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

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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

*NEIC **01** 18:45:41.7±1.7,21°.70S×179°.55W,h600km,mb4.6/6,*
Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
*IDC **01** 18:45:46.3±2.6,21°.76S×179°.70W,h627km±37km,mb3.5/4,*
mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
s-min=20.6km az=159.0
ISC 01 18:45:43.1±2.7,22°.3S±0°.2×179°.6W±0°.3,h613km±42km,
n22,σ1s15/21,mb4.4/9,1C,South of Fiji Islands

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

IDC ***01*** *00:05:25.3±0.7, 4°.01N×126°.76E, h0km, mb4.0/14, mb1 4.2/14, mb1mx4.0/25, mbtmp4.0/14, MS3.1/1, Ms1 3.1/1, ms1mx2.1/33, Error ellipse: s-maj=43.7km s-min=13.4km az=72.0*
ISCJB ***01*** *00:05:25.4±0.5, 4°.05N±0°.08×126°.7E±0°.2, h10km, mb4.0/14, Error ellipse: s-maj=27.3km s-min=9.2km az=164.7*
AUST ***01*** *00:06:10.4±8.0, 3°.35N×126°.30E, h446km, Error ellipse: s-maj=4.6km s-min=1.4km az=241.0*
ISC 01 00:05:27.0±0.6**, 4°.06N**±0°.10**×126°.8E**±0°.2**, h10km, n25, σ0s.58**/22**, mb4.1**/14**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.23**	**338**	LR	LR	00 07 57.8	
	comp=Z,256nm,19.3s,baz=228,slow=47						
PCI	**Palu**	**8.53**	**235**	P	Pg	00 08 02.4	-8.2
	baz=7.7,SNR=11						
PCI				S		00 09 18.5	
	baz=7.7,SNR=3.6						
KDU	**Kakadu**	**17.56**	**161**	S	S	00 13 00.3	+4.6
	baz=17,SNR=3.8						
FITZ	**Fitzroy Crossi**	**22.05**	**183**	P	**P**	**00 10 21.4**	**-0.7**
	2.7nm,0.6s,baz=29,slow=8.6,SNR=9.1						
FITZ	**Fitzroy Crossi**	**22.05**	**183**	P	**P**	**00 10 22.5**	**+0.4**
	baz=22,SNR=8.4						
WRA	**Warramunga Arr**	**24.97**	**163**	P	**P**	**00 10 50.7**	**-0.3**
	7.0nm,0.6s,baz=343,slow=10,SNR=24						
ASAR	**Alice Springs**	**28.41**	**166**	P	**P**	**00 11 21.5**	**-0.6**
	0.5nm,0.6s,baz=344,slow=6.9,SNR=8.4						
GSI	**Gunungsitoli**	**29.32**	**265**	S	S	00 15 30.4	-53
	baz=29,SNR=4.9						
CMAR	**Chiang Mai Arr**	**30.77**	**300**	P	**P**	**00 11 42.8**	**-0.2**
	0.6nm,0.4s,baz=113,slow=6.9,SNR=5.7						
MEEK	**Meekatharra**	**31.53**	**194**	P	**P**	**00 11 50.1**	**+0.5**
	baz=31,SNR=3.1						
KSRS	**Korea Array**	**33.25**	**2**	P	**P**	**00 12 04.1**	**-0.5**
	0.6nm,0.4s,baz=185,slow=9.7,SNR=3.2						
KLBR	**Kellerberrin**	**36.49**	**193**	P	**P**	**00 12 33.1**	**+0.6**
	baz=36,SNR=4.4						
BBOO	**Buckleboo**	**37.70**	**167**	P	**P**	**00 12 43.4**	**+0.5**
	baz=37,SNR=9.0						
STKA	**Stephens Creek**	**38.41**	**160**	P	**P**	**00 12 48.0**	**-0.9**
	4.3nm,0.8s,baz=325,slow=8.7,SNR=7.9						
STKA	**Stephens Creek**	**38.41**	**160**	P	**P**	**00 12 49.5**	**+0.7**
	baz=38,SNR=9.4						
ARMA	**Armidale**	**41.70**	**147**	P	P	00 13 18.0	+1.7
	baz=42,SNR=3.8						
SONM	**Songino Array**	**47.01**	**341**	P	**P**	**00 13 58.9**	**+0.3**
	0.7nm,0.4s,baz=156,slow=8.2,SNR=7.5						
SONM				PcP	**PcP**	**00 15 31.2**	**+0.3**
	0.5nm,0.7s,baz=172,slow=3.3,SNR=6.2						
MKAR	**Makanchi Array**	**57.33**	**325**	P	**P**	**00 15 15.3**	**-0.1**
	1.8nm,0.5s,baz=119,slow=8.0,SNR=42						
MKAR				PcP	**PcP**	**00 16 09.8**	**+0.4**
	0.8nm,0.8s,baz=122,slow=4.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**60.33**	**333**	P	**P**	**00 15 35.0**	**-1.1**
	0.7nm,0.4s,baz=126,slow=6.5,SNR=6.6						
AKTO	**Aktyubinsk**	**73.45**	**322**	P	**P**	**00 17 00.0**	**+0.3**
	1.1nm,0.6s,baz=59,slow=9.3,SNR=5.2						
VNDA	**Vanda**	**83.74**	**173**	P	**P**	**00 17 55.3**	**-0.6**
	1.0nm,0.6s,baz=327,slow=3.7,SNR=4.9						
ILAR	**Eielson Array**	**84.78**	**25**	P	**P**	**00 18 02.4**	**+1.0**
	0.5nm,0.9s,baz=260,slow=5.7,SNR=4.5						
ARCES	**ARCESS Array B**	**90.17**	**340**	P	**P**	**00 18 26.9**	**-0.4**
	1.5nm,0.8s,baz=86,slow=6.4,SNR=3.3						
FINES	**FINESS Array B**	**91.58**	**332**	P	**P**	**00 18 34.2**	**+0.2**
	0.8nm,0.6s,baz=66,slow=4.6,SNR=7.0						
TORD	**Torodi Ar. Bea**	**122.89**	**288**	PKP	**PKPdf**	**00 24 24.6**	**0.0**
	0.2nm,0.5s,baz=92,slow=1.7,SNR=4.6						

NEIC ***01*** *00:12:27.5±1.4, 14°.26S×76°.53W, h35km, mb3.8/1, ML4.3(ARE), Error ellipse: s-maj=23.4km s-min=13.4km az=71.0*
NEIC Felt [III] at Pisco.
ISCJB ***01*** *00:12:28.6±0.9, 13°.99S±0°.09×76°.3W±0°.1, h30km, mb3.6/4, MS3.1/2, Error ellipse: s-maj=19.7km s-min=7.4km az=146.3*
IDC ***01*** *00:12:31.9±1.2, 13°.74S×76°.08W, h35km±6km, mb3.5/4, mb1 3.7/7, mb1mx3.5/21, mbtmp3.5/7, ML3.4/3, MS3.1/4, Ms1 3.1/4, ms1mx2.7/22, Error ellipse: s-maj=48.3km s-min=13.1km az=56.0*
ISC 01 00:12:29.8±0.9**, 14°.13S**±0°.10**×76°.4W**±0°.1**, h30km, n16, σ2s.13**/19**, mb3.7**/4**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.18**	**348**	*e*Pn	**Pn**	**00 13 02.8**	**-1.2**
NNA				*e*Sn	**Sn**	**00 13 27.8**	**-2.2**
NNA	**Nana**	**2.18**	**348**	Pn	**Pn**	**00 13 02.1**	**-1.9**
	49nm,0.3s,baz=171,slow=13,SNR=33						
NNA				Lg	Lg	00 13 30.9	
	119nm,0.3s,baz=176,slow=13,SNR=8.5						
ATAH	**Atahualpa**	**7.23**	**344**	Pn	**Pn**	**00 14 12.0**	**-1.8**
	1.1nm,0.3s,baz=135,slow=10.0,SNR=7.8						
ATAH				Sn	**Sn**	**00 15 40.3**	**+5.2**
	1.7nm,0.3s,baz=198,slow=20,SNR=2.8						
ATAH				LR	LR	00 16 50.5	
	comp=Z,65nm,20.1s,baz=327,slow=37						
LPAZ	**La Paz**	**8.24**	**106**	*e*Pn	**Pn**	**00 14 27.2**	**-0.6**
LPAZ	**La Paz**	**8.24**	**106**	Pn	**Pn**	**00 14 30.2**	**+2.4**
	2.3nm,0.3s,baz=296,slow=8.0,SNR=57						
SAML	**Samuel**	**13.90**	**70**	*e*Pn	**Pn**	**00 15 44.3**	**-0.6**
SIV	**San Ignacio**	**14.89**	**99**	Pn	**Pn**	**00 15 58.2**	**-0.1**
	0.3nm,0.3s,baz=288,slow=11,SNR=7.8						
SIV				LR	LR	00 21 29.0	
	comp=Z,49nm,18.9s,slow=37						
LCO	**Las Campanas**	**15.72**	**161**	*e*Pn	**Pn**	**00 16 05.4**	**-3.9**
	2.6nm,0.4s						
CFAA	**Coronel Fontan**	**18.93**	**158**	P	**Pn**	**00 16 51.8**	**+2.7**
	0.0nm,0.3s,baz=335,slow=10.0,SNR=15						
CPUP	**Villa Florida**	**21.57**	**127**	P	**P**	**00 17 16.9**	**0.0**
	1.1nm,0.5s,baz=270,slow=20,SNR=5.7						
CPUP				LR	LR	00 26 06.6	
	comp=Z,62nm,18.0s,baz=292,slow=38						
BDFB	**Brasilia**	**27.44**	**97**	LR	LR	00 29 37.4	
	comp=Z,74nm,20.6s,baz=182,slow=38						
TXAR	**Lajitas Array**	**50.61**	**329**	P	**P**	**00 21 26.5**	**+0.2**
	0.5nm,0.6s,baz=153,slow=8.9,SNR=8.7						
TORD	**Torodi Ar. Bea**	**81.92**	**74**	P	**P**	**00 24 46.9**	**-0.2**
	0.8nm,0.8s,baz=252,slow=4.6,SNR=6.2						
TORD				pP	**pP**	**00 24 58.0**	**+1.3**
	2.3nm,0.9s,baz=261,slow=4.4,SNR=8.3						
YKA	**Yellowknife Ar**	**82.01**	**343**	P	**P**	**00 24 46.3**	**-0.3**
	0.4nm,0.6s,baz=146,slow=6.0,SNR=11						
YKA				pP	**pP**	**00 24 57.2**	**+1.1**
	0.5nm,0.8s,baz=139,slow=6.0,SNR=6.2						
MKAR	**Makanchi Array**	**142.85**	**24**	PKP	**PKPdf**	**00 32 01.2**	**+0.7**
	0.2nm,0.6s,baz=323,slow=2.2,SNR=3.8						
SONM	**Songino Array**	**146.31**	**357**	PKPbc	**PKPbc**	**00 32 07.6**	**-0.2**
	0.4nm,0.4s,baz=355,slow=2.0,SNR=6.8						
SONM				pPKPbc	pPKPbc	00 32 20.1	+2.5
	0.7nm,0.6s,baz=346,slow=2.6,SNR=4.5						

IDC 01 00:24:08.1±1.3**, 1°.90N×127°.27E, h0km, mb3.6**/5**, mb1 3.8**/6**, mb1mx3.6**/22**, mbtmp3.7**/6**, ML3.5**/1**, Error ellipse: s-maj=95.8km s-min=19.2km az=71.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.94**	**185**	P	P	00 28 42.5	+0.6
	0.1nm,0.3s,baz=11,slow=9.6,SNR=3.3						
WRA	**Warramunga Arr**	**22.79**	**163**	P	P	00 29 12.7	+0.1
	1.2nm,0.5s,baz=340,slow=11,SNR=4.3						
ASAR	**Alice Springs**	**26.23**	**166**	P	P	00 29 45.1	+0.1
	0.4nm,0.6s,baz=352,slow=7.1,SNR=5.4						
STKA	**Stephens Creek**	**36.24**	**159**	P	P	00 31 12.3	-0.8
	1.4nm,0.6s,baz=342,slow=10,SNR=4.8						
SONM	**Songino Array**	**49.19**	**342**	P	P	00 32 58.3	+0.2
	0.4nm,0.6s,baz=156,slow=6.1,SNR=2.0						
MKAR	**Makanchi Array**	**59.35**	**326**	P	P	00 34 12.1	-0.1
	0.4nm,0.4s,baz=122,slow=7.6,SNR=9.7						

IGQ ***01*** *00:34:07.0, 1°.69S×77°.60W, h216km±3km, Mb4.8, Ms4.7, Error ellipse: s-maj=4.1km s-min=1.7km az=2.9*
MOS ***01*** *00:34:07.0±0.8, 1°.48S×77°.36W, h168km, mb5.1/76, Error ellipse: s-maj=7.3km s-min=4.8km az=89.9*
IDC ***01*** *00:34:09.6±0.6, 1°.50S×77°.33W, h183km±4km, mb4.5/31, mb1 4.7/34, mb1mx4.6/35, mbtmp4.5/34, MS3.7/10, Ms1 3.7/10, ms1mx3.3/36, Error ellipse: s-maj=11.7km s-min=6.3km az=65.0*
ISCJB ***01*** *00:34:09.3±0.2, 1°.61S±0°.02×77°.44W±0°.03, h193km±1km, mb4.7/253, Error ellipse: s-maj=5.3km s-min=3.5km az=149.2*
NEIC ***01*** *00:34:10.6±0.1, 1°.55S×77°.31W, mb4.9/197, MD4.9(IGQ), Error ellipse: s-maj=3.8km s-min=2.5km az=54.0*
NEIC Felt at Cuenca.
GCMT ***01*** *00:34:12.7±0.2, 1°.74S×77°.66W, h195km±1km, MW5.1, Moment Tensor Solution. s43,c52; s82,c126; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.17±.13; $M_{\theta\theta}$1.48±.17; $M_{\phi\phi}$1.69±.20; $M_{r\theta}$3.84±.12; $M_{\theta\phi}$-2.57±.14; $M_{\phi r}$-2.42±.14; Best double couple: $M_0$5.90000×10^{16} NP1:ϕ_s153.00000°, δ21.00000°, λ-62.00000°. NP2:ϕ_s304.00000°, δ71.00000°, λ-100.00000°. Principal axes: T 6.2500, Plg25.0000°, Azm42.0000°; N -0.8000, Plg10.0000°, Azm307.0000°; P -5.4600, Plg63.0000°, Azm198.0000°; Data Used: II IU G CN IC.*
SZGRF ***01*** *00:34:28.0, 0°.60N×74°.47W, h196km, mb5.2, Colombia*
ISC 01 00:34:09.9±0.3**, 1°.66S**±0°.03**×77°.46W**±0°.05**, h189km**±2km**, h189km:pP-P, n1037, σ1s.07**/1314**, mb4.9**/254**, 217C-220D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.95**	**231**	⇑S	**Sn**	**00 34 59.7**	**-0.7**
MACE	**Macas**	**0.95**	**231**	⇑P	**Pn**	**00 34 37.9**	**-0.5**
ULBA	**Ulba**	**0.97**	**282**	⇓P	**Pn**	**00 34 38.1**	**-0.6**
BULB	**Ulba Tungurahu**	**0.97**	**283**	⇓S	**Sn**	**00 35 00.1**	**-1.0**
BULB	**Ulba Tungurahu**	**0.97**	**283**	⇓P	**Pn**	**00 34 38.1**	**-0.7**
BRUN	**Tungurahua Vol**	**0.98**	**284**	⇓P	**Pn**	**00 34 38.3**	**-0.5**
BRUN	**Tungurahua Vol**	**0.98**	**284**	⇓S	**Sn**	**00 35 00.1**	**-0.9**
BPAT	**Tungurahua Vol**	**0.98**	**279**	⇓S	**Sn**	**00 35 00.3**	**-1.1**
BPAT	**Tungurahua Vol**	**0.98**	**279**	⇓P	**Pn**	**00 34 38.5**	**-0.5**
RUN5	**Runtun**	**0.99**	**284**	⇓P	**Pn**	**00 34 38.3**	**-0.6**
ARRY	**Arrayan**	**1.01**	**279**	⇓P	**Pn**	**00 34 38.2**	**-0.8**
RETU	**Refugio**	**1.01**	**282**	⇓P	**Pn**	**00 34 38.5**	**-0.7**
BMAS	**Trigal station**	**1.03**	**279**	⇓S	**Sn**	**00 35 00.0**	**-1.7**
BMAS	**Trigal station**	**1.03**	**279**	⇓P	**Pn**	**00 34 38.5**	**-0.7**
JUI6	**Juive**	**1.03**	**283**	⇓P	**Pn**	**00 34 38.4**	**-0.7**
BIL2	**Estacion Bilba**	**1.06**	**281**	⇓P	**Pn**	**00 34 39.0**	**-0.4**
PISA	**Pisayambo**	**1.10**	**303**	⇑P	**Pn**	**00 34 39.6**	**-0.3**
RIOE	**Riobamba**	**1.17**	**265**	⇑S	**Sn**	**00 35 02.6**	**-1.0**
RIOE	**Riobamba**	**1.17**	**265**	⇑P	**Pn**	**00 34 39.7**	**-0.5**
IGUA	**Igualata**	**1.19**	**278**	⇑P	**Pn**	**00 34 40.0**	**-0.7**
COV1	**Cotopaxi Volc**	**1.33**	**318**	⇓P	**Pn**	**00 34 42.2**	**+0.3**
BTAM	**Cotopaxi Volca**	**1.35**	**316**	⇓P	**Pn**	**00 34 41.7**	**-0.3**
MOV1	**Cotopaxi Vol s**	**1.36**	**314**	⇓P	**Pn**	**00 34 41.5**	**-0.5**
BMOR	**Cotopaxi Volca**	**1.36**	**313**	⇓S	**Sn**	**00 35 05.9**	**-0.9**
BMOR	**Cotopaxi Volca**	**1.36**	**313**	⇓P	**Pn**	**00 34 41.8**	**-0.2**
BVC2	**Cotopaxi Volca**	**1.38**	**316**	⇓P	**Pn**	**00 34 41.9**	**-0.3**
VC1	**Cotopaxi 1**	**1.38**	**317**	⇓P	**Pn**	**00 34 41.9**	**-0.4**
BREF	**Cotopaxi Volca**	**1.39**	**315**	⇓P	**Pn**	**00 34 42.2**	**-0.2**
ANTI	**Antisana**	**1.39**	**330**	⇓P	**Pn**	**00 34 42.2**	**-0.1**
BNAS	**Cotopaxi Volca**	**1.42**	**314**	⇓P	**Pn**	**00 34 42.4**	**-0.1**
BNAS	**Cotopaxi Volca**	**1.42**	**314**	⇓S	**Sn**	**00 35 08.4**	**+0.7**
NAS2	**Nasa**	**1.43**	**315**	⇓P	**Pn**	**00 34 42.7**	**+0.1**
CAMI	**Rancho Maria**	**1.43**	**313**	⇓P	**Pn**	**00 34 41.6**	**-1.0**
PITA	**Cotopaxi Volc**	**1.46**	**318**	⇓P	**Pn**	**00 34 42.5**	**-0.4**
LAV4	**Lava4-Reventad**	**1.57**	**354**	⇓P	**Pn**	**00 34 43.5**	**-0.1**
CHAR	**Charly**	**1.58**	**352**	⇓P	**Pn**	**00 34 44.0**	**+0.1**
CONE	**Cono NE Rev Vo**	**1.59**	**353**	⇓P	**Pn**	**00 34 43.8**	**-0.1**
CAYR	**Refugio Cayamb**	**1.75**	**342**	⇓P	**Pn**	**00 34 46.0**	**+0.2**
CAYA	**Cayambe**	**1.80**	**343**	⇓P	**Pn**	**00 34 46.6**	**+0.4**
JUA2	**San Juan 2**	**1.84**	**321**	⇓P	**Pn**	**00 34 45.8**	**-0.7**
GGP	**Refugio Guagua**	**1.86**	**322**	⇓P	**Pn**	**00 34 46.2**	**-0.6**
TERV	**Terraza Guagua**	**1.87**	**322**	⇓P	**Pn**	**00 34 46.4**	**-0.4**
PINO	**Pino**	**1.88**	**322**	⇑P	**Pn**	**00 34 46.5**	**-0.6**
YANA	**Yana**	**1.89**	**324**	⇓P	**Pn**	**00 34 46.5**	**-0.5**
OTAV	**Otavalo**	**2.13**	**332**	⇓S	**Sn**	**00 35 19.7**	**-0.6**
OTAV	**Otavalo**	**2.13**	**332**	⇓P	**Pn**	**00 34 48.7**	**-0.8**
OTAV	**Otavalo**	**2.13**	**332**	*e*Pn	**Pn**	**00 34 48.5**	**-1.0**
COTA	**Cotacachi**	**2.17**	**336**	⇑P	**Pn**	**00 34 49.9**	**-0.1**
GOLV	**Golondrinas**	**2.50**	**318**	P	**Pn**	**00 34 51.2**	**-2.0**
LITE	**Lita**	**2.61**	**340**	⇓P	**Pn**	**00 34 54.1**	**-0.5**
ATAH	**Atahualpa**	**5.52**	**190**	P	**Pn**	**00 35 31.7**	**+0.5**
ATAH				S	**Sn**	**00 36 31.9**	**-3.3**
ATAH	**Atahualpa**	**5.52**	**190**	P	**Pn**	**00 35 31.7**	**+0.5**
	253nm,0.3s,baz=14,slow=8.3,SNR=1431						
ATAH				S	**Sn**	**00 36 31.9**	**-3.3**
	267nm,0.3s,baz=22,slow=11,SNR=15						
NNA	**Nana**	**10.28**	**177**	*e*Pn	**Pn**	**00 36 32.9**	**-0.1**
NNA				S	Sn	00 38 17.9	-10
NNA				*e*Sn	S	00 38 18.9	-9.4
NNA	**Nana**	**10.28**	**177**	P	**Pn**	**00 36 33.0**	**-0.1**
	9.5nm,0.3s,baz=353,slow=11,SNR=36						
NNA				S	Sn	00 38 17.9	-10
	50nm,0.3s,baz=260,slow=21,SNR=8.5						
BCIP	**Isla Barro Col**	**11.01**	**348**	*e*Pn	**Pn**	**00 36 42.6**	**+0.1**
BCIP				*e*Sn	**Sn**	**00 38 43.8**	**-1.4**
SDV	**Santo Domingo**	**12.49**	**33**	*e*Pn	**Pn**	**00 37 01.1**	**-0.6**
JTS	**JuntasAbangare**	**14.02**	**328**	*e*Pn	**Pn**	**00 37 21.7**	**+1.1**
	58nm,1.3s						
ARE	**Arequipa**	**15.84**	**159**	⇓*i*P	**P**	**00 37 46.0**	**+2.8**
ARE	**Arequipa**	**15.84**	**159**	⇓*i*P	**P**	**00 37 46.0**	**+2.8**
SAML	**Samuel**	**15.95**	**118**	*e*Pn	**P**	**00 37 43.3**	**-0.8**
	17nm,1.1s						
LPAZ	**La Paz**	**17.20**	**148**	*e*P	**Pn**	**00 37 58.8**	**-0.9**
	121nm,1.0s						
LPAZ				S	**Sn**	**00 41 12.0**	**-1.5**
LPAZ	**La Paz**	**17.20**	**148**	P	**Pn**	**00 38 00.5**	**+0.7**
	12nm,0.3s,baz=331,slow=9.9,SNR=124						
LPAZ				S	**Sn**	**00 41 12.0**	**-1.5**
	0.5nm,0.3s,baz=0.0,slow=20,SNR=3.0						
TGUH	**Tegucigalpa,Un**	**18.40**	**328**	*e*P	**Pn**	**00 38 12.5**	**-0.7**
	79nm,0.9s						
MTDJ	**Mount Denham**	**19.76**	**360**	*e*P	**P**	**00 38 27.5**	**+1.8**
	172nm,1.0s						
GRGR	**Grenville**	**20.84**	**48**	*e*P	**P**	**00 38 35.4**	**-1.7**
	1µm,1.5s						
SDDR	**Presa de Saban**	**21.39**	**16**	*e*P	**P**	**00 38 43.8**	**+0.8**
	391nm,1.0s						
SIV	**San Ignacio**	**21.53**	**132**	P	**P**	**00 38 44.9**	**+0.4**
SIV	**San Ignacio**	**21.53**	**132**	P	**P**	**00 38 44.9**	**+0.4**
	39nm,0.5s,baz=324,slow=11,SNR=148						
CRPR	**Cabo Rojo, PR**	**22.04**	**27**	*e*P	**P**	**00 38 48.8**	**-0.7**
	189nm,0.9s						
MPR	**Mayaguez**	**22.21**	**27**	*e*P	**P**	**00 38 49.9**	**-1.2**
	131nm,1.3s						
OBIP	**Obispado Ponce**	**22.31**	**28**	*e*P	**P**	**00 38 50.9**	**-1.1**
	72nm,1.1s						
CELP	**Cerrillos**	**22.35**	**28**	*e*P	**P**	**00 38 52.6**	**+0.3**
LRS	**Lares**	**22.41**	**27**	*e*P	**P**	**00 38 53.0**	**0.0**
AOPR	**Arecibo Observ**	**22.50**	**27**	*e*P	**P**	**00 38 53.2**	**-0.7**
	122nm,0.6s						
AOPR				*e*pP	**pP**	**00 39 26.2**	**-1.2**
SJG	**San Juan**	**22.58**	**29**	*e*P	**P**	**00 38 52.7**	**-1.8**
	51nm,0.8s						
SJG	**San Juan**	**22.58**	**29**	P	**P**	**00 38 52.6**	**-1.9**
	50nm,0.5s,baz=188,slow=6.2,SNR=20						
HUMP	**Col San Antoni**	**22.76**	**30**	*e*P	**P**	**00 38 54.6**	**-1.5**
	35nm,0.8s						
HUMP				*e*pP	**pP**	**00 39 27.4**	**-2.7**
CBYP	**Canovanas**	**22.86**	**29**	*e*P	**P**	**00 38 55.1**	**-2.0**
	60nm,0.8s						
MTP	**Monte Pirata**	**22.87**	**30**	*e*P	**P**	**00 38 55.0**	**-2.1**
	54nm,0.9s						
HMG	**Houelmont**	**23.45**	**41**	*e*P	**P**	**00 39 01.9**	**-0.6**
PHG	**Guadaloupe-2**	**23.51**	**41**	*e*P	**P**	**00 39 02.5**	**-0.6**
LZG	**Guadaloupe-1**	**23.52**	**41**	*e*P	**P**	**00 39 02.2**	**-0.8**
DOG	**Dongo Capester**	**23.54**	**41**	*e*P	**P**	**00 39 02.5**	**-0.7**
TEIG	**Tepich**	**24.20**	**335**	*e*P	**P**	**00 39 09.0**	**-0.2**
	30nm,1.2s						
TEIG	**Tepich**	**24.20**	**335**	P	**P**	**00 39 08.9**	**-0.2**
	17nm,0.5s,baz=90,slow=2.0,SNR=12						
ANWB	**Willy Bob**	**24.65**	**38**	*e*P	**P**	**00 39 10.1**	**-3.2**
	60nm,0.6s						
CMIG	**Matias Romero**	**25.35**	**318**	P	**P**	**00 39 20.2**	**+0.6**
CMIG	**Matias Romero**	**25.35**	**318**	P	**P**	**00 39 20.2**	**+0.6**
	16nm,0.8s,baz=108,slow=6.4,SNR=34						
LCO	**Las Campanas**	**27.95**	**167**	*e*P	**P**	**00 39 44.6**	**+1.5**
	40nm,0.7s						
LCO				*e*PcP	**PcP**	**00 42 53.7**	**0.0**
CMCH	**Combarbala**	**29.98**	**169**	⇑*i*P	**P**	**00 40 02.3**	**+1.5**
CMCH	**Combarbala**	**29.98**	**169**	⇑*i*P	**P**	**00 40 02.3**	**+1.5**
CFAA	**Coronel Fontan**	**31.03**	**165**	P	**P**	**00 40 11.6**	**+1.6**
CFAA				PcP	**PcP**	**00 43 01.7**	**+0.5**
CFAA				ScP	**ScP**	**00 46 27.3**	**+1.0**
CFAA	**Coronel Fontan**	**31.03**	**165**	P	**P**	**00 40 11.6**	**+1.6**
	5.6nm,0.8s,baz=339,slow=8.5,SNR=114						
CFAA				PcP	**PcP**	**00 43 01.7**	**+0.5**
	0.7nm,0.8s,baz=333,slow=2.3,SNR=3.5						
CFAA				ScP	**ScP**	**00 46 27.3**	**+1.0**
	0.2nm,0.7s,baz=346,slow=6.7,SNR=4.0						
CPUP	**Villa Florida**	**31.25**	**143**	P	**P**	**00 40 11.6**	**-0.3**
CPUP				PcP	**PcP**	**00 43 02.4**	**+0.6**
CPUP				ScP	**ScP**	**00 46 27.4**	**+0.4**
CPUP	**Villa Florida**	**31.25**	**143**	P	**P**	**00 40 11.6**	**-0.3**
	15nm,0.6s,baz=305,slow=9.4,SNR=62						
CPUP				PcP	**PcP**	**00 43 02.4**	**+0.6**
	3.2nm,0.6s,baz=3.5,slow=3.7,SNR=3.3						
CPUP				ScP	**ScP**	**00 46 27.4**	**+0.4**
	0.5nm,0.5s,baz=60,slow=19,SNR=3.2						
IHA	**Instituto Hidr**	**31.68**	**171**	⇓*i*P	**P**	**00 40 17.7**	**+2.1**
IHA	**Instituto Hidr**	**31.68**	**171**	⇓*i*P	**P**	**00 40 17.7**	**+2.1**
BDFB	**Brasilia**	**32.18**	**117**	P	**P**	**00 40 21.4**	**+1.0**
BDFB	**Brasilia**	**32.18**	**117**	P	**P**	**00 40 21.4**	**+1.0**
	6.7nm,0.4s,baz=286,slow=8.1,SNR=29						
CLCH	**Cerro Calan**	**32.23**	**169**	⇓*i*P	**P**	**00 40 22.6**	**+2.1**
LMEL	**Las Melosas**	**32.73**	**169**	⇓*i*P	**P**	**00 40 27.4**	**+2.4**
LMEL	**Las Melosas**	**32.73**	**169**	⇓*i*P	**P**	**00 40 27.4**	**+2.4**
NHSC	**New Hope**	**34.67**	**356**	*e*P	**P**	**00 40 42.2**	**+0.7**
	262nm,1.3s						
GOGA	**Godfrey**	**35.34**	**351**	*e*P	**P**	**00 40 46.2**	**-1.0**
GOGA				pmax	pmax		
	comp=Z,18nm,0.9s						
GOGA	**Godfrey**	**35.34**	**351**	*e*P	**P**	**00 40 46.2**	**-1.0**
	comp=Z,18nm,0.9s						
GOGA				*e*pP	**pP**	**00 41 27.9**	**+1.1**
LRAL	**Lakeview Retre**	**35.66**	**346**	*e*P	**P**	**00 40 49.3**	**-0.7**
	comp=Z,34nm,0.6s						
LRAL				*e*pP	**pP**	**00 41 29.9**	**+0.3**
SPB	**Sao Paulo**	**36.35**	**129**	*e*P	**P**	**00 40 55.3**	**-0.7**
	comp=Z,15nm,0.8s						
CNNC	**Cliffs of the**	**36.71**	**359**	*e*P	**P**	**00 40 58.9**	**+0.1**
	comp=Z,25nm,0.8s						
KMSC	**Kings Mountain**	**36.79**	**355**	⇓P	**P**	**00 40 59.6**	**+0.1**
	baz=37,SNR=30						
732A	**Laxson Ranch,**	**37.13**	**326**	⇑P	**P**	**00 41 03.2**	**+0.7**
	baz=37,SNR=9.9						
CPCT	**Cooper Cave**	**37.50**	**351**	*e*P	**P**	**00 41 05.2**	**-0.4**
CPCT				*e*pP	**pP**	**00 41 45.7**	**+0.2**
SWET	**Sewanee**	**37.53**	**349**	*e*P	**P**	**00 41 04.8**	**-1.1**
	comp=Z,20nm,0.7s						
SWET				*e*pP	**pP**	**00 41 45.3**	**-0.5**
TKL	**Tuckaleechee C**	**37.59**	**352**	*e*P	**P**	**00 41 05.6**	**-0.7**
TKL				*e*pP	**pP**	**00 41 44.5**	**-1.7**
TKL	**Tuckaleechee C**	**37.59**	**352**	P	**P**	**00 41 04.8**	**-1.5**
	comp=Z,11nm,0.8s,baz=164,slow=10,SNR=17						
TKL				LR	LR	00 58 10.1	
	comp=Z,62nm,18.8s,baz=313,slow=38						
632A	**Uvalde**	**37.63**	**327**	⇑P	**P**	**00 41 07.9**	**+1.1**
	baz=38,SNR=14						
PLAL	**Pickwick Lake**	**37.78**	**346**	*e*P	**P**	**00 41 05.7**	**-2.2**
	comp=Z,28nm,1.0s						
PLAL				*e*pP	**pP**	**00 41 47.3**	**-0.6**
PLAL				*e*ScP	**ScP**	**00 46 50.2**	**-0.1**
631A	**Perdido Creek**	**37.99**	**326**	⇑P	**P**	**00 41 10.6**	**+0.9**
	baz=38,SNR=18						
532A	**Rocksprings**	**38.18**	**328**	⇓P	**P**	**00 41 12.8**	**+1.4**
	baz=38,SNR=65						
JCT	**Junction City**	**38.41**	**328**	⇑P	**P**	**00 41 13.8**	**+0.6**
	baz=38						
TZTN	**Tazewell**	**38.43**	**352**	*e*P	**P**	**00 41 12.8**	**-0.5**
	comp=Z,52nm,0.8s						
TZTN				*e*pP	**pP**	**00 41 53.3**	**0.0**
WHTX	**Lake Whitney**	**38.46**	**332**	⇓P	**P**	**00 41 13.9**	**+0.3**
	baz=39						
531A	**Rocksprings**	**38.56**	**327**	⇓P	**P**	**00 41 15.3**	**+0.8**
	baz=39,SNR=12						
432A	**Menard**	**38.71**	**329**	⇓P	**P**	**00 41 16.1**	**+0.3**
	baz=39,SNR=9.9						
BLA	**Blacksburg**	**38.77**	**356**	*e*P	**P**	**00 41 16.2**	**0.0**
BLA				*e**PP	**pP**	**00 41 56.1**	**-0.2**
BLA				pmax	pmax		
	comp=Z,52nm,1.1s						
BLA	**Blacksburg**	**38.77**	**356**	*e*P	**P**	**00 41 16.1**	**0.0**
	comp=Z,52nm,1.1s						
BLA				*e*pP	**pP**	**00 41 56.1**	**-0.2**
WVT	**Waverly**	**38.82**	**347**	*e*P	**P**	**00 41 14.3**	**-2.2**
WVT				pmax	pmax		
	comp=Z,19nm,0.6s						
WVT	**Waverly**	**38.82**	**347**	*e*P	**P**	**00 41 14.3**	**-2.2**
	comp=Z,19nm,0.6s						
TRQA	**Tornquist**	**38.91**	**160**	*e*P	**P**	**00 41 18.2**	**+0.9**
	comp=Z,14nm,1.0s						
TRQA				*e*PcP	**PcP**	**00 43 24.9**	**+0.8**
530A	**J-C Ranch, Com**	**38.98**	**326**	⇑P	**P**	**00 41 18.3**	**+0.3**
	baz=39,SNR=22						
431A	**Sonora**	**38.99**	**327**	⇑P	**P**	**00 41 18.4**	**+0.3**
	baz=39,SNR=15						
332A	**Millersview**	**39.09**	**329**	⇓P	**P**	**00 41 19.2**	**+0.3**
	baz=39,SNR=30						
JSRW	**J. Sargeant Re**	**39.16**	**359**	*e*P	**P**	**00 41 19.1**	**-0.2**
GNAR	**Gosnell**	**39.22**	**344**	*e*P	**P**	**00 41 19.0**	**-0.8**
	comp=Z,1µm,1.3s						
GNAR				*e*pP	**pP**	**00 42 00.1**	**0.0**
628A	**Black Gap, Mar**	**39.38**	**324**	⇓P	**P**	**00 41 22.0**	**+0.7**
	baz=40,SNR=16						
331A	**San Angelo**	**39.39**	**328**	⇓P	**P**	**00 41 22.0**	**+0.7**
	baz=40,SNR=8.0						
PLCA	**Paso Flores**	**39.40**	**172**	*e*P	**P**	**00 41 23.0**	**+1.7**
	comp=Z,76nm,0.8s						
PLCA				*e*PcP	**PcP**	**00 43 26.4**	**+0.7**
PLCA				ScP	**ScP**	**00 46 57.8**	**+1.3**
PLCA	**Paso Flores**	**39.40**	**172**	P	**P**	**00 41 22.7**	**+1.4**
	comp=Z,64nm,0.7s,baz=344,slow=9.3,SNR=133						
PLCA				PcP	**PcP**	**00 43 26.4**	**+0.7**
	comp=Z,11nm,0.8s,baz=343,slow=4.6,SNR=4.8						
PLCA				ScP	**ScP**	**00 46 57.8**	**+1.3**
	comp=Z,2.3nm,1.1s,baz=339,slow=2.9,SNR=4.5						
430A	**Baggett Ranch,**	**39.41**	**327**	⇑P	**P**	**00 41 22.0**	**+0.3**
	baz=40,SNR=8.0						
232A	**Coleman**	**39.45**	**330**	⇓P	**P**	**00 41 22.2**	**+0.3**
	baz=40,SNR=7.8						
529A	**Stev Forest Ra**	**39.46**	**325**	⇑P	**P**	**00 41 22.4**	**+0.4**
	baz=40,SNR=9.3						
627A	**Terlingua Ranc**	**39.65**	**323**	⇓P	**P**	**00 41 25.1**	**+1.5**
	baz=40,SNR=28						
429A	**Davenport Ranc**	**39.65**	**326**	⇑P	**P**	**00 41 24.2**	**+0.6**
	baz=40,SNR=22						
CAM4	**Nova Friburgo**	**39.66**	**124**	⇑*i*P	**P**	**00 41 24.5**	**+0.5**
CAM4				*i*		00 41 28.9	
CAM4				*i*		00 41 31.7	
CAM4				*i*		00 41 34.0	
CAM4				*i*		00 41 36.7	
CAM4				*i*		00 41 38.7	
CAM4				*i*		00 41 47.0	
CAM4				*i*		00 41 56.9	
CAM4				*i*		00 42 04.0	
CBN	**Corbin**	**39.67**	**0**	*e*P	**P**	**00 41 23.6**	**+0.1**
	comp=Z,61nm,1.3s						
TXAR	**Lajitas Array**	**39.73**	**323**	P	**P**	**00 41 24.9**	**+0.7**
TXAR				PcP	**PcP**	**00 43 27.4**	**+0.4**
TXAR				ScP	**ScP**	**00 46 58.6**	**+0.5**
TXAR	**Lajitas Array**	**39.73**	**323**	P	**P**	**00 41 24.9**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=144,slow=8.4,SNR=43						
TXAR				PcP	**PcP**	**00 43 27.4**	**+0.4**
	comp=Z,3.4nm,0.8s,baz=144,slow=6.4,SNR=10.0						
TXAR				ScP	**ScP**	**00 46 58.6**	**+0.5**
	comp=Z,1.5nm,0.7s,baz=148,slow=5.9,SNR=10						
TXAR				LR	LR	00 59 04.6	
	comp=Z,69nm,21.8s,baz=0.0,slow=38						
528A	**Cox Ranch, San**	**39.81**	**325**	⇑P	**P**	**00 41 25.7**	**+0.7**
	baz=40,SNR=13						
231A	**Bronte**	**39.83**	**329**	⇓P	**P**	**00 41 25.6**	**+0.6**
	baz=40						
330A	**Mertzon**	**39.86**	**328**	⇓P	**P**	**00 41 25.6**	**+0.3**
	baz=40,SNR=5.3						
ABTX	**Abilene, Hawle**	**40.03**	**330**	⇑P	**P**	**00 41 27.5**	**+0.8**
	baz=40,SNR=8.4						
626A	**Big Bend Ranch**	**40.17**	**323**	⇓P	**P**	**00 41 29.0**	**+1.1**
	baz=40,SNR=34						
428A	**Kincaid Ranch,**	**40.18**	**325**	⇓P	**P**	**00 41 28.9**	**+0.9**
	baz=40						
230A	**Sterling City**	**40.20**	**328**	⇑P	**P**	**00 41 28.8**	**+0.7**
	baz=40						
527A	**Woodward Ranch**	**40.28**	**324**	⇑P	**P**	**00 41 29.7**	**+0.8**
	baz=40						
329A	**Wagon Wheel Ra**	**40.36**	**327**	⇑P	**P**	**00 41 30.0**	**+0.6**
	baz=40,SNR=16						
131A	**Roby**	**40.45**	**330**	⇓P	**P**	**00 41 30.9**	**+0.8**
	baz=41						
526A	**Mary Lane Ranc**	**40.51**	**323**	⇓P	**P**	**00 41 31.7**	**+1.0**
	baz=41,SNR=27						
Z32A	**Haskell**	**40.51**	**331**	⇑P	**P**	**00 41 31.4**	**+0.9**
	baz=41,SNR=23						
WCI	**Wyandotte Cave**	**40.52**	**349**	*e*P	**P**	**00 41 28.5**	**-2.0**

WCI pmax pmax
comp=Z,30nm,0.9s
WCI Wyandotte Cave 40.52 349 *eP* **P 00 41 28.5 -2.0**
comp=Z,30nm,0.9s
USIN University of 40.54 348 *eP* **P 00 41 29.0 -1.7**
comp=Z,125nm,1.3s
229A Bryant Ranch, 40.64 327 ⇓P **P 00 41 32.2 +0.5**
baz=41
SIUC Southern Illin 40.66 346 *eP* **P 00 41 30.0 -1.6**
comp=Z,93nm,0.9s
SIUC *epP* **pP 00 42 11.4 -0.8**
427A Hayter Ranch, 40.68 325 ⇓P **P 00 41 32.8 +0.7**
baz=41,SNR=10
130A Snyder 40.68 329 ⇑P **P 00 41 32.5 +0.5**
baz=41,SNR=15
328A Wristen Ranch, 40.74 326 ⇓P **P 00 41 33.3 +0.8**
baz=41
HUNY Huinay 40.79 174 ⇓/P **P 00 41 33.2 +0.6**
HUNY Huinay 40.79 174 ⇓/P **P 00 41 33.2 +0.6**
Z31A Sharp Cattle R 40.84 330 ⇓P **P 00 41 33.6 +0.3**
baz=41,SNR=18
426A McDonald Obser 40.91 324 ⇑P **P 00 41 35.0 +0.9**
baz=41,SNR=14
Y32A R-V Farms, Ver 41.06 332 ⇓P **P 00 41 35.8 +0.8**
baz=41,SNR=17
327A Balmorhea Ranc 41.12 325 ⇑P **P 00 41 36.8 +1.2**
baz=41
Z30A Sanderson Ranc 41.31 329 ⇓P **P 00 41 37.8 +0.7**
baz=41,SNR=16
326A Caldwell Ranch 41.36 325 ⇑P **P 00 41 38.6 +1.0**
baz=42,SNR=9.8
WMOK Wichita Mounta 41.36 333 *eP* **P 00 41 37.1 -0.4**
WMOK pmax pmax
comp=Z,17nm,0.8s
WMOK Wichita Mounta 41.36 333 *eP* **P 00 41 37.0 -0.4**
comp=Z,17nm,0.8s
OLIL Olney 41.37 347 *eP* **P 00 41 35.5 -1.9**
comp=Z,60nm,1.0s
OLIL *epP* **pP 00 42 17.0 -1.1**
Y31A Rekieta Farm, 41.42 331 ⇑P **P 00 41 38.8 +0.8**
baz=42,SNR=16
MVL Millersville 41.47 1 *eP* **P 00 41 38.6 +0.4**
comp=Z,57nm,1.1s
MVL *epP* **pP 00 42 21.1 +2.3**
BLO Bloomington 41.48 349 *eP* **P 00 41 36.8 -1.5**
BLO pmax pmax
comp=Z,39nm,0.6s
BLO Bloomington 41.48 349 *eP* **P 00 41 36.8 -1.5**
comp=Z,40nm,0.6s
227A Bennet, Jal 41.48 326 ⇑P **P 00 41 39.1 +0.6**
baz=42
128A Castleberry Fa 41.50 327 ⇓P **P 00 41 39.0 +0.3**
baz=42
425A Indio Mountain 41.56 323 ⇑P **P 00 41 40.1 +0.8**
baz=42,SNR=33
Z29A Hungry Hill Ra 41.59 329 ⇓P **P 00 41 40.1 +0.7**
baz=42
RCBR Riachuelo 41.66 97 *eP* **P 00 41 40.7 +0.4**
comp=Z,21nm,0.9s
RCBR Riachuelo 41.66 97 P **P 00 41 40.7 +0.4**
comp=Z,16nm,0.8s,baz=258,slow=8.1,SNR=12
Y30A Stafford Cattl 41.66 330 ⇓P **P 00 41 41.1 +1.1**
baz=42,SNR=13
SLM Saint Louis 41.79 345 *eP* **P 00 41 39.5 -1.4**
SLM *e*PP **pP 00 42 20.5 -1.0**
SLM pmax pmax
comp=Z,41nm,0.9s
SLM Saint Louis 41.79 345 *eP* **P 00 41 39.5 -1.4**
comp=Z,41nm,0.9s
SLM *epP* **pP 00 42 20.5 -1.0**
X31A McDonald Ranch 41.83 332 ⇑P **P 00 41 42.0 +0.7**
baz=42,SNR=19
Z28A Tucker Farm, M 41.97 328 ⇑P **P 00 41 42.9 +0.4**
baz=42
325A Bean Ranch, Si 41.98 324 ⇑P **P 00 41 42.6 -0.1**
baz=42,SNR=9.4
ACSO Alum Creek Sta 42.00 354 *eP* **P 00 41 41.6 -0.9**
comp=Z,54nm,0.8s
ACSO *epP* **pP 00 42 23.5 +0.3**
127A Arkansas Junct 42.02 327 ⇓P **P 00 41 43.3 +0.3**
baz=42
226B Tecolote Peak, 42.02 325 ⇑P **P 00 41 44.5 +1.5**
baz=42,SNR=26
Y29A Porterfield Fa 42.04 329 ⇓P **P 00 41 44.0 +0.9**
baz=42,SNR=20
SSPA Standing Stone 42.10 360 *eP* **P 00 41 42.8 -0.5**
comp=Z,20nm,0.9s
SSPA *epP* **pP 00 42 24.4 +0.5**
X30A Coker Ranch, T 42.11 331 ⇑P **P 00 41 44.4 +0.8**
baz=42,SNR=11
GDL2 Guadalupe Moun 42.23 325 *eP* **P 00 41 46.1 +1.5**
GDL2 *epP* **pP 00 42 27.2 +1.8**
W31A Holland Ranch, 42.27 332 ⇓P **P 00 41 45.4 +0.5**
baz=42,SNR=14
324A Moseley Ranch, 42.33 323 ⇓P **P 00 41 46.0 +0.4**
baz=42,SNR=21
126A Clayton Basin, 42.37 326 ⇓P **P 00 41 46.7 +0.9**
baz=42,SNR=9.8
225A Deer Hill, Car 42.43 325 ⇑P **P 00 41 47.3 +0.9**
baz=43,SNR=13
Z27A Tatum 42.43 327 ⇑P **P 00 41 47.2 +0.9**
baz=43,SNR=6.7
X29A Tulia 42.52 330 ⇓P **P 00 41 47.6 +0.6**
baz=43,SNR=13
W30A Crocket Farms 42.56 332 ⇑P **P 00 41 48.0 +0.7**
baz=43
CPRX Cap Rock 42.57 326 *eP* **P 00 41 48.7 +1.3**
comp=Z,0.7nm,0.3s
MSTX Muleshoe 42.70 328 ⇑P **P 00 41 48.9 +0.5**
baz=43,SNR=12
V31A Spring Creek L 42.70 333 ⇓P **P 00 41 49.4 +1.0**
baz=43,SNR=11
125A Gardner Draw, 42.73 325 ⇑P **P 00 41 49.9 +1.2**
baz=43,SNR=24
224A Cornudas Mount 42.81 324 ⇓P **P 00 41 50.1 +0.7**
baz=43
Z26A Caprock 42.81 327 ⇑P **P 00 41 50.3 +1.0**
baz=43,SNR=28
Y27A Causey 42.84 328 ⇑P **P 00 41 50.0 +0.5**
baz=43,SNR=15
AMTX Amarillo 42.86 330 *eP* **P 00 41 50.1 +0.4**
comp=Z,22nm,0.5s
AMTX *ePcP* **PcP 00 43 37.1 0.0**
AMTX *eScP* **ScP 00 47 11.1 +0.7**
AMTX Amarillo 42.86 330 ⇓P **P 00 41 50.0 +0.4**
baz=43,SNR=16
W29A Amraillo 43.03 331 ⇑P **P 00 41 51.1 0.0**
baz=43,SNR=6.3
ALLY Alegheny Colle 43.18 357 *eP* **P 00 41 51.8 -0.2**
comp=Z,65nm,1.1s
ALLY *epP* **pP 00 42 32.8 -0.1**
U31A Nine Bar Ranch 43.20 333 ⇓P **P 00 41 53.0 +0.7**
baz=43
Y26A Elida 43.22 327 ⇑P **P 00 41 53.4 +0.8**
baz=43
124A Stringfield Ra 43.22 325 ⇓P **P 00 41 54.0 +1.3**
baz=43,SNR=18
Z25A Roswell 43.23 326 ⇓P **P 00 41 53.9 +1.2**
baz=43,SNR=30
HDIL Hopedale 43.38 347 *eP* **P 00 41 51.5 -2.2**
comp=Z,118nm,0.6s
X27A F and S Farms, 43.39 329 ⇑P **P 00 41 54.6 +0.6**
baz=44,SNR=5.0
Z24A Sheeppen Canyo 43.63 325 ⇓P **P 00 41 57.2 +1.2**
baz=44,SNR=28
ERPA Erie 43.63 357 *eP* **P 00 41 54.9 -0.7**
comp=Z,70nm,1.1s
BINY Binghamton 43.68 2 *eP* **P 00 41 56.3 +0.3**
comp=Z,57nm,0.9s
BINY *epP* **pP 00 42 37.4 +0.5**
X26A CR and CF Fran 43.69 328 ⇓P **P 00 41 57.0 +0.6**
baz=44,SNR=5.5
Y25A Mesa, Roswell 43.69 327 ⇑P **P 00 41 57.2 +0.8**
baz=44
U30A WK&E Inc. Balk 43.70 333 ⇓P **P 00 41 57.4 +1.1**
baz=44,SNR=8.5
W27A Bowe Ranch, En 43.70 329 ⇑P **P 00 41 57.1 +0.7**
baz=44,SNR=12
T31A Randall Ranch, 43.73 334 ⇓P **P 00 41 57.1 +0.6**
baz=44,SNR=16
222A Williams Famil 43.77 323 ⇓P **P 00 41 58.8 +1.8**
baz=44,SNR=11
V28A Channing 43.81 331 ⇓P **P 00 41 58.0 +0.7**
baz=44
QUA2 Belchertown 43.98 5 *eP* **P 00 41 57.3 -1.1**
comp=Z,14nm,0.9s
T30A Plains 44.07 333 ⇑P **P 00 42 00.0 +0.8**
baz=44
Z23A Rita Site, Whi 44.08 325 ⇓P **P 00 42 00.8 +1.3**
baz=44,SNR=15
W26A Owens Ranch, T 44.08 329 ⇑P **P 00 41 59.5 +0.1**
baz=44
S31A Mullinville 44.08 335 ⇓P **P 00 42 00.1 +0.7**
baz=44,SNR=11
Y24A Capitan 44.11 326 ⇓P **P 00 42 01.2 +1.4**
baz=44,SNR=21
221A Mesquite Ranch 44.12 322 ⇑P **P 00 42 01.8 +1.9**
baz=44
122A Conniff Cattle 44.13 323 ⇑P **P 00 42 01.7 +1.8**
baz=44
X25A Clemmons Ranch 44.13 327 ⇑P **P 00 42 00.9 +1.0**
baz=44
320A Kipp Ranch, An 44.13 321 ⇓P **P 00 42 01.5 +1.5**
baz=44,SNR=6.9
KSU1 Kansas State U 44.22 339 *eP* **P 00 41 59.4 -1.0**
comp=Z,47nm,0.6s
Y23A Lovelace Mesa, 44.46 325 ⇓P **P 00 42 03.7 +1.1**
baz=45,SNR=21
121A Cookes Peak, D 44.48 323 ⇑P **P 00 42 04.3 +1.6**
baz=45,SNR=12
Z22A Elephant Butte 44.50 324 ⇓P **P 00 42 03.7 +0.8**
baz=45,SNR=14
T29A Hugoton 44.50 333 ⇑P **P 00 42 03.7 +0.9**
baz=45,SNR=9.0
220A Playas Peak, P 44.51 321 ⇑P **P 00 42 04.2 +1.3**
baz=45,SNR=20
S30A Montezuma 44.53 334 ⇓P **P 00 42 03.7 +0.8**
baz=45,SNR=7.1
W25A X Bar L Ranch, 44.54 328 ⇑P **P 00 42 03.9 +0.7**
baz=45,SNR=13
X24A Lazy VL Ranch, 44.58 327 ⇑P **P 00 42 04.4 +0.9**
baz=45
V26A Tequesquite Ra 44.64 329 ⇓P **P 00 42 05.0 +1.1**
baz=45,SNR=35
319A Douglas 44.64 320 ⇑P **P 00 42 04.8 +0.9**
baz=45,SNR=15
U27A Thompson Grove 44.64 331 ⇓P **P 00 42 04.6 +0.7**
baz=45,SNR=6.1
S29A Ulysses 44.80 333 ⇑P **P 00 42 06.0 +0.9**
baz=45,SNR=7.0
T28A Walsh 44.86 332 ⇓P **P 00 42 06.1 +0.6**
baz=45,SNR=5.7
BNM Barren Site 44.95 325 *eP* **P 00 42 07.1 +0.6**
comp=Z,10nm,0.9s
BNM *epP* **pP 00 42 48.2 +0.5**
BNM *ePcP* **PcP 00 43 45.3 +0.8**
BNM *eScP* **ScP 00 47 20.5 +1.4**
Z21A St. Cloud Mine 44.96 323 ⇓P **P 00 42 08.1 +1.5**
baz=45,SNR=11
ACCN Adirondack Com 44.97 4 *eP* **P 00 42 06.2 +0.1**
comp=Z,23nm,1.1s
R30A Dighton 44.98 334 ⇑P **P 00 42 07.3 +0.9**
baz=45
Y22A Socorro 44.99 325 ⇑P **P 00 42 07.4 +0.7**
baz=45,SNR=6.2
X23A Hourglass Bar 45.01 326 ⇓P **P 00 42 07.8 +0.9**
baz=45,SNR=13
120A U Bar Ranch, L 45.01 322 ⇓P **P 00 42 08.4 +1.4**
baz=45
W24A Lazy 6 Ranch, 45.05 327 ⇓P **P 00 42 08.0 +0.8**
baz=45,SNR=14
LPM Los Pinos Moun 45.06 325 *eP* **P 00 42 08.7 +1.4**
U26A Atchley Ranch, 45.08 330 ⇑P **P 00 42 08.4 +1.0**
baz=45
V25A Rancho No Teng 45.10 328 ⇓P **P 00 42 08.8 +1.2**
baz=45,SNR=26
T27A Campo 45.10 331 ⇓P **P 00 42 08.1 +0.6**
baz=45,SNR=13
S28A Manter 45.14 332 ⇓P **P 00 42 08.5 +0.8**
baz=45,SNR=17
LENM Lemitar 45.16 325 *eP* **P 00 42 09.2 +1.2**
CBKS Cedar Bluff 45.20 335 *eP* **P 00 42 08.7 +0.6**
CBKS pmax pmax
comp=Z,81nm,0.7s
CBKS Cedar Bluff 45.20 335 *eP* **P 00 42 08.7 +0.6**
comp=Z,81nm,0.7s
V24A Rampart Ranch, 45.36 328 ⇓P **P 00 42 10.9 +1.2**
baz=46,SNR=19
Z20A Nine Sixteen R 45.38 322 ⇑P **P 00 42 11.3 +1.5**
baz=46,SNR=17
HNH Hanover 45.40 5 *eP* **P 00 42 09.9 +0.3**
W23A Werner Place, 45.41 326 ⇑P **P 00 42 11.2 +1.1**
baz=46,SNR=9.5
LAZ Ladron 45.42 325 *eP* **P 00 42 10.8 +0.7**
comp=Z,3.5nm,0.8s
LAZ *epP* **pP 00 42 53.6 +2.2**
LAZ *eScP* **ScP 00 47 21.9 +0.9**
X22A Bernardo 45.42 325 ⇑P **P 00 42 11.5 +1.4**
baz=46,SNR=5.2
U25A Circle Dot Ran 45.42 329 ⇓P **P 00 42 10.9 +0.8**
baz=46,SNR=12
ANMO Albuquerque 45.43 326 *eP* **P 00 42 11.3 +1.1**
comp=Z,33nm,0.6s
ANMO *epP* **pP 00 42 53.2 +1.7**
ANMO *eScP* **ScP 00 47 21.1 +0.1**
ANMO Albuquerque 45.43 326 P **P 00 42 11.4 +1.3**
comp=Z,30nm,0.6s,baz=140,slow=9.3,SNR=139
ANMO ScP **ScP 00 47 20.6 -0.4**
comp=Z,2.3nm,1.0s,baz=158,slow=7.0,SNR=4.4
Y21A Point of Rocks 45.45 324 ⇑P **P 00 42 11.8 +1.4**
baz=46,SNR=12
R29A Marienthal 45.47 334 ⇑P **P 00 42 11.2 +0.9**
baz=46
NCB Newcomb 45.52 3 *eP* **P 00 42 10.4 -0.1**
comp=Z,21nm,0.6s
SCIA State Center 45.66 344 *eP* **P 00 42 09.4 -2.2**
comp=Z,63nm,0.9s
SCIA *epP* **pP 00 42 51.9 -1.1**
R28A Tribune 45.71 333 ⇓P **P 00 42 13.0 +0.8**
baz=46
Y20A Horse Springs, 45.80 323 ⇑P **P 00 42 14.8 +1.6**
baz=46,SNR=16
X21A Alamocita Cree 45.83 324 ⇓P **P 00 42 15.0 +1.6**
baz=46,SNR=23
V23A Ortiz Mt. (NFS 45.87 327 ⇓P **P 00 42 15.1 +1.4**
baz=46,SNR=10
S26A Kim 45.91 331 ⇑P **P 00 42 15.2 +1.4**
baz=46,SNR=13
LBNH Lisbon 45.96 6 *eP* **P 00 42 13.8 -0.2**
LBNH *e*PP **pP 00 42 55.3 -0.1**
LBNH pmax pmax
comp=Z,33nm,1.2s
LBNH Lisbon 45.96 6 *eP* **P 00 42 13.8 -0.2**
comp=Z,34nm,1.2s
LBNH *epP* **pP 00 42 55.3 -0.1**
T25A Trinidad 45.99 330 ⇑P **P 00 42 16.0 +1.3**
baz=46,SNR=15
R27A Eads 46.12 332 ⇓P **P 00 42 16.1 +0.7**
baz=46,SNR=8.3
LONY Lake Ozonia 46.15 3 *eP* **P 00 42 15.2 -0.3**
comp=Z,85nm,1.6s
TUC Tucson 46.22 320 *eP* **P 00 42 17.1 +0.8**
TUC pmax pmax
comp=Z,3.0nm,0.9s
TUC Tucson 46.22 320 *eP* **P 00 42 17.1 +0.8**
comp=Z,2.8nm,0.9s
TUC *epP* **pP 00 42 59.9 +2.2**
W21A San Fidel 46.22 325 ⇓P **P 00 42 18.0 +1.6**
baz=46,SNR=13
SADO Sadowa 46.25 358 P **P 00 42 14.9 -1.3**
SADO Sadowa 46.25 358 P **P 00 42 14.9 -1.3**
comp=Z,27nm,0.9s,baz=202,slow=6.8,SNR=16
T24A Torres, Weston 46.27 329 ⇓P **P 00 42 18.3 +1.5**
baz=46
X20A Quemado 46.31 324 ⇑P **P 00 42 18.7 +1.6**
baz=46,SNR=5.4
V22A San Miguel Ran 46.39 327 ⇑P **P 00 42 19.3 +1.5**
baz=46,SNR=13
S25A Robets Cordova 46.41 330 ⇓P **P 00 42 19.2 +1.3**
baz=46,SNR=35
FRNY Flat Rock 46.42 4 *eP* **P 00 42 17.5 0.0**
R26A Arlington 46.43 332 ⇓P **P 00 42 18.9 +1.0**
baz=47,SNR=21
MSNY Massena 46.51 3 *eP* **P 00 42 17.9 -0.3**
comp=Z,426nm,1.0s
MSNY *epP* **pP 00 43 01.0 +1.3**
V21A Milan 46.71 326 ⇑P **P 00 42 21.7 +1.4**
baz=47,SNR=9.6
R25A Fountain Ranch 46.72 331 ⇑P **P 00 42 21.1 +1.0**
baz=47
GLMI Grayling 46.72 353 *eP* **P 00 42 17.9 -1.9**
comp=Z,65nm,0.8s
W20A Ramah 46.72 325 ⇑P **P 00 42 21.9 +1.5**
baz=47
S24A Houchin Ranch, 46.78 330 ⇑P **P 00 42 22.4 +1.5**
baz=47,SNR=14
Q26A Hugo 46.96 332 ⇓P **P 00 42 23.0 +1.0**
baz=47
SDCO Great Sand Dun 47.01 329 *eP* **P 00 42 23.8 +1.2**
comp=Z,18nm,0.6s
SDCO *epP* **pP 00 43 06.1 +1.9**
X18A Snowflake 47.17 323 ⇑P **P 00 42 25.2 +1.5**
baz=47
U21A Nageezi 47.17 326 ⇓P **P 00 42 25.0 +1.1**
baz=47,SNR=16
V20A Brimhall 47.18 325 ⇑P **P 00 42 24.9 +1.1**
baz=47
R24A Sanders Place, 47.19 330 ⇑P **P 00 42 25.3 +1.4**
baz=47
T22A Edith 47.19 328 ⇓P **P 00 42 24.8 +0.8**
baz=47
Q25A Bedland, Calha 47.30 331 ⇑P **P 00 42 25.3 +0.6**
baz=47
214A Organ Pipe Nat 47.32 318 ⇑P **P 00 42 25.7 +0.9**
baz=48,SNR=18
W18A Petrified Fore 47.44 324 ⇑P **P 00 42 27.4 +1.5**
baz=48,SNR=7.9
O27A Beecher Island 47.52 334 ⇓P **P 00 42 27.2 +1.0**
baz=48,SNR=5.1
R23A Moffat 47.52 329 ⇓P **P 00 42 27.5 +1.0**
baz=48,SNR=9.2
T21A Navajo Lake 47.52 327 ⇓P **P 00 42 27.6 +1.1**
baz=48
U20A Newcomb 47.62 326 ⇑P **P 00 42 28.1 +0.9**
baz=48,SNR=7.4
S22A 4UR Ranch, Cre 47.70 328 ⇑P **P 00 42 28.7 +0.8**
baz=48
P25A Willow Gulch B 47.74 332 ⇑P **P 00 42 29.0 +1.0**
baz=48,SNR=9.5
Q24A Divide 47.78 331 ⇓P **P 00 42 29.2 +0.7**
baz=48
OGNE Ogallala 47.95 335 *eP* **P 00 42 29.5 0.0**
comp=Z,22nm,0.6s
OGNE Ogallala 47.95 335 ⇑P **P 00 42 30.2 +0.7**
baz=48,SNR=5.8
X16A Lo Mia Camp, P 48.01 322 ⇑P **P 00 42 31.4 +1.2**
baz=48,SNR=16
R22A Saguache, Gunn 48.02 329 ⇑P **P 00 42 31.6 +1.2**
baz=48
N27A Anderson Farm, 48.05 334 ⇑P **P 00 42 31.2 +0.9**
baz=48
Q23A Hartsel 48.07 330 ⇑P **P 00 42 31.7 +0.9**
baz=48
O25A Wiggins 48.19 333 ⇑P **P 00 42 32.2 +0.7**
baz=48
MVCO Mesa Verde 48.21 326 *eP* **P 00 42 32.5 +0.8**
comp=Z,5.5nm,0.8s
MVCO *epP* **pP 00 43 15.0 +1.5**
MVCO Mesa Verde 48.21 326 ⇑P **P 00 42 32.5 +0.8**
baz=48,SNR=5.7
Z14A Wintersburg 48.28 319 ⇓P **P 00 42 32.9 +0.8**
baz=48
ECSD EROS Data Cent 48.34 341 *eP* **P 00 42 30.5 -2.0**
comp=Z,38nm,1.4s
ECSD *epP* **pP 00 43 12.9 -1.3**
N26A Koester Ranch, 48.36 334 ⇑P **P 00 42 33.5 +0.7**
baz=48
P23A Jefferson 48.43 331 ⇑P **P 00 42 34.8 +1.2**
baz=49
R21A Cimarron 48.54 328 ⇑P **P 00 42 35.1 +0.8**
baz=49
S20A Disappointment 48.58 327 ⇓P **P 00 42 35.9 +1.2**
baz=49
Q22A Crested Butte, 48.58 329 ⇑P **P 00 42 35.7 +1.0**
baz=49
O24A Longmont 48.65 332 ⇓P **P 00 42 35.7 +0.8**
baz=49,SNR=5.6
ISCO Idaho Springs 48.65 331 *eP* **P 00 42 35.9 +0.7**
ISCO *e*PP **pP 00 43 18.3 +1.3**
ISCO pmax pmax
comp=Z,6.0nm,0.6s
ISCO Idaho Springs 48.65 331 *eP* **P 00 42 35.9 +0.7**
comp=Z,6.4nm,0.6s
ISCO *epP* **pP 00 43 18.3 +1.3**
ISCO Idaho Springs 48.65 331 ⇓P **P 00 42 35.9 +0.7**
baz=49,SNR=12
Y14A Wickenburg 48.69 320 ⇑P **P 00 42 36.3 +1.1**
baz=49,SNR=7.2
WUAZ Wupatki 48.69 323 *eP* **P 00 42 36.3 +0.9**
comp=Z,32nm,1.0s
WUAZ *epP* **pP 00 43 19.2 +2.0**
WUAZ *eScP* **ScP 00 47 35.6 +0.8**
WUAZ Wupatki 48.69 323 ⇑P **P 00 42 36.6 +1.2**
baz=49,SNR=21
R20A Redvale 48.85 327 ⇓P **P 00 42 37.7 +1.1**
baz=49,SNR=5.9
SMCO Snowmass 48.85 329 *eP* **P 00 42 37.7 +0.8**
comp=Z,4.7nm,0.7s
SMCO *epP* **pP 00 43 20.4 +1.7**
P22A Eagle 49.06 330 ⇑P **P 00 42 39.2 +1.0**
baz=49,SNR=7.3
N24A Carr 49.11 332 ⇑P **P 00 42 39.6 +1.1**
baz=49
O23A Lake Granby, G 49.12 331 ⇓P **P 00 42 39.7 +1.0**
baz=49,SNR=20
M25A Palm-Egli Farm 49.22 334 ⇓P **P 00 42 40.3 +1.0**
baz=49
PV04 Paradox Valley 49.28 327 *eP* **P 00 42 40.9 +1.0**
PV04 *epP* **pP 00 43 23.1 +1.3**
L26A Underwood Farm 49.29 335 ⇓P **P 00 42 40.3 +0.6**
baz=49
GLA Glamis 49.34 318 *eP* **P 00 42 41.0 +0.8**
GLA pmax pmax
comp=Z,13nm,1.0s
GLA Glamis 49.34 318 *eP* **P 00 42 41.0 +0.8**
comp=Z,13nm,1.0s
GLA Glamis 49.34 318 ⇑P **P 00 42 40.7 +0.5**
baz=50,SNR=5.8
S18A Hurst Farm, Bl 49.38 326 ⇓P **P 00 42 41.6 +0.9**
baz=50
O22A Kremmling 49.39 331 ⇑P **P 00 42 41.2 +0.4**
baz=50,SNR=21
Y12C Blythe 49.56 319 ⇑P **P 00 42 43.3 +1.5**
baz=50
M24A Cheyenne 49.59 333 ⇑P **P 00 42 43.0 +0.9**
baz=50
PDMCI Parker Dam,Lak 49.65 320 ⇓P **P 00 42 43.3 +0.8**
baz=50
N23A Red Feather La 49.66 332 ⇓P **P 00 42 43.3 +0.5**
baz=50,SNR=5.7
PHWY Pilot Hill 49.75 332 *eP* **P 00 42 44.2 +0.7**
comp=Z,11nm,0.6s
L25A Engebretsen Ra 49.77 334 ⇑P **P 00 42 44.4 +1.1**
baz=50
U15A North Rim 49.85 323 ⇑P **P 00 42 46.0 +1.6**
baz=50,SNR=11
SWSC Sam W. Stewart 49.93 317 ⇑P **P 00 42 45.8 +1.2**
baz=50
W13A Hualapai Mount 49.98 321 ⇑P **P 00 42 46.6 +1.4**
baz=50,SNR=19
M23A Laramie 50.01 332 ⇑P **P 00 42 46.1 +0.8**
baz=50
L24A Wheatland 50.10 333 ⇓P **P 00 42 46.9 +1.0**
baz=50
BC3 Big Chuckawall 50.12 318 ⇑P **P 00 42 46.8 +0.6**
baz=50
IRM Iron Mountain 50.22 319 ⇑P **P 00 42 47.8 +0.9**
baz=50,SNR=12
N21A Black Mountain 50.32 330 ⇓P **P 00 42 48.9 +1.1**
baz=50
MONP Monument Peak 50.33 317 ⇓P **P 00 42 49.0 +1.1**
baz=50
L23A Garrett 50.51 333 ⇓P **P 00 42 49.7 +0.6**
baz=51
SRU San Rafael 50.68 327 *eP* **P 00 42 51.2 +0.8**
SRU *e*PP **pP 00 43 33.5 +1.0**
SRU pmax pmax
comp=Z,14nm,1.1s
SRU San Rafael 50.68 327 *eP* **P 00 42 51.2 +0.8**
comp=Z,14nm,1.1s
SRU *epP* **pP 00 43 33.5 +1.0**
SRU *eScP* **ScP 00 47 43.3 +0.1**
SRU San Rafael 50.68 327 ⇓P **P 00 42 51.2 +0.8**
baz=51
BELC Belle Mtn. Jos 50.69 318 ⇑P **P 00 42 51.4 +0.9**
baz=51,SNR=7.2
N20A Spence Gulch, 50.75 330 ⇑P **P 00 42 51.7 +0.8**
baz=51,SNR=13
PFO Pinyon Flat Ob 50.77 317 ⇑P **P 00 42 52.2 +1.1**
baz=51
L22A Ellis Ranch, M 50.78 332 ⇑P **P 00 42 52.1 +1.0**
baz=51

O19A	Miners Draw (B	50.79	329	⇓P	P	00 42 51.8	+0.6
	baz=51						
109C	Camp Elliot, M	50.80	316	⇓P	P	00 42 51.9	+0.8
	baz=51						
M21A	Separation Pea	50.89	331	⇑P	P	00 42 52.7	+0.7
	baz=51						
P18A	Preston Nutter	50.90	327	⇑P	P	00 42 52.7	+0.6
	baz=51,SNR=5.1						
EYMN	Ely	50.90	348	*e*P	P	00 42 49.8	-1.9
	comp=Z,52nm,0.6s						
Q16A	Castle Valley	50.90	326	⇓P	P	00 42 52.7	+0.7
	baz=51						
GMRC	Granite Mounta	50.93	319	⇓P	P	00 42 53.3	+1.1
	baz=51						
P17A	Butcher Ranch,	51.05	327	⇓P	P	00 42 53.8	+0.7
	baz=51,SNR=7.1						
L21A	Rawlins	51.17	331	⇑P	P	00 42 54.7	+0.7
	baz=51						
MSU	Marysvale	51.19	325	*e*P	P	00 42 55.7	+1.5
MSU				*e**PP	pP	00 43 38.3	+1.8
MSU				*e*		00 44 07.1	
MSU				*e*		00 44 54.2	
MSU	Marysvale	51.19	325	*e*P	P	00 42 55.7	+1.5
MSU				*e*pP	pP	00 43 38.2	+1.8
MSU				*e*PcP	PcP	00 44 07.1	+0.2
MSU				*e*PP	PP	00 44 54.2	+1.1
MSU				*e*ScP	ScP	00 47 46.6	+1.1
M20A	Sweetwater, Wa	51.20	330	⇑P	P	00 42 55.1	+0.8
	baz=51,SNR=7.2						
MVU	Marysvale	51.20	325	*e*P	P	00 42 55.9	+1.5
	comp=Z,10nm,1.0s						
MVU				*e*pP	pP	00 43 38.4	+1.7
MVU				*e*PcP	PcP	00 44 07.1	+0.1
MVU				*e*ScP	ScP	00 47 46.9	+1.3
CCUT	Cedar City	51.24	323	*e*P	P	00 42 56.0	+1.4
	comp=Z,6.9nm,1.1s						
CCUT				*e*pP	pP	00 43 39.1	+2.3
CCUT				*e*ScP	ScP	00 47 46.3	+0.6
K22A	Casper	51.30	333	⇑P	P	00 42 55.4	+0.4
	baz=51						
HEC	Hector,Ludlow	51.40	319	⇓P	P	00 42 57.8	+2.1
	baz=52,SNR=5.1						
ARUT	Antelope Range	51.44	323	*e*P	P	00 42 55.3	-0.7
ARUT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARUT	Antelope Range	51.44	323	*e*P	P	00 42 55.3	-0.7
	comp=Z,5.5nm,0.8s						
TUQ	Turquoise Moun	51.50	320	⇑P	P	00 42 57.5	+1.0
	baz=52,SNR=8.3						
K21A	Alcova	51.63	332	⇓P	P	00 42 57.9	+0.5
	baz=52,SNR=5.6						
J22A	Midwest	51.88	333	⇓P	P	00 42 59.6	+0.4
	baz=52						
MPU	Maple Canyon	51.92	327	*e*P	P	00 43 00.1	+0.5
	comp=Z,8.8nm,0.8s						
BFSC	Mount Baldy Ra	51.95	317	⇓P	P	00 43 00.9	+1.1
	baz=52						
GSC	Goldstone	51.99	319	*e*P	P	00 43 01.7	+1.6
GSC				pmax	pmax		
	comp=Z,13nm,0.9s						
GSC	Goldstone	51.99	319	*e*P	P	00 43 01.7	+1.6
	comp=Z,13nm,0.9s						
GSC	Goldstone	51.99	319	⇓P	P	00 43 01.1	+1.0
	baz=52						
DAU	Daniels Canyon	52.00	327	*e*P	P	00 43 01.8	+1.5
DAU				*e**PP	pP	00 43 44.0	+1.4
DAU	Daniels Canyon	52.00	327	*e*P	P	00 43 01.8	+1.5
DAU				*e*pP	pP	00 43 44.0	+1.4
MWC	Mount Wilson	52.21	317	*e*P	P	00 43 03.2	+1.4
MWC				pmax	pmax		
	comp=Z,18nm,0.9s						
MWC	Mount Wilson	52.21	317	*e*P	P	00 43 03.2	+1.4
	comp=Z,18nm,0.9s						
JLU	Jordanelle	52.24	327	*e*P	P	00 43 03.0	+1.0
	comp=Z,14nm,0.7s						
JLU				*e*pP	pP	00 43 45.5	+1.1
L19A	Farson	52.24	330	⇑P	P	00 43 02.7	+0.8
	baz=52						
I22A	9 Mile Ranch,	52.26	334	⇓P	P	00 43 02.2	+0.2
	baz=52						
J21A	Lysite	52.27	333	⇓P	P	00 43 02.6	+0.5
	baz=52						
DECC	Green Verdugo	52.41	317	⇓P	P	00 43 04.0	+0.9
	baz=52						
EFI	East Falkland	52.44	165	*d i*P	P	00 43 04.5	+1.6
EFI				pmax	pmax		
	comp=Z,208nm,1.2s						
EFI	East Falkland	52.44	165	*e*P	P	00 43 04.5	+1.6
	comp=Z,325nm,1.4s						
M17A	Scullys Gap (B	52.45	329	⇑P	P	00 43 03.6	+0.1
	baz=53						
K19A	Absolon Red Bu	52.53	331	⇓P	P	00 43 04.1	+0.1
	baz=53,SNR=11						
EDW2	Edwards Air Fo	52.54	318	⇓P	P	00 43 05.2	+1.1
	baz=53,SNR=12						
I21A	Big Trails, Te	52.56	333	⇓P	P	00 43 04.2	0.0
	baz=53,SNR=8.2						
J20A	Shoshoni	52.57	332	⇑P	P	00 43 05.2	+1.0
	baz=53						
DUG	Dugway	52.70	326	*e*P	P	00 43 06.5	+1.2
DUG				*e**PP	pP	00 43 49.3	+1.6
DUG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DUG	Dugway	52.70	326	*e*P	P	00 43 06.5	+1.2
	comp=Z,8.9nm,0.8s						
DUG				*e*pP	pP	00 43 49.3	+1.6
DUG	Dugway	52.70	326	⇓P	P	00 43 06.4	+1.2
	baz=53,SNR=11						
FURC	Furnace Creek,	52.73	320	⇑P	P	00 43 06.7	+1.4
	baz=53						
BW06	Boulder Array	52.84	331	*e*P	P	00 43 06.0	-0.4
	comp=Z,4.2nm,0.6s						
PDAR	Pinedale Array	52.84	331	P	P	00 43 06.0	-0.3
PDAR				PcP	PcP	00 44 12.2	-0.9
PDAR				ScP	ScP	00 47 52.1	-0.4
PDAR	Pinedale Array	52.84	331	P	P	00 43 06.0	-0.3
	comp=Z,3.9nm,0.6s,baz=126,slow=9.5,SNR=39						
PDAR				PcP	PcP	00 44 12.2	-0.9
	comp=Z,1.5nm,0.7s,baz=103,slow=4.0,SNR=4.5						
PDAR				ScP	ScP	00 47 52.1	-0.4
	comp=Z,1.3nm,1.0s,baz=138,slow=5.6,SNR=4.9						
PDAR				LR	LR	01 05 24.7	
	comp=Z,79nm,21.6s,baz=332,slow=36						
MPMC	Manual Prospec	52.89	319	⇑P	P	00 43 07.4	+0.6
	baz=53,SNR=6.2						
J19A	Crowheart	52.96	331	⇑P	P	00 43 07.4	+0.2
	baz=53						
K18A	Toltan Ranch,	52.98	330	⇑P	P	00 43 08.3	+1.0
	baz=53,SNR=16						
HWUT	Hardware Ranch	53.01	328	*e*P	P	00 43 08.0	+0.4
	comp=Z,12nm,0.6s						
HWUT				*e*pP	pP	00 43 50.7	+0.6
HWUT				*e*PcP	PcP	00 44 13.3	-0.3
I20A	Worland	53.05	333	⇑P	P	00 43 08.2	+0.5
	baz=53,SNR=12						
R11A	Troy Canyon, C	53.09	323	⇑P	P	00 43 09.3	+1.1
	baz=53,SNR=11						
ARVC	Arvin	53.24	317	⇓P	P	00 43 10.5	+1.3
	baz=53						
F23A	Volborg	53.27	336	⇑P	P	00 43 09.3	+0.1
	baz=53,SNR=9.1						
ISA	Isabella	53.31	318	⇑P	P	00 43 10.5	+0.8
	baz=53						
J18A	Kendall Valley	53.39	331	⇓P	P	00 43 10.6	+0.2
	baz=54,SNR=12						
CWC	Cottonwood Cre	53.50	319	⇑P	P	00 43 12.1	+0.9
	baz=54						
USHA	Ushuaia	53.51	174	P	P	00 43 12.3	+1.6
USHA	Ushuaia	53.51	174	P	P	00 43 12.3	+1.6
	comp=Z,41nm,0.7s,baz=344,slow=5.7,SNR=28						
E24A	Baker	53.52	337	⇑P	P	00 43 11.3	+0.3
	baz=54						
I19A	Meeteetse	53.52	332	⇓P	P	00 43 11.6	+0.3
	baz=54,SNR=11						
AHID	Auburn Hatcher	53.60	330	*e*P	P	00 43 12.1	+0.2
	comp=Z,9.8nm,0.7s						
I18A	Diamond G Ranc	53.66	331	⇓P	P	00 43 12.6	+0.3
	baz=54,SNR=6.1						
L15A	Malad City	53.73	328	⇑P	P	00 43 13.0	+0.3
	baz=54,SNR=15						
HVU	Hansel Valley	53.77	328	*e*P	P	00 43 14.2	+1.1
HVU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HVU	Hansel Valley	53.77	328	*e*P	P	00 43 14.2	+1.1
	comp=Z,6.1nm,0.8s						
PKM	Peak Mountain	53.79	317	⇑P	P	00 43 13.9	+0.6
	baz=54						
VES	Vestal, Richgr	53.82	318	⇓P	P	00 43 14.3	+1.1
	baz=54,SNR=6.1						
J17A	Brown Place, J	53.84	330	⇑P	P	00 43 14.2	+0.6
	baz=54,SNR=11						
SNOW	Snow King Moun	53.94	330	*e*P	P	00 43 14.9	+0.5
	comp=Z,7.7nm,0.6s						
LOHW	Long Hollow	53.98	331	*e*P	P	00 43 14.7	+0.1
	comp=Z,5.6nm,0.6s						
TPAW	Teton Pass	54.06	330	*e*P	P	00 43 15.1	-0.1
	comp=Z,6.2nm,0.6s						
ULM	Lac du Bonnet	54.07	345	*e*P	P	00 43 13.2	-1.6
	comp=Z,56nm,0.6s						
ULM	Lac du Bonnet	54.07	345	P	P	00 43 13.2	-1.6
	comp=Z,60nm,0.5s,baz=157,slow=7.9,SNR=83						
ULM				LR	LR	01 06 17.7	
	comp=Z,60nm,19.3s,baz=9.5,slow=36						
MOOW	Moose Ponds	54.15	331	*e*P	P	00 43 15.8	0.0
	comp=Z,3.3nm,0.9s						
MOOW				*e*pP	pP	00 43 58.2	-0.3
I17A	Pilgrim Ck.	54.19	331	⇓P	P	00 43 17.0	+0.9
	baz=54,SNR=6.4						
J16A	Bone	54.23	330	⇓P	P	00 43 16.9	+0.5
	baz=54,SNR=6.1						
K15A	Arbon	54.28	329	⇓P	P	00 43 17.1	+0.4
	baz=54						
IMW	Indian Meadow	54.35	331	*e*P	P	00 43 17.5	+0.2
	comp=Z,8.5nm,0.6s						
MTUM	Tungsten Hills	54.35	320	*e*P	P	00 43 18.4	+1.0
MTUM				*e*pP	pP	00 44 02.1	+2.0
C24A	Savage	54.37	338	⇓P	P	00 43 17.7	+0.6
	baz=54						
ELK	Elko	54.44	325	*e*P	P	00 43 18.9	+0.9
	comp=Z,40nm,0.8s						
ELK				*e*pP	pP	00 44 01.8	+1.0
ELK				*e*PcP	PcP	00 44 18.1	-1.1
ELK				*e*ScP	ScP	00 48 00.1	+0.5
RLMT	Red Lodge	54.47	333	*e*P	P	00 43 18.1	0.0
	comp=Z,6.4nm,0.5s						
RLMT	Red Lodge	54.47	333	⇑P	P	00 43 18.3	+0.2
	baz=55						
LKWY	Lake	54.58	332	*e*P	P	00 43 20.4	+1.4
LKWY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LKWY	Lake	54.58	332	*e*P	P	00 43 20.4	+1.4
	comp=Z,6.0nm,0.6s						
NV11	Mina Array Sit	54.73	321	*e*P	P	00 43 20.8	+0.7
NV11				*e*pP	pP	00 44 03.7	+0.9
J15A	Blackfoot	54.74	329	⇓P	P	00 43 20.9	+0.9
	baz=55,SNR=11						
D22A	Cohagen	54.74	336	⇓P	P	00 43 20.7	+0.9
	baz=55						
NVAR	Mina Array Bea	54.82	321	P	P	00 43 21.7	+0.9
NVAR				pP	pP	00 44 03.2	-0.4
NVAR	Mina Array Bea	54.82	321	P	P	00 43 21.7	+0.9
	comp=Z,4.5nm,0.7s,baz=132,slow=6.9,SNR=26						
NVAR				pP	pP	00 44 03.2	-0.4
	comp=Z,6.1nm,0.9s,baz=132,slow=7.2,SNR=5.3						
C23A	Lambert	54.88	337	⇓P	P	00 43 21.5	+0.7
	baz=55						
YMR	Madison River	54.93	331	*e*P	P	00 43 22.1	+0.7
	comp=Z,13nm,0.6s						
D21A	La Casta Ranch	55.00	336	⇓P	P	00 43 22.5	+0.7
	baz=55						
H16A	Russell Place,	55.09	331	⇑P	P	00 43 24.2	+1.6
	baz=55						
GCMT	Greycliff	55.16	333	*e*P	P	00 43 22.9	-0.1
	comp=Z,12nm,0.6s						
GCMT				*e*pP	pP	00 44 06.4	+0.6
J14A	Carey	55.24	328	⇑P	P	00 43 24.6	+0.9
	baz=55						
F18A	Big Timber	55.27	333	⇑P	P	00 43 24.4	+0.7
	baz=55,SNR=53						
QLMT	Earthquake Lak	55.27	331	*e*P	P	00 43 25.4	+1.6
B23A	Brockton	55.35	338	⇓P	P	00 43 25.0	+0.8
	baz=56,SNR=14						
A24A	Westby	55.38	339	⇓P	P	00 43 25.1	+0.8
	baz=56,SNR=14						
BMN	Battle Mountai	55.39	324	*e*P	P	00 43 25.9	+1.1
BMN				pmax	pmax		
	comp=Z,15nm,0.7s						
BMN	Battle Mountai	55.39	324	*e*P	P	00 43 25.9	+1.1
	comp=Z,15nm,0.7s						
D20A	Manuel Ranch,	55.50	335	⇓P	P	00 43 25.6	+0.3
	baz=56,SNR=8.6						
I14A	Mackay	55.63	329	⇓P	P	00 43 27.2	+0.8
	baz=56,SNR=12						
J13A	Cove Ranch, Pi	55.64	328	⇑P	P	00 43 27.1	+0.6
	baz=56,SNR=10						
C21A	Desert Coulee	55.65	336	⇑P	P	00 43 26.8	+0.5
	baz=56,SNR=13						
F17A	Fitzpatrick Pl	55.71	332	⇑P	P	00 43 27.5	+0.6
	baz=56,SNR=6.0						
H15A	Lima	55.71	330	⇑P	P	00 43 27.7	+0.7
	baz=56,SNR=6.7						
G16A	Moss Hill, Enn	55.75	331	⇑P	P	00 43 28.1	+0.9
	baz=56,SNR=13						
E18A	Harlowton	55.87	333	⇑P	P	00 43 28.4	+0.4
	baz=56						
D19A	Cripps Ranch,	55.87	335	⇓P	P	00 43 28.8	+0.9
	baz=56,SNR=8.7						
HLID	Hailey	55.88	328	*e*P	P	00 43 29.1	+0.8
	comp=Z,4.9nm,0.8s						
HLID				*e*pP	pP	00 44 12.2	+1.0
HLID	Hailey	55.88	328	⇓P	P	00 43 29.0	+0.8
	baz=56,SNR=12						
CMB	Columbia Colle	55.92	320	*e*P	P	00 43 28.7	+0.3
CMB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMB	Columbia Colle	55.92	320	*e*P	P	00 43 28.7	+0.3
	comp=Z,4.7nm,0.9s						
MCMT	McKenzie Canyo	55.97	330	*e*P	P	00 43 29.6	+0.7
	comp=Z,2.8nm,0.7s						
MCMT				*e*pP	pP	00 44 12.7	+0.9
BOZ	Bozeman (W)	55.97	332	*e*P	P	00 43 28.9	+0.2
BOZ				*e**PP	pP	00 44 12.4	+0.7
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BOZ	Bozeman (W)	55.97	332	*e*P	P	00 43 28.9	+0.2
	comp=Z,7.8nm,0.6s						
BOZ				*e*pP	pP	00 44 12.4	+0.7
BOZ	Bozeman (W)	55.97	332	⇓P	P	00 43 29.1	+0.3
	baz=56						
I13A	Wildhorse Cree	55.97	329	⇓P	P	00 43 29.8	+0.9
	baz=56						
G15A	Dillon	56.03	331	⇑P	P	00 43 29.9	+0.7
	baz=56,SNR=6.0						
H14A	Leadore	56.08	330	⇑P	P	00 43 30.4	+0.8
	baz=56,SNR=11						
A22A	Carney Farms,	56.14	338	⇑P	P	00 43 30.5	+0.8
	baz=56,SNR=13						
E17A	Martinsdale	56.21	333	⇑P	P	00 43 31.0	+0.5
	baz=56,SNR=10						
WCN	Washoe City	56.25	321	*e*P	P	00 43 32.1	+1.2
WCN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WCN	Washoe City	56.25	321	*e*P	P	00 43 32.1	+1.2
	comp=Z,6.5nm,1.0s						
C19A	Slack Wire Ran	56.39	335	⇑P	P	00 43 32.1	+0.5
	baz=56,SNR=11						
I12A	Atlanta	56.42	328	⇑P	P	00 43 32.7	+0.7
	baz=56,SNR=11						
LRM	Limekiln Ridge	56.49	331	*e*P	P	00 43 32.9	+0.4
LRM				*e*pP	pP	00 44 15.8	+0.2
H13A	Challis	56.49	329	⇑P	P	00 43 33.5	+1.1
	baz=57,SNR=9.8						
B20A	Solberg Farm,	56.52	336	⇑P	P	00 43 33.0	+0.5
	baz=57						
F15A	Butte	56.52	331	⇑P	P	00 43 33.1	+0.3
	baz=57,SNR=9.3						
MFID	Camas Ranch	56.54	327	*e*P	P	00 43 33.8	+1.0
	comp=Z,24nm,0.9s						
MFID				*e*pP	pP	00 44 17.3	+1.5
MFID	Camas Ranch	56.54	327	⇓P	P	00 43 33.8	+1.0
	baz=57,SNR=21						
G14A	Jackson	56.57	330	⇑P	P	00 43 33.5	+0.4
	baz=57,SNR=10						
E16A	East Helena	56.65	332	⇑P	P	00 43 33.8	+0.4
	baz=57,SNR=8.7						
D17A	Six Diamond Ra	56.66	333	⇓P	P	00 43 33.8	+0.3
	baz=57,SNR=14						
H12A	Diamond D Ranc	56.79	329	⇓P	P	00 43 35.3	+0.7
	baz=57,SNR=12						
HRY	Holter Researc	56.85	332	*e*P	P	00 43 35.5	+0.6
G13A	Cobalt	56.85	330	⇓P	P	00 43 35.5	+0.5
	baz=57						
B19A	Brinkman Farms	56.91	335	⇓P	P	00 43 35.5	+0.3
	baz=57						
EGMT	Eagleton	56.91	335	*e*P	P	00 43 35.5	+0.2
	comp=Z,8.0nm,1.0s						
EGMT				*e*pP	pP	00 44 17.7	-0.7
EGMT				*e*PcP	PcP	00 44 28.0	-0.4
EGMT	Eagleton	56.91	335	⇓P	P	00 43 35.5	+0.2
	baz=57						
D16A	Dana Ranch, Ca	56.95	333	⇑P	P	00 43 36.0	+0.4
	baz=57,SNR=11						
BEKR	Beckworth	56.96	321	*e*P	P	00 43 36.7	+0.8
	comp=Z,7.4nm,1.0s						
BEKR				*e*pP	pP	00 44 20.4	+1.4
SCHQ	Schefferville	56.98	7	*e*P	P	00 43 34.7	-0.8
	comp=Z,23nm,1.1s						
SCHQ	Schefferville	56.98	7	P	P	00 43 34.3	-1.2
	comp=Z,11nm,0.8s,baz=190,slow=5.6,SNR=24						
E15A	Deer Lodge	57.02	332	⇑P	P	00 43 36.3	+0.2
	baz=57,SNR=5.4						
C17A	Wharram Farm,	57.05	334	⇓P	P	00 43 36.4	+0.1
	baz=57,SNR=13						
A19A	Klindworth Far	57.20	336	⇑P	P	00 43 37.6	+0.3
	baz=57,SNR=7.7						
B18A	Beardsley Farm	57.21	335	⇓P	P	00 43 37.7	+0.3
	baz=57						
OHCM	Honcut	57.37	320	*e*P	P	00 43 39.6	+1.2
OHCM				*e*pP	pP	00 44 23.9	+2.2
F13A	Darby	57.39	330	⇑P	P	00 43 39.3	+0.6
	baz=58,SNR=11						
D15A	Lincoln	57.41	332	⇓P	P	00 43 39.2	+0.3
	baz=58,SNR=6.0						
E14A	Clinton	57.42	331	⇓P	P	00 43 39.3	+0.4
	baz=58,SNR=19						
WVOR	Wild Horse Val	57.48	325	*e*P	P	00 43 39.7	+0.3
WVOR				*e**PP	pP	00 44 23.4	+0.8
WVOR				pmax	pmax		
	comp=Z,25nm,1.0s						
WVOR	Wild Horse Val	57.48	325	*e*P	P	00 43 39.7	+0.3
	comp=Z,25nm,1.0s						
WVOR				*e*pP	pP	00 44 23.4	+0.8
C16A	Fuhringer Ranc	57.62	333	⇑P	P	00 43 40.5	+0.3
	baz=58						
A18A	Metzger Ranch,	57.64	335	⇑P	P	00 43 40.4	+0.1
	baz=58,SNR=7.1						
CHMT	Chamberlain Mo	57.66	332	*e*P	P	00 43 40.0	-0.7
	comp=Z,1.1nm,0.6s						
E13A	Victor	57.78	331	⇓P	P	00 43 41.7	+0.3
	baz=58						
F12A	Elk City	57.83	330	⇓P	P	00 43 42.0	+0.3
	baz=58,SNR=19						
MSO	Missoula	57.93	331	*e*P	P	00 43 43.0	+0.6
	comp=Z,3.0nm,0.6s						
MSO				*e*pP	pP	00 44 26.4	+0.6
MSO	Missoula	57.93	331	⇑P	P	00 43 43.3	+0.9
	baz=58						
C15A	Salmond Ranch,	57.99	333	⇓P	P	00 43 43.6	+0.7
	baz=58,SNR=9.4						
SLMT	Seeley Lake	58.01	332	*e*P	P	00 43 43.4	+0.4
A17A	Triple J Farms	58.02	335	⇑P	P	00 43 43.1	+0.1
	baz=58,SNR=7.2						
B16A	M & M Farms, S	58.06	334	⇓P	P	00 43 43.1	-0.2
	baz=58						
MOD	Modoc	58.13	323	*e*P	P	00 43 44.4	+0.5
	comp=Z,14nm,1.0s						
BMO	Blue Mountains	58.29	328	*e*P	P	00 43 44.3	-0.6
	comp=Z,5.4nm,1.3s						
B15A	Bradely Ranch,	58.37	333	⇓P	P	00 43 45.6	+0.2
	baz=58,SNR=6.6						
D13A	Huson	58.37	331	⇑P	P	00 43 45.9	+0.5
	baz=58,SNR=12						
A16A	West Butte Ran	58.41	334	⇑P	P	00 43 46.5	+0.8
	baz=58						
LTIM	Timbered Crate	58.42	322	P	P	00 43 46.8	+0.9
SWMT	Swartz Lake	58.45	332	*e*P	P	00 43 46.9	+0.9
C14A	Swan Lake	58.51	332	⇓P	P	00 43 47.9	+1.4
	baz=59						
YBMT	Yellow Bay	58.70	332	*e*P	P	00 43 48.3	+0.5
	comp=Z,6.5nm,0.6s						
B14A	Marquette Ranc	58.72	333	⇓P	P	00 43 48.4	+0.5
	baz=59,SNR=17						
WDC	Whiskeytown Da	58.74	321	*e*P	P	00 43 46.6	-1.4
WDC				*e**PP	pP	00 44 30.9	-0.5
WDC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WDC	Whiskeytown Da	58.74	321	*e*P	P	00 43 46.6	-1.4
	comp=Z,4.0nm,0.8s						
WDC				*e*pP	pP	00 44 30.9	-0.5
JTMT	Jette	58.75	332	*e*P	P	00 43 49.0	+0.8
JTMT				*e*pP	pP	00 44 32.1	+0.6
D12A	Red Ives Fores	58.77	331	⇑P	P	00 43 48.5	+0.2
	baz=59						
C13A	Hot Springs	58.84	332	⇓P	P	00 43 49.4	+0.7
	baz=59,SNR=5.8						
KIPM	Iron Peak	58.91	320	*e*P	P	00 43 50.0	+0.6
	comp=Z,5.5nm,0.8s						
KIPM				*e*PcP	pP	00 44 34.2	+1.4
A15A	Johnson Ranch,	58.93	334	⇓P	P	00 43 49.9	+0.6
	baz=59						
BLMT	Blacktail Moun	58.98	332	*e*P	P	00 43 50.7	+0.9
BSMT	Bassoo Peak	59.06	332	*e*P	P	00 43 51.2	+0.8
BSMT				*e*PcP	PcP	00 44 36.9	-0.2
B13A	Whitefish	59.28	332	⇑P	P	00 43 52.4	+0.7
	baz=59						
C12B	Naegeli Ranch,	59.29	331	⇑P	P	00 43 52.8	+1.1
	baz=59						
YBH	Yreka Blue Hor	59.49	322	*e*P	P	00 43 52.2	-1.1
	comp=Z,6.9nm,0.9s						
YBH				*e*PcP	pP	00 44 36.2	-0.6
BUOR	Burton Butte	59.52	323	P	P	00 43 54.3	+0.7
WALA	Waterton Lakes	59.52	333	*e*P	P	00 43 53.0	-0.4
	comp=Z,0.3nm,0.9s						
KHMM	Horse Mountain	59.65	321	*e*P	P	00 43 55.3	+0.8
	comp=Z,25nm,1.2s						
KHMM				*e*PcP	PcP	00 44 39.3	-0.3
A13A	Flathead Natio	59.66	333	⇑P	P	00 43 55.1	+0.8
	baz=60						
FFC	Flin Flon	59.73	344	*i* P	P	00 43 53.8	-0.7
FFC	Flin Flon	59.73	344	*e*P	P	00 43 53.6	-0.9
	comp=Z,34nm,1.3s						
C11A	Tepee Creek (N	59.76	331	⇓P	P	00 43 55.5	+0.5
	baz=60						
KRMB	Red Mountain	60.12	321	*e*P	P	00 43 58.8	+1.2
	comp=Z,42nm,1.7s						
KRMB				*e*pP	PcP	00 44 42.3	+0.9
HUMO	Hull Mountain	60.14	323	*e*P	P	00 43 57.4	-0.3
	comp=Z,85nm,3.0s						
VTHM	Trough	60.27	326	P	P	00 44 00.2	+1.7
HAWA	Hanford	60.48	328	*e*P	P	00 44 00.4	+0.6
	comp=Z,12nm,1.3s						
NEW	Newport	60.48	331	*e*P	P	00 43 59.9	+0.1
	comp=Z,7.1nm,0.7s						
NEW				*e*PcP	pP	00 44 44.0	+0.6
NEW	Newport	60.48	331	⇑P	P	00 44 00.0	+0.2
	baz=61						
KBO	Bosley Butte	60.70	322	*e*P	P	00 44 02.3	+0.9
	comp=Z,13nm,0.9s						
VFP	Flag Point	60.86	326	P	P	00 44 04.1	+1.5
ETW	Entiat	61.67	328	P	P	00 44 09.0	+1.0
WPW	White Pass	61.75	327	P	P	00 44 09.7	+1.2
LON	Longmire	61.93	327	*e*P	P	00 44 10.4	+0.8
LON				*e**PP	pP	00 44 54.1	+0.7
LON				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LON	Longmire	61.93	327	*e*P	P	00 44 10.4	+0.8
	comp=Z,6.0nm,0.8s						
LON				*e*pP	pP	00 44 54.1	+0.7
BBTS	Babate	62.43	73	P	P	00 44 12.1	-1.3
BBTS	Babate	62.43	73	P	P	00 44 12.1	-1.3
	comp=Z,30nm,0.8s,baz=259,slow=3.3,SNR=6.6						
NLWA	Neilton Lookou	63.44	327	*e*P	P	00 44 21.1	+1.6
	comp=Z,13nm,0.9s						
NLWA				*e*pP	pP	00 45 04.2	+0.6
PMSA	Palmer Station	63.73	174	P	P	00 44 21.6	+0.6
PMSA	Palmer Station	63.73	174	P	P	00 44 21.6	+0.6
	comp=Z,50nm,1.1s,baz=320,slow=13,SNR=4.1						
PGC	Sidney	63.96	328	*e*P	P	00 44 24.2	+1.4
	comp=Z,0.6nm,1.0s						
YKA	Yellowknife Ar	69.85	343	P	P	00 44 58.8	-0.9
YKA				⇑*e*		01 12 59.4	
YKA	Yellowknife Ar	69.85	343	P	P	00 44 58.8	-0.9
	comp=Z,7.0nm,0.7s,baz=140,slow=6.0,SNR=172						
YKA				PKP2bc		01 12 59.3	
	comp=Z,0.6nm,1.1s,baz=327,slow=3.1,SNR=5.6						
YKW3	Yellowknife Ar	69.91	343	*e*P	P	00 44 59.0	-1.1
	comp=Z,0.2nm,0.7s						
SFJD	Kangerlussuaq	71.09	11	*i* P	P	00 45 06.0	-1.1
	comp=Z,5.9nm,1.0s						
PPT	Papeete	72.45	252	LR	LR	01 11 24.0	

comp=Z,98nm,18.4s,baz=184,slow=31
LIC Lamto 72.73 83⇑ *i*P P 00 45 18.0 0.0
comp=Z,93nm,0.8s,baz=264
LIC Lamto 72.73 83⇑ *i*P P 00 45 18.0 0.0
comp=Z,93nm,0.8s
DLBC Dease Lake 72.84 334 *e*P P 00 45 18.3 +0.4
DLBC epP pP 00 46 03.2 +0.2
DLBC Dease Lake 72.84 334 LR LR 01 19 06.1
comp=Z,47nm,20.0s,baz=149,slow=37
DBIC Dimbokro 72.93 83 *e*P P 00 45 19.4 +0.2
comp=Z,134nm,1.3s
DBIC Dimbokro 72.93 83 P P **00 45 19.4 +0.2**
comp=Z,67nm,0.9s,baz=248,slow=5.2,SNR=52
EVOP Sao Brissos 75.00 49 *e*P P 00 45 31.2 +0.5
EVOP pmax pmax
comp=Z,15nm,0.8s
EVOP Sao Brissos 75.00 49 *e*P P 00 45 31.2 +0.5
comp=Z,14nm,0.8s
EVO Evora 75.08 49 *e*P P 00 45 31.2 0.0
comp=Z,14nm,0.8s
EVO *e*R
comp=Z,74nm,20.5s
PNL Peninsula 77.65 333 *e*P P 00 45 44.8 -0.4
comp=Z,15nm,0.9s
SUMG Summit 78.08 11⇑ *i*P P 00 45 47.6 -0.2
SUMG pmax pmax
comp=Z,35nm,0.9s
SUMG Summit 78.08 11 *e*P P 00 45 47.3 -0.5
comp=Z,47nm,0.8s
SUMG epP pP **00 46 32.9 -0.7**
SUMG Summit 78.08 11⇑ *i*P P 00 45 47.6 -0.2
comp=Z,35nm,0.9s
ESDC Sonseca Array 78.41 49 P P **00 45 49.1 -0.8**
ESDC pP pP **00 46 33.6 -2.1**
ESDC Sonseca Array 78.41 49 P P **00 45 49.1 -0.8**
comp=Z,1.1nm,0.5s,baz=270,slow=4.6,SNR=10
ESDC pP pP **00 46 33.6 -2.1**
comp=Z,2.1nm,0.7s,baz=259,slow=5.9,SNR=5.0
INK Inuvik 79.58 342 LR LR 01 21 32.9
comp=Z,62nm,19.1s,baz=116,slow=36
TOA0 Torodi Ar. Sit 79.82 76 *e*P P 00 45 57.4 -0.6
TORD Torodi Ar. Bea 79.82 76 P P **00 45 57.5 -0.5**
TORD PKKPbc **PKKPbc 01 04 41.2 -1.6**
TORD Torodi Ar. Bea 79.82 76 P P **00 45 57.5 -0.5**
comp=Z,9.0nm,0.3s,baz=284,slow=5.9,SNR=428
TORD PKKPbc **PKKPbc 01 04 41.2 -1.6**
comp=Z,1.0nm,1.0s,baz=102,slow=1.8,SNR=7.2
RAGM Ragged Mountai 80.37 332 *e*P P 00 46 01.6 +1.6
comp=Z,14nm,1.0s
BMRM Bremner River 80.54 333 *e*P P 00 46 01.8 +0.9
comp=Z,12nm,1.0s
EGAK Eagle 80.57 337 *e*P P 00 46 01.4 +0.5
comp=Z,22nm,0.9s
SCO Scoresbysund 80.61 16 *i* P P 00 46 01.4 +0.4
SCO pmax pmax
comp=Z,7.0nm,1.0s
SCO Scoresbysund 80.61 16 *i* P P 00 46 01.4 +0.4
comp=Z,6.7nm,1.0s
QUIF Quistinic 80.75 41 *e*P P 00 46 01.8 -0.4
comp=Z,49nm,1.2s
QUIF Quistinic 80.75 41 *e*P P 00 46 01.8 -0.4
QUIF pmax pmax
comp=Z,49nm,1.2s
QUIF Quistinic 80.75 41 *e*P P 00 46 01.8 -0.4
comp=Z,49nm,1.2s
ROSF Rostrenen 80.77 41 *e*P P 00 46 03.0 +0.7
ROSF Rostrenen 80.77 41 *e*P P 00 46 03.0 +0.7
ROSF Rostrenen 80.77 41 *e*P P 00 46 03.0 +0.7
SJPF Ste Jean 81.11 46 *e*P P 00 46 04.2 -0.1
comp=Z,17nm,1.0s
SJPF Ste Jean 81.11 46 *e*P P 00 46 04.2 -0.1
SJPF pmax pmax
comp=Z,17nm,1.0s
SJPF Ste Jean 81.11 46 *e*P P 00 46 04.2 -0.1
comp=Z,17nm,1.0s
DIV Divide 81.13 333 *e*P P 00 46 04.9 +0.8
comp=Z,8.2nm,1.0s
SGMF Saint Gilles 81.22 41 *e*P P 00 46 04.1 -0.6
comp=Z,32nm,1.1s
SGMF epP pP **00 46 51.3 +0.5**
SGMF Saint Gilles 81.22 41 *e*P P 00 46 04.1 -0.6
SGMF pmax pmax
comp=Z,32nm,1.1s
SGMF Saint Gilles 81.22 41 *e*P P 00 46 04.1 -0.6
comp=Z,32nm,1.1s
SGMF epP pP **00 46 51.3 +0.5**
DOT Dot Lake 81.29 336 *e*P P 00 46 05.2 +0.4
comp=Z,26nm,0.7s
ETSF Etsaut 81.55 46 *e*P P 00 46 06.5 -0.2
comp=Z,15nm,0.9s
ETSF Etsaut 81.55 46 *e*P P 00 46 06.5 -0.2
ETSF pmax pmax
comp=Z,15nm,0.9s
ETSF Etsaut 81.55 46 *e*P P 00 46 06.5 -0.2
comp=Z,15nm,0.9s
PAX Paxson 81.64 335 *e*P P 00 46 06.8 +0.1
PAX pmax pmax
comp=Z,11nm,0.8s
PAX Paxson 81.64 335 *e*P P 00 46 06.8 +0.1
comp=Z,11nm,0.8s
EPF Esparros 82.22 46 *e*P P 00 46 10.0 -0.1
comp=Z,76nm,1.5s
EPF epP pP **00 46 57.4 +1.0**
EPF Esparros 82.22 46 *e*P P 00 46 10.0 -0.1
EPF pmax pmax
comp=Z,76nm,1.5s
EPF Esparros 82.22 46 *e*P P 00 46 10.0 -0.1
comp=Z,76nm,1.5s
EPF epP pP **00 46 57.4 +1.0**
GRR Gorron 82.36 41 *e*P P 00 46 09.7 -0.9
comp=Z,19nm,0.8s
GRR Gorron 82.36 41 *e*P P 00 46 09.7 -0.9
GRR pmax pmax
comp=Z,19nm,0.8s
GRR Gorron 82.36 41 *e*P P 00 46 09.7 -0.9
comp=Z,19nm,0.8s
MFF Saint Martin d 82.50 43 *e*P P 00 46 10.9 -0.5
comp=Z,53nm,1.2s
MFF Saint Martin d 82.50 43 *e*P P 00 46 10.9 -0.5
MFF pmax pmax
comp=Z,53nm,1.2s
MFF Saint Martin d 82.50 43 *e*P P 00 46 10.9 -0.5
comp=Z,53nm,1.2s
SML Sawmill 82.52 333 *e*P P 00 46 12.2 +0.9
SML pmax pmax
comp=Z,4.0nm,0.8s
SML Sawmill 82.52 333 *e*P P 00 46 12.2 +0.9
comp=Z,4.1nm,0.8s
FLN La Foliniere 82.68 41 *e*P P 00 46 11.0 -1.3
comp=Z,35nm,0.9s
FLN epP pP **00 46 59.1 +0.5**
FLN *e*R
comp=Z,55nm,19.5s
FLN La Foliniere 82.68 41 *e*P P 00 46 11.0 -1.3
FLN pmax pmax
comp=Z,35nm,0.9s
FLN La Foliniere 82.68 41 *e*P P 00 46 11.0 -1.3
comp=Z,35nm,0.9s
FLN epP pP **00 46 59.1 +0.5**
LFF La Frestale 82.82 44 *e*P P 00 46 12.7 -0.4
comp=Z,25nm,0.8s
LFF La Frestale 82.82 44 *e*P P 00 46 12.7 -0.4
LFF pmax pmax
comp=Z,25nm,0.8s
LFF La Frestale 82.82 44 *e*P P 00 46 12.7 -0.4
comp=Z,25nm,0.8s
ILAR Eielson Array 82.84 336 P P **00 46 12.5 -0.3**
ILAR pP pP **00 46 57.1 -2.0**
ILAR PP PP **00 49 23.1 -2.7**
ILAR Eielson Array 82.84 336 P P **00 46 12.5 -0.3**
comp=Z,6.0nm,0.7s,baz=128,slow=3.9,SNR=56
ILAR pP pP **00 46 57.1 -2.0**
comp=Z,2.9nm,0.9s,baz=118,slow=3.4,SNR=3.5
ILAR PP PP **00 49 23.1 -2.7**
comp=Z,0.7nm,0.8s,baz=110,slow=9.1,SNR=5.2
ILAR LR LR 01 23 00.9
comp=Z,33nm,21.7s,baz=280,slow=35
LDF La Druitiere 82.88 41 *e*P P 00 46 12.1 -1.2
comp=Z,43nm,1.1s
LDF epP pP **00 47 00.0 +0.4**
LDF La Druitiere 82.88 41 *e*P P 00 46 12.1 -1.2
LDF pmax pmax
comp=Z,43nm,1.1s
LDF La Druitiere 82.88 41 *e*P P 00 46 12.1 -1.2
comp=Z,43nm,1.1s
LDF *e*pP pP **00 47 00.0 +0.4**

COLA College 83.27 336 *e*P P 00 46 15.4 +0.5
COLA pmax pmax
comp=Z,12nm,1.0s
COLA College 83.27 336 *e*P P 00 46 15.4 +0.5
comp=Z,12nm,1.0s
MCK McKinley 83.36 335 *e*P P 00 46 16.2 +0.6
MCK pmax pmax
comp=Z,15nm,0.9s
MCK McKinley 83.36 335 *e*P P 00 46 16.1 +0.6
comp=Z,14nm,0.9s
RJF Les Rejaudoux 83.42 44 *e*P P 00 46 15.7 -0.5
comp=Z,48nm,1.2s
RJF *e*pP pP **00 47 02.8 +0.2**
RJF *e*R
comp=Z,71nm,20.5s
RJF Les Rejaudoux 83.42 44 *e*P P 00 46 15.7 -0.5
RJF pmax pmax
comp=Z,48nm,1.2s
RJF Les Rejaudoux 83.42 44 *e*P P 00 46 15.7 -0.5
comp=Z,48nm,1.2s
RJF *e*pP pP **00 47 02.8 +0.2**
SNAA Sanae 83.62 162 *e*P P 00 46 17.6 +0.8
comp=Z,29nm,0.8s
MTLF Montolieu 83.63 46 *e*P P 00 46 16.7 -0.6
comp=Z,74nm,1.3s
MTLF Montolieu 83.63 46 *e*P P 00 46 16.7 -0.6
MTLF pmax pmax
comp=Z,75nm,1.3s
MTLF Montolieu 83.63 46 *e*P P 00 46 16.7 -0.6
comp=Z,74nm,1.3s
CAF Calviac 83.75 45 *e*P P 00 46 17.4 -0.5
comp=Z,38nm,1.2s
CAF *e*pP pP **00 47 04.8 +0.5**
CAF Calviac 83.75 45 *e*P P 00 46 17.4 -0.5
CAF pmax pmax
comp=Z,38nm,1.2s
CAF Calviac 83.75 45 *e*P P 00 46 17.4 -0.5
comp=Z,38nm,1.2s
CAF *e*pP pP **00 47 04.8 +0.5**
TCF Toulx Ste Croi 84.06 43 *e*P P 00 46 18.6 -0.8
comp=Z,33nm,1.1s
TCF *e*pP pP **00 47 05.9 +0.1**
TCF Toulx Ste Croi 84.06 43 *e*P P 00 46 18.6 -0.8
TCF pmax pmax
comp=Z,33nm,1.1s
TCF Toulx Ste Croi 84.06 43 *e*P P 00 46 18.6 -0.8
comp=Z,33nm,1.1s
TCF *e*pP pP **00 47 05.9 +0.1**
SPU Mount Spurr 84.06 332 *e*P P 00 46 19.2 +0.1
HYF Humbligny 84.49 42 *e*P P 00 46 21.2 -0.4
HYF *e*pP pP **00 47 08.6 +0.6**
HYF Humbligny 84.49 42 *e*P P 00 46 21.2 -0.4
HYF *e*pP pP **00 47 08.6 +0.6**
PYM Petit Puy Mans 84.53 44 *e*P P 00 46 21.5 -0.4
PYM Petit Puy Mans 84.53 44 *e*P P 00 46 21.5 -0.4
PYM Petit Puy Mans 84.53 44 *e*P P 00 46 21.5 -0.4
BGF Bois d'Agland 84.53 43 *e*P P 00 46 21.1 -0.7
comp=Z,103nm,1.3s
BGF *e*pP pP **00 47 08.6 +0.4**
BGF Bois d'Agland 84.53 43 *e*P P 00 46 21.1 -0.7
BGF pmax pmax
comp=Z,103nm,1.3s
BGF Bois d'Agland 84.53 43 *e*P P 00 46 21.1 -0.7
comp=Z,103nm,1.3s
BGF *e*pP pP **00 47 08.6 +0.4**
LBL Lubilhac 84.62 44 *e*P P 00 46 22.4 0.0
LBL Lubilhac 84.62 44 *e*P P 00 46 22.4 0.0
LBL Lubilhac 84.62 44 *e*P P 00 46 22.4 0.0
AGO Saint Agoulin 84.66 44 *e*P P 00 46 21.7 -0.7
AGO Saint Agoulin 84.66 44 *e*P P 00 46 21.7 -0.7
DAG Danmarks Havn 84.77 11⇑ *i*P P 00 46 21.7 -0.6
DAG pmax pmax
comp=Z,11nm,0.9s
DAG Danmarks Havn 84.77 11⇑ *i*P P 00 46 21.7 -0.6
comp=Z,14nm,0.9s
COLD Coldfoot 84.90 338 *e*P P 00 46 24.4 +1.3
comp=Z,5.8nm,0.8s
LASF Ste Croix 84.90 46 *e*P P 00 46 23.6 -0.1
comp=Z,60nm,1.3s
LASF *e*pP pP **00 47 11.2 +1.0**
LASF Ste Croix 84.90 46 *e*P P 00 46 23.6 -0.1
comp=Z,60nm,1.3s
LASF *e*pP pP **00 47 11.2 +1.0**
AVF Avril sur Loir 84.91 43 *e*P P 00 46 22.6 -1.0
comp=Z,39nm,1.1s
AVF *e*pP pP **00 47 10.1 0.0**
AVF Avril sur Loir 84.91 43 *e*P P 00 46 22.6 -1.0
AVF pmax pmax
comp=Z,39nm,1.1s
AVF Avril sur Loir 84.91 43 *e*P P 00 46 22.6 -1.0
comp=Z,39nm,1.1s
AVF *e*pP pP **00 47 10.1 0.0**
SSF Saint Saulge 85.05 43 *e*P P 00 46 23.2 -1.1
comp=Z,26nm,1.2s
SSF *e*pP pP **00 47 10.8 -0.1**
SSF Saint Saulge 85.05 43 *e*P P 00 46 23.2 -1.1
SSF pmax pmax
comp=Z,26nm,1.2s
SSF Saint Saulge 85.05 43 *e*P P 00 46 23.2 -1.1
comp=Z,26nm,1.2s
SSF *e*pP pP **00 47 10.8 -0.1**
SMF Signal de Mont 85.22 43 *e*P P 00 46 24.3 -0.9
comp=Z,100nm,1.5s
SMF *e*pP pP **00 47 11.9 +0.1**
SMF Signal de Mont 85.22 43 *e*P P 00 46 24.3 -0.9
SMF pmax pmax
comp=Z,101nm,1.5s
SMF Signal de Mont 85.22 43 *e*P P 00 46 24.3 -0.9
comp=Z,100nm,1.5s
SMF *e*pP pP **00 47 11.9 +0.1**
LOR Lormes 85.31 42 *e*P P 00 46 24.6 -1.1
comp=Z,79nm,1.5s
LOR *e*pP pP **00 47 12.1 -0.1**
LOR *e*R
comp=Z,47nm,17.5s
LOR Lormes 85.31 42 *e*P P 00 46 24.6 -1.1
comp=Z,79nm,1.5s
LOR *e*pP pP **00 47 12.1 -0.1**
VIVF Saint-Julien-l 85.58 45 *e*P P 00 46 26.9 -0.2
comp=Z,41nm,1.3s
VIVF *e*pP pP **00 47 14.3 +0.7**
VIVF Saint-Julien-l 85.58 45 *e*P P 00 46 26.9 -0.2
VIVF pmax pmax
comp=Z,41nm,1.3s
VIVF Saint-Julien-l 85.58 45 *e*P P 00 46 26.9 -0.2
comp=Z,41nm,1.3s
VIVF *e*pP pP **00 47 14.3 +0.7**
BAIF Baives 85.91 40 *e*P P 00 46 27.9 -0.6
comp=Z,23nm,1.2s
BAIF Baives 85.91 40 *e*P P 00 46 27.9 -0.6
BAIF pmax pmax
comp=Z,23nm,1.2s
BAIF Baives 85.91 40 *e*P P 00 46 27.9 -0.6
comp=Z,23nm,1.2s
SNF Seneffe 86.01 39 P P **00 46 28.8 -0.2**
comp=Z,16nm,1.9s
SNF AP pP **00 47 16.4 +0.7**
SMRF Simiane la Rot 86.12 46 *e*P P 00 46 29.6 -0.2
comp=Z,24nm,1.2s
SMRF Simiane la Rot 86.12 46 *e*P P 00 46 29.6 -0.2
comp=Z,24nm,1.2s
DOU Dourbes 86.16 40 P P **00 46 29.3 -0.4**
comp=Z,18nm,1.5s
DOU AP pP **00 47 17.3 +0.9**
SFTF Sexfontaines 86.22 42 *e*P P 00 46 29.3 -0.8
comp=Z,96nm,1.4s
SFTF *e*pP pP **00 47 16.9 +0.2**
SFTF Sexfontaines 86.22 42 *e*P P 00 46 29.3 -0.8
comp=Z,96nm,1.4s
SFTF *e*pP pP **00 47 16.9 +0.2**
MEZF Maizieres J'vi 86.26 41 *e*P P 00 46 29.7 -0.6
comp=Z,53nm,1.1s
MEZF *e*pP pP **00 47 17.3 +0.4**
MEZF Maizieres J'vi 86.26 41 *e*P P 00 46 29.7 -0.6
comp=Z,53nm,1.1s
MEZF *e*pP pP **00 47 17.3 +0.4**
GIVF Givet 86.31 40 *e*P P 00 46 30.2 -0.3
comp=Z,116nm,1.2s
GIVF *e*pP pP **00 47 17.7 +0.6**
GIVF Givet 86.31 40 *e*P P 00 46 30.2 -0.3
GIVF pmax pmax
comp=Z,116nm,1.2s
GIVF Givet 86.31 40 *e*P P 00 46 30.2 -0.3
comp=Z,116nm,1.2s
GIVF *e*pP pP **00 47 17.7 +0.6**

ORIF Oris-en-Rattie 86.44 45 *e*P P 00 46 31.2 -0.2
comp=Z,35nm,1.2s
ORIF *e*pP pP **00 47 19.0 +1.0**
ORIF *e*R
comp=Z,51nm,18.5s
ORIF Oris-en-Rattie 86.44 45 *e*P P 00 46 31.2 -0.2
ORIF pmax pmax
comp=Z,35nm,1.2s
ORIF Oris-en-Rattie 86.44 45 *e*P P 00 46 31.2 -0.2
comp=Z,35nm,1.2s
ORIF *e*pP pP **00 47 19.0 +1.0**
BCLA Clavier 86.65 39 P P **00 46 32.4 +0.3**
comp=Z,20nm,1.9s
BCLA AP pP **00 47 19.7 +0.9**
PAGF Fort de Pagny 86.72 41 *e*P P 00 46 32.1 -0.4
comp=Z,27nm,1.3s
PAGF *e*pP pP **00 47 19.6 +0.4**
PAGF Fort de Pagny 86.72 41 *e*P P 00 46 32.1 -0.4
comp=Z,27nm,1.3s
PAGF *e*pP pP **00 47 19.6 +0.4**
LMR La Mourre 86.73 47 *e*P P 00 46 31.8 -0.9
comp=Z,62nm,1.6s
LMR La Mourre 86.73 47 *e*P P 00 46 31.8 -0.9
LMR pmax pmax
comp=Z,62nm,1.6s
LMR La Mourre 86.73 47 *e*P P 00 46 31.8 -0.9
comp=Z,62nm,1.6s
CABF La Chapelle 86.75 43 *e*P P 00 46 32.1 -0.8
comp=Z,57nm,1.3s
CABF *e*pP pP **00 47 19.9 +0.3**
CABF La Chapelle 86.75 43 *e*P P 00 46 32.1 -0.8
CABF pmax pmax
comp=Z,57nm,1.3s
CABF La Chapelle 86.75 43 *e*P P 00 46 32.1 -0.8
comp=Z,57nm,1.3s
CABF *e*pP pP **00 47 19.9 +0.3**
THEF They Montfort 86.85 42 *e*P P 00 46 32.6 -0.6
THEF They Montfort 86.85 42 *e*P P 00 46 32.6 -0.6
THEF They Montfort 86.85 42 *e*P P 00 46 32.6 -0.6
FRF La Foret Royal 86.86 46 *e*P P 00 46 32.5 -0.8
comp=Z,17nm,0.9s
FRF *e*pP pP **00 47 20.2 +0.2**
FRF La Foret Royal 86.86 46 *e*P P 00 46 32.5 -0.8
FRF pmax pmax
comp=Z,17nm,0.9s
FRF La Foret Royal 86.86 46 *e*P P 00 46 32.5 -0.8
comp=Z,17nm,0.9s
FRF *e*pP pP **00 47 20.2 +0.2**
BEBN Eben Emael 86.93 39 P P **00 46 33.7 +0.3**
comp=Z,12nm,1.5s
BEBN AP pP **00 47 20.8 +0.6**
BNI Bardonecchia 87.02 45 *e*P P 00 46 34.7 +0.5
BNI pmax pmax
comp=Z,25nm,1.4s
BNI Bardonecchia 87.02 45 *e*P P 00 46 34.7 +0.5
comp=Z,25nm,1.4s
BNI *e*pP pP **00 47 22.3 +1.3**
MBDF Montbardon 87.05 45 *e*P P 00 46 33.9 -0.5
comp=Z,6.8nm,0.7s
MBDF *e*pP pP **00 47 21.8 +0.7**
MBDF Montbardon 87.05 45 *e*P P 00 46 33.9 -0.5
MBDF pmax pmax
comp=Z,7.0nm,0.7s
MBDF Montbardon 87.05 45 *e*P P 00 46 33.9 -0.5
comp=Z,6.8nm,0.7s
MBDF *e*pP pP **00 47 21.8 +0.7**
HAU Haudompre 87.07 42 *e*P P 00 46 33.2 -1.1
HAU *e*R
comp=Z,60nm,23.0s
HAU Haudompre 87.07 42 *e*P P 00 46 33.2 -1.1
HAU Haudompre 87.07 42 *e*P P 00 46 33.2 -1.1
HGN Heimansgroeve 87.09 39 *e*P P 00 46 34.5 +0.3
comp=Z,42nm,1.0s
HGN *e*pP pP **00 47 20.1 -0.8**
LPL La Plagne 87.10 44 *e*P P 00 46 34.4 -0.3
comp=Z,23nm,1.2s
LPL La Plagne 87.10 44 *e*P P 00 46 34.4 -0.3
LPL pmax pmax
comp=Z,23nm,1.2s
LPL La Plagne 87.10 44 *e*P P 00 46 34.4 -0.3
comp=Z,23nm,1.2s
LPG La Plagne 87.11 44 *e*P P 00 46 34.7 -0.1
comp=Z,20nm,1.1s
LPG *e*pP pP **00 47 22.5 +0.9**
LPG La Plagne 87.11 44 *e*P P 00 46 34.7 -0.1
LPG pmax pmax
comp=Z,20nm,1.1s
LPG La Plagne 87.11 44 *e*P P 00 46 34.7 -0.1
comp=Z,20nm,1.1s
LPG *e*pP pP **00 47 22.5 +0.9**
WLF Walferdange 87.11 40 P P **00 46 34.7 +0.3**
comp=Z,37nm,1.4s
WLF AP pP **00 47 22.0 +0.9**
WLF Walferdange 87.11 40 *e*P P 00 46 34.3 0.0
WLF pmax pmax
comp=Z,47nm,1.2s
WLF Walferdange 87.11 40 *e*P P 00 46 34.5 +0.1
comp=Z,54nm,1.0s
WLF *e*pP pP **00 47 22.5 +1.4**
WLF Walferdange 87.11 40 *e*P P 00 46 34.3 0.0
comp=Z,47nm,1.2s
WLF *e*pP pP **00 47 21.9 +0.8**
MEM Membach 87.12 39 P P **00 46 34.8 +0.4**
comp=Z,16nm,1.3s
MEM AP pP **00 47 22.2 +1.1**
MVIF Mont Vial 87.25 46 *e*P P 00 46 36.5 +1.1
MVIF Mont Vial 87.25 46 *e*P P 00 46 36.5 +1.1
MVIF Mont Vial 87.25 46 *e*P P 00 46 36.5 +1.1
TOUF Mont Tournerai 87.33 46 *e*P P 00 46 35.4 -0.4
TOUF Mont Tournerai 87.33 46 *e*P P 00 46 35.4 -0.4
TOUF Mont Tournerai 87.33 46 *e*P P 00 46 35.4 -0.4
LOMF Lomont 87.33 43 *e*P P 00 46 35.2 -0.4
LOMF Lomont 87.33 43 *e*P P 00 46 35.2 -0.4
LOMF Lomont 87.33 43 *e*P P 00 46 35.2 -0.4
HINF Hinteralfeld 87.39 42 *e*P P 00 46 34.6 -1.2
HINF Hinteralfeld 87.39 42 *e*P P 00 46 34.6 -1.2
HINF Hinteralfeld 87.39 42 *e*P P 00 46 34.6 -1.2
SBF Sospel 87.45 46 *e*P P 00 46 35.2 -1.0
comp=Z,41nm,0.9s
SBF Sospel 87.45 46 *e*P P 00 46 35.2 -1.0
SBF pmax pmax
comp=Z,41nm,0.9s
SBF Sospel 87.45 46 *e*P P 00 46 35.2 -1.0
comp=Z,41nm,0.9s
SAOF Saorge 87.55 46 *e*P P 00 46 35.6 -1.0
SAOF Saorge 87.55 46 *e*P P 00 46 35.6 -1.0
SAOF Saorge 87.55 46 *e*P P 00 46 35.6 -1.0
SENIN Lac Senin/Sane 87.57 44 *e*P P 00 46 37.0 +0.1
comp=Z,40nm,1.6s
SENIN *e*pP pP **00 47 25.2 +1.5**
MOF Molkenrain 87.58 42 *e*P P 00 46 35.6 -1.2
MOF Molkenrain 87.58 42 *e*P P 00 46 35.6 -1.2
MOF Molkenrain 87.58 42 *e*P P 00 46 35.6 -1.2
ECH Echery 87.63 42 *e*P P 00 46 36.0 -0.9
ECH pmax pmax
comp=Z,36nm,1.3s
ECH Echery 87.63 42 *e*P P 00 46 36.0 -0.9
comp=Z,36nm,1.3s
ECH *e*pP pP **00 47 23.9 +0.2**
ECH Echery 87.63 42 *e*P P 00 46 36.3 -0.6
RUP Ruppelstein 87.70 40 *e*P P 00 46 37.4 +0.2
RUP Ruppelstein 87.70 40 *e*P P 00 46 37.4 +0.2
CDF Champ du Feu 87.73 42 *e*P P 00 46 36.6 -0.9
comp=Z,43nm,1.0s
CDF *e*pP pP **00 47 24.3 0.0**
CDF Champ du Feu 87.73 42 *e*P P 00 46 36.6 -0.9
CDF pmax pmax
comp=Z,43nm,1.0s
CDF Champ du Feu 87.73 42 *e*P P 00 46 36.6 -0.9
comp=Z,43nm,1.0s
CDF *e*pP pP **00 47 24.3 0.0**
WTSB Winterswijk 87.75 38 *e*P P 00 46 37.4 +0.1
WTSB *e*pP pP **00 47 23.5 -0.6**
BBS Basel-Blauen 87.80 43 *e*P P 00 46 36.9 -0.9
BBS Basel-Blauen 87.80 43 *e*P P 00 46 36.9 -0.9
LIBD Limburg 87.92 42 *e*P P 00 46 38.0 -0.2
LIBD Limburg 87.92 42 *e*P P 00 46 38.0 -0.2
BUG Bochum--Univer 87.99 39 *e*P P 00 46 38.5 0.0
comp=Z,39nm,1.1s
BUG *e*pP pP **00 47 26.5 +1.2**
ABH Alteburg 88.03 40 *e*P P 00 46 38.9 +0.1
LANF Langenberg 88.12 41 *e*P P 00 46 39.1 -0.1
LANF Langenberg 88.12 41 *e*P P 00 46 39.1 -0.1
LANF Langenberg 88.12 41 *e*P P 00 46 39.1 -0.1

FELD Feldberg im Sc 88.17 42 eP P 00 46 38.7 -0.9
FELD Feldberg im Sc 88.17 42 eP P 00 46 38.7 -0.9
KEST Kesra 88.36 54 eP P 00 46 40.9 +0.1
KEST Kesra 88.36 54 P P 00 46 40.4 -0.3
comp=Z,5.1nm,0.8s,baz=278,slow=3.2,SNR=16
IBBN Ibbenburen 88.37 38 eP P 00 46 40.3 +0.1
comp=Z,32nm,1.2s
IBBN ePP pP 00 47 28.5 +1.4
BFO Black Forest 88.42 42 eP P 00 46 40.4 -0.3
BFO pmax pmax
comp=Z,16nm,1.5s
BFO Black Forest 88.42 42 eP P 00 46 39.8 -0.8
comp=Z,6.0nm,1.0s
BFO Black Forest 88.42 42 eP P 00 46 40.4 -0.3
comp=Z,16nm,1.5s
PGF Pioggiola 88.50 48 eP P 00 46 41.9 +0.7
comp=Z,20nm,1.0s
PGF Pioggiola 88.50 48 eP P 00 46 41.9 +0.7
PGF pmax pmax
comp=Z,20nm,1.0s
PGF Pioggiola 88.50 48 eP P 00 46 41.9 +0.7
comp=Z,20nm,1.0s
TNS Taunus Mts 88.64 40 eP P 00 46 41.7 0.0
TNS pmax pmax
comp=Z,35nm,1.2s
TNS Taunus Mts 88.64 40 eP P 00 46 41.7 0.0
comp=Z,35nm,1.2s
TNS ePP pP 00 47 29.6 +1.0
SPAK Spaichingen-Ko 88.71 42 eP P 00 46 41.5 -0.6
TUE Stuetta 88.99 44 eP P 00 46 43.8 +0.2
comp=Z,13nm,0.8s
STU Stuttgart 89.03 41 eP P 00 46 43.0 -0.4
STU pmax pmax
comp=Z,18nm,0.9s
STU Stuttgart 89.03 41 eP P 00 46 43.1 -0.4
comp=Z,27nm,1.1s
STU ePP pP 00 47 31.1 +0.7
STU Stuttgart 89.03 41 eP P 00 46 43.0 -0.4
comp=Z,18nm,0.9s
DAVA Damuels 89.40 43⇑ iP P 00 46 45.1 -0.3
comp=Z,29nm,1.1s
DAVA Damuels 89.40 43⇑ iP P 00 46 45.1 -0.3
comp=Z,29nm,1.1s
DAVA Damuels 89.40 43⇑ iP P 00 46 45.1 -0.3
comp=Z,29nm,1.1s
FUORN Ofenpass-Fuorn 89.63 44 eP P 00 46 47.3 +0.7
comp=Z,8.8nm,0.8s
UBBA Unterbreizbach 89.67 39 epP pP 00 47 34.5 +1.3
NRDL Niedersach Rie 89.82 38 epP pP 00 47 35.6 +1.7
CLZ Clausthal 89.95 38 eP P 00 46 47.9 +0.2
comp=Z,22nm,1.2s
CLZ epP pP 00 47 36.3 +1.6
FETA Feichten 89.96 43 i PcP P 00 46 48.3 +0.2
SNR=22
FETA Feichten 89.96 43 i PcP P 00 46 48.3 +0.2
SNR=22
FETA Feichten 89.96 43⇑ iP P 00 46 47.9 -0.2
comp=Z,26nm,1.0s
BSEG Bad Segeberg 90.02 36 eP P 00 46 48.1 +0.2
BSEG pmax pmax
comp=Z,46nm,1.7s
BSEG Bad Segeberg 90.02 36 eP P 00 46 48.1 +0.2
comp=Z,46nm,1.7s
BSEG epP pP 00 47 36.6 +1.8
MOTA Moosalm 90.23 43⇑ iP P 00 46 49.2 -0.1
MOTA pmax pmax
comp=Z,17nm,0.9s
MOTA Moosalm 90.23 43 i PcP P 00 46 49.5 +0.2
SNR=6.5
MOTA Moosalm 90.23 43 i PcP P 00 46 49.5 +0.2
SNR=6.5
MOTA Moosalm 90.23 43⇑ iP P 00 46 49.2 -0.1
comp=Z,17nm,0.9s
FUR Furstenfeldbru 90.38 42 eP P 00 46 49.8 0.0
FUR pmax pmax
comp=Z,21nm,1.1s
FUR Furstenfeldbru 90.38 42 eP P 00 46 49.8 0.0
comp=Z,21nm,1.1s
FUR epP pP 00 47 37.7 +0.9
GRF Grafenberg Arr 90.40 40 eP P 00 46 49.9 +0.1
GRF pmax pmax
comp=Z,18nm,1.1s
GRF Grafenberg Arr 90.40 40 eP P 00 46 49.9 +0.1
comp=Z,18nm,1.1s
GRF epP pP 00 47 37.8 +1.0
WATA Walderalm 90.55 43⇑ iP P 00 46 50.4 -0.4
WATA pmax pmax
comp=Z,6.0nm,0.7s
WATA Walderalm 90.55 43 i PcP P 00 46 50.7 -0.1
SNR=7.4
WATA Walderalm 90.55 43 i PcP P 00 46 50.7 -0.1
SNR=7.4
WATA Walderalm 90.55 43⇑ iP P 00 46 50.4 -0.4
comp=Z,5.7nm,0.7s
WTTA Wattenberg 90.59 43⇑ iP P 00 46 50.9 -0.1
WTTA pmax pmax
comp=Z,19nm,1.0s
WTTA Wattenberg 90.59 43 i PcP P 00 46 51.3 +0.3
SNR=11
WTTA Wattenberg 90.59 43 i PcP P 00 46 51.3 +0.3
SNR=11
WTTA Wattenberg 90.59 43⇑ iP P 00 46 50.9 -0.1
comp=Z,19nm,1.0s
MOX Moxa 90.68 40 eP P 00 46 51.4 +0.3
MOX pmax pmax
comp=Z,17nm,1.6s
MOX Moxa 90.68 40 eP P 00 46 51.4 +0.3
comp=Z,17nm,1.6s
MOX epP pP 00 47 39.5 +1.4
NB2 NORSAR Subarra 90.80 29 P P 00 46 51.3 -0.2
comp=Z,6.4nm,1.0s,baz=270,slow=4.6
NOA NORSAR Array B 90.80 29 P P 00 46 50.9 -0.6
NOA NORSAR Array B 90.80 29 P P 00 46 50.9 -0.6
comp=Z,3.2nm,0.9s,baz=268,slow=4.4,SNR=7.4
NOA LR LR 01 22 38.7
comp=Z,30nm,18.0s,baz=270,slow=32
NEUB Neuenburg 90.80 39 eP P 00 46 52.2 +0.6
comp=Z,31nm,1.4s
NEUB epP pP 00 47 40.2 +1.6
MANZ Manzenberg 90.98 40 eP P 00 46 53.1 +0.5
comp=Z,18nm,1.2s
MANZ epP pP 00 47 41.1 +1.5
PLN Plauen 91.02 40 eP P 00 46 53.2 +0.5
comp=Z,84nm,1.3s
PLN epP pP 00 47 41.2 +1.5
ROTZ Rotzenmuhle 91.04 40 eP P 00 46 53.2 +0.4
comp=Z,20nm,1.3s
ROTZ epP pP 00 47 41.5 +1.7
WERD Werda 91.12 40 eP P 00 46 53.5 +0.3
comp=Z,28nm,1.5s
WERD epP pP 00 47 41.6 +1.4
GUNZ Gunzen 91.13 40 eP P 00 46 53.7 +0.4
comp=Z,21nm,1.5s
GUNZ epP pP 00 47 41.9 +1.6
WERN Wernitzgruen 91.16 40 eP P 00 46 53.8 +0.4
comp=Z,17nm,1.1s
WERN epP pP 00 47 42.0 +1.6
ABTA Abfaltersbach 91.18 43⇑ iPcP P 00 46 53.4 -0.3
comp=Z,20nm,1.1s
ABTA Abfaltersbach 91.18 43⇑ iPcP P 00 46 53.4 -0.3
comp=Z,20nm,1.1s
ABTA Abfaltersbach 91.18 43⇑ iP P 00 46 53.4 -0.3
comp=Z,20nm,1.1s
NKC Novy Kostel 91.20 40 i P P 00 46 54.5 +0.9
NKC e*PP pP 00 47 42.0 +1.4
NKC Novy Kostel 91.20 40 i P P 00 46 54.5 +0.9
NKC epP pP 00 47 42.0 +1.4
TANN Tannenbergstha 91.22 40 eP P 00 46 54.3 +0.6
comp=Z,18nm,1.2s
TANN epP pP 00 47 42.3 +1.6
RJOB Jochberg 91.39 42 eP P 00 46 54.4 -0.1
comp=Z,11nm,0.9s
RJOB epP pP 00 47 42.3 +0.8
WET Wettzell 91.47 41 eP P 00 46 55.1 +0.3
WET pmax pmax
comp=Z,32nm,1.6s
WET Wettzell 91.47 41 eP P 00 46 55.1 +0.3
comp=Z,32nm,1.6s
WET epP pP 00 47 43.1 +1.3
CLL Collm 91.57 39⇑ iP P 00 46 55.1 -0.1
CLL i*PP pP 00 47 42.8 +0.6
CLL e 00 57 14.0
CLL eS ScS 00 57 42.0 +0.9
CLL pmax pmax
comp=Z,6.0nm,1.2s
CLL Collm 91.57 39 eP P 00 46 55.5 +0.3
comp=Z,14nm,1.2s
CLL epP pP 00 47 43.6 +1.4
CLL Collm 91.57 39⇑ iP P 00 46 55.1 -0.1
comp=Z,15nm,1.2s
CLL i pP pP 00 47 42.8 +0.6
CLL ePP PP 00 50 41.0 +5.0
CLL eSKSac SKSac 00 57 14.0 +4.3
CLL eS ScS 00 57 42.0 +0.9
CLL eSP SP 00 58 40.0 -8.8
CLL ePPS PPS 00 59 49.0
CLL e 01 00 22.0
CLL e 01 04 54.0
CLL e 01 05 30.0
CLL eSSS SSS 01 07 24.0
CLL e 01 08 41.0
CLL eSSSS 01 10 42.0
KBA Koelnbreinsper 91.75 43⇑ iP P 00 46 56.0 -0.4
KBA pmax pmax
comp=Z,13nm,1.4s
KBA Koelnbreinsper 91.75 43⇑ iPcP P 00 46 56.0 -0.4
comp=Z,13nm,1.4s
KBA Koelnbreinsper 91.75 43⇑ iPcP P 00 46 56.0 -0.4
comp=Z,13nm,1.4s
KBA Koelnbreinsper 91.75 43⇑ iP P 00 46 56.0 -0.4
comp=Z,13nm,1.4s
FBE Freiberg 91.79 39 eP P 00 46 57.0 +0.8
comp=Z,27nm,1.2s
FBE epP pP 00 47 45.0 +1.8
KHC Kasperske Hory 91.92 41 i P P 00 46 57.2 +0.2
KHC e*PP pP 00 47 44.6 +0.6
KHC Kasperske Hory 91.92 41 eP P 00 46 57.3 +0.4
comp=Z,12nm,1.3s
KHC epP pP 00 47 45.3 +1.3
KHC Kasperske Hory 91.92 41 i P P 00 46 57.2 +0.2
KHC epP pP 00 47 44.6 +0.6
MYKA Terra Mystica 91.95 44⇓ iP P 00 46 56.6 -0.6
comp=Z,12nm,1.0s
MYKA Terra Mystica 91.95 44⇓ iP P 00 46 56.6 -0.6
comp=Z,12nm,1.0s
MYKA Terra Mystica 91.95 44⇓ iP P 00 46 56.6 -0.6
comp=Z,12nm,1.0s
GEC2 GERESS Array S 92.00 41 eP P 00 46 57.2 -0.2
GEC2 pmax pmax
comp=Z,4.0nm,1.0s
GEC2 GERESS Array S 92.00 41 eP P 00 46 57.2 -0.2
comp=Z,4.0nm,1.0s
GEC2 epP pP 00 47 45.2 +0.8
GEC2 GERESS Array S 92.00 41 eP P 00 46 58.0 +0.6
GERES GERESS Array B 92.00 41 P P 00 46 57.1 -0.2
GERES GERESS Array B 92.00 41 P P 00 46 57.1 -0.2
comp=Z,1.6nm,0.8s,baz=252,slow=2.7,SNR=17
CADS Cadrg 92.02 44 i P P 00 46 57.2 -0.2
CADS i pP pP 00 47 44.5 0.0
RUE Ruedersdorf 92.06 38 eP P 00 46 57.9 +0.5
comp=Z,17nm,1.1s
RUE epP pP 00 47 46.0 +1.6
BRG Berggiesshubel 92.16 39 eP P 00 46 58.4 +0.5
comp=Z,18nm,1.1s
BRG epP pP 00 47 46.4 +1.4
comp=Z,17nm,1.2s
BRG Berggiesshubel 92.16 39 eP P 00 46 58.4 +0.5
BRG pmax pmax
comp=Z,18nm,1.1s
BRG pmax pmax
comp=Z,17nm,1.2s
BRG Berggiesshubel 92.16 39 eP P 00 46 58.3 +0.3
comp=Z,18nm,1.1s
BRG epP pP 00 47 46.4 +1.4
MOA Molln 92.38 42⇑ iPcP P 00 46 58.9 -0.2
comp=Z,15nm,1.5s
MOA Molln 92.38 42⇑ iPcP P 00 46 58.9 -0.2
comp=Z,15nm,1.5s
MOA Molln 92.38 42⇑ iP P 00 46 58.9 -0.2
comp=Z,15nm,1.5s
PRU Pruhonice 92.55 40 i P P 00 47 00.2 +0.4
PRU e*PP pP 00 47 47.6 +0.8
PRU Pruhonice 92.55 40 i P P 00 47 00.2 +0.4
PRU epP pP 00 47 47.6 +0.8
PVCC Panska Ves 92.56 40 i P P 00 47 00.5 +0.7
PVCC Panska Ves 92.56 40 i P P 00 47 00.5 +0.7
PVCC epP pP 00 47 48.3 +1.5
LJU Ljubljana 92.57 44 i P P 00 47 00.2 +0.2
LJU epP pP 00 47 47.7 +0.7
SOKA Soboth 92.91 44⇑ iP P 00 47 01.0 -0.6
comp=Z,4.9nm,1.1s
SOKA Soboth 92.91 44⇑ iP P 00 47 01.0 -0.6
comp=Z,4.9nm,1.1s
SOKA Soboth 92.91 44⇑ iP P 00 47 01.0 -0.6
comp=Z,4.9nm,1.1s
TREC Trest 93.18 41 i P P 00 47 03.0 +0.3
TREC Trest 93.18 41 i P P 00 47 03.0 +0.3
TREC epP pP 00 47 50.9 +1.2
DOBS Dobrina 93.22 44 i P P 00 47 03.0 0.0
DOBS i pP pP 00 47 50.3 +0.3
ARSA Arzberg 93.24 43⇑ iPcP P 00 47 02.6 -0.5
comp=Z,6.8nm,0.8s
ARSA Arzberg 93.24 43⇑ iPcP P 00 47 02.6 -0.5
comp=Z,6.8nm,0.8s
ARSA Arzberg 93.24 43⇑ iP P 00 47 02.6 -0.5
comp=Z,6.8nm,0.8s
CONA Conrad Observa 93.45 42⇑ iPcP P 00 47 04.1 0.0
comp=Z,13nm,1.0s
CONA Conrad Observa 93.45 42⇑ iPcP P 00 47 04.1 0.0
comp=Z,13nm,1.0s
CONA Conrad Observa 93.45 42⇑ iP P 00 47 04.1 0.0
comp=Z,13nm,1.0s
UPC Upice 93.49 40 i P P 00 47 04.4 +0.3
UPC Upice 93.49 40 i P P 00 47 04.4 +0.3
UPC epP pP 00 47 52.5 +1.4
KSP Ksiaz 93.65 39 eP P 00 47 05.4 +0.6
KSP e*PP pP 00 47 52.9 +1.0
KSP Ksiaz 93.65 39 eP P 00 47 05.6 +0.8
KSP epP pP 00 47 52.9 +1.0
DPC Dobruska-Polom 93.69 40 eP P 00 47 05.7 +0.6
DPC pmax pmax
comp=Z,19nm,1.0s
DPC Dobruska-Polom 93.69 40 eP P 00 47 05.7 +0.6
comp=Z,19nm,1.0s
DPC epP pP 00 47 53.9 +1.7
DPC Dobruska-Polom 93.69 40 i P P 00 47 05.7 +0.6
DPC epP pP 00 47 53.8 +1.7
KOGS Kog 93.76 44 i P P 00 47 05.5 +0.1
KOGS epP pP 00 47 53.2 +0.8
VRAC Vranov 93.90 41⇑ iP P 00 47 07.1 +1.1
SOP Sopron 93.93 43⇓ e P 00 47 06.5 +0.3
BEHE Becsehely 94.12 44⇓ eP P 00 47 08.1 +1.0
GKP Gorka Klasztor 94.14 37 eP P 00 47 07.8 +0.8
GKP epP pP 00 47 56.0 +2.0
MORC Moravsky Berou 94.50 40 eP P 00 47 08.9 +0.1
MORC pmax pmax
comp=Z,22nm,1.6s
MORC Moravsky Berou 94.50 40 eP P 00 47 08.9 +0.1
comp=Z,22nm,1.6s
MORC epP pP 00 47 57.1 +1.2
MORC Moravsky Berou 94.50 40⇓ iP P 00 47 08.9 +0.1
VNDA Vanda 94.75 191 eP P 00 47 11.4 +2.0
comp=Z,8.6nm,0.8s
VNDA Vanda 94.75 191 P P 00 47 10.9 +1.5
comp=Z,6.6nm,0.8s,baz=125,slow=4.1,SNR=32
OKC Ostrava-Krasne 94.89 40 i P P 00 47 11.3 +0.8
OKC Ostrava-Krasne 94.89 40 i P P 00 47 11.3 +0.8
OKC epP pP 00 47 59.3 +1.7
PKST T"s 94.95 43⇓ e P 00 47 11.0 +0.1
PKS9 Tamasi 95.15 44 ⇓P P 00 47 12.4 +0.6
PKSG 95.18 43⇓ eP P 00 47 12.1 +0.2
PKSM Moragy 95.42 44⇑ iP P 00 47 13.7 +0.7
PKSM Moragy 95.42 44⇓ eP P 00 47 13.6 +0.6
BUD Budapest 95.61 43⇓ eP P 00 47 14.2 +0.4
PKS7 Kunszentmiklos 95.73 43⇓ e P 00 47 14.6 +0.2
PKS2 Kecel 95.80 44⇓ e P 00 47 15.5 +0.8
OJC Ojcow 95.92 40 eP P 00 47 16.0 +0.8
OJC e*PP pP 00 48 03.5 +1.2
OJC Ojcow 95.92 40 eP P 00 47 16.0 +0.8
OJC epP pP 00 48 03.5 +1.2
ARCES ARCESS Array B 96.07 20 P P 00 47 14.2 -1.3
ARCES PKKPbc PKKPbc 01 04 00.8 -4.6
ARCES ARCESS Array B 96.07 20 P P 00 47 14.2 -1.3
comp=Z,0.8nm,0.4s,baz=267,slow=3.9,SNR=19
ARCES PKKPbc PKKPbc 01 04 00.8 -4.6
comp=Z,3.3nm,0.9s,baz=52,slow=2.0,SNR=4.2
PSZ Piszkesteto 96.16 42 eP P 00 47 17.6 +1.2
PSZ Piszkesteto 96.16 42 eP P 00 47 17.6 +1.2
PSZ Piszkesteto 96.16 42⇑ iP P 00 47 17.4 +0.9
PSZ Piszkesteto 96.16 42⇓ e P 00 47 17.2 +0.7
NIE Niedzica 96.32 41 eP P 00 47 13.5 -3.6
NIE Niedzica 96.32 41 eP P 00 47 13.5 -3.6
NIE epP pP 00 48 04.0 -0.2
TRPA Tarpa 97.91 42⇓ iP Pdif 00 47 24.8 +0.6
TRPA Tarpa 97.91 42⇓ e Pdif 00 47 24.9 +0.7
FINES FINESS Array B 97.91 28 P P 00 47 23.2 -0.6
FINES PKKPbc PKKPbc 01 03 55.9 -4.1
FINES FINESS Array B 97.91 28 P P 00 47 23.2 -0.6
comp=Z,2.5nm,0.8s,baz=328,slow=6.8,SNR=6.3
FINES PKKPbc PKKPbc 01 03 55.9 -4.1
comp=Z,1.4nm,1.0s,baz=340,slow=5.1,SNR=4.0
FINES LR LR 01 28 18.8
comp=Z,28nm,19.8s,baz=295,slow=33
BILL Bilibino 101.13 340⇓ eP Pdif 00 47 39.9 +1.8
BILL i 00 51 49.4
BILL pmax pmax
comp=Z,9.0nm,1.3s
BRTR Keskin Array B 107.21 49 PKKP PKKPab 01 03 46.6 -0.1
BRTR Keskin Array B 107.21 49 PKKP PKKPab 01 03 46.6 -0.1
comp=Z,1.4nm,0.9s,baz=114,slow=5.8,SNR=8.9
AKTO Aktyubinsk 118.55 31 PKKPbc PKKPbc 01 02 53.0 -1.6
AKTO Aktyubinsk 118.55 31 PKKPbc PKKPbc 01 02 53.0 -1.6
comp=Z,0.9nm,0.3s,baz=102,slow=4.9,SNR=11
BVAR Borovoye Array 122.28 22 PKKPbc PKKPbc 01 02 38.4 -2.4
BVAR Borovoye Array 122.28 22 PKKPbc PKKPbc 01 02 38.4 -2.4
comp=Z,1.0nm,0.8s,baz=141,slow=5.0,SNR=5.8
NVS Novosibirsk 124.69 13 eP Pdif 00 49 32.3 +9.1
ZAA0 Zalesovo Array 125.88 13 ePKPdf PKPdf 00 52 48.8 -0.4
ZAA0 epPKPdf pPKPdf 00 53 38.5 +0.1
ZAA0 eSKPdf SKiKP 00 56 07.8 0.0
ZALV Zalesovo Beam 125.88 13 PKIKP PKPdf 00 52 48.8 -0.4
ZALV 00 53 36.9
ZALV Zalesovo Beam 125.88 13 PKP PKPdf 00 52 48.8 -0.4
ZALV pPKP pPKPdf 00 53 36.9 -1.6
ZALV SKP 00 56 06.7
ZALV PKKPbc PKKPab 01 02 23.1 -1.3
ZALV Zalesovo Beam 125.88 13 PKP PKPdf 00 52 48.8 -0.4
comp=Z,1.8nm,0.4s,baz=323,slow=4.3,SNR=22
ZALV pPKP pPKPdf 00 53 36.9 -1.6
comp=Z,2.3nm,0.9s,baz=318,slow=2.0,SNR=2.3
ZALV SKP 00 56 06.7
comp=Z,1.4nm,0.8s,baz=304,slow=3.4,SNR=4.0
ZALV PKKPbc PKKPab 01 02 23.1 -1.3
comp=Z,0.6nm,0.5s,baz=146,slow=2.9,SNR=4.2
KURK Kurchatov 127.09 19 diPKIKP PKPdf 00 52 51.8 +0.2
KURK pmax pmax
comp=Z,5.0nm,1.2s
KURK Kurchatov 127.09 19 ePKPdf PKPdf 00 52 51.9 +0.3
STKA Stephens Creek 130.19 225 PKP PKPdf 00 52 58.1 0.0
STKA Stephens Creek 130.19 225 PKP PKPdf 00 52 58.1 0.0
comp=Z,14nm,0.9s,baz=165,slow=1.7,SNR=20
USRK Ussuriysk Arra 130.24 332 PKP PKPdf 00 52 56.7 -1.1
comp=Z,4.0nm,0.8s,baz=69,slow=2.4,SNR=8.5
ZAK Zakamensk 131.45 359 ePKIKP PKPdf 00 52 58.9 -1.2
ZAK pmax pmax
comp=Z,2.0nm,1.3s
MK31 Makanchi Array 131.70 19 ePKIKP PKPdf 00 53 00.2 -0.3
MK31 Makanchi Array 131.70 19 ePKPdf PKPdf 00 53 00.2 -0.3
MK31 eSKPbc SKPab 00 56 09.2 -0.2
MKAR Makanchi Array 131.70 19 PKIKP PKPdf 00 52 59.9 -0.6
MKAR Makanchi Array 131.70 19 PKP PKPdf 00 52 59.9 -0.6
MKAR SKPbc SKPbc 00 56 08.6 0.0
MKAR Makanchi Array 131.70 19 PKP PKPdf 00 52 59.9 -0.6
comp=Z,0.9nm,0.4s,baz=311,slow=2.5,SNR=15
MKAR SKPbc SKPbc 00 56 08.6 0.0
comp=Z,3.5nm,0.9s,baz=343,slow=3.8,SNR=13
EKS2 Erkin-Say 131.74 28 ePKIKP PKPdf 00 53 01.0 +0.1
EKS2 Erkin-Say 131.74 28 ePKPdf PKPdf 00 53 01.0 +0.1
EKS2 epPKPdf pPKPdf 00 53 51.8 +1.7
EKS2 eSKPbc SKPab 00 56 10.5 +0.7
CTA Charters Tower 132.01 241 PKP PKPdf 00 53 02.1 +0.3
CTA Charters Tower 132.01 241 PKP PKPdf 00 53 02.1 +0.3
comp=Z,5.0nm,0.5s,baz=134,slow=2.5,SNR=6.3
AAK Ala-Archa 132.10 28 diPKIKP PKPdf 00 53 03.5 +1.9
AAK pmax pmax
comp=Z,10.0nm,1.7s
AAK Ala-Archa 132.10 28 SKPbc SKPab 00 56 11.1 -0.4
AAK Ala-Archa 132.10 28 SKPbc SKPab 00 56 11.1 -0.4
comp=Z,1.8nm,0.3s,baz=259,slow=2.7,SNR=8.9
MJAR Matsushiro Arr 132.15 321 PKPpre PKPpre 00 52 56.2
MJAR PKP PKPdf 00 53 01.2 -0.5
MJAR SKPbc SKPbc 00 56 10.5 0.0
MJAR Matsushiro Arr 132.15 321 PKPpre 00 52 56.2
comp=Z,0.8nm,0.3s,baz=79,slow=1.0,SNR=4.5
MJAR PKP PKPdf 00 53 01.2 -0.5
comp=Z,2.1nm,0.7s,baz=181,slow=0.5,SNR=6.2
MJAR SKPbc SKPbc 00 56 10.5 0.0
comp=Z,1.0nm,0.3s,baz=55,slow=0.8,SNR=6.6
CN2 Changchun 133.35 337 ePKP PKPdf 00 53 00.3 -3.4
SONM Songino Array 133.88 356 PKP PKPdf 00 53 04.7 0.0
SONM SKPbc SKPbc 00 56 16.7 +0.5
SONM Songino Array 133.88 356 PKP PKPdf 00 53 04.7 0.0
comp=Z,1.3nm,0.7s,baz=344,slow=1.9,SNR=11
SONM SKPbc SKPbc 00 56 16.7 +0.5
comp=Z,4.4nm,0.9s,baz=350,slow=4.5,SNR=9.7
WMQ Urumqi 135.99 15 ePKP PKPdf 00 53 08.8 0.0
KSRS Korea Array 137.40 330 PKhKP PKPpre 00 53 01.1
comp=Z,1.4nm,0.8s,baz=58,slow=5.8,SNR=4.7
KSRS PKP PKPdf 00 53 10.8 -0.6
comp=Z,6.1nm,0.8s,baz=15,slow=0.9,SNR=24
KSRS pPKP pPKPdf 00 53 60.0 -0.8
comp=Z,4.1nm,1.1s,baz=34,slow=0.9,SNR=3.1
KSRS SKPbc SKPbc 00 56 27.7 +0.5
comp=Z,6.7nm,1.0s,baz=14,slow=2.1,SNR=17
KSAR Wonju Array Be 137.43 330 PKPpre PKPpre 00 53 01.1
KSAR PKP PKPdf 00 53 10.8 -0.7
KSAR pPKP pPKPdf 00 53 60.0 -0.8
KSAR SKPbc SKPbc 00 56 27.7 +0.4
BJI Beijing 139.84 344 PKP PKPdf 00 53 15.3 -0.5
BJI SS SS 01 14 18.1 +0.7
BJI LR LR
comp=N,120nm,14.4s
BJI LR LR
comp=E,160nm,14.4s
BJI LR LR
comp=Z,23nm,18.1s
HHC Hu-ho-hao-te 140.14 349 ePKP PKPdf 00 53 17.7 +1.2
HHC PP PP 00 56 20.5 +6.0
HHC SKS SKSdf 01 00 02.1 -7.1
HHC SKKS SKKSac 01 02 46.4 -4.4
HHC SS SS 01 14 23.2 +2.1
HHC AMB AMB
comp=Z,150nm,9.2s
HHC LR LR
comp=N,170nm,15.2s
HHC LR LR
comp=E,160nm,15.0s
HHC LR LR
comp=Z,140nm,16.8s
ASAR Alice Springs 140.45 229 PKPpre PKPpre 00 53 10.2
ASAR PKP PKPdf 00 53 17.0 -0.5
ASAR Alice Springs 140.45 229 PKhKP PKPpre 00 53 10.2
comp=Z,3.9nm,0.6s,baz=125,slow=3.6,SNR=32
ASAR PKP PKPdf 00 53 17.0 -0.5
comp=Z,9.2nm,0.6s,baz=119,slow=2.2,SNR=33
WRAB Tennant Creek 142.13 234 ePKHKP PKPpre 00 53 15.6
WRAB Tennant Creek 142.13 234 ePKPdf PKPpre 00 53 15.6
WRA Warramunga Arr 142.14 234 PKPpre PKPpre 00 53 15.6
WRA SKPbc SKPbc 00 56 40.1 -0.4
WRA Warramunga Arr 142.14 234 PKhKP PKPpre 00 53 15.6
comp=Z,10nm,0.7s,baz=122,slow=2.6,SNR=41
WRA SKPbc SKPbc 00 56 40.1 -0.4
comp=Z,2.1nm,0.8s,baz=135,slow=1.9,SNR=5.5
GTA Gaotai 142.34 3 ePKP PKPdf 00 53 21.6 +1.0
GTA pPKP pPKPdf 00 54 11.2 +1.3
GTA sPKP 00 54 31.8
GTA PP PP 00 56 33.3 +5.5
GTA SKKS 01 03 02.3
GTA SS SS 01 14 46.9 +0.4
GTA AMB AMB
comp=Z,78nm,5.0s
LZH Lanzhou 145.72 358 ePKPbc PKPab 00 53 28.6 +0.7
LZH pPKP pPKPdf 00 54 16.6 +0.7
LZH sPKP 00 54 31.2
LZH PP PP 00 56 56.2 +8.2
LZH SKS SKSdf 01 00 18.7 +0.6
LZH SKKS SKKSac 01 03 20.5 -2.6
LZH SS SS 01 15 30.1 +4.8
LZH AMB AMB
comp=Z,110nm,5.0s
XAN Xi'an 147.24 350 PKPbc PKPdf 00 53 28.9 -0.1
PYUN Piuthan 147.74 34 eP PKPdf 00 53 30.7 +0.5
comp=Z,228nm,0.7s
DANN Dangsing 147.96 32 eP PKPdf 00 53 31.6 +0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,201nm,1.0s						
KOLN	**Koldanda**	**148.33**	**33**	*e*P	**PKPdf**	**00 53 31.5**	**+0.3**
KKN	**Kakani**	**149.21**	**31**	*e*P	**PKPdf**	**00 53 32.7**	**0.0**
	comp=Z,40nm,0.7s						
GUN	**Gumba**	**149.41**	**30**	*e*P	**PKPdf**	**00 53 33.6**	**+0.5**
	comp=Z,22nm,0.4s						
PKIN	**Phulchoki**	**149.44**	**31**	*e*P	**PKPdf**	**00 53 33.8**	**+0.7**
	comp=Z,27nm,0.8s						
PKI	**Pulchoki**	**149.45**	**31**	*e*P	**PKPdf**	**00 53 34.0**	**+0.8**
RAMN	**Ramite**	**150.57**	**30**	*e*P	**PKPdf**	**00 53 35.2**	**+0.3**
	comp=Z,63nm,1.0s						
TAPN	**Taplejung**	**150.77**	**28**	*e*P	**PKPdf**	**00 53 35.7**	**+0.5**
	comp=Z,22nm,0.5s						
HYB	**Hyderabad**	**151.70**	**55**	*i* PKP	**PKPab**	**00 53 50.0**	**-2.4**
HYB				*e*		00 54 38.0	
GYA	**Guiyang**	**155.03**	**351**	*e*PKPbc	PKPdf	00 53 49.5	+8.3
GYA				PKPab	**PKPab**	**00 54 08.6**	**+2.4**
GYA				pPKP	pPKPdf	00 54 30.2	-0.5
GYA				sPKP		00 54 49.7	
GYA				PKS	**PKSdf**	**00 57 12.8**	**-2.8**
GYA				PP	**PP**	**00 57 44.0**	**+2.6**
GYA				AMB	AMB		
	comp=Z,130nm,7.9s						
KMI	**Kunming**	**156.67**	**360**	PKP	**PKPdf**	**00 53 41.2**	**-2.3**
KMI				LR	LR		
	comp=Z,38nm,18.0s						
CMAR	**Chiang Mai Arr**	**162.94**	**12**	PKP	**PKPdf**	**00 53 49.4**	**-1.1**
CMAR				PKPab	**PKPab**	**00 54 39.1**	**-1.4**
CMAR				PP	**PP**	**00 58 24.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**162.94**	**12**	PKP	**PKPdf**	**00 53 49.4**	**-1.1**
	comp=Z,2.9nm,0.9s,baz=317,slow=2.9,SNR=13						
CMAR				PKPab	**PKPab**	**00 54 39.1**	**-1.4**
	comp=Z,5.9nm,0.8s,baz=327,slow=5.5,SNR=20						
CMAR				PP	**PP**	**00 58 24.5**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=330,slow=6.0,SNR=4.8						

*AUST **01** 01:03:46.5, 20°.78S×171°.26W, h600km*
*ISCJB **01** 01:04:35.2±0.6, 20°.76S±0°.10×178°.6W±0°.1, h579km, mb3.9/17, Error ellipse: s-maj=13.6km s-min=12.1km az=140.6*
*IDC **01** 01:04:40.0±2.2, 20°.82S×178°.73W, h624km±26km, mb3.3/17, mb1 3.5/19, mb1mx3.4/25, mbtmp3.4/19, Error ellipse: s-maj=15.0km s-min=13.9km az=7.0*
ISC 01 01:04:36.1±0.6**, 20°.8S**±0°.1×**178°.6W**±0°.1**, h579**km**, n31, σ1s37**/31**, mb3.8**/17**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.00**	**262**	P	**P**	**01 07 36.2**	**+0.8**
	0.5nm,0.3s,baz=132,slow=14,SNR=8.2						
URZ	**Urewera**	**17.84**	**191**	P	**P**	**01 08 10.4**	**-0.6**
	0.8nm,0.3s,baz=358,slow=5.1,SNR=6.7						
RPZ	**Rata Peaks**	**24.47**	**198**	P	**P**	**01 09 10.8**	**+0.3**
	12nm,0.9s,baz=50,slow=4.1,SNR=3.8						
RMQ	**Roma**	**30.40**	**253**	P	P	01 10 07.0	+4.5
	baz=37,SNR=5.0						
CTA	**Charters Tower**	**32.91**	**265**	P	**P**	**01 10 24.8**	**+0.8**
	9.2nm,0.5s,baz=104,slow=12,SNR=15						
QLP	**Quilpie**	**34.45**	**253**	P	**P**	**01 10 37.7**	**+1.0**
	baz=41,SNR=5.4						
PMG	**Port Moresby**	**34.86**	**284**	P	**P**	**01 10 41.0**	**+0.7**
	14nm,0.7s,baz=119,slow=4.9,SNR=3.9						
MTSU	**Mount Surprise**	**35.02**	**268**	P	**P**	**01 10 42.9**	**+1.2**
	baz=42,SNR=6.3						
STKA	**Stephens Creek**	**37.18**	**244**	P	**P**	**01 10 59.6**	**+0.4**
	2.0nm,0.8s,baz=96,slow=13,SNR=4.7						
JAY	**Jayapura**	**43.60**	**289**	P	**P**	**01 11 51.6**	**+1.1**
	baz=50,SNR=8.4						
ASAR	**Alice Springs**	**43.92**	**257**	P	**P**	**01 11 52.9**	**+0.1**
	13nm,0.8s,baz=98,slow=7.7,SNR=93						
ASAR				S	**S**	**01 17 39.6**	**-3.7**
	2.4nm,0.9s,baz=93,slow=16,SNR=12						
WRA	**Warramunga Arr**	**44.02**	**262**	P	**P**	**01 11 53.4**	**-0.2**
	4.5nm,0.3s,baz=95,slow=8.2,SNR=40						
KDU	**Kakadu**	**47.40**	**272**	P	**P**	**01 12 19.6**	**+0.3**
	baz=54,SNR=6.1						
MTN	**Manton Dam**	**48.61**	**271**	P	**P**	**01 12 28.5**	**+0.2**
	baz=55,SNR=5.0						
MTN				S	S	01 19 25.8	+37
	baz=55,SNR=4.4						
FITZ	**Fitzroy Crossi**	**52.45**	**263**	P	**P**	**01 12 56.3**	**+0.1**
	3.1nm,0.7s,baz=111,slow=1.8,SNR=7.6						
VNDA	**Vanda**	**57.61**	**185**	P	**P**	**01 13 32.1**	**+1.1**
	1.6nm,0.7s,baz=359,slow=7.3,SNR=11						
MJAR	**Matsushiro Arr**	**70.09**	**324**	P	**P**	**01 14 50.5**	**-0.4**
	2.4nm,0.6s,baz=161,slow=6.0,SNR=6.9						
PETK	**Petropavlovsk-**	**76.38**	**346**	P	**P**	**01 15 26.8**	**+0.5**
	3.5nm,0.7s,baz=149,slow=9.7,SNR=3.5						
KSRS	**Korea Array**	**76.71**	**319**	P	**P**	**01 15 28.4**	**-0.1**
	0.7nm,0.5s,baz=126,slow=6.2,SNR=3.5						
USRK	**Ussuriysk Arra**	**78.86**	**326**	P	**P**	**01 15 40.2**	**+0.3**
	3.3nm,0.8s,baz=114,slow=7.1,SNR=6.9						
YBH	**Yreka Blue Hor**	**80.83**	**39**	P	**P**	**01 15 52.2**	**+1.8**
	0.2nm,0.3s,baz=204,slow=5.2,SNR=3.5						
TXAR	**Lajitas Array**	**87.66**	**58**	P	**P**	**01 16 24.1**	**0.0**
	0.3nm,0.8s,baz=222,slow=3.2,SNR=4.2						
ILAR	**Eielson Array**	**88.69**	**13**	P	**P**	**01 16 27.4**	**-0.6**
	1.1nm,0.9s,baz=233,slow=5.5,SNR=6.3						
PLCA	**Paso Flores**	**89.50**	**134**	P	**P**	**01 16 32.8**	**+0.2**
	0.7nm,0.7s,baz=236,slow=8.1,SNR=3.0						
CMAR	**Chiang Mai Arr**	**89.68**	**290**	P	**P**	**01 16 34.0**	**+0.3**
	2.0nm,0.8s,baz=116,slow=3.3,SNR=12						
BVAR	**Borovoye Array**	**118.92**	**320**	PKP	**PKPdf**	**01 22 18.3**	**-0.9**
	0.5nm,0.5s,baz=101,slow=5.1,SNR=3.0						
FINES	**FINESS Array B**	**135.86**	**343**	SKPbc	**SKPbc**	**01 25 25.0**	**-4.0**
	2.4nm,0.8s,baz=13,slow=2.5,SNR=7.3						
AKASG	**Malin Array Be**	**142.97**	**330**	PKP	**PKPdf**	**01 23 01.4**	**-3.0**
	2.9nm,0.5s,baz=44,slow=4.4,SNR=24						
BRTR	**Keskin Array B**	**146.60**	**312**	PKPbc	**PKPbc**	**01 23 12.8**	**-1.1**
	0.9nm,0.6s,baz=138,slow=4.1,SNR=8.2						
GERES	**GERESS Array B**	**150.29**	**344**	PKPbc	**PKPbc**	**01 23 22.6**	**0.0**
	0.5nm,0.8s,baz=19,slow=3.6,SNR=7.5						
TORD	**Torodi Ar. Bea**	**172.43**	**182**	PKPab	**PKPab**	**01 25 08.0**	**-0.7**
	0.5nm,0.8s,baz=177,slow=3.1,SNR=3.5						

*ISCJB **01** 01:19:34.3±1.3, 37°.00N±0°.06×27°.64E±0°.06, h17km±37km, Error ellipse: s-maj=9.9km s-min=7.6km az=27.8*
*ISK **01** 01:19:35.6, 37°.17N×27°.52E, h2km, MD2.4*
*DDA **01** 01:19:36.4, 37°.13N×27°.58E, h7km, MD2.5*
*CSEM **01** 01:19:36.7±0.2, 37°.13N×27°.55E, h10km, MD2.4, Error ellipse: s-maj=4.0km s-min=3.1km az=128.0*
ISC 01 01:19:34.6±1.1**, 37°.05N**±0°.04×**27°.62E**±0°.04**, h24**km±9km**, n14, σ0s93**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.25**	**272**	*e*PG	**Pb**	**01 19 40.4**	**-0.3**
BODT				*e*SG	**Sb**	**01 19 44.4**	**-0.5**
BODT	**Bodrum**	**0.25**	**272**	*e*Pg	**Pb**	**01 19 40.4**	**-0.3**
BODT				*e*Sg	**Sb**	**01 19 44.4**	**-0.5**
MLSB	**Milas**	**0.27**	**28**	*e*PG	**Pb**	**01 19 41.4**	**+0.3**
MLSB				*e*SG	**Sb**	**01 19 45.7**	**+0.1**
MLSB	**Milas**	**0.27**	**28**	*e*Pg	**Pb**	**01 19 41.4**	**+0.3**
MLSB				*e*Sg	**Sb**	**01 19 45.7**	**+0.1**
DAT	**Datca**	**0.33**	**186**	*e*PG	**Pn**	**01 19 45.2**	**+1.2**
DAT	**Datca**	**0.33**	**186**	*e*Pg	**Pn**	**01 19 45.2**	**+1.2**
YER	**Yerkesik**	**0.54**	**81**	*e*PG	**Pn**	**01 19 48.1**	**+1.2**
YER	**Yerkesik**	**0.54**	**81**	*e*Pg	**Pn**	**01 19 48.1**	**+1.2**
AYDN	**Tasoluk**	**0.64**	**19**	*i* P	**Pn**	**01 19 48.2**	**-0.1**
AYDN				*i* S	**Sb**	**01 19 56.3**	**+0.5**
AYDN	**Tasoluk**	**0.64**	**19**	*i* P	**Pn**	**01 19 48.2**	**-0.1**
AYDN				*i* S	**Sb**	**01 19 56.3**	**+0.5**
GCAM	**G?zelcaml?**	**0.71**	**335**	*i* P	**Pn**	**01 19 48.9**	**-0.3**
GCAM				*i* S	**Sb**	**01 19 57.8**	**0.0**
GCAM	**G?zelcaml?**	**0.71**	**335**	*i* P	**Pn**	**01 19 48.9**	**-0.3**
GCAM				*i* S	**Sb**	**01 19 57.8**	**0.0**
TURN	**Turunc**	**0.81**	**103**	*i* P	**Pb**	**01 19 49.3**	**-0.7**
TURN				*i* S	**Sb**	**01 19 57.7**	**-2.8**
TURN	**Turunc**	**0.81**	**103**	*i* P	**Pb**	**01 19 49.3**	**-0.7**

*IDC **01** 01:23:50.9±2.7, 50°.30N×87°.45E, h0km, mb3.4/1, mb1 3.5/5, mb1mx3.3/31, mbtmp3.5/5, ML3.5/4, Error ellipse: s-maj=30.0km s-min=13.2km az=96.0*
*NNC **01** 01:23:55.7±2.5, 50°.21N×87°.17E, h11km±10km, mb3.3, mpv2.9, Error ellipse: s-maj=19.2km s-min=10.7km az=70.0*
ISC 01 01:23:52.2±2.2**, 50°.28N**±0°.07×**87°.4E**±0°.1**, h8**km**, n8, σ1s43**/13**, 5C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**4.01**	**337**	Pn	**Pn**	**01 24 54.4**	**+0.5**
	3.1nm,0.3s,baz=158,slow=13,SNR=37						
ZALV				Sn	**Sn**	**01 25 43.0**	**+2.1**
	4.8nm,0.3s,baz=155,slow=25,SNR=12						
ZALV				Lg	Lg	01 25 55.7	
	2.7nm,0.3s,baz=154,slow=31,SNR=4.6						
MK31	**Makanchi Array**	**4.87**	**226**	⇓Pn	**Pn**	**01 25 07.5**	**+1.7**
	1.0nm,0.3s,baz=49,slow=12,SNR=101						
MK31				⇑Pg	Pg	01 25 22.2	-3.4
	1.1nm,0.3s,baz=40,slow=18,SNR=4.2						
MK31				⇑Sn	**Sn**	**01 26 01.9**	**-0.5**
	4.3nm,0.5s,baz=59,slow=23,SNR=8.2						
MK31				⇑Lg	Lg	01 26 24.6	
	20nm,0.9s,baz=49,slow=29,SNR=5.6						
MKAR	**Makanchi Array**	**4.87**	**226**	Pn	**Pn**	**01 25 07.3**	**+1.5**
	2.7nm,0.3s,baz=42,slow=12,SNR=123						
MKAR				Sn	**Sn**	**01 26 04.0**	**+1.5**
	3.4nm,0.3s,baz=48,slow=22,SNR=11						
MKAR				Lg	Lg	01 26 25.7	
	4.1nm,0.3s,baz=47,slow=30,SNR=11						
KURK	**Kurchatov**	**5.63**	**278**	⇑Pn	**Pn**	**01 25 16.8**	**+0.7**
	2.0nm,0.7s						
KURK				⇓Sn	**Sn**	**01 26 21.0**	**0.0**
	2.5nm,0.5s						
KURK				⇓Lg	Lg	01 26 48.6	
	13nm,0.6s						
KURBB	**Kurchatov Arra**	**5.69**	**277**	Pn	**Pn**	**01 25 17.6**	**+0.6**
	0.5nm,0.3s,baz=91,slow=15,SNR=46						
KURBB				Lg	Lg	01 26 49.5	
	0.4nm,0.3s,baz=87,slow=31,SNR=9.7						
KUR18	**Kurchatov Arra**	**5.75**	**277**	⇑Pn	**Pn**	**01 25 17.9**	**+0.1**
	0.2nm,0.6s						
KUR18				Sn	**Sn**	**01 26 25.0**	**+1.2**
KUR18				⇓Lg	Lg	01 26 54.2	
	0.9nm,0.5s						
BVAR	**Borovoye Array**	**10.93**	**291**	Pn	**Pn**	**01 26 27.5**	**-1.2**
	0.2nm,0.3s,baz=102,slow=14,SNR=4.9						
BRTR	**Keskin Array B**	**38.68**	**275**	P	**P**	**01 31 14.3**	**-2.1**
	0.3nm,0.8s,baz=56,slow=8.9,SNR=3.7						

NEIC 01 01:34:03.9±0.6**, 36°.82N**×**104°.82W, h5**km**, ML3.2, MW3.2**(USGS)**, 52C-48D, Error ellipse: s-maj=8.7km s-min=6.9km az=83.0, New Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T24A	**Torres, Weston**	**0.32**	**324**	⇓P	Pg	01 34 07.8	-2.6
	baz=0.3,SNR=1000						
T24A				⇓S	Sg	01 34 11.5	-3.4
	baz=0.3						
T25A	**Trinidad**	**0.46**	**45**	⇑P	Pg	01 34 11.9	-1.2
	baz=0.5,SNR=836						
T25A				⇑S	Sg	01 34 17.5	-1.7
	baz=0.5						
U25A	**Circle Dot Ran**	**0.53**	**141**	⇓P	Pg	01 34 14.5	+0.1
	baz=0.6,SNR=1000						
U25A				⇑S	Sg	01 34 22.1	+0.6
	baz=0.6						
U24A	**Moreno Valley**	**0.55**	**222**	P	Pg	01 34 14.1	-0.8
	baz=0.6,SNR=718						
U24A				⇑S	Sg	01 34 21.2	-1.1
	baz=0.6						
S24A	**Houchin Ranch,**	**0.88**	**339**	P	Pg	01 34 18.6	-2.6
	baz=0.8,SNR=84						
S24A				⇑S	Sg	01 34 29.2	-3.8
	baz=0.8						
S25A	**Robets Cordova**	**0.90**	**20**	P	Pg	01 34 19.1	-2.2
	baz=0.9,SNR=204						
S25A				⇓S	Sg	01 34 29.9	-3.3
	baz=0.9						
U26A	**Atchley Ranch,**	**0.96**	**116**	⇑P	Pg	01 34 22.1	-0.5
	baz=1.0						
U26A				⇑S	Sg	01 34 35.2	-0.2
	baz=1.0						
V25A	**Rancho No Teng**	**0.99**	**170**	⇑P	Pg	01 34 22.5	-0.7
	baz=1.0,SNR=1000						
V25A				⇓S	Sg	01 34 35.8	-0.5
	baz=1.0						
T23A	**Casias Ranch,**	**1.00**	**283**	P	Pg	01 34 21.4	-2.1
	baz=1.0,SNR=56						
T23A				⇑S	Sg	01 34 33.0	-3.8
	baz=1.0						
T26A	**Comanche Natio**	**1.04**	**70**	P	Pg	01 34 23.0	-1.2
	baz=1.1,SNR=100						
T26A				⇑S	Sg	01 34 36.8	-1.2
	baz=1.1						
V24A	**Rampart Ranch,**	**1.15**	**199**	P	Pg	01 34 25.2	-1.1
	baz=1.2,SNR=278						
V24A				⇑S	Sg	01 34 40.0	-1.4
	baz=1.2						
U23A	**El Rito**	**1.21**	**247**	P	Pg	01 34 25.7	-1.7
	baz=1.2,SNR=148						
U23A				⇑S	Sg	01 34 41.3	-2.0
	baz=1.2						
S23A	**Nye Farm, Mont**	**1.29**	**314**	⇓P	Pn	01 34 26.5	-2.5
	baz=1.2,SNR=31						
S23A				⇑S	Sg	01 34 43.0	-3.1
	baz=1.2						
V26A	**Tequesquite Ra**	**1.32**	**140**	P	Pn	01 34 28.4	-0.7
	baz=1.4,SNR=114						
V26A				⇑S	Sg	01 34 46.2	-0.4
	baz=1.4						
S26A	**Kim**	**1.34**	**53**	P	Pn	01 34 28.0	-1.5
	baz=1.3,SNR=250						
S26A				⇓S	Sb	01 34 45.3	-2.0
	baz=1.3						
R25A	**Fountain Ranch**	**1.39**	**18**	⇓P	Pn	01 34 28.2	-2.0
	baz=1.4,SNR=49						
R25A				⇑S	Sb	01 34 45.4	-3.5
	baz=1.4						
R24A	**Sanders Place,**	**1.43**	**351**	P	Pn	01 34 28.5	-2.3
	baz=1.4,SNR=65						
R24A				⇓S	Sb	01 34 46.3	-3.8
	baz=1.4						
V23A	**Ortiz Mt. (NFS**	**1.54**	**226**	⇑Pg	Pn	01 34 32.1	-0.2
	baz=1.5,SNR=135						
R23A	**Moffat**	**1.59**	**330**	⇑Pg	Pn	01 34 31.4	-1.6
	baz=1.5,SNR=540						
W25A	**X Bar L Ranch,**	**1.62**	**170**	⇓Pb	Pb	01 34 34.0	-0.5
	baz=1.7,SNR=320						
W25A				⇓S	Sb	01 34 55.3	-0.2
	baz=1.7						
U27A	**Thompson Grove**	**1.65**	**103**	⇓Pg	Pb	01 34 34.7	-0.3
	baz=1.7,SNR=138						
U27A				⇑Sb	Sg	01 34 57.1	-0.2
	baz=1.7						
W24A	**Lazy 6 Ranch,**	**1.67**	**197**	⇓Pb	Pn	01 34 34.7	+0.6
	baz=1.7,SNR=304						
W24A				⇓S	Sn	01 34 55.9	-0.3
	baz=1.7						
T22A	**Edith**	**1.68**	**277**	⇓Pg	Pn	01 34 33.6	-0.7
	baz=1.6,SNR=31						
T22A				⇓S	Sn	01 34 54.1	-2.4
	baz=1.6						
U22A	**Llaves**	**1.70**	**256**	⇑Pg	Pn	01 34 34.3	-0.2
	baz=1.7,SNR=27						
U22A				⇓Sb	Sn	01 34 56.6	-0.2
	baz=1.7						
T27A	**Campo**	**1.70**	**81**	⇑Pg	Pb	01 34 35.1	-0.7
	baz=1.7,SNR=118						
T27A				⇓Sb	Sb	01 34 57.6	0.0
	baz=1.7						
S27A	**Las Animas**	**1.76**	**60**	⇑Pb	Pn	01 34 35.3	+0.1
	baz=1.8,SNR=35						
S27A				⇓Sb	Sb	01 34 58.9	-0.5
	baz=1.8						
R26A	**Arlington**	**1.84**	**36**	⇑Pb	Pn	01 34 36.4	+0.1
	baz=1.8,SNR=218						
R26A				⇓Sb	Sn	01 35 00.4	+0.3
	baz=1.8						
S22A	**4UR Ranch, Cre**	**1.85**	**301**	⇑Pg	Pn	01 34 36.5	-0.2
	baz=1.8,SNR=43						
S22A				⇑Sb	Sn	01 34 60.0	-0.8
	baz=1.8						
V22A	**San Miguel Ran**	**1.91**	**242**	⇑Pb	Pn	01 34 37.8	+0.4
	baz=1.9,SNR=32						
V22A				⇓Sb	Sn	01 35 02.9	+0.7
	baz=1.9						
V27A	**Dan Oppiter Fa**	**1.92**	**123**	⇓Pb	Pb	01 34 38.9	-0.7
	baz=2.0,SNR=148						
V27A				⇓Sb	Sg	01 35 05.4	-0.5
	baz=2.0						
W26A	**Owens Ranch, T**	**1.93**	**153**	⇑Pb	Pb	01 34 39.4	-0.3
	baz=2.0,SNR=512						
W26A				⇑Sb	Sg	01 35 05.7	-0.4
	baz=2.0						
W23A	**Werner Place,**	**1.98**	**214**	⇓Pb	Pn	01 34 39.3	+1.0
	baz=2.0,SNR=281						
W23A				⇓Sb	Sb	01 35 06.0	+0.2
	baz=2.0						
R22A	**Saguache, Gunn**	**2.09**	**313**	⇑Pg	Pn	01 34 40.6	+0.7
	baz=2.0,SNR=28						
U28A	**Mallet**	**2.13**	**101**	⇑Pb	Pb	01 34 42.7	-0.5
	baz=2.2,SNR=107						
U28A				⇓Sb	Sb	01 35 11.3	+1.2
	baz=2.2						
Q25A	**Bedland, Calha**	**2.14**	**12**	⇓Pg	Pn	01 34 42.0	+1.4
	baz=2.1,SNR=9.6						
Q25A				⇓Sb	Sb	01 35 09.4	-1.1
	baz=2.1						
Q24A	**Divide**	**2.16**	**353**	⇑Pb	Pn	01 34 41.4	+0.4
	baz=2.1						
Q24A				⇑Sb	Sn	01 35 08.4	0.0
	baz=2.1						
R27A	**Eads**	**2.17**	**47**	⇑P	Pn	01 34 40.8	-0.1
	baz=2.2,SNR=51						
R27A				⇑Sb	Sb	01 35 10.3	-0.9
	baz=2.2						
T28A	**Walsh**	**2.19**	**81**	⇑P	Pn	01 34 42.0	+0.9
	baz=2.2						
T28A				⇑Sb	Sb	01 35 12.1	+0.5
	baz=2.2						
Q23A	**Hartsel**	**2.23**	**339**	⇑Pb	Pn	01 34 42.4	+0.4
	baz=2.2,SNR=41						
W27A	**Bowe Ranch, En**	**2.26**	**140**	⇑P	Pn	01 34 43.6	+1.5
	baz=2.3,SNR=104						
W27A				⇓Sb	Sg	01 35 15.7	-1.1
	baz=2.3						
X25A	**Clemmons Ranch**	**2.29**	**177**	⇓Pb	Pb	01 34 45.4	-0.6
	baz=2.3,SNR=123						
X25A				⇑Sb	Sb	01 35 15.8	+1.1
	baz=2.3						
ANMO	**Albuquerque**	**2.29**	**216**	*e*Pn	Pn	01 34 43.2	+0.6
ANMO				*e*Sg	Sb	01 35 14.4	-0.5
X24A	**Lazy VL Ranch,**	**2.30**	**193**	⇓Pb	Pb	01 34 46.0	-0.2
	baz=2.3						
X24A				⇑Sb	Sb	01 35 16.1	+0.9
	baz=2.3						
U21A	**Nageezi**	**2.32**	**261**	⇑Pg	Pb	01 34 45.8	-0.7
	baz=2.3,SNR=136						
U21A				⇑Sb	Sb	01 35 14.1	-1.6
	baz=2.3						
Q26A	**Hugo**	**2.34**	**26**	⇓Pb	Pn	01 34 44.9	+1.6
	baz=2.3,SNR=12						
Q26A				⇓Sb	Sb	01 35 14.8	-1.3
	baz=2.3						
V28A	**Channing**	**2.35**	**116**	⇑Pb	Pb	01 34 46.4	-0.5
	baz=2.4						
V28A				⇓Sb	Sg	01 35 18.3	-1.4
	baz=2.4						
X26A	**CR and CF Fran**	**2.41**	**160**	⇓P	Pn	01 34 45.4	+1.3
	baz=2.5,SNR=196						
X26A				⇓Sb	Sg	01 35 19.9	-1.6
	baz=2.5						
S28A	**Manter**	**2.46**	**71**	⇓P	Pn	01 34 45.3	+0.6
	baz=2.5,SNR=38						
S28A				⇑Sb	Sb	01 35 19.9	+0.5
	baz=2.5						
V21A	**Milan**	**2.49**	**247**	⇓P	Pn	01 34 45.9	+0.5
	baz=2.5,SNR=78						
V21A				⇓Sb	Sb	01 35 19.8	-0.8
	baz=2.5						
X23A	**Hourglass Bar**	**2.50**	**207**	⇓Pb	Pb	01 34 48.9	-0.6
	baz=2.5						
X23A				⇑Sb	Sb	01 35 20.7	0.0
	baz=2.5						
S21A	**Coal Bank Pass**	**2.52**	**290**	⇑Sb	Sb	01 35 20.0	-1.6
	baz=2.5						
X27A	**F and S Farms,**	**2.58**	**147**	⇑Pb	Pb	01 34 50.7	-0.1
	baz=2.6						
X27A				⇓Sb	Sg	01 35 25.4	-1.7
	baz=2.6						
W28A	**Vega**	**2.63**	**126**	⇓Sb	Sb	01 35 26.3	+2.0
	baz=2.7						
P24A	**Kohler Place,**	**2.69**	**359**	⇑Sb	Sb	01 35 25.9	-0.5
	baz=2.6						
KSCO	**Kaye Shedlock'**	**2.79**	**38**	⇓P	Pn	01 34 50.1	+0.7
	baz=2.8,SNR=12						
KSCO				⇓Sb	Sb	01 35 28.8	-0.3
	baz=2.8						
V29A	**Stinnett**	**2.82**	**109**	⇓Sb	Sb	01 35 32.1	+2.2
	baz=2.9						
T29A	**Hugoton**	**2.84**	**82**	⇑Sb	Sb	01 35 31.7	+1.2
	baz=2.9						
U29A	**Oasis Ranch, S**	**2.88**	**96**	⇑Sb	Sb	01 35 33.2	+1.7
	baz=2.9						
Y25A	**Mesa, Roswell**	**2.89**	**178**	⇓Sb	Sb	01 35 33.9	+2.0
	baz=2.9						
LPM	**Los Pinos Moun**	**2.91**	**211**	*e*Pn	Pn	01 34 49.7	-1.4
LPM				*e*Pg	Pb	01 34 56.1	-0.4
LPM				*e*Sg	Sb	01 35 32.6	+0.1
SMCO	**Snowmass**	**2.91**	**325**	*e*Pn	Pn	01 34 50.7	-0.6
SMCO				*e*Pg	Pb	01 34 56.2	-0.6
SMCO				*e*Sg	Sb	01 35 32.9	-0.1
MVCO	**Mesa Verde**	**2.97**	**279**	*e*Pg	Pb	01 34 57.2	-0.4
MVCO				*e*Sg	Sb	01 35 32.6	-1.9
P26A	**Davis Ranch, A**	**2.97**	**23**	⇑Sb	Sb	01 35 33.7	-0.7
	baz=2.9						
ISCO	**Idaho Springs**	**3.04**	**348**	*e*Pn	Pn	01 34 53.6	+0.5
ISCO				*e*Sg	Sn	01 35 33.4	+3.2
ISCO	**Idaho Springs**	**3.04**	**348**	⇑P	Pn	01 34 53.7	+0.6
	baz=3.0,SNR=12						
BNM	**Barren Site**	**3.04**	**210**	*e*Pn	Pn	01 34 53.8	+0.8
BNM				*e*Pg	Pb	01 34 59.4	+0.5
BNM				*e*Sg	Sb	01 35 36.7	+0.2
LAZ	**Ladron**	**3.06**	**219**	*e*Pn	Pn	01 34 53.5	+0.3
LAZ				*e*Pg	Pb	01 34 59.5	+0.3
LAZ				*e*Sg	Sb	01 35 39.3	+2.2
LENM	**Lemitar**	**3.18**	**214**	*e*Pn	Pn	01 34 52.7	-2.1
LENM				*e*Pg	Pb	01 35 00.2	-0.8
LENM				*e*Sg	Sb	01 35 40.4	+0.1
AMTX	**Amarillo**	**3.20**	**126**	*e*Pn	Pn	01 34 55.8	+0.8
AMTX				*e*Sg	Sb	01 35 41.6	+1.0
PV01	**Paradox Valley**	**3.26**	**295**	*e*Pn	Pn	01 34 56.8	+0.8
PV01				*e*Pg	Pb	01 35 02.1	-0.5
PV01				*e*Sg	Sb	01 35 45.3	+2.5
X21A	**Alamocita Cree**	**3.38**	**226**	⇓P	Pn	01 34 58.7	+1.0
	baz=3.4,SNR=5.8						
Y28A	**McKinney Farm,**	**3.58**	**143**	⇑P	Pn	01 35 01.4	+1.2
	baz=3.6,SNR=6.5						
PV04	**Paradox Valley**	**3.61**	**297**	*e*Pn	Pn	01 35 01.3	+0.6
PV04				*e*Pg	Pb	01 35 09.4	+1.0
PV04				*e*Sg	Sg	01 35 56.9	-3.3
Y21A	**Point of Rocks**	**3.65**	**221**	⇓P	Pn	01 35 02.3	+1.0
	baz=3.7,SNR=9.8						
CPRX	**Cap Rock**	**3.86**	**168**	*e*Pg	Pg	01 35 16.7	-1.4
CPRX				*e*Sg	Sg	01 36 04.2	-4.0
CBKS	**Cedar Bluff**	**4.49**	**62**	*e*Pb	Pn	01 35 12.7	+0.1
CBKS				*e*Sg	Sg	01 36 24.0	-4.3
PHWY	**Pilot Hill**	**4.50**	**354**	*e*Pn	Pn	01 35 11.2	-2.0
PHWY				*e*Pg	Pb	01 35 24.6	+0.7
PHWY				*e*Sg	Sb	01 36 19.9	+1.2
GDL2	**Guadalupe Moun**	**4.62**	**175**	*e*Pg	Pb	01 35 28.4	+2.7
GDL2				*e*Sg	Sb	01 36 25.4	+3.7
OGNE	**Ogallala**	**4.66**	**27**	*e*Pn	Pn	01 35 15.1	+0.1
OGNE				*e*Pg	Pb	01 35 27.7	+1.5
OGNE				*e*Sg	Sb	01 36 25.1	+2.4
SRU	**San Rafael**	**5.06**	**299**	*e*Pn	Pn	01 35 21.6	+1.0
SRU				*e*Pg	Pb	01 35 33.2	+0.1
SRU				*e*Sg	Sb	01 36 38.6	+4.2
WMOK	**Wichita Mounta**	**5.33**	**111**	*e*Pn	Pn	01 35 24.1	0.0
WMOK				*e*Pg	Pb	01 35 40.8	+3.2
WMOK				*e*Sg	Sg	01 36 49.1	-6.1
WUAZ	**Wupatki**	**5.46**	**258**	Pn	Pn	01 35 22.4	-3.7
WUAZ				*e*Pb	Pb	01 35 36.9	-3.1
WUAZ				*e*Pg	Pg	01 35 45.2	-3.5
WUAZ				*e*Sg	Sb	01 36 52.5	+6.5
TMUT	**Trail Mountain**	**5.62**	**298**	*e*Pn	Pn	01 35 27.7	-0.8
TMUT				*e*Pg	Pb	01 35 45.1	+2.3
TMUT				*e*Sg	Sb	01 36 55.5	+4.8
MSU	**Marysvale**	**6.08**	**288**	*e*Pn	Pn	01 35 33.8	-0.9
MSU				*e*Pg	Pb	01 35 55.4	+4.9
MSU				*e*Sg	Sb	01 37 11.5	+7.7
MVU	**Marysvale**	**6.10**	**288**	*e*Pg	Pb	01 35 55.4	+4.4
JLU	**Jordanelle**	**6.42**	**308**	*e*Pg	Pg	01 36 01.8	-5.3
TUC	**Tucson**	**6.67**	**229**	*e*Pg	Pg	01 36 10.3	-1.4
TUC				*e*Sg	Sg	01 37 31.8	-6.4
CCUT	**Cedar City**	**6.86**	**279**	*e*Pg	Pb	01 36 09.8	+5.9
CCUT				*e*Sg	Sb	01 37 34.0	+7.7
KSU1	**Kansas State U**	**6.88**	**68**	*e*Pg	Pb	01 36 08.9	+5.1
KSU1				*e*Sg	Sg	01 37 35.7	-9.0
BW06	**Boulder Array**	**6.97**	**330**	*e*Pg	Pg	01 36 11.9	-5.9

HWUT	Hardware Ranch	7.09	314	ePg	Pb	01 36 13.3	+5.6
DUG	Dugway	7.12	301	ePg	Pg	01 36 14.6	-5.8
LOHW	Long Hollow	8.10	329	ePg	Pg	01 36 34.0	-5.2

*UCC **01** 01:50:31.6±0.4, 51°.65N×6°.39E, h6^{km}±2^{km}, ML2.0*
*BUG **01** 01:50:32.3, 51°.42N×6°.55E, h1^{km}, ML1.8*
*ISCJB **01** 01:50:32.0±0.4, 51°.46N±0°.02×6°.56E±0°.03, h0^{km}, Error ellipse: s-maj=3.1km s-min=2.6km az=15.2*
*CSEM **01** 01:50:32.5±0.3, 51°.49N×6°.57E, h1^{km}, ML2.6/15, Error ellipse: s-maj=4.2km s-min=4.2km az=165.0*
*LDG **01** 01:50:32.8±0.1, 51°.53N×6°.60E, h1^{km}, Md3.0/1, Ml2.6/10, Error ellipse: s-maj=2.3km s-min=1.5km az=9.0, Suspected Mining induced.*
*BNS **01** 01:50:34.0±1.4, 51°.47N×6°.60E, h1^{km}, ML1.9*
*BGR **01** 01:50:34.1±1.0, 51°.43N×6°.71E, h1^{km}, ML2.2/5, Error ellipse: s-maj=13.3km s-min=4.4km az=144.0*
ISC 01 01:50:31.8±0.7, **51°.47N**±0°.02×**6°.53E**±0°.02, **h0^{km}, n67, σ0^s.79**/121, **4C-6D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRHE	Rheinberg	0.05	33	Pg	Pg	01 50 33.2	+0.4
BRHE				Sg	Sg	01 50 34.0	+0.5
BRHE	Rheinberg	0.05	33	Pg	Pg	01 50 33.2	+0.4
BRHE				Sg	Sg	01 50 34.0	+0.5
LAUG	Laupendahl	0.29	115	⇓iPg	Pg	01 50 38.4	+1.0
LAUG				i Sg	Sg	01 50 42.3	+1.2
	155nm,0.6s						
LAUG	Laupendahl	0.29	115	Pg	Pg	01 50 38.4	+1.0
LAUG				Sg	Sg	01 50 42.3	+1.2
	155nm,0.6s						
RODG	Roetgen-Dahlhe	0.40	214	⇑iPg	Pb	01 50 41.8	+0.1
RODG				i Sg	Sb	01 50 48.2	0.0
	256nm,0.5s						
RODG	Roetgen-Dahlhe	0.40	214	Pg	Pb	01 50 41.8	+0.1
RODG				Sg	Sb	01 50 48.2	0.0
	256nm,0.5s						
OPLO	Oploo	0.46	285	ePg	Pb	01 50 43.2	+0.4
	baz=99						
OPLO				eSg	Sb	01 50 50.5	+0.3
OPLO	Oploo	0.46	285	ePg	Pb	01 50 43.2	+0.4
OPLO				eSg	Sb	01 50 50.5	+0.3
BUG	Bochum--Univer	0.47	94	ePg	Pg	01 50 41.5	+0.8
	SNR=13						
WTSB	Winterswijk	0.52	19	ePg	Pg	01 50 42.6	+0.8
	baz=193						
WTSB				eSg	Sg	01 50 48.7	+0.1
WTSB	Winterswijk	0.52	19	ePg	Pg	01 50 42.6	+0.8
WTSB				eSg	Sg	01 50 48.7	+0.1
BNS	Bensberg	0.65	141	⇓ePg	Pb	01 50 46.0	-0.1
BNS				eSg	Sb	01 50 54.8	-0.9
	63nm,0.7s						
BNS	Bensberg	0.65	141	Pg	Pb	01 50 46.0	-0.1
BNS				Sg	Sb	01 50 54.8	-0.9
	63nm,0.7s						
HOBG	Hohbusch	0.71	134	⇓ePg	Pb	01 50 46.7	-0.3
HOBG	Hohbusch	0.71	134	Pg	Pb	01 50 46.7	-0.3
HGN	Heimansgroeve	0.80	208	ePn	Pb	01 50 48.9	+0.3
HGN				ePg	Pn	01 50 50.4	0.0
	46nm,0.3s						
HGN				eSg	Sb	01 51 00.2	+0.2
HGN	Heimansgroeve	0.80	208	ePn	Pb	01 50 48.9	+0.3
DREG	Dreilaegerbach	0.83	193	ePg	Pb	01 50 49.4	+0.2
	SNR=9.4						
DREG				eSg	Sb	01 51 01.7	+0.8
DREG	Dreilaegerbach	0.83	193	Pg	Pb	01 50 49.4	+0.2
	SNR=9.4						
DREG				Sg	Sb	01 51 01.7	+0.8
KLL	Kalltalsperre	0.84	189	ePg	Pn	01 50 50.2	-0.7
KLL				eSg	Sb	01 51 02.2	+1.1
	40nm,0.7s						
KLL	Kalltalsperre	0.84	189	Pg	Pn	01 50 50.2	-0.7
KLL				Sg	Sb	01 51 02.2	+1.1
	40nm,0.7s						
BEBN	Eben Emael	0.86	219	⇑P	Pg	01 50 48.9	+0.5
BEBN				S	Sb	01 51 02.8	+1.0
BEBN	Eben Emael	0.86	219	P	Pg	01 50 48.8	+0.5
BEBN				S	Sb	01 51 02.7	+1.0
STB	Steinbach	0.90	167	⇓iPg	Pn	01 50 51.4	-0.4
STB				eSg	Sb	01 51 02.8	-0.1
	42nm,0.5s						
STB	Steinbach	0.90	167	Pg	Pn	01 50 51.4	-0.4
STB				Sg	Sb	01 51 02.8	-0.1
	42nm,0.5s						
MEM	Membach	0.93	201	⇑P	Pb	01 50 51.1	+0.3
MEM				S	Sn	01 51 06.1	0.0
	comp=E,38nm,0.6s						
MEM	Membach	0.93	201	P	Pb	01 50 51.0	+0.3
MEM				S	Sn	01 51 06.0	0.0
	comp=E,38nm,0.6s						
HILG	Hillesheim	1.19	175	⇓iPg	Pn	01 50 56.1	+0.4
HILG				eSg	Sn	01 51 12.2	-0.3
	comp=E,35nm,0.5s						
HILG	Hillesheim	1.19	175	Pg	Pn	01 50 56.1	+0.4
HILG				Sg	Sn	01 51 12.2	-0.3
	comp=E,35nm,0.5s						
KOE	Koeppel	1.30	144	⇓ePg	Pn	01 50 57.3	+0.1
KOE				eSg	Sb	01 51 14.5	+0.2
KOE	Koeppel	1.30	144	Pg	Pn	01 50 57.3	+0.1
KOE				Sg	Sb	01 51 14.5	+0.2
BCLA	Clavier	1.31	217	P	Pn	01 50 57.7	+0.3
BCLA				S	Sn	01 51 16.2	+0.6
BCLA	Clavier	1.31	217	P	Pn	01 50 57.6	+0.3
BCLA				S	Sn	01 51 16.1	+0.6
BGG	Burgeitz	1.37	158	ePg	Pb	01 50 58.8	+0.5
BGG				eSg	Sb	01 51 16.6	+0.2
	comp=E,18nm,0.5s						
BGG	Burgeitz	1.37	158	Pg	Pb	01 50 58.8	+0.5
BGG				Sg	Sb	01 51 16.5	+0.2
	comp=E,18nm,0.5s						
TNS	Taunus Mts	1.75	135	ePg	Pb	01 51 04.3	-0.5
	SNR=14						
TNS				eSg	Sn	01 51 26.4	0.0
TNS	Taunus Mts	1.75	135	Pg	Pb	01 51 04.3	-0.5
	SNR=14						
TNS				Sg	Sn	01 51 26.4	0.0
GIVF	Givet	1.75	219	eP	Pg	01 51 05.4	+0.1
GIVF				eSn	Sn	01 51 26.0	-0.3
	comp=E,37nm,0.6s						
GIVF	Givet	1.75	219	eP	Pg	01 51 05.4	+0.1
GIVF				eSn	Sn	01 51 26.0	-0.3
	comp=E,18nm,0.6s						
WLF	Walferdange	1.83	188	ePg	Pg	01 51 07.5	+0.7
	SNR=7.6						
WLF				eSg	Sg	01 51 30.6	+0.1
WLF	Walferdange	1.83	188	Pg	Pg	01 51 07.5	+0.7
	SNR=7.6						
WLF				Sg	Sg	01 51 30.6	+0.1
DOU	Dourbes	1.85	222	⇑P	Pn	01 51 05.3	+0.6
DOU				S	Sb	01 51 29.7	-0.4
	comp=N,8.0nm,0.3s						
DOU	Dourbes	1.85	222	P	Pn	01 51 05.3	+0.6
DOU				S	Sb	01 51 29.6	-0.4
	comp=N,8.0nm,0.3s						
BAIF	Baives	2.04	227	ePn	Pn	01 51 07.7	+0.3
BAIF	Baives	2.04	227	ePg	Pg	01 51 12.0	+1.0
BAIF				eSn	Sn	01 51 33.4	-0.2
	comp=N,26nm,0.8s						
BAIF	Baives	2.04	227	ePn	Pn	01 51 07.7	+0.3
BAIF	Baives	2.04	227	ePg	Pg	01 51 12.0	+1.0
BAIF				eSn	Sn	01 51 33.4	-0.2
	comp=N,13nm,0.8s						
GTTG	Gvttingen	2.15	87	eSg	Sb	01 51 38.5	-0.3
GTTG	Gvttingen	2.15	87	Sg	Sb	01 51 38.5	-0.3
PAGF	Fort de Pagny	2.97	190	ePg	Pg	01 51 28.6	-0.1
PAGF				eSg	Sg	01 52 08.2	+1.1
	comp=N,1.9nm,0.4s						
PAGF	Fort de Pagny	2.97	190	ePg	Pg	01 51 28.6	-0.1
PAGF				eSg	Sg	01 52 08.2	+1.1
	comp=N,0.9nm,0.4s						
CDF	Champ du Feu	3.10	171	ePn	Pn	01 51 21.5	-0.6
CDF				eSg	Sg	01 52 12.0	+0.5
	comp=N,3.2nm,0.5s						
CDF	Champ du Feu	3.10	171	ePn	Pn	01 51 21.5	-0.6
CDF				eSg	Sg	01 52 12.0	+0.5
	comp=N,1.6nm,0.5s						
MEZF	Maizieres J'vi	3.12	198	eSg	Sg	01 52 12.1	0.0
	comp=N,7.8nm,0.5s						
MEZF	Maizieres J'vi	3.12	198	eSg	Sg	01 52 12.1	0.0
	comp=N,3.9nm,0.5s						
SFTF	Sexfontaines	3.41	197	ePg	Pg	01 51 37.1	-0.1
SFTF				eSg	Sg	01 52 22.0	+0.7
	comp=N,6.8nm,0.5s						
SFTF	Sexfontaines	3.41	197	ePg	Pg	01 51 37.1	-0.1
SFTF				eSg	Sg	01 52 22.0	+0.7
	comp=N,3.4nm,0.5s						
HAU	Haudompre	3.47	182	eSg	Sg	01 52 23.8	+0.4
	comp=N,3.8nm,0.4s						
HAU	Haudompre	3.47	182	eSg	Sg	01 52 23.8	+0.4
	comp=N,1.9nm,0.4s						
LOR	Lormes	4.56	204	ePn	Pn	01 51 41.7	-0.3
LOR				eSn	Sn	01 52 32.1	-3.5
LOR				eSg	Sg	01 52 58.1	0.0
	comp=N,2.7nm,0.5s						
LOR	Lormes	4.56	204	ePn	Pn	01 51 41.7	-0.3
LOR				eSn	Sn	01 52 32.1	-3.5
LOR				eSg	Sg	01 52 58.1	0.0
	comp=N,1.4nm,0.5s						
SSF	Saint Saulge	4.84	205	ePn	Pn	01 51 45.5	-0.4
SSF	Saint Saulge	4.84	205	ePn	Pn	01 51 45.5	-0.4
SMF	Signal de Mont	5.14	201	ePn	Pn	01 51 50.0	-0.1
SMF	Signal de Mont	5.14	201	ePn	Pn	01 51 50.0	-0.1
FLN	La Foliniere	5.26	242	ePn	Pn	01 51 51.3	-0.4
FLN				eSn	Sn	01 52 50.0	-3.0
	comp=N,2.0nm,0.5s						
FLN	La Foliniere	5.26	242	ePn	Pn	01 51 51.3	-0.4
FLN				eSn	Sn	01 52 50.0	-3.0
	comp=N,1.0nm,0.5s						

GUC 01 01:55:08.8±0.6, **28°.92S**×**70°.63W, h75^{km}**±3^{km}, **MD3.7, ML3.9, 2C, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.11	211	⇑iP	Pn	01 55 20.9	+0.8
LCO				i S	Sn	01 55 29.3	+0.9
LCO				AML	AML	01 55 30.4	
	comp=E,4μm,0.2s						
TLL	Tololo Astrono	1.26	187	⇑iP	Pn	01 55 31.8	+0.6
TLL				i S	Sn	01 55 49.4	+1.5
CPCH	Copiapo	1.57	9	eP	Pn	01 55 35.3	+0.4
CPCH				i S	Sn	01 55 55.3	+0.6
CPCH				AML	AML	01 55 57.9	
	comp=E,6μm,0.1s						
CDCH	Caldera	1.85	355	i P	Pn	01 55 38.6	+0.1
CDCH				i S	Sn	01 56 01.7	+0.6
CMCH	Combarbala	2.27	188	i P	Pn	01 55 44.8	+0.4
CMCH				i S	Sn	01 56 12.1	+0.5
CMCH				AML	AML	01 56 29.1	
	comp=E,666nm,0.6s						

*IDC **01** 02:02:20.6±2.4, 11°.41N×86°.74W, h0^{km}, mb3.5/4, mb1 3.9/5, mb1mx3.6/23, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=64.3km s-min=44.5km az=41.0*
*ISCJB **01** 02:02:24.9±0.7, 11°.28N±0°.09×86°.78W±0°.09, h65^{km}, mb3.4/4, Error ellipse: s-maj=17.5km s-min=4.8km az=43.4*
*CASC **01** 02:02:25.7±3.7, 11°.36N×86°.75W, h36^{km}±999^{km}, MD4.0*
ISC 01 02:02:27.7±1.0, **11°.4N**±0°.1×**86°.7W**±0°.1, **h65^{km}, n23, σ2^s.01**/24, **mb3.5**/4, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBS2	Las Lilas	1.34	113	i P	Pn	02 02 48.7	-1.8
GBS2				i S	Sn	02 03 04.5	-3.1
NY14	Universidad de	1.36	121	i P	Pn	02 02 48.1	-2.5
LAPC	Finca la Perla	1.39	115	i P	Pn	02 02 48.4	-2.7
LIM1	Limonal	1.58	115	i P	Pn	02 02 51.3	-2.3
VCR	Vista de Mar	1.62	139	eP	Pn	02 02 54.6	+0.3
CNCH	Conchagua	2.19	330	eP	Pn	02 03 00.8	-1.2
FORC	Fortuna	2.20	114	eP	Pn	02 03 05.4	+3.5
BLLM	Bellamira	2.55	324	eP	Pn	02 03 04.8	-2.0
VSM	San Miguel	2.56	324	eP	Pn	02 03 04.7	-2.4
CGA2	Cerro Gallo 2	2.58	121	eP	Pn	02 03 05.7	-1.6
TGUH	Tegucigalpa,Un	2.73	349	eP	Pn	02 03 10.0	+0.8
TGUH				eS	Sn	02 03 40.5	-0.6
CAHU	Cacacuatique	2.80	329	eP	Pn	02 03 09.7	-0.7
LAJ	Bijagual	2.95	120	eP	Pn	02 03 06.7	-5.7
SNVI	San Vicente	3.05	317	eP	Pn	02 03 10.8	-2.9
QCR	Quepos	3.16	127	eP	Pn	02 03 14.2	-0.9
LFRS	El Faro	3.21	315	eP	Pn	02 03 13.2	-2.6
LFRS				eS	Sn	02 03 45.5	-7.4
CMIG	Matias Romero	9.75	307	Pn	Pn	02 04 42.2	-3.0
	0.2nm,0.3s,baz=126,slow=12,SNR=7.7						
TXAR	Lajitas Array	23.87	321	P	P	02 07 35.4	+0.1
	1.3nm,0.8s,baz=137,slow=10,SNR=16						
TXAR				PcP	PcP	02 11 19.6	+2.7
	0.7nm,0.8s,baz=134,slow=5.4,SNR=7.1						
TKL	Tuckaleechee C	24.33	6	P	P	02 07 40.6	+1.2
	2.1nm,0.5s,baz=172,slow=13,SNR=4.0						
PDAR	Pinedale Array	37.07	332	P	P	02 09 31.7	-0.1
	0.4nm,0.6s,baz=128,slow=12,SNR=3.5						
NVAR	Mina Array Bea	38.99	319	PcP	PcP	02 11 59.4	+2.0
	0.7nm,0.7s,baz=126,slow=4.6,SNR=2.8						
YKA	Yellowknife Ar	54.84	345	P	P	02 11 51.1	+0.2
	0.2nm,0.8s,baz=144,slow=7.1,SNR=4.3						
CMAR	Chiang Mai Arr	149.85	349	PKPbc	PKPbc	02 22 12.6	+1.1
	0.9nm,0.4s,baz=347,slow=5.1,SNR=5.0						

*IDC **01** 02:15:03.3±0.9, 2°.93S×147°.81E, h0^{km}, mb4.2/8, mb1 4.4/10, mb1mx4.1/21, mbtmp4.2/10, ML2.8/2, MS4.1/26, Ms1 4.1/26, ms1mx4.0/34, Error ellipse: s-maj=48.7km s-min=16.4km az=112.0*
*ISCJB **01** 02:15:05.1±0.7, 2°.95S±0°.06×147°.8E±0°.2, h22^{km}, mb4.2/10, MS4.1/23, Error ellipse: s-maj=26.0km s-min=7.9km az=9.3*
*NEIC **01** 02:15:08.6±0.5, 2°.98S×147°.82E, h35^{km}, mb4.6/2, Error ellipse: s-maj=20.5km s-min=8.1km az=105.0*
*GCMT **01** 02:15:08.9±0.3, 3°.03S×148°.02E, h29^{km}±1^{km}, MW5.0, Moment Tensor Solution. s17,c19; s58,c81; Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.20±.21; M$_{\theta\theta}$0.84±.17; M$_{\phi\phi}$-0.64±.19; M$_{r\theta}$-0.01±.22; M$_{\theta\phi}$3.22±.11; M$_{\phi r}$-0.92±.25; Best double couple: M$_0$3.40000×10^{16} NP1:φ$_s$276.00000°, δ74.00000°, λ-3.00000°. NP2:φ$_s$7.00000°, δ87.00000°, λ-164.00000°. Principal axes: T 3.5000, Plg9.0000°, Azm140.0000°; N -0.1300, Plg74.0000°, Azm16.0000°; P -3.3700, Plg13.0000°, Azm233.0000°; Data Used: IU II CN G IC.*
ISC 01 02:15:06.9±0.7, **2°.91S**±0°.07×**147°.8E**±0°.2, **h22^{km}, n54, σ0^s.86**/32, **mb4.3**/10, **MS4.1**/23, **Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.48	185	Pn	Pn	02 16 40.6	-0.4
PMG				Sn	Sn	02 17 55.0	+0.7
PMG	Port Moresby	6.48	185	Pn	Pn	02 16 40.6	-0.4
	0.3nm,0.3s,baz=24,slow=12,SNR=2.1						
PMG				Sn	Sn	02 17 55.0	+0.7
	3.5nm,0.3s,baz=308,slow=11,SNR=6.9						
HNR	Honiara	13.73	119	LR	LR	02 22 35.4	
	comp=Z,593nm,21.7s,baz=181,slow=33						
GUMO	Guam	16.64	350	LR	LR	02 23 51.1	
	comp=Z,463nm,20.8s,baz=148,slow=32						
CTA	Charters Tower	17.14	185	P	Pn	02 19 05.2	+0.1
CTA	Charters Tower	17.14	185	P	Pn	02 19 05.2	+0.1
	0.1nm,0.3s,baz=10.0,slow=15,SNR=4.4						
CTA				LR	LR	02 24 08.1	
	comp=Z,166nm,20.8s,baz=25,slow=32						
CTAO	Charters Tower	17.14	185	ePn	Pn	02 19 03.7	-1.4
WRAB	Tennant Creek	21.39	217	eP	P	02 19 53.4	+0.2
	47nm,1.4s						
WRA	Warramunga Arr	21.41	217	P	P	02 19 53.2	-0.2
WRA	Warramunga Arr	21.41	217	P	P	02 19 53.2	-0.2
	12nm,1.1s,baz=41,slow=11,SNR=27						
WRA				LR	LR	02 29 03.3	
	comp=Z,363nm,18.2s,baz=45,slow=39						
DAV	Davao City (W)	24.26	294	LR	LR	02 29 56.2	
	comp=Z,568nm,18.1s,baz=51,slow=37						
AS31	Alice Springs	24.60	212	eP	P	02 20 25.9	+0.2
ASAR	Alice Springs	24.61	212	P	P	02 20 26.0	+0.2
ASAR	Alice Springs	24.61	212	P	P	02 20 26.0	+0.2
	4.1nm,0.6s,baz=44,slow=7.1,SNR=37						
ASAR				LR	LR	02 30 56.3	
	comp=Z,443nm,20.2s,baz=137,slow=39						
DZM	Mont Dzumac	26.30	138	eLR	LR	02 27 10.8	
	2μm,25.2s						
DZM	Mont Dzumac	26.30	138	LR	LR	02 29 32.8	
	comp=Z,989nm,19.3s,baz=19,slow=33						
FITZ	Fitzroy Crossi	26.42	234	P	P	02 20 41.5	-0.7
FITZ	Fitzroy Crossi	26.42	234	P	P	02 20 41.5	-0.7
	13nm,0.9s,baz=66,slow=9.8,SNR=13						
FITZ				LR	LR	02 32 02.5	
	comp=Z,233nm,20.0s,baz=52,slow=38						
STKA	Stephens Creek	29.39	191	LR	LR	02 34 04.3	
	comp=Z,385nm,18.7s,baz=18,slow=39						
MJAR	Matsushiro Arr	40.25	348	LR	LR	02 37 16.5	
	comp=Z,111nm,19.2s,baz=150,slow=33						
NWAO	Narrogin (SRO)	41.34	220	LR	LR	02 41 13.9	
	comp=Z,384nm,20.3s,baz=146,slow=38						
KSRS	Korea Array	44.19	337	LR	LR	02 39 13.0	
	comp=Z,135nm,19.1s,baz=331,slow=33						
URZ	Urewera	44.24	146	LR	LR	02 38 17.5	
	comp=Z,522nm,19.4s,baz=314,slow=32						
RPZ	Rata Peaks	45.58	156	LR	LR	02 38 48.4	
	comp=Z,273nm,19.6s,baz=358,slow=31						
USRK	Ussuriysk Arra	48.98	345	LR	LR	02 42 13.9	
	comp=Z,89nm,20.2s,baz=18,slow=33						
CMAR	Chiang Mai Arr	52.53	296	LR	LR	02 47 04.5	
	comp=Z,62nm,18.8s,baz=285,slow=36						
PETK	Petropavlovsk-	56.44	7	P	P	02 24 47.0	+0.2
PETK	Petropavlovsk-	56.44	7	P	P	02 24 47.0	+0.2
	5.8nm,1.1s,baz=180,slow=7.2,SNR=4.1						
SONM	Songino Array	62.11	330	LR	LR	02 49 58.3	
	comp=Z,126nm,21.8s,baz=133,slow=34						
PPT	Papeete	63.09	108	LR	LR	02 47 26.4	
	comp=Z,134nm,19.0s,baz=186,slow=31						
PPT2	Papeete2	63.09	108	eLR	LR	02 44 07.6	
	92nm,25.5s						
TBI	Tubuai	63.91	114	eLR	LR	02 44 44.6	
	272nm,32.0s						
VNDA	Vanda	74.93	177	LR	LR	02 56 58.8	
	comp=Z,95nm,18.2s,baz=338,slow=34						
MKAR	Makanchi Array	75.63	320	LR	LR	02 59 22.2	
	comp=Z,106nm,19.7s,baz=352,slow=35						
ZALV	Zalesovo Beam	76.83	327	P	P	02 26 58.4	+1.5
ZALV	Zalesovo Beam	76.83	327	P	P	02 26 58.4	+1.5
	0.3nm,0.4s,baz=98,slow=3.0,SNR=3.7						
ZALV				LR	LR	03 01 09.0	
	comp=Z,110nm,18.4s,baz=85,slow=36						
RKT	Rikitea	77.15	113	eLR	LR	02 50 42.2	
	134nm,30.0s						
KURK	Kurchatov	79.22	323	eP	P	02 27 10.4	+0.1
	6.7nm,1.4s						
ILAR	Eielson Array	82.36	23	P	P	02 27 26.9	+0.1
ILAR	Eielson Array	82.36	23	P	P	02 27 26.9	+0.1
	0.6nm,0.8s,baz=262,slow=5.2,SNR=5.7						
ILAR				LR	LR	03 00 56.3	
	comp=Z,53nm,19.6s,baz=19,slow=33						
BVAR	Borovoye Array	84.74	324	LR	LR	03 03 21.4	
	comp=Z,59nm,20.0s,baz=78,slow=34						
MAW	Mawson	85.37	203	LR	LR	03 04 19.1	
	comp=Z,101nm,19.3s,baz=277,slow=35						
INK	Inuvik	88.52	21	P	P	02 27 58.2	+0.9
INK	Inuvik	88.52	21	P	P	02 27 58.2	+0.9
	2.2nm,1.2s,baz=260,slow=9.2,SNR=4.0						
AKTO	Aktyubinsk	92.06	320	LR	LR	03 09 36.1	
	comp=Z,123nm,19.6s,baz=49,slow=36						
YKA	Yellowknife Ar	96.10	28	P	P	02 28 30.8	-1.8
YKA	Yellowknife Ar	96.10	28	P	P	02 28 30.8	-1.8
	0.5nm,0.9s,baz=269,slow=4.9,SNR=5.4						
ELK	Elko	97.20	49	LR	LR	03 02 10.4	
	comp=Z,424nm,21.7s,baz=319,slow=29						
LPAZ	La Paz	139.73	119	ePKPdf	PKPdf	02 34 36.4	+1.5
LPAZ	La Paz	139.73	119	PKP	PKPdf	02 34 35.8	+0.9
	1.9nm,1.1s,baz=197,slow=2.6,SNR=4.8						
TOA0	Torodi Ar. Sit	144.94	289	ePKPdf	PKPdf	02 34 43.2	-0.2
TORD	Torodi Ar. Bea	144.94	289	PKP	PKPab	02 34 42.1	-0.5
TORD	Torodi Ar. Bea	144.94	289	PKP	PKPab	02 34 42.1	-0.5
	2.6nm,1.0s,baz=66,slow=3.3,SNR=10						
SAML	Samuel	146.98	111	ePKPbc	PKPdf	02 34 47.6	+0.7

*IDC **01** 02:48:19.9±3.0, 0°.49S×133°.71E, h0^{km}, mb3.5/2, mb1 3.6/3, mb1mx3.4/21, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=142.4km s-min=29.2km az=75.0*
*ISCJB **01** 02:48:23.4±1.3, 0°.57S±0°.08×133°.33E±0°.09, h28^{km}, mb3.5/2, Error ellipse: s-maj=14.1km s-min=10.3km az=138.5*
*AUST **01** 02:48:30.8±99.0, 0°.86S×133°.08E, h32^{km}±2^{km}, Error ellipse: s-maj=11.9km s-min=1.1km az=230.0*
ISC 01 02:48:26.0±1.7, **0°.6S**±0°.1×**133°.3E**±0°.1, **h28^{km}, n9, σ1^s.98**/11, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SWI	Sorong	2.04	263	P	Pn	02 48 56.9	-1.6
	baz=1.8,SNR=15						
SWI				S	Sn	02 49 21.5	-1.5
	baz=1.8,SNR=6.2						
FAKI	Fak Fak	2.52	204	P	Pn	02 49 05.0	-0.2
	baz=2.2,SNR=19						
FAKI				S	Sn	02 49 35.1	+0.1
	baz=2.2,SNR=4.9						
TLE	Tual	5.03	186	P	Pn	02 49 42.2	+2.5
	baz=4.8,SNR=3.3						
LUWI	Luwuk	10.52	268	P	Pn	02 50 57.1	+2.1
	baz=10,SNR=3.2						
MTN	Manton Dam	12.35	190	P	Pn	02 51 18.3	-1.8
	baz=12,SNR=6.1						
PCI	Palu	13.45	269	P	Pn	02 51 38.2	+3.1
	baz=13,SNR=5.0						
WRA	Warramunga Arr	19.25	177	P	P	02 52 47.8	-0.6
	0.1nm,0.3s,baz=358,slow=12,SNR=4.2						
ASAR	Alice Springs	22.94	179	P	P	02 53 26.6	-1.5
	2.1nm,0.9s,baz=359,slow=9.5,SNR=14						
MKAR	Makanchi Array	64.85	324	P	P	02 59 01.9	-0.7
	0.3nm,0.6s,baz=125,slow=7.2,SNR=3.2						

*IDC **01** 03:51:49.1±3.0, 31°.00S×178°.41W, h0^{km}, mb4.5/3, mb1 4.6/4, mb1mx4.0/20, mbtmp4.4/4, ML3.5/1, Error ellipse: s-maj=73.9km s-min=30.3km az=44.0*
ISC 01 03:51:56.0±3.5, **31°.3S**±0°.6×**178°.8W**±1°.0, **h35^{km}, n15, σ1^s.54**/7, **mb4.5**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	7.57	198	ePN	Pn	03 53 45.3	+1.4
URZ	Urewera	7.71	205	PN	Pn	03 53 46.7	+0.9
URZ				eSN	Sn	03 55 11.2	-0.7
URZ	Urewera	7.71	205	Pn	Pn	03 53 47.1	+1.4
	0.6nm,0.3s,baz=183,slow=18,SNR=13						
URZ				Sn	Sn	03 55 10.5	-1.3
	3.0nm,0.3s,baz=349,slow=3.4,SNR=5.7						
RAHZ	Arahi	8.31	203	eSN	Sn	03 55 26.1	-0.5
BFZ	Birch Farm	10.18	202	SN	Sn	03 56 06.5	-6.0
MRZ	Mangatainoka R	10.39	205	eSN	Sn	03 56 08.6	-9.1
KIW	Kapiti Island	10.81	207	eSN	Sn	03 56 19.4	-8.6
TCW	Tory Channel	11.36	208	eSN	Sn	03 56 32.8	-8.5
KHZ	Kahutara	12.67	207	eSN	Sn	03 57 01.8	-12
OXZ	Oxford	14.04	209	eSN	Sn	03 57 30.7	-16
MQZ	McQueen's Vall	14.11	206	eSN	Sn	03 57 33.1	-15
ASAR	Alice Springs	42.43	268	P	P	03 59 48.1	+0.5
	2.3nm,0.5s,baz=105,slow=7.6,SNR=34						
WRA	Warramunga Arr	43.50	274	P	P	03 59 56.8	+0.5
	5.2nm,0.3s,baz=111,slow=8.0,SNR=124						
QSPA	South Pole Qui	58.79	180	P	P	04 01 51.9	+1.4
	1.9nm,0.5s,baz=45,slow=0.4,SNR=22						
TORD	Torodi Ar. Bea	161.91	181	PKPab	PKPab	04 12 38.4	-1.5
	0.3nm,0.8s,baz=180,slow=4.0,SNR=4.5						

*IDC **01** 03:54:57.9±0.6, 13°.61N×120°.93E, h142^{km}±5^{km}, mb3.3/7, mb1 3.6/8, mb1mx3.3/27, mbtmp3.4/8, Error ellipse: s-maj=28.4km s-min=15.3km az=64.0*
*ISCJB **01** 03:54:57.9±0.4, 13°.63N±0°.05×120°.70E±0°.08, h150^{km}, mb3.5/7, Error ellipse: s-maj=10.9km s-min=6.9km az=171.4*
*MAN **01** 03:54:59, 13°.63N×120°.58E, h125^{km}, mb4.5, ML3.4, MS3.3*
ISC 01 03:54:58.9±0.8, **13°.63N**±0°.05×**120°.67E**±0°.07, **h150^{km}, n23, σ1^s.37**/25, **mb3.6**/7, **1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.43	284	eP	Pn	03 55 18.4	-1.5
TGY	Tagaytay City	0.53	29	⇓iP	Pn	03 55 19.6	-0.9
TGY				i S	Sn	03 55 35.2	-1.8
TGY	Tagaytay City	0.53	29	P	Pn	03 55 18.3	-2.3
	595nm,0.3s,baz=199,slow=3.2,SNR=26						
TGY				S	Sn	03 55 35.4	-1.6
	311nm,0.3s,baz=168,slow=20,SNR=13						
LQP	Lukban	0.97	60	⇑eP	Pn	03 55 22.9	-0.7
BOAC	Boac	1.15	98	eP	Pn	03 55 23.9	-1.1
SJMP	San Jose	1.24	159	eP	Pn	03 55 24.6	-1.3

OTRP	**Odiongan**	**1.82**	**134**	*e*P	**Pn**	**03 55 30.6**	**-1.4**
AUQP	**San Andres**	**1.97**	**99**	*e*P	**Pn**	**03 55 34.9**	**+1.2**
SCZP	**Santa Cruz**	**2.26**	**341**	*e*P	**Pn**	**03 55 35.4**	**-1.7**
BALP	**Baler**	**2.27**	**22**	*e*P	**Pn**	**03 55 37.6**	**+0.4**
ENPP	**El Nido**	**2.70**	**207**	*e*P	**Pn**	**03 55 42.8**	**+0.2**
CUYO	**Cuyo Island**	**2.78**	**173**	*e*P	**Pn**	**03 55 43.2**	**-0.4**
BOLP	**Bolinao**	**2.83**	**345**	*e*P	**Pn**	**03 55 43.8**	**-0.3**
CAUP	**Cauayan**	**3.48**	**18**	*e*P	**Pn**	**03 55 53.1**	**+0.8**
GUIM	**Jordan**	**3.52**	**148**	*e*P	**Pn**	**03 55 54.3**	**+1.2**
KAPI	**Kappang**	**18.55**	**183**	P	**Pn**	**03 59 05.7**	**-0.5**
	1.2nm,0.3s,baz=18,slow=9.7,SNR=4.1						
CMAR	**Chiang Mai Arr**	**21.42**	**286**	P	**P**	**03 59 37.8**	**+2.5**
	3.1nm,0.7s,baz=94,slow=7.6,SNR=14						
PSI	**Prapat**	**24.04**	**245**	P	**P**	**04 00 02.0**	**+1.6**
	1.6nm,0.5s,baz=67,slow=4.5,SNR=4.7						
WRA	**Warramunga Arr**	**35.97**	**158**	P	**P**	**04 01 43.9**	**-1.5**
	0.5nm,0.4s,baz=336,slow=9.7,SNR=6.1						
ASAR	**Alice Springs**	**39.26**	**161**	P	**P**	**04 02 11.9**	**-1.2**
	0.4nm,0.3s,baz=338,slow=6.7,SNR=6.2						
MKAR	**Makanchi Array**	**46.07**	**324**	P	**P**	**04 03 08.9**	**+1.2**
	0.5nm,0.5s,baz=126,slow=8.6,SNR=7.8						
ZALV	**Zalesovo Beam**	**49.11**	**333**	P	**P**	**04 03 31.4**	**+0.4**
	0.4nm,0.4s,baz=139,slow=6.8,SNR=3.3						
YKA	**Yellowknife Ar**	**92.85**	**22**	P	**P**	**04 07 54.5**	**+0.1**
	0.1nm,0.7s,baz=309,slow=4.8,SNR=4.1						

IDC 01 03:57:44.7±6.0**, 15°.05S**×**176°.24W, h257**km±117km**, mb3.0**/3**, mb1 3.3**/4**, mb1mx3.0**/20**, mbtmp3.1**/4**, Error ellipse: s-maj=271.4km s-min=25.7km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.47**	**76**	P	Pn	03 58 53.9	-0.5
	3.7nm,0.3s,baz=256,slow=19,SNR=4.8						
AFI				S	S	03 59 50.6	+0.6
	2.8nm,0.3s,baz=232,slow=17,SNR=3.2						
WRA	**Warramunga Arr**	**47.26**	**257**	P	P	04 05 52.9	+0.1
	0.3nm,0.4s,baz=91,slow=7.6,SNR=4.5						
ASAR	**Alice Springs**	**47.62**	**252**	P	P	04 05 55.3	-0.2
	1.2nm,0.5s,baz=87,slow=8.2,SNR=16						
ILAR	**Eielson Array**	**82.66**	**12**	P	P	04 09 39.0	-0.1
	0.1nm,0.5s,baz=208,slow=3.6,SNR=4.2						

IDC 01 04:01:16.8±2.4**, 3°.69N**×**126°.31E, h0**km**, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/23**, mbtmp3.4**/4**, Error ellipse: s-maj=251.1km s-min=24.2km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.77**	**162**	P	P	04 06 39.5	-1.0
	0.7nm,0.7s,baz=340,slow=10,SNR=6.4						
ASAR	**Alice Springs**	**28.18**	**165**	P	P	04 07 12.0	+0.7
	0.1nm,0.3s,baz=341,slow=11,SNR=3.0						
STKA	**Stephens Creek**	**38.24**	**159**	P	P	04 08 38.9	+0.1
	1.1nm,0.7s,baz=338,slow=15,SNR=3.5						
MKAR	**Makanchi Array**	**57.35**	**325**	P	P	04 11 06.8	-0.1
	0.1nm,0.4s,baz=115,slow=6.3,SNR=3.2						

*IPEC **01** 04:12:41.2±0.3, 51°.56N×16°.19E, h0km, ML1.8/3, Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*
*WAR **01** 04:12:42.0, 51°.54N×16°.09E*
*ISCJB **01** 04:12:42.0±0.8, 51°.40N±0°.04×16°.05E±0°.04, h0km, Error ellipse: s-maj=6.2km s-min=3.4km az=16.3*
*CSEM **01** 04:12:43.4±0.4, 51°.41N×16°.05E, h2km, ML2.8/9, Error ellipse: s-maj=6.5km s-min=3.5km az=7.0*
*PRU **01** 04:12:44.2, 51°.41N×16°.06E, h0km*
ISC 01 04:12:43.0±1.2**, 51°.45N**±0°.05×**16°.06E**±0°.03**, h0**km**, n26, σ0ˢ59**/49**, 1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**166**	*e*Pg	**Pg**	**04 12 55.1**	**+0.1**
KSP				*e*Sg	**Sg**	**04 13 03.7**	**+0.6**
KSP	**Ksiaz**	**0.63**	**166**	⇓*i*Pg	**Pg**	**04 12 55.1**	**+0.1**
KSP				*e*Sg	**Sg**	**04 13 03.7**	**+0.6**
UPC	**Upice**	**0.95**	**182**	*e*PG	**Pg**	**04 13 01.2**	**+0.1**
UPC	**Upice**	**0.95**	**182**	Pg	**Pg**	**04 13 01.2**	**+0.1**
DPC	**Dobruska-Polom**	**1.12**	**171**	*e*PG	**Pg**	**04 13 04.1**	**-0.3**
DPC				*e*SG	**Sg**	**04 13 18.7**	**-0.1**
	comp=Z,7.9nm,0.3s						
DPC	**Dobruska-Polom**	**1.12**	**171**	Pg	**Pg**	**04 13 04.1**	**-0.3**
DPC				Sg	**Sg**	**04 13 18.7**	**-0.1**
	7.9nm,0.3s						
PVCC	**Panska Ves**	**1.32**	**226**	*e*PG	**Pg**	**04 13 08.5**	**+0.2**
PVCC				*e*SG	**Sb**	**04 13 26.5**	**+0.4**
	comp=Z,38nm,0.2s						
PVCC	**Panska Ves**	**1.32**	**226**	Pg	**Pg**	**04 13 08.5**	**+0.2**
PVCC				Sg	**Sb**	**04 13 26.5**	**+0.4**
	38nm,0.2s						
PRU	**Pruhonice**	**1.75**	**214**	*e*PN	**Pn**	**04 13 14.3**	**-0.4**
PRU				*e*PG	**Pb**	**04 13 15.7**	**-0.4**
PRU				*e*SG	**Sn**	**04 13 38.4**	**+0.7**
	comp=Z,8.7nm,0.6s						
PRU	**Pruhonice**	**1.75**	**214**	Pn	**Pn**	**04 13 14.3**	**-0.4**
CLL	**Collm**	**1.92**	**267**	*e*Pg	**Pb**	**04 13 19.0**	**+0.1**
CLL				*e*		04 13 23.0	
CLL				*e*Sg	**Sg**	**04 13 45.0**	**+0.3**
	comp=Z,6.0nm,0.5s						
MORC	**Moravsky Berou**	**1.93**	**150**	*e*Pn	**Pn**	**04 13 16.1**	**-1.0**
	baz=335						
MORC				*e*Sg	**Sb**	**04 13 43.4**	**-0.2**
	comp=Z,7.5nm,0.3s,baz=335						
OKC	**Ostrava-Krasne**	**2.09**	**140**	*e*SG	**Sb**	**04 13 47.8**	**-0.5**
	comp=Z,6.7nm,0.5s						
OKC	**Ostrava-Krasne**	**2.09**	**140**	Sg	**Sb**	**04 13 47.8**	**-0.5**
	comp=Z,6.7nm,0.5s						
VRAC	**Vranov**	**2.17**	**171**	*e*Pn	**Pn**	**04 13 20.1**	**-0.3**
VRAC				*e*Sg	**Sb**	**04 13 52.1**	**+1.4**
	comp=Z,5.5nm,0.3s,baz=354						
TREC	**Trest**	**2.19**	**190**	*e*PN	**Pn**	**04 13 21.6**	**+0.9**
TREC				*e*PG	**Pb**	**04 13 23.9**	**+0.4**
TREC	**Trest**	**2.19**	**190**	Pn	**Pn**	**04 13 21.6**	**+0.9**
KRUC	**Moravsky**	**2.40**	**175**	*e*Pn	**Pn**	**04 13 23.9**	**+0.3**
	baz=357						
KRUC				*e*Sg	**Sg**	**04 13 59.7**	**-0.5**
	comp=Z,2.9nm,0.3s,baz=357						
NKC	**Novy Kostel**	**2.59**	**243**	*e*PN	**Pn**	**04 13 26.8**	**+0.6**
NKC				*e*PG	**Pg**	**04 13 32.2**	**-0.5**
NKC				*e*SG	**Sg**	**04 14 06.3**	**0.0**
	comp=Z,7.4nm,0.3s						
NKC	**Novy Kostel**	**2.59**	**243**	Pn	**Pn**	**04 13 26.8**	**+0.6**
NKC	**Novy Kostel**	**2.59**	**243**	Pg	**Pg**	**04 13 32.2**	**-0.5**
NKC				Sg	**Sg**	**04 14 06.3**	**0.0**
	comp=Z,7.4nm,0.3s						
OJC	**Ojcow**	**2.67**	**116**	*e*Pg	**Pg**	**04 13 34.3**	**+0.1**
OJC				*e*Sg	**Sg**	**04 14 08.8**	**0.0**
OJC	**Ojcow**	**2.67**	**116**	*e*Pg	**Pg**	**04 13 34.3**	**+0.1**
OJC				*e*Sg	**Sg**	**04 14 08.8**	**0.0**
KHC	**Kasperske Hory**	**2.82**	**215**	*e*PN	**Pn**	**04 13 29.3**	**0.0**
KHC				*e*PG	**Pb**	**04 13 35.1**	**+0.9**
KHC				*e*SN	**Sn**	**04 14 02.7**	**-1.3**
KHC				*e*SG	**Sg**	**04 14 12.4**	**-1.1**
	comp=Z,3.5nm,0.5s						
KHC	**Kasperske Hory**	**2.82**	**215**	Pn	**Pn**	**04 13 29.3**	**0.0**
KHC	**Kasperske Hory**	**2.82**	**215**	Pg	**Pb**	**04 13 35.1**	**+0.9**
KHC				Sn	**Sn**	**04 14 02.7**	**-1.3**
KHC				Sg	**Sg**	**04 14 12.4**	**-1.1**
	comp=Z,3.5nm,0.5s						

IDC 01 04:22:39.6±1.3**, 2°.61N**×**124°.69E, h0**km**, mb3.6**/6**, mb1 3.8**/6**, mb1mx3.6**/25**, mbtmp3.7**/6**, Error ellipse: s-maj=113.6km s-min=18.2km az=66.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.60**	**177**	P	Pn	04 27 21.8	-0.9
	2.2nm,0.3s,baz=14,slow=9.3,SNR=41						
WRA	**Warramunga Arr**	**24.33**	**158**	P	P	04 27 59.6	+0.3
	1.2nm,0.4s,baz=334,slow=11,SNR=13						
ASAR	**Alice Springs**	**27.62**	**162**	P	P	04 28 28.4	-0.6
	0.3nm,0.4s,baz=340,slow=8.0,SNR=4.6						
STKA	**Stephens Creek**	**37.87**	**156**	P	P	04 29 57.9	-0.5
	0.7nm,0.4s,baz=326,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**57.34**	**327**	P	P	04 32 29.7	+0.2
	0.2nm,0.3s,baz=122,slow=7.5,SNR=8.9						
KURBB	**Kurchatov Arra**	**61.60**	**329**	P	P	04 32 58.3	-0.5
	0.2nm,0.3s,baz=133,slow=6.3,SNR=3.3						

MEX 01 04:32:02.4±1.0**, 17°.77N**×**101°.88W, h5**km**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.43**	**113**	*e*P	Pg	04 32 09.5	-1.2
ZIIG				*i* S	Sg	04 32 15.9	-0.4
MMIG	**Aquila**	**1.49**	**290**	*e*P	Pn	04 32 25.5	-4.3
MMIG				*i* S	Sn	04 32 45.3	-4.3
ARIG	**Puente Sto Nin**	**1.54**	**71**	*e*P	Pn	04 32 27.0	-3.7
ARIG				*i* S	Sn	04 32 45.8	-5.3
CAIG	**El Cayaco**	**1.70**	**115**	*e*P	Pn	04 32 29.7	-3.1
CAIG				*i* S	Sn	04 32 50.9	-4.0
ACX	**Acapulco**	**2.13**	**115**	*e*P	Pn	04 32 35.1	-3.6
ACX				*e*S	Sn	04 33 00.6	-4.9
MEIG	**Mezcala**	**2.16**	**86**	*e*P	Pn	04 32 36.0	-3.1
MEIG				*i* S	Sn	04 33 01.4	-5.0
YAIG	**Yautepec**	**2.88**	**68**	*i* P	Pn	04 32 46.8	-2.5
YAIG				*i* S	Sn	04 33 20.4	-4.0
PNIG	**Pinotepa**	**3.84**	**110**	*e*P	Pn	04 32 59.6	-2.7
PNIG				*i* S	Sn	04 33 44.9	-3.0

*MOS **01** 04:33:08.8±0.8, 18°.67S×65°.46E, h10km, mb4.9/19, Error ellipse: s-maj=14.7km s-min=8.3km az=96.1*
*IDC **01** 04:33:09.2±0.5, 18°.66S×65°.48E, h0km, mb4.1/22, mb1 4.2/23, mb1mx4.1/33, mbtmp4.1/23, ML3.7/1, MS3.9/23, Ms1 3.9/23, ms1mx3.7/40, Error ellipse: s-maj=18.0km s-min=13.5km az=91.0*
*ISCJB **01** 04:33:09.8±0.4, 18°.65S±0°.07×65°.51E±0°.07, h15km, mb4.4/40, MS3.9/22, Error ellipse: s-maj=10.1km s-min=9.6km az=39.1*
*NEIC **01** 04:33:10.4±0.2, 18°.70S×65°.45E, h10km, mb4.7/16, Error ellipse: s-maj=8.7km s-min=8.0km az=123.0*
ISC 01 04:33:11.3±0.4**, 18°.68S**±0°.09×**65°.42E**±0°.10**, h15**km**, n220, σ0ˢ82**/218**, mb4.6**/40**, MS4.0**/22**, 40C-40D, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.28**	**267**	P	**P**	**04 37 14.4**	**+0.6**
OPO	**Ambohidratompo**	**17.28**	**267**	P	**P**	**04 37 14.4**	**+0.6**
	0.3nm,0.3s,baz=82,slow=15,SNR=5.6						
OPO				LR	LR	04 42 14.6	
	comp=Z,679nm,19.6s,baz=88,slow=32						
PALK	**Pallekele**	**29.87**	**32**	*e*P	**P**	**04 39 17.8**	**-0.7**
	19nm,1.2s						
KMBO	**Kilima Mbogo**	**32.67**	**299**	LR	LR	04 50 40.7	
	comp=Z,179nm,18.4s,baz=96,slow=32						
LSZ	**Lusaka**	**35.73**	**270**	*e*P	**P**	**04 40 09.7**	**-0.3**
	20nm,1.6s						
LBTB	**Lobatse**	**37.40**	**253**	*e*P	**P**	**04 40 22.7**	**-1.4**
	12nm,0.9s						
LBTB	**Lobatse**	**37.40**	**253**	P	**P**	**04 40 25.7**	**+1.6**
	11nm,1.0s,baz=92,slow=13,SNR=2.0						
LBTB				LR	LR	04 53 20.3	
	comp=Z,488nm,19.4s,baz=113,slow=32						
MBAR	**Mbarara**	**38.48**	**294**	LR	LR	04 54 11.5	
	comp=Z,100nm,20.1s,baz=184,slow=33						
PSI	**Prapat**	**39.27**	**61**	LR	LR	04 53 22.3	
	comp=Z,474nm,19.3s,baz=268,slow=31						
SUR	**Sutherland**	**42.21**	**242**	LR	LR	04 56 11.4	
	comp=Z,293nm,18.6s,baz=124,slow=33						
NWAO	**Narrogin (SRO)**	**48.31**	**118**	LR	LR	04 57 46.9	
	comp=Z,16nm,19.1s,baz=7.4,slow=31						
MAW	**Mawson**	**48.94**	**181**	P	**P**	**04 41 58.1**	**+1.5**
MAW	**Mawson**	**48.94**	**181**	P	**P**	**04 41 58.1**	**+1.5**
	6.0nm,0.9s,baz=28,slow=7.4,SNR=8.0						
MAW				LR	LR	04 57 22.5	
	comp=Z,157nm,21.9s,baz=188,slow=30						
CMAR	**Chiang Mai Arr**	**49.46**	**44**	P	**P**	**04 42 02.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**49.46**	**44**	P	**P**	**04 42 02.3**	**+1.1**
	1.1nm,0.5s,baz=237,slow=7.7,SNR=11						
SHL	**Shillong**	**50.95**	**31**	*e*PKP	**P**	**04 42 13.0**	**+0.3**
ASF	**Jabal al Asfar**	**57.47**	**331**	P	**P**	**04 43 00.5**	**+0.5**
ASF	**Jabal al Asfar**	**57.47**	**331**	P	**P**	**04 43 00.5**	**+0.5**
	1.5nm,0.9s,baz=350,slow=6.3,SNR=4.1						
EKS2	**Erkin-Say**	**61.51**	**7**	*e*P	**P**	**04 43 28.5**	**+0.8**
EKS2				pmax	pmax		
	comp=Z,7.0nm,1.1s						
EKS2	**Erkin-Say**	**61.51**	**7**	*e*P	**P**	**04 43 28.5**	**+0.8**
	comp=Z,7.4nm,1.1s						
AAK	**Ala-Archa**	**61.57**	**8**	*c e*P	**P**	**04 43 28.8**	**+0.6**
AAK				pmax	pmax		
	comp=Z,15nm,1.4s						
AAK	**Ala-Archa**	**61.57**	**8**	*e*P	**P**	**04 43 28.7**	**+0.5**
	comp=Z,0.8nm,0.6s						
AAK	**Ala-Archa**	**61.57**	**8**	P	**P**	**04 43 29.0**	**+0.8**
	comp=Z,2.7nm,0.9s,baz=194,slow=7.0,SNR=6.3						
GNI	**Garni**	**61.62**	**342**	*e*P	**P**	**04 43 30.2**	**+1.7**
	comp=Z,6.8nm,0.8s						
TKM2	**Tokmak 2**	**62.00**	**8**	*e*P	**P**	**04 43 31.7**	**+0.6**
TKM2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TKM2	**Tokmak 2**	**62.00**	**8**	*e*P	**P**	**04 43 31.7**	**+0.6**
	comp=Z,4.7nm,1.1s						
ASAR	**Alice Springs**	**63.52**	**108**	P	**P**	**04 43 41.1**	**-0.4**
ASAR	**Alice Springs**	**63.52**	**108**	P	**P**	**04 43 41.1**	**-0.4**
	comp=Z,0.9nm,0.9s,baz=261,slow=6.3,SNR=8.1						
ASAR				LR	LR	05 07 05.7	
	comp=Z,275nm,21.4s,baz=352,slow=32						
ZEI	**Tsey**	**64.29**	**343**	*e*P	**P**	**04 43 47.3**	**+1.0**
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
WRA	**Warramunga Arr**	**64.61**	**104**	P	**P**	**04 43 48.6**	**-0.2**
WRA	**Warramunga Arr**	**64.61**	**104**	P	**P**	**04 43 48.6**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=258,slow=5.5,SNR=6.2						
WRAB	**Tennant Creek**	**64.62**	**104**	*e*P	**P**	**04 43 49.0**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WRAB	**Tennant Creek**	**64.62**	**104**	*e*P	**P**	**04 43 49.0**	**+0.1**
	comp=Z,7.8nm,1.0s						
BR131	**Keskin Array S**	**65.24**	**333**	*e*P	**P**	**04 43 53.6**	**+1.1**
	comp=Z,1.6nm,0.9s						
BRTR	**Keskin Array B**	**65.24**	**333**	P	**P**	**04 43 53.0**	**+0.5**
BRTR	**Keskin Array B**	**65.24**	**333**	P	**P**	**04 43 53.0**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=169,slow=7.1,SNR=5.1						
BRTR				LR	LR	05 08 15.7	
	comp=Z,29nm,18.7s,baz=123,slow=32						
SNAA	**Sanae**	**65.61**	**199**	*e*P	**P**	**04 43 55.0**	**+0.6**
	comp=Z,7.0nm,1.1s						
SNAA	**Sanae**	**65.61**	**199**	P	**P**	**04 43 55.1**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=79,slow=3.7,SNR=7.2						
SNAA				LR	LR	05 05 02.9	
	comp=Z,39nm,19.0s,baz=7.7,slow=29						
KIV	**Kislovodsk**	**65.71**	**342**	P	**P**	**04 43 56.0**	**+0.6**
KIV						04 44 29.0	
KIV				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MK31	**Makanchi Array**	**66.92**	**13**	*e*P	**P**	**04 44 02.6**	**-0.4**
MK31	**Makanchi Array**	**66.92**	**13**	*e*P	**P**	**04 44 02.6**	**-0.4**
MKAR	**Makanchi Array**	**66.92**	**13**	P	**P**	**04 44 02.9**	**-0.1**
MKAR	**Makanchi Array**	**66.92**	**13**	P	**P**	**04 44 02.9**	**-0.1**
MKAR	**Makanchi Array**	**66.92**	**13**	P	**P**	**04 44 02.9**	**-0.1**
	comp=Z,3.1nm,1.1s,baz=197,slow=3.8,SNR=14						
MKAR				LR	LR	05 11 27.8	
	comp=Z,72nm,20.8s,baz=175,slow=34						
ABKAR	**Akbulak array**	**67.80**	**356**	*e*P	**P**	**04 44 08.6**	**+0.2**
	comp=Z,3.9nm,1.0s						
ANN	**Anapa**	**68.13**	**339**	*e*P	P	04 44 14.4	+3.8
ANN				pmax	pmax		
	comp=Z,42nm,1.0s						
STKA	**Stephens Creek**	**68.90**	**118**	LR	LR	05 07 57.8	
	comp=Z,147nm,20.0s,baz=206,slow=30						
KURBB	**Kurchatov Arra**	**69.95**	**9**	P	**P**	**04 44 22.1**	**+0.3**
	comp=Z,2.5nm,1.1s,baz=202,slow=7.1,SNR=12						
KURK	**Kurchatov**	**70.06**	**9**	⇑*i*P	**P**	**04 44 21.9**	**-0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KURK	**Kurchatov**	**70.06**	**9**	*e*P	**P**	**04 44 22.4**	**-0.1**
	comp=Z,7.1nm,1.0s						
TOA0	**Torodi Ar. Sit**	**70.32**	**292**	*e*P	**P**	**04 44 25.2**	**+0.3**
TORD	**Torodi Ar. Bea**	**70.32**	**292**	P	**P**	**04 44 24.4**	**-0.5**
TORD	**Torodi Ar. Bea**	**70.32**	**292**	P	**P**	**04 44 24.4**	**-0.5**
	comp=Z,1.7nm,1.1s,baz=130,slow=2.5,SNR=5.4						
TORD				LR	LR	05 12 50.6	
	comp=Z,98nm,19.8s,baz=95,slow=34						
QSPA	**South Pole Qui**	**71.43**	**180**	P	**P**	**04 44 31.0**	**0.0**
QSPA	**South Pole Qui**	**71.43**	**180**	P	**P**	**04 44 31.0**	**0.0**
	comp=Z,7.8nm,0.9s,baz=273,slow=2.8,SNR=17						
BVAR	**Borovoye Array**	**71.53**	**3**	P	**P**	**04 44 31.4**	**0.0**
BVAR	**Borovoye Array**	**71.53**	**3**	P	**P**	**04 44 31.4**	**0.0**
BVAR	**Borovoye Array**	**71.53**	**3**	P	**P**	**04 44 31.4**	**0.0**
	comp=Z,1.4nm,0.7s,baz=165,slow=7.5,SNR=8.7						
BRVK	**Borovoye**	**71.56**	**3**	*c i*P	**P**	**04 44 31.7**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,12nm,1.6s						
BRVK	**Borovoye**	**71.56**	**3**	*e*P	**P**	**04 44 31.6**	**+0.1**
	comp=Z,10nm,1.1s						
VRI	**Vrincioaia**	**73.18**	**333**	⇑*i*P	**P**	**04 44 42.9**	**+1.4**
PLOR	**Plostina**	**73.20**	**333**	⇑*i*P	**P**	**04 44 42.9**	**+1.3**
MLR	**Muntele Rosu**	**73.23**	**332**	⇓*i*P	**P**	**04 44 42.6**	**+0.7**
VNDA	**Vanda**	**73.29**	**167**	*e*P	**P**	**04 44 42.0**	**+0.3**
	comp=Z,5.4nm,1.3s						
VNDA	**Vanda**	**73.29**	**167**	P	**P**	**04 44 42.0**	**+0.3**
	comp=Z,2.4nm,1.0s,baz=258,slow=7.2,SNR=8.6						
VNDA				LR	LR	05 13 28.7	
	comp=Z,122nm,21.2s,baz=78,slow=33						
DBIC	**Dimbokro**	**73.68**	**283**	LR	LR	05 14 19.1	
	comp=Z,84nm,20.2s,baz=98,slow=34						
LOT	**Lotru**	**74.18**	**331**	⇑*i*P	**P**	**04 44 46.9**	**-0.6**
ZAA0	**Zalesovo Array**	**74.23**	**12**	*e*P	**P**	**04 44 46.6**	**-0.8**
ZALV	**Zalesovo Beam**	**74.23**	**12**	P	**P**	**04 44 47.2**	**-0.2**
ZALV	**Zalesovo Beam**	**74.23**	**12**	P	**P**	**04 44 47.2**	**-0.2**
ZALV	**Zalesovo Beam**	**74.23**	**12**	P	**P**	**04 44 47.2**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=200,slow=7.0,SNR=12						
ZALV				LR	LR	05 17 51.6	
	comp=Z,65nm,18.9s,baz=237,slow=36						
NVS	**Novosibirsk**	**74.78**	**11**	*e*P	**P**	**04 44 49.2**	**-1.4**
ARU	**Arti**	**75.03**	**356**	*d i*P	**P**	**04 44 51.8**	**-0.2**
ARU						04 47 36.9	
ARU				S	**S**	**04 54 31.0**	**+1.8**
ARU				pmax	pmax		
	comp=Z,17nm,1.7s						
BUR08	**Bucovina Ar. S**	**75.23**	**333**	*e*P	**P**	**04 44 55.2**	**+1.8**
SONM	**Songino Array**	**75.70**	**27**	P	**P**	**04 44 56.2**	**0.0**
SONM	**Songino Array**	**75.70**	**27**	P	**P**	**04 44 56.2**	**0.0**
	comp=Z,0.6nm,0.3s,baz=193,slow=6.1,SNR=5.4						
AK01	**Malin Array Si**	**76.06**	**337**	*e*P	**P**	**04 44 57.6**	**-0.4**
AKASG	**Malin Array Be**	**76.06**	**337**	P	**P**	**04 44 58.2**	**+0.2**
AKASG	**Malin Array Be**	**76.06**	**337**	P	**P**	**04 44 58.2**	**+0.2**
AKASG	**Malin Array Be**	**76.06**	**337**	P	**P**	**04 44 58.2**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=144,slow=4.6,SNR=8.3						
KIEV	**Kiev**	**76.06**	**337**	*e*P	**P**	**04 44 57.7**	**-0.3**
KIEV				pmax	pmax		
	comp=Z,15nm,1.2s						
KIEV	**Kiev**	**76.06**	**337**	*e*P	**P**	**04 44 57.7**	**-0.3**
	comp=Z,15nm,1.2s						
PKSM	**Moragy**	**77.19**	**329**	⇑*i*P	**P**	**04 45 05.1**	**+0.6**
UZH	**Uzhgorod**	**77.24**	**332**	⇑*i*P	**P**	**04 45 05.7**	**+1.0**
UZH				*i*		04 45 18.7	
OBN	**Obninsk**	**77.49**	**344**	P	**P**	**04 45 07.0**	**+1.0**
OBN				*e*		04 45 12.2	
OBN				pmax	pmax		
	comp=Z,12nm,1.0s						
MOS	**Moscow**	**77.77**	**344**	*e*P	**P**	**04 45 07.1**	**-0.4**
MOS				pmax	pmax		
	comp=Z,37nm,1.3s						
OKC	**Ostrava-Krasne**	**79.98**	**331**	*e*P	**P**	**04 45 20.9**	**+1.0**
OKC				*e*		04 45 25.8	
OKC	**Ostrava-Krasne**	**79.98**	**331**	*e*P	**P**	**04 45 20.9**	**+1.0**
OKC				*e*pP	**pP**	**04 45 25.8**	**+1.0**
MORC	**Moravsky Berou**	**80.22**	**331**	*e*P	**P**	**04 45 21.0**	**-0.2**
MORC				pmax	pmax		
	comp=Z,12nm,1.5s						
MORC	**Moravsky Berou**	**80.22**	**331**	*e*P	**P**	**04 45 20.9**	**-0.2**
	comp=Z,12nm,1.5s						
VRAC	**Vranov**	**80.34**	**330**	LR	LR	05 18 36.2	
	comp=Z,42nm,19.6s,baz=241,slow=34						
TREC	**Trest**	**80.86**	**330**	*e*P	**P**	**04 45 24.5**	**-0.1**
TREC	**Trest**	**80.86**	**330**	*e*P	**P**	**04 45 24.5**	**-0.1**
KSAR	**Wonju Array Be**	**81.02**	**46**	P	**P**	**04 45 26.6**	**+0.9**
KSRS	**Korea Array**	**81.05**	**46**	P	**P**	**04 45 26.6**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=245,slow=5.3,SNR=5.2						
KSRS				LR	LR	05 22 58.1	
	comp=Z,72nm,19.5s,baz=334,slow=37						
GERES	**GERESS Array B**	**81.43**	**328**	LR	LR	05 20 35.9	
	comp=Z,25nm,18.1s,baz=96,slow=35						
UPC	**Upice**	**81.44**	**331**	*e*P	**P**	**04 45 29.0**	**+1.4**
UPC	**Upice**	**81.44**	**331**	*e*P	**P**	**04 45 29.0**	**+1.4**
KHC	**Kasperske Hory**	**81.68**	**329**	*e*P	**P**	**04 45 28.3**	**-0.7**
KHC				*e*		04 45 34.4	
KHC	**Kasperske Hory**	**81.68**	**329**	*e*P	**P**	**04 45 28.3**	**-0.7**
KHC				*e*pP	**PcP**	**04 45 34.4**	**-0.4**
PRU	**Pruhonice**	**81.78**	**330**	*e*P	P	04 45 23.6	-5.8
PRU				*e*		04 45 30.5	
PRU	**Pruhonice**	**81.78**	**330**	*e*P	**P**	**04 45 30.5**	**+1.1**
PVCC	**Panska Ves**	**82.13**	**330**	*e*P	**P**	**04 45 31.7**	**+0.4**
PVCC	**Panska Ves**	**82.13**	**330**	*e*P	**P**	**04 45 31.7**	**+0.4**
NKC	**Novy Kostel**	**82.96**	**329**	*e*P	**P**	**04 45 33.9**	**-1.7**
NKC				*e*		04 45 37.2	
NKC	**Novy Kostel**	**82.96**	**329**	*e*P	**P**	**04 45 33.9**	**-1.7**
NKC				*e*pP	**PcP**	**04 45 37.2**	**-3.1**
CLL	**Collm**	**83.39**	**330**	*e*P	**P**	**04 45 39.0**	**+1.2**
CLL				*e*		04 45 44.0	
CLL				pmax	pmax		
	comp=Z,15nm,1.5s						
CLL	**Collm**	**83.39**	**330**	*e*P	**P**	**04 45 39.0**	**+1.2**
	comp=Z,9.0nm,1.5s						
CLL				*e*		04 45 44.0	
MDT	**Midelt**	**84.21**	**307**	LR	LR	05 22 40.8	
	comp=Z,67nm,18.1s,baz=143,slow=35						
JOF	**Joensuu**	**85.63**	**345**	*e*P	**P**	**04 45 48.9**	**+0.1**
JOF	**Joensuu**	**85.63**	**345**	*e*pkp	**P**	**04 45 48.9**	**+0.1**
FINES	**FINESS Array B**	**85.81**	**342**	P	**P**	**04 45 50.2**	**+0.5**
FINES	**FINESS Array B**	**85.81**	**342**	P	**P**	**04 45 50.2**	**+0.5**
	comp=Z,2.0nm,0.8s,baz=62,slow=4.5,SNR=6.7						
KAF	**Kangasniemi**	**86.28**	**343**	*e*P	**P**	**04 45 51.3**	**-0.8**
KAF	**Kangasniemi**	**86.28**	**343**	*e*pkp	**P**	**04 45 51.3**	**-0.8**
ESDC	**Sonseca Array**	**86.83**	**314**	P	**P**	**04 45 55.8**	**+0.4**
ESDC	**Sonseca Array**	**86.83**	**314**	P	**P**	**04 45 55.8**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=125,slow=4.2,SNR=6.3						
MJAR	**Matsushiro Arr**	**87.87**	**50**	P	**P**	**04 46 00.5**	**0.0**
MJAR	**Matsushiro Arr**	**87.87**	**50**	P	**P**	**04 46 00.5**	**0.0**
	comp=Z,2.9nm,1.0s,baz=243,slow=5.9,SNR=9.2						
MJAR				LR	LR	05 22 00.4	
	comp=Z,47nm,20.4s,baz=205,slow=33						
ARCES	**ARCESS Array B**	**92.42**	**347**	LR	LR	05 31 57.9	
	comp=Z,37nm,18.2s,baz=1.6,slow=38						
INK	**Inuvik**	**128.96**	**9**	PKP	**PKPdf**	**04 52 16.9**	**-1.0**
INK	**Inuvik**	**128.96**	**9**	PKP	**PKPdf**	**04 52 16.9**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=240,slow=7.3,SNR=3.1						
ILAR	**Eielson Array**	**129.12**	**17**	PKP	**PKPdf**	**04 52 17.2**	**-1.1**
ILAR	**Eielson Array**	**129.12**	**17**	PKP	**PKPdf**	**04 52 17.2**	**-1.1**
	comp=Z,0.8nm,1.0s,baz=280,slow=1.7,SNR=5.3						
YKA	**Yellowknife Ar**	**136.22**	**0**	PKP	**PKPdf**	**04 52 29.9**	**-1.9**
YKA	**Yellowknife Ar**	**136.22**	**0**	PKP	**PKPdf**	**04 52 29.9**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=347,slow=2.1,SNR=8.9						
ULM	**Lac du Bonnet**	**145.13**	**339**	PKP	**PKPbc**	**04 52 46.3**	**-1.4**
ULM	**Lac du Bonnet**	**145.13**	**339**	PKP	**PKPbc**	**04 52 46.3**	**-1.4**
	comp=Z,5.5nm,0.8s,baz=19,slow=4.2,SNR=6.2						
WCI	**Wyandotte Cave**	**148.60**	**314**	*e*PKP2	**PKPbc**	**04 52 57.8**	**-0.4**
WCI	**Wyandotte Cave**	**148.60**	**314**	*e*PKPbc	**PKPbc**	**04 52 57.8**	**-0.4**
A24A	**Westby**	**148.64**	**347**	⇓P	**PKPbc**	**04 52 57.5**	**-0.4**
	baz=149						
A22A	**Carney Farms,**	**148.96**	**349**	⇓P	**PKPbc**	**04 52 57.4**	**-1.3**
	baz=149						
DGMT	**Dagmar**	**149.11**	**346**	⇓P	**PKPbc**	**04 52 59.4**	**+0.3**
	baz=149						
B23A	**Brockton**	**149.28**	**347**	⇓P	**PKPbc**	**04 52 59.0**	**-0.6**
	baz=149						
A20A	**Cobblestone Ra**	**149.39**	**351**	⇓P	**PKPbc**	**04 52 59.6**	**-0.3**
	baz=149						
A19A	**Klindworth Far**	**149.45**	**352**	⇓P	**PKPbc**	**04 52 59.1**	**-0.9**
	baz=149						
A18A	**Metzger Ranch,**	**149.59**	**354**	⇓P	**PKPbc**	**04 52 59.3**	**-1.0**
	baz=150						
B22A	**Reddig Ranch S**	**149.64**	**349**	⇓P	**PKPbc**	**04 53 00.5**	**0.0**
	baz=150						
A17A	**Triple J Farms**	**149.64**	**355**	⇑P	**PKPbc**	**04 53 00.2**	**-0.3**
	baz=150						
B21A	**Ellsworth Farm**	**149.69**	**350**	⇑P	**PKPbc**	**04 53 00.5**	**-0.1**
	baz=150						
A16A	**West Butte Ran**	**149.71**	**356**	⇓P	**PKPbc**	**04 53 00.3**	**-0.4**
	baz=150						
A15A	**Johnson Ranch,**	**149.74**	**358**	⇑P	**PKPbc**	**04 53 00.4**	**-0.3**
	baz=150,SNR=14						
SWET	**Sewanee**	**149.76**	**309**	*e*PKPbc	**PKPbc**	**04 52 59.3**	**-1.8**
A14A	**Double T Ranch**	**149.76**	**358**	⇓P	**PKPbc**	**04 53 00.5**	**-0.4**
	baz=150						
A12A	**Yaak River Ran**	**149.80**	**1**	⇓P	**PKPbc**	**04 53 01.1**	**+0.2**
	baz=150						
A13A	**Flathead Natio**	**149.82**	**360**	⇓P	**PKPbc**	**04 53 00.9**	**-0.1**
	baz=150						
B19A	**Brinkman Farms**	**149.94**	**353**	⇓P	**PKPbc**	**04 53 00.0**	**-1.2**
	baz=150						
C23A	**Lambert**	**149.95**	**347**	⇓P	**PKPbc**	**04 53 01.6**	**+0.3**
	baz=150						
C24A	**Savage**	**150.04**	**346**	⇓P	**PKPbc**	**04 53 01.7**	**+0.2**
	baz=150						

B18A	**Beardsley Farm**	**150.10**	**354**	⇑P	**PKPbc**	**04 53 01.4**	**-0.2**
	baz=150						
C22A	**Vida**	**150.15**	**348**	⇑P	**PKPbc**	**04 53 01.7**	**0.0**
	baz=150,SNR=7.4						
B16A	**M & M Farms, S**	**150.25**	**356**	⇑P	**PKPbc**	**04 53 01.7**	**-0.2**
	baz=150						
C21A	**Desert Coulee**	**150.29**	**350**	⇑P	**PKPbc**	**04 53 02.2**	**+0.1**
	baz=150						
B17A	**L&G Farms, Che**	**150.30**	**355**	⇑P	**PKPbc**	**04 53 02.2**	**+0.1**
	baz=150						
NLWA	**Neilton Lookou**	**150.37**	**13**	*e*PKPdf	**PKPdf**	**04 52 57.8**	**+0.8**
NLWA				*e*PKPbc	**PKPbc**	**04 53 01.1**	**-1.1**
NLWA				*e*PKPab	**PKPab**	**04 53 08.8**	**+0.3**
B14A	**Marquette Ranc**	**150.37**	**358**	⇑P	**PKPbc**	**04 53 01.9**	**-0.4**
	baz=150,SNR=10.0						
B15A	**Bradely Ranch,**	**150.39**	**357**	⇓P	**PKPbc**	**04 53 01.7**	**-0.7**
	baz=150,SNR=18						
D24A	**Glendive**	**150.41**	**346**	⇓P	**PKPbc**	**04 53 03.3**	**+0.9**
	baz=150						
NEW	**Newport**	**150.41**	**3**	⇓P	**PKPbc**	**04 53 03.0**	**+0.6**
	baz=150						
EGMT	**Eagleton**	**150.46**	**353**	*e*PKPbc	**PKPbc**	**04 53 02.6**	**+0.1**
EGMT	**Eagleton**	**150.46**	**353**	⇑P	**PKPbc**	**04 53 02.1**	**-0.4**
	baz=150,SNR=8.5						
C20A	**Veseth Ranch,**	**150.54**	**351**	⇑P	**PKPbc**	**04 53 03.2**	**+0.6**
	baz=150						
D23A	**Lindsay**	**150.56**	**347**	⇓P	**PKPbc**	**04 53 03.6**	**+0.8**
	baz=150						
C19A	**Slack Wire Ran**	**150.67**	**352**	⇓P	**PKPbc**	**04 53 03.2**	**+0.2**
	baz=151						
WVT	**Waverly**	**150.71**	**312**	*e*PKIKP	**PKPdf**	**04 52 55.0**	**-2.8**
WVT				*e*		04 53 01.9	
WVT	**Waverly**	**150.71**	**312**	*e*PKPdf	**PKPdf**	**04 52 55.0**	**-2.8**
WVT				*e*PKPbc	**PKPbc**	**04 53 01.9**	**-1.4**
D22A	**Cohagen**	**150.78**	**348**	⇓P	**PKPbc**	**04 53 04.0**	**+0.8**
	baz=151,SNR=11						
ECSD	**EROS Data Cent**	**150.80**	**333**	*e*PKPbc	**PKPbc**	**04 53 02.8**	**-0.6**
C16A	**Fuhringer Ranc**	**150.86**	**356**	⇑P	**PKPbc**	**04 53 02.9**	**-0.5**
	baz=151,SNR=8.0						
C11A	**Tepee Creek (N**	**150.88**	**2**	⇓P	**PKPbc**	**04 53 04.1**	**+0.7**
	baz=151						
YBMT	**Yellow Bay**	**150.88**	**359**	*e*PKPbc	**PKPbc**	**04 53 03.1**	**-0.5**
BSMT	**Bassoo Peak**	**150.90**	**0**	*e*PKPbc	**PKPbc**	**04 53 02.8**	**-0.9**
BSMT				*e*PKPab	**PKPab**	**04 53 09.8**	**-1.1**
E24A	**Baker**	**150.93**	**345**	⇑P	**PKPbc**	**04 53 04.7**	**+1.0**
	baz=151						
C15A	**Salmond Ranch,**	**150.93**	**357**	⇓P	**PKPbc**	**04 53 03.8**	**+0.1**
	baz=151						
C17A	**Wharram Farm,**	**150.95**	**355**	⇓P	**PKPbc**	**04 53 03.7**	**0.0**
	baz=151,SNR=9.4						
C14A	**Swan Lake**	**150.97**	**359**	⇓P	**PKPbc**	**04 53 03.9**	**+0.1**
	baz=151						
JTMT	**Jette**	**151.00**	**360**	*e*PKPbc	**PKPbc**	**04 53 03.6**	**-0.2**
D21A	**La Casta Ranch**	**151.01**	**349**	⇓P	**PKPbc**	**04 53 04.3**	**+0.5**
	baz=151						
C12B	**Naegeli Ranch,**	**151.03**	**1**	⇑P	**PKPbc**	**04 53 04.5**	**+0.7**
	baz=151						
C13A	**Hot Springs**	**151.07**	**360**	⇑P	**PKPbc**	**04 53 04.5**	**+0.5**
	baz=151						
D20A	**Manuel Ranch,**	**151.17**	**351**	⇑P	**PKPbc**	**04 53 03.5**	**-0.6**
	baz=151,SNR=8.5						
D19A	**Cripps Ranch,**	**151.20**	**352**	⇓P	**PKPbc**	**04 53 04.2**	**-0.1**
	baz=151,SNR=8.9						
E23A	**Ismay**	**151.22**	**347**	⇑P	**PKPbc**	**04 53 05.5**	**+1.2**
	baz=151						
SWMT	**Swartz Lake**	**151.24**	**359**	*e*PKPbc	**PKPbc**	**04 53 04.3**	**-0.1**
D18A	**Linhart Farms,**	**151.29**	**353**	⇑P	**PKPbc**	**04 53 05.0**	**+0.5**
	baz=151						
E22A	**Miles City**	**151.41**	**347**	⇓P	**PKPbc**	**04 53 06.1**	**+1.4**
	baz=151						
D17A	**Six Diamond Ra**	**151.42**	**354**	⇓P	**PKPbc**	**04 53 04.5**	**-0.4**
	baz=151,SNR=10						
SLMT	**Seeley Lake**	**151.50**	**358**	*e*PKPbc	**PKPbc**	**04 53 04.8**	**-0.3**
E21A	**Keefer Ranch,**	**151.53**	**349**	⇑P	**PKPbc**	**04 53 05.2**	**+0.2**
	baz=152						
D16A	**Dana Ranch, Ca**	**151.61**	**356**	⇑P	**PKPbc**	**04 53 05.3**	**0.0**
	baz=152,SNR=9.6						
D13A	**Huson**	**151.66**	**360**	⇑P	**PKPbc**	**04 53 05.8**	**+0.5**
	baz=152						
D14A	**Greenough**	**151.66**	**358**	⇓P	**PKPbc**	**04 53 05.2**	**-0.2**
	baz=152,SNR=7.4						
D15A	**Lincoln**	**151.66**	**357**	⇓P	**PKPbc**	**04 53 05.9**	**+0.5**
	baz=152,SNR=6.3						
D12A	**Red Ives Fores**	**151.69**	**1**	⇑P	**PKPbc**	**04 53 06.1**	**+0.7**
	baz=152						
E20A	**Meyer Farm, Mu**	**151.74**	**351**	⇑P	**PKPbc**	**04 53 06.5**	**+1.0**
	baz=152,SNR=9.4						
CHMT	**Chamberlain Mo**	**151.82**	**358**	*e*PKPdf	**PKPdf**	**04 52 58.8**	**-0.7**
CHMT				*e*PKPbc	**PKiKP**	**04 53 06.5**	**+0.2**
E19A	**Rath Farm, Rou**	**151.88**	**351**	⇓P	**PKPbc**	**04 53 06.4**	**+0.5**
	baz=152,SNR=7.3						
MSO	**Missoula**	**151.92**	**359**	*e*PKPbc	**PKPbc**	**04 53 05.4**	**-0.6**
MSO	**Missoula**	**151.92**	**359**	⇑P	**PKPbc**	**04 53 05.9**	**0.0**
	baz=152,SNR=9.2						
E18A	**Harlowton**	**151.92**	**353**	⇓P	**PKPbc**	**04 53 06.7**	**+0.7**
	baz=152,SNR=8.4						
F23A	**Volborg**	**151.98**	**346**	⇓P	**PKPbc**	**04 53 06.9**	**+0.8**
	baz=152						
F22A	**Rosebud**	**152.10**	**347**	⇑P	**PKPbc**	**04 53 07.0**	**+0.7**
	baz=152						
E16A	**East Helena**	**152.12**	**356**	⇑P	**PKPbc**	**04 53 07.5**	**+1.1**
	baz=152						
E17A	**Martinsdale**	**152.12**	**354**	⇑P	**PKPbc**	**04 53 07.4**	**+0.9**
	baz=152						
E15A	**Deer Lodge**	**152.28**	**357**	⇑P	**PKPbc**	**04 53 06.8**	**0.0**
	baz=152						
E13A	**Victor**	**152.31**	**359**	⇑P	**PKPbc**	**04 53 06.9**	**0.0**
	baz=152						
F20A	**Billings**	**152.43**	**350**	⇓P	**PKPbc**	**04 53 07.5**	**+0.3**
	baz=152						
G23A	**Biddle**	**152.47**	**346**	⇑P	**PKPbc**	**04 53 07.8**	**+0.6**
	baz=152						
F19A	**Roth Farm, Mol**	**152.50**	**351**	⇑P	**PKPbc**	**04 53 08.0**	**+0.7**
	baz=152						
F18A	**Big Timber**	**152.55**	**353**	⇑P	**PKPbc**	**04 53 07.7**	**+0.3**
	baz=152						
F17A	**Fitzpatrick Pl**	**152.65**	**354**	⇓P	**PKPbc**	**04 53 08.0**	**+0.3**
	baz=153						
G20A	**Bridger**	**153.00**	**350**	⇓P	**PKPbc**	**04 53 09.4**	**+0.9**
	baz=153						
DLMT	**Dillon**	**153.34**	**357**	*e*PKPdf	**PKPdf**	**04 53 01.5**	**-0.2**
DLMT				*e*PKPbc	**PKiKP**	**04 53 09.6**	**+0.3**
G15A	**Dillon**	**153.53**	**357**	⇓P	**PKPbc**	**04 53 11.1**	**+1.4**
	baz=154						
MOOW	**Moose Ponds**	**154.79**	**353**	*e*PKPbc	**PKPbc**	**04 53 13.0**	**+0.5**
LOHW	**Long Hollow**	**154.91**	**353**	*e*PKPdf	**PKPdf**	**04 53 03.5**	**-0.5**
LOHW				*e*PKPab	**PKPab**	**04 53 28.5**	**+0.6**
NVAR	**Mina Array Bea**	**160.05**	**9**	PKPab	**PKPab**	**04 53 50.4**	**+0.2**
NVAR	**Mina Array Bea**	**160.05**	**9**	PKPab	**PKPab**	**04 53 50.4**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=332,slow=5.0,SNR=4.2						
TXAR	**Lajitas Array**	**165.45**	**319**	PKPab	**PKPab**	**04 54 14.4**	**+0.3**
TXAR	**Lajitas Array**	**165.45**	**319**	PKPab	**PKPab**	**04 54 14.4**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=63,slow=4.5,SNR=8.6						

*IDC **01** 04:41:51.9±0.5, 18.°74S×65.°49E, h0^{km}, mb4.1/18, mb1 4.2/19, mb1mx4.1/29, mbtmp4.1/19, ML3.6/1, MS3.8/6, Ms1 3.8/6, ms1mx3.4/39, Error ellipse: s-maj=18.8km s-min=15.9km az=81.0*

*ISCJB **01** 04:41:52.7±0.4, 18.°76S±0.°08×65.°53E±0.°08, h15^{km}, mb4.2/29, MS3.8/5, Error ellipse: s-maj=11.3km s-min=10.1km az=146.9*

*NEIC **01** 04:41:53.7±0.3, 18.°75S×65.°50E, h10^{km}, mb4.5/14, Error ellipse: s-maj=9.0km s-min=8.1km az=151.0*

ISC 01 04:41:54.4±0.4**, 18.°74S**±0.°09×**65.°47E**±0.°09**, h15**^{km}**, n70,** σ**0.s94**/72**, mb4.4**/29**, MS3.8**/5**, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.32**	**268**	P	**P**	**04 45 57.1**	**-0.3**
OPO	**Ambohidratompo**	**17.32**	**268**	P	**P**	**04 45 57.1**	**-0.3**
	0.2nm,0.3s,baz=76,slow=5.8,SNR=5.4						
OPO				LR	LR	04 50 56.7	
	comp=Z,594nm,18.1s,baz=1.3,slow=31						
PALK	**Pallekele**	**29.90**	**32**	*e*P	**P**	**04 48 02.7**	**+0.8**
	19nm,1.1s						
KMBO	**Kilima Mbogo**	**32.74**	**299**	LR	LR	04 59 32.5	
	comp=Z,148nm,18.2s,baz=98,slow=32						
LSZ	**Lusaka**	**35.77**	**270**	*e*P	**P**	**04 48 54.3**	**+0.9**
	3.2nm,0.9s						
LBTB	**Lobatse**	**37.42**	**253**	*e*P	**P**	**04 49 07.7**	**+0.4**
	6.5nm,0.9s						
LBTB	**Lobatse**	**37.42**	**253**	P	**P**	**04 49 06.9**	**-0.4**
	5.5nm,1.0s,baz=103,slow=17,SNR=5.1						
TSUM	**Tsumeb**	**45.17**	**261**	*e*P	**P**	**04 50 09.8**	**-1.3**
	3.2nm,0.9s						
MAW	**Mawson**	**48.87**	**181**	P	**P**	**04 50 39.8**	**+0.6**
MAW	**Mawson**	**48.87**	**181**	P	**P**	**04 50 39.8**	**+0.6**
	9.2nm,1.2s,baz=40,slow=10,SNR=3.7						
MAW				LR	LR	05 06 39.9	
	comp=Z,108nm,19.2s,baz=205,slow=30						
CMAR	**Chiang Mai Arr**	**49.48**	**44**	P	**P**	**04 50 44.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**49.48**	**44**	P	**P**	**04 50 44.9**	**+0.4**
	0.5nm,0.3s,baz=231,slow=5.7,SNR=3.0						
KAPI	**Kappang**	**54.63**	**83**	*e*P	**P**	**04 51 22.8**	**-0.2**
	14nm,1.3s						
EKS2	**Erkin-Say**	**61.57**	**7**	*e*P	**P**	**04 52 13.2**	**+2.0**
	3.8nm,1.0s						
TKM2	**Tokmak 2**	**62.06**	**8**	*e*P	**P**	**04 52 15.1**	**+0.5**
	4.8nm,1.2s						
ASAR	**Alice Springs**	**63.46**	**108**	P	**P**	**04 52 23.8**	**-0.5**
ASAR	**Alice Springs**	**63.46**	**108**	P	**P**	**04 52 23.8**	**-0.5**
	1.1nm,1.0s,baz=274,slow=5.1,SNR=4.8						
WRA	**Warramunga Arr**	**64.56**	**104**	P	**P**	**04 52 30.6**	**-0.9**
WRA	**Warramunga Arr**	**64.56**	**104**	P	**P**	**04 52 30.6**	**-0.9**
	1.4nm,1.0s,baz=261,slow=5.7,SNR=5.8						
BRTR	**Keskin Array B**	**65.31**	**333**	P	**P**	**04 52 36.5**	**+0.5**
BRTR	**Keskin Array B**	**65.31**	**333**	P	**P**	**04 52 36.5**	**+0.5**
	0.2nm,0.3s,baz=142,slow=37,SNR=3.1						
KBZ	**Khabaz**	**65.52**	**342**	P	P	04 52 42.0	+4.9
KBZ	**Khabaz**	**65.52**	**342**	P	P	04 52 42.0	+4.9
	0.6nm,0.6s,baz=164,slow=6.7,SNR=4.0						
SNAA	**Sanae**	**65.56**	**199**	*e*P	**P**	**04 52 37.7**	**+0.6**
	2.9nm,0.8s						
SNAA	**Sanae**	**65.56**	**199**	P	**P**	**04 52 36.9**	**-0.3**
	0.9nm,0.8s,baz=53,slow=8.6,SNR=3.9						
MK31	**Makanchi Array**	**66.97**	**12**	*e*P	**P**	**04 52 47.6**	**+1.2**
MKAR	**Makanchi Array**	**66.97**	**12**	P	**P**	**04 52 47.0**	**+0.7**
MKAR	**Makanchi Array**	**66.97**	**12**	P	**P**	**04 52 47.0**	**+0.7**
	2.6nm,0.9s,baz=196,slow=6.9,SNR=7.8						
STKA	**Stephens Creek**	**68.83**	**118**	P	**P**	**04 52 59.4**	**+0.8**
STKA	**Stephens Creek**	**68.83**	**118**	P	**P**	**04 52 59.4**	**+0.8**
	2.4nm,0.9s,baz=290,slow=11,SNR=3.5						
KURBB	**Kurchatov Arra**	**70.01**	**9**	P	**P**	**04 53 05.6**	**+0.4**
	2.8nm,0.8s,baz=208,slow=6.7,SNR=3.9						
KURBB				LR	LR	05 23 26.6	
	comp=Z,33nm,18.2s,baz=220,slow=36						
KURK	**Kurchatov**	**70.12**	**9**	*e*P	**P**	**04 53 05.7**	**-0.2**
	6.2nm,1.2s						
TORD	**Torodi Ar. Bea**	**70.38**	**292**	P	**P**	**04 53 09.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**70.38**	**292**	P	**P**	**04 53 09.1**	**+0.8**
	1.7nm,1.2s,baz=167,slow=7.3,SNR=5.5						
QSPA	**South Pole Qui**	**71.36**	**180**	*e*P	**P**	**04 53 13.5**	**-0.1**
	12nm,1.1s						
QSPA	**South Pole Qui**	**71.36**	**180**	P	**P**	**04 53 13.8**	**+0.2**
	4.5nm,0.9s,baz=239,slow=2.3,SNR=12						
BVAR	**Borovoye Array**	**71.59**	**3**	LR	LR	05 23 12.3	
	comp=Z,52nm,19.0s,baz=94,slow=35						
VNDA	**Vanda**	**73.22**	**167**	*e*P	**P**	**04 53 24.6**	**+0.2**
	2.5nm,0.9s						
VNDA	**Vanda**	**73.22**	**167**	P	**P**	**04 53 23.7**	**-0.6**
	0.8nm,0.9s,baz=291,slow=8.9,SNR=4.1						
ZAA0	**Zalesovo Array**	**74.28**	**12**	*e*P	**P**	**04 53 30.7**	**-0.1**
ZALV	**Zalesovo Beam**	**74.28**	**12**	P	**P**	**04 53 29.6**	**-1.1**
ZALV	**Zalesovo Beam**	**74.28**	**12**	P	**P**	**04 53 29.6**	**-1.1**
	3.4nm,0.7s,baz=199,slow=7.4,SNR=3.8						
CTA	**Charters Tower**	**75.43**	**107**	LR	LR	05 21 13.1	
	comp=Z,97nm,20.8s,baz=232,slow=31						
KEST	**Kesra**	**75.87**	**316**	*e*P	**P**	**04 53 42.2**	**+1.7**
AKASG	**Malin Array Be**	**76.14**	**337**	P	**P**	**04 53 40.6**	**-0.9**
AKASG	**Malin Array Be**	**76.14**	**337**	P	**P**	**04 53 40.6**	**-0.9**
	0.2nm,0.3s,baz=146,slow=5.0,SNR=4.9						
KIEV	**Kiev**	**76.14**	**337**	*e*P	**P**	**04 53 41.6**	**+0.1**
	5.4nm,1.3s						
MORC	**Moravsky Berou**	**80.30**	**331**	*e*P	**P**	**04 54 04.8**	**+0.2**
	2.7nm,1.1s						
FINES	**FINESS Array B**	**85.88**	**342**	P	**P**	**04 54 32.3**	**-0.9**
FINES	**FINESS Array B**	**85.88**	**342**	P	**P**	**04 54 32.3**	**-0.9**
	1.9nm,1.0s,baz=161,slow=18,SNR=2.1						
WLF	**Walferdange**	**85.90**	**326**	*e*P	**P**	**04 54 35.6**	**+2.0**
	2.9nm,0.7s						
ESDC	**Sonseca Array**	**86.91**	**314**	P	**P**	**04 54 38.2**	**-0.6**
ESDC	**Sonseca Array**	**86.91**	**314**	P	**P**	**04 54 38.3**	**-0.6**
	0.1nm,0.3s,baz=77,slow=38,SNR=3.2						
MJAR	**Matsushiro Arr**	**87.88**	**50**	P	**P**	**04 54 43.7**	**+0.1**
MJAR	**Matsushiro Arr**	**87.88**	**50**	P	**P**	**04 54 43.7**	**+0.1**
	0.7nm,0.4s,baz=182,slow=11,SNR=2.0						
YKA	**Yellowknife Ar**	**136.29**	**0**	PKP	**PKPdf**	**05 01 14.2**	**-0.7**
YKA	**Yellowknife Ar**	**136.29**	**0**	PKP	**PKPdf**	**05 01 14.2**	**-0.7**
	0.2nm,0.7s,baz=354,slow=2.2,SNR=7.0						
BCIP	**Isla Barro Col**	**145.07**	**259**	*e*PKPbc	**PKPdf**	**05 01 33.3**	**+1.1**
ULM	**Lac du Bonnet**	**145.21**	**339**	PKPbc	**PKPbc**	**05 01 30.2**	**-0.8**
ULM	**Lac du Bonnet**	**145.21**	**339**	PKPbc	**PKPbc**	**05 01 30.2**	**-0.8**
	5.4nm,0.8s,baz=57,slow=3.2,SNR=4.4						
ACSO	**Alum Creek Sta**	**145.46**	**315**	*e*PKPbc	**PKPdf**	**05 01 31.8**	**-0.3**
NEW	**Newport**	**150.47**	**4**	*e*PKPdf	**PKPdf**	**05 01 41.3**	**+1.1**
NEW				*e*PKPbc	**PKiKP**	**05 01 46.5**	**+0.2**
EGMT	**Eagleton**	**150.53**	**353**	*e*PKPbc	**PKPbc**	**05 01 45.7**	**0.0**
EGMT				*e*PKPab	**PKPab**	**05 01 50.8**	**-1.5**
ECSD	**EROS Data Cent**	**150.88**	**333**	*e*PKPbc	**PKPbc**	**05 01 45.6**	**-1.0**
ECSD				*e*PKPab	**PKPab**	**05 01 51.1**	**-2.7**
BSMT	**Bassoo Peak**	**150.96**	**0**	*e*PKPdf	**PKPdf**	**05 01 41.5**	**+0.4**
BSMT				*e*PKPbc	**PKPbc**	**05 01 46.3**	**-0.6**
BSMT				*e*PKPab	**PKPab**	**05 01 54.3**	**+0.1**
SWMT	**Swartz Lake**	**151.30**	**359**	*e*PKPbc	**PKPbc**	**05 01 46.8**	**-0.8**
SLMT	**Seeley Lake**	**151.56**	**359**	*e*PKPdf	**PKPdf**	**05 01 42.1**	**0.0**
SLMT				*e*PKPbc	**PKPbc**	**05 01 47.3**	**-1.0**
SLMT				*e*PKPab	**PKPab**	**05 01 53.2**	**-3.5**
MSO	**Missoula**	**151.98**	**359**	*e*PKPbc	**PKPbc**	**05 01 48.5**	**-0.7**
TXAR	**Lajitas Array**	**165.53**	**319**	PKPab	**PKPab**	**05 02 57.7**	**+0.2**
TXAR	**Lajitas Array**	**165.53**	**319**	PKPab	**PKPab**	**05 02 57.7**	**+0.2**
	0.2nm,0.6s,baz=55,slow=4.8,SNR=4.4						

IDC 01 04:54:00.5±2.6**, 21.°49S**×**68.°61W, h104**^{km}±22^{km}**, mb3.5**/3**, mb1 3.6**/5**, mb1mx3.4**/17**, mbtmp3.5**/5**, Error ellipse: s-maj=34.7km s-min=26.7km az=95.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.20**	**5**	P	Pn	04 55 17.4	+0.7
	2.4nm,0.3s,baz=198,slow=7.3,SNR=92						
SIV	**San Ignacio**	**8.99**	**54**	P	Pn	04 56 05.8	-1.8
	1.9nm,0.3s,baz=259,slow=13,SNR=34						
CFAA	**Coronel Fontan**	**10.08**	**178**	P	Pn	04 56 22.2	0.0
	0.1nm,0.3s,baz=357,slow=13,SNR=11						
BDFB	**Brasilia**	**20.36**	**77**	P	P	04 58 30.0	+0.9
	2.5nm,0.4s,baz=261,slow=9.2,SNR=7.8						
TORD	**Torodi Ar. Bea**	**77.09**	**70**	P	P	05 05 42.6	-0.3
	0.5nm,0.6s,baz=251,slow=4.4,SNR=4.3						
YKA	**Yellowknife Ar**	**91.27**	**340**	P	P	05 06 53.4	-0.3
	0.2nm,0.5s,baz=132,slow=4.5,SNR=15						
MKAR	**Makanchi Array**	**145.46**	**36**	PKPbc	PKPdf	05 13 26.1	-0.3
	0.1nm,0.5s,baz=345,slow=4.5,SNR=2.8						

*ROM **01** 05:12:51.5±0.1, 42.°29N×13.°46E, h10^{km}, Ml3.8/14, Error ellipse: s-maj=1.0km s-min=0.7km az=53.0*

*NEIC **01** 05:12:51.0, 42.°28N×13.°47E, h9^{km}, ML3.8(ROM), ML3.8(VIE), After ROM.*

NEIC Felt [V] at Aielli; [IV] at Celano, Luco dei Marsi and Massa d'Albe; [III] at Avezzano, L'Aquila, Magliano de' Marsi, Montorio al Vomano, Pratola Peligna, Rome, Subiaco, Surcola Marsicana and Tagliacozzo; [II] at Ascoli Piceno, Chieti, Pescara, Rieti, Sulmona and Teramo. Felt in much of Abruzzo and in parts of Marche and Lazio.

*LDG **01** 05:12:51.9±0.1, 42.°27N×13.°45E, h2^{km}, Ml3.4/5, Error ellipse: s-maj=3.6km s-min=2.8km az=41.0*

*ISCJB **01** 05:12:51.7±0.2, 42.°30N±0.°01×13.°42E±0.°02, h8^{km}±1^{km}, mb3.5/5, Error ellipse: s-maj=2.6km s-min=2.0km az=21.1*

*IDC **01** 05:12:52.4±1.0, 42.°38N×13.°41E, h0^{km}, mb3.6/6, mb1 3.7/13, mb1mx3.6/34, mbtmp3.6/13, ML3.4/6, Error ellipse: s-maj=16.1km s-min=13.3km az=93.0*

*CSEM **01** 05:12:52.4±0.1, 42.°28N×13.°42E, h2^{km}, ML4.2/12, Error ellipse: s-maj=2.8km s-min=2.2km az=18.0*

*PDG **01** 05:12:52.7±0.7, 42.°30N×13.°44E, h4^{km}, ML3.6/10, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*

*BEO **01** 05:12:52.6±0.8, 42.°11N×13.°45E, h0^{km}, ML3.6*

*PRU **01** 05:12:53.1, 42.°30N×13.°53E, h0^{km}*

*VIE **01** 05:12:53.0, 42.°30N×13.°40E, h2^{km}, ML3.8 88 km ENE of Rome*

*STR **01** 05:13:00.7±2.2, 42.°63N×12.°82E, h5^{km}, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 01 05:12:53.3±0.8**, 42.°29N**±0.°01×**13.°46E**±0.°01**, h6**^{km}±4^{km}**, n250,** σ**1.s53**/327**, mb3.6**/5**, 33C-29D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**327**	*e*Pg	**Pg**	**05 12 54.4**	**-0.9**
AQU	**L'Aquila**	**0.07**	**327**	⇓*i*Pg	**Pg**	**05 12 54.5**	**-0.7**
AQU				Sg	**Sg**	**05 12 55.8**	**-0.8**
	54μm,0.6s						
AQU	**L'Aquila**	**0.07**	**327**	*e*Pg	**Pg**	**05 12 54.3**	**-0.9**
AQU				Sg	**Sg**	**05 12 55.8**	**-0.8**
	54μm,0.6s						
FAGN	**Fagnano**	**0.10**	**105**	P	**Pg**	**05 12 54.7**	**-0.9**
FAGN				S	**Sg**	**05 12 56.5**	**-0.6**
FAGN	**Fagnano**	**0.10**	**105**	⇑*e*Pg	**Pg**	**05 12 54.6**	**-0.9**
FAGN				Sg	**Sg**	**05 12 56.5**	**-0.6**
	185μm,0.4s						
FAGN	**Fagnano**	**0.10**	**105**	P	**Pg**	**05 12 54.7**	**-0.9**
FAGN				Sg	**Sg**	**05 12 56.5**	**-0.6**
	185μm,0.4s						
CAMP	**Campotosto**	**0.25**	**352**	P	**Pg**	**05 12 57.3**	**-0.9**
CAMP				S	**Sg**	**05 13 03.4**	**+1.8**
CAMP	**Campotosto**	**0.25**	**352**	⇓*e*Pg	**Pg**	**05 12 57.3**	**-0.9**
CAMP				Sg	**Sg**	**05 13 01.6**	**0.0**
	8μm,0.6s						
CAMP	**Campotosto**	**0.25**	**352**	⇓*e*Pg	**Pg**	**05 12 57.3**	**-0.9**
CAMP				Sg	**Sg**	**05 13 01.6**	**0.0**
	8μm,0.6s						
CAMP				S	**Sg**	**05 13 03.4**	**+1.8**
FIAM	**Fiamignano**	**0.25**	**265**	P	**Pg**	**05 12 57.7**	**-0.6**
FIAM				S	**Sg**	**05 13 02.1**	**+0.4**
FIAM	**Fiamignano**	**0.25**	**265**	⇑*i*Pg	**Pg**	**05 12 57.7**	**-0.6**
FIAM				Sg	**Sg**	**05 13 02.1**	**+0.4**
	32μm,0.9s						
FIAM	**Fiamignano**	**0.25**	**265**	⇑*i*Pg	**Pg**	**05 12 57.7**	**-0.6**
FIAM				Sg	**Sg**	**05 13 02.1**	**+0.4**
	32μm,0.9s						
PTQR	**Pietraquaria**	**0.27**	**189**	P	**Pg**	**05 12 57.8**	**-0.9**
PTQR	**Pietraquaria**	**0.27**	**189**	⇑*i*Pg	**Pg**	**05 12 57.8**	**-0.9**
PTQR	**Pietraquaria**	**0.27**	**189**	⇑*i*Pg	**Pg**	**05 12 57.8**	**-0.9**
VCEL	**Villa Celiera**	**0.30**	**70**	P	**Pg**	**05 12 58.2**	**-1.1**
VCEL				S	**Sg**	**05 13 03.6**	**+0.3**
VCEL	**Villa Celiera**	**0.30**	**70**	Pg	**Pg**	**05 12 58.2**	**-1.1**
VCEL				Sg	**Sg**	**05 13 02.9**	**-0.5**
	24μm,0.8s						
VCEL	**Villa Celiera**	**0.30**	**70**	Pg	**Pg**	**05 12 58.2**	**-1.1**
VCEL				Sg	**Sg**	**05 13 02.9**	**-0.5**
	24μm,0.8s						
VCEL				S	**Sg**	**05 13 03.6**	**+0.3**
TERO	**Teramo**	**0.35**	**18**	P	**Pg**	**05 12 58.8**	**-1.4**
TERO				S	**Sg**	**05 13 05.0**	**+0.1**
TERO	**Teramo**	**0.35**	**18**	Pg	**Pg**	**05 12 58.8**	**-1.4**
TERO				Sg	**Sg**	**05 13 04.1**	**-0.7**
	10μm,0.8s						
TERO	**Teramo**	**0.35**	**18**	Pg	**Pg**	**05 12 58.8**	**-1.4**
TERO				Sg	**Sg**	**05 13 04.1**	**-0.7**
	10μm,0.8s						
TERO				S	**Sg**	**05 13 04.9**	**+0.1**
INTR	**Introdacqua**	**0.44**	**130**	P	**Pg**	**05 13 00.6**	**-1.2**
INTR				S	**Sg**	**05 13 07.2**	**-0.3**
INTR	**Introdacqua**	**0.44**	**130**	Pg	**Pg**	**05 13 00.6**	**-1.2**
INTR				Sg	**Sg**	**05 13 07.2**	**-0.3**
	14μm,0.4s						
INTR	**Introdacqua**	**0.44**	**130**	Pg	**Pg**	**05 13 00.6**	**-1.2**
INTR				Sg	**Sg**	**05 13 07.2**	**-0.3**
	14μm,0.4s						
LNSS	**Leonessa**	**0.44**	**315**	P	**Pg**	**05 13 00.8**	**-1.1**
LNSS	**Leonessa**	**0.44**	**315**	Pg	**Pg**	**05 13 00.8**	**-1.1**
	10μm,0.8s						
LNSS	**Leonessa**	**0.44**	**315**	Pg	**Pg**	**05 13 00.8**	**-1.1**
	10μm,0.8s						
VVLD	**Villa Vallelon**	**0.44**	**164**	P	**Pg**	**05 13 00.5**	**-1.3**
VVLD				S	**Sg**	**05 13 07.2**	**-0.4**
VVLD	**Villa Vallelon**	**0.44**	**164**	Pg	**Pg**	**05 13 00.5**	**-1.3**
VVLD				Sg	**Sg**	**05 13 07.0**	**-0.6**
	7μm,0.4s						
VVLD	**Villa Vallelon**	**0.44**	**164**	Pg	**Pg**	**05 13 00.5**	**-1.3**
VVLD				Sg	**Sg**	**05 13 07.0**	**-0.6**
	7μm,0.4s						
CERT	**Cerreto**	**0.49**	**226**	P	**Pg**	**05 13 01.6**	**-1.2**
CERT				S	**Sg**	**05 13 08.8**	**-0.4**
CERT	**Cerreto**	**0.49**	**226**	Pg	**Pg**	**05 13 01.6**	**-1.2**
CERT				Sg	**Sg**	**05 13 08.6**	**-0.6**
	16μm,0.8s						
CERT	**Cerreto**	**0.49**	**226**	Pg	**Pg**	**05 13 01.6**	**-1.2**
CERT				Sg	**Sg**	**05 13 08.6**	**-0.6**
	16μm,0.8s						
MNS	**Montasola**	**0.58**	**279**	⇑*i*Pg	**Pg**	**05 13 03.1**	**-1.4**
	3μm,0.7s						
MNS	**Montasola**	**0.58**	**279**	⇑*i*Pg	**Pg**	**05 13 03.1**	**-1.4**
	3μm,0.7s						
LPEL	**Lama dei Pelig**	**0.59**	**114**	Pg	**Pg**	**05 13 03.1**	**-1.7**
LPEL				Sg	**Sg**	**05 13 11.9**	**-0.6**
	6μm,0.4s						
LPEL	**Lama dei Pelig**	**0.59**	**114**	Pg	**Pg**	**05 13 03.1**	**-1.7**
LPEL				Sg	**Sg**	**05 13 11.9**	**-0.6**
	6μm,0.4s						
MTCE	**Montecelio**	**0.59**	**243**	P	**Pg**	**05 13 03.5**	**-1.4**
MTCE				S	**Sb**	**05 13 14.3**	**-0.4**
MTCE	**Montecelio**	**0.59**	**243**	⇑*i*Pg	**Pg**	**05 13 03.4**	**-1.4**
	4μm,0.8s						
MTCE	**Montecelio**	**0.59**	**243**	⇑*i*Pg	**Pg**	**05 13 03.4**	**-1.4**
	4μm,0.8s						
MTCE				S	**Sb**	**05 13 14.3**	**-0.4**
NRCA	**Norcia**	**0.60**	**335**	P	**Pg**	**05 13 03.4**	**-1.5**
NRCA				S	**Sg**	**05 13 12.8**	**+0.1**
NRCA	**Norcia**	**0.60**	**335**	Pg	**Pg**	**05 13 03.4**	**-1.5**
NRCA				Sg	**Sg**	**05 13 12.8**	**+0.1**
	2μm,0.2s						
NRCA	**Norcia**	**0.60**	**335**	Pg	**Pg**	**05 13 03.4**	**-1.5**
NRCA				Sg	**Sg**	**05 13 12.8**	**+0.1**
	2μm,0.2s						
POFI	**Posta Fibreno**	**0.60**	**161**	P	**Pg**	**05 13 03.1**	**-1.8**
POFI				S	**Sg**	**05 13 13.3**	**+0.4**
POFI	**Posta Fibreno**	**0.60**	**161**	Pg	**Pg**	**05 13 03.1**	**-1.8**
POFI				Sg	**Sg**	**05 13 13.3**	**+0.4**
	2μm,0.5s						
POFI	**Posta Fibreno**	**0.60**	**161**	P	**Pg**	**05 13 03.2**	**-1.8**
POFI				Sg	**Sg**	**05 13 13.3**	**+0.4**
	2μm,0.5s						
SDI	**San Donato**	**0.64**	**155**	Pg	**Pg**	**05 13 03.8**	**-1.8**
SDI	**San Donato**	**0.64**	**155**	Pg	**Pg**	**05 13 03.8**	**-1.8**
CAFR	**Castel Frentan**	**0.67**	**95**	Pg	**Pg**	**05 13 05.0**	**-1.1**
CAFR	**Castel Frentan**	**0.67**	**95**	Pg	**Pg**	**05 13 05.0**	**-1.1**
OFFI	**Offida**	**0.67**	**15**	P	**Pg**	**05 13 05.3**	**-0.8**
OFFI	**Offida**	**0.67**	**15**	Pg	**Pg**	**05 13 05.3**	**-0.8**
OFFI	**Offida**	**0.67**	**15**	Pg	**Pg**	**05 13 05.3**	**-0.8**
CESX	**Cesi**	**0.72**	**296**	Pg	**Pg**	**05 13 05.4**	**-1.8**
CESX	**Cesi**	**0.72**	**296**	Pg	**Pg**	**05 13 05.4**	**-1.8**
RMP	**Rome, Mte Porz**	**0.74**	**230**	Pg	**Pg**	**05 13 05.8**	**-1.7**
RMP	**Rome, Mte Porz**	**0.74**	**230**	Pg	**Pg**	**05 13 05.8**	**-1.7**
GIUL	**Giuliano Di Ro**	**0.75**	**192**	Pg	**Pg**	**05 13 05.6**	**-2.1**
GIUL	**Giuliano Di Ro**	**0.75**	**192**	Pg	**Pg**	**05 13 05.6**	**-2.1**
RDP	**Rocca di Papa**	**0.77**	**226**	Pg	**Pg**	**05 13 06.4**	**-1.6**
RDP	**Rocca di Papa**	**0.77**	**226**	Pg	**Pg**	**05 13 06.4**	**-1.6**
RNI2	**Rionero Sannit**	**0.79**	**138**	Pg	**Pg**	**05 13 06.6**	**-1.8**
RNI2	**Rionero Sannit**	**0.79**	**138**	Pg	**Pg**	**05 13 06.6**	**-1.8**
MA9	**Marino**	**0.79**	**229**	Pg	**Pg**	**05 13 06.6**	**-1.9**
MA9	**Marino**	**0.79**	**229**	Pg	**Pg**	**05 13 06.6**	**-1.9**
FDMO	**Fiordimonte**	**0.79**	**340**	Pg	**Pg**	**05 13 06.6**	**-2.0**
FDMO	**Fiordimonte**	**0.79**	**340**	Pg	**Pg**	**05 13 06.6**	**-2.0**
CERA	**Filignano**	**0.81**	**149**	Pg	**Pg**	**05 13 06.6**	**-2.3**
CERA	**Filignano**	**0.81**	**149**	Pg	**Pg**	**05 13 06.6**	**-2.3**
CESI	**CESI - Serrava**	**0.82**	**330**	Pg	**Pg**	**05 13 07.2**	**-1.9**
CESI	**CESI - Serrava**	**0.82**	**330**	Pg	**Pg**	**05 13 07.2**	**-1.9**
MIDA	**Miranda**	**0.88**	**137**	P	**Pg**	**05 13 08.0**	**-2.2**
MIDA	**Miranda**	**0.88**	**137**	Pg	**Pg**	**05 13 07.9**	**-2.3**
MIDA	**Miranda**	**0.88**	**137**	P	**Pg**	**05 13 08.0**	**-2.2**
CING	**Cingoli**	**1.10**	**350**	Pg	**Pg**	**05 13 12.1**	**-2.3**
CING	**Cingoli**	**1.10**	**350**	Pg	**Pg**	**05 13 12.1**	**-2.3**
TOLF	**Tolfa**	**1.10**	**259**	Pg	**Pg**	**05 13 12.5**	**-2.0**
TOLF	**Tolfa**	**1.10**	**259**	Pg	**Pg**	**05 13 12.5**	**-2.0**
MURB	**Monte Urbino**	**1.19**	**325**	Pg	**Pg**	**05 13 14.4**	**-1.7**
MURB	**Monte Urbino**	**1.19**	**325**	Pg	**Pg**	**05 13 14.4**	**-1.7**
AOI	**Ancona**	**1.26**	**5**	Pg	**Pn**	**05 13 16.1**	**-1.4**
AOI	**Ancona**	**1.26**	**5**	Pg	**Pn**	**05 13 16.1**	**-1.4**
ARVD	**Arcevia**	**1.26**	**343**	Pg	**Pn**	**05 13 15.2**	**-2.3**
ARVD	**Arcevia**	**1.26**	**343**	Pg	**Pn**	**05 13 15.2**	**-2.3**
NVLJ	**Novalja**	**2.49**	**24**	*e*Pn	**Pn**	**05 13 33.3**	**-1.1**
NVLJ				Sn	**Sn**	**05 14 06.5**	**+1.5**
NVLJ	**Novalja**	**2.49**	**24**	*e*Pn	**Pn**	**05 13 33.2**	**-1.1**
NVLJ				Sn	**Sn**	**05 14 06.5**	**+1.5**
MAIM	**Mastiano**	**2.71**	**308**	P	**Pn**	**05 13 36.7**	**-0.6**
VLC	**Villacollemand**	**2.92**	**311**	*e*Pn	**Pn**	**05 13 41.5**	**+1.2**
VLC	**Villacollemand**	**2.92**	**311**	*e*Pn	**Pn**	**05 13 41.5**	**+1.2**

STON	Ston	3.19	78	ePn	Pn	05 13 43.8	-0.2
STON				Sn	Sn	05 14 22.0	-0.2
STON	Ston	3.19	78	ePn	Pn	05 13 43.7	-0.2
STON				Sn	Sn	05 14 22.0	-0.2
OSPF	L'Ospedale	3.24	260	P	Pn	05 13 44.1	-0.6
OSPF	L'Ospedale	3.24	260	P	Pn	05 13 44.1	-0.6
SKDS	Skadanscina	3.28	7	i Pn	Pn	05 13 44.0	-1.2
SKDS	Skadanscina	3.28	7	Pn	Pn	05 13 44.0	-1.2
PGF	Pioggiola	3.31	276	eP	Pn	05 13 45.6	-0.1
PGF				eSn	Sn	05 14 20.3	-5.1
	25nm,0.5s						
PGF	Pioggiola	3.31	276	eP	Pn	05 13 45.6	-0.1
PGF				eSn	Sn	05 14 20.3	-5.1
	13nm,0.5s						
TRI	Trieste	3.42	4	ePn	Pn	05 13 44.2	-3.0
TRI	Trieste	3.42	4	ePn	Pn	05 13 44.2	-3.0
HCY	Herceg Novi	3.74	86	⇓iPn	Pn	05 13 52.9	+1.4
HCY				eSn	Sn	05 14 39.0	+3.2
HCY	Herceg Novi	3.74	86	⇓iPn	Pn	05 13 52.9	+1.4
HCY				eSn	Sn	05 14 39.0	+3.2
VOY	Vojsko	3.75	5	ePn	Pn	05 13 51.2	-0.6
VOY				e		05 13 55.8	
VOY	Vojsko	3.75	5	ePn	Pn	05 13 51.2	-0.6
BRY	Bratogost	3.80	79	⇑iPn	Pn	05 13 53.8	+1.3
BRY				eSn	Sn	05 14 40.4	+2.8
BRY	Bratogost	3.80	79	⇑iPn	Pn	05 13 53.8	+1.3
BRY				eSn	Sn	05 14 40.4	+2.8
BUM	Brajici-Budva	4.03	88	⇓iPn	Pn	05 13 57.2	+1.6
BUM				eSn	Sn	05 14 45.5	+2.3
BUM	Brajici-Budva	4.03	88	⇓iPn	Pn	05 13 57.2	+1.6
BUM				eSn	Sn	05 14 45.5	+2.3
UPM	Unac-Piva	4.12	75	ePn	Pn	05 13 58.0	+1.1
UPM				eSn	Sn	05 14 48.4	+3.0
UPM	Unac-Piva	4.12	75	ePn	Pn	05 13 58.0	+1.1
UPM				eSn	Sn	05 14 48.4	+3.0
NKY	Niksic	4.12	81	⇑iPn	Pn	05 13 57.8	+0.9
NKY				eSn	Sn	05 14 47.5	+2.0
NKY	Niksic	4.12	81	⇑iPn	Pn	05 13 57.8	+0.9
NKY				eSn	Sn	05 14 47.5	+2.0
VSL	Villasalto	4.17	229	ePn	Pn	05 13 56.4	-1.0
VSL	Villasalto	4.17	229	ePn	Pn	05 13 56.4	-1.0
PDG	Podgorica	4.30	86	ePn	Pn	05 13 59.3	+0.1
PDG				eSn	Sn	05 14 49.6	0.0
PDG	Podgorica	4.30	86	ePn	Pn	05 13 59.3	+0.1
PDG				eSn	Sn	05 14 49.6	0.0
TTG	Podgorica	4.30	86	⇑iPn	Pn	05 13 59.4	+0.2
TTG				eSn	Sn	05 14 52.1	+2.5
ULC	Ulcinj	4.32	92	⇑iPn	Pn	05 14 00.5	+1.0
ULC				eSn	Sn	05 14 52.9	+2.8
ULC	Ulcinj	4.32	92	⇑iPn	Pn	05 14 00.5	+1.0
ULC				eSn	Sn	05 14 52.9	+2.8
PLE	Pljevlja	4.49	75	⇓iPn	Pn	05 14 03.1	+1.2
PLE				eSn	Sn	05 14 56.5	+2.1
PLE	Pljevlja	4.49	75	⇓iPn	Pn	05 14 03.1	+1.2
PLE				eSn	Sn	05 14 56.5	+2.1
ABTA	Abfaltersbach	4.51	352	i P	Pn	05 14 01.9	-0.2
	SNR=41						
ABTA	Abfaltersbach	4.51	352	i Pn	Pn	05 14 01.9	-0.2
	SNR=41						
ABTA	Abfaltersbach	4.51	352	⇑iPn	Pn	05 14 01.7	-0.4
ABTA	Abfaltersbach	4.51	352	P	Pn	05 14 01.9	-0.2
	SNR=41						
SOKA	Soboth	4.53	14	⇓iPn	Pn	05 14 01.6	-0.8
SOKA	Soboth	4.53	14	⇓iPn	Pn	05 14 01.6	-0.8
SOKA	Soboth	4.53	14	⇓iPn	Pn	05 14 01.6	-0.8
BBLS	Lazići	4.63	68	ePn	Pn	05 14 04.6	+0.7
BBLS				eSn	Sn	05 14 59.0	+1.0
BBLS	Lazići	4.63	68	ePn	Pn	05 14 04.6	+0.7
BBLS				eSn	Sn	05 14 59.0	+1.0
SAOF	Saorge	4.64	293	P	Pn	05 14 04.5	+0.6
SAOF	Saorge	4.64	293	P	Pn	05 14 04.5	+0.6
SBF	Sospel	4.68	292	ePn	Pn	05 14 02.5	-2.0
SBF	Sospel	4.68	292	ePn	Pn	05 14 02.5	-2.0
AUTN	L'Aution	4.73	293	P	Pn	05 14 05.8	+0.5
AUTN	L'Aution	4.73	293	P	Pn	05 14 05.8	+0.5
BEY	Berane	4.79	81	⇓iPn	Pn	05 14 07.8	+1.8
BEY				eSn	Sn	05 15 04.4	+2.6
IVA	Berane	4.79	81	⇓iPn	Pn	05 14 07.8	+1.8
IVA				eSn	Sn	05 15 04.4	+2.6
PVY	Plav	4.82	84	⇓iPn	Pn	05 14 08.6	+2.1
PVY				eSn	Sn	05 15 05.0	+2.3
TOUF	Mont Tournerai	4.86	293	P	Pn	05 14 07.7	+0.7
TOUF	Mont Tournerai	4.86	293	P	Pn	05 14 07.7	+0.7
TIR	Tirane	4.88	99	ePn	Pn	05 14 07.4	+0.2
TIR	Tirane	4.88	99	ePn	Pn	05 14 07.9	+0.7
TIR				eSn	Sn	05 15 01.2	-2.8
TIR	Tirane	4.88	99	ePn	Pn	05 14 07.4	+0.2
TIR				eSn	Sn	05 15 01.2	-2.8
MVIF	Mont Vial	4.89	291	P	Pn	05 14 07.7	+0.3
MVIF	Mont Vial	4.89	291	P	Pn	05 14 07.7	+0.3
CALN	Calern	5.03	289	P	Pn	05 14 09.6	+0.2
CALN	Calern	5.03	289	P	Pn	05 14 09.6	+0.2
DIVS	Divibare	5.11	67	ePn	Pn	05 14 09.6	-0.8
DIVS	Divibare	5.11	67	ePn	Pn	05 14 09.6	-0.8
TUE	Stuetta	5.11	326	ePn	Pn	05 14 10.8	+0.2
TUE	Stuetta	5.11	326	ePn	Pn	05 14 10.8	+0.2
FETA	Feichten	5.11	339	⇑iPn	Pn	05 14 10.3	-0.2
	SNR=9.2						
FETA	Feichten	5.11	339	⇑iPn	Pn	05 14 10.3	-0.2
FETA	Feichten	5.11	339	⇑iPn	Pn	05 14 10.3	-0.2
FRF	La Foret Royal	5.16	287	ePn	Pn	05 14 09.0	-2.0
FRF				eSn	Sn	05 15 04.6	-6.2
	11nm,0.8s						
FRF	La Foret Royal	5.16	287	ePn	Pn	05 14 09.0	-2.0
DAVOX	Davos/Dischmat	5.16	332	Pn	Pn	05 14 08.3	-3.0
	0.3nm,0.3s,baz=304,slow=18,SNR=1.6						
DAVOX				Sn	Sn	05 15 12.2	+1.0
	0.5nm,0.3s,baz=315,slow=19,SNR=2.2						
LMR	La Mourre	5.21	284	ePn	Pn	05 14 10.1	-1.7
LMR	La Mourre	5.21	284	ePn	Pn	05 14 10.1	-1.7
MOTA	Moosalm	5.32	342	⇓iPn	Pn	05 14 13.9	+0.5
	SNR=9.9						
MOTA	Moosalm	5.32	342	⇓iPn	Pn	05 14 13.9	+0.5
MOTA	Moosalm	5.32	342	⇓iPn	Pn	05 14 13.9	+0.5
PKSM	Moragy	5.41	42	⇓iP	Pn	05 14 13.7	-0.7
PKSM	Moragy	5.41	42	⇓iP	Pn	05 14 13.7	-0.7
TRUS	Trudelj	5.43	67	ePn	Pn	05 14 13.7	-1.0
TRUS				eSn	Sn	05 15 17.8	+0.3
TRUS	Trudelj	5.43	67	ePn	Pn	05 14 13.7	-1.0
TRUS				eSn	Sn	05 15 17.8	+0.3
MBDF	Montbardon	5.44	299	eP	Pn	05 14 16.2	+1.2
MBDF	Montbardon	5.44	299	eP	Pn	05 14 16.2	+1.2
GRUS	Gruza	5.55	71	ePn	Pn	05 14 16.4	0.0
GRUS				eSn	Sn	05 15 20.8	+0.3
GRUS	Gruza	5.55	71	ePn	Pn	05 14 16.4	0.0
GRUS				eSn	Sn	05 15 20.8	+0.3
MOA	Molln	5.59	6	⇑iPn	Pn	05 14 16.3	-0.6
	SNR=14						
MOA	Molln	5.59	6	⇑iPn	Pn	05 14 16.3	-0.6
MOA	Molln	5.59	6	⇑iPn	Pn	05 14 16.3	-0.6
DAVA	Damuels	5.60	334	⇓iPn	Pn	05 14 18.0	+0.7
	SNR=7.8						
DAVA	Damuels	5.60	334	⇓iPn	Pn	05 14 18.0	+0.7
DAVA	Damuels	5.60	334	⇓iPn	Pn	05 14 18.0	+0.7
BNI	Bardonecchia	5.64	302	ePn	Pn	05 14 18.7	+1.0
BNI	Bardonecchia	5.64	302	ePn	Pn	05 14 18.7	+1.0
SELS	Selova	5.72	78	ePn	Pn	05 14 18.6	-0.1
SELS				eSn	Sn	05 15 19.3	-5.3
SELS	Selova	5.72	78	ePn	Pn	05 14 18.6	-0.1
LPG	La Plagne	5.81	306	eP	Pn	05 14 21.9	+1.7
LPG	La Plagne	5.81	306	eP	Pn	05 14 21.9	+1.7
CONA	Conrad Observa	5.89	16	⇑iPn	Pn	05 14 19.9	-1.2
	SNR=8.1						
CONA	Conrad Observa	5.89	16	⇑iPn	Pn	05 14 19.9	-1.2
CONA	Conrad Observa	5.89	16	⇑iPn	Pn	05 14 19.9	-1.2
SMRF	Simiane la Rot	6.01	289	eP	Pn	05 14 23.6	+0.9
SMRF	Simiane la Rot	6.01	289	eP	Pn	05 14 23.6	+0.9
ORIF	Oris-en-Rattie	6.09	298	eP	Pn	05 14 25.7	+1.8
ORIF	Oris-en-Rattie	6.09	298	eP	Pn	05 14 25.7	+1.8
BARS	Barje	6.20	82	ePn	Pn	05 14 24.3	-1.0
BARS	Barje	6.20	82	ePn	Pn	05 14 24.3	-1.0
GERES	GERESS Array B	6.56	1	Pn	Pn	05 14 29.0	-1.3
	0.5nm,0.3s,baz=179,slow=13,SNR=20						
GERES				Sn	Sn	05 15 45.0	-0.4
	1.0nm,0.3s,baz=185,slow=25,SNR=7.0						
FELD	Feldberg im Sc	6.79	327	P	Pn	05 14 33.4	-0.1
FELD	Feldberg im Sc	6.79	327	P	Pn	05 14 33.4	-0.1
CABF	La Chapelle	6.81	312	eP	Pn	05 14 35.7	+1.9
CABF	La Chapelle	6.81	312	eP	Pn	05 14 35.7	+1.9
ZAPS	Zavoj	6.82	79	ePn	Pn	05 14 34.2	+0.3
ZAPS				eSn	Sn	05 15 51.2	-0.7
KHC	Kasperske Hory	6.84	1	ePn	Pn	05 14 31.9	-2.2
KHC				eSn	Sn	05 15 49.4	-2.8
KHC	Kasperske Hory	6.84	1	ePN	Pn	05 14 32.5	-1.6
KHC				eSN	Sn	05 15 49.5	-2.8
KHC	Kasperske Hory	6.84	1	Pn	Pn	05 14 32.5	-1.6
VIVF	Saint-Julien-l	6.87	295	eP	Pn	05 14 35.6	+1.0
VIVF	Saint-Julien-l	6.87	295	eP	Pn	05 14 35.6	+1.0
BFO	Black Forest	7.04	331	ePn	Pn	05 14 34.8	-2.0
BFO	Black Forest	7.04	331	ePn	Pn	05 14 34.8	-2.0
MOF	Molkenrain	7.13	323	P	Pn	05 14 37.8	-0.4
MOF	Molkenrain	7.13	323	P	Pn	05 14 37.8	-0.4
VTS	Vitosha	7.22	84	ePn	Pn	05 14 39.9	+0.4
VTS				eSn	Sn	05 15 57.4	-4.4
VTS	Vitosha	7.22	84	⇑iP	Pn	05 14 39.9	+0.4
VTS	Vitosha	7.22	84	⇑iP	Pn	05 14 39.9	+0.4
HINF	Hinteralfeld	7.24	322	ePn	Pn	05 14 36.6	-3.0
HINF				eSn	Sn	05 15 54.9	-7.1
	13nm,0.6s						
HINF	Hinteralfeld	7.24	322	ePn	Pn	05 14 36.6	-3.0
KEST	Kesra	7.29	207	ePn	Pn	05 14 43.7	+3.4
KEST	Kesra	7.29	207	Pn	Pn	05 14 42.9	+2.6
	0.5nm,0.3s,baz=306,slow=3.5,SNR=18						
ECH	Echery	7.40	325	ePn	Pn	05 14 40.2	-1.6
ECH	Echery	7.40	325	P	Pn	05 14 40.2	-1.6
ECH				S	Sn	05 16 04.2	-1.9
ECH	Echery	7.40	325	P	Pn	05 14 40.2	-1.6
ECH				S	Sn	05 16 04.2	-1.9
CDF	Champ du Feu	7.51	327	ePn	Pn	05 14 41.7	-1.6
CDF	Champ du Feu	7.51	327	ePn	Pn	05 14 41.7	-1.6
HAU	Haudompre	7.61	321	ePn	Pn	05 14 42.3	-2.3
HAU				eSn	Sn	05 16 03.3	-7.8
	11nm,0.5s						
HAU	Haudompre	7.61	321	ePn	Pn	05 14 42.3	-2.3
PRU	Pruhonice	7.74	5	ePN	Pn	05 14 44.3	-2.1
PRU				eSN	Sn	05 16 10.2	-4.0
PRU	Pruhonice	7.74	5	Pn	Pn	05 14 44.3	-2.1
THEF	They Montfort	7.93	321	P	Pn	05 14 49.2	+0.1
THEF	They Montfort	7.93	321	P	Pn	05 14 49.2	+0.1
MORC	Moravsky Berou	8.01	19	⇓iP	Pn	05 14 52.0	+1.9
MORC	Moravsky Berou	8.01	19	⇓iP	Pn	05 14 52.0	+1.9
PAGF	Fort de Pagny	8.29	322	eSn	Sn	05 16 19.8	-8.1
	3.5nm,0.6s						
VOIR		8.95	66	⇑iP	Pn	05 15 06.5	+3.4
CLL	Collm	9.03	358	ePn	Pn	05 15 03.0	-1.0
CLL				eSn	Sn	05 16 23.0	-23
CLL				e		05 16 47.0	
CLL				eSb		05 17 03.0	
CLL				e		05 17 17.0	
CLL				eSg		05 17 43.0	
MLR	Muntele Rosu	9.57	66	⇓iP	Pn	05 15 13.6	+2.0
MLR	Muntele Rosu	9.57	66	Pn	Pn	05 15 12.6	+1.0
	0.1nm,0.3s,baz=214,slow=6.6,SNR=14						
MLR	Muntele Rosu	9.57	66	⇓iP	Pn	05 15 13.6	+2.0
KWP	Kalwaria Pacla	9.76	38	⇑iP	Pn	05 15 18.4	+4.3
KWP	Kalwaria Pacla	9.76	38	eP	Pn	05 15 18.4	+4.3
BURAR	Bucovina Array	9.89	53	⇓iP	Pn	05 15 17.1	+1.1
BURAR	Bucovina Array	9.89	53	⇓iP	Pn	05 15 17.1	+1.1
BUR08	Bucovina Ar. S	9.89	53	eP	Pn	05 15 19.2	+3.2
PLOR	Plostina	10.14	65	⇑iP	Pn	05 15 20.4	+1.0
PLOR	Plostina	10.14	65	⇑iP	Pn	05 15 20.4	+1.0
VRI	Vrincioaia	10.20	65	⇑iP	Pn	05 15 20.5	+0.4
ESDC	Sonseca Array	13.42	265	Pn	Pn	05 16 03.7	-0.5
	0.1nm,0.3s,baz=70,slow=13,SNR=4.3						
BRTR	Keskin Array B	15.45	93	Pn	P	05 16 35.1	-1.3
	0.1nm,0.3s,baz=284,slow=13,SNR=2.3						
HFS	Hagfors	17.87	0	P	Pn	05 17 01.0	-1.2
	0.0nm,0.3s,baz=196,slow=13,SNR=2.3						
NOA	NORSAR Array B	18.82	357	P	P	05 17 12.6	-1.0
	0.1nm,0.3s,baz=176,slow=11,SNR=4.4						
FINES	FINESS Array B	20.63	17	P	P	05 17 32.4	-0.8
	3.6nm,0.8s,baz=175,slow=9.0,SNR=8.9						
KBZ	Khabaz	21.53	76	P	P	05 17 45.0	+2.0
	2.2nm,0.8s,baz=277,slow=6.9,SNR=6.0						
TORD	Torodi Ar. Bea	30.78	203	P	P	05 19 10.1	+0.5
	0.9nm,0.7s,baz=15,slow=8.3,SNR=7.2						
BVAR	Borovoye Array	38.85	54	P	P	05 20 17.0	-1.9
	0.7nm,0.8s,baz=252,slow=12,SNR=3.4						
KURBB	Kurchatov Arra	44.27	56	P	P	05 21 03.2	-0.3
	0.2nm,0.2s,baz=306,slow=11,SNR=2.4						
YKA	Yellowknife Ar	67.58	337	P	P	05 23 49.9	-0.2
	0.4nm,0.7s,baz=39,slow=5.7,SNR=9.1						

TIR 01 05:14:02.5±0.8**, 42°.08N×20°.10E, h0**km±249km**,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	Puka	0.16	257	ePG	Pg	05 14 06.9	+1.2
PUK				i SG	Sg	05 14 08.9	+1.0
BCI	Bajram Curri	0.29	355	ePG	Pb	05 14 09.5	-1.1
BCI				i SG	Sb	05 14 14.6	-1.4
PHP	Peshkopia	0.47	147	ePG	Pb	05 14 13.8	+0.1

*NEIC **01** 05:16:14.3, 41°.19S×174°.81E, h30km, ML4.1(WEL), After WEL.*
NEIC Felt [IV] in the Paraparaumu-Silverstream-Wellington area. Also felt at Martinborough and Picton.
WEL 01 05:16:14.2±0.1**, 41°.19S×174°.81E, h31**km**, ML4.1**/41**,**
13C-15D, Error ellipse: s-maj=0.7km s-min=0.6km
az=90.0, intensity MM 5., Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WEL	Wellington	0.10	196	⇓P*	Pb	05 16 19.6	-0.1
WEL	Wellington	0.10	196	P*	Pb	05 16 19.6	-0.1
SNZO	South Karori	0.14	211	⇑P*	Pb	05 16 19.8	-0.2
SNZO	South Karori	0.14	211	ePg	Pb	05 16 19.4	-0.6
SNZO				eSg	Sb	05 16 23.6	-0.3
CAW	Cannon Point	0.21	69	⇑P*	Pb	05 16 20.7	0.0
CAW				S*	Sb	05 16 25.4	+0.3
CAW	Cannon Point	0.21	69	P*	Pb	05 16 20.7	0.0
BHW	Baring Head	0.23	167	⇑P*	Pb	05 16 20.6	-0.2
BHW	Baring Head	0.23	167	P*	Pb	05 16 20.6	-0.2
KIW	Kapiti Island	0.33	14	P*	Pb	05 16 22.3	+0.1
KIW				S*	Sb	05 16 28.0	+0.3
KIW	Kapiti Island	0.33	14	P*	Pb	05 16 22.3	+0.1
TCW	Tory Channel	0.40	266	⇓P*	Pb	05 16 23.0	-0.1
TCW	Tory Channel	0.40	266	P*	Pb	05 16 23.0	-0.1
MSWZ	Moikau Station	0.41	124	⇑P*	Pb	05 16 23.4	+0.1
MSWZ	Moikau Station	0.41	124	P*	Pb	05 16 23.4	+0.1
OGWZ	Otaki Gorge	0.46	37	⇑P*	Pb	05 16 24.1	0.0
OGWZ	Otaki Gorge	0.46	37	P*	Pb	05 16 24.1	0.0
PAWZ	Paruwai Farm	0.51	113	⇑P*	Pb	05 16 24.9	0.0
PAWZ	Paruwai Farm	0.51	113	P*	Pb	05 16 24.9	0.0
PLWZ	Palliser	0.51	139	⇑P*	Pb	05 16 24.8	-0.1
PLWZ	Palliser	0.51	139	P*	Pb	05 16 24.9	-0.1
MTW	Mount Morrison	0.53	87	⇓P*	Pb	05 16 25.3	+0.2
MTW	Mount Morrison	0.53	87	P*	Pb	05 16 25.3	+0.2
HOWZ	Holdsworth Sta	0.61	62	P*	Pb	05 16 26.4	-0.1
HOWZ	Holdsworth Sta	0.61	62	P*	Pb	05 16 26.4	-0.1
TUWZ	Tuamarina	0.69	249	⇓P*	Pb	05 16 27.0	-0.8
TUWZ	Tuamarina	0.69	249	P*	Pb	05 16 27.0	-0.8
TRWZ	Traveller	0.70	108	⇓P*	Pb	05 16 27.4	-0.6
TRWZ	Traveller	0.70	108	P*	Pb	05 16 27.4	-0.6
CMWZ	Cape Campbell	0.72	218	⇓P*	Pb	05 16 28.8	+0.6
CMWZ	Cape Campbell	0.72	218	P*	Pb	05 16 28.8	+0.6
DUWZ	D'Urville Isla	0.77	300	⇑P*	Pb	05 16 29.1	-0.1
DUWZ	D'Urville Isla	0.77	300	P*	Pn	05 16 29.1	+0.1
MRZ	Mangatainoka R	0.79	48	P*	Pn	05 16 28.8	-0.4
MRZ	Mangatainoka R	0.79	48	P*	Pn	05 16 28.8	-0.4
TMWZ	Te Maipa	0.82	85	P*	Pn	05 16 29.2	-0.5
TMWZ	Te Maipa	0.82	85	P*	Pn	05 16 29.2	-0.5
BSWZ	Blackbirch Sta	0.88	233	⇓P*	Pn	05 16 30.3	-0.2
BSWZ	Blackbirch Sta	0.88	233	P*	Pn	05 16 30.2	-0.2
TIWZ	Tintock	0.92	64	⇓P*	Pn	05 16 30.7	-0.3
TIWZ	Tintock	0.92	64	P*	Pn	05 16 30.7	-0.3
NNZ	Nelson	1.08	268	⇑PN	Pn	05 16 33.3	+0.2
NNZ	Nelson	1.08	268	Pn	Pn	05 16 33.3	+0.2
POWZ	Post Office Ro	1.08	43	⇓P*	Pn	05 16 33.2	0.0
POWZ	Post Office Ro	1.08	43	P*	Pn	05 16 33.2	0.0
BFZ	Birch Farm	1.20	66	P*	Pn	05 16 33.5	-1.5
BFZ	Birch Farm	1.20	66	P*	Pn	05 16 33.5	-1.5
DVHZ	Dannevirke	1.36	50	⇓PN	Pn	05 16 36.4	-0.7
DVHZ	Dannevirke	1.36	50	Pn	Pn	05 16 36.4	-0.7
TSZ	Takapari Road	1.43	38	PN	Pn	05 16 38.0	-0.1
TSZ	Takapari Road	1.43	38	Pn	Pn	05 16 38.0	-0.1
WAZ	Wanganui	1.44	6	⇑PN	Pb	05 16 40.5	+0.1
WAZ	Wanganui	1.44	6	Pn	Pb	05 16 40.5	+0.1
THZ	Tophouse	1.54	247	⇑PN	Pn	05 16 39.4	-0.3
THZ	Tophouse	1.54	247	Pn	Pn	05 16 39.4	-0.3
KHZ	Kahutara	1.55	217	⇑PN	Pn	05 16 38.9	-0.7
KHZ	Kahutara	1.55	217	ePn	Pn	05 16 38.9	-0.8
PNHZ	Pukenui	1.66	40	⇓PN	Pn	05 16 40.7	-0.5
PNHZ	Pukenui	1.66	40	Pn	Pn	05 16 39.4	-1.8
PRHZ	Porangahau	1.67	57	PN	Pn	05 16 40.2	-1.1
PRHZ	Porangahau	1.67	57	Pn	Pn	05 16 40.2	-1.1
WPHZ	Waipukurau	1.68	49	PN	Pn	05 16 40.7	-0.7
WPHZ	Waipukurau	1.68	49	Pn	Pn	05 16 40.7	-0.7
QRZ	Quartz Range	1.76	281	PN	Pn	05 16 43.3	+0.8
QRZ	Quartz Range	1.76	281	Pn	Pn	05 16 43.3	+0.8
MTVZ	Mangateitei	1.87	16	PN	Pn	05 16 45.4	+1.2
MTVZ	Mangateitei	1.87	16	Pn	Pn	05 16 45.4	+1.2
MOVZ	Moawhango	1.92	22	PN	Pn	05 16 45.2	+0.3
MOVZ	Moawhango	1.92	22	Pn	Pn	05 16 45.1	+0.3
RAEZ	Rainy Point	1.92	350	PN	Pb	05 16 47.4	-1.2
RAEZ	Rainy Point	1.92	350	Pn	Pb	05 16 47.4	-1.2
DFE	Dawson Falls	1.93	344	PN	Pb	05 16 47.6	-1.3
DFE	Dawson Falls	1.93	344	Pn	Pb	05 16 47.6	-1.3
PKVZ	Pokaka	1.94	13	PN	Pn	05 16 46.6	+1.4
PKVZ	Pokaka	1.94	13	Pn	Pn	05 16 46.5	+1.4
PXZ	Pawanui	1.94	54	⇑PN	Pn	05 16 43.9	-1.2
PXZ	Pawanui	1.94	54	Pn	Pn	05 16 43.9	-1.2
BHHZ	Black Hill Sta	1.95	30	PN	Pn	05 16 45.3	0.0
BHHZ	Black Hill Sta	1.95	30	Pn	Pn	05 16 45.3	0.0
WNVZ	Wahianoa	1.95	18	PN	Pn	05 16 46.3	+0.9
WNVZ	Wahianoa	1.95	18	Pn	Pn	05 16 46.3	+0.9
NRZ	Ngariki Road	1.96	340	Pn	Pn	05 16 46.6	+1.2
TRVZ	Turoa	1.97	17	PN	Pn	05 16 46.7	+1.0
TRVZ	Turoa	1.97	17	Pn	Pn	05 16 46.7	+1.0
NEZ	North Egmont	1.99	344	PN	Pb	05 16 48.1	-1.7
NEZ	North Egmont	1.99	344	Pn	Pb	05 16 48.1	-1.7
DRZ	Dome Shelter	2.00	17	⇓PN	Pn	05 16 47.4	+1.2
DRZ	Dome Shelter	2.00	17	Pn	Pn	05 16 47.4	+1.1
FWVZ	Far West T-bar	2.01	17	PN	Pn	05 16 47.1	+0.8
TUVZ	Tukino	2.02	19	⇓PN	Pn	05 16 47.5	+1.1
DREZ	Durham Road	2.05	347	⇓PN	Pb	05 16 49.2	-1.5
VRZ	Vera Road	2.06	359	PN	Pn	05 16 48.8	+2.1
WPVZ	Whakapapa	2.06	16	PN	Pn	05 16 48.1	+1.2
PKE	Pukeiti	2.09	342	PN	Pn	05 16 49.1	+2.0
NGZ	Ngauruhoe	2.10	17	PN	Pn	05 16 48.7	+1.2
KAHZ	Kahuranaki	2.10	49	PN	Pn	05 16 46.2	-1.2
OTVZ	Oturere	2.12	18	PN	Pn	05 16 48.8	+1.0
MHEZ	Mangahewa	2.14	350	PN	Pb	05 16 50.7	-1.6
WTVZ	West Tongariro	2.15	16	PN	Pn	05 16 49.3	+1.1
TWVZ	Taurewa	2.17	13	PN	Pn	05 16 49.3	+1.0
KRVZ	Karewarewa	2.19	17	PN	Pn	05 16 49.7	+1.1
MCHZ	McNeill Hill	2.26	40	PN	Pn	05 16 48.7	-0.9
KATZ	Kakaramea	2.31	17	PN	Pn	05 16 51.6	+1.2
BKZ	Black Stump Fm	2.40	33	⇓PN	Pn	05 16 50.4	-1.0
LTZ	Lake Taylor	2.47	229	PN	Pn	05 16 51.3	-1.1
NMHZ	Naumai	2.59	37	PN	Pn	05 16 53.0	-1.1
HIZ	Hauiti	2.67	1	PN	Pn	05 16 57.3	+2.2
ALRZ	Allen Road	2.88	25	PN	Pn	05 16 57.0	-0.9
URZ	Urewera	3.42	32	PN	Pn	05 17 03.1	-2.3
URZ	Urewera	3.42	32	ePn	Pn	05 17 03.3	-2.1
MWZ	Matawai	3.54	37	PN	Pn	05 17 04.4	-2.7
WVZ	Waitaha Valley	3.57	237	PN	Pn	05 17 07.1	-0.3
MKAZ	Moumakai	4.08	4	PN	Pn	05 17 15.6	+1.1
FOZ	Fox Glacier	4.47	236	PN	Pn	05 17 17.5	-2.3
LBZ	Lake Benmore	4.67	225	PN	Pn	05 17 21.4	-1.2
ODZ	Otahua Downs	4.91	217	PN	Pn	05 17 24.1	-1.8
ODZ	Otahua Downs	4.91	217	ePn	Pn	05 17 24.5	-1.4
JCZ	Jackson Bay	5.31	235	PN	Pn	05 17 29.4	-2.1
OUZ	Omahuta	6.03	351	Pn	Pn	05 17 43.8	+2.5
OUZ				eSn	Sn	05 18 50.2	+1.0

*ISCJB **01** 05:25:22.4±0.8, 37°.71N±0°.04×20°.88E±0°.05, h1km±6km, Error ellipse: s-maj=8.1km s-min=4.0km az=139.9*
*THE **01** 05:25:23.1, 37°.70N×20°.86E, h8km±1km, ML2.2/1, Error ellipse: s-maj=3.8km s-min=1.0km az=226.0*
*ATH **01** 05:25:23.0, 37°.74N×20°.86E, h13km±2km, MD2.9/10*
*CSEM **01** 05:25:23.2±0.4, 37°.74N×20°.94E, h8km, ML2.2/1, Error ellipse: s-maj=7.9km s-min=4.7km az=52.0*
ISC 01 05:25:22.4±1.6**, 37°.75N**±0°.03×**20°.87E**±0°.04**, h2**km±13km**,**
n43, σ0s.55/63**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	Anninata	0.36	350	P	Pb	05 25 31.2	-0.4
KFL				S	Sb	05 25 37.0	-0.8
KFL	Anninata	0.36	350	P	Pb	05 25 31.2	-0.4
KFL				S	Sb	05 25 37.0	-0.8
VLS	Valsamata	0.48	333	P	Pb	05 25 33.3	-0.3
VLS				S	Sb	05 25 41.4	+0.3
VLS	Valsamata	0.48	333	ePB	Pb	05 25 33.4	-0.2
VLS				eSB	Sb	05 25 40.5	-0.6
VLS	Valsamata	0.48	333	P	Pb	05 25 33.3	-0.3
VLS				eSb	Sb	05 25 40.5	-0.6
VLS				S	Sb	05 25 41.4	+0.3
RLS	Riolos of Patr	0.56	57	P	Pg	05 25 34.0	+0.8
RLS	Riolos of Patr	0.56	57	ePB	Pg	05 25 34.0	+0.8
RLS				eSB	Sb	05 25 42.5	-1.0
RLS	Riolos of Patr	0.56	57	P	Pg	05 25 34.0	+0.8
RLS				eSb	Sb	05 25 42.5	-1.0
AMT	Artemida-Makis	0.70	108	P	Pb	05 25 36.5	-0.8
AMT				S	Sb	05 25 46.7	-0.8
AMT	Artemida-Makis	0.70	108	ePB	Pb	05 25 36.6	-0.8
AMT				eSB	Sb	05 25 46.9	-0.6
AMT	Artemida-Makis	0.70	108	ePb	Pb	05 25 36.6	-0.8
AMT				eSb	Sb	05 25 46.9	-0.6
LAKA	Lakka	1.00	61	ePG	Pg	05 25 41.4	-0.2
LAKA	Lakka	1.00	61	ePb	Pg	05 25 41.4	-0.2
ITM	Ithomi	1.02	124	ePG	Pg	05 25 42.0	+0.1
ITM				eSB	Sb	05 25 56.8	+0.2
ITM	Ithomi	1.02	124	ePg	Pg	05 25 42.0	+0.1
ITM				eSb	Sb	05 25 56.8	+0.2
KLV	Kalavryta, Ach	1.05	74	ePB	Pg	05 25 42.0	-0.6
KLV	Kalavryta, Ach	1.05	74	ePn	Pg	05 25 42.0	-0.6
EFP	Efpalio	1.06	50	ePG	Pg	05 25 42.4	-0.3
EFP				eSB	Sn	05 25 59.1	-0.6
EFP	Efpalio	1.06	50	ePb	Pg	05 25 42.4	-0.3
EFP				eSb	Sn	05 25 59.1	-0.6
PYL	PYLOS	1.10	141	ePN	Pb	05 25 44.0	-0.2
PYL	PYLOS	1.10	141	ePn	Pb	05 25 44.0	-0.2
TRIZ	Trizonia	1.13	57	ePB	Pg	05 25 43.5	-0.6
TRIZ				eSB	Sb	05 26 00.6	+0.7
TRIZ	Trizonia	1.13	57	ePb	Pg	05 25 43.5	-0.6
TRIZ				eSb	Sb	05 26 00.6	+0.7
GUR	Goura	1.18	81	P	Pg	05 25 45.2	+0.2
GUR	Goura	1.18	81	ePN	Pg	05 25 45.0	0.0
GUR	Goura	1.18	81	P	Pg	05 25 45.2	+0.2
KALE	Kalithea	1.19	57	P	Pg	05 25 44.7	-0.5
KALE				S	Sn	05 26 03.9	+0.9
KALE	Kalithea	1.19	57	ePB	Pg	05 25 44.5	-0.7
KALE				eSB	Sn	05 26 03.0	0.0
KALE	Kalithea	1.19	57	ePb	Pg	05 25 44.5	-0.7
KALE				eSb	Sn	05 26 03.0	0.0
EVR	Evrytania	1.38	32	ePG	Pb	05 25 48.9	-0.1
EVR	Evrytania	1.38	32	ePg	Pb	05 25 48.9	-0.1
DYR	Agios Nikonas	1.53	130	ePB	Pg	05 25 51.7	0.0
DYR	Agios Nikonas	1.53	130	ePb	Pg	05 25 51.7	0.0
LTK	Loutraki	1.68	80	ePG	Pg	05 25 54.5	-0.1
LTK	Loutraki	1.68	80	ePg	Pg	05 25 54.5	-0.1
AGG	Agios Georgios	1.71	42	ePN	Pb	05 25 54.5	-0.1
AGG	Agios Georgios	1.71	42	ePn	Pb	05 25 54.5	-0.1
DID	Didima	1.90	97	ePN	Pn	05 25 56.6	+0.8
DID	Didima	1.90	97	ePn	Pn	05 25 56.6	+0.8
LKR	Lokris	1.90	61	ePG	Pb	05 25 58.1	+0.2
LKR	Lokris	1.90	61	ePg	Pb	05 25 58.1	+0.2
THL	Klokotos Trika	2.02	26	ePN	Pb	05 25 59.9	0.0
THL	Klokotos Trika	2.02	26	ePn	Pb	05 25 59.9	0.0

*MOS **01** 05:31:13.7±1.5, 49°.68N×156°.83E, h5km, mb4.3/1, Error ellipse: s-maj=72.4km s-min=18.6km az=84.7*
KRSC 01 05:31:13.7±0.7**, 49°.68N×156°.83E, h5**km±5km**, ML4.1,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.10	336	ePN	Pg	05 31 32.6	-2.3
SKR				i S	Sg	05 31 47.6	-1.6
SKR				pmax	pmax		
	comp=Z,60nm,0.4s						
SKR				smax	smax		
	comp=N,940nm,0.2s						
SKR				smax	smax		
	comp=E,830nm,0.2s						

SKR	**Severo-Kuril's**	**1.10**	**336**	*e*P	Pn	05 31 35.7	-0.1
SKR				*i* S	Sn	05 31 51.1	-0.3
PAU	**Pauzhetka**	**1.79**	**360**	PN	Pn	05 31 45.8	+0.6
PAU				S	Sb	05 32 09.7	0.0
PAU	**Pauzhetka**	**1.79**	**360**	*e*P	Pn	05 31 45.8	+0.6
PAU				*i* S	Sb	05 32 09.7	0.0
MIPR	**Malaya Ipel'ka**	**2.60**	**359**	P	Pn	05 31 58.5	+2.1
ASAK	**Asacha**	**2.79**	**14**	P	Pn	05 32 00.9	+1.8
ASAK				*i* S	Sn	05 32 35.4	+2.2
MTVR	**Mutnovka**	**2.93**	**16**	*e*P	Pn	05 32 02.9	+1.7
MTVR				*i* S	Sn	05 32 39.1	+2.2
RUS	**Russkaya**	**2.95**	**20**	PN	Pn	05 32 02.5	+1.3
RUS				S	Sn	05 32 38.3	+1.3
RUS	**Russkaya**	**2.95**	**20**	P	Pn	05 32 02.5	+1.3
RUS				*i* S	Sn	05 32 38.3	+1.3
GRL	**Gorelyy**	**2.98**	**15**	P	Pn	05 32 03.2	+1.4
GRL				*i* S	Sn	05 32 38.5	+0.5
APC	**Apacha**	**3.26**	**3**	P	Pn	05 32 06.6	+1.2
UGLR	**Uglovaya**	**3.75**	**19**	*e*P	Pn	05 32 14.3	+2.0
AVH	**Avacha**	**3.78**	**18**	*e*P	Pn	05 32 14.9	+2.2
KOK	**Koryaka**	**3.79**	**17**	*e*P	Pn	05 32 15.2	+2.3
SMAR	**Somma**	**3.79**	**18**	*e*P	Pn	05 32 14.8	+1.7
KRER	**Koryakskii**	**3.82**	**18**	P	Pn	05 32 14.1	+0.7
SDLR	**Sedlovina**	**3.83**	**19**	*e*P	Pn	05 32 14.9	+1.5
SPN	**Mys Shipunski**	**3.96**	**29**	PN	Pn	05 32 16.9	+1.8
SPN	**Mys Shipunski**	**3.96**	**29**	*e*P	Pn	05 32 16.9	+1.8
SPN				*i* S	Sn	05 33 02.5	+0.6
GNL	**Ganaly**	**4.08**	**9**	*e*P	Pn	05 32 17.0	+0.1
MKZ	**Mys Kozlova**	**5.74**	**30**	PN	Pn	05 32 39.5	0.0
MKZ	**Mys Kozlova**	**5.74**	**30**	*e*P	Pn	05 32 39.5	0.0

WEL 01 05:41:00.6±0.5**, 45°.63S**×**166°.71E, h12**^{km}**, ML3.5**/9**, 3C-2D, Error ellipse: s-maj=5.4km s-min=2.4km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.35**	**64**	⇑P*	Pb	05 41 08.2	-0.5
DCZ				S*	Sg	05 41 12.5	+0.3
PYZ	**Puysegur Point**	**0.54**	**182**	⇑P*	Pg	05 41 10.9	-0.2
PYZ				S*	Sg	05 41 17.8	-0.5
WHZ	**Wether Hill Ro**	**0.91**	**107**	⇓P*	Pg	05 41 16.7	-1.4
MLZ	**Mavora Lakes**	**1.07**	**75**	P*	Pb	05 41 19.5	-1.5
MSZ	**Milford Sound**	**1.29**	**42**	PN	Pn	05 41 23.3	-1.1
APZ	**The Paps**	**1.50**	**144**	PN	Pn	05 41 26.3	-1.0
WKZ	**Wanaka**	**1.82**	**65**	PN	Pb	05 41 33.5	-0.3
EAZ	**Earnscleugh**	**1.87**	**79**	PN	Pb	05 41 33.7	-1.0
SYZ	**Scrubby Hill**	**1.92**	**119**	⇑PN	Pn	05 41 32.9	-0.1
TUZ	**Tuapeka**	**2.07**	**100**	PN	Pn	05 41 36.0	+0.9
JCZ	**Jackson Bay**	**2.13**	**44**	PN	Pb	05 41 38.0	-1.2
LBZ	**Lake Benmore**	**2.76**	**64**	PN	Pn	05 41 45.1	+0.5
ODZ	**Otahua Downs**	**2.83**	**80**	⇓PN	Pn	05 41 46.0	+0.4

*NIED **01** 05:53:00, 36°.60N×141°.00E, h47^{km}, Mw3.4 Best double couple: $M_0$1.30000×10^{14} NP1:ϕ_s32.00000°, δ74.00000°, λ85.00000°. NP2:ϕ_s229.00000°, δ17.00000°, λ106.00000°.*

JMA 01 05:53:32.7±0.1**, 36°.61N**×**141°.00E, h47**^{km}±1^{km}**, M3.5, 4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.35**	**270**	⇓P	Pn	05 53 42.0	0.0
JHO				S	Sn	05 53 48.3	-0.4
ONAJ	**Iwakimizuishiy**	**0.52**	**342**	⇓P	Pn	05 53 43.6	-0.5
ONAJ				S	Sn	05 53 51.1	-1.1
JYT	**Yasato**	**0.75**	**240**	P	Pn	05 53 46.9	-0.1
JYT				S	Sn	05 53 57.2	-0.2
JFK	**Kawauchi**	**0.76**	**352**	⇓P	Pn	05 53 46.7	-0.5
JFK				S	Sn	05 53 56.4	-1.4
JFT	**Otama**	**1.05**	**330**	⇓P	Pn	05 53 51.9	+0.8
JFT				S	Sn	05 54 05.6	+1.0
JAG	**Ashikaga**	**1.26**	**262**	P	Pn	05 53 54.1	+0.2
JAG				S	Sn	05 54 10.0	+0.3
JMM	**Marumori**	**1.27**	**353**	P	Pn	05 53 53.9	-0.1
JMM				S	Sn	05 54 09.8	0.0
JFY	**Yanaizu**	**1.31**	**308**	P	Pn	05 53 55.2	+0.6
JKT	**Katashina**	**1.42**	**277**	P	Pn	05 53 57.1	+0.9
JKT				S	Sn	05 54 15.2	+1.5
MAT	**Matsushiro**	**2.25**	**269**	P	Pn	05 54 09.4	+1.9
MAT				S	Sn	05 54 39.4	+5.4

IDC 01 05:55:01.5±2.3**, 0°.12S**×**133°.69E, h0**^{km}**, mb3.7**/3**, mb1 3.9**/5**, mb1mx3.6**/23**, mbtmp3.7**/5**, ML3.7**/2**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.9**/34**, Error ellipse: s-maj=102.6km s-min=25.1km az=76.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.54**	**203**	P	P	05 59 30.6	-0.3
	0.2nm,0.3s,baz=24,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**19.71**	**178**	P	P	05 59 33.1	+0.3
	0.2nm,0.3s,baz=353,slow=12,SNR=11						
ASAR	**Alice Springs**	**23.41**	**179**	P	P	06 00 13.6	+1.2
	2.2nm,0.7s,baz=360,slow=12,SNR=18						
STKA	**Stephens Creek**	**32.46**	**167**	P	P	06 01 32.0	-1.7
	1.3nm,0.9s,baz=339,slow=8.6,SNR=3.0						
JNU	**Nakatsue**	**33.17**	**356**	LR	LR	06 13 38.6	
	comp=Z,124nm,19.9s,baz=338,slow=34						
MKAR	**Makanchi Array**	**64.71**	**324**	P	P	06 05 41.6	0.0
	0.9nm,0.6s,baz=110,slow=7.6,SNR=5.1						

*IDC **01** 06:03:02.5±0.4, 10°.69S×162°.27E, h0^{km}, mb5.4/27, mb1 5.5/30, mb1mx5.5/31, mbtmp5.4/30, ML5.2/2, MS5.5/23, Ms1 5.5/23, ms1mx5.5/24, Error ellipse: s-maj=13.1km s-min=11.0km az=86.0*

*ISCJB **01** 06:03:03.2±1.0, 10°.73S±0°.03×162°.23E±0°.02, h12^{km}±6^{km}, mb5.7/222, MS5.6/224, Error ellipse: s-maj=4.7km s-min=3.6km az=164.6*

*BJI **01** 06:03:04.2, 10°.40S×162°.89E, h27^{km}, mB5.6/48, mb5.4/53, Ms5.8/68, Ms7 5.5/63*

*NEIC **01** 06:03:05.7±0.1, 10°.77S×162°.22E, h21^{km}, mb5.9/141, MS5.6/153, MW5.9, Error ellipse: s-maj=5.9km s-min=4.5km az=142.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.51; $M_{\theta\theta}$-7.52; $M_{\phi\phi}$9.03; $M_{r\theta}$-1.37; $M_{\theta\phi}$2.17; $M_{\phi r}$1.86; Best double couple: $M_0$9.00000×10^{17} NP1:ϕ_s143.00000°, δ86.00000°, λ-164.00000°. NP2:ϕ_s52.00000°, δ74.00000°, λ-4.00000°. Principal axes: T 9.5600, Plg8.0000°, Azm276.0000°; N -1.3700, Plg73.0000°, Azm155.0000°; P -8.1900, Plg13.0000°, Azm8.0000°;*

*MOS **01** 06:03:06.4±1.2, 10°.67S×162°.21E, h33^{km}, mb5.8/60, MS5.6/58 Error ellipse: s-maj=6.7km s-min=6.0km az=78.5*

*GCMT **01** 06:03:06.9±0.1, 10°.76S×162°.33E, h13^{km}, MW5.9, Moment Tensor Solution. s111,c243; s76,c102; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.35±.06; $M_{\theta\theta}$-7.41±.06; $M_{\phi\phi}$8.76±.07; $M_{r\theta}$-2.19±.18; $M_{\theta\phi}$-0.13±.05; $M_{\phi r}$-1.38±.15; Best double couple: $M_0$8.50000×10^{17} NP1:ϕ_s136.00000°, δ72.00000°, λ-172.00000°. NP2: ϕ_s43.00000°, δ83.00000°, λ-19.00000°. Principal axes: T 8.9500, Plg8.0000°, Azm91.0000°; N -0.8100, Plg70.0000°, Azm203.0000°; P -8.1400, Plg18.0000°, Azm358.0000°; Data Used: II IU CN IC G. Surface waves: sta=119, comp=244, per= 50.*

*NOU **01** 06:03:08.9±1.2, 11°.28S×162°.28E, h0^{km}±999^{km}, MD4.5, ML3.7*

*AUST **01** 06:03:10.0, 10°.82S×162°.46E, h60^{km}*

*DJA **01** 06:03:12.3±1.1, 11°S±4°×16°3E±°, h84^{km}±13^{km}, M5.9/46, mb5.8/46, mB6.2/35, Mw(mB)5.9/35, Mwp5.8/5*

ISC 01 06:03:07.2±0.3**, 10°.75S**±0°.03×**162°.37E**±0°.03**, h31**^{km}±1^{km}**, h30**^{km}**:pP-P, n1224, σ1°.77**/1179**, mb5.8**/225**, MS5.6**/225**, 144C-163D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.73**	**299**	*e*Pn	**Pn**	**06 03 48.7**	**-0.2**
HNR				Sn	**Sb**	**06 04 24.7**	**-3.6**
HNR	**Honiara**	**2.73**	**299**	Pn	**Pn**	**06 03 48.9**	**0.0**
	1μm,0.3s,baz=173,slow=2.0,SNR=118						
HNR				Sn	**Sb**	**06 04 24.7**	**-3.6**
	9μm,0.3s,baz=233,slow=20,SNR=20						
NOUC	**Port Laguerre**	**11.89**	**162**	*e*P	**Pn**	**06 05 52.6**	**-2.2**
NOUC				*e*S	**Sn**	**06 08 01.2**	**-5.3**
NOUC				AMP		06 08 07.4	
	comp=Z,31nm,3.5s						
DZM	**Mont Dzumac**	**11.91**	**161**	*e*Pn	**Pn**	**06 05 53.6**	**-1.5**
	comp=Z,921nm,1.5s						
DZM				*e*Sn	Sn	06 07 56.1	-11
	comp=Z,36nm,0.3s						
DZM				*e*LR	LR	06 08 35.3	
	comp=Z,72μm,16.6s						
DZM	**Mont Dzumac**	**11.91**	**161**	*e*P	**Pn**	**06 05 52.9**	**-2.2**
DZM	**Mont Dzumac**	**11.91**	**161**	Pn	**Pn**	**06 05 54.4**	**-0.7**
DZM				Sn	**Sn**	**06 08 01.5**	**-5.6**
DZM	**Mont Dzumac**	**11.91**	**161**	Pn	**Pn**	**06 05 54.4**	**-0.7**
	comp=Z,7.4nm,0.3s,baz=18,slow=18,SNR=81						
DZM				Sn	**Sn**	**06 08 01.5**	**-5.6**
	comp=Z,3.7nm,0.3s,baz=71,slow=19,SNR=3.5						
DZM				LR	LR	06 09 40.3	
	comp=Z,32μm,19.0s,baz=345,slow=33						
NORM	**Noumea**	**12.07**	**161**	*e*P	**Pn**	**06 05 55.7**	**-1.5**
PLUM	**Mont Dore**	**12.16**	**161**	*e*P	**Pn**	**06 05 57.8**	**-0.7**
PMG	**Port Moresby**	**15.04**	**274**	*e*P	**Pn**	**06 06 39.2**	**+1.5**
PMG	**Port Moresby**	**15.04**	**274**	Pn	**Pn**	**06 06 36.7**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=92,slow=5.9,SNR=49						
TARA	**Tarawa**	**15.96**	**42**	*e*P	**Pn**	**06 06 51.4**	**+1.6**
	comp=Z,948nm,1.0s						
TARA				*e*S	**Sn**	**06 09 40.3**	**-5.7**
MSVF	**Nonsavu**	**16.70**	**116**	*e*P	**Pn**	**06 06 59.5**	**+0.3**
MSVF				pmax	pmax		
	comp=Z,868nm,1.4s						
MSVF	**Nonsavu**	**16.70**	**116**	*e*P	**Pn**	**06 06 59.5**	**+0.3**
	comp=Z,868nm,1.4s						
MSVF	**Nonsavu**	**16.70**	**116**	Pn	**P**	**06 07 00.6**	**-0.7**
	comp=Z,2μm,1.5s,SNR=34						
FUNA	**Funafuti**	**16.73**	**84**	*e*P	**Pn**	**06 06 58.3**	**-1.3**
	comp=Z,451nm,1.4s						
PATS	**Pohnpei**	**17.94**	**347**	P	**Pn**	**06 07 14.1**	**-0.4**
	baz=18,SNR=7.1						
PATS				S	S	06 10 58.6	+19
	baz=18,SNR=3.4						
EIDS	**Eidsvold**	**18.05**	**215**	*e*P	**P**	**06 07 16.7**	**+0.6**
	comp=Z,1μm,1.8s						
EIDS	**Eidsvold**	**18.05**	**215**	P	Pn	06 07 08.2	-7.7
	baz=18,SNR=21						
CTA	**Charters Tower**	**18.08**	**237**	P	**Pn**	**06 07 15.8**	**-0.5**
CTA	**Charters Tower**	**18.08**	**237**	P	**Pn**	**06 07 15.8**	**-0.5**
	comp=Z,9.7nm,0.3s,baz=66,slow=14,SNR=53						
CTAO	**Charters Tower**	**18.08**	**237**	*e*P	**P**	**06 07 17.8**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,1μm,1.3s						
CTAO	**Charters Tower**	**18.08**	**237**	*e*P	**P**	**06 07 17.8**	**+1.3**
	comp=Z,1μm,1.3s						
MTSU	**Mount Surprise**	**18.95**	**245**	P	**Pn**	**06 07 28.4**	**+1.6**
	baz=19,SNR=152						
COEN	**Coen**	**19.02**	**258**	*e*Pn	**Pn**	**06 07 29.2**	**+1.5**
	comp=Z,39μm,2.3s						
COEN	**Coen**	**19.02**	**258**	P	**Pn**	**06 07 29.2**	**+1.5**
	baz=19,SNR=41						
KWAJ	**Kwajalein Atol**	**20.12**	**15**	*e*P	**P**	**06 07 39.4**	**+0.6**
KWAJ				pmax	pmax		
	comp=Z,2μm,1.7s						
KWAJ	**Kwajalein Atol**	**20.12**	**15**	*e*P	**P**	**06 07 39.4**	**+0.6**
	comp=Z,2μm,1.7s						
RMQ	**Roma**	**20.25**	**218**	P	Pn	06 07 42.9	+0.6
	baz=20,SNR=71						
ARMA	**Armidale**	**21.97**	**205**	*e*P	**P**	**06 07 59.4**	**+0.6**
	comp=Z,870nm,1.5s						
ARMA	**Armidale**	**21.97**	**205**	P	**P**	**06 07 59.2**	**+0.4**
	baz=22,SNR=15						
ARMA				S	Sn	06 12 11.6	+0.6
	baz=22,SNR=5.8						
JAY	**Jayapura**	**23.01**	**289**	P	**P**	**06 08 07.6**	**-2.3**
	comp=Z,138nm,1.8s,comp=Z,6μm						
JAY	**Jayapura**	**23.01**	**289**	P	**P**	**06 08 06.9**	**-3.0**
	baz=23,SNR=16						
QLP	**Quilpie**	**23.25**	**225**	P	**P**	**06 08 12.0**	**-0.2**
	baz=23,SNR=45						
QIS	**Mount Isa**	**23.96**	**243**	P	**P**	**06 08 19.8**	**+0.7**
	baz=24,SNR=22						
MGCD	**Mangrove Creek**	**24.63**	**203**	P	**P**	**06 08 25.9**	**+0.8**
	baz=25,SNR=31						
AFI	**Afiamalu**	**25.44**	**100**	*e*P	**P**	**06 08 32.5**	**-0.3**
	comp=Z,458nm,1.1s						
AFI	**Afiamalu**	**25.44**	**100**	P	**P**	**06 08 32.8**	**+0.1**
	comp=Z,402nm,1.1s,baz=248,slow=4.6,SNR=17						
AFI				LR	LR	06 16 22.3	
	comp=Z,15μm,20.7s,baz=275,slow=31						
CMSA	**Cobar Meteorol**	**25.81**	**214**	P	**P**	**06 08 35.3**	**-0.5**
	baz=26,SNR=51						
RAO	**Raoul Island**	**26.03**	**138**	P	**P**	**06 08 37.5**	**-0.4**
RAO	**Raoul Island**	**26.03**	**138**	P	**P**	**06 08 37.5**	**-0.4**
	comp=Z,438nm,0.3s,baz=294,slow=22,SNR=6.0						
RAO				LR	LR	06 17 17.9	
	comp=Z,9μm,18.7s,baz=312,slow=33						
OUZ	**Omahuta**	**26.41**	**159**	*e*P	**P**	**06 08 43.6**	**+2.4**
	comp=Z,202nm,1.1s						
YNG	**Young**	**26.69**	**206**	P	**P**	**06 08 44.2**	**+0.4**
	baz=27,SNR=37						
CNB	**Canberra Magne**	**27.16**	**204**	P	**P**	**06 08 48.4**	**+0.3**
	baz=27,SNR=6.4						
CAN	**Canberra**	**27.32**	**204**	*e*P	**P**	**06 08 49.4**	**0.0**
CAN				pmax	pmax		
	comp=Z,249nm,1.6s						
CAN				MLR	MLR		
	comp=Z,11μm,21.0s						
CAN	**Canberra**	**27.32**	**204**	*e*P	**P**	**06 08 49.4**	**0.0**
	comp=Z,250nm,1.6s						
CAN				LR	LR		
	comp=Z,11μm,21.0s						
STKA	**Stephens Creek**	**28.47**	**219**	*e*P	**P**	**06 08 59.4**	**-0.3**
	comp=Z,56nm,1.6s						
STKA	**Stephens Creek**	**28.47**	**219**	P	**P**	**06 08 59.8**	**+0.1**
	comp=Z,15nm,0.7s,baz=36,slow=9.0,SNR=27						
STKA				LR	LR	06 18 53.1	
	comp=Z,19μm,21.5s,baz=38,slow=33						
STKA	**Stephens Creek**	**28.47**	**219**	P	**P**	**06 09 00.1**	**+0.3**
	baz=28,SNR=23						
WRAB	**Tennant Creek**	**28.48**	**248**	*e*P	**P**	**06 08 58.5**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,194nm,1.3s						
WRAB				MLR	MLR		
	comp=Z,25μm,19.0s						
WRAB	**Tennant Creek**	**28.48**	**248**	*e*P	**P**	**06 08 58.5**	**-1.5**
	comp=Z,194nm,1.3s						
WRAB				LR	LR		
	comp=Z,25μm,19.0s						
WRAB	**Tennant Creek**	**28.48**	**248**	P	**P**	**06 08 58.0**	**-2.0**
	comp=Z,600nm,1.0s,SNR=22						
WRA	**Warramunga Arr**	**28.50**	**248**	P	**P**	**06 08 58.4**	**-1.7**
WRA				PcP	**PcP**	**06 12 12.9**	**+1.3**
WRA	**Warramunga Arr**	**28.50**	**248**	P	**P**	**06 08 58.4**	**-1.7**
	comp=Z,29nm,0.7s,baz=77,slow=8.8,SNR=98						
WRA				PcP	**PcP**	**06 12 12.9**	**+1.3**
	comp=Z,7.3nm,1.0s,baz=74,slow=3.5,SNR=3.2						
WRA				LR	LR	06 18 59.9	
	comp=Z,17μm,19.1s,baz=70,slow=34						
MILA	**Mila**	**28.77**	**202**	P	**P**	**06 09 03.0**	**+0.6**
	baz=29,SNR=16						
KDU	**Kakadu**	**29.33**	**263**	P	**P**	**06 09 06.1**	**-1.4**
	baz=29,SNR=61						
TLE	**Tual**	**29.76**	**277**	P	P	06 09 16.0	+4.7
GUMO	**Guam**	**29.77**	**324**	*e*P	**P**	**06 09 10.9**	**-0.5**
	comp=Z,389nm,1.4s						
GUMO	**Guam**	**29.77**	**324**	P	**P**	**06 09 11.0**	**-0.5**
	comp=Z,116nm,0.8s,baz=170,slow=9.8,SNR=5.9						
GUMO				LR	LR	06 21 00.1	
	comp=Z,11μm,18.2s,baz=150,slow=36						
AS31	**Alice Springs**	**30.00**	**241**	*e*P	**P**	**06 09 11.2**	**-2.2**
ASAR	**Alice Springs**	**30.00**	**241**	P	**P**	**06 09 11.4**	**-2.0**
ASAR				PcP	**PcP**	**06 12 17.1**	**+1.7**
ASAR	**Alice Springs**	**30.00**	**241**	P	**P**	**06 09 11.4**	**-2.0**
	comp=Z,20nm,0.7s,baz=65,slow=9.9,SNR=104						
ASAR				PcP	**PcP**	**06 12 17.1**	**+1.7**
	comp=Z,2.1nm,0.6s,baz=85,slow=2.0,SNR=2.4						
ASAR				LR	LR	06 19 48.5	
	comp=Z,13μm,20.3s,baz=64,slow=34						
WAKE	**Wake Island**	**30.14**	**8**	*e*P	**P**	**06 09 17.1**	**+2.5**
	comp=Z,422nm,1.5s						
WAKE				LR	LR		
	comp=Z,6μm,20.0s						
URZ	**Urewera**	**30.41**	**157**	*e*P	**P**	**06 09 17.9**	**+1.1**
	comp=Z,212nm,1.7s						
MTN	**Manton Dam**	**30.64**	**263**	P	**P**	**06 09 19.5**	**+0.4**
	baz=31,SNR=20						
TOO	**Toolangi**	**30.71**	**207**	P	**P**	**06 09 20.2**	**+0.6**
	baz=31,SNR=16						
ARPS	**Mount Arapiles**	**31.85**	**212**	P	**P**	**06 09 30.1**	**+0.5**
	baz=32,SNR=18						
SNZO	**South Karori**	**32.32**	**162**	PFAKE		06 09 50.0	+16
SNZO				LR	LR		
	comp=Z,9μm,19.0s						
BBOO	**Buckleboo**	**32.67**	**224**	*e*P	**P**	**06 09 35.9**	**-0.9**
	comp=Z,2μm,0.8s						
BBOO	**Buckleboo**	**32.67**	**224**	P	**P**	**06 09 36.0**	**-0.9**
	baz=33,SNR=47						
KHZ	**Kahutara**	**33.02**	**165**	*e*P	**P**	**06 09 40.0**	**+0.3**
	comp=Z,96nm,1.1s						
PALU	**Palau**	**33.08**	**302**	P	P	06 09 43.9	+3.3
	baz=33,SNR=4.3						
RPZ	**Rata Peaks**	**33.69**	**169**	*e*P	**P**	**06 09 46.1**	**+0.5**
	comp=Z,162nm,0.9s						
RPZ	**Rata Peaks**	**33.69**	**169**	P	**P**	**06 09 46.3**	**+0.7**
	comp=Z,125nm,0.9s,baz=4.7,slow=2.7,SNR=14						
MOO	**Moorlands**	**34.24**	**200**	P	P	06 09 55.7	+5.3
	baz=34,SNR=3.7						
AAI	**Ambon**	**34.60**	**279**	P	P	06 09 59.8	+6.0
TAU	**Tasmania Unive**	**34.62**	**200**	*e*P	**P**	**06 09 54.1**	**+0.5**
TAU				pmax	pmax		
	comp=Z,314nm,1.4s						
TAU				MLR	MLR		
	comp=Z,4μm,20.0s						
TAU	**Tasmania Unive**	**34.62**	**200**	*e*P	**P**	**06 09 54.1**	**+0.5**
	comp=Z,314nm,1.4s						
TAU				LR	LR		
	comp=Z,4μm,20.0s						
ODZ	**Otahua Downs**	**34.90**	**170**	*e*P	**P**	**06 09 59.1**	**+3.1**
	comp=Z,35nm,1.0s						
LBMI	**Labuha**	**36.08**	**284**	P	**P**	**06 10 06.3**	**-0.3**
	comp=Z,329nm,1.0s,comp=Z,5μmcomp=Z,26μm						
FITZ	**Fitzroy Crossi**	**36.26**	**254**	P	**P**	**06 10 06.1**	**-2.0**
FITZ	**Fitzroy Crossi**	**36.26**	**254**	P	**P**	**06 10 06.1**	**-2.0**
	comp=Z,81nm,0.5s,baz=82,slow=8.6,SNR=65						
FITZ	**Fitzroy Crossi**	**36.26**	**254**	P	**P**	**06 10 06.2**	**-2.0**
	baz=36,SNR=126						
TNTI	**Ternate**	**36.64**	**286**	P	P	06 10 15.3	+3.9
	comp=Z,158nm,1.4s,comp=Z,3μm						
FORT	**Forrest**	**37.54**	**233**	*e*P	**P**	**06 10 18.2**	**-0.5**
	comp=Z,168nm,0.8s						
FORT	**Forrest**	**37.54**	**233**	P	**P**	**06 10 18.1**	**-0.7**
	baz=38,SNR=28						
RAR	**Rarotonga**	**37.76**	**111**	LR	LR	06 21 10.5	
	comp=Z,3μm,21.2s,baz=280,slow=29						
MNI	**Manado**	**39.25**	**286**	P	P	06 10 37.4	+4.0
	comp=Z,291nm,1.1s,comp=Z,5μm						
MMRI	**Maumere**	**39.60**	**269**	P	**P**	**06 10 34.7**	**-1.6**
	comp=Z,274nm,1.1s,comp=Z,4μm						
KMSI	**Cibinong**	**39.80**	**284**	P	**P**	**06 10 40.0**	**+2.1**
	comp=Z,969nm,1.2s,comp=Z,12μm						
LUWI	**Luwuk**	**40.50**	**281**	P	**P**	**06 10 45.0**	**+1.2**
	comp=Z,317nm,1.3s,comp=Z,5μm						
DAV	**Davao City (W)**	**40.68**	**294**	PFAKE		06 11 00.0	+15
DAV				LR	LR		
	comp=Z,5μm,20.0s						
BASI	**Baing, Sumba**	**41.08**	**267**	P	P	06 10 52.5	+4.0
	comp=Z,232nm,1.1s,comp=Z,4μm						
SKSI	**Soroako, Sulaw**	**41.53**	**278**	P	**P**	**06 10 52.5**	**+0.1**
	comp=Z,201nm,0.9s,comp=Z,2μm						
BSSI	**Bau Bau, Buton**	**41.65**	**273**	P	P	06 10 56.9	+3.6
	comp=Z,199nm,1.6s,comp=Z,10μm						
MRSI	**Marisa**	**41.72**	**283**	P	**P**	**06 10 50.7**	**-3.1**
	comp=Z,87nm,1.3s,comp=Z,2μm						
XMAS	**Kiritimati**	**41.95**	**75**	PFAKE		06 11 10.0	+14
XMAS				LR	LR		
	comp=Z,4μm,19.0s						
BKSI	**Bulukumba**	**42.15**	**274**	P	**P**	**06 10 56.5**	**-0.9**
	comp=Z,58nm,1.3s,comp=Z,1μm						
MBWA	**Marble Bar**	**42.16**	**250**	*e*P	**P**	**06 10 56.4**	**-1.0**
	comp=Z,120nm,0.8s						
MBWA				LR	LR		
	comp=Z,16μm,19.0s						
MBWA	**Marble Bar**	**42.16**	**250**	P	**P**	**06 10 56.9**	**-0.5**
	SNR=8.1						
KAPI	**Kappang**	**42.57**	**274**	*e*P	**P**	**06 10 58.2**	**-2.5**
	comp=Z,258nm,1.2s						
KAPI				LR	LR		
	comp=Z,4μm,21.0s						
KAPI	**Kappang**	**42.57**	**274**	P	**P**	**06 10 58.8**	**-1.9**
	SNR=36						
KAPI	**Kappang**	**42.57**	**274**	P	P	06 10 57.2	-3.6
	comp=Z,588nm,1.4s,SNR=13						
KAPI	**Kappang**	**42.57**	**274**	P	**P**	**06 10 59.3**	**-1.5**
	comp=Z,46nm,1.0s,baz=96,slow=3.4,SNR=22						
KMBL	**Kambalda**	**42.67**	**235**	P	**P**	**06 11 00.9**	**-0.5**
	baz=43,SNR=23						
SPSI	**Sidrap Palu**	**42.75**	**276**	P	**P**	**06 11 00.3**	**-1.9**
	comp=Z,94nm,1.2s,comp=Z,1μm						
PCI	**Palu**	**43.37**	**280**	P	P	06 11 03.4	-3.9
	baz=44,SNR=82						
PCI				S	**S**	**06 17 30.3**	**-3.3**
	baz=44,SNR=4.7						
MIDW	**Midway**	**43.42**	**26**	*e*P	**P**	**06 11 09.6**	**+2.3**
	comp=Z,245nm,1.4s						
MIDW				LR	LR		
	comp=Z,5μm,21.0s						
MEEK	**Meekatharra**	**44.12**	**243**	P	**P**	**06 11 12.4**	**-0.8**
	baz=44,SNR=103						
SMKI	**Samarinda**	**46.03**	**280**	P	P	06 11 34.5	+6.0
KLBR	**Kellerberrin**	**46.09**	**236**	P	**P**	**06 11 27.5**	**-1.2**
	baz=46,SNR=25						
KHKI	**Kahang-Kahang**	**46.14**	**269**	P	**P**	**06 11 26.6**	**-2.8**
	comp=Z,148nm,1.1s,comp=Z,2μm						
MYLDM	**Lahad Datu**	**46.45**	**288**	P	**P**	**06 11 32.6**	**+0.8**
MYLDM	**Lahad Datu**	**46.45**	**288**	P	**P**	**06 11 32.8**	**+1.0**
	comp=Z,147nm,1.4s,comp=Z,3μm						
DNP	**Denpasar**	**46.50**	**268**	P	**P**	**06 11 33.3**	**+1.1**
	comp=Z,459nm,1.7s						
IGBI	**Denpasar**	**46.55**	**268**	P	**P**	**06 11 32.2**	**-0.3**
	comp=Z,265nm,0.8s						
BLDU	**Ballidu**	**46.69**	**238**	P	**P**	**06 11 32.6**	**-0.8**
	baz=47,SNR=15						
TSM	**Tawau**	**46.75**	**286**	P	**P**	**06 11 33.3**	**-0.8**
MORW	**Morawa**	**46.87**	**240**	P	**P**	**06 11 34.0**	**-0.9**
	baz=47,SNR=39						
NWAO	**Narrogin (SRO)**	**46.90**	**235**	*e*P	**P**	**06 11 34.1**	**-1.0**
	comp=Z,254nm,1.3s						
NWAO				LR	LR		
	comp=Z,6μm,20.0s						
NWAO	**Narrogin (SRO)**	**46.90**	**235**	P	**P**	**06 11 37.2**	**+2.1**
	SNR=6.9						
NWAO	**Narrogin (SRO)**	**46.90**	**235**	P	**P**	**06 11 34.1**	**-1.0**
	comp=Z,132nm,0.9s,baz=78,slow=6.3,SNR=20						
PAE	**Paea**	**46.98**	**104**	*e*P	**P**	**06 11 37.5**	**+1.6**
	comp=Z,35nm,1.6s						
PPT	**Papeete**	**46.98**	**104**	LR	LR	06 27 01.8	
	comp=Z,4μm,18.5s,baz=272,slow=31						
PPT2	**Papeete2**	**46.98**	**104**	*e*P	**P**	**06 11 36.6**	**+0.6**
	comp=Z,107nm,1.3s						
PPT2				*e*S	**S**	**06 18 26.7**	**+0.8**
	comp=Z,5μm,19.0s						
PPT2				*e*LQ	LQ	06 22 41.3	
	comp=Z,7μm,17.2s						
PPT2				*e*LR	LR	06 24 40.2	
	comp=Z,15μm,29.2s,baz=280						
TIAR	**Tiarei**	**47.20**	**104**	*e*P	**P**	**06 11 38.2**	**+0.6**
	comp=Z,118nm,1.3s						
TVO	**Taravao**	**47.30**	**104**	*e*P	**P**	**06 11 40.2**	**+1.8**
	comp=Z,307nm,1.5s						
BYJI	**Banyuwangi**	**47.39**	**269**	P	**P**	**06 11 39.7**	**+0.6**
	comp=Z,439nm,1.3s,comp=Z,11μm						
GIRL	**Giralia**	**47.41**	**249**	P	**P**	**06 11 41.9**	**+2.7**
	baz=48,SNR=8.6						
TBI	**Tubuai**	**47.51**	**112**	*e*S	**S**	**06 18 32.8**	**-0.4**
	comp=Z,4μm,29.0s						
TBI				*e*LQ	LQ	06 22 54.7	
	comp=Z,26μm,27.5s						
TBI				*e*LR	LR	06 24 55.8	
	comp=Z,9μm,30.5s,baz=291						
BBKI	**Banjar Baru**	**47.67**	**275**	P	**P**	**06 11 42.4**	**+1.1**
	comp=Z,162nm,1.2s,comp=Z,9μmcomp=Z,32μm						
SDKM	**Sandakan**	**47.83**	**288**	P	**P**	**06 11 43.0**	**+0.3**
BLJI	**Banyuglugur**	**48.20**	**269**	P	**P**	**06 11 45.1**	**-0.3**
	comp=Z,119nm,1.4s						
GMJI	**Gumukmas**	**48.28**	**268**	P	**P**	**06 11 47.1**	**+1.1**
	comp=Z,79nm,1.1s,comp=Z,2μm						
PMOR	**Pomariorio Ree**	**48.59**	**101**	*e*P	**P**	**06 11 49.6**	**+1.2**
	comp=Z,263nm,1.5s						
KDM	**Kudat**	**48.61**	**289**	P	**P**	**06 11 49.5**	**+0.9**
JHJ	**Hachijo jima 2**	**48.66**	**335**	P	**P**	**06 11 47.1**	**-1.5**
	comp=Z,235nm,0.9s,baz=182,slow=7.4,SNR=12						
KKM	**Kota Kinabalu**	**48.89**	**288**	*e*P	**P**	**06 11 49.9**	**-0.9**
	comp=Z,96nm,1.0s						
KKM				LR	LR		
	comp=Z,3μm,20.0s						
KKM	**Kota Kinabalu**	**48.89**	**288**	P	**P**	**06 11 50.7**	**-0.1**
KKM	**Kota Kinabalu**	**48.89**	**288**	P	**P**	**06 11 51.9**	**+1.1**
	baz=49,SNR=8.5						
KRKI	**Karangkates**	**49.27**	**268**	P	**P**	**06 11 55.0**	**+1.4**

comp=Z,328nm,1.3s
JOW Kunigami 49.92 319 *e*P **P 06 11 58.5 +0.1**
comp=Z,25nm,0.8s
PWJI Pagerwojo 49.92 269 P **P 06 11 58.6 0.0**
comp=Z,110nm,1.2s,comp=Z,2µm
SJI Sawahan 49.99 269 P **P 06 11 58.5 -0.8**
comp=Z,210nm,2.2s,comp=Z,8µm
KIP Kipapa 50.36 50*c*eP **P 06 12 02.2 +0.4**
KIP pmax pmax
comp=Z,144nm,1.6s
KIP Kipapa 50.36 50 *e*P **P 06 12 02.2 +0.4**
comp=Z,174nm,1.0s
KIP LR LR
comp=Z,2µm,21.0s
PCJI Pacitan 50.52 268 P **P 06 12 02.6 -0.5**
comp=Z,342nm,1.4s,comp=Z,4µm
BTM Bintulu 50.97 283 P **P 06 12 05.7 -0.8**
UGM Wanagama 51.19 268 *e*P **P 06 12 08.2 -0.1**
comp=Z,676nm,1.5s
UGM Wanagama 51.19 268 P **P 06 12 08.3 0.0**
baz=51,SNR=7.9
HKL Haleakala 51.30 52 *e*P **P 06 12 10.1 +0.8**
HKL Haleakala 51.30 52 *e*P **P 06 12 10.1 +0.8**
POHA Pohakuloa 51.36 54 *e*P **P 06 12 10.2 +0.6**
comp=Z,245nm,0.9s
SMRI Semarang 51.39 270 P **P 06 12 11.9 +2.2**
SBUM Sibu 51.59 282 P **P 06 12 10.6 -0.7**
MJAR Matsushiro Arr 52.26 335 P **P 06 12 13.3 -2.4**
MJAR Matsushiro Arr 52.26 335 P **P 06 12 13.3 -2.4**
comp=Z,19nm,0.6s,baz=169,slow=8.4,SNR=78
MJAR LR LR 06 32 36.4
comp=Z,6µm,20.4s,baz=145,slow=34
MAJO Matsushiro 52.26 335 *e*P **P 06 12 15.0 -0.8**
MAJO pmax pmax
comp=Z,262nm,1.6s
MAJO MLR MLR
comp=Z,7µm,19.0s
MAJO Matsushiro 52.26 335 *e*P **P 06 12 15.0 -0.8**
comp=Z,262nm,1.6s
MAJO LR LR
comp=Z,7µm,19.0s
MAT Matsushiro 52.26 335 P **P 06 12 14.2 -1.6**
MAT *S* **S 06 19 38.8 -0.1**
YULB Yu-li 52.60 311 *e*P **P 06 12 18.1 -0.5**
comp=Z,30nm,0.8s
NACB Ninganchiao 52.83 312 *e*P **P 06 12 23.1 +2.8**
comp=Z,160nm,1.4s
JNU Nakatsue 52.96 327 *e*P **P 06 12 20.3 -0.8**
comp=Z,54nm,1.1s
JNU Nakatsue 52.96 327 P **P 06 12 20.5 -0.6**
comp=Z,94nm,1.1s,baz=109,slow=4.1,SNR=21
SSLB Suanglung 53.08 311 *e*P **P 06 12 21.7 -0.4**
comp=Z,54nm,0.9s
KSM Kuching 53.19 280 *e*P **P 06 12 21.6 -1.4**
comp=Z,45nm,1.2s
KSM LR LR
comp=Z,2µm,19.0s
KSM Kuching 53.19 280 P **P 06 12 22.1 -0.9**
KSM Kuching 53.19 280 P P 06 12 18.6 -4.4
baz=53,SNR=6.6
YHNB Yeheng 53.29 312 *e*P **P 06 12 24.7 +1.0**
comp=Z,111nm,1.0s
YHNB LR LR
comp=Z,6µm,22.0s
TATO Taipei 53.39 312 PFAKE 06 12 40.0 +16
TATO LR LR
comp=Z,5µm,22.0s
ERM Erimo 55.40 343 *e*P **P 06 12 36.5 -2.1**
ERM Erimo 55.40 343 *e*P **P 06 12 40.0 +1.4**
comp=Z,84nm,1.0s
ERM LR LR
comp=Z,6µm,20.0s
QZH Quanzhou 55.51 310 P P 06 12 44.2 +4.5
QZH S **S 06 20 26.3 +3.1**
QZH LR LR
comp=N,6µm,16.3s
QZH LR LR
comp=E,6µm,18.2s
QZH LR LR
comp=Z,7µm,19.2s
YUK Yuzh-Kuril'sk 56.56 346*d* iP P 06 12 39.8 -7.0
YUK *i* S **S 06 20 39.0 +2.5**
YUK pmax pmax
comp=Z,30µm,1.8s
SSE Sheshan 57.38 318 P **P 06 12 52.6 -0.3**
SSE pP **pP 06 13 01.5 -0.8**
SSE S **S 06 20 47.9 +0.1**
SSE SS **SS 06 24 35.6 -2.3**
SSE pmax pmax
comp=Z,45nm,0.9s
SSE pmax pmax
comp=Z,330nm,6.2s
SSE LR LR
comp=N,2µm,28.2s
SSE LR LR
comp=E,2µm,28.3s
SSE LR LR
comp=Z,3µm,17.5s
ASAJ Asahikawa 57.49 343 *e*P **P 06 12 54.4 +1.0**
comp=Z,110nm,0.9s
ASAJ Asahikawa 57.49 343 P **P 06 12 53.0 -0.4**
comp=Z,269nm,0.9s,baz=219,slow=11,SNR=78
KSRS Korea Array 57.82 328 P **P 06 12 54.8 -1.1**
comp=Z,19nm,0.9s,baz=144,slow=7.2,SNR=65
KSRS LR LR 06 36 00.2
comp=Z,3µm,18.3s,baz=35,slow=34
KSAR Wonju Array Be 57.83 328 P **P 06 12 54.8 -1.2**
DRV Dumont d'Urvil 57.86 190 P P 06 12 44.0 -12
DRV Dumont d'Urvil 57.86 190 PP PP 06 14 44.0 -20
DRV S S 06 20 43.0 -10
DRV SS **SS 06 24 46.0 +2.0**
DRV L L 06 27 00.0
DRV R 06 29 00.0
INCN Inchon 58.52 327 *e*P **P 06 13 01.3 +0.4**
comp=Z,236nm,1.5s
INCN LR LR
comp=Z,5µm,19.0s
INCN Inchon 58.52 327 P **P 06 13 01.5 +0.6**
SNR=16
GZH Guangzhou 58.60 305 P P 06 13 05.9 +4.3
GZH S **S 06 21 07.5 +3.5**
GZH LR LR
comp=N,3µm,18.4s
GZH LR LR
comp=E,3µm,21.3s
GZH LR LR
comp=Z,4µm,18.8s
NJ2 Nanjing 59.52 317 *e*P **P 06 13 09.4 +1.5**
NJ2 pP **pP 06 13 19.1 +1.8**
NJ2 sP **sP 06 13 23.4 +2.5**
NJ2 PcP **PcP 06 13 55.3 +0.1**
NJ2 S **S 06 21 15.5 -0.2**
NJ2 sS **sS 06 21 36.0 +4.7**
NJ2 pmax pmax
comp=Z,50nm,0.9s
NJ2 pmax pmax
comp=Z,530nm,11.8s
NJ2 LR LR
comp=N,3µm,22.4s
NJ2 LR LR
comp=E,3µm,22.6s
NJ2 LR LR
comp=Z,5µm,25.4s
MYKOM Kota Tinggi 59.53 278 P **P 06 13 07.4 -0.9**
QIZ Qiongzhong 59.64 300 P **P 06 13 08.5 -0.4**
QIZ S **S 06 21 19.5 +1.8**
QIZ sS **sS 06 21 30.6 -2.7**
QIZ LR LR
comp=N,2µm,19.1s
QIZ LR LR
comp=E,900nm,21.9s
QIZ LR LR
comp=Z,4µm,20.8s
QIZ Qiongzhong 59.64 300 PFAKE 06 13 20.0 +11
QIZ LR LR
comp=Z,4µm,22.0s
YSS Yuzh-Sakhalins 60.06 345⇓ *i* P **P 06 13 12.2 +0.9**
YSS *i* *PP **pP 06 13 23.2 +2.5**
YSS *e**SP **sP 06 13 29.0 +4.7**
YSS *e* 06 13 53.0
YSS *e*S **S 06 21 18.0 -4.2**
YSS *e*PS **PnS 06 21 29.0 -8.9**
YSS *e*SSS SSS 06 27 46.0
YSS pmax pmax
comp=Z,80nm,0.8s
YSS MLR MLR
comp=N,6µm,19.0s
YSS MLR MLR
comp=Z,6µm,19.0s
KGM Kluang 60.10 279 P **P 06 13 11.2 -1.0**
VLA Vladivostok 60.41 335⇑ *i* P **P 06 13 12.6 -1.1**
VLA *i* S **S 06 21 23.4 -3.3**
VLA pmax pmax
comp=Z,96nm,1.3s
RKT Rikitea 60.80 110 *e*S **S 06 21 32.7 +0.2**
comp=Z,3µm,31.5s
RKT *e*SS **SS 06 25 26.9 -4.9**
comp=Z,2µm,30.5s
RKT *e*LQ LQ 06 28 28.3
comp=Z,9µm,32.0s
RKT *e*LR LR 06 31 03.7
comp=Z,12µm,30.2s,baz=280
KTGM Kuala Trenggan 61.09 282 P **P 06 13 18.1 -0.9**
USRK Ussuriysk Arra 61.26 335 P **P 06 13 18.9 -0.5**
comp=Z,132nm,0.8s,baz=146,slow=6.2,SNR=174
USRK LR LR 06 37 37.4
comp=Z,5µm,21.0s,baz=143,slow=34
SKR Severo-Kuril's 61.42 355 *e*P P 06 13 12.7 -7.7
SKR *e* 06 13 23.4
SKR *e*S S 06 21 31.0 -8.3
SKR *e*PS **PnS 06 21 54.0 -2.4**
SKR *e*SS **SS 06 25 47.0 +6.2**
SKR pmax pmax
comp=Z,170nm,1.1s
SKR smax smax
comp=N,3µm,10.0s
SKR smax smax
comp=E,3µm,16.0s
SKR MLR MLR
comp=N,3µm,20.0s
SKR MLR MLR
comp=E,3µm,20.0s
SKR MLR MLR
comp=Z,4µm,20.0s
WHN Wuhan 61.75 313 P **P 06 13 23.3 +0.2**
WHN S **S 06 21 44.9 +0.6**
WHN LR LR
comp=N,7µm,21.6s
WHN LR LR
comp=E,4µm,16.2s
WHN LR LR
comp=Z,10µm,22.3s
FRIM Kepong 62.03 279 P **P 06 13 24.4 -0.9**
DL2 Dalian 62.29 325⇓ P **P 06 13 26.1 -0.5**
DL2 S **S 06 21 51.3 +0.4**
DL2 pmax pmax
comp=Z,120nm,0.9s
DL2 pmax pmax
comp=Z,350nm,5.6s
DL2 LR LR
comp=N,2µm,16.3s
DL2 LR LR
comp=E,2µm,15.5s
DL2 LR LR
comp=Z,2µm,17.9s
MDJ Mudanjiang 62.59 334 P **P 06 13 28.0 -0.5**
MDJ pP **pP 06 13 33.4 -4.6**
MDJ PP **PP 06 15 45.5 -1.1**
MDJ S **S 06 21 57.0 +2.5**
MDJ SS **SS 06 25 58.8 -0.7**
MDJ pmax pmax
comp=Z,97nm,1.4s
MDJ pmax pmax
comp=Z,510nm,8.5s
MDJ LR LR
comp=N,3µm,26.4s
MDJ LR LR
comp=E,4µm,24.6s
MDJ LR LR
comp=Z,4µm,23.6s
MDJ Mudanjiang 62.59 334 PFAKE 06 13 40.0 +12
MDJ LR LR
comp=Z,5µm,22.0s
IPM Ipoh 62.91 281 *e*P **P 06 13 29.8 -1.4**
comp=Z,129nm,1.5s
IPM Ipoh 62.91 281 P **P 06 13 30.4 -0.9**
TIA Tai'an 63.23 320 P **P 06 13 32.1 -0.8**
TIA S **S 06 22 01.8 -0.9**
TIA pmax pmax
comp=Z,590nm,10.7s
TIA LR LR
comp=N,2µm,26.2s
TIA LR LR
comp=E,6µm,22.6s
TIA LR LR
comp=Z,4µm,22.6s
SNY Shenyang 63.30 328⇑ P **P 06 13 33.4 +0.2**
SNY S **S 06 22 03.1 -0.3**
SNY pmax pmax
comp=Z,15nm,0.6s
SNY pmax pmax
comp=Z,490nm,4.2s
SNY LR LR
comp=N,3µm,18.1s
SNY LR LR
comp=E,2µm,21.6s
SNY LR LR
comp=Z,4µm,26.0s
KULM Kulim 63.47 281 *e*P **P 06 13 33.2 -1.7**
comp=Z,39nm,1.1s
KULM LR LR
comp=Z,2µm,21.0s
KULM Kulim 63.47 281 P **P 06 13 34.2 -0.8**
PET Petropavlovsk 63.60 357 *e*P **P 06 13 33.5 -1.5**
PET *e*S **S 06 22 05.4 -1.3**
PET *e*PS **PnS 06 22 24.9 -1.3**
PET *e*PPS PPS 06 22 35.8
PET *e*SS **SS 06 26 16.3 +1.5**
PET pmax pmax
comp=Z,185nm,1.0s
PET pmax pmax
comp=Z,700nm,4.9s
PET pmax pmax
comp=Z,400nm,5.5s
HABR Khabarovsk 63.73 340*c*eP **P 06 13 35.4 -0.5**
HABR *e**PP **pP 06 13 44.1 -1.3**
HABR *e**SP **sP 06 13 48.2 -0.8**
HABR *e* 06 14 10.0
HABR 06 15 54.4
HABR PPP PPP 06 17 24.3
HABR S **S 06 22 06.6 -1.8**
HABR *e* 06 22 19.0
HABR *e* 06 23 24.5
HABR *e*SS **SS 06 26 15.7 -1.3**
HABR pmax pmax
comp=N,50nm,1.6s
HABR pmax pmax
comp=Z,197nm,1.6s
HABR pmax pmax
comp=E,103nm,3.0s
HABR pmax pmax
comp=Z,504nm,2.9s
HABR MLR MLR
comp=Z,3µm,19.0s
PEA0B Petropavlovsk- 63.73 357 *e*P **P 06 13 36.3 +0.4**
PETK Petropavlovsk- 63.73 357 P **P 06 13 35.3 -0.6**
PETK pmax pmax
comp=Z,89nm,0.9s
PETK Petropavlovsk- 63.73 357 P **P 06 13 35.2 -0.6**
PETK Petropavlovsk- 63.73 357 P **P 06 13 35.2 -0.6**
comp=Z,89nm,0.9s,baz=153,slow=7.6,SNR=58
PETK LR LR 06 35 43.6
comp=Z,3µm,21.1s,baz=175,slow=31
CN2 Changchun 63.84 331 *e*P **P 06 13 36.4 -0.3**
CN2 *e*S **S 06 22 11.3 +1.3**
CN2 pmax pmax
comp=Z,110nm,0.9s
CN2 pmax pmax
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,3µm,20.0s
CN2 LR LR
comp=E,5µm,20.0s
CN2 LR LR
comp=Z,6µm,22.0s
FX1 Attu Island--F 64.05 7 *e*P **P 06 13 37.5 -0.5**
COCO West Island 64.10 262 PFAKE 06 13 50.0 +11
COCO LR LR
comp=Z,3µm,20.0s
PSI Prapat 64.55 278 P **P 06 13 40.1 -2.1**
baz=65,SNR=3.7
CASY Casey 65.47 200 *e*P **P 06 13 46.6 -0.5**
comp=Z,186nm,1.6s
CASY LR LR
comp=Z,3µm,20.0s
KLR Kul'dur 65.52 338 *e*P P 06 13 43.0 -4.6
KLR *e*S **S 06 22 25.5 -5.1**
KLR *e* 06 23 39.5
KLR *e* 06 26 37.0
KLR *e* 06 29 42.5
KLR pmax pmax
comp=N,43nm,1.4s
KLR pmax pmax
comp=E,72nm,1.4s
KLR pmax pmax
comp=Z,190nm,1.4s
KLR MLR MLR
comp=Z,6µm,13.0s
GSI Gunungsitoli 65.53 276 P P 06 13 57.4 +8.9
baz=66,SNR=3.8
GYA Guiyang 65.53 306 P P 06 13 54.4 +6.1
GYA pP pP 06 14 04.4 +6.5
GYA PcP **PcP 06 14 20.4 +0.5**
GYA PP **PP 06 16 17.5 +4.6**
GYA ScP 06 18 22.0
GYA S **S 06 22 29.8 -2.0**
GYA SKS **SKSac 06 23 40.4 -1.7**
GYA SS **SS 06 26 52.6 +6.4**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,310nm,5.0s
GYA LR LR
comp=N,2µm,19.8s
GYA LR LR
comp=E,2µm,19.5s
GYA LR LR
comp=Z,4µm,21.1s
BJI Beijing 66.21 323 P **P 06 13 52.0 -0.2**
BJI S **S 06 22 38.2 -1.1**
BJI SS **SS 06 26 59.8 +3.8**
BJI pmax pmax
comp=Z,32nm,1.6s
BJI pmax pmax
comp=Z,460nm,4.1s
BJI LR LR
comp=N,5µm,20.8s
BJI LR LR
comp=E,4µm,19.5s
BJI LR LR
comp=Z,6µm,24.8s
VNDA Vanda 66.75 180 *e*P **P 06 13 56.0 +0.9**
comp=Z,100nm,1.1s
VNDA P'P'ab **P'P'ab 06 42 31.4 -0.8**
VNDA Vanda 66.75 180 P **P 06 13 56.0 +0.9**
comp=Z,30nm,0.9s,baz=346,slow=6.5,SNR=53
VNDA LR LR 06 37 31.2
comp=Z,3µm,18.8s,baz=6.4,slow=31
VNDA PKP2ab 06 42 31.4
comp=Z,3.4nm,1.2s,baz=236,slow=4.0,SNR=5.1
SBA Scott Base 67.12 179 *e*P **P 06 13 59.3 +1.8**
SBA pmax pmax
comp=Z,133nm,1.3s
SBA MLR MLR
comp=Z,3µm,19.0s
SBA Scott Base 67.12 179 *e*P **P 06 13 59.3 +1.8**
comp=Z,133nm,1.3s
SBA LR LR
comp=Z,3µm,19.0s
TIY Taiyuan 67.13 319 *e*P **P 06 13 59.6 +1.3**
TIY S **S 06 22 51.3 +0.6**
TIY pmax pmax
comp=Z,390nm,5.3s
TIY LR LR
comp=N,2µm,14.0s
TIY LR LR
comp=E,1µm,13.2s
TIY LR LR
comp=Z,4µm,22.3s
XAN Xi'an 67.50 314 P **P 06 13 58.9 -1.8**
XAN pP **pP 06 14 07.0 -3.3**
XAN sP **sP 06 14 12.4 -1.5**
XAN S S 06 22 48.1 -7.2
XAN pmax pmax
comp=Z,100nm,10.3s
XAN LR LR
comp=N,1µm,20.0s
XAN LR LR
comp=E,1µm,21.7s
XAN LR LR
comp=Z,1µm,21.7s
KMI Kunming 68.16 303 P **P 06 14 04.9 -0.3**
KMI pP **pP 06 14 13.9 -0.9**
KMI sP **sP 06 14 16.1 -2.3**
KMI PP **PP 06 16 36.9 +0.9**
KMI S **S 06 23 04.8 +1.0**
KMI sS **sS 06 23 15.6 -4.0**
KMI SS **SS 06 27 29.5 +2.3**
KMI pmax pmax
comp=Z,17nm,1.2s
KMI pmax pmax
comp=Z,210nm,3.7s
KMI LR LR
comp=N,3µm,22.8s
KMI LR LR
comp=E,2µm,23.3s
KMI LR LR
comp=Z,3µm,21.6s
CM31 Chiang Mai Arr 68.97 295 *e*P **P 06 14 10.4 +0.2**
comp=Z,13nm,0.8s
CMAR Chiang Mai Arr 68.97 295 P **P 06 14 09.2 -0.9**
CMAR ⇑*e* 06 42 27.5
CMAR Chiang Mai Arr 68.97 295 P **P 06 14 09.2 -0.9**
comp=Z,8.2nm,0.9s,baz=117,slow=4.4,SNR=24
CMAR LR LR 06 41 26.4
comp=Z,2µm,21.9s,baz=107,slow=34
CMAR PKP2bc 06 42 27.5
comp=Z,0.5nm,0.3s,baz=277,slow=4.2,SNR=5.0
CHTO Chiang Mai 69.09 295 *e*P **P 06 14 10.3 -0.6**
CHTO pmax pmax
comp=Z,61nm,1.6s
CHTO MLR MLR
comp=Z,2µm,20.0s
CHTO Chiang Mai 69.09 295 *e*P **P 06 14 10.2 -0.6**
comp=Z,61nm,1.6s
CHTO LR LR
comp=Z,2µm,20.0s
CHTO Chiang Mai 69.09 295 P **P 06 14 10.7 -0.2**
SNR=7.4
HHC Hu-ho-hao-te 69.50 321 *i* P **P 06 14 13.2 +0.1**
HHC pP **pP 06 14 23.5 +0.8**
HHC sP **sP 06 14 27.8 +1.5**
HHC PP **PP 06 16 50.2 +3.1**
HHC S **S 06 23 14.3 -4.6**
HHC sS **sS 06 23 36.8 +2.1**
HHC ScS **SKSac 06 24 10.6 -0.9**
HHC SS **SS 06 27 44.3 -2.8**
HHC pmax pmax
comp=Z,110nm,1.3s
HHC pmax pmax
comp=Z,1µm,10.2s
HHC LR LR
comp=N,8µm,22.4s
HHC LR LR
comp=E,6µm,21.2s
HHC LR LR
comp=Z,9µm,22.6s
UNV Unalaska Valle 69.57 19 *e*P **P 06 14 15.1 +2.0**
comp=Z,213nm,1.2s
CD2 Chengdu 69.81 309 P **P 06 14 16.1 +0.9**
CD2 pP **pP 06 14 25.6 +0.8**
CD2 sP **sP 06 14 29.7 +1.3**
CD2 PcP **PcP 06 14 37.9 +0.2**
CD2 PP **PP 06 16 52.0 +2.0**
CD2 PcS 06 18 41.7
CD2 S **S 06 23 21.8 -1.1**
CD2 sS **sS 06 23 38.9 +0.2**
CD2 SKS **SKSac 06 24 09.6 -4.6**
CD2 SS **SS 06 27 52.5 +0.3**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,340nm,4.7s
CD2 LR LR
comp=N,3µm,16.2s
CD2 LR LR
comp=E,2µm,16.2s

CD2 LR LR
comp=Z,3μm,25.5s
BTO Baotou 70.32 320 *e*P **P** **06 14 16.9 -1.2**
HIA Hailar 70.52 332 PFAKE 06 14 30.0 +11
HIA LR LR
comp=Z,5μm,21.0s
MIR Mirnyy 72.03 203 ⇓ *i*P P 06 14 33.0 +5.1
MIR *i* 06 14 40.0
MIR *e*S **S** **06 23 50.0 +2.7**
MIR *e*SS **SS** **06 28 30.0 +5.7**
MIR pmax pmax
comp=Z,162nm,1.5s
MIR pmax pmax
comp=Z,1μm,1.5s
LZH Lanzhou 72.13 313 *e*P **P** **06 14 29.9 +0.6**
LZH pP **pP** **06 14 36.7 -2.2**
LZH sP **sP** **06 14 40.3 -2.2**
LZH PcP **PcP** **06 14 46.8 -0.7**
LZH *e*S **S** **06 23 50.2 +0.4**
LZH SS **SS** **06 28 24.2 -3.7**
LZH pmax pmax
comp=Z,30nm,1.3s
LZH pmax pmax
comp=Z,180nm,5.2s
LZH LR LR
comp=N,840nm,13.2s
LZH LR LR
comp=E,3μm,18.6s
LZH LR LR
comp=Z,3μm,19.8s
SEY Seymchan 73.87 355 *e*P **P** **06 14 38.6 -0.1**
CLNS Chul'man 74.11 340 *d i*P **P** **06 14 40.6 +0.2**
CLNS *e* 06 14 53.4
CLNS *e* 06 17 25.4
CLNS *e*PPP PPP 06 19 09.6
CLNS *e*S **SKiKP** **06 24 06.3 0.0**
CLNS *e* 06 24 41.2
CLNS pmax pmax
comp=Z,91nm,1.1s
CLNS pmax pmax
comp=N,42nm,1.2s
CLNS pmax pmax
comp=E,12nm,1.0s
CLNS pmax pmax
comp=Z,12nm,1.2s
CLNS pmax pmax
comp=N,13nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,1.3s
CLNS smax smax
comp=E,637nm,11.9s
CLNS smax smax
comp=N,188nm,13.8s
CLNS MLR MLR
comp=E,1μm,15.0s
CLNS MLR MLR
comp=Z,1μm,17.0s
CLNS MLR MLR
comp=N,917nm,15.0s
CIT Chita 75.28 331 *e*P **P** **06 14 47.4 +0.1**
CIT *e* 06 14 53.8
CIT *e* 06 14 58.5
CIT *e* 06 15 05.5
CIT pmax pmax
comp=Z,212nm,1.4s
ULN Ulaanbaatar 76.15 325 *e*P **P** **06 14 53.1 +0.6**
comp=Z,148nm,1.2s
ULN LR LR
comp=Z,3μm,20.0s
ULN Ulaanbaatar 76.15 325 P **P** **06 14 52.2 -0.3**
SNR=72
GTA Gaotai 76.49 315 ⇓ P **P** **06 14 54.9 +0.3**
GTA pP **pP** **06 15 05.2 +0.9**
GTA sP **sP** **06 15 09.3 +1.5**
GTA PP **PP** **06 17 48.9 +2.0**
GTA S **S** **06 24 37.2 -1.3**
GTA sS **sS** **06 24 54.8 +0.2**
GTA SKS **SKSac** **06 24 59.1 -5.1**
GTA SS **SS** **06 29 36.0 +1.9**
GTA pmax pmax
comp=Z,14nm,1.4s
GTA pmax pmax
comp=Z,450nm,6.6s
GTA LR LR
comp=N,2μm,19.0s
GTA LR LR
comp=E,2μm,20.0s
GTA LR LR
comp=Z,2μm,19.9s
SONM Songino Array 76.50 325 P **P** **06 14 54.2 -0.3**
SONM Songino Array 76.50 325 P **P** **06 14 54.2 -0.3**
comp=Z,60nm,1.0s,baz=135,slow=5.3,SNR=140
SONM LR LR 06 49 23.6
comp=Z,3μm,18.6s,baz=120,slow=36
OHAK Old Harbor 76.90 23 *e*P **P** **06 14 57.2 +1.0**
comp=Z,430nm,1.3s
GAMB Gambell 76.91 12 *e*P **P** **06 14 58.0 +1.9**
comp=Z,298nm,1.6s
YAK Yakutsk 76.92 345 *e*P **P** **06 14 55.9 -0.3**
YAK *e* 06 15 01.5
YAK *e**PP **PcP** **06 15 07.8 +0.6**
YAK *e* 06 17 44.1
YAK *e*S **S** **06 24 43.8 +1.9**
YAK *e* 06 25 11.9
YAK *e*SS **SS** **06 29 35.6 -3.6**
YAK *e*SSS SSS 06 32 56.7
YAK pmax pmax
comp=E,20nm,1.2s
YAK pmax pmax
comp=Z,112nm,1.0s
YAK pmax pmax
comp=N,37nm,1.2s
YAK pmax pmax
comp=Z,218nm,2.5s
YAK pmax pmax
comp=N,119nm,2.0s
YAK pmax pmax
comp=E,54nm,1.5s
YAK smax smax
comp=N,605nm,4.1s
YAK smax smax
comp=E,881nm,7.1s
KDAK Kodiak Island 77.56 23 *e*P **P** **06 15 00.5 +0.5**
comp=E,166nm,0.9s
KDAK LR LR
comp=Z,2μm,20.0s
KDAK Kodiak Island 77.56 23 P **P** **06 15 01.0 +1.0**
comp=Z,972nm,1.0s,SNR=8.0
BILL Bilibino 78.64 1 κ *i*P **P** **06 15 06.0 +0.2**
BILL *e**SP sP 06 15 12.8 -6.3
BILL *i* 06 15 14.2
BILL *i* 06 25 01.9
BILL *i* 06 25 22.3
BILL *i* PS **PnS** **06 25 43.9 -1.4**
BILL *i* SS **SS** **06 30 02.6 -2.4**
BILL *e*SSS SSS 06 33 30.9
BILL pmax pmax
comp=Z,164nm,1.0s
SVW2 Sparrevohn 78.90 19 *e*P **P** **06 15 08.9 +1.5**
comp=Z,217nm,1.1s
QSPA South Pole Qui 79.25 180 *e*P **P** **06 15 09.2 -0.2**
comp=Z,76nm,1.0s
QSPA LR LR
comp=Z,2μm,20.0s
TNA Tin City 79.25 12 *e*P **P** **06 15 09.7 +0.5**
comp=Z,100nm,1.1s
RSO Redoubt South 79.40 21 *e*P **P** **06 15 10.7 +0.4**
LSA Lhasa 79.41 303 PFAKE 06 15 20.0 +8.5
LSA LR LR
comp=Z,2μm,21.0s
ZAK Zakamensk 79.59 326 ⇑ *i*P **P** **06 15 10.7 -0.8**
ZAK *e* 06 18 10.8
ZAK *e* 06 25 13.9
ZAK pmax pmax
comp=Z,48nm,1.3s
IRK Irkutsk 80.03 328 *e*P **P** **06 15 13.4 -0.3**
IRK *e*S **S** **06 25 18.2 +2.4**
IRK pmax pmax
comp=Z,119nm,1.8s
SPU Mount Spurr 80.15 21 *e*P **P** **06 15 14.5 +0.3**
SEW Seward 80.34 22 *e*P **P** **06 15 16.4 +1.3**
comp=Z,166nm,1.1s
MID Middleton Isla 81.09 24 *e*P **P** **06 15 20.0 +0.8**
MID pmax pmax
comp=Z,297nm,1.4s
MID Middleton Isla 81.09 24 *e*P **P** **06 15 20.0 +0.8**
comp=Z,297nm,1.4s
PMR Palmer 81.45 21 *e*P **P** **06 15 21.5 +0.4**
PMR pmax pmax
comp=Z,178nm,1.3s
PMR Palmer 81.45 21 *e*P **P** **06 15 21.5 +0.4**
comp=Z,178nm,1.3s
MOY Mondy 81.48 326 *e*P **P** **06 15 21.4 -0.2**
MOY pmax pmax
comp=Z,77nm,1.7s
TAPN Taplejung 81.58 300 *e*P **P** **06 15 23.1 +0.2**
comp=Z,106nm,1.3s
ODAN Odare 81.71 299 *e*P **P** **06 15 23.5 -0.1**
SML Sawmill 81.88 21 *e*P **P** **06 15 25.1 +1.7**
SML pmax pmax
comp=Z,49nm,1.2s
SML Sawmill 81.88 21 *e*P **P** **06 15 25.1 +1.7**
comp=Z,49nm,1.2s
TRF Thorofare Moun 82.32 19 *e*P **P** **06 15 25.1 -0.8**
comp=Z,132nm,1.2s
RAGM Ragged Mountai 82.35 24 *e*P **P** **06 15 27.0 +1.0**
comp=Z,189nm,1.4s
DIV Divide 82.39 23 *e*P **P** **06 15 27.5 +1.3**
comp=Z,111nm,1.0s
RAMN Ramite 82.41 299 *e*P **P** **06 15 27.4 +0.1**
BMRM Bremner River 82.73 23 *e*P **P** **06 15 28.7 +0.8**
comp=Z,202nm,1.4s
MCK McKinley 82.96 20 *e*P **P** **06 15 29.2 +0.2**
MCK pmax pmax
comp=Z,330nm,1.1s
MCK McKinley 82.96 20 *e*P **P** **06 15 29.2 +0.2**
comp=Z,330nm,1.1s
PALK Pallekele 83.23 279 *e*P **P** **06 15 31.0 -0.5**
comp=Z,18nm,0.8s
GUN Gumba 83.29 300 *e*P **P** **06 15 30.8 -1.1**
comp=Z,200nm,1.4s
PAF Port-aux-Franc 83.33 221 PFAKE 06 15 40.0 +8.7
PAF LR LR
comp=Z,6μm,19.0s
PKI Pulchoki 83.60 300 *e*P **P** **06 15 32.0 -1.5**
comp=Z,154nm,1.3s
PKIN Phulchoki 83.61 300 *e*P **P** **06 15 31.7 -1.8**
comp=Z,112nm,1.4s
PAX Paxson 83.66 21 *e*P **P** **06 15 33.3 +0.6**
PAX pmax pmax
comp=Z,86nm,1.4s
PAX Paxson 83.66 21 *e*P **P** **06 15 33.3 +0.6**
comp=Z,86nm,1.4s
MAW Mawson 83.74 202 P **P** **06 15 32.5 -0.5**
MAW Mawson 83.74 202 P **P** **06 15 32.5 -0.5**
comp=Z,13nm,0.8s,baz=91,slow=4.2,SNR=14
MAW LR LR 06 47 29.4
comp=Z,2μm,21.3s,baz=86,slow=32
MAW Mawson 83.74 202 P **P** **06 15 34.7 +1.7**
baz=84,SNR=16
KKN Kakani 83.77 300 *e*P **P** **06 15 32.9 -1.3**
DMN Daman 83.87 299 *e*P **P** **06 15 33.5 -1.3**
comp=Z,188nm,1.1s
COLA College 84.07 19 *e*P **P** **06 15 34.5 -0.1**
COLA pmax pmax
comp=Z,137nm,1.1s
COLA MLR MLR
comp=Z,2μm,20.0s
COLA College 84.07 19 *e*P **P** **06 15 34.5 -0.1**
comp=Z,137nm,1.1s
COLA LR LR
comp=Z,2μm,20.0s
PNL Peninsula 84.10 26 *e*P **P** **06 15 35.4 +0.5**
comp=Z,160nm,1.2s
DIB Dawson Inlet, 84.24 33 T T 07 48 35.8
SNR=4929
MENT Mentasta 84.27 22 *e*P **P** **06 15 36.7 +0.9**
ILAR Eielson Array 84.32 19 P **P** **06 15 35.6 -0.3**
ILAR PKKP **PKKPbc** **06 33 49.7 -1.9**
ILAR Eielson Array 84.32 19 P **P** **06 15 35.6 -0.3**
comp=Z,17nm,0.8s,baz=239,slow=4.5,SNR=94
ILAR PKKP **PKKPbc** **06 33 49.7 -1.9**
comp=Z,0.5nm,0.7s,baz=342,slow=2.3,SNR=7.4
ILAR LR LR 06 48 39.6
comp=Z,3μm,18.5s,baz=82,slow=32
DOT Dot Lake 84.58 21 *e*P **P** **06 15 38.3 +1.0**
comp=Z,2μm,2.2s
KCPM Cahto Peak 84.81 48 *e*P **P** **06 15 40.0 +0.9**
comp=Z,109nm,1.5s
MCCM Marconi Confer 84.85 50 *e*P **P** **06 15 38.6 -0.5**
comp=Z,125nm,1.4s
KIPM Iron Peak 84.92 48 *e*P **P** **06 15 40.7 +1.0**
comp=Z,252nm,1.6s
CRAG Craig 84.92 31 *e*P **P** **06 15 40.4 +1.3**
comp=Z,63nm,1.2s
COLD Coldfoot 84.95 17 *e*P **P** **06 15 40.6 +1.5**
comp=Z,223nm,1.8s
HOPS Hopland 84.97 49 *e*P **P** **06 15 40.4 +0.6**
comp=Z,96nm,1.3s
KHMM Horse Mountain 85.08 47 *e*P **P** **06 15 41.9 +1.4**
comp=Z,100nm,1.2s
KBO Bosley Butte 85.16 46 *e*P **P** **06 15 41.8 +1.0**
comp=Z,423nm,2.0s
KRMB Red Mountain 85.16 46 *e*P **P** **06 15 42.1 +1.3**
comp=Z,503nm,2.8s
KOLN Koldanda 85.20 299 *e*P **P** **06 15 39.5 -2.0**
comp=Z,57nm,1.1s
DANN Dangsing 85.21 300 *e*P **P** **06 15 39.6 -2.0**
comp=Z,182nm,1.4s
HVS Khovu-Aksy 85.34 324 *d i*P **P** **06 15 41.1 -0.4**
HVS pmax pmax
comp=Z,135nm,1.2s
SAO San Andreas Ge 85.53 51 *e*P **P** **06 15 43.3 +0.7**
SAO pmax pmax
comp=Z,106nm,1.4s
SAO San Andreas Ge 85.53 51 *e*P **P** **06 15 43.3 +0.7**
comp=Z,106nm,1.4s
WRAK Wrangell Islan 85.74 30 *e*P **P** **06 15 43.2 +0.1**
comp=Z,83nm,1.2s
WRAK LR LR
comp=Z,4μm,21.0s
SKAG Skagway 85.76 27 *e*P **P** **06 15 43.8 +0.6**
comp=Z,96nm,1.2s
PYUN Piuthan 85.81 299 *e*P **P** **06 15 42.5 -2.0**
comp=Z,101nm,1.2s
WDC Whiskeytown Da 85.84 48 *e*P **P** **06 15 44.6 +0.5**
WDC pmax pmax
comp=Z,103nm,1.6s
WDC Whiskeytown Da 85.84 48 *e*P **P** **06 15 44.6 +0.5**
comp=Z,103nm,1.6s
YBH Yreka Blue Hor 86.08 46 *e*P **P** **06 15 45.8 +0.4**
comp=Z,65nm,1.3s
LAMM Antelope Mount 86.10 47 P **P** **06 15 46.5 +0.9**
PTRM Twissleman Ran 86.17 53 *e*P **P** **06 15 46.8 +0.9**
HUMO Hull Mountain 86.17 46 *e*P **P** **06 15 46.9 +1.2**
comp=Z,59nm,1.2s
BSC Santa Cruz Isl 86.18 55 ⇓ P **P** **06 15 45.8 -0.1**
baz=86
SMMC Simmler 86.24 53 ⇓ P **P** **06 15 46.9 +0.6**
baz=86
OHCM Honcut 86.25 49 *e*P **P** **06 15 46.5 +0.4**
EGAK Eagle 86.27 21 *e*P **P** **06 15 47.0 +1.4**
comp=Z,768nm,1.5s
EGAK LR LR
comp=Z,4μm,20.0s
PKM Peak Mountain 86.27 54 ⇑ P **P** **06 15 46.8 +0.2**
baz=86,SNR=7.5
LHEM Herd Peak 86.39 47 P **P** **06 15 47.8 +0.7**
WMQ Urumqi 86.56 316 P **P** **06 15 49.2 +1.6**
WMQ pP **pP** **06 15 55.6 -1.9**
WMQ sP **sP** **06 15 58.3 -2.7**
WMQ PP **PP** **06 19 12.9 +3.1**
WMQ SKS **SKSac** **06 26 11.8 -0.4**
WMQ S S **06 26 23.1 +0.7**
WMQ sS **ScS** **06 26 33.6 +3.0**
WMQ SS **SS** **06 32 06.6 +2.8**
WMQ pmax pmax
comp=Z,31nm,1.2s
WMQ pmax pmax
comp=Z,440nm,4.8s
WMQ LR LR
comp=N,3μm,22.6s
WMQ LR LR
comp=E,1μm,18.8s
WMQ LR LR
comp=Z,2μm,23.2s
BLG Laguna Peak 86.67 55 ⇓ P **P** **06 15 48.3 0.0**
baz=87
CMB Columbia Colle 86.70 50 *e*P **P** **06 15 48.5 0.0**
CMB pmax pmax
comp=Z,65nm,1.3s
CMB Columbia Colle 86.70 50 *e*P **P** **06 15 48.5 0.0**
comp=Z,64nm,1.3s
SCI San Clemente I 86.79 56 ⇑ P **P** **06 15 49.0 +0.1**
baz=87
OOW Octopus West 87.00 40 P **P** **06 15 51.2 +1.5**
CIS Catalina Islan 87.02 55 ⇑ P **P** **06 15 50.0 -0.1**
baz=87
OSI Osito Adit 87.07 54 *e*P **P** **06 15 51.7 +1.4**
comp=Z,95nm,1.3s
OSI Osito Adit 87.07 54 ⇓ P **P** **06 15 50.6 +0.3**
baz=87
OSR Olympics--Salm 87.07 41 P **P** **06 15 51.3 +1.2**
NLWA Neilton Lookou 87.09 41 *e*P **P** **06 15 51.4 +1.3**
comp=Z,383nm,2.3s
NLWA LR LR
comp=Z,3μm,20.0s
VES Vestal, Richgr 87.11 53 ⇓ P **P** **06 15 50.0 -0.4**
baz=87,SNR=11
RCTC Rector, Farmer 87.11 52 ⇑ P **P** **06 15 50.3 -0.1**
baz=87
ARVC Arvin 87.12 54 ⇓ P **P** **06 15 50.8 +0.3**
baz=87,SNR=9.4
FMP Fort Macarthur 87.18 55 ⇓ P **P** **06 15 50.6 -0.3**
baz=87
BEKR Beckworth 87.23 49 *e*P **P** **06 15 51.2 0.0**
comp=Z,35nm,1.4s
DECC Green Verdugo 87.29 55 ⇓ P **P** **06 15 51.2 -0.2**
baz=88
HYB Hyderabad 87.37 288 *i* P **P** **06 15 53.0 +0.9**
PASC Pasadena Art C 87.39 55 *e*P **P** **06 15 52.3 +0.5**
comp=Z,381nm,1.4s
RVW Rose Valley 87.43 42 P **P** **06 15 52.9 +1.1**
MWC Mount Wilson 87.50 55 *e*P **P** **06 15 53.1 +0.5**
MWC pmax pmax
comp=Z,212nm,1.5s
MWC Mount Wilson 87.50 55 *e*P **P** **06 15 53.1 +0.5**
comp=Z,212nm,1.5s
WCN Washoe City 87.52 49 *e*P **P** **06 15 52.7 +0.1**
WCN pmax pmax
comp=Z,49nm,1.2s
WCN Washoe City 87.52 49 *e*P **P** **06 15 52.6 +0.1**
comp=Z,49nm,1.2s
ISA Isabella 87.54 53 *e*P **P** **06 15 53.1 +0.5**
ISA pmax pmax
comp=Z,160nm,1.8s
ISA Isabella 87.54 53 *e*P **P** **06 15 53.1 +0.5**
comp=Z,160nm,1.8s
ISA Isabella 87.54 53 ⇓ P **P** **06 15 52.6 0.0**
baz=88,SNR=13
LVP Lakeview Peak 87.62 42 P **P** **06 15 53.7 +0.9**
FL2 Flat Top 2 87.70 42 P **P** **06 15 54.2 +1.0**
EDW2 Edwards Air Fo 87.72 54 ⇑ P **P** **06 15 53.4 -0.1**
baz=88,SNR=26
DLBC Dease Lake 87.75 29 *e*P **P** **06 15 52.9 -0.2**
MLAC Mammoth Lakes 87.77 51 ⇑ P **P** **06 15 53.9 0.0**
baz=88
PGC Sidney 87.77 40 *e*P **P** **06 15 53.8 +0.5**
comp=Z,12nm,2.0s
BFSC Mount Baldy Ra 87.83 55 ⇑ P **P** **06 15 53.6 -0.5**
baz=88,SNR=13
MOD Modoc 87.84 47 *e*P **P** **06 15 54.8 +0.8**
comp=Z,105nm,1.2s
MTUM Tungsten Hills 87.91 52 *e*P **P** **06 15 55.2 +0.8**
109C Camp Elliot, M 87.94 56 ⇑ P **P** **06 15 54.7 +0.2**
baz=88
VFP Flag Point 88.03 43 P **P** **06 15 55.5 +0.6**
MURC Murrieta 88.04 55 ⇑ P **P** **06 15 55.3 +0.3**
baz=88,SNR=10
CWC Cottonwood Cre 88.05 53 ⇓ P **P** **06 15 55.2 0.0**
baz=88,SNR=5.6
TIN Tinemaha 88.09 52 ⇑ P **P** **06 15 55.5 +0.2**
baz=88
LRMC Laurel Mountai 88.11 54 ⇓ P **P** **06 15 55.6 +0.2**
baz=88,SNR=19
GULW Guler Mountain 88.12 43 P **P** **06 15 56.0 +0.9**
LON Longmire 88.23 42 *e*P **P** **06 15 56.0 +0.4**
LON pmax pmax
comp=Z,131nm,2.2s
LON Longmire 88.23 42 *e*P **P** **06 15 56.0 +0.4**
comp=Z,131nm,2.2s
BAR Barrett 88.24 56 *e*P **P** **06 15 56.5 +0.5**
comp=Z,146nm,1.8s
DAC Darwin (Calif) 88.38 53 *e*P **P** **06 15 57.4 +0.6**
DAC pmax pmax
comp=Z,130nm,1.6s
DAC MLR MLR
comp=Z,4μm,19.0s
DAC Darwin (Calif) 88.38 53 *e*P **P** **06 15 57.4 +0.6**
comp=Z,130nm,1.6s
DAC LR LR
comp=Z,4μm,19.0s
NVAR Mina Array Bea 88.38 51 P **P** **06 15 56.6 -0.2**
NVAR Mina Array Bea 88.38 51 P **P** **06 15 56.6 -0.2**
comp=Z,6.3nm,0.8s,baz=239,slow=7.2,SNR=48
NVAR LR LR 06 49 39.2
comp=Z,2μm,19.1s,baz=101,slow=32
WPW White Pass 88.38 42 P **P** **06 15 56.9 +0.5**
MPMC Manual Prospec 88.41 53 ⇓ P **P** **06 15 56.9 0.0**
baz=89,SNR=29
BBRC Big Bear Solar 88.42 55 ⇓ P **P** **06 15 56.7 -0.4**
baz=89
NV11 Mina Array Sit 88.50 51 *e*P **P** **06 15 57.4 +0.2**
MONP Monument Peak 88.50 56 ⇑ P **P** **06 15 57.7 +0.2**
baz=89,SNR=21
RRX Edison Barstow 88.51 54 ⇑ P **P** **06 15 57.4 +0.2**
baz=89
DGAR Diego Garcia 88.56 263 PFAKE 06 16 10.0 +12
DGAR LR LR
comp=Z,3μm,19.0s
PFO Pinyon Flat Ob 88.64 56 *e*P **P** **06 15 58.1 +0.2**
comp=Z,43nm,1.4s
PFO LR LR
comp=Z,2μm,19.0s
PFO Pinyon Flat Ob 88.64 56 P **P** **06 15 58.0 0.0**
comp=Z,123nm,1.2s,SNR=8.0
PFO Pinyon Flat Ob 88.64 56 ⇓ P **P** **06 15 57.8 -0.2**
baz=89,SNR=10
DVTC Desert V Tower 88.71 57 ⇑ P **P** **06 15 58.3 0.0**
baz=89
GRAC Grapevine Rang 88.74 52 ⇓ P **P** **06 15 58.8 +0.6**
baz=89,SNR=22
GSC Goldstone 88.77 54 *e*P **P** **06 15 59.2 +0.7**
GSC pmax pmax
comp=Z,204nm,1.9s
GSC Goldstone 88.77 54 *e*P **P** **06 15 59.2 +0.7**
comp=Z,204nm,1.9s
GSC Goldstone 88.77 54 ⇓ P **P** **06 15 58.8 +0.3**
baz=89,SNR=5.5
FURC Furnace Creek, 89.01 53 ⇑ P **P** **06 15 59.2 -0.2**
baz=89,SNR=43
SWSC Sam W. Stewart 89.02 56 ⇑ P **P** **06 15 59.9 +0.3**
baz=89,SNR=20
HEC Hector,Ludlow 89.03 54 ⇓ P **P** **06 15 59.3 -0.4**
baz=89,SNR=11
BELC Belle Mtn. Jos 89.10 55 ⇓ P **P** **06 16 00.4 +0.2**
baz=89,SNR=44
TPH Tonopah 89.12 51 PFAKE 06 16 10.0 +10
TPH LR LR
comp=Z,2μm,20.0s
WVOR Wild Horse Val 89.18 47 *e*P **P** **06 16 01.1 +0.8**
WVOR pmax pmax
comp=Z,220nm,1.6s
WVOR MLR MLR
comp=Z,2μm,21.0s
WVOR Wild Horse Val 89.18 47 *e*P **P** **06 16 01.1 +0.8**
comp=Z,220nm,1.6s
WVOR LR LR
comp=Z,2μm,21.0s
SHOC Shoshone 89.33 53 ⇑ P **P** **06 16 00.8 -0.2**
baz=90,SNR=24
E07A Sunnyside 89.46 42 P **P** **06 16 02.4 +1.0**
BC3 Big Chuckawall 89.47 56 ⇑ P **P** **06 16 01.9 +0.1**
baz=90,SNR=26
TUQ Turquoise Moun 89.50 54 ⇓ P **P** **06 16 02.2 +0.3**
baz=90
GMRC Granite Mounta 89.56 55 ⇓ P **P** **06 16 02.2 0.0**
baz=90,SNR=30
HAWA Hanford 89.63 43 *e*P **P** **06 16 03.0 +0.9**
comp=Z,233nm,2.0s
HAWA LR LR
comp=Z,2μm,19.0s
BMN Battle Mountai 89.70 49 *e*P **P** **06 16 03.8 +1.0**
BMN pmax pmax
comp=Z,313nm,2.2s
BMN MLR MLR
comp=Z,1μm,19.0s
BMN Battle Mountai 89.70 49 *e*P **P** **06 16 03.8 +1.0**
comp=Z,313nm,2.2s

BMN LR LR
comp=Z,1μm,19.0s
IRM Iron Mountain 89.83 55 ⇓P P 06 16 03.5 +0.1
baz=90,SNR=47
GLA Glamis 89.84 56 *eP* **P 06 16 04.8 +1.3**
GLA pmax pmax
comp=Z,180nm,1.5s
GLA Glamis 89.84 56 *eP* **P 06 16 04.8 +1.3**
comp=Z,180nm,1.5s
GLA Glamis 89.84 56 ⇑P P 06 16 03.8 +0.3
baz=90,SNR=14
LDFC Landfair 90.06 54 *eP* **P 06 16 05.5 +0.9**
comp=Z,246nm,1.5s
Y12C Blythe 90.24 56 ⇓P P 06 16 05.5 +0.2
baz=90,SNR=13
NEE2 Needles Airpor 90.39 55 ⇓P P 06 16 06.4 +0.4
baz=91
R11A Troy Canyon, C 90.44 51 ⇓P P 06 16 06.5 +0.1
baz=91,SNR=52
DDI Dehra Dun 90.51 301 *ex* **P 06 16 05.5 -1.2**
113A Mohawk Valley, 90.65 57 ⇑P P 06 16 07.6 +0.3
baz=91,SNR=19
PDMCI Parker Dam,Lak 90.67 55 ⇓P P 06 16 07.7 +0.4
baz=91,SNR=15
BMO Blue Mountains 90.73 45 *eP* **P 06 16 08.0 +0.6**
BMO pmax pmax
comp=Z,538nm,2.5s
BMO Blue Mountains 90.73 45 *eP* **P 06 16 08.0 +0.6**
comp=Z,538nm,2.5s
W13A Hualapai Mount 91.05 55 ⇓P P 06 16 09.3 0.0
baz=91,SNR=20
MK31 Makanchi Array 91.05 317 *ce* **P 06 16 08.3 -0.5**
MK31 pmax pmax
comp=Z,28nm,1.0s
MK31 Makanchi Array 91.05 317 *eP* **P 06 16 08.3 -0.5**
MKAR Makanchi Array 91.05 317 P P 06 16 07.6 -1.3
MKAR 06 19 45.4
MKAR pmax pmax
comp=Z,8.0nm,0.7s
MKAR pmax pmax
comp=Z,3.0nm,0.9s
MKAR MLR MLR
comp=Z,2μm,18.4s
MKAR Makanchi Array 91.05 317 P P 06 16 07.5 -1.3
MKAR PP **PP 06 19 45.4 -0.3**
MKAR Makanchi Array 91.05 317 P P 06 16 07.5 -1.3
comp=Z,7.5nm,0.7s,baz=92,slow=6.2,SNR=57
MKAR PP **PP 06 19 45.4 -0.3**
comp=Z,2.5nm,0.9s,baz=107,slow=8.2,SNR=3.9
MKAR LR LR 06 57 59.9
comp=Z,2μm,18.4s,baz=258,slow=36
SYO Syowa Base 91.08 198 ⇑ *eP* **P 06 16 09.4 +0.9**
SYO Syowa Base 91.08 198 ⇑ *ep* pP pP 06 16 14.4 -3.9
ELK Elko 91.24 49 *eP* **P 06 16 11.0 +0.9**
214A Organ Pipe Nat 91.27 58 ⇓P P 06 16 10.5 +0.4
baz=92
ZAA0 Zalesovo Array 91.39 325 *eP* **P 06 16 08.8 -1.3**
ZALV Zalesovo Beam 91.39 325 P P 06 16 08.0 -2.2
ZALV 06 19 47.7
ZALV pmax pmax
comp=Z,4.0nm,0.8s
ZALV MLR MLR
comp=Z,3μm,20.1s
ZALV Zalesovo Beam 91.39 325 P P 06 16 08.0 -2.2
ZALV PP **PP 06 19 47.7 -0.4**
ZALV Zalesovo Beam 91.39 325 P P 06 16 08.0 -2.2
comp=Z,4.0nm,0.8s,baz=108,slow=4.8,SNR=17
ZALV PP **PP 06 19 47.7 -0.4**
comp=Z,0.2nm,0.3s,baz=101,slow=7.6,SNR=2.2
ZALV LR LR 06 56 53.6
comp=Z,3μm,20.1s,baz=105,slow=35
MFID Camas Ranch 91.42 46 *eP* **P 06 16 11.2 +0.4**
comp=Z,265nm,2.1s
MFID Camas Ranch 91.42 46 ⇑P P 06 16 10.8 +0.1
baz=92,SNR=29
Z14A Wintersburg 91.45 56 ⇑P P 06 16 11.1 +0.2
baz=92
Y14A Wickenburg 91.52 56 ⇓P P 06 16 11.4 +0.1
baz=92,SNR=5.9
NEW Newport 91.70 41 *eP* **P 06 16 12.2 +0.4**
comp=Z,76nm,1.4s
NEW LR LR
comp=Z,2μm,19.0s
NEW Newport 91.70 41 ⇓P P 06 16 11.3 -0.4
baz=92
ARUT Antelope Range 91.97 52 *eP* **P 06 16 14.2 +0.8**
ARUT pmax pmax
comp=Z,84nm,1.5s
ARUT Antelope Range 91.97 52 *eP* **P 06 16 14.2 +0.8**
comp=Z,84nm,1.5s
CCUT Cedar City 91.98 52 *eP* **P 06 16 14.2 +0.6**
comp=Z,79nm,1.5s
I12A Atlanta 92.00 46 ⇑P P 06 16 13.8 +0.3
baz=92,SNR=35
G12A Big Creek, Yel 92.17 45 ⇑P P 06 16 14.3 +0.1
baz=92
F12A Elk City 92.35 44 ⇓P P 06 16 14.8 -0.2
baz=93,SNR=69
H12A Diamond D Ranc 92.36 45 ⇓P P 06 16 15.0 -0.1
baz=93,SNR=30
HLID Hailey 92.46 46 *eP* **P 06 16 16.0 +0.4**
comp=Z,59nm,1.3s
HLID LR LR
comp=Z,2μm,20.0s
HLID Hailey 92.46 46 ⇓P P 06 16 16.2 +0.6
baz=93,SNR=46
NVS Novosibirsk 92.53 325 *eP* **P 06 16 12.8 -2.6**
NVS *eS* **SKSac 06 26 49.5 +2.9**
NVS pmax pmax
comp=N,18nm,1.7s
NVS pmax pmax
comp=Z,82nm,1.7s
NVS pmax pmax
comp=E,28nm,1.4s
NVS smax smax
comp=N,43nm,2.7s
NVS smax smax
comp=E,64nm,2.6s
D12A Red Ives Fores 92.58 43 ⇑P P 06 16 15.7 -0.2
baz=93
U15A North Rim 92.59 54 ⇑P P 06 16 16.6 +0.1
baz=93,SNR=35
J13A Cove Ranch, Pi 92.59 46 ⇓P P 06 16 16.6 +0.4
baz=93,SNR=38
C12B Naegeli Ranch, 92.64 42 ⇓P P 06 16 16.2 0.0
baz=93
B12A Libby 92.74 41 ⇓P P 06 16 16.9 +0.3
baz=93
I13A Wildhorse Cree 92.75 46 ⇓P P 06 16 17.2 +0.3
baz=93,SNR=68
H13A Challis 92.78 45 ⇓P P 06 16 17.6 +0.5
baz=93,SNR=73
A12A Yaak River Ran 92.80 41 ⇓P P 06 16 17.3 +0.4
baz=93
X16A Lo Mia Camp, P 92.88 56 ⇓P P 06 16 17.7 -0.1
baz=93
G13A Cobalt 92.91 45 ⇑P P 06 16 17.6 0.0
baz=93,SNR=66
DUG Dugway 92.93 50 *eP* **P 06 16 18.5 +0.7**
DUG pmax pmax
comp=Z,168nm,2.3s
DUG MLR MLR
comp=Z,1μm,19.0s
DUG Dugway 92.93 50 *eP* **P 06 16 18.5 +0.7**
comp=Z,168nm,2.3s
DUG LR LR
comp=Z,1μm,19.0s
DUG Dugway 92.93 50 ⇓P P 06 16 18.1 +0.3
baz=93,SNR=5.4
L14A Malta 92.99 48 ⇓P P 06 16 18.5 +0.4
baz=93,SNR=21
F13A Darby 92.99 44 ⇓P P 06 16 17.8 -0.2
baz=93,SNR=54
TUC Tucson 93.03 58 *eP* **P 06 16 18.9 +0.5**
TUC pmax pmax
comp=Z,4.0nm,1.5s
TUC MLR MLR
comp=Z,1μm,21.0s
TUC Tucson 93.03 58 *eP* **P 06 16 18.9 +0.5**
comp=Z,4.4nm,1.5s
TUC LR LR
comp=Z,1μm,21.0s
J14A Carey 93.05 47 ⇓P P 06 16 19.1 +0.8
baz=93
MVU Marysvale 93.06 52 *eP* **P 06 16 19.2 +0.7**
comp=Z,80nm,1.7s
MVU LR LR
comp=Z,2μm,20.0s
MSU Marysvale 93.09 52 *eP* **P 06 16 19.6 +0.9**
MSU Marysvale 93.09 52 *eP* **P 06 16 19.6 +0.9**
BSMT Bassoo Peak 93.13 42 *eP* **P 06 16 18.5 -0.1**
K14A Jones Ranch, D 93.14 47 ⇑P P 06 16 19.2 +0.5
baz=93,SNR=13
WUAZ Wupatki 93.14 55 *eP* **P 06 16 20.6 +1.7**
comp=Z,86nm,1.9s
WUAZ LR LR
comp=Z,1μm,19.0s
WUAZ Wupatki 93.14 55 ⇓P P 06 16 19.2 +0.2
baz=93
D13A Huson 93.18 43 ⇑P P 06 16 18.3 -0.5
baz=93
I14A Mackay 93.22 46 ⇑P P 06 16 19.9 +0.8
baz=93,SNR=33
E13A Victor 93.23 43 ⇓P P 06 16 18.1 -0.9
baz=93,SNR=34
C13A Hot Springs 93.23 42 ⇑P P 06 16 18.4 -0.6
baz=93,SNR=14
HVU Hansel Valley 93.28 48 *eP* **P 06 16 20.3 +0.9**
HVU pmax pmax
comp=Z,94nm,1.4s
HVU Hansel Valley 93.28 48 *eP* **P 06 16 20.3 +0.9**
comp=Z,94nm,1.4s
H14A Leadore 93.42 45 ⇑P P 06 16 20.3 +0.3
baz=94,SNR=42
JTMT Jette 93.44 42 *eP* **P 06 16 19.8 -0.1**
B13A Whitefish 93.45 42 ⇓P P 06 16 19.5 -0.4
baz=94,SNR=17
MSO Missoula 93.47 43 *eP* **P 06 16 20.1 0.0**
comp=Z,52nm,2.1s
MSO LR LR
comp=Z,940nm,19.0s
MSO Missoula 93.47 43 ⇑P P 06 16 19.2 -0.9
baz=94,SNR=6.1
G14A Jackson 93.48 45 ⇓P P 06 16 20.5 +0.2
baz=94,SNR=33
SWMT Swartz Lake 93.58 42 *eP* **P 06 16 20.2 -0.4**
A13A Flathead Natio 93.60 41 ⇑P P 06 16 20.7 0.0
baz=94
L15A Malad City 93.60 48 ⇓P P 06 16 20.6 -0.3
baz=94,SNR=9.9
K15A Arbon 93.63 47 ⇑P P 06 16 20.9 -0.1
baz=94,SNR=6.7
YBMT Yellow Bay 93.64 42 *eP* **P 06 16 20.7 -0.2**
comp=Z,26nm,1.7s
F14A Wisdom 93.66 44 ⇓P P 06 16 20.7 -0.4
baz=94
E14A Clinton 93.69 44 ⇓P P 06 16 20.7 -0.5
baz=94,SNR=10
MPU Maple Canyon 93.79 50 *eP* **P 06 16 23.5 +1.6**
comp=Z,114nm,2.0s
C14A Swan Lake 93.80 42 ⇑P P 06 16 20.9 -0.6
baz=94
D14A Greenough 93.82 43 ⇑P P 06 16 20.7 -1.1
baz=94,SNR=12
MCMT McKenzie Canyo 93.82 45 *eP* **P 06 16 22.2 +0.2**
comp=Z,60nm,2.1s
J15A Blackfoot 93.84 47 ⇑P P 06 16 22.7 +0.8
baz=94,SNR=16
SLMT Seeley Lake 93.86 43 *eP* **P 06 16 21.7 -0.2**
I15A Monteview 93.92 46 ⇓P P 06 16 22.9 +0.6
baz=94,SNR=19
H15A Lima 93.92 45 ⇑P P 06 16 22.8 +0.4
baz=94,SNR=47
Q16A Castle Valley 93.94 51 ⇓P P 06 16 22.7 +0.1
baz=94,SNR=6.1
WALA Waterton Lakes 93.95 41 *eP* **P 06 16 22.8 +0.6**
comp=Z,1.7nm,1.4s
CHMT Chamberlain Mo 93.95 43 *eP* **P 06 16 22.3 -0.1**
TMUT Trail Mountain 93.98 51 *eP* **P 06 16 23.6 +0.8**
comp=Z,185nm,2.6s
KSH Kashi 94.00 309 *eP* **P 06 16 24.3 +1.6**
KSH *ep* **pP 06 16 34.5 +1.9**
KSH *es* **sP 06 16 38.5 +2.4**
KSH *eP* **PP 06 20 13.0 +3.8**
KSH *eSKS* **SKSac 06 26 54.0 -1.7**
KSH *eS* **S 06 27 29.6 -1.8**
KSH *es* **sS 06 27 47.3 -0.5**
KSH pmax pmax
comp=Z,5.0nm,0.3s
KSH pmax pmax
comp=Z,310nm,3.4s
KSH LR LR
comp=N,2μm,14.4s
KSH LR LR
comp=E,2μm,17.9s
KSH LR LR
comp=Z,920nm,15.7s
JLU Jordanelle 94.03 50 *eP* **P 06 16 23.8 +0.7**
comp=Z,44nm,1.4s
DLMT Dillon 94.10 45 *eP* **P 06 16 23.9 +0.9**
comp=Z,54nm,1.3s
X18A Snowflake 94.11 56 ⇓P P 06 16 23.1 -0.3
baz=94
319A Douglas 94.12 59 ⇓P P 06 16 23.5 0.0
baz=94
HWUT Hardware Ranch 94.13 49 *eP* **P 06 16 23.6 +0.2**
comp=Z,26nm,1.4s
HWUT LR LR
comp=Z,1μm,22.0s
G15A Dillon 94.14 45 ⇓P P 06 16 23.6 +0.3
baz=94,SNR=27
DAU Daniels Canyon 94.14 50 *eP* **P 06 16 26.3 +2.7**
DAU Daniels Canyon 94.14 50 *eP* **P 06 16 26.3 +2.7**
B14A Marquette Ranc 94.23 42 ⇑P P 06 16 23.2 -0.4
baz=94,SNR=15
A14A Double T Ranch 94.25 41 ⇓P P 06 16 23.5 -0.1
baz=94,SNR=13
F15A Butte 94.26 44 ⇓P P 06 16 23.7 -0.2
baz=94,SNR=12
E15A Deer Lodge 94.27 44 ⇓P P 06 16 23.4 -0.5
baz=94,SNR=32
LRM Limekiln Ridge 94.29 44 *eP* **P 06 16 24.5 +0.5**
L16A Fish Haven 94.30 48 ⇓P P 06 16 24.0 -0.2
baz=94
KURK Kurchatov 94.31 321 *eP* **P 06 16 22.5 -1.1**
KURK pmax pmax
comp=Z,7.0nm,1.0s
KURK Kurchatov 94.31 321 *eP* **P 06 16 22.6 -1.1**
comp=Z,26nm,1.3s
KURK LR LR
comp=Z,5μm,22.0s
KURK Kurchatov 94.31 321 P P 06 16 23.1 -0.6
SNR=14
KURK Kurchatov 94.31 321 P P 06 16 22.3 -1.4
comp=Z,65nm,1.1s,SNR=5.1
K16A Soda Springs 94.34 47 ⇑P P 06 16 24.2 -0.1
baz=94
P17A Butcher Ranch, 94.36 51 ⇓P P 06 16 24.6 +0.2
baz=95
W18A Petrified Fore 94.39 55 ⇑P P 06 16 24.6 -0.1
baz=95
J16A Bone 94.40 47 ⇓P P 06 16 24.9 +0.3
baz=95
SRU San Rafael 94.47 51 *eP* **P 06 16 25.2 +0.2**
SRU San Rafael 94.47 51 *eP* **P 06 16 25.1 +0.2**
SRU San Rafael 94.47 51 ⇑P P 06 16 24.8 -0.1
baz=95
D15A Lincoln 94.47 43 ⇑P P 06 16 24.3 -0.5
baz=95,SNR=5.1
C15A Salmond Ranch, 94.55 42 ⇑P P 06 16 24.5 -0.6
baz=95,SNR=20
I16A Newdale 94.60 46 ⇑P P 06 16 26.3 +0.9
baz=95,SNR=19
G16A Moss Hill, Enn 94.62 45 ⇑P P 06 16 25.8 +0.3
baz=95,SNR=13
RRI2 Red Ridge 94.63 47 *eP* **P 06 16 26.5 +0.8**
comp=Z,9.5nm,0.7s
S18A Hurst Farm, BI 94.63 53 ⇓P P 06 16 25.2 -0.6
baz=95
AHID Auburn Hatcher 94.68 48 PFAKE 06 16 40.0 +14
AHID LR LR
comp=Z,2μm,20.0s
B15A Bradely Ranch, 94.68 42 ⇑P P 06 16 24.6 -1.0
baz=95,SNR=10
A15A Johnson Ranch, 94.70 41 ⇑P P 06 16 25.2 -0.5
baz=95,SNR=11
L17A Cokeville 94.73 48 ⇓P P 06 16 25.6 -0.6
baz=95
320A Kipp Ranch, An 94.75 59 ⇑P P 06 16 26.2 -0.2
baz=95
P18A Preston Nutter 94.77 51 ⇑P P 06 16 26.5 0.0
baz=95
M17A Scullys Gap (B 94.77 49 ⇑P P 06 16 27.1 +0.8
baz=95,SNR=9.4
K17A Gardner Place, 94.81 48 ⇑P P 06 16 26.3 -0.2
baz=95
QLMT Earthquake Lak 94.81 45 *eP* **P 06 16 27.8 +1.3**
BOZ Bozeman (W) 94.82 45 *eP* **P 06 16 26.8 +0.4**
BOZ pmax pmax
comp=Z,70nm,1.8s
BOZ MLR MLR
comp=Z,2μm,20.0s
BOZ Bozeman (W) 94.82 45 *eP* **P 06 16 26.8 +0.4**
comp=Z,70nm,1.8s
BOZ LR LR
comp=Z,2μm,20.0s
BOZ Bozeman (W) 94.82 45 ⇓P P 06 16 26.7 +0.4
baz=95,SNR=17
220A Playas Peak, P 94.84 59 ⇑P P 06 16 26.9 +0.1
baz=95
F16A Kennard Place, 94.85 44 ⇓P P 06 16 26.7 +0.2
baz=95,SNR=8.8
120A U Bar Ranch, L 94.86 58 ⇓P P 06 16 26.6 -0.3
baz=95
HRY Holter Researc 94.87 44 *eP* **P 06 16 27.1 +0.6**
TKM2 Tokmak 2 94.89 313 PFAKE 06 16 40.0 +13
TKM2 LR LR
comp=Z,2μm,21.0s
H16A Russell Place, 94.92 46 ⇑P P 06 16 27.7 +0.7
baz=95,SNR=25
E16A East Helena 94.95 44 ⇓P P 06 16 26.7 -0.2
baz=95,SNR=19
Z20A Nine Sixteen R 94.99 57 ⇓P P 06 16 27.6 +0.1
baz=95
IMW Indian Meadow 95.00 46 *eP* **P 06 16 28.2 +0.8**
comp=Z,74nm,1.9s
SNOW Snow King Moun 95.05 47 *eP* **P 06 16 29.1 +1.4**
comp=Z,116nm,2.0s
J17A Brown Place, J 95.06 47 ⇑P P 06 16 27.7 +0.1
baz=95
YMR Madison River 95.11 46 *eP* **P 06 16 29.0 +1.2**
comp=Z,56nm,1.5s
D16A Dana Ranch, Ca 95.12 43 ⇓P P 06 16 27.7 0.0
baz=95,SNR=14
C16A Fuhringer Ranc 95.13 42 ⇑P P 06 16 27.2 -0.4
baz=95,SNR=23
LOHW Long Hollow 95.19 47 *eP* **P 06 16 28.7 +0.5**
comp=Z,34nm,1.8s
M18A Lyman 95.21 49 ⇑P P 06 16 28.0 -0.4
baz=95
I17A Pilgrim Ck. 95.26 46 ⇓P P 06 16 28.6 0.0
baz=96
B16A M & M Farms, S 95.26 42 ⇑P P 06 16 28.0 -0.3
baz=96
Y20A Horse Springs, 95.29 57 ⇑P P 06 16 28.5 -0.5
baz=96
X20A Quemado 95.30 56 ⇓P P 06 16 28.9 -0.1
baz=96
L18A Fontenelle, Gr 95.31 48 ⇑P P 06 16 28.3 -0.5
baz=96
H17A Grant Village 95.34 46 ⇑P P 06 16 29.3 +0.4
baz=96
G17A Pierce Place, 95.38 45 ⇓P P 06 16 29.4 +0.4
baz=96
W20A Ramah 95.39 55 ⇓P P 06 16 29.3 -0.1
baz=96
A16A West Butte Ran 95.43 41 ⇓P P 06 16 28.5 -0.6
baz=96,SNR=14
K18A Toltan Ranch, 95.43 48 ⇑P P 06 16 29.5 +0.1
baz=96
221A Mesquite Ranch 95.49 59 ⇓P P 06 16 29.0 -0.8
baz=96
LKWY Lake 95.49 46 *eP* **P 06 16 32.3 +2.7**
LKWY pmax pmax
comp=Z,36nm,1.6s
LKWY MLR MLR
comp=Z,4μm,20.0s
LKWY Lake 95.49 46 *eP* **P 06 16 32.2 +2.7**
comp=Z,36nm,1.6s
LKWY LR LR
comp=Z,4μm,20.0s
E17A Martinsdale 95.49 44 ⇓P P 06 16 28.9 -0.6
baz=96,SNR=9.5
V20A Brimhall 95.53 55 ⇑P P 06 16 29.5 -0.4
baz=96
F17A Fitzpatrick Pl 95.53 44 ⇑P P 06 16 30.1 +0.4
baz=96,SNR=23
J18A Kendall Valley 95.54 47 ⇑P P 06 16 29.8 0.0
baz=96
121A Cookes Peak, D 95.56 58 ⇓P P 06 16 30.3 +0.2
baz=96
U20A Newcomb 95.57 54 ⇓P P 06 16 30.1 0.0
baz=96
FRU Bishkek 95.58 312 *eP* P 06 16 37.0 +7.2
FRU MLR MLR
comp=Z,2μm,22.0s
PV04 Paradox Valley 95.59 52 *eP* P 06 16 34.0 +3.9
AAK Ala-Archa 95.64 312 *eP* P 06 16 33.5 +3.3
AAK pmax pmax
comp=Z,6.0nm,1.2s
AAK Ala-Archa 95.64 312 PFAKE 06 16 40.0 +10
AAK LR LR
comp=Z,2μm,22.0s
D17A Six Diamond Ra 95.72 43 ⇓P P 06 16 29.9 -0.5
baz=96,SNR=17
MVCO Mesa Verde 95.72 53 *eP* **P 06 16 33.1 +2.3**
comp=Z,12nm,1.1s
MVCO LR LR
comp=Z,2μm,19.0s
MVCO Mesa Verde 95.72 53 ⇓P P 06 16 30.5 -0.3
baz=96
O19A Miners Draw (B 95.73 50 ⇓P P 06 16 30.6 -0.1
baz=96
P19A Cripple Cowboy 95.73 51 ⇑P P 06 16 30.7 -0.1
baz=96
C17A Wharram Farm, 95.75 43 ⇑P P 06 16 30.1 -0.4
baz=96,SNR=22
I18A Diamond G Ranc 95.76 47 ⇑P P 06 16 30.6 -0.3
baz=96
Z21A St. Cloud Mine 95.78 57 ⇓P P 06 16 30.9 -0.2
baz=96
BW06 Boulder Array 95.80 48 PFAKE 06 16 40.0 +8.9
BW06 LR LR
comp=Z,1μm,20.0s
BW06 Boulder Array 95.80 48 ⇓P P 06 16 30.3 -0.8
baz=96,SNR=9.2
PDAR Pinedale Array 95.80 48 P P 06 16 30.9 -0.1
PDAR PKKPbc **PKKPdf 06 33 24.9 +2.0**
PDAR Pinedale Array 95.80 48 P P 06 16 30.9 -0.1
comp=Z,4.4nm,1.0s,baz=264,slow=1.5,SNR=15
PDAR PKKPbc **PKKPdf 06 33 24.9 +2.0**
comp=Z,0.5nm,0.8s,baz=92,slow=5.2,SNR=3.8
PDAR LR LR 06 53 04.3
comp=Z,1μm,20.8s,baz=263,slow=31
PV01 Paradox Valley 95.81 52 *eP* **P 06 16 31.3 +0.1**
B17A L&G Farms, Che 95.84 42 ⇓P P 06 16 30.9 +0.1
baz=96,SNR=13
L19A Farson 95.84 48 ⇑P P 06 16 30.8 -0.4
baz=96
X21A Alamocita Cree 95.86 56 ⇓P P 06 16 31.3 -0.2
baz=96
Y21A Point of Rocks 95.89 57 ⇑P P 06 16 31.8 +0.1
baz=96
M19A Rock Springs 95.89 49 ⇑P P 06 16 31.8 +0.3
baz=96
S20A Disappointment 95.93 53 ⇓P P 06 16 31.7 -0.1
baz=96
R20A Redvale 95.97 52 ⇓P P 06 16 32.3 +0.4
baz=96
A17A Triple J Farms 96.01 41 ⇑P P 06 16 31.6 0.0
baz=96,SNR=27
H18A Shoshone NF, C 96.03 46 ⇑P P 06 16 32.3 +0.3
baz=96
W21A San Fidel 96.08 56 ⇓P P 06 16 33.0 +0.5
baz=96
E18A Harlowton 96.15 44 ⇑P P 06 16 33.0 +0.6
baz=96,SNR=25
Q20A Ridgley Place, 96.15 52 ⇓P P 06 16 33.1 +0.4
baz=96
P20A De Beque 96.16 51 ⇓P P 06 16 33.3 +0.6
baz=96
EKS2 Erkin-Say 96.17 312 PFAKE 06 16 40.0 +7.4
EKS2 LR LR
comp=Z,2μm,20.0s
F18A Big Timber 96.18 45 ⇓P P 06 16 33.1 +0.6
baz=96,SNR=13
G18A Lazy EL Ranch, 96.20 45 ⇓P P 06 16 33.2 +0.5
baz=96
GCMT Greycliff 96.20 45 *eP* **P 06 16 33.8 +1.1**
comp=Z,16nm,1.4s
122A Conniff Cattle 96.24 58 ⇑P P 06 16 33.6 +0.4
baz=96

J19A Crowheart 96.24 47 ⇑P P 06 16 33.0 0.0
baz=96
YKA Yellowknife Ar 96.25 28 P P 06 16 31.3 -0.9
YKA PP PP 06 20 23.1 -2.7
YKA PKKP PKKPdf 06 33 22.6 +0.4
YKA PKKPab PKKPbc 06 33 53.1 +32
YKA Yellowknife Ar 96.25 28 P P 06 16 31.3 -0.9
comp=Z,7.3nm,0.9s,baz=256,slow=4.6,SNR=76
YKA PP PP 06 20 23.1 -2.7
comp=Z,3.7nm,1.2s,baz=252,slow=8.0,SNR=3.7
YKA PKKP PKKPdf 06 33 22.6 +0.4
comp=Z,0.3nm,0.8s,baz=79,slow=2.6,SNR=5.9
YKA PKKPab PKKPbc 06 33 53.1 +32
comp=Z,1.0nm,0.9s,baz=73,slow=4.9,SNR=7.5
YKW3 Yellowknife Ar 96.25 28 *e*P P 06 16 31.7 -0.6
comp=Z,1.0nm,1.3s
U21A Nageezi 96.27 54 ⇓P P 06 16 33.5 +0.2
baz=96
D18A Linhart Farms, 96.33 43 ⇓P P 06 16 33.3 +0.1
baz=96,SNR=7.3
K19A Absolon Red Bu 96.33 48 ⇑P P 06 16 33.8 +0.4
baz=96
S21A Coal Bank Pass 96.35 53 ⇓P P 06 16 34.0 +0.2
baz=96
Z22A Elephant Butte 96.36 57 ⇑P P 06 16 33.8 +0.1
baz=97
O20A White River Ci 96.37 50 ⇑P P 06 16 33.6 -0.1
baz=97
RLMT Red Lodge 96.38 45 PFAKE 06 16 40.0 +6.4
RLMT LR LR
comp=Z,2µm,20.0s
T21A Navajo Lake 96.45 54 ⇓P P 06 16 33.9 -0.2
baz=97
Y22A Socorro 96.46 57 ⇑P P 06 16 34.2 0.0
baz=97
N20A Spence Gulch, 96.46 50 ⇓P P 06 16 34.1 0.0
baz=97
EGMT Eagleton 96.48 42 *e*P P 06 16 34.3 +0.5
comp=Z,31nm,1.0s
EGMT LR LR
comp=Z,2µm,20.0s
EGMT Eagleton 96.48 42 ⇓P P 06 16 33.7 -0.1
baz=97,SNR=19
H19A Powell 96.50 46 ⇓P P 06 16 34.9 +0.9
baz=97
X22A Bernardo 96.51 56 ⇑P P 06 16 34.9 +0.6
baz=97
B18A Beardsley Farm 96.53 42 ⇑P P 06 16 33.9 -0.1
baz=97,SNR=9.9
A18A Metzger Ranch, 96.56 42 ⇓P P 06 16 33.8 -0.3
baz=97,SNR=6.9
L20A Wamsutter 96.58 49 ⇓P P 06 16 34.6 +0.1
baz=97
M20A Sweetwater, Wa 96.61 49 ⇓P P 06 16 35.0 +0.3
baz=97
R21A Cimarron 96.64 52 ⇑P P 06 16 35.2 +0.2
baz=97
K20A Yellowstone Ra 96.67 48 ⇓P P 06 16 35.7 +0.8
baz=97
Q21A Lamborn Mesa, 96.69 52 ⇓P P 06 16 35.6 +0.5
baz=97
W22A Albuquerque 96.70 56 ⇑P P 06 16 35.7 +0.4
baz=97
F19A Roth Farm, Mol 96.71 45 ⇓P P 06 16 34.9 -0.1
baz=97,SNR=9.9
BNM Barren Site 96.77 57 *e*P P 06 16 35.4 -0.3
comp=Z,11nm,1.5s
E19A Rath Farm, Rou 96.91 44 ⇑P P 06 16 36.0 +0.2
baz=97,SNR=21
C19A Slack Wire Ran 96.91 43 ⇑P P 06 16 35.6 -0.1
baz=97,SNR=13
D19A Cripps Ranch, 96.94 43 ⇑P P 06 16 36.3 +0.3
baz=97,SNR=20
T22A Edith 96.95 54 ⇓P P 06 16 36.2 -0.2
baz=97
J20A Shoshoni 96.96 47 ⇓P P 06 16 36.3 +0.2
baz=97
N21A Black Mountain 97.01 50 ⇑P P 06 16 36.3 -0.3
baz=97
ANMO Albuquerque 97.02 56 *e*P Pdif 06 16 37.2 +0.4
comp=Z,8.1nm,1.3s
ANMO LR LR
comp=Z,1µm,19.0s
PMSA Palmer Station 97.05 162 PFAKE 06 16 50.0 +14
PMSA LR LR
comp=Z,2µm,19.0s
B19A Brinkman Farms 97.08 42 ⇓P P 06 16 36.3 -0.2
baz=97,SNR=13
S22A 4UR Ranch, Cre 97.12 53 ⇑P P 06 16 37.0 -0.2
baz=97
G20A Bridger 97.13 45 ⇓P Pdif 06 16 37.3 +0.4
baz=97
SNAA Sanae 97.17 185 *e*P Pdif 06 16 37.6 +1.1
comp=Z,15nm,1.1s
H20A Greybull 97.18 46 ⇓P Pdif 06 16 37.4 +0.3
baz=97
SMCO Snowmass 97.20 52 *e*P Pdif 06 16 41.0 +3.1
comp=Z,5.6nm,1.1s
Y23A Lovelace Mesa, 97.21 57 ⇓P P 06 16 37.2 -0.4
baz=97
Q22A Crested Butte, 97.21 52 ⇓P P 06 16 37.2 -0.4
baz=97
R22A Saguache, Gunn 97.24 53 ⇓P P 06 16 37.5 -0.3
baz=97
M21A Separation Pea 97.24 49 ⇑P P 06 16 37.5 -0.1
baz=97
F20A Billings 97.25 45 ⇓P Pdif 06 16 37.5 +0.1
baz=97
A19A Klindworth Far 97.28 42 ⇓P P 06 16 36.9 -0.5
baz=98,SNR=12
324A Moseley Ranch, 97.34 59 ⇓P P 06 16 37.8 -0.4
baz=98
V23A Ortiz Mt. (NFS 97.35 55 ⇓P Pdif 06 16 38.3 0.0
baz=98
E20A Meyer Farm, Mu 97.36 44 ⇓P Pdif 06 16 38.1 +0.2
baz=98,SNR=26
224A Cornudas Mount 97.39 59 ⇑P Pdif 06 16 38.5 0.0
baz=98
P22A Eagle 97.42 51 ⇑P Pdif 06 16 38.9 +0.3
baz=98
U23A El Rito 97.43 54 ⇑P Pdif 06 16 38.8 +0.1
baz=98
D20A Manuel Ranch, 97.44 44 ⇑P Pdif 06 16 38.3 +0.1
baz=98,SNR=21
K21A Alcova 97.46 48 ⇓P Pdif 06 16 38.8 +0.2
baz=98
124A Stringfield Ra 97.53 58 ⇑P P 06 16 39.1 0.0
baz=98
I21A Big Trails, Te 97.59 47 ⇑P Pdif 06 16 39.4 +0.3
baz=98
O22A Kremmling 97.66 51 ⇓P P 06 16 39.5 -0.2
baz=98
425A Indio Mountain 97.67 60 ⇓P Pdif 06 16 39.7 0.0
baz=98
Y24A Capitan 97.72 57 ⇑P P 06 16 39.6 -0.3
baz=98
325A Bean Ranch, Si 97.76 60 ⇓P P 06 16 39.9 -0.2
baz=98
A20A Cobblestone Ra 97.81 42 ⇓P P 06 16 39.3 -0.5
baz=98,SNR=7.7
N22A Wattenberg Ran 97.81 50 ⇓P P 06 16 40.2 -0.1
baz=98
W24A Lazy 6 Ranch, 97.91 56 ⇑P Pdif 06 16 40.8 0.0
baz=98
V24A Rampart Ranch, 98.09 55 ⇓P P 06 16 41.5 -0.1
baz=98
E21A Keefer Ranch, 98.09 44 ⇓P Pdif 06 16 41.5 +0.4
baz=98,SNR=11
P23A Jefferson 98.10 51 ⇓P Pdif 06 16 41.9 +0.2
baz=98
J22A Midwest 98.12 47 ⇑P Pdif 06 16 41.7 +0.2
baz=98
SDCO Great Sand Dun 98.16 53 *e*P Pdif 06 16 48.7 +6.7
comp=Z,55nm,2.8s
D21A La Casta Ranch 98.21 44 ⇑Pdiff Pdif 06 16 42.1 +0.5
baz=98
N23A Red Feather La 98.21 50 ⇓Pdiff Pdif 06 16 42.3 +0.2
baz=98
626A Big Bend Ranch 98.23 61 ⇑Pdiff Pdif 06 16 42.4 +0.2
baz=98
ISCO Idaho Springs 98.33 51 PFAKE 06 16 50.0 +7.3
ISCO LR LR
comp=Z,2µm,19.0s
Y25A Mesa, Roswell 98.33 57 ⇓Pdiff P 06 16 42.4 -0.1
baz=98
B21A Ellsworth Farm 98.35 42 ⇓Pdiff Pdif 06 16 42.9 +0.7
baz=98
S24A Houchin Ranch, 98.37 53 ⇑Pdiff Pdif 06 16 43.2 +0.3
baz=99
T24A Torres, Weston 98.43 54 ⇑Pdiff Pdif 06 16 43.3 +0.1
baz=99
426A McDonald Obser 98.47 60 ⇑Pdiff Pdif 06 16 43.6 +0.3
baz=99
R24A Sanders Place, 98.53 53 ⇓Pdiff Pdif 06 16 44.1 +0.6
baz=99
226B Tecolote Peak, 98.53 59 ⇑Pdiff Pdif 06 16 43.7 +0.2
baz=99
L23A Garrett 98.54 49 ⇑Pdiff Pdif 06 16 43.7 +0.3
baz=99
F22A Rosebud 98.56 45 ⇓Pdiff Pdif 06 16 44.2 +1.0
baz=99
KK31 Karatay Array 98.60 312 *i* P Pdif 06 16 47.7 +4.3
TXAR Lajitas Array 98.61 62 P Pdif 06 16 45.4 +1.5
TXAR PP PP 06 20 42.4 -2.6
TXAR Lajitas Array 98.61 62 P Pdif 06 16 45.4 +1.5
comp=Z,1.0nm,0.9s,baz=226,slow=4.5,SNR=9.3
TXAR PP PP 06 20 42.4 -2.6
comp=Z,2.4nm,1.0s,baz=238,slow=7.2,SNR=6.4
TXAR LR LR 06 55 41.2
comp=Z,2µm,18.9s,baz=310,slow=32
V25A Rancho No Teng 98.63 55 ⇑Pdiff Pdif 06 16 44.4 +0.4
baz=99
W25A X Bar L Ranch, 98.68 56 ⇑Pdiff Pdif 06 16 44.3 +0.2
baz=99
D22A Cohagen 98.77 44 ⇓Pdiff Pdif 06 16 45.0 +0.9
baz=99
E22A Miles City 98.85 44 ⇑Pdiff Pdif 06 16 45.0 +0.5
baz=99
S25A Robets Cordova 98.99 53 ⇑Pdiff Pdif 06 16 46.0 +0.5
baz=99
G23A Biddle 99.11 46 ⇑Pdiff Pdif 06 16 46.7 +1.0
baz=99
A22A Carney Farms, 99.14 42 ⇑Pdiff Pdif 06 16 46.3 +0.5
baz=99
E23A Ismay 99.30 44 ⇑Pdiff Pdif 06 16 47.3 +0.9
baz=100
VOSK Vostochnaya 99.30 322 P Pdif 06 16 44.0 -2.3
VOSK pmax pmax
comp=Z,17nm,1.3s
D23A Lindsay 99.43 44 ⇓Pdiff Pdif 06 16 47.8 +0.7
baz=100
C23A Lambert 99.51 43 ⇑Pdiff Pdif 06 16 48.3 +0.9
baz=100
H24A Dirks Ranch, A 99.65 46 ⇓Pdiff Pdif 06 16 48.8 +0.6
baz=100
BVA0 Borovoye Array 99.69 322 P Pdif 06 16 43.4 -4.6
BVA0 pmax pmax
comp=Z,3.0nm,1.3s
BVAR Borovoye Array 99.69 322 PP PP 06 20 52.0 -0.5
BVAR Borovoye Array 99.69 322 PP PP 06 20 52.0 -0.5
comp=Z,5.8nm,0.9s,baz=90,slow=8.0,SNR=6.5
B23A Brockton 99.70 42 ⇑Pdiff Pdif 06 16 48.9 +0.7
baz=100
S26A Kim 99.75 53 ⇓Pdiff Pdif 06 16 49.6 +0.8
baz=100
BRVK Borovoye 99.75 322 *e*P Pdif 06 16 47.7 -0.6
BRVK pmax pmax
comp=Z,5.0nm,1.2s
BRVK Borovoye 99.75 322 *e*P Pdif 06 16 47.9 -0.4
comp=Z,26nm,1.5s
BRVK LR LR
comp=Z,2µm,22.0s
BRVK Borovoye 99.75 322 P Pdif 06 16 50.7 +2.5
SNR=6.5
A23A Redstone 99.82 42 ⇑Pdiff Pdif 06 16 49.4 +0.7
baz=100
R26A Arlington 99.83 53 ⇓Pdiff Pdif 06 16 49.6 +0.4
baz=100
E24A Baker 99.99 44 ⇓Pdiff Pdif 06 16 50.3 +0.7
baz=100
C24A Savage 99.99 43 ⇑Pdiff Pdif 06 16 50.2 +0.6
baz=100
128A Castleberry Fa 100.01 59 ⇑Pdiff Pdif 06 16 50.4 +0.3
baz=100
D24A Glendive 100.02 44 ⇑Pdiff Pdif 06 16 50.4 +0.7
baz=100
DGMT Dagmar 100.23 42 PFAKE 06 17 00.0 +9.5
DGMT LR LR
comp=Z,1µm,19.0s
DGMT Dagmar 100.23 42 ⇑Pdiff Pdif 06 16 51.2 +0.7
baz=100
429A Davenport Ranc 100.29 61 ⇑Pdiff Pdif 06 16 51.7 +0.4
baz=100
A24A Westby 100.39 42 ⇑Pdiff Pdif 06 16 52.0 +0.8
baz=101
AMTX Amarillo 100.91 56 PFAKE 06 17 10.0 +16
AMTX LR LR
comp=Z,1µm,20.0s
AMTX Amarillo 100.91 56 ⇓Pdiff Pdif 06 16 54.5 +0.5
baz=101
OGNE Ogallala 101.16 50 PFAKE 06 17 10.0 +15
OGNE LR LR
comp=Z,1µm,22.0s
RER Riviere de l'E 101.30 246 PFAKE 06 17 10.0 +14
RER LR LR
comp=Z,2µm,19.0s
FFC Flin Flon 101.95 36 *e*P Pdif 06 16 57.4 -0.6
FFC pmax pmax
comp=Z,21nm,1.6s
FFC MLR MLR
comp=Z,2µm,19.0s
FFC Flin Flon 101.95 36 *e*Pdif Pdif 06 16 57.4 -0.6
comp=Z,21nm,1.6s
FFC LR LR
comp=Z,2µm,19.0s
WMOK Wichita Mounta 103.28 57 PFAKE 06 17 20.0 +16
WMOK LR LR
comp=Z,2µm,19.0s
KSU1 Kansas State U 105.22 52 PFAKE 06 21 40.0
KSU1 LR LR
comp=Z,2µm,19.0s
ECSD EROS Data Cent 105.30 48 PFAKE 06 21 40.0
ECSD LR LR
comp=Z,1µm,20.0s
MSEY Mahe Island 105.64 262 PFAKE 06 21 40.0
MSEY LR LR
comp=Z,2µm,22.0s
AB31 Akbulak array 106.18 318 *i* P Pdif 06 17 21.7 +4.8
ARU Arti 106.53 326 P Pdif 06 17 13.9 -4.4
ARU S SKSac 06 27 50.9 -5.2
ARU SP SP 06 30 50.5 -7.8
ARU PS PS 06 31 00.6 -2.2
ARU MLR MLR
comp=Z,3µm,18.0s
PAYG Puerto Ayora 106.90 94 PFAKE 06 21 40.0
PAYG LR LR
comp=Z,1µm,19.0s
SCIA State Center 107.81 49 PFAKE 06 21 40.0
SCIA LR LR
comp=Z,2µm,21.0s
EFI East Falkland 108.70 155 PFAKE 06 21 40.0
EFI LR LR
comp=Z,1µm,21.0s
EYMN Ely 108.71 43 PFAKE 06 21 50.0
EYMN LR LR
comp=Z,1µm,19.0s
ABPO Ambohimpanom 109.57 245 PFAKE 06 21 50.0
ABPO LR LR
comp=Z,2µm,20.0s
VBMS Vicksburg 110.09 60 PFAKE 06 21 50.0
VBMS LR LR
comp=Z,1µm,20.0s
KBS Kingsbay 110.31 354 *e*PP PP 06 22 09.0 -1.3
KBS *e* 06 31 34.5
KBS AMS AMS 07 02 00.8
comp=Z,2µm,24.3s
KBS Kingsbay 110.31 354 PFAKE 06 21 50.0
KBS LR LR
comp=Z,2µm,22.0s
SPA0 Spitsbergen Ar 110.45 353 *e*PP PP 06 22 10.2 -1.1
SPA0 *e* 06 31 29.2
HDIL Hopedale 110.83 51 PFAKE 06 21 50.0
HDIL LR LR
comp=Z,3µm,19.0s
OXF Oxford 110.99 57 PFAKE 06 21 50.0
OXF LR LR
comp=Z,1µm,20.0s
TEIG Tepich 111.69 72 PFAKE 06 21 50.0
TEIG LR LR
comp=Z,723nm,20.0s
PLAL Pickwick Lake 112.08 57 PFAKE 06 21 50.0
PLAL LR LR
comp=Z,1µm,19.0s
TGUH Tegucigalpa,Un 112.11 79 PFAKE 06 21 50.0
TGUH LR LR
comp=Z,1µm,20.0s
BJO Bjornoya 112.96 350 AMS AMS 07 12 34.9
comp=Z,2µm,20.8s
LRAL Lakeview Retre 113.04 59 PFAKE 06 21 50.0
LRAL LR LR
comp=Z,2µm,19.0s
GLMI Grayling 113.80 46 PFAKE 06 22 00.0
GLMI LR LR
comp=Z,2µm,20.0s
DAG Danmarks Havn 114.00 0 *e*PKIKP PKiKP 06 21 43.7 +1.1
DAG pmax pmax
comp=Z,2.0nm,0.8s
DAG Danmarks Havn 114.00 0 *i* P PP 06 22 36.6 0.0
DAG *i* 06 31 59.5
DAG
comp=Z,1µm,22.0s
KEV Kevo 114.66 344 *e*p PKPdf 06 21 59.6 +16
comp=Z,5.5nm,0.7s
KEV Kevo 114.66 344 PFAKE 06 22 00.0 +16
KEV LR LR
comp=Z,2µm,22.0s
ARCES ARCESS Array B 115.20 345 PKP PKPdf 06 21 46.1 +1.0
ARCES ARCESS Array B 115.20 345 PKP PKPdf 06 21 46.1 +1.0
comp=Z,6.0nm,0.9s,baz=132,slow=1.3,SNR=13
ARE0 ARCESS Array S 115.20 345 *e*PP PP 06 22 46.1 +0.9
ARE0 *e* 06 32 22.1
ARE0 *e*SS SS 06 38 41.8 +1.8
LCO Las Campanas 115.32 129 PFAKE 06 22 00.0 +13
LCO LR LR
comp=Z,1µm,22.0s
MAK Makhachkala 115.42 312 *i* PKIKP PKPdf 06 21 45.9 -0.3
MAK *e* 06 22 49.7
MAK *e*PS PKKPab 06 32 25.6 +0.5
MAK *e*SS SS 06 38 54.8 +10
MAK pmax pmax
comp=Z,89nm,1.2s
ACSO Alum Creek Sta 115.66 51 PFAKE 06 22 00.0 +13
ACSO LR LR
comp=Z,1µm,20.0s
KTK1 Kautokeino 116.15 345 *e*PP PP 06 22 50.8 -1.2
KTK1 AMS AMS 07 12 33.8
comp=Z,3µm,22.8s
TRQA Tornquist 116.16 142 PFAKE 06 22 00.0 +12
TRQA LR LR
comp=Z,753nm,21.0s
TRO Tromso 116.74 346 *e*PP PP 06 22 56.5 +0.5
TRO AMS AMS 07 21 16.3
comp=Z,2µm,19.0s
SUMG Summit 116.97 7 *e*PKIKP PKPdf 06 21 51.0 +2.1
SUMG Summit 116.97 7 *e*PKPdf PKPdf 06 21 51.0 +2.1
SUMG Summit 116.97 7 *i* P PKPdf 06 21 51.5 +2.6
comp=Z,5.0nm,1.0s
SUMG *i* 06 32 49.4
SUMG
comp=Z,1µm,17.0s
SUMG Summit 116.97 7 *i* P SP 06 32 36.5 -0.3
NNA Nana 116.99 109 PFAKE 06 22 00.0 +10
NNA LR LR
comp=Z,924nm,19.0s
DGRG David-gareji 117.23 311 P PKPdf 06 21 53.5 +3.7
JOF Joensuu 117.40 337 *e*PKIKP PKPdf 06 21 49.4 -0.1
JOF pmax pmax
comp=Z,4.0nm,0.9s
JOF Joensuu 117.40 337 *e*p PKPdf 06 21 49.4 -0.1
comp=Z,4.1nm,0.9s
VRHR Novokhopersk 117.43 322 *i* PKIKP PKPdf 06 21 48.7 -1.2
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=Z,5.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR MLR MLR
comp=Z,2µm,17.0s
VRHR MLR MLR
comp=N,350nm,16.0s
VRHR MLR MLR
comp=E,1µm,17.0s
ERPA Erie 117.58 48 PFAKE 06 22 00.0 +10
ERPA LR LR
comp=Z,2µm,19.0s
TBLG Delisi 117.65 312 *e*PKIKP PKPdf 06 21 51.9 +1.3
TBLG Delisi 117.65 312 P PKPdf 06 21 51.9 +1.3
GNI Garni 117.93 310 PFAKE 06 22 00.0 +8.6
GNI LR LR
comp=Z,1µm,21.0s
MOS Moscow 118.01 328 *i* PKIKP PKPdf 06 21 52.6 +1.8
MOS *e* 06 23 02.4
MOS pmax pmax
comp=Z,36nm,1.1s
ZEI Tsey 118.05 313 *i* PKIKP PKPdf 06 21 56.5 +4.9
ZEI pmax pmax
comp=Z,14nm,2.0s
BLA Blacksburg 118.06 54 PFAKE 06 22 00.0 +8.4
BLA LR LR
comp=Z,1µm,20.0s
ONI Oni 118.42 313 P PKPdf 06 21 48.3 -3.8
AKH Akhalkalaki 118.63 311 P PKPdf 06 21 54.3 +1.6
KIV Kislovodsk 118.67 314 *i* PKIKP PKPdf 06 21 56.9 +4.3
KIV 06 29 00.0
KIV *e*SS SS 06 39 41.7 +15
KIV pmax pmax
comp=Z,12nm,1.7s
KIV MLR MLR
comp=Z,2µm,22.0s
OTAV Otavalo 118.67 96 PFAKE 06 22 10.0 +16
OTAV LR LR
comp=Z,1µm,19.0s
NHSC New Hope 118.75 58 PFAKE 06 22 00.0 +7.1
NHSC LR LR
comp=Z,2µm,20.0s
BCIP Isla Barro Col 118.80 85 PFAKE 06 22 10.0 +16
BCIP LR LR
comp=Z,856nm,20.0s
OBN Obninsk 118.82 328 *i* PKIKP PKPdf 06 21 56.0 +3.6
OBN *e* 06 22 04.0
OBN 06 23 10.0
OBN *e* 06 28 54.6
OBN *e*PS PS 06 32 57.7 -1.0
OBN pmax pmax
comp=Z,28nm,1.8s
OBN MLR MLR
comp=Z,3µm,19.0s
VSR Storozhevoye 118.86 323 *i* PKIKP PKPdf 06 21 52.1 -0.5
VSR pmax pmax
comp=Z,4.0nm,0.7s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,6.0nm,1.0s
VSR MLR MLR
comp=Z,2µm,19.0s
VSR MLR MLR
comp=N,770nm,18.0s
VSR MLR MLR
comp=E,1µm,17.0s
VORD Divnogorie 118.87 323 *i* PKIKP PKPdf 06 21 51.8 -0.8
VORD pmax pmax
comp=Z,3.0nm,0.8s
VORD pmax pmax
comp=N,9.0nm,0.7s
VORD pmax pmax
comp=E,20nm,0.9s
VORD MLR MLR
comp=N,950nm,20.0s
VORD MLR MLR
comp=Z,2µm,20.0s
VORD MLR MLR
comp=E,810nm,17.0s
SFJD Kangerlussuaq 119.63 14 PFAKE 06 22 10.0 +16
SFJD LR LR
comp=Z,1µm,20.0s
SFJD Kangerlussuaq 119.63 14 *i* P PKPdf 06 21 56.4 +2.8
SFJD
comp=Z,1µm,24.0s
SFJD Kangerlussuaq 119.63 14 *i* P PKKPbc 06 31 57.3 -10
SFJD *e*S PS 06 33 16.1 +11
KAF Kangasniemi 119.76 338 *e*PKIKP PKPdf 06 21 52.8 -1.2
KAF pmax pmax
comp=Z,3.0nm,0.7s
KAF Kangasniemi 119.76 338 *e*p PKPdf 06 21 52.8 -1.2
comp=Z,3.1nm,0.7s
FINES FINESS Array B 120.26 337 PKP PKPdf 06 21 54.8 -0.2
FINES FINESS Array B 120.26 337 PKP PKPdf 06 21 54.8 -0.2

comp=Z,4.9nm,0.9s,baz=70,slow=6.3,SNR=12
CBN Corbin 120.28 52 PFAKE 06 22 10.0 +14
CBN LR LR
comp=Z,2µm,20.0s
CNNC Cliffs of the 120.36 55 PFAKE 06 22 10.0 +14
CNNC LR LR
comp=Z,2µm,19.0s
BINY Binghamton 120.47 47 PFAKE 06 22 10.0 +14
BINY LR LR
comp=Z,3µm,20.0s
LONY Lake Ozonia 120.83 44 PFAKE 06 22 10.0 +13
LONY LR LR
comp=Z,1µm,19.0s
SOC Sochi 120.84 315 *i* PKIKP **PKPdf 06 21 55.7 -1.0**
SOC *e*SS SS 06 39 54.3 -0.4
SOC *e*SSS SSS 06 44 18.1
NCB Newcomb 121.26 45 PFAKE 06 22 10.0 +12
NCB LR LR
comp=Z,2µm,20.0s
SCHQ Schefferville 121.51 31 PKP **PKPdf 06 21 57.4 -0.2**
SCHQ Schefferville 121.51 31 PKP **PKPdf 06 21 57.4 -0.2**
comp=Z,2.6nm,0.8s,baz=319,slow=6.3,SNR=4.3
MTDJ Mount Denham 121.73 75 PFAKE 06 22 10.0 +11
MTDJ LR LR
comp=Z,607nm,20.0s
VSU Vasula 121.80 334 *i* PKIKP **PKPdf 06 22 00.8 +2.8**
ANN Anapa 122.06 316 *e*PKIKP **PKPdf 06 21 58.8 -0.2**
ANN pmax pmax
comp=Z,65nm,1.3s
ANN MLR MLR
comp=N,1µm,25.0s
ANN MLR MLR
comp=E,3µm,25.0s
ANN MLR MLR
comp=Z,2µm,25.0s
LBNH Lisbon 122.76 44 PFAKE 06 22 10.0 +10
LBNH LR LR
comp=Z,2µm,19.0s
BOSA Boshof 123.01 226 PKP **PKPdf 06 22 01.4 -0.2**
BOSA Boshof 123.01 226 PKP **PKPdf 06 22 01.4 -0.2**
comp=Z,2.5nm,0.6s,baz=132,slow=2.8,SNR=6.1
MALT Malatya 123.10 309 PFAKE 06 22 10.0 +8.7
MALT LR LR
comp=Z,1µm,20.0s
LPAZ La Paz 123.27 118 PKP **PKPdf 06 22 02.9 -0.1**
LPAZ La Paz 123.27 118 PKP **PKPdf 06 22 02.9 -0.1**
comp=Z,1.7nm,0.8s,baz=182,slow=2.6,SNR=6.3
SUR Sutherland 123.53 219 PFAKE 06 22 10.0 +7.5
SUR LR LR
comp=Z,2µm,21.0s
GTBY Guantanamo Bay 124.04 73 PFAKE 06 22 20.0 +17
GTBY LR LR
comp=Z,725nm,22.0s
KMBO Kilima Mbogo 124.17 261 PFAKE 06 22 20.0 +16
KMBO LR LR
comp=Z,1µm,22.0s
AKASG Malin Array Be 124.78 326 PKIKP **PKPdf 06 22 04.2 +0.2**
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKASG Malin Array Be 124.78 326 PKP **PKPdf 06 22 04.2 +0.2**
AKASG Malin Array Be 124.78 326 PKP **PKPdf 06 22 04.2 +0.2**
comp=Z,4.8nm,0.8s,baz=64,slow=2.1,SNR=15
AK01 Malin Array Si 124.79 326 *e*PKPdf **PKPdf 06 22 05.8 +1.8**
KIEV Kiev 124.79 326 *e*PKIKP **PKPdf 06 22 03.5 -0.5**
KIEV MLR MLR
comp=Z,3µm,22.0s
KIEV Kiev 124.79 326 *e*PKPdf **PKPdf 06 22 03.5 -0.5**
KIEV LR LR
comp=Z,3µm,22.0s
AK02 Malin Array Si 124.81 326 *e*PKPdf **PKPdf 06 22 06.2 +2.2**
HFS Hagfors 125.50 341 PKP **PKPdf 06 22 04.7 -0.4**
HFS Hagfors 125.50 341 PKP **PKPdf 06 22 04.7 -0.4**
comp=Z,7.6nm,0.9s,baz=45,slow=2.3,SNR=11
NB2 NORSAR Subarra125.51 343 PKPdf **PKPdf 06 22 05.9 +0.7**
comp=Z,5.5nm,1.0s,baz=39,slow=1.9
NB2 NORSAR Subarra125.51 343 PKPdf **PKPdf 06 22 05.9 +0.7**
baz=39,slow=1.9
NOA NORSAR Array B125.51 343 PKP **PKPdf 06 22 04.2 -1.0**
NOA PKKPbc **PKKPbc 06 31 44.6 +0.5**
NOA NORSAR Array B125.51 343 PKP **PKPdf 06 22 04.2 -1.0**
comp=Z,5.0nm,0.9s,baz=37,slow=2.0,SNR=12
NOA PKKPbc **PKKPbc 06 31 44.6 +0.5**
comp=Z,0.8nm,0.7s,baz=214,slow=4.2,SNR=3.5
ASF Jabal al Asfar 125.58 302 PKP **PKPdf 06 22 07.0 +0.7**
ASF Jabal al Asfar 125.58 302 PKP **PKPdf 06 22 07.0 +0.7**
comp=Z,7.7nm,0.7s,baz=127,slow=2.0,SNR=3.6
NC602 NORSAR Array S 125.67 343 *e*PP PP 06 23 55.9 -1.0
BORG Borgarnes 126.02 2 PFAKE 06 22 20.0 +14
BORG LR LR
comp=Z,1µm,20.0s
SUW Suwalki 126.06 332 *e*PKIKP **PKPdf 06 22 06.7 +0.3**
SUW Suwalki 126.06 332 *e*PKPdf **PKPdf 06 22 06.7 +0.3**
BR131 Keskin Array S 126.31 312 *e*PKPdf **PKPdf 06 22 07.7 +0.2**
BRTR Keskin Array B 126.31 312 PKP **PKPdf 06 22 06.9 -0.6**
BRTR PP **PP 06 24 05.9 +3.4**
BRTR Keskin Array B 126.31 312 PKP **PKPdf 06 22 06.9 -0.6**
comp=Z,5.0nm,1.1s,baz=134,slow=3.6,SNR=12
BRTR PP **PP 06 24 05.9 +3.4**
comp=Z,1.8nm,0.9s,baz=267,slow=4.9,SNR=3.8
CPUP Villa Florida 126.64 134 PKP **PKPdf 06 22 08.0 -0.4**
CPUP Villa Florida 126.64 134 PKP **PKPdf 06 22 08.0 -0.4**
comp=Z,2.6nm,0.7s,baz=90,slow=20,SNR=4.0
MMAI Mount Meron Ar 126.66 303 PKP **PKPdf 06 22 08.1 -0.2**
MMAI Mount Meron Ar 126.66 303 PKP **PKPdf 06 22 08.1 -0.2**
comp=Z,0.9nm,0.3s,baz=46,slow=3.6,SNR=3.7
KIS Kishinev 126.77 322 *e*PKIKP **PKPdf 06 22 10.0 +2.1**
KIS *e* 06 22 19.0
KIS *e* 06 24 12.0
KIS *e*PS PS 06 33 58.0 -12
KIS MLR MLR
comp=Z,2µm,20.0s
KIS MLR MLR
comp=N,2µm,19.0s
KIS MLR MLR
comp=E,1µm,19.0s
KIS MLR MLR
comp=Z,2µm,22.0s
KIS Kishinev 126.77 322 *e*PKP **PKPdf 06 22 10.0 +2.1**
KIS Kishinev 126.77 322 *e*PP PP 06 24 12.0 +7.1
KIS *e*SKP 06 25 40.0
KIS Kishinev 126.77 322 *e*PS PS 06 33 58.0 -12
KIS LRM MLR 07 14 58.0
comp=Z,900nm,19.0s
ANTO Ankara 126.89 312 *e*PKIKP **PKPdf 06 22 09.1 +0.6**
ANTO MLR MLR
comp=Z,741nm,19.0s
ANTO Ankara 126.89 312 *e*PKPdf **PKPdf 06 22 09.1 +0.6**
ANTO LR LR
comp=Z,741nm,19.0s
ANTO Ankara 126.89 312 P **PKPdf 06 22 13.3 +4.8**
SNR=7.0
BER Bergen 127.61 346 *e*PP PP 06 24 12.3 +2.6
BER AMS AMS 07 20 47.5
comp=Z,1µm,18.1s
SDDR Presa de Saban 127.66 74 PFAKE 06 22 20.0 +9.5
SDDR LR LR
comp=Z,1µm,19.0s
EIL Elat 127.66 299 PKP **PKPdf 06 22 11.2 +1.0**
EIL Elat 127.66 299 PKP **PKPdf 06 22 11.2 +1.0**
comp=Z,5.0nm,0.7s,baz=15,slow=2.1,SNR=6.0
GRTK Grand Turk 127.72 71 PFAKE 06 22 20.0 +10
GRTK LR LR
comp=Z,814nm,21.0s
LSZ Lusaka 127.77 241 *e*PKPdf **PKPdf 06 22 11.4 +0.5**
LSZ LR LR
comp=Z,3µm,21.0s
CSS Prodhromos 127.89 306 PFAKE 06 22 20.0 +10
CSS LR LR
comp=Z,2µm,21.0s
CFR Carcaliu 128.02 320⇑ *i*P **PKPdf 06 22 12.9 +2.5**
LVV L'vov 128.08 327 *i* PKIKP **PKPdf 06 22 14.2 +3.8**
LVV *e*PPP PPP 06 27 00.0
LVV *e* 06 29 15.0
LVV *e*PS **PS 06 34 15.0 -5.9**
LVV MLR MLR
comp=Z,2µm,20.0s
BEL Belsk 128.54 330 *e*PKP **PKPdf 06 22 16.1 +4.9**
BUR08 Bucovina Ar. S 128.60 324 *e*PKPdf **PKPdf 06 22 13.7 +2.1**
KWP Kalwaria Pacla 128.90 327 PFAKE 06 22 20.0 +8.1
KWP LR LR
comp=Z,4µm,21.0s
ISP Isparta 129.23 310 PFAKE 06 22 20.0 +6.9
ISP LR LR
comp=Z,718nm,20.0s
GKP Gorka Klasztor 129.23 334 *e*PKP **PKPdf 06 22 16.2 +3.8**

MLR Muntele Rosu 129.24 321 PKP **PKPdf 06 22 14.8 +1.9**
MLR Muntele Rosu 129.24 321⇓ *i*P **PKPdf 06 22 15.1 +2.2**
MLR Muntele Rosu 129.24 321 PKP **PKPdf 06 22 14.8 +1.9**
comp=Z,1.3nm,1.0s,baz=328,slow=4.2,SNR=10.0
KOLS Kolonicke sedl 129.53 327 *e*PKIKP **PKPdf 06 22 13.8 +0.6**
KOLS Kolonicke sedl 129.53 327 *e*PKP **PKPdf 06 22 13.8 +0.6**
UZH Uzhgorod 129.69 326 *i* PKIKP **PKPdf 06 22 17.7 +4.3**
UZH *e* 06 24 27.7
UZH *e* 06 29 18.0
UZH MLR MLR
comp=Z,2µm,20.0s
TRPA Tarpa 129.84 326⇓ *i*P **PKPdf 06 22 18.0 +4.3**
TRPA Tarpa 129.84 326⇓ *e*PKPdf **PKPdf 06 22 18.0 +4.3**
CRVS Cervenica-Dubn 129.98 327 *e*PKIKP **PKPdf 06 22 14.1 +0.1**
CRVS Cervenica-Dubn 129.98 327 *e*PKP **PKPdf 06 22 14.1 +0.1**
OJC Ojcow 130.04 329 *i* PKIKP **PKPdf 06 22 18.3 +4.2**
OJC *e* 06 24 35.1
OJC *e*SP SP 06 34 32.9 0.0
OJC MLR MLR
comp=Z,4µm,22.7s
OJC Ojcow 130.04 329 *e*PKiKP **PKPdf 06 22 18.3 +4.2**
OJC *e*PP PP 06 24 35.1 +9.0
OJC *e*SP SP 06 34 32.9 0.0
OJC *e*SS SS 06 42 00.6 +11
OJC L L 07 18 53.1
comp=Z,4µm,22.7s
NIE Niedzica 130.28 328 *i* PKIKP **PKPdf 06 22 16.2 +1.6**
NIE *e* 06 24 28.3
NIE Niedzica 130.28 328 *e*PKiKP **PKPdf 06 22 16.2 +1.6**
NIE *e*PP PP 06 24 18.3 -9.4
DRGR 130.49 324⇓ *i*P **PKPdf 06 22 19.5 +4.3**
MBAR Mbarara 130.61 260 PFAKE 06 22 30.0 +14
MBAR LR LR
comp=Z,818nm,21.0s
SAML Samuel 130.63 112 PFAKE 06 22 30.0 +14
SAML LR LR
comp=Z,759nm,22.0s
OKC Ostrava-Krasne 131.11 330 *e*PP PP 06 24 25.4 -7.6
OKC AMS AMS 07 19 00.0
comp=Z,3µm,23.0s
RUE Ruedersdorf 131.27 335 *e*PKPdf **PKPdf 06 22 18.4 +2.1**
KSP Ksiaz 131.33 332 *e*PKIKP **PKPdf 06 22 21.5 +5.0**
KSP *e* 06 24 32.0
KSP *e*PPS PPS 06 36 20.0
KSP *e*SS SS 06 42 04.0 -0.8
KSP Ksiaz 131.33 332 *e*PKP **PKPdf 06 22 21.5 +5.0**
PSZ Piszkesteto 131.41 327 PFAKE 06 22 30.0 +13
PSZ LR LR
comp=Z,3µm,21.0s
PSZ Piszkesteto 131.41 327⇓ *i*P **PKPdf 06 22 17.5 +0.6**
PSZ Piszkesteto 131.41 327⇓ *e* **PKPdf 06 22 21.5 +4.6**
MORC Moravsky Berou 131.44 330 *e*PKIKP **PKPdf 06 22 18.5 +1.7**
MORC Moravsky Berou 131.44 330 *e*PKPdf **PKPdf 06 22 18.5 +1.7**
MORC Moravsky Berou 131.44 330⇓ *i*P **PKPdf 06 22 21.8 +5.0**
BSEG Bad Segeberg 131.51 338 *e*PKIKP **PKPdf 06 22 19.0 +2.3**
BSEG Bad Segeberg 131.51 338 *e*PKPdf **PKPdf 06 22 19.0 +2.3**
VYHS Vyhne 131.61 328 *e*PKIKP **PKPdf 06 22 21.9 +4.7**
VYHS Vyhne 131.61 328 *e*PKP **PKPdf 06 22 21.9 +4.7**
DPC Dobruska-Polom 131.65 331 *e*PKIKP PKPdf 06 22 22.5 +5.3
DPC *e* 06 24 33.9
DPC MLR MLR
comp=Z,2µm,18.7s
DPC Dobruska-Polom 131.65 331 *e*PKP PKPdf 06 22 22.5 +5.3
DPC *ex* x 06 22 47.0
DPC *e*PP **PP 06 24 33.9 -2.6**
DPC AMS AMS 07 22 40.0
comp=Z,2µm,18.7s
UPC Upice 131.69 332 *e*PKIKP PKPdf 06 22 22.7 +5.5
UPC Upice 131.69 332 *e*PKP PKPdf 06 22 22.7 +5.5
UPC *ex* x 06 22 47.7
BBSR BB Station 131.70 56 PFAKE 06 22 30.0 +12
BBSR LR LR
comp=Z,1µm,21.0s
PKSN Nyarlorinc 132.03 326⇑ *e*PKPdf PKPdf 06 22 23.9 +6.0
BUD Budapest 132.14 327⇓ *e*PKPdf **PKPdf 06 22 23.1 +5.0**
VRAC Vranov 132.22 330 PKP **PKPdf 06 22 19.8 +1.5**
VRAC Vranov 132.22 330 PKP **PKPdf 06 22 19.8 +1.5**
comp=Z,1.8nm,0.3s,baz=85,slow=23,SNR=9.0
PKS7 Kunszentmiklos 132.33 326⇑ *e*PKPdf PKPdf 06 22 24.1 +5.6
PVCC Panska Ves 132.33 333 *e*PKIKP **PKPdf 06 22 21.7 +3.3**
PVCC MLR MLR
comp=Z,3µm,20.9s
PVCC Panska Ves 132.33 333 *e*PKP **PKPdf 06 22 21.7 +3.3**
PVCC AMS AMS 07 20 30.0
comp=Z,3µm,20.9s
BRG Berggiesshubel 132.37 333 *i* PKP **PKPdf 06 22 20.3 +1.8**
comp=Z,14nm,1.5s
BRG PP **PP 06 24 36.0 -5.0**
BRG *i* PKS **PKSdf 06 25 54.8 +0.1**
comp=Z,88nm,1.9s
BRG *e* 06 35 01.6
comp=Z,13nm,1.7s
BRG SS SS 06 42 14.0 -3.3
BRG
comp=N,2µm,21.2s
BRG
comp=E,819nm,18.6s
BRG
comp=Z,2µm,18.6s
BRG Berggiesshubel 132.37 333 *i* PKIKP **PKPdf 06 22 20.3 +1.8**
BRG *e* 06 35 01.6
BRG SS SS 06 42 14.0 -3.3
BRG pmax pmax
comp=Z,14nm,1.5s
BRG pmax pmax
comp=Z,88nm,1.9s
BRG pmax pmax
comp=Z,13nm,1.7s
BRG MLR MLR
comp=N,2µm,21.2s
BRG MLR MLR
comp=E,819nm,18.6s
BRG MLR MLR
comp=Z,2µm,18.6s
BRG Berggiesshubel 132.37 333 *e*PKPdf **PKPdf 06 22 20.6 +2.1**
VTS Vitosha 132.38 319⇑ *i*P **PKPdf 06 22 21.5 +2.5**
CLL Collm 132.46 334⇓ *i*PKIKP **PKPdf 06 22 23.4 +4.8**
CLL *e* 06 22 31.0
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL MLR MLR
comp=Z,2µm,21.8s
CLL Collm 132.46 334 *e*PKPdf **PKPdf 06 22 20.4 +1.8**
CLL Collm 132.46 334 *e*PKPdf **PKPdf 06 22 17.0 -1.6**
CLL ⇓ *i*pPKPdf **PKPdf 06 22 23.4 +4.8**
comp=Z,17nm,1.1s
CLL *e* 06 22 31.0
CLL *e*PP **PP 06 24 42.0 +0.5**
CLL *e*PKSbc **PKSbc 06 25 45.0 -1.6**
CLL *i* PKSdf **PKSdf 06 25 54.5 -0.3**
comp=Z,117nm,2.0s
CLL *e*SKSac SKSac 06 29 42.0 +14
CLL *e*SKKSac **SKKSac 06 31 31.0 -4.9**
CLL *e*Sdif **Sdif 06 32 57.0 +4.2**
CLL *e*PS **PS 06 34 52.0 -6.6**
CLL *e*PPS PPS 06 36 36.0
CLL *e*SS **SS 06 42 22.0 +3.6**
CLL *e* 06 43 39.0
CLL *e*SSS SSS 06 47 10.0
CLL *e* 06 48 18.0
CLL *e*SSSS 06 51 12.0
CLL Lm MLR 07 22 00.0
comp=Z,2µm,21.8s
PKSG 132.53 327⇓ *e*PKPdf **PKPdf 06 22 23.8 +4.9**
SJG San Juan 132.56 75 PFAKE 06 22 30.0 +10
SJG LR LR
comp=Z,596nm,20.0s
FBE Freiberg 132.59 334 *e*PKPdf **PKPdf 06 22 21.4 +2.5**
PKS2 Kecel 132.64 326⇑ *e*PKPdf PKPdf 06 22 25.0 +5.9
PRA Prague 132.72 332 PKP **PKPdf 06 22 20.0 +0.9**
PRA PP **PP 06 24 41.0 -2.3**
PRA *ex* x 06 25 59.0
NRDL Niedersach Rie 132.72 337 *e*PKPdf **PKPdf 06 22 21.3 +2.3**
PRU Pruhonice 132.73 332 *e*PKIKP **PKPdf 06 22 22.9 +3.7**
PRU *e* 06 24 44.8
PRU *e* 06 42 25.1
PRU MLR MLR
comp=Z,2µm,23.4s
PRU Pruhonice 132.73 332 *e*PKP **PKPdf 06 22 22.9 +3.7**
PRU *e*PP **PP 06 24 44.8 +1.5**
PRU *e*SKP 06 25 43.4
PRU *e*SS SS 06 42 25.1 +3.3
PRU AMS AMS 07 18 10.0

comp=Z,2µm,23.4s
TREC Trest 132.76 331 *e*PKIKP **PKPdf 06 22 24.2 +4.9**
TREC MLR MLR
comp=Z,3µm,24.3s
TREC Trest 132.76 331 *e*PKP **PKPdf 06 22 24.2 +4.9**
TREC AMS AMS 07 17 20.0
comp=Z,3µm,24.3s
PKST T"s 132.81 327⇑ *e*PKPdf PKPdf 06 22 24.8 +5.4
NEUB Neuenburg 133.05 335 *e*PKPdf **PKPdf 06 22 21.8 +2.1**
PKS9 Tamasi 133.09 326⇓ *e*PKPdf **PKPdf 06 22 24.6 +4.6**
PKSM Moragy 133.12 326⇑ *i*P **PKPdf 06 22 24.0 +4.0**
PKSM Moragy 133.12 326⇑ *e*PKPdf **PKPdf 06 22 23.7 +3.7**
CLZ Clausthal 133.13 336 *e*PKPdf **PKPdf 06 22 22.3 +2.4**
SOP Sopron 133.31 329⇓ *e*PKPdf PKPdf 06 22 25.6 +5.3
TANN Tannenbergstha 133.35 334 *e*PKPdf **PKPdf 06 22 22.6 +2.2**
WERD Werda 133.39 334 *e*PKPdf **PKPdf 06 22 22.4 +1.9**
PLN Plauen 133.43 334 *e*PKPdf **PKPdf 06 22 22.7 +2.2**
GUNZ Gunzen 133.44 334 *e*PKPdf **PKPdf 06 22 22.7 +2.1**
WERN Wernitzgruen 133.48 334 *e*PKPdf **PKPdf 06 22 23.0 +2.4**
NKC Novy Kostel 133.49 334 *e*PKIKP **PKPdf 06 22 22.1 +1.5**
NKC Novy Kostel 133.49 334 *e*PKP **PKPdf 06 22 22.1 +1.5**
NKC *e*SKP 06 25 49.7
MOX Moxa 133.54 335 *e*PKIKP **PKPdf 06 22 22.8 +2.1**
MOX Moxa 133.54 335 *e*PKPdf **PKPdf 06 22 22.8 +2.1**
KHC Kasperske Hory 133.78 332 *e*PKIKP **PKPdf 06 22 24.3 +3.1**
KHC *e* 06 24 46.8
KHC *e* 06 42 35.0
KHC MLR MLR
comp=Z,3µm,24.7s
KHC Kasperske Hory 133.78 332 *e*PKPdf **PKPdf 06 22 23.7 +2.5**
KHC Kasperske Hory 133.78 332 *e*PKP **PKPdf 06 22 20.0 -1.2**
KHC *ex* x 06 22 24.3
KHC *ex* x 06 22 52.6
KHC *e*PP **PP 06 24 46.8 -3.3**
KHC *e*SS SS 06 42 35.0 +0.4
KHC AMS AMS 07 16 20.0
comp=Z,3µm,24.7s
MANZ Manzenberg 133.82 334 *e*PKPdf **PKPdf 06 22 23.5 +2.2**
GEC2 GERESS Array S 133.92 332 *e*PKIKP **PKPdf 06 22 23.4 +1.8**
GEC2 GERESS Array S 133.92 332 *e*PKPdf **PKPdf 06 22 23.4 +1.8**
GERES GERESS Array B 133.92 332 PKP **PKPdf 06 22 21.4 -0.2**
GERES PP PP 06 24 59.2 +8.1
GERES GERESS Array B 133.92 332 PKP **PKPdf 06 22 21.4 -0.2**
comp=Z,5.8nm,1.0s,baz=329,slow=0.8,SNR=7.9
GERES PP PP 06 24 59.2 +8.1
comp=Z,3.2nm,1.2s,baz=61,slow=6.4,SNR=5.0
ROTZ Rotzenmuhle 133.94 333 *e*PKPdf **PKPdf 06 22 23.6 +2.1**
BEHE Becsehely 133.98 327⇓ *e*PKPdf PKPdf 06 22 13.9 -7.7
UBBA Unterbreizbach 134.07 336 *e*PKPdf **PKPdf 06 22 23.8 +2.3**
WET Wettzell 134.09 332 *e*PKIKP **PKPdf 06 22 24.1 +2.3**
WET Wettzell 134.09 332 *e*PKPdf **PKPdf 06 22 24.1 +2.3**
EKA Eskdalemuir Ar 134.09 349 PKP **PKPdf 06 22 22.5 +0.9**
EKA Eskdalemuir Ar 134.09 349 PKP **PKPdf 06 22 22.5 +0.9**
comp=Z,3.1nm,0.9s,baz=38,slow=4.2,SNR=3.7
ESK Eskdalemuir 134.12 349 PFAKE 06 22 30.0 +8.4
ESK LR LR
comp=Z,2µm,22.0s
TSUM Tsumeb 134.28 230 PFAKE 06 22 30.0 +6.8
TSUM LR LR
comp=Z,4µm,19.0s
GRF Grafenberg Arr 134.42 334 *e*PKIKP **PKPdf 06 22 24.6 +2.2**
GRF MLR MLR
comp=Z,2µm,21.8s
GRF Grafenberg Arr 134.42 334 *e*PKPdf **PKPdf 06 22 24.6 +2.2**
GRF *e*L L 07 23 38.0
comp=Z,2µm,21.8s
BUG Bochum--Univer 134.62 338 *e*PKPdf **PKPdf 06 22 24.6 +1.9**
PERS Pernice 134.74 328 *e*PKPdf **PKPdf 06 22 24.0 +0.8**
PERS *e*PP **PP 06 25 01.5 +5.1**
PERS *e* 06 25 52.1
SPB Sao Paulo 135.11 140 PFAKE 06 22 40.0 +16
SPB LR LR
comp=Z,826nm,20.0s
RJOB Jochberg 135.13 331 *e*PKPdf **PKPdf 06 22 25.7 +1.8**
TIR Tirane 135.16 319 PFAKE 06 22 40.0 +16
TIR LR LR
comp=Z,3µm,22.0s
KBA Koelnbreinsper 135.33 330⇑ *i*PKIKP **PKPdf 06 22 26.5 +2.1**
KBA Koelnbreinsper 135.33 330⇑ *i*PKiKP **PKPdf 06 22 26.5 +2.1**
comp=Z,17nm,1.0s
KBA Koelnbreinsper 135.33 330⇑ *i*P **PKPdf 06 22 26.5 +2.1**
LJU Ljubljana 135.44 328 *e*PKPdf **PKPdf 06 22 23.5 -0.9**
TOD Tromm 135.50 336 PKIKP **PKPdf 06 22 25.6 +1.2**
TOD Tromm 135.50 336 PKP **PKPdf 06 22 25.6 +1.2**
CADS Cadrg 135.72 329 *e*PKPdf **PKPdf 06 22 23.6 -1.4**
ABTA Abfaltersbach 135.97 330⇑ *i*PKPdf **PKPdf 06 22 21.7 -3.8**
comp=Z,14nm,1.1s
ABTA Abfaltersbach 135.97 330⇑ *i*P **PKPdf 06 22 21.7 -3.8**
STU Stuttgart 135.99 335 *e*PKIKP **PKPdf 06 22 26.6 +1.2**
STU Stuttgart 135.99 335 *e*PKPdf **PKPdf 06 22 26.6 +1.2**
RUP Ruppelstein 136.11 337 PKIKP **PKPdf 06 22 23.4 -2.2**
RUP Ruppelstein 136.11 337 PKP **PKPdf 06 22 23.4 -2.2**
LANF Langenberg 136.40 336 PKIKP **PKPdf 06 22 28.4 +2.3**
LANF Langenberg 136.40 336 PKP **PKPdf 06 22 28.4 +2.3**
LANF Langenberg 136.40 336 PKP **PKPdf 06 22 28.4 +2.3**
WLF Walferdange 136.49 338 PKP **PKPdf 06 22 24.4 -1.8**
WLF Walferdange 136.49 338 *e*PKPdf **PKPdf 06 22 28.3 +2.1**
WLF Walferdange 136.49 338 PFAKE 06 22 40.0 +14
WLF LR LR
comp=Z,2µm,22.0s
GIVF Givet 136.61 339 *e*PKIKP **PKPdf 06 22 24.7 -1.7**
comp=Z,52nm,1.2s
GIVF Givet 136.61 339 *e*PKIKP **PKPdf 06 22 24.7 -1.7**
GIVF Givet 136.61 339 *e*PKPdf **PKPdf 06 22 24.7 -1.7**
FETA Feichten 136.62 332⇓ *i*PKPdf **PKPdf 06 22 22.9 -3.9**
comp=Z,16nm,1.0s
BFO Black Forest 136.69 335 PFAKE 06 22 40.0 +13
BFO LR LR
comp=Z,2µm,20.0s
ANWB Willy Bob 136.73 76 PFAKE 06 22 40.0 +12
ANWB LR LR
comp=Z,591nm,20.0s
BAIF Baives 136.86 339 *e*PKIKP **PKPdf 06 22 24.4 -2.5**
BAIF Baives 136.86 339 *e*PKIKP **PKPdf 06 22 24.4 -2.5**
BAIF Baives 136.86 339 *e*PKPdf **PKPdf 06 22 24.4 -2.5**
GRGR Grenville 136.86 84 PFAKE 06 22 40.0 +12
GRGR LR LR
comp=Z,645nm,19.0s
CDF Champ du Feu 137.06 336 *e*PKIKP **PKPdf 06 22 25.0 -2.5**
CDF Champ du Feu 137.06 336 *e*PKIKP **PKPdf 06 22 25.0 -2.5**
CDF Champ du Feu 137.06 336 *e*PKPdf **PKPdf 06 22 25.0 -2.5**
FELD Feldberg im Sc 137.18 335 PKP **PKPdf 06 22 28.6 +0.8**
FELD Feldberg im Sc 137.18 335 PKP **PKPdf 06 22 28.6 +0.8**
DAVOX Davos/Dischmat 137.19 332 PKP **PKPdf 06 22 26.8 -1.1**
DAVOX Davos/Dischmat 137.19 332 PKP **PKPdf 06 22 26.8 -1.1**
comp=Z,6.8nm,0.9s,baz=2.9,slow=13,SNR=6.4
ECH Echery 137.26 336 *e*PKIKP **PKPdf 06 22 28.7 +0.9**
ECH MLR MLR
comp=Z,1µm,22.0s
ECH Echery 137.26 336 *e*PKPdf **PKPdf 06 22 28.7 +0.9**
ECH LR LR
comp=Z,1µm,22.0s
ECH Echery 137.26 336 PKP **PKPdf 06 22 26.9 -0.9**
FDF Fort de France 137.41 80 PFAKE 06 22 40.0 +11
FDF LR LR
comp=Z,701nm,19.0s
PAGF Fort de Pagny 137.56 337 *e*PKIKP **PKPdf 06 22 26.2 -2.1**
comp=Z,12nm,1.3s
PAGF Fort de Pagny 137.56 337 *e*PKPdf **PKPdf 06 22 26.2 -2.1**
MOF Molkenrain 137.56 335 PKIKP **PKPdf 06 22 29.9 +1.5**
MOF Molkenrain 137.56 335 PKP **PKPdf 06 22 29.9 +1.5**
MOF Molkenrain 137.56 335 PKP **PKPdf 06 22 29.9 +1.5**
TUE Stuetta 137.67 332 *e*PKPdf **PKPdf 06 22 31.3 +2.5**
TUE LR LR
comp=Z,3µm,22.0s
HINF Hinteralfeld 137.71 335 *e*PKIKP **PKPdf 06 22 26.1 -2.5**
comp=Z,77nm,1.5s
HINF Hinteralfeld 137.71 335 *e*PKIKP **PKPdf 06 22 26.1 -2.5**
HINF Hinteralfeld 137.71 335 *e*PKPdf **PKPdf 06 22 26.1 -2.5**
THEF They Montfort 137.72 337 PKIKP **PKPdf 06 22 26.5 -2.1**
THEF They Montfort 137.72 337 PKP **PKPdf 06 22 26.5 -2.1**
THEF They Montfort 137.72 337 PKP **PKPdf 06 22 26.5 -2.1**
HAU Haudompre 137.76 336 *e*PKIKP **PKPdf 06 22 26.7 -2.0**
comp=Z,44nm,1.3s
HAU *e*R
comp=Z,2µm,23.0s
HAU Haudompre 137.76 336 *e*PKIKP **PKPdf 06 22 26.7 -2.0**
HAU Haudompre 137.76 336 *e*PKPdf **PKPdf 06 22 26.7 -2.0**
MEZF Maizieres J'vi 137.86 338 *e*PKIKP **PKPdf 06 22 26.7 -2.1**
comp=Z,71nm,1.3s
MEZF Maizieres J'vi 137.86 338 *e*PKPdf **PKPdf 06 22 26.7 -2.1**
SFTF Sexfontaines 138.11 337 *e*PKIKP **PKPdf 06 22 27.3 -2.0**
comp=Z,86nm,1.4s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SFTF	Sexfontaines	138.11	337	ePKPdf	PKPdf	06 22 27.3	-2.0
TIP	Timpagrande	138.33	319	PFAKE		06 22 40.0	+10
TIP				LR	LR		
	comp=Z,2μm,22.0s						
AQU	L'Aquila	138.47	325	PFAKE		06 22 40.0	+10
AQU				LR	LR		
	comp=Z,3μm,22.0s						
CUC	Castrocucco	138.47	320	PFAKE		06 22 40.0	+10
CUC				LR	LR		
	comp=Z,1μm,22.0s						
VLC	Villacollemand	138.86	329	PFAKE		06 22 40.0	+9.2
VLC				LR	LR		
	comp=Z,2μm,22.0s						
OG01	Vacheresse	138.96	334	PKP	PKPdf	06 22 29.8	-1.2
OG01	Vacheresse	138.96	334	PKP	PKPdf	06 22 35.2	+4.2
CABF	La Chapelle	138.98	335	ePKIKP	PKPdf	06 22 28.8	-2.3
	comp=Z,96nm,1.3s						
CABF	La Chapelle	138.98	335	ePKIKP	PKPdf	06 22 28.8	-2.3
CABF	La Chapelle	138.98	335	ePKPdf	PKPdf	06 22 28.8	-2.3
LOR	Lormes	139.33	337	ePKIKP	PKPdf	06 22 29.3	-2.3
	comp=Z,48nm,1.4s						
LOR				eR			
	comp=Z,2μm,20.0s						
LOR	Lormes	139.33	337	ePKPdf	PKPdf	06 22 29.3	-2.3
CEL	Celeste	139.40	318	PFAKE		06 22 40.0	+8.0
CEL				LR	LR		
	comp=Z,1μm,22.0s						
FLN	La Foliniere	139.49	343	ePKIKP	PKPdf	06 22 29.4	-2.4
	comp=Z,76nm,1.4s						
FLN				eR			
	comp=Z,3μm,21.5s						
FLN	La Foliniere	139.49	343	ePKIKP	PKPdf	06 22 29.4	-2.4
FLN	La Foliniere	139.49	343	ePKPdf	PKPdf	06 22 29.4	-2.4
LDF	La Druitiere	139.53	342	ePKIKP	PKPdf	06 22 29.3	-2.6
	comp=Z,66nm,1.5s						
LDF	La Druitiere	139.53	342	ePKIKP	PKPdf	06 22 29.3	-2.6
LDF	La Druitiere	139.53	342	ePKPdf	PKPdf	06 22 29.3	-2.6
LPL	La Plagne	139.57	333	ePKIKP	PKPdf	06 22 29.8	-2.5
	comp=Z,23nm,1.1s						
LPL	La Plagne	139.57	333	ePKIKP	PKPdf	06 22 29.8	-2.5
LPL	La Plagne	139.57	333	ePKPdf	PKPdf	06 22 29.8	-2.5
LPG	La Plagne	139.58	333	ePKIKP	PKPdf	06 22 30.1	-2.3
	comp=Z,45nm,1.3s						
LPG	La Plagne	139.58	333	ePKIKP	PKPdf	06 22 30.1	-2.3
LPG	La Plagne	139.58	333	ePKPdf	PKPdf	06 22 30.1	-2.3
SSF	Saint Saulge	139.63	338	ePKIKP	PKPdf	06 22 29.9	-2.2
	comp=Z,49nm,1.2s						
SSF	Saint Saulge	139.63	338	ePKIKP	PKPdf	06 22 29.9	-2.2
SSF	Saint Saulge	139.63	338	ePKPdf	PKPdf	06 22 29.9	-2.2
OG35	Corcelles	139.65	335	PKP	PKPdf	06 22 36.1	+3.8
SMF	Signal de Mont	139.85	337	ePKIKP	PKPdf	06 22 30.1	-2.4
	comp=Z,52nm,1.5s						
SMF	Signal de Mont	139.85	337	ePKIKP	PKPdf	06 22 30.1	-2.4
SMF	Signal de Mont	139.85	337	ePKPdf	PKPdf	06 22 30.1	-2.4
AVF	Avril sur Loir	139.92	338	ePKIKP	PKPdf	06 22 30.3	-2.3
	comp=Z,17nm,1.1s						
AVF	Avril sur Loir	139.92	338	ePKIKP	PKPdf	06 22 30.3	-2.3
AVF	Avril sur Loir	139.92	338	ePKPdf	PKPdf	06 22 30.3	-2.3
GRR	Gorron	139.94	343	ePKIKP	PKPdf	06 22 30.5	-2.1
	comp=Z,57nm,1.3s						
GRR	Gorron	139.94	343	ePKIKP	PKPdf	06 22 30.5	-2.1
GRR	Gorron	139.94	343	ePKPdf	PKPdf	06 22 30.5	-2.1
BNI	Bardonecchia	139.96	333	ePKIKP	PKPdf	06 22 31.5	-1.4
BNI				MLR	MLR		
	comp=Z,2μm,19.0s						
BNI	Bardonecchia	139.96	333	ePKPdf	PKPdf	06 22 31.5	-1.4
BNI				LR	LR		
	comp=Z,2μm,19.0s						
BDFB	Brasilia	140.09	131	PKP	PKPdf	06 22 33.7	-0.3
BDFB	Brasilia	140.09	131	PKP	PKPdf	06 22 33.7	-0.3
	comp=Z,3.2nm,0.7s,baz=11,slow=2.5,SNR=3.5						
MBDF	Montbardon	140.17	333	ePKIKP	PKPdf	06 22 31.5	-1.9
	comp=Z,73nm,1.5s						
MBDF	Montbardon	140.17	333	ePKIKP	PKPdf	06 22 31.5	-1.9
MBDF	Montbardon	140.17	333	ePKPdf	PKPdf	06 22 31.5	-1.9
BGF	Bois d'Agland	140.30	338	ePKIKP	PKPdf	06 22 30.7	-2.6
	comp=Z,36nm,1.1s						
BGF	Bois d'Agland	140.30	338	ePKIKP	PKPdf	06 22 30.7	-2.6
BGF	Bois d'Agland	140.30	338	ePKPdf	PKPdf	06 22 30.7	-2.6
SAOF	Saorge	140.37	331	PKP	PKPdf	06 22 32.4	-1.2
ORIF	Oris-en-Rattie	140.41	334	ePKIKP	PKPdf	06 22 31.1	-2.6
	comp=Z,85nm,1.7s						
ORIF				eR			
	comp=Z,2μm,22.8s						
ORIF	Oris-en-Rattie	140.41	334	ePKIKP	PKPdf	06 22 31.1	-2.6
ORIF	Oris-en-Rattie	140.41	334	ePKPdf	PKPdf	06 22 31.1	-2.6
TOUF	Mont Tournerai	140.50	332	PKP	PKPdf	06 22 32.4	-1.6
SBF	Sospel	140.52	331	ePKIKP	PKPdf	06 22 31.3	-2.6
	comp=Z,110nm,1.4s						
SBF	Sospel	140.52	331	ePKIKP	PKPdf	06 22 31.3	-2.6
SBF	Sospel	140.52	331	ePKPdf	PKPdf	06 22 31.3	-2.6
SGMF	Saint Gilles	140.54	344	ePKIKP	PKPdf	06 22 31.5	-2.2
SGMF	Saint Gilles	140.54	344	ePKIKP	PKPdf	06 22 31.5	-2.2
SGMF	Saint Gilles	140.54	344	ePKPdf	PKPdf	06 22 31.5	-2.2
ROSF	Rostrenen	140.65	345	ePKIKP	PKPdf	06 22 31.0	-2.9
	comp=Z,123nm,1.6s						
ROSF	Rostrenen	140.65	345	ePKIKP	PKPdf	06 22 31.0	-2.9
ROSF	Rostrenen	140.65	345	ePKPdf	PKPdf	06 22 31.0	-2.9
SSB	Saint Sauveur	140.69	335	ePKIKP	PKPdf	06 22 34.0	-0.2
SSB				MLR	MLR		
	comp=Z,1μm,22.0s						
SSB	Saint Sauveur	140.69	335	ePKPdf	PKPdf	06 22 34.0	-0.2
SSB				LR	LR		
	comp=Z,1μm,22.0s						
PGF	Pioggiola	140.72	328	ePKIKP	PKPdf	06 22 31.5	-2.9
	comp=Z,164nm,1.4s						
PGF	Pioggiola	140.72	328	ePKIKP	PKPdf	06 22 31.5	-2.9
PGF	Pioggiola	140.72	328	ePKPdf	PKPdf	06 22 31.5	-2.9
TCF	Toulx Ste Croi	140.77	338	ePKIKP	PKPdf	06 22 32.5	-1.7
	comp=Z,34nm,1.2s						
TCF	Toulx Ste Croi	140.77	338	ePKIKP	PKPdf	06 22 32.5	-1.7
TCF	Toulx Ste Croi	140.77	338	ePKPdf	PKPdf	06 22 32.5	-1.7
VIVF	Saint-Julien-l	140.98	335	ePKIKP	PKPdf	06 22 32.2	-2.5
	comp=Z,66nm,1.4s						
VIVF	Saint-Julien-l	140.98	335	ePKIKP	PKPdf	06 22 32.2	-2.5
VIVF	Saint-Julien-l	140.98	335	ePKPdf	PKPdf	06 22 32.2	-2.5
QUIF	Quistinic	141.01	345	ePKIKP	PKPdf	06 22 32.9	-1.6
	comp=Z,172nm,1.6s						
QUIF	Quistinic	141.01	345	ePKIKP	PKPdf	06 22 32.9	-1.6
QUIF	Quistinic	141.01	345	ePKPdf	PKPdf	06 22 32.9	-1.6
FRF	La Foret Royal	141.12	332	ePKIKP	PKPdf	06 22 32.7	-2.2
	comp=Z,48nm,1.2s						
FRF	La Foret Royal	141.12	332	ePKIKP	PKPdf	06 22 32.7	-2.2
FRF	La Foret Royal	141.12	332	ePKPdf	PKPdf	06 22 32.7	-2.2
SMRF	Simiane la Rot	141.29	333	ePKIKP	PKPdf	06 22 34.0	-1.3
	comp=Z,43nm,1.2s						
SMRF	Simiane la Rot	141.29	333	ePKPdf	PKPdf	06 22 34.0	-1.3
MFF	Saint Martin d	141.31	341	ePKIKP	PKPdf	06 22 33.3	-1.8
	comp=Z,47nm,1.1s						
MFF	Saint Martin d	141.31	341	ePKIKP	PKPdf	06 22 33.3	-1.8
MFF	Saint Martin d	141.31	341	ePKPdf	PKPdf	06 22 33.3	-1.8
LMR	La Mourre	141.36	331	ePKIKP	PKPdf	06 22 33.0	-2.3
	comp=Z,66nm,1.4s						
LMR	La Mourre	141.36	331	ePKIKP	PKPdf	06 22 33.0	-2.3
LMR	La Mourre	141.36	331	ePKPdf	PKPdf	06 22 33.0	-2.3
WDD	Wield Dalam	141.62	316	PFAKE		06 22 50.0	+14
WDD				LR	LR		
	comp=Z,758nm,19.0s						
RJF	Les Rejaudoux	141.86	338	ePKIKP	PKPdf	06 22 33.7	-2.5
	comp=Z,95nm,1.4s						
RJF				eR			
	comp=Z,2μm,19.8s						
RJF	Les Rejaudoux	141.86	338	ePKIKP	PKPdf	06 22 33.7	-2.5
RJF	Les Rejaudoux	141.86	338	ePKPdf	PKPdf	06 22 33.7	-2.5
LASF	Ste Croix	141.96	335	ePKIKP	PKPdf	06 22 34.4	-2.0
	comp=Z,61nm,1.2s						
LASF	Ste Croix	141.96	335	ePKPdf	PKPdf	06 22 34.4	-2.0
CAF	Calviac	141.97	337	ePKIKP	PKPdf	06 22 34.4	-2.0
	comp=Z,33nm,1.0s						
CAF	Calviac	141.97	337	ePKIKP	PKPdf	06 22 34.4	-2.0
CAF	Calviac	141.97	337	ePKPdf	PKPdf	06 22 34.4	-2.0
LFF	La Frestale	142.45	338	ePKIKP	PKPdf	06 22 34.8	-2.4
LFF	La Frestale	142.45	338	ePKIKP	PKPdf	06 22 34.8	-2.4
LFF	La Frestale	142.45	338	ePKPdf	PKPdf	06 22 34.8	-2.4
VSL	Villasalto	142.64	325	PFAKE		06 22 50.0	+12
VSL				LR	LR		
	comp=Z,1μm,22.0s						
MTLF	Montolieu	143.24	336	ePKIKP	PKPbc	06 22 36.4	+0.7
	comp=Z,137nm,1.3s						
MTLF	Montolieu	143.24	336	ePKIKP	PKPbc	06 22 36.4	+0.7
MTLF	Montolieu	143.24	336	ePKPdf	PKPbc	06 22 36.4	+0.7
LRDF	Laroque-de-Fa	143.44	335	PKP	PKPbc	06 22 36.9	+0.6
LRDF	Laroque-de-Fa	143.44	335	PKP	PKPbc	06 22 36.9	+0.6
SJAF	Saint Jean de	143.66	334	PKP	PKPbc	06 22 37.0	+0.1
SJAF	Saint Jean de	143.66	334	PKP	PKPbc	06 22 37.0	+0.1
FILF	Fillols	143.74	334	PKP	PKPbc	06 22 36.9	-0.3
FILF	Fillols	143.74	334	PKP	PKPbc	06 22 36.9	-0.3
CARF	Carcanieres	143.80	335	PKP	PKPab	06 22 36.0	-0.8
CARF	Carcanieres	143.80	335	PKP	PKPab	06 22 36.0	-0.8
EPF	Esparros	144.24	337	ePKIKP	PKPab	06 22 38.4	+0.1
	comp=Z,68nm,1.1s						
EPF	Esparros	144.24	337	ePKIKP	PKPab	06 22 38.4	+0.1
EPF	Esparros	144.24	337	ePKPdf	PKPab	06 22 38.4	+0.1
LABF	Labassere	144.33	338	PKP	PKPdf	06 22 39.9	-0.8
LABF	Labassere	144.33	338	PKP	PKPdf	06 22 39.9	-0.8
RESF	Ens	144.43	337	PKP	PKPdf	06 22 41.1	+0.1
RESF	Ens	144.43	337	PKP	PKPdf	06 22 41.1	+0.1
REYF	Montagne du Re	144.48	338	PKP	PKPdf	06 22 40.4	-0.6
REYF	Montagne du Re	144.48	338	PKP	PKPdf	06 22 40.4	-0.6
VIEF	Viey	144.49	337	PKP	PKPdf	06 22 40.4	-0.6
VIEF	Viey	144.49	337	PKP	PKPdf	06 22 40.4	-0.6
ETSF	Etsaut	144.69	338	ePKIKP	PKPdf	06 22 41.0	-0.3
	comp=Z,268nm,0.9s						
ETSF	Etsaut	144.69	338	ePKIKP	PKPdf	06 22 41.0	-0.3
ETSF	Etsaut	144.69	338	ePKPdf	PKPdf	06 22 41.0	-0.3
LARF	Larrau	144.72	339	PKP	PKPdf	06 22 41.4	0.0
LARF	Larrau	144.72	339	PKP	PKPdf	06 22 41.4	0.0
SJPF	Ste Jean	144.74	339	ePKIKP	PKPab	06 22 38.5	-1.6
	comp=Z,350nm,1.5s						
SJPF	Ste Jean	144.74	339	ePKIKP	PKPab	06 22 38.5	-1.6
SJPF	Ste Jean	144.74	339	ePKPdf	PKPab	06 22 38.5	-1.6
KEST	Kesra	145.12	320	PKP	PKPbc	06 22 41.6	-0.2
KEST				ePKPdf	PKPab	06 22 41.7	-0.2
KEST	Kesra	145.12	320	PKP	PKPbc	06 22 41.6	-0.2
	comp=Z,8.1nm,1.0s,baz=213,slow=2.2,SNR=8.8						
CMAH	Djebel Manchou	145.72	323	P	PKPbc	06 22 43.7	0.0
ABSA	Djebel Ababsia	145.92	322	P	PKPdf	06 22 42.8	-0.9
CAEH	'Ain El Ouahch	145.95	324	P	PKPab	06 22 45.8	+1.0
CKFL	Kef-Lekhel	146.29	323	P	PKPdf	06 22 43.8	-0.5
CASM	Ain Smara	146.52	323	P	PKPbc	06 22 46.4	+0.3
SET	Setif	147.19	324	P	PKPab	06 22 49.0	-0.7
PBRG	Braganca	147.63	345	ePKP	PKPbc	06 22 50.0	+1.0
PGAV	Gavieira, Arco	147.84	347	ePKP	PKPbc	06 22 48.7	-1.0
PGAV				eLR	LR	07 14 57.6	
	comp=Z,896nm,20.0s						
POLO	Lamas de Olo	148.29	346	ePKP	PKPbc	06 22 51.7	+0.8
MVO	Moncorvo	148.30	345	ePKP	PKPbc	06 22 52.0	+1.1
MVO				eLQ	LQ	07 04 25.9	
MVO				eLR	LR	07 16 59.0	
	comp=Z,2μm,22.0s						
PVRL	Vila Real	148.37	346	ePKP	PKPbc	06 22 52.0	+1.0
EMHD	Djebel Mahouad	148.55	327	P	PKPab	06 22 54.0	-1.2
ESDC	Sonseca Array	148.74	339	PKPbc	PKPbc	06 22 52.5	+0.5
ESDC				PP	PP	06 26 23.6	+2.5
ESDC	Sonseca Array	148.74	339	PKPbc	PKPbc	06 22 52.5	+0.5
	comp=Z,14nm,1.0s,baz=10,slow=2.9,SNR=18						
ESDC				PP	PP	06 26 23.6	+2.5
	comp=Z,8.7nm,1.1s,baz=19,slow=6.1,SNR=6.3						
ESLA	Sonseca Array	148.74	339	ePKPbc	PKPbc	06 22 52.6	+0.6
PVIS	Viseu	148.94	346	ePKP	PKPbc	06 22 54.4	+1.9
PAB	San Pablo	148.99	340	ePKP2	PKPbc	06 22 52.9	+0.2
PAB				MLR	MLR		
	comp=Z,2μm,20.0s						
PAB	San Pablo	148.99	340	ePKPbc	PKPbc	06 22 52.9	+0.2
PAB				LR	LR		
	comp=Z,2μm,20.0s						
MTE	Manteigas	149.15	345	ePKP	PKPab	06 22 56.2	-1.2
MTE				eSS	SS	06 45 47.7	+15
MTE				eLQ	LQ	07 04 43.5	
MTE				eLR	LR	07 16 23.9	
	comp=Z,2μm,20.0s						
MTE	Manteigas	149.15	345	ePKPdf	PKPdf	06 22 50.0	+1.1
MTE				LR	LR		
	comp=Z,2μm,21.0s						
PCBR	Castelo Branco	149.66	344	ePKP	PKPbc	06 22 55.3	+1.1
PMRV	Marv??o	150.02	344	ePKP	PKPbc	06 22 56.0	+0.8
PMRV				eLR	LR	07 16 25.6	
	comp=Z,1μm,18.0s						
PTOM	Tomar	150.11	346	ePKP	PKPbc	06 22 56.2	+0.9
PGRA	Graciosa	150.37	16	ePKP	PKPbc	06 22 56.6	+0.6
ROSA	Rosais	150.58	17	ePKP	PKPbc	06 22 57.8	+1.3
PMTG	Montargil	150.58	345	ePKP	PKPbc	06 22 56.9	+0.4
PESTR	Estremoz	150.60	344	ePKP	PKPbc	06 22 58.0	+1.4
PMAN	Manadas	150.70	17	ePKP	PKPbc	06 22 58.5	+1.7
ADH	Angra Heroismo	150.92	16	ePKP	PKPbc	06 22 58.6	+1.3
SHEL	Horse Pasture	150.97	204	PFAKE		06 23 00.0	+1.9
SHEL				LR	LR		
	comp=Z,1μm,20.0s						
EVO	Evora	151.03	344	ePKIKP	PKPdf	06 22 50.1	-1.7
	comp=Z,198nm,1.4s						
EVO				eR			
	comp=Z,2μm,22.0s						
EVO	Evora	151.03	344	ePKP	PKPbc	06 22 58.8	+1.2
EVOP	Sao Brissos	151.06	344	ePKIKP	PKPdf	06 22 50.1	-1.7
EVOP	Sao Brissos	151.06	344	ePKPdf	PKPdf	06 22 50.1	-1.7
PBEJ	Beja	151.47	344	ePKP	PKPbc	06 22 59.6	+1.0
PNCL	Nicolau / Gran	151.56	345	ePKP	PKPbc	06 22 57.0	-1.8
PCVE	Castro Verde	151.88	344	ePKP	PKPbc	06 23 00.4	+0.8
PVAQ	Vaqueiros	152.00	343	ePKP	PKPbc	06 22 59.5	-0.4
PVAQ				eSS	SS	06 46 01.8	-2.6
PVAQ				eLQ	LQ	07 06 22.9	
PVAQ				eLR	LR	07 17 20.0	
	comp=Z,2μm,18.0s						
CMLA	Cha da Macela	152.19	13	PFAKE		06 23 00.0	-0.3
CMLA				LR	LR		
	comp=Z,1μm,19.0s						
CMLA	Cha da Macela	152.19	13	ePKP	PKPbc	06 23 02.6	+2.3
MORF	Marmelete	152.35	344	ePKP	PKPbc	06 22 59.1	-1.6
PSMN	Pico do Norte,	153.02	13	ePKP	PKPdf	06 22 58.4	+3.6
TAM	Tamanrasset	154.85	301	ePKIKP	PKPdf	06 22 59.6	+1.6
TAM				MLR	MLR		
	comp=Z,1μm,19.0s						
TAM	Tamanrasset	154.85	301	ePKPdf	PKPdf	06 22 59.6	+1.6
TAM				LR	LR		
	comp=Z,1μm,19.0s						
RTC	Rabat Centre	154.86	339	PFAKE		06 23 10.0	+3.8
RTC				LR	LR		
	comp=Z,2μm,19.0s						
RCBR	Riachuelo	155.46	131	PFAKE		06 23 10.0	+11
RCBR				LR	LR		
	comp=Z,1μm,19.0s						
PMOZ	Porto Moniz, M	158.03	359	eLR	LR	07 19 17.7	
	comp=Z,1μm,20.0s						
TOA0	Torodi Ar. Sit	160.95	279	ePKPdf	PKPdf	06 23 06.5	+1.0
TORD	Torodi Ar. Bea	160.95	279	PKP	PKPdf	06 23 04.4	-1.1
TORD	Torodi Ar. Bea	160.95	279	PKP	PKPdf	06 23 04.4	-1.1
	comp=Z,4.2nm,0.9s,baz=32,slow=0.8,SNR=13						
DBIC	Dimbokro	166.74	253	PKP	PKPdf	06 23 11.4	+0.5
DBIC	Dimbokro	166.74	253	PKP	PKPdf	06 23 11.4	+0.5
	comp=Z,7.4nm,1.0s,baz=65,slow=3.7,SNR=4.8						
LIC	Lamto	166.75	251	ePKIKP	PKPdf	06 23 04.6	-6.3
LIC				eR			
	comp=Z,3μm,21.0s						
LIC	Lamto	166.75	251	ePKPdf	PKPdf	06 23 04.6	-6.3
SACV	Santiago Islan	172.82	54	PFAKE		06 23 20.0	+5.6
SACV				LR	LR		
	comp=Z,2μm,21.0s						

IDC 01 06:21:27.6±4.9**,11°.11S**×**161°.91E,h0km,mb3.6**/3**,**
mb1 3.9/5**,mb1mx3.6**/21**,mbtmp3.8**/5**,ML3.8**/2**,Error**
ellipse: s-maj=89.6km s-min=31.0km az=59.0,
Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.55	311	Pn	Pn	06 22 10.2	0.0
	45nm,0.3s,baz=130,slow=5.1,SNR=8.7						
HNR				Sn	Sg	06 22 48.8	-0.7
	153nm,0.3s,baz=200,slow=22,SNR=8.6						
DZM	Mont Dzumac	11.74	159	Pn	Pn	06 24 17.4	+0.8
	0.2nm,0.3s,baz=0.0,slow=11,SNR=19						
STKA	Stephens Creek	27.91	219	P	P	06 27 18.1	-1.5
	1.1nm,0.7s,baz=25,slow=8.1,SNR=2.1						
WRA	Warramunga Arr	27.94	248	P	P	06 27 20.3	+0.3
	0.3nm,0.5s,baz=78,slow=8.9,SNR=5.1						
ASAR	Alice Springs	29.43	241	P	P	06 27 33.9	+0.6
	0.2nm,0.4s,baz=71,slow=10,SNR=5.5						

KRSC 01 06:24:16.7±1.0**,50°.20N**×**157°.65E,h42km**±42km**,ML3.7,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.09	297	eP	Pn	06 24 34.5	-1.0
SKR				iS	Sn	06 24 47.5	-1.9
PAU	Pauzhetka	1.38	338	eP	Pn	06 24 40.9	+1.5
PAU				iS	Sn	06 24 58.3	+1.9
ASAK	Asacha	2.19	4	eP	Pn	06 24 53.0	+2.3
ASAK				iS	Sn	06 25 19.9	+3.2
RUS	Russkaya	2.30	13	eP	Pn	06 24 53.8	+1.7
RUS				iS	Sn	06 25 20.7	+1.6
MTVR	Mutnovka	2.31	8	eP	Pn	06 24 54.4	+2.0
MTVR				iS	Sn	06 25 22.1	+2.4
GRL	Gorelyy	2.37	6	eP	Pn	06 24 55.8	+2.6
GRL				iS	Sn	06 25 24.3	+3.1
UGLR	Uglovaya	3.10	13	eP	Pn	06 25 06.1	+2.9
UGLR				iS	Sn	06 25 41.8	+2.7
AVH	Avacha	3.14	12	eP	Pn	06 25 07.0	+3.2
AVH				iS	Sn	06 25 43.0	+2.9
SMAR	Somma	3.15	13	eP	Pn	06 25 06.3	+2.3
SMAR				iS	Sn	06 25 41.9	+1.3
KOK	Koryaka	3.16	11	eP	Pn	06 25 07.5	+3.5
SDLR	Sedlovina	3.18	13	eP	Pn	06 25 06.5	+2.2
SDLR				iS	Sn	06 25 42.5	+1.5
GNL	Ganaly	3.50	3	eP	Pn	06 25 11.5	+2.7
MKZ	Mys Kozlova	5.03	28	eP	Pn	06 25 31.1	+1.6
MKZ				iS	Sn	06 26 26.5	+0.3

CSEM ***01*** *06:31:07.4,38°.98N×23°.23E,h14km,ML1.5/1,After THE*
THE 01 06:31:07.4,38°.98N×23°.23E,h14km±2km**,ML1.5**/1**,Error**
ellipse: s-maj=2.5km s-min=0.5km az=138.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIA	Simia	0.10	187	P	Pg	06 31 10.4	-0.1
SMIA				S	Sg	06 31 12.7	0.0
SMIA	Simia	0.10	187	P	Pg	06 31 10.4	-0.1
SMIA				S	Sg	06 31 12.7	0.0
SKIA	Skiathos	0.26	45	P	Pg	06 31 13.1	+0.1
SKIA				S	Sg	06 31 17.1	+0.3
SKIA	Skiathos	0.26	45	P	Pg	06 31 13.1	+0.1
SKIA				S	Sg	06 31 17.1	+0.3
ATAL	Atalanti	0.33	209	P	Pg	06 31 14.1	-0.1
ATAL				S	Sg	06 31 18.4	-0.3
ATAL	Atalanti	0.33	209	P	Pg	06 31 14.1	-0.1
ATAL				S	Sg	06 31 18.4	-0.3
LKR	Lokris	0.37	208	P	Pg	06 31 14.8	-0.2
LKR				S	Sb	06 31 21.2	-0.4
LKR	Lokris	0.37	208	P	Pg	06 31 14.8	-0.2
LKR				S	Sb	06 31 21.2	-0.4
AOS	Alonnisos	0.54	69	P	Pg	06 31 17.4	-0.7
AOS				S	Sg	06 31 25.5	+0.1
AOS	Alonnisos	0.54	69	P	Pg	06 31 17.4	-0.7
AOS				S	Sg	06 31 25.5	+0.1
AGG	Agios Georgios	0.70	274	P	Pg	06 31 20.4	-0.7
AGG	Agios Georgios	0.70	274	P	Pg	06 31 20.4	-0.7

TAP ***01*** *06:38:19.0,24°.48N×122°.11E,h24km,ML3.0,C*
JMA ***01*** *06:38:18.6±0.2,24°.51N×122°.18E,h47km,M2.4*
ISCJB ***01*** *06:38:18.1±0.4,24°.46N±0°.03×122°.23E±0°.02,h16km±6km,*
Error ellipse: s-maj=4.6km s-min=2.9km az=172.7
ISC 01 06:38:18.6±1.0**,24°.50N**±0°.03×**122°.17E**±0°.03**,h25km**±10km**,**
n31,σ1§31/56**,2C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.31	291	⇑iP	Pb	06 38 25.5	-0.3
	baz=293						
TWC				iS	Sn	06 38 29.8	-3.5
	baz=293						
ENA	Nanau	0.39	260	P	Pb	06 38 26.6	-0.5
	baz=265						
ENA				eS	Sb	06 38 31.6	-1.3
	baz=265						
EGS		0.41	329	iP	Pn	06 38 28.0	-0.9
	baz=333						
EGS				S	Sb	06 38 33.8	+0.6
	baz=333						
ILA	Ilan	0.46	305	eP	Pb	06 38 28.6	+0.4
	baz=307						
ILA				eS	Sb	06 38 35.5	+0.7
	baz=307						
TWE	Neicheng	0.51	296	⇑iP	Pb	06 38 29.0	0.0
	baz=298						
TWE				S	Sb	06 38 35.5	-0.5
	baz=298						
TWB1	Santiao Chiao	0.53	343	P	Pn	06 38 30.4	-0.2
	baz=338						
TWB1				S	Sn	06 38 37.8	-1.1
	baz=338						
ENTT	Nioudou	0.56	285	P	Pn	06 38 30.0	-1.1
	baz=287						
ENTT				eS	Sb	06 38 37.5	-0.1
	baz=287						
TWD	Chiawan	0.66	231	eP	Pn	06 38 30.8	-1.7
	baz=231						
TWD				eS	Sn	06 38 40.0	-2.0
	baz=231						
NWF	Wu-fen Shan	0.67	329	eP	Pb	06 38 32.6	+0.8
	baz=323						
NWF				S	Sb	06 38 42.2	+1.5
	baz=323						
NNS	Nan Shan	0.72	266	P	Pn	06 38 32.4	-0.9
	baz=271						
NNS				eS	Sn	06 38 41.5	-2.2
	baz=271						
NSK	Sanguang	0.76	284	iP	Pn	06 38 33.3	-0.5
	baz=288						
NSK				S	Sn	06 38 42.9	-1.6
	baz=288						
YOJ	Yonaguni jima	0.77	92	P	Pn	06 38 33.0	-0.9
YOJ				eS	Sn	06 38 43.5	-1.2
WHF	Hehuan Shan	0.89	247	P	Pn	06 38 35.2	-0.7
	baz=253						
WHF				eS	Sn	06 38 46.8	-1.5
	baz=253						
TWS1	Kuangyinshan	0.91	312	eP	Pb	06 38 37.3	+1.6
	baz=315						
TWS1				eS	Sb	06 38 49.1	+1.7
	baz=315						
TWY	Chenhua	0.93	327	eP	Pb	06 38 37.8	+1.7
	baz=331						
TWY				eS	Sb	06 38 49.0	+1.0
	baz=331						
ESL	Shilin	0.95	225	eP	Pn	06 38 36.4	0.0
	baz=206						
NSTT	Nanjuang	1.07	277	eP	Pb	06 38 39.5	+1.1
	baz=278						
NSTT				eS	Sb	06 38 53.0	+1.0
	baz=278						
TWQ1	Liyutan	1.28	264	eP	Pn	06 38 41.7	+0.8
	baz=263						
TWQ1				eS	Sb	06 38 58.8	+0.7
	baz=263						
SMLT	Sun Moon Lake	1.31	242	eP	Pn	06 38 43.0	+1.6
	baz=226						
SMLT				eS	Sb	06 39 00.1	+1.2
	baz=226						
TYC	Yuchr	1.33	244	eP	Pn	06 38 42.7	+1.1
	baz=228						
TYC				eS	Sb	06 39 00.6	+1.0
	baz=228						
TWF1	Yuli	1.39	215	eP	Pn	06 38 42.0	-0.4
	baz=226						
IRIF	Iriomote-Funau	1.44	96	P	Pn	06 38 42.3	-0.7
IRIF				eS	Sn	06 39 00.0	-1.1
HATJ	Hateruma jima	1.56	106	eS	Sn	06 39 03.3	-0.9
ALS	Alishan	1.58	232	eP	Pn	06 38 46.8	+1.4
	baz=215						
CHN5	Tsauling	1.63	237	eP	Pn	06 38 47.2	+1.4
	baz=216						
CHN5				eS	Sb	06 39 09.0	+0.8
	baz=216						
JKRS	Kuro-shima	1.70	98	P	Pn	06 38 46.6	-0.1
JKRS				eS	Sn	06 39 06.6	-1.1
JIJ	Ishigaki jima	1.81	94	P	Pn	06 38 47.6	-0.6
JIJ				eS	Sn	06 39 08.6	-1.7
CHN4	Tsaushan	1.83	232	eP	Pn	06 38 50.4	+1.9
	baz=211						
CHN4				eS	Sb	06 39 14.4	+0.3
	baz=211						
WTP	Ta-pu	1.89	229	eP	Pn	06 38 51.9	+2.6
	baz=224						
CHN1	Nanshi	1.99	229	eP	Pn	06 38 53.0	+2.3
	baz=224						
JTJ	Tarama	2.31	86	P	Pn	06 38 55.6	+0.5
JTJ				eS	Sn	06 39 21.8	-1.0

*IDC **01** 06:55:52.4±3.1, 0°.10N×123°.45E, h128^{km}±30^{km}, mb3.5/10, mb1 3.7/12, mb1mx3.6/24, mbtmp3.5/12, Error ellipse: s-maj=26.7km s-min=12.4km az=68.0*

*ISCJB **01** 06:55:54.3±0.5, 0°.02S±0°.04×123°.38E±0°.07, h157^{km}, mb3.7/10, Error ellipse: s-maj=10.3km s-min=5.9km az=14.6*

*DJA **01** 06:55:58.7±1.0, 0°S±6°×12°3E±1°0, h122^{km}±9^{km}, M4.3/6, mb4.3/1, MLv4.4/6*

ISC 01 06:55:55.4±0.6**, 0°.01S**±0°.06×**123°.36E**±0°.09**, h157**^{km}**, n28,** $\sigma 1^{s}$**04**/35**, mb3.8**/10**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.85**	**47**	P	**Pn**	**06 56 20.5**	**+0.8**
LUWI	**Luwuk**	**1.18**	**210**	P	**Pn**	**06 56 22.2**	**-0.3**
LUWI				S	**Sn**	**06 56 41.2**	**-2.0**
MRSI	**Marisa**	**1.50**	**289**	P	**Pn**	**06 56 25.0**	**-0.5**
SKSI	**Soroako, Sulaw**	**3.22**	**219**	P	**Pn**	**06 56 46.3**	**+0.4**
SKSI				S	**Sn**	**06 57 24.4**	**-0.7**
TTSI	**Tana Toraja**	**4.65**	**230**	P	**Pn**	**06 57 05.4**	**+1.0**
SPSI	**Sidrap Palu**	**5.32**	**222**	P	**Pn**	**06 57 15.0**	**+1.8**
KAPI	**Kappang**	**6.14**	**216**	P	**Pn**	**06 57 22.9**	**-1.2**
	2.2nm,0.3s,baz=14,slow=14,SNR=5.1						
KAPI				S	**Sn**	**06 58 32.4**	**-1.2**
	3.6nm,0.3s,baz=204,slow=21,SNR=10						
FITZ	**Fitzroy Crossi**	**18.12**	**173**	P	**P**	**06 59 55.4**	**-0.2**
	1.1nm,0.3s,baz=3.3,slow=10,SNR=25						
WRA	**Warramunga Arr**	**22.54**	**152**	P	**P**	**07 00 42.1**	**-0.4**
	1.3nm,0.5s,baz=330,slow=10,SNR=25						
ASAR	**Alice Springs**	**25.65**	**157**	P	**P**	**07 01 12.3**	**+1.6**
	0.4nm,0.4s,baz=339,slow=15,SNR=4.9						
ASAR				PcP	**PcP**	**07 04 38.1**	**+0.7**
	0.9nm,0.6s,baz=352,slow=2.5,SNR=8.4						
CTA	**Charters Tower**	**30.01**	**133**	PcP	**PcP**	**07 04 47.0**	**-1.2**
	1.5nm,0.3s,baz=302,slow=2.8,SNR=4.1						
CMAR	**Chiang Mai Arr**	**30.20**	**309**	P	**P**	**07 01 52.4**	**+1.1**
	2.7nm,0.8s,baz=135,slow=7.0,SNR=16						
CMAR				PcP	**PcP**	**07 04 48.7**	**+0.1**
	0.4nm,0.4s,baz=164,slow=1.4,SNR=4.8						
STKA	**Stephens Creek**	**36.09**	**153**	P	**P**	**07 02 42.6**	**+0.4**
	2.0nm,0.6s,baz=323,slow=5.7,SNR=5.6						
STKA				PcP	**PcP**	**07 05 04.2**	**-0.7**
	0.7nm,0.4s,baz=0.0,slow=5.1,SNR=3.7						
MJAR	**Matsushiro Arr**	**38.89**	**19**	P	**P**	**07 03 04.2**	**-1.5**
	3.6nm,0.8s,baz=196,slow=9.2,SNR=8.4						
TAPN	**Taplejung**	**43.72**	**311**	*e*P	**P**	**07 03 46.5**	**+0.9**
	8.7nm,0.5s						
RAMN	**Ramite**	**44.35**	**310**	*e*P	**P**	**07 03 51.7**	**+1.1**
	21nm,0.6s						
GUN	**Gumba**	**45.40**	**311**	*e*P	**P**	**07 03 59.8**	**+0.8**
	22nm,0.5s						
PKI	**Pulchoki**	**45.58**	**310**	*e*P	**P**	**07 04 01.1**	**+0.7**
PKIN	**Phulchoki**	**45.59**	**310**	*e*P	**P**	**07 04 01.1**	**+0.7**
	4.2nm,0.4s						
KOLN	**Koldanda**	**47.07**	**309**	*e*P	**P**	**07 04 12.9**	**+1.0**
	28nm,0.7s						
DANN	**Dangsing**	**47.23**	**310**	*e*P	**P**	**07 04 14.0**	**+0.8**
	35nm,0.7s						
PYUN	**Piuthan**	**47.70**	**309**	*e*P	**P**	**07 04 17.7**	**+0.9**
	65nm,0.8s						
SONM	**Songino Array**	**49.89**	**345**	P	**P**	**07 04 32.7**	**-0.3**
	1.6nm,0.5s,baz=165,slow=7.0,SNR=3.9						
MKAR	**Makanchi Array**	**58.81**	**328**	P	**P**	**07 05 37.0**	**-0.3**
	0.5nm,0.4s,baz=116,slow=8.8,SNR=10						
MKAR				pP	**pP**	**07 06 15.6**	**+1.5**
	0.4nm,0.6s,baz=123,slow=8.8,SNR=3.7						
ZALV	**Zalesovo Beam**	**62.47**	**335**	P	**P**	**07 06 00.5**	**-1.4**
	0.6nm,0.4s,baz=133,slow=6.7,SNR=3.9						
VNDA	**Vanda**	**80.19**	**172**	P	**P**	**07 07 49.0**	**+1.2**
	1.2nm,0.7s,baz=318,slow=6.7,SNR=7.7						
ILAR	**Eielson Array**	**89.90**	**25**	P	**P**	**07 08 35.5**	**-1.0**
	0.2nm,0.5s,baz=249,slow=4.9,SNR=5.2						
TORD	**Torodi Ar. Bea**	**120.76**	**285**	PKP	**PKPdf**	**07 14 29.3**	**-0.6**
	0.4nm,0.5s,baz=32,slow=2.6,SNR=4.1						

MEX 01 07:06:52.2±1.0**, 17°.84N×101°.41W, h28**^{km}±8^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.23**	**193**	*e*P	Pb	07 06 56.8	-1.9
ZIIG				*i* S	Sb	07 07 02.1	-1.0
ARIG	**Puente Sto Nin**	**1.10**	**66**	*e*P	Pn	07 07 08.8	-3.0
ARIG				*i* S	Sn	07 07 23.4	-2.7
CAIG	**El Cayaco**	**1.34**	**126**	*i* P	Pn	07 07 12.2	-2.8
CAIG				*i* S	Sn	07 07 28.9	-3.1
MEIG	**Mezcala**	**1.71**	**87**	*e*P	Pn	07 07 18.4	-1.8
ACX	**Acapulco**	**1.77**	**123**	*e*P	Pn	07 07 18.1	-2.8
ACX				*i* S	Sn	07 07 39.1	-3.3
MMIG	**Aquila**	**1.90**	**284**	*e*P	Pn	07 07 20.6	-2.1
MMIG				*i* S	Sn	07 07 43.4	-2.3
YAIG	**Yautepec**	**2.45**	**65**	*i* P	Pn	07 07 28.5	-1.9
YAIG				*i* S	Sn	07 07 56.4	-3.2
PNIG	**Pinotepa**	**3.45**	**114**	*e*P	Pn	07 07 41.5	-2.6
PNIG				*i* S	Sn	07 08 20.8	-3.3

*BJI **01** 07:18:50.8, 5°.48S×67°.98E, h6^{km}, mB5.3/17, mb4.7/31, Ms4.9/17, Ms7 4.5/18*

*ISCJB **01** 07:18:55.9±0.4, 5°.05S±0°.07×68°.55E±0°.04, h10^{km}, mb4.5/61, MS4.5/24, Error ellipse: s-maj=10.2km s-min=5.9km az=178.7*

*IDC **01** 07:18:56.0±0.7, 4°.89S×68°.56E, h0^{km}, mb4.2/22, mb1 4.4/22, mb1mx4.2/29, mbtmp4.2/22, MS4.4/16, Ms1 4.4/16, ms1mx4.1/37, Error ellipse: s-maj=21.7km s-min=15.5km az=15.0*

*NEIC **01** 07:18:58.1±0.4, 4°.98S×68°.58E, h10^{km}, mb4.9/25, Error ellipse: s-maj=11.5km s-min=7.3km az=191.0*

*DJA **01** 07:18:59.2±1.1, 5°S±9°×6°9E±1°5, h10^{km}, M4.9/9, mB6.9/1, mb4.7/9, MLv5.0/2, Mw(mB)6.8/1*

*GCMT **01** 07:19:00.3±0.4, 5°.34S×68°.66E, h20^{km}±1^{km}, MW5.1, Moment Tensor Solution. s14,c15; s68,c93; Moment tensor: Scale 10^{16}Nm; M_{rr}-4.65±.42; $M_{\theta\theta}$2.07±.30; $M_{\phi\phi}$2.58±.28; $M_{r\theta}$-3.69±.60; $M_{\theta\phi}$-2.88±.19; $M_{\phi r}$-2.83±.48; Best double couple: $M_0$6.50000×10^{16} NP1:ϕ_s344.00000°, δ50.00000°, λ-45.00000°. NP2:ϕ_s107.00000°, δ57.00000°, λ-130.00000°. Principal axes: T 5.2400, Plg4.0000°, Azm225.0000°; N 2.4400, Plg33.0000°, Azm132.0000°; P -7.6800, Plg57.0000°, Azm320.0000°; Data Used: II IC IU CN G.*

ISC 01 07:18:58.9±0.5**, 5°.07S**±0°.07×**68°.51E**±0°.06**, h19**^{km}±1^{km}**, n312,** $\sigma 1^{s}$**05**/351**, mb4.6**/61**, MS4.5**/25**, 99C-66D, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.56**	**121**	*e*Pn	**Pn**	**07 20 05.7**	**-1.3**
KAAM	**Kaadhehdhoo**	**7.12**	**39**	P	**Pn**	**07 20 41.2**	**-0.9**
	82nm,1.8s,0.7nm						
MSEY	**Mahe Island**	**12.99**	**271**	*e*Pn	**Pn**	**07 22 05.1**	**+2.5**
HYB	**Hyderabad**	**24.45**	**24**	*i* P	**P**	**07 24 16.0**	**-0.8**
OPO	**Ambohidratompo**	**24.76**	**235**	LR	LR	07 32 05.4	
	comp=Z,1µm,18.2s,baz=121,slow=32						
SISI	**Saibi**	**30.76**	**84**	P	**P**	**07 25 13.4**	**0.0**
KMBO	**Kilima Mbogo**	**31.45**	**276**	P	**P**	**07 25 20.4**	**+0.6**
KMBO	**Kilima Mbogo**	**31.45**	**276**	P	**P**	**07 25 20.4**	**+0.6**
	1.8nm,0.8s,baz=82,slow=9.8,SNR=3.7						
KMBO				LR	LR	07 35 48.3	
	comp=Z,564nm,18.9s,baz=94,slow=32						
PPI	**Padang Panjang**	**32.17**	**83**	P	**P**	**07 25 26.4**	**+0.5**
	37nm,0.5s,14µm						
CM31	**Chiang Mai Arr**	**38.04**	**51**	*e*P	**P**	**07 26 17.9**	**+1.5**
	1.4nm,0.3s						
CMAR	**Chiang Mai Arr**	**38.04**	**51**	P	**P**	**07 26 15.8**	**-0.6**
CMAR				PcP	**PcP**	**07 28 32.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**38.04**	**51**	P	**P**	**07 26 15.8**	**-0.6**
	1.8nm,0.8s,baz=243,slow=9.1,SNR=13						
CMAR				PcP	**PcP**	**07 28 32.4**	**+0.6**
	1.1nm,0.6s,baz=231,slow=4.7,SNR=7.0						
CMAR				LR	LR	07 38 48.2	
	comp=Z,495nm,21.0s,baz=66,slow=32						
CHTO	**Chiang Mai**	**38.24**	**51**	*e*P	**P**	**07 26 19.6**	**+1.4**
	13nm,1.5s						
CHTO	**Chiang Mai**	**38.24**	**51**	P	**P**	**07 26 17.3**	**-0.8**
	8.7nm,1.9s						
CMMT	**Chiang Mai**	**38.25**	**51**	P	**P**	**07 26 18.1**	**-0.1**
	7.8nm,1.9s						
KSM	**Kuching**	**42.26**	**82**	*e*P	**P**	**07 26 52.0**	**+0.4**
	27nm,1.5s						
KSM	**Kuching**	**42.26**	**82**	P	**P**	**07 26 50.5**	**-1.1**
	14nm,1.8s						
SBUM	**Sibu**	**44.30**	**81**	P	**P**	**07 27 07.0**	**-1.1**
	11nm,1.6s						
KMI	**Kunming**	**44.81**	**46**	P	**P**	**07 27 13.8**	**+1.6**
KMI				pP	**pP**	**07 27 18.1**	**0.0**
KMI				sP	**sP**	**07 27 20.5**	**+0.1**
KMI				PP	**PP**	**07 28 59.7**	**+2.7**
KMI				S	**S**	**07 33 49.9**	**+0.9**
KMI				SS	**ScS**	**07 37 05.0**	**-4.6**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,130nm,5.3s						
KMI				LR	LR		
	comp=N,310nm,19.4s						
KMI				LR	LR		
	comp=E,270nm,20.5s						
KMI				LR	LR		
	comp=Z,400nm,19.4s						
KSH	**Kashi**	**44.90**	**8**	P	P	07 27 09.3	-3.2
KSH				*e*pP	pP	07 27 13.4	-5.1
KSH				*e*sP	sP	07 27 16.3	-4.5
KSH				*e*PP	**PcP**	**07 28 53.1**	**-0.9**
KSH				*e*PcP	**PP**	**07 28 54.3**	**-3.4**
KSH				*e*ScP	**ScP**	**07 32 44.1**	**-1.5**
KSH				*e*PcS	**PcS**	**07 32 46.1**	**-1.6**
KSH				*e*S	S	07 33 41.9	-7.8
KSH				*e*ScS	**ScS**	**07 37 04.8**	**-4.5**
KSH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSH				LR	LR		
	comp=N,630nm,14.0s						
KSH				LR	LR		
	comp=E,510nm,13.3s						
KSH				LR	LR		
	comp=Z,260nm,8.0s						
BOSA	**Boshof**	**47.17**	**235**	LR	LR	07 44 13.6	
	comp=Z,603nm,20.9s,baz=4.2,slow=32						
QIZ	**Qiongzhong**	**47.23**	**58**	P	**P**	**07 27 30.6**	**-0.5**
QIZ				S	**S**	**07 34 24.0**	**+0.5**
QIZ				pmax	pmax		
	comp=Z,19nm,2.0s						
QIZ				LR	LR		
	comp=Z,490nm,15.8s						
EKS2	**Erkin-Say**	**47.75**	**5**	*e*P	**P**	**07 27 36.1**	**+1.2**
	comp=Z,52nm,1.6s						
AAK	**Ala-Archa**	**47.79**	**6**	*e*P	**P**	**07 27 36.2**	**+1.0**
	comp=Z,5.1nm,1.3s						
AAK	**Ala-Archa**	**47.79**	**6**	P	**P**	**07 27 35.4**	**+0.2**
	comp=Z,3.6nm,1.0s,baz=192,slow=9.7,SNR=2.6						
AAK				LR	LR	07 44 44.6	
	comp=Z,232nm,21.0s,baz=244,slow=32						
KKAR	**Karatay Array**	**47.98**	**2**	*e*P	**P**	**07 27 36.3**	**-0.3**
	comp=Z,1.0nm,0.6s						
TKM2	**Tokmak 2**	**48.20**	**7**	*e*P	**P**	**07 27 38.6**	**+0.1**
	comp=Z,13nm,1.0s						
GYA	**Guiyang**	**48.45**	**48**	*e*P	**P**	**07 27 41.3**	**+0.7**
GYA				PP	**PP**	**07 29 34.4**	**+0.9**
GYA				ScP	**ScP**	**07 33 01.9**	**+1.1**
GYA				S	**S**	**07 34 42.0**	**+1.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,390nm,17.8s						
GYA				LR	LR		
	comp=E,260nm,18.5s						
GYA				LR	LR		
	comp=Z,420nm,17.1s						
CD2	**Chengdu**	**49.13**	**41**	P	**P**	**07 27 46.8**	**+1.1**
CD2				pP	**pP**	**07 27 51.3**	**-0.4**
CD2				sP	**sP**	**07 27 53.8**	**-0.2**
CD2				PcP	**PcP**	**07 29 10.1**	**+1.0**
CD2				PP	**PP**	**07 29 41.0**	**+1.4**
CD2				PcS	**PcS**	**07 33 05.2**	**-0.4**
CD2				S	**S**	**07 34 51.6**	**+1.3**
CD2				SS	**SS**	**07 38 18.7**	**-3.2**
CD2				pmax	pmax		
	comp=Z,30nm,0.4s						
CD2				pmax	pmax		
	comp=Z,180nm,5.3s						
CD2				LR	LR		
	comp=E,380nm,21.6s						
CD2				LR	LR		
	comp=Z,460nm,17.6s						
KAPI	**Kappang**	**51.04**	**92**	LR	LR	07 47 50.3	
	comp=Z,343nm,19.1s,baz=269,slow=34						
WMQ	**Urumqi**	**51.66**	**18**	P	**P**	**07 28 06.2**	**+1.6**
WMQ				pP	**pP**	**07 28 10.7**	**+0.1**
WMQ				sP	**sP**	**07 28 13.2**	**+0.3**
WMQ				PP	**PP**	**07 30 04.7**	**+2.4**
WMQ				S	**S**	**07 35 25.4**	**+0.4**
WMQ				SS	**SS**	**07 38 59.3**	**-2.4**
WMQ				pmax	pmax		
	comp=Z,20nm,1.4s						
WMQ				pmax	pmax		
	comp=Z,270nm,2.6s						
WMQ				LR	LR		
	comp=N,560nm,16.0s						
WMQ				LR	LR		
	comp=E,450nm,16.0s						
WMQ				LR	LR		
	comp=Z,340nm,23.2s						
LZH	**Lanzhou**	**52.65**	**36**	*e*P	**P**	**07 28 14.6**	**+2.4**
LZH				pP	**pP**	**07 28 19.0**	**+0.8**
LZH				sP	**sP**	**07 28 21.0**	**+0.4**
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
GTA	**Gaotai**	**52.86**	**30**	P	**P**	**07 28 15.4**	**+1.7**
GTA				pP	**pP**	**07 28 20.0**	**+0.3**
GTA				sP	**sP**	**07 28 22.5**	**+0.5**
GTA				S	**S**	**07 35 45.6**	**+3.8**
GTA				sS	**sS**	**07 35 52.7**	**+1.0**
GTA				SS	**SS**	**07 39 24.8**	**+3.8**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,470nm,5.7s						
GTA				LR	LR		
	comp=N,210nm,18.8s						
GTA				LR	LR		
	comp=E,440nm,17.6s						
GTA				LR	LR		
	comp=Z,430nm,19.2s						
MK31	**Makanchi Array**	**53.07**	**12**	*e*P	**P**	**07 28 13.8**	**-1.2**
MKAR	**Makanchi Array**	**53.07**	**12**	*e*P	**P**	**07 28 13.8**	**-1.1**
MKAR	**Makanchi Array**	**53.07**	**12**	P	**P**	**07 28 12.7**	**-2.2**
	comp=Z,2.3nm,0.7s,baz=200,slow=6.3,SNR=19						
MKAR				LR	LR	07 49 04.5	
	comp=Z,238nm,18.5s,baz=58,slow=34						
KBZ	**Khabaz**	**53.79**	**337**	P	**P**	**07 28 19.2**	**-1.0**
KBZ	**Khabaz**	**53.79**	**337**	P	**P**	**07 28 19.2**	**-1.0**
	comp=Z,6.0nm,0.9s,baz=160,slow=5.7,SNR=12						
ABKAR	**Akbulak array**	**54.62**	**353**	*e*P	**P**	**07 28 25.0**	**-1.2**
	comp=Z,2.2nm,0.7s						
BRTR	**Keskin Array B**	**54.94**	**327**	P	**P**	**07 28 27.8**	**-1.2**
BRTR	**Keskin Array B**	**54.94**	**327**	P	**P**	**07 28 27.8**	**-1.2**
	comp=Z,1.4nm,1.0s,baz=138,slow=5.8,SNR=6.5						
KURBB	**Kurchatov Arra**	**56.14**	**8**	P	**P**	**07 28 35.9**	**-1.3**
	comp=Z,3.0nm,0.9s,baz=202,slow=7.3,SNR=21						
KURBB				PcP	**PcP**	**07 29 35.4**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=207,slow=4.0,SNR=4.7						
KURK	**Kurchatov**	**56.24**	**8**	*e*P	**P**	**07 28 37.8**	**-0.1**
	comp=Z,10nm,1.1s						
KURK				PcP	**PcP**	**07 29 35.4**	**+0.1**
FITZ	**Fitzroy Crossi**	**57.23**	**108**	LR	LR	07 48 00.8	
	comp=Z,320nm,21.6s,baz=93,slow=30						
BVAR	**Borovoye Array**	**57.90**	**1**	P	**P**	**07 28 48.7**	**-0.9**
BVAR	**Borovoye Array**	**57.90**	**1**	P	**P**	**07 28 48.7**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=166,slow=6.9,SNR=7.7						
BRVK	**Borovoye**	**57.93**	**1**	*e*P	**P**	**07 28 49.8**	**+0.1**
	comp=Z,18nm,1.6s						
HHC	**Hu-ho-hao-te**	**60.34**	**37**	*e*P	**P**	**07 29 07.1**	**+0.3**
HHC				sP	**sP**	**07 29 14.4**	**-0.8**
HHC				PP	PP	07 31 27.6	+7.5
HHC				S	**S**	**07 37 20.1**	**-0.6**
HHC				sS	**sS**	**07 37 29.5**	**-1.2**
HHC				ScS	SKKSac	07 38 51.0	-5.8
HHC				SS	**SS**	**07 41 21.8**	**+3.1**
HHC				pmax	pmax		
	comp=Z,33nm,0.9s						
HHC				LR	LR		
	comp=N,500nm,18.4s						
HHC				LR	LR		
	comp=E,710nm,17.5s						
HHC				LR	LR		
	comp=Z,500nm,21.1s						
ZAA0	**Zalesovo Array**	**60.38**	**11**	*e*P	**P**	**07 29 05.9**	**-0.8**
ZALV	**Zalesovo Beam**	**60.38**	**11**	P	**P**	**07 29 04.5**	**-2.2**
ZALV	**Zalesovo Beam**	**60.38**	**11**	P	**P**	**07 29 04.5**	**-2.2**
	comp=Z,4.8nm,0.6s,baz=207,slow=6.7,SNR=24						
NJ2	**Nanjing**	**60.44**	**49**	*e*P	**P**	**07 29 07.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s						
SONM	**Songino Array**	**62.30**	**28**	P	**P**	**07 29 18.2**	**-1.9**
SONM	**Songino Array**	**62.30**	**28**	P	**P**	**07 29 18.2**	**-1.9**
	comp=Z,5.2nm,0.7s,baz=220,slow=6.7,SNR=15						
SONM				LR	LR	07 56 00.7	
	comp=Z,556nm,19.4s,baz=272,slow=36						
KIS	**Kishinev**	**62.57**	**330**	*e*P	P	07 29 30.0	+8.3
ULN	**Ulaanbaatar**	**62.63**	**28**	*e*P	**P**	**07 29 24.1**	**+1.8**
	comp=Z,32nm,1.8s						
ULN	**Ulaanbaatar**	**62.63**	**28**	P	**P**	**07 29 22.6**	**+0.3**
	comp=Z,8.2nm,1.8s						
AKASG	**Malin Array Be**	**65.00**	**334**	P	**P**	**07 29 35.9**	**-1.7**
AKASG	**Malin Array Be**	**65.00**	**334**	P	**P**	**07 29 35.9**	**-1.7**
	comp=Z,1.2nm,0.5s,baz=134,slow=5.4,SNR=5.8						
ASAR	**Alice Springs**	**65.46**	**114**	P	**P**	**07 29 41.4**	**+0.1**
ASAR	**Alice Springs**	**65.46**	**114**	P	**P**	**07 29 41.4**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=273,slow=6.3,SNR=9.5						
ASAR				LR	LR	07 55 17.6	
	comp=Z,277nm,21.5s,baz=310,slow=33						
WRA	**Warramunga Arr**	**65.58**	**109**	P	**P**	**07 29 41.5**	**-0.6**
WRA	**Warramunga Arr**	**65.58**	**109**	P	**P**	**07 29 41.5**	**-0.6**
	comp=Z,5.5nm,1.0s,baz=283,slow=6.1,SNR=22						
WRA				LR	LR	07 51 09.9	
	comp=Z,223nm,21.2s,baz=270,slow=30						
WRAB	**Tennant Creek**	**65.59**	**109**	*e*P	**P**	**07 29 43.4**	**+1.3**
	comp=Z,35nm,1.5s						
TORD	**Torodi Ar. Bea**	**68.76**	**286**	P	**P**	**07 30 02.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**68.76**	**286**	P	**P**	**07 30 02.1**	**-0.2**
	comp=Z,2.6nm,1.2s,baz=106,slow=3.0,SNR=4.9						
KSAR	**Wonju Array Be**	**69.47**	**47**	P	**P**	**07 30 05.1**	**-1.2**
KSRS	**Korea Array**	**69.50**	**47**	P	**P**	**07 30 05.1**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=249,slow=11,SNR=7.2						
KSRS				LR	LR	08 00 07.5	
	comp=Z,328nm,20.2s,baz=283,slow=36						
CN2	**Changchun**	**70.56**	**40**	*e*P	**P**	**07 30 13.9**	**+1.1**
CN2				*e*sP	**sP**	**07 30 21.0**	**-0.3**
CN2				*e*S	**S**	**07 39 25.9**	**+0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PGF	**Pioggiola**	**71.68**	**318**	*e*P	**P**	**07 30 20.4**	**+0.6**
PGF	**Pioggiola**	**71.68**	**318**	*e*P	**P**	**07 30 20.4**	**+0.6**
STKA	**Stephens Creek**	**72.98**	**122**	LR	LR	07 59 18.2	
	comp=Z,330nm,19.3s,baz=23,slow=33						
TUE	**Stuetta**	**73.17**	**322**	*e*P	**P**	**07 30 31.5**	**+2.8**
	comp=Z,17nm,1.6s						
SBF	**Sospel**	**73.27**	**319**	*e*P	**P**	**07 30 30.3**	**+1.1**
SBF	**Sospel**	**73.27**	**319**	*e*P	**P**	**07 30 30.3**	**+1.1**
MDJ	**Mudanjiang**	**73.59**	**41**	P	**P**	**07 30 30.0**	**-1.0**
MDJ				pmax	pmax		
	comp=Z,130nm,3.6s						
MDJ				LR	LR		
	comp=E,170nm,56.5s						
MDJ				LR	LR		
	comp=Z,330nm,25.5s						
MDJ	**Mudanjiang**	**73.59**	**41**	*e*P	**P**	**07 30 31.3**	**+0.3**
	comp=Z,5.3nm,0.4s						
FINES	**FINESS Array B**	**73.96**	**340**	P	**P**	**07 30 33.5**	**+0.8**
FINES	**FINESS Array B**	**73.96**	**340**	P	**P**	**07 30 33.5**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=107,slow=6.4,SNR=8.4						
MBDF	**Montbardon**	**74.06**	**319**	*e*P	**P**	**07 30 34.3**	**+0.4**
	comp=Z,12nm,1.1s						
MBDF	**Montbardon**	**74.06**	**319**	*e*P	**P**	**07 30 34.3**	**+0.4**
	comp=Z,12nm,1.1s						
DBIC	**Dimbokro**	**74.15**	**278**	*e*P	**P**	**07 30 35.6**	**+0.7**
DBIC	**Dimbokro**	**74.15**	**278**	P	**P**	**07 30 35.9**	**+1.0**
	comp=Z,5.7nm,0.8s,baz=73,slow=7.1,SNR=8.1						
LIC	**Lamto**	**74.26**	**278**	*e*P	**P**	**07 30 35.6**	**+0.1**
	comp=Z,18nm,0.8s,baz=100						
LIC	**Lamto**	**74.26**	**278**	*e*P	**P**	**07 30 35.6**	**+0.1**
	comp=Z,18nm,0.8s						
LPG	**La Plagne**	**74.39**	**320**	*e*P	**P**	**07 30 37.0**	**+1.0**
LPG	**La Plagne**	**74.39**	**320**	*e*P	**P**	**07 30 37.0**	**+1.0**
SENIN	**Lac Senin/Sane**	**74.40**	**321**	*e*P	**P**	**07 30 36.4**	**+0.4**
	comp=Z,7.8nm,0.7s						
LPL	**La Plagne**	**74.41**	**320**	*e*P	**P**	**07 30 36.7**	**+0.7**
	comp=Z,5.5nm,0.8s						
LPL	**La Plagne**	**74.41**	**320**	*e*P	**P**	**07 30 36.7**	**+0.7**
	comp=Z,5.5nm,0.8s						
ORIF	**Oris-en-Rattie**	**74.72**	**319**	*e*P	**P**	**07 30 38.3**	**+0.6**
	comp=Z,7.9nm,0.9s						
ORIF	**Oris-en-Rattie**	**74.72**	**319**	*e*P	**P**	**07 30 38.3**	**+0.6**
	comp=Z,7.9nm,0.9s						
USRK	**Ussuriysk Arra**	**75.00**	**42**	P	**P**	**07 30 38.9**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=238,slow=3.6,SNR=4.7						
USRK				LR	LR	08 03 27.2	
	comp=Z,195nm,20.6s,baz=62,slow=36						
CABF	**La Chapelle**	**75.27**	**321**	*e*P	**P**	**07 30 41.9**	**+1.1**
	comp=Z,18nm,1.1s						
CABF	**La Chapelle**	**75.27**	**321**	*e*P	**P**	**07 30 41.9**	**+1.1**
	comp=Z,18nm,1.1s						
CDF	**Champ du Feu**	**75.29**	**323**	*e*P	**P**	**07 30 41.7**	**+0.8**
	comp=Z,5.4nm,0.8s						
CDF	**Champ du Feu**	**75.29**	**323**	*e*P	**P**	**07 30 41.7**	**+0.8**
	comp=Z,5.4nm,0.8s						
HINF	**Hinteralfeld**	**75.29**	**322**	*e*P	**P**	**07 30 42.1**	**+1.2**
HINF	**Hinteralfeld**	**75.29**	**322**	*e*P	**P**	**07 30 42.1**	**+1.2**
HAU	**Haudompre**	**75.68**	**322**	*e*P	**P**	**07 30 43.9**	**+0.8**
HAU	**Haudompre**	**75.68**	**322**	*e*P	**P**	**07 30 43.9**	**+0.8**
PAGF	**Fort de Pagny**	**76.28**	**323**	*e*P	**P**	**07 30 46.9**	**+0.4**
PAGF	**Fort de Pagny**	**76.28**	**323**	*e*P	**P**	**07 30 46.9**	**+0.4**
WLF	**Walferdange**	**76.49**	**324**	P	**P**	**07 30 47.0**	**-0.6**
MAT	**Matsushiro**	**76.92**	**51**	P	**P**	**07 30 51.0**	**+0.6**
MJAR	**Matsushiro Arr**	**76.92**	**51**	P	**P**	**07 30 50.0**	**-0.4**
MJAR	**Matsushiro Arr**	**76.92**	**51**	P	**P**	**07 30 50.0**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=251,slow=5.9,SNR=8.9						
MJAR				LR	LR	08 06 43.4	
	comp=Z,187nm,18.3s,baz=285,slow=37						
LOR	**Lormes**	**76.93**	**321**	*e*P	**P**	**07 30 50.5**	**+0.3**
LOR	**Lormes**	**76.93**	**321**	*e*P	**P**	**07 30 50.5**	**+0.3**
SSF	**Saint Saulge**	**77.07**	**321**	*e*P	**P**	**07 30 51.5**	**+0.5**
	comp=Z,16nm,1.2s						
SSF	**Saint Saulge**	**77.07**	**321**	*e*P	**P**	**07 30 51.5**	**+0.5**
	comp=Z,16nm,1.2s						
CAF	**Calviac**	**77.23**	**318**	*e*P	**P**	**07 30 53.6**	**+1.6**
	comp=Z,6.4nm,0.9s						
CAF	**Calviac**	**77.23**	**318**	*e*P	**P**	**07 30 53.6**	**+1.6**
	comp=Z,6.4nm,0.9s						
BCLA	**Clavier**	**77.30**	**324**	P	**P**	**07 30 52.8**	**+0.6**
	comp=Z,12nm,2.7s						
BGF	**Bois d'Agland**	**77.31**	**320**	*e*P	**P**	**07 30 53.0**	**+0.7**
	comp=Z,18nm,0.9s						
BGF	**Bois d'Agland**	**77.31**	**320**	*e*P	**P**	**07 30 53.0**	**+0.7**
	comp=Z,18nm,0.9s						
RJF	**Les Rejaudoux**	**77.73**	**318**	*e*P	**P**	**07 30 55.4**	**+0.7**
RJF	**Les Rejaudoux**	**77.73**	**318**	*e*P	**P**	**07 30 55.4**	**+0.7**
BAIF	**Baives**	**77.80**	**324**	*e*P	**P**	**07 30 55.8**	**+0.8**
BAIF	**Baives**	**77.80**	**324**	*e*P	**P**	**07 30 55.8**	**+0.8**
ETSF	**Etsaut**	**78.35**	**316**	*e*P	**P**	**07 30 59.6**	**+1.3**
ETSF	**Etsaut**	**78.35**	**316**	*e*P	**P**	**07 30 59.6**	**+1.3**
SJPF	**Ste Jean**	**78.88**	**316**	*e*P	**P**	**07 31 01.7**	**+0.6**
	comp=Z,78nm,1.5s						
SJPF	**Ste Jean**	**78.88**	**316**	*e*P	**P**	**07 31 01.7**	**+0.6**
	comp=Z,78nm,1.5s						
NOA	**NORSAR Array B**	**79.32**	**335**	P	**P**	**07 31 01.1**	**-2.0**
NOA	**NORSAR Array B**	**79.32**	**335**	P	**P**	**07 31 01.1**	**-2.0**
	comp=Z,0.5nm,0.8s,baz=81,slow=5.9,SNR=3.3						
ESDC	**Sonseca Array**	**79.88**	**312**	P	**P**	**07 31 05.8**	**-0.9**
ESDC	**Sonseca Array**	**79.88**	**312**	P	**P**	**07 31 05.8**	**-0.9**
	comp=Z,1.4nm,0.7s,baz=92,slow=4.6,SNR=7.1						
ARCES	**ARCESS Array B**	**79.98**	**346**	P	**P**	**07 31 05.7**	**-0.9**
ARCES	**ARCESS Array B**	**79.98**	**346**	P	**P**	**07 31 05.7**	**-0.9**
	comp=Z,2.9nm,0.9s,baz=131,slow=2.6,SNR=4.6						
ARCES				LR	LR	08 05 21.4	
	comp=Z,293nm,19.7s,baz=210,slow=35						
YKA	**Yellowknife Ar**	**122.66**	**2**	PKP	**PKPdf**	**07 37 51.8**	**-1.4**
YKA	**Yellowknife Ar**	**122.66**	**2**	PKP	**PKPdf**	**07 37 51.7**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=348,slow=2.3,SNR=19						
K21A	**Alcova**	**142.41**	**355**	⇑PKiKP	**PKPdf**	**07 38 32.5**	**+1.4**
	baz=142						
BW06	**Boulder Array**	**142.42**	**358**	⇑PKiKP	**PKPdf**	**07 38 32.4**	**+1.2**
	baz=142						
PDAR	**Pinedale Array**	**142.42**	**358**	PKP	**PKPdf**	**07 38 32.0**	**+0.9**
PDAR	**Pinedale Array**	**142.42**	**358**	PKP	**PKPdf**	**07 38 32.0**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=68,slow=2.5,SNR=7.8						
N24A	**Carr**	**143.91**	**351**	⇓PKiKP	**PKPdf**	**07 38 33.3**	**-0.4**
	baz=144						
N20A	**Spence Gulch,**	**144.28**	**356**	⇑PKiKP	**PKPdf**	**07 38 34.6**	**+0.1**

baz=144
N21A **Black Mountain** 144.29 355 ⇓PKiKP **PKPdf** 07 38 34.6 +0.1
baz=144
O24A **Longmont** 144.63 351 ⇑PKiKP **PKPdf** 07 38 34.8 -0.1
baz=144
O23A **Lake Granby, G** 144.66 353 ⇑PKiKP **PKPdf** 07 38 35.6 +0.4
baz=144
O22A **Kremmling** 144.78 353 ⇑PKiKP **PKPdf** 07 38 35.7 +0.3
baz=144
DAU **Daniels Canyon** 144.81 360 *e*PKPdf **PKPdf** 07 38 36.3 +0.8
O19A **Miners Draw (B** 144.86 357 ⇑PKiKP **PKPab** 07 38 34.8 +0.4
baz=145
P26A **Davis Ranch, A** 144.88 349 ⇑PKiKP PKPbc 07 38 35.2 +0.7
baz=145
O20A **White River Ci** 144.97 356 ⇓PKiKP **PKPab** 07 38 35.1 +0.3
baz=145
DUG **Dugway** 145.01 2 *e*PKPdf **PKPab** 07 38 34.9 0.0
DUG **Dugway** 145.01 2 ⇑PKiKP **PKPdf** 07 38 35.9 +0.3
baz=145
ISCO **Idaho Springs** 145.02 352 ⇓PKiKP **PKPdf** 07 38 36.3 +0.4
baz=145
P25A **Willow Gulch B** 145.08 350 ⇑PKiKP **PKPab** 07 38 35.9 +0.7
baz=145
KSCO **Kaye Shedlock'** 145.27 348 ⇑PKiKP **PKPab** 07 38 36.2 +0.3
baz=145
P22A **Eagle** 145.37 354 ⇓PKiKP **PKPdf** 07 38 37.5 +1.2
baz=145
P23A **Jefferson** 145.47 352 ⇑PKiKP **PKPab** 07 38 38.0 +1.1
baz=145
P21A **Newcastle** 145.51 354 ⇓PKiKP **PKPab** 07 38 37.9 +1.1
baz=145
P19A **Cripple Cowboy** 145.52 357 ⇑PKiKP **PKPab** 07 38 38.0 +1.1
baz=145
Q26A **Hugo** 145.53 349 ⇑PKiKP **PKPab** 07 38 37.6 +0.7
baz=145
P18A **Preston Nutter** 145.58 358 ⇑PKiKP **PKPab** 07 38 38.4 +1.2
baz=145
P20A **De Beque** 145.61 356 ⇓PKiKP **PKPab** 07 38 38.2 +1.0
baz=145
Q25A **Bedland, Calha** 145.68 350 ⇑PKiKP **PKPab** 07 38 37.8 +0.4
baz=145
P17A **Butcher Ranch,** 145.75 359 ⇑PKiKP **PKPbc** 07 38 37.6 +0.3
baz=146
Q24A **Divide** 145.77 351 ⇓PKiKP **PKPbc** 07 38 38.0 +0.4
baz=146
Q23A **Hartsel** 145.93 352 ⇑PKiKP **PKPab** 07 38 38.9 +0.4
baz=146
R27A **Eads** 146.00 348 ⇑PKiKP **PKPab** 07 38 39.2 +0.7
baz=146
S30A **Montezuma** 146.05 344 ⇓PKiKP **PKPab** 07 38 39.0 +0.3
baz=146
TUL1 **Tulsa** 146.07 337 ⇑PKiKP **PKPab** 07 38 39.1 +0.3
baz=146
SRU **San Rafael** 146.10 359 ⇑PKiKP **PKPab** 07 38 39.3 +0.3
baz=146
Q22A **Crested Butte,** 146.11 354 ⇑PKiKP **PKPab** 07 38 39.6 +0.5
baz=146
R26A **Arlington** 146.12 349 ⇑PKiKP **PKPab** 07 38 39.6 +0.5
baz=146
Q20A **Ridgley Place,** 146.15 356 ⇑PKiKP **PKPab** 07 38 39.7 +0.5
baz=146
CMB **Columbia Colle** 146.20 13 *e*PKPbc **PKPab** 07 38 39.5 +0.2
Q21A **Lamborn Mesa,** 146.20 354 ⇑PKiKP **PKPab** 07 38 40.1 +0.7
baz=146
NVAR **Mina Array Bea** 146.22 10 PKPbc **PKPbc** 07 38 39.2 +0.4
NVAR **Mina Array Bea** 146.22 10 PKPbc **PKPbc** 07 38 39.2 +0.4
comp=Z,3.8nm,0.8s,baz=21,slow=1.9,SNR=21
NV11 **Mina Array Sit** 146.25 9 *e*PKPbc **PKPab** 07 38 39.7 +0.2
S29A **Ulysses** 146.25 345 ⇑PKiKP **PKPab** 07 38 39.8 +0.3
baz=146
Q16A **Castle Valley** 146.31 360 ⇑PKiKP **PKPab** 07 38 40.4 +0.6
baz=146
T31A **Randall Ranch,** 146.34 343 ⇑PKiKP **PKPbc** 07 38 39.6 +0.6
baz=146
R25A **Fountain Ranch** 146.43 350 ⇓PKiKP **PKPab** 07 38 40.5 +0.3
baz=146
S28A **Manter** 146.47 346 ⇓PKiKP **PKPab** 07 38 40.8 +0.4
baz=146
R24A **Sanders Place,** 146.49 351 ⇑PKiKP **PKPbc** 07 38 39.8 +0.2
baz=146
R23A **Moffat** 146.63 352 ⇑PKiKP **PKPab** 07 38 41.6 +0.4
baz=146
R21A **Cimarron** 146.66 354 ⇑PKiKP **PKPab** 07 38 41.6 +0.4
baz=146
R11A **Troy Canyon, C** 146.67 6 ⇑PKiKP **PKPbc** 07 38 41.0 +0.9
baz=146
MVU **Marysvale** 146.72 1 *e*PKPbc **PKPbc** 07 38 41.0 +0.7
R22A **Saguache, Gunn** 146.72 353 ⇑PKiKP **PKPab** 07 38 42.0 +0.4
baz=146
S26A **Kim** 146.78 348 ⇑PKiKP **PKPab** 07 38 41.8 +0.2
baz=147
R20A **Redvale** 146.91 356 ⇑PKiKP **PKPab** 07 38 42.2 0.0
baz=147
S25A **Robets Cordova** 146.93 350 ⇑PKiKP **PKPbc** 07 38 41.9 +1.0
baz=147
PV01 **Paradox Valley** 146.98 356 *e*PKPbc **PKPbc** 07 38 41.7 +0.6
S24A **Houchin Ranch,** 147.08 351 ⇓PKiKP **PKPab** 07 38 42.9 -0.1
baz=147
U30A **WK&E Inc. Balk** 147.15 344 ⇑PKiKP **PKPbc** 07 38 41.9 +0.5
baz=147
S22A **4UR Ranch, Cre** 147.20 353 ⇓PKiKP **PKPbc** 07 38 42.4 +0.6
baz=147
T26A **Comanche Natio** 147.24 348 ⇑PKiKP **PKPbc** 07 38 42.7 +0.9
baz=147
S20A **Disappointment** 147.27 355 ⇑PKiKP **PKPab** 07 38 43.9 +0.2
baz=147
S21A **Coal Bank Pass** 147.39 355 ⇓PKiKP **PKPab** 07 38 44.1 -0.1
baz=147
T25A **Trinidad** 147.43 349 ⇑PKiKP **PKPab** 07 38 44.5 +0.2
baz=147
S18A **Hurst Farm, Bl** 147.50 358 ⇓PKiKP **PKPbc** 07 38 43.6 +1.0
baz=147
T24A **Torres, Weston** 147.61 350 ⇓PKiKP **PKPab** 07 38 44.9 -0.2
baz=147
V31A **Spring Creek L** 147.61 342 ⇓PKiKP **PKPbc** 07 38 43.9 +1.2
baz=147
GRAC **Grapevine Rang** 147.77 9 ⇓PKiKP **PKPbc** 07 38 43.9 +0.9
baz=148
T23A **Casias Ranch,** 147.80 352 ⇑PKiKP **PKPbc** 07 38 43.7 +0.3
baz=148
U27A **Thompson Grove** 147.80 347 ⇑PKiKP **PKPbc** 07 38 43.6 +0.3
baz=148
MVCO **Mesa Verde** 147.90 355 ⇑PKiKP **PKPbc** 07 38 43.3 -0.3
baz=148
T22A **Edith** 147.93 353 ⇑PKiKP **PKiKP** 07 38 45.3 -0.4
baz=148
U26A **Atchley Ranch,** 148.02 348 ⇑PKiKP **PKPbc** 07 38 43.8 -0.2
baz=148
T21A **Navajo Lake** 148.03 354 ⇓PKiKP **PKPbc** 07 38 44.4 +0.4
baz=148
U25A **Circle Dot Ran** 148.15 349 ⇑PKiKP **PKiKP** 07 38 45.9 -0.2
baz=148
W31A **Holland Ranch,** 148.19 342 ⇓PKiKP **PKPbc** 07 38 44.5 +0.2
baz=148
CWC **Cottonwood Cre** 148.20 10 ⇓PKiKP **PKPbc** 07 38 44.9 +0.5
baz=148
FURC **Furnace Creek,** 148.37 8 ⇑PKiKP **PKPbc** 07 38 45.1 +0.6
baz=148
U23A **El Rito** 148.51 352 ⇑PKiKP **PKPbc** 07 38 45.1 -0.2
baz=148
VES **Vestal, Richgr** 148.59 12 ⇓PKiKP **PKPbc** 07 38 45.4 +0.2
baz=148
U21A **Nageezi** 148.59 354 ⇓PKiKP **PKPbc** 07 38 45.0 -0.5
baz=148
V26A **Tequesquite Ra** 148.61 348 ⇓PKiKP **PKPbc** 07 38 46.1 +0.6
baz=148
MPMC **Manual Prospec** 148.67 9 ⇑PKiKP **PKPbc** 07 38 46.5 +0.9
baz=148
X31A **McDonald Ranch** 148.71 342 ⇑PKiKP **PKPbc** 07 38 45.5 -0.2
baz=148
U20A **Newcomb** 148.73 355 ⇑PKiKP **PKPbc** 07 38 45.3 -0.5
baz=148
V25A **Rancho No Teng** 148.73 349 ⇓PKiKP **PKPbc** 07 38 46.9 +1.1
baz=148
U15A **North Rim** 148.78 1 ⇑PKiKP **PKPbc** 07 38 45.8 -0.3
baz=148
V24A **Rampart Ranch,** 148.96 350 ⇓PKiKP **PKiKP** 07 38 47.7 -0.2
baz=149
AMTX **Amarillo** 148.98 344 ⇑PKiKP **PKPbc** 07 38 47.0 +0.7
baz=149
SHOC **Shoshone** 149.00 8 ⇑PKiKP **PKPbc** 07 38 47.1 +0.8
baz=149
V22A **San Miguel Ran** 149.02 353 ⇓PKiKP **PKPbc** 07 38 46.7 +0.1
baz=149
Y32A **R-V Farms, Ver** 149.11 340 ⇑PKiKP **PKiKP** 07 38 48.0 +0.1
baz=149
W27A **Bowe Ranch, En** 149.15 346 ⇓PKiKP **PKPbc** 07 38 47.3 +0.5
baz=149
W26A **Owens Ranch, T** 149.29 348 ⇑PKiKP **PKPbc** 07 38 47.3 +0.1
baz=149
W25A **X Bar L Ranch,** 149.31 349 ⇓PKiKP **PKPbc** 07 38 47.0 -0.2
baz=149
X29A **Tulia** 149.39 344 ⇑PKiKP **PKPbc** 07 38 47.4 0.0
baz=149
W24A **Lazy 6 Ranch,** 149.49 350 ⇑PKiKP **PKPbc** 07 38 48.5 +0.7
baz=149
GSC **Goldstone** 149.52 9 ⇓PKiKP **PKPbc** 07 38 48.6 +0.9
baz=149
Z32A **Haskell** 149.76 340 ⇓PKiKP **PKiKP** 07 38 49.5 +0.2
baz=150
X26A **CR and CF Fran** 149.81 347 ⇑PKiKP **PKiKP** 07 38 49.5 0.0
baz=150
ANMO **Albuquerque** 149.91 352 *e*PKPbc **PKPbc** 07 38 50.6 +1.8
Y29A **Porterfield Fa** 149.94 344 ⇑PKiKP **PKPbc** 07 38 49.5 +0.8
baz=150
Z31A **Shiarp Cattle R** 149.97 341 ⇓PKiKP **PKiKP** 07 38 49.9 +0.2
baz=150
X25A **Clemmons Ranch** 150.01 349 ⇑PKiKP **PKPbc** 07 38 49.5 +0.5
baz=150
Y28A **McKinney Farm,** 150.05 344 ⇑PKiKP **PKiKP** 07 38 50.2 +0.2
baz=150
HEC **Hector,Ludlow** 150.05 8 ⇑PKiKP **PKiKP** 07 38 50.1 +0.2
baz=150
MSTX **Muleshoe** 150.13 345 ⇑PKiKP **PKiKP** 07 38 50.2 +0.1
baz=150
WHTX **Lake Whitney** 150.16 336 ⇑PKiKP **PKiKP** 07 38 50.6 +0.5
baz=150
GMRC **Granite Mounta** 150.19 7 ⇑PKiKP **PKPbc** 07 38 50.2 +0.8
baz=150
Y27A **Causey** 150.30 346 ⇑PKiKP **PKiKP** 07 38 50.7 +0.2
baz=150
Z30A **Sanderson Ranc** 150.31 342 ⇑PKiKP **PKPbc** 07 38 50.2 +0.6
baz=150
Y26A **Elida** 150.42 347 ⇑PKiKP **PKPbc** 07 38 50.5 +0.5
baz=150
ABTX **Abilene, Hawle** 150.44 339 ⇓PKiKP **PKPbc** 07 38 50.5 +0.6
baz=150
Z29A **Hungry Hill Ra** 150.51 343 ⇑PKiKP **PKPbc** 07 38 50.2 +0.1
baz=150
BBRC **Big Bear Solar** 150.52 9 ⇓PKiKP **PKPbc** 07 38 50.5 +0.1
baz=150
LAZ **Ladron** 150.54 353 *e*PKPdf **PKPdf** 07 38 47.4 +2.4
X20A **Quemado** 150.54 355 ⇓PKiKP **PKiKP** 07 38 51.3 +0.2
baz=150
Y25A **Mesa, Roswell** 150.60 348 ⇓PKiKP **PKPbc** 07 38 50.3 -0.1
baz=150
Z28A **Tucker Farm, M** 150.67 344 ⇓PKiKP **PKPbc** 07 38 50.1 -0.4
baz=150
X16A **Lo Mia Camp, P** 150.80 360 ⇓PKiKP **PKiKP** 07 38 51.7 +0.1
baz=151
Y23A **Lovelace Mesa,** 150.84 351 ⇑PKiKP **PKPbc** 07 38 51.3 +0.3
baz=151
Z27A **Tatum** 150.86 346 ⇓PKiKP **PKiKP** 07 38 52.1 +0.4
baz=151
130A **Snyder** 150.90 342 ⇑PKiKP **PKPbc** 07 38 50.8 -0.2
baz=151
Y22A **Socorro** 150.97 352 ⇓PKiKP **PKPbc** 07 38 50.9 -0.5
baz=151
Y21A **Point of Rocks** 150.99 353 ⇑PKiKP **PKiKP** 07 38 52.8 +0.7
baz=151
Z26A **Caprock** 151.08 347 ⇓PKiKP **PKiKP** 07 38 52.8 +0.7
baz=151
232A **Coleman** 151.10 339 ⇓PKiKP **PKiKP** 07 38 52.7 +0.5
baz=151
129A **Stewart Farms,** 151.14 343 ⇑PKiKP **PKiKP** 07 38 52.6 +0.4
baz=151
Y20A **Horse Springs,** 151.16 355 ⇑PKiKP **PKiKP** 07 38 53.0 +0.6
baz=151
Z25A **Roswell** 151.23 348 ⇑PKiKP **PKiKP** 07 38 53.2 +0.8
baz=151
Y14A **Wickenburg** 151.24 3 ⇓PKiKP **PKiKP** 07 38 53.4 +1.1
baz=151
Z24A **Sheeppen Canyo** 151.31 349 ⇓PKiKP **PKiKP** 07 38 53.8 +1.1
baz=151
BC3 **Big Chuckawall** 151.32 7 ⇑PKiKP **PKiKP** 07 38 53.2 +0.6
baz=151
Y12C **Blythe** 151.33 5 ⇓PKiKP **PKiKP** 07 38 53.6 +1.2
baz=151
128A **Castleberry Fa** 151.33 344 ⇓PKiKP **PKiKP** 07 38 53.3 +0.7
baz=151
332A **Milleview** 151.59 339 ⇑PKiKP **PKiKP** 07 38 53.9 +0.8
baz=151
Z22A **Elephant Butte** 151.64 352 ⇑PKiKP **PKiKP** 07 38 53.9 +0.6
baz=151
Z21A **St. Cloud Mine** 151.68 353 ⇑PKiKP **PKiKP** 07 38 54.0 +0.5
baz=152
126A **Clayton Basin,** 151.69 347 ⇑PKiKP **PKiKP** 07 38 54.0 +0.7
baz=152
229A **Bryant Ranch,** 151.75 342 ⇓PKiKP **PKiKP** 07 38 54.0 +0.6
baz=152
125A **Gardner Draw,** 151.82 348 ⇑PKiKP **PKiKP** 07 38 54.4 +0.8
baz=152
331A **San Angelo** 151.91 340 ⇓PKiKP **PKiKP** 07 38 54.8 +1.0
baz=152
124A **Stringfield Ra** 151.94 349 ⇑PKiKP **PKiKP** 07 38 54.8 +0.7
baz=152
MONP **Monument Peak** 151.94 9 ⇓PKiKP **PKiKP** 07 38 54.9 +0.9
baz=152
Z20A **Nine Sixteen R** 151.97 355 ⇑PKiKP **PKiKP** 07 38 55.1 +1.1
baz=152
330A **Mertzon** 152.07 341 ⇑PKiKP **PKPbc** 07 38 54.2 +0.4
baz=152
432A **Menard** 152.07 338 ⇑PKiKP **PKPbc** 07 38 53.9 +0.1
baz=152
DVTC **Desert V Tower** 152.22 8 ⇑PKiKP **PKiKP** 07 38 55.5 +1.0
baz=152
226B **Tecolote Peak,** 152.27 347 ⇓PKiKP **PKPbc** 07 38 54.4 +0.1
baz=152
113A **Mohawk Valley,** 152.36 4 ⇑PKiKP **PKiKP** 07 38 55.0 +0.4
baz=152
225A **Deer Hill, Car** 152.38 348 ⇑PKiKP **PKPbc** 07 38 55.2 +0.5
baz=152
JCT **Junction City** 152.43 338 ⇑PKiKP **PKPbc** 07 38 54.9 +0.3
baz=152
121A **Cookes Peak, D** 152.46 353 ⇓PKiKP **PKPbc** 07 38 55.9 +0.8
baz=152
120A **U Bar Ranch, L** 152.53 355 ⇓PKiKP **PKPbc** 07 38 55.4 +0.4
baz=152
431A **Sonora** 152.54 339 ⇓PKiKP **PKiKP** 07 38 56.2 +1.1
baz=152
328A **Wristen Ranch,** 152.59 344 ⇑PKiKP **PKiKP** 07 38 55.9 +0.7
baz=152
430A **Baggett Ranch,** 152.66 341 ⇓PKiKP **PKPbc** 07 38 55.5 +0.4
baz=152
532A **Rocksprings** 152.78 338 ⇓PKiKP **PKiKP** 07 38 56.4 +0.7
baz=153
223A **Chaparral, Ant** 152.79 351 ⇓PKiKP **PKiKP** 07 38 56.5 +0.8
baz=153
TUC **Tucson** 152.89 359 *e*PKPbc **PKPbc** 07 38 57.5 +1.9
326A **Caldwell Ranch** 152.95 346 ⇑PKiKP **PKiKP** 07 38 56.5 +0.5
baz=153
531A **Rocksprings** 152.99 339 ⇓PKiKP **PKPbc** 07 38 56.3 +0.5
baz=153
429A **Davenport Ranc** 153.02 342 ⇓PKiKP **PKiKP** 07 38 56.7 +0.6
baz=153
325A **Bean Ranch, Si** 153.13 348 ⇑PKiKP **PKiKP** 07 38 57.4 +0.9
baz=153
220A **Playas Peak, P** 153.16 354 ⇑PKiKP **PKiKP** 07 38 57.7 +1.2
baz=153
324A **Moseley Ranch,** 153.17 349 ⇓PKiKP **PKiKP** 07 38 57.8 +1.2
baz=153
428A **Kincaid Ranch,** 153.17 343 ⇑PKiKP **PKiKP** 07 38 57.0 +0.5
baz=153
214A **Organ Pipe Nat** 153.23 2 ⇑PKiKP **PKiKP** 07 38 57.5 +1.0
baz=153
530A **J-C Ranch, Com** 153.28 340 ⇑PKiKP **PKiKP** 07 38 57.5 +0.8
baz=153
632A **Uvalde** 153.29 337 ⇑PKiKP **PKiKP** 07 38 58.0 +1.3
baz=153
426A **McDonald Obser** 153.59 345 ⇓PKiKP **PKiKP** 07 38 58.8 +1.3
baz=153
631A **Perdido Creek** 153.68 338 ⇓PKiKP **PKiKP** 07 38 59.1 +1.6
baz=154
425A **Indio Mountain** 153.70 347 ⇓PKiKP **PKiKP** 07 38 59.0 +1.4
baz=154
320A **Kipp Ranch, An** 153.72 354 ⇑PKiKP **PKiKP** 07 38 59.0 +1.4
baz=154
528A **Cox Ranch, San** 153.73 343 ⇓PKiKP **PKiKP** 07 38 59.4 +1.7
baz=154
526A **Mary Lane Ranc** 154.18 345 ⇓PKiKP **PKiKP** 07 39 00.5 +1.8
baz=154
628A **Black Gap, Mar** 154.39 342 ⇓PKiKP **PKiKP** 07 38 59.4 +0.4
baz=154
627A **Terlingua Ranc** 154.57 343 ⇓PKiKP **PKiKP** 07 39 00.4 +1.0
baz=154
TXAR **Lajitas Array** 154.76 344 PKP **PKPdf** 07 38 52.6 +1.4
TXAR PKPbc **PKPbc** 07 38 59.2 -0.5
TXAR PKPab **PKPab** 07 39 15.3 +0.8
TXAR **Lajitas Array** 154.76 344 PKP **PKPdf** 07 38 52.6 +1.4
comp=Z,0.3nm,0.8s,baz=54,slow=2.2,SNR=2.7
TXAR PKPbc **PKPbc** 07 38 59.2 -0.5
comp=Z,0.9nm,0.7s,baz=53,slow=1.6,SNR=7.5
TXAR PKPab **PKPab** 07 39 15.3 +0.8
comp=Z,0.7nm,0.7s,baz=198,slow=1.2,SNR=3.5

PRE 01 07:22:22.5±2.5, 21°.34S×33°.63E, h10km, ML4.1, Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.49**	**253**	*e*P		Pn	07 23 18.8	+1.8
MSNA				*e*P		Pb	07 23 18.8	-5.7
MSNA				*e*S		Sn	07 23 58.0	-0.4
MSNA				*e*S		Sb	07 23 59.1	-8.0
MSNA				AML		AML	07 24 17.4	
	comp=Z,142nm,0.6s							
MSNA				AML		AML	07 24 17.7	
	comp=Z,145nm,0.6s							
POGA	**Pongola**	**6.27**	**197**	*e*P		Pn	07 23 55.0	-0.1
POGA				*e*S		Sn	07 25 04.9	-2.1
POGA				AML		AML	07 25 47.7	
	comp=Z,31nm,0.5s							
SLR	**Silverton**	**6.57**	**227**	*e*P		Pn	07 24 00.4	+1.0
SLR				*e*S		Sn	07 25 10.6	-4.0
SLR				AML		AML	07 25 51.0	
	comp=Z,43nm,0.6s							
ERPM	**east rand prop**	**7.00**	**224**	*e*S		Sn	07 25 19.5	-5.8
ERPM				AML		AML	07 26 01.3	
	comp=Z,22nm,0.6s							
KLOF	**Kloof**	**7.43**	**227**	*e*P		Pn	07 24 10.8	-0.4
KLOF				*e*S		Sn	07 25 31.7	-4.0
KLOF				AML		AML	07 26 20.4	
	comp=Z,34nm,0.6s							
KSR	**Koster**	**7.63**	**233**	*e*S		Sn	07 25 36.7	-4.0
KSR				AML		AML	07 26 24.9	
	comp=Z,33nm,0.6s							
LSZ	**Lusaka**	**7.94**	**319**	*e*P		Pn	07 24 20.5	+2.2
LSZ				*e*S		Sn	07 25 44.3	-4.1
PRYS	**Parys**	**7.97**	**225**	*e*P		Pn	07 24 18.1	-0.6
PRYS				*e*S		Sn	07 25 47.5	-1.7
PRYS				AML		AML	07 26 40.4	
	comp=Z,18nm,0.7s							
LBTB	**Lobatse**	**8.24**	**242**	*e*P		Pn	07 24 23.6	+1.3
LBTB				*e*S		Sn	07 25 51.3	-4.3
LBTB				AML		AML	07 26 47.5	
	comp=Z,23nm,0.6s							
SEK	**Senekal**	**8.83**	**217**	*e*P		Pn	07 24 30.8	+0.3
SEK				*e*S		Sn	07 26 05.8	-4.4
SEK				AML		AML	07 27 08.7	
	comp=Z,19nm,0.6s							
SWZ	**Schweizer**	**9.54**	**231**	*e*P		Pn	07 24 39.2	-1.0
SWZ				*e*S		Sn	07 26 23.1	-4.6
SWZ				AML		AML	07 27 28.0	
	comp=Z,16nm,0.7s							

*IDC **01** 07:31:09.0±0.8, 0°.57S×132°.88E, h0km, mb4.1/11, mb1 4.2/13, mb1mx4.0/26, mbtmp4.1/13, ML4.1/2, Error ellipse: s-maj=38.7km s-min=11.6km az=75.0*
*NEIC **01** 07:31:17.1±3.0, 0°.56S×133°.02E, h63km, 27km, mb4.1/6, Error ellipse: s-maj=21.0km s-min=7.6km az=55.0*
*AUST **01** 07:31:21.6, 0°.98S×133°.00E, h100km*

ISC 01 07:31:14.0±0.7, 0°.65S±0°.05×133°.04E±0°.09, h32km, n45, o256/52, mb4.3/15, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.39**	**199**	P		**Pb**	**07 31 54.1**	**-2.2**
	baz=2.1,SNR=26							
FAKI				S		**Sb**	**07 32 25.5**	**+0.1**
	baz=2.1,SNR=5.0							
TLE	**Tual**	**4.96**	**183**	P		Pn	07 32 30.4	+4.1
	baz=4.7,SNR=14							
TLE				S		**Sn**	**07 33 26.6**	**+3.9**
	baz=4.7,SNR=4.4							
MMPI	**Merauke**	**10.67**	**137**	S		Sn	07 35 59.8	+17
	baz=10,SNR=3.1							
KDU	**Kakadu**	**11.97**	**183**	P		**Pn**	**07 34 03.3**	**+0.8**
	baz=12,SNR=18							
KDU				S		**Sn**	**07 36 12.4**	**-2.7**
	baz=12,SNR=4.1							
MTN	**Manton Dam**	**12.26**	**189**	P		**Pn**	**07 34 07.6**	**+1.1**
	baz=12,SNR=15							
MTN				S		**Sn**	**07 36 20.6**	**-1.5**
	baz=12,SNR=6.9							
PCI	**Palu**	**13.20**	**269**	P		Pn	07 34 23.6	+4.2
	baz=13,SNR=4.8							
PCI				S		**S**	**07 37 11.1**	**+2.0**
	baz=13,SNR=12							
KAPI	**Kappang**	**13.96**	**252**	Pn		**Pn**	**07 34 32.7**	**+3.1**
KAPI	**Kappang**	**13.96**	**252**	Pn		**Pn**	**07 34 32.7**	**+3.1**
	0.6nm,0.3s,baz=124,slow=7.3,SNR=5.3							
FITZ	**Fitzroy Crossi**	**18.80**	**202**	P		**P**	**07 35 29.2**	**-1.8**
FITZ				S		**Sn**	**07 38 54.2**	**-7.0**
FITZ	**Fitzroy Crossi**	**18.80**	**202**	P		**P**	**07 35 29.2**	**-1.8**
	0.3nm,0.3s,baz=29,slow=13,SNR=9.1							
FITZ				S		**Sn**	**07 38 54.2**	**-7.0**
	0.4nm,0.3s,baz=121,slow=11,SNR=6.0							
FITZ	**Fitzroy Crossi**	**18.80**	**202**	P		**Pn**	**07 35 32.6**	**+0.9**
	baz=19,SNR=16							
FITZ				S		Sn	07 38 53.4	-7.9
	baz=19,SNR=5.2							
WRAB	**Tennant Creek**	**19.21**	**176**	*e*P		**Pn**	**07 35 37.0**	**+0.4**
	6.7nm,0.8s							
WRAB				*e*S		Sn	07 39 03.4	-7.6
WRA	**Warramunga Arr**	**19.22**	**176**	P		**Pn**	**07 35 36.4**	**-0.2**
WRA				S		**Sn**	**07 39 05.1**	**-6.2**
WRA	**Warramunga Arr**	**19.22**	**176**	P		**Pn**	**07 35 36.4**	**-0.2**
	0.9nm,0.3s,baz=354,slow=11,SNR=44							
WRA				S		**Sn**	**07 39 05.1**	**-6.2**
	0.4nm,0.3s,baz=357,slow=23,SNR=6.1							
QIS	**Mount Isa**	**20.80**	**162**	P		Pn	07 35 56.1	+0.8
	baz=21,SNR=5.8							
KSM	**Kuching**	**22.82**	**275**	*e*P		**P**	**07 36 14.5**	**0.0**
	12nm,1.2s							
KSM	**Kuching**	**22.82**	**275**	P		**P**	**07 36 14.8**	**+0.3**
	baz=23,SNR=4.8							
AS31	**Alice Springs**	**22.89**	**178**	*e*P		**P**	**07 36 16.5**	**+1.3**
ASAR	**Alice Springs**	**22.89**	**178**	P		**P**	**07 36 16.3**	**+1.1**
ASAR				S		**S**	**07 40 27.6**	**+4.5**
ASAR	**Alice Springs**	**22.89**	**178**	P		**P**	**07 36 16.3**	**+1.1**
	11nm,0.9s,baz=349,slow=9.9,SNR=42							
ASAR				S		**S**	**07 40 27.6**	**+4.5**
	3.4nm,1.1s,baz=1.0,slow=22,SNR=8.5							
CTA	**Charters Tower**	**23.25**	**147**	P		**P**	**07 36 21.1**	**+2.3**
CTA	**Charters Tower**	**23.25**	**147**	P		**P**	**07 36 21.1**	**+2.3**
	4.2nm,0.8s,baz=95,slow=14,SNR=2.1							
MBWA	**Marble Bar**	**24.17**	**212**	*e*P		**P**	**07 36 28.7**	**+1.2**
	11nm,0.9s							
STKA	**Stephens Creek**	**32.09**	**166**	*e*P		**P**	**07 37 38.6**	**+0.3**
	2.3nm,0.9s							
STKA	**Stephens Creek**	**32.09**	**166**	P		**P**	**07 37 39.0**	**+0.8**
	8.0nm,0.8s,baz=337,slow=7.0,SNR=17							
STKA	**Stephens Creek**	**32.09**	**166**	P		**P**	**07 37 39.1**	**+0.8**
	baz=22,SNR=9.5							
CMAR	**Chiang Mai Arr**	**38.51**	**301**	P		**P**	**07 38 32.1**	**-1.6**
CMAR	**Chiang Mai Arr**	**38.51**	**301**	P		**P**	**07 38 32.1**	**-1.6**
	0.6nm,0.4s,baz=120,slow=7.3,SNR=6.7							
MKAR	**Makanchi Array**	**64.75**	**324**	P		**P**	**07 41 49.0**	**-0.4**
MKAR	**Makanchi Array**	**64.75**	**324**	P		**P**	**07 41 49.0**	**-0.4**
	1.1nm,0.9s,baz=120,slow=7.2,SNR=6.8							
ZALV	**Zalesovo Beam**	**67.37**	**331**	P		**P**	**07 42 04.0**	**-1.9**
ZALV	**Zalesovo Beam**	**67.37**	**331**	P		**P**	**07 42 04.0**	**-1.9**
	0.7nm,0.6s,baz=116,slow=6.8,SNR=5.6							
KURK	**Kurchatov**	**68.83**	**326**	*e*P		**P**	**07 42 14.9**	**-0.2**
	1.7nm,0.8s							
KURBB	**Kurchatov Arra**	**68.83**	**326**	P		**P**	**07 42 14.9**	**-0.3**
	2.8nm,0.9s,baz=119,slow=5.8,SNR=21							
BVAR	**Borovoye Array**	**74.42**	**326**	P		**P**	**07 42 48.5**	**-0.3**
BVAR	**Borovoye Array**	**74.42**	**326**	P		**P**	**07 42 48.5**	**-0.3**
	3.3nm,0.7s,baz=115,slow=7.0,SNR=16							
BRVK	**Borovoye**	**74.50**	**326**	*e*P		**P**	**07 42 48.4**	**-0.9**
	6.2nm,0.9s							
VNDA	**Vanda**	**78.37**	**174**	P		**P**	**07 43 11.8**	**+1.0**
VNDA	**Vanda**	**78.37**	**174**	P		**P**	**07 43 11.8**	**+1.0**
	0.5nm,0.6s,baz=306,slow=8.1,SNR=2.6							
OPO	**Ambohidratompo**	**85.86**	**252**	P		**P**	**07 43 51.0**	**-0.5**
OPO	**Ambohidratompo**	**85.86**	**252**	P		**P**	**07 43 51.0**	**-0.5**
	3.3nm,1.0s,baz=306,slow=4.7,SNR=3.0							
ILAR	**Eielson Array**	**86.35**	**25**	P		**P**	**07 43 51.5**	**-1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ILAR	Eielson Array	86.35	25	P	P	07 43 51.5	-1.2
	0.3nm,0.6s,baz=251,slow=6.1,SNR=4.5						
TORD	Torodi Ar. Bea	130.24	287	PKP	PKPdf	07 50 20.7	-1.4
TORD	Torodi Ar. Bea	130.24	287	PKP	PKPdf	07 50 20.7	-1.4
	0.1nm,0.3s,baz=132,slow=38,SNR=3.6						

CRAAG ***01*** *07:49:56.8, 37.°36N×3.°31E, Ml3.5*
MDD ***01*** *07:49:58.6±1.1, 36.°96N×3.°60E, h0km, mb4.0/5, Error ellipse: s-maj=12.8km s-min=6.2km az=91.0, PRXIMO*
CSEM ***01*** *07:49:58.5±0.5, 36.°94N×3.°58E, h10km, ML3.5, Error ellipse: s-maj=11.6km s-min=6.6km az=98.0*
ISC 01 07:49:57.2±1.6**, 36.°99N**±0.°06×**3.°67E**±0.°06**, h14**km±13km**, n43,** σ**1s.73**/59**, 1C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.55	250	P	Pg	07 50 07.4	-0.6
ABA	Alger-Bouzarea	0.55	250	P	Pg	07 50 07.4	-0.6
ABA	Alger-Bouzarea	0.55	250	P	Pg	07 50 07.4	-0.6
ADJB	Djebel Djouab	0.85	193	P	Pg	07 50 13.5	-0.3
ADJB	Djebel Djouab	0.85	193	P	Pg	07 50 13.5	-0.3
ADJB	Djebel Djouab	0.85	193	P	Pg	07 50 13.5	-0.3
EMHD	Djebel Mahouad	0.98	216	P	Pb	07 50 15.1	-1.0
EMHD	Djebel Mahouad	0.98	216	P	Pb	07 50 15.1	-1.0
EMHD	Djebel Mahouad	0.98	216	P	Pb	07 50 15.1	-1.0
EBNR	Beni Rached	1.86	249	P	Pg	07 50 33.9	+1.0
EBNR	Beni Rached	1.86	249	P	Pg	07 50 33.9	+1.0
ECHA	Ech Chlef	2.04	246	P	Pg	07 50 37.0	+0.7
ECHA	Ech Chlef	2.04	246	P	Pg	07 50 37.0	+0.7
ECHF	Ech Chlef	2.06	247	P	Pg	07 50 37.0	+0.3
EANR	'Ain N'Sour	2.32	244	P	Pg	07 50 40.5	-1.2
EANR	'Ain N'Sour	2.32	244	P	Pg	07 50 40.5	-1.2
EANR	'Ain N'Sour	2.32	244	P	Pg	07 50 40.5	-1.2
EIBI	Ibiza	2.74	319	P	Pn	07 50 42.2	+1.4
	1.0nm,0.1s,SNR=7.9						
EIBI				S	Sn	07 51 12.3	-1.4
	3.2nm,0.2s,SNR=7.9						
EIBI	Ibiza	2.74	319	P	Pn	07 50 42.2	+1.4
	1.0nm,0.1s,SNR=7.9						
EIBI				S	Sn	07 51 12.3	-1.4
	3.2nm,0.2s,SNR=7.9						
EBEN	Beniarda	3.53	300	P	Pn	07 50 52.9	+1.2
	0.2nm,0.1s,SNR=7.9						
EBEN				S	Sn	07 51 31.8	-1.5
	0.9nm,0.2s,SNR=7.9						
EBEN	Beniarda	3.53	300	P	Pn	07 50 52.9	+1.2
	0.2nm,0.1s,SNR=7.9						
EBEN				S	Sn	07 51 31.8	-1.5
	0.9nm,0.2s,SNR=7.9						
EMUR	La Murta	4.00	284	S	Sn	07 51 43.5	-1.5
	1.9nm,0.4s,SNR=7.9						
EMUR	La Murta	4.00	284	S	Sn	07 51 43.5	-1.5
	1.9nm,0.4s,SNR=7.9						
ETOB	Tobarra	4.45	293	P	Pn	07 51 05.6	+1.2
	1.4nm,0.2s,SNR=7.4						
ETOB				S	Sn	07 51 53.4	-2.7
	0.6nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.45	293	P	Pn	07 51 05.6	+1.2
	1.4nm,0.2s,SNR=7.4						
ETOB				S	Sn	07 51 53.3	-2.7
	0.6nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.67	317	P	Pn	07 51 09.8	+2.2
	0.4nm,0.2s,SNR=7.9						
EMOS				S	Sn	07 51 59.8	-1.9
	0.7nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.67	317	P	Pn	07 51 09.8	+2.2
	0.4nm,0.2s,SNR=7.9						
EMOS				S	Sn	07 51 59.8	-1.9
	0.7nm,0.2s,SNR=7.9						
ERTA	Horta de San J	4.74	328	S	Sn	07 52 02.6	-0.4
	2.1nm,0.3s,SNR=7.9						
ERTA	Horta de San J	4.74	328	S	Sn	07 52 02.6	-0.4
	2.1nm,0.3s,SNR=7.9						
EPOB	Poblet	4.80	336	P	Pn	07 51 10.6	+1.5
	1.0nm,0.2s,SNR=7.9						
EPOB				S	Sn	07 52 02.1	-2.5
	0.2nm,0.2s,SNR=7.9						
EPOB	Poblet	4.80	336	P	Pn	07 51 10.6	+1.5
	1.0nm,0.2s,SNR=7.9						
CFON	Fontmartina	4.86	349	⇑P	Pn	07 51 11.4	+1.4
	3.7nm,0.1s,SNR=18						
CFON				S	Sn	07 52 03.9	-2.2
	3.8nm,0.2s,SNR=7.9						
CFON	Fontmartina	4.86	349	P	Pn	07 51 11.4	+1.4
	3.7nm,0.1s,SNR=18						
EVIA	Vianos	5.16	290	P	Pn	07 51 16.6	+2.5
	0.7nm,0.1s,SNR=4.0						
EVIA				S	Sn	07 52 13.7	+0.1
	0.2nm,0.2s,SNR=7.9						
EVIA	Vianos	5.16	290	P	Pn	07 51 16.6	+2.5
	0.7nm,0.1s,SNR=4.0						
EVIA				S	Sn	07 52 13.7	+0.1
	0.2nm,0.2s,SNR=7.9						
EQES	Quesada	5.43	281	P	Pn	07 51 20.6	+2.7
	0.9nm,0.2s,SNR=7.9						
EQES				S	Sn	07 52 20.8	+0.5
	0.3nm,0.2s,SNR=7.9						
EQES	Quesada	5.43	281	P	Pn	07 51 20.6	+2.7
	0.9nm,0.2s,SNR=7.9						
EQES				S	Sn	07 52 20.8	+0.5
	0.3nm,0.2s,SNR=7.9						
EJON	La Jonquera	5.48	354	P	Pn	07 51 20.7	+2.2
	2.0nm,0.1s,SNR=15						
EJON				S	Sn	07 52 19.5	-1.9
	1.2nm,0.3s,SNR=7.9						
EJON	La Jonquera	5.48	354	P	Pn	07 51 20.7	+2.2
	2.0nm,0.1s,SNR=15						
CLLI	Llivia	5.63	347	P	Pn	07 51 23.6	+2.9
	0.5nm,0.1s,SNR=7.9						
CLLI	Llivia	5.63	347	P	Pn	07 51 23.6	+2.9
	0.5nm,0.1s,SNR=7.9						
CSOR	Sort	5.72	341	P	Pn	07 51 25.0	+3.1
	1.3nm,0.2s,SNR=5.8						
CSOR				S	Sn	07 52 26.2	-1.2
	0.4nm,0.2s,SNR=7.9						
CSOR	Sort	5.72	341	P	Pn	07 51 25.0	+3.1
	1.3nm,0.2s,SNR=5.8						

IDC ***01*** *07:52:51.7±1.3, 35.°16N×76.°39E, h0km, mb3.5/6, mb1 3.6/10, mb1mx3.4/30, mbtmp3.5/10, ML3.3/4, Error ellipse: s-maj=29.5km s-min=22.8km az=73.0*
ISC 01 07:52:55.1±0.9**, 35.°28N**±0.°06×**76.°6E**±0.°2**, h10**km**, n12,** σ**1s.69**/11**, mb3.6**/5**, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DLH	Dalhousie	2.79	191	*e*PKP	Pb	07 53 45.0	-0.1
DLH				*e*S	Sb	07 54 21.0	+1.6
AAK	Ala-Archa	7.52	348	Pg	Pb	07 55 08.9	+3.1
	0.1nm,0.3s,baz=163,slow=17,SNR=5.2						
MKAR	Makanchi Array	12.27	19	Pn	Pn	07 55 50.8	+0.9
	0.1nm,0.3s,baz=201,slow=12,SNR=4.9						
MKAR				Sn	Sn	07 58 05.7	-1.0
	0.1nm,0.3s,baz=203,slow=26,SNR=2.7						
KURBB	Kurchatov Arra	15.40	5	Pn	Pn	07 56 32.3	0.0
	0.0nm,0.3s,baz=193,slow=9.9,SNR=2.2						
BVAR	Borovoye Array	18.28	348	P	Pn	07 57 07.6	-1.2
	0.1nm,0.3s,baz=142,slow=7.5,SNR=6.0						
ZALV	Zalesovo Beam	19.53	15	P	P	07 57 23.0	+0.4
	0.1nm,0.3s,baz=195,slow=11,SNR=2.3						
AKTO	Aktyubinsk	20.29	324	P	P	07 57 28.9	-2.0
	1.1nm,0.5s,baz=163,slow=11,SNR=4.4						
CMAR	Chiang Mai Arr	25.94	124	P	P	07 58 27.0	-0.7
	0.8nm,0.3s,baz=303,slow=11,SNR=4.3						
FINES	FINESS Array B	41.05	326	P	P	08 00 36.8	-1.6
	0.9nm,0.5s,baz=108,slow=9.8,SNR=7.6						
NOA	NORSAR Array B	48.08	324	P	P	08 01 32.3	-2.3
	0.4nm,0.7s,baz=132,slow=14,SNR=2.4						
TORD	Torodi Ar. Bea	70.28	272	P	P	08 04 06.0	-3.1
	0.3nm,0.6s,baz=44,slow=4.8,SNR=4.1						
YKA	Yellowknife Ar	82.14	5	P	P	08 05 14.1	-1.6
	0.1nm,0.4s,baz=343,slow=5.5,SNR=5.7						

IDC 01 07:53:56.3±4.2**, 10.°75S**×**110.°68E, h0**km**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/20**, mbtmp3.3**/3**, Error ellipse: s-maj=219.3km s-min=28.9km az=46.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.55	115	P	P	07 59 18.4	+0.3
	0.4nm,0.8s,baz=288,slow=10,SNR=3.1						
ASAR	Alice Springs	25.58	123	P	P	07 59 26.8	-0.6
	0.4nm,0.7s,baz=304,slow=8.9,SNR=5.6						
MKAR	Makanchi Array	62.66	338	P	P	08 04 23.0	+0.2
	0.2nm,0.4s,baz=155,slow=7.5,SNR=4.4						

NNC 01 08:32:41.5±3.2**, 40.°42N**×**79.°61E, h0**km**, mb3.6, mpv3.2, 2C-6D, Error ellipse: s-maj=26.7km s-min=12.3km az=165.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TKM2	Tokmak 2	3.91	311	⇑Pn	Pn	08 33 42.1	-0.9
	5.6nm,0.5s						
TKM2				⇓Sn	Sn	08 34 31.3	+1.4
	20nm,0.5s						
MK31	Makanchi Array	6.66	16	⇓Pn	Pn	08 34 21.6	+1.0
	1.5nm,0.9s,baz=200,slow=13,SNR=6.3						
MK31				⇓Pg	Pb	08 34 43.5	+5.2
	0.9nm,0.7s,baz=192,slow=17,SNR=3.6						
MK31				⇓Sn	Sn	08 35 38.4	+1.1
	1.5nm,0.6s						
MK31				⇓Lg	Lg	08 36 12.6	
	1.1nm,0.6s						
KUR18	Kurchatov Arra	10.25	356	⇑Lg	Lg	08 38 03.9	
	0.4nm,0.9s						
KURK	Kurchatov	10.32	356	⇓Lg	Lg	08 38 01.2	
	11nm,1.4s						

IDC 01 08:54:06.5±2.9**, 20.°29S**×**178.°29W, h0**km**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/19**, mbtmp3.6**/4**, Error ellipse: s-maj=307.7km s-min=30.2km az=161.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.30	257	P	P	09 02 18.0	-0.6
	0.6nm,0.6s,baz=91,slow=8.3,SNR=12						
WRA	Warramunga Arr	44.36	262	P	P	09 02 19.4	+0.4
	0.4nm,0.3s,baz=97,slow=8.1,SNR=34						
FITZ	Fitzroy Crossi	52.79	262	P	P	09 03 23.7	-0.2
	0.9nm,0.6s,baz=76,slow=4.2,SNR=2.4						
TXAR	Lajitas Array	87.17	57	P	P	09 06 55.1	0.0
	0.2nm,0.8s,baz=205,slow=4.0,SNR=2.8						

IDC ***01*** *09:01:26.2±1.6, 41.°52N×71.°39E, h0km, mb3.6/3, mb1 3.6/9, mb1mx3.4/33, mbtmp3.5/9, ML3.2/6, Error ellipse: s-maj=20.1km s-min=11.5km az=4.0*
NNC ***01*** *09:01:27.0±1.7, 41.°43N×71.°37E, h0km, mb3.5, mpv3.4, Error ellipse: s-maj=17.1km s-min=6.4km az=33.0*
ISC 01 09:01:29.7±1.3**, 41.°53N**±0.°10×**71.°38E**±0.°07**, h23**km**, n23,** σ**1s.61**/29**, mb3.4**/3**, 5C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	1.70	338	P	Pn	09 01 58.5	+0.5
	29nm,0.3s,baz=160,slow=17,SNR=731						
KK31				⇑S	Sb	09 02 23.3	+2.2
	168nm,0.3s,baz=142,slow=17,SNR=3.5						
AML	Almayashu	1.83	70	P	Pb	09 02 02.1	-0.7
	SNR=159						
EKS2	Erkin-Say	2.11	57	P	Pb	09 02 07.0	-0.4
	SNR=13						
UCH	Uchtor	2.44	72	P	Pb	09 02 12.5	-0.7
	SNR=21						
AAK	Ala-Archa	2.57	64	Pn	Pb	09 02 13.2	-2.0
	9.1nm,0.3s,baz=236,slow=4.5,SNR=61						
AAK				Lg	Lg	09 02 48.5	
	18nm,0.3s,baz=353,slow=21,SNR=12						
KBK	Karagaybulak	2.89	66	P	Pb	09 02 17.9	-2.8
	SNR=26						
USP	Ospenovka	2.89	52	P	Pb	09 02 20.5	-0.1
	SNR=25						
CHMS	Chumysh	2.90	59	P	Pb	09 02 21.8	+0.9
	SNR=15						
KZA	Kyzart	2.95	78	P	Pb	09 02 22.1	+0.3
	SNR=20						
TKM2	Tokmak 2	3.43	65	⇓Pn	Pn	09 02 24.1	+2.2
	0.9nm,0.4s						
TKM2				⇓Pg	Pb	09 02 29.2	-0.6
	11nm,0.5s						
TKM2				⇓Lg	Lg	09 03 15.4	
	38nm,0.4s						
TKM2	Tokmak 2	3.43	65	P	Pb	09 02 29.3	-0.6
	SNR=22						
MK31	Makanchi Array	9.44	52	⇑Pn	Pn	09 03 45.3	+1.1
	0.9nm,0.6s,baz=240,slow=14,SNR=8.4						
MK31				⇑Lg	Lg	09 06 28.3	
	2.6nm,0.7s,baz=238,slow=28,SNR=3.7						
MKAR	Makanchi Array	9.44	52	Pn	Pn	09 03 44.3	0.0
	0.1nm,0.3s,baz=238,slow=16,SNR=3.6						
MKAR				Lg	Lg	09 06 25.2	
	0.2nm,0.3s,baz=240,slow=33,SNR=4.1						
KURBB	Kurchatov Arra	10.36	26	Pn	Pn	09 03 54.6	-2.1
	0.0nm,0.3s,baz=219,slow=13,SNR=2.6						
KURBB				Sn	Sn	09 05 53.8	+1.8
	0.1nm,0.3s,baz=32,slow=7.0,SNR=6.3						
KURBB				Lg	Lg	09 06 54.4	
	0.1nm,0.3s,baz=216,slow=29,SNR=5.3						
AB31	Akbulak array	11.14	318	P	Pn	09 04 07.5	+0.1
	0.5nm,0.4s,baz=129,slow=13,SNR=21						
BVA0	Borovoye Array	11.52	357	⇑P	Pn	09 04 15.2	+2.6
	0.2nm,0.5s,baz=163,slow=13,SNR=9.4						
BVAR	Borovoye Array	11.52	357	Pn	Pn	09 04 11.2	-1.4
	0.7nm,0.3s,baz=162,slow=10,SNR=10						
BVAR				Sn	Sn	09 06 16.7	-3.7
	1.2nm,0.3s,baz=167,slow=22,SNR=13						
BVAR				Lg	Lg	09 07 32.7	
	0.1nm,0.3s,baz=162,slow=13,SNR=2.9						
AKTO	Aktyubinsk	12.85	318	⇑P	Pn	09 04 31.3	+0.4
	0.5nm,1.4s						
AKTO	Aktyubinsk	12.85	318	Pn	Pn	09 04 29.4	-1.4
	0.2nm,0.3s,baz=136,slow=14,SNR=5.5						
AKTO				Sn	Sn	09 06 50.3	-2.7
	0.2nm,0.3s,baz=201,slow=4.3,SNR=4.9						
ZALV	Zalesovo Beam	15.33	31	Pn	Pn	09 05 03.6	-0.9
	0.1nm,0.3s,baz=218,slow=9.6,SNR=2.4						
ZALV				Sn	Sn	09 07 53.9	+0.5
	0.1nm,0.3s,baz=227,slow=21,SNR=2.6						
ARCES	ARCESS Array B	36.66	335	P	P	09 08 34.8	+0.6
	2.0nm,0.9s,baz=108,slow=6.5,SNR=3.7						
GERES	GERESS Array B	40.44	301	P	P	09 09 05.4	-0.9
	0.6nm,0.7s,baz=81,slow=6.1,SNR=5.4						
YKA	Yellowknife Ar	76.21	3	P	P	09 13 16.3	+0.6
	0.2nm,0.7s,baz=353,slow=6.0,SNR=8.7						

IDC 01 09:02:03.7±10.0**, 23.°65S**×**179.°97E, h469**km±132km**, mb3.3**/5**, mb1 3.5**/6**, mb1mx3.2**/19**, mbtmp3.3**/6**, Error ellipse: s-maj=92.7km s-min=28.4km az=6.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.77	189	P	P	09 05 11.6	-0.1
	2.1nm,0.3s,baz=10,slow=2.5,SNR=13						
CTA	Charters Tower	31.45	270	P	P	09 07 46.5	+0.9
	5.4nm,0.3s,baz=87,slow=10,SNR=14						
STKA	Stephens Creek	34.79	248	P	P	09 08 12.7	-1.2
	0.5nm,0.5s,baz=113,slow=7.7,SNR=2.7						
ASAR	Alice Springs	42.05	260	P	P	09 09 13.2	0.0
	0.8nm,0.4s,baz=96,slow=7.5,SNR=26						
WRA	Warramunga Arr	42.40	266	P	P	09 09 15.5	-0.6
	1.6nm,0.3s,baz=95,slow=8.5,SNR=79						
TXAR	Lajitas Array	90.33	58	P	P	09 14 14.2	0.0
	0.4nm,0.6s,baz=220,slow=6.2,SNR=7.0						

BJI ***01*** *09:07:46.7, 7.°38S×127.°23E, h410km, mB4.4/17, mb4.3/21*
ISCJB ***01*** *09:07:52.2±0.2, 6.°78S±0.°02×126.°92E±0.°03, h407km, mb4.3/39, Error ellipse: s-maj=4.1km s-min=3.1km az=154.3*
IDC ***01*** *09:07:53.2±1.1, 6.°79S×126.°92E, h407km±11km, mb3.9/21, mb1 4.0/26, mb1mx4.0/30, mbtmp4.0/26, Error ellipse: s-maj=11.4km s-min=6.3km az=77.0*
DJA ***01*** *09:07:53.9±0.2, 7°S±3°×12°7E±°, h404km±4km, M4.6/27, mB5.0/14, mb4.7/27, MLv5.0/13, Mw(mB)4.4/14*
NEIC ***01*** *09:07:53.7±0.4, 6.°76S×126.°89E, h415km±4km, mb4.6/12, Error ellipse: s-maj=7.5km s-min=4.4km az=71.0*
AUST ***01*** *09:07:53.4±0.3, 6.°79S×126.°82E, h410km, Error ellipse: s-maj=0.8km s-min=0.6km az=41.0*
ISC 01 09:07:53.2±0.3**, 6.°85S**±0.°03×**126.°93E**±0.°04**, h407**km**, n167,** σ**1s.53**/219**, mb4.3**/39**, 2C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.39	22	P	P	09 09 02.3	+2.2
AAI				S	S	09 09 55.5	+1.0
AAI	Ambon	3.39	22	P	P	09 09 01.8	+1.7
	baz=3.4,SNR=7.2						
AAI				S	S	09 09 55.5	+1.0
	baz=3.4,SNR=4.3						
BBSI	Bau Bau	4.54	287	P	P	09 09 13.6	+2.8
MMRI	Maumere	4.98	249	P	P	09 09 15.5	+0.4
MMRI				S	S	09 10 20.2	-1.9
TLE	Tual	5.90	79	P	P	09 09 26.2	+1.5
	1μm,0.8s,17μm7.3nm						
TLE				S	S	09 10 36.4	-3.3
	1μm,0.8s,17μm7.3nm						
TLE	Tual	5.90	79	P	P	09 09 26.6	+1.8
	baz=6.0,SNR=44						
TLE				S	S	09 10 34.0	-5.8
	baz=6.0,SNR=12						
LBMI	Labuha	6.20	5	P	P	09 09 28.9	+0.9
	266nm,0.8s,4μm1.1nm						
FAKI	Fak Fak	6.58	54	P	P	09 09 31.8	-1.1
	104nm,0.7s,1μm0.8nm						
FAKI	Fak Fak	6.58	54	P	P	09 09 31.4	-1.6
	baz=6.7,SNR=14						
FAKI				S	S	09 10 47.6	-5.9
	baz=6.7,SNR=12						
BKSI	Bulukumba	6.94	282	P	P	09 09 36.7	-0.2
	54nm,0.7s,763nm0.2nm						
SKSI	Soroako, Sulaw	7.04	307	P	P	09 09 42.6	+4.6
LUWI	Luwuk	7.11	324	P	P	09 09 40.0	+1.3
	234nm,1.5s,3μm0.7nm						
LUWI	Luwuk	7.11	324	P	P	09 09 39.6	+0.8
	baz=7.0,SNR=4.5						
LUWI				S	S	09 11 04.5	+0.3
	baz=7.0,SNR=4.7						
WSI	Waingapu	7.14	246	S	S	09 10 56.8	-7.9
	baz=7.1,SNR=23						
MTN	Manton Dam	7.25	146	P	P	09 09 41.7	+1.4
	baz=7.4,SNR=64						
MTN				S	S	09 11 06.9	-0.1
	baz=7.4,SNR=6.1						
SWI	Sorong	7.35	36	P	P	09 09 42.3	+0.9
	96nm,0.6s,1μm0.3nm						
SWI	Sorong	7.35	36	P	P	09 09 42.7	+1.3
	baz=7.4,SNR=6.2						
KAPI	Kappang	7.37	284	*e*P	P	09 09 41.1	-0.5
KAPI				S	S	09 11 08.7	-0.8
KAPI				*e*S	S	09 11 12.1	+2.6
KAPI	Kappang	7.37	284	P	P	09 09 41.6	0.0
	68nm,1.2s,0.2nm						
KAPI	Kappang	7.37	284	P	P	09 09 41.4	-0.2
	6.0nm,0.3s,baz=97,slow=2.7,SNR=16						
KAPI				S	S	09 11 08.7	-0.8
	baz=100,slow=17,SNR=3.4						
SPSI	Sidrap Palu	7.69	292	P	P	09 09 45.2	+0.1
	37nm,1.4s,0.1nm						
KDU	Kakadu	7.96	137	P	P	09 09 49.4	+1.2
	baz=8.1,SNR=32						
TTSI	Tana Toraja	8.03	298	P	P	09 09 50.2	+1.3
	77nm,1.7s,2μm						
MNI	Manado	8.50	346	P	P	09 09 55.0	+0.9
	210nm,0.6s,0.9nm						
PCI	Palu	9.22	310	S	S	09 12 09.7	+21
	baz=9.1,SNR=3.8						
BAKI	Biak	10.74	59	P	P	09 10 22.5	+3.6
	146nm,1.2s,1μm						
FITZ	Fitzroy Crossi	11.25	186	P	P	09 10 25.7	+1.2
FITZ				S	S	09 12 25.9	-3.5
FITZ	Fitzroy Crossi	11.25	186	P	P	09 10 25.7	+1.2
	4.6nm,0.3s,baz=21,slow=8.8,SNR=162						
FITZ				S	S	09 12 25.9	-3.5
	3.6nm,0.3s,baz=144,slow=23,SNR=6.1						
FITZ	Fitzroy Crossi	11.25	186	P	P	09 10 25.7	+1.2
	baz=11,SNR=103						
FITZ				S	S	09 12 29.3	-0.1
	baz=11,SNR=4.7						
BBKI	Banjar Baru	12.50	285	P	P	09 10 40.3	+2.0
	464nm,1.1s						
BLJI	Banyuglugur	13.26	265	P	P	09 10 47.8	+1.2
	149nm,0.8s,3μm						
MTKI	Muara Teweh, K	13.36	296	P	P	09 10 49.2	+1.5
	131nm,1.0s						
DAV	Davao City (W)	13.89	354	P	P	09 10 54.3	+0.8
DAV	Davao City (W)	13.89	354	P	P	09 10 54.3	+0.8
	38nm,0.3s,baz=202,slow=11,SNR=4.6						
CTBH	Cotabato--PC H	14.23	349	⇑*i*P	P	09 10 57.5	+0.2
JAY	Jayapura	14.38	73	P	P	09 11 03.9	+5.0
	74nm,0.8s						
JAY	Jayapura	14.38	73	P	P	09 11 01.4	+2.5
	baz=14,SNR=5.2						
WRAB	Tennant Creek	14.86	152	*i* P	P	09 11 05.0	+0.9
	39nm,0.8s						
WRAB				*e*S	S	09 13 41.5	-0.4
WRA	Warramunga Arr	14.87	152	P	P	09 11 05.0	+1.0
WRA				S	S	09 13 41.2	-0.8
WRA	Warramunga Arr	14.87	152	P	P	09 11 05.0	+1.0
	2.3nm,0.3s,baz=325,slow=11,SNR=148						
WRA				S	S	09 13 41.2	-0.8
	2.7nm,0.3s,baz=320,slow=20,SNR=7.0						
SJI	Sawahan	15.07	266	P	P	09 11 12.8	+6.4
MBWA	Marble Bar	15.84	205	*e*P	P	09 11 15.2	+0.7
	110nm,1.5s						
PALU	Palau	15.98	28	P	P	09 11 15.9	-0.2
	baz=16,SNR=9.9						
STKI	Sintang	16.88	293	P	P	09 11 30.8	+5.1
BJII	Banjamegara	17.10	267	P	P	09 11 35.8	+7.7
SBUM	Sibu	17.35	302	P	P	09 11 34.9	+4.2
	13nm,1.1s						
COEN	Coen	17.46	115	P	P	09 11 32.7	+0.9
	baz=18,SNR=19						
TGJI	Tegal	17.68	269	P	P	09 11 34.4	+0.2
	74nm,1.0s,3μm						
AS31	Alice Springs	18.01	159	*e*P	P	09 11 38.6	+1.0
AS31				*e*S	S	09 14 45.1	+2.0
ASAR	Alice Springs	18.01	159	P	P	09 11 38.8	+1.2
ASAR				S	S	09 14 41.5	-1.6
ASAR	Alice Springs	18.01	159	P	P	09 11 38.8	+1.2
	4.1nm,0.3s,baz=338,slow=9.9,SNR=178						
ASAR				S	S	09 14 41.5	-1.6
	1.7nm,0.3s,baz=345,slow=21,SNR=13						
QIS	Mount Isa	18.34	139	P	P	09 11 42.0	+0.8
	baz=18,SNR=21						
QIS				S	S	09 14 50.1	+1.0
	baz=18,SNR=6.9						
KSM	Kuching	18.54	296	*e*P	P	09 11 41.1	-2.1
	60nm,1.2s						
KSM	Kuching	18.54	296	P	P	09 11 41.6	-1.7
	48nm,1.0s,523nm						
KSM	Kuching	18.54	296	P	P	09 11 41.3	-2.0
	baz=18,SNR=11						
KSM				S	S	09 14 57.8	+5.2
	baz=18,SNR=4.5						
CISI	Cisompet, Garu	18.98	267	P	P	09 11 45.8	-2.0
	448nm,0.9s,3μm						
CISI	Cisompet, Garu	18.98	267	P	P	09 11 46.3	-1.5
	baz=19,SNR=16						
CISI				S	S	09 14 48.7	-12
	baz=19,SNR=3.6						
LEM	Lembang	19.18	269	P	P	09 11 50.4	+0.5
	141nm,1.0s						
GIRL	Giralia	19.91	217	P	P	09 11 58.0	+1.6
	baz=20,SNR=11						
PMG	Port Moresby	20.18	99	P	P	09 11 58.8	-0.2
PMG	Port Moresby	20.18	99	P	P	09 11 58.8	-0.2
	14nm,0.6s,baz=285,slow=6.7,SNR=5.9						
MEEK	Meekatharra	21.21	201	P	P	09 12 08.4	+0.1
	baz=21,SNR=87						
MEEK				S	S	09 15 39.3	+3.2
	baz=21,SNR=5.2						
PPBI	Pangkal Pinang	21.24	282	P	P	09 12 09.6	+0.9
	29nm,1.0s,26μm						
FORT	Forrest	23.83	178	*e*P	P	09 12 32.7	+0.9
	42nm,0.6s						
FORT	Forrest	23.83	178	P	P	09 12 32.8	+0.9
	baz=24,SNR=25						
MORW	Morawa	24.37	204	P	P	09 12 37.2	+0.5
	baz=24,SNR=12						
KMBL	Kambalda	24.84	190	P	P	09 12 41.4	+0.5
	baz=25,SNR=14						
BLDU	Ballidu	25.51	201	P	P	09 12 47.2	+0.3
	baz=26,SNR=11						
KLBR	Kellerberrin	26.07	198	P	P	09 12 52.4	+0.5
	baz=26,SNR=26						
BBOO	Buckleboo	27.19	163	*e*P	P	09 13 03.3	+1.6
	732nm,1.4s						
BBOO	Buckleboo	27.19	163	P	P	09 13 03.0	+1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	baz=27,SNR=10						
NWAO	**Narrogin (SRO)**	**27.47**	**198**	*e*P	**P**	**09 13 04.6**	**+0.4**
	19nm,0.7s						
NWAO	**Narrogin (SRO)**	**27.47**	**198**	P	**P**	**09 13 04.8**	**+0.6**
	23nm,0.7s,baz=27,slow=8.3,SNR=18						
IPM	**Ipoh**	**28.20**	**293**	*e*P	**P**	**09 13 09.6**	**-1.4**
	10nm,0.4s						
STKA	**Stephens Creek**	**28.41**	**153**	*e*P	**P**	**09 13 14.2**	**+1.6**
	1.5nm,0.8s						
STKA	**Stephens Creek**	**28.41**	**153**	P	**P**	**09 13 14.0**	**+1.4**
	6.8nm,0.5s,baz=328,slow=9.4,SNR=27						
STKA	**Stephens Creek**	**28.41**	**153**	P	**P**	**09 13 14.1**	**+1.6**
	baz=29,SNR=19						
KULM	**Kulim**	**28.87**	**294**	*e*P	**P**	**09 13 17.3**	**+0.5**
PSI	**Prapat**	**29.56**	**288**	P	**P**	**09 13 22.3**	**-0.6**
PSI	**Prapat**	**29.56**	**288**	P	**P**	**09 13 22.3**	**-0.6**
	46nm,0.9s,baz=129,slow=6.7,SNR=29						
PSI	**Prapat**	**29.56**	**288**	P	P	09 13 17.0	-5.9
	baz=29,SNR=24						
CMSA	**Cobar Meteorol**	**30.18**	**147**	P	**P**	**09 13 30.0**	**+2.1**
	baz=30,SNR=13						
GSI	**Gunungsitoli**	**30.40**	**284**	P	**P**	**09 13 29.4**	**-0.8**
	baz=30,SNR=4.9						
QIZ	**Qiongzhong**	**30.74**	**327**	P	**P**	**09 13 33.1**	**+0.1**
QIZ				S	**S**	**09 18 07.1**	**+1.1**
ARPS	**Mount Arapiles**	**32.74**	**158**	P	**P**	**09 13 52.5**	**+2.4**
	baz=33,SNR=18						
YNG	**Young**	**33.75**	**147**	P	**P**	**09 14 01.5**	**+2.8**
	baz=34,SNR=6.7						
PATS	**Pohnpei**	**34.13**	**67**	S	**S**	**09 18 58.3**	**0.0**
	baz=34,SNR=3.2						
TOO	**Toolangi**	**34.93**	**154**	P	**P**	**09 14 11.8**	**+3.1**
	baz=35,SNR=5.6						
CMAR	**Chiang Mai Arr**	**37.35**	**313**	P	**P**	**09 14 28.4**	**-0.7**
CMAR				ScP	**ScP**	**09 19 45.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**37.35**	**313**	P	**P**	**09 14 28.4**	**-0.7**
	1.2nm,0.6s,baz=139,slow=6.9,SNR=8.5						
CMAR				ScP	**ScP**	**09 19 45.9**	**-0.4**
	1.7nm,0.6s,baz=173,slow=2.9,SNR=9.5						
GYA	**Guiyang**	**38.51**	**330**	*e*P	**P**	**09 14 39.0**	**+0.2**
GYA				pP	**pP**	**09 15 58.6**	**+2.9**
GYA				PcP	**PcP**	**09 16 43.0**	**+1.0**
GYA				ScP	**ScP**	**09 19 51.2**	**+0.5**
GYA				S	**S**	**09 20 05.0**	**+1.0**
GYA				ScS	**ScS**	**09 24 01.9**	**-0.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LHI	**Lord Howe Isla**	**38.76**	**133**	P	P	09 14 45.9	+5.3
	baz=39,SNR=3.6						
WHN	**Wuhan**	**39.09**	**343**	P	**P**	**09 14 43.1**	**-0.2**
NJ2	**Nanjing**	**39.45**	**349**	*e*P	**P**	**09 14 46.4**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
KMI	**Kunming**	**39.55**	**324**	P	**P**	**09 14 48.4**	**+1.0**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JNU	**Nakatsue**	**39.93**	**5**	*e*P	**P**	**09 14 49.2**	**-0.9**
	comp=Z,4.1nm,0.8s						
JNU	**Nakatsue**	**39.93**	**5**	P	**P**	**09 14 49.0**	**-1.1**
	comp=Z,8.6nm,0.6s,baz=195,slow=1.8,SNR=14						
KSAR	**Wonju Array Be**	**44.07**	**1**	P	**P**	**09 15 22.9**	**-0.1**
KSAR				ScP	**ScP**	**09 20 11.9**	**-0.5**
KSRS	**Korea Array**	**44.08**	**1**	P	**P**	**09 15 22.9**	**-0.2**
	comp=Z,7.6nm,0.6s,baz=182,slow=9.7,SNR=26						
KSRS				ScP	**ScP**	**09 20 11.9**	**-0.5**
	comp=Z,1.6nm,1.0s,baz=199,slow=2.6,SNR=4.3						
MJAR	**Matsushiro Arr**	**44.44**	**13**	P	**P**	**09 15 24.4**	**-1.5**
MJAR	**Matsushiro Arr**	**44.44**	**13**	P	**P**	**09 15 24.4**	**-1.5**
	comp=Z,19nm,0.6s,baz=193,slow=9.6,SNR=89						
MAJO	**Matsushiro**	**44.44**	**13**	*e*P	**P**	**09 15 24.6**	**-1.4**
	comp=Z,22nm,0.7s						
MAT	**Matsushiro**	**44.44**	**13**	P	**P**	**09 15 24.5**	**-1.4**
BJI	**Beijing**	**47.70**	**349**	P	**P**	**09 15 52.0**	**+1.1**
BJI				S	**S**	**09 22 18.3**	**+2.8**
BJI				SS	**SS**	**09 25 54.2**	**+3.8**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,79nm,4.5s						
LZH	**Lanzhou**	**47.90**	**335**	*e*P	**P**	**09 15 52.5**	**-0.2**
LZH				pP	**PcP**	**09 17 16.0**	**+2.1**
LZH				sP	**sP**	**09 17 59.0**	**-0.2**
LZH				*e*S	**S**	**09 22 16.3**	**-2.6**
LZH				sS	**sS**	**09 24 44.1**	**-0.4**
LZH				SS	**SS**	**09 25 51.7**	**-2.4**
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,70nm,4.1s						
HHC	**Hu-ho-hao-te**	**49.53**	**345**	*e*P	**P**	**09 16 04.9**	**+0.2**
HHC				pP	**pP**	**09 17 27.5**	**+1.1**
HHC				sP	**sP**	**09 18 12.1**	**+0.4**
HHC				PcS	**PcS**	**09 21 16.5**	**-0.5**
HHC				S	**S**	**09 22 39.8**	**-1.2**
HHC				sS	**ScS**	**09 25 10.7**	**-1.7**
HHC				SS	**SS**	**09 26 18.1**	**-1.4**
HHC				pmax	pmax		
	comp=Z,35nm,0.5s						
HHC				pmax	pmax		
	comp=Z,230nm,8.0s						
CN2	**Changchun**	**50.43**	**359**	*e*P	**P**	**09 16 13.6**	**+2.3**
USRK	**Ussuriysk Arra**	**51.02**	**5**	P	**P**	**09 16 15.1**	**-0.4**
	comp=Z,12nm,0.5s,baz=188,slow=6.8,SNR=53						
USRK				ScP	**ScP**	**09 20 41.3**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=186,slow=2.0,SNR=4.8						
MDJ	**Mudanjiang**	**51.29**	**2**	P	**P**	**09 16 17.8**	**+0.3**
MDJ				pP	**pP**	**09 17 38.2**	**-1.6**
MDJ				ScP	**ScP**	**09 20 41.7**	**-1.1**
MDJ				S	**S**	**09 23 07.7**	**+3.1**
MDJ				pmax	pmax		
	comp=Z,11nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,98nm,4.5s						
GTA	**Gaotai**	**52.43**	**334**	⇓P	**P**	**09 16 25.5**	**-0.6**
GTA				pP	**pP**	**09 17 49.8**	**+0.9**
GTA				sP	**sP**	**09 18 33.6**	**-0.3**
GTA				S	**S**	**09 23 20.2**	**-0.3**
GTA				sS	**sS**	**09 25 48.9**	**0.0**
GTA				SS	**SS**	**09 27 05.9**	**+0.5**
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,77nm,5.2s						
ASAJ	**Asahikawa**	**52.67**	**14**	P	**P**	**09 16 27.2**	**-0.4**
ASAJ	**Asahikawa**	**52.67**	**14**	P	**P**	**09 16 27.2**	**-0.4**
	comp=Z,12nm,0.7s,baz=208,slow=8.6,SNR=9.6						
RPZ	**Rata Peaks**	**53.24**	**141**	P	**P**	**09 16 32.7**	**+0.8**
RPZ	**Rata Peaks**	**53.24**	**141**	P	**P**	**09 16 32.7**	**+0.8**
	comp=Z,15nm,0.8s,baz=317,slow=2.3,SNR=6.3						
KAAM	**Kaadhehdhoo**	**54.30**	**276**	P	**P**	**09 16 40.6**	**+0.7**
	baz=54,SNR=4.9						
ULN	**Ulaanbaatar**	**57.24**	**344**	*e*P	**P**	**09 16 59.9**	**-0.1**
	comp=Z,2.5nm,0.6s						
SONM	**Songino Array**	**57.39**	**344**	P	**P**	**09 17 00.4**	**-0.6**
SONM	**Songino Array**	**57.39**	**344**	P	**P**	**09 17 00.4**	**-0.6**
	comp=Z,3.7nm,0.5s,baz=175,slow=7.0,SNR=16						
WMQ	**Urumqi**	**61.65**	**329**	*e*P	**P**	**09 17 29.6**	**-0.1**
PETK	**Petropavlovsk-**	**65.18**	**20**	P	**P**	**09 17 52.8**	**+0.5**
PETK	**Petropavlovsk-**	**65.18**	**20**	P	**P**	**09 17 52.8**	**+0.5**
	comp=Z,14nm,0.5s,baz=188,slow=5.8,SNR=86						
MKAR	**Makanchi Array**	**66.47**	**328**	P	**P**	**09 17 59.9**	**-0.6**
MKAR	**Makanchi Array**	**66.47**	**328**	P	**P**	**09 17 59.9**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=126,slow=7.6,SNR=14						
AAK	**Ala-Archa**	**68.49**	**321**	P	**P**	**09 18 13.7**	**+0.3**
AAK	**Ala-Archa**	**68.49**	**321**	P	**P**	**09 18 13.7**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=144,slow=14,SNR=2.3						
ZAA0	**Zalesovo Array**	**70.14**	**335**	*e*P	**P**	**09 18 21.4**	**-1.5**
ZALV	**Zalesovo Beam**	**70.14**	**335**	P	**P**	**09 18 21.4**	**-1.4**
ZALV	**Zalesovo Beam**	**70.14**	**335**	P	**P**	**09 18 21.4**	**-1.4**
	comp=Z,3.7nm,0.5s,baz=134,slow=5.6,SNR=25						
FX1	**Attu Island--F**	**71.22**	**28**	P	**P**	**09 18 29.6**	**+0.3**
FX1	**Attu Island--F**	**71.22**	**28**	P	**P**	**09 18 29.6**	**+0.3**
	comp=Z,15nm,0.7s,baz=18,slow=9.6,SNR=3.1						
VNDA	**Vanda**	**72.97**	**173**	P	**P**	**09 18 39.6**	**+0.4**
VNDA	**Vanda**	**72.97**	**173**	P	**P**	**09 18 39.6**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=311,slow=6.6,SNR=21						
MAW	**Mawson**	**73.98**	**201**	*e*P	**P**	**09 18 46.0**	**+0.9**
	comp=Z,4.3nm,1.2s						
MAW	**Mawson**	**73.98**	**201**	P	**P**	**09 18 46.3**	**+1.1**
	comp=Z,4.7nm,0.7s,baz=60,slow=9.6,SNR=12						
MAW	**Mawson**	**73.98**	**201**	P	**P**	**09 18 46.2**	**+1.1**
	baz=74,SNR=8.3						
OPO	**Ambohidratompo**	**78.16**	**252**	P	**P**	**09 19 09.4**	**-0.3**
OPO	**Ambohidratompo**	**78.16**	**252**	P	**P**	**09 19 09.4**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=53,slow=2.8,SNR=7.8						
SYO	**Syowa Base**	**82.69**	**201**	⇑*e*P	**P**	**09 19 31.4**	**-0.8**
QSPA	**South Pole Qui**	**83.12**	**180**	*e*P	**P**	**09 19 34.4**	**-0.2**
	comp=Z,17nm,1.2s						
RDF	**Al-Radifah**	**84.07**	**300**	*e*P	**P**	**09 19 37.4**	**-2.5**
RDF				AMb	AMB	09 19 40.9	
	comp=Z,38nm,1.5s						
NAY	**Al-Naaiem**	**84.39**	**300**	*e*P	**P**	**09 19 40.4**	**-1.2**
NAY				AMb	AMB	09 19 47.5	
	comp=Z,12nm,1.8s						
RST	**Umm Al-Ruwaisa**	**84.65**	**300**	*e*P	**P**	**09 19 41.6**	**-1.2**
RST				AMb	AMB	09 19 42.6	
	comp=Z,3.4nm,0.9s						
COLD	**Coldfoot**	**93.51**	**23**	*e*P	**P**	**09 20 23.2**	**-0.4**
	comp=Z,1.4nm,0.5s						
ILAR	**Eielson Array**	**94.52**	**25**	P	**P**	**09 20 26.0**	**-2.2**
ILAR				PKKPbc	**PKKPdf**	**09 37 25.6**	**-0.9**
ILAR	**Eielson Array**	**94.52**	**25**	P	**P**	**09 20 26.0**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=252,slow=4.4,SNR=11						
ILAR				PKKPbc	**PKKPdf**	**09 37 25.6**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=67,slow=1.2,SNR=4.2						
YKA	**Yellowknife Ar**	**108.95**	**26**	PKiKP	**PKiKP**	**09 25 34.0**	**-0.7**
YKA				PKKPbc	**PKKPbc**	**09 36 42.5**	**-3.6**
YKA				PKKPab	**PKKPab**	**09 36 55.4**	**-2.5**
YKA	**Yellowknife Ar**	**108.95**	**26**	PKiKP	**PKiKP**	**09 25 34.0**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=297,slow=1.9,SNR=6.2						
YKA				PKKPbc	**PKKPbc**	**09 36 42.5**	**-3.6**
	comp=Z,0.3nm,0.5s,baz=116,slow=3.5,SNR=11						
YKA				PKKPab	**PKKPab**	**09 36 55.4**	**-2.5**
	comp=Z,0.2nm,0.7s,baz=102,slow=5.3,SNR=4.8						
PDAR	**Pinedale Array**	**118.94**	**45**	PKKPbc	PKKPbc	09 36 13.5	+1.3
PDAR	**Pinedale Array**	**118.94**	**45**	PKKPbc	PKKPbc	09 36 13.5	+1.3
	comp=Z,0.5nm,0.7s,baz=111,slow=4.5,SNR=5.8						
TORD	**Torodi Ar. Bea**	**125.79**	**281**	PKP	**PKPdf**	**09 26 07.7**	**-0.7**
TORD	**Torodi Ar. Bea**	**125.79**	**281**	PKP	**PKPdf**	**09 26 07.7**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=48,slow=1.9,SNR=8.7						
TXAR	**Lajitas Array**	**127.45**	**58**	PKP	**PKPdf**	**09 26 12.0**	**+0.6**
TXAR				SKPbc	SKiKP	09 28 51.5	-17
TXAR	**Lajitas Array**	**127.45**	**58**	PKhKP	PKPpre	09 26 01.5	
	comp=Z,0.1nm,0.7s,baz=300,slow=3.6,SNR=2.3						
TXAR				PKP	**PKPdf**	**09 26 12.0**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=199,slow=1.5,SNR=3.7						
TXAR				SKPbc	SKiKP	09 28 51.5	-17
	comp=Z,0.5nm,0.8s,baz=274,slow=2.1,SNR=6.2						
PLCA	**Paso Flores**	**129.99**	**163**	SKPbc	SKPbc	09 28 59.6	-0.2
PLCA	**Paso Flores**	**129.99**	**163**	SKPbc	SKPbc	09 28 59.6	-0.2
	comp=Z,2.4nm,0.9s,baz=218,slow=4.1,SNR=5.4						
SCHQ	**Schefferville**	**130.89**	**10**	SKPbc	**SKPbc**	**09 29 00.8**	**-1.8**
SCHQ	**Schefferville**	**130.89**	**10**	SKPbc	**SKPbc**	**09 29 00.8**	**-1.8**
	comp=Z,12nm,0.9s,baz=324,slow=7.8,SNR=14						
DBIC	**Dimbokro**	**132.14**	**273**	SKPbc	**SKPbc**	**09 29 06.8**	**-1.5**
DBIC	**Dimbokro**	**132.14**	**273**	SKPbc	**SKPbc**	**09 29 06.8**	**-1.5**
	comp=Z,3.5nm,0.8s,baz=96,slow=1.4,SNR=4.3						
CPUP	**Villa Florida**	**146.76**	**173**	PKP	**PKPdf**	**09 26 46.0**	**-0.5**
CPUP				PKPbc	**PKPbc**	**09 26 49.4**	**+0.5**
CPUP	**Villa Florida**	**146.76**	**173**	PKP	**PKPdf**	**09 26 46.0**	**-0.5**
	comp=Z,1.9nm,0.3s,baz=220,slow=2.0,SNR=16						
CPUP				PKPbc	**PKPbc**	**09 26 49.4**	**+0.5**
	comp=Z,1.9nm,0.3s,baz=177,slow=3.1,SNR=16						
LPAZ	**La Paz**	**152.60**	**147**	PKPbc	**PKPbc**	**09 27 04.9**	**+0.8**
LPAZ				PKPab	**PKPab**	**09 27 18.1**	**+1.9**
LPAZ	**La Paz**	**152.60**	**147**	PKPbc	**PKPbc**	**09 27 04.9**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=269,slow=2.2,SNR=6.5						
LPAZ				PKPab	**PKPab**	**09 27 18.1**	**+1.9**
	comp=Z,1.3nm,0.5s,baz=214,slow=6.3,SNR=6.9						
SIV	**San Ignacio**	**155.96**	**161**	PKP	**PKPdf**	**09 26 59.3**	**-1.4**
SIV				PKPab	**PKPab**	**09 27 30.6**	**+0.7**
SIV	**San Ignacio**	**155.96**	**161**	PKP	**PKPdf**	**09 26 59.3**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=217,slow=10,SNR=2.6						
SIV				PKPab	**PKPab**	**09 27 30.6**	**+0.7**
	comp=Z,2.2nm,0.9s,baz=208,slow=5.1,SNR=5.0						
BDFB	**Brasilia**	**157.10**	**193**	PKPab	**PKPab**	**09 27 35.6**	**+0.8**
BDFB	**Brasilia**	**157.10**	**193**	PKPab	**PKPab**	**09 27 35.6**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=217,slow=1.5,SNR=3.8						

IDC 01 09:09:06.7±1.3**,5°.05S**×**68°.44E,h0**km**,mb4.0**/10**,**
mb1 4.2/10**,mb1mx3.9**/26**,mbtmp4.0**/10**,MS3.7**/4**,**
Ms1 3.7/4**,ms1mx3.1**/37**,Error ellipse: s-maj=42.5km**
s-min=22.0km az=49.0,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**24.72**	**235**	LR	LR	09 22 17.0	
	comp=Z,148nm,18.9s,baz=340,slow=32						
PSI	**Prapat**	**31.44**	**76**	LR	LR	09 25 03.4	
	comp=Z,192nm,21.1s,baz=184,slow=30						
CMAR	**Chiang Mai Arr**	**38.08**	**51**	P	P	09 16 27.8	+0.3
	0.7nm,0.3s,baz=234,slow=7.7,SNR=7.1						
CMAR				LR	LR	09 29 44.7	
	comp=Z,59nm,18.5s,baz=235,slow=32						
BOSA	**Boshof**	**47.13**	**235**	LR	LR	09 35 25.6	
	comp=Z,97nm,18.0s,baz=149,slow=34						
AAK	**Ala-Archa**	**47.77**	**6**	P	P	09 17 45.8	-0.1
	0.7nm,0.4s,baz=192,slow=12,SNR=3.1						
KBZ	**Khabaz**	**53.74**	**337**	P	P	09 18 30.6	0.0
	1.7nm,0.9s,baz=148,slow=3.4,SNR=4.5						
BRTR	**Keskin Array B**	**54.88**	**327**	P	P	09 18 39.9	+0.5
	0.5nm,0.4s,baz=144,slow=11,SNR=5.2						
ZALV	**Zalesovo Beam**	**60.37**	**11**	P	P	09 19 15.9	-1.5
	1.5nm,0.7s,baz=214,slow=5.3,SNR=5.4						
SONM	**Songino Array**	**62.31**	**28**	P	P	09 19 31.4	+0.4
	2.5nm,0.7s,baz=218,slow=6.5,SNR=9.1						
ASAR	**Alice Springs**	**65.54**	**114**	P	P	09 19 53.3	+0.7
	1.1nm,0.7s,baz=297,slow=7.2,SNR=3.1						
WRA	**Warramunga Arr**	**65.65**	**110**	P	P	09 19 54.0	+0.5
	1.9nm,0.7s,baz=277,slow=6.2,SNR=6.3						
STKA	**Stephens Creek**	**73.06**	**122**	P	P	09 20 37.7	-1.3
	3.3nm,0.9s,baz=246,slow=10.0,SNR=2.9						
MJAR	**Matsushiro Arr**	**76.96**	**51**	P	P	09 21 01.3	-0.2
	1.2nm,0.8s,baz=246,slow=11,SNR=3.5						
YKA	**Yellowknife Ar**	**122.63**	**2**	PKP	PKPdf	09 28 02.8	-1.3
	0.2nm,0.7s,baz=338,slow=2.0,SNR=6.0						
PDAR	**Pinedale Array**	**142.40**	**358**	PKP	PKPdf	09 28 41.0	-1.1
	0.3nm,0.7s,baz=6.9,slow=3.0,SNR=3.3						
NVAR	**Mina Array Bea**	**146.21**	**10**	PKPbc	PKPab	09 28 50.4	-0.1
	2.4nm,1.0s,baz=331,slow=1.6,SNR=11						
TXAR	**Lajitas Array**	**154.71**	**344**	PKPab	PKPab	09 29 25.2	-0.1
	0.8nm,0.9s,baz=35,slow=3.1,SNR=4.5						

*ISK **01** 09:13:21.3, 39°.63N×30°.27E, h18km, MD2.6*
*CSEM **01** 09:13:21.6±0.2, 39°.68N×30°.33E, h10km, MD2.7, Error ellipse: s-maj=6.1km s-min=4.5km az=153.0*
*ISCJB **01** 09:13:21.6±0.7, 39°.66N±0°.04×30°.33E±0°.05, h7km±7km, Error ellipse: s-maj=8.2km s-min=5.1km az=145.3*
*DDA **01** 09:13:22.1, 39°.70N×30°.27E, h7km, MD2.7*
ISC 01 09:13:21.7±1.0**,39°.69N**±0°.03×**30°.29E**±0°.03**,h15**km±8km**,**
n28,σ**0**s**.43**/40**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.23**	**33**	*i* P	**Pg**	**09 13 26.5**	**-0.3**
BORA				*i* S	**Sb**	**09 13 31.2**	**-0.3**
BORA	**Eskisehir**	**0.23**	**33**	*i* P	**Pg**	**09 13 26.5**	**-0.3**
BORA				*i* S	**Sb**	**09 13 31.2**	**-0.3**
TVSB	**Tavsanli**	**0.69**	**250**	*e*PG	**Pg**	**09 13 34.6**	**-0.5**
TVSB				*e*SG	**Sg**	**09 13 44.2**	**-0.1**
TVSB	**Tavsanli**	**0.69**	**250**	*e*Pg	**Pg**	**09 13 34.6**	**-0.5**
TVSB				*e*Sg	**Sg**	**09 13 44.2**	**-0.1**
GULT	**Gulveren**	**0.76**	**13**	*e*PG	**Pn**	**09 13 37.9**	**-0.1**
GULT				*e*SG	**Sn**	**09 13 49.6**	**+0.4**
GULT	**Gulveren**	**0.76**	**13**	*e*Pg	**Pn**	**09 13 37.9**	**-0.1**
GULT				*e*Sg	**Sn**	**09 13 49.6**	**+0.4**
ADVT	**Abdulvahap**	**0.86**	**330**	*e*PG	**Pn**	**09 13 39.0**	**-0.2**
ADVT	**Abdulvahap**	**0.86**	**330**	*e*Pg	**Pn**	**09 13 39.0**	**-0.2**
GDZ	**Gediz**	**0.87**	**227**	*i* P	**Pb**	**09 13 38.5**	**-0.1**
GDZ				*i* S	**Sn**	**09 13 51.6**	**-0.4**
GDZ	**Gediz**	**0.87**	**227**	*i* P	**Pb**	**09 13 38.5**	**-0.1**
GDZ				*i* S	**Sn**	**09 13 51.6**	**-0.4**
IZI	**Iznik**	**0.90**	**316**	*e*PG	**Pn**	**09 13 40.0**	**+0.1**
IZI	**Iznik**	**0.90**	**316**	*e*Pg	**Pn**	**09 13 40.0**	**+0.1**
SVRH	**Sivrihisar-ESK**	**0.98**	**104**	*e*PG	**Pb**	**09 13 40.6**	**+0.2**
SVRH	**Sivrihisar-ESK**	**0.98**	**104**	*e*Pg	**Pb**	**09 13 40.6**	**+0.2**
MDUB	**Mudurnu**	**1.04**	**41**	*e*PN	**Pb**	**09 13 41.8**	**+0.3**
MDUB	**Mudurnu**	**1.04**	**41**	*e*Pn	**Pb**	**09 13 41.8**	**+0.3**
ORLT	**Orhaneli**	**1.13**	**289**	*e*PN	**Pb**	**09 13 43.0**	**0.0**
ORLT	**Orhaneli**	**1.13**	**289**	*e*Pn	**Pb**	**09 13 43.0**	**0.0**
HRT	**Hereke**	**1.23**	**337**	*e*PN	**Pn**	**09 13 44.1**	**-0.3**
HRT	**Hereke**	**1.23**	**337**	*e*Pn	**Pn**	**09 13 44.1**	**-0.3**
DEMI	**Demirci**	**1.38**	**243**	*i* P	**Pg**	**09 13 48.3**	**-0.1**
DEMI				*i* S	**Sg**	**09 14 07.8**	**+1.5**
DEMI	**Demirci**	**1.38**	**243**	*i* P	**Pg**	**09 13 48.3**	**-0.1**
DEMI				*i* S	**Sg**	**09 14 07.8**	**+1.5**
DURS	**Dursunbey**	**1.41**	**267**	*i* P	**Pb**	**09 13 47.9**	**+0.2**
DURS				*i* S	**Sg**	**09 14 07.3**	**+0.2**
DURS	**Dursunbey**	**1.41**	**267**	*i* P	**Pb**	**09 13 47.9**	**+0.2**
DURS				*i* S	**Sg**	**09 14 07.3**	**+0.2**
KIZT	**Kizilcal**	**1.47**	**123**	*e*PN	**Pn**	**09 13 47.7**	**-0.1**
KIZT	**Kizilcal**	**1.47**	**123**	*e*Pn	**Pn**	**09 13 47.7**	**-0.1**
KCTX	**Karacabey (Bur**	**1.60**	**292**	*e*PN	**Pn**	**09 13 49.7**	**+0.3**
KCTX	**Karacabey (Bur**	**1.60**	**292**	*e*Pn	**Pn**	**09 13 49.7**	**+0.3**

MAN 01 09:17:51,8°.07N×**122°.33E,h1**km**,mb3.6,ML2.3,MS1.8,**
1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.37**	**140**	⇓*e*P	Pg	09 17 58.1	0.0
PAGZ	**Pagadian**	**1.06**	**102**	*e*P	Pb	09 18 12.1	-0.2
PAGZ				*e*S	Sn	09 18 29.7	+1.2
CTBH	**Cotabato--PC H**	**2.08**	**114**	⇑*i*P	Pb	09 18 28.6	-0.9

IDC 01 09:29:22.7±1.4**,23°.33N**×**142°.51E,h0**km**,mb3.5**/4**,**
mb1 3.7/4**,mb1mx3.3**/25**,mbtmp3.5**/4**,MS2.8**/1**,Ms1 2.8**/1**,**
ms1mx2.2/28**,Error ellipse: s-maj=48.1km**
s-min=29.0km az=84.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**13.68**	**345**	LR	LR	09 37 35.7	
	comp=Z,36nm,19.4s,baz=165,slow=36						
SONM	**Songino Array**	**37.69**	**319**	P	P	09 36 40.4	+0.5
	0.9nm,0.6s,baz=124,slow=9.4,SNR=3.2						
WRA	**Warramunga Arr**	**43.74**	**191**	P	P	09 37 29.9	-0.2
	0.2nm,0.6s,baz=7.2,slow=7.9,SNR=6.9						
KURBB	**Kurchatov Arra**	**55.91**	**316**	P	P	09 39 01.8	-0.5
	0.3nm,0.4s,baz=92,slow=7.6,SNR=3.6						
YKA	**Yellowknife Ar**	**75.31**	**28**	P	P	09 41 07.4	-0.1
	0.1nm,0.3s,baz=293,slow=5.9,SNR=7.9						

IDC 01 09:36:28.7±0.9**,39°.05N**×**110°.75E,h0**km**,mb3.5**/8**,**
mb1 3.7/9**,mb1mx3.5**/26**,mbtmp3.5**/9**,ML3.4**/1**,Error**
ellipse: s-maj=31.9km s-min=15.2km az=67.0,Western
Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.34**	**342**	Pn	Pn	09 38 44.0	-0.7
	0.4nm,0.3s,baz=158,slow=12,SNR=7.6						
SONM				Sn	Sn	09 40 31.5	+1.0
	0.2nm,0.3s,baz=160,slow=26,SNR=3.6						
SONM				Lg	Lg	09 41 23.1	
	0.4nm,0.3s,baz=151,slow=26,SNR=11						
MKAR	**Makanchi Array**	**22.15**	**300**	P	P	09 41 26.1	+0.1
	1.9nm,1.0s,baz=96,slow=12,SNR=9.4						
CMAR	**Chiang Mai Arr**	**22.94**	**210**	P	P	09 41 34.3	-0.2
	4.3nm,0.8s,baz=13,slow=9.6,SNR=29						
ZALV	**Zalesovo Beam**	**23.07**	**319**	P	P	09 41 36.3	+0.6
	0.6nm,0.6s,baz=120,slow=5.2,SNR=3.2						
KURBB	**Kurchatov Arra**	**25.41**	**308**	P	P	09 41 57.5	-0.2
	0.6nm,0.6s,baz=107,slow=10,SNR=4.2						
FINES	**FINESS Array B**	**54.20**	**324**	P	P	09 45 55.7	+0.1
	1.0nm,0.8s,baz=74,slow=10,SNR=4.2						
WRA	**Warramunga Arr**	**62.70**	**155**	P	P	09 46 55.7	+0.3
	0.3nm,0.7s,baz=343,slow=6.7,SNR=2.8						
ASAR	**Alice Springs**	**66.04**	**157**	P	P	09 47 16.8	-0.5
	0.3nm,0.7s,baz=358,slow=8.3,SNR=3.9						
YKA	**Yellowknife Ar**	**72.45**	**20**	P	P	09 47 56.7	+0.2
	0.3nm,0.7s,baz=324,slow=5.8,SNR=8.9						

IDC 01 09:40:29.4±9.1**,22°.38N**×**143°.42E,h174**km±86km**,mb3.1**/8**,**
mb1 3.3/8**,mb1mx3.1**/26**,mbtmp3.1**/8**,Error ellipse:**
s-maj=41.2km s-min=15.7km az=85.0,Volcano Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.11**	**322**	P	P	09 44 49.6	0.0
	0.7nm,0.6s,baz=148,slow=8.9,SNR=2.8						
WRA	**Warramunga Arr**	**42.99**	**193**	P	P	09 48 11.6	0.0
	0.6nm,0.4s,baz=16,slow=9.0,SNR=13						
ASAR	**Alice Springs**	**46.70**	**192**	P	P	09 48 40.6	-0.2
	0.4nm,0.5s,baz=15,slow=8.1,SNR=9.3						
ZALV	**Zalesovo Beam**	**53.81**	**321**	P	P	09 49 34.5	+0.6
	0.3nm,0.4s,baz=111,slow=11,SNR=2.6						
KURBB	**Kurchatov Arra**	**57.17**	**317**	P	P	09 49 57.4	-0.6
	0.3nm,0.3s,baz=91,slow=7.6,SNR=2.9						
YKA	**Yellowknife Ar**	**75.75**	**28**	P	P	09 51 55.9	+0.4
	0.2nm,0.4s,baz=292,slow=5.9,SNR=11						
NVAR	**Mina Array Bea**	**82.55**	**52**	P	P	09 52 32.7	-0.6
	0.3nm,0.6s,baz=262,slow=6.3,SNR=3.0						
FINES	**FINESS Array B**	**82.66**	**335**	P	P	09 52 32.9	-0.1
	0.3nm,0.3s,baz=49,slow=5.8,SNR=7.8						
FINES				pP	pP	09 53 06.7	-9.2
	0.5nm,0.4s,baz=57,slow=7.0,SNR=6.3						

IDC 01 09:40:55.2±2.5**,17°.44S**×**174°.73W,h156**km±24km**,**
mb3.7/7**,mb1 4.0**/8**,mb1mx3.6**/21**,mbtmp3.8**/8**,Error**
ellipse: s-maj=42.4km s-min=15.6km az=135.0,Tonga
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.52**	**39**	P	Pn	09 42 02.8	+0.2
	24nm,0.3s,baz=200,slow=12,SNR=56						
AFI				S	Sn	09 42 50.7	-4.3
	82nm,0.3s,baz=46,slow=22,SNR=22						
URZ	**Urewera**	**21.94**	**197**	P	P	09 45 36.3	+0.1
	3.6nm,0.3s,baz=49,slow=4.5,SNR=6.0						
STKA	**Stephens Creek**	**41.93**	**242**	P	P	09 48 30.7	+0.1
	2.3nm,0.4s,baz=95,slow=8.4,SNR=11						
WRA	**Warramunga Arr**	**48.16**	**259**	P	P	09 49 19.4	-0.6
	1.2nm,0.3s,baz=96,slow=7.2,SNR=44						
ASAR	**Alice Springs**	**48.29**	**254**	P	P	09 49 20.6	-0.4
	9.8nm,0.6s,baz=89,slow=8.2,SNR=160						
ASAR				PcP	PcP	09 50 45.2	-0.2
	0.8nm,0.7s,baz=100,slow=3.8,SNR=6.7						
PDAR	**Pinedale Array**	**84.63**	**42**	P	P	09 53 10.7	-0.8
	0.2nm,0.6s,baz=207,slow=5.7,SNR=2.3						
ILAR	**Eielson Array**	**84.69**	**12**	P	P	09 53 10.7	-0.3
	0.4nm,0.5s,baz=225,slow=6.0,SNR=18						
CMAR	**Chiang Mai Arr**	**92.05**	**289**	P	P	09 53 47.8	+0.8
	0.4nm,0.3s,baz=99,slow=5.6,SNR=4.0						
ARCES	**ARCESS Array B**	**126.44**	**351**	PKP	PKPdf	09 59 38.0	-0.9
	2.3nm,0.9s,baz=38,slow=2.0,SNR=5.5						
BRTR	**Keskin Array B**	**146.87**	**318**	PKPbc	PKPbc	10 00 19.4	-0.1
	0.9nm,0.7s,baz=116,slow=2.4,SNR=6.8						
GERES	**GERESS Array B**	**147.94**	**349**	PKPbc	PKPbc	10 00 22.2	+0.1
	0.7nm,0.7s,baz=20,slow=4.3,SNR=7.9						

IDC 01 09:57:25.5±3.6**,49°.61S**×**112°.14E,h0**km**,mb3.6**/3**,**
mb1 3.9/3**,mb1mx3.7**/14**,mbtmp3.6**/3**,MS3.4**/1**,Ms1 3.4**/1**,**
ms1mx2.9/17**,Error ellipse: s-maj=143.4km**
s-min=31.2km az=102.0,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**31.00**	**41**	P	P	10 03 45.5	+0.8
	0.9nm,1.1s,baz=209,slow=7.4,SNR=5.4						
VNDA	**Vanda**	**33.62**	**163**	P	P	10 04 07.0	0.0
	1.1nm,0.9s,baz=309,slow=6.1,SNR=4.1						
VNDA				LR	LR	10 16 30.0	
	comp=Z,55nm,18.8s,baz=148,slow=34						
WRA	**Warramunga Arr**	**34.49**	**39**	P	P	10 04 14.5	-0.7
	0.2nm,0.6s,baz=212,slow=7.8,SNR=4.7						
YKA	**Yellowknife Ar**	**151.59**	**45**	PKPbc	PKPbc	10 17 19.9	-0.3
	0.3nm,0.9s,baz=278,slow=3.9,SNR=4.5						

*SKO **01** 10:00:52.6, 41°.03N×22°.52E, h15km, M1.1, ML1.4*
*THE **01** 10:00:53.2, 41°.02N×22°.47E, h13km±4km, ML2.1/2, Error ellipse: s-maj=5.2km s-min=1.2km az=233.0*
*ATH **01** 10:00:53.5, 41°.04N×22°.50E, h6km±4km, MD2.7/5*
*CSEM **01** 10:00:53.0±0.1, 41°.04N×22°.50E, h10km, ML2.1/2, Error ellipse: s-maj=3.4km s-min=2.7km az=175.0*
*ISCJB **01** 10:00:53.2±0.5, 41°.04N±0°.03×22°.50E±0°.03, h7km±5km, Error ellipse: s-maj=5.9km s-min=3.7km az=169.4*
ISC 01 10:00:53.1±0.9**,41°.04N**±0°.03×**22°.51E**±0°.02**,h11**km±6km**,**
n27,σ**0**s**.41**/46**,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.11**	**225**	P	**Pg**	**10 00 56.1**	**+0.1**
GRG				S	**Sg**	**10 00 58.1**	**0.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GRG	Griva	0.11	225	ePG	Pg	10 00 56.2	+0.2
GRG				eSG	Sg	10 00 57.8	-0.3
GRG	Griva	0.11	225	P	Pg	10 00 56.1	+0.1
GRG				eSg	Sg	10 00 57.8	-0.3
GRG				S	Sg	10 00 58.1	0.0
VAY	Valandovo	0.29	10	P	Pg	10 00 59.0	0.0
VAY	Valandovo	0.29	10	i Pg	Pg	10 00 59.0	0.0
VAY				i Sg	Sg	10 01 03.8	+0.9
VAY				eLg	Lg	10 01 04.0	
	comp=E,31nm,0.3s						
VAY				eLg	Lg	10 01 04.0	
	comp=N,57nm,0.3s						
VAY	Valandovo	0.29	10	P	Pg	10 00 59.0	0.0
VAY	Valandovo	0.29	10	i Pg	Pg	10 00 59.5	+0.5
VAY				i Sg	Sg	10 01 01.3	-1.6
VAY				eLg	Lg	10 01 01.5	
	comp=N,57nm,0.3s						
THE	Thessaloniki	0.53	139	P	Pg	10 01 03.4	0.0
THE	Thessaloniki	0.53	139	P	Pg	10 01 03.4	0.0
SOH	Sokhos	0.68	108	P	Pb	10 01 07.4	+0.5
SOH				S	Sb	10 01 16.1	-0.2
SOH	Sokhos	0.68	108	ePB	Pb	10 01 06.9	0.0
SOH				eSB	Sg	10 01 15.6	+0.5
SOH	Sokhos	0.68	108	ePb	Pb	10 01 06.9	0.0
SOH	Sokhos	0.68	108	P	Pb	10 01 07.4	+0.5
SOH				eSb	Sg	10 01 15.6	+0.5
SOH				S	Sb	10 01 16.1	-0.2
SRS	Serrai	0.83	84	P	Pg	10 01 09.2	+0.2
SRS				S	Sn	10 01 22.8	0.0
SRS	Serrai	0.83	84	P	Pg	10 01 09.2	+0.2
FNA	Florina	0.89	254	ePB	Pb	10 01 10.4	-0.2
FNA				eSB	Sb	10 01 22.7	+0.2
FNA	Florina	0.89	254	ePb	Pb	10 01 10.4	-0.2
FNA				eSb	Sb	10 01 22.7	+0.2
BIA	Bitola	0.89	269	ePg	Pb	10 01 10.7	0.0
BIA				eSg	Sb	10 01 22.8	+0.2
BIA				eLg	Lg	10 01 22.9	
	comp=E,7.0nm,0.2s						
BIA				eLg	Lg	10 01 22.9	
	comp=N,8.0nm,0.2s						
BIA	Bitola	0.89	269	ePg	Pb	10 01 10.6	0.0
BIA				eSg	Sb	10 01 22.7	+0.2
BIA				eLg	Lg	10 01 22.9	
	comp=N,8.0nm,0.2s						
LIT	Litokhoron	0.93	181	ePG	Pg	10 01 11.1	+0.1
LIT	Litokhoron	0.93	181	ePg	Pg	10 01 11.1	+0.1
PLG	Polygyros	0.97	132	ePB	Pg	10 01 11.3	-0.5
PLG				eSB	Sb	10 01 25.1	+0.3
PLG	Polygyros	0.97	132	ePb	Pg	10 01 11.3	-0.5
PLG				eSb	Sb	10 01 25.1	+0.3
NVR	Nevrokopi	1.07	72	ePG	Pb	10 01 13.0	-0.6
NVR				eSB	Sn	10 01 29.0	+0.1
NVR	Nevrokopi	1.07	72	ePg	Pb	10 01 13.0	-0.6
NVR				eSb	Sn	10 01 29.0	+0.1
THL	Klokotos Trika	1.52	194	ePB	Pg	10 01 21.9	-0.3
THL	Klokotos Trika	1.52	194	ePb	Pg	10 01 21.9	-0.3

WEL 01 10:04:32.4±0.6**, 47°.93S**×**165°.50E, h33**km**, ML3.5**/6**, 2C-1D, Error ellipse: s-maj=5.6km s-min=4.3km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYZ	Puysegur Point	1.93	25	⇑PN	Pn	10 05 02.0	-1.0
PYZ				SN	Sn	10 05 25.1	-1.1
APZ	The Paps	2.01	58	PN	Pn	10 05 03.2	-1.0
APZ				SN	Sn	10 05 26.4	-1.7
WHZ	Wether Hill Ro	2.63	40	⇑PN	Pn	10 05 12.5	-0.1
WHZ				eSN	Sn	10 05 42.4	-1.0
DCZ	Deep Cove	2.70	26	ePN	Pn	10 05 13.0	-0.5
SYZ	Scrubby Hill	2.84	62	PN	Pn	10 05 14.8	-0.6
SYZ				SN	Sn	10 05 45.9	-2.6
MLZ	Mavora Lakes	3.17	36	⇓PN	Pn	10 05 20.3	+0.3
MLZ				eSN	Sn	10 05 56.3	-0.4
TUZ	Tuapeka	3.45	57	PN	Pn	10 05 23.5	-0.2
MSZ	Milford Sound	3.66	28	PN	Pn	10 05 27.5	+0.7
EAZ	Earnscleugh	3.76	46	ePN	Pn	10 05 27.4	-0.7
WKZ	Wanaka	3.94	39	ePN	Pn	10 05 31.6	+1.0
JCZ	Jackson Bay	4.47	32	ePN	Pn	10 05 40.1	+2.1
ODZ	Otahua Downs	4.57	53	PN	Pn	10 05 37.3	-2.0

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*IDC **01** 10:11:13.0±3.4, 13°.64N×90°.38W, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.7/24, mbtmp3.6/7, ML3.6/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=79.7km s-min=34.9km az=17.0*

*CASC **01** 10:11:16.0±3.3, 13°.14N×90°.91W, h22km±14km, MD4.0, ML3.2*

*ISCJB **01** 10:11:16.5±1.2, 13°.14N±0°.10×90°.92W±0°.05, h60km±10km, mb3.6/5, MS3.2/2, Error ellipse: s-maj=16.8km s-min=5.8km az=20.2*

ISC 01 10:11:17.9±1.8**, 13°.2N**±0°.1×**90°.90W**±0°.06**, h50**km±15km**, n28,** σ1§**38**/35**, mb3.5**/5**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCG	Pacaya	1.23	13	eP	Pn	10 11 38.3	-0.7
FUG	Fuego 3	1.25	3	eP	Pn	10 11 38.2	-1.1
JAT	Jato	1.33	328	eP	Pn	10 11 38.6	-1.5
JAT				eS	Sn	10 11 59.0	+2.3
SBLS	San Blas	1.40	62	eP	Pn	10 11 40.2	-1.1
RTR	El Retiro	1.41	60	eP	Pn	10 11 40.5	-0.9
SNJE	San Jose	1.43	62	eP	Pn	10 11 40.6	-1.1
NBG	Las Nubes	1.49	21	eP	Pn	10 11 42.7	+0.1
RBDL	Robledal	1.50	52	eP	Pn	10 11 42.0	-0.6
RBDL				eS	Sn	10 11 59.6	-1.4
BOQS	Boqueron	1.67	71	eP	Pn	10 11 44.2	-0.7
BOQS				eS	Sn	10 12 05.8	+0.5
SNET	Serv Nac Est T	1.70	73	eP	Pn	10 11 44.6	-0.7
SNET				AML	AML	10 12 15.2	
	comp=Z,300nm,0.4s						
LFRS	El Faro	1.84	76	eP	Pn	10 11 46.9	-0.3
LFRS				eS	Sn	10 12 10.7	+1.3
LBRS	Las Brisas	1.89	73	eP	Pn	10 11 47.6	-0.2
LBRS				eS	Sn	10 12 10.6	+0.1
MTO2	Montecristo 2	1.92	51	eP	Pn	10 11 47.7	-0.7
MTO2				eS	Sn	10 12 11.7	+0.2
SNVI	San Vicente	2.05	78	eP	Pn	10 11 50.2	+0.1
MRL	Marmol	2.21	32	eP	Pn	10 11 53.8	+1.6
BLLM	Bellamira	2.60	84	eP	Pn	10 11 58.4	+0.8
CAHU	Cacacuatique	2.68	77	eP	Pn	10 11 59.4	+0.6
CNCH	Conchagua	2.99	88	eP	Pn	10 12 03.0	+0.1
CNCH				eS	Sn	10 12 38.9	+1.2
CMIG	Matias Romero	5.46	316	Pn	Pn	10 12 34.7	-2.1
	comp=Z,1.9nm,0.3s,baz=113,slow=11,SNR=14						
CMIG				Sn	Sn	10 13 41.6	+3.2
	comp=Z,1.2nm,0.3s,baz=198,slow=20,SNR=3.9						
TEIG	Tepich	7.44	19	Pn	Pn	10 13 05.0	+1.2
	comp=Z,5.4nm,0.3s,baz=198,slow=4.6,SNR=30						
TXAR	Lajitas Array	19.96	326	P	Pn	10 15 47.8	-0.4
	comp=Z,0.1nm,0.3s,baz=150,slow=13,SNR=13						
TKL	Tuckaleechee C	23.28	15	LR	LR	10 26 09.6	
	comp=Z,74nm,20.4s,baz=113,slow=40						
ANMO	Albuquerque	25.83	330	P	P	10 16 45.8	+0.8
	comp=Z,0.4nm,0.5s,baz=153,slow=11,SNR=4.1						
NVAR	Mina Array Bea	34.97	321	P	P	10 18 08.5	+2.8
	comp=Z,1.0nm,0.7s,baz=133,slow=8.3,SNR=12						
NVAR				LR	LR	10 34 02.8	
	comp=Z,50nm,19.6s,baz=267,slow=39						
SCHQ	Schefferville	45.62	19	P	P	10 19 30.6	-2.6
	comp=Z,1.5nm,0.8s,baz=211,slow=5.9,SNR=2.9						
YKA	Yellowknife Ar	52.06	346	P	P	10 20 21.2	-1.2
	comp=Z,0.2nm,0.7s,baz=144,slow=7.5,SNR=7.6						
ILAR	Eielson Array	64.00	337	P	P	10 21 44.9	-1.1
	comp=Z,0.5nm,0.9s,baz=161,slow=4.2,SNR=4.8						
CMAR	Chiang Mai Arr	147.09	343	PKPbc	PKPbc	10 30 57.6	+1.3
	comp=Z,1.1nm,0.6s,baz=341,slow=3.7,SNR=7.0						

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*ISK **01** 10:30:13.5, 37°.09N×27°.59E, h10km, MD2.7*

*DDA **01** 10:30:13.7, 37°.10N×27°.56E, h7km, MD3.0*

*CSEM **01** 10:30:13.8±0.1, 37°.08N×27°.56E, h10km, MD2.7, Error ellipse: s-maj=2.3km s-min=1.9km az=116.0*

*ISCJB **01** 10:30:13.8±0.5, 37°.07N±0°.03×27°.55E±0°.03, h12km±4km, Error ellipse: s-maj=4.9km s-min=3.9km az=31.8*

*ATH **01** 10:30:14.9, 37°.02N×27°.42E, h34km±2km, MD2.9/5*

ISC 01 10:30:13.6±0.9**, 37°.08N**±0°.02×**27°.58E**±0°.02**, h16**km±7km**, n47,** σ1§**14**/64**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.21	264	ePG	Pg	10 30 18.4	-0.2
BODT				eSG	Sg	10 30 22.5	+0.5
BODT	Bodrum	0.21	264	ePg	Pg	10 30 18.4	-0.2
BODT				eSg	Sg	10 30 22.5	+0.5
MLSB	Milas	0.27	37	ePG	Pb	10 30 19.1	-0.9
MLSB				eSG	Sb	10 30 23.4	-0.9
MLSB	Milas	0.27	37	ePg	Pb	10 30 19.1	-0.9
MLSB				eSg	Sb	10 30 23.5	-0.9
DAT	Datca	0.35	180	ePG	Pg	10 30 20.8	-0.2
DAT	Datca	0.35	180	ePg	Pg	10 30 20.8	-0.2
YER	Yerkesik	0.57	85	ePG	Pb	10 30 25.0	-0.2
YER	Yerkesik	0.57	85	ePg	Pb	10 30 25.0	-0.2
NIS1	Nisyros Isl.	0.58	214	ePB	Pb	10 30 25.2	-0.1
NIS1				eSB	Sb	10 30 33.0	-0.3
NIS1	Nisyros Isl.	0.58	214	ePb	Pb	10 30 25.2	-0.1
NIS1				eSb	Sb	10 30 33.0	-0.3
AYDN	Tasoluk	0.62	23	i P	Pb	10 30 25.7	-0.5
AYDN				i S	Sb	10 30 34.7	0.0
AYDN	Tasoluk	0.62	23	i P	Pb	10 30 25.7	-0.5
AYDN				i S	Sb	10 30 34.7	0.0
GCAM	G?zelcaml?	0.67	336	i P	Pb	10 30 26.5	-0.4
GCAM				i S	Sb	10 30 36.5	+0.4
GCAM	G?zelcaml?	0.67	336	i P	Pb	10 30 26.5	-0.4
GCAM				i S	Sb	10 30 36.5	+0.4
TURN	Turunc	0.85	104	eP	Pg	10 30 26.0	-4.1
TURN				i S	Sg	10 30 35.4	-5.9
TURN	Turunc	0.85	104	eP	Pg	10 30 26.0	-4.1
DALY	Dalyan (Mu˜la	0.90	107	ePG	Pn	10 30 31.3	-0.3
DALY	Dalyan (Mu˜la	0.90	107	ePg	Pn	10 30 31.3	-0.3
ARG	Arkhangelos	0.97	153	ePN	Pn	10 30 33.6	+1.0
ARG				eSN	Sn	10 30 47.1	+1.1
ARG	Arkhangelos	0.97	153	ePn	Pn	10 30 33.6	+1.0
ARG				eSn	Sn	10 30 47.1	+1.1
FETY	Fethiye	1.29	110	ePN	Pg	10 30 38.6	+0.1
FETY	Fethiye	1.29	110	ePn	Pg	10 30 38.6	+0.1
DNZL	Cakiroluk	1.32	62	i P	Pg	10 30 38.9	-0.2
DNZL				i S	Sg	10 30 57.8	+1.5
DNZL	Cakiroluk	1.32	62	i P	Pg	10 30 38.9	-0.2
DNZL				i S	Sg	10 30 57.8	+1.5
IZM	Izmir	1.33	349	ePN	Pb	10 30 38.3	0.0
IZM	Izmir	1.33	349	ePn	Pb	10 30 38.3	0.0
DENT	Denizli	1.34	60	ePN	Pb	10 30 38.2	-0.2
DENT	Denizli	1.34	60	ePn	Pb	10 30 38.2	-0.2
BLCB	Balcova	1.37	342	ePN	Pb	10 30 38.9	+0.1
BLCB	Balcova	1.37	342	ePn	Pb	10 30 38.9	+0.1
KARP	Karpathos	1.57	192	ePN	Pb	10 30 41.7	-0.6
KARP				eSN	Sn	10 31 00.5	-0.3
KARP	Karpathos	1.57	192	ePn	Pb	10 30 41.7	-0.6
KARP				eSn	Sn	10 31 00.5	-0.3
GOLH	Golhisar	1.59	84	i P	Pg	10 30 46.7	+2.4
GOLH				i S	Sg	10 31 07.4	+2.4
GOLH	Golhisar	1.59	84	i P	Pg	10 30 46.7	+2.4
GOLH				i S	Sg	10 31 07.4	+2.4
APE	Apeiranthos	1.64	270	ePN	Pb	10 30 43.7	+0.3
APE	Apeiranthos	1.64	270	ePN	Pn	10 30 42.1	+0.4
APE				eSN	Sn	10 31 00.5	-2.0
APE	Apeiranthos	1.64	270	ePn	Pn	10 30 42.1	+0.4
APE				eSn	Sn	10 31 00.5	-2.0
KULA	Kula-Manisa	1.67	31	ePN	Pb	10 30 43.5	-0.5
KULA	Kula-Manisa	1.67	31	ePn	Pb	10 30 43.5	-0.5
CHOS	Chios island	1.77	318	ePN	Pn	10 30 44.6	+0.9
CHOS	Chios island	1.77	318	ePn	Pn	10 30 44.6	+0.9
AKS	Akhisar	1.80	6	ePN	Pb	10 30 45.2	-1.0
AKS	Akhisar	1.80	6	ePn	Pb	10 30 45.2	-1.0
ELL	Elmali	1.90	99	ePN	Pn	10 30 46.6	+1.2
ELL	Elmali	1.90	99	ePn	Pn	10 30 46.6	+1.2
KHL	Karahalli	1.98	51	ePN	Pb	10 30 48.4	-0.9
KHL	Karahalli	1.98	51	ePn	Pb	10 30 48.4	-0.9

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*ISCJB **01** 10:43:35.0±0.2, 19°.51S±0°.03×69°.11W±0°.04, h10km, mb4.7/77, MS3.9/14, Error ellipse: s-maj=5.1km s-min=3.5km az=165.3*

*IDC **01** 10:43:35.6±0.5, 19°.36S×69°.07W, h0km, mb4.5/20, mb1 4.6/25, mb1mx4.6/29, mbtmp4.5/25, ML4.1/5, MS3.8/18, Ms1 3.8/18, ms1mx3.7/32, Error ellipse: s-maj=19.0km s-min=12.3km az=56.0*

*NEIC **01** 10:43:36.8±0.2, 19°.52S×69°.16W, h10km, mb4.8/57, ML5.3(GUC), Error ellipse: s-maj=6.4km s-min=4.9km az=74.0*

NEIC Felt [III] at Arica and [II] at Pozo Almonte. Also felt at Iquique.

*GUC **01** 10:43:36.8±0.4, 19°.57S×69°.26W, h19km±3km, ML5.3*

*BJI **01** 10:43:37.8, 19°.50S×68°.90W, h10km, mB5.4/3, Ms5.4/2, Ms7 5.3/3*

ISC 01 10:43:35.9±1.2**, 19°.57S**±0°.02×**69°.24W**±0°.04**, h5**km±7km**, n522,** σ0§**94**/531**, mb4.8**/76**, MS3.9**/14**, 182C-167D, Northern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNMC	Minimini	0.55	322	⇑iP	Pg	10 43 47.1	+0.5
MNMC				i S	Sg	10 43 54.6	+0.8
MNMC	Minimini	0.55	322	⇑iP	Pg	10 43 47.1	+0.5
MNMC				i S	Sg	10 43 54.6	+0.8
MNMC				AML	AML	10 43 55.5	
	comp=N,416μm,0.6s						
PSGC	Pisagua	0.84	268	i P	Pg	10 43 51.3	-0.7
PSGC				i S	Sg	10 44 02.1	-0.7
PSGC	Pisagua	0.84	268	i P	Pg	10 43 51.3	-0.7
PSGC				i S	Sg	10 44 02.1	-0.7
PSGC				AML	AML	10 44 03.0	
	comp=N,45μm,0.8s						
HMBC	Humberstone	0.94	221	⇓iP	Pg	10 43 53.1	-0.8
HMBC				i S	Sg	10 44 05.5	-0.5
HMBC	Humberstone	0.94	221	⇓iP	Pg	10 43 53.1	-0.8
HMBC				i S	Sg	10 44 05.5	-0.5
HMBC				AML	AML	10 44 06.9	
	comp=N,129μm,0.5s						
ARCH	Arica	1.47	317	i P	Pn	10 44 02.5	-0.5
ARCH				eS	Sn	10 44 21.4	-1.1
ARCH	Arica	1.47	317	i P	Pn	10 44 02.5	-0.5
ARCH				eS	Sn	10 44 21.4	-1.1
ARCH				AML	AML	10 44 25.2	
	comp=N,87μm,0.7s						
PB01	Plate Boundary	1.49	189	⇑iP	Pn	10 44 03.1	-0.2
PB01				i S	Sn	10 44 22.6	-0.6
PB01	Plate Boundary	1.49	189	⇑iP	Pn	10 44 03.1	-0.2
PB01				i S	Sn	10 44 22.6	-0.6
PB01				AML	AML	10 44 27.2	
	comp=E,26μm,0.7s						
PB04	Plate Boundary	2.69	185	eP	Pb	10 44 23.9	-0.7
PB04				eS	Sb	10 45 00.0	+2.1
PB04	Plate Boundary	2.69	185	eP	Pb	10 44 23.9	-0.7
PB04				eS	Sb	10 45 00.0	+2.1
PB04				AML	AML	10 45 10.9	
	comp=N,41μm,0.6s						
LPAZ	La Paz	3.43	18	ePn	Pn	10 44 27.1	-3.4
LPAZ				eSn	Sn	10 45 10.6	-1.2
LPAZ	La Paz	3.43	18	Pn	Pb	10 44 36.6	-0.8
	comp=N,14nm,0.3s,baz=195,slow=7.5,SNR=451						
LPAZ				Sn	Sg	10 45 29.2	+3.1
	comp=N,23nm,0.3s,baz=330,slow=20,SNR=1.8						
SPCH	San Pedro de A	3.46	164	AML	AML	10 45 41.8	
	comp=N,11μm,0.8s						
ARE	Arequipa	3.76	325	eP	Pn	10 44 38.0	+3.2
ARE				eS	Sn	10 45 14.0	-5.6
SIV	San Ignacio	8.55	67	Pn	Pn	10 45 39.5	-0.9
SIV	San Ignacio	8.55	67	Pn	Pn	10 45 39.5	-0.9
	comp=N,3.4nm,0.3s,baz=271,slow=9.8,SNR=64						
SIV				LR	LR	10 49 18.7	
	comp=N,450nm,20.3s,slow=41						
LCO	Las Campanas	9.50	188	ePn	Pn	10 45 53.3	-0.3
LCO				eSn	Sn	10 47 45.8	+4.9
NNA	Nana	10.50	315	ePn	Pn	10 46 08.4	+1.2
NNA				eSn	Sn	10 48 06.7	+1.3
NNA				Sn	Sn	10 48 12.8	+7.3
NNA	Nana	10.50	315	Pn	Pn	10 46 06.9	-0.4
	comp=N,2.1nm,0.3s,baz=171,slow=9.8,SNR=20						
NNA				Sn	Sn	10 48 12.8	+7.4
	comp=N,1.5nm,0.3s,baz=246,slow=20,SNR=2.2						
NNA				LR	LR	10 50 43.6	
	comp=N,664nm,20.7s,baz=163,slow=41						
CFAA	Coronel Fontan	12.02	176	Pn	Pn	10 46 29.4	+1.5
CFAA				Sn	Sn	10 49 00.3	+18
CFAA	Coronel Fontan	12.02	176	Pn	Pn	10 46 29.4	+1.5
	comp=N,0.2nm,0.3s,baz=343,slow=13,SNR=18						
CFAA				Sn	Sn	10 49 00.3	+18
	comp=N,0.1nm,0.3s,baz=252,slow=20,SNR=2.0						
CFAA				LR	LR	10 51 09.0	
	comp=N,114nm,19.3s,baz=166,slow=37						
SAML	Samuel	12.07	30	ePn	Pn	10 46 27.6	-1.1
	comp=N,13nm,0.7s						
SAML				eSn	Sn	10 48 36.1	-7.7
CPUP	Villa Florida	12.87	124	Pn	Pn	10 46 39.0	-0.4
CPUP	Villa Florida	12.87	124	Pn	Pn	10 46 39.0	-0.4
	comp=N,0.6nm,0.3s,baz=284,slow=12,SNR=12						
CPUP				LR	LR	10 51 54.6	
	comp=N,153nm,21.6s,baz=289,slow=39						
ATAH	Atahualpa	15.22	323	Pn	Pn	10 47 12.6	+0.5
ATAH	Atahualpa	15.22	323	Pn	Pn	10 47 12.6	+0.5
	comp=N,0.4nm,0.3s,baz=148,slow=23,SNR=4.5						
ATAH				LR	LR	10 53 11.8	
	comp=N,612nm,20.1s,baz=147,slow=38						
TRQA	Tornquist	19.48	163	eP	P	10 48 04.2	+0.5
	comp=N,14nm,0.9s						
BDFB	Brasilia	20.60	82	P	P	10 48 15.4	-0.8
BDFB	Brasilia	20.60	82	P	P	10 48 15.4	-0.8
	comp=N,4.1nm,0.7s,baz=264,slow=10,SNR=3.5						
PLCA	Paso Flores	21.13	183	eP	P	10 48 23.2	+1.6
	comp=N,42nm,1.0s						
PLCA	Paso Flores	21.13	183	P	P	10 48 23.3	+1.6
	comp=N,31nm,0.9s,baz=7.0,slow=14,SNR=11						
PLCA				LR	LR	10 55 59.1	
	comp=N,483nm,19.5s,baz=181,slow=35						
OTAV	Otavalo	21.66	334	eP	P	10 48 29.6	+1.6
	comp=N,7.2nm,0.8s						
SDV	Santo Domingo	28.31	357	eP	P	10 49 29.6	-1.2
	comp=N,39nm,0.8s						
RPN	Rapa Nui	37.45	251	LR	LR	11 02 41.8	
	comp=N,120nm,21.0s,baz=120,slow=30						
OBIP	Obispado Ponce	37.47	4	eP	P	10 50 49.7	-0.8
	comp=N,69nm,1.0s						
CELP	Cerrillos	37.50	4	eP	P	10 50 48.2	-2.6
SJG	San Juan	37.57	5	P	P	10 50 48.9	-2.4
SJG	San Juan	37.57	5	P	P	10 50 48.9	-2.4
	comp=N,40nm,0.9s,baz=196,slow=3.1,SNR=11						
MPR	Mayaguez	37.60	3	eP	P	10 50 49.4	-2.2
	comp=N,56nm,0.9s						
LRS	Lares	37.70	4	eP	P	10 50 50.4	-2.0
TEIG	Tepich	43.73	334	P	P	10 51 42.4	+0.2
TEIG	Tepich	43.73	334	P	P	10 51 42.4	+0.2
	comp=N,7.8nm,0.6s,baz=13,slow=0.3,SNR=8.4						
CMIG	Matias Romero	44.30	324	P	P	10 51 47.5	+0.6
CMIG	Matias Romero	44.30	324	P	P	10 51 47.5	+0.6
	comp=N,5.8nm,0.8s,baz=110,slow=5.4,SNR=14						
TIGA	Tifton	52.55	345	⇑P	P	10 52 49.9	-0.4
	baz=53						
NHSC	New Hope	53.41	349	eP	P	10 52 57.0	+0.4
GOGA	Godfrey	54.41	345	eP	P	10 53 03.4	-0.5
	comp=N,20nm,1.2s						
LRAL	Lakeview Retre	54.99	342	eP	P	10 53 07.2	-1.0
	comp=N,8.1nm,0.9s						
HKT	Hockley	55.50	332	eP	P	10 53 12.7	+0.9
KMSC	Kings Mountain	55.61	348	⇓P	P	10 53 12.1	-0.5
	baz=56,SNR=15						
732A	Laxson Ranch,	56.45	327	⇓P	P	10 53 18.7	0.0
	baz=57,SNR=7.3						
CPCT	Cooper Cave	56.60	345	eP	P	10 53 18.8	-1.0
SWET	Sewanee	56.74	344	eP	P	10 53 20.0	-0.8
	comp=N,15nm,0.6s						
632A	Uvalde	56.99	328	⇓P	P	10 53 22.7	0.0
	baz=57,SNR=7.8						
PLAL	Pickwick Lake	57.13	342	eP	P	10 53 22.1	-1.4
	comp=N,12nm,0.9s						
631A	Perdido Creek	57.31	327	⇓P	P	10 53 24.6	-0.3
	baz=58,SNR=5.9						
TZTN	Tazewell	57.42	346	eP	P	10 53 22.9	-2.6
	comp=N,60nm,1.8s						
BLA	Blacksburg	57.45	349	eP	P	10 53 25.3	-0.5
	comp=N,28nm,1.1s						
532A	Rocksprings	57.56	328	⇓P	P	10 53 26.6	-0.1
	baz=58,SNR=6.3						
JCT	Junction City	57.80	329	⇓P	P	10 53 28.2	-0.2
	baz=58						
531A	Rocksprings	57.91	328	⇑P	P	10 53 29.2	0.0
	baz=58,SNR=11						
WHTX	Lake Whitney	57.96	332	⇑P	P	10 53 29.4	0.0
	baz=58,SNR=7.2						
432A	Menard	58.12	329	⇑P	P	10 53 30.3	-0.3
	baz=58,SNR=16						
WVT	Waverly	58.12	342	eP	P	10 53 28.1	-2.3
	comp=N,17nm,0.8s						
530A	J-C Ranch, Com	58.30	327	⇓P	P	10 53 31.8	0.0
	baz=58,SNR=9.4						
431A	Sonora	58.36	328	⇑P	P	10 53 32.0	-0.3
	baz=59,SNR=8.8						
332A	Millersview	58.51	329	⇓P	P	10 53 33.2	-0.2
	baz=59,SNR=16						
628A	Black Gap, Mar	58.58	326	⇓P	P	10 53 34.2	+0.4
	baz=59,SNR=13						
529A	Stev Forest Ra	58.73	327	⇑P	P	10 53 35.0	+0.1
	baz=59,SNR=16						
430A	Baggett Ranch,	58.76	328	⇑P	P	10 53 34.9	-0.2
	baz=59,SNR=12						
331A	San Angelo	58.78	329	⇑P	P	10 53 34.8	-0.4
	baz=59,SNR=8.2						
627A	Terlingua Ranc	58.82	325	⇓P	P	10 53 35.5	-0.1
	baz=59,SNR=5.8						
TXAR	Lajitas Array	58.88	325	P	P	10 53 35.6	-0.4
TXAR	Lajitas Array	58.88	325	P	P	10 53 35.6	-0.4
	comp=N,1.6nm,0.9s,baz=145,slow=9.1,SNR=15						
TXAR				LR	LR	11 17 46.2	
	comp=N,64nm,20.0s,baz=180,slow=35						
232A	Coleman	58.88	330	⇓P	P	10 53 35.7	-0.2
	baz=59,SNR=7.8						
429A	Davenport Ranc	58.96	327	⇑P	P	10 53 36.3	-0.3
	baz=59,SNR=12						
LPIG	La Paz	59.04	316	LR	LR	11 15 02.7	
	comp=N,5.2nm,19.9s,baz=304,slow=32						
528A	Cox Ranch, San	59.06	326	⇑P	P	10 53 36.8	-0.4
	baz=59,SNR=5.0						
330A	Mertzon	59.23	328	⇓P	P	10 53 37.8	-0.6
	baz=60,SNR=5.1						
231A	Bronte	59.24	329	⇓P	P	10 53 37.9	-0.5
	baz=60						
626A	Big Bend Ranch	59.30	325	⇓P	P	10 53 39.1	+0.1
	baz=60,SNR=18						
428A	Kincaid Ranch,	59.45	327	⇑P	P	10 53 39.9	0.0
	baz=60						
ABTX	Abilene, Hawle	59.49	330	⇓P	P	10 53 39.7	-0.4
	baz=60,SNR=6.7						
230A	Sterling City	59.59	329	⇑P	P	10 53 40.4	-0.5
	baz=60						
MVL	Millersville	59.63	354	eP	P	10 53 41.0	+0.2
	comp=N,15nm,1.0s						
526A	Mary Lane Ranc	59.67	325	⇑P	P	10 53 41.6	+0.1
	baz=60,SNR=19						
WCI	Wyandotte Cave	59.68	344	eP	P	10 53 40.0	-1.3
	comp=N,8.6nm,0.7s						
329A	Wagon Wheel Ra	59.70	328	⇓P	P	10 53 41.2	-0.4
	baz=60,SNR=12						
131A	Roby	59.89	330	⇓P	P	10 53 42.5	-0.3
	baz=60,SNR=13						
427A	Hayter Ranch,	59.92	326	⇓P	P	10 53 42.8	-0.4
	baz=60,SNR=6.5						
Z32A	Haskell	59.98	331	⇑P	P	10 53 43.2	-0.3
	baz=60						
SIUC	Southern Illin	60.00	342	eP	P	10 53 42.8	-0.6
	comp=N,48nm,1.0s						
229A	Bryant Ranch,	60.00	328	⇑P	P	10 53 43.1	-0.5
	baz=60						
328A	Wristen Ranch,	60.04	327	⇓P	P	10 53 43.7	-0.2
	baz=60,SNR=7.7						
130A	Snyder	60.10	329	⇓P	P	10 53 43.9	-0.4
	baz=60,SNR=8.3						
426A	McDonald Obser	60.12	325	⇑P	P	10 53 44.5	-0.1
	baz=60,SNR=12						
Z31A	Sharp Cattle R	60.30	330	⇑P	P	10 53 45.3	-0.3
	baz=60,SNR=18						
327A	Balmorhea Ranc	60.38	326	⇓P	P	10 53 45.9	-0.4
	baz=61						
228A	UT Block 9, Go	60.52	328	⇑P	P	10 53 46.6	-0.6
	baz=61						
Y32A	R-V Farms, Ver	60.55	331	⇑P	P	10 53 46.9	-0.4
	baz=61,SNR=6.8						
129A	Stewart Farms,	60.57	329	⇓P	P	10 53 47.0	-0.5
	baz=61,SNR=8.1						
326A	Caldwell Ranch	60.60	326	⇑P	P	10 53 47.5	-0.3
	baz=61,SNR=14						
TUL1	Tulsa	60.64	335	⇑P	P	10 53 47.4	-0.5
	baz=61						
425A	Indio Mountain	60.72	325	⇓P	P	10 53 48.6	-0.2
	baz=61,SNR=12						
Z30A	Sanderson Ranc	60.74	330	⇑P	P	10 53 48.2	-0.5
	baz=61,SNR=8.9						

227A	Bennet, Jal baz=61	60.79 327	⇓P	P	10 53 49.1	0.0
ACSO	Alum Creek Sta comp=N,29nm,0.9s	60.85 348	eP	P	10 53 48.4	-0.8
128A	Castleberry Fa baz=61	60.87 328	⇑P	P	10 53 49.0	-0.6
Y31A	Rekieta Farm, baz=61,SNR=14	60.89 331	⇓P	P	10 53 49.3	-0.4
Z29A	Hungry Hill Ra baz=61,SNR=8.4	61.00 329	⇑P	P	10 53 49.7	-0.8
325A	Bean Ranch, Si baz=61,SNR=17	61.17 325	⇑P	P	10 53 51.6	-0.2
BRYW	Bryant College comp=N,129nm,1.1s	61.21 358	eP	P	10 53 51.0	-0.6
226B	Tecolote Peak, baz=62,SNR=12	61.29 326	⇓P	P	10 53 52.9	+0.4
X31A	McDonald Ranch baz=62,SNR=13	61.32 331	⇑P	P	10 53 52.0	-0.5
127A	Arkansas Junct baz=62	61.35 327	⇑P	P	10 53 52.3	-0.7
Z28A	Tucker Farm, M baz=62,SNR=5.2	61.35 329	⇓P	P	10 53 52.1	-0.8
Y29A	Porterfield Fa baz=62,SNR=12	61.47 329	⇑P	P	10 53 52.9	-0.7
GDL2	Guadalupe Moun	61.49 326	eP	P	10 53 54.3	+0.4
324A	Moseley Ranch, baz=62,SNR=12	61.50 325	⇓P	P	10 53 53.2	-0.8
X30A	Coker Ranch, T baz=62,SNR=8.1	61.57 330	⇑P	P	10 53 53.6	-0.8
225A	Deer Hill, Car baz=62,SNR=7.4	61.66 326	⇓P	P	10 53 54.9	-0.2
126A	Clayton Basin, baz=62,SNR=5.2	61.66 327	⇑P	P	10 53 55.0	-0.1
ALLY	Alegheny Colle	61.74 351	eP	P	10 53 54.9	-0.4
W31A	Holland Ranch, baz=62	61.77 332	⇑P	P	10 53 54.6	-0.9
Z27A	Tatum baz=62,SNR=12	61.79 328	⇑P	P	10 53 55.1	-0.8
Y28A	McKinney Farm, baz=62,SNR=5.6	61.79 329	⇑P	P	10 53 54.9	-0.9
HRV	Adam Dziewonsk comp=N,23nm,1.0s	61.80 358	eP	P	10 53 55.7	+0.1
SFIN	Scholer Farm baz=62,SNR=7.5	61.91 345	⇑P	P	10 53 54.4	-2.0
X29A	Tulia baz=62	61.96 330	⇑P	P	10 53 56.0	-1.0
224A	Cornudas Mount baz=62,SNR=11	62.01 325	⇑P	P	10 53 56.8	-0.6
W30A	Crocket Farms baz=62	62.05 331	⇑P	P	10 53 56.7	-0.8
MSTX	Muleshoe baz=62,SNR=15	62.09 329	⇓P	P	10 53 57.3	-0.6
Z26A	Caprock baz=62,SNR=6.9	62.14 327	⇑P	P	10 53 57.7	-0.5
ERPA	Erie comp=N,67nm,1.0s	62.17 351	eP	P	10 53 57.3	-0.8
V31A	Spring Creek L baz=62	62.21 332	⇓P	P	10 53 58.3	-0.3
Y27A	Causey baz=62,SNR=9.1	62.22 328	⇑P	P	10 53 58.0	-0.8
X28A	Dimmitt baz=62	62.26 329	⇑P	P	10 53 58.2	-0.8
AMTX	Amarillo baz=63	62.31 330	⇑P	P	10 53 58.3	-1.0
124A	Stringfield Ra baz=63,SNR=6.2	62.46 326	⇑P	P	10 54 00.3	-0.3
W29A	Amraillo baz=63	62.49 330	⇓P	P	10 53 59.7	-0.8
Z25A	Roswell baz=63,SNR=8.1	62.52 327	⇑P	P	10 54 00.3	-0.5
W28A	Vega baz=63	62.86 330	⇑P	P	10 54 02.5	-0.5
222A	Williams Famil baz=63	62.89 324	⇓P	P	10 54 03.2	-0.1
Z24A	Sheeppen Canyo baz=63,SNR=8.2	62.90 326	⇑P	P	10 54 03.0	-0.4
Y25A	Mesa, Roswell baz=63,SNR=6.1	63.02 327	⇓P	P	10 54 03.3	-0.8
X26A	CR and CF Fran baz=63,SNR=7.0	63.07 328	⇑P	P	10 54 04.0	-0.5
W27A	Bowe Ranch, En baz=63,SNR=6.8	63.12 329	⇑P	P	10 54 04.2	-0.5
320A	Kipp Ranch, An baz=63	63.12 323	⇑P	P	10 54 04.9	0.0
T31A	Randall Ranch, baz=64,SNR=5.3	63.25 333	⇓P	P	10 54 05.2	-0.3
V28A	Channing baz=64	63.27 330	⇓P	P	10 54 05.4	-0.4
Z23A	Rita Site, Whi baz=64	63.30 326	⇑P	P	10 54 06.1	+0.1
Y24A	Capitan baz=64	63.40 327	⇓P	P	10 54 06.4	-0.4
X25A	Clemmons Ranch baz=64	63.48 328	⇓P	P	10 54 06.7	-0.4
220A	Playas Peak, P baz=64,SNR=9.7	63.54 323	⇓P	P	10 54 08.1	+0.5
V27A	Dan Oppiter Fa baz=64	63.57 330	⇑P	P	10 54 07.6	-0.1
319A	Douglas baz=64	63.58 322	⇑P	P	10 54 08.4	+0.5
121A	Cookes Peak, D baz=64,SNR=6.6	63.59 324	⇓P	P	10 54 08.7	+0.7
Y23A	Lovelace Mesa, baz=64	63.73 326	⇑P	P	10 54 08.9	0.0
KSU1	Kansas State U comp=N,18nm,0.8s	63.74 336	eP	P	10 54 07.9	-0.7
U28A	Mallet baz=64	63.79 331	⇑P	P	10 54 08.4	-0.8
X24A	Lazy VL Ranch, baz=64	63.90 327	⇑P	P	10 54 09.7	-0.3
W25A	X Bar L Ranch, baz=64,SNR=7.4	63.92 328	⇓P	P	10 54 09.8	-0.3
V26A	Tequesquite Ra baz=64,SNR=9.9	64.05 329	⇑P	P	10 54 10.6	-0.4
120A	U Bar Ranch, L baz=64	64.08 323	⇓P	P	10 54 11.7	+0.6
U27A	Thompson Grove baz=64	64.10 330	⇑P	P	10 54 12.0	+0.8
Z21A	St. Cloud Mine baz=64	64.11 325	⇓P	P	10 54 12.3	+0.8
BNM	Barren Site comp=N,12nm,1.4s	64.20 326	eP	P	10 54 12.9	+0.8
SNAA	Sanae	64.20 161	P	P	10 54 13.2	+1.8
SNAA	Sanae comp=N,6.1nm,0.8s,baz=298,slow=6.4,SNR=34	64.20 161	P	P	10 54 13.2	+1.8
Y22A	Socorro baz=64	64.21 326	⇑P	P	10 54 13.1	+1.1
X23A	Hourglass Bar baz=64	64.30 327	⇑P	P	10 54 13.0	+0.3
S29A	Ulysses baz=65	64.31 332	⇑P	P	10 54 13.0	+0.5
LPM	Los Pinos Moun	64.32 326	eP	P	10 54 13.4	+0.6
W24A	Lazy 6 Ranch, baz=65	64.39 328	⇑P	P	10 54 13.9	+0.7
Z20A	Nine Sixteen R baz=65,SNR=9.0	64.47 324	⇑P	P	10 54 14.6	+0.8
V25A	Rancho No Teng baz=65,SNR=8.7	64.49 329	⇓P	P	10 54 13.8	-0.1
U26A	Atchley Ranch, baz=65,SNR=11	64.52 330	⇑P	P	10 54 14.0	-0.1
T27A	Campo baz=65,SNR=7.1	64.58 331	⇑P	P	10 54 14.0	-0.4
S28A	Manter baz=65,SNR=7.2	64.64 332	⇑P	P	10 54 14.3	-0.3
Y21A	Point of Rocks baz=65,SNR=11	64.65 325	⇓P	P	10 54 16.0	+1.0
LAZ	Ladron comp=N,5.9nm,1.3s	64.66 326	eP	P	10 54 16.1	+1.1
X22A	Bernardo baz=65	64.67 326	⇓P	P	10 54 15.9	+0.8
ANMO	Albuquerque comp=N,1.8nm,0.8s	64.72 327	eP	P	10 54 16.1	+0.7
V24A	Rampart Ranch, baz=65,SNR=6.8	64.73 328	⇑P	P	10 54 15.4	-0.1
CBKS	Cedar Bluff comp=N,20nm,0.8s	64.73 334	eP	P	10 54 15.6	+0.4
W23A	Werner Place, baz=65	64.73 327	⇓P	P	10 54 15.7	+0.2
U25A	Circle Dot Ran baz=65,SNR=12	64.84 329	⇑P	P	10 54 16.2	+0.1
Y20A	Horse Springs, baz=65,SNR=5.5	64.95 325	⇑P	P	10 54 17.8	+0.8
X21A	Alamocita Cree baz=65	65.04 325	⇓P	P	10 54 18.0	+0.5
T26A	Comanche Natio baz=65,SNR=8.7	65.07 330	⇑P	P	10 54 17.7	+0.1
V23A	Ortiz Mt. (NFS baz=65,SNR=5.8	65.20 327	⇓P	P	10 54 19.2	+0.6
U24A	Moreno Valley baz=66,SNR=5.4	65.27 328	⇑P	P	10 54 19.6	+0.6
S26A	Kim baz=66,SNR=14	65.38 331	⇓P	P	10 54 20.1	+0.5
T25A	Trinidad baz=66	65.43 330	⇑P	P	10 54 20.7	+0.7
X20A	Quemado baz=66,SNR=6.1	65.50 325	⇓P	P	10 54 21.3	+0.8
R27A	Eads baz=66	65.61 331	⇑P	P	10 54 21.4	+0.4
U23A	El Rito baz=66	65.66 328	⇑P	P	10 54 22.4	+0.9
T24A	Torres, Weston baz=66	65.69 329	⇓P	P	10 54 22.6	+0.8
V22A	San Miguel Ran baz=66,SNR=12	65.70 327	⇑P	P	10 54 22.5	+0.7
S25A	Robets Cordova baz=66	65.86 330	⇑P	P	10 54 22.9	+0.2
R26A	Arlington baz=66,SNR=7.8	65.92 331	⇓P	P	10 54 23.1	+0.1
W20A	Ramah baz=66,SNR=5.5	65.94 325	⇑P	P	10 54 23.9	+0.5
U22A	Llaves baz=66	66.03 327	⇑P	P	10 54 24.5	+0.5
214A	Organ Pipe Nat baz=66	66.09 320	⇓P	P	10 54 25.4	+1.3
KSCO	Kaye Shedlock' baz=66,SNR=5.9	66.13 332	⇓P	P	10 54 24.5	+0.1
T23A	Casias Ranch, baz=66	66.14 328	⇓P	P	10 54 25.5	+0.8
S24A	Houchin Ranch, baz=66,SNR=5.0	66.22 329	⇓P	P	10 54 25.8	+0.6
X18A	Snowflake baz=66	66.28 324	⇓P	P	10 54 25.9	+0.4
BGNE	Belgrade baz=67,SNR=8.8	66.33 337	⇑P	P	10 54 25.0	-0.4
V20A	Brimhall baz=67	66.43 326	⇓P	P	10 54 27.6	+1.1
SDCO	Great Sand Dun comp=N,9.6nm,0.9s	66.44 329	eP	P	10 54 27.1	+0.5
Q26A	Hugo baz=67	66.46 331	⇑P	P	10 54 27.6	+1.1
U21A	Nageezi baz=67,SNR=5.6	66.48 327	⇑P	P	10 54 27.4	+0.6
T22A	Edith baz=67,SNR=6.3	66.55 328	⇑P	P	10 54 27.9	+0.6
P27A	Ficken Ranch, baz=67	66.56 332	⇑P	P	10 54 27.8	+0.8
R24A	Sanders Place, baz=67,SNR=6.0	66.64 330	⇓P	P	10 54 28.2	+0.5
T21A	Navajo Lake baz=67	66.86 327	⇓P	P	10 54 29.6	+0.4
U20A	Newcomb baz=67	66.89 326	⇑P	P	10 54 30.3	+0.9
R23A	Moffat baz=67	66.95 329	⇓P	P	10 54 30.4	+0.6
O27A	Beecher Island baz=67	67.04 333	⇓P	P	10 54 30.9	+0.8
X16A	Lo Mia Camp, P baz=67,SNR=5.5	67.04 323	⇑P	P	10 54 31.3	+1.0
S22A	4UR Ranch, Cre baz=67	67.09 328	⇑P	P	10 54 31.6	+0.9
Z14A	Wintersburg baz=67	67.16 321	⇑P	P	10 54 32.4	+1.5
P25A	Willow Gulch B baz=68,SNR=8.2	67.23 331	⇓P	P	10 54 32.0	+0.6
Q24A	Divide baz=68	67.24 330	⇓P	P	10 54 32.4	+0.8
R22A	Saguache, Gunn baz=68	67.43 329	⇑P	P	10 54 33.7	+0.8
O26A	Horse Wrangler baz=68	67.44 332	⇑P	P	10 54 33.1	+0.4
OGNE	Ogallala baz=68	67.47 334	⇑P	P	10 54 33.3	+0.4
S21A	Coal Bank Pass baz=68	67.50 328	⇓P	P	10 54 34.3	+0.9
MVCO	Mesa Verde comp=N,28nm,1.7s	67.52 327	eP	P	10 54 34.3	+0.9
MVCO	Mesa Verde baz=68	67.52 327	⇓P	P	10 54 34.2	+0.9
P24A	Kohler Place, baz=68	67.57 331	⇓P	P	10 54 34.9	+1.3
WUAZ	Wupatki comp=N,5.6nm,0.8s	67.80 324	eP	P	10 54 36.6	+1.5
WUAZ	Wupatki baz=68	67.80 324	⇑P	P	10 54 36.0	+0.9
ECSD	EROS Data Cent comp=N,33nm,1.8s	67.81 339	eP	P	10 54 34.0	-0.8
P23A	Jefferson baz=68	67.89 330	⇑P	P	10 54 36.1	+0.2
S20A	Disappointment baz=68,SNR=8.4	67.92 327	⇑P	P	10 54 36.8	+0.9
R21A	Cimarron baz=68	67.93 328	⇑P	P	10 54 36.9	+1.0
SPMN	St. Paul baz=68	67.96 342	⇓P	P	10 54 35.7	0.0
Q22A	Crested Butte, baz=68	68.00 329	⇑P	P	10 54 37.4	+0.9
M27A	Reverse DX Ran baz=68	68.11 334	⇓P	P	10 54 37.9	+1.0
ISCO	Idaho Springs baz=68,SNR=7.8	68.12 331	⇓P	P	10 54 37.6	+0.4
O24A	Longmont baz=68	68.13 331	⇓P	P	10 54 38.2	+1.1
R20A	Redvale baz=68,SNR=7.9	68.20 328	⇓P	P	10 54 38.7	+1.0
PV01	Paradox Valley comp=N,390nm,0.8s	68.26 327	eP	P	10 54 39.2	+1.1
SMCO	Snowmass comp=N,5.9nm,0.8s	68.28 329	eP	P	10 54 39.1	+0.8
DBIC	Dimbokro	68.49 74	P	P	10 54 38.0	-1.7
DBIC	Dimbokro comp=N,13nm,0.8s,baz=217,slow=8.6,SNR=17	68.49 74	P	P	10 54 38.0	-1.7
DBIC				LR	LR	11 24 33.9
	comp=N,94nm,19.2s,baz=179,slow=36					
P22A	Eagle baz=69	68.50 330	⇑P	P	10 54 40.3	+0.7
L27A	T5 Ranch, Ells baz=69	68.54 334	⇑P	P	10 54 40.6	+1.0
O23A	Lake Granby, G baz=69,SNR=12	68.59 331	⇓P	P	10 54 40.7	+0.6
S18A	Hurst Farm, Bl baz=69,SNR=12	68.66 326	⇓P	P	10 54 41.3	+0.7
M25A	Palm-Egli Farm baz=69	68.74 333	⇓P	P	10 54 42.1	+1.2
P21A	Newcastle baz=69,SNR=6.6	68.78 329	⇑P	P	10 54 42.1	+0.9
O22A	Kremmling baz=69,SNR=9.7	68.84 330	⇑P	P	10 54 42.0	+0.2
BC3	Big Chuckawall baz=69	68.86 320	⇓P	P	10 54 43.0	+1.2
W13A	Hualapai Mount baz=69	68.93 322	⇓P	P	10 54 43.6	+1.3
MONP	Monument Peak baz=69	68.94 319	⇑P	P	10 54 43.7	+1.3
BAR	Barrett comp=N,8.2nm,0.9s	68.96 318	eP	P	10 54 43.9	+1.6
U15A	North Rim baz=69,SNR=11	68.97 324	⇓P	P	10 54 43.8	+1.2
IRM	Iron Mountain baz=69,SNR=7.0	69.03 320	⇓P	P	10 54 43.8	+1.1
M24A	Cheyenne baz=69,SNR=8.8	69.10 332	⇓P	P	10 54 43.8	+0.6
N23A	Red Feather La baz=69,SNR=6.0	69.15 331	⇓P	P	10 54 44.0	+0.4
PHWY	Pilot Hill comp=N,29nm,2.0s	69.25 332	eP	P	10 54 44.9	+0.6
N22A	Wattenberg Ran baz=70	69.31 331	⇓P	P	10 54 45.7	+1.2
O21A	Pagoda baz=70	69.33 330	⇓P	P	10 54 45.6	+0.9
K26A	Motz Farm, Whi baz=70	69.41 334	⇑P	P	10 54 45.7	+0.8
BELC	Belle Mtn. Jos baz=70	69.43 320	⇑P	P	10 54 46.4	+1.0
PFO	Pinyon Flat Ob	69.45 319	LR	LR	11 22 30.0	
	comp=N,54nm,21.9s,baz=134,slow=34					
PFO	Pinyon Flat Ob baz=70	69.45 319	⇑P	P	10 54 46.7	+1.3
M23A	Laramie baz=70,SNR=8.2	69.50 332	⇓P	P	10 54 46.1	+0.4
P19A	Cripple Cowboy baz=70,SNR=6.9	69.61 328	⇓P	P	10 54 47.1	+0.7
O20A	White River Ci baz=70	69.63 329	⇓P	P	10 54 47.5	+1.0
GMRC	Granite Mounta baz=70,SNR=6.9	69.76 321	⇑P	P	10 54 48.6	+1.2
N21A	Black Mountain baz=70	69.77 330	⇑P	P	10 54 48.6	+1.2
M22A	Cedar Creek Ra baz=70	69.85 331	⇓P	P	10 54 48.7	+0.8
SRU	San Rafael comp=N,5.0nm,0.9s	70.00 327	eP	P	10 54 49.6	+0.9
SRU	San Rafael baz=70,SNR=7.6	70.00 327	⇓P	P	10 54 49.3	+0.5
L23A	Garrett baz=70	70.01 332	⇑P	P	10 54 49.2	+0.4
N20A	Spence Gulch, baz=70	70.19 329	⇓P	P	10 54 50.6	+0.7
Q16A	Castle Valley baz=70	70.19 326	⇑P	P	10 54 51.2	+1.2
O19A	Miners Draw (B baz=70,SNR=6.7	70.19 329	⇑P	P	10 54 50.4	+0.5
P18A	Preston Nutter baz=70	70.24 327	⇓P	P	10 54 51.4	+1.0
L22A	Ellis Ranch, M baz=70	70.27 331	⇑P	P	10 54 51.5	+1.1
M21A	Separation Pea baz=71	70.36 331	⇓P	P	10 54 52.0	+0.9
TUQ	Turquoise Moun baz=71	70.36 321	⇓P	P	10 54 52.3	+1.3
CCUT	Cedar City comp=N,6.5nm,0.8s	70.37 324	eP	P	10 54 52.9	+1.8
P17A	Butcher Ranch, baz=71	70.38 327	⇓P	P	10 54 51.9	+0.8
MSU	Marysvale	70.42 325	eP	P	10 54 52.6	+1.2
MVU	Marysvale	70.43 325	eP	P	10 54 52.4	+0.9
K23A	Bowen Ranch, D baz=71	70.49 332	⇑P	P	10 54 52.6	+0.9
J24A	Dixon Ranch, L baz=71	70.55 333	⇑P	P	10 54 53.0	+1.1
ARUT	Antelope Range comp=N,7.9nm,0.7s	70.58 324	eP	P	10 54 53.9	+1.6
BFSC	Mount Baldy Ra baz=71	70.61 319	⇓P	P	10 54 53.7	+1.1
QSPA	South Pole Qui comp=N,14nm,0.9s	70.61 180	eP	P	10 54 53.5	+1.3
M20A	Sweetwater, Wa baz=71	70.66 330	⇑P	P	10 54 53.6	+0.8
GSC	Goldstone baz=71	70.80 320	⇓P	P	10 54 55.2	+1.6
K22A	Casper baz=71	70.81 332	⇓P	P	10 54 54.2	+0.6
SHOC	Shoshone baz=71	70.89 321	⇓P	P	10 54 55.5	+1.4
I24A	Kuemmerle Ranc baz=71	70.96 334	⇑P	P	10 54 55.3	+0.8
K21A	Alcova baz=71,SNR=13	71.12 331	⇑P	P	10 54 56.1	+0.5
L20A	Wamsutter baz=71	71.13 330	⇑P	P	10 54 56.2	+0.5
DAU	Daniels Canyon	71.34 327	eP	P	10 54 58.2	+1.1
J22A	Midwest baz=72,SNR=6.7	71.39 332	⇑P	P	10 54 57.0	-0.1
LRMC	Laurel Mountai baz=72	71.45 320	⇑P	P	10 54 58.5	+0.9
M18A	Lyman baz=72	71.51 329	⇑P	P	10 54 58.6	+0.6
JLU	Jordanelle comp=N,5.7nm,0.7s	71.58 327	eP	P	10 54 58.8	+0.3
FURC	Furnace Creek, baz=72	71.62 321	⇑P	P	10 54 59.8	+1.4
K20A	Yellowstone Ra baz=72,SNR=6.4	71.64 331	⇑P	P	10 54 58.4	-0.2
H24A	Dirks Ranch, A baz=72,SNR=12	71.66 334	⇓P	P	10 54 58.4	-0.2
L19A	Farson baz=72,SNR=6.2	71.69 330	⇑P	P	10 54 59.2	+0.2
MPMC	Manual Prospec baz=72	71.72 320	⇓P	P	10 55 00.1	+0.8
J21A	Lysite baz=72,SNR=5.7	71.77 332	⇓P	P	10 54 59.7	+0.2
I22A	9 Mile Ranch, baz=72,SNR=7.4	71.78 333	⇑P	P	10 54 59.5	+0.1
M17A	Scullys Gap (B baz=72	71.84 328	⇓P	P	10 55 00.3	+0.4
L18A	Fontenelle, Gr baz=72	71.88 329	⇓P	P	10 55 00.5	+0.4
DUG	Dugway comp=N,5.8nm,1.0s	71.99 326	eP	P	10 55 02.0	+1.3
DUG	Dugway baz=72	71.99 326	⇑P	P	10 55 01.2	+0.4
K19A	Absolon Red Bu baz=72	72.00 330	⇑P	P	10 55 01.3	+0.4
ISA	Isabella	72.05 320	eP	P	10 55 03.0	+1.8
ISA	Isabella baz=72	72.05 320	⇓P	P	10 55 02.3	+1.1
J20A	Shoshoni baz=72	72.06 331	⇓P	P	10 55 01.7	+0.6
I21A	Big Trails, Te baz=72,SNR=12	72.07 332	⇓P	P	10 55 01.1	-0.1
G24A	Alzada baz=72,SNR=7.9	72.08 335	⇓P	P	10 55 01.1	0.0
R11A	Troy Canyon, C baz=72	72.18 323	⇑P	P	10 55 03.3	+1.3
BW06	Boulder Array comp=N,5.4nm,1.3s	72.29 330	eP	P	10 55 03.4	+0.7
BW06	Boulder Array baz=72	72.29 330	⇓P	P	10 55 03.8	+1.2
PDAR	Pinedale Array	72.29 330	P	P	10 55 02.6	-0.1
PDAR	Pinedale Array comp=N,1.4nm,0.8s,baz=134,slow=7.7,SNR=9.3	72.29 330	P	P	10 55 02.6	-0.1
PDAR				LR	LR	11 29 20.9
	comp=N,55nm,19.8s,baz=39,slow=38					
G23A	Biddle baz=73,SNR=13	72.37 334	⇑P	P	10 55 02.8	-0.1
L17A	Cokeville baz=73	72.42 329	⇑P	P	10 55 03.4	0.0
K18A	Toltan Ranch, baz=73,SNR=5.6	72.42 330	⇓P	P	10 55 03.9	+0.5
J19A	Crowheart baz=73,SNR=7.9	72.44 331	⇓P	P	10 55 03.6	+0.1
F24A	Ekalaka baz=73,SNR=19	72.51 335	⇑P	P	10 55 03.6	-0.1
VES	Vestal, Richgr baz=73	72.55 319	⇓P	P	10 55 04.4	+0.4
H21A	Big Horn, Sher baz=73	72.61 333	⇑P	P	10 55 04.4	0.0
L16A	Fish Haven baz=73	72.63 328	⇑P	P	10 55 05.2	+0.6
F23A	Volborg baz=73,SNR=12	72.80 334	⇑P	P	10 55 05.4	0.0
J18A	Kendall Valley baz=73,SNR=10.0	72.85 330	⇓P	P	10 55 06.0	0.0
H20A	Greybull baz=73	72.92 332	⇑P	P	10 55 05.9	-0.2
K17A	Gardner Place, baz=73	72.93 329	⇑P	P	10 55 06.2	-0.2
I19A	Meeteetse baz=73	73.01 331	⇑P	P	10 55 06.8	-0.1
E24A	Baker baz=73,SNR=8.1	73.05 336	⇓P	P	10 55 07.3	+0.4
L15A	Malad City baz=73,SNR=9.3	73.09 328	⇓P	P	10 55 07.5	+0.2
I18A	Diamond G Ranc baz=73,SNR=10	73.13 330	⇓P	P	10 55 08.0	+0.3
G21A	Lodge Grass baz=73	73.16 333	⇑P	P	10 55 07.9	+0.4
F22A	Rosebud baz=73,SNR=7.1	73.20 334	⇑P	P	10 55 07.7	-0.1
J17A	Brown Place, J baz=74	73.29 330	⇓P	P	10 55 09.0	+0.5
K16A	Soda Springs baz=74,SNR=5.1	73.31 329	⇓P	P	10 55 09.5	+0.8
SNOW	Snow King Moun comp=N,4.3nm,0.8s	73.39 330	eP	P	10 55 10.2	+1.0
ULM	Lac du Bonnet	73.39 343	eP	P	10 55 08.0	-0.7
ULM	Lac du Bonnet comp=N,7.1nm,0.5s,baz=165,slow=7.1,SNR=7.1	73.39 343	P	P	10 55 07.7	-1.0
ULM				LR	LR	11 31 38.5
	comp=N,87nm,18.6s,baz=154,slow=39					
E23A	Ismay baz=74,SNR=7.4	73.39 335	⇑P	P	10 55 08.6	-0.2
LOHW	Long Hollow	73.43 330	eP	P	10 55 10.2	+0.8
H19A	Powell baz=74	73.50 332	⇓P	P	10 55 10.1	+0.4
D24A	Glendive baz=74	73.51 336	⇓P	P	10 55 10.0	+0.4
G20A	Bridger baz=74	73.59 332	⇑P	P	10 55 10.5	+0.3
F21A	Absaloka Mine, baz=74	73.59 333	⇑P	P	10 55 11.0	+0.9
E22A	Miles City baz=74	73.60 334	⇓P	P	10 55 10.5	+0.4
I17A	Pilgrim Ck. baz=74	73.65 330	⇑P	P	10 55 11.5	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
K15A	Arbon	73.67	328	⇑P	P	10 55 11.6	+0.9
	baz=74						
NVAR	Mina Array Bea	73.79	322	P	P	10 55 12.9	+1.3
NVAR	Mina Array Bea	73.79	322	P	P	10 55 12.9	+1.3
	comp=N,3.0nm,0.8s,baz=155,slow=6.2,SNR=16						
H18A	Shoshone NF, C	73.81	331	⇑P	P	10 55 11.7	+0.1
	baz=74,SNR=13						
K14A	Jones Ranch, D	73.89	328	⇓P	P	10 55 12.7	+0.7
	baz=74						
C24A	Savage	73.89	336	⇓P	P	10 55 12.5	+0.7
	baz=74						
D23A	Lindsay	73.90	335	⇑P	P	10 55 12.4	+0.5
	baz=74,SNR=11						
RLMT	Red Lodge	73.97	332	eP	P	10 55 12.8	+0.3
	comp=N,5.5nm,0.8s						
RLMT	Red Lodge	73.97	332	⇓P	P	10 55 13.1	+0.6
	baz=74						
H17A	Grant Village	74.01	330	⇑P	P	10 55 13.9	+1.1
	baz=74						
I16A	Newdale	74.05	330	⇓P	P	10 55 13.8	+0.9
	baz=74						
LKWY	Lake	74.06	331	eP	P	10 55 15.2	+2.0
	comp=N,7.2nm,0.8s						
SCHQ	Schefferville	74.12	1	eP	P	10 55 12.3	-0.6
	comp=N,5.2nm,0.8s						
SCHQ	Schefferville	74.12	1	P	P	10 55 11.1	-1.8
	comp=N,5.0nm,0.8s,baz=227,slow=2.7,SNR=7.0						
SCHQ				LR	LR	11 29 20.5	
	comp=N,63nm,18.3s,baz=68,slow=37						
E21A	Keefer Ranch,	74.15	334	⇑P	P	10 55 14.1	+0.8
	baz=74						
J15A	Blackfoot	74.15	329	⇓P	P	10 55 14.2	+0.7
	baz=74,SNR=6.8						
G18A	Lazy EL Ranch,	74.26	332	⇑P	P	10 55 14.5	+0.4
	baz=74,SNR=11						
D22A	Cohagen	74.27	335	⇑P	P	10 55 14.7	+0.7
	baz=74,SNR=9.1						
F19A	Roth Farm, Mol	74.40	332	⇓P	P	10 55 15.1	+0.2
	baz=75,SNR=7.2						
D21A	La Casta Ranch	74.53	334	⇓P	P	10 55 16.0	+0.4
	baz=75,SNR=8.3						
H16A	Russell Place,	74.56	330	⇑P	P	10 55 17.1	+1.1
	baz=75,SNR=10.0						
E20A	Meyer Farm, Mu	74.56	333	⇑P	P	10 55 16.3	+0.5
	baz=75,SNR=8.6						
DGMT	Dagmar	74.58	337	eP	P	10 55 16.7	+0.9
	comp=N,17nm,1.0s						
DGMT	Dagmar	74.58	337	⇓P	P	10 55 16.0	+0.2
	baz=75						
I15A	Monteview	74.62	329	⇓P	P	10 55 17.3	+1.1
	baz=75,SNR=9.5						
C22A	Vida	74.64	335	⇓P	P	10 55 16.2	+0.1
	baz=75						
GCMT	Greycliff	74.67	332	eP	P	10 55 17.0	+0.5
	comp=N,5.6nm,1.0s						
F18A	Big Timber	74.78	332	⇓P	P	10 55 17.6	+0.5
	baz=75,SNR=12						
E19A	Rath Farm, Rou	74.81	333	⇓P	P	10 55 17.6	+0.5
	baz=75,SNR=26						
B23A	Brockton	74.88	336	⇑P	P	10 55 17.9	+0.4
	baz=75						
A24A	Westby	74.89	337	⇓P	P	10 55 18.0	+0.4
	baz=75						
J13A	Cove Ranch, Pi	75.01	328	⇓P	P	10 55 18.9	+0.4
	baz=75						
D20A	Manuel Ranch,	75.03	334	⇑P	P	10 55 18.9	+0.5
	baz=75						
I14A	Mackay	75.04	329	⇑P	P	10 55 19.7	+1.0
	baz=75,SNR=9.2						
B22A	Reddig Ranch S	75.13	336	⇑P	P	10 55 19.6	+0.6
	baz=75						
C21A	Desert Coulee	75.19	335	⇓P	P	10 55 19.7	+0.4
	baz=75						
F17A	Fitzpatrick Pl	75.20	331	⇑P	P	10 55 20.4	+0.8
	baz=75,SNR=5.8						
G16A	Moss Hill, Enn	75.22	330	⇑P	P	10 55 20.3	+0.6
	baz=76						
A23A	Redstone	75.24	337	⇓P	P	10 55 20.2	+0.7
	baz=76						
HLID	Hailey	75.25	328	eP	P	10 55 21.3	+1.3
	comp=N,7.3nm,1.0s						
HLID	Hailey	75.25	328	⇑P	P	10 55 20.9	+1.0
	baz=76,SNR=13						
I13A	Wildhorse Cree	75.36	328	⇓P	P	10 55 21.7	+1.1
	baz=76,SNR=6.9						
D19A	Cripps Ranch,	75.40	333	⇑P	P	10 55 20.8	+0.2
	baz=76,SNR=7.4						
MCMT	McKenzie Canyo	75.41	330	eP	P	10 55 21.9	+1.0
	comp=N,2.5nm,0.7s						
BOZ	Bozeman (W)	75.45	331	eP	P	10 55 21.6	+0.6
	comp=N,2.0nm,0.8s						
BOZ	Bozeman (W)	75.45	331	⇓P	P	10 55 21.2	+0.2
	baz=76						
PPT2	Papeete2	75.47	256	eLR	LR	11 18 39.6	
	comp=N,64nm,27.8s						
G15A	Dillon	75.49	330	⇑P	P	10 55 21.4	+0.1
	baz=76						
H14A	Leadore	75.50	329	⇓P	P	10 55 22.3	+0.9
	baz=76,SNR=5.9						
B21A	Ellsworth Farm	75.64	335	⇓P	P	10 55 22.2	+0.3
	baz=76						
A22A	Carney Farms,	75.66	336	⇑P	P	10 55 22.4	+0.4
	baz=76,SNR=8.8						
DLMT	Dillon	75.69	330	eP	P	10 55 23.5	+1.1
	comp=N,11nm,1.5s						
E17A	Martinsdale	75.72	332	⇑P	P	10 55 23.0	+0.4
	baz=76,SNR=12						
I12A	Atlanta	75.78	328	⇓P	P	10 55 24.0	+1.0
	baz=76,SNR=6.8						
D18A	Linhart Farms,	75.82	333	⇑P	P	10 55 23.1	+0.1
	baz=76						
MFID	Camas Ranch	75.87	327	eP	P	10 55 24.4	+1.0
	comp=N,7.1nm,1.0s						
MFID	Camas Ranch	75.87	327	⇑P	P	10 55 24.6	+1.2
	baz=76,SNR=6.4						
H13A	Challis	75.90	329	⇓P	P	10 55 24.6	+1.0
	baz=76,SNR=7.9						
C19A	Slack Wire Ran	75.92	334	⇑P	P	10 55 23.9	+0.4
	baz=76,SNR=5.8						
BEKR	Beckworth	75.94	322	eP	P	10 55 25.2	+1.2
	comp=N,1.6nm,0.9s						
LRM	Limekiln Ridge	75.96	330	eP	P	10 55 25.0	+1.0
F15A	Butte	75.99	330	⇑P	P	10 55 24.6	+0.4
	baz=76						
G14A	Jackson	76.01	329	⇑P	P	10 55 24.7	+0.4
	baz=76						
E16A	East Helena	76.14	331	⇓P	P	10 55 25.5	+0.7
	baz=76						
D17A	Six Diamond Ra	76.17	332	⇓P	P	10 55 25.5	+0.4
	baz=76,SNR=8.2						
H12A	Diamond D Ranc	76.18	328	⇓P	P	10 55 25.6	+0.3
	baz=76						
G13A	Cobalt	76.27	329	⇓P	P	10 55 26.8	+1.1
	baz=76,SNR=18						
HRY	Holter Researc	76.34	331	eP	P	10 55 26.3	+0.3
A20A	Cobblestone Ra	76.36	335	⇓P	P	10 55 26.2	+0.2
	baz=77,SNR=5.3						
F14A	Wisdom	76.39	330	⇑P	P	10 55 26.7	+0.3
	baz=77						
B19A	Brinkman Farms	76.44	334	⇓P	P	10 55 26.6	+0.1
	baz=77,SNR=5.9						
EGMT	Eagleton	76.44	333	⇓P	P	10 55 26.5	0.0
	baz=77,SNR=5.5						
D16A	Dana Ranch, Ca	76.46	332	⇑P	P	10 55 27.5	+0.8
	baz=77,SNR=16						
E15A	Deer Lodge	76.50	331	⇓P	P	10 55 27.6	+0.7
	baz=77,SNR=7.5						
C17A	Wharram Farm,	76.57	333	⇓P	P	10 55 27.4	+0.1
	baz=77						
A19A	Klindworth Far	76.73	334	⇓P	P	10 55 28.3	+0.2
	baz=77						
B18A	Beardsley Farm	76.74	334	⇑P	P	10 55 28.5	+0.3
	baz=77,SNR=7.5						
F13A	Darby	76.83	329	⇓P	P	10 55 29.6	+0.8
	baz=77,SNR=13						
G12A	Big Creek, Yel	76.83	328	⇓P	P	10 55 29.4	+0.5
	baz=77						
E14A	Clinton	76.89	330	⇑P	P	10 55 29.5	+0.4
	baz=77						
D15A	Lincoln	76.90	331	⇑P	P	10 55 30.0	+0.7
	baz=77						
TOA0	Torodi Ar. Sit	77.01	71	eP	P	10 55 28.9	-1.4
TORD	Torodi Ar. Bea	77.01	71	P	P	10 55 28.7	-1.6
TORD	Torodi Ar. Bea	77.01	71	P	P	10 55 28.7	-1.6
	comp=N,4.9nm,0.8s,baz=251,slow=4.4,SNR=28						
TORD				LR	LR	11 27 59.1	
	comp=N,61nm,19.1s,baz=225,slow=35						
B17A	L&G Farms, Che	77.09	333	⇑P	P	10 55 30.5	+0.4
	baz=77						
C16A	Fuhringer Ranc	77.13	332	⇑P	P	10 55 30.7	+0.3
	baz=77						
CHMT	Chamberlain Mo	77.14	331	eP	P	10 55 31.5	+0.8
	comp=N,3.5nm,1.4s						
A18A	Metzger Ranch,	77.17	334	⇓P	P	10 55 30.4	-0.2
	baz=77,SNR=6.2						
E13A	Victor	77.23	330	⇑P	P	10 55 31.9	+0.8
	baz=78,SNR=5.7						
F12A	Elk City	77.25	329	⇓P	P	10 55 31.2	0.0
	baz=78						
D14A	Greenough	77.39	331	⇑P	P	10 55 32.3	+0.4
	baz=78						
C15A	Salmond Ranch,	77.49	332	⇑P	P	10 55 33.3	+0.7
	baz=78,SNR=12						
SLMT	Seeley Lake	77.50	331	eP	P	10 55 33.4	+0.8
A17A	Triple J Farms	77.55	333	⇓P	P	10 55 32.8	+0.1
	baz=78						
BMO	Blue Mountains	77.63	327	eP	P	10 55 34.3	+0.9
D13A	Huson	77.84	330	⇓P	P	10 55 35.2	+0.8
	baz=78,SNR=7.3						
B15A	Bradely Ranch,	77.88	332	⇑P	P	10 55 34.4	-0.2
	baz=78,SNR=7.2						
SWMT	Swartz Lake	77.93	331	eP	P	10 55 36.2	+1.3
	comp=N,2.7nm,0.9s						
YBMT	Yellow Bay	78.19	331	eP	P	10 55 37.1	+0.7
	comp=N,3.4nm,0.8s						
D12A	Red Ives Fores	78.23	330	⇑P	P	10 55 37.2	+0.7
	baz=78						
JTMT	Jette	78.23	331	eP	P	10 55 37.7	+1.1
C13A	Hot Springs	78.32	331	⇓P	P	10 55 37.8	+0.8
	baz=79,SNR=8.2						
SYO	Syowa Base	78.41	160	⇓eP	P	10 55 36.4	-0.8
SYO	Syowa Base	78.41	160	⇓epP	pP	10 55 39.0	0.0
A15A	Johnson Ranch,	78.45	332	⇑P	P	10 55 38.3	+0.5
	baz=79						
YBH	Yreka Blue Hor	78.50	322	P	P	10 55 37.5	-0.8
YBH	Yreka Blue Hor	78.50	322	P	P	10 55 37.5	-0.8
	comp=N,1.3nm,1.0s,baz=0.0,slow=0.0,SNR=3.0						
BSMT	Bassoo Peak	78.54	331	eP	P	10 55 39.5	+1.1
VNDA	Vanda	78.69	190	P	P	10 55 40.6	+2.0
VNDA	Vanda	78.69	190	P	P	10 55 40.6	+2.0
	comp=N,1.5nm,0.9s,baz=142,slow=6.2,SNR=7.1						
A14A	Double T Ranch	78.75	332	⇓P	P	10 55 40.0	+0.6
	baz=79						
C12B	Naegeli Ranch,	78.76	330	⇓P	P	10 55 40.2	+0.8
	baz=79						
B13A	Whitefish	78.78	331	⇑P	P	10 55 40.6	+1.0
	baz=79						
WALA	Waterton Lakes	79.03	332	eP	P	10 55 41.0	0.0
	comp=N,0.2nm,0.9s						
FFC	Flin Flon	79.11	341	eP	P	10 55 41.5	+0.4
	comp=N,3.1nm,0.8s						
A13A	Flathead Natio	79.16	332	⇓P	P	10 55 42.6	+1.0
	baz=79						
B12A	Libby	79.36	331	⇓P	P	10 55 43.7	+1.0
	baz=80						
A12A	Yaak River Ran	79.72	331	⇑P	P	10 55 45.9	+1.2
	baz=80						
MDT	Midelt	80.75	50	LR	LR	11 26 46.2	
	comp=N,75nm,20.7s,baz=5.3,slow=32						
TSUM	Tsumeb	80.89	107	eP	P	10 55 56.1	+4.3
	comp=N,6.4nm,0.7s						
TAM	Tamanrasset	84.23	63	P	P	10 56 08.3	-0.8
	comp=N,1.8nm,0.4s						
BOSA	Boshof	84.62	118	P	P	10 56 12.9	+1.8
BOSA	Boshof	84.62	118	P	P	10 56 12.9	+1.8
	comp=N,6.6nm,0.9s,baz=265,slow=2.4,SNR=8.7						
BOSA				LR	LR	11 28 48.2	
	comp=N,102nm,18.6s,baz=344,slow=32						
ESDC	Sonseca Array	84.68	45	P	P	10 56 10.7	-0.3
ESDC	Sonseca Array	84.68	45	P	P	10 56 10.7	-0.3
	comp=N,1.6nm,0.8s,baz=240,slow=5.6,SNR=7.0						
ESDC				LR	LR	11 29 59.7	
	comp=N,55nm,18.2s,baz=35,slow=33						
MAW	Mawson	86.26	163	LR	LR	11 35 05.2	
	comp=N,129nm,21.7s,baz=86,slow=36						
YKA	Yellowknife Ar	89.27	341	P	P	10 56 32.2	-0.3
YKA	Yellowknife Ar	89.27	341	P	P	10 56 32.2	-0.3
	comp=N,12nm,0.9s,baz=134,slow=4.7,SNR=222						
YKW3	Yellowknife Ar	89.33	341	eP	P	10 56 32.5	-0.3
	comp=N,0.3nm,0.9s						
DLBC	Dease Lake	92.36	333	eP	P	10 56 47.8	+0.7
DLBC	Dease Lake	92.36	333	P	P	10 56 48.0	+0.8
	comp=N,2.6nm,0.8s,baz=119,slow=2.6,SNR=8.1						
SUMG	Summit	94.21	9	eP	P	10 56 55.2	-0.6
	comp=N,2.3nm,0.6s						
INK	Inuvik	99.03	340	P	Pdif	10 57 16.5	-0.7
INK	Inuvik	99.03	340	P	Pdif	10 57 16.5	-0.7
	comp=N,1.0nm,0.8s,baz=94,slow=1.8,SNR=4.3						
KBZ	Khabaz	119.14	50	PKP	PKPdf	11 02 27.1	+1.1
KBZ	Khabaz	119.14	50	PKP	PKPdf	11 02 27.1	+1.1
	comp=N,1.7nm,0.9s,baz=317,slow=1.3,SNR=4.3						
ASAR	Alice Springs	131.46	209	PKP	PKPdf	11 02 50.1	-0.3
ASAR	Alice Springs	131.46	209	PKP	PKPdf	11 02 50.1	-0.3
	comp=N,1.8nm,0.5s,baz=137,slow=1.9,SNR=13						
WRA	Warramunga Arr	134.44	212	PKPpre	PKPpre	11 02 47.5	
WRA				PKP	PKPdf	11 02 55.8	-0.2
WRA	Warramunga Arr	134.44	212	PKhKP	PKPpre	11 02 47.5	
	comp=N,0.4nm,0.8s,baz=156,slow=1.3,SNR=5.4						
WRA				PKP	PKPdf	11 02 55.8	-0.2
	comp=N,1.4nm,0.6s,baz=146,slow=1.6,SNR=7.9						
ZALV	Zalesovo Beam	140.33	24	PKP	PKPdf	11 03 05.8	0.0
ZALV	Zalesovo Beam	140.33	24	PKP	PKPdf	11 03 05.8	0.0
	comp=N,3.5nm,0.7s,baz=298,slow=3.6,SNR=9.6						
KSH	Kashi	144.10	49	ePKP	PKPbc	11 03 12.2	+1.1
KSH				LR	LR		
	comp=N,150nm,9.0s						
KSH				LR	LR		
	comp=E,130nm,4.4s						
KSH				LR	LR		
	comp=Z,140nm,5.8s						
MKAR	Makanchi Array	144.23	34	PKP	PKPab	11 03 10.6	-0.2
MKAR	Makanchi Array	144.23	34	PKP	PKPab	11 03 10.6	-0.2
	comp=Z,1.0nm,0.8s,baz=294,slow=1.2,SNR=7.2						
WMQ	Urumqi	149.06	33	ePKPbc	PKPdf	11 03 20.0	-1.3
USRK	Ussuriysk Arra	149.71	329	PKPbc	PKPbc	11 03 27.4	+0.6
	comp=Z,7.8nm,0.7s,baz=237,slow=1.8,SNR=10.0						
MJAR	Matsushiro Arr	150.61	311	PKPbc	PKPbc	11 03 29.1	-0.2
MJAR	Matsushiro Arr	150.61	311	PKPbc	PKPbc	11 03 29.1	-0.2
	comp=Z,3.4nm,0.8s,baz=104,slow=0.7,SNR=11						
SONM	Songino Array	151.58	6	PKPbc	PKPbc	11 03 31.4	0.0
SONM	Songino Array	151.58	6	PKPbc	PKPbc	11 03 31.4	0.0
	comp=Z,4.5nm,0.6s,baz=325,slow=0.9,SNR=14						
CN2	Changchun	152.88	336	ePKPbc	PKPdf	11 03 23.2	-3.9
GTA	Gaotai	158.08	23	ePKP	PKPdf	11 03 34.6	+0.2
GTA				PKPab	PKPab	11 04 10.0	+2.3
HHC	Hu-ho-hao-te	158.78	358	ePKP	PKPdf	11 03 27.5	-7.6
HHC				PKS	PKSdf	11 07 01.3	-7.5
HHC				PP	PP	11 07 47.3	-2.8
HHC				SKS	SKSdf	11 10 28.5	-13
HHC	Hu-ho-hao-te	158.78	358	SKKS	SKKSac	11 14 31.3	-10
CD2	Chengdu	167.05	28	PKP	PKPdf	11 03 41.0	-2.4
WHN	Wuhan	168.60	344	PKPbc	PKPdf	11 03 54.9	+11
CMAR	Chiang Mai Arr	168.76	94	PKP	PKPdf	11 03 47.1	+2.3
CMAR				PKPab	PKPab	11 04 57.1	+1.9
CMAR	Chiang Mai Arr	168.76	94	PKP	PKPdf	11 03 47.1	+2.3
	comp=Z,0.4nm,0.3s,baz=349,slow=2.8,SNR=3.8						
CMAR				PKPab	PKPab	11 04 57.1	+1.9
	comp=Z,0.5nm,0.3s,baz=268,slow=6.6,SNR=4.7						
GYA	Guiyang	172.17	28	PKP	PKPdf	11 03 45.0	-1.7
GYA				PKPab	PKPab	11 05 10.9	+0.9
GYA				PKS	PKSdf	11 07 15.6	-3.6
GYA				PP	PP	11 09 01.2	+1.0
GYA				AMB	AMB		
	comp=Z,90nm,8.3s						

WEL 01 10:47:12.4±0.4, 34°.85S×178°.54E, h324km±4km, ML3.6/4, Error ellipse: s-maj=20.0km s-min=10.6km az=90.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	Matawai	3.57	193	PN	Pn	10 48 15.8	+0.3
MWZ				eSN	S	10 49 05.2	-0.9
URZ	Urewera	3.59	198	PN	Pn	10 48 15.6	+0.1
URZ				SN	S	10 49 05.8	-0.5
BKZ	Black Stump Fm	4.61	200	PN	Pn	10 48 27.3	+0.8
BFZ	Birch Farm	6.10	197	PN	Pn	10 48 44.5	+1.1
MRZ	Mangatainoka R	6.26	201	ePN	Pn	10 48 45.9	+0.5
KIW	Kapiti Island	6.65	204	ePN	Pn	10 48 50.6	+0.6
CAW	Cannon Point	6.82	203	PN	Pn	10 48 52.3	+0.4

*NIED **01** 10:54:00, 26°.50N×124°.80E, h5km, Mw4.3 Best double couple: $M_0$3.07000×10^{15} NP1:ϕ_s62.00000°, δ71.00000°, λ-95.00000°. NP2:ϕ_s258.00000°, δ20.00000°, λ-75.00000°.*

*BJI **01** 10:54:26.4, 26°.15N×124°.92E, h16km, mB4.5/9, mb4.1/16, ML4.5/3, Ms4.1/5, Ms7 4.1/6*

*JMA **01** 10:54:26.8±0.2, 26°.52N×124°.76E, h2km, M4.2*

*ISCJB **01** 10:54:30.3±1.1, 26°.54N±0°.03×124°.70E±0°.03, h25km±8km, mb4.4/55, MS3.4/12, Error ellipse: s-maj=5.3km s-min=3.7km az=34.5*

*MOS **01** 10:54:31.4±0.9, 26°.60N×124°.78E, h33km, mb4.8/15, Error ellipse: s-maj=12.0km s-min=6.5km az=113.6*

*NEIC **01** 10:54:34.2±0.5, 26°.58N×124°.65E, h41km±5km, mb4.6/20, Error ellipse: s-maj=7.0km s-min=4.5km az=143.0*

*IDC **01** 10:54:36.6±3.0, 26°.65N×124°.71E, h62km±25km, mb3.9/24, mb1 4.1/28, mb1mx4.0/37, mbtmp4.0/28, ML3.3/4, MS3.3/14, Ms1 3.3/14, ms1mx3.1/51, Error ellipse: s-maj=16.8km s-min=16.0km az=38.0*

ISC 01 10:54:30.2±0.8, 26°.52N±0°.04×124°.77E±0°.04, h15km±4km, n224, σ1s17/221, mb4.5/55, MS3.4/12, 37C-25D, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMJ	Miyako jima 2	1.76	164	P	Pn	10 54 58.7	-1.4
JMJ				S	Sn	10 55 21.3	-0.8
JKE	Kume jima 2	1.82	96	P	Pn	10 54 59.5	-1.3
JOGS	Gusukube	1.84	162	P	Pn	10 54 59.6	-1.6
JOGS				S	Sn	10 55 24.3	+0.1
JTJ	Tarama	1.87	182	P	Pn	10 55 00.6	-1.0
JAGN	Aguni-jima	2.21	88	P	Pn	10 55 05.8	-0.5
JIJ	Ishigaki jima	2.22	195	P	Pn	10 55 05.1	-1.3
IRIF	Iriomote-Funau	2.37	204	P	Pn	10 55 07.3	-1.1
JKRS	Kuro-shima	2.37	197	P	Pn	10 55 08.2	-0.3
JKRS				S	Sn	10 55 38.8	+1.5
YOJ	Yonaguni jima	2.59	218	P	Pn	10 55 10.3	-1.2
YOJ				S	Sn	10 55 40.7	-2.0
JJT2	Tamagusuku 2	2.70	97	P	Pn	10 55 14.9	+1.9
JOW	Kunigami	3.15	83	ePn	Pn	10 55 22.6	+3.4
JOW				eSn	Sb	10 56 03.7	-0.3
TATO	Taipei	3.33	243	ePn	Pn	10 55 20.9	-0.8
TATO				eSn	Sb	10 56 07.2	-2.1
YHNB	Yeheng	3.58	240	ePn	Pn	10 55 24.2	-1.0
YHNB				eSn	Sn	10 56 11.4	+4.2
NACB	Ninganchiao	3.70	232	ePn	Pn	10 55 28.2	+1.4
NACB				eSn	Sn	10 56 15.0	+4.9
JTK	Tokunoshima	3.93	70	P	Pn	10 55 32.5	+2.5
JAMN	Amaminishikomi	4.28	65	P	Pn	10 55 37.4	+2.7
SSLB	Suanglung	4.40	233	ePn	Pn	10 55 38.7	+2.3
SSLB				eSn	Sn	10 56 28.3	+0.9
YULB	Yu-li	4.43	226	ePn	Pn	10 55 38.7	+1.9
YULB				eSn	Sn	10 56 33.5	+5.3
JAM	Amami Oshima	4.69	65	P	Pn	10 55 43.0	+2.6
TPUB	Ta-pu	4.94	230	ePn	Pn	10 55 46.6	+2.8
TWG	Pinlang	4.99	223	ePn	Pn	10 55 47.4	+2.9
SSE	Sheshan	5.54	326	Pn	Pb	10 55 59.6	-7.0
SSE				Sn	Sn	10 57 02.3	+6.8
SSE				smax	smax		
	comp=N,150µm,0.7s						
SSE				smax	smax		
	comp=E,138µm,1.1s						
SSE				LR	LR		
	comp=N,440nm,7.7s						
SSE				LR	LR		
	comp=E,340nm,7.7s						
SSE				LR	LR		
	comp=Z,600nm,7.7s						
QZH	Quanzhou	5.79	256	⇑iPn	Pn	10 55 56.1	+0.6
QZH				Sn	Sn	10 56 58.1	-3.5
QZH				smax	smax		
	comp=N,460nm,1.0s						
QZH				smax	smax		
	comp=E,240nm,0.9s						
QZH				LR	LR		
	comp=N,2µm,11.2s						
QZH				LR	LR		
	comp=E,1µm,11.1s						
QZH				LR	LR		
	comp=Z,1µm,10.3s						
NJ2	Nanjing	7.56	318	eP	Pn	10 56 25.7	+6.0
NJ2				S	Sb	10 58 03.5	-7.3
NJ2				smax	smax		
	comp=N,160nm,1.0s						
NJ2				smax	smax		
	comp=E,120nm,1.0s						
NJ2				LR	LR		
	comp=N,600nm,6.8s						
NJ2				LR	LR		
	comp=E,370nm,8.0s						
NJ2				LR	LR		
	comp=Z,6µm,7.3s						
JNU	Nakatsue	8.45	37	ePn	Pn	10 56 34.0	+1.9
	comp=Z,18nm,0.9s						
JNU				eSn	Sn	10 58 05.1	-2.1
JNU	Nakatsue	8.45	37	P	Pn	10 56 37.0	+4.9
	comp=Z,0.5nm,0.3s,baz=183,slow=4.3,SNR=13						
JNU				LR	LR	11 00 09.1	
	comp=Z,130nm,18.6s,baz=232,slow=40						
WHN	Wuhan	10.00	296	P	Pn	10 56 42.4	-11
WHN				S	Sn	10 58 28.8	-16
WHN				LR	LR		
	comp=N,2µm,7.6s						
WHN				LR	LR		
	comp=E,960nm,10.8s						
WHN				LR	LR		
	comp=Z,2µm,7.7s						
KSAR	Wonju Array Be	11.21	13	P	Pn	10 57 11.7	+1.9
KSAR				S	Sn	10 59 15.0	+0.3
KSRS	Korea Array	11.23	13	P	Pn	10 57 11.7	+1.6
	comp=Z,0.4nm,0.3s,baz=193,slow=13,SNR=11						
KSRS				S	Sn	10 59 15.0	-0.2
	comp=Z,0.5nm,0.3s,baz=192,slow=24,SNR=6.3						
KSRS				LR	LR	11 01 49.5	
	comp=Z,130nm,18.2s,baz=174,slow=39						
MAJO	Matsushiro	15.19	46	iP	P	10 58 10.1	+1.0
MAT	Matsushiro	15.19	46	P	P	10 58 10.0	+0.9
MJAR	Matsushiro Arr	15.19	46	P	P	10 58 07.9	-1.2
MJAR	Matsushiro Arr	15.19	46	P	P	10 58 07.9	-1.2
	comp=Z,0.2nm,0.3s,baz=237,slow=12,SNR=23						
MJAR				LR	LR	11 04 30.5	
	comp=Z,42nm,18.9s,baz=210,slow=39						
QIZ	Qiongzhong	15.65	245	P	Pn	10 58 07.5	-2.7
QIZ				S	Sn	11 01 01.7	-1.7
QIZ				pmax	pmax		
	comp=Z,31nm,0.4s						
QIZ				LR	LR		
	comp=Z,360nm,5.8s						
USRK	Ussuriysk Arra	18.59	16	P	Pn	10 58 49.0	+2.2
	comp=Z,0.3nm,0.3s,baz=200,slow=9.4,SNR=21						
DAV	Davao City (W)	19.36	178	LR	LR	11 05 12.1	
	comp=Z,90nm,18.9s,baz=24,slow=33						
LZH	Lanzhou	20.23	303	eP	Pn	10 59 09.1	+2.2
LZH				pmax	pmax		
	comp=Z,34nm,1.4s						
LZH				pmax	pmax		
	comp=Z,170nm,4.1s						
ASAJ	Asahikawa	22.72	35	LR	LR	11 07 21.8	
	comp=Z,35nm,20.2s,baz=59,slow=34						
GUMO	Guam	22.80	120	LR	LR	11 07 13.3	
	comp=Z,47nm,19.5s,baz=92,slow=33						
KLR	Kul'dur	23.31	12	eP	P	10 59 34.4	-3.0
KLR				pmax	pmax		
	comp=Z,38nm,1.2s						
HABR	Khabarovsk	23.34	17	eP	P	10 59 36.7	-1.0
HABR				e*SP	sP	11 00 15.3	+31
HABR						11 03 22.8	
HABR				eS	S	11 03 38.6	-11
HABR				pmax	pmax		
	comp=Z,53nm,2.6s						
HABR				pmax	pmax		
	comp=E,86nm,3.9s						
HABR				pmax	pmax		
	comp=N,61nm,3.9s						
HABR				MLR	MLR		
	comp=Z,78nm,16.0s						
GTA	Gaotai	24.48	308	⇑P	P	10 59 49.0	+0.2
GTA				pP	pP	10 59 53.9	+0.4
GTA				sP	sP	10 59 56.1	+0.6
GTA				S	S	11 04 00.2	-8.4
GTA				pmax	pmax		
	comp=Z,10.0nm,1.6s						
GTA				pmax	pmax		

comp=Z,79nm,4.8s
GTA LR LR
comp=N,200nm,15.2s
GTA LR LR
comp=E,150nm,16.9s
GTA LR LR
comp=Z,200nm,15.4s
CHTO Chiang Mai 25.00 258 *e*P **P 10 59 54.1 +0.5**
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CHTO Chiang Mai 25.00 258 *e*P **P 10 59 54.1 +0.5**
comp=Z,5.8nm,0.9s
CMAR Chiang Mai Arr 25.14 257 P **P 10 59 55.9 +1.0**
CMAR Chiang Mai Arr 25.14 257 P **P 10 59 55.9 +1.0**
comp=Z,3.0nm,1.0s,baz=64,slow=7.4,SNR=10
ULN Ulaanbaatar 25.44 332 *e*P **P 10 59 57.9 +0.4**
comp=Z,4.4nm,0.9s
SONM Songino Array 25.71 331 P **P 10 59 59.3 -0.5**
SONM Songino Array 25.71 331 P **P 10 59 59.3 -0.5**
comp=Z,3.9nm,1.0s,baz=145,slow=10,SNR=10
SONM LR LR 11 11 27.4
comp=Z,141nm,19.7s,baz=90,slow=40
MOY Mondy 30.90 331 *e*P **P 11 00 46.6 +0.5**
HVS Khovu-Aksy 34.07 325⇑*i*P **P 11 01 13.2 -0.7**
YAK Yakutsk 35.66 4 *e*P **P 11 01 27.7 +0.4**
PETK Petropavlovsk- 36.13 34 LR LR 11 15 10.0
comp=Z,17nm,19.6s,baz=148,slow=34
MK31 Makanchi Array 39.04 313 *e*P **P 11 01 56.0 -0.3**
MK31 Makanchi Array 39.04 313 *e*P **P 11 01 56.0 -0.3**
MKAR Makanchi Array 39.04 313 P **P 11 01 55.7 -0.6**
MKAR Makanchi Array 39.04 313 P **P 11 01 55.7 -0.6**
MKAR Makanchi Array 39.04 313 P **P 11 01 55.7 -0.6**
comp=Z,1.8nm,0.6s,baz=98,slow=10,SNR=24
MKAR LR LR 11 18 28.7
comp=Z,48nm,18.6s,baz=350,slow=37
ZAA0 Zalesovo Array 40.17 324 *e*P **P 11 02 04.3 -1.2**
ZALV Zalesovo Beam 40.17 324 P **P 11 02 04.3 -1.2**
ZALV Zalesovo Beam 40.17 324 P **P 11 02 04.3 -1.2**
ZALV Zalesovo Beam 40.17 324 P **P 11 02 04.3 -1.2**
comp=Z,3.6nm,0.6s,baz=112,slow=8.6,SNR=20
ZALV LR LR 11 19 58.3
comp=Z,35nm,18.8s,baz=254,slow=38
ULHL Ulahol 42.44 304 *i*P **P 11 02 24.9 +0.3**
ULHL Ulahol 42.44 304 P **P 11 02 24.9 +0.3**
SNR=5.5
KURK Kurchatov 42.49 317*ce*P **P 11 02 23.3 -1.3**
KURK pmax pmax
comp=Z,9.0nm,1.2s
TKM2 Tokmak 2 42.98 305 *e*P **P 11 02 29.4 +0.4**
TKM2 pmax pmax
comp=Z,10.0nm,0.8s
TKM2 Tokmak 2 42.98 305 *e*P **P 11 02 29.4 +0.4**
comp=Z,10nm,0.8s
TKM2 Tokmak 2 42.98 305 P **P 11 02 29.6 +0.6**
SNR=16
KZA Kyzart 43.16 304 *i*P **P 11 02 31.8 +1.1**
KZA Kyzart 43.16 304 P **P 11 02 31.8 +1.1**
SNR=5.8
CHMS Chumysh 43.60 305 *i*P **P 11 02 34.4 +0.6**
CHMS Chumysh 43.60 305 P **P 11 02 34.4 +0.6**
SNR=5.0
AAK Ala-Archa 43.76 305*ce*P **P 11 02 35.1 -0.1**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 43.76 305 *e*P **P 11 02 35.2 -0.1**
comp=Z,3.2nm,1.0s
AML Almayashu 44.31 304 *i*P **P 11 02 40.8 +0.8**
AML Almayashu 44.31 304 P **P 11 02 40.8 +0.8**
SNR=7.0
KKAR Karatay Array 46.71 305 *e*P **P 11 02 58.3 -0.2**
KKAR pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 46.71 305 *e*P **P 11 02 58.2 -0.2**
comp=Z,2.2nm,0.6s
WRAB Tennant Creek 47.10 168 *e*P **P 11 03 01.4 -0.2**
WRAB pmax pmax
comp=Z,2.0nm,0.5s
WRAB Tennant Creek 47.10 168 *e*P **P 11 03 01.4 -0.2**
comp=Z,2.2nm,0.5s
BRVK Borovoye 48.07 319*ce*P **P 11 03 08.1 -0.8**
BRVK pmax pmax
comp=Z,11nm,1.4s
BILL Bilibino 48.41 19 P P 11 03 08.0 -3.2
BILL pmax pmax
comp=Z,21nm,0.6s
ASAR Alice Springs 50.66 169 P **P 11 03 29.9 +0.9**
ASAR Alice Springs 50.66 169 P **P 11 03 29.9 +0.9**
comp=Z,0.5nm,0.6s,baz=357,slow=7.6,SNR=9.6
CTA Charters Tower 50.80 154 LR LR 11 25 35.7
comp=Z,73nm,19.8s,baz=57,slow=36
ABKAR Akbulak array 54.19 313 *e*P **P 11 03 54.4 -0.5**
comp=Z,1.0nm,0.4s
ARU Arti 55.25 322*d*/*i*P **P 11 04 01.2 -1.2**
ARU 11 06 03.9
ARU S S 11 11 33.2 -12
ARU pmax pmax
comp=Z,8.0nm,1.7s
AKTO Aktyubinsk 55.42 314 LR LR 11 29 41.8
comp=Z,44nm,20.1s,baz=327,slow=38
ILAR Eielson Array 65.65 28 P **P 11 05 11.6 -1.8**
ILAR Eielson Array 65.65 28 P **P 11 05 11.6 -1.8**
comp=Z,0.7nm,0.7s,baz=239,slow=4.7,SNR=14
KIV Kislovodsk 66.66 309 *i*P **P 11 05 20.4 0.0**
MENT Mentasta 67.41 30 *e*P **P 11 05 25.1 +0.4**
SPITS Spitsbergen Ar 67.90 348 P **P 11 05 28.1 +0.5**
SPITS Spitsbergen Ar 67.90 348 P **P 11 05 28.1 +0.5**
comp=Z,1.9nm,0.5s,baz=70,slow=7.2,SNR=14
JOF Joensuu 68.28 331 *e*P **P 11 05 28.9 -1.2**
JOF pmax pmax
comp=Z,4.0nm,0.5s
JOF Joensuu 68.28 331 *ep* **P 11 05 28.9 -1.2**
comp=Z,3.5nm,0.5s
ARCES ARCESS Array B 68.59 338 P **P 11 05 32.3 +0.2**
ARCES ARCESS Array B 68.59 338 P **P 11 05 32.3 +0.2**
comp=Z,2.9nm,1.0s,baz=64,slow=8.4,SNR=3.7
KIP Kipapa 69.76 76*ce*P **P 11 05 41.6 +1.6**
KIP pmax pmax
comp=Z,86nm,1.7s
KAF Kangasniemi 70.74 330 *e*P **P 11 05 44.8 -0.5**
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 70.74 330 *ep* **P 11 05 44.8 -0.5**
comp=Z,2.1nm,0.5s
FINES FINESS Array B 71.07 330 P **P 11 05 47.3 -0.1**
FINES FINESS Array B 71.07 330 P **P 11 05 47.3 -0.1**
comp=Z,6.4nm,0.7s,baz=56,slow=6.1,SNR=28
AKASG Malin Array Be 73.28 319 P **P 11 06 00.0 -0.8**
AKASG Malin Array Be 73.28 319 P **P 11 05 60.0 -0.8**
AKASG Malin Array Be 73.28 319 P **P 11 05 60.0 -0.8**
comp=Z,1.9nm,0.6s,baz=59,slow=5.7,SNR=7.8
BR131 Keskin Array S 74.39 307 *e*P **P 11 06 07.8 +0.1**
comp=Z,5.6nm,0.9s
BRTR Keskin Array B 74.39 307 P **P 11 06 07.8 +0.1**
BRTR Keskin Array B 74.39 307 P **P 11 06 07.8 +0.1**
comp=Z,5.4nm,0.8s,baz=94,slow=5.4,SNR=28
RES Resolute Bay 75.83 10 P **P 11 06 14.2 -1.0**
RES Resolute Bay 75.83 10 P **P 11 06 14.2 -1.0**
comp=Z,2.5nm,0.9s,baz=345,slow=6.6,SNR=5.0
BUR08 Bucovina Ar. S 76.92 317 *e*P **P 11 06 22.1 +0.1**
HFS Hagfors 77.11 331 P **P 11 06 22.6 0.0**
HFS Hagfors 77.11 331 P **P 11 06 22.6 0.0**
comp=Z,2.8nm,0.8s,baz=53,slow=7.4,SNR=4.8
EIL Elat 77.22 297 LR LR 11 47 03.2
comp=Z,56nm,20.1s,baz=280,slow=41
MLR Muntele Rosu 77.35 315 P **P 11 06 24.8 +0.3**
MLR Muntele Rosu 77.35 315 P **P 11 06 24.8 +0.3**
comp=Z,1.2nm,0.9s,baz=95,slow=16,SNR=5.0
NOA NORSAR Array B 77.66 333 P **P 11 06 25.4 -0.5**
NOA NORSAR Array B 77.66 333 P **P 11 06 25.4 -0.5**
comp=Z,2.0nm,0.9s,baz=55,slow=5.7,SNR=3.6
NOA LR LR 11 44 21.3
comp=Z,45nm,19.4s,baz=270,slow=38
YKA Yellowknife Ar 79.55 24 P **P 11 06 35.4 -0.8**
YKA Yellowknife Ar 79.55 24 P **P 11 06 35.3 -0.8**
comp=Z,0.8nm,0.8s,baz=306,slow=5.1,SNR=22
MORC Moravsky Berou 80.44 321 *e*P **P 11 06 41.4 +0.1**
MORC pmax pmax
comp=Z,1.0nm,0.6s
MORC Moravsky Berou 80.44 321 *e*P **P 11 06 41.4 +0.1**
comp=Z,1.0nm,0.6s
DPC Dobruska-Polom 80.83 322 *e*P P 11 06 46.6 +3.2
DPC Dobruska-Polom 80.83 322 *e*P P 11 06 46.6 +3.2
VRAC Vranov 81.21 321 P **P 11 06 45.4 0.0**
VRAC Vranov 81.21 321 P **P 11 06 45.4 0.0**
comp=Z,5.1nm,0.9s,baz=84,slow=8.0,SNR=6.3
RPZ Rata Peaks 81.77 148 P **P 11 06 49.7 +1.5**
RPZ Rata Peaks 81.77 148 P **P 11 06 49.7 +1.5**
comp=Z,9.0nm,1.0s,baz=133,slow=12,SNR=2.6
BRG Berggiesshubel 81.85 323 *e*(P) P 11 06 56.6 +7.9
comp=Z,2.7nm,1.1s
BRG Berggiesshubel 81.85 323 *e*P P 11 06 56.6 +7.9
BRG pmax pmax
comp=Z,3.0nm,1.1s
CLL Collm 82.12 324 *e*P **P 11 06 50.0 -0.1**
CLL pmax pmax
comp=Z,17nm,1.0s
CLL Collm 82.12 324 *e*P **P 11 06 50.0 -0.1**
comp=Z,4.0nm,1.0s
CLL *e*PcP **pP 11 06 54.0 -1.2**
CLL LmV 11 44 00.0
comp=Z,100nm,18.4s
KHC Kasperske Hory 82.99 322 *e*P **P 11 06 56.1 +1.4**
KHC Kasperske Hory 82.99 322 *e*P **P 11 06 56.1 +1.4**
NKC Novy Kostel 83.00 323 *e*P **P 11 06 55.2 +0.4**
NKC Novy Kostel 83.00 323 *e*P **P 11 06 55.2 +0.4**
GERES GERESS Array B 83.07 322 P **P 11 06 55.0 -0.2**
GERES GERESS Array B 83.07 322 P **P 11 06 55.0 -0.2**
comp=Z,0.8nm,0.7s,baz=67,slow=3.5,SNR=8.1
DAVOX Davos/Dischmat 86.36 321 P **P 11 07 12.0 0.0**
DAVOX Davos/Dischmat 86.36 321 P **P 11 07 12.0 0.0**
comp=Z,1.7nm,0.4s,baz=54,slow=2.9,SNR=5.6
CDF Champ du Feu 86.82 324 *e*P **P 11 07 13.7 -0.4**
comp=Z,10nm,1.1s
CDF Champ du Feu 86.82 324 *e*P **P 11 07 13.7 -0.4**
CDF pmax pmax
comp=Z,11nm,1.1s
CDF Champ du Feu 86.82 324 *e*P **P 11 07 13.7 -0.4**
comp=Z,10nm,1.1s
NEW Newport 87.23 36 P **P 11 07 15.7 -0.4**
NEW Newport 87.23 36 P **P 11 07 15.7 -0.4**
comp=Z,2.2nm,0.7s,baz=294,slow=2.6,SNR=6.8
NEW Newport 87.23 36⇑P **P 11 07 15.9 -0.1**
baz=87
YBH Yreka Blue Hor 87.84 44 P **P 11 07 19.6 +0.4**
YBH Yreka Blue Hor 87.84 44 P **P 11 07 19.6 +0.4**
comp=Z,1.5nm,1.0s,baz=236,slow=7.3,SNR=3.7
A13A Flathead Natio 88.22 35⇓P **P 11 07 21.0 +0.2**
baz=88
B13A Whitefish 88.55 35⇓P **P 11 07 22.9 +0.6**
baz=88
A14A Double T Ranch 88.69 34⇑P **P 11 07 23.6 +0.5**
baz=88,SNR=10.0
BSMT Bassoo Peak 88.71 36 *e*P **P 11 07 24.1 +0.8**
comp=Z,2.0nm,0.7s
LPL La Plagne 88.88 322 *e*P **P 11 07 23.7 -0.4**
comp=Z,7.8nm,0.9s
LPL La Plagne 88.88 322 *e*P **P 11 07 23.7 -0.4**
LPL pmax pmax
comp=Z,8.0nm,0.9s
LPL La Plagne 88.88 322 *e*P **P 11 07 23.7 -0.4**
comp=Z,7.8nm,0.9s
LPG La Plagne 88.88 322 *e*P **P 11 07 23.9 -0.3**
comp=Z,9.0nm,0.9s
LPG La Plagne 88.88 322 *e*P **P 11 07 23.9 -0.3**
LPG pmax pmax
comp=Z,9.0nm,0.9s
LPG La Plagne 88.88 322 *e*P **P 11 07 23.9 -0.3**
comp=Z,9.0nm,0.9s
D12A Red Ives Fores 88.92 36⇓P **P 11 07 23.7 -0.5**
baz=89
C13A Hot Springs 88.93 36⇑P **P 11 07 24.7 +0.5**
baz=89
A15A Johnson Ranch, 89.03 34⇑P **P 11 07 25.1 +0.5**
baz=89
B14A Marquette Ranc 89.16 34⇑P **P 11 07 26.3 +0.9**
baz=89
SBF Sospel 89.48 320 *e*P **P 11 07 25.9 -0.9**
comp=Z,21nm,0.8s
SBF Sospel 89.48 320 *e*P **P 11 07 25.9 -0.9**
SBF pmax pmax
comp=Z,21nm,0.8s
SBF Sospel 89.48 320 *e*P **P 11 07 25.9 -0.9**
comp=Z,21nm,0.8s
B15A Bradely Ranch, 89.55 34⇓P **P 11 07 27.5 +0.4**
baz=89
FFC Flin Flon 89.68 25 *i*P **P 11 07 27.2 -0.2**
SLMT Seeley Lake 89.78 35 *e*P **P 11 07 28.6 +0.3**
comp=Z,5.3nm,0.8s
F12A Elk City 89.79 37⇑P **P 11 07 28.2 -0.1**
baz=90
MSO Missoula 89.81 36 *e*P **P 11 07 28.6 +0.2**
comp=Z,2.3nm,1.1s
MSO Missoula 89.81 36⇓P **P 11 07 28.6 +0.2**
baz=90
D14A Greenough 89.87 36⇓P **P 11 07 29.0 +0.4**
baz=90
C15A Salmond Ranch, 89.88 35⇑P **P 11 07 29.0 +0.3**
baz=90,SNR=5.5
A17A Triple J Farms 90.06 33⇓P **P 11 07 30.3 +0.9**
baz=90
G12A Big Creek, Yel 90.15 38⇑P **P 11 07 30.0 0.0**
baz=90,SNR=5.7
F13A Darby 90.27 37⇑P **P 11 07 30.7 +0.1**
baz=90
C16A Fuhringer Ranc 90.30 34⇓P **P 11 07 31.0 +0.3**
baz=90
E14A Clinton 90.31 36⇑P **P 11 07 31.1 +0.3**
baz=90
B17A L&G Farms, Che 90.45 33⇑P **P 11 07 31.6 +0.4**
baz=90
E15A Deer Lodge 90.75 36⇓P **P 11 07 32.5 -0.3**
baz=90
G13A Cobalt 90.77 37⇓P **P 11 07 32.7 -0.2**
baz=90
F14A Wisdom 90.77 36⇑P **P 11 07 34.1 +1.1**
baz=90
H12A Diamond D Ranc 90.77 38⇑P **P 11 07 32.8 -0.2**
baz=90,SNR=6.9
D16A Dana Ranch, Ca 90.92 35⇓P **P 11 07 34.3 +0.8**
baz=91
MFID Camas Ranch 90.94 39 *e*P **P 11 07 34.4 +0.7**
comp=Z,3.9nm,1.0s
MFID Camas Ranch 90.94 39⇓P **P 11 07 33.9 +0.2**
baz=91
H13A Challis 91.09 38⇑P **P 11 07 34.9 +0.5**
baz=91
F15A Butte 91.21 36⇑P **P 11 07 35.5 +0.4**
baz=91,SNR=5.5
LRM Limekiln Ridge 91.25 36 *e*P **P 11 07 36.5 +1.3**
comp=Z,21nm,1.0s
D17A Six Diamond Ra 91.27 34⇑P **P 11 07 35.9 +0.7**
baz=91
A20A Cobblestone Ra 91.43 32⇓P **P 11 07 37.0 +1.2**
baz=91
DLMT Dillon 91.47 36 *e*P **P 11 07 37.1 +1.0**
comp=Z,2.7nm,0.8s
I13A Wildhorse Cree 91.58 38⇓P **P 11 07 38.4 +1.6**
baz=91,SNR=9.0
HLID Hailey 91.64 39 *e*P **P 11 07 38.2 +1.2**
comp=Z,4.7nm,1.0s
HLID Hailey 91.64 39⇑P **P 11 07 38.0 +1.0**
baz=91,SNR=7.7
E17A Martinsdale 91.65 35⇓P **P 11 07 37.8 +0.8**
baz=91
G15A Dillon 91.66 37⇓P **P 11 07 38.1 +1.0**
baz=91,SNR=11
C19A Slack Wire Ran 91.69 33⇑P **P 11 07 37.7 +0.6**
baz=91
BOZ Bozeman (W) 91.80 36⇓P **P 11 07 38.2 +0.5**
baz=92
J13A Cove Ranch, Pi 91.88 39⇑P **P 11 07 39.3 +1.2**
baz=92,SNR=5.7
I14A Mackay 91.94 38⇑P **P 11 07 39.5 +1.1**
baz=92,SNR=10
G16A Moss Hill, Enn 91.98 36⇑P **P 11 07 39.1 +0.5**
baz=92
F17A Fitzpatrick Pl 92.13 35⇑P **P 11 07 39.9 +0.7**
baz=92
D19A Cripps Ranch, 92.16 33⇑P **P 11 07 39.8 +0.5**
baz=92
NVAR Mina Array Bea 92.51 45 P **P 11 07 42.1 +0.9**
NVAR Mina Array Bea 92.51 45 P **P 11 07 42.1 +0.9**
comp=Z,1.0nm,0.8s,baz=303,slow=5.9,SNR=8.7
D20A Manuel Ranch, 92.58 33⇓P **P 11 07 41.7 +0.6**
baz=92
F18A Big Timber 92.61 35⇑P **P 11 07 41.7 +0.3**
baz=92
H16A Russell Place, 92.62 36⇑P **P 11 07 41.8 +0.2**
baz=92
E19A Rath Farm, Rou 92.70 34⇑P **P 11 07 42.2 +0.5**
baz=92
J15A Blackfoot 92.85 38⇑P **P 11 07 43.0 +0.4**
baz=93
K14A Jones Ranch, D 92.99 39⇓P **P 11 07 43.9 +0.6**
baz=93
H17A Grant Village 93.19 36⇑P **P 11 07 46.7 +2.4**
baz=93
R11A Troy Canyon, C 94.25 43⇓P **P 11 07 49.7 +0.5**
baz=94
FURC Furnace Creek, 94.61 45⇓P **P 11 07 51.4 +0.8**
baz=94
PDAR Pinedale Array 94.84 37 P **P 11 07 52.6 +0.8**
PDAR Pinedale Array 94.84 37 P **P 11 07 52.6 +0.8**
comp=Z,0.1nm,0.4s,baz=270,slow=2.7,SNR=3.9
P18A Preston Nutter 96.58 40⇓P **P 11 08 00.3 +0.4**
baz=96
PFO Pinyon Flat Ob 96.62 47⇑P **P 11 08 00.1 +0.1**
baz=96
MONP Monument Peak 97.08 48⇓P Pdif 11 08 02.7 +0.4
baz=97
BC3 Big Chuckawall 97.25 47⇑P Pdif 11 08 03.7 +0.8
baz=97
S18A Hurst Farm, Bl 98.03 41⇓P Pdif 11 08 07.3 +0.8
baz=98
OTAV Otavalo 145.24 44 *e*PKPbc **PKPbc 11 14 08.4 +0.1**

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*CSEM **01** 11:06:22.5,42.50N×13.36E,h10km,MD1.9/10,After ROM*
ROM 01 11:06:22.5±0.1,42.50N×13.36E,h10km,Md1.9/10, Ml1.7/7,8C,Error ellipse: s-maj=1.2km s-min=1.0km az=96.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**46**	⇑*i*P	g	g	11 06 25.3	+0.6
CAMP					S	S	11 06 26.8	+0.5
	225nm,0.3s							
CAMP	**Campotosto**	**0.06**	**46**	⇑*i*P	g	g	11 06 25.3	+0.6
CAMP					S	S	11 06 26.8	+0.5
	225nm,0.3s							
AQU	**L'Aquila**	**0.15**	**166**		P	g	11 06 26.3	+0.4
AQU					S	S	11 06 29.1	+0.9
	164nm,0.6s							
AQU	**L'Aquila**	**0.15**	**166**		P	g	11 06 26.3	+0.4
AQU					S	S	11 06 29.1	+0.9
	164nm,0.6s							
TERO	**Teramo**	**0.22**	**56**	⇑*i*P	g	g	11 06 27.5	+0.3
TERO					S	S	11 06 30.9	+0.5
	90nm,0.2s							
TERO	**Teramo**	**0.22**	**56**	⇑*i*P	g	g	11 06 27.5	+0.3
TERO					S	S	11 06 30.9	+0.5
	90nm,0.2s							
LNSS	**Leonessa**	**0.26**	**295**	⇑*i*P	g	g	11 06 28.5	+0.6
LNSS					S	Sb	11 06 33.1	-1.0
	217nm,0.2s							
LNSS	**Leonessa**	**0.26**	**295**	⇑*i*P	g	g	11 06 28.5	+0.6
LNSS					S	Sb	11 06 33.1	-1.0
	217nm,0.2s							
FIAM	**Fiamignano**	**0.29**	**218**		P	g	11 06 28.8	+0.3
FIAM					S	Sb	11 06 33.8	-1.2
	33nm,0.6s							
FIAM	**Fiamignano**	**0.29**	**218**		P	g	11 06 28.8	+0.3
FIAM					S	Sb	11 06 33.8	-1.2
	33nm,0.6s							
VCEL	**Villa Celiera**	**0.37**	**106**		P	g	11 06 30.7	+0.6
VCEL					S	Sb	11 06 36.7	-0.8
	98nm,0.6s							
VCEL	**Villa Celiera**	**0.37**	**106**		P	g	11 06 30.7	+0.6
VCEL					S	Sb	11 06 36.7	-0.8
	98nm,0.6s							
NRCA	**Norcia**	**0.38**	**332**	⇑*i*P	g	g	11 06 30.5	+0.3
NRCA					S	Sb	11 06 36.6	-1.0
	179nm,0.1s							
NRCA	**Norcia**	**0.38**	**332**	⇑*i*P	g	g	11 06 30.5	+0.3
NRCA					S	Sb	11 06 36.6	-1.0
	179nm,0.1s							
MNS	**Montasola**	**0.51**	**258**		Pg	Pg	11 06 32.6	+0.1
	19nm,0.3s							
MNS	**Montasola**	**0.51**	**258**		Pg	Pg	11 06 32.6	+0.1
	19nm,0.3s							
FDMO	**Fiordimonte**	**0.57**	**340**		Pg	Pg	11 06 34.0	+0.3
FDMO					S	Sb	11 06 42.7	-0.4
FDMO	**Fiordimonte**	**0.57**	**340**		Pg	Pg	11 06 34.0	+0.3
FDMO					S	Sb	11 06 42.7	-0.4
CESX	**Cesi**	**0.58**	**281**		Pg	Pg	11 06 33.8	-0.1
CESX					S	Sb	11 06 42.7	-0.6
CESX	**Cesi**	**0.58**	**281**		Pg	Pg	11 06 33.8	-0.1
CESX					S	Sb	11 06 42.7	-0.6
CESI	**CESI - Serrava**	**0.61**	**327**		Pg	Pg	11 06 34.5	+0.1
CESI	**CESI - Serrava**	**0.61**	**327**		Pg	Pg	11 06 34.5	+0.1

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*ISCJB **01** 11:09:08.2±0.5,51.55N±0.03×16.06E±0.03,h0km, mb3.0/1,Error ellipse: s-maj=3.8km s-min=2.7km az=23.2*
*CSEM **01** 11:09:09.7±0.4,51.55N×16.03E,h2km,ML3.4/13,Error ellipse: s-maj=6.4km s-min=3.8km az=4.0*
*IPEC **01** 11:09:09.0±0.3,51.64N×16.12E,h0km,ML2.6/4,Error ellipse: s-maj=1.9km s-min=1.5km az=45.0*
*PRU **01** 11:09:10.4,51.55N×16.06E,h0km*
*IDC **01** 11:09:11.3±0.8,51.52N×15.87E,h0km,mb2.9/1, mb1 3.2/6,mb1mx3.1/25,mbtmp3.1/6,ML2.9/5,Error ellipse: s-maj=14.9km s-min=8.8km az=99.0*
*WAR **01** 11:09:12.3,51.49N×16.09E*
*VIE **01** 11:09:13.0±0.5,51.32N×16.06E,h0km,mb2.5/5,ML2.9/5, Error ellipse: s-maj=3.3km s-min=3.2km az=146.0 70 km WNW of Wroclaw Suspected Mining induced.*
ISC 01 11:09:09.2±0.8,51.60N±0.03×16.08E±0.03,h0km,n44, σ1s06/80,5C-4D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.77**	**170**	*e*Pg		**Pg**	**11 09 24.6**	**+0.6**
KSP				*e*Sg		**Sg**	**11 09 34.2**	**+0.2**
KSP	**Ksiaz**	**0.77**	**170**	⇓*i*Pg		**Pg**	**11 09 24.6**	**+0.6**
KSP				*e*Sg		**Sg**	**11 09 34.2**	**+0.2**
UPC	**Upice**	**1.10**	**182**	*e*PG		**Pg**	**11 09 30.3**	**0.0**
UPC	**Upice**	**1.10**	**182**	Pg		**Pg**	**11 09 30.3**	**0.0**
DPC	**Dobruska-Polom**	**1.27**	**173**	*e*PG		**Pg**	**11 09 33.3**	**-0.2**
DPC				*e*SG		**Sg**	**11 09 49.0**	**-0.8**
	comp=Z,38nm,0.3s							
DPC	**Dobruska-Polom**	**1.27**	**173**	Pg		**Pg**	**11 09 33.3**	**-0.2**
DPC				Sg		**Sg**	**11 09 49.0**	**-0.8**
	38nm,0.3s							
PVCC	**Panska Ves**	**1.44**	**222**	*e*PG		**Pn**	**11 09 36.5**	**-0.1**
PVCC				*e*SG		**Sg**	**11 09 54.8**	**-0.7**
	comp=Z,246nm,0.2s							
PVCC	**Panska Ves**	**1.44**	**222**	Pg		**Pn**	**11 09 36.5**	**-0.1**
PVCC				Sg		**Sg**	**11 09 54.8**	**-0.7**
	246nm,0.2s							
BRG	**Berggiesshubel**	**1.53**	**242**	PN		**Pn**	**11 09 37.4**	**-0.4**
BRG				PG		**Pb**	**11 09 38.7**	**+0.2**
BRG				SG		**Sg**	**11 09 58.7**	**+0.3**
	77nm,0.5s							
KRLC	**Kraliky**	**1.59**	**164**	*e*PG		**Pn**	**11 09 38.7**	**0.0**
KRLC				*e*SG		**Sn**	**11 09 59.7**	**-0.3**
KRLC	**Kraliky**	**1.59**	**164**	Pg		**Pn**	**11 09 38.7**	**0.0**
KRLC				Sg		**Sn**	**11 09 59.7**	**-0.3**
PRU	**Pruhonice**	**1.89**	**212**	*e*PN		**Pn**	**11 09 42.4**	**-0.4**
PRU				*e*PG		**Pb**	**11 09 44.1**	**-0.5**
PRU				*e*SG		**Sn**	**11 10 07.9**	**+0.6**
	comp=Z,34nm,0.3s							
PRU	**Pruhonice**	**1.89**	**212**	Pn		**Pn**	**11 09 42.4**	**-0.4**
PRU	**Pruhonice**	**1.89**	**212**	Pg		**Pb**	**11 09 44.1**	**-0.5**
PRU				Sg		**Sn**	**11 10 07.9**	**+0.6**
	34nm,0.3s							
CLL	**Collm**	**1.95**	**262**	*i* Pn		**Pn**	**11 09 43.3**	**-0.3**
CLL				*i* Pg		**Pb**	**11 09 46.2**	**+0.6**
CLL				*i*			11 09 50.4	
CLL				*e*Sg		**Sg**	**11 10 12.0**	**+0.1**
	comp=Z,30nm,0.6s							
RAC	**Raciborz**	**2.03**	**138**	*e*Pg		**Pb**	**11 09 47.6**	**+0.7**
RAC				*e*Sg		**Sg**	**11 10 13.9**	**-0.4**
MORC	**Moravsky Berou**	**2.05**	**153**	⇑*i*P		**Pn**	**11 09 45.2**	**+0.2**
MORC				S		**Sb**	**11 10 13.1**	**-0.3**
MORC				*e*Sg		**Sg**	**11 10 13.9**	**-1.2**
	comp=Z,36nm,0.5s,baz=335							
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*PG		**Pg**	**11 09 51.2**	**-0.2**
OKC				*e*SG		**Sb**	**11 10 18.4**	**+0.7**
	comp=Z,41nm,0.6s							
OKC	**Ostrava-Krasne**	**2.20**	**143**	Pg		**Pg**	**11 09 51.2**	**-0.2**
OKC				Sg		**Sb**	**11 10 18.4**	**+0.7**
	comp=Z,41nm,0.6s							
VRAC	**Vranov**	**2.32**	**172**	Pn		**Pn**	**11 09 49.4**	**+0.7**
	comp=Z,2.3nm,0.3s,baz=334,slow=15,SNR=14							
VRAC				Lg		Lg	11 10 21.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,2.2nm,0.3s,baz=76,slow=23,SNR=4.3						
VRAC	Vranov	2.32	172	⇓iP	Pn	11 09 46.9	-1.8
VRAC	Vranov	2.32	172	ePn	Pn	11 09 49.0	+0.3
VRAC				eSg	Sg	11 10 22.8	-1.0
	comp=Z,29nm,0.4s,baz=353						
KRUC	Moravsky	2.55	175	ePn	Pn	11 09 52.5	+0.6
	baz=356						
KRUC				eSg	Sg	11 10 30.0	-1.2
	comp=Z,23nm,0.7s,baz=356						
NKC	Novy Kostel	2.68	241	ePN	Pn	11 09 53.9	+0.3
NKC				ePG	Pb	11 09 58.6	+0.5
NKC				eSG	Sg	11 10 34.2	-1.1
	comp=Z,61nm,0.5s						
NKC	Novy Kostel	2.68	241	Pn	Pn	11 09 53.9	+0.3
OJC	Ojcow	2.73	119	ePn	Pn	11 09 53.4	-0.9
OJC				ePg	Pg	11 10 02.4	+0.9
OJC				Sn	Sn	11 10 23.3	-4.7
OJC				eSg	Sg	11 10 38.6	+1.7
OJC	Ojcow	2.73	119	ePn	Pn	11 09 53.4	-0.9
JAVC	Velka Javorina	2.93	159	eSg	Sg	11 10 44.1	+0.8
	comp=Z,16nm,0.6s						
KHC	Kasperske Hory	2.95	214	ePN	Pn	11 09 57.4	0.0
KHC				ePG	Pb	11 10 03.5	+0.8
KHC				eSG	Sg	11 10 41.9	-2.1
	comp=Z,18nm,0.6s						
KHC	Kasperske Hory	2.95	214	Pn	Pn	11 09 57.4	0.0
KHC	Kasperske Hory	2.95	214	Pg	Pb	11 10 03.5	+0.8
KHC				Sg	Sg	11 10 41.9	-2.1
	comp=Z,18nm,0.6s						
GERES	GERESS Array B	3.16	210	Pn	Pn	11 10 01.0	+0.8
	comp=Z,1.8nm,0.3s,baz=29,slow=13,SNR=58						
GERES				Lg	Lg	11 10 47.4	
	comp=Z,5.7nm,0.3s,baz=23,slow=28,SNR=13						
BSD	Bornholm Skovb	3.58	349	iP	Pn	11 10 06.4	+0.4
BSD				iS	Sn	11 10 46.1	-2.9
CONA	Conrad Observa	3.68	182	⇓iPn	Pn	11 10 07.9	+0.4
CONA				⇑iSg	Sg	11 11 05.0	-2.5
	comp=Z,24nm,0.6s						
CONA	Conrad Observa	3.68	182	Pn	Pn	11 10 07.9	+0.4
CONA				Sg	Sg	11 11 05.0	-2.5
	comp=Z,24nm,0.6s						
MOA	Molln	3.94	198	⇑iPn	Pn	11 10 11.4	+0.5
MOA				⇑iSg	Sg	11 11 14.2	-1.5
	comp=Z,14nm,0.6s						
MOA	Molln	3.94	198	Pn	Pn	11 10 11.4	+0.5
MOA				Sg	Sg	11 11 14.2	-1.5
	comp=Z,14nm,0.6s						
KBA	Koelnbreinsper	4.87	203	⇑iPn	Pn	11 10 24.7	+0.8
KBA				⇓iSg	Sg	11 11 45.5	-0.1
	comp=Z,7.2nm,0.6s						
KBA	Koelnbreinsper	4.87	203	Pn	Pn	11 10 24.7	+0.8
KBA				Sg	Sg	11 11 45.5	-0.1
	comp=Z,7.2nm,0.6s						
DAVOX	Davos/Dischmat	6.31	223	Lg	Lg	11 12 32.5	
	comp=Z,0.6nm,0.3s,baz=315,slow=20,SNR=3.5						
AKASG	Malin Array Be	8.31	91	Pn	Pn	11 11 11.6	+0.6
	comp=Z,0.9nm,0.3s,baz=279,slow=12,SNR=2.9						
HFS	Hagfors	8.65	352	Pn	Pn	11 11 15.6	0.0
	comp=Z,0.1nm,0.3s,baz=170,slow=14,SNR=5.5						
FINES	FINESS Array B	11.28	25	Pn	Pn	11 11 50.8	-0.7
	comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=6.6						
YKA	Yellowknife Ar	59.76	336	P	P	11 19 16.9	+1.6
	comp=Z,0.1nm,0.6s,baz=32,slow=6.2,SNR=5.5						

IDC 01 11:10:10.2±10.0, 17°.89S×177°.97W, h597km±104km, mb2.8/5, mb1 3.0/5, mb1mx2.8/20, mbtmp2.8/5, Error ellipse: s-maj=125.2km s-min=39.3km az=133.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.01	241	P	P	11 16 46.7	-0.2
	1.2nm,0.7s,baz=98,slow=14,SNR=3.0						
WRA	Warramunga Arr	45.05	259	P	P	11 17 34.3	-0.2
	0.5nm,0.3s,baz=96,slow=7.0,SNR=34						
WRA				PcP	PcP	11 19 02.0	-0.3
	0.1nm,0.3s,baz=90,slow=3.8,SNR=4.7						
ASAR	Alice Springs	45.20	254	P	P	11 17 35.5	0.0
	1.1nm,0.4s,baz=92,slow=7.9,SNR=45						
ASAR				PcP	PcP	11 19 02.5	-0.3
	0.2nm,0.4s,baz=102,slow=4.0,SNR=6.3						
FITZ	Fitzroy Crossi	53.45	260	P	P	11 18 36.0	-0.1
	0.6nm,0.5s,baz=93,slow=13,SNR=3.3						
ILAR	Eielson Array	85.78	13	P	P	11 21 46.8	-0.1
	0.2nm,0.4s,baz=224,slow=4.8,SNR=9.7						

IDC 01 11:15:11.1±2.1, 3°.62N×126°.67E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, Error ellipse: s-maj=178.3km s-min=26.3km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.60	162	P	P	11 20 33.9	+0.7
	1.4nm,0.7s,baz=340,slow=11,SNR=10.0						
ASAR	Alice Springs	28.02	166	P	P	11 21 05.3	+1.2
	0.3nm,0.5s,baz=347,slow=12,SNR=6.6						
STKA	Stephens Creek	38.05	159	P	P	11 22 29.6	-1.8
	1.6nm,0.7s,baz=336,slow=9.6,SNR=6.8						
MKAR	Makanchi Array	57.61	325	P	P	11 25 02.8	-0.2
	0.2nm,0.4s,baz=114,slow=7.5,SNR=4.1						

IDC 01 11:19:35.0±2.8, 31°.54S×179°.29W, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.9/20, mbtmp4.0/6, ML3.5/1, Error ellipse: s-maj=58.8km s-min=26.6km az=56.0

ISC 01 11:19:40.8±2.1, 31°.69S±0°.09×179°.4W±0°.3, h35km, n15, σ2s.08/18, mb4.2/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.73	28	Sn	Sn	11 20 41.5	-12
	164nm,0.3s,baz=81,slow=20,SNR=4.5						
PUZ	Puketiti	6.67	196	PN	Pn	11 21 16.4	+0.2
PUZ				SN	Sn	11 22 32.3	+1.4
MWZ	Matawai	7.11	200	ePN	Pn	11 21 22.5	+0.2
MWZ				eSN	Sn	11 22 44.9	+3.0
URZ	Urewera	7.17	203	ePN	Pn	11 21 23.3	+0.2
URZ				eSN	Sn	11 22 46.5	+3.2
URZ	Urewera	7.17	203	Pn	Pn	11 21 23.8	+0.6
	0.8nm,0.3s,baz=350,slow=22,SNR=7.2						
URZ				Sn	Sn	11 22 45.7	+2.4
	5.5nm,0.3s,baz=170,slow=21,SNR=18						
BKZ	Black Stump Fm	8.19	203	ePN	Pn	11 21 36.2	-1.1
BFZ	Birch Farm	9.65	200	PN	Pn	11 21 54.7	-2.5
BFZ				eSN	Sn	11 23 41.6	-2.8
MRZ	Mangatainoka R	9.84	203	eSN	Sn	11 23 45.3	-3.8
MQZ	McQueen's Vall	13.55	205	SN	Sn	11 25 10.9	-8.9
ODZ	Otahua Downs	15.45	207	ePN	Pn	11 23 14.0	-2.0
CTA	Charters Tower	32.88	282	P	P	11 26 12.7	+0.9
	0.8nm,0.3s,baz=99,slow=13,SNR=2.7						
STKA	Stephens Creek	33.07	259	P	P	11 26 14.0	+0.8
	2.6nm,0.8s,baz=112,slow=13,SNR=4.1						
ASAR	Alice Springs	41.89	269	P	P	11 27 27.0	-1.1
	0.7nm,0.6s,baz=107,slow=7.6,SNR=14						
WRA	Warramunga Arr	43.00	274	P	P	11 27 36.0	-1.0
	2.3nm,0.5s,baz=112,slow=8.0,SNR=51						
QSPA	South Pole Qui	58.43	180	P	P	11 29 33.3	+0.5
	1.5nm,0.7s,baz=39,slow=4.5,SNR=22						

IDC 01 11:23:44.0±32.0, 11°.10S×65°.84E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.3/25, mbtmp3.6/3, MS3.4/1, Ms1 3.4/1, ms1mx2.7/34, Error ellipse: s-maj=964.9km s-min=49.4km az=67.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASF	Jabal al Asfar	51.16	328	LR	LR	11 53 07.8	
	comp=Z,38nm,19.0s,baz=50,slow=34						
ASAR	Alice Springs	65.63	111	P	P	11 34 30.9	+0.4
	0.3nm,0.7s,baz=284,slow=5.3,SNR=4.7						
WRA	Warramunga Arr	66.22	107	P	P	11 34 34.0	-0.4
	0.6nm,0.8s,baz=274,slow=5.3,SNR=3.9						
SONM	Songino Array	68.83	28	P	P	11 34 50.5	+0.1
	0.8nm,0.9s,baz=215,slow=6.3,SNR=3.9						

ISCJB 01 11:25:56.7±0.3, 36°.66N±0°.03×71°.55E±0°.06, h142km, mb3.9/16, Error ellipse: s-maj=7.0km s-min=3.0km az=159.1

IDC 01 11:25:58.6±0.9, 36°.56N×71°.54E, h155km±7km, mb3.6/14, mb1 3.8/18, mb1mx3.6/30, mbtmp3.6/18, Error ellipse: s-maj=14.4km s-min=11.3km az=44.0

NNC 01 11:26:08.1±4.1, 37°.42N×71°.68E, h185km±33km, mb3.2, mpv4.3, Error ellipse: s-maj=35.3km s-min=23.8km az=18.0

ISC 01 11:25:58.0±0.5, 36°.76N±0°.05×71°.77E±0°.07, h142km, n60, σ1s.96/63, mb3.9/16, 10C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.93	178	⇑P	Pn	11 26 44.7	+0.3
CEP				S	Sn	11 27 19.0	-1.1
CHCP	Chirah Chowk	3.33	158	⇑P	Pn	11 26 51.4	+2.1
THW	Thamme Wali	3.96	180	⇑P	Pn	11 26 57.0	-0.5
SARP	Sargodha	4.89	171	P	Pn	11 27 08.9	-0.9
DLH	Dalhousie	5.45	139	ePKP	Pn	11 27 17.0	-0.5
DLH				eS	Sn	11 28 18.0	-1.4
AML	Almayashu	5.57	15	P	Pn	11 27 21.7	+2.6
	SNR=115						
DHRM	DHARAMSHALA	5.85	139	ePKP	Pn	11 27 24.9	+2.1
DHRM				eS	Sn	11 28 28.6	-0.5
DHRM				AML	AML	11 28 31.7	
	comp=N,906nm,0.3s						
DHRM				AML	AML	11 28 33.3	
	comp=E,1μm,0.5s						
UCH	Uchtor	5.86	20	P	Sn	11 28 34.4	+5.0
	SNR=5.5						
KZA	Kyzart	5.95	26	P	Pn	11 27 27.8	+3.5
	SNR=9.9						
EKS2	Erkin-Say	6.09	14	P	Pn	11 27 29.2	+3.4
	SNR=7.7						
AAK	Ala-Archa	6.23	19	P	Pn	11 27 30.9	+3.1
	comp=E,4.3nm,0.3s,baz=165,slow=4.7,SNR=26						
AAK				S	Sn	11 28 41.4	+3.5
	comp=E,4.6nm,0.3s,baz=312,slow=22,SNR=13						
KK31	Karatay Array	6.41	352	⇑P	Pn	11 27 31.0	+1.0
	comp=E,11nm,0.2s,baz=175,slow=12,SNR=622						
KK31				⇓S	Sn	11 28 39.6	-2.3
	comp=E,15nm,0.3s,baz=183,slow=25,SNR=16						
ULHL	Ulahol	6.48	31	P	Pn	11 27 34.6	+3.5
	SNR=6.3						
BHK	Bhakra	6.58	143	ePKP	Pn	11 27 35.0	+2.6
BHK				ex	Sn	11 28 43.0	-3.3
CHMS	Chumysh	6.64	19	P	Pn	11 27 36.1	+3.1
	SNR=6.2						
TKM2	Tokmak 2	6.82	24	⇓P	Pn	11 27 39.1	+3.4
	comp=E,12nm,0.5s						
TKM2				⇑S	Sn	11 28 48.9	-3.3
	comp=E,9.8nm,0.7s						
TKM2	Tokmak 2	6.82	24	P	Pn	11 27 39.5	+3.8
	SNR=15						
SMLA	Simla	7.19	140	iP	Pn	11 27 42.1	+1.5
SMLA				iS	Sn	11 28 58.4	-2.5
SMLA				AML	AML	11 29 01.4	
	comp=E,367nm,0.3s						
SMLA				AML	AML	11 29 02.2	
	comp=N,398nm,0.4s						
DDI	Dehra Dun	8.29	139	ePKP	Pn	11 27 55.0	-0.4
DDI				ePKP		11 27 56.3	
DDI				eS	Sn	11 29 22.0	-5.6
DDI				eS		11 29 23.9	
DDI				AML	AML	11 29 32.9	
	comp=N,854nm,0.3s						
DDI				AML	AML	11 29 34.2	
	comp=E,410nm,0.3s						
MKAR	Makanchi Array	12.72	35	P	P	11 28 56.7	-2.6
	comp=E,0.1nm,0.3s,baz=210,slow=13,SNR=5.7						
PYUN	Piuthan	12.81	129	eP	Pn	11 28 54.1	-1.2
	comp=E,107nm,0.3s						
DANN	Dangsing	13.13	126	eP	Pn	11 28 58.8	-0.6
	comp=E,103nm,0.4s						
KOLN	Koldanda	13.43	129	eP	Pn	11 29 02.5	-0.7
	comp=E,40nm,0.3s						
KKN	Kakani	14.50	124	eP	Pn	11 29 16.9	+0.1
	comp=E,59nm,0.5s						
DMN	Daman	14.51	125	eP	Pn	11 29 17.3	+0.4
	comp=E,50nm,0.4s						
KUR18	Kurchatov Arra	14.67	17	⇑P	P	11 29 19.8	-1.0
	comp=E,0.2nm,0.8s						
KURBB	Kurchatov Arra	14.68	17	P	Pn	11 29 19.4	+0.8
	comp=E,0.2nm,0.3s,baz=203,slow=11,SNR=15						
PKIN	Phulchoki	14.72	125	eP	Pn	11 29 19.8	+0.3
	comp=E,44nm,0.3s						
PKI	Pulchoki	14.73	125	eP	Pn	11 29 19.9	+0.1
	comp=E,41nm,0.3s						
KURK	Kurchatov	14.79	17	⇑P	P	11 29 21.4	-0.8
	comp=E,4.4nm,1.3s						
GUN	Gumba	14.83	123	eP	Pn	11 29 20.7	-0.2
	comp=E,59nm,0.4s						
AB31	Akbulak array	15.16	329	P	Pn	11 29 23.5	-1.1
	comp=E,4.0nm,0.4s,baz=147,slow=15,SNR=107						
AB31				⇓S	Sn	11 32 03.4	-9.3
	comp=E,13nm,0.8s,baz=152,slow=23,SNR=13						
RAMN	Ramite	15.94	124	eP	Pn	11 29 34.2	-0.4
	comp=E,61nm,0.5s						
VOSK	Vostochnaya	15.97	358	⇑P	Pn	11 29 33.6	-0.9
BVA0	Borovoye Array	16.29	357	S	Sn	11 32 34.9	-4.8
	comp=E,0.2nm,0.5s,baz=164,slow=23,SNR=4.9						
BVAR	Borovoye Array	16.29	357	P	P	11 29 39.1	+0.4
	comp=E,1.3nm,0.3s,baz=145,slow=9.4,SNR=13						
BVAR				S	Sn	11 32 33.7	-6.0
	comp=E,0.5nm,0.3s,baz=164,slow=22,SNR=5.8						
ZRNK	Zerenda	16.30	354	⇑P	P	11 29 40.8	+1.9
	comp=E,4.7nm,0.6s						
BRVK	Borovoye	16.33	357	⇓P	P	11 29 41.4	+2.2
	comp=E,7.5nm,1.0s						
TAPN	Taplejung	16.43	120	eP	P	11 29 41.2	+0.3
	comp=E,83nm,0.4s						
ODAN	Odare	16.53	122	eP	P	11 29 42.5	+0.6
	comp=E,52nm,0.5s						
AKTO	Aktyubinsk	16.87	328	⇑P	Pn	11 29 45.4	-0.1
	comp=E,1.4nm,0.5s						
AKTO				⇓S	S	11 32 44.4	-9.1
	comp=E,0.8nm,0.7s						
AKTO	Aktyubinsk	16.87	328	P	Pn	11 29 44.9	-0.6
	comp=E,2.7nm,0.3s,baz=134,slow=10,SNR=49						
AKTO				S	S	11 32 43.6	-10
	comp=E,0.6nm,0.3s,baz=221,slow=22,SNR=3.7						
ZALV	Zalesovo Beam	19.43	24	P	Pn	11 30 15.2	-0.4
	comp=E,3.6nm,0.3s,baz=212,slow=11,SNR=69						
SONM	Songino Array	27.68	56	P	P	11 31 35.5	+2.9
	comp=E,1.1nm,0.7s,baz=267,slow=9.5,SNR=6.4						
BRTR	Keskin Array B	29.94	287	P	P	11 31 51.9	-0.9
	comp=E,0.4nm,0.6s,baz=97,slow=7.8,SNR=4.0						
CMAR	Chiang Mai Arr	30.05	120	P	P	11 31 54.1	+0.4
	comp=E,1.0nm,0.7s,baz=311,slow=15,SNR=7.6						
CMAR				pP	pP	11 32 26.1	+2.1
	comp=E,0.3nm,0.4s,baz=306,slow=10,SNR=1.6						
AKASG	Malin Array Be	33.26	308	P	P	11 32 20.9	-0.6
	comp=E,0.4nm,0.3s,baz=82,slow=7.8,SNR=4.2						
JOF	Joensuu	35.95	330	ep	P	11 32 44.9	+0.4
	comp=E,3.5nm,0.4s						
FINES	FINESS Array B	37.61	326	P	P	11 32 59.0	+0.5
	comp=E,2.6nm,0.3s,baz=120,slow=9.4,SNR=58						
KAF	Kangasniemi	37.74	327	ep	P	11 32 59.7	+0.1
	comp=E,1.0nm,0.5s						
ARCES	ARCESS Array B	41.14	337	P	P	11 33 28.7	+1.0
	comp=E,2.5nm,0.5s,baz=114,slow=8.9,SNR=42						
NB2	NORSAR Subarra	44.54	323	P	P	11 33 54.8	-0.4
	comp=Z,3.4nm,0.4s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.54	323	P	P	11 33 55.0	-0.2
	comp=Z,3.8nm,0.5s,baz=96,slow=7.7,SNR=23						
SPITS	Spitsbergen Ar	47.38	347	P	P	11 34 18.9	+1.7
	comp=Z,1.2nm,0.5s,baz=130,slow=11,SNR=11						
ESDC	Sonseca Array	57.88	298	P	P	11 35 34.0	-1.0
	comp=Z,0.3nm,0.4s,baz=63,slow=6.9,SNR=4.3						
TORD	Torodi Ar. Bea	66.34	269	P	P	11 36 27.9	-3.8
	comp=Z,1.0nm,0.4s,baz=50,slow=5.9,SNR=19						
ILAR	Eielson Array	74.36	16	P	P	11 37 19.8	+0.2
	comp=Z,1.0nm,1.0s,baz=317,slow=5.1,SNR=11						
YKA	Yellowknife Ar	80.95	3	P	P	11 37 56.7	+0.6
	comp=Z,0.7nm,0.4s,baz=351,slow=5.5,SNR=52						
YKA				pP	pP	11 38 35.8	+4.3
	comp=Z,0.4nm,0.7s,baz=350,slow=5.4,SNR=3.4						
YKA				sP	sP	11 38 52.1	+5.5
	comp=Z,0.3nm,0.6s,baz=350,slow=5.4,SNR=2.6						
WRA	Warramunga Arr	81.61	122	P	P	11 37 59.5	-0.8
	comp=Z,1.8nm,0.4s,baz=324,slow=4.9,SNR=59						
ASAR	Alice Springs	83.90	125	P	P	11 38 11.3	-0.7
	comp=Z,1.8nm,0.6s,baz=310,slow=5.1,SNR=37						

IDC 01 11:26:28.6±2.2, 5°.89S×130°.86E, h0km, mb3.7/1, mb1 3.5/4, mb1mx3.3/19, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=85.3km s-min=28.6km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.16	202	Pn	Pn	11 29 36.5	-0.5
	0.1nm,0.3s,baz=30,slow=16,SNR=6.7						
FITZ				Sn	Sn	11 31 49.1	-15
	0.2nm,0.3s,baz=38,slow=23,SNR=6.7						
WRA	Warramunga Arr	14.37	167	Pn	Pn	11 29 52.6	-0.9
	0.1nm,0.3s,baz=347,slow=10,SNR=3.3						
WRA				Sn	Sn	11 32 23.4	-10
	0.2nm,0.3s,baz=346,slow=23,SNR=5.7						
ASAR	Alice Springs	17.91	171	P	P	11 30 40.4	+0.3
	0.1nm,0.3s,baz=345,slow=9.8,SNR=5.2						
MKAR	Makanchi Array	67.78	326	P	P	11 37 28.4	0.0
	0.4nm,0.4s,baz=108,slow=7.8,SNR=7.2						

ISCJB 01 11:54:04.5±1.4, 5°.3N±0°.2×126°.5E±0°.3, h100km, mb3.7/4, Error ellipse: s-maj=55.9km s-min=10.6km az=150.9

IDC 01 11:54:05.3±9.2, 5°.13N×125°.78E, h86km±77km, mb3.4/4, mb1 3.6/4, mb1mx3.2/24, mbtmp3.5/4, Error ellipse: s-maj=103.6km s-min=22.2km az=65.0

ISC 01 11:54:06.5±1.1, 5°.3N±0°.2×126°.4E±0°.3, h100km, n9, σ0s.88/11, mb3.8/4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	2.86	313	⇓iP	Pn	11 54 51.2	+0.8
BUKP	Musuan	2.90	334	eP	Pn	11 54 51.4	+0.5
BUKP				eS	Sn	11 55 09.1	-16
PAGZ	Pagadian	3.91	311	eP	Pn	11 55 05.0	+0.5
PAGZ				eS	Sn	11 55 14.6	-35
FITZ	Fitzroy Crossi	23.23	182	P	P	11 59 03.8	-1.2
	1.4nm,0.3s,baz=15,slow=7.9,SNR=26						
WRA	Warramunga Arr	26.25	163	P	P	11 59 32.8	+0.2
	1.5nm,0.5s,baz=341,slow=10,SNR=29						
WRA				PcP	PcP	12 02 57.3	+0.5
	0.4nm,1.1s,baz=332,slow=2.5,SNR=4.7						
ASAR	Alice Springs	29.68	166	P	P	12 00 03.9	+0.8
	0.6nm,0.5s,baz=341,slow=6.8,SNR=11						
ASAR				PcP	PcP	12 03 05.0	-0.2
	0.7nm,0.6s,baz=349,slow=2.8,SNR=6.7						
MKAR	Makanchi Array	56.09	325	P	P	12 03 34.1	-1.2
	0.6nm,0.5s,baz=126,slow=7.3,SNR=10						
TORD	Torodi Ar. Bea	122.08	289	PKP	PKPdf	12 12 50.0	-0.5
	0.6nm,0.6s,baz=71,slow=1.4,SNR=8.3						
CFAA	Coronel Fontan	150.44	154	PKPbc	PKPbc	12 13 47.9	+0.8
	0.3nm,0.4s,baz=229,slow=2.7,SNR=8.1						

JMA 01 11:57:06.1±0.3, 44°.00N×147°.99E, h0km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.75	250	P	Pn	11 57 37.8	+0.1
NEM2				eS	Sn	11 58 01.0	+0.4
JRA	Rausu	2.07	269	P	Pn	11 57 42.7	+0.6
JRA				eS	Sb	11 58 09.9	-0.9
JNK	Nakash	2.41	261	P	Pn	11 57 47.5	+0.8
JNK				eS	Sn	11 58 18.2	+1.3
JAK	Akkeshi	2.60	248	P	Pn	11 57 49.9	+0.6
JTKR	Abashiri--Toko	2.95	271	P	Pn	11 57 56.0	+1.9
JAR	Ashorobuto	3.14	259	P	Pn	11 57 58.3	+1.4
JAR				eS	Sn	11 58 36.5	+1.4
JOB	Onbets	3.22	252	P	Pn	11 57 59.4	+1.5
JOB				eS	Sn	11 58 38.5	+1.6
JCH	Churui	3.65	249	P	Pn	11 58 05.4	+1.6
JCH				eS	Sn	11 58 49.0	+1.4
JNBK	Urakawa-nobuka	4.20	248	P	Pn	11 58 13.2	+1.8
JKB	Kayabe	5.53	250	P	Pn	11 58 31.1	+1.5
JKB				eS	Sn	11 59 33.7	-0.1

SZGRF 01 12:05:30.8, 21°.78S×176°.45W, h33km, Fiji Islands region

DJA 01 12:05:56.6±3.5, 21°S±9°×17°7W±1°4, h224km±34km, M4.8/12, mb4.8/12

ISCJB 01 12:06:03.0±0.8, 20°.97S±0°.03×177°.22W±0°.03, h284km±7km, mb4.8/158, Error ellipse: s-maj=5.5km s-min=3.6km az=36.9

AUST 01 12:06:02.6±0.4, 20°.93S×176°.90W, h273km, Error ellipse: s-maj=1.1km s-min=0.9km az=313.0

BJI 01 12:06:06.1, 20°.90S×177°.30W, h315km, mB5.0/17, mb4.8/34

IDC 01 12:06:06.6±1.1, 20°.92S×177°.22W, h309km±9km, mb4.4/37, mb1 4.5/39, mb1mx4.5/39, mbtmp4.4/39, Error ellipse: s-maj=9.2km s-min=7.0km az=151.0

MOS 01 12:06:09.7±0.8, 20°.67S×177°.37W, h341km, mb5.1/31, Error ellipse: s-maj=7.8km s-min=5.9km az=117.3

NEIC 01 12:06:16.0±1.1, 20°.90S×177°.41W, h401km±10km, mb4.9/108, Error ellipse: s-maj=6.9km s-min=3.9km az=146.0

ISC 01 12:06:06.6±0.4, 21°.01S±0°.04×177°.14W±0°.05, h314km±2km, h314km:pP-P, n1042, σ1s.07/1193, mb4.9/158, 235C-207D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.58	305	eP	Pn	12 07 33.1	+1.5
MSVF				eS	S	12 08 44.1	+4.0
MSVF	Nonsavu	5.58	305	ePn	Pn	12 07 33.1	+1.5
MSVF				eS	S	12 08 44.1	+4.0
NIUE	Niue	7.05	75	P	Pn	12 07 45.0	-3.9
	baz=6.8,SNR=82						
NIUE				S	S	12 09 02.1	-10
	baz=6.8,SNR=30						
RAO	Raoul Island	8.24	185	S	S	12 09 31.3	-6.7
RAO	Raoul Island	8.24	185	S	S	12 09 31.3	-6.7
	152nm,0.3s,baz=103,slow=23,SNR=11						
AFI	Afiamalu	8.72	37	P	Pn	12 08 02.2	-7.1
AFI				ePn	P	12 08 02.4	-11
AFI				eS	S	12 09 30.8	-18
AFI	Afiamalu	8.72	37	P	Pn	12 08 02.2	-7.1
	41nm,0.3s,baz=62,slow=1.2,SNR=42						
AFI				S	S	12 09 30.9	-18
	41nm,0.3s,baz=215,slow=23,SNR=8.8						
FUNA	Funafuti	12.90	344	ePn	Pn	12 08 58.5	-1.3
FUNA				eS	S	12 11 21.1	-1.6
DZM	Mont Dzumac	15.31	263	eP	Pn	12 09 30.1	+1.7
	193nm,1.1s						
DZM	Mont Dzumac	15.31	263	P	Pn	12 09 28.8	+0.4
DZM	Mont Dzumac	15.31	263	P	Pn	12 09 28.8	+0.4
	4.6nm,0.3s,baz=79,slow=18,SNR=56						
NOUC	Port Laguerre	15.44	263	eP	Pn	12 09 29.9	+0.1
RAR	Rarotonga	16.21	94	eP	P	12 09 36.2	-0.1
	553nm,1.8s						
RAR	Rarotonga	16.21	94	P	P	12 09 36.0	-0.3
	2.6nm,0.3s,baz=235,slow=4.5,SNR=5.2						
OUZ	Omahuta	16.34	208	eP	Pn	12 09 39.5	-0.5
	58nm,0.7s						
WCZ	Waipu Caves	16.64	205	ePN	Pn	12 09 42.7	-1.0
PUZ	Puketiti	17.47	192	ePN	P	12 09 48.3	-1.4
PUZ				eSN	S	12 12 49.2	-5.6
MWZ	Matawai	17.87	194	ePN	P	12 09 53.4	-0.7
MWZ				eSN	S	12 13 00.4	-2.5
URZ	Urewera	17.90	195	eP	P	12 09 53.1	-1.2
	44nm,0.8s						
URZ				S	S	12 13 01.8	-1.4
URZ	Urewera	17.90	195	ePN	P	12 09 52.1	-2.1
URZ	Urewera	17.90	195	P	P	12 09 53.6	-0.7
	11nm,0.3s,baz=15,slow=0.9,SNR=47						
URZ				S	S	12 13 01.8	-1.4
	5.4nm,0.3s,baz=266,slow=20,SNR=13						
PRRZ	Plateau Road	18.30	196	PN	P	12 09 59.7	+1.0
HIZ	Hauiti	18.77	200	ePN	P	12 10 04.1	+0.6
BKZ	Black Stump Fm	18.91	195	ePN	P	12 10 02.6	-2.6
BKZ				eSN	S	12 13 19.7	-3.4
FWVZ	Far West T-bar	19.24	197	ePN	P	12 10 06.1	-2.8
BHHZ	Black Hill Sta	19.32	196	ePN	P	12 10 09.0	-0.6
KAHZ	Kahuranaki	19.42	194	ePN	P	12 10 11.1	+0.6
PXZ	Pawanui	19.64	194	eSN	S	12 13 34.7	-1.8
BFZ	Birch Farm	20.41	195	ePN	P	12 10 19.8	-0.9
BFZ				eSN	S	12 13 48.3	-1.1
MRZ	Mangatainoka R	20.55	196	ePN	P	12 10 19.3	-2.8
MRZ				eSN	S	12 13 49.3	-2.4
MTW	Mount Morrison	21.04	196	ePN	P	12 10 25.7	-0.9
CAW	Cannon Point	21.10	197	PN	P	12 10 26.6	-0.6
QRZ	Quartz Range	21.62	202	ePN	P	12 10 32.1	0.0
NNZ	Nelson	21.69	200	ePN	P	12 10 31.4	-1.2
THZ	Tophouse	22.34	200	ePN	P	12 10 38.9	+0.3
KHZ	Kahutara	22.74	198	eP	P	12 10 41.9	-0.2
	52nm,0.9s						

KHZ **Kahutara** 22.74 198 *e*PN P 12 10 42.6 +0.5
LTZ **Lake Taylor** 23.46 200 *e*PN P 12 10 47.8 -1.0
OXZ **Oxford** 24.02 200 *e*PN P 12 10 52.2 -1.5
WVZ **Waitaha Valley** 24.23 202 *e*PN P 12 10 55.6 0.0
TARA **Tarawa** 24.26 335 *e*P P 12 10 55.4 -0.8
279nm,0.9s
RPZ **Rata Peaks** 24.69 201 *e*P P 12 11 00.2 +0.4
46nm,0.8s
RPZ **Rata Peaks** 24.69 201 P P 12 11 01.0 +1.2
44nm,0.7s,baz=335,slow=3.0,SNR=14
JCZ **Jackson Bay** 25.82 204 *e*PN P 12 11 08.6 -1.3
PAE **Paea** 26.21 87 *e*P P 12 11 14.0 +0.4
12nm,1.1s
PPT2 **Papeete2** 26.22 87 *e*P P 12 11 14.7 +0.8
71nm,1.1s
PPT **Papeete** 26.23 87 P P 12 11 14.0 +0.1
PPT **Papeete** 26.23 87 P P 12 11 14.0 +0.1
74nm,1.0s,baz=55,slow=24,SNR=5.2
TIAR **Tiarei** 26.45 87 *e*P P 12 11 16.5 +0.7
118nm,1.0s
EIDS **Eidsvold** 29.49 255 P P 12 11 43.8 +1.2
baz=30,SNR=3.5
ARMA **Armidale** 29.58 245 P P 12 11 45.2 +1.7
baz=30,SNR=11
MGCD **Mangrove Creek** 30.64 240 P P 12 11 54.4 +1.8
baz=31,SNR=13
RMQ **Roma** 31.63 253 P P 12 12 03.3 +2.0
baz=32,SNR=9.7
CNB **Canberra Magne** 32.62 237 P P 12 12 11.1 +1.3
baz=33,SNR=23
CAN **Canberra** 32.90 237 *e*P P 12 12 13.3 +1.1
CAN pmax pmax
comp=Z,7.0nm,0.6s
CAN **Canberra** 32.90 237 *e*P P 12 12 13.3 +1.1
comp=Z,7.2nm,0.6s
YNG **Young** 33.11 239 P P 12 12 15.0 +1.0
baz=33,SNR=5.7
MILA **Mila** 33.31 234 P P 12 12 16.9 +1.1
baz=34,SNR=8.1
CTA **Charters Tower** 34.24 265 P P 12 12 23.4 -0.5
CTA **Charters Tower** 34.24 265 P P 12 12 23.4 -0.5
comp=Z,19nm,0.5s,baz=90,slow=10.0,SNR=38
CTAO **Charters Tower** 34.24 265 *e*P P 12 12 24.9 +1.0
CTAO pmax pmax
comp=Z,28nm,0.5s
CTAO **Charters Tower** 34.24 265 *e*P P 12 12 24.9 +1.0
comp=Z,28nm,0.5s
CMSA **Cobar Meteorol** 34.79 245 P P 12 12 29.2 +0.8
baz=35,SNR=61
QLP **Quilpie** 35.68 253 P P 12 12 36.8 +0.8
baz=36,SNR=13
QLP S S 12 18 16.1 +27
baz=36,SNR=4.3
PMG **Port Moresby** 36.24 283 *e*P P 12 12 41.3 +0.6
comp=Z,101nm,0.9s
PMG **Port Moresby** 36.24 283 P P 12 12 41.4 +0.6
comp=Z,92nm,0.9s,baz=91,slow=6.1,SNR=16
TOO **Toolangi** 36.25 235 P P 12 12 41.5 +0.8
baz=36,SNR=18
MTSU **Mount Surprise** 36.37 268 P P 12 12 42.8 +0.8
baz=37,SNR=10
STKA **Stephens Creek** 38.30 245 *e*P P 12 12 58.6 +0.7
comp=Z,1.9nm,0.4s
STKA PcP **PcP** 12 15 05.1 +0.5
STKA ScP **ScP** 12 18 24.2 +2.1
STKA **Stephens Creek** 38.30 245 P P 12 12 58.7 +0.9
comp=Z,9.1nm,0.4s,baz=93,slow=10,SNR=68
STKA PcP **PcP** 12 15 05.1 +0.5
comp=Z,4.5nm,0.5s,baz=103,slow=5.7,SNR=4.9
STKA ScP **ScP** 12 18 24.2 +2.1
comp=Z,6.9nm,1.1s,baz=40,slow=5.0,SNR=4.7
STKA **Stephens Creek** 38.30 245 P P 12 12 58.3 +0.5
baz=38,SNR=3.9
COEN **Coen** 38.42 274 P P 12 12 59.9 +0.9
baz=39,SNR=28
QIS **Mount Isa** 40.35 263 P P 12 13 15.1 +0.2
baz=40,SNR=6.3
BBOO **Buckleboo** 43.05 244 P P 12 13 36.1 -0.2
baz=43,SNR=8.2
JAY **Jayapura** 44.96 288 P P 12 13 52.3 +0.6
baz=45,SNR=14
AS31 **Alice Springs** 45.19 257 *e*P P 12 13 53.5 +0.1
ASAR **Alice Springs** 45.19 257 P P 12 13 53.4 0.0
ASAR PcP **PcP** 12 15 27.4 -0.3
ASAR ScP **ScP** 12 18 52.4 +2.5
ASAR S **S** 12 20 07.0 -2.1
ASAR **Alice Springs** 45.19 257 P P 12 13 53.4 0.0
comp=Z,11nm,0.4s,baz=94,slow=8.4,SNR=213
ASAR PcP **PcP** 12 15 27.4 -0.3
comp=Z,7.5nm,0.7s,baz=106,slow=4.0,SNR=9.0
ASAR ScP **ScP** 12 18 52.4 +2.5
comp=Z,0.6nm,0.6s,baz=114,slow=2.7,SNR=4.6
ASAR S **S** 12 20 07.0 -2.1
comp=Z,1.9nm,0.9s,baz=92,slow=16,SNR=8.0
WRAB **Tennant Creek** 45.32 262 *e*P P 12 13 53.7 -0.8
WRAB pmax pmax
comp=Z,21nm,0.9s
WRAB **Tennant Creek** 45.32 262 *e*P P 12 13 53.7 -0.8
comp=Z,21nm,0.9s
WRA **Warramunga Arr** 45.33 262 P P 12 13 53.8 -0.7
WRA S **S** 12 20 10.0 -1.2
WRA **Warramunga Arr** 45.33 262 P P 12 13 53.8 -0.7
comp=Z,16nm,1.0s,baz=95,slow=7.2,SNR=128
WRA S **S** 12 20 10.0 -1.2
comp=Z,1.7nm,0.9s,baz=94,slow=12,SNR=5.2
KIP **Kipapa** 46.12 25*c**e*P P 12 14 00.7 +0.2
KIP pmax pmax
comp=Z,106nm,0.9s
KDU **Kakadu** 48.76 271 P P 12 14 20.6 -0.2
baz=49,SNR=23
FORT **Forrest** 49.83 247 P P 12 14 28.4 -0.3
baz=50,SNR=12
MTN **Manton Dam** 49.97 271 P P 12 14 29.3 -0.7
baz=50,SNR=9.6
GUMO **Guam** 50.74 309 P P 12 14 36.7 +1.1
GUMO **Guam** 50.74 309 P P 12 14 36.7 +1.1
comp=Z,244nm,0.5s,baz=171,slow=9.5,SNR=27
TLE **Tual** 50.88 280 P P 12 14 37.5 +0.8
baz=51,SNR=3.2
FITZ **Fitzroy Crossi** 53.76 263 P P 12 14 57.9 +0.2
FITZ **Fitzroy Crossi** 53.76 263 P P 12 14 57.9 +0.2
comp=Z,12nm,1.1s,baz=89,slow=4.1,SNR=18
FITZ **Fitzroy Crossi** 53.76 263 P P 12 14 57.8 +0.2
baz=54,SNR=20
SWI **Sorong** 54.15 285 P P 12 15 00.9 +0.4
baz=54,SNR=10
KMBL **Kambalda** 55.09 246 P P 12 15 06.7 -0.4
baz=55,SNR=5.2
SBA **Scott Base** 57.42 184 *e*P P 12 15 25.5 +2.9
SBA pmax pmax
comp=Z,19nm,0.8s
SBA **Scott Base** 57.42 184 *e*P P 12 15 25.5 +2.9
comp=Z,19nm,0.8s
VNDA **Vanda** 57.48 185 P P 12 15 25.9 +2.8
VNDA ScP **ScP** 12 19 44.9 +3.1
VNDA **Vanda** 57.48 185 P P 12 15 25.9 +2.8
comp=Z,4.5nm,0.8s,baz=352,slow=7.8,SNR=26
VNDA ScP **ScP** 12 19 44.9 +3.1
comp=Z,6.0nm,0.8s,baz=334,slow=3.9,SNR=16
MEEK **Meekatharra** 58.51 251 P P 12 15 30.1 -1.0
baz=59,SNR=9.4
MBWA **Marble Bar** 58.53 257 *e*P P 12 15 30.5 -0.6
comp=Z,15nm,0.7s
KLBR **Kellerberrin** 58.57 245 P P 12 15 31.0 -0.3
baz=59,SNR=12
BLDU **Ballidu** 59.58 246 P P 12 15 37.7 -0.5
baz=60,SNR=21
MORW **Morawa** 60.38 248 P P 12 15 43.4 -0.3
baz=60,SNR=9.3
CASY **Casey** 63.85 205 *e*P P 12 16 07.0 +1.1
comp=Z,110nm,1.7s
PCI **Palu** 64.57 279 P P 12 16 19.1 +7.7
baz=65,SNR=5.3
QSPA **South Pole Qui** 69.06 180 *e*P P 12 16 40.7 +1.8
comp=Z,17nm,0.7s
MJAR **Matsushiro Arr** 71.09 323 P P 12 16 50.6 -0.7
MJAR **Matsushiro Arr** 71.09 323 P P 12 16 50.6 -0.7
comp=Z,14nm,0.7s,baz=165,slow=6.3,SNR=62
MAJO **Matsushiro** 71.09 323 *e*P P 12 16 50.8 -0.5
MAJO pmax pmax
comp=Z,12nm,0.7s
MAJO **Matsushiro** 71.09 323 *e*P P 12 16 50.8 -0.5
comp=Z,12nm,0.7s
MAT **Matsushiro** 71.09 323 P P 12 16 50.8 -0.5
SBUM **Sibu** 72.88 279 P P 12 17 01.5 -0.9
comp=Z,13nm,1.4s
JNU **Nakatsue** 73.19 316 *e*P P 12 17 03.9 0.0
comp=Z,19nm,1.6s
JNU **Nakatsue** 73.19 316 P P 12 17 03.8 0.0
comp=Z,16nm,0.9s,baz=103,slow=2.8,SNR=9.4
FX1 **Attu Island--F** 74.06 354 P P 12 17 06.6 -1.7
FX1 **Attu Island--F** 74.06 354 P P 12 17 06.6 -1.7
comp=Z,12nm,0.6s,baz=117,slow=18,SNR=4.6
KSM **Kuching** 74.28 278 *e*P P 12 17 10.7 +0.2
comp=Z,16nm,1.0s
KSM **Kuching** 74.28 278 P P 12 17 09.6 -0.9
comp=Z,24nm,1.1s
KSM **Kuching** 74.28 278 P P 12 17 11.0 +0.6
baz=74,SNR=6.7
ASAJ **Asahikawa** 74.55 331 P P 12 17 12.3 +0.9
ASAJ **Asahikawa** 74.55 331 P P 12 17 12.3 +0.9
comp=Z,52nm,0.9s,baz=203,slow=6.1,SNR=28
SSLB **Suanglung** 74.92 303 *e*P P 12 17 12.2 -1.7
comp=Z,13nm,0.3s
YHNB **Yeheng** 75.05 304 *e*P P 12 17 14.7 0.0
comp=Z,28nm,0.9s
YSS **Yuzh-Sakhalins** 76.71 333⇓*e*P P 12 17 24.6 +1.2
YSS pmax pmax
comp=Z,60nm,1.0s
PETK **Petropavlovsk-** 76.97 345 P P 12 17 23.9 -0.8
PETK **Petropavlovsk-** 76.97 345 P P 12 17 23.9 -0.8
PETK **Petropavlovsk-** 76.97 345 P P 12 17 23.9 -0.8
comp=Z,15nm,0.7s,baz=139,slow=9.8,SNR=30
BSC **Santa Cruz Isl** 77.37 46 ⇓P P 12 17 28.8 +1.4
baz=78
SCI **San Clemente I** 77.52 47 ⇑P P 12 17 29.5 +1.3
baz=78
PKM **Peak Mountain** 77.78 45 ⇓P P 12 17 31.2 +1.3
baz=78,SNR=6.5
KSRS **Korea Array** 77.80 318 P P 12 17 30.1 +0.5
comp=Z,7.0nm,1.0s,baz=144,slow=6.4,SNR=20
KSAR **Wonju Array Be** 77.81 318 P P 12 17 30.1 +0.4
MCCM **Marconi Confer** 77.81 41 *e*P P 12 17 31.0 +1.4
comp=Z,28nm,1.0s
BLG **Laguna Peak** 77.82 46 ⇓P P 12 17 30.9 +1.1
baz=78
SAO **San Andreas Ge** 77.85 43 *e*P P 12 17 31.0 +1.1
SAO pmax pmax
comp=Z,39nm,1.0s
SAO **San Andreas Ge** 77.85 43 *e*P P 12 17 31.0 +1.1
comp=Z,39nm,1.0s
SMMC **Simmler** 77.91 45 ⇑P P 12 17 31.9 +1.5
baz=78
FMP **Fort Macarthur** 78.11 47 ⇑P P 12 17 32.6 +1.2
baz=78
HOPS **Hopland** 78.23 40 *e*P P 12 17 33.8 +1.7
comp=Z,40nm,1.1s
OSI **Osito Adit** 78.34 46 ⇑P P 12 17 34.1 +1.3
baz=79
DECC **Green Verdugo** 78.40 46 ⇑P P 12 17 34.2 +1.1
baz=79
109C **Camp Elliot, M** 78.46 48 ⇓P P 12 17 34.5 +1.1
baz=79
MWC **Mount Wilson** 78.56 46 *e*P P 12 17 35.1 +0.9
MWC pmax pmax
comp=Z,127nm,1.6s
MWC **Mount Wilson** 78.56 46 *e*P P 12 17 35.1 +0.9
comp=Z,127nm,1.6s
ARVC **Arvin** 78.57 45 ⇓P P 12 17 35.1 +1.2
baz=79,SNR=7.9
BAR **Barrett** 78.65 48 *e*P P 12 17 35.5 +1.1
MURC **Murrieta** 78.80 47 ⇓P P 12 17 36.4 +1.2
baz=79,SNR=8.6
VES **Vestal, Richgr** 78.82 45 ⇑P P 12 17 36.2 +0.9
baz=79,SNR=9.7
BFSC **Mount Baldy Ra** 78.84 47 ⇓P P 12 17 36.5 +0.9
baz=79,SNR=10
MONP **Monument Peak** 78.94 48 ⇓P P 12 17 37.6 +1.3
baz=79,SNR=15
EDW2 **Edwards Air Fo** 78.99 46 ⇓P P 12 17 37.5 +1.2
baz=79,SNR=30
RCTC **Rector, Farmer** 78.99 44 ⇑P P 12 17 37.9 +1.7
baz=79
DVTC **Desert V Tower** 79.03 49 ⇓P P 12 17 38.0 +1.4
baz=79
KHMM **Horse Mountain** 79.05 38 *e*P P 12 17 38.5 +1.9
comp=Z,37nm,1.1s
ISA **Isabella** 79.12 45 *e*P P 12 17 38.1 +1.1
ISA pmax pmax
comp=Z,44nm,1.0s
ISA **Isabella** 79.12 45 *e*P P 12 17 38.1 +1.1
comp=Z,44nm,1.0s
ISA **Isabella** 79.12 45 ⇓P P 12 17 38.4 +1.4
baz=79,SNR=28
CMB **Columbia Colle** 79.29 42 *e*P P 12 17 38.7 +0.9
CMB pmax pmax
comp=Z,32nm,0.9s
CMB **Columbia Colle** 79.29 42 *e*P P 12 17 38.7 +0.9
comp=Z,32nm,0.9s
PFO **Pinyon Flat Ob** 79.31 48 *e*P P 12 17 38.3 +0.1
comp=Z,18nm,1.0s
PFO **Pinyon Flat Ob** 79.31 48 P P 12 17 39.3 +1.1
comp=Z,15nm,0.9s,baz=259,slow=4.7,SNR=21
PFO **Pinyon Flat Ob** 79.31 48 ⇓P P 12 17 39.3 +1.1
baz=80,SNR=12
BBRC **Big Bear Solar** 79.36 47 ⇓P P 12 17 39.8 +1.3
baz=80
KRMB **Red Mountain** 79.36 38 *e*P P 12 17 40.0 +1.8
comp=Z,41nm,1.3s
SWSC **Sam W. Stewart** 79.40 49 ⇓P P 12 17 39.6 +1.1
baz=80,SNR=8.2
LRMC **Laurel Mountai** 79.53 46 ⇑P P 12 17 40.3 +1.1
baz=80,SNR=12
WDC **Whiskeytown Da** 79.55 39 *e*P P 12 17 40.3 +1.2
WDC pmax pmax
comp=Z,47nm,1.3s
WDC **Whiskeytown Da** 79.55 39 *e*P P 12 17 40.3 +1.2
comp=Z,47nm,1.3s
RRX **Edison Barstow** 79.66 46 ⇑P P 12 17 41.1 +1.3
baz=80
CWC **Cottonwood Cre** 79.83 45 ⇓P P 12 17 42.1 +1.2
baz=80,SNR=6.7
USRK **Ussuriysk Arra** 79.83 325 P P 12 17 41.5 +1.1
comp=Z,25nm,0.8s,baz=145,slow=3.2,SNR=45
BELC **Belle Mtn. Jos** 79.85 48 ⇑P P 12 17 42.4 +1.3
baz=80,SNR=30
MPMC **Manual Prospec** 80.00 45 ⇑P P 12 17 43.0 +1.2
baz=80,SNR=25
GSC **Goldstone** 80.03 46 *e*P P 12 17 42.9 +1.1
GSC pmax pmax
comp=Z,21nm,1.0s
GSC **Goldstone** 80.03 46 *e*P P 12 17 42.9 +1.1
comp=Z,21nm,1.0s
GSC **Goldstone** 80.03 46 ⇑P P 12 17 43.0 +1.1
baz=80,SNR=13
MLAC **Mammoth Lakes** 80.03 43 ⇑P P 12 17 43.3 +1.3
baz=80
BC3 **Big Chuckawall** 80.04 48 ⇑P P 12 17 43.4 +1.5
baz=80,SNR=14
DAC **Darwin (Calif)** 80.06 45 *e*P P 12 17 43.6 +1.5
DAC pmax pmax
comp=Z,15nm,1.2s
DAC **Darwin (Calif)** 80.06 45 *e*P P 12 17 43.6 +1.5
comp=Z,15nm,1.2s
HEC **Hector,Ludlow** 80.08 47 ⇑P P 12 17 43.2 +1.0
baz=80,SNR=15
TIN **Tinemaha** 80.09 44 ⇑P P 12 17 43.6 +1.4
baz=80
GLA **Glamis** 80.15 49 *e*P P 12 17 44.5 +2.0
GLA pmax pmax
comp=Z,31nm,0.9s
GLA **Glamis** 80.15 49 *e*P P 12 17 44.5 +2.0
comp=Z,31nm,0.9s
GLA **Glamis** 80.15 49 ⇑P P 12 17 44.2 +1.7
baz=80,SNR=9.1
YBH **Yreka Blue Hor** 80.19 38 P P 12 17 44.1 +1.6
YBH **Yreka Blue Hor** 80.19 38 P P 12 17 44.1 +1.6
comp=Z,33nm,0.8s,baz=184,slow=1.5,SNR=115
LBCM **Butte Creek Ri** 80.42 40 P P 12 17 45.1 +1.2
BEKR **Beckworth** 80.42 41 *e*P P 12 17 45.0 +1.0
comp=Z,16nm,1.1s
WCN **Washoe City** 80.45 42 *e*P P 12 17 45.4 +1.2
WCN pmax pmax
comp=Z,39nm,1.3s
WCN **Washoe City** 80.45 42 *e*P P 12 17 45.4 +1.2
comp=Z,39nm,1.3s
GMRC **Granite Mounta** 80.51 47 ⇓P P 12 17 45.7 +1.1
baz=81,SNR=14
IRM **Iron Mountain** 80.52 48 ⇓P P 12 17 46.0 +1.5
baz=81,SNR=23
HUMO **Hull Mountain** 80.60 37 *e*P P 12 17 46.4 +1.7
comp=Z,25nm,1.1s
GRAC **Grapevine Rang** 80.62 45 ⇑P P 12 17 46.4 +1.5
baz=81,SNR=28
FURC **Furnace Creek,** 80.65 45 ⇓P P 12 17 46.1 +1.2
baz=81,SNR=20
TUQ **Turquoise Moun** 80.70 46 ⇑P P 12 17 46.6 +1.1
baz=81,SNR=6.6
SHOC **Shoshone** 80.72 46 ⇓P P 12 17 46.4 +1.0
baz=81,SNR=15
Y12C **Blythe** 80.74 49 ⇓P P 12 17 47.1 +1.6
baz=81,SNR=8.2
113A **Mohawk Valley,** 80.75 50 ⇑P P 12 17 47.0 +1.4
baz=81,SNR=26
NJ2 **Nanjing** 80.82 309 *e*P P 12 17 47.0 +1.0
NJ2 pmax pmax
comp=Z,50nm,1.2s
NVAR **Mina Array Bea** 80.84 43 P P 12 17 47.4 +1.1
NVAR **Mina Array Bea** 80.84 43 P P 12 17 47.4 +1.1
comp=Z,14nm,0.8s,baz=224,slow=8.4,SNR=101
NV11 **Mina Array Sit** 80.94 43 *e*P P 12 17 47.6 +0.9
214A **Organ Pipe Nat** 81.01 51 ⇑P P 12 17 48.6 +1.5
baz=81
LDFC **Landfair** 81.05 47 *e*P P 12 17 48.9 +1.6
comp=Z,106nm,1.2s
KDAK **Kodiak Island** 81.12 13 P P 12 17 46.9 0.0
KDAK **Kodiak Island** 81.12 13 P P 12 17 46.9 0.0
comp=Z,23nm,0.9s,baz=217,slow=6.8,SNR=4.9
NEE2 **Needles Airpor** 81.22 48 ⇓P P 12 17 49.5 +1.4
baz=82
HABR **Khabarovsk** 81.28 330 *e*P P 12 17 47.0 -1.0
HABR *e*PPP PPP 12 22 49.1
HABR *e*S **S** 12 27 31.5 0.0
HABR *e* 12 28 59.6
HABR *e*SS **SS** 12 32 55.5 -0.2
HABR pmax pmax
comp=N,27nm,2.3s
HABR pmax pmax
comp=E,43nm,2.3s
HABR pmax pmax
comp=Z,57nm,1.2s
HABR MLR MLR
comp=Z,73nm,21.0s
PDMCI **Parker Dam,Lak** 81.30 48 ⇓P P 12 17 50.0 +1.6
baz=82,SNR=14
MAW **Mawson** 81.36 200 P P 12 17 48.5 +0.3
MAW **Mawson** 81.36 200 P P 12 17 48.5 +0.3
comp=Z,8.1nm,0.6s,baz=126,slow=6.2,SNR=27
MAW **Mawson** 81.36 200 P P 12 17 49.4 +1.2
baz=81,SNR=17
MDJ **Mudanjiang** 81.39 325 P P 12 17 49.6 +0.9
MDJ pmax pmax
comp=Z,43nm,1.0s
MDJ pmax pmax
comp=Z,68nm,4.5s
MDJ **Mudanjiang** 81.39 325 *e*P P 12 17 49.5 +0.8
comp=Z,40nm,1.0s
Z14A **Wintersburg** 81.64 50 ⇓P P 12 17 52.0 +1.7
baz=82,SNR=12
MOD **Modoc** 81.70 39 *e*P P 12 17 51.6 +1.1
comp=Z,60nm,0.9s
QIZ **Qiongzhong** 81.80 294 P P 12 17 51.6 +0.2
QIZ pP **pP** 12 19 03.9 -0.5
QIZ sP **sP** 12 19 36.4 -1.1
QIZ S **SKSac** 12 27 40.5 -0.8
QIZ sS **sS** 12 29 46.9 -0.2
QIZ pmax pmax
comp=Z,20nm,1.4s
QIZ pmax pmax
comp=Z,250nm,4.0s
Y14A **Wickenburg** 81.91 49 ⇓P P 12 17 53.2 +1.5
baz=82,SNR=36
W13A **Hualapai Mount** 81.91 48 ⇓P P 12 17 53.3 +1.4
baz=82,SNR=12
BROR **Big Rock Looko** 81.95 36 P P 12 17 52.4 +0.8
NCOR **Newberry Crate** 82.33 37 P P 12 17 55.7 +1.9
R11A **Troy Canyon, C** 82.55 44 ⇑P P 12 17 55.9 +0.9
baz=83
TUC **Tucson** 82.66 51 *e*P P 12 17 57.6 +1.9
TUC pmax pmax
comp=Z,5.0nm,1.0s
TUC **Tucson** 82.66 51 *e*P P 12 17 57.6 +1.9
comp=Z,4.7nm,1.0s
BMN **Battle Mountai** 82.69 42 *e*P P 12 17 56.8 +1.1
BMN pmax pmax
comp=Z,75nm,1.4s
BMN **Battle Mountai** 82.69 42 *e*P P 12 17 56.8 +1.1
comp=Z,75nm,1.4s
WVOR **Wild Horse Val** 83.00 39 *e*P P 12 17 58.3 +1.1
WVOR pmax pmax
comp=Z,40nm,1.0s
WVOR **Wild Horse Val** 83.00 39 *e*P P 12 17 58.3 +1.1
comp=Z,40nm,1.0s
VIPM **Ingram Point** 83.12 37 P P 12 17 59.1 +1.2
VIPM **Ingram Point** 83.12 37 P P 12 17 59.1 +1.2
CN2 **Changchun** 83.19 322⇓*e*P P 12 17 58.3 +0.3
CN2 *e*pP **pP** 12 19 08.6 -2.7
CN2 *e*S **S** 12 27 50.9 -0.1
CN2 pmax pmax
comp=Z,30nm,1.0s
OSR **Olympics--Salm** 83.24 33 P P 12 17 59.7 +1.5
X16A **Lo Mia Camp, P** 83.26 49 ⇓P P 12 18 00.7 +1.8
baz=84,SNR=68
319A **Douglas** 83.31 53 ⇑P P 12 18 00.9 +1.8
baz=84,SNR=20
KLR **Kul'dur** 83.37 329 *e*P P 12 17 54.7 -4.1
WHN **Wuhan** 83.39 306 P P 12 18 00.1 +0.8
G06A **Carlson Farm,** 83.56 36 P P 12 18 00.8 +0.9
CCUT **Cedar City** 83.58 46 *e*P P 12 18 01.9 +1.5
comp=Z,27nm,0.9s
ARUT **Antelope Range** 83.66 46 *e*P P 12 18 01.7 +1.0
ARUT pmax pmax
comp=Z,24nm,1.0s
ARUT **Antelope Range** 83.66 46 *e*P P 12 18 01.6 +1.0
comp=Z,24nm,1.0s
PFB **Port Renfrew** 83.71 32 P P 12 18 01.4 +0.9
U15A **North Rim** 83.71 47 ⇑P P 12 18 02.9 +1.7
baz=84,SNR=69
HDW **Hoodsport** 83.80 33 P P 12 18 02.6 +1.5
320A **Kipp Ranch, An** 83.85 53 ⇑P P 12 18 04.0 +2.2
baz=84,SNR=15
WUAZ **Wupatki** 83.87 48 *e*P P 12 18 03.5 +1.6
comp=Z,27nm,1.1s
WUAZ **Wupatki** 83.87 48 ⇓P P 12 18 03.4 +1.6
baz=84,SNR=16
LON **Longmire** 83.88 35 *e*P P 12 18 02.1 +0.6
LON pmax pmax
comp=Z,14nm,1.1s
LON **Longmire** 83.88 35 *e*P P 12 18 02.1 +0.6
comp=Z,14nm,1.1s
SEW **Sewad** 83.92 14 *e*P P 12 18 00.8 -0.4
comp=Z,32nm,1.1s
WPW **White Pass** 83.98 35 P P 12 18 02.8 +0.8
IPM **Ipoh** 83.99 277 P P 12 18 01.8 -1.0
comp=Z,17nm,1.2s
ELK **Elko** 84.11 42 *e*P P 12 18 03.9 +0.8
comp=Z,16nm,0.9s
ELK **Elko** 84.11 42 P P 12 18 03.8 +0.8
comp=Z,16nm,0.9s,baz=242,slow=5.0,SNR=61
220A **Playas Peak, P** 84.13 53 ⇑P P 12 18 05.1 +2.0
baz=84,SNR=23
PGC **Sidney** 84.25 32 *e*P P 12 18 04.2 +1.1
comp=Z,3.7nm,1.2s
120A **U Bar Ranch, L** 84.36 52 ⇑P P 12 18 06.2 +1.9
baz=85,SNR=17
X18A **Snowflake** 84.38 50 ⇓P P 12 18 05.9 +1.4
baz=85,SNR=7.4
BBB **Bella Bella** 84.47 28 P P 12 18 05.0 +0.8
BBB **Bella Bella** 84.47 28 P P 12 18 05.0 +0.8
comp=Z,23nm,0.8s,baz=273,slow=5.0,SNR=13
G08A **Pilot Rock** 84.53 37 P P 12 18 06.0 +1.1
Z20A **Nine Sixteen R** 84.66 52 ⇑P P 12 18 07.7 +1.9
baz=85,SNR=16
221A **Mesquite Ranch** 84.73 53 ⇓P P 12 18 08.1 +1.9
baz=85,SNR=5.7
W18A **Petrified Fore** 84.83 49 ⇑P P 12 18 08.0 +1.3
baz=85
MVU **Marysvale** 84.86 46 *e*P P 12 18 08.1 +1.3
comp=Z,17nm,1.2s
CRAG **Craig** 84.86 23 *e*P P 12 18 06.1 +0.1
comp=Z,67nm,1.5s
HAWA **Hanford** 84.88 36 P P 12 18 07.5 +1.1
MSU **Marysvale** 84.88 46 *e*P P 12 18 08.1 +1.2
MSU *e* 12 21 25.6
MSU pmax pmax
comp=Z,30nm,1.4s
MSU **Marysvale** 84.88 46 *e*P P 12 18 08.1 +1.2
comp=Z,30nm,1.4s
MSU *e*PP **PP** 12 21 25.6 -3.2
121A **Cookes Peak, D** 84.98 53 ⇓P P 12 18 09.3 +1.9

baz=85,SNR=23
ETW Entiat 85.20 35 P P 12 18 08.9 +0.8
Y20A Horse Springs, 85.21 51 ⇑P P 12 18 10.4 +1.8
baz=86,SNR=22
BMO Blue Mountains 85.21 38 eP P 12 18 08.7 +0.5
BMO pmax pmax
comp=Z,45nm,1.6s
BMO Blue Mountains 85.21 38 eP P 12 18 08.7 +0.5
comp=Z,45nm,1.6s
MFID Camas Ranch 85.25 40 eP P 12 18 09.1 +0.6
comp=Z,19nm,1.2s
MFID Camas Ranch 85.25 40 ⇑P P 12 18 09.3 +0.8
baz=86,SNR=13
222A Williams Famil 85.29 53 ⇓P P 12 18 10.3 +1.4
baz=86
PMR Palmer 85.33 13 eP P 12 18 07.5 -0.7
PMR e 12 21 34.7
PMR pmax pmax
comp=Z,42nm,1.2s
PMR Palmer 85.33 13 eP P 12 18 07.5 -0.7
comp=Z,42nm,1.2s
PMR ePP PP 12 21 34.7 +3.2
PSI Prapat 85.34 275 P P 12 18 09.1 -0.5
PSI Prapat 85.34 275 P P 12 18 07.3 -2.3
comp=Z,11nm,1.2s
PSI Prapat 85.34 275 P P 12 18 09.1 -0.5
comp=Z,5.0nm,0.9s,baz=99,slow=4.8,SNR=7.2
DUG Dugway 85.36 44 ⇓P P 12 18 09.8 +0.7
baz=86
X20A Quemado 85.43 50 ⇓P P 12 18 11.4 +1.7
baz=86,SNR=14
Z21A St. Cloud Mine 85.43 52 ⇓P P 12 18 11.7 +2.0
baz=86
122A Conniff Cattle 85.64 53 ⇑P P 12 18 12.5 +1.9
baz=86
DIV Divide 85.67 15 eP P 12 18 09.4 -0.6
comp=Z,75nm,1.2s
SML Sawmill 85.69 13 eP P 12 18 09.8 -0.3
SML pmax pmax
comp=Z,4.0nm,0.9s
SML Sawmill 85.69 13 eP P 12 18 09.8 -0.3
comp=Z,3.6nm,0.9s
W20A Ramah 85.71 50 ⇓P P 12 18 12.7 +1.6
baz=86,SNR=13
223A Chaparral, Ant 85.75 54 ⇑P P 12 18 13.0 +1.8
baz=86
Q16A Castle Valley 85.77 46 ⇑P P 12 18 12.6 +1.4
baz=86,SNR=7.5
Y21A Point of Rocks 85.77 51 ⇑P P 12 18 13.2 +1.8
baz=86,SNR=26
BMRM Bremner River 85.81 15 eP P 12 18 10.0 -0.7
comp=Z,48nm,1.0s
WRAK Wrangell Islan 85.86 23 eP P 12 18 11.8 +0.9
comp=Z,63nm,1.2s
X21A Alamocita Cree 85.89 51 ⇓P P 12 18 13.4 +1.4
baz=86,SNR=14
Z22A Elephant Butte 85.93 52 ⇓P P 12 18 13.5 +1.4
baz=86,SNR=17
S18A Hurst Farm, Bl 85.94 47 ⇓P P 12 18 12.8 +0.6
baz=86,SNR=7.1
TMUT Trail Mountain 85.94 45 eP P 12 18 13.7 +1.5
comp=Z,41nm,1.0s
V20A Brimhall 86.06 49 ⇓P P 12 18 13.5 +0.8
baz=86
PNL Peninsula 86.11 18 eP P 12 18 12.3 +0.2
comp=Z,63nm,0.8s
123A Bell Site, Whi 86.16 53 ⇑P P 12 18 14.6 +1.5
baz=86
HLID Hailey 86.19 40 eP P 12 18 14.0 +0.9
comp=Z,9.9nm,0.8s
HLID Hailey 86.19 40 ⇓P P 12 18 14.2 +1.1
baz=86,SNR=17
324A Moseley Ranch, 86.20 54 ⇓P P 12 18 14.5 +1.1
baz=86,SNR=32
HVU Hansel Valley 86.23 43 eP P 12 18 14.2 +0.8
HVU pmax pmax
comp=Z,3.0nm,0.5s
HVU Hansel Valley 86.23 43 eP P 12 18 14.2 +0.8
comp=Z,3.1nm,0.5s
J13A Cove Ranch, Pi 86.24 41 ⇓P P 12 18 14.4 +1.1
baz=86,SNR=22
Y22A Socorro 86.25 52 ⇑P P 12 18 14.9 +1.2
baz=86,SNR=12
425A Indio Mountain 86.28 55 ⇓P P 12 18 15.2 +1.4
baz=87,SNR=25
SRU San Rafael 86.30 46 eP P 12 18 14.7 +0.9
SRU pmax pmax
comp=Z,30nm,0.7s
SRU San Rafael 86.30 46 eP P 12 18 14.7 +0.9
comp=Z,30nm,0.7s
SRU San Rafael 86.30 46 ⇓P P 12 18 14.6 +0.9
baz=87,SNR=42
U20A Newcomb 86.31 49 ⇓P P 12 18 14.7 +0.8
baz=87
W21A San Fidel 86.32 50 ⇑P P 12 18 15.2 +1.2
baz=87
P17A Butcher Ranch, 86.34 45 ⇑P P 12 18 14.8 +0.8
baz=87,SNR=6.5
LAZ Ladron 86.34 51 eP P 12 18 15.5 +1.4
comp=Z,2.6nm,0.9s
Y22D IRIS PASSCAL I 86.35 52 ⇑P P 12 18 15.6 +1.5
baz=87
LENM Lemitar 86.35 51 eP P 12 18 15.6 +1.5
comp=Z,7.8nm,1.0s
626A Big Bend Ranch 86.39 57 ⇑P P 12 18 15.7 +1.4
baz=87,SNR=25
K14A Jones Ranch, D 86.39 42 ⇑P P 12 18 14.9 +0.8
baz=87,SNR=6.8
SYO Syowa Base 86.41 192⇑eP P 12 18 12.0 -1.6
224A Cornudas Mount 86.46 54 ⇑P P 12 18 16.2 +1.5
baz=87,SNR=22
H12A Diamond D Ranc 86.47 39 ⇓P P 12 18 15.1 +0.6
baz=87,SNR=31
Z23A Rita Site, Whi 86.47 52 ⇑P P 12 18 16.1 +1.5
baz=87
DAU Daniels Canyon 86.48 44 eP P 12 18 16.1 +1.3
DAU pmax pmax
comp=Z,4.0nm,0.7s
DAU Daniels Canyon 86.48 44 eP P 12 18 16.1 +1.3
comp=Z,4.4nm,0.7s
X22A Bernardo 86.49 51 ⇓P P 12 18 16.4 +1.7
baz=87
G12A Big Creek, Yel 86.52 39 ⇑P P 12 18 15.4 +0.7
baz=87,SNR=26
325A Bean Ranch, Si 86.56 55 ⇓P P 12 18 16.2 +1.0
baz=87,SNR=24
I13A Wildhorse Cree 86.56 40 ⇓P P 12 18 15.9 +0.9
baz=87,SNR=8.8
TNA Tin City 86.58 4 eP P 12 18 13.8 -0.4
comp=Z,10nm,1.0s
L15A Malad City 86.59 42 ⇑P P 12 18 15.5 +0.4
baz=87,SNR=6.9
BNM Barren Site 86.60 52 eP P 12 18 16.5 +1.1
comp=Z,4.5nm,1.0s
526A Mary Lane Ranc 86.65 56 ⇓P P 12 18 16.7 +1.1
baz=87,SNR=13
TXAR Lajitas Array 86.65 57 P P 12 18 17.0 +1.4
TXAR PKKPbc PKKPbc 12 36 09.7 -0.1
TXAR Lajitas Array 86.65 57 P P 12 18 17.0 +1.4
comp=Z,13nm,0.9s,baz=217,slow=6.9,SNR=91
TXAR PKKPbc PKKPbc 12 36 09.7 -0.1
comp=Z,0.2nm,0.5s,baz=195,slow=1.7,SNR=4.4
V21A Milan 86.65 50 ⇓P P 12 18 16.6 +1.0
baz=87
MVCO Mesa Verde 86.73 48 eP P 12 18 16.2 +0.3
comp=Z,4.6nm,0.9s
P18A Preston Nutter 86.75 45 ⇓P P 12 18 16.8 +0.8
baz=87,SNR=9.7
TRF Thorofare Moun 86.78 12 eP P 12 18 13.7 -1.8
comp=Z,37nm,0.9s
124A Stringfield Ra 86.80 53 ⇓P P 12 18 17.7 +1.3
baz=87,SNR=11
H13A Challis 86.84 40 ⇑P P 12 18 17.1 +0.9
baz=87,SNR=16
W22A Albuquerque 86.86 51 ⇓P P 12 18 18.0 +1.5
baz=87
HWUT Hardware Ranch 86.91 43 eP P 12 18 16.9 +0.2
comp=Z,2.9nm,0.6s
Y23A Lovelace Mesa, 86.92 52 ⇓P P 12 18 17.8 +0.9
baz=87,SNR=7.5
F12A Elk City 86.92 38 ⇓P P 12 18 17.2 +0.7
baz=87,SNR=72
627A Terlingua Ranc 86.92 57 ⇓P P 12 18 18.3 +1.3
baz=87,SNR=16
U21A Nageezi 86.94 49 ⇓P P 12 18 18.0 +1.1
baz=87,SNR=40
426A McDonald Obser 86.96 56 ⇓P P 12 18 18.4 +1.2
baz=87,SNR=19

I14A Mackay 86.97 40 ⇓P P 12 18 18.0 +1.1
baz=87,SNR=12
225A Deer Hill, Car 87.00 54 ⇓P P 12 18 18.7 +1.4
baz=87,SNR=14
PV04 Paradox Valley 87.03 47 eP P 12 18 18.1 +0.8
SEY Seymchan 87.05 347 eP P 12 18 15.9 -0.6
ANMO Albuquerque 87.10 51 P P 12 18 18.7 +1.0
ANMO Albuquerque 87.10 51 P P 12 18 18.7 +1.0
comp=Z,6.4nm,0.7s,baz=225,slow=4.9,SNR=23
X23A Hourglass Bar 87.12 51 ⇓P P 12 18 18.8 +0.9
baz=87
S20A Disappointment 87.13 48 ⇑P P 12 18 18.6 +0.7
baz=87,SNR=10
PV01 Paradox Valley 87.13 47 eP P 12 18 18.1 +0.2
comp=Z,1μm,1.1s
G13A Cobalt 87.14 39 ⇑P P 12 18 18.3 +0.7
baz=87,SNR=20
Z24A Sheeppen Canyo 87.15 53 ⇓P P 12 18 19.1 +1.1
baz=87,SNR=7.1
SKAG Skagway 87.18 20 eP P 12 18 18.3 +1.1
comp=Z,58nm,1.4s
L16A Fish Haven 87.20 43 ⇑P P 12 18 18.4 +0.3
baz=88,SNR=8.2
V22A San Miguel Ran 87.23 50 ⇑P P 12 18 18.8 +0.4
baz=88
326A Caldwell Ranch 87.29 55 ⇑P P 12 18 19.1 +0.6
baz=88,SNR=10
R20A Redvale 87.29 47 ⇑P P 12 18 19.1 +0.5
baz=88
MCK McKinley 87.29 12 eP P 12 18 16.9 -0.8
MCK pmax pmax
comp=Z,39nm,0.9s
MCK McKinley 87.29 12 eP P 12 18 16.9 -0.8
comp=Z,39nm,0.9s
T21A Navajo Lake 87.30 49 ⇑P P 12 18 19.3 +0.7
baz=88
J15A Blackfoot 87.31 41 ⇓P P 12 18 19.9 +1.4
baz=88,SNR=16
NEW Newport 87.32 35 P P 12 18 18.6 +0.4
NEW Newport 87.32 35 P P 12 18 18.6 +0.4
comp=Z,7.7nm,0.7s,baz=230,slow=4.6,SNR=16
NEW Newport 87.32 35 ⇓P P 12 18 18.5 +0.4
baz=88,SNR=8.8
628A Black Gap, Mar 87.33 57 ⇑P P 12 18 19.8 +1.0
baz=88,SNR=8.6
PAX Paxson 87.35 14 eP P 12 18 17.2 -0.9
PAX pmax pmax
comp=Z,37nm,1.6s
PAX Paxson 87.35 14 eP P 12 18 17.2 -0.9
comp=Z,37nm,1.6s
Y24A Capitan 87.37 52 ⇑P P 12 18 20.0 +1.0
baz=88,SNR=22
125A Gardner Draw, 87.38 54 ⇓P P 12 18 20.2 +1.2
baz=88,SNR=8.5
GDL2 Guadalupe Moun 87.39 54 eP P 12 18 20.5 +1.4
comp=Z,24nm,1.2s
H14A Leadore 87.40 40 ⇑P P 12 18 20.0 +1.1
baz=88,SNR=15
M17A Scullys Gap (B 87.41 44 ⇑P P 12 18 19.4 +0.3
baz=88
W23A Werner Place, 87.42 51 ⇑P P 12 18 19.9 +0.7
baz=88,SNR=5.4
S21A Coal Bank Pass 87.44 48 ⇓P P 12 18 20.2 +0.8
baz=88,SNR=7.7
F13A Darby 87.47 39 ⇓P P 12 18 19.5 +0.4
baz=88,SNR=39
SNAA Sanae 87.48 178 eP P 12 18 19.0 +0.2
SNAA Sanae 87.48 178 eP P 12 18 19.0 +0.2
comp=Z,5.3nm,0.6s
226B Tecolote Peak, 87.49 54 ⇑P P 12 18 20.6 +1.1
baz=88,SNR=29
427A Hayter Ranch, 87.53 56 ⇑P P 12 18 21.1 +1.4
baz=88,SNR=52
K16A Soda Springs 87.53 42 ⇓P P 12 18 20.4 +0.8
baz=88
P19A Cripple Cowboy 87.59 46 ⇑P P 12 18 20.5 +0.5
baz=88,SNR=18
D12A Red Ives Fores 87.59 37 ⇑P P 12 18 20.0 +0.3
baz=88
GYA Guiyang 87.60 299⇑iP P 12 18 21.2 +1.0
GYA pP pP 12 19 35.8 +1.5
GYA sP sP 12 20 08.4 +1.3
GYA PP PP 12 21 52.6 +2.0
GYA SKS SKSac 12 28 16.0 -1.9
GYA S S 12 28 32.2 -2.7
GYA sS sS 12 30 45.5 -0.4
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,100nm,4.1s
I15A Monteview 87.60 41 ⇑P P 12 18 21.1 +1.3
baz=88
L17A Cokeville 87.60 43 ⇑P P 12 18 20.1 +0.1
baz=88
Z25A Roswell 87.61 53 ⇑P P 12 18 21.2 +1.2
baz=88,SNR=9.0
V23A Ortiz Mt. (NFS 87.67 50 ⇑P P 12 18 21.7 +1.3
baz=88,SNR=7.4
G14A Jackson 87.68 39 ⇑P P 12 18 21.1 +0.9
baz=88,SNR=17
327A Balmorhea Ranc 87.69 55 ⇑P P 12 18 21.6 +1.2
baz=88
528A Cox Ranch, San 87.70 57 ⇓P P 12 18 21.7 +1.1
baz=88,SNR=8.9
MENT Mentasta 87.72 15 eP P 12 18 19.9 +0.2
Q20A Ridgley Place, 87.72 47 ⇓P P 12 18 21.1 +0.6
baz=88,SNR=6.3
J16A Bone 87.75 42 ⇑P P 12 18 21.6 +1.0
baz=88,SNR=5.1
T22A Edith 87.75 49 ⇓P P 12 18 21.5 +0.7
baz=88
M18A Lyman 87.78 44 ⇓P P 12 18 21.3 +0.5
baz=88,SNR=7.9
MCMT McKenzie Canyo 87.82 40 eP P 12 18 22.1 +1.1
comp=Z,9.1nm,0.8s
O19A Miners Draw (B 87.83 45 ⇑P P 12 18 21.6 +0.6
baz=88,SNR=6.1
H15A Lima 87.83 40 ⇑P P 12 18 22.0 +1.1
baz=88,SNR=16
126A Clayton Basin, 87.85 54 ⇑P P 12 18 22.0 +0.8
baz=88
C12B Naegeli Ranch, 87.90 37 ⇑P P 12 18 21.9 +0.9
baz=88,SNR=15
K17A Gardner Place, 87.91 42 ⇓P P 12 18 22.1 +0.7
baz=88,SNR=11
E13A Victor 87.92 38 ⇓P P 12 18 21.3 +0.1
baz=88,SNR=6.0
Y25A Mesa, Roswell 87.92 52 ⇑P P 12 18 22.4 +0.9
baz=88,SNR=14
P20A De Beque 87.92 46 ⇑P P 12 18 22.0 +0.5
baz=88,SNR=14
U23A El Rito 87.93 50 ⇓P P 12 18 22.4 +0.8
baz=88
R21A Cimarron 87.95 47 ⇓P P 12 18 22.5 +0.8
baz=88,SNR=21
RRI2 Red Ridge 87.97 42 eP P 12 18 23.1 +1.4
comp=Z,13nm,0.8s
W24A Lazy 6 Ranch, 87.98 51 ⇑P P 12 18 22.3 +0.4
baz=88,SNR=8.9
428A Kincaid Ranch, 88.03 56 ⇓P P 12 18 23.3 +1.2
baz=88
VNA2 Neumayer--Watz 88.03 177 eP P 12 18 22.4 +1.1
F14A Wisdom 88.05 39 ⇑P P 12 18 22.5 +0.6
baz=88,SNR=5.2
L18A Fontenelle, Gr 88.05 43 ⇓P P 12 18 22.8 +0.7
baz=88
D13A Huson 88.12 37 ⇓P P 12 18 22.1 0.0
baz=88,SNR=17
I16A Newdale 88.14 41 ⇑P P 12 18 23.8 +1.4
baz=88,SNR=25
S22A 4UR Ranch, Cre 88.15 48 ⇑P P 12 18 23.7 +1.0
baz=88,SNR=21
Q21A Lamborn Mesa, 88.16 47 ⇑P P 12 18 23.6 +1.0
baz=88
Z26A Caprock 88.16 53 ⇓P P 12 18 23.4 +0.8
baz=88,SNR=22
DCID1 Drake Creek 88.18 42 eP P 12 18 23.8 +1.1
comp=Z,14nm,0.8s
DLBC Dease Lake 88.20 23 P P 12 18 23.1 +0.9
DLBC Dease Lake 88.20 23 P P 12 18 23.1 +0.9
comp=Z,14nm,0.7s,baz=225,slow=5.4,SNR=48
X25A Clemmons Ranch 88.22 52 ⇓P P 12 18 23.5 +0.5
baz=88
328A Wristen Ranch, 88.22 55 ⇓P P 12 18 23.5 +0.6
baz=88,SNR=7.3
G15A Dillon 88.22 40 ⇓P P 12 18 23.7 +1.0
baz=88,SNR=36

DOT Dot Lake 88.25 14 eP P 12 18 22.1 -0.2
comp=Z,43nm,1.3s
DLMT Dillon 88.26 40 eP P 12 18 24.0 +1.1
comp=Z,25nm,0.9s
B12A Libby 88.27 36 ⇓P P 12 18 23.6 +0.9
baz=88,SNR=8.7
MSO Missoula 88.27 38 eP P 12 18 22.9 0.0
comp=Z,5.3nm,0.8s
MSO Missoula 88.27 38 ⇓P P 12 18 22.9 0.0
baz=88,SNR=14
TPAW Teton Pass 88.27 42 eP P 12 18 24.3 +1.1
comp=Z,6.4nm,0.8s
E14A Clinton 88.30 38 ⇑P P 12 18 23.5 +0.5
baz=89,SNR=31
V24A Rampart Ranch, 88.32 51 ⇓P P 12 18 24.3 +0.8
baz=89,SNR=7.0
O20A White River Ci 88.33 46 ⇑P P 12 18 23.8 +0.4
baz=89
PLCA Paso Flores 88.34 133 P P 12 18 24.0 +0.6
PLCA Paso Flores 88.34 133 P P 12 18 24.0 +0.6
comp=Z,1.1nm,0.6s,baz=307,slow=6.8,SNR=6.5
J17A Brown Place, J 88.36 42 ⇑P P 12 18 24.3 +0.9
baz=89,SNR=9.5
127A Arkansas Junct 88.36 54 ⇑P P 12 18 24.3 +0.7
baz=89,SNR=6.8
BSMT Bassoo Peak 88.36 37 eP P 12 18 23.6 +0.3
comp=Z,14nm,0.8s
T23A Casias Ranch, 88.37 49 ⇓P P 12 18 24.5 +0.8
baz=89
C13A Hot Springs 88.39 37 ⇓P P 12 18 23.3 0.0
baz=89,SNR=9.2
M19A Rock Springs 88.41 44 ⇓P P 12 18 24.1 +0.4
baz=89
K18A Toltan Ranch, 88.41 43 ⇓P P 12 18 24.6 +0.8
baz=89,SNR=15
R22A Saguache, Gunn 88.43 48 ⇑P P 12 18 25.1 +1.0
baz=89,SNR=12
IMW Indian Meadow 88.49 41 eP P 12 18 23.6 -0.5
comp=Z,19nm,0.9s
A12A Yaak River Ran 88.50 35 ⇑P P 12 18 24.8 +1.1
baz=89,SNR=7.0
COLA College 88.53 12 eP P 12 18 22.4 -1.0
COLA pmax pmax
comp=Z,30nm,0.8s
COLA College 88.53 12 eP P 12 18 22.4 -1.0
comp=Z,30nm,0.8s
MOOW Moose Ponds 88.54 42 eP P 12 18 25.0 +0.7
comp=Z,5.2nm,1.0s
LOHW Long Hollow 88.55 42 eP P 12 18 25.0 +0.6
comp=Z,4.1nm,0.6s
Y26A Elida 88.56 53 ⇓P P 12 18 25.1 +0.6
baz=89
P21A Newcastle 88.57 47 ⇑P P 12 18 25.6 +1.0
baz=89
L19A Farson 88.58 44 ⇑P P 12 18 25.2 +0.7
baz=89,SNR=17
F15A Butte 88.58 39 ⇑P P 12 18 25.0 +0.6
baz=89,SNR=14
JTMT Jette 88.59 37 eP P 12 18 24.5 +0.2
comp=Z,8.3nm,0.9s
LRM Limekiln Ridge 88.59 39 eP P 12 18 25.2 +0.6
comp=Z,115nm,1.0s
429A Davenport Ranc 88.60 56 ⇑P P 12 18 25.4 +0.7
baz=89,SNR=24
SWMT Swartz Lake 88.61 37 eP P 12 18 24.4 0.0
comp=Z,4.1nm,1.0s
Q22A Crested Butte, 88.62 47 ⇓P P 12 18 25.8 +0.8
baz=89,SNR=18
ILAR Eielson Array 88.63 12 P P 12 18 22.9 -1.0
ILAR PP PP 12 21 51.0 -6.8
ILAR PKKPbc PKKPdf 12 36 03.2 +2.1
ILAR Eielson Array 88.63 12 P P 12 18 22.9 -1.0
comp=Z,7.5nm,0.8s,baz=219,slow=5.1,SNR=85
ILAR PP PP 12 21 51.0 -6.8
comp=Z,1.6nm,0.8s,baz=216,slow=8.1,SNR=5.0
ILAR PKKPbc PKKPdf 12 36 03.2 +2.1
comp=Z,0.2nm,0.6s,baz=341,slow=2.5,SNR=5.5
D14A Greenough 88.66 38 ⇑P P 12 18 24.7 0.0
baz=89,SNR=24
G16A Moss Hill, Enn 88.66 40 ⇓P P 12 18 25.8 +1.0
baz=89,SNR=26
N20A Spence Gulch, 88.66 45 ⇑P P 12 18 25.6 +0.6
baz=89,SNR=10
W25A Bar L Ranch, 88.67 51 ⇑P P 12 18 25.4 +0.4
baz=89,SNR=16
QLMT Earthquake Lak 88.68 40 eP P 12 18 26.6 +1.7
comp=Z,6.8nm,1.1s
228A UT Block 9, Go 88.70 55 ⇓P P 12 18 25.8 +0.7
baz=89,SNR=5.8
CHMT Chamberlain Mo 88.71 38 eP P 12 18 25.2 +0.1
comp=Z,15nm,1.1s
J18A Kendall Valley 88.71 42 ⇑P P 12 18 25.9 +0.7
baz=89,SNR=36
H16A Russell Place, 88.72 41 ⇑P P 12 18 26.8 +1.7
baz=89,SNR=60
I17A Pilgrim Ck. 88.73 42 ⇓P P 12 18 26.6 +1.4
baz=89,SNR=6.5
SMCO Snowmass 88.73 47 eP P 12 18 26.1 +0.5
comp=Z,9.8nm,0.8s
Z27A Tatum 88.75 54 ⇓P P 12 18 25.8 +0.3
baz=89,SNR=8.1
SLMT Seeley Lake 88.75 38 eP P 12 18 25.0 -0.2
comp=Z,18nm,1.0s
BW06 Boulder Array 88.78 43 ⇑P P 12 18 25.8 +0.3
baz=89,SNR=20
PDAR Pinedale Array 88.78 43 P P 12 18 25.5 0.0
PDAR PKKPbc PKKPbc 12 36 04.2 -1.4
PDAR Pinedale Array 88.78 43 P P 12 18 25.5 0.0
comp=Z,8.0nm,0.9s,baz=207,slow=3.0,SNR=45
PDAR PKKPbc PKKPbc 12 36 04.2 -1.4
comp=Z,0.4nm,0.8s,baz=73,slow=5.1,SNR=3.6
YBMT Yellow Bay 88.80 37 eP P 12 18 24.5 -0.8
comp=Z,4.8nm,0.9s
E15A Deer Lodge 88.80 39 ⇓P P 12 18 25.8 +0.4
baz=89,SNR=16
530A J-C Ranch, Com 88.83 57 ⇓P P 12 18 26.4 +0.7
baz=89
B13A Whitefish 88.83 36 ⇓P P 12 18 25.5 +0.1
baz=89,SNR=15
V25A Rancho No Teng 88.84 51 ⇑P P 12 18 26.5 +0.7
baz=89,SNR=11
X26A CR and CF Fran 88.85 52 ⇑P P 12 18 26.2 +0.3
baz=89
329A Wagon Wheel Ra 88.90 56 ⇑P P 12 18 26.8 +0.7
baz=89,SNR=7.4
H17A Grant Village 88.97 41 ⇑P P 12 18 28.6 +2.2
baz=89,SNR=23
BOZ Bozeman (W) 88.99 40 eP P 12 18 26.7 +0.4
BOZ pmax pmax
comp=Z,25nm,0.9s
BOZ Bozeman (W) 88.99 40 eP P 12 18 26.7 +0.4
comp=Z,25nm,0.9s
BOZ Bozeman (W) 88.99 40 ⇑P P 12 18 27.2 +0.9
baz=89,SNR=49
M20A Sweetwater, Wa 89.03 45 ⇑P P 12 18 27.6 +0.9
baz=89,SNR=6.0
Y27A Causey 89.04 53 ⇓P P 12 18 27.2 +0.5
baz=89,SNR=12
R23A Moffat 89.06 48 ⇑P P 12 18 27.6 +0.7
baz=89,SNR=8.2
F16A Kennard Place, 89.06 40 ⇓P P 12 18 27.6 +1.0
baz=89
CMIG Matias Romero 89.07 71 P P 12 18 28.0 +0.9
CMIG Matias Romero 89.07 71 P P 12 18 28.0 +0.9
comp=Z,5.6nm,0.8s,baz=297,slow=4.2,SNR=12
P22A Eagle 89.08 47 ⇑P P 12 18 27.4 +0.4
baz=89,SNR=5.1
XAN Xi'an 89.08 307 P P 12 18 27.2 +0.4
XAN pmax pmax
comp=Z,14nm,1.0s
I18A Diamond G Ranc 89.09 42 ⇑P P 12 18 27.7 +0.7
baz=89
T24A Torres, Weston 89.09 50 ⇑P P 12 18 27.9 +0.8
baz=89
N21A Black Mountain 89.12 45 ⇑P P 12 18 27.9 +0.7
baz=89,SNR=6.2
631A Perdido Creek 89.12 58 ⇑P P 12 18 27.7 +0.6
baz=89,SNR=9.8
W26A Owens Ranch, T 89.13 52 ⇓P P 12 18 27.5 +0.4
baz=89
430A Baggett Ranch, 89.18 57 ⇑P P 12 18 27.6 +0.2
baz=90
L20A Wamsutter 89.19 44 ⇓P P 12 18 28.3 +0.9
baz=90,SNR=17
D15A Lincoln 89.20 38 ⇑P P 12 18 28.0 +0.7
baz=90,SNR=24
S24A Houchin Ranch, 89.23 49 ⇓P P 12 18 28.9 +1.1
baz=90,SNR=5.2

229A	Bryant Ranch,	89.24	55	⇓P	P	12 18 28.2	+0.6
	baz=90						
U25A	Circle Dot Ran	89.25	50	⇑P	P	12 18 28.3	+0.6
	baz=90,SNR=6.6						
K19A	Absolon Red Bu	89.26	43	⇑P	P	12 18 27.8	+0.1
	baz=90,SNR=12						
732A	Laxson Ranch,	89.33	59	⇓P	P	12 18 28.6	+0.6
	baz=90,SNR=6.4						
G17A	Pierce Place,	89.35	40	⇑P	P	12 18 29.5	+1.5
	baz=90,SNR=11						
J19A	Crowheart	89.35	43	⇓P	P	12 18 28.7	+0.6
	baz=90,SNR=25						
Z28A	Tucker Farm, M	89.36	54	⇓P	P	12 18 28.5	+0.2
	baz=90,SNR=6.4						
MSTX	Muleshoe	89.37	53	⇑P	P	12 18 28.9	+0.6
	baz=90,SNR=8.2						
Q23A	Hartsel	89.39	48	⇓P	P	12 18 29.0	+0.5
	baz=90						
X27A	F and S Farms,	89.42	52	⇓P	P	12 18 29.1	+0.6
	baz=90						
V26A	Tequesquite Ra	89.42	51	⇑P	P	12 18 28.7	+0.2
	baz=90						
E16A	East Helena	89.43	39	⇓P	P	12 18 28.9	+0.7
	baz=90,SNR=19						
HRY	Holter Researc	89.43	39	*e*P	P	12 18 29.0	+0.7
	comp=Z,21nm,0.8s						
531A	Rocksprings	89.46	57	⇑P	P	12 18 29.5	+0.8
	baz=90,SNR=14						
129A	Stewart Farms,	89.48	55	⇑P	P	12 18 29.4	+0.7
	baz=90,SNR=6.6						
O22A	Kremmling	89.49	46	⇑P	P	12 18 29.2	+0.3
	baz=90,SNR=6.3						
330A	Mertzon	89.49	56	⇑P	P	12 18 29.0	+0.1
	baz=90						
B14A	Marquette Ranc	89.49	37	⇑P	P	12 18 28.9	+0.4
	baz=90,SNR=22						
K20A	Yellowstone Ra	89.50	43	⇓P	P	12 18 28.9	+0.1
	baz=90						
WALA	Waterton Lakes	89.52	36	*e*P	P	12 18 29.2	+0.5
	comp=Z,1.7nm,1.5s						
C15A	Salmond Ranch,	89.55	38	⇓P	P	12 18 29.2	+0.3
	baz=90,SNR=14						
T25A	Trinidad	89.58	50	⇓P	P	12 18 29.6	+0.2
	baz=90						
R24A	Sanders Place,	89.58	49	⇓P	P	12 18 29.9	+0.6
	baz=90,SNR=5.2						
P23A	Jefferson	89.60	47	⇑P	P	12 18 30.0	+0.5
	baz=90						
BILL	Bilibino	89.62	354κ	*i*P	P	12 18 27.6	-0.9
BILL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BILL	Bilibino	89.62	354	*e*P	P	12 18 27.9	-0.6
	comp=Z,8.9nm,1.0s						
431A	Sonora	89.63	57	⇓P	P	12 18 29.9	+0.4
	baz=90						
M21A	Separation Pea	89.63	45	⇑P	P	12 18 29.9	+0.4
	baz=90,SNR=7.1						
W27A	Bowe Ranch, En	89.63	52	⇑P	P	12 18 29.7	+0.2
	baz=90,SNR=7.4						
H18A	Shoshone NF, C	89.68	41	⇓P	P	12 18 30.4	+0.8
	baz=90,SNR=11						
U26A	Atchley Ranch,	89.72	51	⇑P	P	12 18 30.5	+0.5
	baz=90,SNR=8.4						
Y28A	McKinney Farm,	89.74	53	⇑P	P	12 18 30.4	+0.4
	baz=90						
230A	Sterling City	89.74	56	⇓P	P	12 18 30.4	+0.4
	baz=90						
A14A	Double T Ranch	89.74	36	⇑P	P	12 18 30.3	+0.6
	baz=90,SNR=45						
D16A	Dana Ranch, Ca	89.76	39	⇑P	P	12 18 30.7	+0.9
	baz=90,SNR=24						
I19A	Meeteetse	89.77	42	⇑P	P	12 18 31.0	+1.0
	baz=90,SNR=22						
632A	Uvalde	89.79	58	⇓P	P	12 18 31.2	+1.0
	baz=90,SNR=9.3						
S25A	Robets Cordova	89.79	49	⇑P	P	12 18 30.8	+0.5
	baz=90,SNR=6.8						
N22A	Wattenberg Ran	89.85	46	⇓P	P	12 18 31.4	+0.8
	baz=90,SNR=7.4						
B15A	Bradely Ranch,	89.86	37	⇑P	P	12 18 29.9	-0.3
	baz=90,SNR=11						
Z29A	Hungry Hill Ra	89.87	54	⇓P	P	12 18 30.7	+0.2
	baz=90,SNR=6.9						
E17A	Martinsdale	89.87	39	⇑P	P	12 18 31.2	+0.7
	baz=90,SNR=10						
Q24A	Divide	89.89	48	⇑P	P	12 18 31.4	+0.6
	baz=90						
EGAK	Eagle	89.89	15	*e*P	P	12 18 29.8	0.0
	comp=Z,34nm,0.9s						
O23A	Lake Granby, G	89.94	46	⇑P	P	12 18 31.7	+0.6
	baz=90,SNR=6.6						
532A	Rocksprings	89.95	58	⇑P	P	12 18 31.6	+0.6
	baz=90,SNR=14						
ISCO	Idaho Springs	89.95	47	*e*P	P	12 18 31.8	+0.7
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ISCO	Idaho Springs	89.95	47	*e*P	P	12 18 31.8	+0.7
	comp=Z,2.9nm,1.1s						
ISCO	Idaho Springs	89.95	47	⇓P	P	12 18 31.6	+0.4
	baz=90						
J20A	Shoshoni	90.01	43	⇑P	P	12 18 31.9	+0.8
	baz=90,SNR=28						
331A	San Angelo	90.03	56	⇑P	P	12 18 31.5	+0.1
	baz=90						
X28A	Dimmitt	90.04	53	⇑P	P	12 18 31.6	+0.2
	baz=90						
C16A	Fuhringer Ranc	90.05	38	⇑P	P	12 18 31.4	+0.3
	baz=90,SNR=21						
G18A	Lazy EL Ranch,	90.06	41	⇓P	P	12 18 32.4	+1.1
	baz=90,SNR=27						
H19A	Powell	90.09	41	⇑P	P	12 18 32.6	+1.2
	baz=90,SNR=13						
V27A	Dan Oppiter Fa	90.10	52	⇓P	P	12 18 32.0	+0.3
	baz=90						
R25A	Fountain Ranch	90.12	49	⇑P	P	12 18 32.0	+0.3
	baz=90						
A15A	Johnson Ranch,	90.12	36	⇑P	P	12 18 31.7	+0.3
	baz=90,SNR=29						
RLMT	Red Lodge	90.15	41	*e*P	P	12 18 33.2	+1.5
	comp=Z,17nm,0.9s						
RLMT	Red Lodge	90.15	41	⇓P	P	12 18 32.8	+1.0
	baz=90,SNR=12						
Y29A	Porterfield Fa	90.15	54	⇓P	P	12 18 32.4	+0.5
	baz=90,SNR=5.2						
130A	Snyder	90.15	55	⇓P	P	12 18 32.4	+0.5
	baz=90						
JCT	Junction City	90.18	57	⇓P	P	12 18 32.1	+0.1
	baz=90						
T26A	Comanche Natio	90.18	50	⇑P	P	12 18 32.1	0.0
	baz=90						
K21A	Alcova	90.20	44	⇓P	P	12 18 32.4	+0.3
	baz=90,SNR=15						
COLD	Coldfoot	90.23	10	*e*P	P	12 18 31.5	+0.2
	comp=Z,22nm,1.2s						
N23A	Red Feather La	90.24	46	⇓P	P	12 18 33.0	+0.6
	baz=90						
GCMT	Greycliff	90.24	40	*e*P	P	12 18 33.4	+1.3
	comp=Z,17nm,1.2s						
F18A	Big Timber	90.27	40	⇓P	P	12 18 33.4	+1.2
	baz=90,SNR=18						
I20A	Worland	90.27	42	⇑P	P	12 18 32.9	+0.6
	baz=91,SNR=18						
HHC	Hu-ho-hao-te	90.28	314	*e*P	P	12 18 31.2	-1.1
HHC				pP	pP	12 19 46.3	-0.5
HHC				sP	sP	12 20 19.8	+0.3
HHC				PP	PP	12 22 13.9	+2.3
HHC				SKS	SKSac	12 28 31.1	-1.9
HHC				S	S	12 28 54.7	-4.4
HHC				sS	sS	12 31 09.7	-1.3
HHC				SS	SS	12 35 10.1	+2.4
HHC				pmax	pmax		
	comp=Z,40nm,0.6s						
HHC				pmax	pmax		
	comp=Z,280nm,4.8s						
HHC				LR	LR		
	comp=N,230nm,16.3s						
HHC				LR	LR		
	comp=E,260nm,15.1s						
HHC				LR	LR		
	comp=Z,150nm,14.7s						
KMI	Kunming	90.29	297	P	P	12 18 33.6	+0.7
KMI				pmax	pmax		
	comp=Z,190nm,1.2s						
Z30A	Sanderson Ranc	90.32	54	⇓P	P	12 18 32.8	+0.2
	baz=91,SNR=6.5						
D17A	Six Diamond Ra	90.33	39	⇓P	P	12 18 33.6	+1.1
	baz=91,SNR=29						
432A	Menard	90.34	57	⇓P	P	12 18 32.9	+0.1
	baz=91,SNR=13						
W28A	Vega	90.35	52	⇑P	P	12 18 32.7	-0.1
	baz=91						
231A	Bronte	90.38	56	⇑P	P	12 18 33.1	+0.2
	baz=91,SNR=14						
X29A	Tulia	90.38	53	⇓P	P	12 18 33.2	+0.3
	baz=91						
B16A	M & M Farms, S	90.40	37	⇑P	P	12 18 32.6	-0.1
	baz=91						
U27A	Thompson Grove	90.40	51	⇑P	P	12 18 33.0	0.0
	baz=91						
J21A	Lysite	90.41	43	⇑P	P	12 18 33.8	+0.8
	baz=91,SNR=23						
L22A	Ellis Ranch, M	90.44	45	⇓P	P	12 18 34.3	+1.1
	baz=91,SNR=12						
S26A	Kim	90.46	50	⇑P	P	12 18 33.4	+0.1
	baz=91,SNR=8.1						
Q25A	Bedland, Calha	90.49	48	⇓P	P	12 18 33.5	0.0
	baz=91						
C17A	Wharram Farm,	90.53	38	⇓P	P	12 18 34.1	+0.7
	baz=91,SNR=33						
V28A	Channing	90.55	52	⇑P	P	12 18 33.9	+0.2
	baz=91						
AMTX	Amarillo	90.58	53	⇓P	P	12 18 34.1	+0.2
	baz=91						
332A	Millersview	90.59	57	⇑P	P	12 18 34.4	+0.5
	baz=91,SNR=18						
H20A	Greybull	90.62	42	⇑P	P	12 18 34.1	+0.3
	baz=91,SNR=25						
131A	Roby	90.62	55	⇓P	P	12 18 34.4	+0.3
	baz=91,SNR=7.6						
M23A	Laramie	90.65	45	⇑P	P	12 18 34.6	+0.3
	baz=91,SNR=5.7						
K22A	Casper	90.68	44	⇓P	P	12 18 34.5	+0.2
	baz=91,SNR=7.4						
W29A	Amraillo	90.70	53	⇓P	P	12 18 34.8	+0.4
	baz=91						
F19A	Roth Farm, Mol	90.71	40	⇓P	P	12 18 35.0	+0.8
	baz=91,SNR=15						
I21A	Big Trails, Te	90.74	43	⇑P	P	12 18 34.8	+0.3
	baz=91,SNR=31						
Y30A	Stafford Cattl	90.74	54	⇓P	P	12 18 34.9	+0.3
	baz=91						
T27A	Campo	90.75	50	⇑P	P	12 18 34.6	-0.1
	baz=91						
R26A	Arlington	90.78	49	⇓P	P	12 18 34.9	+0.1
	baz=91,SNR=7.1						
P25A	Willow Gulch B	90.81	48	⇓P	P	12 18 35.6	+0.6
	baz=91						
G20A	Bridger	90.84	41	⇑P	P	12 18 35.2	+0.3
	baz=91,SNR=11						
B17A	L&G Farms, Che	90.85	38	⇑P	P	12 18 35.4	+0.6
	baz=91						
D18A	Linhart Farms,	90.87	39	⇑P	P	12 18 36.0	+1.1
	baz=91						
232A	Coleman	90.87	56	⇑P	P	12 18 35.6	+0.3
	baz=91,SNR=11						
L23A	Garrett	90.97	45	⇑P	P	12 18 36.4	+0.7
	baz=91,SNR=11						
X30A	Coker Ranch, T	91.00	53	⇑P	P	12 18 35.9	+0.1
	baz=91						
Q26A	Hugo	91.00	48	⇑P	P	12 18 36.3	+0.5
	baz=91						
CM31	Chiang Mai Arr	91.04	289	*e*P	P	12 18 38.4	+2.2
	comp=Z,2.9nm,0.6s						
CMAR	Chiang Mai Arr	91.04	289	P	P	12 18 37.4	+1.2
CMAR	Chiang Mai Arr	91.04	289	P	P	12 18 37.4	+1.2
	comp=Z,7.6nm,0.9s,baz=122,slow=2.9,SNR=44						
J22A	Midwest	91.07	43	⇑P	P	12 18 36.4	+0.4
	baz=91,SNR=23						
Z31A	Sharp Cattle R	91.08	55	⇑P	P	12 18 36.3	+0.2
	baz=91,SNR=10						
E19A	Rath Farm, Rou	91.11	40	⇑P	P	12 18 36.9	+0.9
	baz=91,SNR=18						
CMMT	Chiang Mai	91.17	290	P	P	12 18 36.6	-0.2
	comp=Z,19nm,1.4s						
F20A	Billings	91.17	41	⇓P	P	12 18 37.2	+0.8
	baz=91						
CHTO	Chiang Mai	91.17	290	*e*P	P	12 18 37.0	+0.1
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CHTO	Chiang Mai	91.17	290	*e*P	P	12 18 37.0	+0.1
	comp=Z,9.8nm,0.6s						
CHTO	Chiang Mai	91.17	290	P	P	12 18 36.7	-0.1
ABTX	Abilene, Hawle	91.18	55	⇑P	P	12 18 37.1	+0.5
	baz=92,SNR=6.4						
R27A	Eads	91.23	49	⇑P	P	12 18 36.9	0.0
	baz=92,SNR=5.2						
A17A	Triple J Farms	91.25	37	⇑P	P	12 18 37.3	+0.7
	baz=92,SNR=23						
M24A	Cheyenne	91.25	46	⇑P	P	12 18 37.7	+0.8
	baz=92						
Y31A	Rekieta Farm,	91.25	54	⇑P	P	12 18 37.4	+0.4
	baz=92						
H21A	Big Horn, Sher	91.28	42	⇓P	P	12 18 37.5	+0.6
	baz=92,SNR=6.2						
I22A	9 Mile Ranch,	91.29	43	⇑P	P	12 18 37.7	+0.7
	baz=92,SNR=19						
K23A	Bowen Ranch, D	91.31	44	⇓P	P	12 18 37.5	+0.3
	baz=92,SNR=7.9						
EGMT	Eagleton	91.32	38	*e*P	P	12 18 38.0	+1.1
	comp=Z,32nm,1.6s						
EGMT	Eagleton	91.32	38	⇓P	P	12 18 37.6	+0.7
	baz=92,SNR=6.7						
D19A	Cripps Ranch,	91.40	39	⇑P	P	12 18 38.3	+1.0
	baz=92,SNR=16						
P26A	Davis Ranch, A	91.40	48	⇑P	P	12 18 38.5	+0.8
	baz=92						
L24A	Wheatland	91.44	45	⇓P	P	12 18 38.7	+0.9
	baz=92						
G21A	Lodge Grass	91.47	42	⇑P	P	12 18 38.5	+0.7
	baz=92						
B18A	Beardsley Farm	91.49	38	⇑P	P	12 18 38.4	+0.6
	baz=92,SNR=11						
E20A	Meyer Farm, Mu	91.52	40	⇑P	P	12 18 38.9	+1.0
	baz=92,SNR=7.2						
S28A	Manter	91.57	50	⇓P	P	12 18 38.8	+0.4
	baz=92						
C19A	Slack Wire Ran	91.58	39	⇓P	P	12 18 39.5	+1.3
	baz=92,SNR=26						
Z32A	Haskell	91.58	55	⇑P	P	12 18 39.0	+0.6
	baz=92,SNR=17						
J23A	Dilts Ranch, B	91.66	44	⇓P	P	12 18 39.4	+0.7
	baz=92						
KSCO	Kaye Shedlock’	91.67	49	⇑P	P	12 18 39.5	+0.7
	baz=92						
V30A	Spur Ranch, Mi	91.68	52	⇓P	P	12 18 39.8	+0.9
	baz=92						
H22A	Clearmont	91.70	42	⇓P	P	12 18 39.6	+0.8
	baz=92						
A18A	Metzger Ranch,	91.72	38	⇓P	P	12 18 39.3	+0.5
	baz=92,SNR=19						
O26A	Horse Wrangler	91.73	47	⇑P	P	12 18 39.7	+0.6
	baz=92						
CD2	Chengdu	91.74	302	P	P	12 18 39.2	-0.1
CD2				pP	pP	12 19 54.1	+0.3
CD2				sP	sP	12 20 26.2	-0.2
CD2				PP	PP	12 22 25.7	+2.5
CD2				SKS	SKSac	12 28 40.1	-1.5
CD2				S	S	12 29 10.3	-2.2
CD2				sS	sS	12 31 22.5	-2.4
CD2				SS	SS	12 35 30.4	+1.6
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,100nm,5.0s						
X31A	McDonald Ranch	91.74	54	⇑P	P	12 18 39.4	+0.3
	baz=92						
D20A	Manuel Ranch,	91.80	40	⇑P	P	12 18 40.4	+1.2
	baz=92,SNR=13						
F21A	Absaloka Mine,	91.81	41	⇓P	P	12 18 40.4	+1.1
	baz=92,SNR=5.6						
Y32A	R-V Farms, Ver	91.89	54	⇓P	P	12 18 40.2	+0.4
	baz=92,SNR=7.0						
W31A	Holland Ranch,	92.00	53	⇓P	P	12 18 40.7	+0.4
	baz=92,SNR=8.5						
B19A	Brinkman Farms	92.00	38	⇑P	P	12 18 41.0	+1.0
	baz=92,SNR=11						
G22A	Birney	92.03	42	⇑P	P	12 18 41.0	+0.6
	baz=92						
S29A	Ulysses	92.15	50	⇓P	P	12 18 41.5	+0.5
	baz=92						
E21A	Keefer Ranch,	92.18	40	⇓P	P	12 18 42.3	+1.4
	baz=92,SNR=5.7						
C20A	Veseth Ranch,	92.19	39	⇑P	P	12 18 42.1	+1.1
	baz=92,SNR=18						
J24A	Dixon Ranch, L	92.20	44	⇑P	P	12 18 41.8	+0.6
	baz=92						
O27A	Beecher Island	92.28	48	⇑P	P	12 18 42.6	+1.0
	baz=93						
V31A	Spring Creek L	92.31	53	⇓P	P	12 18 43.0	+1.2
	baz=93						
F22A	Rosebud	92.32	41	⇓P	P	12 18 42.1	+0.5
	baz=93						
A19A	Klindworth Far	92.35	38	⇑P	P	12 18 42.4	+0.7
	baz=93,SNR=12						
M26A	McRoberts Ranc	92.38	46	⇑P	P	12 18 42.5	+0.5
	baz=93						
K25A	Mack Ranch, Ha	92.40	45	⇓P	P	12 18 43.2	+1.1
	baz=93						
I24A	Kuemmerle Ranc	92.47	44	⇑P	P	12 18 42.5	+0.1
	baz=93						
D21A	La Casta Ranch	92.48	40	⇓P	P	12 18 43.2	+0.9
	baz=93,SNR=5.0						
N27A	Anderson Farm,	92.50	47	⇑P	P	12 18 42.9	+0.2
	baz=93						
G23A	Biddle	92.59	42	⇓P	P	12 18 43.4	+0.5
	baz=93						
WHTX	Lake Whitney	92.62	57	⇑P	P	12 18 43.4	+0.2
	baz=93						
C21A	Desert Coulee	92.78	39	⇓P	P	12 18 44.3	+0.7
	baz=93						
A20A	Cobblestone Ra	92.80	38	⇓P	P	12 18 44.5	+0.8
	baz=93,SNR=14						
E22A	Miles City	92.81	41	⇑P	P	12 18 44.9	+1.0
	baz=93						
F23A	Volborg	92.82	42	⇑P	P	12 18 44.7	+0.8
	baz=93,SNR=7.0						
K26A	Motz Farm, Whi	92.90	45	⇑P	P	12 18 45.2	+0.8
	baz=93,SNR=8.8						
OGNE	Ogallala	92.91	47	⇑P	P	12 18 45.2	+0.7
	baz=93						
H24A	Dirks Ranch, A	92.91	43	⇑P	P	12 18 44.6	+0.2
	baz=93,SNR=28						
T31A	Randall Ranch,	92.97	51	⇓P	P	12 18 44.9	+0.1
	baz=93						
D22A	Cohagen	93.01	40	⇑P	P	12 18 45.9	+1.1
	baz=93,SNR=6.3						
B21A	Ellsworth Farm	93.11	39	⇓P	P	12 18 46.2	+1.0
	baz=93						
E23A	Ismay	93.24	41	⇓P	P	12 18 46.7	+0.9
	baz=94						
S31A	Mullinville	93.33	51	⇓P	P	12 18 46.6	+0.2
	baz=94						
F24A	Ekalaka	93.47	42	⇓P	P	12 18 47.5	+0.5
	baz=94,SNR=5.0						
D23A	Lindsay	93.61	41	⇑P	P	12 18 48.4	+1.0
	baz=94,SNR=5.0						
B22A	Reddig Ranch S	93.65	39	⇓P	P	12 18 48.6	+0.9
	baz=94,SNR=5.2						
LZH	Lanzhou	93.71	307	*e*P	P	12 18 49.5	+1.1
LZH				pP	pP	12 20 04.0	+1.0
LZH				sP	sP	12 20 38.1	+2.5
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
E24A	Baker	93.88	41	⇓P	P	12 18 49.5	+0.7
	baz=94						
C23A	Lambert	93.91	40	⇓P	P	12 18 50.0	+1.1
	baz=94,SNR=7.5						
A22A	Carney Farms,	94.02	39	⇓P	P	12 18 49.9	+0.6
	baz=94						
D24A	Glendive	94.12	41	⇑P	P	12 18 50.9	+1.1
	baz=94						
CFAA	Coronel Fontan	94.15	126	P	P	12 18 51.3	+0.8
CFAA	Coronel Fontan	94.15	126	P	P	12 18 51.3	+0.8
	comp=Z,0.4nm,0.7s,baz=220,slow=4.5,SNR=11						
C24A	Savage	94.24	40	⇑P	P	12 18 51.4	+1.0
	baz=94						
B23A	Brockton	94.32	39	⇓P	P	12 18 51.9	+1.2
	baz=95,SNR=7.2						
INK	Inuvik	94.55	15	P	P	12 18 50.6	-0.6
INK				PP	PP	12 22 41.0	-3.1
INK	Inuvik	94.55	15	P	P	12 18 50.6	-0.6
	comp=Z,10.0nm,0.9s,baz=231,slow=4.3,SNR=39						
INK				PP	PP	12 22 41.0	-3.1
	comp=Z,3.4nm,1.1s,baz=223,slow=10,SNR=5.0						
A23A	Redstone	94.61	39	⇓P	P	12 18 52.9	+0.8
	baz=95						
DGMT	Dagmar	94.80	40	*e*P	P	12 18 54.1	+1.3
	comp=Z,12nm,0.6s						
DGMT	Dagmar	94.80	40	⇓P	P	12 18 53.7	+0.9
	baz=95						
A24A	Westby	95.11	39	⇑P	P	12 18 55.1	+0.8
	baz=95						
TUL1	Tulsa	95.39	54	⇓P	P	12 18 56.0	+0.2
	baz=96						
BGNE	Belgrade	95.78	48	⇑P	P	12 18 58.2	+0.7
	baz=96						
YKA	Yellowknife Ar	96.64	25	P	P	12 19 00.5	-0.3
YKA				PKiKP	PKiKP	12 23 35.2	-0.7
YKA				PKKPbc	PKKPbc	12 35 42.5	-3.2
YKA	Yellowknife Ar	96.64	25	P	P	12 19 00.4	-0.3
	comp=Z,3.4nm,0.8s,baz=242,slow=4.3,SNR=81						
YKA				PKiKP	PKiKP	12 23 35.2	-0.7
	comp=Z,0.2nm,0.4s,baz=244,slow=1.5,SNR=10						
YKA				PKKPbc	PKKPbc	12 35 42.5	-3.2
	comp=Z,0.5nm,0.4s,baz=39,slow=2.4,SNR=23						
SONM	Songino Array	96.66	319	P	P	12 19 01.2	-0.3
SONM				PP	PP	12 22 56.0	-5.0
SONM	Songino Array	96.66	319	P	P	12 19 01.2	-0.3
	comp=Z,0.4nm,0.5s,baz=131,slow=4.9,SNR=4.3						
SONM				PP	PP	12 22 56.0	-5.0
	comp=Z,1.7nm,1.0s,baz=124,slow=6.8,SNR=8.7						
GTA	Gaotai	97.91	309	*e*P	Pdif	12 19 08.9	+1.6
GTA				pP	pP	12 20 24.5	+2.4
GTA				sP	sP	12 20 57.3	+2.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
RES	Resolute Bay	108.06	16	PKiKP	PKiKP	12 23 55.0	-1.4
RES	Resolute Bay	108.06	16	PKiKP	PKiKP	12 23 55.0	-1.4
	comp=Z,1.6nm,0.7s,baz=240,slow=5.8,SNR=7.7						
ZALV	Zalesovo Beam	111.39	321	PKIKP	PKiKP	12 24 01.5	-1.7
ZALV	Zalesovo Beam	111.39	321	PKiKP	PKiKP	12 24 01.5	-1.7
ZALV	Zalesovo Beam	111.39	321	PKiKP	PKiKP	12 24 01.5	-1.7
	comp=Z,2.7nm,0.6s,baz=158,slow=1.0,SNR=21						
MK31	Makanchi Array	112.13	313	*e*PKIKP	PKiKP	12 24 03.4	-1.5
MK31	Makanchi Array	112.13	313	*e*PKPdf	PKiKP	12 24 03.4	-1.5
MKAR	Makanchi Array	112.13	313	P	Pdif	12 20 11.2	+1.0
MKAR				*i*		12 24 03.6	
MKAR	Makanchi Array	112.13	313	Pdif	Pdif	12 20 11.2	+1.0
MKAR				PKiKP	PKiKP	12 24 03.6	-1.3
MKAR				PKKPbc	PKKPbc	12 34 57.9	-0.5
MKAR	Makanchi Array	112.13	313	Pdiff	Pdif	12 20 11.2	+1.0
	comp=Z,0.4nm,0.7s,baz=90,slow=6.1,SNR=4.7						
MKAR				PKiKP	PKiKP	12 24 03.6	-1.3
	comp=Z,2.3nm,0.6s,baz=90,slow=0.3,SNR=34						
MKAR				PKKPbc	PKKPbc	12 34 57.9	-0.5
	comp=Z,0.7nm,0.7s,baz=279,slow=4.2,SNR=5.6						
KURK	Kurchatov	114.91	317*c*	*i*PKIKP	PKPdf	12 24 08.9	-1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	114.91	317	PKP	PKPdf	12 24 08.5	-1.5
KURK				PKKPbc	PKKPab	12 34 51.8	-1.1
KURBB	Kurchatov Arra	114.96	317	PKP	PKPdf	12 24 08.5	-1.6
	comp=Z,3.3nm,0.7s,baz=95,slow=1.8,SNR=34						
KURBB				PKKPbc	PKKPab	12 34 51.8	-0.8
	comp=Z,0.5nm,0.8s,baz=279,slow=5.2,SNR=4.4						
SJG	San Juan	115.37	79	PKP	PKPdf	12 24 11.3	-0.5
SJG	San Juan	115.37	79	PKP	PKPdf	12 24 11.3	-0.5
	comp=Z,20nm,0.3s,baz=312,slow=18,SNR=6.4						
BVA0	Borovoye Array	119.98	320	*i* PKIKP	PKPdf	12 24 18.3	-1.4
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	119.98	320	PKIKP	PKPdf	12 24 18.7	-1.0
BVAR	Borovoye Array	119.98	320	PKP	PKPdf	12 24 18.7	-1.0
BVAR	Borovoye Array	119.98	320	PKP	PKPdf	12 24 18.7	-1.0
	comp=Z,5.6nm,0.4s,baz=116,slow=0.9,SNR=40						
BRVK	Borovoye	120.04	320*d*	*i*PKIKP	PKPdf	12 24 18.6	-1.2
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BRVK	Borovoye	120.04	320	*e*PKPdf	PKPdf	12 24 18.5	-1.4
ZRNK	Zerenda	120.82	320	PKIKP	PKPdf	12 24 20.0	-1.4
ZRNK				pmax	pmax		
	comp=Z,11nm,0.7s						
SFJD	Kangerlussuaq	123.11	22	PKP	PKPdf	12 24 24.2	-1.1
SFJD	Kangerlussuaq	123.11	22	*i* P	PKPdf	12 24 24.2	-1.1
	comp=Z,6.2nm,0.6s						
SFJD	Kangerlussuaq	123.11	22	PKP	PKPdf	12 24 24.2	-1.1
	comp=Z,7.9nm,0.6s,baz=202,slow=2.0,SNR=11						
DAG	Danmarks Havn	123.16	6	*i* PKIKP	PKPdf	12 24 23.6	-1.6
DAG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DAG	Danmarks Havn	123.16	6	*i* P	PKPdf	12 24 23.6	-1.6
	comp=Z,5.5nm,0.9s						

SUMG	Summit	123.45	14	ePKIKP	PKPdf	12 24 27.0	+0.6
SUMG	Summit	123.45	14	ePKPdf	PKPdf	12 24 27.0	+0.6
SUMG	Summit	123.45	14	i P	PKPdf	12 24 27.2	+0.8
	comp=Z,13nm,0.9s						
SVE	Sverdlovsk	124.86	325	ePKIKP	PKPdf	12 24 28.4	-0.6
SVE				pmax	pmax		
	comp=Z,16nm,1.0s						
SOKR	Solikamsk	125.92	329c	iPKIKP	PKPdf	12 24 30.4	-0.4
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARU	Arti	126.07	325	i PKIKP	PKPdf	12 24 30.7	-0.6
ARU						12 26 24.5	
ARU						12 31 03.7	
BOSA	Boshof	126.14	205	PKP	PKPdf	12 24 32.6	0.0
BOSA	Boshof	126.14	205	PKP	PKPdf	12 24 32.6	0.0
	comp=Z,2.5nm,0.6s,baz=298,slow=16,SNR=9.7						
AB31	Akbulak array	127.00	316	⇑P	PKPdf	12 24 28.7	-4.7
	comp=Z,2.0nm,0.6s,baz=124,slow=5.1,SNR=20						
AB31	Akbulak array	127.00	316	i PKIKP	PKPdf	12 24 28.6	-4.7
AB31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ABKAR	Akbulak array	127.00	316	ePKPdf	PKPdf	12 24 33.1	-0.2
AKTO	Aktyubinsk	127.98	318	PKIKP	PKPdf	12 24 35.0	-0.1
AKTO	Aktyubinsk	127.98	318	PKP	PKPdf	12 24 35.0	-0.1
AKTO	Aktyubinsk	127.98	318	PKP	PKPdf	12 24 35.0	-0.1
	comp=Z,4.6nm,0.7s,baz=76,slow=3.4,SNR=25						
SCO	Scoresbysund	128.37	10	⇓iPKIKP	PKPdf	12 24 35.2	-0.1
SCO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SCO	Scoresbysund	128.37	10	⇓iP	PKPdf	12 24 35.2	-0.1
	comp=Z,7.7nm,1.1s						
KEV	Kevo	129.11	349	ePKIKP	PKPdf	12 24 36.0	-0.7
KEV	Kevo	129.11	349	epkp	PKPdf	12 24 36.0	-0.7
ARCES	ARCESS Array B	129.56	350	PKP	PKPdf	12 24 37.0	-0.7
ARCES	ARCESS Array B	129.56	350	PKhKP	PKPpre	12 24 28.0	
	comp=Z,2.8nm,0.9s,baz=21,slow=7.8,SNR=4.1						
ARCES				PKP	PKPdf	12 24 37.0	-0.7
	comp=Z,2.7nm,0.4s,baz=19,slow=1.3,SNR=38						
JOF	Joensuu	133.85	342	ePKIKP	PKPdf	12 24 38.6	-7.3
JOF	Joensuu	133.85	342	epkp	PKPdf	12 24 38.6	-7.3
KAF	Kangasniemi	135.85	344	ePKIKP	PKPdf	12 24 49.1	-0.5
KAF	Kangasniemi	135.85	344	epkp	PKPdf	12 24 49.1	-0.5
FIA1	FINESS Array S	136.48	344	ePKPdf	PKPdf	12 24 49.7	-1.1
FINES	FINESS Array B	136.48	344	PKP	PKPdf	12 24 51.1	+0.3
FINES				PP	PP	12 27 39.3	+3.5
FINES				SKPbc	SKPbc	12 27 54.1	+1.1
FINES	FINESS Array B	136.48	344	PKhKP	PKPpre	12 24 38.8	
	comp=Z,0.5nm,0.4s,baz=70,slow=2.2,SNR=5.7						
FINES				PKP	PKPdf	12 24 51.1	+0.3
	comp=Z,1.2nm,0.4s,baz=56,slow=2.4,SNR=5.7						
FINES				PP	PP	12 27 39.3	+3.5
	comp=Z,5.2nm,1.1s,baz=15,slow=5.8,SNR=4.3						
FINES				SKPbc	SKPbc	12 27 54.1	+1.1
	comp=Z,1.9nm,0.6s,baz=64,slow=4.4,SNR=6.2						
OBN	Obninsk	137.58	332	i PKIKP	PKPdf	12 24 52.0	-1.0
OBN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZEI	Tsey	139.46	312	ePKIKP	PKPdf	12 24 58.3	+1.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NB2	NORSAR Subarra	139.57	354	PKP	PKPpre	12 24 47.0	
	comp=Z,1.9nm,0.9s,baz=19,slow=4.0						
NOA	NORSAR Array B	139.57	354	PKPpre	PKPpre	12 24 47.3	
NOA				PKP	PKPdf	12 24 56.0	-0.6
NOA				SKPbc	SKPbc	12 28 02.5	+0.6
NOA	NORSAR Array B	139.57	354	PKhKP	PKPpre	12 24 47.3	
	comp=Z,1.8nm,0.8s,baz=22,slow=3.9,SNR=7.3						
NOA				PKP	PKPdf	12 24 56.0	-0.6
	comp=Z,2.6nm,0.9s,baz=13,slow=4.0,SNR=4.7						
NOA				SKPbc	SKPbc	12 28 02.5	+0.6
	comp=Z,2.7nm,0.8s,baz=14,slow=4.4,SNR=7.6						
KMBO	Kilima Mbogo	139.81	241	PKPpre	PKPpre	12 24 51.8	
KMBO				ePKPdf	PKPdf	12 24 59.3	+0.6
KMBO	Kilima Mbogo	139.81	241	PKhKP	PKPpre	12 24 51.8	
	comp=Z,0.6nm,0.3s,baz=224,slow=23,SNR=4.2						
KBZ	Khabaz	139.82	314	PKIKP	PKPdf	12 24 58.7	+1.2
KBZ	Khabaz	139.82	314	PKP	PKPdf	12 24 58.6	+1.2
KBZ	Khabaz	139.82	314	PKP	PKPdf	12 24 58.6	+1.2
	comp=Z,1.5nm,0.8s,baz=80,slow=6.1,SNR=4.0						
KIV	Kislovodsk	139.88	314	i PKIKP	PKPdf	12 24 57.0	-0.7
HFS	Hagfors	140.16	352	PKPpre	PKPpre	12 24 48.9	
HFS				PKP	PKPdf	12 24 58.0	+0.4
HFS				SKPbc	SKPbc	12 28 04.4	+0.9
HFS	Hagfors	140.16	352	PKhKP	PKPpre	12 24 48.9	
	comp=Z,3.2nm,0.4s,baz=58,slow=3.7,SNR=23						
HFS				PKP	PKPdf	12 24 58.0	+0.4
	comp=Z,4.6nm,0.7s,baz=100,slow=1.8,SNR=7.2						
HFS				SKPbc	SKPbc	12 28 04.4	+0.9
	comp=Z,3.5nm,0.8s,baz=11,slow=3.0,SNR=6.9						
AKASG	Malin Array Be	143.84	331	PKHKP	PKPpre	12 25 01.3	
AKASG	Malin Array Be	143.84	331	PKPpre	PKPpre	12 25 01.3	
AKASG				SKPbc	SKiKP	12 28 13.6	-0.2
AKASG	Malin Array Be	143.84	331	PKhKP	PKPpre	12 25 01.3	
	comp=Z,20nm,0.6s,baz=43,slow=4.3,SNR=50						
AKASG				SKPbc	SKiKP	12 28 13.6	-0.2
	comp=Z,1.6nm,0.6s,baz=44,slow=2.9,SNR=6.8						
AK01	Malin Array Si	143.85	331	ePKPdf	PKPab	12 25 01.2	-1.2
KIEV	Kiev	143.85	331	ePKHKP	PKPab	12 25 01.3	-1.1
KIEV	Kiev	143.85	331	ePKPdf	PKPab	12 25 01.3	-1.1
AK02	Malin Array Si	143.88	331	ePKPdf	PKPab	12 25 01.2	-1.3
MUD	Monsted U'grnd	144.29	354	⇓iPKIKP	PKPab	12 25 03.4	-0.5
MUD				pmax	pmax		
	comp=Z,31nm,0.9s						
MUD	Monsted U'grnd	144.29	354	⇓iP	PKPab	12 25 03.4	-0.5
	comp=Z,31nm,0.8s						
COP	Copenhagen	144.64	351	i P	PKPbc	12 25 04.6	-0.6
	comp=Z,14nm,0.8s						
BSD	Bornholm Skovb	144.75	348	⇓iPKIKP	PKPbc	12 25 04.5	-1.1
BSD				pmax	pmax		
	comp=Z,44nm,0.8s						
BSD	Bornholm Skovb	144.75	348	⇓iP	PKPbc	12 25 04.5	-1.1
	comp=Z,44nm,0.8s						
MALT	Malatya	144.87	307	ePKIKP	PKPab	12 25 06.9	-0.1
MALT	Malatya	144.87	307	ePKPbc	PKPab	12 25 06.9	-0.1
MALT	Malatya	144.87	307	⇑iP	PKPdf	12 25 06.8	0.0
LLD	Lille Linde	145.01	351	i PKIKP	PKPdf	12 25 05.8	-0.5
LLD				pmax	pmax		
	comp=Z,42nm,0.7s						
LLD	Lille Linde	145.01	351	i P	PKPdf	12 25 05.8	-0.5
	comp=Z,42nm,0.7s						
EKA	Eskdalemuir Ar	145.43	6	PKPbc	PKPdf	12 25 05.8	-1.2
EKA	Eskdalemuir Ar	145.43	6	PKPbc	PKPdf	12 25 05.8	-1.2
	comp=Z,2.7nm,0.5s,baz=327,slow=2.6,SNR=6.8						
ESK	Eskdalemuir	145.44	6	i PKP2	PKPab	12 25 11.0	+2.6
GKP	Gorka Klasztor	145.95	345	ePKP	PKPbc	12 25 08.7	-0.6
BEL	Belsk	146.21	340	ePKP	PKPbc	12 25 09.9	-0.2
BSEG	Bad Segeberg	146.64	352	ePKIKP	PKPdf	12 25 09.5	+0.4
BSEG	Bad Segeberg	146.64	352	ePKPdf	PKPdf	12 25 09.5	+0.4
BSEG				ePKPbc	PKPbc	12 25 11.2	0.0
LVV	L'vov	146.71	335	ePKIKP	PKPdf	12 25 09.8	+0.4
DRWC	Darouich	146.75	305	eP	PKPab	12 25 17.5	+3.2
ZALF	Zalf	147.20	298	i P	PKPbc	12 25 13.5	0.0
KWP	Kalwaria Pacla	147.37	336	ePKP	PKPbc	12 25 13.1	-0.3
RUE	Ruedersdorf	147.46	348	ePKPdf	PKPdf	12 25 11.2	+0.7
RUE				ePKPbc	PKPbc	12 25 13.5	0.0
ARNB	Al Arnab	147.52	304	i P	PKPdf	12 25 12.5	+1.2
BR131	Keskin Array S	147.77	312	ePKPdf	PKPdf	12 25 11.7	0.0
BR131				ePKPbc	PKPbc	12 25 14.0	-1.0
BR131				ePKPab	PKPab	12 25 17.8	-0.5
BRTR	Keskin Array B	147.77	312	PKP	PKPdf	12 25 11.4	-0.3
BRTR				PKPbc	PKPbc	12 25 14.2	-0.8
BRTR	Keskin Array B	147.77	312	PKP	PKPdf	12 25 11.4	-0.3
	comp=Z,8.9nm,0.7s,baz=165,slow=3.2,SNR=42						
BRTR				PKPbc	PKPbc	12 25 14.2	-0.8
	comp=Z,9.0nm,0.7s,baz=134,slow=3.6,SNR=40						
TOTH	TOTAH	147.84	300	eP	PKPdf	12 25 08.5	-3.4
BUR08	Bucovina Ar. S	147.88	331	ePKPbc	PKPbc	12 25 15.3	+0.3
BURAR	Bucovina Array	147.89	331	⇓iP	PKPbc	12 25 14.6	-0.4
OJC	Ojcow	147.92	339	i PKP2	PKPbc	12 25 14.3	-0.5
OJC	Ojcow	147.92	339	ePKiKP	PKPbc	12 25 14.3	-0.5
NRDL	Niedersach Rie	148.07	352	ePKPdf	PKPdf	12 25 11.7	+0.3
NRDL				ePKPbc	PKPbc	12 25 14.8	-0.2
KOLS	Kolonicke sedl	148.10	335	ePKP2	PKPbc	12 25 15.6	+0.2
KOLS	Kolonicke sedl	148.10	335	ePKP	PKPbc	12 25 15.6	+0.2
CFR	Carcaliu	148.16	325	⇑iP	PKPbc	12 25 15.5	-0.1
ANTO	Ankara	148.29	313	ePKP2	PKPbc	12 25 16.0	-0.2
ANTO	Ankara	148.29	313	ePKPbc	PKPbc	12 25 16.0	-0.2
UZH	Uzhgorod	148.34	335	⇑iPKP2	PKPbc	12 25 15.1	-0.8
KSP	Ksiaz	148.40	344	ePKP2	PKPab	12 25 20.0	-0.3
KSP	Ksiaz	148.40	344	ePKP	PKPbc	12 25 16.2	+0.2
NIE	Niedzica	148.43	338	ePKHKP	PKPdf	12 25 11.1	-1.2
NIE	Niedzica	148.43	338	ePKPdf	PKPdf	12 25 11.1	-1.2
NIE				ePKiKP	PKPbc	12 25 16.4	+0.2
VRI	Vrincioaia	148.43	327	⇑iP	PKPbc	12 25 15.6	-0.7
CRVS	Cervenica-Dubn	148.44	336	ePKIKP	PKPbc	12 25 15.1	-1.1
CRVS	Cervenica-Dubn	148.44	336	ePKP	PKPbc	12 25 15.1	-1.1
TIRR	Tirgusor	148.47	324	⇑iP	PKPbc	12 25 15.5	-0.9
TRPA	Tarpa	148.65	334	⇓iP	PKPbc	12 25 16.7	0.0
CLZ	Clausthal	148.67	351	ePKPdf	PKPdf	12 25 13.0	+0.4
CLZ				ePKPbc	PKPbc	12 25 17.0	+0.3
CLL	Collm	148.73	348	⇓ePKHKP	PKPdf	12 25 12.0	-0.6
CLL				i		12 25 20.8	
CLL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CLL				pmax	pmax		
	comp=Z,11nm,0.6s						
CLL				pmax	pmax		
	comp=Z,53nm,1.0s						
CLL	Collm	148.73	348	ePKPdf	PKPdf	12 25 12.8	+0.2
CLL				ePKPbc	PKPbc	12 25 16.7	-0.1
CLL	Collm	148.73	348	ePKPdf	PKPdf	12 25 12.0	-0.6
	comp=Z,11nm,1.2s						
CLL				⇓iPKPbc	PKPbc	12 25 16.7	-0.1
	comp=Z,53nm,0.6s						
CLL				i PKiKP	PKiKP	12 25 18.7	+0.6
CLL				⇑iPKPab	PKPab	12 25 20.8	-0.8
	comp=Z,27nm,1.0s						
CLL				e		12 26 37.0	
CLL				ePP	PP	12 28 52.0	+2.8
OKC	Ostrava-Krasne	148.78	341	⇑iPKP	PKPbc	12 25 16.1	-0.9
OKC				ePKPAB	PKPab	12 25 22.2	+0.4
UPC	Upice	148.78	344	ePKPDF	PKPdf	12 25 12.9	+0.1
UPC				⇑iPKP	PKPbc	12 25 17.1	+0.1
UPC				ePKPAB	PKPab	12 25 21.8	-0.1
DPC	Dobruska-Polom	148.84	343	ePKPDF	PKPdf	12 25 13.2	+0.3
DPC				⇑iPKP	PKPbc	12 25 17.4	+0.2
BRG	Berggiesshubel	148.94	346	ePKP	PKPdf	12 25 13.1	+0.1
	comp=Z,9.5nm,1.1s						
BRG				i		12 25 17.2	
	comp=Z,26nm,0.7s						
BRG				i		12 25 21.9	
	comp=Z,19nm,1.0s						
BRG				epPKP	pPKPdf	12 26 30.3	-1.5
	comp=Z,6.3nm,1.3s						
BRG	Berggiesshubel	148.94	346	ePKPdf	PKPdf	12 25 13.4	+0.4
BRG				ePKPbc	PKPbc	12 25 17.5	+0.1
WTSB	Winterswijk	148.95	355	ePKP	PKPbc	12 25 17.1	-0.2
MORC	Moravsky Berou	149.01	341	ePKPdf	PKPdf	12 25 12.7	-0.5
MORC				ePKPbc	PKPbc	12 25 17.0	-0.7
MORC				ePKPab	PKPab	12 25 23.1	+0.2
MORC	Moravsky Berou	149.01	341	⇑iP	PKPdf	12 25 13.7	+0.5
DOPR	Dopca	149.02	329	⇓iP	PKPbc	12 25 18.1	+0.3
FBE	Freiberg	149.03	347	ePKPdf	PKPdf	12 25 13.6	+0.5
FBE				ePKPbc	PKPbc	12 25 18.0	+0.4
NEUB	Neuenburg	149.06	349	ePKPdf	PKPdf	12 25 13.5	+0.3
NEUB				ePKPbc	PKPbc	12 25 17.7	+0.1
MLR	Muntele Rosu	149.08	328	PKPbc	PKPbc	12 25 17.4	-0.7
MLR	Muntele Rosu	149.08	328	⇑iP	PKPbc	12 25 17.8	-0.3
MLR	Muntele Rosu	149.08	328	PKPbc	PKPbc	12 25 17.4	-0.7
	comp=Z,2.6nm,0.7s,baz=90,slow=3.4,SNR=8.4						
PVCC	Panska Ves	149.12	345	i PKP2	PKPbc	12 25 18.0	+0.2
PVCC	Panska Ves	149.12	345	⇑iPKP	PKPbc	12 25 18.0	+0.2
BUG	Bochum--Univer	149.43	355	ePKPdf	PKPdf	12 25 13.9	+0.2
BUG				ePKPbc	PKPbc	12 25 18.3	-0.2
MOX	Moxa	149.63	349	ePKPdf	PKPdf	12 25 14.3	+0.2
MOX				ePKPbc	PKPbc	12 25 19.0	-0.1
DRGR		149.63	333	⇓iP	PKPbc	12 25 18.3	-1.0
PRU	Pruhonice	149.63	345	i PKP2	PKPbc	12 25 19.1	0.0
PRU	Pruhonice	149.63	345	⇑iPKP	PKPbc	12 25 19.1	0.0
PLN	Plauen	149.68	348	ePKPdf	PKPdf	12 25 14.5	+0.3
PLN				ePKPbc	PKPbc	12 25 19.3	+0.1
WERD	Werda	149.69	348	ePKPdf	PKPdf	12 25 14.5	+0.2
WERD				ePKPbc	PKPbc	12 25 19.2	-0.1
TANN	Tannenbergstha	149.69	348	ePKPdf	PKPdf	12 25 14.5	+0.2
TANN				ePKPbc	PKPbc	12 25 19.3	0.0
VRAC	Vranov	149.71	342	PKPbc	PKPbc	12 25 19.5	+0.1
VRAC				PKPab	PKPab	12 25 25.9	+0.2
VRAC	Vranov	149.71	342	⇑iP	PKPbc	12 25 19.2	-0.1
VRAC	Vranov	149.71	342	PKPbc	PKPbc	12 25 19.5	+0.1
	comp=Z,8.6nm,0.8s,baz=343,slow=1.4,SNR=13						
VRAC				PKPab	PKPab	12 25 25.9	+0.2
	comp=Z,13nm,0.9s,baz=11,slow=1.4,SNR=9.4						
UBBA	Unterbreizbach	149.72	351	ePKPdf	PKPdf	12 25 14.3	+0.2
UBBA				ePKPbc	PKPbc	12 25 18.9	-0.2
VYHS	Vyhne	149.72	339	ePKP	PKPbc	12 25 19.1	-0.3
GUNZ	Gunzen	149.76	348	ePKPdf	PKPdf	12 25 14.7	+0.3
GUNZ				ePKPbc	PKPbc	12 25 19.7	+0.2
WERN	Wernitzgruen	149.83	348	ePKPdf	PKPdf	12 25 15.0	+0.5
WERN				ePKPbc	PKPbc	12 25 19.8	+0.2
PSZ	Piszkesteto	149.84	337	ePKPdf	PKPdf	12 25 14.5	-0.1
PSZ				ePKPbc	PKPbc	12 25 19.3	-0.5
PSZ				ePKPab	PKPab	12 25 24.4	-2.0
PSZ	Piszkesteto	149.84	337	⇓iP	PKPbc	12 25 18.8	-1.0
NKC	Novy Kostel	149.86	348	i PKP2	PKPbc	12 25 19.8	+0.1
NKC	Novy Kostel	149.86	348	⇑iPKP	PKPbc	12 25 19.8	+0.1
TREC	Trest	150.03	343	⇑iPKP	PKPbc	12 25 20.0	-0.1
MANZ	Manzenberg	150.16	348	ePKPdf	PKPdf	12 25 15.2	+0.2
MANZ				ePKPbc	PKPbc	12 25 20.4	0.0
MANZ				ePKPab	PKPab	12 25 27.1	-0.5
BEBN	Eben Emael	150.19	356	PKPbc	PKPbc	12 25 19.9	-0.5
HGN	Heimansgroeve	150.20	356	ePKP	PKPbc	12 25 20.2	-0.3
	comp=Z,27nm,0.9s						
MEM	Membach	150.35	356	PKPbc	PKPbc	12 25 20.6	-0.2
ROTZ	Rotzenmuhle	150.35	348	ePKPdf	PKPdf	12 25 15.6	+0.3
ROTZ				ePKPbc	PKPbc	12 25 21.0	+0.2
TNS	Taunus Mts	150.51	353	ePKIKP	PKPdf	12 25 16.0	+0.4
TNS	Taunus Mts	150.51	353	ePKPdf	PKPdf	12 25 16.0	+0.4
TNS				ePKPbc	PKPbc	12 25 21.2	-0.1
TNS				ePKPab	PKPab	12 25 28.7	-0.4
SNF	Seneffe	150.54	358	PKPbc	PKPbc	12 25 21.2	0.0
BCLA	Clavier	150.58	357	PKPbc	PKPbc	12 25 21.0	-0.3
BCLA				PKPab	PKPab	12 25 28.2	-1.0
GRF	Grafenberg Arr	150.61	349	ePKIKP	PKPbc	12 25 21.6	+0.1
GRF	Grafenberg Arr	150.61	349	ePKPbc	PKPbc	12 25 21.6	+0.1
GRF				ePKPab	PKPab	12 25 29.3	-0.1
KHC	Kasperske Hory	150.66	346	ePKIKP	PKPdf	12 25 15.0	-0.8
KHC				e		12 25 30.1	
KHC	Kasperske Hory	150.66	346	ePKPdf	PKPdf	12 25 15.0	-0.8
KHC				ePKPbc	PKPbc	12 25 21.4	-0.2
KHC				ePKPab	PKPab	12 25 30.1	+0.4
KHC	Kasperske Hory	150.66	346	ePKPDF	PKPdf	12 25 15.6	-0.2
KHC				⇑iPKP	PKPbc	12 25 21.6	0.0
KHC				ePKPAB	PKPab	12 25 28.1	-1.6
WET	Wettzell	150.81	346	ePKIKP	PKPdf	12 25 16.1	+0.1
WET	Wettzell	150.81	346	ePKPdf	PKPdf	12 25 16.1	+0.1
WET				ePKPbc	PKPbc	12 25 21.6	-0.4
WET				ePKPab	PKPab	12 25 30.2	-0.1
GEC2	GERESS Array S	150.90	345	ePKIKP	PKPdf	12 25 16.2	-0.1
GEC2	GERESS Array S	150.90	345	ePKPdf	PKPdf	12 25 16.2	-0.1
GEC2				ePKPbc	PKPbc	12 25 22.2	-0.1
GEC2				ePKPab	PKPab	12 25 30.5	-0.3
GERES	GERESS Array B	150.90	345	PKP	PKPdf	12 25 15.9	-0.4
GERES				PKPbc	PKPbc	12 25 21.7	-0.5
GERES	GERESS Array B	150.90	345	PKP	PKPdf	12 25 15.9	-0.4
	comp=Z,2.0nm,1.0s,baz=11,slow=1.4,SNR=12						
GERES				PKPbc	PKPbc	12 25 21.7	-0.5
	comp=Z,11nm,0.9s,baz=27,slow=1.6,SNR=49						
GIVF	Givet	150.92	357	ePKIKP	PKPdf	12 25 15.3	-0.8
	comp=Z,63nm,1.5s						
GIVF	Givet	150.92	357	ePKIKP	PKPdf	12 25 15.3	-0.8
GIVF	Givet	150.92	357	ePKPdf	PKPdf	12 25 15.3	-0.8
DOU	Dourbes	150.94	358	PKPbc	PKPbc	12 25 22.2	0.0
BZS	Buzias	151.02	332	⇓iP	PKPbc	12 25 22.0	-0.5
CONA	Conrad Observa	151.16	342	⇑iPKPdf	PKPdf	12 25 16.6	-0.1
	comp=Z,5.1nm,1.2s						
CONA				⇓iPKiKP	PKPbc	12 25 22.9	0.0
	comp=Z,16nm,0.7s						
CONA	Conrad Observa	151.16	342	⇓iP	PKPbc	12 25 22.9	0.0
WLF	Walferdange	151.28	356	ePKIKP	PKPdf	12 25 15.3	-1.4
WLF				e		12 25 32.0	
WLF	Walferdange	151.28	356	ePKPdf	PKPdf	12 25 17.5	+0.8
WLF				ePKPbc	PKiKP	12 25 23.4	0.0
WLF				ePKPab	PKPab	12 25 32.2	0.0
WLF	Walferdange	151.28	356	ePKPdf	PKPdf	12 25 15.3	-1.4
WLF				ePKPbc	PKPbc	12 25 22.9	-0.1
WLF				ePKPab	PKPab	12 25 32.0	-0.2
PKSM	Moragy	151.74	336	⇑iP	PKPbc	12 25 22.5	-1.6
PKSM	Moragy	151.74	336	⇓e	PKPbc	12 25 23.6	-0.5
STU	Stuttgart	151.84	351	ePKIKP	PKPdf	12 25 18.1	+0.5
STU				e		12 25 34.0	
STU	Stuttgart	151.84	351	ePKPdf	PKPdf	12 25 18.0	+0.5
STU				ePKPbc	PKPbc	12 25 24.3	0.0
STU				ePKPab	PKPab	12 25 33.8	-0.8
STU	Stuttgart	151.84	351	ePKPdf	PKPdf	12 25 18.1	+0.5
STU				ePKPbc	PKPbc	12 25 24.2	0.0
STU				ePKPab	PKPab	12 25 34.0	-0.6
FUR	Furstenfeldbru	152.07	348	ePKIKP	PKPbc	12 25 24.5	-0.3
FUR	Furstenfeldbru	152.07	348	ePKPbc	PKPbc	12 25 24.5	-0.3
FUR				ePKPab	PKPab	12 25 35.3	-0.3
RJOB	Jochberg	152.15	346	ePKPbc	PKPbc	12 25 24.5	-0.6
RJOB				ePKPab	PKPab	12 25 36.0	0.0
FLN	La Foliniere	152.18	5	ePKIKP	PKPdf	12 25 17.3	-0.8
	comp=Z,59nm,1.2s						
FLN	La Foliniere	152.18	5	ePKIKP	PKPdf	12 25 17.3	-0.8
FLN	La Foliniere	152.18	5	ePKPdf	PKPdf	12 25 17.3	-0.8
ROSF	Rostrenen	152.29	9	ePKIKP	PKPdf	12 25 17.1	-1.1
ROSF	Rostrenen	152.29	9	ePKIKP	PKPdf	12 25 17.1	-1.1
ROSF	Rostrenen	152.29	9	ePKPdf	PKPdf	12 25 17.1	-1.1
LDF	La Druitiere	152.37	4	ePKIKP	PKPdf	12 25 17.4	-1.0
	comp=Z,58nm,1.4s						
LDF	La Druitiere	152.37	4	ePKIKP	PKPdf	12 25 17.4	-1.0
LDF	La Druitiere	152.37	4	ePKPdf	PKPdf	12 25 17.4	-1.0
BFO	Black Forest	152.39	352	ePKIKP	PKPdf	12 25 17.9	-0.6
BFO				e		12 25 35.7	
BFO	Black Forest	152.39	352	ePKPbc	PKPbc	12 25 25.1	-0.5
BFO				ePKPab	PKPab	12 25 36.2	-0.7
BFO	Black Forest	152.39	352	ePKPdf	PKPdf	12 25 17.9	-0.6
BFO				ePKPbc	PKPbc	12 25 25.3	-0.3
BFO				ePKPab	PKPab	12 25 35.7	-1.2
PAGF	Fort de Pagny	152.42	356	ePKIKP	PKPdf	12 25 17.8	-0.6
PAGF	Fort de Pagny	152.42	356	ePKPdf	PKPdf	12 25 17.8	-0.6
CDF	Champ du Feu	152.43	354	ePKIKP	PKPdf	12 25 17.4	-1.2
	comp=Z,20nm,1.5s						
CDF	Champ du Feu	152.43	354	ePKIKP	PKPdf	12 25 17.4	-1.2
CDF	Champ du Feu	152.43	354	ePKPdf	PKPdf	12 25 17.4	-1.2
SGMF	Saint Gilles	152.47	8	ePKIKP	PKPdf	12 25 17.4	-1.1
	comp=Z,22nm,1.1s						
SGMF	Saint Gilles	152.47	8	ePKIKP	PKPdf	12 25 17.4	-1.1
SGMF	Saint Gilles	152.47	8	ePKPdf	PKPdf	12 25 17.4	-1.1
MEZF	Maizieres J'vi	152.51	357	ePKIKP	PKPdf	12 25 16.8	-1.8
MEZF	Maizieres J'vi	152.51	357	ePKPdf	PKPdf	12 25 16.8	-1.8
GRR	Gorron	152.52	5	ePKIKP	PKPdf	12 25 17.9	-0.7
GRR	Gorron	152.52	5	ePKIKP	PKPdf	12 25 17.9	-0.7
GRR	Gorron	152.52	5	ePKPdf	PKPdf	12 25 17.9	-0.7
VTS	Vitosha	152.53	326	⇑iP	PKPbc	12 25 25.5	-0.7
SOKA	Soboth	152.54	342	⇑iPKPdf	PKPdf	12 25 17.9	-0.9
	comp=Z,5.4nm,1.5s						
SOKA				⇑iPKiKP	PKPbc	12 25 25.3	-0.7
	comp=Z,9.3nm,1.0s						
SOKA	Soboth	152.54	342	⇑iP	PKPbc	12 25 25.3	-0.7
PERS	Pernice	152.55	341	i PKPdf	PKPdf	12 25 18.1	-0.6
PERS				i PKPbc	PKPbc	12 25 25.1	-1.0
PERS				ePKPab	PKPab	12 25 37.1	-0.6
KBA	Koelnbreinsper	152.63	344	⇑iPKPdf	PKPdf	12 25 18.2	-0.8
	comp=Z,5.8nm,1.4s						
KBA				⇓iPKiKP	PKPbc	12 25 26.0	-0.3
	comp=Z,8.3nm,1.1s						
KBA	Koelnbreinsper	152.63	344	⇓iP	PKPbc	12 25 26.0	-0.3
SFTF	Sexfontaines	152.81	357	ePKIKP	PKPdf	12 25 18.4	-0.6
	comp=Z,89nm,1.6s						
SFTF	Sexfontaines	152.81	357	ePKPdf	PKPdf	12 25 18.4	-0.6
HAU	Haudompre	152.92	355	ePKIKP	PKPdf	12 25 18.4	-0.8
HAU	Haudompre	152.92	355	ePKIKP	PKPdf	12 25 18.4	-0.8
HAU	Haudompre	152.92	355	ePKPdf	PKPdf	12 25 18.4	-0.8
HINF	Hinteralfeld	153.06	354	ePKIKP	PKPdf	12 25 18.4	-1.1
HINF	Hinteralfeld	153.06	354	ePKIKP	PKPdf	12 25 18.4	-1.1
HINF	Hinteralfeld	153.06	354	ePKPdf	PKPdf	12 25 18.4	-1.1
LJU	Ljubljana	153.26	342	ePKPdf	PKPdf	12 25 19.6	-0.1
LJU				i PKPbc	PKPbc	12 25 26.9	-0.6
LJU				i PKPab	PKPab	12 25 39.8	-0.9
FETA	Feichten	153.27	348	⇑iPKPdf	PKPdf	12 25 19.0	-1.0
	comp=Z,12nm,1.1s						
FETA	Feichten	153.27	348	⇑iP	PKPdf	12 25 19.0	-1.0
CRNS	Crni Vrh	153.30	342	i PKPdf	PKPdf	12 25 19.4	-0.5
CRNS				i PKPbc	PKPbc	12 25 26.7	-1.0
CRNS				i PKPab	PKPab	12 25 39.5	-1.4
DAVOX	Davos/Dischmat	153.66	349	PKP	PKPdf	12 25 21.0	+0.4
DAVOX				PKPbc	PKiKP	12 25 28.6	0.0
DAVOX				PKPab	PKPab	12 25 42.5	-0.1
DAVOX	Davos/Dischmat	153.66	349	PKP	PKPdf	12 25 21.0	+0.4
	comp=Z,3.7nm,0.7s,baz=336,slow=7.7,SNR=5.7						
DAVOX				PKPbc	PKiKP	12 25 28.6	0.0
	comp=Z,4.5nm,0.4s,baz=216,slow=3.0,SNR=7.7						
DAVOX				PKPab	PKPab	12 25 42.4	-0.1
	comp=Z,1.9nm,0.4s,baz=358,slow=18,SNR=4.6						
LOR	Lormes	153.79	358	ePKIKP	PKPdf	12 25 19.9	-0.6
	comp=Z,32nm,1.4s						
LOR	Lormes	153.79	358	ePKPdf	PKPdf	12 25 19.9	-0.6
SSF	Saint Saulge	154.00	359	ePKIKP	PKPdf	12 25 20.2	-0.6
	comp=Z,23nm,1.3s						
SSF	Saint Saulge	154.00	359	ePKIKP	PKPdf	12 25 20.2	-0.6
SSF	Saint Saulge	154.00	359	ePKPdf	PKPdf	12 25 20.2	-0.6
TUE	Stuetta	154.05	350	ePKPdf	PKPdf	12 25 20.8	-0.3
TUE				ePKPbc	PKPbc	12 25 29.3	-0.2
AVF	Avril sur Loir	154.28	359	ePKIKP	PKPdf	12 25 20.4	-0.7
	comp=Z,7.3nm,1.0s						
AVF	Avril sur Loir	154.28	359	ePKIKP	PKPdf	12 25 20.4	-0.7
AVF	Avril sur Loir	154.28	359	ePKPdf	PKPdf	12 25 20.4	-0.7
CABF	La Chapelle	154.32	355	ePKIKP	PKPdf	12 25 20.9	-0.4
CABF	La Chapelle	154.32	355	ePKIKP	PKPdf	12 25 20.9	-0.4
CABF	La Chapelle	154.32	355	ePKPdf	PKPdf	12 25 20.9	-0.4
MFF	Saint Martin d	154.35	5	ePKIKP	PKPdf	12 25 20.5	-0.7
MFF	Saint Martin d	154.35	5	ePKIKP	PKPdf	12 25 20.5	-0.7
MFF	Saint Martin d	154.35	5	ePKPdf	PKPdf	12 25 20.5	-0.7
SMF	Signal de Mont	154.41	358	ePKIKP	PKPdf	12 25 20.6	-0.8
	comp=Z,21nm,1.3s						
SMF	Signal de Mont	154.41	358	ePKIKP	PKPdf	12 25 20.6	-0.8
SMF	Signal de Mont	154.41	358	ePKPdf	PKPdf	12 25 20.6	-0.8
BGF	Bois d'Agland	154.51	0	ePKIKP	PKPdf	12 25 20.5	-1.0
BGF	Bois d'Agland	154.51	0	ePKIKP	PKPdf	12 25 20.5	-1.0
BGF	Bois d'Agland	154.51	0	ePKPdf	PKPdf	12 25 20.5	-1.0
TCF	Toulx Ste Croi	154.78	1	ePKIKP	PKPdf	12 25 20.8	-1.1
	comp=Z,38nm,1.4s						
TCF	Toulx Ste Croi	154.78	1	ePKIKP	PKPdf	12 25 20.8	-1.1
TCF	Toulx Ste Croi	154.78	1	ePKPdf	PKPdf	12 25 20.8	-1.1
LPL	La Plagne	155.35	353	ePKIKP	PKPdf	12 25 23.5	+0.6
LPL	La Plagne	155.35	353	ePKIKP	PKPdf	12 25 23.5	+0.6
LPL	La Plagne	155.35	353	ePKPdf	PKPdf	12 25 23.5	+0.6
LPG	La Plagne	155.36	353	ePKIKP	PKPdf	12 25 23.6	+0.5
LPG	La Plagne	155.36	353	ePKIKP	PKPdf	12 25 23.6	+0.5
LPG	La Plagne	155.36	353	ePKPdf	PKPdf	12 25 23.6	+0.5
ORIF	Oris-en-Rattie	156.02	355	ePKIKP	PKPdf	12 25 23.3	-0.4
ORIF	Oris-en-Rattie	156.02	355	ePKIKP	PKPdf	12 25 23.3	-0.4
ORIF	Oris-en-Rattie	156.02	355	ePKPdf	PKPdf	12 25 23.3	-0.4
MBDF	Montbardon	156.12	353	ePKIKP	PKPdf	12 25 23.4	-0.5
MBDF	Montbardon	156.12	353	ePKIKP	PKPdf	12 25 23.4	-0.5
MBDF	Montbardon	156.12	353	ePKPdf	PKPdf	12 25 23.4	-0.5
VIVF	Saint-Julien-l	156.17	357	ePKIKP	PKPdf	12 25 23.4	-0.4
	comp=Z,24nm,1.3s						
VIVF	Saint-Julien-l	156.17	357	ePKIKP	PKPdf	12 25 23.4	-0.4
VIVF	Saint-Julien-l	156.17	357	ePKPdf	PKPdf	12 25 23.4	-0.4
SMRF	Simiane la Rot	156.98	355	ePKIKP	PKPdf	12 25 24.8	-0.1
	comp=Z,16nm,1.0s						
SMRF	Simiane la Rot	156.98	355	ePKPdf	PKPdf	12 25 24.8	-0.1
PCAB	Cabril	157.40	22	ePKPab	PKPab	12 25 58.7	+0.1
SJPF	Ste Jean	157.69	8	ePKIKP	PKPdf	12 25 25.7	-0.1
SJPF	Ste Jean	157.69	8	ePKIKP	PKPdf	12 25 25.7	-0.1
SJPF	Ste Jean	157.69	8	ePKPdf	PKPdf	12 25 25.7	-0.1
PBRG	Braganca	157.74	19	ePKPab	PKPab	12 26 00.1	0.0
POLO	Lamas de Olo	157.78	22	ePKPab	PKPab	12 26 00.3	-0.1
PVRL	Vila Real	157.89	22	ePKPab	PKPab	12 26 00.7	-0.1
EPF	Esparros	157.94	5	ePKIKP	PKPdf	12 25 25.7	-0.4
EPF	Esparros	157.94	5	ePKIKP	PKPdf	12 25 25.7	-0.4
EPF	Esparros	157.94	5	ePKPdf	PKPdf	12 25 25.7	-0.4
ETSF	Etsaut	157.98	7	ePKIKP	PKPdf	12 25 26.2	0.0
ETSF	Etsaut	157.98	7	ePKIKP	PKPdf	12 25 26.2	0.0
ETSF	Etsaut	157.98	7	ePKPdf	PKPdf	12 25 26.2	0.0
MVO	Moncorvo	158.22	20	ePKPdf	PKPdf	12 25 26.8	+0.2
MVO	Moncorvo	158.22	20	ePKPab	PKPab	12 26 02.3	+0.1
PVIS	Viseu	158.33	23	ePKPab	PKPab	12 26 02.5	-0.2
MTE	Manteigas	158.73	22	ePKPab	PKPab	12 26 04.1	-0.4
PTOM	Tomar	159.09	25	ePKPab	PKPab	12 26 06.1	+0.1
PMTG	Montargil	159.63	25	ePKPab	PKPab	12 26 08.1	-0.2
PMRV	Marv??o	159.64	23	ePKPdf	PKPdf	12 25 28.4	+0.2
PMRV	Marv??o	159.64	23	ePKPab	PKPab	12 26 07.9	-0.5
PESTR	Estremoz	160.06	25	ePKPab	PKPab	12 26 09.7	-0.5
EVOP	Sao Brissos	160.13	26	ePKIKP	PKPdf	12 25 28.4	-0.3
EVOP	Sao Brissos	160.13	26	ePKPdf	PKPdf	12 25 28.4	-0.3
EVO	Evora	160.18	26	ePKIKP	PKPdf	12 25 28.4	-0.4
ESDC	Sonseca Array	160.50	16	PKP	PKPdf	12 25 29.2	0.0
ESDC				PKPab	PKPab	12 26 11.9	-0.2
ESDC				PP	PP	12 29 55.0	+0.2
ESDC	Sonseca Array	160.50	16	PKP	PKPdf	12 25 29.2	0.0
	comp=Z,1.3nm,0.8s,baz=326,slow=2.3,SNR=8.3						
ESDC				PKPab	PKPab	12 26 11.9	-0.2
	comp=Z,2.0nm,0.6s,baz=331,slow=3.9,SNR=11						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC				PP	PP	12 29 55.0	+0.2
	comp=Z,0.5nm,0.7s,baz=354,slow=6.1,SNR=4.4						
MORF	Marmelete	160.93	29	*e*PKPdf	PKPdf	12 25 30.9	+1.2
MORF	Marmelete	160.93	29	*e*PKPab	PKPab	12 26 13.8	-0.3
PCVE	Castro Verde	160.93	27	*e*PKPab	PKPab	12 26 13.7	-0.4
PVAQ	Vaqueiros	161.26	27	*e*PKPab	PKPab	12 26 13.6	-1.9
LIC	Lamto	163.44	151	*e*PKIKP	PKPdf	12 25 32.1	-0.7
	comp=Z,12nm,0.8s						
LIC	Lamto	163.44	151	*e*PKPdf	PKPdf	12 25 32.1	-0.7
DBIC	Dimbokro	163.91	151	PKP	PKPdf	12 25 33.1	-0.2
DBIC				PKPab	PKPab	12 26 28.5	+0.9
DBIC	Dimbokro	163.91	151	PKP	PKPdf	12 25 33.1	-0.2
	comp=Z,3.9nm,0.6s,baz=129,slow=3.5,SNR=6.0						
DBIC				PKPab	PKPab	12 26 28.5	+0.9
	comp=Z,2.4nm,0.5s,baz=209,slow=3.6,SNR=4.8						
KEST	Kesra	164.26	340	PKPab	PKPab	12 26 28.4	-0.5
KEST	Kesra	164.26	340	PKPab	PKPab	12 26 28.4	-0.5
	comp=Z,2.0nm,0.9s,baz=342,slow=3.5,SNR=4.0						
TOA0	Torodi Ar. Sit	172.11	172	*e*PKPdf	PKPdf	12 25 36.5	-2.3
TORD	Torodi Ar. Bea	172.11	172	PKP	PKPdf	12 25 37.8	-1.0
TORD				PKPab	PKPab	12 27 04.7	+1.0
TORD				PP	PP	12 30 54.4	+0.5
TORD	Torodi Ar. Bea	172.11	172	PKP	PKPdf	12 25 37.8	-1.0
	comp=Z,4.6nm,0.8s,baz=345,slow=1.0,SNR=31						
TORD				PKPab	PKPab	12 27 04.7	+1.0
	comp=Z,2.7nm,0.6s,baz=184,slow=2.3,SNR=14						
TORD				PP	PP	12 30 54.4	+0.5
	comp=Z,1.3nm,1.0s,baz=178,slow=3.6,SNR=3.8						
TAM	Tamanrasset	176.95	306	*e*PKIKP	PKPdf	12 25 41.1	+0.8
TAM	Tamanrasset	176.95	306	*e*PKPdf	PKPdf	12 25 41.1	+0.8

IDC 01 12:10:53.1±7.5**, 11°.07S**×**166°.84E, h0**^{km}**, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.7**/19**, mbtmp4.0**/3**, Error ellipse: s-maj=398.4km s-min=32.7km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.48	250	P	P	12 17 25.2	-0.5
	4.6nm,0.8s,baz=78,slow=7.7,SNR=6.4						
ASAR	Alice Springs	33.74	244	P	P	12 17 37.1	+0.4
	0.9nm,0.6s,baz=72,slow=8.3,SNR=4.1						
ILAR	Eielson Array	83.20	18	P	P	12 23 20.9	0.0
	0.5nm,0.5s,baz=235,slow=4.0,SNR=7.9						

*IDC **01** 12:17:38.6±5.3, 7°.12S×128°.88E, h142^{km}±54^{km}, mb3.6/7, mb1 3.9/10, mb1mx3.6/22, mbtmp3.7/10, Error ellipse: s-maj=35.2km s-min=19.5km az=51.0*
*ISCJB **01** 12:17:38.6±0.5, 7°.13S±0°.04×128°.80E±0°.06, h156^{km}, mb3.8/7, Error ellipse: s-maj=8.7km s-min=5.3km az=0.1*
*AUST **01** 12:17:41.5, 6°.98S×129°.03E, h200^{km}*
ISC 01 12:17:40.0±0.6**, 7°.21S**±0°.05×**128°.83E**±0°.08**, h156**^{km}**, n25,** σ**2**^{s}**01**/26**, mb3.8**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	3.55	350	P	Pn	12 18 39.9	+5.2
	baz=3.4,SNR=3.2						
TLE	Tual	4.19	68	P	Pn	12 18 46.0	+3.2
	baz=3.9,SNR=20						
TLE				S	Sn	12 19 30.9	-0.9
	baz=3.9,SNR=8.0						
FAKI	Fak Fak	5.45	39	P	Pn	12 18 53.8	-5.8
	baz=5.2,SNR=4.4						
FAKI				S	Sn	12 19 55.2	-6.6
	baz=5.2,SNR=4.9						
MTN	Manton Dam	6.04	158	P	Pn	12 19 10.0	+2.6
	baz=6.2,SNR=76						
MTN				S	Sn	12 20 14.4	-1.4
	baz=6.2,SNR=13						
KDU	Kakadu	6.52	147	P	Pn	12 19 15.7	+2.0
	baz=6.6,SNR=127						
KDU				S	Sn	12 20 24.2	-3.0
	baz=6.6,SNR=13						
SWI	Sorong	6.75	21	P	Pn	12 19 17.3	+0.5
	baz=6.5,SNR=15						
SWI				S	Sn	12 20 29.2	-3.5
	baz=6.5,SNR=5.0						
PCI	Palu	10.93	305	S	Sn	12 21 47.7	-26
	baz=11,SNR=5.5						
FITZ	Fitzroy Crossi	11.27	196	P	Pn	12 20 17.3	+0.7
	4.3nm,0.3s,baz=38,slow=11,SNR=52						
FITZ				S	Sn	12 22 17.9	-3.4
	3.8nm,0.3s,baz=269,slow=20,SNR=7.5						
FITZ	Fitzroy Crossi	11.27	196	P	Pn	12 20 17.3	+0.7
	baz=12,SNR=23						
WRA	Warramunga Arr	13.74	158	P	Pn	12 20 47.8	-0.7
	0.9nm,0.3s,baz=341,slow=10,SNR=34						
WRA				S	Sn	12 23 11.7	-9.2
	4.0nm,0.3s,baz=330,slow=22,SNR=12						
COEN	Coen	15.61	117	P	P	12 21 14.1	+1.4
	baz=16,SNR=11						
QIS	Mount Isa	16.89	143	P	Pn	12 21 28.6	+1.3
	baz=17,SNR=5.8						
ASAR	Alice Springs	17.08	164	P	Pn	12 21 31.1	+1.6
	3.9nm,0.3s,baz=338,slow=10.0,SNR=190						
ASAR				S	S	12 24 34.0	-4.9
	1.4nm,0.3s,baz=316,slow=16,SNR=7.1						
MEEK	Meekatharra	21.63	206	P	P	12 22 20.6	+2.6
	baz=22,SNR=3.6						
STKA	Stephens Creek	27.28	156	P	P	12 23 10.7	+0.8
	3.3nm,0.9s,baz=318,slow=6.9,SNR=6.9						
STKA	Stephens Creek	27.28	156	P	P	12 23 10.8	+0.8
	baz=28,SNR=3.9						
PSI	Prapat	31.46	287	P	P	12 23 48.0	+0.8
	5.8nm,0.9s,baz=182,slow=9.8,SNR=5.2						
ARPS	Mount Arapiles	31.73	160	P	P	12 23 51.0	+1.8
	baz=32,SNR=6.6						
PATS	Pohnpei	32.55	65	S	S	12 29 13.9	+13
	baz=32,SNR=3.7						
CMAR	Chiang Mai Arr	38.98	311	P	P	12 24 51.0	-0.3
	0.2nm,0.3s,baz=138,slow=6.5,SNR=6.6						
SONM	Songino Array	58.28	342	P	P	12 27 18.5	+0.2
	0.3nm,0.5s,baz=160,slow=4.6,SNR=2.7						
PETK	Petropavlovsk-	64.89	19	P	P	12 28 01.4	-0.9
	2.9nm,0.9s,baz=14,slow=2.0,SNR=6.2						
MKAR	Makanchi Array	67.77	327	P	P	12 28 20.8	0.0
	0.7nm,0.4s,baz=121,slow=7.7,SNR=7.3						
KURBB	Kurchatov Arra	72.08	329	P	P	12 28 46.2	-0.8
	0.9nm,0.5s,baz=132,slow=5.0,SNR=12						
TORD	Torodi Ar. Bea	127.71	281	PKP	PKPdf	12 36 27.6	-0.3
	0.3nm,0.5s,baz=84,slow=2.2,SNR=4.7						

*NNC **01** 12:20:54.5±4.2, 35°.43N×68°.76E, h17^{km}±30^{km}, mb4.1, mpv3.5, Error ellipse: s-maj=43.4km s-min=32.1km az=97.0*
ISC 01 12:20:56.4±6.3**, 35°.3N**±0°.3×**68°.9E**±0°.4**, h35**^{km}**, n7,** σ**1**^{s}**15**/8**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	7.75	28	P	Pn	12 22 48.2	+1.1
	SNR=23						
KK31	Karatay Array	7.86	9	⇑Pn	Pn	12 22 47.7	-0.5
	0.9nm,0.3s,baz=194,slow=13,SNR=26						
KK31				⇓Sn	Sn	12 24 15.6	-0.2
	2.1nm,0.5s,baz=196,slow=22,SNR=6.5						
KK31				⇑Lg	Lg	12 25 01.5	
	3.1nm,0.5s,baz=196,slow=31,SNR=5.9						
KZA	Kyzart	8.37	35	P	Pn	12 22 55.0	-0.5
	SNR=18						
CHMS	Chumysh	8.90	29	P	Pn	12 23 03.1	+0.6
	SNR=11						
USP	Ospenovka	9.03	27	P	Pn	12 23 06.0	+1.7
	SNR=7.7						
TKM2	Tokmak 2	9.19	32	⇑Pn	Pn	12 23 05.6	-1.1
	7.9nm,0.6s						
TKM2	Tokmak 2	9.19	32	P	Pn	12 23 05.9	-0.7
	SNR=20						

*ISK **01** 12:38:12.1, 40°.15N×38°.53E, h5^{km}, MD2.7*
*CSEM **01** 12:38:12.9±0.2, 40°.15N×38°.54E, h10^{km}, MD2.9, Error ellipse: s-maj=5.2km s-min=4.2km az=112.0*
*DDA **01** 12:38:13.5, 40°.13N×38°.55E, h7^{km}, MD2.9*
*ISCJB **01** 12:38:13.1±0.6, 40°.15N±0°.04×38°.56E±0°.04, h7^{km}±7^{km}, Error ellipse: s-maj=6.6km s-min=5.4km az=6.9*
ISC 01 12:38:13.3±1.1**, 40°.15N**±0°.03×**38°.54E**±0°.03**, h12**^{km}±11^{km}**, n21,** σ**0**^{s}**64**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUSE	Susehri	0.27	283	*i* P	Pg	12 38 18.8	-0.1
SUSE				*i* S	Sb	12 38 24.1	-0.6
SUSE	Susehri	0.27	283	*i* P	Pg	12 38 18.8	-0.1
SUSE				*i* S	Sb	12 38 24.1	-0.6
KELT	Kelkit	0.55	90	*i* P	Pg	12 38 24.0	-0.1
KELT				*i* S	Sb	12 38 32.8	-0.1
KELT	Kelkit	0.55	90	*i* P	Pg	12 38 24.0	-0.1
KELT				*i* S	Sb	12 38 32.8	-0.1
ILIC	ilic-Erzincan	0.69	178	*e*PG	Pg	12 38 25.6	-1.2
ILIC				*e*SG	Sg	12 38 36.4	+0.4
ILIC	ilic-Erzincan	0.69	178	*e*Pg	Pg	12 38 25.6	-1.2
ILIC				*e*Sg	Sg	12 38 36.4	+0.4
EZC	Erzincan	0.74	122	*e*PG	Pg	12 38 26.6	-1.1
EZC				*e*SG	Sg	12 38 37.8	+0.4
EZC	Erzincan	0.74	122	*e*Pg	Pg	12 38 26.6	-1.1
EZC				*e*Sg	Sg	12 38 37.8	+0.4
ESPY	Espiye-Giresun	0.78	11	*e*PG	Pg	12 38 27.9	-0.6
ESPY	Espiye-Giresun	0.78	11	*e*Pg	Pg	12 38 27.9	-0.6
GUMT	Gumushane	0.78	66	*e*PG	Pg	12 38 27.9	-0.6
GUMT	Gumushane	0.78	66	*e*Pg	Pg	12 38 27.9	-0.6
KEMA	Kemaliye	0.88	182	*i* P	Pg	12 38 29.6	-0.7
KEMA				*i* S	Sb	12 38 43.0	+0.7
KEMA	Kemaliye	0.88	182	*i* P	Pg	12 38 29.6	-0.7
KEMA				*i* S	Sb	12 38 43.0	+0.7
ERZN	Erzincan	1.07	121	*e*PG	Pg	12 38 33.9	0.0
BAYT	Ayd˜–ntepe-Bay	1.25	78	*e*PN	Pn	12 38 37.0	+0.2
BAYT	Ayd˜–ntepe-Bay	1.25	78	*e*Pn	Pn	12 38 37.0	+0.2
PTK	Pertek	1.42	152	*e*PN	Pn	12 38 39.4	+0.3
PTK	Pertek	1.42	152	*e*Pn	Pn	12 38 39.4	+0.3
MALT	Malatya	1.83	183	*e*PN	Pn	12 38 45.1	+0.4
MALT	Malatya	1.83	183	*e*Pn	Pn	12 38 45.2	+0.4

*IDC **01** 12:49:09.4±4.2, 20°.17S×69°.09W, h114^{km}±30^{km}, mb3.6/5, mb1 3.7/8, mb1mx3.5/20, mbtmp3.6/8, Error ellipse: s-maj=39.7km s-min=18.6km az=43.0*
*ISCJB **01** 12:49:09.7±0.5, 20°.08S±0°.04×69°.23W±0°.09, h131^{km}±5^{km}, mb3.7/4, Error ellipse: s-maj=14.0km s-min=5.9km az=174.0*
*GUC **01** 12:49:10.6±0.8, 20°.12S×69°.31W, h123^{km}±5^{km}, ML4.1*
*NEIC **01** 12:49:10.6, 20°.12S×69°.31W, h123^{km}, MG4.1(GUC), After GUC.*
ISC 01 12:49:10.5±0.8**, 20°.07S**±0°.03×**69°.28W**±0°.08**, h126**^{km}±7^{km}**, n28,** σ**1**^{s}**08**/39**, mb4.0**/4**, 6C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HMBC	Humberstone	0.60	250	⇑*i*P	Pn	12 49 30.2	+0.3
HMBC				*i* S	Sn	12 49 44.5	-0.1
HMBC	Humberstone	0.60	250	⇑*i*P	Pn	12 49 30.2	+0.3
HMBC				*i* S	Sn	12 49 44.5	-0.1
HMBC				AML	AML	12 49 46.1	
	comp=E,9µm,0.2s						
PSGC	Pisagua	0.92	301	⇑*i*P	Pn	12 49 32.8	+0.4
PSGC				*i* S	Sn	12 49 49.4	+0.4
PSGC	Pisagua	0.92	301	⇑*i*P	Pn	12 49 32.8	+0.4
PSGC				*i* S	Sn	12 49 49.4	+0.4
PSGC				AML	AML	12 49 52.0	
	comp=N,2µm,0.2s						
MNMC	Minimini	0.98	342	⇑*i*P	Pn	12 49 33.9	+0.7
MNMC				*i* S	Sn	12 49 51.3	+0.9
MNMC	Minimini	0.98	342	⇑*i*P	Pn	12 49 33.9	+0.7
MNMC				*i* S	Sn	12 49 51.3	+0.9
MNMC				AML	AML	12 49 53.9	
	comp=E,8µm,0.2s						
PB01	Plate Boundary	0.98	191	*i* P	Pn	12 49 33.1	+0.1
PB01				*i* S	Sn	12 49 49.5	-0.6
PB01	Plate Boundary	0.98	191	*i* P	Pn	12 49 33.1	+0.1
PB01				*i* S	Sn	12 49 49.5	-0.6
PB01				AML	AML	12 49 51.6	
	comp=N,7µm,0.3s						
PB09	Plate Boundary	1.72	179	*e*P	Pn	12 49 41.4	+0.4
PB09				*e*S	Sn	12 50 04.3	0.0
PB09	Plate Boundary	1.72	179	*e*P	Pn	12 49 41.4	+0.4
PB09				*e*S	Sn	12 50 04.3	0.0
PB09				AML	AML	12 50 07.1	
	comp=E,5µm,0.4s						
PB07	Plate Boundary	1.74	199	*e*P	Pn	12 49 41.4	+0.1
PB07				*i* S	Sn	12 50 04.6	-0.2
PB07	Plate Boundary	1.74	199	*e*P	Pn	12 49 41.4	+0.1
PB07				*i* S	Sn	12 50 04.6	-0.2
PB07				AML	AML	12 50 07.4	
	comp=E,1µm,0.3s						
ARCH	Arica	1.84	329	⇓*i*P	Pn	12 49 42.9	+0.6
ARCH	Arica	1.84	329	⇓*i*P	Pn	12 49 42.9	+0.6
ARCH				AML	AML	12 50 07.7	
	comp=N,2µm,0.4s						
PB04	Plate Boundary	2.19	185	⇓*i*P	Pn	12 49 49.4	+2.8
PB04	Plate Boundary	2.19	185	⇓*i*P	Pn	12 49 49.4	+2.8
PB04				AML	AML	12 50 37.9	
	comp=E,504nm,0.6s						
MECH	Mejillones	3.21	200	AML	AML	12 50 40.5	
	comp=N,257nm,0.5s						
LPAZ	La Paz	3.92	16	*e*Pn	Pn	12 50 11.9	+2.2
LPAZ	La Paz	3.92	16	P	Pn	12 50 10.8	+1.0
	comp=N,3.7nm,0.3s,baz=197,slow=5.6,SNR=112						
LPAZ				S	Sn	12 50 55.0	-0.5
	comp=N,0.4nm,0.3s,baz=228,slow=16,SNR=2.2						
ARE	Arequipa	4.16	329	*e*P	Pn	12 50 13.0	+0.4
ARE				*e*S	Sn	12 50 59.0	-1.7
SIV	San Ignacio	8.80	64	P	Pn	12 51 11.0	-3.9
	comp=N,3.6nm,0.3s,baz=265,slow=10,SNR=54						
SAML	Samuel	12.53	29	*e*Pn	P	12 52 09.6	-1.5
CPUP	Villa Florida	12.63	122	P	Pn	12 52 01.8	-3.9
	comp=N,0.5nm,0.3s,baz=280,slow=13,SNR=5.5						
BDFB	Brasilia	20.71	81	P	P	12 53 39.4	-1.8
	comp=N,2.6nm,0.4s,baz=231,slow=7.8,SNR=5.5						
RCBR	Riachuelo	35.38	71	P	P	12 55 54.7	+0.3
	comp=N,2.7nm,0.5s,baz=234,slow=12,SNR=6.0						
TXAR	Lajitas Array	59.26	325	P	P	12 59 00.2	+1.1
	comp=N,0.2nm,0.6s,baz=139,slow=7.0,SNR=3.3						
TORD	Torodi Ar. Bea	77.21	71	P	P	13 00 49.9	-1.3
	comp=N,1.1nm,0.4s,baz=255,slow=5.3,SNR=28						
YKA	Yellowknife Ar	89.73	341	P	P	13 01 55.4	+1.3
	comp=N,0.7nm,0.6s,baz=132,slow=4.7,SNR=26						

SKHL 01 12:56:52.5±0.9**, 51°.17N**×**136°.90E, h25**^{km}±7^{km}**, 1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRNR	Gornyy	0.50	217	⇓*i*Pg	Pb	12 57 03.0	+0.2
GRNR				AMB	AMB	12 57 04.0	
	220nm,0.2s						
GRNR				*e*Sg	Sb	12 57 09.7	-0.1
GRNR				A	A	12 57 10.2	
	2µm,0.2s						
NKL	Nikolayevsk	3.06	48	*e*Pg	Pb	12 57 47.5	+1.4
NKL				AMB	AMB	12 57 50.0	
	17nm,0.5s						
NKL				AMB	AMB	12 57 50.0	
	29nm,0.5s						
NKL				*e*Sg	Sb	12 58 28.0	+5.0
NKL				A	A	12 58 35.2	
	85nm,0.5s						
NKL				A	A	12 58 35.2	
	60nm,0.5s						
EKMR	Ekimchan	3.09	310	*e*Pn	Pn	12 57 40.0	+0.3
EKMR				*e*Pg	Pb	12 57 48.0	+1.2
EKMR				AMB	AMB	12 57 51.8	
	6.0nm,0.3s						
EKMR				AMB	AMB	12 57 51.8	
	5.0nm,0.3s						
EKMR				AMB	AMB	12 57 51.8	
	23nm,0.3s						
EKMR				*e*Sg	Sb	12 58 29.6	+5.5
EKMR				A	A	12 58 36.0	
	46nm,0.5s						
EKMR				A	A	12 58 36.0	
	38nm,0.5s						
EKMR				A	A	12 58 36.0	
	35nm,0.5s						
TYV	Tymovskoe	3.65	93	*e*rx	rx	12 58 03.5	
TYV				*e*Sg	Sb	12 58 47.0	+7.0
TYV				A	A	12 58 53.4	
	24nm,0.7s						
KLR	Kul'dur	3.84	242	*e*Pg	Pb	12 58 01.8	+2.3
KLR				*e*Sg	Sb	12 58 51.1	+5.7
BMKR	Bomnak	6.03	309	*e*Pg	Pb	12 58 42.0	+5.3
BMKR				*e*Sg	Sb	13 00 00.5	+12
BMKR				A	A	13 00 13.9	
	13nm,0.6s						
TEY	Ternei	6.14	182	*e*Sg	Sb	13 00 05.0	+13
ZEA	Zeya	6.43	297	*e*Sg	Sb	13 00 14.5	+14
KROS	Kirovskiy	6.85	302	*e*Sg	Sb	13 00 26.5	+14
KROS				A	A	13 00 32.1	
	6.0nm,0.6s						

*SZGRF **01** 12:56:26.9, 27°.11N×142°.26E, h33^{km}, mb5.6, Bonin Islands, Japan, region*
*NIED **01** 12:57:00, 26°.70N×141°.30E, h360^{km}, Mw5.3 Best double couple: $M_0$8.98000×10^{16} NP1:ϕ_s39.00000°, δ59.00000°, λ-39.00000°. NP2:ϕ_s152.00000°, δ57.00000°, λ-142.00000°.*
*BJI **01** 12:57:06.1, 26°.20N×140°.77E, h413^{km}, mB4.7/27, mb5.2/61*
*ISCJB **01** 12:57:07.8±0.3, 26°.19N±0°.02×140°.56E±0°.02, h419^{km}±2^{km}, mb5.2/383, Error ellipse: s-maj=3.0km s-min=2.6km az=144.0*
*MOS **01** 12:57:07.7±0.8, 26°.26N×140°.50E, h415^{km}, mb5.5/138, Error ellipse: s-maj=6.8km s-min=3.8km az=109.8*
*TEH **01** 12:57:09.0, 26°.22N×140°.55E, h415^{km}, ML5.4*
*IDC **01** 12:57:09.5±0.7, 26°.22N×140°.57E, h422^{km}±6^{km}, mb4.8/38, mb1 4.9/45, mb1mx4.9/45, mbtmp4.8/45, Error ellipse: s-maj=6.6km s-min=5.0km az=93.0*
*GCMT **01** 12:57:10.8±0.4, 26°.21N×140°.36E, h415^{km}±2^{km}, MW5.3, Moment Tensor Solution. s56,c80; Moment tensor: Scale 10^{16}Nm; M_{rr}-4.62±.28; $M_{\theta\theta}$-1.65±.39; $M_{\phi\phi}$6.27±.40; $M_{r\theta}$-8.77±.44; $M_{\theta\phi}$2.14±.38; $M_{\phi r}$0.64±.52; Best double couple: $M_0$9.80000×10^{16} NP1:ϕ_s171.00000°, δ40.00000°, λ-152.00000°. NP2:ϕ_s59.00000°, δ72.00000°, λ-54.00000°. Principal axes: T 7.4000, Plg19.0000°, Azm123.0000°; N 4.9000, Plg34.0000°, Azm226.0000°; P -12.2000, Plg49.0000°, Azm9.0000°; Data Used: II IU IC G CN.*
*NEIC **01** 12:57:10.5±0.4, 26°.28N×140°.43E, h434^{km}±4^{km}, mb5.4/210, MW5.2(NIED) Error ellipse: s-maj=3.7km s-min=2.9km az=154.0*
NEIC Recorded [1 JMA] in the Haha-jima-retto.
*DJA **01** 12:57:10.3±1.3, 26°N±6°×14°1E±°, h510^{km}±17^{km}, M4.8/60, mb5.0/60, mB5.3/32, Mw(mB)4.8/32*
*JMA **01** 12:57:10.7±0.3, 26°.67N×141°.31E, h418^{km}±3^{km}, M5.5*
JMA Felt I J1.
ISC 01 12:57:08.7±0.3**, 26°.26N**±0°.03×**140°.57E**±0°.03**, h416**^{km}±2^{km}**, h416**^{km}**:pP-P, n1441,** σ**1**^{s}**19**/1653**, mb5.3**/390**, 244C-387D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.49	75	P	P	12 58 03.5	+0.2
JHHJ				S	S	12 58 44.8	-2.7
CBIJ	Chichi jima	1.67	60	P	P	12 58 03.4	-0.8
CBIJ				S	S	12 58 44.5	-4.6
JHCJ	Hachijojimakas	6.82	355	P	P	12 58 48.9	-2.0
JHCJ				S	S	13 00 11.4	-2.5
JHJ2	Mitsune	6.86	355	P	P	12 58 50.4	-0.9
JHJ2				S	S	13 00 09.2	-5.4
JHJ	Hachijo jima 2	6.87	354	P	P	12 58 50.5	-1.0
	538nm,0.3s,baz=165,slow=10,SNR=134						
JHJ				S	S	13 00 10.2	-4.7
	348nm,0.3s,baz=108,slow=20,SNR=4.4						
JMY	Miyakejima3	7.83	354	P	P	12 59 02.7	+0.6
JMY				S	S	13 00 32.1	-2.6
JKO	Kozu shima	7.99	351	P	P	12 59 03.2	-0.6
JKO				S	S	13 00 36.7	-1.2
TTO1	TONANKAI O.B.S	8.03	337	P	P	12 59 06.6	+2.8
TK02	Tokai 2	8.04	343	P	P	12 59 05.5	+1.6
TK02				S	S	13 00 41.0	+2.6
TTO4	TONANKAI O.B.S	8.15	342	P	P	12 59 07.2	+2.0
TTO4				S	S	13 00 42.9	+2.2
BSO1	Boso 1	8.37	2	P	P	12 59 06.7	-0.6
BSO1				S	S	13 00 37.4	-7.3
JWZ	Kozaga	8.38	331	P	P	12 59 10.7	+2.7
JWZ				S	S	13 00 47.9	+2.1
BSO3	Boso 3	8.51	360	P	P	12 59 08.0	-1.1
BSO3				S	S	13 00 44.1	-4.0
BSO4	Boso 4	8.70	359	P	P	12 59 10.8	-0.6
JIE	Ise	8.76	339	P	P	12 59 14.3	+2.1
JIE				S	S	13 00 53.9	+0.1
JKN2	Miekihoku	8.77	336	⇓P	P	12 59 14.3	+2.0
JKN2				S	S	13 00 53.1	-0.9
MRT2	Murotomisaki 2	9.03	323	P	P	12 59 18.4	+3.2
JAO	Obara	9.41	343	P	P	12 59 20.2	+0.7
JAO				S	S	13 01 05.4	-2.0
JMN	Monobe	9.43	324	P	P	12 59 23.2	+3.5
JTN	Tanegashima 3	9.50	300	P	P	12 59 23.0	+2.5
JNAR	Kushima--Naru	9.69	305	P	P	12 59 26.1	+3.6
JAM	Amami Oshima	9.98	285	P	P	12 59 28.7	+2.9
JTZ	Takazaki	10.01	306	P	P	12 59 29.4	+3.3
JNN	Nakanoshima	10.10	293	P	P	12 59 29.1	+2.1
JKIT	Kitakata	10.16	311	P	P	12 59 31.5	+3.8
JUS	Usuki	10.23	314	P	P	12 59 32.4	+3.9
JSU	Suzuyama	10.29	303	P	P	12 59 31.9	+2.8
MJAR	Matsushiro Arr	10.44	349	P	P	12 59 30.0	-0.7
MJAR				S	S	13 01 24.7	-3.4
MJAR				ScP	ScP	13 07 46.0	-1.4
MJAR	Matsushiro Arr	10.44	349	P	P	12 59 30.0	-0.7
	18nm,0.3s,baz=169,slow=11,SNR=116						
MJAR				S	S	13 01 24.7	-3.4
	14nm,0.3s,baz=150,slow=18,SNR=9.0						
MJAR				ScP	ScP	13 07 46.0	-1.4
	0.6nm,0.3s,baz=205,slow=3.7,SNR=7.0						
MAJO	Matsushiro	10.44	349	*e*P	P	12 59 29.4	-1.4
MAJO				*e*S	S	13 01 28.2	+0.1
MAJO	Matsushiro	10.44	349	*e*P	P	12 59 29.4	-1.4
MAJO				*e*S	S	13 01 28.2	+0.1
MAT	Matsushiro	10.44	349	P	P	12 59 29.9	-0.9
MAT				S	S	13 01 24.8	-3.3
JTK	Tokunoshima	10.47	281	P	P	12 59 33.8	+2.6
JZO	Okuchi	10.49	306	P	P	12 59 34.3	+2.9
JIU2	Izumi 2	10.56	309	P	P	12 59 35.6	+3.5
JKI	Kunimi	10.71	315	P	P	12 59 37.6	+3.8
JKI				S	S	13 01 39.9	+6.3
JHS	Saijyo	10.81	325	P	P	12 59 37.5	+2.6
JHS				S	S	13 01 39.8	+4.2
JNU	Nakatsue	10.84	311	*e*P	P	12 59 38.1	+2.9
JNU				*e*S	S	13 01 34.1	-2.2
JNU				S	S	13 01 40.7	+4.3
JNU	Nakatsue	10.84	311	P	P	12 59 37.8	+2.5
	9.6nm,0.3s,baz=113,slow=6.0,SNR=98						
JNU				S	S	13 01 40.7	+4.3
	0.4nm,0.3s,baz=30,slow=22,SNR=6.2						
JSJ	Shimokoshiki	10.93	302	P	P	12 59 38.9	+2.7
JHT	Toyohira	10.93	322	P	P	12 59 38.9	+2.7
JTA	Tamana	10.99	310	P	P	12 59 40.0	+3.2
JHD	Hondo	11.00	307	P	P	12 59 39.9	+3.0
JOW	Kunigami	11.02	276	*e*P	P	12 59 37.6	+0.3
JOW				*e*S	S	13 01 39.1	-1.0
JFK	Kawauchi	11.07	1	P	P	12 59 38.2	+0.5
JFK				S	S	13 01 36.4	-4.4
JFA	Akaike	11.26	314	P	P	12 59 42.8	+3.0
JMM	Marumori	11.57	1	P	P	12 59 43.9	+0.8
SAI	Saigo	11.68	330	P	P	12 59 47.0	+2.7
SAI				S	S	13 01 56.5	+3.6
JII	Iki	12.02	311	P	P	12 59 51.2	+3.1
JFU	Fukue jima 2	12.11	305	P	P	12 59 51.9	+2.8
JTU	Tsushima	12.67	313	P	P	12 59 58.2	+2.9
JOM	Ohasama	13.19	2	P	P	13 00 02.1	+1.2
GUMO	Guam	13.24	161	*e*P	P	13 00 02.1	+0.4
GUMO				S	S	13 02 28.9	+4.1
GUMO				*e*S	S	13 02 29.7	+4.9
GUMO	Guam	13.24	161	P	P	13 00 01.6	-0.1
	31nm,0.3s,baz=157,slow=9.8,SNR=19						
GUMO				S	S	13 02 28.8	+4.1
	14nm,0.3s,baz=328,slow=22,SNR=4.1						
JKZ	Kuzumaki	13.70	2	P	P	13 00 07.8	+1.3
JAH	Hinai	13.89	0	P	P	13 00 10.3	+1.8
KSRS	Korea Array	15.47	319	P	P	13 00 25.9	+0.3
	2.0nm,0.3s,baz=131,slow=11,SNR=122						
KSRS				S	S	13 03 15.1	+6.6
	baz=130,slow=21,SNR=5.1						
KSRS				PcP	PcP	13 05 01.8	+0.7
	0.3nm,0.3s,baz=158,slow=1.5,SNR=6.2						
KSRS				ScP	ScP	13 07 54.4	-0.9
	baz=159,slow=0.9,SNR=8.7						
KSAR	Wonju Array Be	15.49	319	P	P	13 00 25.9	+0.1
KSAR				S	S	13 03 15.1	+6.3
KSAR				PcP	PcP	13 05 01.8	+0.7

KSAR ScP **ScP** **13 07 54.4 -0.9**
ERM Erimo 15.86 7 *c* *i*P **P** **13 00 31.6 +1.9**
ERM Erimo 15.86 7 *e*P **P** **13 00 31.2 +1.6**
402nm,1.1s
ERM Erimo 15.86 7 P **P** **13 00 31.1 +1.4**
2µm,1.1s,SNR=41
JNBK Urakawa-nobuka 16.08 6 P **P** **13 00 33.8 +1.8**
INCN Inchon 16.27 317 *e*P **P** **13 00 33.5 -0.7**
235nm,0.6s
INCN Inchon 16.27 317 P **P** **13 00 34.3 +0.2**
SNR=10
JAR Ashorobuto 17.19 8 P **P** **13 00 44.9 +1.0**
TATO Taipei 17.26 270 *e*P **P** **13 00 44.5 -0.4**
475nm,1.8s
NACB Ninganchiao 17.30 267 *e*P **P** **13 00 43.7 -1.6**
YHNB Yeheng 17.41 269 *e*P **P** **13 00 45.6 -0.9**
120nm,0.4s
YHNB *e*S **S** **13 03 49.6 +3.0**
SSE Sheshan 17.67 290 P **P** **13 00 48.0 -1.1**
SSE sP sP 13 02 32.3 -6.7
SSE S **S** **13 03 48.7 -2.7**
SSE pmax pmax
comp=Z,55nm,0.8s
SSE pmax pmax
comp=Z,130nm,5.5s
YULB Yu-li 17.73 265 *e*P **P** **13 00 49.5 -0.3**
comp=Z,210nm,0.7s
ASAJ Asahikawa 17.89 5 *e*P **P** **13 00 52.4 +1.2**
comp=Z,97nm,0.8s
ASAJ *e*S **S** **13 03 57.8 +2.7**
ASAJ ScP **ScP** **13 08 00.1 +0.1**
ASAJ Asahikawa 17.89 5 P **P** **13 00 52.5 +1.2**
comp=Z,7.2nm,0.3s,baz=224,slow=13,SNR=60
ASAJ ScP **ScP** **13 08 00.1 +0.1**
comp=Z,1.1nm,0.3s,baz=269,slow=9.4,SNR=5.9
SSLB Suanglung 17.95 266 *e*P **P** **13 00 52.4 +0.2**
comp=Z,454nm,0.7s
TWG Pinlang 18.07 263 *e*P **P** **13 00 52.3 -1.1**
comp=Z,1µm,0.6s
YUK Yuzh-Kuril'sk 18.24 12 *i*P P 13 00 49.3 -5.7
YUK *i*S **S** **13 04 00.8 -0.6**
YUK pmax pmax
comp=N,81nm,0.5s
YUK pmax pmax
comp=E,81nm,1.0s
YUK pmax pmax
comp=Z,175nm,1.0s
YUK pmax pmax
comp=Z,22µm,0.5s
YUK pmax pmax
comp=Z,38µm,1.2s
YUK pmax pmax
comp=E,47µm,2.4s
YUK pmax pmax
comp=N,23µm,2.4s
YUK MLR MLR
comp=Z,373nm,22.0s
VLA Vladivostok 18.25 339⇓ *i*P **P** **13 00 55.5 +0.5**
VLA S **S** **13 04 00.3 -1.2**
VLA pmax pmax
comp=Z,407nm,0.9s
TPUB Ta-pu 18.34 265 *e*P **P** **13 00 56.6 +0.3**
comp=Z,252nm,0.6s
TPUB *e*S **S** **13 04 02.0 -1.8**
PALP Palanan 19.17 245 *e*P P 13 00 56.9 -7.8
USRK Ussuriysk Arra 19.20 341 P **P** **13 01 05.1 +0.5**
comp=Z,9.6nm,0.3s,baz=153,slow=9.3,SNR=295
USRK ScP **ScP** **13 08 02.4 -0.6**
comp=Z,0.3nm,0.3s,baz=312,slow=1.7,SNR=4.2
CAUP Cauayan 19.72 246 *e*P **P** **13 01 10.8 +1.1**
NJ2 Nanjing 19.81 292 *e*P **P** **13 01 10.2 -0.2**
NJ2 sP **sP** **13 03 00.0 -2.7**
NJ2 S **S** **13 04 28.5 +0.8**
NJ2 PcP **PcP** **13 05 10.0 +1.5**
NJ2 pmax pmax
comp=Z,120nm,0.9s
QZH Quanzhou 19.86 271⇑ *i*P **P** **13 01 12.2 +1.2**
QZH S **S** **13 04 29.5 +0.7**
QZH pmax pmax
comp=Z,370nm,0.9s
PIP Pasuquin 20.06 251⇓ *e*P **P** **13 01 12.5 -0.3**
ABRA Dolores 20.30 249 *e*P **P** **13 01 14.4 -0.6**
MDJ Mudanjiang 20.34 337 P **P** **13 01 16.1 +1.1**
MDJ sP **sP** **13 03 11.1 +2.5**
MDJ S **S** **13 04 34.1 -2.0**
MDJ ScP **ScP** **13 08 05.8 +0.2**
MDJ ScS **ScS** **13 11 48.5 -0.4**
MDJ pmax pmax
comp=Z,90nm,1.1s
MDJ pmax pmax
comp=Z,400nm,7.5s
MDJ Mudanjiang 20.34 337 *e*P **P** **13 01 16.1 +1.1**
comp=Z,99nm,0.9s
MDJ *e*S S 13 04 43.5 +7.4
BALP Baler 20.57 243 *e*P **P** **13 01 17.4 -0.1**
YSS Yuzh-Sakhalins 20.72 4⇓ *i*P **P** **13 01 19.8 +1.3**
YSS *i*S **S** **13 04 41.4 -0.7**
YSS pmax pmax
comp=N,190nm,1.0s
YSS pmax pmax
comp=E,110nm,1.0s
YSS pmax pmax
comp=Z,340nm,1.0s
SNY Shenyang 20.90 322⇓ P **P** **13 01 20.3 +0.1**
SNY S **S** **13 04 42.8 -2.3**
SNY pmax pmax
comp=Z,530nm,0.8s
CN2 Changchun 21.38 329 *e*P **P** **13 01 24.2 -0.3**
CN2 *e*S **S** **13 04 51.3 -1.4**
CN2 ScP **ScP** **13 08 06.8 -1.4**
CN2 pmax pmax
comp=Z,70nm,0.9s
CN2 pmax pmax
comp=Z,400nm,9.0s
TGY Tagaytay City 22.01 240 P **P** **13 01 32.1 +1.5**
TGY Tagaytay City 22.01 240 P **P** **13 01 32.1 +1.5**
comp=Z,1µm,0.6s,baz=25,slow=2.1,SNR=30
RCP Roxas 22.28 232⇓ *e*P **P** **13 01 33.6 +0.6**
TIA Tai'an 22.32 302 P **P** **13 01 33.9 +0.7**
TIA pmax pmax
comp=Z,210nm,0.7s
HABR Khabarovsk 22.59 350 *ce*P **P** **13 01 35.1 -0.3**
HABR *e**SP **sP** **13 03 32.6 -0.5**
HABR *e* 13 05 12.8
HABR *e*S **S** **13 05 12.9 +1.1**
HABR *e* 13 11 56.0
HABR pmax pmax
comp=Z,257nm,1.1s
HABR pmax pmax
comp=N,70nm,1.1s
HABR pmax pmax
comp=E,96nm,1.0s
HABR MLR MLR
comp=Z,132nm,14.0s
DAV Davao City (W) 23.84 219 P **P** **13 01 45.5 -1.6**
comp=Z,242nm,0.8s
KLR Kul'dur 23.93 346 *e*P **P** **13 01 43.1 -4.4**
KLR *e*S **S** **13 05 30.5 -2.6**
KLR pmax pmax
comp=E,86nm,1.4s
KLR pmax pmax
comp=Z,190nm,1.4s
KLR MLR MLR
comp=Z,1µm,12.5s
CTBH Cotabato--PC H 24.50 222⇑ *i*P **P** **13 01 53.6 +0.6**
BJI Beijing 24.52 310 P **P** **13 01 52.6 -0.3**
BJI sP **sP** **13 03 53.1 -0.8**
BJI S **S** **13 05 40.8 -1.7**
BJI pmax pmax
comp=Z,77nm,0.8s
SGSI Sangihe 26.68 215 P **P** **13 02 08.4 -4.0**
comp=Z,1µm,0.5s,comp=Z,139µm
SKR Severo-Kuril's 27.14 22 *e*P **P** **13 02 13.1 -2.8**
SKR pmax pmax
comp=N,180nm,1.0s
SKR pmax pmax
comp=E,180nm,1.0s
SKR pmax pmax
comp=Z,220nm,1.0s
GAMI Galela, Maluku 27.22 209 P **P** **13 02 12.9 -4.2**
comp=Z,47nm,0.9s,comp=Z,3µm
BAKI Biak 27.63 190 P P 13 02 15.2 -5.6
comp=Z,34nm,1.2s,comp=Z,1µm
HHC Hu-ho-hao-te 28.05 309 *i*P **P** **13 02 24.7 +0.3**
HHC pP **PP** **13 03 38.1 -0.4**
HHC sP **sP** **13 04 24.6 -2.8**
HHC S **S** **13 06 37.7 -0.6**
HHC ScP **ScP** **13 08 24.3 -3.0**
HHC sS sS 13 08 50.7 -5.4
HHC PcS **PcS** **13 09 11.3 +2.1**
HHC ScS **ScS** **13 12 18.8 -2.0**
HHC pmax pmax
comp=Z,150nm,1.0s
HHC pmax pmax
comp=Z,290nm,6.9s
HIA Hailar 28.08 330 *e*P **P** **13 02 24.8 +0.5**
comp=Z,43nm,0.6s
HIA *e*ScP **ScP** **13 08 27.5 +0.4**
SRPI Serui, Papua 28.28 189 P **P** **13 02 24.2 -2.3**
comp=Z,74nm,1.0s
RKPI Ransiki, Papua 28.29 194 P **P** **13 02 24.3 -2.3**
comp=Z,76nm,0.9s
TNTI Ternate 28.36 209 P **P** **13 02 25.1 -2.0**
comp=Z,92nm,1.2s,comp=Z,2µm
SWI Sorong 28.43 200 P **P** **13 02 25.7 -2.0**
comp=Z,72nm,0.8s,comp=Z,1µm
JAY Jayapura 28.61 180 P **P** **13 02 26.8 -2.6**
comp=Z,19nm,1.3s,comp=Z,4µm
MNI Manado 28.95 214 P **P** **13 02 30.4 -2.0**
comp=Z,114nm,1.1s,comp=Z,3µm
BTO Baotou 29.06 307 *e*P **P** **13 02 32.5 -0.7**
QIZ Qiongzhong 29.21 262 P **P** **13 02 34.5 -0.1**
QIZ sP **sP** **13 04 36.5 -1.3**
QIZ S **S** **13 06 56.7 +0.1**
QIZ pmax pmax
comp=Z,87nm,0.7s
LBMI Labuha 29.57 207 P **P** **13 02 35.8 -2.0**
comp=Z,138nm,1.0s,comp=Z,2µm
KDM Kudat 29.69 234 P **P** **13 02 39.5 +0.6**
PEA0B Petropavlovsk- 29.72 21 *e*P **P** **13 02 40.0 +1.4**
PEA0B *e*ScP **ScP** **13 08 31.5 -0.8**
PETK Petropavlovsk- 29.72 21 P **P** **13 02 39.8 +1.2**
PETK 13 05 30.3
PETK pmax pmax
comp=Z,47nm,0.8s
PETK pmax pmax
comp=Z,11nm,0.7s
PETK pmax pmax
comp=N,9.0nm,0.7s
PETK Petropavlovsk- 29.72 21 P **P** **13 02 39.8 +1.2**
PETK PcP **PcP** **13 05 30.3 -0.1**
PETK ScP **ScP** **13 08 31.0 -1.2**
PETK Petropavlovsk- 29.72 21 P **P** **13 02 39.8 +1.2**
comp=N,47nm,0.8s,baz=223,slow=3.8,SNR=74
PETK PcP **PcP** **13 05 30.3 -0.1**
comp=N,11nm,0.7s,baz=189,slow=7.0,SNR=4.8
PETK ScP **ScP** **13 08 31.0 -1.2**
comp=N,9.4nm,0.7s,baz=178,slow=7.4,SNR=9.6
MYLDM Lahad Datu 29.74 229 P **P** **13 02 42.0 +2.7**
MYLDM Lahad Datu 29.74 229 P **P** **13 02 37.7 -1.6**
comp=N,59nm,1.0s
PET Petropavlovsk 29.96 22 *e*P **P** **13 02 41.1 +0.4**
PET *e* 13 05 30.5
PET *e*S **S** **13 07 08.2 +0.8**
PET pmax pmax
comp=Z,115nm,0.9s
PET pmax pmax
comp=Z,500nm,2.0s
PET pmax pmax
comp=Z,100nm,7.4s
PET MLR MLR
comp=Z,200nm,16.0s
PET MLR MLR
comp=Z,400nm,18.0s
FAKI Fak Fak 30.11 197 P **P** **13 02 40.3 -2.2**
comp=Z,56nm,1.2s,comp=Z,588nm
KMSI Cibinong 30.13 215 P **P** **13 02 40.7 -2.0**
comp=Z,244nm,1.0s,comp=Z,2µm
SDKM Sandakan 30.31 231 P **P** **13 02 46.0 +1.6**
GYA Guiyang 30.33 278⇑ *i*P **P** **13 02 45.4 +0.9**
GYA pP **pP** **13 04 00.0 +0.4**
GYA PP **PP** **13 04 10.0 +6.6**
GYA sP **sP** **13 04 49.3 +1.3**
GYA PcP **PcP** **13 05 34.9 +2.2**
GYA S **S** **13 07 13.2 -1.0**
GYA ScP **ScP** **13 08 35.4 +0.4**
GYA PcS **PcS** **13 09 17.0 -0.1**
GYA sS **sS** **13 09 29.5 -3.3**
GYA ScS **ScS** **13 12 31.0 -1.2**
GYA pmax pmax
comp=Z,60nm,0.6s
GYA pmax pmax
comp=Z,360nm,3.4s
KKM Kota Kinabalu 30.73 233 *e*P **P** **13 02 49.1 +1.1**
comp=Z,99nm,1.1s
KKM Kota Kinabalu 30.73 233 P **P** **13 02 48.6 +0.5**
KKM Kota Kinabalu 30.73 233 P **P** **13 02 46.2 -1.8**
comp=Z,90nm,0.9s,comp=Z,1µm
TSM Tawau 30.81 229 P **P** **13 02 49.5 +0.8**
MRSI Marisa 31.30 218 P **P** **13 02 50.9 -1.9**
comp=Z,160nm,1.1s,comp=Z,1µm
MSAI Masohi 31.52 203 P P 13 02 50.8 -3.9
comp=Z,20nm,1.2s,comp=Z,390nm
AAI Ambon 32.09 204 P P 13 02 55.6 -4.1
comp=Z,95nm,0.8s,comp=Z,2µm
LUWI Luwuk 32.13 215 P P 13 02 56.6 -3.3
comp=Z,111nm,0.7s,comp=Z,3µm
CD2 Chengdu 32.56 287⇑ P **P** **13 03 04.2 +0.6**
CD2 pP **pP** **13 04 21.2 +1.8**
CD2 PP **PP** **13 04 33.1 +5.3**
CD2 sP **sP** **13 05 08.2 +0.6**
CD2 PcP **PcP** **13 05 40.1 +1.5**
CD2 S **S** **13 07 49.2 +0.9**
CD2 PcS **PcS** **13 09 24.6 +0.1**
CD2 sS **sS** **13 10 06.2 -1.4**
CD2 SS **SS** **13 10 27.7 -2.2**
CD2 pmax pmax
comp=Z,270nm,0.4s
CD2 pmax pmax
comp=Z,120nm,4.3s
CLNS Chul'man 32.56 344 *i*P **P** **13 03 03.9 +0.7**
CLNS *e**PP **PP** **13 04 28.0 +0.5**
CLNS *e* 13 05 34.8
CLNS *e*S **S** **13 07 47.1 -0.5**
CLNS *e**SS **sS** **13 10 08.7 +1.8**
CLNS pmax pmax
comp=N,62nm,0.8s
CLNS pmax pmax
comp=Z,140nm,0.9s
CLNS pmax pmax
comp=E,29nm,0.8s
CLNS pmax pmax
comp=Z,12nm,0.9s
CLNS pmax pmax
comp=E,20nm,0.9s
CLNS pmax pmax
comp=N,39nm,1.2s
CLNS smax smax
comp=N,41nm,1.4s
CLNS smax smax
comp=E,24nm,1.0s
CLNS smax smax
comp=E,15nm,0.4s
CLNS smax smax
comp=Z,6.0nm,0.4s
CLNS smax smax
comp=N,27nm,0.6s
TLE Tual 32.61 195 P P 13 03 00.0 -4.1
comp=N,126nm,1.3s
LZH Lanzhou 32.75 296 *e*P **P** **13 03 06.7 +1.4**
LZH pP **pP** **13 04 21.0 -0.1**
LZH sP **sP** **13 05 09.5 +0.2**
LZH PcP **PcP** **13 05 40.7 +1.5**
LZH *e*S **S** **13 07 50.7 -0.6**
LZH ScP **ScP** **13 08 42.2 -0.9**
LZH PcS **PcS** **13 09 20.3 -4.9**
LZH sS **sS** **13 10 11.3 +0.6**
LZH SS **SS** **13 10 33.7 -0.1**
LZH pmax pmax
comp=Z,81nm,1.0s
LZH pmax pmax
comp=Z,400nm,5.1s
ULN Ulaanbaatar 33.95 318 *e*P **P** **13 03 16.0 +0.6**
comp=Z,87nm,0.9s
ULN Ulaanbaatar 33.95 318 P **P** **13 03 16.4 +1.1**
SNR=40
ULN Ulaanbaatar 33.95 318 P **P** **13 03 12.6 -2.8**
comp=Z,117nm,1.1s,comp=Z,1µm
KMI Kunming 34.03 277 P **P** **13 03 17.9 +1.5**
KMI pP **pP** **13 04 32.9 +0.2**
KMI PP **PP** **13 04 49.1 +4.8**
KMI sP **sP** **13 05 19.9 -0.9**
KMI S **S** **13 08 11.6 +0.4**
KMI sS **sS** **13 10 30.2 -1.0**
KMI SS **SS** **13 10 55.3 -5.5**
KMI pmax pmax
comp=Z,51nm,0.9s
KMI pmax pmax
comp=Z,86nm,3.7s
SKSI Soroako, Sulaw 34.13 216 P P 13 03 13.5 -3.7
comp=Z,34nm,1.0s
SONM Songino Array 34.34 318 P **P** **13 03 19.2 +0.6**
SONM PcP **PcP** **13 05 43.8 +0.3**
SONM S **S** **13 08 16.7 +1.6**
SONM ScP **ScP** **13 08 48.2 -0.2**
SONM Songino Array 34.34 318 P **P** **13 03 19.2 +0.6**
comp=Z,39nm,0.7s,baz=124,slow=7.6,SNR=277
SONM PcP **PcP** **13 05 43.8 +0.3**
comp=Z,14nm,0.8s,baz=107,slow=2.6,SNR=7.3
SONM S **S** **13 08 16.7 +1.6**
comp=Z,5.7nm,1.2s,baz=114,slow=13,SNR=4.5
SONM ScP **ScP** **13 08 48.2 -0.2**
comp=Z,1.7nm,0.6s,baz=132,slow=2.1,SNR=5.2
UBPT Khong Chiam 34.48 259 P **P** **13 03 17.6 -2.5**
comp=Z,52nm,0.6s
MMPI Merauke 34.52 180 P P 13 03 16.3 -4.0
comp=Z,200nm,1.1s
SGKI Sangatta, Kali 34.65 223 P P 13 03 18.1 -3.4
comp=Z,327nm,1.3s
BTM Bintulu 34.94 234 P **P** **13 03 25.0 +1.1**
TTSI Tana Toraja 35.38 218 P P 13 03 24.0 -3.6
comp=Z,19nm,1.1s
PMG Port Moresby 36.03 169 P **P** **13 03 33.2 +0.1**
PMG Port Moresby 36.03 169 P **P** **13 03 33.2 +0.1**
comp=Z,19nm,0.6s,baz=315,slow=6.5,SNR=9.9
FX1 Attu Island--F 36.05 34 *e*P **P** **13 03 34.6 +1.9**
FX1 PcP **PcP** **13 05 48.4 +0.1**
FX1 Attu Island--F 36.05 34 P **P** **13 03 34.0 +1.3**
comp=Z,405nm,0.8s,baz=244,slow=3.1,SNR=57
FX1 PcP **PcP** **13 05 48.4 +0.1**
comp=Z,20nm,0.5s,baz=272,slow=1.5,SNR=7.3
BBSI Bau Bau 36.07 211 P P 13 03 29.5 -3.9
comp=Z,33nm,1.2s,comp=Z,3µm
SBUM Sibu 36.08 234 P **P** **13 03 34.7 +1.2**
SBUM Sibu 36.08 234 P P 13 03 30.3 -3.2
comp=Z,32nm,1.1s
SPSI Sidrap Palu 36.18 217 P P 13 03 30.7 -3.6
comp=Z,71nm,1.0s,comp=Z,689nm
GTA Gaotai 36.37 301⇓ P **P** **13 03 36.5 +0.7**
GTA pP **pP** **13 04 54.6 +1.6**
GTA PP **PP** **13 05 12.7 +3.0**
GTA sP **sP** **13 05 40.7 -0.2**
GTA PcP **PcP** **13 05 51.2 +1.5**
GTA S **S** **13 08 46.1 +0.1**
GTA sS **sS** **13 11 04.8 -2.4**
GTA SS **SS** **13 11 39.7 -6.8**
GTA pmax pmax
comp=Z,50nm,1.1s
GTA pmax pmax
comp=Z,140nm,5.0s
YAK Yakutsk 36.50 351 *d* *i*P **P** **13 03 35.9 -0.4**
YAK *e**PP **pP** **13 04 52.9 -0.7**
YAK *e* 13 05 16.9
YAK *e* 13 05 45.2
YAK *e*S **S** **13 08 42.6 -4.5**
YAK *e* 13 12 56.5
YAK pmax pmax
comp=Z,236nm,0.9s
YAK pmax pmax
comp=E,23nm,0.9s
YAK pmax pmax
comp=N,115nm,1.3s
YAK pmax pmax
comp=Z,93nm,1.2s
YAK pmax pmax
comp=E,25nm,0.9s
YAK pmax pmax
comp=N,150nm,1.6s
YAK smax smax
comp=N,191nm,1.1s
YAK smax smax
comp=E,93nm,1.1s
MTKI Muara Teweh, K 36.68 226 P P 13 03 35.2 -3.3
comp=E,112nm,0.9s,comp=E,4µm
KAPI Kappang 37.07 216 *e*P **P** **13 03 41.4 -0.3**
comp=E,89nm,1.5s
KAPI ScP **ScP** **13 08 58.4 -0.4**
KAPI Kappang 37.07 216 P P 13 03 38.0 -3.7
comp=E,40nm,1.4s
KAPI Kappang 37.07 216 P **P** **13 03 41.3 -0.4**
comp=E,26nm,0.7s,baz=59,slow=3.9,SNR=9.9
KAPI ScP **ScP** **13 08 58.4 -0.4**
comp=E,30nm,1.1s,baz=327,slow=4.1,SNR=5.3
BKSI Bulukumba 37.13 215 P P 13 03 38.5 -3.7
comp=E,35nm,0.9s,comp=E,534nm
ZAK Zakamensk 37.30 320⇓ *i*P **P** **13 03 43.9 +0.6**
ZAK *e* 13 08 58.9
ZAK pmax pmax
comp=Z,82nm,1.0s
SEY Seymchan 37.49 9 *d* *i*P **P** **13 03 45.4 +0.8**
IRK Irkutsk 37.62 323 *e*P **P** **13 03 46.2 +0.4**
IRK *e*S **S** **13 09 06.0 +1.8**
IRK pmax pmax
comp=Z,130nm,1.3s
BSSI Bau Bau, Buton 37.65 214 P P 13 03 42.7 -3.8
comp=Z,107nm,0.7s,comp=Z,12µm
KSM Kuching 38.13 235 *e*P **P** **13 03 50.9 +0.3**
comp=Z,16nm,0.5s
KSM Kuching 38.13 235 P **P** **13 03 51.4 +0.8**
KSM Kuching 38.13 235 P P 13 03 47.3 -3.2
comp=Z,24nm,0.6s
STKI Sintang 38.27 232 P P 13 03 48.4 -3.2
comp=Z,99nm,0.8s
CHBT CHBT 38.31 257 P **P** **13 03 51.3 -0.7**
comp=Z,96nm,0.5s,comp=Z,2µm
BBKI Banjar Baru 38.64 224 P P 13 03 51.2 -3.5
comp=Z,28nm,1.6s,comp=Z,1µm
MMRI Maumere 39.00 210 P **P** **13 03 55.1 -2.5**
comp=Z,98nm,0.9s,comp=Z,901nm
CMMT Chiang Mai 39.02 268 P **P** **13 03 57.5 -0.3**
comp=Z,74nm,0.9s,comp=Z,666nm
CHTO Chiang Mai 39.02 268 *e*P **P** **13 03 58.7 +0.9**
CHTO *e* 13 05 59.0
CHTO pmax pmax
comp=Z,53nm,0.8s
CHTO Chiang Mai 39.02 268 *e*P **P** **13 03 58.7 +0.9**
comp=Z,54nm,0.8s
CHTO *e*PcP **PcP** **13 05 59.0 +0.8**
CHTO Chiang Mai 39.02 268 P **P** **13 03 59.0 +1.2**
SNR=18
CHTO Chiang Mai 39.02 268 P **P** **13 03 57.6 -0.2**
comp=Z,81nm,0.9s,comp=Z,677nm
CM31 Chiang Mai Arr 39.14 267 *e*P **P** **13 03 59.8 +1.0**
comp=Z,22nm,0.4s
CM31 *e*PcP **PcP** **13 05 59.8 +1.2**
CM31 *e*ScP **ScP** **13 09 08.6 +1.8**
CMAR Chiang Mai Arr 39.14 267 P **P** **13 04 00.0 +1.2**
CMAR PcP **PcP** **13 05 59.5 +0.9**
CMAR ScP **ScP** **13 09 07.8 +1.0**
CMAR S **S** **13 09 28.2 +0.7**
CMAR *e* 13 33 50.8
CMAR Chiang Mai Arr 39.14 267 P **P** **13 04 00.0 +1.2**
comp=Z,34nm,0.8s,baz=58,slow=7.8,SNR=251
CMAR PcP **PcP** **13 05 59.5 +0.9**
comp=Z,11nm,0.8s,baz=78,slow=1.2,SNR=12
CMAR ScP **ScP** **13 09 07.8 +1.0**
comp=Z,5.1nm,1.0s,baz=80,slow=2.0,SNR=6.4
CMAR S **S** **13 09 28.2 +0.7**
comp=Z,1.5nm,0.8s,baz=81,slow=18,SNR=5.7
CMAR P3KPbc 13 33 50.8
comp=Z,1.4nm,0.7s,baz=249,slow=5.2,SNR=16
MOY Mondy 39.16 321 *e*P **P** **13 03 59.3 +0.7**
MOY *e* 13 09 29.2
MOY pmax pmax
comp=Z,66nm,1.7s
COEN Coen 40.06 176 *e*P **P** **13 04 06.8 +0.6**
PBKI Pangkalan Bun 40.13 229 P P 13 04 02.5 -4.3
comp=Z,93nm,1.1s
PHET Kaeng Krachan 40.62 259 P **P** **13 04 10.4 -0.3**
comp=Z,164nm,0.8s
WSI Waingapu 40.79 212 P P 13 04 07.2 -4.9
comp=Z,160nm,0.5s
BASI Baing, Sumba 41.15 211 P P 13 04 09.9 -5.0
comp=Z,139nm,1.2s
KTGM Kuala Trenggan 41.36 246 P **P** **13 04 18.9 +2.1**
KMMI Kalianget 41.99 222 P P 13 04 17.4 -4.3

comp=Z,52nm,0.9s
SRBI Singaraja 42.10 219 P P 13 04 17.8 -4.8
comp=Z,46nm,0.9s
KHKI Kahang-Kahang 42.10 219 P P 13 04 17.9 -4.7
comp=Z,140nm,1.1s,comp=Z,1µm
ATKA Atka Island 42.60 40 *e*P **P 13 04 26.8 +0.7**
comp=Z,130nm,0.9s
BYJI Banyuwangi 42.70 220 P P 13 04 22.7 -4.6
comp=Z,288nm,0.9s,comp=Z,13µm
BLJI Banyuglugur 42.77 221 P P 13 04 23.3 -4.6
comp=Z,32nm,1.2s
MYKOM **Kota Tinggi 42.85 241** P **P 13 04 30.6 +2.0**
MYKOM **Kota Tinggi 42.85 241** P **P 13 04 26.6 -2.0**
comp=Z,85nm,0.9s,comp=Z,932nm
KGM Kluang 43.14 242 P **P 13 04 32.7 +1.8**
BTDF Bukit Timah Da 43.18 241 P P 13 04 27.2 -4.0
comp=Z,22nm,1.2s,comp=Z,324nm
HVS Khovu-Aksy 43.23 318*d* iP **P 13 04 32.1 +0.9**
GMJI Gumukmas 43.28 221 P P 13 04 27.2 -4.7
comp=Z,29nm,1.5s
KULM Kulim 43.44 248 *e*P **P 13 04 34.4 +1.2**
KULM *e*PcP **PcP 13 06 14.1 +1.2**
KULM Kulim 43.44 248 P **P 13 04 34.7 +1.4**
KULM Kulim 43.44 248 P **P 13 04 31.1 -2.1**
comp=Z,64nm,1.0s,comp=Z,629nm
LSA Lhasa 43.52 286 *e*P **P 13 04 36.3 +2.0**
LSA *e* 13 06 14.6
LSA pmax pmax
comp=Z,21nm,0.6s
LSA Lhasa 43.52 286 *e*P **P 13 04 36.2 +2.0**
comp=Z,20nm,0.6s
LSA *e*PcP **PcP 13 06 14.6 +1.0**
IPM Ipoh 43.57 247 *e*P **P 13 04 35.0 +0.6**
comp=Z,56nm,0.7s
IPM Ipoh 43.57 247 P **P 13 04 35.4 +1.0**
IPM Ipoh 43.57 247 P **P 13 04 32.2 -2.1**
comp=Z,87nm,0.9s,comp=Z,847nm
SHL Shillong 43.59 280 *e*PKP **P 13 04 36.0 +1.5**
SHL *e*PCP **PcP 13 06 14.5 +1.0**
SHL *e*S **S 13 10 32.0 -0.5**
SHL *e*SCS **ScS 13 13 45.3 -2.4**
FRIM Kepong 43.78 245 P **P 13 04 37.2 +1.3**
PWJI Pagerwojo 44.07 223 P **P 13 04 35.5 -2.6**
BILL Bilibino 44.59 13*d* iP **P 13 04 41.8 +0.3**
BILL *e**PP **pP 13 05 59.9 -2.3**
BILL *i* 13 06 15.8
BILL *e* 13 06 34.8
BILL *i* S **S 13 10 47.2 +1.9**
BILL *e*SS **ScS 13 13 52.3 +0.1**
BILL pmax pmax
comp=Z,462nm,1.3s
BILL Bilibino 44.59 13 *e*P **P 13 04 41.5 0.0**
comp=Z,255nm,0.9s
BILL *e*PcP **PcP 13 06 16.5 +0.6**
BILL *e*ScP **ScP 13 09 27.1 -0.6**
WMQ Urumqi 45.90 307 P **P 13 04 53.3 +1.2**
WMQ pP **pP 13 06 14.7 +1.3**
WMQ PcP **PcP 13 06 22.7 +1.6**
WMQ PP **PP 13 06 47.9 +2.2**
WMQ sP **sP 13 07 00.1 0.0**
WMQ ScP **ScP 13 09 35.3 +1.5**
WMQ PcS **PcS 13 10 16.4 +0.3**
WMQ S **S 13 11 06.1 +1.5**
WMQ sS **sS 13 13 30.9 -0.4**
WMQ ScS **ScS 13 14 01.4 -0.4**
WMQ SS **SS 13 14 33.8 -1.7**
WMQ pmax pmax
comp=Z,260nm,0.9s
PSI Prapat 46.24 247 P **P 13 04 56.0 +0.8**
PSI Prapat 46.24 247 P **P 13 04 56.0 +0.8**
comp=Z,81nm,0.5s,baz=38,slow=2.5,SNR=80
WRAB Tennant Creek 46.32 188 *e*P **P 13 04 55.0 -0.4**
WRAB pmax pmax
comp=Z,46nm,0.8s
WRAB Tennant Creek 46.32 188 *e*P **P 13 04 55.0 -0.4**
comp=Z,46nm,0.8s
WRAB Tennant Creek 46.32 188 P **P 13 04 55.0 -0.4**
comp=Z,365nm,0.4s
WRA Warramunga Arr 46.33 188 P **P 13 04 54.6 -0.9**
WRA ScP **ScP 13 09 34.6 -1.1**
WRA S **S 13 11 07.7 -3.3**
WRA P'P' 13 35 59.6
WRA *e* 13 42 35.3
WRA Warramunga Arr 46.33 188 P **P 13 04 54.6 -0.9**
comp=Z,34nm,0.3s,baz=6.7,slow=7.9,SNR=813
WRA ScP **ScP 13 09 34.6 -1.1**
comp=Z,13nm,0.9s,baz=5.8,slow=4.4,SNR=19
WRA S **S 13 11 07.7 -3.3**
comp=Z,10nm,0.9s,baz=5.5,slow=13,SNR=6.6
WRA PKPPKP P'P'df 13 35 59.6 -11
comp=Z,0.5nm,0.7s,baz=147,slow=2.2,SNR=4.6
WRA P4KPbc 13 42 35.3
comp=Z,0.5nm,0.5s,baz=9.4,slow=5.0,SNR=13
CTA Charters Tower 46.41 173 P **P 13 04 56.0 -0.1**
CTA Charters Tower 46.41 173 P **P 13 04 56.0 -0.1**
comp=Z,7.3nm,0.6s,baz=19,slow=7.5,SNR=12
FITZ Fitzroy Crossi 46.43 200 P **P 13 04 56.8 +0.5**
FITZ PcP **PcP 13 06 23.7 +0.6**
FITZ Fitzroy Crossi 46.43 200 P **P 13 04 56.8 +0.5**
comp=Z,12nm,0.3s,baz=27,slow=10.0,SNR=65
FITZ PcP **PcP 13 06 23.7 +0.6**
comp=Z,6.7nm,0.6s,baz=33,slow=4.6,SNR=3.5
TAPN Taplejung 46.89 284 *e*P **P 13 05 01.6 +1.4**
comp=Z,66nm,0.5s
ODAN Odare 47.27 283 *e*P **P 13 05 04.3 +1.3**
comp=Z,139nm,0.4s
UNV Unalaska Valle 47.52 40 *e*P **P 13 05 04.2 +0.1**
comp=Z,30nm,0.3s
UNV *e*PcP **PcP 13 06 28.4 +1.9**
RAMN Ramite 47.94 284 *e*P **P 13 05 09.6 +1.5**
comp=Z,212nm,0.8s
AKUT Akutan 48.01 40 *e*P **P 13 05 08.7 +0.8**
comp=Z,437nm,0.7s
GUN Gumba 48.38 285 *e*P **P 13 05 13.1 +1.6**
comp=Z,258nm,0.5s
GAMB Gambell 48.50 26 *e*P **P 13 05 12.7 +1.3**
comp=Z,124nm,0.9s
GAMB *e*PcP **PcP 13 06 30.8 +1.0**
PKI Pulchoki 48.85 285 *e*P **P 13 05 15.9 +0.8**
PKIN Phulchoki 48.86 285 *e*P **P 13 05 15.9 +0.8**
comp=Z,44nm,0.4s
KKN Kakani 48.92 285 *e*P **P 13 05 16.7 +1.3**
comp=Z,55nm,0.4s
DMN Daman 49.11 285 *e*P **P 13 05 18.0 +1.1**
comp=Z,86nm,0.4s
ZAA0 Zalesovo Array 49.18 320 *e*P **P 13 05 16.4 -0.3**
ZAA0 *e*PcP **PcP 13 06 32.4 -0.2**
ZAA0 *e*ScP **ScP 13 09 47.0 -0.3**
ZALV Zalesovo Beam 49.18 320 P **P 13 05 16.5 -0.1**
ZALV 13 06 32.1
ZALV S **S 13 11 49.3 -0.6**
ZALV pmax pmax
comp=Z,52nm,0.8s
ZALV pmax pmax
comp=Z,36nm,0.7s
ZALV pmax pmax
comp=N,15nm,0.8s
ZALV smax smax
comp=N,2.0nm,0.9s
ZALV pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 49.18 320 P **P 13 05 16.5 -0.1**
ZALV PcP **PcP 13 06 32.1 -0.4**
ZALV ScP **ScP 13 09 46.1 -1.2**
ZALV S **S 13 11 49.2 -0.6**
ZALV *e* 13 42 47.1
ZALV Zalesovo Beam 49.18 320 P **P 13 05 16.5 -0.1**
comp=Z,52nm,0.8s,baz=98,slow=6.8,SNR=298
ZALV PcP **PcP 13 06 32.1 -0.4**
comp=Z,36nm,0.7s,baz=116,slow=3.5,SNR=13
ZALV ScP **ScP 13 09 46.1 -1.2**
comp=Z,15nm,0.8s,baz=113,slow=4.5,SNR=12
ZALV S **S 13 11 49.2 -0.6**
comp=Z,2.3nm,0.8s,baz=97,slow=10,SNR=4.8
ZALV P4KPbc 13 42 47.1
comp=Z,0.5nm,0.7s,baz=119,slow=5.3,SNR=3.3
MK31 Makanchi Array 49.90 310 *e*P **P 13 05 22.9 +0.8**
MK31 *e* 13 06 35.6
MK31 Makanchi Array 49.90 310 *e*P **P 13 05 22.9 +0.8**
MK31 *e*PcP **PcP 13 06 35.6 +0.2**
MK31 *e*ScP **ScP 13 09 51.7 +1.0**
MKAR Makanchi Array 49.90 310 P **P 13 05 22.9 +0.7**
MKAR 13 06 35.4
MKAR S **S 13 11 59.0 -1.1**
MKAR pmax pmax
comp=Z,83nm,0.7s
MKAR pmax pmax
comp=Z,26nm,0.7s
MKAR pmax pmax
comp=N,6.0nm,0.7s
MKAR smax smax
comp=N,1.0nm,0.7s
MKAR Makanchi Array 49.90 310 P **P 13 05 22.9 +0.7**
MKAR PcP **PcP 13 06 35.4 -0.1**
MKAR ScP **ScP 13 09 50.2 -0.4**
MKAR S **S 13 11 59.0 -1.1**
MKAR *e* 13 42 50.5
MKAR Makanchi Array 49.90 310 P **P 13 05 22.9 +0.7**
comp=N,83nm,0.7s,baz=92,slow=9.2,SNR=818
MKAR PcP **PcP 13 06 35.4 -0.1**
comp=N,26nm,0.7s,baz=87,slow=5.3,SNR=9.1
MKAR ScP **ScP 13 09 50.2 -0.4**
comp=N,5.7nm,0.7s,baz=84,slow=5.1,SNR=5.9
MKAR S **S 13 11 59.0 -1.1**
comp=N,0.7nm,0.7s,baz=90,slow=16,SNR=2.9
MKAR P4KPbc 13 42 50.5
comp=N,0.4nm,0.6s,baz=90,slow=6.5,SNR=5.8
AS31 Alice Springs 50.05 188 *e*P **P 13 05 22.7 -0.8**
AS31 *e*ScP **ScP 13 09 51.6 +0.2**
AS31 *e*S **S 13 12 00.1 -2.5**
ASAR Alice Springs 50.05 188 P **P 13 05 22.7 -0.8**
ASAR PcP **PcP 13 06 36.9 +0.6**
ASAR ScP **ScP 13 09 51.8 +0.3**
ASAR S **S 13 11 59.6 -2.9**
ASAR P'P' 13 35 50.8
ASAR Alice Springs 50.05 188 P **P 13 05 22.7 -0.8**
comp=N,4.1nm,0.3s,baz=357,slow=5.3,SNR=142
ASAR PcP **PcP 13 06 36.9 +0.6**
comp=N,8.3nm,0.8s,baz=16,slow=4.2,SNR=13
ASAR ScP **ScP 13 09 51.8 +0.3**
comp=N,4.7nm,0.8s,baz=3.1,slow=4.7,SNR=6.9
ASAR S **S 13 11 59.6 -2.9**
comp=N,4.1nm,0.9s,baz=17,slow=16,SNR=13
ASAR PKPPKP P'P'df 13 35 50.8 -15
comp=N,0.6nm,0.9s,baz=183,slow=3.3,SNR=4.2
DANN Dangsing 50.12 286 *e*P **P 13 05 26.0 +1.6**
NVS Novosibirsk 50.26 321↓ *i*P **P 13 05 24.7 +0.1**
NVS *i* 13 06 35.3
NVS *i* S **S 13 12 04.0 -0.5**
NVS *e**SS **ScS 13 14 27.2 -3.3**
NVS pmax pmax
comp=Z,54nm,1.0s
NVS smax smax
comp=N,56nm,2.5s
NVS smax smax
comp=E,27nm,1.4s
KOLN Koldanda 50.38 285 *e*P **P 13 05 27.5 +1.2**
comp=E,120nm,0.6s
TNA Tin City 50.75 25 *e*P **P 13 05 29.1 +1.1**
comp=E,189nm,1.3s
PYUN Piuthan 50.84 286 *e*P **P 13 05 31.0 +1.4**
comp=E,225nm,0.5s
SDPT Sand Point 51.26 39 *e*P **P 13 05 31.7 -0.3**
comp=E,359nm,0.8s
KURK Kurchatov 52.54 315*d* iP **P 13 05 41.5 +0.1**
KURK pmax pmax
comp=Z,265nm,1.1s
KURK Kurchatov 52.54 315 *e*P **P 13 05 41.6 +0.2**
KURK P'P' 13 36 10.1
KURK *e* 13 43 01.1
KURK Kurchatov 52.54 315 P **P 13 05 42.0 +0.6**
SNR=71
KURK Kurchatov 52.54 315 P **P 13 05 41.0 -0.4**
comp=Z,1µm,0.6s
KURBB Kurchatov Arra 52.59 315 PKPPKP 13 36 10.1
comp=Z,0.1nm,0.2s,baz=245,slow=2.3,SNR=4.4
KURBB P4KPbc 13 43 01.1
comp=Z,0.1nm,0.2s,baz=90,slow=4.6,SNR=4.0
DZM Mont Dzumac 54.20 150 *e*P **P 13 05 53.1 -0.6**
comp=Z,80nm,1.4s
ULHL Ulahol 54.29 304 *i* P **P 13 05 56.1 +1.7**
ULHL Ulahol 54.29 304 P **P 13 05 56.1 +1.7**
SNR=23
TKM2 Tokmak 2 54.71 305 *e*P **P 13 05 58.9 +1.5**
TKM2 *e* 13 06 54.2
TKM2 *e*S **S 13 13 07.7 +2.5**
TKM2 pmax pmax
comp=Z,86nm,0.6s
TKM2 Tokmak 2 54.71 305 *e*P **P 13 05 58.9 +1.5**
comp=Z,86nm,0.6s
TKM2 *e*PcP **PcP 13 06 54.2 +0.2**
TKM2 *e*S **S 13 13 07.7 +2.5**
TKM2 Tokmak 2 54.71 305 P **P 13 05 58.7 +1.3**
SNR=189
SVW2 Sparrevohn 54.76 32 *e*P **P 13 05 58.5 +1.4**
KSH Kashi 54.77 301↓ *i*P P 13 06 02.0 +4.3
KSH PcP **PcP 13 06 56.1 +1.9**
KSH pP pP 13 07 26.8 +4.2
KSH sP sP 13 08 09.9 +1.6
KSH PP PP 13 08 13.2 +7.6
KSH *e*ScP **ScP 13 10 14.0 +1.9**
KSH PcS **PcS 13 10 54.9 +0.2**
KSH *i* S S 13 13 13.8 +8.0
KSH ScS **ScS 13 15 05.1 +1.8**
KSH sS sS 13 15 45.0 +7.1
KSH SS SS 13 17 08.1 +12
KSH pmax pmax
comp=Z,170nm,0.7s
KSH pmax pmax
comp=Z,330nm,4.8s
KZA Kyzart 55.04 304 *i* P **P 13 06 02.1 +2.1**
KZA Kyzart 55.04 304 P **P 13 06 02.1 +2.1**
SNR=124
KBK Karagaybulak 55.21 305 *i* P **P 13 06 02.3 +1.5**
KBK Karagaybulak 55.21 305 P **P 13 06 02.3 +1.5**
SNR=79
CHMS Chumysh 55.32 306 *i* P **P 13 06 02.6 +1.2**
CHMS Chumysh 55.32 306 P **P 13 06 02.6 +1.2**
SNR=45
FRU Bishkek 55.44 305↓ *i*P **P 13 06 03.0 +0.8**
FRU *e* 13 13 17.0
FRU pmax pmax
comp=Z,184nm,1.6s
OHAK Old Harbor 55.47 37 *e*P **P 13 06 02.5 +0.4**
comp=Z,138nm,0.7s
USP Ospenovka 55.48 306 *i* P **P 13 06 03.6 +1.0**
USP Ospenovka 55.48 306 P **P 13 06 03.6 +1.0**
SNR=78
AAK Ala-Archa 55.55 305*d* iP **P 13 06 04.1 +0.9**
AAK pmax pmax
comp=Z,242nm,1.2s
AAK Ala-Archa 55.55 305 *e*P **P 13 06 04.0 +0.9**
comp=Z,60nm,0.6s
AAK PcP **PcP 13 06 57.5 +0.3**
AAK *e*PcP **PcP 13 06 57.8 +0.5**
AAK S **S 13 13 18.6 +2.6**
AAK *e*S S 13 13 19.7 +3.6
AAK Ala-Archa 55.55 305 P **P 13 06 04.5 +1.3**
SNR=34
AAK Ala-Archa 55.55 305 P **P 13 06 04.0 +0.9**
comp=Z,604nm,0.6s,SNR=36
AAK Ala-Archa 55.55 305 P **P 13 06 04.3 +1.1**
comp=Z,55nm,0.6s,baz=109,slow=5.5,SNR=188
AAK PcP **PcP 13 06 57.5 +0.3**
comp=Z,14nm,0.7s,baz=184,slow=7.0,SNR=5.0
AAK S **S 13 13 18.6 +2.6**
comp=Z,1.0nm,0.3s,baz=240,slow=19,SNR=15
UCH Uchtor 55.57 305 P **P 13 06 05.8 +2.1**
SNR=31
KDAK Kodiak Island 55.89 37 *e*P **P 13 06 05.4 +0.3**
comp=Z,435nm,1.3s
KDAK Kodiak Island 55.89 37 P **P 13 06 05.0 0.0**
comp=Z,1µm,0.8s,SNR=32
KDAK Kodiak Island 55.89 37 P **P 13 06 05.5 +0.5**
comp=Z,132nm,0.8s,baz=269,slow=3.1,SNR=74
KIP Kipapa 55.94 81*ce*P **P 13 06 07.1 +1.1**
KIP pmax pmax
comp=Z,150nm,2.5s
KIP Kipapa 55.94 81 *e*P **P 13 06 07.1 +1.1**
comp=Z,41nm,0.7s
RSO Redoubt South 56.05 33 *e*P **P 13 06 07.0 +0.6**
EKS2 Erkin-Say 56.07 305 *e*P **P 13 06 07.9 +1.1**
EKS2 *e* 13 07 00.0
EKS2 pmax pmax
comp=Z,65nm,0.8s
EKS2 Erkin-Say 56.07 305 *e*P **P 13 06 07.8 +1.1**
comp=Z,65nm,0.8s
EKS2 *e*PcP **PcP 13 07 00.0 +0.8**
EKS2 Erkin-Say 56.07 305 P **P 13 06 08.0 +1.1**
SNR=40
AML Almayashu 56.19 305 *i* P **P 13 06 09.7 +1.8**
AML Almayashu 56.19 305 P **P 13 06 09.7 +1.8**
SNR=152
SPU Mount Spurr 56.47 32 *e*P **P 13 06 09.3 +0.2**
MSVF Nonsavu 56.91 136 *e*P **P 13 06 14.3 +1.5**
MSVF Nonsavu 56.91 136 *e*P **P 13 06 14.3 +1.5**
TRF Thorofare Moun 57.53 30 *e*P **P 13 06 16.1 -0.5**
comp=Z,186nm,0.9s
SEW Seward 57.66 34 *e*P **P 13 06 17.3 +0.1**
BVAR Borovoye Array 57.68 318 P4KPbc 13 43 24.1
comp=Z,0.2nm,0.4s,baz=107,slow=3.5,SNR=3.5
BRVK Borovoye 57.74 318*d* iP **P 13 06 18.5 +0.5**
BRVK pmax pmax
comp=Z,325nm,1.0s
BRVK Borovoye 57.74 318 *e*P **P 13 06 18.7 +0.7**
comp=Z,238nm,0.6s
BRVK *e*PcP **PcP 13 07 05.8 +0.3**
BRVK Borovoye 57.74 318 P **P 13 06 18.9 +0.9**
SNR=82
BRVK Borovoye 57.74 318 P **P 13 06 18.2 +0.2**
comp=Z,3µm,0.5s
HYB Hyderabad 57.78 275 *i* P **P 13 06 18.5 -0.4**
STKA Stephens Creek 57.82 179 P **P 13 06 18.2 -0.5**
STKA S **S 13 13 45.8 +0.6**
STKA Stephens Creek 57.82 179 P **P 13 06 18.2 -0.5**
comp=Z,9.6nm,0.5s,baz=345,slow=7.1,SNR=58
STKA S **S 13 13 45.8 +0.6**
comp=Z,4.4nm,1.1s,baz=276,slow=20,SNR=3.0
PMR Palmer 57.91 32 *e*P **P 13 06 18.5 -0.4**
PMR *e* 13 07 06.4
PMR pmax pmax
comp=Z,141nm,0.8s
PMR Palmer 57.91 32 *e*P **P 13 06 18.5 -0.4**
comp=Z,141nm,0.8s
PMR *e*PcP **PcP 13 07 06.4 +0.5**
COLD Coldfoot 58.04 25 *e*P **P 13 06 20.9 +1.1**
comp=Z,98nm,1.0s
COLD *e*PcP **PcP 13 07 08.2 +1.9**
MCK McKinley 58.16 30 *e*P **P 13 06 20.8 +0.1**
MCK pmax pmax
comp=Z,402nm,0.9s
MCK McKinley 58.16 30 *e*P **P 13 06 20.8 +0.1**
comp=Z,402nm,0.9s
SML Sawmill 58.30 32 *e*P **P 13 06 20.9 -0.8**
SML pmax pmax
comp=Z,56nm,0.8s
SML Sawmill 58.30 32 *e*P **P 13 06 20.9 -0.8**
comp=Z,56nm,0.8s
KK31 Karatay Array 58.40 306 *i* P **P 13 06 23.5 +0.8**
KK31 pmax pmax
comp=Z,133nm,0.6s
KKAR Karatay Array 58.40 306 *e*P **P 13 06 23.7 +1.0**
KKAR pmax pmax
comp=Z,147nm,0.6s
KKAR Karatay Array 58.40 306 *e*P **P 13 06 23.7 +1.0**
comp=Z,147nm,0.6s
COLA College 58.73 28 *e*P **P 13 06 24.3 -0.2**
COLA pmax pmax
comp=Z,55nm,0.6s
COLA College 58.73 28 *e*P **P 13 06 24.3 -0.2**
comp=Z,54nm,0.6s
ILAR Eielson Array 59.13 28 P **P 13 06 26.6 -0.7**
ILAR PcP **PcP 13 07 10.2 -0.6**
ILAR P'P' 13 35 55.9
ILAR *e* 13 43 30.2
ILAR Eielson Array 59.13 28 P **P 13 06 26.6 -0.7**
comp=Z,77nm,0.9s,baz=262,slow=5.6,SNR=512
ILAR PcP **PcP 13 07 10.2 -0.6**
comp=Z,12nm,0.8s,baz=288,slow=4.5,SNR=5.3
ILAR PKPPKP **P'P'df 13 35 55.9 -2.1**
comp=Z,0.3nm,0.8s,baz=63,slow=2.9,SNR=4.1
ILAR P4KPbc 13 43 30.2
comp=Z,0.3nm,0.6s,baz=240,slow=5.1,SNR=5.9
MID Middleton Isla 59.22 35 *e*P **P 13 06 29.2 +1.3**
MID pmax pmax
comp=Z,91nm,0.9s
MID Middleton Isla 59.22 35 *e*P **P 13 06 29.2 +1.3**
comp=Z,91nm,0.9s
DIV Divide 59.51 33 *e*P **P 13 06 30.6 +0.6**
comp=Z,145nm,1.4s
PAX Paxson 59.68 31 *e*P **P 13 06 31.6 +0.5**
PAX *e* 13 07 14.5
PAX pmax pmax
comp=Z,150nm,1.1s
PAX Paxson 59.68 31 *e*P **P 13 06 31.6 +0.5**
comp=Z,150nm,1.1s
PAX *e*PcP **PcP 13 07 14.5 +1.4**
BMRM Bremner River 60.08 33 *e*P **P 13 06 34.3 +0.6**
comp=Z,236nm,0.8s
DOT Dot Lake 60.33 30 *e*P **P 13 06 35.5 +0.2**
comp=Z,210nm,0.8s
MENT Mentasta 60.48 31 *e*P **P 13 06 37.0 +0.6**
KBL Kabul 61.10 297 *e*P **P 13 06 41.8 +0.6**
KBL pmax pmax
comp=Z,175nm,0.8s
KBL Kabul 61.10 297 *e*P **P 13 06 41.8 +0.6**
comp=Z,175nm,0.8s
EGAK Eagle 61.58 28 *e*P **P 13 06 43.3 -0.3**
comp=Z,45nm,0.7s
POO Poona 61.59 278↑ *i*P **P 13 06 43.0 -1.5**
comp=Z,150nm,1.0s
PNL Peninsula 62.74 34 *e*P **P 13 06 51.9 +0.7**
comp=Z,110nm,0.8s
NWAO Narrogin (SRO) 62.91 202 P **P 13 06 52.9 +0.2**
NWAO PcP **PcP 13 07 26.3 -0.2**
NWAO Narrogin (SRO) 62.91 202 P **P 13 06 52.9 +0.2**
comp=Z,8.1nm,0.6s,baz=56,slow=6.1,SNR=9.0
NWAO PcP **PcP 13 07 26.3 -0.2**
comp=Z,16nm,0.6s,baz=24,slow=2.1,SNR=11
SVE Sverdlovsk 63.00 323*c* iP **P 13 06 53.5 +0.5**
SVE *e*S **S 13 14 49.0 -0.7**
SVE pmax pmax
comp=Z,142nm,0.8s
XMAS Kiritimati 64.08 101 *e*P **P 13 07 01.7 +1.0**
comp=Z,91nm,0.7s
ARU Arti 64.19 322*d* iP **P 13 07 00.7 0.0**
ARU *e* 13 07 32.3
ARU *PP **pP 13 08 30.8 +1.8**
ARU *e* 13 09 27.5
ARU S **S 13 15 02.8 -1.4**
ARU 13 16 07.9
ARU pmax pmax
comp=Z,202nm,0.7s
ARU Arti 64.19 322 P **P 13 07 00.8 0.0**
comp=Z,2µm,0.6s,SNR=95
INK Inuvik 64.38 24 P **P 13 07 01.6 0.0**
INK PcP **PcP 13 07 32.5 +0.4**
INK Inuvik 64.38 24 P **P 13 07 01.6 0.0**
comp=Z,52nm,0.7s,baz=292,slow=6.5,SNR=306
INK PcP **PcP 13 07 32.5 +0.4**
comp=Z,21nm,1.0s,baz=336,slow=14,SNR=6.1
SOKR Solikamsk 64.63 326*d* iP **P 13 07 03.5 +0.1**
SOKR pmax pmax
comp=Z,140nm,1.2s
AB31 Akbulak array 64.64 314 *i* P **P 13 07 03.7 0.0**
AB31 pmax pmax
comp=Z,105nm,0.6s
ABKAR Akbulak array 64.64 314 *e*P **P 13 07 03.9 +0.2**
comp=Z,124nm,0.7s
SKAG Skagway 64.82 34 *e*P **P 13 07 05.8 +1.2**
comp=Z,84nm,0.9s
CRAG Craig 66.75 38 *e*P **P 13 07 17.6 +0.8**
comp=Z,74nm,0.9s
WRAK Wrangell Islan 66.97 37 *e*P **P 13 07 19.3 +1.1**
comp=Z,90nm,1.0s
IMYA Miami 67.68 301 *e*P **P 13 07 25.0 +1.7**
DLBC Dease Lake 67.71 35 *e*P **P 13 07 24.2 +1.3**
DLBC Dease Lake 67.71 35 P **P 13 07 24.4 +1.5**
comp=Z,68nm,0.9s,baz=289,slow=6.1,SNR=179
ISRO Mashad 68.18 301 *e*P **P 13 07 27.8 +1.6**
ABKT Ailbek 68.73 303 P **P 13 07 30.1 +0.6**
comp=Z,379nm,0.9s,SNR=14
IKRD Kardeh 68.78 301 *e*P **P 13 07 27.3 -2.8**
ISFR Sfrayin 69.09 302 *e*P **P 13 07 33.0 +1.0**
ISHV Shirvan 69.17 302 *e*P **P 13 07 33.9 +1.5**
BBB Bella Bella 70.48 41 P **P 13 07 39.9 +0.2**
BBB Bella Bella 70.48 41 P **P 13 07 39.9 +0.2**
comp=Z,31nm,0.8s,baz=245,slow=7.7,SNR=19
ALE Alert 70.87 3 P **P 13 07 42.0 +0.5**
comp=Z,1µm,0.8s,SNR=65
KBS Kingsbay 71.13 351 *e*P **P 13 07 43.9 +0.8**
KBS AMB AMB 13 07 44.6
comp=Z,90nm,0.7s
KBS Kingsbay 71.13 351 *e*P **P 13 07 43.7 +0.6**
KBS pmax pmax

comp=Z,63nm,0.6s
KBS Kingsbay 71.13 351 *e*P P 13 07 43.7 +0.6
comp=Z,63nm,0.6s
IKIA Kiasar 72.64 302 *e*P P 13 07 53.6 +0.5
BJO Bjornoya 72.65 346 *e*P P 13 07 51.6 -0.4
IBAF Bafgh 72.77 297 *e*P P 13 07 54.2 +0.4
ISHM Shahmirzad 73.08 302 *e*P P 13 07 57.0 +1.3
WBK Wadi Bani Khal 73.17 287 P P 13 07 57.2 +1.1
SNR=12
RES Resolute Bay 73.20 13 *e*P P 13 07 55.4 +0.2
comp=Z,97nm,0.8s
RES Resolute Bay 73.20 13 P P 13 07 55.5 +0.2
comp=Z,89nm,0.8s,baz=324,slow=5.5,SNR=276
KEV Kevo 73.28 341 *e*P P 13 07 56.1 +0.3
KEV pmax pmax
comp=Z,133nm,1.0s
KEV Kevo 73.28 341 *e*p P 13 07 55.1 -0.7
comp=Z,78nm,0.8s
KEV Kevo 73.28 341 *e*P P 13 07 56.1 +0.3
comp=Z,133nm,1.0s
IALA Alasht 73.35 302 *e*P P 13 07 57.4 +0.2
ICHK Chekchek 73.46 298 *e*P P 13 07 58.0 +0.1
ILAS Lasjerd 73.48 302 *e*P P 13 07 59.1 +1.2
YKW3 Yellowknife Ar 73.52 28 *e*P P 13 07 57.1 -0.2
comp=Z,2.0nm,0.8s
YKA Yellowknife Ar 73.55 28 P P 13 07 57.3 -0.2
YKA Yellowknife Ar 73.55 28 P P 13 07 57.3 -0.2
comp=Z,94nm,0.7s,baz=295,slow=5.7,SNR=1273
IMEH Mehriz 73.60 297 *e*P P 13 07 58.4 -0.3
IPRN Peran 73.65 303 *e*P P 13 07 59.0 +0.2
ARCES ARCESS Array B 73.85 341 P P 13 07 59.2 +0.2
ARCES ARCESS Array B 73.85 341 P P 13 07 59.2 +0.2
comp=Z,107nm,0.7s,baz=82,slow=9.2,SNR=303
ARE0 ARCESS Array S 73.85 341 *e*P P 13 07 59.6 +0.6
JMDO Jabal Madar 74.01 287 P P 13 08 01.7 +0.8
SNR=8.7
BANOM Banah 74.21 291 P P 13 08 03.1 +1.1
SNR=7.5
HOQ Hoqain 74.23 289 P P 13 08 02.7 +0.6
SNR=14
PGC Sidney 74.49 43 *e*P P 13 08 04.2 +1.1
comp=Z,6.5nm,1.1s
BSY Bisya 74.64 288 P P 13 08 05.5 +1.1
SNR=12
NLWA Neilton Lookou 74.70 45 *e*P P 13 08 06.1 +1.7
comp=Z,119nm,0.9s
HATD Hatta, Dubai 74.76 290 P P 13 08 06.1 +1.0
SNR=12
KTK1 Kautokeino 74.81 341 ⇓*i*P P 13 08 04.7 +0.1
KTK1 AMB AMB 13 08 06.8
comp=Z,280nm,1.6s
ASHO Ashiyiah 74.88 290 P P 13 08 06.8 +1.0
SNR=12
ARQ Araqi 74.99 289 P P 13 08 07.4 +1.0
SNR=25
NAZ Nazwa, Dubai 75.09 291 P P 13 08 07.6 +0.6
SNR=7.1
JOF Joensuu 75.18 333 *e*P P 13 08 06.8 +0.1
JOF pmax pmax
comp=Z,124nm,0.7s
JOF Joensuu 75.18 333 *e*p P 13 08 06.8 +0.1
comp=Z,124nm,0.7s
GNW Green Mountain 75.29 44 P P 13 08 09.2 +1.6
VRHR Novokhopersk 75.31 320 *e*P P 13 08 07.1 -0.6
VRHR *e*S S 13 17 08.9 -3.4
VRHR pmax pmax
comp=N,40nm,0.7s
VRHR pmax pmax
comp=Z,190nm,0.7s
VRHR pmax pmax
comp=E,80nm,1.4s
VRHR smax smax
comp=N,130nm,1.0s
VRHR smax smax
comp=Z,30nm,1.0s
VRHR smax smax
comp=E,90nm,0.9s
CMW Cultus Mountai 75.40 43 P P 13 08 09.8 +1.4
IPAR Pars 75.42 296 *e*P P 13 08 09.6 +0.5
MOS Moscow 75.57 325 *e*P P 13 08 07.1 -1.9
MOS *i*S S 13 17 10.6 -4.3
MOS pmax pmax
comp=Z,175nm,1.3s
MOS pmax pmax
comp=Z,300nm,1.5s
JCW Jim Creek 75.60 43 P P 13 08 10.8 +1.3
TRO Tromso 75.68 342 *e*P P 13 08 09.0 -0.4
TRO AMB AMB 13 08 11.3
comp=Z,172nm,1.3s
RPW Rockport 75.76 43 P P 13 08 11.4 +1.1
KEBM Edson Butte 76.13 49 *e*P P 13 08 13.8 +1.2
comp=Z,275nm,0.9s
COR Corvallis 76.15 47 *e*P P 13 08 14.0 +1.5
COR pmax pmax
comp=Z,78nm,1.0s
COR Corvallis 76.15 47 *e*P P 13 08 14.0 +1.5
comp=Z,78nm,1.0s
OBSR Observation Ro 76.19 44 P P 13 08 07.4 -5.6
F04A Amboy 76.19 46 P P 13 08 13.8 +1.1
LON Longmire 76.25 45 *e*P P 13 08 13.5 +0.4
LON pmax pmax
comp=Z,27nm,0.9s
LON Longmire 76.25 45 *e*P P 13 08 13.5 +0.4
comp=Z,27nm,0.9s
OBN Obninsk 76.38 325κ *i*P P 13 08 13.5 0.0
OBN 13 08 24.0
OBN *e* 13 09 42.7
OBN *e*S S 13 17 20.7 -2.9
OBN pmax pmax
comp=Z,218nm,1.4s
OBN MLR MLR
comp=Z,100nm,15.0s
OBN Obninsk 76.38 325 P P 13 08 13.8 +0.3
comp=Z,853nm,0.9s,SNR=7.4
DAG Danmarks Havn 76.41 355 ⇓*i*P P 13 08 13.2 -0.2
DAG pmax pmax
comp=Z,37nm,0.8s
DAG Danmarks Havn 76.41 355 ⇓*i*P P 13 08 13.2 -0.2
comp=Z,50nm,0.8s
WPW White Pass 76.44 45 P P 13 08 15.1 +0.9
KBO Bosley Butte 76.46 50 *e*P P 13 08 16.0 +1.6
comp=Z,184nm,1.4s
PNT Penticton 76.55 42 P P 13 08 15.3 +0.6
PNT Penticton 76.55 42 P P 13 08 15.3 +0.6
VSR Storozhevoye 76.67 321 *e*P P 13 08 15.7 +0.4
VSR *e*S S 13 17 24.5 -2.4
VSR pmax pmax
comp=Z,290nm,1.1s
VSR pmax pmax
comp=N,90nm,0.9s
VSR pmax pmax
comp=E,170nm,1.0s
VSR smax smax
comp=N,330nm,1.1s
VSR smax smax
comp=Z,30nm,1.2s
VSR smax smax
comp=E,90nm,1.0s
VORD Divnogorie 76.71 320 *de*P P 13 08 15.6 +0.2
VORD *e*S S 13 17 25.4 -1.9
VORD pmax pmax
comp=Z,100nm,0.9s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,60nm,0.8s
VORD smax smax
comp=N,730nm,1.9s
VORD smax smax
comp=Z,20nm,1.3s
VORD smax smax
comp=E,110nm,1.0s
DGRG David-gareji 76.75 310 P P 13 08 16.5 +0.5
ETW Entiat 76.83 43 P P 13 08 17.1 +0.7
KRMB Red Mountain 76.95 50 *e*P P 13 08 18.6 +1.4
comp=E,74nm,1.2s
EBG Ellensburg 76.97 44 P P 13 08 18.3 +1.2
GUDG Gudauri 76.97 311 P P 13 08 17.8 +0.5
SEAG Tbilisi Sea 77.02 310 P P 13 08 18.1 +0.6
IRO Indian Ridge 77.07 47 P P 13 08 18.6 +0.7
TBLG Delisi 77.08 310 P P 13 08 17.8 0.0
TBLG Delisi 77.08 310 P P 13 08 17.8 0.0
HUMO Hull Mountain 77.17 49 *e*P P 13 08 19.3 +1.0
comp=E,37nm,1.0s
ZEI Tsey 77.22 311 *e*P P 13 08 18.8 0.0
ZEI pmax pmax
comp=Z,95nm,0.8s
KHMM Horse Mountain 77.33 51 *e*P P 13 08 20.7 +1.4
comp=Z,147nm,1.1s
GOR Gori 77.41 311 P P 13 08 20.7 +1.1
KZR Kazreti 77.44 310 P P 13 08 20.0 +0.2
KBZ Khabaz 77.51 313 P P 13 08 20.8 +0.8
KBZ pmax pmax
comp=Z,161nm,0.8s
KBZ Khabaz 77.51 313 P P 13 08 20.8 +0.8
KBZ Khabaz 77.51 313 P P 13 08 20.8 +0.8
comp=Z,161nm,0.8s,baz=102,slow=3.3,SNR=452
KIV Kislovodsk 77.56 313κ *i*P P 13 08 21.1 +0.7
KIV *i* 13 08 27.8
KIV *PP pP 13 09 52.0 -0.7
KIV S S 13 17 37.0 +0.1
KIV pmax pmax
comp=Z,101nm,0.9s
KIV Kislovodsk 77.56 313 P P 13 08 21.2 +0.8
comp=Z,522nm,0.8s,SNR=16
KAF Kangasniemi 77.59 334 *e*P P 13 08 19.7 -0.4
KAF pmax pmax
comp=Z,81nm,0.6s
KAF Kangasniemi 77.59 334 *e*p P 13 08 19.7 -0.4
comp=Z,81nm,0.6s
BLTW Bickleton 77.62 45 P P 13 08 21.8 +1.1
YBH Yreka Blue Hor 77.69 50 *e*P P 13 08 22.4 +1.2
comp=Z,76nm,0.9s
YBH Yreka Blue Hor 77.69 50 P P 13 08 22.4 +1.2
comp=Z,74nm,0.8s,baz=345,slow=3.1,SNR=188
GNI Garni 77.72 309 *e*P P 13 08 22.6 +1.2
comp=Z,61nm,0.9s
GNI Garni 77.72 309 P P 13 08 23.0 +1.6
SNR=22
F07A Phinny Hill Vi 77.79 45 P P 13 08 22.9 +1.4
STEI Steigen 77.80 342 *e*P P 13 08 21.2 +0.1
STEI AMB AMB 13 08 23.1
comp=Z,171nm,1.7s
HAWA Hanford 77.83 44 *e*P P 13 08 22.6 +0.9
WRD Warden 77.90 44 P P 13 08 23.0 +0.9
KCPM Cahto Peak 77.92 52 *e*P P 13 08 23.8 +1.3
comp=Z,94nm,1.0s
VIPM Ingram Point 77.93 46 P P 13 08 23.7 +1.1
VIPM Ingram Point 77.93 46 P P 13 08 23.7 +1.1
KIPM Iron Peak 77.94 52 *e*P P 13 08 23.2 +0.5
comp=Z,113nm,1.1s
FIA1 FINESS Array S 78.05 333 *e*P P 13 08 22.3 -0.2
FINES FINESS Array B 78.05 333 P P 13 08 22.3 -0.3
FINES PP PP 13 11 24.9 -0.3
FINES S S 13 17 39.2 -1.9
FINES FINESS Array B 78.05 333 P P 13 08 22.3 -0.3
comp=Z,69nm,0.6s,baz=70,slow=5.0,SNR=561
FINES PP PP 13 11 24.9 -0.3
comp=Z,13nm,0.9s,baz=64,slow=11,SNR=5.4
FINES S S 13 17 39.2 -1.9
comp=Z,4.4nm,1.0s,baz=55,slow=17,SNR=6.8
AKH Akhalkalaki 78.06 310 P P 13 08 24.4 +1.0
ILIN Lien 78.21 303 *e*P P 13 08 24.2 -0.1
WDC Whiskeytown Da 78.28 51 *e*P P 13 08 25.0 +0.7
WDC pmax pmax
comp=Z,95nm,1.3s
WDC Whiskeytown Da 78.28 51 *e*P P 13 08 25.0 +0.7
comp=Z,95nm,1.3s
NEW Newport 78.49 42 P P 13 08 26.1 +0.8
NEW Newport 78.49 42 P P 13 08 26.1 +0.8
comp=Z,131nm,0.9s,baz=295,slow=4.6,SNR=172
NEW Newport 78.49 42 ⇑P P 13 08 26.0 +0.7
baz=78,SNR=108
K05A Summer Lake 78.50 48 P P 13 08 27.0 +1.3
HOPS Hopland 78.56 52 *e*P P 13 08 26.3 +0.4
comp=Z,58nm,1.2s
IDHR Dehrash 78.73 303 *e*P P 13 08 26.1 -1.0
MCCM Marconi Confer 79.05 53 *e*P P 13 08 29.1 +0.7
comp=Z,385nm,1.7s
A12A Yaak River Ran 79.06 41 ⇓P P 13 08 29.8 +1.5
baz=79,SNR=29
MOR8 Moi Rana 79.22 340 ⇓*i*P P 13 08 27.4 -1.5
MOR8 AMB AMB 13 08 29.2
comp=Z,232nm,1.0s
MOD Modoc 79.25 49 *e*P P 13 08 30.5 +0.8
comp=Z,161nm,0.8s
B12A Libby 79.31 41 ⇓P P 13 08 30.7 +1.0
baz=79,SNR=11
VSU Vasula 79.42 331 *di*P P 13 08 29.7 -0.3
VSU pmax pmax
comp=Z,97nm,1.1s
FLOS Flostrand 79.42 341 *e*P P 13 08 29.7 -0.2
FLOS AMB AMB 13 08 33.6
comp=Z,174nm,1.7s
SAC San Andreas 79.62 53 *e*P P 13 08 32.4 +0.9
SAC pmax pmax
comp=Z,74nm,1.1s
SAC San Andreas 79.62 53 *e*P P 13 08 32.4 +0.9
comp=Z,74nm,1.1s
SOC Sochi 79.66 313 *di*P P 13 08 31.6 0.0
SOC *e*SP sP 13 10 49.3 +1.2
SOC *e* 13 11 45.7
SOC *e*S S 13 17 56.1 -2.6
SOC *e*SS SS 13 23 20.4 +3.2
SOC *i* SSS SSS 13 26 43.5
SOC pmax pmax
comp=Z,88nm,0.7s
C12B Naegeli Ranch, 79.73 42 ⇓P P 13 08 32.7 +0.7
baz=80,SNR=12
UMR Umm Al-Rimmam 79.80 298 *e*P P 13 08 32.5 -0.1
UMR AMb AMB 13 08 33.5
comp=Z,258nm,0.5s
BMO Blue Mountains 79.91 45 *e*P P 13 08 33.7 +0.7
BMO pmax pmax
comp=Z,101nm,0.9s
BMO Blue Mountains 79.91 45 *e*P P 13 08 33.7 +0.7
comp=Z,101nm,0.9s
QRN Al-Qurain 79.97 297 *e*P P 13 08 33.4 -0.1
QRN AMb AMB 13 08 34.3
comp=Z,248nm,0.7s
KBD Kabd 79.98 298 *e*P P 13 08 33.6 0.0
KBD AMb AMB 13 08 34.5
comp=Z,150nm,0.6s
WALA Waterton Lakes 80.01 40 *e*P P 13 08 34.5 +1.0
comp=Z,4.0nm,0.8s
B13A Whitefish 80.01 41 ⇓P P 13 08 34.7 +1.2
baz=80,SNR=119
BSMT Bassoo Peak 80.07 41 *e*P P 13 08 34.3 +0.3
comp=Z,75nm,0.9s
BEKR Beckworth 80.09 50 *e*P P 13 08 34.6 +0.4
comp=Z,72nm,0.9s
WVOR Wild Horse Val 80.13 48 *e*P P 13 08 34.7 +0.4
WVOR pmax pmax
comp=Z,66nm,0.9s
WVOR Wild Horse Val 80.13 48 *e*P P 13 08 34.7 +0.4
comp=Z,66nm,0.9s
ABTO Aybut 80.14 284 P P 13 08 35.2 +0.5
SNR=8.3
RDF Al-Radifah 80.19 297 *e*P P 13 08 35.0 +0.3
RDF AMb AMB 13 08 36.2
comp=Z,354nm,0.6s
BLMT Blacktail Moun 80.25 41 *e*P P 13 08 35.7 +0.8
comp=Z,90nm,0.9s
C13A Hot Springs 80.28 42 ⇑P P 13 08 35.8 +0.9
baz=80,SNR=130
NAY Al-Naaiem 80.31 298 *e*P P 13 08 35.3 0.0
NAY AMb AMB 13 08 36.5
comp=Z,319nm,0.9s
A14A Double T Ranch 80.33 40 ⇑P P 13 08 36.1 +0.9
baz=80,SNR=148
RST Umm Al-Ruwaisa 80.39 298 *e*P P 13 08 35.5 -0.3
RST AMb AMB 13 08 36.7
comp=Z,55nm,0.8s
JTMT Jette 80.42 41 *e*P P 13 08 36.7 +0.9
comp=Z,82nm,0.9s
YBMT Yellow Bay 80.53 41 *e*P P 13 08 36.0 -0.3
comp=Z,79nm,1.1s
ANN Anapa 80.57 315 *e*P P 13 08 35.3 -1.1
ANN *e*S S 13 18 06.6 -1.4
ANN pmax pmax
comp=Z,201nm,1.0s
PPT Papeete 80.62 115 P P 13 08 37.9 +0.9
PPT Papeete 80.62 115 P P 13 08 37.9 +0.9
comp=Z,49nm,0.9s,baz=86,slow=6.8,SNR=4.5
D13A Huson 80.63 42 ⇑P P 13 08 37.1 +0.4
baz=80,SNR=45
SAO San Andreas Ge 80.67 54 *e*P P 13 08 38.0 +0.9
SAO pmax pmax
comp=Z,51nm,1.2s
SAO San Andreas Ge 80.67 54 *e*P P 13 08 38.0 +0.9
comp=Z,51nm,1.2s
PMOR Pomariorio Ree 80.70 112 *e*P P 13 08 38.5 +1.0
comp=Z,111nm,1.1s
SWMT Swartz Lake 80.70 41 *e*P P 13 08 37.5 +0.3
comp=Z,81nm,0.9s
B14A Marquette Ranc 80.72 40 ⇑P P 13 08 38.4 +1.1
baz=81,SNR=192
A15A Johnson Ranch, 80.73 40 ⇑P P 13 08 37.9 +0.6
baz=81,SNR=153
WCN Washoe City 80.76 51 *e*P P 13 08 38.5 +0.8
WCN pmax pmax
comp=Z,32nm,0.9s
WCN Washoe City 80.76 51 *e*P P 13 08 38.5 +0.8
comp=Z,32nm,0.9s
F12A Elk City 80.78 43 ⇓P P 13 08 38.1 +0.4
baz=81,SNR=133
CMB Columbia Colle 80.88 52 *e*P P 13 08 38.8 +0.6
CMB pmax pmax
comp=Z,66nm,0.8s
CMB Columbia Colle 80.88 52 *e*P P 13 08 38.8 +0.6
comp=Z,66nm,0.8s
MICGM Minsk 81.06 327 *e*P P 13 08 38.0 -0.7
MSO Missoula 81.06 42 *e*P P 13 08 39.1 0.0
comp=Z,14nm,0.8s
MSO Missoula 81.06 42 ⇑P P 13 08 39.0 0.0
baz=81,SNR=41
MNK Minsk 81.08 327 *e*P P 13 08 38.0 -0.8
MNK pmax pmax
comp=Z,310nm,1.0s
E13A Victor 81.10 42 ⇓P P 13 08 39.0 -0.2
baz=81,SNR=27
SLMT Seeley Lake 81.13 42 *e*P P 13 08 37.7 -1.8
comp=Z,229nm,1.2s
IZAR Zarasai 81.15 329 *e*P P 13 08 39.2 0.0
IZAR AMB AMB 13 08 40.4
comp=Z,46nm,1.3s
B15A Bradely Ranch, 81.16 40 ⇓P P 13 08 40.1 +0.6
baz=81,SNR=147
D14A Greenough 81.20 42 ⇓P P 13 08 39.7 -0.1
baz=81,SNR=44
ISAL Salakas 81.30 328 *e*P P 13 08 40.0 0.0
ISAL AMB AMB 13 08 41.3
comp=Z,37nm,1.0s
F13A Darby 81.33 43 ⇑P P 13 08 40.4 -0.1
baz=81,SNR=80
NACGM Naroch 81.37 328 *e*P P 13 08 38.0 -2.3
IIGN Ignalina 81.38 328 *e*P P 13 08 40.4 0.0
IIGN AMB AMB 13 08 41.6
comp=Z,25nm,0.9s
C15A Salmond Ranch, 81.39 41 ⇓P P 13 08 41.7 +0.8
baz=81,SNR=159
SUMG Summit 81.42 360 ⇓*i*P P 13 08 41.5 +0.7
SUMG pmax pmax
comp=Z,51nm,0.9s
SUMG Summit 81.42 360 *e*P P 13 08 41.4 +0.7
comp=Z,84nm,0.9s
SUMG Summit 81.42 360 ⇓*i*P P 13 08 41.5 +0.7
comp=Z,51nm,0.9s
CHMT Chamberlain Mo 81.44 42 *e*P P 13 08 41.2 0.0
comp=Z,25nm,1.0s
MFID Camas Ranch 81.52 46 *e*P P 13 08 42.4 +0.9
comp=Z,104nm,0.8s
MFID Camas Ranch 81.52 46 ⇑P P 13 08 42.6 +1.1
baz=81,SNR=83
E14A Clinton 81.54 42 ⇓P P 13 08 41.6 0.0
baz=81,SNR=37
H12A Diamond D Ranc 81.60 44 ⇓P P 13 08 42.5 +0.5
baz=82,SNR=71
B16A M & M Farms, S 81.60 40 ⇑P P 13 08 42.4 +0.6
baz=82,SNR=58
G13A Cobalt 81.72 44 ⇑P P 13 08 42.8 +0.2
baz=82,SNR=106
I12A Atlanta 81.78 45 ⇑P P 13 08 43.7 +0.7
baz=82
D15A Lincoln 81.81 41 ⇑P P 13 08 43.4 +0.4
baz=82,SNR=33
C16A Fuhringer Ranc 81.89 40 ⇓P P 13 08 43.8 +0.5
baz=82,SNR=177
A17A Triple J Farms 81.91 39 ⇓P P 13 08 44.0 +0.7
baz=82,SNR=82
F14A Wisdom 81.91 43 ⇓P P 13 08 43.6 0.0
baz=82,SNR=7.4
H13A Challis 81.97 44 ⇑P P 13 08 44.6 +0.8
baz=82,SNR=166
BMN Battle Mountai 81.99 49 *e*P P 13 08 45.1 +1.1
BMN pmax pmax
comp=Z,62nm,1.1s
BMN Battle Mountai 81.99 49 *e*P P 13 08 45.1 +1.1
comp=Z,62nm,1.1s
KBSD Kabsdagh 82.03 307 *e*P P 13 08 38.2 -6.0
KBSD Kabsdagh 82.03 307 *e*P P 13 08 38.4 -5.8
E15A Deer Lodge 82.04 42 ⇓P P 13 08 44.8 +0.6
baz=82,SNR=124
G14A Jackson 82.13 43 ⇓P P 13 08 44.5 -0.3
baz=82,SNR=20
MLAC Mammoth Lakes 82.15 52 ⇑P P 13 08 45.9 +0.8
baz=82,SNR=16
NVAR Mina Array Bea 82.17 51 P P 13 08 45.8 +0.7
NVAR Mina Array Bea 82.17 51 P P 13 08 45.8 +0.7
comp=Z,59nm,0.9s,baz=275,slow=5.0,SNR=291
B17A L&G Farms, Che 82.18 40 ⇑P P 13 08 45.4 +0.6
baz=82,SNR=196
NV11 Mina Array Sit 82.27 51 *e*P P 13 08 46.2 +0.7
HLID Hailey 82.35 45 *e*P P 13 08 46.8 +0.9
comp=Z,48nm,0.9s
HLID Hailey 82.35 45 ⇑P P 13 08 46.9 +0.9
baz=82,SNR=89
SMMC Simmler 82.36 54 ⇓P P 13 08 46.7 +0.8
baz=82
I13A Wildhorse Cree 82.37 45 ⇑P P 13 08 47.2 +1.2
baz=82,SNR=123
HRY Holter Researc 82.39 41 *e*P P 13 08 46.6 +0.7
comp=Z,77nm,0.7s
D16A Dana Ranch, Ca 82.39 41 ⇓P P 13 08 46.6 +0.7
baz=82,SNR=116
A18A Metzger Ranch, 82.40 39 ⇑P P 13 08 46.6 +0.8
baz=82,SNR=120
F15A Butte 82.42 42 ⇑P P 13 08 47.0 +0.7
baz=82,SNR=307
AKASG Malin Array Be 82.42 323 P P 13 08 45.4 -0.4
AKASG pmax pmax
comp=Z,92nm,0.6s
AKASG Malin Array Be 82.42 323 P P 13 08 45.4 -0.4
AKASG Malin Array Be 82.42 323 P P 13 08 45.4 -0.4
comp=Z,92nm,0.6s,baz=52,slow=5.2,SNR=209
AK01 Malin Array Si 82.44 323 *e*P P 13 08 45.5 -0.4
KIEV Kiev 82.44 323 *e*P P 13 08 45.5 -0.4
KIEV pmax pmax
comp=Z,118nm,0.6s
KIEV Kiev 82.44 323 *e*P P 13 08 45.5 -0.4
comp=Z,118nm,0.6s
AK02 Malin Array Si 82.46 323 *e*P P 13 08 45.6 -0.4
LRM Limekiln Ridge 82.46 42 *e*P P 13 08 47.1 +0.6
comp=Z,970nm,0.9s
RCTC Rector, Farmer 82.46 53 ⇓P P 13 08 46.6 +0.3
baz=82
MZRK Al-Mazaregh 82.48 306 *e*P P 13 08 43.1 -3.4
H14A Leadore 82.50 44 ⇑P P 13 08 47.3 +0.7
baz=82,SNR=67
C17A Wharram Farm, 82.54 40 ⇑P P 13 08 46.9 +0.2
baz=82,SNR=115
TBLU Trondheim 82.55 340 *e*P P 13 08 37.9 -8.4
E16A East Helena 82.57 42 ⇓P P 13 08 47.7 +0.9
baz=82,SNR=175
SIM Simferopol' 82.57 317 *de*P P 13 08 46.8 +0.1
SIM pmax pmax
comp=Z,121nm,0.8s
J13A Cove Ranch, Pi 82.58 45 ⇓P P 13 08 48.1 +1.1
baz=82,SNR=71
DLMT Dillon 82.60 43 *e*P P 13 08 47.5 +0.4
comp=Z,120nm,1.0s
SFNV Sufian 82.61 307 *e*P P 13 08 46.4 -0.8
SFNV Sufian 82.61 307 *e*P P 13 08 47.0 -0.2
PKM Peak Mountain 82.68 55 ⇓P P 13 08 48.9 +1.2
baz=83,SNR=18
MCMT McKenzie Canyo 82.71 43 *e*P P 13 08 48.2 +0.4
comp=Z,19nm,1.2s
B18A Beardsley Farm 82.71 39 ⇓P P 13 08 48.2 +0.7
baz=83,SNR=121
SCO Scoresbysund 82.72 354 ⇓*i*P P 13 08 47.2 +0.2
SCO pmax pmax
comp=Z,31nm,0.9s
SCO Scoresbysund 82.72 354 ⇓*i*P P 13 08 47.2 +0.2
comp=Z,31nm,0.9s
G15A Dillon 82.76 43 ⇓P P 13 08 48.6 +0.7
baz=83,SNR=109
I14A Mackay 82.78 44 ⇓P P 13 08 49.5 +1.5
baz=83,SNR=225
VES Vestal, Richgr 82.79 54 ⇓P P 13 08 47.9 -0.1

baz=83,SNR=22
D17A **Six Diamond Ra** 82.83 41 ⇑P P 13 08 49.0 +0.8
baz=83,SNR=196
TIN **Tinemaha** 82.85 52 ⇑P P 13 08 49.3 +0.9
baz=83,SNR=20
EGMT **Eagleton** 82.92 40 eP P 13 08 49.0 +0.5
comp=Z,126nm,0.9s
EGMT **Eagleton** 82.92 40 ⇑P P 13 08 49.0 +0.5
baz=83,SNR=112
MALT **Malatya** 82.93 309 ⇓P P 13 08 50.4 +1.6
MALT **Malatya** 82.93 309 eP P 13 08 49.9 +1.1
comp=Z,70nm,1.0s
MALT **Malatya** 82.93 309 ⇓*i*P P 13 08 50.3 +1.5
H15A **Lima** 82.94 44 ⇓P P 13 08 49.4 +0.5
baz=83,SNR=40
F16A **Kennard Place,** 82.98 42 ⇓P P 13 08 49.7 +0.8
baz=83,SNR=78
A19A **Klindworth Far** 83.01 38 ⇓P P 13 08 49.8 +0.8
baz=83,SNR=92
BOZ **Bozeman (W)** 83.04 42 eP P 13 08 49.9 +0.6
BOZ pmax pmax
comp=Z,48nm,0.8s
BOZ **Bozeman (W)** 83.04 42 eP P 13 08 49.9 +0.6
comp=Z,48nm,0.8s
BOZ **Bozeman (W)** 83.04 42 ⇓P P 13 08 50.2 +0.8
baz=83,SNR=115
E17A **Martinsdale** 83.09 41 ⇓P P 13 08 50.5 +1.0
baz=83,SNR=146
G16A **Moss Hill, Enn** 83.15 43 ⇓P P 13 08 50.7 +0.8
baz=83,SNR=44
B19A **Brinkman Farms** 83.15 39 ⇑P P 13 08 50.4 +0.7
baz=83,SNR=29
ELK **Elko** 83.17 48 eP P 13 08 51.0 +0.8
comp=Z,70nm,0.9s
FFC **Flin Flon** 83.20 31 eP P 13 08 49.7 0.0
FFC pmax pmax
comp=Z,118nm,0.8s
FFC **Flin Flon** 83.20 31 eP P 13 08 49.7 0.0
comp=Z,118nm,0.8s
FFC **Flin Flon** 83.20 31 P P 13 08 49.1 -0.6
comp=Z,1µm,0.7s,SNR=78
BSC **Santa Cruz Isl** 83.22 56 ⇓P P 13 08 50.5 +0.2
baz=83
CWC **Cottonwood Cre** 83.24 53 ⇑P P 13 08 50.8 +0.3
baz=83,SNR=14
ARVC **Arvin** 83.30 54 ⇓P P 13 08 50.9 +0.3
baz=83,SNR=6.6
ISA **Isabella** 83.31 54 eP P 13 08 50.5 -0.3
ISA pmax pmax
comp=Z,16nm,0.7s
ISA **Isabella** 83.31 54 eP P 13 08 50.5 -0.3
comp=Z,16nm,0.7s
ISA **Isabella** 83.31 54 ⇑P P 13 08 50.6 -0.3
baz=83,SNR=24
D18A **Linhart Farms,** 83.33 40 ⇑P P 13 08 51.6 +0.9
baz=83,SNR=11
I15A **Monteview** 83.35 44 ⇑P P 13 08 52.3 +1.4
baz=83,SNR=49
C19A **Slack Wire Ran** 83.48 40 ⇑P P 13 08 52.3 +0.9
baz=83,SNR=60
GRAC **Grapevine Rang** 83.48 52 ⇑P P 13 08 52.4 +0.8
baz=83,SNR=45
A20A **Cobblestone Ra** 83.50 38 ⇑P P 13 08 52.0 +0.6
baz=83,SNR=33
F17A **Fitzpatrick Pl** 83.50 42 ⇓P P 13 08 52.4 +0.8
baz=83,SNR=76
QLMT **Earthquake Lak** 83.58 43 eP P 13 08 53.0 +0.9
comp=Z,20nm,0.9s
BLG **Laguna Peak** 83.59 55 ⇓P P 13 08 52.4 +0.2
baz=84,SNR=7.1
SUW **Suwalki** 83.60 328 eP P 13 08 51.3 -0.4
SUW pmax pmax
comp=Z,419nm,1.0s
SUW **Suwalki** 83.60 328 eP P 13 08 51.3 -0.4
comp=Z,419nm,1.0s
SUW **Suwalki** 83.60 328 eP P 13 08 51.2 -0.4
OSI **Osito Adit** 83.61 55 eP P 13 08 53.5 +1.3
comp=Z,68nm,0.7s
OSI **Osito Adit** 83.61 55 ⇓P P 13 08 52.9 +0.7
baz=84,SNR=6.1
K14A **Jones Ranch, D** 83.64 46 ⇓P P 13 08 53.8 +1.5
baz=84,SNR=37
DAC **Darwin (Calif)** 83.66 53 eP P 13 08 53.0 +0.4
DAC pmax pmax
comp=Z,38nm,0.9s
DAC **Darwin (Calif)** 83.66 53 eP P 13 08 53.0 +0.4
comp=Z,38nm,0.9s
J15A **Blackfoot** 83.69 45 ⇑P P 13 08 54.3 +1.7
baz=84,SNR=116
G17A **Pierce Place,** 83.75 42 ⇓P P 13 08 54.2 +1.3
baz=84,SNR=37
H16A **Russell Place,** 83.76 43 ⇓P P 13 08 54.5 +1.5
baz=84,SNR=112
MPMC **Manual Prospec** 83.83 53 ⇓P P 13 08 54.2 +0.6
baz=84,SNR=80
NB2 **NORSAR Subarra** 83.84 338 P P 13 08 51.9 -0.9
comp=Z,67nm,0.7s,baz=46,slow=4.8
NB2 **NORSAR Subarra** 83.84 338 P P 13 08 51.9 -0.9
baz=46,slow=4.8
NOA **NORSAR Array B** 83.84 338 P P 13 08 51.7 -1.1
NOA PP PP 13 12 10.8 -1.5
NOA **NORSAR Array B** 83.84 338 P P 13 08 51.7 -1.1
comp=Z,61nm,0.8s,baz=47,slow=4.9,SNR=187
NOA PP PP 13 12 10.8 -1.5
comp=Z,10.0nm,0.9s,baz=46,slow=8.5,SNR=8.6
L14A **Malta** 83.85 46 ⇓P P 13 08 54.6 +1.2
baz=84,SNR=43
D19A **Cripps Ranch,** 83.88 40 ⇓P P 13 08 54.2 +0.8
baz=84,SNR=170
MOL **Molde** 83.89 340 eP P 13 08 52.9 -0.1
MOL AMB AMB 13 08 54.8
comp=Z,125nm,1.3s
YMR **Madison River** 83.95 43 eP P 13 08 55.5 +1.5
comp=Z,206nm,0.9s
LRMC **Laurel Mountai** 83.96 53 ⇑P P 13 08 54.6 +0.5
baz=84,SNR=57
K15A **Arbon** 83.98 45 ⇑P P 13 08 55.4 +1.3
baz=84,SNR=38
EDW2 **Edwards Air Fo** 84.02 54 ⇑P P 13 08 55.1 +0.8
baz=84,SNR=76
I16A **Newdale** 84.03 44 ⇓P P 13 08 56.0 +1.6
baz=84,SNR=51
F18A **Big Timber** 84.06 41 ⇓P P 13 08 55.2 +0.8
baz=84,SNR=85
DECC **Green Verdugo** 84.07 55 ⇑P P 13 08 54.8 +0.3
baz=84,SNR=11
C20A **Veseth Ranch,** 84.08 39 ⇓P P 13 08 55.2 +0.9
baz=84,SNR=52
R11A **Troy Canyon, C** 84.09 50 ⇑P P 13 08 55.4 +0.6
baz=84,SNR=171
NAO01 **NORSAR Array S** 84.09 338 eP P 13 08 53.0 -1.1
comp=Z,38nm,0.8s
FURC **Furnace Creek,** 84.09 52 ⇓P P 13 08 55.3 +0.8
baz=84,SNR=74
GCMT **Greycliff** 84.15 41 eP P 13 08 55.2 +0.4
comp=Z,32nm,0.9s
RAYN **Ar Rayn** 84.15 293 P P 13 08 55.0 -0.1
comp=Z,1µm,0.7s,SNR=87
PASC **Pasadena Art C** 84.21 55 eP P 13 08 55.3 +0.1
comp=Z,90nm,1.1s
B21A **Ellsworth Farm** 84.25 38 ⇑P P 13 08 55.5 +0.4
baz=84,SNR=17
J16A **Bone** 84.27 44 ⇓P P 13 08 56.9 +1.4
baz=84,SNR=100
MWC **Mount Wilson** 84.28 55 eP P 13 08 56.0 +0.2
MWC pmax pmax
comp=Z,131nm,1.1s
MWC **Mount Wilson** 84.28 55 eP P 13 08 56.0 +0.2
comp=Z,131nm,1.1s
HVU **Hansel Valley** 84.28 46 eP P 13 08 55.9 +0.3
HVU pmax pmax
comp=Z,61nm,0.8s
HVU **Hansel Valley** 84.28 46 eP P 13 08 55.9 +0.3
comp=Z,61nm,0.8s
E19A **Rath Farm, Rou** 84.31 41 ⇑P P 13 08 56.1 +0.6
baz=84,SNR=73
H17A **Grant Village** 84.33 43 ⇑P P 13 08 58.6 +2.7
baz=84,SNR=106
FMP **Fort Macarthur** 84.34 55 ⇑P P 13 08 56.3 +0.5
baz=84
D20A **Manuel Ranch,** 84.34 40 ⇑P P 13 08 56.5 +0.8
baz=84,SNR=153
LKWY **Lake** 84.35 43 eP P 13 08 58.7 +2.7
LKWY pmax pmax
comp=Z,126nm,0.8s
LKWY **Lake** 84.35 43 eP P 13 08 58.7 +2.7
comp=Z,126nm,0.8s
IMW **Indian Meadow** 84.36 44 eP P 13 08 57.4 +1.3
comp=Z,82nm,0.8s
DCID1 **Drake Creek** 84.37 44 eP P 13 08 57.8 +1.8
comp=Z,48nm,0.3s
CIS **Catalina Islan** 84.40 56 ⇓P P 13 08 56.4 +0.2
baz=84,SNR=14
RRI2 **Red Ridge** 84.41 44 eP P 13 08 57.7 +1.3
comp=Z,73nm,0.9s
L15A **Malad City** 84.42 46 ⇓P P 13 08 57.1 +0.8
baz=84,SNR=16
G18A **Lazy EL Ranch,** 84.46 42 ⇑P P 13 08 56.6 +0.2
baz=84,SNR=18
SCI **San Clemente I** 84.50 56 ⇓P P 13 08 56.8 +0.1
baz=84
K16A **Soda Springs** 84.51 45 ⇓P P 13 08 58.1 +1.4
baz=84,SNR=118
C21A **Desert Coulee** 84.53 39 ⇑P P 13 08 57.1 +0.5
baz=84,SNR=45
A22A **Carney Farms,** 84.54 37 ⇑P P 13 08 56.6 0.0
baz=84,SNR=74
F19A **Roth Farm, Mol** 84.54 41 ⇑P P 13 08 57.4 +0.6
baz=84,SNR=38
MOOW **Moose Ponds** 84.56 44 eP P 13 08 58.1 +1.1
comp=Z,72nm,1.1s
BFSC **Mount Baldy Ra** 84.56 55 ⇓P P 13 08 57.0 -0.1
baz=84,SNR=27
TPAW **Teton Pass** 84.57 44 eP P 13 08 58.2 +1.1
comp=Z,64nm,0.8s
I17A **Pilgrim Ck.** 84.58 43 ⇑P P 13 08 58.8 +1.7
baz=84,SNR=29
E20A **Meyer Farm, Mu** 84.67 40 ⇑P P 13 08 57.9 +0.6
baz=84,SNR=20
GSC **Goldstone** 84.68 53 eP P 13 08 58.2 +0.6
GSC pmax pmax
comp=Z,175nm,1.0s
GSC **Goldstone** 84.68 53 eP P 13 08 58.2 +0.6
comp=Z,175nm,1.0s
GSC **Goldstone** 84.68 53 ⇓P P 13 08 58.2 +0.6
baz=85,SNR=118
REDW **Red Top Meadow** 84.69 44 eP P 13 08 59.2 +1.5
comp=Z,0.8nm,1.3s
SNOW **Snow King Moun** 84.70 44 eP P 13 08 58.9 +1.1
comp=Z,62nm,1.1s
LOHW **Long Hollow** 84.72 44 eP P 13 08 58.2 +0.4
comp=Z,42nm,0.9s
H18A **Shoshone NF, C** 84.74 42 ⇑P P 13 08 59.1 +1.2
baz=85,SNR=45
RLMT **Red Lodge** 84.74 42 eP P 13 08 58.8 +1.0
comp=Z,49nm,0.6s
RLMT **Red Lodge** 84.74 42 ⇓P P 13 08 59.0 +1.2
baz=85,SNR=34
RRX **Edison Barstow** 84.74 54 ⇑P P 13 08 58.7 +0.9
baz=85,SNR=5.1
SHOC **Shoshone** 84.78 53 ⇓P P 13 08 58.6 +0.6
baz=85,SNR=51
J17A **Brown Place, J** 84.78 44 ⇑P P 13 08 59.2 +1.1
baz=85,SNR=20
AHID **Auburn Hatcher** 84.85 45 eP P 13 08 59.5 +1.0
comp=Z,72nm,1.0s
B22A **Reddig Ranch S** 84.88 38 ⇑P P 13 08 58.5 +0.2
baz=85,SNR=23
DRWC **Darouich** 84.96 308 eP P 13 08 59.0 0.0
DRWC **Darouich** 84.96 308 eP P 13 08 58.7 -0.2
K17A **Gardner Place,** 84.97 45 ⇑P P 13 08 59.5 +0.5
baz=85,SNR=7.9
D21A **La Casta Ranch** 85.01 39 ⇓P P 13 08 59.4 +0.5
baz=85,SNR=12
L16A **Fish Haven** 85.03 45 ⇓P P 13 09 00.3 +0.9
baz=85,SNR=107
F20A **Billings** 85.04 41 ⇑P P 13 08 59.5 +0.4
baz=85,SNR=9.6
DUG **Dugway** 85.05 47 eP P 13 09 00.0 +0.6
DUG pmax pmax
comp=Z,80nm,0.8s
DUG **Dugway** 85.05 47 eP P 13 08 60.0 +0.6
comp=Z,80nm,0.8s
DUG **Dugway** 85.05 47 ⇓P P 13 09 00.2 +0.8
baz=85,SNR=110
BBRC **Big Bear Solar** 85.09 54 ⇓P P 13 09 00.0 +0.2
baz=85,SNR=21
A23A **Redstone** 85.12 37 ⇓P P 13 08 59.7 +0.2
baz=85,SNR=8.6
H19A **Powell** 85.15 42 ⇓P P 13 09 01.1 +1.3
baz=85,SNR=33
HWUT **Hardware Ranch** 85.15 46 eP P 13 09 00.5 +0.6
comp=Z,104nm,1.0s
I18A **Diamond G Ranc** 85.16 43 ⇑P P 13 09 01.0 +1.0
baz=85,SNR=26
MURC **Murrieta** 85.20 55 ⇓P P 13 09 00.4 +0.3
baz=85,SNR=22
HEC **Hector,Ludlow** 85.25 54 ⇑P P 13 09 01.0 +0.6
baz=85,SNR=57
TUQ **Turquoise Moun** 85.25 53 ⇓P P 13 09 01.2 +0.7
baz=85,SNR=36
E21A **Keefer Ranch,** 85.26 40 ⇑P P 13 09 00.8 +0.6
baz=85,SNR=11
C22A **Vida** 85.26 38 ⇑P P 13 09 00.2 0.0
baz=85,SNR=16
J18A **Kendall Valley** 85.29 44 ⇓P P 13 09 01.6 +0.9
baz=85,SNR=148
G20A **Bridger** 85.31 41 ⇓P P 13 09 00.8 +0.2
baz=85,SNR=46
L17A **Cokeville** 85.34 45 ⇓P P 13 09 01.5 +0.6
baz=85,SNR=26
B23A **Brockton** 85.34 37 ⇑P P 13 09 00.9 +0.3
baz=85,SNR=82
HYA **Hoyanger** 85.38 340 eP P 13 08 59.8 -0.5
HYA AMB AMB 13 09 01.8
comp=Z,130nm,1.2s
D22A **Cohagen** 85.43 39 ⇑P P 13 09 01.6 +0.6
baz=85,SNR=38
I19A **Meeteetse** 85.48 43 ⇑P P 13 09 02.6 +1.1
baz=85,SNR=33
BR131 **Keskin Array S** 85.50 312 eP P 13 09 00.9 -0.7
comp=Z,22nm,0.7s
BRTR **Keskin Array B** 85.50 312 P P 13 09 00.9 -0.7
BRTR **Keskin Array B** 85.50 312 P P 13 09 00.9 -0.7
comp=Z,25nm,0.8s,baz=94,slow=3.4,SNR=116
K18A **Toltan Ranch,** 85.58 44 ⇑P P 13 09 02.9 +0.9
baz=85,SNR=31
109C **Camp Elliot, M** 85.61 56 ⇓P P 13 09 02.4 +0.3
baz=86,SNR=7.1
A24A **Westby** 85.61 37 ⇑P P 13 09 02.1 +0.3
baz=85,SNR=22
C23A **Lambert** 85.61 38 ⇓P P 13 09 02.4 +0.5
baz=85,SNR=52
F21A **Absaloka Mine,** 85.63 40 ⇓P P 13 09 02.2 +0.1
baz=86,SNR=5.3
TLCR 85.65 319 ⇑P P 13 09 01.8 -0.2
TLCR 85.65 319 ⇑*i*P P 13 09 01.8 -0.2
LVV **L'vov** 85.67 324 *i* P P 13 09 08.0 +6.0
JLU **Joanelle** 85.74 47 eP P 13 09 03.4 +0.5
comp=Z,138nm,1.5s
PFO **Pinyon Flat Ob** 85.74 55 eP P 13 09 02.9 +0.1
comp=Z,109nm,0.9s
PFO **Pinyon Flat Ob** 85.74 55 P P 13 09 03.0 +0.1
comp=Z,665nm,0.7s,SNR=51
PFO **Pinyon Flat Ob** 85.74 55 ⇑P P 13 09 03.4 +0.5
baz=86,SNR=85
GMRC **Granite Mounta** 85.76 53 ⇓P P 13 09 03.6 +0.7
baz=86,SNR=124
DGMT **Dagmar** 85.77 37 eP P 13 09 02.9 +0.2
comp=Z,89nm,1.0s
DGMT **Dagmar** 85.77 37 ⇑P P 13 09 02.8 +0.2
baz=86,SNR=11
M17A **Scullys Gap (B** 85.80 46 ⇑P P 13 09 03.3 +0.2
baz=86,SNR=20
BW06 **Boulder Array** 85.81 44 ⇑P P 13 09 03.2 0.0
baz=86,SNR=49
PDAR **Pinedale Array** 85.81 44 P P 13 09 03.7 +0.5
PDAR PP PP 13 12 26.9 -2.2
PDAR **Pinedale Array** 85.81 44 P P 13 09 03.7 +0.5
comp=Z,29nm,0.9s,baz=276,slow=2.8,SNR=143
PDAR PP PP 13 12 26.9 -2.2
comp=Z,3.1nm,1.0s,baz=316,slow=4.1,SNR=5.1
ARUT **Antelope Range** 85.84 50 eP P 13 09 03.7 +0.4
ARUT pmax pmax
comp=Z,60nm,1.0s
ARUT **Antelope Range** 85.84 50 eP P 13 09 03.7 +0.4
comp=Z,60nm,1.0s
H20A **Greybull** 85.84 42 ⇓P P 13 09 03.8 +0.7
baz=86,SNR=32
J19A **Crowheart** 85.86 43 ⇓P P 13 09 04.1 +0.7
baz=86,SNR=63
BELC **Belle Mtn. Jos** 85.89 54 ⇑P P 13 09 03.9 +0.3
baz=86,SNR=89
G21A **Lodge Grass** 85.91 41 ⇓P P 13 09 03.8 +0.3
baz=86,SNR=46
MPU **Maple Canyon** 85.92 47 eP P 13 09 04.1 +0.3
comp=Z,66nm,1.2s
E22A **Miles City** 85.96 39 ⇑P P 13 09 03.9 +0.3
baz=86,SNR=15
L18A **Fontenelle, Gr** 85.96 45 ⇑P P 13 09 04.6 +0.7
baz=86,SNR=25
D23A **Lindsay** 85.96 39 ⇑P P 13 09 04.4 +0.8
baz=86,SNR=15
DAU **Daniels Canyon** 85.97 47 eP P 13 09 04.7 +0.6
DAU pmax pmax
comp=Z,59nm,0.9s
DAU **Daniels Canyon** 85.97 47 eP P 13 09 04.7 +0.6
comp=Z,59nm,0.9s
ANTO **Ankara** 85.98 313 eP P 13 09 03.8 -0.1
ANTO pmax pmax
comp=Z,18nm,0.7s
ANTO **Ankara** 85.98 313 eP P 13 09 03.8 -0.1
comp=Z,18nm,0.7s
LDFC **Landfair** 86.01 53 eP P 13 09 05.2 +1.0
comp=Z,177nm,1.0s
CCUT **Cedar City** 86.01 50 eP P 13 09 04.2 0.0
comp=Z,38nm,1.1s
BAR **Barrett** 86.03 56 eP P 13 09 04.4 +0.2
comp=Z,101nm,1.2s
CFR **Carcaliu** 86.06 319 ⇑P P 13 09 03.4 -0.6
CFR **Carcaliu** 86.06 319 ⇑*i*P P 13 09 03.4 -0.6
I20A **Worland** 86.06 42 ⇑P P 13 09 05.1 +0.9
baz=86,SNR=42
BEL **Belsk** 86.07 327 eP P 13 09 03.8 -0.1
MONP **Monument Peak** 86.11 55 ⇓P P 13 09 05.4 +0.6
baz=86,SNR=48
F22A **Rosebud** 86.15 40 ⇓P P 13 09 04.8 +0.2
baz=86,SNR=23
HAWK **Haweek** 86.17 307 eP P 13 09 04.1 -0.8
HAWK **Haweek** 86.17 307 eP P 13 09 04.7 -0.1
TESR **Tescani** 86.17 321 ⇓*i*P P 13 09 04.1 -0.4
C24A **Savage** 86.19 38 ⇑P P 13 09 05.1 +0.4
baz=86,SNR=11
M18A **Lyman** 86.20 45 ⇑P P 13 09 05.4 +0.3
baz=86,SNR=18
K19A **Absolon Red Bu** 86.23 44 ⇓P P 13 09 04.9 -0.2
baz=86,SNR=16
ZALF **Zalf** 86.26 305 eP P 13 09 04.8 -0.5
ZALF **Zalf** 86.26 305 eP P 13 09 05.3 0.0
E23A **Ismay** 86.29 39 ⇑P P 13 09 05.8 +0.6
baz=86,SNR=9.3
TIRR **Tirgusor** 86.29 318 ⇓P P 13 09 05.2 +0.1
TIRR **Tirgusor** 86.29 318 eP P 13 09 04.8 -0.3
comp=Z,26nm,0.9s
TIRR **Tirgusor** 86.29 318 ⇓*i*P P 13 09 05.2 +0.1
L19A **Farson** 86.30 44 ⇑P P 13 09 06.1 +0.6
baz=86,SNR=57
BUR08 **Bucovina Ar. S** 86.33 322 eP P 13 09 03.9 -1.5
MSU **Marysvale** 86.33 49 eP P 13 09 05.7 0.0
MSU pmax pmax
comp=Z,61nm,1.3s
MSU **Marysvale** 86.33 49 eP P 13 09 05.7 0.0
comp=Z,61nm,1.3s
BURAR **Bucovina Array** 86.33 322 ⇑*i*P P 13 09 05.3 -0.1
H21A **Big Horn, Sher** 86.33 41 ⇑P P 13 09 06.2 +0.7
baz=86,SNR=26
J20A **Shoshoni** 86.41 43 ⇑P P 13 09 06.3 +0.4
baz=86,SNR=12
IRM **Iron Mountain** 86.43 54 ⇑P P 13 09 06.9 +0.9
baz=86,SNR=56
G22A **Birney** 86.45 41 ⇑P P 13 09 06.3 +0.3
baz=86,SNR=31
BC3 **Big Chuckawall** 86.45 54 ⇓P P 13 09 06.9 +0.6
baz=86,SNR=77
DVTC **Desert V Tower** 86.46 55 ⇓P P 13 09 06.9 +0.6
baz=86,SNR=21
KWP **Kalwaria Pacla** 86.47 325 ⇓P P 13 09 06.1 +0.2
KWP **Kalwaria Pacla** 86.47 325 eP P 13 09 05.9 -0.1
comp=Z,118nm,1.0s
KWP **Kalwaria Pacla** 86.47 325 ⇓*i*P P 13 09 06.1 +0.2
KWP **Kalwaria Pacla** 86.47 325 eP P 13 09 05.8 -0.1
VRI **Vrincioaia** 86.49 320 ⇓P P 13 09 06.1 0.0
VRI **Vrincioaia** 86.49 320 ⇓*i*P P 13 09 06.1 0.0
NEE2 **Needles Airpor** 86.51 53 ⇓P P 13 09 06.8 +0.4
baz=86
PLOR **Plostina** 86.54 320 ⇑P P 13 09 06.3 -0.1
PLOR **Plostina** 86.54 320 ⇑*i*P P 13 09 06.3 -0.1
SWSC **Sam W. Stewart** 86.55 55 ⇓P P 13 09 07.0 +0.5
baz=86,SNR=26
TMUT **Trail Mountain** 86.58 48 eP P 13 09 07.6 +0.6
comp=Z,12nm,0.8s
K20A **Yellowstone Ra** 86.63 44 ⇑P P 13 09 07.0 0.0
baz=86,SNR=17
BLS5 **Blasjo** 86.63 338 eP P 13 09 04.7 -1.7
BLS5 AMB AMB 13 09 07.8
comp=Z,36nm,1.3s
I21A **Big Trails, Te** 86.64 42 ⇑P P 13 09 07.3 +0.3
baz=86,SNR=46
SFJD **Kangerlussuaq** 86.65 4 eP P 13 09 06.0 -0.3
comp=Z,118nm,0.7s
SFJD **Kangerlussuaq** 86.65 4 ⇓*i*P P 13 09 06.2 -0.1
comp=Z,89nm,0.7s
F23A **Volborg** 86.68 40 ⇓P P 13 09 07.4 +0.3
baz=86,SNR=32
TOTH **TOTAH** 86.72 306 eP P 13 09 05.9 -1.6
TOTH **TOTAH** 86.72 306 eP P 13 09 05.7 -1.8
M19A **Rock Springs** 86.74 45 ⇑P P 13 09 07.9 +0.3
baz=87
H22A **Clearmont** 86.76 41 ⇑P P 13 09 07.9 +0.4
baz=87,SNR=12
P17A **Butcher Ranch,** 86.79 47 ⇓P P 13 09 08.4 +0.6
baz=87,SNR=11
Q16A **Castle Valley** 86.80 48 ⇑P P 13 09 08.7 +0.7
baz=87,SNR=21
J21A **Lysite** 86.80 43 ⇑P P 13 09 08.2 +0.3
baz=87,SNR=9.9
GKP **Gorka Klasztor** 86.82 330 eP P 13 09 06.5 -0.9
E24A **Baker** 86.82 39 ⇓P P 13 09 08.0 +0.3
baz=87,SNR=7.2
W13A **Hualapai Mount** 86.87 52 ⇑P P 13 09 08.9 +0.5
baz=87,SNR=17
G23A **Biddle** 86.98 40 ⇓P P 13 09 08.6 +0.1
baz=87,SNR=29
L20A **Wamsutter** 86.98 44 ⇑P P 13 09 09.2 +0.4
baz=87,SNR=14
ISR **Istrita** 87.02 320 ⇑P P 13 09 08.9 +0.2
ISR **Istrita** 87.02 320 ⇑*i*P P 13 09 08.9 +0.2
P18A **Presson Nutter** 87.04 47 ⇑P P 13 09 09.7 +0.5
baz=87,SNR=29
I22A **9 Mile Ranch,** 87.08 42 ⇑P P 13 09 09.7 +0.6
baz=87,SNR=29
Y12C **Blythe** 87.08 54 ⇓P P 13 09 09.9 +0.8
baz=87,SNR=23
PDMCI **Parker Dam,Lak** 87.09 53 ⇓P P 13 09 09.8 +0.7
baz=87,SNR=23
KOLS **Kolonicke sedl** 87.12 324 eP P 13 09 08.5 -0.5
KOLS pmax pmax
comp=Z,15nm,1.1s
KOLS **Kolonicke sedl** 87.12 324 eP P 13 09 08.5 -0.5
SRU **San Rafael** 87.13 47 eP P 13 09 09.8 +0.3
SRU pmax pmax
comp=Z,10.0nm,0.5s
SRU **San Rafael** 87.13 47 eP P 13 09 09.8 +0.3
comp=Z,10nm,0.5s
SRU **San Rafael** 87.13 47 ⇑P P 13 09 09.6 +0.1
baz=87,SNR=27
MLR **Muntele Rosu** 87.15 320 ⇑*i*P P 13 09 09.0 -0.4
F24A **Ekalaka** 87.16 39 ⇓P P 13 09 09.6 +0.3
baz=87,SNR=16
GLA **Glamis** 87.20 54 eP P 13 09 10.6 +0.8
GLA pmax pmax
comp=Z,73nm,0.8s
GLA **Glamis** 87.20 54 eP P 13 09 10.6 +0.8
comp=Z,73nm,0.8s
GLA **Glamis** 87.20 54 ⇓P P 13 09 10.6 +0.8
baz=87,SNR=37
SNART **Snartemo** 87.21 337 eP P 13 09 05.9 -3.2
SNART AMB AMB 13 09 08.2
comp=Z,50nm,1.6s
COP **Copenhagen** 87.21 334 *i* P P 13 09 09.4 +0.2
comp=Z,15nm,0.8s
UZH **Uzhgorod** 87.30 324 ⇑*i*P P 13 09 08.9 -0.9
K21A **Alcova** 87.31 43 ⇑P P 13 09 10.6 +0.3
baz=87,SNR=20
U15A **North Rim** 87.32 50 ⇑P P 13 09 11.2 +0.6
baz=87,SNR=47
H23A **Clabaugh Cattl** 87.34 41 ⇑P P 13 09 09.9 -0.3
baz=87
SECR 87.34 320 ⇑*i*P P 13 09 09.6 -0.5
J22A **Midwest** 87.35 42 ⇑P P 13 09 10.6 +0.2
baz=87,SNR=40
M20A **Sweetwater, Wa** 87.36 45 ⇓P P 13 09 11.5 +0.9

baz=87,SNR=27
O19A Miners Draw (B 87.41 46 ⇓P P 13 09 10.7 -0.1
baz=87,SNR=16
G24A Alzada 87.47 40 ⇓P P 13 09 10.7 -0.1
baz=87,SNR=6.1
TRPA Tarpa 87.47 324⇓*i*P P
TRPA Tarpa 87.47 324⇓*e* P 13 09 10.7 +0.1
CRVS Cervenica-Dubn 87.57 325 *e*P P 13 09 10.3 -0.8
CRVS Cervenica-Dubn 87.57 325 *e*P P 13 09 10.3 -0.8
OJC Ojcow 87.58 326⇓*i*P P 13 09 10.6 -0.5
OJC Ojcow 87.58 326 *i* P P 13 09 10.6 -0.5
OJC *e*PcP PcP 13 09 19.4 +6.8
PRD Provadia 87.60 318 *e*P P 13 09 11.2 -0.1
I23A Meade Ranch, G 87.65 41 ⇓P P 13 09 11.7 -0.1
baz=88
MSEY Mahe Island 87.65 264 *e*P P 13 09 12.2 +0.1
comp=Z,35nm,1.1s
MSEY Mahe Island 87.65 264 P P 13 09 12.2 +0.1
comp=Z,195nm,0.6s,SNR=6.5
N20A Spence Gulch, 87.67 45 ⇑P P 13 09 12.8 +0.7
baz=88,SNR=30
VOIR 87.70 321 ⇓P P 13 09 12.2 +0.3
VOIR 87.70 321⇓*i*P P 13 09 12.2 +0.3
H24A Dirks Ranch, A 87.73 40 ⇑P P 13 09 11.9 -0.2
baz=88,SNR=32
K22A Casper 87.75 43 ⇓P P 13 09 12.5 +0.2
baz=88,SNR=7.6
M21A Separation Pea 87.81 44 ⇑P P 13 09 13.0 +0.3
baz=88,SNR=22
NIE Niedzica 87.83 326 *e*P P 13 09 12.4 0.0
NIE Niedzica 87.83 326 *e*P P 13 09 12.4 0.0
P19A Cripple Cowboy 87.86 46 ⇓P P 13 09 13.6 +0.6
baz=88,SNR=70
J23A Dilts Ranch, B 87.91 42 ⇑P P 13 09 13.0 0.0
baz=88
MUD Monsted U'grnd 87.91 335⇓*i*P P 13 09 11.1 -1.4
MUD pmax pmax
comp=Z,28nm,1.0s
MUD Monsted U'grnd 87.91 335⇓*i*P P 13 09 11.1 -1.4
comp=Z,28nm,1.1s
O20A White River Ci 88.07 46 ⇓P P 13 09 14.1 +0.2
baz=88,SNR=16
Y14A Wickenburg 88.08 53 ⇓P P 13 09 14.4 +0.6
baz=88,SNR=102
113A Mohawk Valley, 88.12 54 ⇓P P 13 09 14.6 +0.7
baz=88,SNR=15
CSS Prodhromos 88.14 308 *e*P P 13 09 13.5 -0.6
comp=Z,17nm,0.8s
L22A Ellis Ranch, M 88.15 43 ⇑P P 13 09 14.8 +0.5
baz=88,SNR=11
N21A Black Mountain 88.18 45 ⇑P P 13 09 15.0 +0.5
baz=88,SNR=10
DRGR 88.20 323 ⇓P P 13 09 13.7 -0.5
DRGR 88.20 323⇓*i*P P 13 09 13.7 -0.5
I24A Kuemmerle Ranc 88.20 41 ⇓P P 13 09 14.0 -0.4
baz=88,SNR=6.2
S18A Hurst Farm, Bl 88.23 48 ⇓P P 13 09 14.5 -0.2
baz=88,SNR=22
K23A Bowen Ranch, D 88.24 42 ⇓P P 13 09 14.7 +0.1
baz=88,SNR=8.7
P20A De Beque 88.31 46 ⇑P P 13 09 15.4 +0.4
baz=88,SNR=5.8
M22A Cedar Creek Ra 88.41 44 ⇑P P 13 09 15.9 +0.4
baz=88,SNR=17
Z14A Wintersburg 88.42 53 ⇓P P 13 09 16.1 +0.7
baz=88,SNR=12
LOT Lotru 88.42 321⇑*i*P P 13 09 14.1 -1.2
WUAZ Wupatki 88.42 51 *e*P P 13 09 16.4 +0.8
comp=Z,32nm,1.0s
WUAZ Wupatki 88.42 51 ⇓P P 13 09 16.4 +0.8
baz=88,SNR=30
SZH Strazhica 88.44 318 *e*P P 13 09 14.7 -0.6
J24A Dixon Ranch, L 88.49 42 ⇑P P 13 09 15.6 0.0
baz=88,SNR=11
O21A Pagoda 88.52 45 ⇑P P 13 09 16.4 +0.4
baz=88,SNR=5.7
L23A Garrett 88.56 43 ⇑P P 13 09 16.0 -0.2
baz=88,SNR=35
PV04 Paradox Valley 88.58 47 *e*P P 13 09 16.5 +0.2
MDND Maddock 88.60 36 ⇓P P 13 09 16.2 +0.2
baz=88,SNR=6.1
OKC Ostrava-Krasne 88.64 327 *i* P P 13 09 15.8 -0.3
OKC Ostrava-Krasne 88.64 327⇓*i*P P 13 09 15.8 -0.3
Q20A Ridgley Place, 88.67 47 ⇑P P 13 09 17.2 +0.5
baz=88,SNR=39
K24A Anderson Ranch 88.75 42 ⇓P P 13 09 16.7 -0.2
baz=89
N22A Wattenberg Ran 88.83 44 ⇑P P 13 09 18.4 +0.9
baz=89,SNR=12
KSP Ksiaz 88.87 328⇓*i*P P 13 09 16.9 -0.2
KSP Ksiaz 88.87 328 *e*P P 13 09 16.8 -0.3
RUE Ruedersdorf 88.89 331 *e*P P 13 09 16.8 -0.3
comp=Z,41nm,1.1s
RUE *e*PP PP 13 12 53.4 +0.6
M23A Laramie 88.91 43 ⇓P P 13 09 18.3 +0.5
baz=89,SNR=29
P21A Newcastle 88.91 46 ⇑P P 13 09 18.4 +0.5
baz=89,SNR=15
ULM Lac du Bonnet 88.92 32 P P 13 09 17.2 -0.2
ULM Lac du Bonnet 88.92 32 P P 13 09 17.2 -0.2
comp=Z,15nm,0.7s,baz=314,slow=5.5,SNR=19
PV01 Paradox Valley 88.94 47 *e*P P 13 09 18.3 +0.3
comp=Z,2µm,0.7s
X16A Lo Mia Camp, P 88.95 52 ⇑P P 13 09 19.0 +0.9
baz=89,SNR=37
MORC Moravsky Berou 88.98 327 ⇑P P 13 09 17.8 +0.1
MORC Moravsky Berou 88.98 327 *e*P P 13 09 16.9 -0.8
comp=Z,24nm,0.8s
MORC Moravsky Berou 88.98 327⇑*i*P P 13 09 17.8 +0.1
PSZ Piszkesteto 89.00 325 ⇑P P 13 09 17.3 -0.6
PSZ Piszkesteto 89.00 325 *e*P P 13 09 16.9 -0.9
comp=Z,68nm,1.1s
PSZ Piszkesteto 89.00 325⇑*i*P P 13 09 17.3 -0.6
PSZ Piszkesteto 89.00 325⇓*e* P 13 09 17.9 0.0
R20A Redvale 89.04 47 ⇑P P 13 09 18.7 +0.3
baz=89,SNR=15
L24A Wheatland 89.07 43 ⇓P P 13 09 19.1 +0.7
baz=89,SNR=12
N23A Red Feather La 89.10 44 ⇑P P 13 09 19.9 +1.2
baz=89,SNR=52
O22A Kremmling 89.13 45 ⇓P P 13 09 19.4 +0.4
baz=89,SNR=44
PHWY Pilot Hill 89.17 44 *e*P P 13 09 19.5 +0.3
comp=Z,50nm,0.9s
VYHS Vyhne 89.17 326 *e*P P 13 09 18.4 -0.2
VYHS pmax pmax
comp=Z,43nm,1.0s
VYHS Vyhne 89.17 326 *e*P P 13 09 18.4 -0.2
DPC Dobruska-Polom 89.19 328⇓*i*P P 13 09 18.6 -0.1
DPC Dobruska-Polom 89.19 328⇓*i*P P 13 09 18.6 -0.1
Q21A Lamborn Mesa, 89.21 46 ⇓P P 13 09 20.2 +1.0
baz=89,SNR=8.3
214A Organ Pipe Nat 89.23 55 ⇑P P 13 09 20.3 +1.0
baz=89,SNR=52
UPC Upice 89.23 328 *i* P P 13 09 18.6 -0.2
UPC Upice 89.23 328⇓*i*P P 13 09 18.6 -0.2
S20A Disappointment 89.25 48 ⇑P P 13 09 19.7 +0.2
baz=89,SNR=17
P22A Eagle 89.31 45 ⇓P P 13 09 20.9 +1.1
baz=89,SNR=69
BSEG Bad Segeberg 89.32 333 *e*P P 13 09 18.4 -0.7
BSEG *e* 13 12 56.6
BSEG pmax pmax
comp=Z,112nm,1.0s
BSEG Bad Segeberg 89.32 333 *e*P P 13 09 18.4 -0.7
comp=Z,112nm,1.0s
BSEG *e*PP PP 13 12 56.6 +0.5
K25A Mack Ranch, Ha 89.38 42 ⇑P P 13 09 20.4 +0.6
baz=89,SNR=20
DIM Dimitrovgrad 89.39 318 *e*P P 13 09 20.0 +0.3
SMCO Snowmass 89.41 46 *e*P P 13 09 21.1 +0.6
comp=Z,40nm,1.0s
M24A Cheyenne 89.46 43 ⇓P P 13 09 21.4 +1.1
baz=89,SNR=38
R21A Cimarron 89.48 47 ⇓P P 13 09 21.6 +1.0
baz=89,SNR=47
MVCO Mesa Verde 89.49 48 *e*P P 13 09 21.0 +0.3
comp=Z,62nm,1.4s
MVCO Mesa Verde 89.49 48 ⇓P P 13 09 21.1 +0.5
baz=89,SNR=22
O23A Lake Granby, G 89.50 45 ⇓P P 13 09 21.9 +1.2
baz=89,SNR=56
BZS Buzias 89.52 322 ⇓P P 13 09 19.2 -1.0
BZS Buzias 89.52 322⇓*i*P P 13 09 19.2 -1.0
L25A Engebretsen Ra 89.59 42 ⇑P P 13 09 21.4 +0.6
baz=89,SNR=5.5
Q22A Crested Butte, 89.63 46 ⇑P P 13 09 22.4 +1.1
baz=90,SNR=73
PKSN Nyarlorinc 89.66 324⇓*e* P 13 09 20.9 +0.1
MPEP Malo Peshtene 89.69 319 *e*P P 13 09 20.5 -0.6
KDZ Kurdzhali 89.69 317 *e*P P 13 09 20.7 -0.5
S21A Coal Bank Pass 89.71 48 ⇑P P 13 09 22.5 +0.8
baz=90,SNR=15
BUD Budapest 89.73 325⇓*e* P 13 09 21.0 -0.2
K26A Motz Farm, Whi 89.74 41 ⇓P P 13 09 21.6 +0.1
baz=90,SNR=12
VRAC Vranov 89.75 327⇑*i*P P 13 09 21.0 -0.3
W18A Petrified Fore 89.77 51 ⇓P P 13 09 22.7 +0.8
baz=90
PVCC Panska Ves 89.89 329 *i* P P 13 09 21.6 -0.3
PVCC Panska Ves 89.89 329⇓*i*P P 13 09 21.6 -0.3
PGB Panagyurishte 89.92 319 *e*P P 13 09 22.0 -0.2
ISCO Idaho Springs 89.93 45 *e*P P 13 09 23.6 +0.9
ISCO pmax pmax
comp=Z,35nm,0.8s
ISCO Idaho Springs 89.93 45 *e*P P 13 09 23.6 +0.9
comp=Z,35nm,0.8s
ISCO Idaho Springs 89.93 45 ⇑P P 13 09 23.6 +0.9
baz=90,SNR=50
U20A Newcomb 89.93 49 ⇑P P 13 09 23.0 +0.4
baz=90,SNR=44
PKS7 Kunszentmiklos 89.94 324⇑*e* P 13 09 22.3 +0.2
X18A Snowflake 89.94 51 ⇓P P 13 09 23.4 +0.8
baz=90,SNR=21
BRG Berggiesshubel 89.94 329 *i* P P 13 09 21.5 -0.5
comp=Z,29nm,0.9s
BRG *i* PP PP 13 12 58.1 -2.9
comp=Z,10nm,1.0s
BRG *e*PKKS 13 30 10.0
comp=Z,9.0nm,1.8s
BRG *e*PKPPKP P'P'df 13 34 51.0 -13
comp=Z,6.2nm,1.6s
BRG Berggiesshubel 89.94 329 *i* P P 13 09 21.5 -0.5
BRG *i* 13 12 58.1
BRG pmax pmax
comp=Z,29nm,0.9s
BRG pmax pmax
comp=Z,10.0nm,1.0s
BRG pmax pmax
comp=Z,9.0nm,1.8s
BRG pmax pmax
comp=Z,6.0nm,1.6s
BRG Berggiesshubel 89.94 329 *e*P P 13 09 21.6 -0.5
comp=Z,29nm,0.9s
M25A Palm-Egli Farm 89.95 43 ⇑P P 13 09 23.4 +0.8
baz=90,SNR=7.4
P23A Jefferson 90.03 45 ⇓P P 13 09 24.6 +1.4
baz=90,SNR=50
CLL Collm 90.06 330⇓*i*P P 13 09 21.8 -0.8
CLL *e**PP pP 13 10 58.0 0.0
CLL pmax pmax
comp=Z,27nm,1.1s
CLL Collm 90.06 330 *e*P P 13 09 21.8 -0.8
comp=Z,51nm,1.1s
CLL *e*PP PP 13 13 02.4 +0.4
CLL Collm 90.06 330⇓*i*P P 13 09 21.8 -0.8
comp=Z,51nm,1.1s
CLL *e* 13 12 57.0
CLL *e*PP PP 13 13 01.0 -1.0
comp=Z,17nm,1.2s
R22A Saguache, Gunn 90.08 47 ⇑P P 13 09 24.7 +1.2
baz=90,SNR=42
O24A Longmont 90.08 44 ⇓P P 13 09 24.3 +1.1
baz=90,SNR=12
PKSG 90.11 325⇓*e* P 13 09 22.7 -0.3
FBE Freiberg 90.17 330 *e*P P 13 09 22.9 -0.3
comp=Z,76nm,1.0s
L26A Unterwood Farm 90.19 42 ⇑P P 13 09 24.2 +0.6
baz=90,SNR=11
ZST Bratislava 90.24 326 *e*P P 13 09 22.7 -0.8
ZST pmax pmax
comp=Z,44nm,1.5s
ZST Bratislava 90.24 326 *e*P P 13 09 22.7 -0.8
T21A Navajo Lake 90.25 48 ⇓P P 13 09 24.7 +0.6
baz=90,SNR=5.7
PKS2 Kecel 90.27 324⇑*e* P 13 09 23.7 0.0
PRU Pruhonice 90.27 329⇓*i*P P 13 09 23.2 -0.5
PRU Pruhonice 90.27 329⇓*i*P P 13 09 23.2 -0.5
V20A Brimhall 90.28 49 ⇑P P 13 09 24.8 +0.6
baz=90,SNR=20
N25A Grover 90.30 43 ⇑P P 13 09 24.7 +0.6
baz=90
Q23A Hartsel 90.30 46 ⇓P P 13 09 25.5 +1.1
baz=90,SNR=30
TREC Trest 90.30 328 *i* P P 13 09 23.5 -0.3
TREC Trest 90.30 328⇓*i*P P 13 09 23.5 -0.3
S22A 4UR Ranch, Cre 90.30 47 ⇓P P 13 09 25.1 +0.7
baz=90,SNR=57
PKST T''s 90.38 325⇓*e* P 13 09 23.6 -0.7
VTS Vitosha 90.46 319 ⇓P P 13 09 24.2 -0.7
VTS Vitosha 90.46 319⇓*i*P P 13 09 24.2 -0.7
VTS Vitosha 90.46 319 *e*P P 13 09 23.9 -1.0
NRDL Niedersach Rie 90.46 332 *e*P P 13 09 23.6 -0.7
comp=Z,21nm,1.2s
U21A Nageezi 90.48 49 ⇑P P 13 09 25.9 +0.6
baz=90,SNR=36
M26A McRoberts Ranc 90.49 42 ⇓P P 13 09 25.6 +0.6
baz=90,SNR=12
TUC Tucson 90.52 53 *e*P P 13 09 25.5 +0.3
TUC pmax pmax
comp=Z,7.0nm,1.0s
TUC Tucson 90.52 53 *e*P P 13 09 25.5 +0.3
comp=Z,6.9nm,1.0s
P24A Kohler Place, 90.54 45 ⇑P P 13 09 26.1 +0.7
baz=90,SNR=7.8
L27A T5 Ranch, Ells 90.62 42 ⇓P P 13 09 25.7 +0.1
baz=90
W20A Ramah 90.62 50 ⇑P P 13 09 26.4 +0.4
baz=90,SNR=61
T22A Edith 90.66 48 ⇑P P 13 09 27.1 +1.0
baz=90,SNR=54
NEUB Neuenburg 90.67 331 *e*P P 13 09 24.9 -0.6
comp=Z,48nm,0.9s
O25A Wiggins 90.69 44 ⇑P P 13 09 26.4 +0.5
baz=90,SNR=10
PKS9 Tamasi 90.70 324⇓*e* P 13 09 25.1 -0.6
Q24A Divide 90.70 45 ⇑P P 13 09 27.0 +0.7
baz=91,SNR=30
R23A Moffat 90.71 46 ⇑P P 13 09 27.5 +1.2
baz=91,SNR=69
PKSM Moragy 90.75 324 ⇓P P 13 09 24.9 -1.0
PKSM Moragy 90.75 324⇓*i*P P 13 09 24.9 -1.0
PKSM Moragy 90.75 324⇓*e* P 13 09 25.6 -0.3
MMB Musomiste 90.75 318 *e*P P 13 09 25.2 -0.9
N26A Koester Ranch, 90.82 43 ⇓P P 13 09 26.5 -0.1
baz=91
CLZ Clausthal 90.82 332 *e*P P 13 09 25.8 -0.4
comp=Z,82nm,1.6s
CLZ *e*PP PP 13 13 07.2 -0.8
V21A Milan 90.84 49 ⇑P P 13 09 27.5 +0.6
baz=91,SNR=19
SOP Sopron 90.86 326⇓*e* P 13 09 26.5 +0.1
S23A Nye Farm, Mont 90.87 47 ⇓P P 13 09 27.7 +0.7
baz=91
M27A Reverse DX Ran 90.91 42 ⇓P P 13 09 27.3 +0.4
baz=91
TANN Tannenbergstha 90.93 330 *e*P P 13 09 26.2 -0.6
comp=Z,17nm,1.0s
X20A Quemado 90.94 50 ⇑P P 13 09 28.7 +1.3
baz=91,SNR=111
KKB Krupnik 90.97 318 *e*P P 13 09 26.0 -1.1
WERD Werda 90.98 330 *e*P P 13 09 26.3 -0.7
comp=Z,32nm,1.1s
P25A Willow Gulch B 91.00 44 ⇑P P 13 09 28.1 +0.6
baz=91,SNR=23
PLN Plauen 91.02 330 *e*P P 13 09 26.6 -0.5
comp=Z,129nm,1.2s
PLN *e*PP PP 13 13 09.5 0.0
GUNZ Gunzen 91.03 330 *e*P P 13 09 26.8 -0.4
comp=Z,46nm,1.0s
CONA Conrad Observa 91.04 326 *i* PcP P 13 09 27.2 -0.2
SNR=37
CONA Conrad Observa 91.04 326 *i* P P 13 09 27.2 -0.2
comp=Z,40nm,1.0s
U22A Llaves 91.05 48 ⇑P P 13 09 28.7 +0.8
baz=91,SNR=36
WERN Wernitzgruen 91.06 330 *e*P P 13 09 27.0 -0.4
comp=Z,56nm,1.1s
NKC Novy Kostel 91.07 330 *i* P P 13 09 26.8 -0.6
NKC Novy Kostel 91.07 330⇓*i*P P 13 09 26.8 -0.6
BRSD Miller 91.09 38 ⇓P P 13 09 27.4 -0.2
baz=91
O26A Horse Wrangler 91.11 43 ⇓P P 13 09 28.0 0.0
baz=91,SNR=11
MOX Moxa 91.15 330 *e*P P 13 09 27.0 -0.7
MOX *e* 13 13 10.4
MOX pmax pmax
comp=Z,37nm,1.2s
MOX Moxa 91.15 330 *e*P P 13 09 27.0 -0.7
comp=Z,37nm,1.2s
MOX *e*PP PP 13 13 10.4 -0.1
R24A Sanders Place, 91.15 46 ⇓P P 13 09 29.5 +1.3
baz=91,SNR=112
W21A San Fidel 91.21 50 ⇓P P 13 09 29.5 +0.9
baz=91,SNR=7.5
T23A Casias Ranch, 91.22 47 ⇓P P 13 09 29.5 +0.8
baz=91,SNR=15
N27A Anderson Farm, 91.25 43 ⇓P P 13 09 28.8 +0.2
baz=91,SNR=13
V22A San Miguel Ran 91.27 49 ⇓P P 13 09 29.5 +0.6
baz=91,SNR=32
Q25A Bedland, Calha 91.30 45 ⇑P P 13 09 29.4 +0.5
baz=91,SNR=17
KHC Kasperske Hory 91.32 328⇓*i*P P 13 09 28.1 -0.5
KHC Kasperske Hory 91.32 328 *e*P P 13 09 27.9 -0.7
comp=Z,36nm,0.8s
KHC Kasperske Hory 91.32 328⇓*i*P P 13 09 28.1 -0.5
KHC *ex* x 13 10 00.0
Y20A Horse Springs, 91.37 51 ⇑P P 13 09 30.7 +1.3
baz=91,SNR=93
MANZ Manzenberg 91.40 330 *e*P P 13 09 28.4 -0.5
comp=Z,33nm,1.0s
S24A Houchin Ranch, 91.42 46 ⇓P P 13 09 30.8 +1.1
baz=91,SNR=57
GEC2 GERESS Array S 91.46 328 *e*P P 13 09 28.5 -0.8
GEC2 pmax pmax
comp=Z,35nm,1.0s
GEC2 GERESS Array S 91.46 328 *e*P P 13 09 28.5 -0.8
comp=Z,35nm,1.0s
GERES GERESS Array B 91.46 328 P P 13 09 28.5 -0.8
GERES PP PP 13 13 14.2 +1.0
GERES GERESS Array B 91.46 328 P P 13 09 28.5 -0.8
comp=Z,18nm,0.7s,baz=42,slow=4.3,SNR=154
GERES PP PP 13 13 14.2 +1.0
comp=Z,3.0nm,0.9s,baz=46,slow=5.8,SNR=6.1
OGNE Ogallala 91.47 42 ⇓P P 13 09 29.5 0.0
baz=91,SNR=10
X21A Alamocita Cree 91.48 50 ⇓P P 13 09 30.9 +1.0
baz=91,SNR=59
P26A Davis Ranch, A 91.49 44 ⇑P P 13 09 30.0 +0.2
baz=91,SNR=12
ROTZ Rotzenmuhle 91.51 329 *e*P P 13 09 29.3 -0.1
comp=Z,33nm,1.0s
U23A El Rito 91.52 48 ⇓P P 13 09 31.0 +0.9
baz=91,SNR=54
VAY Valandovo 91.61 318 *e*P P 13 09 28.7 -1.2
WET Wettzell 91.64 329 *e*P P 13 09 29.6 -0.4
WET *e* 13 13 14.9
WET pmax pmax
comp=Z,18nm,1.1s
WET Wettzell 91.64 329 *e*P P 13 09 29.6 -0.4
comp=Z,18nm,1.1s
WET *e*PP PP 13 13 14.9 +0.5
Z20A Nine Sixteen R 91.65 52 ⇓P P 13 09 31.9 +1.3
baz=92,SNR=115
O27A Beecher Island 91.65 43 ⇓P P 13 09 30.4 0.0
baz=92
ARSA Arzberg 91.67 326 *i* PcP P 13 09 29.7 -0.5
SNR=20
ARSA Arzberg 91.67 326⇓*i*P P 13 09 29.6 -0.6
comp=Z,27nm,1.1s
R25A Fountain Ranch 91.73 46 ⇓P P 13 09 31.2 +0.4
baz=92,SNR=18
UBBA Unterbreizbach 91.73 331 *e*P P 13 09 29.4 -0.8
Q26A Hugo 91.76 45 ⇑P P 13 09 31.3 +0.3
baz=92,SNR=17
W22A Albuquerque 91.77 49 ⇓P P 13 09 32.2 +1.0
baz=92
Y21A Point of Rocks 91.80 51 ⇑P P 13 09 32.6 +1.2
baz=92,SNR=61
KOGS Kog 91.84 325 *i* P P 13 09 30.1 -0.9
T24A Torres, Weston 91.85 47 ⇑P P 13 09 32.8 +1.2
baz=92,SNR=41
V23A Ortiz Mt. (NFS 91.85 48 ⇑P P 13 09 33.0 +1.5
baz=92,SNR=21
SKO Skopje 91.87 319 *e*P P 13 09 31.6 +0.3
MOA Molln 91.88 327 *i* PcP P 13 09 30.7 -0.5
SNR=25
MOA Molln 91.88 327 *i* P P 13 09 30.7 -0.5
comp=Z,22nm,0.7s
S25A Robets Cordova 91.91 46 ⇑P P 13 09 32.0 +0.3
baz=92,SNR=26
120A U Bar Ranch, L 91.93 52 ⇓P P 13 09 33.0 +1.1
baz=92,SNR=21
LAZ Ladron 91.95 50 *e*P P 13 09 31.8 -0.2
comp=Z,20nm,1.1s
P27A Ficken Ranch, 91.97 44 ⇑P P 13 09 31.5 -0.4
baz=92
X22A Bernardo 91.99 50 ⇑P P 13 09 33.4 +1.3
baz=92,SNR=6.0
GRF Grafenberg Arr 92.01 330 *e*P P 13 09 31.5 -0.2
GRF pmax pmax
comp=Z,39nm,1.0s
GRF Grafenberg Arr 92.01 330 *e*P P 13 09 31.5 -0.2
comp=Z,39nm,1.0s
U24A Moreno Valley 92.08 47 ⇑P P 13 09 34.2 +1.5
baz=92,SNR=37
319A Douglas 92.09 53 ⇓P P 13 09 33.4 +0.8
baz=92,SNR=15
ANMO Albuquerque 92.12 49 *e*P P 13 09 33.4 +0.6
comp=Z,59nm,1.0s
R26A Arlington 92.17 45 ⇓P P 13 09 33.1 +0.3
baz=92,SNR=40
Z21A St. Cloud Mine 92.19 51 ⇑P P 13 09 34.4 +1.3
baz=92,SNR=47
LENM Lemitar 92.20 50 *e*P P 13 09 34.3 +1.2
comp=Z,20nm,1.2s
W23A Werner Place, 92.20 49 ⇓P P 13 09 34.1 +0.9
baz=92,SNR=21
T25A Trinidad 92.23 46 ⇑P P 13 09 34.1 +0.8
baz=92,SNR=50
KSCO Kaye Shedlock' 92.27 44 ⇓P P 13 09 33.3 0.0
baz=92,SNR=6.5
Y22D IRIS PASSCAL I 92.29 50 ⇑P P 13 09 34.4 +0.9
baz=92
PERS Pernice 92.29 326 *i* P P 13 09 32.2 -0.9
SOKA Soboth 92.30 326⇑*i*PcP P 13 09 32.3 -0.9
comp=Z,41nm,1.3s
SOKA Soboth 92.30 326⇑*i*P P 13 09 32.4 -0.9
comp=Z,41nm,1.3s
Y22A Socorro 92.33 50 ⇑P P 13 09 34.6 +0.8
baz=92,SNR=25
220A Playas Peak, P 92.35 53 ⇓P P 13 09 34.6 +0.8
baz=92,SNR=37
LPM Los Pinos Moun 92.35 50 *e*P P 13 09 34.7 +0.8
comp=Z,24nm,1.3s
BUG Bochum-Univer 92.42 333 *e*P P 13 09 32.4 -1.1
comp=Z,36nm,1.2s
BNM Barren Site 92.45 50 *e*P P 13 09 35.0 +0.7
comp=Z,36nm,1.3s
V24A Rampart Ranch, 92.47 48 ⇓P P 13 09 35.6 +1.2
baz=92,SNR=47
X23A Hourglass Bar 92.51 49 ⇓P P 13 09 35.0 +0.4
baz=92
121A Cookes Peak, D 92.53 52 ⇑P P 13 09 35.9 +1.2
baz=92,SNR=15
S26A Kim 92.56 46 ⇓P P 13 09 34.8 +0.1
baz=92,SNR=20
R27A Eads 92.59 45 ⇑P P 13 09 34.8 0.0
baz=92
EYMN Ely 92.60 32 *e*P P 13 09 34.6 +0.2
comp=Z,38nm,1.2s
320A Kipp Ranch, An 92.66 53 ⇑P P 13 09 36.3 +1.1
baz=93,SNR=5.6
U25A Circle Dot Ran 92.66 47 ⇓P P 13 09 35.9 +0.7
baz=92,SNR=112
RJOB Jochberg 92.67 328 *e*P P 13 09 34.5 -0.3
comp=Z,40nm,1.0s
W24A Lazy 6 Ranch, 92.68 48 ⇓P P 13 09 36.3 +1.0
baz=93,SNR=68
Z22A Elephant Butte 92.71 51 ⇑P P 13 09 36.3 +0.8
baz=93,SNR=30
T26A Comanche Natio 92.74 46 ⇓P P 13 09 36.0 +0.4
baz=93,SNR=62
221A Mesquite Ranch 92.83 52 ⇑P P 13 09 36.9 +0.9
baz=93
TNS Taunus Mts 92.84 332 *e*P P 13 09 34.9 -0.7
TNS pmax pmax
comp=Z,14nm,0.8s

TNS	Taunus Mts	92.84	332	eP	P	13 09 34.9	-0.7
	comp=Z,14nm,0.8s						
ECSD	EROS Data Cent	92.84	38	eP	P	13 09 35.3	-0.4
	comp=Z,25nm,1.0s						
V25A	Rancho No Teng	92.85	48	⇓P	P	13 09 37.0	+0.9
	baz=93,SNR=39						
KBA	Koelnbreinsper	92.86	327	i P	P	13 09 34.9	-1.0
KBA				pmax	pmax		
	comp=Z,16nm,0.7s						
KBA	Koelnbreinsper	92.86	327	i PcP	P	13 09 34.9	-1.0
	SNR=8.3						
KBA	Koelnbreinsper	92.86	327	i P	P	13 09 34.9	-1.0
	comp=Z,16nm,0.7s						
S27A	Las Animas	92.89	45	⇓P	P	13 09 36.3	+0.1
	baz=93						
Y23A	Lovelace Mesa,	92.96	50	⇑P	P	13 09 37.2	+0.5
	baz=93,SNR=18						
BOJS	Bojanci	92.99	325	eP	P	13 09 35.4	-0.8
LJU	Ljubljana	92.99	326	i P	P	13 09 35.3	-1.0
122A	Conniff Cattle	93.00	51	⇓P	P	13 09 37.8	+1.1
	baz=93						
X24A	Lazy VL Ranch,	93.03	49	⇓P	P	13 09 37.4	+0.5
	baz=93,SNR=8.1						
MYKA	Terra Mystica	93.03	327	⇓iPcP	P	13 09 35.0	-1.6
	comp=Z,14nm,0.6s						
MYKA	Terra Mystica	93.03	327	⇓iP	P	13 09 35.0	-1.6
	comp=Z,14nm,0.6s						
FUR	Furstenfeldbru	93.08	329	eP	P	13 09 36.5	-0.2
FUR				pmax	pmax		
	comp=Z,87nm,0.9s						
FUR	Furstenfeldbru	93.08	329	eP	P	13 09 36.5	-0.2
	comp=Z,87nm,0.9s						
U26A	Atchley Ranch,	93.10	47	⇑P	P	13 09 37.9	+0.7
	baz=93,SNR=14						
TOD	Tromm	93.14	331	eP	P	13 09 36.4	-0.5
TOD	Tromm	93.14	331	eP	P	13 09 36.4	-0.5
Z23A	Rita Site, Whi	93.22	50	⇑P	P	13 09 38.3	+0.6
	baz=93,SNR=9.8						
222A	Williams Famil	93.25	52	⇓P	P	13 09 38.6	+0.7
	baz=93,SNR=9.4						
W25A	X Bar L Ranch,	93.31	48	⇓P	P	13 09 38.7	+0.5
	baz=93,SNR=23						
T27A	Campo	93.37	46	⇑P	P	13 09 38.7	+0.3
	baz=93,SNR=15						
Y24A	Capitan	93.39	50	⇓P	P	13 09 38.8	+0.1
	baz=93,SNR=7.9						
V26A	Tequesquite Ra	93.42	47	⇑P	P	13 09 38.9	+0.3
	baz=93,SNR=13						
BGNE	Belgrade	93.48	40	⇓P	P	13 09 37.9	-0.7
	baz=93						
ABTA	Abfaltersbach	93.50	327	⇓iP	P	13 09 36.7	-2.0
	comp=Z,33nm,1.1s,SNR=13						
ABTA	Abfaltersbach	93.50	327	⇓iP	P	13 09 36.7	-2.0
	comp=Z,33nm,1.1s						
WATA	Walderalm	93.53	328	⇓iP	P	13 09 37.7	-1.2
WATA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WATA	Walderalm	93.53	328	⇓iPcP	P	13 09 37.7	-1.2
	comp=Z,5.8nm,0.6s						
WATA	Walderalm	93.53	328	⇓iP	P	13 09 37.7	-1.2
	comp=Z,5.8nm,0.6s						
123A	Bell Site, Whi	93.55	51	⇓P	P	13 09 39.7	+0.4
	baz=93						
WTTA	Wattenberg	93.56	328	⇓iP	P	13 09 37.5	-1.6
WTTA				pmax	pmax		
	comp=Z,11nm,0.6s						
WTTA	Wattenberg	93.56	328	⇓iPcP	P	13 09 37.5	-1.6
	comp=Z,11nm,0.6s						
WTTA	Wattenberg	93.56	328	⇓iP	P	13 09 37.5	-1.6
	comp=Z,11nm,0.6s						
X25A	Clemmons Ranch	93.57	49	⇓P	P	13 09 39.6	+0.2
	baz=94,SNR=13						
S28A	Manter	93.58	45	⇓P	P	13 09 39.5	+0.2
	baz=93,SNR=15						
STU	Stuttgart	93.59	330	eP	P	13 09 38.1	-0.8
STU				pmax	pmax		
	comp=Z,34nm,0.9s						
STU	Stuttgart	93.59	330	eP	P	13 09 38.4	-0.6
	comp=Z,33nm,0.9s						
STU	Stuttgart	93.59	330	eP	P	13 09 38.1	-0.8
	comp=Z,34nm,0.9s						
U27A	Thompson Grove	93.68	46	⇓P	P	13 09 40.0	+0.1
	baz=94,SNR=17						
MOTA	Moosalm	93.75	328	⇓iP	P	13 09 38.5	-1.5
MOTA				pmax	pmax		
	comp=Z,14nm,1.0s						
MOTA	Moosalm	93.75	328	⇓iPcP	P	13 09 38.5	-1.5
	comp=Z,14nm,1.0s						
MOTA	Moosalm	93.75	328	⇓iP	P	13 09 38.5	-1.5
	comp=Z,14nm,1.0s						
Z24A	Sheeppen Canyo	93.78	50	⇑P	P	13 09 40.6	+0.2
	baz=94,SNR=10						
RETA	Reutte	93.81	329	⇓iPcP	P	13 09 39.2	-0.9
	comp=Z,14nm,1.0s						
RETA	Reutte	93.81	329	⇓iP	P	13 09 39.2	-0.9
	comp=Z,14nm,1.0s						
RUP	Ruppelstein	93.82	332	eP	P	13 09 39.5	-0.6
RUP	Ruppelstein	93.82	332	eP	P	13 09 39.5	-0.6
W26A	Owens Ranch, T	93.85	48	⇓P	P	13 09 40.9	+0.3
	baz=94						
SPMN	St. Paul	93.85	35	⇑P	P	13 09 40.1	-0.1
	baz=94						
Y25A	Mesa, Roswell	93.90	49	⇓P	P	13 09 40.8	0.0
	baz=94,SNR=16						
BCLA	Clavier	94.00	333	P	P	13 09 39.8	-1.0
	comp=Z,12nm,1.5s						
LANF	Langenberg	94.05	331	eP	P	13 09 40.3	-0.8
LANF	Langenberg	94.05	331	eP	P	13 09 40.3	-0.8
LANF	Langenberg	94.05	331	eP	P	13 09 40.3	-0.8
S29A	Ulysses	94.05	44	⇓P	P	13 09 41.5	+0.1
	baz=94						
V27A	Dan Oppiter Fa	94.07	47	⇑P	P	13 09 41.7	+0.1
	baz=94						
124A	Stringfield Ra	94.07	51	⇑P	P	13 09 42.2	+0.4
	baz=94,SNR=11						
U28A	Mallet	94.09	46	⇓P	P	13 09 41.4	-0.2
	baz=94						
X26A	CR and CF Fran	94.13	48	⇓P	P	13 09 42.2	+0.3
	baz=94,SNR=12						
FETA	Feichten	94.16	328	⇑iPcP	P	13 09 40.4	-1.4
	comp=Z,20nm,1.0s						
FETA	Feichten	94.16	328	⇑iP	P	13 09 40.4	-1.4
	comp=Z,20nm,1.0s						
T29A	Hugoton	94.22	45	⇓P	P	13 09 42.1	-0.1
	baz=94						
WLF	Walferdange	94.23	332	P	P	13 09 41.7	-0.2
	comp=Z,35nm,1.6s						
WLF	Walferdange	94.23	332	eP	P	13 09 41.9	0.0
WLF				pmax	pmax		
	comp=Z,50nm,1.2s						
WLF	Walferdange	94.23	332	eP	P	13 09 41.4	-0.5
	comp=Z,29nm,1.0s						
WLF	Walferdange	94.23	332	eP	P	13 09 41.9	0.0
	comp=Z,50nm,1.2s						
Z25A	Roswell	94.25	50	⇑P	P	13 09 42.8	+0.4
	baz=94,SNR=11						
SPAK	Spaichingen-Ko	94.27	330	eP	P	13 09 41.2	-1.0
BFO	Black Forest	94.30	330	eP	P	13 09 41.2	-1.1
BFO				pmax	pmax		
	comp=Z,55nm,1.4s						
BFO	Black Forest	94.30	330	eP	P	13 09 41.4	-0.9
BFO				pmax	pmax		
	comp=Z,24nm,0.9s						
BFO	Black Forest	94.30	330	eP	P	13 09 41.4	-0.9
	comp=Z,24nm,0.9s						
BFO	Black Forest	94.30	330	eP	P	13 09 41.2	-1.1
	comp=Z,55nm,1.4s						
BFO	Black Forest	94.30	330	P	P	13 09 41.4	-0.9
	comp=Z,156nm,1.0s,SNR=10						
W27A	Bowe Ranch, En	94.33	47	⇓P	P	13 09 43.2	+0.4
	baz=94,SNR=23						
DAVA	Damuels	94.37	329	i PcP	P	13 09 41.7	-1.0
	SNR=8.4						
DAVA	Damuels	94.37	329	i P	P	13 09 41.7	-1.0
	comp=Z,22nm,0.8s						
224A	Cornudas Mount	94.38	51	⇓P	P	13 09 43.5	+0.4
	baz=94,SNR=20						
GIVF	Givet	94.44	333	⇓iP	P	13 09 41.5	-1.3
	comp=Z,62nm,1.5s						
GIVF	Givet	94.44	333	⇓iP	P	13 09 41.5	-1.3
GIVF				pmax	pmax		
	comp=Z,62nm,1.5s						
GIVF	Givet	94.44	333	⇓iP	P	13 09 41.5	-1.3
	comp=Z,62nm,1.5s						
S30A	Montezuma	94.45	44	⇓P	P	13 09 43.1	-0.1
	baz=94						
V28A	Channing	94.47	47	⇓P	P	13 09 43.5	+0.1
	baz=94						
Y26A	Elida	94.49	49	⇓P	P	13 09 43.4	-0.1
	baz=94						
X27A	F and S Farms,	94.55	48	⇑P	P	13 09 43.9	+0.1
	baz=94						
125A	Gardner Draw,	94.65	50	⇑P	P	13 09 44.6	+0.4
	baz=94,SNR=9.7						
U29A	Oasis Ranch, S	94.66	45	⇑P	P	13 09 44.1	-0.1
	baz=94						
CDF	Champ du Feu	94.71	331	⇓iP	P	13 09 43.1	-1.1
	comp=Z,38nm,0.9s						
CDF	Champ du Feu	94.71	331	⇓iP	P	13 09 43.1	-1.1
CDF				pmax	pmax		
	comp=Z,39nm,0.9s						
CDF	Champ du Feu	94.71	331	⇓iP	P	13 09 43.1	-1.1
	comp=Z,38nm,0.9s						
BAIF	Baives	94.72	333	⇓iP	P	13 09 42.8	-1.3
	comp=Z,27nm,1.1s						
BAIF	Baives	94.72	333	⇓iP	P	13 09 42.8	-1.3
BAIF				pmax	pmax		
	comp=Z,27nm,1.1s						
BAIF	Baives	94.72	333	⇓iP	P	13 09 42.8	-1.3
	comp=Z,27nm,1.1s						
Z26A	Caprock	94.76	49	⇓P	P	13 09 44.7	-0.1
	baz=95,SNR=18						
LIBD	Limburg	94.76	331	eP	P	13 09 43.8	-0.5
LIBD	Limburg	94.76	331	eP	P	13 09 43.8	-0.5
324A	Moseley Ranch,	94.77	52	⇑P	P	13 09 44.9	0.0
	baz=95,SNR=7.7						
T30A	Plains	94.77	45	⇑P	P	13 09 44.7	0.0
	baz=95						
W28A	Vega	94.78	47	⇓P	P	13 09 45.2	+0.4
	baz=95						
FELD	Feldberg im Sc	94.79	330	eP	P	13 09 43.8	-0.8
FELD	Feldberg im Sc	94.79	330	eP	P	13 09 43.8	-0.8
225A	Deer Hill, Car	94.85	51	⇓P	P	13 09 45.5	+0.2
	baz=95						
V29A	Stinnett	94.85	46	⇑P	P	13 09 45.0	-0.1
	baz=95						
ECH	Echery	94.91	331	eP	P	13 09 44.3	-0.8
ECH				pmax	pmax		
	comp=Z,20nm,1.1s						
ECH	Echery	94.91	331	eP	P	13 09 44.3	-0.8
	comp=Z,20nm,1.1s						
ECH	Echery	94.91	331	eP	P	13 09 44.2	-0.8
Y27A	Causey	94.95	48	⇑P	P	13 09 45.6	-0.1
	baz=95,SNR=9.9						
U30A	WK&E Inc. Balk	95.01	45	⇓P	P	13 09 45.6	-0.2
	baz=95						
S31A	Mullinville	95.07	44	⇑P	P	13 09 45.7	-0.3
	baz=95						
126A	Clayton Basin,	95.09	50	⇓P	P	13 09 45.9	-0.4
	baz=95						
GDL2	Guadalupe Moun	95.11	50	eP	P	13 09 46.9	+0.5
	comp=Z,22nm,0.5s						
325A	Bean Ranch, Si	95.17	51	⇑P	P	13 09 47.1	+0.4
	baz=95,SNR=16						
MSTX	Muleshoe	95.17	48	⇑P	P	13 09 46.4	-0.2
	baz=95						
MOF	Molkenrain	95.19	331	eP	P	13 09 45.3	-1.1
MOF	Molkenrain	95.19	331	eP	P	13 09 45.3	-1.1
MOF	Molkenrain	95.19	331	eP	P	13 09 45.3	-1.1
TUE	Stuetta	95.21	329	eP	P	13 09 45.1	-1.6
	comp=Z,58nm,1.8s						
X28A	Dimmitt	95.22	47	⇑P	P	13 09 46.7	-0.1
	baz=95						
W29A	Amraillo	95.22	47	⇓P	P	13 09 47.2	+0.3
	baz=95						
Z27A	Tatum	95.25	49	⇓P	P	13 09 46.8	-0.2
	baz=95,SNR=13						
PAGF	Fort de Pagny	95.27	332	⇓iP	P	13 09 45.9	-0.7
	comp=Z,32nm,1.1s						
PAGF	Fort de Pagny	95.27	332	⇓iP	P	13 09 45.9	-0.7
	comp=Z,32nm,1.1s						
T31A	Randall Ranch,	95.28	44	⇓P	P	13 09 47.1	+0.2
	baz=95						
BBS	Basel-Blauen	95.32	330	eP	P	13 09 45.5	-1.4
BBS	Basel-Blauen	95.32	330	eP	P	13 09 45.5	-1.4
226B	Tecolote Peak,	95.32	50	⇓P	P	13 09 47.5	+0.2
	baz=95,SNR=6.4						
HINF	Hinteralfeld	95.34	331	⇓iP	P	13 09 45.5	-1.5
	comp=Z,28nm,1.0s						
HINF	Hinteralfeld	95.34	331	⇓iP	P	13 09 45.5	-1.5
HINF				pmax	pmax		
	comp=Z,28nm,1.0s						
HINF	Hinteralfeld	95.34	331	⇓iP	P	13 09 45.5	-1.5
	comp=Z,28nm,1.0s						
AMTX	Amarillo	95.34	47	eP	P	13 09 48.0	+0.6
	comp=Z,13nm,0.9s						
AMTX	Amarillo	95.34	47	⇓P	P	13 09 47.6	+0.2
	baz=95,SNR=5.9						
THEF	They Montfort	95.41	331	eP	P	13 09 46.4	-0.9
THEF	They Montfort	95.41	331	eP	P	13 09 46.4	-0.9
THEF	They Montfort	95.41	331	eP	P	13 09 46.4	-0.9
HAU	Haudompre	95.42	331	⇓iP	P	13 09 46.0	-1.3
	comp=Z,37nm,1.1s						
HAU	Haudompre	95.42	331	⇓iP	P	13 09 46.0	-1.3
HAU				pmax	pmax		
	comp=Z,37nm,1.1s						
HAU	Haudompre	95.42	331	⇓iP	P	13 09 46.0	-1.3
	comp=Z,37nm,1.1s						
V30A	Spur Ranch, Mi	95.46	46	⇓P	P	13 09 48.2	+0.4
	baz=95						
425A	Indio Mountain	95.49	52	⇑P	P	13 09 48.5	+0.4
	baz=95,SNR=23						
127A	Arkansas Junct	95.53	50	⇑P	P	13 09 47.8	-0.5
	baz=95						
Y28A	McKinney Farm,	95.55	48	⇑P	P	13 09 48.1	-0.2
	baz=95						
MEZF	Maizieres J'vi	95.59	332	⇓iP	P	13 09 47.3	-0.8
	comp=Z,47nm,1.0s						
MEZF	Maizieres J'vi	95.59	332	⇓iP	P	13 09 47.3	-0.8
	comp=Z,47nm,1.0s						
X29A	Tulia	95.59	47	⇑P	P	13 09 48.6	+0.1
	baz=96,SNR=9.0						
U31A	Nine Bar Ranch	95.62	45	⇑P	P	13 09 48.6	0.0
	baz=96						
LOMF	Lomont	95.71	330	eP	P	13 09 46.8	-1.9
LOMF	Lomont	95.71	330	eP	P	13 09 46.8	-1.9
LOMF	Lomont	95.71	330	eP	P	13 09 46.8	-1.9
SFTF	Sexfontaines	95.83	332	⇓iP	P	13 09 48.2	-0.9
	comp=Z,84nm,1.1s						
SFTF	Sexfontaines	95.83	332	⇓iP	P	13 09 48.2	-0.9
	comp=Z,84nm,1.1s						
Z28A	Tucker Farm, M	95.83	49	⇑P	P	13 09 49.2	-0.4
	baz=96,SNR=7.3						
KSU1	Kansas State U	95.87	41	eP	P	13 09 49.3	-0.2
	comp=Z,36nm,0.8s						
SCHQ	Schefferville	95.87	16	eP	P	13 09 49.3	+0.1
	comp=Z,12nm,1.3s						
SCHQ				PP	PP	13 13 47.7	+1.0
SCHQ	Schefferville	95.87	16	P	P	13 09 49.1	-0.1
	comp=Z,5.5nm,0.8s,baz=336,slow=4.3,SNR=7.8						
SCHQ				PP	PP	13 13 47.7	+1.0
	comp=Z,4.7nm,1.0s,baz=353,slow=10.0,SNR=4.1						
W30A	Crocket Farms	95.88	46	⇑P	P	13 09 49.9	+0.1
	baz=96						
326A	Caldwell Ranch	95.89	51	⇑P	P	13 09 49.9	0.0
	baz=96,SNR=13						
Y29A	Porterfield Fa	95.97	48	⇓P	P	13 09 50.4	+0.2
	baz=96						
V31A	Spring Creek L	95.99	45	⇑P	P	13 09 50.7	+0.5
	baz=96						
327A	Balmorhea Ranc	96.20	51	⇓P	P	13 09 51.3	0.0
	baz=96						
426A	McDonald Obser	96.23	52	⇓P	P	13 09 51.6	-0.1
	baz=96,SNR=24						
W31A	Holland Ranch,	96.29	46	⇑P	P	13 09 51.7	+0.1
	baz=96						
Z29A	Hungry Hill Ra	96.30	48	⇓P	P	13 09 51.9	+0.2
	baz=96,SNR=12						
228A	UT Block 9, Go	96.38	50	⇓P	P	13 09 52.0	-0.1
	baz=96						
TIP	Timpagrande	96.40	319	eP	P	13 09 52.0	0.0
	comp=Z,34nm,1.2s						
Y30A	Stafford Cattl	96.47	47	⇓P	P	13 09 52.4	0.0
	baz=96						
526A	Mary Lane Ranc	96.54	52	⇑P	P	13 09 53.3	+0.4
	baz=96,SNR=15						
427A	Hayter Ranch,	96.56	51	⇓P	P	13 09 53.3	+0.4
	baz=96,SNR=14						
129A	Stewart Farms,	96.57	49	⇓P	P	13 09 52.4	-0.5
	baz=96						
CABF	La Chapelle	96.60	330	⇓iP	P	13 09 51.5	-1.3
	comp=Z,49nm,1.3s						
CABF	La Chapelle	96.60	330	⇓iP	P	13 09 51.5	-1.3
CABF				pmax	pmax		
	comp=Z,49nm,1.3s						
CABF	La Chapelle	96.60	330	⇓iP	P	13 09 51.5	-1.3
	comp=Z,49nm,1.3s						
X31A	McDonald Ranch	96.61	46	⇑P	P	13 09 53.0	0.0
	baz=96						
328A	Wristen Ranch,	96.67	50	⇑P	P	13 09 53.2	-0.2
	baz=97,SNR=6.4						
Z30A	Sanderson Ranc	96.67	48	⇑P	P	13 09 53.0	-0.3
	baz=96,SNR=6.4						
626A	Big Bend Ranch	96.80	52	⇑P	P	13 09 54.2	+0.2
	baz=97,SNR=7.6						
Y31A	Rekieta Farm,	96.83	47	⇑P	P	13 09 53.7	-0.4
	baz=97						
229A	Bryant Ranch,	97.00	49	⇑P	P	13 09 54.9	0.0
	baz=97						
LOR	Lormes	97.06	332	⇓iP	P	13 09 53.5	-1.2
	comp=Z,30nm,1.1s						
LOR	Lormes	97.06	332	⇓iP	P	13 09 53.5	-1.2
	comp=Z,30nm,1.1s						
428A	Kincaid Ranch,	97.14	51	⇓P	Pdif	13 09 56.2	+0.7
	baz=97						
LPL	La Plagne	97.14	329	⇓iP	P	13 09 54.2	-1.2
	comp=Z,21nm,0.8s						
LPL	La Plagne	97.14	329	⇓iP	P	13 09 54.2	-1.2
LPL				pmax	pmax		
	comp=Z,21nm,0.8s						
LPL	La Plagne	97.14	329	⇓iP	P	13 09 54.2	-1.2
	comp=Z,21nm,0.8s						
LPG	La Plagne	97.15	329	⇓iP	P	13 09 54.4	-1.1
	comp=Z,32nm,0.9s						
LPG	La Plagne	97.15	329	⇓iP	P	13 09 54.4	-1.1
LPG				pmax	pmax		
	comp=Z,32nm,0.9s						
LPG	La Plagne	97.15	329	⇓iP	P	13 09 54.4	-1.1
	comp=Z,32nm,0.9s						
329A	Wagon Wheel Ra	97.17	50	⇓Pdiff	Pdif	13 09 55.8	+0.2
	baz=97						
130A	Snyder	97.20	48	⇓Pdiff	P	13 09 55.5	-0.2
	baz=97						
TXAR	Lajitas Array	97.25	52	P	Pdif	13 09 57.0	+0.8
TXAR				PP	PP	13 13 59.6	+1.2
TXAR				PKKPbc	PKKPbc	13 26 32.2	-0.6
TXAR	Lajitas Array	97.25	52	P	Pdif	13 09 57.0	+0.8
	comp=Z,13nm,0.8s,baz=307,slow=2.8,SNR=112						
TXAR				PP	PP	13 13 59.6	+1.2
	comp=Z,3.0nm,1.1s,baz=316,slow=5.2,SNR=3.4						
TXAR				PKKPbc	PKKPbc	13 26 32.2	-0.6
	comp=Z,0.2nm,0.5s,baz=139,slow=6.3,SNR=3.7						
Z31A	Sharp Cattle R	97.31	47	⇓Pdiff	P	13 09 56.1	-0.1
	baz=97						
Y32A	R-V Farms, Ver	97.35	47	⇑Pdiff	P	13 09 56.1	-0.2
	baz=97						
SSF	Saint Saulge	97.37	332	⇓iP	P	13 09 54.9	-1.2
	comp=Z,27nm,1.1s						
SSF	Saint Saulge	97.37	332	⇓iP	P	13 09 54.9	-1.2
SSF				pmax	pmax		
	comp=Z,27nm,1.1s						
SSF	Saint Saulge	97.37	332	⇓iP	P	13 09 54.9	-1.2
	comp=Z,27nm,1.1s						
627A	Terlingua Ranc	97.38	52	⇑Pdiff	Pdif	13 09 57.1	+0.3
	baz=97						
528A	Cox Ranch, San	97.39	51	⇑Pdiff	Pdif	13 09 57.1	+0.3
	baz=97						
CEL	Celeste	97.51	319	eP	P	13 09 55.8	-1.3
	comp=Z,60nm,0.8s						
BNI	Bardonecchia	97.52	329	eP	P	13 09 56.2	-0.8
BNI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BNI	Bardonecchia	97.52	329	eP	P	13 09 56.2	-0.8
	comp=Z,9.1nm,0.9s						
230A	Sterling City	97.53	49	⇑Pdiff	P	13 09 57.1	-0.2
	baz=97						
131A	Roby	97.54	48	⇓Pdiff	P	13 09 57.0	-0.2
	baz=97						
SMF	Signal de Mont	97.55	332	⇓iP	P	13 09 55.7	-1.2
	comp=Z,28nm,1.2s						
SMF	Signal de Mont	97.55	332	⇓iP	P	13 09 55.7	-1.2
SMF				pmax	pmax		
	comp=Z,28nm,1.2s						
SMF	Signal de Mont	97.55	332	⇓iP	P	13 09 55.7	-1.2
	comp=Z,28nm,1.2s						
FLN	La Foliniere	97.59	335	⇓iP	P	13 09 55.6	-1.4
	comp=Z,19nm,0.9s						
FLN	La Foliniere	97.59	335	⇓iP	P	13 09 55.6	-1.4
FLN				pmax	pmax		
	comp=Z,19nm,0.9s						
FLN	La Foliniere	97.59	335	⇓iP	P	13 09 55.6	-1.4
	comp=Z,19nm,0.9s						
LDF	La Druitiere	97.59	335	⇓iP	P	13 09 55.6	-1.4
	comp=Z,32nm,1.1s						
LDF	La Druitiere	97.59	335	⇓iP	P	13 09 55.6	-1.4
LDF				pmax	pmax		
	comp=Z,32nm,1.1s						
LDF	La Druitiere	97.59	335	⇓iP	P	13 09 55.6	-1.4
	comp=Z,32nm,1.1s						
AVF	Avril sur Loir	97.65	332	eP	P	13 09 56.1	-1.2
	comp=Z,47nm,1.2s						
AVF	Avril sur Loir	97.65	332	eP	P	13 09 56.1	-1.2
AVF				pmax	pmax		
	comp=Z,47nm,1.2s						
AVF	Avril sur Loir	97.65	332	eP	P	13 09 56.1	-1.2
	comp=Z,47nm,1.2s						
628A	Black Gap, Mar	97.72	52	⇑Pdiff	Pdif	13 09 58.4	+0.3
	baz=98						
MBDF	Montbardon	97.72	329	⇓iP	P	13 09 56.0	-1.9
	comp=Z,15nm,1.0s						
MBDF	Montbardon	97.72	329	⇓iP	P	13 09 56.0	-1.9
MBDF				pmax	pmax		
	comp=Z,15nm,1.0s						
MBDF	Montbardon	97.72	329	⇓iP	P	13 09 56.0	-1.9
	comp=Z,15nm,1.0s						
429A	Davenport Ranc	97.75	50	⇑Pdiff	P	13 09 58.1	-0.2
	baz=98						
Z32A	Haskell	97.75	47	⇓Pdiff	Pdif	13 09 58.3	+0.2
	baz=98						
330A	Mertzon	97.77	49	⇑Pdiff	P	13 09 57.9	-0.4
	baz=98						
529A	Stev Forest Ra	97.81	51	⇓Pdiff	Pdif	13 09 58.7	+0.2
	baz=98						
AUTN	L'Aution	97.96	328	eP	P	13 09 55.5	-3.6
AUTN	L'Aution	97.96	328	eP	P	13 09 55.5	-3.6
AUTN	L'Aution	97.96	328	eP	P	13 09 55.5	-3.6
ORIF	Oris-en-Rattie	97.99	329	eP	P	13 09 57.7	-1.3
ORIF	Oris-en-Rattie	97.99	329	eP	P	13 09 57.7	-1.3
ORIF	Oris-en-Rattie	97.99	329	eP	P	13 09 57.7	-1.3
231A	Bronte	98.04	49	⇓Pdiff	P	13 09 59.0	-0.5
	baz=98						
GRR	Gorron	98.04	335	⇓iP	P	13 09 57.8	-1.2
	comp=Z,28nm,1.1s						
GRR	Gorron	98.04	335	⇓iP	P	13 09 57.8	-1.2
GRR				pmax	pmax		
	comp=Z,28nm,1.1s						
GRR	Gorron	98.04	335	⇓iP	P	13 09 57.8	-1.2
	comp=Z,28nm,1.1s						
BGF	Bois d'Agland	98.04	332	⇓iP	P	13 09 58.0	-1.1
BGF	Bois d'Agland	98.04	332	⇓iP	P	13 09 58.0	-1.1
BGF	Bois d'Agland	98.04	332	⇓iP	P	13 09 58.0	-1.1
SBF	Sospel	98.06	328	⇓iP	P	13 09 57.4	-1.9
	comp=Z,22nm,0.7s						
SBF	Sospel	98.06	328	⇓iP	P	13 09 57.4	-1.9
SBF				pmax	pmax		
	comp=Z,22nm,0.7s						
SBF	Sospel	98.06	328	⇓iP	P	13 09 57.4	-1.9
	comp=Z,22nm,0.7s						
ABTX	Abilene, Hawle	98.06	48	⇑Pdiff	P	13 09 59.5	-0.1
	baz=98						
430A	Baggett Ranch,	98.10	50	⇑Pdiff	P	13 09 59.5	-0.3
	baz=98						
331A	San Angelo	98.34	49	⇓Pdiff	P	13 10 00.2	-0.7
	baz=98						
CALN	Calern	98.40	328	eP	Pdif	13 10 01.3	+0.3
CALN	Calern	98.40	328	eP	Pdif	13 10 01.3	+0.3
CALN	Calern	98.40	328	eP	Pdif	13 10 01.3	+0.3
530A	J-C Ranch, Com	98.41	51	⇑Pdiff	P	13 10 01.4	+0.2
	baz=98						
TUL1	Tulsa	98.44	43	⇓Pdiff	P	13 10 00.9	-0.2
	baz=98						
TCF	Toulx Ste Croi	98.53	332	⇓iP	P	13 10 00.3	-1.0
	comp=Z,14nm,1.0s						
TCF	Toulx Ste Croi	98.53	332	⇓iP	P	13 10 00.3	-1.0
TCF				pmax	pmax		
	comp=Z,14nm,1.0s						
TCF	Toulx Ste Croi	98.53	332	⇓iP	P	13 10 00.3	-1.0
	comp=Z,14nm,1.0s						
VIVF	Saint-Julien-l	98.58	330	⇓iP	Pdif	13 10 00.4	-1.2
	comp=Z,24nm,1.1s						
VIVF	Saint-Julien-l	98.58	330	⇓iP	Pdif	13 10 00.4	-1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIVF				pmax	pmax		
	comp=Z,24nm,1.1s						
VIVF	**Saint-Julien-l**	**98.58**	**330**	⇓*i*P	Pdif	13 10 00.4	-1.2
	comp=Z,24nm,1.1s						
431A	**Sonora**	**98.60**	**50**	⇑Pdiff	Pdif	13 10 01.6	-0.4
	baz=98						
332A	**Millersview**	**98.76**	**49**	⇓Pdiff	**P**	**13 10 02.7**	**0.0**
	baz=99						
SMRF	**Simiane la Rot**	**98.85**	**329**	⇓*i*P	Pdif	13 10 02.5	-0.3
SMRF	**Simiane la Rot**	**98.85**	**329**	⇓*i*P	Pdif	13 10 02.5	-0.3
531A	**Rocksprings**	**98.95**	**50**	⇓Pdiff	Pdif	13 10 03.4	-0.2
	baz=99						
432A	**Menard**	**99.03**	**49**	⇓Pdiff	**Pdif**	**13 10 03.5**	**-0.4**
	baz=99						
MFF	**Saint Martin d**	**99.23**	**334**	⇓*i*P	**Pdif**	**13 10 03.5**	**-0.9**
MFF	**Saint Martin d**	**99.23**	**334**	⇓*i*P	**Pdif**	**13 10 03.5**	**-0.9**
MFF	**Saint Martin d**	**99.23**	**334**	⇓*i*P	**Pdif**	**13 10 03.5**	**-0.9**
JCT	**Junction City**	**99.27**	**49**	⇑Pdiff	**Pdif**	**13 10 04.8**	**-0.2**
	baz=99						
631A	**Perdido Creek**	**99.39**	**51**	⇑Pdiff	**Pdif**	**13 10 05.2**	**-0.2**
	baz=99						
532A	**Rocksprings**	**99.42**	**50**	⇓Pdiff	**Pdif**	**13 10 05.4**	**-0.3**
	baz=99						
LASF	**Ste Croix**	**99.56**	**330**	⇓*i*P	**Pdif**	**13 10 05.0**	**-0.9**
	comp=Z,38nm,1.3s						
LASF	**Ste Croix**	**99.56**	**330**	⇓*i*P	**Pdif**	**13 10 05.0**	**-0.9**
	comp=Z,38nm,1.3s						
RJF	**Les Rejaudoux**	**99.60**	**332**	⇓*i*P	**Pdif**	**13 10 05.4**	**-0.7**
	comp=Z,12nm,0.8s						
RJF	**Les Rejaudoux**	**99.60**	**332**	⇓*i*P	**Pdif**	**13 10 05.4**	**-0.7**
RJF				pmax	pmax		
	comp=Z,12nm,0.8s						
RJF	**Les Rejaudoux**	**99.60**	**332**	⇓*i*P	**Pdif**	**13 10 05.4**	**-0.7**
	comp=Z,12nm,0.8s						
CAF	**Calviac**	**99.67**	**331**	⇓*i*P	**Pdif**	**13 10 05.3**	**-1.2**
CAF	**Calviac**	**99.67**	**331**	⇓*i*P	**Pdif**	**13 10 05.3**	**-1.2**
CAF	**Calviac**	**99.67**	**331**	⇓*i*P	**Pdif**	**13 10 05.3**	**-1.2**
632A	**Uvalde**	**99.87**	**50**	⇓Pdiff	**Pdif**	**13 10 07.6**	**-0.1**
	baz=100						
WHTX	**Lake Whitney**	**99.90**	**47**	⇓Pdiff	**Pdif**	**13 10 07.4**	**-0.3**
	baz=100						
732A	**Laxson Ranch,**	**100.22**	**51**	⇓Pdiff	**Pdif**	**13 10 09.0**	**-0.1**
	baz=100						
LFF	**La Frestale**	**100.22**	**332**	*e*P	**Pdif**	**13 10 08.3**	**-0.5**
	comp=Z,19nm,0.8s						
LFF	**La Frestale**	**100.22**	**332**	*e*P	**Pdif**	**13 10 08.3**	**-0.5**
LFF				pmax	pmax		
	comp=Z,19nm,0.8s						
LFF	**La Frestale**	**100.22**	**332**	*e*P	**Pdif**	**13 10 08.3**	**-0.5**
	comp=Z,19nm,0.8s						
SFIN	**Scholer Farm**	**100.25**	**35**	⇑Pdiff	**Pdif**	**13 10 08.7**	**-0.4**
	baz=100						
KEST	**Kesra**	**103.04**	**321**	Pdif	**Pdif**	**13 10 21.2**	**-0.4**
KEST	**Kesra**	**103.04**	**321**	Pdiff	**Pdif**	**13 10 21.2**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=264,slow=3.6,SNR=4.0						
ESDC	**Sonseca Array**	**106.53**	**332**	PP	PP	13 14 56.5	-10
	comp=Z,3.2nm,1.0s,baz=28,slow=6.7,SNR=7.1						
TIGA	**Tifton**	**108.80**	**39**	⇑Pdiff		13 14 50.0	
	baz=109						
QSPA	**South Pole Qui**	**116.04**	**180**	*e*PKPdf	**PKPdf**	**13 15 01.9**	**-0.6**
LSZ	**Lusaka**	**116.44**	**265**	*e*PKPdf	**PKPdf**	**13 15 05.5**	**+0.6**
LBTB	**Lobatse**	**121.94**	**256**	*e*PKPdf	**PKPdf**	**13 15 15.6**	**+0.4**
BOSA	**Boshof**	**123.18**	**252**	PKP	**PKPdf**	**13 15 17.4**	**-0.1**
BOSA	**Boshof**	**123.18**	**252**	PKP	**PKPdf**	**13 15 17.4**	**-0.1**
	comp=Z,3.9nm,0.7s,baz=248,slow=11,SNR=9.1						
TOA0	**Torodi Ar. Sit**	**124.02**	**309**	*e*PKPdf	**PKPdf**	**13 15 18.8**	**-0.5**
TORD	**Torodi Ar. Bea**	**124.02**	**309**	PKP	**PKPdf**	**13 15 18.6**	**-0.8**
TORD				PP	PP	13 16 56.8	-12
TORD	**Torodi Ar. Bea**	**124.02**	**309**	PKP	**PKPdf**	**13 15 18.6**	**-0.8**
	comp=Z,14nm,0.7s,baz=27,slow=1.5,SNR=102						
TORD				PP	PP	13 16 56.8	-12
	comp=Z,2.6nm,0.9s,baz=42,slow=6.2,SNR=4.8						
LRS	**Lares**	**128.32**	**34**	*e*PKPdf	**PKPdf**	**13 15 27.4**	**-0.1**
SJG	**San Juan**	**128.82**	**33**	SKPbc	SKiKP	13 18 08.7	-16
	comp=Z,17nm,0.7s,baz=17,slow=17,SNR=5.6						
SNAA	**Sanae**	**130.21**	**194**	*e*P	**PKPdf**	**13 15 29.4**	**-0.2**
SNAA	**Sanae**	**130.21**	**194**	*e*P	**SKPbc**	**13 18 11.6**	**-1.4**
SNAA	**Sanae**	**130.21**	**194**	PKP	**PKPdf**	**13 15 28.5**	**-1.0**
SNAA				SKPbc	**SKPbc**	**13 18 11.9**	**-1.1**
SNAA	**Sanae**	**130.21**	**194**	PKP	**PKPdf**	**13 15 28.5**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=214,slow=4.9,SNR=9.7						
SNAA				SKPbc	**SKPbc**	**13 18 11.9**	**-1.1**
	comp=Z,7.2nm,0.9s,baz=138,slow=2.9,SNR=20						
VNA2	**Neumayer--Watz**	**131.75**	**194**	*e*P	**PKPdf**	**13 15 33.7**	**+1.3**
VNA2	**Neumayer--Watz**	**131.75**	**194**	*e*P	**SKPbc**	**13 18 16.6**	**-2.0**
DBIC	**Dimbokro**	**133.13**	**309**	PKP	**PKPdf**	**13 15 36.2**	**-0.5**
DBIC				*e*PKPdf	**PKiKP**	**13 15 37.1**	**-0.9**
DBIC				SKPbc	**SKPbc**	**13 18 24.7**	**-0.3**
DBIC	**Dimbokro**	**133.13**	**309**	PKP	**PKPdf**	**13 15 36.2**	**-0.5**
	comp=Z,15nm,0.8s,baz=78,slow=1.4,SNR=19						
DBIC				SKPbc	**SKPbc**	**13 18 24.7**	**-0.3**
	comp=Z,15nm,0.8s,baz=7.6,slow=2.8,SNR=11						
LIC	**Lamto**	**133.56**	**309**	*e*PKIKP	**PKPdf**	**13 15 36.7**	**-0.8**
	comp=Z,31nm,0.7s						
LIC	**Lamto**	**133.56**	**309**	*e*PKPdf	**PKPdf**	**13 15 36.7**	**-0.8**
OTAV	**Otavalo**	**134.09**	**61**	*e*PKPdf	**PKPdf**	**13 15 41.6**	**+2.5**
ATAH	**Atahualpa**	**138.34**	**70**	SKPbc	**SKPbc**	**13 18 40.6**	**-0.9**
ATAH	**Atahualpa**	**138.34**	**70**	SKPbc	**SKPbc**	**13 18 40.6**	**-0.9**
	comp=Z,4.7nm,0.6s,baz=221,slow=3.7,SNR=4.9						
PMSA	**Palmer Station**	**138.37**	**164**	PKP	**PKPdf**	**13 15 42.0**	**-2.8**
PMSA	**Palmer Station**	**138.37**	**164**	PKP	**PKPdf**	**13 15 42.0**	**-2.8**
	comp=Z,21nm,0.6s,baz=328,slow=19,SNR=5.6						
NNA	**Nana**	**142.06**	**75**	PKPpre	PKPpre	13 15 48.4	
NNA	**Nana**	**142.06**	**75**	PKhKP	PKPpre	13 15 48.4	
	comp=Z,35nm,0.5s,baz=339,slow=5.4,SNR=21						
USHA	**Ushuaia**	**144.42**	**151**	PKP	**PKPdf**	**13 15 55.8**	**-0.1**
USHA	**Ushuaia**	**144.42**	**151**	PKP	**PKPdf**	**13 15 55.8**	**-0.1**
	comp=Z,25nm,0.8s,baz=201,slow=1.6,SNR=11						
PLCA	**Paso Flores**	**150.49**	**127**	PKP	**PKPdf**	**13 16 06.8**	**+0.3**
PLCA				*e*PKPbc	**PKPbc**	**13 16 12.4**	**+0.1**
PLCA				PKPbc	**PKiKP**	**13 16 12.6**	**-0.3**
PLCA				*e*PKPab	**PKPab**	**13 16 21.7**	**+1.1**
PLCA	**Paso Flores**	**150.49**	**127**	PKP	**PKPdf**	**13 16 06.8**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=153,slow=1.7,SNR=4.9						
PLCA				PKPbc	**PKiKP**	**13 16 12.6**	**-0.3**
	comp=Z,25nm,0.9s,baz=232,slow=3.2,SNR=52						
LPAZ	**La Paz**	**151.53**	**75**	*e*PKPdf	**PKPdf**	**13 16 10.0**	**+0.5**
LPAZ				PKP	**PKPdf**	**13 16 10.2**	**+0.8**
LPAZ				PKPbc	**PKiKP**	**13 16 16.3**	**-0.1**
LPAZ				*e*PKPab	**PKPab**	**13 16 27.1**	**+0.7**
LPAZ	**La Paz**	**151.53**	**75**	PKP	**PKPdf**	**13 16 10.2**	**+0.8**
	comp=Z,3.0nm,1.0s,baz=350,slow=3.6,SNR=9.3						
LPAZ				PKPbc	**PKiKP**	**13 16 16.3**	**-0.1**
	comp=Z,47nm,0.8s,baz=3.9,slow=4.3,SNR=128						
SAML	**Samuel**	**151.65**	**57**	*e*PKPdf	**PKPdf**	**13 16 08.9**	**0.0**
SAML				*e*PKPbc	**PKPbc**	**13 16 15.2**	**-0.4**
SAML				*e*PKPab	**PKPab**	**13 16 26.4**	**+0.3**
LCO	**Las Campanas**	**152.20**	**103**	*e*PKPdf	**PKPdf**	**13 16 09.9**	**+0.2**
LCO				*e*PKPbc	**PKiKP**	**13 16 17.1**	**+0.1**
LCO				*e*PKPab	**PKPab**	**13 16 29.5**	**+1.0**
CFAA	**Coronel Fontan**	**154.27**	**109**	PKP	**PKPdf**	**13 16 11.6**	**-0.7**
CFAA				PKPbc	**PKPbc**	**13 16 20.3**	**-0.6**
CFAA				PKPab	**PKPab**	**13 16 37.0**	**+0.1**
CFAA	**Coronel Fontan**	**154.27**	**109**	PKP	**PKPdf**	**13 16 11.6**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=230,slow=6.5,SNR=3.2						
CFAA				PKPbc	**PKPbc**	**13 16 20.3**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=275,slow=3.8,SNR=8.6						
CFAA				PKPab	**PKPab**	**13 16 37.0**	**+0.1**
	comp=Z,1.2nm,1.0s,baz=252,slow=5.3,SNR=8.4						
SIV	**San Ignacio**	**157.41**	**67**	PKP	**PKPdf**	**13 16 16.3**	**-0.5**
SIV				PKPab	**PKPab**	**13 16 50.1**	**-0.7**
SIV	**San Ignacio**	**157.41**	**67**	PKP	**PKPdf**	**13 16 16.3**	**-0.5**
	comp=Z,3.7nm,1.0s,baz=213,slow=1.2,SNR=8.4						
SIV				PKPab	**PKPab**	**13 16 50.1**	**-0.7**
	comp=Z,26nm,0.9s,baz=281,slow=4.7,SNR=23						
RCBR	**Riachuelo**	**159.40**	**350**	PKPab	**PKPab**	**13 16 58.7**	**-0.6**
RCBR	**Riachuelo**	**159.40**	**350**	PKPab	**PKPab**	**13 16 58.7**	**-0.6**
	comp=Z,14nm,0.9s,baz=4.8,slow=6.6,SNR=8.1						
CPUP	**Villa Florida**	**163.95**	**94**	PKP	**PKPdf**	**13 16 23.0**	**-0.5**
CPUP				PKPab	**PKPab**	**13 17 19.3**	**+0.1**
CPUP	**Villa Florida**	**163.95**	**94**	PKP	**PKPdf**	**13 16 23.0**	**-0.5**
	comp=Z,9.5nm,1.2s,baz=274,slow=18,SNR=4.7						
CPUP				PKPab	**PKPab**	**13 17 19.3**	**+0.1**
	comp=Z,4.3nm,0.8s,baz=272,slow=6.1,SNR=9.5						
BDFB	**Brasilia**	**166.74**	**39**	PKP	**PKPdf**	**13 16 25.9**	**-0.3**
BDFB				PKPab	**PKPab**	**13 17 31.7**	**0.0**
BDFB	**Brasilia**	**166.74**	**39**	PKP	**PKPdf**	**13 16 25.9**	**-0.3**
	comp=Z,5.3nm,0.9s,baz=52,slow=1.8,SNR=6.3						
BDFB				PKPab	**PKPab**	**13 17 31.7**	**0.0**
	comp=Z,11nm,0.9s,baz=322,slow=6.8,SNR=8.6						

IDC 01 13:11:30.6±7.2**,23°.78S×67°.04W,h194**km±53km**,mb3.4**/2**,**
mb1 3.4/5**,mb1mx3.2**/17**,mbtmp3.2**/5**,Error ellipse:**
s-maj=68.7km s-min=27.5km az=20.0,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.52**	**352**	P	Pn	13 13 18.3	-0.2
	0.3nm,0.3s,baz=148,slow=4.7,SNR=5.9						
LPAZ				S	Sn	13 14 43.2	-0.8
	0.1nm,0.3s,baz=345,slow=11,SNR=3.3						
SIV	**San Ignacio**	**9.56**	**37**	P	Pn	13 13 45.2	+0.8
	0.2nm,0.3s,baz=232,slow=16,SNR=5.8						
BDFB	**Brasilia**	**19.64**	**69**	P	P	13 15 44.7	-0.2
	0.8nm,0.3s,baz=246,slow=12,SNR=8.9						
TORD	**Torodi Ar. Bea**	**76.52**	**69**	P	P	13 22 59.7	0.0
	0.5nm,0.4s,baz=257,slow=5.5,SNR=11						
YKA	**Yellowknife Ar**	**93.90**	**340**	P	P	13 24 26.1	+0.6
	0.2nm,0.5s,baz=129,slow=4.9,SNR=5.3						
WRA	**Warramunga Arr**	**131.81**	**207**	PKP	PKPdf	13 30 20.8	-0.6
	0.1nm,0.3s,baz=151,slow=1.9,SNR=7.7						
ZALV	**Zalesovo Beam**	**143.21**	**28**	PKP	PKPbc	13 30 39.2	+0.4
	0.4nm,0.5s,baz=264,slow=2.9,SNR=3.0						
MKAR	**Makanchi Array**	**146.38**	**39**	PKPbc	PKPbc	13 30 47.8	-0.8
	0.8nm,0.6s,baz=300,slow=3.6,SNR=11						

*CSEM **01** 13:26:03.9±0.1,38°.75N×23°.40E,h10km,ML1.8/2,Error ellipse: s-maj=2.0km s-min=1.7km az=98.0*
*THE **01** 13:26:03.9,38°.73N×23°.40E,h17km,ML1.8/2,Error ellipse: s-maj=0.8km s-min=0.3km az=166.0*
*ATH **01** 13:26:04.3,38°.75N×23°.40E,h9km±8km,MD2.6/9,ML2.0*
*ISCJB **01** 13:26:04.1±0.5,38°.76N±0°.02×23°.41E±0°.03,h12km±3km, Error ellipse: s-maj=4.2km s-min=3.9km az=42.9*
ISC 01 13:26:04.1±0.8**,38°.76N**±0°.02×**23°.41E**±0°.02**,h16**km±6km**,**
n34,σ0s.40/60**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRKA	**Markates**	**0.15**	**109**	P	**Pg**	**13 26 08.0**	**-0.1**
MRKA				S	**Sg**	**13 26 10.9**	**+0.2**
MRKA	**Markates**	**0.15**	**109**	P	**Pg**	**13 26 08.0**	**-0.1**
MRKA				S	**Sg**	**13 26 10.9**	**+0.2**
SMIA	**Simia**	**0.20**	**309**	P	**Pg**	**13 26 08.8**	**0.0**
SMIA				S	**Sg**	**13 26 12.7**	**+0.7**
SMIA	**Simia**	**0.20**	**309**	P	**Pg**	**13 26 08.8**	**0.0**
SMIA				S	**Sg**	**13 26 12.7**	**+0.7**
ATAL	**Atalanti**	**0.31**	**258**	P	**Pg**	**13 26 10.3**	**-0.3**
ATAL				S	**Sg**	**13 26 15.3**	**+0.3**
ATAL	**Atalanti**	**0.31**	**258**	P	**Pg**	**13 26 10.3**	**-0.3**
ATAL				S	**Sg**	**13 26 15.3**	**+0.3**
LKR	**Lokris**	**0.34**	**252**	P	**Pg**	**13 26 10.7**	**-0.4**
LKR				S	**Sg**	**13 26 16.1**	**+0.3**
LKR	**Lokris**	**0.34**	**252**	*e*PG	**Pg**	**13 26 10.7**	**-0.4**
LKR				*e*SB	**Sg**	**13 26 15.4**	**-0.4**
LKR	**Lokris**	**0.34**	**252**	P	**Pg**	**13 26 10.7**	**-0.4**
LKR				*e*Sb	**Sg**	**13 26 15.4**	**-0.4**
LKR				S	**Sg**	**13 26 16.1**	**+0.3**
AOS	**Alonnisos**	**0.56**	**41**	P	**Pg**	**13 26 14.8**	**-0.3**
AOS				S	**Sb**	**13 26 23.4**	**+0.2**
AOS	**Alonnisos**	**0.56**	**41**	*e*PG	**Pg**	**13 26 14.8**	**-0.3**
AOS				*e*SB	**Sg**	**13 26 22.8**	**+0.3**
AOS	**Alonnisos**	**0.56**	**41**	P	**Pg**	**13 26 14.8**	**-0.3**
AOS				*e*Sb	**Sg**	**13 26 22.8**	**+0.3**
AOS				S	**Sb**	**13 26 23.4**	**+0.2**
NEO	**Neokhori**	**0.57**	**346**	*e*PB	**Pg**	**13 26 15.2**	**-0.2**
NEO				*e*SB	**Sg**	**13 26 23.0**	**0.0**
NEO	**Neokhori**	**0.57**	**346**	*e*Pb	**Pg**	**13 26 15.2**	**-0.2**
NEO				*e*Sb	**Sg**	**13 26 23.0**	**0.0**
XOR	**Xorichti**	**0.63**	**345**	P	**Pg**	**13 26 16.5**	**-0.1**
XOR	**Xorichti**	**0.63**	**345**	P	**Pg**	**13 26 16.5**	**-0.1**
PTL	**Penteli**	**0.79**	**153**	*e*PG	**Pg**	**13 26 19.7**	**+0.2**
PTL				*e*SB	**Sb**	**13 26 29.5**	**-0.5**
PTL	**Penteli**	**0.79**	**153**	*e*Pg	**Pg**	**13 26 19.7**	**+0.2**
PTL				*e*Sb	**Sb**	**13 26 29.5**	**-0.5**
LTK	**Loutraki**	**0.81**	**205**	*e*PB	**Pb**	**13 26 19.0**	**-0.8**
LTK				*e*SB	**Sg**	**13 26 31.1**	**+0.6**
LTK	**Loutraki**	**0.81**	**205**	*e*Pg	**Pb**	**13 26 19.0**	**-0.8**
LTK				*e*Sb	**Sg**	**13 26 31.1**	**+0.6**
ATH	**Athens Observa**	**0.82**	**163**	*e*PB	**Pg**	**13 26 20.4**	**+0.4**
ATH				*e*SB	**Sg**	**13 26 31.1**	**+0.3**
ATH	**Athens Observa**	**0.82**	**163**	*e*Pb	**Pg**	**13 26 20.4**	**+0.4**
ATH				*e*Sb	**Sg**	**13 26 31.1**	**+0.3**
AGG	**Agios Georgios**	**0.88**	**288**	*e*PB	**Pb**	**13 26 20.9**	**-0.2**
AGG				*e*SB	**Sg**	**13 26 33.7**	**+0.8**
AGG	**Agios Georgios**	**0.88**	**288**	*e*Pb	**Pb**	**13 26 20.9**	**-0.2**
AGG				*e*Sb	**Sg**	**13 26 33.7**	**+0.8**
NAIG	**Nisos Aigina**	**1.00**	**176**	*e*PG	**Pb**	**13 26 22.8**	**-0.2**
NAIG	**Nisos Aigina**	**1.00**	**176**	*e*Pg	**Pb**	**13 26 22.8**	**-0.2**
KALE	**Kalithea**	**1.06**	**250**	*e*PG	**Pb**	**13 26 23.7**	**-0.4**
KALE	**Kalithea**	**1.06**	**250**	*e*Pg	**Pb**	**13 26 23.7**	**-0.4**
GUR	**Goura**	**1.17**	**226**	*e*PB	**Pb**	**13 26 26.2**	**+0.2**
GUR				*e*SB	**Sg**	**13 26 42.1**	**+0.1**
GUR	**Goura**	**1.17**	**226**	*e*Pb	**Pb**	**13 26 26.2**	**+0.2**
GUR				*e*Sb	**Sg**	**13 26 42.1**	**+0.1**
KLV	**Kalavryta, Ach**	**1.22**	**235**	*e*PB	**Pb**	**13 26 27.4**	**+0.6**
KLV	**Kalavryta, Ach**	**1.22**	**235**	*e*Pn	**Pb**	**13 26 27.4**	**+0.6**
DID	**Didima**	**1.25**	**186**	*e*PN	**Pn**	**13 26 27.2**	**+0.1**
DID	**Didima**	**1.25**	**186**	*e*Pn	**Pn**	**13 26 27.2**	**+0.1**

TAP 01 13:41:36.1,24°.18N×121°.78E,h10km**,ML3.7,9C-1D,B,**
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**346**	P	Pg	13 41 39.3	+0.1
	baz=349						
EHP				S	Sg	13 41 41.8	+0.5
	baz=349						
TWD	**Chiawan**	**0.19**	**238**	⇑*i*P	Pg	13 41 40.5	+0.3
	baz=245						
TWD				*e*S	Sg	13 41 43.7	+0.7
	baz=245						
ENA	**Nanau**	**0.25**	**353**	⇑*i*P	Pg	13 41 41.4	+0.2
	baz=354						
ENA				S	Sg	13 41 45.1	+0.6
	baz=354						
HWA	**Hwalien**	**0.26**	**217**	*e*P	Pb	13 41 42.6	-0.2
	baz=229						
ESF	**Shoufeng Towns**	**0.40**	**218**	*e*P	Pb	13 41 44.6	-0.6
	baz=227						
ESF				*e*S	Sb	13 41 50.8	-0.5
	baz=227						
TWC	**Suao**	**0.43**	**9**	⇑*i*P	Pg	13 41 44.7	+0.2
	baz=3.0						
TWC				*e*S	Sg	13 41 50.1	-0.1
	baz=3.0						
NNS	**Nan Shan**	**0.45**	**305**	⇑*i*P	Pg	13 41 45.2	+0.2
	baz=306						
NNS				*e*S	Sg	13 41 51.4	+0.3
	baz=306						
WHF	**Hehuan Shan**	**0.47**	**265**	⇑*i*P	Pg	13 41 45.7	-0.1
	baz=267						
WHF				*e*S	Sg	13 41 52.2	-0.2
	baz=267						
ESL	**Shilin**	**0.48**	**221**	P	Pg	13 41 46.0	+0.5
	baz=231						
ESL				*e*S	Sg	13 41 52.6	+0.7
	baz=231						
ENTT	**Nioudou**	**0.49**	**337**	⇑*i*P	Pg	13 41 46.1	+0.3
	baz=338						
ENTT				*e*S	Sg	13 41 53.1	+0.8
	baz=338						
TEGC	**Jichi Village**	**0.52**	**205**	*e*P	Pb	13 41 47.1	-0.1
	baz=195						
TEGC				*e*S	Sb	13 41 56.1	+1.3
	baz=195						
TWE	**Neicheng**	**0.55**	**350**	⇑*i*P	Pg	13 41 47.1	+0.4
	baz=351						
TWE				S	Sg	13 41 54.4	+0.5
	baz=351						
TWT	**Tachien**	**0.55**	**277**	P	Pb	13 41 47.7	-0.4
	baz=278						
TWT				*e*S	Sg	13 41 55.4	+0.8
	baz=278						
ILA	**Ilan**	**0.58**	**357**	P	Pb	13 41 48.1	-0.3
	baz=350						
ILA				S	Sb	13 41 56.7	+0.1
	baz=350						
NSK	**Sanguang**	**0.62**	**322**	⇑*i*P	Pg	13 41 48.6	+0.4
	baz=323						
NSK				S	Sg	13 41 57.2	+0.7
	baz=323						
EGS		**0.67**	**12**	*e*P	Pg	13 41 49.5	+0.4
	baz=21						
EHY	**Hungye**	**0.79**	**212**	P	Pg	13 41 51.1	-0.3
	baz=225						
EHY				*e*S	Sb	13 42 03.5	+0.8
	baz=225						
NSTT	**Nanjuang**	**0.84**	**302**	P	Pb	13 41 52.9	+0.2
	baz=303						
NSTT				*e*S	Sb	13 42 03.8	-0.2
	baz=303						
TWB1	**Santiao Chiao**	**0.84**	**13**	P	Pb	13 41 52.7	-0.1
	baz=13						
TWB1				*e*S	Sb	13 42 04.3	+0.1
	baz=13						
SMLT	**Sun Moon Lake**	**0.85**	**250**	P	Pb	13 41 53.1	-0.1
	baz=251						
SMLT				*e*S	Sb	13 42 04.7	-0.1
	baz=251						
TAP1	**Taipei**	**0.88**	**345**	*e*P	Pb	13 41 54.0	+0.5
	baz=345						
NWF	**Wu-fen Shan**	**0.88**	**0**	P	Pb	13 41 53.5	-0.1
	baz=353						
NWF				S	Sb	13 42 05.3	-0.3
	baz=353						
TYC	**Yuchr**	**0.89**	**252**	P	Pb	13 41 53.4	-0.1
	baz=254						
TYC				*e*S	Sb	13 42 05.3	-0.1
	baz=254						
TWQ1	**Liyutan**	**0.93**	**280**	*e*P	Pn	13 41 55.1	-0.1
	baz=282						
TWQ1				*e*S	Sn	13 42 08.7	+0.1
	baz=282						
TWF1	**Yuli**	**0.94**	**208**	*e*P	Pg	13 41 52.9	-1.3
	baz=221						
TWF1				*e*S	Sg	13 42 06.6	+0.2
	baz=221						
NCU	**National Centr**	**0.95**	**326**	*e*P	Pn	13 41 55.3	-0.1
	baz=326						
NCU				*e*S	Sn	13 42 08.8	-0.3
	baz=326						
NSY	**Sanyi**	**0.95**	**284**	*e*P	Pn	13 41 55.7	+0.1
	baz=286						
NSY				*e*S	Sn	13 42 08.9	-0.3
	baz=286						
HSN	**Hsinchu**	**0.96**	**310**	*e*P	Pn	13 41 55.3	-0.3
	baz=304						
HSN				*e*S	Sn	13 42 09.0	-0.2
	baz=304						
TWS1	**Kuangyinshan**	**0.97**	**340**	*e*P	Pn	13 41 55.6	-0.1
	baz=341						
TWS1				*e*S	Sn	13 42 09.5	0.0
	baz=341						
TCU	**Taichung**	**1.00**	**268**	*e*P	Pn	13 41 57.4	+1.2
	baz=270						
TCU				*e*S	Sn	13 42 11.2	+0.8
	baz=270						
WNT	**Mingjian**	**1.04**	**253**	*e*P	Pn	13 41 57.0	+0.2
	baz=251						
WNT				*e*S	Sn	13 42 12.7	+1.3
	baz=251						
TWY	**Chenhua**	**1.10**	**352**	*e*P	Pn	13 41 57.6	+0.1
	baz=352						
TWY				*e*S	Sn	13 42 14.0	+1.2
	baz=352						
ALS	**Alishan**	**1.11**	**233**	⇓*i*P	Pb	13 41 57.6	-0.1
	baz=236						
ALS				*e*S	Sg	13 42 13.2	+0.5
	baz=236						
CHKT	**Chengkung**	**1.14**	**199**	*e*P	Pb	13 41 56.7	-1.2
	baz=201						
CHKT				*e*S	Sb	13 42 12.7	-0.1
	baz=201						
YOJ	**Yonaguni jima**	**1.16**	**76**	⇑P	Pb	13 41 58.2	0.0
	baz=60						
CHN5	**Tsauling**	**1.16**	**240**	P	Pg	13 41 59.0	+0.4
	baz=243						
CHN5				*e*S	Sn	13 42 15.9	+1.4
	baz=243						
ELDTW	**Lidau**	**1.21**	**215**	*e*P	Pn	13 41 57.3	-1.9
	baz=206						
ELDTW				*e*S	Sn	13 42 15.8	+0.1
	baz=206						
WGK	**Gukeng**	**1.22**	**246**	*e*P	Pg	13 41 59.9	+0.5
	baz=249						
WGK				*e*S	Sn	13 42 17.6	+1.9
	baz=249						
CHN2	**Minshiung**	**1.36**	**242**	*e*P	Pg	13 42 01.9	-0.2
	baz=245						
CHN2				*e*S	Sg	13 42 22.4	+2.7
	baz=245						
CHN4	**Tsaushan**	**1.36**	**233**	*e*P	Pg	13 42 02.5	+0.2
	baz=237						
CHN4				*e*S	Sg	13 42 21.6	+1.5
	baz=237						
WTCT	**Ta-ch'eng**	**1.40**	**257**	*e*P	Pb	13 42 02.5	+0.2
	baz=260						
WTCT				*e*S	Sg	13 42 22.4	+1.2
	baz=260						
CHY	**Chiayi**	**1.41**	**241**	*e*P	Pb	13 42 02.8	+0.3
	baz=245						
CHY				*e*S	Sg	13 42 23.5	+1.9
	baz=245						
WTP	**Ta-pu**	**1.42**	**229**	*e*P	Pb	13 42 02.9	+0.3
	baz=233						
WTP				*e*S	Sg	13 42 22.8	+1.0
	baz=233						
TWK	**Hsinying**	**1.49**	**233**	*e*P	Pb	13 42 03.8	-0.1
	baz=236						
TWK				*e*S	Sg	13 42 24.7	+0.5
	baz=236						
TWG	**Pinlang**	**1.50**	**206**	*e*P	Pn	13 42 01.0	-2.1
	baz=210						
CHN1	**Nanshi**	**1.52**	**229**	*e*P	Pb	13 42 04.4	+0.1
	baz=223						
CHN1				*e*S	Sg	13 42 25.5	+0.5
	baz=223						
CHN8	**Yiju**	**1.66**	**240**	*e*P	Pn	13 42 05.8	+0.7
	baz=244						
CHN8				*e*S	Sg	13 42 28.8	-0.7
	baz=244						
CHN3	**Shinhua**	**1.70**	**230**	*e*P	Pb	13 42 06.7	-0.7
	baz=234						
CHN3				*e*S	Sg	13 42 30.9	+0.2
	baz=234						
ECL	**Taimali**	**1.75**	**206**	*e*P	Pn	13 42 07.2	+0.8
	baz=195						
SCLT	**Jiali**	**1.76**	**236**	*e*P	Pn	13 42 06.3	-0.3
	baz=240						
SCLT				*e*S	Sg	13 42 31.9	-0.9
	baz=240						
TWM1	**Shoushan**	**1.84**	**223**	*e*P	Pb	13 42 09.2	-0.6
	baz=225						
EAST	**Anshuo**	**1.98**	**206**	*e*P	Pn	13 42 09.6	-0.1
	baz=197						
SCZT	**Fangliau**	**2.09**	**211**	*e*P	Pn	13 42 12.5	+1.3
	baz=215						
SCZT				*e*S	Sb	13 42 39.6	-0.6
	baz=215						
PNG	**Penghu**	**2.12**	**254**	*e*P	Pn	13 42 13.0	+1.4
	baz=259						
PNG				*e*S	Sb	13 42 39.7	-1.3
	baz=259						
LAY	**Lan-yu**	**2.14**	**186**	*e*P	Pn	13 42 12.6	+0.7
	baz=188						
WDGT	**Dungji**	**2.15**	**245**	*e*P	Pn	13 42 12.5	+0.6
	baz=235						
WDGT				*e*S	Sb	13 42 41.1	-0.6
	baz=235						
HEN	**Hengchun**	**2.37**	**204**	*e*P	Pn	13 42 16.4	+1.4
	baz=199						
KNM	**Kinmen**	**3.06**	**275**	*e*P	Pn	13 42 26.7	+2.3
	baz=278						

*CSEM **01** 14:04:51.3,45°.53N×26°.47E,h128km,MD3.6/2,After BUC*
BUC 01 14:04:51.3±1.1**,45°.53N×26°.47E,h128**km±9km**,MD3.6**/2**,**
36C-3D,Error ellipse: s-maj=7.0km s-min=5.4km az=124.0,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.34**	**22**	⇓*i*P	Pn	14 05 09.7	+0.2
PLOR				*i* S	Sn	14 05 22.5	-0.8
PLOR	**Plostina**	**0.34**	**22**	⇓*i*P	Pn	14 05 09.7	+0.2
PLOR	**Plostina**	**0.34**	**22**	⇓*i*P	Pn	14 05 09.7	+0.2
PLOR				*i* S	Sn	14 05 22.5	-0.8
MLR	**Muntele Rosu**	**0.37**	**264**	⇑*i*P	Pn	14 05 10.0	+0.3
MLR				*i* S	Sn	14 05 23.0	-0.6
MLR	**Muntele Rosu**	**0.37**	**264**	⇑*i*P	Pn	14 05 10.0	+0.3
MLR	**Muntele Rosu**	**0.37**	**264**	⇑*i*P	Pn	14 05 10.0	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MLR				iS	Sn	14 05 23.0	-0.6
VRI	Vrincioaia	0.38	29	⇑iP	Pn	14 05 10.0	+0.4
VRI				iS	Sn	14 05 22.7	-0.8
VRI	Vrincioaia	0.38	29	⇑iP	Pn	14 05 10.0	+0.4
VRI	Vrincioaia	0.38	29	⇑iP	Pn	14 05 10.0	+0.4
VRI				iS	Sn	14 05 22.7	-0.8
PETR	Petresti	0.57	70	⇑iP	Pn	14 05 11.4	+0.9
PETR				iS	Sn	14 05 25.5	+0.4
PETR	Petresti	0.57	70	⇑iP	Pn	14 05 11.4	+0.9
PETR	Petresti	0.57	70	⇑iP	Pn	14 05 11.4	+0.9
PETR				iS	Sn	14 05 25.5	+0.4
SECR		0.57	210	⇑iP	Pn	14 05 11.4	+0.8
SECR				iS	Sn	14 05 25.8	+0.6
SECR		0.57	210	⇑iP	Pn	14 05 11.4	+0.8
SECR		0.57	210	⇑iP	Pn	14 05 11.4	+0.8
SECR				iS	Sn	14 05 25.8	+0.6
DOPR	Dopca	0.87	300	⇑iP	Pn	14 05 13.1	+0.2
DOPR				iS	Sn	14 05 28.4	-0.9
DOPR	Dopca	0.87	300	⇑iP	Pn	14 05 13.1	+0.2
DOPR	Dopca	0.87	300	⇑iP	Pn	14 05 13.1	+0.2
DOPR				iS	Sn	14 05 28.4	-0.9
TESR	Tescani	0.99	7	⇑iP	Pn	14 05 14.2	+0.3
TESR				iS	Sn	14 05 29.8	-1.4
TESR	Tescani	0.99	7	⇑iP	Pn	14 05 14.2	+0.3
TESR	Tescani	0.99	7	⇑iP	Pn	14 05 14.2	+0.3
TESR				iS	Sn	14 05 29.8	-1.4
VOIR		1.00	265	⇑iP	Pn	14 05 14.3	+0.1
VOIR				iS	Sn	14 05 30.4	-1.1
VOIR		1.00	265	⇑iP	Pn	14 05 14.3	+0.1
VOIR		1.00	265	⇑iP	Pn	14 05 14.3	+0.1
VOIR				iS	Sn	14 05 30.4	-1.1
AMRR	Amara	1.11	146	⇑iP	Pn	14 05 15.8	+0.7
AMRR				iS	Sn	14 05 33.1	0.0
AMRR	Amara	1.11	146	⇑iP	Pn	14 05 15.8	+0.7
AMRR	Amara	1.11	146	⇑iP	Pn	14 05 15.8	+0.7
AMRR				iS	Sn	14 05 33.1	0.0
CIOR	Ciorogarla	1.16	201	iS	Sn	14 05 33.9	-0.2
CIOR	Ciorogarla	1.16	201	S	Sn	14 05 33.9	-0.2
CIOR	Ciorogarla	1.16	201	iS	Sn	14 05 33.9	-0.2
BUC1	Bucharest	1.23	195	iS	Sn	14 05 35.0	-0.2
BUC1	Bucharest	1.23	195	S	Sn	14 05 35.0	-0.2
BUC1	Bucharest	1.23	195	iS	Sn	14 05 35.0	-0.2
CFR	Carcaliu	1.23	106	⇑iP	Pn	14 05 16.5	+0.2
CFR				iS	Sn	14 05 34.1	-1.2
CFR	Carcaliu	1.23	106	⇑iP	Pn	14 05 16.5	+0.2
CFR	Carcaliu	1.23	106	⇑iP	Pn	14 05 16.5	+0.2
CFR				iS	Sn	14 05 34.1	-1.2
HUMR	Humele	1.46	227	⇑iP	Pn	14 05 19.0	+0.2
HUMR				iS	Sn	14 05 39.0	-0.7
HUMR	Humele	1.46	227	⇑iP	Pn	14 05 19.0	+0.2
HUMR	Humele	1.46	227	⇑iP	Pn	14 05 19.0	+0.2
HUMR				iS	Sn	14 05 39.0	-0.7
LEOM	Leova	1.56	52	iS	Sn	14 05 41.4	-0.3
LEOM	Leova	1.56	52	S	Sn	14 05 41.4	-0.3
LEOM	Leova	1.56	52	iS	Sn	14 05 41.4	-0.3
CVD	Cernavoda	1.65	137	iS	Sn	14 05 43.2	-0.4
CVD	Cernavoda	1.65	137	S	Sn	14 05 43.2	-0.4
CVD	Cernavoda	1.65	137	iS	Sn	14 05 43.2	-0.4
TLCR		1.69	101	⇑iP	Pn	14 05 22.1	+0.7
TLCR				iS	Sn	14 05 43.9	-0.5
TLCR		1.69	101	⇑iP	Pn	14 05 22.1	+0.7
TLCR		1.69	101	⇑iP	Pn	14 05 22.1	+0.7
TLCR				iS	Sn	14 05 43.9	-0.5
TIRR	Tirgusor	1.75	127	⇑iP	Pn	14 05 22.5	+0.4
TIRR				iS	Sn	14 05 44.5	-1.2
TIRR				iS		14 05 45.1	
TIRR	Tirgusor	1.75	127	⇑iP	Pn	14 05 22.5	+0.4
TIRR	Tirgusor	1.75	127	⇑iP	Pn	14 05 22.5	+0.4
TIRR				iS	Sn	14 05 44.5	-1.2
TIRR				iS		14 05 45.1	
LOT	Lotru	1.90	268	iS	Sn	14 05 49.7	+0.5
LOT	Lotru	1.90	268	S	Sn	14 05 49.7	+0.5
LOT	Lotru	1.90	268	iS	Sn	14 05 49.7	+0.5

GUC 01 14:07:18.0±0.8**, 22°.16S×70°.43W, h21**km±10km**, MD3.6, ML3.3, 3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB07	Plate Boundary	0.66	50	eP	Pb	14 07 30.5	-0.7
PB07				iS	Sb	14 07 39.3	-0.8
PB07				AML	AML	14 07 39.7	
	comp=N,2μm,0.2s						
PB04	Plate Boundary	0.88	97	⇓iP	Pb	14 07 24.7	-10
PB04				eS	Sb	14 07 29.6	-16
PB04				AML	AML	14 07 30.1	
	comp=E,14μm,0.2s						
MECH	Mejillones	0.94	181	iP	Pb	14 07 34.0	-1.7
MECH				iS	Sb	14 07 47.0	-0.7
PB09	Plate Boundary	1.16	72	⇓iP	Pn	14 07 38.1	-1.1
PB09				iS	Sb	14 07 53.6	-0.7
PB09				AML	AML	14 07 55.8	
	comp=N,2μm,0.3s						
PB01	Plate Boundary	1.41	38	eP	Pn	14 07 42.0	-0.6
PB01				iS	Sn	14 08 00.9	+0.2
PB01				AML	AML	14 08 05.0	
	comp=E,412nm,0.2s						
ANCH	Antofagasta	1.52	179	⇓iP	Pn	14 07 42.4	-1.6
ANCH				iS	Sn	14 08 02.2	-0.8
PSGC	Pisagua	2.56	6	AML	AML	14 08 40.7	
	comp=E,86nm,0.3s						
MNMC	Minimini	3.11	15	AML	AML	14 09 12.4	
	comp=E,143nm,0.3s						

*ISK **01** 14:10:22.6, 38°.83N×26°.17E, h16km, MD3.8, ML3.7*
*ATH **01** 14:10:22.8, 38°.88N×26°.31E, h26km±1km, MD3.6/28, ML3.1*
*DDA **01** 14:10:23.0, 38°.85N×26°.28E, h28km, MD3.6, ML3.8*
*CSEM **01** 14:10:23.6±0.1, 38°.82N×26°.24E, h10km, MD3.6, Error ellipse: s-maj=2.4km s-min=2.3km az=113.0*
*THE **01** 14:10:23.7, 38°.86N×26°.30E, h3km, ML3.3/5, Error ellipse: s-maj=0.9km s-min=0.3km az=97.0*
*ISCJB **01** 14:10:23.1±0.4, 38°.84N±0°.01×26°.22E±0°.02, h12km±3km, Error ellipse: s-maj=2.5km s-min=2.2km az=149.5*
*SOF **01** 14:10:25.9, 39°.21N×26°.16E, h2km, MD3.3*
ISC 01 14:10:24.1±0.9**, 38°.86N**±0°.02×**26°.29E**±0°.02**, h12**km±8km**, n244, σ0ˢ.86**/282**, 16C-2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.39	358	P	Pg	14 10 31.3	-0.5
PRK				S	Sg	14 10 37.1	+0.1
PRK	Paraskevi	0.39	358	ePB	Pg	14 10 31.3	-0.5
PRK				eSB	Sg	14 10 37.1	+0.1
PRK	Paraskevi	0.39	358	P	Pg	14 10 31.3	-0.5
PRK				S	Sg	14 10 37.1	+0.1
SIGR	SIGRI	0.49	316	P	Pg	14 10 33.4	-0.3
SIGR				S	Sg	14 10 40.7	+0.5
SIGR	SIGRI	0.49	316	P	Pg	14 10 33.4	-0.3
SIGR				S	Sg	14 10 40.7	+0.5
CHOS	Chios island	0.51	201	P	Pg	14 10 33.7	-0.3
CHOS				S	Sg	14 10 41.2	+0.4
CHOS	Chios island	0.51	201	ePN	Pg	14 10 33.7	-0.3
CHOS	Chios island	0.51	201	P	Pg	14 10 33.7	-0.3
CHOS				S	Sg	14 10 41.2	+0.4
URLA	Izmir	0.55	154	iP	Pg	14 10 34.3	-0.6
URLA				iS	Sg	14 10 42.9	+0.7
URLA	Izmir	0.55	154	iP	Pg	14 10 34.3	-0.6
URLA				iS	Sg	14 10 42.9	+0.7
BLCB	Balcova	0.76	129	ePG	Pb	14 10 39.4	+0.3
BLCB				eSG	Sn	14 10 50.9	-0.9
BLCB	Balcova	0.76	129	ePg	Pb	14 10 39.4	+0.3
BLCB				eSg	Sn	14 10 50.9	-0.9
IZM	Izmir	0.89	121	ePG	Pb	14 10 41.1	-0.4
IZM	Izmir	0.89	121	ePg	Pb	14 10 41.1	-0.4
EZN	Ezine	0.96	2	ePG	Pb	14 10 42.3	-0.4
EZN				eSG	Sn	14 10 56.4	-0.6
EZN	Ezine	0.96	2	ePg	Pb	14 10 42.3	-0.4
EZN				eSg	Sn	14 10 56.4	-0.6
BOZC	Bozcaada	1.00	349	iP	Pb	14 10 42.4	-0.8
BOZC				iS	Sg	14 10 56.7	+0.4
AKS	Akhisar	1.19	89	ePN	Pn	14 10 46.1	-0.4
AKS	Akhisar	1.19	89	ePn	Pn	14 10 46.1	-0.4
AKHS	Akhisar	1.19	89	iP	Pn	14 10 45.7	-0.8
AKHS				iS	Sg	14 11 04.0	+1.6
AKHS	Akhisar	1.19	89	iP	Pn	14 10 45.7	-0.8
AKHS				iS	Sg	14 11 04.0	+1.6
LIA	Limnos Island	1.35	321	P	Pn	14 10 48.1	-0.5
LIA				S	Sg	14 11 07.2	-0.2
LIA	Limnos Island	1.35	321	ePN	Pn	14 10 48.1	-0.5
LIA				eSN	Sb	14 11 06.6	+0.3
LIA	Limnos Island	1.35	321	P	Pn	14 10 48.1	-0.5
LIA				eSn	Sb	14 11 06.6	+0.3
LIA				S	Sg	14 11 07.2	-0.2
BALY	Balya	1.35	49	iP	Pn	14 10 48.2	-0.6
BALY				iS	Sg	14 11 07.6	-0.1
BALY	Balya	1.35	49	iP	Pn	14 10 48.2	-0.6
BALY				iS	Sg	14 11 07.6	-0.1
GCAM	G?zelcaml?	1.38	147	iP	Pb	14 10 49.7	0.0
GCAM				iS	Sg	14 11 09.6	+1.2
GCAM	G?zelcaml?	1.38	147	iP	Pb	14 10 49.7	0.0
GCAM				iS	Sg	14 11 09.6	+1.2
BALB	Balikesir	1.46	57	ePN	Pn	14 10 50.0	-0.2
BALB	Balikesir	1.46	57	ePn	Pn	14 10 50.0	-0.2
GELI	Tayfur-Gelibol	1.54	5	ePN	Pn	14 10 51.0	-0.3
GELI	Tayfur-Gelibol	1.54	5	ePn	Pn	14 10 51.0	-0.3
LPK	Lapseki	1.55	13	ePN	Pn	14 10 51.3	-0.2
LPK	Lapseki	1.55	13	ePn	Pn	14 10 51.3	-0.2
GONE	Gonen-Balikesi	1.60	42	ePN	Pn	14 10 51.9	-0.3
GONE	Gonen-Balikesi	1.60	42	ePn	Pn	14 10 51.9	-0.3
SMTH	Samothraki Isl	1.71	340	ePN	Pn	14 10 53.2	-0.5
SMTH	Samothraki Isl	1.71	340	ePn	Pn	14 10 53.2	-0.5
KRBG	Karabiga-Canak	1.72	27	ePN	Pn	14 10 53.9	+0.2
KRBG	Karabiga-Canak	1.72	27	ePn	Pn	14 10 53.9	+0.2
AYDN	Tasoluk	1.73	133	iP	Pn	14 10 53.4	-0.6
AYDN				iS	Sb	14 11 17.8	+0.3
AYDN	Tasoluk	1.73	133	iP	Pn	14 10 53.4	-0.6
AYDN				iS	Sb	14 11 17.8	+0.3
ERIK	Erikli-Kesan	1.82	5	ePN	Pn	14 10 54.2	-0.9
ERIK	Erikli-Kesan	1.82	5	ePn	Pn	14 10 54.2	-0.9
DURS	Dursunbey	1.85	66	iP	Pn	14 10 55.3	-0.4
DURS				iS	Sg	14 11 24.2	+0.6
DURS	Dursunbey	1.85	66	iP	Pn	14 10 55.3	-0.4
APE	Apeiranthos	1.89	199	ePN	Pn	14 10 54.3	-1.8
APE	Apeiranthos	1.89	199	P	Pn	14 10 55.5	-0.6
APE	Apeiranthos	1.89	199	ePB	Pn	14 10 54.6	-1.5
APE	Apeiranthos	1.89	199	⇑iP	Pn	14 10 54.3	-1.8
APE	Apeiranthos	1.89	199	ePn	Pn	14 10 54.3	-1.8
APE	Apeiranthos	1.89	199	ePb	Pn	14 10 54.6	-1.5
APE	Apeiranthos	1.89	199	P	Pn	14 10 55.5	-0.6
DEMI	Demirci	1.90	84	iP	Pn	14 10 56.1	-0.2
DEMI				iS	Sg	14 11 24.0	-1.2
DEMI	Demirci	1.90	84	iP	Pn	14 10 56.1	-0.2
DEMI				iS	Sg	14 11 24.0	-1.2
AOS	Alonnisos	1.90	280	ePB	Pn	14 10 55.9	-0.4
AOS	Alonnisos	1.90	280	ePb	Pn	14 10 55.9	-0.4
EDC	Edincik	1.92	39	ePN	Pn	14 10 57.1	+0.6
EDC	Edincik	1.92	39	ePn	Pn	14 10 57.1	+0.6
SART	Tekirdag	1.95	20	iP	Pn	14 10 57.1	+0.1
SART				iS	Sb	14 11 23.0	-0.8
SART	Tekirdag	1.95	20	iP	Pn	14 10 57.1	+0.1
SART				iS	Sb	14 11 23.0	-0.8
BNT	Bandirma	1.95	40	ePN	Pn	14 10 56.6	-0.4
BNT	Bandirma	1.95	40	ePn	Pn	14 10 56.6	-0.4
MLSB	Milas	1.95	143	ePN	Pn	14 10 56.3	-0.7
MLSB	Milas	1.95	143	ePn	Pn	14 10 56.3	-0.7
DST	Dursunbey	1.96	67	ePN	Pn	14 10 56.6	-0.5
DST	Dursunbey	1.96	67	ePn	Pn	14 10 56.6	-0.5
BODT	Bodrum	1.97	156	ePN	Pn	14 10 56.3	-0.9
BODT	Bodrum	1.97	156	ePn	Pn	14 10 56.3	-0.9
MRMT	Marmara Adasi	2.01	30	ePN	Pn	14 10 58.0	+0.2
MRMT	Marmara Adasi	2.01	30	ePn	Pn	14 10 58.0	+0.2
ALN	Alexandroupoli	2.04	355	P	Pn	14 10 57.9	-0.3
ALN				S	Sn	14 11 24.4	+0.8
ALN	Alexandroupoli	2.04	355	ePB	Pn	14 10 57.9	-0.3
ALN				eSN	Sn	14 11 21.8	-1.8
ALN	Alexandroupoli	2.04	355	P	Pn	14 10 57.9	-0.3
ALN				eSn	Sn	14 11 21.8	-1.8
ALN				S	Sn	14 11 24.4	+0.8
PTL	Penteli	2.07	248	ePN	Pn	14 10 57.2	-1.4
PTL	Penteli	2.07	248	ePn	Pn	14 10 57.2	-1.4
KCTX	Karacabey (Bur	2.13	48	ePN	Pn	14 10 58.7	-0.7
KCTX	Karacabey (Bur	2.13	48	ePn	Pn	14 10 58.7	-0.7
ATH	Athens Observa	2.21	247	ePB	Pn	14 11 01.0	+0.5
ATH	Athens Observa	2.21	247	ePb	Pn	14 11 01.0	+0.5
PAIG	Paliouri	2.29	299	ePN	Pn	14 11 01.1	-0.4
PAIG	Paliouri	2.29	299	ePN	Pn	14 11 01.2	-0.3
PAIG	Paliouri	2.29	299	ePn	Pn	14 11 01.2	-0.3
OUR	Ouranopolis	2.31	310	P	Pn	14 11 01.8	-0.1
OUR				S	Sn	14 11 31.8	+1.6
OUR	Ouranopolis	2.31	310	P	Pn	14 11 01.8	-0.1
OUR				S	Sn	14 11 31.8	+1.6
TKR	Tekirdag	2.33	24	ePN	Pn	14 11 02.9	+0.7
TKR	Tekirdag	2.33	24	ePn	Pn	14 11 02.9	+0.7
YER	Yerkesik	2.33	137	ePN	Pn	14 11 01.9	-0.4
YER	Yerkesik	2.33	137	ePn	Pn	14 11 01.9	-0.4
ORLT	Orhaneli	2.34	59	ePN	Pn	14 11 03.5	+1.2
ORLT	Orhaneli	2.34	59	ePn	Pn	14 11 03.5	+1.2
DAT	Datca	2.36	154	ePN	Pn	14 11 01.9	-0.8
DAT	Datca	2.36	154	ePn	Pn	14 11 01.9	-0.8
NIS1	Nisyros Isl.	2.36	162	ePN	Pn	14 11 01.7	-0.9
NIS1	Nisyros Isl.	2.36	162	ePn	Pn	14 11 01.7	-0.9
NEO	Neokhori	2.43	282	ePN	Pn	14 11 02.5	-1.0
NEO	Neokhori	2.43	282	ePn	Pn	14 11 02.5	-1.0
NAIG	Nisos Aigina	2.46	244	ePB	Pn	14 11 05.1	+1.1
NAIG	Nisos Aigina	2.46	244	ePb	Pn	14 11 05.1	+1.1
GDZ	Gediz	2.50	84	eP	Pn	14 11 05.3	+0.7
GDZ				iS	Sg	14 11 43.9	-0.4
GDZ	Gediz	2.50	84	eP	Pn	14 11 05.3	+0.7
MDNY	Mudanya-Bursa	2.51	52	ePN	Pn	14 11 04.9	+0.3
MDNY	Mudanya-Bursa	2.51	52	ePn	Pn	14 11 04.9	+0.3
TVSB	Tavsanli	2.53	76	ePN	Pn	14 11 05.1	0.0
TVSB	Tavsanli	2.53	76	ePn	Pn	14 11 05.1	0.0
SANT	Santorini	2.57	195	ePB	Pn	14 11 06.7	+1.2
SANT	Santorini	2.57	195	ePb	Pn	14 11 06.7	+1.2
LKR	Lokris	2.58	266	ePB	Pn	14 11 06.7	+1.1
LKR	Lokris	2.58	266	ePb	Pn	14 11 06.7	+1.1
KHL	Karahalli	2.59	101	ePN	Pn	14 11 06.7	+0.9
KHL	Karahalli	2.59	101	ePn	Pn	14 11 06.7	+0.9
ARMT	Armutlu	2.61	49	ePN	Pn	14 11 06.9	+0.8
ARMT	Armutlu	2.61	49	ePn	Pn	14 11 06.9	+0.8
PLG	Polygyros	2.67	305	ePN	Pn	14 11 06.7	-0.1
PLG	Polygyros	2.67	305	ePn	Pn	14 11 06.7	-0.1
GEMT	Gemlik	2.73	54	ePN	Pn	14 11 09.3	+1.6
GEMT	Gemlik	2.73	54	ePn	Pn	14 11 09.3	+1.6
LTK	Loutraki	2.74	253	ePB	Pn	14 11 09.5	+1.7
LTK	Loutraki	2.74	253	ePb	Pn	14 11 09.5	+1.7
DID	Didima	2.76	242	ePN	Pn	14 11 07.2	-0.9
DID	Didima	2.76	242	ePn	Pn	14 11 07.2	-0.9
DALY	Dalyan (Mu˜la	2.77	137	ePN	Pn	14 11 08.2	+0.1
DALY	Dalyan (Mu˜la	2.77	137	ePn	Pn	14 11 08.2	+0.1
SLVT	Silivri	2.79	31	ePN	Pn	14 11 09.6	+1.1
SLVT	Silivri	2.79	31	ePn	Pn	14 11 09.6	+1.1
KDZ	Kurdzhali	2.87	347	iP	Pn	14 11 09.1	-0.4
KDZ	Kurdzhali	2.87	347	iP	Pn	14 11 09.1	-0.4
IZI	Iznik	2.87	58	ePN	Pn	14 11 09.9	+0.3
IZI	Iznik	2.87	58	ePn	Pn	14 11 09.9	+0.3
CTKS	Kestanelik-??a	2.92	35	ePN	Pn	14 11 11.0	+0.8
CTKS	Kestanelik-??a	2.92	35	ePn	Pn	14 11 11.0	+0.8
BUY	Buyukada	2.95	47	ePN	Pn	14 11 11.7	+1.1
BUY	Buyukada	2.95	47	ePn	Pn	14 11 11.7	+1.1
ALT	Altintas	2.98	85	ePN	Pn	14 11 11.6	+0.4
ALT	Altintas	2.98	85	ePn	Pn	14 11 11.6	+0.4
SOH	Sokhos	2.99	312	ePN	Pn	14 11 10.9	-0.4
SOH	Sokhos	2.99	312	ePn	Pn	14 11 10.9	-0.4
BGKT	Bogazkoy	3.00	39	ePN	Pn	14 11 12.2	+0.9
BGKT	Bogazkoy	3.00	39	ePn	Pn	14 11 12.2	+0.9
EDRB	Edirne	3.00	6	ePN	Pn	14 11 11.0	-0.4
EDRB	Edirne	3.00	6	ePn	Pn	14 11 11.0	-0.4
ARG	Arkhangelos	3.02	151	ePN	Pn	14 11 12.1	+0.5
ARG	Arkhangelos	3.02	151	ePn	Pn	14 11 12.1	+0.5
CTYL	Yal??k??y-??at	3.03	30	ePN	Pn	14 11 12.8	+1.1
CTYL	Yal??k??y-??at	3.03	30	ePn	Pn	14 11 12.8	+1.1
CAVI	Cavuskoy	3.06	63	ePN	Pn	14 11 13.3	+1.1
CAVI	Cavuskoy	3.06	63	ePn	Pn	14 11 13.3	+1.1
ISK	Istanbul-Kandi	3.06	43	ePN	Pn	14 11 12.9	+0.7
ISK	Istanbul-Kandi	3.06	43	ePn	Pn	14 11 12.9	+0.7
RZN	Rozhen	3.07	337	iP	Pn	14 11 12.3	-0.2
RZN	Rozhen	3.07	337	iP	Pn	14 11 12.3	-0.2
ADVT	Abdulvahap	3.09	58	ePN	Pn	14 11 13.8	+1.2
ADVT	Abdulvahap	3.09	58	ePn	Pn	14 11 13.8	+1.2
AGG	Agios Georgios	3.09	274	ePN	Pn	14 11 12.4	-0.3
AGG	Agios Georgios	3.09	274	ePn	Pn	14 11 12.4	-0.3
NVR	Nevrokopi	3.11	324	ePN	Pn	14 11 12.8	-0.1
NVR	Nevrokopi	3.11	324	ePn	Pn	14 11 12.8	-0.1
FETY	Fethiye	3.14	134	ePN	Pn	14 11 13.6	+0.3
FETY	Fethiye	3.14	134	ePn	Pn	14 11 13.6	+0.3
LIT	Litokhoron	3.19	294	ePN	Pn	14 11 14.4	+0.4
LIT	Litokhoron	3.19	294	ePn	Pn	14 11 14.4	+0.4
GUR	Goura	3.24	255	ePN	Pn	14 11 14.3	-0.4
GUR	Goura	3.24	255	ePn	Pn	14 11 14.3	-0.4
DIM	Dimitrovgrad	3.24	350	eP	Pn	14 11 14.7	+0.1
DIM	Dimitrovgrad	3.24	350	eP	Pn	14 11 14.7	+0.1
HRT	Hereke	3.25	52	ePN	Pn	14 11 16.5	+1.6
HRT	Hereke	3.25	52	ePn	Pn	14 11 16.5	+1.6
KALE	Kalithea	3.29	263	ePN	Pn	14 11 16.1	+0.8
KALE	Kalithea	3.29	263	ePn	Pn	14 11 16.1	+0.8
KLV	Kalavryta, Ach	3.35	257	ePN	Pn	14 11 17.7	+1.4
KLV	Kalavryta, Ach	3.35	257	ePn	Pn	14 11 17.7	+1.4
KARP	Karpathos	3.38	168	ePN	Pn	14 11 16.4	-0.2
KARP	Karpathos	3.38	168	ePn	Pn	14 11 16.4	-0.2
THL	Klokotos Trika	3.40	283	ePN	Pn	14 11 16.7	-0.1
THL	Klokotos Trika	3.40	283	ePn	Pn	14 11 16.7	-0.1
VLI	Veliai	3.41	232	ePN	Pn	14 11 16.0	-1.0
VLI	Veliai	3.41	232	ePn	Pn	14 11 16.0	-1.0
LAKA	Lakka	3.44	261	ePN	Pn	14 11 17.3	-0.1
LAKA	Lakka	3.44	261	ePn	Pn	14 11 17.3	-0.1
SILT	Sile	3.44	47	ePN	Pn	14 11 19.1	+1.6
SILT	Sile	3.44	47	ePn	Pn	14 11 19.1	+1.6
EFP	Efpalio	3.46	264	ePN	Pn	14 11 18.1	+0.4
EFP	Efpalio	3.46	264	ePn	Pn	14 11 18.1	+0.4
EVR	Evrytania	3.50	272	ePN	Pn	14 11 18.0	-0.3
EVR	Evrytania	3.50	272	ePn	Pn	14 11 18.0	-0.3
ESKT	Eskisehir	3.60	78	ePN	Pn	14 11 21.0	+1.2
ESKT	Eskisehir	3.60	78	ePn	Pn	14 11 21.0	+1.2
GULT	Gulveren	3.62	63	ePN	Pn	14 11 22.0	+2.1
GULT	Gulveren	3.62	63	ePn	Pn	14 11 22.0	+2.1
NPS	Neapolis	3.63	189	ePN	Pn	14 11 19.5	-0.6
NPS	Neapolis	3.63	189	ePn	Pn	14 11 19.5	-0.6
KYTH	Kithira	3.65	226	ePN	Pn	14 11 19.3	-1.0
KYTH	Kithira	3.65	226	ePn	Pn	14 11 19.3	-1.0
GRG	Griva	3.65	306	ePN	Pn	14 11 21.1	+0.7
GRG	Griva	3.65	306	ePn	Pn	14 11 21.1	+0.7
IDI	Anoyia	3.74	198	ePN	Pn	14 11 21.7	+0.1
IDI	Anoyia	3.74	198	ePn	Pn	14 11 21.7	+0.1
ZKR	Zakros	3.74	181	ePN	Pn	14 11 21.9	+0.4
ZKR	Zakros	3.74	181	ePn	Pn	14 11 21.9	+0.4
VAY	Valandovo	3.77	312	ePn	Pn	14 11 23.6	+1.7
VAY				eSg	Sg	14 12 27.2	+2.2
VAY	Valandovo	3.77	312	ePn	Pn	14 11 24.0	+2.1
ITM	Ithomi	3.83	245	ePN	Pn	14 11 22.4	-0.4
ITM	Ithomi	3.83	245	ePn	Pn	14 11 22.4	-0.4
PGB	Panagyurishte	4.02	337	eP	Pn	14 11 25.1	-0.4
PGB	Panagyurishte	4.02	337	eP	Pn	14 11 25.1	-0.4
PYL	PYLOS	4.10	243	ePN	Pn	14 11 26.9	+0.4
PYL	PYLOS	4.10	243	ePn	Pn	14 11 26.9	+0.4
SVRH	Sivrihisar-ESK	4.11	80	ePN	Pn	14 11 28.6	+1.9
SVRH	Sivrihisar-ESK	4.11	80	ePn	Pn	14 11 28.6	+1.9
MDUB	Mudurnu	4.11	65	ePN	Pn	14 11 28.9	+2.1
MDUB	Mudurnu	4.11	65	ePn	Pn	14 11 28.9	+2.1
FNA	Florina	4.24	298	ePN	Pn	14 11 29.2	+0.7
FNA	Florina	4.24	298	ePn	Pn	14 11 29.2	+0.7
KIZT	Kizilcal	4.36	88	ePN	Pn	14 11 31.1	+0.9
KIZT	Kizilcal	4.36	88	ePn	Pn	14 11 31.1	+0.9
VTS	Vitosha	4.40	329	⇑iP	Pn	14 11 31.0	+0.2
VTS	Vitosha	4.40	329	eP	Pn	14 11 30.8	0.0
VTS	Vitosha	4.40	329	eP	Pn	14 11 30.8	0.0
VTS	Vitosha	4.40	329	ePn	Pn	14 11 31.7	+0.9
SZH	Strazhica	4.41	357	iP	Pn	14 11 30.7	-0.1
SZH	Strazhica	4.41	357	iP	Pn	14 11 30.7	-0.1
PVL	Pavlikeni	4.41	351	eP	Pn	14 11 30.4	-0.3
PVL	Pavlikeni	4.41	351	eP	Pn	14 11 30.4	-0.3
PRD	Provadia	4.42	11	iP	Pn	14 11 30.5	-0.3
PRD	Provadia	4.42	11	iP	Pn	14 11 30.5	-0.3
MPEP	Malo Peshtene	4.89	338	eP	Pn	14 11 37.2	-0.1
BARS	Barje	5.21	321	⇑iPn	Pn	14 11 42.6	+0.9
TIRR	Tirgusor	5.81	15	⇑iP	Pn	14 11 50.0	0.0
TIRR	Tirgusor	5.81	15	⇑iP	Pn	14 11 50.0	0.0
BOLS	Boljevac	5.94	328	ePn	Pn	14 11 51.3	-0.5
CFR	Carcaliu	6.46	12	⇓iP	Pn	14 11 58.8	-0.1
CFR	Carcaliu	6.46	12	⇓iP	Pn	14 11 58.8	-0.1
IVAS	Ivanjica	6.60	317	ePn	Pn	14 12 02.4	+1.5
MLR	Muntele Rosu	6.63	358	⇑iP	Pn	14 12 02.3	+0.9
MLR	Muntele Rosu	6.63	358	⇑iP	Pn	14 12 02.3	+0.9
LOT	Lotru	6.84	345	⇑iP	Pn	14 12 04.7	+0.4
LOT	Lotru	6.84	345	⇑iP	Pn	14 12 04.7	+0.4
PLOR	Plostina	6.99	2	⇑iP	Pn	14 12 08.6	+2.4
PLOR	Plostina	6.99	2	⇑iP	Pn	14 12 08.6	+2.4
VRI	Vrincioaia	7.01	3	⇑iP	Pn	14 12 08.1	+1.7
VRI	Vrincioaia	7.01	3	⇑iP	Pn	14 12 08.1	+1.7
DOPR	Dopca	7.13	355	⇑iP	Pn	14 12 04.8	-3.4
TESR	Tescani	7.65	2	⇑iP	Pn	14 12 15.3	+0.1
TESR	Tescani	7.65	2	⇑iP	Pn	14 12 15.3	+0.1

*JMA **01** 14:23:48.9±0.3, 30°.23N×139°.54E, h429km±4km, M3.4*
*IDC **01** 14:23:49.2±1.7, 30°.17N×139°.09E, h403km±82km, mb2.7/3, mb1 2.8/5, mb1mx2.6/26, mbtmp2.7/5, Error ellipse: s-maj=204.8km s-min=18.7km az=67.0*
*ISCJB **01** 14:23:50.5±0.8, 30°.15N±0°.06×139°.2E±0°.1, h388km, mb3.0/3, Error ellipse: s-maj=17.6km s-min=7.0km az=163.9*
ISC 01 14:23:50.4±1.5**, 30°.19N**±0°.09×**139°.4E**±0°.2**, h388**km**, n19, σ2ˢ.02**/24**, mb3.0**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.94	7	P	Pn	14 24 54.2	+2.2
JHJ2				S	S	14 25 44.7	+2.8
JHJ	Hachijo jima 2	2.94	7	P	Pn	14 24 54.2	+2.2
	7.4nm,0.3s,baz=75,slow=23,SNR=17						
JHJ				S	S	14 25 43.7	+1.7
	6.9nm,0.3s,baz=83,slow=23,SNR=6.0						
CBIJ	Chichi jima	3.96	141	P	Pn	14 25 01.9	+0.5
CBIJ				eS	S	14 25 59.1	+0.3
BSO1	Boso 1	4.65	17	S	S	14 26 13.4	+3.1
JIE	Ise	4.75	332	P	Pn	14 25 10.9	+1.7
JKN2	Miekihoku	4.81	328	P	Pn	14 25 10.8	+1.0
BSO4	Boso 4	4.85	9	eS	S	14 26 16.6	+1.8
HMMJ	Hamamatsu 2	4.85	344	P	Pn	14 25 11.6	+1.4
JNY	Yasuok	5.31	347	P	Pn	14 25 16.1	+1.1
JHU	Hanno	5.64	359	P	Pn	14 25 18.2	-0.4
JRY	Ryogami san	5.82	356	P	Pn	14 25 21.3	+0.8
JRY				eS	S	14 26 33.5	-0.5
JYT	Yasato	6.06	6	P	Pn	14 25 23.0	-0.1
JYT				eS	S	14 26 34.7	-3.9
JAG	Ashikaga	6.22	1	P	Pn	14 25 24.1	-0.8
JAG				eS	S	14 26 37.3	-4.6
JGN	Niukaw	6.26	345	P	Pn	14 25 25.9	+0.5
MJAR	Matsushiro Arr	6.41	352	P	Pn	14 25 27.1	+0.1
	0.7nm,0.3s,baz=134,slow=10,SNR=6.4						
MJAR				S	S	14 26 44.5	-1.3
	0.3nm,0.3s,baz=152,slow=28,SNR=4.0						
JHO	Hitachi	6.48	9	P	Pn	14 25 28.3	+0.5
JHO				eS	S	14 26 44.8	-2.4
SONM	Songino Array	30.78	314	P	P	14 29 28.0	-3.7
	0.2nm,0.5s,baz=106,slow=4.7,SNR=2.9						
WRA	Warramunga Arr	50.08	186	P	P	14 32 04.7	-3.1
	0.4nm,0.5s,baz=6.0,slow=7.9,SNR=20						
ASAR	Alice Springs	53.81	186	P	P	14 32 31.9	-2.9
	0.4nm,0.4s,baz=1.5,slow=6.4,SNR=24						

IDC 01 14:34:51.8±53.0**, 18°.50S×178°.60W, h0**km**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/19**, mbtmp3.7**/3**, Error ellipse: s-maj=971.9km s-min=163.3km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.19	242	P	P	14 42 13.3	-0.1
	0.3nm,0.4s,baz=76,slow=8.3,SNR=3.7						
WRA	Warramunga Arr	44.35	260	P	P	14 43 04.2	-0.1
	0.4nm,0.4s,baz=98,slow=7.8,SNR=22						
ASAR	Alice Springs	44.46	255	P	P	14 43 05.0	-0.2
	0.6nm,0.4s,baz=85,slow=8.2,SNR=27						

*IDC **01** 14:41:09.7±1.4, 38°.57N×22°.03E, h0km, mb3.5/5, mb1 3.4/6, mb1mx3.3/27, mbtmp3.4/6, ML2.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/32, Error ellipse: s-maj=32.9km s-min=24.7km az=120.0*
*THE **01** 14:41:09.5, 38°.40N×22°.01E, h13km, ML3.5/6, Error ellipse: s-maj=0.5km s-min=0.3km az=40.0*
*ATH **01** 14:41:09.5, 38°.39N×22°.00E, h13km, MD3.3/30, ML3.0*
*CSEM **01** 14:41:09.7±0.1, 38°.38N×22°.03E, h2km, ML3.5/6, Error*

ellipse: s-maj=2.7km s-min=2.3km az=106.0

*ISCJB **01** 14:41:09.6±0.2, 38.°40N±0.°01×22.°01E±0.°02, h8^{km}±2^{km}, mb3.4/5, MS3.0/1, Error ellipse: s-maj=2.6km s-min=2.3km az=17.9*

ISC 01 14:41:10.3±0.7**, 38.°40N**±0.°01×**22.°01E**±0.°01**, h10**^{km}±4^{km}**, n118,** σ**0.^{s}84**/169**, mb3.5**/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.06	120	P	Pg	14 41 11.9	-0.4
TRIZ	Trizonia	0.06	120	ePG	Pg	14 41 12.0	-0.4
TRIZ				eSG	Sg	14 41 13.7	-0.1
TRIZ	Trizonia	0.06	120	P	Pg	14 41 11.9	-0.4
EFP	Efpalio	0.09	291	P	Pg	14 41 12.0	-0.6
EFP				S	Sg	14 41 14.4	+0.1
EFP	Efpalio	0.09	291	ePG	Pg	14 41 12.1	-0.6
EFP				eSG	Sg	14 41 13.9	-0.4
EFP	Efpalio	0.09	291	P	Pg	14 41 12.0	-0.6
EFP				S	Sg	14 41 14.4	+0.1
KALE	Kalithea	0.10	93	P	Pg	14 41 12.6	-0.4
KALE				S	Sg	14 41 14.7	-0.2
KALE	Kalithea	0.10	93	ePG	Pg	14 41 12.7	-0.3
KALE				eSG	Sg	14 41 14.6	-0.3
KALE	Kalithea	0.10	93	P	Pg	14 41 12.6	-0.4
KALE				S	Sg	14 41 14.7	-0.2
PSA1	Psathopyrgos	0.12	234	ePG	Pg	14 41 12.7	-0.4
PSA1				eSG	Sg	14 41 14.6	-0.5
LAKA	Lakka	0.16	188	ePG	Pg	14 41 13.4	-0.4
LAKA				eSG	Sg	14 41 16.2	+0.1
LAKA	Lakka	0.16	188	P	Pg	14 41 13.4	-0.4
UPR	University Cam	0.21	237	P	Pg	14 41 14.2	-0.4
UPR	University Cam	0.21	237	ePG	Pg	14 41 14.2	-0.4
UPR				eSG	Sg	14 41 17.6	+0.1
UPR	University Cam	0.21	237	P	Pg	14 41 14.2	-0.4
UPR				S	Sg	14 41 16.8	-0.7
UPR				eSg	Sg	14 41 17.6	+0.1
KLV	Kalavryta, Ach	0.37	162	ePB	Pg	14 41 16.8	-0.8
KLV				eSB	Sg	14 41 22.0	-0.5
KLV	Kalavryta, Ach	0.37	162	ePb	Pg	14 41 16.8	-0.8
DSF	Desfina	0.41	88	P	Pg	14 41 17.6	-0.8
DSF				S	Sg	14 41 23.7	-0.1
DSF	Desfina	0.41	88	P	Pg	14 41 17.6	-0.8
DSF				S	Sg	14 41 23.7	-0.1
GUR	Goura	0.53	150	P	Pg	14 41 19.6	-1.0
GUR	Goura	0.53	150	ePB	Pg	14 41 19.8	-0.8
GUR				eSB	Sg	14 41 27.6	0.0
GUR	Goura	0.53	150	ePb	Pg	14 41 19.8	-0.8
EVR	Evrytania	0.54	343	P	Pg	14 41 20.0	-0.8
EVR				S	Sg	14 41 27.8	-0.3
EVR	Evrytania	0.54	343	ePB	Pg	14 41 20.1	-0.8
EVR				eSB	Sg	14 41 28.5	+0.4
EVR	Evrytania	0.54	343	ePb	Pg	14 41 20.1	-0.8
EVR				S	Sg	14 41 27.8	-0.3
EVR				eSb	Sg	14 41 28.5	+0.4
RLS	Riolos of Patr	0.54	232	P	Pg	14 41 20.2	-0.7
RLS	Riolos of Patr	0.54	232	ePB	Pg	14 41 20.4	-0.5
RLS				eSB	Sg	14 41 28.4	+0.4
RLS	Riolos of Patr	0.54	232	ePb	Pg	14 41 20.4	-0.5
RLS				S	Sg	14 41 28.1	+0.1
RLS				eSb	Sg	14 41 28.4	+0.4
AXAR	Agios Charalam	0.63	54	P	Pg	14 41 21.4	-1.1
AXAR	Agios Charalam	0.63	54	P	Pg	14 41 21.4	-1.1
AGG	Agios Georgios	0.68	22	P	Pg	14 41 22.0	-1.4
AGG				S	Sg	14 41 32.2	0.0
AGG	Agios Georgios	0.68	22	ePG	Pg	14 41 22.0	-1.4
AGG				eSB	Sg	14 41 32.3	0.0
AGG	Agios Georgios	0.68	22	P	Pg	14 41 22.0	-1.4
AGG				S	Sg	14 41 31.2	-1.0
AGG				eSb	Sg	14 41 32.3	0.0
LKR	Lokris	0.82	72	P	Pg	14 41 24.8	-1.3
LKR	Lokris	0.82	72	ePB	Pg	14 41 25.3	-0.8
LKR				eSB	Sg	14 41 36.7	-0.1
LKR	Lokris	0.82	72	P	Pg	14 41 24.8	-1.3
LKR	Lokris	0.82	72	ePb	Pg	14 41 25.3	-0.8
LKR				eSb	Sg	14 41 36.7	-0.1
LTK	Loutraki	0.84	116	ePB	Pg	14 41 26.4	-0.1
LTK				eSB	Sg	14 41 37.8	+0.3
LTK	Loutraki	0.84	116	P	Pg	14 41 26.1	-0.4
LTK	Loutraki	0.84	116	ePb	Pg	14 41 26.4	-0.1
LTK				eSb	Sg	14 41 37.8	+0.3
ATAL	Atalanti	0.85	69	P	Pg	14 41 25.3	-1.4
ATAL				S	Sg	14 41 37.8	+0.1
ATAL	Atalanti	0.85	69	P	Pg	14 41 25.3	-1.4
ATAL				S	Sg	14 41 37.8	+0.1
AMT	Artemida-Makis	0.89	195	P	Pg	14 41 26.3	-1.2
AMT	Artemida-Makis	0.89	195	ePB	Pg	14 41 26.7	-0.8
AMT				eSB	Sg	14 41 39.6	+0.5
AMT	Artemida-Makis	0.89	195	P	Pg	14 41 26.3	-1.2
AMT	Artemida-Makis	0.89	195	ePb	Pg	14 41 26.7	-0.8
AMT				eSb	Sg	14 41 39.6	+0.5
AMT				S	Sb	14 41 40.1	+0.1
KFL	Anninata	1.00	254	P	Pg	14 41 28.4	-1.2
KFL	Anninata	1.00	254	P	Pg	14 41 28.4	-1.2
SMIA	Simia	1.06	62	P	Pg	14 41 29.1	-1.5
SMIA	Simia	1.06	62	P	Pg	14 41 29.1	-1.5
VLX	Vlachokerasia	1.06	164	ePG	Pg	14 41 29.0	-1.8
VLX				eSB	Sg	14 41 44.8	+0.2
VLX	Vlachokerasia	1.06	164	ePg	Pg	14 41 29.0	-1.8
VLX				eSb	Sg	14 41 44.8	+0.2
VLS	Valsamata	1.14	259	P	Pb	14 41 30.0	-2.0
VLS	Valsamata	1.14	259	ePG	Pb	14 41 30.1	-2.0
VLS				eSB	Sb	14 41 47.3	+0.4
VLS	Valsamata	1.14	259	ePg	Pb	14 41 30.1	-2.0
VLS				eSb	Sb	14 41 47.3	+0.4
THL	Klokotos Trika	1.17	0	ePB	Pb	14 41 31.8	-0.8
THL				eSB	Sg	14 41 48.0	+0.1
THL	Klokotos Trika	1.17	0	ePb	Pb	14 41 31.8	-0.8
THL				eSb	Sg	14 41 48.0	+0.1
ITM	Ithomi	1.22	183	ePG	Pn	14 41 32.2	-1.2
ITM				eSB	Sb	14 41 48.8	-0.4
ITM	Ithomi	1.22	183	ePg	Pn	14 41 32.2	-1.2
ITM				eSb	Sb	14 41 48.8	-0.4
NEO	Neokhori	1.31	46	ePB	Pn	14 41 34.5	-0.3
NEO				eSB	Sg	14 41 53.2	+0.6
NEO	Neokhori	1.31	46	ePb	Pn	14 41 34.5	-0.3
NEO				eSb	Sg	14 41 53.2	+0.6
DID	Didima	1.32	132	ePB	Pn	14 41 34.7	-0.1
DID	Didima	1.32	132	ePb	Pn	14 41 34.7	-0.1
NAIG	Nisos Aigina	1.33	118	ePB	Pb	14 41 35.5	+0.1
NAIG	Nisos Aigina	1.33	118	ePb	Pb	14 41 35.5	+0.1
ATH	Athens Observa	1.41	107	ePB	Pb	14 41 36.7	-0.1
ATH				eSB	Sg	14 41 55.3	-0.4
ATH	Athens Observa	1.41	107	ePb	Pb	14 41 36.7	-0.1
ATH				eSb	Sg	14 41 55.3	-0.4
PTL	Penteli	1.50	103	ePB	Pn	14 41 37.3	-0.1
PTL				eSB	Sg	14 41 58.4	-0.3
PTL	Penteli	1.50	103	ePb	Pn	14 41 37.3	-0.1
PTL				eSb	Sg	14 41 58.4	-0.3
PYL	PYLOS	1.51	188	ePG	Pn	14 41 37.5	0.0
PYL	PYLOS	1.51	188	ePg	Pn	14 41 37.5	0.0
JAN	Janina	1.55	325	ePB	Pb	14 41 39.3	+0.2
JAN	Janina	1.55	325	ePb	Pb	14 41 39.3	+0.2
DYR	Agios Nikonas	1.65	171	ePG	Pn	14 41 39.8	+0.4
DYR	Agios Nikonas	1.65	171	ePg	Pn	14 41 39.8	+0.4
AOS	Alonnisos	1.66	62	ePG	Pn	14 41 39.8	+0.3
AOS	Alonnisos	1.66	62	ePg	Pn	14 41 39.8	+0.3
LIT	Litokhoron	1.74	12	ePN	Pn	14 41 41.5	+0.8
LIT	Litokhoron	1.74	12	ePn	Pn	14 41 41.5	+0.8
VLI	Veliai	1.83	156	ePN	Pn	14 41 42.0	+0.1
VLI				eSN	Sb	14 42 07.1	+0.2
VLI	Veliai	1.83	156	ePn	Pn	14 41 42.0	+0.1
VLI				eSn	Sb	14 42 07.1	+0.2
KZN	Kozani	1.92	355	ePN	Pn	14 41 44.1	+0.9
KZN	Kozani	1.92	355	ePn	Pn	14 41 44.1	+0.9
PAIG	Paliouri	2.01	40	ePB	Pn	14 41 43.5	-0.8
PAIG	Paliouri	2.01	40	ePb	Pn	14 41 43.5	-0.8
KEK	Kerkira	2.17	308	ePN	Pb	14 41 48.2	-1.4
KEK	Kerkira	2.17	308	ePn	Pb	14 41 48.2	-1.4
KYTH	Kithira	2.27	158	ePN	Pn	14 41 49.2	+1.3
KYTH	Kithira	2.27	158	ePn	Pn	14 41 49.2	+1.3
PLG	Polygyros	2.27	29	ePB	Pn	14 41 47.7	-0.2
PLG	Polygyros	2.27	29	ePb	Pn	14 41 47.7	-0.2
GRG	Griva	2.58	7	ePN	Pn	14 41 53.4	+1.2
GRG	Griva	2.58	7	ePn	Pn	14 41 53.4	+1.2
SOH	Sokhos	2.64	23	ePB	Pn	14 41 53.2	+0.2
SOH	Sokhos	2.64	23	ePb	Pn	14 41 53.2	+0.2
LIA	Limnos Island	2.89	58	ePN	Pn	14 41 55.7	-0.7
LIA	Limnos Island	2.89	58	ePn	Pn	14 41 55.7	-0.7
VAY	Valandovo	2.95	8	ePn	Pn	14 41 57.9	+0.6
VAY				eSg	Sn	14 42 33.6	+0.7
VAY	Valandovo	2.95	8	ePn	Pn	14 41 58.4	+1.1
APE	Apeiranthos	3.09	114	ePN	Pn	14 42 00.0	+0.7
APE	Apeiranthos	3.09	114	ePn	Pn	14 42 00.0	+0.7
CHOS	Chios island	3.18	89	ePN	Pn	14 42 01.0	+0.5
CHOS	Chios island	3.18	89	ePn	Pn	14 42 01.0	+0.5
NVR	Nevrokopi	3.28	25	ePN	Pn	14 42 02.3	+0.5
NVR	Nevrokopi	3.28	25	ePn	Pn	14 42 02.3	+0.5
VTS	Vitosha	4.29	12	ePn	Pn	14 42 17.5	+1.7
VTS				eSn	Sn	14 43 06.4	+0.4
BARS	Barje	4.42	358	ePn	Pn	14 42 20.0	+2.5
IVAS	Ivanjica	5.36	345	ePn	Pn	14 42 32.7	+2.2
MLR	Muntele Rosu	7.67	21	Pn	Pn	14 43 05.9	+3.6
	0.1nm,0.3s,baz=176,slow=16,SNR=2.2						
BRTR	Keskin Array B	9.15	78	Pn	Pn	14 43 24.2	+1.7
	0.1nm,0.3s,baz=259,slow=12,SNR=2.4						
HFS	Hagfors	22.39	349	P	P	14 46 08.4	-0.2
	1.1nm,0.6s,baz=152,slow=9.6,SNR=6.2						
FINES	FINESS Array B	23.21	5	P	P	14 46 15.7	-1.5
	1.0nm,0.8s,baz=181,slow=9.5,SNR=4.6						
NB2	NORSAR Subarra	23.65	347	P	P	14 46 21.0	-0.7
	comp=Z,0.7nm,0.6s,baz=159,slow=9.3						
NB2	NORSAR Subarra	23.65	347	P	P	14 46 21.0	-0.7
	comp=Z,0.7nm,0.6s,SNR=3.8						
NOA	NORSAR Array B	23.65	347	P	P	14 46 20.8	-0.9
	comp=Z,0.3nm,0.6s,baz=170,slow=12,SNR=4.0						
TORD	Torodi Ar. Bea	30.95	221	P	P	14 47 30.0	+2.3
	comp=Z,0.7nm,0.7s,baz=32,slow=8.9,SNR=7.0						
ARCES	ARCESS Array B	31.26	2	LR	LR	14 58 53.6	
	comp=Z,35nm,19.2s,baz=34,slow=34						
MKAR	Makanchi Array	44.19	59	P	P	14 49 18.4	-1.0
	comp=Z,0.3nm,0.4s,baz=276,slow=7.7,SNR=7.5						

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*AUST **01** 14:49:26.2±38.0, 16.°58S×170.°89E, h0^{km}±8^{km}, Error ellipse: s-maj=6.8km s-min=3.8km az=249.0*

*ISCJB **01** 14:49:52.4±0.8, 17.°33S±0.°04×167.°6E±0.°1, h19^{km}, mb4.0/11, MS3.8/9, Error ellipse: s-maj=18.3km s-min=6.2km az=178.0*

*NOU **01** 14:49:55.2±1.3, 17.°23S×167.°88E, h30^{km}, MD3.3, ML3.6*

*IDC **01** 14:49:56.4±0.8, 17.°20S×167.°78E, h40^{km}±6^{km}, mb3.9/11, mb1 4.0/13, mb1mx3.8/23, mbtmp4.0/13, ML4.5/2, MS3.8/11, Ms1 3.8/11, ms1mx3.5/38, Error ellipse: s-maj=24.3km s-min=17.5km az=87.0*

ISC 01 14:49:54.8±0.8**, 17.°36S**±0.°06×**167.°7E**±0.°1**, h19**^{km}**, n38,** σ**2.^{s}36**/39**, mb4.1**/9**, MS3.7**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.83	189	eP	Pn	14 51 07.1	+0.6
BAYA				eS	Sn	14 51 59.1	-2.8
DZM	Mont Dzumac	4.83	194	ePn	Pn	14 51 07.3	+0.7
	24nm,0.2s						
DZM				eSn	Sn	14 51 57.5	-4.5
	72nm,0.2s						
DZM	Mont Dzumac	4.83	194	eP	Pn	14 51 07.5	+0.9
DZM				eS	Sn	14 51 59.9	-2.1
DZM				AMP		14 52 07.4	
	comp=Z,902nm,3.6s						
DZM	Mont Dzumac	4.83	194	Pn	Pn	14 51 07.4	+0.7
	comp=Z,6.8nm,0.3s,baz=41,slow=15,SNR=35						
DZM				Sn	Sn	14 52 02.5	+0.5
	comp=Z,23nm,0.3s,baz=309,slow=23,SNR=12						
DZM				LR	LR	14 53 01.5	
	comp=Z,957nm,19.2s,baz=40,slow=37						
NOUC	Port Laguerre	4.89	195	eP	Pn	14 51 07.0	-0.3
NOUC				eS	Sn	14 52 01.6	-1.9
NOUC				AMP		14 52 13.2	
	comp=Z,38nm,0.0s						
NORM	Noumea	4.97	193	eP	Pn	14 51 09.1	+0.6
NORM				eS	Sn	14 52 04.6	-0.8
HNR	Honiara	10.90	315	Pn	Pn	14 52 29.4	-0.5
	comp=Z,8.6nm,0.3s,baz=122,slow=6.6,SNR=4.0						
HNR				LR	LR	14 56 02.3	
	comp=Z,325nm,18.7s,baz=344,slow=34						
RMQ	Roma	19.75	239	P	Pn	14 54 27.9	+2.7
	baz=23,SNR=7.9						
AFI	Afiamalu	20.07	83	LR	LR	15 00 15.3	
	comp=Z,246nm,21.8s,baz=196,slow=31						
CTA	Charters Tower	20.48	259	LR	LR	15 01 51.9	
	comp=Z,267nm,18.3s,baz=67,slow=35						
URZ	Urewera	22.40	160	P	P	14 54 53.8	+1.6
	comp=Z,18nm,1.1s,baz=244,slow=7.8,SNR=5.1						
QLP	Quilpie	23.57	243	P	P	14 55 06.5	+2.1
	baz=27,SNR=4.6						
CMSA	Cobar Meteorol	24.43	231	P	P	14 55 14.8	+2.4
	baz=27,SNR=14						
STKA	Stephens Creek	27.68	234	P	P	14 55 42.6	+0.8
	comp=Z,1.6nm,0.5s,baz=32,slow=8.6,SNR=8.4						
STKA				LR	LR	15 06 58.2	
	comp=Z,186nm,19.8s,baz=25,slow=37						
STKA	Stephens Creek	27.68	234	P	P	14 55 43.6	+1.8
	baz=31,SNR=5.4						
MMPI	Merauke	28.01	285	P	P	14 55 41.0	-3.9
	baz=31,SNR=4.1						
RAR	Rarotonga	30.92	102	LR	LR	15 05 50.0	
	comp=Z,124nm,20.3s,baz=92,slow=31						
WRA	Warramunga Arr	31.67	260	P	P	14 56 16.9	-0.4
	comp=Z,1.0nm,0.5s,baz=81,slow=6.1,SNR=26						
ASAR	Alice Springs	32.20	253	P	P	14 56 21.6	-0.4
	comp=Z,2.5nm,0.4s,baz=78,slow=8.5,SNR=146						
ASAR				LR	LR	15 08 43.7	
	comp=Z,321nm,18.1s,baz=110,slow=35						
FITZ	Fitzroy Crossi	40.00	262	LR	LR	15 12 32.1	
	comp=Z,186nm,20.6s,baz=159,slow=34						
FITZ	Fitzroy Crossi	40.00	262	P	P	14 57 29.1	+0.4
	baz=43,SNR=5.2						
TBI	Tubuai	40.50	106	eLR	LR	15 09 07.9	
	comp=Z,113nm,28.0s						
PPT2	Papeete2	40.70	97	eLR	LR	15 09 17.2	
	comp=Z,166nm,23.5s						
MEEK	Meekatharra	46.20	250	P	P	14 58 19.0	+0.1
	baz=49,SNR=6.2						
KAPI	Kappang	48.46	279	LR	LR	15 17 49.6	
	comp=Z,55nm,21.4s,baz=282,slow=34						
KSM	Kuching	59.53	282	P	P	14 59 53.4	-4.1
	baz=62,SNR=3.1						
MJAR	Matsushiro Arr	60.42	333	P	P	15 00 01.1	-2.0
	comp=Z,1.6nm,0.8s,baz=180,slow=9.1,SNR=3.5						
ASAJ	Asahikawa	65.34	340	LR	LR	15 25 59.8	
	comp=Z,54nm,19.8s,baz=186,slow=33						
QSPA	South Pole Qui	72.68	180	P	P	15 01 21.2	0.0
	comp=Z,3.3nm,0.8s,baz=237,slow=0.8,SNR=10						
CMAR	Chiang Mai Arr	76.39	294	P	P	15 01 42.9	-0.6
	comp=Z,0.3nm,0.7s,baz=103,slow=4.1,SNR=2.8						
SONM	Songino Array	84.84	324	P	P	15 02 26.9	-1.4
	comp=Z,1.0nm,0.7s,baz=152,slow=5.9,SNR=6.5						
SONM				pP	pP	15 02 39.4	+4.8
	comp=Z,2.3nm,0.8s,baz=141,slow=5.4,SNR=6.8						
NVAR	Mina Array Bea	88.68	49	LR	LR	15 33 50.9	
	comp=Z,84nm,19.0s,baz=358,slow=30						
ILAR	Eielson Array	88.90	18	P	P	15 02 44.5	-2.9
	comp=Z,0.4nm,1.0s,baz=230,slow=4.6,SNR=4.4						
ILAR				pP	pP	15 02 56.8	+2.9
	comp=Z,0.4nm,0.7s,baz=240,slow=5.4,SNR=3.1						
MKAR	Makanchi Array	99.38	316	P	Pdif	15 03 34.2	-1.7
	comp=Z,0.2nm,0.6s,baz=94,slow=4.9,SNR=3.7						
MKAR				pP	pP	15 03 47.0	+4.6
	comp=Z,0.3nm,0.6s,baz=92,slow=7.3,SNR=3.6						
ZALV	Zalesovo Beam	99.74	323	P	Pdif	15 03 35.3	-2.1
	comp=Z,0.3nm,0.5s,baz=70,slow=4.7,SNR=2.9						
ZALV				pP	pP	15 03 47.6	+3.9
	comp=Z,0.4nm,0.4s,baz=64,slow=3.4,SNR=2.6						
ARCES	ARCESS Array B	122.89	345	PKP	PKPdf	15 08 46.6	-2.5
	comp=Z,0.8nm,0.8s,baz=55,slow=30,SNR=5.4						
ARCES				pPKP	pPKPdf	15 08 59.5	+3.8
	comp=Z,1.3nm,0.5s,baz=88,slow=2.1,SNR=2.5						
FINES	FINESS Array B	128.30	338	PKP	PKPdf	15 08 57.5	-2.2
	comp=Z,0.8nm,0.6s,baz=357,slow=3.8,SNR=6.8						
TORD	Torodi Ar. Bea	165.85	255	PKP	PKPdf	15 09 57.2	-2.2
	comp=Z,0.5nm,0.8s,baz=99,slow=1.0,SNR=3.1						

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*ISCJB **01** 15:02:51.9±0.8, 11.°50S±0.°10×166.°3E±0.°1, h59^{km}, mb4.0/11, Error ellipse: s-maj=19.8km s-min=14.1km az=170.8*

*IDC **01** 15:02:53.2±3.8, 11.°51S×166.°37E, h58^{km}±31^{km}, mb3.8/11, mb1 3.9/13, mb1mx3.7/23, mbtmp3.9/13, ML4.1/2, MS3.2/1, Ms1 3.2/1, ms1mx2.8/29, Error ellipse: s-maj=29.7km s-min=20.8km az=89.0*

ISC 01 15:02:53.3±0.9**, 11.°5S**±0.°1×**166.°3E**±0.°2**, h59**^{km}**, n15,** σ**1.^{s}10**/16**, mb4.0**/11**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.62	288	P	Pn	15 04 29.1	+1.1
	23nm,0.3s,baz=137,slow=2.0,SNR=12						
DZM	Mont Dzumac	10.51	179	ePn	Pn	15 05 24.3	+3.0
	2.4nm,0.3s						
DZM				eLR	LR	15 07 50.6	
	160nm,24.2s						
DZM	Mont Dzumac	10.51	179	P	Pn	15 05 22.0	+0.7
	0.3nm,0.3s,baz=301,slow=16,SNR=8.9						
DZM				LR	LR	15 08 30.3	
	comp=Z,132nm,18.9s,baz=11,slow=32						
STKA	Stephens Creek	30.52	225	P	P	15 09 00.6	-0.4
	1.0nm,0.8s,baz=58,slow=12,SNR=3.9						
WRA	Warramunga Arr	31.88	251	P	P	15 09 13.0	-0.2
	1.8nm,0.8s,baz=81,slow=8.7,SNR=11						
WRA				pP	pP	15 09 25.1	-2.8
	1.4nm,0.8s,baz=84,slow=8.9,SNR=7.2						
WRA				PcP	PcP	15 12 03.3	+0.5
	0.5nm,0.8s,baz=81,slow=3.8,SNR=4.7						
ASAR	Alice Springs	33.12	244	P	P	15 09 23.8	-0.3
	2.0nm,0.8s,baz=69,slow=9.9,SNR=33						
ASAR				PcP	PcP	15 12 06.5	+0.3
	0.6nm,0.7s,baz=66,slow=1.9,SNR=8.3						
FITZ	Fitzroy Crossi	39.83	256	P	P	15 10 20.8	-0.4
	2.0nm,0.7s,baz=103,slow=2.7,SNR=3.7						
PPT2	Papeete2	43.02	103	eLR	LR	15 22 52.2	
	70nm,27.8s						
MJAR	Matsushiro Arr	54.65	332	P	P	15 12 14.9	-1.3
	1.2nm,0.8s,baz=168,slow=10.0,SNR=4.2						
CMAR	Chiang Mai Arr	72.83	293	P	P	15 14 17.9	+1.7
	1.0nm,0.9s,baz=114,slow=4.6,SNR=8.7						
QSPA	South Pole Qui	78.50	180	P	P	15 14 48.1	+0.1
	4.7nm,1.0s,baz=322,slow=1.8,SNR=7.1						
SONM	Songino Array	79.38	324	P	P	15 14 53.8	+0.8
	0.8nm,0.9s,baz=132,slow=6.0,SNR=4.9						
ILAR	Eielson Array	83.76	18	P	P	15 15 15.2	-0.4
	0.4nm,0.8s,baz=226,slow=5.8,SNR=6.9						
MKAR	Makanchi Array	94.25	317	P	P	15 16 06.5	+0.3
	2.1nm,0.8s,baz=96,slow=6.0,SNR=22						
ZALV	Zalesovo Beam	94.27	324	P	P	15 16 05.5	-0.4
	0.7nm,0.7s,baz=121,slow=5.7,SNR=4.6						

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*PGC **01** 15:14:35.8±0.4, 47.°51N×122.°19W, h21^{km}, ML2.1/11, 14km Ese of Seattle, Wa Washington*

*ISCJB **01** 15:14:36.7±0.5, 47.°60N±0.°04×122.°23W±0.°05, h13^{km}±3^{km}, Error ellipse: s-maj=7.0km s-min=5.7km az=33.2*

*NEIC **01** 15:14:37.0, 47.°65N×122.°14W, h3^{km}, MD2.3(SEA), After SEA.*

NEIC Felt [II] at Bellevue, Kirkland and Redmond. Also felt at Arlington, Bremerton, Issaquah, Sammamish, Seattle and Woodinville.

*PNSN **01** 15:14:38.0, 47.°65N×122.°14W, h7^{km}, MD2.6, Fault plane solution: NP1:ϕ_s65.00000°, δ45.00000°, NP2: ϕ_s284.00000°, δ52.00000°, Principal axes: T Plg69.0000°, Azm256.0000°; P Plg4.0000°, Azm356.0000°; Fault plane solution: NP1:ϕ_s300.00000°, δ75.00000°, NP2: ϕ_s30.00000°, δ90.00000°, Principal axes: T Plg11.0000°, Azm256.0000°; P Plg11.0000°, Azm164.0000°; Fault plane solution: NP1:ϕ_s110.00000°, δ60.00000°, NP2: ϕ_s210.00000°, δ73.00000°, Principal axes: T Plg34.0000°, Azm74.0000°; P Plg8.0000°, Azm338.0000°;*

ISC 01 15:14:36.8±0.9**, 47.°66N**±0.°03×**122.°14W**±0.°04**, h13**^{km}±7^{km}**, n31,** σ**0.^{s}94**/43**, 1C-19D, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MARYW	Marymoor Park	0.02	69	⇑P	Pg	15 14 39.0	-0.1
WISC	Wilburton Inst	0.05	204	⇓P	Pg	15 14 39.6	+0.4
ALCT	Alcott Element	0.07	97	⇓P	Pg	15 14 39.9	+0.4
NOWS	NOAA--Sand Poi	0.08	291	⇓P	Pg	15 14 40.2	+0.6
FINN	Finn Hill Juni	0.09	316	P	Pg	15 14 40.2	+0.6
EARN	East Ridge Ele	0.11	40	⇓P	Pg	15 14 40.4	+0.5
PNLK	Pine Lake Midd	0.11	134	⇓P	Pg	15 14 40.5	+0.6
RHAZ	Hazelwood Elem	0.12	194	⇓P	Pg	15 14 40.5	+0.5
MPL	Maple valley S	0.19	189	P	Pb	15 14 42.2	0.0
ALKI	Alki Wastewate	0.20	246	P	Pb	15 14 43.4	+1.0
LON	Longmire	0.94	166	ePg	Pb	15 14 53.9	-1.0
VGZ	Gonzales	1.10	314	⇓P	Pb	15 14 55.5	-2.2
VGZ				⇑S	Sb	15 15 10.4	-1.4
NLWA	Neilton Lookou	1.20	258	ePg	Pn	15 14 58.5	-0.8
SNB	Saturna Island	1.31	329	⇓P	Pn	15 15 00.6	-0.3
SNB				⇓S	Sb	15 15 18.1	0.0
PGC	Sidney	1.32	319	ePn	Pn	15 15 00.1	-0.8
PGC	Sidney	1.32	319	⇓P	Pn	15 15 00.1	-0.8
PGC				⇓S	Sb	15 15 17.8	-0.6
VDB	Vedder Mountai	1.37	1	⇓P	Pn	15 15 02.1	+0.5
VDB				⇓S	Sg	15 15 20.8	-0.2
LZB	Mount Lazard	1.48	311	⇑P	Pn	15 15 01.8	-1.4
LZB				⇓S	Sn	15 15 21.2	-1.2
GOBB	Galiano Island	1.58	325	⇑P	Pn	15 15 04.5	-0.1
GOBB				⇓S	Sn	15 15 25.4	+0.5
HNB	Haney	1.65	350	⇑P	Pn	15 15 05.7	+0.3
HNB				⇑S	Sn	15 15 27.2	+0.8
PFB	Port Renfrew	1.79	302	⇓P	Pn	15 15 07.0	-0.4
PFB				⇑S	Sn	15 15 30.4	+0.3
HOPB	Hope	1.80	15	⇓S	Sb	15 15 33.2	+1.2
BIB	Bowen Island	1.91	337	⇑P	Pn	15 15 09.9	+0.8
BIB				⇑S	Sb	15 15 35.2	-0.1
NLLB	Nanaimo Lost L	2.00	323	⇑P	Pn	15 15 10.7	+0.5
NLLB				⇑S	Sn	15 15 36.0	+1.0
WPB	Watts Point	2.12	341	⇑S	Sn	15 15 39.2	+1.0
GHNB	Nanoose	2.16	321	⇑S	Sn	15 15 40.6	+1.5
MGB	Mount Grey	2.17	309	⇑P	Pn	15 15 13.4	+0.6
MGB				⇓S	Sn	15 15 40.6	+1.1
HAWA	Hanford	2.19	124	ePn	Pn	15 15 13.5	+0.6
SHB	Sechelt	2.26	330	⇑P	Pn	15 15 14.7	+0.7
SHB				⇓S	Sn	15 15 43.6	+1.9
BSMT	Bassoo Peak	4.97	85	ePn	Pn	15 15 49.5	-1.7
SWMT	Swartz Lake	5.51	89	ePn	Pn	15 15 57.8	-0.9

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*IDC **01** 15:26:23.6±0.6, 7.°11N×75.°29W, h57^{km}±5^{km}, mb3.6/16, mb1 3.9/16, mb1mx3.8/24, mbtmp3.7/16, MS3.3/6, Ms1 3.3/6, ms1mx3.0/32, Error ellipse: s-maj=20.5km s-min=11.7km az=62.0*

*ISCJB **01** 15:26:27.3±0.6, 6.°34N±0.°07×74.°5W±0.°1, h33^{km}, mb4.3/30, MS3.4/4, Error ellipse: s-maj=21.6km s-min=9.0km az=11.8*

*NEIC **01** 15:26:28.0±3.0, 6.°29N×74.°32W, h21^{km}±22^{km}, mb4.9/16, Error ellipse: s-maj=17.2km s-min=9.7km az=115.0*

ISC 01 15:26:27.2±1.1**, 6.°5N**±0.°1×**74.°6W**±0.°2**, h35**^{km}**, n78,** σ**2.^{s}27**/58**, mb4.5**/30**, MS3.5**/4**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	Santo Domingo	4.60	58	ePn	Pn	15 27 34.2	-0.3
OTAV	Otavalo	7.30	212	ePn	Pn	15 28 12.6	+0.7
	16nm,0.8s						
SJG	San Juan	14.19	35	P	Pn	15 29 39.8	-6.0
	7.2nm,0.3s,baz=211,slow=14,SNR=12						
SJG				LR	LR	15 35 19.7	
	comp=Z,37nm,18.1s,baz=105,slow=38						
TEIG	Tepich	19.05	317	LR	LR	15 38 22.0	
	comp=Z,61nm,19.1s,baz=319,slow=40						
SAML	Samuel	19.09	143	eP	Pn	15 30 47.5	-0.6
	35nm,0.3s						
CMIG	Matias Romero	22.46	300	LR	LR	15 39 30.6	
	comp=Z,58nm,18.3s,baz=36,slow=36						
LPAZ	La Paz	23.51	164	eP	P	15 31 35.7	+0.7
	13nm,1.0s						
LPAZ	La Paz	23.51	164	P	P	15 31 37.1	+2.2
	2.7nm,0.6s,baz=340,slow=7.4,SNR=12						
SIV	San Ignacio	26.04	149	P	P	15 31 59.6	+2.1
	8.4nm,0.6s,baz=343,slow=9.7,SNR=32						
SIV				LR	LR	15 43 20.1	
	comp=Z,110nm,20.0s,slow=38						
SSPA	Standing Stone	34.13	356	eP	P	15 33 16.2	+7.3
	5.4nm,0.6s						
BDFB	Brasilia	34.30	130	P	P	15 33 13.1	+2.3
	3.7nm,0.4s,baz=284,slow=10,SNR=7.3						
TXAR	Lajitas Array	35.61	313	P	P	15 33 07.8	-14
	1.5nm,0.9s,baz=126,slow=9.9,SNR=10						
CPUP	Villa Florida	36.67	154	P	P	15 33 30.5	-0.3
	0.5nm,0.4s,baz=101,slow=20,SNR=5.4						
CFAA	Coronel Fontan	38.36	171	P	P	15 33 44.8	-0.4
	0.2nm,0.3s,baz=343,slow=7.8,SNR=6.7						
ULM	Lac du Bonnet	47.12	341	LR	LR	15 54 23.8	
	comp=Z,62nm,19.6s,baz=20,slow=36						
PDAR	Pinedale Array	47.50	325	P	P	15 34 45.4	-14
	1.9nm,1.1s,baz=134,slow=11,SNR=7.5						
SCHQ	Schefferville	48.61	6	LR	LR	15 52 20.9	

	comp=Z,84nm,19.7s,baz=65,slow=32						
NVAR	Mina Array Bea	50.68	315	P	P	15 35 11.8	-12
	0.9nm,0.8s,baz=115,slow=7.3,SNR=5.5						
YKA	Yellowknife Ar	63.08	340	P	P	15 36 39.0	-12
	2.9nm,0.6s,baz=133,slow=6.8,SNR=88						
YKA				pP	pP	15 36 53.4	-8.2
	1.8nm,0.6s,baz=133,slow=6.8,SNR=13						
ESDC	Sonseca Array	71.00	50	P	P	15 37 37.8	-3.9
	0.2nm,0.4s,baz=294,slow=5.7,SNR=3.7						
ROSF	Rostrenen	72.79	41	eP	P	15 37 54.6	+2.4
	24nm,1.0s						
ROSF	Rostrenen	72.79	41	eP	P	15 37 54.6	+2.4
	24nm,1.0s						
QUIF	Quistinic	72.79	42	eP	P	15 37 54.7	+2.5
QUIF	Quistinic	72.79	42	eP	P	15 37 54.7	+2.5
SGMF	Saint Gilles	73.25	42	eP	P	15 37 57.1	+2.2
	39nm,1.1s						
SGMF	Saint Gilles	73.25	42	eP	P	15 37 57.1	+2.2
	39nm,1.1s						
SJPF	Ste Jean	73.46	47	eP	P	15 37 58.9	+2.5
SJPF	Ste Jean	73.46	47	eP	P	15 37 58.9	+2.5
GRR	Gorron	74.39	42	eP	P	15 38 04.0	+2.4
	20nm,0.9s						
GRR	Gorron	74.39	42	eP	P	15 38 04.0	+2.4
	20nm,0.9s						
EPF	Esparros	74.60	47	eP	P	15 38 05.5	+2.5
EPF	Esparros	74.60	47	eP	P	15 38 05.5	+2.5
MFF	Saint Martin d	74.64	44	eP	P	15 38 05.0	+1.9
	26nm,0.9s						
MFF	Saint Martin d	74.64	44	eP	P	15 38 05.0	+1.9
	26nm,0.9s						
FLN	La Foliniere	74.69	41	eP	P	15 38 05.9	+2.5
	31nm,0.9s						
FLN	La Foliniere	74.69	41	eP	P	15 38 05.9	+2.5
	31nm,0.9s						
LDF	La Druitiere	74.90	41	eP	P	15 38 06.9	+2.3
	18nm,0.9s						
LDF	La Druitiere	74.90	41	eP	P	15 38 06.9	+2.3
	18nm,0.9s						
TORD	Torodi Ar. Bea	75.24	78	P	P	15 38 04.4	-2.8
	1.3nm,0.8s,baz=287,slow=6.4,SNR=13						
TORD				pP	PcP	15 38 20.1	-0.5
	0.7nm,0.5s,baz=284,slow=6.4,SNR=4.2						
RJF	Les Rejaudoux	75.65	45	eP	P	15 38 11.2	+2.2
RJF	Les Rejaudoux	75.65	45	eP	P	15 38 11.2	+2.2
MTLF	Montolieu	75.99	47	eP	P	15 38 12.5	+1.5
MTLF	Montolieu	75.99	47	eP	P	15 38 12.5	+1.5
CAF	Calviac	76.01	45	eP	P	15 38 12.8	+1.7
	5.2nm,0.6s						
CAF	Calviac	76.01	45	eP	P	15 38 12.8	+1.7
	5.2nm,0.6s						
ILAR	Eielson Array	76.65	335	P	P	15 38 03.5	-11
	0.6nm,0.6s,baz=112,slow=4.4,SNR=13						
BGF	Bois d'Agland	76.69	44	eP	P	15 38 17.2	+2.3
BGF	Bois d'Agland	76.69	44	eP	P	15 38 17.2	+2.3
AVF	Avril sur Loir	77.05	44	eP	P	15 38 19.1	+2.2
AVF	Avril sur Loir	77.05	44	eP	P	15 38 19.1	+2.2
SSF	Saint Saulge	77.18	43	eP	P	15 38 19.7	+2.1
	4.8nm,0.8s						
SSF	Saint Saulge	77.18	43	eP	P	15 38 19.7	+2.1
	4.8nm,0.8s						
SMF	Signal de Mont	77.38	44	eP	P	15 38 21.1	+2.3
SMF	Signal de Mont	77.38	44	eP	P	15 38 21.1	+2.3
LOR	Lormes	77.43	43	eP	P	15 38 21.3	+2.2
	6.1nm,0.5s						
LOR	Lormes	77.43	43	eP	P	15 38 21.3	+2.2
	6.1nm,0.5s						
GIVF	Givet	78.27	40	eP	P	15 38 26.5	+2.9
GIVF	Givet	78.27	40	eP	P	15 38 26.5	+2.9
MEZF	Maizieres J'vi	78.32	42	eP	P	15 38 26.6	+2.7
MEZF	Maizieres J'vi	78.32	42	eP	P	15 38 26.6	+2.7
ORIF	Oris-en-Rattie	78.71	46	eP	P	15 38 28.8	+2.5
	10nm,0.9s						
ORIF	Oris-en-Rattie	78.71	46	eP	P	15 38 28.8	+2.5
	10nm,0.9s						
LPL	La Plagne	79.33	45	eP	P	15 38 33.2	+3.3
	6.7nm,0.9s						
LPL	La Plagne	79.33	45	eP	P	15 38 33.2	+3.3
	6.7nm,0.9s						
HINF	Hinteralfeld	79.49	43	eP	P	15 38 32.7	+2.3
	5.7nm,0.6s						
HINF	Hinteralfeld	79.49	43	eP	P	15 38 32.7	+2.3
	5.7nm,0.6s						
CDF	Champ du Feu	79.79	42	eP	P	15 38 34.9	+2.8
CDF	Champ du Feu	79.79	42	eP	P	15 38 34.9	+2.8
SBF	Sospel	79.80	47	eP	P	15 38 34.2	+2.0
	12nm,0.8s						
SBF	Sospel	79.80	47	eP	P	15 38 34.2	+2.0
	12nm,0.8s						
NB2	NORSAR Subarra	82.34	29	P	P	15 38 49.8	+4.4
	comp=Z,3.6nm,0.7s,baz=269,slow=5.6						
NOA	NORSAR Array B	82.34	29	P	P	15 38 40.0	-5.4
	comp=Z,0.4nm,0.6s,baz=46,slow=25,SNR=2.7						
GERES	GERESS Array B	84.05	42	P	P	15 38 46.8	-7.7
	comp=Z,0.2nm,0.6s,baz=299,slow=8.8,SNR=2.3						
ARCES	ARCESS Array B	87.50	20	P	P	15 39 02.5	-8.6
	comp=Z,0.9nm,0.6s,baz=290,slow=3.6,SNR=6.2						
FINES	FINESS Array B	89.43	28	P	P	15 39 13.7	-6.6
	comp=Z,1.0nm,0.8s,baz=231,slow=8.6,SNR=3.1						
MKAR	Makanchi Array	123.12	19	pPKP	pPKPdf	15 45 29.6	-2.3
	comp=Z,0.2nm,0.4s,baz=321,slow=2.4,SNR=2.3						
ASAR	Alice Springs	147.72	235	PKPbc	PKPdf	15 46 01.8	-4.6
	comp=Z,1.1nm,0.6s,baz=119,slow=3.9,SNR=9.1						
ASAR				pPKPbc	pPKPbc	15 46 19.0	-1.6
	comp=Z,1.2nm,0.6s,baz=124,slow=3.3,SNR=5.4						
WRA	Warramunga Arr	148.89	242	PKPbc	PKPdf	15 46 04.5	-3.8
	comp=Z,1.8nm,0.6s,baz=110,slow=2.3,SNR=10.0						
WRA				pPKPbc	pPKPbc	15 46 22.3	-1.4
	comp=Z,0.9nm,0.5s,baz=110,slow=2.7,SNR=4.1						

IDC 01 15:34:51.4±3.0**, 48°.81S×123°.45E, h0km, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.6**/14**, mbtmp3.6**/3**, MS3.5**/3**, Ms1 3.5**/3**, ms1mx3.2**/15**, Error ellipse: s-maj=78.1km s-min=59.3km az=139.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	16.54	341	LR	LR	15 43 49.4	
	comp=Z,194nm,20.1s,baz=78,slow=32						
STKA	Stephens Creek	21.76	46	LR	LR	15 46 47.5	
	comp=Z,131nm,18.7s,baz=206,slow=33						
ASAR	Alice Springs	26.42	22	P	P	15 40 30.4	+0.7
	1.2nm,0.8s,baz=201,slow=8.8,SNR=9.2						
WRA	Warramunga Arr	30.11	21	P	P	15 41 01.9	-0.7
	0.7nm,1.1s,baz=202,slow=10,SNR=3.5						
VNDA	Vanda	32.32	165	LR	LR	15 53 59.3	
	comp=Z,77nm,20.8s,baz=324,slow=36						
CMAR	Chiang Mai Arr	70.44	335	P	P	15 46 07.5	+0.1
	0.4nm,0.6s,baz=186,slow=5.7,SNR=6.7						
YKA	Yellowknife Ar	145.79	44	PKPbc	PKPdf	15 54 30.1	-0.4
	1.7nm,0.8s,baz=266,slow=3.2,SNR=15						

*CNRM **01** 15:35:06.6, 31°.60N×7°.63W, h0km, MD3.1*
*INMG **01** 15:35:06.9±1.8, 31°.70N×7°.28W, h0km, ML2.6, Error ellipse: s-maj=21.6km s-min=12.3km az=82.0*
*ISCJB **01** 15:35:06.4±0.6, 31°.79N±0°.04×7°.68W±0°.03, h10km, Error ellipse: s-maj=5.2km s-min=3.7km az=161.5*
*CSEM **01** 15:35:07.5±0.2, 31°.63N×7°.66W, h20km, ML3.5/5, Error ellipse: s-maj=4.2km s-min=3.0km az=147.0*
*IGIL **01** 15:35:08.3, 31°.66N×7°.37W, h0km, ML2.7*
ISC 01 15:35:05.6±1.0**, 31°.65N**±0°.04×**7°.63W**±0°.03**, h10km, n27, σ1s.35**/48**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CIA	Chichaoua	0.97	266	i P	Pg	15 35 24.0	-0.2
CIA				i S	Sg	15 35 37.5	+0.7
TZC	Tazercounte	1.09	62	i S	Sn	15 35 42.0	-0.4
JHA	Jbel Lahdid	1.56	274	i P	Pn	15 35 34.0	+0.6
JHA				i S	Sn	15 35 54.0	+0.3
KIB	El Ksiba	1.64	55	i P	Pb	15 35 35.0	-0.9
KIB				i S	Sg	15 35 57.0	-1.3
YBT	Youssef Ben Ta	2.41	222	i P	Pn	15 35 46.0	+1.0
YBT				i S	Sn	15 36 12.5	-2.1
CZD	Col de Zad	2.59	57	i P	Pn	15 35 49.0	+1.2
CZD				i S	Sn	15 36 20.0	+0.5
ZFT	Errachidia	2.82	81	i P	Pn	15 35 52.0	+1.2
ZFT				i S	Sn	15 36 26.0	+1.1
PFVI	Vila Bisbo	5.56	350	ePn	Pn	15 36 29.6	+1.2
PFVI				eSn	Sn	15 37 33.0	+0.6
PFVI	Vila Bisbo	5.56	350	ePn	Pn	15 36 29.6	+1.2
PFVI				eSn	Sn	15 37 33.0	+0.6
PBDV	Barranco-do-Ve	5.59	358	ePn	Pn	15 36 30.4	+1.6
PBDV				eSn	Sn	15 37 32.8	-0.3
PBDV				A	A	15 37 39.7	
	2.1nm,0.2s						
PBDV	Barranco-do-Ve	5.59	358	ePn	Pn	15 36 30.4	+1.6
PBDV				eSn	Sn	15 37 32.8	-0.3
	2.1nm,0.2s						
MORF	Marmelete	5.71	352	ePn	Pn	15 36 32.0	+1.5
MORF				eSn	Sn	15 37 36.7	+0.6
MORF				A	A	15 37 39.8	
	3.8nm,0.1s						
MORF	Marmelete	5.71	352	ePn	Pn	15 36 32.0	+1.5
MORF				eSn	Sn	15 37 36.7	+0.6
	3.8nm,0.1s						
PVAQ	Vaqueiros	5.75	359	ePn	Pn	15 36 31.9	+1.0
PVAQ				eSn	Sn	15 37 36.0	-0.9
PVAQ				A	A	15 37 38.9	
	3.2nm,0.2s						
PVAQ	Vaqueiros	5.75	359	ePn	Pn	15 36 31.9	+1.0
PVAQ				eSn	Sn	15 37 36.0	-0.9
	3.2nm,0.2s						
PTEO	Sao Teotonio	5.96	352	ePn	Pn	15 36 35.1	+1.3
PTEO				eSn	Sn	15 37 42.4	+0.4
PTEO				A	A	15 37 46.1	
	6.3nm,0.6s						
PTEO	Sao Teotonio	5.96	352	ePn	Pn	15 36 35.1	+1.3
PTEO				eSn	Sn	15 37 42.4	+0.4
	6.3nm,0.6s						
PCVE	Castro Verde	5.98	357	ePn	Pn	15 36 35.4	+1.2
PCVE				eSn	Sn	15 37 41.8	-0.9
PCVE				A	A	15 37 45.3	
	3.9nm,0.4s						
PCVE	Castro Verde	5.98	357	ePn	Pn	15 36 35.4	+1.2
PCVE				eSn	Sn	15 37 41.8	-0.9
	3.9nm,0.4s						
MESJ	Messejana	6.20	356	eP	Pn	15 36 38.5	+1.4
MESJ				eS	Sn	15 37 44.8	-3.3
MESJ				AML	AML	15 37 51.9	
	comp=N,5.3nm,0.3s						
MESJ	Messejana	6.20	356	eP	Pn	15 36 38.5	+1.4
MESJ	Messejana	6.20	356	eP	Pn	15 36 38.5	+1.4
MESJ				eS	Sn	15 37 44.8	-3.3
MESJ				eS	Sn	15 37 44.8	-3.3
MESJ	Messejana	6.20	356	eP	Pn	15 36 38.5	+1.4
PBEJ	Beja	6.37	358	eSn	Sn	15 37 51.1	-1.2
PBEJ	Beja	6.37	358	eSn	Sn	15 37 51.1	-1.2
PNCL	Nicolau / Gran	6.49	354	eSn	Sn	15 37 55.0	-0.3
PNCL	Nicolau / Gran	6.49	354	eSn	Sn	15 37 55.0	-0.3

NEIC 01 15:39:25.3, 35°.03N×119°.31W, h18km, MW3.5(PAS)**, 24C-23D, After PAS., Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARVC	Arvin	0.41	75	P	Pg	15 39 33.5	-0.2
	baz=0.4,SNR=169						
ARVC				⇓S	Sg	15 39 38.4	-1.0
	baz=0.4						
PKM	Peak Mountain	0.44	253	P	Pg	15 39 33.4	-1.1
	baz=0.4,SNR=474						
PKM				⇑S	Sg	15 39 39.9	-0.9
	baz=0.4						
OSI	Osito Adit	0.63	130	ePg	Pb	15 39 36.7	-1.3
OSI				eSg	Sg	15 39 45.3	-1.2
OSI	Osito Adit	0.63	130	⇑P	Pb	15 39 36.5	-1.4
	baz=0.6,SNR=43						
OSI				⇓S	Sg	15 39 44.8	-1.7
	baz=0.6						
SMMC	Simmler	0.63	297	⇑P	Pb	15 39 36.9	-1.0
	baz=0.6,SNR=59						
SMMC				⇑S	Sg	15 39 45.7	-0.8
	baz=0.6						
VES	Vestal, Richgr	0.83	13	⇑P	Pb	15 39 40.1	-1.3
	baz=0.8,SNR=181						
VES				⇑S	Sb	15 39 50.7	-1.6
	baz=0.8						
ISA	Isabella	0.93	47	ePn	Pb	15 39 41.5	-1.6
ISA	Isabella	0.93	47	P	Pb	15 39 41.7	-1.4
	baz=0.9,SNR=237						
ISA				⇓S	Sb	15 39 54.0	-1.4
	baz=0.9						
BLG	Laguna Peak	0.94	167	⇓P	Pb	15 39 42.3	-0.8
	baz=0.9,SNR=82						
BLG				⇓S	Sb	15 39 55.0	-0.1
	baz=0.9						
PTRM	Twissleman Ran	0.97	311	ePb	Pb	15 39 42.0	-1.7
BSC	Santa Cruz Isl	1.06	195	⇑P	Pb	15 39 43.8	-1.4
	baz=1.1,SNR=31						
BSC				⇑S	Sb	15 39 58.1	-0.7
	baz=1.1						
EDW2	Edwards Air Fo	1.09	97	⇓P	Pb	15 39 44.7	-1.2
	baz=1.1,SNR=138						
EDW2				⇓S	Sb	15 39 58.8	-1.1
	baz=1.1						
DECC	Green Verdugo	1.12	133	⇑P	Pn	15 39 45.2	-1.0
	baz=1.1,SNR=9.6						
DECC				⇓S	Sb	15 39 59.8	-0.6
	baz=1.1						
RCTC	Rector, Farmer	1.28	3	⇑P	Pn	15 39 46.9	-1.5
	baz=1.3						
RCTC				⇓S	Sn	15 40 03.7	-1.4
	baz=1.3						
MWC	Mount Wilson	1.31	127	ePb	Pn	15 39 48.1	-0.8
LRMC	Laurel Mountai	1.40	71	⇓P	Pn	15 39 49.4	-0.8
	baz=1.4,SNR=135						
LRMC				⇑Sb	Sn	15 40 08.6	+0.2
	baz=1.4						
FMP	Fort Macarthur	1.56	147	⇓Pb	Pn	15 39 52.5	+0.4
	baz=1.6						
FMP				⇓Sb	Sb	15 40 12.9	-0.1
	baz=1.6						
BFSC	Mount Baldy Ra	1.57	119	⇑Pb	Pn	15 39 52.4	-0.2
	baz=1.6,SNR=41						
BFSC				⇓Sb	Sb	15 40 13.2	-0.6
	baz=1.6						
CWC	Cottonwood Cre	1.73	35	⇓Pb	Pn	15 39 55.5	+0.8
	baz=1.7,SNR=24						
CWC				⇓Sb	Sb	15 40 18.1	-0.3
	baz=1.7						
CIS	Catalina Islan	1.78	155	⇓P	Pn	15 39 54.5	-0.7
	baz=1.8,SNR=39						
MPMC	Manual Prospec	1.81	55	⇓P	Pn	15 39 54.9	-1.0
	baz=1.8,SNR=201						
DAC	Darwin (Calif)	1.88	48	P	Pb	15 39 58.5	-0.8
DAC				eS	Sn	15 40 20.7	+0.5
GSC	Goldstone	2.07	82	ePn	Pn	15 39 58.3	-1.1
SCI	San Clemente I	2.14	163	⇑S	Sn	15 40 25.0	-1.2
	baz=2.1						
TIN	Tinemaha	2.21	23	⇓Pb	Pb	15 40 03.5	-1.4
	baz=2.2						
TIN				⇑Sb	Sb	15 40 32.9	+0.8
	baz=2.2						
MURC	Murrieta	2.25	129	⇓P	Pn	15 40 00.8	-1.0
	baz=2.3						
MURC				⇓S	Sn	15 40 27.8	-1.3
	baz=2.3						
MTUM	Tungsten Hills	2.40	14	ePn	Pn	15 40 01.9	-2.1
MTUM				ePb	Pb	15 40 02.9	-5.4
SAO	San Andreas Ge	2.45	316	ePn	Pn	15 40 03.1	-1.4
MLAC	Mammoth Lakes	2.63	8	⇑Sb	Sb	15 40 44.6	+0.1
	baz=2.6						
PFO	Pinyon Flat Ob	2.75	120	ePn	Pn	15 40 08.3	-0.5
PFO	Pinyon Flat Ob	2.75	120	⇑P	Pn	15 40 08.0	-0.8
	baz=2.7						
PFO				⇑S	Sn	15 40 41.0	-0.7
	baz=2.7						
BELC	Belle Mtn. Jos	2.92	110	⇑P	Pn	15 40 09.9	-1.2
	baz=2.9,SNR=6.9						
GMRC	Granite Mounta	3.01	94	⇑P	Pn	15 40 11.0	-1.3
	baz=3.0,SNR=19						
GMRC				⇑S	Sn	15 40 46.3	-1.8
	baz=3.0						
CMB	Columbia Colle	3.13	344	ePn	Pn	15 40 13.0	-0.8
BAR	Barrett	3.21	136	ePn	Pn	15 40 13.8	-1.1
MONP	Monument Peak	3.21	131	⇓P	Pn	15 40 14.3	-0.8
	baz=3.2						
MONP				⇑S	Sn	15 40 52.1	-1.1
	baz=3.2						
LDFC	Landfair	3.45	88	ePn	Pn	15 40 16.6	-1.7
BC3	Big Chuckawall	3.47	112	⇑P	Pn	15 40 17.1	-1.6
	baz=3.5						
NV11	Mina Array Sit	3.52	15	ePn	Pn	15 40 18.5	-0.9
NV11				eSn	Sn	15 40 58.4	-2.4
IRM	Iron Mountain	3.54	103	⇑P	Pn	15 40 18.0	-1.4
	baz=3.5						
GLA	Glamis	4.21	117	ePn	Pn	15 40 28.2	-0.5
WCN	Washoe City	4.28	355	ePn	Pn	15 40 30.0	+0.1
WCN				eSn	Sn	15 41 19.0	-0.6
W13A	Hualapai Mount	4.45	87	⇓S	Sn	15 41 21.5	-2.4
	baz=4.4						
BEKR	Beckworth	4.91	351	ePn	Pn	15 40 38.2	-0.2
BEKR				eSn	Sn	15 41 33.7	-1.2
CCUT	Cedar City	5.42	61	ePn	Pn	15 40 43.0	-2.6
ARUT	Antelope Range	5.48	58	ePn	Pn	15 40 46.0	-0.3
	8.9nm,0.6s						
Z14A	Wintersburg	5.53	106	⇓S	Sn	15 41 48.7	-1.2
	baz=5.5						
U15A	North Rim	5.88	74	⇑S	Sn	15 41 57.7	-1.5
	baz=5.9						
MVU	Marysvale	6.67	57	ePn	Pn	15 40 58.7	-4.1

*IDC **01** 15:44:28.6±0.5, 6°.83N×76°.31W, h0km, mb4.2/19, mb1 4.4/19, mb1mx4.3/24, mbtmp4.2/19, MS3.9/7, Ms1 3.8/7, ms1mx3.5/28, Error ellipse: s-maj=20.1km s-min=12.5km az=62.0*
*BJI **01** 15:44:29.0, 6°.80N×76°.30W, h4km, Ms5.3/1, Ms7 4.8/1*
*ISCJB **01** 15:44:30.4±0.2, 6°.93N±0°.03×76°.40W±0°.03, h18km, mb4.6/82, MS4.0/8, Error ellipse: s-maj=5.4km s-min=4.0km az=31.4*
*NEIC **01** 15:44:33.0±0.2, 6°.81N×76°.36W, mb4.9/56, ML4.3(RSNC), Error ellipse: s-maj=5.8km s-min=4.7km az=29.0*
NEIC Felt at Bello, Caucasia and Medellin.
*SZGRF **01** 15:44:38.4, 7°.43N×75°.87W, h33km, mb4.9, Northern Colombia*
ISC 01 15:44:31.6±0.3**, 6°.87N**±0°.05×**76°.32W**±0°.05**, h18km, n202, σ1s.14**/207**, mb4.8**/82**, MS3.9**/8**, 2C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HELC	Santa Helena	0.99	129	⇓iP	Pb	15 44 49.8	-0.7
HELC				eS	Sb	15 45 03.7	+0.4
SOLC	Bahia Solano	1.23	246	eP	Pn	15 44 54.0	0.0
RUSC	La Rusia	3.36	106	⇑iP	Pn	15 45 25.4	+1.8
RUSC				eS	Sn	15 46 06.0	+2.7
BCIP	Isla Barro Col	4.17	303	ePn	Pn	15 45 34.0	-0.4
SDV	Santo Domingo	5.98	70	ePn	Pn	15 46 00.9	+1.5
OTAV	Otavalo	6.92	198	ePn	Pn	15 46 14.0	+1.4
OTAV				eSn	Sn	15 47 34.8	+3.6
JTS	JuntasAbangare	9.19	292	ePn	Pn	15 46 45.0	+1.6
	22nm,0.9s						
JTS				eSn	Sn	15 48 24.4	-2.1
SDDR	Presa de Saban	13.00	22	ePn	Pn	15 47 35.4	-0.2
CELP	Cerrillos	14.64	40	ePn	Pn	15 47 57.1	-0.8
SJG	San Juan	14.94	41	ePn	Pn	15 48 02.6	+0.6
SJG	San Juan	14.94	41	Pn	Pn	15 47 58.5	-3.5
	2.9nm,0.3s,baz=334,slow=18,SNR=3.2						
CBYP	Canovanas	15.25	41	ePn	Pn	15 48 08.0	+1.8
	37nm,0.6s						
MTP	Monte Pirata	15.32	42	ePn	Pn	15 48 03.9	-3.2
	37nm,1.0s						
STVI	Saint Thomas	15.90	43	ePn	Pn	15 48 08.1	-6.5
	56nm,0.8s						
NNA	Nana	18.74	182	eP	P	15 48 47.0	-2.7
	12nm,0.8s						
SAML	Samuel	20.45	140	eP	P	15 49 05.9	-2.4
	26nm,0.9s						
CMIG	Matias Romero	20.79	301	P	P	15 49 13.0	+1.0
CMIG	Matias Romero	20.79	301	P	P	15 49 13.0	+1.0
	2.0nm,0.8s,baz=161,slow=18,SNR=2.8						
CMIG				LR	LR	15 58 18.2	
	comp=Z,328nm,21.0s,baz=31,slow=40						
LPAZ	La Paz	24.39	161	eP	P	15 49 47.5	-2.3
	12nm,0.8s						
LPAZ	La Paz	24.39	161	P	P	15 49 49.4	-0.5
	2.3nm,0.6s,baz=353,slow=9.6,SNR=13						
SIV	San Ignacio	27.27	146	P	P	15 50 15.2	-0.1
SIV	San Ignacio	27.27	146	P	P	15 50 15.2	-0.1
	1.7nm,0.5s,baz=316,slow=9.7,SNR=7.1						
SIV				LR	LR	16 01 20.6	
	comp=Z,338nm,19.7s,slow=37						
PARMO	Parma	32.10	339	eP	P	15 50 59.0	+1.2
SDMD	Soldier's Deli	32.40	359	eP	P	15 50 59.4	-1.1
	26nm,0.8s						
USIN	University of	32.63	343	eP	P	15 51 00.1	-2.4
	34nm,0.9s						
TXAR	Lajitas Array	34.11	314	P	P	15 51 15.8	+0.2
TXAR	Lajitas Array	34.11	314	P	P	15 51 15.8	+0.2
	0.6nm,0.8s,baz=134,slow=11,SNR=5.2						
BDFB	Brasilia	35.86	129	P	P	15 51 29.5	-1.4
BDFB	Brasilia	35.86	129	P	P	15 51 29.5	-1.4
	3.5nm,0.5s,baz=292,slow=12,SNR=6.7						
BDFB				LR	LR	16 05 18.5	
	comp=Z,97nm,19.0s,baz=306,slow=35						
CPUP	Villa Florida	37.80	152	LR	LR	16 08 35.8	
	comp=Z,232nm,18.6s,baz=166,slow=38						
CFAA	Coronel Fontan	39.03	169	P	P	15 51 58.1	+0.7
CFAA	Coronel Fontan	39.03	169	P	P	15 51 58.1	+0.7
	1.1nm,0.6s,baz=337,slow=7.1,SNR=26						
ANMO	Albuquerque	39.36	319	eP	P	15 51 59.7	-0.7
	3.8nm,0.9s						
SDCO	Great Sand Dun	40.57	324	eP	P	15 52 12.6	+2.1
	8.7nm,1.1s						
ISCO	Idaho Springs	42.03	326	eP	P	15 52 24.6	+2.1
	4.9nm,1.1s						
MVCO	Mesa Verde	42.06	321	eP	P	15 52 20.8	-1.9
	5.6nm,1.2s						
PV01	Paradox Valley	42.67	322	eP	P	15 52 26.9	-0.8
PV01				epP	pP	15 52 36.3	+2.9
WUAZ	Wupatki	42.97	317	eP	P	15 52 28.1	-1.9
	6.2nm,0.9s						
GLA	Glamis	44.19	311	eP	P	15 52 37.6	-2.2
	14nm,1.2s						
GLA				epP	pP	15 52 48.8	+3.3
SRU	San Rafael	44.48	321	epP	pP	15 52 50.5	+2.6
MVU	Marysvale	45.19	320	eP	P	15 52 49.9	+1.9
	9.8nm,1.3s						
CCUT	Cedar City	45.41	318	epP	pP	15 52 58.5	+3.1
DAU	Daniels Canyon	45.72	322	eP	P	15 52 53.2	+1.1
BW06	Boulder Array	46.22	326	epP	pP	15 53 05.5	+3.8
PDAR	Pinedale Array	46.22	326	P	P	15 52 56.4	+0.4
PDAR	Pinedale Array	46.22	326	P	P	15 52 56.4	+0.4
	0.6nm,0.6s,baz=116,slow=10,SNR=6.1						
ULM	Lac du Bonnet	46.23	343	LR	LR	16 11 02.0	
	comp=Z,110nm,18.1s,baz=50,slow=34						
DUG	Dugway	46.55	321	eP	P	15 53 00.2	+1.7
	7.7nm,1.1s						
DUG				epP	pP	15 53 06.9	+2.7
LOHW	Long Hollow	47.35	326	eP	P	15 53 00.9	-3.9
	7.5nm,1.3s						
MOOW	Moose Ponds	47.52	326	eP	P	15 53 05.2	-1.0
MOOW				epP	pP	15 53 13.7	+1.9
PLCA	Paso Flores	47.66	174	eP	P	15 53 06.1	-0.9
	9.2nm,0.9s						
PLCA	Paso Flores	47.66	174	P	P	15 53 06.9	-0.1
	3.8nm,0.8s,baz=344,slow=9.6,SNR=7.7						
PLCA				LR	LR	16 11 26.5	
	comp=Z,51nm,21.5s,baz=356,slow=34						
IMW	Indian Meadow	47.72	326	eP	P	15 53 06.3	-1.4
SCHQ	Schefferville	48.43	7	P	P	15 53 13.2	+0.4
SCHQ	Schefferville	48.43	7	P	P	15 53 13.2	+0.4
	8.8nm,1.0s,baz=198,slow=5.5,SNR=6.0						
NV11	Mina Array Sit	49.12	316	eP	P	15 53 17.1	-1.4
NVAR	Mina Array Bea	49.22	316	P	P	15 53 19.7	+0.4
NVAR				PcP	PcP	15 54 43.1	+0.7
NVAR	Mina Array Bea	49.22	316	P	P	15 53 19.7	+0.4
	1.3nm,0.8s,baz=124,slow=6.8,SNR=11						
NVAR				PcP	PcP	15 54 43.1	+0.7
	0.8nm,0.7s,baz=132,slow=5.4,SNR=4.0						
BOZ	Bozeman (W)	49.23	328	eP	P	15 53 17.8	-1.4
	2.2nm,1.0s						
MCMT	McKenzie Canyo	49.37	326	eP	P	15 53 18.7	-1.7
	2.4nm,1.1s						
HLID	Hailey	49.49	324	eP	P	15 53 19.6	-1.7
	2.7nm,1.0s						
HLID				epP	pP	15 53 28.5	+1.5
WVOR	Wild Horse Val	51.44	320	eP	P	15 53 35.5	-0.5
	13nm,1.2s						
YKA	Yellowknife Ar	62.16	341	P	P	15 54 51.0	-0.5
YKA	Yellowknife Ar	62.16	341	P	P	15 54 51.0	-0.5
	3.0nm,0.6s,baz=132,slow=6.9,SNR=71						
SUMG	Summit	69.55	11	eP	P	15 55 37.8	-1.7
	12nm,0.7s						
DBIC	Dimbokro	70.90	85	P	P	15 55 47.9	-0.5
DBIC	Dimbokro	70.90	85	P	P	15 55 47.9	-0.5
	1.2nm,0.5s,baz=248,slow=6.2,SNR=3.5						
ESDC	Sonseca Array	72.07	51	P	P	15 55 55.5	+0.4
ESDC	Sonseca Array	72.07	51	P	P	15 55 55.5	+0.4
	4.6nm,0.9s,baz=268,slow=6.2,SNR=22						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSF	Rostrenen	73.64	42	eP	P	15 56 04.5	+0.4
	24nm,0.9s						
ROSF	Rostrenen	73.64	42	eP	P	15 56 04.5	+0.4
	24nm,0.9s						
DOT	Dot Lake	74.09	335	eP	P	15 56 00.6	-5.9
	7.2nm,0.9s						
SGMF	Saint Gilles	74.10	42	eP	P	15 56 06.4	-0.4
	19nm,0.9s						
SGMF	Saint Gilles	74.10	42	eP	P	15 56 06.4	-0.4
	19nm,0.9s						
SJPF	Ste Jean	74.46	47	eP	P	15 56 09.9	+0.8
	38nm,0.9s						
SJPF	Ste Jean	74.46	47	eP	P	15 56 09.9	+0.8
	38nm,0.9s						
ETSF	Etsaut	74.93	48	eP	P	15 56 12.5	+0.6
	9.8nm,0.8s						
ETSF	Etsaut	74.93	48	eP	P	15 56 12.5	+0.6
	9.8nm,0.8s						
GRR	Gorron	75.25	42	eP	P	15 56 13.8	+0.4
	68nm,1.1s						
GRR	Gorron	75.25	42	eP	P	15 56 13.8	+0.4
	68nm,1.1s						
FLN	La Foliniere	75.53	41	eP	P	15 56 15.6	+0.5
	17nm,0.8s						
FLN	La Foliniere	75.53	41	eP	P	15 56 15.6	+0.5
	17nm,0.8s						
MFF	Saint Martin d	75.54	44	eP	P	15 56 15.7	+0.5
	21nm,0.9s						
MFF	Saint Martin d	75.54	44	eP	P	15 56 15.7	+0.5
	21nm,0.9s						
ILAR	Eielson Array	75.59	335	P	P	15 56 14.3	-0.8
ILAR	Eielson Array	75.59	335	P	P	15 56 14.3	-0.8
	0.5nm,0.7s,baz=123,slow=4.8,SNR=9.7						
EPF	Esparros	75.60	47	eP	P	15 56 15.7	0.0
	9.8nm,0.8s						
EPF	Esparros	75.60	47	eP	P	15 56 15.7	0.0
	9.8nm,0.8s						
LDF	La Druitiere	75.75	42	eP	P	15 56 16.7	+0.3
	38nm,1.0s						
LDF	La Druitiere	75.75	42	eP	P	15 56 16.7	+0.3
	38nm,1.0s						
LFF	La Frestale	76.02	46	eP	P	15 56 18.3	+0.3
LFF	La Frestale	76.02	46	eP	P	15 56 18.3	+0.3
PPT	Papeete	76.28	250	LR	LR	16 20 26.6	
	comp=Z,142nm,20.2s,baz=200,slow=28						
PPT2	Papeete2	76.28	250	eLR	LR	16 20 29.4	
	96nm,24.5s						
RJF	Les Rejaudoux	76.60	45	eP	P	15 56 21.5	+0.2
	15nm,0.9s						
RJF	Les Rejaudoux	76.60	45	eP	P	15 56 21.5	+0.2
	15nm,0.9s						
TORD	Torodi Ar. Bea	76.84	78	P	P	15 56 22.3	-0.9
TORD	Torodi Ar. Bea	76.84	78	P	P	15 56 22.3	-0.9
	1.5nm,0.9s,baz=296,slow=4.3,SNR=12						
CAF	Calviac	76.96	46	eP	P	15 56 23.8	+0.4
	16nm,0.9s						
CAF	Calviac	76.96	46	eP	P	15 56 23.8	+0.4
	16nm,0.9s						
MTLF	Montolieu	76.99	47	eP	P	15 56 23.7	+0.2
	48nm,1.5s						
MTLF	Montolieu	76.99	47	eP	P	15 56 23.7	+0.2
	48nm,1.5s						
TCF	Toulx Ste Croi	77.14	44	eP	P	15 56 24.4	0.0
TCF	Toulx Ste Croi	77.14	44	eP	P	15 56 24.4	0.0
BGF	Bois d'Agland	77.60	44	eP	P	15 56 27.0	+0.1
BGF	Bois d'Agland	77.60	44	eP	P	15 56 27.0	+0.1
AVF	Avril sur Loir	77.96	44	eP	P	15 56 28.7	-0.1
	29nm,1.2s						
AVF	Avril sur Loir	77.96	44	eP	P	15 56 28.7	-0.1
	29nm,1.2s						
SSF	Saint Saulge	78.08	43	eP	P	15 56 29.4	-0.1
	15nm,1.0s						
SSF	Saint Saulge	78.08	43	eP	P	15 56 29.4	-0.1
	15nm,1.0s						
SMF	Signal de Mont	78.29	44	eP	P	15 56 30.7	0.0
	34nm,1.2s						
SMF	Signal de Mont	78.29	44	eP	P	15 56 30.7	0.0
	34nm,1.2s						
LOR	Lormes	78.33	43	eP	P	15 56 30.8	-0.1
	14nm,1.0s						
LOR	Lormes	78.33	43	eP	P	15 56 30.8	-0.1
	14nm,1.0s						
BAIF	Baives	78.69	40	eP	P	15 56 32.9	+0.1
	12nm,1.0s						
BAIF	Baives	78.69	40	eP	P	15 56 32.9	+0.1
	12nm,1.0s						
VIVF	Saint-Julien-l	78.81	46	eP	P	15 56 33.6	-0.1
	17nm,1.1s						
VIVF	Saint-Julien-l	78.81	46	eP	P	15 56 33.6	-0.1
	17nm,1.1s						
GIVF	Givet	79.09	40	eP	P	15 56 35.4	+0.4
	32nm,1.1s						
GIVF	Givet	79.09	40	eP	P	15 56 35.4	+0.4
	32nm,1.1s						
SFTF	Sexfontaines	79.16	42	eP	P	15 56 35.5	0.0
	60nm,1.3s						
SFTF	Sexfontaines	79.16	42	eP	P	15 56 35.5	0.0
	60nm,1.3s						
MEZF	Maizieres J'vi	79.18	42	eP	P	15 56 35.8	+0.3
MEZF	Maizieres J'vi	79.18	42	eP	P	15 56 35.8	+0.3
BCLA	Clavier	79.41	40	P	P	15 56 37.9	+1.1
	comp=Z,11nm,2.1s						
SMRF	Simiane la Rot	79.44	47	eP	P	15 56 37.3	+0.2
SMRF	Simiane la Rot	79.44	47	eP	P	15 56 37.3	+0.2
PAGF	Fort de Pagny	79.63	42	eP	P	15 56 38.2	+0.2
	comp=Z,7.8nm,1.0s						
PAGF	Fort de Pagny	79.63	42	eP	P	15 56 38.2	+0.2
	comp=Z,7.8nm,1.0s						
ORIF	Oris-en-Rattie	79.67	46	eP	P	15 56 39.5	+1.1
	comp=Z,23nm,1.0s						
ORIF	Oris-en-Rattie	79.67	46	eP	P	15 56 39.5	+1.1
	comp=Z,23nm,1.0s						
CABF	La Chapelle	79.83	44	eP	P	15 56 39.6	+0.3
	comp=Z,14nm,1.0s						
CABF	La Chapelle	79.83	44	eP	P	15 56 39.6	+0.3
	comp=Z,14nm,1.0s						
TAM	Tamanrasset	79.88	68	eP	P	15 56 39.9	-0.2
	comp=Z,3.0nm,1.1s						
TAM				ePcP	PcP	15 56 50.3	+2.6
WLF	Walferdange	79.93	41	P	P	15 56 40.7	+1.0
	comp=Z,11nm,1.1s						
WLF	Walferdange	79.93	41	eP	P	15 56 40.8	+1.2
	comp=Z,16nm,0.9s						
WLF	Walferdange	79.93	41	eP	P	15 56 38.0	-1.6
	comp=Z,18nm,1.0s						
WLF				ePcP	PcP	15 56 47.9	+0.8
HAU	Haudompre	80.03	43	eP	P	15 56 40.2	0.0
HAU	Haudompre	80.03	43	eP	P	15 56 40.2	0.0
FRF	La Foret Royal	80.22	47	eP	P	15 56 41.5	+0.2
	comp=Z,17nm,1.1s						
FRF	La Foret Royal	80.22	47	eP	P	15 56 41.5	+0.2
	comp=Z,17nm,1.0s						
LPL	La Plagne	80.28	45	eP	P	15 56 42.8	+0.9
LPL	La Plagne	80.28	45	eP	P	15 56 42.8	+0.9
LPG	La Plagne	80.29	45	eP	P	15 56 43.0	+1.0
	comp=Z,20nm,1.1s						
LPG	La Plagne	80.29	45	eP	P	15 56 43.0	+1.0
	comp=Z,20nm,1.1s						
MBDF	Montbardon	80.30	46	eP	P	15 56 42.7	+0.8
	comp=Z,5.3nm,0.9s						
MBDF	Montbardon	80.30	46	eP	P	15 56 42.7	+0.8
	comp=Z,5.3nm,0.9s						
HINF	Hinteralfeld	80.37	43	eP	P	15 56 41.9	-0.2
	comp=Z,12nm,1.0s						
HINF	Hinteralfeld	80.37	43	eP	P	15 56 41.9	-0.2
	comp=Z,12nm,1.0s						
ECH	Echery	80.58	42	eP	P	15 56 40.0	-3.1
	comp=Z,11nm,1.1s						
CDF	Champ du Feu	80.66	42	eP	P	15 56 43.7	0.0
	comp=Z,11nm,1.0s						
CDF	Champ du Feu	80.66	42	eP	P	15 56 43.7	0.0
	comp=Z,11nm,1.0s						
SBF	Sospel	80.78	47	eP	P	15 56 44.6	+0.2
SBF	Sospel	80.78	47	eP	P	15 56 44.6	+0.2
TNS	Taunus Mts	81.42	40	eP	P	15 56 48.8	+1.1
	comp=Z,17nm,1.3s						
STU	Stuttgart	81.93	42	eP	P	15 56 51.0	+0.7
PGF	Pioggiola	81.96	48	eP	P	15 56 50.6	-0.1
	comp=Z,57nm,1.5s						
PGF	Pioggiola	81.96	48	eP	P	15 56 50.6	-0.1
	comp=Z,57nm,1.5s						
NRDL	Niedersach Rie	82.42	38	eP	P	15 56 54.1	+1.4
	comp=Z,6.0nm,1.0s						
BSEG	Bad Segeberg	82.52	37	eP	P	15 56 54.4	+1.2
	comp=Z,12nm,0.8s						
CLZ	Clausthal	82.61	39	eP	P	15 56 55.1	+1.3
	comp=Z,8.0nm,1.1s						
NB2	NORSAR Subarra	82.84	29	P	P	15 56 55.7	+0.8
	comp=Z,5.2nm,0.8s,baz=271,slow=5.3						
NOA	NORSAR Array B	82.84	29	P	P	15 56 56.1	+1.2
NOA	NORSAR Array B	82.84	29	P	P	15 56 56.1	+1.2
	comp=Z,3.5nm,0.7s,baz=274,slow=5.3,SNR=15						
NEUB	Neuenburg	83.51	39	eP	P	15 56 59.6	+1.2
	comp=Z,20nm,1.5s						
MANZ	Manzenberg	83.78	40	eP	P	15 57 01.2	+1.2
	comp=Z,7.0nm,1.1s						
PLN	Plauen	83.79	40	eP	P	15 57 01.0	+1.1
	comp=Z,57nm,1.3s						
WERD	Werda	83.88	40	eP	P	15 57 01.5	+1.0
	comp=Z,3.0nm,0.5s						
GUNZ	Gunzen	83.90	40	eP	P	15 57 01.7	+1.1
WERN	Wernitzgruen	83.94	40	eP	P	15 57 02.0	+1.3
	comp=Z,9.0nm,1.5s						
TANN	Tannenbergstha	83.98	40	eP	P	15 57 02.2	+1.2
	comp=Z,5.0nm,1.1s						
CLL	Collm	84.27	39	eP	P	15 57 03.4	+1.1
	comp=Z,6.0nm,1.0s						
CLL	Collm	84.27	39⇑	iP	P	15 57 02.9	+0.6
	comp=Z,8.0nm,1.2s						
WET	Wettzell	84.33	41	eP	P	15 57 04.0	+1.2
	comp=Z,11nm,1.3s						
FBE	Freiberg	84.52	39	eP	P	15 57 05.1	+1.5
	comp=Z,8.0nm,1.1s						
KHC	Kasperske Hory	84.80	41	eP	P	15 57 06.1	+1.0
BRG	Berggiesshubel	84.89	40	eP	P	15 57 06.3	+0.8
	comp=Z,6.5nm,1.1s						
BRG	Berggiesshubel	84.89	40	eP	P	15 57 06.7	+1.2
	comp=Z,7.0nm,1.1s						
GEC2	GERESS Array S	84.90	42	eP	P	15 57 06.6	+0.9
	comp=Z,8.0nm,1.1s						
GERES	GERESS Array B	84.90	42	P	P	15 57 06.4	+0.7
GERES	GERESS Array B	84.90	42	P	P	15 57 06.4	+0.7
	comp=Z,3.3nm,0.9s,baz=262,slow=3.8,SNR=20						
PRU	Pruhonice	85.35	40	eP	P	15 57 08.9	+1.1
UPC	Upice	86.24	40	eP	P	15 57 13.5	+1.3
DPC	Dobruska-Polom	86.45	40	eP	P	15 57 14.6	+1.2
ARCES	ARCESS Array B	87.73	20	P	P	15 57 19.5	+0.4
ARCES	ARCESS Array B	87.73	20	P	P	15 57 19.5	+0.4
	comp=Z,2.1nm,0.6s,baz=268,slow=3.6,SNR=18						
FINES	FINESS Array B	89.90	28	P	P	15 57 30.3	+0.8
FINES	FINESS Array B	89.90	28	P	P	15 57 30.3	+0.8
	comp=Z,2.3nm,0.7s,baz=349,slow=1.9,SNR=8.7						
SONM	Songino Array	125.48	358	PKP	PKPdf	16 03 32.2	+0.1
SONM	Songino Array	125.48	358	PKP	PKPdf	16 03 32.2	+0.1
	comp=Z,0.7nm,0.8s,baz=318,slow=1.6,SNR=6.9						
CN2	Changchun	125.86	341	ePKP	PKPdf	16 03 31.1	-1.7
WMQ	Urumqi	127.51	15	ePKP	PKPdf	16 03 36.2	+0.2
HHC	Hu-ho-hao-te	131.97	352	ePKP	PKPdf	16 03 41.2	-3.4
HHC				PP	PP	16 06 06.8	+2.5
HHC				PKS	PKSdf	16 07 15.4	-5.8
HHC				SKS	SKSdf	16 10 48.4	-7.2
HHC				AMB	AMB		
	comp=Z,260nm,12.8s						
HHC				LR	LR		
	comp=N,240nm,19.6s						
HHC				LR	LR		
	comp=E,210nm,21.0s						
HHC				LR	LR		
	comp=Z,200nm,19.6s						
STKA	Stephens Creek	136.79	230	PKP	PKPdf	16 03 53.5	-0.2
STKA	Stephens Creek	136.79	230	PKP	PKPdf	16 03 53.5	-0.2
	comp=Z,1.8nm,0.8s,baz=20,slow=2.6,SNR=3.8						
HYB	Hyderabad	145.38	46	i PKP	PKPbc	16 04 08.5	-0.9
ASAR	Alice Springs	146.52	237	PKPbc	PKPdf	16 04 11.4	0.0
ASAR	Alice Springs	146.52	237	PKPbc	PKPdf	16 04 11.4	0.0
	comp=Z,1.9nm,0.6s,baz=116,slow=3.4,SNR=34						
WRA	Warramunga Arr	147.54	243	PKPbc	PKPdf	16 04 13.2	0.0
WRA	Warramunga Arr	147.54	243	PKPbc	PKPdf	16 04 13.2	0.0
	comp=Z,1.8nm,0.6s,baz=108,slow=2.3,SNR=22						
CMAR	Chiang Mai Arr	154.41	10	PKPbc	PKPbc	16 04 32.0	0.0
CMAR				PKPab	PKPab	16 04 45.2	-0.8
CMAR	Chiang Mai Arr	154.41	10	PKPbc	PKPbc	16 04 32.0	0.0
	comp=Z,0.9nm,0.6s,baz=313,slow=3.0,SNR=5.7						
CMAR				PKPab	PKPab	16 04 45.2	-0.8
	comp=Z,2.4nm,0.8s,baz=327,slow=5.3,SNR=9.3						

MAN 01 15:46:06, 17°.46N×120°.80E, h3km, mb3.9, ML2.7, MS2.4, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.21	336	eP	Pg	15 46 10.6	+0.5
ABRA				eS	Sg	15 46 13.4	+0.6
SIPP	Brgy, Tapao	0.57	325⇓	eP	Pg	15 46 17.1	+0.2
SIPP				i S	Sn	15 46 30.8	-0.1
PIP	Pasuquin	0.88	349⇑	iP	Pg	15 46 21.5	-1.4
PIP				eS	Sg	15 46 35.1	+0.7
CVP	Callao Caves	1.00	76⇓	iP	Pg	15 46 24.3	-1.0
CVP				i S	Sb	15 46 39.4	-0.2
CAUP	Cauayan	1.10	118	eP	Pn	15 46 28.1	-0.3
BOLP	Bolinao	1.37	219	eP	Pn	15 46 30.9	-1.1
PALP	Palanan	1.60	104	eP	Pn	15 46 34.6	-0.6
BALP	Baler	1.86	156	eP	Pn	15 46 38.7	-0.1

IDC 01 15:47:02.7±70.0, 20°.02S×179°.13E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=1259.0km s-min=166.3km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.59	243	P	P	15 54 01.7	-0.4
	0.7nm,0.5s,baz=103,slow=12,SNR=3.4						
WRA	Warramunga Arr	42.00	262	P	P	15 54 56.2	+0.1
	0.2nm,0.3s,baz=95,slow=7.9,SNR=4.9						
ASAR	Alice Springs	42.01	257	P	P	15 54 56.0	-0.1
	0.5nm,0.8s,baz=96,slow=8.3,SNR=6.8						

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*CSEM **01** 15:54:26.6, 42°.26N×13°.47E, h10km, MD1.9/9, After ROM*
ROM 01 15:54:26.6±0.1, 42°.26N×13°.47E, h10km, Md1.9/9, Ml1.3/7, 4C, Error ellipse: s-maj=1.5km s-min=1.0km az=34.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.08	89⇑	iPg	Pg	15 54 29.5	+0.4
FAGN				Sg	Sg	15 54 31.0	+0.2
	528nm,0.5s						
FAGN	Fagnano	0.08	89⇑	iPg	Pg	15 54 29.5	+0.4
FAGN				Sg	Sg	15 54 31.0	+0.2
	528nm,0.5s						
AQU	L'Aquila	0.10	330	Pg	Pg	15 54 29.9	+0.6
AQU				Sg	Sg	15 54 31.9	+0.6
	58nm,0.2s						
AQU	L'Aquila	0.10	330	Pg	Pg	15 54 29.9	+0.6
AQU				Sg	Sg	15 54 31.9	+0.6
	58nm,0.2s						
FIAM	Fiamignano	0.26	271⇑	iPg	Pg	15 54 32.7	+0.6
FIAM				Sg	Sg	15 54 36.9	+1.1
	35nm,0.3s						
FIAM	Fiamignano	0.26	271⇑	iPg	Pg	15 54 32.7	+0.6
FIAM				Sg	Sg	15 54 36.9	+1.1
	35nm,0.3s						
CAMP	Campotosto	0.28	350	Pg	Pg	15 54 32.7	+0.3
CAMP				Sg	Sb	15 54 37.8	-1.0
	17nm,0.5s						
CAMP	Campotosto	0.28	350	Pg	Pg	15 54 32.7	+0.3
CAMP				Sg	Sb	15 54 37.8	-1.0
	17nm,0.5s						
VCEL	Villa Celiera	0.30	64	Pg	Pb	15 54 33.8	-0.5
VCEL				Sg	Sb	15 54 38.5	-1.0
	55nm,0.4s						
VCEL	Villa Celiera	0.30	64	Pg	Pb	15 54 33.8	-0.5
VCEL				Sg	Sb	15 54 38.5	-1.0
	55nm,0.4s						
TERO	Teramo	0.37	15	Pg	Pg	15 54 34.1	0.0
TERO				Sg	Sg	15 54 39.9	+0.8
	31nm,0.3s						
TERO	Teramo	0.37	15	Pg	Pg	15 54 34.1	0.0
TERO				Sg	Sg	15 54 39.9	+0.8
	31nm,0.3s						
VVLD	Villa Vallelon	0.41	164	Pg	Pg	15 54 35.1	+0.3
	38nm,1.1s						
VVLD	Villa Vallelon	0.41	164	Pg	Pg	15 54 35.1	+0.3
	38nm,1.1s						
INTR	Introdacqua	0.41	128	Pg	Pg	15 54 35.3	+0.5
INTR				Sg	Sb	15 54 41.6	-0.9
INTR	Introdacqua	0.41	128	Pg	Pg	15 54 35.3	+0.5
INTR				Sg	Sb	15 54 41.6	-0.9
LNSS	Leonessa	0.47	317	Pg	Pb	15 54 36.9	-0.2
LNSS	Leonessa	0.47	317	Pg	Pb	15 54 36.9	-0.2
NRCA	Norcia	0.63	335	Pg	Pg	15 54 38.8	-0.1
NRCA				Sg	Sb	15 54 48.2	-0.6
	12nm,0.1s						
NRCA	Norcia	0.63	335	Pg	Pg	15 54 38.8	-0.1
NRCA				Sg	Sb	15 54 48.2	-0.6
	12nm,0.1s						

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*IDC **01** 16:32:09.7±1.2, 37°.42N×43°.88E, h0km, mb3.4/9, mb1 3.5/14, mb1mx3.4/31, mbtmp3.3/14, ML2.9/4, MS2.7/2, Ms1 2.7/2, ms1mx2.4/30, Error ellipse: s-maj=21.1km s-min=16.6km az=144.0*
*ISK **01** 16:32:10.8, 37°.38N×44°.15E, h26km, ML3.8*
*DDA **01** 16:32:11.8, 37°.67N×43°.93E, h7km, MD3.4*
*CSEM **01** 16:32:12.8±0.1, 37°.62N×43°.91E, h2km, MD3.4, Error ellipse: s-maj=4.6km s-min=3.3km az=26.0*
*ISCJB **01** 16:32:12.1±0.6, 37°.61N±0°.03×43°.96E±0°.02, h5km±5km, mb3.3/9, Error ellipse: s-maj=4.9km s-min=3.1km az=173.9*
*TEH **01** 16:32:15.1, 37°.70N×43°.90E, h23km, ML3.7*
ISC 01 16:32:12.4±0.9, 37°.61N±0°.03×43°.92E±0°.02, h12km±6km, n72, σ1.s58/85, mb3.2/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	HAKKARI	0.17	254	i P	Pg	16 32 15.8	-0.7
HAKT				i S	Sg	16 32 20.1	+0.8
HAKT	HAKKARI	0.17	254	i P	Pg	16 32 15.8	-0.7
HAKT				i S	Sg	16 32 20.1	+0.8
CUKT	Cukurca	0.43	215	ePG	Pg	16 32 20.5	-0.5
CUKT				eSG	Sb	16 32 28.5	-0.1
CUKT	Cukurca	0.43	215	ePg	Pg	16 32 20.5	-0.5
CUKT				eSg	Sb	16 32 28.5	-0.1
GEVA	Gevas	0.98	316	i P	Pg	16 32 29.2	-2.1
GEVA				eS	Sg	16 32 43.3	-0.8
CLDR	Caldiran	1.54	360	ePN	Pb	16 32 40.6	-0.3
CLDR				eSN	Sg	16 33 02.0	+0.1
CLDR	Caldiran	1.54	360	ePn	Pb	16 32 40.6	-0.3
CLDR				eSn	Sg	16 33 02.0	+0.1
TATV	Tatvan	1.58	305	i P	Pg	16 32 43.0	+0.2
TATV				i S	Sg	16 33 06.6	+3.2
TATV	Tatvan	1.58	305	i P	Pg	16 32 43.0	+0.2
IAZR	Azarshahr	1.64	87	ePn	Pn	16 32 40.7	-0.6
IAZR				eSg	Sg	16 33 07.5	+2.3
IAZR				e		16 33 12.7	
	comp=Z,11μm,0.2s						
IMRD	Marand	1.79	51	ePn	Pn	16 32 43.7	+0.4
IMRD				eSg	Sg	16 33 10.1	+0.1
IMRD				e		16 33 17.9	
	comp=Z,6μm,0.3s						
ITBZ	Tabriz	1.87	70	ePn	Pb	16 32 45.7	-0.9
ITBZ				eSg	Sg	16 33 13.3	+0.7
ITBZ				e		16 33 18.8	
	comp=Z,2μm,0.3s						
DYDN	Diyadin	1.94	355	i P	Pb	16 32 47.8	-0.1
DYDN				i S	Sg	16 33 14.1	-0.8
DYDN	Diyadin	1.94	355	i P	Pb	16 32 47.8	-0.1
IFTB	Fath-abad	2.00	77	ePn	Pn	16 32 47.2	+0.9
BEST	Besiri	2.12	279	i P	Pb	16 32 49.9	-0.9
BEST				i S	Sb	16 33 17.6	+0.6
IHRS	Heris	2.57	73	ePn	Pn	16 32 55.3	+1.3
IHRS				e		16 33 58.2	
	comp=Z,2μm,0.4s						
GNI	Garni	2.62	14	ePN	Pn	16 32 55.4	+0.7
GNI	Garni	2.62	14	Pn	Pb	16 32 57.3	-2.1
	comp=Z,9.2nm,0.3s,baz=342,slow=2.2,SNR=22						
GNI				Lg	Lg	16 33 36.1	
	comp=Z,2.2nm,0.3s,baz=198,slow=22,SNR=3.2						
GNI	Garni	2.62	14	ePn	Pn	16 32 55.4	+0.7
DIY	Diyarbakir	2.94	277	ePN	Pn	16 33 00.6	+1.6
DIY	Diyarbakir	2.94	277	ePn	Pn	16 33 00.6	+1.6
ISRB	Sarab	2.98	85	ePn	Pn	16 33 01.4	+1.7
ISRB				eSg	Sg	16 33 47.7	-0.5
ISRB				e		16 33 57.3	
	comp=Z,2μm,0.5s						
DIYA	Diyarbakir	3.02	277	i P	Pn	16 33 01.9	+1.8
DIYA				i S	Sb	16 33 41.3	-1.8
DIYA	Diyarbakir	3.02	277	i P	Pn	16 33 01.9	+1.8
EZM	Erzurum	3.04	320	ePN	Pn	16 33 02.6	+2.0
IDHR	Dehrash	3.52	145	ePn	Pn	16 33 09.2	+2.1
IDHR				e		16 34 17.2	
	comp=Z,3μm,0.3s						
IDHR	Dehrash	3.52	145	ePn	Pn	16 33 09.2	+2.1
ILIN	Lien	3.64	137	ePn	Pn	16 33 10.9	+2.1
ILIN				e		16 34 17.9	
	comp=Z,2μm,0.4s						
ILIN	Lien	3.64	137	ePn	Pn	16 33 10.9	+2.1
SVRC	Sivrice-ELAZID	3.72	283	ePN	Pn	16 33 11.5	+1.6
SVRC	Sivrice-ELAZID	3.72	283	ePn	Pn	16 33 11.5	+1.6
PTK	Pertek	3.79	291	ePN	Pn	16 33 12.3	+1.6
PTK	Pertek	3.79	291	ePn	Pn	16 33 12.3	+1.6
ERZN	Erzincan	3.84	302	ePN	Pn	16 33 13.6	+2.2
IVIS	Veis	3.88	141	ePn	Pn	16 33 14.4	+2.4
IVIS				e		16 34 31.6	
	comp=N,2μm,0.5s						
IVIS	Veis	3.88	141	ePn	Pn	16 33 14.4	+2.4
IGHG	Ghaleghazi	3.91	146	ePn	Pn	16 33 14.6	+2.1
IGHG				e		16 34 32.6	
	comp=Z,2μm,0.3s						
IGHG	Ghaleghazi	3.91	146	ePn	Pn	16 33 14.6	+2.1
ELZG	Elazig	3.99	284	eP	Pn	16 33 13.1	-0.5
ELZG				eS	Sg	16 34 20.1	-0.5
ELZG	Elazig	3.99	284	eP	Pn	16 33 13.1	-0.5
DGRG	David-gareji	4.00	16	P	Pb	16 33 19.5	-3.3
DGRG				S	Sg	16 34 23.9	+3.0
BAYT	Ayd˜–ntepe-Bay	4.05	315	ePN	Pn	16 33 16.9	+2.5
BAYT	Ayd˜–ntepe-Bay	4.05	315	ePn	Pn	16 33 16.9	+2.5
EZC	Erzincan	4.17	302	ePN	Pn	16 33 18.5	+2.6
EZC	Erzincan	4.17	302	ePn	Pn	16 33 18.5	+2.6
BHD	Baghdad	4.34	175	i x	Pn	16 33 14.0	-4.2
BHD				i x	Sn	16 34 02.0	-6.7
MYA	Malataya	4.40	281	ePN	Pn	16 33 21.6	+2.5
MYA	Malataya	4.40	281	ePn	Pn	16 33 21.6	+2.5
IKOM	Komasi	4.50	138	ePn	Pn	16 33 22.1	+1.6
IKOM				e		16 34 54.0	
	comp=Z,1μm,0.4s						
IKOM	Komasi	4.50	138	ePn	Pn	16 33 22.1	+1.6
IGZV	Ghazvin	5.19	102	ePn	Pn	16 33 31.7	+1.7
IGZV				e		16 35 16.1	
	comp=Z,234nm,0.4s						
IGZV	Ghazvin	5.19	102	ePn	Pn	16 33 31.7	+1.7
IRAZ	Razeghan	5.32	113	ePn	Pn	16 33 33.8	+2.0
IRAZ				e		16 33 55.3	
	comp=Z,144nm,0.3s						
IRAZ	Razeghan	5.32	113	ePn	Pn	16 33 33.8	+2.0
KBZ	Khabaz	6.17	353	Pn	Pn	16 33 48.0	+4.8
	comp=Z,0.1nm,0.3s,baz=171,slow=9.3,SNR=7.0						
IPIR	Pirpir	7.53	129	ePn	Pn	16 34 04.0	+1.7
IPIR				e		16 35 33.2	
	comp=Z,158nm,0.2s						
IPIR	Pirpir	7.53	129	ePn	Pn	16 34 04.0	+1.7
ASF	Jabal al Asfar	7.91	229	Pn	Pn	16 34 08.8	+1.5
	comp=Z,1.1nm,0.3s,baz=98,slow=14,SNR=9.6						
ASF				Lg	Lg	16 36 19.2	
	comp=Z,0.7nm,0.3s,baz=114,slow=20,SNR=2.9						
ASF				LR	LR	16 37 41.6	
	comp=Z,44nm,19.1s,baz=127,slow=43						
BRTR	Keskin Array B	8.31	288	Pn	Pn	16 34 13.8	+1.0
	comp=Z,0.1nm,0.3s,baz=121,slow=14,SNR=2.5						
BRTR				Lg	Lg	16 36 44.5	
	comp=Z,0.0nm,0.3s,baz=120,slow=18,SNR=2.5						
MMAI	Mount Meron Ar	8.33	239	Pn	Pn	16 34 10.7	-2.3
	comp=Z,0.1nm,0.3s,baz=54,slow=15,SNR=2.9						
EIL	Elat	10.88	226	LR	LR	16 39 14.4	
	comp=Z,50nm,19.6s,baz=94,slow=40						
AKTO	Aktyubinsk	16.31	34	Pn	Pn	16 36 02.5	+1.4
	comp=Z,0.1nm,0.3s,baz=239,slow=7.5,SNR=4.1						
BVAR	Borovoye Array	23.98	41	P	P	16 37 27.7	+1.2
	comp=Z,0.5nm,0.6s,baz=236,slow=12,SNR=3.2						
GERES	GERESS Array B	24.56	307	P	P	16 37 31.1	-1.0
	comp=Z,0.4nm,0.6s,baz=96,slow=7.2,SNR=5.2						
FINES	FINESS Array B	26.34	341	P	P	16 37 47.5	-0.3
	comp=Z,1.2nm,0.8s,baz=165,slow=7.9,SNR=7.1						
KURBB	Kurchatov Arra	27.78	51	P	P	16 38 01.4	+0.5
	comp=Z,0.3nm,0.6s,baz=262,slow=9.2,SNR=3.2						
HFS	Hagfors	29.60	329	P	P	16 38 17.9	+0.9
	comp=Z,0.9nm,0.7s,baz=151,slow=6.6,SNR=3.9						
MKAR	Makanchi Array	29.62	60	P	P	16 38 17.0	-0.4
	comp=Z,0.2nm,0.6s,baz=251,slow=9.0,SNR=3.1						
TORD	Torodi Ar. Bea	44.74	248	P	P	16 40 24.2	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.3nm,0.8s,baz=60,slow=8.5,SNR=2.2						
CMAR	Chiang Mai Arr	51.44	96	P	P	16 41 17.0	-0.6
	comp=Z,0.7nm,0.8s,baz=300,slow=8.2,SNR=4.4						
YKA	Yellowknife Ar	78.75	350	P	P	16 44 14.3	0.0
	comp=Z,0.2nm,0.8s,baz=9.1,slow=6.2,SNR=4.3						

PRE 01 16:51:40.6±1.1, 21°.78S×33°.43E, h5km, ML3.5, Mozambique

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSNA	Messina	3.21	259	eP	Pn	16 52 32.4	+0.6
MSNA				eS	Sn	16 53 11.0	+0.6
MSNA				AML	AML	16 53 29.8	
	comp=Z,113nm,0.4s						
BLWY	Bulawayo	4.79	289	i P	Pg	16 53 28.4	+16
BLWY				i		16 53 28.8	
	baz=44,slow=14						
BLWY				i S	Sg	16 54 10.5	-4.3
POGA	Pongola	5.80	196	eP	Pn	16 53 07.8	+0.4
POGA				eS	Sn	16 54 11.4	-3.1
POGA				AML	AML	16 54 50.9	
	comp=Z,16nm,0.5s						
PRYS	Parys	7.54	226	eP	Pn	16 53 31.6	+0.2
PRYS				eS	Sn	16 54 53.1	-4.3
PRYS				AML	AML	16 55 27.2	
	comp=Z,7.0nm,0.6s						

ISK 01 17:05:38.8, 37°.85N×27°.58E, h5km, MD3.1
DDA 01 17:05:39.4, 37°.84N×27°.55E, h7km, MD3.2
CSEM 01 17:05:39.8±0.1, 37°.84N×27°.58E, h2km, MD3.2, Error ellipse: s-maj=3.8km s-min=2.9km az=78.0
ISCJB 01 17:05:39.7±0.5, 37°.85N±0°.02×27°.56E±0°.03, h6km±5km, Error ellipse: s-maj=4.6km s-min=3.6km az=138.7
ISC 01 17:05:39.6±1.0, 37°.85N±0°.02×27°.57E±0°.02, h7km±9km, n66, σ1s.05/89, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.31	241	i P	Pg	17 05 45.4	-0.2
GCAM				i S	Sg	17 05 49.1	-0.6
GCAM	G?zelcaml?	0.31	241	i P	Pg	17 05 45.4	-0.2
GCAM				i S	Sg	17 05 49.1	-0.6
AYDN	Tasoluk	0.31	128	i P	Pb	17 05 46.7	-0.8
AYDN				i S	Sg	17 05 50.4	+0.6
AYDN	Tasoluk	0.31	128	i P	Pb	17 05 46.7	-0.8
AYDN				i S	Sg	17 05 50.4	+0.6
MLSB	Milas	0.58	164	ePG	Pg	17 05 51.2	+0.5
MLSB	Milas	0.58	164	ePg	Pg	17 05 51.2	+0.5
IZM	Izmir	0.60	336	ePG	Pg	17 05 51.3	+0.1
IZM	Izmir	0.60	336	ePg	Pg	17 05 51.3	+0.1
BLCB	Balcova	0.68	322	ePG	Pg	17 05 53.0	+0.3
BLCB	Balcova	0.68	322	ePg	Pg	17 05 53.0	+0.3
BODT	Bodrum	0.81	195	ePG	Pb	17 05 56.2	+0.1
BODT				eSG	Sb	17 06 07.5	+0.2
BODT	Bodrum	0.81	195	ePg	Pb	17 05 56.2	+0.1
BODT				eSg	Sb	17 06 07.5	+0.2
YER	Yerkesik	0.91	141	ePG	Pg	17 05 57.4	+0.3
YER				eSG	Sb	17 06 10.8	+0.7
YER	Yerkesik	0.91	141	ePg	Pg	17 05 57.4	+0.3
YER				eSg	Sb	17 06 10.8	+0.7
URLA	Izmir	0.92	304	i P	Pg	17 05 57.2	-0.2
URLA				i S	Sg	17 06 09.7	+0.3
URLA	Izmir	0.92	304	i P	Pg	17 05 57.2	-0.2
URLA				i S	Sg	17 06 09.7	+0.3
MANT	Manisa	1.01	50	i P	Pg	17 05 59.0	0.0
MANT				i S	Sg	17 06 11.9	-0.2
MANT	Manisa	1.01	50	i P	Pg	17 05 59.0	0.0
MANT				i S	Sg	17 06 11.9	-0.2
AKHS	Akhisar	1.04	10	i P	Pg	17 05 59.5	-0.2
AKHS				i S	Sg	17 06 10.9	-2.4
AKHS	Akhisar	1.04	10	i P	Pg	17 05 59.5	-0.2
AKHS				i S	Sg	17 06 10.9	-2.4
AKS	Akhisar	1.04	10	ePG	Pg	17 05 60.0	+0.3
AKS	Akhisar	1.04	10	ePg	Pg	17 06 00.0	+0.3
KULA	Kula-Manisa	1.08	52	ePN	Pg	17 06 00.3	-0.2
KULA	Kula-Manisa	1.08	52	ePn	Pg	17 06 00.3	-0.2
DAT	Datca	1.12	180	ePN	Pg	17 06 01.1	0.0
DAT	Datca	1.12	180	ePn	Pg	17 06 01.1	0.0
DENT	Denizli	1.16	94	ePN	Pg	17 06 01.9	0.0
DENT	Denizli	1.16	94	ePn	Pg	17 06 01.9	0.0
DNZL	Cakiroluk	1.18	97	i P	Pg	17 06 02.2	-0.1
DNZL				i S	Sb	17 06 18.6	+0.6
DNZL	Cakiroluk	1.18	97	i P	Pg	17 06 02.2	-0.1
DNZL				i S	Sb	17 06 18.6	+0.6
TURN	Turunc	1.27	140	i P	Pg	17 06 02.2	-1.8
TURN				i S	Sg	17 06 19.2	-1.4
TURN	Turunc	1.27	140	i P	Pg	17 06 02.2	-1.8
TURN				i S	Sg	17 06 19.2	-1.4
DALY	Dalyan (Mu˜la	1.34	140	ePN	Pb	17 06 05.3	+0.2
DALY	Dalyan (Mu˜la	1.34	140	ePn	Pb	17 06 05.3	+0.2
DEMI	Demirci	1.49	37	i P	Pb	17 06 08.1	+0.4
DEMI				i S	Sn	17 06 26.7	0.0
DEMI	Demirci	1.49	37	i P	Pb	17 06 08.1	+0.4
DEMI				i S	Sn	17 06 26.7	0.0
KHAL	Karahalli	1.60	70	i P	Pn	17 06 08.4	0.0
KHAL				i S	Sn	17 06 29.3	-0.2
KHAL	Karahalli	1.60	70	i P	Pn	17 06 08.4	0.0
KHAL				i S	Sn	17 06 29.3	-0.2
KHL	Karahalli	1.61	72	ePN	Pb	17 06 09.7	-0.1
KHL	Karahalli	1.61	72	ePn	Pb	17 06 09.7	-0.1
FETY	Fethiye	1.71	135	ePN	Pn	17 06 10.6	+0.7
FETY	Fethiye	1.71	135	ePn	Pn	17 06 10.6	+0.7
APE	Apeiranthos	1.80	245	ePN	Pb	17 06 12.6	-0.3
APE	Apeiranthos	1.80	245	ePn	Pb	17 06 12.6	-0.3
BALB	Balikesir	1.80	8	ePN	Pn	17 06 12.2	+1.1
BALB	Balikesir	1.80	8	ePn	Pn	17 06 12.2	+1.1
BALY	Balya	1.89	1	eP	Pn	17 06 12.6	+0.2
BALY				i S	Sn	17 06 32.0	-4.4
BALY	Balya	1.89	1	eP	Pn	17 06 12.6	+0.2
DST	Dursunbey	1.93	25	ePN	Pb	17 06 14.7	-0.6
DST	Dursunbey	1.93	25	ePn	Pb	17 06 14.7	-0.6
TVSB	Tavsanli	2.18	42	ePN	Pn	17 06 18.1	+1.7
TVSB	Tavsanli	2.18	42	ePn	Pn	17 06 18.1	+1.7
GONE	Gonen-Balikesi	2.20	2	ePN	Pn	17 06 17.9	+1.4
GONE	Gonen-Balikesi	2.20	2	ePn	Pn	17 06 17.9	+1.4
ALT	Altintas	2.33	58	ePN	Pn	17 06 19.7	+1.2
ALT	Altintas	2.33	58	ePn	Pn	17 06 19.7	+1.2
ORLT	Orhaneli	2.42	25	ePN	Pn	17 06 21.2	+1.5
ORLT	Orhaneli	2.42	25	ePn	Pn	17 06 21.2	+1.5
KCTX	Karacabey (Bur	2.49	14	ePN	Pn	17 06 22.0	+1.4
KCTX	Karacabey (Bur	2.49	14	ePn	Pn	17 06 22.0	+1.4
KRBG	Karabiga-Canak	2.55	355	ePN	Pn	17 06 23.0	+1.6
KRBG	Karabiga-Canak	2.55	355	ePn	Pn	17 06 23.0	+1.6
IZI	Iznik	2.89	30	ePN	Pn	17 06 28.0	+1.8
IZI	Iznik	2.89	30	ePn	Pn	17 06 28.0	+1.8
CAVI	Cavuskoy	2.94	36	ePN	Pn	17 06 29.0	+2.2
CAVI	Cavuskoy	2.94	36	ePn	Pn	17 06 29.0	+2.2

BEO 01 17:08:48.9±0.8, 42°.88N×17°.52E, h0km±4km, ML2.5/8
CSEM 01 17:08:48.7±0.3, 42°.89N×17°.48E, h2km, ML2.4/10, Error ellipse: s-maj=7.2km s-min=3.8km az=33.0
PDG 01 17:08:50.2±0.4, 42°.94N×17°.58E, h11km±1km, ML2.4/10, Error ellipse: s-maj=1.1km s-min=1.2km az=0.0
ISC 01 17:08:49.0±1.3, 42°.91N±0°.03×17°.50E±0°.03, h2km±10km, n42, σ0s.84/82, 6C-14D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STON	Ston	0.15	104	ePg	Pg	17 08 51.7	-0.2
STON				Sg	Sg	17 08 54.9	+1.0
STON	Ston	0.15	104	ePg	Pg	17 08 51.7	-0.2
STON				Sg	Sg	17 08 54.9	+1.0
BRY	Bratogost	0.76	90⇓	iPg	Pg	17 09 02.7	-0.9
BRY				eSg	Sb	17 09 14.6	-1.4
BRY	Bratogost	0.76	90⇓	iPg	Pg	17 09 02.7	-0.9
BRY				eSg	Sb	17 09 14.6	-1.4
HCY	Herceg Novi	0.87	122⇑	iPg	Pg	17 09 05.0	-0.6
HCY				eSg	Sb	17 09 18.4	-0.4
HCY	Herceg Novi	0.87	122⇑	iPg	Pg	17 09 05.0	-0.6
HCY				eSg	Sb	17 09 18.4	-0.4
UPM	Unac-Piva	1.07	74⇓	iPg	Pg	17 09 08.7	-0.9
UPM				eSg	Sb	17 09 25.0	+0.1
UPM	Unac-Piva	1.07	74⇓	iPg	Pg	17 09 08.7	-0.9
UPM				eSg	Sb	17 09 25.0	+0.1
NKY	Niksic	1.10	94⇓	iPg	Pg	17 09 09.8	-0.3
NKY				eSg	Sn	17 09 26.6	-0.8
NKY	Niksic	1.10	94⇓	iPg	Pg	17 09 09.8	-0.3
NKY				eSg	Sn	17 09 26.6	-0.8
BUM	Brajici-Budva	1.20	120⇓	iPg	Pb	17 09 12.0	-0.4
BUM				eSg	Sn	17 09 29.6	0.0
BUM	Brajici-Budva	1.20	120⇓	iPg	Pb	17 09 12.0	-0.4
BUM				eSg	Sn	17 09 29.6	0.0
PDG	Podgorica	1.38	110⇓	iPg	Pn	17 09 15.2	0.0
PDG				eSg	Sn	17 09 35.7	+1.7
TTG	Podgorica	1.38	110⇓	iPg	Pn	17 09 15.2	-0.1
TTG				eSg	Sn	17 09 35.7	+1.6
PLE	Pljevlja	1.45	72⇑	iPg	Pb	17 09 16.6	-0.1
PLE				eSg	Sn	17 09 37.7	+1.8
PLE	Pljevlja	1.45	72⇑	iPg	Pb	17 09 16.6	-0.1
PLE				eSg	Sn	17 09 37.7	+1.8
ULC	Ulcinj	1.60	126⇑	iPg	Pn	17 09 18.3	0.0
ULC				eSg	Sg	17 09 42.2	+1.8
ULC	Ulcinj	1.60	126⇑	iPg	Pn	17 09 18.3	0.0
ULC				eSg	Sg	17 09 42.2	+1.8
BBLS	Lazići	1.69	55	ePn	Pn	17 09 20.1	+0.5
BBLS				eSg	Sg	17 09 43.5	+0.3
BBLS	Lazići	1.69	55	ePn	Pn	17 09 20.1	+0.5
BBLS				eSg	Sg	17 09 43.5	+0.3
BEY	Berane	1.76	90⇓	iPn	Pb	17 09 21.6	-0.4
BEY				eSn	Sg	17 09 45.8	+0.3
IVA	Berane	1.76	90⇓	iPn	Pb	17 09 21.6	-0.5
IVA				eSn	Sg	17 09 45.8	+0.2
PVY	Plav	1.84	99⇓	iPn	Pn	17 09 21.9	+0.2
PVY				eSn	Sg	17 09 48.2	+0.1
PVY	Plav	1.84	99⇓	iPn	Pn	17 09 21.9	+0.2
PVY				eSn	Sg	17 09 48.2	+0.1
BLY	Banja Luka	1.85	353	ePn	Pn	17 09 22.2	+0.4
BLY				eSn	Sb	17 09 47.6	+0.4
BLY	Banja Luka	1.85	353	ePn	Pn	17 09 22.2	+0.4
BLY				eSn	Sb	17 09 47.6	+0.4
IVAS	Ivanjica	2.05	70	ePn	Pn	17 09 24.6	+0.1
IVAS				eSg	Sb	17 09 53.6	+0.7
IVAS	Ivanjica	2.05	70	ePn	Pn	17 09 24.6	+0.1
IVAS				eSg	Sb	17 09 53.6	+0.7
DIVS	Divibare	2.17	56	ePn	Pn	17 09 25.9	-0.3
DIVS				eSn	Sn	17 09 54.4	+0.7
DIVS	Divibare	2.17	56	ePn	Pn	17 09 25.9	-0.3
DIVS				eSn	Sn	17 09 54.4	+0.7
TRUS	Trudelj	2.49	57	ePn	Pn	17 09 28.9	-1.6
TRUS				eSn	Sn	17 10 00.4	-1.0
TRUS	Trudelj	2.49	57	ePn	Pn	17 09 28.9	-1.6
TRUS				eSn	Sn	17 10 00.4	-1.0
NVLJ	Novalja	2.52	312	ePn	Pn	17 09 30.4	-0.5
NVLJ				Sn	Sn	17 10 01.1	-1.2
NVLJ	Novalja	2.52	312	ePn	Pn	17 09 30.4	-0.5
NVLJ				Sn	Sn	17 10 01.0	-1.2
GRUS	Gruza	2.54	66	ePn	Pn	17 09 31.4	+0.2
GRUS				eSn	Sn	17 10 03.9	+1.2
GRUS	Gruza	2.54	66	ePn	Pn	17 09 31.4	+0.2
GRUS				eSn	Sn	17 10 03.9	+1.2
SELS	Selova	2.67	82	ePn	Pn	17 09 32.0	-1.0
SELS	Selova	2.67	82	ePn	Pn	17 09 32.0	-1.0
BOJS	Bojanci	3.06	329	ePn	Pn	17 09 39.4	+1.1
BOJS				eSn	Sn	17 10 16.5	+1.0
BOJS	Bojanci	3.06	329	ePn	Pn	17 09 39.4	+1.1
BOJS				eSn	Sn	17 10 16.5	+1.0
ZAPS	Zavoj	3.78	83	ePn	Pn	17 09 48.6	+0.3
ZAPS				eSn	Sn	17 10 33.1	-0.2
ZAPS	Zavoj	3.78	83	ePn	Pn	17 09 48.6	+0.3
ZAPS				eSn	Sn	17 10 33.1	-0.2

ISK 01 17:23:04.5, 36°.84N×35°.84E, h19km, MD2.5
CSEM 01 17:23:05.0±0.2, 36°.91N×35°.61E, h28km±2km, MD2.5, Error ellipse: s-maj=7.0km s-min=5.2km az=132.0
DDA 01 17:23:06.6, 37°.00N×35°.55E, h7km, MD2.7
ISC 01 17:23:05.3±1.1, 36°.94N±0°.05×35°.61E±0°.05, h27km±7km, n12, σ0s.41/20, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YURE	YUREGIR	0.12	170	i P	Pb	17 23 11.0	+0.6
YURE				i S	Sb	17 23 14.0	+0.1
YURE	YUREGIR	0.12	170	i P	Pb	17 23 11.0	+0.6
YURE				i S	Sb	17 23 14.0	+0.1
CEYT	Ceyhan	0.13	59	ePG	Pb	17 23 10.0	-0.5
CEYT				eSG	Sb	17 23 13.8	-0.2
CEYT	Ceyhan	0.13	59	ePg	Pb	17 23 10.0	-0.5
CEYT				eSg	Sb	17 23 13.8	-0.2
KRTS	Karatas	0.41	207	ePG	Pb	17 23 13.9	-0.3
KRTS	Karatas	0.41	207	ePg	Pb	17 23 13.9	-0.3
KOZT	Kozan	0.56	18	ePG	Pb	17 23 16.9	+0.2
KOZT				eSG	Sn	17 23 26.6	+0.6
KOZT	Kozan	0.56	18	ePg	Pb	17 23 16.9	+0.2
KOZT				eSg	Sn	17 23 26.6	+0.6
GULE	Gulek	0.75	297	i P	Pb	17 23 19.6	-0.2
GULE				i S	Sb	17 23 29.9	+0.2
GULE	Gulek	0.75	297	i P	Pb	17 23 19.6	-0.2
GULE				i S	Sb	17 23 29.9	+0.2
KMRS	Kahramanmaras	1.18	61	ePG	Pn	17 23 25.6	-0.3
KMRS	Kahramanmaras	1.18	61	ePg	Pn	17 23 25.6	-0.3

IDC 01 17:25:21.6±2.0, 18°.82S×177°.91W, h562km±35km, mb3.2/4, mb1 3.4/5, mb1mx3.0/20, mbtmp3.3/5, Error ellipse: s-maj=110.8km s-min=23.0km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.65	51	P	P	17 27 14.9	-1.6
	6.2nm,0.3s,baz=234,slow=9.7,SNR=12						
STKA	Stephens Creek	38.62	242	P	P	17 31 57.2	-0.2
	2.9nm,0.8s,baz=78,slow=9.0,SNR=7.7						
WRA	Warramunga Arr	44.94	260	P	P	17 32 47.5	+0.1
	1.4nm,0.6s,baz=97,slow=8.2,SNR=42						
ASAR	Alice Springs	45.01	255	P	P	17 32 48.2	+0.3
	3.6nm,0.8s,baz=90,slow=7.5,SNR=93						
ASAR				S	S	17 38 44.2	-2.0
	0.3nm,0.6s,baz=91,slow=16,SNR=4.5						
CMAR	Chiang Mai Arr	89.63	290	P	P	17 37 21.3	+0.8
	0.6nm,0.9s,baz=138,slow=1.4,SNR=5.5						
BRTR	Keskin Array B	145.75	314	PKPbc	PKPdf	17 43 57.7	+0.7
	0.5nm,0.8s,baz=81,slow=4.5,SNR=2.9						

BJI 01 18:23:04.5, 18°.80S×23°.90E, h10km, mB4.8/1, mb4.7/1, Ms7 4.7/1
ISCJB 01 18:23:05.9±0.6, 19°.04S±0°.04×23°.83E±0°.06, h10km, mb3.8/4, MS3.9/2, Error ellipse: s-maj=8.7km s-min=4.8km az=160.1
IDC 01 18:23:06.6±1.7, 19°.00S×23°.72E, h0km, mb3.8/2, mb1 4.2/3, mb1mx3.5/24, mbtmp4.1/3, ML4.8/1, MS3.0/2, Ms1 2.9/2, ms1mx2.8/31, Error ellipse: s-maj=82.0km s-min=22.0km az=78.0
PRE 01 18:23:06.7±3.3, 18°.82S×23°.75E, h10km, ML5.4
NEIC 01 18:23:06.9±0.7, 18°.82S×23°.91E, h10km, mb4.0/2, ML4.3(PRE), Error ellipse: s-maj=16.7km s-min=11.3km az=107.0
ISC 01 18:23:06.0±0.6, 18°.94S±0°.05×23°.79E±0°.05, h10km, n36, σ2s.52/53, mb4.0/4, Botswana

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLWY	Bulawayo	4.70	106	i P	Pg	18 24 36.8	+0.7
BLWY				i		18 24 37.0	
	baz=206,slow=6.9						
BLWY				i S	Sg	18 25 35.1	-1.8
LSZ	Lusaka	5.56	50	eP	Pn	18 24 29.8	+0.8
LSZ				eS	Sn	18 25 29.7	-3.4
LSZ	Lusaka	5.56	50	ePn	Pn	18 24 28.9	0.0
	50nm,0.3s						
LSZ				eSn	Sn	18 25 28.6	-4.4
TSUM	Tsumeb	5.88	266	eP	Pn	18 24 36.0	+2.6
TSUM				eS	Sn	18 25 38.0	-2.8
TSUM	Tsumeb	5.88	266	ePn	Pn	18 24 35.8	+2.5
	55nm,0.4s						
TSUM				eSn	Sn	18 25 36.4	-4.5
LBTB	Lobatse	6.27	165	eP	Pn	18 24 42.9	+4.2
LBTB				eS	Sn	18 25 51.6	+1.1
LBTB				AML	AML	18 26 36.0	
	comp=Z,199nm,0.5s						
LBTB	Lobatse	6.27	165	ePn	Pn	18 24 42.4	+3.7
	comp=Z,40nm,0.4s						
LBTB				eSg	Sg	18 26 26.3	-1.1
MSNA	Messina	6.75	121	eP	Pn	18 24 48.2	+3.0
MSNA				eS	Sn	18 26 05.2	+3.0
MSNA				AML	AML	18 26 42.2	
	comp=Z,367nm,0.4s						
KSR	Koster	7.45	158	eP	Pn	18 24 59.4	+4.4
KSR				eS	Sn	18 26 19.7	0.0
KSR				AML	AML	18 27 11.3	
	comp=Z,233nm,0.8s						
SLR	Silverton	7.93	149	eP	Pn	18 25 06.2	+4.6
SLR				eS	Sn	18 26 31.1	-0.4
SLR				AML	AML	18 27 30.6	
	comp=Z,201nm,0.5s						
KLOF	Kloof	8.17	155	eP	Pn	18 25 09.8	+4.9
KLOF				eS	Sn	18 26 38.4	+1.0
KLOF				AML	AML	18 27 37.8	
	comp=Z,253nm,0.6s						
SWZ	Schweizer	8.32	170	eP	Pn	18 25 10.2	+3.3
SWZ				eS	Sn	18 26 39.6	-1.5
SWZ				AML	AML	18 27 51.1	
	comp=Z,170nm,0.5s						
ERPM	east rand prop	8.43	152	eP	Pn	18 25 11.6	+3.1
ERPM				eS	Sn	18 26 42.9	-1.0
ERPM				AML	AML	18 27 38.6	
	comp=Z,141nm,0.6s						
PRYS	Parys	8.60	158	eP	Pn	18 25 14.5	+3.8
PRYS				eS	Sn	18 26 46.3	-1.6
PRYS				AML	AML	18 27 48.6	
	comp=Z,214nm,0.5s						
UPI	Upington	9.66	193	eP	Pn	18 25 28.8	+3.5
UPI				eS	Sn	18 27 10.9	-3.0
UPI				AML	AML	18 28 10.8	
	comp=Z,35nm,0.5s						
BOSA	Boshof	9.72	172	eP	Pn	18 25 29.4	+3.4
BOSA				eS	Sn	18 27 12.4	-3.0
BOSA				AML	AML	18 28 24.2	
	comp=Z,100nm,0.6s						
BOSA	Boshof	9.72	172	Pn	Pn	18 25 28.6	+2.6
BOSA				ePn	Pn	18 25 29.0	+2.9
BOSA				eSn	Sn	18 27 13.3	-2.1
BOSA				Sn	Sn	18 27 15.6	+0.1
BOSA				eLg	Lg	18 28 04.2	
BOSA				Lg	Lg	18 28 12.9	
BOSA	Boshof	9.72	172	Pn	Pn	18 25 28.6	+2.6
	comp=Z,6.0nm,0.3s,baz=354,slow=12,SNR=121						
BOSA				Sn	Sn	18 27 15.6	+0.2
	comp=Z,3.6nm,0.3s,baz=6.3,slow=18,SNR=4.0						
BOSA				Lg	Lg	18 28 12.9	
	comp=Z,5.8nm,0.3s,baz=324,slow=17,SNR=4.1						
BOSA				LR	LR	18 29 41.4	
	comp=Z,44nm,19.5s,baz=175,slow=41						
SEK	Senekal	9.98	160	eP	Pn	18 25 32.8	+3.2
SEK				eS	Sn	18 27 21.4	-0.3
SEK				AML	AML	18 28 26.7	
	comp=Z,255nm,0.9s						
POGA	Pongola	11.05	141	eP	Pn	18 25 47.0	+2.9
POGA				eS	Sn	18 27 42.7	-5.0
POGA				AML	AML	18 29 03.6	
	comp=Z,110nm,0.7s						
KOMG	Komaggas	12.24	207	eS	Sn	18 28 12.1	-4.9
KOMG				AML	AML	18 29 56.9	
	comp=Z,27nm,0.9s						
KSD	Kokstad	12.62	157	eP	Pn	18 26 08.2	+2.4
KSD				eS	Sn	18 28 25.6	-1.0
KSD				AML	AML	18 29 49.0	
	comp=Z,141nm,0.7s						
SUR	Sutherland	13.65	191	eP	Pn	18 26 22.4	+2.5
SUR				eS	Sn	18 28 50.5	-1.2
SUR				AML	AML	18 30 46.7	
	comp=Z,16nm,0.6s						
SUR	Sutherland	13.65	191	ePn	Pn	18 26 22.4	+2.5
	comp=Z,51nm,0.7s						
SUR				eSn	Sn	18 28 48.1	-3.6
KMBO	Kilima Mbogo	22.08	38	Pn	P	18 27 59.2	-2.5
KMBO	Kilima Mbogo	22.08	38	LR	LR	18 37 01.9	
	comp=Z,79nm,18.1s,baz=88,slow=38						
TORD	Torodi Ar. Bea	38.61	324	P	P	18 30 31.7	+2.1
TORD	Torodi Ar. Bea	38.61	324	P	P	18 30 31.7	+2.1
	comp=Z,3.0nm,0.8s,baz=143,slow=8.3,SNR=18						
BRTR	Keskin Array B	59.08	9	P	P	18 33 09.2	+2.6
BRTR	Keskin Array B	59.08	9	P	P	18 33 09.2	+2.6
	comp=Z,0.3nm,0.7s,baz=184,slow=5.5,SNR=2.7						
EKS2	Erkin-Say	76.64	35	P	P	18 34 53.5	-3.7
TKM2	Tokmak 2	77.82	36	eP	P	18 35 03.5	-0.3
	comp=Z,0.9nm,0.5s						
SBA	Scott Base	81.07	173	P	P	18 35 20.4	-0.5
	comp=Z,0.8nm,0.6s						
WMQ	Urumqi	85.48	41	eP	P	18 35 43.6	-0.6
HHC	Hu-ho-hao-te	100.50	50	eP	Pdif	18 36 55.2	+1.3
HHC				pP	pP	18 37 00.0	+2.7
HHC				PP	PP	18 41 04.7	+3.7
HHC				SKS	SKSac	18 47 32.3	-0.9
HHC				S	Sdif	18 48 27.5	-3.3
HHC				sS	sS	18 48 35.7	-0.7
HHC				SS	SS	18 55 26.9	-0.3
HHC				LR	LR		
	comp=Z,200nm,18.4s						
CN2	Changchun	111.16	50	ePKP	PKiKP	18 41 37.0	-3.0

IDC 01 18:28:25.6±8.1, 23°.72N×126°.32E, h0km, mb3.8/3, mb1 3.8/3, mb1mx3.3/24, mbtmp3.8/3, Error ellipse: s-maj=185.1km s-min=146.1km az=28.0
ISCJB 01 18:28:32.2±0.7, 24°.76N±0°.06×127°.04E±0°.05, h31km, mb3.6/3, Error ellipse: s-maj=10.3km s-min=4.0km az=148.5
JMA 01 18:28:35.0±0.2, 24°.94N×126°.86E, h67km, M3.0
ISC 01 18:28:33.3±1.1, 24°.79N±0°.08×126°.99E±0°.05, h31km, n18, σ1s.28/26, mb3.7/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	1.44	269	P	Pb	18 28 58.0	-1.6
JJT2	Tamagusuku 2	1.51	27	P	Pb	18 28 59.5	-1.2
JJT2				S	Sn	18 29 17.4	+0.5
JKE	Kume jima 2	1.55	353	P	Pn	18 28 58.6	-0.1
JMJ	Miyako jima 2	1.55	271	P	Pb	18 28 59.4	-1.9
JMJ				S	Sn	18 29 16.3	-1.4
JAGN	Aguni-jima	1.81	7	P	Pn	18 29 02.7	+0.3
JAGN				S	Sn	18 29 24.6	+0.3
JTJ	Tarama	2.09	267	P	Pn	18 29 06.6	+0.4
JTJ				S	Sn	18 29 31.4	+0.2
JOW	Kunigami	2.34	29	P	Pn	18 29 11.1	+1.4
JOW				S	Sn	18 29 37.1	-0.3
JIH	Iheya	2.41	21	S	Sn	18 29 38.8	-0.2
JIJ	Ishigaki jima	2.63	261	P	Pn	18 29 13.6	0.0
JKRS	Kuro-shima	2.77	259	P	Pn	18 29 17.3	+1.7
IRIF	Iriomote-Funau	3.01	262	P	Pn	18 29 19.2	+0.4
JTK	Tokunoshima	3.47	30	P	Pn	18 29 25.4	+0.3
JTK				S	Sn	18 30 03.0	-2.2
JAMN	Amaminishikomi	3.96	29	P	Pn	18 29 32.7	+0.8
JMZ	Minamidaito 2	3.96	74	P	Pn	18 29 32.3	+0.4
JMZ				S	Sn	18 30 16.1	-1.3
JAM	Amami Oshima	4.30	32	P	Pn	18 29 37.2	+0.6
JAM				S	Sn	18 30 23.0	-2.7
SONM	Songino Array	28.20	330	P	P	18 34 25.7	+2.4
	0.8nm,0.8s,baz=147,slow=10.0,SNR=6.5						
MKAR	Makanchi Array	41.69	313	P	P	18 36 18.3	-0.8
	0.9nm,0.6s,baz=102,slow=9.6,SNR=11						
FINES	FINESS Array B	73.57	331	P	P	18 40 04.0	+0.9
	0.8nm,0.8s,baz=54,slow=7.1,SNR=5.2						

ISCJB 01 18:29:25.8±0.6, 42°.97N±0°.03×17°.44E±0°.03, h1km±3km, Error ellipse: s-maj=5.5km s-min=2.7km az=38.4
TIR 01 18:29:26.9, 42°.44N×17°.58E, h1km, ML3.9
BEO 01 18:29:26.0±0.6, 42°.86N×17°.40E, h1km±4km, ML3.2/1
CSEM 01 18:29:26.8±0.2, 42°.93N×17°.46E, h2km, ML3.0/9, Error ellipse: s-maj=5.4km s-min=2.8km az=40.0
PDG 01 18:29:27.4±0.3, 42°.90N×17°.52E, h10km, ML3.0/9, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0
VIE 01 18:29:31.1±0.9, 43°.18N×17°.59E, h8km, mb2.9/4, ML2.7/4, Error ellipse: s-maj=7.7km s-min=5.2km az=32.0 98 km ESE of Split
ISC 01 18:29:26.5±1.3, 42°.92N±0°.03×17°.45E±0°.03, h2km±9km, n92, σ0s.97/156, 32C-10D, Adriatic Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STON	Ston	0.19	103	i Pg	Pg	18 29 30.0	-0.3
STON				Sg	Sg	18 29 33.2	+0.4
STON	Ston	0.19	103	i Pg	Pg	18 29 29.9	-0.3
STON				Sg	Sg	18 29 33.1	+0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRY	Bratogost	0.80	91	⇑iPg	Pg	18 29 40.3	-1.6
BRY				eSg	Sg	18 29 53.2	+0.9
BRY	Bratogost	0.80	91	⇑iPg	Pg	18 29 40.3	-1.6
BRY				eSg	Sg	18 29 53.2	+0.9
HCY	Herceg Novi	0.90	121	⇑iPg	Pg	18 29 43.0	-0.9
HCY				eSg	Sg	18 29 56.4	+0.8
HCY	Herceg Novi	0.90	121	⇑iPg	Pg	18 29 43.0	-0.9
HCY				eSg	Sg	18 29 56.4	+0.8
UPM	Unac-Piva	1.11	75	⇓iPg	Pg	18 29 47.1	-0.7
UPM				eSg	Sb	18 30 04.4	+0.9
UPM	Unac-Piva	1.11	75	⇓iPg	Pg	18 29 47.1	-0.7
UPM				eSg	Sb	18 30 04.4	+0.9
NKY	Niksic	1.14	95	⇑iPg	Pg	18 29 47.8	-0.6
NKY				eSg	Sb	18 30 05.0	+0.6
NKY	Niksic	1.14	95	⇑iPg	Pg	18 29 47.8	-0.6
NKY				eSg	Sb	18 30 05.0	+0.6
BUM	Brajici-Budva	1.23	119	⇑iPg	Pg	18 29 49.3	-0.9
BUM				eSg	Sb	18 30 07.1	+0.1
BUM	Brajici-Budva	1.23	119	⇑iPg	Pg	18 29 49.3	-0.9
BUM				eSg	Sb	18 30 07.1	+0.1
PDG	Podgorica	1.42	109	ePn	Pn	18 29 52.4	-0.9
PDG				eSg	Sn	18 30 12.4	-0.2
PDG	Podgorica	1.42	109	ePn	Pn	18 29 52.4	-0.9
PDG				eSg	Sn	18 30 13.5	+0.9
TTG	Podgorica	1.42	109	⇑iPg	Pn	18 29 52.5	-0.9
TTG				eSg	Sn	18 30 13.5	+0.9
PLE	Pljevlja	1.48	73	⇑iPg	Pb	18 29 54.9	0.0
PLE				eSg	Sg	18 30 16.2	+2.1
PLE	Pljevlja	1.48	73	⇑iPg	Pb	18 29 54.9	0.0
PLE				eSg	Sg	18 30 16.2	+2.1
ULC	Ulcinj	1.64	125	⇓iPn	Pn	18 29 55.7	-0.7
ULC				eSn	Sg	18 30 19.4	+0.3
ULC	Ulcinj	1.64	125	⇓iPn	Pn	18 29 55.7	-0.7
ULC				eSn	Sg	18 30 19.4	+0.3
BBLS	Lazići	1.71	56	⇑iPn	Pn	18 29 57.7	+0.2
BBLS				eSn	Sg	18 30 21.9	+0.3
BBLS	Lazići	1.71	56	⇑iPn	Pn	18 29 57.7	+0.2
BBLS				eSn	Sg	18 30 21.9	+0.3
BEY	Berane	1.80	91	⇑iPn	Pb	18 29 59.5	-0.8
BEY				eSn	Sb	18 30 23.9	+0.6
IVA	Berane	1.80	91	⇑iPn	Pb	18 29 59.5	-0.8
IVA				eSn	Sb	18 30 23.9	+0.6
BLY	Banja Luka	1.84	354	eSn	Sg	18 30 25.9	+0.2
BLY	Banja Luka	1.84	354	eSn	Sg	18 30 25.9	+0.2
PVY	Plav	1.88	99	ePn	Pn	18 30 00.6	+0.8
PVY				eSn	Sb	18 30 25.7	+0.1
SJES	Sjenica	1.88	79	ePn	Pn	18 30 00.2	+0.3
SJES				eSn	Sb	18 30 25.6	-0.2
PUK	Puka	2.01	115	i PN	Pn	18 30 01.4	-0.2
PUK				i SN	Sn	18 30 27.6	+0.3
PUK	Puka	2.01	115	i Pn	Pn	18 30 01.4	-0.2
PUK				i Sn	Sn	18 30 27.6	+0.3
BCI	Bajram Curri	2.01	105	i PN	Pn	18 30 02.3	+0.8
BCI				i SN	Sb	18 30 28.8	-0.5
BCI	Bajram Curri	2.01	105	i Pn	Pn	18 30 02.3	+0.8
BCI				i Sn	Sb	18 30 28.8	-0.5
DIVS	Divibare	2.20	57	i Pn	Pn	18 30 04.1	-0.1
DIVS				eSn	Sn	18 30 32.4	+0.4
DIVS	Divibare	2.20	57	i Pn	Pn	18 30 04.1	-0.1
DIVS				eSn	Sn	18 30 32.4	+0.4
TEKS	Tekeris	2.22	42	ePn	Pn	18 30 04.0	-0.5
TEKS	Tekeris	2.22	42	ePn	Pn	18 30 04.0	-0.5
TIR	Tirane	2.39	130	ePN	Pn	18 30 07.4	+0.7
TIR				i SN	Sn	18 30 34.5	-2.0
TIR	Tirane	2.39	130	ePn	Pn	18 30 05.9	-0.8
TIR				eSn	Sn	18 30 35.1	-1.4
TIR	Tirane	2.39	130	ePn	Pn	18 30 07.4	+0.7
TIR				eSn	Sn	18 30 35.1	-1.4
NVLJ	Novalja	2.49	312	i Pn	Pn	18 30 08.6	+0.6
NVLJ				Sn	Sn	18 30 39.7	+0.6
NVLJ	Novalja	2.49	312	i Pn	Pn	18 30 08.6	+0.6
NVLJ				Sn	Sn	18 30 39.6	+0.6
TRUS	Trudelj	2.52	58	⇑iPn	Pn	18 30 07.4	-1.1
TRUS	Trudelj	2.52	58	⇑iPn	Pn	18 30 07.4	-1.1
PHP	Peshkopia	2.54	118	i PN	Pn	18 30 10.2	+1.4
PHP				i SN	Sn	18 30 41.1	+0.7
PHP	Peshkopia	2.54	118	i Pn	Pn	18 30 10.2	+1.4
PHP				i Sn	Sn	18 30 41.1	+0.7
GRUS	Gruza	2.57	67	ePn	Pn	18 30 09.3	0.0
GRUS				eSn	Sn	18 30 42.7	+1.6
GRUS	Gruza	2.57	67	ePn	Pn	18 30 09.3	0.0
GRUS				eSn	Sn	18 30 42.7	+1.6
SELS	Selova	2.71	82	ePn	Pn	18 30 10.7	-0.4
SELS				eSn	Sn	18 30 45.7	+1.2
SELS	Selova	2.71	82	ePn	Pn	18 30 10.7	-0.4
SELS				eSn	Sn	18 30 45.7	+1.2
BOJS	Bojanci	3.03	329	ePn	Pn	18 30 16.1	+0.6
BOJS	Bojanci	3.03	329	ePn	Pn	18 30 16.1	+0.6
BARS	Barje	3.21	90	ePn	Pn	18 30 19.3	+1.2
BARS				eSn	Sn	18 30 58.0	+1.1
BARS	Barje	3.21	90	ePn	Pn	18 30 19.3	+1.2
BARS				eSn	Sn	18 30 58.0	+1.1
PKSM	Moragy	3.40	14	⇑iP	Pn	18 30 19.7	-1.0
PKSM	Moragy	3.40	14	⇑ePn	Pn	18 30 20.4	-0.3
PKSM	Moragy	3.40	14	⇑iP	Pn	18 30 19.7	-1.0
PKSM				S	Sn	18 31 00.4	-1.2
BOLS	Boljevac	3.41	73	eSn	Sn	18 31 02.4	+0.6
BOLS	Boljevac	3.41	73	eSn	Sn	18 31 02.4	+0.6
BEHE	Becsehely	3.58	353	⇑ePn	Pn	18 30 24.3	+1.1
BEHE				ePKKPdf	Sn	18 31 07.5	+1.4
BEHE				ePKKPdf	Sn	18 31 07.5	+1.4
PKS9	Tamasi	3.72	9	ePn	Pn	18 30 25.6	+0.6
ZAPS	Zavoj	3.82	83	⇑iPn	Pn	18 30 27.3	+0.9
ZAPS				eSn	Sn	18 31 11.3	-0.5
BZS	Buzias	4.03	47	⇑iPn	Pn	18 30 28.4	-0.9
BZS				eSn	Sn	18 31 15.9	-1.2
BZS	Buzias	4.03	47	⇑iP	Pn	18 30 28.9	-0.4
BZS	Buzias	4.03	47	⇑iPn	Pn	18 30 28.4	-0.9
BZS	Buzias	4.03	47	⇑iP	Pn	18 30 28.9	-0.4
BZS				S	Sn	18 31 15.6	-1.5
BZS				eSn	Sb	18 31 15.9	-12
SOKA	Soboth	4.13	336	⇓iPn	Pn	18 30 31.0	+0.2
SOKA				⇑iSn	Sn	18 31 19.9	+0.1
SOKA	Soboth	4.13	336	Pn	Pn	18 30 31.0	+0.2
SOKA				Sn	Sn	18 31 19.9	+0.1
RMGR	Halanga-Turnu	4.18	64	S	Sn	18 31 21.5	+0.8
RMGR	Halanga-Turnu	4.18	64	S	Sn	18 31 21.5	+0.8
VTS	Vitosha	4.26	92	ePn	Pn	18 30 32.1	-0.4
VTS				eSn	Sn	18 31 21.6	-1.2
VTS	Vitosha	4.26	92	⇑iP	Pn	18 30 34.4	+1.9
VTS	Vitosha	4.26	92	ePn	Pn	18 30 32.1	-0.4
VTS	Vitosha	4.26	92	⇑iP	Pn	18 30 34.4	+1.9
VTS				eSn	Sn	18 31 21.6	-1.2
VTS				S	Sb	18 31 22.7	-12
PKST	Tˆ's	4.36	5	ePn	Pn	18 30 34.4	+0.5
PKST				eSn	Sn	18 31 24.7	-0.6
PKSG		4.53	8	ePn	Pn	18 30 36.5	+0.4
PKSG				eSn	Sn	18 31 31.5	+2.3
ARSA	Arzberg	4.54	343	i Pn	Pn	18 30 37.3	+1.0
	SNR=10						
ARSA				⇑iSn	Sn	18 31 28.3	-1.5
ARSA	Arzberg	4.54	343	Pn	Pn	18 30 37.3	+1.0
	SNR=10						
ARSA				Sn	Sn	18 31 28.3	-1.5
CONA	Conrad Observa	5.13	348	i Pn	Pn	18 30 45.5	+1.0
	SNR=12						
CONA				⇓iSn	Sn	18 31 43.6	-0.8
CONA	Conrad Observa	5.13	348	Pn	Pn	18 30 45.5	+1.0
	SNR=12						
CONA				Sn	Sn	18 31 43.6	-0.8
LOT	Lotru	5.20	59	S	Sn	18 31 45.7	-0.5
LOT	Lotru	5.20	59	S	Sn	18 31 45.7	-0.5
PSZ	Piszkesteto	5.29	18	⇓iP	Pn	18 30 46.3	-0.4
PSZ	Piszkesteto	5.29	18	⇓ePn	Pn	18 30 46.5	-0.2
PSZ				eSn	Sn	18 31 46.6	-1.6
PSZ	Piszkesteto	5.29	18	⇓iP	Pn	18 30 46.3	-0.4
PSZ				S	Sn	18 31 46.6	-1.6
DRGR		5.39	42	S	Sn	18 31 48.7	-1.9
DRGR		5.39	42	S	Sn	18 31 48.7	-1.9
MOA	Molln	5.42	337	i Pn	Pn	18 30 50.4	+2.0
	SNR=15						
MOA				⇓iSn	Sn	18 31 50.7	-0.6
MOA	Molln	5.42	337	Pn	Pn	18 30 50.4	+2.0
	SNR=15						
MOA				Sn	Sn	18 31 50.7	-0.6
HUMR	Humele	5.69	71	S	Sn	18 31 58.2	+0.2
HUMR	Humele	5.69	71	S	Sn	18 31 58.2	+0.2
VRAC	Vranov	6.42	355	S	Sn	18 32 13.1	-2.9
MLR	Muntele Rosu	6.63	64	⇑iP	Pn	18 31 06.0	+0.9
MLR	Muntele Rosu	6.63	64	⇑iP	Pn	18 31 06.0	+0.9

IDC 01 18:34:48.1±4.2**, 20°.96S**×**178°.07W, h494**km±47km**, mb3.4**/13**, mb1 3.6**/14**, mb1mx3.5**/20**, mbtmp3.4**/14**, Error ellipse: s-maj=22.1km s-min=17.9km az=59.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	17.74	193	P	P	18 38 26.3	+0.1
	0.8nm,0.3s,baz=344,slow=13,SNR=4.1						
PMG	Port Moresby	35.38	284	P	P	18 41 01.7	-0.1
	14nm,0.8s,baz=153,slow=15,SNR=7.5						
STKA	Stephens Creek	37.53	245	P	P	18 41 18.9	-0.5
	6.4nm,0.6s,baz=89,slow=9.8,SNR=26						
ASAR	Alice Springs	44.35	257	P	P	18 42 13.8	-0.2
	13nm,0.5s,baz=92,slow=8.3,SNR=297						
ASAR				PcP	PcP	18 43 47.5	-0.1
	0.6nm,0.6s,baz=110,slow=3.6,SNR=4.3						
WRA	Warramunga Arr	44.47	263	P	P	18 42 14.3	-0.6
	4.0nm,0.3s,baz=97,slow=7.3,SNR=116						
VNDA	Vanda	57.45	185	P	P	18 43 49.0	+0.5
	0.3nm,0.5s,baz=25,slow=5.6,SNR=4.4						
MJAR	Matsushiro Arr	70.54	324	P	P	18 45 12.7	0.0
	2.7nm,0.5s,baz=159,slow=6.4,SNR=20						
MAT	Matsushiro	70.54	324	P	P	18 45 12.9	+0.2
PETK	Petropavlovsk-	76.69	345	P	P	18 45 47.1	-0.4
	2.3nm,0.6s,baz=143,slow=7.9,SNR=7.7						
KSRS	Korea Array	77.19	319	P	P	18 45 51.8	+1.3
	1.1nm,0.6s,baz=124,slow=5.4,SNR=8.8						
USRK	Ussuriysk Arra	79.30	326	P	P	18 46 02.1	+0.5
	1.4nm,0.8s,baz=142,slow=4.0,SNR=6.8						
NVAR	Mina Array Bea	81.40	43	P	P	18 46 12.8	-0.3
	0.2nm,0.6s,baz=231,slow=9.7,SNR=4.5						
TXAR	Lajitas Array	87.36	57	P	P	18 46 43.0	+0.6
	0.4nm,0.9s,baz=219,slow=5.8,SNR=4.4						
ILAR	Eielson Array	88.77	13	P	P	18 46 47.3	-0.8
	0.7nm,1.0s,baz=218,slow=5.1,SNR=5.4						
CMAR	Chiang Mai Arr	90.20	290	P	P	18 46 56.9	+1.1
	0.6nm,0.7s,baz=122,slow=2.3,SNR=7.5						
FINES	FINESS Array B	136.19	344	PKP	PKPdf	18 53 12.2	-0.1
	0.6nm,0.6s,baz=85,slow=2.9,SNR=3.4						
AKASG	Malin Array Be	143.38	331	PKP	PKPab	18 53 22.6	-1.1
	3.2nm,0.4s,baz=42,slow=4.1,SNR=25						
BRTR	Keskin Array B	147.09	312	PKPbc	PKPbc	18 53 35.0	-0.5
	0.9nm,0.6s,baz=90,slow=0.6,SNR=6.6						
BRG	Berggiesshubel	148.69	345	eP	PKPab	18 53 44.5	0.0
	3.7nm,1.2s						
GERES	GERESS Array B	150.62	344	PKPbc	PKPbc	18 53 42.9	-0.9
	0.4nm,0.6s,baz=24,slow=3.6,SNR=5.1						

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*DDA **01** 18:48:11.5, 38°.90N×26°.47E, h7km, MD2.8*
*ISCJB **01** 18:48:11.9±0.8, 38°.89N±0°.04×26°.44E±0°.07, h7km±9km, Error ellipse: s-maj=9.1km s-min=6.0km az=155.3*
*CSEM **01** 18:48:12.3±0.3, 38°.87N×26°.42E, h15km, MD2.6, Error ellipse: s-maj=7.2km s-min=4.0km az=76.0*
*ISK **01** 18:48:13.2, 38°.96N×26°.51E, h12km, MD2.6*
ISC 01 18:48:12.0±1.2**, 38°.91N**±0°.03×**26°.47E**±0°.05**, h8**km±11km**, n17, σ0s.43**/26**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.55	170	i P	Pg	18 48 22.7	-0.1
URLA				i S	Sg	18 48 30.0	0.0
URLA	Izmir	0.55	170	i P	Pg	18 48 22.7	-0.1
URLA				i S	Sg	18 48 30.0	0.0
EZN	Ezine	0.93	353	ePG	Pb	18 48 30.4	+0.1
EZN				eSG	Sb	18 48 43.4	+0.6
EZN	Ezine	0.93	353	ePg	Pb	18 48 30.4	+0.1
EZN				eSg	Sb	18 48 43.4	+0.6
BOZC	Bozcaada	0.99	341	i P	Pb	18 48 31.3	-0.1
BOZC				i S	Sg	18 48 44.1	+0.2
AKS	Akhisar	1.04	91	ePG	Pn	18 48 33.5	+0.5
AKS				eSG	Sn	18 48 47.8	0.0
AKS	Akhisar	1.04	91	ePg	Pn	18 48 33.5	+0.5
AKS				eSg	Sn	18 48 47.8	0.0
BALY	Balya	1.22	46	i P	Pn	18 48 34.6	-0.8
BALY				i S	Sg	18 48 51.6	+0.4
BALY	Balya	1.22	46	i P	Pn	18 48 34.6	-0.8
BALY				i S	Sg	18 48 51.6	+0.4
BALB	Balikesir	1.31	56	ePN	Pg	18 48 37.2	0.0
BALB	Balikesir	1.31	56	ePn	Pg	18 48 37.2	0.0
GONE	Gonen-Balikesi	1.48	39	ePN	Pb	18 48 39.5	-0.2
GONE	Gonen-Balikesi	1.48	39	ePn	Pb	18 48 39.5	-0.2
GELI	Tayfur-Gelibol	1.49	360	ePN	Pb	18 48 39.6	-0.3
GELI	Tayfur-Gelibol	1.49	360	ePn	Pb	18 48 39.6	-0.3
KRBG	Karabiga-Canak	1.61	23	ePN	Pb	18 48 41.4	-0.7
KRBG	Karabiga-Canak	1.61	23	ePn	Pb	18 48 41.4	-0.7

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*BJI **01** 18:56:22.4, 1°.22S×133°.07E, h7km, mB4.8/5, mb4.6/12, Ms4.4/5, Ms7 4.3/5*
*IDC **01** 18:56:29.5±0.7, 0°.40S×132°.64E, h0km, mb4.4/13, mb1 4.5/16, mb1mx4.2/29, mbtmp4.4/16, ML4.3/3, MS3.4/8, Ms1 3.4/8, ms1mx3.1/38, Error ellipse: s-maj=27.7km s-min=11.1km az=74.0*
*NEIC **01** 18:56:31.5±5.0, 0°.38S×132°.61E, h12km±31km, mb4.4/16, Error ellipse: s-maj=12.4km s-min=6.2km az=48.0*
*DJA **01** 18:56:33.7±1.0, 0°S±4°×13°3E±°, h10km, M4.8/19, mB5.4/9, mb4.8/19, MLv4.8/11, Mw(mB)4.9/9*
*ISCJB **01** 18:56:34.6±0.7, 0°.37S±0°.04×132°.67E±0°.04, h49km±6km, mb4.4/31, MS3.5/7, Error ellipse: s-maj=7.2km s-min=4.8km az=40.1*
*AUST **01** 18:56:37.8, 0°.49S×132°.50E, h60km*
ISC 01 18:56:36.2±0.6**, 0°.36S**±0°.04×**132°.66E**±0°.05**, h46**km±5km**, n114, σ1s.42**/123**, mb4.4**/31**, MS3.3**/7**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SWI	Sorong	1.48	250	P	Pn	18 56 58.1	-2.4
SWI				S	Sn	18 57 19.6	+0.9
SWI	Sorong	1.48	250	P	Pn	18 56 57.7	-2.8
	baz=1.3,SNR=1000						
SWI				S	Sn	18 57 19.5	+0.8
	baz=1.3,SNR=7.8						
RKPI	Ransiki, Papua	1.90	127	P	Pn	18 57 05.3	-0.9
RKPI				S	Sn	18 57 30.7	+1.8
FAKI	Fak Fak	2.58	189	P	Pn	18 57 14.4	-1.1
FAKI				S	Sn	18 57 48.7	+3.1
FAKI	Fak Fak	2.58	189	P	Pn	18 57 13.2	-2.2
	baz=2.4,SNR=526						
FAKI				S	Sn	18 57 48.5	+3.0
	baz=2.4,SNR=5.2						
BAKI	Biak	3.55	103	P	Pn	18 57 26.6	-2.2
SRPI	Serui, Papua	3.88	113	P	Pn	18 57 34.7	+1.3
MSAI	Masohi	4.76	231	P	Pn	18 57 47.1	+1.6
MSAI				S	Sn	18 58 42.0	+2.5
LBMI	Labuha	5.17	267	P	Pn	18 57 49.8	-1.2
	200nm,0.9s,2μm0.6nm						
TLE	Tual	5.24	179	P	Pn	18 57 52.4	+0.3
	451nm,1.0s,4μm1.6nm						
TLE				S	Sn	18 58 52.3	+1.0
	451nm,1.0s,4μm1.6nm						
TLE	Tual	5.24	179	P	Pn	18 57 52.1	0.0
	baz=5.2,SNR=92						
TLE				S	Sn	18 58 55.0	+3.6
	baz=5.2,SNR=7.6						
GAMI	Galela, Maluku	5.34	294	P	Pn	18 57 53.8	+0.4
	171nm,0.7s,2μm0.6nm						
TNTI	Ternate	5.41	282	P	Pn	18 57 53.7	-0.7
	88nm,0.9s,2μm0.4nm						
MNI	Manado	8.02	283	P	Pn	18 58 31.7	+1.5
	95nm,0.7s,3μm						
LUWI	Luwuk	9.91	266	P	Pn	18 58 55.1	-1.0
	94nm,1.0s						
KDU	Kakadu	12.25	181	P	Pn	18 59 25.0	-3.1
	baz=12,SNR=54						
KDU				S	Sn	19 01 39.0	-4.3
	baz=12,SNR=6.8						
MTN	Manton Dam	12.49	187	P	Pn	18 59 27.7	-3.8
	baz=12,SNR=71						
MTN				S	Sn	19 01 42.0	-7.3
	baz=12,SNR=16						
BKSI	Bulukumba	13.45	248	P	Pn	18 59 45.4	+0.8
	30nm,1.0s						
KAPI	Kappang	13.69	250	Pn	Pn	18 59 43.0	-4.9
KAPI	Kappang	13.69	250	P	Pn	18 59 49.2	+1.3
	39nm,1.1s						
KAPI	Kappang	13.69	250	Pn	Pn	18 59 43.0	-4.9
	0.6nm,0.3s,baz=76,slow=17,SNR=2.6						
KAPI				LR	LR	19 05 16.7	
	comp=Z,114nm,20.2s,baz=196,slow=39						
SMKI	Samarinda	15.45	270	P	P	19 00 18.2	+3.2
PMG	Port Moresby	17.00	122	Pn	Pn	19 00 29.4	-1.4
BBKI	Banjar Baru	18.07	260	P	P	19 00 46.0	+2.0
	79nm,1.1s,3μm						
GUMO	Guam	18.40	41	LR	LR	19 07 11.4	
	comp=Z,59nm,18.2s,baz=107,slow=35						
KHKI	Kahang-Kahang	18.76	244	P	Pn	19 00 52.6	+0.2
	35nm,1.3s						
FITZ	Fitzroy Crossi	18.93	201	P	P	19 00 51.2	-2.3
FITZ				S	Sn	19 04 10.6	-15
FITZ	Fitzroy Crossi	18.93	201	P	P	19 00 51.2	-2.3
	0.6nm,0.3s,baz=26,slow=11,SNR=18						
FITZ				S	Sn	19 04 10.6	-15
	0.4nm,0.3s,baz=336,slow=20,SNR=4.0						
FITZ				LR	LR	19 07 57.8	
	comp=Z,135nm,20.3s,baz=16,slow=36						
FITZ	Fitzroy Crossi	18.93	201	P	P	19 00 51.0	-2.4
	baz=19,SNR=14						
FITZ				S	Sn	19 04 14.4	-11
	baz=19,SNR=3.4						
WRAB	Tennant Creek	19.52	175	eP	P	19 00 59.5	-0.4
	13nm,0.8s						
WRAB				eS	S	19 04 16.0	-22
WRA	Warramunga Arr	19.53	175	P	P	19 00 59.3	-0.7
WRA				S	S	19 04 29.7	-8.6
WRA	Warramunga Arr	19.53	175	P	P	19 00 59.3	-0.7
	1.4nm,0.3s,baz=354,slow=11,SNR=71						
WRA				S	S	19 04 29.7	-8.6
	0.3nm,0.3s,baz=357,slow=23,SNR=5.7						
SBUM	Sibu	20.62	278	P	Pn	19 01 14.0	-0.6
	22nm,1.0s						
MTSU	Mount Surprise	21.05	148	P	P	19 01 18.1	+1.6
	baz=21,SNR=7.7						
PBKI	Pangkalan Bun	21.11	263	P	P	19 01 17.9	+0.7
	74nm,1.3s						
STKI	Sintang	21.18	271	P	P	19 01 18.9	+0.9
	17nm,0.9s,2μm						
QIS	Mount Isa	21.19	162	P	P	19 01 21.0	+3.0
	baz=21,SNR=13						
KSM	Kuching	22.42	275	eP	P	19 01 31.3	0.0
	11nm,0.8s						
KSM	Kuching	22.42	275	P	P	19 01 32.1	+0.8
	15nm,1.0s						
KSM	Kuching	22.42	275	P	P	19 01 32.1	+0.8
	baz=22,SNR=5.2						
AS31	Alice Springs	23.20	177	eP	P	19 01 38.5	-0.7
ASAR	Alice Springs	23.20	177	P	P	19 01 39.1	-0.1
ASAR				S	S	19 05 50.6	+2.8
ASAR	Alice Springs	23.20	177	P	P	19 01 39.1	-0.1
	22nm,0.6s,baz=1.4,slow=11,SNR=237						
ASAR				S	S	19 05 50.6	+2.8
	4.3nm,0.9s,baz=357,slow=24,SNR=6.2						
ASAR				LR	LR	19 11 52.8	
	comp=Z,160nm,19.9s,baz=360,slow=40						
CTA	Charters Tower	23.70	147	P	P	19 01 43.9	-0.2
CTA	Charters Tower	23.70	147	P	P	19 01 43.9	-0.2
	20nm,0.8s,baz=313,slow=8.9,SNR=3.5						
CTAO	Charters Tower	23.70	147	eP	P	19 01 44.0	0.0
	15nm,0.8s						
MBWA	Marble Bar	24.22	211	eP	P	19 01 48.6	-0.2
	36nm,1.4s						
QLP	Quilpie	28.35	158	P	P	19 02 25.5	-0.5
	baz=28,SNR=13						
MEEK	Meekatharra	29.42	206	P	P	19 02 35.3	-0.2
	baz=29,SNR=3.3						
BKNI	Bangkinang	31.63	271	P	P	19 02 46.3	-8.9
	baz=32,SNR=3.1						
KULM	Kulim	32.45	280	P	P	19 03 01.8	-0.7
STKA	Stephens Creek	32.47	166	eP	P	19 03 01.4	-0.9
	3.2nm,0.9s						
STKA	Stephens Creek	32.47	166	P	P	19 03 01.8	-0.6
	6.9nm,0.8s,baz=344,slow=8.3,SNR=16						
STKA	Stephens Creek	32.47	166	P	P	19 03 01.9	-0.4
	baz=32,SNR=11						
MORW	Morawa	32.66	208	P	P	19 03 04.5	+0.4
	baz=33,SNR=5.7						
JNU	Nakatsue	33.35	357	LR	LR	19 14 18.1	
	comp=Z,42nm,19.4s,baz=47,slow=32						
CMSA	Cobar Meteorol	33.37	160	P	P	19 03 10.0	-0.2
	baz=34,SNR=12						
BLDU	Ballidu	33.69	205	P	P	19 03 13.4	+0.4
	baz=34,SNR=28						
PSI	Prapat	33.87	276	P	P	19 03 14.2	-0.8
PSI	Prapat	33.87	276	P	P	19 03 14.2	-0.8
	9.0nm,0.8s,baz=94,slow=6.7,SNR=5.2						
KLBR	Kellerberrin	34.12	203	P	P	19 03 17.1	+0.3
	baz=34,SNR=22						
ARMA	Armidale	34.91	151	P	P	19 03 24.7	+0.9
	baz=35,SNR=4.2						
NWAO	Narrogin (SRO)	35.50	203	eP	P	19 03 26.0	-2.6
	5.4nm,0.6s						
NWAO	Narrogin (SRO)	35.50	203	P	P	19 03 27.2	-1.4
	4.9nm,0.6s,baz=69,slow=7.9,SNR=6.4						
GYA	Guiyang	36.59	319	eP	P	19 03 40.0	+1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MJAR	Matsushiro Arr	37.08	7	LR	LR	19 15 11.3	
	comp=Z,52nm,21.5s,baz=275,slow=30						
CM31	Chiang Mai Arr	38.04	301	eP	P	19 03 50.8	+0.3
	comp=Z,2.9nm,0.9s						
CMAR	Chiang Mai Arr	38.04	301	P	P	19 03 50.6	+0.1
CMAR	Chiang Mai Arr	38.04	301	P	P	19 03 50.6	+0.1
	comp=Z,2.6nm,0.9s,baz=121,slow=6.9,SNR=22						
CHTO	Chiang Mai	38.20	302	eP	P	19 03 51.5	-0.3
	comp=Z,4.8nm,0.9s						
KMI	Kunming	38.46	313	P	P	19 03 54.7	+0.5
KMI				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MDJ	Mudanjiang	44.87	357	P	P	19 04 47.6	+1.6
MDJ				S	S	19 11 29.8	+9.4
MDJ				pmax	pmax		
	comp=Z,7.0nm,2.5s						
MDJ				pmax	pmax		
	comp=Z,44nm,4.5s						
MDJ				LR	LR		
	comp=N,42nm,35.7s						
MDJ				LR	LR		
	comp=E,41nm,40.2s						
ASAJ	Asahikawa	45.16	10	LR	LR	19 24 25.1	
	comp=E,36nm,18.7s,baz=171,slow=37						
HHC	Hu-ho-hao-te	45.28	337	eP	P	19 04 50.6	+1.1
HHC				PP	PP	19 06 36.8	+0.7
HHC				S	S	19 11 27.0	+0.2
HHC				sS	sS	19 11 49.0	+1.1
HHC				ScS	ScS	19 14 42.0	-0.5
HHC				pmax	pmax		
	comp=Z,48nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,12.4s						
HHC				LR	LR		
	comp=N,170nm,15.3s						
HHC				LR	LR		
	comp=E,230nm,18.8s						
HHC				LR	LR		
	comp=Z,260nm,17.9s						
LSA	Lhasa	49.57	311	P	P	19 05 17.0	-6.5
	comp=Z,3.3nm,0.6s						
TAPN	Taplejung	51.20	306	eP	P	19 05 35.0	-0.6
	comp=Z,28nm,1.2s						
ODAN	Odare	51.25	306	eP	P	19 05 35.5	-0.5
	comp=Z,18nm,0.8s						
RAMN	Ramite	51.93	305	eP	P	19 05 40.9	-0.2
	comp=Z,15nm,0.8s						
PALK	Pallekele	52.37	279	P	P	19 05 37.8	-6.5
	comp=Z,28nm,1.4s						
GUN	Gumba	52.91	306	eP	P	19 05 48.0	-0.4
	comp=Z,20nm,0.8s						
PKIN	Phulchoki	53.16	305	eP	P	19 05 50.7	+0.5
KKN	Kakani	53.34	306	eP	P	19 05 50.5	-1.0
DMN	Daman	53.41	305	eP	P	19 05 51.6	-0.4
KOLN	Koldanda	54.71	305	eP	P	19 06 01.3	-0.1
	comp=Z,26nm,0.8s						
DANN	Dangsing	54.80	306	eP	P	19 06 01.9	-0.3
	comp=Z,27nm,0.8s						
WMQ	Urumqi	59.48	324	eP	P	19 06 36.1	+1.4
MK31	Makanchi Array	64.30	324	eP	P	19 07 07.5	+0.6
MKAR	Makanchi Array	64.30	324	P	P	19 07 07.6	+0.6
MKAR	Makanchi Array	64.30	324	P	P	19 07 07.6	+0.6
	comp=Z,3.1nm,0.7s,baz=116,slow=8.1,SNR=42						
KSH	Kashi	65.11	315	P	P	19 07 14.2	+1.6
KSH				ePcP	PcP	19 07 47.2	+2.2
KSH				ePP	PP	19 09 38.9	+2.6
KSH				eScP		19 11 44.4	
KSH				ePcS		19 11 49.5	
KSH				eS	S	19 15 50.5	-1.6
KSH				esS	sS	19 16 13.2	-1.0
KSH				eScS	SKSac	19 17 01.2	-2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KSH				pmax	pmax		
	comp=Z,11nm,0.8s						
KSH				pmax	pmax		
	comp=Z,48nm,3.1s						
KSH				LR	LR		
	comp=Z,160nm,4.8s						
TKM2	Tokmak 2	66.72	318	eP	P	19 07 22.6	-0.3
	comp=Z,2.6nm,0.8s						
ZAA0	Zalesovo Array	66.94	332	eP	P	19 07 22.6	-1.2
ZALV	Zalesovo Beam	66.94	332	P	P	19 07 23.6	-0.3
ZALV	Zalesovo Beam	66.94	332	P	P	19 07 23.6	-0.3
	comp=Z,1.0nm,0.6s,baz=126,slow=6.9,SNR=8.2						
AAK	Ala-Archa	67.35	317	P	P	19 07 26.3	-0.7
EKS2	Erkin-Say	67.85	317	eP	P	19 07 30.6	+0.6
	comp=Z,3.5nm,1.1s						
KURK	Kurchatov	68.38	326	eP	P	19 07 32.9	0.0
	comp=Z,3.7nm,0.8s						
KURBB	Kurchatov Arra	68.38	326	P	P	19 07 33.2	+0.2
	comp=Z,4.3nm,0.9s,baz=121,slow=5.8,SNR=50						
KBL	Kabul	68.70	307	P	P	19 07 35.0	-0.6
KKAR	Karatay Array	70.25	317	eP	P	19 07 44.6	-0.1
	comp=Z,1.9nm,0.7s						
BVAR	Borovoye Array	73.97	326	P	P	19 08 07.1	+0.3
BVAR	Borovoye Array	73.97	326	P	P	19 08 07.1	+0.3
	comp=Z,2.5nm,0.8s,baz=87,slow=7.6,SNR=11						
BRVK	Borovoye	74.05	326	eP	P	19 08 06.1	-1.1
VNDA	Vanda	78.70	174	eP	P	19 08 33.6	+0.5
	comp=Z,2.4nm,0.9s						
VNDA	Vanda	78.70	174	P	P	19 08 34.0	+0.9
	comp=Z,2.4nm,1.0s,baz=334,slow=5.2,SNR=4.6						
VNDA				LR	LR	19 43 46.6	
	comp=Z,65nm,19.0s,baz=318,slow=36						
ABKAR	Akbulak array	79.05	320	eP	P	19 08 34.8	-0.8
	comp=Z,0.6nm,0.4s						
ILAR	Eielson Array	86.25	25	P	P	19 09 11.2	-1.4
ILAR	Eielson Array	86.25	25	P	P	19 09 11.2	-1.4
	comp=Z,0.6nm,0.8s,baz=258,slow=4.5,SNR=5.1						
QSPA	South Pole Qui	89.57	180	P	P	19 09 28.4	-0.3
QSPA	South Pole Qui	89.57	180	P	P	19 09 28.3	-0.3
	comp=Z,2.6nm,0.7s,baz=339,slow=3.7,SNR=18						
TORD	Torodi Ar. Bea	129.79	287	PKP	PKPdf	19 15 40.7	-0.9
TORD	Torodi Ar. Bea	129.79	287	PKP	PKPdf	19 15 40.7	-0.9
	comp=Z,0.3nm,0.7s,baz=70,slow=2.1,SNR=3.2						
CPUP	Villa Florida	151.77	161	PKPbc	PKPbc	19 16 27.4	+0.7
CPUP	Villa Florida	151.77	161	PKPbc	PKPbc	19 16 27.4	+0.7
	comp=Z,1.7nm,0.6s,baz=270,slow=2.0,SNR=8.8						

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*BJI **01** 19:04:35.2, 7°.09S×130°.33E, h102km, mB5.0/20, mb4.9/31*
*AUST **01** 19:04:39.6, 6°.48S×129°.53E, h60km*
*NEIC **01** 19:04:43.2±1.5, 6°.52S×129°.85E, h114km±15km, mb4.5/17, Error ellipse: s-maj=12.2km s-min=6.8km az=58.0*
*ISCJB **01** 19:04:45.0±0.5, 6°.54S±0°.03×129°.89E±0°.04, h145km±5km, mb4.5/42, Error ellipse: s-maj=6.5km s-min=4.1km az=167.9*
*IDC **01** 19:04:47.4±3.6, 6°.49S×129°.90E, h151km±33km, mb4.1/19, mb1 4.1/20, mb1mx4.1/26, mbtmp4.1/20, Error ellipse: s-maj=18.7km s-min=9.6km az=72.0*
*DJA **01** 19:04:47.0±0.3, 7°S±4°×13°0E±°, h136km±14km, M4.9/9, mB5.4/6, mb5.1/9, MLv4.8/5, Mw(mB)4.8/6*
ISC 01 19:04:45.2±0.7**, 6°.62S**±0°.04×**129°.87E**±0°.05**, h131**km±6km**, n147, σ1s.56**/165**, mb4.5**/42**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	3.01	71	P	Pn	19 05 33.6	+1.5
TLE	Tual	3.01	71	P	Pn	19 05 34.2	+2.2
	baz=3.3,SNR=90						
TLE				S	Sn	19 06 08.8	+0.6
	baz=3.3,SNR=7.4						
MSAI	Masohi	3.38	344	P	Pn	19 05 39.1	+2.2
FAKI	Fak Fak	4.37	33	P	Pn	19 05 48.2	-1.8
FAKI	Fak Fak	4.37	33	P	Pn	19 05 47.9	-2.1
	baz=4.5,SNR=50						
FAKI				S	Sn	19 06 34.9	-5.4
	baz=4.5,SNR=13						
SWI	Sorong	5.88	14	P	Pn	19 06 08.2	-2.0
	baz=5.9,SNR=81						
SWI				S	Sn	19 07 09.1	-7.5
	baz=5.9,SNR=8.8						
MTN	Manton Dam	6.31	169	P	Pn	19 06 17.7	+1.7
	baz=6.6,SNR=198						
MTN				S	Sn	19 07 26.8	0.0
	baz=6.6,SNR=11						
LBMI	Labuha	6.39	338	P	Pn	19 06 17.7	+0.6
	565nm,0.9s,5µm1.6nm						
KDU	Kakadu	6.55	157	P	Pn	19 06 20.3	+1.1
	baz=6.8,SNR=900						
KDU				S	Sn	19 07 33.1	+0.4
	baz=6.8,SNR=5.7						
RKPI	Ransiki, Papua	6.65	40	P	Pn	19 06 19.8	-0.7
	155nm,0.6s,5µm						
BAKI	Biak	8.23	49	P	Pn	19 06 42.0	+0.2
	457nm,0.8s,4µm						
KMSI	Cibinong	9.25	320	P	Pn	19 06 57.9	+2.4
	135nm,1.2s,1µm						
MNI	Manado	9.45	328	P	Pn	19 06 59.8	+1.5
	86nm,1.1s						
WSI	Waingapu	9.95	252	S	Sn	19 08 55.2	+0.4
	baz=9.7,SNR=3.6						
SPSI	Sidrap Palu	10.40	284	P	Pn	19 07 27.6	+17
MRSI	Marisa	10.60	311	P	Pn	19 07 16.1	+2.5
	58nm,1.1s,546nm						
JAY	Jayapura	11.54	70	P	P	19 07 45.1	+11
	baz=12,SNR=3.4						
FITZ	Fitzroy Crossi	12.14	199	P	Pn	19 07 32.6	-1.4
FITZ				S	Sn	19 09 39.1	-8.7
FITZ	Fitzroy Crossi	12.14	199	P	Pn	19 07 32.6	-1.4
	3.2nm,0.3s,baz=39,slow=12,SNR=55						
FITZ				S	Sn	19 09 39.1	-8.7
	9.9nm,0.3s,baz=91,slow=20,SNR=7.3						
FITZ	Fitzroy Crossi	12.14	199	P	Pn	19 07 33.5	-0.5
	baz=12,SNR=18						
FITZ				S	Sn	19 09 44.3	-3.5
	baz=12,SNR=5.6						
WRAB	Tennant Creek	13.93	162	ePn	Pn	19 07 54.5	-2.6
WRAB				eSn	Sn	19 10 17.6	-14
WRA	Warramunga Arr	13.94	162	P	Pn	19 07 55.1	-2.1
WRA				S	Sn	19 10 23.1	-8.2
WRA	Warramunga Arr	13.94	162	P	Pn	19 07 55.1	-2.1
	4.0nm,0.3s,baz=344,slow=13,SNR=42						
WRA				S	Sn	19 10 23.1	-8.2
	6.3nm,0.3s,baz=341,slow=23,SNR=9.8						
COEN	Coen	14.98	120	P	P	19 08 13.3	+0.7
	baz=15,SNR=10						
COEN				S	Sn	19 10 47.0	-9.4
	baz=15,SNR=5.6						
BBKI	Banjar Baru	15.29	281	P	P	19 08 22.7	+6.6
AS31	Alice Springs	17.39	168	eP	Pn	19 08 40.7	+0.8
ASAR	Alice Springs	17.39	168	P	Pn	19 08 41.6	+1.7
ASAR				S	S	19 11 48.6	-5.1
ASAR	Alice Springs	17.39	168	P	Pn	19 08 41.6	+1.7
	5.4nm,0.3s,baz=345,slow=9.2,SNR=104						
ASAR				S	S	19 11 48.6	-5.1
	2.1nm,0.3s,baz=337,slow=21,SNR=8.7						
MBWA	Marble Bar	17.47	213	ePn	Pn	19 08 41.2	+0.3
	12nm,0.7s						
MBWA				eSn	S	19 11 45.4	-10
MTSU	Mount Surprise	18.15	130	P	Pn	19 08 50.0	+1.0
	baz=18,SNR=5.5						
KKM	Kota Kinabalu	18.55	312	eP	P	19 08 51.9	-0.1
	35nm,1.2s						
CTA	Charters Tower	20.79	132	P	Pn	19 09 18.3	-1.7
CTA	Charters Tower	20.79	132	P	Pn	19 09 18.3	-1.7
	6.8nm,0.9s,baz=296,slow=14,SNR=4.3						
CTAO	Charters Tower	20.79	132	eP	Pn	19 09 18.9	-1.2
	34nm,1.4s						
KSM	Kuching	21.11	292	eP	P	19 09 18.0	-1.7
	5.9nm,0.9s						
CISI	Cisompet, Garu	21.91	266	P	P	19 09 29.1	+0.9
	baz=22,SNR=4.1						
MEEK	Meekatharra	22.61	207	P	P	19 09 36.5	+1.4
	baz=23,SNR=7.7						
MEEK				S	Sn	19 13 50.1	-9.0
	baz=23,SNR=5.6						
FORT	Forrest	24.10	184	P	P	19 09 50.4	+1.7
	baz=24,SNR=12						
QLP	Quilpie	24.11	147	P	P	19 09 51.4	+2.5
	baz=24,SNR=4.5						
XMIS	Christmas Isla	24.25	259	eP	P	19 09 43.8	-6.5
	538nm,1.3s						
GUMO	Guam	25.00	37	eP	P	19 09 49.1	-7.9
	1µm,2.5s						
KMBL	Kambalda	25.73	196	P	P	19 10 05.2	+1.7
	baz=26,SNR=9.0						
MORW	Morawa	25.87	209	P	P	19 10 08.0	+3.2
	baz=26,SNR=3.4						
BBOO	Buckleboo	26.69	168	P	P	19 10 13.4	+1.2
	baz=27,SNR=5.4						
STKA	Stephens Creek	27.41	158	eP	P	19 10 19.7	+1.1
	1.1nm,0.6s						
STKA	Stephens Creek	27.41	158	P	P	19 10 19.9	+1.3
	4.7nm,0.6s,baz=334,slow=8.4,SNR=15						
STKA	Stephens Creek	27.41	158	P	P	19 10 20.0	+1.3
	baz=28,SNR=13						
CMSA	Cobar Meteorol	28.87	151	P	P	19 10 33.5	+2.0
	baz=29,SNR=19						
KULM	Kulim	31.47	291	eP	P	19 10 52.4	-2.4
	7.3nm,0.9s						
ARPS	Mount Arapiles	31.94	162	P	P	19 11 00.9	+2.3
	baz=32,SNR=24						
QIZ	Qiongzhong	32.23	323	P	P	19 11 00.7	-0.6
QIZ				sP	sP	19 11 34.8	-10
QIZ				S	S	19 16 07.4	+2.3
QIZ				ScS	ScS	19 21 20.8	+2.8
QIZ				pmax	pmax		
	comp=Z,19nm,2.0s						
PSI	Prapat	32.28	286	P	P	19 11 01.6	-0.4
PSI	Prapat	32.28	286	P	P	19 11 01.6	-0.4
	comp=Z,11nm,0.7s,baz=160,slow=12,SNR=7.3						
PSI	Prapat	32.28	286	P	P	19 11 04.1	+2.1
	baz=32,SNR=4.6						
YNG	Young	32.43	151	P	P	19 11 05.4	+2.4
	baz=33,SNR=11						
GSI	Gunungsitoli	33.18	283	S	S	19 16 16.6	-3.4
	baz=33,SNR=7.3						
LHI	Lord Howe Isla	36.85	136	P	P	19 11 53.3	+12
	baz=37,SNR=12						
CM31	Chiang Mai Arr	39.39	310	eP	P	19 12 02.1	-0.3
	comp=Z,1.2nm,0.6s						
CMAR	Chiang Mai Arr	39.39	310	P	P	19 12 02.1	-0.3
CMAR				PcP	PcP	19 14 08.5	+0.3
CMAR	Chiang Mai Arr	39.39	310	P	P	19 12 02.1	-0.3
	comp=Z,3.6nm,0.6s,baz=138,slow=7.4,SNR=42						
CMAR				PcP	PcP	19 14 08.5	+0.3
	comp=Z,1.0nm,0.6s,baz=146,slow=2.9,SNR=8.2						
JNU	Nakatsue	39.53	1	P	P	19 12 02.3	-1.1
JNU	Nakatsue	39.53	1	P	P	19 12 02.3	-1.1
	comp=Z,8.1nm,0.9s,baz=202,slow=2.8,SNR=6.6						
CHTO	Chiang Mai	39.60	310	eP	P	19 12 03.4	-0.7
	comp=Z,6.6nm,0.8s						
CHTO				e		19 12 10.9	
GYA	Guiyang	39.85	327	eP	P	19 12 05.7	-0.5
GYA				pP	pP	19 12 30.5	-4.9
GYA				sP	sP	19 12 42.8	-7.5
GYA				PP	PnPn	19 13 44.4	-0.7
GYA				PcP	PcP	19 14 11.0	+1.3
GYA				ScP	ScP	19 17 49.5	+2.9
GYA				PcS	PcS	19 18 01.0	+0.8
GYA				S	S	19 18 04.2	+3.0
GYA				sS	sS	19 18 45.6	-6.4
GYA				ScS	ScS	19 22 01.2	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	Kunming	41.14	321	P	P	19 12 17.3	+0.3
KMI				pmax	pmax		
	comp=Z,54nm,0.6s						
MAJO	Matsushiro	43.64	10	eP	P	19 12 34.4	-2.4
	comp=Z,16nm,0.9s						
MAT	Matsushiro	43.64	10	P	P	19 12 34.7	-2.1
MJAR	Matsushiro Arr	43.64	10	P	P	19 12 34.9	-1.9
MJAR	Matsushiro Arr	43.64	10	P	P	19 12 34.9	-1.9
	comp=Z,8.8nm,0.7s,baz=190,slow=10,SNR=39						
KSAR	Wonju Array Be	43.87	358	P	P	19 12 37.7	-0.8
KSRS	Korea Array	43.88	358	P	P	19 12 37.7	-0.9
	comp=Z,1.8nm,0.6s,baz=173,slow=8.9,SNR=16						
CD2	Chengdu	44.91	328	P	P	19 12 49.3	+2.2
CD2				PP	PP	19 14 38.9	+4.2
CD2				PcS	PcS	19 18 16.7	-3.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH	Lanzhou	49.01	332	eP	P	19 13 19.3	+0.4
LZH				pP	pP	19 13 41.5	-7.7
LZH				sP	sP	19 13 50.0	-14
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC	Hu-ho-hao-te	50.14	342	eP	P	19 13 27.2	-0.2
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,260nm,9.0s						
HHC				LR	LR		
	comp=N,260nm,17.5s						
HHC				LR	LR		
	comp=E,170nm,16.7s						
HHC				LR	LR		
	comp=Z,290nm,16.0s						
CN2	Changchun	50.34	356	eP	P	19 13 27.5	-1.2
USRK	Ussuriysk Arra	50.62	2	P	P	19 13 30.1	-0.6
	comp=Z,5.9nm,0.6s,baz=185,slow=6.7,SNR=19						
MDJ	Mudanjiang	51.00	360	P	P	19 13 32.6	-1.0
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,43nm,3.3s						
MDJ	Mudanjiang	51.00	360	P	P	19 13 32.0	-1.5
	comp=Z,5.1nm,0.6s						
ASAJ	Asahikawa	51.79	12	P	P	19 13 38.9	-0.6
ASAJ	Asahikawa	51.79	12	P	P	19 13 38.9	-0.6
	comp=Z,6.7nm,0.8s,baz=198,slow=15,SNR=8.8						
LSA	Lhasa	51.83	316	eP	P	19 13 40.6	0.0
	comp=Z,3.2nm,0.6s						
ODAN	Odare	52.91	311	eP	P	19 13 47.8	-0.6
	comp=Z,17nm,0.5s						
TAPN	Taplejung	52.94	312	eP	P	19 13 48.1	-0.5
	comp=Z,17nm,0.3s						
RAMN	Ramite	53.55	310	eP	P	19 13 52.9	-0.2
	comp=Z,42nm,0.5s						
GTA	Gaotai	53.58	331	P	P	19 13 52.9	0.0
GTA				pP	pP	19 14 18.1	-5.5
GTA				sP	sP	19 14 29.4	-8.8
GTA				S	S	19 21 17.1	+0.9
GTA				sS	sS	19 21 59.8	-10
GTA				SS	SS	19 24 58.7	0.0
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,57nm,4.0s						
GTA				LR	LR		
	comp=N,75nm,15.9s						
GTA				LR	LR		
	comp=E,110nm,16.1s						
GTA				LR	LR		
	comp=Z,90nm,15.7s						
GUN	Gumba	54.60	311	eP	P	19 14 00.3	-0.5
	comp=Z,37nm,0.7s						
PKI	Pulchoki	54.78	310	eP	P	19 14 01.2	-0.9
	comp=Z,7.8nm,0.5s						
PKIN	Phulchoki	54.79	310	eP	P	19 14 01.1	-1.0
	comp=Z,6.4nm,0.5s						
KKN	Kakani	54.99	311	eP	P	19 14 02.8	-0.7
	comp=Z,11nm,0.6s						
DMN	Daman	55.03	310	eP	P	19 14 03.3	-0.5
	comp=Z,7.8nm,0.5s						
KOLN	Koldanda	56.26	310	eP	P	19 14 12.0	-0.5
	comp=Z,13nm,0.6s						
DANN	Dangsing	56.43	310	eP	P	19 14 13.2	-0.6
	comp=Z,12nm,0.7s						
ULN	Ulaanbaatar	57.86	342	eP	P	19 14 23.2	-0.2
	comp=Z,40nm,0.6s						
SONM	Songino Array	58.04	342	P	P	19 14 24.5	-0.1
SONM	Songino Array	58.04	342	P	P	19 14 24.5	-0.1
	comp=Z,1.4nm,0.6s,baz=163,slow=6.7,SNR=22						
WMQ	Urumqi	63.01	327	eP	P	19 14 59.6	+1.3
WMQ	Urumqi	63.01	327	P	P	19 14 58.9	+0.6
WMQ				PP	PP	19 17 22.9	+4.3
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.4s						
WMQ				LR	LR		
	comp=N,260nm,9.4s						
WMQ				LR	LR		
	comp=E,200nm,8.0s						
WMQ				LR	LR		
	comp=Z,38nm,15.2s						
PETK	Petropavlovsk-	64.00	18	P	P	19 15 04.5	-0.1
PETK	Petropavlovsk-	64.00	18	P	P	19 15 04.5	-0.1
	comp=Z,3.7nm,0.6s,baz=172,slow=5.0,SNR=17						
KSH	Kashi	67.65	317	eP	P	19 15 29.4	+1.0
KSH				ePcP	PcP	19 15 55.9	+1.4
KSH				epP	pP	19 15 56.9	-3.5
KSH				esP	sP	19 16 09.1	-5.5
KSH				ePP	PP	19 17 59.9	+0.5
KSH				eScP		19 19 48.0	
KSH				ePcS		19 19 59.6	
KSH				eS	S	19 24 13.3	-2.1
KSH				esS	SKiKP	19 25 00.5	-12
KSH				eScS	SKSac	19 25 12.5	-1.7
KSH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,75nm,4.5s						
KSH				LR	LR		
	comp=N,77nm,3.9s						
KSH				LR	LR		
	comp=E,68nm,3.7s						
KSH				LR	LR		
	comp=Z,100nm,3.3s						
MK31	Makanchi Array	67.84	327	eP	P	19 15 28.8	-0.5
MKAR	Makanchi Array	67.84	327	eP	P	19 15 29.5	+0.2
MKAR	Makanchi Array	67.84	327	P	P	19 15 29.4	+0.2
	comp=Z,20nm,0.5s,baz=115,slow=8.4,SNR=312						
KZA	Kyzart	69.40	320	P	P	19 15 39.8	+0.2
	SNR=12						
TKM2	Tokmak 2	69.61	320	eP	P	19 15 40.8	+0.2
	comp=Z,10nm,0.6s						
TKM2	Tokmak 2	69.61	320	P	P	19 15 41.0	+0.5
	SNR=19						
KBK	Karagaybulak	69.89	320	P	P	19 15 42.9	+0.6
	SNR=7.3						
AAK	Ala-Archa	70.17	320	eP	P	19 15 43.7	-0.3
	comp=Z,1.7nm,0.8s						
AAK	Ala-Archa	70.17	320	P	P	19 15 44.7	+0.7
	SNR=15						
AAK	Ala-Archa	70.17	320	P	P	19 15 43.7	-0.3
	comp=Z,9.0nm,0.9s,baz=121,slow=5.5,SNR=38						
AML	Almayashu	70.44	319	P	P	19 15 46.6	+0.7
	SNR=17						
USP	Ospenovka	70.48	320	P	P	19 15 45.9	+0.2
	SNR=40						
EKS2	Erkin-Say	70.64	320	eP	P	19 15 47.0	+0.2
	comp=Z,12nm,0.8s						
EKS2	Erkin-Say	70.64	320	P	P	19 15 47.6	+0.8
	SNR=21						
ZAA0	Zalesovo Array	71.19	334	eP	P	19 15 48.1	-1.6
ZALV	Zalesovo Beam	71.19	334	P	P	19 15 48.5	-1.1
ZALV	Zalesovo Beam	71.19	334	P	P	19 15 48.5	-1.1
	comp=Z,4.1nm,0.6s,baz=124,slow=5.2,SNR=28						
KURBB	Kurchatov Arra	72.12	328	P	P	19 15 55.0	-0.3
	comp=Z,6.5nm,0.6s,baz=128,slow=5.0,SNR=97						
KURK	Kurchatov	72.13	329	eP	P	19 15 54.8	-0.5
	comp=Z,15nm,1.2s						
VNDA	Vanda	72.84	173	P	P	19 15 59.6	+0.4
VNDA	Vanda	72.84	173	P	P	19 15 59.6	+0.4
	comp=Z,0.6nm,0.5s,baz=316,slow=5.9,SNR=7.0						
KKAR	Karatay Array	72.97	319	eP	P	19 15 60.0	-0.6
BVAR	Borovoye Array	77.67	328	P	P	19 16 26.7	-0.5
BVAR	Borovoye Array	77.67	328	P	P	19 16 26.7	-0.5
	comp=Z,4.2nm,0.8s,baz=123,slow=5.5,SNR=19						
BRVK	Borovoye	77.75	328	eP	P	19 16 26.6	-1.0
	comp=Z,4.6nm,1.0s						
ABKAR	Akbulak array	82.13	322	eP	P	19 16 50.0	-1.2
QSPA	South Pole Qui	83.36	180	P	P	19 16 57.6	+0.2
QSPA	South Pole Qui	83.36	180	P	P	19 16 57.6	+0.2
	comp=Z,1.3nm,0.6s,baz=324,slow=14,SNR=17						
KMBO	Kilima Mbogo	92.47	269	eP	P	19 17 35.6	-6.8
	comp=Z,5.6nm,0.5s						
ILAR	Eielson Array	93.06	25	P	P	19 17 41.1	-2.6
ILAR	Eielson Array	93.06	25	P	P	19 17 41.1	-2.6
	comp=Z,0.9nm,0.8s,baz=248,slow=4.6,SNR=6.7						
FINES	FINESS Array B	102.37	331	PKiKP	PKiKP	19 22 44.9	-1.8
FINES	FINESS Array B	102.37	331	PKiKP	PKiKP	19 22 44.9	-1.8
	comp=Z,1.2nm,0.8s,baz=90,slow=1.4,SNR=4.3						
YKA	Yellowknife Ar	107.47	26	PKiKP	PKiKP	19 22 55.2	-0.9
YKA	Yellowknife Ar	107.47	26	PKiKP	PKiKP	19 22 55.2	-0.9
	comp=Z,0.4nm,0.6s,baz=299,slow=1.6,SNR=8.1						
GERES	GERESS Array B	112.05	320	PKiKP	PKiKP	19 23 04.2	-1.0
GERES	GERESS Array B	112.05	320	PKiKP	PKiKP	19 23 04.2	-1.0
	comp=Z,0.5nm,0.5s,baz=90,slow=1.0,SNR=8.8						
PDAR	Pinedale Array	116.72	45	PKP	PKPdf	19 23 14.4	-0.2
PDAR	Pinedale Array	116.72	45	PKP	PKPdf	19 23 14.4	-0.2
	comp=Z,0.5nm,0.6s,baz=143,slow=3.2,SNR=2.9						
TORD	Torodi Ar. Bea	128.61	281	PKP	PKPdf	19 23 37.6	-0.2
TORD	Torodi Ar. Bea	128.61	281	PKP	PKPdf	19 23 37.6	-0.2
	comp=Z,0.8nm,0.7s,baz=71,slow=1.9,SNR=9.1						
DBIC	Dimbokro	135.04	273	PKP	PKPdf	19 23 50.0	0.0
DBIC				ePKPdf	PKiKP	19 23 50.4	-1.2
DBIC	Dimbokro	135.04	273	PKP	PKPdf	19 23 50.0	0.0
	comp=Z,2.5nm,0.9s,baz=45,slow=1.4,SNR=4.0						
CPUP	Villa Florida	146.51	168	PKPbc	PKPbc	19 24 11.9	0.0
CPUP	Villa Florida	146.51	168	PKPbc	PKPbc	19 24 11.9	0.0
	comp=Z,1.3nm,0.5s,baz=226,slow=3.0,SNR=10						
LPAZ	La Paz	151.10	142	PKPbc	PKPbc	19 24 24.6	0.0
LPAZ				ePKPab	PKPab	19 24 33.7	+1.1
LPAZ	La Paz	151.10	142	PKPbc	PKPbc	19 24 24.6	0.0
	comp=Z,1.4nm,0.4s,baz=297,slow=12,SNR=15						

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*NEIC **01** 19:08:09.0, 39°.41N×111°.09W, h6km, ML2.6(SLC), After SLC.*
*IDC **01** 19:08:10.3±1.1, 39°.38N×110°.79W, h0km, mb2.6/1, mb1 3.0/5, mb1mx3.0/30, mbtmp2.7/5, ML2.9/4, Error ellipse: s-maj=12.6km s-min=9.1km az=143.0*
ISC 01 19:08:10.2±0.8**, 39°.44N**±0°.03×**110°.84W**±0°.04**, h8**km**, n35, σ1s.63**/35**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRU	San Rafael	0.41	143	ePg	Pb	19 08 19.4	-0.5
MPU	Maple Canyon	0.84	313	ePg	Pg	19 08 22.8	-3.6
DAU	Daniels Canyon	1.02	342	ePg	Pg	19 08 28.4	-1.5
JLU	Jordanelle	1.25	338	ePg	Pn	19 08 32.5	-1.8
MSU	Marysvale	1.40	229	ePg	Pn	19 08 32.3	-3.9
MVU	Marysvale	1.42	229	ePg	Pn	19 08 32.2	-4.4
CTU	Camp Tracy	1.43	331	ePg	Pn	19 08 35.4	-1.3
DUG	Dugway	1.69	297	ePn	Pn	19 08 36.8	-3.5
PV04	Paradox Valley	1.84	124	ePn	Pg	19 08 45.6	+0.1
PV01	Paradox Valley	2.20	126	ePn	Pb	19 08 50.5	+0.1
HWUT	Hardware Ranch	2.23	346	ePn	Pn	19 08 48.4	+0.6
ARUT	Antelope Range	2.62	232	ePn	Pn	19 08 52.3	-0.7
CCUT	Cedar City	2.73	227	ePn	Pn	19 08 53.8	-0.9
HVU	Hansel Valley	2.76	328	ePn	Pn	19 08 53.3	-1.6
MVCO	Mesa Verde	2.89	140	ePn	Pb	19 08 59.5	-2.7
SMCO	Snowmass	3.01	94	ePn	Pb	19 09 02.2	-2.2
AHID	Auburn Hatcher	3.33	357	Pn	Pn	19 09 05.8	+3.0
PDAR	Pinedale Array	3.46	16	Pn	Pn	19 09 06.8	+2.2
PDAR				Pg	Pg	19 09 15.2	-1.3
PDAR				Lg	Lg	19 10 01.0	
PDAR	Pinedale Array	3.46	16	Pn	Pn	19 09 06.8	+2.2
	0.6nm,0.3s,baz=179,slow=12,SNR=20						
PDAR				Pg	Pg	19 09 15.2	-1.3
	1.5nm,0.3s,baz=186,slow=15,SNR=20						
PDAR				Lg	Lg	19 10 01.0	
	0.7nm,0.3s,baz=189,slow=31,SNR=4.5						
ELK	Elko	3.62	293	ePn	Pn	19 09 05.8	-1.0
ELK				Lg	Lg	19 10 05.6	
ELK	Elko	3.62	293	Pn	Pn	19 09 09.7	+2.9
	0.2nm,0.3s,baz=118,slow=11,SNR=11						
ELK				Lg	Lg	19 10 05.6	
	0.2nm,0.3s,baz=42,slow=7.0,SNR=3.8						
WUAZ	Wupatki	3.94	186	ePn	Pn	19 09 12.6	+1.5
TPAW	Teton Pass	4.05	359	ePn	Pn	19 09 14.1	+1.4
ISCO	Idaho Springs	4.05	83	ePn	Pn	19 09 14.7	+1.8
LOHW	Long Hollow	4.17	2	ePn	Pn	19 09 15.3	+0.9
MOOW	Moose Ponds	4.30	1	ePn	Pn	19 09 17.3	+1.0
IMW	Indian Meadow	4.45	359	ePn	Pn	19 09 19.1	+0.7
PHWY	Pilot Hill	4.51	64	Pn	Pb	19 09 26.0	-3.9
ANMO	Albuquerque	5.69	141	ePn	Pn	19 09 34.2	-1.0
ANMO				ePg	Pg	19 09 57.4	-1.8
ANMO				Lg	Lg	19 11 08.6	
ANMO	Albuquerque	5.69	141	Pn	Pn	19 09 36.2	+1.0
	0.2nm,0.3s,baz=338,slow=14,SNR=5.1						
ANMO				Pg	Pg	19 09 54.2	-5.0
	0.3nm,0.3s,baz=332,slow=15,SNR=6.6						
ANMO				Lg	Lg	19 11 08.6	
	0.2nm,0.3s,baz=252,slow=21,SNR=6.1						
LAZ	Ladron	5.84	148	Pn	Pn	19 09 36.4	-0.9
NVAR	Mina Array Bea	5.91	263	Pn	Pn	19 09 40.2	+1.9
NVAR				Pg	Pb	19 09 53.8	+0.2
NVAR	Mina Array Bea	5.91	263	Pn	Pn	19 09 40.2	+1.9
	0.1nm,0.3s,baz=86,slow=14,SNR=2.5						
NVAR				Pg	Pb	19 09 53.8	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.3nm,0.3s,baz=81,slow=16,SNR=13						
YKA	Yellowknife Ar	23.20	356	P	P	19 13 18.9	+1.7
YKA	Yellowknife Ar	23.20	356	P	P	19 13 18.9	+1.7
	0.1nm,0.5s,baz=168,slow=9.5,SNR=4.4						

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*IDC **01** 19:27:11.4±7.0, 5°.58S×109°.95E, h554km±100km, mb2.5/6, mb1 2.5/6, mb1mx2.4/23, mbtmp2.5/6, Error ellipse: s-maj=141.7km s-min=19.1km az=56.0*

ISC 01 19:27:11.5±2.7**, 5°.6S**±0°.6×**110°.0E**±0°.9**, h556km, n8, σ0s.43**/6**, mb2.9**/6**, Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	Wanagama	2.39	167	P	P	19 28 19.9	-3.8
	baz=17,SNR=5.3						
CISI	Cisompet, Garu	2.92	227	P	P	19 28 22.4	-4.2
	baz=17,SNR=11						
CMAR	Chiang Mai Arr	26.24	336	P	P	19 32 03.0	0.0
	0.1nm,0.5s,baz=167,slow=8.3,SNR=2.9						
ASAR	Alice Springs	29.23	130	P	P	19 32 28.8	-0.4
	0.2nm,0.8s,baz=306,slow=8.0,SNR=4.6						
STKA	Stephens Creek	39.48	135	P	P	19 33 55.0	+0.4
	0.6nm,0.4s,baz=313,slow=12,SNR=3.2						
SONM	Songino Array	53.27	357	P	P	19 35 39.0	+0.3
	0.2nm,0.6s,baz=178,slow=8.5,SNR=2.5						
MKAR	Makanchi Array	57.62	338	P	P	19 36 08.9	0.0
	0.5nm,0.3s,baz=154,slow=7.4,SNR=13						
ZALV	Zalesovo Beam	62.95	344	P	P	19 36 43.4	-0.4
	0.2nm,0.4s,baz=168,slow=7.4,SNR=2.4						

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*IDC **01** 19:33:03.8±1.4, 36°.71N×110°.10W, h0km, mb1 2.9/3, mb1mx2.8/29, mbtmp2.6/3, ML2.8/3, Error ellipse: s-maj=19.1km s-min=12.3km az=42.0*

*NEIC **01** 19:33:03.9±0.5, 36°.38N×110°.27W, h0km, ML2.7, Error ellipse: s-maj=7.9km s-min=6.5km az=61.0, Suspected Mining explosion.*

NEIC 40 km [25 miles] S of Kayenta.

*ISCJB **01** 19:33:03.3±0.5, 36°.35N±0°.04×110°.24W±0°.06, h0km, Error ellipse: s-maj=7.5km s-min=5.4km az=137.9*

ISC 01 19:33:02.7±1.0**, 36°.43N**±0°.04×**110°.28W**±0°.04**, h0km, n29, σ1s.77**/27**, Eastern Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WUAZ	Wupatki	1.27	225	ePg	Pg	19 33 25.4	-1.8
MVCO	Mesa Verde	1.63	61	ePn	Pn	19 33 32.0	-0.8
PV10	Paradox Valley	2.18	27	ePn	Pn	19 33 40.9	+0.4
PV01	Paradox Valley	2.18	38	ePn	Pn	19 33 41.8	+1.3
PV04	Paradox Valley	2.24	29	ePn	Pn	19 33 43.0	+1.8
MSU	Marysvale	2.57	325	ePn	Pn	19 33 48.9	+3.1
MVU	Marysvale	2.58	324	ePn	Pn	19 33 48.5	+2.6
SRU	San Rafael	2.68	356	ePn	Pn	19 33 49.0	+1.7
CCUT	Cedar City	2.71	295	ePn	Pn	19 33 50.3	+2.6
ARUT	Antelope Range	2.87	299	ePn	Pn	19 33 50.7	+0.9
TMUT	Trail Mountain	2.95	346	ePn	Pn	19 33 53.9	+2.7
LAZ	Ladron	3.27	127	ePn	Pn	19 33 57.2	+1.8
ANMO	Albuquerque	3.45	114	ePn	Pn	19 33 58.0	+0.2
ANMO				ePg	Pg	19 34 08.4	-0.3
ANMO				Lg	Lg	19 34 52.5	
ANMO	Albuquerque	3.45	114	Pn	Pn	19 33 59.8	+1.9
	0.2nm,0.3s,baz=273,slow=17,SNR=5.6						
ANMO				Lg	Lg	19 34 52.5	
	0.3nm,0.3s,baz=342,slow=19,SNR=2.9						
LENM	Lemitar	3.52	129	Pn	Pn	19 34 00.0	+1.1
LPM	Los Pinos Moun	3.66	124	ePn	Pb	19 34 08.5	+0.2
MPU	Maple Canyon	3.73	344	Pn	Pn	19 34 06.2	+4.4
BNM	Barren Site	3.75	126	ePn	Pn	19 34 03.6	+1.5
SMCO	Snowmass	3.79	43	ePn	Pn	19 34 05.1	+2.4
DAU	Daniels Canyon	4.05	349	ePn	Pn	19 34 10.7	+4.5
TUC	Tucson	4.13	186	ePn	Pn	19 34 07.9	+0.7
DUG	Dugway	4.25	333	Pn	Pn	19 34 10.0	+1.1
HWUT	Hardware Ranch	5.26	349	ePn	Pn	19 34 25.7	+2.9
GSC	Goldstone	5.42	260	Pg	Pg	19 34 44.8	-1.8
PDAR	Pinedale Array	6.35	5	Pn	Pn	19 34 37.5	-0.3
PDAR				Pg	Pg	19 35 03.5	-0.9
PDAR				Lg	Lg	19 36 16.1	
PDAR	Pinedale Array	6.35	5	Pn	Pn	19 34 37.5	-0.3
	0.1nm,0.3s,baz=170,slow=12,SNR=5.4						
PDAR				Pg	Pg	19 35 03.5	-0.9
	0.2nm,0.3s,baz=181,slow=14,SNR=6.4						
PDAR				Lg	Lg	19 36 16.1	
	0.0nm,0.3s,baz=180,slow=28,SNR=3.2						
NVAR	Mina Array Bea	6.69	290	Pn	Pn	19 34 47.1	+4.7
NVAR				Lg	Lg	19 36 33.9	
NVAR	Mina Array Bea	6.69	290	Pn	Pn	19 34 47.1	+4.7
	0.1nm,0.3s,baz=95,slow=18,SNR=2.3						
NVAR				Lg	Lg	19 36 33.9	
	0.1nm,0.3s,baz=95,slow=28,SNR=3.0						
TXAR	Lajitas Array	9.00	140	Pg	Pn	19 35 40.3	+26
	baz=330,slow=12,SNR=3.2						
TXAR				Lg	Lg	19 37 50.1	
	0.0nm,0.3s,baz=321,slow=24,SNR=2.6						

MEX 01 19:53:11.1±1.0**, 17°.39N**×**95°.15W, h138km**±10km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.39	140	i P	Pn	19 53 29.3	-1.3
CMIG				i S	Sn	19 53 42.8	-2.6
VHO	Vista Hermosa	1.55	258	eP	Pn	19 53 39.8	-0.8
VHO				eS	Sn	19 54 01.4	-1.7
HUIG	Huatulco	1.86	210	eP	Pn	19 53 43.1	-0.8
HUIG				eS	Sn	19 54 07.5	-1.5
TGIG		2.03	107	i P	Pn	19 53 45.5	-0.5
TGIG				i S	Sn	19 54 11.1	-1.7
TPIG	Tehuac#an	2.34	296	i P	Pn	19 53 49.4	-0.5
TPIG				i S	Sn	19 54 17.2	-2.6
UTMO	Huajuapan	2.57	280	eP	Pn	19 53 51.9	-0.9
UTMO				eS	Sn	19 54 22.5	-2.3
PNIG	Pinotepa	3.02	251	i P	Pn	19 53 55.4	-2.9
PNIG				i S	Sn	19 54 33.1	-1.7
CCIG	Comitan	3.09	111	i P	Pn	19 53 59.0	-0.5
CCIG				eS	Sn	19 54 35.0	-1.7
YAIG	Yautepec	4.00	292	i P	Pn	19 54 11.0	-0.3
YAIG				i S	Sn	19 54 55.8	-2.2

IDC 01 19:53:27.9±6.9**, 30°.37S**×**178°.24W, h0km, mb4.2**/2**, mb1 4.5**/2**, mb1mx3.7**/17**, mbtmp4.2**/2**, Error ellipse: s-maj=281.3km s-min=56.5km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.90	267	P	P	20 01 27.8	-0.6
	1.0nm,0.5s,baz=104,slow=7.5,SNR=19						
WRA	Warramunga Arr	43.89	272	P	P	20 01 36.8	+0.3
	2.3nm,0.3s,baz=111,slow=8.1,SNR=64						
FINES	FINESS Array B	145.05	340	PKPbc	PKPbc	20 13 05.0	-0.8
	0.9nm,0.8s,baz=49,slow=2.6,SNR=6.1						

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*IDC **01** 20:18:42.6±1.1, 35°.18N×23°.31E, h0km, mb3.7/9, mb1 3.7/12, mb1mx3.6/29, mbtmp3.7/12, ML3.6/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/45, Error ellipse: s-maj=24.1km s-min=21.3km az=35.0*

*ISCJB **01** 20:18:47.8±0.5, 35°.05N±0°.04×23°.22E±0°.05, h73km±4km, mb3.4/9, Error ellipse: s-maj=8.6km s-min=4.3km az=43.9*

*ATH **01** 20:18:48.8, 35°.17N×23°.27E, h74km±2km, ML3.2*

*CSEM **01** 20:18:48.4±0.2, 35°.01N×23°.22E, h73km±5km, ML3.2, Error ellipse: s-maj=7.7km s-min=3.5km az=50.0*

*THE **01** 20:18:50.4, 35°.07N×23°.20E, h31km±16km, ML3.2/1, Error ellipse: s-maj=16.6km s-min=0.4km az=68.0*

*HLW **01** 20:18:51.3, 35°.00N×23°.84E, h33km±24km, Md0.0, Ml3.7*

ISC 01 20:18:48.2±0.9**, 35°.02N**±0°.05×**23°.19E**±0°.05**, h59km**±8km**, n125, σ1s.23**/145**, mb3.6**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARN	Karanos	0.70	57	P	Pn	20 19 02.8	+0.3
KARN				S	Sn	20 19 12.8	-0.1
KARN	Karanos	0.70	57	eP	Pn	20 19 03.1	+0.6
KARN				eS	Sn	20 19 14.0	+1.1
KARN	Karanos	0.70	57	eP	Pn	20 19 03.1	+0.6
KARN				eS	Sn	20 19 14.0	+1.1
GVD	Gavdhos	0.76	104	P	Pn	20 19 04.1	+1.0
GVD				S	Sn	20 19 14.7	+0.7
GVD	Gavdhos	0.76	104	eP	Pn	20 19 04.3	+1.2
GVD				eS	Sn	20 19 17.3	+3.3
GVD	Gavdhos	0.76	104	P	Pn	20 19 04.1	+1.0
GVD				S	Sn	20 19 14.7	+0.7
ANKY	Antikythira Is	0.85	6	eP	Pn	20 19 04.5	+0.3
ANKY				eS	Sn	20 19 15.8	-0.2
ANKY	Antikythira Is	0.85	6	eP	Pn	20 19 04.5	+0.3
ANKY				eS	Sn	20 19 15.8	-0.2
VAM	Vamos	0.91	65	P	Pn	20 19 06.0	+0.9
VAM				S	Sn	20 19 17.8	+0.4
VAM	Vamos	0.91	65	eP	Pn	20 19 05.9	+0.9
VAM				eS	Sn	20 19 18.3	+0.9
VAM	Vamos	0.91	65	eP	Pn	20 19 05.9	+0.9
VAM				eS	Sn	20 19 18.3	+0.9
KYTH	Kithira	1.26	354	P	Pn	20 19 10.5	+0.9
KYTH	Kithira	1.26	354	eP	Pn	20 19 10.6	+0.9
KYTH	Kithira	1.26	354	eP	Pn	20 19 10.6	+0.9
SIVA	Sivas	1.33	90	P	Pn	20 19 12.2	+1.7
SIVA				S	Sn	20 19 28.8	+1.5
SIVA	Sivas	1.33	90	eP	Pn	20 19 12.1	+1.6
SIVA				eS	Sn	20 19 29.2	+1.9
SIVA	Sivas	1.33	90	eP	Pn	20 19 12.1	+1.6
SIVA				S	Sn	20 19 28.8	+1.5
IDI	Anoyia	1.42	79	P	Pn	20 19 13.0	+1.2
IDI				S	Sn	20 19 31.0	+1.5
IDI	Anoyia	1.42	79	eP	Pn	20 19 13.3	+1.5
IDI	Anoyia	1.42	79	P	Pn	20 19 13.0	+1.2
IDI				S	Sn	20 19 31.0	+1.5
VLI	Veliai	1.71	353	P	Pn	20 19 16.9	+1.3
VLI				S	Sn	20 19 37.2	+0.8
VLI	Veliai	1.71	353	eP	Pn	20 19 16.8	+1.2
VLI	Veliai	1.71	353	eP	Pn	20 19 16.8	+1.2
VLI				S	Sn	20 19 37.2	+0.8
DYR	Agios Nikonas	1.87	338	P	Pn	20 19 19.2	+1.3
DYR	Agios Nikonas	1.87	338	P	Pn	20 19 19.2	+1.3
LAST	Lasithi	1.88	85	eP	Pn	20 19 19.4	+1.3
LAST	Lasithi	1.88	85	eP	Pn	20 19 19.4	+1.3
NPS	Neapolis	2.00	82	eP	Pn	20 19 21.3	+1.7
NPS	Neapolis	2.00	82	eP	Pn	20 19 21.3	+1.7
PYL	PYLOS	2.21	328	P	Pn	20 19 24.0	+1.5
PYL	PYLOS	2.21	328	eP	Pn	20 19 22.9	+0.4
PYL	PYLOS	2.21	328	P	Pn	20 19 24.0	+1.5
SANT	Santorini	2.28	53	eP	Pn	20 19 23.9	+0.4
SANT	Santorini	2.28	53	eP	Pn	20 19 23.9	+0.4
ITM	Ithomi	2.38	335	eP	Pn	20 19 26.0	+1.1
ITM	Ithomi	2.38	335	eP	Pn	20 19 26.0	+1.1
DID	Didima	2.48	1	P	Pn	20 19 27.3	+1.1
DID	Didima	2.48	1	eP	Pn	20 19 26.7	+0.5
DID	Didima	2.48	1	eP	Pn	20 19 26.7	+0.5
ZKR	Zakros	2.48	87	eP	Pn	20 19 28.1	+1.9
ZKR	Zakros	2.48	87	eP	Pn	20 19 28.1	+1.9
NAIG	Nisos Aigina	2.74	5	eP	Pn	20 19 31.0	+1.3
NAIG	Nisos Aigina	2.74	5	eP	Pn	20 19 31.0	+1.3
AMT	Artemida-Makis	2.78	335	eP	Pn	20 19 31.7	+1.4
AMT	Artemida-Makis	2.78	335	eP	Pn	20 19 31.7	+1.4
APE	Apeiranthos	2.79	42	eP	Pn	20 19 29.9	-0.5
APE				eS	Sn	20 20 01.7	-1.1
APE	Apeiranthos	2.79	42	eP	Pn	20 19 29.9	-0.5
APE	Apeiranthos	2.79	42	eP	Pn	20 19 29.9	-0.5
APE				eS	Sn	20 20 01.7	-1.1
ATH	Athens Observa	2.97	8	eP	Pn	20 19 33.6	+0.7
ATH	Athens Observa	2.97	8	eP	Pn	20 19 33.6	+0.7
GUR	Goura	2.99	347	eP	Pn	20 19 34.9	+1.7
GUR	Goura	2.99	347	eP	Pn	20 19 34.9	+1.7
LTK	Loutraki	3.00	357	eP	Pn	20 19 34.1	+0.8
LTK	Loutraki	3.00	357	eP	Pn	20 19 34.1	+0.8
PTL	Penteli	3.07	10	eP	Pn	20 19 34.7	+0.4
PTL	Penteli	3.07	10	eP	Pn	20 19 34.7	+0.4
KLV	Kalavryta, Ach	3.13	345	eP	Pn	20 19 35.9	+0.8
KLV	Kalavryta, Ach	3.13	345	eP	Pn	20 19 35.9	+0.8
KARP	Karpathos	3.29	80	eP	Pn	20 19 38.2	+0.9
KARP	Karpathos	3.29	80	eP	Pn	20 19 38.2	+0.9
RLS	Riolos of Patr	3.33	336	eP	Pn	20 19 38.9	+1.1
RLS	Riolos of Patr	3.33	336	eP	Pn	20 19 38.9	+1.1
LAKA	Lakka	3.36	343	eP	Pn	20 19 38.7	+0.5
LAKA	Lakka	3.36	343	eP	Pn	20 19 38.7	+0.5
TRIZ	Trizonia	3.46	345	eP	Pn	20 19 40.3	+0.8
TRIZ	Trizonia	3.46	345	eP	Pn	20 19 40.3	+0.8
KALE	Kalithea	3.47	346	eP	Pn	20 19 40.3	+0.6
KALE	Kalithea	3.47	346	eP	Pn	20 19 40.3	+0.6
EFP	Efpalio	3.55	343	eP	Pn	20 19 41.8	+1.0
EFP	Efpalio	3.55	343	eP	Pn	20 19 41.8	+1.0
LKR	Lokris	3.62	358	eP	Pn	20 19 42.9	+1.1
LKR	Lokris	3.62	358	eP	Pn	20 19 42.9	+1.1
EVR	Evrytania	4.04	344	eP	Pn	20 19 49.5	+1.9
EVR	Evrytania	4.04	344	eP	Pn	20 19 49.5	+1.9
AGG	Agios Georgios	4.05	350	eP	Pn	20 19 48.2	+0.5
AGG	Agios Georgios	4.05	350	eP	Pn	20 19 48.2	+0.5
CHOS	Chios island	4.07	34	eP	Pn	20 19 48.1	+0.1
CHOS	Chios island	4.07	34	eP	Pn	20 19 48.1	+0.1
AOS	Alonnisos	4.18	7	eP	Pn	20 19 49.4	0.0
AOS	Alonnisos	4.18	7	eP	Pn	20 19 49.4	0.0
ARG	Arkhangelos	4.19	72	eP	Pn	20 19 50.6	+1.0
ARG	Arkhangelos	4.19	72	eP	Pn	20 19 50.6	+1.0
NEO	Neokhori	4.28	0	eP	Pn	20 19 51.4	+0.6
NEO	Neokhori	4.28	0	eP	Pn	20 19 51.4	+0.6
THL	Klokotos Trika	4.63	349	eP	Pn	20 19 55.8	+0.2
THL	Klokotos Trika	4.63	349	eP	Pn	20 19 55.8	+0.2
PRK	Paraskevi	4.88	29	eP	Pn	20 19 59.1	+0.1
PRK	Paraskevi	4.88	29	eP	Pn	20 19 59.1	+0.1
PAIG	Paliouri	4.91	4	eP	Pn	20 19 59.3	-0.1
PAIG	Paliouri	4.91	4	eP	Pn	20 19 59.3	-0.1
LIT	Litokhoron	5.10	354	eP	Pn	20 20 02.0	-0.1
LIT	Litokhoron	5.10	354	eP	Pn	20 20 02.0	-0.1
HMAT	Matruh	5.11	139	P	Pn	20 20 00.4	-1.8
LIA	Limnos Island	5.12	17	eP	Pn	20 20 01.5	-0.7
LIA	Limnos Island	5.12	17	eP	Pn	20 20 01.5	-0.7
PLG	Polygyros	5.35	2	eP	Pn	20 20 05.2	-0.2
PLG	Polygyros	5.35	2	eP	Pn	20 20 05.2	-0.2
KEK	Kerkira	5.41	331	eP	Pn	20 20 06.1	-0.1
KEK	Kerkira	5.41	331	eP	Pn	20 20 06.1	-0.1
SMTH	Samothraki Isl	5.75	18	eP	Pn	20 20 10.0	-0.9
SMTH	Samothraki Isl	5.75	18	eP	Pn	20 20 10.0	-0.9
FNA	Florina	5.93	347	eP	Pn	20 20 12.9	-0.5
FNA	Florina	5.93	347	eP	Pn	20 20 12.9	-0.5
SWA2		6.07	161	P	Pn	20 20 15.5	+0.1
	baz=166						
SWA2				AMP		20 21 00.0	
	comp=N,70μm,0.2s,logA/T=5.6,baz=166						
SWA2				S	Sn	20 21 20.4	-3.2
	baz=166						
SWA2		6.07	161	P	Pn	20 20 15.5	+0.1
HFRF	Wahat Farafira	8.99	149	P	Pn	20 20 55.3	-0.1
	baz=152						
HFRF	Wahat Farafira	8.99	149	P	Pn	20 20 55.3	-0.1
GLL	Jalalah	9.02	125	P	Pn	20 20 53.2	-2.6
	baz=127						
GLL	Jalalah	9.02	125	P	Pn	20 20 53.2	-2.6
AMAG	Maghara	9.49	115	P	Pn	20 20 59.1	-3.1
	baz=116						
BRTR	Keskin Array B	9.54	57	Pn	Pn	20 21 03.8	+0.7
	comp=N,0.1nm,0.3s,baz=246,slow=13,SNR=4.2						
MMAI	Mount Meron Ar	10.33	98	Pn	Pn	20 21 11.0	-2.7
	comp=N,1.0nm,0.3s,baz=266,slow=11,SNR=12						
MMAI				Sn	Sn	20 23 02.0	-6.0
	comp=N,1.0nm,0.3s,baz=284,slow=15,SNR=6.2						
EIL	Elat	11.28	115	Pn	Pn	20 21 25.6	-1.1
	comp=N,0.3nm,0.3s,baz=17,slow=20,SNR=13						
EIL				Sn	Sn	20 23 23.2	-8.0
	comp=N,0.3nm,0.3s,baz=18,slow=19,SNR=3.7						
ASF	Jabal al Asfar	11.78	100	LR	LR	20 27 56.4	
	comp=N,27nm,18.7s,baz=274,slow=47						
GERES	GERESS Array B	15.49	336	Pn	Pn	20 22 23.0	0.0
	comp=N,0.1nm,0.3s,baz=139,slow=9.1,SNR=2.5						
AKASG	Malin Array Be	16.27	14	Pn	Pn	20 22 31.9	-0.9
	comp=N,0.8nm,0.3s,baz=209,slow=10,SNR=6.0						
HFS	Hagfors	25.87	349	P	P	20 24 14.3	+0.2
	comp=N,1.6nm,0.5s,baz=150,slow=10,SNR=14						
FINES	FINESS Array B	26.50	3	P	P	20 24 19.1	-0.7
	comp=N,0.3nm,0.3s,baz=172,slow=9.2,SNR=6.8						
NOA	NORSAR Array B	27.15	347	P	P	20 24 26.7	+1.1
	comp=N,0.6nm,0.6s,baz=150,slow=11,SNR=4.1						
TORD	Torodi Ar. Bea	29.19	227	P	P	20 24 47.4	+3.2
	comp=N,0.1nm,0.3s,baz=31,slow=9.2,SNR=6.2						
ARCES	ARCESS Array B	34.59	1	P	P	20 25 31.3	+0.3
	comp=N,2.4nm,1.1s,baz=177,slow=7.9,SNR=5.4						
ARCES				PcP	PcP	20 28 05.8	+1.6
	comp=N,0.9nm,0.8s,baz=186,slow=2.7,SNR=4.0						
MKAR	Makanchi Array	45.19	56	P	P	20 27 00.3	+1.1
	comp=N,0.3nm,0.3s,baz=264,slow=7.5,SNR=15						
ZALV	Zalesovo Beam	46.26	46	P	P	20 27 07.7	+0.2
	comp=N,1.0nm,0.3s,baz=271,slow=7.6,SNR=8.7						
SONM	Songino Array	60.81	50	P	P	20 28 55.1	+0.8
	comp=N,0.2nm,0.4s,baz=280,slow=9.5,SNR=3.9						
YKA	Yellowknife Ar	77.07	341	P	P	20 30 37.1	+2.5
	comp=N,0.1nm,0.5s,baz=38,slow=5.5,SNR=3.6						

IDC 01 20:19:37.9±2.2**, 6°.29S**×**151°.72E, h0km, mb3.4**/3**, mb1 3.8**/3**, mb1mx3.4**/17**, mbtmp3.5**/3**, Error ellipse: s-maj=148.0km s-min=28.5km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.66	230	P	P	20 24 30.3	0.0
	0.7nm,0.7s,baz=57,slow=10,SNR=5.4						
ASAR	Alice Springs	24.34	223	P	P	20 24 58.0	+0.3
	1.6nm,0.6s,baz=54,slow=9.4,SNR=20						
ILAR	Eielson Array	83.93	22	P	P	20 32 09.6	0.0
	0.2nm,0.6s,baz=232,slow=4.4,SNR=3.6						
TORD	Torodi Ar. Bea	149.70	285	PKPbc	PKPbc	20 39 30.1	-0.7
	0.3nm,0.7s,baz=54,slow=4.3,SNR=4.3						

IDC 01 20:29:23.1±8.5**, 19°.80S**×**176°.65W, h0km, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.5**/3**, Error ellipse: s-maj=373.2km s-min=40.6km az=144.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.91	256	P	P	20 37 48.0	0.0
	0.4nm,0.4s,baz=90,slow=8.3,SNR=13						
WRA	Warramunga Arr	45.96	261	P	P	20 37 47.8	-0.5
	0.2nm,0.4s,baz=98,slow=6.1,SNR=5.1						
ILAR	Eielson Array	87.36	12	P	P	20 42 11.7	+0.1
	0.8nm,1.0s,baz=215,slow=7.7,SNR=4.1						

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*ROM **01** 20:34:44.5±0.1, 42°.34N×13°.49E, h9km, Ml3.3/14, Error ellipse: s-maj=1.1km s-min=0.8km az=60.0*

*CSEM **01** 20:34:44.9±0.1, 42°.33N×13°.49E, h2km, ML3.5/7, Error ellipse: s-maj=3.0km s-min=2.3km az=58.0*

*ISCJB **01** 20:34:44.7±0.2, 42°.34N±0°.02×13°.48E±0°.03, h11km±2km, mb3.2/2, Error ellipse: s-maj=3.3km s-min=2.6km az=148.3*

*LDG **01** 20:34:45.6±0.2, 42°.30N×13°.48E, h2km, Ml2.9/4, Error ellipse: s-maj=8.0km s-min=4.6km az=46.0*

*IDC **01** 20:34:46.2±1.2, 42°.49N×13°.30E, h0km, mb3.3/3, mb1 3.4/6, mb1mx3.3/28, mbtmp3.2/6, ML3.0/3, Error ellipse: s-maj=24.4km s-min=14.0km az=101.0*

ISC 01 20:34:45.4±0.8**, 42°.34N**±0°.02×**13°.49E**±0°.02**, h9km**±4km**, n104, σ1s.37**/130**, 1C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	280	Pg	Pg	20 34 47.2	-0.4
AQU				Sg	Sg	20 34 48.7	-0.4
AQU	L'Aquila	0.07	280	Pg	Pg	20 34 47.2	-0.4
AQU				Sg	Sg	20 34 48.7	-0.4
FAGN	Fagnano	0.10	139	Pg	Pg	20 34 47.6	-0.4
FAGN				Sg	Sg	20 34 49.7	-0.1
	23μm,0.7s						
FAGN	Fagnano	0.10	139	Pg	Pg	20 34 47.6	-0.4
FAGN				Sg	Sg	20 34 49.7	-0.1
	23μm,0.7s						
CAMP	Campotosto	0.20	342	Pg	Pg	20 34 49.5	-0.2
CAMP				Sg	Sg	20 34 53.2	+0.6
	4μm,0.7s						
CAMP	Campotosto	0.20	342	Pg	Pg	20 34 49.5	-0.2
CAMP				Sg	Sg	20 34 53.2	+0.6
	4μm,0.7s						
VCEL	Villa Celiera	0.26	78	Pg	Pg	20 34 50.6	-0.1
VCEL				Sg	Sb	20 34 56.0	-1.0
	7μm,0.9s						
VCEL	Villa Celiera	0.26	78	Pg	Pg	20 34 50.6	-0.1
VCEL				Sg	Sb	20 34 56.0	-1.0
	7μm,0.9s						
FIAM	Fiamignano	0.29	255	Pg	Pg	20 34 51.1	-0.1
FIAM				Sg	Sg	20 34 56.2	+1.1
	5μm,0.8s						
FIAM	Fiamignano	0.29	255	Pg	Pg	20 34 51.1	-0.1
FIAM				Sg	Sg	20 34 56.2	+1.1
	5μm,0.8s						
TERO	Teramo	0.29	16	Pg	Pg	20 34 50.9	-0.4
TERO				Sg	Sg	20 34 55.8	+0.6
	5μm,0.8s						
TERO	Teramo	0.29	16	Pg	Pg	20 34 50.9	-0.4
TERO				Sg	Sg	20 34 55.8	+0.6
	5μm,0.8s						
PTQR	Pietraquaria	0.33	192	⇓iPg	Pg	20 34 51.6	-0.3
PTQR				Sg	Sg	20 34 56.4	+0.1
PTQR	Pietraquaria	0.33	192	⇓iPg	Pg	20 34 51.6	-0.3
PTQR				Sg	Sg	20 34 56.4	+0.1
LNSS	Leonessa	0.42	308	Pg	Pg	20 34 53.3	-0.4
LNSS				Sg	Sg	20 35 00.6	+1.3
LNSS	Leonessa	0.42	308	Pg	Pg	20 34 53.3	-0.4
LNSS				Sg	Sg	20 35 00.6	+1.3
INTR	Introdacqua	0.45	137	Pg	Pg	20 34 53.8	-0.4
INTR				Sg	Sg	20 35 01.0	+0.9
	4μm,0.8s						
INTR	Introdacqua	0.45	137	Pg	Pg	20 34 53.8	-0.4
INTR				Sg	Sg	20 35 01.0	+0.9
	4μm,0.8s						
VVLD	Villa Vallelon	0.48	168	Pg	Pg	20 34 54.1	-0.7
VVLD				Sg	Sb	20 35 02.8	-0.5
	2μm,0.6s						
VVLD	Villa Vallelon	0.48	168	Pg	Pg	20 34 54.1	-0.7
CERT	Cerreto	0.55	224	Pg	Pg	20 34 55.3	-0.7
	2μm,0.6s						
CERT	Cerreto	0.55	224	Pg	Pg	20 34 55.3	-0.7
	2μm,0.6s						
GUAR	Guarcino	0.56	194	Pg	Pg	20 34 55.5	-0.8
	1μm,0.7s						
GUAR	Guarcino	0.56	194	Pg	Pg	20 34 55.5	-0.8
	1μm,0.7s						
NRCA	Norcia	0.56	330	Pg	Pg	20 34 55.6	-0.8
NRCA				Sg	Sg	20 35 04.7	+0.9
NRCA	Norcia	0.56	330	Pg	Pg	20 34 55.6	-0.8
NRCA				Sg	Sg	20 35 04.7	+0.9
LPEL	Lama dei Pelig	0.59	120	Pg	Pg	20 34 56.1	-0.8
LPEL				Sg	Sb	20 35 05.8	-0.6
	2μm,1.0s						
LPEL	Lama dei Pelig	0.59	120	Pg	Pg	20 34 56.1	-0.8
LPEL				Sg	Sb	20 35 05.8	-0.6
	2μm,1.0s						
MNS	Montasola	0.60	274	Pg	Pg	20 34 56.1	-1.0
MNS	Montasola	0.60	274	Pg	Pg	20 34 56.1	-1.0
OFFI	Offida	0.61	13	Pg	Pg	20 34 57.5	+0.3
	5μm,0.9s						
OFFI	Offida	0.61	13	Pg	Pg	20 34 57.5	+0.3
	5μm,0.9s						
MTCE	Montecelio	0.64	240	Pg	Pg	20 34 57.0	-0.8
	891nm,0.8s						
MTCE	Montecelio	0.64	240	Pg	Pg	20 34 57.0	-0.8
	891nm,0.8s						
CAFR	Castel Frentan	0.64	100	Pg	Pg	20 34 57.8	0.0
	1μm,0.7s						
CAFR	Castel Frentan	0.64	100	Pg	Pg	20 34 57.8	0.0
	1μm,0.7s						
POFI	Posta Fibreno	0.65	165	Pg	Pg	20 34 56.7	-1.2
	559nm,0.6s						
POFI	Posta Fibreno	0.65	165	Pg	Pg	20 34 56.7	-1.2
	559nm,0.6s						
SDI	San Donato	0.68	159	Pg	Pg	20 34 57.4	-1.0
	531nm,0.5s						
SDI	San Donato	0.68	159	Pg	Pg	20 34 57.4	-1.0
	531nm,0.5s						
CESX	Cesi	0.73	292	Pg	Pg	20 34 58.6	-0.8
CESX	Cesi	0.73	292	Pg	Pg	20 34 58.6	-0.8
FDMO	Fiordimonte	0.76	337	Pg	Pg	20 34 58.8	-1.2
FDMO	Fiordimonte	0.76	337	Pg	Pg	20 34 58.8	-1.2
GUMA	Gualdo di Mace	0.79	24	Pg	Pg	20 34 58.8	-1.8
GUMA	Gualdo di Mace	0.79	24	Pg	Pg	20 34 58.8	-1.8
CESI	CESI - Serrava	0.79	327	Pg	Pg	20 34 59.5	-1.2
CESI	CESI - Serrava	0.79	327	Pg	Pg	20 34 59.5	-1.2
RMP	Rome, Mte Porz	0.79	228	Pg	Pg	20 34 59.8	-0.9
RMP	Rome, Mte Porz	0.79	228	Pg	Pg	20 34 59.8	-0.9
GIUL	Giuliano Di Ro	0.80	193	Pg	Pg	20 34 59.8	-1.1
GIUL	Giuliano Di Ro	0.80	193	Pg	Pg	20 34 59.8	-1.1
RNI2	Rionero Sannit	0.81	142	Pg	Pg	20 35 00.1	-0.8
RNI2	Rionero Sannit	0.81	142	Pg	Pg	20 35 00.1	-0.8
RDP	Rocca di Papa	0.82	225	Pg	Pg	20 35 00.9	-0.3
RDP	Rocca di Papa	0.82	225	Pg	Pg	20 35 00.9	-0.3

CERA	Filignano	0.84	152	Pg	Pg	20 34 59.9	-1.7
CERA	Filignano	0.84	152	Pg	Pg	20 34 59.9	-1.7
MIDA	Miranda	0.90	141	Pg	Pg	20 35 01.3	-1.4
MIDA	Miranda	0.90	141	Pg	Pg	20 35 01.3	-1.4
CING	Cingoli	1.05	348	Pg	Pg	20 35 04.3	-1.4
CING	Cingoli	1.05	348	Pg	Pg	20 35 04.3	-1.4
SGG	Gregorio Mates	1.16	145	Pg	Pb	20 35 06.0	-1.7
SGG	Gregorio Mates	1.16	145	Pg	Pb	20 35 06.0	-1.7
NVLJ	Novalja	2.44	24	ePn	Pn	20 35 26.2	+0.9
NVLJ				Sn	Sb	20 35 58.0	-1.5
NVLJ	Novalja	2.44	24	ePn	Pn	20 35 26.2	+0.9
NVLJ				Sn	Sb	20 35 57.9	-1.5
MAIM	Mastiano	2.70	307	P	Pn	20 35 28.5	-0.5
PGF	Pioggiola	3.33	275	eP	Pn	20 35 39.5	+1.8
PGF				eSn	Sn	20 36 14.7	-2.8
	1.4nm,0.3s						
PGF	Pioggiola	3.33	275	eP	Pn	20 35 39.5	+1.8
PGF				eSn	Sn	20 36 14.7	-2.8
	0.7nm,0.3s						
VOY	Vojsko	3.70	4	ePn	Pn	20 35 46.6	+3.8
VOY				e		20 35 59.3	
VOY				eSn	Sg	20 37 09.6	+25
VOY	Vojsko	3.70	4	ePn	Pn	20 35 46.6	+3.8
ABTA	Abfaltersbach	4.46	351	⇑iPn	Pn	20 35 52.0	-1.2
ABTA	Abfaltersbach	4.46	351	Pn	Pn	20 35 52.0	-1.2
SBF	Sospel	4.69	291	ePn	Pn	20 35 56.9	+0.6
SBF	Sospel	4.69	291	ePn	Pn	20 35 56.9	+0.6
DIVS	Divibare	5.06	68	ePn	Pn	20 36 03.3	+1.8
DAVOX	Davos/Dischmat	5.13	331	Pn	Pn	20 36 04.8	+2.3
	0.5nm,0.3s,baz=149,slow=16,SNR=7.6						
DAVOX				Sn	Sn	20 37 05.2	+3.2
	0.2nm,0.3s,baz=164,slow=20,SNR=2.0						
FRF	La Foret Royal	5.17	286	ePn	Pn	20 36 03.3	+0.4
FRF				eSn	Sn	20 36 58.7	-3.9
	5.5nm,0.7s						
FRF	La Foret Royal	5.17	286	ePn	Pn	20 36 03.3	+0.4
FRF				eSn	Sn	20 36 58.7	-3.9
	2.8nm,0.7s						
LMR	La Mourre	5.23	283	ePn	Pn	20 36 04.1	+0.4
LMR	La Mourre	5.23	283	ePn	Pn	20 36 04.1	+0.4
MBDF	Montbardon	5.44	298	eP	Pn	20 36 09.3	+2.6
MBDF	Montbardon	5.44	298	eP	Pn	20 36 09.3	+2.6
GRUS	Gruza	5.51	71	ePn	Pn	20 36 08.9	+1.4
MOA	Molln	5.53	5	⇓iPn	Pn	20 36 07.2	-0.7
MOA	Molln	5.53	5	Pn	Pn	20 36 07.2	-0.7
LPG	La Plagne	5.80	305	eP	Pn	20 36 15.8	+4.0
SMRF	Simiane la Rot	6.02	288	eP	Pn	20 36 17.1	+2.5
SMRF	Simiane la Rot	6.02	288	eP	Pn	20 36 17.1	+2.5
ORIF	Oris-en-Rattie	6.09	298	eP	Pn	20 36 19.7	+4.0
GERES	GERESS Array B	6.50	1	Pn	Pn	20 36 20.8	-0.5
	0.2nm,0.3s,baz=167,slow=12,SNR=9.2						
GERES				Sn	Sn	20 37 35.4	-0.3
	0.4nm,0.3s,baz=176,slow=24,SNR=7.4						
KHC	Kasperske Hory	6.79	0	ePN	Pn	20 36 27.4	+2.2
KHC				eSN	Sn	20 37 41.3	-1.3
VIVF	Saint-Julien-l	6.88	294	eP	Pn	20 36 29.7	+3.3
HINF	Hinteralfeld	7.21	322	ePn	Pn	20 36 30.9	-0.1
HINF				eSn	Sn	20 37 48.5	-4.5
	3.2nm,0.5s						
HINF	Hinteralfeld	7.21	322	ePn	Pn	20 36 30.9	-0.1
KEST	Kesra	7.35	207	Pn	Pn	20 36 37.5	+4.6
	0.2nm,0.3s,baz=273,slow=4.7,SNR=12						
CDF	Champ du Feu	7.48	326	ePn	Pn	20 36 34.9	+0.2
CDF	Champ du Feu	7.48	326	ePn	Pn	20 36 34.9	+0.2
HAU	Haudompre	7.58	321	ePn	Pn	20 36 36.3	+0.3
HAU				eSn	Sn	20 37 57.3	-4.8
	5.7nm,0.5s						
HAU	Haudompre	7.58	321	ePn	Pn	20 36 36.3	+0.3
MLR	Muntele Rosu	9.52	66	Pn	Pn	20 37 06.8	+4.1
	0.0nm,0.3s,baz=166,slow=8.3,SNR=5.1						
FINES	FINESS Array B	20.57	17	P	Pn	20 39 25.3	-1.1
	2.2nm,1.1s,baz=165,slow=12,SNR=3.1						
TORD	Torodi Ar. Bea	30.84	203	P	P	20 41 04.1	+2.4
	0.4nm,0.9s,baz=12,slow=7.9,SNR=3.0						
YKA	Yellowknife Ar	67.54	337	P	P	20 45 43.1	+1.6
	0.1nm,0.4s,baz=42,slow=5.7,SNR=4.1						

*ISCJB **01** 20:38:41.5±0.5,22°.66S±0°.04×69°.07W±0°.06,h88km±5km, mb4.3/16,Error ellipse: s-maj=9.7km s-min=6.2km az=16.9*
*IDC **01** 20:38:43.3±0.6,22°.61S×69°.06W,h91km±5km,mb4.1/7, mb1 4.2/12,mb1mx3.9/21,mbtmp4.0/12,MS3.0/4, Ms1 3.0/4,ms1mx2.8/25,Error ellipse: s-maj=20.0km s-min=16.2km az=118.0*
*NEIC **01** 20:38:43.4±0.4,22°.65S×69°.10W,mb4.3/12,Error ellipse: s-maj=9.4km s-min=7.9km az=94.0*
*GUC **01** 20:38:43.3±0.5,22°.53S×69°.35W,h92km±4km,ML4.7*
ISC 01 20:38:43.6±0.4**,22°.55S**±0°.04×**69°.26W**±0°.04**,h98**km±3km**, n68,**σ1s.**77**/87**,mb4.3**/16**,6C-6D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	Plate Boundary	0.36	323	⇑iP	Pn	20 39 01.2	+3.0
PB04				i S	Sn	20 39 14.7	+5.5
PB04	Plate Boundary	0.36	323	⇑iP	Pn	20 39 01.2	+3.0
PB04				i S	Sn	20 39 14.7	+5.5
PB04				AML	AML	20 39 15.9	
	comp=N,32μm,0.5s						
PB09	Plate Boundary	0.75	1	⇓iP	Pn	20 39 01.2	-0.4
PB09				i S	Sn	20 39 14.4	-0.6
PB09	Plate Boundary	0.75	1	⇓iP	Pn	20 39 01.2	-0.4
PB09				i S	Sn	20 39 14.4	-0.6
PB09				AML	AML	20 39 18.1	
	comp=E,65μm,0.5s						
SPCH	San Pedro de A	1.04	110	eP	Pn	20 39 05.7	+1.2
SPCH				i S	Sn	20 39 22.4	+2.0
SPCH	San Pedro de A	1.04	110	eP	Pn	20 39 05.7	+1.2
SPCH				i S	Sn	20 39 22.4	+2.0
SPCH				AML	AML	20 39 32.2	
	comp=E,19μm,0.3s						
CEN1	Los Morros	1.20	226	⇓iP	Pn	20 39 08.0	+1.7
CEN1				i S	Sn	20 39 26.9	+3.5
CEN1	Los Morros	1.20	226	⇓iP	Pn	20 39 08.0	+1.7
CEN1				i S	Sn	20 39 26.9	+3.5
MECH	Mejillones	1.23	243	⇑iP	Pn	20 39 05.5	-1.0
MECH				eS	Sn	20 39 22.1	-1.6
MECH	Mejillones	1.23	243	⇑iP	Pn	20 39 05.5	-1.0
MECH				eS	Sn	20 39 22.1	-1.6
MECH				AML	AML	20 39 32.2	
	comp=N,10μm,0.5s						
PB01	Plate Boundary	1.52	352	⇓iP	Pn	20 39 09.5	-0.6
PB01				i S	Sn	20 39 29.5	-0.6
PB01	Plate Boundary	1.52	352	⇓iP	Pn	20 39 09.5	-0.6
PB01				i S	Sn	20 39 29.5	-0.6
PB01				AML	AML	20 39 30.9	
	comp=N,9μm,0.2s						
ANCH	Antofagasta	1.55	223	⇑iP	Pn	20 39 09.1	-1.2
ANCH				i S	Sn	20 39 29.1	-1.5
ANCH	Antofagasta	1.55	223	⇑iP	Pn	20 39 09.1	-1.2
ANCH				i S	Sn	20 39 29.1	-1.5
ANCH				AML	AML	20 39 34.8	
	comp=E,8μm,0.5s						
HMBC	Humberstone	2.34	345	AML	AML	20 40 14.5	
	comp=N,4μm,0.6s						
PSGC	Pisagua	3.05	344	AML	AML	20 40 25.4	
	comp=E,1μm,0.5s						
MNMC	Minimini	3.42	355	AML	AML	20 40 40.5	
	comp=N,4μm,0.5s						
LPAZ	La Paz	6.32	10	ePn	Pn	20 40 15.5	+0.6
LPAZ	La Paz	6.32	10	P	Pn	20 40 16.0	+1.1
	comp=N,9.8nm,0.3s,baz=196,slow=6.4,SNR=220						
ARE	Arequipa	6.42	340	eP	Pn	20 40 12.0	-3.9
ARE				eS	Sn	20 41 21.0	-6.8
LCO	Las Campanas	6.56	191	ePn	Pn	20 40 12.9	-4.8
	comp=N,49nm,0.6s						
CFAA	Coronel Fontan	9.06	174	P	Pn	20 40 48.4	-3.1
CFAA				S	Sn	20 42 22.2	-10
CFAA	Coronel Fontan	9.06	174	P	Pn	20 40 48.4	-3.1
	comp=N,1.6nm,0.3s,baz=350,slow=13,SNR=117						
CFAA				S	Sn	20 42 22.2	-10
	comp=N,0.2nm,0.3s,baz=353,slow=17,SNR=2.7						
SIV	San Ignacio	10.11	51	P	Pn	20 41 02.5	-3.4
SIV				S	Sn	20 42 46.7	-11
SIV	San Ignacio	10.11	51	P	Pn	20 41 02.5	-3.4
	comp=N,3.8nm,0.3s,baz=249,slow=12,SNR=51						
SIV				S	Sn	20 42 46.7	-11
	comp=N,0.5nm,0.3s,baz=305,slow=23,SNR=3.2						
SIV				LR	LR	20 45 34.5	
	comp=N,103nm,18.8s,slow=41						
CPUP	Villa Florida	11.49	111	P	Pn	20 41 22.3	-2.2
CPUP	Villa Florida	11.49	111	P	Pn	20 41 22.3	-2.2
	comp=N,0.4nm,0.3s,baz=275,slow=12,SNR=12						
CPUP				LR	LR	20 46 52.6	
	comp=N,55nm,20.4s,baz=164,slow=43						
NNA	Nana	12.76	324	Pn	Pn	20 41 42.6	+1.1
NNA				S	Sn	20 43 55.9	-6.0
NNA	Nana	12.76	324	S	Sn	20 43 55.9	-6.0
	comp=N,0.8nm,0.3s,baz=271,slow=16,SNR=3.9						
SAML	Samuel	14.73	24	Pn	Pn	20 42 02.3	-4.8
TRQA	Tornquist	16.67	160	ePn	Pn	20 42 28.3	-2.9
	comp=N,2.5nm,0.6s						
PLCA	Paso Flores	18.16	183	ePn	P	20 42 47.9	-0.4
	comp=N,4.8nm,0.8s						
PLCA	Paso Flores	18.16	183	P	P	20 42 48.5	+0.2
	comp=N,0.5nm,0.3s,baz=7.0,slow=12,SNR=16						
PLCA				LR	LR	20 49 51.6	
	comp=N,56nm,19.4s,baz=337,slow=37						
SPB	Sao Paulo	20.11	97	ePn	P	20 43 09.6	0.0
	comp=N,22nm,0.7s						
BDFB	Brasilia	21.20	75	P	P	20 43 19.6	-2.0
BDFB	Brasilia	21.20	75	P	P	20 43 19.6	-2.0
	comp=N,25nm,0.4s,baz=251,slow=11,SNR=53						
BDFB				LR	LR	20 53 03.5	
	comp=N,54nm,18.5s,baz=190,slow=41						
OTAV	Otavalo	24.36	337	P	P	20 43 58.0	+5.0
RCBR	Riachuelo	36.23	68	P	P	20 45 37.1	-0.3
RCBR	Riachuelo	36.23	68	P	P	20 45 37.1	-0.3
	comp=N,13nm,0.7s,baz=230,slow=11,SNR=12						
FDF	Fort de France	37.90	13	P	P	20 45 57.4	+6.0
	comp=N,32nm,0.9s						
SNAA	Sanae	61.39	161	eP	P	20 48 49.7	+0.7
SNAA	Sanae	61.39	161	eP	P	20 48 49.4	+0.4
	comp=N,2.5nm,0.7s						
QSPA	South Pole Qui	67.64	180	eP	P	20 49 30.8	+1.0
	comp=N,6.2nm,0.5s						
QSPA				pP	PcP	20 49 59.7	+3.6
DBIC	Dimbokro	69.34	73	eP	P	20 49 40.5	-0.6
	comp=N,7.7nm,1.0s						
CCUT	Cedar City	72.78	325	eP	P	20 50 04.1	+2.5
	comp=N,1.9nm,1.0s						
MSU	Marysvale	72.87	326	P	P	20 50 04.0	+1.9
	comp=N,2.7nm,1.1s						
ISA	Isabella	74.32	320	P	P	20 50 12.2	+1.7
	comp=N,2.5nm,0.6s						
SBA	Scott Base	74.74	190	eP	P	20 50 13.4	+1.1
	comp=N,4.6nm,1.1s						
VNDA	Vanda	75.76	190	P	P	20 50 18.9	+0.8
VNDA	Vanda	75.76	190	P	P	20 50 18.9	+0.8
	comp=N,0.7nm,0.8s,baz=104,slow=5.1,SNR=4.2						
NVAR	Mina Array Bea	76.12	322	P	P	20 50 22.7	+1.7
NVAR				sP	sP	20 50 57.0	+0.1
NVAR	Mina Array Bea	76.12	322	P	P	20 50 22.7	+1.7
	comp=N,0.5nm,0.8s,baz=162,slow=5.3,SNR=3.6						
NVAR				sP	sP	20 50 57.0	+0.1
	comp=N,0.8nm,0.8s,baz=164,slow=4.7,SNR=4.4						
TOA0	Torodi Ar. Sit	78.01	70	eP	P	20 50 31.1	-0.6
TOA0				ePcP	PcP	20 50 40.7	-0.4
TOA0				epP	pP	20 50 56.0	-1.1
TORD	Torodi Ar. Bea	78.01	70	P	P	20 50 31.4	-0.3
TORD				pP	pP	20 50 56.4	-0.8
TORD	Torodi Ar. Bea	78.01	70	P	P	20 50 31.4	-0.3
	comp=N,5.9nm,0.7s,baz=257,slow=5.5,SNR=40						
TORD				pP	pP	20 50 56.4	-0.8
	comp=N,5.7nm,0.5s,baz=255,slow=5.5,SNR=5.6						
TSUM	Tsumeb	80.05	107	P	P	20 50 42.5	-0.5
	comp=N,4.0nm,0.7s						
TSUM				epP	pP	20 51 09.0	+0.5
MAW	Mawson	83.42	163	P	P	20 51 00.3	+0.7
MAW	Mawson	83.42	163	P	P	20 51 00.3	+0.7
	comp=N,1.8nm,0.7s,baz=225,slow=5.7,SNR=4.8						
YKA	Yellowknife Ar	92.07	341	P	P	20 51 41.5	+0.4
YKA				pP	pP	20 52 06.0	-1.1
YKA	Yellowknife Ar	92.07	341	P	P	20 51 41.5	+0.4
	comp=N,1.1nm,0.7s,baz=139,slow=4.3,SNR=24						
YKA				pP	pP	20 52 06.0	-1.1
	comp=N,0.2nm,0.5s,baz=138,slow=4.5,SNR=2.9						
ASAR	Alice Springs	128.83	208	PKP	PKPdf	20 57 40.6	+0.3
ASAR				pPKP	pPKPdf	20 58 04.8	-2.6
ASAR	Alice Springs	128.83	208	PKP	PKPdf	20 57 40.6	+0.3
	comp=N,1.0nm,0.8s,baz=123,slow=1.7,SNR=10						
ASAR				pPKP	pPKPdf	20 58 04.8	-2.6
	comp=N,0.5nm,0.7s,baz=132,slow=1.8,SNR=4.0						
WRA	Warramunga Arr	131.89	210	PKP	PKPdf	20 57 46.8	+0.6
WRA				pPKP	pPKPdf	20 58 12.9	-0.3
WRA	Warramunga Arr	131.89	210	PKP	PKPdf	20 57 46.8	+0.6
	comp=N,0.9nm,0.7s,baz=150,slow=1.7,SNR=9.6						
WRA				pPKP	pPKPdf	20 58 12.9	-0.3
	comp=N,0.4nm,0.5s,baz=155,slow=1.4,SNR=2.7						
ZALV	Zalesovo Beam	143.04	25	PKP	PKPdf	20 58 06.7	+1.1
ZALV				pPKP	pPKPdf	20 58 30.0	-2.7
ZALV	Zalesovo Beam	143.04	25	PKP	PKPdf	20 58 06.7	+1.1
	comp=N,0.6nm,0.4s,baz=300,slow=2.2,SNR=4.9						
ZALV				pPKP	pPKPdf	20 58 30.0	-2.7
	comp=N,0.5nm,0.4s,baz=292,slow=2.0,SNR=2.5						
MKAR	Makanchi Array	146.67	37	PKPbc	PKPbc	20 58 13.2	-0.7
MKAR				pPKPbc	pPKPbc	20 58 37.5	-3.2
MKAR	Makanchi Array	146.67	37	PKPbc	PKPbc	20 58 13.2	-0.7
	comp=N,0.4nm,0.5s,baz=290,slow=3.6,SNR=5.3						
MKAR				pPKPbc	pPKPbc	20 58 37.5	-3.2
	comp=N,2.1nm,0.7s,baz=331,slow=2.3,SNR=3.3						

*CSEM **01** 21:03:43.7,36°.33N×4°.63E,h0km,ML3.5,After ALG*
CRAAG 01 21:03:43.7,36°.33N×4°.63E,Ml3.5,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKF	Akfadou	0.31	350	P	Pb	21 03 51.4	-1.0
AKF	Akfadou	0.31	350	P	Pb	21 03 51.4	-1.0
SET	Setif	0.63	102	P	Pb	21 03 58.0	+0.2
SET	Setif	0.63	102	P	Pb	21 03 58.0	+0.2
EMHD	Djebel Mahouad	1.36	265	P	Pn	21 04 10.2	0.0
EMHD	Djebel Mahouad	1.36	265	P	Pn	21 04 10.2	0.0
ABA	Alger-Bouzarea	1.37	291	P	Pb	21 04 10.4	+0.2
ABA	Alger-Bouzarea	1.37	291	P	Pb	21 04 10.4	+0.2
CASM	Ain Smara	1.50	92	P	Pn	21 04 10.8	-1.2
CASM	Ain Smara	1.50	92	P	Pn	21 04 10.8	-1.2

*ISCJB **01** 21:10:02.2±0.5,41°.25N±0°.06×139°.02E±0°.08,h250km, mb3.2/3,Error ellipse: s-maj=9.3km s-min=7.2km az=139.6*
*JMA **01** 21:10:03.2±0.4,41°.26N×138°.89E,h230km±3km,M3.0*
*IDC **01** 21:10:03.4±1.4,41°.32N×138°.83E,h228km±19km,mb3.0/3, mb1 3.0/6,mb1mx2.7/28,mbtmp3.0/6,Error ellipse: s-maj=31.6km s-min=18.0km az=127.0*
ISC 01 21:10:03.3±1.0**,41°.21N**±0°.07×**139°.03E**±0°.09**,h250**km**,n15, σ1s.05**/16**,mb3.4**/3**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	0.94	21	P	Pn	21 10 35.5	-2.4
JIW	Iwasaki	0.96	129	P	Pn	21 10 36.8	-1.4
JANG	Nango	2.06	113	P	Pn	21 10 45.7	-0.6
JOM	Ohasama	2.45	134	P	Pn	21 10 49.8	-0.2
JYK	Kaneyama	2.50	156	P	Pn	21 10 50.3	-0.3
JMK	Ichinoseki	2.81	143	P	Pn	21 10 53.4	-0.4
JNBK	Urakawa-nobuka	2.98	68	P	Pn	21 10 55.1	-0.4
JNBK				eS	S	21 11 35.7	-1.1
JSD	Sado	3.22	191	P	Pn	21 10 57.8	-0.5
JCH	Churui	3.52	65	P	Pn	21 11 01.8	+0.3
JCH				S	S	21 11 45.3	-2.4
ASAJ	Asahikawa	3.92	41	P	Pn	21 11 06.5	+0.5
	5.8nm,0.3s,baz=232,slow=10,SNR=59						
ASAJ				S	S	21 11 54.5	-1.4
	0.5nm,0.3s,baz=90,slow=20,SNR=3.0						
MJAR	Matsushiro Arr	4.70	188	P	Pn	21 11 15.9	+0.4
	0.6nm,0.3s,baz=357,slow=14,SNR=7.9						
USRK	Ussuriysk Arra	5.98	302	P	Pn	21 11 28.8	-2.3
	0.2nm,0.3s,baz=110,slow=12,SNR=12						
ZALV	Zalesovo Beam	37.80	309	P	P	21 16 55.7	+0.2
	0.7nm,0.5s,baz=92,slow=9.6,SNR=4.4						
MKAR	Makanchi Array	40.44	298	P	P	21 17 17.8	+0.4
	0.1nm,0.4s,baz=85,slow=11,SNR=3.4						
FINES	FINESS Array B	64.27	331	P	P	21 20 12.9	+1.5
	1.2nm,0.8s,baz=27,slow=13,SNR=4.0						

*ISK **01** 21:18:09.0,39°.09N×29°.04E,h5km,MD2.5*
*DDA **01** 21:18:09.6,39°.08N×29°.04E,h7km,MD2.9*
*CSEM **01** 21:18:09.8±0.1,39°.08N×29°.05E,h10km,MD2.9,Error ellipse: s-maj=3.5km s-min=2.2km az=148.0*
*ISCJB **01** 21:18:09.6±0.5,39°.07N±0°.04×29°.05E±0°.04,h9km±5km, Error ellipse: s-maj=6.6km s-min=3.6km az=148.5*
ISC 01 21:18:09.6±0.9**,39°.08N**±0°.03×**29°.04E**±0°.02**,h14**km±8km**, n26,**σ0s.**44**/42**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.26	261	i P	Pg	21 18 15.4	+0.2
DEMI				i S	Sg	21 18 18.4	-0.6
DEMI	Demirci	0.26	261	i P	Pg	21 18 15.4	+0.2
DEMI				i S	Sg	21 18 18.4	-0.6
GDZ	Gediz	0.34	89	i P	Pg	21 18 17.0	+0.3
GDZ				i S	Sg	21 18 22.0	+0.4
GDZ	Gediz	0.34	89	i P	Pg	21 18 17.0	+0.3
GDZ				i S	Sg	21 18 22.0	+0.4
TVSB	Tavsanli	0.49	42	ePG	Pg	21 18 19.2	-0.2
TVSB				eSG	Sg	21 18 25.7	-0.3
TVSB	Tavsanli	0.49	42	ePg	Pg	21 18 19.2	-0.2
TVSB				eSg	Sg	21 18 25.7	-0.3
KULA	Kula-Manisa	0.64	208	ePG	Pg	21 18 22.0	-0.2
KULA				eSG	Sg	21 18 30.7	0.0
KULA	Kula-Manisa	0.64	208	ePg	Pg	21 18 22.0	-0.2
KULA				eSg	Sg	21 18 30.7	0.0
DURS	Dursunbey	0.68	320	i P	Pg	21 18 22.9	-0.1
DURS				i S	Sb	21 18 32.8	+0.2
DURS	Dursunbey	0.68	320	i P	Pg	21 18 22.9	-0.1
DURS				i S	Sb	21 18 32.8	+0.2
MANT	Manisa	0.70	213	i P	Pb	21 18 23.6	-0.2
MANT				i S	Sg	21 18 32.0	-0.7
MANT	Manisa	0.70	213	i P	Pb	21 18 23.6	-0.2
MANT				i S	Sg	21 18 32.0	-0.7
ALT	Altintas	0.83	92	ePG	Pb	21 18 26.5	+0.6
ALT	Altintas	0.83	92	ePg	Pb	21 18 26.5	+0.6
AKHS	Akhisar	0.98	258	i P	Pn	21 18 29.1	+0.2
AKHS				eS	Sb	21 18 41.7	+0.6
AKHS	Akhisar	0.98	258	i P	Pn	21 18 29.1	+0.2
AKHS				eS	Sb	21 18 41.7	+0.6
AKS	Akhisar	0.98	258	ePG	Pn	21 18 29.0	+0.1
AKS	Akhisar	0.98	258	ePg	Pn	21 18 29.0	+0.1
IZI	Iznik	1.29	15	ePN	Pb	21 18 34.1	+0.3
IZI	Iznik	1.29	15	ePn	Pb	21 18 34.1	+0.3
BORA	Eskisehir	1.35	53	eP	Pn	21 18 34.3	+0.2
BORA				eS	Sb	21 18 50.8	-1.1
BORA	Eskisehir	1.35	53	eP	Pn	21 18 34.3	+0.2
BORA				eS	Sb	21 18 50.8	-1.1
GONE	Gonen-Balikesi	1.42	313	ePN	Pb	21 18 36.3	+0.4
GONE	Gonen-Balikesi	1.42	313	ePn	Pb	21 18 36.3	+0.4
GULT	Gulveren	1.76	40	ePN	Pb	21 18 41.5	-0.3
GULT	Gulveren	1.76	40	ePn	Pb	21 18 41.5	-0.3

*NEIC **01** 21:18:43.3,18°.58N×69°.05W,h105km,MD4.1(RSPR), After RSPR.*
RSPR 01 21:18:43.3,18°.58N×69°.05W,h105km±2km**,MD4.1**/9**, 18C-3D,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.38	304	⇑iP	Pn	21 18 58.1	-0.9
DR12				eS	Sn	21 19 10.5	-0.1
DR12	Loma Pena Alta	0.38	304	i Pu	Pn	21 18 58.1	-0.9
DR12				eS	Sn	21 19 10.5	-0.1
SMN1	Samana, DR	0.64	341	⇓eP	Pn	21 18 59.8	-1.0
SMN1				eS	Sn	21 19 14.1	+0.2
AGPR	Aguadilla, PR	1.84	93	⇑eP	Pn	21 19 14.8	+0.7
AGPR	Aguadilla, PR	1.84	93	eS	Sn	21 19 39.5	+1.9
AGPR	Aguadilla, PR	1.84	93	⇑eP	Pn	21 19 14.8	+0.7
AGPR				eS	Sn	21 19 39.5	+1.9
LSP	Las Mesas	1.91	102	⇑eP	Pn	21 19 15.0	0.0
LSP				eS	Sn	21 19 38.6	-0.5
LSP	Las Mesas	1.91	102	⇑eP	Pn	21 19 15.0	0.0
LSP				eS	Sn	21 19 38.6	-0.5
CRPR	Cabo Rojo, PR	1.93	107	⇑eP	Pn	21 19 15.1	0.0
CRPR				eS	Sn	21 19 39.8	+0.3
CRPR	Cabo Rojo, PR	1.93	107	⇑eP	Pn	21 19 15.1	0.0
CRPR				eS	Sn	21 19 39.8	+0.3
LRS	Lares	2.12	97	⇓eP	Pn	21 19 18.2	+0.6
LRS				eS	Sn	21 19 42.8	-1.0
LRS	Lares	2.12	97	⇓eP	Pn	21 19 18.2	+0.6
LRS				eS	Sn	21 19 42.8	-1.0
SDDR	Presa de Saban	2.16	281	⇑eP	Pn	21 19 17.5	-0.6
SDDR				eS	Sn	21 19 45.0	+0.2
SDDR	Presa de Saban	2.16	281	⇑eP	Pn	21 19 17.5	-0.6
SDDR				eS	Sn	21 19 45.0	+0.2
AOPR	Arecibo Observ	2.19	96	⇑eP	Pn	21 19 18.2	-0.4
AOPR				eS	Sn	21 19 45.1	-0.5
AOPR	Arecibo Observ	2.19	96	⇑eP	Pn	21 19 18.2	-0.4
AOPR				eS	Sn	21 19 45.1	-0.5
CELP	Cerrillos	2.40	102	⇑eP	Pn	21 19 21.2	-0.1
CELP				eS	Sn	21 19 51.8	+1.4
CELP	Cerrillos	2.40	102	⇑eP	Pn	21 19 21.2	-0.1
CELP				eS	Sn	21 19 51.8	+1.4
SJG	San Juan	2.79	99	eS	Sn	21 20 00.3	+0.6
CPD	Cerro la Pandu	3.03	100	eS	Sn	21 20 04.7	-0.6
CBYP	Canovanas	3.05	95	⇑eP	Pn	21 19 29.0	-0.9
CBYP				eS	Sn	21 20 05.2	-0.7
CBYP	Canovanas	3.05	95	⇑eP	Pn	21 19 29.0	-0.9
CBYP				eS	Sn	21 20 05.2	-0.7
HUMP	Col San Antoni	3.07	98	⇑eP	Pn	21 19 29.4	-0.7
HUMP	Col San Antoni	3.07	98	eS	Sn	21 20 06.3	+0.1
HUMP	Col San Antoni	3.07	98	⇑eP	Pn	21 19 29.4	-0.7
HUMP				eS	Sn	21 20 06.3	+0.1
MTP	Monte Pirata	3.36	98	⇑eP	Pn	21 19 33.3	-0.7
MTP				eS	Sn	21 20 11.7	-1.4
MTP	Monte Pirata	3.36	98	⇑eP	Pn	21 19 33.3	-0.7
MTP				eS	Sn	21 20 11.7	-1.4

PRE 01 21:26:03.1±2.1**,26°.40S**×**27°.59E,h2**km**,ML2.4,4C-4D, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	Kloof	0.06	23	⇑iP	Pg	21 26 05.0	+0.5
KLOF				eS	Sg	21 26 05.8	+0.4
KLOF				AML	AML	21 26 07.9	
	comp=Z,4μm,0.2s						
PRYS	Parys	0.56	201	eP	Pg	21 26 14.3	+0.2
PRYS				eS	Sg	21 26 21.9	+0.4
PRYS				AML	AML	21 26 26.6	
	comp=Z,104nm,0.5s						
ERPM	east rand prop	0.59	84	⇑iP	Pg	21 26 15.3	+0.5
ERPM				eS	Sg	21 26 22.5	-0.1
ERPM				AML	AML	21 26 23.5	
	comp=Z,70nm,0.3s						
KSR	Koster	0.83	311	⇑iP	Pg	21 26 18.8	-0.5
KSR				eS	Sg	21 26 29.0	-1.2
KSR				AML	AML	21 26 36.2	
	comp=Z,91nm,0.7s						
SLR	Silverton	0.91	43	⇓iP	Pg	21 26 20.6	-0.2
SLR				eS	Sg	21 26 32.4	-0.5
SLR				AML	AML	21 26 40.3	
	comp=Z,42nm,0.3s						
SEK	Senekal	1.91	179	⇑iP	Pb	21 26 38.5	-0.5
SEK				eS	Sn	21 27 02.3	+0.5
SEK				AML	AML	21 27 04.1	
	comp=Z,98nm,0.2s						
SWZ	Schweizer	2.16	248	⇓iP	Pn	21 26 40.1	-0.2
SWZ				eS	Sb	21 27 09.3	-1.2
SWZ				AML	AML	21 27 10.4	
	comp=Z,90nm,0.3s						
LBTB	Lobatse	2.27	307	⇓iP	Pn	21 26 42.5	+0.8
LBTB				eS	Sb	21 27 11.9	-1.5
LBTB				AML	AML	21 27 14.2	
	comp=Z,82nm,0.5s						
BOSA	Boshof	3.02	223	⇓iP	Pn	21 26 51.8	-0.4
BOSA				eS	Sn	21 27 27.1	-2.0
BOSA				AML	AML	21 27 42.0	
	comp=Z,7.4nm,0.3s						
BLWY	Bulawayo	6.30	9	i P	Pn	21 27 29.7	-7.6
BLWY				i		21 27 29.8	
	baz=125,slow=22						
BLWY				i S	Sg	21 29 18.8	-7.2

*CSEM **01** 21:30:19.9±0.3,36°.08N×35°.42E,h34km±3km,MD2.7, Error ellipse: s-maj=8.3km s-min=4.5km az=28.0*
*ISK **01** 21:30:20.5,36°.15N×35°.49E,h29km,MD2.7*
*DDA **01** 21:30:20.3,36°.32N×35°.53E,h7km,MD3.0*
ISC 01 21:30:19.3±2.1**,36°.2N**±0°.1×**35°.46E**±0°.10**,h15**km**,n17, σ0s.82**/24**,Turkey**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KRTS	Karatas	0.42	350	ePG	Pn	21 30 30.6	-0.3
KRTS				eSG	Sn	21 30 37.5	-0.9
KRTS	Karatas	0.42	350	ePg	Pn	21 30 30.6	-0.3
KRTS				eSg	Sn	21 30 37.5	-0.9
YAYL	Yayladag	0.54	103	iP	Pn	21 30 31.8	-0.7
YAYL				iS	Sb	21 30 38.4	+0.3
YAYL	Yayladag	0.54	103	iP	Pn	21 30 31.8	-0.7
YAYL				iS	Sb	21 30 38.4	+0.3
HTY	Hatay	0.55	94	ePG	Pb	21 30 31.8	+1.2
HTY	Hatay	0.55	94	ePg	Pb	21 30 31.8	+1.2
CEYT	Ceyhan	0.88	15	ePG	Pn	21 30 37.2	0.0
CEYT	Ceyhan	0.88	15	ePg	Pn	21 30 37.2	0.0
KOZT	Kozan	1.35	12	ePN	Pn	21 30 43.6	-0.1
KOZT	Kozan	1.35	12	ePn	Pn	21 30 43.6	-0.1
KUZU	Kuzuini	1.44	64	iP	Pn	21 30 44.9	0.0
KUZU				iS	Sn	21 31 02.0	-1.5
KUZU	Kuzuini	1.44	64	iP	Pn	21 30 44.9	0.0
KUZU				iS	Sn	21 31 02.0	-1.5
AYKD	Aykdinkavak	1.65	40	eP	Pn	21 30 48.4	+0.5
AYKD				iS	Sn	21 31 07.2	-1.7
GAZ	Gaziantep	1.73	54	ePN	Pn	21 30 49.3	+0.3
GAZ	Gaziantep	1.73	54	ePn	Pn	21 30 49.3	+0.3
KMRS	Kahramanmaras	1.77	40	ePN	Pn	21 30 49.9	+0.4
KMRS	Kahramanmaras	1.77	40	ePn	Pn	21 30 49.9	+0.4

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*IDC **01** 21:34:02.7±0.8, 26.°16N×128.°71E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.9/25, mbtmp3.9/13, ML3.2/1, MS3.3/7, Ms1 3.3/7, ms1mx3.1/38, Error ellipse: s-maj=27.0km s-min=18.1km az=79.0*

*JMA **01** 21:34:05.0±0.2, 26.°10N×128.°77E, h43km, M3.4*

ISC 01 21:34:04.5±1.7**, 26.°08N**±0.°05×**128.°74E**±0.°04**, h16**km±10km**, n31,** σ1^{s}**60**/37**, mb3.9**/12**, MS3.1**/4**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	Kunigami	0.85	331	P	Pg	21 34 20.8	-0.3
JOW				S	Sg	21 34 32.0	-0.4
JJT2	Tamagusuku 2	0.89	274	P	Pb	21 34 21.7	+0.2
JJT2				S	Sb	21 34 34.1	+1.0
JIH	Iheya	1.17	324	P	Pn	21 34 25.7	-0.5
JAGN	Aguni-jima	1.43	291	P	Pn	21 34 29.6	-0.2
JTK	Tokunoshima	1.71	6	P	Pn	21 34 33.2	-0.4
JTK				S	Sn	21 34 52.6	-2.5
JKE	Kume jima 2	1.77	278	P	Pn	21 34 33.6	-0.8
JKE				S	Sn	21 34 54.9	-1.7
JAMN	Amaminishikomi	2.19	10	P	Pn	21 34 39.8	-0.4
JAMN				S	Sn	21 35 04.5	-2.5
JMZ	Minamidaito 2	2.25	96	P	Pn	21 34 40.3	-0.7
JMZ				S	Sn	21 35 05.0	-3.5
JAM	Amami Oshima	2.45	18	P	Pn	21 34 43.1	-0.6
JAM				S	Sn	21 35 11.5	-1.8
JOGS	Gusukube	3.29	247	P	Pn	21 34 55.4	+0.1
JOGS				S	Sn	21 35 32.7	-1.3
JTJ	Tarama	3.92	249	P	Pn	21 35 03.4	-0.6
JTJ				S	Sn	21 35 46.8	-2.9
JIJ	Ishigaki jima	4.50	249	P	Pn	21 35 10.4	-1.5
JIJ				S	Sn	21 35 58.9	-5.0
IRIF	Iriomote-Funau	4.86	250	P	Pn	21 35 16.4	-0.5
JNU	Nakatsue	7.26	14	Pn	Pn	21 35 50.1	+0.2
	0.4nm,0.3s,baz=241,slow=1.8,SNR=6.3						
JNU				LR	LR	21 39 06.9	
	comp=Z,196nm,19.6s,baz=3.4,slow=42						
KSRS	Korea Array	11.36	357	LR	LR	21 41 28.4	
	comp=Z,169nm,18.3s,baz=170,slow=40						
GUMO	Guam	19.59	126	LR	LR	21 45 25.3	
	comp=Z,45nm,19.0s,baz=255,slow=35						
ASAJ	Asahikawa	21.22	28	LR	LR	21 46 45.1	
	comp=Z,76nm,21.1s,baz=16,slow=36						
SONM	Songino Array	27.93	327	P	P	21 39 55.9	+1.9
	3.5nm,0.9s,baz=137,slow=10,SNR=22						
CMAR	Chiang Mai Arr	28.55	261	P	P	21 40 00.7	+1.0
	0.4nm,0.6s,baz=51,slow=7.1,SNR=4.9						
CMAR				LR	LR	21 52 10.4	
	comp=Z,45nm,19.2s,baz=270,slow=38						
PETK	Petropavlovsk-	34.59	31	LR	LR	21 53 35.8	
	comp=Z,32nm,20.9s,baz=347,slow=34						
MKAR	Makanchi Array	41.97	312	P	P	21 41 54.3	-0.4
	1.0nm,0.7s,baz=102,slow=11,SNR=10						
ZALV	Zalesovo Beam	42.64	323	P	P	21 41 59.4	-0.6
	0.5nm,0.6s,baz=110,slow=8.1,SNR=4.0						
ZALV				LR	LR	22 00 29.2	
	comp=Z,92nm,18.2s,baz=260,slow=37						
WRA	Warramunga Arr	46.07	173	P	P	21 42 28.9	+1.2
	1.1nm,0.7s,baz=353,slow=8.6,SNR=8.4						
ASAR	Alice Springs	49.71	174	P	P	21 42 57.6	+1.7
	0.8nm,0.8s,baz=6.7,slow=8.8,SNR=8.0						
ILAR	Eielson Array	64.35	28	P	P	21 44 40.0	+0.8
	0.4nm,0.8s,baz=269,slow=6.9,SNR=3.5						
FINES	FINESS Array B	73.22	331	P	P	21 45 33.8	-0.6
	1.9nm,0.8s,baz=85,slow=4.0,SNR=4.5						
AKASG	Malin Array Be	75.94	320	P	P	21 45 50.2	-0.2
	0.4nm,0.3s,baz=55,slow=6.8,SNR=7.3						
BRTR	Keskin Array B	77.48	308	P	P	21 46 00.6	+1.0
	2.3nm,0.9s,baz=97,slow=5.1,SNR=12						
YKA	Yellowknife Ar	78.47	25	P	P	21 46 04.6	+0.3
	0.3nm,0.7s,baz=301,slow=5.5,SNR=6.2						
NB2	NORSAR Subarra	79.65	334	P	P	21 46 10.4	-0.5
	comp=Z,1.0nm,0.7s,baz=51,slow=5.6						
NOA	NORSAR Array B	79.65	334	P	P	21 46 10.7	-0.2
	comp=Z,1.3nm,0.7s,baz=52,slow=5.5,SNR=5.3						

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*IDC **01** 21:39:31.2±1.9, 42.°55N×17.°08E, h0km, mb3.6/7, mb1 3.7/13, mb1mx3.6/29, mbtmp3.6/13, ML3.4/5, Error ellipse: s-maj=30.6km s-min=14.7km az=32.0*

*SZGRF **01** 21:39:31.8, 42.°31N×17.°60E, h10km, mb4.0, Adriatic Sea*

*ISCJB **01** 21:39:35.0±0.4, 42.°85N±0.°01×17.°37E±0.°02, h14km±2km, mb3.6/7, Error ellipse: s-maj=2.6km s-min=1.9km az=35.8*

*BEO **01** 21:39:35.9±0.6, 42.°88N×17.°39E, h1km±4km, ML3.8/1*

*PDG **01** 21:39:35.4±0.6, 42.°87N×17.°41E, h3km±1km, MD3.8/9, ML3.8/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

*PRU **01** 21:39:36.6, 42.°71N×17.°45E, h10km*

*LDG **01** 21:39:36.1±0.1, 42.°90N×17.°48E, h10km, Ml3.7/8, Error ellipse: s-maj=4.3km s-min=2.4km az=11.0*

*TIR **01** 21:39:37.6, 42.°58N×17.°47E, h30km, ML4.5*

*VIE **01** 21:39:37.4±0.5, 42.°91N×17.°39E, h10km, mb3.5/9, ML3.5/7, Ms4.1/2, Error ellipse: s-maj=4.1km s-min=3.3km az=54.0 101 km SE of Split*

*CSEM **01** 21:39:37.1±0.1, 42.°87N×17.°40E, h10km, Ms4.1, Error ellipse: s-maj=3.8km s-min=2.1km az=26.0*

ISC 01 21:39:35.6±0.9**, 42.°85N**±0.°02×**17.°40E**±0.°02**, h11**km±6km**, n253,** σ1^{s}**51**/347**, mb3.7**/7**, 62C-27D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	Ston	0.22	84	iPg	Pg	21 39 40.2	-0.1
STON				Sg	Sg	21 39 43.5	+0.1
STON	Ston	0.22	84	iPg	Pg	21 39 40.2	-0.1
STON				Sg	Sg	21 39 43.5	+0.1
BRY	Bratogost	0.84	86	⇓iPg	Pg	21 39 50.2	-1.7
BRY				eSg	Sb	21 40 03.9	+0.1
HCY	Herceg Novi	0.90	116	⇓iPg	Pg	21 39 52.7	-0.3
HCY				eSg	Sn	21 40 06.8	-0.6
HCY	Herceg Novi	0.90	116	⇓iPg	Pg	21 39 52.7	-0.3
HCY				eSg	Sn	21 40 06.8	-0.6
UPM	Unac-Piva	1.16	72	⇑iPg	Pb	21 39 55.6	-2.3
UPM				eSg	Sn	21 40 14.2	+0.2
NKY	Niksic	1.18	91	ePg	Pb	21 39 56.4	-1.6
NKY				eSg	Sn	21 40 15.7	+1.5
BUM	Brajici-Budva	1.23	116	⇑iPg	Pn	21 39 58.4	-0.5
BUM				eSg	Sn	21 40 17.4	+1.8
PDG	Podgorica	1.43	106	ePn	Pn	21 40 02.1	+0.5
PDG				eSg	Sg	21 40 22.5	+0.8
PDG	Podgorica	1.43	106	ePn	Pn	21 40 02.1	+0.5
PDG				eSg	Sg	21 40 23.6	+1.9
TTG	Podgorica	1.43	106	⇓iPg	Pn	21 40 01.7	+0.1
TTG				eSg	Sg	21 40 23.6	+1.9
PLE	Pljevlja	1.54	71	⇑iPg	Pn	21 40 02.8	-0.3
PLE				eSg	Sg	21 40 27.2	+2.2
MS1	Monte Sant'Ang	1.57	224	ePn	Pg	21 40 06.0	+0.2
MS1				eSn	Sg	21 40 29.9	+3.7
ULC	Ulcinj	1.63	122	⇓iPn	Pb	21 40 05.7	0.0
ULC				eSn	Sg	21 40 30.4	+2.4
ULC	Ulcinj	1.63	122	⇓iPn	Pb	21 40 05.7	0.0
BBLS	Lazići	1.78	55	⇑iPn	Pb	21 40 07.9	-0.5
BBLS				eSn	Sb	21 40 31.8	+1.0
BBLS	Lazići	1.78	55	⇑iPn	Pb	21 40 07.9	-0.5
BBLS				eSn	Sb	21 40 31.8	+1.0
BAI	Bari	1.78	193	ePn	Pn	21 40 06.1	-0.3
BAI				eSn	Sb	21 40 30.1	-0.6
BEY	Berane	1.83	88	⇓iPn	Pb	21 40 09.4	+0.1
IVA	Berane	1.83	88	⇓iPn	Pb	21 40 09.4	+0.1
IVA				eSn	Sg	21 40 35.2	+0.6
BLY	Banja Luka	1.91	355	⇑iPn	Pb	21 40 10.3	-0.1
BLY	Banja Luka	1.91	355	⇑iPn	Pb	21 40 10.3	-0.1
PVY	Plav	1.91	97	⇓iPn	Pb	21 40 10.6	+0.1
PVY				eSn	Sg	21 40 37.4	+0.5
PVY	Plav	1.91	97	⇓iPn	Pb	21 40 10.6	+0.1
SJES	Sjenica	1.93	77	⇑iPn	Pb	21 40 10.4	-0.6
SJES				eSn	Sb	21 40 36.3	+1.2
PUK	Puka	2.02	113	iPN	Pb	21 40 11.6	-0.8
PUK	Puka	2.02	113	iPn	Pb	21 40 11.6	-0.8
BCI	Bajram Curri	2.03	103	iPN	Pb	21 40 12.5	-0.1
BCI				iSN	Sb	21 40 37.3	-0.5
BCI	Bajram Curri	2.03	103	iPn	Pb	21 40 12.5	-0.1
BCI				iSn	Sb	21 40 37.3	-0.5
DIVS	Divibare	2.26	56	⇑iPn	Pn	21 40 14.4	+1.3
DIVS				eSn	Sn	21 40 42.9	+1.8
DIVS	Divibare	2.26	56	⇑iPn	Pn	21 40 14.4	+1.3
DIVS				eSn	Sn	21 40 42.9	+1.8
TEKS	Tekeris	2.30	42	⇑iPn	Pn	21 40 14.0	+0.5
TEKS	Tekeris	2.30	42	⇑iPn	Pn	21 40 14.0	+0.5
TIR	Tirane	2.37	128	iPN	Pn	21 40 15.8	+1.3
TIR				iPN	Sn	21 40 43.1	-0.5
TIR	Tirane	2.37	128	⇑iPn	Pn	21 40 16.5	+2.0
TIR				eSn	Sb	21 40 46.6	-1.1
TIR	Tirane	2.37	128	⇑iPn	Pn	21 40 16.5	+2.0
TIR				eSn	Sb	21 40 46.6	-1.1
NVLJ	Novalja	2.51	314	ePn	Pn	21 40 18.0	+1.6
NVLJ				Sn	Sb	21 40 50.0	-1.6
NVLJ	Novalja	2.51	314	ePn	Pn	21 40 17.9	+1.6
NVLJ				Sn	Sb	21 40 49.9	-1.6
PHP	Peshkopia	2.54	116	iPN	Pb	21 40 19.5	-1.8
PHP				iPN	Sn	21 40 50.0	+2.1
PHP	Peshkopia	2.54	116	iPn	Pb	21 40 19.5	-1.8
TRUS	Trudelj	2.58	57	⇑iPn	Pn	21 40 17.5	+0.1
TRUS	Trudelj	2.58	57	⇑iPn	Pn	21 40 17.5	+0.1
GRUS	Gruza	2.63	66	eSn	Sn	21 40 52.2	+2.1
GRUS	Gruza	2.63	66	eSn	Sn	21 40 52.2	+2.1
SISC	Sisak	2.72	345	ePn	Pn	21 40 21.1	+1.8
SISC				Sn	Sb	21 40 55.5	-2.2
SISC	Sisak	2.72	345	ePn	Pn	21 40 21.1	+1.8
SISC				Sn	Sb	21 40 55.5	-2.2
SELS	Selova	2.75	81	⇓iPn	Pn	21 40 20.5	+0.7
SELS				eSn	Sn	21 40 55.7	+2.6
SELS	Selova	2.75	81	⇓iPn	Pn	21 40 20.5	+0.7
SELS				eSn	Sn	21 40 55.7	+2.6
VLO	Vlora	2.85	146	iPN	Pn	21 40 19.9	-1.2
VLO	Vlora	2.85	146	iPn	Pn	21 40 19.9	-1.2
BEO	Beograd	2.96	48	ePn	Pn	21 40 22.8	+0.2
BEO				eSn	Sn	21 40 59.3	+1.1
BEO	Beograd	2.96	48	ePn	Pn	21 40 22.8	+0.2
BEO				eSn	Sn	21 40 59.3	+1.1
BOJS	Bojanci	3.07	331	iPn	Pn	21 40 26.1	+2.0
BOJS	Bojanci	3.07	331	ePn	Pn	21 40 26.0	+1.9
BOJS	Bojanci	3.07	331	ePn	Pn	21 40 26.0	+1.9
SKO	Skopje	3.12	105	ePn	Pn	21 40 27.3	+2.5
SKO	Skopje	3.12	105	ePn	Pn	21 40 27.8	+3.0
BARS	Barje	3.25	89	ePn	Pn	21 40 27.8	+1.2
BARS	Barje	3.25	89	ePn	Pn	21 40 27.8	+1.2
BIA	Bitola	3.45	121	ePn	Pn	21 40 30.9	+1.5
BIA	Bitola	3.45	121	ePn	Pn	21 40 30.9	+1.5
BOLS	Boljevac	3.46	72	ePn	Pn	21 40 29.9	+0.4
BOLS				eSn	Sn	21 41 11.5	+0.9
BOLS	Boljevac	3.46	72	ePn	Pn	21 40 29.9	+0.4
BOLS				eSn	Sn	21 41 11.5	+0.9
PKSM	Moragy	3.48	14	⇑iP	Pn	21 40 30.5	+0.8
PKSM	Moragy	3.48	14	⇑ePn	Pn	21 40 30.6	+0.8
PKSM				eSn	Sn	21 41 09.4	-1.5
PKSM	Moragy	3.48	14	⇑iP	Pn	21 40 30.5	+0.8
PKSM				S	Sn	21 41 10.1	-0.8
KEK	Kerkira	3.62	149	eP	Pn	21 40 32.2	+0.5
FNA	Florina	3.62	123	eP	Pn	21 40 33.8	+2.1
BEHE	Becsehely	3.65	353	⇓ePn	Pn	21 40 34.3	+2.3
BEHE				eSn	Sn	21 41 17.6	+2.5
PKS9	Tamasi	3.79	9	⇓eSKSac	Pn	21 40 35.3	+1.3
LJU	Ljubljana	3.80	328	ePn	Pn	21 40 36.0	+1.9
LJU				eSn	Sn	21 41 22.0	+3.2
ZAPS	Zavoj	3.86	82	ePn	Pn	21 40 37.2	+2.2
ZAPS				eSn	Sn	21 41 21.2	+0.8
PKS2	Kecel	3.87	19	⇑eSKSac	Pn	21 40 36.0	+1.0
VOY	Vojsko	4.05	323	ePn	Pn	21 40 38.9	+1.2
VOY				eSn	Sn	21 41 27.9	+2.7
VOY	Vojsko	4.05	323	ePn	Pn	21 40 38.9	+1.2
VOY				eSn	Sn	21 41 27.9	+2.7
PKS6	Bocsa	4.05	22	⇓eSKSac	Pn	21 40 38.6	+1.0
PKS6				eSn	Sn	21 41 25.4	+0.3
BZS	Buzias	4.10	46	⇑iPn	Pn	21 40 38.6	+0.3
BZS				eSn	Sn	21 41 25.9	-0.4
BZS	Buzias	4.10	46	⇑iP	Pn	21 40 38.7	+0.4
BZS	Buzias	4.10	46	⇑iP	Pn	21 40 38.7	+0.4
BZS				S	Sn	21 41 26.0	-0.4
JAN	Janina	4.12	140	eP	Pn	21 40 40.4	+1.9
DJES	Djerdap	4.13	62	eSn	Sn	21 41 27.4	+0.4
DJES	Djerdap	4.13	62	eSn	Sn	21 41 27.4	+0.4
VAY	Valandovo	4.14	110	ePn	Pn	21 40 39.0	+0.2
VAY	Valandovo	4.14	110	ePn	Pn	21 40 39.5	+0.7
KZN	Kozani	4.15	126	eP	Pb	21 40 45.9	-2.8
SOKA	Soboth	4.18	337	⇑iPn	Pn	21 40 40.9	+1.4
SOKA				⇓iSn	Sn	21 41 30.1	+1.7
SOKA	Soboth	4.18	337	Pn	Pn	21 40 40.9	+1.4
SOKA				Sn	Sn	21 41 30.1	+1.7
OBKA	Obir	4.18	332	⇑iPn	Pn	21 40 40.8	+1.3
	SNR=13						
OBKA				⇑iSn	Sn	21 41 29.9	+1.5
OBKA	Obir	4.18	332	Pn	Pn	21 40 40.8	+1.3
	SNR=13						
OBKA				Sn	Sn	21 41 29.9	+1.5
GRG	Griva	4.19	115	eP	Pn	21 40 41.3	+1.8
RMGR	Halanga-Turnu	4.24	63	S	Sn	21 41 31.9	+2.2
RMGR	Halanga-Turnu	4.24	63	S	Sn	21 41 31.9	+2.2
VTS	Vitosha	4.29	91	⇑iP	Pn	21 40 42.8	+1.8
VTS	Vitosha	4.29	91	⇑iP	Pn	21 40 42.8	+1.8
VTS				eSn	Sn	21 41 31.6	+0.5
VTS				S	Sn	21 41 33.4	+2.3
PKS7	Kunszentmiklos	4.38	16	⇓ePn	Pn	21 40 43.3	+1.2
PKS7				eSn	Sn	21 41 35.8	+2.7
PKSN	Nyarlorinc	4.41	23	⇓ePn	Pn	21 40 43.6	+1.1
PKST	T^'s	4.43	6	⇓ePn	Pn	21 40 44.3	+1.5
PKST				eSn	Sn	21 41 34.9	+0.4
ARSA	Arzberg	4.60	344	⇑iPn	Pn	21 40 46.1	+1.0
	SNR=54						
ARSA				⇑iSn	Sn	21 41 40.5	+2.0
ARSA	Arzberg	4.60	344	Pn	Pn	21 40 46.1	+1.0
	SNR=54						
ARSA				Sn	Sn	21 41 40.5	+2.0
PKSG		4.60	8	⇑ePn	Pn	21 40 46.7	+1.6
PKSG				eSn	Sn	21 41 41.6	+3.2
LIT	Litokhoron	4.71	124	eP	Pn	21 40 48.3	+1.6
THL	Klokotos Trika	4.79	132	eP	Pn	21 40 48.7	+1.0
SOP	Sopron	4.87	353	ePn	Pn	21 40 50.5	+1.7
SOP				eSn	Sn	21 41 45.9	+0.7
SOH	Sokhos	4.89	112	eP	Pn	21 40 51.5	+2.3
DEV	Deva	4.98	51	⇑iP	Pn	21 40 51.7	+1.4
DEV	Deva	4.98	51	⇑iP	Pn	21 40 51.7	+1.4
DEV				S	Sn	21 41 47.1	-0.8
KBA	Koelnbreinsper	5.11	327	iPn	Pn	21 40 53.7	+1.4
	SNR=6.8						
KBA				⇓iSn	Sn	21 41 52.5	+1.1
KBA	Koelnbreinsper	5.11	327	Pn	Pn	21 40 53.7	+1.4
	SNR=6.8						
KBA				Sn	Sn	21 41 52.5	+1.1
MAIM	Mastiano	5.14	284	P	Pn	21 40 52.9	+0.3
EVR	Evrytania	5.16	138	eP	Pn	21 40 54.8	+1.9
PLG	Polygyros	5.17	117	eP	Pn	21 40 54.4	+1.5
CONA	Conrad Observa	5.19	349	⇑iPn	Pn	21 40 55.0	+1.6
	SNR=18						
CONA				⇑iSn	Sn	21 41 54.2	+0.9
CONA	Conrad Observa	5.19	349	Pn	Pn	21 40 55.0	+1.6
	SNR=18						
CONA				Sn	Sn	21 41 54.2	+0.9
ABTA	Abfaltersbach	5.22	320	iPn	Pn	21 40 54.9	+1.1
	SNR=12						
ABTA				⇑iSn	Sn	21 41 54.9	+0.9
ABTA	Abfaltersbach	5.22	320	Pn	Pn	21 40 54.9	+1.1
	SNR=12						
ABTA				Sn	Sn	21 41 54.9	+0.9
VLS	Valsamata	5.26	151	eP	Pn	21 40 54.1	-0.2
LOT	Lotru	5.27	58	⇓iP	Pn	21 40 56.8	+2.4
LOT	Lotru	5.27	58	⇓iP	Pn	21 40 56.8	+2.4
LOT				S	Sn	21 41 56.2	+1.0
AGG	Agios Georgios	5.34	134	eP	Pn	21 40 56.5	+1.1
PSZ	Piszkesteto	5.37	18	⇑iP	Pn	21 40 56.2	+0.5
PSZ	Piszkesteto	5.37	18	⇓e	Pn	21 40 56.7	+1.0
PSZ	Piszkesteto	5.37	18	⇑iP	Pn	21 40 56.2	+0.5
PSZ				S	Sn	21 41 56.3	-1.2
DRGR		5.46	42	⇓iP	Pn	21 40 57.7	+0.7
DRGR		5.46	42	⇓iP	Pn	21 40 57.7	+0.7
DRGR				S	Sn	21 41 59.1	-0.8
MOA	Molln	5.46	337	iPn	Pn	21 40 59.4	+2.4
	SNR=58						
MOA				⇑iSn	Sn	21 42 02.0	+2.1
MOA	Molln	5.46	337	Pn	Pn	21 40 59.4	+2.4
	SNR=58						
MOA				Sn	Sn	21 42 02.0	+2.1
PAIG	Paliouri	5.55	120	eP	Pn	21 40 58.6	+0.4
EFP	Efpalio	5.59	141	eP	Pn	21 41 00.4	+1.6
NEO	Neokhori	5.65	127	eP	Pn	21 41 00.4	+0.8
SMOL	Smolenice	5.67	0	ePN	Pn	21 41 01.5	+1.7
SMOL				eSN	Sn	21 42 03.3	-1.5
RLS	Riolos of Patr	5.70	146	eP	Pn	21 41 00.5	+0.2
TRIZ	Trizonia	5.72	140	eP	Pn	21 41 01.9	+1.4
KALE	Kalithea	5.73	139	eP	Pn	21 41 02.5	+1.7
VYHS	Vyhne	5.73	10	ePN	Pn	21 41 02.5	+1.8
VYHS				eSN	Sn	21 42 07.0	+0.5
HUMR	Humele	5.75	70	⇑iP	Pn	21 41 01.8	+0.9
HUMR	Humele	5.75	70	⇑iP	Pn	21 41 01.8	+0.9
HUMR				S	Sn	21 42 06.6	-0.3
LAKA	Lakka	5.78	141	eP	Pn	21 41 02.6	+1.3
RJOB	Jochberg	5.87	328	ePn	Pn	21 41 04.7	+2.1
RJOB				eSn	Sn	21 42 11.4	+1.6
LKR	Lokris	5.97	133	eP	Pn	21 41 04.5	+0.5
KLV	Kalavryta, Ach	6.01	141	eP	Pn	21 41 05.7	+1.1
VOIR		6.08	62	S	Sn	21 42 17.0	+1.8
VOIR		6.08	62	S	Sn	21 42 17.0	+1.8
WATA	Walderalm	6.09	319	iPn	Pn	21 41 07.9	+2.2
	SNR=13						
WATA				⇓iSn	Sn	21 42 16.9	+1.4
WATA	Walderalm	6.09	319	Pn	Pn	21 41 07.9	+2.2
	SNR=13						
WATA				Sn	Sn	21 42 16.9	+1.4
AOS	Alonnisos	6.13	125	eP	Pn	21 41 06.4	+0.3
GUR	Goura	6.19	141	eP	Pn	21 41 08.1	+1.0
PGF	Pioggiola	6.20	270	ePn	Pn	21 41 07.8	+0.6
PGF	Pioggiola	6.20	270	ePn	Pn	21 41 07.8	+0.6
AMT	Artemida-Makis	6.25	147	eP	Pn	21 41 08.9	+1.0
MOTA	Moosalm	6.33	317	iPn	Pn	21 41 10.8	+1.8
	SNR=25						
MOTA	Moosalm	6.33	317	Pn	Pn	21 41 10.8	+1.8
	SNR=25						
TRPA	Tarpa	6.40	33	⇑iP	Pn	21 41 11.2	+1.4
TRPA	Tarpa	6.40	33	⇑iP	Pn	21 41 11.2	+1.4
TRPA				S	Sn	21 42 21.4	-1.4
LTK	Loutraki	6.42	137	eP	Pn	21 41 09.7	-0.5
VRAC	Vranov	6.48	355	⇑iP	Pn	21 41 12.7	+1.7
VRAC	Vranov	6.48	355	⇑iP	Pn	21 41 13.0	+2.0
VRAC	Vranov	6.48	355	Pn	Pn	21 41 13.1	+2.0
	0.7nm,0.3s,baz=192,slow=12,SNR=6.7						
VRAC				Sn	Sn	21 42 24.2	-0.7
	2.2nm,0.3s,baz=109,slow=18,SNR=6.9						
VRAC	Vranov	6.48	355	⇑iP	Pn	21 41 12.7	+1.7
VRAC	Vranov	6.48	355	ePn	Pn	21 41 13.0	+2.0
VRAC				eSn	Sn	21 42 24.1	-0.9
VRAC				S	Sn	21 42 25.0	0.0
DOPR	Dopca	6.52	59	⇑iP	Pn	21 41 14.4	+2.9
DOPR	Dopca	6.52	59	⇑iP	Pn	21 41 14.4	+2.9
DOPR				S	Sn	21 42 26.0	+0.2
GEC2	GERESS Array S	6.53	338	ePn	Pn	21 41 13.0	+1.3
GEC2				eSn	Sn	21 42 27.0	+0.8
GERES	GERESS Array B	6.53	338	Pn	Pn	21 41 12.6	+0.9
	0.9nm,0.3s,baz=157,slow=13,SNR=31						
GERES				Sn	Sn	21 42 27.2	+1.1
	3.1nm,0.3s,baz=154,slow=24,SNR=8.4						
SMTH	Samothraki Isl	6.54	109	eP	Pn	21 41 13.2	+1.4
LIA	Limnos Island	6.56	114	eP	Pn	21 41 14.4	+2.4
DAVOX	Davos/Dischmat	6.63	309	Pn	Pn	21 41 15.0	+1.8
	0.9nm,0.3s,baz=124,slow=16,SNR=11						
DAVOX				Sn	Sn	21 42 26.7	-2.3
	1.2nm,0.3s,baz=9.8,slow=18,SNR=3.7						
ITM	Ithomi	6.64	147	eP	Pn	21 41 13.5	+0.3
VLX	Vlachokerasia	6.67	143	eP	Pn	21 41 16.0	+2.3
CRVS	Cervenica-Dubn	6.68	24	ePN	Pn	21 41 14.4	+0.6
MLR	Muntele Rosu	6.69	64	⇑iP	Pn	21 41 16.3	+2.3
MLR	Muntele Rosu	6.69	64	Pn	Pn	21 41 16.8	+2.9
	0.1nm,0.3s,baz=277,slow=16,SNR=5.7						
MLR				Sn	Sn	21 42 31.6	+1.4
	0.4nm,0.3s,baz=247,slow=10,SNR=5.2						
MLR	Muntele Rosu	6.69	64	⇑iP	Pn	21 41 16.3	+2.3
MLR				S	Sn	21 42 32.3	+2.1
ALN	Alexandroupoli	6.74	104	eP	Pn	21 41 16.9	+2.3
PYL	PYLOS	6.82	149	eP	Pn	21 41 14.9	-0.7
KHC	Kasperske Hory	6.82	338	ePN	Pn	21 41 17.4	+1.7
KHC				eSN	Sn	21 42 33.6	+0.3
KHC	Kasperske Hory	6.82	338	Pn	Pn	21 41 17.4	+1.7
KHC				Sn	Sn	21 42 33.6	+0.3
NIE	Niedzica	6.88	16	ePn	Pn	21 41 19.6	+3.2
NIE	Niedzica	6.88	16	ePn	Pn	21 41 19.6	+3.2
PTL	Penteli	6.88	132	eP	Pn	21 41 17.4	+0.9
NAIG	Nisos Aigina	6.89	136	eP	Pn	21 41 14.0	-2.6
MORC	Moravsky Berou	6.93	1	⇓iP	Pn	21 41 19.3	+2.1
MORC	Moravsky Berou	6.93	1	S	Sn	21 42 34.2	-1.8
MORC	Moravsky Berou	6.93	1	ePn	Pn	21 41 19.1	+1.9
MORC				eSn	Sn	21 42 36.3	+0.3
DID	Didima	6.96	138	eP	Pn	21 41 17.4	-0.2
KOLS	Kolonicke sedl	6.97	28	ePN	Pn	21 41 19.8	+2.1
OKC	Ostrava-Krasne	7.01	4	ePN	Pn	21 41 20.1	+1.9
OKC				eSN	Sn	21 42 38.4	+0.5
OKC	Ostrava-Krasne	7.01	4	Pn	Pn	21 41 20.1	+1.9
OKC				Sn	Sn	21 42 38.4	+0.5
WET	Wettzell	7.04	335	ePn	Pn	21 41 19.8	+1.2
DYR	Agios Nikonas	7.17	146	eP	Pn	21 41 19.2	-1.2
KRLC	Kraliky	7.24	357	ePN	Pn	21 41 24.5	+3.1
KRLC				ex	x	21 42 44.7	
KRLC	Kraliky	7.24	357	Pn	Pn	21 41 24.5	+3.1
KRLC				Sn	Sn	21 42 44.7	+1.1
PLOR	Plostina	7.28	62	⇑iP	Pn	21 41 24.0	+2.0
PLOR	Plostina	7.28	62	⇑iP	Pn	21 41 24.0	+2.0
PLOR				S	Sn	21 42 45.1	+0.5
BURAR	Bucovina Array	7.29	47	⇑iP	Pn	21 41 24.2	+2.0
BURAR	Bucovina Array	7.29	47	⇑iP	Pn	21 41 24.2	+2.0
BURAR				S	Sn	21 42 43.8	-1.2
SBF	Sospel	7.33	281	ePn	Pn	21 41 20.8	-1.9
SBF				eSn	Sn	21 42 38.9	-7.1
	6.9nm,0.3s						
VRI	Vrincioaia	7.33	63	⇑iP	Pn	21 41 24.8	+2.1
VRI	Vrincioaia	7.33	63	⇑iP	Pn	21 41 24.8	+2.1
VRI				S	Sn	21 42 46.4	+0.4
PRU	Pruhonice	7.41	346	ePN	Pn	21 41 26.5	+2.8
PRU	Pruhonice	7.41	346	Pn	Pn	21 41 26.5	+2.8
VLI	Veliai	7.46	143	eP	Pn	21 41 24.5	+0.1
DPC	Dobruska-Polom	7.54	355	ePN	Pn	21 41 28.7	+3.2
DPC				eSN	Sn	21 42 50.6	-0.4
DPC	Dobruska-Polom	7.54	355	Pn	Pn	21 41 28.7	+3.2
DPC				Sn	Sn	21 42 50.6	-0.4
OJC	Ojcow	7.55	12	ePn	Pn	21 41 28.3	+2.6
OJC	Ojcow	7.55	12	ePn	Pn	21 41 28.3	+2.6
ROTZ	Rotzenmuhle	7.79	334	ePn	Pn	21 41 29.9	+0.9
KYTH	Kithira	7.87	145	eP	Pn	21 41 30.9	+0.8
FRF	La Foret Royal	7.89	279	ePn	Pn	21 41 30.1	-0.2
FRF				eSn	Sn	21 42 53.0	-6.5
	2.3nm,0.3s						
MBDF	Montbardon	7.91	287	ePn	Pn	21 41 28.5	-2.3
MBDF				eSn	Sn	21 42 54.0	-6.4
	11nm,0.6s						
LMR	La Mourre	7.99	277	ePn	Pn	21 41 31.1	-0.5
MANZ	Manzenberg	8.02	335	ePn	Pn	21 41 32.9	+0.8
CFR	Carcaliu	8.08	70	⇑iP	Pn	21 41 34.7	+1.8
CFR	Carcaliu	8.08	70	⇑iP	Pn	21 41 34.7	+1.8
CFR				S	Sn	21 43 05.3	+1.0
LPG	La Plagne	8.10	293	ePn	Pn	21 41 32.2	-1.2
LPG				eSn	Sn	21 42 58.7	-6.4
	14nm,0.5s						
LPL	La Plagne	8.12	293	ePn	Pn	21 41 33.0	-0.6
LPL				eSn	Sn	21 42 59.1	-6.3
	20nm,0.6s						
TIRR	Tirgusor	8.15	75	⇑iP	Pn	21 41 36.5	+2.7
TIRR	Tirgusor	8.15	75	⇑iP	Pn	21 41 36.5	+2.7
TIRR				S	Sn	21 43 05.6	-0.3
WERD	Werda	8.37	337	ePn	Pn	21 41 39.1	+2.3
BRG	Berggiesshubel	8.37	345	PN	Pn	21 41 41.8	+5.0

BRG				SG	Sb	21 43 34.5	-5.5
	7.5nm,0.8s						
BFO	Black Forest	8.39	314	ePn	Pn	21 41 37.3	+0.1
BFO				eSn	Sn	21 43 08.9	-3.0
TLCR		8.55	70	⇑iP	Pn	21 41 41.9	+2.5
TLCR		8.55	70	⇑iP	Pn	21 41 41.9	+2.5
TLCR				S	Sn	21 43 16.7	+0.9
ORIF	Oris-en-Rattie	8.57	288	ePn	Pn	21 41 37.8	-2.0
MOX	Moxa	8.75	335	ePn	Pn	21 41 42.6	+0.6
CABF	La Chapelle	8.88	299	ePn	Pn	21 41 44.2	+0.2
CABF	La Chapelle	8.88	299	ePn	Pn	21 41 44.2	+0.2
HINF	Hinteralfeld	8.93	307	ePn	Pn	21 41 43.7	-0.9
HINF				eSn	Sn	21 43 17.7	-7.5
	8.9nm,0.5s						
CLL	Collm	8.97	342	ePn	Pn	21 41 48.0	+2.9
CLL				eSn	Sn	21 43 09.0	-17
CLL				i Sb	Sg	21 43 57.3	-26
CLL				eSg	Sg	21 44 23.0	-0.5
KARN	Karanos	9.00	144	eP	Pn	21 41 45.1	-0.4
CDF	Champ du Feu	9.01	312	ePn	Pn	21 41 43.7	-2.0
CDF				eSn	Sn	21 43 18.4	-8.8
	3.4nm,0.4s						
HAU	Haudompre	9.32	307	ePn	Pn	21 41 49.4	-0.5
HAU				eSn	Sn	21 43 26.3	-8.4
	10nm,0.5s						
HAU	Haudompre	9.32	307	ePn	Pn	21 41 49.4	-0.5
VIVF	Saint-Julien-l	9.41	287	ePn	Pn	21 41 49.0	-2.2
LAST	Lasithi	9.92	138	eP	Pn	21 41 55.7	-2.5
SMF	Signal de Mont	10.36	296	ePn	Pn	21 42 02.2	-2.0
LOR	Lormes	10.54	299	ePn	Pn	21 42 06.3	-0.4
LOR	Lormes	10.54	299	ePn	Pn	21 42 06.3	-0.4
AKASG	Malin Array Be	11.28	42	Pn	Pn	21 42 18.7	+2.0
	baz=235,slow=15,SNR=3.7						
HFS	Hagfors	17.46	354	P	Pn	21 43 37.5	-1.4
	0.2nm,0.3s,baz=172,slow=12,SNR=12						
EKA	Eskdalemuir Ar	18.27	320	P	P	21 43 50.0	+0.8
	baz=114,slow=10,SNR=2.3						
NB2	NORSAR Subarra	18.60	351	P	Pn	21 43 53.2	+0.3
	comp=Z,0.8nm,0.5s,baz=164,slow=9.3						
NB2	NORSAR Subarra	18.60	351	P	Pn	21 43 53.2	+0.3
	comp=Z,0.8nm,0.5s,SNR=3.7						
NOA	NORSAR Array B	18.60	351	P	Pn	21 43 58.7	+5.8
	comp=Z,0.3nm,0.3s,baz=165,slow=9.2,SNR=3.8						
FINES	FINESS Array B	19.34	13	P	P	21 43 59.9	-0.9
	comp=Z,0.3nm,0.3s,baz=169,slow=11,SNR=18						
KAF	Kangasniemi	20.01	12	ep	P	21 44 06.5	-1.6
	comp=Z,1.3nm,0.4s						
GNI	Garni	20.62	88	P	Pn	21 44 16.6	-0.9
	comp=Z,2.7nm,0.8s,baz=323,slow=5.1,SNR=4.0						
JOF	Joensuu	21.69	17	ep	P	21 44 24.1	-2.1
	comp=Z,1.4nm,0.5s						
ARCES	ARCESS Array B	27.08	6	P	P	21 45 16.2	-1.8
	comp=Z,1.3nm,0.9s,baz=185,slow=9.6,SNR=5.1						
ZALV	Zalesovo Beam	44.48	51	P	P	21 47 45.6	-1.1
	comp=Z,1.0nm,0.5s,baz=277,slow=8.6,SNR=6.5						
MKAR	Makanchi Array	45.03	62	P	P	21 47 50.0	-1.2
	comp=Z,0.5nm,0.5s,baz=283,slow=7.5,SNR=8.5						
SONM	Songino Array	59.38	52	P	P	21 49 37.2	-0.8
	comp=Z,0.6nm,0.7s,baz=303,slow=8.4,SNR=3.2						
YKA	Yellowknife Ar	68.18	338	P	P	21 50 35.0	-0.6
	comp=Z,0.1nm,0.5s,baz=36,slow=5.4,SNR=4.2						
CMAR	Chiang Mai Arr	71.59	82	P	P	21 50 56.8	-0.5
	comp=Z,0.2nm,0.3s,baz=302,slow=5.8,SNR=4.3						

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*IDC **01** 21:55:44.2±2.5, 42.96N×17.73E, h0^{km}, mb3.0/1, mb1 3.3/6, mb1mx3.2/28, mbtmp3.2/6, ML2.9/5, Error ellipse: s-maj=36.6km s-min=18.7km az=47.0*

*PDG **01** 21:55:45.9±0.5, 42.95N×17.46E, h0^{km}±11^{km}, ML3.0/9, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*

*PRU **01** 21:55:45.3, 42.66N×17.43E, h10^{km}*

*CSEM **01** 21:55:46.7±0.2, 42.94N×17.47E, h2^{km}, Ms3.6, Error ellipse: s-maj=4.8km s-min=2.7km az=38.0*

*BEO **01** 21:55:46.7±0.7, 42.91N×17.45E, h0^{km}±4^{km}, ML3.1/1*

*TIR **01** 21:55:46.0, 42.58N×17.42E, h12^{km}, ML3.9*

*VIE **01** 21:55:48.4±0.7, 43.01N×17.47E, h10^{km}, mb2.9/6, ML2.9/5, Ms3.6/1, Error ellipse: s-maj=7.8km s-min=5.0km az=43.0 99 km SE of Split*

ISC 01 21:55:46.3±1.1**, 42.93N**±0.02×**17.44E**±0.02**, h7**^{km}±8^{km}**, n108, σ1§29**/177**, 29C-20D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	Ston	0.20	107	i Pg	Pg	21 55 50.0	-0.3
STON				Sg	Sg	21 55 53.2	+0.3
STON	Ston	0.20	107	i Pg	Pg	21 55 49.9	-0.3
STON				Sg	Sg	21 55 53.2	+0.3
BRY	Bratogost	0.81	92	⇓iPg	Pg	21 56 00.2	-1.5
BRY				eSg	Sg	21 56 13.3	+1.1
BRY	Bratogost	0.81	92	⇓iPg	Pg	21 56 00.2	-1.5
BRY				eSg	Sg	21 56 13.3	+1.1
HCY	Herceg Novi	0.91	122	⇑iPg	Pg	21 56 02.7	-1.1
HCY				eSg	Sb	21 56 17.3	+0.5
HCY	Herceg Novi	0.91	122	⇑iPg	Pg	21 56 02.7	-1.1
HCY				eSg	Sb	21 56 17.3	+0.5
UPM	Unac-Piva	1.10	75	⇑iPg	Pg	21 56 05.7	-1.8
UPM				eSg	Sn	21 56 23.7	-0.3
UPM	Unac-Piva	1.10	75	⇑iPg	Pg	21 56 05.7	-1.8
UPM				eSg	Sn	21 56 23.7	-0.3
NKY	Niksic	1.15	95	⇑iPg	Pg	21 56 06.8	-1.4
NKY				eSg	Sn	21 56 25.3	+0.5
NKY	Niksic	1.15	95	⇑iPg	Pg	21 56 06.8	-1.4
NKY				eSg	Sn	21 56 25.3	+0.5
BUM	Brajici-Budva	1.24	120	⇓iPg	Pg	21 56 09.2	-0.9
BUM				eSg	Sn	21 56 28.4	+1.3
BUM	Brajici-Budva	1.24	120	⇓iPg	Pg	21 56 09.2	-0.9
BUM				eSg	Sn	21 56 28.4	+1.3
PDG	Podgorica	1.43	110	⇓iPg	Pn	21 56 12.3	-0.3
PDG				eSg	Sg	21 56 32.7	+0.6
TTG	Podgorica	1.43	110	⇓iPg	Pn	21 56 12.3	-0.3
TTG				eSg	Sg	21 56 34.2	+2.1
PLE	Pljevlja	1.48	74	⇓iPg	Pn	21 56 13.2	-0.2
PLE				eSg	Sg	21 56 35.8	+2.0
PLE	Pljevlja	1.48	74	⇓iPg	Pn	21 56 13.2	-0.2
PLE				eSg	Sg	21 56 35.8	+2.0
ULC	Ulcinj	1.65	125	⇓iPn	Pn	21 56 15.6	0.0
ULC				eSn	Sg	21 56 41.4	+2.3
ULC	Ulcinj	1.65	125	⇓iPn	Pn	21 56 15.6	0.0
ULC				eSn	Sg	21 56 41.4	+2.3
MS1	Monte Sant'Ang	1.66	223	ePn	Pn	21 56 16.1	+0.3
MS1				eSn	Sg	21 56 39.9	+0.4
BBLS	Lazići	1.71	56	ePn	Pb	21 56 17.8	-0.2
BBLS				eSn	Sg	21 56 41.4	+0.2
BBLS	Lazići	1.71	56	ePn	Pb	21 56 17.8	-0.2
BBLS				eSn	Sg	21 56 41.4	+0.2
BEY	Berane	1.80	91	⇑iPn	Pb	21 56 19.8	+0.2
BEY				eSn	Sg	21 56 45.3	+1.2
IVA	Berane	1.80	91	⇑iPn	Pb	21 56 19.8	+0.2
IVA				eSn	Sg	21 56 45.3	+1.2
BLY	Banja Luka	1.83	354	ePn	Pb	21 56 20.2	+0.2
BLY				eSn	Sg	21 56 45.8	+0.8
BLY	Banja Luka	1.83	354	ePn	Pb	21 56 20.2	+0.2
BLY				eSn	Sg	21 56 45.8	+0.8
BAI	Bari	1.87	193	ePn	Pn	21 56 16.6	-2.1
BAI				eSn	Sb	21 56 44.8	+0.5
PVY	Plav	1.88	99	⇑iPn	Pb	21 56 20.2	-0.8
PVY				eSn	Sg	21 56 47.8	+1.1
SJES	Sjenica	1.88	79	ePn	Pb	21 56 20.4	-0.6
SJES				eSg	Sg	21 56 46.4	-0.3
BCI	Bajram Curri	2.02	105	i PN	Pn	21 56 22.1	+1.4
BCI				i SN	Sg	21 56 50.7	-0.3
BCI	Bajram Curri	2.02	105	i Pn	Pn	21 56 22.1	+1.4
BCI				i Sn	Sg	21 56 50.7	-0.3
PUK	Puka	2.02	115	i PN	Pn	21 56 21.6	+0.8
PUK				i SN	Sb	21 56 49.8	+1.2
PUK	Puka	2.02	115	i Pn	Pn	21 56 21.6	+0.8
PUK				i Sn	Sb	21 56 49.8	+1.2
DIVS	Divibare	2.19	57	i Pn	Pn	21 56 24.1	+0.9
DIVS	Divibare	2.19	57	i Pn	Pn	21 56 24.1	+0.9
TEKS	Tekeris	2.21	42	ePn	Pn	21 56 23.9	+0.4
TEKS	Tekeris	2.21	42	ePn	Pn	21 56 23.9	+0.4
TIR	Tirane	2.40	130	ePN	Pn	21 56 24.5	-1.4
TIR				i SN	Sn	21 56 55.7	+0.2
TIR	Tirane	2.40	130	ePn	Pn	21 56 27.9	+2.0
TIR				eSn	Sn	21 56 56.0	+0.5
TIR	Tirane	2.40	130	ePn	Pn	21 56 27.9	+2.0
TIR				i Sn	Sn	21 56 55.7	+0.2
NVLJ	Novalja	2.48	312	i Pn	Pn	21 56 27.6	+0.6
NVLJ				Sn	Sn	21 56 59.5	+1.9
NVLJ	Novalja	2.48	312	i Pn	Pn	21 56 27.6	+0.6
NVLJ				Sn	Sn	21 56 59.4	+1.9
TRUS	Trudelj	2.51	58	⇑iPn	Pn	21 56 27.4	-0.1
TRUS	Trudelj	2.51	58	⇑iPn	Pn	21 56 27.4	-0.1
PHP	Peshkopia	2.55	118	i PN	Pn	21 56 30.1	+2.0
PHP	Peshkopia	2.55	118	i Pn	Pn	21 56 30.1	+2.0
GRUS	Gruza	2.57	67	ePn	Pn	21 56 29.5	+1.2
GRUS				eSn	Sn	21 57 01.9	+2.1
GRUS	Gruza	2.57	67	ePn	Pn	21 56 29.5	+1.2
GRUS				eSn	Sn	21 57 01.9	+2.1
SISC	Sisak	2.66	343	ePn	Pn	21 56 31.0	+1.5
SISC				Sn	Sb	21 57 05.6	-1.4
SISC	Sisak	2.66	343	ePn	Pn	21 56 31.0	+1.5
SISC				Sn	Sb	21 57 05.5	-1.4
SELS	Selova	2.71	83	ePn	Pn	21 56 31.0	+0.7
SELS	Selova	2.71	83	ePn	Pn	21 56 31.0	+0.7
BARS	Barje	3.21	91	ePn	Pn	21 56 39.0	+1.8
BARS				eSn	Sn	21 57 17.1	+1.3
PKSM	Moragy	3.39	14	⇑iP	Pn	21 56 40.2	+0.6
PKSM	Moragy	3.39	14	⇓ePn	Pn	21 56 40.5	+0.9
PKSM				eSn	Sn	21 57 20.3	+0.2
PKSM	Moragy	3.39	14	⇑iP	Pn	21 56 40.2	+0.6
PKSM				S	Sn	21 57 20.1	0.0
BEHE	Becsehely	3.57	353	⇓ePn	Pn	21 56 44.1	+2.0
BEHE				eSn	Sn	21 57 27.4	+2.9
PKS9	Tamasi	3.70	9	⇓ePn	Pn	21 56 45.1	+1.2
PKS2	Kecel	3.78	19	⇓ePn	Pn	21 56 45.9	+1.0
ZAPS	Zavoj	3.82	83	ePn	Pn	21 56 47.0	+1.5
ZAPS	Zavoj	3.82	83	ePn	Pn	21 56 47.6	+2.1
ZAPS				eSn	Sn	21 57 31.6	+1.0
ZAPS	Zavoj	3.82	83	ePn	Pn	21 56 47.0	+1.5
ZAPS				eSn	Sn	21 57 31.6	+1.0
VOY	Vojsko	4.01	322	ePn	Pn	21 56 49.2	+1.0
VOY				eSn	Sn	21 57 37.7	+2.2
VOY	Vojsko	4.01	322	Pn	Pn	21 56 49.2	+1.0
VOY				eSn	Sn	21 57 37.7	+2.2
BZS	Buzias	4.02	47	ePn	Pn	21 56 48.7	+0.4
BZS				eSn	Sn	21 57 35.3	-0.4
BZS	Buzias	4.02	47	⇓iP	Pn	21 56 49.0	+0.7
BZS	Buzias	4.02	47	ePn	Pn	21 56 48.7	+0.4
BZS	Buzias	4.02	47	⇓iP	Pn	21 56 49.0	+0.7
BZS				eSn	Sn	21 57 35.3	-0.4
BZS				S	Sn	21 57 36.2	+0.5
SOKA	Soboth	4.12	336	⇑iPn	Pn	21 56 50.7	+1.0
SOKA				⇓iSn	Sn	21 57 38.2	0.0
SOKA	Soboth	4.12	336	Pn	Pn	21 56 50.7	+1.0
SOKA				Sn	Sn	21 57 38.2	0.0
OBKA	Obir	4.13	331	⇑iPn	Pn	21 56 50.2	+0.3
OBKA	Obir	4.13	331	Pn	Pn	21 56 50.2	+0.3
RMGR	Halanga-Turnu	4.17	64	S	Sn	21 57 41.6	+2.2
RMGR	Halanga-Turnu	4.17	64	S	Sn	21 57 41.6	+2.2
VTS	Vitosha	4.26	93	⇑iP	Pn	21 56 55.9	+4.2
VTS	Vitosha	4.26	93	⇑iP	Pn	21 56 55.9	+4.2
VTS				eSn	Sn	21 57 42.5	+0.8
VTS				S	Sb	21 57 47.0	-6.2
PKST	Tˆ's	4.35	5	⇑ePn	Pn	21 56 54.2	+1.4
PKST				eSn	Sn	21 57 44.7	+1.0
PKSG		4.51	8	⇑ePn	Pn	21 56 56.5	+1.5
PKSG				eSn	Sn	21 57 50.7	+3.0
ARSA	Arzberg	4.53	343	i Pn	Pn	21 56 57.4	+2.1
	SNR=10						
ARSA				⇑iSn	Sn	21 57 49.1	+0.9
ARSA	Arzberg	4.53	343	Pn	Pn	21 56 57.4	+2.1
	SNR=10						
ARSA				Sn	Sn	21 57 49.1	+0.9
SOP	Sopron	4.79	353	⇓ePn	Pn	21 57 00.8	+1.9
CONA	Conrad Observa	5.12	348	i Pn	Pn	21 57 05.5	+2.1
	SNR=18						
CONA				⇓iSn	Sn	21 58 04.0	+1.1
CONA	Conrad Observa	5.12	348	Pn	Pn	21 57 05.5	+2.1
	SNR=18						
CONA				Sn	Sn	21 58 04.0	+1.1
LOT	Lotru	5.20	59	⇑iP	Pn	21 57 06.4	+1.9
LOT	Lotru	5.20	59	⇑iP	Pn	21 57 06.4	+1.9
LOT				S	Sn	21 58 06.2	+1.4
PSZ	Piszkesteto	5.28	18	⇑iP	Pn	21 57 06.2	+0.6
PSZ	Piszkesteto	5.28	18	⇓e	Pn	21 57 06.4	+0.8
PSZ	Piszkesteto	5.28	18	⇑iP	Pn	21 57 06.2	+0.6
PSZ				S	Sn	21 58 06.3	-0.4
DRGR		5.38	42	⇑iP	Pn	21 57 08.0	+1.0
DRGR		5.38	42	⇑iP	Pn	21 57 08.0	+1.0
DRGR				S	Sn	21 58 09.8	+0.7
MOA	Molln	5.40	337	i Pn	Pn	21 57 10.1	+2.8
	SNR=9.5						
MOA				⇑iSn	Sn	21 58 10.5	+0.8
MOA	Molln	5.40	337	Pn	Pn	21 57 10.1	+2.8
	SNR=9.5						
MOA				Sn	Sn	21 58 10.5	+0.8
VRAC	Vranov	6.41	355	⇑iP	Pn	21 57 22.8	+1.8
VRAC	Vranov	6.41	355	Pn	Pn	21 57 19.7	-1.3
	0.1nm,0.3s,baz=204,slow=20,SNR=2.8						
VRAC				Sn	Sn	21 58 32.7	-1.7
	0.6nm,0.3s,baz=89,slow=18,SNR=4.7						
VRAC	Vranov	6.41	355	⇑iP	Pn	21 57 22.8	+1.8
VRAC				S	Sn	21 58 33.2	-1.2
GERES	GERESS Array B	6.47	337	Pn	Pn	21 57 22.2	+0.3
	0.3nm,0.3s,baz=161,slow=13,SNR=10						
GERES				Sn	Sn	21 58 37.8	+1.9
	0.9nm,0.3s,baz=156,slow=23,SNR=7.4						
TREC	Trest	6.51	349	eSN	Sn	21 58 37.9	+1.0
TREC	Trest	6.51	349	Sn	Sn	21 58 37.9	+1.0
DAVOX	Davos/Dischmat	6.61	308	Pn	Pn	21 57 25.3	+1.3
	0.2nm,0.3s,baz=218,slow=19,SNR=2.3						
DAVOX				Sn	Sn	21 58 41.1	+1.4
	0.3nm,0.3s,baz=336,slow=20,SNR=3.6						
MLR	Muntele Rosu	6.62	64	Sn	Sn	21 58 33.4	-6.5
	0.0nm,0.3s,baz=104,slow=18,SNR=2.4						
KHC	Kasperske Hory	6.76	338	ePN	Pn	21 57 27.0	+1.1
KHC				eSN	Sn	21 58 42.7	-0.4
KHC	Kasperske Hory	6.76	338	Pn	Pn	21 57 27.0	+1.1
KHC				Sn	Sn	21 58 42.7	-0.4
MORC	Moravsky Berou	6.85	1	S	Sn	21 58 45.9	+0.6
MORC	Moravsky Berou	6.85	1	S	Sn	21 58 45.9	+0.6
PRU	Pruhonice	7.34	345	eSN	Sn	21 58 59.2	+1.9
PRU	Pruhonice	7.34	345	Sn	Sn	21 58 59.2	+1.9
HFS	Hagfors	17.38	354	P	Pn	21 59 48.8	-0.3
	0.1nm,0.3s,baz=157,slow=7.8,SNR=2.8						
FINES	FINESS Array B	19.25	13	P	P	22 00 09.7	-1.3
	0.1nm,0.3s,baz=178,slow=9.3,SNR=4.7						
MKAR	Makanchi Array	44.96	62	P	P	22 03 59.5	-2.4
	0.1nm,0.3s,baz=309,slow=6.9,SNR=2.8						

IDC 01 22:15:20.2±1.0**, 20.99N**×**143.45E, h0**^{km}**, mb3.6**/5**, mb1 3.9**/5**, mb1mx3.5**/25**, mbtmp3.6**/5**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.2**/37**, Error ellipse: s-maj=67.9km s-min=24.1km az=106.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.23	324	LR	LR	22 27 07.7	
	comp=Z,23nm,19.8s,baz=145,slow=33						
WRA	Warramunga Arr	41.65	193	P	P	22 23 10.8	+0.3
	0.7nm,0.8s,baz=16,slow=8.5,SNR=2.7						
ASAR	Alice Springs	45.35	192	P	P	22 23 39.7	-0.7
	0.3nm,0.6s,baz=17,slow=8.1,SNR=4.6						
YKA	Yellowknife Ar	76.96	28	P	P	22 27 14.4	0.0
	0.4nm,0.5s,baz=292,slow=5.3,SNR=8.9						
NVAR	Mina Array Bea	83.39	51	P	P	22 27 50.1	+0.2
	0.8nm,0.7s,baz=275,slow=6.3,SNR=6.5						
FINES	FINESS Array B	83.93	335	P	P	22 27 51.8	-0.1
	0.3nm,0.6s,baz=57,slow=5.1,SNR=7.5						

IDC 01 22:27:09.6±7.0**, 37.08N**×**70.08E, h213**^{km}±49^{km}**, mb2.8**/1**, mb1 2.7**/5**, mb1mx2.5**/29**, mbtmp2.7**/5**, 1C, Error ellipse: s-maj=146.3km s-min=35.0km az=139.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.03	3	⇑Pn	Pn	22 28 40.3	+3.1
	0.4nm,0.3s,baz=182,slow=13,SNR=7.6						
KK31				Sn	S	22 29 50.8	+4.0
	3.2nm,0.5s,baz=187,slow=25,SNR=17						
AAK	Ala-Archa	6.50	30	P	Pn	22 28 43.2	-0.3
	0.3nm,0.3s,baz=184,slow=7.8,SNR=7.2						
AAK				S	S	22 29 58.5	+0.4
	0.4nm,0.3s,baz=136,slow=23,SNR=21						
MKAR	Makanchi Array	13.28	39	P	P	22 30 11.2	-1.2
	0.2nm,0.3s,baz=219,slow=12,SNR=10						
KURBB	Kurchatov Arra	14.83	21	P	P	22 30 30.6	+1.1
	0.0nm,0.3s,baz=212,slow=11,SNR=4.0						
ZALV	Zalesovo Beam	19.71	26	P	P	22 31 22.4	-0.3
	0.4nm,0.3s,baz=214,slow=11,SNR=11						
TORD	Torodi Ar. Bea	65.00	268	P	P	22 37 27.1	0.0
	0.2nm,0.4s,baz=56,slow=6.0,SNR=4.8						

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*ISCJB **01** 22:30:09.5±0.2, 29.17N±0.02×51.57E±0.02, h17^{km}, mb4.2/62, MS3.4/6, Error ellipse: s-maj=3.5km s-min=2.4km az=28.6*

*BJI **01** 22:30:10.5, 29.50N×51.80E, h12^{km}, mB5.0/6, mb4.6/12, Ms4.7/3, Ms7 4.4/3*

*TEH **01** 22:30:11.8, 29.16N×51.60E, h10^{km}, ML4.1*

*MOS **01** 22:30:11.4±1.0, 29.09N×51.57E, h33^{km}, mb4.5/28, Error ellipse: s-maj=7.4km s-min=4.7km az=119.5*

*THR **01** 22:30:11.8±0.8, 29.19N×51.57E, h43^{km}±11^{km}, ML4.2*

*IDC **01** 22:30:12.9±3.1, 29.24N×51.73E, h25^{km}±20^{km}, mb3.9/24, mb1 4.0/28, mb1mx4.0/34, mbtmp3.9/28, ML3.9/4, MS3.3/9, Ms1 3.4/9, ms1mx3.1/56, Error ellipse: s-maj=17.0km s-min=11.6km az=165.0*

*NEIC **01** 22:30:13.9±1.4, 29.24N×51.63E, h34^{km}±10^{km}, mb4.3/28, ML4.2(THR), MN4.1(TEH), Error ellipse: s-maj=6.3km s-min=3.7km az=189.0*

*CSEM **01** 22:30:13.3±0.1, 29.22N×51.62E, h30^{km}, mb4.2/29, Ms4.5, Error ellipse: s-maj=3.4km s-min=2.5km az=37.0*

*OMAN **01** 22:30:18.2±0.2, 28.77N×51.62E, h41^{km}±30^{km}, Error ellipse: s-maj=36.7km s-min=7.2km az=8.0*

ISC 01 22:30:11.8±0.3**, 29.19N**±0.04×**51.63E**±0.03**, h17**^{km}**, n490, σ1§24**/494**, mb4.3**/62**, MS3.4**/6**, 16C-10D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHI	Shiraz	0.89	59	ePg	Pb	22 30 27.8	-1.1
SHI				eSg	Sb	22 30 40.3	-0.3
SHI				e		22 30 46.5	
	comp=Z,60µm,0.3s						
ISRV	Sarvestan	1.31	81	ePg	Pn	22 30 35.9	+0.3
ISRV				eSg	Sb	22 30 54.0	+1.2
ISRV				e		22 31 05.3	
	comp=Z,47µm,0.2s						
ISRV	Sarvestan	1.31	81	ePg	Pn	22 30 36.0	+0.3
ISRV				eSg	Sb	22 30 54.0	+1.2
IPAR	Pars	1.40	62	ePn	Pn	22 30 36.0	-0.8
IPAR				eSg	Sg	22 30 58.0	+1.0
IPAR				e		22 31 05.7	
	comp=Z,36µm,0.3s						
IPAR	Pars	1.40	62	ePn	Pn	22 30 36.0	-0.8
GHIR	Ghir-Karzin	1.49	127	ePg	Pb	22 30 39.8	+0.6
GHIR				AML	AML	22 31 06.8	
	comp=N,4µm,0.4s						
GHIR				AML	AML	22 31 09.7	
	comp=E,4µm,0.5s						
GHIR	Ghir-Karzin	1.49	127	ePn	Pb	22 30 39.0	-0.2
GHIR	Ghir-Karzin	1.49	127	ePn	Pb	22 30 39.0	-0.2
GHIR	Ghir-Karzin	1.49	127	ePg	Pb	22 30 39.8	+0.6
IGAR	Gharneh	3.22	6	e	Pg	22 31 12.4	-1.2
	comp=Z,4µm,0.3s						
IGAR				ePn	Pn	22 31 02.5	+0.6
IMEH	Mehriz	3.39	49	e	Pg	22 31 22.9	+6.2
	comp=Z,4µm,0.3s						
IMEH				ePn	Pn	22 31 05.3	+1.2
UMR	Umm Al-Rimmam	3.44	277	eP	Pb	22 31 07.8	-4.4
UMR	Umm Al-Rimmam	3.44	277	eP	Pb	22 31 07.8	-4.4
KBD	Kabd	3.44	271	eP	Pb	22 31 08.6	-3.7
KBD				AML	AML	22 31 54.0	
	comp=Z,233nm,0.5s						
KBD	Kabd	3.44	271	eP	Pb	22 31 08.6	-3.7
IPIR	Pirpir	3.54	350	e	Sb	22 31 59.5	+2.5
	comp=Z,3µm,0.2s						
IPIR				ePn	Pn	22 31 07.0	+0.7
RDF	Al-Radifah	3.58	267	eP	Pb	22 31 10.1	-4.6
RDF				AML	AML	22 31 55.5	
	comp=Z,391nm,0.5s						
RDF	Al-Radifah	3.58	267	eP	Pb	22 31 10.1	-4.6
NASN	Na'in	3.74	15	ePn	Pn	22 31 08.8	-0.2
NASN	Na'in	3.74	15	ePn	Pn	22 31 08.0	-1.0
NASN	Na'in	3.74	15	ePn	Pn	22 31 08.8	-0.2
IZEF	Zefreh	3.74	9	e		22 31 11.3	
	comp=Z,2µm,0.1s						
IZEF				ePn	Pn	22 31 09.4	+0.4
NAY	Al-Naaiem	3.84	272	eP	Pn	22 31 13.6	+3.5
NAY				AML	AML	22 32 01.5	
	comp=Z,142nm,0.6s						
NAY	Al-Naaiem	3.84	272	eP	Pn	22 31 13.6	+3.5
ICHK	Chekchek	3.87	37	ePn	Pn	22 31 11.6	+0.8
ICHK				e		22 31 24.4	
	comp=Z,3µm,0.2s						
ICHK	Chekchek	3.87	37	ePn	Pn	22 31 11.6	+0.8
RST	Umm Al-Ruwaisa	4.06	276	eP	Pn	22 31 16.3	+3.2
RST	Umm Al-Ruwaisa	4.06	276	eP	Pn	22 31 16.3	+3.2
IKLH	Kolahrood	4.12	359	ePn	Pn	22 31 14.4	+0.2
IKLH				e		22 31 31.0	
	comp=Z,2µm,0.3s						
IKLH	Kolahrood	4.12	359	ePn	Pn	22 31 14.4	+0.2
IBAF	Bafgh	4.16	54	ePn	Pn	22 31 15.5	+0.8
IBAF				e		22 31 32.0	
	comp=Z,3µm,0.2s						
IBAF	Bafgh	4.16	54	ePn	Pn	22 31 15.5	+0.8
BNDS	Bandar-Abbas	4.38	113	ePn	Pn	22 31 17.9	+0.1
BNDS				AML	AML	22 32 54.2	
	comp=N,203nm,0.6s						
BNDS	Bandar-Abbas	4.38	113	ePn	Pn	22 31 17.0	-0.8
BNDS	Bandar-Abbas	4.38	113	ePn	Pn	22 31 17.9	+0.1
KRBR	Kerman	4.54	79	ePn	Pn	22 31 21.0	+1.0
KRBR				AML	AML	22 32 35.4	
	comp=E,196nm,0.7s						
KRBR				AML	AML	22 33 03.5	
	comp=N,172nm,0.6s						
KRBR	Kerman	4.54	79	ePn	Pn	22 31 20.0	0.0
KRBR	Kerman	4.54	79	ePn	Pn	22 31 21.0	+1.0
KHMZ	Khomeyn	4.75	343	ePn	Pn	22 31 22.9	0.0
KHMZ	Khomeyn	4.75	343	ePn	Pn	22 31 22.9	0.0
BANOM	Banah	5.27	127	P	Pn	22 31 30.2	+0.4
	SNR=120						
GHVR	GHOM	5.28	357	ePn	Pn	22 31 30.2	+0.2
GHVR				AML	AML	22 32 33.9	
	comp=E,128nm,0.3s						
GHVR	GHOM	5.28	357	ePn	Pn	22 31 30.0	0.0
GHVR	GHOM	5.28	357	ePn	Pn	22 31 30.0	0.0
NAZ	Nazwa, Dubai	5.51	138	P	Pn	22 31 34.1	+0.9
ASUD	Al Ashush, Dub	5.62	143	⇑P	Pn	22 31 36.2	+1.6
ASUD	Al Ashush, Dub	5.62	143	P	Pn	22 31 36.2	+1.6
FAQ	Al Faqa, Dubai	5.67	140	P	Pn	22 31 36.0	+0.8
IVRN	Varamin	5.79	1	ePn	Pn	22 31 37.1	+0.1
IVRN				ePn	Pn	22 31 37.4	+0.4
IVRN	Varamin	5.79	1	ePn	Pn	22 31 37.1	+0.1
HATD	Hatta, Dubai	5.92	136	P	Pn	22 31 40.0	+1.3
ASHO	Ashiyiah	5.98	138	⇑P	Pn	22 31 40.4	+0.8
ASHO				⇑S	Sn	22 32 44.5	-3.3
ASHO	Ashiyiah	5.98	138	P	Pn	22 31 40.4	+0.8
IR5	Iran Long-Peri	6.07	352	ePn	Pn	22 31 41.1	+0.2
IR5	Iran Long-Peri	6.07	352	ePn	Pn	22 31 41.1	+0.2
IKOM	Komasi	6.08	326	ePn	Pn	22 31 41.2	+0.1
IKOM				e		22 32 58.2	
	comp=Z,1µm,0.2s						
IKOM	Komasi	6.08	326	ePn	Pn	22 31 41.2	+0.1
ILAS	Lasjerd	6.28	10	ePn	Pn	22 31 44.2	+0.4
ILAS	Lasjerd	6.28	10	ePn	Pn	22 31 44.2	+0.4
IR3	Iran Long-Peri	6.29	355	ePn	Pn	22 31 44.0	+0.1
IR3	Iran Long-Peri	6.29	355	ePn	Pn	22 31 44.0	+0.1
IRAZ	Razeghan	6.36	347	ePn	Pn	22 31 45.1	+0.1
IRAZ				e		22 33 03.8	
	comp=Z,719nm,0.4s						
IRAZ	Razeghan	6.36	347	ePn	Pn	22 31 45.1	+0.1
DAMV	Damavand	6.43	2	ePn	Pn	22 31 45.5	-0.4
DAMV	Damavand	6.43	2	ePn	Pn	22 31 45.0	-0.9
DAMV	Damavand	6.43	2	ePn	Pn	22 31 45.5	-0.4
TABS	Tabas	6.46	45	ePn	Pn	22 31 46.3	0.0
TABS	Tabas	6.46	45	ePn	Pn	22 31 46.3	0.0
IFIR	Firoozkooh	6.50	8	ePn	Pn	22 31 46.5	-0.5
IFIR				e		22 31 49.7	
	comp=Z,662nm,0.1s						
IFIR	Firoozkooh	6.50	8	ePn	Pn	22 31 46.5	-0.5
IMHD	Mahdasht	6.53	353	ePn	Pn	22 31 47.4	+0.3
IMHD				e		22 32 12.5	
	comp=Z,303nm,0.2s						
IMHD	Mahdasht	6.53	353	ePn	Pn	22 31 47.5	+0.3
IANJ	Anjilo	6.55	17	ePn	Pn	22 31 47.4	-0.2
IANJ				e		22 32 30.3	
	comp=Z,586nm,0.4s						
IANJ	Anjilo	6.55	17	ePn	Pn	22 31 47.4	-0.2
IGHG	Ghaleghazi	6.70	321	ePn	Pn	22 31 49.5	-0.1

IGHG *e* 22 33 18.7
comp=Z,1μm,0.3s
IGHG Ghaleghazi 6.70 321 *e*Pn **Pn 22 31 49.5 -0.1**
IVIS Veis 6.70 324 *e*Pn **Pn 22 31 49.5 0.0**
IVIS *e* 22 33 14.9
comp=Z,744nm,0.2s
IVIS Veis 6.70 324 *e*Pn **Pn 22 31 49.5 0.0**
CHTH Charan 6.71 356 *e*Pn **Pn 22 31 49.5 -0.3**
CHTH Charan 6.71 356 *e*Pn **Pn 22 31 49.0 -0.8**
CHTH Charan 6.71 356 *e*Pn **Pn 22 31 49.5 -0.3**
THKV Tehran--Karaj 6.74 355 *e*Pn **Pn 22 31 50.3 +0.2**
THKV Tehran--Karaj 6.74 355 *e*Pn **Pn 22 31 50.3 +0.2**
ISHM Shahmirzad 6.75 12 *e*Pn **Pn 22 31 50.3 0.0**
ISHM *e* 22 31 57.4
comp=Z,891nm,0.3s
ISHM Shahmirzad 6.75 12 *e*Pn **Pn 22 31 50.3 0.0**
IALA Alasht 6.95 8 *e*Pn **Pn 22 31 53.3 +0.2**
IALA Alasht 6.95 8 *e*Pn **Pn 22 31 53.3 +0.2**
ILIN Lien 6.95 326 *e*Pn **Pn 22 31 53.0 -0.1**
ILIN *e* 22 32 01.4
comp=Z,1μm,0.2s
ILIN Lien 6.95 326 *e*Pn **Pn 22 31 53.0 -0.1**
IPRN Peran 7.06 5 *e*Pn **Pn 22 31 54.6 +0.1**
IPRN *e* 22 32 15.5
comp=Z,810nm,0.2s
IPRN Peran 7.06 5 *e*Pn **Pn 22 31 54.7 +0.2**
IDHR Dehrash 7.07 322 *e*Pn **Pn 22 31 55.3 +0.6**
IDHR *e* 22 33 30.7
comp=Z,2μm,0.3s
IDHR Dehrash 7.07 322 *e*Pn **Pn 22 31 55.3 +0.6**
IKOO Kooshah 7.11 61 *e*Pn **Pn 22 31 55.7 +0.3**
IKOO *e* 22 32 33.1
comp=Z,468nm,0.3s
IKOO Kooshah 7.11 61 *e*Pn **Pn 22 31 55.7 +0.3**
ITEG Tejag 7.14 57 *e*Pn **Pn 22 31 55.9 +0.3**
ITEG *e* 22 32 34.6
comp=Z,285nm,0.3s
ITEG Tejag 7.14 57 *e*Pn **Pn 22 31 55.9 +0.3**
IKIA Kiasar 7.21 13 *e*Pn **Pn 22 31 57.0 +0.4**
IKIA *e* 22 32 04.2
comp=Z,254nm,0.2s
IKIA Kiasar 7.21 13 *e*Pn **Pn 22 31 57.0 +0.4**
IGZV Ghazvin 7.27 351 *e*Pn **Pn 22 31 57.5 0.0**
IGZV *e* 22 32 09.2
comp=Z,215nm,0.2s
IGZV Ghazvin 7.27 351 *e*Pn **Pn 22 31 57.5 0.0**
ARQ Araqi 7.30 142 P **Pn 22 31 58.2 +0.6**
SNR=15
ARQ ⇑S **Sn 22 33 18.4 -1.7**
ARQ Araqi 7.30 142 P **Pn 22 31 58.2 +0.6**
SNR=15
BHD Baghdad 7.42 305 *ex* Pn 22 32 03.0 +3.7
BHD *ex* **Pg 22 32 35.0 +1.2**
BHD *ex* **Sn 22 33 28.0 +4.9**
BHD *ex* x 22 34 18.0
IGLO Ghaloghah 7.52 14 *e* 22 32 11.1
comp=N,1μm,0.3s
IGLO *e*Pn **Pn 22 32 03.4 +2.5**
HOQ Hoqain 7.56 136 ⇑P **Pn 22 32 02.1 +0.9**
HOQ Hoqain 7.56 136 P **Pn 22 32 02.1 +0.9**
ZNJK Zanjan 7.86 342 *e*Pn **Pn 22 32 05.2 -0.4**
ZNJK Zanjan 7.86 342 *e*Pn **Pn 22 32 05.2 -0.4**
IDAH Dahanechah 7.91 61 *e* 22 32 47.2
comp=Z,325nm,0.2s
IDAH *e*Pn **Pn 22 32 07.0 +0.7**
BSY Bisya 8.14 141 ⇓P **Pn 22 32 09.6 +0.3**
SNR=12
BSYO Bisya 8.18 141 P **Pn 22 32 09.6 -0.1**
SNR=12
IKRD Kardeh 9.52 36 *e*Pn Pn 22 32 35.8 +7.5
ISRO Mashad 9.69 41 *e*Pn **Pn 22 32 30.6 +0.1**
ISRO Mashad 9.69 41 *e*Pn **Pn 22 32 30.6 +0.1**
IHRS Heris 9.87 338 *e*Pn **Pn 22 32 32.6 -0.5**
IHRS *e* 22 32 36.0
comp=Z,102nm,0.2s
IHRS Heris 9.87 338 *e*Pn **Pn 22 32 32.6 -0.5**
IMYA Miami 10.08 43 *e*Pn **Pn 22 32 35.7 -0.3**
IMYA Miami 10.08 43 *e*Pn **Pn 22 32 35.7 -0.3**
CUKT Cukurca 10.47 322 *e*P **Pn 22 32 39.5 -1.7**
IMRD Marand 10.70 334 *e*Pn **Pn 22 32 44.2 -0.2**
IMRD *e* 22 33 11.9
comp=Z,141nm,0.2s
IMRD Marand 10.70 334 *e*Pn **Pn 22 32 44.2 -0.2**
VANB Van 11.61 326 *e*P **Pn 22 32 56.2 -0.6**
RBK Rabkut 11.87 168 P **Pn 22 32 59.5 -0.9**
SNR=10.0
RBK Rabkut 11.87 168 P **Pn 22 32 59.5 -0.9**
SNR=10.0
ABTO Aybut 11.88 172 ⇑P **Pn 22 33 00.1 -0.5**
SNR=23
ABTO Aybut 11.88 172 P **Pn 22 33 00.1 -0.5**
SNR=23
GNI Garni 12.31 334 *e*P **Pn 22 33 08.8 +2.4**
GNI Garni 12.31 334 *e*Pn **Pn 22 33 06.4 0.0**
GNI Garni 12.31 334 Pn **Pn 22 33 07.3 +0.9**
comp=Z,0.0nm,0.3s,baz=187,slow=8.1,SNR=2.5
GNI LR LR 22 37 35.4
comp=Z,60nm,18.4s,baz=10.0,slow=36
GNI Garni 12.31 334 *e*Pn **Pn 22 33 06.4 0.0**
GNI Garni 12.31 334 P **Pn 22 33 07.3 +0.9**
comp=Z,60nm,18.4s
ASF Jabal al Asfar 13.03 287 Pn **Pn 22 33 15.3 -0.9**
ASF Sn **Sn 22 35 36.0 -4.7**
ASF Jabal al Asfar 13.03 287 Pn **Pn 22 33 15.3 -0.9**
comp=Z,0.5nm,0.3s,baz=224,slow=11,SNR=5.6
ASF Sn **Sn 22 35 36.0 -4.7**
comp=Z,0.4nm,0.3s,baz=0.0,slow=20,SNR=3.4
ASF LR LR 22 38 05.5
comp=Z,29nm,19.3s,baz=60,slow=36
DGRG David-gareji 13.25 339 P P 22 33 25.1 -3.8
BNGB Bing¨ll 13.33 320 *e*P **Pn 22 33 17.5 -2.8**
EZM Erzurum 13.62 324 *e*P **Pn 22 33 22.7 -1.7**
SEAG Tbilisi Sea 13.72 338 P **P 22 33 36.1 +2.0**
SVRC Sivrice-ELAZID 13.74 315 *e*P Pn 22 33 22.7 -3.2
PTK Pertek 14.01 317 *e*P Pn 22 33 26.4 -3.3
ERZN Erzincan 14.28 320 *e*P **Pn 22 33 30.6 -2.7**
MMAI Mount Meron Ar 14.41 289 Pn **Pn 22 33 34.9 -0.2**
MMAI Mount Meron Ar 14.41 289 Pn **Pn 22 33 34.9 -0.2**
comp=Z,0.6nm,0.3s,baz=100,slow=17,SNR=7.1
MMAI Mount Meron Ar 14.41 289 Pn **Pn 22 33 34.9 -0.2**
GUDG Gudauri 14.45 338 P **P 22 33 43.8 +1.3**
GUDG Gudauri 14.45 338 P **P 22 33 43.8 +1.3**
EIL Elat 14.55 276 LR LR 22 40 17.6
comp=Z,146nm,18.9s,baz=94,slow=41
BAYT Ayd¨ntepe-Bay 14.61 323 *e*P **Pn 22 33 35.5 -2.4**
KMRS Kahramanmaras 14.83 308 *e*P **Pn 22 33 38.1 -2.6**
ILIC ilic-Erzincan 14.86 317 *e*P Pn 22 33 37.6 -3.6
ONI Oni 14.91 336 P **P 22 33 49.3 +1.9**
ONI Oni 14.91 336 P **P 22 33 49.3 +1.9**
ZEI Tsey 14.92 337 *e*P **P 22 33 45.0 -2.7**
ZEI pmax pmax
comp=Z,11nm,0.7s
KOZT Kozan 15.57 306 *e*P **Pn 22 33 48.0 -2.5**
KBL Kabul 15.72 66 *e*P **Pn 22 33 54.7 +2.0**
KBL pmax pmax
comp=Z,11nm,0.8s
KBL Kabul 15.72 66 *e*Pn **Pn 22 33 54.7 +2.0**
comp=Z,11nm,0.8s
KBL Kabul 15.72 66 *e*P **Pn 22 33 54.7 +2.0**
comp=Z,11nm,0.8s
ESPY Espiye-Giresun 15.74 321 *e*P **Pn 22 33 50.1 -2.6**
KBZ Khabaz 16.11 337 P **Pn 22 33 57.9 +0.5**
KBZ Khabaz 16.11 337 Pn **Pn 22 33 57.9 +0.5**
KBZ Khabaz 16.11 337 Pn **Pn 22 33 57.9 +0.5**
comp=Z,0.2nm,0.3s,baz=138,slow=7.5,SNR=21
KBZ Khabaz 16.11 337 Pn **Pn 22 33 57.8 +0.5**
RSDY Resadiye-TOKAT 16.20 317 *e*P **Pn 22 33 55.6 -3.0**
BNN Bunyan 16.23 311 *e*P **Pn 22 33 56.1 -3.0**
KIV Kislovodsk 16.38 337 ⇑P **P 22 34 02.0 -1.7**
KIV pmax pmax
comp=Z,6.0nm,0.7s
KIV MLR MLR
comp=Z,100nm,12.0s
KIV Kislovodsk 16.38 337 P **P 22 34 02.0 -1.7**
comp=Z,100nm,12.0s
CSS Prodhromos 16.54 295 *e*P **P 22 34 05.1 -0.4**
CSS Prodhromos 16.54 295 *e*Pn **P 22 34 03.8 -1.7**
comp=Z,17nm,1.0s
CSS Prodhromos 16.54 295 *e*Pn **P 22 34 03.8 -1.7**
comp=Z,17nm,1.0s
SOC Sochi 17.24 330 *c i*P **P 22 34 13.7 +0.5**
SOC *e* 22 37 22.1
SOC pmax pmax
comp=Z,6.0nm,0.4s
SOC Sochi 17.24 330 *i*P **P 22 34 13.7 +0.5**
comp=Z,6.0nm,0.4s
SULT Sultanhani-AKS 17.53 306 *e*P **Pn 22 34 14.4 -1.0**
CORM Corum 17.73 313 *e*P **Pn 22 34 16.2 -1.8**
BR131 Keskin Array S 18.15 310 *e*Pn **P 22 34 24.1 +0.7**
comp=Z,3.0nm,0.6s
BR131 Keskin Array S 18.15 310 *e*Pn **P 22 34 24.1 +0.7**
comp=Z,3.0nm,0.6s
BRTR Keskin Array B 18.15 310 P **P 22 34 24.6 +1.2**
BRTR Keskin Array B 18.15 310 P **P 22 34 24.6 +1.2**
comp=Z,0.4nm,0.3s,baz=132,slow=13,SNR=13
BRTR Keskin Array B 18.15 310 P **P 22 34 24.6 +1.2**
DIKM Dikmen 18.20 317 *e*P **Pn 22 34 22.7 -0.8**
KONT Konya--Tatoy 18.25 304 *e*P **P 22 34 25.1 +0.6**
LADK Ladik-KONYA 18.35 304 *e*P **P 22 34 25.9 +0.3**
BYBT Boyabat 18.38 316 *e*P **Pn 22 34 25.4 -0.5**
ANTO Ankara 18.79 310 *e*P **Pn 22 34 30.6 -0.2**
ANTO pmax pmax
comp=Z,6.0nm,0.8s
ANTO Ankara 18.79 310 *e*P **Pn 22 34 30.6 -0.2**
comp=Z,6.2nm,0.8s
ANTO Ankara 18.79 310 *e*P **Pn 22 34 30.6 -0.2**
comp=Z,6.2nm,0.8s
KIZT Kizilcal 18.98 306 *e*P **Pn 22 34 34.0 +0.8**
ANN Anapa 19.22 328 *e*P **Pn 22 34 38.2 +2.2**
ANN pmax pmax
comp=Z,31nm,1.2s
SVRH Sivrihisar-ESK 19.47 307 *e*P **Pn 22 34 40.2 +1.2**
KKAR Karatay Array 20.56 42 *e*P **P 22 34 48.4 -1.2**
KKAR pmax pmax
comp=Z,3.0nm,0.4s
KKAR Karatay Array 20.56 42 *e*P **P 22 34 48.4 -1.2**
comp=Z,3.3nm,0.4s
KKAR Karatay Array 20.56 42 *e*P **P 22 34 48.4 -1.2**
comp=Z,3.3nm,0.4s
ABKAR Akbulak array 21.02 15 *e*P **P 22 34 53.9 -0.6**
comp=Z,6.9nm,0.6s
ABKAR Akbulak array 21.02 15 *e*P **P 22 34 53.9 -0.6**
comp=Z,6.9nm,0.6s
AKTK Aktyubinsk 21.76 11 P **P 22 35 02.1 -0.4**
AKTO Aktyubinsk 21.76 11 P **P 22 35 02.1 -0.4**
AKTO Aktyubinsk 21.76 11 P **P 22 35 02.1 -0.4**
AKTO Aktyubinsk 21.76 11 P **P 22 35 02.1 -0.4**
comp=Z,6.4nm,0.6s,baz=197,slow=11,SNR=24
AKTO Aktyubinsk 21.76 11 P **P 22 35 02.1 -0.4**
AML Almayashu 22.02 48 P **P 22 35 04.7 -1.0**
EKS2 Erkin-Say 22.33 47 *e*P **P 22 35 09.0 +0.2**
EKS2 pmax pmax
comp=Z,6.0nm,0.7s
EKS2 Erkin-Say 22.33 47 *e*P **P 22 35 09.0 +0.2**
comp=Z,5.9nm,0.7s
EKS2 Erkin-Say 22.33 47 P **P 22 35 10.1 +1.3**
SNR=7.5
EKS2 Erkin-Say 22.33 47 *e*P **P 22 35 09.0 +0.2**
comp=Z,5.9nm,0.7s
KSH Kashi 22.52 56 P **P 22 35 06.6 -4.3**
KSH *e*pP **pP 22 35 15.6 -0.1**
KSH *e*PP **PnPn 22 35 32.1 -2.1**
KSH *e*S S 22 39 01.5 -16
KSH *e*PcP **PcP 22 39 06.6 +2.2**
KSH sS sS 22 39 15.7 -10
KSH *e*SS Sn 22 39 38.7 +8.0
KSH *e*ScP **ScP 22 42 40.2 -1.1**
KSH *e*PcS **PcS 22 42 43.7 +0.4**
KSH pmax pmax
comp=Z,11nm,0.2s
KSH pmax pmax
comp=Z,150nm,3.5s
KSH LR LR
comp=N,290nm,8.1s
KSH LR LR
comp=E,140nm,4.8s
KSH LR LR
comp=Z,310nm,6.6s
AAK Ala-Archa 22.78 48 *e*P **P 22 35 14.2 +0.6**
AAK pmax pmax
comp=Z,3.0nm,1.0s
AAK Ala-Archa 22.78 48 *e*P **P 22 35 14.2 +0.6**
comp=Z,2.7nm,1.0s
AAK Ala-Archa 22.78 48 P **P 22 35 15.8 +2.1**
SNR=9.9
AAK Ala-Archa 22.78 48 P **P 22 35 11.3 -2.3**
comp=Z,4.8nm,0.8s,baz=234,slow=10,SNR=19
AAK LR LR 22 45 46.1
comp=Z,126nm,19.6s,baz=134,slow=41
AAK Ala-Archa 22.78 48 *e*P **P 22 35 14.2 +0.6**
comp=Z,2.7nm,1.0s
KZA Kyzart 23.02 50 P **P 22 35 18.9 +2.5**
SNR=9.1
KBK Karagaybulak 23.08 48 P **P 22 35 18.7 +1.9**
SNR=6.0
USP Ospenovka 23.09 46 P P 22 35 22.6 +5.9
SNR=5.2
VRHR Novokhopersk 23.14 344 *e*P **P 22 35 17.2 +0.2**
VRHR *e*S **S 22 39 21.7 -5.9**
VRHR pmax pmax
comp=Z,40nm,1.5s
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,4.0nm,0.3s
VRHR smax smax
comp=N,10.0nm,0.7s
VRHR smax smax
comp=Z,10.0nm,0.8s
VRHR smax smax
comp=E,10.0nm,0.6s
VRHR Novokhopersk 23.14 344 *e*P **P 22 35 17.2 +0.2**
comp=E,10.0nm,0.5s
TKM2 Tokmak 2 23.63 48 *e*P **P 22 35 21.1 -1.2**
TKM2 pmax pmax
comp=Z,4.0nm,0.8s
TKM2 Tokmak 2 23.63 48 *e*P **P 22 35 21.1 -1.2**
comp=Z,4.4nm,0.8s
TKM2 Tokmak 2 23.63 48 P **P 22 35 22.4 +0.1**
SNR=7.6
TKM2 Tokmak 2 23.63 48 *e*P **P 22 35 21.1 -1.2**
comp=Z,4.3nm,0.8s
VORD Divnogorie 23.65 340 *e*P **P 22 35 25.2 +3.1**
VORD *e*S **S 22 39 31.8 -4.1**
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=Z,9.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD smax smax
comp=E,20nm,0.8s
VORD smax smax
comp=Z,10.0nm,2.7s
VORD smax smax
comp=N,10.0nm,0.9s
ULHL Ulahol 23.75 50 P **P 22 35 24.2 +0.7**
SNR=7.3
VSR Storozhevoye 23.91 340 *e*P **P 22 35 26.9 +2.3**
VSR *e*S **S 22 39 36.2 -3.8**
VSR pmax pmax
comp=Z,20nm,1.4s
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,5.0nm,0.6s
VSR smax smax
comp=E,10.0nm,0.9s
VSR smax smax
comp=Z,10.0nm,1.6s
VSR smax smax
comp=N,10.0nm,0.8s
TIRR Tirgusor 23.92 316 ⇑*i*P **P 22 35 27.0 +2.3**
TLCR 24.07 318 ⇑*i*P P 22 35 31.6 +5.4
CFR Carcaliu 24.47 317 ⇓*i*P **P 22 35 30.8 +1.0**
PGOR Pogoanele 25.02 316 ⇓*i*P P 22 35 39.5 +4.7
GHRR 25.38 318 ⇑*i*P **P 22 35 37.7 -0.3**
VRI Vrincioaia 25.67 317 ⇓*i*P **P 22 35 42.1 +1.3**
PLOR Plostina 25.71 317 ⇓*i*P **P 22 35 43.5 +2.4**
MLR Muntele Rosu 25.95 316 P **P 22 35 45.4 +2.0**
MLR Muntele Rosu 25.95 316 ⇑*i*P **P 22 35 45.4 +2.0**
MLR Muntele Rosu 25.95 316 P **P 22 35 45.4 +2.0**
comp=N,2.9nm,0.7s,baz=246,slow=2.3,SNR=13
MLR Muntele Rosu 25.95 316 P **P 22 35 45.4 +2.0**
TESR Tescani 26.07 318 ⇓*i*P **P 22 35 44.8 +0.5**
DOPR Dopca 26.53 316 ⇓*i*P **P 22 35 49.0 +0.5**
AK02 Malin Array Si 27.29 328 *e*P **P 22 35 54.4 -0.9**
AK02 Malin Array Si 27.29 328 *e*P **P 22 35 54.3 -0.9**
AK01 Malin Array Si 27.31 328 *e*P **P 22 35 54.4 -1.0**
AK01 Malin Array Si 27.31 328 *e*P **P 22 35 54.4 -1.0**
AKASG Malin Array Be 27.31 328 P **P 22 35 54.6 -0.8**
AKASG Malin Array Be 27.31 328 P **P 22 35 54.6 -0.8**
AKASG Malin Array Be 27.31 328 P **P 22 35 54.6 -0.8**
comp=N,0.6nm,0.4s,baz=135,slow=8.8,SNR=4.4
AKASG Malin Array Be 27.31 328 P **P 22 35 54.6 -0.8**
KIEV Kiev 27.31 328 *e*P **P 22 35 54.6 -0.9**
KIEV pmax pmax
comp=Z,4.0nm,1.0s
KIEV Kiev 27.31 328 *e*P **P 22 35 54.6 -0.9**
comp=Z,4.5nm,1.0s
KIEV Kiev 27.31 328 *e*P **P 22 35 54.6 -0.9**
comp=Z,4.5nm,1.0s
BURAR Bucovina Array 27.48 319 ⇑*i*P **P 22 35 56.7 -0.5**
PYUN Piuthan 27.50 85 *e*P **P 22 35 57.6 -0.1**
comp=Z,30nm,0.7s
BUR08 Bucovina Ar. S 27.51 319 *e*P **P 22 35 57.7 +0.2**
BUR08 Bucovina Ar. S 27.51 319 *e*P **P 22 35 57.7 +0.2**
BRVK Borovoye 27.51 25 *e*P **P 22 35 57.2 -0.1**
BRVK pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 27.51 25 *e*P **P 22 35 57.2 -0.1**
comp=Z,4.0nm,0.6s
BRVK Borovoye 27.51 25 *e*P **P 22 35 57.2 -0.1**
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 27.52 25 P **P 22 35 57.7 +0.3**
BVAR 22 39 15.8
BVAR Borovoye Array 27.52 25 P **P 22 35 57.7 +0.3**
BVAR PcP **PcP 22 39 15.8 +0.7**
BVAR Borovoye Array 27.52 25 P **P 22 35 57.7 +0.3**
comp=Z,8.0nm,0.6s,baz=220,slow=7.9,SNR=62
BVAR PcP **PcP 22 39 15.8 +0.7**
comp=Z,1.2nm,0.5s,baz=225,slow=1.8,SNR=3.5
BVAR Borovoye Array 27.52 25 P **P 22 35 57.7 +0.3**
BVAR Borovoye Array 27.52 25 PcP **PcP 22 39 15.8 +0.7**
ARU Arti 27.67 8 *e*P **P 22 36 01.1 +2.5**
ARU 22 36 47.3
ARU S **S 22 40 44.2 +4.5**
ARU SS **SnSn 22 41 52.7 +1.1**
ARU Arti 27.67 8 *e*P **P 22 36 01.1 +2.5**
KOLN Koldanda 28.09 85 *e*P **P 22 36 02.3 -0.7**
comp=Z,6.3nm,0.5s
DANN Dangsing 28.13 84 *e*P **P 22 36 03.2 -0.2**
comp=Z,53nm,0.8s
DRGR 28.55 316 ⇓*i*P **P 22 36 07.8 +1.1**
LVV L'vov 29.36 322 *e*P P 22 36 17.8 +4.1
DMN Daman 29.44 85 *e*P **P 22 36 13.5 -1.5**
comp=Z,20nm,0.8s
KURBB Kurchatov Arra 29.45 36 P **P 22 36 14.6 0.0**
comp=Z,1.7nm,0.8s,baz=236,slow=9.1,SNR=22
KURBB ScP **ScP 22 42 58.8 -2.2**
comp=Z,0.7nm,0.9s,baz=237,slow=3.7,SNR=8.1
KURBB LR LR 22 49 33.9
comp=Z,105nm,18.5s,baz=255,slow=40
KKN Kakani 29.55 84 *e*P **P 22 36 15.0 -1.0**
comp=Z,15nm,0.5s
KURK Kurchatov 29.56 36 *e*P **P 22 36 15.7 +0.2**
KURK pmax pmax
comp=Z,3.0nm,0.9s
KURK Kurchatov 29.56 36 *e*P **P 22 36 15.3 -0.1**
comp=Z,3.4nm,1.0s
KURK ScP **ScP 22 42 58.8 -2.5**
KURK Kurchatov 29.56 36 *e*P **P 22 36 15.7 +0.2**
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 29.62 45 *e*P **P 22 36 15.8 -0.3**
MK31 Makanchi Array 29.62 45 *e*P **P 22 36 15.8 -0.3**
MK31 Makanchi Array 29.62 45 *e*P **P 22 36 15.8 -0.3**
MKAR Makanchi Array 29.62 45 *ce*P **P 22 36 15.8 -0.3**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 29.62 45 P **P 22 36 15.9 -0.2**
MKAR 22 42 59.5
MKAR Makanchi Array 29.62 45 P **P 22 36 15.9 -0.2**
MKAR ScP **ScP 22 42 59.5 -2.3**
MKAR Makanchi Array 29.62 45 P **P 22 36 15.9 -0.2**
comp=Z,1.1nm,0.5s,baz=242,slow=7.4,SNR=28
MKAR ScP **ScP 22 42 59.5 -2.3**
comp=Z,0.8nm,0.9s,baz=248,slow=1.3,SNR=4.2
MKAR LR LR 22 49 47.3
comp=Z,80nm,20.1s,baz=174,slow=40
MKAR Makanchi Array 29.62 45 P **P 22 36 15.9 -0.2**
PKIN Phulchoki 29.70 85 *e*P **P 22 36 16.0 -1.3**
comp=Z,11nm,0.6s
PKI Pulchoki 29.71 85 *e*P **P 22 36 16.7 -0.8**
comp=Z,33nm,1.0s
KWP Kalwaria Pacla 29.97 321 *e*P **P 22 36 19.6 +0.4**
KWP pmax pmax
comp=Z,5.0nm,0.8s
KWP Kalwaria Pacla 29.97 321 *e*P **P 22 36 19.6 +0.4**
comp=Z,4.7nm,0.8s
KWP Kalwaria Pacla 29.97 321 ⇓*i*P **P 22 36 19.8 +0.6**
KWP Kalwaria Pacla 29.97 321 *e*P **P 22 36 19.7 +0.6**
KWP Kalwaria Pacla 29.97 321 *e*P **P 22 36 19.6 +0.4**
comp=Z,4.7nm,0.8s
GUN Gumba 30.05 84 *e*P **P 22 36 20.1 -0.4**
comp=Z,21nm,0.7s
RAMN Ramite 30.87 86 *e*P **P 22 36 26.1 -1.6**
comp=Z,17nm,0.8s
ODAN Odare 31.58 85 *e*P **P 22 36 32.4 -1.5**
TAPN Taplejung 31.75 84 *e*P **P 22 36 34.5 -1.0**
comp=Z,5.6nm,0.6s
OJC Ojcow 31.89 320 *e*P **P 22 36 36.9 +0.8**
OJC pmax pmax
comp=Z,5.0nm,0.9s
OJC Ojcow 31.89 320 *e*P **P 22 36 36.9 +0.8**
comp=Z,5.4nm,0.9s
OJC Ojcow 31.89 320 *e*P **P 22 36 36.9 +0.8**
comp=Z,5.4nm,0.9s
MORC Moravsky Berou 32.98 318 *e*P **P 22 36 47.2 +1.5**
MORC pmax pmax
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 32.98 318 *e*P **P 22 36 47.2 +1.5**
comp=Z,3.8nm,0.8s
MORC Moravsky Berou 32.98 318 ⇑*i*P **P 22 36 44.3 -1.4**
MORC Moravsky Berou 32.98 318 *e*P **P 22 36 47.2 +1.5**
comp=Z,3.8nm,0.8s
VRAC Vranov 33.34 317 ⇑*i*P **P 22 36 49.3 +0.5**
VRAC Vranov 33.34 317 LR LR 22 52 50.6
comp=Z,213nm,21.6s,baz=318,slow=41
DPC Dobruska-Polom 33.93 318 *e*P **P 22 36 53.9 -0.1**
DPC *e* 22 36 59.8
DPC Dobruska-Polom 33.93 318 *e*P **P 22 36 53.9 -0.1**
DPC *e*pP **pP 22 36 59.8 +0.6**
DPC Dobruska-Polom 33.93 318 *e*P **P 22 36 53.9 -0.1**
UPC Upice 34.18 319 *e*P P 22 37 02.6 +6.5
UPC Upice 34.18 319 *e*pP P 22 37 02.6 +6.5
LSA Lhasa 34.30 79 *e*P **P 22 36 58.3 +0.3**
LSA pmax pmax
comp=Z,7.0nm,0.8s
LSA Lhasa 34.30 79 *e*P **P 22 36 58.3 +0.3**
comp=Z,7.0nm,0.8s
LSA Lhasa 34.30 79 *e*P **P 22 36 58.3 +0.3**
comp=Z,7.0nm,0.8s
ZAA0 Zalesovo Array 34.52 35 *e*P **P 22 36 57.7 -1.3**
ZAA0 Zalesovo Array 34.52 35 *e*P **P 22 36 57.7 -1.3**
ZALV Zalesovo Beam 34.52 35 P **P 22 36 58.3 -0.7**
ZALV Zalesovo Beam 34.52 35 P **P 22 36 58.3 -0.7**
ZALV Zalesovo Beam 34.52 35 P **P 22 36 58.3 -0.7**
comp=Z,2.0nm,0.3s,baz=245,slow=9.2,SNR=18
ZALV LR LR 22 54 01.0
comp=Z,70nm,19.8s,baz=232,slow=42
ZALV Zalesovo Beam 34.52 35 P **P 22 36 58.3 -0.7**
PRU Pruhonice 34.83 317 *e*P **P 22 37 01.0 -0.7**
PRU *e* 22 37 07.6
PRU Pruhonice 34.83 317 *e*P **P 22 37 01.0 -0.7**
PRU *e*pP **pP 22 37 07.6 +0.6**
PRU Pruhonice 34.83 317 P **P 22 37 01.0 -0.7**
GERES GERESS Array B 34.93 315 P **P 22 37 01.6 -1.1**
GERES GERESS Array B 34.93 315 P **P 22 37 01.6 -1.1**
comp=Z,0.5nm,0.5s,baz=109,slow=3.2,SNR=6.3
KHC Kasperske Hory 35.10 315 *e*P **P 22 37 03.9 -0.2**
KHC Kasperske Hory 35.10 315 *e*P **P 22 37 03.3 -0.8**
comp=Z,42nm,2.7s
KHC Kasperske Hory 35.10 315 *e*P **P 22 37 03.9 -0.2**
KHC *ex* x 22 37 08.2
BRG Berggiesshubel 35.53 318 *e*P P 22 37 13.4 +5.7
comp=Z,2.5nm,1.1s
BRG Berggiesshubel 35.53 318 *e*P P 22 37 13.4 +5.7
BRG pmax pmax
comp=Z,3.0nm,1.1s
KEST Kesra 36.06 292 P **P 22 37 14.7 +2.1**
KEST Kesra 36.06 292 P **P 22 37 14.7 +2.1**
comp=Z,0.8nm,0.8s,baz=33,slow=10,SNR=4.3
JOF Joensuu 36.23 344 *e*P **P 22 37 12.0 -1.5**
JOF pmax pmax

	comp=Z,2.0nm,0.6s						
JOF	Joensuu	36.23	344	ep	P	22 37 12.0	-1.5
	comp=Z,2.2nm,0.6s						
CLL	Collm	36.24	318	eP	P	22 37 18.0	+4.2
CLL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CLL	Collm	36.24	318	e(P)	P	22 37 17.0	+3.2
FINES	FINESS Array B	36.43	340	P	P	22 37 14.5	-0.8
FINES	FINESS Array B	36.43	340	P	P	22 37 14.5	-0.8
	comp=Z,0.7nm,0.4s,baz=143,slow=9.6,SNR=16						
PGF	Pioggiola	36.65	303	eP	P	22 37 16.9	-0.7
PGF	Pioggiola	36.65	303	eP	P	22 37 16.9	-0.7
PGF	Pioggiola	36.65	303	eP	P	22 37 16.9	-0.7
KAF	Kangasniemi	36.88	340	eP	P	22 37 17.8	-1.3
KAF				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KAF	Kangasniemi	36.88	340	ep	P	22 37 17.8	-1.3
	comp=Z,0.9nm,0.7s						
SBF	Sospel	37.95	305	eP	P	22 37 27.4	-1.2
SBF	Sospel	37.95	305	eP	P	22 37 27.4	-1.2
SBF	Sospel	37.95	305	eP	P	22 37 27.4	-1.2
SBF	Sospel	37.95	305	eP	P	22 37 27.4	-1.2
FRF	La Foret Royal	38.48	304	eP	P	22 37 31.8	-1.1
FRF	La Foret Royal	38.48	304	eP	P	22 37 31.8	-1.1
FRF	La Foret Royal	38.48	304	eP	P	22 37 31.8	-1.1
FRF	La Foret Royal	38.48	304	eP	P	22 37 31.8	-1.1
MBDF	Montbardon	38.55	306	eP	P	22 37 33.5	-0.1
	comp=Z,18nm,0.9s						
MBDF	Montbardon	38.55	306	eP	P	22 37 33.5	-0.1
MBDF				pmax	pmax		
	comp=Z,18nm,0.9s						
MBDF	Montbardon	38.55	306	eP	P	22 37 33.5	-0.1
	comp=Z,18nm,0.9s						
MBDF	Montbardon	38.55	306	eP	P	22 37 33.5	-0.1
	comp=Z,8.8nm,0.9s						
LPG	La Plagne	38.67	307	eP	P	22 37 33.9	-1.0
	comp=Z,4.9nm,0.5s						
LPG	La Plagne	38.67	307	eP	P	22 37 33.9	-1.0
LPG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LPG	La Plagne	38.67	307	eP	P	22 37 33.9	-1.0
	comp=Z,4.9nm,0.5s						
LPG	La Plagne	38.67	307	eP	P	22 37 33.9	-1.0
	comp=Z,2.5nm,0.5s						
LPL	La Plagne	38.69	307	eP	P	22 37 33.1	-1.8
	comp=Z,6.4nm,0.6s						
LPL	La Plagne	38.69	307	eP	P	22 37 33.1	-1.8
LPL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPL	La Plagne	38.69	307	eP	P	22 37 33.1	-1.8
	comp=Z,6.4nm,0.6s						
LPL	La Plagne	38.69	307	eP	P	22 37 33.1	-1.8
	comp=Z,3.2nm,0.6s						
CDF	Champ du Feu	38.89	312	eP	P	22 37 34.7	-1.7
CDF	Champ du Feu	38.89	312	eP	P	22 37 34.7	-1.7
CDF	Champ du Feu	38.89	312	eP	P	22 37 34.7	-1.7
CDF	Champ du Feu	38.89	312	eP	P	22 37 34.7	-1.7
ORIF	Oris-en-Rattie	39.20	306	eP	P	22 37 37.9	-1.2
ORIF	Oris-en-Rattie	39.20	306	eP	P	22 37 37.9	-1.2
ORIF	Oris-en-Rattie	39.20	306	eP	P	22 37 37.9	-1.2
ORIF	Oris-en-Rattie	39.20	306	eP	P	22 37 37.9	-1.2
CABF	La Chapelle	39.32	309	eP	P	22 37 39.6	-0.4
CABF	La Chapelle	39.32	309	eP	P	22 37 39.6	-0.4
CABF	La Chapelle	39.32	309	eP	P	22 37 39.6	-0.4
CABF	La Chapelle	39.32	309	eP	P	22 37 39.6	-0.4
HAU	Haudompre	39.41	311	eP	P	22 37 39.2	-1.4
HAU	Haudompre	39.41	311	eP	P	22 37 39.2	-1.4
HAU	Haudompre	39.41	311	eP	P	22 37 39.2	-1.4
HAU	Haudompre	39.41	311	eP	P	22 37 39.2	-1.4
SFTF	Sexfontaines	40.30	311	eP	P	22 37 46.5	-1.6
	comp=Z,4.6nm,0.5s						
SFTF	Sexfontaines	40.30	311	eP	P	22 37 46.5	-1.6
	comp=Z,4.6nm,0.5s						
SFTF	Sexfontaines	40.30	311	eP	P	22 37 46.5	-1.6
	comp=Z,2.3nm,0.5s						
MEZF	Maizieres J'vi	40.35	312	eP	P	22 37 47.3	-1.2
MEZF	Maizieres J'vi	40.35	312	eP	P	22 37 47.3	-1.2
MEZF	Maizieres J'vi	40.35	312	eP	P	22 37 47.3	-1.2
GTA	Gaotai	40.67	62	eP	P	22 37 52.4	+1.0
GTA				pP	pP	22 37 56.7	0.0
GTA				sP	sP	22 37 59.4	+0.6
GTA				pmax	pmax		
	comp=Z,16nm,0.7s						
SMF	Signal de Mont	40.85	309	eP	P	22 37 51.4	-1.2
	comp=Z,8.7nm,0.7s						
SMF	Signal de Mont	40.85	309	eP	P	22 37 51.4	-1.2
SMF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SMF	Signal de Mont	40.85	309	eP	P	22 37 51.4	-1.2
	comp=Z,8.7nm,0.7s						
SMF	Signal de Mont	40.85	309	eP	P	22 37 51.4	-1.2
	comp=Z,4.3nm,0.7s						
LOR	Lormes	40.93	310	eP	P	22 37 52.0	-1.3
	comp=Z,4.9nm,0.8s						
LOR	Lormes	40.93	310	eP	P	22 37 52.0	-1.3
	comp=Z,4.9nm,0.8s						
LOR	Lormes	40.93	310	eP	P	22 37 52.0	-1.3
	comp=Z,2.5nm,0.8s						
SSF	Saint Saulge	41.14	309	eP	P	22 37 53.6	-1.4
	comp=Z,5.2nm,0.8s						
SSF	Saint Saulge	41.14	309	eP	P	22 37 53.6	-1.4
SSF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SSF	Saint Saulge	41.14	309	eP	P	22 37 53.6	-1.4
	comp=Z,5.2nm,0.8s						
SSF	Saint Saulge	41.14	309	eP	P	22 37 53.6	-1.4
	comp=Z,2.6nm,0.8s						
AVF	Avril sur Loir	41.20	309	eP	P	22 37 54.3	-1.2
AVF	Avril sur Loir	41.20	309	eP	P	22 37 54.3	-1.2
AVF	Avril sur Loir	41.20	309	eP	P	22 37 54.3	-1.2
AVF	Avril sur Loir	41.20	309	eP	P	22 37 54.3	-1.2
BAIF	Baives	41.21	314	eP	P	22 37 54.7	-0.8
BAIF	Baives	41.21	314	eP	P	22 37 54.7	-0.8
BAIF	Baives	41.21	314	eP	P	22 37 54.7	-0.8
BAIF	Baives	41.21	314	eP	P	22 37 54.7	-0.8
BGF	Bois d'Agland	41.52	308	eP	P	22 37 56.5	-1.6
	comp=Z,5.8nm,0.7s						
BGF	Bois d'Agland	41.52	308	eP	P	22 37 56.5	-1.6
BGF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BGF	Bois d'Agland	41.52	308	eP	P	22 37 56.5	-1.6
	comp=Z,5.8nm,0.7s						
BGF	Bois d'Agland	41.52	308	eP	P	22 37 56.5	-1.6
	comp=Z,2.9nm,0.7s						
NB2	NORSAR Subarra	41.59	332	P	P	22 37 57.0	-1.6
	comp=Z,2.0nm,0.5s,baz=122,slow=8.6						
NB2	NORSAR Subarra	41.59	332	P	P	22 37 57.0	-1.6
	comp=Z,2.0nm,0.5s,SNR=1.9						
NOA	NORSAR Array B	41.59	332	P	P	22 37 57.3	-1.3
NOA	NORSAR Array B	41.59	332	P	P	22 37 57.3	-1.3
	comp=Z,1.6nm,0.5s,baz=122,slow=8.4,SNR=12						
NOA				LR	LR	22 56 06.8	
	comp=Z,24nm,18.4s,baz=270,slow=37						
NOA	NORSAR Array B	41.59	332	P	P	22 37 57.3	-1.3
TCF	Toulx Ste Croi	41.92	308	eP	P	22 37 59.8	-1.7
TCF	Toulx Ste Croi	41.92	308	eP	P	22 37 59.8	-1.7
TCF	Toulx Ste Croi	41.92	308	eP	P	22 37 59.8	-1.7
TCF	Toulx Ste Croi	41.92	308	eP	P	22 37 59.8	-1.7
KEV	Kevo	42.98	348	eP	P	22 38 08.7	-1.0
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	Kevo	42.98	348	eP	P	22 38 09.1	-0.6
KEV	Kevo	42.98	348	ep	P	22 38 08.7	-1.0
	comp=Z,0.5nm,0.3s						
KEV	Kevo	42.98	348	eP	P	22 38 09.1	-0.6
KEV	Kevo	42.98	348	eP	P	22 38 09.1	-0.6
ARCES	ARCESS Array B	43.09	347	P	P	22 38 10.3	-0.3
ARCES	ARCESS Array B	43.09	347	P	P	22 38 10.3	-0.3
	comp=Z,1.4nm,0.5s,baz=148,slow=9.3,SNR=21						
ARCES	ARCESS Array B	43.09	347	P	P	22 38 10.3	-0.3
ARE0	ARCESS Array S	43.09	347	eP	P	22 38 09.7	-0.9
ARE0	ARCESS Array S	43.09	347	eP	P	22 38 09.7	-0.9
MFF	Saint Martin d	43.58	308	eP	P	22 38 13.9	-0.9
MFF	Saint Martin d	43.58	308	eP	P	22 38 13.9	-0.9
MFF	Saint Martin d	43.58	308	eP	P	22 38 13.9	-0.9
MFF	Saint Martin d	43.58	308	eP	P	22 38 13.9	-0.9
LDF	La Druitiere	43.76	311	eP	P	22 38 14.8	-1.5
	comp=Z,6.0nm,0.5s						
LDF	La Druitiere	43.76	311	eP	P	22 38 14.8	-1.5
LDF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
LDF	La Druitiere	43.76	311	eP	P	22 38 14.8	-1.5
	comp=Z,6.0nm,0.5s						
LDF	La Druitiere	43.76	311	eP	P	22 38 14.8	-1.5
	comp=Z,3.0nm,0.5s						
ZAK	Zakamensk	43.94	46	eP	P	22 38 17.3	-0.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
ZAK	Zakamensk	43.94	46	eP	P	22 38 17.3	-0.5
	comp=Z,1.0nm,1.3s						
FLN	La Foliniere	44.02	311	eP	P	22 38 17.0	-1.4
	comp=Z,7.4nm,0.6s						
FLN	La Foliniere	44.02	311	eP	P	22 38 17.0	-1.4
FLN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FLN	La Foliniere	44.02	311	eP	P	22 38 17.0	-1.4
	comp=Z,7.4nm,0.6s						
FLN	La Foliniere	44.02	311	eP	P	22 38 17.0	-1.4
	comp=Z,3.7nm,0.6s						
CHTO	Chiang Mai	44.19	93	eP	P	22 38 20.2	+0.1
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CHTO	Chiang Mai	44.19	93	eP	P	22 38 20.2	+0.1
	comp=Z,4.8nm,1.1s						
CHTO	Chiang Mai	44.19	93	eP	P	22 38 20.2	+0.1
	comp=Z,4.8nm,1.1s						
SJPF	Ste Jean	44.19	303	eP	P	22 38 19.2	-0.6
SJPF	Ste Jean	44.19	303	eP	P	22 38 19.2	-0.6
SJPF	Ste Jean	44.19	303	eP	P	22 38 19.2	-0.6
SJPF	Ste Jean	44.19	303	eP	P	22 38 19.2	-0.6
GRR	Gorron	44.23	311	eP	P	22 38 18.8	-1.2
	comp=Z,7.4nm,0.6s						
GRR	Gorron	44.23	311	eP	P	22 38 18.8	-1.2
GRR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GRR	Gorron	44.23	311	eP	P	22 38 18.8	-1.2
	comp=Z,7.4nm,0.6s						
GRR	Gorron	44.23	311	eP	P	22 38 18.8	-1.2
	comp=Z,3.7nm,0.6s						
CMAR	Chiang Mai Arr	44.32	93	P	P	22 38 20.6	-0.5
CMAR	Chiang Mai Arr	44.32	93	P	P	22 38 20.6	-0.5
	comp=Z,0.9nm,0.6s,baz=286,slow=8.7,SNR=4.7						
CMAR	Chiang Mai Arr	44.32	93	P	P	22 38 20.7	-0.5
SGMF	Saint Gilles	45.34	310	eP	P	22 38 27.9	-1.0
	comp=Z,15nm,0.8s						
SGMF	Saint Gilles	45.34	310	eP	P	22 38 27.9	-1.0
SGMF				pmax	pmax		
	comp=Z,15nm,0.8s						
SGMF	Saint Gilles	45.34	310	eP	P	22 38 27.9	-1.0
	comp=Z,15nm,0.8s						
SGMF	Saint Gilles	45.34	310	eP	P	22 38 27.9	-1.0
	comp=Z,7.5nm,0.8s						
SONM	Songino Array	45.70	50	P	P	22 38 31.4	-0.5
SONM	Songino Array	45.70	50	P	P	22 38 31.4	-0.5
	comp=Z,0.8nm,0.7s,baz=264,slow=7.0,SNR=4.6						
SONM	Songino Array	45.70	50	P	P	22 38 31.4	-0.5
QUIF	Quistinic	45.72	310	eP	P	22 38 31.0	-0.9
QUIF	Quistinic	45.72	310	eP	P	22 38 31.0	-0.9
QUIF	Quistinic	45.72	310	eP	P	22 38 31.0	-0.9
QUIF	Quistinic	45.72	310	eP	P	22 38 31.0	-0.9
ESDC	Sonseca Array	46.38	298	P	P	22 38 37.4	+0.1
ESDC	Sonseca Array	46.38	298	P	P	22 38 37.4	+0.1
	comp=Z,0.3nm,0.5s,baz=80,slow=7.6,SNR=4.8						
ESDC	Sonseca Array	46.38	298	P	P	22 38 37.4	+0.1
TOA0	Torodi Ar. Sit	48.86	262	eP	P	22 38 57.0	+0.2
TOA0	Torodi Ar. Sit	48.86	262	eP	P	22 38 57.0	+0.2
TORD	Torodi Ar. Bea	48.86	262	P	P	22 38 57.4	+0.5
TORD	Torodi Ar. Bea	48.86	262	P	P	22 38 57.4	+0.5
	comp=Z,2.4nm,0.5s,baz=55,slow=8.6,SNR=44						
TORD	Torodi Ar. Bea	48.86	262	P	P	22 38 57.3	+0.5
DBIC	Dimbokro	57.62	259	P	P	22 40 01.8	+0.5
DBIC	Dimbokro	57.62	259	P	P	22 40 01.8	+0.5
	comp=Z,5.4nm,0.7s,baz=47,slow=9.3,SNR=12						
DBIC	Dimbokro	57.62	259	P	P	22 40 01.8	+0.5
LIC	Lamto	57.99	258	eP	P	22 40 04.1	+0.2
	comp=Z,10nm,0.5s						
LIC	Lamto	57.99	258	eP	P	22 40 04.1	+0.2
	comp=Z,10nm,0.5s						
LIC	Lamto	57.99	258	eP	P	22 40 04.1	+0.2
	comp=Z,5.1nm,0.5s						
KSAR	Wonju Array Be	62.67	60	P	P	22 40 34.8	-0.8
KSAR	Wonju Array Be	62.67	60	P	P	22 40 34.8	-0.8
KSRS	Korea Array	62.70	60	P	P	22 40 34.8	-1.0
	comp=Z,3.2nm,0.6s,baz=284,slow=6.7,SNR=5.1						
KSRS	Korea Array	62.70	60	P	P	22 40 34.8	-1.0
	comp=Z,3.0nm,0.6s						
BOSA	Boshof	62.77	206	P	P	22 40 36.9	+0.5
BOSA	Boshof	62.77	206	P	P	22 40 36.9	+0.5
	comp=Z,1.4nm,0.4s,baz=179,slow=10.0,SNR=10						
BOSA	Boshof	62.77	206	P	P	22 40 36.9	+0.5
USRK	Ussuriysk Arra	63.75	52	P	P	22 40 41.0	-1.6
	comp=Z,1.0nm,0.6s,baz=236,slow=48,SNR=2.3						
SEY	Seymchan	69.09	29	eP	P	22 41 16.6	+0.1
SEY	Seymchan	69.09	29	eP	P	22 41 16.6	+0.1
BILL	Bilibino	71.79	21⇓	eP	P	22 41 37.7	+4.7
BILL				S	SKiKP	22 51 18.0	+7.8
BILL				pmax	pmax		
	comp=Z,24nm,1.5s						
SCHQ	Schefferville	81.10	329	P	P	22 42 26.0	0.0
SCHQ	Schefferville	81.10	329	P	P	22 42 26.0	0.0
	comp=Z,1.8nm,0.6s,baz=79,slow=15,SNR=8.1						
EGAK	Eagle	85.81	5	eP	P	22 42 50.0	+0.1
	comp=Z,5.0nm,1.0s						
YKA	Yellowknife Ar	87.97	354	P	P	22 43 00.6	+0.1
YKA	Yellowknife Ar	87.97	354	P	P	22 43 00.6	+0.1
	comp=Z,2.7nm,0.9s,baz=8.1,slow=5.0,SNR=22						
ASAR	Alice Springs	94.93	114	P	P	22 43 32.1	-1.4
ASAR	Alice Springs	94.93	114	P	P	22 43 32.1	-1.4
	comp=Z,0.3nm,0.5s,baz=295,slow=4.7,SNR=2.4						

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*ISCJB **01** 22:34:49.3±0.7, 41.°93N±0.°03×23.°34E±0.°05, h10km±6km, Error ellipse: s-maj=6.2km s-min=4.3km az=173.0*
*THE **01** 22:34:50.2, 41.°89N×23.°35E, h2km±15km, ML1.7/1, Error ellipse: s-maj=15.7km s-min=0.5km az=0.0*
*SKO **01** 22:34:50.9, 41.°91N×23.°32E, h2km, M1.5, ML2.0*
*ATH **01** 22:34:50.6, 41.°86N×23.°37E, h19km±1km, MD3.2/6*
*CSEM **01** 22:34:50.1±0.4, 41.°91N×23.°41E, h10km, ML1.7/1, Error ellipse: s-maj=7.6km s-min=7.1km az=124.0*
*BEO **01** 22:34:51.9±1.6, 41.°95N×23.°29E, h9km±5km, ML1.8/3*
ISC 01 22:34:49.9±1.0**, 41.°92N**±0.°02×**23.°36E**±0.°03**, h9**km±10km**, n40, σ0.s70**/53**, 4C-1D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVR	Nevrokopi	0.68	146	P	Pg	22 35 02.5	-0.5
NVR	Nevrokopi	0.68	146	ePB	Pg	22 35 02.6	-0.5
NVR				eSN	Sg	22 35 12.0	+0.2
NVR	Nevrokopi	0.68	146	P	Pg	22 35 02.5	-0.5
NVR				eSn	Sg	22 35 12.0	+0.2
VTS	Vitosha	0.69	350	P	Pg	22 35 03.3	+0.1
VTS	Vitosha	0.69	350	ePg	Pg	22 35 03.0	-0.2
VTS				eSg	Sg	22 35 12.6	+0.4
VTS	Vitosha	0.69	350⇑	iP	Pg	22 35 03.1	-0.2
VTS	Vitosha	0.69	350	P	Pg	22 35 03.3	+0.1
SRS	Serrai	0.81	168	P	Pg	22 35 05.2	-0.4
SRS				S	Sg	22 35 16.8	+0.6
SRS	Serrai	0.81	168	P	Pg	22 35 05.2	-0.4
SRS				S	Sg	22 35 16.8	+0.6
VAY	Valandovo	0.84	225	P	Pg	22 35 05.6	-0.5
VAY	Valandovo	0.84	225	i Pg	Pg	22 35 05.7	-0.5
VAY				i Sg	Sg	22 35 17.2	+0.2
VAY				eLg	Lg	22 35 17.3	
	comp=N,45nm,0.5s						
VAY				eLg	Lg	22 35 17.6	
	comp=E,28nm,0.6s						
VAY	Valandovo	0.84	225	i Pg	Pg	22 35 01.1	-5.0
VAY	Valandovo	0.84	225	P	Pg	22 35 05.6	-0.5
VAY				i Sg	Sb	22 35 17.6	-0.5
VAY				eLg	Lg	22 35 18.0	
	comp=E,28nm,0.6s						
PLD	Plovdiv	1.02	79	P	Pg	22 35 09.5	+0.1
PLD	Plovdiv	1.02	79	P	Pg	22 35 09.5	+0.1
SOH	Sokhos	1.09	180	ePN	Pg	22 35 10.4	-0.5
SOH				eSN	Sg	22 35 25.1	0.0
SOH	Sokhos	1.09	180	ePn	Pg	22 35 10.4	-0.5
SOH				eSn	Sg	22 35 25.1	0.0
GRG	Griva	1.20	217	ePN	Pb	22 35 12.4	-0.5
GRG				eSN	Sb	22 35 28.3	-0.2
GRG	Griva	1.20	217	ePn	Pb	22 35 12.4	-0.5
GRG				eSn	Sb	22 35 28.3	-0.2
KAVA	Kavala	1.26	136	P	Pn	22 35 13.5	-0.2
KAVA	Kavala	1.26	136	P	Pn	22 35 13.5	-0.2
BARS	Barje	1.46	309	ePg	Pb	22 35 17.2	-0.1
BARS				eSg	Sn	22 35 35.7	-0.1
ZAPS	Zavoj	1.46	339	ePg	Pg	22 35 17.9	-0.1
ZAPS				eSg	Sg	22 35 37.6	+0.7
PLG	Polygyros	1.54	178	ePN	Pn	22 35 18.2	+0.6
PLG				eSN	Sn	22 35 37.4	-0.4
PLG	Polygyros	1.54	178	ePn	Pn	22 35 18.2	+0.6
PLG				eSn	Sn	22 35 37.4	-0.4
FNA	Florina	1.88	234	ePN	Pb	22 35 24.1	-0.3
FNA	Florina	1.88	234	ePn	Pb	22 35 24.1	-0.3
PAIG	Paliouri	2.00	173	ePN	Pn	22 35 24.9	+1.0
PAIG	Paliouri	2.00	173	ePn	Pn	22 35 24.9	+1.0
ALN	Alexandroupoli	2.26	116	ePB	Pn	22 35 28.7	+1.2
ALN	Alexandroupoli	2.26	116	ePb	Pn	22 35 28.7	+1.2
AOS	Alonnisos	2.77	172	ePN	Pn	22 35 35.8	+1.3
AOS	Alonnisos	2.77	172	ePn	Pn	22 35 35.8	+1.3
GRUS	Gruza	2.77	316	eSn	Sn	22 36 08.0	-0.1
AGG	Agios Georgios	3.00	196	ePN	Pn	22 35 39.5	+1.9
AGG	Agios Georgios	3.00	196	ePn	Pn	22 35 39.5	+1.9
LOT	Lotru	3.54	5⇑	iP	Pg	22 35 58.2	+0.4
SECR		3.69	31⇑	iP	Pn	22 35 45.7	-1.4
VOIR		3.73	19⇑	iP	Pb	22 35 52.8	-3.2
BZS	Buzias	3.91	342⇓	iP	Pg	22 36 03.8	-1.0

IDC 01 22:40:13.5±0.9**, 13.°19N×125.°93E, h0**km**, mb3.9**/11**, mb1 4.0**/11**, mb1mx3.8**/25**, mbtmp3.9**/11**, MS3.1**/4**, Ms1 3.1**/4**, ms1mx2.8**/44**, 1D, Error ellipse: s-maj=43.1km s-min=14.2km az=70.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCP	Roxas	3.51	243⇓	eP	Pg	22 41 21.2	+0.3
JHJ	Hachijo jima 2	23.52	30	LR	LR	22 53 32.8	
	comp=Z,29nm,19.4s,baz=102,slow=34						
KSRS	Korea Array	24.23	4	P	P	22 45 32.5	+0.5
	1.3nm,0.7s,baz=182,slow=13,SNR=5.1						
MJAR	Matsushiro Arr	25.73	23	LR	LR	22 53 22.7	
	comp=Z,50nm,19.7s,baz=315,slow=31						
CMAR	Chiang Mai Arr	26.47	285	P	P	22 45 53.4	+0.7
	1.7nm,0.7s,baz=95,slow=7.7,SNR=14						
CMAR				LR	LR	22 57 07.0	
	comp=Z,17nm,18.9s,baz=230,slow=38						
PSI	Prapat	28.63	251	LR	LR	22 57 34.9	
	comp=Z,94nm,18.4s,baz=215,slow=36						
FITZ	Fitzroy Crossi	31.10	181	P	P	22 46 33.5	-0.2
	1.1nm,0.7s,baz=39,slow=13,SNR=2.9						
WRA	Warramunga Arr	33.95	166	P	P	22 46 57.8	-1.0
	0.3nm,0.3s,baz=343,slow=10,SNR=3.1						
ASAR	Alice Springs	37.45	168	P	P	22 47 29.2	+0.4
	0.6nm,0.7s,baz=351,slow=7.1,SNR=6.9						
SONM	Songino Array	38.19	339	P	P	22 47 35.7	+0.8
	0.5nm,0.5s,baz=148,slow=8.5,SNR=5.8						
STKA	Stephens Creek	47.26	162	P	P	22 48 49.1	+0.5
	2.6nm,0.8s,baz=355,slow=7.9,SNR=7.5						
MKAR	Makanchi Array	49.53	321	P	P	22 49 04.4	-1.7
	1.4nm,0.7s,baz=106,slow=8.9,SNR=11						
ZALV	Zalesovo Beam	51.93	330	P	P	22 49 23.1	-0.8
	0.6nm,0.5s,baz=116,slow=8.2,SNR=4.7						
KURBB	Kurchatov Arra	53.51	324	P	P	22 49 36.5	+0.7
	1.8nm,0.5s,baz=123,slow=7.7,SNR=24						
FINES	FINESS Array B	83.18	332	P	P	22 52 40.6	-0.7
	1.9nm,1.0s,baz=44,slow=8.5,SNR=4.7						

NNC 01 22:41:38.9±3.4**, 40.°94N×78.°90E, h0**km**, mb3.5, mpv3.2, 2C-5D, Error ellipse: s-maj=27.6km s-min=15.2km az=158.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNDC	Almaty	2.69	328	⇑Pn	Pn	22 42 24.4	+0.9
	12nm,0.7s						
KNDC				⇓Lg	Lg	22 43 04.8	
	122nm,1.1s						
MK31	Makanchi Array	6.34	22	⇓Pg	Pb	22 43 34.4	+4.2
	1.5nm,0.9s,baz=200,slow=12,SNR=8.3						
MK31				⇑Sn	Sn	22 44 27.2	+0.4
	1.7nm,0.7s,baz=190,slow=25,SNR=4.1						
MK31				⇓Lg	Lg	22 44 59.7	
	1.9nm,0.8s						
KK31	Karatay Array	6.61	292	⇓Pg	Pb	22 43 36.0	+1.2
	1.5nm,0.9s,baz=108,slow=14,SNR=10						
KK31				⇓Lg	Lg	22 45 07.2	
	2.8nm,1.0s,baz=105,slow=27,SNR=3.7						

IDC 01 22:55:02.1±1.4**, 15.°68S×172.°85W, h0**km**, mb3.8**/6**, mb1 4.1**/7**, mb1mx3.9**/20**, mbtmp3.8**/7**, MS3.4**/7**, Ms1 3.4**/7**, ms1mx3.1**/42**, Error ellipse: s-maj=86.8km s-min=18.5km az=144.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.05	31	Pn	Pn	22 55 36.2	-1.7
	21nm,0.3s,baz=184,slow=1.1,SNR=25						
AFI				Sn	Sn	22 56 01.1	-3.1
	37nm,0.3s,baz=287,slow=20,SNR=4.2						
RAR	Rarotonga	13.57	116	LR	LR	23 01 31.6	
	comp=Z,286nm,20.6s,baz=234,slow=29						
DZM	Mont Dzumac	20.59	249	eLR	LR	23 04 50.8	
	310nm,26.8s						
DZM	Mont Dzumac	20.59	249	LR	LR	23 05 42.5	
	comp=Z,62nm,18.5s,baz=32,slow=31						
PPT2	Papeete2	22.38	98	eLR	LR	23 04 55.4	
	210nm,25.5s						
TBI	Tubuai	23.31	113	eLR	LR	23 05 25.0	
	305nm,27.0s						
HNR	Honiara	27.25	280	LR	LR	23 10 35.6	
	comp=Z,156nm,18.1s,baz=138,slow=34						
STKA	Stephens Creek	44.35	240	P	P	23 03 13.3	-1.0
	2.6nm,0.8s,baz=100,slow=6.5,SNR=5.2						
STKA				LR	LR	23 20 02.8	
	comp=Z,78nm,20.1s,baz=193,slow=34						
WRA	Warramunga Arr	50.29	257	P	P	23 04 01.9	+1.1
	0.4nm,0.3s,baz=95,slow=6.8,SNR=3.7						
ASAR	Alice Springs	50.53	252	P	P	23 04 01.8	-0.8
	5.6nm,0.8s,baz=86,slow=8.4,SNR=35						
GUMO	Guam	50.93	303	LR	LR	23 22 30.6	
	comp=Z,17nm,18.5s,baz=109,slow=32						
PETK	Petropavlovsk-	73.06	342	LR	LR	23 36 58.8	
	comp=Z,23nm,19.1s,baz=324,slow=34						
NVAR	Mina Array Bea	74.19	42	P	P	23 06 41.5	+0.4
	1.1nm,0.8s,baz=223,slow=9.6,SNR=6.4						
KSRS	Korea Array	76.73	315	LR	LR	23 40 17.6	
	comp=Z,12nm,19.2s,baz=290,slow=35						
TXAR	Lajitas Array	80.33	56	P	P	23 07 15.3	-0.3
	0.1nm,0.5s,baz=209,slow=9.0,SNR=2.5						
YKA	Yellowknife Ar	90.15	23	P	P	23 08 05.0	+1.2
	0.1nm,0.4s,baz=259,slow=5.6,SNR=4.5						
BRTR	Keskin Array B	146.71	321	PKPbc	PKPdf	23 14 45.4	+0.5
	0.6nm,0.8s,baz=18,slow=5.2,SNR=3.1						

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*NIED **01** 22:58:00, 36.°80N×128.°70E, h5km, Mw3.9 Best double couple: M0 8.49000×10^14 NP1:φs305.00000°, δ84.00000°, λ67.00000°. NP2:φs202.00000°, δ24.00000°, λ166.00000°.*
*JMA **01** 22:58:21.5±0.7, 36.°83N×128.°71E, h0km, M4.6*
*KMA **01** 22:58:27.2, 36.°56N×128.°72E, ML4.0*
*IDC **01** 22:58:27.0±0.9, 36.°51N×128.°65E, h0km, mb3.6/6, mb1 3.6/10, mb1mx3.5/30, mbtmp3.5/10, ML3.3/3, Error ellipse: s-maj=27.9km s-min=10.4km az=56.0*
*ISCJB **01** 22:58:27.6±0.3, 36.°56N±0.°03×128.°74E±0.°03, h20km±4km, mb3.6/6, Error ellipse: s-maj=4.8km s-min=3.8km az=35.7*
ISC 01 22:58:27.8±1.0**, 36.°56N**±0.°03×**128.°72E**±0.°02**, h8**km±7km**, n33, σ0.s85**/41**, mb3.6**/6**, South Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSEUS	ULSEONG	0.21	186	P	Pg	22 58 32.6	+0.5
KSYCH	Yecheon	0.24	286	P	Pg	22 58 33.2	+0.5
KSADO	Andong	0.24	129	P	Pg	22 58 33.2	+0.5
KSADO				S	Sg	22 58 36.4	+0.5
KSYOJ	YEONGJU	0.34	333	P	Pb	22 58 35.0	-1.2
KSCHY	BONGHWA	0.41	23	P	Pg	22 58 36.1	+0.2
KSSAJ	Sangju	0.47	251	P	Pg	22 58 37.1	+0.1
KSYOD	Yeongdeok	0.56	96	P	Pg	22 58 38.7	+0.1
KSULJ	Uljin	0.57	76	P	Pg	22 58 38.8	-0.1
KSULJ				S	Sg	22 58 46.5	0.0
KSTBA	Taebaek	0.59	19	P	Pb	22 58 39.5	-1.0
KSTBA				S	Sg	22 58 47.0	-0.1
KSYOW	Yeongwol	0.64	341	P	Pb	22 58 40.3	-1.0
KSPHA	Pohang	0.65	125	P	Pg	22 58 40.3	0.0
KSCHJ	Chungju	0.67	298	P	Pg	22 58 40.7	-0.1
KSCHJ				S	Sg	22 58 49.4	-0.1
KSCPR	CHUPUNGNYEONG	0.69	241	P	Pg	22 58 40.8	-0.3
KSCPR				S	Sg	22 58 49.8	-0.3

KSBON	**Boeun**	**0.74**	**265**	P	**Pg**	**22 58 42.0**	**-0.1**
KSDAG	**Daegu**	**0.81**	**169**	P	**Pg**	**22 58 43.0**	**-0.3**
KSDAG				S	**Sg**	**22 58 53.8**	**0.0**
KSRS	**Korea Array**	**1.09**	**325**	Pg	**Pb**	**22 58 48.3**	**-0.6**
	109nm,0.3s,baz=144,slow=18,SNR=594						
KSRS				Lg	Lg	22 59 02.4	
	368nm,0.3s,baz=144,slow=31,SNR=40						
JTU	**Tsushima**	**2.11**	**164**	P	**Pn**	**22 59 02.5**	**-0.8**
JTU				S	**Sb**	**22 59 33.7**	**+1.1**
JII	**Iki**	**2.88**	**163**	P	**Pn**	**22 59 13.7**	**-0.3**
JTY	**Toyota**	**2.99**	**139**	P	**Pn**	**22 59 14.2**	**-1.3**
JGT	**Gotsu**	**3.32**	**116**	P	**Pn**	**22 59 18.6**	**-1.4**
JGT				S	**Sn**	**22 59 58.2**	**-1.3**
JHT	**Toyohira**	**3.57**	**121**	P	**Pn**	**22 59 22.1**	**-1.3**
JNU	**Nakatsue**	**3.87**	**152**	Pn	**Pn**	**22 59 27.7**	**+0.1**
	2.6nm,0.3s,baz=346,slow=5.9,SNR=21						
JNU				Lg	Lg	23 00 29.2	
	8.1nm,0.3s,baz=239,slow=18,SNR=6.4						
JHS	**Saijyo**	**3.90**	**112**	P	**Pn**	**22 59 26.0**	**-2.1**
JTO	**Tosashimizu**	**5.00**	**136**	P	**Pn**	**22 59 43.4**	**+0.3**
MJAR	**Matsushiro Arr**	**7.64**	**87**	Pn	**Pn**	**23 00 20.1**	**+0.6**
	0.5nm,0.3s,baz=275,slow=14,SNR=3.9						
USRK	**Ussuriysk Arra**	**8.03**	**17**	Pn	**Pn**	**23 00 24.8**	**+0.1**
	0.1nm,0.3s,baz=135,slow=43,SNR=2.3						
SONM	**Songino Array**	**19.93**	**311**	P	**Pn**	**23 03 00.7**	**-1.0**
	0.1nm,0.3s,baz=123,slow=11,SNR=3.8						
MKAR	**Makanchi Array**	**35.68**	**301**	P	**P**	**23 05 27.4**	**+0.9**
	0.4nm,0.6s,baz=88,slow=11,SNR=4.1						
KURBB	**Kurchatov Arra**	**38.22**	**308**	P	**P**	**23 05 47.8**	**-0.1**
	1.1nm,0.7s,baz=94,slow=9.2,SNR=8.2						
AAK	**Ala-Archa**	**41.61**	**296**	P	**P**	**23 06 16.8**	**+0.4**
	0.8nm,0.7s,baz=139,slow=9.5,SNR=6.6						
WRA	**Warramunga Arr**	**56.45**	**174**	P	**P**	**23 08 09.2**	**-0.9**
	0.4nm,0.3s,baz=357,slow=7.9,SNR=4.7						
FINES	**FINESS Array B**	**64.18**	**329**	P	**P**	**23 09 04.1**	**+1.6**
	1.1nm,0.9s,baz=59,slow=7.4,SNR=6.7						
YKA	**Yellowknife Ar**	**69.06**	**26**	P	**P**	**23 09 35.2**	**+1.6**
	0.2nm,0.8s,baz=306,slow=6.6,SNR=4.3						

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*IDC **01** 23:25:17.7±1.9, 6°.51S×128°.86E, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.7/18, mbtmp3.9/4, ML4.2/2, Error ellipse: s-maj=188.4km s-min=28.6km az=68.0*
*AUST **01** 23:25:30.2, 6°.98S×129°.03E, h35km*
*ISCJB **01** 23:25:31.1±0.6, 6°.86S±0°.05×129°.02E±0°.06, h156km, mb3.5/2, Error ellipse: s-maj=8.9km s-min=6.4km az=13.5*
ISC 01 23:25:31.5±0.8**, 6°.96S**±0°.06×**129°.18E**±0°.08**, h156km, n17, σ2s.83**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**3.77**	**70**	P	**Pn**	**23 26 32.1**	**+3.1**
	baz=3.9,SNR=10						
TLE				S	**Sn**	**23 27 10.4**	**-3.2**
	baz=3.9,SNR=4.2						
FAKI	**Fak Fak**	**5.04**	**37**	P	**Pn**	**23 26 44.9**	**-0.7**
	baz=5.2,SNR=39						
FAKI				S	**Sn**	**23 27 38.3**	**-5.2**
	baz=5.2,SNR=18						
MTN	**Manton Dam**	**6.16**	**162**	P	Pn	23 27 03.1	+2.7
	baz=6.2,SNR=36						
MTN				S	**Sn**	**23 28 08.4**	**-1.7**
	baz=6.2,SNR=12						
SWI	**Sorong**	**6.40**	**19**	P	**Pn**	**23 27 06.3**	**+2.7**
	baz=6.5,SNR=6.7						
SWI				S	**Sn**	**23 28 13.3**	**-2.5**
	baz=6.5,SNR=3.8						
KDU	**Kakadu**	**6.55**	**151**	P	**Pn**	**23 27 07.5**	**+1.8**
	baz=6.6,SNR=148						
KDU				S	**Sn**	**23 28 17.3**	**-2.2**
	baz=6.6,SNR=7.2						
WSI	**Waingapu**	**9.19**	**252**	S	**Sn**	**23 29 19.5**	**-3.4**
	baz=9.1,SNR=3.3						
PCI	**Palu**	**11.09**	**302**	S	Sn	23 29 39.4	-29
	baz=11,SNR=29						
FITZ	**Fitzroy Crossi**	**11.60**	**197**	P	**Pn**	**23 28 13.2**	**+0.7**
	baz=12,SNR=45						
WRA	**Warramunga Arr**	**13.85**	**159**	Pn	**P**	**23 28 42.9**	**-1.7**
	1.2nm,0.3s,baz=332,slow=14,SNR=9.6						
WRA				Sn	Sn	23 31 05.4	-10
	3.5nm,0.3s,baz=334,slow=22,SNR=16						
COEN	**Coen**	**15.41**	**118**	P	**P**	**23 29 04.0**	**+2.0**
	baz=16,SNR=9.3						
ASAR	**Alice Springs**	**17.22**	**165**	P	**Pn**	**23 29 26.1**	**+3.2**
	0.5nm,0.3s,baz=338,slow=9.1,SNR=20						
ASAR				S	**S**	**23 32 31.6**	**-2.0**
	1.2nm,0.3s,baz=345,slow=25,SNR=5.9						
MTSU	**Mount Surprise**	**18.47**	**128**	P	Pn	23 29 46.3	+8.7
	baz=19,SNR=7.5						
MEEK	**Meekatharra**	**22.01**	**206**	P	pP	23 30 38.0	-3.3
	baz=22,SNR=4.0						
LHI	**Lord Howe Isla**	**37.09**	**135**	S	S	23 38 19.7	+18
	baz=37,SNR=3.1						
NFK	**Norfolk Island**	**42.61**	**126**	P	pP	23 33 43.7	-3.2
	baz=43,SNR=6.6						
MKAR	**Makanchi Array**	**67.75**	**327**	P	**P**	**23 36 14.2**	**+2.0**
	0.7nm,0.5s,baz=117,slow=8.1,SNR=19						
ZALV	**Zalesovo Beam**	**71.19**	**334**	P	**P**	**23 36 34.5**	**+1.3**
	0.4nm,0.5s,baz=131,slow=6.6,SNR=3.7						

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*ISCJB **01** 23:38:38.2±0.3, 17°.09N±0°.02×99°.65W±0°.02, h45km±3km, mb4.4/68, MS3.6/13, Error ellipse: s-maj=4.1km s-min=2.9km az=19.5*
*IDC **01** 23:38:39.5±0.6, 17°.23N×99°.52W, h35km±4km, mb3.9/14, mb1 4.1/17, mb1mx3.9/28, mbtmp3.9/17, ML3.5/3, MS3.5/18, Ms1 3.5/18, ms1mx3.5/31, Error ellipse: s-maj=17.4km s-min=10.4km az=58.0*
*NEIC **01** 23:38:40.2, 17°.05N×99°.68W, h44km, mb4.5/60, MD4.7(MEX), After MEX.*
*MEX **01** 23:38:40.2±0.6, 17°.05N×99°.68W, h44km±7km, MD4.7*
ISC 01 23:38:39.5±0.4**, 17°.10N**±0°.03×**99°.66W**±0°.03**, h38km**±1km**, n389, σ1s.27**/421**, mb4.4**/67**, MS3.5**/13**, 109C-89D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.29**	**220**	*i* P	**Pn**	**23 38 47.1**	**-0.7**
ACX				*i* S	**Sn**	**23 38 53.0**	**-1.8**
ACX	**Acapulco**	**0.29**	**220**	*i* P	**Pn**	**23 38 47.1**	**-0.7**
ACX				*i* S	**Sn**	**23 38 53.0**	**-1.8**
CAIG	**El Cayaco**	**0.58**	**265**	*i* P	**Pn**	**23 38 50.2**	**-1.2**
CAIG				*i* S	**Sn**	**23 38 58.5**	**-1.2**
CAIG	**El Cayaco**	**0.58**	**265**	*i* P	**Pn**	**23 38 50.2**	**-1.2**
CAIG				*i* S	**Sn**	**23 38 58.5**	**-1.2**
ARIG	**Puente Sto Nin**	**1.35**	**331**	*e*P	**Pn**	**23 39 01.4**	**-0.4**
ARIG				*e*S	**Sn**	**23 39 18.3**	**-0.3**
PNIG	**Pinotepa**	**1.63**	**115**	*e*P	**Pn**	**23 39 05.2**	**-0.4**
PNIG				*e*S	**Sn**	**23 39 24.1**	**-1.2**
PNIG	**Pinotepa**	**1.63**	**115**	*e*P	**Pn**	**23 39 05.2**	**-0.4**
PNIG				*e*S	**Sn**	**23 39 24.1**	**-1.2**
ZIIG	**Zihuatanejo**	**1.80**	**287**	*e*P	**Pn**	**23 39 07.2**	**-0.7**
ZIIG				*i* S	**Sn**	**23 39 28.5**	**-1.1**
ZIIG	**Zihuatanejo**	**1.80**	**287**	*e*P	**Pn**	**23 39 07.2**	**-0.7**
ZIIG				*i* S	**Sn**	**23 39 28.5**	**-1.1**
YAIG	**Yautepec**	**1.84**	**18**	*e*P	**Pn**	**23 39 07.9**	**-0.9**
YAIG				*e*S	**Sn**	**23 39 31.1**	**+0.2**
YAIG	**Yautepec**	**1.84**	**18**	*e*P	**Pn**	**23 39 07.9**	**-0.9**
YAIG				*e*S	**Sn**	**23 39 31.1**	**+0.2**
UTMO	**Huajuapan**	**1.92**	**67**	*e*P	**Pn**	**23 39 09.8**	**0.0**
UTMO				*e*S	**Sn**	**23 39 32.8**	**0.0**
UTMO	**Huajuapan**	**1.92**	**67**	*e*P	**Pn**	**23 39 09.8**	**0.0**
UTMO				*e*S	**Sn**	**23 39 32.8**	**0.0**
MZVM		**2.12**	**11**	*e*P	**Pn**	**23 39 12.6**	**+0.2**
MZVM				*e*S	**Sn**	**23 39 38.3**	**+0.8**
PPM	**Popocatepetl**	**2.19**	**26**	*e*P	**Pn**	**23 39 13.8**	**0.0**
PPM				*e*S	**Sn**	**23 39 40.5**	**+0.5**
PPM	**Popocatepetl**	**2.19**	**26**	*e*P	**Pn**	**23 39 13.8**	**0.0**
PPM				*e*S	**Sn**	**23 39 40.5**	**+0.5**
PBIG	**Penon de los B**	**2.40**	**13**	*e*P	**Pn**	**23 39 16.4**	**+0.2**
PBIG				*e*S	**Sn**	**23 39 45.2**	**+0.9**
PTVM	**Pico Tres Padr**	**2.54**	**12**	*e*P	**Pn**	**23 39 18.6**	**+0.2**
PTVM				*e*S	**Sn**	**23 39 48.6**	**+0.4**
PTVM	**Pico Tres Padr**	**2.54**	**12**	*e*P	**Pn**	**23 39 18.6**	**+0.2**
PTVM				*e*S	**Sn**	**23 39 48.6**	**+0.4**
IIO	**Organos**	**2.64**	**20**	*e*P	**Pn**	**23 39 19.9**	**+0.1**
IIO				*e*S	**Sn**	**23 39 51.5**	**+0.7**
IIO	**Organos**	**2.64**	**20**	*e*P	**Pn**	**23 39 19.9**	**+0.1**
IIO				*e*S	**Sn**	**23 39 51.5**	**+0.7**
VTVM	**Tizayuca**	**2.79**	**17**	*e*P	**Pn**	**23 39 22.0**	**+0.1**
VTVM				*e*S	**Sn**	**23 39 53.9**	**-0.5**
VHO	**Vista Hermosa**	**2.80**	**90**	*e*P	**Pn**	**23 39 22.6**	**+0.7**
VHO				*e*S	**Sn**	**23 39 53.1**	**-1.4**
VHO	**Vista Hermosa**	**2.80**	**90**	*e*P	**Pn**	**23 39 22.6**	**+0.7**
VHO				*e*S	**Sn**	**23 39 53.1**	**-1.4**
HUIG	**Huatulco**	**3.65**	**111**	*e*P	**Pn**	**23 39 34.3**	**+0.8**
HUIG				*e*S	**Sn**	**23 40 14.1**	**-1.3**
HUIG	**Huatulco**	**3.65**	**111**	*e*P	**Pn**	**23 39 34.3**	**+0.8**
HUIG				*e*S	**Sn**	**23 40 14.1**	**-1.3**
MMIG	**Aquila**	**3.71**	**289**	*e*P	**Pn**	**23 39 33.5**	**-0.7**
MMIG				*e*S	**Sn**	**23 40 15.5**	**-1.2**
MMIG	**Aquila**	**3.71**	**289**	*e*P	**Pn**	**23 39 33.5**	**-0.7**
MMIG				*e*S	**Sn**	**23 40 15.5**	**-1.2**
EZ5V		**4.43**	**303**	*e*P	**Pn**	**23 39 47.3**	**+2.8**
EZ5V				*e*S	**Sn**	**23 40 34.4**	**-0.6**
CMIG	**Matias Romero**	**4.57**	**89**	*e*P	**Pn**	**23 39 46.4**	**+0.4**
CMIG				*e*S	**Sn**	**23 40 38.3**	**+0.4**
CMIG				Lg	Lg	23 40 59.8	
CMIG	**Matias Romero**	**4.57**	**89**	*e*P	**Pn**	**23 39 46.4**	**+0.4**
CMIG				*e*S	**Sn**	**23 40 38.3**	**+0.4**
CMIG	**Matias Romero**	**4.57**	**89**	Pn	**Pn**	**23 39 46.0**	**0.0**
	3.4nm,0.3s,baz=274,slow=11,SNR=20						
CMIG				Sn	**Sn**	**23 40 37.4**	**-0.5**
	22nm,0.3s,baz=302,slow=16,SNR=6.1						
CMIG				Lg	Lg	23 40 59.8	
	30nm,0.3s,baz=345,slow=9.2,SNR=7.4						
CMIG				LR	LR	23 41 08.1	
	comp=Z,120nm,18.1s,baz=62,slow=34						
R15V		**4.60**	**297**	*e*P	**Pn**	**23 39 48.2**	**+1.6**
R15V				*e*S	**Sn**	**23 40 38.7**	**-0.1**
ANIG	**Ahuacatlan**	**6.05**	**311**	*e*P	**Pn**	**23 40 06.8**	**+0.3**
ANIG				*e*S	**Sn**	**23 41 14.9**	**+0.2**
ANIG	**Ahuacatlan**	**6.05**	**311**	*e*P	**Pn**	**23 40 06.8**	**+0.3**
ANIG				*e*S	**Sn**	**23 41 14.9**	**+0.2**
TGIG		**6.26**	**92**	*e*P	Pn	23 40 13.1	+3.6
TGIG				*e*S	**Sn**	**23 41 20.2**	**+0.3**
TGIG		**6.26**	**92**	*e*P	Pn	23 40 13.1	+3.6
TGIG				*e*S	**Sn**	**23 41 20.2**	**+0.3**
ZAIG	**Zacatecas**	**6.27**	**335**	*e*P	**Pn**	**23 40 10.3**	**+0.5**
ZAIG				*e*S	**Sn**	**23 41 20.7**	**+0.3**
ZAIG	**Zacatecas**	**6.27**	**335**	*e*P	**Pn**	**23 40 10.3**	**+0.5**
ZAIG				*e*S	**Sn**	**23 41 20.7**	**+0.3**
CCIG	**Comitan**	**7.25**	**95**	*e*P	**Pn**	**23 40 25.9**	**+2.7**
CCIG				*e*S	**Sn**	**23 41 45.8**	**+1.4**
CCIG	**Comitan**	**7.25**	**95**	*e*P	**Pn**	**23 40 25.9**	**+2.7**
CCIG				*e*S	**Sn**	**23 41 45.8**	**+1.4**
LNIG	**Linares**	**7.77**	**1**	*e*P	**Pn**	**23 40 31.9**	**+1.8**
LNIG				*e*S	**Sn**	**23 41 58.5**	**+1.8**
LNIG	**Linares**	**7.77**	**1**	*e*P	**Pn**	**23 40 31.9**	**+1.8**
LNIG				*e*S	**Sn**	**23 41 58.5**	**+1.8**
TEIG	**Tepich**	**11.23**	**72**	*e*Pn	**Pn**	**23 41 18.1**	**+0.7**
TEIG				*e*Sn	**Sn**	**23 43 21.2**	**-0.6**
TEIG	**Tepich**	**11.23**	**72**	Pn	**Pn**	**23 41 18.4**	**+0.9**
	3.6nm,0.3s,baz=253,slow=5.7,SNR=10						
TEIG				Sn	Sn	23 43 13.4	-8.4
	2.1nm,0.3s,baz=336,slow=20,SNR=3.6						
TEIG				LR	LR	23 46 08.4	
	comp=Z,181nm,20.1s,baz=224,slow=41						
732A	**Laxson Ranch,**	**11.58**	**359**	⇓P	**Pn**	**23 41 24.5**	**+2.2**
	baz=12						
LPIG	**La Paz**	**12.16**	**307**	LR	LR	23 45 45.9	
	comp=Z,27nm,20.2s,baz=4.6,slow=35						
631A	**Perdido Creek**	**12.29**	**356**	⇓P	**Pn**	**23 41 33.1**	**+1.1**
	baz=12						
632A	**Uvalde**	**12.36**	**359**	⇑P	**Pn**	**23 41 34.5**	**+1.7**
	baz=12						
628A	**Black Gap, Mar**	**12.68**	**347**	⇓P	**Pn**	**23 41 39.1**	**+1.7**
	baz=13						
TXAR	**Lajitas Array**	**12.72**	**344**	Pn	**Pn**	**23 41 39.1**	**+1.1**
TXAR				Lg	Lg	23 45 15.0	
TXAR	**Lajitas Array**	**12.72**	**344**	Pn	**Pn**	**23 41 39.1**	**+1.1**
	0.0nm,0.3s,baz=162,slow=13,SNR=14						
TXAR				Lg	Lg	23 45 15.0	
	baz=145,slow=32,SNR=2.7						
TXAR				LR	LR	23 46 44.5	
	comp=Z,118nm,20.9s,baz=5.0,slow=38						
627A	**Terlingua Ranc**	**12.77**	**345**	⇑P	**Pn**	**23 41 40.0**	**+1.4**
	baz=13						
532A	**Rocksprings**	**12.97**	**359**	⇑P	**Pn**	**23 41 42.4**	**+1.0**
	baz=13						
531A	**Rocksprings**	**13.04**	**357**	⇓P	**Pn**	**23 41 43.2**	**+1.0**
	baz=13						
626A	**Big Bend Ranch**	**13.06**	**342**	⇓P	**Pn**	**23 41 44.5**	**+1.9**
	baz=13						
530A	**J-C Ranch, Com**	**13.08**	**354**	⇓P	**Pn**	**23 41 44.1**	**+1.3**
	baz=13						
529A	**Stev Forest Ra**	**13.18**	**350**	⇑P	**Pn**	**23 41 45.9**	**+1.7**
	baz=13,SNR=12						
528A	**Cox Ranch, San**	**13.32**	**348**	⇓P	**Pn**	**23 41 47.7**	**+1.6**
	baz=13,SNR=9.7						
JCT	**Junction City**	**13.32**	**359**	⇓P	**Pn**	**23 41 47.6**	**+1.5**
	baz=13						
527A	**Woodward Ranch**	**13.48**	**345**	⇑P	**Pn**	**23 41 50.1**	**+1.7**
	baz=14						
526A	**Mary Lane Ranc**	**13.53**	**343**	⇑P	**Pn**	**23 41 50.6**	**+1.6**
	baz=14						
431A	**Sonora**	**13.55**	**357**	⇑P	**Pn**	**23 41 50.7**	**+1.4**
	baz=14						
429A	**Davenport Ranc**	**13.62**	**352**	⇓P	**Pn**	**23 41 51.7**	**+1.5**
	baz=14						
430A	**Baggett Ranch,**	**13.71**	**354**	⇑P	**Pn**	**23 41 52.9**	**+1.5**
	baz=14						
432A	**Menard**	**13.72**	**360**	⇓P	**Pn**	**23 41 52.6**	**+1.1**
	baz=14						
428A	**Kincaid Ranch,**	**13.85**	**349**	⇑P	**Pn**	**23 41 54.5**	**+1.2**
	baz=14,SNR=6.3						
426A	**McDonald Obser**	**14.09**	**344**	⇓P	**Pn**	**23 41 57.8**	**+1.1**
	baz=14						
427A	**Hayter Ranch,**	**14.11**	**347**	⇑P	**Pn**	**23 41 58.5**	**+1.6**
	baz=14						
332A	**Millersview**	**14.22**	**360**	⇓P	**Pn**	**23 41 59.2**	**+0.8**
	baz=14						
330A	**Mertzon**	**14.31**	**355**	⇑P	**Pn**	**23 42 01.5**	**+1.9**
	baz=14,SNR=8.3						
425A	**Indio Mountain**	**14.47**	**341**	⇓P	**Pn**	**23 42 03.6**	**+1.7**
	baz=15						
328A	**Wristen Ranch,**	**14.51**	**349**	⇓P	**Pn**	**23 42 03.3**	**+1.0**
	baz=15						
232A	**Coleman**	**14.73**	**0**	⇑P	**Pn**	**23 42 05.0**	**-0.2**
	baz=15						
231A	**Bronte**	**14.79**	**358**	⇓P	**Pn**	**23 42 06.2**	**+0.2**
	baz=15						
229A	**Bryant Ranch,**	**14.94**	**353**	⇓P	**Pn**	**23 42 07.8**	**-0.2**
	baz=15						
WHTX	**Lake Whitney**	**14.96**	**7**	⇑P	**P**	**23 42 12.1**	**-1.2**
	baz=15,SNR=8.7						
325A	**Bean Ranch, Si**	**15.01**	**342**	⇑P	**Pn**	**23 42 10.3**	**+1.2**
	baz=15,SNR=5.9						
324A	**Moseley Ranch,**	**15.23**	**341**	⇓P	**Pn**	**23 42 13.6**	**+1.6**
	baz=15,SNR=5.5						
226B	**Tecolote Peak,**	**15.47**	**346**	⇓P	**Pn**	**23 42 16.6**	**+1.6**
	baz=16,SNR=9.7						
131A	**Roby**	**15.53**	**358**	⇑P	**Pn**	**23 42 17.9**	**+2.2**
	baz=16,SNR=6.3						
GDL2	**Guadalupe Moun**	**15.63**	**345**	*e*Pn	**Pn**	**23 42 18.1**	**+1.0**
225A	**Deer Hill, Car**	**15.66**	**344**	⇓P	**Pn**	**23 42 18.7**	**+1.0**
	baz=16						
128A	**Castleberry Fa**	**15.67**	**351**	⇓P	**Pn**	**23 42 18.9**	**+1.3**
	baz=16,SNR=11						
JTS	**JuntasAbangare**	**15.80**	**113**	*e*Pn	**Pn**	**23 42 20.3**	**+0.9**
	55nm,1.4s						
224A	**Cornudas Mount**	**15.83**	**341**	⇑P	**Pn**	**23 42 20.9**	**+1.1**
	baz=16,SNR=8.5						
126A	**Clayton Basin,**	**15.98**	**347**	⇑P	**Pn**	**23 42 22.1**	**+0.6**
	baz=16						
RFTA	**Plano**	**16.07**	**9**	*e*Pn	**Pn**	**23 42 18.8**	**-3.9**
125A	**Gardner Draw,**	**16.14**	**345**	⇑P	**Pn**	**23 42 23.8**	**+0.1**
	baz=16						
Z32A	**Haskell**	**16.14**	**1**	⇓P	**Pn**	**23 42 22.4**	**-1.2**
	baz=16,SNR=6.1						
Z31A	**Sharp Cattle R**	**16.16**	**359**	⇓P	**Pn**	**23 42 23.9**	**0.0**
	baz=16,SNR=8.9						
Z30A	**Sanderson Ranc**	**16.18**	**356**	⇑P	**Pn**	**23 42 23.7**	**-0.4**
	baz=16,SNR=7.1						
Z29A	**Hungry Hill Ra**	**16.20**	**354**	⇑P	**Pn**	**23 42 24.3**	**-0.1**
	baz=16,SNR=7.1						
Z28A	**Tucker Farm, M**	**16.31**	**352**	⇑P	**Pn**	**23 42 26.4**	**+0.6**
	baz=16						
320A	**Kipp Ranch, An**	**16.31**	**332**	⇓P	**P**	**23 42 27.8**	**-0.6**
	baz=16						
222A	**Williams Famil**	**16.39**	**337**	⇑P	**Pn**	**23 42 28.1**	**+1.2**
	baz=16						
124A	**Stringfield Ra**	**16.40**	**342**	⇑P	**Pn**	**23 42 28.0**	**+1.0**
	baz=16,SNR=8.3						
Z27A	**Tatum**	**16.46**	**349**	⇓P	**Pn**	**23 42 27.2**	**-0.6**
	baz=17						
Z26A	**Caprock**	**16.57**	**347**	⇑P	**Pn**	**23 42 30.2**	**+1.0**
	baz=17,SNR=5.6						
319A	**Douglas**	**16.69**	**330**	⇑P	**P**	**23 42 33.3**	**+0.7**
	baz=17						
Z25A	**Roswell**	**16.75**	**345**	⇑P	**Pn**	**23 42 31.3**	**0.0**
	baz=17						
Y29A	**Porterfield Fa**	**16.79**	**354**	⇑P	**Pn**	**23 42 31.8**	**-0.1**
	baz=17						
220A	**Playas Peak, P**	**16.79**	**333**	⇑P	**P**	**23 42 34.2**	**+0.4**
	baz=17						
Y31A	**Rekieta Farm,**	**16.80**	**358**	⇓P	**Pn**	**23 42 32.4**	**+0.4**
	baz=17						
Y32A	**R-V Farms, Ver**	**16.84**	**1**	⇑P	**Pn**	**23 42 32.8**	**+0.4**
	baz=17						
Z24A	**Sheeppen Canyo**	**16.96**	**343**	⇑P	**Pn**	**23 42 34.5**	**+0.4**
	baz=17						
Y27A	**Causey**	**17.01**	**350**	⇓P	**Pn**	**23 42 34.5**	**-0.1**
	baz=17						
MSTX	**Muleshoe**	**17.04**	**351**	⇑P	**Pn**	**23 42 34.5**	**-0.4**
	baz=17						
121A	**Cookes Peak, D**	**17.04**	**336**	⇓P	**P**	**23 42 36.2**	**-0.3**
	baz=17						
Z23A	**Rita Site, Whi**	**17.15**	**341**	⇓P	**Pn**	**23 42 36.9**	**+0.4**
	baz=17						
VBMS	**Vicksburg**	**17.18**	**27**	*e*P	**Pn**	**23 42 34.9**	**-1.7**
	27nm,0.8s						
X30A	**Coker Ranch, T**	**17.31**	**357**	⇓P	**Pn**	**23 42 38.6**	**+0.3**
	baz=17,SNR=10						
Y25A	**Mesa, Roswell**	**17.36**	**346**	⇓P	**Pn**	**23 42 39.3**	**+0.4**
	baz=18						
Z22A	**Elephant Butte**	**17.39**	**339**	⇑P	**Pn**	**23 42 40.0**	**+0.6**
	baz=18						
120A	**U Bar Ranch, L**	**17.39**	**334**	⇓P	**P**	**23 42 41.3**	**+0.9**
	baz=18						
Y24A	**Capitan**	**17.55**	**344**	⇓P	**Pn**	**23 42 41.2**	**-0.2**
	baz=18						
WMOK	**Wichita Mounta**	**17.59**	**2**	*e*Pn	**Pn**	**23 42 39.3**	**-2.4**
	33nm,0.6s						
Z21A	**St. Cloud Mine**	**17.68**	**337**	⇓P	**P**	**23 42 45.1**	**+1.4**
	baz=18,SNR=6.9						
Y23A	**Lovelace Mesa,**	**17.72**	**342**	⇑P	**Pn**	**23 42 43.7**	**+0.1**
	baz=18						
X27A	**F and S Farms,**	**17.75**	**351**	⇓P	**Pn**	**23 42 43.0**	**-0.8**
	baz=18						
X26A	**CR and CF Fran**	**17.78**	**349**	⇑P	**Pn**	**23 42 43.9**	**-0.2**
	baz=18						
AMTX	**Amarillo**	**17.81**	**355**	*e*P	**Pn**	**23 42 43.6**	**-0.9**
	12nm,0.8s						
AMTX	**Amarillo**	**17.81**	**355**	⇓P	**Pn**	**23 42 44.3**	**-0.2**
	baz=18						
Y22A	**Socorro**	**18.01**	**340**	⇓P	**Pn**	**23 42 46.5**	**-0.6**
	baz=18						
W31A	**Holland Ranch,**	**18.02**	**359**	⇓P	**Pn**	**23 42 46.5**	**-0.5**
	baz=18						
BNM	**Barren Site**	**18.10**	**341**	*e*Pn	**P**	**23 42 50.2**	**+1.9**
	6.8nm,0.9s						
W27A	**Bowe Ranch, En**	**18.15**	**351**	⇑P	**Pn**	**23 42 48.0**	**-0.7**
	baz=18						
TUC	**Tucson**	**18.19**	**328**	*e*P	**Pn**	**23 42 52.2**	**+3.1**
	1.5nm,0.9s						
MIAR	**Mount Ida**	**18.21**	**16**	*e*Pn	**P**	**23 42 46.1**	**-3.1**
	33nm,1.1s						
LENM	**Lemitar**	**18.22**	**340**	*e*Pn	**P**	**23 42 48.3**	**-1.3**
LPM	**Los Pinos Moun**	**18.25**	**341**	*e*Pn	**P**	**23 42 48.3**	**-1.6**
Y20A	**Horse Springs,**	**18.48**	**337**	⇓P	**Pn**	**23 42 53.6**	**+0.7**
	baz=19						
LAZ	**Ladron**	**18.49**	**340**	*e*P	**Pn**	**23 42 53.4**	**+0.4**
X21A	**Alamocita Cree**	**18.75**	**339**	⇑P	**Pn**	**23 42 57.0**	**+0.9**
	baz=19,SNR=6.6						
W24A	**Lazy 6 Ranch,**	**18.76**	**345**	⇓P	**P**	**23 42 55.8**	**+0.3**
	baz=19,SNR=5.3						
ANMO	**Albuquerque**	**18.79**	**342**	P	**P**	**23 42 56.3**	**+0.5**
ANMO				*e*Pn	**Pn**	**23 42 56.5**	**-0.1**
ANMO	**Albuquerque**	**18.79**	**342**	P	**P**	**23 42 56.3**	**+0.5**
	0.2nm,0.3s,baz=152,slow=12,SNR=8.4						
ANMO				LR	LR	23 51 13.0	
	comp=Z,342nm,18.1s,baz=156,slow=40						
V26A	**Tequesquite Ra**	**18.98**	**350**	⇑P	**P**	**23 42 57.5**	**-0.4**
	baz=19,SNR=8.6						
TUL1	**Tulsa**	**19.05**	**10**	⇓P	**P**	**23 42 58.4**	**-0.1**
	baz=19						
V25A	**Rancho No Teng**	**19.18**	**348**	⇑P	**P**	**23 42 58.9**	**-1.2**
	baz=19						
V24A	**Rampart Ranch,**	**19.22**	**346**	⇓P	**P**	**23 42 59.3**	**-1.3**
	baz=19						
LRAL	**Lakeview Retre**	**19.55**	**33**	*e*P	**P**	**23 43 01.6**	**-2.4**
	27nm,1.4s						
U26A	**Atchley Ranch,**	**19.56**	**350**	⇓P	**P**	**23 43 04.2**	**-0.1**
	baz=20,SNR=6.5						
W20A	**Ramah**	**19.61**	**338**	⇑P	**P**	**23 43 04.9**	**0.0**
	baz=20						
X18A	**Snowflake**	**19.66**	**334**	⇑P	**Pn**	**23 43 08.0**	**+1.1**
	baz=20,SNR=6.5						
V22A	**San Miguel Ran**	**19.82**	**342**	⇓P	**P**	**23 43 06.7**	**-0.5**
	baz=20						
T31A	**Randall Ranch,**	**19.93**	**360**	⇓P	**P**	**23 43 07.6**	**-0.5**
	baz=20						
U23A	**El Rito**	**20.02**	**344**	⇓P	**P**	**23 43 09.1**	**-0.1**
	baz=20						
DWPF	**Disney**	**20.05**	**54**	*e*P	**P**	**23 43 08.6**	**-0.9**
	0.3nm,0.9s						
T28A	**Walsh**	**20.07**	**354**	⇓P	**P**	**23 43 08.6**	**-1.1**
	baz=20,SNR=6.9						
T27A	**Campo**	**20.07**	**353**	⇑P	**P**	**23 43 08.9**	**-0.8**
	baz=20						
113A	**Mohawk Valley,**	**20.14**	**323**	⇑P	Pn	23 43 14.0	+1.5
	baz=20						
V20A	**Brimhall**	**20.21**	**339**	⇑P	**P**	**23 43 11.5**	**+0.1**
	baz=20						
X16A	**Lo Mia Camp, P**	**20.22**	**331**	⇑P	Pn	23 43 13.1	-0.6
	baz=20						
T26A	**Comanche Natio**	**20.30**	**351**	⇑P	**P**	**23 43 11.4**	**-0.9**
	baz=20						
T25A	**Trinidad**	**20.40**	**349**	⇓P	**P**	**23 43 12.7**	**-0.7**
	baz=20						
S31A	**Mullinville**	**20.45**	**0**	⇑P	**P**	**23 43 13.4**	**-0.3**
	baz=21						
T24A	**Torres, Weston**	**20.46**	**348**	⇑P	**P**	**23 43 13.7**	**-0.5**
	baz=21						
S30A	**Montezuma**	**20.48**	**358**	⇓P	**P**	**23 43 13.7**	**-0.5**
	baz=21						
S28A	**Manter**	**20.51**	**355**	⇓P	**P**	**23 43 14.2**	**-0.3**
	baz=21						
U21A	**Nageezi**	**20.52**	**341**	⇑P	**P**	**23 43 14.6**	**-0.2**
	baz=21						
PLAL	**Pickwick Lake**	**20.60**	**28**	*e*P	**P**	**23 43 13.1**	**-2.3**
	11nm,0.6s						
Y14A	**Wickenburg**	**20.61**	**327**	⇑P	Pn	23 43 18.5	+0.4
	baz=21						
S26A	**Kim**	**20.72**	**351**	⇑P	**P**	**23 43 15.9**	**-0.9**
	baz=21						
U20A	**Newcomb**	**20.75**	**339**	⇑P	**P**	**23 43 17.5**	**+0.4**
	baz=21						
T22A	**Edith**	**20.85**	**344**	⇓P	**P**	**23 43 18.3**	**0.0**
	baz=21						
S25A	**Robets Cordova**	**20.91**	**349**	⇑P	**P**	**23 43 18.2**	**-0.8**
	baz=21,SNR=5.1						
GLA	**Glamis**	**20.96**	**322**	*e*P	Pn	23 43 21.5	-0.6
	12nm,0.9s						
GLA	**Glamis**	**20.96**	**322**	⇑P	Pn	23 43 23.3	+1.2
	baz=21						
T21A	**Navajo Lake**	**21.00**	**342**	⇑P	**P**	**23 43 19.6**	**-0.4**
	baz=21						
S24A	**Houchin Ranch,**	**21.04**	**348**	⇓P	**P**	**23 43 20.1**	**-0.4**
	baz=21						
WUAZ	**Wupatki**	**21.11**	**333**	*e*P	**P**	**23 43 20.7**	**-0.3**
	28nm,1.1s						
WUAZ	**Wupatki**	**21.11**	**333**	⇓P	**P**	**23 43 21.9**	**+0.9**
	baz=21						
R30A	**Dighton**	**21.12**	**359**	⇓P	**P**	**23 43 20.1**	**-0.9**
	baz=21						
SDCO	**Great Sand Dun**	**21.20**	**347**	*e*P	**P**	**23 43 22.4**	**+0.2**
	5.2nm,0.9s						
R28A	**Tribune**	**21.25**	**355**	⇓P	**P**	**23 43 21.3**	**-1.2**
	baz=21						
R29A	**Marienthal**	**21.29**	**357**	⇓P	**P**	**23 43 22.4**	**-0.5**
	baz=21						
R27A	**Eads**	**21.29**	**353**	⇓P	**P**	**23 43 22.3**	**-0.6**
	baz=21						
Y12C	**Blythe**	**21.29**	**324**	⇑P	**P**	**23 43 26.1**	**+3.2**
	baz=21						
R25A	**Fountain Ranch**	**21.36**	**350**	⇓P	**P**	**23 43 22.8**	**-0.9**
	baz=22						
R26A	**Arlington**	**21.39**	**352**	⇑P	**P**	**23 43 23.7**	**-0.3**
	baz=22						
UTMT	**University of**	**21.43**	**24**	*e*P	**P**	**23 43 21.2**	**-3.1**
	59nm,0.9s						
SWSC	**Sam W. Stewart**	**21.46**	**320**	⇑P	**P**	**23 43 29.0**	**+4.3**
	baz=22						
MVCO	**Mesa Verde**	**21.50**	**340**	*e*P	**P**	**23 43 25.3**	**-0.1**
	17nm,1.3s						
MVCO	**Mesa Verde**	**21.50**	**340**	⇑P	**P**	**23 43 25.6**	**+0.2**

baz=22
S22A 4UR Ranch, Cre 21.52 344 ⇑P P 23 43 25.7 +0.1
baz=22
R24A Sanders Place, 21.59 348 ⇓P P 23 43 25.5 -0.8
baz=22
CBKS Cedar Bluff 21.64 360 eP P 23 43 26.1 -0.4
23nm,0.9s
WVT Waverly 21.67 27 eP P 23 43 24.0 -2.9
9.1nm,0.8s
R23A Moffat 21.70 347 ⇑P P 23 43 27.5 0.0
baz=22
S21A Coal Bank Pass 21.70 342 ⇑P P 23 43 27.7 +0.2
baz=22
SWET Sewanee 21.81 32 eP P 23 43 25.4 -3.1
13nm,0.8s
MONP Monument Peak 21.82 319 ⇑P P 23 43 33.3 +4.6
baz=22
GOGA Godfrey 21.82 39 eP P 23 43 29.6 +1.1
10nm,1.0s
IRM Iron Mountain 21.95 324 ⇓P P 23 43 33.0 +3.0
baz=22
W13A Hualapai Mount 21.97 327 ⇑P P 23 43 32.9 +2.6
baz=22
S20A Disappointment 22.03 341 ⇑P P 23 43 31.2 +0.2
baz=22
KSU1 Kansas State U 22.09 6 eP P 23 43 29.6 -1.8
14nm,0.8s
U15A North Rim 22.27 332 ⇑P P 23 43 35.1 +1.4
baz=22
R21A Cimarron 22.29 343 ⇑P P 23 43 33.8 0.0
baz=22
PFO Pinyon Flat Ob 22.32 321 eP P 23 43 38.3 +4.2
14nm,1.4s
PFO Pinyon Flat Ob 22.32 321 LR LR 23 52 28.8
comp=Z,164nm,18.6s,baz=140,slow=37
R20A Redvale 22.36 342 ⇑P P 23 43 35.0 +0.4
baz=22
PV01 Paradox Valley 22.37 341 eP P 23 43 34.2 -0.5
S18A Hurst Farm, Bl 22.44 338 ⇑P P 23 43 36.2 +0.7
baz=22
SIUC Southern Illin 22.50 22 eP P 23 43 35.4 -0.4
26nm,1.0s
P27A Ficken Ranch, 22.52 354 ⇑P P 23 43 36.3 +0.1
baz=23
Q22A Crested Butte, 22.59 345 ⇑P P 23 43 36.9 -0.2
baz=23
LDFC Landfair 22.60 325 eP P 23 43 39.3 +2.3
24nm,1.2s
P26A Davis Ranch, A 22.61 353 ⇓P P 23 43 36.3 -0.8
baz=23
GMRC Granite Mounta 22.69 324 ⇑P P 23 43 40.8 +2.9
baz=23
CPCT Cooper Cave 22.71 34 eP P 23 43 36.8 -1.3
PV04 Paradox Valley 22.71 341 eP P 23 43 37.0 -1.3
PV10 Paradox Valley 22.74 341 eP P 23 43 37.2 -1.4
SMCO Snowmass 22.91 345 eP P 23 43 40.5 0.0
13nm,1.1s
SLM Saint Louis 22.99 19 eP P 23 43 38.4 -2.5
27nm,0.4s
Q20A Ridgley Place, 23.05 343 ⇑P P 23 43 41.8 +0.1
baz=23
HEC Hector,Ludlow 23.10 323 ⇑P P 23 43 44.5 +2.3
baz=23
ISCO Idaho Springs 23.21 348 eP P 23 43 42.0 -1.4
8.1nm,1.1s
ISCO Idaho Springs 23.21 348 ⇓P P 23 43 43.0 -0.4
baz=23
TKL Tuckaleechee C 23.27 34 eP P 23 43 40.8 -2.9
TKL pP pP 23 43 50.8 -3.0
TKL Tuckaleechee C 23.27 34 P P 23 43 41.2 -2.5
5.0nm,0.8s,baz=200,slow=12,SNR=7.4
TKL pP pP 23 43 50.8 -3.0
9.0nm,0.8s,baz=204,slow=10,SNR=6.3
TKL LR LR 23 55 16.1
comp=Z,56nm,21.1s,baz=255,slow=43
USIN University of 23.31 25 eP P 23 43 42.6 -1.5
24nm,0.8s
P20A De Beque 23.58 343 ⇑P P 23 43 46.7 -0.3
baz=24
O23A Lake Granby, G 23.66 348 ⇓P P 23 43 47.3 -0.5
baz=24
CCUT Cedar City 23.68 332 eP P 23 43 49.9 +1.9
4.5nm,1.0s
NHSC New Hope 23.71 44 eP P 23 43 47.2 -0.8
66nm,1.0s
O22A Kremmling 23.75 347 ⇑P P 23 43 48.4 -0.3
baz=24
N27A Anderson Farm, 23.76 355 ⇑P P 23 43 48.7 +0.2
baz=24
OLIL Olney 23.81 23 eP P 23 43 50.0 +1.1
14nm,0.8s
OGNE Ogallala 23.86 356 ⇑P P 23 43 49.8 +0.4
baz=24
P19A Cripple Cowboy 23.88 342 ⇑P P 23 43 49.9 +0.1
baz=24
SRU San Rafael 23.90 339 eP P 23 43 50.6 +0.6
10.0nm,0.8s
SRU San Rafael 23.90 339 ⇓P P 23 43 50.9 +1.0
baz=24
ARUT Antelope Range 23.91 332 eP P 23 43 47.0 -3.0
MSU Marysvale 23.99 335 eP P 23 43 52.1 +1.3
MVU Marysvale 24.00 335 eP P 23 43 50.9 0.0
4.8nm,0.8s
TZTN Tazewell 24.06 33 eP P 23 43 50.0 -1.3
13nm,0.9s
WCI Wyandotte Cave 24.10 26 eP P 23 43 47.7 -3.9
17nm,1.0s
O20A White River Ci 24.14 344 ⇓P P 23 43 52.6 +0.4
baz=24
P18A Preston Nutter 24.27 340 ⇓P P 23 43 54.2 +0.8
baz=24,SNR=7.7
TMUT Trail Mountain 24.30 338 eP P 23 43 54.8 +1.0
11nm,0.8s
N23A Red Feather La 24.33 348 ⇓P P 23 43 53.8 -0.2
baz=24
O19A Miners Draw (B 24.53 342 ⇑P P 23 43 56.8 +1.1
baz=25
N21A Black Mountain 24.54 346 ⇑P P 23 43 57.2 +1.3
baz=25,SNR=7.3
PHWY Pilot Hill 24.64 349 eP P 23 43 51.8 -5.0
18nm,1.5s
N20A Spence Gulch, 24.80 344 ⇑P P 23 43 58.8 +0.6
baz=25
BLO Bloomington 24.80 25 eP P 23 43 56.6 -1.4
11nm,0.7s
HDIL Hopedale 25.04 19 eP P 23 43 58.6 -1.4
21nm,0.6s
MPU Maple Canyon 25.09 338 eP P 23 44 01.2 +0.4
7.2nm,0.9s
PKM Peak Mountain 25.26 318 ⇑P P 23 44 07.1 +4.7
baz=25
M21A Separation Pea 25.31 346 ⇓P P 23 44 04.7 +1.9
baz=25,SNR=5.1
DAU Daniels Canyon 25.31 339 eP P 23 44 04.2 +1.3
SCIA State Center 25.34 11 eP P 23 44 01.8 -1.0
23nm,0.9s
R11A Troy Canyon, C 25.36 330 ⇓P P 23 44 05.1 +1.9
baz=25
DUG Dugway 25.69 336 eP P 23 44 07.2 +1.1
7.7nm,0.8s
DUG Dugway 25.69 336 ⇓P P 23 44 09.0 +2.8
baz=26,SNR=7.0
L20A Wamsutter 25.92 345 ⇑P P 23 44 09.0 +0.7
baz=26
BLA Blacksburg 26.26 36 eP P 23 44 10.3 -0.9
20nm,0.8s
K21A Alcova 26.27 347 ⇓P P 23 44 12.5 +1.1
baz=26
L19A Farson 26.27 344 ⇓P P 23 44 12.7 +1.1
baz=26
HWUT Hardware Ranch 26.48 340 eP P 23 44 16.9 +3.4
7.8nm,0.8s
ECSD EROS Data Cent 26.68 5 eP P 23 44 14.3 -0.7
28nm,1.4s
NV11 Mina Array Sit 26.73 326 eP P 23 44 17.4 +1.8
NVAR Mina Array Bea 26.80 326 P P 23 44 17.9 +1.5
NVAR pP pP 23 44 27.0 0.0
NVAR Mina Array Bea 26.80 326 P P 23 44 17.9 +1.5
2.4nm,0.9s,baz=151,slow=8.6,SNR=14
NVAR pP pP 23 44 27.0 0.0
3.7nm,0.8s,baz=139,slow=10,SNR=15
BW06 Boulder Array 26.95 344 eP P 23 44 18.5 +0.9
10nm,1.1s
BW06 Boulder Array 26.95 344 ⇓P P 23 44 18.2 +0.6
baz=27
PDAR Pinedale Array 26.95 344 P P 23 44 17.4 -0.3
PDAR Pinedale Array 26.95 344 P P 23 44 17.4 -0.3
1.8nm,0.8s,baz=145,slow=11,SNR=12
PDAR LR LR 23 56 02.0
comp=Z,511nm,18.1s,baz=168,slow=39
L15A Malad City 27.12 339 ⇑P P 23 44 20.2 +1.2
baz=27
J20A Shoshoni 27.14 346 ⇑P P 23 44 19.8 +0.6
baz=27
ELK Elko 27.14 333 LR LR 23 56 11.2
comp=Z,359nm,18.1s,baz=153,slow=39
ACSO Alum Creek Sta 27.21 29 eP P 23 44 18.2 -1.6
14nm,0.9s
I21A Big Trails, Te 27.41 348 ⇑P P 23 44 21.9 +0.3
baz=28
L14A Malta 27.45 338 ⇓P P 23 44 23.2 +1.2
baz=28
J18A Kendall Valley 27.48 343 ⇑P P 23 44 22.8 +0.3
baz=28
I20A Worland 27.71 347 ⇓P P 23 44 25.3 +0.9
baz=28
I19A Meeteetse 27.99 346 ⇓P P 23 44 27.5 +0.5
baz=28
TPAW Teton Pass 28.00 342 eP P 23 44 25.7 -1.4
12nm,1.1s
LOHW Long Hollow 28.02 343 eP P 23 44 27.8 +0.7
3.6nm,0.8s
JSRW J. Sargeant Re 28.07 39 eP P 23 44 26.4 -1.0
H21A Big Horn, Sher 28.14 349 ⇑P P 23 44 28.7 +0.5
baz=28
MOOW Moose Ponds 28.18 343 eP P 23 44 29.3 +0.7
3.3nm,0.9s
IMW Indian Meadow 28.37 343 eP P 23 44 30.9 +0.4
3.2nm,0.8s
H18A Shoshone NF, C 28.76 345 ⇑P P 23 44 34.2 +0.4
baz=29
F23A Volborg 28.94 352 ⇓P P 23 44 35.5 +0.3
baz=29
HLID Hailey 29.20 338 ⇓P P 23 44 39.2 +1.5
baz=29
MFID Camas Ranch 29.61 336 eP P 23 44 42.8 +1.6
3.8nm,1.0s
F19A Roth Farm, Mol 29.70 347 ⇓P P 23 44 42.7 +0.7
baz=30
H14A Leadore 29.77 340 ⇑P P 23 44 43.6 +0.9
baz=30
MCMT McKenzie Canyo 29.79 341 eP P 23 44 44.2 +1.2
F18A Big Timber 29.93 346 ⇓P P 23 44 44.6 +0.6
baz=30
SSPA Standing Stone 30.07 34 eP P 23 44 45.0 -0.2
8.8nm,1.1s
COWI Conover 30.22 15 eP P 23 44 45.4 -1.1
E19A Rath Farm, Rou 30.25 347 ⇓P P 23 44 46.6 -0.2
baz=30
G13A Cobalt 30.47 339 ⇑P P 23 44 49.9 +1.1
baz=31
LRM Limekiln Ridge 30.57 342 eP P 23 44 50.2 +0.4
E18A Harlowton 30.59 346 ⇓P P 23 44 51.0 +1.1
baz=31
F15A Butte 30.60 342 ⇑P P 23 44 51.1 +1.1
baz=31
MDND Maddock 30.67 0 ⇑P P 23 44 51.6 +1.2
baz=31
D20A Manuel Ranch, 30.72 349 ⇑P P 23 44 51.8 +0.8
baz=31
E17A Martinsdale 30.72 345 ⇓P P 23 44 51.5 +0.4
baz=31
G12A Big Creek, Yel 30.88 338 ⇓P P 23 44 53.3 +0.8
baz=31
D19A Cripps Ranch, 30.94 348 ⇑P P 23 44 53.5 +0.6
baz=31
C23A Lambert 30.96 353 ⇓P P 23 44 53.8 +0.8
baz=31
E16A East Helena 31.00 344 ⇓P P 23 44 54.3 +0.7
baz=31
F13A Darby 31.12 340 ⇑P P 23 44 55.2 +0.7
baz=31
E15A Deer Lodge 31.17 343 ⇑P P 23 44 56.1 +1.1
baz=31
HRY Holter Researc 31.21 344 eP P 23 44 54.0 -1.3
D17A Six Diamond Ra 31.33 345 ⇓P P 23 44 57.1 +0.8
baz=31
F12A Elk City 31.40 339 ⇓P P 23 44 58.2 +1.2
baz=32
E14A Clinton 31.41 341 ⇑P P 23 44 57.8 +0.6
baz=32
C19A Slack Wire Ran 31.52 348 ⇓P P 23 44 58.6 +0.6
baz=32
YBH Yreka Blue Hor 31.52 326 LR LR 23 58 53.9
comp=Z,84nm,21.9s,baz=71,slow=39
CELP Cerrillos 31.53 83 eP P 23 45 01.4 +3.1
B22A Reddig Ranch S 31.55 352 ⇑P P 23 44 59.2 +1.0
baz=32
B23A Brockton 31.59 353 ⇑P P 23 44 59.3 +0.7
baz=32
CHMT Chamberlain Mo 31.79 342 eP P 23 45 01.1 +0.5
C17A Wharram Farm, 31.80 346 ⇑P P 23 45 01.1 +0.7
baz=32
SJG San Juan 31.93 83 LR LR 23 56 38.5
comp=Z,76nm,20.4s,baz=271,slow=34
ATAH Atahualpa 31.96 137 P P 23 45 05.7 +3.1
ATAH Atahualpa 31.96 137 P P 23 45 05.7 +3.1
10nm,0.8s,baz=15,slow=5.0,SNR=5.9
ATAH LR LR 23 55 07.3
comp=Z,106nm,18.9s,baz=202,slow=31
SLMT Seeley Lake 32.16 342 eP P 23 45 04.4 +0.7
C16A Fuhringer Ranc 32.19 345 ⇑P P 23 45 04.6 +0.6
baz=32
D13A Huson 32.32 341 ⇓P P 23 45 05.2 +0.2
baz=32
SWMT Swartz Lake 32.55 342 eP P 23 45 07.1 0.0
D12A Red Ives Fores 32.57 340 ⇑P P 23 45 07.3 +0.1
baz=33
A19A Klindworth Far 32.60 349 ⇑P P 23 45 07.1 -0.3
baz=33
C14A Swan Lake 32.71 342 ⇑P P 23 45 09.1 +0.7
baz=33
JTMT Jette 32.85 342 eP P 23 45 09.9 +0.2
YBMT Yellow Bay 32.87 342 eP P 23 45 09.3 -0.6
A17A Triple J Farms 33.01 347 ⇑P P 23 45 11.7 +0.6
baz=33
B14A Marquette Ranc 33.11 343 ⇑P P 23 45 12.8 +0.8
baz=33
ULM Lac du Bonnet 33.21 4 eP P 23 45 12.2 -0.5
7.6nm,1.1s
ULM Lac du Bonnet 33.21 4 LR LR 00 01 13.7
comp=Z,91nm,19.5s,baz=29,slow=41
B13A Whitefish 33.46 342 ⇑P P 23 45 16.3 +1.3
baz=34
A14A Double T Ranch 33.71 344 ⇑P P 23 45 18.7 +1.5
baz=34
NEW Newport 34.21 339 LR LR 00 01 13.4
comp=Z,94nm,19.1s,baz=96,slow=40
FFC Flin Flon 37.60 358 eP P 23 45 49.6 -0.7
12nm,1.4s
SCHQ Schefferville 45.31 26 P P 23 46 51.9 -1.7
SCHQ pP pP 23 47 03.4 -1.2
SCHQ Schefferville 45.31 26 P P 23 46 51.9 -1.7
3.2nm,0.6s,baz=241,slow=14,SNR=9.5
SCHQ pP pP 23 47 03.4 -1.2
2.2nm,0.4s,baz=227,slow=6.4,SNR=2.4
SCHQ LR LR 00 07 01.9
comp=Z,70nm,20.4s,baz=338,slow=38
LPAZ La Paz 45.46 135 P P 23 46 56.3 +0.5
LPAZ La Paz 45.46 135 P P 23 46 56.3 +0.5
1.9nm,0.7s,baz=326,slow=7.1,SNR=9.2
LPAZ LR LR 00 03 34.6
comp=Z,63nm,21.8s,baz=216,slow=33
YKA Yellowknife Ar 46.55 351 P P 23 47 02.0 -1.1
YKA Yellowknife Ar 46.55 351 P P 23 47 02.0 -1.1
1.9nm,0.7s,baz=157,slow=7.4,SNR=31
DLBC Dease Lake 46.96 339 eP P 23 47 05.0 -1.6
DLBC Dease Lake 46.96 339 P P 23 47 05.0 -1.6
2.6nm,0.8s,baz=169,slow=8.8,SNR=3.1
SIV San Ignacio 50.28 129 P P 23 47 31.8 -0.8
SIV San Ignacio 50.28 129 P P 23 47 31.8 -0.8
0.7nm,0.6s,baz=306,slow=7.3,SNR=4.1
FRB Frobisher Bay 51.26 17 P P 23 47 37.8 -1.4
FRB Frobisher Bay 51.26 17 P P 23 47 37.8 -1.4
1.8nm,0.7s,baz=238,slow=10,SNR=9.6
RKT Rikitea 52.82 222 eT T 00 44 14.4
13nm,0.2s
HKL Haleakala 53.45 283 eP P 23 48 03.9 +7.2
BMRM Bremner River 54.18 335 eP P 23 48 04.0 +3.0
14nm,1.2s
EGAK Eagle 55.19 340 eP P 23 48 11.1 +3.0
6.0nm,1.1s
INK Inuvik 55.49 345 P P 23 48 09.6 -0.7
INK pP pP 23 48 20.9 -0.6
INK Inuvik 55.49 345 P P 23 48 09.6 -0.7
2.8nm,0.7s,baz=121,slow=7.4,SNR=14
INK pP pP 23 48 20.9 -0.6
5.1nm,0.9s,baz=134,slow=7.9,SNR=10
DOT Dot Lake 55.50 338 eP P 23 48 14.0 +3.5
9.6nm,1.1s
PAX Paxson 55.64 337 eP P 23 48 15.0 +3.5
5.9nm,1.0s
SML Sawmill 56.15 335 eP P 23 48 20.8 +5.6
32nm,2.8s
CFAA Coronel Fontan 57.05 148 P P 23 48 22.6 +0.8
CFAA pP pP 23 48 33.8 +0.7
CFAA Coronel Fontan 57.05 148 P P 23 48 22.6 +0.8
0.7nm,0.9s,baz=328,slow=5.5,SNR=7.2
CFAA pP pP 23 48 33.8 +0.7
0.4nm,0.9s,baz=354,slow=3.1,SNR=2.2
PMOR Pomariorio Ree 57.29 239 eT T 00 49 40.2
5.0nm,0.2s
RSO Redoubt South 57.43 332 eP P 23 48 24.8 +0.4
SPU Mount Spurr 57.43 333 eP P 23 48 24.8 +0.6
TRF Thorofare Moun 57.75 336 eP P 23 48 26.6 0.0
11nm,1.0s
PPT2 Papeete2 60.03 237 eLR LR 00 06 16.5
101nm,25.5s
BDFB Brasilia 60.43 120 P P 23 48 46.0 +0.2
BDFB Brasilia 60.43 120 P P 23 48 46.0 +0.2
4.9nm,0.8s,baz=301,slow=1.3,SNR=7.5
PLCA Paso Flores 63.57 156 P P 23 49 07.0 +0.6
PLCA pP pP 23 49 17.8 0.0
PLCA Paso Flores 63.57 156 P P 23 49 07.0 +0.6
1.8nm,1.0s,baz=323,slow=13,SNR=3.5
PLCA pP pP 23 49 17.8 0.0
1.2nm,0.8s,baz=277,slow=8.4,SNR=2.1
PLCA LR LR 00 10 31.7
comp=Z,90nm,21.0s,baz=10,slow=30
SUMG Summit 65.33 17 eP P 23 49 17.6 -0.3
8.9nm,0.9s
SUMG Summit 65.33 17 i P pP 23 49 28.6 -0.7
8.5nm,0.8s
DAG Dannmarks Havn 71.41 14 i P pP 23 50 13.6 +6.7
3.9nm,0.8s
PETK Petropavlovsk- 83.86 324 P P 23 51 05.4 +0.2
PETK Petropavlovsk- 83.86 324 P P 23 51 05.4 +0.2
2.3nm,0.8s,baz=108,slow=9.3,SNR=4.2
ARCES ARCESS Array B 85.42 17 P P 23 51 16.4 +3.6
ARCES ARCESS Array B 85.42 17 P P 23 51 16.4 +3.6
1.1nm,0.6s,baz=292,slow=2.8,SNR=5.8
GRFO Grafenberg 89.95 37 eP P 23 51 39.4 +4.5
22nm,1.8s
DBIC Dimbokro 92.63 82 LR LR 00 31 05.8
comp=Z,47nm,19.6s,baz=237,slow=34
DZM Mont Dzumac 99.75 250 eLR LR 00 25 31.1
66nm,22.7s
STKA Stephens Creek 123.01 243 PKP PKPdf 23 57 31.9 -0.4
STKA Stephens Creek 123.01 243 PKP PKPdf 23 57 31.9 -0.4
1.4nm,0.7s,baz=186,slow=3.3,SNR=5.1
WRA Warramunga Arr 128.90 258 PKP PKPdf 23 57 43.9 -0.1
WRA pPKP pPKPdf 23 57 55.6 -0.5
WRA Warramunga Arr 128.90 258 PKP PKPdf 23 57 43.9 -0.1
2.0nm,0.7s,baz=78,slow=2.3,SNR=10
WRA pPKP pPKPdf 23 57 55.6 -0.5
1.6nm,0.8s,baz=77,slow=2.2,SNR=3.4
ASAR Alice Springs 129.60 253 PKP PKPdf 23 57 45.2 0.0
ASAR pPKP pPKPdf 23 57 56.5 -0.9
ASAR Alice Springs 129.60 253 PKP PKPdf 23 57 45.2 0.0
1.1nm,0.8s,baz=143,slow=1.8,SNR=9.6
ASAR pPKP pPKPdf 23 57 56.5 -0.9
0.9nm,0.8s,baz=107,slow=2.3,SNR=5.3
HYB Hyderabad 145.66 3 i PKP PKPdf 23 58 13.0 -1.8

MEX 01 23:54:28.7±0.4, 16°.94N×100°.11W, h7km±4km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.18	305	eP			Pg	23 54 32.1	-0.4
CAIG				i S			Sg	23 54 35.0	0.0
ACX	Acapulco	0.25	107	i P			Pg	23 54 32.6	-1.1
ACX				i S			Sg	23 54 35.0	-2.1
ARIG	Puente Sto Nin	1.35	350	eP			Pn	23 54 50.3	-3.7
ARIG				i S			Sb	23 55 06.9	-5.1
ZIIG	Zihuatanejo	1.46	297	eP			Pn	23 54 52.1	-3.4
ZIIG				i S			Sn	23 55 09.4	-5.4
PNIG	Pinotepa	1.98	106	eP			Pn	23 54 59.3	-3.4
PNIG				eS			Sn	23 55 23.3	-4.5
YAIG	Yautepec	2.15	27	eP			Pn	23 55 02.8	-2.5
YAIG				eS			Sn	23 55 28.5	-3.8
UTMO	Huajuapan	2.37	68	eP			Pn	23 55 05.5	-2.9
UTMO				eS			Sn	23 55 34.4	-3.6
PPM	Popocatepetl	2.54	33	eP			Pn	23 55 08.6	-2.4
PPM				eS			Sn	23 55 37.8	-4.9

IDC 02 00:20:48.6±1.5, 5°.30N×126°.46E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.5/24, mbtmp3.5/6, Error ellipse: s-maj=157.8km s-min=19.3km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.25	163	P			P	00 26 24.8	-0.9
ASAR	Alice Springs	29.69	166	P			P	00 26 57.6	+1.2
SONM	Songino Array	45.74	341	P			P	00 29 12.5	+0.7
MKAR	Makanchi Array	56.12	325	P			P	00 30 30.0	0.0
KURBB	Kurchatov Arra	60.28	327	P			P	00 30 58.7	-0.3
BVAR	Borovoye Array	65.87	327	P			P	00 31 35.2	-0.9

CSEM ***02*** *00:25:55.9±0.3, 39°.89N×41°.89E, h10km, MD3.0, Error ellipse: s-maj=6.9km s-min=5.4km az=19.0*
DDA ***02*** *00:25:56.1, 39°.89N×41°.90E, h7km, MD3.0*
ISK ***02*** *00:25:56.2, 40°.05N×41°.92E, h9km, MD2.8*
ISCJB ***02*** *00:25:56.9±0.6, 39°.88N±0°.03×41°.90E±0°.04, h12km±4km, Error ellipse: s-maj=5.0km s-min=4.6km az=18.0*

ISC 02 00:25:55.8±1.0, 39°.90N±0°.03×41°.95E±0°.03, h14km±7km, n26, σ0°92/43, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOMI	Horasan	0.15	348	i P			Pb	00 26 00.4	-0.1
HOMI				i S			Sg	00 26 02.7	+0.1
ERZM	Erzurum	0.45	271	i P			Pg	00 26 04.7	-0.1
ERZM				i S			Sg	00 26 10.9	+0.1
ERZM	Erzurum	0.45	271	i P			Pg	00 26 04.7	-0.1
ERZM				i S			Sg	00 26 10.9	+0.1
EZM	Erzurum	0.45	271	ePG			Pb	00 26 05.3	-0.3
EZM				eSG			Sb	00 26 12.3	0.0
VRTB	Varto-Mus	0.83	207	ePG			Pn	00 26 15.3	+2.1
VRTB	Varto-Mus	0.83	207	ePg			Pn	00 26 15.3	+2.1
TUTA	Tutak	0.83	126	eP			Pg	00 26 11.7	-0.3
TUTA				eS			Sn	00 26 25.5	0.0
TUTA	Tutak	0.83	126	eP			Pg	00 26 11.7	-0.3
TUTA				eS			Sn	00 26 25.5	0.0
DDEM	Demirkent	1.00	352	i P			Pn	00 26 15.2	-0.3
DDEM				i S			Sn	00 26 30.9	+1.3
DDEM	Demirkent	1.00	352	i P			Pn	00 26 15.2	-0.3
DDEM				i S			Sn	00 26 30.9	+1.3
KOPT	Kop Dagi	1.12	277	eP			Pg	00 26 17.3	-0.1
KOPT				eS			Sg	00 26 32.0	-0.1
KOPT	Kop Dagi	1.12	277	eP			Pg	00 26 17.3	-0.1
KOPT				eS			Sg	00 26 32.0	-0.1
BNGL	BINGOL	1.13	213	eP			Pb	00 26 12.5	-4.7
BNGL				eS			Sb	00 26 28.5	-3.3
DAGI	Agillar	1.18	359	i P			Pg	00 26 18.4	-0.1
DAGI				i S			Sg	00 26 35.6	+1.7
ARTV	Artvin	1.29	359	i P			Pg	00 26 20.5	0.0
ARTV				i S			Sg	00 26 38.5	+1.2
ARTV	Artvin	1.29	359	i P			Pg	00 26 20.5	0.0
ARTV				i S			Sg	00 26 38.5	+1.2
BNGB	Bing¶ll	1.33	228	ePN			Pg	00 26 22.3	+0.8
BAYT	Ayd¯–ntepe-Bay	1.47	290	ePN			Pb	00 26 22.4	-0.6
BAYT				eSN			Sb	00 26 41.9	+0.3
BAYT	Ayd¯–ntepe-Bay	1.47	290	ePn			Pb	00 26 22.4	-0.6
BAYT				eSn			Sb	00 26 41.9	+0.3
PZAR	Pazar-Rize	1.51	328	ePN			Pn	00 26 22.1	-0.2
PZAR				eSN			Sn	00 26 41.5	-0.3
PZAR	Pazar-Rize	1.51	328	ePn			Pn	00 26 22.1	-0.2
PZAR				eSn			Sn	00 26 41.5	-0.3
BINT	Bingol	1.52	228	ePn			Pn	00 26 22.3	-0.4

BCA	**Borcka**	**1.56**	**351**	*e*PN	**Pn**	**00 26 22.4**	**-0.8**
BCA	**Borcka**	**1.56**	**351**	*e*Pn	**Pn**	**00 26 22.4**	**-0.8**
CLDR	**Caldiran**	**1.70**	**116**	*e*PN	**Pg**	**00 26 28.3**	**-0.1**
CLDR	**Caldiran**	**1.70**	**116**	*e*Pn	**Pg**	**00 26 28.3**	**-0.1**

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*ISCJB **02** 00:48:40.3±0.4, 37.°10N±0.°02×2.°48W±0.°02, $h5^{km}\pm2^{km}$, Error ellipse: s-maj=3.5km s-min=2.3km az=167.8*

*MDD **02** 00:48:41.9±0.3, 36.°90N×2.°31W, $h11^{km}$, mbLg3.0/42, Error ellipse: s-maj=4.4km s-min=1.9km az=163.0, PRXIMO*

MDD EMS: III INTENSIDAD MAXIMA.

*LDG **02** 00:48:41.8±0.1, 36.°93N×2.°33W, $h2^{km}$, Ml3.3/4, Error ellipse: s-maj=2.9km s-min=1.8km az=153.0*

*CSEM **02** 00:48:41.5±0.2, 36.°98N×2.°37W, $h10^{km}$, ML3.6/24, Error ellipse: s-maj=4.1km s-min=2.3km az=154.0*

*SFS **02** 00:48:42.0, 36.°93N×2.°32W, $h11^{km}$, ML3.2*

*INMG **02** 00:48:42.2±1.5, 36.°94N×2.°35W, $h10^{km}\pm2^{km}$, ML3.0, Error ellipse: s-maj=3.1km s-min=2.0km az=155.0*

ISC 02 00:48:41.0±0.8**, 36.°96N**±0.°03×**2.°32W**±0.°02**, $h14^{km}\pm4^{km}$, n169,** $\sigma 1^s 47$/275**, 5C-4D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENIJ	**Nijar**	**0.09**	**82**	⇓Pg	**Pb**	**00 48 44.6**	**+0.5**
	347nm,0.2s,SNR=18						
ENIJ	**Nijar**	**0.09**	**82**	Pg	**Pb**	**00 48 44.6**	**+0.5**
	347nm,0.2s,SNR=18						
EBER	**Berja**	**0.46**	**262**	⇑Pg	**Pg**	**00 48 50.3**	**+0.1**
	337nm,0.1s,SNR=18						
EBER				Lg	Lg	00 48 56.5	
	1µm,0.2s,SNR=5.0						
EBER	**Berja**	**0.46**	**262**	Pg	**Pg**	**00 48 50.3**	**+0.1**
	337nm,0.1s,SNR=18						
EBER				Lg	Lg	00 48 56.5	
	1µm,0.2s,SNR=5.0						
EHUE	**Huescar**	**0.88**	**346**	⇓Pg	**Pb**	**00 48 57.2**	**-0.9**
	6.3nm,0.2s,SNR=18						
EHUE				Lg	Lg	00 49 09.4	
	95nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**0.88**	**346**	Pg	**Pb**	**00 48 57.2**	**-0.9**
	6.3nm,0.2s,SNR=18						
EHUE				Lg	Lg	00 49 09.4	
	95nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**0.93**	**286**	⇓Pg	**Pb**	**00 48 58.3**	**-0.6**
	56nm,0.1s,SNR=18						
EQUE				Lg	Lg	00 49 08.7	
	249nm,0.3s,SNR=12						
EQUE	**Quentar**	**0.93**	**286**	Pg	**Pb**	**00 48 58.3**	**-0.6**
	56nm,0.1s,SNR=18						
EQUE				Lg	Lg	00 49 08.7	
	249nm,0.3s,SNR=12						
EGUA	**Guajares**	**1.00**	**263**	⇑Pn	**Pb**	**00 49 00.1**	**-0.1**
	106nm,0.3s,SNR=18						
EGUA				Pg	**Pn**	**00 49 01.4**	**+0.7**
	431nm,0.3s,SNR=7.9						
EGUA				Lg	Lg	00 49 16.8	
	SNR=4.0						
EGUA	**Guajares**	**1.00**	**263**	Pn	**Pb**	**00 49 00.1**	**-0.1**
	106nm,0.3s,SNR=18						
EQES	**Quesada**	**1.03**	**325**	⇓Pn	**Pb**	**00 49 00.5**	**-0.2**
	74nm,0.3s,SNR=270						
EQES				Pg	**Pn**	**00 49 02.1**	**+0.9**
	60nm,0.1s,SNR=7.9						
EQES				Lg	Lg	00 49 17.2	
	64nm,0.2s,SNR=9.5						
EQES	**Quesada**	**1.03**	**325**	Pn	**Pb**	**00 49 00.5**	**-0.2**
	74nm,0.3s,SNR=270						
CART	**Cartagena**	**1.23**	**59**	Pn	Pn	00 49 02.4	-1.3
CART				Sn	**Sb**	**00 49 17.8**	**-1.8**
CART	**Cartagena**	**1.23**	**59**	*e*P	Pn	00 49 02.4	-1.3
CART				*e*S	**Sb**	**00 49 17.8**	**-1.8**
EMUR	**La Murta**	**1.23**	**44**	⇑Pn	**Pn**	**00 49 03.7**	**-0.2**
	6.5nm,0.2s,SNR=18						
EMUR				Pg	**Pb**	**00 49 05.4**	**+1.4**
	28nm,0.4s,SNR=11						
EMUR				Lg	Lg	00 49 21.5	
	169nm,0.4s,SNR=5.0						
EMUR	**La Murta**	**1.23**	**44**	Pn	**Pn**	**00 49 03.7**	**-0.2**
	6.5nm,0.2s,SNR=18						
ELUQ	**Luque**	**1.66**	**292**	Pn	**Pb**	**00 49 11.9**	**+0.4**
	3.2nm,0.1s,SNR=7.9						
ELUQ				Pg	**Pg**	**00 49 13.8**	**+0.8**
	84nm,0.2s,SNR=7.9						
ELUQ				Lg	Lg	00 49 37.5	
	101nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**1.66**	**292**	Pn	**Pb**	**00 49 11.9**	**+0.4**
	3.2nm,0.1s,SNR=7.9						
EBAN	**Banos Encina**	**1.67**	**316**	Pn	**Pn**	**00 49 11.4**	**+1.5**
	4.3nm,0.2s,SNR=425						
EBAN				Pg	**Pb**	**00 49 12.2**	**+0.6**
	284nm,0.2s,SNR=7.9						
EBAN				Lg	Lg	00 49 34.3	
	163nm,0.2s,SNR=8.8						
EBAN	**Banos Encina**	**1.67**	**316**	Pn	**Pn**	**00 49 11.4**	**+1.5**
	4.3nm,0.2s,SNR=425						
EVIA	**Vianos**	**1.68**	**355**	Pn	**Pn**	**00 49 11.8**	**+1.7**
	2.4nm,0.2s,SNR=7.9						
EVIA				Pg	**Pb**	**00 49 13.1**	**+1.3**
	39nm,0.2s,SNR=114						
EVIA				Sn	**Sb**	**00 49 33.7**	**+0.8**
	SNR=7.9						
EVIA	**Vianos**	**1.68**	**355**	Pn	**Pn**	**00 49 11.8**	**+1.7**
	2.4nm,0.2s,SNR=7.9						
EMAL	**Malaga-Limoner**	**1.70**	**264**	Pn	**Pn**	**00 49 10.3**	**+0.1**
EMAL				Sn	**Sn**	**00 49 28.3**	**-3.5**
EMAL	**Malaga-Limoner**	**1.70**	**264**	*e*P	**Pn**	**00 49 10.4**	**+0.1**
EMAL				*e*S	**Sn**	**00 49 28.3**	**-3.5**
EMLI	**Melilla**	**1.73**	**197**	Sn	**Sn**	**00 49 32.0**	**-0.5**
	83nm,0.1s,SNR=7.9						
EMEL	**Melilla**	**1.73**	**197**	Pn	Pn	00 49 09.1	-1.6
	31nm,0.1s,SNR=4.0						
EMEL				Sn	**Sn**	**00 49 32.0**	**-0.6**
	83nm,0.1s,SNR=7.9						
MELI	**Melilla**	**1.73**	**197**	Sn	**Sn**	**00 49 31.3**	**-1.3**
	42nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**1.79**	**20**	⇑Pn	**Pn**	**00 49 12.3**	**+0.7**
	15nm,0.1s,SNR=18						
ETOB				Pg	**Pb**	**00 49 15.4**	**+1.8**
	44nm,0.2s,SNR=10						
ETOB				Sn	**Sn**	**00 49 35.4**	**+1.3**
	109nm,0.4s,SNR=5.0						
ETOB	**Tobarra**	**1.79**	**20**	Pn	**Pn**	**00 49 12.3**	**+0.7**
	15nm,0.1s,SNR=18						
EMIJ	**Mijas**	**2.01**	**259**	⇑Pn	**Pn**	**00 49 13.7**	**-0.8**
	3.5nm,0.1s,SNR=18						
EMIJ				Pg	**Pb**	**00 49 17.7**	**+0.4**
	7.4nm,0.1s,SNR=7.9						
EMIJ				Sn	**Sn**	**00 49 39.5**	**+0.1**
	28nm,0.3s,SNR=5.0						
EMIJ	**Mijas**	**2.01**	**259**	Pn	**Pn**	**00 49 13.7**	**-0.8**
	3.5nm,0.1s,SNR=18						
EADA	**Adamuz**	**2.16**	**305**	Pn	**Pn**	**00 49 17.9**	**+1.3**
	1.6nm,0.1s,SNR=38						
EADA				Pg	**Pb**	**00 49 20.9**	**+1.0**
	68nm,0.3s,SNR=7.9						
EADA				Lg	Lg	00 49 48.5	
	145nm,0.4s,SNR=5.0						
EADA	**Adamuz**	**2.16**	**305**	Pn	**Pn**	**00 49 17.9**	**+1.3**
	1.6nm,0.1s,SNR=38						
EBEN	**Beniarda**	**2.41**	**43**	Pn	**Pn**	**00 49 19.3**	**-0.7**
	1.4nm,0.2s,SNR=14						
EBEN				Pg	**Pb**	**00 49 24.6**	**+0.5**
	11nm,0.4s,SNR=18						
EBEN	**Beniarda**	**2.41**	**43**	Pn	**Pn**	**00 49 19.3**	**-0.7**
	1.4nm,0.2s,SNR=14						
LIJA	**Lijar**	**2.47**	**270**	Pg	**Pb**	**00 49 25.0**	**-0.2**
LIJA				Lg	Lg	00 50 00.0	
LIJA	**Lijar**	**2.47**	**270**	*e*P	**Pb**	**00 49 25.0**	**-0.2**
LIJA				Lg	Lg	00 50 00.0	
OKGL	**Djebel Kef Gue**	**2.56**	**110**	Pn	**Pn**	**00 49 23.6**	**+1.5**
	20nm,0.2s,SNR=7.9						
OKGL				Sn	**Sn**	**00 49 51.5**	**-1.5**
	98nm,0.3s,SNR=7.9						
OKGL	**Djebel Kef Gue**	**2.56**	**110**	Pn	**Pn**	**00 49 23.6**	**+1.5**
	20nm,0.2s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.58**	**260**	Pn	**Pn**	**00 49 22.0**	**-0.3**
	1.0nm,0.2s,SNR=7.9						
EJIF				Pg	**Pb**	**00 49 28.7**	**+1.7**
	6.9nm,0.4s,SNR=7.9						
EJIF	**Jimena Fronter**	**2.58**	**260**	Pn	**Pn**	**00 49 22.0**	**-0.3**
	1.0nm,0.2s,SNR=7.9						
ECEU	**Ceuta**	**2.68**	**248**	Pn	**Pn**	**00 49 24.4**	**+0.6**
	4.7nm,0.2s,SNR=6.2						
ECEU				Pg	**Pb**	**00 49 30.7**	**+2.0**
	6.2nm,0.1s,SNR=7.9						
ECEU				Sn	**Sn**	**00 49 54.0**	**-2.0**
	2.4nm,0.1s,SNR=6.7						
ECEU	**Ceuta**	**2.68**	**248**	Pn	**Pn**	**00 49 24.4**	**+0.6**
	4.7nm,0.2s,SNR=6.2						
ESPR	**Espera**	**2.83**	**269**	Pn	Pn	00 49 29.7	+3.9
	1.6nm,0.2s,SNR=7.3						
ESPR				Pg	**Pb**	**00 49 33.7**	**+2.3**
	1.5nm,0.2s,SNR=4.0						
ESPR				Lg	Lg	00 50 12.3	
	23nm,0.3s,SNR=4.0						
ECHE	**Chera**	**2.83**	**22**	Pg	Pb	00 49 35.0	+3.6
	25nm,0.3s,SNR=5.1						
ECHE				Lg	Lg	00 50 11.8	
	20nm,0.4s,SNR=7.9						
ECHE	**Chera**	**2.83**	**22**	Pg	Pb	00 49 35.0	+3.6
	25nm,0.3s,SNR=5.1						
ECHE				Lg	Lg	00 50 11.8	
	20nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**3.00**	**335**	Pn	**Pn**	**00 49 28.8**	**+0.6**
	2.0nm,0.1s,baz=157,slow=12,SNR=25						
ESDC				Pg	**Pb**	**00 49 35.6**	**+1.3**
	16nm,0.2s,baz=156,slow=17,SNR=34						
ESDC				Sn	**Sn**	**00 50 03.5**	**-0.5**
	13nm,0.2s,baz=152,slow=23,SNR=9.1						
ESDC				Lg	Lg	00 50 16.4	
	56nm,0.4s,baz=149,slow=30,SNR=7.9						
ESDC	**Sonseca Array**	**3.00**	**335**	Pn	**Pn**	**00 49 28.8**	**+0.6**
	2.0nm,0.1s,slow=12,SNR=25						
ESDC				Sn	**Sn**	**00 50 03.5**	**-0.5**
	13nm,0.2s,slow=23,SNR=9.1						
ESDC				Lg	Lg	00 50 16.4	
	56nm,0.4s,SNR=7.9						
EIBI	**Ibiza**	**3.56**	**53**	Pn	**Pn**	**00 49 36.1**	**+0.3**
	5.9nm,0.2s,SNR=21						
EIBI				Sn	**Sn**	**00 50 15.9**	**-1.7**
	6.2nm,0.2s,SNR=6.6						
EIBI	**Ibiza**	**3.56**	**53**	Pn	**Pn**	**00 49 36.1**	**+0.3**
	5.9nm,0.2s,SNR=21						
EMIN	**Mina Concepcio**	**3.56**	**284**	Pn	**Pn**	**00 49 35.8**	**0.0**
	1.5nm,0.1s,SNR=30						
EMIN				Pg	**Pg**	**00 49 48.8**	**-0.4**
	3.6nm,0.2s,SNR=4.0						
EMIN				Sn	**Sn**	**00 50 17.2**	**-0.5**
	3.6nm,0.2s,SNR=6.2						
EMIN				Lg	Lg	00 50 36.2	
	42nm,0.7s,SNR=5.0						
EMIN	**Mina Concepcio**	**3.56**	**284**	Pn	**Pn**	**00 49 35.8**	**0.0**
	1.5nm,0.1s,SNR=30						
EMOS	**Mosqueruela**	**3.69**	**22**	Pn	**Pn**	**00 49 39.6**	**+1.8**
	1.0nm,0.4s,SNR=17						
EMOS				Pg	**Pg**	**00 49 51.1**	**-0.7**
	4.3nm,0.6s,SNR=11						
EMOS				Lg	Lg	00 50 38.1	
	10nm,0.5s,SNR=7.9						
EMOS	**Mosqueruela**	**3.69**	**22**	Pn	**Pn**	**00 49 39.6**	**+1.8**
	1.0nm,0.4s,SNR=17						
ETOR	**Torete**	**3.86**	**3**	Pn	**Pn**	**00 49 41.4**	**+1.4**
	7.0nm,0.2s,SNR=19						
ETOR				Pg	**Pg**	**00 49 54.5**	**-0.5**
	25nm,0.3s,SNR=22						
ETOR				Sn	**Sn**	**00 50 24.3**	**-0.9**
	20nm,0.3s,SNR=7.9						
ETOR				Lg	Lg	00 50 43.1	
	82nm,0.4s,SNR=5.0						
ETOR	**Torete**	**3.86**	**3**	Pn	**Pn**	**00 49 41.4**	**+1.4**
	7.0nm,0.2s,SNR=19						
GUD	**Guadarrama**	**3.95**	**339**	Pn	**Pn**	**00 49 41.7**	**+0.4**
	1.2nm,0.3s,SNR=7.4						
GUD				Pg	**Pg**	**00 49 54.7**	**-1.9**
	13nm,0.4s,SNR=9.3						
GUD				Lg	Lg	00 50 43.8	
	70nm,0.9s,SNR=5.0						
GUD	**Guadarrama**	**3.95**	**339**	Pn	**Pn**	**00 49 41.7**	**+0.4**
	1.2nm,0.3s,SNR=7.4						
EBAD	**Badajoz**	**4.12**	**297**	Pn	**Pn**	**00 49 43.8**	**+0.3**
	1.3nm,0.1s,SNR=19						
EBAD				Pg	**Pb**	**00 49 56.0**	**+2.7**
	7.4nm,0.3s,SNR=11						
EBAD				Sn	**Sn**	**00 50 31.2**	**-0.3**
	15nm,0.2s,SNR=7.4						
EBAD	**Badajoz**	**4.12**	**297**	Pn	**Pn**	**00 49 43.8**	**+0.3**
	1.3nm,0.1s,SNR=19						
EBAD				Sn	**Sn**	**00 50 31.2**	**-0.3**
	15nm,0.2s,SNR=7.4						
EGRO	**El Granado**	**4.16**	**279**	Pn	**Pn**	**00 49 44.7**	**+0.7**
	1.2nm,0.1s,SNR=5.2						
EGRO				Sn	**Sn**	**00 50 29.9**	**-2.5**
	5.8nm,0.2s,SNR=4.0						
EGRO				Lg	Lg	00 50 54.0	
	10.0nm,0.3s,SNR=5.0						
EGRO	**El Granado**	**4.16**	**279**	Pn	**Pn**	**00 49 44.7**	**+0.7**
	1.2nm,0.1s,SNR=5.2						
EGRO				Lg	Lg	00 50 54.0	
	10.0nm,0.3s,SNR=5.0						
EPLA	**Plasencia**	**4.28**	**318**	Pn	**Pn**	**00 49 46.5**	**+0.8**
	9.3nm,0.2s,SNR=48						
EPLA				Pg	Pb	00 50 00.6	+4.6
	5.2nm,0.1s,SNR=14						
EPLA				Sn	**Sn**	**00 50 35.5**	**+0.1**
	5.0nm,0.2s,SNR=5.8						
EPLA				Lg	Lg	00 50 54.3	
	43nm,0.5s,SNR=5.0						
EPLA	**Plasencia**	**4.28**	**318**	Pn	**Pn**	**00 49 46.5**	**+0.8**
	9.3nm,0.2s,SNR=48						
PVAQ	**Vaqueiros**	**4.33**	**277**	*e*Pn	**Pn**	**00 49 46.4**	**0.0**
PVAQ				*e*Sn	**Sn**	**00 50 35.0**	**-1.7**
PVAQ				-ML		00 50 41.1	
PVAQ	**Vaqueiros**	**4.33**	**277**	Pn	**Pn**	**00 49 46.4**	**0.0**
PVAQ				Sn	**Sn**	**00 50 35.0**	**-1.7**
PVAQ	**Vaqueiros**	**4.33**	**277**	Pn	**Pn**	**00 49 46.4**	**0.0**
PVAQ				Sn	**Sn**	**00 50 35.0**	**-1.7**
PBDV	**Barranco-do-Ve**	**4.49**	**275**	*e*Pn	**Pn**	**00 49 49.8**	**+1.1**
PBDV				*e*Sn	**Sn**	**00 50 39.6**	**-1.1**
PBDV				A	A	00 51 12.3	
	9.2nm,0.5s						
PBDV	**Barranco-do-Ve**	**4.49**	**275**	Pn	**Pn**	**00 49 49.8**	**+1.1**
PBDV				Sn	**Sn**	**00 50 39.6**	**-1.1**
	9.2nm,0.5s						
PBDV	**Barranco-do-Ve**	**4.49**	**275**	Pn	**Pn**	**00 49 49.8**	**+1.1**
PBDV				*e*Sn	**Sn**	**00 50 39.6**	**-1.1**
	9.2nm,0.5s						
ERTA	**Horta de San J**	**4.50**	**27**	Pn	**Pn**	**00 49 49.8**	**+1.1**
	1.1nm,0.2s,SNR=6.4						
ERTA				Lg	Lg	00 51 06.5	
	5.8nm,0.5s,SNR=5.0						
ERTA	**Horta de San J**	**4.50**	**27**	Pn	**Pn**	**00 49 49.8**	**+1.1**
	1.1nm,0.2s,SNR=6.4						
ERTA				Lg	Lg	00 51 06.5	
	5.8nm,0.5s,SNR=5.0						
PBEJ	**Beja**	**4.54**	**285**	*e*Pn	**Pn**	**00 49 50.1**	**+0.9**
PBEJ				*e*Sn	**Sn**	**00 50 40.7**	**-1.1**
PBEJ				A	A	00 51 11.8	
	10nm,0.6s						
PBEJ	**Beja**	**4.54**	**285**	Pn	**Pn**	**00 49 50.1**	**+0.9**
PBEJ				Sn	**Sn**	**00 50 40.7**	**-1.1**
	5.1nm,0.6s						
PBEJ	**Beja**	**4.54**	**285**	Pn	**Pn**	**00 49 50.1**	**+0.9**
PBEJ				*e*Sn	**Sn**	**00 50 40.7**	**-1.1**
	10nm,0.6s						
PESTR	**Estremoz**	**4.58**	**296**	*e*Pn	**Pn**	**00 49 50.1**	**+0.2**
PESTR				*e*Sg	**Sg**	**00 51 07.6**	**-0.5**
PESTR				A	A	00 51 14.8	
	20nm,0.8s						
PESTR	**Estremoz**	**4.58**	**296**	Pn	**Pn**	**00 49 50.1**	**+0.2**
PESTR				Lg	Lg	00 51 07.6	
	10nm,0.8s						
PESTR	**Estremoz**	**4.58**	**296**	Pn	**Pn**	**00 49 50.1**	**+0.2**
PESTR				*e*Sg	**Sg**	**00 51 07.6**	**-0.5**
	20nm,0.8s						
PCVE	**Castro Verde**	**4.61**	**280**	*e*Pn	**Pn**	**00 49 50.8**	**+0.6**
PCVE	**Castro Verde**	**4.61**	**280**	Pn	**Pn**	**00 49 50.8**	**+0.6**
PCVE	**Castro Verde**	**4.61**	**280**	Pn	**Pn**	**00 49 50.8**	**+0.6**
PMRV	**Marv??o**	**4.69**	**303**	*e*Pn	**Pn**	**00 49 53.0**	**+1.6**
PMRV				*e*Sg	**Sg**	**00 51 10.1**	**-1.5**
PMRV				A	A	00 51 18.0	
	24nm,0.6s						
PMRV	**Marv??o**	**4.69**	**303**	Pn	**Pn**	**00 49 53.0**	**+1.6**
PMRV				Lg	Lg	00 51 10.1	
	24nm,0.6s						
PMRV	**Marv??o**	**4.69**	**303**	Pn	**Pn**	**00 49 53.0**	**+1.6**
PMRV				*e*Sg	**Sg**	**00 51 10.1**	**-1.5**
	24nm,0.6s						
PMRV				Lg	Lg	00 51 10.1	
	24nm,0.6s						
EVO	**Evora**	**4.78**	**291**	*e*Pn	**Pn**	**00 49 54.0**	**+1.5**
EVO				*e*Sn	**Sn**	**00 50 47.2**	**-0.5**
EVO				*e*Sg	**Sg**	**00 51 13.3**	**-1.0**
	34nm,0.4s						
EVO	**Evora**	**4.78**	**291**	*e*Pn	**Pn**	**00 49 53.1**	**+0.6**
EVO				*e*Sn	**Sn**	**00 50 45.6**	**-2.1**
EVO				*e*Sg	**Sg**	**00 51 12.4**	**-1.9**
EVO				A	A	00 51 19.5	
	14nm,0.7s						
EVO	**Evora**	**4.78**	**291**	Pn	**Pn**	**00 49 53.1**	**+0.6**
EVO				Sn	**Sn**	**00 50 45.6**	**-2.1**
EVO				Lg	Lg	00 51 12.4	
	14nm,0.7s						
EVO	**Evora**	**4.78**	**291**	Pn	**Pn**	**00 49 53.1**	**+0.6**
EVO				Sn	**Sn**	**00 50 45.6**	**-2.1**
EVO				*e*Sg	**Sg**	**00 51 12.4**	**-1.9**
	14nm,0.7s						
EVO				Lg	Lg	00 51 12.4	
	14nm,0.7s						
EVOP	**Sao Brissos**	**4.86**	**291**	*e*Pn	**Pn**	**00 49 54.0**	**+0.4**
EVOP				*e*Sn	**Sn**	**00 50 47.2**	**-2.5**
EVOP				*e*Sg	**Sg**	**00 51 13.3**	**-3.6**
	17nm,0.4s						
PCBR	**Castelo Branco**	**4.97**	**307**	*e*Pn	**Pn**	**00 49 56.4**	**+1.3**
PCBR				*e*Sn	**Sn**	**00 50 51.5**	**-0.9**
PCBR				*e*Sg	**Sg**	**00 51 19.8**	**-0.6**
PCBR				A	A	00 51 27.4	
	16nm,0.4s						
PCBR	**Castelo Branco**	**4.97**	**307**	Pn	**Pn**	**00 49 56.4**	**+1.3**
PCBR				Sn	**Sn**	**00 50 51.5**	**-0.9**
PCBR				Lg	Lg	00 51 19.8	
	8.1nm,0.4s						
PCBR	**Castelo Branco**	**4.97**	**307**	Pn	**Pn**	**00 49 56.4**	**+1.3**
PCBR				Sn	**Sn**	**00 50 51.5**	**-0.9**
PCBR				*e*Sg	**Sg**	**00 51 19.8**	**-0.6**
	16nm,0.4s						
ESAC	**San Caprasio**	**4.97**	**16**	Pn	**Pn**	**00 49 57.5**	**+2.3**
	6.4nm,0.3s,SNR=7.9						
ESAC				Pg	Pg	00 50 14.6	-1.5
	9.6nm,0.3s,SNR=5.9						
ESAC				Lg	Lg	00 51 18.1	
	55nm,0.4s,SNR=4.7						
ESAC	**San Caprasio**	**4.97**	**16**	Pn	**Pn**	**00 49 57.5**	**+2.3**
	6.4nm,0.3s,SNR=7.9						
MOE	**Montemor**	**5.03**	**290**	*e*Pn	**Pn**	**00 49 57.9**	**+1.9**
MOE				*e*Sg	**Sg**	**00 51 21.7**	**-0.7**
MOE	**Montemor**	**5.03**	**290**	Pn	**Pn**	**00 49 57.9**	**+1.9**
MOE				Lg	Lg	00 51 21.7	
MOE	**Montemor**	**5.03**	**290**	Pn	**Pn**	**00 49 57.9**	**+1.9**
MOE				*e*Sg	**Sg**	**00 51 21.7**	**-0.7**
MOE				Lg	Lg	00 51 21.7	
PNCL	**Nicolau / Gran**	**5.07**	**285**	*e*Pn	**Pn**	**00 49 57.1**	**+0.6**
PNCL				*e*Sg	**Sg**	**00 51 20.8**	**-2.8**
PNCL				A	A	00 51 34.4	
	8.4nm,0.6s						
PNCL	**Nicolau / Gran**	**5.07**	**285**	*e*Pn	**Pn**	**00 49 57.1**	**+0.6**
PNCL				*e*Sg	**Sg**	**00 51 20.8**	**-2.8**
	8.4nm,0.6s						
PMTG	**Montargil**	**5.12**	**296**	*e*Pn	**Pn**	**00 49 57.8**	**+0.6**
PMTG				*e*Sn	**Sn**	**00 50 54.1**	**-1.9**
PMTG				*e*Sg	**Sg**	**00 51 25.3**	**+0.1**
PMTG				A	A	00 51 29.8	
	21nm,0.7s						
PMTG	**Montargil**	**5.12**	**296**	*e*Pn	**Pn**	**00 49 57.8**	**+0.6**
PMTG				*e*Sn	**Sn**	**00 50 54.1**	**-1.9**
PMTG				*e*Sg	**Sg**	**00 51 25.3**	**+0.1**
	21nm,0.7s						
EPOB	**Poblet**	**5.12**	**30**	Pn	**Pn**	**00 49 58.1**	**+0.8**
	0.1nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**5.12**	**30**	Pn	**Pn**	**00 49 58.1**	**+0.8**
	0.1nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	**5.14**	**278**	*e*Pn	**Pn**	**00 49 59.2**	**+1.7**
PTEO				*e*Sn	**Sn**	**00 50 55.4**	**-1.3**
PTEO				*e*Sg	**Sg**	**00 51 26.2**	**+0.2**
PTEO				A	A	00 51 28.6	
	16nm,0.6s						
PTEO	**Sao Teotonio**	**5.14**	**278**	Pn	**Pn**	**00 49 59.2**	**+1.7**
PTEO				Sn	**Sn**	**00 50 55.4**	**-1.3**
PTEO				Lg	Lg	00 51 26.2	
	7.8nm,0.6s						
PTEO	**Sao Teotonio**	**5.14**	**278**	Pn	**Pn**	**00 49 59.2**	**+1.7**
PTEO				Sn	**Sn**	**00 50 55.4**	**-1.3**
PTEO				*e*Sg	**Sg**	**00 51 26.2**	**+0.2**
	16nm,0.6s						
PFVI	**Vila Bisbo**	**5.21**	**274**	*e*Pn	**Pn**	**00 49 58.9**	**+0.5**
PFVI				*e*Sn	**Sn**	**00 50 56.8**	**-1.5**
PFVI				A	A	00 51 02.5	
	0.9nm,0.8s						
PFVI	**Vila Bisbo**	**5.21**	**274**	Pn	**Pn**	**00 49 59.0**	**+0.5**
	1.8nm,0.2s,SNR=7.1						
PFVI				Sn	**Sn**	**00 50 54.2**	**-4.1**
	7.2nm,0.3s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.21**	**274**	*e*Pn	**Pn**	**00 49 58.9**	**+0.5**
PFVI				*e*Sn	**Sn**	**00 50 56.8**	**-1.5**
	0.9nm,0.8s						
MTE	**Manteigas**	**5.34**	**312**	*e*Pn	**Pn**	**00 50 02.4**	**+2.1**
MTE				*e*Sg	**Sg**	**00 51 31.4**	**-0.9**
MTE				A	A	00 51 42.1	
	25nm,0.6s						
MTE	**Manteigas**	**5.34**	**312**	Pn	**Pn**	**00 50 02.4**	**+2.1**
MTE				Lg	Lg	00 51 31.4	
	12nm,0.6s						
MTE	**Manteigas**	**5.34**	**312**	Pn	**Pn**	**00 50 02.4**	**+2.1**
MTE				*e*Sg	**Sg**	**00 51 31.4**	**-0.9**
	25nm,0.6s						
PTOM	**Tomar**	**5.48**	**301**	*e*Pn	**Pn**	**00 50 03.4**	**+1.3**
PTOM				*e*Sg	**Sg**	**00 51 36.0**	**-0.7**
PTOM				A	A	00 51 43.2	
	30nm,0.7s						
PTOM	**Tomar**	**5.48**	**301**	Pn	**Pn**	**00 50 03.4**	**+1.3**
PTOM				Lg	Lg	00 51 36.0	
	15nm,0.7s						
PTOM	**Tomar**	**5.48**	**301**	Pn	**Pn**	**00 50 03.4**	**+1.3**
PTOM				Lg	Lg	00 51 36.0	
	15nm,0.7s						
MVO	**Moncorvo**	**5.57**	**320**	*e*Pn	**Pn**	**00 50 05.0**	**+1.4**
MVO				*e*Sg	**Sg**	**00 51 39.2**	**-0.6**
MVO				A	A	00 51 51.6	
	25nm,0.6s						
MVO	**Moncorvo**	**5.57**	**320**	Pn	**Pn**	**00 50 04.9**	**+1.4**
	3.4nm,0.2s,SNR=18						
MVO				Pg	Pg	00 50 24.9	-2.8
	5.3nm,0.3s,SNR=5.8						
MVO				Sn	**Sn**	**00 51 05.5**	**-1.9**
	1.5nm,0.1s,SNR=7.9						
MVO				Lg	Lg	00 51 37.5	
	39nm,0.4s,SNR=5.0						
MVO	**Moncorvo**	**5.57**	**320**	Pn	**Pn**	**00 50 04.9**	**+1.4**
	3.4nm,0.2s,SNR=18						
PVIS	**Viseu**	**5.74**	**312**	*e*Pn	**Pn**	**00 50 07.6**	**+1.7**
PVIS				*e*Sn	**Sn**	**00 51 10.6**	**-1.0**
PVIS				A	A	00 51 54.9	
	13nm,0.5s						
PVIS	**Viseu**	**5.74**	**312**	Pn	**Pn**	**00 50 07.6**	**+1.7**
PVIS				Sn	**Sn**	**00 51 10.6**	**-1.0**
	6.5nm,0.5s						
PVIS	**Viseu**	**5.74**	**312**	Pn	**Pn**	**00 50 07.6**	**+1.7**
PVIS				Sn	**Sn**	**00 51 10.6**	**-1.0**
	6.5nm,0.5s						
PMAFR	**Mafra**	**5.85**	**292**	*e*Pn	**Pn**	**00 50 08.6**	**+1.3**
PMAFR				*e*Sn	**Sn**	**00 51 12.3**	**-1.9**
PMAFR				A	A	00 51 50.2	
	19nm,0.7s						
PMAFR	**Mafra**	**5.85**	**292**	Pn	**Pn**	**00 50 07.9**	**+0.6**
	2.8nm,0.2s,SNR=7.9						
PMAFR				Sn	**Sn**	**00 51 12.0**	**-2.2**
	5.3nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**5.85**	**292**	Pn	**Pn**	**00 50 07.9**	**+0.6**
	2.8nm,0.2s,SNR=7.9						
PMAFR				Sn	**Sn**	**00 51 12.0**	**-2.2**
	5.3nm,0.2s,SNR=7.9						
IEPA	**Eparoz**	**5.87**	**8**	Pg	**Pg**	**00 50 33.9**	**+0.5**
	3.8nm,0.5s,SNR=7.9						
IEPA				Lg	Lg	00 51 48.0	
	15nm,0.4s,SNR=7.9						
IEPA	**Eparoz**	**5.87**	**8**	Pg	**Pg**	**00 50 33.9**	**+0.5**
	3.8nm,0.5s,SNR=7.9						
IEPA				Lg	Lg	00 51 48.0	
	15nm,0.4s,SNR=7.9						
PBRG	**Braganca**	**5.93**	**326**	*e*Pn	**Pn**	**00 50 10.4**	**+2.0**
PBRG				*e*Sg	**Sg**	**00 51 48.3**	**-2.9**
PBRG				A	A	00 52 00.0	
	13nm,0.6s						
PBRG	**Braganca**	**5.93**	**326**	Pn	**Pn**	**00 50 10.4**	**+2.0**
PBRG				Lg	Lg	00 51 48.3	
	6.4nm,0.6s						
PBRG	**Braganca**	**5.93**	**326**	Pn	**Pn**	**00 50 10.4**	**+2.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PBRG				Lg	Lg	00 51 48.3	
	6.4nm,0.6s						
IELO	**Elcoad**	**5.94**	**8**	Pn	**Pn**	**00 50 10.5**	**+2.0**
	0.7nm,0.2s,SNR=7.9						
IELO				Pg	**Pg**	**00 50 34.7**	**0.0**
	3.2nm,0.4s,SNR=4.0						
IELO				Lg	Lg	00 51 49.2	
	17nm,0.6s,SNR=7.9						
IELO	**Elcoad**	**5.94**	**8**	Pn	**Pn**	**00 50 10.5**	**+2.0**
	0.7nm,0.2s,SNR=7.9						
PVRL	**Vila Real**	**6.01**	**317**	*e*Pn	**Pn**	**00 50 11.7**	**+2.1**
PVRL				*e*Sn	**Sn**	**00 51 16.4**	**-1.8**
PVRL				*e*Sg	**Sg**	**00 51 52.3**	**-1.7**
PVRL				A	A	00 52 02.1	
	13nm,0.8s						
PVRL	**Vila Real**	**6.01**	**317**	Pn	**Pn**	**00 50 11.7**	**+2.1**
PVRL				Sn	**Sn**	**00 51 16.4**	**-1.8**
PVRL				Lg	Lg	00 51 52.3	
	6.4nm,0.8s						
PVRL	**Vila Real**	**6.01**	**317**	Pn	**Pn**	**00 50 11.7**	**+2.1**
PVRL				Sn	**Sn**	**00 51 16.4**	**-1.8**
PVRL				Lg	Lg	00 51 52.3	
	6.4nm,0.8s						
CSOR	**Sort**	**6.03**	**25**	Pn	**Pn**	**00 50 11.6**	**+1.8**
	0.7nm,0.2s,SNR=6.4						
CSOR				Lg	Lg	00 51 53.4	
	5.8nm,0.5s,SNR=4.0						
CSOR	**Sort**	**6.03**	**25**	Pn	**Pn**	**00 50 11.6**	**+1.8**
	0.7nm,0.2s,SNR=6.4						
CSOR				Lg	Lg	00 51 53.4	
	5.8nm,0.5s,SNR=4.0						
ECAL	**Calabor**	**6.04**	**327**	Pn	**Pn**	**00 50 11.1**	**+1.2**
	6.7nm,0.4s,SNR=7.1						
ECAL				Sn	**Sn**	**00 51 17.1**	**-1.7**
	2.5nm,0.3s,SNR=4.7						
ECAL				Lg	Lg	00 51 53.0	
	21nm,0.4s,SNR=5.0						
ECAL	**Calabor**	**6.04**	**327**	Pn	**Pn**	**00 50 11.1**	**+1.2**
	6.7nm,0.4s,SNR=7.1						
ECAL				Sn	**Sn**	**00 51 17.1**	**-1.7**
	2.5nm,0.3s,SNR=4.7						
ECAL				Lg	Lg	00 51 53.0	
	21nm,0.4s,SNR=5.0						
CFON	**Fontmartina**	**6.05**	**36**	Pn	**Pn**	**00 50 11.8**	**+1.7**
	0.7nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**6.05**	**36**	Pn	**Pn**	**00 50 11.8**	**+1.7**
	0.7nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**6.08**	**12**	*e*Pn	**Pn**	**00 50 10.9**	**+0.3**
ETSF				*e*Sg	**Sg**	**00 51 53.2**	**-3.0**
	4.3nm,0.4s						
ETSF	**Etsaut**	**6.08**	**12**	Pn	**Pn**	**00 50 10.9**	**+0.3**
ETSF				Lg	Lg	00 51 53.2	
	1.1nm,0.4s						
POLO	**Lamas de Olo**	**6.12**	**318**	*e*Pn	**Pn**	**00 50 13.1**	**+2.0**
POLO				*e*Sn	**Sn**	**00 51 19.4**	**-1.6**
POLO				*e*Sg	**Sg**	**00 51 53.4**	**-4.1**
POLO				A	A	00 52 09.1	
	7.0nm,0.7s						
POLO	**Lamas de Olo**	**6.12**	**318**	*e*Pn	**Pn**	**00 50 13.1**	**+2.0**
SJPF	**Ste Jean**	**6.20**	**7**	*e*Pn	**Pn**	**00 50 12.6**	**+0.5**
SJPF				*e*Sg	**Sg**	**00 51 57.1**	**-2.9**
	4.7nm,0.4s						
SJPF	**Ste Jean**	**6.20**	**7**	Pn	**Pn**	**00 50 12.6**	**+0.5**
SJPF				Lg	Lg	00 51 57.1	
	1.2nm,0.4s						
ELIZ	**Elizondo**	**6.23**	**5**	Pn	**Pn**	**00 50 15.1**	**+2.6**
	2.1nm,0.3s,SNR=7.9						
ELIZ				Sn	**Sn**	**00 51 20.1**	**-3.3**
	3.2nm,0.4s,SNR=7.9						
ELIZ				Lg	Lg	00 51 56.7	
	8.3nm,0.5s,SNR=7.9						
ELIZ	**Elizondo**	**6.23**	**5**	Pn	**Pn**	**00 50 15.1**	**+2.6**
	2.1nm,0.3s,SNR=7.9						
ELIZ				Lg	Lg	00 51 56.7	
	8.3nm,0.5s,SNR=7.9						
ELAN	**Lanestosa**	**6.32**	**353**	Pn	**Pn**	**00 50 15.0**	**+1.3**
	0.7nm,0.2s,SNR=8.2						
ELAN				Pg	**Pg**	**00 50 40.9**	**-1.1**
	0.5nm,0.2s,SNR=7.9						
ELAN				Sn	**Sn**	**00 51 24.4**	**-1.3**
	1.4nm,0.3s,SNR=5.3						
ELAN				Lg	Lg	00 52 02.1	
	4.8nm,0.3s,SNR=5.0						
ELAN	**Lanestosa**	**6.32**	**353**	Pn	**Pn**	**00 50 15.0**	**+1.3**
	0.7nm,0.2s,SNR=8.2						
EPF	**Esparros**	**6.40**	**18**	*e*Pn	**Pn**	**00 50 16.7**	**+1.8**
EPF				*e*Sg	**Sg**	**00 52 02.7**	**-3.6**
	4.6nm,0.5s						
EPF	**Esparros**	**6.40**	**18**	Pn	**Pn**	**00 50 16.7**	**+1.8**
EPF				Lg	Lg	00 52 02.7	
	1.2nm,0.5s						
PCAB	**Cabril**	**6.48**	**319**	*e*Pn	**Pn**	**00 50 18.1**	**+2.1**
PCAB				*e*Sg	**Sg**	**00 52 08.7**	**-0.3**
PCAB				A	A	00 52 13.0	
	18nm,0.7s						
PCAB	**Cabril**	**6.48**	**319**	Pn	**Pn**	**00 50 18.1**	**+2.1**
PCAB				Lg	Lg	00 52 08.7	
	9.1nm,0.7s						
PCAB	**Cabril**	**6.48**	**319**	Pn	**Pn**	**00 50 18.1**	**+2.1**
PCAB				*e*Sg	**Sg**	**00 52 08.7**	**-0.3**
	18nm,0.7s						
ELOB	**Lobios**	**6.61**	**320**	Pn	**Pn**	**00 50 19.1**	**+1.3**
	3.6nm,0.2s,SNR=7.2						
ELOB				Sn	**Sn**	**00 51 29.7**	**-3.3**
	2.0nm,0.3s,SNR=5.0						
ELOB				Lg	Lg	00 52 12.2	
	9.5nm,0.4s,SNR=7.9						
ELOB	**Lobios**	**6.61**	**320**	Pn	**Pn**	**00 50 19.1**	**+1.3**
	3.6nm,0.2s,SNR=7.2						
ELOB				Lg	Lg	00 52 12.2	
	9.5nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**6.71**	**342**	Pn	**Pn**	**00 50 20.0**	**+0.9**
	0.9nm,0.3s,SNR=5.3						
EARI				Pg	**Pg**	**00 50 50.8**	**+1.4**
	1.8nm,0.7s,SNR=4.0						
EARI				Sn	**Sn**	**00 51 32.7**	**-2.7**
	1.4nm,0.5s,SNR=4.7						
EARI				Lg	Lg	00 52 11.9	
	6.2nm,0.6s,SNR=5.0						
EARI	**Arriondas**	**6.71**	**342**	Pn	**Pn**	**00 50 20.0**	**+0.9**
	0.9nm,0.3s,SNR=5.3						
PGAV	**Gavieira, Arco**	**6.79**	**319**	*e*Pn	**Pn**	**00 50 22.3**	**+2.0**
PGAV				*e*Sn	**Sn**	**00 51 35.5**	**-2.0**
PGAV				A	A	00 52 20.7	
	11nm,0.8s						
PGAV	**Gavieira, Arco**	**6.79**	**319**	*e*Pn	**Pn**	**00 50 22.3**	**+2.0**
EPON	**Pontenova**	**7.36**	**331**	Lg	Lg	00 52 35.8	
	3.2nm,0.4s,SNR=7.9						
EPON	**Pontenova**	**7.36**	**331**	Lg	Lg	00 52 35.8	
	3.2nm,0.4s,SNR=7.9						
MFF	**Saint Martin d**	**9.77**	**9**	*e*Pn	**Pn**	**00 51 00.5**	**-0.5**
MFF	**Saint Martin d**	**9.77**	**9**	Pn	**Pn**	**00 51 00.5**	**-0.5**
QUIF	**Quistinic**	**10.97**	**357**	*e*Pn	**Pn**	**00 51 17.5**	**+0.1**
QUIF	**Quistinic**	**10.97**	**357**	Pn	**Pn**	**00 51 17.5**	**+0.1**
ROSF	**Rostrenen**	**11.39**	**357**	*e*Pn	**Pn**	**00 51 22.6**	**-0.6**
ROSF	**Rostrenen**	**11.39**	**357**	Pn	**Pn**	**00 51 22.6**	**-0.6**

IDC 02 00:56:32.9±4.3**, 4.77S**×**151.93E, h0**km**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/17**, mbtmp3.6**/2**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.5**/21**, Error ellipse: s-maj=198.9km s-min=49.6km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.60**	**225**	Sn	Sn	00 59 25.7	-1.6
	5.2nm,0.3s,baz=120,slow=7.5,SNR=6.8						
WRA	**Warramunga Arr**	**22.82**	**227**	P	P	01 01 37.9	+0.2
	0.5nm,0.3s,baz=50,slow=9.8,SNR=4.1						
ASAR	**Alice Springs**	**25.59**	**221**	P	P	01 02 03.8	-0.2
	0.5nm,0.4s,baz=57,slow=9.4,SNR=8.6						
PETK	**Petropavlovsk-**	**57.87**	**4**	LR	LR	01 28 08.8	
	comp=Z,28nm,19.2s,baz=230,slow=33						
TORD	**Torodi Ar. Bea**	**149.47**	**288**	PKPbc	PKPbc	01 16 24.8	-0.5
	0.4nm,1.0s,baz=94,slow=1.8,SNR=5.0						

*IDC **02** 00:58:00.9±0.6, 0.35S×132.88E, h0km, mb4.3/10, mb1 4.5/13, mb1mx4.3/24, mbtmp4.3/13, ML4.3/3, MS3.4/8, Ms1 3.4/8, ms1mx3.1/35, Error ellipse: s-maj=26.4km s-min=13.4km az=69.0*
*DJA **02** 00:58:05.3±0.6, 0°S±5°×13°3E±°, h58km±15km, M5.1/6, mb5.3/2, mB5.3/2, MLv5.0/6, Mw(mB)4.7/2*
*AUST **02** 00:58:06.5, 0.49S×133.00E, h35km*
ISC 02 00:58:02.6±2.8**, 0.33S**±0.05×**132.86E**±0.04**, h11**km±17km**, n55, σ1§35**/58**, mb4.3**/10**, MS3.5**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**1.69**	**252**	P	**Pn**	**00 58 31.9**	**-0.1**
SWI				S	**Sn**	**00 58 54.2**	**+0.6**
SWI	**Sorong**	**1.69**	**252**	P	**Pn**	**00 58 32.3**	**+0.3**
	baz=1.8,SNR=261						
SWI				S	**Sn**	**00 58 53.9**	**+0.3**
	baz=1.8,SNR=9.4						
RKPI	**Ransiki, Papua**	**1.77**	**132**	P	**Pn**	**00 58 34.2**	**+1.1**
RKPI				S	**Sn**	**00 58 56.2**	**+0.6**
FAKI	**Fak Fak**	**2.65**	**193**	P	**Pn**	**00 58 47.3**	**+2.1**
FAKI				S	**Sn**	**00 59 19.3**	**+1.9**
FAKI	**Fak Fak**	**2.65**	**193**	P	**Pn**	**00 58 47.3**	**+2.1**
	baz=2.5,SNR=59						
BAKI	**Biak**	**3.36**	**105**	P	**Pn**	**00 58 55.4**	**+0.3**
BAKI				S	**Sn**	**00 59 33.5**	**-1.5**
SRPI	**Serui, Papua**	**3.71**	**114**	P	**Pn**	**00 59 02.0**	**+2.1**
MSAI	**Masohi**	**4.94**	**233**	P	Pn	00 59 21.1	+4.3
TLE	**Tual**	**5.28**	**181**	P	**Pn**	**00 59 20.8**	**-0.7**
	678nm,0.7s,6μm2.4nm						
TLE	**Tual**	**5.28**	**181**	P	**Pn**	**00 59 20.7**	**-0.7**
	baz=5.2,SNR=12						
TLE				S	**Sn**	**01 00 25.3**	**+3.0**
	baz=5.2,SNR=5.0						
LBMI	**Labuha**	**5.37**	**267**	P	**Pn**	**00 59 24.1**	**+1.4**
LBMI				S	**Sn**	**01 00 25.0**	**+0.5**
GAMI	**Galela, Maluku**	**5.51**	**293**	P	**Pb**	**00 59 38.6**	**-0.3**
DAV	**Davao City (W)**	**10.33**	**315**	LR	LR	01 03 09.4	
	comp=Z,128nm,22.0s,baz=240,slow=30						
KDU	**Kakadu**	**12.29**	**182**	P	**Pn**	**01 00 57.4**	**-0.2**
	baz=12,SNR=15						
KDU				S	**Sn**	**01 03 10.7**	**-4.0**
	baz=12,SNR=3.8						
MTN	**Manton Dam**	**12.55**	**188**	P	**Pn**	**01 01 00.8**	**-0.5**
	baz=12,SNR=24						
MTN				S	**Sn**	**01 03 17.1**	**-4.1**
	baz=12,SNR=4.5						
PCI	**Palu**	**13.03**	**267**	P	P	01 01 13.8	-4.6
	baz=13,SNR=8.8						
KAPI	**Kappang**	**13.89**	**250**	Pn	**Pn**	**01 01 21.1**	**+1.5**
	1.3nm,0.3s,baz=117,slow=6.8,SNR=2.7						
KAPI				LR	LR	01 06 28.5	
	comp=Z,126nm,18.0s,baz=294,slow=36						
GUMO	**Guam**	**18.24**	**40**	LR	LR	01 07 36.0	
	comp=Z,118nm,18.5s,baz=242,slow=32						
FITZ	**Fitzroy Crossi**	**19.04**	**201**	P	**P**	**01 02 24.1**	**-0.7**
	0.8nm,0.3s,baz=39,slow=9.9,SNR=16						
FITZ				S	Sn	01 05 47.0	-12
	0.3nm,0.3s,baz=185,slow=8.9,SNR=4.6						
FITZ				LR	LR	01 10 19.9	
	comp=Z,75nm,20.5s,baz=24,slow=39						
FITZ	**Fitzroy Crossi**	**19.04**	**201**	P	**P**	**01 02 23.9**	**-0.9**
	baz=19,SNR=13						
WRA	**Warramunga Arr**	**19.55**	**176**	P	**P**	**01 02 30.7**	**+0.2**
	1.0nm,0.3s,baz=358,slow=13,SNR=29						
WRA				S	S	01 05 59.4	-12
	0.3nm,0.3s,baz=359,slow=23,SNR=4.3						
MTSU	**Mount Surprise**	**20.98**	**148**	P	Pn	01 02 50.6	+2.0
	baz=21,SNR=4.8						
ASAR	**Alice Springs**	**23.22**	**178**	P	**P**	**01 03 10.1**	**+0.2**
	21nm,0.7s,baz=0.0,slow=11,SNR=139						
ASAR				S	**S**	**01 07 25.3**	**+3.3**
	1.7nm,0.8s,baz=355,slow=29,SNR=4.0						
CTA	**Charters Tower**	**23.61**	**147**	P	**P**	**01 03 14.1**	**+0.2**
	14nm,0.8s,baz=342,slow=11,SNR=8.6						
QLP	**Quilpie**	**28.31**	**158**	P	**P**	**01 03 56.1**	**-0.3**
	baz=28,SNR=6.5						
STKA	**Stephens Creek**	**32.45**	**166**	P	**P**	**01 04 32.2**	**-0.7**
	11nm,0.7s,baz=337,slow=7.7,SNR=30						
STKA				LR	LR	01 19 19.0	
	comp=Z,173nm,18.4s,baz=15,slow=39						
STKA	**Stephens Creek**	**32.45**	**166**	P	**P**	**01 04 32.4**	**-0.7**
	baz=32,SNR=17						
MORW	**Morawa**	**32.78**	**208**	P	**P**	**01 04 35.8**	**-0.2**
	baz=33,SNR=3.3						
CMSA	**Cobar Meteorol**	**33.34**	**160**	P	**P**	**01 04 41.9**	**+1.1**
	baz=33,SNR=4.7						
BLDU	**Ballidu**	**33.80**	**206**	P	**P**	**01 04 45.2**	**+0.4**
	baz=34,SNR=7.6						
PSI	**Prapat**	**34.06**	**275**	P	**P**	**01 04 47.2**	**-0.3**
	1.4nm,0.2s,baz=85,slow=12,SNR=4.2						
ARMA	**Armidale**	**34.84**	**151**	P	**P**	**01 04 54.3**	**+0.3**
	baz=35,SNR=4.8						
NWAO	**Narrogin (SRO)**	**35.61**	**203**	LR	LR	01 19 58.4	
	comp=Z,99nm,19.9s,baz=6.4,slow=37						
MJAR	**Matsushiro Arr**	**37.02**	**7**	LR	LR	01 16 55.6	
	comp=Z,87nm,21.6s,baz=165,slow=31						
KSRS	**Korea Array**	**37.87**	**354**	LR	LR	01 18 42.1	
	comp=Z,48nm,20.7s,baz=337,slow=33						
CMAR	**Chiang Mai Arr**	**38.20**	**301**	P	**P**	**01 05 23.1**	**+0.4**
	4.8nm,1.0s,baz=119,slow=6.7,SNR=13						
TAPN	**Taplejung**	**51.34**	**306**	*e*P	**P**	**01 07 06.0**	**-1.8**
	18nm,1.0s						
ODAN	**Odare**	**51.40**	**305**	*e*P	**P**	**01 07 07.8**	**-0.3**
RAMN	**Ramite**	**52.08**	**305**	*e*P	**P**	**01 07 13.1**	**-0.1**
	22nm,0.9s						
GUN	**Gumba**	**53.05**	**306**	*e*P	**P**	**01 07 20.4**	**-0.2**
	24nm,0.8s						
SONM	**Songino Array**	**53.21**	**338**	P	**P**	**01 07 22.3**	**+1.2**
	0.6nm,0.9s,baz=166,slow=7.4,SNR=3.2						
PKI	**Pulchoki**	**53.30**	**305**	*e*P	**P**	**01 07 21.4**	**-1.0**
KKN	**Kakani**	**53.49**	**306**	*e*P	**P**	**01 07 23.0**	**-0.6**
DMN	**Daman**	**53.56**	**305**	*e*P	**P**	**01 07 23.9**	**-0.3**
KOLN	**Koldanda**	**54.85**	**305**	*e*P	**P**	**01 07 33.6**	**0.0**
	32nm,0.8s						
DANN	**Dangsing**	**54.94**	**306**	*e*P	**P**	**01 07 33.9**	**-0.4**
	35nm,0.8s						
PYUN	**Piuthan**	**55.48**	**305**	*e*P	**P**	**01 07 38.2**	**+0.1**
	76nm,0.9s						
PETK	**Petropavlovsk-**	**57.14**	**18**	P	**P**	**01 07 49.8**	**+0.6**
	3.0nm,1.0s,baz=216,slow=4.4,SNR=3.1						
WMQ	**Urumqi**	**59.57**	**323**	*e*P	**P**	**01 08 08.3**	**+1.8**
MKAR	**Makanchi Array**	**64.39**	**324**	P	**P**	**01 08 39.2**	**+0.4**
	1.7nm,0.8s,baz=112,slow=8.6,SNR=12						
ZALV	**Zalesovo Beam**	**67.01**	**331**	P	**P**	**01 08 54.9**	**-0.6**
	0.6nm,0.4s,baz=148,slow=7.5,SNR=3.4						
VNDA	**Vanda**	**78.71**	**174**	P	**P**	**01 10 05.1**	**+0.6**
	1.5nm,0.9s,baz=318,slow=8.0,SNR=7.6						
TORD	**Torodi Ar. Bea**	**129.98**	**287**	PKP	**PKPdf**	**01 17 12.6**	**-1.0**
	0.7nm,0.7s,baz=54,slow=1.7,SNR=5.0						
CPUP	**Villa Florida**	**151.73**	**160**	PKPbc	**PKPbc**	**01 17 57.9**	**-0.3**
	3.3nm,0.7s,baz=90,slow=20,SNR=12						
LPAZ	**La Paz**	**153.51**	**130**	PKPbc	**PKPbc**	**01 18 01.5**	**-1.7**
	0.6nm,0.7s,baz=238,slow=1.7,SNR=2.8						
LPAZ				PKPab	**PKPab**	**01 18 15.6**	**+0.3**
	3.1nm,0.8s,baz=206,slow=2.3,SNR=12						

*BJI **02** 01:11:10.7, 34.10N×118.90W, h14km, mb4.7/2, Ms7 4.7/1*
*IDC **02** 01:11:11.3±1.4, 33.99N×118.86W, h0km, mb3.8/6, mb1 3.8/12, mb1mx3.7/31, mbtmp3.7/12, ML3.5/5, MS3.2/7, Ms1 3.2/7, ms1mx2.9/41, Error ellipse: s-maj=21.6km s-min=8.7km az=43.0*
*ISCJB **02** 01:11:12.0±0.4, 34.05N±0.02×118.89W±0.02, h15km±2km, mb3.9/10, MS3.7/5, Error ellipse: s-maj=4.1km s-min=2.5km az=136.2*
*NEIC **02** 01:11:13.7, 34.07N×118.88W, h14km, mb4.3/4, MW4.1(PAS), After PAS.*
NEIC One person injured in the Los Angeles area. Felt [IV] at Westlake Village; [III] at Agoura Hills, Avalon, Bell, Burbank, Calabasas, Camarillo, Chino Hills, Compton, Culver City, Encino, Garden Grove, Gardena, Hermosa Beach, Inglewood, Irvine, Malibu, Marina del Rey, Moorpark, Newbury Park, Northridge, Oak Park, Pacific Palisades, Panorama City, Paramount, Playa del Rey, Reseda, Santa Monica, Sherman Oaks, Simi Valley, Tarzana, Thousand Oaks, Tustin, Valley Village, Van Nuys, Whittier and Woodland Hills; [II] throughout Los Angeles and Orange Counties, in much of Ventura County and in western Riverside and San Bernardino Counties. Felt as far as Lompoc, Palm Springs and San Diego.
ISC 02 01:11:12.4±0.7**, 34.00N**±0.02×**118.91W**±0.02**, h16**km±3km**, n246, σ1§26**/267**, mb3.9**/10**, MS3.3**/5**, 41C-43D, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PT2	**Point Dume**	**0.09**	**89**	Pg	**Pg**	**01 11 15.0**	**-0.6**
BLG	**Laguna Peak**	**0.17**	**310**	⇓P	**Pb**	**01 11 16.7**	**-0.4**
	baz=0.2,SNR=1000						
BALC	**Balcom Canyon**	**0.31**	**351**	Pg	**Pb**	**01 11 19.2**	**-0.4**
BLCC	**Black Canyon**	**0.31**	**39**	Pg	**Pb**	**01 11 19.0**	**-0.6**
DJJ	**Donna J Jenkin**	**0.39**	**75**	Pg	**Pb**	**01 11 20.7**	**-0.2**
RPV	**Rancho Palos V**	**0.49**	**121**	Pg	**Pb**	**01 11 23.3**	**+0.6**
SBI	**Santa Barbara**	**0.53**	**191**	Pg	**Pn**	**01 11 24.5**	**-0.8**
DECC	**Green Verdugo**	**0.54**	**63**	Pg	**Pg**	**01 11 23.1**	**-0.1**
DECC	**Green Verdugo**	**0.54**	**63**	⇓P	**Pg**	**01 11 22.6**	**-0.5**
	baz=0.5,SNR=284						
DECC				⇑S	**Sg**	**01 11 29.6**	**-0.9**
	baz=0.5						
PYR	**Pyramid**	**0.58**	**14**	Pg	**Pg**	**01 11 23.5**	**-0.4**
FMP	**Fort Macarthur**	**0.59**	**119**	Pg	**Pb**	**01 11 24.7**	**+0.4**
FMP	**Fort Macarthur**	**0.59**	**119**	⇓P	**Pb**	**01 11 24.6**	**+0.4**
	baz=0.6,SNR=849						
FMP				⇓S	**Sb**	**01 11 33.0**	**+0.6**
	baz=0.6						
BSC	**Santa Cruz Isl**	**0.60**	**269**	⇑P	**Pb**	**01 11 24.5**	**0.0**
	baz=0.6,SNR=111						
BSC				⇑S	**Sb**	**01 11 33.7**	**+0.9**
	baz=0.6						
PASC	**Pasadena Art C**	**0.62**	**74**	*e*Pg	**Pg**	**01 11 23.8**	**-0.9**
PASC				*e*Sg	**Sg**	**01 11 31.0**	**-2.0**
OSI	**Osito Adit**	**0.63**	**14**	⇓*i*Pg	**Pg**	**01 11 24.2**	**-0.6**
OSI				*e*Sg	**Sg**	**01 11 32.2**	**-1.0**
OSI	**Osito Adit**	**0.63**	**14**	⇓P	**Pg**	**01 11 24.2**	**-0.6**
	baz=0.6,SNR=152						
OSI				⇑S	**Sg**	**01 11 32.3**	**-1.0**
	baz=0.6						
GVRC	**Garvey Reservo**	**0.66**	**86**	Pb	**Pn**	**01 11 26.5**	**-0.6**
CIAC	**Catalina I. Ai**	**0.73**	**145**	Pg	**Pn**	**01 11 27.6**	**-0.4**
CIS	**Catalina Islan**	**0.73**	**144**	⇓P	**Pn**	**01 11 27.6**	**-0.5**
	baz=0.8,SNR=271						
CIS				⇓S	**Sn**	**01 11 38.1**	**-0.8**
	baz=0.8						
BTPC	**Burnt Peak**	**0.73**	**22**	Pg	**Pg**	**01 11 25.8**	**-0.9**
RYS	**Reyes Peak**	**0.73**	**330**	Pn	**Pb**	**01 11 26.5**	**-0.4**
MWC	**Mount Wilson**	**0.74**	**73**	⇓*i*Pg	**Pg**	**01 11 26.1**	**-0.8**
MWC				*e*Sg	**Sg**	**01 11 35.9**	**-0.9**
QAL	**Quail Lake**	**0.76**	**12**	Pn	**Pg**	**01 11 26.6**	**-0.7**
SBC	**Santa Barbara**	**0.80**	**303**	Pn	**Pb**	**01 11 27.8**	**-0.1**
SBC	**Santa Barbara**	**0.80**	**303**	⇑P	**Pb**	**01 11 27.7**	**-0.1**
	baz=0.8,SNR=47						
LEOC	**Leona Valley**	**0.80**	**39**	Pn	**Pg**	**01 11 27.3**	**-0.7**
CHFC	**Chilao Flat St**	**0.80**	**66**	Pg	**Pg**	**01 11 27.7**	**-0.4**
CJV	**Casa Juvan**	**0.82**	**50**	Pn	**Pg**	**01 11 27.8**	**-0.6**
ALPC	**Antelope**	**0.85**	**36**	Pg	**Pg**	**01 11 27.8**	**-1.1**
STTC	**Scott Ranch**	**0.87**	**25**	Pn	**Pg**	**01 11 28.4**	**-0.9**
PEM	**Pine Mountain**	**0.88**	**79**	Pn	**Pg**	**01 11 28.3**	**-1.1**
ABL	**Mount Abel**	**0.88**	**343**	Pn	**Pg**	**01 11 28.6**	**-1.0**
LRRC	**Littlerock Res**	**0.90**	**54**	Pn	**Pg**	**01 11 28.4**	**-1.4**
JNH	**Juniper Hills**	**0.91**	**61**	Pn	**Pg**	**01 11 28.7**	**-1.4**
THC	**Tehachapi Micr**	**0.93**	**13**	Pn	**Pg**	**01 11 29.1**	**-1.3**
FOXC	**Fox Airport**	**0.93**	**37**	Pn	**Pg**	**01 11 29.5**	**-0.9**
PLEC	**Pleito Hills**	**0.97**	**352**	Pn	**Pg**	**01 11 30.6**	**-0.7**
CHNC	**Chino**	**1.02**	**90**	Pn	**Pg**	**01 11 31.8**	**-0.4**
SYP	**Santa Ynez Pea**	**1.03**	**301**	Pn	**Pb**	**01 11 31.8**	**-0.1**
TJR	**Tejon Ranch**	**1.03**	**8**	Pn	**Pb**	**01 11 31.1**	**-0.8**
TPO	**Tropico Hills**	**1.04**	**33**	Pn	**Pb**	**01 11 30.9**	**-1.2**
MARC	**Maricopa**	**1.06**	**341**	Pn	**Pb**	**01 11 31.9**	**-0.4**
BFSC	**Mount Baldy Ra**	**1.06**	**77**	Pn	**Pb**	**01 11 32.4**	**-0.2**
BFSC	**Mount Baldy Ra**	**1.06**	**77**	⇓P	**Pb**	**01 11 31.4**	**-1.1**
	baz=1.0,SNR=1000						
BFSC				⇑S	**Sb**	**01 11 45.7**	**-0.6**
	baz=1.0						
ARVC	**Arvin**	**1.12**	**3**	Pn	**Pb**	**01 11 32.9**	**-0.6**
ARVC	**Arvin**	**1.12**	**3**	⇓P	**Pb**	**01 11 32.4**	**-1.1**
	baz=1.1,SNR=594						
ARVC				⇓S	**Sb**	**01 11 46.5**	**-1.4**
	baz=1.1						
FIGC	**Figueroa Mtn.**	**1.15**	**309**	Pn	**Pb**	**01 11 32.4**	**-1.5**
EDW2	**Edwards Air Fo**	**1.16**	**41**	Pn	**Pb**	**01 11 33.5**	**-0.6**
EDW2	**Edwards Air Fo**	**1.16**	**41**	⇓P	**Pb**	**01 11 32.8**	**-1.3**
	baz=1.1,SNR=1000						
EDW2				⇓S	**Sb**	**01 11 47.7**	**-1.3**
	baz=1.1						
PKM	**Peak Mountain**	**1.16**	**320**	Pn	**Pb**	**01 11 33.7**	**-0.6**
PKM	**Peak Mountain**	**1.16**	**320**	⇑P	**Pb**	**01 11 33.3**	**-0.9**
	baz=1.1,SNR=413						
PKM				⇓S	**Sb**	**01 11 48.1**	**-1.1**
	baz=1.1						
GAV	**Glen Avon**	**1.17**	**89**	Pn	**Pb**	**01 11 34.1**	**-0.1**
SS2	**San Sevaine**	**1.19**	**80**	Pn	**Pn**	**01 11 34.0**	**-0.3**
TEJ	**El Tejon**	**1.24**	**8**	Pn	**Pn**	**01 11 34.5**	**-0.5**
EL2	**El Mirage 2**	**1.25**	**65**	Pn	**Pn**	**01 11 33.8**	**-1.4**
RVR	**Riverside**	**1.28**	**90**	Pn	**Pn**	**01 11 34.8**	**-0.8**
SME	**Santa Rosa Min**	**1.31**	**97**	Pn	**Pn**	**01 11 35.4**	**-0.6**
CSP	**Cedar Springs**	**1.32**	**77**	Pn	**Pn**	**01 11 36.2**	**-0.1**
ADO	**Adelanto Recei**	**1.34**	**66**	Pn	**Pb**	**01 11 37.0**	**-0.2**
BAKC	**Calstate**	**1.35**	**353**	Pn	**Pn**	**01 11 36.0**	**-0.5**
CCAC	**Calif City Air**	**1.36**	**33**	Pn	**Pn**	**01 11 36.2**	**-0.6**
HYS	**Haystack Butte**	**1.40**	**52**	Pn	**Pn**	**01 11 37.2**	**-0.2**
CRGC	**Crocker Grade**	**1.41**	**332**	Pn	**Pn**	**01 11 37.1**	**-0.3**
VTV	**Victorville**	**1.42**	**67**	Pn	**Pn**	**01 11 37.3**	**-0.4**
WBMM	**Breckenridge M**	**1.47**	**11**	Pn	**Pg**	**01 11 42.5**	**+1.8**
MURC	**Murrieta**	**1.48**	**105**	⇑P	**Pn**	**01 11 37.7**	**-0.7**
	baz=1.5,SNR=379						
CFT	**Crafton Hills**	**1.50**	**88**	Pn	**Pn**	**01 11 38.5**	**-0.1**
CARC	**Carrizo Plain**	**1.51**	**330**	Pn	**Pb**	**01 11 39.4**	**-0.7**
BCH	**Branch Mountai**	**1.52**	**321**	Pn	**Pn**	**01 11 38.7**	**-0.4**
DTP	**Desert Tortois**	**1.54**	**35**	Pn	**Pn**	**01 11 38.7**	**-0.5**
SMMC	**Simmler**	**1.58**	**326**	⇑Pb	**Pn**	**01 11 39.9**	**+0.1**
	baz=1.5,SNR=78						
BACC	**Bachelor Mtn.**	**1.61**	**104**	Pn	**Pn**	**01 11 39.4**	**-0.8**
BBSC	**Beaumont Base**	**1.61**	**92**	Pn	**Pn**	**01 11 40.1**	**0.0**
DGR	**Domenigoni Val**	**1.62**	**102**	Pn	**Pn**	**01 11 39.7**	**-0.7**
GORC	**Green Oak Ranc**	**1.64**	**121**	Pn	**Pn**	**01 11 39.5**	**-1.0**
YEG	**Yeguas Mountai**	**1.67**	**329**	Pn	**Pn**	**01 11 41.3**	**+0.2**
BBRC	**Big Bear Solar**	**1.67**	**81**	⇑Pb	**Pn**	**01 11 41.5**	**+0.3**
	baz=1.6,SNR=68						
BBRC				⇓S	**Sn**	**01 12 01.8**	**-0.6**
	baz=1.6						
POB	**Polly Butte**	**1.69**	**100**	Pn	**Pn**	**01 11 41.3**	**0.0**
JFS	**Joseph F. Stat**	**1.69**	**37**	Pn	**Pn**	**01 11 40.8**	**-0.6**
ISA	**Isabella**	**1.69**	**12**	⇓*i*Pn	**Pn**	**01 11 41.3**	**-0.1**
ISA				*e*Sn	**Sn**	**01 12 01.6**	**-1.2**
ISA				*e*Sg	**Sb**	**01 12 04.6**	**+0.3**
ISA	**Isabella**	**1.69**	**12**	⇑Pb	**Pn**	**01 11 41.3**	**-0.1**
	baz=1.6,SNR=773						
ISA				⇑Sb	**Sn**	**01 12 02.9**	**+0.1**
	baz=1.6						
WHFM	**Hanning Flat**	**1.75**	**15**	Pn	**Pn**	**01 11 41.8**	**-0.4**
WASM	**Alta Sierra Ca**	**1.75**	**9**	Pn	**Pn**	**01 11 41.8**	**-0.5**
SIL	**Silver Peak**	**1.76**	**78**	Pn	**Pn**	**01 11 42.8**	**+0.4**
BLKC	**Black Mountain**	**1.77**	**52**	Pn	**Pn**	**01 11 41.9**	**-0.5**
LRMC	**Laurel Mountai**	**1.78**	**34**	⇑P	**Pn**	**01 11 42.0**	**-0.6**
	baz=1.7,SNR=97						
LRMC				⇓S	**Sn**	**01 12 04.1**	**-0.9**
	baz=1.7						
RRX	**Edison Barstow**	**1.81**	**60**	⇓P	**Pn**	**01 11 42.6**	**-0.3**
	baz=1.8,SNR=115						
FLSC	**Flash Two Peak**	**1.82**	**58**	Pn	**Pn**	**01 11 42.9**	**-0.3**
PLM	**Palomar**	**1.83**	**110**	Pn	**Pn**	**01 11 43.4**	**+0.1**
VES	**Vestal, Richgr**	**1.84**	**356**	⇑P	**Pn**	**01 11 42.8**	**-0.5**
	baz=1.8,SNR=247						
WWPM	**Walker Pass**	**1.86**	**21**	Pn	**Pn**	**01 11 43.4**	**-0.3**
CRY	**Cary Ranch**	**1.86**	**103**	Pn	**Pn**	**01 11 43.8**	**+0.1**
109C	**Camp Elliot, M**	**1.88**	**126**	⇑P	**Pn**	**01 11 42.8**	**-1.0**
	baz=1.9,SNR=101						
DPP	**Dos Picos Cty**	**1.93**	**121**	Pn	**Pn**	**01 11 44.9**	**+0.4**
SRTC	**Snort**	**1.94**	**29**	Pn	**Pn**	**01 11 44.4**	**-0.3**
BZNA	**Buzz No.'s Pla**	**1.94**	**105**	Pn	**Pn**	**01 11 44.7**	**-0.1**
DNR	**Dunn Ranch,Anz**	**1.95**	**102**	Pn	**Pn**	**01 11 45.2**	**+0.3**
RMR	**Rimrock**	**1.95**	**83**	Pn	**Pn**	**01 11 45.6**	**+0.6**
SNDA	**J Saunders Pla**	**1.97**	**103**	Pn	**Pn**	**01 11 45.4**	**+0.3**
WSHM	**Spangler Hills**	**1.97**	**36**	Pn	**Pn**	**01 11 44.4**	**-0.8**
FRD	**Ford Ranch**	**1.99**	**104**	Pn	**Pn**	**01 11 45.5**	**0.0**
NMC	**Nine Mile Cany**	**2.01**	**24**	Pn	**Pn**	**01 11 45.1**	**-0.7**
TOW	**Tower One**	**2.03**	**27**	Pn	**Pn**	**01 11 45.6**	**-0.4**
EML	**El Monte Cty P**	**2.05**	**122**	Pn	**Pn**	**01 11 45.4**	**-0.9**
PFO	**Pinyon Flat Ob**	**2.08**	**100**	⇑*e*Pn	**Pn**	**01 11 46.7**	**-0.1**
PFO				*e*Pg	**Pg**	**01 11 53.8**	**+1.4**
PFO				*e*Sn	**Sn**	**01 12 13.8**	**+1.3**
PFO				Lg	Lg	01 12 16.1	
PFO				*e*Sg	**Sb**	**01 12 16.9**	**+1.3**
PFO	**Pinyon Flat Ob**	**2.08**	**100**	Pn	**Pn**	**01 11 46.7**	**-0.1**
	36nm,0.3s,baz=285,slow=12,SNR=277						
PFO				Sn	**Sn**	**01 12 12.3**	**-0.2**
	116nm,0.3s,baz=312,slow=15,SNR=6.7						
PFO				Lg	Lg	01 12 16.1	
	291nm,0.3s,baz=17,slow=16,SNR=19						
PFO	**Pinyon Flat Ob**	**2.08**	**100**	⇑P	**Pn**	**01 11 46.7**	**-0.1**
	baz=2.1,SNR=253						
ALV	**Alvord Mountai**	**2.16**	**60**	Pn	**Pn**	**01 11 47.8**	**0.0**
GSC	**Goldstone**	**2.17**	**53**	⇑*i*Pn	**Pn**	**01 11 47.9**	**0.0**
GSC				*e*Pg	**Pg**	**01 11 53.9**	**0.0**

GSC				eSg	Sb	01 12 17.3	-0.6
GSC	Goldstone	2.17	53	⇑P	Pn	01 11 47.9	0.0
	baz=2.1,SNR=490						
GSC				⇓Sb	Sb	01 12 18.2	+0.3
	baz=2.1						
HEC	Hector,Ludlow	2.29	68	⇓P	Pn	01 11 49.6	0.0
	baz=2.2,SNR=149						
HEC				⇓S	Sn	01 12 17.3	-0.1
	baz=2.2						
BAR	Barrett	2.29	125	ePn	Pn	01 11 48.8	-0.7
BAR				eSn	Sn	01 12 16.3	-1.2
MONP	Monument Peak	2.36	117	⇓P	Pn	01 11 50.4	-0.3
	baz=2.4,SNR=99						
MONP				⇓S	Sn	01 12 19.7	+0.3
	baz=2.4						
MPMC	Manual Prospec	2.36	29	⇑P	Pn	01 11 49.9	-0.7
	baz=2.3,SNR=439						
TPC	Twentynine Pal	2.38	87	Pn	Pn	01 11 50.7	-0.1
TPC				ScS	ScS	01 26 47.5	+3.2
CBKC	Canebrake	2.48	116	Pn	Pn	01 11 52.3	+0.2
DAC	Darwin (Calif)	2.51	25	ePn	Pn	01 11 52.4	-0.3
DAC				ePg	Pb	01 11 58.2	+0.9
DAC				eSg	Sg	01 12 32.3	-0.9
PARM	Anticline Ridg	2.53	333	Pn	Pn	01 11 52.5	-0.3
QSM	Queen of Sheba	2.58	40	Pn	Pn	01 11 53.8	+0.4
CRR	Carrizo Plain	2.70	114	Pn	Pn	01 11 57.1	+2.0
PAPM	Alder Peak	2.77	314	Pn	Pn	01 11 55.3	-0.9
FRK	Frink	2.79	101	Pn	Pn	01 11 56.8	+0.4
GMRC	Granite Mounta	2.80	73	Pn	Pn	01 11 56.4	-0.2
GMRC	Granite Mounta	2.80	73	⇓P	Pn	01 11 56.2	-0.4
	baz=2.8,SNR=61						
GMRC				⇑S	Sn	01 12 28.8	-1.3
	baz=2.8						
HVC	Hernandez Vall	2.83	327	Pn	Pn	01 11 56.7	-0.3
LRC	Lone Oak Road	2.84	323	Pn	Pn	01 11 56.3	-0.7
YUH	Yuha Desert	2.84	118	Pn	Pn	01 11 56.2	-0.9
GRP	Granite Pass	2.85	73	Pn	Pn	01 11 57.1	-0.1
GWY	Greenwater Val	2.85	40	Pn	Pn	01 11 56.8	-0.5
BC3	Big Chuckawall	2.90	96	⇑P	Pn	01 11 57.5	-0.5
	baz=2.9,SNR=70						
DANC	Danby, Needles	2.99	77	Pn	Pn	01 11 58.9	-0.2
DANC				ScS	ScS	01 26 46.8	+2.3
SGL	Mount Signal	2.99	116	Pn	Pn	01 11 59.4	+0.3
BPIM	Pinnacles	3.09	324	Pn	Pn	01 11 59.8	-0.7
BPOM	Post Ranch	3.23	314	Pn	Pn	01 12 02.0	-0.4
LDFC	Landfair	3.32	70	ePn	Pn	01 12 03.3	-0.4
LDFC				eSg	Sb	01 12 54.6	+3.6
LCH	Last Change Ra	3.38	17	Pn	Pn	01 12 05.5	+0.8
SAO	San Andreas Ge	3.45	324	ePn	Pn	01 12 04.4	-1.0
FRP	Fremont Peak	3.46	323	Pn	Pn	01 12 05.0	-0.7
GLA	Glamis	3.54	104	ePn	Pn	01 12 06.3	-0.5
GLA				ePg	Pg	01 12 18.8	-1.4
GLA				eSg	Sg	01 13 03.0	-3.1
Y12C	Blythe	3.66	93	⇓P	Pn	01 12 07.6	-0.7
	baz=3.6,SNR=11						
SHPR	Sheep Range	3.96	50	Pn	Pn	01 12 11.9	-0.6
CMB	Columbia Colle	4.20	344	ePn	Pn	01 12 16.6	+0.8
CMB				ePg	Pg	01 12 30.2	-2.6
W13A	Hualapai Mount	4.29	74	⇓P	Pn	01 12 17.5	+0.3
	baz=4.2,SNR=123						
NVAR	Mina Array Bea	4.44	6	Pn	Pn	01 12 20.9	+1.5
NVAR				Pg	Pb	01 12 28.2	-2.0
NVAR				Lg	Lg	01 13 29.3	
NVAR	Mina Array Bea	4.44	6	Pn	Pn	01 12 20.9	+1.5
	1.0nm,0.3s,baz=190,slow=14,SNR=24						
NVAR				Pg	Pb	01 12 28.2	-2.0
	2.1nm,0.3s,baz=196,slow=16,SNR=31						
NVAR				Lg	Lg	01 13 29.3	
	6.9nm,0.3s,baz=220,slow=21,SNR=4.6						
NVAR				LR	LR	01 14 23.3	
	comp=Z,349nm,18.3s,baz=115,slow=43						
NV11	Mina Array Sit	4.46	8	ePn	Pn	01 12 20.6	+1.1
NV11				ePg	Pb	01 12 33.2	+2.7
NV11				eSg	Sb	01 13 29.2	+5.2
Y14A	Wickenburg	4.91	89	⇓P	Pn	01 12 25.5	0.0
	baz=4.9,SNR=117						
WCN	Washoe City	5.33	353	ePn	Pn	01 12 30.9	-0.6
	29nm,0.8s						
WCN				ePg	Pb	01 12 45.6	+0.3
WCN				eSg	Sb	01 13 52.9	+3.8
CCUT	Cedar City	5.73	50	ePn	Pn	01 12 38.4	+1.4
	19nm,0.5s						
CCUT				ePg	Pg	01 12 57.4	-4.8
CCUT				eSg	Sb	01 14 02.5	+1.8
ARUT	Antelope Range	5.83	48	ePn	Pn	01 12 39.8	+1.4
	57nm,0.6s						
ARUT				ePg	Pb	01 12 58.3	+4.6
U15A	North Rim	5.93	64	⇓P	Pn	01 12 41.5	+1.6
	baz=5.9,SNR=56						
BEKR	Beckworth	5.97	349	ePn	Pn	01 12 42.0	+1.8
	6.0nm,0.7s						
BEKR				eSg	Sb	01 14 10.0	+2.6
X16A	Lo Mia Camp, P	6.20	84	⇑P	Pn	01 12 44.1	+0.6
	baz=6.2,SNR=37						
WUAZ	Wupatki	6.38	74	ePn	Pn	01 12 47.3	+1.4
	28nm,0.7s						
WUAZ				eSg	Sg	01 14 30.5	-6.8
TUC	Tucson	7.02	102	ePn	Pn	01 12 55.7	+1.1
	1.1nm,0.8s						
TUC				eSg	Sg	01 14 57.5	-0.2
MVU	Marysvale	7.03	48	ePn	Pn	01 12 57.0	+2.1
	20nm,0.6s						
MVU				ePg	Pg	01 13 21.8	-5.1
MVU				eSg	Sb	01 14 48.6	+11
MSU	Marysvale	7.06	48	ePn	Pn	01 12 57.9	+2.6
	17nm,0.6s						
ELK	Elko	7.34	22	ePn	Pn	01 13 00.5	+1.4
	15nm,0.8s						
ELK				Sn	Sn	01 14 22.6	+0.6
ELK				Lg	Lg	01 15 03.0	
ELK	Elko	7.34	22	Pn	Pn	01 13 00.9	+1.8
	0.5nm,0.3s,baz=213,slow=12,SNR=17						
ELK				Sn	Sn	01 14 22.6	+0.6
	0.3nm,0.3s,baz=230,slow=16,SNR=2.4						
ELK				Lg	Lg	01 15 03.0	
	1.0nm,0.3s,baz=294,slow=18,SNR=3.8						
DUG	Dugway	7.87	36	ePn	Pn	01 13 09.6	+3.3
	3.0nm,1.0s						
YBH	Yreka Blue Hor	8.28	340	Pn	Pn	01 13 15.3	+3.5
YBH				Lg	Lg	01 15 17.6	
YBH	Yreka Blue Hor	8.28	340	Pn	Pn	01 13 15.4	+3.5
	0.0nm,0.3s,baz=143,slow=6.0,SNR=2.2						
YBH				Lg	Lg	01 15 17.6	
	0.1nm,0.3s,baz=125,slow=19,SNR=2.1						
WVOR	Wild Horse Val	8.42	1	ePn	Pn	01 13 16.2	+2.4
	4.7nm,1.1s						
SRU	San Rafael	8.45	51	ePn	Pn	01 13 17.6	+3.2
	14nm,0.6s						
DAU	Daniels Canyon	8.84	41	ePn	Pn	01 13 21.3	+1.5
	5.7nm,0.8s						
JLU	Jordanelle	8.87	40	ePn	Pn	01 13 25.0	+4.9
	7.0nm,0.8s						
P18A	Preston Nutter	8.93	49	⇑P	Pn	01 13 26.0	+5.0
	baz=8.9,SNR=30						
MVCO	Mesa Verde	9.06	66	ePn	Pn	01 13 25.4	+2.6
	14nm,0.7s						
PV04	Paradox Valley	9.20	59	ePn	Pn	01 13 27.3	+2.7
PV01	Paradox Valley	9.33	61	ePn	Pn	01 13 29.0	+2.6
	1μm,0.7s						
HWUT	Hardware Ranch	9.56	35	ePn	Pn	01 13 31.3	+1.8
	4.6nm,0.9s						
MFID	Camas Ranch	9.70	13	ePn	Pn	01 13 34.2	+2.8
	4.5nm,1.0s						
HLID	Hailey	10.17	19	ePn	Pn	01 13 38.7	+0.9
	5.8nm,1.3s						
ANMO	Albuquerque	10.32	81	ePn	Pn	01 13 41.5	+1.5
ANMO				Lg	Lg	01 16 35.5	
ANMO	Albuquerque	10.32	81	Pn	Pn	01 13 41.4	+1.3
	0.1nm,0.3s,baz=265,slow=14,SNR=3.4						
ANMO				Lg	Lg	01 16 35.5	
	0.1nm,0.3s,baz=195,slow=19,SNR=3.1						
N20A	Spence Gulch,	10.87	48	⇓P	Pn	01 13 53.3	+5.8
	baz=11,SNR=12						
SMCO	Snowmass	10.89	58	ePn	Pn	01 13 50.5	+2.5
	2.7nm,0.5s						
N21A	Black Mountain	11.29	50	P	Pn	01 13 58.6	+5.4
	baz=11,SNR=8.0						
BW06	Boulder Array	11.41	37	ePn	Pn	01 13 58.9	+4.0
	2.7nm,1.0s						
PDAR	Pinedale Array	11.41	37	Pn	Pn	01 13 59.1	+4.2
PDAR	Pinedale Array	11.41	37	Pn	Pn	01 13 59.1	+4.2
	0.1nm,0.3s,baz=221,slow=11,SNR=9.8						
H14A	Leadore	11.43	20	⇓P	Pn	01 14 01.4	+6.3
	baz=11,SNR=7.6						
LOHW	Long Hollow	11.57	32	ePn	Pn	01 14 00.9	+3.9
	5.4nm,1.0s						
MOOW	Moose Ponds	11.62	31	ePn	Pn	01 13 58.8	+1.1
MCMT	McKenzie Canyo	11.78	22	ePn	Pn	01 14 03.2	+3.3
	7.4nm,1.5s						
GDL2	Guadalupe Moun	12.33	94	ePn	Pn	01 14 12.7	+5.2
	1.8nm,0.6s						
LPIG	La Paz	12.40	140	LR	LR	01 18 42.6	
	comp=Z,18nm,18.7s,baz=353,slow=36						
L22A	Ellis Ranch, M	12.68	47	⇑P	Pn	01 14 16.4	+4.2
	baz=13,SNR=8.7						
LRM	Limekiln Ridge	12.80	21	ePn	Pn	01 14 13.8	0.0
BOZ	Bozeman (W)	12.90	23	ePn	Pn	01 14 20.1	+5.0
	2.3nm,0.8s						
426A	McDonald Obser	13.02	101	⇑P	Pn	01 14 19.4	+2.5
	baz=13,SNR=7.3						
Z27A	Tatum	13.10	89	⇓P	Pn	01 14 20.2	+2.3
	baz=13,SNR=6.2						
I21A	Big Trails, Te	13.32	39	⇑P	Pn	01 14 25.1	+4.2
	baz=13,SNR=6.0						
H20A	Greybull	13.44	36	⇑P	Pn	01 14 26.9	+4.4
	baz=13,SNR=5.5						
F17A	Fitzpatrick Pl	13.46	26	⇓P	P	01 14 28.9	-3.1
	baz=13,SNR=7.0						
427A	Hayter Ranch,	13.47	99	⇑P	P	01 14 28.6	-3.7
	baz=13,SNR=6.9						
E16A	East Helena	13.67	22	⇑P	P	01 14 30.5	-3.9
	baz=14,SNR=5.4						
TXAR	Lajitas Array	13.79	106	Pn	Pn	01 14 31.0	+3.7
TXAR	Lajitas Array	13.79	106	Pn	Pn	01 14 31.0	+3.7
	0.1nm,0.3s,baz=289,slow=12,SNR=13						
TXAR				LR	LR	01 19 41.7	
	comp=Z,74nm,19.6s,baz=270,slow=37						
F18A	Big Timber	13.81	28	⇓P	P	01 14 33.8	-2.1
	baz=14,SNR=6.5						
SLMT	Seeley Lake	13.84	16	ePn	P	01 14 35.3	-1.1
	2.6nm,0.7s						
E17A	Martinsdale	13.87	24	⇓P	P	01 14 33.5	-3.2
	baz=14,SNR=7.3						
D15A	Lincoln	13.89	18	⇓P	P	01 14 35.4	-1.5
	baz=14,SNR=10						
428A	Kincaid Ranch,	14.10	99	⇑P	P	01 14 37.1	-2.1
	baz=14,SNR=6.9						
D16A	Dana Ranch, Ca	14.16	21	⇓P	P	01 14 39.9	+0.1
	baz=14,SNR=10						
BSMT	Bassoo Peak	14.18	11	eP	Pn	01 14 36.3	+3.7
	3.6nm,1.0s						
528A	Cox Ranch, San	14.20	101	⇑P	P	01 14 38.9	-1.3
	baz=14,SNR=5.8						
E18A	Harlowton	14.29	26	⇑P	P	01 14 41.5	+0.2
	baz=14,SNR=7.0						
NEW	Newport	14.31	5	LR	LR	01 20 29.5	
	comp=Z,121nm,18.4s,baz=327,slow=39						
628A	Black Gap, Mar	14.36	104	P	P	01 14 40.4	-1.7
	baz=14,SNR=12						
D17A	Six Diamond Ra	14.53	23	⇑P	P	01 14 42.4	-1.6
	baz=14,SNR=7.4						
429A	Davenport Ranc	14.78	99	⇓P	P	01 14 45.7	-1.0
	baz=15,SNR=6.4						
RSSD	Black Hills	15.32	44	ePn	Pn	01 14 47.5	-0.7
530A	J-C Ranch, Com	15.38	100	⇓P	P	01 14 54.2	+0.8
	baz=15,SNR=8.6						
WALA	Waterton Lakes	15.49	12	ePn	Pn	01 14 51.8	+1.5
	0.2nm,0.8s						
A14A	Double T Ranch	15.50	14	⇑P	P	01 14 56.3	+1.6
	baz=15,SNR=6.8						
B17A	L&G Farms, Che	15.51	21	⇑P	P	01 14 56.4	+1.6
	baz=16,SNR=24						
EGMT	Eagleton	15.60	23	ePn	Pn	01 14 53.5	+1.9
	19nm,1.0s						
EGMT	Eagleton	15.60	23	⇓P	P	01 14 56.3	+0.5
	baz=16,SNR=7.7						
B18A	Beardsley Farm	15.92	23	⇑P	P	01 15 01.0	+1.7
	baz=16,SNR=5.3						
531A	Rocksprings	16.03	99	⇓P	P	01 14 59.8	-0.8
	baz=16,SNR=15						
A17A	Triple J Farms	16.13	20	⇓P	P	01 15 02.6	+0.9
	baz=16,SNR=9.4						
Z32A	Haskell	16.20	87	⇑P	P	01 15 01.8	-0.6
	baz=16,SNR=12						
432A	Menard	16.44	96	⇑P	P	01 15 04.1	-1.0
	baz=16,SNR=6.1						
532A	Rocksprings	16.57	98	⇑P	P	01 15 05.9	-0.7
	baz=16,SNR=10						
A19A	Klindworth Far	16.72	24	⇓P	P	01 15 09.5	+1.3
	baz=17,SNR=8.4						
732A	Laxson Ranch,	17.00	103	⇑P	P	01 15 12.7	+1.3
	baz=17,SNR=9.6						
ULM	Lac du Bonnet	23.42	39	P	P	01 16 20.6	0.0
ULM	Lac du Bonnet	23.42	39	P	P	01 16 20.6	0.0
	1.9nm,0.4s,baz=233,slow=11,SNR=3.9						
ULM				LR	LR	01 25 12.0	
	comp=Z,61nm,18.6s,baz=322,slow=36						
FFC	Flin Flon	23.87	25	eP	P	01 16 25.2	+0.3
	3.5nm,0.9s						
DLBC	Dease Lake	25.55	346	P	P	01 16 42.8	+2.5
DLBC	Dease Lake	25.55	346	P	P	01 16 42.8	+2.5
	2.0nm,0.8s,baz=212,slow=9.2,SNR=3.8						
DLBC				LR	LR	01 27 39.4	
	comp=Z,108nm,21.3s,baz=120,slow=39						
COWI	Conover	25.64	53	eP	P	01 16 41.6	+0.4
	4.7nm,0.7s						
CMIG	Matias Romero	27.34	122	P	P	01 16 56.6	-0.2
CMIG	Matias Romero	27.34	122	P	P	01 16 56.6	-0.2
	0.5nm,0.3s,baz=320,slow=16,SNR=2.7						
CMIG				LR	LR	01 28 42.3	
	comp=Z,50nm,19.5s,baz=181,slow=38						
YKA	Yellowknife Ar	28.64	4	P	P	01 17 09.0	+1.1
YKA	Yellowknife Ar	28.64	4	P	P	01 17 09.0	+1.1
	0.2nm,0.6s,baz=192,slow=8.6,SNR=8.2						
INK	Inuvik	35.35	351	P	P	01 18 08.3	+1.6
INK	Inuvik	35.35	351	P	P	01 18 08.3	+1.6
	0.9nm,0.8s,baz=152,slow=8.4,SNR=3.9						
MDJ	Mudanjiang	80.08	318	P	P	01 23 21.4	0.0
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.7s						
FINES	FINESS Array B	80.72	16	P	P	01 23 25.5	+1.1
FINES	FINESS Array B	80.72	16	P	P	01 23 25.5	+1.1
	comp=Z,0.8nm,0.7s,baz=18,slow=6.6,SNR=5.4						
DAVOX	Davos/Dischmat	87.32	32	LR	LR	02 03 12.5	
	comp=Z,176nm,21.3s,baz=85,slow=36						
HHC	Hu-ho-hao-te	92.20	324	eP	P	01 24 21.2	-0.4
HHC				pP	pP	01 24 25.3	-1.6
HHC				sP	sP	01 24 30.0	+1.2
HHC				PP	PP	01 28 02.9	+1.9
HHC				SKS	SKSac	01 34 48.5	-5.9
HHC				S	S	01 35 20.6	-3.2
HHC				LR	LR		
	comp=Z,220nm,15.5s						
KURK	Kurchatov	94.24	349	eP	P	01 24 32.1	+1.5
	comp=Z,4.0nm,1.4s						
WMQ	Urumqi	98.83	341	eP	Pdif	01 24 55.9	+4.2

*AUST **02** 01:33:57.8, 8°.38S×107°.88E, h60km*
*DJA **02** 01:33:58.7±0.7, 8°S±3°×10°8E±°, h9km±6km, M4.3/14, mb4.2/1, mB5.9/1, MLv4.4/14, Mw(mB)5.5/1*
*ISCJB **02** 01:33:58.3±0.5, 8°.48S±0°.04×107°.87E±0°.03, h58km±6km, mb3.9/8, MS3.4/2, Error ellipse: s-maj=7.7km s-min=5.2km az=159.6*
*IDC **02** 01:34:05.6±14.0, 8°.02S×108°.14E, h104km±127km, mb3.7/8, mb1 3.8/8, mb1mx3.5/22, mbtmp3.7/8, MS3.5/2, Ms1 3.5/2, ms1mx2.7/38, Error ellipse: s-maj=91.1km s-min=23.4km az=52.0*
ISC 02 01:33:59.7±0.8**, 8°.47S**±0°.04×**107°.91E**±0°.03**, h59**km±8km**, n39,** σ2s13/44**, mb4.0**/8**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.91	354	P	Pn	01 34 14.3	-2.4
CISI				S	Sn	01 34 25.2	-4.0
CISI	Cisompet, Garu	0.91	354	P	Pn	01 34 13.9	-2.8
	baz=0.8,SNR=52						
CISI				S	Sn	01 34 25.6	-3.6
	baz=0.8,SNR=5.1						
CLJI	Cilicap	1.33	56	P	Pn	01 34 23.4	+1.3
CLJI				S	Sn	01 34 38.6	-0.2
LEM	Lembang	1.66	350	P	Pn	01 34 26.9	+0.2
LEM				S	Sn	01 34 49.6	+2.5
LEM	Lembang	1.66	350	P	Pn	01 34 26.6	-0.1
	baz=1.6,SNR=65						
TGJI	Tegal	2.00	37	P	Pn	01 34 29.6	-1.5
BJII	Banjamegara	2.11	58	P	Pn	01 34 33.5	+0.7
BJII				S	Sn	01 34 57.6	-0.4
DBJI	Dramaga	2.22	329	P	Pn	01 34 35.1	+0.8
DBJI				S	Sn	01 35 03.6	+2.9
UGM	Wanagama	2.65	78	P	Pn	01 34 40.0	-0.1
UGM	Wanagama	2.65	78	P	Pn	01 34 38.5	-1.5
	baz=2.7,SNR=64						
UGM				S	Sn	01 35 08.5	-2.6
	baz=2.7,SNR=4.4						
CGJI	Cibinong	2.87	310	P	Pn	01 34 42.1	-0.9
SMRI	Semarang	2.88	61	P	Pn	01 34 44.0	+0.8
SMRI	Semarang	2.88	61	P	Pn	01 34 43.6	+0.3
	baz=2.9,SNR=11						
SMRI				S	Sn	01 35 16.3	-0.4
	baz=2.9,SNR=6.3						
XMI	Christmas Isla	2.94	228	P	Pn	01 34 44.3	+0.2
	baz=3.0,SNR=6.5						
XMI				S	Sn	01 35 15.4	-2.8
	baz=3.0,SNR=9.4						
XMIS	Christmas Isla	2.99	228	P	Pn	01 34 44.5	-0.2
	baz=3.0,SNR=17						
XMIS				S	Sn	01 35 15.9	-3.5
	baz=3.0,SNR=8.8						
PCJI	Pacitan	3.25	85	P	Pn	01 34 48.7	+0.5
PWJI	Pagerwojo	3.88	84	P	Pn	01 34 57.8	+0.9
SJI	Sawahan	3.89	79	P	Pn	01 34 59.1	+2.0
KASI	Kota Agung	4.48	311	P	Pn	01 35 07.6	+2.5
PPBI	Pangkal Pinang	6.51	344	P	Pn	01 35 33.8	+0.8
WSI	Waingapu	12.29	97	P	Pn	01 36 50.2	-1.9
	baz=12,SNR=8.5						
PCI	Palu	14.06	58	S	Sn	01 39 45.4	-5.3
	baz=14,SNR=6.0						
LUWI	Luwuk	16.54	64	P	P	01 37 56.2	+6.6
	baz=16,SNR=4.1						
MEEK	Meekatharra	20.73	152	P	Pn	01 38 44.4	+6.0
	baz=21,SNR=7.6						
MEEK				S	S	01 42 20.2	-3.6
	baz=21,SNR=4.9						
MTN	Manton Dam	23.23	103	S	Sn	01 43 31.1	-0.6
	baz=23,SNR=5.9						
FAKI	Fak Fak	24.83	79	P	P	01 39 06.1	-11
	baz=25,SNR=3.5						
NWAO	Narrogin (SRO)	25.82	162	LR	LR	01 48 53.7	
	comp=Z,93nm,19.6s,baz=10,slow=34						
WRA	Warramunga Arr	28.00	117	P	P	01 39 47.0	+1.7
	0.9nm,0.6s,baz=287,slow=11,SNR=3.7						
ASAR	Alice Springs	29.11	124	P	P	01 39 57.5	+2.3
	0.4nm,0.4s,baz=303,slow=7.9,SNR=5.9						
ASAR				pP	pP	01 40 12.1	+2.2
	0.3nm,0.4s,baz=304,slow=9.0,SNR=2.3						
STKA	Stephens Creek	39.00	131	P	P	01 41 23.0	+2.5
	3.6nm,0.8s,baz=307,slow=8.9,SNR=10						
STKA				pP	pP	01 41 38.4	+2.8
	2.9nm,0.6s,baz=332,slow=10,SNR=3.2						
STKA	Stephens Creek	39.00	131	P	P	01 41 23.1	+2.5
	baz=39,SNR=5.7						
SONM	Songino Array	56.08	359	LR	LR	02 09 27.0	
	comp=Z,44nm,19.1s,baz=327,slow=38						
MKAR	Makanchi Array	59.57	340	P	P	01 43 55.7	-1.5
	1.3nm,0.4s,baz=154,slow=7.5,SNR=28						
ZALV	Zalesovo Beam	65.17	345	P	P	01 44 33.4	-1.0
	0.7nm,0.4s,baz=149,slow=5.5,SNR=4.6						
KBZ	Khabaz	78.34	318	P	P	01 45 54.2	+0.5
	1.0nm,0.7s,baz=149,slow=5.6,SNR=4.7						
BRTR	Keskin Array B	83.47	312	P	P	01 46 21.2	-0.1
	0.5nm,0.6s,baz=149,slow=5.5,SNR=5.3						
ARCES	ARCESS Array B	95.22	340	P	P	01 47 15.7	-0.8
	0.7nm,0.8s,baz=91,slow=9.0,SNR=3.9						
YKA	Yellowknife Ar	117.92	21	PKP	PKPdf	01 52 38.4	-0.9
	0.1nm,0.4s,baz=325,slow=1.0,SNR=3.2						
TXAR	Lajitas Array	143.83	51	pPKP	pPKPdf	01 53 46.6	0.0
	0.2nm,0.5s,baz=288,slow=3.7,SNR=2.5						

*IDC **02** 01:34:50.7±1.9, 6°.40S×129°.71E, h0km, mb4.2/1, mb1 3.9/4, mb1mx3.6/19, mbtmp3.8/4, ML3.4/3, Error ellipse: s-maj=72.9km s-min=26.8km az=77.0*
*AUST **02** 01:35:02.8±0.0, 6°.66S×129°.61E, h169km±1km, Error ellipse: s-maj=3.3km s-min=1.4km az=276.0*
*ISCJB **02** 01:35:03.3±0.9, 6°.84S±0°.05×129°.97E±0°.10, h139km, mb3.9/1, Error ellipse: s-maj=13.7km s-min=6.0km az=13.5*
ISC 02 01:35:04.3±1.1**, 6°.92S**±0°.06×**130°.1E**±0°.1**, h139**km**, n10,** σ2s52/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLE	Tual	2.95	65	P	Pn	01 35 57.7	+7.2
	baz=3.3,SNR=3.4						
TLE				S	Sn	01 36 26.9	+0.7
	baz=3.3,SNR=7.6						
FAKI	Fak Fak	4.53	29	P	Pn	01 36 12.5	+1.2
	baz=4.6,SNR=7.4						
FAKI				S	Sn	01 37 02.2	-1.3
	baz=4.6,SNR=7.2						
MTN	Manton Dam	5.98	170	P	Pn	01 36 34.6	+3.9
	baz=6.4,SNR=16						
MTN				S	Sn	01 37 39.4	+1.3
	baz=6.4,SNR=9.1						
KDU	Kakadu	6.20	158	P	Pn	01 36 38.5	+4.9
	baz=6.7,SNR=16						
KDU				S	Sn	01 37 46.1	+2.6
	baz=6.7,SNR=5.1						
FITZ	Fitzroy Crossi	11.92	201	Pn	Pn	01 37 48.9	-1.1
	0.2nm,0.3s,baz=17,slow=10,SNR=21						
FITZ				Sn	Sn	01 39 55.4	-6.2
	0.5nm,0.3s,baz=300,slow=20,SNR=3.7						
FITZ	Fitzroy Crossi	11.92	201	P	Pn	01 37 50.1	+0.1
	baz=12,SNR=10						
WRA	Warramunga Arr	13.60	163	Pn	Pn	01 38 11.6	+0.1
	0.1nm,0.3s,baz=340,slow=14,SNR=2.5						
WRA				Sn	Sn	01 40 36.6	-5.3
	0.6nm,0.3s,baz=341,slow=23,SNR=4.9						
ASAR	Alice Springs	17.06	168	P	Pn	01 38 57.5	+3.0
	0.2nm,0.3s,baz=347,slow=11,SNR=8.4						
QLP	Quilpie	23.76	147	S	S	01 44 26.5	+17
	baz=24,SNR=4.4						
MKAR	Makanchi Array	68.19	327	P	P	01 45 49.1	-0.6
	1.0nm,0.4s,baz=123,slow=8.1,SNR=16						

*IDC **02** 01:50:28.6±1.4, 35°.20N×34°.23E, h0km, mb3.5/3, mb1 3.5/6, mb1mx3.2/26, mbtmp3.4/6, ML2.5/3, Error ellipse: s-maj=71.4km s-min=16.9km az=71.0*
*DDA **02** 01:50:31.0, 34°.83N×34°.13E, h26km, MD3.4*
*ISCJB **02** 01:50:33.8±0.2, 34°.93N±0°.02×34°.00E±0°.03, h54km±5km, mb3.5/3, Error ellipse: s-maj=3.7km s-min=2.8km az=157.4*
*ISK **02** 01:50:33.9, 34°.90N×34°.01E, h22km, MD3.2*
*NIC **02** 01:50:34.4±0.2, 34°.90N×33°.93E, h46km, ML3.4, MW3.0*
*CSEM **02** 01:50:35.2±0.1, 34°.93N×33°.96E, h40km, Mw3.0, Error ellipse: s-maj=3.6km s-min=2.7km az=65.0*
*NSSC **02** 01:50:37.1±1.5, 34°.93N×34°.22E, h40km±999km, MD1.8, ML2.4*
ISC 02 01:50:34.0±0.9**, 34°.95N**±0°.02×**34°.00E**±0°.02**, h48**km±6km**, n98,** σ1s42/135**, mb3.7**/3**, 2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	Paralimni	0.07	28	P	Pn	01 50 42.2	+0.7
	43nm,0.2s						
PHNC				S	Sn	01 50 47.5	+0.7
PHNC	Paralimni	0.07	28	P	Pn	01 50 42.2	+0.7
	43nm,0.2s						
PHNC				S	Sn	01 50 47.5	+0.7
AKIN	Ak˜–nc˜–lar- K	0.44	279	ePG	Pn	01 50 44.2	-0.2
AKIN				eSG	Sn	01 50 51.1	-0.7
AKIN	Ak˜–nc˜–lar- K	0.44	279	ePg	Pn	01 50 44.2	-0.2
AKIN				eSg	Sn	01 50 51.1	-0.7
LFK	Lefkose	0.50	311	ePG	Pn	01 50 45.1	-0.1
LFK	Lefkose	0.50	311	ePg	Pn	01 50 45.1	-0.1
CSS	Prodhromos	0.55	272	P	Pn	01 50 45.5	-0.2
	10nm,0.5s						
CSS				S	Sn	01 50 53.9	-0.2
CSS	Prodhromos	0.55	272	ePG	Pn	01 50 45.4	-0.2
CSS				eSG	Sn	01 50 54.2	+0.1
CSS	Prodhromos	0.55	272	P	Pn	01 50 45.5	-0.2
	10nm,0.5s						
CSS				S	Sn	01 50 53.9	-0.2
CSS				eSg		01 50 54.2	
EREN	Erenkoy	0.60	14	ePG	Pn	01 50 47.2	+0.9
EREN	Erenkoy	0.60	14	ePg	Pn	01 50 47.2	+0.9
MAMC	Mammari	0.68	290	P	Pn	01 50 47.5	+0.2
MAMC	Mammari	0.68	290	P	Pn	01 50 47.5	+0.2
AKDN	Akdeniz- K˜–br	0.91	293	ePG	Pn	01 50 52.2	+1.7
AKDN	Akdeniz- K˜–br	0.91	293	ePg	Pn	01 50 52.2	+1.7
LEF	Lefka	0.92	281	ePG	Pn	01 50 52.9	+2.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LEF	Lefka	0.92	281	ePg	Pn	01 50 52.9	+2.3
SZAC	Souni-Zanaja	0.93	259	P	Pn	01 50 50.4	-0.4
SZAC				S	Sn	01 51 03.1	0.0
SZAC	Souni-Zanaja	0.93	259	P	Pn	01 50 50.4	-0.4
SZAC				S	Sn	01 51 03.1	0.0
ALFC	Alevga	1.16	281	P	Pn	01 50 53.7	-0.2
	4.2nm,0.3s						
ALFC				S	Sn	01 51 08.8	+0.1
ALFC	Alevga	1.16	281	P	Pn	01 50 53.7	-0.2
	4.2nm,0.3s						
ALFC				S	Sn	01 51 08.8	+0.1
PPCY	Paphos	1.36	268	P	Pn	01 50 57.1	+0.6
PPCY	Paphos	1.36	268	P	Pn	01 50 57.1	+0.6
AKMC	Akamas	1.37	274	⇓P	Pn	01 50 57.7	+1.0
AKMC	Akamas	1.37	274	⇓P	Pn	01 50 57.7	+1.0
BHL	Bhannes	1.72	127	eP	Pn	01 51 01.3	-0.3
BHL	Bhannes	1.72	127	eP	Pn	01 51 01.3	-0.3
HWQ	Hawqa	1.74	112	eP	Pn	01 51 03.3	+1.4
HWQ	Hawqa	1.74	112	eP	Pn	01 51 03.3	+1.4
ARNB	Al Arnab	1.85	60	eP	Pn	01 51 04.1	+0.7
ARNB				eS	Sn	01 51 23.7	-2.0
ARNB				AML	AML	01 51 26.6	
	comp=Z,76nm,0.3s						
ARNB				AML	AML	01 51 27.0	
	comp=E,83nm,0.2s						
ARNB				AML	AML	01 51 28.4	
	comp=N,43nm,0.5s						
ARNB	Al Arnab	1.85	60	eP	Pn	01 51 04.1	+0.7
	SNR=57						
ARNB				eS	Sn	01 51 23.7	-2.0
	comp=N,43nm,0.5s,SNR=58						
GAZI	Gazipasa	1.88	314	eP	Pn	01 51 03.7	+0.1
GAZI				iS	Sn	01 51 24.8	-1.4
GAZI	Gazipasa	1.88	314	eP	Pn	01 51 03.7	+0.1
GAZI				iS	Sn	01 51 24.8	-1.4
ERMK	Ermenek	1.91	333	iP	Pn	01 51 05.7	+1.5
ERMK				iS	Sn	01 51 28.5	+1.4
ERMK	Ermenek	1.91	333	iP	Pn	01 51 05.7	+1.5
ERMK				iS	Sn	01 51 28.5	+1.4
BIDA	Albida	1.91	87	eP	Pn	01 51 05.0	+0.8
BIDA				eS	Sn	01 51 25.2	-1.9
BIDA				AML	AML	01 51 28.7	
	comp=N,144nm,0.6s						
BIDA				AML	AML	01 51 29.1	
	comp=E,82nm,0.3s						
BIDA				AML	AML	01 51 31.6	
	comp=Z,143nm,0.5s						
BIDA	Albida	1.91	87	eP	Pn	01 51 05.0	+0.8
	SNR=57						
BIDA				eS	Sn	01 51 25.2	-1.9
	comp=Z,143nm,0.5s,SNR=58						
KRTS	Karatas	1.97	34	ePN	Pn	01 51 07.3	+2.4
KRTS	Karatas	1.97	34	ePn	Pn	01 51 07.3	+2.4
YAYL	Yayladag	2.04	57	eP	Pn	01 51 06.2	+0.3
YAYL				iS	Sn	01 51 29.6	-0.6
YAYL	Yayladag	2.04	57	eP	Pn	01 51 06.2	+0.3
YAYL				iS	Sn	01 51 29.6	-0.6
WRDH	Warideh	2.06	74	eP	Pn	01 51 06.7	+0.6
WRDH				eS	Sn	01 51 29.2	-1.4
WRDH				AML	AML	01 51 31.7	
	comp=N,97nm,0.5s						
WRDH				AML	AML	01 51 31.7	
	comp=E,126nm,0.3s						
WRDH				AML	AML	01 51 31.8	
	comp=Z,65nm,0.3s						
WRDH	Warideh	2.06	74	eP	Pn	01 51 06.7	+0.6
	SNR=57						
WRDH				eS	Sn	01 51 29.2	-1.4
	comp=Z,65nm,0.3s,SNR=58						
HNTI	Hanita	2.10	152	Pn	Pn	01 51 07.3	+0.6
HNTI				Sn	Sn	01 51 33.3	+1.7
RCY	Rachaya	2.10	133	eP	Pn	01 51 07.9	+1.1
RCY	Rachaya	2.10	133	eP	Pn	01 51 07.9	+1.1
HTY	Hatay	2.10	56	ePN	Pn	01 51 08.1	+1.4
HTY	Hatay	2.10	56	ePn	Pn	01 51 08.1	+1.4
BRBR	Barbar	2.23	133	eP	Pn	01 51 10.1	+1.5
BRBR				eS	Sn	01 51 32.6	-2.5
BRBR				AML	AML	01 51 37.7	
	comp=E,59nm,0.3s						
BRBR				AML	AML	01 51 38.3	
	comp=N,28nm,0.4s						
BRBR				AML	AML	01 51 38.5	
	comp=Z,56nm,0.4s						
KSDI	Kefar Szold	2.23	141	Pn	Pn	01 51 09.2	+0.8
KSDI				Sn	Sn	01 51 35.4	+0.6
MMC7	Mount Meron ar	2.24	148	Pn	Pn	01 51 09.4	+0.7
MMAI	Mount Meron Ar	2.25	148	Pn	Pn	01 51 09.5	+0.6
	comp=Z,12nm,0.3s,baz=338,slow=13,SNR=170						
MMAI				Sn	Sn	01 51 35.2	-0.3
	comp=Z,13nm,0.3s,baz=338,slow=27,SNR=6.3						
GULE	Gulek	2.42	15	iP	Pn	01 51 12.7	+1.5
GULE				iS	Sn	01 51 41.3	+1.7
GULE	Gulek	2.42	15	iP	Pn	01 51 12.7	+1.5
GULE				iS	Sn	01 51 41.3	+1.7
BLGI	Bet Lehem HaGe	2.42	155	Pn	Pn	01 51 12.1	+1.0
OFRI	‘Ofer	2.46	160	Pn	Pn	01 51 12.2	+0.5
CEYT	Ceyhan	2.50	34	ePN	Pn	01 51 14.9	+2.7
CEYT	Ceyhan	2.50	34	ePn	Pn	01 51 14.9	+2.7
MMLI	Mount Malkishu	2.77	154	Pn	Pn	01 51 17.3	+1.4
MMLI				Sn	Sn	01 51 49.1	+1.0
TCHB	Talchebab	2.80	144	eP	Pn	01 51 18.6	+2.3
TCHB				eS	Sn	01 51 47.2	-1.8
TCHB				AML	AML	01 51 53.6	
	comp=Z,80nm,0.3s						
TCHB				AML	AML	01 51 54.5	
	comp=E,75nm,0.4s						
TCHB				AML	AML	01 52 01.2	
	comp=N,43nm,0.4s						
TCHB	Talchebab	2.80	144	eP	Pn	01 51 18.6	+2.3
	SNR=57						
TCHB				eS	Sn	01 51 47.2	-1.8
	comp=N,43nm,0.4s,SNR=58						
SLTI	Sal’it	2.84	162	Pn	Pn	01 51 17.2	+0.4
KOZT	Kozan	2.93	30	ePN	Pn	01 51 21.0	+2.9
KOZT	Kozan	2.93	30	ePn	Pn	01 51 21.0	+2.9
HMDT	Nahal Hemdat	2.98	154	Pn	Pn	01 51 20.2	+1.5
HMDT				Sn	Sn	01 51 54.9	+1.8
KUZU	Kuzuini	3.10	53	iP	Pn	01 51 20.6	+0.2
KUZU				iS	Sn	01 51 54.6	-1.6
KUZU	Kuzuini	3.10	53	iP	Pn	01 51 20.6	+0.2
KUZU				iS	Sn	01 51 54.6	-1.6
NIG	Nigde	3.20	9	ePN	Pn	01 51 25.4	+3.5
NIG	Nigde	3.20	9	ePn	Pn	01 51 25.4	+3.5
SULT	Sultanhani-AKS	3.27	353	ePN	Pn	01 51 26.6	+3.8
SULT	Sultanhani-AKS	3.27	353	ePn	Pn	01 51 26.6	+3.8
AYKD	Aykdinkavak	3.35	42	iP	Pn	01 51 24.8	+0.9
AYKD				iS	Sn	01 51 59.7	-2.7
GAZ	Gaziantep	3.42	49	ePN	Pn	01 51 27.5	+2.6
GAZ	Gaziantep	3.42	49	ePn	Pn	01 51 27.5	+2.6
ZALF	Zalf	3.43	125	eP	Pn	01 51 27.3	+2.3
ZALF				eS	Sn	01 52 02.7	-1.8
ZALF				AML	AML	01 52 13.2	
	comp=Z,4.9nm,0.7s						
ZALF				AML	AML	01 52 15.3	
	comp=E,7.6nm,0.4s						
ZALF				AML	AML	01 52 17.0	
	comp=N,6.1nm,0.5s						
ZALF	Zalf	3.43	125	eP	Pn	01 51 27.3	+2.3
	SNR=57						
ZALF				eS	Sn	01 52 02.7	-1.8
	comp=N,6.1nm,0.5s,SNR=58						
DSI	Dead Sea	3.56	161	Pn	Pn	01 51 27.9	+1.2
DSI				Sn	Sn	01 52 09.5	+1.9
ASF	Jabal al Asfar	3.68	138	Pn	Pn	01 51 27.9	-0.6
	comp=N,0.2nm,0.3s,baz=195,slow=12,SNR=2.6						
ASF				Sn	Sn	01 52 13.8	+3.2
	comp=N,1.7nm,0.3s,baz=322,slow=19,SNR=13						
RTMI	Retamim	3.92	171	Pn	Pn	01 51 33.4	+1.7
RTMI				Sn	Sn	01 52 17.9	+1.4
KZIT	Kziot	4.04	175	Pn	Pn	01 51 34.4	+1.0
FETY	Fethiye	4.33	294	ePN	Pn	01 51 41.5	+4.2
FETY	Fethiye	4.33	294	ePn	Pn	01 51 41.5	+4.2
AMAG	Maghara	4.34	189	P	Pn	01 51 37.9	+0.4
RMNI	Mount Ramon	4.39	171	Pn	Pn	01 51 39.6	+1.5
ZFRI	Zfri	4.49	167	Pn	Pn	01 51 40.8	+1.3
PRNI	Paran	4.66	169	Pn	Pn	01 51 43.6	+1.8
BRTR	Keskin Array B	4.78	357	Pn	Pn	01 51 40.4	-3.2
	comp=N,0.0nm,0.3s,baz=205,slow=12,SNR=2.4						
KRMI	Paran Flat	4.86	173	Pn	Pn	01 51 46.3	+1.8
HRFI	Mount Harif	4.97	170	Pn	Pn	01 51 47.3	+1.1
HNKL	Nakhl	5.00	180	P	Pn	01 51 46.5	-0.1
HNKL				S	Sn	01 52 39.9	-3.2
SUZ		5.18	191	P	Pn	01 51 49.1	+0.1
MBRI	Mt Berech	5.20	171	Pn	Pn	01 51 51.1	+1.8
EIL	Elat	5.32	171	Pn	Pn	01 51 52.6	+1.7
	comp=N,1.2nm,0.3s,baz=16,slow=17,SNR=11						
EIL				Sn	Sn	01 52 50.7	-0.3
	comp=N,2.0nm,0.3s,baz=345,slow=23,SNR=8.7						
EIL	Elat	5.32	171	Pn	Pn	01 51 52.1	+1.2
EIL				Sn	Sn	01 52 52.9	+1.9
HKAT	Jabal Katrina	6.40	180	P	Pn	01 52 06.2	+0.3
FINES	FINESS Array B	26.99	352	P	P	01 56 10.6	-0.4
	comp=N,2.0nm,1.1s,baz=149,slow=11,SNR=4.4						
ARCES	ARCESS Array B	34.96	355	P	P	01 57 19.8	-1.2
	comp=N,1.1nm,0.8s,baz=168,slow=9.2,SNR=4.4						
YKA	Yellowknife Ar	79.66	346	P	P	02 02 35.5	-0.4
	comp=N,0.1nm,0.5s,baz=18,slow=5.0,SNR=4.3						

DDA 02 01:55:16.8, 37.72N×37.42E, h7km, MD3.2
CSEM 02 01:55:17.5±0.1, 37.73N×37.41E, h5km, MD2.8, Error ellipse: s-maj=2.8km s-min=2.1km az=133.0
ISK 02 01:55:17.5, 37.72N×37.38E, h9km, MD2.8
ISCJB 02 01:55:17.1±0.5, 37.72N±0.02×37.42E±0.03, h3km±7km, Error ellipse: s-maj=4.9km s-min=3.8km az=34.4
ISC 02 01:55:17.2±1.1, 37.75N±0.02×37.39E±0.02, h2km±11km, n29, σ0s.75/42, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GZT	Gaziantep	0.41	161	iP	Pg	01 55 24.8	-0.4
GZT				iS	Sg	01 55 29.8	-0.8
KMRS	Kahramanmaras	0.46	238	ePG	Pg	01 55 26.5	+0.5
KMRS				eSG	Sg	01 55 32.8	+0.8
KMRS	Kahramanmaras	0.46	238	ePg	Pg	01 55 26.5	+0.5
KMRS				eSg	Sg	01 55 32.8	+0.8
AYKD	Aykdinkavak	0.57	235	iP	Pg	01 55 28.5	+0.3
AYKD				iS	Sg	01 55 35.0	-0.6
GAZ	Gaziantep	0.59	194	ePG	Pg	01 55 29.3	+0.7
GAZ	Gaziantep	0.59	194	ePg	Pg	01 55 29.3	+0.7
AKCD	Akcadag	0.69	37	iP	Pg	01 55 31.0	+0.6
AKCD				iS	Sg	01 55 40.0	+0.7
AKCD	Akcadag	0.69	37	iP	Pg	01 55 31.0	+0.6
AKCD				iS	Sg	01 55 40.0	+0.7
ATAB	Bozova	0.77	111	iP	Pg	01 55 31.4	-0.5
ATAB				iS	Sg	01 55 41.3	-0.6
ATAB	Bozova	0.77	111	iP	Pg	01 55 31.4	-0.5
ATAB				iS	Sg	01 55 41.3	-0.6
DARE	Darende-Malaty	0.82	5	ePG	Pg	01 55 33.5	+0.5
DARE				eSG	Sb	01 55 47.0	+1.1
MYA	Malataya	1.00	54	ePG	Pb	01 55 37.2	-0.1
MYA	Malataya	1.00	54	ePg	Pb	01 55 37.2	-0.1
KUZU	Kuzuini	1.01	195	iP	Pg	01 55 36.4	-0.1
KUZU				iS	Sb	01 55 50.7	-0.3
KUZU	Kuzuini	1.01	195	iP	Pg	01 55 36.4	-0.1
KUZU				iS	Sb	01 55 50.7	-0.3
SARI	SarD1z-Kayseri	1.01	311	ePG	Pn	01 55 38.4	-0.2
SARI	SarD1z-Kayseri	1.01	311	ePg	Pn	01 55 38.4	-0.2
PINB	Pinarbasi	1.21	320	eP	Pg	01 55 38.1	-2.3
PINB				eS	Sn	01 55 58.3	-0.2
PINB	Pinarbasi	1.21	320	eP	Pg	01 55 38.1	-2.3
PINB				eS	Sn	01 55 58.3	-0.2
KOZT	Kozan	1.27	258	ePN	Pg	01 55 41.8	+0.2
KOZT	Kozan	1.27	258	ePn	Pg	01 55 41.8	+0.2
SVRC	Sivrice-ELAZID	1.64	67	ePN	Pn	01 55 47.0	-0.1
SVRC	Sivrice-ELAZID	1.64	67	ePn	Pn	01 55 47.0	-0.1
BNN	Bunyan	1.64	313	ePN	Pn	01 55 47.5	+0.3
BNN	Bunyan	1.64	313	ePn	Pn	01 55 47.5	+0.3
ILIC	ilic-Erzincan	1.93	28	ePN	Pn	01 55 52.0	+0.8
ILIC	ilic-Erzincan	1.93	28	ePn	Pn	01 55 52.0	+0.8
PTK	Pertek	1.94	53	ePN	Pn	01 55 51.4	0.0
PTK	Pertek	1.94	53	ePn	Pn	01 55 51.4	0.0

IDC 02 01:56:21.8±0.9, 39.34N×73.85E, h0km, mb3.6/10, mb1 3.7/15, mb1mx3.6/32, mbtmp3.6/15, ML3.2/5, Error ellipse: s-maj=17.3km s-min=15.9km az=116.0
NNC 02 01:56:31.3±6.9, 39.88N×73.79E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=57.5km s-min=33.9km az=172.0
ISC 02 01:56:26.2±0.9, 39.45N±0.08×73.88E±0.08, h28km, n29, σ1s.61/28, mb3.7/10, 6C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	2.68	357	P	Pn	01 57 09.9	+2.1
	SNR=107						
UCH	Uchtor	2.81	10	P	Pb	01 57 14.3	-1.7
	SNR=10						
KZA	Kyzart	2.82	21	P	Pb	01 57 13.7	-2.4
	SNR=20						
EKS2	Erkin-Say	3.21	359	P	Pb	01 57 20.4	-2.1
	SNR=17						
AAK	Ala-Archa	3.21	8	P	Pb	01 57 19.5	-3.2
	SNR=38						
AAK	Ala-Archa	3.21	8	Pn	Pb	01 57 18.4	-4.2
	5.0nm,0.3s,baz=160,slow=7.5,SNR=45						
AAK				Sn	Sb	01 58 00.6	-0.8
	5.0nm,0.3s,baz=292,slow=21,SNR=8.0						
KBK	Karagaybulak	3.30	14	P	Pb	01 57 21.2	-3.0
	SNR=20						
ULHL	Ulahol	3.32	32	P	Pb	01 57 25.0	+0.6
	SNR=9.4						
CHMS	Chumysh	3.60	10	P	Pb	01 57 25.2	-4.0
	SNR=7.5						
TKM2	Tokmak 2	3.70	20	⇑Pn	Pb	01 57 26.1	-4.9
	13nm,0.6s						
TKM2				⇑Lg	Lg	01 58 22.5	
	28nm,0.7s						
TKM2	Tokmak 2	3.70	20	P	Pb	01 57 26.3	-4.7
	SNR=20						
KK31	Karatay Array	4.44	326	⇓Pn	Pn	01 57 33.3	+1.6
	1.7nm,0.3s,baz=138,slow=14,SNR=102						
KK31				⇑Pg	Pb	01 57 42.9	-0.6
	2.7nm,0.3s,baz=142,slow=16,SNR=11						
KK31				⇑Sn	Sn	01 58 25.3	+2.8
	11nm,0.4s,baz=133,slow=21,SNR=5.1						
KK31				⇓Lg	Lg	01 58 38.4	
	14nm,0.4s,baz=136,slow=29,SNR=3.8						
MKAR	Makanchi Array	9.57	37	Pn	Pn	01 58 42.5	+0.4
	0.1nm,0.3s,baz=232,slow=18,SNR=2.4						
MKAR				Lg	Lg	02 01 17.9	
	0.1nm,0.3s,baz=218,slow=26,SNR=2.9						
KURBB	Kurchatov Arra	11.64	15	Pn	Pn	01 59 12.3	+2.0
	0.0nm,0.3s,baz=198,slow=12,SNR=3.2						
KURBB				Lg	Lg	02 02 26.6	
	0.1nm,0.3s,baz=204,slow=27,SNR=5.4						
BVA0	Borovoye Array	13.79	351	⇑P	Pn	01 59 40.4	+0.7
	0.2nm,0.5s,baz=157,slow=11,SNR=4.8						
BVAR	Borovoye Array	13.79	351	Pn	Pn	01 59 39.3	-0.3
	0.2nm,0.3s,baz=164,slow=14,SNR=9.1						
AB31	Akbulak array	13.96	319	⇑P	Pn	01 59 40.4	-1.5
	0.5nm,0.5s,baz=124,slow=13,SNR=3.6						
AKTO	Aktyubinsk	15.67	320	Pn	Pn	02 00 03.2	-1.6
	0.1nm,0.3s,baz=145,slow=15,SNR=4.6						
ZALV	Zalesovo Beam	16.30	24	Pn	Pn	02 00 13.0	+0.1
	0.1nm,0.3s,baz=213,slow=10,SNR=2.7						
BRTR	Keskin Array B	30.83	284	P	P	02 02 38.2	-1.6
	0.3nm,0.7s,baz=77,slow=12,SNR=2.4						
FINES	FINESS Array B	36.39	323	P	P	02 03 28.1	+0.3
	0.5nm,0.3s,baz=109,slow=9.1,SNR=11						
ARCES	ARCESS Array B	39.34	336	P	P	02 03 53.0	+0.3
	2.6nm,1.0s,baz=105,slow=7.9,SNR=6.9						
HFS	Hagfors	42.22	320	P	P	02 04 16.4	0.0
	0.9nm,0.6s,baz=93,slow=8.9,SNR=9.6						
GERES	GERESS Array B	43.15	303	P	P	02 04 25.0	+0.8
	0.2nm,0.6s,baz=66,slow=9.9,SNR=2.2						
NOA	NORSAR Array B	43.45	321	P	P	02 04 26.8	+0.4
	1.5nm,1.0s,baz=91,slow=7.6,SNR=3.3						
TORD	Torodi Ar. Bea	68.05	269	P	P	02 07 22.5	-0.9
	0.3nm,0.4s,baz=53,slow=4.7,SNR=12						
YKA	Yellowknife Ar	78.17	4	P	P	02 08 23.4	+0.9
	0.1nm,0.4s,baz=348,slow=5.6,SNR=5.3						
WRA	Warramunga Arr	81.69	124	P	P	02 08 43.2	+1.1
	0.4nm,0.4s,baz=324,slow=5.1,SNR=4.0						
ASAR	Alice Springs	84.14	127	P	P	02 08 54.3	-0.5
	0.2nm,0.6s,baz=316,slow=4.8,SNR=3.7						

CSEM 02 01:59:24.7±0.2, 45.15N×14.91E, h35km±4km, ML1.2, Error ellipse: s-maj=7.3km s-min=3.8km az=71.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GBRS	Gornja Briga	0.39	350	Pg	Pb	01 59 33.5	-0.4
GBRS				iSg	Sb	01 59 39.6	-0.5
	5.0nm,0.1s						
BOJS	Bojanci	0.43	34	iPg	Pn	01 59 34.5	0.0
BOJS				iSg	Sn	01 59 41.5	+0.3
BOJS							
	comp=Z,11nm,0.2s						
BOJS	Bojanci	0.43	34	iPg	Pn	01 59 34.5	0.0
BOJS				iSg	Sn	01 59 41.5	+0.3
	comp=Z,11nm,0.2s						
KNDS	Knezji Dol	0.53	316	iSg	Sn	01 59 43.6	-0.2
KNDS	Knezji Dol	0.53	316	iSg	Sn	01 59 43.6	-0.2
NVLJ	Novalja	0.59	182	ePg	Pn	01 59 36.5	0.0
NVLJ				Sg	Sb	01 59 45.4	+0.5
NVLJ	Novalja	0.59	182	ePg	Pn	01 59 36.4	-0.1
NVLJ				Sg	Sb	01 59 45.4	+0.5
SKDS	Skadanscina	0.74	303	iPg	Pn	01 59 38.9	+0.1
SKDS				eSg	Sb	01 59 50.0	+0.6
SKDS							
	comp=Z,2.0nm,0.1s						
SKDS	Skadanscina	0.74	303	iPg	Pn	01 59 38.9	+0.1
SKDS				eSg	Sb	01 59 50.0	+0.6
	comp=Z,2.0nm,0.1s						

CSEM 02 01:59:27.1, 38.68N×40.97E, h8km, MD2.7, After ISK
ISK 02 01:59:27.1, 38.68N×40.97E, h8km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNGB	Bingˆ¶l	0.39	324	ePG	Pg	01 59 35.2	+0.4
BNGB				eSG	Sg	01 59 40.8	+0.7
BINT	Bingol	0.42	298	ePg	Pg	01 59 35.2	-0.3
BINT				eSg	Sg	01 59 40.8	-0.5
PTK	Pertek	1.25	280	ePN	Pg	01 59 51.5	+0.1
PTK				eSN	Sn	02 00 09.1	+0.8
PTK	Pertek	1.25	280	ePn	Pg	01 59 51.5	+0.1
PTK				eSn	Sn	02 00 09.1	+0.8
SVRC	Sivrice-ELAZID	1.34	258	ePN	Pn	01 59 51.7	-0.6
SVRC	Sivrice-ELAZID	1.34	258	ePn	Pn	01 59 51.7	-0.6
ILIC	ilic-Erzincan	2.02	293	ePN	Pn	02 00 02.5	+0.8
ILIC	ilic-Erzincan	2.02	293	ePn	Pn	02 00 02.5	+0.8

DDA 02 01:59:43.5, 38.30N×38.81E, h7km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.24	34	iP	Pg	01 59 49.0	+0.5
ELZG				iS	Sg	01 59 52.3	+0.4
AKCD	Akcadag	0.70	270	eP	Pg	01 59 56.5	-0.7
AKCD				iS	Sb	02 00 07.6	-0.6

IDC 02 02:05:06.6±1.9, 10.61N×123.23E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/25, mbtmp3.7/6, Error ellipse: s-maj=228.9km s-min=20.1km az=64.0
ISCJB 02 02:05:10.8±0.6, 9.88N±0.04×121.61E±0.05, h25km, mb3.7/6, Error ellipse: s-maj=7.3km s-min=6.1km az=148.8
MAN 02 02:05:12, 9.91N×121.70E, h36km, mb4.6, ML3.5, MS3.4
ISC 02 02:05:12.2±0.8, 9.92N±0.05×121.69E±0.06, h25km, n16, σ0s.94/20, mb3.8/6, 2C-1D, Sulu Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIM	Jordan	1.13	52	eP	Pn	02 05 32.1	-0.3
GUIM				eS	Sn	02 05 46.5	-0.6
CUYO	Cuyo Island	1.14	324	eP	Pn	02 05 32.5	0.0
RCP	Roxas	1.93	32	⇑iP	Pn	02 05 44.5	+1.0
RCP				iS	Sn	02 06 08.4	+1.5
DCPH	Dipolog City	2.11	129	⇑iP	Pn	02 05 45.9	0.0
DCPH				iS	Sn	02 06 10.7	-0.8
TBP	Tagbilaran	2.15	96	eP	Pn	02 05 47.5	+1.0
LLP	Lapu-Lapu	2.28	80	⇓eP	Pn	02 05 48.6	+0.4
LLP				eS	Sb	02 06 19.1	-1.2
IPIL	Ipil	2.29	158	eP	Pn	02 05 49.2	+0.8
SJMP	San Jose	2.58	348	eP	Pn	02 05 52.7	+0.2
PAGZ	Pagadian	2.65	141	eP	Pn	02 05 55.0	+1.6
MSLP	Maasin	3.13	86	eP	Pn	02 06 01.3	+1.4
WRA	Warramunga Arr	32.18	157	P	P	02 11 37.0	-1.4
	0.7nm,0.6s,baz=341,slow=9.6,SNR=3.0						
ASAR	Alice Springs	35.45	160	P	P	02 12 06.5	-0.3
	0.3nm,0.3s,baz=338,slow=7.1,SNR=7.1						
MKAR	Makanchi Array	49.65	325	P	P	02 14 02.5	+0.7
	0.4nm,0.8s,baz=111,slow=7.9,SNR=3.6						
KURBB	Kurchatov Arra	53.86	327	P	P	02 14 33.6	+0.5
	1.0nm,0.7s,baz=135,slow=6.2,SNR=8.4						
AKTO	Aktyubinsk	65.73	321	P	P	02 15 55.2	+0.4
	0.4nm,0.5s,baz=90,slow=8.1,SNR=3.5						
FINES	FINESS Array B	84.04	331	P	P	02 17 40.0	-0.5
	1.3nm,1.0s,baz=59,slow=8.3,SNR=4.4						

JMA 02 02:11:34.7, 33.84N×135.00E, h13km±1km, M0.9, Shikoku

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JWM	Minabe	0.29	88	P	Pg	02 11 40.7	-0.1
JWM				S	Sg	02 11 44.7	-0.2
JAI	Aioi	0.46	264	P	Pg	02 11 43.6	-0.2
JAI				S	Sg	02 11 49.4	-0.6
JWY	Kouya	0.62	52	P	Pg	02 11 46.7	-0.3

BGS 02 02:19:07.7±1.3, 54.33N×160.31W, h10km, mb5.7
MOS 02 02:19:09.5±0.9, 54.56N×161.62W, h33km, mb5.9/151, MS5.0/66, Error ellipse: s-maj=6.6km s-min=3.5km az=89.8
ISCJB 02 02:19:10.9±0.3, 54.51N±0.02×161.52W±0.02, h43km±2km, mb5.6/443, MS5.0/225, Error ellipse: s-maj=3.3km s-min=1.9km az=179.3
IDC 02 02:19:10.7±0.7, 54.52N×161.62W, h33km±4km, mb5.2/35, mb1 5.2/38, mb1mx5.2/39, mbtmp5.2/38, ML4.9/3, MS4.9/35, Ms1 4.9/35, ms1mx4.9/44, Error ellipse: s-maj=12.6km s-min=7.7km az=177.0
BJI 02 02:19:12.4, 54.99N×162.32W, h40km, mB5.5/29, mb5.6/64, Ms5.3/62, Ms7 5.1/59
NEIC 02 02:19:12.5, 54.53N×161.52W, h9km, mb5.6/253, MS5.0/144, MW5.3, ML5.4(AEIC), MW5.6(USGS), Moment Tensor Solution. s57 Moment tensor: Scale 10^{17}Nm; M_{rr}0.22; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$0.07; $M_{r\theta}$1.08; $M_{\theta\phi}$-0.26; $M_{\phi r}$0.32; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s74.00000°, δ82.00000°, λ96.00000°. NP2:ϕ_s215.00000°, δ10.00000°, λ51.00000°. Principal axes: T 1.0800, Plg52.0000°, Azm351.0000°; N 0.1800, Plg6.0000°, Azm253.0000°; P -1.2600, Plg37.0000°, Azm158.0000°; After AEIC.
NEIC Felt [IV] at Sand Point. Also felt at Cold Bay, False Pass, King Cove and Perryville.
GCMT 02 02:19:13.4±0.1, 54.53N×161.52W, h21km, MW5.6, Moment Tensor Solution. s77,c123; s4,c4; Moment tensor: Scale 10^{17}Nm; M_{rr}0.27±.02; $M_{\theta\theta}$-0.22±.02; $M_{\phi\phi}$-0.05±.02; $M_{r\theta}$2.63±.14; $M_{\theta\phi}$-0.22±.01; $M_{\phi r}$0.93±.06; Best double couple: $M_0$2.80000×10^{17} NP1:ϕ_s212.00000°, δ4.00000°, λ52.00000°. NP2:ϕ_s71.00000°, δ87.00000°, λ92.00000°. Principal axes: T 2.7700, Plg48.0000°, Azm343.0000°; N 0.0700, Plg2.0000°, Azm250.0000°; P -2.8400, Plg42.0000°, Azm158.0000°; Data Used: II IU IC G CN. Surface waves: sta= 93, comp=159, per= 50.
DJA 02 02:19:16.6±3.7, 55°N±9°×16°1W±1°8, h85km±33km, M5.5/26, mB5.9/15, mb5.6/26, Mw(mB)5.5/15
SZGRF 02 02:19:19.0, 55.55N×161.78W, h35km, mb5.8, MS4.8, Alaska Peninsula, United States
ISC 02 02:19:09.1±0.2, 54.46N±0.03×161.54W±0.02, h23km, h22km:pP-P, n1927, σ1s.28/2168, mb5.7/453, MS5.0/225, 448C-241D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRIA	Deer Island	0.66	321	P	Pn	02 19 24.2	+1.2
DOL	Dolgoi Island	0.72	345	P	Pn	02 19 24.9	+1.0
DT1	Dutton Round H	0.78	327	P	Pn	02 19 25.9	+1.2
PS4A	Pavlof South-4	0.91	348	P	Pn	02 19 28.2	+1.7
PVV	Pavlof Volcano	0.93	351	P	Pn	02 19 28.5	+1.7
SDPT	Sand Point	1.08	34	P	Pb	02 19 30.0	+0.9
SDPT				S	Sn	02 19 45.3	+2.2
FALS	False Pass	1.16	291	P	Pb	02 19 31.8	+1.4
FALS				S	Sn	02 19 48.1	+3.1
SSLW	Shishaldin Wes	1.54	283	P	Pb	02 19 38.2	+1.4
VNWF	Veniaminof 8	2.04	33	P	Pb	02 19 45.5	+0.1

VNFG Veniaminof 2 2.16 31 P Pb 02 19 47.3 -0.2
VNHG Veniaminof 1 2.23 36 P Pb 02 19 48.0 -0.7
AKA Akutan 2.50 264 P Pb 02 19 51.4 -1.8
AKA S Sb 02 20 21.7 -1.9
AKUT Akutan 2.50 264 P Pb 02 19 51.0 -2.2
AKUT S Sb 02 20 22.0 -1.6
CHGN Chignik 2.57 43 ePn Pn 02 19 51.4 +2.2
AKLV Akutan Long Va 2.60 265 P Pb 02 19 52.5 -2.5
AKGG Akutan Green G 2.62 266 P Pb 02 19 53.0 -2.3
AKRB Akutan Reef Bi 2.68 265 P Pb 02 19 53.6 -2.6
UNV Unalaska Valle 2.98 260 P Pb 02 19 57.1 +2.2
UNV S Sb 02 20 32.9 -4.5
MTBL Makushin Table 3.06 263 P Pn 02 19 58.7 +2.7
ANPK Aniakchak Peak 3.08 38 P Pn 02 19 58.9 +2.6
AZAC Aniakchak 3.08 36 P Pn 02 19 58.7 +2.3
MREP Makushin Rep't 3.13 260 P Pn 02 19 59.9 +2.9
ANNW Aniakchak Nort 3.14 35 P Pn 02 20 00.0 +2.9
MCIR Makushin Cirqu 3.19 263 P Pn 02 20 00.2 +2.5
OKFG Magazine Ridge 3.91 257 P Pn 02 20 10.2 +2.6
OKCE Okmok Cone E 4.05 258 P Pn 02 20 12.6 +3.0
OKSO Okmok South 4.07 257 P Pn 02 20 12.4 +2.6
OKSO S Sn 02 20 59.0 +2.3
OKSP Okmok Steeple 4.18 256 P Pn 02 20 14.3 +2.9
NIKO Nikolski 4.59 254 P Pn 02 20 17.6 +0.6
SII Sitkinak Islan 4.68 60 P Pn 02 20 19.1 +0.8
KELA Mount Kelaz 5.13 36 P Pn 02 20 26.6 +2.2
KABU Katmai Buttres 5.17 40 P Pn 02 20 27.3 +2.3
KCE Katmai Mt Cerb 5.18 40 P Pn 02 20 28.4 +3.2
KABR Katmai Barrier 5.19 42 P Pn 02 20 26.8 +1.5
KAKN Katmai Knife C 5.27 40 P Pn 02 20 28.5 +2.1
OHAK Old Harbor 5.41 56 P Pn 02 20 28.4 +0.2
KAWH Katmai 5.43 41 P Pn 02 20 30.2 +1.7
KDAK Kodiak Island 6.01 53 Pn Pn 02 20 36.9 +0.4
KDAK Sn Sn 02 21 40.8 -3.8
KDAK Kodiak Island 6.01 53 Pn Pn 02 20 36.0 -0.5
4μm,0.8s
KDAK Kodiak Island 6.01 53 Pn Pn 02 20 36.9 +0.4
38nm,0.3s,baz=221,slow=6.3,SNR=207
KDAK Sn Sn 02 21 40.8 -3.8
20nm,0.3s,baz=344,slow=19,SNR=2.6
AUW Augustine West 6.61 39 P Pn 02 20 47.4 +2.6
AUNW Augustine NWes 6.62 39 P Pn 02 20 47.2 +2.5
AUP Augustine Pinn 6.63 39 P Pn 02 20 48.1 +3.1
AUP Augustine Pinn 6.63 39 P Pn 02 20 48.1 +3.1
OPT Oil Point 6.90 38 P Pn 02 20 50.9 +2.2
SVW2 Sparrevohn 7.38 23 P Pn 02 20 57.6 +2.4
RSO Redoubt South 7.66 35 ePn Pn 02 21 02.3 +3.1
SPU Mount Spurr 8.42 33 ePn Pn 02 21 11.8 +2.2
SEW Seward 8.65 44 ePn Pn 02 21 13.6 +1.0
SEW eSn Sn 02 22 48.3 -0.9
RC01 Rabbit Creek A 9.15 39 ePn Pn 02 21 20.6 +1.1
0.9nm,0.5s
RC01 eSn Sn 02 23 00.9 -0.7
MID Middleton Isla 9.68 53 eP Pn 02 21 27.0 +0.3
MID Middleton Isla 9.68 53 ePn Pn 02 21 27.0 +0.3
PMR Palmer 9.71 38 eP Pn 02 21 27.2 +0.1
PMR Palmer 9.71 38 ePn Pn 02 21 27.2 +0.1
PPLA Purkeypile 9.75 26 ePn Pn 02 21 31.2 +3.3
SML Sawmill 10.13 38 eP Pn 02 21 32.7 -0.3
SML Sawmill 10.13 38 ePn Pn 02 21 32.7 -0.3
GAMB Gambell 10.69 335 ePn Pn 02 21 43.0 +2.5
368nm,1.0s
TRF Thorofare Moun 10.71 28 ePn Pn 02 21 40.6 -0.4
DIV Divide 10.73 45 ePn Pn 02 21 41.1 -0.1
DIV eSn Sn 02 23 37.9 -2.4
RAGM Ragged Mountai 10.84 50 ePn Pn 02 21 42.8 +0.1
BMRM Bremner River 11.14 47 ePn Pn 02 21 46.7 -0.1
BMRM eSn Sn 02 23 48.1 -2.4
MCK McKinley 11.31 30 eP Pn 02 21 48.7 -0.4
MCK McKinley 11.31 30 ePn Pn 02 21 48.6 -0.4
TNA Tin City 11.58 347 ePn Pn 02 21 55.1 +2.4
417nm,1.2s
PAX Paxson 11.91 38 eP Pn 02 21 56.5 -0.8
PAX Paxson 11.91 38 ePn Pn 02 21 56.5 -0.8
AMKA Amchitka 11.96 263 ePn Pn 02 21 59.4 +1.4
682nm,0.6s
COLA College 12.49 28 eP Pn 02 22 03.0 -2.1
COLA College 12.49 28 ePn Pn 02 22 03.0 -2.1
MENT Mentasta 12.53 40 ePn Pn 02 22 05.2 -0.6
DOT Dot Lake 12.83 37 ePn Pn 02 22 08.4 -1.3
YKU2 Yakutat 12.92 58 ePn Pn 02 22 13.6 +2.6
PNL Peninsula 13.10 58 ePn Pn 02 22 13.2 -0.2
725nm,0.9s
COLD Coldfoot 13.91 19 ePn Pn 02 22 25.9 +1.4
EGAK Eagle 14.52 37 ePn Pn 02 22 30.1 -2.7
FX1 Attu Island--F 15.05 274 ePn Pn 02 22 41.1 +1.0
FX1 Sn Sn 02 25 28.6 +2.6
FX1 Attu Island--F 15.05 274 Pn Pn 02 22 40.9 +0.8
18nm,0.3s,baz=156,slow=21,SNR=42
FX1 Sn Sn 02 25 28.6 +2.6
0.9nm,0.3s,baz=354,slow=19,SNR=2.2
FX1 LR LR 02 27 53.1
comp=Z,3μm,20.6s,baz=342,slow=35
SKAG Skagway 15.09 60 ePn Pn 02 22 41.6 +1.1
500nm,1.4s
CRAG Craig 16.30 75 ePn Pn 02 22 57.5 +1.2
357nm,1.5s
WRAK Wrangell Islan 16.62 71 ePn P 02 23 02.7 +0.2
462nm,1.4s
DLBC Dease Lake 17.77 64 ePn P 02 23 16.9 +1.6
DLBC S Sn 02 26 29.2 -2.6
DLBC Dease Lake 17.77 64 P P 02 23 17.3 +2.0
2.1nm,0.3s,baz=277,slow=12,SNR=74
DLBC S Sn 02 26 29.2 -2.6
0.3nm,0.3s,baz=90,slow=20,SNR=2.3
DLBC LR LR 02 30 19.0
comp=Z,3μm,18.3s,baz=276,slow=38
INK Inuvik 19.04 32 P P 02 23 26.8 -2.4
INK ScP ScP 02 31 24.9 -2.0
INK Inuvik 19.04 32 P P 02 23 26.8 -2.4
4.2nm,0.3s,baz=230,slow=13,SNR=112
INK ScP ScP 02 31 24.9 -2.0
0.2nm,0.3s,baz=290,slow=0.7,SNR=4.6
INK LR LR 02 31 43.0
comp=Z,15μm,19.1s,baz=234,slow=40
BBB Bella Bella 19.99 83 P P 02 23 40.8 +1.2
BBB ScP ScP 02 31 27.4 -2.0
BBB Bella Bella 19.99 83 P P 02 23 40.8 +1.2
53nm,1.0s,baz=286,slow=13,SNR=12
BBB LR LR 02 30 04.2
comp=Z,3μm,18.8s,baz=294,slow=33
BBB ScP ScP 02 31 27.4 -2.0
4.1nm,0.8s,baz=293,slow=7.2,SNR=3.7
BILL Bilibino 20.27 325d iP P 02 23 41.1 -1.5
BILL i 02 23 55.2
BILL i S S 02 27 16.2 -12
BILL pmax pmax
comp=Z,55nm,1.0s
BILL MLR MLR
comp=Z,5μm,15.0s
BILL Bilibino 20.27 325 eP P 02 23 42.3 -0.2
comp=Z,266nm,1.0s
PET Petropavlovsk 23.38 283α iP P 02 24 14.8 -0.9
PET e*PP pP 02 24 25.3 +3.1
PET e*SP sP 02 24 30.6 +5.4
PET eS S 02 28 23.2 -3.8
PET pmax pmax
comp=Z,1μm,1.7s
PET pmax pmax
comp=Z,500nm,6.6s
PET pmax pmax
comp=Z,401nm,0.8s
PET MLR MLR
comp=Z,3μm,19.0s
PET MLR MLR
comp=Z,3μm,21.0s
PEA0B Petropavlovsk- 23.89 284 eP P 02 24 20.4 -0.3
PETK Petropavlovsk- 23.89 284 P P 02 24 20.4 -0.3
PETK e 02 28 03.7
PETK Petropavlovsk- 23.89 284 P P 02 24 20.4 -0.3
PETK PcP PcP 02 28 03.7 +1.0
PETK ScP ScP 02 31 38.8 -0.5
PETK Petropavlovsk- 23.89 284 P P 02 24 20.4 -0.3
comp=Z,288nm,0.7s,baz=88,slow=13,SNR=210
PETK PcP PcP 02 28 03.7 +1.0
comp=Z,9.8nm,0.9s,baz=96,slow=4.1,SNR=4.9
PETK ScP ScP 02 31 38.8 -0.5
comp=Z,6.2nm,0.7s,baz=97,slow=8.2,SNR=9.1
PETK LR LR 02 33 39.5
comp=Z,2μm,19.4s,baz=83,slow=36
OBC Olympics--Boni 24.09 90 P P 02 24 25.3 +2.6
PGC Sidney 24.16 88 eP P 02 24 25.1 +2.0
comp=Z,4.0nm,0.9s

OSD Olympics--Snow 24.42 90 P P 02 24 28.2 +2.4
NLWA Neilton Lookou 24.54 91 eP P 02 24 29.2 +2.5
comp=Z,150nm,1.0s
NLWA LR LR
comp=Z,3μm,20.0s
SEY Seymchan 24.88 308c iP P 02 24 28.7 -0.9
MBW Mount Baker 25.00 87 P P 02 24 33.0 +2.0
GNW Green Mountain 25.06 90 P P 02 24 33.8 +2.4
JCW Jim Creek 25.27 88 P P 02 24 35.4 +2.1
YKW3 Yellowknife Ar 25.28 52 eP P 02 24 33.6 +0.4
comp=Z,3.1nm,0.9s
YKA Yellowknife Ar 25.29 53 P P 02 24 34.0 +0.7
YKA pP pP 02 24 43.2 +3.0
YKA PcP PcP 02 28 06.0 +0.4
YKA ScP ScP 02 31 41.4 -1.6
YKA e 02 57 32.6
YKA Yellowknife Ar 25.29 53 P P 02 24 34.0 +0.7
comp=Z,16nm,0.5s,baz=270,slow=9.2,SNR=303
YKA pP pP 02 24 43.2 +3.0
comp=Z,102nm,0.8s,baz=279,slow=10,SNR=32
YKA PcP PcP 02 28 06.0 +0.4
comp=Z,7.8nm,0.7s,baz=278,slow=1.9,SNR=8.6
YKA ScP ScP 02 31 41.4 -1.6
comp=Z,16nm,0.9s,baz=275,slow=2.7,SNR=28
YKA P3KPbc 02 57 32.6
comp=Z,0.6nm,0.6s,baz=89,slow=4.5,SNR=18
HTW Haystack Looko 25.55 89 P P 02 24 38.0 +2.1
SKR Severo-Kuril's 25.72 279 eP P 02 24 32.4 -4.9
SKR e 02 24 43.0
SKR e 02 25 18.0
SKR S S 02 29 06.0 +1.4
SKR eSS SnSn 02 30 03.0 +3.2
SKR pmax pmax
comp=Z,680nm,1.0s
SKR pmax pmax
comp=N,120nm,0.8s
SKR pmax pmax
comp=E,120nm,0.8s
SKR pmax pmax
comp=Z,2μm,8.0s
SKR smax smax
comp=N,2μm,12.0s
SKR smax smax
comp=E,2μm,12.0s
SKR MLR MLR
comp=N,2μm,20.0s
SKR MLR MLR
comp=Z,3μm,20.0s
SKR MLR MLR
comp=E,2μm,20.0s
D05A Enumclaw 25.74 90 P P 02 24 40.4 +2.9
LON Longmire 26.07 91 eP P 02 24 42.7 +2.0
LON pmax pmax
comp=Z,47nm,0.9s
LON Longmire 26.07 91 eP P 02 24 42.7 +2.0
comp=Z,47nm,0.9s
LON eScP ScP 02 31 42.7 -3.0
RCM Mount Rainier- 26.07 90 P P 02 24 43.3 +2.3
WPW White Pass 26.25 91 P P 02 24 44.4 +2.0
COR Corvallis 26.41 96 eP P 02 24 46.2 +2.6
COR pmax pmax
comp=Z,94nm,1.2s
COR Corvallis 26.41 96 eP P 02 24 46.2 +2.6
comp=Z,94nm,1.2s
TWW Teanaway 26.42 89 P P 02 24 46.3 +2.5
LTY Liberty 26.47 89 P P 02 24 46.0 +1.7
ETW Entiat 26.49 88 P P 02 24 46.5 +2.0
RNO Roman Nose 26.55 98 P P 02 24 47.5 +2.5
WTV Waterville 26.67 87 P P 02 24 47.9 +1.9
EBG Ellensburg 26.71 89 P P 02 24 48.8 +2.3
KEBM Edson Butte 26.84 100 eP P 02 24 50.0 +2.4
comp=Z,193nm,1.5s
VLL Laurance Lake 26.85 93 P P 02 24 49.8 +2.1
OD2 Odessa Site #2 27.55 87 P P 02 24 55.2 +1.4
HAWA Hanford 27.59 90 eP P 02 24 56.2 +2.0
comp=Z,116nm,0.8s
HAWA eScP ScP 02 31 48.4 -1.7
HAWA LR LR
comp=Z,2μm,20.0s
HUMO Hull Mountain 27.80 99 eP P 02 24 59.1 +2.9
comp=Z,34nm,1.1s
HUMO ePcP PcP 02 28 12.2 +0.3
VIPM Ingram Point 28.01 94 P P 02 25 00.1 +1.8
VIPM Ingram Point 28.01 94 P P 02 25 00.1 +1.8
NEW Newport 28.03 84 eP P 02 24 59.7 +1.5
comp=Z,24nm,0.8s
NEW eScP ScP 02 31 49.4 -2.2
NEW Newport 28.03 84 P P 02 24 59.1 +0.9
comp=Z,19nm,0.8s,baz=300,slow=7.2,SNR=33
NEW ScP ScP 02 31 49.4 -2.2
comp=Z,15nm,1.1s,baz=273,slow=4.4,SNR=11
NEW LR LR 02 34 22.3
comp=Z,2μm,20.5s,baz=292,slow=32
NEW Newport 28.03 84 ⇓P P 02 24 59.5 +1.3
baz=28,SNR=24
KHMM Horse Mountain 28.47 103 eP P 02 25 05.0 +2.7
comp=Z,93nm,1.4s
YBH Yreka Blue Hor 28.50 100 eP P 02 25 05.0 +2.5
comp=Z,170nm,0.8s
YBH ScP ScP 02 31 51.3 -1.8
YBH Yreka Blue Hor 28.50 100 P P 02 25 04.6 +2.1
comp=Z,23nm,0.8s,baz=336,slow=3.6,SNR=37
YBH ScP ScP 02 31 51.3 -1.8
comp=Z,4.1nm,1.0s,baz=77,slow=5.2,SNR=4.1
YBH LR LR 02 33 47.7
comp=Z,5μm,20.6s,baz=315,slow=31
A12A Yaak River Ran 28.56 82 ⇓P P 02 25 04.3 +1.4
baz=28
MIDW Midway 28.65 210 PFAKE 02 25 20.0 +16
MIDW LR LR
comp=Z,3μm,20.0s
C11A Tepee Creek (N 28.75 84 ⇓P P 02 25 05.6 +0.9
baz=29,SNR=8.6
A13A Flathead Natio 29.27 81 ⇓P P 02 25 10.3 +1.0
baz=29
WDC Whiskeytown Da 29.34 102 eP P 02 25 11.5 +1.6
WDC pmax pmax
comp=Z,20nm,1.0s
WDC Whiskeytown Da 29.34 102 eP P 02 25 11.5 +1.6
comp=Z,20nm,1.0s
WALA Waterton Lakes 29.50 81 eP P 02 25 12.2 +0.8
comp=Z,1.5nm,1.3s
WALA eScP ScP 02 31 54.5 -1.7
B13A Whitefish 29.52 82 ⇓P P 02 25 12.4 +0.9
baz=29,SNR=7.8
BSMT Bassoo Peak 29.60 83 eP P 02 25 13.7 +1.4
D12A Red Ives Fores 29.68 85 ⇑P P 02 25 13.8 +0.8
baz=30
BMO Blue Mountains 29.75 90 eP P 02 25 15.1 +1.5
comp=Z,140nm,1.5s
BMO LR LR
comp=Z,3μm,22.0s
BLMT Blacktail Moun 29.76 83 eP P 02 25 15.2 +1.4
MOD Modoc 29.78 98 eP P 02 25 16.2 +2.3
comp=Z,116nm,1.0s
C13A Hot Springs 29.81 84 ⇓P P 02 25 15.2 +1.2
baz=30,SNR=23
A14A Double T Ranch 29.83 80 ⇓P P 02 25 15.3 +1.0
baz=30,SNR=29
JTMT Jette 29.94 83 eP P 02 25 16.6 +1.3
JTMT eScP ScP 02 31 55.2 -2.5
YBMT Yellow Bay 30.04 83 eP P 02 25 16.9 +0.7
comp=Z,27nm,1.0s
YBMT eScP ScP 02 31 56.0 -2.0
D13A Huson 30.18 84 ⇓P P 02 25 17.8 +0.5
baz=30,SNR=5.9
B14A Marquette Ranc 30.21 81 ⇑P P 02 25 18.7 +1.0
baz=30,SNR=11
A15A Johnson Ranch, 30.22 80 ⇑P P 02 25 18.1 +0.3
baz=30,SNR=20
SWMT Swartz Lake 30.23 83 eP P 02 25 18.8 +1.0
C14A Swan Lake 30.24 83 ⇑P P 02 25 19.0 +1.1
baz=30
WVOR Wild Horse Val 30.41 95 eP P 02 25 21.1 +1.6
WVOR e 02 31 57.6
WVOR pmax pmax
comp=Z,81nm,1.1s
WVOR MLR MLR
comp=Z,2μm,19.0s
WVOR Wild Horse Val 30.41 95 eP P 02 25 21.1 +1.6
comp=Z,81nm,1.1s
WVOR eScP ScP 02 31 57.6 -1.7
WVOR LR LR
comp=Z,2μm,19.0s
F12A Elk City 30.44 87 ⇑P P 02 25 20.8 +1.1
baz=30,SNR=84

MSO Missoula 30.62 85 eP P 02 25 22.2 +1.0
comp=Z,31nm,1.5s
MSO ePcP PcP 02 28 18.6 -0.4
MSO eScP ScP 02 31 57.1 -2.8
MSO LR LR
comp=Z,821nm,22.0s
MSO Missoula 30.62 85 ⇑P P 02 25 22.1 +0.9
baz=30,SNR=18
B15A Bradely Ranch, 30.65 81 ⇑P P 02 25 22.0 +0.5
baz=30,SNR=15
SLMT Seeley Lake 30.66 84 eP P 02 25 22.5 +0.8
SLMT eScP ScP 02 31 57.9 -2.2
E13A Victor 30.68 85 ⇑P P 02 25 22.6 +0.7
baz=30,SNR=17
D14A Greenough 30.74 84 ⇑P P 02 25 23.0 +0.6
baz=31,SNR=36
G12A Big Creek, Yel 30.75 88 ⇓P P 02 25 23.3 +0.8
baz=31
OHCM Honcut 30.78 103 eP P 02 25 24.3 +1.8
A16A West Butte Ran 30.89 79 ⇓P P 02 25 23.7 +0.1
baz=31
C15A Salmond Ranch, 30.90 82 ⇑P P 02 25 25.0 +1.3
baz=31,SNR=64
F13A Darby 30.96 87 ⇓P P 02 25 25.3 +1.0
baz=31,SNR=58
CHMT Chamberlain Mo 30.97 84 eP P 02 25 25.2 +0.7
CHMT eScP ScP 02 31 59.1 -2.1
BEKR Beckworth 31.07 101 eP P 02 25 26.7 +1.4
comp=Z,17nm,1.0s
BEKR ePcP PcP 02 28 20.3 -0.2
BEKR eScP ScP 02 31 59.6 -1.9
B16A M & M Farms, S 31.09 80 ⇑P P 02 25 25.5 +0.1
baz=31,SNR=12
E14A Clinton 31.10 85 ⇓P P 02 25 26.7 +1.1
baz=31,SNR=24
D15A Lincoln 31.33 83 ⇓P P 02 25 28.3 +0.8
baz=31,SNR=21
H12A Diamond D Ranc 31.35 89 ⇑P P 02 25 28.9 +1.1
baz=31,SNR=50
C16A Fuhringer Ranc 31.38 81 ⇑P P 02 25 28.6 +0.7
baz=31,SNR=14
G13A Cobalt 31.40 88 ⇓P P 02 25 29.5 +1.3
baz=31,SNR=54
A17A Triple J Farms 31.41 79 ⇓P P 02 25 28.5 +0.4
baz=31,SNR=7.8
MFID Camas Ranch 31.45 91 eP P 02 25 30.0 +1.4
comp=Z,86nm,0.9s
MFID Camas Ranch 31.45 91 ⇓P P 02 25 30.0 +1.4
baz=31,SNR=92
F14A Wisdom 31.50 86 ⇑P P 02 25 30.4 +1.2
baz=31
E15A Deer Lodge 31.59 84 ⇑P P 02 25 30.8 +1.0
baz=32,SNR=30
I12A Atlanta 31.63 90 ⇓P P 02 25 31.8 +1.5
baz=32,SNR=80
B17A L&G Farms, Che 31.68 80 ⇑P P 02 25 30.9 +0.5
baz=32,SNR=13
H13A Challis 31.69 88 ⇓P P 02 25 31.9 +1.1
baz=32,SNR=58
G14A Jackson 31.77 87 ⇓P P 02 25 32.6 +1.0
baz=32,SNR=18
WCN Washoe City 31.79 101 eP P 02 25 33.2 +1.5
WCN pmax pmax
comp=Z,26nm,1.0s
WCN Washoe City 31.79 101 eP P 02 25 33.2 +1.5
comp=Z,26nm,1.0s
WCN eScP ScP 02 32 02.7 -1.3
D16A Dana Ranch, Ca 31.90 83 ⇓P P 02 25 33.3 +0.8
baz=32,SNR=17
A18A Metzger Ranch, 31.91 78 ⇓P P 02 25 32.8 +0.3
baz=32,SNR=13
HRY Holter Researc 31.91 83 eP P 02 25 34.1 +1.5
F15A Butte 32.00 85 ⇓P P 02 25 34.2 +0.7
baz=32,SNR=8.5
LRM Limekiln Ridge 32.03 85 eP P 02 25 34.8 +0.9
LRM eScP ScP 02 32 02.5 -2.3
C17A Wharram Farm, 32.04 81 ⇑P P 02 25 33.9 +0.2
baz=32,SNR=9.1
E16A East Helena 32.09 83 ⇑P P 02 25 35.3 +1.1
baz=32,SNR=24
I13A Wildhorse Cree 32.15 89 ⇑P P 02 25 36.2 +1.2
baz=32,SNR=58
H14A Leadore 32.18 88 ⇑P P 02 25 36.2 +1.1
baz=32,SNR=57
HLID Hailey 32.19 90 eP P 02 25 36.7 +1.4
comp=Z,50nm,1.0s
HLID ePcP PcP 02 28 23.9 +0.5
HLID eScP ScP 02 32 03.9 -1.4
HLID LR LR
comp=Z,3μm,22.0s
HLID Hailey 32.19 90 ⇓P P 02 25 36.6 +1.4
baz=32,SNR=71
DLMT Dillon 32.21 86 eP P 02 25 36.7 +1.5
comp=Z,56nm,1.5s
DLMT ePcP PcP 02 28 23.7 +0.3
DLMT eScP ScP 02 32 03.3 -2.0
B18A Beardsley Farm 32.21 79 ⇑P P 02 25 35.8 +0.7
baz=32,SNR=21
CMB Columbia Colle 32.30 103 eP P 02 25 37.8 +1.8
CMB pmax pmax
comp=Z,25nm,1.1s
CMB Columbia Colle 32.30 103 eP P 02 25 37.8 +1.8
comp=Z,25nm,1.1s
D17A Six Diamond Ra 32.33 82 ⇓P P 02 25 36.9 +0.6
baz=32,SNR=24
MCMT McKenzie Canyo 32.36 87 eP P 02 25 37.8 +1.0
comp=Z,3μm,0.9s
MCMT ePcP PcP 02 28 24.2 +0.2
G15A Dillon 32.38 86 ⇑P P 02 25 37.6 +0.8
baz=32,SNR=25
EGMT Eagleton 32.41 80 eP P 02 25 37.6 +0.6
comp=Z,57nm,1.3s
EGMT ePcP PcP 02 28 24.0 +0.1
EGMT eScP ScP 02 32 03.8 -2.0
EGMT LR LR
comp=Z,1μm,20.0s
EGMT Eagleton 32.41 80 ⇓P P 02 25 37.5 +0.5
baz=32,SNR=27
RES Resolute Bay 32.42 27 eP P 02 25 35.8 -0.9
comp=Z,19nm,0.6s
RES ePcP PcP 02 28 22.9 -0.4
RES eScP ScP 02 32 03.7 -1.6
RES Resolute Bay 32.42 27 P P 02 25 36.0 -0.6
comp=Z,20nm,0.6s,baz=255,slow=12,SNR=117
RES ScP ScP 02 32 04.2 -1.1
comp=Z,32nm,1.0s,baz=273,slow=5.0,SNR=11
RES LR LR 02 40 10.5
comp=Z,4μm,20.4s,baz=263,slow=39
J13A Cove Ranch, Pi 32.43 90 ⇑P P 02 25 38.8 +1.6
baz=32,SNR=117
BMN Battle Mountai 32.50 97 eP P 02 25 39.8 +1.8
BMN pmax pmax
comp=Z,53nm,1.2s
BMN MLR MLR
comp=Z,2μm,20.0s
BMN Battle Mountai 32.50 97 eP P 02 25 39.8 +1.8
comp=Z,53nm,1.2s
BMN LR LR
comp=Z,2μm,20.0s
A19A Klindworth Far 32.53 78 ⇑P P 02 25 38.5 +0.5
baz=32,SNR=25
I14A Mackay 32.53 89 ⇓P P 02 25 39.7 +1.5
baz=32,SNR=38
SAO San Andreas Ge 32.59 106 eP P 02 25 40.0 +1.4
SAO pmax pmax
comp=Z,62nm,1.6s
SAO San Andreas Ge 32.59 106 eP P 02 25 40.0 +1.4
comp=Z,62nm,1.6s
H15A Lima 32.60 87 ⇑P P 02 25 39.8 +1.0
baz=32,SNR=21
E17A Martinsdale 32.61 83 ⇓P P 02 25 40.1 +1.3
baz=32,SNR=20
BOZ Bozeman (W) 32.61 85 eP P 02 25 40.0 +1.2
BOZ e 02 28 24.6
BOZ pmax pmax
comp=Z,48nm,1.5s
BOZ MLR MLR
comp=Z,815nm,22.0s
BOZ Bozeman (W) 32.61 85 eP P 02 25 40.0 +1.2
comp=Z,48nm,1.5s
BOZ ePcP PcP 02 28 24.6 +0.1
BOZ eScP ScP 02 32 04.9 -1.7
BOZ LR LR
comp=Z,815nm,22.0s
BOZ Bozeman (W) 32.61 85 ⇓P P 02 25 39.8 +1.0
baz=32,SNR=20
B19A Brinkman Farms 32.66 79 ⇓P P 02 25 40.0 +1.0

baz=32,SNR=11
G16A Moss Hill, Enn 32.74 86 ⇓P P 02 25 40.8 +0.8
baz=33,SNR=34
D18A Linhart Farms, 32.82 81 ⇓P P 02 25 42.0 +1.4
baz=33,SNR=52
J14A Carey 32.85 90 ⇓P P 02 25 42.9 +2.0
baz=33,SNR=56
C19A Slack Wire Ran 32.97 80 ⇓P P 02 25 43.1 +1.3
baz=33,SNR=61
A20A Cobblestone Ra 33.02 77 ⇓P P 02 25 42.8 +0.5
baz=33,SNR=22
F17A Fitzpatrick Pl 33.03 84 ⇑P P 02 25 43.4 +0.9
baz=33,SNR=25
I15A Monteview 33.06 88 ⇓P P 02 25 44.2 +1.5
baz=33,SNR=7.9
KIP Kipapa 33.09 174 ⇓*i*P P 02 25 44.6 +1.7
KIP pmax pmax
comp=Z,236nm,1.7s
KIP Kipapa 33.09 174 *e*P P 02 25 44.8 +1.8
comp=Z,116nm,0.9s
KIP LR LR
comp=Z,6μm,21.0s
E18A Harlowton 33.10 82 ⇑P P 02 25 44.5 +1.5
baz=33,SNR=27
QLMT Earthquake Lak 33.19 86 *e*P P 02 25 45.2 +1.3
QLMT *e*ScP ScP 02 32 07.2 -1.6
B20A Solberg Farm, 33.19 78 ⇑P P 02 25 44.3 +0.5
baz=33
NVAR Mina Array Bea 33.21 101 P P 02 25 45.8 +1.6
NVAR ScP ScP 02 32 07.9 -1.0
NVAR *e* 02 57 00.1
NVAR Mina Array Bea 33.21 101 P P 02 25 45.8 +1.6
comp=Z,18nm,0.8s,baz=297,slow=8.8,SNR=86
NVAR ScP ScP 02 32 07.9 -1.0
comp=Z,10nm,0.9s,baz=286,slow=2.8,SNR=23
NVAR LR LR 02 36 32.5
comp=Z,3μm,21.8s,baz=52,slow=31
NVAR P3KPbc 02 57 00.1
comp=Z,0.5nm,0.6s,baz=145,slow=5.4,SNR=3.6
NV11 Mina Array Sit 33.30 101 *e*P P 02 25 46.7 +1.8
NV11 *e*ScP ScP 02 32 07.0 -2.2
G17A Pierce Place, 33.31 85 ⇓P P 02 25 46.5 +1.5
baz=33,SNR=14
H16A Russell Place, 33.37 86 ⇓P P 02 25 46.6 +1.1
baz=33,SNR=24
D19A Cripps Ranch, 33.37 80 ⇓P P 02 25 46.7 +1.4
baz=33,SNR=34
J15A Blackfoot 33.44 89 ⇓P P 02 25 48.3 +2.2
baz=33,SNR=52
ELK Elko 33.45 95 *e*P P 02 25 48.2 +1.9
comp=Z,1μm,1.0s
ELK *e*ScP ScP 02 32 08.4 -1.4
MLAC Mammoth Lakes 33.46 102 ⇓P P 02 25 49.0 +2.6
baz=33
K14A Jones Ranch, D 33.53 91 ⇑P P 02 25 48.3 +1.5
baz=33,SNR=20
YMR Madison River 33.55 86 *e*P P 02 25 48.2 +1.1
comp=E,60nm,1.0s
YMR *e*PcP PcP 02 28 27.5 +0.2
F18A Big Timber 33.58 83 ⇓P P 02 25 48.4 +1.2
baz=33,SNR=9.0
C20A Veseth Ranch, 33.58 79 ⇑P P 02 25 48.4 +1.3
baz=33,SNR=56
FFC Flin Flon 33.60 65 *e*P P 02 25 48.0 +0.8
FFC pmax pmax
comp=Z,23nm,0.9s
FFC MLR MLR
comp=Z,2μm,21.0s
FFC Flin Flon 33.60 65 *e*P P 02 25 48.0 +0.8
comp=Z,23nm,0.9s
FFC *e*ScP ScP 02 32 07.1 -2.7
FFC LR LR
comp=Z,2μm,21.0s
FFC Flin Flon 33.60 65 P P 02 25 48.4 +1.2
comp=Z,147nm,1.3s,SNR=11
GCMT Greycliff 33.67 83 *e*P P 02 25 49.2 +1.1
comp=Z,4.4nm,0.5s
GCMT *e*ScP ScP 02 32 07.9 -2.4
I16A Newdale 33.71 87 ⇓P P 02 25 50.0 +1.6
baz=34,SNR=8.2
B21A Ellsworth Farm 33.77 77 ⇓P P 02 25 49.6 +0.9
baz=34,SNR=5.8
L14A Malta 33.80 91 ⇑P P 02 25 51.1 +1.8
baz=34,SNR=26
E19A Rath Farm, Rou 33.81 81 ⇑P P 02 25 50.7 +1.5
baz=34,SNR=39
MTUM Tungsten Hills 33.81 103 *e*P P 02 25 51.7 +2.3
K15A Arbon 33.82 90 ⇑P P 02 25 51.7 +2.3
baz=34,SNR=52
D20A Manuel Ranch, 33.84 80 ⇓P P 02 25 50.9 +1.5
baz=34,SNR=12
H17A Grant Village 33.94 86 ⇑P P 02 25 53.0 +2.5
baz=34,SNR=34
LKWY Lake 33.94 85 *e*P P 02 25 53.1 +2.5
LKWY pmax pmax
comp=Z,31nm,1.0s
LKWY MLR MLR
comp=Z,1μm,21.0s
LKWY Lake 33.94 85 *e*P P 02 25 53.0 +2.5
comp=Z,31nm,1.0s
LKWY *e*ScP ScP 02 32 11.2 -0.3
LKWY LR LR
comp=Z,1μm,21.0s
G18A Lazy EL Ranch, 34.00 84 ⇑P P 02 25 51.5 +0.6
baz=34,SNR=9.4
J16A Bone 34.00 88 ⇓P P 02 25 52.9 +1.9
baz=34,SNR=10.0
IMW Indian Meadow 34.02 87 *e*P P 02 25 52.9 +1.7
comp=Z,28nm,1.1s
IMW *e*ScP ScP 02 32 09.9 -1.9
C21A Desert Coulee 34.04 78 ⇓P P 02 25 52.4 +1.2
baz=34,SNR=11
F19A Roth Farm, Mol 34.05 83 ⇓P P 02 25 52.5 +1.2
baz=34,SNR=20
DCID1 Drake Creek 34.05 87 *e*P P 02 25 53.9 +2.4
comp=Z,76nm,1.5s
TPH Tonopah 34.08 100 PFAKE 02 26 10.0 +18
TPH LR LR
comp=Z,3μm,21.0s
PTRM Twissleman Ran 34.08 106 *e*P P 02 25 53.9 +2.2
A22A Carney Farms, 34.11 76 ⇓P P 02 25 52.8 +1.1
baz=34,SNR=26
RRI2 Red Ridge 34.12 88 *e*P P 02 25 53.2 +1.0
comp=Z,63nm,1.4s
E20A Meyer Farm, Mu 34.16 81 ⇑P P 02 25 53.6 +1.4
baz=34,SNR=13
I17A Pilgrim Ck. 34.22 87 ⇑P P 02 25 54.7 +1.8
baz=34,SNR=6.2
MOOW Moose Ponds 34.22 87 *e*P P 02 25 54.4 +1.4
comp=Z,39nm,1.7s
MOOW *e*ScP ScP 02 32 10.6 -1.8
HVU Hansel Valley 34.23 91 *e*P P 02 25 54.9 +1.9
HVU *e* 02 28 29.6
HVU pmax pmax
comp=Z,65nm,1.0s
HVU Hansel Valley 34.23 91 *e*P P 02 25 54.9 +1.9
comp=Z,65nm,1.0s
HVU *e*PcP PcP 02 28 29.6 +0.4
HVU *e*ScP ScP 02 32 10.5 -1.9
TPAW Teton Pass 34.25 87 *e*P P 02 25 55.4 +2.1
comp=Z,29nm,1.2s
TPAW *e*ScP ScP 02 32 10.9 -1.7
K16A Soda Springs 34.28 89 ⇑P P 02 25 55.5 +2.1
baz=34,SNR=28
RLMT Red Lodge 34.28 84 *e*P P 02 25 55.0 +1.6
comp=Z,20nm,1.1s
RLMT *e*ScP ScP 02 32 12.3 -0.3
RLMT LR LR
comp=Z,617nm,20.0s
RLMT Red Lodge 34.28 84 ⇑P P 02 25 54.8 +1.4
baz=34,SNR=9.5
H18A Shoshone NF, C 34.30 85 ⇑P P 02 25 54.8 +1.1
baz=34,SNR=15
L15A Malad City 34.32 91 ⇓P P 02 25 55.3 +1.5
baz=34,SNR=44
LOHW Long Hollow 34.38 87 *e*P P 02 25 55.3 +1.0
comp=Z,16nm,1.0s
LOHW *e*ScP ScP 02 32 10.8 -2.2
SNOW Snow King Moun 34.38 87 *e*P P 02 25 55.7 +1.3
comp=Z,20nm,1.2s
B22A Reddig Ranch S 34.42 77 ⇓P P 02 25 55.4 +1.0
baz=34,SNR=8.0
SMMC Simmler 34.45 107 ⇑P P 02 25 56.9 +2.1
baz=34
J17A Brown Place, J 34.47 87 ⇑P P 02 25 56.5 +1.4
baz=34,SNR=8.7
D21A La Casta Ranch 34.51 79 ⇑P P 02 25 56.2 +1.0
baz=34,SNR=12
F20A Billings 34.54 82 ⇑P P 02 25 56.6 +1.1
baz=34,SNR=12
VES Vestal, Richgr 34.58 105 ⇓P P 02 25 57.4 +1.6
baz=34,SNR=21
AHID Auburn Hatcher 34.60 89 PFAKE 02 26 10.0 +14
AHID LR LR
comp=Z,2μm,20.0s
H19A Powell 34.70 84 ⇓P P 02 25 58.3 +1.3
baz=35,SNR=12
GRAC Grapevine Rang 34.74 102 ⇓P P 02 25 59.5 +2.2
baz=35
E21A Keefer Ranch, 34.75 80 ⇓P P 02 25 58.8 +1.6
baz=35
C22A Vida 34.78 78 ⇓P P 02 25 58.3 +0.8
baz=35,SNR=9.2
I18A Diamond G Ranc 34.79 86 ⇓P P 02 25 59.4 +1.5
baz=35,SNR=13
G20A Bridger 34.83 83 ⇓P P 02 25 58.9 +0.8
baz=35,SNR=28
R11A Troy Canyon, C 34.83 98 ⇑P P 02 25 59.7 +1.4
baz=35,SNR=124
PKM Peak Mountain 34.86 107 ⇑P P 02 26 00.6 +2.2
baz=35,SNR=10
L16A Fish Haven 34.87 90 ⇓P P 02 26 00.1 +1.6
baz=35,SNR=50
B23A Brockton 34.90 76 ⇓P P 02 25 59.5 +1.0
baz=35,SNR=36
D22A Cohagen 34.93 79 ⇓P P 02 26 00.3 +1.5
baz=35,SNR=56
POHA Pohakuloa 34.94 170 *e*P P 02 26 00.9 +1.6
comp=Z,239nm,0.9s
J18A Kendall Valley 34.96 87 ⇓P P 02 26 00.4 +1.0
baz=35,SNR=15
HWUT Hardware Ranch 35.05 91 *e*P P 02 26 01.5 +1.4
comp=Z,87nm,1.7s
HWUT *e*PcP PcP 02 28 31.6 +0.1
HWUT *e*ScP ScP 02 32 13.8 -1.5
HWUT LR LR
comp=Z,2μm,22.0s
ISA Isabella 35.06 105 *e*P P 02 26 01.4 +1.4
ISA pmax pmax
comp=E,85nm,1.6s
ISA Isabella 35.06 105 *e*P P 02 26 01.4 +1.4
comp=Z,84nm,1.6s
ISA *e*ScP ScP 02 32 13.5 -1.8
ISA Isabella 35.06 105 ⇓P P 02 26 01.3 +1.2
baz=35,SNR=17
I19A Meeteetse 35.07 85 ⇑P P 02 26 01.2 +1.0
baz=35,SNR=10.0
YUK Yuzh-Kuril'sk 35.10 275 *i* P P 02 25 57.8 -2.5
YUK *i* 02 27 15.9
YUK *i* PPP PPP 02 27 31.2
YUK *i* S S 02 31 29.1 -2.3
YUK *i* SS SnSn 02 33 49.7 +1.5
YUK *i* SSS SSS 02 34 14.2
YUK pmax pmax
comp=N,74nm,0.5s
YUK pmax pmax
comp=Z,294nm,1.0s
YUK pmax pmax
comp=E,220nm,1.0s
YUK pmax pmax
comp=Z,360nm,1.8s
YUK MLR MLR
comp=N,276nm,23.0s
YUK MLR MLR
comp=E,200nm,23.0s
YUK MLR MLR
comp=Z,883nm,23.0s
DAC Darwin (Calif) 35.12 103 *e*P P 02 26 02.3 +1.6
DAC pmax pmax
comp=Z,46nm,1.2s
DAC MLR MLR
comp=Z,2μm,22.0s
DAC Darwin (Calif) 35.12 103 *e*P P 02 26 02.3 +1.6
comp=Z,46nm,1.2s
DAC *e*ScP ScP 02 32 14.4 -1.3
DAC LR LR
comp=Z,2μm,22.0s
F21A Absaloka Mine, 35.12 81 ⇓P P 02 26 01.7 +1.1
baz=35
C23A Lambert 35.14 77 ⇑P P 02 26 02.2 +1.5
baz=35,SNR=71
L17A Cokeville 35.15 89 ⇑P P 02 26 02.3 +1.4
baz=35,SNR=8.6
DUG Dugway 35.22 93 *e*P P 02 26 03.1 +1.6
DUG pmax pmax
comp=Z,122nm,1.1s
DUG MLR MLR
comp=Z,1μm,19.0s
DUG Dugway 35.22 93 *e*P P 02 26 03.1 +1.6
comp=Z,122nm,1.1s
DUG *e*ScP ScP 02 32 14.6 -1.3
DUG LR LR
comp=Z,1μm,19.0s
DUG Dugway 35.22 93 ⇓P P 02 26 03.0 +1.6
baz=35,SNR=101
A24A Westby 35.22 75 ⇑P P 02 26 02.4 +1.0
baz=35,SNR=29
YSS Yuzh-Sakhalins 35.24 281 ⇑*e*P P 02 26 02.0 +0.6
YSS *e**PP pP 02 26 12.0 +3.7
YSS pmax pmax
comp=Z,70nm,1.3s
ARVC Arvin 35.24 106 ⇑P P 02 26 02.8 +1.2
baz=35
K18A Toltan Ranch, 35.30 88 ⇑P P 02 26 03.7 +1.4
baz=35,SNR=19
MPMC Manual Prospec 35.33 103 ⇑P P 02 26 04.4 +1.8
baz=35,SNR=35
DGMT Dagmar 35.35 76 *e*P P 02 26 04.0 +1.5
comp=Z,99nm,1.2s
DGMT LR LR
comp=Z,2μm,20.0s
DGMT Dagmar 35.35 76 ⇑P P 02 26 03.3 +0.9
baz=35,SNR=9.3
YAK Yakutsk 35.36 311 *e*P P 02 26 00.6 -1.6
YAK *e**PP pP 02 26 09.5 +0.3
YAK *e* 02 27 15.0
YAK *e* 02 28 31.3
YAK *e*S S 02 31 30.3 -4.6
YAK *e*SS SnSn 02 33 53.7 -0.1
YAK *e* 02 36 16.5
YAK pmax pmax
comp=Z,198nm,0.9s
YAK pmax pmax
comp=N,11nm,1.0s
YAK pmax pmax
comp=E,78nm,1.0s
YAK pmax pmax
comp=Z,761nm,9.5s
YAK pmax pmax
comp=E,687nm,7.9s
YAK pmax pmax
comp=N,202nm,5.3s
YAK smax smax
comp=N,79nm,1.5s
YAK smax smax
comp=E,145nm,1.6s
H20A Greybull 35.38 84 ⇓P P 02 26 03.4 +0.6
baz=35,SNR=8.3
FURC Furnace Creek, 35.40 102 ⇓P P 02 26 05.0 +2.1
baz=35,SNR=8.8
G21A Lodge Grass 35.41 82 ⇓P P 02 26 03.8 +0.7
baz=35,SNR=18
E22A Miles City 35.45 80 ⇓P P 02 26 04.7 +1.4
baz=35,SNR=14
D23A Lindsay 35.47 78 ⇑P P 02 26 05.0 +1.5
baz=35,SNR=20
J19A Crowheart 35.49 86 ⇓P P 02 26 05.0 +1.1
baz=35,SNR=10
BW06 Boulder Array 35.50 87 *e*P P 02 26 04.8 +0.8
comp=E,38nm,1.6s
BW06 LR LR
comp=Z,897nm,20.0s
BW06 Boulder Array 35.50 87 ⇓P P 02 26 04.9 +0.8
baz=35,SNR=14
PDAR Pinedale Array 35.50 87 P P 02 26 04.8 +0.8
PDAR ScP ScP 02 32 14.2 -2.9
PDAR *e* 02 56 48.5
PDAR Pinedale Array 35.50 87 P P 02 26 04.8 +0.8
comp=Z,4.8nm,0.6s,baz=296,slow=4.7,SNR=46
PDAR ScP ScP 02 32 14.2 -2.9
comp=Z,5.4nm,1.1s,baz=288,slow=1.4,SNR=10
PDAR LR LR 02 39 19.9
comp=Z,742nm,19.2s,baz=308,slow=34
PDAR P3KPbc 02 56 48.5
comp=Z,0.6nm,0.6s,baz=144,slow=5.3,SNR=4.4
I20A Worland 35.62 85 ⇓P P 02 26 06.2 +1.3
baz=36,SNR=24
LRMC Laurel Mountai 35.63 104 ⇓P P 02 26 06.4 +1.4
baz=36,SNR=6.5
F22A Rosebud 35.65 81 ⇑P P 02 26 06.0 +0.9
baz=36,SNR=10
M17A Scullys Gap (B 35.66 90 ⇓P P 02 26 06.3 +1.0
baz=36,SNR=18
C24A Savage 35.72 77 ⇓P P 02 26 07.5 +1.9
baz=36,SNR=68
L18A Fontenelle, Gr 35.74 89 ⇓P P 02 26 07.1 +1.0
baz=36,SNR=26
JLU Jordanelle 35.75 92 *e*P P 02 26 07.6 +1.4
comp=Z,65nm,1.4s
JLU *e*ScP ScP 02 32 15.9 -2.2
E23A Ismay 35.79 79 ⇑P P 02 26 07.8 +1.6
baz=36,SNR=18
H21A Big Horn, Sher 35.85 83 ⇑P P 02 26 07.7 +0.8
baz=36,SNR=9.5
K19A Absolon Red Bu 35.88 87 ⇓P P 02 26 07.3 0.0
baz=36,SNR=18
EDW2 Edwards Air Fo 35.89 105 ⇑P P 02 26 08.4 +1.1
baz=36,SNR=8.0
G22A Birney 35.95 82 ⇑P P 02 26 08.4 +0.7
baz=36,SNR=11
DAU Daniels Canyon 35.99 92 *e*P P 02 26 09.8 +1.5
DAU Daniels Canyon 35.99 92 *e*P P 02 26 09.8 +1.5
DAU *e*ScP ScP 02 32 17.0 -1.9
D24A Glendive 36.01 78 ⇓P P 02 26 10.2 +2.2
baz=36,SNR=53
J20A Shoshoni 36.01 85 ⇓P P 02 26 09.7 +1.4
baz=36,SNR=19
MPU Maple Canyon 36.02 93 *e*P P 02 26 10.2 +1.7
comp=Z,32nm,1.1s
MPU *e*ScP ScP 02 32 17.1 -1.8
L19A Farson 36.03 88 ⇑P P 02 26 09.4 +0.9
baz=36,SNR=22
M18A Lyman 36.04 90 ⇑P P 02 26 09.5 +0.9
baz=36,SNR=12
F23A Volborg 36.17 80 ⇑P P 02 26 10.5 +1.0
baz=36,SNR=20
I21A Big Trails, Te 36.19 84 ⇓P P 02 26 10.3 +0.5
baz=36,SNR=21
GSC Goldstone 36.26 103 *e*P P 02 26 12.2 +1.8
GSC *e* 02 28 35.5
GSC pmax pmax
comp=Z,117nm,1.4s
GSC Goldstone 36.26 103 *e*P P 02 26 12.2 +1.8
comp=Z,117nm,1.4s
GSC *e*PcP PcP 02 28 35.5 +0.4
GSC *e*ScP ScP 02 32 18.3 -1.4
GSC Goldstone 36.26 103 ⇑P P 02 26 12.1 +1.8
baz=36,SNR=19
H22A Clearmont 36.27 82 ⇑P P 02 26 11.3 +0.8
baz=36,SNR=11
K20A Yellowstone Ra 36.28 87 ⇓P P 02 26 10.8 +0.1
baz=36,SNR=7.4
PASC Pasadena Art C 36.30 106 *e*P P 02 26 11.9 +1.2
comp=Z,47nm,1.4s
E24A Baker 36.33 78 ⇓P P 02 26 12.3 +1.5
baz=36,SNR=17
MWC Mount Wilson 36.34 106 *e*P P 02 26 13.3 +2.1
MWC pmax pmax
comp=Z,80nm,1.5s
MWC Mount Wilson 36.34 106 *e*P P 02 26 13.3 +2.1
comp=Z,80nm,1.5s
J21A Lysite 36.38 85 ⇓P P 02 26 12.3 +0.8
baz=36,SNR=24
ARUT Antelope Range 36.46 97 *e*P P 02 26 13.3 +1.1
ARUT pmax pmax
comp=Z,88nm,1.3s
ARUT Antelope Range 36.46 97 *e*P P 02 26 13.3 +1.1
comp=Z,88nm,1.3s
ARUT *e*ScP ScP 02 32 19.2 -1.3
G23A Biddle 36.48 81 ⇓P P 02 26 13.1 +0.9
baz=36,SNR=24
M19A Rock Springs 36.52 89 ⇓P P 02 26 13.1 +0.3
baz=36,SNR=11
BFSC Mount Baldy Ra 36.55 105 ⇓P P 02 26 14.5 +1.6
baz=36,SNR=14
I22A 9 Mile Ranch, 36.61 84 ⇓P P 02 26 14.2 +0.8
baz=36,SNR=12
CCUT Cedar City 36.66 97 *e*P P 02 26 15.7 +1.7
comp=Z,99nm,1.5s
CCUT *e*ScP ScP 02 32 20.3 -1.1
L20A Wamsutter 36.68 87 ⇑P P 02 26 14.3 +0.2
baz=36,SNR=15
MVU Marysvale 36.69 95 *e*P P 02 26 15.9 +1.7
comp=Z,51nm,1.3s
MVU *e*ScP ScP 02 32 20.1 -1.4
MVU LR LR
comp=Z,2μm,20.0s
MSU Marysvale 36.70 95 *e*P P 02 26 16.1 +1.8
MSU Marysvale 36.70 95 *e*P P 02 26 16.1 +1.8
TMUT Trail Mountain 36.74 93 *e*P P 02 26 16.6 +1.8
comp=Z,118nm,1.3s
P17A Butcher Ranch, 36.90 93 ⇑P P 02 26 17.1 +1.1
baz=37,SNR=26
J22A Midwest 36.90 84 ⇑P P 02 26 16.7 +0.8
baz=37
K21A Alcova 36.93 86 ⇓P P 02 26 16.5 +0.3
baz=37,SNR=32
ASAJ Asahikawa 36.95 277 *e*P P 02 26 15.8 -0.3
comp=Z,30nm,0.8s
ASAJ *e*PcP PcP 02 28 37.2 +0.3
ASAJ Asahikawa 36.95 277 P P 02 26 15.8 -0.3
comp=Z,56nm,0.7s,baz=25,slow=4.8,SNR=26
ASAJ LR LR 02 39 59.2
comp=Z,2μm,22.0s,baz=346,slow=34
G24A Alzada 36.96 80 ⇓P P 02 26 16.8 +0.5
baz=37,SNR=8.8
Q16A Castle Valley 37.02 94 ⇑P P 02 26 18.7 +1.8
baz=37,SNR=25
P18A Preston Nutter 37.09 92 ⇓P P 02 26 19.0 +1.3
baz=37,SNR=59
M20A Sweetwater, Wa 37.09 88 ⇑P P 02 26 18.6 +1.0
baz=37,SNR=14
H24A Dirks Ranch, A 37.23 81 ⇓P P 02 26 18.7 +0.2
baz=37,SNR=16
SRU San Rafael 37.27 93 *e*P P 02 26 20.6 +1.5
SRU pmax pmax
comp=Z,130nm,1.2s
SRU San Rafael 37.27 93 *e*P P 02 26 20.6 +1.5
comp=Z,130nm,1.2s
SRU *e*ScP ScP 02 32 21.4 -2.2
SRU San Rafael 37.27 93 ⇑P P 02 26 20.5 +1.5
baz=37,SNR=81
L21A Rawlins 37.27 87 ⇑P P 02 26 19.7 +0.5
baz=37,SNR=29
GMRC Granite Mounta 37.29 103 ⇑P P 02 26 20.6 +1.4
baz=37,SNR=26
O19A Miners Draw (B 37.31 90 ⇓P P 02 26 20.3 +0.9
baz=37,SNR=35
J23A Dilts Ranch, B 37.45 84 ⇑P P 02 26 21.5 +1.0
baz=37,SNR=5.2
N20A Spence Gulch, 37.47 89 ⇑P P 02 26 22.0 +1.2
baz=37,SNR=26
M21A Separation Pea 37.50 87 ⇓P P 02 26 21.4 +0.3
baz=37,SNR=10
ALE Alert 37.58 12 P P 02 26 20.0 -1.0
comp=Z,509nm,0.8s,SNR=67
PFO Pinyon Flat Ob 37.69 105 *e*P P 02 26 23.7 +1.1
comp=Z,34nm,1.1s
PFO LR LR
comp=Z,3μm,20.0s
PFO Pinyon Flat Ob 37.69 105 P P 02 26 23.0 +0.4
comp=Z,138nm,1.0s,SNR=8.7
PFO Pinyon Flat Ob 37.69 105 ⇓P P 02 26 23.7 +1.1
baz=38,SNR=11
I24A Kuemmerle Ranc 37.71 82 ⇓P P 02 26 23.0 +0.4
baz=38,SNR=8.5
L22A Ellis Ranch, M 37.78 86 ⇑P P 02 26 24.4 +1.0
baz=38,SNR=9.3
K23A Bowen Ranch, D 37.80 84 ⇓P P 02 26 24.0 +0.5
baz=38,SNR=11
P19A Cripple Cowboy 37.82 91 ⇓P P 02 26 24.9 +1.1
baz=38,SNR=57
109C Camp Elliot, M 37.85 106 ⇑P P 02 26 25.6 +1.8
baz=38,SNR=7.2
NEE2 Needles Airpor 37.89 102 ⇑P P 02 26 25.6 +1.4
baz=38,SNR=5.2
RSSD Black Hills 37.89 81 *e*P P 02 26 25.1 +0.7
RSSD *e* 02 28 40.2
RSSD *e* 02 32 23.6
RSSD pmax pmax
comp=Z,35nm,0.8s

RSSD **Black Hills** 37.89 81 *e*P P 02 26 25.1 +0.7
comp=Z,35nm,0.8s
RSSD *e*PcP **PcP** 02 28 40.2 +0.1
RSSD *e*ScP **ScP** 02 32 23.6 -2.3
ERM Erimo 37.91 274 *d i*P **P** 02 26 23.9 -0.3
ERM pmax pmax
comp=Z,122nm,1.0s
ERM Erimo 37.91 274 *e*P **P** 02 26 24.2 +0.1
comp=Z,111nm,1.0s
ERM LR LR
comp=Z,1µm,22.0s
ERM Erimo 37.91 274 P **P** 02 26 24.3 +0.1
comp=Z,613nm,0.9s,SNR=12
O20A White River Ci 37.93 90 ⇑P **P** 02 26 25.3 +0.7
baz=38,SNR=49
N21A Black Mountain 37.95 88 ⇓P **P** 02 26 25.4 +0.5
baz=38,SNR=14
J24A Dixon Ranch, L 38.01 83 ⇓P **P** 02 26 25.8 +0.6
baz=38,SNR=6.1
IRM Iron Mountain 38.03 103 ⇑P **P** 02 26 27.0 +1.6
baz=38,SNR=34
U15A North Rim 38.06 98 ⇓P **P** 02 26 27.5 +1.6
baz=38,SNR=30
W13A Hualapai Mount 38.07 101 ⇑P **P** 02 26 27.5 +1.5
baz=38,SNR=44
M22A Cedar Creek Ra 38.08 87 ⇓P **P** 02 26 26.2 +0.2
baz=38,SNR=18
L23A Garrett 38.15 85 ⇑P **P** 02 26 27.0 +0.4
baz=38,SNR=39
BC3 Big Chuckawall 38.22 104 ⇑P **P** 02 26 28.0 +0.9
baz=38,SNR=12
MONP Monument Peak 38.24 106 ⇓P **P** 02 26 29.0 +1.7
baz=38,SNR=16
P20A De Beque 38.25 91 ⇓P **P** 02 26 28.0 +0.6
baz=38,SNR=9.6
BAR Barrett 38.25 106 *e*P **P** 02 26 29.0 +1.7
comp=Z,396nm,2.5s
BAR *e*ScP **ScP** 02 32 24.9 -2.3
MDND Maddock 38.27 74 ⇓P **P** 02 26 28.6 +1.3
baz=38,SNR=52
O21A Pagoda 38.33 89 ⇑P **P** 02 26 28.6 +0.6
baz=38,SNR=8.9
PDMCI Parker Dam,Lak 38.50 102 ⇓P **P** 02 26 30.6 +1.3
baz=38,SNR=9.7
S18A Hurst Farm, Bl 38.52 94 ⇑P **P** 02 26 30.4 +0.6
baz=38,SNR=62
N22A Wattenberg Ran 38.54 87 ⇓P **P** 02 26 30.7 +0.8
baz=38,SNR=13
SWSC Sam W. Stewart 38.55 105 ⇑P **P** 02 26 31.0 +1.2
baz=38,SNR=9.8
L24A Wheatland 38.64 85 ⇑P **P** 02 26 31.2 +0.6
baz=38
Q20A Ridgley Place, 38.67 91 ⇓P **P** 02 26 31.1 +0.2
baz=38,SNR=24
Y12C Blythe 38.68 103 ⇓P **P** 02 26 32.4 +1.6
baz=39,SNR=19
PV04 Paradox Valley 38.69 92 *e*P **P** 02 26 32.0 +0.9
PV04 *e*ScP **S** 02 32 27.1 +0.6
HABR Khabarovsk 38.75 288 *c i*P **P** 02 26 30.0 -1.2
HABR *e**PP **pP** 02 26 39.6 +1.4
HABR *e**SP **sP** 02 26 43.8 +2.8
HABR *e* 02 27 58.8
HABR *e*PPP PPP 02 28 20.0
HABR *e* 02 28 40.8
HABR *e*S **S** 02 32 25.3 -1.5
HABR *e**SS **sS** 02 32 41.8 +3.5
HABR *e*SSS SSS 02 35 35.1
HABR *e* 02 36 37.0
HABR pmax pmax
comp=E,114nm,1.0s
HABR pmax pmax
comp=Z,224nm,1.0s
HABR pmax pmax
comp=N,106nm,1.9s
HABR pmax pmax
comp=Z,457nm,1.9s
HABR MLR MLR
comp=N,1µm,18.0s
HABR MLR MLR
comp=Z,2µm,18.0s
HABR MLR MLR
comp=E,1µm,18.0s
N23A Red Feather La 38.78 87 ⇑P **P** 02 26 32.6 +0.7
baz=39,SNR=13
P21A Newcastle 38.79 90 ⇓P **P** 02 26 32.8 +0.9
baz=39,SNR=12
PHWY Pilot Hill 38.80 86 *e*P **P** 02 26 32.6 +0.5
comp=E,11nm,1.1s
PHWY *e*ScP **S** 02 32 26.6 -1.8
O22A Kremmling 38.90 88 ⇑P **P** 02 26 33.4 +0.4
baz=39,SNR=18
K25A Mack Ranch, Ha 38.91 83 ⇓P **P** 02 26 33.1 +0.3
baz=39,SNR=5.3
GLA Glamis 39.02 104 *e*P **P** 02 26 35.1 +1.4
GLA *e* 02 32 28.9
GLA pmax pmax
comp=Z,82nm,1.2s
GLA Glamis 39.02 104 *e*P **P** 02 26 35.1 +1.4
comp=Z,82nm,1.2s
GLA *e*ScP **ScP** 02 32 28.9 -1.3
GLA Glamis 39.02 104 ⇑P **P** 02 26 35.2 +1.4
baz=39,SNR=14
ULM Lac du Bonnet 39.02 68 *e*P **P** 02 26 34.3 +0.8
comp=Z,86nm,1.1s
ULM Lac du Bonnet 39.02 68 P **P** 02 26 33.8 +0.3
comp=Z,23nm,0.4s,baz=306,slow=8.7,SNR=38
ULM LR LR 02 42 22.8
comp=Z,1µm,21.4s,baz=152,slow=36
PV01 Paradox Valley 39.05 92 *e*P **P** 02 26 34.8 +0.6
comp=Z,2µm,0.7s
PV01 *e*ScP **ScP** 02 32 28.6 -1.9
M24A Cheyenne 39.07 85 ⇓P **P** 02 26 35.0 +0.8
baz=39
R20A Redvale 39.13 92 ⇓P **P** 02 26 35.4 +0.6
baz=39,SNR=26
L25A Engebretsen Ra 39.14 84 ⇓P **P** 02 26 35.8 +1.1
baz=39
P22A Eagle 39.14 89 ⇑P **P** 02 26 35.5 +0.5
baz=39,SNR=8.1
Q21A Lamborn Mesa, 39.17 91 ⇑P **P** 02 26 35.7 +0.6
baz=39,SNR=8.5
WUAZ Wupatki 39.23 98 *e*P **P** 02 26 37.0 +1.5
comp=Z,68nm,1.1s
WUAZ *e*ScP **ScP** 02 32 30.2 -0.8
WUAZ LR LR
comp=Z,2µm,20.0s
WUAZ Wupatki 39.23 98 ⇓P **P** 02 26 37.1 +1.5
baz=39,SNR=22
O23A Lake Granby, G 39.23 88 ⇓P **P** 02 26 37.0 +1.3
baz=39,SNR=21
K26A Motz Farm, Whi 39.25 83 ⇑P **P** 02 26 35.9 +0.2
baz=39,SNR=5.3
SMCO Snowmass 39.29 90 *e*P **P** 02 26 36.8 +0.4
comp=Z,24nm,1.3s
SMCO *e*PcP **PcP** 02 28 44.3 -0.5
SMCO *e*ScP **ScP** 02 32 29.5 -2.1
S20A Disappointment 39.38 93 ⇓P **P** 02 26 37.3 +0.4
baz=39,SNR=54
Y14A Wickenburg 39.41 101 ⇑P **P** 02 26 38.4 +1.4
baz=39,SNR=27
N24A Carr 39.44 86 ⇑P **P** 02 26 38.2 +0.9
baz=39
R21A Cimarron 39.49 91 ⇑P **P** 02 26 38.8 +0.9
baz=39,SNR=21
M25A Palm-Egli Farm 39.54 85 ⇑P **P** 02 26 39.2 +1.2
baz=39,SNR=6.3
Q22A Crested Butte, 39.54 90 ⇑P **P** 02 26 38.9 +0.6
baz=39,SNR=12
ISCO Idaho Springs 39.68 88 *e*P **P** 02 26 40.4 +0.9
ISCO *e* 02 28 46.4
ISCO pmax pmax
comp=Z,129nm,2.8s
ISCO MLR MLR
comp=Z,2µm,19.0s
ISCO Idaho Springs 39.68 88 *e*P **P** 02 26 40.4 +0.9
comp=Z,129nm,2.8s
ISCO *e*PcP **PcP** 02 28 46.4 +0.5
ISCO *e*ScP **ScP** 02 32 30.5 -2.4
ISCO LR LR
comp=Z,2µm,19.0s
ISCO Idaho Springs 39.68 88 ⇑P **P** 02 26 40.3 +0.9
baz=40,SNR=7.4
MVCO Mesa Verde 39.72 93 *e*P **P** 02 26 40.4 +0.9
comp=Z,67nm,1.4s
MVCO *e*ScP **ScP** 02 32 31.5 -1.6
MVCO LR LR
comp=Z,1µm,20.0s

MVCO Mesa Verde 39.72 93 ⇓P **P** 02 26 40.2 +0.3
baz=40,SNR=16
L26A Underwood Farm 39.72 83 ⇑P **P** 02 26 40.5 +1.0
baz=40,SNR=5.4
CLNS Chul'man 39.74 304 *e*P **P** 02 26 39.0 -0.4
CLNS *e**PP **pP** 02 26 44.5 -1.9
CLNS *e*PPP PPP 02 28 18.0
CLNS *e* 02 28 43.8
CLNS pmax pmax
comp=Z,96nm,0.7s
CLNS pmax pmax
comp=N,51nm,0.7s
CLNS pmax pmax
comp=E,64nm,0.8s
CLNS pmax pmax
comp=Z,11nm,0.8s
CLNS pmax pmax
comp=N,13nm,0.9s
CLNS pmax pmax
comp=E,18nm,1.0s
CLNS MLR MLR
comp=Z,2µm,18.0s
CLNS MLR MLR
comp=N,455nm,19.0s
CLNS MLR MLR
comp=E,1µm,16.0s
O24A Longmont 39.78 87 ⇑P **P** 02 26 41.6 +1.5
baz=40
K27A Flueckinger Fa 39.80 82 ⇑P **P** 02 26 40.4 +0.3
baz=40
P23A Jefferson 39.83 89 ⇓P **P** 02 26 42.3 +1.5
baz=40,SNR=30
S21A Coal Bank Pass 39.83 92 ⇓P **P** 02 26 41.7 +0.9
baz=40,SNR=10.0
113A Mohawk Valley, 39.83 103 ⇓P **P** 02 26 41.6 +1.2
baz=40,SNR=8.0
Z14A Wintersburg 39.86 102 ⇓P **P** 02 26 42.1 +1.4
baz=40,SNR=14
N25A Grover 39.91 86 ⇓P **P** 02 26 42.7 +1.4
baz=40
X16A Lo Mia Camp, P 39.97 99 ⇓P **P** 02 26 43.7 +1.9
baz=40,SNR=42
M26A McRoberts Ranc 40.05 84 ⇓P **P** 02 26 43.3 +1.0
baz=40
R22A Saguache, Gunn 40.05 91 ⇑P **P** 02 26 43.9 +1.4
baz=40,SNR=24
AGMN Agassa Nation 40.10 71 *e*P **P** 02 26 42.7 +0.2
comp=E,131nm,1.1s
Q23A Hartsel 40.14 89 ⇓P **P** 02 26 44.7 +1.4
baz=40,SNR=12
KLR Kul'dur 40.15 291 *e*P P 02 26 37.2 -5.7
KLR *e* 02 28 24.5
KLR pmax pmax
comp=E,78nm,1.8s
KLR pmax pmax
comp=Z,130nm,1.8s
KLR MLR MLR
comp=N,1µm,13.5s
KLR MLR MLR
comp=Z,3µm,13.5s
U20A Newcomb 40.28 94 ⇓P **P** 02 26 45.5 +1.1
baz=40
S22A 4UR Ranch, Cre 40.33 91 ⇓P **P** 02 26 46.1 +1.2
baz=40,SNR=24
O25A Wiggins 40.35 87 ⇓P **P** 02 26 46.0 +1.2
baz=40
N26A Koester Ranch, 40.41 85 ⇓P **P** 02 26 46.4 +1.1
baz=40,SNR=15
T21A Navajo Lake 40.43 93 ⇓P **P** 02 26 46.9 +1.2
baz=40,SNR=9.7
M27A Reverse DX Ran 40.45 84 ⇓P **P** 02 26 46.4 +0.9
baz=40
W18A Petrified Fore 40.45 97 ⇓P **P** 02 26 47.1 +1.3
baz=40
Q24A Divide 40.50 89 ⇑P **P** 02 26 47.1 +0.9
baz=40,SNR=7.8
BRSD Miller 40.62 78 ⇓P **P** 02 26 47.3 +0.5
baz=40,SNR=7.7
R23A Moffat 40.62 90 ⇓P **P** 02 26 48.4 +1.2
baz=40,SNR=14
P25A Willow Gulch B 40.71 87 ⇓P **P** 02 26 49.4 +1.5
baz=41,SNR=20
V20A Brimhall 40.71 95 ⇑P **P** 02 26 48.8 +0.8
baz=41,SNR=14
O26A Horse Wrangler 40.73 86 ⇓P **P** 02 26 49.0 +1.1
baz=41,SNR=12
X18A Snowflake 40.75 98 ⇓P **P** 02 26 49.9 +1.7
baz=41,SNR=11
U21A Nageezi 40.75 94 ⇑P **P** 02 26 49.6 +1.4
baz=41,SNR=76
T22A Edith 40.79 92 ⇑P **P** 02 26 50.2 +1.6
baz=41,SNR=42
N27A Anderson Farm, 40.82 84 ⇑P **P** 02 26 49.7 +1.0
baz=41,SNR=9.8
214A Organ Pipe Nat 40.97 103 ⇑P **P** 02 26 51.4 +1.5
baz=41,SNR=30
R24A Sanders Place, 41.01 89 ⇑P **P** 02 26 51.5 +1.1
baz=41,SNR=16
OGNE Ogallala 41.02 84 *e*P **P** 02 26 51.4 +1.0
comp=Z,41nm,0.8s
OGNE LR LR
comp=Z,863nm,22.0s
OGNE Ogallala 41.02 84 ⇑P **P** 02 26 51.1 +0.8
baz=41,SNR=5.0
Q25A Bedland, Calha 41.06 88 ⇓P **P** 02 26 51.6 +0.8
baz=41,SNR=16
SDCO Great Sand Dun 41.11 90 *e*P **P** 02 26 52.4 +1.1
comp=Z,70nm,1.8s
P26A Davis Ranch, A 41.16 87 ⇓P **P** 02 26 52.8 +1.3
baz=41,SNR=42
W20A Ramah 41.17 96 ⇑P **P** 02 26 52.8 +1.1
baz=41,SNR=26
V21A Milan 41.19 94 ⇑P **P** 02 26 52.7 +0.8
baz=41,SNR=6.9
O27A Beecher Island 41.25 85 ⇓P **P** 02 26 53.1 +0.9
baz=41
U22A Llaves 41.25 93 ⇑P **P** 02 26 53.7 +1.2
baz=41
T23A Casias Ranch, 41.28 92 ⇓P **P** 02 26 53.8 +1.2
baz=41,SNR=5.1
S24A Houchin Ranch, 41.35 90 ⇑P **P** 02 26 54.4 +1.2
baz=41,SNR=26
Q26A Hugo 41.48 87 ⇓P **P** 02 26 55.3 +1.1
baz=41,SNR=7.4
V22A San Miguel Ran 41.54 94 ⇑P **P** 02 26 55.5 +0.7
baz=41,SNR=12
R25A Fountain Ranch 41.55 89 ⇓P **P** 02 26 55.7 +1.0
baz=41,SNR=14
X20A Quemado 41.58 96 ⇑P **P** 02 26 56.4 +1.2
baz=42,SNR=9.5
W21A San Fidel 41.67 95 ⇑P **P** 02 26 56.5 +0.7
baz=42
U23A El Rito 41.67 92 ⇓P **P** 02 26 57.2 +1.4
baz=42,SNR=45
S25A Robets Cordova 41.79 90 ⇓P **P** 02 26 57.4 +0.7
baz=42,SNR=12
T24A Torres, Weston 41.83 91 ⇑P **P** 02 26 58.7 +1.5
baz=42,SNR=16
TUC Tucson 41.87 101 *e*P **P** 02 26 59.0 +1.6
TUC *e* 02 28 53.2
TUC pmax pmax
comp=Z,10.0nm,1.2s
TUC MLR MLR
comp=Z,712nm,20.0s
TUC Tucson 41.87 101 *e*P **P** 02 26 59.0 +1.6
comp=Z,9.9nm,1.2s
TUC *e*PcP **PcP** 02 28 53.2 +0.4
TUC *e*ScP **ScP** 02 32 40.3 -1.0
TUC LR LR
comp=Z,712nm,20.0s
R26A Arlington 41.93 88 ⇓P **P** 02 26 58.7 +0.8
baz=42,SNR=30
KSCO Kaye Shedlock' 41.94 87 ⇓P **P** 02 26 58.8 +0.9
baz=42,SNR=7.8
X21A Alamocita Cree 42.06 96 ⇑P **P** 02 27 00.7 +1.6
baz=42,SNR=51
V23A Ortiz Mt. (NFS 42.08 93 ⇑P **P** 02 27 00.8 +1.6
baz=42,SNR=11
Y20A Horse Springs, 42.10 97 ⇑P **P** 02 27 01.3 +1.9
baz=42,SNR=8.1
U24A Moreno Valley 42.15 92 ⇓P **P** 02 27 01.2 +1.4
baz=42,SNR=7.9
W22A Albuquerque 42.15 94 ⇓P **P** 02 27 01.1 +1.3
baz=42
T25A Trinidad 42.16 90 ⇑P **P** 02 27 00.8 +1.1
baz=42,SNR=30
R27A Eads 42.32 88 ⇑P **P** 02 27 02.0 +1.0
baz=42,SNR=23

S26A Kim 42.38 89 ⇓P **P** 02 27 02.0 +0.5
baz=42,SNR=21
ECSD EROS Data Cent 42.38 77 *e*P **P** 02 27 01.2 -0.1
comp=Z,76nm,1.3s
ECSD LR LR
comp=Z,2µm,21.0s
Y21A Point of Rocks 42.44 96 ⇓P **P** 02 27 03.8 +1.7
baz=42,SNR=11
LAZ Ladron 42.47 95 *e*P **P** 02 27 03.8 +1.4
comp=Z,28nm,1.6s
LAZ *e*pP **pP** 02 27 14.6 +5.2
LAZ *e*ScP **ScP** 02 32 42.5 -1.4
X22A Bernardo 42.47 95 ⇑P **P** 02 27 04.2 +1.9
baz=42,SNR=7.4
ANMO Albuquerque 42.48 94 *e*P **P** 02 27 03.2 +0.8
comp=Z,22nm,1.2s
ANMO *e*PcP **PcP** 02 28 55.8 +0.9
ANMO *e*ScP **ScP** 02 32 42.0 -1.9
ANMO LR LR
comp=Z,441nm,20.0s
W23A Werner Place, 42.51 94 ⇓P **P** 02 27 03.7 +1.0
baz=42,SNR=9.1
Z20A Nine Sixteen R 42.55 98 ⇑P **P** 02 27 04.4 +1.5
baz=42,SNR=29
T26A Comanche Natio 42.61 89 ⇓P **P** 02 27 03.6 +0.2
baz=42,SNR=14
V24A Rampart Ranch, 42.63 92 ⇑P **P** 02 27 04.8 +1.2
baz=42,SNR=22
U25A Circle Dot Ran 42.66 91 ⇓P **P** 02 27 04.8 +0.8
baz=42,SNR=19
S27A Las Animas 42.67 88 ⇑P **P** 02 27 04.3 +0.5
baz=42
WAKE Wake Island 42.67 227 PFAKE 02 27 20.0 +16
WAKE LR LR
comp=Z,2µm,22.0s
EYMN Ely 42.70 69 *e*P **P** 02 27 04.2 +0.4
comp=Z,88nm,0.7s
EYMN *e*ScP **ScP** 02 32 40.9 -3.5
EYMN LR LR
comp=Z,1µm,21.0s
LENM Lemitar 42.73 95 *e*P **P** 02 27 06.0 +1.5
LENM *e*pP pP 02 27 16.9 +5.4
LPM Los Pinos Moun 42.83 95 *e*P **P** 02 27 06.6 +1.3
LPM *e*pP **pP** 02 27 17.1 +4.8
LPM *e*PcP **PcP** 02 28 56.1 +0.1
LPM *e*ScP **ScP** 02 32 43.7 -1.6
R28A Tribune 42.86 87 ⇓P **P** 02 27 06.1 +0.7
baz=43
Y22A Socorro 42.90 96 ⇓P **P** 02 27 07.4 +1.5
baz=43,SNR=24
W24A Lazy 6 Ranch, 42.91 93 ⇓P **P** 02 27 06.9 +1.0
baz=43,SNR=21
V25A Rancho No Teng 42.93 92 ⇓P **P** 02 27 07.1 +1.0
baz=43
120A U Bar Ranch, L 42.94 99 ⇑P **P** 02 27 07.4 +1.3
baz=43,SNR=10
Z21A St. Cloud Mine 42.94 97 ⇑P **P** 02 27 07.8 +1.6
baz=43,SNR=18
BNM Barren Site 42.95 95 *e*P **P** 02 27 07.4 +1.1
comp=Z,33nm,1.2s
BNM *e*PcP **PcP** 02 28 56.9 +0.4
BNM *e*ScP **ScP** 02 32 44.1 -1.7
BGNE Belgrade 42.97 81 ⇓P **P** 02 27 06.6 +0.5
baz=43,SNR=19
USRK Ussuriysk Arra 42.98 285 P **P** 02 27 04.6 -1.5
comp=Z,9.3nm,0.8s,baz=56,slow=6.8,SNR=22
USRK PcP **PcP** 02 28 56.5 +0.3
comp=Z,13nm,0.9s,baz=33,slow=2.6,SNR=3.9
USRK LR LR 02 45 23.1
comp=Z,2µm,20.7s,baz=51,slow=37
U26A Atchley Ranch, 43.06 90 ⇑P **P** 02 27 07.8 +0.8
baz=43,SNR=29
T27A Campo 43.20 89 ⇑P **P** 02 27 08.5 +0.4
baz=43
R29A Marienthal 43.20 86 ⇓P **P** 02 27 08.9 +0.8
baz=43
S28A Manter 43.32 88 ⇓P **P** 02 27 10.0 +0.9
baz=43,SNR=10
Z22A Elephant Butte 43.39 96 ⇓P **P** 02 27 11.1 +1.3
baz=43,SNR=15
319A Douglas 43.42 100 ⇓P **P** 02 27 11.3 +1.3
baz=43,SNR=7.6
Y23A Lovelace Mesa, 43.43 95 ⇑P **P** 02 27 11.3 +1.1
baz=43,SNR=18
121A Cookes Peak, D 43.44 98 ⇑P **P** 02 27 11.5 +1.3
baz=43,SNR=17
V26A Tequesquite Ra 43.45 91 ⇑P **P** 02 27 10.9 +0.8
baz=43,SNR=25
W25A X Bar L Ranch, 43.45 92 ⇑P **P** 02 27 11.1 +0.9
baz=43,SNR=13
220A Playas Peak, P 43.47 99 ⇑P **P** 02 27 11.6 +1.2
baz=43,SNR=32
T28A Walsh 43.51 88 ⇓P **P** 02 27 11.3 +0.6
baz=43,SNR=9.4
U27A Thompson Grove 43.57 90 ⇓P **P** 02 27 11.6 +0.4
baz=43,SNR=14
SPMN St. Paul 43.61 73 ⇓P **P** 02 27 11.5 +0.3
baz=43,SNR=22
VLA Vladivostok 43.71 284 ⇑*i*P **P** 02 27 10.7 -1.3
VLA *e*S **S** 02 33 39.2 -1.3
VLA pmax pmax
comp=Z,104nm,1.6s
S29A Ulysses 43.75 87 ⇓P **P** 02 27 13.2 +0.7
baz=44
CBKS Cedar Bluff 43.75 85 *e*P **P** 02 27 13.4 +0.9
CBKS pmax pmax
comp=Z,84nm,1.0s
CBKS Cedar Bluff 43.75 85 *e*P **P** 02 27 13.4 +0.9
comp=Z,84nm,1.0s
122A Conniff Cattle 43.77 97 ⇓P **P** 02 27 14.7 +1.9
baz=44,SNR=6.3
R30A Dighton 43.79 86 ⇑P **P** 02 27 13.4 +0.6
baz=44
Y24A Capitan 43.80 94 ⇓P **P** 02 27 14.0 +0.9
baz=44,SNR=12
Z23A Rita Site, Whi 43.81 96 ⇑P **P** 02 27 14.4 +1.3
baz=44,SNR=5.7
221A Mesquite Ranch 43.82 98 ⇓P **P** 02 27 14.5 +1.3
baz=44,SNR=5.7
X25A Clemmons Ranch 43.82 93 ⇑P **P** 02 27 14.3 +1.0
baz=44,SNR=6.8
320A Kipp Ranch, An 43.88 100 ⇑P **P** 02 27 15.2 +1.4
baz=44,SNR=30
W26A Owens Ranch, T 43.95 92 ⇑P **P** 02 27 14.9 +0.6
baz=44
U28A Mallet 43.95 89 ⇑P **P** 02 27 14.3 +0.1
baz=44,SNR=6.3
T29A Hugoton 43.96 88 ⇓P **P** 02 27 14.8 +0.6
baz=44
V27A Dan Oppiter Fa 44.03 90 ⇑P **P** 02 27 15.2 +0.3
baz=44,SNR=7.5
MDJ Mudanjiang 44.06 287 P **P** 02 27 13.8 -1.1
MDJ pP **pP** 02 27 25.2 +3.3
MDJ sP sP 02 27 30.2 +5.5
MDJ PcP **PcP** 02 29 01.3 +1.5
MDJ ScP **ScP** 02 32 47.7 -2.2
MDJ PcS **PcS** 02 32 54.0 +1.2
MDJ S S 02 33 36.6 -9.1
MDJ SS SS 02 36 51.8 -11
MDJ ScS **ScS** 02 37 10.2 -1.5
MDJ pmax pmax
comp=Z,19nm,0.7s
MDJ pmax pmax
comp=Z,160nm,6.2s
MDJ LR LR
comp=N,660nm,21.2s
MDJ LR LR
comp=E,1µm,22.1s
MDJ LR LR
comp=Z,2µm,19.5s
MDJ Mudanjiang 44.06 287 *e*P **P** 02 27 14.0 -0.9
comp=Z,25nm,0.8s
MDJ LR LR
comp=Z,2µm,19.0s
S30A Montezuma 44.12 86 ⇓P **P** 02 27 15.8 +0.4
baz=44,SNR=7.2
222A Williams Famil 44.14 98 ⇑P **P** 02 27 17.0 +1.2
baz=44
Y25A Mesa, Roswell 44.23 94 ⇓P **P** 02 27 17.2 +0.7
baz=44,SNR=17
123A Bell Site, Whi 44.24 96 ⇓P **P** 02 27 17.9 +1.3
baz=44
Z24A Sheeppen Canyo 44.27 95 ⇑P **P** 02 27 17.8 +1.0
baz=44,SNR=15
X26A CR and CF Fran 44.30 92 ⇓P **P** 02 27 17.6 +0.6
baz=44
W27A Bowe Ranch, En 44.38 91 ⇓P **P** 02 27 18.0 +0.3

baz=44,SNR=7.3
V28A Channing 44.39 90 ⇓P P 02 27 17.8 +0.1
baz=44
MJAR Matsushiro Arr 44.39 272 P P 02 27 17.7 +0.1
MJAR PcP PcP 02 29 01.9 +0.8
MJAR ScP ScP 02 32 50.4 -1.1
MJAR Matsushiro Arr 44.39 272 P P 02 27 17.7 +0.1
comp=Z,39nm,0.9s,baz=43,slow=6.7,SNR=102
MJAR PcP PcP 02 29 01.9 +0.8
comp=Z,7.1nm,0.7s,baz=41,slow=2.9,SNR=4.0
MJAR ScP ScP 02 32 50.4 -1.1
comp=Z,2.9nm,0.8s,baz=30,slow=3.0,SNR=8.2
MJAR LR LR 02 45 35.2
comp=Z,667nm,19.9s,baz=70,slow=36
MAJO Matsushiro 44.39 272 *e*P P 02 27 17.9 +0.3
MAJO pmax pmax
comp=Z,233nm,0.9s
MAJO Matsushiro 44.39 272 *e*P P 02 27 17.9 +0.3
comp=Z,233nm,0.9s
MAJO *e*ScP ScP 02 32 50.4 -1.0
MAJO LR LR
comp=Z,1μm,22.0s
MAT Matsushiro 44.39 272 P P 02 27 17.7 +0.1
MAT S S 02 33 50.4 -0.3
U29A Oasis Ranch, S 44.46 88 ⇓P P 02 27 18.5 +0.3
baz=44
T30A Plains 44.48 87 ⇓P P 02 27 18.7 +0.3
baz=44
124A Stringfield Ra 44.67 96 ⇓P P 02 27 20.9 +0.8
baz=45,SNR=15
Z25A Roswell 44.68 94 ⇓P P 02 27 20.7 +0.7
baz=45,SNR=8.6
S31A Mullinville 44.70 86 ⇑P P 02 27 20.6 +0.4
baz=44
V29A Stinnett 44.71 89 ⇓P P 02 27 20.4 +0.1
baz=45
Y26A Elida 44.74 93 ⇓P P 02 27 21.0 +0.5
baz=45
W28A Vega 44.74 90 ⇑P P 02 27 20.6 +0.1
baz=45
U30A WK&E Inc. Balk 44.77 88 ⇓P P 02 27 20.8 +0.1
baz=45,SNR=6.5
T31A Randall Ranch, 44.95 86 ⇑P P 02 27 22.4 +0.3
baz=45,SNR=13
224A Cornudas Mount 45.08 96 ⇓P P 02 27 24.1 +0.8
baz=45,SNR=17
COWI Conover 45.10 69 *e*P P 02 27 23.1 0.0
comp=Z,40nm,0.6s
COWI *e*S S 02 33 58.4 -2.4
COWI LR LR
comp=Z,995nm,19.0s
Y27A Causey 45.15 92 ⇓P P 02 27 24.1 +0.3
baz=45
125A Gardner Draw, 45.16 95 ⇓P P 02 27 24.7 +0.8
baz=45,SNR=15
AMTX Amarillo 45.31 90 *e*P P 02 27 25.9 +0.9
comp=Z,39nm,1.4s
AMTX *e*ScP ScP 02 32 53.8 -1.6
AMTX LR LR
comp=Z,1μm,20.0s
AMTX Amarillo 45.31 90 ⇓P P 02 27 25.3 +0.3
baz=45
MSTX Muleshoe 45.32 92 ⇓P P 02 27 25.3 +0.1
baz=45,SNR=6.0
U31A Nine Bar Ranch 45.35 87 ⇑P P 02 27 25.5 +0.3
baz=45
KSU1 Kansas State U 45.38 82 *e*P P 02 27 25.4 0.0
comp=Z,70nm,1.0s
KSU1 *e*ScP ScP 02 32 52.4 -3.0
KSU1 LR LR
comp=Z,955nm,21.0s
225A Deer Hill, Car 45.46 96 ⇑P P 02 27 27.2 +0.9
baz=45,SNR=8.1
SCIA State Center 45.48 77 *e*P P 02 27 26.9 +0.7
comp=Z,86nm,0.9s
SCIA LR LR
comp=Z,2μm,21.0s
Z27A Tatum 45.53 93 ⇑P P 02 27 26.9 +0.1
baz=45,SNR=7.0
126A Clayton Basin, 45.54 94 ⇑P P 02 27 27.7 +0.8
baz=45,SNR=15
324A Moseley Ranch, 45.56 97 ⇑P P 02 27 27.8 +0.7
baz=46,SNR=10
X29A Tulia 45.61 91 ⇓P P 02 27 27.3 -0.1
baz=46
GDL2 Guadalupe Moun 45.66 95 *e*P P 02 27 28.8 +1.0
GDL2 *e*pP pP 02 27 39.7 +4.7
GDL2 *e*PcP PcP 02 29 06.2 +0.4
GDL2 *e*ScP ScP 02 32 55.2 -1.6
Y28A McKinney Farm, 45.67 92 ⇑P P 02 27 27.7 -0.1
baz=46
V31A Spring Creek L 45.76 88 ⇑P P 02 27 28.9 +0.4
baz=46,SNR=7.6
226B Tecolote Peak, 45.87 95 ⇑P P 02 27 30.3 +0.8
baz=46,SNR=12
JHJ Hachijo jima 2 45.88 267 P P 02 27 30.1 +0.8
comp=Z,93nm,0.7s,baz=256,slow=16,SNR=4.2
JHJ LR LR 02 44 37.0
comp=Z,448nm,21.1s,baz=112,slow=33
127A Arkansas Junct 45.90 94 ⇓P P 02 27 30.0 +0.3
baz=46
325A Bean Ranch, Si 45.91 96 ⇓P P 02 27 30.9 +0.9
baz=46,SNR=20
X30A Coker Ranch, T 46.09 90 ⇑P P 02 27 31.2 0.0
baz=46,SNR=6.6
425A Indio Mountain 46.34 97 ⇑P P 02 27 34.4 +1.2
baz=46,SNR=34
227A Bennet, Jal 46.42 94 ⇓P P 02 27 34.0 +0.2
baz=46
Z29A Hungry Hill Ra 46.45 92 ⇑P P 02 27 34.0 0.0
baz=46,SNR=6.6
128A Castleberry Fa 46.45 93 ⇓P P 02 27 34.5 +0.4
baz=46,SNR=13
HIA Hailar 46.51 298 *e*P P 02 27 33.6 -0.7
comp=Z,32nm,0.8s
HIA LR LR
comp=Z,2μm,20.0s
326A Caldwell Ranch 46.53 96 ⇑P P 02 27 35.7 +1.0
baz=46
228A UT Block 9, Go 46.75 94 ⇓P P 02 27 36.6 +0.2
baz=47
129A Stewart Farms, 46.81 93 ⇓P P 02 27 36.7 -0.1
baz=47,SNR=6.4
KBS Kingsbay 46.82 2 *e*P P 02 27 36.7 +0.5
KBS AMB AMB 02 27 37.8
comp=Z,123nm,0.7s
KBS *e*SS SS 02 38 01.0 +11
KBS AMS AMS 02 43 47.9
comp=Z,1μm,25.3s
KBS Kingsbay 46.82 2 *e*P P 02 27 36.1 -0.1
KBS *e* 02 29 08.8
KBS pmax pmax
comp=Z,92nm,0.9s
KBS MLR MLR
comp=Z,1μm,21.0s
KBS Kingsbay 46.82 2 *e*P P 02 27 36.0 -0.1
comp=Z,92nm,0.9s
KBS *e*PcP PcP 02 29 08.8 0.0
KBS *e*ScP ScP 02 32 59.7 -1.0
KBS LR LR
comp=Z,1μm,21.0s
CN2 Changchun 46.89 288 *e*P P 02 27 36.4 -0.8
CN2 *es*P sP 02 27 54.1 +7.0
CN2 *e*PP PP 02 29 25.9 -1.5
CN2 *e*S S 02 34 21.3 -5.1
CN2 *e*SS ScS 02 37 40.2 +10
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,20.0s
CN2 LR LR
comp=E,2μm,20.0s
CN2 LR LR
comp=Z,1μm,20.0s
DAG Danmarks Havn 46.94 11⇑*i*P P 02 27 36.9 -0.3
DAG pmax pmax
comp=Z,100nm,0.7s
DAG MLR MLR
comp=Z,2μm,22.0s
DAG Danmarks Havn 46.94 11⇑*i*P P 02 27 36.9 -0.3
comp=Z,150nm,0.7s
DAG
comp=Z,2μm,22.0s
426A McDonald Obser 46.98 96 ⇑P P 02 27 38.9 +0.6
baz=47,SNR=7.1

WMOK Wichita Mounta 47.11 88 PFAKE 02 28 00.0 +21
WMOK LR LR
comp=Z,1μm,20.0s
427A Hayter Ranch, 47.21 96 ⇑P P 02 27 40.2 +0.2
baz=47
Y32A R-V Farms, Ver 47.24 89 ⇓P P 02 27 40.0 -0.1
baz=47,SNR=5.8
SUMG Summit 47.31 20⇑*i*P P 02 27 41.0 +0.4
SUMG pmax pmax
comp=Z,80nm,1.0s
SUMG MLR MLR
comp=Z,3μm,17.0s
SUMG Summit 47.31 20 *e*P P 02 27 40.9 +0.3
comp=Z,140nm,1.0s
SUMG *e*ScP ScP 02 33 02.1 -1.3
SUMG Summit 47.31 20⇑*i*P P 02 27 41.0 +0.4
comp=Z,80nm,1.0s
SUMG
comp=Z,3μm,17.0s
Z31A Sharp Cattle R 47.32 90 ⇑P P 02 27 40.4 -0.3
baz=47,SNR=6.4
130A Snyder 47.36 92 ⇑P P 02 27 41.1 0.0
baz=47
526A Mary Lane Ranc 47.39 97 ⇓P P 02 27 42.3 +0.8
baz=47,SNR=13
329A Wagon Wheel Ra 47.57 94 ⇑P P 02 27 42.9 +0.1
baz=48,SNR=10
527A Woodward Ranch 47.60 96 ⇑P P 02 27 43.4 +0.2
baz=48
SPA0 Spitsbergen Ar 47.62 1 *e*P P 02 27 41.5 -1.0
131A Roby 47.64 91 ⇓P P 02 27 43.4 +0.1
baz=48,SNR=7.9
Z32A Haskell 47.72 90 ⇑P P 02 27 43.5 -0.3
baz=48,SNR=11
428A Kincaid Ranch, 47.72 95 ⇑P P 02 27 44.7 +0.8
baz=48,SNR=11
626A Big Bend Ranch 47.74 97 ⇓P P 02 27 44.7 +0.6
baz=48,SNR=17
230A Sterling City 47.78 93 ⇑P P 02 27 44.2 -0.2
baz=48
TUL1 Tulsa 48.03 85 ⇑P P 02 27 46.0 -0.2
baz=48,SNR=15
528A Cox Ranch, San 48.07 96 ⇓P P 02 27 47.3 +0.6
baz=48,SNR=12
330A Mertzon 48.10 93 ⇑P P 02 27 46.6 -0.2
baz=48,SNR=14
ABTX Abilene, Hawle 48.11 91 ⇓P P 02 27 46.8 0.0
baz=48,SNR=6.5
TXAR Lajitas Array 48.18 97 P P 02 27 47.9 +0.4
TXAR PcP PcP 02 29 14.7 +0.1
TXAR ScP ScP 02 33 05.7 -1.7
TXAR Lajitas Array 48.18 97 P P 02 27 47.9 +0.4
comp=Z,11nm,0.9s,baz=306,slow=5.9,SNR=84
TXAR PcP PcP 02 29 14.7 +0.1
comp=Z,8.3nm,0.9s,baz=232,slow=1.7,SNR=6.9
TXAR ScP ScP 02 33 05.7 -1.7
comp=Z,3.6nm,1.0s,baz=298,slow=2.7,SNR=6.0
TXAR LR LR 02 46 29.8
comp=Z,2μm,20.9s,baz=5.0,slow=34
627A Terlingua Ranc 48.25 97 ⇓P P 02 27 48.5 +0.4
baz=48
429A Davenport Ranc 48.25 94 ⇓P P 02 27 48.0 -0.1
baz=48,SNR=8.7
SFJD Kangerlussuaq 48.35 29 *e*P P 02 27 48.6 +0.4
comp=Z,117nm,0.8s
SFJD LR LR
comp=Z,1μm,22.0s
SFJD Kangerlussuaq 48.35 29⇑*i*P P 02 27 48.9 +0.7
comp=Z,98nm,0.8s
SFJD
comp=Z,990nm,26.0s
GLMI Grayling 48.37 68 *e*P P 02 27 49.5 +0.8
comp=Z,251nm,1.4s
GLMI LR LR
comp=Z,815nm,20.0s
529A Stev Forest Ra 48.43 95 ⇑P P 02 27 49.7 +0.3
baz=48,SNR=6.1
628A Black Gap, Mar 48.51 96 ⇑P P 02 27 50.7 +0.6
baz=48,SNR=25
430A Baggett Ranch, 48.52 94 ⇑P P 02 27 49.9 -0.2
baz=48,SNR=7.1
HDIL Hopedale 48.59 75 *e*P P 02 27 50.3 -0.1
comp=Z,547nm,1.3s
HDIL LR LR
comp=Z,2μm,19.0s
331A San Angelo 48.60 93 ⇑P P 02 27 50.3 -0.5
baz=48,SNR=6.1
232A Coleman 48.64 91 ⇑P P 02 27 50.5 -0.5
baz=48
530A J-C Ranch, Com 48.92 94 ⇑P P 02 27 53.3 +0.1
baz=49,SNR=14
332A Millersview 48.95 92 ⇑P P 02 27 53.0 -0.4
baz=49,SNR=6.4
431A Sonora 48.96 93 ⇓P P 02 27 53.3 -0.1
baz=49,SNR=10
SNY Shenyang 49.22 288 ⇑P P 02 27 55.3 +0.1
SNY S S 02 34 58.1 -1.3
SNY pmax pmax
comp=Z,160nm,1.1s
SNY pmax pmax
comp=Z,910nm,3.5s
SNY LR LR
comp=N,1μm,20.4s
SNY LR LR
comp=E,1μm,21.0s
SNY LR LR
comp=Z,1μm,21.6s
432A Menard 49.29 92 ⇓P P 02 27 55.7 -0.3
baz=49,SNR=12
SLM Saint Louis 49.35 78 *e*P P 02 27 55.9 -0.4
SLM pmax pmax
comp=Z,225nm,1.1s
SLM Saint Louis 49.35 78 *e*P P 02 27 55.9 -0.4
comp=Z,225nm,1.1s
531A Rocksprings 49.37 94 ⇑P P 02 27 56.4 -0.2
baz=49,SNR=11
RFTA Plano 49.55 88 *e*P P 02 27 58.1 +0.2
JCT Junction City 49.58 93 ⇓P P 02 27 57.8 -0.4
baz=50,SNR=12
KSRS Korea Array 49.73 280 P P 02 28 00.1 +0.9
comp=Z,129nm,0.8s,baz=48,slow=7.0,SNR=350
KSRS PcP PcP 02 29 21.4 +1.4
comp=Z,14nm,0.8s,baz=52,slow=4.8,SNR=3.3
KSRS ScP ScP 02 33 14.0 +0.3
comp=Z,1.9nm,0.8s,baz=73,slow=4.5,SNR=4.2
KSRS LR LR 02 48 31.6
comp=Z,359nm,20.1s,baz=50,slow=35
KSAR Wonju Array Be 49.76 280 P P 02 28 00.1 +0.6
KSAR PcP PcP 02 29 21.4 +1.3
KSAR ScP ScP 02 33 14.0 +0.1
532A Rocksprings 49.77 93 ⇓P P 02 27 59.0 -0.8
baz=50,SNR=6.6
WHTX Lake Whitney 49.84 90 ⇑P P 02 28 00.3 +0.2
baz=50,SNR=8.3
631A Perdido Creek 49.91 94 ⇓P P 02 27 60.0 -0.7
baz=50,SNR=12
SFIN Scholer Farm 49.95 74 ⇓P P 02 28 00.7 -0.1
baz=50
MIAR Mount Ida 50.28 84 *e*P P 02 28 02.9 -0.5
MIAR pmax pmax
comp=Z,49nm,1.1s
MIAR Mount Ida 50.28 84 *e*P P 02 28 02.9 -0.5
comp=Z,49nm,1.1s
632A Uvalde 50.30 94 ⇑P P 02 28 03.1 -0.6
baz=50
INCN Inchon 50.45 281 *e*P P 02 28 05.1 +0.4
comp=Z,126nm,0.9s
INCN LR LR
comp=Z,616nm,21.0s
INCN Inchon 50.45 281 P P 02 28 05.3 +0.6
SNR=13
OLIL Olney 50.50 76 *e*P P 02 28 04.9 -0.1
comp=Z,165nm,0.9s
SIUC Southern Illin 50.57 78 *e*P P 02 28 05.1 -0.5
comp=Z,91nm,0.8s
SCHQ Schefferville 50.62 48 *e*P P 02 28 05.5 -0.3
comp=Z,118nm,1.3s
SCHQ Schefferville 50.62 48 P P 02 28 05.8 0.0
comp=Z,35nm,0.7s,baz=311,slow=8.0,SNR=30
SCHQ LR LR 02 50 20.8
comp=Z,2μm,20.3s,baz=200,slow=37
732A Laxson Ranch, 50.77 94 ⇑P P 02 28 06.9 -0.3
baz=51,SNR=8.1
PARMO Parma 50.99 79 *e*P P 02 28 08.2 -0.5
JNU Nakatsue 51.07 274 *e*P P 02 28 10.0 +0.6
comp=Z,42nm,1.0s
JNU Nakatsue 51.07 274 P P 02 28 09.8 +0.4
comp=Z,70nm,0.9s,baz=42,slow=6.2,SNR=38

BLO Bloomington 51.09 75 *e*P P 02 28 09.0 -0.5
BLO pmax pmax
comp=Z,104nm,1.2s
BLO Bloomington 51.09 75 *e*P P 02 28 09.0 -0.5
comp=Z,104nm,1.2s
HBAR Harrisburg 51.25 81 *e*P P 02 28 09.7 -1.0
HBAR *e*ScP ScP 02 33 18.9 -1.5
USIN University of 51.28 77 *e*P P 02 28 10.7 -0.2
comp=Z,364nm,1.2s
BJO Bjornoya 51.32 360 *e*P P 02 28 10.0 -0.7
GLAT Glass 51.54 79 *e*P P 02 28 12.3 -0.5
UTMT University of 51.73 79 *e*P P 02 28 14.3 0.0
comp=Z,317nm,1.1s
HALT Halls 51.76 80 *e*P P 02 28 14.0 -0.5
WCI Wyandotte Cave 51.87 75 *e*P P 02 28 14.7 -0.7
WCI pmax pmax
comp=Z,15nm,0.6s
WCI Wyandotte Cave 51.87 75 *e*P P 02 28 14.7 -0.7
comp=Z,15nm,0.6s
SCO Scoresbysund 52.03 16 *i*P P 02 28 16.4 +0.3
SCO pmax pmax
comp=Z,34nm,0.8s
SCO Scoresbysund 52.03 16 *i*P P 02 28 16.4 +0.3
comp=Z,34nm,0.8s
IRK Irkutsk 52.12 309 *e*P P 02 28 15.9 -1.1
IRK pmax pmax
comp=Z,135nm,2.0s
HKT Hockley 52.28 90 *e*P P 02 28 19.4 +1.0
HKT pmax pmax
comp=Z,100nm,1.6s
HKT Hockley 52.28 90 *e*P P 02 28 19.4 +1.0
comp=Z,100nm,1.6s
DL2 Dalian 52.30 286 P P 02 28 18.1 -0.4
DL2 S S 02 35 40.0 -2.2
DL2 ScS ScS 02 38 02.1 -4.6
DL2 pmax pmax
comp=Z,170nm,0.9s
DL2 pmax pmax
comp=Z,170nm,6.7s
DL2 LR LR
comp=N,450nm,19.4s
DL2 LR LR
comp=E,500nm,17.3s
DL2 LR LR
comp=Z,730nm,16.3s
ACSO Alum Creek Sta 52.34 71 *e*P P 02 28 18.5 -0.3
comp=Z,138nm,1.5s
ACSO LR LR
comp=Z,1μm,21.0s
XMAS Kiritimati 52.35 175 *e*P P 02 28 20.1 +1.1
comp=Z,247nm,1.3s
XMAS LR LR
comp=Z,3μm,21.0s
WVT Waverly 52.47 78 *e*P P 02 28 19.4 -0.4
WVT pmax pmax
comp=Z,124nm,0.8s
WVT Waverly 52.47 78 *e*P P 02 28 19.4 -0.4
comp=Z,124nm,0.8s
ERPA Erie 52.68 68 *e*P P 02 28 21.6 +0.3
comp=Z,114nm,1.1s
ERPA LR LR
comp=Z,1μm,19.0s
OXF Oxford 52.71 81 *e*P P 02 28 20.7 -0.9
OXF pmax pmax
comp=Z,348nm,1.2s
OXF MLR MLR
comp=Z,903nm,20.0s
OXF Oxford 52.71 81 *e*P P 02 28 20.7 -0.9
comp=Z,348nm,1.2s
OXF *e*ScP ScP 02 33 24.0 -2.7
OXF LR LR
comp=Z,903nm,20.0s
ALLY Alegheny Colle 52.92 68 *e*P P 02 28 23.1 +0.1
comp=Z,215nm,1.3s
PLAL Pickwick Lake 53.14 80 *e*P P 02 28 24.2 -0.6
comp=Z,135nm,1.2s
PLAL LR LR
comp=Z,683nm,20.0s
MSNY Massena 53.41 62 *e*P P 02 28 26.5 0.0
comp=Z,334nm,0.8s
VBMS Vicksburg 53.72 84 *e*P P 02 28 29.6 +0.6
comp=Z,169nm,1.2s
VBMS LR LR
comp=Z,721nm,21.0s
ULN Ulaanbaatar 53.81 303 *e*P P 02 28 29.4 -0.3
comp=Z,80nm,0.9s
ULN *e*PcP PcP 02 29 35.3 +0.1
ULN LR LR
comp=Z,3μm,19.0s
ULN Ulaanbaatar 53.81 303 P P 02 28 30.0 +0.3
SNR=39
ULN Ulaanbaatar 53.81 303 P P 02 28 29.6 -0.1
comp=Z,99nm,0.9s,comp=Z,941nm
LONY Lake Ozonia 53.81 62 *e*P P 02 28 29.3 -0.3
comp=Z,165nm,2.2s
LONY LR LR
comp=Z,1μm,20.0s
ZAK Zakamensk 53.85 308⇑*i*P P 02 28 30.0 +0.1
ZAK pmax pmax
comp=Z,19nm,1.2s
MOY Mondy 53.99 310 *e*P P 02 28 31.2 +0.2
MOY pmax pmax
comp=Z,91nm,2.5s
SONM Songino Array 54.15 304 P P 02 28 32.1 0.0
SONM PcP PcP 02 29 37.2 +0.7
SONM ScP ScP 02 33 32.9 0.0
SONM S S 02 36 07.1 -0.3
SONM Songino Array 54.15 304 P P 02 28 32.1 0.0
comp=Z,67nm,0.8s,baz=47,slow=7.5,SNR=251
SONM PcP PcP 02 29 37.2 +0.7
comp=Z,49nm,0.8s,baz=75,slow=1.9,SNR=12
SONM ScP ScP 02 33 32.9 0.0
comp=Z,10.0nm,0.9s,baz=60,slow=3.1,SNR=11
SONM S S 02 36 07.1 -0.3
comp=Z,6.3nm,1.2s,baz=52,slow=12,SNR=7.6
SONM LR LR 02 54 18.2
comp=Z,3μm,19.3s,baz=39,slow=39
FRNY Flat Rock 54.17 61 *e*P P 02 28 32.2 0.0
comp=Z,16nm,0.7s
SWET Sewanee 54.20 78 *e*P P 02 28 31.5 -1.1
comp=Z,98nm,1.5s
NCB Newcomb 54.45 62 *e*P P 02 28 34.0 -0.3
comp=Z,42nm,1.1s
NCB LR LR
comp=Z,1μm,20.0s
BJI Beijing 54.52 291 P P 02 28 33.7 -1.1
BJI S S 02 36 08.9 -3.5
BJI pmax pmax
comp=Z,53nm,1.0s
BJI pmax pmax
comp=Z,290nm,4.0s
BJI LR LR
comp=N,1μm,23.2s
BJI LR LR
comp=E,1μm,21.2s
BJI LR LR
comp=Z,1μm,22.4s
TZTN Tazewell 54.61 75 *e*P P 02 28 35.2 -0.3
comp=Z,189nm,1.4s
BINY Binghamton 54.76 65 *e*P P 02 28 37.2 +0.6
comp=Z,39nm,0.9s
BINY LR LR
comp=Z,733nm,19.0s
CPCT Cooper Cave 54.84 77 *e*P P 02 28 36.3 -0.9
SSPA Standing Stone 54.84 68 *e*P P 02 28 37.1 -0.1
comp=Z,73nm,1.0s
MDV Middlebury 54.97 62 *e*P P 02 28 37.8 -0.2
TKL Tuckaleechee C 55.12 76 *e*P P 02 28 38.4 -0.8
ACCN Adirondack Com 55.15 63 *e*P P 02 28 40.0 +0.7
comp=Z,18nm,0.7s
LRAL Lakeview Retre 55.16 81 *e*P P 02 28 38.2 -1.4
comp=Z,34nm,1.0s
LRAL LR LR
comp=Z,712nm,19.0s
LBNH Lisbon 55.44 61 PFAKE 02 29 00.0 +19
LBNH LR LR
comp=Z,2μm,19.0s
HNH Hanover 55.63 61 *e*P P 02 28 43.8 +1.0
comp=Z,19nm,0.8s
BLA Blacksburg 55.89 72 *e*P P 02 28 44.3 -0.4
BLA pmax pmax
comp=Z,92nm,1.1s
BLA MLR MLR
comp=Z,1μm,19.0s
BLA Blacksburg 55.89 72 *e*P P 02 28 44.3 -0.4
comp=Z,92nm,1.1s
BLA LR LR

comp=Z,1μm,19.0s
KEV Kevo 55.94 356 *e*P **P 02 28 43.6 -1.0**
KEV pmax pmax
comp=Z,105nm,0.8s
KEV MLR MLR
comp=Z,1μm,21.0s
KEV Kevo 55.94 356 *e*p **P 02 28 43.6 -1.0**
comp=Z,74nm,0.7s
KEV Kevo 55.94 356 *e*P **P 02 28 43.6 -1.0**
comp=Z,105nm,0.8s
KEV LR LR
comp=Z,1μm,21.0s
MVL Millersville 56.12 67 *e*P **P 02 28 46.6 +0.3**
ARCES ARCESS Array B 56.21 357 P **P 02 28 45.5 -1.1**
ARCES PcP **PcP 02 29 43.2 -0.8**
ARCES S **S 02 36 37.0 +2.8**
ARCES ARCESS Array B 56.21 357 P **P 02 28 45.5 -1.1**
comp=Z,50nm,0.8s,baz=0.0,slow=8.5,SNR=103
ARCES PcP **PcP 02 29 43.2 -0.8**
comp=Z,20nm,0.7s,baz=353,slow=5.1,SNR=6.3
ARCES S **S 02 36 37.0 +2.8**
comp=Z,2.5nm,0.9s,baz=16,slow=18,SNR=3.9
ARCES LR LR 02 56 03.6
comp=Z,830nm,19.3s,baz=6.7,slow=39
ARE0 ARCESS Array S 56.21 357 *e*S **S 02 36 30.3 -3.9**
ARE0 ARCESS Array S 56.21 357 *e*P **P 02 28 45.4 -1.2**
TRO Tromso 56.22 360 *e*P **P 02 28 45.7 -0.9**
TRO AMB AMB 02 28 51.2
comp=Z,122nm,1.8s
TRO AMS AMS 02 50 09.5
comp=Z,916nm,23.2s
SDMD Soldier's Deli 56.28 68 *e*P **P 02 28 47.8 +0.3**
comp=Z,48nm,1.0s
HHC Hu-ho-hao-te 56.43 295 *e*P **P 02 28 48.9 +0.2**
HHC pP pP 02 29 01.4 +5.5
HHC PcP **PcP 02 29 45.4 0.0**
HHC PP **PP 02 30 56.7 +2.7**
HHC ScP **ScP 02 33 42.0 -1.1**
HHC S **S 02 36 36.8 -1.3**
HHC ScS **ScS 02 38 29.8 -6.5**
HHC SS SS 02 40 17.4 -7.3
HHC pmax pmax
comp=Z,150nm,1.1s
HHC pmax pmax
comp=Z,630nm,8.3s
HHC LR LR
comp=N,2μm,16.7s
HHC LR LR
comp=E,3μm,19.0s
HHC LR LR
comp=Z,3μm,20.6s
TIA Tai'an 56.73 287 ⇑P **P 02 28 50.4 -0.3**
TIA pmax pmax
comp=Z,80nm,1.1s
TIA LR LR
comp=N,700nm,30.0s
TIA LR LR
comp=E,1μm,34.0s
TIA LR LR
comp=Z,1μm,27.0s
KTK1 Kautokeino 56.79 358 *e*P **P 02 28 48.5 -2.2**
KTK1 AMB AMB 02 28 53.5
comp=Z,136nm,1.6s
KTK1 *e*S S 02 36 48.3 +6.3
KTK1 AMS AMS 02 49 57.0
comp=Z,2μm,24.7s
CBN Corbin 56.85 69 *e*P **P 02 28 51.6 0.0**
CBN LR LR
comp=Z,1μm,19.0s
KMSC Kings Mountain 56.87 75 ⇑P **P 02 28 51.0 -0.6**
baz=57
GOGA Godfrey 56.91 78 *e*P **P 02 28 50.4 -1.7**
GOGA pmax pmax
comp=Z,36nm,1.0s
GOGA Godfrey 56.91 78 *e*P **P 02 28 50.4 -1.7**
comp=Z,36nm,1.0s
TARA Tarawa 56.92 211 *e*P **P 02 28 52.9 +0.7**
comp=Z,253nm,1.0s
TARA LR LR
comp=Z,2μm,20.0s
JSRW J. Sargeant Re 56.95 70 *e*P **P 02 28 52.2 0.0**
WES Weston 57.07 62 *e*P **P 02 28 53.1 +0.1**
WES pmax pmax
comp=Z,59nm,0.9s
WES Weston 57.07 62 *e*P **P 02 28 53.1 +0.1**
comp=Z,59nm,0.9s
JOW Kunigami 57.23 271 *e*P **P 02 28 54.7 +0.3**
comp=Z,46nm,1.0s
BORG Borgarnes 57.26 19 *e*P **P 02 28 54.8 +0.8**
comp=Z,79nm,1.0s
BORG LR LR
comp=Z,4μm,20.0s
BTO Baotou 57.42 295 *e*P **P 02 28 55.5 -0.2**
HVS Khovu-Aksy 57.54 314⇓*i*P **P 02 28 55.9 -0.5**
LOF Lofoten 57.67 2 *e*P **PcP 02 29 46.2 -3.4**
APA Apatity 57.78 353⇓*i*P **P 02 28 56.8 -0.9**
APA pmax pmax
comp=Z,44nm,0.8s
STEI Steigen 57.91 1 *e*P **P 02 28 57.8 -0.7**
STEI AMB AMB 02 29 02.8
comp=Z,50nm,1.4s
SSE Sheshan 58.16 280 P **P 02 29 01.4 +0.6**
SSE S **S 02 37 01.8 +1.0**
SSE sS **sS 02 37 14.1 +1.4**
SSE LR LR
comp=N,350nm,26.0s
SSE LR LR
comp=E,430nm,26.0s
SSE LR LR
comp=Z,760nm,27.5s
CNNC Cliffs of the 58.72 72 PFAKE 02 29 20.0 +15
CNNC LR LR
comp=Z,1μm,19.0s
NVS Novosibirsk 58.78 322⇑*i*P **P 02 29 03.3 -1.5**
NVS *i* 02 29 53.2
NVS *i*S S 02 37 02.2 -6.1
NVS *i* 02 38 51.3
NVS pmax pmax
comp=Z,79nm,1.5s
NVS pmax pmax
comp=N,29nm,1.0s
NVS pmax pmax
comp=E,26nm,1.5s
NVS smax smax
comp=N,10.0nm,1.2s
NVS smax smax
comp=E,11nm,1.8s
NJ2 Nanjing 58.79 282 *e*P **P 02 29 04.8 -0.4**
NJ2 pP **pP 02 29 16.0 +3.5**
NJ2 sP sP 02 29 21.0 +5.8
NJ2 PP **PP 02 31 15.1 +0.1**
NJ2 S **S 02 37 06.5 -2.5**
NJ2 pmax pmax
comp=Z,80nm,0.9s
NJ2 pmax pmax
comp=Z,200nm,9.1s
NJ2 LR LR
comp=N,1μm,30.8s
NJ2 LR LR
comp=E,1μm,30.0s
NJ2 LR LR
comp=Z,1μm,23.1s
ZAA0 Zalesovo Array 58.91 321 *e*P **P 02 29 04.8 -1.0**
ZALV Zalesovo Beam 58.91 321 P **P 02 29 04.7 -1.1**
ZALV 02 29 55.2
ZALV Zalesovo Beam 58.91 321 P **P 02 29 04.7 -1.1**
ZALV PcP **PcP 02 29 55.2 +0.4**
ZALV ⇑*e* 02 58 47.9
ZALV Zalesovo Beam 58.91 321 P **P 02 29 04.7 -1.1**
comp=Z,15nm,0.8s,baz=37,slow=6.9,SNR=68
ZALV PcP **PcP 02 29 55.2 +0.4**
comp=Z,16nm,0.8s,baz=23,slow=3.9,SNR=5.4
ZALV LR LR 02 56 58.9
comp=Z,4μm,18.2s,baz=32,slow=39
ZALV PKP2bc 02 58 47.9
comp=Z,0.2nm,0.3s,baz=190,slow=4.1,SNR=4.2
NHSC New Hope 59.01 75 *e*P **P 02 29 06.6 -0.1**
comp=Z,169nm,1.1s
NHSC LR LR
comp=Z,2μm,19.0s
KONS Konsvik 59.30 2 *e*P P 02 29 02.9 -5.4
KONS AMB AMB 02 29 07.2
comp=Z,76nm,0.8s
FLOS Flostrand 59.47 2 *e*P **P 02 29 09.0 -0.4**
FLOS AMB AMB 02 29 12.1
comp=Z,161nm,1.6s
MOR8 Moi Rana 59.66 2 *e*P **P 02 29 08.9 -1.9**
MOR8 AMB AMB 02 29 10.3
comp=Z,65nm,0.8s
SOKR Solikamsk 62.23 339*c i*P **P 02 29 27.2 -1.0**
SOKR pmax pmax
comp=Z,230nm,1.0s
SOKR MLR MLR
comp=Z,4μm,19.0s
TBLU Trondheim 62.45 4 *e*P P 02 29 21.2 -8.5
WHN Wuhan 62.47 285⇑*i*P **P 02 29 30.3 0.0**
WHN S **S 02 37 58.1 +2.0**
WHN pmax pmax
comp=Z,350nm,1.7s
WHN LR LR
comp=N,2μm,17.1s
WHN LR LR
comp=E,2μm,17.1s
WHN LR LR
comp=Z,2μm,21.8s
JOF Joensuu 62.53 353 *e*P **P 02 29 29.4 -0.9**
JOF pmax pmax
comp=Z,95nm,0.7s
JOF Joensuu 62.53 353 *e*p **P 02 29 29.4 -0.9**
comp=Z,95nm,0.7s
TATO Taipei 62.59 275 PFAKE 02 29 50.0 +19
TATO LR LR
comp=Z,1μm,20.0s
YHNB Yeheng 62.89 275 PFAKE 02 29 50.0 +17
YHNB LR LR
comp=Z,897nm,22.0s
MOL Molde 63.00 6 *e*P **P 02 29 32.9 -0.4**
MOL AMB AMB 02 29 36.6
comp=Z,149nm,1.5s
NACB Ninganchiao 63.14 274 *e*P **P 02 29 34.6 -0.3**
comp=Z,65nm,0.9s
GTA Gaotai 63.56 301 ⇑P **P 02 29 37.2 -0.4**
GTA pP **pP 02 29 49.8 +4.9**
GTA sP sP 02 29 55.3 +7.6
GTA PP **PP 02 31 59.2 +2.2**
GTA S **S 02 38 06.2 -3.6**
GTA pmax pmax
comp=Z,110nm,2.2s
GTA pmax pmax
comp=Z,570nm,9.5s
GTA LR LR
comp=N,1μm,20.0s
GTA LR LR
comp=E,2μm,17.1s
GTA LR LR
comp=Z,2μm,17.1s
KAF Kangasniemi 63.61 356 *e*P **P 02 29 36.7 -0.7**
KAF pmax pmax
comp=Z,138nm,0.7s
KAF Kangasniemi 63.61 356 *e*p **P 02 29 36.7 -0.7**
comp=Z,138nm,0.7s
KURK Kurchatov 63.77 322*c i*P **P 02 29 38.2 -0.5**
KURK pmax pmax
comp=Z,138nm,1.7s
KURK MLR MLR
comp=Z,6μm,20.0s
KURK Kurchatov 63.77 322 *e*P **P 02 29 37.9 -0.7**
comp=Z,70nm,1.0s
KURK *e*S **S 02 38 10.0 -1.8**
KURK LR LR
comp=Z,5μm,19.0s
KURK Kurchatov 63.77 322 P **P 02 29 38.6 -0.1**
comp=Z,374nm,1.1s,SNR=35
SSLB Suanglung 63.81 275 *e*P **P 02 29 38.8 -0.6**
comp=Z,129nm,0.8s
SVE Sverdlovsk 63.88 336*d i*P **P 02 29 39.1 -0.2**
SVE *e*PPP PPP 02 33 27.5
SVE *e*S S 02 38 30.4 +17
SVE *e* 02 39 27.5
SVE pmax pmax
comp=Z,177nm,0.8s
SVE MLR MLR
comp=Z,2μm,16.0s
YULB Yu-li 63.92 274 *e*P **P 02 29 41.1 +1.1**
comp=Z,108nm,1.4s
LZH Lanzhou 64.03 296 *e*P **P 02 29 41.5 +0.7**
LZH pP **pP 02 29 52.2 +4.1**
LZH sP sP 02 29 56.8 +5.9
LZH PcP **PcP 02 30 18.8 +2.8**
LZH *e*S **S 02 38 10.4 -5.3**
LZH sS **sS 02 38 31.0 +3.2**
LZH SS **SS 02 42 21.6 -2.3**
LZH pmax pmax
comp=Z,46nm,1.0s
LZH pmax pmax
comp=Z,370nm,6.1s
LZH LR LR
comp=N,140nm,12.5s
LZH LR LR
comp=E,1μm,15.2s
LZH LR LR
comp=Z,1μm,16.3s
TEIG Tepich 64.09 91 PFAKE 02 30 00.0 +19
TEIG LR LR
comp=Z,609nm,20.0s
FIA1 FINESS Array S 64.29 356 *e*P **P 02 29 41.0 -0.9**
FINES FINESS Array B 64.29 356 P **P 02 29 41.1 -0.7**
FINES P'P' 02 58 33.6
FINES FINESS Array B 64.29 356 P **P 02 29 41.1 -0.7**
comp=Z,192nm,0.8s,baz=15,slow=7.9,SNR=450
FINES LR LR 02 57 44.9
comp=Z,847nm,18.1s,baz=90,slow=96
FINES PKPPKP P'P'df 02 58 33.6 -5.3
comp=Z,2.8nm,0.8s,baz=236,slow=0.7,SNR=4.8
QZH Quanzhou 64.30 277⇑*i*P **P 02 29 43.8 +1.3**
QZH S **S 02 38 19.3 +0.3**
QZH pmax pmax
comp=Z,800nm,1.5s
QZH LR LR
comp=Z,1μm,23.2s
HYA Hoyanger 64.31 7 *e*P **P 02 29 42.2 +0.1**
HYA AMB AMB 02 29 45.0
comp=Z,124nm,2.0s
BVA0 Borovoye Array 64.57 328 *i* P **P 02 29 42.6 -1.3**
BVA0 pmax pmax
comp=Z,31nm,0.8s
BRVK Borovoye 64.57 328 *e*P **P 02 29 43.5 -0.4**
BRVK pmax pmax
comp=Z,170nm,0.8s
BRVK MLR MLR
comp=Z,3μm,21.0s
BRVK Borovoye 64.57 328 *e*P **P 02 29 43.5 -0.4**
comp=Z,170nm,0.8s
BRVK LR LR
comp=Z,3μm,21.0s
BRVK Borovoye 64.57 328 P **P 02 29 43.5 -0.4**
comp=Z,1μm,0.7s,SNR=99
VOSK Vostochnaya 64.64 328 P **P 02 29 42.9 -1.5**
VOSK pmax pmax
comp=Z,90nm,0.9s
LRW Lerwick 64.68 11⇑*e*P **P 02 29 45.0 +0.5**
LRW AMB AMB 02 29 45.5
comp=Z,182nm,1.0s
LRW Lerwick 64.68 11 P **P 02 29 45.0 +0.5**
LRW AMB AMB 02 29 45.5
comp=Z,182nm,1.0s
NB2 NORSAR Subarra 64.71 4 P **P 02 29 44.6 -0.1**
comp=Z,92nm,0.8s,baz=357,slow=6.5
NB2 NORSAR Subarra 64.71 4 P **P 02 29 44.6 -0.1**
baz=357,slow=6.5
NOA NORSAR Array B 64.71 4 P **P 02 29 44.5 -0.2**
NOA P'P' 02 58 30.4
NOA NORSAR Array B 64.71 4 P **P 02 29 44.5 -0.2**
comp=Z,80nm,0.8s,baz=356,slow=6.6,SNR=263
NOA PKPPKP P'P'df 02 58 30.4 -7.9
comp=Z,1.4nm,0.9s,baz=170,slow=4.6,SNR=3.6
ARU Arti 64.73 337*c i*P **P 02 29 44.0 -0.9**
ARU 02 30 16.3
ARU 02 32 04.9
ARU S **S 02 38 22.3 -1.2**
ARU 02 39 34.4
ARU pmax pmax
comp=Z,217nm,1.0s
ARU MLR MLR
comp=Z,2μm,17.0s
ARU Arti 64.73 337 P **P 02 29 44.5 -0.4**
comp=Z,1μm,0.6s,SNR=95
NAO01 NORSAR Array S 64.89 4 *e*P **P 02 29 45.1 -0.7**
comp=Z,44nm,0.8s
ASK Askoy 64.92 7 *e*P **P 02 29 45.1 -0.9**
BER Bergen 65.03 7 *e*P **P 02 29 45.9 -0.8**
ZRNK Zerenda 65.05 329 P **P 02 29 46.0 -1.0**
ZRNK pmax pmax
comp=Z,207nm,0.8s
EGD Espegrend 65.13 7 *e*P **P 02 29 46.5 -0.9**
ODD1 Odda 65.59 7 *e*P **P 02 29 50.7 +0.3**
MK31 Makanchi Array 65.61 317 *i* P **P 02 29 49.2 -1.6**
MK31 pmax pmax
comp=Z,6.0nm,0.4s
MK31 Makanchi Array 65.61 317 *e*P **P 02 29 49.8 -1.0**
MKAR Makanchi Array 65.61 317 P **P 02 29 49.7 -1.1**
MKAR Makanchi Array 65.61 317 P **P 02 29 49.7 -1.1**
MKAR P'P' 02 58 26.4
MKAR Makanchi Array 65.61 317 P **P 02 29 49.7 -1.1**
comp=Z,10nm,0.6s,baz=43,slow=6.8,SNR=95
MKAR PKPPKP P'P'df 02 58 26.4 -9.3
comp=Z,2.1nm,1.0s,baz=151,slow=2.8,SNR=3.9
MKAR LR LR 02 59 58.8
comp=Z,2μm,21.7s,baz=25,slow=37
PUL Pulkovo 65.73 353⇓*i*P **P 02 29 51.6 +0.3**
PUL pmax pmax
comp=Z,274nm,0.8s
WMQ Urumqi 65.78 312 P **P 02 29 51.9 -0.1**
WMQ pP **pP 02 30 02.2 +2.9**
WMQ sP **sP 02 30 06.1 +4.1**
WMQ PP **PP 02 32 18.8 +2.5**
WMQ ScP 02 34 22.1
WMQ S **S 02 38 34.1 -2.8**
WMQ sS **sS 02 38 51.1 +2.1**
WMQ pmax pmax
comp=Z,88nm,0.9s
WMQ LR LR
comp=N,2μm,18.0s
WMQ LR LR
comp=E,1μm,18.6s
WMQ LR LR
comp=Z,2μm,26.0s
BLS5 Blasjo 66.06 7 *e*P **P 02 29 53.4 -0.1**
BLS5 AMB AMB 02 29 54.8
comp=Z,88nm,0.7s
MVH1 Achvaich 66.48 13⇑*i*P **P 02 29 56.4 +0.3**
MVH1 Achvaich 66.48 13 P **P 02 29 56.4 +0.3**
KAC Achnashellach 66.75 14⇑*e*P **P 02 29 58.0 +0.2**
KAC Achnashellach 66.75 14 P **P 02 29 58.0 +0.2**
KPL Plockton 66.85 14⇑*e*P **P 02 29 58.6 +0.1**
KPL AMB AMB 02 30 00.6
comp=Z,150nm,1.8s
KPL Plockton 66.85 14 P **P 02 29 58.6 +0.1**
KPL AMB AMB 02 30 00.6
comp=Z,150nm,1.8s
MDO Dochfour 66.93 13⇑*i*P **P 02 29 59.3 +0.3**
MDO Dochfour 66.93 13 P **P 02 29 59.3 +0.3**
MCD Coleburn Disti 66.94 13⇑*i*P **P 02 29 59.5 +0.5**
MCD Coleburn Disti 66.94 13 P **P 02 29 59.5 +0.5**
SNART Snartemo 67.19 6 *e*P **P 02 29 58.9 -1.7**
SNART AMB AMB 02 30 02.1
comp=Z,86nm,1.3s
MME1 Meikle Cairn 67.23 12⇑*i*P **P 02 30 00.8 -0.1**
MME1 Meikle Cairn 67.23 12 P **P 02 30 00.8 -0.1**
VSU Vasula 67.24 355*c i*P **P 02 30 00.7 -0.2**
VSU pmax pmax
comp=Z,222nm,1.0s
DRUM Mains of Drumt 67.69 12⇑*e*P **P 02 30 03.8 +0.1**
DRUM AMB AMB 02 30 05.0
comp=Z,407nm,0.7s
DRUM Mains of Drumt 67.69 12 P **P 02 30 03.8 +0.1**
DRUM AMB AMB 02 30 05.0
comp=Z,407nm,0.7s
CD2 Chengdu 68.05 293 ⇑P **P 02 30 07.0 +0.4**
CD2 pP pP 02 30 19.3 +5.4
CD2 sP sP 02 30 24.3 +7.6
CD2 PcP **PcP 02 30 33.6 +1.0**
CD2 PP **PP 02 32 38.6 +2.2**
CD2 PcS 02 34 37.1
CD2 S **S 02 39 00.3 -4.3**
CD2 SS **SS 02 43 23.5 -2.9**
CD2 pmax pmax
comp=Z,190nm,0.7s
CD2 pmax pmax
comp=Z,380nm,6.6s
CD2 LR LR
comp=N,820nm,24.5s
CD2 LR LR
comp=E,520nm,19.1s
CD2 LR LR
comp=Z,590nm,24.0s
BBSR BB Station 68.06 65 PFAKE 02 30 20.0 +14
BBSR LR LR
comp=Z,699nm,20.0s
EAB Aberfoyle 68.15 13⇑*i*P **P 02 30 07.0 +0.3**
EAB Aberfoyle 68.15 13 P **P 02 30 07.0 +0.3**
PGBU Glenifferbraes 68.50 14⇑*e*P **P 02 30 08.8 -0.1**
PGBU AMB AMB 02 30 10.3
comp=Z,139nm,1.0s
PGBU Glenifferbraes 68.50 14 P **P 02 30 08.8 -0.1**
PGBU AMB AMB 02 30 10.3
comp=Z,139nm,1.0s
EDI Edinburgh 68.56 13 AMB AMB 02 30 09.0
comp=Z,94nm,1.0s
EDI Edinburgh 68.56 13 AMB AMB 02 30 09.0
comp=Z,94nm,1.0s
EAU Auchinoon 68.60 13⇑*i*P **P 02 30 10.1 +0.5**
EAU Auchinoon 68.60 13 P **P 02 30 10.1 +0.5**
ESY Stoneypath 68.64 13⇑*i*P **P 02 30 09.8 0.0**
ESY Stoneypath 68.64 13 P **P 02 30 09.8 0.0**
AFI Afiamalu 68.65 191 PFAKE 02 30 30.0 +20
AFI LR LR
comp=Z,2μm,20.0s
EBL Broad Law 68.73 13⇑*i*P **P 02 30 10.6 +0.3**
EBL Broad Law 68.73 13 P **P 02 30 10.6 +0.3**
MOS Moscow 69.05 349 *e*P P 02 30 08.8 -3.5
MOS *e* 02 30 31.7
MOS *e* 02 32 40.8
MOS *e*PPP PPP 02 34 24.9
MOS *e*S **S 02 39 11.5 -4.1**
MOS pmax pmax
comp=Z,136nm,0.8s
MOS pmax pmax
comp=Z,200nm,1.0s
ESK Eskdalemuir 69.15 13⇑*e*P **P 02 30 13.3 +0.3**
ESK AMB AMB 02 30 15.8
comp=Z,110nm,1.2s
ESK Eskdalemuir 69.15 13 P **P 02 30 13.3 +0.3**
ESK AMB AMB 02 30 15.8
comp=Z,110nm,1.2s
ESK Eskdalemuir 69.15 13 *e*P **P 02 30 12.9 -0.1**
ESK pmax pmax
comp=Z,90nm,0.8s
ESK Eskdalemuir 69.15 13 *e*P **P 02 30 12.9 -0.1**
comp=Z,90nm,0.8s
ESK Eskdalemuir 69.15 13 P **P 02 30 13.4 +0.4**
comp=Z,750nm,0.8s,SNR=17
MUD Monsted U'grnd 69.19 6⇑*i*P **P 02 30 13.7 +0.5**
MUD pmax pmax
comp=Z,100nm,0.8s
MUD Monsted U'grnd 69.19 6⇑*i*P **P 02 30 13.7 +0.5**
comp=Z,102nm,0.8s
ECK Cauldkaine Hil 69.29 13⇑*i*P **P 02 30 13.8 -0.1**
ECK Cauldkaine Hil 69.29 13 P **P 02 30 13.8 -0.1**
GCD Castle Douglas 69.49 14⇑*i*P **P 02 30 15.0 -0.1**
GCD Castle Douglas 69.49 14 P **P 02 30 15.0 -0.1**
TGUH Tegucigalpa,Un 69.54 94 *e*P **P 02 30 16.0 +0.1**
comp=Z,50nm,0.9s
TGUH LR LR
comp=Z,710nm,22.0s
OBN Obninsk 69.78 349*c i*P **P 02 30 15.8 -1.0**
OBN *i* 02 30 25.5
OBN *i* 02 30 38.0
OBN *e* 02 32 51.0
OBN *i*S **S 02 39 21.4 -2.8**
OBN pmax pmax
comp=Z,199nm,1.0s
OBN Obninsk 69.78 349 P **P 02 30 16.1 -0.7**
comp=Z,1μm,0.8s,SNR=16
GMM Mts of Mourne 69.81 15⇑*i*P **P 02 30 17.1 +0.1**
GMM Mts of Mourne 69.81 15 P **P 02 30 17.1 +0.1**
KESW Keswick, Cumbr 69.87 13⇑*e*P **P 02 30 17.3 -0.1**
KESW AMB AMB 02 30 18.9
comp=Z,90nm,0.9s
KESW Keswick, Cumbr 69.87 13 P **P 02 30 17.3 -0.1**
KESW AMB AMB 02 30 18.9
comp=Z,90nm,0.9s
GYA Guiyang 69.92 287⇑*i*P **P 02 30 18.6 +0.3**
GYA pP pP 02 30 31.7 +6.0
GYA sP sP 02 30 37.0 +8.5
GYA PP **PP 02 32 56.9 +4.1**

GYA ScP 02 34 41.0
GYA S **S** **02 39 26.4 -0.6**
GYA SKS **SKSac** **02 40 11.9 -6.1**
GYA pmax pmax
comp=Z,50nm,0.9s
GYA pmax pmax
comp=Z,170nm,2.7s
GYA LR LR
comp=N,900nm,23.6s
GYA LR LR
comp=E,880nm,22.7s
GYA LR LR
comp=Z,1µm,21.7s
IZAR **Zarasai** **69.97 355** *e*P **P** **02 30 17.8 -0.2**
IZAR AMB AMB 02 30 19.6
comp=Z,80nm,0.9s
COP **Copenhagen** **70.11 4** ⇑*i*P **P** **02 30 19.2 +0.4**
comp=Z,47nm,0.9s
PMOR **Pomariorio Ree** **70.15 166** *e*P **P** **02 30 18.5 -1.0**
comp=Z,132nm,1.3s
ISAL **Salakas** **70.16 355** *e*P **P** **02 30 18.9 -0.2**
ISAL AMB AMB 02 30 19.9
comp=Z,68nm,0.9s
IIGN **Ignalina** **70.37 355** *e*P **P** **02 30 20.4 -0.1**
IIGN AMB AMB 02 30 21.3
comp=Z,78nm,0.9s
LLD **Lille Linde** **70.45 4** ⇓*i*P **P** **02 30 21.2 +0.3**
LLD pmax pmax
comp=Z,140nm,0.8s
LLD **Lille Linde** **70.45 4** ⇓*i*P **P** **02 30 21.2 +0.3**
comp=Z,143nm,0.7s
BSD **Bornholm Skovb** **70.75 2** ⇑*i*P **P** **02 30 22.7 -0.1**
BSD pmax pmax
comp=Z,57nm,0.8s
BSD **Bornholm Skovb** **70.75 2** ⇑*i*P **P** **02 30 22.7 -0.1**
comp=Z,57nm,0.7s
NACGM **Naroch** **70.79 355** *e*P P 02 30 20.0 -3.1
WME **Myndd Eilian** **70.87 14** ⇑*i*P **P** **02 30 23.5 0.0**
WME **Myndd Eilian** **70.87 14** P **P** **02 30 23.5 0.0**
AB31 **Akbulak array** **70.93 333** P **P** **02 30 24.0 0.0**
AB31 pmax pmax
comp=Z,133nm,0.6s
ABKAR **Akbulak array** **70.93 333** *e*P **P** **02 30 24.1 +0.1**
comp=Z,186nm,0.7s
WPM1 **Penmaenmawr** **71.06 14** ⇑*e*P **P** **02 30 24.5 -0.2**
WPM1 **Penmaenmawr** **71.06 14** P **P** **02 30 24.5 -0.2**
MICGM **Minsk** **71.13 354** ⇑*i*P **P** **02 30 24.0 -1.1**
MNK **Minsk** **71.13 354** ⇑*i*P **P** **02 30 24.0 -1.1**
MNK pmax pmax
comp=Z,780nm,1.0s
YLL **Llanberis** **71.14 14** ⇑*e*P **P** **02 30 24.6 -0.6**
YLL **Llanberis** **71.14 14** P **P** **02 30 24.6 -0.6**
YRE **Yr Eifl** **71.26 14** ⇑*i*P **P** **02 30 25.7 -0.2**
YRE **Yr Eifl** **71.26 14** P **P** **02 30 25.7 -0.2**
RGN **Rugen** **71.28 3** *e*P **P** **02 30 27.0 +1.0**
comp=Z,204nm,0.8s
RGN **Rugen** **71.28 3** *e*P **P** **02 30 26.4 +0.4**
comp=Z,144nm,0.7s
HLG **Helgoland** **71.37 7** *e*P **P** **02 30 27.6 +1.0**
comp=Z,193nm,0.9s
KBI1 **Birley Grange** **71.38 13** ⇑*e*P **P** **02 30 26.6 0.0**
KBI1 **Birley Grange** **71.38 13** P **P** **02 30 26.6 0.0**
HNR **Honiara** **71.42 220** PFAKE 02 30 50.0 +23
HNR LR LR
comp=Z,638nm,21.0s
TKM2 **Tokmak 2** **71.45 319** *e*P **P** **02 30 27.6 0.0**
TKM2 *e*S **S** **02 39 45.4 +0.8**
TKM2 pmax pmax
comp=Z,115nm,1.3s
TKM2 MLR MLR
comp=Z,4µm,20.0s
TKM2 **Tokmak 2** **71.45 319** *e*P **P** **02 30 27.6 0.0**
comp=Z,115nm,1.3s
TKM2 *e*S **S** **02 39 45.4 +0.8**
TKM2 LR LR
comp=Z,4µm,20.0s
TKM2 **Tokmak 2** **71.45 319** P **P** **02 30 28.0 +0.4**
SNR=73
STNC **Stoke** **71.46 13** ⇑*e*P **P** **02 30 27.7 +0.6**
STNC AMB AMB 02 30 28.4
comp=Z,199nm,1.2s
STNC **Stoke** **71.46 13** P **P** **02 30 27.7 +0.6**
STNC AMB AMB 02 30 28.4
comp=Z,199nm,1.2s
FOEL **Foel Wylfa** **71.52 14** ⇑*e*P **P** **02 30 28.0 +0.5**
FOEL AMB AMB 02 30 28.8
comp=Z,169nm,0.9s
FOEL **Foel Wylfa** **71.52 14** P **P** **02 30 28.0 +0.5**
FOEL AMB AMB 02 30 28.8
comp=Z,169nm,0.9s
USP **Ospenovka** **71.57 320** *i*P **P** **02 30 28.5 +0.4**
USP **Ospenovka** **71.57 320** P **P** **02 30 28.5 +0.4**
SNR=54
CHMS **Chumysh** **71.71 320** *i*P **P** **02 30 29.7 +0.8**
CHMS **Chumysh** **71.71 320** P **P** **02 30 29.6 +0.7**
SNR=46
BSEG **Bad Segeberg** **71.77 5** *e*P **P** **02 30 29.7 +0.8**
BSEG pmax pmax
comp=Z,184nm,1.0s
BSEG **Bad Segeberg** **71.77 5** *e*P **P** **02 30 29.7 +0.8**
comp=Z,184nm,1.0s
ULHL **Ulahol** **71.78 319** *i*P **P** **02 30 29.9 +0.4**
ULHL **Ulahol** **71.78 319** P **P** **02 30 30.0 +0.4**
SNR=64
SUW **Suwalki** **71.83 357** *e*P **P** **02 30 28.3 -1.0**
SUW pmax pmax
comp=Z,308nm,0.8s
SUW **Suwalki** **71.83 357** *e*P **P** **02 30 28.3 -1.0**
comp=Z,308nm,0.8s
SUW **Suwalki** **71.83 357** *e*P **P** **02 30 28.4 -1.0**
SUW *e*PcP **PcP** **02 30 46.9 -1.2**
SUW *e*S **S** **02 39 45.0 -3.0**
SUW LMZ LR 02 59 13.7
FRU **Bishkek** **71.90 320** ⇑*i*P **P** **02 30 30.0 0.0**
FRU *e* 02 30 52.0
FRU *e* 02 39 50.0
FRU pmax pmax
comp=Z,590nm,2.0s
FRU MLR MLR
comp=Z,2µm,20.0s
MTDJ **Mount Denham** **71.92 84** *e*P **P** **02 30 30.3 -0.3**
comp=Z,252nm,1.8s
MTDJ LR LR
comp=Z,375nm,21.0s
HLM1 **Long Mynd** **71.92 14** ⇑*e*P **P** **02 30 30.2 +0.3**
HLM1 AMB AMB 02 30 31.0
comp=Z,96nm,2.5s
HLM1 **Long Mynd** **71.92 14** P **P** **02 30 30.2 +0.3**
HLM1 AMB AMB 02 30 31.0
comp=Z,96nm,2.5s
KBK **Karagaybulak** **71.93 320** *i*P **P** **02 30 30.9 +0.6**
KBK **Karagaybulak** **71.93 320** P **P** **02 30 30.9 +0.6**
SNR=65
GTBY **Guantanamo Bay** **71.98 81** PFAKE 02 30 50.0 +19
GTBY LR LR
comp=Z,1µm,20.0s
AAK **Ala-Archa** **72.12 320** *e*P **P** **02 30 31.7 +0.2**
AAK pmax pmax
comp=Z,85nm,0.9s
AAK MLR MLR
comp=Z,3µm,21.0s
AAK **Ala-Archa** **72.12 320** *e*P **P** **02 30 31.7 +0.2**
comp=Z,85nm,0.9s
AAK LR LR
comp=Z,3µm,21.0s
AAK **Ala-Archa** **72.12 320** P **P** **02 30 31.0 -0.5**
comp=Z,577nm,0.9s,SNR=73
KZA **Kyzart** **72.31 319** *i*P **P** **02 30 33.7 +0.7**
KZA **Kyzart** **72.31 319** P **P** **02 30 33.7 +0.7**
SNR=54
AEU **East Anglia Un** **72.33 11** *e*P **P** **02 30 32.6 +0.3**
AEU **East Anglia Un** **72.33 11** P **P** **02 30 32.6 +0.3**
EKS2 **Erkin-Say** **72.36 320** *e*P **P** **02 30 33.3 +0.4**
EKS2 pmax pmax
comp=Z,87nm,1.0s
EKS2 MLR MLR
comp=Z,4µm,19.0s
EKS2 **Erkin-Say** **72.36 320** *e*P **P** **02 30 33.3 +0.4**
comp=Z,87nm,1.0s
EKS2 LR LR
comp=Z,4µm,19.0s
EKS2 **Erkin-Say** **72.36 320** P **P** **02 30 33.6 +0.7**
SNR=70
MCH1 **Michaelchurch** **72.42 14** ⇑*e*P **P** **02 30 33.0 +0.1**
MCH1 AMB AMB 02 30 34.5
comp=Z,71nm,1.2s
MCH1 **Michaelchurch** **72.42 14** P **P** **02 30 33.0 +0.1**
MCH1 AMB AMB 02 30 34.5
comp=Z,71nm,1.2s
PPT **Papeete** **72.46 168** LR LR 02 55 12.6
comp=Z,2µm,19.7s,baz=29,slow=30
UCH **Uchtor** **72.46 320** P **P** **02 30 35.1 +1.2**
SNR=5.8
PPT2 **Papeete2** **72.48 168** *e*S S 02 39 48.8 -7.5
comp=Z,684nm,29.0s
PPT2 *e*LR LR 02 52 28.3
comp=Z,4µm,24.5s,baz=348
SSW **Stow on the Wo** **72.60 13** ⇑*i*P **P** **02 30 34.6 +0.6**
SSW **Stow on the Wo** **72.60 13** P **P** **02 30 34.6 +0.6**
GKP **Gorka Klasztor** **72.64 1** *e*P **P** **02 30 34.3 +0.1**
GKP LMZ LR 02 57 37.5
VOR **Voronezh** **72.78 347** *e*P P 02 30 32.0 -3.0
VOR pmax pmax
comp=Z,250nm,1.6s
AML **Almayashu** **72.85 320** *i*P **P** **02 30 36.9 +0.8**
AML **Almayashu** **72.85 320** P **P** **02 30 36.9 +0.8**
SNR=91
SKP1 **Kophill** **72.98 12** ⇑*i*P **P** **02 30 36.3 +0.1**
SKP1 **Kophill** **72.98 12** P **P** **02 30 36.3 +0.1**
GRTK **Grand Turk** **73.02 77** PFAKE 02 30 50.0 +13
GRTK LR LR
comp=Z,978nm,20.0s
VRHR **Novokhopersk** **73.05 345** *e*P **P** **02 30 34.9 -1.7**
VRHR *e*S S 02 39 55.8 -6.3
VRHR pmax pmax
comp=N,110nm,0.9s
VRHR pmax pmax
comp=Z,140nm,0.9s
VRHR pmax pmax
comp=E,70nm,1.3s
VRHR smax smax
comp=E,190nm,1.6s
VRHR smax smax
comp=Z,20nm,2.1s
VRHR smax smax
comp=N,110nm,1.3s
VRHR MLR MLR
comp=Z,890nm,22.0s
VRHR MLR MLR
comp=N,290nm,21.0s
VRHR MLR MLR
comp=E,750nm,20.0s
SWN1 **Swindon** **73.05 13** ⇑*e*P **P** **02 30 36.6 -0.1**
SWN1 AMB AMB 02 30 37.3
comp=Z,124nm,1.7s
SWN1 **Swindon** **73.05 13** P **P** **02 30 36.6 -0.1**
SWN1 AMB AMB 02 30 37.3
comp=Z,124nm,1.7s
KMI **Kunming** **73.14 290** P **P** **02 30 37.5 -0.4**
KMI pP **pP** **02 30 48.9 +3.6**
KMI sP **sP** **02 30 52.9 +4.8**
KMI PP **PP** **02 33 20.8 +0.3**
KMI S **S** **02 40 03.5 -0.9**
KMI sS **sS** **02 40 20.2 +3.6**
KMI pmax pmax
comp=Z,30nm,1.1s
KMI pmax pmax
comp=Z,310nm,4.1s
KMI LR LR
comp=N,790nm,21.6s
KMI LR LR
comp=E,370nm,25.6s
KMI LR LR
comp=Z,800nm,24.0s
KK31 **Karatay Array** **73.16 323** P **P** **02 30 35.6 -1.9**
KK31 pmax pmax
comp=Z,113nm,1.0s
KKAR **Karatay Array** **73.16 323** *e*P **P** **02 30 37.1 -0.4**
KKAR pmax pmax
comp=Z,57nm,0.8s
KKAR **Karatay Array** **73.16 323** *e*P **P** **02 30 37.1 -0.4**
comp=Z,57nm,0.8s
HTL **Hartland** **73.18 15** ⇑*e*P **P** **02 30 38.0 +0.5**
HTL AMB AMB 02 30 41.5
comp=Z,70nm,2.4s
HTL **Hartland** **73.18 15** P **P** **02 30 38.0 +0.5**
HTL AMB AMB 02 30 41.5
comp=Z,70nm,2.4s
NRDL **Niedersach Rie** **73.19 5** *e*P **P** **02 30 37.8 +0.4**
comp=Z,93nm,1.0s
HEX **Exmoor** **73.21 14** ⇑*e*P **P** **02 30 38.0 +0.4**
HEX **Exmoor** **73.21 14** P **P** **02 30 38.0 +0.4**
VSR **Storozhevoye** **73.28 347** *e*P **P** **02 30 37.4 -0.6**
VSR *e*S **S** **02 39 59.5 -5.3**
VSR pmax pmax
comp=Z,190nm,0.8s
VSR pmax pmax
comp=N,170nm,0.9s
VSR pmax pmax
comp=E,40nm,0.9s
VSR smax smax
comp=E,120nm,3.6s
VSR smax smax
comp=Z,30nm,2.1s
VSR smax smax
comp=N,40nm,1.2s
VSR MLR MLR
comp=Z,2µm,22.0s
VSR MLR MLR
comp=N,2µm,26.0s
VSR MLR MLR
comp=E,940nm,21.0s
WOL **Wolverton** **73.33 13** ⇑*e*P **P** **02 30 38.7 +0.4**
WOL AMB AMB 02 30 42.3
comp=Z,165nm,1.8s
WOL **Wolverton** **73.33 13** P **P** **02 30 38.7 +0.4**
WOL AMB AMB 02 30 42.3
comp=Z,165nm,1.8s
RUE **Ruedersdorf** **73.36 3** *e*P **P** **02 30 39.0 +0.6**
comp=Z,151nm,1.0s
RUE **Ruedersdorf** **73.36 3** *e*P **P** **02 30 38.7 +0.3**
comp=Z,99nm,0.8s
WTSB **Winterswijk** **73.50 7** *e*P **P** **02 30 39.5 +0.3**
VORD **Divnogorie** **73.51 346** *e*P **P** **02 30 38.6 -0.8**
VORD pmax pmax
comp=Z,190nm,0.8s
VORD pmax pmax
comp=N,350nm,0.9s
VORD pmax pmax
comp=E,80nm,0.5s
VORD MLR MLR
comp=N,3µm,22.0s
VORD MLR MLR
comp=E,1µm,22.0s
VORD MLR MLR
comp=Z,2µm,22.0s
CLZ **Clausthal** **73.86 5** *e*P **P** **02 30 42.3 +0.8**
CLZ *e**PP **pP** **02 30 52.4 +3.5**
CLZ pmax pmax
comp=Z,113nm,0.9s
CLZ **Clausthal** **73.86 5** *e*P **P** **02 30 42.3 +0.8**
comp=Z,113nm,0.9s
CLZ *e*pP **pP** **02 30 52.4 +3.5**
JTS **JuntasAbangare** **73.89 95** PFAKE 02 31 00.0 +18
JTS LR LR
comp=Z,399nm,20.0s
QIZ **Qiongzhong** **73.95 280** P **P** **02 30 42.7 +0.2**
QIZ pP **pP** **02 30 53.6 +3.7**
QIZ S **SKiKP** **02 40 11.0 +1.7**
QIZ LR LR
comp=E,250nm,19.5s
QIZ LR LR
comp=Z,510nm,23.5s
QIZ **Qiongzhong** **73.95 280** PFAKE 02 31 00.0 +18
QIZ LR LR
comp=Z,521nm,21.0s
MSVF **Nonsavu** **73.99 200** *e*P **P** **02 30 43.6 +1.0**
MSVF pmax pmax
comp=Z,154nm,1.1s
MSVF MLR MLR
comp=Z,2µm,22.0s
MSVF **Nonsavu** **73.99 200** *e*P **P** **02 30 43.5 +1.0**
comp=Z,154nm,1.1s
MSVF LR LR
comp=Z,2µm,22.0s
MSVF **Nonsavu** **73.99 200** P **P** **02 30 43.0 +0.5**
comp=Z,778nm,1.1s,SNR=29
BEL **Belsk** **74.06 358** *e*P **P** **02 30 42.8 +0.2**
BEL LMZ LR 03 00 10.3
KSH **Kashi** **74.22 317** ⇑*i*P P 02 30 47.5 +3.6
KSH pP **PcP** **02 30 59.8 +1.0**
KSH *e*PcP pP 02 31 02.4 +11
KSH sP sP 02 31 05.3 +11
KSH *e*PP PP 02 33 35.0 +5.9
KSH S **S** **02 40 16.3 +0.2**
KSH *e*SKS **SKSac** **02 40 46.4 -3.7**
KSH *e*ScS **SKKSac** **02 40 50.2 -0.1**
KSH *e*SS **SS** **02 45 04.3 +3.7**
KSH pmax pmax
comp=Z,150nm,0.6s
KSH LR LR
comp=N,580nm,5.4s
KSH LR LR
comp=E,430nm,8.8s
KSH LR LR
comp=Z,1µm,6.1s
DAV **Davao City (W)** **74.35 260** PFAKE 02 31 00.0 +15
DAV LR LR
comp=Z,902nm,21.0s
CLL **Collm** **74.51 4** ⇑*i*P **P** **02 30 45.1 -0.1**
CLL *e*S **S** **02 40 24.0 +5.4**
CLL pmax pmax
comp=Z,2.0nm,0.9s
CLL MLR MLR
comp=Z,700nm,20.8s
CLL **Collm** **74.51 4** *e*P **P** **02 30 45.2 0.0**
comp=Z,80nm,0.9s
CLL *e*pP **pP** **02 30 54.4 +1.8**
CLL **Collm** **74.51 4** ⇑*i*P **P** **02 30 45.1 -0.1**
comp=Z,79nm,0.9s
CLL *e*PP **PP** **02 33 33.0 +2.0**
CLL *e*S **S** **02 40 24.0 +5.4**
CLL *e*PPS PPS 02 41 12.0
CLL *e*SS SS 02 45 18.0 +14
CLL *e* 02 49 00.0
CLL LmV 03 07 00.0
comp=Z,700nm,20.8s
CLL LmH 03 12 00.0
comp=N,600nm,21.1s
CLL LmH 03 12 00.0
comp=E,400nm,20.5s
NEUB **Neuenburg** **74.56 4** *e*P **P** **02 30 45.9 +0.4**
comp=Z,155nm,0.9s
NEUB *e*pP **pP** **02 30 56.1 +3.2**
BEBN **Eben Emael** **74.57 8** P **P** **02 30 45.7 +0.1**
comp=Z,11nm,1.0s
HGN **Heimansgroeve** **74.63 8** *e*P **P** **02 30 46.0 +0.1**
comp=Z,101nm,1.0s
SNF **Seneffe** **74.73 9** P **P** **02 30 46.8 +0.2**
comp=Z,33nm,1.3s
MEM **Membach** **74.79 8** P **P** **02 30 47.2 +0.4**
comp=Z,48nm,0.9s
AKASG **Malin Array Be** **74.83 353** P **P** **02 30 46.4 -0.7**
AKASG S **S** **02 40 17.4 -4.7**
AKASG **Malin Array Be** **74.83 353** P **P** **02 30 46.4 -0.7**
AKASG S **S** **02 40 17.4 -4.7**
AKASG **Malin Array Be** **74.83 353** P **P** **02 30 46.4 -0.7**
comp=Z,216nm,0.8s,baz=10,slow=5.8,SNR=115
AKASG S **S** **02 40 17.4 -4.7**
comp=Z,8.6nm,1.0s,baz=7.6,slow=12,SNR=5.8
AKASG LR LR 03 03 59.8
comp=Z,2µm,21.6s,baz=355,slow=36
KIEV **Kiev** **74.83 353** *e*P **P** **02 30 46.3 -0.8**
KIEV pmax pmax
comp=Z,210nm,0.8s
KIEV MLR MLR
comp=Z,1µm,21.0s
KIEV **Kiev** **74.83 353** *e*P **P** **02 30 46.3 -0.8**
comp=Z,210nm,0.8s
KIEV LR LR
comp=Z,1µm,21.0s
AK01 **Malin Array Si** **74.84 353** *e*P **P** **02 30 46.2 -0.9**
UBBA **Unterbreizbach** **74.86 6** *e*P **P** **02 30 47.2 +0.1**
UBBA *e*pP **pP** **02 30 56.6 +2.1**
AK02 **Malin Array Si** **74.87 353** *e*P **P** **02 30 46.5 -0.9**
FBE **Freiberg** **74.91 3** *e*P **P** **02 30 48.1 +0.6**
comp=Z,117nm,1.0s
BCLA **Clavier** **74.92 9** P **P** **02 30 47.9 +0.3**
SDDR **Presa de Saban** **74.93 79** *e*P **P** **02 30 47.7 -0.4**
comp=Z,33nm,0.9s
SDDR LR LR
comp=Z,859nm,20.0s
BRG **Berggiesshubel** **74.97 3** ⇑*i*P **P** **02 30 48.2 +0.3**
comp=Z,71nm,1.0s
BRG S **S** **02 40 23.0 -0.8**
BRG *e*PKPPKP **P'P'df** **02 58 16.1 -4.1**
comp=Z,7.0nm,1.5s
BRG
comp=N,1µm,22.4s
BRG
comp=E,547nm,20.6s
BRG
comp=Z,914nm,21.6s
BRG **Berggiesshubel** **74.97 3** ⇑*i*P **P** **02 30 48.2 +0.3**
BRG S **S** **02 40 23.0 -0.8**
BRG pmax pmax
comp=Z,71nm,1.0s
BRG pmax pmax
comp=Z,7.0nm,1.5s
BRG MLR MLR
comp=N,1µm,22.4s
BRG MLR MLR
comp=E,547nm,20.6s
BRG MLR MLR
comp=Z,914nm,21.6s
BRG **Berggiesshubel** **74.97 3** *e*P **P** **02 30 48.2 +0.3**
comp=Z,76nm,0.9s
BRG *e*pP **pP** **02 30 58.4 +3.1**
KSP **Ksiaz** **75.06 1** ⇑*i*P **P** **02 30 48.6 +0.1**
KSP **Ksiaz** **75.06 1** *e*P **P** **02 30 48.5 +0.1**
KSP LMZ LR 02 57 43.5
MOX **Moxa** **75.11 5** *e*P **P** **02 30 49.2 +0.4**
MOX pmax pmax
comp=Z,107nm,0.9s
MOX **Moxa** **75.11 5** *e*P **P** **02 30 49.2 +0.4**
comp=Z,107nm,0.9s
BAIF **Baives** **75.17 9** ⇑*i*P **P** **02 30 49.4 +0.3**
comp=Z,87nm,0.7s
BAIF **Baives** **75.17 9** ⇑*i*P **P** **02 30 49.4 +0.3**
BAIF pmax pmax
comp=Z,87nm,0.7s
BAIF **Baives** **75.17 9** ⇑*i*P **P** **02 30 49.4 +0.3**
comp=Z,87nm,0.7s
DOU **Dourbes** **75.17 9** P **P** **02 30 49.3 +0.3**
GIVF **Givet** **75.19 9** ⇑*i*P **P** **02 30 49.2 0.0**
comp=Z,129nm,1.0s
GIVF **Givet** **75.19 9** ⇑*i*P **P** **02 30 49.2 0.0**
GIVF pmax pmax
comp=Z,129nm,1.0s
GIVF **Givet** **75.19 9** ⇑*i*P **P** **02 30 49.2 0.0**
comp=Z,129nm,1.0s
JSA **Saint Aubin** **75.28 14** ⇑*e*P **P** **02 30 49.6 -0.1**
JSA AMB AMB 02 30 50.7
comp=Z,70nm,1.2s
JSA **Saint Aubin** **75.28 14** P **P** **02 30 49.6 -0.1**
JSA AMB AMB 02 30 50.7
comp=Z,70nm,1.2s
PLN **Plauen** **75.30 4** *e*P **P** **02 30 50.2 +0.4**
comp=Z,262nm,0.9s
PVCC **Panska Ves** **75.34 3** ⇑*i*P **P** **02 30 50.4 +0.4**
PVCC MLR MLR
comp=Z,800nm,20.0s
PVCC **Panska Ves** **75.34 3** ⇑*i*P **P** **02 30 50.4 +0.4**
PVCC AMS AMS 03 11 00.0
comp=Z,800nm,20.0s
WERD **Werda** **75.34 4** *e*P **P** **02 30 50.5 +0.4**
comp=Z,38nm,0.9s
TNS **Taunus Mts** **75.36 7** *e*P **P** **02 30 50.6 +0.4**
TNS *e**PP **pP** **02 31 00.7 +3.1**
TNS pmax pmax
comp=Z,77nm,0.9s
TNS **Taunus Mts** **75.36 7** *e*P **P** **02 30 50.6 +0.4**
comp=Z,77nm,0.9s
TNS *e*pP **pP** **02 31 00.7 +3.1**
TANN **Tannenbergstha** **75.38 4** *e*P **P** **02 30 50.9 +0.5**
comp=Z,41nm,1.0s
TANN *e*pP **PcP** **02 31 01.2 -2.3**
UPC **Upice** **75.39 2** ⇑*i*P **P** **02 30 50.6 +0.3**
UPC **Upice** **75.39 2** ⇑*i*P **P** **02 30 50.6 +0.3**
GUNZ **Gunzen** **75.43 4** *e*P **P** **02 30 51.1 +0.5**
comp=Z,50nm,0.9s
WERN **Wernitzgruen** **75.50 4** *e*P **P** **02 30 51.7 +0.7**
comp=Z,69nm,0.9s
DPC **Dobruska-Polom** **75.55 1** ⇑*i*P **P** **02 30 51.9 +0.6**
DPC *e* 02 31 00.9
DPC MLR MLR
comp=Z,1µm,21.2s

DPC Dobruska-Polom 75.55 1⇑ *i*P P 02 30 51.9 +0.6
DPC *e*pP **pP** 02 31 00.9 +2.1
DPC AMS AMS 03 10 40.0
comp=Z,1µm,21.2s
NKC Novy Kostel 75.56 4⇑ *i*P P 02 30 51.9 +0.6
NKC Novy Kostel 75.56 4⇑ *i*P P 02 30 51.9 +0.6
LSA Lhasa 75.58 301 P P 02 30 53.2 +0.8
LSA pmax pmax
comp=Z,80nm,0.9s
LSA Lhasa 75.58 301 *e*P P 02 30 52.9 +0.5
LSA pmax pmax
comp=Z,56nm,0.7s
LSA MLR MLR
comp=Z,2µm,19.0s
LSA Lhasa 75.58 301 *e*P P 02 30 52.9 +0.5
comp=Z,56nm,0.7s
LSA LR LR
comp=Z,2µm,19.0s
ABH Alteburg 75.63 7 *e*P P 02 30 52.1 +0.3
OJC Ojcow 75.69 359 *e*P P 02 30 52.1 0.0
OJC *e**PP **pP** 02 31 01.8 +2.3
OJC *e*S S 02 40 36.0 +4.2
OJC MLR MLR
comp=Z,900nm,21.2s
OJC Ojcow 75.69 359 *e*P P 02 30 52.1 0.0
OJC *e*pP **pP** 02 31 01.8 +2.3
OJC *e*S S 02 40 36.0 +4.2
OJC L L 03 05 06.2
comp=Z,900nm,21.2s
WLF Walferdange 75.74 8 P P 02 30 53.0 +0.7
comp=Z,53nm,1.1s
WLF Walferdange 75.74 8 *e*P P 02 30 52.8 +0.5
WLF pmax pmax
comp=Z,76nm,0.9s
WLF MLR MLR
comp=Z,1µm,20.0s
WLF Walferdange 75.74 8 *e*P P 02 30 53.2 +0.9
comp=Z,86nm,1.0s
WLF Walferdange 75.74 8 *e*P P 02 30 52.8 +0.5
comp=Z,76nm,0.9s
WLF LR LR
comp=Z,1µm,20.0s
RUP Ruppelstein 75.77 8 *e*P P 02 30 52.7 +0.1
RUP Ruppelstein 75.77 8 *e*P P 02 30 52.7 +0.1
PRA Prague 75.79 3⇑P P 02 30 53.0 +0.4
MANZ Manzenberg 75.79 4 *e*P P 02 30 53.1 +0.4
comp=Z,44nm,1.1s
RAC Raciborz 75.83 0 *e*P P 02 30 53.4 +0.6
BST Brest 75.86 15 *e*P P 02 30 53.8 +0.7
BST Brest 75.86 15 *e*P P 02 30 53.8 +0.7
PRU Pruhonice 75.88 3⇑*i*P P 02 30 53.5 +0.4
PRU *e* 02 31 02.0
PRU MLR MLR
comp=Z,1µm,22.9s
PRU Pruhonice 75.88 3⇑*i*P P 02 30 53.5 +0.4
PRU *e*pP **pP** 02 31 02.0 +1.4
PRU AMS AMS 03 11 20.0
comp=Z,1µm,22.9s
FLN La Foliniere 75.92 13⇑*i*P P 02 30 53.2 -0.2
comp=Z,97nm,0.9s
FLN *e*R
comp=Z,1µm,18.8s
FLN La Foliniere 75.92 13⇑*i*P P 02 30 53.2 -0.2
FLN pmax pmax
comp=Z,97nm,0.9s
FLN La Foliniere 75.92 13⇑*i*P P 02 30 53.2 -0.2
comp=Z,97nm,0.9s
ROSF Rostrenen 75.95 15⇑*i*P P 02 30 53.9 +0.3
comp=Z,115nm,1.2s
ROSF Rostrenen 75.95 15⇑*i*P P 02 30 53.9 +0.3
ROSF pmax pmax
comp=Z,115nm,1.2s
ROSF Rostrenen 75.95 15⇑*i*P P 02 30 53.9 +0.3
comp=Z,115nm,1.2s
LVV L'vov 75.99 356 *i*P P 02 30 53.4 -0.4
TOD Tromm 75.99 6 *e*P P 02 30 54.2 +0.4
TOD Tromm 75.99 6 *e*P P 02 30 54.2 +0.4
ROTZ Rotzenmuhle 76.02 4 *e*P P 02 30 54.7 +0.8
comp=Z,65nm,1.0s
GRF Grafenberg Arr 76.05 5 *e*P P 02 30 54.9 +0.8
GRF pmax pmax
comp=Z,92nm,0.9s
GRF MLR MLR
comp=Z,500nm,20.1s
GRF Grafenberg Arr 76.05 5 *e*P P 02 30 54.9 +0.8
comp=Z,92nm,0.9s
GRF *e*L L 03 06 32.1
comp=Z,529nm,20.1s
OKC Ostrava-Krasne 76.08 0⇑*i*P P 02 30 54.5 +0.2
OKC MLR MLR
comp=Z,800nm,22.7s
OKC Ostrava-Krasne 76.08 0⇑*i*P P 02 30 54.5 +0.2
OKC AMS AMS 03 10 30.0
comp=Z,800nm,22.7s
LDF La Druitiere 76.13 13⇑*i*P P 02 30 54.4 -0.2
comp=Z,146nm,1.2s
LDF La Druitiere 76.13 13⇑*i*P P 02 30 54.4 -0.2
LDF pmax pmax
comp=Z,146nm,1.2s
LDF La Druitiere 76.13 13⇑*i*P P 02 30 54.4 -0.2
comp=Z,146nm,1.2s
SGMF Saint Gilles 76.14 14⇑*i*P P 02 30 54.9 +0.3
comp=Z,162nm,1.2s
SGMF Saint Gilles 76.14 14⇑*i*P P 02 30 54.9 +0.3
SGMF pmax pmax
comp=Z,162nm,1.2s
SGMF Saint Gilles 76.14 14⇑*i*P P 02 30 54.9 +0.3
comp=Z,162nm,1.2s
MORC Moravsky Berou 76.14 1 *e*P P 02 30 54.1 -0.6
MORC pmax pmax
comp=Z,57nm,0.7s
MORC Moravsky Berou 76.14 1 *e*P P 02 30 54.1 -0.6
comp=Z,57nm,0.7s
MORC Moravsky Berou 76.14 1⇑*i*P P 02 30 54.8 +0.1
KWP Kalwaria Pacla 76.22 357 *e*P P 02 30 55.6 +0.5
KWP pmax pmax
comp=Z,180nm,0.8s
KWP MLR MLR
comp=Z,1µm,19.0s
KWP Kalwaria Pacla 76.22 357 *e*P P 02 30 55.6 +0.5
comp=Z,180nm,0.8s
KWP LR LR
comp=Z,1µm,19.0s
KWP Kalwaria Pacla 76.22 357⇑*i*P P 02 30 55.7 +0.5
KWP Kalwaria Pacla 76.22 357 *e*P P 02 30 55.7 +0.5
KWP *e*S S 02 40 38.2 +0.5
KWP LMZ LR 03 02 29.0
KTD Kalmit 76.23 7 *e*P P 02 30 55.5 +0.3
KTD Kalmit 76.23 7 *e*P P 02 30 55.5 +0.3
GRR Gorron 76.24 13⇑*i*P P 02 30 55.3 +0.1
comp=Z,57nm,0.7s
GRR Gorron 76.24 13⇑*i*P P 02 30 55.3 +0.1
GRR pmax pmax
comp=Z,57nm,0.7s
GRR Gorron 76.24 13⇑*i*P P 02 30 55.3 +0.1
comp=Z,57nm,0.7s
QUIF Quistinic 76.38 15⇑*i*P P 02 30 56.1 +0.1
comp=Z,46nm,0.9s
QUIF Quistinic 76.38 15⇑*i*P P 02 30 56.1 +0.1
QUIF pmax pmax
comp=Z,46nm,0.9s
QUIF Quistinic 76.38 15⇑*i*P P 02 30 56.1 +0.1
comp=Z,46nm,0.9s
NIE Niedzica 76.49 359 *e*P P 02 30 57.0 +0.4
NIE Niedzica 76.49 359 *e*P P 02 30 57.0 +0.4
LANF Langenberg 76.55 7 *e*P P 02 30 57.5 +0.5
LANF Langenberg 76.55 7 *e*P P 02 30 57.5 +0.5
LANF Langenberg 76.55 7 *e*P P 02 30 57.5 +0.5
RKPI Ransiki, Papua 76.58 248 P P 02 30 58.2 +0.6
comp=Z,92nm,1.7s
TREC Trest 76.59 2⇑*i*P P 02 30 57.4 +0.2
TREC MLR MLR
comp=Z,1µm,22.7s
TREC Trest 76.59 2⇑*i*P P 02 30 57.4 +0.2
TREC AMS AMS 03 11 30.0
comp=Z,1µm,22.7s
VRAC Vranov 76.60 1⇓*i*P P 02 30 57.6 +0.4
WET Wettzell 76.67 4 *e*P P 02 30 58.5 +0.8
WET *e**PP **PcP** 02 31 08.7 -0.3
WET pmax pmax
comp=Z,50nm,1.1s
WET Wettzell 76.67 4 *e*P P 02 30 58.5 +0.8
comp=Z,50nm,1.1s
WET *e*pP **PcP** 02 31 08.7 -0.3
KHC Kasperske Hory 76.70 3⇑*i*P P 02 30 58.7 +0.8

KHC *e* 02 31 07.0
KHC *e* 02 31 08.4
KHC MLR MLR
comp=Z,1µm,21.8s
KHC Kasperske Hory 76.70 3 *e*P P 02 30 58.4 +0.5
comp=Z,81nm,0.8s
KHC Kasperske Hory 76.70 3⇑*i*P P 02 30 58.7 +0.8
KHC *e*pP **pP** 02 31 07.0 +1.7
KHC AMS AMS 03 12 00.0
comp=Z,1µm,21.8s
MEZF Maizieres J'vi 76.79 9⇑*i*P P 02 30 58.7 +0.4
comp=Z,127nm,1.2s
MEZF Maizieres J'vi 76.79 9⇑*i*P P 02 30 58.7 +0.4
comp=Z,127nm,1.2s
PMG Port Moresby 76.80 232 *e*P P 02 30 59.1 +0.4
comp=Z,121nm,1.1s
PMG LR LR
comp=Z,905nm,20.0s
PMG Port Moresby 76.80 232 P P 02 30 58.7 0.0
comp=Z,99nm,1.0s,baz=35,slow=5.3,SNR=11
PAGF Fort de Pagny 76.80 9⇑*i*P P 02 30 59.0 +0.6
comp=Z,51nm,0.8s
PAGF Fort de Pagny 76.80 9⇑*i*P P 02 30 59.0 +0.6
comp=Z,51nm,0.8s
STU Stuttgart 76.85 6 *e*P P 02 30 58.3 -0.4
STU pmax pmax
comp=Z,58nm,0.8s
STU Stuttgart 76.85 6 *e*P P 02 30 59.0 +0.3
comp=Z,64nm,0.9s
STU Stuttgart 76.85 6 *e*P P 02 30 58.3 -0.4
comp=Z,58nm,0.8s
KOLS Kolonicke sedl 76.93 357 *e*P P 02 30 59.4 +0.2
KOLS pmax pmax
comp=Z,47nm,1.0s
KOLS Kolonicke sedl 76.93 357 *e*P P 02 30 59.4 +0.2
CRVS Cervenica-Dubn 76.98 358 *e*P P 02 30 58.9 -0.5
CRVS pmax pmax
comp=Z,45nm,1.0s
CRVS Cervenica-Dubn 76.98 358 *e*P P 02 30 58.9 -0.5
GEC2 GERESS Array S 76.99 3 *e*P P 02 31 00.0 +0.4
GEC2 *e**PP **PcP** 02 31 10.2 -0.4
GEC2 pmax pmax
comp=Z,60nm,0.9s
GEC2 GERESS Array S 76.99 3 *e*P P 02 31 00.0 +0.4
comp=Z,60nm,0.9s
GEC2 *e*pP **PcP** 02 31 10.2 -0.4
GERES GERESS Array B 76.99 3 P P 02 30 59.7 +0.1
GERES P'P' 02 58 11.2
GERES GERESS Array B 76.99 3 P P 02 30 59.7 +0.1
comp=Z,44nm,0.7s,baz=0.0,slow=4.5,SNR=431
GERES PKPPKP P'P'df 02 58 11.2 -5.5
comp=Z,0.6nm,1.0s,baz=180,slow=0.1,SNR=4.1
CDF Champ du Feu 77.07 8⇑*i*P P 02 31 00.2 +0.2
comp=Z,129nm,1.1s
CDF Champ du Feu 77.07 8⇑*i*P P 02 31 00.2 +0.2
CDF pmax pmax
comp=Z,129nm,1.1s
CDF Champ du Feu 77.07 8⇑*i*P P 02 31 00.2 +0.2
comp=Z,129nm,1.1s
SFTF Sexfontaines 77.09 9⇑*i*P P 02 31 00.2 +0.2
comp=Z,108nm,0.9s
SFTF Sexfontaines 77.09 9⇑*i*P P 02 31 00.2 +0.2
comp=Z,108nm,0.9s
THEF They Montfort 77.15 9 *e*P P 02 31 00.7 +0.3
THEF They Montfort 77.15 9 *e*P P 02 31 00.7 +0.3
THEF They Montfort 77.15 9 *e*P P 02 31 00.7 +0.3
BFO Black Forest 77.23 7 *e*P P 02 31 00.8 -0.1
BFO pmax pmax
comp=Z,35nm,0.8s
BFO MLR MLR
comp=Z,1µm,20.0s
BFO Black Forest 77.23 7 *e*P P 02 31 01.1 +0.2
comp=Z,47nm,0.9s
BFO Black Forest 77.23 7 *e*P P 02 31 00.8 -0.1
comp=Z,35nm,0.8s
BFO LR LR
comp=Z,1µm,20.0s
BFO Black Forest 77.23 7 P P 02 31 01.9 +1.0
comp=Z,271nm,0.7s,SNR=24
UZH Uzhgorod 77.24 357⇑*i*P P 02 31 01.6 +0.8
UZH *e* 02 31 12.8
UZH *e* 02 31 14.0
UZH *e*S S 02 40 45.8 -2.9
UZH *e* 02 41 26.4
ECH Echery 77.26 8 *e*P P 02 31 00.9 -0.1
ECH pmax pmax
comp=Z,75nm,0.8s
ECH MLR MLR
comp=Z,999nm,19.0s
ECH Echery 77.26 8 *e*P P 02 31 00.9 -0.1
comp=Z,75nm,0.8s
ECH LR LR
comp=Z,999nm,19.0s
ECH Echery 77.26 8 *e*P P 02 31 01.2 +0.2
LIBD Limburg 77.36 7 *e*P P 02 31 01.8 +0.3
LIBD Limburg 77.36 7 *e*P P 02 31 01.8 +0.3
HAU Haudompre 77.40 8⇑*i*P P 02 31 01.9 +0.1
comp=Z,124nm,0.9s
HAU *e*R
comp=Z,793nm,19.0s
HAU Haudompre 77.40 8⇑*i*P P 02 31 01.9 +0.1
HAU pmax pmax
comp=Z,124nm,0.9s
HAU Haudompre 77.40 8⇑*i*P P 02 31 01.9 +0.1
comp=Z,124nm,0.9s
SMOL Smolenice 77.40 1 *e*P P 02 31 03.1 +1.3
SMOL Smolenice 77.40 1 *e*P P 02 31 03.1 +1.3
VYHS Vyhne 77.42 360 *e*P P 02 31 02.6 +0.7
VYHS pmax pmax
comp=Z,46nm,0.9s
VYHS Vyhne 77.42 360 *e*P P 02 31 02.6 +0.7
SPAK Spaichingen-Ko 77.49 7 *e*P P 02 31 02.7 +0.3
FUR Furstenfeldbru 77.57 5 *e*P P 02 31 03.3 +0.5
FUR *e**PP **PcP** 02 31 13.6 +0.6
FUR pmax pmax
comp=Z,95nm,0.9s
FUR Furstenfeldbru 77.57 5 *e*P P 02 31 03.3 +0.5
comp=Z,95nm,0.9s
FUR *e*pP **PcP** 02 31 13.6 +0.6
MOF Molkenrain 77.62 8 *e*P P 02 31 03.1 0.0
MOF Molkenrain 77.62 8 *e*P P 02 31 03.1 0.0
MOF Molkenrain 77.62 8 *e*P P 02 31 03.1 0.0
HINF Hinteralfeld 77.63 8⇑*i*P P 02 31 03.1 0.0
comp=Z,107nm,1.1s
HINF Hinteralfeld 77.63 8⇑*i*P P 02 31 03.1 0.0
HINF pmax pmax
comp=Z,107nm,1.0s
HINF Hinteralfeld 77.63 8⇑*i*P P 02 31 03.1 0.0
comp=Z,107nm,1.0s
SWI Sorong 77.64 251 P P 02 31 05.0 +1.5
comp=Z,167nm,1.2s,comp=Z,2µm
FELD Feldberg im Sc 77.66 7 *e*P P 02 31 03.3 -0.1
FELD Feldberg im Sc 77.66 7 *e*P P 02 31 03.3 -0.1
ZST Bratislava 77.72 1 *e*P P 02 31 03.7 +0.2
ZST pmax pmax
comp=Z,71nm,0.7s
ZST Bratislava 77.72 1 *e*P P 02 31 03.7 +0.2
TRPA Tarpa 77.73 357⇑*i*P P 02 31 04.2 +0.7
TRPA Tarpa 77.73 357 *e*P P 02 31 04.3 +0.7
HYF Humbligny 77.77 11⇑*i*P P 02 31 04.3 +0.5
HYF Humbligny 77.77 11⇑*i*P P 02 31 04.3 +0.5
BCIP Isla Barro Col 77.78 91 PFAKE 02 31 20.0 +16
BCIP LR LR
comp=Z,437nm,22.0s
LOR Lormes 77.90 10⇑*i*P P 02 31 04.6 0.0
comp=Z,59nm,0.8s
LOR *e*R
comp=Z,1µm,20.5s
LOR Lormes 77.90 10⇑*i*P P 02 31 04.6 0.0
comp=Z,59nm,0.8s
CONA Conrad Observa 77.97 2 *i*P P 02 31 05.8 +0.7
SNR=210
CONA Conrad Observa 77.97 2 *i*P P 02 31 05.8 +0.7
comp=Z,121nm,0.8s
PSZ Piszkesteto 77.99 359 *e*P P 02 31 05.9 +0.7
PSZ pmax pmax
comp=Z,86nm,1.0s
PSZ MLR MLR
comp=Z,838nm,20.0s
PSZ Piszkesteto 77.99 359 *e*P P 02 31 05.9 +0.7
comp=Z,86nm,1.0s
PSZ LR LR
comp=Z,838nm,20.0s
PSZ Piszkesteto 77.99 359⇑*i*P P 02 31 06.2 +1.0
PSZ Piszkesteto 77.99 359⇑*e*P P 02 31 06.2 +1.0

LRS Lares 78.00 75 *e*P P 02 31 05.5 -0.1
MOA Molln 78.01 3 *i*P P 02 31 05.3 +0.1
SNR=48
MOA Molln 78.01 3⇑*i*P P 02 31 05.5 +0.3
comp=Z,28nm,0.8s
BBS Basel-Blauen 78.03 8 *e*P P 02 31 05.5 +0.1
BBS Basel-Blauen 78.03 8 *e*P P 02 31 05.5 +0.1
SSF Saint Saulge 78.07 10⇑*i*P P 02 31 05.6 +0.1
comp=Z,125nm,1.1s
SSF Saint Saulge 78.07 10⇑*i*P P 02 31 05.6 +0.1
SSF pmax pmax
comp=Z,125nm,1.1s
SSF Saint Saulge 78.07 10⇑*i*P P 02 31 05.6 +0.1
comp=Z,125nm,1.1s
RJOB Jochberg 78.07 4 *e*P P 02 31 06.0 +0.4
comp=Z,83nm,0.9s
MFF Saint Martin d 78.09 13⇑*i*P P 02 31 05.9 +0.3
comp=Z,145nm,0.9s
MFF Saint Martin d 78.09 13⇑*i*P P 02 31 05.9 +0.3
MFF pmax pmax
comp=Z,145nm,0.9s
MFF Saint Martin d 78.09 13⇑*i*P P 02 31 05.9 +0.3
comp=Z,145nm,0.9s
LOMF Lomont 78.09 8 *e*P P 02 31 06.1 +0.4
LOMF Lomont 78.09 8 *e*P P 02 31 06.1 +0.4
LOMF Lomont 78.09 8 *e*P P 02 31 06.1 +0.4
BUR08 Bucovina Ar. S 78.11 355 *e*P P 02 31 05.9 0.0
BURAR Bucovina Array 78.14 355⇑*i*P P 02 31 06.4 +0.4
BMR Baia Mare 78.16 357⇑*i*P P 02 31 06.6 +0.6
TBI Tubuai 78.18 169 *e*S S 02 40 54.8 -4.3
comp=Z,366nm,32.8s
TBI *e*LR LR 02 55 11.2
comp=Z,3µm,29.0s,baz=350
RETA Reutte 78.22 5 *i*P P 02 31 06.8 +0.4
SNR=41
RETA Reutte 78.22 5 *i*P P 02 31 06.8 +0.4
comp=Z,36nm,0.9s
SOP Sopron 78.22 1⇑*e*P P 02 31 07.3 +1.0
AVF Avril sur Loir 78.32 11⇑*i*P P 02 31 06.9 0.0
comp=Z,79nm,0.9s
AVF Avril sur Loir 78.32 11⇑*i*P P 02 31 06.9 0.0
AVF pmax pmax
comp=Z,79nm,0.9s
AVF Avril sur Loir 78.32 11⇑*i*P P 02 31 06.9 0.0
comp=Z,79nm,0.9s
CELP Cerrillos 78.33 75 *e*P P 02 31 07.6 +0.3
OBIP Obispado Ponce 78.34 75 *e*P P 02 31 07.3 -0.1
comp=Z,21nm,0.6s
PRAR RASCA 78.34 355⇑*i*P P 02 31 06.5 -0.5
DAVA Damuels 78.37 6 *i*P P 02 31 07.8 +0.4
SNR=14
DAVA Damuels 78.37 6⇑*i*P P 02 31 07.7 +0.4
comp=Z,28nm,0.8s
MOTA Moosalm 78.38 5 *i*P P 02 31 07.8 +0.4
MOTA pmax pmax
comp=Z,70nm,0.8s
MOTA Moosalm 78.38 5 *i*P P 02 31 07.8 +0.4
SNR=113
MOTA Moosalm 78.38 5 *i*P P 02 31 07.8 +0.4
comp=Z,70nm,0.8s
WATA Walderalm 78.42 5 *i*P P 02 31 08.1 +0.5
WATA pmax pmax
comp=Z,56nm,0.7s
WATA Walderalm 78.42 5 *i*P P 02 31 08.1 +0.5
SNR=58
WATA Walderalm 78.42 5 *i*P P 02 31 08.1 +0.5
comp=Z,56nm,0.7s
IAS Iasi 78.43 354⇓*i*P P 02 31 07.2 -0.3
BUD Budapest 78.43 360⇑*e*P P 02 31 08.5 +1.0
TNTI Ternate 78.46 255 P P 02 31 07.9 -0.2
comp=Z,103nm,0.9s,comp=Z,2µm
BGF Bois d'Agland 78.49 11⇑*i*P P 02 31 07.9 0.0
comp=Z,99nm,1.2s
BGF Bois d'Agland 78.49 11⇑*i*P P 02 31 07.9 0.0
BGF pmax pmax
comp=Z,99nm,1.2s
BGF Bois d'Agland 78.49 11⇑*i*P P 02 31 07.9 0.0
comp=Z,99nm,1.2s
SMF Signal de Mont 78.51 10⇑*i*P P 02 31 07.9 -0.1
comp=Z,86nm,0.9s
SMF Signal de Mont 78.51 10⇑*i*P P 02 31 07.9 -0.1
SMF pmax pmax
comp=Z,87nm,0.9s
SMF Signal de Mont 78.51 10⇑*i*P P 02 31 07.9 -0.1
comp=Z,86nm,0.9s
PKSG 78.53 0⇑*e*P P 02 31 09.1 +1.1
SJG San Juan 78.54 75 PFAKE 02 31 30.0 +22
SJG LR LR
comp=Z,631nm,19.0s
KIS Kishinev 78.54 353α*i*P P 02 31 06.0 -2.1
KIS *e*S S 02 40 54.0 -8.8
KIS *e*PS PnS 02 41 12.0 -33
KIS pmax pmax
comp=N,500nm,2.0s
KIS pmax pmax
comp=Z,600nm,2.0s
KIS pmax pmax
comp=N,500nm,2.0s
KIS pmax pmax
comp=Z,500nm,2.0s
KIS Kishinev 78.54 353⇑*i*P P 02 31 06.0 -2.1
comp=Z,600nm,2.0s
KIS Kishinev 78.54 353 *e*PP PP 02 33 50.0 -15
KIS *e*S S 02 40 54.0 -8.8
KIS Kishinev 78.54 353 *e*PS 02 41 12.0
KIS LRM MLR 03 04 05.0
comp=Z,2µm,20.0s
KIS Kishinev 78.54 353⇓*i*P P 02 31 07.5 -0.6
SHL Shillong 78.58 298⇑*i*x P 02 31 08.5 -0.4
SHL *ex* S 02 41 01.0 -3.3
ARSA Arzberg 78.64 2 *i*P P 02 31 09.5 +0.8
SNR=81
ARSA Arzberg 78.64 2 *e*P P 02 31 09.5 +0.8
comp=Z,76nm,0.8s
PKST T"s 78.66 0⇑*e*P P 02 31 09.7 +0.9
FETA Feichten 78.69 5 *i*P P 02 31 09.8 +0.7
SNR=125
FETA Feichten 78.69 5 *e*P P 02 31 09.8 +0.7
comp=Z,81nm,0.8s
TCF Toulx Ste Croi 78.69 11⇑*i*P P 02 31 08.9 -0.1
comp=Z,35nm,0.9s
TCF Toulx Ste Croi 78.69 11⇑*i*P P 02 31 08.9 -0.1
TCF pmax pmax
comp=Z,35nm,0.9s
TCF Toulx Ste Croi 78.69 11⇑*i*P P 02 31 08.9 -0.1
comp=Z,35nm,0.9s
KBA Koelnbreinsper 78.75 4 *i*P P 02 31 10.5 +1.0
KBA pmax pmax
comp=Z,142nm,0.8s
KBA Koelnbreinsper 78.75 4 *i*P P 02 31 10.5 +1.0
comp=Z,142nm,0.8s,SNR=43
KBA Koelnbreinsper 78.75 4 *i*P P 02 31 10.5 +1.0
comp=Z,142nm,0.8s
CABF La Chapelle 78.76 9⇑*i*P P 02 31 10.0 +0.5
comp=Z,143nm,1.1s
CABF La Chapelle 78.76 9⇑*i*P P 02 31 10.0 +0.5
CABF pmax pmax
comp=Z,143nm,1.1s
CABF La Chapelle 78.76 9⇑*i*P P 02 31 10.0 +0.5
comp=Z,143nm,1.1s
FAKI Fak Fak 78.81 249 P P 02 31 10.5 +0.5
comp=Z,95nm,1.0s,comp=Z,1µm
PKS7 Kunszentmiklos 78.87 360⇓*e*P P 02 31 11.5 +1.6
MTP Monte Pirata 78.89 75 *e*P P 02 31 10.8 +0.3
comp=Z,93nm,1.3s
PKSN Nyarlorinc 79.01 359⇓*e*P P 02 31 12.5 +1.8
AGO Saint Agoulin 79.02 11 *e*P P 02 31 11.5 +0.7
AGO Saint Agoulin 79.02 11 *e*P P 02 31 11.5 +0.7
ABTA Abfaltersbach 79.05 4 *i*P P 02 31 11.2 +0.2
SNR=46
ABTA Abfaltersbach 79.05 4 *i*P P 02 31 11.2 +0.2
comp=Z,55nm,0.9s
DRGR 79.06 357⇑*i*P P 02 31 11.3 +0.2
OG01 Vacheresse 79.09 8 *e*P P 02 31 11.6 +0.3
OG01 Vacheresse 79.09 8 *e*P P 02 31 11.6 +0.3
LEOM Leova 79.10 353⇓*i*P P 02 31 11.5 +0.3
TUE Stuetta 79.15 6 *e*P P 02 31 12.2 +0.5
comp=Z,28nm,0.8s
TUE LR LR
comp=Z,725nm,19.0s
TESR Tescani 79.17 354⇑*i*P P 02 31 11.1 -0.5
SOKA Soboth 79.20 2⇓*i*P P 02 31 12.4 +0.5
comp=Z,100nm,0.9s
SOKA Soboth 79.20 2⇓*i*P P 02 31 12.4 +0.5
comp=Z,100nm,0.9s
MYKA Terra Mystica 79.21 3⇑*i*P P 02 31 11.9 0.0

MYKA **Terra Mystica** 79.21 3⇑*i*P P 02 31 11.9 0.0
comp=Z,43nm,0.7s
TAPN **Taplejung** 79.22 302 *e*P P 02 31 12.9 +0.3
comp=Z,296nm,0.8s
PERS **Pernice** 79.24 2 *i* P P 02 31 12.7 +0.6
PERS *e*S S 02 41 10.0 -0.5
PYM **Petit Puy Mans** 79.31 11 *e*P P 02 31 12.6 +0.1
PYM **Petit Puy Mans** 79.31 11 *e*P P 02 31 12.6 +0.1
PYM **Petit Puy Mans** 79.31 11 *e*P P 02 31 12.6 +0.1
PKS6 **Bocsa** 79.31 359⇑*e*P P 02 31 13.2 +0.9
PKS9 **Tamasi** 79.33 0⇑*e*P P 02 31 13.1 +0.7
OBKA **Obir** 79.36 3 *i* P P 02 31 13.3 +0.6
SNR=270
OBKA **Obir** 79.36 3 *i* P P 02 31 13.3 +0.6
comp=Z,382nm,0.8s
PKS2 **Kecel** 79.42 359⇑*e*P P 02 31 13.8 +0.9
BEHE **Becsehely** 79.44 1⇑*e*P P 02 31 14.2 +1.2
UBPT **Khong Chiam** 79.44 281 P P 02 31 13.8 +0.3
comp=Z,62nm,1.5s
GHRR 79.57 354⇓*i*P P 02 31 14.8 +1.0
RJF **Les Rejaudoux** 79.57 12⇑*i*P P 02 31 13.7 -0.1
comp=Z,54nm,1.0s
RJF *e*R
comp=Z,1µm,20.5s
RJF **Les Rejaudoux** 79.57 12⇑*i*P P 02 31 13.7 -0.1
RJF pmax pmax
comp=Z,54nm,1.0s
RJF **Les Rejaudoux** 79.57 12⇑*i*P P 02 31 13.7 -0.1
comp=Z,54nm,1.0s
MDB **Medias** 79.65 356⇓*i*P P 02 31 15.4 +1.2
GUN **Gumba** 79.66 304 *e*P P 02 31 15.3 +0.3
comp=Z,338nm,1.0s
PKSM **Moragy** 79.71 360⇑*i*P P 02 31 14.6 +0.1
PKSM **Moragy** 79.71 360⇑*e*P P 02 31 14.7 +0.2
RSL **Roselend** 79.72 8 *e*P P 02 31 16.7 +1.9
RSL **Roselend** 79.72 8 *e*P P 02 31 16.7 +1.9
RSL **Roselend** 79.72 8 *e*P P 02 31 16.7 +1.9
PAYG **Puerto Ayora** 79.74 106 PFAKE 02 31 30.0 +15
PAYG LR LR
comp=Z,726nm,19.0s
DOPR **Dopca** 79.78 355⇓*i*P P 02 31 15.8 +0.9
ODAN **Odare** 79.79 302 *e*P P 02 31 15.6 0.0
comp=Z,161nm,0.8s
VRI **Vrincioaia** 79.81 354⇑*i*P P 02 31 15.3 +0.2
ANN **Anapa** 79.81 346 *e*P P 02 31 12.6 -2.4
ANN *e**PP PcP 02 31 23.7 +1.0
ANN *e* 02 34 14.3
ANN *e*S S 02 41 11.0 -5.3
ANN *e*SS SS 02 46 20.7 -3.3
ANN pmax pmax
comp=Z,123nm,1.7s
KIV **Kislovodsk** 79.81 342⇑*i*P P 02 31 15.7 +0.5
KIV *e* 02 31 19.9
KIV *e* 02 34 15.6
KIV *i* S S 02 41 21.1 +4.5
KIV pmax pmax
comp=Z,212nm,0.8s
KIV **Kislovodsk** 79.81 342 P P 02 31 15.1 -0.1
comp=Z,1µm,0.8s,SNR=60
VOY **Vojsko** 79.81 3 *e*P P 02 31 14.4 -0.8
VOY *e* 02 31 46.9
VOY *e* 02 32 14.8
LJU **Ljubljana** 79.82 3 *i* P P 02 31 14.9 -0.3
LJU *i* 02 31 21.5
PLOR **Plostina** 79.83 354⇓*i*P P 02 31 15.3 +0.1
MAK **Makhachkala** 79.83 339 *e*P P 02 31 14.1 -1.1
MAK *e* 02 31 21.0
MAK *e* 02 34 11.6
MAK *e*PPP PPP 02 36 06.3
MAK *e*S S 02 41 12.1 -4.6
MAK *e*SS SS 02 46 31.9 +7.4
MAK pmax pmax
comp=Z,289nm,0.9s
LFF **La Frestale** 79.84 13⇑*i*P P 02 31 15.5 +0.3
comp=Z,106nm,1.0s
LFF **La Frestale** 79.84 13⇑*i*P P 02 31 15.5 +0.3
LFF pmax pmax
comp=Z,106nm,1.0s
LFF **La Frestale** 79.84 13⇑*i*P P 02 31 15.5 +0.3
comp=Z,106nm,1.0s
LBL **Lubilhac** 79.85 11 *e*P P 02 31 15.4 0.0
LBL **Lubilhac** 79.85 11 *e*P P 02 31 15.4 0.0
LBL **Lubilhac** 79.85 11 *e*P P 02 31 15.4 0.0
LPL **La Plagne** 79.90 8⇑*i*P P 02 31 16.9 +1.0
comp=Z,42nm,0.8s
LPL **La Plagne** 79.90 8⇑*i*P P 02 31 16.9 +1.0
LPL pmax pmax
comp=Z,42nm,0.8s
LPL **La Plagne** 79.90 8⇑*i*P P 02 31 16.9 +1.0
comp=Z,42nm,0.8s
PETR **Petresti** 79.92 354⇑*i*P P 02 31 16.5 +0.9
LPG **La Plagne** 79.92 8⇑*i*P P 02 31 17.2 +1.1
comp=Z,58nm,1.0s
LPG **La Plagne** 79.92 8⇑*i*P P 02 31 17.2 +1.1
LPG pmax pmax
comp=Z,58nm,1.0s
LPG **La Plagne** 79.92 8⇑*i*P P 02 31 17.2 +1.1
comp=Z,58nm,1.0s
SSB **Saint Sauveur** 79.94 10 *e*P P 02 31 15.5 -0.3
SSB pmax pmax
comp=Z,26nm,1.1s
SSB MLR MLR
comp=Z,585nm,20.0s
SSB **Saint Sauveur** 79.94 10 *e*P P 02 31 15.5 -0.3
comp=Z,26nm,1.1s
SSB LR LR
comp=Z,585nm,20.0s
JAVS **Javornik** 79.96 3 *i* P P 02 31 15.6 -0.4
JAVS *i* 02 31 25.3
DEV **Deva** 79.96 357⇓*i*P P 02 31 16.3 +0.4
MYLDM **Lahad Datu** 79.97 265 P P 02 31 17.4 +1.0
MYLDM **Lahad Datu** 79.97 265 P P 02 31 16.8 +0.5
comp=Z,75nm,1.6s,comp=Z,1µm
KBZ **Khabaz** 79.99 342 P P 02 31 16.6 +0.6
KBZ **Khabaz** 79.99 342 P P 02 31 16.6 +0.6
KBZ **Khabaz** 79.99 342 P P 02 31 16.6 +0.6
comp=Z,144nm,0.9s,baz=333,slow=3.4,SNR=280
KBZ LR LR 03 13 25.2
comp=Z,919nm,19.6s,baz=14,slow=41
CAF **Calviac** 80.01 12⇑*i*P P 02 31 16.3 +0.1
comp=Z,65nm,1.2s
CAF **Calviac** 80.01 12⇑*i*P P 02 31 16.3 +0.1
CAF pmax pmax
comp=Z,65nm,1.2s
CAF **Calviac** 80.01 12⇑*i*P P 02 31 16.3 +0.1
comp=Z,65nm,1.2s
KKN **Kakani** 80.05 304 *e*P P 02 31 17.2 +0.3
comp=Z,166nm,0.8s
SIM **Simferopol'** 80.08 349*ce*P P 02 31 16.5 0.0
SIM pmax pmax
comp=Z,42nm,0.9s
SIM MLR MLR
comp=Z,1µm,19.0s
RAMN **Ramite** 80.10 303 *e*P P 02 31 17.4 +0.1
comp=Z,359nm,0.7s
TRI **Trieste** 80.13 3 *e*P P 02 31 15.8 -1.0
TRI pmax pmax
comp=Z,41nm,0.7s
TRI **Trieste** 80.13 3 *e*P P 02 31 15.8 -1.0
comp=Z,41nm,0.7s
PKI **Pulchoki** 80.17 304 *e*P P 02 31 17.8 +0.1
comp=Z,272nm,0.9s
PKIN **Phulchoki** 80.17 304 *e*P P 02 31 18.3 +0.6
comp=Z,100nm,0.6s
MLR **Mumtele Rosu** 80.22 355⇑*i*P P 02 31 17.7 +0.2
BZS **Buzias** 80.27 358⇑*i*P P 02 31 17.8 +0.3
DMN **Daman** 80.28 304 *e*P P 02 31 18.6 +0.3
comp=Z,287nm,0.8s
CMMT **Chiang Mai** 80.28 289 P P 02 31 18.0 -0.1
comp=Z,54nm,0.9s,comp=Z,723nm
CHTO **Chiang Mai** 80.28 289 *e*P P 02 31 17.8 -0.3
CHTO pmax pmax
comp=Z,37nm,0.9s
CHTO MLR MLR
comp=Z,508nm,20.0s
CHTO **Chiang Mai** 80.28 289 *e*P P 02 31 17.8 -0.3
comp=Z,37nm,0.9s
CHTO LR LR
comp=Z,508nm,20.0s
CHTO **Chiang Mai** 80.28 289 P P 02 31 17.6 -0.5
comp=Z,60nm,0.9s,comp=Z,776nm
DANN **Dangsing** 80.31 306 *e*P P 02 31 18.8 +0.4
comp=Z,807nm,0.7s
VOIR 80.32 355⇓*i*P P 02 31 18.3 +0.3

TLCR 80.34 353⇑*i*P P 02 31 17.8 -0.1
SDKM **Sandakan** 80.36 266 P P 02 31 20.6 +2.1
BNI **Bardonecchia** 80.36 8 *e*P P 02 31 19.5 +1.3
BNI pmax pmax
comp=Z,56nm,1.0s
BNI MLR MLR
comp=Z,1µm,22.0s
BNI **Bardonecchia** 80.36 8 *e*P P 02 31 19.5 +1.3
comp=Z,56nm,1.0s
BNI LR LR
comp=Z,1µm,22.0s
LOT **Lotru** 80.37 356⇑*i*P P 02 31 18.0 -0.3
VIVF **Saint-Julien-l** 80.37 10⇑*i*P P 02 31 18.5 +0.3
comp=Z,73nm,1.1s
VIVF **Saint-Julien-l** 80.37 10⇑*i*P P 02 31 18.5 +0.3
VIVF pmax pmax
comp=Z,73nm,1.1s
VIVF **Saint-Julien-l** 80.37 10⇑*i*P P 02 31 18.5 +0.3
comp=Z,73nm,1.1s
BOJS **Bojanci** 80.38 2 *i* P P 02 31 18.4 +0.3
BOJS *e* 02 31 28.2
CFR **Carcaliu** 80.40 353⇓*i*P P 02 31 18.1 -0.1
ORIF **Oris-en-Rattie** 80.42 9⇑*i*P P 02 31 19.1 +0.6
comp=Z,62nm,0.9s
ORIF *e*R
comp=Z,1µm,20.8s
ORIF **Oris-en-Rattie** 80.42 9⇑*i*P P 02 31 19.1 +0.6
ORIF pmax pmax
comp=Z,62nm,0.9s
ORIF **Oris-en-Rattie** 80.42 9⇑*i*P P 02 31 19.1 +0.6
comp=Z,62nm,0.9s
SISC **Sisak** 80.43 1 P P 02 31 19.4 +1.0
MTUR **Matau** 80.53 355⇓*i*P P 02 31 19.3 +0.2
ISR **Istrita** 80.56 354⇑*i*P P 02 31 19.4 +0.2
RKT **Rikitea** 80.57 155 *e*S S 02 41 16.9 -7.6
comp=Z,353nm,32.8s
RKT *e*LR LR 02 56 15.2
comp=Z,3µm,30.2s,baz=345
CM31 **Chiang Mai Arr** 80.57 288 *e*P P 02 31 20.1 +0.5
comp=Z,82nm,0.8s
CMAR **Chiang Mai Arr** 80.57 288 P P 02 31 19.8 +0.2
CMAR **Chiang Mai Arr** 80.57 288 P P 02 31 19.8 +0.2
comp=Z,120nm,0.9s,baz=18,slow=5.4,SNR=186
CMAR LR LR 03 10 50.6
comp=Z,506nm,19.3s,baz=37,slow=38
KKM **Kota Kinabalu** 80.61 267 *e*P P 02 31 20.0 +0.1
comp=Z,21nm,0.7s
KKM **Kota Kinabalu** 80.61 267 P P 02 31 21.2 +1.3
KKM **Kota Kinabalu** 80.61 267 P P 02 31 20.2 +0.3
comp=Z,50nm,1.5s,comp=Z,902nm
OG22 **Abries** 80.61 8 *e*P P 02 31 21.1 +1.4
OG22 **Abries** 80.61 8 *e*P P 02 31 21.1 +1.4
SOC **Sochi** 80.66 345 *e*P P 02 31 20.0 +0.3
SECR 80.67 355⇑*i*P P 02 31 19.5 -0.3
MBDF **Montbardon** 80.69 8⇑*i*P P 02 31 21.2 +1.2
comp=Z,120nm,0.9s
MBDF **Montbardon** 80.69 8⇑*i*P P 02 31 21.2 +1.2
MBDF pmax pmax
comp=Z,120nm,0.9s
MBDF **Montbardon** 80.69 8⇑*i*P P 02 31 21.2 +1.2
comp=Z,120nm,0.9s
ZEI **Tsey** 80.72 341 *e*P P 02 31 20.4 +0.1
ZEI *e*S S 02 41 24.9 -1.6
ZEI pmax pmax
comp=Z,209nm,1.7s
ZEI pmax pmax
comp=N,262nm,2.2s
ZEI pmax pmax
comp=E,175nm,1.0s
ZEI pmax pmax
comp=Z,11nm,2.0s
ZEI smax smax
comp=N,46nm,6.0s
ZEI smax smax
comp=E,13nm,5.0s
PGOR **Pogoanele** 80.75 354⇑*i*P P 02 31 21.0 +0.9
TLE **Tual** 80.81 247 P P 02 31 21.4 +0.6
comp=E,84nm,1.6s
KOLN **Koldanda** 80.87 305 *e*P P 02 31 21.5 +0.2
comp=E,201nm,0.6s
PYUN **Piuthan** 80.88 306 *e*P P 02 31 21.4 0.0
comp=E,370nm,0.9s
GUDG **Gudauri** 80.92 341 P P 02 31 22.0 +0.6
SMLA **Simla** 80.94 312 *i*x P 02 31 21.9 +0.5
OG25 **Le Caire** 80.98 9 *e*P P 02 31 22.2 +0.7
OG25 **Le Caire** 80.98 9 *e*P P 02 31 22.2 +0.7
ONI **Oni** 80.99 342 P P 02 31 22.4 +0.8
AMRR **Amara** 81.02 354⇑*i*P P 02 31 21.6 0.0
DZM **Mont Dzumac** 81.03 210 *e*P P 02 31 21.8 0.0
comp=E,180nm,1.3s
DZM *e*S S 02 41 21.2 -8.4
comp=E,374nm,26.0s
DZM *e*SS SS 02 46 38.3 -6.7
comp=E,261nm,25.1s
DZM *e*LR LR 02 56 35.0
comp=E,2µm,23.6s
DZM **Mont Dzumac** 81.03 210 *e*P P 02 31 22.5 +0.7
comp=E,119nm,1.4s
TSM **Tawau** 81.05 265 P P 02 31 23.3 +1.2
LASF **Ste Croix** 81.06 11⇑*i*P P 02 31 22.4 +0.6
comp=E,92nm,1.4s
LASF **Ste Croix** 81.06 11⇑*i*P P 02 31 22.4 +0.6
comp=E,92nm,1.4s
TIRR **Tirgusor** 81.10 353 *e*P P 02 31 21.8 -0.2
TIRR pmax pmax
comp=Z,94nm,0.8s
TIRR **Tirgusor** 81.10 353 *e*P P 02 31 21.8 -0.2
comp=Z,94nm,0.8s
TIRR **Tirgusor** 81.10 353⇓*i*P P 02 31 22.0 0.0
HUMR **Humele** 81.23 355⇓*i*P P 02 31 22.4 -0.3
KBL **Kabul** 81.25 320 *e*P P 02 31 21.7 -1.6
KBL pmax pmax
comp=Z,104nm,0.9s
KBL **Kabul** 81.25 320 *e*P P 02 31 21.7 -1.6
comp=Z,104nm,0.9s
PGAV **Gavieira, Arco** 81.26 20 *e*P P 02 31 23.9 +0.8
comp=Z,70nm,2.0s
PGAV *e*LR LR 03 00 45.5
comp=Z,835nm,18.0s
CVD **Cernavoda** 81.27 353⇓*i*P P 02 31 23.5 +0.6
NVLJ **Novalja** 81.31 3 P P 02 31 23.1 0.0
SMRF **Simiane la Rot** 81.33 9⇑*i*P P 02 31 24.4 +1.1
comp=Z,56nm,0.9s
SMRF **Simiane la Rot** 81.33 9⇑*i*P P 02 31 24.4 +1.1
comp=Z,56nm,0.9s
ANWB **Willy Bob** 81.34 72 PFAKE 02 31 40.0 +16
ANWB LR LR
comp=Z,572nm,20.0s
TOUF **Mont Tournerai** 81.44 8 *e*P P 02 31 25.0 +0.9
TOUF **Mont Tournerai** 81.44 8 *e*P P 02 31 25.0 +0.9
TOUF **Mont Tournerai** 81.44 8 *e*P P 02 31 25.0 +0.9
GOR **Gori** 81.45 341 P P 02 31 25.3 +1.3
AUTN **L'Aution** 81.47 8 *e*P P 02 31 25.1 +0.8
AUTN **L'Aution** 81.47 8 *e*P P 02 31 25.1 +0.8
AUTN **L'Aution** 81.47 8 *e*P P 02 31 25.1 +0.8
SAOF **Saorge** 81.49 8 *e*P P 02 31 24.6 +0.4
SAOF **Saorge** 81.49 8 *e*P P 02 31 24.6 +0.4
SAOF **Saorge** 81.49 8 *e*P P 02 31 24.6 +0.4
VLC **Villacollemand** 81.52 6 *e*P P 02 31 24.4 +0.2
comp=Z,31nm,0.8s
VLC LR LR
comp=Z,633nm,20.0s
SEAG **Tbilisi Sea** 81.53 340 P P 02 31 25.0 +0.6
MVIF **Mont Vial** 81.55 8 *e*P P 02 31 25.3 +0.7
MVIF **Mont Vial** 81.55 8 *e*P P 02 31 25.3 +0.7
MVIF **Mont Vial** 81.55 8 *e*P P 02 31 25.3 +0.7
PCAB **Cabril** 81.56 20 *e*P P 02 31 25.5 +0.9
comp=Z,93nm,1.9s
TBLG **Delisi** 81.58 340 P P 02 31 25.6 +1.0
TBLG **Delisi** 81.58 340 P P 02 31 25.6 +1.0
MTLF **Montolieu** 81.59 12⇑*i*P P 02 31 25.0 +0.3
comp=Z,61nm,1.1s
MTLF **Montolieu** 81.59 12⇑*i*P P 02 31 25.0 +0.3
MTLF pmax pmax
comp=Z,61nm,1.1s
MTLF **Montolieu** 81.59 12⇑*i*P P 02 31 25.0 +0.3
comp=Z,61nm,1.1s
SBF **Sospel** 81.60 8⇑*i*P P 02 31 25.0 +0.2
comp=Z,148nm,0.9s
SBF **Sospel** 81.60 8⇑*i*P P 02 31 25.0 +0.2
SBF pmax pmax
comp=Z,148nm,0.9s
SBF **Sospel** 81.60 8⇑*i*P P 02 31 25.0 +0.2
comp=Z,148nm,0.9s
EPF **Esparros** 81.66 13⇑*i*P P 02 31 24.6 -0.5

comp=Z,37nm,1.0s
EPF **Esparros** 81.66 13⇑*i*P P 02 31 24.6 -0.5
EPF pmax pmax
comp=Z,37nm,1.0s
EPF **Esparros** 81.66 13⇑*i*P P 02 31 24.6 -0.5
comp=Z,37nm,1.0s
ETSF **Etsaut** 81.67 14⇑*i*P P 02 31 25.8 +0.6
comp=Z,58nm,0.7s
ETSF **Etsaut** 81.67 14⇑*i*P P 02 31 25.8 +0.6
ETSF pmax pmax
comp=Z,58nm,0.7s
ETSF **Etsaut** 81.67 14⇑*i*P P 02 31 25.8 +0.6
comp=Z,58nm,0.7s
AAI **Ambon** 81.67 252 P P 02 31 27.1 +1.7
comp=Z,114nm,1.2s,comp=Z,3µm
PBRG **Braganca** 81.71 19 *e*P P 02 31 26.1 +0.7
comp=Z,69nm,1.6s
REVF **Revere** 81.72 8 *e*P P 02 31 25.9 +0.5
REVF **Revere** 81.72 8 *e*P P 02 31 25.9 +0.5
REVF **Revere** 81.72 8 *e*P P 02 31 25.9 +0.5
DGRG **David-gareji** 81.72 340 P P 02 31 26.7 +1.3
DIVS **Divibare** 81.81 359 P P 02 31 26.1 +0.2
FRF **La Foret Royal** 81.84 9⇑*i*P P 02 31 26.2 +0.2
comp=Z,83nm,1.2s
FRF **La Foret Royal** 81.84 9⇑*i*P P 02 31 26.2 +0.2
FRF pmax pmax
comp=Z,83nm,1.2s
FRF **La Foret Royal** 81.84 9⇑*i*P P 02 31 26.2 +0.2
comp=Z,83nm,1.2s
ABKT **Ailbek** 81.87 329 P P 02 31 27.9 +1.6
comp=Z,966nm,0.8s,SNR=64
PSN **Preselentsi** 81.89 353 *e*P P 02 31 26.6 +0.4
POLO **Lamas de Olo** 81.93 20 *e*P P 02 31 27.5 +0.9
comp=Z,49nm,1.8s
KZR **Kazreti** 81.98 341 P P 02 31 27.4 +0.6
PTO **Porto** 81.99 20 *e*P P 02 31 28.0 +1.2
comp=Z,92nm,1.2s
PVRL **Vila Real** 82.04 20 *e*P P 02 31 28.1 +1.0
comp=Z,171nm,1.9s
LMR **La Mourre** 82.05 9⇑*i*P P 02 31 27.5 +0.4
comp=Z,116nm,1.3s
LMR **La Mourre** 82.05 9⇑*i*P P 02 31 27.5 +0.4
LMR pmax pmax
comp=Z,116nm,1.3s
LMR **La Mourre** 82.05 9⇑*i*P P 02 31 27.5 +0.4
comp=Z,116nm,1.3s
ZIMR 82.08 355⇓*i*P P 02 31 27.3 +0.1
AKH **Akhalkalaki** 82.13 341 P P 02 31 28.9 +1.1
MVO **Moncorvo** 82.28 19 *e*P P 02 31 29.2 +0.8
comp=Z,89nm,1.8s
MVO *e*LR LR 03 00 25.0
comp=Z,1µm,20.0s
PRD **Provadia** 82.42 353 *e*P P 02 31 29.5 +0.5
BCA **Borcka** 82.43 343 *e*P P 02 31 29.2 +0.1
SZH **Strazhica** 82.44 355 *e*P P 02 31 28.8 -0.3
MPEP **Malo Peshtene** 82.46 356 *e*P P 02 31 28.8 -0.4
PVL **Pavlikeni** 82.53 355 *e*P P 02 31 30.0 +0.5
PVIS **Viseu** 82.54 20 *e*P P 02 31 30.8 +1.0
comp=Z,129nm,1.9s
PLE **Pljevlja** 82.58 359⇑*i*P P 02 31 31.0 +1.0
ARTV **Artvin** 82.63 342 *i*P P 02 31 30.9 +0.5
UPM **Unac-Piva** 82.72 360⇑*i*P P 02 31 30.9 +0.1
DAGI **Agillar** 82.74 342 *i*P P 02 31 31.4 +0.6
HMG **Houelmont** 82.75 73 *e*P P 02 31 31.5 +0.3
PHG **Guadaloupe-2** 82.76 73 *e*P P 02 31 31.8 +0.5
PZAR **Pazar-Rize** 82.82 343 *e*P P 02 31 31.5 +0.4
DBAD **Bademkaya** 82.83 342 *i*P P 02 31 31.9 +0.6
MTE **Manteigas** 82.92 20 *e*P P 02 31 32.5 +0.8
comp=Z,122nm,1.4s
MTE *e*LR LR 03 01 25.7
comp=Z,646nm,20.0s
MTE **Manteigas** 82.92 20 *e*P P 02 31 32.0 +0.3
comp=Z,60nm,0.8s
MTE LR LR
comp=Z,1µm,19.0s
DDEM **Demirkent** 82.95 342 *i*P P 02 31 32.7 +0.8
KARS **Kars** 82.96 341 *e*P P 02 31 33.9 +1.8
BRY **Bratogost** 83.02 360 *e*P P 02 31 32.3 0.0
PGF **Pioggiola** 83.03 7⇑*i*P P 02 31 32.7 +0.4
comp=Z,124nm,1.0s
PGF **Pioggiola** 83.03 7⇑*i*P P 02 31 32.7 +0.4
PGF pmax pmax
comp=Z,124nm,1.0s
PGF **Pioggiola** 83.03 7⇑*i*P P 02 31 32.7 +0.4
comp=Z,124nm,1.0s
IVA **Berane** 83.04 359⇑*i*P P 02 31 32.8 +0.5
STON **Ston** 83.05 1 P P 02 31 31.8 -0.4
GNI **Garni** 83.10 340 *e*P P 02 31 34.4 +1.5
comp=Z,81nm,0.8s
GNI LR LR
comp=Z,2µm,22.0s
NKY **Niksic** 83.10 360⇑*i*P P 02 31 32.6 -0.1
KTUT **Trabzon** 83.19 344 *e*P P 02 31 34.0 +1.0
DIKM **Dikmen** 83.19 347 *e*P P 02 31 34.3 +1.3
JMB **Yambol** 83.20 354 P P 02 31 34.3 +1.2
JMB **Yambol** 83.20 354 *e*P P 02 31 33.6 +0.5
MACK **Trabzon** 83.23 344 *i*P P 02 31 33.8 +0.5
VTS **Vitosha** 83.24 356 P P 02 31 30.6 -2.9
VTS **Vitosha** 83.24 356⇑*i*P P 02 31 33.1 -0.4
VTS **Vitosha** 83.24 356 *e*P P 02 31 33.0 -0.4
PGB **Panagyurishte** 83.25 356 *e*P P 02 31 33.5 +0.1
CHBT **CHBT** 83.27 282 P P 02 31 34.1 +0.3
comp=Z,42nm,1.0s,comp=Z,2µm
PVY **Plav** 83.31 359⇑*i*P P 02 31 33.3 -0.5
SDV **Santo Domingo** 83.37 84 *e*P P 02 31 34.5 -0.1
comp=Z,0.5nm,1.1s
SDV LR LR
comp=Z,1.0nm,22.0s
ESPY **Espiye-Giresun** 83.42 345 *e*P P 02 31 34.3 0.0
BYBT **Boyabat** 83.43 348 *e*P P 02 31 35.4 +1.1
AQU **L'Aquila** 83.47 4 *e*P P 02 31 35.1 +0.6
comp=Z,52nm,0.8s
AQU LR LR
comp=Z,1µm,20.0s
AQU **L'Aquila** 83.47 4⇓*i*P P 02 31 34.9 +0.4
PCBR **Castelo Branco** 83.47 20 *e*P P 02 31 35.0 +0.5
comp=Z,91nm,1.2s
HCY **Herceg Novi** 83.47 360⇑*i*P P 02 31 34.2 -0.3
GRSN **GIRESUNGRSN** 83.48 345 *i*P P 02 31 34.9 +0.3
TTG **Podgorica** 83.49 359⇑*i*P P 02 31 34.6 +0.1
PTOM **Tomar** 83.50 21 *e*P P 02 31 35.3 +0.7
comp=Z,142nm,1.5s
BALT **Daday** 83.53 349 *i*P P 02 31 35.6 +0.6
BCI **Bajram Curri** 83.54 359 *i*P P 02 31 35.0 +0.1
BUM **Brajici-Budva** 83.62 360⇑*i*P P 02 31 34.8 -0.5
KVT **Kavak** 83.65 347 *e*P P 02 31 36.9 +1.5
PLD **Plovdiv** 83.67 355 P P 02 31 35.3 -0.1
DIM **Dimitrovgrad** 83.68 355 *e*P P 02 31 36.1 +0.6
HAVZ **Havza** 83.70 347 *i*P P 02 31 36.8 +1.1
BAYT **Ayd¨–ntepe-Bay** 83.71 344 *e*P P 02 31 37.1 +1.2
HOMI **Horasan** 83.74 342 *i*P P 02 31 37.4 +1.1
GUMT **Gumushane** 83.75 344 *e*P P 02 31 37.5 +1.4
EDRB **Edirne** 83.81 354 *e*P P 02 31 36.6 +0.4
PUK **Puka** 83.87 359 *i*P P 02 31 38.8 +2.2
PMRV **Marv??o** 83.88 20 *e*P P 02 31 37.7 +1.0
comp=Z,101nm,1.8s
PMRV *e*LR LR 03 00 48.0
comp=Z,578nm,20.0s
SAFT **Safranbolu** 83.90 349 *e*P P 02 31 37.6 +0.9
ALMR **Almeirim** 83.91 21 *e*P P 02 31 36.9 +0.1
ALMR **Almeirim** 83.91 21 *e*P P 02 31 36.9 +0.1
ALMR **Almeirim** 83.91 21 *e*P P 02 31 36.8 +0.1
SKO **Skopje** 83.91 358 P P 02 31 37.6 +0.9
SKO **Skopje** 83.91 358 *i*P P 02 31 38.0 +1.2
ERBA **Erbaa** 83.94 346 *i*P P 02 31 38.5 +1.5
TOS **Tosya** 83.95 348 *e*P P 02 31 38.5 +1.4
PMAFR **Mafra** 83.95 21 *e*P P 02 31 37.9 +0.9
comp=Z,238nm,1.3s
ULC **Ulcinj** 83.95 359⇑*i*P P 02 31 36.7 -0.3
KDZE **Karadeniz Ereo** 83.96 350 *e*P P 02 31 36.8 -0.2
ILGA **Ilgaz** 83.97 348 *i*P P 02 31 38.3 +1.0
KKB **Krupnik** 83.97 357 *e*P P 02 31 37.7 +0.6
ERZM **Erzurum** 83.97 342 *i*P P 02 31 38.8 +1.4
EZM **Erzurum** 83.97 342 *e*P P 02 31 38.8 +1.4
KOPT **Kop Dagi** 84.01 343 *i*P P 02 31 39.2 +1.5
PMTG **Montargil** 84.06 21 *e*P P 02 31 37.9 +0.4
comp=Z,72nm,1.1s
FDF **Fort de France** 84.07 73 PFAKE 02 31 50.0 +12
FDF LR LR
comp=Z,491nm,20.0s
CTYL **Yal??k??y-??at** 84.07 353 *e*P P 02 31 38.0 +0.5
KDZ **Kurdzhali** 84.08 355 *e*P P 02 31 38.1 +0.5
KELT **Kelkit** 84.09 344 *i*P P 02 31 39.1 +1.2
RSDY **Resadiye-TOKAT** 84.14 346 *e*P P 02 31 39.6 +1.6

SUSE Susehri 84.20 345 *i* P P 02 31 37.8 -0.7
TUTA Tutak 84.20 341 *i* P P 02 31 39.8 +1.2
LIS Lisbon 84.21 21 *e*P P 02 31 38.3 0.0
LIS AMS AMS 03 08 15.6
comp=Z,2µm,21.4s
LIS Lisbon 84.21 21 *e*P P 02 31 38.3 0.0
LIS A A 03 08 15.6
comp=Z,2µm,21.4s
LIS Lisbon 84.21 21 *e*P P 02 31 38.3 0.0
PHP Peshkopia 84.22 359 *i* P P 02 31 38.3 -0.1
PHP Peshkopia 84.22 359 P P 02 31 37.4 -1.0
MMB Musomiste 84.22 356 *e*P P 02 31 39.2 +0.8
CLDR Caldiran 84.24 340 *e*P P 02 31 40.3 +1.5
ESDC Sonseca Array 84.28 17 P P 02 31 38.8 +0.1
ESDC PKKPbc PKKPbc 02 49 48.3 -0.4
ESDC Sonseca Array 84.28 17 P P 02 31 38.8 +0.1
comp=Z,17nm,0.6s,baz=344,slow=4.8,SNR=131
ESDC PKKPbc PKKPbc 02 49 48.3 -0.4
comp=Z,0.2nm,0.5s,baz=218,slow=1.7,SNR=4.6
ESDC LR LR 03 10 48.2
comp=Z,750nm,19.8s,baz=295,slow=37
ESLA Sonseca Array 84.28 17 *e*P P 02 31 38.9 +0.2
comp=Z,9.5nm,0.9s
SILT Sile 84.28 352 *e*P P 02 31 38.7 +0.1
CTKS Kestanelik-??a 84.29 352 *e*P P 02 31 38.9 +0.3
SLVT Silivri 84.32 353 *e*P P 02 31 39.7 +0.9
BGKT Bogazkoy 84.33 352 *e*P P 02 31 39.3 +0.4
TOKA Tokat 84.33 346 *i* P P 02 31 40.1 +1.1
PAB San Pablo 84.34 18 *e*P P 02 31 39.2 +0.1
PAB pmax pmax
comp=Z,14nm,0.8s
PAB MLR MLR
comp=Z,845nm,19.0s
PAB San Pablo 84.34 18 *e*P P 02 31 39.1 +0.1
comp=Z,14nm,0.8s
PAB LR LR
comp=Z,845nm,19.0s
PESTR Estremoz 84.39 20 *e*P P 02 31 39.5 +0.3
comp=Z,103nm,1.6s
ISK Istanbul-Kandi 84.42 352 *e*P P 02 31 39.5 +0.2
ISK Istanbul-Kandi 84.42 352 P P 02 31 38.9 -0.4
CANT Cankiri 84.42 348 *e*P P 02 31 41.0 +1.6
NVR Nevrokopi 84.45 356 P P 02 31 40.2 +0.7
NVR Nevrokopi 84.45 356 *e*P P 02 31 40.3 +0.7
CRLT Corlu 84.46 353 *e*P P 02 31 40.5 +1.0
EZC Erzincan 84.46 344 *e*P P 02 31 41.2 +1.5
HENT Hendek 84.50 351 *i* P P 02 31 39.9 +0.1
VAY Valandovo 84.53 357 P P 02 31 39.9 0.0
VAY Valandovo 84.53 357 *i* P P 02 31 40.1 +0.3
TIR Tirane 84.56 359 *i* P P 02 31 38.8 -1.2
TIR Tirane 84.56 359 *e*P P 02 31 40.3 +0.3
TIR pmax pmax
comp=Z,77nm,0.8s
TIR MLR MLR
comp=Z,960nm,20.0s
TIR Tirane 84.56 359 P P 02 31 38.9 -1.1
TIR Tirane 84.56 359 *e*P P 02 31 40.3 +0.3
comp=Z,77nm,0.8s
TIR LR LR
comp=Z,960nm,20.0s
ERZN Erzincan 84.56 344 *e*P P 02 31 41.7 +1.5
SKSI Soroako, Sulaw 84.58 258 P P 02 31 42.6 +2.0
EVOP Sao Brissos 84.60 21 *e*P P 02 31 40.5 +0.2
EVOP pmax pmax
comp=Z,194nm,1.5s
EVOP Sao Brissos 84.60 21 *e*P P 02 31 40.5 +0.2
comp=Z,194nm,1.5s
HRT Hereke 84.61 351 *e*P P 02 31 40.9 +0.6
TKR Tekirdag 84.61 353 *e*P P 02 31 41.1 +0.8
EVO Evora 84.62 21 *e*P P 02 31 40.5 +0.1
comp=Z,194nm,1.5s
EVO eR
comp=Z,2µm,23.0s
EVO Evora 84.62 21 *e*P P 02 31 41.3 +0.9
comp=Z,71nm,1.8s
BUY Buyukada 84.62 352 *e*P P 02 31 40.5 +0.1
BUY Buyukada 84.62 352 *i* P P 02 31 40.1 -0.3
SGKT Sivrigoynuk 84.63 350 *i* P P 02 31 41.0 +0.4
PHET Kaeng Krachan 84.67 285 P P 02 31 41.2 +0.2
comp=Z,109nm,0.8s
VRTB Varto-Mus 84.68 342 *e*P P 02 31 42.0 +1.1
SPNC Sapanca-Adapaz 84.69 351 *e*P P 02 31 41.3 +0.7
SRS Serai 84.70 356 P P 02 31 41.0 +0.2
CORM Corum 84.72 348 *e*P P 02 31 42.6 +1.6
BTM Bintulu 84.72 268 P P 02 31 44.1 +2.9
KAVA Kavala 84.78 355 P P 02 31 41.5 +0.4
ALN Alexandroupoli 84.80 354 P P 02 31 41.4 +0.2
ALN Alexandroupoli 84.80 354 *e*P P 02 31 41.5 +0.2
MDUB Mudurnu 84.81 350 *e*P P 02 31 42.3 +0.8
BIA Bitola 84.87 358 *i* P P 02 31 41.1 -0.6
VANB Van 84.87 341 *e*P P 02 31 43.4 +1.6
ILIC ilic-Erzincan 84.88 345 *e*P P 02 31 43.2 +1.3
GRG Griva 84.90 357 P P 02 31 42.3 +0.5
GRG Griva 84.90 357 *e*P P 02 31 42.7 +0.9
GULT Gulveren 84.92 351 *e*P P 02 31 42.6 +0.6
PNCL Nicolau / Gran 84.92 21 *e*P P 02 31 42.4 +0.5
comp=Z,95nm,1.6s
ARMT Armutlu 84.93 352 *e*P P 02 31 41.8 -0.1
SART Tekirdag 84.93 353 *i* P P 02 31 42.3 +0.3
BNGL BINGOL 84.94 342 *i* P P 02 31 40.5 -1.8
BNGB Bing˜¶l 84.98 343 *e*P P 02 31 43.8 +1.4
ADVT Abdulvahap 84.99 351 *e*P P 02 31 42.5 +0.3
MRMT Marmara Adasi 84.99 353 *e*P P 02 31 42.6 +0.3
ERIK Erikli-Kesan 84.99 354 *e*P P 02 31 42.5 +0.3
SOH Sokhos 85.00 356 P P 02 31 42.5 +0.2
SOH Sokhos 85.00 356 *e*P P 02 31 42.1 -0.2
GEMT Gemlik 85.03 352 *e*P P 02 31 42.8 +0.4
KEMA Kemaliye 85.07 345 *i* P P 02 31 43.6 +0.8
FNA Florina 85.10 358 P P 02 31 42.8 0.0
FNA Florina 85.10 358 *e*P P 02 31 42.8 0.0
IZI Iznik 85.11 352 *e*P P 02 31 43.4 +0.5
MDNY Mudanya-Bursa 85.12 352 *e*P P 02 31 43.4 +0.5
PBEJ Beja 85.14 21 *e*P P 02 31 43.9 +0.9
comp=Z,56nm,1.5s
YOZ Yozgat 85.16 347 *e*P P 02 31 44.5 +1.3
GEVA Gevas 85.21 341 *i* P P 02 31 44.1 +0.5
CAVI Cavuskoy 85.21 351 *e*P P 02 31 44.0 +0.7
BNT Bandirma 85.21 353 *e*P P 02 31 43.7 +0.4
KRBG Karabiga-Canak 85.22 353 *e*P P 02 31 43.8 +0.5
EDC Edincik 85.22 353 *e*P P 02 31 46.2 +2.8
LOD Lodumlu 85.23 349 *e*P P 02 31 44.6 +1.1
ANTO Ankara 85.24 349 *e*P P 02 31 44.5 +0.9
ANTO Ankara 85.24 349 *e*P P 02 31 44.3 +0.7
ANTO pmax pmax
comp=Z,83nm,0.7s
ANTO MLR MLR
comp=Z,691nm,20.0s
ANTO Ankara 85.24 349 *e*P P 02 31 44.3 +0.7
comp=Z,84nm,0.7s
ANTO LR LR
comp=Z,691nm,20.0s
MESJ Messejana 85.25 21 *e*P P 02 31 43.3 -0.3
MESJ AMS AMS 03 08 44.8
comp=Z,1µm,25.9s
MESJ Messejana 85.25 21 *e*P P 02 31 43.3 -0.3
MESJ A A 03 08 44.8
comp=Z,1µm,25.9s
MESJ Messejana 85.25 21 *e*P P 02 31 43.2 -0.3
SMTH Samothraki Isl 85.25 355 *e*P P 02 31 43.1 -0.4
GELI Tayfur-Gelibol 85.27 354 *e*P P 02 31 43.7 +0.1
KBN Korca 85.27 358 *i* P P 02 31 43.4 -0.3
LPK Lapseki 85.28 354 *e*P P 02 31 44.2 +0.6
BR131 Keskin Array S 85.29 348 *e*P P 02 31 44.1 +0.2
comp=Z,60nm,0.8s
BRTR Keskin Array B 85.29 348 P P 02 31 44.4 +0.4
BRTR PKKPbc PKKPbc 02 49 46.5 0.0
BRTR P'P' 02 57 51.8
BRTR Keskin Array B 85.29 348 P P 02 31 44.4 +0.4
comp=Z,71nm,0.8s,baz=35,slow=2.6,SNR=408
BRTR PKKPbc PKKPbc 02 49 46.5 0.0
comp=Z,1.6nm,0.8s,baz=174,slow=5.4,SNR=12
BRTR PKPPKP P'P'df 02 57 51.8 -9.4
comp=Z,1.5nm,1.0s,baz=193,slow=5.1,SNR=5.6
BRTR LR LR 03 13 01.1
comp=Z,846nm,22.0s,baz=43,slow=38
PTK Pertek 85.30 344 *e*P P 02 31 45.7 +1.7
ULDT Uludag 85.33 352 *i* P P 02 31 44.8 +0.6
PLG Polygyros 85.45 356 P P 02 31 42.9 -1.6
PLG Polygyros 85.45 356 *e*P P 02 31 43.8 -0.8
OUR Ouranopolis 85.46 356 P P 02 31 44.4 -0.2
BORA Eskisehir 85.47 351 *i* P P 02 31 45.0 +0.3
NEST Nestorio 85.48 358 P P 02 31 43.9 -0.9
PCVE Castro Verde 85.48 21 *e*P P 02 31 46.0 +1.3
comp=Z,61nm,1.9s
BBAL Bala 85.53 349 *i* P P 02 31 45.7 +0.6
GONE Gonen-Balikesi 85.54 353 *e*P P 02 31 45.4 +0.4
AFSR Af˙ar-Bala (A 85.63 349 *e*P P 02 31 46.3 +0.8
KAMT Kaman 85.63 348 *e*P P 02 31 46.6 +1.1
MORF Marmelete 85.67 21 *e*P P 02 31 47.1 +1.4
comp=Z,115nm,1.5s
LIT Litokhoron 85.75 357 P P 02 31 45.3 -0.8
LIT Litokhoron 85.75 357 *e*P P 02 31 46.0 -0.1
PVAQ Vaqueiros 85.77 21 *e*P P 02 31 46.8 +0.6
comp=Z,54nm,1.8s
PVAQ eLR LR 03 01 29.2
comp=Z,919nm,20.0s
OTAV Otavalo 85.78 95 *e*P P 02 31 46.9 -0.1
comp=Z,5.9nm,0.6s
OTAV LR LR
comp=Z,277nm,21.0s
ESKT Eskisehir 85.79 350 *e*P P 02 31 47.0 +0.5
SEYT Eskypehyr 85.79 350 *i* P P 02 31 46.6 +0.2
SVRH Sivrihisar-ESK 85.80 350 *e*P P 02 31 46.8 +0.4
HAKT HAKKARI 85.81 340 *i* P P 02 31 47.5 +0.8
SBUM Sibu 85.83 268 P P 02 31 49.2 +2.4
SBUM Sibu 85.83 268 P P 02 31 47.1 +0.4
comp=Z,56nm,1.0s,comp=Z,822nm
LIA Limnos Island 85.84 355 P P 02 31 45.9 -0.5
LIA Limnos Island 85.84 355 *e*P P 02 31 46.5 +0.1
BALY Balya 85.85 353 *i* P P 02 31 46.4 -0.1
EZN Ezine 85.85 354 *e*P P 02 31 46.6 +0.2
BOZC Bozcaada 85.85 354 *i* P P 02 31 46.2 -0.2
BNN Bunyan 85.87 346 *e*P P 02 31 47.9 +1.1
TTSI Tana Toraja 85.87 259 P P 02 31 47.4 +0.5
comp=Z,51nm,1.5s
PAIG Palilouri 85.88 356 P P 02 31 47.0 +0.3
PAIG Palilouri 85.88 356 *e*P P 02 31 46.0 -0.7
PBDV Barranco-do-Ve 85.88 21 *e*P P 02 31 48.0 +1.2
comp=Z,93nm,1.9s
CUC Castrocucco 85.89 2 *e*P P 02 31 45.8 -1.1
comp=Z,70nm,1.1s
CUC LR LR
comp=Z,600nm,19.0s
GRGR Grenville 85.90 75 PFAKE 02 32 00.0 +13
GRGR LR LR
comp=Z,506nm,19.0s
DST Dursunbey 85.91 352 *e*P P 02 31 47.2 +0.3
DARE Darende-Malaty 85.91 345 *e*P P 02 31 48.8 +1.8
DURS Dursunbey 85.92 352 *i* P P 02 31 46.7 -0.3
BALB Balikesir 85.93 353 *e*P P 02 31 47.0 +0.2
BEST Besiri 85.95 342 *i* P P 02 31 47.9 +0.7
PINB Pinarbasi 85.96 346 *i* P P 02 31 48.3 +0.8
TVSB Tavsanli 85.99 351 *e*P P 02 31 47.8 +0.5
MYA Malataya 86.00 344 *e*P P 02 31 49.3 +1.9
AVNT Avonos 86.07 347 *i* P P 02 31 48.1 +0.2
VSL Villasalto 86.09 7 *e*P P 02 31 48.2 +0.4
comp=Z,34nm,0.8s
VSL LR LR
comp=Z,1µm,19.0s
AKCD Akcadag 86.11 345 *i* P P 02 31 49.3 +1.3
DIYA Diyarbakir 86.12 343 *i* P P 02 31 49.0 +1.1
SIRN S˙¬rnak 86.12 341 *i* P P 02 31 54.7 +6.7
DIY Diyarbakir 86.13 343 *e*P P 02 31 49.5 +1.4
CUKT Cukurca 86.13 340 *e*P P 02 31 48.9 +0.7
KEK Kerkira 86.20 359 *e*P P 02 31 48.6 +0.4
SARI SarD1z-Kayseri 86.22 346 *e*P P 02 31 50.0 +1.4
JAN Janina 86.24 358 P P 02 31 49.9 +1.4
JAN Janina 86.24 358 *e*P P 02 31 49.5 +1.0
THL Klokotos Trika 86.30 357 P P 02 31 47.9 -0.8
THL Klokotos Trika 86.30 357 *e*P P 02 31 48.3 -0.4
KIZT Kizilcal 86.32 350 *e*P P 02 31 49.5 +0.5
ALT Altintas 86.32 351 *e*P P 02 31 49.4 +0.4
ALT Altintas 86.32 351 *i* P P 02 31 39.1 -10
GDZ Gediz 86.34 351 *i* P P 02 31 49.0 -0.1
PRK Paraskevi 86.43 354 P P 02 31 50.5 +1.1
PRK Paraskevi 86.43 354 *e*P P 02 31 48.8 -0.6
DEMI Demirci 86.45 352 *i* P P 02 31 49.4 -0.2
XOR Xorichti 86.46 356 P P 02 31 49.9 +0.3
JBP Jabalpur 86.48 306 ⇓*i*P P 02 31 49.6 -0.3
JBP *ex* x 02 32 27.4
NEO Neokhori 86.52 356 *e*P P 02 31 49.1 -0.8
BOLV Bolvadin 86.58 350 *i* P P 02 31 58.5 +8.2
MARD Mardin 86.60 342 *i* P P 02 31 51.4 +1.0
CTAO Charters Tower 86.61 228 *e*P P 02 31 50.3 0.0
CTAO pmax pmax
comp=Z,81nm,1.1s
CTAO MLR MLR
comp=Z,752nm,20.0s
CTAO Charters Tower 86.61 228 *e*P P 02 31 50.3 0.0
comp=Z,81nm,1.1s
CTAO LR LR
comp=Z,752nm,20.0s
SKIA Skiathos 86.65 356 P P 02 31 51.4 +0.9
SPSI Sidrap Palu 86.65 259 P P 02 31 51.2 +0.5
comp=Z,38nm,1.8s,comp=Z,833nm
KDHN Kadinhani 86.65 349 *i* P P 02 31 50.5 -0.1
AKHS Akhisar 86.69 353 *i* P P 02 31 50.2 -0.4
AKS Akhisar 86.69 353 *e*P P 02 31 50.8 +0.1
TIP Timpagrande 86.72 1 *e*P P 02 31 51.1 +0.2
comp=Z,69nm,0.8s
TIP LR LR
comp=Z,668nm,20.0s
NIG Nigde 86.76 347 *e*P P 02 31 52.4 +1.0
SHUT Suhut-Afyon 86.78 351 *e*P P 02 31 51.9 +0.6
SULT Sultanhani-AKS 86.81 348 *e*P P 02 31 52.2 +0.8
AGG Agios Georgios 86.83 357 P P 02 31 51.6 +0.2
AGG Agios Georgios 86.83 357 *e*P P 02 31 50.8 -0.6
MAKR Makrakomi, Fth 86.85 357 P P 02 31 52.2 +0.7
ATAB Bozova 86.86 344 *i* P P 02 31 52.7 +1.1
LADK Ladik-KONYA 86.94 349 *e*P P 02 31 52.5 +0.4
SMIA Simia 86.95 356 P P 02 31 53.4 +1.4
EVR Evrytania 86.95 357 P P 02 31 53.2 +1.1
EVR Evrytania 86.95 357 *e*P P 02 31 52.4 +0.3
KULA Kula-Manisa 86.98 352 *e*P P 02 31 52.5 +0.3
MANT Manisa 87.02 352 *i* P P 02 31 52.3 -0.2
KMRS Kahramanmaras 87.04 345 *e*P P 02 31 53.5 +1.1
KHAL Karahalli 87.06 351 *i* P P 02 31 52.5 -0.1
GZT Gaziantep 87.09 345 *i* P P 02 31 53.8 +0.9
AYKD Aykdinkavak 87.14 345 *i* P P 02 31 53.6 +0.6
LKR Lokris 87.18 356 *e*P P 02 31 52.3 -0.8
KONT Konya--Tatoy 87.19 349 *e*P P 02 31 53.8 +0.6
IZM Izmir 87.21 353 *e*P P 02 31 52.9 -0.4
KOZT Kozan 87.22 346 *e*P P 02 31 55.2 +1.9
BLCB Balcova 87.23 353 *e*P P 02 31 53.4 0.0
URLA Izmir 87.29 354 *i* P P 02 31 53.1 -0.5
CHOS Chios island 87.30 354 *e*P P 02 31 53.3 -0.4
GAZ Gaziantep 87.32 345 *e*P P 02 31 55.1 +1.2
DSF Desfina 87.44 357 P P 02 31 55.4 +1.0
EFP Efpalio 87.44 357 P P 02 31 55.8 +1.5
EFP Efpalio 87.44 357 *e*P P 02 31 55.3 +1.0
KALE Kalithea 87.47 357 *e*P P 02 31 54.7 +0.2
ISP Isparta 87.50 350 *e*P P 02 31 53.9 -0.9
ISP Isparta 87.50 350 *e*P P 02 31 54.3 -0.4
ISP pmax pmax
comp=Z,60nm,0.7s
ISP MLR MLR
comp=Z,649nm,21.0s
ISP Isparta 87.50 350 P P 02 31 55.4 +0.6
ISP Isparta 87.50 350 *e*P P 02 31 54.3 -0.4
comp=Z,60nm,0.7s
ISP LR LR
comp=Z,649nm,21.0s
ISP Isparta 87.50 350 ⇑*i*P P 02 31 54.4 -0.4
KAPI Kappang 87.51 258 *e*P P 02 31 55.2 +0.3
comp=Z,128nm,1.4s
KAPI Kappang 87.51 258 P P 02 31 55.3 +0.4
comp=Z,241nm,1.4s,SNR=5.9
KAPI Kappang 87.51 258 LR LR 03 06 33.7
comp=Z,318nm,22.0s,baz=157,slow=32
BKSI Bulukumba 87.55 257 P P 02 31 55.6 +0.5
comp=Z,45nm,1.6s,comp=Z,628nm
GULE Gulek 87.55 347 *i* P P 02 31 55.2 +0.1
LAKA Lakka 87.62 357 *e*P P 02 31 49.8 -5.5
CEL Celeste 87.63 2 *e*P P 02 31 52.8 -2.5
comp=Z,59nm,0.8s
CEL LR LR
comp=Z,423nm,21.0s
CEYT Ceyhan 87.69 346 *e*P P 02 31 56.5 +1.0
DENT Denizli 87.71 352 *e*P P 02 31 56.3 +0.6
VLS Valsamata 87.72 358 *e*P P 02 31 56.8 +1.1
KUZU Kuzuini 87.73 345 *i* P P 02 31 56.2 +0.3
KSM Kuching 87.73 269 *e*P P 02 31 56.7 +0.6
comp=Z,24nm,1.0s
KSM LR LR
comp=Z,154nm,19.0s
KSM Kuching 87.73 269 P P 02 31 57.2 +1.2
PTL Penteli 87.75 356 P P 02 31 56.9 +1.1
PTL Penteli 87.75 356 *e*P P 02 31 54.1 -1.7
DNZL Cakiroluk 87.77 352 *i* P P 02 31 56.3 +0.1
PMOZ Porto Moniz, M 87.79 29 *e*LR LR 03 06 19.8
comp=Z,617nm,18.0s
LTK Loutraki 87.81 356 *e*P P 02 31 54.9 -1.2
KLV Kalavryta, Ach 87.81 357 *e*P P 02 31 55.8 -0.4
RLS Riolos of Patr 87.82 358 P P 02 31 58.8 +2.7
RLS Riolos of Patr 87.82 358 *e*P P 02 31 57.2 +1.1
BCK Bucak 87.86 350 *e*P P 02 31 56.5 0.0
AYDN Tasoluk 87.89 353 *i* P P 02 31 56.3 -0.3
GUR Goura 87.92 357 P P 02 31 57.3 +0.5
GUR Goura 87.92 357 *e*P P 02 31 56.3 -0.4
DRWC Darouich 87.94 345 *e*P P 02 32 03.6 +6.8
GOLH Golhisar 88.17 351 *i* P P 02 31 58.4 +0.4
GLHS Glhisar (BURDU 88.26 351 *e*P P 02 31 59.2 +0.8
MLSB Milas 88.27 353 *e*P P 02 31 58.3 0.0
DID Didima 88.31 356 P P 02 31 58.7 +0.1
DID Didima 88.31 356 *e*P P 02 31 57.2 -1.4
KORT Korkueli 88.34 351 *i* P P 02 31 58.1 -0.6
AMT Artemida-Makis 88.34 357 *e*P P 02 31 59.1 +0.4
YER Yerkesik 88.39 352 *e*P P 02 31 59.4 +0.5
ERMK Ermenek 88.42 348 *i* P P 02 31 58.8 -0.5
BODT Bodrum 88.53 353 *e*P P 02 31 58.8 -0.7
BTCH Batrach 88.55 345 *e*P P 02 32 00.7 +1.0
ELL Elmali 88.63 351 *e*P P 02 32 00.5 +0.3
APE Apeiranthos 88.64 354 *e*P P 02 31 57.3 -2.8
APE Apeiranthos 88.64 354 ⇓*i*P P 02 31 58.2 -1.9
DALY Dalyan (Mu˙la 88.67 352 *e*P P 02 32 00.3 +0.1
ITM Ithomi 88.68 357 *e*P P 02 32 00.7 +0.4
FETY Fethiye 88.81 351 *e*P P 02 32 00.7 -0.2
DAT Datca 88.84 353 *e*P P 02 31 59.9 -1.3
PYL PYLOS 88.97 357 *e*P P 02 32 01.2 -0.4
WRDH Warideh 89.07 345 *e*P P 02 32 02.5 +0.3
AKAS Kas 89.17 351 *i* P P 02 32 02.0 -0.7
ARG Arkhangelos 89.31 352 *e*P P 02 32 02.2 -1.0
BIDA Albida 89.57 345 *e*P P 02 32 05.0 +0.4
BHD Baghdad 89.81 339 *i* x P 02 31 59.0 -6.6
BHD *i* x S 02 42 51.0 -5.1
KEST Kesra 89.83 7 *e*P P 02 32 05.6 -0.1
KEST Kesra 89.83 7 P P 02 32 06.0 +0.2
comp=Z,4.8nm,0.8s,baz=304,slow=2.4,SNR=19
LEF Lefka 89.92 348 *e*P P 02 32 06.1 0.0
ANKY Antikythira Is 89.94 356 *e*P P 02 32 07.0 +0.8
WDD Wield Dalam 89.98 3 PFAKE 02 32 20.0 +14
WDD LR LR
comp=Z,377nm,19.0s
CSS Prodhromos 90.03 348 *e*P P 02 32 06.0 -0.6
comp=Z,18nm,0.8s
CSS LR LR
comp=Z,753nm,21.0s
HAWK Haweek 90.04 345 *e*P P 02 32 07.2 +0.5
KARP Karpathos 90.05 353 *e*P P 02 32 06.2 -0.5
KULM Kulim 90.27 279 *e*P P 02 32 08.1 +0.1
comp=Z,28nm,1.0s
KULM LR LR
comp=Z,440nm,22.0s
KULM Kulim 90.27 279 P P 02 32 11.2 +3.2
VAM Vamos 90.36 355 *e*P P 02 32 09.1 +0.9
KARN Karanos 90.38 356 *e*P P 02 32 08.8 +0.5
NPS Neapolis 90.43 354 *e*P P 02 32 07.8 -0.7
IDI Anoyia 90.45 355 *e*P P 02 32 07.8 -0.8
LAST Lasithi 90.54 354 *e*P P 02 32 08.7 -0.4
ZKR Zakros 90.54 354 *e*P P 02 32 08.7 -0.3
IPM Ipoh 90.71 279 *e*P P 02 32 09.9 -0.1
comp=Z,24nm,0.9s
SIVA Sivas 90.72 355 *e*P P 02 32 09.2 -0.6
BRBR Barbar 91.20 345 *e*P P 02 32 11.7 -0.6
BRBR Barbar 91.20 345 *e*P P 02 32 11.8 -0.6
ZALF Zalf 91.47 344 *e*P P 02 32 13.7 +0.4
ZALF Zalf 91.47 344 *e*P P 02 32 13.5 +0.1
SALA Sala 91.77 345 *e*P P 02 32 14.2 -0.8
SALA Sala 91.77 345 *e*P P 02 32 14.2 -0.8
ATAH Atahualpa 91.78 100 P P 02 32 16.1 +0.7
ATAH Atahualpa 91.78 100 P P 02 32 16.1 +0.7
comp=Z,36nm,1.0s,baz=347,slow=3.8,SNR=24
TCHB Talchebab 91.92 345 *e*P P 02 32 16.2 +0.7
WRAB Tennant Creek 92.02 238 *e*P P 02 32 14.8 -1.0
WRAB pmax pmax
comp=Z,24nm,1.1s
WRAB MLR MLR
comp=Z,713nm,20.0s
WRAB Tennant Creek 92.02 238 *e*P P 02 32 14.8 -1.0
comp=Z,24nm,1.1s
WRAB LR LR
comp=Z,713nm,20.0s
WRA Warramunga Arr 92.03 238 P P 02 32 15.3 -0.6
WRA Warramunga Arr 92.03 238 P P 02 32 15.3 -0.6
comp=Z,11nm,1.0s,baz=38,slow=5.7,SNR=30
WRA LR LR 03 08 56.3
comp=Z,433nm,20.3s,baz=50,slow=32
HYB Hyderabad 92.09 304 *i* P P 02 32 15.0 -1.5
comp=Z,70nm,1.0s
HYB *e* 02 32 24.0
HYB *e* 02 42 10.0
UMR Umm Al-Rimmam 92.61 335 *e*P P 02 32 18.6 -0.1
UMR AMb AMB 02 32 20.8
comp=Z,152nm,1.9s
RST Umm Al-Ruwaisa 92.84 335 *e*P P 02 32 19.4 -0.3
KBD Kabd 92.97 335 *e*P P 02 32 20.2 -0.1
NAY Al-Naaiem 93.02 335 *e*P P 02 32 20.4 -0.1
NAY AMb AMB 02 32 22.7
comp=Z,56nm,1.1s
PSI Prapat 93.28 279 LR LR 03 19 20.7
comp=Z,384nm,19.7s,baz=314,slow=39
FITZ Fitzroy Crossi 94.97 246 LR LR 03 15 16.7
comp=Z,336nm,19.9s,baz=63,slow=35
AS31 Alice Springs 95.39 236 *e*P P 02 32 31.5 +0.2
ASAR Alice Springs 95.40 236 P P 02 32 31.1 -0.2
ASAR PKKP PKKPdf 02 49 23.4 +0.7
ASAR Alice Springs 95.40 236 P P 02 32 31.1 -0.2
comp=Z,5.9nm,0.9s,baz=31,slow=4.6,SNR=34
ASAR PKKP PKKPdf 02 49 23.4 +0.7
comp=Z,1.2nm,0.5s,baz=204,slow=2.1,SNR=24
ASAR LR LR 03 13 45.6
comp=Z,695nm,19.4s,baz=28,slow=34
SMDO Samad 95.64 324 ⇑P P 02 32 32.2 -0.6
SNR=12
JMDO Jabal Madar 96.26 324 P P 02 32 35.2 -0.3
SNR=5.5
NNA Nana 96.59 101 *e*P P 02 32 35.5 -1.5
comp=Z,12nm,1.1s
NNA LR LR
comp=Z,281nm,21.0s
NNA Nana 96.59 101 P P 02 32 35.9 -1.1
comp=Z,6.1nm,0.9s,baz=327,slow=8.1,SNR=5.0
SNZO South Karori 97.54 198 PFAKE 02 33 00.0 +19
SNZO LR LR
comp=Z,2µm,22.0s
STKA Stephens Creek 98.92 226 P Pdif 02 32 47.5 +0.4
STKA pP pP 02 32 57.2 +2.6
STKA Stephens Creek 98.92 226 P Pdif 02 32 47.5 +0.4
comp=Z,3.9nm,0.9s,baz=24,slow=6.3,SNR=5.8
STKA pP pP 02 32 57.2 +2.6
comp=Z,5.7nm,1.0s,baz=60,slow=6.1,SNR=5.4
STKA LR LR 03 13 17.4
comp=Z,1µm,18.9s,baz=25,slow=33
CAN Canberra 99.03 219 PFAKE 02 33 00.0 +13
CAN LR LR
comp=Z,433nm,19.0s
SAML Samuel 102.08 88 *e*Pdif Pdif 02 32 59.9 -1.6
comp=Z,7.1nm,1.3s
SAML LR LR
comp=Z,547nm,21.0s
SACV Santiago Islan 102.15 41 PFAKE 02 33 20.0 +18
SACV LR LR
comp=Z,667nm,19.0s
TAM Tamanrasset 102.27 12 PFAKE 02 33 20.0 +17
TAM LR LR
comp=Z,516nm,20.0s
LPAZ La Paz 105.05 97 Pdif Pdif 02 33 17.5 +2.1
LPAZ La Paz 105.05 97 Pdiff Pdif 02 33 17.5 +2.1
comp=Z,0.7nm,0.9s,baz=360,slow=6.2,SNR=3.8
SIV San Ignacio 108.92 91 Pdif Pdif 02 33 31.7 -0.2
SIV PP PP 02 38 02.9 -1.1
SIV San Ignacio 108.92 91 Pdiff Pdif 02 33 31.7 -0.2
comp=Z,0.5nm,0.5s,baz=341,slow=0.5,SNR=3.2
SIV PP PP 02 38 02.9 -1.1
comp=Z,1.2nm,0.7s,baz=309,slow=4.1,SNR=3.5
TOA0 Torodi Ar. Sit 111.17 18 *e*PKP PKiKP 02 37 40.1 -0.7
TORD Torodi Ar. Bea 111.17 18 Pdif Pdif 02 33 41.6 -0.4
TORD PKiKP PKiKP 02 37 39.7 -1.1
TORD PKKPbc PKKPbc 02 48 33.9 -0.7
TORD Torodi Ar. Bea 111.17 18 Pdiff Pdif 02 33 41.7 -0.4

	comp=Z,0.5nm,1.1s,baz=336,slow=5.5,SNR=2.4						
TORD				PKiKP	**PKiKP**	**02 37 39.7**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=337,slow=2.8,SNR=27						
TORD				PKKPbc	**PKKPbc**	**02 48 33.9**	**-0.7**
	comp=Z,2.4nm,1.0s,baz=164,slow=1.8,SNR=12						
NWAO	**Narrogin (SRO)**	**111.36**	**243**	PFAKE		02 38 00.0	
NWAO				LR	LR		
	comp=Z,321nm,19.0s						
LCO	**Las Campanas**	**113.53**	**107**	PFAKE		02 38 00.0	
LCO				LR	LR		
	comp=Z,990nm,22.0s						
RCBR	**Riachuelo**	**114.86**	**63**	PFAKE		02 38 10.0	+22
RCBR				LR	LR		
	comp=Z,474nm,20.0s						
DBIC	**Dimbokro**	**116.04**	**26**	PKP	**PKPdf**	**02 37 49.8**	**-0.4**
DBIC				PKKPab	**PKKPab**	**02 48 24.3**	**-3.1**
DBIC	**Dimbokro**	**116.04**	**26**	PKP	**PKPdf**	**02 37 49.8**	**-0.4**
	comp=Z,2.0nm,0.5s,baz=296,slow=9.4,SNR=4.6						
DBIC				PKKPab	**PKKPab**	**02 48 24.3**	**-3.1**
	comp=Z,3.7nm,1.0s,baz=134,slow=9.8,SNR=3.1						
DGAR	**Diego Garcia**	**116.39**	**296**	PFAKE		02 38 10.0	+19
DGAR				LR	LR		
	comp=Z,491nm,19.0s						
CFAA	**Coronel Fontan**	**116.88**	**107**	PKKPab	PKKPab	02 48 18.2	-1.5
CFAA	**Coronel Fontan**	**116.88**	**107**	PKKPab	PKKPab	02 48 18.2	-1.5
	comp=Z,0.3nm,0.9s,baz=159,slow=4.5,SNR=7.9						
CPUP	**Villa Florida**	**119.13**	**95**	PKP	**PKPdf**	**02 37 54.5**	**-1.1**
CPUP				PKKPab	**PKKPab**	**02 48 09.4**	**-1.0**
CPUP	**Villa Florida**	**119.13**	**95**	PKP	**PKPdf**	**02 37 54.5**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=91,slow=20,SNR=4.3						
CPUP				PKKPab	**PKKPab**	**02 48 09.4**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=92,slow=6.0,SNR=8.0						
MSEY	**Mahe Island**	**122.03**	**315**	PFAKE		02 38 20.0	+18
MSEY				LR	LR		
	comp=Z,742nm,20.0s						
PLCA	**Paso Flores**	**122.37**	**116**	PKP	**PKPdf**	**02 38 00.9**	**-0.7**
PLCA				*e*PKPdf	**PKiKP**	**02 38 01.1**	**-0.7**
PLCA				SKP		02 41 33.6	
PLCA				PKKPbc	**PKKPbc**	**02 47 56.9**	**+1.3**
PLCA	**Paso Flores**	**122.37**	**116**	PKP	**PKPdf**	**02 38 00.9**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=244,slow=2.6,SNR=6.7						
PLCA				SKP		02 41 33.6	
	comp=Z,3.0nm,0.8s,baz=215,slow=3.1,SNR=4.7						
PLCA				PKKPbc	**PKKPbc**	**02 47 56.9**	**+1.3**
	comp=Z,1.9nm,0.9s,baz=193,slow=1.9,SNR=3.8						
SPB	**Sao Paulo**	**122.81**	**85**	PFAKE		02 38 20.0	+17
SPB				LR	LR		
	comp=Z,502nm,21.0s						
KMBO	**Kilima Mbogo**	**124.65**	**337**	*e*P	**PKPdf**	**02 38 07.9**	**+0.9**
KMBO	**Kilima Mbogo**	**124.65**	**337**	*e*PKPdf	**PKPdf**	**02 38 07.2**	**+0.2**
KMBO				PKP	**PKPdf**	**02 38 07.7**	**+0.6**
KMBO				LR	LR		
	comp=Z,386nm,21.0s						
KMBO	**Kilima Mbogo**	**124.65**	**337**	PKP	**PKPdf**	**02 38 07.7**	**+0.6**
	comp=Z,6.9nm,0.8s,baz=25,slow=4.3,SNR=31						
TRQA	**Tornquist**	**125.09**	**108**	*e*PKPdf	**PKPdf**	**02 38 05.8**	**-0.9**
TRQA				LR	LR		
	comp=Z,797nm,19.0s						
MBAR	**Mbarara**	**125.38**	**345**	PFAKE		02 38 30.0	+22
MBAR				LR	LR		
	comp=Z,1μm,22.0s						
SBA	**Scott Base**	**133.49**	**189**	PFAKE		02 38 40.0	+19
SBA				LR	LR		
	comp=Z,777nm,21.0s						
VNDA	**Vanda**	**133.66**	**190**	*e*PKPdf	**PKPdf**	**02 38 21.6**	**-0.2**
VNDA				PKP	**PKPdf**	**02 38 22.9**	**+1.0**
VNDA				SKPbc	**SKPbc**	**02 41 46.5**	**-2.3**
VNDA	**Vanda**	**133.66**	**190**	PKP	**PKPdf**	**02 38 22.9**	**+1.0**
	comp=Z,2.7nm,1.1s,baz=320,slow=4.4,SNR=6.6						
VNDA				SKPbc	**SKPbc**	**02 41 46.5**	**-2.3**
	comp=Z,4.4nm,0.9s,baz=335,slow=4.0,SNR=9.0						
CASY	**Casey**	**137.21**	**217**	PFAKE		02 38 50.0	+21
CASY				LR	LR		
	comp=Z,960nm,20.0s						
ABPO	**Ambohimpanom**	**138.35**	**317**	PFAKE		02 38 50.0	+17
ABPO				LR	LR		
	comp=Z,608nm,22.0s						
PMSA	**Palmer Station**	**140.00**	**139**	PP	PP	02 41 30.0	-1.8
PMSA	**Palmer Station**	**140.00**	**139**	PP	PP	02 41 30.0	-1.8
	comp=Z,32nm,0.8s,baz=314,slow=9.2,SNR=5.5						
LSZ	**Lusaka**	**140.18**	**345**	*e*PKPdf	PKPdf	02 38 28.1	-7.8
LSZ				*e*PP	**PP**	**02 41 32.3**	**-0.4**
LSZ				*e*SKP		02 42 09.5	
LSZ				LR	LR		
	comp=Z,709nm,19.0s						
MIR	**Mirnyy**	**143.73**	**221⇑**	*i*PKIKP	PKPbc	02 38 38.5	+0.4
MIR				*i*		02 38 44.0	
MIR				pmax	pmax		
	comp=Z,88nm,1.2s						
QSPA	**South Pole Qui**	**144.23**	**180**	*e*PKPdf	**PKPab**	**02 38 39.2**	**-0.3**
QSPA				pPKP	**pPKPdf**	**02 38 52.2**	**+2.9**
QSPA				*e*SKP		02 42 16.4	
QSPA				SKPbc	**SKPbc**	**02 42 16.7**	**-2.0**
QSPA				LR	LR		
	comp=Z,829nm,19.0s						
QSPA	**South Pole Qui**	**144.23**	**180**	PKP	**PKPab**	**02 38 39.1**	**-0.3**
	comp=Z,73nm,0.9s,baz=34,slow=0.9,SNR=239						
QSPA				pPKP	**pPKPdf**	**02 38 52.2**	**+2.9**
	comp=Z,34nm,0.8s,baz=7.0,slow=1.9,SNR=7.5						
QSPA				SKPbc	**SKPbc**	**02 42 16.7**	**-2.0**
	comp=Z,19nm,1.0s,baz=19,slow=2.5,SNR=5.5						
TSUM	**Tsumeb**	**144.80**	**1⇑**	*i*P	**PKPab**	**02 38 42.3**	**-0.7**
TSUM	**Tsumeb**	**144.80**	**1**	*e*PKPdf	**PKPab**	**02 38 42.3**	**-0.7**
TSUM				*e*SKPbc	**SKPbc**	**02 42 20.8**	**-0.9**
TSUM				LR	LR		
	comp=Z,757nm,22.0s						
MSNA	**Messina**	**146.77**	**340⇑**	*i*P	**PKPbc**	**02 38 49.5**	**+0.5**
MSNA				AMS	AMS	03 48 03.5	
	comp=Z,510nm,28.9s						
LBTB	**Lobatse**	**150.12**	**347**	*e*P	**PKPbc**	**02 38 57.2**	**-0.5**
LBTB				AMS	AMS	03 47 07.7	
	comp=Z,355nm,6.7s						
LBTB	**Lobatse**	**150.12**	**347**	*e*PKPdf	**PKPdf**	**02 38 52.6**	**0.0**
LBTB				*e*PKPbc	**PKPbc**	**02 38 57.8**	**+0.1**
LBTB				*e*PP	**PP**	**02 42 30.4**	**-1.4**
SLR	**Silverton**	**150.40**	**342**	*e*P	**PKPbc**	**02 38 58.6**	**+0.2**
SLR				AMS	AMS	03 48 41.0	
	comp=Z,875nm,18.3s						
KSR	**Koster**	**150.75**	**344**	*e*P	**PKPbc**	**02 38 58.5**	**-0.7**
ERPM	**east rand prop**	**151.00**	**342⇑**	*i*P	**PKPbc**	**02 38 59.7**	**-0.2**
POGA	**Pongola**	**151.27**	**335**	*e*P	**PKPbc**	**02 39 00.3**	**+0.1**
PRYS	**Parys**	**151.73**	**343**	*e*P	**PKPbc**	**02 39 00.8**	**-0.7**
SWZ	**Schweizer**	**152.29**	**347**	*e*P	**PKPbc**	**02 39 00.7**	**-2.1**
SEK	**Senekal**	**153.05**	**342**	*e*P	**PKPbc**	**02 39 03.7**	**-0.7**
BOSA	**Boshof**	**153.71**	**346**	*e*P	**PKPbc**	**02 39 05.4**	**-0.4**
BOSA				AMS	AMS	03 49 48.6	
	comp=Z,893nm,18.5s						
BOSA	**Boshof**	**153.71**	**346**	*e*PKPbc	**PKPbc**	**02 39 05.7**	**-0.1**
BOSA				*e*PP	**PP**	**02 42 51.2**	**-1.1**
BOSA	**Boshof**	**153.71**	**346**	PKPbc	**PKPbc**	**02 39 05.5**	**-0.4**
	comp=Z,13nm,0.8s,baz=6.9,slow=3.0,SNR=22						
BOSA				PP	**PP**	**02 42 50.8**	**-1.6**
	comp=Z,15nm,1.1s,baz=46,slow=4.7,SNR=5.5						
UPI	**Upington**	**153.85**	**354**	*e*P	**PKPbc**	**02 39 04.9**	**-1.2**
MAW	**Mawson**	**155.46**	**220**	PKP	**PKPdf**	**02 38 57.9**	**-1.1**
MAW				pPKP	**pPKPdf**	**02 39 09.0**	**+2.2**
MAW				PKPab	**PKPab**	**02 39 25.1**	**+0.2**
MAW	**Mawson**	**155.46**	**220**	PKP	**PKPdf**	**02 38 57.9**	**-1.1**
	comp=Z,3.0nm,0.9s,baz=348,slow=1.8,SNR=4.2						
MAW				pPKP	**pPKPdf**	**02 39 09.0**	**+2.2**
	comp=Z,6.5nm,1.0s,baz=202,slow=2.9,SNR=6.8						
MAW				PKPab	**PKPab**	**02 39 25.1**	**+0.2**
	comp=Z,50nm,1.1s,baz=96,slow=4.1,SNR=3.6						
SUR	**Sutherland**	**157.87**	**355**	*e*PKPab	**PKPab**	**02 39 35.6**	**-0.7**
SUR				LR	LR		
	comp=Z,1μm,20.0s						
VNA2	**Neumayer--Watz**	**159.96**	**155**	*e*P	**PKPab**	**02 39 43.6**	**-0.7**
SNAA	**Sanae**	**160.43**	**160**	*e*P	**PKPab**	**02 39 45.0**	**-1.4**
SNAA	**Sanae**	**160.43**	**160**	*e*P	**PKPab**	**02 39 44.9**	**-1.6**
SNAA	**Sanae**	**160.43**	**160**	PKP	**PKPdf**	**02 39 03.2**	**-1.9**
SNAA				*e*PKPdf	**PKPdf**	**02 39 05.0**	**-0.1**
SNAA				PKPab	**PKPab**	**02 39 44.8**	**-1.6**
SNAA				*e*PKPab	PKPab	02 39 45.0	-1.4
SNAA	**Sanae**	**160.43**	**160**	PKP	**PKPdf**	**02 39 03.2**	**-1.9**
	comp=Z,2.1nm,1.1s,baz=152,slow=2.3,SNR=5.1						
SNAA				PKPab	**PKPab**	**02 39 44.8**	**-1.6**
	comp=Z,9.1nm,1.0s,baz=224,slow=4.8,SNR=21						
SYO	**Syowa Base**	**162.47**	**206⇓**	*e*X	**PKPab**	**02 39 52.8**	**-2.4**
SYO	**Syowa Base**	**162.47**	**206⇑**	*e*X	pPKPab	02 40 06.8	+4.0
MAIT	**Maitri**	**163.35**	**172**	*e*P	PKPab	02 39 48.0	-11

*ISCJB **02** 02:21:01.7±0.3, 42°.48N±0°.02×13°.36E±0°.02, h13km±2km, Error ellipse: s-maj=3.2km s-min=2.6km az=157.9*
*CSEM **02** 02:21:02.1±0.1, 42°.48N×13°.35E, h8km, ML3.5/11, Error ellipse: s-maj=2.2km s-min=1.7km az=79.0*
*ROM **02** 02:21:02.0±0.1, 42°.49N×13°.36E, h10km±1km, Ml3.1/14, Error ellipse: s-maj=1.1km s-min=0.8km az=80.0*
ISC 02 02:21:02.5±0.8**, 42°.49N**±0°.02×**13°.37E**±0°.02**, h13**km±4km**, n80, σ0s.96**/119**, 1C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.06**	**31**	Pg	**Pg**	**02 21 04.8**	**-0.4**
CAMP				Sg	**Sg**	**02 21 06.4**	**-0.7**
	9μm,0.3s						
CAMP	**Campotosto**	**0.06**	**31**	Pg	**Pg**	**02 21 04.8**	**-0.4**
CAMP				Sg	**Sg**	**02 21 06.4**	**-0.7**
	9μm,0.3s						
AQU	**L'Aquila**	**0.14**	**170**	Pg	**Pg**	**02 21 05.8**	**-0.2**
AQU				Sg	**Sg**	**02 21 08.5**	**+0.1**
	6μm,0.3s						
AQU	**L'Aquila**	**0.14**	**170**	Pg	**Pg**	**02 21 05.8**	**-0.2**
AQU				Sg	**Sg**	**02 21 08.5**	**+0.1**
	6μm,0.3s						
TERO	**Teramo**	**0.22**	**52**	Pg	**Pg**	**02 21 07.1**	**-0.2**
TERO				Sg	**Sg**	**02 21 10.6**	**+0.1**
	3μm,0.3s						
TERO	**Teramo**	**0.22**	**52**	Pg	**Pg**	**02 21 07.1**	**-0.2**
TERO				Sg	**Sg**	**02 21 10.6**	**+0.1**
	3μm,0.3s						
LNSS	**Leonessa**	**0.27**	**295**	Pg	**Pg**	**02 21 08.1**	**-0.1**
LNSS				Sg	**Sg**	**02 21 12.6**	**+0.6**
	4μm,0.2s						
LNSS	**Leonessa**	**0.27**	**295**	Pg	**Pg**	**02 21 08.1**	**-0.1**
LNSS				Sg	**Sg**	**02 21 12.6**	**+0.6**
	4μm,0.2s						
FAGN	**Fagnano**	**0.27**	**145**	Pg	**Pg**	**02 21 08.1**	**-0.1**
	5μm,0.3s						
FAGN	**Fagnano**	**0.27**	**145**	Pg	**Pg**	**02 21 08.1**	**-0.1**
	5μm,0.3s						
FIAM	**Fiamignano**	**0.29**	**220**	Pg	**Pg**	**02 21 08.3**	**-0.2**
FIAM				Sg	**Sg**	**02 21 13.1**	**+0.5**
	993nm,0.4s						
FIAM	**Fiamignano**	**0.29**	**220**	Pg	**Pg**	**02 21 08.3**	**-0.2**
FIAM				Sg	**Sg**	**02 21 13.1**	**+0.5**
	993nm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**105**	Pg	**Pg**	**02 21 10.3**	**+0.5**
VCEL				Sg	**Sb**	**02 21 16.6**	**+0.1**
	3μm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**105**	Pg	**Pg**	**02 21 10.3**	**+0.5**
NRCA	**Norcia**	**0.39**	**331**	Pg	**Pg**	**02 21 10.1**	**-0.3**
NRCA				Sg	**Sg**	**02 21 16.1**	**+0.4**
	4μm,0.1s						
NRCA	**Norcia**	**0.39**	**331**	Pg	**Pg**	**02 21 10.1**	**-0.3**
NRCA				Sg	**Sg**	**02 21 16.1**	**+0.4**
	4μm,0.1s						
PTQR	**Pietraquaria**	**0.47**	**177**	Pg	**Pg**	**02 21 11.1**	**-0.6**
PTQR				Sg	**Sb**	**02 21 19.1**	**-0.4**
	111nm,0.3s						
PTQR	**Pietraquaria**	**0.47**	**177**	Pg	**Pg**	**02 21 11.1**	**-0.6**
PTQR				Sg	**Sb**	**02 21 19.1**	**-0.4**
	111nm,0.3s						
OFFI	**Offida**	**0.50**	**27**	Pg	**Pb**	**02 21 12.9**	**-0.3**
	3μm,0.7s						
OFFI	**Offida**	**0.50**	**27**	Pg	**Pb**	**02 21 12.9**	**-0.3**
	3μm,0.7s						
MNS	**Montasola**	**0.52**	**259**	Pg	**Pg**	**02 21 12.0**	**-0.7**
MNS				Sg	**Sg**	**02 21 19.4**	**-0.3**
	675nm,0.6s						
MNS	**Montasola**	**0.52**	**259**	Pg	**Pg**	**02 21 12.0**	**-0.7**
MNS				Sg	**Sg**	**02 21 19.4**	**-0.3**
	675nm,0.6s						
FDMO	**Fiordimonte**	**0.59**	**339**	Pg	**Pg**	**02 21 13.3**	**-0.7**
FDMO				Sg	**Sg**	**02 21 22.2**	**+0.5**
	354nm,0.3s						
FDMO	**Fiordimonte**	**0.59**	**339**	Pg	**Pg**	**02 21 13.3**	**-0.7**
FDMO				Sg	**Sg**	**02 21 22.2**	**+0.5**
	354nm,0.3s						
CESX	**Cesi**	**0.60**	**282**	Pg	**Pg**	**02 21 13.3**	**-0.8**
CESX				Sg	**Sg**	**02 21 22.3**	**+0.3**
	486nm,0.4s						
CESX	**Cesi**	**0.60**	**282**	Pg	**Pg**	**02 21 13.3**	**-0.8**
CESX				Sg	**Sg**	**02 21 22.3**	**+0.3**
	486nm,0.4s						
CERT	**Cerreto**	**0.61**	**208**	Pg	**Pg**	**02 21 13.7**	**-0.7**
CERT				Sg	**Sb**	**02 21 23.7**	**+0.1**
	1μm,0.5s						
CERT	**Cerreto**	**0.61**	**208**	Pg	**Pg**	**02 21 13.7**	**-0.7**
CERT				Sg	**Sb**	**02 21 23.7**	**+0.1**
	1μm,0.5s						
CESI	**CESI - Serrava**	**0.62**	**327**	Pg	**Pg**	**02 21 14.1**	**-0.5**
CESI				Sg	**Sb**	**02 21 23.6**	**-0.3**
CESI	**CESI - Serrava**	**0.62**	**327**	Pg	**Pg**	**02 21 14.1**	**-0.5**
CESI				Sg	**Sb**	**02 21 23.6**	**-0.3**
INTR	**Introdacqua**	**0.62**	**140**	Pg	**Pg**	**02 21 13.9**	**-0.7**
	647nm,0.5s						
INTR	**Introdacqua**	**0.62**	**140**	Pg	**Pg**	**02 21 13.9**	**-0.7**
	647nm,0.5s						
VVLD	**Villa Vallelon**	**0.65**	**163**	Pg	**Pg**	**02 21 14.2**	**-0.9**
VVLD	**Villa Vallelon**	**0.65**	**163**	Pg	**Pg**	**02 21 14.2**	**-0.9**
MTCE	**Montecelio**	**0.66**	**225**	Pg	**Pg**	**02 21 14.3**	**-1.0**
MTCE	**Montecelio**	**0.66**	**225**	Pg	**Pg**	**02 21 14.3**	**-1.0**
GUAR	**Guarcino**	**0.69**	**184**	Pg	**Pg**	**02 21 15.5**	**-0.5**
GUAR	**Guarcino**	**0.69**	**184**	Pg	**Pg**	**02 21 15.5**	**-0.5**
GUMA	**Gualdo di Mace**	**0.71**	**36**	⇑Pg	**Pg**	**02 21 13.6**	**-2.7**
GUMA				Sg	**Sg**	**02 21 22.7**	**-2.9**
	1μm,0.3s						
LPEL	**Lama dei Pelig**	**0.75**	**126**	Pg	**Pg**	**02 21 15.8**	**-1.2**
LPEL				Sg	**Sg**	**02 21 27.0**	**+0.2**
LPEL	**Lama dei Pelig**	**0.75**	**126**	Pg	**Pg**	**02 21 15.8**	**-1.2**
LPEL				Sg	**Sg**	**02 21 27.0**	**+0.2**
CAFR	**Castel Frentan**	**0.77**	**110**	Pg	**Pg**	**02 21 16.9**	**-0.5**
CAFR	**Castel Frentan**	**0.77**	**110**	Pg	**Pg**	**02 21 16.9**	**-0.5**
POFI	**Posta Fibreno**	**0.81**	**162**	Pg	**Pg**	**02 21 17.2**	**-1.0**
POFI	**Posta Fibreno**	**0.81**	**162**	Pg	**Pg**	**02 21 17.2**	**-1.0**
SNTG	**Esanatoglia**	**0.83**	**338**	Pg	**Pg**	**02 21 17.6**	**-0.9**
SNTG	**Esanatoglia**	**0.83**	**338**	Pg	**Pg**	**02 21 17.6**	**-0.9**
RMP	**Rome, Mte Porz**	**0.84**	**216**	Pg	**Pg**	**02 21 18.4**	**-0.3**
RMP	**Rome, Mte Porz**	**0.84**	**216**	Pg	**Pg**	**02 21 18.4**	**-0.3**
SDI	**San Donato**	**0.84**	**157**	Pg	**Pg**	**02 21 17.4**	**-1.4**
SDI	**San Donato**	**0.84**	**157**	Pg	**Pg**	**02 21 17.4**	**-1.4**
RDP	**Rocca di Papa**	**0.88**	**214**	Pg	**Pg**	**02 21 19.2**	**-0.2**
RDP	**Rocca di Papa**	**0.88**	**214**	Pg	**Pg**	**02 21 19.2**	**-0.2**
CING	**Cingoli**	**0.90**	**352**	Pg	**Pg**	**02 21 18.7**	**-1.1**
CING	**Cingoli**	**0.90**	**352**	Pg	**Pg**	**02 21 18.7**	**-1.1**
GIUL	**Giuliano Di Ro**	**0.93**	**185**	Pg	**Pb**	**02 21 19.5**	**-1.1**
GIUL	**Giuliano Di Ro**	**0.93**	**185**	Pg	**Pb**	**02 21 19.5**	**-1.1**
MGAB	**Montegabbione**	**1.02**	**295**	Pg	**Pb**	**02 21 21.2**	**-0.8**
MGAB	**Montegabbione**	**1.02**	**295**	Pg	**Pb**	**02 21 21.2**	**-0.8**
ARVD	**Arcevia**	**1.06**	**343**	Pg	**Pb**	**02 21 21.8**	**-0.9**
ARVD	**Arcevia**	**1.06**	**343**	Pg	**Pb**	**02 21 21.8**	**-0.9**
MIDA	**Miranda**	**1.07**	**142**	Pg	**Pb**	**02 21 21.1**	**-1.9**
MIDA	**Miranda**	**1.07**	**142**	Pg	**Pb**	**02 21 21.1**	**-1.9**
AOI	**Ancona**	**1.07**	**9**	Pg	**Pb**	**02 21 22.4**	**-0.6**
AOI	**Ancona**	**1.07**	**9**	Pg	**Pb**	**02 21 22.4**	**-0.6**
TOLF	**Tolfa**	**1.10**	**248**	Pg	**Pb**	**02 21 22.3**	**-1.1**
TOLF	**Tolfa**	**1.10**	**248**	Pg	**Pb**	**02 21 22.3**	**-1.1**
SACS	**San Casciano d**	**1.14**	**289**	Pg	**Pb**	**02 21 23.4**	**-0.6**
NVLJ	**Novalja**	**2.34**	**27**	*e*Pn	**Pn**	**02 21 41.1**	**+0.3**
NVLJ				Sn	**Sn**	**02 22 10.5**	**+1.1**
NVLJ	**Novalja**	**2.34**	**27**	*e*Pn	**Pn**	**02 21 41.0**	**+0.3**
NVLJ				Sn	**Sn**	**02 22 10.4**	**+1.1**
SKDS	**Skadanscina**	**3.09**	**8**	*i* Pn	**Pn**	**02 21 51.4**	**+0.4**
SKDS				*i* Sn	**Sn**	**02 22 28.5**	**+0.6**
SKDS	**Skadanscina**	**3.09**	**8**	*i* Pn	**Pn**	**02 21 51.4**	**+0.4**
SKDS				*i* Sn	**Sn**	**02 22 28.5**	**+0.6**
STON	**Ston**	**3.21**	**82**	*e*Pn	**Pn**	**02 21 54.1**	**+1.4**
STON				Sn	**Sn**	**02 22 33.4**	**+2.5**
STON	**Ston**	**3.21**	**82**	*e*Pn	**Pn**	**02 21 54.0**	**+1.4**
STON				Sn	**Sn**	**02 22 33.3**	**+2.5**
BOJS	**Bojanci**	**3.31**	**24**	*i* Pn	**Pn**	**02 21 55.1**	**+1.1**
BOJS				*i* Sn	**Sn**	**02 22 35.6**	**+2.5**
BOJS	**Bojanci**	**3.31**	**24**	*i* Pn	**Pn**	**02 21 55.1**	**+1.1**
BOJS				*i* Sn	**Sn**	**02 22 35.6**	**+2.5**
VISS	**Visnje**	**3.48**	**17**	*i* Pn	**Pn**	**02 21 57.2**	**+0.9**
VISS				*i* Sn	**Sn**	**02 22 38.7**	**+1.3**
VISS	**Visnje**	**3.48**	**17**	*i* Pn	**Pn**	**02 21 57.2**	**+0.9**
VISS				*i* Sn	**Sn**	**02 22 38.7**	**+1.3**
KHC	**Kasperske Hory**	**6.64**	**1**	*e*PN	**Pn**	**02 22 40.4**	**+0.6**
KHC				*e*SN	**Sn**	**02 23 53.4**	**-2.0**
KHC	**Kasperske Hory**	**6.64**	**1**	Pn	**Pn**	**02 22 40.4**	**+0.6**

*IDC **02** 02:28:32.4±2.9, 55°.07N×161°.93W, h0km, mb3.8/7, mb1 3.9/9, mb1mx3.6/29, mbtmp3.8/9, ML3.3/2, Error ellipse: s-maj=87.5km s-min=18.2km az=160.0*
*ISCJB **02** 02:28:34.1±1.1, 54°.41N±0°.09×161°.30W±0°.09, h52km±8km, mb3.7/7, Error ellipse: s-maj=16.6km s-min=5.8km az=154.0*
*NEIC **02** 02:28:35.8, 54°.53N×161°.51W, h4km, ML3.6(AEIC), After AEIC.*
ISC 02 02:28:36.0±1.6**, 54°.5N**±0°.1×**161°.37W**±0°.06**, h49**km±13km**, n36, σ1s.01**/41**, mb4.0**/7**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.69**	**312**	P	**Pn**	**02 28 48.1**	**-1.5**
DOL	**Dolgoi Island**	**0.70**	**336**	P	**Pn**	**02 28 48.8**	**-1.0**
DT1	**Dutton Round H**	**0.80**	**319**	P	**Pn**	**02 28 49.7**	**-1.2**
PS4A	**Pavlof South-4**	**0.88**	**342**	P	**Pn**	**02 28 52.0**	**-0.1**
PVV	**Pavlof Volcano**	**0.90**	**345**	P	**Pn**	**02 28 52.2**	**-0.1**
PVV				S	**Sn**	**02 29 05.2**	**+0.9**
SDPT	**Sand Point**	**0.99**	**31**	P	**Pn**	**02 28 53.8**	**+0.3**
SDPT				S	**Sn**	**02 29 07.8**	**+1.4**
FALS	**False Pass**	**1.24**	**287**	P	**Pn**	**02 28 55.8**	**-1.0**
FALS				S	**Sn**	**02 29 12.6**	**+0.3**
BRPK	**Brown Peak**	**1.38**	**277**	P	**Pn**	**02 28 58.0**	**-1.0**
BRPK				S	**Sn**	**02 29 16.6**	**+0.5**
SSLS	**Shishaldin Sou**	**1.54**	**279**	P	**Pn**	**02 29 01.2**	**+0.1**
SSLS				S	**Sn**	**02 29 21.4**	**+1.4**
SSLW	**Shishaldin Wes**	**1.62**	**280**	P	**Pn**	**02 29 02.1**	**0.0**
VNWF	**Veniaminof 8**	**1.94**	**31**	P	Pn	02 29 09.8	+3.1
VNHG	**Veniaminof 1**	**2.13**	**35**	P	Pn	02 29 12.2	+3.0
ZRO	**Akutan Zero**	**2.73**	**263**	P	**Pn**	**02 29 17.0**	**-0.3**
UNV	**Unalaska Valle**	**3.09**	**260**	P	**Pn**	**02 29 21.9**	**-0.2**
MSW	**Makushin Switc**	**3.23**	**262**	P	**Pn**	**02 29 23.3**	**-0.9**
KDAK	**Kodiak Island**	**5.91**	**53**	Pn	**Pn**	**02 30 00.1**	**-0.7**
KDAK				Sn	**Sn**	**02 31 05.5**	**-1.6**
KDAK	**Kodiak Island**	**5.91**	**53**	Pn	**Pn**	**02 30 00.1**	**-0.7**
	0.5nm,0.3s,baz=249,slow=9.5,SNR=6.8						
KDAK				Sn	**Sn**	**02 31 05.5**	**-1.6**
	0.8nm,0.3s,baz=330,slow=20,SNR=2.0						
BMRM	**Bremner River**	**11.03**	**47**	*e*Pn	**Pn**	**02 31 11.8**	**+0.8**
	18nm,1.1s						
FX1	**Attu Island--F**	**15.14**	**274**	Pn	**Pn**	**02 32 07.3**	**+0.8**
FX1	**Attu Island--F**	**15.14**	**274**	Pn	**Pn**	**02 32 07.3**	**+0.8**
	0.5nm,0.3s,baz=101,slow=16,SNR=2.5						
INK	**Inuvik**	**18.95**	**32**	P	**P**	**02 32 52.9**	**+0.2**
INK	**Inuvik**	**18.95**	**32**	P	**P**	**02 32 52.9**	**+0.2**
	0.1nm,0.3s,baz=241,slow=13,SNR=2.2						
PETK	**Petropavlovsk-**	**23.97**	**284**	P	**P**	**02 33 43.9**	**-1.7**
PETK	**Petropavlovsk-**	**23.97**	**284**	P	**P**	**02 33 43.9**	**-1.7**
	2.3nm,0.5s,baz=88,slow=11,SNR=4.0						
YKA	**Yellowknife Ar**	**25.18**	**53**	P	**P**	**02 33 58.2**	**+1.8**
YKA	**Yellowknife Ar**	**25.18**	**53**	P	**P**	**02 33 58.2**	**+1.8**
	0.5nm,0.9s,baz=271,slow=9.4,SNR=3.4						
KSRS	**Korea Array**	**49.81**	**281**	P	**P**	**02 37 23.9**	**+0.2**
	1.2nm,0.7s,baz=52,slow=7.5,SNR=4.7						
KSAR	**Wonju Array Be**	**49.84**	**281**	P	**P**	**02 37 23.9**	**0.0**
FINES	**FINESS Array B**	**64.24**	**356**	P	**P**	**02 39 04.5**	**-0.9**
FINES	**FINESS Array B**	**64.24**	**356**	P	**P**	**02 39 04.5**	**-0.9**
	1.1nm,0.8s,baz=24,slow=8.1,SNR=5.1						
AKASG	**Malin Array Be**	**74.79**	**353**	P	**P**	**02 40 09.7**	**-0.8**
AKASG	**Malin Array Be**	**74.79**	**353**	P	**P**	**02 40 09.7**	**-0.8**
	0.6nm,0.4s,baz=9.5,slow=6.5,SNR=4.1						
GERES	**GERESS Array B**	**76.94**	**3**	P	**P**	**02 40 23.4**	**+0.4**
GERES	**GERESS Array B**	**76.94**	**3**	P	**P**	**02 40 23.4**	**+0.4**
	0.3nm,0.6s,baz=335,slow=6.8,SNR=2.7						
CMAR	**Chiang Mai Arr**	**80.65**	**289**	P	**P**	**02 40 44.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**80.65**	**289**	P	**P**	**02 40 44.5**	**+0.9**
	0.5nm,0.3s,baz=357,slow=3.6,SNR=2.8						

*CSEM **02** 02:29:23.5, 42°.28N×13°.49E, h10km, MD2.1/6, After ROM*
ROM 02 02:29:23.5±0.1**, 42°.28N**×**13°.49E, h10**km±1km**, Md2.1**/6**, Ml1.4**/1**, Error ellipse: s-maj=2.1km s-min=1.6km az=33.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**102**	Pg	Pg	02 29 25.9	+0.1
FAGN				Sg	Sg	02 29 28.3	+0.9
	300nm,0.7s						
FAGN	**Fagnano**	**0.07**	**102**	Pg	Pg	02 29 25.9	+0.1
FAGN				Sg	Sg	02 29 28.3	+0.9
	300nm,0.7s						
AQU	**L'Aquila**	**0.10**	**317**	Pg	Pg	02 29 26.3	+0.1
AQU				Sg	Sg	02 29 28.7	+0.6
	143nm,0.6s						
AQU	**L'Aquila**	**0.10**	**317**	Pg	Pg	02 29 26.3	+0.1
AQU				Sg	Sg	02 29 28.7	+0.6
	143nm,0.6s						
PTQR	**Pietraquaria**	**0.27**	**195**	Pg	Pg	02 29 29.7	+0.6
PTQR				Sg	Sg	02 29 34.0	+1.2
	3.0nm,0.3s						
PTQR	**Pietraquaria**	**0.27**	**195**	Pg	Pg	02 29 29.7	+0.6
PTQR				Sg	Sg	02 29 34.0	+1.2
	3.0nm,0.3s						
FIAM	**Fiamignano**	**0.28**	**267**	Pg	Pb	02 29 30.1	-0.7
FIAM				Sg	Sb	02 29 35.0	-0.7
FIAM	**Fiamignano**	**0.28**	**267**	Pg	Pb	02 29 30.1	-0.7
FIAM				Sg	Sb	02 29 35.0	-0.7
VCEL	**Villa Celiera**	**0.28**	**66**	Pg	Pg	02 29 30.1	+0.7
VCEL	**Villa Celiera**	**0.28**	**66**	Pg	Pg	02 29 30.1	+0.7
TERO	**Teramo**	**0.35**	**13**	Pg	Pg	02 29 30.9	+0.3
TERO	**Teramo**	**0.35**	**13**	Pg	Pg	02 29 30.9	+0.3

*DJA **02** 03:08:07.4±0.3, 2°S±3°×12°1E±°, h10km, M4.2/6, MLv4.2/6*
*IDC **02** 03:08:07.2±0.9, 2°.42S×120°.78E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/22, mbtmp3.8/7, ML3.4/1, Error ellipse: s-maj=51.3km s-min=16.5km az=68.0*
*ISCJB **02** 03:08:07.1±0.5, 2°.31S±0°.04×120°.90E±0°.04, h10km, mb3.8/6, Error ellipse: s-maj=6.7km s-min=5.7km az=136.3*
ISC 02 03:08:07.7±0.7**, 2°.42S**±0°.05×**120°.87E**±0°.05**, h10**km**, n14, σ1s.72**/18**, mb3.9**/6**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKSI	**Soroako, Sulaw**	**0.48**	**103**	P	**Pg**	**03 08 15.5**	**-1.6**
SKSI				S	**Sg**	**03 08 23.9**	**+0.4**
TTSI	**Tana Toraja**	**1.22**	**239**	P	Pn	03 08 33.1	+2.3
SPSI	**Sidrap Palu**	**1.88**	**216**	P	**Pg**	**03 08 42.6**	**-1.3**
LUWI	**Luwuk**	**2.35**	**54**	P	**Pn**	**03 08 45.6**	**-0.7**
LUWI				S	**Sn**	**03 09 14.4**	**-0.8**
KAPI	**Kappang**	**2.81**	**203**	Pn	**Pn**	**03 08 53.4**	**+0.7**
	6.8nm,0.3s,baz=19,slow=4.9,SNR=20						
KAPI				Sn	**Sg**	**03 09 34.1**	**-3.8**
	5.1nm,0.3s,baz=84,slow=22,SNR=7.8						
BKSI	**Bulukumba**	**2.98**	**194**	P	**Pb**	**03 08 59.6**	**-1.2**
MRSI	**Marisa**	**3.07**	**20**	P	**Pn**	**03 08 54.9**	**-1.4**
MRSI				S	**Sn**	**03 09 30.8**	**-2.4**
KBKI	**Kotabaru**	**4.77**	**259**	P	**Pn**	**03 09 20.0**	**+0.3**
WRA	**Warramunga Arr**	**21.83**	**144**	P	**P**	**03 13 01.1**	**+0.7**
	2.6nm,0.9s,baz=315,slow=9.5,SNR=7.0						
ASAR	**Alice Springs**	**24.60**	**150**	P	**P**	**03 13 29.1**	**+0.8**
	2.6nm,0.9s,baz=322,slow=7.1,SNR=19						
ASAR				PcP	**PcP**	**03 17 08.6**	**+2.3**
	0.3nm,0.8s,baz=336,slow=1.9,SNR=5.4						
STKA	**Stephens Creek**	**35.21**	**149**	P	**P**	**03 15 04.1**	**+1.8**
	1.9nm,0.6s,baz=313,slow=10,SNR=6.1						
SONM	**Songino Array**	**51.63**	**348**	P	**P**	**03 17 16.8**	**+2.2**
	0.4nm,0.5s,baz=150,slow=6.0,SNR=2.7						
MKAR	**Makanchi Array**	**59.59**	**330**	P	**P**	**03 18 12.0**	**+0.2**
	0.7nm,0.5s,baz=131,slow=8.0,SNR=11						
ZALV	**Zalesovo Beam**	**63.66**	**337**	P	**P**	**03 18 38.9**	**-0.1**
	0.3nm,0.4s,baz=118,slow=12,SNR=2.7						

*ISCJB **02** 03:10:47.8±0.5, 45°.10N±0°.02×11°.89E±0°.04, h1km±5km, Error ellipse: s-maj=5.1km s-min=3.8km az=26.5*
*ROM **02** 03:10:49.2±0.3, 45°.10N×11°.88E, h20km±8km, Md2.5/11, Ml2.0/3, Error ellipse: s-maj=7.4km s-min=2.8km az=109.0*
*CSEM **02** 03:10:49.1±0.3, 45°.11N×11°.80E, h20km, MD2.5, Error ellipse: s-maj=5.1km s-min=4.7km az=130.0*
ISC 02 03:10:49.2±0.9**, 45°.12N**±0°.02×**11°.81E**±0°.02**, h10**km±7km**, n51, σ0s.85**/86**, 6C-7D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADRI	**Adria, Italy**	**0.17**	**119⇓**	*e*Pg	**Pg**	**03 10 52.4**	**-0.5**
ADRI	**Adria, Italy**	**0.17**	**119⇓**	*e*Pg	**Pg**	**03 10 52.4**	**-0.5**
TEOL	**Teolo**	**0.26**	**338⇓**	*e*Pg	**Pg**	**03 10 53.6**	**-0.9**
TEOL				*e*Sg	**Sg**	**03 10 58.6**	**+0.5**
TEOL	**Teolo**	**0.26**	**338⇓**	*e*Pg	**Pg**	**03 10 53.7**	**-0.9**
TEOL				*e*Sg	**Sg**	**03 10 58.6**	**+0.5**

FIU	**Minerbio Fiu**	**0.53**	**205**	Pg	**Pg**	**03 10 59.3**	**-0.2**
FIU				Sg	**Sb**	**03 11 08.9**	**+0.6**
FIU	**Minerbio Fiu**	**0.53**	**205**	*e*Pg	**Pg**	**03 10 59.3**	**-0.2**
FIU				*e*Sg	**Sb**	**03 11 08.9**	**+0.6**
RAVA	**Ravarino**	**0.61**	**234**	Pg	**Pg**	**03 11 01.3**	**+0.3**
RAVA	**Ravarino**	**0.61**	**234**	*e*Pg	**Pg**	**03 11 01.3**	**+0.3**
MTLO	**Montello**	**0.72**	**16**⇑	*e*Pg	**Pg**	**03 11 03.2**	**0.0**
MTLO				*e*Sg	**Sb**	**03 11 14.7**	**+0.8**
MTLO	**Montello**	**0.72**	**16**⇑	*e*Pg	**Pg**	**03 11 03.2**	**0.0**
MTLO				*e*Sg	**Sb**	**03 11 14.7**	**+0.8**
CGRP	**Cima Grappa**	**0.76**	**360**	*e*Pg	**Pg**	**03 11 03.6**	**-0.3**
CGRP	**Cima Grappa**	**0.76**	**360**	Pg	**Pg**	**03 11 03.7**	**-0.3**
CGRP				Sg	**Sg**	**03 11 14.9**	**+1.0**
CGRP	**Cima Grappa**	**0.76**	**360**	*e*Pg	**Pg**	**03 11 03.7**	**-0.3**
CGRP				Sg	**Sg**	**03 11 14.9**	**+1.0**
NOVE	**Novellara**	**0.84**	**248**	Pg	**Pb**	**03 11 06.0**	**+0.1**
NOVE	**Novellara**	**0.84**	**248**	*e*Pg	**Pb**	**03 11 06.0**	**+0.1**
DDS	**Dosso del Somm**	**0.88**	**330**	*e*Pg	**Pg**	**03 11 05.0**	**-1.2**
DDS	**Dosso del Somm**	**0.88**	**330**	*e*Pg	**Pg**	**03 11 05.0**	**-1.2**
BALD	**Monte Baldo**	**0.90**	**309**⇓	*e*Pg	**Pg**	**03 11 05.5**	**-1.0**
BALD	**Monte Baldo**	**0.90**	**309**⇓	*e*Pg	**Pg**	**03 11 05.5**	**-1.0**
VARN	**Col Varnada, M**	**0.90**	**13**	*e*Pg	**Pg**	**03 11 06.6**	**+0.1**
VARN				*e*Sg	**Sb**	**03 11 20.2**	**+1.2**
VARN	**Col Varnada, M**	**0.90**	**13**	*e*Pg	**Pg**	**03 11 06.6**	**+0.1**
VARN				*e*Sg	**Sb**	**03 11 20.2**	**+1.2**
CTI	**Castel Tesino**	**0.94**	**353**	Pg	**Pg**	**03 11 06.1**	**-1.2**
CTI				Sg	**Sb**	**03 11 21.1**	**+1.0**
CTI	**Castel Tesino**	**0.94**	**353**	*e*Pg	**Pg**	**03 11 06.1**	**-1.2**
CTI				*e*Sg	**Sb**	**03 11 21.1**	**+1.0**
POLC	**Polcenigo**	**1.03**	**28**⇑	*e*Pg	**Pg**	**03 11 09.1**	**+0.1**
POLC				*e*Sg	**Sn**	**03 11 25.2**	**+1.0**
MLNI	**Malnisio**	**1.18**	**28**	*e*Pg	**Pb**	**03 11 11.1**	**-0.6**
MLNI				*e*Sg	**Sn**	**03 11 28.3**	**+0.4**
MLNI	**Malnisio**	**1.18**	**28**	*e*Pg	**Pb**	**03 11 11.1**	**-0.6**
MLNI				*e*Sg	**Sn**	**03 11 28.3**	**+0.4**
RNI	**Roncone**	**1.19**	**317**	*e*Pg	**Pb**	**03 11 11.1**	**-0.8**
RNI				*e*Sg	**Sg**	**03 11 28.2**	**+0.7**
RNI	**Roncone**	**1.19**	**317**	*e*Pg	**Pb**	**03 11 11.1**	**-0.8**
RNI				*e*Sg	**Sg**	**03 11 28.2**	**+0.7**
CIMO	**Cimolais**	**1.27**	**20**	*e*Pg	**Pn**	**03 11 12.5**	**-0.6**
CIMO				*e*Sg	**Sn**	**03 11 30.4**	**+0.1**
CIMO	**Cimolais**	**1.27**	**20**	*e*Pg	**Pn**	**03 11 12.5**	**-0.6**
CIMO				*e*Sg	**Sn**	**03 11 30.4**	**+0.1**
APPI	**Appiano**	**1.42**	**344**	Pg	**Pn**	**03 11 15.4**	**+0.2**
APPI	**Appiano**	**1.42**	**344**	*e*Pg	**Pn**	**03 11 15.4**	**+0.2**
GEPF	**Gemona**	**1.49**	**38**	*e*Pg	**Pn**	**03 11 15.7**	**-0.3**
SABO	**M.te Sabotino**	**1.53**	**55**⇑	*e*Pg	**Pn**	**03 11 15.7**	**-0.9**
SABO				*e*Sg	**Sb**	**03 11 37.1**	**0.0**
SABO	**M.te Sabotino**	**1.53**	**55**	Pg	**Pn**	**03 11 15.7**	**-0.9**
SABO	**M.te Sabotino**	**1.53**	**55**⇑	*e*Pg	**Pn**	**03 11 15.7**	**-0.9**
SABO				*e*Sg	**Sg**	**03 11 41.8**	**+3.5**
VINO	**Villanova**	**1.54**	**42**	*e*Pg	**Pn**	**03 11 15.7**	**-1.0**
VINO				*e*Sg	**Sn**	**03 11 36.9**	**+0.1**
VINO	**Villanova**	**1.54**	**42**	Pg	**Pn**	**03 11 15.6**	**-1.1**
	12nm,0.5s						
VINO	**Villanova**	**1.54**	**42**	*e*Pg	**Pn**	**03 11 15.7**	**-1.0**
VINO				*e*Sg	**Sn**	**03 11 36.9**	**+0.1**
SKDS	**Skadanscina**	**1.61**	**74**	*i* Pn	**Pn**	**03 11 16.1**	**-1.7**
SKDS				*i* Sn	**Sn**	**03 11 37.6**	**-1.1**
SKDS							
	comp=Z,2.0nm,0.1s						
SKDS	**Skadanscina**	**1.61**	**74**	Pn	**Pn**	**03 11 16.1**	**-1.7**
SKDS				*i* Sn	**Sn**	**03 11 37.6**	**-1.1**
	comp=Z,2.0nm,0.1s						
ABSI	**Aberstueckl**	**1.65**	**348**⇑	*e*Pg	**Pn**	**03 11 19.1**	**+0.7**
ABSI				*e*Sg	**Sb**	**03 11 40.7**	**+0.1**
ZOU	**Zoufplan**	**1.65**	**29**	*e*Pg	**Pn**	**03 11 18.5**	**0.0**
ZOU				*e*Sg	**Sb**	**03 11 41.8**	**+0.9**
VOY	**Vojsko**	**1.73**	**57**	*e*Pn	**Pn**	**03 11 18.3**	**-1.1**
VOY				*e*Sn	**Sn**	**03 11 41.3**	**-0.2**
RISI	**Rein**	**1.84**	**6**⇓	*e*Pn	**Pb**	**03 11 22.8**	**-0.3**
RISI				*e*Sn	**Sg**	**03 11 48.0**	**-0.4**
CRNS	**Crni Vrh**	**1.97**	**60**	*i* Pn	**Pn**	**03 11 21.9**	**-0.8**
CRNS				*i* Sn	**Sn**	**03 11 47.6**	**0.0**
MOZS	**Mozjanca**	**2.19**	**57**	*i* Pn	**Pb**	**03 11 29.1**	**+0.2**
MOZS				*i* Sn	**Sg**	**03 12 00.7**	**+1.1**
VISS	**Visnje**	**2.24**	**71**	*i* Pn	**Pn**	**03 11 25.8**	**-0.6**
VISS				*i* Sn	**Sn**	**03 11 54.2**	**+0.1**
VISS							
	comp=Z,2.0nm,0.3s						
VISS	**Visnje**	**2.24**	**71**	*i* Pn	**Pn**	**03 11 25.8**	**-0.6**
VISS				*i* Sn	**Sn**	**03 11 54.2**	**+0.1**
	comp=Z,2.0nm,0.3s						
NVLJ	**Novalja**	**2.25**	**103**	*e*Pn	**Pn**	**03 11 25.8**	**-0.7**
NVLJ				Sn	**Sn**	**03 11 53.2**	**-1.1**
NVLJ	**Novalja**	**2.25**	**103**	*e*Pn	**Pn**	**03 11 25.7**	**-0.7**
NVLJ				Sn	**Sn**	**03 11 53.1**	**-1.1**

*IDC **02** 03:17:04.8±9.2, 13.°73N×90.°79W, h42^{km}±60^{km}, mb3.5/4, mb1 3.7/6, mb1mx3.4/23, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=80.8km s-min=37.3km az=180.0*

*CASC **02** 03:17:07.9±2.2, 13.°72N×91.°07W, h37^{km}±8^{km}, MD3.8*

*ISCJB **02** 03:17:07.0±0.8, 13.°73N±0.°08×91.°09W±0.°05, h73^{km}±7^{km}, mb3.5/4, Error ellipse: s-maj=15.3km s-min=5.0km az=27.2*

ISC 02 03:17:07.6±1.2**, 13.°78N**±0.°08×**91.°07W**±0.°05**, h69**^{km}±9^{km}**, n25,** σ1^{s}**18**/38**, mb3.8**/4**, 4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.70**	**18**	*e*P	**Pn**	**03 17 22.9**	**+0.2**
PCG	**Pacaya**	**0.76**	**36**	*e*P	**Pn**	**03 17 23.3**	**-0.1**
PCG				*e*S	**Sn**	**03 17 35.2**	**+0.2**
JAT	**Jato**	**0.77**	**315**	*e*P	**Pn**	**03 17 24.4**	**+1.1**
JAT				*e*S	**Sn**	**03 17 31.9**	**-2.9**
NBG	**Las Nubes**	**1.07**	**41**	*e*P	**Pn**	**03 17 28.2**	**+1.0**
NBG				*e*S	**Sn**	**03 17 43.9**	**+2.1**
RBDL	**Robledal**	**1.39**	**76**⇓	*i*P	**Pn**	**03 17 31.2**	**0.0**
RTR	**El Retiro**	**1.39**	**85**⇓	*i*P	**Pn**	**03 17 31.1**	**-0.1**
RTR				*e*S	**Sn**	**03 17 49.8**	**+0.8**
SBLS	**San Blas**	**1.41**	**87**⇓	*i*P	**Pn**	**03 17 31.0**	**-0.5**
SBLS				*e*S	**Sn**	**03 17 48.8**	**-0.7**
SNJE	**San Jose**	**1.43**	**86**⇓	*i*P	**Pn**	**03 17 31.4**	**-0.3**
SNJE				*e*S	**Sn**	**03 17 48.9**	**-0.9**
BOQS	**Boqueron**	**1.74**	**91**	*i* P	**Pn**	**03 17 36.0**	**0.0**
BOQS				*e*S	**Sn**	**03 17 57.5**	**+0.1**
MTO2	**Montecristo 2**	**1.77**	**69**	*i* P	**Pn**	**03 17 36.0**	**-0.4**
SNET	**Serv Nac Est T**	**1.79**	**93**	*i* P	**Pn**	**03 17 36.4**	**-0.1**
SNET				*e*S	**Sn**	**03 17 58.2**	**-0.1**
MRL	**Marmol**	**1.85**	**46**	*e*P	**Pn**	**03 17 38.7**	**+1.3**
LFRS	**El Faro**	**1.96**	**94**	*i* P	**Pn**	**03 17 39.0**	**+0.2**
LBRS	**Las Brisas**	**1.97**	**91**	*e*P	**Pn**	**03 17 39.4**	**+0.5**
SNVI	**San Vicente**	**2.17**	**94**	*i* P	**Pn**	**03 17 41.7**	**-0.1**
SNVI				*e*S	**Sn**	**03 18 09.7**	**+1.9**
VSM	**San Miguel**	**2.74**	**97**	*e*P	**Pn**	**03 17 50.9**	**+1.4**
BLLM	**Bellamira**	**2.77**	**97**	*i* P	**Pn**	**03 17 50.8**	**+1.0**
BLLM				*e*S	**Sn**	**03 18 23.4**	**+1.1**
CNCH	**Conchagua**	**3.19**	**99**	*i* P	**Pn**	**03 17 55.7**	**+0.3**
CNCH				*e*S	**Sn**	**03 18 34.2**	**+1.8**
CMIG	**Matias Romero**	**4.94**	**312**	P	**Pn**	**03 18 20.0**	**+0.7**
	2.1nm,0.3s,baz=141,slow=11,SNR=20						
CMIG				S	**Sn**	**03 19 17.4**	**+2.3**
	6.9nm,0.3s,baz=73,slow=15,SNR=8.4						
TEIG	**Tepich**	**6.95**	**22**	P	**Pn**	**03 18 47.9**	**+1.1**
	3.4nm,0.3s,baz=192,slow=2.5,SNR=21						
TEIG				S	**Sn**	**03 20 02.5**	**-1.9**
	baz=0.0,slow=20,SNR=2.0						
TXAR	**Lajitas Array**	**19.39**	**325**	P	**Pn**	**03 21 31.3**	**+1.4**
	0.1nm,0.3s,baz=147,slow=12,SNR=8.6						
TKL	**Tuckaleechee C**	**22.76**	**16**	P	**P**	**03 22 04.5**	**+0.2**
	2.9nm,0.7s,baz=178,slow=10,SNR=4.1						
NVAR	**Mina Array Bea**	**34.41**	**321**	P	P	03 23 52.1	+3.4
	0.9nm,0.7s,baz=131,slow=9.7,SNR=5.9						
SCHQ	**Schefferville**	**45.12**	**20**	P	**P**	**03 25 15.2**	**-1.8**
	1.5nm,0.8s,baz=216,slow=17,SNR=3.6						
YKA	**Yellowknife Ar**	**51.45**	**346**	P	**P**	**03 26 05.2**	**-0.4**
	0.1nm,0.6s,baz=150,slow=7.6,SNR=4.2						
YKA				PcP	**PcP**	**03 27 18.3**	**-0.7**
	0.2nm,0.7s,baz=148,slow=3.7,SNR=4.2						

*ATH **02** 03:17:12.4, 38.°83N×27.°87E, h18^{km}±5^{km}, MD3.1/4*

*ISK **02** 03:17:14.5, 38.°96N×27.°57E, h5^{km}, MD3.1*

*DDA **02** 03:17:14.9, 38.°97N×27.°63E, h19^{km}, MD3.1*

*CSEM **02** 03:17:15.7±0.1, 38.°96N×27.°59E, h2^{km}, MD3.1, Error ellipse: s-maj=2.8km s-min=2.6km az=96.0*

*ISCJB **02** 03:17:15.7±0.5, 38.°96N±0.°02×27.°61E±0.°03, h4^{km}±4^{km}, Error ellipse: s-maj=3.5km s-min=3.3km az=24.5*

ISC 02 03:17:15.6±0.8**, 38.°96N**±0.°02×**27.°61E**±0.°02**, h14**^{km}±6^{km}**, n93,** σ0^{s}**90**/117**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.18**	**118**	*e*PG	**Pg**	**03 17 19.5**	**-0.4**
AKS	**Akhisar**	**0.18**	**118**	*e*Pg	**Pg**	**03 17 19.5**	**-0.4**
AKHS	**Akhisar**	**0.18**	**118**	*i* P	**Pg**	**03 17 19.4**	**-0.5**
AKHS				*i* S	**Sg**	**03 17 23.0**	**+0.3**
AKHS	**Akhisar**	**0.18**	**118**	*i* P	**Pg**	**03 17 19.4**	**-0.5**
AKHS				*i* S	**Sg**	**03 17 23.0**	**+0.3**
IZM	**Izmir**	**0.63**	**206**	*e*PG	**Pg**	**03 17 27.5**	**-0.4**
IZM				*e*SG	**Sb**	**03 17 37.9**	**+0.9**
IZM	**Izmir**	**0.63**	**206**	*e*Pg	**Pg**	**03 17 27.5**	**-0.4**
IZM				*e*Sg	**Sb**	**03 17 37.9**	**+0.9**
BALB	**Balikesir**	**0.71**	**17**	*e*PG	**Pb**	**03 17 29.7**	**0.0**
BALB				*e*SG	**Sn**	**03 17 40.6**	**-1.2**
BALB	**Balikesir**	**0.71**	**17**	*e*Pg	**Pb**	**03 17 29.7**	**0.0**
BALB				*e*Sg	**Sn**	**03 17 40.6**	**-1.2**
BLCB	**Balcova**	**0.73**	**218**	*e*PG	**Pb**	**03 17 29.2**	**-0.8**
BLCB				*e*SG	**Sb**	**03 17 40.0**	**+0.1**
BLCB	**Balcova**	**0.73**	**218**	*e*Pg	**Pb**	**03 17 29.2**	**-0.8**
BLCB				*e*Sg	**Sb**	**03 17 40.0**	**+0.1**
BALY	**Balya**	**0.78**	**0**	*i* P	**Pb**	**03 17 30.4**	**-0.5**
BALY				*i* S	**Sb**	**03 17 41.1**	**-0.2**
BALY	**Balya**	**0.78**	**0**	*i* P	**Pb**	**03 17 30.4**	**-0.5**
BALY				*i* S	**Sb**	**03 17 41.1**	**-0.2**
DEMI	**Demirci**	**0.86**	**84**	*i* P	**Pb**	**03 17 32.1**	**-0.3**
DEMI				*i* S	**Sb**	**03 17 43.6**	**-0.3**
DEMI	**Demirci**	**0.86**	**84**	*i* P	**Pb**	**03 17 32.1**	**-0.3**
DEMI				*i* S	**Sb**	**03 17 43.6**	**-0.3**
MANT	**Manisa**	**0.88**	**122**	*i* P	**Pb**	**03 17 32.3**	**-0.4**
MANT				*i* S	**Sb**	**03 17 44.4**	**0.0**
MANT	**Manisa**	**0.88**	**122**	*i* P	**Pb**	**03 17 32.3**	**-0.4**
MANT				*i* S	**Sb**	**03 17 44.4**	**0.0**
DURS	**Dursunbey**	**0.92**	**46**	*i* P	**Pb**	**03 17 33.0**	**-0.5**
DURS				*i* S	**Sg**	**03 17 46.1**	**+0.5**
DURS	**Dursunbey**	**0.92**	**46**	*i* P	**Pb**	**03 17 33.0**	**-0.5**
DURS				*i* S	**Sg**	**03 17 46.1**	**+0.5**
KULA	**Kula-Manisa**	**0.94**	**118**	*e*PG	**Pb**	**03 17 33.4**	**-0.2**
KULA	**Kula-Manisa**	**0.94**	**118**	*e*Pg	**Pb**	**03 17 33.4**	**-0.2**
DST	**Dursunbey**	**1.01**	**50**	*e*PG	**Pg**	**03 17 35.8**	**+0.6**
DST	**Dursunbey**	**1.01**	**50**	*e*Pg	**Pg**	**03 17 35.8**	**+0.6**
PRK	**Paraskevi**	**1.08**	**286**	*e*PN	**Pg**	**03 17 37.2**	**+0.7**
PRK	**Paraskevi**	**1.08**	**286**	*e*Pn	**Pg**	**03 17 37.2**	**+0.7**
GONE	**Gonen-Balikesi**	**1.08**	**3**	*e*PN	**Pn**	**03 17 36.5**	**+0.2**
GONE	**Gonen-Balikesi**	**1.08**	**3**	*e*Pn	**Pn**	**03 17 36.5**	**+0.2**
EZN	**Ezine**	**1.32**	**311**	*e*PN	**Pb**	**03 17 40.5**	**+0.4**
EZN	**Ezine**	**1.32**	**311**	*e*Pn	**Pb**	**03 17 40.5**	**+0.4**
CHOS	**Chios island**	**1.35**	**245**	*e*PN	**Pn**	**03 17 40.3**	**+0.3**
CHOS				*e*SN	**Sg**	**03 18 00.8**	**+1.7**
CHOS	**Chios island**	**1.35**	**245**	*e*Pn	**Pn**	**03 17 40.3**	**+0.3**
CHOS				*e*Sn	**Sg**	**03 18 00.8**	**+1.7**
EDC	**Edincik**	**1.40**	**8**	*e*PN	**Pb**	**03 17 42.1**	**+0.7**
EDC	**Edincik**	**1.40**	**8**	*e*Pn	**Pb**	**03 17 42.1**	**+0.7**
BNT	**Bandirma**	**1.41**	**10**	*e*PN	**Pb**	**03 17 42.3**	**+0.6**
BNT	**Bandirma**	**1.41**	**10**	*e*Pn	**Pb**	**03 17 42.3**	**+0.6**
KRBG	**Karabiga-Canak**	**1.45**	**350**	*e*PN	**Pn**	**03 17 41.9**	**+0.6**
KRBG	**Karabiga-Canak**	**1.45**	**350**	*e*Pn	**Pn**	**03 17 41.9**	**+0.6**
GDZ	**Gediz**	**1.46**	**84**	*i* P	**Pb**	**03 17 43.0**	**+0.4**
GDZ				*i* S	**Sb**	**03 18 01.7**	**+0.6**
GDZ	**Gediz**	**1.46**	**84**	*i* P	**Pb**	**03 17 43.0**	**+0.4**
GDZ				*i* S	**Sb**	**03 18 01.7**	**+0.6**
ORLT	**Orhaneli**	**1.47**	**42**	*e*PN	**Pb**	**03 17 43.5**	**+0.8**
ORLT	**Orhaneli**	**1.47**	**42**	*e*Pn	**Pb**	**03 17 43.5**	**+0.8**
BOZC	**Bozcaada**	**1.49**	**306**	*e*P	**Pb**	**03 17 43.8**	**+0.7**
BOZC				*e*S	**Sn**	**03 17 58.7**	**-2.5**
TVSB	**Tavsanli**	**1.52**	**71**	*e*PN	**Pb**	**03 17 44.3**	**+0.7**
TVSB	**Tavsanli**	**1.52**	**71**	*e*Pn	**Pb**	**03 17 44.3**	**+0.7**
LPK	**Lapseki**	**1.55**	**335**	*e*PN	**Pb**	**03 17 43.8**	**-0.3**
LPK	**Lapseki**	**1.55**	**335**	*e*Pn	**Pb**	**03 17 43.8**	**-0.3**
KHAL	**Karahalli**	**1.59**	**111**	*e*P	**Pn**	**03 17 43.6**	**+0.2**
KHAL				*e*S	**Sb**	**03 18 04.7**	**0.0**
KHAL	**Karahalli**	**1.59**	**111**	*e*P	**Pn**	**03 17 43.6**	**+0.2**
KHAL				*e*S	**Sb**	**03 18 04.7**	**0.0**
KHL	**Karahalli**	**1.63**	**113**	*e*PN	**Pb**	**03 17 46.1**	**+0.7**
KHL	**Karahalli**	**1.63**	**113**	*e*Pn	**Pb**	**03 17 46.1**	**+0.7**
MRMT	**Marmara Adasi**	**1.64**	**360**	*e*PN	**Pb**	**03 17 45.6**	**0.0**
MRMT	**Marmara Adasi**	**1.64**	**360**	*e*Pn	**Pb**	**03 17 45.6**	**0.0**
MLSB	**Milas**	**1.67**	**175**	*e*PN	**Pb**	**03 17 46.4**	**+0.3**
MLSB	**Milas**	**1.67**	**175**	*e*Pn	**Pb**	**03 17 46.4**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.68**	**329**	*e*PN	**Pb**	**03 17 46.1**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.68**	**329**	*e*Pn	**Pb**	**03 17 46.1**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.71**	**35**	*e*PN	**Pb**	**03 17 46.9**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.71**	**35**	*e*Pn	**Pb**	**03 17 46.9**	**+0.1**
SART	**Tekirdag**	**1.75**	**349**	*i* P	**Pn**	**03 17 46.0**	**+0.3**
SART				*i* S	**Sn**	**03 18 04.8**	**-3.0**
SART	**Tekirdag**	**1.75**	**349**	*i* P	**Pn**	**03 17 46.0**	**+0.3**
ARMT	**Armutlu**	**1.87**	**31**	*e*PN	**Pb**	**03 17 49.8**	**+0.3**
ARMT	**Armutlu**	**1.87**	**31**	*e*Pn	**Pb**	**03 17 49.8**	**+0.3**
YER	**Yerkesik**	**1.90**	**164**	*e*PN	**Pb**	**03 17 49.4**	**-0.7**
YER	**Yerkesik**	**1.90**	**164**	*e*Pn	**Pb**	**03 17 49.4**	**-0.7**
ERIK	**Erikli-Kesan**	**1.90**	**334**	*e*PN	**Pb**	**03 17 49.1**	**-1.0**
ERIK	**Erikli-Kesan**	**1.90**	**334**	*e*Pn	**Pb**	**03 17 49.1**	**-1.0**
GEMT	**Gemlik**	**1.91**	**39**	*e*PN	**Pb**	**03 17 49.8**	**-0.4**
GEMT	**Gemlik**	**1.91**	**39**	*e*Pn	**Pb**	**03 17 49.8**	**-0.4**
BODT	**Bodrum**	**1.91**	**187**	*e*PN	**Pb**	**03 17 49.4**	**-0.8**
BODT	**Bodrum**	**1.91**	**187**	*e*Pn	**Pb**	**03 17 49.4**	**-0.8**
ALT	**Altintas**	**1.95**	**87**	*e*PN	**Pb**	**03 17 50.8**	**-0.1**
ALT	**Altintas**	**1.95**	**87**	*e*Pn	**Pb**	**03 17 50.8**	**-0.1**
IZI	**Iznik**	**1.99**	**46**	*e*PN	**Pb**	**03 17 51.1**	**-0.5**
IZI	**Iznik**	**1.99**	**46**	*e*Pn	**Pb**	**03 17 51.1**	**-0.5**
LIA	**Limnos Island**	**2.10**	**297**	*e*PN	**Pb**	**03 17 52.9**	**-0.5**
LIA	**Limnos Island**	**2.10**	**297**	*e*Pn	**Pb**	**03 17 52.9**	**-0.5**
CAVI	**Cavuskoy**	**2.12**	**54**	*e*PN	**Pb**	**03 17 53.1**	**-0.7**
CAVI	**Cavuskoy**	**2.12**	**54**	*e*Pn	**Pb**	**03 17 53.1**	**-0.7**
CRLT	**Corlu**	**2.17**	**2**	*e*PN	**Pb**	**03 17 53.4**	**-1.1**
CRLT	**Corlu**	**2.17**	**2**	*e*Pn	**Pb**	**03 17 53.4**	**-1.1**
ADVT	**Abdulvahap**	**2.20**	**48**	*e*PN	**Pb**	**03 17 54.1**	**-1.1**
ADVT	**Abdulvahap**	**2.20**	**48**	*e*Pn	**Pb**	**03 17 54.1**	**-1.1**
BUY	**Buyukada**	**2.21**	**31**	*e*PN	**Pb**	**03 17 54.4**	**-1.0**
BUY	**Buyukada**	**2.21**	**31**	*e*Pn	**Pb**	**03 17 54.4**	**-1.0**
ALN	**Alexandroupoli**	**2.28**	**329**	*e*PN	**Pn**	**03 17 54.1**	**+1.4**
ALN	**Alexandroupoli**	**2.28**	**329**	*e*Pn	**Pn**	**03 17 54.1**	**+1.4**
CTKS	**Kestanelik-??a**	**2.37**	**17**	*e*PN	**Pb**	**03 17 56.4**	**-1.7**
CTKS	**Kestanelik-??a**	**2.37**	**17**	*e*Pn	**Pb**	**03 17 56.4**	**-1.7**
HRT	**Hereke**	**2.44**	**40**	*e*PN	**Pb**	**03 17 57.7**	**-1.5**
HRT	**Hereke**	**2.44**	**40**	*e*Pn	**Pb**	**03 17 57.7**	**-1.5**
GULT	**Gulveren**	**2.68**	**56**	*e*PN	**Pb**	**03 18 01.4**	**-1.9**
GULT	**Gulveren**	**2.68**	**56**	*e*Pn	**Pb**	**03 18 01.4**	**-1.9**
SVRH	**Sivrihisar-ESK**	**3.08**	**80**	*e*PN	**Pn**	**03 18 06.7**	**+2.9**
SVRH	**Sivrihisar-ESK**	**3.08**	**80**	*e*Pn	**Pn**	**03 18 06.7**	**+2.9**

*CSEM **02** 03:26:26.5±0.2, 77.°08N×18.°48E, h2^{km}, ML3.4, Error ellipse: s-maj=18.0km s-min=3.5km az=71.0*

*NAO **02** 03:26:26.4±0.9, 77.°10N×18.°78E, ML3.8*

*IDC **02** 03:26:27.1±0.5, 77.°14N×17.°91E, h0^{km}, mb3.6/14, mb1 3.8/17, mb1mx3.7/26, mbtmp3.6/17, ML3.0/3, Error ellipse: s-maj=17.0km s-min=7.4km az=72.0*

*BER **02** 03:26:30.9, 77.°15N×18.°54E, h15^{km}, MD3.2, ML3.4, ML3.8(NAO)*

ISC 02 03:26:27.7±1.5**, 77.°13N**±0.°03×**18.°04E**±0.°05**, h6**^{km}±10^{km}**, n56,** σ1^{s}**31**/64**, mb3.5**/15**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.57**	**259**	*e*P	**Pb**	**03 26 40.5**	**+0.4**
HSP				*e*S	**Sb**	**03 26 49.0**	**+0.5**
SPA0	**Spitsbergen Ar**	**1.12**	**342**	Pg	**Pb**	**03 26 49.6**	**+0.2**
	baz=155,slow=22						
SPA0				Lg	Lg	03 27 05.0	
	baz=151,slow=37						
SPA0	**Spitsbergen Ar**	**1.12**	**342**	*e*P	**Pn**	**03 26 49.7**	**-0.2**
SPA0				*e*S	**Sn**	**03 27 05.2**	**-0.4**
SPA0	**Spitsbergen Ar**	**1.12**	**342**	Pg	**Pb**	**03 26 49.6**	**+0.2**
	baz=155,slow=20,SNR=999						
SPA0				Lg	Lg	03 27 05.0	
	baz=151,slow=32,SNR=7.7						
SPA0				*e*S	**Sn**	**03 27 05.2**	**-0.4**
	SNR=55						
SPITS	**Spitsbergen Ar**	**1.12**	**342**	Pn	**Pb**	**03 26 49.6**	**+0.2**
	baz=148,slow=21,SNR=4396						
SPITS				Sn	**Sn**	**03 27 05.2**	**-0.4**
	baz=152,slow=42,SNR=26						
HOPEN	**Hopen**	**1.71**	**108**	*e*P	**Pn**	**03 26 56.2**	**-1.9**
HOPEN				*e*S	**Sn**	**03 27 17.4**	**-2.9**
KBS	**Kingsbay**	**2.21**	**328**	Pn	**Pn**	**03 27 05.2**	**+0.4**
KBS				Pg	**Pg**	**03 27 09.9**	**-0.1**
KBS				Lg	Lg	03 27 37.8	
KBS	**Kingsbay**	**2.21**	**328**	*e*P	**Pn**	**03 27 05.0**	**+0.1**
KBS				*e*Pg	**Pg**	**03 27 09.8**	**-0.2**
KBS				*e*Sg	**Sg**	**03 27 38.3**	**-0.3**
KBS				AML	AML	03 27 41.3	
	comp=Z,2μm,0.4s						
KBS	**Kingsbay**	**2.21**	**328**	*e*P	**Pn**	**03 27 05.0**	**+0.1**
	SNR=55						
KBS				Lg	Lg	03 27 37.8	
BJO	**Bjornoya**	**2.65**	**173**	*e*Pg	**Pb**	**03 27 15.3**	**-0.2**
BJO				*e*Sg	**Sb**	**03 27 49.2**	**+0.9**
BJO	**Bjornoya**	**2.65**	**173**	*e*Pg	**Pb**	**03 27 15.3**	**-0.2**
	SNR=91						
BJO				*e*Sg	**Sb**	**03 27 49.2**	**+0.9**
	SNR=91						
TRO	**Tromso**	**7.54**	**178**	*e*P	**Pn**	**03 28 17.2**	**-0.8**
TRO	**Tromso**	**7.54**	**178**	*e*P	**Pn**	**03 28 17.2**	**-0.8**
	SNR=51						
KEV	**Kevo**	**7.83**	**157**	*e*p	**Pn**	**03 28 20.6**	**-1.3**
	comp=Z,0.7nm,0.3s						
KEV	**Kevo**	**7.83**	**157**	*e*P	**Pn**	**03 28 20.6**	**-1.3**
	comp=Z,0.7nm,0.3s						
ARA0	**ARCESS Array S**	**7.92**	**161**	Pn	**Pn**	**03 28 21.7**	**-1.5**
	baz=350,slow=11						
ARA0				Sn	Sn	03 29 43.2	-10
	baz=353,slow=22						
ARA0	**ARCESS Array S**	**7.92**	**161**	P	**Pn**	**03 28 21.7**	**-1.5**
	baz=350,slow=11						
ARA0				S	Sn	03 29 43.2	-10
	baz=353,slow=22						
ARA0	**ARCESS Array S**	**7.92**	**161**	P	**Pn**	**03 28 21.7**	**-1.5**
	baz=350,slow=11,SNR=51						
ARCES	**ARCESS Array B**	**7.92**	**161**	Pn	**Pn**	**03 28 21.9**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=350,slow=11,SNR=25						
ARCES				Sn	Sn	03 29 41.7	-11
	comp=Z,3.5nm,0.3s,baz=352,slow=21,SNR=5.7						
ARE0	**ARCESS Array S**	**7.92**	**161**	*e*P	**Pn**	**03 28 22.5**	**-0.7**
ARE0	**ARCESS Array S**	**7.92**	**161**	*e*P	**Pn**	**03 28 22.5**	**-0.7**
	SNR=51						
DAG	**Danmarks Havn**	**8.21**	**286**	*i* P	**Sn**	**03 29 57.8**	**-2.3**
	comp=Z,4.6nm,0.6s						
KTK1	**Kautokeino**	**8.29**	**167**	*e*P	**Pn**	**03 28 28.1**	**-0.2**
KTK1				AML	AML	03 30 13.3	
	comp=Z,32nm,0.6s						
KTK1	**Kautokeino**	**8.29**	**167**	*e*P	**Pn**	**03 28 28.1**	**-0.2**
	SNR=51						
APA0	**Apatity Array**	**10.53**	**147**	Pn	Pn	03 28 55.5	-3.4
	baz=349,slow=10						
APA0				Sn	Sn	03 30 43.3	-14
	baz=354,slow=22						
APA0	**Apatity Array**	**10.53**	**147**	P	Pn	03 28 55.5	-3.4
	baz=349,slow=10						
APA0				S	Sn	03 30 43.3	-14
	baz=354,slow=22						
APA0	**Apatity Array**	**10.53**	**147**	P	Pn	03 28 55.5	-3.4
	baz=349,slow=9.9,SNR=51						
SUMG	**Summit**	**14.86**	**282**	*i* P	**P**	**03 30 04.9**	**+0.6**
	comp=Z,5.1nm,1.0s						
JOF	**Joensuu**	**14.90**	**156**	*e*p	Pn	03 29 51.1	-7.5
	comp=Z,0.2nm,0.3s						
KAF	**Kangasniemi**	**15.33**	**165**	*e*p	**Pn**	**03 30 00.5**	**-3.8**
	comp=Z,1.3nm,0.6s						
FIA0	**FINESS Array S**	**15.98**	**166**	P	**Pn**	**03 30 09.7**	**-3.1**
	baz=6.3,slow=14						
FIA0	**FINESS Array S**	**15.98**	**166**	P	**Pn**	**03 30 09.7**	**-3.1**
	baz=6.3,slow=14						
FIA0	**FINESS Array S**	**15.98**	**166**	P	**Pn**	**03 30 09.7**	**-3.1**
	baz=6.3,slow=13,SNR=51						
FINES	**FINESS Array B**	**15.98**	**166**	Pn	**Pn**	**03 30 09.4**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=6.5,slow=14,SNR=7.8						
FINES				Sn	Sn	03 32 57.4	-13
	comp=Z,0.3nm,0.3s,baz=352,slow=22,SNR=5.2						
NOA	**NORSAR Array B**	**16.33**	**192**	Pn	**P**	**03 30 19.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=9.0,slow=12,SNR=3.5						
HFS	**Hagfors**	**17.14**	**187**	P	**Pn**	**03 30 28.0**	**+0.6**
	baz=9.9,slow=10						
HFS	**Hagfors**	**17.14**	**187**	P	**Pn**	**03 30 28.0**	**+0.6**
	baz=9.9,slow=10						
HFS	**Hagfors**	**17.14**	**187**	P	**Pn**	**03 30 28.1**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=33,slow=11,SNR=10.0						
HFS	**Hagfors**	**17.14**	**187**	P	**Pn**	**03 30 28.0**	**+0.6**
	baz=9.9,slow=9.3,SNR=51						
AKASG	**Malin Array Be**	**26.88**	**164**	P	**P**	**03 32 07.7**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=355,slow=9.5,SNR=3.2						
GERES	**GERESS Array B**	**28.44**	**186**	P	**P**	**03 32 23.7**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=39,slow=6.3,SNR=3.0						
ZALV	**Zalesovo Beam**	**33.04**	**95**	P	**P**	**03 33 05.6**	**+2.3**
	comp=Z,0.2nm,0.4s,baz=343,slow=8.0,SNR=3.6						
ZALV				PcP	**PcP**	**03 35 46.3**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=347,slow=5.9,SNR=3.4						
KBZ	**Khabaz**	**35.04**	**148**	P	**P**	**03 33 21.5**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=348,slow=7.7,SNR=4.7						
YKA	**Yellowknife Ar**	**37.57**	**326**	P	**P**	**03 33 42.0**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=11,slow=8.0,SNR=8.7						
YKA				PcP	**PcP**	**03 35 59.5**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=12,slow=2.8,SNR=5.5						
BRTR	**Keskin Array B**	**38.10**	**160**	P	**P**	**03 33 47.8**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=358,slow=9.0,SNR=3.0						
ESDC	**Sonseca Array**	**38.73**	**208**	P	**P**	**03 33 53.5**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=4.6,slow=8.4,SNR=6.2						
MKAR	**Makanchi Array**	**39.19**	**102**	P	**P**	**03 33 56.3**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=354,slow=7.3,SNR=10						
KEST	**Kesra**	**41.67**	**191**	P	**P**	**03 34 17.4**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=336,slow=14,SNR=5.3						
SONM	**Songino Array**	**43.57**	**78**	P	**P**	**03 34 31.5**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=339,slow=3.6,SNR=2.9						
PDAR	**Pinedale Array**	**56.04**	**315**	P	**P**	**03 36 06.1**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=24,slow=6.9,SNR=2.9						
MJAR	**Matsushiro Arr**	**60.86**	**53**	P	**P**	**03 36 41.0**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=345,slow=6.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**64.54**	**198**	P	**P**	**03 37 05.1**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=352,slow=6.9,SNR=34						
TXAR	**Lajitas Array**	**68.16**	**307**	P	**P**	**03 37 28.2**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=38,slow=5.4,SNR=10						
CMAR	**Chiang Mai Arr**	**70.10**	**95**	P	**P**	**03 37 41.2**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=346,slow=6.5,SNR=3.2						
ASAR	**Alice Springs**	**118.60**	**70**	PKP	**PKPdf**	**03 45 14.7**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=2.1,slow=1.7,SNR=11						
MAW	**Mawson**	**147.06**	**150**	PKPbc	**PKPbc**	**03 46 09.7**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=85,slow=23,SNR=7.2						

*IDC **02** 03:29:30.3±2.7, 14.°68N×92.°20W, h60^{km}±19^{km}, mb3.6/5, mb1 4.0/8, mb1mx3.7/24, mbtmp3.8/8, MS3.2/3, Ms1 3.2/3, ms1mx2.9/41, Error ellipse: s-maj=25.1km s-min=15.5km az=16.0*

*ISCJB **02** 03:29:30.0±0.8, 14.°55N±0.°07×92.°48W±0.°07, h68^{km}±6^{km}, mb3.7/7, Error ellipse: s-maj=16.0km s-min=5.2km az=41.7*

*MEX **02** 03:29:31.7±0.4, 14.°54N×92.°72W, h11^{km}±7^{km}, MD4.0*

*CASC **02** 03:29:33.6±1.6, 14.°58N×92.°26W, h57^{km}±24^{km}, MD4.2*

ISC 02 03:29:30.3±0.8**, 14.°57N**±0.°06×**92.°49W**±0.°04**, h63**^{km}±6^{km}**, n30,** σ1^{s}**72**/43**, mb3.8**/7**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.40**	**33**	*i* P	**Pn**	**03 29 41.5**	**-0.1**
THIG				*e*S	**Sn**	**03 29 49.7**	**-0.2**
JAT	**Jato**	**0.86**	**107**	*e*P	**Pn**	**03 29 47.6**	**+0.8**
FUG	**Fuego 3**	**1.60**	**94**	*e*P	**Pn**	**03 29 56.7**	**0.0**
CCIG	**Comitan**	**1.74**	**11**	*e*P	**Pn**	**03 29 59.7**	**+1.2**
CCIG				*e*S	**Sn**	**03 30 21.5**	**+1.7**
PCG	**Pacaya**	**1.83**	**95**	*e*P	**Pn**	**03 30 00.6**	**+0.8**
PCG				*e*S	**Sn**	**03 30 22.4**	**+0.3**
NBG	**Las Nubes**	**2.07**	**89**	*e*P	**Pn**	**03 30 04.0**	**+0.9**
TGIG		**2.28**	**345**	*e*P	**Pn**	**03 30 06.3**	**+0.5**
TGIG				*e*S	**Sn**	**03 30 32.8**	**0.0**
MRL	**Marmol**	**2.75**	**79**	*e*P	**Pn**	**03 30 12.6**	**+0.3**
RBDL	**Robledal**	**2.75**	**99**	*e*P	**Pn**	**03 30 12.6**	**+0.3**
RTR	**El Retiro**	**2.84**	**103**	*e*P	**Pn**	**03 30 13.8**	**+0.4**
SBLS	**San Blas**	**2.87**	**104**	*e*P	**Pn**	**03 30 14.6**	**+0.7**
SNJE	**San Jose**	**2.88**	**104**	*e*P	**Pn**	**03 30 14.3**	**+0.2**
BOQS	**Boqueron**	**3.22**	**105**	*e*P	**Pn**	**03 30 19.4**	**+0.7**
CMIG	**Matias Romero**	**3.41**	**318**	*e*P	**Pn**	**03 30 21.2**	**+0.2**
CMIG				*e*S	**Sn**	**03 30 58.0**	**-2.3**
CMIG	**Matias Romero**	**3.41**	**318**	P	**Pn**	**03 30 22.1**	**+1.1**
	8.8nm,0.3s,baz=124,slow=10,SNR=54						
CMIG				S	**Sn**	**03 31 03.3**	**+3.0**
	28nm,0.3s,baz=139,slow=10,SNR=6.3						
CMIG				LR	LR	03 32 05.5	
	comp=Z,223nm,19.4s,baz=4.7,slow=44						
LFRS	**El Faro**	**3.46**	**105**	*e*P	**Pn**	**03 30 23.0**	**+1.2**
LFRS				*e*S	**Sn**	**03 30 59.4**	**-2.2**
SNVI	**San Vicente**	**3.67**	**105**	*e*P	**Pn**	**03 30 25.5**	**+0.8**
HUIG	**Huatulco**	**3.69**	**289**	*e*P	**Pn**	**03 30 23.7**	**-1.3**
HUIG				*i* S	**Sn**	**03 31 03.6**	**-3.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CNCH	Conchagua	4.70	105	eP	Pn	03 30 40.8	+1.9
TEIG	Tepich	6.92	35	P	Pn	03 31 07.2	-1.9
	12nm,0.3s,baz=237,slow=3.2,SNR=98						
TEIG				S	Sn	03 32 21.3	-5.1
	baz=163,slow=19,SNR=2.8						
TEIG				LR	LR	03 34 15.8	
	comp=Z,216nm,18.2s,baz=236,slow=43						
TXAR	Lajitas Array	17.96	327	P	Pn	03 33 38.4	+2.5
	0.1nm,0.3s,baz=145,slow=8.7,SNR=15						
TXAR				PcP	PcP	03 38 09.3	+0.8
	baz=192,slow=33,SNR=3.3						
TKL	Tuckaleechee C	22.41	19	P	P	03 34 21.8	-1.9
	1.9nm,0.6s,baz=197,slow=14,SNR=4.2						
TKL				pP	pP	03 34 38.1	+0.6
	6.4nm,0.9s,baz=194,slow=13,SNR=5.5						
TKL				LR	LR	03 43 38.9	
	comp=Z,77nm,19.0s,baz=240,slow=38						
ANMO	Albuquerque	23.88	331	P	P	03 34 38.7	+0.4
	1.1nm,0.6s,baz=163,slow=12,SNR=7.3						
PDAR	Pinedale Array	31.71	336	P	P	03 35 51.3	+3.0
	0.3nm,0.6s,baz=170,slow=8.0,SNR=2.8						
NVAR	Mina Array Bea	32.93	321	P	P	03 36 01.9	+2.8
	3.5nm,0.7s,baz=132,slow=8.4,SNR=28						
NVAR				PcP	PcP	03 38 43.1	+0.8
	0.7nm,0.7s,baz=138,slow=5.6,SNR=3.9						
NVAR				ScP	ScP	03 42 22.2	+1.2
	0.4nm,0.5s,baz=133,slow=4.4,SNR=3.3						
SIV	San Ignacio	43.42	133	P	P	03 37 26.1	-1.1
	1.3nm,0.7s,baz=308,slow=9.1,SNR=5.0						
SIV				pP	pP	03 37 42.3	-1.0
	3.3nm,0.8s,baz=316,slow=9.1,SNR=5.7						
YKA	Yellowknife Ar	50.37	347	P	P	03 38 18.9	-1.8
	1.2nm,0.7s,baz=150,slow=7.3,SNR=29						
YKA				PcP	PcP	03 39 37.3	-1.2
	0.5nm,0.7s,baz=152,slow=4.2,SNR=9.8						
FRB	Frobisher Bay	51.87	13	P	P	03 38 27.1	-4.9
	0.4nm,0.4s,baz=206,slow=16,SNR=3.8						
CPUP	Villa Florida	53.12	140	pP	pP	03 38 58.1	-0.1
	1.0nm,0.7s,baz=92,slow=20,SNR=3.4						
CMAR	Chiang Mai Arr	145.30	341	PKPbc	PKPbc	03 49 01.1	-0.6
	3.5nm,0.7s,baz=344,slow=3.8,SNR=16						

CSEM 02 03:34:00.8, 39.13N×29.02W, h15km, ML2.4, After PDA

PDA 02 03:34:00.8±0.8**, 39.13N×29.02W, h15**km**, MD3.5, ML2.4, Error ellipse: s-maj=8.4km s-min=4.6km az=83.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCED	Cedros	0.56	153	eP	Pg	03 34 09.6	-2.2
PCED				eS	Sg	03 34 16.6	-2.7
PCED				A	A	03 34 17.2	
	66nm,0.3s						
PCED	Cedros	0.56	153	eP	Pg	03 34 09.6	-2.2
PCED				eS	Sg	03 34 16.6	-2.7
CALA	Caldeira	0.60	155	eP	Pg	03 34 10.8	-1.9
CALA				eS	Sg	03 34 17.4	-3.4
CALA	Caldeira	0.60	155	eP	Pg	03 34 10.8	-1.9
CALA				eS	Sg	03 34 17.4	-3.4
HOR	Horta	0.67	153	eS	Sg	03 34 19.1	-3.8
HOR	Horta	0.67	153	eS	Sg	03 34 19.1	-3.8
ROSA	Rosais	0.73	124	eP	Pg	03 34 11.9	-3.2
ROSA				eS	Sg	03 34 20.7	-4.1
ROSA				A	A	03 34 23.8	
	67nm,0.3s						
ROSA	Rosais	0.73	124	eP	Pg	03 34 11.9	-3.2
ROSA				eS	Sg	03 34 20.7	-4.1
PICO	Pico	0.78	143	eS	Sg	03 34 21.9	-4.5
PICO	Pico	0.78	143	eS	Sg	03 34 21.9	-4.5
PCAN	Candelaria	0.78	148	eP	Pg	03 34 12.6	-3.5
PCAN				eS	Sg	03 34 22.3	-4.2
PCAN				A	A	03 34 24.2	
	129nm,0.2s						
PCAN	Candelaria	0.78	148	eP	Pg	03 34 12.6	-3.5
PCAN				eS	Sg	03 34 22.3	-4.2
PGRA	Graciosa	0.81	97	eP	Pn	03 34 20.3	+2.5
PMAN	Manadas	0.88	124	eP	Pb	03 34 14.4	-3.4
PMAN	Manadas	0.88	124	eP	Pb	03 34 14.4	-3.4

ISK 02 03:50:18.6, 37.85N×42.89E, h9km, MD3.1
DDA 02 03:50:19.2, 37.86N×42.95E, h7km, MD3.1
CSEM 02 03:50:19.3±0.2, 37.84N×42.93E, h10km, MD3.1, Error ellipse: s-maj=4.2km s-min=3.2km az=60.0
ISCJB 02 03:50:19.0±0.7, 37.84N±0.03×42.93E±0.05, h7km±8km, Error ellipse: s-maj=6.8km s-min=4.7km az=170.6

ISC 02 03:50:20.1±1.0**, 37.86N**±0.02×**42.98E**±0.02**, h12**km±10km**, n40,** σ**1.19**/58**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	Gevas	0.46	8	i P	Pg	03 50 28.2	-1.0
GEVA				i S	Sg	03 50 35.1	-0.3
GEVA	Gevas	0.46	8	i P	Pg	03 50 28.2	-1.0
GEVA				i S	Sg	03 50 35.1	-0.3
HAKT	HAKKARI	0.65	117	i P	Pg	03 50 32.3	-0.4
HAKT				i S	Sg	03 50 42.2	+0.8
HAKT	HAKKARI	0.65	117	i P	Pg	03 50 32.3	-0.4
HAKT				i S	Sg	03 50 42.2	+0.8
TVAN	Van	0.75	26	eP	Pg	03 50 34.0	-0.7
TVAN				eS	Sg	03 50 45.4	+0.8
TVAN	Van	0.75	26	eP	Pg	03 50 34.0	-0.7
TVAN				eS	Sg	03 50 45.4	+0.8
CUKT	Cukurca	0.79	140	ePG	Pg	03 50 35.1	-0.2
CUKT				eSG	Sb	03 50 46.8	+0.3
CUKT	Cukurca	0.79	140	ePg	Pg	03 50 35.1	-0.2
CUKT				eSg	Sb	03 50 46.8	+0.3
VANB	Van	0.81	23	ePG	Pg	03 50 35.1	-0.6
VANB				eSG	Sb	03 50 47.3	+0.2
VANB	Van	0.81	23	ePg	Pg	03 50 35.1	-0.6
VANB				eSg	Sb	03 50 47.3	+0.2
TATV	Tatvan	0.86	319	i P	Pg	03 50 36.7	-0.1
TATV				i S	Sb	03 50 49.0	+0.3
TATV	Tatvan	0.86	319	i P	Pg	03 50 36.7	-0.1
TATV				i S	Sb	03 50 49.0	+0.3
BEST	Besiri	1.35	272	i P	Pg	03 50 47.0	+0.9
BEST				i S	Sg	03 51 06.9	+3.2
CLDR	Caldiran	1.48	29	ePN	Pn	03 50 46.6	-0.3
CLDR	Caldiran	1.48	29	ePn	Pn	03 50 46.6	-0.3
TUTA	Tutak	1.55	355	eP	Pb	03 50 48.7	-0.2
TUTA				i S	Sg	03 51 14.0	+3.9
TUTA	Tutak	1.55	355	eP	Pb	03 50 48.7	-0.2
VRTB	Varto-Mus	1.77	318	ePN	Pn	03 50 49.7	-1.0
VRTB	Varto-Mus	1.77	318	ePn	Pn	03 50 49.7	-1.0
MARD	Mardin	1.83	253	i P	Pb	03 50 53.6	0.0
MARD				i S	Sg	03 51 18.4	-0.5
BNGB	Bingˆ¶l	2.13	303	ePN	Pn	03 50 54.6	-1.0
DIY	Diyarbakir	2.18	272	ePN	Pn	03 50 54.9	-1.4
DIY	Diyarbakir	2.18	272	ePn	Pn	03 50 54.9	-1.4
BINT	Bingol	2.21	298	ePn	Pn	03 50 54.6	-2.1
DIYA	Diyarbakir	2.26	273	i P	Pb	03 50 59.1	-1.9
DIYA				i S	Sb	03 51 30.2	+1.3
EZM	Erzurum	2.41	329	ePN	Pn	03 50 59.1	-0.5
GNI	Garni	2.67	30	ePN	Pn	03 51 04.2	+1.1
GNI	Garni	2.67	30	ePn	Pn	03 51 04.2	+1.1
SVRC	Sivrice-ELAZID	2.94	281	ePN	Pn	03 51 05.6	-1.3
SVRC	Sivrice-ELAZID	2.94	281	ePn	Pn	03 51 05.6	-1.3
PTK	Pertek	3.00	291	ePN	Pn	03 51 06.9	-0.8
PTK	Pertek	3.00	291	ePn	Pn	03 51 06.9	-0.8
ERZN	Erzincan	3.08	305	ePN	Pn	03 51 07.9	-0.8
BAYT	Ayd˜–ntepe-Bay	3.36	320	ePN	Pn	03 51 12.1	-0.5
BAYT	Ayd˜–ntepe-Bay	3.36	320	ePn	Pn	03 51 12.1	-0.5
EZC	Erzincan	3.41	305	ePn	Pn	03 51 07.9	-5.3
MYA	Malataya	3.62	279	ePN	Pn	03 51 16.0	-0.2
MYA	Malataya	3.62	279	ePn	Pn	03 51 16.0	-0.2
BHD	Baghdad	4.71	166	ex	Pn	03 51 30.0	-1.1
BHD				ex	Pg	03 51 49.0	-1.4
BHD				ex	Sn	03 52 26.0	+0.3
BHD				ex	Sg	03 52 55.0	+3.5
BHD	Baghdad	4.71	166	ePn	Pn	03 51 30.0	-1.1

IDC 02 03:50:30.4±2.5, 54.62N×161.61W, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.6/29, mbtmp3.7/9, ML3.5/2, Error ellipse: s-maj=68.0km s-min=22.7km az=164.0
NEIC 02 03:50:34.6, 54.41N×161.50W, h13km, ML3.3(AEIC), After AEIC.

ISC 02 03:50:32.0±2.2**, 54.27N**±0.10×**161.36W**±0.05**, h23**km±13km**, n20,** σ**0.90**/27**, mb3.9**/7**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOL	Dolgoi Island	0.93	342	P	Pb	03 50 49.5	0.0
DOL				S	Sb	03 51 00.8	-0.6
DT1	Dutton Round H	1.00	328	P	Pn	03 50 50.2	-0.3
PS4A	Pavlof South-4	1.12	345	P	Pb	03 50 52.7	0.0
PVV	Pavlof Volcano	1.14	347	P	Pb	03 50 53.0	+0.1
PVV				S	Sn	03 51 07.5	+0.2
PS1A	Pavlof South-1	1.18	349	P	Pb	03 50 53.9	+0.3
PS1A				S	Sb	03 51 08.7	+0.2
SDPT	Sand Point	1.20	25	P	Pb	03 50 54.6	+0.6
SDPT				S	Sb	03 51 09.5	+0.5
FALS	False Pass	1.34	297	P	Pb	03 50 56.3	0.0
FALS				S	Sb	03 51 12.8	-0.1
BRPK	Brown Peak	1.44	286	P	Pb	03 50 57.9	-0.2
VNWF	Veniaminof 8	2.15	28	P	Pb	03 51 09.5	-0.7
VNFG	Veniaminof 2	2.27	26	P	Pn	03 51 10.1	+1.9
VNHG	Veniaminof 1	2.33	32	P	Pb	03 51 12.6	-0.6
KDAK	Kodiak Island	6.05	51	Pn	Pn	03 52 00.2	+0.3
	0.7nm,0.3s,baz=323,slow=23,SNR=14						
KDAK				Sn	Sn	03 53 05.5	-2.8
	1.1nm,0.3s,baz=197,slow=13,SNR=11						
INK	Inuvik	19.15	32	P	P	03 54 51.9	-1.3
	0.2nm,0.3s,baz=232,slow=11,SNR=7.5						
PETK	Petropavlovsk-	24.04	284	P	P	03 55 45.0	0.0
	2.2nm,0.5s,baz=92,slow=12,SNR=8.7						
YKA	Yellowknife Ar	25.32	52	P	P	03 55 57.6	+1.0
	0.2nm,0.5s,baz=270,slow=8.9,SNR=10						
YKA				PcP	PcP	03 59 29.8	+1.2
	0.1nm,0.6s,baz=277,slow=2.2,SNR=5.0						
FINES	FINESS Array B	64.48	356	P	P	04 01 05.6	-0.5
	1.0nm,0.8s,baz=13,slow=9.2,SNR=11						
NOA	NORSAR Array B	64.89	4	P	P	04 01 09.0	+0.2
	0.8nm,0.8s,baz=355,slow=6.5,SNR=3.4						
AKASG	Malin Array Be	75.03	353	P	P	04 02 10.6	-0.5
	0.9nm,0.5s,baz=10.0,slow=6.1,SNR=4.5						
GERES	GERESS Array B	77.18	3	P	P	04 02 23.6	0.0
	0.4nm,0.7s,baz=15,slow=5.5,SNR=4.6						
BRTR	Keskin Array B	85.50	348	P	P	04 03 08.4	+0.5
	0.4nm,0.7s,baz=71,slow=2.7,SNR=3.0						

ISK 02 03:55:21.2, 39.57N×27.10E, h5km, MD2.6
DDA 02 03:55:21.2, 39.55N×27.12E, h7km, MD3.0
CSEM 02 03:55:21.6±0.4, 39.57N×27.08E, h10km, MD3.0, Error ellipse: s-maj=8.9km s-min=3.9km az=29.0

ISC 02 03:55:21.4±1.5**, 39.51N**±0.06×**27.11E**±0.05**, h22**km±5km**, n22,** σ**0.64**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALY	Balya	0.45	59	i P	Pb	03 55 30.5	-0.2
BALY				i S	Sb	03 55 36.6	-0.4
BALY	Balya	0.45	59	i P	Pb	03 55 30.5	-0.2
BALY				i S	Sb	03 55 36.6	-0.4
BALB	Balikesir	0.61	77	ePG	Pb	03 55 33.7	+0.3
BALB				eSG	Sb	03 55 41.9	+0.4
BALB	Balikesir	0.61	77	ePg	Pb	03 55 33.7	+0.3
BALB				eSg	Sb	03 55 41.9	+0.4
GONE	Gonen-Balikesi	0.69	39	ePG	Pb	03 55 34.4	-0.4
GONE				eSG	Sb	03 55 44.2	+0.2
GONE	Gonen-Balikesi	0.69	39	ePg	Pb	03 55 34.4	-0.4
GONE				eSg	Sb	03 55 44.2	+0.2
BOZC	Bozcaada	0.88	292	i P	Pn	03 55 39.1	+0.6
BOZC				i S	Sn	03 55 50.2	-0.4
KRBG	Karabiga-Canak	0.89	9	ePG	Pb	03 55 37.5	-0.7
KRBG	Karabiga-Canak	0.89	9	ePg	Pb	03 55 37.5	-0.7
LPK	Lapseki	0.90	343	ePG	Pb	03 55 38.0	-0.4
LPK	Lapseki	0.90	343	ePg	Pb	03 55 38.0	-0.4
GELI	Tayfur-Gelibol	1.01	331	ePG	Pb	03 55 39.9	-0.3
GELI	Tayfur-Gelibol	1.01	331	ePg	Pb	03 55 39.9	-0.3
MRMT	Marmara Adasi	1.15	19	ePN	Pn	03 55 42.5	+0.2
MRMT	Marmara Adasi	1.15	19	ePn	Pn	03 55 42.5	+0.2
SART	Tekirdag	1.18	2	i P	Pb	03 55 43.5	+0.4
SART				i S	Sn	03 55 58.8	+0.7
SART	Tekirdag	1.18	2	i P	Pb	03 55 43.5	+0.4
SART				i S	Sn	03 55 58.8	+0.7
ERIK	Erikli-Kesan	1.25	339	ePN	Pb	03 55 44.1	-0.1
ERIK	Erikli-Kesan	1.25	339	ePn	Pb	03 55 44.1	-0.1
DEMI	Demirci	1.33	110	i P	Pn	03 55 42.6	-2.1
DEMI				i S	Sb	03 56 03.3	+1.1
TVSB	Tavsanli	1.82	91	ePN	Pb	03 55 54.7	+0.7
TVSB	Tavsanli	1.82	91	ePn	Pb	03 55 54.7	+0.7

IDC 02 04:04:01.4±0.9**, 14.20N×145.42E, h110**km±7km**, mb3.7**/13**, mb1 3.8**/13**, mb1mx3.5**/27**, mbtmp3.7**/13**, Error ellipse: s-maj=27.4km s-min=16.1km az=99.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.81	222	P	Pn	04 04 22.0	+1.4
	360nm,0.3s,baz=99,slow=2.0,SNR=111						
GUMO				S	Sn	04 04 35.9	+0.8
	900nm,0.3s,baz=4.5,slow=23,SNR=90						
JNU	Nakatsue	23.02	327	P	P	04 08 58.5	+1.4
	4.8nm,0.7s,baz=99,slow=2.4,SNR=5.5						
KSRS	Korea Array	27.91	329	P	P	04 09 41.5	+0.3
	1.2nm,0.4s,baz=146,slow=9.4,SNR=5.5						
WRA	Warramunga Arr	35.63	198	P	P	04 10 48.9	0.0
	0.4nm,0.8s,baz=19,slow=9.1,SNR=3.2						
FITZ	Fitzroy Crossi	37.56	212	P	P	04 11 05.8	+0.6
	0.7nm,0.3s,baz=24,slow=12,SNR=8.4						
PETK	Petropavlovsk-	40.03	12	P	P	04 11 26.1	+0.6
	0.3nm,0.4s,baz=149,slow=7.2,SNR=8.0						
SONM	Songino Array	46.55	324	P	P	04 12 16.7	-1.4
	0.5nm,0.5s,baz=126,slow=9.7,SNR=2.4						
MKAR	Makanchi Array	61.43	316	P	P	04 14 06.9	+0.7
	0.3nm,0.3s,baz=90,slow=8.3,SNR=6.8						
ZALV	Zalesovo Beam	61.45	324	P	P	04 14 07.0	+0.9
	0.5nm,0.5s,baz=101,slow=7.8,SNR=2.2						
KDAK	Kodiak Island	63.27	32	P	P	04 14 18.5	+0.3
	12nm,1.2s,baz=326,slow=7.3,SNR=3.8						
YKA	Yellowknife Ar	82.08	27	P	P	04 16 09.1	-0.3
	0.8nm,0.5s,baz=286,slow=5.2,SNR=24						
ARCES	ARCESS Array B	86.67	342	P	P	04 16 31.8	-0.8
	0.6nm,0.5s,baz=76,slow=10,SNR=7.5						
JOF	Joensuu	87.97	335	ep	P	04 16 36.3	-2.5
	1.2nm,0.5s						
KAF	Kangasniemi	90.39	336	ep	P	04 16 46.0	-4.2
	0.6nm,0.5s						
FINES	FINESS Array B	90.84	335	P	P	04 16 50.7	-1.5
	1.7nm,0.5s,baz=64,slow=4.9,SNR=34						
HFS	Hagfors	96.44	338	P	P	04 17 16.0	-2.0
	1.3nm,0.9s,baz=79,slow=7.5,SNR=5.1						

HLW 02 04:04:25.7, 34.99N×25.54E, h33km±31km, Md0.0, Ml3.6
IDC 02 04:04:27.9±0.8, 34.61N×25.34E, h0km, mb3.9/12, mb1 3.9/15, mb1mx3.8/29, mbtmp3.9/15, ML3.9/3, Error ellipse: s-maj=20.1km s-min=15.4km az=164.0
ISCJB 02 04:04:31.2±0.3, 34.39N±0.02×25.41E±0.02, h59km±3km, mb3.7/16, Error ellipse: s-maj=3.9km s-min=2.4km az=33.8
CSEM 02 04:04:33.1±0.1, 34.40N×25.36E, h60km, ML3.5, Error ellipse: s-maj=3.1km s-min=1.8km az=33.0
ISK 02 04:04:33.4, 34.63N×25.37E, h61km, ML3.6
ATH 02 04:04:34.2, 34.60N×25.24E, h62km±2km, ML3.5
THE 02 04:04:36.1, 34.59N×25.27E, h52km±4km, ML3.7/2, Error ellipse: s-maj=4.7km s-min=1.5km az=356.0
DDA 02 04:04:44.7, 34.99N×26.03E, h51km, MD3.6

ISC 02 04:04:33.1±0.8**, 34.45N**±0.04×**25.39E**±0.03**, h49**km±9km**, n342,** σ**1.31**/374**, mb3.7**/16**, 4C-2D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	Lasithi	0.71	6	P	Pn	04 04 47.2	+0.2
LAST				S	Sn	04 04 58.1	+0.9
LAST	Lasithi	0.71	6	eP	Pn	04 04 47.3	+0.2
LAST				eS	Sn	04 04 57.2	0.0
LAST	Lasithi	0.71	6	eP	Pn	04 04 47.3	+0.2
LAST				eS	Sn	04 04 57.2	0.0
SIVA	Sivas	0.74	320	P	Pn	04 04 46.9	-0.4
SIVA				S	Sn	04 04 56.9	-0.7
SIVA	Sivas	0.74	320	eP	Pn	04 04 47.0	-0.4
SIVA				eS	Sn	04 04 56.9	-0.7
SIVA	Sivas	0.74	320	eP	Pn	04 04 47.0	-0.4
SIVA				eS	Sn	04 04 56.9	-0.7
NPS	Neapolis	0.83	13	P	Pn	04 04 49.5	+0.9
NPS				S	Sn	04 05 00.6	+0.8
NPS	Neapolis	0.83	13	eP	Pn	04 04 49.5	+0.9
NPS				eS	Sn	04 05 00.8	+1.0
NPS	Neapolis	0.83	13	eP	Pn	04 04 49.5	+0.9
NPS				eS	Sn	04 05 00.8	+1.0
IDI	Anoyia	0.93	334	P	Pn	04 04 50.2	+0.2
IDI				S	Sn	04 05 02.0	-0.3
IDI	Anoyia	0.93	334	eP	Pn	04 04 50.2	+0.2
IDI				eS	Sn	04 05 02.0	-0.3
IDI	Anoyia	0.93	334	eP	Pn	04 04 50.2	+0.2
IDI				eS	Sn	04 05 02.0	-0.3
ZKR	Zakros	0.95	46	P	Pn	04 04 52.2	+2.1
ZKR				S	Sn	04 05 06.1	+3.5
ZKR	Zakros	0.95	46	eP	Pn	04 04 52.4	+2.3
ZKR				eS	Sn	04 05 06.2	+3.6
ZKR	Zakros	0.95	46	eP	Pn	04 04 52.4	+2.3
ZKR				eS	Sn	04 05 06.2	+3.6
GVD	Gavdhos	1.14	290	P	Pn	04 04 53.6	+0.9
GVD	Gavdhos	1.14	290	eP	Pn	04 04 53.4	+0.7
GVD	Gavdhos	1.14	290	eP	Pn	04 04 53.4	+0.7
VAM	Vamos	1.36	315	P	Pn	04 04 56.8	+1.0
VAM	Vamos	1.36	315	eP	Pn	04 04 57.2	+1.4
VAM	Vamos	1.36	315	P	Pn	04 04 56.8	+1.0
KARP	Karpathos	1.82	53	eP	Pn	04 05 05.5	+3.5
KARP	Karpathos	1.82	53	eP	Pn	04 05 05.5	+3.5
SANT	Santorini	1.92	2	eP	Pn	04 05 03.9	+0.6
SANT	Santorini	1.92	2	eP	Pn	04 05 03.9	+0.6
ANKY	Antikythira Is	2.22	310	eP	Pn	04 05 08.2	+0.8
ANKY	Antikythira Is	2.22	310	eP	Pn	04 05 08.2	+0.8
NIS2	Nisyros Isl.	2.58	34	P	Pn	04 05 15.2	+2.8
NIS1	Nisyros Isl.	2.59	34	eP	Pn	04 05 14.6	+2.0
NIS1	Nisyros Isl.	2.59	34	eP	Pn	04 05 14.6	+2.0
APE	Apeiranthos	2.61	2	ePN	Pn	04 05 12.4	-0.5
APE				eSN	Sn	04 05 40.2	-3.2
APE	Apeiranthos	2.61	2	P	Pn	04 05 13.1	+0.2
APE				S	Sn	04 05 42.4	-1.0
APE	Apeiranthos	2.61	2	eP	Pn	04 05 13.1	+0.2
APE	Apeiranthos	2.61	2	ePn	Pn	04 05 12.4	-0.5
APE	Apeiranthos	2.61	2	eP	Pn	04 05 13.1	+0.2
APE				eSn	Sn	04 05 40.2	-3.2
APE				S		04 05 42.4	
KYTH	Kithira	2.65	314	P	Pn	04 05 14.2	+0.8
KYTH	Kithira	2.65	314	eP	Pn	04 05 14.1	+0.7
KYTH	Kithira	2.65	314	eP	Pn	04 05 14.1	+0.7
ARG	Arkhangelos	2.85	51	P	Pn	04 05 18.7	+2.7
ARG	Arkhangelos	2.85	51	eP	Pn	04 05 18.4	+2.4
ARG	Arkhangelos	2.85	51	eP	Pn	04 05 18.4	+2.4
DAT	Datca	2.89	37	ePN	Pn	04 05 16.9	+0.2
DAT	Datca	2.89	37	ePn	Pn	04 05 16.9	+0.2
VLI	Veliai	3.02	319	P	Pn	04 05 18.9	+0.5
VLI	Veliai	3.02	319	eP	Pn	04 05 18.6	+0.2
VLI	Veliai	3.02	319	P	Pn	04 05 18.9	+0.5
BODT	Bodrum	3.04	30	ePN	Pn	04 05 18.5	-0.2
BODT	Bodrum	3.04	30	ePn	Pn	04 05 18.5	-0.2
DYR	Agios Nikonas	3.39	314	eP	Pn	04 05 24.3	+0.7
DYR	Agios Nikonas	3.39	314	eP	Pn	04 05 24.3	+0.7
MLSB	Milas	3.44	34	ePN	Pn	04 05 24.5	+0.3
MLSB	Milas	3.44	34	ePn	Pn	04 05 24.5	+0.3
DID	Didima	3.51	331	P	Pn	04 05 25.2	0.0
DID	Didima	3.51	331	eP	Pn	04 05 24.9	-0.3
DID				eS	Sn	04 06 03.6	-1.9
DID	Didima	3.51	331	P	Pn	04 05 25.2	0.0
DALY	Dalyan (Mu˜la	3.55	47	ePN	Pn	04 05 26.7	+1.0
DALY	Dalyan (Mu˜la	3.55	47	ePn	Pn	04 05 26.7	+1.0
TURN	Turunc	3.56	46	i P	Pn	04 05 23.4	-2.4
TURN				i S	Sn	04 05 57.7	-8.9
TURN	Turunc	3.56	46	i P	Pn	04 05 23.4	-2.4
YER	Yerkesik	3.56	40	ePN	Pn	04 05 26.7	+0.7
YER	Yerkesik	3.56	40	ePn	Pn	04 05 26.7	+0.7
NAIG	Nisos Aigina	3.64	336	eP	Pn	04 05 26.9	0.0
NAIG	Nisos Aigina	3.64	336	eP	Pn	04 05 26.9	0.0
HMAT	Matruh	3.64	156	P	Pn	04 05 26.1	-0.9
HMAT				S	Sn	04 06 08.9	+0.1
FETY	Fethiye	3.72	53	ePN	Pn	04 05 29.3	+1.3
FETY	Fethiye	3.72	53	ePn	Pn	04 05 29.3	+1.3
ATH	Athens Observa	3.76	339	eP	Pn	04 05 29.8	+1.2
ATH	Athens Observa	3.76	339	eP	Pn	04 05 29.8	+1.2
AYDN	Tasoluk	3.78	31	i P	Pn	04 05 31.3	+2.3
AYDN				i S	Sn	04 06 12.3	0.0
AYDN	Tasoluk	3.78	31	i P	Pn	04 05 31.3	+2.3
AYDN				i S	Sn	04 06 12.3	0.0
PTL	Penteli	3.79	341	eP	Pn	04 05 29.6	+0.5
PTL	Penteli	3.79	341	eP	Pn	04 05 29.6	+0.5
VLX	Vlachokerasia	3.80	321	eP	Pn	04 05 29.7	+0.5
VLX	Vlachokerasia	3.80	321	eP	Pn	04 05 29.7	+0.5
PYL	PYLOS	3.84	310	eP	Pn	04 05 29.9	+0.2
PYL				eS	Sn	04 06 10.7	-2.9
PYL	PYLOS	3.84	310	eP	Pn	04 05 29.9	+0.2
AKAS	Kas	3.88	62	i P	Pn	04 05 31.8	+1.5
AKAS				eS	Sn	04 06 13.7	-1.0
AKAS	Kas	3.88	62	i P	Pn	04 05 31.8	+1.5
AKAS				eS	Sn	04 06 13.7	-1.0
ITM	Ithomi	3.92	315	eP	Pn	04 05 30.5	-0.2
ITM				eS	Sn	04 06 13.7	-1.7
ITM	Ithomi	3.92	315	eP	Pn	04 05 30.5	-0.2
ITM				eS	Sn	04 06 13.7	-1.7
CHOS	Chios island	3.96	8	eP	Pn	04 05 32.8	+1.4
CHOS	Chios island	3.96	8	eP	Pn	04 05 32.8	+1.4
LTK	Loutraki	4.07	332	eP	Pn	04 05 33.1	+0.3
LTK	Loutraki	4.07	332	eP	Pn	04 05 33.1	+0.3
BLCB	Balcova	4.14	18	ePN	Pn	04 05 33.7	-0.1
BLCB	Balcova	4.14	18	ePn	Pn	04 05 33.7	-0.1
IZM	Izmir	4.22	20	ePN	Pn	04 05 35.4	+0.5
IZM	Izmir	4.22	20	ePn	Pn	04 05 35.4	+0.5
GUR	Goura	4.26	326	P	Pn	04 05 36.0	+0.4
GUR				S	Pn	04 05 37.3	+1.7
GUR	Goura	4.26	326	eP	Pn	04 05 35.8	+0.2
GUR	Goura	4.26	326	P	Pn	04 05 36.0	+0.4
AMT	Artemida-Makis	4.28	317	eP	Pn	04 05 35.6	-0.2
AMT	Artemida-Makis	4.28	317	eP	Pn	04 05 35.6	-0.2
GLHS	Glhisar (BURDU	4.29	50	ePN	Pn	04 05 37.4	+1.4
GLHS	Glhisar (BURDU	4.29	50	ePn	Pn	04 05 37.4	+1.4
ELL	Elmali	4.34	57	ePN	Pn	04 05 37.9	+1.3
ELL	Elmali	4.34	57	ePn	Pn	04 05 37.9	+1.3
GOLH	Golhisar	4.38	49	i P	Pn	04 05 39.4	+2.2
GOLH				i S	Sn	04 06 26.7	-0.3
GOLH	Golhisar	4.38	49	i P	Pn	04 05 39.4	+2.2
GOLH				i S	Sn	04 06 26.7	-0.3
DNZL	Cakiroluk	4.38	41	i P	Pn	04 05 38.9	+1.6
DNZL				eS	Sn	04 06 23.1	-4.1
DNZL	Cakiroluk	4.38	41	i P	Pn	04 05 38.9	+1.6
DNZL				eS	Sn	04 06 23.1	-4.1
DENT	Denizli	4.42	41	ePN	Pn	04 05 38.6	+0.9
DENT	Denizli	4.42	41	ePn	Pn	04 05 38.6	+0.9
KLV	Kalavryta, Ach	4.44	325	eP	Pn	04 05 38.2	+0.2
KLV	Kalavryta, Ach	4.44	325	eP	Pn	04 05 38.2	+0.2
LKR	Lokris	4.61	336	eP	Pn	04 05 40.3	+0.1
LKR	Lokris	4.61	336	eP	Pn	04 05 40.3	+0.1
LAKA	Lakka	4.68	325	eP	Pn	04 05 42.2	+1.0
LAKA	Lakka	4.68	325	eP	Pn	04 05 42.2	+1.0
KALE	Kalithea	4.72	327	eP	Pn	04 05 41.7	-0.2
KALE				eS	Sn	04 06 33.6	-1.8
KALE	Kalithea	4.72	327	eP	Pn	04 05 41.7	-0.2
KALE				eS	Sn	04 06 33.6	-1.8
TRIZ	Trizonia	4.73	327	eP	Pn	04 05 43.1	+1.2
TRIZ	Trizonia	4.73	327	eP	Pn	04 05 43.1	+1.2
KORT	Korkueli	4.77	56	i P	Pn	04 05 44.6	+2.1
KORT				i S	Sn	04 06 37.0	+0.4
KORT	Korkueli	4.77	56	i P	Pn	04 05 44.6	+2.1
KORT				i S	Sn	04 06 37.0	+0.4
RLS	Riolos of Patr	4.79	320	eP	Pn	04 05 43.7	+0.9
RLS	Riolos of Patr	4.79	320	eP	Pn	04 05 43.7	+0.9
KULA	Kula-Manisa	4.83	32	ePN	Pn	04 05 44.2	+0.8
KULA	Kula-Manisa	4.83	32	ePn	Pn	04 05 44.2	+0.8
PRK	Paraskevi	4.84	8	eP	Pn	04 05 44.4	+1.1
PRK	Paraskevi	4.84	8	eP	Pn	04 05 44.4	+1.1
EFP	Efpalio	4.86	326	eP	Pn	04 05 44.6	+0.9
EFP	Efpalio	4.86	326	eP	Pn	04 05 44.6	+0.9
AOS	Alonnisos	4.86	346	eP	Pn	04 05 44.7	+1.0
AOS	Alonnisos	4.86	346	eP	Pn	04 05 44.7	+1.0
ANTB	Antalya	4.93	59	ePN	Pn	04 05 46.4	+1.8
ANTB	Antalya	4.93	59	ePn	Pn	04 05 46.4	+1.8
KHL	Karahalli	5.10	40	ePN	Pn	04 05 47.9	+0.8
KHL	Karahalli	5.10	40	ePn	Pn	04 05 47.9	+0.8
KHAL	Karahalli	5.12	39	i P	Pn	04 05 48.5	+1.1
KHAL				i S	Sn	04 06 41.8	-3.4
KHAL	Karahalli	5.12	39	i P	Pn	04 05 48.5	+1.1
KHAL				i S	Sn	04 06 41.8	-3.4
NEO	Neokhori	5.15	341	eP	Pn	04 05 48.1	+0.5
NEO	Neokhori	5.15	341	eP	Pn	04 05 48.1	+0.5
BCK	Bucak	5.18	53	ePN	Pn	04 05 49.3	+1.2
BCK	Bucak	5.18	53	ePn	Pn	04 05 49.3	+1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AGG	Agios Georgios	5.18	333	eP	Pn	04 05 49.2	+1.1
AGG	Agios Georgios	5.18	333	eP	Pn	04 05 49.2	+1.1
SWA2		5.19	179	P	Pn	04 05 48.4	+0.1
	baz=181						
SWA2		5.19	179	P	Pn	04 05 48.4	+0.1
EVR	Evrytania	5.30	328	eP	Pn	04 05 49.9	0.0
EVR	Evrytania	5.30	328	eP	Pn	04 05 49.9	0.0
ISP	Isparta	5.34	50	ePN	Pn	04 05 52.4	+2.0
ISP	Isparta	5.34	50	⇑iP	Pn	04 05 53.6	+3.2
ISP	Isparta	5.34	50	ePn	Pn	04 05 52.4	+2.0
ISP	Isparta	5.34	50	⇑iP	Pn	04 05 53.6	+3.2
VLS	Valsamata	5.37	315	eP	Pn	04 05 51.0	+0.3
VLS	Valsamata	5.37	315	eP	Pn	04 05 51.0	+0.3
HBRG	Burj al ‘Arab	5.39	135	P	Pn	04 05 48.9	-2.1
	baz=139						
HBRG				S	Sn	04 06 47.4	-4.3
	baz=139						
BALY	Balya	5.57	18	i P	Pn	04 05 54.3	+0.8
BALY				eS	Sn	04 06 46.0	-10
BALY	Balya	5.57	18	i P	Pn	04 05 54.3	+0.8
PAIG	Paliouri	5.63	346	eP	Pn	04 05 55.5	+1.2
PAIG	Paliouri	5.63	346	eP	Pn	04 05 55.5	+1.2
DST	Dursunbey	5.75	26	ePN	Pn	04 05 55.9	-0.1
DST	Dursunbey	5.75	26	ePn	Pn	04 05 55.9	-0.1
THL	Klokotos Trika	5.77	333	eP	Pn	04 05 57.7	+1.5
THL	Klokotos Trika	5.77	333	eP	Pn	04 05 57.7	+1.5
SHUT	Suhut-Afyon	5.83	44	ePN	Pn	04 05 58.0	+0.9
SHUT	Suhut-Afyon	5.83	44	ePn	Pn	04 05 58.0	+0.9
GONE	Gonen-Balikesi	5.88	17	ePN	Pn	04 05 57.8	+0.2
GONE	Gonen-Balikesi	5.88	17	ePn	Pn	04 05 57.8	+0.2
ALT	Altintas	5.95	38	ePN	Pn	04 05 59.5	+0.7
ALT	Altintas	5.95	38	ePn	Pn	04 05 59.5	+0.7
TVSB	Tavsanli	5.96	32	ePN	Pn	04 05 59.3	+0.5
TVSB	Tavsanli	5.96	32	ePn	Pn	04 05 59.3	+0.5
GELI	Tayfur-Gelibol	6.00	8	ePN	Pn	04 05 59.3	0.0
GELI	Tayfur-Gelibol	6.00	8	ePn	Pn	04 05 59.3	0.0
LPK	Lapseki	6.01	10	ePN	Pn	04 05 59.3	-0.1
LPK	Lapseki	6.01	10	ePn	Pn	04 05 59.3	-0.1
LIT	Litokhoron	6.09	339	eP	Pn	04 06 02.1	+1.5
LIT	Litokhoron	6.09	339	eP	Pn	04 06 02.1	+1.5
PLG	Polygyros	6.11	346	eP	Pn	04 06 01.3	+0.5
PLG	Polygyros	6.11	346	eP	Pn	04 06 01.3	+0.5
KRBG	Karabiga-Canak	6.12	14	ePN	Pn	04 06 01.0	+0.1
KRBG	Karabiga-Canak	6.12	14	ePn	Pn	04 06 01.0	+0.1
LEF	Lefka	6.21	82	ePN	Pn	04 06 03.4	+1.3
LEF	Lefka	6.21	82	ePn	Pn	04 06 03.4	+1.3
ORLT	Orhaneli	6.24	26	ePN	Pn	04 06 02.7	0.0
ORLT	Orhaneli	6.24	26	ePn	Pn	04 06 02.7	0.0
ERIK	Erikli-Kesan	6.27	8	ePN	Pn	04 06 02.7	-0.3
ERIK	Erikli-Kesan	6.27	8	ePn	Pn	04 06 02.7	-0.3
JAN	Janina	6.34	326	eP	Pn	04 06 04.1	+0.2
JAN	Janina	6.34	326	eP	Pn	04 06 04.1	+0.2
ERMK	Ermenek	6.51	68	i P	Pn	04 06 07.9	+1.4
ERMK				i S	Sn	04 07 06.3	-13
ERMK	Ermenek	6.51	68	i P	Pn	04 06 07.9	+1.4
HNAT	Natroun	6.54	136	P	Pn	04 06 05.2	-1.6
	baz=139						
HNAT	Natroun	6.54	136	P	Pn	04 06 05.2	-1.6
CSS	Prodhromos	6.56	83	ePN	Pn	04 06 08.5	+1.5
CSS	Prodhromos	6.56	83	Pn	Pn	04 06 07.0	0.0
SOH	Sokhos	6.56	346	eP	Pn	04 06 07.7	+0.7
SOH	Sokhos	6.56	346	eP	Pn	04 06 07.7	+0.7
KONT	Konya--Tatoy	6.62	56	ePN	Pn	04 06 08.8	+0.9
KONT	Konya--Tatoy	6.62	56	ePn	Pn	04 06 08.8	+0.9
LFK	Lefkose	6.74	81	ePN	Pn	04 06 11.5	+1.9
LFK	Lefkose	6.74	81	ePn	Pn	04 06 11.5	+1.9
LADK	Ladik-KONYA	6.76	54	ePN	Pn	04 06 10.5	+0.7
LADK	Ladik-KONYA	6.76	54	ePn	Pn	04 06 10.5	+0.7
KIZT	Kizilcal	6.83	48	ePN	Pn	04 06 11.7	+0.8
KIZT	Kizilcal	6.83	48	ePn	Pn	04 06 11.7	+0.8
KEK	Kerkira	6.89	321	eP	Pn	04 06 11.8	+0.2
KEK	Kerkira	6.89	321	eP	Pn	04 06 11.8	+0.2
GRG	Griva	6.91	341	eP	Pn	04 06 12.6	+0.8
GRG	Griva	6.91	341	eP	Pn	04 06 12.6	+0.8
SVRH	Sivrihisar-ESK	7.00	43	ePN	Pn	04 06 13.4	+0.4
SVRH	Sivrihisar-ESK	7.00	43	ePn	Pn	04 06 13.4	+0.4
FNA	Florina	7.08	334	eP	Pn	04 06 14.6	+0.5
FNA	Florina	7.08	334	eP	Pn	04 06 14.6	+0.5
KOT	Kottamia	7.08	128	P	Pn	04 06 11.1	-3.0
	baz=131						
KOT				AMP		04 07 00.0	
	comp=E,30µm,0.2s,logA/T=5.2,baz=131						
HSAF	As Saff	7.11	131	P	Pn	04 06 11.5	-3.1
	baz=134						
CTKS	Kestanelik-??a	7.21	19	ePN	Pn	04 06 15.6	-0.2
CTKS	Kestanelik-??a	7.21	19	ePn	Pn	04 06 15.6	-0.2
GULT	Gulveren	7.23	33	ePN	Pn	04 06 16.6	+0.4
GULT	Gulveren	7.23	33	ePn	Pn	04 06 16.6	+0.4
GLL	Jalalah	7.24	130	P	Pn	04 06 14.4	-2.0
	baz=134						
GLL	Jalalah	7.24	130	P	Pn	04 06 14.4	-2.0
HHAG	Hagoal	7.24	126	P	Pn	04 06 13.4	-3.0
	baz=130						
HHAG				S	Sn	04 07 29.5	-7.8
	baz=130						
EREN	Erenkoy	7.29	79	ePN	Pn	04 06 18.5	+1.6
EREN	Erenkoy	7.29	79	ePn	Pn	04 06 18.5	+1.6
EDRB	Edirne	7.46	8	ePN	Pn	04 06 18.8	-0.5
EDRB	Edirne	7.46	8	ePn	Pn	04 06 18.8	-0.5
AMAG	Maghara	7.61	118	P	Pn	04 06 16.6	-4.9
	baz=121						
HFRF	Wahat Farafira	7.70	160	P	Pn	04 06 22.9	+0.2
	baz=162						
HFRF	Wahat Farafira	7.70	160	P	Pn	04 06 22.9	+0.2
SUZ		7.81	124	P	Pn	04 06 21.1	-3.0
	baz=127						
AFSR	Afˉar-Bala (A	7.91	49	ePN	Pn	04 06 26.3	+0.7
AFSR	Afˉar-Bala (A	7.91	49	ePn	Pn	04 06 26.3	+0.7
ANTO	Ankara	8.01	45	ePN	Pn	04 06 27.4	+0.5
ANTO	Ankara	8.01	45	ePn	Pn	04 06 27.4	+0.5
OFRI	‘Ofer	8.22	100	Pn	Pn	04 06 29.5	-0.2
KAMT	Kaman	8.28	51	ePN	Pn	04 06 30.9	+0.3
KAMT	Kaman	8.28	51	ePn	Pn	04 06 30.9	+0.3
NIG	Nigde	8.29	61	ePN	Pn	04 06 31.7	+0.7
NIG	Nigde	8.29	61	ePn	Pn	04 06 31.7	+0.7
VTS	Vitosha	8.30	349	⇓iP	Pn	04 06 40.9	+10
SLTI	Sal’it	8.37	103	Pn	Pn	04 06 31.7	-0.1
KZIT	Kziot	8.37	112	Pn	Pn	04 06 31.4	-0.5
BRTR	Keskin Array B	8.43	49	Pn	Pn	04 06 34.0	+1.2
	comp=E,0.2nm,0.3s,baz=223,slow=14,SNR=11						
BRTR				Sn	Sn	04 08 05.5	-1.1
	comp=E,0.2nm,0.3s,baz=135,slow=18,SNR=4.6						
MMAI	Mount Meron Ar	8.46	97	Pn	Pn	04 06 32.1	-1.1
	comp=E,2.7nm,0.3s,baz=279,slow=11,SNR=16						
MMAI				Sn	Sn	04 08 02.0	-5.3
	comp=E,6.6nm,0.3s,baz=266,slow=22,SNR=9.2						
RTMI	Retamim	8.53	111	Pn	Pn	04 06 34.0	-0.1
HNKL	Nakhl	8.56	119	P	Pn	04 06 30.8	-3.7
	baz=123						
MMLI	Mount Malkishu	8.62	101	Pn	Pn	04 06 34.7	-0.6
KSDI	Kefar Szold	8.64	95	Pn	Pn	04 06 34.9	-0.6
YTIR	Yattir	8.74	108	Pn	Pn	04 06 36.8	-0.1
HMDT	Nahal Hemdat	8.76	102	Pn	Pn	04 06 36.8	-0.3
RMNI	Mount Ramon	8.80	113	Pn	Pn	04 06 37.9	+0.2
ASUT		8.80	141	P	Pn	04 06 36.7	-1.1
	baz=144						
ASUT		8.80	141	P	Pn	04 06 36.7	-1.1
GRB	Gharib	8.83	132	P	Pn	04 06 36.1	-2.0
	baz=135						
GRB	Gharib	8.83	132	P	Pn	04 06 36.1	-2.0
DSI	Dead Sea	8.87	106	Pn	Pn	04 06 37.9	-0.7
KOZT	Kozan	8.98	67	ePN	Pn	04 06 40.9	+0.7
KOZT	Kozan	8.98	67	ePn	Pn	04 06 40.9	+0.7
KRMI	Paran Flat	9.01	116	Pn	Pn	04 06 39.6	-1.0
PRNI	Paran	9.10	114	Pn	Pn	04 06 41.8	0.0
ZFRI	Zfri	9.13	112	Pn	Pn	04 06 41.4	-0.8
HRFI	Mount Harif	9.28	116	Pn	Pn	04 06 44.7	+0.4
MBRI	Mt Berech	9.31	117	Pn	Pn	04 06 44.5	-0.3
CORM	Corum	9.31	49	ePN	Pn	04 06 44.8	0.0
CORM	Corum	9.31	49	ePn	Pn	04 06 44.8	0.0
EIL	Elat	9.41	118	Pn	Pn	04 06 45.6	-0.5
	comp=E,2.9nm,0.3s,baz=35,slow=11,SNR=34						
EIL				Sn	Sn	04 08 22.3	-8.2
	comp=E,1.7nm,0.3s,baz=325,slow=13,SNR=5.7						
EIL	Elat	9.41	118	Pn	Pn	04 06 45.9	-0.2
HKAT	Jabal Katrina	9.43	127	P	Pn	04 06 43.8	-2.7
	baz=129						
ASF	Jabal al Asfar	9.89	100	Pn	Pn	04 06 51.7	-1.1
	comp=E,0.3nm,0.3s,baz=328,slow=2.7,SNR=4.1						
ASF				Sn	Sn	04 08 35.9	-6.5
	comp=E,0.6nm,0.3s,baz=257,slow=14,SNR=2.9						
STON	Ston	10.33	327	ePn	Pn	04 06 54.9	-3.7
STON				Sn	Sn	04 08 39.4	-13
CFR	Carcaliu	10.92	10	⇓iP	Pn	04 07 11.6	+5.0
MLR	Muntele Rosu	11.03	2	⇑iP	Pn	04 07 11.4	+3.1
MLR	Muntele Rosu	11.03	2	Pn	Pn	04 07 11.0	+2.7
	comp=E,0.0nm,0.3s,baz=236,slow=10.0,SNR=3.6						
VRI	Vrincioaia	11.45	5	⇑iP	Pn	04 07 17.1	+3.2
KBZ	Khabaz	16.42	50	Pn	P	04 08 24.1	+1.9
	comp=E,0.4nm,0.3s,baz=234,slow=7.6,SNR=28						
AKASG	Malin Array Be	16.48	9	Pn	P	04 08 22.0	-0.7
	comp=E,4.5nm,0.3s,baz=196,slow=9.8,SNR=22						
GERES	GERESS Array B	16.80	332	Pn	P	04 08 27.8	+1.4
	comp=E,0.3nm,0.3s,baz=146,slow=12,SNR=14						
DAVOX	Davos/Dischmat	17.00	321	Pn	P	04 08 31.8	+3.0
	comp=E,0.2nm,0.3s,baz=153,slow=16,SNR=4.3						
KHC	Kasperske Hory	17.07	333	eP	P	04 08 42.0	+13
FRF	La Foret Royal	17.14	308	eP	Pn	04 08 27.7	-1.4
FRF	La Foret Royal	17.14	308	eP	Pn	04 08 27.7	-1.4
MBDF	Montbardon	17.60	311	eP	Pn	04 08 33.6	-1.3
MBDF	Montbardon	17.60	311	eP	Pn	04 08 33.6	-1.3
LPG	La Plagne	18.00	313	eP	P	04 08 38.5	-1.5
LPG	La Plagne	18.00	313	eP	P	04 08 38.5	-1.5
LPL	La Plagne	18.02	313	eP	P	04 08 39.5	-0.7
LPL	La Plagne	18.02	313	eP	P	04 08 39.5	-0.7
ORIF	Oris-en-Rattie	18.25	311	eP	P	04 08 42.5	0.0
ORIF	Oris-en-Rattie	18.25	311	eP	P	04 08 42.5	0.0
NKC	Novy Kostel	18.40	333	eP	Pn	04 08 46.7	+2.2
CABF	La Chapelle	18.99	316	eP	P	04 08 50.1	-0.5
CABF	La Chapelle	18.99	316	eP	P	04 08 50.1	-0.5
HINF	Hinteralfeld	19.25	319	eP	P	04 08 54.0	+0.6
	comp=E,6.4nm,0.8s						
HINF	Hinteralfeld	19.25	319	eP	P	04 08 54.0	+0.6
	comp=E,3.2nm,0.8s						
CDF	Champ du Feu	19.40	321	eP	P	04 08 52.7	-2.4
	comp=E,11nm,1.0s						
CDF	Champ du Feu	19.40	321	eP	P	04 08 52.7	-2.4
	comp=E,5.5nm,1.0s						
HAU	Haudompre	19.64	319	eP	P	04 08 58.3	+0.7
	comp=E,5.0nm,0.6s						
HAU	Haudompre	19.64	319	eP	P	04 08 58.3	+0.7
	comp=E,2.5nm,0.6s						
PAGF	Fort de Pagny	20.30	320	eP	P	04 09 04.8	0.0
PAGF	Fort de Pagny	20.30	320	eP	P	04 09 04.8	0.0
SMF	Signal de Mont	20.33	313	eP	P	04 09 05.2	+0.1
	comp=E,14nm,1.2s						
SMF	Signal de Mont	20.33	313	eP	P	04 09 05.2	+0.1
	comp=E,7.1nm,1.2s						
SFTF	Sexfontaines	20.47	318	eP	P	04 09 06.6	0.0
SFTF	Sexfontaines	20.47	318	eP	P	04 09 06.6	0.0
MEZF	Maizieres J’vi	20.63	319	eP	P	04 09 07.5	-0.8
MEZF	Maizieres J’vi	20.63	319	eP	P	04 09 07.5	-0.8
LOR	Lormes	20.63	315	eP	P	04 09 08.5	+0.1
LOR	Lormes	20.63	315	eP	P	04 09 08.5	+0.1
CAF	Calviac	20.71	307	eP	P	04 09 09.2	0.0
CAF	Calviac	20.71	307	eP	P	04 09 09.2	0.0
BGF	Bois d’Agland	20.89	312	eP	P	04 09 11.5	+0.3
	comp=E,13nm,0.9s						
BGF	Bois d’Agland	20.89	312	eP	P	04 09 11.5	+0.3
	comp=E,6.4nm,0.9s						
TCF	Toulx Ste Croi	21.17	311	eP	P	04 09 13.9	-0.3
TCF	Toulx Ste Croi	21.17	311	eP	P	04 09 13.9	-0.3
RJF	Les Rejaudoux	21.21	308	eP	P	04 09 14.8	+0.2
RJF	Les Rejaudoux	21.21	308	eP	P	04 09 14.8	+0.2
LFF	La Frestale	21.59	306	eP	P	04 09 18.3	-0.3
LFF	La Frestale	21.59	306	eP	P	04 09 18.3	-0.3
BAIF	Baives	22.00	322	eP	P	04 09 23.1	+0.1
	comp=E,10nm,0.7s						
BAIF	Baives	22.00	322	eP	P	04 09 23.1	+0.1
	comp=E,5.1nm,0.7s						
MFF	Saint Martin d	22.78	310	eP	P	04 09 29.6	-1.8
MFF	Saint Martin d	22.78	310	eP	P	04 09 29.6	-1.8
LDF	La Druitiere	23.62	314	eP	P	04 09 38.5	-1.0
LDF	La Druitiere	23.62	314	eP	P	04 09 38.5	-1.0
FLN	La Foliniere	23.91	315	eP	P	04 09 41.1	-1.1
	comp=E,5.6nm,0.5s						
FLN	La Foliniere	23.91	315	eP	P	04 09 41.1	-1.1
	comp=E,2.8nm,0.5s						
ESDC	Sonseca Array	23.94	291	P	P	04 09 43.6	+0.9
	comp=E,1.3nm,0.6s,baz=78,slow=9.9,SNR=12						
GRR	Gorron	23.96	313	eP	P	04 09 41.9	-0.8
GRR	Gorron	23.96	313	eP	P	04 09 41.9	-0.8
SGMF	Saint Gilles	24.94	312	eP	P	04 09 51.2	-0.4
SGMF	Saint Gilles	24.94	312	eP	P	04 09 51.2	-0.4
MDT	Midelt	25.00	275	P	P	04 09 53.0	+0.5
	comp=E,1.3nm,0.8s,baz=108,slow=17,SNR=2.5						
QUIF	Quistinic	25.18	311	eP	P	04 09 53.4	-0.5
QUIF	Quistinic	25.18	311	eP	P	04 09 53.4	-0.5
ROSF	Rostrenen	25.41	312	eP	P	04 09 56.0	+0.1
ROSF	Rostrenen	25.41	312	eP	P	04 09 56.0	+0.1
HFS	Hagfors	26.81	347	P	P	04 10 07.3	-1.1
	comp=E,0.6nm,0.4s,baz=134,slow=8.5,SNR=6.6						
FINES	FINESS Array B	27.01	1	P	P	04 10 08.9	-1.3
	comp=E,0.4nm,0.3s,baz=159,slow=13,SNR=8.9						
KAF	Kangasniemi	27.69	1	ep	P	04 10 14.3	-1.9
	comp=E,0.7nm,0.6s						
KAF	Kangasniemi	27.69	1	eP	P	04 10 14.3	-1.9
	comp=E,0.7nm,0.6s						
EKA	Eskdalemuir Ar	28.73	325	P	P	04 10 27.2	+1.6
	comp=E,0.7nm,0.6s,baz=124,slow=11,SNR=3.7						
JOF	Joensuu	28.73	6	ep	P	04 10 22.6	-2.9
	comp=E,0.4nm,0.4s						
TORD	Torodi Ar. Bea	30.19	231	P	P	04 10 40.5	+1.6
	comp=E,4.3nm,0.5s,baz=34,slow=8.5,SNR=93						
ARCES	ARCESS Array B	35.13	0	P	P	04 11 20.5	-1.1
	comp=E,0.7nm,0.6s,baz=180,slow=9.8,SNR=8.0						
DBIC	Dimbokro	39.28	232	P	P	04 11 58.8	+1.5
	comp=E,1.9nm,0.7s,baz=78,slow=13,SNR=5.3						
MKAR	Makanchi Array	44.01	56	P	P	04 12 37.9	+2.2
	comp=E,1.2nm,0.6s,baz=278,slow=6.7,SNR=16						
ZALV	Zalesovo Beam	45.36	46	P	P	04 12 47.2	+0.9
	comp=E,1.6nm,0.5s,baz=275,slow=8.5,SNR=10						
SCHQ	Schefferville	63.85	320	P	P	04 15 01.1	+0.8
	comp=E,2.3nm,0.8s,baz=56,slow=7.3,SNR=3.9						
YKA	Yellowknife Ar	78.18	342	P	P	04 16 27.2	+0.3
	comp=E,0.1nm,0.6s,baz=35,slow=5.2,SNR=3.5						

*CSEM **02** 04:05:46.3±0.4, 76.°82N×17.°49E, h2km, ML2.3, Error ellipse: s-maj=28.2km s-min=5.5km az=75.0*
*NAO **02** 04:05:47.7±1.9, 77.°03N×18.°90E, h1km±18km, ML2.2*
*BER **02** 04:05:52.3±1.9, 77.°15N×19.°14E, h22km±14km, MD2.7, ML2.3, ML2.2(NAO)*
ISC 02 04:05:46.3±2.1**, 77.°14N**±0.°09×**20.°7E**±0.°3**, h10km, n15,** σ**1.s10**/19**, Svalbard region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HSP	Hornsund	1.16	266	eP	Pb	04 06 03.6	-4.8
HSP				eS	Sb	04 06 11.8	-12
SPA0	Spitsbergen Ar	1.39	320	Pg	Pb	04 06 12.6	+0.3
	baz=147,slow=22						
SPA0				Lg	Lg	04 06 27.9	
	baz=155,slow=37						
SPA0	Spitsbergen Ar	1.39	320	Pg	Pb	04 06 12.6	+0.3
	baz=147,slow=22						
SPA0				Lg	Lg	04 06 27.9	
	baz=155,slow=37						
SPA0	Spitsbergen Ar	1.39	320	Pg	Pb	04 06 12.6	+0.3
	baz=147,slow=20,SNR=95						
SPA0				Lg	Lg	04 06 28.0	
	baz=155,slow=32,SNR=55						
KBS	Kingsbay	2.55	319	Pn	Pn	04 06 28.2	+0.6
KBS				Pg	Pb	04 06 33.1	+1.0
KBS				Lg	Lg	04 07 02.1	
KBS	Kingsbay	2.55	319	eP	Pn	04 06 28.1	+0.5
KBS				ePg	Pb	04 06 32.7	+0.6
KBS				eSg	Sb	04 07 02.2	-1.3
KBS				AML	AML	04 07 04.3	
	comp=Z,32nm,0.3s						
KBS	Kingsbay	2.55	319	eP	Pn	04 06 28.1	+0.5
	SNR=55						
KBS	Kingsbay	2.55	319	ePg	Pb	04 06 32.7	+0.6
	SNR=92						
KBS				Lg	Lg	04 07 02.1	
KBS				eSg	Sb	04 07 02.2	-1.3
	comp=Z,32nm,0.3s,SNR=92						
BJO	Bjornoya	2.68	189	e	Pg	04 06 39.7	+2.2
BJO				eSg	Sg	04 07 11.6	-0.5
ARA0	ARCESS Array S	7.77	167	Sn	Sn	04 09 06.2	-0.9
	slow=22						
ARA0	ARCESS Array S	7.77	167	Sn	Sn	04 09 06.2	-0.9
	slow=22						
ARA0	ARCESS Array S	7.77	167	Sn	Sn	04 09 06.2	-0.9
	slow=19,SNR=55						
NB2	NORSAR Subarra	16.48	196	P	Pn	04 09 35.9	-1.4
NB2	NORSAR Subarra	16.48	196	P	Pn	04 09 35.9	-1.4
NB2	NORSAR Subarra	16.48	196	P	Pn	04 09 35.9	-1.4
	SNR=51						

*ISK **02** 04:13:01.6, 34.°87N×34.°07E, h3km, MD2.7*
*CSEM **02** 04:13:03.8±1.3, 34.°89N×33.°93E, h20km, Mw2.8, Error ellipse: s-maj=33.2km s-min=16.5km az=164.0*
*NIC **02** 04:13:04.1±0.2, 34.°65N×33.°91E, h28km, ML2.3, MW2.8*
ISC 02 04:13:00.5±2.8**, 34.°7N**±0.°2×**34.°00E**±0.°10**, h21km**±6km**, n15,** σ**1.s01**/25**, Cyprus region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PHNC	Paralimni	0.33	4	P	Pn	04 13 11.3	+1.2
	1.6nm,0.5s						
PHNC				S	Sn	04 13 17.0	+0.7
PHNC	Paralimni	0.33	4	P	Pn	04 13 11.3	+1.2
	1.6nm,0.5s						
PHNC				S	Sn	04 13 17.0	+0.7
CSS	Prodhromos	0.62	298	P	Pn	04 13 14.3	+0.1
	1.2nm,0.3s						
CSS				S	Sb	04 13 22.3	+1.1
CSS	Prodhromos	0.62	298	ePG	Pn	04 13 14.5	+0.3
CSS				eSG	Sn	04 13 23.4	-0.1
CSS	Prodhromos	0.62	298	ePg	Pn	04 13 14.5	+0.3
CSS				S	Sb	04 13 22.3	+1.1
CSS				eSg	Sn	04 13 23.4	-0.1
LFK	Lefkose	0.72	328	ePG	Pb	04 13 13.3	-1.0
LFK				eSG	Sb	04 13 23.3	-0.5
LFK	Lefkose	0.72	328	ePg	Pb	04 13 13.4	-1.0
LFK				eSg	Sb	04 13 23.3	-0.5
MAMC	Mammari	0.81	308	P	Pb	04 13 17.3	+1.3
MAMC	Mammari	0.81	308	P	Pb	04 13 17.3	+1.3
EREN	Erenkoy	0.86	9	ePG	Pb	04 13 15.7	-1.1
EREN	Erenkoy	0.86	9	ePg	Pb	04 13 15.7	-1.1
ALFC	Alevga	1.25	293	P	Pn	04 13 23.0	+0.2
	0.3nm,0.4s						
ALFC				S	Sn	04 13 37.3	-1.7
ALFC	Alevga	1.25	293	P	Pn	04 13 23.0	+0.2
	0.3nm,0.4s						
ALFC				S	Sn	04 13 37.3	-1.7
AKMC	Akamas	1.42	285	P	Pn	04 13 25.0	-0.1
AKMC	Akamas	1.42	285	P	Pn	04 13 25.0	-0.1

GUC 02 04:17:20.3±0.4**, 35.°28S**×**71.°40W, h98km**±2km**, MD3.5, ML3.6, 3C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TALC	Talca	0.23	238	⇑iP	Pn	04 17 34.1	-0.1
TALC				i S	Sn	04 17 44.5	-0.2
TALC				AML	AML	04 17 44.8	
	comp=N,15µm,0.2s						
CACH	El Canelo	1.33	30	⇓iP	Pn	04 17 44.6	+0.1
CACH				i S	Sn	04 18 03.4	+0.5
COCH	Cobquecura	1.42	233	eP	Pn	04 17 45.6	+0.2
COCH				i S	Sn	04 18 04.3	0.0
CCHI	Chillan	1.43	202	⇓iP	Pn	04 17 45.8	+0.2
CCHI				i S	Sn	04 18 05.0	+0.2
CHCH	Chadas Angostu	1.47	25	eP	Pn	04 17 46.0	-0.2
LMEL	Las Melosas	1.73	35	⇑iP	Pn	04 17 50.1	+0.6
LMEL				i S	Sn	04 18 12.4	+0.6
LMEL				AML	AML	04 18 16.0	
	comp=N,337nm,0.2s						
PCH	Pirque	1.81	24	eP	Pn	04 17 50.6	+0.2
PCH				i S	Sn	04 18 13.8	+0.4
ANTU	Antumapu	1.82	21	eP	Pn	04 17 50.8	+0.3
ANTU				i S	Sn	04 18 14.0	+0.5
ANTU				AML	AML	04 18 16.6	
	comp=N,318nm,0.2s						
SAN	Santiago	1.92	19	i S	Sn	04 18 16.3	+0.5
CLCH	Cerro Calan	2.01	21	eP	Pn	04 17 53.3	+0.3
CLCH				i S	Sn	04 18 18.5	+0.5
CLCH				AML	AML	04 18 19.6	
	comp=E,330nm,0.5s						
PEL	Peldehue	2.21	16	⇑iP	Pn	04 17 56.2	+0.6
PEL				i S	Sn	04 18 23.1	+0.5
PEL				AML	AML	04 18 25.5	
	comp=E,430nm,0.3s						
ROCH	El Roble	2.32	8	eP	Pn	04 17 57.9	+0.5
ROCH				eS	Sn	04 18 26.5	+0.9
ROCH				AML	AML	04 18 29.2	
	comp=E,390nm,0.4s						

IDC 02 04:19:25.7±1.6**, 1.°18S**×**122.°69E, h0km, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/21**, mbtmp3.4**/4**, Error ellipse: s-maj=233.3km s-min=25.2km az=61.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.85	149	P	P	04 24 19.9	-0.3
	0.5nm,0.8s,baz=326,slow=12,SNR=3.0						
ASAR	Alice Springs	24.85	155	P	P	04 24 50.1	-0.1
	0.7nm,0.9s,baz=342,slow=8.2,SNR=4.7						
STKA	Stephens Creek	35.36	152	P	P	04 26 23.4	+0.3
	0.9nm,0.7s,baz=320,slow=7.9,SNR=3.6						
MKAR	Makanchi Array	59.46	329	P	P	04 29 30.4	-0.1
	0.4nm,0.7s,baz=127,slow=7.2,SNR=4.9						

*ISK **02** 04:50:44.9, 39.°30N×27.°93E, h5km, MD2.6*
*DDA **02** 04:50:44.6, 39.°31N×27.°93E, h7km, MD2.8*
*CSEM **02** 04:50:45.6±0.1, 39.°28N×27.°95E, h2km, MD2.6, Error ellipse: s-maj=2.9km s-min=1.9km az=74.0*
ISC 02 04:50:45.4±1.0**, 39.°28N**±0.°02×**27.°93E**±0.°03**, h9km**±11km**, n44,** σ**0.s37**/59**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.36	353	ePG	Pg	04 50 52.4	-0.1
BALB				eSG	Sg	04 50 58.0	+0.7
BALB	Balikesir	0.36	353	ePg	Pg	04 50 52.4	-0.1
BALB				eSg	Sg	04 50 58.0	+0.7
AKHS	Akhisar	0.41	193	i P	Pg	04 50 53.4	0.0
AKHS				i S	Sb	04 51 00.7	-0.4
AKHS	Akhisar	0.41	193	i P	Pg	04 50 53.4	0.0
AKHS				i S	Sb	04 51 00.7	-0.4
AKS	Akhisar	0.41	193	ePG	Pg	04 50 53.6	+0.2
AKS				eSG	Sb	04 51 01.7	+0.5
AKS	Akhisar	0.41	193	ePg	Pg	04 50 53.6	+0.2
BALY	Balya	0.52	332	i P	Pg	04 50 55.0	-0.5
BALY				i S	Sg	04 51 02.1	-0.3
BALY	Balya	0.52	332	i P	Pg	04 50 55.0	-0.5
BALY				i S	Sg	04 51 02.1	-0.3
DURS	Dursunbey	0.53	52	i P	Pg	04 50 55.2	-0.4
DURS				i S	Sg	04 51 02.4	-0.2
DURS	Dursunbey	0.53	52	i P	Pg	04 50 55.2	-0.4
DURS				i S	Sg	04 51 02.4	-0.2
DST	Dursunbey	0.62	58	ePG	Pb	04 50 57.9	-0.5
DST	Dursunbey	0.62	58	ePg	Pb	04 50 57.9	-0.5
DEMI	Demirci	0.65	111	i P	Pg	04 50 58.0	0.0
DEMI				i S	Sg	04 51 07.4	+0.8
DEMI	Demirci	0.65	111	i P	Pg	04 50 58.0	0.0
DEMI				i S	Sg	04 51 07.4	+0.8
GONE	Gonen-Balikesi	0.79	346	ePG	Pb	04 51 01.1	-0.1
GONE	Gonen-Balikesi	0.79	346	ePg	Pb	04 51 01.1	-0.1
MANT	Manisa	0.93	148	i P	Pg	04 51 03.3	+0.1
MANT				i S	Sg	04 51 14.8	-0.5
MANT	Manisa	0.93	148	i P	Pg	04 51 03.3	+0.1
MANT				i S	Sg	04 51 14.8	-0.5
KULA	Kula-Manisa	0.95	143	ePG	Pg	04 51 04.0	+0.3
KULA	Kula-Manisa	0.95	143	ePg	Pg	04 51 04.0	+0.3
EDC	Edincik	1.07	357	ePG	Pn	04 51 06.6	+0.2
EDC	Edincik	1.07	357	ePg	Pn	04 51 06.6	+0.2
ORLT	Orhaneli	1.07	44	ePG	Pn	04 51 06.6	+0.1
ORLT	Orhaneli	1.07	44	ePg	Pn	04 51 06.6	+0.1
BNT	Bandirma	1.07	359	ePG	Pn	04 51 06.9	+0.3
BNT	Bandirma	1.07	359	ePg	Pn	04 51 06.9	+0.3
TVSB	Tavsanli	1.20	81	ePN	Pg	04 51 08.4	+0.1
TVSB	Tavsanli	1.20	81	ePn	Pg	04 51 08.5	+0.1
GDZ	Gediz	1.22	99	i P	Pn	04 51 08.5	-0.1
GDZ				i S	Sb	04 51 24.6	+0.1
GDZ	Gediz	1.22	99	i P	Pn	04 51 08.5	-0.1
GDZ				i S	Sb	04 51 24.6	+0.1
MDNY	Mudanya-Bursa	1.31	34	ePN	Pg	04 51 11.1	+0.6
MDNY	Mudanya-Bursa	1.31	34	ePn	Pg	04 51 11.1	+0.6
MRMT	Marmara Adasi	1.35	349	ePN	Pg	04 51 11.6	+0.4
MRMT	Marmara Adasi	1.35	349	ePn	Pg	04 51 11.6	+0.4
ARMT	Armutlu	1.47	29	ePN	Pg	04 51 13.5	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARMT	Armutlu	1.47	29	ePn	Pg	04 51 13.5	0.0
GEMT	Gemlik	1.50	40	ePN	Pg	04 51 13.7	-0.5
GEMT	Gemlik	1.50	40	ePn	Pg	04 51 13.7	-0.5
IZI	Iznik	1.59	48	ePN	Pb	04 51 14.8	-0.1
IZI	Iznik	1.59	48	ePn	Pb	04 51 14.8	-0.1
ALT	Altintas	1.71	97	ePN	Pb	04 51 16.6	-0.3
ALT	Altintas	1.71	97	ePn	Pb	04 51 16.6	-0.3
ADVT	Abdulvahap	1.80	50	ePN	Pb	04 51 18.5	0.0
ADVT	Abdulvahap	1.80	50	ePn	Pb	04 51 18.5	0.0

*ISK **02** 04:52:08.8, 39.°58N×27.°08E, h5km, MD3.4*
*ATH **02** 04:52:08.3, 39.°48N×27.°23E, h31km±2km, MD3.0/5*
*SOF **02** 04:52:08.6, 39.°65N×26.°97E, h2km, MD2.8*
*DDA **02** 04:52:08.6, 39.°54N×27.°12E, h27km, MD3.2*
*ISCJB **02** 04:52:09.2±0.4, 39.°54N±0.°02×27.°07E±0.°02, h2km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=178.9*
*CSEM **02** 04:52:09.8±0.1, 39.°56N×27.°05E, h2km, MD3.2, Error ellipse: s-maj=3.2km s-min=3.1km az=118.0*
*THE **02** 04:52:10.5, 39.°44N×27.°07E, h6km±1km, ML3.3/3, Error ellipse: s-maj=2.1km s-min=0.8km az=277.0*
ISC 02 04:52:09.2±1.0, **39.°52N**±0.°02×**27.°10E**±0.°01, **h12**km±9km, **n135**, σ**0.s78**/167, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALY	Balya	0.46	61	i P	Pg	04 52 18.4	+0.2
BALY				i S	Sg	04 52 24.7	+0.4
BALY	Balya	0.46	61	i P	Pg	04 52 18.4	+0.2
BALY				i S	Sg	04 52 24.7	+0.4
BALB	Balikesir	0.61	78	ePG	Pb	04 52 21.7	-0.2
BALB	Balikesir	0.61	78	ePg	Pb	04 52 21.7	-0.2
EZN	Ezine	0.67	297	ePG	Pg	04 52 22.6	+0.3
EZN				eSG	Sg	04 52 31.8	+0.6
EZN	Ezine	0.67	297	ePg	Pg	04 52 22.6	+0.3
EZN				eSg	Sg	04 52 31.8	+0.6
GONE	Gonen-Balikesi	0.69	40	ePG	Pg	04 52 22.7	0.0
GONE				eSG	Sb	04 52 32.4	-0.5
GONE	Gonen-Balikesi	0.69	40	ePg	Pg	04 52 22.7	0.0
GONE				eSg	Sb	04 52 32.4	-0.5
PRK	Paraskevi	0.70	247	P	Pg	04 52 23.0	+0.3
PRK				S	Sb	04 52 33.1	+0.2
PRK	Paraskevi	0.70	247	ePN	Pg	04 52 23.0	+0.3
PRK				eSN	Sn	04 52 35.7	0.0
PRK	Paraskevi	0.70	247	P	Pg	04 52 23.0	+0.3
PRK				S	Sb	04 52 33.1	+0.2
PRK				eSn	Sn	04 52 35.7	0.0
AKS	Akhisar	0.84	139	ePG	Pn	04 52 27.1	+0.1
AKS	Akhisar	0.84	139	ePg	Pn	04 52 27.1	+0.1
AKHS	Akhisar	0.84	139	i P	Pg	04 52 25.8	+0.3
AKHS				i S	Sb	04 52 37.6	+0.4
AKHS	Akhisar	0.84	139	i P	Pg	04 52 25.8	+0.3
AKHS				i S	Sb	04 52 37.6	+0.4
BOZC	Bozcaada	0.87	292	i P	Pg	04 52 26.3	+0.2
BOZC				i S	Sg	04 52 37.5	+0.1
KRBG	Karabiga-Canak	0.89	10	ePG	Pg	04 52 25.8	-0.5
KRBG	Karabiga-Canak	0.89	10	ePg	Pg	04 52 25.8	-0.5
LPK	Lapseki	0.89	343	ePG	Pg	04 52 26.1	-0.4
LPK	Lapseki	0.89	343	ePg	Pg	04 52 26.1	-0.4
SIGR	SIGRI	1.01	253	P	Pg	04 52 28.6	-0.1
SIGR				S	Sb	04 52 42.7	+0.7
SIGR	SIGRI	1.01	253	P	Pg	04 52 28.6	-0.1
SIGR				S	Sb	04 52 42.7	+0.7
EDC	Edincik	1.01	35	ePG	Pn	04 52 29.3	-0.1
EDC	Edincik	1.01	35	ePg	Pn	04 52 29.3	-0.1
BNT	Bandirma	1.05	37	ePG	Pg	04 52 28.7	-0.7
BNT	Bandirma	1.05	37	ePg	Pg	04 52 28.7	-0.7
DURS	Dursunbey	1.06	85	i P	Pg	04 52 29.6	-0.1
DURS				i S	Sg	04 52 43.5	-0.1
DURS	Dursunbey	1.06	85	i P	Pg	04 52 29.6	-0.1
DURS				i S	Sg	04 52 43.5	-0.1
IZM	Izmir	1.12	174	ePN	Pn	04 52 31.9	+1.0
IZM	Izmir	1.12	174	ePn	Pn	04 52 31.9	+1.0
BLCB	Balcova	1.13	182	ePN	Pn	04 52 31.9	+1.0
BLCB	Balcova	1.13	182	ePn	Pn	04 52 31.9	+1.0
MRMT	Marmara Adasi	1.15	19	ePN	Pb	04 52 30.6	-0.5
MRMT	Marmara Adasi	1.15	19	ePn	Pb	04 52 30.6	-0.5
SART	Tekirdag	1.17	3	i P	Pb	04 52 31.2	-0.3
SART				i S	Sg	04 52 46.1	-0.9
SART	Tekirdag	1.17	3	i P	Pb	04 52 31.2	-0.3
SART				i S	Sg	04 52 46.1	-0.9
DST	Dursunbey	1.18	85	ePN	Pn	04 52 32.1	+0.5
DST	Dursunbey	1.18	85	ePn	Pn	04 52 32.1	+0.5
URLA	Izmir	1.22	199	i P	Pn	04 52 31.5	-0.7
URLA				i S	Sn	04 52 49.7	+1.0
URLA	Izmir	1.22	199	i P	Pn	04 52 31.5	-0.7
URLA				i S	Sn	04 52 49.7	+1.0
ERIK	Erikli-Kesan	1.24	339	ePN	Pn	04 52 32.3	-0.1
ERIK	Erikli-Kesan	1.24	339	ePn	Pn	04 52 32.3	-0.1
DEMI	Demirci	1.34	110	i P	Pg	04 52 34.9	0.0
DEMI				i S	Sb	04 52 51.7	+0.2
DEMI	Demirci	1.34	110	i P	Pg	04 52 34.9	0.0
CHOS	Chios island	1.39	216	P	Pn	04 52 34.2	-0.4
CHOS				S	Sn	04 52 52.9	-0.1
CHOS	Chios island	1.39	216	ePN	Pn	04 52 34.2	-0.4
CHOS				eSN	Sn	04 52 52.5	-0.5
CHOS	Chios island	1.39	216	P	Pn	04 52 34.2	-0.4
CHOS				eSn	Sn	04 52 52.5	-0.5
CHOS				S	Sn	04 52 52.9	-0.1
ORLT	Orhaneli	1.48	69	ePN	Pg	04 52 37.8	+0.2
ORLT	Orhaneli	1.48	69	ePn	Pg	04 52 37.8	+0.2
TKR	Tekirdag	1.51	13	ePN	Pb	04 52 37.1	-0.1
TKR	Tekirdag	1.51	13	ePn	Pb	04 52 37.1	-0.1
LIA	Limnos Island	1.53	285	P	Pn	04 52 36.8	+0.4
LIA	Limnos Island	1.53	285	ePB	Pn	04 52 36.6	+0.2
LIA				eSN	Sb	04 52 57.2	+0.4
LIA	Limnos Island	1.53	285	P	Pn	04 52 36.8	+0.4
LIA				eSn	Sb	04 52 57.2	+0.4
MANT	Manisa	1.53	132	i P	Pn	04 52 36.9	+0.3
MANT				i S	Sn	04 52 54.1	-2.4
MANT	Manisa	1.53	132	i P	Pn	04 52 36.9	+0.3
SMTH	Samothraki Isl	1.54	309	ePB	Pn	04 52 36.8	+0.3
SMTH				eSN	Sb	04 52 57.6	+0.4
SMTH	Samothraki Isl	1.54	309	ePb	Pn	04 52 36.8	+0.3
SMTH				eSn	Sb	04 52 57.6	+0.4
KULA	Kula-Manisa	1.57	129	ePN	Pb	04 52 38.9	+0.6
KULA	Kula-Manisa	1.57	129	ePn	Pb	04 52 38.9	+0.6
ALN	Alexandroupoli	1.60	330	P	Pg	04 52 39.3	-0.6
ALN				S	Sg	04 53 00.9	+0.3
ALN	Alexandroupoli	1.60	330	ePN	Pn	04 52 37.7	+0.4
ALN				eSN	Sg	04 53 00.1	-0.5
ALN	Alexandroupoli	1.60	330	ePn	Pn	04 52 37.7	+0.4
ALN	Alexandroupoli	1.60	330	P	Pg	04 52 39.3	-0.6
ALN				eSn	Sg	04 53 00.1	-0.5
ALN				S	Sg	04 53 00.9	+0.3
MDNY	Mudanya-Bursa	1.61	58	ePN	Pb	04 52 39.3	+0.3
MDNY	Mudanya-Bursa	1.61	58	ePn	Pb	04 52 39.3	+0.3
CRLT	Corlu	1.68	17	ePN	Pb	04 52 39.7	-0.4
CRLT	Corlu	1.68	17	ePn	Pb	04 52 39.7	-0.4
ARMT	Armutlu	1.71	52	ePN	Pb	04 52 40.6	0.0
ARMT	Armutlu	1.71	52	ePn	Pb	04 52 40.6	0.0
TVSB	Tavsanli	1.83	91	ePN	Pb	04 52 43.5	+0.8
TVSB	Tavsanli	1.83	91	ePn	Pb	04 52 43.5	+0.8
GEMT	Gemlik	1.85	60	ePN	Pb	04 52 43.2	+0.2
GEMT	Gemlik	1.85	60	ePn	Pb	04 52 43.2	+0.2
GDZ	Gediz	1.90	102	eP	Pn	04 52 42.2	+0.7
GDZ				i S	Sn	04 53 06.0	+0.6
GDZ	Gediz	1.90	102	eP	Pn	04 52 42.2	+0.7
SLVT	Silivri	1.91	26	ePN	Pb	04 52 43.0	-1.0
SLVT	Silivri	1.91	26	ePn	Pb	04 52 43.0	-1.0
IZI	Iznik	2.00	65	ePN	Pb	04 52 45.4	-0.2
IZI	Iznik	2.00	65	ePn	Pb	04 52 45.4	-0.2
CTKS	Kestanelik-??a	2.02	32	ePN	Pb	04 52 45.1	-0.9
CTKS	Kestanelik-??a	2.02	32	ePn	Pb	04 52 45.1	-0.9
BUY	Buyukada	2.04	49	ePN	Pb	04 52 45.6	-0.7
BUY	Buyukada	2.04	49	ePn	Pb	04 52 45.6	-0.7
BGKT	Bogazkoy	2.10	37	ePN	Pb	04 52 46.4	-0.8
BGKT	Bogazkoy	2.10	37	ePn	Pb	04 52 46.4	-0.8
ISK	Istanbul-Kandi	2.15	43	ePN	Pb	04 52 47.1	-1.1
ISK	Istanbul-Kandi	2.15	43	ePn	Pb	04 52 47.1	-1.1
CTYL	Yal??k??y-??at	2.15	24	ePN	Pn	04 52 46.6	+1.7
CTYL	Yal??k??y-??at	2.15	24	ePn	Pn	04 52 46.7	+1.7
CAVI	Cavuskoy	2.22	71	ePN	Pb	04 52 48.6	-0.7
CAVI	Cavuskoy	2.22	71	ePn	Pb	04 52 48.6	-0.7
ADVT	Abdulvahap	2.22	65	ePN	Pb	04 52 48.8	-0.5
ADVT	Abdulvahap	2.22	65	ePn	Pb	04 52 48.8	-0.5
KHL	Karahalli	2.23	122	ePN	Pb	04 52 49.7	+0.1
KHL	Karahalli	2.23	122	ePn	Pb	04 52 49.7	+0.1
MLSB	Milas	2.28	166	ePN	Pb	04 52 50.6	+0.2
MLSB	Milas	2.28	166	ePn	Pb	04 52 50.6	+0.2
EDRB	Edirne	2.34	353	ePN	Pn	04 52 48.8	+1.2
EDRB	Edirne	2.34	353	ePn	Pn	04 52 48.8	+1.2
HRT	Hereke	2.36	56	ePN	Pb	04 52 50.1	-1.6
HRT	Hereke	2.36	56	ePn	Pb	04 52 50.1	-1.6
ALT	Altintas	2.38	100	ePN	Pb	04 52 51.6	-0.4
ALT	Altintas	2.38	100	ePn	Pb	04 52 51.7	-0.4
BODT	Bodrum	2.46	176	ePN	Pb	04 52 53.0	-0.4
BODT	Bodrum	2.46	176	ePn	Pb	04 52 53.0	-0.4
KDZ	Kurdzhali	2.49	329	i P	Pn	04 52 50.4	+0.8
KDZ	Kurdzhali	2.49	329	i P	Pn	04 52 50.4	+0.8
OUR	Ouranopolis	2.53	290	P	Pn	04 52 50.9	+0.7
OUR	Ouranopolis	2.53	290	P	Pn	04 52 50.9	+0.7
SILT	Sile	2.54	49	ePN	Pn	04 52 52.5	+2.2
SILT	Sile	2.54	49	ePn	Pn	04 52 52.5	+2.2
YER	Yerkesik	2.55	158	ePN	Pb	04 52 54.5	-0.5
YER	Yerkesik	2.55	158	ePn	Pb	04 52 54.5	-0.5
APE	Apeiranthos	2.74	207	ePN	Pb	04 52 56.5	-1.7
APE	Apeiranthos	2.74	207	ePn	Pb	04 52 56.5	-1.7
GULT	Gulveren	2.78	70	ePN	Pb	04 52 56.9	-2.0
GULT	Gulveren	2.78	70	ePn	Pb	04 52 56.9	-2.0
DIM	Dimitrovgrad	2.80	335	i Pg	Pb	04 52 59.7	+0.6
DIM	Dimitrovgrad	2.80	335	i Pg	Pb	04 52 59.7	+0.6
DAT	Datca	2.81	172	ePN	Pb	04 52 58.0	-1.4
DAT	Datca	2.81	172	ePn	Pb	04 52 58.0	-1.4
ESKT	Eskisehir	2.90	89	ePN	Pb	04 52 59.0	-1.9
ESKT	Eskisehir	2.90	89	ePn	Pb	04 52 59.0	-1.9
DALY	Dalyan (Mu˜la	2.96	155	ePN	Pb	04 53 00.1	-1.8
DALY	Dalyan (Mu˜la	2.96	155	ePn	Pb	04 53 00.1	-1.8
JMB	Yambol	2.97	353	i Pg	Pg	04 53 06.1	-0.1
JMB	Yambol	2.97	353	i Pg	Pg	04 53 06.1	-0.1
SVRH	Sivrihisar-ESK	3.42	90	ePN	Pn	04 53 06.2	+3.7
SVRH	Sivrihisar-ESK	3.42	90	ePn	Pn	04 53 06.2	+3.7
KIZT	Kizilcal	3.77	98	ePN	Pn	04 53 11.6	+4.3
KIZT	Kizilcal	3.77	98	ePn	Pn	04 53 11.6	+4.3
VTS	Vitosha	4.25	317	i P	Pn	04 53 14.6	+0.6
VTS	Vitosha	4.25	317	i P	Pn	04 53 14.6	+0.6
MPEP	Malo Peshtene	4.59	328	i P	Pn	04 53 19.5	+1.0

IDC 02 05:06:58.5±5.6, **29.°01N**×**68.°63E**, **h0**km, **mb3.2**/5, **mb1 3.4**/6, **mb1mx3.2**/30, **mbtmp3.4**/6, **ML3.7**/1, **Error ellipse: s-maj=184.6km s-min=26.7km az=136.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	14.40	18	Pn	Pn	05 10 23.2	-0.6
	0.3nm,0.3s,baz=203,slow=16,SNR=3.4						
MKAR	Makanchi Array	20.72	27	P	P	05 11 38.6	-1.9
	0.2nm,0.4s,baz=212,slow=11,SNR=5.7						
KURBB	Kurchatov Arra	22.85	16	P	P	05 12 04.2	+1.0
	0.3nm,0.5s,baz=214,slow=8.6,SNR=3.4						
ZALV	Zalesovo Beam	27.58	21	P	P	05 12 47.6	+0.5
	0.7nm,0.5s,baz=217,slow=12,SNR=4.0						
TORD	Torodi Ar. Bea	63.68	271	P	P	05 17 31.9	-0.3
	0.2nm,0.6s,baz=63,slow=5.6,SNR=3.1						
YKA	Yellowknife Ar	88.78	2	P	P	05 19 54.3	+0.4
	0.1nm,0.6s,baz=354,slow=5.0,SNR=6.5						

IDC 02 05:11:01.3±2.3, **18.°43S**×**177.°77W**, **h620**km±40km, **mb3.4**/3, **mb1 3.5**/5, **mb1mx3.0**/20, **mbtmp3.4**/5, **Error ellipse: s-maj=120.2km s-min=35.0km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.31	53	P	P	05 12 55.0	-0.1
	2.5nm,0.3s,baz=225,slow=4.3,SNR=4.2						
DZM	Mont Dzumac	15.24	254	P	P	05 14 12.0	+0.9
	0.3nm,0.3s,baz=118,slow=17,SNR=4.0						
STKA	Stephens Creek	38.91	242	P	P	05 17 35.6	-0.2
	2.4nm,0.7s,baz=72,slow=13,SNR=5.2						
WRA	Warramunga Arr	45.13	260	P	P	05 18 24.4	-0.3
	2.7nm,0.3s,baz=97,slow=7.1,SNR=27						
ASAR	Alice Springs	45.23	255	P	P	05 18 25.5	+0.1
	3.8nm,0.5s,baz=87,slow=8.0,SNR=94						
ASAR				PcP	PcP	05 19 51.8	-0.1
	0.3nm,0.5s,baz=106,slow=3.7,SNR=4.2						

IDC 02 05:39:14.0±6.6, **22.°30N**×**143.°16E**, **h255**km±63km, **mb3.0**/8, **mb1 3.1**/8, **mb1mx3.0**/25, **mbtmp3.0**/8, **Error ellipse: s-maj=44.9km s-min=15.1km az=79.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	20.02	322	P	P	05 43 28.0	+0.1
	2.1nm,0.4s,baz=145,slow=8.9,SNR=7.1						
WRA	Warramunga Arr	42.86	192	P	P	05 46 47.3	-0.3
	1.3nm,1.1s,baz=16,slow=9.3,SNR=5.6						
ASAR	Alice Springs	46.57	192	P	P	05 47 16.8	0.0
	0.2nm,0.7s,baz=18,slow=9.1,SNR=3.3						
ZALV	Zalesovo Beam	53.73	321	P	P	05 48 09.3	-0.6
	0.7nm,0.5s,baz=100,slow=5.8,SNR=3.8						
MKAR	Makanchi Array	54.28	312	P	P	05 48 13.9	-0.1
	0.3nm,0.5s,baz=88,slow=9.2,SNR=3.9						
KURBB	Kurchatov Arra	57.07	317	P	P	05 48 34.0	+0.3
	1.5nm,0.6s,baz=93,slow=7.7,SNR=22						
YKA	Yellowknife Ar	75.93	28	P	P	05 50 32.6	+0.2
	0.1nm,0.4s,baz=294,slow=5.7,SNR=4.6						
FINES	FINESS Array B	82.63	334	P	P	05 51 08.4	-0.2
	0.2nm,0.3s,baz=57,slow=5.1,SNR=5.0						

*MOS **02** 05:43:28.4±1.2, 49.°42N×155.°87E, h12km, mb4.2/1, Error ellipse: s-maj=36.3km s-min=9.9km az=73.4*
*KRSC **02** 05:43:34.7±0.8, 49.°72N×156.°41E, h5km±5km, ML4.0*
*IDC **02** 05:43:36.9±4.6, 49.°67N×155.°63E, h66km±42km, mb3.0/5, mb1 3.3/6, mb1mx3.1/26, mbtmp3.0/6, ML2.8/1, Error ellipse: s-maj=36.6km s-min=25.1km az=136.0*
ISC 02 05:43:33.1±2.3, **49.°61N**±0.°10×**155.°8E**±0.°1, **h30**km±14km, **n24**, σ**1.s94**/34, **mb3.5**/4, **1D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.09	10	⇓iPN	Pn	05 43 50.1	-2.2
SKR				pmax	pmax		
	comp=N,100nm,0.3s						
SKR				pmax	pmax		
	comp=E,90nm,0.3s						
SKR				pmax	pmax		
	comp=Z,180nm,0.3s						
SKR	Severo-Kuril's	1.09	10	eP	Pb	05 43 54.1	+0.7
SKR				eS	Sb	05 44 07.9	+0.7
PAU	Pauzhetka	1.97	19	PN	Pn	05 44 06.3	+2.0
PAU				S	Sn	05 44 29.6	+1.7
PAU	Pauzhetka	1.97	19	eP	Pn	05 44 06.3	+2.0
PAU				eS	Sn	05 44 29.6	+1.7
MIPR	Malaya Ipel'ka	2.74	12	eP	Pn	05 44 17.0	+2.1
MIPR				S	Sn	05 44 47.1	+0.1
ASAK	Asacha	3.07	25	P	Pn	05 44 22.5	+2.9
ASAK				eS	Sn	05 44 57.8	+2.4
MTVR	Mutnovka	3.24	27	eP	Pn	05 44 24.6	+2.6
MTVR				eS	Sn	05 45 01.2	+1.6
RUS	Russkaya	3.30	30	PN	Pn	05 44 23.9	+1.3
RUS	Russkaya	3.30	30	eP	Pn	05 44 23.9	+1.3
RUS				S	Sn	05 44 59.4	-1.4
PETK	Petropavlovsk-	3.70	18	PN	Pn	05 44 31.2	+3.1
PETK				S	Sb	05 45 18.7	-3.3
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK	Petropavlovsk-	3.70	18	P	Pn	05 44 31.2	+3.1
	comp=N,0.8nm,0.3s,baz=180,slow=14,SNR=24						
PETK				S	Sb	05 45 18.7	-3.3
	comp=N,0.7nm,0.3s,baz=193,slow=21,SNR=5.1						
NLC	Nalytchevo	4.20	30	eS	Sn	05 45 22.0	-0.9
GNL	Ganaly	4.30	17	eP	Pn	05 44 40.8	+4.3
SPN	Mys Shipunski	4.38	35	PN	Pn	05 44 39.3	+1.9
SPN	Mys Shipunski	4.38	35	eP	Pn	05 44 39.3	+1.9
SPN				S	Sn	05 45 27.5	+0.1
MKZ	Mys Kozlova	6.15	34	PN	Pn	05 45 02.5	+0.8
MKZ	Mys Kozlova	6.15	34	eP	Pn	05 45 02.5	+0.8
MKZ				eS	Sn	05 46 08.1	-2.9
FX1	Attu Island--F	11.36	67	P	Pn	05 46 12.8	-0.3
	comp=N,0.6nm,0.3s,baz=246,slow=23,SNR=6.6						
FX1				S	Sn	05 48 08.6	-10
	comp=N,1.3nm,0.3s,baz=75,slow=22,SNR=7.2						
KURK	Kurchatov	47.32	303	P	P	05 52 03.1	-0.5
KURBB	Kurchatov Arra	47.41	302	P	P	05 52 03.1	-1.2
	comp=N,0.3nm,0.5s,baz=57,slow=8.0,SNR=3.4						
YKA	Yellowknife Ar	47.55	39	P	P	05 52 06.0	+0.8
	comp=N,0.0nm,0.5s,baz=304,slow=8.5,SNR=2.6						
WRA	Warramunga Arr	71.82	201	P	P	05 54 52.3	-0.4
	comp=N,0.4nm,0.8s,baz=17,slow=6.2,SNR=2.9						
TXAR	Lajitas Array	74.55	63	P	P	05 55 08.5	-0.5
	comp=N,0.4nm,0.7s,baz=299,slow=6.0,SNR=5.2						
ASAR	Alice Springs	75.51	201	P	P	05 55 14.4	+0.1
	comp=N,0.2nm,0.5s,baz=14,slow=5.7,SNR=4.2						

BJI 02 05:48:21.7, 36.°42N×111.°13E, h7km, **ML3.6**/6, **Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	5.90	269	ePg	Pb	05 50 09.0	+3.9
LZH				Sg	Sb	05 51 23.3	+7.2

MEX 02 05:54:55.0±0.5, **16.°99N**×**100.°10W**, **h5**km±4km, **MD3.8**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.17	289	eP	Pg	05 54 58.0	-0.4
CAIG				eS	Sg	05 55 01.1	+0.3
ACX	Acapulco	0.26	118	i P	Pg	05 54 58.6	-1.5
ACX				i S	Sg	05 55 02.3	-1.3
ARIG	Puente Sto Nin	1.30	349	eP	Pn	05 55 16.0	-3.9
ARIG				eS	Sg	05 55 32.5	-4.6
ZIIG	Zihuatanejo	1.44	295	eP	Pn	05 55 18.5	-3.3
ZIIG				eS	Sb	05 55 35.8	-5.2
PNIG	Pinotepa	1.98	107	eP	Pn	05 55 26.0	-3.3
PNIG				eS	Sn	05 55 50.1	-4.3
YAIG	Yautepec	2.10	28	eP	Pn	05 55 28.1	-3.0
YAIG				i S	Sn	05 55 53.2	-4.6
UTMO	Huajuapan	2.34	69	eP	Pn	05 55 31.5	-3.0
UTMO				eS	Sn	05 55 59.7	-4.1
PPM	Popocatepetl	2.49	34	eP	Pn	05 55 34.5	-2.4
PPM				eS	Sn	05 56 04.0	-4.2

WEL 02 05:57:15.4±0.0, **44.°26S**×**170.°00E**, **h14**km, **ML3.6**/8, **6C**, **Error ellipse: s-maj=0.5km s-min=0.4km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBZ	Lake Benmore	0.18	135	⇑P*	Pg	05 57 19.8	0.0
LBZ				S*	Sg	05 57 22.8	+0.1
FOZ	Fox Glacier	0.73	342	⇑P*	Pg	05 57 29.1	-0.5
WKZ	Wanaka	0.91	231	⇑P*	Pb	05 57 32.1	-0.9
WKZ				S*	Sb	05 57 44.0	-0.9
ODZ	Otahua Downs	0.91	150	⇑P*	Pb	05 57 32.0	-0.9
JCZ	Jackson Bay	0.92	281	P*	Pb	05 57 32.0	-1.2
JCZ				S*	Sb	05 57 44.0	-1.3
RPZ	Rata Peaks	0.93	55	P*	Pb	05 57 32.8	-0.6
RPZ				S*	Sb	05 57 44.7	-1.0
EAZ	Earnscleugh	1.09	207	⇑P*	Pb	05 57 35.2	-0.8
WVZ	Waitaha Valley	1.30	24	⇑PN	Pn	05 57 38.7	-0.4
TUZ	Tuapeka	1.72	189	PN	Pn	05 57 45.3	+0.4
LTZ	Lake Taylor	2.21	49	PN	Pn	05 57 51.2	-0.5
SYZ	Scrubby Hill	2.36	195	PN	Pn	05 57 52.7	-1.0

NNC 02 06:01:50.5±5.3, **36.°91N**×**71.°22E**, **h0**km, **mb3.6**, **mpv3.4**, **3C-2D**, **Error ellipse: s-maj=43.5km s-min=34.4km az=168.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.21	355	⇓Pn	Pn	06 03 24.5	+1.1
	1.1nm,0.3s,baz=181,slow=12,SNR=31						
KK31				⇑Sn	Sn	06 04 36.1	+1.0
	0.6nm,0.3s,baz=173,slow=23,SNR=7.4						
TKM2	Tokmak 2	6.88	28	⇑Pn	Pn	06 03 32.7	-0.2
	2.1nm,0.6s						
TKM2				⇓Sn	Sn	06 04 53.2	+1.0
	0.4nm,0.5s						
AB31	Akbulak array	14.81	330	⇑P	Pn	06 05 18.5	-2.6
	0.1nm,0.2s,baz=144,slow=15,SNR=6.3						

IDC 02 06:07:24.5±1.1, **21.°71N**×**145.°52E**, **h0**km, **mb3.6**/4, **mb1 3.9**/5, **mb1mx3.5**/26, **mbtmp3.7**/5, **ML3.8**/1, **Error ellipse: s-maj=82.4km s-min=22.8km az=105.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	16.09	338	Pn	Pn	06 11 13.5	+1.4
	0.4nm,0.3s,baz=137,slow=8.5,SNR=2.5						
WRA	Warramunga Arr	42.82	196	P	P	06 15 23.1	-1.2
	0.3nm,0.3s,baz=17,slow=9.2,SNR=8.3						
ASAR	Alice Springs	46.50	195	P	P	06 15 53.9	+0.1
	0.1nm,0.3s,baz=17,slow=5.9,SNR=4.3						
STKA	Stephens Creek	53.41	184	P	P	06 16 46.6	+0.5
	1.2nm,0.4s,baz=23,slow=7.7,SNR=7.6						
YKA	Yellowknife Ar	75.42	28	P	P	06 19 09.3	-0.6
	0.3nm,0.4s,baz=293,slow=5.9,SNR=14						
LPAZ	La Paz	147.77	86	PKPbc	PKPbc	06 27 13.4	+0.5
	0.5nm,0.5s,baz=228,slow=2.8,SNR=3.7						

*ISK **02** 06:22:04.3, 40.°37N×27.°26E, h25km, MD2.6*
*DDA **02** 06:22:05.5, 40.°36N×27.°23E, h14km, MD2.4*
*CSEM **02** 06:22:05.1±0.2, 40.°40N×27.°26E, h20km, MD2.6, Error ellipse: s-maj=5.5km s-min=4.0km az=26.0*
*ISCJB **02** 06:22:05.4±0.5, 40.°41N±0.°03×27.°26E±0.°04, h25km±5km, Error ellipse: s-maj=5.9km s-min=4.9km az=12.8*
ISC 02 06:22:05.0±1.0, **40.°37N**±0.°04×**27.°26E**±0.°02, **h18**km±4km, **n29**, σ**0.s53**/40, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBG	Karabiga-Canak	0.04	58	ePG	Pg	06 22 08.5	+0.3
KRBG	Karabiga-Canak	0.04	58	ePg	Pg	06 22 08.5	+0.3
SART	Tekirdag	0.32	350	i P	Pb	06 22 12.6	+0.3
SART				i S	Sb	06 22 17.3	+0.2
SART	Tekirdag	0.32	350	i P	Pb	06 22 12.6	+0.3
SART				i S	Sb	06 22 17.3	+0.2
MRMT	Marmara Adasi	0.35	48	ePG	Pb	06 22 13.1	+0.4
MRMT				eSG	Sb	06 22 18.1	+0.2
MRMT	Marmara Adasi	0.35	48	ePg	Pb	06 22 13.1	+0.4
MRMT				eSg	Sb	06 22 18.1	+0.2
LPK	Lapseki	0.38	270	ePG	Pb	06 22 13.4	+0.2
LPK				eSG	Sb	06 22 19.2	+0.4
LPK	Lapseki	0.38	270	ePg	Pb	06 22 13.4	+0.2
LPK				eSg	Sb	06 22 19.2	+0.4
GONE	Gonen-Balikesi	0.46	135	ePG	Pg	06 22 14.4	0.0
GONE	Gonen-Balikesi	0.46	135	ePg	Pg	06 22 14.4	0.0
EDC	Edincik	0.47	93	ePG	Pb	06 22 14.7	0.0
EDC	Edincik	0.47	93	ePg	Pb	06 22 14.7	0.0
GELI	Tayfur-Gelibol	0.60	273	ePG	Pg	06 22 16.9	0.0
GELI	Tayfur-Gelibol	0.60	273	ePg	Pg	06 22 16.9	0.0
ERIK	Erikli-Kesan	0.64	298	ePG	Pb	06 22 17.6	0.0
ERIK	Erikli-Kesan	0.64	298	ePg	Pb	06 22 17.6	0.0
BALY	Balya	0.69	156	i P	Pg	06 22 19.0	+0.4
BALY				i S	Sg	06 22 28.4	+0.6
BALY	Balya	0.69	156	i P	Pg	06 22 19.0	+0.4
BALY				i S	Sg	06 22 28.4	+0.6
BOZC	Bozcaada	1.06	240	i P	Pg	06 22 26.0	+0.3
BOZC				i S	Sg	06 22 39.7	+0.1
DURS	Dursunbey	1.21	129	i P	Pg	06 22 29.0	+0.5
DURS				i S	Sg	06 22 44.7	+0.4
DURS	Dursunbey	1.21	129	i P	Pg	06 22 29.0	+0.5
DURS				i S	Sg	06 22 44.7	+0.4
CTKS	Kestanelik-??a	1.28	47	ePN	Pn	06 22 27.0	-1.0
CTKS	Kestanelik-??a	1.28	47	ePn	Pn	06 22 27.0	-1.0
DST	Dursunbey	1.30	126	ePN	Pn	06 22 27.1	-1.2
DST	Dursunbey	1.30	126	ePn	Pn	06 22 27.1	-1.2
EDRB	Edirne	1.52	345	ePN	Pn	06 22 30.7	-0.6
EDRB	Edirne	1.52	345	ePn	Pn	06 22 30.7	-0.6
IZI	Iznik	1.69	91	ePN	Pn	06 22 32.9	-0.8
IZI	Iznik	1.69	91	ePn	Pn	06 22 32.9	-0.8

GUC 02 07:05:25.7±0.4, **22.°35S**×**66.°61W**, **h280**km, **ML3.7**, **3C**, **Jujuy Province**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	Plate Boundary	2.50	282	⇑iP	Pn	07 06 17.8	+2.3
PB09				eS	S	07 06 57.4	+2.4
PB09				AML	AML	07 07 00.1	
	comp=E,64nm,0.7s						
PB01	Plate Boundary	2.98	295	⇑iP	Pn	07 06 22.9	+2.9
PB01				eS	S	07 07 05.8	+2.5
PB01				AML	AML	07 07 07.5	
	comp=E,32nm,0.2s						
HMBC	Humberstone	3.69	303	eP	Pn	07 06 30.6	+3.0
HMBC				eS	S	07 07 19.9	+2.9
HMBC				AML	AML	07 07 24.1	
	comp=N,26nm,0.6s						
MNMC	Minimini	4.25	318	⇑iP	Pn	07 06 39.1	+4.9
MNMC				iS	S	07 07 34.7	+5.8
MNMC				AML	AML	07 07 39.7	
	comp=N,44nm,0.2s						
PSGC	Pisagua	4.28	309	eP	Pn	07 06 37.6	+3.4
PSGC				eS	S	07 07 32.4	+3.4
PSGC				AML	AML	07 07 34.8	
	comp=E,11nm,0.4s						

IDC 02 07:26:35.6±7.0, 36°.33N×71°.47E, h86km±51km, mb3.1/4, mb1 3.2/6, mb1mx3.0/27, mbtmp3.1/6, ML3.6/2, 1C-1D, Error ellipse: s-maj=74.6km s-min=39.1km az=135.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	6.72	19	P	Pn	07 28 13.0	+1.2
	0.9nm,0.3s,baz=181,slow=8.5,SNR=8.8						
AAK				S	Sn	07 29 26.5	-0.5
	0.3nm,0.3s,baz=151,slow=19,SNR=3.8						
KK31	Karatay Array	6.81	354	⇑Pn	Pn	07 28 11.3	-1.5
	0.3nm,0.2s,baz=181,slow=13,SNR=13						
KK31				⇓Sn	Sn	07 29 23.0	-5.8
	0.4nm,0.2s,baz=178,slow=22						
ZALV	Zalesovo Beam	19.92	24	P	P	07 30 59.5	-0.8
	0.2nm,0.3s,baz=223,slow=14,SNR=2.8						
FINES	FINESS Array B	37.84	326	P	P	07 33 43.6	+0.1
	0.7nm,0.9s,baz=120,slow=13,SNR=3.3						
ARCES	ARCESS Array B	41.45	338	P	P	07 34 13.5	+0.1
	1.5nm,0.8s,baz=115,slow=8.1,SNR=4.0						
TORD	Torodi Ar. Bea	66.09	269	P	P	07 37 13.2	-0.6
	0.4nm,0.8s,baz=46,slow=6.1,SNR=2.3						
YKA	Yellowknife Ar	81.40	3	P	P	07 38 43.0	+0.5
	0.1nm,0.4s,baz=350,slow=5.2,SNR=4.5						

JMA 02 07:41:15.7, 35°.15N×135°.94E, h15km, M2.6, Western Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JWT	Wachi	0.46	287	P	Pg	07 41 24.7	-0.2
JWT				S	Sg	07 41 30.4	-0.8
JHE	Heguri	0.54	203	P	Pg	07 41 26.2	-0.2
JHE				S	Sg	07 41 33.2	-0.4
TSUJ	Tsu 2	0.59	138	P	Pg	07 41 26.8	-0.5
TSUJ				S	Sg	07 41 34.6	-0.6
JKY	Yasaka	0.83	305	P	Pb	07 41 31.5	-0.4
JKY				S	Sg	07 41 42.4	-0.5
JGM	Miyama	0.84	49	P	Pb	07 41 31.6	-0.5
JGM				S	Sg	07 41 42.3	-0.9
JKS	Kasai	0.91	260	P	Pb	07 41 32.7	-0.6
JKS				S	Sb	07 41 44.5	-0.7
JKN2	Miekihoku	0.95	163	P	Pb	07 41 33.2	-0.7
JWY	Kouya	0.97	197	P	Pb	07 41 33.7	-0.7
JWY				S	Sb	07 41 46.5	-0.6
MAT	Matsushiro	2.31	52	P	Pn	07 41 54.0	+0.8
MAT				S	Sb	07 42 25.1	-0.3

*ATH **02** 08:08:41.7, 40°.41N×21°.90E, h5km±2km, MD3.0/10*
*CSEM **02** 08:08:41.5±0.2, 40°.44N×21°.93E, h2km, ML2.0/2, Error ellipse: s-maj=6.4km s-min=4.8km az=41.0*
*ISCJB **02** 08:08:41.2±0.6, 40°.43N±0°.03×21°.93E±0°.04, h1km±7km, Error ellipse: s-maj=6.1km s-min=4.3km az=43.6*
*THE **02** 08:08:42.2, 40°.39N×21°.90E, h2km±40km, ML2.0/2, Error ellipse: s-maj=40.4km s-min=0.9km az=229.0*
ISC 02 08:08:41.4±0.9, 40°.41N±0°.02×21°.89E±0°.03, h8km±8km, n34, σ0s.41/48, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZN	Kozani	0.14	220	P	Pg	08 08 44.3	-0.2
KZN				S	Sg	08 08 46.7	+0.2
KZN	Kozani	0.14	220	ePG	Pg	08 08 44.3	-0.2
KZN				eSG	Sg	08 08 46.8	+0.2
KZN	Kozani	0.14	220	P	Pg	08 08 44.3	-0.2
KZN				S	Sg	08 08 46.7	+0.2
FNA	Florina	0.54	314	P	Pg	08 08 52.1	+0.3
FNA				S	Sb	08 09 01.6	+0.5
FNA	Florina	0.54	314	P	Pg	08 08 51.6	-0.2
FNA				S	Sg	08 09 00.2	+1.3
FNA	Florina	0.54	314	ePG	Pg	08 08 51.8	0.0
FNA				eSB	Sb	08 09 00.6	-0.5
FNA	Florina	0.54	314	ePg	Pg	08 08 51.8	0.0
FNA	Florina	0.54	314	P	Pg	08 08 52.1	+0.3
FNA				eSb	Sb	08 09 00.6	-0.5
LIT	Litokhoron	0.56	124	P	Pg	08 08 52.5	+0.3
LIT				S	Sg	08 08 59.7	+0.2
LIT	Litokhoron	0.56	124	P	Pb	08 08 53.0	-0.5
LIT				S	Sg	08 08 59.9	+0.4
LIT	Litokhoron	0.56	124	ePB	Pg	08 08 52.5	+0.3
LIT				eSB	Sg	08 09 00.3	+0.8
LIT	Litokhoron	0.56	124	P	Pg	08 08 52.5	+0.3
LIT				S	Sg	08 08 59.7	+0.2
LIT				eSb	Sg	08 09 00.3	+0.8
NEST	Nestorio	0.64	270	P	Pg	08 08 53.8	0.0
NEST	Nestorio	0.64	270	P	Pg	08 08 54.3	+0.5
NEST	Nestorio	0.64	270	P	Pg	08 08 53.8	0.0
GRG	Griva	0.67	36	P	Pg	08 08 54.4	0.0
GRG	Griva	0.67	36	ePG	Pg	08 08 54.2	-0.2
GRG	Griva	0.67	36	ePg	Pg	08 08 54.2	-0.2
THL	Klokotos Trika	0.85	173	P	Pg	08 08 58.1	+0.3
THL				S	Sb	08 09 10.2	+0.1
THL	Klokotos Trika	0.85	173	P	Pb	08 08 58.5	0.0
THL	Klokotos Trika	0.85	173	ePB	Pb	08 08 58.2	-0.3
THL	Klokotos Trika	0.85	173	P	Pg	08 08 58.1	+0.3
THL				S	Sb	08 09 10.2	+0.1
SOH	Sokhos	1.19	69	ePB	Pn	08 09 04.6	+0.1
SOH	Sokhos	1.19	69	ePb	Pn	08 09 04.6	+0.1
PLG	Polygyros	1.19	91	ePN	Pb	08 09 03.6	-0.7
PLG	Polygyros	1.19	91	ePn	Pb	08 09 03.6	-0.7
AGG	Agios Georgios	1.43	166	ePB	Pg	08 09 09.2	+0.3
AGG	Agios Georgios	1.43	166	ePb	Pg	08 09 09.2	+0.3
PAIG	Paliouri	1.46	109	ePG	Pn	08 09 08.1	0.0
PAIG	Paliouri	1.46	109	ePg	Pn	08 09 08.1	0.0
EVR	Evrytania	1.50	182	ePB	Pg	08 09 10.2	+0.1
EVR	Evrytania	1.50	182	ePb	Pg	08 09 10.2	+0.1
EFP	Efpalio	1.98	180	ePN	Pg	08 09 18.8	-0.7
EFP	Efpalio	1.98	180	ePn	Pg	08 09 18.8	-0.7

KRSC 02 08:22:38.9±0.6, 50°.26N×157°.28E, h55km±5km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.85	300	eP	Pn	08 22 53.4	-1.4
SKR				iS	Sn	08 23 03.5	-3.0
PAU	Pauzhetka	1.25	346	eP	Pn	08 22 59.9	-0.1
PAU				iS	Sn	08 23 14.5	-1.2
MIPR	Malaya Ipel'ka	2.04	351	eP	Pn	08 23 11.6	+0.7
ASAK	Asacha	2.16	10	eP	Pn	08 23 13.9	+1.3
ASAK				iS	Sn	08 23 39.0	+0.7
MTVR	Mutnovka	2.30	14	eP	Pn	08 23 15.5	+1.0
MTVR				iS	Sn	08 23 42.9	+1.2
RUS	Russkaya	2.31	19	eP	Pn	08 23 15.1	+0.6
RUS				iS	Sn	08 23 41.2	-0.5
GRL	Gorelyy	2.35	12	eP	Pn	08 23 16.3	+1.1
GRL				iS	Sn	08 23 42.8	-0.2
APC	Apacha	2.67	358	eP	Pn	08 23 21.4	+2.0
APC				iS	Sn	08 23 52.8	+2.3
PET	Petropavlovsk	2.90	17	eP	Pn	08 23 24.7	+2.2
PET				iS	Sn	08 23 58.5	+2.4
UGLR	Uglovaya	3.10	17	eP	Pn	08 23 28.3	+2.8
UGLR				iS	Sn	08 24 04.4	+2.9
AVH	Avacha	3.14	16	eP	Pn	08 23 29.1	+3.1
AVH				iS	Sn	08 24 05.4	+3.1
KOK	Koryaka	3.15	15	eP	Pn	08 23 29.2	+3.1
KOK				iS	Sn	08 24 05.9	+3.3
SMAR	Somma	3.15	17	P	Pn	08 23 29.0	+2.7
SMAR				iS	Sn	08 24 04.9	+2.0
KRER	Koryakskii	3.18	16	eP	Pn	08 23 29.8	+3.1
KRER				iS	Sn	08 24 06.9	+3.3
SDLR	Sedlovina	3.18	18	eP	Pn	08 23 28.5	+1.9
SDLR				iS	Sn	08 24 05.0	+1.6
SPN	Mys Shipunski	3.31	30	eP	Pn	08 23 29.6	+1.4
SPN				iS	Sn	08 24 07.2	+0.9
GNL	Ganaly	3.46	7	eP	Pn	08 23 33.0	+2.6
GNL				iS	Sn	08 24 13.0	+2.7
MKZ	Mys Kozlova	5.09	31	eP	Pn	08 23 53.9	+1.4

IDC 02 08:28:02.7±0.7, 7°.03N×76°.33W, h14km±4km, mb3.6/10, mb1 3.9/10, mb1mx3.8/20, mbtmp3.6/10, MS3.6/4, Ms1 3.6/4, ms1mx3.2/24, Error ellipse: s-maj=26.4km s-min=18.2km az=55.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMIG	Matias Romero	20.70	301	LR	LR	08 40 50.1	
	comp=Z,111nm,21.5s,baz=160,slow=37						
LPAZ	La Paz	24.55	161	P	P	08 33 24.1	+1.2
	2.2nm,0.8s,baz=350,slow=6.8,SNR=8.2						
SIV	San Ignacio	27.41	147	P	P	08 33 48.1	0.0
	0.8nm,0.6s,baz=319,slow=6.8,SNR=3.8						
TKL	Tuckaleechee C	29.30	348	LR	LR	08 45 46.1	
	comp=Z,65nm,18.6s,baz=54,slow=36						
TXAR	Lajitas Array	33.99	314	P	P	08 34 47.2	+1.0
	0.4nm,0.9s,baz=130,slow=8.4,SNR=2.6						
SADO	Sadowa	37.67	357	LR	LR	08 51 27.8	
	comp=Z,52nm,19.8s,baz=87,slow=37						
PDAR	Pinedale Array	46.08	326	P	P	08 36 26.2	-0.3
	0.3nm,0.7s,baz=110,slow=8.0,SNR=2.8						
NVAR	Mina Array Bea	49.09	316	P	P	08 36 51.0	+0.9
	0.3nm,0.7s,baz=123,slow=6.6,SNR=3.2						
YKA	Yellowknife Ar	62.00	341	P	P	08 38 22.3	+0.2
	1.0nm,0.7s,baz=132,slow=6.9,SNR=23						
ESDC	Sonseca Array	71.98	51	P	P	08 39 26.6	+0.4
	0.1nm,0.3s,baz=262,slow=4.5,SNR=4.3						
PPT	Papeete	76.33	250	LR	LR	09 06 57.8	
	comp=Z,141nm,19.9s,baz=174,slow=31						
TORD	Torodi Ar. Bea	76.81	78	P	P	08 39 54.3	-0.4
	0.3nm,0.9s,baz=215,slow=2.5,SNR=2.6						
TORD				pP	pP	08 40 00.2	+0.8
	0.9nm,0.7s,baz=292,slow=5.2,SNR=5.3						
GERES	GERESS Array B	84.78	42	P	P	08 40 35.8	-1.0
	0.3nm,0.5s,baz=283,slow=5.9,SNR=3.0						
ARCES	ARCESS Array B	87.58	20	P	P	08 40 49.3	-0.7
	4.1nm,1.1s,baz=294,slow=2.5,SNR=4.5						
ASAR	Alice Springs	146.60	237	PKPbc	PKPdf	08 47 43.4	+0.2
	0.1nm,0.4s,baz=104,slow=3.4,SNR=3.5						
ASAR				pPKPbc	pPKPbc	08 47 49.0	-0.6
	2.3nm,0.9s,baz=113,slow=3.0,SNR=10						
WRA	Warramunga Arr	147.61	244	PKPbc	PKPdf	08 47 46.0	+1.1
	0.5nm,0.8s,baz=96,slow=1.6,SNR=3.3						
WRA				pPKPbc	PKPab	08 47 50.8	+1.0
	1.6nm,0.7s,baz=100,slow=4.1,SNR=4.6						

IDC 02 08:32:10.3±2.3, 6°.40S×130°.10E, h0km, mb3.6/1, mb1 3.8/3, mb1mx3.5/18, mbtmp3.7/3, ML4.0/2, Error ellipse: s-maj=137.3km s-min=31.8km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.08	163	Pn	Pn	08 35 30.5	-0.7
	0.8nm,0.3s,baz=346,slow=13,SNR=37						
WRA				Sn	Sn	08 37 55.4	-13
	0.8nm,0.3s,baz=332,slow=23,SNR=13						
ASAR	Alice Springs	17.55	168	P	Pn	08 36 17.1	+0.4
	0.4nm,0.3s,baz=345,slow=10,SNR=36						
ASAR				S	Sn	08 39 20.5	-12
	0.2nm,0.3s,baz=350,slow=26,SNR=7.7						
MKAR	Makanchi Array	67.78	327	P	P	08 43 10.1	0.0
	0.4nm,0.6s,baz=132,slow=7.0,SNR=5.0						

*ISCJB **02** 08:34:38.4±0.5, 18°.18N±0°.06×67°.02W±0°.04, h31km±3km, mb3.8/9, Error ellipse: s-maj=10.7km s-min=4.8km az=19.7*
*NEIC **02** 08:34:39.7, 18°.17N×67°.02W, h21km, MD3.5(RSPR), After RSPR.*
NEIC Felt [IV] at Anasco, Hormigueros, Lares, Mayaguez, San German, San Sebastian and Yauco. Also felt at Lajas, Sabana Grande, Trujillo Alto and Utuado.
*IDC **02** 08:34:39.5±2.7, 18°.30N×66°.92W, h22km±16km, mb3.6/9, mb1 3.7/9, mb1mx3.6/22, mbtmp3.6/9, Error ellipse: s-maj=43.9km s-min=15.3km az=23.0*
*RSPR **02** 08:34:39.7, 18°.17N×67°.02W, h21km±1km, MD3.5/16*
ISC 02 08:34:39.3±0.8, 18°.17N±0°.04×67°.01W±0°.03, h26km±4km, n62, σ0s.93/71, mb3.8/9, 16C-15D, Mona Passage

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSP	Las Mesas	0.07	272	⇓eP	Pb	08 34 43.3	-0.7
LSP	Las Mesas	0.07	272	⇓eP	Pb	08 34 43.3	-0.7
MPR	Mayaguez	0.13	287	⇑eP	Pb	08 34 43.6	-0.8
MPR	Mayaguez	0.13	287	⇑eP	Pb	08 34 43.6	-0.8
LRS	Lares	0.20	53	⇑eP	Pb	08 34 44.7	-0.5
LRS	Lares	0.20	53	⇑eP	Pb	08 34 44.7	-0.5
GBPR	Guanica, Bosqu	0.23	147	⇓eP	Pb	08 34 45.1	-0.4
GBPR	Guanica, Bosqu	0.23	147	⇓eP	Pb	08 34 45.1	-0.4
AOPR	Arecibo Observ	0.30	55	⇓eP	Pb	08 34 46.0	-0.4
AOPR	Arecibo Observ	0.30	55	eS	Sb	08 34 51.0	-0.3
AOPR	Arecibo Observ	0.30	55	⇓eP	Pb	08 34 46.0	-0.4
AOPR				eS	Sb	08 34 51.0	-0.3
AGPR	Aguadilla, PR	0.31	342	⇑eP	Pb	08 34 46.0	-0.6
AGPR	Aguadilla, PR	0.31	342	eS	Sb	08 34 51.2	-0.4
AGPR	Aguadilla, PR	0.31	342	⇑eP	Pb	08 34 46.0	-0.6
AGPR				eS	Sb	08 34 51.2	-0.4
OBIP	Obispado Ponce	0.41	109	⇑eP	Pb	08 34 47.6	-0.5
OBIP	Obispado Ponce	0.41	109	eS	Sb	08 34 53.9	-0.2
OBIP	Obispado Ponce	0.41	109	⇑eP	Pb	08 34 47.6	-0.5
OBIP				eS	Sb	08 34 53.9	-0.2
CELP	Cerrillos	0.42	103	⇓eP	Pb	08 34 47.7	-0.6
CELP	Cerrillos	0.42	103	⇓eP	Pb	08 34 47.7	-0.6
SJG	San Juan	0.82	94	⇓eP	Pb	08 34 54.0	-1.1
SJG	San Juan	0.82	94	eS	Sb	08 35 04.8	-0.9
SJG	San Juan	0.82	94	⇓eP	Pb	08 34 53.9	-1.1
SJG	San Juan	0.82	94	⇓eP	Pb	08 34 53.9	-1.1
SJG				Lg	Lg	08 35 04.6	
SJG				eS	Sb	08 35 04.8	-0.9
SJG	San Juan	0.82	94	Pg	Pb	08 34 53.7	-1.3
	500nm,0.3s,baz=284,slow=11,SNR=890						
SJG				Lg	Lg	08 35 04.6	
	2µm,0.3s,baz=270,slow=11,SNR=103						
IMO	Isla Mona	0.85	266	⇓eP	Pb	08 34 53.7	-1.9
IMO	Isla Mona	0.85	266	⇓eP	Pb	08 34 53.7	-1.9
CPD	Cerro la Pandu	1.05	97	⇑eP	Pb	08 34 57.6	-1.3
CPD	Cerro la Pandu	1.05	97	eS	Sb	08 35 11.3	-1.0
CPD	Cerro la Pandu	1.05	97	⇑eP	Pb	08 34 57.6	-1.3
CPD				eS	Sb	08 35 11.3	-1.0
CBYP	Canovanas	1.10	85	⇑eP	Pn	08 34 58.6	-0.5
CBYP	Canovanas	1.10	85	⇑eP	Pn	08 34 58.6	-0.5
HUMP	Col San Antoni	1.10	91	⇑eP	Pn	08 34 58.2	-0.9
HUMP	Col San Antoni	1.10	91	eS	Sb	08 35 12.7	-1.1
HUMP	Col San Antoni	1.10	91	⇑eP	Pn	08 34 58.2	-0.9
HUMP				eS	Sb	08 35 12.7	-1.1
STVI	Saint Thomas	1.96	85	⇓eP	Pn	08 35 10.6	-0.3
STVI	Saint Thomas	1.96	85	⇓eP	Pn	08 35 10.6	-0.3
CDVI	St. Croix	2.18	101	ePn	Pb	08 35 16.5	-1.6
CDVI				eSg	Sb	08 35 46.1	+1.5
TBVI	Tortola	2.29	84	⇑eP	Pn	08 35 15.4	0.0
TBVI	Tortola	2.29	84	⇑eP	Pn	08 35 15.4	0.0
LZG	Guadaloupe-1	5.40	111	eP	Pn	08 35 57.9	-0.3
SCG	Saint Claude	5.53	112	eP	Pn	08 36 01.2	+1.2
HMG	Houelmont	5.53	112	eP	Pn	08 36 00.7	+0.7
SEG	Port Louis	5.55	108	eP	Pn	08 36 00.5	+0.3
PHG	Guadaloupe-2	5.56	112	eP	Pn	08 36 01.7	+1.1
TXAR	Lajitas Array	35.21	295	P	P	08 41 32.4	+0.7
TXAR				ScP	ScP	08 47 46.8	+0.2
TXAR	Lajitas Array	35.21	295	P	P	08 41 32.4	+0.7
	0.2nm,0.5s,baz=118,slow=9.3,SNR=5.5						
TXAR				ScP	ScP	08 47 46.8	+0.2
	0.2nm,0.6s,baz=119,slow=5.6,SNR=3.2						
SCHQ	Schefferville	36.59	0	P	P	08 41 41.6	-1.5
SCHQ	Schefferville	36.59	0	P	P	08 41 41.6	-1.5
	1.7nm,0.8s,baz=186,slow=9.2,SNR=3.1						
NVAR	Mina Array Bea	48.79	305	P	P	08 43 24.9	+2.3
NVAR	Mina Array Bea	48.79	305	P	P	08 43 24.9	+2.3
	0.2nm,0.6s,baz=103,slow=6.8,SNR=2.6						
YKA	Yellowknife Ar	55.09	335	P	P	08 44 08.2	-0.7
YKA	Yellowknife Ar	55.09	335	P	P	08 44 08.1	-0.7
	0.3nm,0.5s,baz=111,slow=7.4,SNR=11						
ESDC	Sonseca Array	58.02	54	P	P	08 44 30.8	+0.6
ESDC	Sonseca Array	58.02	54	P	P	08 44 30.8	+0.6
	0.4nm,0.4s,baz=267,slow=8.9,SNR=4.9						
DBIC	Dimbokro	61.52	92	P	P	08 44 54.5	-0.1
DBIC	Dimbokro	61.52	92	P	P	08 44 54.5	-0.1
	2.4nm,0.8s,baz=292,slow=5.3,SNR=3.4						
TORD	Torodi Ar. Bea	66.02	83	P	P	08 45 23.8	-0.5
TORD	Torodi Ar. Bea	66.02	83	P	P	08 45 23.8	-0.5
	1.2nm,0.8s,baz=288,slow=6.1,SNR=7.3						
FINES	FINESS Array B	75.68	30	P	P	08 46 22.1	0.0
FINES	FINESS Array B	75.68	30	P	P	08 46 22.1	0.0
	0.6nm,0.6s,baz=264,slow=5.7,SNR=5.2						
BRTR	Keskin Array B	86.45	49	P	P	08 47 21.2	+1.0
BRTR	Keskin Array B	86.45	49	P	P	08 47 21.2	+1.0
	0.7nm,0.8s,baz=287,slow=5.9,SNR=3.1						

*NEIC **02** 08:37:35.1, 28°.48S×70°.46W, h90km, MG4.0(GUC), After GUC.*
GUC 02 08:37:35.1±0.8, 28°.48S×70°.46W, h90km±7km, ML4.0, 6C-2D, Central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.57	202	⇑iP	Pn	08 37 51.5	+0.7
LCO				iS	Sn	08 38 03.6	+1.1
LCO	Las Campanas	0.57	202	⇑iP	Pn	08 37 51.5	+0.7
LCO				iS	Sn	08 38 03.6	+1.1
LCO				AML	AML	08 38 04.5	
	comp=E,2µm,0.4s						
CPCH	Copiapo	1.12	5	⇑iP	Pn	08 37 56.5	+0.2
CPCH				iS	Sn	08 38 12.6	+0.4
CPCH	Copiapo	1.12	5	⇑iP	Pn	08 37 56.5	+0.2
CPCH				iS	Sn	08 38 12.6	+0.4
CPCH				AML	AML	08 38 14.5	
	comp=E,15µm,0.1s						
CDCH	Caldera	1.45	347	eP	Pn	08 38 00.8	+0.6
CDCH				iS	Sn	08 38 19.2	0.0
CDCH	Caldera	1.45	347	eP	Pn	08 38 00.8	+0.6
CDCH				iS	Sn	08 38 19.2	0.0
TLL	Tololo Astrono	1.71	190	⇑iP	Pn	08 38 04.3	+0.4
TLL				iS	Sn	08 38 26.6	+1.0
TLL	Tololo Astrono	1.71	190	⇑iP	Pn	08 38 04.3	+0.4
TLL				iS	Sn	08 38 26.6	+1.0
CMCH	Combarbala	2.72	190	⇓iP	Pn	08 38 16.0	-1.0
CMCH				iS	Sn	08 38 48.2	-1.1
CMCH	Combarbala	2.72	190	⇓iP	Pn	08 38 16.0	-1.0
CMCH				iS	Sn	08 38 48.2	-1.1
CMCH				AML	AML	08 38 58.4	
	comp=E,456nm,0.8s						

MOS 02 08:53:33.3±1.5, 50°.30N×98°.42E, h8km, mb4.4/1, 1C, Error ellipse: s-maj=61.2km s-min=20.9km az=50.1, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MOY	Mondy	2.12	49	ePN	Pn	08 54 10.7	+1.4
MOY				e		08 54 40.4	
MOY				pmax	pmax		
	comp=Z,175nm,0.5s						
MOY				smax	smax		
	comp=N,1µm,1.8s						
ORL	Orlik	2.41	21	ePN	Pb	08 54 16.1	-0.9
ORL				e		08 54 48.0	
ORL				pmax	pmax		
	comp=Z,116nm,0.4s						
ORL				smax	smax		
	comp=E,470nm,0.6s						
ZAK	Zakamensk	3.12	87	⇑iPN	Pn	08 54 22.8	-0.1
ZAK				e		08 54 28.9	
ZAK				e		08 55 10.3	
ZAK				pmax	pmax		
	comp=Z,57nm,0.8s						
ZAK				smax	smax		
	comp=E,161nm,0.4s						
TLY	Talaya	3.58	65	ePN	Pn	08 54 28.5	-0.6
TLY				e		08 54 37.2	
TLY				e		08 55 24.9	
TLY				pmax	pmax		
	comp=Z,32nm,0.4s						
TLY				smax	smax		
	comp=N,323nm,1.3s						
IRK	Irkutsk	4.16	60	ePN	Pb	08 54 46.8	+0.1
IRK				e		08 55 41.8	
IRK				pmax	pmax		
	comp=Z,92nm,0.2s						
IRK				smax	smax		
	comp=N,670nm,0.5s						
TRG	Tyrgan	5.53	60	ePN	Pb	08 55 14.2	+4.1
TRG				eS	Sn	08 55 59.2	-0.4
TRG				e		08 56 23.0	
TRG				pmax	pmax		
	comp=Z,9.0nm,0.5s						
TRG				smax	smax		
	comp=N,178nm,1.0s						
NIZ	Nizh Angarsk	8.65	46	eP	Pn	08 55 41.4	+2.7
NIZ				pmax	pmax		
	comp=Z,2.0nm,0.4s						

MAN 02 09:08:13, 17°.95N×120°.95E, h20km, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.37	218	eP	Pn	09 08 23.6	+0.4
SIPP	Brgy, Tapao	0.47	267	⇓iP	Pn	09 08 23.7	-0.9
SIPP				iS	Sn	09 08 34.3	+2.0
CAUP	Cauayan	1.30	140	eP	Pn	09 08 36.0	0.0
CAUP				eS	Sb	09 08 53.9	+0.9
PALP	Palanan	1.66	122	eP	Sn	09 09 05.6	+3.9
BOLP	Bolinao	1.84	213	eP	Pn	09 08 40.1	-3.4

MEX 02 09:09:07.1±0.3, 16°.68N×99°.73W, h6km±2km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.22	327	eP	Pg	09 09 11.9	+0.4
ACX				eS	Sg	09 09 15.1	+0.6
CAIG	El Cayaco	0.63	305	eP	Pg	09 09 18.2	-1.0
CAIG				eS	Sg	09 09 27.0	-0.3
PNIG	Pinotepa	1.57	100	eP	Pn	09 09 31.9	-3.6
PNIG				eS	Sn	09 09 51.0	-5.1
ARIG	Puente Sto Nin	1.69	340	eP	Pn	09 09 33.6	-3.6
ARIG				eS	Sn	09 09 54.5	-4.7
ZIIG	Zihuatanejo	1.89	299	eP	Pn	09 09 37.2	-2.7
ZIIG				eS	Sn	09 09 59.5	-4.6
UTMO	Huajuapan	2.17	58	eP	Pn	09 09 40.7	-3.3
UTMO				eS	Sn	09 10 06.5	-4.9
YAIG	Yautepec	2.26	16	eP	Pn	09 09 41.7	-3.5
YAIG				eS	Sn	09 10 08.6	-4.9
PPM	Popocatepetl	2.59	24	eP	Pn	09 09 47.4	-2.9
PPM				eS	Sn	09 10 18.9	-3.7

IDC 02 09:18:06.9±55.0, 24°.10S×177°.41W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/17, mbtmp3.9/3, Error ellipse: s-maj=1001.0km s-min=159.7km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.85	249	P	P	09 25 16.1	-0.9
	0.6nm,0.3s,baz=86,slow=9.7,SNR=7.1						
ASAR	Alice Springs	44.34	260	P	P	09 26 18.9	-0.2
	0.9nm,0.4s,baz=91,slow=7.8,SNR=28						
WRA	Warramunga Arr	44.75	265	P	P	09 26 23.0	+0.6
	0.7nm,0.4s,baz=103,slow=8.1,SNR=10						

IDC 02 09:29:40.9±2.2, 8°.18S×74°.40W, h154km±28km, mb2.9/3, mb1 3.2/7, mb1mx3.1/23, mbtmp3.1/7, Error ellipse: s-maj=30.1km s-min=13.0km az=51.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	4.09	284	P	Pn	09 30 42.6	-0.4
	41nm,0.3s,baz=124,slow=11,SNR=261						
ATAH				S	Sn	09 31 31.4	+0.1
	4.8nm,0.3s,baz=124,slow=15,SNR=4.8						
NNA	Nana	4.48	212	P	Pn	09 30 48.9	+1.2
	4.4nm,0.3s,baz=41,slow=8.0,SNR=17						
NNA				S	Sn	09 31 39.5	-0.2
	28nm,0.3s,baz=342,slow=19,SNR=18						
LPAZ	La Paz	10.12	143	P	Pn	09 32 02.7	-0.6
	0.2nm,0.3s,baz=335,slow=10,SNR=6.8						
LPAZ				S	S	09 33 57.3	+0.1
	0.1nm,0.3s,baz=343,slow=20,SNR=3.1						
SIV	San Ignacio	15.16	122	P	P	09 33 08.8	0.0
	0.6nm,0.3s,baz=303,slow=12,SNR=14						
CPUP	Villa Florida	24.27	140	P	P	09 34 43.9	0.0
	0.3nm,0.4s,baz=324,slow=17						
YKA	Yellowknife Ar	76.95	342	P	P	09 41 17.0	+0.9
	0.1nm,0.8s,baz=146,slow=8.5,SNR=2.6						
TORD	Torodi Ar. Bea	78.48	75	P	P	09 41 24.6	-0.9
	0.5nm,0.5s,baz=276,slow=6.1,SNR=5.6						
WRA	Warramunga Arr	140.23	225	PKP	PKPdf	09 48 53.8	+1.4
	0.5nm,0.7s,baz=118,slow=2.1,SNR=6.4						

MEX 02 10:24:13.0±0.3**, 16.°69N**×**99.°77W, h9**^{km}±1^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.19	335	*i* P	Pg	10 24 17.2	+0.1
ACX				*e*P		10 24 17.3	
ACX				*e*S	Sg	10 24 20.4	+0.6
CAIG	El Cayaco	0.59	307	*e*P	Pg	10 24 23.4	-1.0
CAIG				*e*S	Sg	10 24 31.7	-0.6
PNIG	Pinotepa	1.61	101	*e*P	Pn	10 24 38.3	-3.3
PNIG				*e*S	Sn	10 24 57.5	-5.0
ARIG	Puente Sto Nin	1.67	341	*e*P	Pn	10 24 39.0	-3.5
ARIG				*e*S	Sn	10 24 59.5	-4.6
YAIG	Yautepec	2.26	17	*e*P	Pn	10 24 47.3	-3.4
YAIG				*e*S	Sn	10 25 14.1	-4.8
PPM	Popocatepetl	2.60	25	*e*P	Pn	10 24 52.7	-3.2
PPM				*e*S	Sn	10 25 23.2	-4.9

*ISCJB **02** 10:36:51.4±0.3, 15.°61S±0.°05×70.°50W±0.°04, h193^{km}, mb3.8/18, Error ellipse: s-maj=7.1km s-min=5.4km az=35.7*
*IDC **02** 10:36:52.9±0.8, 15.°49S×70.°39W, h191^{km}±7^{km}, mb3.6/11, mb1 3.7/13, mb1mx3.6/22, mbtmp3.6/13, Error ellipse: s-maj=20.8km s-min=9.6km az=28.0*
*NEIC **02** 10:36:52.7±0.6, 15.°60S×70.°54W, h184^{km}±7^{km}, mb4.1/8, Error ellipse: s-maj=12.0km s-min=11.3km az=190.0*
NEIC Felt at Juliaca.
ISC 02 10:36:52.6±0.5**, 15.°70S**±0.°07×**70.°50W**±0.°06**, h193**^{km}**, n122,** σ**1**^{s}**33**/134**, mb3.9**/18**, 38C-44D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	Arequipa	1.22	232	⇑*i*P	Pn	10 37 23.2	-0.4
ARE				*i* S	Sn	10 37 47.4	-0.3
LPAZ	La Paz	2.35	105	*e*Pn	Pn	10 37 36.7	+1.7
LPAZ				*e*Sn	Sn	10 38 08.7	+0.7
LPAZ	La Paz	2.35	105	P	Pn	10 37 36.6	+1.6
	216nm,0.3s,baz=290,slow=8.1,SNR=8502						
LPAZ				S	Sn	10 38 08.2	+0.3
	29nm,0.3s,baz=211,slow=24,SNR=6.9						
NNA	Nana	7.18	300	*e*Pn	Pn	10 38 33.8	-1.5
NNA				*e*Sn	Sn	10 39 49.9	-6.8
NNA	Nana	7.18	300	P	Pn	10 38 33.8	-1.5
	1.9nm,0.3s,baz=133,slow=10,SNR=20						
NNA				S	Sn	10 39 53.4	-3.4
	4.4nm,0.3s,baz=237,slow=22,SNR=5.0						
SIV	San Ignacio	9.07	93	P	Pn	10 38 58.4	-1.6
	3.2nm,0.3s,baz=289,slow=11,SNR=30						
SIV				S	Sn	10 40 39.7	-2.0
	0.4nm,0.3s,baz=212,slow=17,SNR=3.6						
SAML	Samuel	9.80	48	*e*Pn	Pn	10 39 07.6	-1.9
	14nm,0.8s						
SAML				*e*Sn	Sn	10 40 49.8	-9.2
LCO	Las Campanas	13.25	181	*e*Pn	Pn	10 39 54.5	+0.8
CFAA	Coronel Fontan	15.96	173	P	Pn	10 40 29.1	+2.2
	0.1nm,0.3s,baz=349,slow=11,SNR=13						
CFAA				S	S	10 43 17.7	-6.2
	0.1nm,0.3s,baz=242,slow=15,SNR=3.0						
OTAV	Otavalo	17.68	333	*e*P	P	10 40 46.2	+0.1
	2.0nm,0.9s						
BDFB	Brasilia	21.65	93	P	P	10 41 26.8	-1.4
	1.9nm,0.4s,baz=256,slow=7.1,SNR=4.8						
SDV	Santo Domingo	24.43	360	*e*P	P	10 41 53.9	-0.1
	0.1nm,0.7s						
PLCA	Paso Flores	24.94	180	P	P	10 41 59.5	+1.3
	0.6nm,0.5s,baz=13,slow=9.1,SNR=3.8						
732A	Laxson Ranch,	52.57	327	⇑P	P	10 45 46.2	-0.3
	baz=53						
632A	Uvalde	53.10	328	⇑P	P	10 45 50.5	+0.1
	baz=53						
532A	Rocksprings	53.66	328	⇑P	P	10 45 54.5	0.0
	baz=54						
WHTX	Lake Whitney	54.01	332	⇓P	P	10 45 57.2	+0.2
	baz=54						
531A	Rocksprings	54.02	328	⇑P	P	10 45 56.9	-0.2
	baz=54						
432A	Menard	54.21	329	⇓P	P	10 45 58.0	-0.5
	baz=54						
530A	J-C Ranch, Com	54.42	327	⇓P	P	10 45 59.8	-0.2
	baz=54						
431A	Sonora	54.46	328	⇓P	P	10 46 00.2	-0.1
	baz=55						
332A	Millersview	54.59	329	⇓P	P	10 46 00.9	-0.4
	baz=55,SNR=6.6						
628A	Black Gap, Mar	54.73	325	⇑P	P	10 46 02.7	+0.4
	baz=55,SNR=5.7						
529A	Stev Forest Ra	54.87	326	⇑P	P	10 46 03.5	+0.2
	baz=55,SNR=7.4						
232A	Coleman	54.96	330	⇓P	P	10 46 03.8	-0.1
	baz=55,SNR=8.0						
627A	Terlingua Ranc	54.98	325	⇑P	P	10 46 04.3	+0.2
	baz=55						
TXAR	Lajitas Array	55.05	324	P	P	10 46 04.4	-0.3
	0.7nm,0.5s,baz=150,slow=9.2,SNR=20						
TXAR				PcP	PcP	10 47 04.3	+0.6
	0.3nm,0.9s,baz=142,slow=7.5,SNR=2.0						
429A	Davenport Ranc	55.09	327	⇑P	P	10 46 04.9	+0.1
	baz=55,SNR=7.0						
626A	Big Bend Ranch	55.48	324	⇑P	P	10 46 07.8	+0.1
	baz=56						
ABTX	Abilene, Hawle	55.56	330	⇑P	P	10 46 08.1	0.0
	baz=56						
527A	Woodward Ranch	55.64	325	⇑P	P	10 46 08.8	-0.1
	baz=56						
329A	Wagon Wheel Ra	55.81	327	⇓P	P	10 46 09.8	-0.1
	baz=56						
526A	Mary Lane Ranc	55.84	325	⇓P	P	10 46 10.5	+0.1
	baz=56						
426A	McDonald Obser	56.27	325	⇓P	P	10 46 13.4	-0.1
	baz=56						
Z31A	Sharp Cattle R	56.37	330	⇑P	P	10 46 14.0	+0.1
	baz=56						
Y32A	R-V Farms, Ver	56.60	331	⇓P	P	10 46 15.7	+0.2
	baz=57						
129A	Stewart Farms,	56.66	328	⇓P	P	10 46 15.7	-0.3
	baz=57						
326A	Caldwell Ranch	56.74	326	⇓P	P	10 46 16.3	-0.3
	baz=57						
Z30A	Sanderson Ranc	56.82	329	⇓P	P	10 46 16.6	-0.5
	baz=57,SNR=5.2						
425A	Indio Mountain	56.89	324	⇑P	P	10 46 17.5	-0.2
	baz=57,SNR=6.1						
Y31A	Rekieta Farm,	56.95	331	⇓P	P	10 46 18.0	+0.1
	baz=57						
325A	Bean Ranch, Si	57.33	325	⇑P	P	10 46 20.7	-0.1
	baz=57,SNR=5.5						
X31A	McDonald Ranch	57.37	331	⇑P	P	10 46 20.6	-0.3
	baz=58,SNR=6.1						
226B	Tecolote Peak,	57.43	326	⇑P	P	10 46 21.5	+0.1
	baz=58						
GDL2	Guadalupe Moun	57.63	326	*e*P	P	10 46 22.8	0.0
	38nm,0.8s						
X30A	Coker Ranch, T	57.64	330	⇓P	P	10 46 22.2	-0.5
	baz=58						
324A	Moseley Ranch,	57.67	325	⇑P	P	10 46 22.1	-1.0
	baz=58,SNR=5.2						
225A	Deer Hill, Car	57.81	326	⇑P	P	10 46 24.2	0.0
	baz=58						
Z27A	Tatum	57.89	328	⇓P	P	10 46 24.0	-0.6
	baz=58,SNR=6.1						
224A	Cornudas Mount	58.17	325	⇓P	P	10 46 26.1	-0.5
	baz=58,SNR=7.3						
Y27A	Causey	58.31	328	⇓P	P	10 46 26.8	-0.7
	baz=58,SNR=5.2						
124A	Stringfield Ra	58.60	326	⇑P	P	10 46 29.4	-0.4
	baz=59						
Z24A	Sheeppen Canyo	59.04	326	⇑P	P	10 46 32.3	-0.4
	baz=59,SNR=5.4						
X26A	CR and CF Fran	59.17	328	⇓P	P	10 46 33.2	-0.3
	baz=59						
U30A	WK&E Inc. Balk	59.24	332	⇓P	P	10 46 36.1	+2.3
	baz=59						
V25A	Rancho No Teng	60.59	328	⇓P	P	10 46 43.2	+0.1
	baz=61						
U26A	Atchley Ranch,	60.59	329	⇓P	P	10 46 42.9	-0.3
	baz=61						
Z20A	Nine Sixteen R	60.67	324	⇑P	P	10 46 44.5	+0.8
	baz=61						
Y21A	Point of Rocks	60.81	325	⇓P	P	10 46 45.8	+1.1
	baz=61,SNR=5.1						
ANMO	Albuquerque	60.85	326	*e*P	P	10 46 45.4	+0.4
	5.7nm,1.6s						
ANMO	Albuquerque	60.85	326	P	P	10 46 45.0	+0.1
	1.0nm,0.6s,baz=69,slow=23,SNR=6.6						
S26A	Kim	61.44	331	⇑P	P	10 46 48.9	+0.1
	baz=62,SNR=5.6						
S25A	Robets Cordova	61.93	330	⇑P	P	10 46 52.2	0.0
	baz=62						
R26A	Arlington	61.97	331	⇑P	P	10 46 52.4	+0.1
	baz=62						
214A	Organ Pipe Nat	62.37	320	⇓P	P	10 46 55.9	+0.9
	baz=62						
SDCO	Great Sand Dun	62.52	329	*e*P	P	10 46 56.5	+0.3
	5.7nm,1.3s						
X16A	Lo Mia Camp, P	63.25	323	⇑P	P	10 47 01.6	+0.7
	baz=63						
113A	Mohawk Valley,	63.52	320	⇑P	P	10 47 02.9	+0.4
	baz=64						
N27A	Anderson Farm,	63.60	333	⇑P	P	10 47 04.6	+1.6
	baz=64						
ECSD	EROS Data Cent	63.79	339	*e*P	P	10 47 03.6	-0.5
	7.9nm,1.4s						
SMCO	Snowmass	64.36	329	*e*P	P	10 47 08.8	+0.4
	1.8nm,0.6s						
O19A	Miners Draw (B	66.28	329	⇓P	P	10 47 20.9	+0.5
	baz=66,SNR=6.7						
PDAR	Pinedale Array	68.36	330	P	P	10 47 32.9	-0.6
	0.7nm,0.4s,baz=124,slow=8.8,SNR=9.1						
DBIC	Dimbokro	68.68	76	P	P	10 47 34.5	-1.2
	1.5nm,0.4s,baz=177,slow=19,SNR=4.7						
J18A	Kendall Valley	68.92	330	⇓P	P	10 47 36.4	-0.6
	baz=69,SNR=5.4						
K17A	Gardner Place,	69.01	329	⇑P	P	10 47 37.4	-0.1
	baz=69						
ULM	Lac du Bonnet	69.36	343	P	P	10 47 37.8	-1.4
	1.9nm,0.3s,baz=83,slow=1.8,SNR=4.8						
IMW	Indian Meadow	69.88	330	*e*P	P	10 47 43.6	+0.8
NVAR	Mina Array Bea	70.03	322	P	P	10 47 44.7	+0.9
	0.7nm,0.7s,baz=152,slow=6.6,SNR=6.5						
LKWY	Lake	70.12	331	*e*P	P	10 47 44.8	+0.5
	2.5nm,0.8s						
J15A	Blackfoot	70.24	329	⇓P	P	10 47 45.2	+0.4
	baz=70						
D22A	Cohagen	70.28	335	⇓P	P	10 47 45.7	+0.8
	baz=70						
G18A	Lazy EL Ranch,	70.30	332	⇓P	P	10 47 45.8	+0.6
	baz=70,SNR=5.7						
D21A	La Casta Ranch	70.55	334	⇓P	P	10 47 47.2	+0.6
	baz=71,SNR=5.2						
E20A	Meyer Farm, Mu	70.59	333	⇑P	P	10 47 47.6	+0.8
	baz=71						
H16A	Russell Place,	70.62	330	⇓P	P	10 47 48.3	+1.0
	baz=71						
I15A	Monteview	70.70	329	⇑P	P	10 47 48.7	+1.0
	baz=71						
J14A	Carey	70.73	328	⇑P	P	10 47 48.9	+1.0
	baz=71						
E19A	Rath Farm, Rou	70.84	333	⇓P	P	10 47 48.6	+0.2
	baz=71,SNR=5.4						
F17A	Fitzpatrick Pl	71.25	332	⇑P	P	10 47 51.9	+0.9
	baz=71						
G16A	Moss Hill, Enn	71.28	330	⇑P	P	10 47 51.7	+0.6
	baz=71						
I13A	Wildhorse Cree	71.46	328	⇓P	P	10 47 53.5	+1.1
	baz=72						
H14A	Leadore	71.59	329	⇓P	P	10 47 53.8	+0.8
	baz=72						
E17A	Martinsdale	71.76	332	⇑P	P	10 47 54.3	+0.3
	baz=72						
C19A	Slack Wire Ran	71.94	334	⇓P	P	10 47 54.7	-0.2
	baz=72						
MFID	Camas Ranch	71.99	327	*e*P	P	10 47 56.7	+1.3
	2.8nm,0.8s						
MFID	Camas Ranch	71.99	327	⇑P	P	10 47 56.4	+1.1
	baz=72						
H13A	Challis	71.99	329	⇓P	P	10 47 56.2	+0.8
	baz=72						
D17A	Six Diamond Ra	72.21	332	⇑P	P	10 47 56.9	+0.3
	baz=72						
H12A	Diamond D Ranc	72.28	328	⇓P	P	10 47 57.9	+0.8
	baz=72						
G13A	Cobalt	72.36	329	⇓P	P	10 47 58.5	+0.9
	baz=72						
D16A	Dana Ranch, Ca	72.50	332	⇓P	P	10 47 59.5	+1.1
	baz=73,SNR=5.3						
E14A	Clinton	72.95	330	⇑P	P	10 48 02.3	+1.2
	baz=73						
E13A	Victor	73.30	330	⇓P	P	10 48 04.1	+1.1
	baz=73						
F12A	Elk City	73.33	329	⇓P	P	10 48 03.9	+0.7
	baz=73						
C15A	Salmond Ranch,	73.54	332	⇓P	P	10 48 05.3	+0.9
	baz=74						
A16A	West Butte Ran	73.96	333	⇓P	P	10 48 06.6	-0.2
	baz=74						
YBH	Yreka Blue Hor	74.73	322	P	P	10 48 11.3	-0.1
	2.1nm,0.9s,baz=195,slow=4.1,SNR=3.3						
TORD	Torodi Ar. Bea	76.93	72	P	P	10 48 22.5	-1.8
	0.8nm,0.4s,baz=259,slow=4.6,SNR=17						
TORD				pP	pP	10 49 11.9	+1.1
	1.1nm,0.8s,baz=256,slow=5.5,SNR=4.5						
YKA	Yellowknife Ar	85.25	341	P	P	10 49 06.8	-0.2
	0.8nm,0.5s,baz=135,slow=5.0,SNR=46						
YKA				pP	pP	10 49 53.9	-0.6
	0.2nm,0.8s,baz=138,slow=5.0,SNR=1.6						
LBTB	Lobatse	88.83	116	*e*P	P	10 49 19.5	-6.0
STKA	Stephens Creek	123.56	213	PKP	PKPdf	10 55 28.3	+0.6
	1.6nm,0.8s,baz=338,slow=20,SNR=4.7						
ASAR	Alice Springs	134.18	212	PKP	PKPdf	10 55 48.1	0.0
	0.6nm,0.6s,baz=129,slow=1.9,SNR=9.1						
WRA	Warramunga Arr	136.98	215	PKP	PKPdf	10 55 53.8	+0.4
	0.7nm,0.4s,baz=140,slow=1.6,SNR=11						
ZALV	Zalesovo Beam	137.24	21	PKP	PKPdf	10 55 53.6	+0.8
	1.5nm,0.6s,baz=309,slow=3.1,SNR=4.9						
ZALV				SKP		10 59 09.3	
	1.6nm,0.9s,baz=12,slow=7.6,SNR=5.3						
MKAR	Makanchi Array	141.62	30	SKPbc	SKiKP	10 59 22.0	+0.2
	0.2nm,0.5s,baz=156,slow=28,SNR=3.6						
FITZ	Fitzroy Crossi	142.84	206	PKhKP	PKPpre	10 56 00.6	
	1.4nm,0.6s,baz=46,slow=20,SNR=5.8						
WMQ	Urumqi	146.39	29	*e*PKPbc	PKPdf	10 56 09.1	-0.3
MJAR	Matsushiro Arr	147.12	315	PKPbc	PKPbc	10 56 13.5	+0.3
	4.8nm,0.7s,baz=137,slow=1.2,SNR=23						
MAT	Matsushiro	147.12	315	PKP	PKPbc	10 56 13.3	+0.1
SONM	Songino Array	147.86	4	PKPbc	PKPbc	10 56 15.7	+0.7
	1.2nm,0.6s,baz=345,slow=1.9,SNR=5.6						
HHC	Hu-ho-hao-te	154.88	356	⇓*i*PKPbc	PKPdf	10 56 25.0	+2.3
HHC				pPKP	pPKPdf	10 57 07.6	-5.5
HHC				PKS	PKSdf	10 59 57.9	+1.1
HHC				SKS	SKSdf	11 03 14.0	+2.8
HHC				SKKS	SKKSac	11 06 59.6	+4.8
HHC				SS	SS	11 19 54.5	+5.9
HHC				LR	LR		
	comp=N,230nm,20.0s						
HHC				LR	LR		
	comp=E,290nm,21.4s						
HHC				LR	LR		
	comp=Z,120nm,21.4s						

*IDC **02** 10:47:54.6±1.0, 50.°22N×87.°92E, h0^{km}, mb3.5/4, mb1 3.9/10, mb1mx3.7/32, mbtmp3.9/10, ML4.1/6, Error ellipse: s-maj=13.0km s-min=11.5km az=144.0*
*MOS **02** 10:47:54.6±1.6, 50.°14N×87.°81E, h10^{km}, mb4.2/1, Error ellipse: s-maj=16.3km s-min=11.0km az=107.7*
*NNC **02** 10:47:55.4±2.2, 50.°29N×87.°76E, h0^{km}, mb3.8, mpv3.8, Error ellipse: s-maj=18.9km s-min=13.4km az=81.0*
*ISCJB **02** 10:47:55.0±1.3, 50.°20N±0.°05×87.°75E±0.°07, h7^{km}±8^{km}, mb3.5/4, Error ellipse: s-maj=8.7km s-min=7.7km az=143.1*
ISC 02 10:47:56.9±1.2**, 50.°41N**±0.°04×**87.°68E**±0.°05**, h10**^{km}±8^{km}**, n32,** σ**1**^{s}**64**/36**, mb3.6**/4**, 13C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAR	Aktash	0.10	205	*i* PG	Pg	10 47 59.2	-0.5
UKR	Ust'-Kan	1.93	287	*e*PN	Pb	10 48 32.3	+0.2
UKR				*e*		10 49 00.5	
TASR	Tashtagol	2.36	3	*e*PN	Pb	10 48 41.9	+2.5
TASR				*e*		10 49 16.9	
HVS	Khovu-Aksy	3.89	77	⇑*e*PN	Pn	10 48 58.5	+1.7
ZALV	Zalesovo Beam	3.96	335	*e*PN	Pn	10 49 01.7	+4.1
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.3s						
ZALV	Zalesovo Beam	3.96	335	Pn	Pn	10 49 01.6	+4.1
	comp=Z,7.9nm,0.3s,baz=157,slow=13,SNR=142						
ZALV				Sn	Sb	10 49 53.3	-1.3
	comp=Z,6.0nm,0.3s,baz=150,slow=24,SNR=6.7						
ZALV				Lg	Lg	10 50 05.7	
	comp=Z,5.7nm,0.3s,baz=169,slow=31,SNR=5.1						
MK31	Makanchi Array	5.09	227	Pn	Pn	10 49 13.8	+0.7
	comp=Z,27nm,0.6s,baz=52,slow=11,SNR=400						
MK31				⇓Pg	Pb	10 49 27.7	+1.7
	comp=Z,8.0nm,0.4s,baz=56,slow=13,SNR=4.7						
MK31				⇓Sn	Sn	10 50 12.0	0.0
	comp=Z,16nm,0.6s,baz=94,slow=45,SNR=6.3						
MK31				⇑Lg	Lg	10 50 33.1	
	comp=Z,42nm,0.5s,baz=49,slow=34,SNR=4.5						
MKAR	Makanchi Array	5.09	227	*e*PN	Pn	10 49 13.7	+0.5
MKAR	Makanchi Array	5.09	227	Pn	Pn	10 49 13.6	+0.4
	comp=Z,9.2nm,0.3s,baz=48,slow=12,SNR=361						
MKAR				Sn	Sn	10 50 12.0	0.0
	comp=Z,9.2nm,0.3s,baz=342,slow=12,SNR=8.6						
MKAR				Lg	Lg	10 50 30.5	
	comp=Z,13nm,0.3s,baz=56,slow=31,SNR=5.4						
NVS	Novosibirsk	5.20	330	*e*PN	Pb	10 49 28.1	+0.3
NVS				*e*		10 49 33.9	
NVS				*e*		10 50 44.9	
KURK	Kurchatov	5.79	277	⇑Pn	Pn	10 49 24.1	+1.4
	comp=Z,7.1nm,0.4s						
KURK				⇑Sn	Sn	10 50 34.1	+5.1
	comp=Z,7.6nm,0.6s						
KURK				⇑Lg	Lg	10 50 59.2	
	comp=Z,38nm,0.6s						
KURK	Kurchatov	5.79	277*c*	*i*PN	Pn	10 49 24.1	+1.4
KURBB	Kurchatov Arra	5.84	276	Pn	Pn	10 49 25.1	+1.6
	comp=Z,2.0nm,0.3s,baz=92,slow=15,SNR=161						
KURBB				Sn	Sn	10 50 33.8	+3.3
	comp=Z,0.8nm,0.3s,baz=88,slow=27,SNR=6.1						
KURBB				Lg	Lg	10 50 58.4	
	comp=Z,1.0nm,0.3s,baz=88,slow=35,SNR=7.4						
KUR17	Kurchatov Arra	5.88	276	⇑Pn	Pn	10 49 25.6	+1.6
	comp=Z,0.9nm,0.5s						
KUR17				⇑Sn	Sn	10 50 34.4	+3.0
	comp=Z,0.4nm,0.4s						
KUR17				⇓Lg	Lg	10 51 00.5	
	comp=Z,2.0nm,0.7s						
VOSK	Vostochnaya	10.65	289	⇑P	Pn	10 50 28.8	-0.6
	comp=Z,1.7nm,0.5s						
BVA0	Borovoye Array	11.04	290	⇑P	Pn	10 50 34.7	-0.1
	comp=Z,0.3nm,0.4s,baz=106,slow=13,SNR=18						
BVAR	Borovoye Array	11.04	290	Pn	Pn	10 50 35.1	+0.3
	comp=Z,1.9nm,0.3s,baz=103,slow=14,SNR=20						
BVAR				Sn	Sn	10 52 36.3	-1.9
	comp=Z,0.8nm,0.3s,baz=101,slow=23,SNR=6.0						
BRVK	Borovoye	11.11	291	*i* P	Pn	10 50 36.4	+0.7
TKM2	Tokmak 2	11.17	233	⇓P	Pn	10 50 36.1	-0.7
	comp=Z,1.1nm,0.6s						
ZRNK	Zerenda	11.87	290	⇑P	Pn	10 50 45.8	-0.3
	comp=Z,1.3nm,0.5s						
AAK	Ala-Archa	11.95	234	*i* P	Pn	10 50 47.6	+0.3
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AAK	Ala-Archa	11.95	234	Pn	Pn	10 50 46.9	-0.4
	comp=Z,0.5nm,0.3s,baz=66,slow=8.2,SNR=7.0						
AAK				Sn	Sn	10 52 54.1	-6.5
	comp=Z,0.2nm,0.3s,baz=198,slow=21,SNR=1.5						
AAK				Lg	Lg	10 54 09.4	
	comp=Z,0.2nm,0.3s,baz=318,slow=20,SNR=3.7						
SONM	Songino Array	12.52	95	Lg	Lg	10 54 31.6	
	comp=Z,0.2nm,0.3s,baz=269,slow=15,SNR=11						
KK31	Karatay Array	13.84	245	P	Pn	10 51 09.0	-3.9
	comp=Z,0.3nm,0.3s,baz=59,slow=14,SNR=15						
AB31	Akbulak array	17.90	277	⇑P	Pn	10 52 05.5	-0.2
	comp=Z,0.9nm,0.5s						
AKTO	Aktyubinsk	18.85	282	⇑P	P	10 52 16.9	+0.1
	comp=Z,0.4nm,0.8s						
AKTO	Aktyubinsk	18.85	282	P	P	10 52 17.6	+0.8
AKTO	Aktyubinsk	18.85	282	P	P	10 52 17.6	+0.8
	comp=Z,0.4nm,0.3s,baz=88,slow=12,SNR=9.9						
YKA	Yellowknife Ar	66.06	11	P	P	10 58 43.7	+0.5
	comp=Z,0.3nm,0.6s,baz=340,slow=6.7,SNR=9.9						
TORD	Torodi Ar. Bea	77.45	275	P	P	10 59 52.3	-0.2
	comp=Z,0.4nm,0.7s,baz=27,slow=5.7,SNR=4.1						
ASAR	Alice Springs	84.31	138	P	P	11 00 25.8	-3.1
	comp=Z,0.1nm,0.4s,baz=198,slow=20,SNR=4.1						
NVAR	Mina Array Bea	88.63	20	P	P	11 00 51.2	+0.9
	comp=Z,0.2nm,0.6s,baz=359,slow=4.0,SNR=3.0						

*IDC **02** 10:55:30.6±0.4, 3.°87N×126.°60E, h0^{km}, mb4.6/34, mb1 4.7/34, mb1mx4.7/36, mbtmp4.6/34, MS3.9/20, Ms1 4.0/20, ms1mx3.8/37, Error ellipse: s-maj=17.8km s-min=9.8km az=75.0*
*MOS **02** 10:55:33.9±1.1, 3.°92N×126.°70E, h33^{km}, mb5.0/35, Error ellipse: s-maj=13.4km s-min=6.1km az=117.5*
*BJI **02** 10:55:34.0, 3.°90N×126.°80E, h35^{km}, mB4.9/31, mb4.8/36, Ms4.4/28, Ms7 4.2/29*
*NEIC **02** 10:55:35.9±0.2, 3.°89N×126.°73E, h35^{km}, mb4.8/30, Error ellipse: s-maj=7.3km s-min=4.7km az=75.0*
*ISCJB **02** 10:55:36.9±0.5, 3.°88N±0.°02×126.°83E±0.°03, h62^{km}±4^{km}, mb4.7/89, Error ellipse: s-maj=5.2km s-min=3.3km az=155.3*
*AUST **02** 10:55:39.9±0.0, 3.°73N×126.°84E, h71^{km}, Error ellipse: s-maj=1.1km s-min=0.8km az=15.0*
*DJA **02** 10:55:41.5±0.4, 4°N±3°×12°7E±°, h62^{km}±7^{km}, M4.8/20, mB5.2/11, mb5.0/20, MLv5.2/9, Mw(mB)4.6/11*
ISC 02 10:55:37.1±0.4**, 3.°82N**±0.°03×**126.°79E**±0.°04**, h45**^{km}±3^{km}**, n274,** σ**1**^{s}**56**/315**, mb4.7**/87**, MS4.0**/33**, 8C-2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.27	264	P	Sn	10 56 17.1	+2.8
MNI	Manado	3.06	220	P	Pn	10 56 24.0	+0.9
MNI				S	Sn	10 57 03.5	+5.0
TNTI	Ternate	3.08	169	P	Pn	10 56 23.5	+0.2
TNTI				S	Sn	10 57 01.2	+2.2
MATI	Mati	3.15	350	*e*P	Pn	10 56 25.9	+1.7
MATI				*e*S	Sn	10 57 23.1	+22
DAV	Davao City (W)	3.45	340	Pn	Pn	10 56 23.9	-4.4
DAV				Sn	Sn	10 57 11.1	+3.1
DAV	Davao City (W)	3.45	340	P	Pn	10 56 35.3	+7.0
DAV	Davao City (W)	3.45	340	Pn	Pn	10 56 35.8	+7.5
	99nm,0.3s,baz=318,slow=4.6,SNR=4.2						
DAV				Sn	Sn	10 57 11.1	+3.1
	110nm,0.3s,baz=96,slow=23,SNR=4.5						
DAV				LR	LR	10 57 14.2	
	comp=Z,333nm,19.5s,baz=279,slow=31						
CTBH	Cotabato--PC H	4.22	323	⇑*i*P	Pn	10 56 39.4	+0.4
KMSI	Cibinong	4.28	221	P	Pn	10 56 43.7	+3.9
BUKP	Musuan	4.38	337	*e*P	Pn	10 56 43.1	+1.8
LBMI	Labuha	4.49	171	P	Pn	10 56 43.4	+0.8
PAGZ	Pagadian	5.25	320	*e*P	Pn	10 56 53.8	+0.8
PAGZ				*e*S	Px	10 57 19.5	
MRSI	Marisa	5.88	236	P	Pn	10 57 02.6	+0.9
	416nm,0.7s,3µm1.3nm						
LUWI	Luwuk	6.29	220	P	Pn	10 57 11.8	+4.5
	603nm,1.1s,7µm1.7nm						
LUWI	Luwuk	6.29	220	P	Pn	10 57 12.9	+5.6
	baz=6.3,SNR=14						
SWI	Sorong	6.45	136	P	Pn	10 57 09.3	-0.3
	145nm,1.0s,2µm0.6nm						
SWI	Sorong	6.45	136	P	Pn	10 57 10.3	+0.8
	baz=6.4,SNR=15						
SWI				S	Sn	10 58 22.0	+0.1
	baz=6.4,SNR=6.7						
SKSI	Soroako, Sulaw	8.34	221	P	Pn	10 57 38.7	+3.1

116nm,0.7s,1µm0.5nm
MYLDM **Lahad Datu** 8.38 280 P Pn 10 57 35.7 -0.3
MYLDM **Lahad Datu** 8.38 280 P Pn 10 57 40.4 +4.4
130nm,0.9s,1µm
PALU **Palau** 8.41 65 P Pn 10 57 38.9 +2.4
baz=8.4,SNR=6.1
FAKI **Fak Fak** 8.63 141 P Pn 10 57 39.9 +0.3
87nm,1.1s,858nm
FAKI **Fak Fak** 8.63 141 P Pn 10 57 40.6 +1.0
baz=8.6,SNR=16
TSM **Tawau** 8.91 273 P Pn 10 57 44.1 +0.8
SDKM **Sandakan** 9.73 281 P Pn 10 57 58.8 +4.1
TTSI **Tana Toraja** 9.75 226 P Pn 10 57 57.6 +2.7
81nm,1.0s,1µm
SPSI **Sidrap Palu** 10.45 222 P Pn 10 58 10.3 +5.9
31nm,0.7s
SMKI **Samarinda** 10.47 246 P Pn 10 58 10.4 +5.6
62nm,0.8s
BAKI **Biak** 10.56 118 P Pn 10 58 09.8 +3.9
99nm,1.2s,2µm
KKM **Kota Kinabalu** 10.77 282 *e*Pn Pn 10 58 09.0 +0.1
KKM *e*Sn Sn 11 00 11.5 +3.3
KKM **Kota Kinabalu** 10.77 282 P Pn 10 58 12.0 +3.1
KKM **Kota Kinabalu** 10.77 282 P Pn 10 58 12.6 +3.7
38nm,0.8s,653nm
KKM **Kota Kinabalu** 10.77 282 P Pn 10 58 12.9 +4.0
baz=11,SNR=5.4
TLE **Tual** 11.11 148 P Pn 10 58 16.8 +3.3
156nm,1.6s
TLE **Tual** 11.11 148 P Pn 10 58 16.9 +3.4
baz=11,SNR=4.1
KAPI **Kappang** 11.25 219 *e*Pn Pn 10 58 14.4 -1.0
KAPI **Kappang** 11.25 219 Pn Pn 10 58 17.8 +2.4
1.5nm,0.3s,baz=76,slow=6.5,SNR=5.7
BKSI **Bulukumba** 11.27 216 P Pn 10 58 30.9 +15
KBKI **Kotabaru** 12.76 236 P P 10 58 54.3 +8.3
MMRI **Maumere** 13.18 200 P P 10 58 59.8 +9.1
BBKI **Banjar Baru** 13.97 239 P P 10 58 57.3 -2.2
95nm,1.8s,2µm
SBUM **Sibu** 14.62 265 P Pn 10 59 03.4 +2.1
SBUM **Sibu** 14.62 265 P P 10 59 04.7 -2.0
50nm,1.0s,645nm
JAY **Jayapura** 15.26 114 P P 10 59 13.0 -0.9
baz=15,SNR=7.2
KHKI **Kahang-Kahang** 16.46 223 P P 10 59 27.3 +0.1
56nm,0.7s
KSM **Kuching** 16.63 262 *e*Pn P 10 59 28.2 -0.8
56nm,1.2s
KSM **Kuching** 16.63 262 P P 10 59 29.5 +0.4
KSM **Kuching** 16.63 262 P P 10 59 30.2 +1.1
42nm,0.9s
KSM **Kuching** 16.63 262 P P 10 59 30.6 +1.5
baz=17,SNR=12
MTN **Manton Dam** 17.11 165 P Pn 10 59 30.6 -2.5
baz=17,SNR=13
MTN S S 11 02 47.1 -3.3
baz=17,SNR=3.3
KDU **Kakadu** 17.34 161 P Pn 10 59 34.1 -2.0
baz=17,SNR=15
GMJI **Gumukmas** 17.93 228 P P 10 59 44.2 +0.7
70nm,1.0s
KNRA **Kununurra** 19.47 174 P P 11 00 01.0 +0.7
baz=20,SNR=24
PCJI **Pacitan** 19.62 233 P P 11 00 00.4 -1.6
71nm,1.1s
TPUB **Ta-pu** 20.26 343 *e*P P 11 00 08.2 -0.7
30nm,0.6s
GUMO **Guam** 20.31 60 LR LR 11 06 24.8
comp=Z,258nm,20.4s,baz=269,slow=32
SSLB **Suanglung** 20.64 345 *e*P P 11 00 13.1 +0.1
187nm,1.9s
FITZ **Fitzroy Crossi** 21.82 183 *e*P P 11 00 25.3 -0.3
FITZ S S 11 04 21.1 -3.4
FITZ **Fitzroy Crossi** 21.82 183 P P 11 00 24.7 -0.9
13nm,0.5s,baz=24,slow=8.4,SNR=21
FITZ S S 11 04 21.1 -3.4
3.4nm,0.9s,baz=163,slow=21,SNR=6.6
FITZ **Fitzroy Crossi** 21.82 183 P P 11 00 24.8 -0.8
baz=22,SNR=41
FITZ S S 11 04 20.9 -3.6
baz=22,SNR=6.9
LEM **Lembang** 21.87 241 P P 11 00 27.1 +0.6
QIZ **Qiongzhong** 22.42 314 P P 11 00 31.6 -0.6
QIZ S S 11 04 37.1 +1.3
QIZ pmax pmax
comp=Z,170nm,4.4s
QIZ LR LR
comp=Z,350nm,19.4s
KGM **Kluang** 23.51 266 P P 11 00 44.8 +1.4
KTGM **Kuala Trenggan** 23.63 275 P P 11 00 44.8 +0.3
COEN **Coen** 24.00 138 P P 11 00 50.6 +2.8
baz=24,SNR=4.2
WRAB **Tennant Creek** 24.75 163 *e*P P 11 00 53.8 -0.8
WRAB *e*S S 11 05 11.3 -2.6
WRAB pmax pmax
comp=Z,61nm,0.6s
WRAB **Tennant Creek** 24.75 163 *e*P P 11 00 53.8 -0.8
comp=Z,60nm,0.6s
WRAB *e*S S 11 05 11.3 -2.6
WRA **Warramunga Arr** 24.75 163 P P 11 00 53.8 -0.9
WRA S S 11 05 16.9 +2.9
WRA **Warramunga Arr** 24.75 163 P P 11 00 53.8 -0.9
comp=Z,62nm,0.6s,baz=344,slow=11,SNR=303
WRA S S 11 05 16.9 +2.9
comp=Z,7.0nm,0.7s,baz=345,slow=18,SNR=8.4
FRIM **Kepong** 25.13 269 P P 11 01 05.1 +6.9
IPM **Ipoh** 25.71 272 *e*P P 11 01 02.5 -1.0
comp=Z,25nm,1.1s
MBWA **Marble Bar** 25.77 195 *e*P P 11 01 05.2 +1.3
comp=Z,23nm,1.0s
QIS **Mount Isa** 27.30 153 P P 11 01 18.4 +0.7
baz=27,SNR=26
MTSU **Mount Surprise** 27.83 142 P P 11 01 22.5 0.0
baz=28,SNR=6.4
PSI **Prapat** 27.84 269 P P 11 01 21.9 -0.9
PSI **Prapat** 27.84 269 P P 11 01 21.9 -0.9
comp=Z,15nm,0.8s,baz=346,slow=4.3,SNR=5.4
PSI LR LR 11 12 25.6
comp=Z,360nm,20.0s,baz=273,slow=37
AS31 **Alice Springs** 28.19 166 *e*P P 11 01 25.0 -0.6
AS31 *e*ScP ScP 11 08 17.0 +0.7
ASAR **Alice Springs** 28.19 166 P P 11 01 25.2 -0.4
ASAR S S 11 06 10.3 +2.0
ASAR **Alice Springs** 28.19 166 P P 11 01 25.2 -0.4
comp=Z,3.2nm,0.4s,baz=355,slow=8.1,SNR=76
ASAR S S 11 06 10.3 +2.0
comp=Z,0.4nm,0.6s,baz=110,slow=25,SNR=2.9
JNU **Nakatsue** 29.40 7 P P 11 01 34.6 -1.7
JNU **Nakatsue** 29.40 7 P P 11 01 34.6 -1.7
comp=Z,6.7nm,0.8s,baz=15,slow=2.3,SNR=8.4
JNU LR LR 11 12 45.9
comp=Z,180nm,20.0s,baz=28,slow=35
GYA **Guiyang** 29.64 321 P P 11 01 39.8 +1.2
GYA pP pP 11 01 49.0 -1.6
GYA sP sP 11 01 55.2 -0.8
GYA PP PnPn 11 02 37.4 +2.3
GYA SS SnSn 11 08 06.7 +3.6
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,440nm,17.6s
GYA LR LR
comp=E,410nm,18.7s
GYA LR LR
comp=Z,490nm,17.7s
CTA **Charters Tower** 30.50 142 P P 11 01 48.5 +2.3
CTA **Charters Tower** 30.50 142 P P 11 01 48.5 +2.3
comp=Z,14nm,1.0s,baz=348,slow=12,SNR=6.3
CTA LR LR 11 14 56.1
comp=Z,114nm,19.5s,baz=137,slow=38
CM31 **Chiang Mai Arr** 30.88 300 *e*P P 11 01 48.9 -0.7
comp=Z,3.6nm,0.6s
CMAR **Chiang Mai Arr** 30.88 300 P P 11 01 48.7 -0.9
CMAR ScP ScP 11 08 28.6 +3.5
CMAR **Chiang Mai Arr** 30.88 300 P P 11 01 48.7 -0.9
comp=Z,2.5nm,0.8s,baz=123,slow=7.6,SNR=16
CMAR ScP ScP 11 08 28.6 +3.5
comp=Z,2.4nm,0.8s,baz=158,slow=1.9,SNR=14
CMAR LR LR 11 15 43.7
comp=Z,196nm,18.8s,baz=125,slow=40
CHTO **Chiang Mai** 31.03 301 *e*P P 11 01 49.3 -1.6
CHTO pmax pmax
comp=Z,10.0nm,0.9s
CHTO **Chiang Mai** 31.03 301 *e*P P 11 01 49.2 -1.6
comp=Z,10nm,0.9s
MEEK **Meekatharra** 31.30 194 P P 11 01 53.4 +0.2
baz=31,SNR=18
KMI **Kunming** 31.36 315 P P 11 01 55.5 +1.5
KMI pP pP 11 02 05.4 -0.6
KMI sP sP 11 02 10.1 -1.3
KMI PP PnPn 11 03 00.8 +3.0
KMI S S 11 06 59.7 +1.2
KMI SS SnSn 11 08 48.2 +3.0
KMI pmax pmax
comp=Z,4.0nm,1.0s
KMI pmax pmax
comp=Z,120nm,4.9s
KMI LR LR
comp=N,150nm,20.8s
KMI LR LR
comp=E,240nm,21.8s
KMI LR LR
comp=Z,370nm,21.8s
JHJ **Hachijo jima 2** 31.58 21 LR LR 11 14 39.0
comp=Z,251nm,18.6s,baz=252,slow=36
KSAR **Wonju Array Be** 33.48 2 P P 11 02 11.2 -0.9
KSRS **Korea Array** 33.49 2 P P 11 02 11.2 -0.9
comp=Z,3.2nm,0.7s,baz=184,slow=9.8,SNR=10.0
MJAR **Matsushiro Arr** 34.22 16 P P 11 02 15.6 -2.9
MJAR **Matsushiro Arr** 34.22 16 P P 11 02 15.6 -2.9
comp=Z,0.9nm,0.5s,baz=186,slow=9.7,SNR=6.9
MJAR LR LR 11 16 18.6
comp=Z,204nm,19.4s,baz=200,slow=36
MAT **Matsushiro** 34.22 16 P P 11 02 17.7 -0.9
MAT S S 11 07 45.0 +2.8
MORW **Morawa** 34.29 197 P P 11 02 19.5 +0.2
baz=34,SNR=9.3
XAN **Xi'an** 34.36 333 P P 11 02 18.2 -1.7
XAN pmax pmax
comp=Z,8.0nm,0.8s
XAN pmax pmax
comp=Z,22nm,14.8s
XAN LR LR
comp=N,170nm,23.5s
XAN LR LR
comp=E,70nm,20.8s
XAN LR LR
comp=Z,120nm,20.0s
FORT **Forrest** 34.43 178 *e*P P 11 02 20.7 +0.3
comp=Z,24nm,0.6s
FORT **Forrest** 34.43 178 P P 11 02 20.6 +0.3
baz=34,SNR=20
CD2 **Chengdu** 34.61 324 P P 11 02 23.4 +1.3
CD2 pP pP 11 02 33.5 -0.7
CD2 sP sP 11 02 37.7 -1.8
CD2 PP PP 11 03 40.8 -0.4
CD2 PcP PcP 11 04 57.2 +1.3
CD2 S S 11 07 49.9 +1.4
CD2 PcS PcS 11 08 42.5 -0.1
CD2 SS SnSn 11 10 03.5 -0.2
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 pmax pmax
comp=Z,80nm,5.3s
CD2 LR LR
comp=N,440nm,21.5s
CD2 LR LR
comp=E,610nm,20.6s
CD2 LR LR
comp=Z,420nm,16.2s
QLP **Quilpie** 34.62 152 P P 11 02 21.6 -0.5
baz=35,SNR=11
KMBL **Kambalda** 35.30 187 P P 11 02 28.5 +0.5
baz=35,SNR=9.9
HNR **Honiara** 35.57 112 LR LR 11 15 45.8
comp=Z,136nm,18.6s,baz=282,slow=34
BLDU **Ballidu** 35.57 195 P P 11 02 30.5 +0.3
baz=36,SNR=16
KLBR **Kellerberrin** 36.25 193 P P 11 02 36.8 +0.6
baz=36,SNR=8.2
RMQ **Roma** 36.87 146 P P 11 02 41.6 +0.1
baz=37,SNR=6.9
BJI **Beijing** 37.31 347 P P 11 02 46.1 +1.1
BJI S S 11 08 33.3 +3.8
BJI pmax pmax
comp=Z,18nm,0.9s
BJI pmax pmax
comp=Z,97nm,5.4s
BJI LR LR
comp=N,140nm,11.8s
BJI LR LR
comp=E,210nm,20.4s
BJI LR LR
comp=Z,110nm,22.4s
EIDS **Eidsvold** 37.38 142 *e*P P 11 02 45.7 -0.1
comp=Z,20nm,0.7s
EIDS **Eidsvold** 37.38 142 P P 11 02 45.9 +0.1
baz=37,SNR=7.2
BBOO **Buckleboo** 37.48 167 *e*P P 11 02 46.8 +0.3
comp=Z,194nm,0.7s
BBOO **Buckleboo** 37.48 167 P P 11 02 46.4 0.0
baz=38,SNR=21
NWAO **Narrogin (SRO)** 37.66 193 P P 11 02 48.2 +0.2
NWAO **Narrogin (SRO)** 37.66 193 P P 11 02 48.2 +0.2
comp=Z,6.8nm,0.6s,baz=13,slow=9.3,SNR=10
SNY **Shenyang** 37.95 356 JP P 11 02 50.7 +0.4
SNY S S 11 08 47.0 +7.9
SNY pmax pmax
comp=Z,16nm,0.5s
SNY pmax pmax
comp=Z,140nm,5.0s
SNY LR LR
comp=N,210nm,18.0s
SNY LR LR
comp=E,130nm,14.7s
SNY LR LR
comp=Z,190nm,15.7s
STKA **Stephens Creek** 38.19 159 *e*P P 11 02 52.6 +0.2
comp=Z,4.4nm,0.6s
STKA **Stephens Creek** 38.19 159 P P 11 02 52.7 +0.2
comp=Z,21nm,0.6s,baz=333,slow=7.9,SNR=46
STKA LR LR 11 19 22.0
comp=Z,151nm,21.4s,baz=230,slow=37
STKA **Stephens Creek** 38.19 159 P P 11 02 52.8 +0.2
baz=38,SNR=49
LZH **Lanzhou** 38.46 329 *e*P P 11 02 54.8 -0.1
LZH pmax pmax
comp=Z,98nm,4.4s
LZH LR LR
comp=N,94nm,13.7s
LZH LR LR
comp=E,380nm,15.6s
LZH LR LR
comp=Z,440nm,15.1s
HHC **Hu-ho-hao-te** 39.33 342 *e*P P 11 03 03.4 +1.3
HHC sP sP 11 03 18.6 -1.1
HHC PP PnPn 11 04 38.3 +2.2
HHC PcP PcP 11 05 10.4 +0.3
HHC S S 11 09 03.5 +3.2
HHC SS SS 11 11 50.0 -5.4
HHC pmax pmax
comp=Z,24nm,1.2s
HHC pmax pmax
comp=Z,170nm,8.3s
HHC LR LR
comp=N,410nm,17.8s
HHC LR LR
comp=E,460nm,16.7s
HHC LR LR
comp=Z,650nm,18.8s
CMSA **Cobar Meteorol** 39.50 154 P P 11 03 04.0 +0.4
baz=40,SNR=28
USRK **Ussuriysk Arra** 40.47 6 P P 11 03 11.2 -0.1
comp=Z,7.7nm,0.7s,baz=185,slow=9.6,SNR=6.4
MDJ **Mudanjiang** 40.70 3 P P 11 03 13.2 -0.1
MDJ PP PP 11 04 47.6 -0.2
MDJ PcP PcP 11 05 14.5 +0.3
MDJ PcS PcS 11 09 05.5 +0.6
MDJ S S 11 09 23.3 +2.9
MDJ pmax pmax
comp=Z,7.0nm,0.8s
MDJ pmax pmax
comp=Z,53nm,3.8s
MDJ LR LR
comp=N,91nm,21.9s
MDJ LR LR
comp=E,57nm,24.9s
MDJ LR LR
comp=Z,110nm,26.3s
ARMA **Armidale** 41.51 147 P P 11 03 21.0 +0.7
baz=42,SNR=44
LSA **Lhasa** 42.43 311 *e*P P 11 03 27.8 -0.4
LSA pmax pmax
comp=Z,13nm,0.6s
LSA **Lhasa** 42.43 311 *e*P P 11 03 27.8 -0.4
comp=Z,13nm,0.6s
ASAJ **Asahikawa** 42.49 17 P P 11 03 28.1 +0.2
ASAJ **Asahikawa** 42.49 17 P P 11 03 28.1 +0.2
comp=Z,4.9nm,0.7s,baz=232,slow=23,SNR=5.8
ASAJ LR LR 11 21 32.7
comp=Z,208nm,19.3s,baz=206,slow=37
ARPS **Mount Arapiles** 42.75 162 P P 11 03 31.5 +1.3
baz=43,SNR=24
YNG **Young** 43.04 153 P P 11 03 34.0 +1.4
baz=43,SNR=11
GTA **Gaotai** 43.05 329 P P 11 03 31.4 -1.3
GTA PcP PcP 11 05 23.5 +1.2
GTA S S 11 09 53.5 -2.1
GTA pmax pmax
comp=Z,5.0nm,0.7s
GTA pmax pmax
comp=Z,91nm,5.2s
GTA LR LR
comp=N,200nm,18.1s
GTA LR LR
comp=E,310nm,19.0s
GTA LR LR
comp=Z,290nm,18.5s
ODAN **Odare** 44.07 305 *e*P P 11 03 39.6 -1.7
comp=Z,19nm,0.6s
CAN **Canberra** 44.16 154 *e*P P 11 03 42.3 +0.6
CAN pmax pmax
comp=Z,11nm,0.7s
CAN **Canberra** 44.16 154 *e*P P 11 03 42.3 +0.6
comp=Z,11nm,0.7s
CNB **Canberra Magne** 44.32 153 P P 11 03 45.9 +3.0
baz=44,SNR=4.8
RAMN **Ramite** 44.75 305 *e*P P 11 03 45.4 -1.3
comp=Z,18nm,0.7s
HABR **Khabarovsk** 45.05 8 *e*P P 11 03 45.5 -2.9
HABR *e**SP sP 11 03 59.1 -7.0
HABR *e* 11 05 30.4
HABR S S 11 10 21.6 -2.4
HABR 11 13 39.1
HABR *e*SSS SSS 11 14 33.3
HABR pmax pmax
comp=E,43nm,2.0s
HABR pmax pmax
comp=Z,32nm,2.0s
HABR pmax pmax
comp=N,66nm,3.1s
HABR MLR MLR
comp=Z,104nm,19.0s
KLR **Kul'dur** 45.44 5 *e*P P 11 03 46.9 -4.6
HIA **Hailar** 45.68 354 *e*P P 11 03 54.0 +0.5
comp=Z,10nm,0.6s
GUN **Gumba** 45.72 306 *e*P P 11 03 52.8 -1.8
comp=Z,30nm,0.6s
PKI **Pulchoki** 45.97 305 *e*P P 11 03 54.6 -1.9
DZM **Mont Dzumac** 46.54 125 *e*LR LR 11 17 13.4
comp=Z,115nm,25.9s
LHI **Lord Howe Isla** 46.68 141 P pP 11 04 16.7 +2.7
baz=47,SNR=3.4
ULN **Ulaanbaatar** 47.05 342 *e*P P 11 04 03.7 -0.8
comp=Z,11nm,1.0s
SONM **Songino Array** 47.23 341 P P 11 04 05.0 -0.8
SONM PcP PcP 11 05 37.1 +0.6
SONM **Songino Array** 47.23 341 P P 11 04 04.9 -0.8
comp=Z,2.8nm,0.8s,baz=158,slow=7.0,SNR=12
SONM PcP PcP 11 05 37.1 +0.6
comp=Z,3.2nm,0.9s,baz=148,slow=3.7,SNR=4.1
SONM LR LR 11 24 53.7
comp=Z,194nm,20.4s,baz=112,slow=37
KOLN **Koldanda** 47.52 305 *e*P P 11 04 06.4 -2.1
comp=Z,32nm,0.6s
DANN **Dangsing** 47.61 305 *e*P P 11 04 07.5 -1.8
comp=Z,33nm,0.6s
PYUN **Piuthan** 48.15 305 *e*P P 11 04 11.7 -1.6
comp=Z,27nm,0.5s
HYB **Hyderabad** 49.15 290 *i*P P 11 04 19.0 -1.9
MOY **Mondy** 52.32 340 *e*P P 11 04 44.0 -0.4
WMQ **Urumqi** 52.69 325 P P 11 04 48.7 +1.5
WMQ pP pP 11 05 01.7 +1.8
WMQ S S 11 12 12.7 +0.8
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,150nm,5.2s
WMQ LR LR
comp=N,390nm,26.6s
WMQ LR LR
comp=E,190nm,24.6s
WMQ LR LR
comp=Z,200nm,21.6s
POO **Poona** 53.74 290 *e*PKP P 11 04 51.0 -4.4
HVS **Khovu-Aksy** 54.68 335⇑ *e*P P 11 05 01.0 -0.7
HVS pmax pmax
comp=Z,26nm,0.9s
PETK **Petropavlovsk-** 55.32 22 P P 11 05 06.1 -0.1
PETK **Petropavlovsk-** 55.32 22 P P 11 05 06.1 -0.1
PETK **Petropavlovsk-** 55.32 22 P P 11 05 06.1 -0.1
comp=Z,5.9nm,0.6s,baz=200,slow=5.1,SNR=17
PETK LR LR 11 28 45.4
comp=Z,58nm,19.8s,baz=212,slow=36
MK31 **Makanchi Array** 57.52 325 *ce*P P 11 05 20.4 -1.6
MK31 pmax pmax
comp=Z,6.0nm,0.5s
MK31 **Makanchi Array** 57.52 325 *e*P P 11 05 20.3 -1.6
MKAR **Makanchi Array** 57.52 325 *i*P P 11 05 20.3 -1.7
MKAR pmax pmax
comp=Z,4.0nm,0.5s
MKAR **Makanchi Array** 57.52 325 P P 11 05 20.4 -1.5
MKAR **Makanchi Array** 57.52 325 P P 11 05 20.4 -1.5
comp=Z,3.5nm,0.5s,baz=119,slow=7.2,SNR=52
MKAR LR LR 11 32 03.3
comp=Z,233nm,18.3s,baz=103,slow=38
KSH **Kashi** 58.02 315 *e*P P 11 05 26.6 +0.8
KSH *ep*P pP 11 05 36.6 -2.0
KSH *e*PcP PcP 11 06 17.9 +0.5
KSH *e*PP PP 11 07 36.0 +1.3
KSH *e*PcS PcS 11 10 18.3 -0.6
KSH *e*S S 11 13 21.1 -2.4
KSH *e*ScS ScS 11 15 09.3 -2.7
KSH *e*SS SS 11 17 14.2 -1.1
KSH pmax pmax
comp=Z,9.0nm,0.9s
KSH LR LR
comp=N,120nm,7.7s
KSH LR LR
comp=E,230nm,5.1s
KSH LR LR
comp=Z,190nm,4.6s
YAK **Yakutsk** 58.12 2 *e*P P 11 05 25.5 -0.3
YAK pmax pmax
comp=Z,24nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
TKM2 **Tokmak 2** 59.72 318 *e*P P 11 05 37.5 -0.1
TKM2 pmax pmax
comp=Z,6.0nm,0.9s
TKM2 **Tokmak 2** 59.72 318 *e*P P 11 05 37.5 -0.1
comp=Z,6.1nm,0.9s
AAK **Ala-Archa** 60.33 318⇑ *e*P P 11 05 41.9 +0.2
AAK pmax pmax
comp=Z,14nm,1.7s
AAK **Ala-Archa** 60.33 318 P P 11 05 42.1 +0.3
AAK **Ala-Archa** 60.33 318 P P 11 05 42.1 +0.3
comp=Z,1.5nm,0.5s,baz=160,slow=12,SNR=5.7
ZAA0 **Zalesovo Array** 60.53 333 *e*P P 11 05 40.3 -2.4
ZALV **Zalesovo Beam** 60.53 333 P P 11 05 40.4 -2.2
ZALV **Zalesovo Beam** 60.53 333 P P 11 05 40.4 -2.2
ZALV **Zalesovo Beam** 60.53 333 P P 11 05 40.4 -2.2
comp=Z,2.5nm,0.4s,baz=128,slow=6.2,SNR=20
ZALV LR LR 11 33 44.5
comp=Z,146nm,19.9s,baz=253,slow=38
EKS2 **Erkin-Say** 60.83 318 *e*P P 11 05 44.6 -0.5
EKS2 pmax pmax
comp=Z,6.0nm,0.8s
EKS2 **Erkin-Say** 60.83 318 *e*P P 11 05 44.5 -0.5
comp=Z,6.1nm,0.8s
KBL **Kabul** 61.52 307 *e*P P 11 05 48.4 -1.6
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL **Kabul** 61.52 307 *e*P P 11 05 48.4 -1.6
comp=Z,8.5nm,0.8s
KURK **Kurchatov** 61.70 327 *c i*P P 11 05 49.1 -1.5

KURK				pmax	pmax		
	comp=Z,20nm,1.0s						
KURK				MLR	MLR		
	comp=Z,141nm,23.0s						
KURK	**Kurchatov**	**61.70**	**327**	*e*P	**P**	**11 05 49.2**	**-1.4**
	comp=Z,14nm,0.6s						
RPZ	**Rata Peaks**	**61.80**	**145**	P	**P**	**11 05 52.7**	**+1.2**
RPZ	**Rata Peaks**	**61.80**	**145**	P	**P**	**11 05 52.7**	**+1.2**
	comp=Z,18nm,0.9s,baz=227,slow=1.2,SNR=11						
NVS	**Novosibirsk**	**61.82**	**333**	*e*P	**P**	**11 05 48.7**	**-2.6**
NVS				pmax	pmax		
	comp=N,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.7s						
SEY	**Seymchan**	**61.93**	**13**	*i* P	**P**	**11 05 52.2**	**+0.3**
KK31	**Karatay Array**	**63.21**	**317**	*ce*P	**P**	**11 06 00.0**	**-0.9**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KKAR	**Karatay Array**	**63.21**	**317**	*e*P	**P**	**11 06 00.1**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KKAR	**Karatay Array**	**63.21**	**317**	*e*P	**P**	**11 06 00.1**	**-0.8**
	comp=Z,7.5nm,0.8s						
VOSK	**Vostochnaya**	**66.82**	**327**	P	**P**	**11 06 22.2**	**-2.0**
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BVA0	**Borovoye Array**	**67.28**	**327**	P	**P**	**11 06 25.5**	**-1.6**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**67.28**	**327**	P	**P**	**11 06 26.3**	**-0.8**
BVAR	**Borovoye Array**	**67.28**	**327**	P	**P**	**11 06 26.3**	**-0.8**
BVAR	**Borovoye Array**	**67.28**	**327**	P	**P**	**11 06 26.3**	**-0.8**
	comp=Z,4.0nm,0.6s,baz=120,slow=8.7,SNR=18						
BRVK	**Borovoye**	**67.35**	**327**	*e*P	**P**	**11 06 26.3**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,13nm,0.9s						
BRVK	**Borovoye**	**67.35**	**327**	*e*P	**P**	**11 06 26.2**	**-1.2**
	comp=Z,12nm,0.9s						
AB31	**Akbulak array**	**72.12**	**321**	*ce*P	**P**	**11 06 56.1**	**-0.8**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.2s						
ABKAR	**Akbulak array**	**72.12**	**321**	*e*P	**P**	**11 06 55.1**	**-1.8**
	comp=Z,3.1nm,0.6s						
AKTO	**Aktyubinsk**	**73.63**	**322**	*i* P	**P**	**11 07 04.2**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKTO	**Aktyubinsk**	**73.63**	**322**	P	**P**	**11 07 04.7**	**-1.2**
AKTO	**Aktyubinsk**	**73.63**	**322**	P	**P**	**11 07 04.7**	**-1.2**
	comp=Z,6.7nm,0.8s,baz=99,slow=7.4,SNR=24						
SVE	**Sverdlovsk**	**73.92**	**328**	⇑*e*P	**P**	**11 07 08.9**	**+1.5**
SVE				pmax	pmax		
	comp=Z,12nm,0.7s						
GAMB	**Gambell**	**74.29**	**24**	*e*P	**P**	**11 07 10.1**	**+0.7**
	comp=Z,8.2nm,0.9s						
ARU	**Arti**	**74.89**	**328**	*d i*P	**P**	**11 07 11.9**	**-1.2**
ARU						11 09 58.4	
ARU				S	**S**	**11 16 47.2**	**+0.3**
ARU				SS	**SS**	**11 21 30.3**	**-5.4**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OPO	**Ambohidratompo**	**81.39**	**251**	P	**P**	**11 07 48.9**	**-1.1**
OPO	**Ambohidratompo**	**81.39**	**251**	P	**P**	**11 07 48.9**	**-1.1**
	comp=Z,2.8nm,0.6s,baz=34,slow=4.6,SNR=11						
ABPO	**Ambohimpanom**	**81.40**	**250**	*e*P	**P**	**11 07 50.0**	**-0.1**
ABPO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ABPO	**Ambohimpanom**	**81.40**	**250**	*e*P	**P**	**11 07 50.0**	**-0.1**
	comp=Z,6.0nm,0.7s						
KDAK	**Kodiak Island**	**81.78**	**32**	P	**P**	**11 07 51.9**	**+0.8**
KDAK	**Kodiak Island**	**81.78**	**32**	P	**P**	**11 07 51.9**	**+0.8**
	comp=Z,9.1nm,0.9s,baz=299,slow=15,SNR=6.6						
ZEI	**Tsey**	**82.20**	**312**	*e*P	**P**	**11 07 52.9**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	**Khabaz**	**82.96**	**313**	P	**P**	**11 07 57.3**	**-0.2**
KBZ	**Khabaz**	**82.96**	**313**	P	**P**	**11 07 57.3**	**-0.2**
KBZ	**Khabaz**	**82.96**	**313**	P	**P**	**11 07 57.3**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=122,slow=8.1,SNR=4.0						
TRF	**Thorofare Moun**	**83.43**	**27**	*e*P	**P**	**11 07 58.7**	**-1.1**
	comp=Z,11nm,1.0s						
VNDA	**Vanda**	**83.51**	**173**	*e*P	**P**	**11 08 00.5**	**+0.8**
	comp=Z,2.3nm,0.7s						
VNDA	**Vanda**	**83.51**	**173**	P	**P**	**11 08 00.9**	**+1.2**
	comp=Z,1.8nm,0.8s,baz=313,slow=5.3,SNR=7.8						
VNDA				LR	LR	11 41 43.8	
	comp=Z,56nm,19.4s,baz=328,slow=33						
COLD	**Coldfoot**	**83.78**	**23**	*e*P	**P**	**11 08 03.1**	**+1.8**
	comp=Z,11nm,1.0s						
VRHR	**Novokhopersk**	**84.01**	**321**	*e*P	**P**	**11 08 02.6**	**-0.2**
VRHR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.7s						
SML	**Sawmill**	**84.22**	**28**	*e*P	**P**	**11 08 02.9**	**-0.8**
SML				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SML	**Sawmill**	**84.22**	**28**	*e*P	**P**	**11 08 02.9**	**-0.8**
	comp=Z,4.3nm,0.6s						
PPT	**Papeete**	**85.08**	**108**	LR	LR	11 39 22.1	
	comp=Z,159nm,20.0s,baz=184,slow=31						
PPT2	**Papeete2**	**85.08**	**108**	*e*LR	LR	11 35 03.5	
	comp=Z,65nm,24.5s						
DIV	**Divide**	**85.44**	**29**	*e*P	**P**	**11 08 11.5**	**+1.6**
	comp=Z,8.5nm,0.4s						
VORD	**Divnogorie**	**85.48**	**321**	*e*P	**P**	**11 08 11.8**	**+1.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VORD				pmax	pmax		
	comp=N,30nm,0.8s						
VORD				pmax	pmax		
	comp=E,30nm,0.6s						
VSR	**Storozhevoye**	**85.56**	**321**	*e*P	**P**	**11 08 09.5**	**-1.1**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VSR				pmax	pmax		
	comp=N,10.0nm,1.3s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
BMRM	**Bremner River**	**86.00**	**29**	*e*P	**P**	**11 08 14.2**	**+1.5**
	comp=E,12nm,1.0s						
ANN	**Anapa**	**86.88**	**315**	*e*P	**P**	**11 08 15.0**	**-2.2**
ANN				*e*		11 08 24.9	
ANN				pmax	pmax		
	comp=Z,17nm,0.9s						
OBN	**Obninsk**	**87.02**	**325**	*e*P	**P**	**11 08 17.1**	**-0.6**
OBN				*i*		11 08 23.7	
OBN				pmax	pmax		
	comp=Z,35nm,1.6s						
ASF	**Jabal al Asfar**	**87.90**	**302**	P	**P**	**11 08 21.3**	**-1.3**
ASF	**Jabal al Asfar**	**87.90**	**302**	P	**P**	**11 08 21.3**	**-1.3**
	comp=Z,3.0nm,0.7s,baz=360,slow=2.7,SNR=6.0						
KMBO	**Kilima Mbogo**	**89.62**	**269**	P	**P**	**11 08 30.7**	**-0.5**
KMBO	**Kilima Mbogo**	**89.62**	**269**	P	**P**	**11 08 30.7**	**-0.5**
	baz=45,slow=22,SNR=9.7						
BRTR	**Keskin Array B**	**90.01**	**310**	P	**P**	**11 08 30.6**	**-1.8**
BRTR	**Keskin Array B**	**90.01**	**310**	P	**P**	**11 08 30.6**	**-1.8**
	comp=Z,2.9nm,0.9s,baz=116,slow=5.6,SNR=8.9						
BRTR				LR	LR	11 50 14.9	
	comp=Z,48nm,18.3s,baz=273,slow=37						
ARCES	**ARCESS Array B**	**90.38**	**340**	P	**P**	**11 08 32.6**	**-0.7**
ARCES	**ARCESS Array B**	**90.38**	**340**	P	**P**	**11 08 32.6**	**-0.7**
	comp=Z,1.0nm,0.4s,baz=230,slow=15,SNR=17						
ARCES				LR	LR	11 51 35.0	
	comp=Z,101nm,19.4s,baz=329,slow=37						
FINES	**FINESS Array B**	**91.78**	**332**	P	**P**	**11 08 39.5**	**-0.5**
FINES	**FINESS Array B**	**91.78**	**332**	P	**P**	**11 08 39.5**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=70,slow=3.6,SNR=8.8						
AKASG	**Malin Array Be**	**91.86**	**321**	*i* P	**P**	**11 08 39.2**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**91.86**	**321**	P	**P**	**11 08 39.3**	**-1.3**
AKASG	**Malin Array Be**	**91.86**	**321**	P	**P**	**11 08 39.3**	**-1.3**
	comp=Z,3.3nm,0.8s,baz=77,slow=4.1,SNR=5.9						
VSU	**Vasula**	**92.02**	**329**	*i* P	**P**	**11 08 42.0**	**+0.9**
VSU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MLR	**Muntele Rosu**	**94.88**	**316**	P	**P**	**11 08 54.0**	**-0.7**
MLR	**Muntele Rosu**	**94.88**	**316**	P	**P**	**11 08 54.0**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=208,slow=1.6,SNR=6.3						
BUR08	**Bucovina Ar. S**	**94.98**	**318**	*e*P	**P**	**11 08 54.4**	**-0.8**
UZH	**Uzhgorod**	**96.67**	**320**	*e*P	**P**	**11 09 01.8**	**-0.9**
NB2	**NORSAR Subarra**	**98.73**	**334**	P	**P**	**11 09 10.8**	**-0.9**
	comp=Z,1.8nm,0.8s,baz=68,slow=4.6						
NOA	**NORSAR Array B**	**98.73**	**334**	P	**P**	**11 09 11.1**	**-0.6**
NOA	**NORSAR Array B**	**98.73**	**334**	P	**P**	**11 09 11.1**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=67,slow=4.6,SNR=4.7						
NOA				LR	LR	11 58 29.3	
	comp=Z,164nm,18.7s,baz=265,slow=38						
LSZ	**Lusaka**	**99.29**	**255**	P	**Pdif**	**11 09 13.9**	**-1.3**
LSZ	**Lusaka**	**99.29**	**255**	P	**Pdif**	**11 09 13.9**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=44,slow=9.2,SNR=5.1						
YKA	**Yellowknife Ar**	**99.39**	**24**	P	**Pdif**	**11 09 14.5**	**-0.1**
YKA				PKiKP	**PKiKP**	**11 13 44.8**	**+0.9**
YKA				PKKPbc	**PKKPbc**	**11 25 37.1**	**-3.2**
YKA	**Yellowknife Ar**	**99.39**	**24**	P	**Pdif**	**11 09 14.5**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=298,slow=4.4,SNR=10						
YKA				PKiKP	**PKiKP**	**11 13 44.8**	**+0.9**
	comp=Z,0.1nm,0.5s,baz=295,slow=1.6,SNR=5.1						
YKA				PKKPbc	**PKKPbc**	**11 25 37.1**	**-3.2**
	comp=Z,0.1nm,0.6s,baz=119,slow=3.3,SNR=4.4						
VRAC	**Vranov**	**100.11**	**321**	P	**Pdif**	**11 09 18.0**	**-0.1**
VRAC	**Vranov**	**100.11**	**321**	P	**Pdif**	**11 09 18.0**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=159,slow=18,SNR=3.0						
BRG	**Berggiesshubel**	**101.20**	**323**	*e*P	**Pdif**	**11 09 23.1**	**+0.2**
	comp=Z,5.9nm,1.3s						
BRG	**Berggiesshubel**	**101.20**	**323**	*e*P	**Pdif**	**11 09 23.1**	**+0.2**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GERES	**GERESS Array B**	**102.05**	**322**	P	**Pdif**	**11 09 26.5**	**-0.4**
GERES	**GERESS Array B**	**102.05**	**322**	P	**Pdif**	**11 09 26.5**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=68,slow=7.4,SNR=6.0						
NVAR	**Mina Array Bea**	**106.80**	**48**	PKiKP	**PKiKP**	**11 14 00.2**	**+1.7**
NVAR				PKKPab	**PKKPab**	**11 25 32.3**	**-0.8**
NVAR	**Mina Array Bea**	**106.80**	**48**	PKiKP	**PKiKP**	**11 14 00.2**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=249,slow=4.7,SNR=3.1						
NVAR				PKKPab	**PKKPab**	**11 25 32.3**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=124,slow=3.2,SNR=5.0						
PDAR	**Pinedale Array**	**111.24**	**41**	PKKPab	PKKPab	11 25 12.2	-1.2
PDAR	**Pinedale Array**	**111.24**	**41**	PKKPab	PKKPab	11 25 12.2	-1.2
	comp=Z,0.9nm,0.8s,baz=125,slow=5.9,SNR=8.1						
SCHQ	**Schefferville**	**120.47**	**9**	PKP	**PKPdf**	**11 14 24.7**	**+1.0**
SCHQ	**Schefferville**	**120.47**	**9**	PKP	**PKPdf**	**11 14 24.7**	**+1.0**
	comp=Z,1.7nm,0.9s,baz=256,slow=4.2,SNR=4.1						
TXAR	**Lajitas Array**	**121.49**	**52**	PKP	**PKPdf**	**11 14 27.4**	**+0.8**
TXAR				PKKPab	**PKKPbc**	**11 24 27.5**	**+0.1**
TXAR	**Lajitas Array**	**121.49**	**52**	PKP	**PKPdf**	**11 14 27.4**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=164,slow=1.8,SNR=18						
TXAR				PKKPab	**PKKPbc**	**11 24 27.5**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=97,slow=4.8,SNR=3.9						
KSU1	**Kansas State U**	**121.50**	**39**	*e*PKPdf	**PKPdf**	**11 14 27.0**	**+0.8**
TORD	**Torodi Ar. Bea**	**122.95**	**288**	PKP	**PKPdf**	**11 14 29.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**122.95**	**288**	PKP	**PKPdf**	**11 14 29.1**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=82,slow=1.6,SNR=24						
PLAL	**Pickwick Lake**	**129.38**	**37**	*e*PKPdf	**PKPdf**	**11 14 41.5**	**+0.2**
DBIC	**Dimbokro**	**130.62**	**282**	PKP	**PKPdf**	**11 14 44.3**	**0.0**
DBIC	**Dimbokro**	**130.62**	**282**	PKP	**PKPdf**	**11 14 44.3**	**0.0**
	comp=Z,2.8nm,0.8s,baz=127,slow=3.5,SNR=4.5						
TKL	**Tuckaleechee C**	**131.39**	**34**	*e*PKPdf	**PKPdf**	**11 14 45.7**	**+0.5**
LCO	**Las Campanas**	**149.94**	**148**	*e*PKPbc	**PKPbc**	**11 15 25.2**	**+1.5**

IDC 02 11:02:04.0±9.0**, 15°.44S**×**167°.89E, h200**^{km}±78^{km}**, mb3.7**/4**, mb1 3.8**/5**, mb1mx3.3**/20**, mbtmp3.6**/5**, Error ellipse: s-maj=155.4km s-min=66.2km az=87.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.74**	**191**	P	Pn	11 03 41.1	+0.1
	0.8nm,0.3s,baz=22,slow=18,SNR=7.9						
DZM				S	Sn	11 04 58.5	+0.5
	0.5nm,0.3s,baz=138,slow=14,SNR=2.1						
STKA	**Stephens Creek**	**29.00**	**231**	P	P	11 07 44.6	-0.7
	1.3nm,0.3s,baz=71,slow=9.8,SNR=7.6						
WRA	**Warramunga Arr**	**32.24**	**257**	P	P	11 08 13.7	-0.3
	0.3nm,0.3s,baz=83,slow=8.5,SNR=15						
ASAR	**Alice Springs**	**32.99**	**250**	P	P	11 08 20.1	-0.4
	5.2nm,0.5s,baz=76,slow=9.3,SNR=46						
FITZ	**Fitzroy Crossi**	**40.48**	**260**	P	P	11 09 24.5	+0.9
	1.8nm,0.4s,baz=90,slow=7.4,SNR=14						

HEL 02 11:06:37.0±1.0**, 69°.43N**×**30°.72E, h0**^{km}**, ML1.1, Explosion, Norway-Murmansk border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEV	**Kevo**	**1.34**	**286**	PG	Pg	11 07 01.8	-0.9
	baz=109						
KEV				SG	Sg	11 07 19.6	-0.5
KEV				MSG		11 07 19.6	
	comp=Z,0.7nm,0.2s						
VRF	**Varrio**	**1.74**	**194**	SG	Sn	11 07 31.0	-0.3
VRF				MSG		11 07 31.0	
	comp=Z,0.5nm,0.1s						
ARA0	**ARCESS Array S**	**1.84**	**276**	PN	Pn	11 07 10.0	+0.2
	baz=92						
ARA0				SG	Sn	11 07 34.2	+0.4
ARA0				MSG		11 07 34.2	
	comp=Z,1.0nm,0.2s						
SGF	**Sodankyl**	**2.53**	**220**	SG	Sb	11 07 53.9	-0.9
SGF				MSG		11 07 53.9	
	comp=Z,0.4nm,0.2s						
HEF	**Hetta**	**2.75**	**251**	SG	Sb	11 07 59.3	-2.0
HEF				MSG		11 07 59.3	
	comp=Z,0.6nm,0.2s						

MEX 02 11:12:38.4±0.3**, 18°.24N**×**103°.21W, h34**^{km}±6^{km}**, MD3.5, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.14**	**290**	*i* P	Pn	11 12 43.3	+1.2
MMIG				*i* S	Sb	11 12 47.0	-1.8
R15V		**1.18**	**322**	*i* P	Pn	11 12 56.3	-2.3
R15V				*e*S	Sn	11 13 11.1	-2.4
EZ5V		**1.29**	**343**	*i* P	Pn	11 12 58.8	-1.5
EZ5V				*e*S	Sn	11 13 14.0	-2.6

IDC ***02*** *11:33:11.0±3.1, 5°.44S×151°.82E, h0*^{km}*, mb4.1/3, mb1 4.4/4, mb1mx3.7/19, mbtmp4.2/4, ML3.2/1, Error ellipse: s-maj=107.4km s-min=41.9km az=124.0*
AUST ***02*** *11:34:46.0, 9°.63S×147°.76E, h600*^{km}
ISC 02 11:33:16.4±2.2**, 6°.1S**±0°.5×**152°.3E**±0°.4**, h38**^{km}**, n9, σ1**^{s}**29**/9**, mb4.0**/3**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.06**	**237**	Pn	**Pn**	**11 34 44.3**	**+0.8**
	3.4nm,0.3s,baz=64,slow=11,SNR=12						
PMG				Sn	**Sn**	**11 35 50.5**	**-1.2**
	2.6nm,0.3s,baz=131,slow=23,SNR=4.2						
FAKI	**Fak Fak**	**20.26**	**278**	P	Pn	11 38 06.6	+16
	baz=17,SNR=3.4						
KDU	**Kakadu**	**20.62**	**250**	P	**P**	**11 37 52.9**	**+0.2**
	baz=15,SNR=4.3						
MTN	**Manton Dam**	**21.92**	**251**	P	**P**	**11 38 07.6**	**+0.9**
	baz=17,SNR=4.1						
WRA	**Warramunga Arr**	**22.22**	**230**	P	**P**	**11 38 09.9**	**0.0**
	3.4nm,0.8s,baz=53,slow=10,SNR=22						
ASAR	**Alice Springs**	**24.86**	**224**	P	**P**	**11 38 36.3**	**+0.7**
	3.4nm,0.8s,baz=58,slow=8.6,SNR=38						
KNRA	**Kununurra**	**24.97**	**246**	P	**P**	**11 38 38.5**	**+1.9**
	baz=20,SNR=3.9						
FITZ	**Fitzroy Crossi**	**28.62**	**243**	P	**P**	**11 39 08.1**	**-1.4**
	4.9nm,0.8s,baz=59,slow=8.0,SNR=12						
TORD	**Torodi Ar. Bea**	**150.23**	**286**	PKPbc	**PKPbc**	**11 53 03.5**	**-1.0**
	0.9nm,0.6s,baz=62,slow=2.9,SNR=7.7						

IDC 02 11:41:12.9±23.0**, 13°.55N**×**90°.82W, h0**^{km}**, mb3.5**/2**, mb1 3.5**/3**, mb1mx3.4**/20**, mbtmp3.3**/3**, ML3.8**/1**, Error ellipse: s-maj=449.0km s-min=65.5km az=7.0, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**19.72**	**325**	P	P	11 45 44.6	+0.3
	0.1nm,0.3s,baz=148,slow=11,SNR=6.4						
SCHQ	**Schefferville**	**45.26**	**19**	P	P	11 49 32.1	0.0
	1.6nm,0.6s,baz=231,slow=6.5,SNR=3.7						
YKA	**Yellowknife Ar**	**51.73**	**346**	P	P	11 50 21.4	-0.4
	0.1nm,0.5s,baz=151,slow=8.0,SNR=4.9						

JMA ***02*** *11:44:24.6, 39°.17N×140°.84E, h7*^{km}*±1*^{km}*, M3.3*
Broadband fault plane solution: P waves. NP1: φs306.00000°, δ76.00000°, λ-24.00000°. NP2: φs42.00000°, δ67.00000°, λ-164.00000°. Principal axes: T Plg6.0000°, Azm355.0000°; N Plg62.0000°, Azm97.0000°; P Plg27.0000°, Azm262.0000°;
JMA Felt I J1.
IDC ***02*** *11:44:24.8±1.1, 39°.18N×140°.67E, h0*^{km}*, mb3.5/6, mb1 3.5/9, mb1mx3.4/27, mbtmp3.4/9, ML2.8/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/25 Error ellipse: s-maj=29.5km s-min=15.0km az=108.0*
ISCJB ***02*** *11:44:24.3±0.5, 39°.18N±0°.03×140°.85E±0°.04, h10*^{km}*±4*^{km}*, mb3.4/6, Error ellipse: s-maj=5.3km s-min=4.9km az=171.4*
ISC 02 11:44:25.0±1.2**, 39°.17N**±0°.03×**140°.86E**±0°.03**, h2**^{km}±9^{km}**, n17, σ0**^{s}**97**/25**, mb3.6**/6**, 4C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.28**	**322**	⇑P	**Pg**	**11 44 30.2**	**-0.2**
JRG				S	**Sg**	**11 44 34.4**	**+0.3**
JMK	**Ichinoseki**	**0.36**	**128**	⇑P	**Pg**	**11 44 31.6**	**-0.3**
JMK				S	**Sg**	**11 44 36.9**	**+0.3**
JOM	**Ohasama**	**0.45**	**48**	⇓P	**Pg**	**11 44 33.5**	**-0.2**
JOM				S	**Sg**	**11 44 39.8**	**+0.2**
JYK	**Kaneyama**	**0.46**	**237**	⇓P	**Pg**	**11 44 33.4**	**-0.5**
JYK				S	**Sg**	**11 44 39.6**	**-0.3**
JIO	**Ouri**	**0.81**	**152**	⇑P	**Pg**	**11 44 39.9**	**-0.7**
JIO				S	**Sg**	**11 44 51.1**	**0.0**
JOU	**Okura**	**0.82**	**191**	⇑P	**Pg**	**11 44 40.4**	**-0.3**
JOU				S	**Sg**	**11 44 51.3**	**0.0**
MJAR	**Matsushiro Arr**	**3.36**	**219**	Pn	**Pn**	**11 45 18.9**	**+0.5**
	0.5nm,0.3s,baz=24,slow=14,SNR=13						
MJAR				Pg	**Pb**	**11 45 25.6**	**+0.3**
	1.2nm,0.3s,baz=27,slow=15,SNR=25						
MJAR				Lg	Lg	11 46 09.0	
	1.1nm,0.3s,baz=16,slow=22,SNR=5.1						
MAT	**Matsushiro**	**3.36**	**219**	P	**Pn**	**11 45 19.1**	**+0.6**
MAT				*e*S	**Sn**	**11 45 59.2**	**+0.3**
ASAJ	**Asahikawa**	**5.11**	**14**	Pn	**Pn**	**11 45 43.6**	**+1.2**
	0.7nm,0.3s,baz=212,slow=13,SNR=5.7						
ASAJ				LR	LR	11 47 55.1	
	comp=Z,98nm,19.0s,baz=318,slow=41						
USRK	**Ussuriysk Arra**	**8.31**	**310**	Pn	**Pn**	**11 46 24.7**	**-1.8**
	0.3nm,0.3s,baz=115,slow=13,SNR=4.1						
KSRS	**Korea Array**	**10.31**	**264**	Pn	**Pn**	**11 46 56.5**	**+2.8**
	0.4nm,0.3s,baz=78,slow=14,SNR=18						
KSRS				LR	LR	11 50 16.0	
	comp=Z,40nm,19.6s,baz=85,slow=34						
MKAR	**Makanchi Array**	**42.64**	**300**	P	**P**	**11 52 21.5**	**-1.1**
	0.4nm,0.7s,baz=82,slow=10,SNR=3.1						
KURBB	**Kurchatov Arra**	**44.36**	**306**	P	**P**	**11 52 34.9**	**-1.6**
	0.9nm,0.7s,baz=88,slow=8.7,SNR=6.0						
WRA	**Warramunga Arr**	**59.12**	**187**	P	**P**	**11 54 26.5**	**-0.5**
	0.4nm,0.8s,baz=4.2,slow=7.3,SNR=4.4						
YKA	**Yellowknife Ar**	**62.19**	**31**	P	**P**	**11 54 48.6**	**+1.2**
	0.1nm,0.7s,baz=304,slow=6.6,SNR=3.8						
ASAR	**Alice Springs**	**62.85**	**187**	P	**P**	**11 54 51.8**	**-0.5**
	0.3nm,0.8s,baz=356,slow=5.5,SNR=4.5						
FINES	**FINESS Array B**	**66.72**	**332**	P	**P**	**11 55 17.1**	**0.0**
	0.5nm,0.7s,baz=96,slow=11,SNR=4.0						

IDC ***02*** *11:46:59.0±4.6, 36°.33N×71°.27E, h125*^{km}*±39*^{km}*, mb3.2/6, mb1 3.4/12, mb1mx3.2/31, mbtmp3.3/12, Error ellipse: s-maj=32.1km s-min=21.4km az=12.0*
ISCJB ***02*** *11:47:04.6±0.7, 36°.69N±0°.03×71°.90E±0°.10, h124*^{km}*, mb3.4/6, Error ellipse: s-maj=11.4km s-min=3.9km az=169.6*
ISC 02 11:47:03.9±1.0**, 36°.71N**±0°.05×**71°.8E**±0°.1**, h124**^{km}**, n38, σ1**^{s}**64**/38**, mb3.4**/6**, 5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.88**	**178**	⇓P	**Pn**	**11 47 50.1**	**+1.2**
CEP				S	**Sn**	**11 48 26.0**	**+2.5**
CHCP	**Chirah Chowk**	**3.28**	**158**	P	**Pn**	**11 47 57.0**	**+3.0**
THW	**Thamme Wali**	**3.91**	**180**	P	**Pn**	**11 48 02.6**	**+0.3**
SARP	**Sargodha**	**4.83**	**171**	P	**Pn**	**11 48 14.7**	**+0.1**
DLH	**Dalhousie**	**5.41**	**139**	*e*PKP	**Pn**	**11 48 24.0**	**+1.4**
DLH				*e*S	**Sn**	**11 49 24.0**	**+0.2**
DLH	**Dalhousie**	**5.41**	**139**	*e*PKP	**Pn**	**11 48 24.0**	**+1.4**
DLH				*e*S	**Sn**	**11 49 24.0**	**+0.2**
AML	**Almayashu**	**5.62**	**15**	P	**Pn**	**11 48 26.5**	**+1.0**
	SNR=80						
UCH	**Uchtor**	**5.91**	**20**	P	**Sn**	**11 49 36.7**	**+0.6**
	SNR=12						
KZA	**Kyzart**	**6.00**	**26**	P	**Pn**	**11 48 32.5**	**+1.9**
	SNR=9.2						
EKS2	**Erkin-Say**	**6.14**	**14**	P	Pn	11 48 35.3	+3.0
	SNR=11						
AAK	**Ala-Archa**	**6.28**	**19**	P	**Pn**	**11 48 36.2**	**+2.1**
	5.6nm,0.3s,baz=180,slow=6.1,SNR=39						
AAK				S	**Sn**	**11 49 45.6**	**+0.9**
	2.7nm,0.3s,baz=329,slow=23,SNR=17						
KBK	**Karagaybulak**	**6.42**	**21**	P	Pn	11 48 40.5	+4.4
	SNR=6.7						
CHMS	**Chumysh**	**6.69**	**19**	P	**Pn**	**11 48 42.3**	**+2.8**
	SNR=7.0						
TKM2	**Tokmak 2**	**6.87**	**24**	P	Pn	11 48 45.2	+3.1
	SNR=21						
SMLA	**Simla**	**7.15**	**140**	*i* P	**Pn**	**11 48 47.7**	**+2.0**
SMLA				*i* S	**Sn**	**11 50 05.8**	**+0.3**
SMLA				⇓E		11 50 08.6	
	comp=N,2μm,0.3s						
SMLA				⇓E		11 50 09.1	
	comp=E,2μm,0.2s						
SMLA	**Simla**	**7.15**	**140**	*i* P	**Pn**	**11 48 47.7**	**+2.0**
SMLA				*i* S	**Sn**	**11 50 05.8**	**+0.3**
SMLA				⇓E		11 50 08.6	
	comp=N,2μm,0.3s						
SMLA				⇓E		11 50 09.1	
	comp=E,2μm,0.2s						
MKAR	**Makanchi Array**	**12.76**	**35**	P	**Pn**	**11 50 01.7**	**+1.0**
	comp=E,0.2nm,0.3s,baz=210,slow=12,SNR=4.6						
PYUN	**Piuthan**	**12.78**	**129**	*e*P	**Pn**	**11 50 01.6**	**+0.3**
DANN	**Dangsing**	**13.10**	**126**	*e*P	**Pn**	**11 50 06.2**	**+0.7**
	comp=E,14nm,0.3s						
DANN				*e*S	**Sn**	**11 52 25.3**	**-4.7**
KOLN	**Koldanda**	**13.39**	**128**	*e*P	**Pn**	**11 50 09.4**	**+0.2**
	comp=E,4.7nm,0.2s						
KOLN				*e*S	**Sn**	**11 52 34.0**	**-3.1**
KKN	**Kakani**	**14.47**	**124**	*e*P	**Pn**	**11 50 22.6**	**-0.4**
DMN	**Daman**	**14.47**	**125**	*e*P	**Pn**	**11 50 23.2**	**+0.1**
PKIN	**Phulchoki**	**14.69**	**124**	*e*P	**Pn**	**11 50 26.2**	**+0.4**
	comp=E,10nm,0.3s						
PKI	**Pulchoki**	**14.70**	**124**	*e*P	**Pn**	**11 50 26.5**	**+0.5**
	comp=E,8.0nm,0.2s						
KURBB	**Kurchatov Arra**	**14.73**	**17**	P	**P**	**11 50 28.1**	**-0.6**
	comp=E,0.1nm,0.3s,baz=206,slow=11,SNR=15						
GUN	**Gumba**	**14.79**	**122**	*e*P	**Pn**	**11 50 27.1**	**-0.1**
	comp=E,12nm,0.4s						
RAMN	**Ramite**	**15.90**	**124**	*e*P	**P**	**11 50 41.9**	**-0.3**
	comp=E,8.9nm,0.3s						
BVAR	**Borovoye Array**	**16.34**	**357**	P	**Pn**	**11 50 45.1**	**-0.9**
	comp=E,0.7nm,0.3s,baz=160,slow=11,SNR=9.8						
TAPN	**Taplejung**	**16.41**	**120**	*e*P	**Pn**	**11 50 46.4**	**-0.8**
ODAN	**Odare**	**16.50**	**122**	*e*P	**Pn**	**11 50 48.0**	**-0.2**
	comp=E,10nm,0.5s						
AKTO	**Aktyubinsk**	**16.92**	**328**	P	**P**	**11 50 49.8**	**-3.1**
	comp=E,0.5nm,0.3s,baz=122,slow=8.3,SNR=17						
AKTO				S	Sn	11 53 46.3	-15
	comp=E,0.0nm,0.3s,baz=137,slow=17,SNR=2.3						
ZALV	**Zalesovo Beam**	**19.47**	**24**	P	**P**	**11 51 19.8**	**-0.9**
	comp=E,1.4nm,0.3s,baz=215,slow=11,SNR=23						
SONM	**Songino Array**	**27.70**	**55**	P	**P**	**11 52 41.4**	**+0.9**
	comp=E,0.2nm,0.4s,baz=246,slow=11,SNR=3.6						
FINES	**FINESS Array B**	**37.66**	**326**	P	P	11 54 03.0	-3.6
	comp=E,1.0nm,0.8s,baz=120,slow=7.5,SNR=4.1						
ARCES	**ARCESS Array B**	**41.19**	**337**	P	P	11 54 32.5	-3.2
	comp=E,1.2nm,0.8s,baz=106,slow=8.9,SNR=7.5						
TORD	**Torodi Ar. Bea**	**66.34**	**269**	P	P	11 57 31.6	-7.9
	comp=E,0.2nm,0.4s,baz=46,slow=5.6,SNR=7.7						
YKA	**Yellowknife Ar**	**81.01**	**3**	P	P	11 59 01.0	-3.3
	comp=E,0.3nm,0.5s,baz=350,slow=5.4,SNR=14						
WRA	**Warramunga Arr**	**81.58**	**122**	P	P	11 59 03.8	-4.2
	comp=E,0.2nm,0.4s,baz=324,slow=4.9,SNR=6.9						

IDC 02 12:09:53.9±2.5**, 56°.08S**×**27°.40W, h0**^{km}**, mb3.7**/2**, mb1 3.8**/2**, mb1mx3.6**/14**, mbtmp3.7**/2**, Error ellipse: s-maj=93.7km s-min=51.7km az=8.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	50.30	305	P	P	12 18 52.4	-0.5
	0.5nm,0.5s,baz=184,slow=8.9,SNR=2.5						
TORD	Torodi Ar. Bea	73.14	30	P	P	12 21 26.1	+0.1
	0.4nm,0.8s,baz=203,slow=5.5,SNR=5.3						
YKA	Yellowknife Ar	136.11	318	PKP	PKPdf	12 29 16.4	+1.0
	0.1nm,0.3s,baz=134,slow=2.0,SNR=5.4						
SONM	Songino Array	150.84	87	PKPbc	PKPbc	12 29 46.6	-0.8
	0.2nm,0.3s,baz=176,slow=3.8,SNR=2.8						

ISK 02 12:27:57.6, 41˚.61N×34˚.88E, h5^{km}, MD2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIKM	Dikmen	0.29	82	ePG	Pg	12 28 03.6	+0.4
DIKM				eSG	Sb	12 28 10.6	+0.1
BZK	Bozkurt	0.74	298	ePG	Pg	12 28 12.2	+0.4
BZK				eSG	Sn	12 28 25.2	-1.1
CORM	Corum	1.44	187	ePN	Pg	12 28 26.1	+0.6

*IDC **02** 12:39:34.1±1.3, 13˚.43N×119˚.80E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/23, mbtmp3.4/4, MS3.1/1, Ms1 3.1/1, ms1mx2.4/25, Error ellipse: s-maj=25.4km s-min=16.7km az=140.0*
*ISCJB **02** 12:39:34.7±0.8, 12˚.98N±0˚.05×120˚.10E±0˚.08, h31^{km}, mb3.4/4, MS3.2/1, Error ellipse: s-maj=10.8km s-min=7.7km az=177.7*
*MAN **02** 12:39:35, 12˚.97N×120˚.19E, h27^{km}, mb4.6, ML3.5, MS3.4*
ISC 02 12:39:35.4±1.1**, 13˚.03N**±0˚.06×**120˚.20E**±0˚.08**, h31^{km}, n12, σ0s.33**/11**, mb3.2**/4**, 1C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.70	4	eP	Pn	12 39 49.4	+0.2
SJMP	San Jose	1.06	122	eP	Pn	12 39 53.9	-0.2
SJMP				eS	Sn	12 40 07.8	0.0
TGY	Tagaytay City	1.29	34	⇑eP	Pb	12 39 58.8	-0.4
TGY				eS	Sb	12 40 15.7	+0.4
TGY	Tagaytay City	1.29	34	Pg	Pb	12 39 58.7	-0.4
	173nm,0.3s,baz=204,slow=5.0,SNR=15						
TGY				Lg	Lg	12 40 15.7	
	296nm,0.3s,baz=161,slow=19,SNR=5.8						
BOAC	Boac	1.66	75	eP	Pb	12 40 05.8	+0.4
ENPP	El Nido	1.96	203	eP	Pn	12 40 06.8	+0.3
CUYO	Cuyo Island	2.31	160	eP	Pn	12 40 11.0	-0.3
WRA	Warramunga Arr	35.59	157	P	P	12 46 38.2	+7.8
	0.2nm,0.9s,baz=333,slow=10,SNR=3.4						
SONM	Songino Array	36.57	344	P	P	12 46 38.6	+0.1
	0.4nm,0.7s,baz=154,slow=9.1,SNR=4.5						
ASAR	Alice Springs	38.85	160	P	P	12 47 05.8	+7.8
	0.2nm,0.6s,baz=338,slow=7.0,SNR=2.8						
PETK	Petropavlovsk-	49.85	29	LR	LR	13 08 42.6	
	comp=Z,23nm,21.1s,baz=355,slow=35						
ARCES	ARCESS Array B	79.54	339	P	P	12 51 38.7	-0.2
	3.3nm,1.1s,baz=80,slow=6.6,SNR=3.8						

*BJI **02** 13:11:24.2, 40˚.69N×78˚.91E, h17^{km}, ML3.5/7*
*NNC **02** 13:11:30.0±7.4, 40˚.65N×78˚.36E, h0^{km}, mb4.0, mpv3.7, Error ellipse: s-maj=77.6km s-min=58.2km az=73.0*
ISC 02 13:11:17.2±5.2**, 40˚.8N**±0˚.1×**79˚.9E**±0˚.3**, h10^{km}, n13, σ1s.88**/10**, 6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	3.14	299	P	Pb	13 12 10.5	-2.9
	SNR=23						
KSH	Kashi	3.29	249	Pn	Pb	13 12 14.1	-1.6
KSH				Sn	Sb	13 12 56.4	+0.6
KSH				smax	smax		
	comp=N,180nm,0.9s						
KSH				smax	smax		
	comp=E,170nm,0.9s						
KNDC	Almaty	3.30	319	⇓Pn	Pb	13 12 14.6	-1.3
KNDC				⇓Lg	Lg	13 12 55.6	
KZA	Kyzart	3.76	292	P	Pn	13 12 17.4	+1.7
	SNR=7.9						
TKM2	Tokmak 2	3.89	305	⇓Pn	Pb	13 12 20.9	-5.2
	comp=E,15nm,0.4s						
TKM2				⇓Lg	Lg	13 13 07.4	
	comp=E,57nm,0.6s						
TKM2	Tokmak 2	3.89	305	P	Pb	13 12 21.0	-5.0
	SNR=32						
KBK	Karagaybulak	4.18	298	P	Pn	13 12 24.7	+3.4
	SNR=6.5						
UCH	Uchtor	4.33	291	P	Pb	13 12 31.5	-2.2
	SNR=9.3						
USP	Ospenovka	4.76	303	P	Pb	13 12 40.1	-0.6
	SNR=15						
AML	Almayashu	4.89	288	P	Pb	13 12 41.6	-1.5
	SNR=24						
EKS2	Erkin-Say	4.98	294	P	Pb	13 12 43.7	-0.9
	SNR=34						
WMQ	Urumqi	6.51	60	ePn	Pn	13 12 43.3	-10
WMQ				Sn	Sn	13 13 48.1	-19
WMQ				smax	smax		
	comp=N,12nm,0.4s						
WMQ				smax	smax		
	comp=E,13nm,0.7s						
KK31	Karatay Array	7.41	291	⇓Pg	Pb	13 13 26.8	+1.0
	comp=E,4.9nm,0.8s,baz=119,slow=15,SNR=28						
KK31				⇓Lg	Lg	13 14 55.0	
	comp=E,3.6nm,0.5s,baz=112,slow=27,SNR=4.6						

IDC 02 13:22:17.9±3.0**, 7˚.57S**×**116˚.27E, h0^{km}, mb3.2**/4**, mb1 3.4**/4**, mb1mx3.2**/21**, mbtmp3.2**/4**, Error ellipse: s-maj=175.8km s-min=23.8km az=54.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.40	127	P	P	13 27 08.1	+0.6
	0.4nm,0.5s,baz=302,slow=11,SNR=5.1						
ASAR	Alice Springs	23.29	135	P	P	13 27 26.9	-0.6
	0.2nm,0.6s,baz=313,slow=8.7,SNR=5.9						
SONM	Songino Array	55.85	352	P	P	13 31 57.0	-0.3
	0.5nm,0.6s,baz=172,slow=7.9,SNR=4.9						
MKAR	Makanchi Array	61.98	334	P	P	13 32 40.1	+0.2
	0.1nm,0.4s,baz=157,slow=7.3,SNR=4.2						

*AUST **02** 13:34:10.9±3.2, 7˚.42S×122˚.92E, h194^{km}, Error ellipse: s-maj=3.4km s-min=1.1km az=19.0*
*IDC **02** 13:34:38.8±1.4, 9˚.52S×125˚.02E, h0^{km}, mb3.3/2, mb1 3.8/5, mb1mx3.5/20, mbtmp3.6/5, ML3.8/3, Error ellipse: s-maj=101.2km s-min=24.5km az=66.0*
*ISCJB **02** 13:34:41.8±1.0, 9˚.88S±0˚.08×124˚.71E±0˚.09, h33^{km}, mb3.4/2, Error ellipse: s-maj=13.8km s-min=9.7km az=146.8*
ISC 02 13:34:44.9±1.4**, 9˚.82S**±0˚.09×**124˚.83E**±0˚.10**, h35^{km}, n9, σ2s.92**/13**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	Manton Dam	6.87	116	P	Pn	13 36 25.0	+1.8
	baz=9.7,SNR=35						
KNRA	Kununurra	6.97	147	P	Pn	13 36 27.3	+2.8
	baz=10.0,SNR=11						
KDU	Kakadu	8.02	111	P	Pn	13 36 41.4	+2.4
	baz=11,SNR=22						
KDU				S	Sn	13 38 10.3	+1.8
	baz=11,SNR=4.7						
FITZ	Fitzroy Crossi	8.27	175	Pn	Pn	13 36 44.7	+2.4
	1.1nm,0.3s,baz=2.9,slow=12,SNR=43						
FITZ				Sn	Sn	13 38 14.1	-0.4
	0.6nm,0.3s,baz=102,slow=2.3,SNR=7.7						
FITZ	Fitzroy Crossi	8.27	175	P	Pn	13 36 45.0	+2.6
	baz=11,SNR=21						
WRA	Warramunga Arr	13.62	139	Pn	Pn	13 37 54.1	-1.6
	0.5nm,0.3s,baz=315,slow=15,SNR=27						
WRA				Sn	Sn	13 40 21.1	-4.8
	0.5nm,0.3s,baz=320,slow=25,SNR=7.0						
ASAR	Alice Springs	16.27	149	Pn	Pn	13 38 30.7	-0.2
	0.3nm,0.3s,baz=320,slow=11,SNR=54						
ASAR				Sn	Sn	13 41 25.7	-4.6
	0.2nm,0.3s,baz=324,slow=22,SNR=4.9						
MKAR	Makanchi Array	67.93	330	P	P	13 45 38.1	-2.0
	0.2nm,0.5s,baz=122,slow=8.1,SNR=3.6						
KURBB	Kurchatov Arra	72.36	331	P	P	13 46 05.8	-1.3
	0.1nm,0.3s,baz=139,slow=6.2,SNR=2.6						

*ISK **02** 13:41:12.5, 38˚.18N×34˚.20E, h10^{km}, MD2.9*
*DDA **02** 13:41:12.4, 38˚.22N×34˚.18E, h7^{km}, MD2.8*
*CSEM **02** 13:41:12.5±0.1, 38˚.17N×34˚.20E, h5^{km}, MD2.9, Error ellipse: s-maj=4.3km s-min=3.1km az=9.0*
*ISCJB **02** 13:41:13.6±0.5, 38˚.17N±0˚.05×34˚.20E±0˚.05, h18^{km}, Error ellipse: s-maj=6.7km s-min=5.2km az=170.0*
ISC 02 13:41:12.9±1.0**, 38˚.19N**±0˚.03×**34˚.21E**±0˚.03**, h18^{km}, n25, σ0s.64**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSTP	Nigde	0.25	198	i P	Pb	13 41 19.2	+0.4
NIG	Nigde	0.33	103	ePG	Pg	13 41 18.9	-1.2
NIG				eSG	Sb	13 41 25.4	0.0
NIG	Nigde	0.33	103	ePg	Pg	13 41 18.9	-1.2
NIG				eSg	Sb	13 41 25.4	0.0
SULT	Sultanhani-AKS	0.55	272	ePG	Pb	13 41 23.8	-0.2
SULT	Sultanhani-AKS	0.55	272	ePg	Pb	13 41 23.8	-0.2
AVNT	Avonos	0.78	40	i P	Pg	13 41 28.0	-0.2
AVNT				i S	Sb	13 41 38.2	-0.2
AVNT	Avonos	0.78	40	i P	Pg	13 41 28.0	-0.2
AVNT				i S	Sb	13 41 38.2	-0.2
GULE	Gulek	1.01	153	eP	Pb	13 41 31.1	-0.9
GULE	Gulek	1.01	153	eP	Pb	13 41 31.1	-0.9
BNN	Bunyan	1.45	62	ePN	Pb	13 41 39.6	+0.2
BNN				eSN	Sg	13 41 59.6	-0.1
BNN	Bunyan	1.45	62	ePn	Pb	13 41 39.6	+0.2
BNN				eSn	Sg	13 41 59.7	-0.1
LADK	Ladik-KONYA	1.45	271	ePN	Pb	13 41 39.2	-0.3
LADK	Ladik-KONYA	1.45	271	ePn	Pb	13 41 39.2	-0.3
KOZT	Kozan	1.46	118	ePN	Pb	13 41 39.8	+0.2
KOZT	Kozan	1.46	118	ePn	Pb	13 41 39.8	+0.2
AFSR	Af¯ar-Bala (A	1.54	325	ePN	Pb	13 41 40.7	-0.3
AFSR	Af¯ar-Bala (A	1.54	325	ePn	Pb	13 41 40.7	-0.3
KDHN	Kadinhani	1.68	282	i P	Pb	13 41 43.0	-0.4
KDHN	Kadinhani	1.68	282	i P	Pb	13 41 43.0	-0.4
YOZ	Yozgat	1.69	30	ePN	Pb	13 41 42.9	-0.7
YOZ	Yozgat	1.69	30	ePn	Pb	13 41 42.9	-0.7
CEYT	Ceyhan	1.69	133	ePN	Pb	13 41 43.0	-0.6
CEYT	Ceyhan	1.69	133	ePn	Pb	13 41 43.0	-0.6
KMRS	Kahramanmaras	2.24	107	ePN	Pn	13 41 50.6	+1.5
KMRS	Kahramanmaras	2.24	107	ePn	Pn	13 41 50.6	+1.5

*ISK **02** 13:42:33.2, 40˚.71N×30˚.30E, h6^{km}, MD2.8*
*DDA **02** 13:42:33.0, 40˚.73N×30˚.32E, h7^{km}, MD2.9*
*CSEM **02** 13:42:33.4±0.2, 40˚.73N×30˚.31E, h2^{km}, MD2.8, Error ellipse: s-maj=5.1km s-min=3.3km az=33.0*
ISC 02 13:42:33.8±0.9**, 40˚.72N**±0˚.02×**30˚.31E**±0˚.02**, h10^{km}**±6^{km}**, n58, σ0s.52**/72**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPNC	Sapanca-Adapaz	0.03	185	ePG	Pg	13 42 35.3	-0.3
SPNC	Sapanca-Adapaz	0.03	185	ePg	Pg	13 42 35.3	-0.3
GULT	Gulveren	0.33	152	ePG	Pg	13 42 40.1	-0.2
GULT				eSG	Sg	13 42 44.8	+0.2
GULT	Gulveren	0.33	152	ePg	Pg	13 42 40.1	-0.2
GULT				eSg	Sg	13 42 44.8	+0.2
GPA	Golpazari	0.43	180	ePG	Pg	13 42 42.0	-0.2
GPA				eSG	Sg	13 42 48.3	+0.4
GPA	Golpazari	0.43	180	ePg	Pg	13 42 42.0	-0.2
GPA				eSg	Sg	13 42 48.3	+0.4
HENT	Hendek	0.46	77	i P	Pg	13 42 42.2	-0.5
HENT				i S	Sg	13 42 48.6	-0.2
HENT	Hendek	0.46	77	i P	Pg	13 42 42.2	-0.5
HENT				i S	Sg	13 42 48.6	-0.2
HRT	Hereke	0.50	282	ePG	Pg	13 42 43.5	+0.1
HRT	Hereke	0.50	282	ePg	Pg	13 42 43.6	+0.1
ADVT	Abdulvahap	0.52	237	ePG	Pg	13 42 43.3	-0.6
ADVT	Abdulvahap	0.52	237	ePg	Pg	13 42 43.3	-0.6
CAVI	Cavuskoy	0.63	215	ePG	Pg	13 42 45.5	-0.4
CAVI	Cavuskoy	0.63	215	ePg	Pg	13 42 45.6	-0.4
SILT	Sile	0.67	311	ePG	Pg	13 42 46.7	0.0
SILT	Sile	0.67	311	ePg	Pg	13 42 46.7	0.0
MDUB	Mudurnu	0.72	110	ePG	Pg	13 42 47.3	-0.4
MDUB	Mudurnu	0.72	110	ePg	Pg	13 42 47.3	-0.4
IZI	Iznik	0.74	239	ePG	Pg	13 42 47.7	-0.5
IZI	Iznik	0.74	239	ePg	Pg	13 42 47.7	-0.5
BORA	Eskisehir	0.85	173	eP	Pg	13 42 48.6	-1.5
BORA				i S	Sb	13 43 02.2	+0.1
BORA	Eskisehir	0.85	173	eP	Pg	13 42 48.6	-1.5
BORA				i S	Sb	13 43 02.2	+0.1
GEMT	Gemlik	0.90	252	ePG	Pg	13 42 50.2	-0.9
GEMT	Gemlik	0.90	252	ePg	Pg	13 42 50.2	-0.9
BUY	Buyukada	0.92	279	ePG	Pg	13 42 51.0	-0.4
BUY	Buyukada	0.92	279	i P	Pg	13 42 50.6	-0.8
BUY				i S	Sb	13 43 04.0	0.0
BUY	Buyukada	0.92	279	i P	Pg	13 42 50.6	-0.8
BUY	Buyukada	0.92	279	ePg	Pg	13 42 51.0	-0.4
BUY				i S	Sb	13 43 04.0	0.0
ISK	Istanbul-Kandi	1.01	290	ePG	Pg	13 42 52.4	-0.8
ISK	Istanbul-Kandi	1.01	290	ePg	Pg	13 42 52.4	-0.8
ULDT	Uludag	1.07	238	i P	Pg	13 42 53.8	-0.5
ULDT	Uludag	1.07	238	i P	Pg	13 42 53.8	-0.5
ARMT	Armutlu	1.11	263	ePN	Pg	13 42 54.6	-0.6
ARMT	Armutlu	1.11	263	ePn	Pg	13 42 54.6	-0.6
MDNY	Mudanya-Bursa	1.14	253	ePN	Pg	13 42 55.0	-0.7
MDNY	Mudanya-Bursa	1.14	253	ePn	Pg	13 42 55.0	-0.7
BGKT	Bogazkoy	1.25	292	ePN	Pb	13 42 57.3	-0.2
BGKT	Bogazkoy	1.25	292	ePn	Pb	13 42 57.3	-0.2
ORLT	Orhaneli	1.27	239	ePN	Pn	13 42 57.4	-0.3
ORLT	Orhaneli	1.27	239	ePn	Pn	13 42 57.4	-0.3
TVSB	Tavsanli	1.43	208	ePN	Pn	13 43 00.2	+0.3
TVSB	Tavsanli	1.43	208	ePn	Pn	13 43 00.2	+0.3
CTKS	Kestanelik-??a	1.46	291	ePN	Pn	13 43 00.6	+0.4
CTKS	Kestanelik-??a	1.46	291	ePn	Pn	13 43 00.6	+0.4
ELBA	Catalca	1.49	287	i P	Pb	13 43 01.4	-0.1
ELBA				i S	Sg	13 43 21.4	-0.2
ELBA	Catalca	1.49	287	i P	Pb	13 43 01.4	-0.1
ELBA				i S	Sg	13 43 21.4	-0.2
ALT	Altintas	1.67	185	ePN	Pn	13 43 03.4	+0.2
ALT	Altintas	1.67	185	ePn	Pn	13 43 03.4	+0.2
SLVT	Silivri	1.67	288	ePN	Pn	13 43 03.9	+0.8
SLVT	Silivri	1.67	288	ePn	Pn	13 43 03.9	+0.8
GDZ	Gediz	1.75	202	i P	Pg	13 43 07.5	+0.1
GDZ				i S	Sg	13 43 29.9	-0.1
GDZ	Gediz	1.75	202	i P	Pg	13 43 07.5	+0.1
GDZ				i S	Sg	13 43 29.9	-0.1
DURS	Dursunbey	1.80	232	i P	Pb	13 43 07.2	+0.4
DURS	Dursunbey	1.80	232	i P	Pb	13 43 07.2	+0.4
MRMT	Marmara Adasi	2.07	268	ePN	Pn	13 43 09.4	+0.8
MRMT	Marmara Adasi	2.07	268	ePn	Pn	13 43 09.5	+0.8
GONE	Gonen-Balikesi	2.12	252	ePN	Pn	13 43 09.7	+0.5
GONE	Gonen-Balikesi	2.12	252	ePn	Pn	13 43 09.7	+0.5

*ISK **02** 13:50:07.1, 38˚.57N×27˚.61E, h8^{km}, MD2.9*
*DDA **02** 13:50:07.2, 38˚.55N×27˚.71E, h7^{km}, MD2.8*
*CSEM **02** 13:50:07.5±0.2, 38˚.56N×27˚.67E, h8^{km}, MD2.8, Error ellipse: s-maj=4.2km s-min=3.3km az=109.0*
*ISCJB **02** 13:50:07.4±0.7, 38˚.55N±0˚.03×27˚.67E±0˚.05, h6^{km}±7^{km}, Error ellipse: s-maj=6.7km s-min=3.9km az=32.6*
ISC 02 13:50:07.4±1.0**, 38˚.56N**±0˚.02×**27˚.66E**±0˚.03**, h10^{km}**±9^{km}**, n32, σ0s.63**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.34	21	i P	Pg	13 50 14.0	-0.1
AKHS				i S	Sg	13 50 19.6	+0.9
AKHS	Akhisar	0.34	21	i P	Pg	13 50 14.0	-0.1
AKHS				i S	Sg	13 50 19.6	+0.9
AKS	Akhisar	0.34	21	ePG	Pg	13 50 14.1	-0.1
AKS				eSG	Sb	13 50 19.9	-1.0
AKS	Akhisar	0.34	21	ePg	Pg	13 50 14.1	-0.1
AKS				eSg	Sb	13 50 20.0	-1.0
BLCB	Balcova	0.52	250	ePG	Pg	13 50 16.7	-0.7
BLCB				eSG	Sg	13 50 24.4	+0.2
URLA	Izmir	0.86	257	i P	Pg	13 50 24.2	+0.3
URLA				i S	Sn	13 50 38.0	-0.2
URLA	Izmir	0.86	257	i P	Pg	13 50 24.2	+0.3
AYDN	Tasoluk	0.92	169	i P	Pg	13 50 24.7	-0.3
AYDN				i S	Sb	13 50 37.7	+0.1
AYDN	Tasoluk	0.92	169	i P	Pg	13 50 24.7	-0.3
AYDN				i S	Sb	13 50 37.7	+0.1
DEMI	Demirci	0.95	59	i P	Pg	13 50 25.5	-0.3
DEMI				i S	Sb	13 50 38.5	-0.3
DEMI	Demirci	0.95	59	i P	Pg	13 50 25.5	-0.3
DEMI				i S	Sb	13 50 38.5	-0.3
BALB	Balikesir	1.09	9	ePN	Pb	13 50 28.4	+0.1
BALY	Balya	1.18	358	i P	Pg	13 50 30.0	0.0
BALY				i S	Sn	13 50 46.6	+0.5
BALY	Balya	1.18	358	i P	Pg	13 50 30.0	0.0
BALY				i S	Sn	13 50 46.6	+0.5
DURS	Dursunbey	1.22	31	eP	Pb	13 50 29.1	-1.5
DURS				i S	Sg	13 50 46.5	-0.1
DURS	Dursunbey	1.22	31	eP	Pb	13 50 29.1	-1.5
DURS				i S	Sg	13 50 46.5	-0.1
KHAL	Karahalli	1.45	97	i P	Pb	13 50 34.4	-0.1
KHAL	Karahalli	1.45	97	i P	Pb	13 50 34.4	-0.1
KHL	Karahalli	1.48	99	ePN	Pb	13 50 35.1	+0.1
KHL	Karahalli	1.48	99	ePn	Pb	13 50 35.1	+0.1
GONE	Gonen-Balikesi	1.48	1	ePN	Pn	13 50 34.3	+0.2
GONE	Gonen-Balikesi	1.48	1	ePn	Pn	13 50 34.3	+0.2
TVSB	Tavsanli	1.66	57	ePN	Pb	13 50 37.5	-0.6
TVSB	Tavsanli	1.66	57	ePn	Pb	13 50 37.5	-0.6
ORLT	Orhaneli	1.77	32	ePN	Pb	13 50 39.2	-0.6
KRBG	Karabiga-Canak	1.85	351	ePN	Pn	13 50 39.7	+0.5
KRBG	Karabiga-Canak	1.85	351	ePn	Pn	13 50 39.7	+0.5
GELI	Tayfur-Gelibol	2.05	334	ePN	Pn	13 50 42.7	+0.8
GELI	Tayfur-Gelibol	2.05	334	ePn	Pn	13 50 42.7	+0.8
FETY	Fethiye	2.23	149	ePN	Pb	13 50 46.4	-1.3
IZI	Iznik	2.26	38	ePN	Pn	13 50 45.9	+1.0
CAVI	Cavuskoy	2.36	45	ePN	Pn	13 50 47.2	+1.1

IDC 02 13:50:34.5±1.5**, 11˚.08N**×**140˚.68E, h0^{km}, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/23**, mbtmp3.4**/4**, Error ellipse: s-maj=72.8km s-min=27.9km az=92.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.46	191	P	P	13 56 57.5	-0.4
	0.4nm,0.9s,baz=10,slow=10,SNR=4.5						
ASAR	Alice Springs	35.17	191	P	P	13 57 30.6	+0.3
	0.2nm,0.4s,baz=12,slow=9.0,SNR=4.9						
MKAR	Makanchi Array	60.51	318	P	P	14 00 46.7	+0.1
	0.3nm,0.7s,baz=91,slow=10,SNR=3.5						
YKA	Yellowknife Ar	86.94	27	P	P	14 03 21.1	-0.1
	0.2nm,0.7s,baz=285,slow=5.3,SNR=5.0						

*NEIC **02** 14:02:18.6±0.2, 11˚.28N×140˚.46E, h10^{km}, mb5.3/93, MW5.2, Error ellipse: s-maj=6.1km s-min=5.2km az=89.0, Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M_{rr}1.02; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-0.29; $M_{r\theta}$0.14; $M_{\theta\phi}$-0.16; $M_{\phi r}$-0.14; Best double couple: $M_0$0.94000×10^{17} NP1: ϕ_s245.00000°, δ43.00000°, λ78.00000°. NP2:ϕ_s81.00000°, δ49.00000°, λ101.00000°. Principal axes: T 1.0500, Plg81.0000°, Azm52.0000°; N -0.2600, Plg7.0000°, Azm253.0000°; P -0.7800, Plg3.0000°, Azm163.0000°;*
*IDC **02** 14:02:19.7±0.4, 11˚.09N×140˚.46E, h0^{km}, mb4.9/23, mb1 5.0/24, mb1mx5.0/26, mbtmp4.9/24, ML4.6/1, MS4.7/27, Ms1 4.7/27, ms1mx4.6/35 Error ellipse: s-maj=20.1km s-min=10.8km az=80.0*
*MOS **02** 14:02:21.8±1.0, 11˚.15N×140˚.88E, h33^{km}, mb5.5/67, MS5.0/20, Error ellipse: s-maj=10.9km s-min=5.7km az=104.7*
*ISCJB **02** 14:02:22.4±0.9, 11˚.18N±0˚.03×140˚.91E±0˚.03, h36^{km}±7^{km}, mb5.2/181, MS4.9/73, Error ellipse: s-maj=5.1km s-min=4.8km az=23.0*
*BJI **02** 14:02:23.7, 11˚.10N×140˚.40E, h37^{km}, mB5.3/49, mb4.9/56, Ms5.1/63, Ms7 4.8/56*
*TEH **02** 14:02:23.0, 11˚.06N×140˚.40E, h37^{km}, ML5.3*
*GCMT **02** 14:02:26.7±0.1, 11˚.00N×140˚.38E, h12^{km}, MW5.3, Moment Tensor Solution. s76,c127; s23,c24; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.00000×10^{17} NP1:ϕ_s100.00000°, δ42.00000°, λ117.00000°. NP2:ϕ_s245.00000°, δ54.00000°, λ67.00000°. Principal axes: T 1.0600, Plg71.0000°, Azm99.0000°; N -0.0800, Plg18.0000°, Azm259.0000°; P -0.9800, Plg6.0000°, Azm351.0000°; Data Used: II IU IC G CN. Surface waves: sta= 90, comp=171, per= 50.*
*DJA **02** 14:02:32.2±0.6, 11˚N±7˚×14˚1E±˚, h127^{km}±11^{km}, M5.2/20, mB5.6/18, mb5.2/20, MLv5.8/1, Mw(mB)5.1/18, Mwp5.6/1*
ISC 02 14:02:24.5±0.3**, 11˚.17N**±0˚.03×**140˚.68E**±0˚.03**, h33^{km}**±1^{km}**, h32^{km}:pP-P, n624, σ1s.72**/626**, mb5.2**/190**, MS4.8**/73**, 101C-100D, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	4.74	59	ePn	Pn	14 03 36.2	+2.4
GUMO				Sn	Sb	14 04 46.0	+2.4
GUMO	Guam	4.74	59	Pn	Pn	14 03 37.3	+3.5
	23nm,0.3s,baz=205,slow=9.5,SNR=12						
GUMO				Sn	Sb	14 04 46.0	+2.4
	35nm,0.3s,baz=43,slow=21,SNR=2.6						
GUMO				LR	LR	14 05 29.4	
	comp=Z,7μm,18.7s,baz=242,slow=38						
BAKI	Biak	13.10	201	P	Pn	14 05 30.2	+1.8
JAY	Jayapura	13.60	180	P	Pn	14 05 37.7	+2.5
	47nm,1.4s,3μm						
RKPI	Ransiki, Papua	14.16	208	P	P	14 05 51.2	+1.2
	56nm,1.7s,3μm						
SWI	Sorong	15.19	219	P	P	14 06 03.2	+1.8
	61nm,1.3s,3μm						
DAV	Davao City (W)	15.46	256	Pn	P	14 06 03.1	-1.4
DAV	Davao City (W)	15.46	256	Pn	P	14 06 03.1	-1.4
	baz=254,slow=18,SNR=7.2						
DAV				LR	LR	14 11 08.9	
	comp=Z,2μm,18.9s,baz=123,slow=35						
GAMI	Galela, Maluku	15.80	235	P	P	14 06 07.8	-0.5
	164nm,1.2s,3μm						
FAKI	Fak Fak	16.32	211	P	P	14 06 13.3	-0.7
	298nm,1.2s,4μm7μm						
CTBH	Cotabato--PC H	16.69	258	⇓iP	Pn	14 06 16.5	+0.4
TNTI	Ternate	16.78	233	P	P	14 06 26.1	+6.9
	158nm,1.2s,2μm						
LBMI	Labuha	17.59	229	P	P	14 06 31.3	+3.2
	159nm,1.8s,3μm						
MNI	Manado	18.46	240	P	Pn	14 06 45.9	+7.9
TLE	Tual	18.48	206	P	Pn	14 06 40.0	+1.8
	178nm,1.2s,7μm						
MSAI	Masohi	18.57	220	P	Pn	14 06 41.1	+1.8
	68nm,1.0s,1μm						
AAI	Ambon	19.30	221	P	P	14 06 47.0	+0.1
	729nm,1.1s,6μm						
JOW	Kunigami	19.48	325	eP	P	14 06 44.1	-4.7
JOW				epP	pP	14 06 55.7	-1.7
TGY	Tagaytay City	19.49	281	LR	LR	14 13 13.0	
	comp=Z,10.0nm,18.5s,baz=205,slow=34						
KMSI	Cibinong	19.65	239	P	Pn	14 06 56.2	+3.9
	409nm,1.1s,5μm						
PMG	Port Moresby	21.43	162	P	P	14 07 08.8	-1.2
	9.1nm,1.1s						
PMG	Port Moresby	21.43	162	P	P	14 07 08.8	-1.2
	204nm,1.2s,baz=342,slow=8.2,SNR=11						
PMG				LR	LR	14 14 50.1	
	comp=Z,3μm,18.1s,baz=349,slow=35						
MRSI	Marisa	21.44	242	P	P	14 07 09.9	-0.2
	294nm,1.3s						
LUWI	Luwuk	21.55	237	P	P	14 07 10.0	-1.3
	492nm,1.1s,5μm						
JHJ	Hachijo jima 2	21.86	358	LR	LR	14 14 16.7	
	comp=Z,3μm,19.0s,baz=168,slow=33						
YULB	Yu-li	22.11	306	eP	P	14 07 20.7	+3.4
	74nm,1.0s						
NACB	Ninganchiao	22.28	308	eP	P	14 07 14.5	-4.6
	81nm,1.1s						
NACB				epP	pP	14 07 24.4	-3.4
SSLB	Suanglung	22.58	306	eP	P	14 07 17.1	-5.3
	108nm,0.9s						
MYLDM	Lahad Datu	22.74	257	P	P	14 07 25.9	+1.8
MYLDM	Lahad Datu	22.74	257	P	P	14 07 25.5	+1.4
	345nm,1.1s,5μm						
SKSI	Soroako, Sulaw	23.57	236	P	P	14 07 32.2	-0.3
	98nm,1.5s,2μm						
TSM	Tawau	23.60	255	P	P	14 07 33.2	+0.5
JNU	Nakatsue	23.63	339	eP	P	14 07 28.8	-4.1
	30nm,0.9s						
JNU	Nakatsue	23.63	339	P	P	14 07 33.5	+0.6
	41nm,0.9s,baz=146,slow=4.5,SNR=11						
JNU				LR	LR	14 16 11.5	
	comp=Z,849nm,19.4s,baz=320,slow=35						
SDKM	Sandakan	23.87	259	P	P	14 07 35.3	0.0
KDM	Kudat	23.93	262	P	P	14 07 36.8	+1.0

BBSI Bau Bau 24.47 228 P **P** **14 07 42.1 +1.3**
305nm,1.0s,3µm
KKM Kota Kinabalu 24.71 260 *e*P P 14 07 37.1 -6.1
56nm,1.1s
KKM *e*pP pP 14 07 44.0 -8.6
KKM Kota Kinabalu 24.71 260 P **P** **14 07 44.1 +0.9**
QZH Quanzhou 25.02 306 ⇑*i*P **P** **14 07 47.8 +2.1**
QZH S **S** **14 12 07.3 -0.6**
QZH LR LR
comp=N,3µm,15.0s
QZH LR LR
comp=E,1µm,11.6s
QZH LR LR
comp=Z,3µm,12.6s
COEN Coen 25.09 174 *e*P **P** **14 07 43.2 -3.1**
comp=Z,2µm,2.3s
MJAR Matsushiro Arr 25.36 355 P **P** **14 07 48.2 -0.5**
MJAR PcP **PcP** **14 11 21.7 +0.9**
MJAR Matsushiro Arr 25.36 355 P **P** **14 07 48.2 -0.5**
comp=Z,9.5nm,0.8s,baz=179,slow=11,SNR=22
MJAR PcP **PcP** **14 11 21.7 +0.9**
comp=Z,5.4nm,1.0s,baz=215,slow=4.4,SNR=6.3
MJAR LR LR 14 16 15.4
comp=Z,710nm,18.6s,baz=180,slow=33
MAJO Matsushiro 25.36 355 *e*P **P** **14 07 45.7 -3.0**
MAJO *e**PP **pP** **14 07 57.0 -1.0**
MAJO pmax pmax
comp=Z,55nm,1.0s
MAJO Matsushiro 25.36 355 *e*P **P** **14 07 45.7 -3.0**
comp=Z,55nm,1.0s
MAJO *e*pP **pP** **14 07 57.0 -1.0**
MAT Matsushiro 25.36 355 P **P** **14 07 47.4 -1.3**
MAT S **S** **14 12 09.2 -3.9**
BKSI Bulukumba 26.21 232 P **P** **14 07 56.6 0.0**
comp=Z,22nm,1.0s,comp=Z,575nm
KAPI Kappang 26.32 233 P **P** **14 07 55.5 -2.1**
comp=Z,1.9nm,0.9s
KAPI Kappang 26.32 233 P **P** **14 07 55.5 -2.1**
comp=Z,50nm,1.2s,baz=69,slow=5.2,SNR=6.4
KAPI LR LR 14 17 55.9
comp=Z,851nm,20.2s,baz=237,slow=36
SSE Sheshan 26.82 321 P **P** **14 08 00.7 -1.2**
SSE S **S** **14 12 36.2 0.0**
SSE PcS **PcS** **14 15 03.7 -2.0**
SSE pmax pmax
comp=Z,16nm,0.6s
SSE pmax pmax
comp=Z,250nm,5.4s
SSE LR LR
comp=N,830nm,13.8s
SSE LR LR
comp=E,1µm,13.8s
SSE LR LR
comp=Z,1µm,16.9s
MMRI Maumere 26.91 224 P **P** **14 08 05.1 +2.2**
HNR Honiara 28.03 136 P **P** **14 08 12.3 -0.6**
comp=Z,10nm,1.0s
HNR *e*pP **pP** **14 08 22.3 0.0**
HNR Honiara 28.03 136 P **P** **14 08 12.3 -0.6**
comp=Z,88nm,1.0s,baz=198,slow=2.7,SNR=5.9
HNR LR LR 14 16 21.2
comp=Z,982nm,21.1s,baz=83,slow=30
BTM Bintulu 28.48 256 P P 14 08 13.3 -3.8
KSRS Korea Array 28.57 338 P **P** **14 08 18.1 +0.5**
comp=Z,11nm,1.0s,baz=160,slow=9.7,SNR=29
KSRS PcP **PcP** **14 11 29.1 +0.8**
comp=Z,6.9nm,1.0s,baz=170,slow=2.4,SNR=11
KSRS ScP **ScP** **14 15 10.9 +3.5**
comp=Z,3.0nm,1.0s,baz=150,slow=2.3,SNR=9.2
KSRS LR LR 14 18 54.4
comp=Z,2µm,18.4s,baz=105,slow=35
KSAR Wonju Array Be 28.58 338 P **P** **14 08 18.1 +0.5**
KSAR PcP **PcP** **14 11 29.1 +0.7**
KSAR ScP **ScP** **14 15 10.9 +3.5**
NJ2 Nanjing 28.93 319 *e*P **P** **14 08 19.1 -1.7**
NJ2 S **S** **14 13 06.0 -3.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
NJ2 pmax pmax
comp=Z,420nm,6.6s
NJ2 LR LR
comp=N,1µm,19.2s
NJ2 LR LR
comp=E,1µm,23.6s
NJ2 LR LR
comp=Z,2µm,19.2s
SBUM Sibu 29.53 255 P **P** **14 08 26.3 0.0**
QIZ Qiongzhong 30.75 288 P P 14 08 33.3 -3.7
QIZ S **S** **14 13 33.8 -4.5**
QIZ LR LR
comp=N,480nm,13.0s
QIZ LR LR
comp=E,530nm,15.7s
QIZ LR LR
comp=Z,1µm,13.2s
WHN Wuhan 31.12 312 *e*P **P** **14 08 41.4 +1.2**
WHN LR LR
comp=N,3µm,14.2s
WHN LR LR
comp=E,2µm,11.9s
WHN LR LR
comp=Z,4µm,15.4s
WRAB Tennant Creek 31.53 191 *e*P P 14 08 35.7 -8.2
WRAB pmax pmax
comp=Z,34nm,1.0s
WRAB Tennant Creek 31.53 191 *e*P P 14 08 35.6 -8.2
comp=Z,34nm,1.0s
WRAB Tennant Creek 31.53 191 P **P** **14 08 42.8 -1.1**
comp=Z,172nm,1.2s,SNR=12
WRA Warramunga Arr 31.54 191 P **P** **14 08 42.5 -1.5**
WRA PcP **PcP** **14 11 37.7 +1.3**
WRA Warramunga Arr 31.54 191 P **P** **14 08 42.5 -1.5**
comp=Z,27nm,1.0s,baz=12,slow=9.4,SNR=64
WRA PcP **PcP** **14 11 37.7 +1.3**
comp=Z,7.6nm,1.0s,baz=5.4,slow=3.2,SNR=4.9
WRA LR LR 14 20 47.4
comp=Z,1µm,18.6s,baz=35,slow=35
KSM Kuching 31.65 254 *e*P P 14 08 34.2 -11
comp=Z,32nm,1.3s
KSM Kuching 31.65 254 P P 14 08 40.3 -4.8
DL2 Dalian 32.43 332 P **P** **14 08 54.2 +2.6**
DL2 S S 14 14 10.2 +6.2
DL2 pmax pmax
comp=Z,37nm,1.2s
DL2 pmax pmax
comp=Z,400nm,4.3s
DL2 LR LR
comp=E,1µm,15.7s
DL2 LR LR
comp=Z,2µm,17.2s
VLA Vladivostok 32.74 348 ⇑P **P** **14 08 53.1 -1.1**
VLA *e* 14 10 01.2
VLA *e* 14 11 36.3
VLA *e*S **S** **14 14 08.2 -0.5**
VLA pmax pmax
comp=Z,26nm,1.4s
YUK Yuzh-Kuril'sk 33.05 7*d i*P **P** **14 08 56.5 -0.4**
YUK *i* *SP **sP** **14 09 12.4 +2.1**
YUK *e* 14 10 07.0
YUK *e*PPP PPP 14 10 21.0
YUK *i* S S 14 14 03.0 -11
YUK *e*SSS SSS 14 16 38.8
YUK pmax pmax
comp=Z,21nm,4.1s
USRK Ussuriysk Arra 33.76 349 P **P** **14 09 03.9 +0.8**
comp=Z,6.0nm,0.8s,baz=179,slow=9.0,SNR=11
USRK LR LR 14 21 11.5
comp=Z,1µm,19.6s,baz=145,slow=34
SNY Shenyang 34.02 337 ⇓P **P** **14 09 07.9 +2.5**
SNY pP pP 14 09 20.3 +5.4
SNY S **S** **14 14 29.2 +0.5**
SNY pmax pmax
comp=Z,19nm,1.3s
SNY pmax pmax
comp=Z,430nm,7.5s
SNY LR LR
comp=N,2µm,16.9s
SNY LR LR
comp=E,2µm,15.7s
SNY LR LR
comp=Z,3µm,17.5s
MDJ Mudanjiang 34.67 346 P **P** **14 09 10.7 -0.3**
MDJ PP **PP** **14 10 29.4 -0.6**
MDJ PcP **PcP** **14 11 42.7 -2.0**
MDJ S **S** **14 14 38.8 +0.1**
MDJ PcS **PcS** **14 15 30.5 -0.6**
MDJ ScS **ScS** **14 19 28.1 -2.7**
MDJ pmax pmax
comp=Z,140nm,5.9s
MDJ LR LR
comp=N,980nm,15.3s
MDJ LR LR
comp=E,240nm,12.4s
MDJ LR LR
comp=Z,1µm,14.2s
CN2 Changchun 35.08 341 *e*P **P** **14 09 15.1 +0.5**
CN2 PP **PP** **14 10 35.0 +0.4**
CN2 PcP **PcP** **14 11 46.1 +0.2**
CN2 *e*S **S** **14 14 45.0 -0.1**
CN2 pmax pmax
comp=Z,30nm,1.3s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2µm,14.0s
CN2 LR LR
comp=E,2µm,14.0s
CN2 LR LR
comp=Z,2µm,15.0s
AS31 Alice Springs 35.25 191 *e*P P 14 09 12.3 -4.0
AS31 *e*PcP **PcP** **14 11 43.8 -3.0**
ASAR Alice Springs 35.25 191 P **P** **14 09 15.2 -1.1**
ASAR PP **PP** **14 10 41.6 +4.9**
ASAR PcP **PcP** **14 11 48.0 +1.3**
ASAR Alice Springs 35.25 191 P **P** **14 09 15.2 -1.1**
comp=Z,4.8nm,0.6s,baz=20,slow=12,SNR=77
ASAR PP **PP** **14 10 41.6 +4.9**
comp=Z,13nm,1.1s,baz=12,slow=9.6,SNR=5.7
ASAR PcP **PcP** **14 11 48.0 +1.3**
comp=Z,16nm,1.0s,baz=13,slow=3.9,SNR=9.4
ASAR LR LR 14 23 13.8
comp=Z,789nm,18.7s,baz=5.6,slow=36
GYA Guiyang 35.47 300 ⇑*i*P **P** **14 09 16.9 -1.5**
GYA PP **PnPn** **14 10 35.8 -1.9**
GYA PcP **PcP** **14 11 48.8 +1.2**
GYA S **S** **14 14 45.9 -5.8**
GYA ScP **ScP** **14 15 28.0 -3.3**
GYA ScS **ScS** **14 19 31.8 -4.3**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,940nm,15.6s
GYA LR LR
comp=E,710nm,17.7s
GYA LR LR
comp=Z,890nm,16.7s
YSS Yuzh-Sakhalins 35.71 2 *e*P P 14 09 09.0 -11
YSS *e* 14 14 54.0
YSS MLR MLR
comp=Z,1µm,15.0s
BJI Beijing 36.02 327 P **P** **14 09 23.0 +0.3**
BJI S **S** **14 14 59.2 -0.3**
BJI pmax pmax
comp=Z,40nm,0.9s
BJI pmax pmax
comp=Z,270nm,5.3s
BJI LR LR
comp=N,2µm,17.6s
BJI LR LR
comp=E,1µm,18.0s
BJI LR LR
comp=Z,1µm,17.2s
XAN Xi'an 36.86 313 P **P** **14 09 27.4 -2.7**
XAN S **S** **14 15 10.9 -1.8**
XAN pmax pmax
comp=Z,52nm,9.8s
XAN LR LR
comp=N,630nm,15.1s
XAN LR LR
comp=E,270nm,21.9s
XAN LR LR
comp=Z,470nm,15.9s
HABR Khabarovsk 37.48 354*c e*P **P** **14 09 33.2 -1.8**
HABR *e**PP **pP** **14 09 42.7 -1.9**
HABR *e**SP **sP** **14 09 46.9 -1.6**
HABR 14 10 58.9
HABR PPP PPP 14 11 17.6
HABR *e* 14 11 50.4
HABR *e*S **S** **14 15 21.2 -0.4**
HABR *e**SS **ScP** **14 15 37.4 -0.6**
HABR *e*SS **SnSn** **14 18 01.7 +0.9**
HABR *e*SSS SSS 14 18 19.4
HABR *e* 14 19 43.3
HABR pmax pmax
comp=N,20nm,1.3s
HABR pmax pmax
comp=E,56nm,3.0s
HABR pmax pmax
comp=Z,35nm,1.3s
HABR pmax pmax
comp=Z,50nm,1.2s
HABR MLR MLR
comp=E,3µm,17.0s
HABR MLR MLR
comp=N,1µm,15.0s
HABR MLR MLR
comp=Z,2µm,15.0s
MYKOM Kota Tinggi 37.72 258 P P 14 09 30.9 -6.6
KGM Kluang 38.17 259 P P 14 09 34.8 -6.5
KMI Kunming 38.48 296 P **P** **14 09 46.0 +1.9**
KMI S **S** **14 15 40.6 +2.7**
KMI pmax pmax
comp=Z,25nm,1.2s
KMI pmax pmax
comp=Z,280nm,4.6s
KMI LR LR
comp=N,1µm,13.6s
KMI LR LR
comp=E,720nm,15.9s
KMI LR LR
comp=Z,930nm,18.8s
KLR Kul'dur 38.66 351 *e*P P 14 09 41.2 -3.8
KLR *e*S **S** **14 15 38.0 -1.5**
KLR *e* 14 18 26.0
KLR pmax pmax
comp=Z,100nm,1.4s
KLR MLR MLR
comp=Z,4µm,13.0s
HHC Hu-ho-hao-te 39.13 324 *e*P **P** **14 09 50.2 +1.0**
HHC pP **pP** **14 10 00.6 +1.9**
HHC PP **PnPn** **14 11 26.2 +4.3**
HHC PcP **PcP** **14 11 59.5 +1.1**
HHC S **S** **14 15 47.8 +0.8**
HHC pmax pmax
comp=Z,32nm,1.2s
HHC pmax pmax
comp=Z,370nm,6.0s
HHC LR LR
comp=N,2µm,15.5s
HHC LR LR
comp=E,2µm,14.3s
HHC LR LR
comp=Z,3µm,17.8s
CD2 Chengdu 39.41 306 P **P** **14 09 50.7 -0.9**
CD2 PP **PnPn** **14 11 25.6 +0.2**
CD2 S **S** **14 15 48.7 -2.7**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,340nm,6.2s
CD2 LR LR
comp=N,2µm,13.2s
CD2 LR LR
comp=E,1µm,13.2s
IPM Ipoh 39.81 264 *e*P P 14 09 47.7 -7.4
comp=E,22nm,1.0s
IPM Ipoh 39.81 264 P **P** **14 09 54.1 -1.1**
BTO Baotou 39.88 323 *e*P **P** **14 09 55.3 -0.1**
KULM Kulim 40.02 265 *e*P P 14 09 51.0 -5.8
KULM Kulim 40.02 265 P **P** **14 09 54.8 -2.0**
CM31 Chiang Mai Arr 40.92 285 *e*P P 14 10 00.3 -4.0
comp=E,76nm,1.1s
CM31 *e*pP pP 14 10 09.7 -4.2
CMAR Chiang Mai Arr 40.92 285 P **P** **14 10 05.8 +1.5**
CMAR Chiang Mai Arr 40.92 285 P **P** **14 10 05.8 +1.5**
comp=E,55nm,1.1s,baz=93,slow=6.4,SNR=145
CMAR LR LR 14 26 42.4
comp=E,543nm,18.4s,baz=270,slow=36
CHTO Chiang Mai 40.95 286 *e*P P 14 09 58.2 -6.3
CHTO pmax pmax
comp=Z,15nm,1.2s
CHTO Chiang Mai 40.95 286 *e*P P 14 09 58.2 -6.3
comp=Z,15nm,1.2s
CHTO Chiang Mai 40.95 286 P **P** **14 10 06.2 +1.7**
SNR=5.9
LZH Lanzhou 41.50 313 *e*P **P** **14 10 10.6 +1.7**
LZH pP **pP** **14 10 20.1 +1.6**
LZH PP **PP** **14 11 44.6 -0.5**
LZH PcP **PcP** **14 12 09.0 +2.8**
LZH *e*S **S** **14 16 22.0 -0.6**
LZH pmax pmax
comp=Z,31nm,1.3s
LZH pmax pmax
comp=Z,180nm,4.4s
LZH LR LR
comp=N,380nm,14.2s
LZH LR LR
comp=E,2µm,17.5s
LZH LR LR
comp=Z,2µm,18.2s
DZM Mont Dzumac 41.59 143 *e*P **P** **14 10 09.5 -0.2**
comp=Z,309nm,1.2s
DZM *e*S **S** **14 16 20.8 -3.2**
comp=Z,761nm,26.7s
DZM *e*LR LR 14 21 43.8
comp=Z,2µm,23.4s
DZM Mont Dzumac 41.59 143 *e*P **P** **14 10 07.6 -2.1**
DZM Mont Dzumac 41.59 143 *e*P P 14 10 06.1 -3.6
comp=Z,145nm,1.2s
HIA Hailar 41.77 339 *e*P P 14 10 07.1 -3.8
comp=Z,59nm,1.1s
ARMA Armidale 42.67 166 *e*P **P** **14 10 18.1 -0.3**
comp=Z,45nm,1.3s
STKA Stephens Creek 42.81 179 P **P** **14 10 18.1 -1.3**
comp=Z,34nm,1.1s
STKA Stephens Creek 42.81 179 P **P** **14 10 18.1 -1.3**
comp=Z,8.7nm,0.8s,baz=356,slow=9.4,SNR=14
STKA LR LR 14 28 39.9
comp=Z,662nm,18.5s,baz=156,slow=37
FORT Forrest 43.44 196 *e*P **P** **14 10 24.3 -0.1**
comp=Z,58nm,1.0s
BBOO Buckleboo 43.95 186 *e*P **P** **14 10 27.1 -1.6**
comp=Z,841nm,1.5s
PETK Petropavlovsk- 44.01 15 P **P** **14 10 29.3 +0.5**
PETK Petropavlovsk- 44.01 15 P **P** **14 10 29.3 +0.5**
PETK Petropavlovsk- 44.01 15 P **P** **14 10 29.3 +0.5**
comp=Z,2.1nm,0.8s,baz=200,slow=17,SNR=3.6
PET Petropavlovsk 44.17 16 *e*P **P** **14 10 30.4 +0.3**
PET *e*S **S** **14 17 03.6 +2.6**
PET pmax pmax
comp=Z,21nm,1.0s
PET pmax pmax
comp=Z,300nm,10.0s
PET pmax pmax
comp=Z,400nm,5.8s
PET MLR MLR
comp=Z,700nm,13.0s
GTA Gaotai 45.85 315 ⇑P **P** **14 10 44.2 +0.3**
GTA PcP **PcP** **14 12 22.0 +1.1**
GTA PP **PP** **14 12 32.7 +1.1**
GTA S **S** **14 17 27.7 +1.7**
GTA pmax pmax
comp=Z,15nm,1.2s
GTA pmax pmax
comp=Z,260nm,6.7s
GTA LR LR
comp=N,850nm,15.7s
GTA LR LR
comp=E,910nm,15.4s
GTA LR LR
comp=Z,970nm,17.1s
ULN Ulaanbaatar 46.17 329 *e*P P 14 10 38.6 -7.7
comp=Z,42nm,1.4s
ULN *e*pP pP 14 10 53.5 -2.5
ULN *e*sP sP 14 10 59.1 -0.9
ULN Ulaanbaatar 46.17 329 P **P** **14 10 47.6 +1.3**
SNR=16
SONM Songino Array 46.49 328 P **P** **14 10 49.1 +0.3**
SONM Songino Array 46.49 328 P **P** **14 10 49.1 +0.3**
comp=Z,6.8nm,0.7s,baz=141,slow=7.3,SNR=43
SONM LR LR 14 31 40.5
comp=Z,2µm,18.0s,baz=126,slow=38
MSVF Nonsavu 46.76 127 *e*P **P** **14 10 49.6 -1.6**
MSVF *e**PP **pP** **14 10 59.9 -1.0**
MSVF pmax pmax
comp=Z,91nm,1.2s
MSVF Nonsavu 46.76 127 *e*P **P** **14 10 49.6 -1.6**
comp=Z,91nm,1.2s
MSVF *e*pP **pP** **14 10 59.9 -1.0**
MSVF Nonsavu 46.76 127 P **P** **14 10 53.0 +1.8**
comp=Z,330nm,1.2s,SNR=9.6
CAN Canberra 46.90 171 *e*P P 14 10 48.6 -3.4
CAN *e**PP pP 14 10 59.2 -2.5
CAN pmax pmax
comp=Z,66nm,1.4s
CAN Canberra 46.90 171 *e*P P 14 10 48.6 -3.4
comp=Z,66nm,1.4s
CAN *e*pP pP 14 10 59.2 -2.5
CLNS Chul'man 47.17 348 *e*P **P** **14 10 52.7 -1.1**
CLNS *e**PP **pP** **14 11 00.9 -2.7**
CLNS *e* 14 12 46.6
CLNS *e*S S 14 17 55.7 +11
CLNS pmax pmax
comp=N,22nm,1.3s
CLNS pmax pmax
comp=E,8.0nm,1.1s
CLNS pmax pmax
comp=Z,29nm,1.2s
CLNS pmax pmax
comp=Z,15nm,1.2s
CLNS pmax pmax
comp=N,13nm,1.3s
CLNS pmax pmax
comp=E,12nm,1.3s
CLNS smax smax
comp=N,732nm,15.3s
CLNS smax smax
comp=E,345nm,15.8s
CLNS MLR MLR
comp=Z,860nm,14.0s
CLNS MLR MLR
comp=N,655nm,16.0s
CLNS MLR MLR
comp=E,347nm,13.0s
NWAO Narrogin (SRO) 49.23 206 *e*P P 14 10 59.0 -11
LSA Lhasa 49.53 300 *e*P P 14 11 07.2 -5.8
LSA Lhasa 49.53 300 *e*P P 14 11 07.2 -5.8
ZAK Zakamensk 49.69 329 ⇑*i*P **P** **14 11 14.2 +0.8**
ZAK pmax pmax
comp=Z,37nm,1.3s
IRK Irkutsk 50.40 332 *e*P **P** **14 11 19.2 +0.5**
IRK pmax pmax
comp=Z,49nm,1.6s
YAK Yakutsk 51.40 353*c i*P **P** **14 11 25.9 -0.1**
YAK *e**PP **pP** **14 11 35.0 -0.8**
YAK *e* 14 12 37.1
YAK *e* 14 13 23.4
YAK *e*PPP PPP 14 14 24.2
YAK *e*S **S** **14 18 45.0 +1.8**
YAK *e* 14 21 13.8
YAK *e*SSS SSS 14 24 01.4
YAK pmax pmax
comp=Z,49nm,1.1s
YAK pmax pmax
comp=N,33nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=Z,136nm,3.6s
YAK pmax pmax
comp=N,99nm,3.5s
YAK pmax pmax
comp=E,111nm,4.4s
YAK smax smax
comp=N,44nm,2.9s
YAK smax smax
comp=E,75nm,3.3s
YAK MLR MLR
comp=Z,478nm,14.0s
YAK MLR MLR
comp=N,414nm,15.0s
YAK MLR MLR
comp=E,359nm,15.0s
MOY Mondy 51.62 330 *e*P **P** **14 11 29.0 +1.0**
MOY pmax pmax

comp=Z,25nm,1.3s
TAPN Taplejung 52.15 296 *e*P **P 14 11 33.1 +0.5**
comp=Z,83nm,1.2s
SEY Seymchan 52.36 7⇓*e*P **P 14 11 33.5 +0.4**
ODAN Odare 52.38 295 *e*P **P 14 11 34.5 +0.3**
comp=Z,53nm,1.0s
RAMN Ramite 53.09 295 *e*P **P 14 11 40.0 +0.5**
comp=Z,67nm,1.2s
GUN Gumba 53.83 296 *e*P **P 14 11 45.5 +0.5**
comp=Z,155nm,1.2s
TAU Tasmania Unive 54.16 174 *e*P **P 14 11 44.1 -2.4**
TAU Tasmania Unive 54.16 174 *e*P **P 14 11 44.1 -2.4**
PKI Pulchoki 54.21 296 *e*P **P 14 11 47.7 -0.1**
comp=Z,72nm,1.2s
PKIN Phulchoki 54.22 296 *e*P **P 14 11 48.6 +0.8**
comp=Z,51nm,1.3s
KKN Kakani 54.35 296 *e*P **P 14 11 48.6 0.0**
comp=Z,52nm,1.1s
DMN Daman 54.48 296 *e*P **P 14 11 50.1 +0.4**
ATKA Atka Island 54.70 32 *e*P **P 14 11 50.8 +0.4**
HVS Khovu-Aksy 55.16 326⇓*e*P **P 14 11 54.9 +0.9**
HVS pmax pmax
comp=Z,133nm,1.1s
HVS MLR MLR
comp=Z,4μm,16.0s
DANN Dangsing 55.74 297 *e*P **P 14 11 59.0 +0.2**
comp=Z,76nm,0.9s
KOLN Koldanda 55.83 296 *e*P **P 14 11 59.5 +0.2**
comp=Z,33nm,1.0s
WMQ Urumqi 55.92 316 P **P 14 12 00.2 +0.7**
WMQ PP **PP 14 14 06.2 +1.8**
WMQ S **S 14 19 43.5 -1.8**
WMQ ScS **ScS 14 21 43.2 -3.3**
WMQ SS **SS 14 23 28.8 -2.6**
WMQ pmax pmax
comp=Z,52nm,1.0s
WMQ pmax pmax
comp=Z,300nm,5.2s
WMQ LR LR
comp=N,620nm,11.6s
WMQ LR LR
comp=E,900nm,15.4s
WMQ LR LR
comp=Z,440nm,26.0s
PYUN Piuthan 56.39 296 *e*P **P 14 12 03.6 +0.2**
comp=Z,184nm,1.1s
BILL Bilibino 59.25 11*c i*P **P 14 12 22.2 -0.3**
BILL *i* 14 12 38.9
BILL *i* 14 13 09.9
BILL *e* 14 14 34.0
BILL *i*S S 14 20 20.6 -7.5
BILL pmax pmax
comp=Z,49nm,1.6s
BILL MLR MLR
comp=Z,400nm,18.0s
BILL Bilibino 59.25 11 *e*P **P 14 12 19.5 -2.9**
comp=Z,27nm,1.0s
PALK Pallekele 59.25 272 *e*P P 14 12 19.3 -4.2
comp=Z,65nm,1.6s
KIP Kipapa 59.41 72⇓*e*P **P 14 12 26.4 +2.1**
KIP pmax pmax
comp=Z,51nm,1.0s
URZ Urewera 59.81 147 LR LR 14 34 39.5
comp=Z,399nm,18.7s,baz=320,slow=32
HYB Hyderabad 60.32 284 *i*P **P 14 12 29.5 -1.2**
MK31 Makanchi Array 60.45 318 *i*P **P 14 12 31.5 +0.4**
MK31 pmax pmax
comp=Z,37nm,1.3s
MK31 Makanchi Array 60.45 318 *e*P P 14 12 26.4 -4.7
MKAR Makanchi Array 60.45 318 P **P 14 12 31.5 +0.4**
MKAR Makanchi Array 60.45 318 P **P 14 12 31.5 +0.4**
MKAR Makanchi Array 60.45 318 P **P 14 12 31.5 +0.4**
comp=Z,7.9nm,0.9s,baz=94,slow=8.8,SNR=65
MKAR LR LR 14 41 09.3
comp=Z,435nm,18.4s,baz=105,slow=39
MKAR PKPPKP **P'P'df 14 41 58.8 +3.4**
comp=Z,2.0nm,1.1s,baz=310,slow=0.9,SNR=5.8
ZAA0 Zalesovo Array 61.27 326 *e*P P 14 12 32.9 -3.6
ZALV Zalesovo Beam 61.27 326 P **P 14 12 35.9 -0.6**
ZALV Zalesovo Beam 61.27 326 P **P 14 12 35.9 -0.6**
ZALV P'P' 14 41 58.1
ZALV Zalesovo Beam 61.27 326 P **P 14 12 35.9 -0.6**
comp=Z,5.4nm,0.6s,baz=106,slow=6.7,SNR=31
ZALV LR LR 14 40 33.5
comp=Z,1μm,18.0s,baz=259,slow=38
ZALV PKPPKP **P'P'df 14 41 58.1 +4.4**
comp=Z,3.8nm,1.1s,baz=298,slow=3.2,SNR=4.6
NVS Novosibirsk 62.46 327 *e*P **P 14 12 44.2 -0.3**
NVS pmax pmax
comp=N,17nm,1.5s
NVS pmax pmax
comp=E,32nm,1.5s
NVS pmax pmax
comp=Z,46nm,1.5s
KSH Kashi 63.50 309 P **P 14 12 54.3 +2.4**
KSH PcP **PcP 14 13 29.3 +0.9**
KSH *e*PP **PP 14 15 15.9 +4.2**
KSH *e*PcS 14 17 33.0
KSH *e*S **S 14 21 24.9 +1.7**
KSH *e*ScS **SKSac 14 22 41.6 -1.5**
KSH *e*SS **SS 14 25 35.0 +4.4**
KSH pmax pmax
comp=Z,17nm,1.0s
KSH LR LR
comp=N,810nm,16.3s
KSH LR LR
comp=E,920nm,11.9s
KSH LR LR
comp=Z,530nm,9.0s
KURK Kurchatov 63.84 321 *e*P P 14 12 49.9 -3.8
KURK *e**PP pP 14 13 01.7 -2.1
KURK *e**SP sP 14 13 06.0 -1.6
KURK pmax pmax
comp=Z,62nm,1.0s
KURK Kurchatov 63.84 321*c i*P **P 14 12 53.8 +0.1**
KURK pmax pmax
comp=Z,59nm,1.2s
KURK MLR MLR
comp=Z,903nm,17.0s
KURK Kurchatov 63.84 321 *e*P P 14 12 49.9 -3.8
comp=Z,62nm,1.0s
KURK *e*pP pP 14 13 01.7 -2.1
KURK *e*sP sP 14 13 06.0 -1.6
KURK Kurchatov 63.84 321 P **P 14 12 54.2 +0.5**
SNR=37
KURK Kurchatov 63.84 321 P **P 14 12 53.1 -0.6**
comp=Z,305nm,1.1s,SNR=19
TKM2 Tokmak 2 64.26 312 *e*P P 14 12 52.3 -4.7
TKM2 pmax pmax
comp=Z,20nm,1.3s
TKM2 Tokmak 2 64.26 312 *e*P P 14 12 52.3 -4.7
comp=Z,20nm,1.3s
TKM2 *e*PP PP 14 15 09.6 -8.8
TKM2 Tokmak 2 64.26 312 P **P 14 12 57.5 +0.5**
SNR=11
KZA Kyzart 64.39 311 P **P 14 12 59.4 +1.4**
SNR=18
TNA Tin City 64.55 21 *e*P **P 14 12 55.9 -2.1**
comp=Z,25nm,1.3s
KBK Karagaybulak 64.70 312 P **P 14 13 00.3 +0.6**
SNR=7.6
CHMS Chumysh 64.89 312 P **P 14 13 00.9 +0.1**
SNR=6.4
AAK Ala-Archa 65.02 312⇑*e*P **P 14 13 02.7 +0.8**
AAK MLR MLR
comp=Z,1μm,17.0s
AAK Ala-Archa 65.02 312 *e*P P 14 12 51.7 -10
comp=Z,17nm,1.3s
AAK Ala-Archa 65.02 312 P **P 14 13 02.7 +0.8**
SNR=8.1
AAK Ala-Archa 65.02 312 P **P 14 13 02.8 +0.8**
SNR=7.5
AAK Ala-Archa 65.02 312 P **P 14 13 01.4 -0.5**
comp=Z,53nm,1.4s,SNR=6.3
USP Ospenovka 65.11 313 P **P 14 13 02.5 +0.3**
SNR=8.8
AML Almayashu 65.55 311 P **P 14 13 06.5 +1.0**
SNR=20
EKS2 Erkin-Say 65.55 312 *e*P P 14 13 00.4 -4.9
EKS2 pmax pmax
comp=Z,11nm,1.0s
EKS2 Erkin-Say 65.55 312 *e*P P 14 13 00.4 -4.9
comp=Z,11nm,1.0s
EKS2 Erkin-Say 65.55 312 P **P 14 13 05.9 +0.7**
SNR=12
KK31 Karatay Array 67.99 312 *i*P **P 14 13 20.8 +0.2**
KK31 pmax pmax
comp=Z,44nm,1.5s
KKAR Karatay Array 67.99 312 *e*P P 14 13 16.6 -4.0
KKAR pmax pmax
comp=Z,18nm,1.1s
KKAR Karatay Array 67.99 312 *e*P P 14 13 16.6 -4.0
comp=Z,18nm,1.1s
KBL Kabul 68.67 303 *e*P P 14 13 21.3 -4.0
KBL pmax pmax
comp=Z,18nm,1.1s
KBL Kabul 68.67 303 *e*P P 14 13 21.2 -4.0
comp=Z,18nm,1.1s
RSO Redoubt South 68.86 29 *e*P **P 14 13 25.2 -0.8**
comp=Z,41nm,1.0s
VOSK Vostochnaya 68.91 322 P **P 14 13 25.6 -0.6**
VOSK pmax pmax
comp=Z,25nm,1.3s
BVA0 Borovoye Array 69.31 323 *i*P **P 14 13 28.5 -0.2**
BVA0 pmax pmax
comp=Z,9.0nm,1.2s
BRVK Borovoye 69.38 323 *e*P P 14 13 23.9 -5.2
BRVK pmax pmax
comp=Z,75nm,1.4s
BRVK Borovoye 69.38 323 *e*P P 14 13 23.9 -5.2
comp=Z,75nm,1.4s
BRVK Borovoye 69.38 323 P **P 14 13 29.7 +0.6**
comp=Z,185nm,1.3s,SNR=15
SEW Seward 70.38 30 *e*P P 14 13 31.0 -4.0
comp=Z,43nm,1.1s
TRF Thorofare Moun 70.75 26 *e*P P 14 13 28.8 -8.7
comp=Z,30nm,1.2s
TRF *e*pP pP 14 13 46.0 -1.7
MCK McKinley 71.40 26 *e*P **P 14 13 38.4 -2.9**
MCK pmax pmax
comp=Z,45nm,1.1s
MCK McKinley 71.40 26 *e*P **P 14 13 38.4 -2.9**
comp=Z,45nm,1.1s
COLD Coldfoot 71.73 23 *e*P **P 14 13 41.7 -1.5**
comp=Z,47nm,1.1s
COLA College 72.11 25 *e*P **P 14 13 43.1 -2.3**
COLA pmax pmax
comp=Z,13nm,1.0s
COLA College 72.11 25 *e*P **P 14 13 43.1 -2.3**
comp=Z,13nm,1.0s
DIV Divide 72.35 29 *e*P **P 14 13 43.9 -3.1**
comp=Z,37nm,1.2s
PAX Paxson 72.79 27 *e*P **P 14 13 48.3 -1.3**
PAX pmax pmax
comp=Z,24nm,1.0s
PAX Paxson 72.79 27 *e*P **P 14 13 48.3 -1.3**
comp=Z,24nm,1.0s
BMRM Bremner River 72.89 29 *e*P **P 14 13 47.3 -2.9**
comp=Z,63nm,1.2s
DOT Dot Lake 73.52 27 *e*P P 14 13 50.7 -3.2
comp=Z,27nm,0.9s
MENT Mentasta 73.57 28 *e*P **P 14 13 53.0 -1.2**
MENT *e*PcP **PcP 14 14 08.0 -2.0**
PPT2 Papeete2 74.56 112 *e*S **S 14 23 37.2 +2.7**
comp=Z,224nm,27.8s
PPT2 *e*LR LR 14 36 51.6
comp=Z,568nm,21.2s,baz=294
TIAR Tiarei 74.76 112 *e*P P 14 14 05.5 +3.6
comp=Z,143nm,1.2s
EGAK Eagle 74.92 26 *e*P **P 14 13 59.6 -2.3**
comp=Z,38nm,1.4s
PNL Peninsula 75.34 31 *e*P **P 14 14 01.9 -2.7**
comp=Z,28nm,1.3s
PMOR Pomariorio Ree 75.37 109 *e*P P 14 14 08.9 +3.5
comp=Z,136nm,1.3s
AB31 Akbulak array 75.59 318 *i*P **P 14 14 05.9 -0.2**
AB31 pmax pmax
comp=Z,1.0nm,0.2s
ABKAR Akbulak array 75.59 318 *e*P P 14 14 01.9 -4.2
comp=Z,12nm,1.0s
IMYA Miami 75.92 305 *e*P **P 14 14 09.2 +0.6**
ARU Arti 76.42 326*e i*P **P 14 14 10.3 -0.4**
ARU 14 17 00.3
ARU S **S 14 23 54.7 +0.9**
ARU pmax pmax
comp=Z,21nm,1.2s
ARU MLR MLR
comp=Z,1μm,18.0s
TBI Tubuai 76.42 117 *e*LR LR 14 37 46.8
comp=Z,466nm,22.0s
ISRO Mashad 76.44 305 *e*P **P 14 14 12.3 +0.9**
IMOG Moghan 76.56 305 *e*P **P 14 14 12.3 0.0**
IPAY Payeh 76.81 305 *e*P **P 14 14 14.7 +1.1**
IKRD Kardeh 77.17 305 *e*P P 14 14 12.1 -3.6
SOKR Solikamsk 77.36 329⇑*i*P **P 14 14 16.9 +1.0**
SOKR pmax pmax
comp=Z,20nm,1.3s
SOKR MLR MLR
comp=Z,2μm,17.0s
ABKT Ailbek 77.39 307 P **P 14 14 17.9 +1.2**
comp=Z,146nm,1.1s,SNR=11
SKAG Skagway 77.41 31 *e*P **P 14 14 14.2 -2.0**
comp=Z,44nm,1.2s
DRV Dumont d'Urvil 77.62 180 P P 14 14 23.0 +5.9
DRV Dumont d'Urvil 77.62 180 PP PP 14 17 29.0 +16
DRV S S 14 24 52.0 +46
DRV SS SS 14 29 30.0 +23
DRV L L 14 34 00.0
DRV R 14 39 00.0
WBK Wadi Bani Khal 78.21 291 P **P 14 14 22.6 +1.1**
SNR=5.9
WRAK Wrangell Islan 79.11 34 *e*P **P 14 14 23.9 -1.8**
comp=Z,76nm,1.3s
HOQ Hoqain 79.60 292 ⇓P **P 14 14 29.3 +0.3**
SNR=11
BSY Bisya 79.82 291 ⇓P **P 14 14 30.7 +0.4**
SNR=6.5
DLBC Dease Lake 80.21 32 *e*P **P 14 14 29.8 -1.9**
ARQ Araqi 80.35 292 P **P 14 14 34.2 +1.0**
SNR=9.9
IKIA Kiasar 81.10 305 *e*P **P 14 14 37.7 +0.5**
IDMV Damavand 82.51 305 *e*P **P 14 14 44.1 -0.6**
IVRN Varamin 82.84 304 *e*P **P 14 14 45.7 -0.5**
IR3 Iran Long-Peri 83.34 305 *e*P **P 14 14 48.7 -0.1**
ABTO Aybut 84.27 286 ⇑P **P 14 14 54.2 +0.4**
SNR=13
MAK Makhachkala 84.79 313 *e*P **P 14 14 56.0 +0.2**
MAK *e* 14 18 12.5
MAK *e*PPP PPP 14 20 05.4
MAK *e*S **S 14 25 16.2 -5.6**
MAK pmax pmax
comp=Z,52nm,0.9s
MIR Mirnyy 84.95 197⇓*i*P **P 14 14 56.5 +0.5**
MIR *i* 14 15 05.0
MIR *i* 14 15 08.0
MIR pmax pmax
comp=Z,47nm,1.1s
NLWA Neilton Lookou 85.53 43 *e*P **P 14 14 56.5 -3.1**
comp=Z,49nm,1.1s
PGC Sidney 85.55 41 *e*P **P 14 14 56.6 -2.9**
comp=Z,2.7nm,1.2s
MCW Mount Constitu 85.95 41 P **P 14 15 03.8 +2.2**
MCW Mount Constitu 85.95 41 P **P 14 15 03.8 +2.2**
BMW Boistfort Moun 86.15 44 P **P 14 15 04.2 +1.6**
BMW Boistfort Moun 86.15 44 P **P 14 15 04.2 +1.6**
GNW Green Mountain 86.19 42 P **P 14 15 04.5 +1.8**
MSEY Mahe Island 86.20 265 P **P 14 15 04.0 +0.5**
comp=Z,131nm,1.2s,SNR=5.8
APA Apatity 86.22 338⇑*e*P **P 14 15 03.2 +0.7**
APA MLR MLR
comp=Z,500nm,17.0s
RNO Roman Nose 86.32 46 P **P 14 15 06.2 +2.6**
MBW Mount Baker 86.53 41 P **P 14 15 06.4 +1.8**
DGRG David-gareji 86.64 311 P **P 14 15 05.9 +0.7**
YKW3 Yellowknife Ar 86.83 27 *e*P **P 14 15 03.5 -2.1**
comp=Z,0.6nm,0.9s
YKA Yellowknife Ar 86.86 27 P **P 14 15 06.5 +0.8**
YKA PKiKP **PKiKP 14 20 13.6 +2.3**
YKA PKKPbc **PKKPbc 14 33 01.8 +0.2**
YKA Yellowknife Ar 86.86 27 P **P 14 15 06.5 +0.8**
comp=Z,25nm,0.9s,baz=290,slow=5.3,SNR=216
YKA PKiKP **PKiKP 14 20 13.6 +2.3**
comp=Z,0.4nm,0.8s,baz=289,slow=1.8,SNR=4.6
YKA PKKPbc **PKKPbc 14 33 01.7 +0.2**
comp=Z,0.2nm,0.7s,baz=121,slow=2.6,SNR=5.3
SEAG Tbilisi Sea 86.99 312 P **P 14 15 06.7 -0.1**
VRHR Novokhopersk 87.02 321 *e*P **P 14 15 04.9 -1.8**
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR MLR MLR
comp=Z,1μm,20.0s
VRHR MLR MLR
comp=N,240nm,18.0s
VRHR MLR MLR
comp=E,820nm,20.0s
LON Longmire 87.04 43 *e*P P 14 15 03.5 -3.5
LON pmax pmax
comp=Z,26nm,1.3s
LON Longmire 87.04 43 *e*P P 14 15 03.5 -3.5
comp=Z,26nm,1.3s
TBLG Delisi 87.05 312 *e*P **P 14 15 07.2 +0.1**
TBLG Delisi 87.05 312 P **P 14 15 07.2 +0.1**
GUDG Gudauri 87.08 313 P **P 14 15 07.5 +0.1**
UMR Umm Al-Rimmam 87.12 299 *e*P **P 14 15 06.7 -1.0**
UMR AMb AMB 14 15 10.5
comp=Z,87nm,1.4s
HUMO Hull Mountain 87.16 47 *e*P P 14 15 01.9 -5.7
comp=Z,59nm,1.3s
WPW White Pass 87.23 43 P **P 14 15 09.7 +1.7**
RDF Al-Radifah 87.39 299 *e*P **P 14 15 07.9 -1.1**
RDF AMb AMB 14 15 11.8
comp=Z,63nm,1.1s
VLL Laurance Lake 87.42 44 P **P 14 15 11.1 +2.1**
ZEI Tsey 87.42 313 *e*P **P 14 15 07.3 -1.8**
ZEI pmax pmax
comp=Z,37nm,1.3s
GOR Gori 87.45 312 P **P 14 15 09.7 +0.6**
KEV Kevo 87.52 341 *e*P **P 14 15 07.3 -1.4**
KEV pmax pmax
comp=Z,2.0nm,0.7s
KEV Kevo 87.52 341 *ep* **P 14 15 07.3 -1.4**
comp=Z,2.4nm,0.7s
YBH Yreka Blue Hor 87.53 48 *e*P P 14 15 03.5 -6.0
comp=Z,49nm,1.3s
YBH Yreka Blue Hor 87.53 48 LR LR 14 47 50.1
comp=Z,455nm,20.5s,baz=278,slow=31
TWW Teanaway 87.58 43 P **P 14 15 11.8 +2.2**
NAY Al-Naaiem 87.59 299 *e*P **P 14 15 08.8 -1.2**
NAY AMb AMB 14 15 12.0
comp=Z,86nm,1.3s
NAC Naches 87.70 43 P **P 14 15 12.2 +2.0**
RST Umm Al-Ruwaisa 87.75 299 *e*P **P 14 15 09.0 -1.7**
RST AMb AMB 14 15 11.9
comp=Z,10nm,0.9s
TBM Table Mountain 87.75 42 P **P 14 15 11.9 +1.5**
ONI Oni 87.79 313 P **P 14 15 11.0 +0.3**
RES Resolute Bay 87.81 13 *e*P P 14 15 06.5 -3.6
comp=Z,5.0nm,0.8s
WDC Whiskeytown Da 87.91 49 *e*P **P 14 15 09.3 -1.9**
WDC pmax pmax
comp=Z,45nm,1.4s
WDC Whiskeytown Da 87.91 49 *e*P **P 14 15 09.3 -1.9**
comp=Z,45nm,1.4s
KBZ Khabaz 87.92 314 P **P 14 15 10.7 -0.5**
KBZ Khabaz 87.92 314 P **P 14 15 10.7 -0.5**
KBZ Khabaz 87.92 314 P **P 14 15 10.7 -0.5**
comp=Z,5.8nm,1.0s,baz=117,slow=3.2,SNR=9.3
KBZ LR LR 14 58 35.9
comp=Z,267nm,18.6s,baz=217,slow=38
KIV Kislovodsk 88.02 314 *i*P **P 14 15 10.9 -0.9**
KIV *e*S **S 14 25 50.2 -3.3**
KIV *e*PS **PS 14 27 03.1 +3.1**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,200nm,17.0s
AKH Akhalkalaki 88.03 312 P **P 14 15 12.1 +0.1**
WTV Waterville 88.05 42 P **P 14 15 13.2 +1.4**
ARCES ARCESS Array B 88.09 341 P **P 14 15 11.0 -0.5**
ARCES ARCESS Array B 88.09 341 P **P 14 15 11.0 -0.5**
comp=Z,8.2nm,0.8s,baz=77,slow=7.8,SNR=21
ARCES LR LR 14 59 26.5
comp=Z,448nm,19.4s,baz=64,slow=39
ARE0 ARCESS Array S 88.09 341 *e*P P 14 15 07.9 -3.6
MOS Moscow 88.09 327 *e*P **P 14 15 10.3 -1.4**
MOS *e* 14 15 23.2
MOS *e*PPP PPP 14 20 33.2
MOS pmax pmax
comp=Z,56nm,1.2s
MOS pmax pmax
comp=Z,100nm,1.4s
VIPM Ingram Point 88.38 45 P **P 14 15 15.3 +1.7**
VIPM Ingram Point 88.38 45 P **P 14 15 15.3 +1.7**
VORD Divnogorie 88.48 322 *e*P **P 14 15 13.0 -0.7**
VORD pmax pmax
comp=N,110nm,0.8s
VORD pmax pmax
comp=E,130nm,0.8s
VORD pmax pmax
comp=Z,10.0nm,0.8s
VORD MLR MLR
comp=N,700nm,18.0s
VORD MLR MLR
comp=E,640nm,18.0s
VORD MLR MLR
comp=Z,980nm,18.0s
VSR Storozhevoye 88.49 322 *e*P **P 14 15 12.3 -1.4**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,9.0nm,0.9s
VSR MLR MLR
comp=N,610nm,18.0s
VSR MLR MLR
comp=E,560nm,18.0s
VSR MLR MLR
comp=Z,1μm,18.0s
HAWA Hanford 88.65 43 *e*P **P 14 15 12.0 -2.6**
comp=Z,29nm,1.3s
JOF Joensuu 88.73 334 *e*P **P 14 15 13.0 -1.6**
JOF pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 88.73 334 *ep* **P 14 15 13.0 -1.6**
comp=Z,3.9nm,0.7s
OBN Obninsk 88.85 326 *e*P **P 14 15 14.1 -1.2**
OBN *i* 14 15 23.7
OBN pmax pmax
comp=Z,58nm,1.2s
OBN MLR MLR
comp=Z,700nm,18.0s
RKT Rikitea 89.20 114 *e*LR LR 14 43 42.2
comp=Z,317nm,41.2s
MOD Modoc 89.24 48 *e*P P 14 15 14.5 -3.2
comp=Z,96nm,1.3s
VNDA Vanda 89.36 175 P **P 14 15 17.2 0.0**
VNDA PP **PP 14 18 49.0 +0.6**
VNDA Vanda 89.36 175 P **P 14 15 17.2 0.0**
comp=Z,2.9nm,1.0s,baz=326,slow=5.3,SNR=9.0
VNDA PP **PP 14 18 49.0 +0.6**
comp=Z,4.8nm,1.3s,baz=351,slow=7.5,SNR=4.5
BEKR Beckworth 89.70 49 *e*P **P 14 15 17.3 -2.6**
comp=Z,16nm,0.9s
NEW Newport 89.73 41 *e*P **P 14 15 17.3 -2.4**
comp=Z,14nm,1.0s
NEW Newport 89.73 41 ⇓P **P 14 15 20.4 +0.7**
baz=90
CMB Columbia Colle 90.12 51 *e*P **P 14 15 19.5 -2.3**
CMB pmax pmax
comp=Z,43nm,1.3s
CMB Columbia Colle 90.12 51 *e*P **P 14 15 19.5 -2.3**
comp=Z,43nm,1.3s
RAYN Ar Rayn 90.28 294 P **P 14 15 22.5 -0.3**
comp=Z,84nm,0.8s,SNR=5.2
WCN Washoe City 90.29 50 *e*P **P 14 15 20.2 -2.5**
WCN pmax pmax
comp=Z,21nm,1.2s
WCN Washoe City 90.29 50 *e*P **P 14 15 20.2 -2.5**
comp=Z,21nm,1.2s
WVOR Wild Horse Val 90.30 47 *e*P P 14 15 19.2 -3.4
WVOR pmax pmax
comp=Z,39nm,1.3s
WVOR Wild Horse Val 90.30 47 *e*P P 14 15 19.2 -3.4
comp=Z,39nm,1.3s
C11A Tepee Creek (N 90.41 41 ⇓P **P 14 15 24.2 +1.3**
baz=90
BMO Blue Mountains 90.57 44 *e*P **P 14 15 21.5 -2.3**
BMO pmax pmax
comp=Z,31nm,1.4s
BMO Blue Mountains 90.57 44 *e*P **P 14 15 21.5 -2.3**
comp=Z,31nm,1.4s
B12A Libby 90.65 40 ⇑P **P 14 15 26.2 +2.2**

baz=91
SMMC Simmler 91.10 54 ⇓P P 14 15 28.1 +1.8
baz=91
KAF Kangasniemi 91.18 335 eP P 14 15 23.3 -2.8
KAF pmax pmax
comp=Z,4.0nm,0.6s
KAF Kangasniemi 91.18 335 ep P 14 15 23.3 -2.8
comp=Z,3.7nm,0.6s
D12A Red Ives Fores 91.23 42 ⇓P P 14 15 28.0 +1.2
baz=91
A13A Flathead Natio 91.25 40 ⇓P P 14 15 28.7 +1.9
baz=91
PKM Peak Mountain 91.34 54 ⇓P P 14 15 30.2 +2.5
baz=91,SNR=20
BSMT Bassoo Peak 91.35 41 eP P 14 15 24.5 -3.0
comp=Z,17nm,1.1s
ANN Anapa 91.43 316 eP P 14 15 15.1 -12
ANN e 14 15 25.0
ANN pmax pmax
comp=Z,9.0nm,1.2s
C13A Hot Springs 91.54 41 ⇓P P 14 15 29.8 +1.6
baz=92
FIA1 FINESS Array S 91.58 334 eP P 14 15 23.7 -4.2
FIA1 epP pP 14 15 36.4 -2.0
FINES FINESS Array B 91.58 334 P P 14 15 26.7 -1.2
FINES FINESS Array B 91.58 334 P P 14 15 26.7 -1.2
comp=Z,5.8nm,0.7s,baz=65,slow=4.8,SNR=26
FINES LR LR 14 59 26.7
comp=Z,611nm,18.8s,baz=90,slow=37
NVAR Mina Array Bea 91.61 50 P P 14 15 30.7 +1.8
NVAR Mina Array Bea 91.61 50 P P 14 15 30.7 +1.8
comp=Z,15nm,0.9s,baz=264,slow=5.5,SNR=76
VES Vestal, Richgr 91.69 53 ⇓P P 14 15 30.4 +1.4
baz=92,SNR=8.3
F12A Elk City 91.69 43 ⇑P P 14 15 30.1 +1.1
baz=92,SNR=10.0
NV11 Mina Array Sit 91.72 50 eP P 14 15 27.4 -1.9
G12A Big Creek, Yel 91.83 43 ⇑P P 14 15 30.7 +0.9
baz=92
A14A Double T Ranch 91.85 39 ⇓P P 14 15 31.2 +1.6
baz=92,SNR=9.0
BMN Battle Mountai 91.87 48 eP P 14 15 27.6 -2.4
BMN pmax pmax
comp=Z,23nm,1.3s
BMN Battle Mountai 91.87 48 eP P 14 15 27.6 -2.4
comp=Z,24nm,1.3s
MFID Camas Ranch 92.00 45 eP P 14 15 27.6 -2.9
comp=Z,27nm,1.0s
MFID Camas Ranch 92.00 45 ⇓P P 14 15 32.1 +1.6
baz=92
TIN Tinemaha 92.03 52 ⇓P P 14 15 33.3 +2.6
baz=92
C14A Swan Lake 92.04 41 ⇑P P 14 15 31.7 +1.1
baz=92
ARVC Arvin 92.07 54 ⇓P P 14 15 32.8 +2.0
baz=92
B14A Marquette Ranc 92.15 40 ⇑P P 14 15 32.8 +1.8
baz=92,SNR=11
ISA Isabella 92.21 53 eP P 14 15 29.5 -2.1
ISA pmax pmax
comp=Z,20nm,1.3s
ISA Isabella 92.21 53 eP P 14 15 29.5 -2.1
comp=Z,20nm,1.3s
ISA Isabella 92.21 53 ⇓P P 14 15 32.7 +1.1
baz=92,SNR=9.7
MSO Missoula 92.22 41 ⇑P P 14 15 32.0 +0.6
baz=92
A15A Johnson Ranch, 92.28 39 ⇓P P 14 15 33.1 +1.5
baz=92,SNR=15
F13A Darby 92.29 43 ⇓P P 14 15 32.5 +0.7
baz=92,SNR=8.2
H12A Diamond D Ranc 92.33 44 ⇓P P 14 15 33.0 +0.9
baz=92,SNR=6.5
I12A Atlanta 92.37 45 ⇓P P 14 15 33.5 +1.2
baz=92
SLMT Seeley Lake 92.37 41 eP P 14 15 30.2 -2.0
comp=Z,11nm,1.3s
D14A Greenough 92.42 41 ⇓P P 14 15 32.4 0.0
baz=92
G13A Cobalt 92.58 43 ⇑P P 14 15 34.3 +1.1
baz=92,SNR=27
B15A Bradely Ranch, 92.61 40 ⇑P P 14 15 34.3 +1.1
baz=92,SNR=11
VSU Vasula 92.61 331⇑eP P 14 15 32.6 -0.2
VSU pmax pmax
comp=Z,15nm,1.0s
VSU MLR MLR
comp=Z,5.0nm,21.0s
CHMT Chamberlain Mo 92.64 41 eP P 14 15 31.3 -2.1
comp=Z,6.7nm,1.4s
E14A Clinton 92.64 42 ⇓P P 14 15 34.7 +1.2
baz=93
GRAC Grapevine Rang 92.71 52 ⇑P P 14 15 35.4 +1.6
baz=93
H13A Challis 92.73 44 ⇓P P 14 15 35.6 +1.7
baz=93,SNR=9.6
DAC Darwin (Calif) 92.73 52 eP P 14 15 31.3 -2.8
DAC pmax pmax
comp=Z,30nm,1.3s
DAC Darwin (Calif) 92.73 52 eP P 14 15 31.3 -2.8
comp=Z,30nm,1.3s
C15A Salmond Ranch, 92.76 40 ⇑P P 14 15 35.4 +1.4
baz=93
EDW2 Edwards Air Fo 92.80 54 ⇑P P 14 15 36.0 +1.7
baz=93,SNR=2
MPMC Manual Prospec 92.88 53 ⇑P P 14 15 36.5 +1.7
baz=93,SNR=42
HLID Hailey 92.94 45 eP P 14 15 32.5 -2.4
comp=Z,16nm,1.1s
HLID Hailey 92.94 45 ⇑P P 14 15 36.7 +1.8
baz=93,SNR=22
A16A West Butte Ran 92.99 39 ⇑P P 14 15 35.7 +0.7
baz=93
I13A Wildhorse Cree 93.03 44 ⇑P P 14 15 37.0 +1.6
baz=93,SNR=18
G14A Jackson 93.05 43 ⇑P P 14 15 36.0 +0.6
baz=93
D15A Lincoln 93.07 41 ⇓P P 14 15 36.2 +0.8
baz=93
B16A M & M Farms, S 93.11 39 ⇑P P 14 15 36.3 +0.9
baz=93,SNR=14
J13A Cove Ranch, Pi 93.16 45 ⇑P P 14 15 37.3 +1.5
baz=93,SNR=14
E15A Deer Lodge 93.20 42 ⇑P P 14 15 36.9 +0.9
baz=93,SNR=14
ELK Elko 93.22 48 eP P 14 15 34.6 -1.7
comp=Z,15nm,1.2s
ELK epP pP 14 15 45.9 -0.8
BFSC Mount Baldy Ra 93.24 54 ⇑P P 14 15 37.8 +1.4
baz=93,SNR=7.1
FURC Furnace Creek, 93.25 52 ⇑P P 14 15 38.5 +2.3
baz=93,SNR=12
C16A Fuhringer Ranc 93.30 40 ⇓P P 14 15 37.4 +1.1
baz=93,SNR=14
H14A Leadore 93.32 43 ⇓P P 14 15 38.1 +1.5
baz=93,SNR=14
I14A Mackay 93.48 44 ⇑P P 14 15 39.1 +1.7
baz=93,SNR=11
F15A Butte 93.49 42 ⇓P P 14 15 38.7 +1.3
baz=93,SNR=9.9
LRM Limekiln Ridge 93.53 42 eP P 14 15 35.0 -2.6
comp=Z,148nm,1.1s
A17A Triple J Farms 93.54 39 ⇑P P 14 15 38.7 +1.3
baz=94,SNR=15
DLMT Dillon 93.58 43 eP P 14 15 35.8 -2.0
comp=Z,8.3nm,1.1s
MCMT McKenzie Canyo 93.59 43 eP P 14 15 36.0 -2.0
comp=Z,4.0nm,1.2s
GSC Goldstone 93.62 53 eP P 14 15 36.2 -1.9
GSC pmax pmax
comp=Z,47nm,1.3s
GSC Goldstone 93.62 53 eP P 14 15 36.2 -1.9
comp=Z,47nm,1.3s
GSC Goldstone 93.62 53 ⇓P P 14 15 39.8 +1.7
baz=94,SNR=9.8
SIM Simferopol' 93.62 317 P P 14 15 36.0 -1.8
SIM pmax pmax
comp=Z,12nm,0.8s
SIM MLR MLR
comp=Z,200nm,19.0s
HRY Holter Researc 93.62 41 eP P 14 15 36.0 -1.9
comp=Z,22nm,1.2s
J14A Carey 93.63 45 ⇑P P 14 15 40.1 +2.1
baz=94,SNR=13
R11A Troy Canyon, C 93.68 50 ⇑P P 14 15 39.8 +1.4
baz=94,SNR=15
D16A Dana Ranch, Ca 93.69 41 ⇓P P 14 15 39.5 +1.2
baz=94,SNR=20
B17A L&G Farms, Che 93.72 39 ⇓P P 14 15 39.2 +1.0
baz=94,SNR=22
G15A Dillon 93.72 43 ⇓P P 14 15 39.6 +1.1
baz=94
MURC Murrieta 93.78 55 ⇑P P 14 15 39.9 +1.1
baz=94
E16A East Helena 93.79 41 ⇑P P 14 15 39.8 +1.2
baz=94,SNR=13
H15A Lima 93.80 43 ⇓P P 14 15 39.9 +1.1
baz=94
SHOC Shoshone 93.86 52 ⇑P P 14 15 40.8 +1.7
baz=94
C17A Wharram Farm, 93.98 40 ⇑P P 14 15 39.9 +0.4
baz=94,SNR=18
109C Camp Elliot, M 94.05 56 ⇑P P 14 15 41.3 +1.3
baz=94
A18A Metzger Ranch, 94.08 39 ⇓P P 14 15 40.9 +1.0
baz=94,SNR=21
F16A Kennard Place, 94.08 42 ⇑P P 14 15 41.0 +1.0
baz=94,SNR=6.8
K14A Jones Ranch, D 94.12 45 ⇑P P 14 15 42.1 +1.8
baz=94,SNR=14
BOZ Bozeman (W) 94.13 42 eP P 14 15 38.0 -2.3
BOZ pmax pmax
comp=Z,11nm,1.4s
BOZ Bozeman (W) 94.13 42 eP P 14 15 38.0 -2.3
comp=Z,11nm,1.4s
BOZ Bozeman (W) 94.13 42 ⇓P P 14 15 41.6 +1.4
baz=94,SNR=9.6
HEC Hector,Ludlow 94.13 53 ⇑P P 14 15 41.2 +0.8
baz=94
G16A Moss Hill, Enn 94.16 43 ⇑P P 14 15 41.6 +1.2
baz=94,SNR=21
D17A Six Diamond Ra 94.20 40 ⇑P P 14 15 41.5 +1.0
baz=94,SNR=26
L14A Malta 94.25 46 ⇓P P 14 15 42.5 +1.6
baz=94,SNR=14
TUQ Turquoise Moun 94.27 53 ⇓P P 14 15 42.6 +1.4
baz=94,SNR=6.1
B18A Beardsley Farm 94.31 39 ⇓P P 14 15 41.5 +0.5
baz=94,SNR=9.1
E17A Martinsdale 94.34 41 ⇑P P 14 15 42.7 +1.4
baz=94,SNR=14
J15A Blackfoot 94.36 44 ⇓P P 14 15 43.4 +2.1
baz=94,SNR=17
PFO Pinyon Flat Ob 94.37 55 ⇑P P 14 15 42.7 +1.0
baz=94,SNR=9.6
EGMT Eagleton 94.47 39 eP P 14 15 39.7 -2.0
comp=Z,22nm,1.3s
EGMT Eagleton 94.47 39 ⇑P P 14 15 42.5 +0.8
baz=94,SNR=9.1
K15A Arbon 94.53 45 ⇓P P 14 15 43.9 +1.7
baz=94,SNR=8.3
QLMT Earthquake Lak 94.54 43 eP P 14 15 39.8 -2.5
comp=Z,4.3nm,1.2s
QLMT epP pP 14 15 50.6 -2.1
AKASG Malin Array Be 94.57 324 P P 14 15 40.1 -1.9
AKASG Malin Array Be 94.57 324 P P 14 15 40.0 -1.9
AKASG Malin Array Be 94.57 324 P P 14 15 40.0 -1.9
comp=Z,0.9nm,0.6s,baz=43,slow=4.3,SNR=5.3
AKASG LR LR 15 01 21.7
comp=Z,416nm,18.9s,baz=65,slow=38
MONP Monument Peak 94.60 55 ⇓P P 14 15 44.3 +1.5
baz=95,SNR=5.2
HVU Hansel Valley 94.66 46 eP P 14 15 41.0 -1.8
HVU pmax pmax
comp=Z,21nm,1.3s
HVU Hansel Valley 94.66 46 eP P 14 15 41.0 -1.8
comp=Z,21nm,1.3s
GMRC Granite Mounta 94.67 53 ⇑P P 14 15 44.5 +1.6
baz=95,SNR=15
F17A Fitzpatrick Pl 94.67 42 ⇓P P 14 15 44.1 +1.3
baz=95,SNR=11
H16A Russell Place, 94.71 43 ⇑P P 14 15 45.0 +2.0
baz=95,SNR=20
A19A Klindworth Far 94.75 38 ⇑P P 14 15 43.9 +1.0
baz=95,SNR=16
D18A Linhart Farms, 94.75 40 ⇓P P 14 15 44.1 +1.1
baz=95
B19A Brinkman Farms 94.81 39 ⇓P P 14 15 44.3 +1.1
baz=95,SNR=8.7
G17A Pierce Place, 94.83 42 ⇓P P 14 15 45.4 +1.9
baz=95
L15A Malad City 94.86 46 ⇑P P 14 15 44.7 +1.0
baz=95,SNR=7.4
E18A Harlowton 94.91 41 ⇑P P 14 15 45.1 +1.3
baz=95,SNR=21
YMR Madison River 94.91 43 eP P 14 15 41.6 -2.4
comp=Z,50nm,1.3s
YMR epP pP 14 15 54.2 -0.3
DVTC Desert V Tower 94.93 56 ⇑P P 14 15 45.9 +1.8
baz=95
J16A Bone 94.96 44 ⇓P P 14 15 46.0 +1.8
baz=95,SNR=15
C19A Slack Wire Ran 95.02 39 ⇑P P 14 15 45.5 +1.3
baz=95,SNR=16
SWSC Sam W. Stewart 95.09 55 ⇑P P 14 15 46.2 +1.5
baz=95
K16A Soda Springs 95.13 45 ⇑P P 14 15 47.1 +2.1
baz=95,SNR=16
DUG Dugway 95.15 48 eP P 14 15 43.2 -1.9
DUG pmax pmax
comp=Z,23nm,1.3s
DUG Dugway 95.15 48 eP P 14 15 43.2 -1.9
comp=Z,23nm,1.3s
DUG Dugway 95.15 48 ⇓P P 14 15 46.4 +1.3
baz=95,SNR=15
IMW Indian Meadow 95.20 44 eP P 14 15 43.5 -1.9
comp=Z,20nm,1.3s
IRM Iron Mountain 95.25 54 ⇑P P 14 15 47.3 +1.8
baz=95,SNR=25
A20A Cobblestone Ra 95.26 38 ⇓P P 14 15 46.1 +0.8
baz=95,SNR=9.1
H17A Grant Village 95.27 43 ⇑P P 14 15 48.8 +3.1
baz=95,SNR=17
F18A Big Timber 95.28 41 ⇓P P 14 15 46.9 +1.4
baz=95,SNR=14
LKWY Lake 95.32 43 eP P 14 15 43.7 -2.2
LKWY pmax pmax
comp=Z,11nm,0.9s
LKWY Lake 95.32 43 eP P 14 15 43.7 -2.2
comp=Z,11nm,0.9s
D19A Cripps Ranch, 95.34 40 ⇑P P 14 15 46.8 +1.1
baz=95,SNR=16
GCMT Greycliff 95.36 41 eP P 14 15 43.6 -2.3
comp=Z,16nm,1.3s
B20A Solberg Farm, 95.38 39 ⇓P P 14 15 46.7 +0.9
baz=95,SNR=7.6
MOOW Moose Ponds 95.39 44 eP P 14 15 44.1 -2.0
comp=Z,10nm,1.3s
I17A Pilgrim Ck. 95.44 43 ⇑P P 14 15 48.6 +2.2
baz=95,SNR=6.3
L16A Fish Haven 95.52 45 ⇓P P 14 15 48.2 +1.4
baz=96,SNR=18
LOHW Long Hollow 95.53 44 eP P 14 15 44.5 -2.3
comp=Z,11nm,1.3s
J17A Brown Place, J 95.55 44 ⇑P P 14 15 48.1 +1.2
baz=96
HWUT Hardware Ranch 95.57 46 eP P 14 15 45.6 -1.4
comp=Z,22nm,1.3s
CCUT Cedar City 95.60 50 eP P 14 15 44.7 -2.6
comp=Z,15nm,1.3s
MAW Mawson 95.65 202 P P 14 15 46.4 +0.1
MAW Mawson 95.65 202 P P 14 15 46.4 +0.1
comp=Z,7.6nm,1.1s,baz=70,slow=8.7,SNR=7.4
MAW LR LR 14 58 10.4
comp=Z,318nm,18.9s,baz=81,slow=35
E19A Rath Farm, Rou 95.67 41 ⇑P P 14 15 48.2 +1.0
baz=96,SNR=8.4
C20A Veseth Ranch, 95.67 39 ⇓P P 14 15 48.6 +1.5
baz=96,SNR=38
BRTR Keskin Array B 95.70 312 P P 14 15 46.6 -0.9
BRTR Keskin Array B 95.70 312 P P 14 15 46.6 -0.9
comp=Z,2.0nm,1.0s,baz=100,slow=2.9,SNR=11
BRTR LR LR 15 06 34.2
comp=Z,121nm,18.8s,baz=198,slow=40
H18A Shoshone NF, C 95.77 42 ⇑P P 14 15 49.5 +1.5
baz=96,SNR=6.1
F19A Roth Farm, Mol 95.80 41 ⇓P P 14 15 49.1 +1.2
baz=96,SNR=7.6
D20A Manuel Ranch, 95.84 40 ⇑P P 14 15 49.1 +1.1
baz=96,SNR=8.8
RLMT Red Lodge 95.87 42 ⇓P P 14 15 50.1 +1.8
baz=96,SNR=6.6
Y12C Blythe 95.87 54 ⇑P P 14 15 50.0 +1.7
baz=96
W13A Hualapai Mount 95.97 53 ⇓P P 14 15 50.4 +1.4
baz=96,SNR=8.1
JLU Jordanelle 96.00 47 eP P 14 15 47.6 -1.4
comp=Z,22nm,1.4s
FFC Flin Flon 96.01 31 eP P 14 15 45.4 -3.0
FFC pmax pmax
comp=Z,12nm,1.2s
FFC Flin Flon 96.01 31 eP P 14 15 45.4 -3.0
comp=Z,12nm,1.2s
FFC Flin Flon 96.01 31 P P 14 15 49.4 +1.0
comp=Z,48nm,0.9s,SNR=6.9
J18A Kendall Valley 96.07 44 ⇑P P 14 15 50.8 +1.4
baz=96,SNR=15
E20A Meyer Farm, Mu 96.07 40 ⇓P P 14 15 50.0 +1.0
baz=96,SNR=5.6
MVU Marysvale 96.15 49 eP P 14 15 48.1 -1.7
comp=Z,3.7nm,0.9s
C21A Desert Coulee 96.19 39 ⇑P P 14 15 50.6 +1.1
baz=96,SNR=8.2
H19A Powell 96.22 42 ⇑P P 14 15 51.4 +1.5
baz=96,SNR=5.2
M17A Scullys Gap (B 96.25 46 ⇑P P 14 15 50.8 +0.7
baz=96
K18A Toltan Ranch, 96.27 44 ⇑P P 14 15 51.6 +1.4
baz=96
F20A Billings 96.33 41 ⇓P P 14 15 51.2 +0.9
baz=96
A22A Carney Farms, 96.42 37 ⇓P P 14 15 50.9 +0.3
baz=96,SNR=8.2
G20A Bridger 96.52 42 ⇓P P 14 15 52.3 +1.1
baz=96,SNR=12
BW06 Boulder Array 96.55 44 ⇓P P 14 15 52.2 +0.6
baz=96
PDAR Pinedale Array 96.55 44 P P 14 15 52.2 +0.7
PDAR PP PP 14 19 44.6 -1.0
PDAR Pinedale Array 96.55 44 P P 14 15 52.2 +0.7
comp=Z,1.2nm,0.8s,baz=234,slow=2.4,SNR=8.3
PDAR PP PP 14 19 44.6 -1.0
comp=Z,2.0nm,1.1s,baz=297,slow=6.5,SNR=7.9
PDAR LR LR 14 58 52.4
comp=Z,224nm,18.1s,baz=131,slow=35
J19A Crowheart 96.71 44 ⇓P P 14 15 53.6 +1.4
baz=97,SNR=18
U15A North Rim 96.77 51 ⇓P P 14 15 54.4 +1.7
baz=97,SNR=6.9
113A Mohawk Valley, 96.77 55 ⇓P P 14 15 53.7 +1.3
baz=97
Q16A Castle Valley 96.78 48 ⇑P P 14 15 54.0 +1.5
baz=97,SNR=5.8
L19A Farson 96.93 45 ⇑P P 14 15 54.4 +1.2
baz=97
H20A Greybull 96.94 42 ⇓P P 14 15 54.7 +1.6
baz=97
C22A Vida 96.97 39 ⇑P P 14 15 53.7 +0.6
baz=97
F21A Absaloka Mine, 96.98 41 ⇑P P 14 15 54.3 +1.1
baz=97
K19A Absolon Red Bu 97.01 44 ⇓P Pdif 14 15 54.4 +0.7
baz=97
Y14A Wickenburg 97.02 54 ⇑P Pdif 14 15 55.2 +1.5
baz=97,SNR=12
D22A Cohagen 97.04 39 ⇑P Pdif 14 15 54.4 +0.9
baz=97,SNR=10.0
I20A Worland 97.07 43 ⇓P Pdif 14 15 54.6 +0.8
baz=97
G21A Lodge Grass 97.17 41 ⇑P Pdif 14 15 55.3 +1.1
baz=97
SRU San Rafael 97.18 48 eP P 14 15 52.0 -2.4
SRU pmax pmax
comp=Z,3.0nm,0.8s
SRU San Rafael 97.18 48 eP P 14 15 52.0 -2.4
comp=Z,3.3nm,0.8s
SRU San Rafael 97.18 48 ⇑P Pdif 14 15 55.1 +0.7
baz=97,SNR=6.0
P18A Preston Nutter 97.20 47 ⇓P Pdif 14 15 55.8 +1.1
baz=97
B23A Brockton 97.20 38 ⇓P Pdif 14 15 54.7 +0.5
baz=97,SNR=8.7
Z14A Wintersburg 97.25 54 ⇓P Pdif 14 15 56.3 +1.6
baz=97
C23A Lambert 97.37 38 ⇑P Pdif 14 15 55.9 +1.0
baz=97,SNR=11
H21A Big Horn, Sher 97.52 42 ⇓P Pdif 14 15 56.9 +1.1
baz=97,SNR=5.3
D23A Lindsay 97.63 39 ⇑P Pdif 14 15 57.5 +1.4
baz=98,SNR=5.4
I21A Big Trails, Te 97.68 43 ⇑P Pdif 14 15 57.4 +0.8
baz=98
J21A Lysite 97.76 43 ⇓P Pdif 14 15 58.5 +1.5
baz=98
WUAZ Wupatki 97.78 52 ⇑P Pdif 14 15 58.9 +1.7
baz=98
NOA NORSAR Array B 97.78 338 LR LR 15 07 32.0
comp=Z,326nm,18.5s,baz=40,slow=40
214A Organ Pipe Nat 97.79 55 ⇑P Pdif 14 15 58.8 +1.6
baz=98
M20A Sweetwater, Wa 97.97 45 ⇑P Pdif 14 15 58.9 +0.9
baz=98
S18A Hurst Farm, Bl 98.07 49 ⇓P Pdif 14 15 59.0 +0.5
baz=98,SNR=5.5
X16A Lo Mia Camp, P 98.09 53 ⇓P Pdif 14 16 00.5 +1.8
baz=98
P19A Cripple Cowboy 98.11 47 ⇑P Pdif 14 15 59.6 +0.9
baz=98,SNR=8.2
F23A Volborg 98.12 40 ⇓P Pdif 14 15 58.7 +0.3
baz=98
N20A Spence Gulch, 98.17 46 ⇓P Pdif 14 16 00.2 +1.3
baz=98
J22A Midwest 98.38 43 ⇓P Pdif 14 16 01.1 +1.5
baz=98
M21A Separation Pea 98.50 45 ⇓P Pdif 14 16 01.9 +1.5
baz=98
PV04 Paradox Valley 98.62 48 eP P 14 15 58.1 -2.8
Q20A Ridgley Place, 98.86 47 ⇓P Pdif 14 16 03.0 +1.0
baz=99,SNR=7.9
R20A Redvale 99.08 48 ⇑P Pdif 14 16 03.8 +0.8
baz=99
H24A Dirks Ranch, A 99.08 41 ⇑P Pdif 14 16 03.3 +0.6
baz=99
TUC Tucson 99.31 54 eP Pdif 14 16 01.8 -2.1
TUC pmax pmax
comp=Z,2.0nm,1.3s
TUC Tucson 99.31 54 eP Pdif 14 16 01.8 -2.1
comp=Z,1.9nm,1.3s
L23A Garrett 99.43 44 ⇓P Pdif 14 16 05.4 +0.9
baz=99
UZH Uzhgorod 99.53 324 eP Pdif 14 16 11.0 +6.6
R21A Cimarron 99.62 48 ⇓P Pdif 14 16 07.0 +1.6
baz=100,SNR=9.1
SMCO Snowmass 99.72 47 ePdif Pdif 14 16 04.5 -1.5
comp=Z,5.2nm,1.1s
N23A Red Feather La 99.76 45 ⇓P Pdif 14 16 07.8 +1.8
baz=100
CRVS Cervenica-Dubn 99.88 324 eP Pdif 14 16 04.5 -1.5
CRVS Cervenica-Dubn 99.88 324 PDIF Pdif 14 16 04.5 -1.5
Q22A Crested Butte, 99.89 47 ⇓P Pdif 14 16 08.2 +1.5
baz=100
V20A Brimhall 99.89 50 ⇓P Pdif 14 16 07.9 +1.2
baz=100
U21A Nageezi 100.27 50 ⇓P Pdif 14 16 08.3 0.0
baz=100
S22A 4UR Ranch, Cre 100.38 48 ⇑P Pdif 14 16 10.4 +1.5
baz=100
Z20A Nine Sixteen R 100.77 53 ⇓P Pdif 14 16 12.7 +2.2
baz=101,SNR=6.2
319A Douglas 100.83 55 ⇓P Pdif 14 16 13.0 +2.3
baz=101
R23A Moffat 100.93 47 ⇑P Pdif 14 16 13.0 +1.7
baz=101
220A Playas Peak, P 101.25 54 ⇓P Pdif 14 16 14.6 +2.0
baz=101,SNR=8.8
OKC Ostrava-Krasne 101.25 326 AMS AMS 15 06 00.0
comp=Z,1µm,20.5s
320A Kipp Ranch, An 101.44 55 ⇓P Pdif 14 16 16.1 +2.5
baz=102
VYHS Vyhne 101.58 325 i P Pdif 14 16 11.5 -2.1
VYHS Vyhne 101.58 325 PDIF Pdif 14 16 11.5 -2.1
121A Cookes Peak, D 101.61 53 ⇓P Pdif 14 16 16.7 +2.4
baz=102,SNR=5.1
T24A Torres, Weston 101.95 48 ⇓P Pdif 14 16 17.9 +2.1
baz=102
DPC Dobruska-Polom 101.95 327 AMS AMS 15 05 50.0
comp=Z,1µm,22.7s
W24A Lazy 6 Ranch, 102.43 50 ⇓P Pdif 14 16 19.7 +1.8
baz=102
PVCC Panska Ves 102.77 328 AMS AMS 15 08 30.0
comp=Z,1µm,19.4s
S26A Kim 102.87 47 ⇓P Pdif 14 16 20.3 +0.6
baz=103
BRG Berggiesshubel 102.89 329 eP Pdif 14 16 19.3 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,3.4nm,1.0s						
BRG				e		14 20 29.0	
	comp=Z,6.0nm,1.4s						
BRG							
	comp=N,598nm,10.8s						
BRG							
	comp=E,558nm,20.0s						
BRG							
	comp=Z,1µm,10.2s						
BRG	**Berggiesshubel**	**102.89**	**329**	eP	**Pdif**	**14 16 19.3**	**0.0**
BRG				e		14 20 29.0	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BRG				MLR	MLR		
	comp=N,598nm,10.8s						
BRG				MLR	MLR		
	comp=E,558nm,20.0s						
BRG				MLR	MLR		
	comp=Z,1µm,10.2s						
TREC	**Trest**	**102.99**	**327**	AMS	AMS	15 06 40.0	
	comp=Z,1µm,20.6s						
PRU	**Pruhonice**	**103.09**	**328**	AMS	AMS	15 06 50.0	
	comp=Z,1µm,20.5s						
CLL	**Collm**	**103.10**	**329**	eP	**Pdif**	**14 16 21.0**	**+0.7**
CLL				MLR	MLR		
	comp=Z,700nm,18.5s						
CLL	**Collm**	**103.10**	**329**	e(Pdif)		14 16 21.0	
CLL				e		14 30 00.0	
CLL				eSS	SS	14 35 36.0	+22
CLL				eSSS	SSS	14 39 30.0	
CLL				LV		15 08 00.0	
	comp=Z,700nm,18.5s						
Y25A	**Mesa, Roswell**	**103.48**	**51**	⇓P	**Pdif**	**14 16 23.6**	**+1.1**
	baz=104						
224A	**Cornudas Mount**	**103.56**	**53**	⇑P	**Pdif**	**14 16 24.5**	**+1.6**
	baz=104						
NKC	**Novy Kostel**	**104.03**	**329**	AMS	AMS	15 06 50.0	
	comp=Z,900nm,22.4s						
KHC	**Kasperske Hory**	**104.11**	**327**	ePKP		14 20 42.7	
KHC				AMS	AMS	15 07 50.0	
	comp=Z,1µm,22.2s						
GERES	**GERESS Array B**	**104.21**	**327**	Pdif	**Pdif**	**14 16 24.0**	**-1.4**
GERES				PKiKP	**PP**	**14 20 42.8**	**-0.3**
GERES				PKKPbc	**PKKPbc**	**14 32 15.3**	**+0.6**
GERES	**GERESS Array B**	**104.21**	**327**	Pdiff	**Pdif**	**14 16 24.0**	**-1.4**
	comp=Z,0.2nm,0.2s,baz=50,slow=11,SNR=3.4						
GERES				PKiKP	**PP**	**14 20 42.8**	**-0.3**
	comp=Z,0.2nm,0.2s,baz=356,slow=1.9,SNR=4.4						
GERES				PKKPbc	**PKKPbc**	**14 32 15.3**	**+0.6**
	comp=Z,0.2nm,0.2s,baz=197,slow=4.1,SNR=3.6						
325A	**Bean Ranch, Si**	**104.26**	**54**	⇓P	**Pdif**	**14 16 28.4**	**+2.3**
	baz=104						
425A	**Indio Mountain**	**104.47**	**54**	⇑P	**Pdif**	**14 16 29.2**	**+2.2**
	baz=104						
TXAR	**Lajitas Array**	**106.09**	**55**	Pdif	**Pdif**	**14 16 36.1**	**+2.0**
TXAR				PKiKP	**PKiKP**	**14 20 47.0**	**+0.8**
TXAR	**Lajitas Array**	**106.09**	**55**	Pdiff	**Pdif**	**14 16 36.1**	**+2.0**
	comp=Z,0.5nm,0.9s,baz=96,slow=1.3,SNR=5.4						
TXAR				PKiKP	**PKiKP**	**14 20 47.0**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=202,slow=1.3,SNR=3.5						
429A	**Davenport Ranc**	**106.98**	**53**	⇓P		14 20 49.3	
	baz=107						
LRAL	**Lakeview Retre**	**116.78**	**44**	ePKPdf	**PKPdf**	**14 21 04.0**	**-2.2**
ESDC	**Sonseca Array**	**119.69**	**329**	PKP	**PKPdf**	**14 21 11.6**	**-0.1**
ESDC				PP	**PP**	**14 22 35.4**	**+1.6**
ESDC				PKKPbc	**PKKPbc**	**14 31 24.3**	**+1.1**
ESDC	**Sonseca Array**	**119.69**	**329**	PKP	**PKPdf**	**14 21 11.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=18,slow=2.7,SNR=14						
ESDC				PP	**PP**	**14 22 35.4**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=37,slow=8.0,SNR=4.8						
ESDC				PKKPbc	**PKKPbc**	**14 31 24.3**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=258,slow=4.4,SNR=4.4						
MVO	**Moncorvo**	**120.01**	**332**	ePKP	**PKPdf**	**14 21 13.7**	**+1.4**
POLO	**Lamas de Olo**	**120.19**	**333**	ePKP	**PKPdf**	**14 21 12.9**	**+0.2**
PVRL	**Vila Real**	**120.23**	**333**	ePKP	**PKPdf**	**14 21 13.9**	**+1.2**
PVIS	**Viseu**	**120.76**	**333**	ePKP	**PKPdf**	**14 21 14.8**	**+1.1**
MTE	**Manteigas**	**120.85**	**332**	ePKP	**PKPdf**	**14 21 15.1**	**+1.2**
PCBR	**Castelo Branco**	**121.27**	**332**	ePKP	**PKPdf**	**14 21 15.5**	**+0.9**
PMRV	**Marv??o**	**121.56**	**331**	ePKP	**PKPdf**	**14 21 16.5**	**+1.2**
PTOM	**Tomar**	**121.88**	**332**	ePKP	**PKPdf**	**14 21 17.3**	**+1.5**
PMTG	**Montargil**	**122.23**	**332**	ePKP	**PKPdf**	**14 21 16.9**	**+0.4**
EVO	**Evora**	**122.56**	**331**	ePKP	**PKPdf**	**14 21 18.5**	**+1.3**
PBEJ	**Beja**	**122.89**	**331**	ePKP	**PKPdf**	**14 21 19.3**	**+1.5**
PNCL	**Nicolau / Gran**	**123.14**	**331**	ePKP	**PKPdf**	**14 21 19.7**	**+1.4**
PCVE	**Castro Verde**	**123.29**	**330**	ePKP	**PKPdf**	**14 21 20.2**	**+1.6**
TORD	**Torodi Ar. Bea**	**132.67**	**300**	PKPpre	PKPpre	14 21 25.6	
TORD				PKP	**PKiKP**	**14 21 37.4**	**-0.8**
TORD	**Torodi Ar. Bea**	**132.67**	**300**	PKhKP	PKPpre	14 21 25.6	
	comp=Z,1.3nm,1.0s,baz=354,slow=2.6,SNR=5.4						
TORD				PKP	**PKiKP**	**14 21 37.4**	**-0.8**
	comp=Z,4.7nm,1.1s,baz=10,slow=1.3,SNR=10						
OTAV	**Otavalo**	**139.50**	**76**	ePKPdf	**PKPdf**	**14 21 48.7**	**-1.7**
PLCA	**Paso Flores**	**139.71**	**142**	PKP	**PKPdf**	**14 21 50.5**	**+1.0**
PLCA	**Paso Flores**	**139.71**	**142**	PKP	**PKPdf**	**14 21 50.5**	**+1.0**
	comp=Z,16nm,1.2s,baz=229,slow=6.4,SNR=9.2						
DBIC	**Dimbokro**	**141.40**	**296**	PKPpre	PKPpre	14 21 47.8	
DBIC	**Dimbokro**	**141.40**	**296**	PKhKP	PKPpre	14 21 47.8	
	comp=Z,8.1nm,1.0s,baz=254,slow=3.7,SNR=5.0						
CMCH	**Combarbala**	**144.58**	**129**	eP	**PKPdf**	**14 21 58.0**	**-0.5**
CMCH	**Combarbala**	**144.58**	**129**	eP	**PKPdf**	**14 21 58.0**	**-0.5**
LZG	**Guadaloupe-1**	**144.92**	**40**	eP	**PKPdf**	**14 21 59.2**	**-0.1**
SCG	**Saint Claude**	**145.07**	**40**	eP	**PKPdf**	**14 21 60.0**	**+0.3**
HMG	**Houelmont**	**145.09**	**40**	eP	**PKPdf**	**14 21 59.8**	**+0.1**
PHG	**Guadaloupe-2**	**145.10**	**40**	eP	**PKPdf**	**14 21 59.9**	**+0.1**
TLL	**Tololo Astrono**	**145.18**	**128**	⇑iPKIKP	**PKPdf**	**14 22 00.1**	**+0.3**
TLL	**Tololo Astrono**	**145.18**	**128**	⇑iP	**PKPdf**	**14 22 00.1**	**+0.3**
TLL	**Tololo Astrono**	**145.18**	**128**	⇑iP	**PKPdf**	**14 22 00.1**	**+0.3**
TBG	**Guadaloupe-3**	**145.22**	**40**	eP	**PKPdf**	**14 22 00.4**	**+0.6**
DEG	**La Desirade**	**145.24**	**39**	eP	**PKPab**	**14 21 59.7**	**0.0**
LCO	**Las Campanas**	**145.75**	**126**	ePKPdf	**PKPab**	**14 22 01.8**	**+0.1**
LCO	**Las Campanas**	**145.75**	**126**	⇑iP	**PKPab**	**14 22 02.0**	**+0.4**
FDF	**Fort de France**	**146.38**	**41**	ePKP2	**PKPbc**	**14 22 03.0**	**-0.2**
FDF	**Fort de France**	**146.38**	**41**	ePKPab	**PKPbc**	**14 22 03.0**	**-0.2**
FDF	**Fort de France**	**146.38**	**41**	eP	**PKPab**	**14 22 04.4**	**+0.4**
TRQA	**Tornquist**	**146.41**	**147**	ePKPab	**PKPdf**	**14 22 01.1**	**-0.2**
MVM	**Montagne Vaucl**	**146.67**	**40**	eP	**PKPab**	**14 22 04.7**	**-0.3**
LPAZ	**La Paz**	**151.57**	**104**	PKP	**PKPdf**	**14 22 12.3**	**+1.3**
LPAZ				ePKPbc	**PKPbc**	**14 22 12.8**	**-4.4**
LPAZ				PKPbc	**PKiKP**	**14 22 18.6**	**+0.9**
LPAZ	**La Paz**	**151.57**	**104**	PKP	**PKPdf**	**14 22 12.3**	**+1.3**
	comp=Z,7.1nm,1.2s,baz=351,slow=1.6,SNR=11						
LPAZ				PKPbc	**PKiKP**	**14 22 18.6**	**+0.9**
	comp=Z,31nm,1.0s,baz=326,slow=4.2,SNR=47						
SAML	**Samuel**	**156.40**	**87**	ePKPdf	**PKPdf**	**14 22 17.0**	**-0.1**
BDFB	**Brasilia**	**170.44**	**119**	PKPab	**PKPab**	**14 23 48.1**	**+1.0**
BDFB	**Brasilia**	**170.44**	**119**	PKPab	**PKPab**	**14 23 48.1**	**+1.0**
	comp=Z,5.1nm,0.8s,baz=235,slow=7.4,SNR=4.8						

MEX 02 14:21:06.1±0.4, 18.37N×100.55W, h40km±6km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res ISC
ZIIG	**Zihuatanejo**	**1.16**	**229**	i P	Pn	14 21 24.3	-1.6
ZIIG				i S	Sn	14 21 38.0	-2.5
CAIG	**El Cayaco**	**1.34**	**169**	i P	Pn	14 21 27.0	-1.4
CAIG				eS	Sn	14 21 42.7	-2.3
SZVM	**Salazar**	**1.45**	**49**	i P	Pn	14 21 28.4	-2.1
YAIG	**Yautepec**	**1.48**	**71**	i P	Pn	14 21 28.5	-2.0
YAIG				i S	Sn	14 21 46.8	-2.1
ACP2	**Acapulco**	**1.62**	**157**	i P	Pn	14 21 30.3	-1.8
ACP2				i S	Sn	14 21 49.7	-2.1
ACX	**Acapulco**	**1.63**	**156**	i P	Pn	14 21 30.6	-1.8
ACX				eS	Sn	14 21 48.8	-3.4
IIO	**Organos**	**2.11**	**55**	i P	Pn	14 21 37.0	-2.4
IIO				eS	Sn	14 22 02.3	-2.4

*LDG **02** 14:41:38.5±0.1, 42.09N×7.98W, h2km, Ml3.3/6, Error ellipse: s-maj=2.8km s-min=2.3km az=70.0*

*CSEM **02** 14:41:38.3±0.1, 42.09N×8.02W, h19km, ML3.5/24, Error ellipse: s-maj=2.4km s-min=1.7km az=104.0*

*MDD **02** 14:41:39.6±0.2, 42.09N×8.02W, h20km±1km, mbLg2.9/41, Error ellipse: s-maj=2.8km s-min=2.2km az=93.0, PRXIMO*

*INMG **02** 14:41:39.6±1.3, 42.08N×8.04W, h23km±2km, MD2.8, ML3.0, Error ellipse: s-maj=2.8km s-min=1.4km az=94.0*

ISC 02 14:41:39.0±0.9, **42.09N**±0.02×**8.02W**±0.02, **h24**km±7km, **n134**, σ1.**88**/184, **3C-4D, Spain**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res ISC
ELOB	**Lobios**	**0.23**	**189**	⇑Pg	**Pb**	**14 41 45.0**	**-0.1**
	67nm,0.0s,SNR=18						
ELOB				Lg	Lg	14 41 48.8	
	2µm,0.2s,SNR=5.0						
ELOB	**Lobios**	**0.23**	**189**	Pg	**Pb**	**14 41 45.0**	**-0.1**
	67nm,0.0s,SNR=18						
ELOB				Lg	Lg	14 41 48.8	
	2µm,0.2s,SNR=5.0						
PGAV	**Gavieira, Arco**	**0.23**	**236**	i Pg	**Pb**	**14 41 45.3**	**+0.3**
PGAV				eSg	**Sb**	**14 41 49.3**	**+0.2**
PGAV				A	A	14 41 49.8	
	619nm,0.2s						
PCAB	**Cabril**	**0.38**	**181**	ePg	**Pb**	**14 41 47.4**	**+0.1**
PCAB				eSg	**Sb**	**14 41 52.8**	**-0.1**
PCAB				A	A	14 41 52.9	
	1µm,0.1s						
PCAB	**Cabril**	**0.38**	**181**	⇓Pg	**Pb**	**14 41 47.4**	**+0.1**
PCAB				Lg	Lg	14 41 52.8	
	642nm,0.1s						
PCAB	**Cabril**	**0.38**	**181**	Pg	**Pb**	**14 41 47.4**	**+0.1**
PCAB				eSg	**Sb**	**14 41 52.8**	**-0.1**
	1µm,0.1s						
EZAM	**Zamans**	**0.51**	**276**	⇓Pg	**Pb**	**14 41 49.7**	**+0.4**
	22nm,0.1s,SNR=18						
EZAM				Lg	Lg	14 41 56.5	
	152nm,0.2s,SNR=7.9						
EZAM	**Zamans**	**0.51**	**276**	Pg	**Pb**	**14 41 49.7**	**+0.4**
	22nm,0.1s,SNR=18						
EZAM				Lg	Lg	14 41 56.5	
	152nm,0.2s,SNR=7.9						
ERUA	**La Rua**	**0.71**	**65**	⇑Pg	**Pn**	**14 41 52.9**	**-0.7**
	67nm,0.1s,SNR=18						
ERUA				Lg	Lg	14 42 01.9	
	146nm,0.1s,SNR=7.9						
ERUA	**La Rua**	**0.71**	**65**	Pg	**Pn**	**14 41 52.9**	**-0.7**
	67nm,0.1s,SNR=18						
ERUA				Lg	Lg	14 42 01.9	
	146nm,0.1s,SNR=7.9						
POLO	**Lamas de Olo**	**0.74**	**167**	eP	**Pb**	**14 41 53.2**	**-0.1**
POLO				eS	**Sb**	**14 42 03.0**	**0.0**
POLO				A	A	14 42 03.9	
	299nm,0.3s						
POLO	**Lamas de Olo**	**0.74**	**167**	eP	**Pb**	**14 41 53.2**	**-0.1**
POLO				eS	**Sb**	**14 42 03.0**	**0.0**
	299nm,0.3s						
PVRL	**Vila Real**	**0.85**	**165**	eP	**Pb**	**14 41 54.8**	**-0.3**
PVRL				eS	**Sb**	**14 42 06.3**	**+0.2**
PVRL				A	A	14 42 07.1	
	800nm,0.1s						
PVRL	**Vila Real**	**0.85**	**165**	Pg	**Pb**	**14 41 54.8**	**-0.3**
PVRL				Lg	Lg	14 42 06.3	
	400nm,0.1s						
PVRL	**Vila Real**	**0.85**	**165**	eP	**Pb**	**14 41 54.8**	**-0.3**
PVRL				eS	**Sb**	**14 42 06.3**	**+0.2**
	800nm,0.1s						
STS	**Santiago**	**0.89**	**334**	Pg	**Pn**	**14 41 55.5**	**-0.5**
	60nm,0.1s,SNR=40						
STS				Lg	Lg	14 42 07.2	
	71nm,0.2s,SNR=5.0						
STS	**Santiago**	**0.89**	**334**	Pg	**Pn**	**14 41 55.5**	**-0.5**
	60nm,0.1s,SNR=40						
STS				Lg	Lg	14 42 07.2	
	71nm,0.2s,SNR=5.0						
ECAL	**Calabor**	**0.96**	**99**	Pg	**Pb**	**14 41 56.6**	**-0.5**
	23nm,0.2s,SNR=99						
ECAL				Lg	Lg	14 42 09.1	
	299nm,0.2s,SNR=66						
ECAL	**Calabor**	**0.96**	**99**	Pg	**Pb**	**14 41 56.6**	**-0.5**
	23nm,0.2s,SNR=99						
ECAL				Lg	Lg	14 42 09.1	
	299nm,0.2s,SNR=66						
PBRG	**Braganca**	**0.99**	**106**	ePn	**Pb**	**14 41 57.0**	**-0.6**
PBRG	**Braganca**	**0.99**	**106**	ePg	**Pb**	**14 41 57.7**	**+0.1**
PBRG				eSn	**Sn**	**14 42 10.5**	**-0.3**
PBRG				A	A	14 42 11.7	
	437nm,0.4s						
PBRG	**Braganca**	**0.99**	**106**	Pg	**Pb**	**14 41 57.0**	**-0.6**
PBRG				Lg	Lg	14 42 10.5	
	219nm,0.4s						
PBRG	**Braganca**	**0.99**	**106**	ePn	**Pb**	**14 41 57.0**	**-0.6**
PBRG	**Braganca**	**0.99**	**106**	ePg	**Pb**	**14 41 57.7**	**+0.1**
PBRG				eSn	**Sn**	**14 42 10.5**	**-0.3**
	437nm,0.4s						
PTO	**Porto**	**1.05**	**205**	ePn	**Pn**	**14 41 57.8**	**-0.4**
PTO				eSg	**Sb**	**14 42 12.2**	**+0.4**
PTO				A	A	14 42 14.3	
	410nm,0.1s						
PTO	**Porto**	**1.05**	**205**	Pg	**Pn**	**14 41 57.8**	**-0.4**
PTO				Lg	Lg	14 42 12.2	
	205nm,0.1s						
PTO	**Porto**	**1.05**	**205**	Pg	**Pn**	**14 41 57.8**	**-0.4**
PTO				eSg	**Sb**	**14 42 12.2**	**+0.4**
	410nm,0.1s						
EMAZ	**Mazaricos**	**1.11**	**321**	⇓Pn	**Pn**	**14 41 58.5**	**-0.6**
	3.6nm,0.1s,SNR=18						
EMAZ				Pg	**Pb**	**14 42 00.0**	**+0.5**
	36nm,0.1s,SNR=88						
EMAZ				Sn	**Sn**	**14 42 12.8**	**-0.9**
	27nm,0.1s,SNR=7.9						
EMAZ				Lg	Lg	14 42 14.9	
	13nm,0.1s,SNR=14						
EMAZ	**Mazaricos**	**1.11**	**321**	Pn	**Pn**	**14 41 58.5**	**-0.6**
	3.6nm,0.1s,SNR=18						
MVO	**Moncorvo**	**1.19**	**141**	ePn	**Pn**	**14 41 59.5**	**-0.7**
MVO				eSg	**Sb**	**14 42 16.8**	**+1.0**
MVO				A	A	14 42 23.1	
	124nm,0.5s						
MVO	**Moncorvo**	**1.19**	**141**	⇓Pn	**Pn**	**14 41 59.5**	**-0.7**
	7.0nm,0.1s,SNR=18						
MVO				Pg	**Pb**	**14 42 01.3**	**+0.4**
	16nm,0.1s,SNR=7.9						
MVO				Lg	Lg	14 42 16.9	
	86nm,0.1s,SNR=5.0						
MVO	**Moncorvo**	**1.19**	**141**	Pn	**Pn**	**14 41 59.5**	**-0.7**
	7.0nm,0.1s,SNR=18						
MVO	**Moncorvo**	**1.19**	**141**	Pg	**Pb**	**14 42 01.3**	**+0.4**
	16nm,0.1s,SNR=7.9						
MVO				eSg	**Sb**	**14 42 16.8**	**+1.0**
	124nm,0.5s						
MVO				Lg	Lg	14 42 16.9	
	86nm,0.1s,SNR=5.0						
PVIS	**Viseu**	**1.38**	**176**	ePn	**Pn**	**14 42 02.2**	**-0.6**
PVIS				eSg	**Sb**	**14 42 22.0**	**+0.6**
PVIS				A	A	14 42 22.5	
	226nm,0.5s						
PVIS	**Viseu**	**1.38**	**176**	Pn	**Pn**	**14 42 02.2**	**-0.6**
PVIS				Lg	Lg	14 42 22.0	
	113nm,0.5s						
PVIS	**Viseu**	**1.38**	**176**	ePn	**Pn**	**14 42 02.2**	**-0.6**
PVIS				eSg	**Sb**	**14 42 22.0**	**+0.6**
	226nm,0.5s						
EPON	**Pontenova**	**1.39**	**27**	Pn	**Pn**	**14 42 02.0**	**-0.9**
	2.8nm,0.1s,SNR=7.9						
EPON				Pg	**Pb**	**14 42 04.9**	**+0.6**
	5.6nm,0.1s,SNR=22						
EPON				Sn	**Sn**	**14 42 18.3**	**-2.2**
	25nm,0.2s,SNR=7.9						
EPON				Lg	Lg	14 42 22.3	
	102nm,0.2s,SNR=22						
EPON	**Pontenova**	**1.39**	**27**	Pn	**Pn**	**14 42 02.0**	**-0.9**
	2.8nm,0.1s,SNR=7.9						
MTE	**Manteigas**	**1.73**	**168**	ePg	**Pb**	**14 42 10.6**	**+0.5**
MTE				eSg	**Sb**	**14 42 32.4**	**+1.0**
MTE				A	A	14 42 39.0	
	150nm,0.5s						
MTE	**Manteigas**	**1.73**	**168**	Pg	**Pb**	**14 42 10.6**	**+0.5**
MTE				Lg	Lg	14 42 32.4	
	75nm,0.5s						
MTE	**Manteigas**	**1.73**	**168**	ePg	**Pb**	**14 42 10.6**	**+0.5**
MTE				eSg	**Sb**	**14 42 32.4**	**+1.0**
	150nm,0.5s						
PCBR	**Castelo Branco**	**2.29**	**170**	ePn	**Pn**	**14 42 14.9**	**-0.4**
PCBR				eSg	**Sb**	**14 42 49.9**	**+2.5**
PCBR				A	A	14 42 55.1	
	49nm,0.3s						
PCBR	**Castelo Branco**	**2.29**	**170**	Pn	**Pn**	**14 42 14.9**	**-0.4**
PCBR				Lg	Lg	14 42 49.9	
	24nm,0.3s						
PCBR	**Castelo Branco**	**2.29**	**170**	ePn	**Pn**	**14 42 14.9**	**-0.4**
PCBR				eSg	**Sb**	**14 42 49.9**	**+2.5**
	49nm,0.3s						
EARI	**Arriondas**	**2.39**	**59**	Pn	**Pn**	**14 42 17.0**	**+0.2**
	3.5nm,0.2s,SNR=44						
EARI				Pg	**Pb**	**14 42 22.8**	**+1.4**
	3.1nm,0.2s,SNR=7.9						
EARI				Sn	**Sn**	**14 42 44.9**	**-0.5**
	13nm,0.2s,SNR=7.9						
EARI				Lg	Lg	14 42 54.9	
	12nm,0.5s,SNR=7.9						
EARI	**Arriondas**	**2.39**	**59**	Pn	**Pn**	**14 42 17.0**	**+0.2**
	3.5nm,0.2s,SNR=44						
PTOM	**Tomar**	**2.49**	**187**	eSg	**Sb**	**14 42 55.4**	**+2.1**
PTOM				A	A	14 43 01.6	
	74nm,0.5s						
PTOM	**Tomar**	**2.49**	**187**	Lg	Lg	14 42 55.4	
	37nm,0.5s						
PTOM	**Tomar**	**2.49**	**187**	eSg	**Sb**	**14 42 55.4**	**+2.1**
	74nm,0.5s						
EPLA	**Plasencia**	**2.50**	**144**	Pn	**Pn**	**14 42 18.2**	**0.0**
	3.4nm,0.0s,SNR=17						
EPLA				Pg	**Pb**	**14 42 25.6**	**+2.3**
	6.5nm,0.2s,SNR=16						
EPLA				Sn	**Sn**	**14 42 48.0**	**0.0**
	6.3nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	14 42 57.8	
	14nm,0.4s,SNR=5.0						
EPLA	**Plasencia**	**2.50**	**144**	Pn	**Pn**	**14 42 18.2**	**0.0**
	3.4nm,0.0s,SNR=17						
EPLA	**Plasencia**	**2.50**	**144**	Pg	**Pb**	**14 42 25.6**	**+2.3**
	6.5nm,0.2s,SNR=16						
EPLA				Sn	**Sn**	**14 42 48.0**	**0.0**
	6.3nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	14 42 57.8	
	14nm,0.4s,SNR=5.0						
PMRV	**Marv??o**	**2.71**	**170**	ePn	**Pn**	**14 42 20.5**	**-0.5**
PMRV				eSg	**Sb**	**14 43 03.7**	**+4.3**
PMRV				A	A	14 43 06.3	
	68nm,0.3s						
PMRV	**Marv??o**	**2.71**	**170**	Pn	**Pn**	**14 42 20.5**	**-0.5**
PMRV				Lg	Lg	14 43 03.7	
	68nm,0.3s						
PMRV	**Marv??o**	**2.71**	**170**	ePn	**Pn**	**14 42 20.5**	**-0.5**
PMRV				Lg	Lg	14 43 03.7	
	68nm,0.3s						
PMRV				eSg	**Sb**	**14 43 03.7**	**+4.3**
	68nm,0.3s						
PMTG	**Montargil**	**3.03**	**183**	eSn	**Sn**	**14 42 59.0**	**-1.9**
PMTG				eSg	**Sb**	**14 43 12.2**	**+3.5**
PMTG				A	A	14 43 18.2	
	16nm,0.3s						
PMTG	**Montargil**	**3.03**	**183**	eSn	**Sn**	**14 42 59.0**	**-1.9**
PMTG				eSg	**Sb**	**14 43 12.2**	**+3.5**
	16nm,0.3s						
PESTR	**Estremoz**	**3.24**	**174**	ePn	**Pn**	**14 42 27.9**	**-0.5**
PESTR				eSn	**Sn**	**14 43 04.8**	**-1.4**
PESTR				eSg	**Sb**	**14 43 18.8**	**+4.0**
PESTR				A	A	14 43 23.7	
	35nm,0.5s						
PESTR	**Estremoz**	**3.24**	**174**	Pn	**Pn**	**14 42 27.9**	**-0.5**
PESTR				Sn	**Sn**	**14 43 04.8**	**-1.4**
PESTR				Lg	Lg	14 43 18.8	
	35nm,0.5s						
PESTR	**Estremoz**	**3.24**	**174**	ePn	**Pn**	**14 42 27.9**	**-0.5**
PESTR				eSn	**Sn**	**14 43 04.8**	**-1.4**
PESTR				Lg	Lg	14 43 18.8	
	35nm,0.5s						
PESTR				eSg	**Sb**	**14 43 18.8**	**+4.0**
	35nm,0.5s						
GUD	**Guadarrama**	**3.25**	**115**	Pn	**Pn**	**14 42 28.8**	**+0.2**
	3.8nm,0.3s,SNR=11						
GUD				Sn	**Sn**	**14 43 05.8**	**-0.8**
	8.6nm,0.3s,SNR=7.9						
GUD				Lg	Lg	14 43 19.2	
	39nm,0.3s,SNR=16						
GUD	**Guadarrama**	**3.25**	**115**	Pn	**Pn**	**14 42 28.8**	**+0.2**
	3.8nm,0.3s,SNR=11						
GUD				Sn	**Sn**	**14 43 05.8**	**-0.8**
	8.6nm,0.3s,SNR=7.9						
GUD				Lg	Lg	14 43 19.2	
	39nm,0.3s,SNR=16						
PMAFR	**Mafra**	**3.28**	**198**	eSg	**Sb**	**14 43 21.8**	**+5.8**
PMAFR				A	A	14 43 34.5	
	26nm,0.5s						
PMAFR	**Mafra**	**3.28**	**198**	Pn	**Pn**	**14 42 28.9**	**0.0**
	1.4nm,0.1s,SNR=7.9						
PMAFR				Sn	Sn	14 43 03.9	-3.3
	9.0nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	14 43 21.7	
	153nm,0.6s,SNR=7.9						
PMAFR	**Mafra**	**3.28**	**198**	Pn	**Pn**	**14 42 28.9**	**0.0**
	1.4nm,0.1s,SNR=7.9						
PMAFR				Sn	Sn	14 43 03.9	-3.3
	9.0nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	14 43 21.7	
	153nm,0.6s,SNR=7.9						
PMAFR				eSg	**Sb**	**14 43 21.8**	**+5.8**
	26nm,0.5s						
EBAD	**Badajoz**	**3.42**	**167**	Pn	**Pn**	**14 42 30.8**	**-0.1**
	0.7nm,0.1s,SNR=12						
EBAD				Sn	**Sn**	**14 43 08.1**	**-2.5**
	2.9nm,0.1s,SNR=7.9						
EBAD				Lg	Lg	14 43 25.2	
	7.1nm,0.1s,SNR=5.0						
EBAD	**Badajoz**	**3.42**	**167**	Pn	**Pn**	**14 42 30.8**	**-0.1**
	0.7nm,0.1s,SNR=12						
EBAD				Sn	**Sn**	**14 43 08.1**	**-2.5**
	2.9nm,0.1s,SNR=7.9						
EBAD				Lg	Lg	14 43 25.2	
	7.1nm,0.1s,SNR=5.0						
EVO	**Evora**	**3.56**	**180**	ePn	**Pn**	**14 42 32.1**	**-0.6**
EVO				eSn	Sn	14 43 10.5	-3.5
EVO				eSg	Sb	14 43 30.3	+6.3
	49nm,0.4s						
EVO	**Evora**	**3.56**	**180**	eSn	**Sn**	**14 43 11.8**	**-2.2**
EVO				eSg	**Sb**	**14 43 28.1**	**+4.1**
EVO				A	A	14 43 35.3	
	21nm,0.8s						
EVO	**Evora**	**3.56**	**180**	Sn	**Sn**	**14 43 11.8**	**-2.2**
EVO				Lg	Lg	14 43 28.1	
	21nm,0.8s						
EVO	**Evora**	**3.56**	**180**	eSn	**Sn**	**14 43 11.8**	**-2.2**
EVO				eSg	**Sb**	**14 43 28.1**	**+4.1**
	21nm,0.8s						
EVO				Lg	Lg	14 43 28.1	
	21nm,0.8s						
EVOP	**Sao Brissos**	**3.56**	**181**	ePn	**Pn**	**14 42 32.1**	**-0.7**
EVOP				eSn	Sn	14 43 10.5	-3.6
EVOP				eSg	Sb	14 43 30.3	+6.2
	24nm,0.4s						
ELAN	**Lanestosa**	**3.56**	**70**	Pn	**Pn**	**14 42 33.2**	**+0.5**
	1.9nm,0.2s,SNR=23						
ELAN				Sn	**Sn**	**14 43 13.1**	**-1.0**
	6.2nm,0.3s,SNR=7.9						
ELAN				Lg	Lg	14 43 30.2	
	13nm,0.7s,SNR=5.0						
ELAN	**Lanestosa**	**3.56**	**70**	Pn	**Pn**	**14 42 33.2**	**+0.5**
	1.9nm,0.2s,SNR=23						
ELAN				Sn	**Sn**	**14 43 13.1**	**-1.0**
	6.2nm,0.3s,SNR=7.9						
ELAN				Lg	Lg	14 43 30.2	
	13nm,0.7s,SNR=5.0						
MOE	**Montemor**	**3.58**	**184**	eSn	Sn	14 43 11.1	-3.4
MOE				eSg	**Sb**	**14 43 30.0**	**+5.5**
MOE	**Montemor**	**3.58**	**184**	Sn	Sn	14 43 11.1	-3.4
MOE				Lg	Lg	14 43 30.0	
MOE	**Montemor**	**3.58**	**184**	Sn	Sn	14 43 11.1	-3.4
MOE				Lg	Lg	14 43 30.0	
MOE				eSg	**Sb**	**14 43 30.0**	**+5.5**
ESDC	**Sonseca Array**	**3.91**	**127**	⇑Pn	**Pn**	**14 42 37.5**	**-0.1**
	1.7nm,0.1s,baz=310,slow=13,SNR=18						
ESDC				Pg	**Pb**	**14 42 45.8**	**-1.4**
	0.3nm,0.2s,baz=308,slow=13,SNR=9.6						
ESDC				Sn	**Sn**	**14 43 20.7**	**-2.1**
	0.2nm,0.1s,baz=310,slow=24,SNR=4.1						
ESDC				Lg	Lg	14 43 40.0	
	12nm,0.3s,baz=306,slow=30,SNR=8.2						
ESDC	**Sonseca Array**	**3.91**	**127**	Pn	**Pn**	**14 42 37.5**	**-0.1**
	1.7nm,0.1s,baz=310,slow=13,SNR=18						
ESDC	**Sonseca Array**	**3.91**	**127**	Pg	**Pb**	**14 42 45.8**	**-1.4**
	0.3nm,0.2s,baz=308,SNR=9.6						
ESDC				Sn	**Sn**	**14 43 20.7**	**-2.1**
	0.2nm,0.1s,baz=310,slow=24,SNR=4.1						
ESDC				Lg	Lg	14 43 40.0	
	12nm,0.3s,slow=30,SNR=8.2						
PNCL	**Nicolau / Gran**	**4.00**	**186**	eSg	Sb	14 43 44.1	+7.5
PNCL				A	A	14 43 49.7	
	9.1nm,0.4s						
PNCL	**Nicolau / Gran**	**4.00**	**186**	eSg	Sb	14 43 44.1	+7.5
	9.1nm,0.4s						
PBEJ	**Beja**	**4.06**	**178**	eSn	**Sn**	**14 43 23.6**	**-2.9**
PBEJ				eSg	**Sb**	**14 43 43.5**	**+5.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PBEJ				A	A	14 43 51.1	
	13nm,0.5s						
PBEJ	Beja	4.06	178	Sn	Sn	14 43 23.6	-2.9
PBEJ				Lg	Lg	14 43 43.5	
	6.5nm,0.5s						
PBEJ	Beja	4.06	178	Sn	Sn	14 43 23.6	-2.9
PBEJ				eSg	Sb	14 43 43.5	+5.0
	13nm,0.5s						
EMIN	Mina Concepcio	4.44	166	Pn	Pn	14 42 44.4	-0.5
	0.2nm,0.1s,SNR=7.3						
EMIN				Sn	Sn	14 43 32.2	-3.6
	1.4nm,0.3s,SNR=7.9						
EMIN				Lg	Lg	14 43 57.1	
	15nm,0.5s,SNR=5.0						
EMIN	Mina Concepcio	4.44	166	Pn	Pn	14 42 44.4	-0.5
	0.2nm,0.1s,SNR=7.3						
EMIN				Sn	Sn	14 43 32.2	-3.6
	1.4nm,0.3s,SNR=7.9						
EMIN				Lg	Lg	14 43 57.1	
	15nm,0.5s,SNR=5.0						
PCVE	Castro Verde	4.46	180	eSn	Sn	14 43 32.5	-3.7
PCVE				eSg	Sb	14 44 00.3	+10
PCVE				A	A	14 44 02.8	
	12nm,0.5s						
PCVE	Castro Verde	4.46	180	Sn	Sn	14 43 32.5	-3.7
PCVE				Lg	Lg	14 44 00.3	
	12nm,0.5s						
PCVE	Castro Verde	4.46	180	Sn	Sn	14 43 32.5	-3.7
PCVE				Lg	Lg	14 44 00.3	
	12nm,0.5s						
EGRO	El Granado	4.57	175	Sn	Sn	14 43 36.2	-2.8
	2.4nm,0.2s,SNR=4.0						
EGRO				Lg	Lg	14 44 02.8	
	19nm,0.4s,SNR=7.9						
EGRO	El Granado	4.57	175	Sn	Sn	14 43 36.2	-2.8
	2.4nm,0.2s,SNR=4.0						
EGRO				Lg	Lg	14 44 02.8	
	19nm,0.4s,SNR=7.9						
PTEO	Sao Teotonio	4.58	187	eSg	Sb	14 44 03.3	+10
PTEO				A	A	14 44 06.9	
	16nm,0.6s						
PTEO	Sao Teotonio	4.58	187	Lg	Lg	14 44 03.3	
	7.9nm,0.6s						
PTEO	Sao Teotonio	4.58	187	Lg	Lg	14 44 03.3	
	7.9nm,0.6s						
ETOR	Torete	4.66	104	Pn	Pn	14 42 48.2	+0.3
	0.5nm,0.2s,SNR=6.9						
ETOR				Lg	Lg	14 44 03.5	
	19nm,0.3s,SNR=7.9						
ETOR	Torete	4.66	104	Pn	Pn	14 42 48.2	+0.3
	0.5nm,0.2s,SNR=6.9						
ETOR				Lg	Lg	14 44 03.5	
	19nm,0.3s,SNR=7.9						
PVAQ	Vaqueiros	4.69	177	ePn	Pn	14 42 48.0	-0.3
PVAQ				eSn	Sn	14 43 38.8	-3.1
PVAQ				A	A	14 44 10.2	
	16nm,0.6s						
PVAQ	Vaqueiros	4.69	177	Pn	Pn	14 42 48.0	-0.3
PVAQ				Sn	Sn	14 43 38.8	-3.1
	16nm,0.6s						
PVAQ	Vaqueiros	4.69	177	ePn	Pn	14 42 48.0	-0.3
PVAQ				Sn	Sn	14 43 38.8	-3.1
	16nm,0.6s						
EADA	Adamuz	4.72	145	Pn	Pn	14 42 48.6	-0.2
	0.6nm,0.3s,SNR=7.9						
EADA				Sn	Sn	14 43 39.6	-3.2
	0.5nm,0.2s,SNR=7.9						
EADA				Lg	Lg	14 44 05.1	
	4.8nm,0.2s,SNR=7.9						
EADA	Adamuz	4.72	145	Pn	Pn	14 42 48.6	-0.2
	0.6nm,0.3s,SNR=7.9						
EADA				Sn	Sn	14 43 39.6	-3.2
	0.5nm,0.2s,SNR=7.9						
EADA				Lg	Lg	14 44 05.1	
	4.8nm,0.2s,SNR=7.9						
MORF	Marmelete	4.81	186	ePn	Pn	14 42 50.4	+0.5
MORF				eSn	Sn	14 43 41.9	-3.0
MORF				A	A	14 44 15.0	
	5.4nm,0.5s						
MORF	Marmelete	4.81	186	Pn	Pn	14 42 50.4	+0.5
MORF				Sn	Sn	14 43 41.9	-3.0
	5.4nm,0.5s						
MORF	Marmelete	4.81	186	ePn	Pn	14 42 50.4	+0.5
MORF				Sn	Sn	14 43 41.9	-3.0
	5.4nm,0.5s						
PBDV	Barranco-do-Ve	4.84	179	eSg	Sb	14 44 12.3	+11
PBDV				A	A	14 44 18.6	
	22nm,0.6s						
PBDV	Barranco-do-Ve	4.84	179	Lg	Lg	14 44 12.3	
	22nm,0.6s						
PBDV	Barranco-do-Ve	4.84	179	Lg	Lg	14 44 12.3	
	22nm,0.6s						
PFVI	Vila Bisbo	4.99	187	Sn	Sn	14 43 46.8	-2.6
	2.7nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	4.99	187	Sn	Sn	14 43 46.8	-2.6
	2.7nm,0.1s,SNR=7.9						
IEPA	Eparoz	5.04	80	Pn	Pn	14 42 54.5	+1.3
	0.4nm,0.1s,SNR=7.9						
IEPA				Sn	Sn	14 43 51.2	+0.5
	3.1nm,0.2s,SNR=7.9						
IEPA				Lg	Lg	14 44 15.5	
	6.1nm,0.4s,SNR=7.9						
IEPA	Eparoz	5.04	80	Pn	Pn	14 42 54.5	+1.3
	0.4nm,0.1s,SNR=7.9						
IEPA				Sn	Sn	14 43 51.2	+0.5
	3.1nm,0.2s,SNR=7.9						
IEPA				Lg	Lg	14 44 15.5	
	6.1nm,0.4s,SNR=7.9						
IELO	Elcoad	5.07	79	Pn	Pn	14 42 54.0	+0.4
	0.7nm,0.1s,SNR=7.9						
IELO				Sn	Sn	14 43 48.2	-3.2
	1.8nm,0.2s,SNR=7.9						
IELO				Lg	Lg	14 44 16.4	
	3.9nm,0.3s,SNR=7.9						
IELO	Elcoad	5.07	79	Pn	Pn	14 42 54.0	+0.4
	0.7nm,0.1s,SNR=7.9						
IELO				Sn	Sn	14 43 48.2	-3.2
	1.8nm,0.2s,SNR=7.9						
IELO				Lg	Lg	14 44 16.4	
	3.9nm,0.3s,SNR=7.9						
SJPF	Ste Jean	5.11	76	ePn	Pn	14 42 53.7	-0.4
SJPF				eSn	Sn	14 43 49.7	-2.7
SJPF				eSg	Sb	14 44 17.7	+9.0
	6.1nm,0.5s						
SJPF	Ste Jean	5.11	76	Pn	Pn	14 42 53.7	-0.4
SJPF				Sn	Sn	14 43 49.7	-2.7
SJPF				eSg	Sb	14 44 17.7	+9.0
	3.0nm,0.5s						
EVIA	Vianos	5.44	128	Lg	Lg	14 44 32.4	
	4.3nm,0.3s,SNR=7.2						
EVIA	Vianos	5.44	128	Lg	Lg	14 44 32.4	
	4.3nm,0.3s,SNR=7.2						
ETSF	Etsaut	5.57	79	ePn	Pn	14 43 00.4	0.0
ETSF				eSn	Sn	14 44 00.5	-3.2
	3.5nm,0.2s						
ETSF	Etsaut	5.57	79	Pn	Pn	14 43 00.4	0.0
ESAC	San Caprasio	5.64	91	Lg	Lg	14 44 33.1	
	16nm,0.2s,SNR=4.0						
ESAC	San Caprasio	5.64	91	Lg	Lg	14 44 33.1	
	16nm,0.2s,SNR=4.0						
EQES	Quesada	5.73	137	Lg	Lg	14 44 36.6	
	1.5nm,0.3s,SNR=4.0						
EQES	Quesada	5.73	137	Lg	Lg	14 44 36.6	
	1.5nm,0.3s,SNR=4.0						
EMOS	Mosqueruela	5.94	104	Pn	Pn	14 43 07.0	+1.3
	0.2nm,0.1s,SNR=4.0						
EMOS				Sn	Sn	14 44 09.7	-3.3
	0.6nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	5.94	104	Pn	Pn	14 43 07.0	+1.3
	0.2nm,0.1s,SNR=4.0						
ETOB	Tobarra	6.02	123	Pn	Pn	14 43 07.5	+0.9
	0.5nm,0.1s,SNR=4.0						
ETOB				Lg	Lg	14 44 46.5	
	9.1nm,0.4s,SNR=5.0						
ETOB	Tobarra	6.02	123	Pn	Pn	14 43 07.5	+0.9
	0.5nm,0.1s,SNR=4.0						
ETOB				Lg	Lg	14 44 46.5	
	9.1nm,0.4s,SNR=5.0						
EPF	Esparros	6.24	79	ePn	Pn	14 43 09.2	-0.4
EPF				eSn	Sn	14 44 16.9	-3.3
	3.0nm,0.3s						
EPF	Esparros	6.24	79	Pn	Pn	14 43 09.2	-0.4
QUIF	Quistinic	6.76	29	ePn	Pn	14 43 15.7	-1.0
QUIF				eSn	Sn	14 44 28.9	-3.9
	7.7nm,0.2s						
QUIF	Quistinic	6.76	29	Pn	Pn	14 43 15.7	-1.0
ROSF	Rostrenen	7.08	27	ePn	Pn	14 43 19.8	-1.3
ROSF				eSn	Sn	14 44 35.1	-5.7
	2.9nm,0.4s						
ROSF	Rostrenen	7.08	27	Pn	Pn	14 43 19.8	-1.3

ISK ***02*** *14:57:03.5, 37°.26N×28°.28E, h28km, MD2.5*
CSEM ***02*** *14:57:05.4±0.3, 37°.20N×28°.19E, h22km±3km, MD2.5, Error ellipse: s-maj=6.5km s-min=4.2km az=29.0*
ISCJB ***02*** *14:57:05.9±0.6, 37°.20N±0°.05×28°.18E±0°.05, h12km, Error ellipse: s-maj=8.2km s-min=4.1km az=38.3*
DDA ***02*** *14:57:06.3, 37°.25N×28°.22E, h7km, MD3.0*
ISC 02 14:57:05.8±1.0, **37°.22N**±0°.04×**28°.19E**±0°.03, **h12**km, **n16**, σ**0.s83**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.12	140	ePG	Pg	14 57 08.9	0.0
YER				eSG	Sg	14 57 13.1	+1.9
YER	Yerkesik	0.12	140	ePg	Pg	14 57 09.0	0.0
YER				eSg	Sg	14 57 13.1	+1.9
MLSB	Milas	0.34	282	ePG	Pg	14 57 12.9	+0.2
MLSB				eSG	Sb	14 57 19.6	+0.4
MLSB	Milas	0.34	282	ePg	Pg	14 57 12.9	+0.2
MLSB				eSg	Sb	14 57 19.6	+0.4
TURN	Turunc	0.48	136	i P	Pg	14 57 15.6	+0.3
TURN				i S	Sb	14 57 22.8	-0.5
TURN	Turunc	0.48	136	i P	Pg	14 57 15.6	+0.3
TURN				i S	Sb	14 57 22.8	-0.5
AYDN	Tasoluk	0.50	331	i P	Pb	14 57 16.1	-0.5
AYDN				i S	Sb	14 57 23.5	-0.4
AYDN	Tasoluk	0.50	331	i P	Pb	14 57 16.1	-0.5
AYDN				i S	Sb	14 57 23.5	-0.4
DALY	Dalyan (Mu˜la	0.55	137	ePG	Pg	14 57 15.3	-1.3
DALY	Dalyan (Mu˜la	0.55	137	ePg	Pg	14 57 15.3	-1.3
DAT	Datca	0.69	225	ePG	Pg	14 57 18.7	-0.6
DAT	Datca	0.69	225	ePg	Pg	14 57 18.7	-0.6
BODT	Bodrum	0.72	257	ePG	Pg	14 57 19.1	-0.7
BODT	Bodrum	0.72	257	ePg	Pg	14 57 19.1	-0.7
DNZL	Cakiroluk	0.83	55	i P	Pg	14 57 21.5	-0.3
DNZL	Cakiroluk	0.83	55	i P	Pg	14 57 21.5	-0.3

IDC 02 14:58:18.3±2.3, **1°.97N**×**126°.37E**, **h0**km, **mb3.1**/3, **mb1 3.3**/3, **mb1mx3.1**/20, **mbtmp3.1**/3, **Error ellipse: s-maj=193.6km s-min=27.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.14	161	P	P	15 03 25.0	-1.4
	0.4nm,0.5s,baz=339,slow=11,SNR=7.5						
ASAR	Alice Springs	26.52	164	P	P	15 03 59.0	+1.2
	0.2nm,0.9s,baz=346,slow=12,SNR=4.1						
MKAR	Makanchi Array	58.79	326	P	P	15 08 18.2	-0.3
	0.1nm,0.4s,baz=140,slow=7.4,SNR=3.5						

ISCJB ***02*** *14:58:24.8±1.2, 24°.86S±0°.05×176°.99W±0°.04, h80km±10km, mb5.0/101, Error ellipse: s-maj=8.1km s-min=5.6km az=153.3*
NEIC ***02*** *14:58:27.7±0.2, 24°.78S×177°.01W, mb5.0/64, Error ellipse: s-maj=8.3km s-min=6.4km az=136.0*
MOS ***02*** *14:58:28.0±1.3, 24°.76S×177°.10W, h102km, mb5.5/19, Error ellipse: s-maj=9.7km s-min=8.6km az=98.4*
GCMT ***02*** *14:58:28.3±0.2, 24°.94S×176°.76W, h97km±1km, MW5.2, Moment Tensor Solution. s74,c120; s99,c167; Moment tensor: Scale 10^16Nm; Mrr3.21±.19; Mθθ0.00±.22; Mφφ-3.21±.19; Mrθ-7.94±.12; Mθφ-1.86±.20; Mφr-2.68±.12; Best double couple: M0 9.10000×10^16 NP1:φs3.00000°, δ18.00000°, λ29.00000°. NP2:φs245.00000°, δ81.00000°, λ106.00000°. Principal axes: T 9.7700, Plg51.0000°, Azm173.0000°; N -1.3700, Plg16.0000°, Azm62.0000°; P -8.4100, Plg34.0000°, Azm321.0000°; Data Used: II IU IC G CN.*
AUST ***02*** *14:58:28.8±0.0, 24°.85S×176°.71W, h107km Error ellipse: s-maj=1.1km s-min=0.8km az=272.0*
IDC ***02*** *14:58:30.9±1.5, 24°.85S×177°.15W, h113km±12km, mb4.7/25, mb1 4.9/26, mb1mx4.9/27, mbtmp4.8/26, MS4.1/25, Ms1 4.1/25, ms1mx4.0/36, Error ellipse: s-maj=11.5km s-min=10.1km az=152.0*
SZGRF ***02*** *14:58:31.3, 23°.93S×178°.56W, h33km, South of Fiji Islands*
DJA ***02*** *14:58:37.5±3.7, 25°S±7°×17°7W±1°3, h189km±36km, M5.2/17, mB5.7/4, mb5.2/17, Mw(mB)5.2/4*
ISC 02 14:58:28.6±0.2, **24°.81S**±0°.04×**176°.98W**±0°.05, **h100**km±1km, **h99**km**:pP-P**, **n706**, σ**1.s59**/781, **mb5.0**/99, **130C-89D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.50	191	ePn	Pn	14 59 33.8	-0.7
RAO				eSn	Sn	15 00 26.5	+0.8
RAO	Raoul Island	4.50	191	P	Pn	14 59 34.4	-0.1
	688nm,0.3s,baz=87,slow=10.0,SNR=15						
RAO				S	Sn	15 00 26.5	+0.8
	784nm,0.3s,baz=70,slow=21,SNR=6.0						
MSVF	Nonsavu	8.43	326	eP	Pn	15 00 29.4	+1.3
MSVF				pmax	pmax		
	comp=Z,461nm,1.1s						
MSVF	Nonsavu	8.43	326	ePn	Pn	15 00 29.4	+1.3
	comp=Z,461nm,1.1s						
MSVF	Nonsavu	8.43	326	Pn	Pn	15 00 31.0	+2.9
	comp=Z,7μm,1.0s						
NIUE	Niue	8.68	50	P	Pn	15 00 25.0	-6.3
	baz=8.5,SNR=35						
NIUE				S	Sn	15 01 51.8	-16
	baz=8.5,SNR=7.9						
AFI	Afiamalu	11.90	25	ePn	Pn	15 01 04.5	-11
	comp=Z,100nm,0.8s						
AFI				eSn	Sn	15 03 04.9	-21
AFI	Afiamalu	11.90	25	P	Pn	15 01 05.5	-10
	comp=Z,15nm,0.3s,baz=356,slow=1.0,SNR=26						
AFI				S	Sn	15 03 09.5	-17
	comp=Z,14nm,0.3s,baz=42,slow=24,SNR=5.3						
AFI				LR	LR	15 05 29.9	
	comp=Z,347nm,18.8s,baz=92,slow=35						
OUZ	Omahuta	13.19	216	ePn	Pn	15 01 33.9	+2.0
	comp=Z,188nm,1.3s						
MWZ	Matawai	14.27	198	PN	Pn	15 01 44.9	-1.0
URZ	Urewera	14.32	199	ePn	Pn	15 01 45.1	-1.4
	comp=Z,33nm,0.5s						
URZ				eSn	Sn	15 04 09.5	-15
URZ	Urewera	14.32	199	PN	Pn	15 01 45.3	-1.2
URZ				SN	Sn	15 04 12.5	-12
URZ	Urewera	14.32	199	P	Pn	15 01 44.9	-1.6
	comp=Z,13nm,0.3s,baz=328,slow=2.6,SNR=42						
URZ				S	Sn	15 04 14.1	-10
	comp=Z,9.9nm,0.3s,baz=110,slow=23,SNR=9.6						
BKZ	Black Stump Fm	15.34	200	PN	Pn	15 01 56.4	-3.2
BKZ				SN	Sn	15 04 34.8	-14
DZM	Mont Dzumac	15.46	277	ePn	P	15 02 07.8	+4.2
	comp=Z,396nm,1.1s						
DZM				eLQ	LQ	15 05 07.9	
	comp=Z,5μm,27.7s						
DZM				eLR	LR	15 05 46.6	
	comp=Z,2μm,28.9s						
DZM	Mont Dzumac	15.46	277	eP	P	15 02 05.8	+2.3
DZM	Mont Dzumac	15.46	277	P	P	15 02 06.0	+2.4
DZM	Mont Dzumac	15.46	277	P	P	15 02 06.0	+2.4
	comp=Z,3.8nm,0.3s,baz=81,slow=17,SNR=32						
DZM				LR	LR	15 05 57.3	
	comp=Z,526nm,18.2s,baz=95,slow=29						
NOUC	Port Laguerre	15.58	277	eP	P	15 02 05.9	+1.1
FWVZ	Far West T-bar	15.72	202	PN	Pn	15 02 01.8	-2.7
TRVZ	Turoa	15.76	202	PN	Pn	15 02 01.1	-4.0
RAR	Rarotonga	16.24	81	P	Pn	15 02 07.1	-3.8
	comp=Z,6.8nm,1.0s						
RAR				S	Sn	15 04 55.1	-16
RAR	Rarotonga	16.24	81	P	Pn	15 02 07.1	-3.8
	comp=Z,3.5nm,0.3s,baz=270,slow=6.3,SNR=6.8						
RAR				S	Sn	15 04 55.1	-16
	comp=Z,29nm,0.3s,baz=90,slow=3.9,SNR=3.1						
RAR				LR	LR	15 07 17.5	
	comp=Z,693nm,21.8s,baz=270,slow=32						
TSZ	Takapari Road	16.32	200	PN	Pn	15 02 07.2	-4.5
BFZ	Birch Farm	16.81	198	PN	Pn	15 02 12.8	-5.0
MRZ	Mangatainoka R	16.99	200	PN	Pn	15 02 14.1	-5.8
KIW	Kapiti Island	17.38	201	ePN	P	15 02 18.9	-5.7
QRZ	Quartz Range	18.22	206	PN	P	15 02 27.6	-6.2
NNZ	Nelson	18.23	204	PN	P	15 02 27.7	-6.2
THZ	Tophouse	18.88	204	PN	P	15 02 34.7	-6.3
KHZ	Kahutara	19.23	202	eP	P	15 02 38.7	-6.1
	comp=Z,194nm,0.6s						
KHZ				eS	S	15 05 55.9	-21
KHZ	Kahutara	19.23	202	PN	P	15 02 38.4	-6.4
OXZ	Oxford	20.55	203	PN	P	15 02 51.5	-7.7
MQZ	McQueen's Vall	20.68	202	SN	S	15 06 31.0	-15
WVZ	Waitaha Valley	20.83	206	PN	P	15 02 54.2	-7.9
RPZ	Rata Peaks	21.25	205	eP	P	15 02 59.7	-6.9
	comp=Z,38nm,0.6s						
RPZ				eS	S	15 06 36.5	-21
RPZ	Rata Peaks	21.25	205	P	P	15 03 00.5	-6.1
	comp=Z,17nm,0.6s,baz=301,slow=1.0,SNR=17						
RPZ				S	S	15 06 46.2	-11
	comp=Z,25nm,0.7s,baz=75,slow=4.3,SNR=8.8						
LHI	Lord Howe Isla	22.13	247	P	P	15 03 21.2	+5.1
	baz=22,SNR=4.2						
ODZ	Otahua Downs	22.54	203	eP	P	15 03 15.6	-4.6
	comp=Z,46nm,0.8s						
WHZ	Wether Hill Ro	24.29	206	PN	P	15 03 33.8	-2.7
TBI	Tubuai	25.15	92	eLQ	LQ	15 08 46.1	
	comp=Z,1μm,34.5s						
TBI				eLR	LR	15 09 56.5	
	comp=Z,2μm,29.8s,baz=260						
PPT2	Papeete2	26.50	80	eLQ	LQ	15 09 26.9	
	comp=Z,671nm,24.5s						
PPT2				eLR	LR	15 10 30.9	
	comp=Z,1μm,28.2s,baz=247						
PPT	Papeete	26.51	80	LR	LR	15 11 58.6	
	comp=Z,501nm,18.1s,baz=257,slow=30						
HNR	Honiara	26.77	301	P	P	15 03 58.6	-0.6
HNR	Honiara	26.77	301	P	P	15 03 58.6	-0.6
	comp=Z,30nm,0.6s,baz=214,slow=11,SNR=2.6						
TARA	Tarawa	27.80	338	eP	P	15 04 06.6	-1.7
	comp=Z,97nm,0.9s						
ARMA	Armidale	28.32	252	P	P	15 04 15.4	+2.3
	baz=28,SNR=6.0						
EIDS	Eidsvold	28.90	262	P	P	15 04 19.5	+1.3
	baz=29,SNR=27						
MGCD	Mangrove Creek	29.05	246	P	P	15 04 22.0	+2.6
	baz=29,SNR=6.7						
CNB	Canberra Magne	30.82	242	P	P	15 04 37.9	+2.7
	baz=31,SNR=11						
RMQ	Roma	30.88	259	P	P	15 04 37.1	+1.4
	baz=31,SNR=36						
CAN	Canberra	31.12	242	eP	P	15 04 38.0	+0.3
CAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CAN	Canberra	31.12	242	eP	P	15 04 38.0	+0.3
	comp=Z,8.0nm,0.6s						
MILA	Mila	31.35	239	P	P	15 04 40.7	+1.0
	baz=32,SNR=37						
YNG	Young	31.44	244	P	P	15 04 41.9	+1.3
	baz=32,SNR=18						
CMSA	Cobar Meteorol	33.47	250	P	P	15 04 58.6	+0.3
	baz=34,SNR=12						
CTA	Charters Tower	34.24	270	P	P	15 05 06.2	+1.1
CTA	Charters Tower	34.24	270	P	P	15 05 06.2	+1.1
	comp=Z,89nm,0.7s,baz=100,slow=11,SNR=44						
CTA				LR	LR	15 16 54.6	
	comp=Z,329nm,19.3s,baz=104,slow=32						
CTAO	Charters Tower	34.24	270	eP	P	15 05 04.6	-0.5
CTAO				pmax	pmax		
	comp=Z,89nm,0.8s						
CTAO	Charters Tower	34.24	270	eP	P	15 05 04.6	-0.5
	comp=Z,89nm,0.8s						
TOO	Toolangi	34.31	239	P	P	15 05 05.4	-0.2
	baz=34,SNR=20						
MOO	Moorlands	34.31	230	P	P	15 05 06.7	+1.2
	baz=34,SNR=4.2						
QLP	Quilpie	34.91	259	P	P	15 05 11.8	+1.0
	baz=35,SNR=34						
MTSU	Mount Surprise	36.54	273	P	P	15 05 25.9	+1.0
	baz=37,SNR=55						
STKA	Stephens Creek	36.97	249	eP	P	15 05 27.8	-0.5
STKA				PcP	PcP	15 07 48.0	+0.5
STKA	Stephens Creek	36.97	249	P	P	15 05 27.2	-1.1
	comp=Z,8.4nm,0.4s,baz=92,slow=9.5,SNR=53						
STKA				PcP	PcP	15 07 48.0	+0.5
	comp=Z,7.7nm,0.9s,baz=87,slow=8.7,SNR=3.2						
STKA				LR	LR	15 18 30.4	
	comp=Z,359nm,20.9s,baz=220,slow=33						
STKA	Stephens Creek	36.97	249	P	P	15 05 28.3	0.0
	baz=37,SNR=34						
ARPS	Mount Arapiles	37.07	241	P	P	15 05 29.9	+0.8
	baz=37,SNR=12						
PMG	Port Moresby	37.40	288	eP	P	15 05 31.4	-0.6
	comp=Z,102nm,1.0s						
PMG				epP	pP	15 05 53.5	-1.4
PMG				esP	sP	15 06 05.3	-1.1
PMG	Port Moresby	37.40	288	P	P	15 05 32.1	+0.1
	comp=Z,91nm,1.0s,baz=129,slow=2.7,SNR=12						
RKT	Rikitea	38.31	96	eLR	LR	15 15 43.1	
	comp=Z,922nm,33.2s,baz=248						
COEN	Coen	38.98	279	P	P	15 05 46.8	+1.5
	baz=39,SNR=12						
QIS	Mount Isa	40.16	267	P	P	15 05 56.3	+1.1
	baz=40,SNR=16						
BBOO	Buckleboo	41.64	248	P	P	15 06 05.8	-1.4
	baz=42,SNR=17						
AS31	Alice Springs	44.61	261	eP	P	15 06 30.3	-0.9
AS31				epP	pP	15 06 54.0	-0.6
AS31				eS	S	15 12 58.8	-1.3
ASAR	Alice Springs	44.61	261	P	P	15 06 29.9	-1.3
ASAR				PcP	PcP	15 08 13.5	+1.0
ASAR				ScP	ScP	15 11 58.2	+2.5
ASAR				S	S	15 12 58.8	-1.3
ASAR	Alice Springs	44.61	261	P	P	15 06 29.9	-1.3
	comp=Z,13nm,0.4s,baz=102,slow=7.3,SNR=136						
ASAR				PcP	PcP	15 08 13.5	+1.0
	comp=Z,9.7nm,0.9s,baz=109,slow=2.5,SNR=6.8						
ASAR				ScP	ScP	15 11 58.2	+2.5
	comp=Z,2.0nm,1.0s,baz=122,slow=4.5,SNR=4.8						
ASAR				S	S	15 12 58.8	-1.3
	comp=Z,7.0nm,1.0s,baz=99,slow=16,SNR=8.9						
ASAR				LR	LR	15 23 40.0	
	comp=Z,266nm,18.5s,baz=109,slow=34						
WRAB	Tennant Creek	45.09	266	eP	P	15 06 34.8	-0.3
WRAB				e*PP	pP	15 06 56.2	-2.3
WRAB				e*SP	sP	15 07 08.4	-1.4
WRAB				pmax	pmax		
	comp=Z,94nm,0.8s						
WRAB	Tennant Creek	45.09	266	eP	P	15 06 34.8	-0.3
	comp=Z,94nm,0.8s						
WRAB				epP	pP	15 06 56.2	-2.3
WRAB				esP	sP	15 07 08.4	-1.4
WRAB	Tennant Creek	45.09	266	P	P	15 06 35.0	0.0
	comp=Z,760nm,0.6s,SNR=41						
WRA	Warramunga Arr	45.10	266	P	P	15 06 33.6	-1.5
WRA				PcP	PcP	15 08 14.7	+0.4
WRA				ScP	ScP	15 12 02.0	+4.3
WRA				S	S	15 13 02.9	-4.2
WRA	Warramunga Arr	45.10	266	P	P	15 06 33.6	-1.5
	comp=Z,89nm,0.7s,baz=104,slow=8.0,SNR=425						
WRA				PcP	PcP	15 08 14.7	+0.4
	comp=Z,17nm,0.9s,baz=98,slow=3.8,SNR=7.1						
WRA				ScP	ScP	15 12 02.0	+4.3
	comp=Z,5.7nm,0.9s,baz=103,slow=4.1,SNR=8.3						
WRA				S	S	15 13 02.9	-4.2
	comp=Z,8.5nm,1.0s,baz=99,slow=14,SNR=8.0						
WRA				LR	LR	15 25 09.3	
	comp=Z,303nm,19.8s,baz=85,slow=36						
JAY	Jayapura	46.41	292	P	P	15 06 45.1	-0.4
	comp=Z,42nm,1.2s,comp=Z,2μm						
JAY	Jayapura	46.41	292	P	P	15 06 45.1	-0.4
	baz=47,SNR=7.4						
FORT	Forrest	48.59	250	P	P	15 07 00.5	-1.7
	baz=49,SNR=32						
KDU	Kakadu	49.11	275	P	P	15 07 05.2	-1.1
	baz=49,SNR=33						
KIP	Kipapa	49.52	23⇑	eP	P	15 07 09.4	+0.2
KIP				pmax	pmax		
	comp=Z,142nm,2.5s						
MTN	Manton Dam	50.27	274	P	P	15 07 14.3	-0.8
	baz=50,SNR=12						
BAKI	Biak	51.01	290	P	P	15 07 21.5	+0.8
	comp=Z,72nm,1.1s						
KNRA	Kununurra	51.44	269	P	P	15 07 24.0	+0.1
	baz=52,SNR=95						
TLE	Tual	51.79	283	P	P	15 07 26.5	0.0
	comp=Z,58nm,0.9s						
TLE	Tual	51.79	283	P	P	15 07 26.4	-0.1
	baz=52,SNR=5.2						
GUMO	Guam	53.31	311	P	P	15 07 37.7	0.0
GUMO	Guam	53.31	311	P	P	15 07 37.7	0.0
	comp=Z,19nm,0.3s,baz=183,slow=19,SNR=3.8						

GUMO LR LR 15 26 57.0
comp=Z,314nm,18.4s,baz=105,slow=32
FAKI Fak Fak 53.48 286 P **P** **15 07 39.3 +0.2**
baz=54,SNR=5.2
FITZ Fitzroy Crossi 53.51 265 P **P** **15 07 39.6 +0.5**
FITZ Fitzroy Crossi 53.51 265 P **P** **15 07 39.6 +0.5**
comp=Z,117nm,0.9s,baz=124,slow=8.7,SNR=81
FITZ Fitzroy Crossi 53.51 265 P **P** **15 07 39.6 +0.5**
baz=54,SNR=86
SBA Scott Base 53.66 184 *e*P **P** **15 07 41.6 +2.3**
SBA *e**PP **pP** **15 08 03.9 +0.4**
SBA pmax pmax
comp=Z,39nm,0.9s
SBA Scott Base 53.66 184 *e*P **P** **15 07 41.6 +2.3**
comp=Z,39nm,0.9s
SBA *ep*P **pP** **15 08 03.9 +0.4**
VNDA Vanda 53.72 186 P **P** **15 07 41.3 +1.5**
VNDA *ep*P **pP** **15 08 03.5 -0.5**
VNDA *es*P **sP** **15 08 14.8 -0.4**
VNDA Vanda 53.72 186 P **P** **15 07 41.3 +1.5**
comp=Z,17nm,1.0s,baz=2.4,slow=7.5,SNR=50
VNDA LR LR 15 25 22.9
comp=Z,115nm,21.4s,baz=33,slow=30
KMBL Kambalda 53.75 248 P **P** **15 07 39.5 -1.3**
baz=54,SNR=11
SWI Sorong 55.35 287 P **P** **15 07 52.4 -0.1**
baz=56,SNR=7.4
KLBR Kellerberrin 57.18 247 P **P** **15 08 04.0 -1.4**
baz=57,SNR=52
NWAO Narrogin (SRO) 57.37 246 P **P** **15 08 07.8 +1.1**
NWAO Narrogin (SRO) 57.37 246 P **P** **15 08 07.8 +1.1**
comp=Z,11nm,0.8s,baz=109,slow=8.2,SNR=7.2
NWAO LR LR 15 29 55.3
comp=Z,140nm,18.1s,baz=272,slow=33
MEEK Meekatharra 57.49 253 P **P** **15 08 07.5 -0.2**
baz=58,SNR=18
MBWA Marble Bar 57.93 260 *e*P **P** **15 08 08.3 -2.4**
comp=Z,39nm,1.1s
BLDU Balldu 58.25 248 P **P** **15 08 11.3 -1.6**
baz=58,SNR=58
MORW Morawa 59.15 250 P **P** **15 08 17.8 -1.4**
baz=59,SNR=30
CASY Casey 60.51 206 *e*P **P** **15 08 27.0 -0.8**
comp=Z,96nm,0.9s
CASY *ep*P **pP** **15 08 51.8 -0.6**
CASY *es*P **sP** **15 09 04.4 +1.0**
KAPI Kappang 63.68 277 LR LR 15 32 47.1
comp=Z,140nm,19.4s,baz=116,slow=32
DAV Davao City (W) 64.26 292 LR LR 15 32 14.4
comp=Z,133nm,21.5s,baz=182,slow=32
QSPA South Pole Qui 65.28 180 LR LR 15 32 17.8
comp=Z,138nm,19.1s,baz=210,slow=31
MIR Mirnyy 67.52 206 ⇓ *i*P P 15 09 09.0 -4.6
MIR pmax pmax
comp=Z,108nm,1.1s
UGM Wanagama 70.87 270 P **P** **15 09 35.1 -0.1**
baz=71,SNR=4.4
KKM Kota Kinabalu 71.81 286 P **P** **15 09 42.5 +1.6**
baz=72,SNR=4.1
CISI Cisompet, Garu 73.47 269 P **P** **15 09 51.4 +0.6**
baz=74,SNR=5.0
LEM Lembang 73.94 270 P **P** **15 09 55.6 +1.9**
baz=74,SNR=7.6
MJAR Matsushiro Arr 74.23 324 P **P** **15 09 53.6 -1.0**
MJAR Matsushiro Arr 74.23 324 P **P** **15 09 53.6 -1.0**
comp=Z,8.1nm,0.8s,baz=168,slow=6.3,SNR=36
MJAR LR LR 15 36 29.8
comp=Z,228nm,20.5s,baz=120,slow=31
MAJO Matsushiro 74.23 324 *e*P **P** **15 09 52.7 -2.0**
MAJO *e**PP **pP** **15 10 19.2 -1.0**
MAJO *e**SP **sP** **15 10 30.3 -0.7**
MAJO pmax pmax
comp=Z,14nm,0.8s
MAJO Matsushiro 74.23 324 *e*P **P** **15 09 52.7 -2.0**
comp=Z,14nm,0.8s
MAJO *ep*P **pP** **15 10 19.2 -1.0**
MAJO *es*P **sP** **15 10 30.3 -0.7**
MAT Matsushiro 74.23 324 P **P** **15 09 53.1 -1.6**
MAT S **S** **15 19 17.4 -3.0**
KSM Kuching 74.97 279 *e*P P 15 09 56.0 -3.5
comp=Z,19nm,0.8s
KSM *ep*P pP 15 10 24.3 -0.7
KSM Kuching 74.97 279 P **P** **15 10 00.6 +1.1**
baz=75,SNR=10
NACB Ninganchiao 76.88 305 *e*P **P** **15 10 08.3 -1.7**
comp=Z,50nm,0.9s
TPUB Ta-pu 77.11 303 *e*P **P** **15 10 10.3 -1.1**
comp=Z,41nm,0.8s
SSLB Suanglung 77.14 304 *e*P **P** **15 10 10.4 -1.2**
comp=Z,30nm,0.8s
SSLB *e*PcP **PcP** **15 10 21.9 -0.1**
YHNB Yeheng 77.33 305 *e*P **P** **15 10 10.9 -1.8**
comp=Z,36nm,1.0s
FX1 Attu Island--F 77.84 354 *e*P **P** **15 10 13.7 -1.0**
FX1 *ep*P **pP** **15 10 41.8 +1.4**
MAW Mawson 77.85 200 P **P** **15 10 15.6 +0.9**
MAW Mawson 77.85 200 P **P** **15 10 15.6 +0.9**
comp=Z,77nm,0.8s,baz=139,slow=9.3,SNR=133
MAW LR LR 15 45 16.9
comp=Z,109nm,19.2s,baz=106,slow=36
MAW Mawson 77.85 200 P **P** **15 10 15.6 +0.9**
baz=78,SNR=67
ASAJ Asahikawa 77.95 331 P **P** **15 10 17.5 +1.9**
ASAJ Asahikawa 77.95 331 P **P** **15 10 17.5 +1.9**
comp=Z,8.2nm,0.6s,baz=312,slow=28,SNR=6.5
PET Petropavlovsk 80.36 345 *e*P **P** **15 10 28.1 -0.3**
PET *e* 15 20 28.0
PET pmax pmax
comp=Z,23nm,1.9s
PEA0B Petropavlovsk- 80.66 345 *e*P **P** **15 10 30.1 0.0**
PETK Petropavlovsk- 80.66 345 P **P** **15 10 30.2 +0.1**
PETK Petropavlovsk- 80.66 345 P **P** **15 10 30.2 +0.1**
PETK Petropavlovsk- 80.66 345 P **P** **15 10 30.2 +0.1**
comp=Z,13nm,0.9s,baz=152,slow=10,SNR=9.5
PETK LR LR 15 42 13.6
comp=Z,120nm,18.8s,baz=141,slow=32
KSRS Korea Array 80.73 319 P **P** **15 10 31.9 +1.1**
comp=Z,10nm,1.3s,baz=141,slow=5.9,SNR=10.0
KSRS LR LR 15 40 18.8
comp=Z,141nm,20.6s,baz=109,slow=31
KSAR Wonju Array Be 80.75 319 P **P** **15 10 31.9 +1.0**
MURC Murrieta 81.26 47 ⇓P **P** **15 10 35.3 +1.5**
baz=82
BFSC Mount Baldy Ra 81.35 46 ⇓P **P** **15 10 35.7 +1.4**
baz=82
MONP Monument Peak 81.36 48 ⇓P **P** **15 10 36.0 +1.4**
baz=82
VES Vestal, Richgr 81.42 44 ⇓P **P** **15 10 36.1 +1.5**
baz=82,SNR=7.3
EDW2 Edwards Air Fo 81.52 45 ⇑P **P** **15 10 36.5 +1.3**
baz=82,SNR=8.9
ISA Isabella 81.70 45 *e*P **P** **15 10 36.1 0.0**
ISA *e**PP **pP** **15 11 01.0 -1.0**
ISA *e**SP **sP** **15 11 13.6 +0.9**
ISA pmax pmax
comp=Z,11nm,0.9s
ISA Isabella 81.70 45 *e*P **P** **15 10 36.1 0.0**
comp=Z,10nm,0.9s
ISA *ep*P **pP** **15 11 01.0 -1.0**
ISA *es*P **sP** **15 11 13.6 +0.9**
ISA Isabella 81.70 45 ⇑P **P** **15 10 37.7 +1.6**
baz=82,SNR=10
CMB Columbia Colle 82.01 42 *e*P **P** **15 10 38.5 +0.9**
CMB pmax pmax
comp=Z,9.0nm,1.2s
CMB Columbia Colle 82.01 42 *e*P **P** **15 10 38.5 +0.9**
comp=Z,9.4nm,1.2s
LRMC Laurel Mountai 82.09 45 ⇑P **P** **15 10 39.7 +1.5**
baz=82
CWC Cottonwood Cre 82.43 44 ⇑P **P** **15 10 41.6 +1.6**
baz=83
GSC Goldstone 82.55 46 *e*P **P** **15 10 41.8 +1.2**
GSC pmax pmax
comp=Z,27nm,1.4s
GSC Goldstone 82.55 46 *e*P **P** **15 10 41.8 +1.2**
comp=Z,27nm,1.4s
GSC *e*PcP **PcP** **15 10 47.1 +1.7**
GSC Goldstone 82.55 46 ⇓P **P** **15 10 42.0 +1.5**
baz=83,SNR=6.9
MPMC Manual Prospec 82.57 45 ⇑P **P** **15 10 42.3 +1.4**
baz=83,SNR=14
TIN Tinemaha 82.72 44 ⇑P **P** **15 10 43.4 +2.0**
baz=83
SYO Syowa Base 82.74 192 ⇓ *e*P **P** **15 10 39.0 -2.0**
SYO Syowa Base 82.74 192 ⇓ *e*X **P** **15 10 41.3 +0.3**
IRM Iron Mountain 82.96 47 ⇓P **P** **15 10 44.4 +1.7**
baz=83,SNR=18
GMRC Granite Mounta 82.99 47 ⇑P **P** **15 10 44.5 +1.6**
baz=83,SNR=6.5
USRK Ussuriysk Arra 83.05 326 P **P** **15 10 44.2 +1.4**
comp=Z,8.5nm,0.8s,baz=109,slow=3.4,SNR=15
USRK LR LR 15 43 05.1
comp=Z,129nm,18.8s,baz=307,slow=32
113A Mohawk Valley, 83.09 49 ⇓P **P** **15 10 44.8 +1.5**
baz=83
Y12C Blythe 83.14 48 ⇑P **P** **15 10 45.1 +1.6**
baz=83
WCN Washoe City 83.19 41 *e*P **P** **15 10 44.2 +0.3**
WCN *e**PP **pP** **15 11 10.5 +0.6**
WCN pmax pmax
comp=Z,12nm,1.1s
WCN Washoe City 83.19 41 *e*P **P** **15 10 44.2 +0.3**
comp=Z,12nm,1.1s
WCN *ep*P **pP** **15 11 10.5 +0.6**
BEKR Beckworth 83.20 40 *e*P **P** **15 10 41.6 -2.4**
comp=Z,7.8nm,1.4s
GRAC Grapevine Rang 83.22 44 ⇓P **P** **15 10 45.7 +1.7**
baz=83
SHOC Shoshone 83.25 45 ⇑P **P** **15 10 45.8 +1.7**
baz=84
214A Organ Pipe Nat 83.29 50 ⇓P **P** **15 10 46.4 +1.9**
baz=84
NJ2 Nanjing 83.35 310 *e*P **P** **15 10 47.1 +2.5**
NJ2 pmax pmax
comp=Z,30nm,1.1s
QIZ Qiongzhong 83.48 294 P **P** **15 10 48.2 +2.6**
QIZ S **S** **15 21 01.4 +2.0**
NVAR Mina Array Bea 83.53 42 P **P** **15 10 46.9 +1.2**
NVAR Mina Array Bea 83.53 42 P **P** **15 10 46.9 +1.2**
comp=Z,4.3nm,0.8s,baz=224,slow=9.0,SNR=24
NVAR LR LR 15 41 49.8
comp=Z,160nm,18.1s,baz=100,slow=31
NV11 Mina Array Sit 83.62 43 *e*P **P** **15 10 46.6 +0.6**
SNAA Sanae 83.69 178 *e*P **P** **15 10 45.6 -0.3**
SNAA Sanae 83.69 178 *e*P **P** **15 10 45.6 -0.3**
comp=Z,61nm,1.0s
Z14A Wintersburg 84.00 49 ⇓P **P** **15 10 49.8 +1.9**
baz=84,SNR=12
VNA2 Neumayer--Watz 84.25 177 *e*P **P** **15 10 48.7 0.0**
Y14A Wickenburg 84.28 49 ⇓P **P** **15 10 51.1 +1.6**
baz=84,SNR=11
W13A Hualapai Mount 84.36 47 ⇑P **P** **15 10 51.7 +1.7**
baz=85,SNR=16
MOD Modoc 84.55 39 *e*P **P** **15 10 51.1 +0.4**
comp=Z,17nm,1.0s
MDJ Mudanjiang 84.57 325 P **P** **15 10 51.5 +0.9**
MDJ pP **pP** **15 11 15.1 -1.5**
MDJ sP **sP** **15 11 25.3 -2.0**
MDJ PP **PP** **15 14 05.1 -2.7**
MDJ S **SKKSac** **15 21 12.0 +0.8**
MDJ SS **SS** **15 26 43.8 +0.7**
MDJ pmax pmax
comp=Z,10.0nm,1.2s
MDJ pmax pmax
comp=Z,140nm,7.3s
MDJ LR LR
comp=E,150nm,32.0s
MDJ LR LR
comp=Z,180nm,33.6s
MDJ Mudanjiang 84.57 325 *e*P **P** **15 10 50.0 -0.6**
comp=Z,6.6nm,0.8s
MDJ *e*PcP **PcP** **15 10 55.0 +1.0**
HABR Khabarovsk 84.64 330 *de*P **P** **15 10 50.6 -0.2**
HABR *e**PP **pP** **15 11 14.4 -2.5**
HABR *e* 15 14 07.1
HABR *i* 15 16 03.3
HABR *e*S **S** **15 21 05.2 -4.5**
HABR *e*SS **SS** **15 26 44.7 +0.7**
HABR *e*SSS SSS 15 30 15.2
HABR pmax pmax
comp=N,6.0nm,0.9s
HABR pmax pmax
comp=Z,10.0nm,1.3s
HABR pmax pmax
comp=E,17nm,1.3s
HABR MLR MLR
comp=Z,62nm,13.0s
KDAK Kodiak Island 84.78 13 P **P** **15 10 52.6 +1.3**
KDAK Kodiak Island 84.78 13 P **P** **15 10 52.6 +1.3**
comp=Z,5.1nm,0.8s,baz=98,slow=2.9,SNR=4.0
TUC Tucson 84.91 51 *e*P **P** **15 10 53.3 +0.6**
TUC pmax pmax
comp=Z,2.0nm,0.8s
TUC Tucson 84.91 51 *e*P **P** **15 10 53.3 +0.6**
comp=Z,1.8nm,0.8s
R11A Troy Canyon, C 85.17 44 ⇑P **P** **15 10 55.3 +1.3**
baz=85
319A Douglas 85.48 53 ⇓P **P** **15 10 57.5 +1.9**
baz=86
X16A Lo Mia Camp, P 85.62 49 ⇑P **P** **15 10 58.4 +2.0**
baz=86,SNR=14
PLCA Paso Flores 85.64 133 *e*P **P** **15 10 56.5 +0.2**
comp=Z,107nm,1.6s
PLCA *ep*P **pP** **15 11 23.8 +1.3**
PLCA *es*P **sP** **15 11 34.0 +0.8**
PLCA Paso Flores 85.64 133 P **P** **15 10 57.5 +1.1**
comp=Z,26nm,0.9s,baz=228,slow=5.7,SNR=46
PLCA LR LR 15 40 32.1
comp=Z,190nm,21.4s,baz=174,slow=29
PSI Prapat 85.81 275 P **P** **15 10 57.9 +0.2**
PSI Prapat 85.81 275 P **P** **15 10 57.9 +0.2**
comp=Z,10nm,0.7s,baz=162,slow=7.4,SNR=4.4
WVOR Wild Horse Val 85.84 39 *e*P **P** **15 10 57.5 +0.4**
WVOR pmax pmax
comp=Z,16nm,1.3s
WVOR Wild Horse Val 85.84 39 *e*P **P** **15 10 57.5 +0.4**
comp=Z,16nm,1.3s
320A Kipp Ranch, An 86.00 53 ⇓P **P** **15 11 00.1 +1.9**
baz=86
SNY Shenyang 86.10 320 ⇑P **P** **15 10 58.9 +0.7**
SNY sP **sP** **15 11 33.9 -1.1**
SNY S **ScS** **15 21 32.1 -0.7**
SNY pmax pmax
comp=Z,10.0nm,1.9s
SNY pmax pmax
comp=Z,330nm,7.3s
SNY LR LR
comp=N,120nm,13.0s
SNY LR LR
comp=E,180nm,16.9s
SNY LR LR
comp=Z,140nm,14.5s
CCUT Cedar City 86.12 46 *e*P **P** **15 10 58.1 -0.6**
comp=Z,14nm,1.2s
U15A North Rim 86.18 47 ⇑P **P** **15 11 00.7 +1.6**
baz=86,SNR=14
CN2 Changchun 86.28 322 *e*P **P** **15 10 59.7 +0.7**
CN2 *e*PP **PP** **15 14 23.3 +1.6**
CN2 *e*S **S** **15 21 24.9 -1.1**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
WUAZ Wupatki 86.28 48 *e*P **P** **15 10 58.9 -0.6**
comp=Z,37nm,1.6s
WUAZ Wupatki 86.28 48 ⇑P **P** **15 11 01.3 +1.8**
baz=86
220A Playas Peak, P 86.31 52 ⇑P **P** **15 11 01.6 +1.9**
baz=86,SNR=20
GSI Gunungsitoli 86.41 273 P **P** **15 11 02.5 +2.0**
baz=87,SNR=4.5
120A U Bar Ranch, L 86.57 52 ⇑P **P** **15 11 02.9 +1.9**
baz=87
KLR Kul'dur 86.70 329 *e*P **P** **15 10 59.0 -2.0**
X18A Snowflake 86.71 50 ⇑P **P** **15 11 03.3 +1.7**
baz=87,SNR=9.5
ELK Elko 86.81 42 LR LR 15 40 20.8
comp=Z,99nm,20.0s,baz=294,slow=29
Z20A Nine Sixteen R 86.90 51 ⇑P **P** **15 11 04.5 +1.9**
baz=87,SNR=16
221A Mesquite Ranch 86.90 53 ⇑P **P** **15 11 04.5 +1.9**
baz=87
121A Cookes Peak, D 87.17 52 ⇓P **P** **15 11 05.8 +1.9**
baz=87,SNR=7.2
MVU Marysvale 87.41 45 *e*P **P** **15 11 05.0 0.0**
comp=Z,12nm,1.4s
MVU *ep*P **pP** **15 11 30.0 -1.2**
222A Williams Famil 87.44 53 ⇑P **P** **15 11 07.1 +1.9**
baz=88
Y20A Horse Springs, 87.48 51 ⇓P **P** **15 11 07.7 +2.2**
baz=88,SNR=14
X20A Quemado 87.73 50 ⇓P **P** **15 11 08.7 +2.1**
baz=88
HAWA Hanford 87.86 36 *e*P **P** **15 11 07.2 +0.5**
comp=Z,16nm,1.4s
Y21A Point of Rocks 88.03 51 ⇓P **P** **15 11 10.0 +1.9**
baz=88,SNR=17
W20A Ramah 88.04 50 ⇑P **P** **15 11 09.8 +1.7**
baz=88
Z22A Elephant Butte 88.14 52 ⇑P **P** **15 11 10.1 +1.6**
baz=88,SNR=30
X21A Alamocita Cree 88.17 51 ⇑P **P** **15 11 10.2 +1.4**
baz=88,SNR=11
324A Moseley Ranch, 88.29 54 ⇑P **P** **15 11 10.1 +0.8**
baz=88,SNR=6.9
425A Indio Mountain 88.32 55 ⇑P **P** **15 11 10.7 +1.3**
baz=88,SNR=12
626A Big Bend Ranch 88.35 56 ⇑P **P** **15 11 10.8 +1.3**
baz=88,SNR=6.9
Y22A Socorro 88.49 51 ⇑P **P** **15 11 11.7 +1.5**
baz=89,SNR=8.2
TMUT Trail Mountain 88.50 45 *e*P **P** **15 11 10.7 +0.4**
comp=Z,22nm,0.8s
224A Cornudas Mount 88.58 54 ⇓P **P** **15 11 12.2 +1.6**
baz=89,SNR=12
TXAR Lajitas Array 88.60 57 P **P** **15 11 12.0 +1.3**
TXAR Lajitas Array 88.60 57 P **P** **15 11 12.0 +1.3**
comp=Z,3.6nm,0.9s,baz=215,slow=6.1,SNR=18
LENM Lemitar 88.60 51 *e*P **P** **15 11 12.5 +1.8**
comp=Z,13nm,1.1s
LAZ Ladron 88.61 51 *e*P **P** **15 11 10.6 -0.2**
comp=Z,8.9nm,1.4s
W21A San Fidel 88.62 50 ⇑P **P** **15 11 11.8 +1.0**
baz=89
325A Bean Ranch, Si 88.63 54 ⇓P **P** **15 11 11.7 +0.9**
baz=89,SNR=5.9
526A Mary Lane Ranc 88.63 56 ⇓P **P** **15 11 12.0 +1.1**
baz=89
Z23A Rita Site, Whi 88.67 52 ⇑P **P** **15 11 12.7 +1.7**
baz=89,SNR=12
U20A Newcomb 88.69 49 ⇓P **P** **15 11 13.3 +2.2**
baz=89
I12A Atlanta 88.70 40 ⇓P **P** **15 11 13.3 +2.3**
baz=89
X22A Bernardo 88.75 51 ⇑P **P** **15 11 12.8 +1.4**
baz=89
L14A Malta 88.79 42 ⇓P **P** **15 11 13.0 +1.6**
baz=89
SRU San Rafael 88.84 46 *e*P **P** **15 11 12.6 +0.9**
SRU *e**PP **pP** **15 11 36.0 -2.0**
SRU *e**SP **sP** **15 11 50.8 +2.2**
SRU pmax pmax
comp=Z,9.0nm,0.8s
SRU San Rafael 88.84 46 *e*P **P** **15 11 12.6 +0.9**
comp=Z,9.3nm,0.8s
SRU *ep*P **pP** **15 11 36.0 -2.0**
SRU *es*P **sP** **15 11 50.8 +2.2**
SRU San Rafael 88.84 46 ⇑P **P** **15 11 12.6 +0.9**
baz=89,SNR=11
BNM Barren Site 88.84 51 *e*P **P** **15 11 12.9 +1.0**
comp=Z,12nm,1.3s
627A Terlingua Ranc 88.87 57 ⇑P **P** **15 11 13.0 +1.0**
baz=89
LPM Los Pinos Moun 88.92 51 *e*P **P** **15 11 11.5 -0.7**
comp=Z,6.5nm,0.8s
124A Stringfield Ra 88.94 53 ⇑P **P** **15 11 13.7 +1.3**
baz=89,SNR=11
426A McDonald Obser 88.98 55 ⇑P **P** **15 11 13.5 +0.9**
baz=89
HLID Hailey 88.98 40 ⇓P **P** **15 11 14.1 +1.8**
baz=89
PMR Palmer 88.98 13 *e*P **P** **15 11 10.5 -1.0**
PMR pmax pmax
comp=Z,35nm,1.3s
PMR Palmer 88.98 13 *e*P **P** **15 11 10.5 -1.0**
comp=Z,35nm,1.3s
J13A Cove Ranch, Pi 89.02 40 ⇓P **P** **15 11 13.7 +1.2**
baz=89
527A Woodward Ranch 89.04 56 ⇓P **P** **15 11 13.3 +0.5**
baz=89
225A Deer Hill, Car 89.11 54 ⇓P **P** **15 11 14.4 +1.2**
baz=89,SNR=5.8
Y23A Lovelace Mesa, 89.14 52 ⇑P **P** **15 11 14.3 +1.1**
baz=89,SNR=9.9
628A Black Gap, Mar 89.26 57 ⇑P **P** **15 11 14.8 +1.1**
baz=89
L15A Malad City 89.29 42 ⇓P **P** **15 11 15.0 +1.3**
baz=90
DIV Divide 89.29 15 *e*P **P** **15 11 13.0 -0.1**
comp=Z,10nm,0.8s
P18A Preston Nutter 89.30 45 ⇑P **P** **15 11 14.9 +0.8**
baz=90
U21A Nageezi 89.31 49 ⇑P **P** **15 11 14.7 +0.7**
baz=90,SNR=7.3
H12A Diamond D Ranc 89.31 39 ⇑P **P** **15 11 15.0 +1.2**
baz=90
Z24A Sheeppen Canyo 89.33 53 ⇓P **P** **15 11 15.4 +1.2**
baz=90,SNR=8.7
J14A Carey 89.37 41 ⇑P **P** **15 11 15.4 +1.4**
baz=90
ANMO Albuquerque 89.37 51 *e*P **P** **15 11 14.2 -0.1**
comp=Z,19nm,1.2s
BMRM Bremner River 89.42 15 *e*P **P** **15 11 13.1 -0.7**
comp=Z,18nm,1.0s
125A Gardner Draw, 89.50 53 ⇓P **P** **15 11 16.1 +1.2**
baz=90,SNR=7.9
427A Hayter Ranch, 89.54 56 ⇑P **P** **15 11 16.0 +0.9**
baz=90,SNR=8.2
226B Tecolote Peak, 89.57 54 ⇑P **P** **15 11 16.2 +1.0**
baz=90
Y24A Capitan 89.58 52 ⇑P **P** **15 11 16.5 +1.2**
baz=90,SNR=5.5
GYA Guiyang 89.59 299 P **P** **15 11 17.0 +1.6**
GYA pP **pP** **15 11 44.0 +2.3**
GYA sP **sP** **15 11 55.2 +2.9**
GYA PP **PP** **15 14 52.8 +4.1**
GYA SKS **SKSac** **15 21 36.6 -0.5**
GYA S **S** **15 21 55.8 -2.7**
GYA sS **sS** **15 22 44.9 +1.2**
GYA SS **SS** **15 27 58.4 +1.0**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,540nm,19.6s
GYA LR LR
comp=E,510nm,20.7s
GYA LR LR
comp=Z,590nm,19.7s
H13A Challis 89.66 39 ⇓P **P** **15 11 17.4 +2.1**
baz=90
528A Cox Ranch, San 89.67 56 ⇑P **P** **15 11 16.8 +1.1**
baz=90
I14A Mackay 89.76 40 ⇑P **P** **15 11 18.1 +2.1**
baz=90
Z25A Roswell 89.77 53 ⇓P **P** **15 11 17.5 +1.4**
baz=90,SNR=5.1
F12A Elk City 89.80 38 ⇑P **P** **15 11 17.3 +1.3**
baz=90,SNR=11
S21A Coal Bank Pass 89.86 48 ⇓P **P** **15 11 18.4 +1.7**
baz=90
L16A Fish Haven 89.88 43 ⇑P **P** **15 11 17.6 +1.0**
baz=90
G13A Cobalt 89.99 39 ⇓P **P** **15 11 18.3 +1.4**
baz=90
428A Kincaid Ranch, 90.02 56 ⇓P **P** **15 11 18.1 +0.8**
baz=90
M17A Scullys Gap (B 90.05 43 ⇑P **P** **15 11 18.3 +0.9**
baz=90
529A Stev Forest Ra 90.08 57 ⇓P **P** **15 11 18.3 +0.8**
baz=90
Y25A Mesa, Roswell 90.11 52 ⇑P **P** **15 11 18.5 +0.8**
baz=90,SNR=18
P19A Cripple Cowboy 90.12 46 ⇑P **P** **15 11 19.4 +1.6**
baz=90
H14A Leadore 90.21 40 ⇑P **P** **15 11 19.5 +1.6**
baz=90,SNR=6.5
328A Wristen Ranch, 90.24 55 ⇑P **P** **15 11 19.3 +1.0**
baz=90
W24A Lazy 6 Ranch, 90.25 51 ⇑P **P** **15 11 19.3 +0.9**
baz=90,SNR=7.5
Z26A Caprock 90.30 53 ⇑P **P** **15 11 19.5 +0.9**
baz=90,SNR=16
F13A Darby 90.34 38 ⇑P **P** **15 11 19.2 +0.7**
baz=91
TNA Tin City 90.35 4 *e*P **P** **15 11 17.0 -0.8**
comp=Z,11nm,1.1s
R21A Cimarron 90.40 47 ⇑P **P** **15 11 20.4 +1.3**
baz=91

M18A **Lyman** 90.41 44 ⇓P P 15 11 20.1 +1.1
baz=91
TRF **Thorofare Moun** 90.46 12 eP P 15 11 17.7 -1.0
comp=Z,27nm,0.8s
127A **Arkansas Junct** 90.46 54 ⇓P P 15 11 19.9 +0.5
baz=91
J16A **Bone** 90.48 42 ⇑P P 15 11 21.0 +1.7
baz=91
C11A **Tepee Creek (N** 90.52 36 ⇓P P 15 11 21.1 +2.0
baz=91
G14A **Jackson** 90.52 39 ⇑P P 15 11 20.5 +1.0
baz=91
429A **Davenport Ranc** 90.57 56 ⇑P P 15 11 20.3 +0.5
baz=91,SNR=17
V24A **Rampart Ranch,** 90.60 51 ⇑P P 15 11 21.4 +1.3
baz=91,SNR=7.7
K17A **Gardner Place,** 90.61 42 ⇑P P 15 11 21.3 +1.4
baz=91
MCMT **McKenzie Canyo** 90.63 40 eP P 15 11 19.4 -0.6
comp=Z,3.3nm,1.0s
Y26A **Elida** 90.73 53 ⇑P P 15 11 21.4 +0.8
baz=91,SNR=7.0
SEY **Seymchan** 90.77 347⇑ eP P 15 11 20.6 +0.7
Z27A **Tatum** 90.88 54 ⇓P P 15 11 21.9 +0.6
baz=91
329A **Wagon Wheel Ra** 90.91 56 ⇑P P 15 11 21.9 +0.5
baz=91,SNR=7.6
W25A **X Bar L Ranch,** 90.92 51 ⇑P P 15 11 22.2 +0.7
baz=91,SNR=9.9
MCK **McKinley** 90.97 12 eP P 15 11 20.3 -0.5
MCK pmax pmax
comp=Z,12nm,1.0s
MCK **McKinley** 90.97 12 eP P 15 11 20.3 -0.5
comp=Z,12nm,1.0s
631A **Perdido Creek** 91.00 58 ⇑P P 15 11 22.5 +0.7
baz=91,SNR=11
TPAW **Teton Pass** 91.00 42 eP P 15 11 20.1 -1.7
comp=Z,14nm,1.4s
G15A **Dillon** 91.03 40 ⇓P P 15 11 23.1 +1.2
baz=91
128A **Castleberry Fa** 91.08 54 ⇓P P 15 11 22.8 +0.6
baz=91
Q22A **Crested Butte,** 91.08 47 ⇓P P 15 11 24.0 +1.6
baz=91
K18A **Toltan Ranch,** 91.08 43 ⇓P P 15 11 23.4 +1.2
baz=91,SNR=8.8
V25A **Rancho No Teng** 91.12 51 ⇑P P 15 11 23.2 +0.7
baz=91,SNR=7.9
430A **Baggett Ranch,** 91.14 57 ⇓P P 15 11 23.1 +0.6
baz=91
732A **Laxson Ranch,** 91.15 59 ⇓P P 15 11 22.8 +0.3
baz=91
E14A **Clinton** 91.18 38 ⇑P P 15 11 23.8 +1.4
baz=91
Y27A **Causey** 91.19 53 ⇓P P 15 11 23.3 +0.6
baz=91,SNR=12
SMCO **Snowmass** 91.20 47 eP P 15 11 24.3 +1.2
comp=Z,15nm,1.3s
L19A **Farson** 91.22 43 ⇓P P 15 11 23.8 +1.1
baz=91
N20A **Spence Gulch,** 91.23 45 ⇓P P 15 11 23.8 +0.9
baz=91
IMW **Indian Meadow** 91.23 41 eP P 15 11 23.5 +0.6
comp=Z,16nm,1.4s
LCO **Las Campanas** 91.25 123 eP P 15 11 21.6 -1.9
comp=Z,56nm,1.6s
LCO **Las Campanas** 91.25 123 P P 15 11 24.1 +0.7
baz=91,SNR=4.6
229A **Bryant Ranch,** 91.27 55 ⇓P P 15 11 24.1 +1.0
baz=91
LOHW **Long Hollow** 91.28 42 eP P 15 11 22.8 -0.2
comp=Z,15nm,1.5s
MENT **Mentasta** 91.35 15 eP P 15 11 20.0 -2.7
531A **Rocksprings** 91.37 57 ⇑P P 15 11 24.2 +0.6
baz=92,SNR=10
J18A **Kendall Valley** 91.41 42 ⇑P P 15 11 24.8 +1.1
baz=92,SNR=24
BW06 **Boulder Array** 91.45 43 ⇑P P 15 11 24.8 +0.9
baz=92,SNR=9.3
PDAR **Pinedale Array** 91.45 43 P P 15 11 24.4 +0.5
PDAR **Pinedale Array** 91.45 43 P P 15 11 24.4 +0.5
comp=Z,4.3nm,0.9s,baz=209,slow=2.9,SNR=30
QLMT **Earthquake Lak** 91.46 40 eP P 15 11 24.6 +0.8
comp=Z,2.4nm,1.2s
R23A **Moffat** 91.47 48 ⇑P P 15 11 25.0 +0.9
baz=92
XAN **Xi'an** 91.48 307 P P 15 11 25.2 +1.2
H16A **Russell Place,** 91.50 41 ⇑P P 15 11 25.7 +1.7
baz=92,SNR=9.8
MSTX **Muleshoe** 91.52 53 ⇑P P 15 11 24.8 +0.6
baz=92,SNR=5.3
U25A **Circle Dot Ran** 91.54 50 ⇓P P 15 11 25.2 +0.8
baz=92
D14A **Greenough** 91.56 38 ⇓P P 15 11 26.9 +2.7
baz=92
CHMT **Chamberlain Mo** 91.61 38 eP P 15 11 24.8 +0.3
comp=Z,5.9nm,1.4s
X27A **F and S Farms,** 91.61 52 ⇑P P 15 11 25.5 +0.8
baz=92
YMR **Madison River** 91.65 41 eP P 15 11 24.4 -0.3
comp=Z,25nm,1.4s
H17A **Grant Village** 91.73 41 ⇓P P 15 11 27.2 +2.1
baz=92
230A **Sterling City** 91.75 56 ⇑P P 15 11 25.9 +0.6
baz=92
CFAA **Coronel Fontan** 91.80 126 LR LR 15 42 18.1
comp=Z,32nm,20.7s,baz=311,slow=29
I18A **Diamond G Ranc** 91.80 42 ⇓P P 15 11 26.4 +0.9
baz=92
BOZ **Bozeman (W)** 91.81 40 eP P 15 11 24.4 -0.9
BOZ pmax pmax
comp=Z,8.0nm,1.1s
BOZ **Bozeman (W)** 91.81 40 eP P 15 11 24.4 -0.9
comp=Z,7.7nm,1.1s
BOZ **Bozeman (W)** 91.81 40 ⇑P P 15 11 26.4 +1.1
baz=92,SNR=8.7
L20A **Wamsutter** 91.81 44 ⇓P P 15 11 27.0 +1.5
baz=92
W27A **Bowe Ranch, En** 91.84 52 ⇓P P 15 11 26.3 +0.6
baz=92
532A **Rocksprings** 91.85 58 ⇓P P 15 11 26.4 +0.6
baz=92,SNR=11
DOT **Dot Lake** 91.89 14 eP P 15 11 23.5 -1.6
comp=Z,6.5nm,0.9s
T25A **Trinidad** 91.91 50 ⇑P P 15 11 26.9 +0.8
baz=92
K19A **Absolon Red Bu** 91.92 43 ⇓P P 15 11 26.7 +0.7
baz=92
LKWY **Lake** 91.93 41 eP P 15 11 26.2 +0.1
LKWY pmax pmax
comp=Z,14nm,1.4s
LKWY **Lake** 91.93 41 eP P 15 11 26.1 +0.1
comp=Z,14nm,1.4s
Z29A **Hungry Hill Ra** 91.96 54 ⇑P P 15 11 26.8 +0.6
baz=92,SNR=8.8
R24A **Sanders Place,** 91.97 48 ⇑P P 15 11 27.7 +1.3
baz=92
O22A **Kremmling** 92.00 46 ⇑P P 15 11 27.4 +0.9
baz=92
U26A **Atchley Ranch,** 92.01 51 ⇑P P 15 11 27.3 +0.8
baz=92,SNR=5.4
J19A **Crowheart** 92.03 43 ⇓P P 15 11 27.2 +0.7
baz=92,SNR=7.6
KMI **Kunming** 92.13 297 P P 15 11 29.3 +1.9
KMI pP pP 15 11 55.2 +1.5
KMI sP sP 15 12 07.3 +3.0
KMI PP PP 15 15 14.1 +5.1
KMI S ScS 15 22 23.4 -0.8
KMI SS SS 15 28 35.9 +1.6
KMI pmax pmax
comp=Z,10.0nm,1.2s
KMI pmax pmax
comp=Z,100nm,6.9s
KMI LR LR
comp=N,88nm,29.6s
KMI LR LR
comp=E,130nm,25.4s
KMI LR LR
comp=Z,180nm,38.7s
S25A **Robets Cordova** 92.15 49 ⇓P P 15 11 28.0 +0.9
baz=92
COLA **College** 92.20 12 eP P 15 11 25.7 -0.7
COLA pmax pmax
comp=Z,16nm,1.3s
COLA **College** 92.20 12 eP P 15 11 25.7 -0.7
comp=Z,16nm,1.3s
Y29A **Porterfield Fa** 92.27 54 ⇑P P 15 11 28.4 +0.7
baz=92,SNR=6.6

432A **Menard** 92.28 57 ⇑P P 15 11 28.1 +0.4
baz=92,SNR=5.7
231A **Bronte** 92.37 56 ⇓P P 15 11 28.1 0.0
baz=92,SNR=15
Z30A **Sanderson Ranc** 92.40 54 ⇑P P 15 11 28.5 +0.2
baz=93,SNR=9.7
CMAR **Chiang Mai Arr** 92.43 289 P P 15 11 30.5 +1.9
CMAR **Chiang Mai Arr** 92.43 289 P P 15 11 30.5 +1.9
comp=Z,7.1nm,0.9s,baz=137,slow=3.4,SNR=30
O23A **Lake Granby, G** 92.43 46 ⇓P P 15 11 30.0 +1.4
baz=93
I19A **Meeteetse** 92.48 42 ⇑P P 15 11 29.6 +1.0
baz=93,SNR=6.5
X29A **Tulia** 92.53 53 ⇓P P 15 11 29.9 +1.1
baz=93
332A **Millersview** 92.55 57 ⇑P P 15 11 29.3 +0.3
baz=93,SNR=14
CHTO **Chiang Mai** 92.58 289 eP P 15 11 27.9 -1.4
CHTO pmax pmax
comp=Z,12nm,1.0s
CHTO **Chiang Mai** 92.58 289 eP P 15 11 27.9 -1.4
comp=Z,12nm,1.0s
J20A **Shoshoni** 92.68 43 ⇓P P 15 11 30.3 +0.9
baz=93,SNR=6.2
TRQA **Tornquist** 92.69 134 eP P 15 11 27.1 -2.5
comp=Z,10nm,1.6s
AMTX **Amarillo** 92.75 53 eP P 15 11 29.2 -0.7
comp=Z,7.9nm,0.9s
AMTX **Amarillo** 92.75 53 ⇓P P 15 11 30.4 +0.5
baz=93
S26A **Kim** 92.80 50 ⇑P P 15 11 31.1 +1.0
baz=93
G18A **Lazy EL Ranch,** 92.83 41 ⇑P P 15 11 31.6 +1.5
baz=93
232A **Coleman** 92.86 56 ⇑P P 15 11 30.6 +0.2
baz=93,SNR=13
I20A **Worland** 92.97 42 ⇑P P 15 11 31.9 +1.2
baz=93
HHC **Hu-ho-hao-te** 93.02 314 eP P 15 11 32.5 +1.5
HHC pP pP 15 11 58.7 +1.4
HHC sP sP 15 12 09.4 +1.5
HHC PP PP 15 15 18.5 +2.9
HHC SKS SKSac 15 21 55.8 -0.1
HHC S S 15 22 26.7 -2.3
HHC sS sS 15 23 13.1 -1.4
HHC pmax pmax
comp=Z,28nm,1.0s
HHC pmax pmax
comp=Z,210nm,9.5s
HHC LR LR
comp=N,300nm,15.5s
HHC LR LR
comp=E,330nm,17.8s
HHC LR LR
comp=Z,260nm,18.2s
Z31A **Sharp Cattle R** 93.14 55 ⇑P P 15 11 32.3 +0.6
baz=93,SNR=9.7
R26A **Arlington** 93.14 49 ⇓P P 15 11 32.4 +0.7
baz=93
ABTX **Abilene, Hawle** 93.20 56 ⇓P P 15 11 32.7 +0.8
baz=93
Y31A **Rekieta Farm,** 93.35 54 ⇓P P 15 11 33.1 +0.5
baz=94,SNR=7.3
BILL **Bilibino** 93.40 354 eP P 15 11 32.4 +0.5
BILL i 15 11 55.8
BILL pmax pmax
comp=Z,16nm,1.2s
BILL **Bilibino** 93.40 354 eP P 15 11 30.7 -1.2
comp=Z,10nm,0.8s
BILL epP pP 15 11 55.1 -3.2
I21A **Big Trails, Te** 93.41 43 ⇓P P 15 11 33.6 +0.8
baz=94,SNR=6.8
EGAK **Eagle** 93.52 15 eP P 15 11 32.4 -0.1
comp=Z,7.7nm,1.1s
L23A **Garrett** 93.54 45 ⇓P P 15 11 34.3 +0.8
baz=94
G20A **Bridger** 93.59 41 ⇓P P 15 11 34.6 +1.0
baz=94
Z32A **Haskell** 93.63 55 ⇑P P 15 11 34.5 +0.6
baz=94,SNR=13
J22A **Midwest** 93.71 44 ⇑P P 15 11 35.1 +1.0
baz=94
CD2 **Chengdu** 93.89 302 P P 15 11 36.5 +1.3
CD2 pP pP 15 12 03.3 +1.8
CD2 sP sP 15 12 14.2 +2.1
CD2 PP PP 15 15 26.1 +3.6
CD2 SKS SKSac 15 22 00.4 -0.6
CD2 S S 15 22 34.9 -2.0
CD2 sS sS 15 23 21.5 -1.0
CD2 SS SS 15 29 00.4 +1.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,260nm,6.6s
CD2 LR LR
comp=N,290nm,26.4s
CD2 LR LR
comp=E,270nm,23.0s
CD2 LR LR
comp=Z,420nm,26.9s
I22A **9 Mile Ranch,** 93.95 43 ⇑P P 15 11 36.3 +1.1
baz=94
Y32A **R-V Farms, Ver** 93.98 54 ⇑P P 15 11 36.5 +1.1
baz=94,SNR=5.1
W31A **Holland Ranch,** 94.15 53 ⇑P P 15 11 36.9 +0.6
baz=94
H24A **Dirks Ranch, A** 95.58 43 ⇓P P 15 11 43.5 +0.9
baz=96
RSSD **Black Hills** 95.60 44 eP P 15 11 41.3 -1.6
RSSD pmax pmax
comp=Z,8.0nm,1.1s
RSSD **Black Hills** 95.60 44 eP P 15 11 41.3 -1.6
comp=Z,7.5nm,1.1s
LZH **Lanzhou** 96.12 307 eP P 15 11 50.2 +4.8
LZH pP pP 15 12 09.5 -2.2
LZH sP sP 15 12 18.5 -3.8
LZH pmax pmax
comp=Z,14nm,1.0s
YAK **Yakutsk** 96.44 338 eP P 15 11 45.0 -0.9
YAK pmax pmax
comp=Z,30nm,0.8s
LPAZ **La Paz** 99.53 113 P Pdif 15 12 03.5 +1.7
LPAZ **La Paz** 99.53 113 P Pdif 15 12 03.5 +1.7
comp=Z,4.9nm,1.2s,baz=248,slow=2.3,SNR=7.2
LPAZ LR LR 15 51 13.5
comp=Z,106nm,18.4s,baz=312,slow=32
SONM **Songino Array** 99.60 318 P Pdif 15 12 00.5 -0.2
SONM PP PP 15 15 59.9 -6.3
SONM PKKPbc PKKPbc 15 28 22.9 -0.9
SONM **Songino Array** 99.60 318 P Pdif 15 12 00.5 -0.2
comp=Z,0.2nm,0.5s,baz=100,slow=4.4,SNR=3.8
SONM PP PP 15 15 59.9 -6.3
comp=Z,1.6nm,1.1s,baz=126,slow=6.5,SNR=4.9
SONM PKKPbc PKKPbc 15 28 22.9 -0.9
comp=Z,0.7nm,0.7s,baz=258,slow=3.3,SNR=6.3
SONM LR LR 15 51 31.9
comp=Z,147nm,19.3s,baz=113,slow=32
YKA **Yellowknife Ar** 100.02 25 P Pdif 15 12 03.0 +1.1
YKA PP PP 15 16 08.9 +0.2
YKA PKKPbc PKKPbc 15 28 19.9 -3.0
YKA **Yellowknife Ar** 100.02 25 P Pdif 15 12 03.0 +1.1
comp=Z,0.2nm,0.8s,baz=246,slow=4.4,SNR=5.9
YKA PP PP 15 16 08.9 +0.2
comp=Z,0.1nm,0.7s,baz=240,slow=8.0,SNR=4.0
YKA PKKPbc PKKPbc 15 28 19.9 -3.0
comp=Z,0.4nm,0.8s,baz=44,slow=2.9,SNR=8.6
GTA **Gaotai** 100.41 309 eP Pdif 15 12 05.5 +1.0
GTA pP pP 15 12 31.7 +0.7
GTA sP sP 15 12 41.8 +0.3
GTA PP PP 15 16 15.0 +2.5
GTA SKS SKSac 15 22 34.2 -0.2
GTA S Sdif 15 23 29.7 -2.7
GTA sS sS 15 24 14.9 -3.3
GTA SS SS 15 30 31.1 +0.5
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,140nm,5.2s
GTA LR LR
comp=N,90nm,19.5s
GTA LR LR
comp=E,130nm,20.9s
GTA LR LR
comp=Z,130nm,19.5s
ZALV **Zalesovo Beam** 114.41 320 PKIKP PKPdf 15 16 55.6 -0.7
ZALV **Zalesovo Beam** 114.41 320 PKP PKPdf 15 16 55.6 -0.7

ZALV **Zalesovo Beam** 114.41 320 PKP PKPdf 15 16 55.6 -0.7
comp=Z,1.4nm,0.6s,baz=175,slow=1.2,SNR=7.4
MK31 **Makanchi Array** 114.80 312 ePKIKP PKPdf 15 16 55.1 -2.3
MK31 **Makanchi Array** 114.80 312 ePKPdf PKPdf 15 16 55.1 -2.3
MKAR **Makanchi Array** 114.80 312 PKIKP PKPdf 15 16 56.6 -0.8
MKAR 15 27 35.0
MKAR **Makanchi Array** 114.80 312 PKP PKPdf 15 16 56.6 -0.8
MKAR PKKPbc **PKKPbc** 15 27 35.0 -0.8
MKAR **Makanchi Array** 114.80 312 PKP PKPdf 15 16 56.6 -0.8
comp=Z,2.0nm,0.7s,baz=76,slow=1.7,SNR=20
MKAR PKKPbc **PKKPbc** 15 27 35.0 -0.8
comp=Z,1.8nm,0.7s,baz=260,slow=4.8,SNR=4.5
KURK **Kurchatov** 117.77 316⇑ iPKIKP **PKPdf** 15 17 02.6 -0.3
KURK pmax pmax
comp=Z,5.0nm,1.0s
KURK **Kurchatov** 117.77 316 ePKPdf **PKPdf** 15 17 00.6 -2.3
KSH **Kashi** 118.07 303 ePKP **PKPdf** 15 17 05.0 +1.0
KSH esPKP 15 17 43.7
KSH ePKS **PKSdf** 15 20 40.5 -0.3
KSH eSKS **SKSdf** 15 24 06.3 -0.9
KSH AMB AMB
comp=Z,330nm,5.6s
KSH LR LR
comp=N,110nm,4.6s
KSH LR LR
comp=E,170nm,6.1s
KSH LR LR
comp=Z,240nm,5.2s
TKM2 **Tokmak 2** 118.89 307 ePKIKP **PKPdf** 15 17 03.3 -2.3
TKM2 **Tokmak 2** 118.89 307 ePKPdf **PKPdf** 15 17 03.3 -2.3
AAK **Ala-Archa** 119.65 306⇑ iPKIKP **PKPdf** 15 17 06.7 -0.3
AAK pmax pmax
comp=Z,6.0nm,1.0s
AAK **Ala-Archa** 119.65 306 ePKPdf **PKPdf** 15 17 05.1 -2.0
EKS2 **Erkin-Say** 120.18 306 ePKIKP **PKPdf** 15 17 07.6 -0.4
EKS2 **Erkin-Say** 120.18 306 ePKPdf **PKPdf** 15 17 07.5 -0.4
KKAR **Karatay Array** 122.61 307 ePKIKP **PKPdf** 15 17 09.7 -2.8
KKAR **Karatay Array** 122.61 307 ePKPdf **PKPdf** 15 17 09.7 -2.8
KBL **Kabul** 122.71 296 ePKIKP **PKPdf** 15 17 12.3 -0.9
KBL **Kabul** 122.71 296 ePKPdf **PKPdf** 15 17 12.3 -0.9
BOSA **Boshof** 122.74 203 PKP **PKPdf** 15 17 16.1 +2.7
BOSA **Boshof** 122.74 203 PKP **PKPdf** 15 17 16.1 +2.7
comp=Z,3.0nm,0.7s,baz=170,slow=9.2,SNR=4.6
BRVK **Borovoye** 123.01 318 ePKIKP **PKPdf** 15 17 10.5 -2.4
BRVK **Borovoye** 123.01 318 ePKPdf **PKPdf** 15 17 10.5 -2.4
DAG **Danmarks Havn** 126.91 6 i PKIKP PKPdf 15 17 28.3 +8.6
DAG **Danmarks Havn** 126.91 6 i P PKPdf 15 17 28.3 +8.6
SUMG **Summit** 127.09 14 ePKIKP **PKPdf** 15 17 20.2 -0.5
SUMG **Summit** 127.09 14 ePKPdf **PKPdf** 15 17 20.2 -0.5
SUMG **Summit** 127.09 14 i P **PKPdf** 15 17 22.3 +1.6
comp=Z,4.9nm,1.1s
SVE **Sverdlovsk** 128.04 324 ePKIKP **PKPdf** 15 17 22.9 +0.5
SOKR **Solikamsk** 129.24 328d iPKIKP **PKPdf** 15 17 25.6 +1.1
SOKR pmax pmax
comp=Z,10.0nm,1.4s
ARU **Arti** 129.25 324 i PKIKP **PKPdf** 15 17 25.1 +0.4
ARU 15 19 33.8
ARU 15 24 23.9
ARU SP SP 15 29 32.0 -0.7
ARU SS **SS** 15 36 41.7 -5.9
ABKAR **Akbulak array** 129.81 314 ePKPdf **PKPdf** 15 17 25.7 -0.3
KEV **Kevo** 132.86 349 ePKIKP PKPdf 15 17 39.3 +8.1
KEV **Kevo** 132.86 349 epkp PKPdf 15 17 39.3 +8.1
ARCES **ARCESS Array B** 133.31 349 PKPpre PKPpre 15 17 25.0
ARCES PKP **PKPdf** 15 17 32.0 0.0
ARCES SKP 15 20 56.4
ARCES **ARCESS Array B** 133.31 349 PKhKP PKPpre 15 17 25.0
comp=Z,2.0nm,1.0s,baz=120,slow=1.6,SNR=5.0
ARCES PKP **PKPdf** 15 17 32.0 0.0
comp=Z,4.7nm,0.8s,baz=336,slow=2.7,SNR=11
ARCES SKP 15 20 56.4
comp=Z,5.4nm,1.0s,baz=22,slow=5.0,SNR=3.7
APA **Apatity** 133.33 345⇑ iPKIKP PKPdf 15 17 41.6 +9.5
JOF **Joensuu** 137.50 341 ePKHKP PKPpre 15 17 31.4
JOF pmax pmax
comp=Z,5.0nm,0.7s
JOF **Joensuu** 137.50 341 epkp PKPpre 15 17 31.4
comp=Z,4.6nm,0.7s
KAF **Kangasniemi** 139.53 343 ePKHKP PKPpre 15 17 36.0
KAF **Kangasniemi** 139.53 343 epkp PKPpre 15 17 36.0
FIA1 **FINESS Array S** 140.15 343 ePKPdf **PKPdf** 15 17 43.5 -1.4
FINES **FINESS Array B** 140.16 343 PKPpre PKPpre 15 17 38.2
FINES SKPbc **SKPbc** 15 21 13.0 +1.0
FINES **FINESS Array B** 140.16 343 PKhKP PKPpre 15 17 38.2
comp=Z,2.2nm,0.7s,baz=41,slow=3.0,SNR=15
FINES SKPbc **SKPbc** 15 21 13.0 +1.0
comp=Z,5.4nm,0.9s,baz=14,slow=3.9,SNR=5.5
VRHR **Novokhopersk** 140.51 322 ePKHKP PKPpre 15 17 39.0
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,4.0nm,0.6s
VRHR pmax pmax
comp=Z,7.0nm,0.6s
OBN **Obninsk** 140.96 330 i PKIKP **PKPdf** 15 17 49.1 +2.6
OBN pmax pmax
comp=Z,9.0nm,1.6s
VSR **Storozhevoye** 141.81 323 ePKIKP **PKPdf** 15 17 46.5 -1.7
VSR pmax pmax
comp=N,2.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
ZEI **Tsey** 142.02 308 i PKIKP **PKPdf** 15 17 44.7 -4.5
ZEI pmax pmax
comp=Z,6.0nm,0.9s
VSU **Vasula** 142.41 340 i PKIKP **PKPdf** 15 17 52.0 +3.0
KBZ **Khabaz** 142.47 310 PKIKP PKPpre 15 17 46.7
KBZ **Khabaz** 142.47 310 PKPpre PKPpre 15 17 46.6
KBZ **Khabaz** 142.47 310 PKhKP PKPpre 15 17 46.6
comp=Z,2.7nm,0.8s,baz=146,slow=2.8,SNR=6.7
KIV **Kislovodsk** 142.55 311 i PKIKP **PKPdf** 15 17 53.4 +3.5
KIV pmax pmax
comp=Z,5.0nm,0.8s
CUKT **Cukurca** 143.34 300 eP PKPbc 15 17 49.7 +0.7
NB2 **NORSAR Subarra** 143.35 353 PKP PKPbc 15 17 48.5 +0.4
comp=Z,5.3nm,0.9s,baz=10,slow=3.2
NOA **NORSAR Array B** 143.35 353 PKP PKPbc 15 17 48.8 +0.6
NOA **NORSAR Array B** 143.35 353 PKP PKPbc 15 17 48.8 +0.6
comp=Z,6.3nm,0.9s,baz=16,slow=5.0,SNR=13
NAO01 **NORSAR Array S** 143.58 354 ePKPdf PKPab 15 17 48.5 +0.7
ARTV **Artvin** 143.85 307 i P PKPbc 15 17 51.2 +0.7
DAGI **Agillar** 143.89 306 i P **PKPdf** 15 17 51.8 -0.7
BCA **Borcka** 144.01 307 eP **PKPdf** 15 17 51.8 -0.7
DBAD **Bademkaya** 144.07 306 i P PKPbc 15 17 51.9 +0.9
ERZM **Erzurum** 144.58 305 i P **PKPdf** 15 17 54.1 +0.3
EZM **Erzurum** 144.58 305 eP **PKPdf** 15 17 54.3 +0.4
VRTB **Varto-Mus** 144.68 303 eP **PKPdf** 15 17 55.3 +1.4
SOC **Sochi** 144.71 311 ePKIKP **PKPdf** 15 17 56.5 +2.9
SOC pmax pmax
comp=Z,27nm,0.9s
IZAR **Zarasai** 144.72 337 eP **PKPdf** 15 17 53.1 -0.1
IZAR AMB AMB 15 17 54.6
comp=Z,12nm,1.0s
ISAL **Salakas** 144.91 337 eP **PKPdf** 15 17 53.9 +0.4
ISAL AMB AMB 15 17 56.4
comp=Z,27nm,1.1s
BNGL **BINGOL** 144.96 303 i P PKPbc 15 17 52.3 -1.6
IIGN **Ignalina** 145.05 337 eP **PKPdf** 15 17 54.3 +0.5
IIGN AMB AMB 15 17 56.9
comp=Z,33nm,1.1s
MICGM **Minsk** 145.08 335⇑ iP **PKPbc** 15 17 52.0 -1.5
MNK **Minsk** 145.10 335⇑ iPKIKP **PKPbc** 15 17 52.0 -1.6
MNK pmax pmax
comp=Z,390nm,1.0s
NACGM **Naroch** 145.19 336 eP **PKPbc** 15 17 51.0 -2.9
BNGB **Bing¶ll** 145.31 303 eP **PKPab** 15 17 56.7 +1.5
BAYT **Ayd–ntepe-Bay** 145.37 306 eP **PKPab** 15 17 56.5 +1.1
MARD **Mardin** 145.56 300 i P **PKPab** 15 17 56.5 +0.3
KBSD **Kabsdagh** 145.80 300 eP **PKPbc** 15 17 56.5 +0.1
GUMT **Gumushane** 145.84 306 eP **PKPab** 15 17 58.0 +0.9
MZRK **Al-Mazaregh** 145.90 298 eP **PKPab** 15 17 59.6 +2.2
KELT **Kelkit** 146.09 306 i P **PKPab** 15 17 58.5 +0.3
EZC **Erzincan** 146.12 305 eP **PKPab** 15 17 59.2 +0.9
ESPY **Espiye-Giresun** 146.26 307 eP **PKPdf** 15 17 54.7 -1.7
PTK **Pertek** 146.31 303 eP **PKPab** 15 17 59.9 +0.8
SVRC **Sivrice-ELAZID** 146.49 303 eP **PKPab** 15 18 00.1 +0.3
GRSN **GIRESUNGRSN** 146.59 307 i P **PKPbc** 15 17 58.4 -0.3
ILIC **ilic-Erzincan** 146.78 305 eP **PKPbc** 15 18 00.1 +0.8
SUSE **Susehri** 146.85 306 i P **PKPab** 15 18 01.2 +0.1
KEMA **Kemaliye** 146.89 304 i P **PKPab** 15 18 00.8 -0.4
URFA **Urfa** 147.07 301 eP **PKPab** 15 18 01.4 -0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SUW	Suwalki	147.18	338	ePKIKP	PKPdf	15 17 57.9	+0.5
SUW	Suwalki	147.18	338	ePKPdf	PKPdf	15 17 57.9	+0.5
SUW	Suwalki	147.18	338	ePKP	PKPbc	15 18 00.4	+0.6
AKASG	Malin Array Be	147.20	329	PKP2	PKPbc	15 17 59.7	-0.3
AKASG	Malin Array Be	147.20	329	PKPbc	PKPbc	15 17 59.6	-0.3
AKASG	Malin Array Be	147.20	329	PKPbc	PKPbc	15 17 59.6	-0.3
	comp=Z,34nm,0.8s,baz=42,slow=4.0,SNR=71						
AK01	Malin Array Si	147.21	329	ePKPbc	PKPbc	15 18 00.5	+0.5
KIEV	Kiev	147.21	329	ePKIKP	PKPdf	15 17 57.2	-0.4
KIEV				e		15 17 59.8	
KIEV	Kiev	147.21	329	ePKPdf	PKPdf	15 17 57.2	-0.4
KIEV				ePKPbc	PKPbc	15 17 59.8	-0.2
AK02	Malin Array Si	147.24	329	ePKPdf	PKPdf	15 17 57.1	-0.5
AK02				ePKPbc	PKPbc	15 18 00.6	+0.5
AK02				ePKPab	PKiKP	15 18 03.2	+0.9
RSDY	Resadiye-TOKAT	147.43	307	eP	PKPab	15 18 03.1	-0.1
ATAB	Bozova	147.47	301	i P	PKPbc	15 18 02.3	+1.1
JHLN	Al Jahlan	147.70	298	eP	PKPbc	15 18 02.8	+0.9
SIM	Simferopol'	147.83	316	i PKP2	PKPbc	15 18 02.7	+0.8
SIM				pmax	pmax		
	comp=Z,113nm,0.8s						
DARE	Darende-Malaty	147.83	304	eP	PKPbc	15 18 03.3	+1.1
GZT	Gaziantep	148.06	301	i P	PKPbc	15 18 03.7	+0.7
MUD	Monsted U'grnd	148.07	354	i PKP2	PKPbc	15 18 02.7	+0.6
MUD				pmax	pmax		
	comp=Z,19nm,1.0s						
MUD	Monsted U'grnd	148.07	354	i P	PKPbc	15 18 02.7	+0.6
	comp=Z,19nm,1.0s						
KVT	Kavak	148.12	309	eP	PKPab	15 18 04.7	-1.3
GAZ	Gaziantep	148.38	301	eP	PKPbc	15 18 05.1	+1.4
COP	Copenhagen	148.39	350	i P	PKPbc	15 18 04.6	+1.6
	comp=Z,15nm,0.9s						
BSD	Bornholm Skovb	148.48	347	i PKP2	PKPbc	15 18 03.2	0.0
BSD				pmax	pmax		
	comp=Z,35nm,0.9s						
BSD	Bornholm Skovb	148.48	347	i P	PKPbc	15 18 03.2	0.0
	comp=Z,35nm,0.9s						
BSD				i		15 18 25.5	
KMRS	Kahramanmaras	148.54	302	eP	PKPbc	15 18 05.1	+1.0
SARI	SarD1z-Kayseri	148.68	304	eP	PKPbc	15 18 05.5	+0.9
LLD	Lille Linde	148.77	350	i PKP2	PKPbc	15 18 05.1	+1.2
LLD				pmax	pmax		
	comp=Z,45nm,1.0s						
LLD	Lille Linde	148.77	350	i P	PKPbc	15 18 05.1	+1.2
	comp=Z,45nm,0.9s						
ROOS	tl_alroos	148.87	295	eP	PKPbc	15 18 06.1	+1.0
BNN	Bunyan	148.98	305	eP	PKPbc	15 18 05.9	+0.6
ZALF	Zalf	148.99	293	eP	PKPab	15 18 08.8	-1.0
ESK	Eskdalemuir	149.18	7	i PKP2	PKPab	15 18 07.8	-1.9
ESK	Eskdalemuir	149.18	7	ePKPdf	PKPdf	15 18 01.8	+1.1
ESK				ePKPbc	PKiKP	15 18 06.4	+0.2
BZK	Bozkurt	149.22	311	eP	PKPbc	15 18 06.3	+0.8
CORM	Corum	149.45	308	eP	PKPbc	15 18 07.4	+1.1
YAYL	Yayladag	149.50	299	i P	PKPbc	15 18 07.1	+0.5
SALA	Sala	149.52	293	eP	PKPbc	15 18 08.0	+1.2
BIDA	Albida	149.52	297	eP	PKPbc	15 18 07.3	+0.7
CEYT	Ceyhan	149.55	301	eP	PKPbc	15 18 07.2	+0.7
GKP	Gorka Klasztor	149.63	343	ePKP	PKPbc	15 18 08.4	+2.2
GKP				ePKPbc	PKPab	15 18 13.0	+1.5
BEL	Belsk	149.79	338	ePKP	PKPbc	15 18 07.3	+0.7
BEL				ePKPbc	PKPab	15 18 14.6	+2.3
KIS	Kishinev	149.80	324	ePKP2	PKPbc	15 18 06.0	-0.8
KIS	Kishinev	149.80	324	eUNK	PKPbc	15 18 06.0	-0.8
BALT	Daday	149.81	311	i P	PKPbc	15 18 07.9	+0.6
CANT	Cankiri	150.01	309	eP	PKPbc	15 18 09.6	+2.0
LVV	L'vov	150.16	332	ePKIKP	PKPbc	15 18 07.1	-0.5
GULE	Gulek	150.23	302	i P	PKPbc	15 18 09.3	+0.9
BR131	Keskin Array S	150.32	308	ePKPbc	PKPbc	15 18 08.2	-0.3
BRTR	Keskin Array B	150.32	308	PKP	PKPdf	15 18 02.7	-0.5
BRTR				PKPbc	PKPbc	15 18 07.8	-0.7
BRTR	Keskin Array B	150.32	308	PKP	PKPdf	15 18 02.7	-0.5
	comp=Z,2.0nm,0.9s,baz=20,slow=4.6,SNR=5.2						
BRTR				PKPbc	PKPbc	15 18 07.8	-0.7
	comp=Z,11nm,0.8s,baz=132,slow=1.8,SNR=19						
BSEG	Bad Segeberg	150.41	351	ePKPbc	PKPab	15 18 17.5	+2.8
SAFT	Safranbolu	150.41	311	eP	PKPbc	15 18 09.0	+0.5
LEOM	Leova	150.44	323	⇑iP	PKPbc	15 18 10.0	+1.7
AFSR	Af¯ar-Bala (A	150.83	307	eP	PKPbc	15 18 10.2	+0.5
KWP	Kalwaria Pacla	150.86	333	⇓iP	PKPbc	15 18 10.0	+0.7
KWP	Kalwaria Pacla	150.86	333	ePKP	PKPbc	15 18 09.8	+0.5
KWP				ePKPbc	PKPab	15 18 17.1	+0.3
ANTO	Ankara	150.88	308	eP	PKPbc	15 18 10.3	+0.6
ANTO	Ankara	150.88	308	ePKIKP	PKPdf	15 18 04.5	+0.5
ANTO				e		15 18 17.3	
ANTO	Ankara	150.88	308	ePKPdf	PKPdf	15 18 04.5	+0.5
ANTO				ePKPbc	PKPbc	15 18 10.0	+0.3
ANTO				ePKPab	PKPab	15 18 17.3	-0.1
LOD	Lodumlu	150.89	308	eP	PKPbc	15 18 10.5	+0.7
TLCR		150.89	321	⇑iP	PKPbc	15 18 09.6	+0.2
RUE	Ruedersdorf	151.19	346	ePKPbc	PKPab	15 18 18.8	+0.8
RUE	Ruedersdorf	151.19	346	ePKPbc	PKPbc	15 18 10.6	+0.7
RUE				ePKPab	PKPab	15 18 18.6	+0.6
BUR08	Bucovina Ar. S	151.22	328	ePKPbc	PKPbc	15 18 11.1	+0.8
BUR08				ePKPab	PKPab	15 18 18.5	-0.1
BURAR	Bucovina Array	151.24	328	⇓iP	PKPbc	15 18 11.9	+1.6
TESR	Tescani	151.26	325	⇑iP	PKPbc	15 18 10.5	+0.2
CFR	Carcaliu	151.28	321	⇓iP	PKPbc	15 18 10.7	+0.4
OJC	Ojcow	151.49	337	i PKIKP	PKPbc	15 18 11.1	+0.4
OJC	Ojcow	151.49	337	ePKiKP	PKPbc	15 18 11.1	+0.4
OJC				ePKPab	PKPab	15 18 18.7	-0.7
TIRR	Tirgusor	151.55	320	⇑iP	PKPbc	15 18 11.5	+0.5
KOLS	Kolonicke sedl	151.58	333	ePKIKP	PKPbc	15 18 10.5	-0.5
KOLS	Kolonicke sedl	151.58	333	ePKP	PKPbc	15 18 10.5	-0.5
VRI	Vrincioaia	151.64	324	⇑iP	PKPbc	15 18 11.5	+0.3
PLOR	Plostina	151.69	324	⇓iP	PKPbc	15 18 12.6	+1.2
LFK	Lefkose	151.71	299	eP	PKPbc	15 18 12.6	+0.8
MDUB	Mudurnu	151.76	310	eP	PKPbc	15 18 12.0	+0.2
LADK	Ladik-KONYA	151.78	305	eP	PKPbc	15 18 11.6	-0.3
UZH	Uzhgorod	151.81	332	ePKIKP	PKPbc	15 18 13.4	+2.0
UZH				e		15 18 18.8	
HENT	Hendek	151.81	311	i P	PKPdf	15 18 08.6	+3.3
NRDL	Niedersach Rie	151.84	351	ePKPbc	PKPab	15 18 20.4	-0.2
ERMK	Ermenek	151.85	302	i P	PKPbc	15 18 13.1	+0.9
KIZT	Kizilcal	151.90	307	eP	PKPbc	15 18 12.6	+0.4
CRVS	Cervenica-Dubn	151.94	334	ePKIKP	PKPbc	15 18 10.7	-1.1
CRVS	Cervenica-Dubn	151.94	334	ePKP	PKPbc	15 18 10.7	-1.1
CSS	Prodhromos	151.94	298	eP	PKPbc	15 18 12.3	+0.1
CSS	Prodhromos	151.94	298	ePKPdf	PKPdf	15 18 04.3	-1.4
CSS				ePKPbc	PKPbc	15 18 12.1	-0.1
NIE	Niedzica	151.97	336	i PKIKP	PKPbc	15 18 12.7	+0.8
NIE	Niedzica	151.97	336	ePKiKP	PKPbc	15 18 12.7	+0.8
NIE				ePKPab	PKPab	15 18 20.7	-0.8
BMR	Baia Mare	152.00	330	⇑iP	PKPab	15 18 19.8	-1.8
KSP	Ksiaz	152.07	342	ePKIKP	PKPbc	15 18 12.6	+0.6
KSP	Ksiaz	152.07	342	ePKP	PKPbc	15 18 12.8	+0.8
KSP				ePKPbc	PKPab	15 18 20.8	-1.0
TRPA	Tarpa	152.09	331	⇑iP	PKPbc	15 18 12.8	+0.7
TRPA	Tarpa	152.09	331	ePKPdf	PKPbc	15 18 12.7	+0.7
ISR	Istrita	152.21	323	⇓iP	PKPbc	15 18 13.9	+1.3
DOPR	Dopca	152.28	325	⇑iP	PKPbc	15 18 13.7	+1.0
MLR	Muntele Rosu	152.30	324	⇑iP	PKPbc	15 18 13.1	+0.2
OKC	Ostrava-Krasne	152.38	339	ePKIKP	PKPbc	15 18 13.8	+1.1
OKC				e		15 18 20.9	
OKC	Ostrava-Krasne	152.38	339	⇑ePKP	PKPbc	15 18 13.8	+1.1
OKC				ePKPAB	PKPab	15 18 20.9	-2.2
OKC				epPKP	pPKPdf	15 18 30.0	-3.3
CLZ	Clausthal	152.43	350	ePKPbc	PKPab	15 18 22.1	-1.2
UPC	Upice	152.45	342	ePKIKP	PKPbc	15 18 13.7	+0.8
UPC				e		15 18 21.7	
UPC				e		15 18 38.6	
UPC	Upice	152.45	342	⇑ePKP	PKPbc	15 18 13.7	+0.8
UPC				ePKPAB	PKPab	15 18 21.7	-1.7
UPC				ex	x	15 18 25.9	
UPC				epPKP	pPKPdf	15 18 38.6	+5.2
CLL	Collm	152.46	346	ePKIKP	PKPdf	15 18 06.0	+0.1
CLL				i		15 18 21.6	
CLL				e		15 18 37.0	
CLL				pmax	pmax		
	comp=Z,79nm,0.9s						
CLL				pmax	pmax		
	comp=Z,23nm,0.9s						
CLL	Collm	152.46	346	ePKPbc	PKPab	15 18 21.5	-1.8
CLL	Collm	152.46	346	ePKPdf	PKPdf	15 18 06.0	+0.1
CLL				ePKPbc	PKPbc	15 18 13.0	+0.2
	comp=Z,23nm,0.9s						
CLL				⇓iPKPab	PKPab	15 18 21.6	-1.8
	comp=Z,95nm,0.9s						
CLL				epPKPbc	pPKPbc	15 18 37.0	-3.2
CLL				epPKPab	pPKPab	15 18 47.0	-2.9
DPC	Dobruska-Polom	152.50	341	ePKIKP	PKPbc	15 18 14.0	+1.0
DPC				e		15 18 21.9	
DPC	Dobruska-Polom	152.50	341	⇑ePKP	PKPbc	15 18 14.0	+1.0
DPC				ePKPAB	PKPab	15 18 21.9	-1.8
DPC				ex	x	15 18 26.0	
BORA	Eskisehir	152.52	310	i P	PKPbc	15 18 13.3	-0.2
KRLC	Kraliky	152.61	341	ePKPAB	PKPab	15 18 21.9	-2.2
MORC	Moravsky Berou	152.63	339	ePKIKP	PKPbc	15 18 13.5	+0.1
MORC	Moravsky Berou	152.63	339	ePKPbc	PKPbc	15 18 13.5	+0.1
MORC	Moravsky Berou	152.63	339	⇑iP	PKPab	15 18 21.5	-2.7
BRG	Berggiesshubel	152.65	345	ePKP	PKPdf	15 18 07.6	+1.4
	comp=Z,5.1nm,1.0s						
BRG				i		15 18 13.7	
	comp=Z,16nm,0.8s						
BRG				i		15 18 21.8	
	comp=Z,50nm,0.8s						
BRG				i pPKP	pPKPdf	15 18 39.5	+5.8
	comp=Z,38nm,1.5s						
BRG	Berggiesshubel	152.65	345	ePKIKP	PKPdf	15 18 07.6	+1.4
BRG				i		15 18 21.8	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,16nm,0.9s						
BRG				pmax	pmax		
	comp=Z,50nm,0.8s						
BRG	Berggiesshubel	152.65	345	ePKPbc	PKPab	15 18 22.2	-2.0
FBE	Freiberg	152.74	346	ePKPbc	PKPab	15 18 22.6	-2.0
ADVT	Abdulvahap	152.78	311	eP	PKPbc	15 18 14.1	+0.2
NEUB	Neuenburg	152.80	348	ePKPbc	PKPab	15 18 22.5	-2.3
VOIR		152.81	325	⇑iP	PKPbc	15 18 15.8	+1.9
PVCC	Panska Ves	152.82	344	ePKIKP	PKPbc	15 18 15.1	+1.4
PVCC				e		15 18 22.4	
PVCC	Panska Ves	152.82	344	⇑ePKP	PKPbc	15 18 15.1	+1.4
PVCC				ePKPAB	PKPab	15 18 22.4	-2.5
IZI	Iznik	153.00	311	eP	PKPbc	15 18 14.5	0.0
DRGR		153.01	329	⇓iP	PKPab	15 18 22.8	-3.2
ISP	Isparta	153.28	306	ePKIKP	PKPdf	15 18 07.8	+0.1
ISP	Isparta	153.28	306	ePKPdf	PKPdf	15 18 07.8	+0.1
ISP				ePKPbc	PKPbc	15 18 14.3	-1.0
VYHS	Vyhne	153.28	336	ePKIKP	PKPbc	15 18 15.3	+0.5
VYHS	Vyhne	153.28	336	ePKP	PKPbc	15 18 15.3	+0.5
PRU	Pruhonice	153.32	343	ePKIKP	PKPbc	15 18 15.3	+0.5
PRU				e		15 18 23.4	
PRU				e		15 18 52.0	
PRU	Pruhonice	153.32	343	⇑ePKP	PKPbc	15 18 15.3	+0.5
PRU				ePKPAB	PKPab	15 18 23.4	-3.6
PRU				ex	x	15 18 29.7	
PRU				epPKP	pPKPdf	15 18 37.4	+2.7
PRU				ex	x	15 18 52.0	
VRAC	Vranov	153.34	340	⇑iP	PKPab	15 18 23.8	-3.4
PSZ	Piszkesteto	153.35	334	⇓iP	PKPab	15 18 22.7	-4.7
PSZ	Piszkesteto	153.35	334	⇓ePKPdf	PKPbc	15 18 14.7	-0.3
MOX	Moxa	153.37	348	ePKPbc	PKPab	15 18 23.8	-3.5
TVSB	Tavsanli	153.40	310	eP	PKPbc	15 18 15.7	+0.2
PLN	Plauen	153.41	347	ePKPbc	PKPab	15 18 24.0	-3.4
TANN	Tannenbergstha	153.41	346	ePKPbc	PKPab	15 18 23.9	-3.6
TANN				ePKPab	PKPab	15 18 29.5	+2.0
WERD	Werda	153.42	347	ePKPbc	PKPab	15 18 23.8	-3.7
LOT	Lotru	153.46	326	⇑iP	PKPab	15 18 23.3	-4.7
UBBA	Unterbreizbach	153.48	350	ePKPbc	PKPab	15 18 23.9	-3.7
GUNZ	Gunzen	153.49	347	ePKPbc	PKPab	15 18 24.2	-3.6
GDZ	Gediz	153.54	309	i P	PKPbc	15 18 15.5	-0.3
WERN	Wernitzgruen	153.55	346	ePKPbc	PKPab	15 18 24.4	-3.7
WERN				ePKPab	PKPab	15 18 30.1	+2.0
NKC	Novy Kostel	153.59	346	ePKPAB	PKPab	15 18 24.3	-3.9
NKC				ex	x	15 18 30.1	
TREC	Trest	153.69	341	ePKPAB	PKPab	15 18 24.1	-4.6
TREC				ex	x	15 18 30.7	
KORT	Korkueli	153.69	304	i P	PKPbc	15 18 16.5	+0.3
DURS	Dursunbey	154.02	311	i P	PKPbc	15 18 16.6	-0.1
BUD	Budapest	154.05	335	⇑ePKPdf	PKPab	15 18 24.8	-5.4
ROTZ	Rotzenmuhle	154.08	346	ePKPbc	PKPab	15 18 25.4	-4.9
MEM	Membach	154.14	356	PKPbc	PKPab	15 18 26.3	-4.2
TNS	Taunus Mts	154.28	352	ePKPbc	PKPab	15 18 26.4	-4.8
SNF	Seneffe	154.33	358	PKPbc	PKPab	15 18 27.0	-4.3
GRF	Grafenberg Arr	154.35	348	ePKP2	PKPab	15 18 33.7	+2.2
GRF	Grafenberg Arr	154.35	348	ePKPbc	PKPab	15 18 25.8	-5.7
GRF				ePKPab	PKPab	15 18 33.7	+2.2
KHC	Kasperske Hory	154.35	344	ePKIKP	PKPdf	15 18 09.2	+0.5
KHC				e		15 18 40.4	
KHC	Kasperske Hory	154.35	344	ePKPdf	PKPdf	15 18 09.0	+0.3
KHC				ePKPbc	PKiKP	15 18 18.1	+1.0
KHC	Kasperske Hory	154.35	344	ePKPDF	PKPdf	15 18 09.2	+0.5
KHC				⇑ePKP	PKiKP	15 18 18.6	+1.5
KHC				ex	x	15 18 25.5	
KHC				ePKPAB	PKPab	15 18 33.4	+1.9
KHC				epPKP	pPKPdf	15 18 40.4	+4.1
KHC				ex	x	15 18 55.7	
PKSG		154.37	335	⇑ePKPdf	PKPab	15 18 25.3	-6.3
BCLA	Clavier	154.37	357	PKPbc	PKPab	15 18 26.7	-4.8
BZS	Buzias	154.40	329	⇑iP	PKPab	15 18 24.8	-7.0
DNZL	Cakiroluk	154.41	306	i P	PKPbc	15 18 18.3	+0.5
WET	Wettzell	154.51	345	ePKP2	PKPab	15 18 34.4	+2.2
WET	Wettzell	154.51	345	ePKPbc	PKPab	15 18 26.0	-6.2
WET				ePKPab	PKPab	15 18 34.4	+2.2
PKS6	Bocsa	154.55	333	⇑ePKPdf	PKPab	15 18 26.1	-6.3
GEC2	GERESS Array S	154.59	343	ePKP2	PKPab	15 18 34.7	+2.1
GEC2	GERESS Array S	154.59	343	ePKPbc	PKPab	15 18 26.2	-6.4
GEC2				ePKPab	PKPab	15 18 34.7	+2.1
GERES	GERESS Array B	154.59	343	PKP	PKPdf	15 18 08.6	-0.5
GERES				PKPab	PKPab	15 18 25.9	-6.7
GERES	GERESS Array B	154.59	343	PKP	PKPdf	15 18 08.6	-0.5
	comp=Z,0.5nm,0.3s,baz=11,slow=1.4,SNR=6.4						
GERES				PKPab	PKPab	15 18 25.9	-6.7
	comp=Z,8.0nm,0.8s,baz=48,slow=2.0,SNR=25						
PKST	T˜'s	154.61	336	⇓ePKPdf	PKPbc	15 18 25.3	+7.6
DOU	Dourbes	154.73	358	PKPbc	PKPab	15 18 27.9	-5.1
SOP	Sopron	154.77	338	e	PKPab	15 18 26.8	-6.5
CONA	Conrad Observa	154.79	339	⇑iPKPdf	PKPdf	15 18 08.5	-1.0
	comp=Z,30nm,0.9s,SNR=8.3						
WLF	Walferdange	155.07	355	PKPbc	PKPab	15 18 27.3	-7.2
WLF	Walferdange	155.07	355	ePKPbc	PKPab	15 18 28.6	-5.9
PKS9	Tamasi	155.07	334	⇓ePKPdf	PKPab	15 18 26.1	-8.5
PKSM	Moragy	155.24	333	⇓iP	PKPab	15 18 26.7	-8.6
PKSM	Moragy	155.24	333	⇑ePKPdf	PKPdf	15 18 09.3	-0.7
STU	Stuttgart	155.60	350	ePKPbc	PKPab	15 18 28.9	-7.9
VTS	Vitosha	155.68	322	⇑iP	PKPab	15 18 24.6	-13
FUR	Furstenfeldbru	155.79	346	ePKP2	PKPab	15 18 39.9	+2.2
FUR	Furstenfeldbru	155.79	346	ePKPbc	PKPab	15 18 29.1	-8.6
FUR				ePKPab	PKPab	15 18 39.9	+2.2
RJOB	Jochberg	155.84	344	ePKPab	PKPab	15 18 40.5	+2.5
BFO	Black Forest	156.16	351	ePKP2	PKPab	15 18 40.9	+1.7
BFO	Black Forest	156.16	351	ePKPbc	PKPab	15 18 30.8	-8.4
BFO				ePKPab	PKPab	15 18 40.9	+1.7
PERS	Pernice	156.17	339	i PKPdf	PKPab	15 18 29.4	-10
PERS				i PKPbc	PKPdf	15 18 40.0	+29
PERS				i PKPab	PKPab	15 18 53.2	+14
VAY	Valandovo	156.86	320	ePKP	PKPab	15 18 41.7	-0.8
LJU	Ljubljana	156.88	339	i PKPdf	PKPab	15 18 31.1	-11
LJU				i PKPbc	PKPdf	15 18 43.0	+31
LJU				i PKPab	PKPab	15 18 53.2	+11
BOJS	Bojanci	157.11	337	i PKPdf	PKPab	15 18 32.2	-11
BOJS				i PKPbc	PKPdf	15 18 44.5	+32
JAVS	Javornik	157.16	340	i PKPbc	PKPab	15 18 44.3	+0.5
DBIC	Dimbokro	160.44	156	PKPab	PKPab	15 18 57.5	-1.1
DBIC	Dimbokro	160.44	156	PKPab	PKPab	15 18 57.5	-1.1
	comp=Z,4.4nm,0.7s,baz=152,slow=2.5,SNR=5.4						
ESDC	Sonseca Array	164.06	20	PKP	PKPdf	15 18 20.1	-0.2
ESDC				PKPab	PKPab	15 19 15.6	+1.7
ESDC	Sonseca Array	164.06	20	PKP	PKPdf	15 18 20.1	-0.2
	comp=Z,0.1nm,0.3s,baz=305,slow=46,SNR=3.9						
ESDC				PKPab	PKPab	15 19 15.6	+1.7
	comp=Z,1.1nm,0.8s,baz=324,slow=3.3,SNR=6.3						
KEST	Kesra	167.83	335	PKPab	PKPab	15 19 31.6	+0.9
KEST	Kesra	167.83	335	PKPab	PKPab	15 19 31.6	+0.9
	comp=Z,6.3nm,0.8s,baz=300,slow=3.7,SNR=17						
TOA0	Torodi Ar. Sit	168.33	174	ePKPdf	PKPdf	15 18 23.1	-1.2
TOA0				ePP	PP	15 23 21.7	+0.9
TORD	Torodi Ar. Bea	168.33	174	PKP	PKPdf	15 18 23.2	-1.0
TORD				PKPab	PKPab	15 19 33.2	+0.1
TORD				PP	PP	15 23 22.1	+1.3
TORD	Torodi Ar. Bea	168.33	174	PKP	PKPdf	15 18 23.2	-1.0
	comp=Z,3.4nm,0.9s,baz=304,slow=0.5,SNR=20						
TORD				PKPab	PKPab	15 19 33.2	+0.1
	comp=Z,15nm,1.0s,baz=189,slow=4.3,SNR=28						
TORD				PP	PP	15 23 22.1	+1.3
	comp=Z,2.2nm,0.9s,baz=170,slow=5.2,SNR=5.1						

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*CSEM **02** 15:01:27.9±0.1, 38°.51N×27°.70E, h2km, MD3.0, Error ellipse: s-maj=4.0km s-min=3.1km az=110.0*
*ISK **02** 15:01:27.4, 38°.52N×27°.67E, h5km, MD2.8*
*DDA **02** 15:01:27.1, 38°.51N×27°.70E, h4km, MD3.0*
ISC 02 15:01:27.6±1.0**, 38°.53N**±0°.02×**27°.67E**±0°.03**, h12**km±9km**, n54, σ0ˢ65**/70**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.36	18	i P	Pg	15 01 34.4	-0.5
AKHS				i S	Sg	15 01 40.4	+0.7
AKHS	Akhisar	0.36	18	i P	Pg	15 01 34.4	-0.5
AKHS				i S	Sg	15 01 40.4	+0.7
AKS	Akhisar	0.36	18	ePG	Pg	15 01 34.6	-0.3
AKS				eSG	Sg	15 01 40.3	+0.6
AKS	Akhisar	0.36	18	ePg	Pg	15 01 34.6	-0.3
AKS				eSg	Sg	15 01 40.3	+0.6
BLCB	Balcova	0.52	253	ePG	Pb	15 01 38.0	-0.5
BLCB				eSG	Sg	15 01 45.4	+0.9
BLCB	Balcova	0.52	253	ePg	Pb	15 01 38.1	-0.5
BLCB				eSg	Sg	15 01 45.4	+0.9
URLA	Izmir	0.86	259	i P	Pb	15 01 44.4	-0.1
URLA				i S	Sn	15 01 58.4	+0.3
URLA	Izmir	0.86	259	i P	Pb	15 01 44.4	-0.1
URLA				i S	Sn	15 01 58.4	+0.3
AYDN	Tasoluk	0.89	169	eP	Pg	15 01 43.7	-1.0
AYDN				i S	Sb	15 01 56.1	-0.7
AYDN	Tasoluk	0.89	169	eP	Pg	15 01 43.7	-1.0
AYDN				i S	Sb	15 01 56.1	-0.7
DEMI	Demirci	0.96	58	i P	Pg	15 01 45.9	-0.2
DEMI				i S	Sb	15 01 58.8	-0.2
DEMI	Demirci	0.96	58	i P	Pg	15 01 45.9	-0.2
DEMI				i S	Sb	15 01 58.8	-0.2
BALB	Balikesir	1.12	8	ePN	Pn	15 01 49.5	+0.5
BALB	Balikesir	1.12	8	ePn	Pn	15 01 49.5	+0.5
BALY	Balya	1.21	358	i P	Pg	15 01 50.3	-0.5
BALY				i S	Sg	15 02 06.6	+0.1
BALY	Balya	1.21	358	i P	Pg	15 01 50.3	-0.5
BALY				i S	Sg	15 02 06.6	+0.1
DURS	Dursunbey	1.24	30	eP	Pg	15 01 50.6	-0.8
DURS				i S	Sg	15 02 07.1	-0.3
DURS	Dursunbey	1.24	30	eP	Pg	15 01 50.6	-0.8
DURS				i S	Sg	15 02 07.1	-0.3
DST	Dursunbey	1.30	34	ePN	Pb	15 01 53.1	+1.1
DST	Dursunbey	1.30	34	ePn	Pb	15 01 53.1	+1.1
DNZL	Cakiroluk	1.37	127	i P	Pg	15 01 54.8	+0.8
DNZL	Cakiroluk	1.37	127	i P	Pg	15 01 54.8	+0.8
KHAL	Karahalli	1.44	96	i P	Pg	15 01 54.7	-0.5
KHAL	Karahalli	1.44	96	i P	Pg	15 01 54.7	-0.5
YER	Yerkesik	1.48	161	ePN	Pb	15 01 54.4	-0.6
YER	Yerkesik	1.48	161	ePn	Pb	15 01 54.4	-0.6
BODT	Bodrum	1.50	191	ePN	Pb	15 01 54.9	-0.4
BODT	Bodrum	1.50	191	ePn	Pb	15 01 54.9	-0.4
GONE	Gonen-Balikesi	1.51	0	ePN	Pg	15 01 56.5	-0.1
GONE	Gonen-Balikesi	1.51	0	ePn	Pg	15 01 56.5	-0.1
GDZ	Gediz	1.52	68	i P	Pb	15 01 55.6	-0.1
GDZ	Gediz	1.52	68	i P	Pb	15 01 55.6	-0.1
EZN	Ezine	1.66	321	ePN	Pb	15 01 58.7	+0.6
EZN	Ezine	1.66	321	ePn	Pb	15 01 58.7	+0.6
TVSB	Tavsanli	1.67	56	ePN	Pb	15 01 58.6	+0.3
TVSB	Tavsanli	1.67	56	ePn	Pb	15 01 58.6	+0.3
ORLT	Orhaneli	1.79	32	ePN	Pb	15 02 00.6	+0.3
ORLT	Orhaneli	1.79	32	ePn	Pb	15 02 00.6	+0.3
DAT	Datca	1.80	182	ePN	Pn	15 01 59.4	+0.8
DAT	Datca	1.80	182	ePn	Pn	15 01 59.4	+0.8
KRBG	Karabiga-Canak	1.88	351	ePN	Pb	15 02 01.4	-0.4
KRBG	Karabiga-Canak	1.88	351	ePn	Pb	15 02 01.4	-0.4
MRMT	Marmara Adasi	2.07	358	ePN	Pb	15 02 04.2	-0.8
MRMT	Marmara Adasi	2.07	358	ePn	Pb	15 02 04.3	-0.8
GELI	Tayfur-Gelibol	2.08	334	ePN	Pb	15 02 04.7	-0.5
GELI	Tayfur-Gelibol	2.08	334	ePn	Pb	15 02 04.7	-0.5
ARMT	Armutlu	2.23	24	ePN	Pb	15 02 07.2	-0.6
ARMT	Armutlu	2.23	24	ePn	Pb	15 02 07.2	-0.6
IZI	Iznik	2.28	37	ePN	Pb	15 02 07.8	-0.9
IZI	Iznik	2.28	37	ePn	Pb	15 02 07.8	-0.9
ERIK	Erikli-Kesan	2.31	338	ePN	Pb	15 02 08.0	-1.2
ERIK	Erikli-Kesan	2.31	338	ePn	Pb	15 02 08.0	-1.2
CAVI	Cavuskoy	2.37	45	ePN	Pb	15 02 09.0	-1.2
CAVI	Cavuskoy	2.37	45	ePn	Pb	15 02 09.0	-1.2

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*CSEM **02** 15:29:43.0, 42°.48N×13°.30E, h10km, MD1.9/8, After ROM*
ROM 02 15:29:43.0±0.1**, 42°.48N×13°.30E, h10**km±1km**, Md1.9**/8**, Ml1.3**/6**, 2C, Error ellipse: s-maj=1.7km s-min=1.5km az=82.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.10	54	⇑iPg	Pg	15 29 46.2	+0.4
CAMP				Sg	Sg	15 29 48.3	+0.4
	90nm,0.5s						
CAMP	Campotosto	0.10	54	⇑iPg	Pg	15 29 46.2	+0.4
CAMP				Sg	Sg	15 29 48.3	+0.4
	90nm,0.5s						
AQU	L'Aquila	0.14	148	Pg	Pg	15 29 46.7	+0.3
AQU				Sg	Sg	15 29 49.3	+0.6
	114nm,0.6s						
AQU	L'Aquila	0.14	148	Pg	Pg	15 29 46.7	+0.3
AQU				Sg	Sg	15 29 49.3	+0.6
	114nm,0.6s						
LNSS	Leonessa	0.23	304	Pg	Pg	15 29 48.6	+0.7
LNSS				Sg	Sg	15 29 52.6	+1.4
	48nm,0.3s						
LNSS	Leonessa	0.23	304	Pg	Pg	15 29 48.6	+0.7
LNSS				Sg	Sg	15 29 52.6	+1.4
	48nm,0.3s						
FIAM	Fiamignano	0.25	213	Pg	Pg	15 29 48.5	+0.3
FIAM				Sg	Sg	15 29 52.7	+1.0
	33nm,0.3s						
FIAM	Fiamignano	0.25	213	Pg	Pg	15 29 48.5	+0.3
FIAM				Sg	Sg	15 29 52.7	+1.0
	33nm,0.3s						
TERO	Teramo	0.27	57	Pg	Pg	15 29 48.8	+0.2
TERO				Sg	Sg	15 29 53.0	+0.7
	27nm,0.2s						
TERO	Teramo	0.27	57	Pg	Pg	15 29 48.8	+0.2
TERO				Sg	Sg	15 29 53.0	+0.7
	27nm,0.2s						
FAGN	Fagnano	0.30	135	Pg	Pb	15 29 50.6	+0.1
FAGN				Sg	Sb	15 29 55.2	-0.4
	54nm,0.5s						
FAGN	Fagnano	0.30	135	Pg	Pb	15 29 50.6	+0.1
FAGN				Sg	Sb	15 29 55.2	-0.4
	54nm,0.5s						
NRCA	Norcia	0.38	339	Pg	Pg	15 29 51.0	+0.3
NRCA				Sg	Sb	15 29 57.2	-0.9
	3.0nm,0.2s						
NRCA	Norcia	0.38	339	Pg	Pg	15 29 51.0	+0.3
NRCA				Sg	Sb	15 29 57.2	-0.9
	3.0nm,0.2s						
VCEL	Villa Celiera	0.41	101	Pg	Pb	15 29 52.1	-0.4
VCEL				Sg	Sg	15 29 57.5	+0.7
VCEL	Villa Celiera	0.41	101	Pg	Pb	15 29 52.1	-0.4
VCEL				Sg	Sg	15 29 57.5	+0.7

MEX 02 15:30:03.8±0.6**, 14°.33N×92°.46W, h45**km±13km**, MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THIG		0.60	18	i P	Pn	15 30 14.9	-1.1
THIG				i S	Sn	15 30 22.6	-2.3
PCIG		1.55	332	i P	x	15 32 11.4	
PCIG				i S	x	15 32 29.2	
CCIG	Comitan	1.96	9	i P	Pn	15 30 33.0	-1.8
CCIG				i S	Sn	15 30 56.5	-1.9
TGIG		2.51	345	eP	Pn	15 30 41.0	-1.3
TGIG				i S	Sn	15 31 10.2	-1.6
CMIG	Matias Romero	3.60	320	i P	Pn	15 30 55.7	-1.5
CMIG				i S	Sn	15 31 37.1	-1.5

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*ISCJB **02** 15:38:48.7±0.6, 59°.41N±0°.04×17°.82E±0°.06, h0km, Error ellipse: s-maj=6.2km s-min=4.4km az=162.3*
*CSEM **02** 15:38:49.6±0.2, 59°.41N×17°.74E, h2km, ML1.8, Error ellipse: s-maj=4.4km s-min=3.3km az=159.0, Mining explosion.*
*UPP **02** 15:38:49.2, 59°.39N×17°.79E, h0km, ML1.8, Mining explosion.*
*HEL **02** 15:38:50.1±0.2, 59°.40N×17°.74E, h0km, ML1.8, ML1.8(UPP), Explosion*
*IDC **02** 15:38:51.5±2.5, 59°.52N×17°.77E, h0km, mb1 3.1/3,*

mb1mx2.8/26, mbtmp2.9/3, ML2.0/3, Error ellipse: s-maj=29.4km s-min=9.2km az=177.0
*NAO **02** 15:38:51.2±1.7, 59°.54N×17°.67E, ML1.9*
*BER **02** 15:38:52.1±3.8, 59°.54N×17°.68E, h0km±20km, ML1.9(NAO)*
ISC 02 15:38:49.0±0.9**, 59°.40N**±0°.03×**17°.75E**±0°.03**, h0km, n45, σ1s.06**/60**, Sweden**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UPP	Uppsala	0.47	352	iP	Pg	15 38 58.3	+0.3
UPP				iS	Sg	15 39 04.5	+0.5
UPP	Uppsala	0.47	352	P	Pg	15 38 58.3	+0.3
UPP				S	Sg	15 39 04.5	+0.5
NRTU	Norrtaelje	0.53	57	iP	Pg	15 38 59.0	-0.1
NRTU	Norrtaelje	0.53	57	P	Pg	15 38 59.0	-0.1
	baz=241						
BACU	Backbrunna	0.56	325	iP	Pg	15 39 00.1	+0.3
BACU	Backbrunna	0.56	325	P	Pg	15 39 00.1	+0.3
FLYU	Flymyra	0.74	5	iP	Pg	15 39 03.0	-0.1
FLYU	Flymyra	0.74	5	P	Pg	15 39 03.0	-0.1
VIKU	Vikbolandet	1.05	212	eP	Pg	15 39 08.9	-0.1
VIKU	Vikbolandet	1.05	212	P	Pg	15 39 08.9	-0.1
	baz=28						
AAL	Aland	1.38	54	eP	Pg	15 39 14.2	-1.3
AAL				eS	Sg	15 39 33.0	-0.2
AAL	Aland	1.38	54	P	Pg	15 39 14.1	-1.3
AAL				S	Sg	15 39 33.0	-0.2
FALU	Falun	1.47	320	eP	Pn	15 39 16.6	-0.1
FALU	Falun	1.47	320	P	Pn	15 39 16.5	-0.1
LNKU	Linkoeping	1.66	226	eP	Pn	15 39 19.5	+0.2
LNKU	Linkoeping	1.66	226	P	Pn	15 39 19.4	+0.2
HFS	Hagfors	2.18	292	Pn	Pn	15 39 27.8	+1.3
	baz=105,slow=16						
HFS				Lg	Lg	15 39 56.5	
	baz=104,slow=37						
HFS	Hagfors	2.18	292	Pn	Pn	15 39 27.8	+1.3
	baz=105,slow=16						
HFS				Lg	Lg	15 39 56.5	
	baz=104,slow=37						
HFS	Hagfors	2.18	292	Pn	Pn	15 39 27.8	+1.3
	baz=105,slow=16,SNR=50						
HFS				Lg	Lg	15 39 56.5	
	baz=104,slow=28,SNR=7.4						
RAF	Rauma	2.58	49	eP	Pn	15 39 32.5	+0.5
RAF				eS	Sn	15 40 05.5	+1.5
RAF	Rauma	2.58	49	P	Pn	15 39 32.4	+0.5
RAF				S	Sn	15 40 05.5	+1.5
MTSE	Matsula	3.21	100	eP	Pn	15 39 42.5	+2.0
MTSE	Matsula	3.21	100	P	Pn	15 39 42.5	+2.0
MEF	Metsahovi	3.46	73	eSG	Sg	15 40 38.6	-1.3
MEF	Metsahovi	3.46	73	Sg	Sg	15 40 38.6	-1.3
NB2	NORSAR Subarra	3.65	300	Pn	Pn	15 39 47.4	+0.7
NB2				Pg	Pb	15 39 54.8	+0.4
	baz=113,slow=18						
NB2				Lg	Lg	15 40 41.2	
NB2	NORSAR Subarra	3.65	300	Pn	Pn	15 39 47.4	+0.7
NB2				Pg	Pb	15 39 54.8	+0.4
	baz=113,slow=18						
NB2				Lg	Lg	15 40 41.2	
NB2	NORSAR Subarra	3.65	300	Pn	Pn	15 39 47.4	+0.7
	SNR=50						
NB2	NORSAR Subarra	3.65	300	Pg	Pb	15 39 54.8	+0.4
	baz=113,slow=18,SNR=90						
NB2				Lg	Lg	15 40 41.2	
NOA	NORSAR Array B	3.65	300	Pn	Pn	15 39 47.2	+0.5
	0.1nm,0.3s,baz=236,slow=12,SNR=1.6						
NOA				Pg	Pb	15 39 55.0	+0.6
	0.2nm,0.3s,baz=51,slow=23,SNR=2.5						
NOA				Lg	Lg	15 40 42.2	
	0.3nm,0.3s,baz=185,slow=12,SNR=1.7						
PVF	Pernaja	4.24	71	eP	Pn	15 39 56.8	+2.1
PVF				eS	Sn	15 40 45.2	+0.4
PVF	Pernaja	4.24	71	P	Pn	15 39 56.7	+2.1
PVF				S	Sn	15 40 45.1	+0.4
VAF	Ylistaro	4.36	31	eS	Sn	15 40 47.5	-0.4
VAF	Ylistaro	4.36	31	S	Sn	15 40 47.4	-0.4
KEF	Keuruu	4.46	48	eS	Sn	15 40 49.9	-0.5
KEF				MSG		15 41 13.7	
	comp=Z,1.0nm,1.0s						
KEF	Keuruu	4.46	48	S	Sn	15 40 49.8	-0.5
FIA0	FINESS Array S	4.61	60	Pn	Pn	15 40 00.9	+1.1
	baz=236,slow=12						
FIA0				Pg	Pb	15 40 11.0	+0.4
	baz=253,slow=16						
FIA0				Sn	Sn	15 40 54.2	+0.2
	baz=252,slow=22						
FIA0				Lg	Lg	15 41 11.9	
	baz=241,slow=28						
FIA0	FINESS Array S	4.61	60	Pn	Pn	15 40 00.9	+1.1
	baz=236,slow=12						
FIA0				Pg	Pb	15 40 11.0	+0.4
	baz=253,slow=16						
FIA0				Sn	Sn	15 40 54.2	+0.2
	baz=252,slow=22						
FIA0				Lg	Lg	15 41 11.9	
	baz=241,slow=28						
FIA0	FINESS Array S	4.61	60	Pn	Pn	15 40 00.9	+1.1
	baz=236,slow=12,SNR=50						
FIA0				Sn	Sn	15 40 54.2	+0.2
	baz=252,slow=22,SNR=50						
FIA0				Lg	Lg	15 41 11.9	
	baz=241,slow=24,SNR=21						
FINES	FINESS Array B	4.61	60	Pn	Pn	15 40 01.1	+1.3
	comp=Z,0.1nm,0.3s,baz=242,slow=12,SNR=1.4						
FINES				Sn	Sn	15 40 54.5	+0.6
	comp=Z,0.2nm,0.3s,baz=253,slow=22,SNR=2.0						
FINES				Lg	Lg	15 41 10.9	
	comp=Z,0.4nm,0.3s,baz=247,slow=25,SNR=3.8						
KAF	Kangasniemi	5.00	53	MSG		15 41 25.8	
	comp=Z,0.8nm,0.2s						
SUF	Sumiainen	5.27	47	MSG		15 41 35.5	
	comp=Z,0.9nm,0.2s						
ARA0	ARCESS Array S	10.70	15	Pn	Pn	15 41 20.7	-2.6
	baz=196,slow=14						
ARA0	ARCESS Array S	10.70	15	P	Pn	15 41 20.7	-2.6
	baz=196,slow=14						
ARCES	ARCESS Array B	10.70	15	Pn	Pn	15 41 20.8	-2.5
	comp=Z,0.0nm,0.3s,baz=197,slow=14,SNR=3.1						
ARCES				Sn	Sn	15 43 15.2	-8.5
	comp=Z,0.0nm,0.3s,baz=207,slow=21,SNR=1.8						

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*SZGRF **02** 15:44:12.9, 36°.84N×21°.94E, h33km, Southern Greece*
*ATH **02** 15:44:18.2, 37°.57N×22°.84E, h81km±1km, ML3.8*
*ISCJB **02** 15:44:18.1±0.2, 37°.58N±0°.01×22°.77E±0°.02, h90km±2km, mb3.8/15, Error ellipse: s-maj=2.8km s-min=2.1km az=137.0*
*THE **02** 15:44:19.4, 37°.56N×22°.85E, h73km±2km, ML3.8/6, Error ellipse: s-maj=2.1km s-min=0.6km az=270.0*
*PDG **02** 15:44:19.5±0.5, 37°.60N×22°.82E, h60km±2km, ML3.7/9, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*CSEM **02** 15:44:19.1±0.1, 37°.56N×22°.77E, h80km, mb3.9/4, Mw4.6, Error ellipse: s-maj=3.0km s-min=2.2km az=58.0*
*BEO **02** 15:44:20.6±0.9, 37°.85N×22°.37E, h0km, ML3.6/9*
*IDC **02** 15:44:20.4±2.7, 37°.60N×22°.76E, h103km±27km, mb3.6/12, mb1 3.6/15, mb1mx3.5/28, mbtmp3.5/15, Error ellipse: s-maj=19.6km s-min=14.7km az=136.0*
ISC 02 15:44:18.4±0.6**, 37°.57N**±0°.02×**22°.83E**±0°.02**, h81km**±4km**, n367, σ1s.37**/458**, mb3.8**/16**, 36C-13D, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DID	Didima	0.33	101	eP	Pn	15 44 31.5	+0.4
DID				eS	Sn	15 44 40.8	+0.3
DID	Didima	0.33	101	eP	Pn	15 44 31.5	+0.4
DID				eS	Sn	15 44 40.8	+0.3
VLX	Vlachokerasia	0.41	240	⇓iP	Pn	15 44 32.1	+0.4
VLX				eS	Sn	15 44 41.2	-0.3
VLX	Vlachokerasia	0.41	240	⇓iP	Pn	15 44 32.1	+0.4
VLX				eS	Sn	15 44 41.2	-0.3
LTK	Loutraki	0.46	14	P	Pn	15 44 32.7	+0.7
LTK				S	Sn	15 44 42.4	+0.4
LTK	Loutraki	0.46	14	⇑iP	Pn	15 44 32.7	+0.7
LTK				eS	Sn	15 44 42.5	+0.4
LTK	Loutraki	0.46	14	⇑iP	Pn	15 44 32.7	+0.7
LTK				eS	Sn	15 44 42.5	+0.4
GUR	Goura	0.53	314	P	Pn	15 44 33.2	+0.6
GUR				S	Sn	15 44 42.5	-0.7
GUR	Goura	0.53	314	eP	Pn	15 44 33.3	+0.6
GUR				eS	Sn	15 44 43.1	-0.1
GUR	Goura	0.53	314	eP	Pn	15 44 33.3	+0.6
GUR				eS	Sn	15 44 43.1	-0.1
NAIG	Nisos Aigina	0.56	70	⇑iP	Pn	15 44 33.7	+0.9
NAIG	Nisos Aigina	0.56	70	⇑iP	Pn	15 44 33.7	+0.9
KLV	Kalavryta, Ach	0.71	312	⇓iP	Pn	15 44 34.9	+0.5
KLV	Kalavryta, Ach	0.71	312	⇓iP	Pn	15 44 34.9	+0.5
ATH	Athens Observa	0.81	60	P	Pn	15 44 36.4	+1.1
ATH				S	Sn	15 44 48.1	+0.1
ATH	Athens Observa	0.81	60	eP	Pn	15 44 36.5	+1.1
ATH				eS	Sn	15 44 48.0	+0.1
ATH	Athens Observa	0.81	60	P	Pn	15 44 36.4	+1.1
ATH				S	Sn	15 44 48.1	+0.1
ITM	Ithomi	0.82	242	P	Pn	15 44 36.7	+1.2
ITM				S	Sn	15 44 49.1	+0.9
ITM	Ithomi	0.82	242	⇑iP	Pn	15 44 36.7	+1.2
ITM				eS	Sn	15 44 48.1	-0.1
ITM	Ithomi	0.82	242	P	Pn	15 44 36.6	+1.1
ITM				eS	Sn	15 44 48.1	-0.1
ATHU	Athens Univers	0.85	62	P	Pn	15 44 36.8	+0.9
ATHU				S	Sn	15 44 47.5	-1.4
VLI	Veliai	0.86	174	P	Pn	15 44 35.9	+0.1
VLI				S	Sn	15 44 47.8	-1.1
VLI	Veliai	0.86	174	eP	Pn	15 44 36.0	+0.1
VLI	Veliai	0.86	174	eP	Pn	15 44 36.0	+0.1
VLI				S	Sn	15 44 47.8	-1.1
DSF	Desfina	0.87	344	P	Pn	15 44 36.9	+0.8
DSF	Desfina	0.87	344	P	Pn	15 44 36.9	+0.8
DSF				S	Sn	15 44 48.0	-1.3
AMT	Artemida-Makis	0.89	268	P	Pn	15 44 37.8	+1.5
AMT	Artemida-Makis	0.89	268	⇑iP	Pn	15 44 37.8	+1.5
AMT				eS	Sn	15 44 51.3	+1.7
AMT	Artemida-Makis	0.89	268	⇑iP	Pn	15 44 37.8	+1.5
AMT				S	Sn	15 44 49.0	-0.6
DYR	Agios Nikonas	0.90	206	P	Pn	15 44 37.6	+1.2
DYR	Agios Nikonas	0.90	206	⇑iP	Pn	15 44 37.7	+1.3
DYR				eS	Sn	15 44 51.0	+1.2
DYR	Agios Nikonas	0.90	206	P	Pn	15 44 37.6	+1.2
DYR				eS	Sn	15 44 51.0	+1.2
LAKA	Lakka	0.94	315	P	Pn	15 44 37.6	+0.7
LAKA				S	Sn	15 44 49.9	-0.9
LAKA	Lakka	0.94	315	eP	Pn	15 44 37.7	+0.8
LAKA				eS	Sn	15 44 51.3	+0.5
LAKA	Lakka	0.94	315	P	Pn	15 44 37.6	+0.7
LAKA				eS	Sn	15 44 51.3	+0.5
PTL	Penteli	0.95	60	P	Pn	15 44 38.1	+1.1
PTL				S	Sn	15 44 50.8	-0.1
PTL	Penteli	0.95	60	P	Pn	15 44 38.1	+1.1
PTL				S	Sn	15 44 50.8	-0.1
KALE	Kalithea	0.98	327	P	Pn	15 44 37.9	+0.6
KALE				S	Sn	15 44 51.4	-0.2
KALE	Kalithea	0.98	327	eP	Pn	15 44 38.0	+0.6
KALE				eS	Sn	15 44 52.1	+0.5
KALE	Kalithea	0.98	327	eP	Pn	15 44 38.0	+0.6
KALE				eS	Sn	15 44 52.1	+0.5
TRIZ	Trizonia	0.99	323	P	Pn	15 44 38.0	+0.7
TRIZ	Trizonia	0.99	323	eP	Pn	15 44 38.1	+0.7
TRIZ				eS	Sn	15 44 52.4	+0.8
TRIZ	Trizonia	0.99	323	eP	Pn	15 44 38.1	+0.7
TRIZ				eS	Sn	15 44 52.4	+0.8
LKR	Lokris	1.08	7	P	Pn	15 44 39.5	+1.0
LKR				S	Sn	15 44 54.2	+0.6
LKR	Lokris	1.08	7	⇑iP	Pn	15 44 39.6	+1.0
LKR	Lokris	1.08	7	P	Pn	15 44 39.5	+1.0
LKR				S	Sn	15 44 54.2	+0.6
UPR	University Cam	1.09	311	P	Pn	15 44 39.9	+1.3
UPR	University Cam	1.09	311	eP	Pn	15 44 39.6	+1.0
UPR	University Cam	1.09	311	P	Pn	15 44 39.2	+0.6
UPR				S	Sn	15 44 52.4	-1.3
PYL	PYLOS	1.10	232	P	Pn	15 44 38.8	+0.1
PYL				S	Sn	15 44 54.2	+0.3
PYL	PYLOS	1.10	232	⇑iP	Pn	15 44 38.9	+0.2
PYL				eS	Sn	15 44 54.5	+0.6
PYL	PYLOS	1.10	232	⇑iP	Pn	15 44 38.9	+0.2
PYL				S	Sn	15 44 54.2	+0.3
EFP	Efpalio	1.12	320	P	Pn	15 44 39.7	+0.8
EFP	Efpalio	1.12	320	eP	Pn	15 44 39.8	+0.8
EFP	Efpalio	1.12	320	P	Pn	15 44 39.7	+0.8
ATAL	Atalanti	1.13	8	P	Pn	15 44 40.1	+1.0
ATAL	Atalanti	1.13	8	P	Pn	15 44 40.1	+1.0
RLS	Riolos of Patr	1.18	295	P	Pn	15 44 41.1	+1.4
RLS				S	Sn	15 44 57.9	+2.2
RLS	Riolos of Patr	1.18	295	eP	Pn	15 44 41.3	+1.6
RLS	Riolos of Patr	1.18	295	P	Pn	15 44 41.1	+1.4
RLS				S	Sn	15 44 56.7	+1.0
AXAR	Agios Charalam	1.20	354	P	Pn	15 44 41.2	+1.2
AXAR	Agios Charalam	1.20	354	P	Pn	15 44 41.2	+1.2
MRKA	Markates	1.28	28	P	Pn	15 44 42.1	+1.1
MRKA				S	Sn	15 44 59.2	+1.2
MRKA	Markates	1.28	28	P	Pn	15 44 42.1	+1.1
MRKA				S	Sn	15 44 59.2	+1.2
KYTH	Kithira	1.30	172	P	Pn	15 44 41.9	+0.6
KYTH	Kithira	1.30	172	eP	Pn	15 44 42.1	+0.8
KYTH	Kithira	1.30	172	P	Pn	15 44 41.9	+0.6
MRMA	Marmari	1.32	68	P	Pn	15 44 42.6	+1.1
MRMA				S	Sn	15 44 59.7	+0.8
MRMA	Marmari	1.32	68	P	Pn	15 44 42.6	+1.1
MRMA				S	Sn	15 44 59.7	+0.8
SMIA	Simia	1.34	13	P	Pn	15 44 43.1	+1.4
SMIA	Simia	1.34	13	P	Pn	15 44 43.1	+1.4
AGG	Agios Georgios	1.50	345	P	Pn	15 44 44.9	+1.1
AGG	Agios Georgios	1.50	345	eP	Pn	15 44 44.9	+1.1
AGG	Agios Georgios	1.50	345	P	Pn	15 44 44.8	+1.0
AGG				S	Sn	15 44 59.7	-3.3
MAKR	Makrakomi, Fth	1.54	339	P	Pn	15 44 45.6	+1.3
MAKR				S	Sn	15 45 04.9	+1.0
MAKR	Makrakomi, Fth	1.54	339	P	Pn	15 44 45.6	+1.3
MAKR				S	Sn	15 45 04.9	+1.0
EVR	Evrytania	1.56	329	P	Pn	15 44 45.9	+1.3
EVR				S	Sn	15 45 06.0	+1.4
EVR	Evrytania	1.56	329	eP	Pn	15 44 46.0	+1.3
EVR	Evrytania	1.56	329	P	Pn	15 44 45.8	+1.1
EVR				S	Sn	15 45 06.0	+1.4
SKIA	Skiathos	1.67	17	P	Pn	15 44 47.3	+1.3
SKIA	Skiathos	1.67	17	P	Pn	15 44 47.3	+1.3
KFL	Anninata	1.70	289	P	Pn	15 44 46.8	+0.4
KFL				S	Sn	15 45 08.6	+1.0
KFL	Anninata	1.70	289	P	Pn	15 44 46.8	+0.4
KFL				S	Sn	15 45 08.6	+1.0
ANKY	Antikythira Is	1.75	167	eP	Pn	15 44 47.1	+0.1
ANKY	Antikythira Is	1.75	167	eP	Pn	15 44 47.1	+0.1
NEO	Neokhori	1.76	10	eP	Pn	15 44 48.3	+1.1
NEO	Neokhori	1.76	10	eP	Pn	15 44 48.3	+1.1
AOS	Alonnisos	1.80	27	P	Pn	15 44 48.6	+0.9
AOS	Alonnisos	1.80	27	⇑iP	Pn	15 44 48.7	+1.0
AOS	Alonnisos	1.80	27	⇑iP	Pn	15 44 48.7	+1.0
AOS				S	Sn	15 45 06.9	-3.0
XOR	Xorichti	1.81	9	P	Pn	15 44 48.9	+1.0
XOR	Xorichti	1.81	9	P	Pn	15 44 48.9	+1.0
XOR				S	Sn	15 45 07.0	-3.3
VLS	Valsamata	1.87	290	P	Pn	15 44 49.4	+0.8
VLS	Valsamata	1.87	290	eP	Pn	15 44 49.2	+0.6
VLS	Valsamata	1.87	290	eP	Pn	15 44 49.2	+0.6
THL	Klokotos Trika	2.09	343	P	Pn	15 44 52.3	+0.8
THL	Klokotos Trika	2.09	343	eP	Pn	15 44 52.5	+1.0
THL	Klokotos Trika	2.09	343	P	Pn	15 44 52.3	+0.8
APE	Apeiranthos	2.21	102	eP	Pn	15 44 54.2	+1.0
APE	Apeiranthos	2.21	102	P	Pn	15 44 54.3	+1.0
APE				S	Sn	15 45 19.8	-0.1
APE	Apeiranthos	2.21	102	eP	Pn	15 44 54.4	+1.2
APE	Apeiranthos	2.21	102	⇓iP	Pn	15 44 54.3	+1.0
APE				S	Sn	15 45 19.8	-0.1
APE	Apeiranthos	2.21	102	P	Pn	15 44 54.3	+1.0
APE				S	Sn	15 45 19.8	-0.1
KARN	Karanos	2.34	158	P	Pn	15 44 55.5	+0.6
KARN	Karanos	2.34	158	eP	Pn	15 44 55.6	+0.6
KARN	Karanos	2.34	158	P	Pn	15 44 55.5	+0.6
SANT	Santorini	2.43	119	eP	Pn	15 44 57.8	+1.7
SANT	Santorini	2.43	119	eP	Pn	15 44 57.8	+1.7
VAM	Vamos	2.43	152	P	Pn	15 44 56.3	+0.2
VAM	Vamos	2.43	152	eP	Pn	15 44 56.5	+0.4
VAM	Vamos	2.43	152	eP	Pn	15 44 56.5	+0.4
PAIG	Paliouri	2.44	16	P	Pn	15 44 57.2	+1.0
PAIG	Paliouri	2.44	16	eP	Pn	15 44 57.3	+1.0
PAIG	Paliouri	2.44	16	eP	Pn	15 44 57.3	+1.0
LIT	Litokhoron	2.54	354	P	Pn	15 44 58.5	+1.0
LIT				S	Sn	15 45 28.2	+0.6
LIT	Litokhoron	2.54	354	eP	Pn	15 44 58.6	+1.0
LIT	Litokhoron	2.54	354	P	Pn	15 44 58.5	+1.0
LIT				S	Sn	15 45 28.2	+0.6
MEV	Metsovon	2.54	331	P	Pn	15 45 00.1	+2.4
MEV	Metsovon	2.54	331	P	Pn	15 45 00.1	+2.4
JAN	Janina	2.59	324	eP	Pn	15 44 59.3	+1.0
JAN	Janina	2.59	324	eP	Pn	15 44 59.3	+1.0
CHOS	Chios island	2.68	71	P	Pn	15 45 01.0	+1.5
CHOS	Chios island	2.68	71	eP	Pn	15 45 00.9	+1.5
CHOS	Chios island	2.68	71	eP	Pn	15 45 00.9	+1.5
PLG	Polygyros	2.84	10	P	Pn	15 45 02.6	+1.0
PLG	Polygyros	2.84	10	eP	Pn	15 45 02.7	+1.1
PLG	Polygyros	2.84	10	eP	Pn	15 45 02.7	+1.1
KZN	Kozani	2.85	344	P	Pn	15 45 04.0	+2.2
KZN	Kozani	2.85	344	eP	Pn	15 45 03.8	+2.0
KZN	Kozani	2.85	344	eP	Pn	15 45 03.8	+2.0
SIGR	SIGRI	2.89	55	P	Pn	15 45 03.2	+1.0
SIGR	SIGRI	2.89	55	P	Pn	15 45 03.2	+1.0
OUR	Ouranopolis	2.90	18	P	Pn	15 45 03.8	+1.4
OUR	Ouranopolis	2.90	18	P	Pn	15 45 03.8	+1.4
GVD	Gavdhos	2.91	159	P	Pn	15 45 03.9	+1.3
GVD				S	Sn	15 45 37.8	+1.2
GVD	Gavdhos	2.91	159	eP	Pn	15 45 04.0	+1.3
GVD	Gavdhos	2.91	159	P	Pn	15 45 03.9	+1.3
GVD				S	Sn	15 45 37.8	+1.2
LIA	Limnos Island	2.96	38	P	Pn	15 45 04.1	+0.8
LIA	Limnos Island	2.96	38	⇑iP	Pn	15 45 04.3	+1.1
LIA	Limnos Island	2.96	38	⇑iP	Pn	15 45 04.3	+1.1
SIVA	Sivas	3.01	147	P	Pn	15 45 04.8	+0.9
SIVA				S	Sn	15 45 39.8	+0.8
SIVA	Sivas	3.01	147	eP	Pn	15 45 06.3	+2.4
SIVA	Sivas	3.01	147	P	Pn	15 45 04.8	+0.9
SIVA				S	Sn	15 45 39.8	+0.8
HORT	Hortiatis	3.03	4	P	Pn	15 45 05.6	+1.4
HORT	Hortiatis	3.03	4	P	Pn	15 45 05.6	+1.4
THE	Thessaloniki	3.06	2	P	Pn	15 45 05.9	+1.4
THE	Thessaloniki	3.06	2	P	Pn	15 45 05.9	+1.4
NEST	Nestorio	3.16	335	P	Pn	15 45 07.9	+1.9
NEST	Nestorio	3.16	335	P	Pn	15 45 07.9	+1.9
PRK	Paraskevi	3.18	57	P	Pn	15 45 07.3	+1.1
PRK	Paraskevi	3.18	57	P	Pn	15 45 07.3	+1.1
KEK	Kerkira	3.19	313	P	Pn	15 45 06.1	-0.2
KEK	Kerkira	3.19	313	eP	Pn	15 45 06.2	-0.1
KEK	Kerkira	3.19	313	eP	Pn	15 45 06.2	-0.1
NPS	Neapolis	3.22	135	P	Pn	15 45 08.3	+1.5
NPS				S	Sn	15 45 44.6	+0.5
NPS	Neapolis	3.22	135	eP	Pn	15 45 07.6	+0.8
NPS	Neapolis	3.22	135	eP	Pn	15 45 07.6	+0.8
NPS				S	Sn	15 45 44.6	+0.5
LAST	Lasithi	3.22	138	P	Pn	15 45 07.4	+0.5
LAST				S	Sn	15 45 44.5	+0.3
LAST	Lasithi	3.22	138	eP	Pn	15 45 07.6	+0.7
LAST	Lasithi	3.22	138	eP	Pn	15 45 07.6	+0.7
LAST				S	Sn	15 45 44.5	+0.3
SOH	Sokhos	3.27	7	P	Pn	15 45 09.2	+1.7
SOH	Sokhos	3.27	7	eP	Pn	15 45 09.2	+1.7
SOH	Sokhos	3.27	7	eP	Pn	15 45 09.2	+1.7
GRG	Griva	3.40	355	P	Pn	15 45 11.1	+2.0
GRG	Griva	3.40	355	eP	Pn	15 45 10.4	+1.3
GRG	Griva	3.40	355	eP	Pn	15 45 10.4	+1.3
FNA	Florina	3.40	341	P	Pn	15 45 10.8	+1.6
FNA	Florina	3.40	341	eP	Pn	15 45 09.9	+0.7
FNA	Florina	3.40	341	eP	Pn	15 45 09.9	+0.7
BLCB	Balcova	3.43	75	eP	Pn	15 45 11.8	+2.2
EZN	Ezine	3.54	50	eP	Pn	15 45 12.0	+0.9
SRS	Serrai	3.59	9	P	Pn	15 45 13.3	+1.5
SRS	Serrai	3.59	9	P	Pn	15 45 13.3	+1.5
BODT	Bodrum	3.61	97	eP	Pn	15 45 15.4	+3.3
BIA	Bitola	3.63	342	ePn	Pn	15 45 12.1	-0.3
BIA				eSg	Sn	15 45 55.3	+1.1
BIA	Bitola	3.63	342	ePn	Pn	15 45 15.1	+2.7
BIA				eSg	Sn	15 45 55.3	+1.1
BIA	Bitola	3.63	342	ePn	Pn	15 45 12.1	-0.3
BIA				eSg	Sn	15 45 55.2	+1.1
KAVA	Kavala	3.66	20	P	Pn	15 45 13.7	+1.0
KAVA	Kavala	3.66	20	P	Pn	15 45 13.7	+1.0
ZKR	Zakros	3.68	131	P	Pn	15 45 15.0	+2.1
ZKR	Zakros	3.68	131	eP	Pn	15 45 14.6	+1.7
ZKR	Zakros	3.68	131	eP	Pn	15 45 14.6	+1.7
VAY	Valandovo	3.75	357	P	Pn	15 45 15.0	+1.1
VAY	Valandovo	3.75	357	iPn	Pn	15 45 15.0	+1.1
VAY				eSg	Sn	15 45 58.5	+1.6
VAY	Valandovo	3.75	357	iPn	Pn	15 45 14.7	+0.8
VAY	Valandovo	3.75	357	P	Pn	15 45 15.0	+1.1
VAY				eSg	Sn	15 45 58.9	+2.1
VAY	Valandovo	3.75	357	iPn	Pn	15 45 14.3	+0.4
VAY				iSg	Sn	15 45 58.6	+1.8
NVR	Nevrokopi	3.86	12	P	Pn	15 45 17.8	+2.4
NVR	Nevrokopi	3.86	12	eP	Pn	15 45 16.8	+1.4
NVR	Nevrokopi	3.86	12	eP	Pn	15 45 16.8	+1.4
DAT	Datca	3.89	101	eP	Pn	15 45 19.7	+3.8
GELI	Tayfur-Gelibol	4.00	44	eP	Pn	15 45 18.5	+1.1
KARP	Karpathos	4.03	119	eP	Pn	15 45 19.5	+1.7
KARP	Karpathos	4.03	119	eP	Pn	15 45 19.5	+1.7
AKS	Akhisar	4.14	70	eP	Pn	15 45 21.5	+2.3
LPK	Lapseki	4.15	46	eP	Pn	15 45 20.6	+1.3
ALN	Alexandroupoli	4.16	36	P	Pn	15 45 20.3	+0.9
ALN	Alexandroupoli	4.16	36	eP	Pn	15 45 20.3	+0.9
ALN	Alexandroupoli	4.16	36	eP	Pn	15 45 20.3	+0.9
ERIK	Erikli-Kesan	4.22	42	eP	Pn	15 45 21.3	+1.0
YER	Yerkesik	4.37	94	eP	Pn	15 45 26.1	+3.7
TIR	Tirane	4.41	330	eSn	Sn	15 46 10.7	-2.3
TIR	Tirane	4.41	330	eSn	Sn	15 46 10.7	-2.3
BALB	Balikesir	4.46	61	eP	Pn	15 45 25.6	+2.0
KRBG	Karabiga-Canak	4.48	50	eP	Pn	15 45 25.5	+1.7
SKO	Skopje	4.52	347	ePn	Pn	15 45 26.6	+2.2
SKO	Skopje	4.52	347	ePn	Pn	15 45 26.6	+2.2
GONE	Gonen-Balikesi	4.53	55	eP	Pn	15 45 26.7	+2.2
KULA	Kula-Manisa	4.70	77	eP	Pn	15 45 29.8	+2.9
DALY	Dalyan (Mu˜la	4.71	97	eP	Pn	15 45 31.5	+4.5
MRMT	Marmara Adasi	4.79	49	eP	Pn	15 45 29.6	+1.4
EDC	Edincik	4.80	53	eP	Pn	15 45 30.6	+2.3
VTS	Vitosha	5.02	3	P	Pn	15 45 33.3	+1.9
VTS	Vitosha	5.02	3	ePn	Pn	15 45 34.4	+3.1
VTS	Vitosha	5.02	3	ePn	Pn	15 45 34.5	+3.1
VTS				eSn	Sn	15 46 27.3	-0.8
VTS	Vitosha	5.02	3	⇓iP	Pn	15 45 34.5	+3.1
VTS	Vitosha	5.02	3	P	Pn	15 45 33.3	+1.9
VTS	Vitosha	5.02	3	ePn	Pn	15 45 34.4	+3.1
VTS				eSn	Sn	15 46 27.3	-0.8
FETY	Fethiye	5.09	99	eP	Pn	15 45 36.8	+4.6
ULC	Ulcinj	5.18	329	⇑iPn	Pn	15 45 35.8	+2.4
ULC				eSn	Sn	15 46 31.6	-0.2
ULC	Ulcinj	5.18	329	⇑iPn	Pn	15 45 35.8	+2.4
ULC				eSn	Sn	15 46 31.6	-0.2
EDRB	Edirne	5.23	34	eP	Pn	15 45 35.2	+1.2
BARS	Barje	5.29	352	ePn	Pn	15 45 35.9	+0.9
BARS	Barje	5.29	352	ePn	Pn	15 45 35.9	+0.9
KHL	Karahalli	5.35	80	eP	Pn	15 45 39.5	+3.7
PVY	Plav	5.48	337	⇑iPn	Pn	15 45 38.5	+1.0
PVY				eSn	Sn	15 46 38.8	-0.4
PVY	Plav	5.48	337	⇑iPn	Pn	15 45 38.5	+1.0
PVY				eSn	Sn	15 46 38.8	-0.4
TVSB	Tavsanli	5.53	68	eP	Pn	15 45 41.2	+2.9
PDG	Podgorica	5.57	332	ePn	Pn	15 45 37.8	-0.9
PDG				eSn	Sn	15 46 38.2	-3.1
PDG	Podgorica	5.57	332	⇑iPn	Pn	15 45 40.6	+1.9
PDG				eSn	Sn	15 46 41.5	+0.2
TTG	Podgorica	5.57	332	⇑iPn	Pn	15 45 40.6	+1.9
TTG				eSn	Sn	15 46 41.5	+0.2
LTBQ	Tobruq	5.58	170	iP	Pn	15 45 38.7	-0.2
	SNR=125						
LTBQ				eS	Sn	15 46 34.4	-7.2
	SNR=125						
BUM	Brajici-Budva	5.61	329	⇓iPn	Pn	15 45 41.1	+1.9
BUM				eSn	Sn	15 46 41.3	-1.0
BUM	Brajici-Budva	5.61	329	⇓iPn	Pn	15 45 41.1	+1.9
BUM				eSn	Sn	15 46 41.3	-1.0
ELL	Elmali	5.72	96	eP	Pn	15 45 45.5	+4.7
CTKS	Kestanelik-??a	5.72	48	eP	Pn	15 45 43.2	+2.5
BEY	Berane	5.75	338	⇓iPn	Pn	15 45 41.9	+0.7
BEY				eSn	Sn	15 46 45.6	-0.2
IVA	Berane	5.75	338	⇓iPn	Pn	15 45 41.9	+0.7
IVA				eSn	Sn	15 46 45.6	-0.2
SELS	Selova	5.79	348	ePn	Pn	15 45 41.4	-0.3
SELS				eSn	Sn	15 46 44.7	-2.0
BGKT	Bogazkoy	5.85	50	eP	Pn	15 45 44.1	+1.6
HCY	Herceg Novi	5.89	327	⇑iPn	Pn	15 45 44.3	+1.2
HCY				eSn	Sn	15 46 48.4	-0.8
HCY	Herceg Novi	5.89	327	⇑iPn	Pn	15 45 44.3	+1.2
HCY				eSn	Sn	15 46 48.4	-0.8
ALT	Altintas	5.92	73	eP	Pn	15 45 47.1	+3.6
NKY	Niksic	6.00	332	ePn	Pn	15 45 46.6	+1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NKY				eSn	Sn	15 46 51.0	-1.0
NKY	Niksic	6.00	332	ePn	Pn	15 45 46.6	+1.9
NKY				eSn	Sn	15 46 51.0	-1.0
BRY	Bratogost	6.25	330	⇑iPn	Pn	15 45 50.2	+2.1
BRY				eSn	Sn	15 46 57.4	-0.7
BRY	Bratogost	6.25	330	⇑iPn	Pn	15 45 50.2	+2.1
BRY				eSn	Sn	15 46 57.4	-0.7
PLE	Pljevlja	6.32	337	ePn	Pn	15 45 48.6	-0.4
PLE				eSn	Sn	15 46 58.4	-1.4
PLE	Pljevlja	6.32	337	ePn	Pn	15 45 48.6	-0.4
PLE				eSn	Sn	15 46 58.4	-1.4
UPM	Unac-Piva	6.37	333	⇓iPn	Pn	15 45 50.2	+0.4
UPM				eSn	Sn	15 47 00.1	-1.0
UPM	Unac-Piva	6.37	333	⇓iPn	Pn	15 45 50.2	+0.4
UPM				eSn	Sn	15 47 00.1	-1.0
SILT	Sile	6.38	54	eP	Pn	15 45 52.2	+2.5
GRUS	Gruza	6.51	346	ePn	Pn	15 45 50.9	-0.6
GRUS	Gruza	6.51	346	ePn	Pn	15 45 50.9	-0.6
STON	Ston	6.59	325	ePn	Pn	15 45 50.2	-2.3
STON				Sn	Sn	15 46 58.3	-7.8
BBLS	Lazići	6.80	339	ePn	Pn	15 45 54.1	-1.5
BBLS				eSn	Sn	15 47 05.7	-5.8
BBLS	Lazići	6.80	339	ePn	Pn	15 45 54.1	-1.5
DIVS	Divibare	6.86	343	ePn	Pn	15 45 55.4	-1.0
DIVS				eSn	Sn	15 47 07.6	-5.4
DIVS	Divibare	6.86	343	ePn	Pn	15 45 55.4	-1.0
LJBD	Adjabya	6.99	199	i P	Pn	15 45 49.8	-8.3
	SNR=120						
TIRR	Tirgusor	8.07	30	⇑iP	Pn	15 46 15.1	+2.4
TIRR	Tirgusor	8.07	30	⇑iP	Pn	15 46 15.1	+2.4
MLR	Muntele Rosu	8.25	15	⇑iP	Pn	15 46 18.3	+3.0
MLR	Muntele Rosu	8.25	15	P	Pn	15 46 18.1	+2.8
	0.2nm,0.3s,baz=173,slow=7.3,SNR=9.0						
MLR	Muntele Rosu	8.25	15	⇑iP	Pn	15 46 18.3	+3.0
BLY	Banja Luka	8.33	331	ePn	Pn	15 46 15.2	-1.2
BLY	Banja Luka	8.33	331	ePn	Pn	15 46 15.2	-1.2
CFR	Carcaliu	8.58	26	⇑iP	Pn	15 46 22.4	+2.7
CFR	Carcaliu	8.58	26	⇑iP	Pn	15 46 22.4	+2.7
BRTR	Keskin Array B	8.73	72	P	Pn	15 46 24.2	+2.3
	0.5nm,0.3s,baz=255,slow=14,SNR=16						
PLOR	Plostina	8.75	18	⇑iP	Pn	15 46 26.0	+3.9
VRI	Vrincioaia	8.78	18	⇑iP	Pn	15 46 25.2	+2.7
VRI	Vrincioaia	8.78	18	⇑iP	Pn	15 46 25.2	+2.7
NVLJ	Novalja	9.21	322	Sn	Sn	15 48 00.8	-9.3
BOJS	Bojanci	9.74	327	i Pn	Pn	15 46 34.9	-0.7
BOJS				i Sn	Sn	15 48 18.1	-5.0
BOJS	Bojanci	9.74	327	i Pn	Pn	15 46 34.9	-0.7
SKDS	Skadanscina	10.34	323	i Pn	Pn	15 46 42.7	-1.1
SKDS				i Sn	Sn	15 48 29.4	-8.4
SKDS	Skadanscina	10.34	323	i Pn	Pn	15 46 42.7	-1.1
JAVS	Javornik	10.57	325	i Pn	Pn	15 46 47.4	+0.4
JAVS				i Sn	Sn	15 48 34.2	-9.4
JAVS	Javornik	10.57	325	i Pn	Pn	15 46 47.4	+0.4
MMAI	Mount Meron Ar	11.24	110	P	Pn	15 46 54.0	-2.1
	0.8nm,0.3s,baz=314,slow=12,SNR=7.9						
PGF	Pioggiola	11.70	299	eP	Pn	15 47 02.8	+0.5
PGF	Pioggiola	11.70	299	eP	Pn	15 47 02.8	+0.5
EIL	Elat	12.81	124	P	Pn	15 47 14.4	-2.9
	0.4nm,0.3s,baz=22,slow=17,SNR=11						
EIL				S	Sn	15 49 29.0	-9.0
	0.9nm,0.3s,baz=287,slow=13,SNR=5.4						
GEC2	GERESS Array S	13.07	332	eP	P	15 47 30.0	+2.0
	comp=Z,5.0nm,1.0s						
GERES	GERESS Array B	13.07	332	P	Pn	15 47 21.2	+0.4
	comp=Z,0.2nm,0.3s,baz=159,slow=15,SNR=4.3						
KHC	Kasperske Hory	13.36	333	eP	Pn	15 47 23.0	-1.5
WET	Wettzell	13.63	331	eP	P	15 47 35.9	+1.8
	comp=Z,5.0nm,0.6s						
AKASG	Malin Array Be	13.90	17	P	P	15 47 36.4	-0.6
	comp=Z,0.9nm,0.3s,baz=213,slow=10,SNR=4.1						
MBDF	Montbardon	14.04	306	eP	Pn	15 47 34.7	+1.2
MBDF	Montbardon	14.04	306	eP	Pn	15 47 34.7	+1.2
ROTZ	Rotzenmuhle	14.39	331	eP	P	15 47 44.0	+1.5
	comp=Z,2.0nm,0.8s						
LPG	La Plagne	14.39	308	eP	Pn	15 47 39.8	+1.5
LPG	La Plagne	14.39	308	eP	Pn	15 47 39.8	+1.5
LPL	La Plagne	14.41	308	eP	Pn	15 47 39.7	+1.2
LPL	La Plagne	14.41	308	eP	Pn	15 47 39.7	+1.2
GRF	Grafenberg Arr	14.72	329	eP	P	15 47 48.1	+1.9
	comp=Z,10.0nm,0.8s						
BRG	Berggiesshubel	14.73	337	eP	P	15 47 47.7	+1.4
	comp=Z,4.8nm,1.0s						
BRG	Berggiesshubel	14.73	337	eP	P	15 47 47.7	+1.4
	comp=Z,3.0nm,0.6s						
TANN	Tannenbergstha	14.83	333	eP	P	15 47 50.0	+2.6
	comp=Z,4.0nm,0.9s						
GUNZ	Gunzen	14.83	333	eP	P	15 47 49.5	+2.0
	comp=Z,5.0nm,1.1s						
WERD	Werda	14.91	333	eP	P	15 47 50.7	+2.4
	comp=Z,4.0nm,0.9s						
PLN	Plauen	14.99	333	eP	P	15 47 51.2	+2.0
	comp=Z,25nm,0.8s						
MOX	Moxa	15.32	332	eP	P	15 47 54.6	+1.7
	comp=Z,2.0nm,0.7s						
CABF	La Chapelle	15.34	311	eP	Pn	15 47 50.9	+0.7
	comp=Z,6.9nm,0.6s						
CABF	La Chapelle	15.34	311	eP	Pn	15 47 50.9	+0.7
	comp=Z,3.5nm,0.6s						
CLL	Collm	15.40	336	eP	P	15 47 55.5	+1.8
	comp=Z,5.0nm,0.7s						
CLL	Collm	15.40	336	⇓iP	P	15 47 55.1	+1.4
	comp=Z,8.0nm,0.8s						
HINF	Hinteralfeld	15.55	316	eP	P	15 47 55.9	+0.4
HINF	Hinteralfeld	15.55	316	eP	P	15 47 55.9	+0.4
CDF	Champ du Feu	15.68	319	eP	P	15 47 58.7	+1.8
	comp=Z,2.5nm,0.5s						
CDF	Champ du Feu	15.68	319	eP	P	15 47 58.7	+1.8
	comp=Z,1.2nm,0.5s						
HAU	Haudompre	15.94	316	eP	P	15 48 00.4	+0.7
HAU	Haudompre	15.94	316	eP	P	15 48 00.4	+0.7
PAGF	Fort de Pagny	16.59	317	eP	P	15 48 08.3	+1.3
	comp=Z,2.5nm,0.8s						
PAGF	Fort de Pagny	16.59	317	eP	P	15 48 08.3	+1.3
	comp=Z,1.2nm,0.8s						
SFTF	Sexfontaines	16.78	315	eP	P	15 48 09.2	+0.2
SFTF	Sexfontaines	16.78	315	eP	P	15 48 09.2	+0.2
MEZF	Maizieres J'vi	16.93	316	eP	P	15 48 12.2	+1.5
	comp=Z,5.3nm,0.4s						
MEZF	Maizieres J'vi	16.93	316	eP	P	15 48 12.2	+1.5
	comp=Z,2.7nm,0.4s						
LOR	Lormes	16.99	311	eP	P	15 48 11.7	+0.3
LOR	Lormes	16.99	311	eP	P	15 48 11.7	+0.3
SSF	Saint Saulge	17.11	310	eP	P	15 48 13.4	+0.7
	comp=Z,5.7nm,0.7s						
SSF	Saint Saulge	17.11	310	eP	P	15 48 13.4	+0.7
	comp=Z,2.8nm,0.7s						
CAF	Calviac	17.23	302	eP	Pn	15 48 13.4	-0.3
CAF	Calviac	17.23	302	eP	Pn	15 48 13.4	-0.3
BGF	Bois d'Agland	17.30	308	eP	P	15 48 15.5	+0.7
BGF	Bois d'Agland	17.30	308	eP	P	15 48 15.5	+0.7
GIVF	Givet	17.98	320	eP	Pn	15 48 25.7	+2.9
GIVF	Givet	17.98	320	eP	Pn	15 48 25.7	+2.9
BAIF	Baives	18.27	319	eP	P	15 48 25.6	+0.1
	comp=Z,6.5nm,0.5s						
BAIF	Baives	18.27	319	eP	P	15 48 25.6	+0.1
	comp=Z,3.2nm,0.5s						
MFF	Saint Martin d	19.23	305	eP	P	15 48 36.4	+0.4
MFF	Saint Martin d	19.23	305	eP	P	15 48 36.4	+0.4
LDF	La Druitiere	19.98	311	eP	P	15 48 43.9	-0.1
	comp=Z,13nm,0.6s						
LDF	La Druitiere	19.98	311	eP	P	15 48 43.9	-0.1
	comp=Z,6.3nm,0.6s						
FLN	La Foliniere	20.27	311	eP	P	15 48 47.2	+0.1
FLN	La Foliniere	20.27	311	eP	P	15 48 47.2	+0.1
GRR	Gorron	20.34	310	eP	P	15 48 48.0	0.0
	comp=Z,7.4nm,0.6s						
GRR	Gorron	20.34	310	eP	P	15 48 48.0	0.0
	comp=Z,3.7nm,0.6s						
ESDC	Sonseca Array	21.01	284	P	P	15 48 54.7	-0.6
	comp=Z,0.9nm,0.6s,baz=82,slow=10.0,SNR=5.0						
SGMF	Saint Gilles	21.34	308	eP	P	15 48 58.4	-0.3
SGMF	Saint Gilles	21.34	308	eP	P	15 48 58.4	-0.3
QUIF	Quistinic	21.61	307	eP	P	15 49 01.2	-0.4
QUIF	Quistinic	21.61	307	eP	P	15 49 01.2	-0.4
ROSF	Rostrenen	21.82	308	eP	P	15 49 02.4	-1.4
ROSF	Rostrenen	21.82	308	eP	P	15 49 02.4	-1.4
HFS	Hagfors	23.32	348	P	P	15 49 17.8	-1.3
	comp=Z,2.8nm,0.5s,baz=155,slow=11,SNR=24						
FINES	FINESS Array B	23.98	4	P	P	15 49 23.4	-1.6
	comp=Z,1.7nm,0.7s,baz=180,slow=9.5,SNR=9.0						
NB2	NORSAR Subarra	24.60	346	P	P	15 49 31.0	+0.3
	comp=Z,2.0nm,0.6s,baz=159,slow=11						
NB2	NORSAR Subarra	24.60	346	P	P	15 49 31.0	+0.3
	comp=Z,2.0nm,0.6s,SNR=5.3						
NOA	NORSAR Array B	24.60	346	P	P	15 49 30.8	0.0
	comp=Z,1.6nm,0.6s,baz=149,slow=9.8,SNR=8.4						
KAF	Kangasniemi	24.66	4	ep	P	15 49 30.4	-0.8
	comp=Z,0.4nm,0.4s						
KAF	Kangasniemi	24.66	4	eP	P	15 49 30.4	-0.8
	comp=Z,0.4nm,0.4s						
EKA	Eskdalemuir Ar	24.98	324	P	P	15 49 34.6	+0.4
	comp=Z,3.1nm,0.4s,baz=120,slow=9.3,SNR=18						
JOF	Joensuu	25.90	9	ep	P	15 49 42.1	-0.3
	comp=Z,2.6nm,0.6s						
JOF	Joensuu	25.90	9	eP	P	15 49 42.1	-0.3
	comp=Z,2.6nm,0.6s						
TORD	Torodi Ar. Bea	30.77	223	P	P	15 50 26.4	+0.1
	comp=Z,0.9nm,0.6s,baz=30,slow=9.3,SNR=15						
ARCES	ARCESS Array B	32.05	2	P	P	15 50 36.5	-0.4
	comp=Z,1.6nm,0.7s,baz=188,slow=9.5,SNR=9.4						
KEV	Kevo	32.32	3	ep	P	15 50 37.9	-1.4
	comp=Z,0.3nm,0.4s						
DBIC	Dimbokro	39.74	226	P	P	15 51 42.1	-1.1
	comp=Z,8.0nm,1.0s,baz=89,slow=2.1,SNR=4.7						
LIC	Lamto	40.20	226	⇑iP	P	15 51 47.3	+0.3
	comp=Z,9.5nm,0.4s						
LIC	Lamto	40.20	226	⇑iP	P	15 51 47.3	+0.3
	comp=Z,4.8nm,0.4s						
MKAR	Makanchi Array	44.06	58	P	P	15 52 18.4	+0.2
	comp=Z,0.3nm,0.5s,baz=267,slow=7.4,SNR=13						
MKAR				PP	PP	15 54 01.4	-0.7
	comp=Z,0.2nm,0.7s,baz=263,slow=5.7,SNR=2.1						
ZALV	Zalesovo Beam	44.74	48	P	P	15 52 23.3	-0.1
	comp=Z,1.5nm,0.5s,baz=271,slow=8.1,SNR=9.2						
SCHQ	Schefferville	60.13	318	P	P	15 54 16.4	-0.8
	comp=Z,2.7nm,0.7s,baz=44,slow=7.4,SNR=7.0						
YKA	Yellowknife Ar	74.57	341	P	P	15 55 48.1	0.0
	comp=Z,0.1nm,0.3s,baz=294,slow=10,SNR=3.6						

KRSC 02 16:08:59.6±0.2, 52°.90N×160°.46E, h21km±16km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.33	307	P	Pn	16 09 08.3	-0.9
SPN				i S	Sn	16 09 14.1	-1.2
NLC	Nalytchevo	0.73	292	eP	Pb	16 09 13.7	+0.2
NLC				i S	Sb	16 09 22.9	-0.1
SDLR	Sedlovina	1.02	292	P	Pb	16 09 18.6	-0.2
SDLR				i S	Sn	16 09 32.5	-0.2
UGLR	Uglovaya	1.03	288	P	Pb	16 09 18.8	-0.2
UGLR				i S	Sn	16 09 33.0	0.0
SMAR	Somma	1.06	291	eP	Pn	16 09 19.0	-0.6
SMAR				i S	Sb	16 09 33.3	0.0
PET	Petropavlovsk	1.10	277	P	Pn	16 09 19.4	-0.3
PET				i S	Sb	16 09 33.7	0.0
AVH	Avacha	1.10	290	P	Pn	16 09 19.9	0.0
AVH				i S	Sn	16 09 34.3	-0.2
KRER	Koryakskii	1.11	292	P	Pn	16 09 20.2	+0.1
KRER				i S	Sn	16 09 35.4	+0.4
KOK	Koryaka	1.17	290	P	Pn	16 09 20.8	0.0
KOK				i S	Sn	16 09 36.2	0.0
RUS	Russkaya	1.27	249	eP	Pn	16 09 21.7	-0.4
RUS				i S	Sn	16 09 37.9	-0.7
KII	Karymskiy	1.29	332	eP	Pn	16 09 22.2	-0.3
KII				i S	Sn	16 09 38.7	-0.5
MTVR	Mutnovka	1.45	254	eP	Pn	16 09 24.8	+0.1
MTVR				i S	Sb	16 09 43.7	-0.4
GRL	Gorelyy	1.49	257	eP	Pn	16 09 26.0	+0.7
GRL				i S	Sb	16 09 45.2	-0.2
ASAK	Asacha	1.64	253	eP	Pn	16 09 27.8	+0.5
ASAK				i S	Sn	16 09 48.6	+0.7
GNL	Ganaly	1.71	299	P	Pb	16 09 29.4	-1.0
GNL				i S	Sb	16 09 52.0	+0.4
MKZ	Mys Kozlova	1.82	24	eP	Pn	16 09 28.1	-1.6
MKZ				eS	Sn	16 09 49.6	-2.5
APC	Apacha	2.00	272	eP	Pb	16 09 33.8	-1.4
APC				i S	Sb	16 09 59.4	-0.2
MIPR	Malaya Ipel'ka	2.34	256	eP	Pn	16 09 38.0	+1.1
KMNR	Kamenistaya	2.87	357	eP	Pn	16 09 46.1	+1.9
KMNR				i S	Sn	16 10 20.4	+2.3
BZMR	Bezymyannaya	3.04	0	P	Pn	16 09 48.7	+2.1
BZGR	Bezymyannyi-Gr	3.05	2	eP	Pn	16 09 48.9	+2.2
BZGR				i S	Sn	16 10 26.0	+3.4
ESO	Esso	3.20	342	eP	Pn	16 09 49.6	+0.9
KLY	Klyuchi	3.42	2	P	Pn	16 09 53.4	+1.8
KLY				i S	Sn	16 10 32.9	+1.4
KBG	Krutoberegovo	3.61	20	P	Pn	16 09 57.0	+2.8
KBG				i S	Sn	16 10 38.6	+2.6

IDC 02 16:20:09.7±41.0, 38°.22S×46°.96E, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.6/22, mbtmp4.1/3, MS3.6/6, Ms1 3.6/6, ms1mx3.2/33, Error ellipse: s-maj=1051.0km s-min=285.1km az=109.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	20.45	291	LR	LR	16 31 27.9	
	comp=Z,96nm,19.6s,baz=249,slow=33						
LBTB	Lobatse	22.39	300	LR	LR	16 32 45.9	
	comp=Z,89nm,18.1s,baz=334,slow=34						
LSZ	Lusaka	28.23	319	LR	LR	16 36 25.4	
	comp=Z,56nm,18.8s,baz=196,slow=35						
MAW	Mawson	30.76	168	LR	LR	16 35 52.5	
	comp=Z,116nm,19.8s,baz=176,slow=31						
VNDA	Vanda	58.05	167	LR	LR	16 51 51.5	
	comp=Z,103nm,19.6s,baz=148,slow=33						
ASAR	Alice Springs	73.47	107	P	P	16 31 44.0	-0.3
	1.1nm,0.8s,baz=228,slow=6.0,SNR=14						
STKA	Stephens Creek	74.36	118	P	P	16 31 49.8	+0.4
	0.8nm,0.6s,baz=214,slow=5.5,SNR=3.9						
WRA	Warramunga Arr	75.95	104	P	P	16 31 59.0	+0.2
	1.7nm,0.8s,baz=228,slow=4.8,SNR=11						
CTA	Charters Tower	84.79	111	LR	LR	17 06 47.6	
	comp=Z,65nm,18.6s,baz=42,slow=33						

IDC 02 16:22:36.5±3.3, 32°.19S×178°.19W, h0km, mb3.2/2, mb1 3.6/3, mb1mx3.5/18, mbtmp3.4/3, ML2.9/1, MS3.7/1, Ms1 3.7/1, ms1mx3.1/9, Error ellipse: s-maj=76.7km s-min=47.9km az=118.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.17	211	Pn	Pn	16 24 22.4	-0.3
	0.2nm,0.3s,baz=350,slow=15,SNR=2.2						
URZ				Sn	Sn	16 25 38.4	-6.5
	0.3nm,0.3s,baz=160,slow=3.7,SNR=4.5						
ASAR	Alice Springs	42.88	269	P	P	16 30 36.9	-0.1
	0.2nm,0.6s,baz=109,slow=8.2,SNR=4.1						
WRA	Warramunga Arr	44.03	274	P	P	16 30 46.2	-0.1
	0.3nm,0.6s,baz=114,slow=8.0,SNR=3.7						
FITZ	Fitzroy Crossi	52.22	271	LR	LR	16 54 10.9	
	comp=Z,68nm,18.7s,baz=155,slow=36						
FINES	FINESS Array B	146.76	339	PKPbc	PKPbc	16 42 18.9	-0.8
	0.5nm,0.6s,baz=336,slow=6.1,SNR=3.7						

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*ISCJB **02** 17:04:40.5±0.2, 43°.76N±0°.01×105°.32W±0°.02, h0km, mb4.1/1, Error ellipse: s-maj=2.5km s-min=1.7km az=165.8*

*NEIC **02** 17:04:41.4±0.4, 43°.80N×105°.25W, h0km, ML3.0, Error ellipse: s-maj=5.8km s-min=4.9km az=176.0, Suspected Mining explosion.*

NEIC 60 km [35 miles] SSE of Gillette.

*IDC **02** 17:04:41.6±1.7, 43°.87N×105°.55W, h0km, mb3.9/1, mb1 3.6/5, mb1mx3.4/28, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=50.6km s-min=8.1km az=147.0*

ISC 02 17:04:41.2±0.6, 43°.75N±0°.02×105°.33W±0°.02, h0km, n290, σ0s.92/307, 96C-64D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	Meade Ranch, G	0.23	336	P	Pg	17 04 47.2	+1.5
	baz=0.2,SNR=283						
I23A	Meade Ranch, G	0.23	336	P	Pg	17 04 47.2	+1.5
	baz=0.2,SNR=283						
J23A	Dilts Ranch, B	0.38	205	P	Pg	17 04 49.3	+0.9
	baz=0.5,SNR=396						
J23A	Dilts Ranch, B	0.38	205	P	Pg	17 04 49.3	+0.9
	baz=0.5,SNR=396						
I24A	Kuemmerle Ranc	0.52	77	⇓P	Pg	17 04 51.7	+0.6
	baz=0.5,SNR=665						
I24A	Kuemmerle Ranc	0.52	77	⇓P	Pg	17 04 51.7	+0.6
	baz=0.5,SNR=665						
J24A	Dixon Ranch, L	0.64	130	P	Pg	17 04 53.7	+0.3
	baz=0.6,SNR=116						
J24A	Dixon Ranch, L	0.64	130	P	Pg	17 04 53.7	+0.3
	baz=0.6,SNR=116						
H23A	Clabaugh Cattl	0.81	356	⇑P	Pg	17 04 57.1	+0.3
	baz=0.8,SNR=36						
H23A	Clabaugh Cattl	0.81	356	⇑P	Pg	17 04 57.1	+0.3
	baz=0.8,SNR=36						
I22A	9 Mile Ranch,	0.85	280	⇑P	Pg	17 04 58.0	+0.6
	baz=0.9,SNR=1000						
I22A				S	Sg	17 05 09.0	+0.6
	baz=0.9						
I22A	9 Mile Ranch,	0.85	280	⇑P	Pg	17 04 58.0	+0.6
	baz=0.9,SNR=1000						
I22A				S	Sg	17 05 09.0	+0.6
	baz=0.9						
J22A	Midwest	0.90	248	⇑P	Pg	17 04 58.3	-0.1
	baz=1.0						
J22A	Midwest	0.90	248	⇑P	Pg	17 04 58.3	-0.1
	baz=1.0						
RSSD	Black Hills	1.01	68	ePg	Pg	17 05 00.1	-0.4
K23A	Bowen Ranch, D	1.02	192	P	Pg	17 05 00.7	+0.1
	baz=1.1,SNR=15						
K23A	Bowen Ranch, D	1.02	192	P	Pg	17 05 00.7	+0.1
	baz=1.1,SNR=15						
K24A	Anderson Ranch	1.09	160	⇓P	Pg	17 05 01.7	-0.4
	baz=1.1,SNR=139						
K24A	Anderson Ranch	1.09	160	⇓P	Pg	17 05 01.7	-0.4
	baz=1.1,SNR=139						
H22A	Clearmont	1.12	319	P	Pg	17 05 03.0	+0.3
	baz=1.1,SNR=198						
H22A	Clearmont	1.12	319	P	Pg	17 05 03.0	+0.3
	baz=1.1,SNR=198						
H24A	Dirks Ranch, A	1.14	29	⇑P	Pg	17 05 02.6	-0.5
	baz=1.1						
H24A	Dirks Ranch, A	1.14	29	⇑P	Pg	17 05 02.6	-0.5
	baz=1.1						
K22A	Casper	1.40	219	⇓P	Pn	17 05 07.3	-0.8
	baz=1.5						
K22A	Casper	1.40	219	⇓P	Pn	17 05 07.3	-0.8
	baz=1.5						
I21A	Big Trails, Te	1.42	273	⇓P	Pn	17 05 07.0	-1.4
	baz=1.5						
I21A	Big Trails, Te	1.42	273	⇓P	Pn	17 05 07.0	-1.4
	baz=1.5						
G23A	Biddle	1.45	358	⇑P	Pn	17 05 08.3	-0.4
	baz=1.4						
G23A	Biddle	1.45	358	⇑P	Pn	17 05 08.3	-0.4
	baz=1.4						
H21A	Big Horn, Sher	1.51	306	Pb	Pn	17 05 09.9	+0.3
	baz=1.5,SNR=157						
H21A	Big Horn, Sher	1.51	306	Pb	Pn	17 05 09.9	+0.3
	baz=1.5,SNR=157						
K25A	Mack Ranch, Ha	1.56	136	⇓Pb	Pn	17 05 10.7	+0.4
	baz=1.6,SNR=194						
K25A	Mack Ranch, Ha	1.56	136	⇓Pb	Pn	17 05 10.7	+0.4
	baz=1.6,SNR=194						
J21A	Lysite	1.59	256	P	Pn	17 05 10.2	-0.6
	baz=1.7,SNR=113						
J21A	Lysite	1.59	256	P	Pn	17 05 10.2	-0.6
	baz=1.7,SNR=113						
G22A	Birney	1.62	335	Pb	Pn	17 05 11.6	+0.5
	baz=1.6,SNR=172						
G22A	Birney	1.62	335	Pb	Pn	17 05 11.6	+0.5
	baz=1.6,SNR=172						
L23A	Garrett	1.66	190	P	Pn	17 05 11.4	-0.3
	baz=1.7,SNR=416						
L23A				⇑S	Sn	17 05 34.2	+0.4
	baz=1.7						
L23A	Garrett	1.66	190	P	Pn	17 05 11.4	-0.3
	baz=1.7,SNR=416						
L23A				⇑S	Sn	17 05 34.2	+0.4
	baz=1.7						
G24A	Alzada	1.71	22	⇓Pb	Pn	17 05 12.9	+0.6
	baz=1.6,SNR=25						
G24A	Alzada	1.71	22	⇓Pb	Pn	17 05 12.9	+0.6
	baz=1.6,SNR=25						
L24A	Wheatland	1.73	170	Pb	Pn	17 05 12.8	+0.2
	baz=1.8,SNR=48						
L24A	Wheatland	1.73	170	Pb	Pn	17 05 12.8	+0.2
	baz=1.8,SNR=48						
K21A	Alcova	1.79	232	Pb	Pn	17 05 14.2	+0.6
	baz=1.9,SNR=234						
K21A				⇓S	Sn	17 05 37.2	0.0
	baz=1.9						
K21A	Alcova	1.79	232	Pb	Pn	17 05 14.2	+0.6
	baz=1.9,SNR=234						
K21A				⇓S	Sn	17 05 37.2	0.0
	baz=1.9						
L25A	Engebretsen Ra	1.88	147	⇑Pb	Pn	17 05 15.9	+1.2
	baz=1.9,SNR=22						
L25A				Sb	Sb	17 05 40.6	0.0
	baz=1.9						
L25A	Engebretsen Ra	1.88	147	⇑Pb	Pn	17 05 15.9	+1.2
	baz=1.9,SNR=22						
L25A				Sb	Sb	17 05 40.6	0.0
	baz=1.9						
K26A	Motz Farm, Whi	1.89	123	⇑Pb	Pn	17 05 15.5	+0.7
	baz=1.9,SNR=52						
K26A	Motz Farm, Whi	1.89	123	⇑Pb	Pn	17 05 15.5	+0.7
	baz=1.9,SNR=52						
L22A	Ellis Ranch, M	1.90	206	Pb	Pn	17 05 15.7	+0.7
	baz=2.0,SNR=148						
L22A				Sb	Sb	17 05 41.0	-0.2
	baz=2.0						
L22A	Ellis Ranch, M	1.90	206	Pb	Pn	17 05 15.7	+0.7
	baz=2.0,SNR=148						
L22A				Sb	Sb	17 05 41.0	-0.2
	baz=2.0						
F23A	Volborg	1.97	358	P	Pn	17 05 16.5	+0.6
	baz=1.9,SNR=230						
F23A				Sb	Sg	17 05 44.5	-0.1
	baz=1.9						
F23A	Volborg	1.97	358	P	Pn	17 05 16.5	+0.6
	baz=1.9,SNR=230						
F23A				Sb	Sg	17 05 44.5	-0.1
	baz=1.9						
G21A	Lodge Grass	2.00	318	⇑P	Pn	17 05 17.0	+0.7
	baz=2.0,SNR=152						
G21A	Lodge Grass	2.00	318	⇑P	Pn	17 05 17.0	+0.7
	baz=2.0,SNR=152						
I20A	Worland	2.04	277	Pb	Pn	17 05 17.8	+1.0
	baz=2.1,SNR=341						
I20A				Sb	Sb	17 05 45.0	0.0
	baz=2.1						
I20A	Worland	2.04	277	Pb	Pn	17 05 17.8	+1.0
	baz=2.1,SNR=341						
I20A				Sb	Sb	17 05 45.0	0.0
	baz=2.1						
J20A	Shoshoni	2.04	260	Pb	Pb	17 05 18.8	-0.4
	baz=2.1,SNR=254						
J20A	Shoshoni	2.04	260	Pb	Pb	17 05 18.8	-0.4
	baz=2.1,SNR=254						
H20A	Greybull	2.06	292	P	Pn	17 05 17.6	+0.4
	baz=2.1,SNR=93						
H20A	Greybull	2.06	292	P	Pn	17 05 17.6	+0.4
	baz=2.1,SNR=93						
F22A	Rosebud	2.13	342	P	Pn	17 05 18.1	0.0
	baz=2.1,SNR=189						
F22A				Sb	Sb	17 05 48.7	+0.9
	baz=2.1						
F22A	Rosebud	2.13	342	P	Pn	17 05 18.1	0.0
	baz=2.1,SNR=189						
F22A				Sb	Sb	17 05 48.7	+0.9
	baz=2.1						
F24A	Ekalaka	2.19	16	⇓P	Pn	17 05 20.2	+1.3
	baz=2.1,SNR=11						
F24A	Ekalaka	2.19	16	⇓P	Pn	17 05 20.2	+1.3
	baz=2.1,SNR=11						
M23A	Laramie	2.30	187	⇑Pb	Pn	17 05 22.3	+1.8
	baz=2.4,SNR=44						
M23A				Sb	Sb	17 05 53.4	+0.7
	baz=2.4						
M23A	Laramie	2.30	187	⇑Pb	Pn	17 05 22.3	+1.8
	baz=2.4,SNR=44						
M23A				Sb	Sb	17 05 53.4	+0.7
	baz=2.4						
M24A	Cheyenne	2.31	171	⇑Pb	Pb	17 05 23.4	-0.4
	baz=2.4,SNR=162						
M24A	Cheyenne	2.31	171	⇑Pb	Pb	17 05 23.4	-0.4
	baz=2.4,SNR=162						
L21A	Rawlins	2.33	221	⇑P	Pn	17 05 22.0	+1.1
	baz=2.4,SNR=72						
L21A	Rawlins	2.33	221	⇑P	Pn	17 05 22.0	+1.1
	baz=2.4,SNR=72						
L26A	Underwood Farm	2.38	135	Pb	Pb	17 05 24.0	-1.0
	baz=2.4						
L26A	Underwood Farm	2.38	135	Pb	Pb	17 05 24.0	-1.0
	baz=2.4						

F21A **Absaloka Mine,** 2.44 329 P Pn 17 05 21.9 -0.4
baz=2.4,SNR=14
F21A **Absaloka Mine,** 2.44 329 P Pn 17 05 21.9 -0.4
baz=2.4,SNR=14
PHWY **Pilot Hill** 2.45 182 ℯPn Pn 17 05 23.0 +0.4
K20A **Yellowstone Ra** 2.46 245 Pb Pb 17 05 25.0 -1.3
baz=2.5
K20A **Yellowstone Ra** 2.46 245 Pb Pb 17 05 25.0 -1.3
baz=2.5
M25A **Palm-Egli Farm** 2.50 157 ⇓P Pn 17 05 24.7 +1.5
baz=2.5,SNR=14
M25A **Palm-Egli Farm** 2.50 157 ⇓P Pn 17 05 24.7 +1.5
baz=2.5,SNR=14
M22A **Cedar Creek Ra** 2.52 202 Pb Pn 17 05 25.5 +1.8
baz=2.6,SNR=33
M22A **Cedar Creek Ra** 2.52 202 Pb Pn 17 05 25.5 +1.8
baz=2.6,SNR=33
G20A **Bridger** 2.54 306 P Pn 17 05 23.7 0.0
baz=2.5,SNR=106
G20A **Bridger** 2.54 306 P Pn 17 05 23.7 0.0
baz=2.5,SNR=106
M21A **Separation Pea** 2.61 216 Pb Pn 17 05 26.8 +1.9
baz=2.7
M21A **Separation Pea** 2.61 216 Pb Pn 17 05 26.8 +1.9
baz=2.7
I19A **Meeteetse** 2.67 277 P Pn 17 05 26.7 +1.2
baz=2.7,SNR=67
I19A **Meeteetse** 2.67 277 P Pn 17 05 26.7 +1.2
baz=2.7,SNR=67
E22A **Miles City** 2.73 351 P Pn 17 05 26.1 -0.1
baz=2.7,SNR=16
E22A **Miles City** 2.73 351 P Pn 17 05 26.1 -0.1
baz=2.7,SNR=16
K19A **Absolon Red Bu** 2.73 251 ⇑Pb Pb 17 05 29.7 -1.2
baz=2.8,SNR=62
K19A **Absolon Red Bu** 2.73 251 ⇑Pb Pb 17 05 29.7 -1.2
baz=2.8,SNR=62
E23A **Ismay** 2.75 0 P Pn 17 05 26.9 +0.3
baz=2.7,SNR=36
E23A **Ismay** 2.75 0 P Pn 17 05 26.9 +0.3
baz=2.7,SNR=36
J19A **Crowheart** 2.75 261 ⇑P Pn 17 05 28.6 +1.9
baz=2.8,SNR=180
J19A **Crowheart** 2.75 261 ⇑P Pn 17 05 28.6 +1.9
baz=2.8,SNR=180
H19A **Powell** 2.79 291 ⇓P Pn 17 05 27.9 +0.8
baz=2.8,SNR=29
H19A **Powell** 2.79 291 ⇓P Pn 17 05 27.9 +0.8
baz=2.8,SNR=29
L20A **Wamsutter** 2.81 233 P Pn 17 05 29.9 +2.2
baz=2.9,SNR=6.6
L20A **Wamsutter** 2.81 233 P Pn 17 05 29.9 +2.2
baz=2.9,SNR=6.6
F20A **Billings** 2.87 317 ⇓P Pn 17 05 28.3 0.0
baz=2.9,SNR=18
F20A **Billings** 2.87 317 ⇓P Pn 17 05 28.3 0.0
baz=2.9,SNR=18
N23A **Red Feather La** 2.89 189 ⇓P Pn 17 05 29.9 +1.2
baz=2.9,SNR=45
N23A **Red Feather La** 2.89 189 ⇓P Pn 17 05 29.9 +1.2
baz=2.9,SNR=45
E24A **Baker** 2.90 14 ⇑P Pn 17 05 29.6 +0.9
baz=2.8,SNR=70
E24A **Baker** 2.90 14 ⇑P Pn 17 05 29.6 +0.9
baz=2.8,SNR=70
N24A **Carr** 2.94 173 ⇓Pb Pb 17 05 34.3 -0.2
baz=3.0,SNR=6.8
N24A **Carr** 2.94 173 ⇓Pb Pb 17 05 34.3 -0.2
baz=3.0,SNR=6.8
E21A **Keefer Ranch,** 3.05 337 P Pn 17 05 30.1 -0.6
baz=3.0
E21A **Keefer Ranch,** 3.05 337 P Pn 17 05 30.1 -0.6
baz=3.0
N22A **Wattenberg Ran** 3.06 196 ⇑Pb Pb 17 05 35.9 -0.8
baz=3.1,SNR=41
N22A **Wattenberg Ran** 3.06 196 ⇑Pb Pb 17 05 35.9 -0.8
baz=3.1,SNR=41
M20A **Sweetwater, Wa** 3.09 224 ⇑Pb Pb 17 05 36.8 -0.3
baz=3.2
M20A **Sweetwater, Wa** 3.09 224 ⇑Pb Pb 17 05 36.8 -0.3
baz=3.2
RLMT **Red Lodge** 3.14 297 ℯPn Pn 17 05 31.3 -0.7
RLMT **Red Lodge** 3.14 297 ⇑P Pn 17 05 32.8 +0.7
baz=3.2,SNR=9.1
RLMT **Red Lodge** 3.14 297 ⇑P Pn 17 05 32.8 +0.7
baz=3.2,SNR=9.1
PDAR **Pinedale Array** 3.24 254 Pn Pn 17 05 34.3 +0.8
PDAR Pg Pg 17 05 42.0 -1.3
PDAR Lg Lg 17 06 19.6
PDAR **Pinedale Array** 3.24 254 Pn Pn 17 05 34.3 +0.8
3.4nm,0.3s,baz=75,slow=16,SNR=74
PDAR Pg Pg 17 05 42.0 -1.3
5.7nm,0.3s,baz=60,slow=18,SNR=29
PDAR Lg Lg 17 06 19.6
7.1nm,0.3s,baz=76,slow=22,SNR=5.4
H18A **Shoshone NF, C** 3.25 288 ⇑P Pn 17 05 33.9 +0.2
baz=3.3,SNR=7.8
H18A **Shoshone NF, C** 3.25 288 ⇑P Pn 17 05 33.9 +0.2
baz=3.3,SNR=7.8
F19A **Roth Farm, Mol** 3.32 311 P Pn 17 05 35.2 +0.7
baz=3.3,SNR=44
F19A **Roth Farm, Mol** 3.32 311 P Pn 17 05 35.2 +0.7
baz=3.3,SNR=44
E20A **Meyer Farm, Mu** 3.39 325 P Pn 17 05 34.7 -0.7
baz=3.4
E20A **Meyer Farm, Mu** 3.39 325 P Pn 17 05 34.7 -0.7
baz=3.4
N21A **Black Mountain** 3.40 209 P Pn 17 05 37.4 +1.7
baz=3.5
N21A **Black Mountain** 3.40 209 P Pn 17 05 37.4 +1.7
baz=3.5
G18A **Lazy EL Ranch,** 3.41 299 ⇑P Pn 17 05 36.4 +0.7
baz=3.4,SNR=51
G18A **Lazy EL Ranch,** 3.41 299 ⇑P Pn 17 05 36.4 +0.7
baz=3.4,SNR=51
D23A **Lindsay** 3.43 1 P Pn 17 05 36.8 +0.9
baz=3.4,SNR=48
D23A **Lindsay** 3.43 1 P Pn 17 05 36.8 +0.9
baz=3.4,SNR=48
D24A **Glendive** 3.44 11 ⇑P Pn 17 05 37.4 +1.4
baz=3.4,SNR=11
D24A **Glendive** 3.44 11 ⇑P Pn 17 05 37.4 +1.4
baz=3.4,SNR=11
D22A **Cohagen** 3.45 350 ⇑P Pn 17 05 36.6 +0.4
baz=3.4,SNR=28
D22A **Cohagen** 3.45 350 ⇑P Pn 17 05 36.6 +0.4
baz=3.4,SNR=28
J18A **Kendall Valley** 3.46 263 P Pn 17 05 38.2 +1.7
baz=3.5
J18A **Kendall Valley** 3.46 263 P Pn 17 05 38.2 +1.7
baz=3.5
D21A **La Casta Ranch** 3.52 341 ⇑P Pn 17 05 37.3 +0.1
baz=3.5
D21A **La Casta Ranch** 3.52 341 ⇑P Pn 17 05 37.3 +0.1
baz=3.5
O23A **Lake Granby, G** 3.56 187 ⇓Pb Pb 17 05 44.1 -1.1
baz=3.6,SNR=18
O23A **Lake Granby, G** 3.56 187 ⇓Pb Pb 17 05 44.1 -1.1
baz=3.6,SNR=18
N27A **Anderson Farm,** 3.60 144 ⇑P Pn 17 05 39.1 +0.9
baz=3.6,SNR=20
N27A **Anderson Farm,** 3.60 144 ⇑P Pn 17 05 39.1 +0.9
baz=3.6,SNR=20
N20A **Spence Gulch,** 3.64 218 ⇓P Pn 17 05 40.1 +1.2
baz=3.7,SNR=10
N20A **Spence Gulch,** 3.64 218 ⇓P Pn 17 05 40.1 +1.2
baz=3.7,SNR=10
E19A **Rath Farm, Rou** 3.65 319 P Pn 17 05 38.8 -0.2
baz=3.6,SNR=43
E19A **Rath Farm, Rou** 3.65 319 P Pn 17 05 38.8 -0.2
baz=3.6,SNR=43
O22A **Kremmling** 3.70 195 ⇓Pb Pb 17 05 46.4 -1.1
baz=3.8,SNR=10
O22A **Kremmling** 3.70 195 ⇓Pb Pb 17 05 46.4 -1.1
baz=3.8,SNR=10
GCMT **Greycliff** 3.70 305 ℯPn Pn 17 05 40.5 +0.7
OGNE **Ogallala** 3.72 138 ℯPn Pn 17 05 40.9 +1.0
OGNE **Ogallala** 3.72 138 ⇓P Pn 17 05 40.7 +0.8
baz=3.7,SNR=16
OGNE **Ogallala** 3.72 138 ⇓P Pn 17 05 40.7 +0.8
baz=3.7,SNR=16
LKWY **Lake** 3.74 284 ℯPn Pn 17 05 41.7 +1.3
F18A **Big Timber** 3.79 306 P Pn 17 05 41.9 +0.9
baz=3.8,SNR=55
F18A **Big Timber** 3.79 306 P Pn 17 05 41.9 +0.9
baz=3.8,SNR=55
LOHW **Long Hollow** 3.83 270 ℯPn Pn 17 05 42.6 +1.1
C24A **Savage** 3.83 9 ⇑P Pn 17 05 43.0 +1.6
baz=3.8,SNR=23
C24A **Savage** 3.83 9 ⇑P Pn 17 05 43.0 +1.6
baz=3.8,SNR=23
D20A **Manuel Ranch,** 3.88 330 P Pn 17 05 42.2 0.0
baz=3.9,SNR=30
D20A **Manuel Ranch,** 3.88 330 P Pn 17 05 42.2 0.0
baz=3.9,SNR=30
MOOW **Moose Ponds** 3.92 272 ℯPn Pn 17 05 44.8 +1.9
J17A **Brown Place, J** 3.93 266 Pb Pb 17 05 50.9 -0.5
baz=4.0
J17A **Brown Place, J** 3.93 266 Pb Pb 17 05 50.9 -0.5
baz=4.0
SNOW **Snow King Moun** 3.95 268 ℯPn Pn 17 05 45.5 +2.2
ISCO **Idaho Springs** 3.95 183 ℯPn Pn 17 05 44.3 +1.0
ISCO **Idaho Springs** 3.95 183 ⇑P Pn 17 05 44.5 +1.2
baz=4.0
ISCO **Idaho Springs** 3.95 183 ⇑P Pn 17 05 44.5 +1.2
baz=4.0
C22A **Vida** 4.02 355 ⇑P Pn 17 05 45.3 +1.4
baz=4.0,SNR=18
C22A **Vida** 4.02 355 ⇑P Pn 17 05 45.3 +1.4
baz=4.0,SNR=18
C23A **Lambert** 4.06 1 ⇓P Pn 17 05 45.8 +1.3
baz=4.0,SNR=26
C23A **Lambert** 4.06 1 ⇓P Pn 17 05 45.8 +1.3
baz=4.0,SNR=26
IMW **Indian Meadow** 4.06 274 ℯPn Pn 17 05 46.8 +2.0
TPAW **Teton Pass** 4.09 268 ℯPn Pn 17 05 46.7 +1.5
O27A **Beecher Island** 4.14 148 ⇓P Pn 17 05 46.4 +0.6
baz=4.2
O27A **Beecher Island** 4.14 148 ⇓P Pn 17 05 46.4 +0.6
baz=4.2
YMR **Madison River** 4.16 285 ℯPn Pn 17 05 44.5 -1.6
O20A **White River Ci** 4.21 212 P Pn 17 05 48.4 +1.5
baz=4.3,SNR=22
O20A **White River Ci** 4.21 212 P Pn 17 05 48.4 +1.5
baz=4.3,SNR=22
D19A **Cripps Ranch,** 4.23 325 P Pn 17 05 46.8 -0.1
baz=4.2,SNR=8.7
D19A **Cripps Ranch,** 4.23 325 P Pn 17 05 46.8 -0.1
baz=4.2,SNR=8.7
C21A **Desert Coulee** 4.26 344 ⇑P Pn 17 05 48.2 +0.8
baz=4.2
C21A **Desert Coulee** 4.26 344 ⇑P Pn 17 05 48.2 +0.8
baz=4.2
E18A **Harlowton** 4.29 313 ⇑P Pn 17 05 48.7 +0.8
baz=4.3,SNR=55
E18A **Harlowton** 4.29 313 ⇑P Pn 17 05 48.7 +0.8
baz=4.3,SNR=55
P25A **Willow Gulch B** 4.32 168 ⇑P Pn 17 05 49.1 +0.9
baz=4.4
P25A **Willow Gulch B** 4.32 168 ⇑P Pn 17 05 49.1 +0.9
baz=4.4
H16A **Russell Place,** 4.36 285 ⇓P Pn 17 05 49.8 +1.0
baz=4.4
H16A **Russell Place,** 4.36 285 ⇓P Pn 17 05 49.8 +1.0
baz=4.4
F17A **Fitzpatrick Pl** 4.36 301 P Pn 17 05 50.2 +1.4
baz=4.4,SNR=33
F17A **Fitzpatrick Pl** 4.36 301 P Pn 17 05 50.2 +1.4
baz=4.4,SNR=33
RRI2 **Red Ridge** 4.37 267 ℯPn Pn 17 05 50.0 +0.9
C20A **Veseth Ranch,** 4.38 336 ⇑P Pn 17 05 49.6 +0.6
baz=4.4,SNR=10
C20A **Veseth Ranch,** 4.38 336 ⇑P Pn 17 05 49.6 +0.6
baz=4.4,SNR=10
P23A **Jefferson** 4.39 185 ⇑P Pn 17 05 50.2 +0.8
baz=4.4
P23A **Jefferson** 4.39 185 ⇑P Pn 17 05 50.2 +0.8
baz=4.4
P26A **Davis Ranch, A** 4.44 160 ⇑P Pn 17 05 50.7 +0.8
baz=4.5,SNR=25
P26A **Davis Ranch, A** 4.44 160 ⇑P Pn 17 05 50.7 +0.8
baz=4.5,SNR=25
O19A **Miners Draw (B** 4.46 221 ⇑P Pn 17 05 51.2 +1.1
baz=4.5,SNR=9.2
O19A **Miners Draw (B** 4.46 221 ⇑P Pn 17 05 51.2 +1.1
baz=4.5,SNR=9.2
QLMT **Earthquake Lak** 4.51 286 ℯPn Pn 17 05 54.3 +3.3
P27A **Ficken Ranch,** 4.67 153 ⇑P Pn 17 05 53.7 +0.7
baz=4.7,SNR=16
P27A **Ficken Ranch,** 4.67 153 ⇑P Pn 17 05 53.7 +0.7
baz=4.7,SNR=16
B23A **Brockton** 4.72 3 ⇑P Pn 17 05 55.0 +1.3
baz=4.7,SNR=18
B23A **Brockton** 4.72 3 ⇑P Pn 17 05 55.0 +1.3
baz=4.7,SNR=18
SMCO **Snowmass** 4.73 196 ℯPn Pn 17 05 54.3 +0.2
C19A **Slack Wire Ran** 4.76 328 P Pn 17 05 54.3 +0.1
baz=4.7,SNR=31
C19A **Slack Wire Ran** 4.76 328 P Pn 17 05 54.3 +0.1
baz=4.7,SNR=31
E17A **Martinsdale** 4.76 307 P Pn 17 05 55.5 +1.1
baz=4.8,SNR=25
E17A **Martindale** 4.76 307 P Pn 17 05 55.5 +1.1
baz=4.8,SNR=25
DGMT **Dagmar** 4.79 9 ℯPn Pn 17 05 55.5 +1.0
DGMT **Dagmar** 4.79 9 ⇓P Pn 17 05 56.1 +1.5
baz=4.7,SNR=5.4
DGMT **Dagmar** 4.79 9 ⇓P Pn 17 05 56.1 +1.5
baz=4.7,SNR=5.4
G16A **Moss Hill, Enn** 4.86 290 ⇑P Pn 17 05 56.0 +0.3
baz=4.9
G16A **Moss Hill, Enn** 4.86 290 ⇑P Pn 17 05 56.0 +0.3
baz=4.9
BOZ **Bozeman (W)** 4.88 295 ℯPn Pn 17 05 54.6 -1.2
BOZ **Bozeman (W)** 4.88 295 ⇑P Pn 17 05 56.1 +0.2
baz=4.9
BOZ **Bozeman (W)** 4.88 295 ⇑P Pn 17 05 56.1 +0.2
baz=4.9
Q25A **Bedland, Calha** 4.90 170 ⇓P Pn 17 05 56.8 +0.6
baz=4.9
Q25A **Bedland, Calha** 4.90 170 ⇓P Pn 17 05 56.8 +0.6
baz=4.9
Q26A **Hugo** 5.01 164 ⇑P Pn 17 05 58.3 +0.6
baz=5.0
Q26A **Hugo** 5.01 164 ⇑P Pn 17 05 58.3 +0.6
baz=5.0
HWUT **Hardware Ranch** 5.07 247 ℯPn Pn 17 05 59.3 +0.7
6.6nm,0.4s
D17A **Six Diamond Ra** 5.08 314 P Pn 17 05 59.2 +0.6
baz=5.1,SNR=48
D17A **Six Diamond Ra** 5.08 314 P Pn 17 05 59.2 +0.6
baz=5.1,SNR=48
KSCO **Kaye Shedlock'** 5.15 156 ⇓P Pn 17 06 00.3 +0.6
baz=5.2
KSCO **Kaye Shedlock'** 5.15 156 ⇓P Pn 17 06 00.3 +0.6
baz=5.2
A22A **Carney Farms,** 5.26 356 ⇑P Pn 17 06 01.5 +0.4
baz=5.2
A22A **Carney Farms,** 5.26 356 ⇑P Pn 17 06 01.5 +0.4
baz=5.2
EGMT **Eagleton** 5.27 326 ℯPn Pn 17 06 01.1 -0.2
10nm,0.4s
C17A **Wharram Farm,** 5.44 317 ⇑P Pn 17 06 03.8 +0.3
baz=5.4,SNR=6.6
C17A **Wharram Farm,** 5.44 317 ⇑P Pn 17 06 03.8 +0.3
baz=5.4,SNR=6.6
HRY **Holter Researc** 5.46 305 ℯPn Pn 17 06 04.5 +0.6
7.3nm,0.3s
L15A **Malad City** 5.47 254 ⇓P Pn 17 06 05.7 +1.6
baz=5.5,SNR=12
L15A **Malad City** 5.47 254 ⇓P Pn 17 06 05.7 +1.6
baz=5.5,SNR=12
D16A **Dana Ranch, Ca** 5.47 309 P Pn 17 06 04.6 +0.5
baz=5.5,SNR=17
D16A **Dana Ranch, Ca** 5.47 309 P Pn 17 06 04.6 +0.5
baz=5.5,SNR=17
LRM **Limekiln Ridge** 5.48 295 ℯPn Pn 17 06 04.3 +0.1
16nm,0.4s
MCMT **Monte Canyo** 5.50 284 Pn Pb 17 06 13.1 -5.2
1.0nm,0.3s
JLU **Jordanelle** 5.53 237 ℯPn Pn 17 06 05.6 +0.7
3.9nm,0.5s
B18A **Beardsley Farm** 5.58 328 ⇓P Pn 17 06 05.9 +0.4
baz=5.6
B18A **Beardsley Farm** 5.58 328 ⇓P Pn 17 06 05.9 +0.4
baz=5.6
R26A **Arlington** 5.62 165 ⇑P Pn 17 06 06.6 +0.4
baz=5.7,SNR=5.7
R26A **Arlington** 5.62 165 ⇑P Pn 17 06 06.6 +0.4
baz=5.7,SNR=5.7
R25A **Fountain Ranch** 5.65 172 P Pn 17 06 07.0 +0.5
baz=5.7,SNR=12
R25A **Fountain Ranch** 5.65 172 P Pn 17 06 07.0 +0.5
baz=5.7,SNR=12
R27A **Eads** 5.78 160 ⇓P Pn 17 06 09.1 +0.8
baz=5.8,SNR=5.3
R27A **Eads** 5.78 160 ⇓P Pn 17 06 09.1 +0.8
baz=5.8,SNR=5.3
E15A **Deer Lodge** 5.83 300 ⇓P Pn 17 06 09.2 +0.3
baz=5.8,SNR=16
E15A **Deer Lodge** 5.83 300 ⇓P Pn 17 06 09.2 +0.3
baz=5.8,SNR=16
B17A **L&G Farms, Che** 5.93 322 ⇓P Pn 17 06 10.9 +0.6
baz=5.9,SNR=5.7
B17A **L&G Farms, Che** 5.93 322 ⇓P Pn 17 06 10.9 +0.6
baz=5.9,SNR=5.7
PV04 **Paradox Valley** 5.99 208 ℯPn Pn 17 06 12.5 +1.2
D15A **Lincoln** 6.04 306 ⇑P Pn 17 06 12.5 +0.7
baz=6.0,SNR=11
D15A **Lincoln** 6.04 306 ⇑P Pn 17 06 12.5 +0.7
baz=6.0,SNR=11
C16A **Fuhringer Ranc** 6.05 314 ⇓P Pn 17 06 12.0 +0.1
baz=6.0,SNR=8.6
C16A **Fuhringer Ranc** 6.05 314 ⇓P Pn 17 06 12.0 +0.1
baz=6.0,SNR=8.6
SRU **San Rafael** 6.06 222 ⇑P Pn 17 06 13.1 +1.0
baz=6.1,SNR=17
SRU **San Rafael** 6.06 222 ⇑P Pn 17 06 13.1 +1.0
baz=6.1,SNR=17
S25A **Robets Cordova** 6.12 173 ⇓P Pn 17 06 13.1 +0.1
baz=6.2
S25A **Robets Cordova** 6.12 173 ⇓P Pn 17 06 13.1 +0.1
baz=6.2
S26A **Kim** 6.28 166 P Pn 17 06 15.4 +0.3
baz=6.3,SNR=6.1
S26A **Kim** 6.28 166 P Pn 17 06 15.4 +0.3
baz=6.3,SNR=6.1
ECSD **EROS Data Cent** 6.31 87 ℯPn Pn 17 06 11.9 -3.5
17nm,0.9s
CHMT **Chamberlain Mo** 6.42 302 ℯPn Pn 17 06 17.0 -0.1
1.1nm,0.4s
B16A **M & M Farms, S** 6.44 319 ⇓P Pn 17 06 17.2 0.0
baz=6.4
B16A **M & M Farms, S** 6.44 319 ⇓P Pn 17 06 17.2 0.0
baz=6.4
Q16A **Castle Valley** 6.53 224 ⇑P Pn 17 06 19.7 +1.1
baz=6.6,SNR=6.7
Q16A **Castle Valley** 6.53 224 ⇑P Pn 17 06 19.7 +1.1
baz=6.6,SNR=6.7
DUG **Dugway** 6.61 240 P Pn 17 06 20.6 +0.9
baz=6.7,SNR=9.7
DUG **Dugway** 6.61 240 P Pn 17 06 20.6 +0.9
baz=6.7,SNR=9.7
D14A **Greenough** 6.65 303 P Pn 17 06 20.6 +0.4
baz=6.7,SNR=12
D14A **Greenough** 6.65 303 P Pn 17 06 20.6 +0.4
baz=6.7,SNR=12
B15A **Bradely Ranch,** 6.79 315 ⇓P Pn 17 06 22.2 +0.1
baz=6.8
B15A **Bradely Ranch,** 6.79 315 ⇓P Pn 17 06 22.2 +0.1
baz=6.8
MSO **Missoula** 6.81 300 ⇑P Pn 17 06 23.1 +0.7
baz=6.8
MSO **Missoula** 6.81 300 ⇑P Pn 17 06 23.1 +0.7
baz=6.8
MVCO **Mesa Verde** 6.96 201 ℯPn Pn 17 06 26.6 +2.0
3.9nm,0.6s
S18A **Hurst Farm, Bl** 7.01 212 ⇑P Pn 17 06 25.9 +0.6
baz=7.1,SNR=16
S18A **Hurst Farm, Bl** 7.01 212 ⇑P Pn 17 06 25.9 +0.6
baz=7.1,SNR=16
SWMT **Swartz Lake** 7.15 305 ℯPn Pn 17 06 27.0 0.0
B14A **Marquette Ranc** 7.20 313 ⇑P Pn 17 06 27.3 -0.4
baz=7.2,SNR=11
B14A **Marquette Ranc** 7.20 313 ⇑P Pn 17 06 27.3 -0.4
baz=7.2,SNR=11
ELK **Elko** 7.94 251 Pn Pn 17 06 40.2 +2.2
ELK **Elko** 7.94 251 Pn Pn 17 06 40.2 +2.2
0.3nm,0.3s,baz=53,slow=16,SNR=4.5
AGMN **Agassiz Nation** 8.00 52 Pn Pn 17 06 38.1 -0.6
ULM **Lac du Bonnet** 9.16 41 Pn Pn 17 06 53.9 -0.6
ULM Lg Lg 17 09 22.8
ULM **Lac du Bonnet** 9.16 41 Pn Pn 17 06 53.9 -0.6
0.7nm,0.3s,baz=234,slow=13,SNR=4.9
ULM Lg Lg 17 09 22.8
0.7nm,0.3s,baz=300,slow=14,SNR=2.7
YKA **Yellowknife Ar** 19.55 347 P P 17 09 08.7 -1.3
0.1nm,0.3s,baz=163,slow=13,SNR=4.8
ARCES **ARCESS Array B** 61.42 18 P P 17 14 57.4 -1.2
1.5nm,1.0s,baz=348,slow=6.6,SNR=3.8

IDC 02 17:27:17.1±9.2, 17°90S×178°08W, h592km±96km, mb3.1/6, mb1 3.3/6, mb1mx3.0/19, mbtmp3.1/6, Error ellipse: s-maj=57.3km s-min=24.6km az=71.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.91**	**241**	P	P	P	17 33 53.4	+0.1
	1.4nm,0.5s,baz=97,slow=10.0,SNR=9.4							
WRA	**Warramunga Arr**	**44.94**	**259**	P	P	P	17 34 40.3	-0.5
	1.2nm,0.5s,baz=94,slow=7.3,SNR=36							
ASAR	**Alice Springs**	**45.10**	**254**	P	P	P	17 34 41.6	-0.3
	4.5nm,0.6s,baz=88,slow=8.6,SNR=104							
ASAR				PcP	PcP	PcP	17 36 09.3	-0.4
	0.3nm,0.5s,baz=104,slow=3.6,SNR=6.9							
MJAR	**Matsushiro Arr**	**68.09**	**323**	P	P	P	17 37 18.8	0.0
	0.8nm,0.5s,baz=152,slow=6.4,SNR=8.8							
QSPA	**South Pole Qui**	**72.15**	**180**	P	P	P	17 37 42.7	+0.2
	0.9nm,1.0s,baz=39,slow=3.0,SNR=4.6							
CMAR	**Chiang Mai Arr**	**89.18**	**290**	P	P	P	17 39 12.6	+1.4
	0.1nm,0.4s,baz=101,slow=2.8,SNR=4.3							
MKAR	**Makanchi Array**	**109.36**	**314**	PKiKP	PKiKP	PKiKP	17 44 39.6	-1.2
	0.3nm,0.9s,baz=114,slow=3.6,SNR=2.9							
BRTR	**Keskin Array B**	**145.00**	**315**	PKPbc	PKPdf		17 45 48.1	0.0
	0.9nm,0.8s,baz=134,slow=4.3,SNR=5.8							
GERES	**GERESS Array B**	**147.69**	**345**	PKPbc	PKPbc		17 45 55.1	-0.8
	0.5nm,0.5s,baz=35,slow=4.9,SNR=6.6							

IDC 02 17:37:35.5±0.8, 3°31N×78°53W, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/24, mbtmp3.9/10, MS3.6/1, Ms1 3.5/1, ms1mx2.7/31, Error ellipse: s-maj=36.1km s-min=19.0km az=63.0, South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**15.29**	**174**	Pn	P	P	17 41 19.3	+1.4
	1.2nm,0.3s,baz=354,slow=11,SNR=9.6							
LPAZ	**La Paz**	**22.02**	**152**	P	P	P	17 42 31.6	-0.9
	1.6nm,0.8s,baz=352,slow=8.8,SNR=8.2							
SIV	**San Ignacio**	**25.80**	**138**	P	P	P	17 43 07.8	-0.8
	1.6nm,0.5s,baz=327,slow=7.9,SNR=5.6							
BDFB	**Brasilia**	**35.58**	**123**	LR	LR	LR	17 59 58.0	
	comp=Z,96nm,19.1s,baz=97,slow=38							
PDAR	**Pinedale Array**	**48.03**	**329**	P	P	P	17 46 15.2	-1.6
	0.4nm,0.9s,baz=128,slow=5.8,SNR=2.5							
YKA	**Yellowknife Ar**	**64.82**	**342**	P	P	P	17 48 15.7	-0.2
	0.8nm,0.7s,baz=140,slow=6.4,SNR=13							
DBIC	**Dimbokro**	**73.42**	**84**	P	P	P	17 49 09.8	-0.5
	2.8nm,0.7s,baz=264,slow=8.9,SNR=3.3							
ESDC	**Sonseca Array**	**76.03**	**50**	P	P	P	17 49 25.7	+0.6
	0.1nm,0.3s,baz=262,slow=6.4,SNR=3.3							
TORD	**Torodi Ar. Bea**	**79.74**	**77**	P	P	P	17 49 45.5	-0.6
	0.8nm,0.6s,baz=295,slow=5.2,SNR=5.5							
SNAA	**Sanae**	**88.64**	**162**	P	P	P	17 50 30.4	+0.1
	0.6nm,0.6s,baz=247,slow=4.2,SNR=8.8							
GERES	**GERESS Array B**	**89.01**	**41**	P	P	P	17 50 34.1	+1.5
	0.1nm,0.2s,baz=264,slow=5.4,SNR=5.8							
QSPA	**South Pole Qui**	**93.34**	**180**	P	P	P	17 50 53.3	+1.0
	1.5nm,0.9s,baz=138,slow=2.3,SNR=7.8							
ZALV	**Zalesovo Beam**	**121.28**	**11**	PKP	PKPdf	PKPdf	17 56 30.6	0.0
	0.3nm,0.4s,baz=318,slow=1.9,SNR=2.9							
MKAR	**Makanchi Array**	**127.32**	**16**	PKP	PKPdf	PKPdf	17 56 42.1	-0.4
	0.3nm,0.7s,baz=338,slow=2.3,SNR=3.3							
SONM	**Songino Array**	**128.89**	**356**	PKP	PKPdf	PKPdf	17 56 45.8	+0.2
	0.2nm,0.4s,baz=267,slow=0.5,SNR=4.5							
KSRS	**Korea Array**	**132.58**	**331**	PKP	PKPdf	PKPdf	17 56 53.2	+0.6
	0.6nm,0.6s,baz=19,slow=1.9,SNR=5.3							
ASAR	**Alice Springs**	**142.70**	**234**	PKhKP	PKPpre	PKPpre	17 57 06.6	
	0.2nm,0.5s,baz=124,slow=3.7,SNR=10							
WRA	**Warramunga Arr**	**143.93**	**240**	PKhKP	PKPpre	PKPpre	17 57 11.0	
	1.4nm,0.8s,baz=110,slow=3.0,SNR=10							

*ISCJB **02** 17:38:30.9±0.9, 13°87N±0°09×91°49W±0°06, h75km±9km, mb3.8/2, Error ellipse: s-maj=16.6km s-min=6.9km az=23.9*

*CASC **02** 17:38:32.5±2.3, 13°87N×91°42W, h46km±46km, MD3.7*

*IDC **02** 17:38:35.3±6.0, 14°31N×91°25W, h82km±37km, mb3.4/2, mb1 3.8/4, mb1mx3.4/21, mbtmp3.4/4, Error ellipse:*

s-maj=53.7km s-min=19.5km az=169.0

ISC 02 17:38:32.7±1.3**, 14°.0N**±0°.1×**91°.42W**±0°.06**, h71**km±10km**, n19,** σ**1s.12**/26**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	**Jato**	**0.41**	**329**	*e*P	**Pn**	**17 38 44.3**	**-0.5**
FUG	**Fuego 3**	**0.74**	**50**	*e*P	**Pn**	**17 38 47.0**	**-1.4**
PCG	**Pacaya**	**0.90**	**62**	*e*P	**Pn**	**17 38 49.6**	**-0.7**
PCG				*e*S	**Sn**	**17 39 04.0**	**+0.7**
IXG	**Ixpaco**	**0.96**	**78**	*e*P	**Pn**	**17 38 50.4**	**-0.6**
IXG				*e*S	**Sn**	**17 39 05.7**	**+1.2**
NBG	**Las Nubes**	**1.21**	**59**	*e*P	**Pn**	**17 38 54.2**	**0.0**
NBG				*e*S	**Sn**	**17 39 12.2**	**+1.9**
RBDL	**Robledal**	**1.69**	**85**	*e*P	**Pn**	**17 38 59.3**	**-1.1**
RTR	**El Retiro**	**1.73**	**92**	*e*P	**Pn**	**17 39 00.7**	**-0.2**
SBLS	**San Blas**	**1.75**	**94**	*e*P	**Pn**	**17 39 00.8**	**-0.5**
SBLS				*e*S	**Sn**	**17 39 21.5**	**-1.4**
SNJE	**San Jose**	**1.77**	**93**	*e*P	**Pn**	**17 39 01.1**	**-0.4**
MRL	**Marmol**	**2.00**	**57**	*e*P	**Pn**	**17 39 04.3**	**-0.3**
MRL				*e*S	**Sn**	**17 39 31.2**	**+2.4**
BOQS	**Boqueron**	**2.09**	**96**	*e*P	**Pn**	**17 39 05.9**	**0.0**
LFRS	**El Faro**	**2.32**	**98**	*e*P	**Pn**	**17 39 09.3**	**+0.5**
LFRS				*e*S	**Sn**	**17 39 36.0**	**-0.4**
SNVI	**San Vicente**	**2.53**	**98**	*e*P	**Pn**	**17 39 12.5**	**+0.7**
CMIG	**Matias Romero**	**4.56**	**313**	P	**Pn**	**17 39 39.3**	**0.0**
	5.1nm,0.3s,baz=114,slow=8.4,SNR=38						
CMIG				S	**Sn**	**17 40 31.6**	**+0.6**
	10nm,0.3s,baz=258,slow=18,SNR=9.7						
TEIG	**Tepich**	**6.91**	**25**	P	**Pn**	**17 40 10.0**	**-1.4**
	20nm,0.3s,baz=286,slow=0.7,SNR=93						
TEIG				S	Sn	17 41 22.5	-6.1
	baz=66,slow=19,SNR=1.5						
TXAR	**Lajitas Array**	**19.04**	**325**	P	**Pn**	**17 42 50.9**	**+0.2**
	0.1nm,0.3s,baz=136,slow=10,SNR=5.0						
NVAR	**Mina Array Bea**	**34.05**	**321**	P	**P**	**17 45 11.9**	**+1.5**
	1.3nm,0.7s,baz=131,slow=8.9,SNR=9.3						
YKA	**Yellowknife Ar**	**51.19**	**346**	P	**P**	**17 47 26.5**	**-2.0**
	0.4nm,0.5s,baz=151,slow=7.9,SNR=12						
CMAR	**Chiang Mai Arr**	**146.20**	**342**	PKPbc	**PKPdf**	**17 58 05.1**	**+0.2**
	1.8nm,0.6s,baz=337,slow=3.3,SNR=13						

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*IDC **02** 17:39:17.7±2.5, 13°.10N×50°.13E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.4/24, mbtmp3.6/5, Error ellipse: s-maj=65.0km s-min=36.4km az=52.0*

*ISCJB **02** 17:39:18.4±0.9, 13°.3N±0°.1×50°.08E±0°.05, h10km, mb3.6/5, Error ellipse: s-maj=15.2km s-min=7.3km az=10.2*

*DHMR **02** 17:39:24.3±2.2, 13°.38N×49°.62E, h4km±420km, ML3.2*

ISC 02 17:39:20.3±1.0**, 13°.4N**±0°.1×**50°.10E**±0°.08**, h10**km**, n8,** σ**1s.33**/11**, mb3.6**/5**, 2D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.46**	**315**	*i* P	**Pn**	**17 39 46.2**	**-0.6**
MUKL				*i* S	**Sn**	**17 40 05.0**	**-1.1**
MUKL				AML	AML	17 40 05.4	
	comp=N,335nm,0.4s						
BDHA	**Al Bayda'**	**4.44**	**278**	⇓*i*P	**Pn**	**17 40 29.1**	**+1.1**
BDHA				*e*		17 40 29.2	
	baz=114,slow=18						
BDHA				AML	AML	17 40 31.0	
	comp=E,114nm,0.3s						
BDHA				*i* S	**Sn**	**17 41 19.2**	**-0.7**
LBOS		**4.74**	**276**	⇓*i*P	**Pn**	**17 40 33.1**	**+1.0**
LBOS				*i* S	**Sn**	**17 41 25.7**	**-1.5**
MKAR	**Makanchi Array**	**42.82**	**33**	P	**P**	**17 47 20.0**	**+1.5**
	comp=E,0.1nm,0.4s,baz=230,slow=6.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	**47.12**	**77**	P	**P**	**17 47 52.0**	**-1.1**
	comp=E,0.4nm,0.3s,baz=270,slow=8.8,SNR=2.3						
FINES	**FINESS Array B**	**50.99**	**345**	P	**P**	**17 48 23.2**	**+1.2**
	comp=E,1.1nm,0.9s,baz=134,slow=8.2,SNR=7.5						
SONM	**Songino Array**	**57.70**	**42**	P	**P**	**17 49 11.8**	**+0.4**
	comp=E,0.3nm,0.6s,baz=258,slow=8.5,SNR=4.4						
ASAR	**Alice Springs**	**89.76**	**114**	P	**P**	**17 52 18.1**	**-1.5**
	comp=E,0.2nm,0.5s,baz=284,slow=4.5,SNR=13						

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*IDC **02** 17:39:14.8±7.1, 36°.69N×140°.75E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.1/24, mbtmp3.1/3, Error ellipse: s-maj=152.0km s-min=38.5km az=27.0*

*ISCJB **02** 17:39:26.4±0.7, 36°.10N±0°.04×139°.90E±0°.06, h63km±5km, mb3.4/2, Error ellipse: s-maj=8.2km s-min=7.3km az=173.9*

*JMA **02** 17:39:27.7±0.1, 36°.10N×139°.87E, h49km±1km, M3.1*

JMA Felt I J1.

ISC 02 17:39:27.3±1.2**, 36°.11N**±0°.04×**139°.88E**±0°.06**, h54**km±9km**, n14,** σ**0s.77**/23**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.28**	**65**	P	**Pn**	**17 39 36.6**	**-0.1**
JYT				S	**Sn**	**17 39 42.9**	**-0.4**
TOK	**Tokyo**	**0.43**	**193**	P	**Pn**	**17 39 38.8**	**+0.7**
TOK				S	**Sn**	**17 39 47.5**	**+1.8**
JAG	**Ashikaga**	**0.47**	**313**	P	**Pn**	**17 39 38.6**	**+0.1**
JAG				S	**Sn**	**17 39 46.2**	**-0.3**
JHU	**Hanno**	**0.55**	**242**	P	**Pn**	**17 39 39.0**	**-0.4**
JHU				S	**Sn**	**17 39 47.5**	**-0.6**
JRY	**Ryogami san**	**0.80**	**264**	P	**Pn**	**17 39 42.4**	**-0.1**
JRY				S	**Sn**	**17 39 53.3**	**-0.3**
JKT	**Katashina**	**0.83**	**322**	P	**Pn**	**17 39 43.2**	**+0.2**
JKT				S	**Sn**	**17 39 55.2**	**+0.7**
JOD2	**Odawara 2**	**1.06**	**217**	P	**Pn**	**17 39 46.5**	**+0.5**
JOD2				S	**Sn**	**17 39 59.9**	**+0.1**
JYN	**Shimob**	**1.24**	**241**	P	**Pn**	**17 39 49.6**	**+1.1**
JFY	**Yanaizu**	**1.30**	**354**	P	**Pn**	**17 39 50.1**	**+0.8**
JHK	**Hiroka**	**1.33**	**329**	P	**Pn**	**17 39 50.6**	**+1.0**
MJAR	**Matsushiro Arr**	**1.42**	**288**	Pn	**Pn**	**17 39 50.2**	**-0.5**
	4.3nm,0.3s,baz=83,slow=9.5,SNR=110						
MJAR				Sn	**Sn**	**17 40 09.5**	**+1.2**
	5.2nm,0.3s,baz=134,slow=15,SNR=12						
MAT	**Matsushiro**	**1.42**	**288**	P	**Pn**	**17 39 51.3**	**+0.5**
MAT				S	**Sn**	**17 40 08.5**	**+0.1**
WRA	**Warramunga Arr**	**55.99**	**186**	P	**P**	**17 48 59.5**	**-0.9**
	0.3nm,0.5s,baz=3.0,slow=7.3,SNR=9.9						
ASAR	**Alice Springs**	**59.72**	**186**	P	**P**	**17 49 25.9**	**-0.6**
	0.1nm,0.5s,baz=6.5,slow=7.2,SNR=4.5						

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*ISCJB **02** 17:42:15.9±0.4, 28°.95S±0°.03×70°.5W±0°.1, h103km±5km, mb4.4/6, Error ellipse: s-maj=14.6km s-min=4.8km az=2.4*

*GUC **02** 17:42:16.8±1.1, 28°.95S×70°.41W, h91km±10km, ML4.7*

*IDC **02** 17:42:18.1±0.7, 28°.95S×70°.33W, h98km±5km, mb4.2/6, mb1 4.1/7, mb1mx3.8/18, mbtmp4.2/7, Error ellipse: s-maj=23.6km s-min=11.1km az=64.0*

ISC 02 17:42:17.1±0.6**, 28°.94S**±0°.04×**70°.49W**±0°.10**, h97**km±5km**, n26,** σ**1s.09**/37**, mb4.3**/6**, 6C-4D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.20**	**250**	⇑*i*P	**Pn**	**17 42 31.3**	**0.0**
LCO				*i* S	**Sn**	**17 42 41.8**	**-0.2**
LCO				AML	AML	17 42 42.1	
	comp=N,35μm,0.2s						
TLL	**Tololo Astrono**	**1.25**	**193**	⇑*i*P	**Pn**	**17 42 40.9**	**+0.3**
TLL				*i* S	**Sn**	**17 42 58.3**	**+0.2**
TLL				AML	AML	17 43 04.1	
	comp=E,12μm,0.6s						
CPCH	**Copiapo**	**1.58**	**4**	⇓*i*P	**Pn**	**17 42 44.1**	**-0.2**
CPCH				*i* S	**Sn**	**17 43 04.8**	**-0.2**
CPCH				AML	AML	17 43 06.2	
	comp=E,17μm,0.2s						
CDCH	**Caldera**	**1.89**	**351**	⇑*i*P	**Pn**	**17 42 48.4**	**+0.1**
CDCH				*i* S	**Sn**	**17 43 11.7**	**-0.2**
CMCH	**Combarbala**	**2.27**	**191**	⇓*i*P	**Pn**	**17 42 52.5**	**-0.6**
CMCH				*i* S	**Sn**	**17 43 19.8**	**-1.0**
CMCH				AML	AML	17 43 45.5	
	comp=E,11μm,0.9s						
CHNG	**Los Chungos**	**3.06**	**196**	⇑*i*P	**Pn**	**17 43 02.6**	**-0.9**
CHNG				*i* S	**Sn**	**17 43 38.9**	**-0.4**
CHNG				AML	AML	17 43 49.5	
	comp=E,1μm,0.3s						
CFAA	**Coronel Fontan**	**3.29**	**144**	P	**Pn**	**17 43 07.5**	**+0.8**
	comp=E,13nm,0.3s,baz=324,slow=11,SNR=757						
CFAA				S	**Sn**	**17 43 44.2**	**-0.8**
	comp=E,16nm,0.3s,baz=252,slow=10,SNR=16						
JACH	**Jahuel**	**3.73**	**181**	⇑*i*P	**Pn**	**17 43 13.0**	**+0.3**
ROCH	**El Roble**	**4.04**	**186**	⇑*i*P	**Pn**	**17 43 15.7**	**-1.3**
PEL	**Peldehue**	**4.19**	**182**	⇓*i*P	**Pn**	**17 43 18.3**	**-0.6**
PCH	**Pirque**	**4.66**	**180**	*e*P	**Pn**	**17 43 25.1**	**-0.2**
LMEL	**Las Melosas**	**4.90**	**177**	⇓*i*P	**Pn**	**17 43 29.1**	**+0.6**
PLCA	**Paso Flores**	**11.76**	**180**	P	**Pn**	**17 44 59.0**	**-2.7**
	comp=E,0.4nm,0.3s,baz=348,slow=14,SNR=9.1						
CPUP	**Villa Florida**	**11.95**	**81**	P	Pn	17 44 59.5	-4.7
	comp=E,0.8nm,0.3s,baz=242,slow=13,SNR=6.2						
LPAZ	**La Paz**	**12.78**	**10**	P	**Pn**	**17 45 13.3**	**-2.5**
	comp=E,0.9nm,0.3s,baz=201,slow=8.2,SNR=10						
SIV	**San Ignacio**	**15.54**	**36**	P	**Pn**	**17 45 47.7**	**-3.2**
	comp=E,0.4nm,0.3s,baz=242,slow=18,SNR=3.2						
BDFB	**Brasilia**	**24.59**	**62**	P	**P**	**17 47 27.9**	**-0.6**
	comp=E,9.5nm,0.8s,baz=225,slow=11,SNR=11						
TEIG	**Tepich**	**51.81**	**339**	P	**P**	**17 51 16.2**	**+1.0**
	comp=E,21nm,1.3s,baz=72,slow=3.2,SNR=4.3						
TEIG				pP	**pP**	**17 51 40.1**	**+1.4**
	comp=E,3.2nm,0.5s,baz=42,slow=6.1,SNR=1.7						
QSPA	**South Pole Qui**	**61.28**	**180**	P	**P**	**17 52 23.2**	**+1.2**
	comp=E,1.6nm,0.9s,baz=166,slow=4.2,SNR=8.8						
DBIC	**Dimbokro**	**72.32**	**72**	P	**P**	**17 53 32.6**	**-0.1**
	comp=E,4.8nm,0.6s,baz=227,slow=7.5,SNR=9.8						
TORD	**Torodi Ar. Bea**	**81.23**	**70**	P	**P**	**17 54 23.2**	**+0.4**
	comp=E,3.9nm,0.6s,baz=271,slow=5.5,SNR=42						
TORD				pP	**pP**	**17 54 48.7**	**+0.7**
	comp=E,1.1nm,0.8s,baz=262,slow=4.8,SNR=3.0						
BOSA	**Boshof**	**81.24**	**118**	P	**P**	**17 54 22.9**	**0.0**
	comp=E,2.2nm,0.6s,baz=88,slow=14,SNR=6.9						
ASAR	**Alice Springs**	**122.67**	**207**	PKP	**PKPdf**	**18 01 01.9**	**-0.2**
	comp=E,0.1nm,0.4s,baz=132,slow=1.6,SNR=7.4						
WRA	**Warramunga Arr**	**125.81**	**209**	PKP	**PKPdf**	**18 01 08.6**	**+0.4**
	comp=E,0.6nm,0.5s,baz=153,slow=1.6,SNR=12						
WRA				pPKP	**pPKPdf**	**18 01 34.7**	**-0.3**
	comp=E,0.3nm,0.5s,baz=148,slow=1.7,SNR=2.1						
ZALV	**Zalesovo Beam**	**149.21**	**29**	PKPbc	**PKPbc**	**18 01 55.0**	**+1.1**
	comp=E,4.1nm,0.6s,baz=282,slow=1.4,SNR=21						
ZALV				pPKPbc	**pPKPbc**	**18 02 21.5**	**+1.0**
	comp=E,2.1nm,0.6s,baz=301,slow=3.5,SNR=4.8						
MKAR	**Makanchi Array**	**152.29**	**43**	PKPbc	**PKPbc**	**18 02 02.2**	**+0.8**
	comp=E,1.7nm,0.6s,baz=320,slow=2.0,SNR=27						
MKAR				pPKPbc	**pPKPbc**	**18 02 28.5**	**+0.3**
	comp=E,0.6nm,0.8s,baz=277,slow=4.2,SNR=3.6						

NNC 02 18:18:42.4±11.0**, 36°.77N**×**70°.68E, h117**km±248km**, mb2.9, mpv3.6, 5D, Error ellipse: s-maj=96.0km s-min=75.9km az=8.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.33**	**359**	⇓P	Pn	18 20 13.9	+0.8
	1.3nm,0.3s,baz=177,slow=12,SNR=127						
KK31				⇓S	Sn	18 21 24.8	+0.7
	2.2nm,0.5s,baz=185,slow=21,SNR=10						
TKM2	**Tokmak 2**	**7.21**	**30**	⇓P	Pn	18 20 24.6	-0.8
	2.7nm,0.5s						
TKM2				⇓S	Sn	18 21 45.9	-0.1
	1.0nm,0.5s						
AB31	**Akbulak array**	**14.72**	**331**	⇓P	Pn	18 22 04.8	+0.2
	0.2nm,0.3s						

IDC 02 18:22:28.0±1.9**, 3°.87N**×**126°.35E, h0**km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.3**/23**, mbtmp3.5**/4**, Error ellipse: s-maj=114.1km s-min=23.9km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.84**	**182**	P	P	18 27 21.9	-0.4
	1.7nm,0.8s,baz=27,slow=16,SNR=1.8						
WRA	**Warramunga Arr**	**24.93**	**162**	P	P	18 27 53.0	-0.1
	0.5nm,0.7s,baz=342,slow=11,SNR=10.0						
ASAR	**Alice Springs**	**28.34**	**165**	P	P	18 28 24.2	+0.3
	0.3nm,1.1s,baz=342,slow=7.1,SNR=5.9						
MKAR	**Makanchi Array**	**57.23**	**325**	P	P	18 32 17.2	0.0
	0.3nm,0.9s,baz=116,slow=7.6,SNR=3.5						

MEX 02 18:38:58.4±0.5**, 16°.69N**×**99°.67W, h36**km±7km**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.26**	**314**	*i* P	Pn	18 39 04.8	-1.9
ACX				*e*S	Sn	18 39 10.0	-4.4
CAIG	**El Cayaco**	**0.68**	**302**	*i* P	Pn	18 39 09.5	-2.0
CAIG				*i* S	Sn	18 39 19.2	-1.6
PNIG	**Pinotepa**	**1.51**	**101**	*e*P	Pn	18 39 21.6	-1.2
PNIG				*i* S	Sn	18 39 39.1	-2.2
ARIG	**Puente Sto Nin**	**1.71**	**338**	*i* P	Pn	18 39 23.7	-2.0
ARIG				*i* S	Sn	18 39 44.2	-2.2

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*NIED **02** 18:41:00, 46°.50N×153°.70E, h14km, Mw4.2 Best double couple: Mo2.39000×10^15 NP1:φs346.00000°, δ59.00000°, λ53.00000°. NP2:φs222.00000°, δ46.00000°, λ135.00000°.*

*ISCJB **02** 18:41:01.8±0.6, 46°.51N±0°.05×153°.35E±0°.05, h40km±4km, mb4.4/77, MS3.8/11, Error ellipse: s-maj=8.8km s-min=4.1km az=147.4*

*SKHL **02** 18:41:01.1±2.0, 46°.56N×153°.75E, h65km±13km, mb4.9/5, Ms3.9/1*

*BJI **02** 18:41:01.3, 46°.61N×153°.65E, h58km, mB4.7/21, mb4.6/29, Ms4.2/14, Ms7 3.9/14*

*JMA **02** 18:41:01.3±0.9, 46°.48N×153°.68E, h30km, M4.9*

*NEIC **02** 18:41:04.5±1.0, 46°.67N×153°.19E, h46km±8km, mb4.5/28, Error ellipse: s-maj=12.5km s-min=6.4km az=145.0*

*MOS **02** 18:41:05.8±1.0, 46°.74N×153°.06E, h65km, mb4.7/39, Error ellipse: s-maj=8.9km s-min=6.9km az=96.9*

*IDC **02** 18:41:06.7±2.7, 46°.83N×153°.09E, h55km±24km, mb3.9/21, mb1 4.1/24, mb1mx4.0/29, mbtmp3.9/24, ML3.7/3, MS3.4/11, Ms1 3.4/11, ms1mx3.3/35, Error ellipse: s-maj=17.2km s-min=11.7km az=147.0*

ISC 02 18:41:05.5±0.5**, 46°.49N**±0°.06×**153°.31E**±0°.05**, h60**km±2km**, h59**km**:pP-P, n266,** σ**1s.53**/309**, mb4.5**/77**, MS3.9**/11**, 11C-14D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**4.01**	**254**	⇑*i*PN	**Pn**	**18 42 04.5**	**+0.2**
KUR				*e*S	**Sn**	**18 42 50.0**	**+0.1**
KUR				pmax	pmax		
	comp=Z,230nm,0.6s						
KUR				pmax	pmax		
	comp=N,90nm,0.5s						
KUR				pmax	pmax		
	comp=E,90nm,0.3s						
KUR				smax	smax		
	comp=N,3μm,1.0s						
KUR				smax	smax		
	comp=E,4μm,1.0s						
KUR				smax	smax		
	comp=N,1μm,0.5s						
KUR				smax	smax		
	comp=E,540nm,0.8s						
KUR	**Kuril'sk**	**4.01**	**254**	⇑*i*P	**Pn**	**18 42 04.5**	**+0.2**
KUR				AMB	AMB	18 42 07.0	
	comp=E,90nm,0.5s						
KUR				AMB	AMB	18 42 07.0	
	comp=E,230nm,0.6s						
KUR				*e*S	**Sn**	**18 42 50.0**	**+0.1**
KUR				A	A	18 43 09.0	
	comp=E,3μm,1.0s						
KUR				A	A	18 43 09.0	
	comp=E,4μm,1.0s						
KUR				A	A	18 43 13.2	
	comp=E,1μm,0.5s						
KUR				A	A	18 43 13.2	
	comp=E,540nm,0.8s						
SKR	**Severo-Kuril's**	**4.59**	**23**	*e*PN	Pn	18 42 05.0	-7.3
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				MLR	MLR		
	comp=Z,1μm,10.0s						
SKR	**Severo-Kuril's**	**4.59**	**23**	*e*P	Pn	18 42 05.0	-7.3
SKR				AMB	AMB	18 42 07.0	
	comp=Z,80nm,0.5s						
SKR				*e*S	Sn	18 42 54.4	-10
SKR				A	A	18 43 12.0	
	comp=Z,220nm,0.5s						
SKR				A	A	18 43 12.0	
	comp=Z,80nm,0.5s						
SKR				A	A	18 43 12.0	
	comp=Z,370nm,0.7s						
SKR				AMS	AMS	18 44 22.0	
	comp=Z,1μm,10.0s						
YUK	**Yuzh-Kuril'sk**	**5.80**	**248**	*i* PN	**Pn**	**18 42 29.6**	**+0.7**
YUK				*i* S	**Sn**	**18 43 36.0**	**+2.0**
YUK				pmax	pmax		
	comp=N,81nm,0.5s						
YUK				pmax	pmax		
	comp=E,70nm,0.5s						
YUK				pmax	pmax		
	comp=Z,117nm,0.5s						
YUK				smax	smax		
	comp=N,222nm,0.6s						
YUK				smax	smax		
	comp=E,96nm,0.6s						
YUK				MLR	MLR		
	comp=Z,338nm,15.0s						
YUK	**Yuzh-Kuril'sk**	**5.80**	**248**	⇓*i*P	**Pn**	**18 42 29.6**	**+0.7**
YUK				AMB	AMB	18 42 39.3	
	comp=Z,81nm,0.5s						
YUK				AMB	AMB	18 42 39.3	
	comp=Z,70nm,0.5s						
YUK				AMB	AMB	18 42 39.3	
	comp=Z,117nm,0.5s						
YUK				*i* S	**Sn**	**18 43 36.1**	**+2.0**
YUK				A	A	18 43 52.3	
	comp=Z,222nm,0.7s						
YUK				A	A	18 43 52.3	
	comp=Z,96nm,0.7s						
NEM2	**Nemuro 2**	**6.21**	**243**	P	**Pn**	**18 42 33.3**	**-1.2**
NEM2				*e*S	**Sn**	**18 43 40.3**	**-3.8**
JRA	**Rausu**	**6.32**	**249**	P	**Pn**	**18 42 37.0**	**+1.0**
JNK	**Nakash**	**6.75**	**248**	P	**Pn**	**18 42 42.1**	**+0.3**
JNK				*e*S	**Sn**	**18 43 56.6**	**-0.6**
JAK	**Akkeshi**	**7.06**	**243**	P	**Pn**	**18 42 44.7**	**-1.4**
JAK				*e*S	**Sn**	**18 44 01.1**	**-3.7**
JTKR	**Abashiri--Toko**	**7.10**	**253**	P	**Pn**	**18 42 47.8**	**+1.1**
PEA0B	**Petropavlovsk-**	**7.21**	**22**	*e*Pn	**Pn**	**18 42 46.7**	**-1.4**
PETK	**Petropavlovsk-**	**7.21**	**22**	PN	**Pn**	**18 42 45.6**	**-2.5**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,83nm,21.8s						
PETK	**Petropavlovsk-**	**7.21**	**22**	P	**Pn**	**18 42 45.6**	**-2.5**
PETK	**Petropavlovsk-**	**7.21**	**22**	P	**Pn**	**18 42 45.6**	**-2.5**
	comp=Z,1.1nm,0.3s,baz=163,slow=7.7,SNR=30						
PETK				LR	LR	18 45 34.3	
	comp=Z,83nm,21.8s,baz=334,slow=38						
YSS	**Yuzh-Sakhalins**	**7.27**	**277**	*e*PN	**Pn**	**18 42 50.0**	**+1.0**
YSS				*e*S	**Sn**	**18 44 12.0**	**+1.9**
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
YSS				MLR	MLR		
	comp=N,400nm,15.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
YSS				smax	smax		
	comp=E,30nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.27**	**277**	*e*P	**Pn**	**18 42 50.0**	**+1.0**
YSS				*e*S	**Sn**	**18 44 12.0**	**+1.9**
YSS				*e*LQ	LQ	18 44 43.0	
YSS				AMS	AMS	18 45 40.0	
	comp=E,400nm,14.0s						
YSS				AMS	AMS	18 45 40.0	
	comp=E,400nm,15.0s						
YSS				AMS	AMS	18 45 40.0	
	comp=E,300nm,15.0s						
PET	**Petropavlovsk**	**7.40**	**26**	*e*PN	**Pn**	**18 42 49.4**	**-1.3**
PET				pmax	pmax		
	comp=Z,40nm,0.9s						
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
JAR	**Ashorobuto**	**7.49**	**248**	P	**Pn**	**18 42 52.5**	**+0.5**
JAR				*e*S	**Sn**	**18 44 14.6**	**-0.9**
JOB	**Onbets**	**7.64**	**245**	P	**Pn**	**18 42 53.7**	**-0.4**
JOB				*e*S	**Sn**	**18 44 14.1**	**-5.1**
JSE	**Soyaes**	**7.66**	**262**	P	Pn	18 42 58.9	+4.6
JKK2	**Kamakawa 2**	**7.91**	**254**	P	**Pn**	**18 42 59.0**	**+1.2**
ASAJ	**Asahikawa**	**7.92**	**256**	P	**Pn**	**18 42 58.5**	**+0.7**
ASAJ	**Asahikawa**	**7.92**	**256**	P	**Pn**	**18 42 59.9**	**+2.0**
ASAJ	**Asahikawa**	**7.92**	**256**	P	**Pn**	**18 42 58.5**	**+0.7**
	comp=Z,2.3nm,0.3s,baz=85,slow=16,SNR=13						
ASAJ				LR	LR	18 45 41.3	
	comp=Z,289nm,21.3s,baz=200,slow=35						
UGL	**Uglegorsk**	**8.01**	**293**	*e*P	**Pn**	**18 43 00.5**	**+1.5**
UGL				AMB	AMB	18 43 02.5	
	comp=Z,140nm,1.0s						
JWK2	**Keihoku**	**8.05**	**266**	P	Pn	18 43 03.7	+4.1
JCH	**Churui**	**8.09**	**245**	P	**Pn**	**18 42 59.9**	**-0.3**
JCH				*e*S	**Sn**	**18 44 26.1**	**-4.1**
TYV	**Tymovskoe**	**8.30**	**306**	*e*P	**Pn**	**18 43 02.0**	**-1.0**
TYV				AMB	AMB	18 43 03.8	
	comp=Z,5.0nm,0.6s						
TYV				AMB	AMB	18 43 03.8	
	comp=Z,4.0nm,0.6s						
TYV				AMB	AMB	18 43 03.8	
	comp=Z,10.0nm,0.6s						
JFR	**Furan**	**8.31**	**250**	P	**Pn**	**18 43 05.1**	**+1.8**
JAB	**Ashibetsu**	**8.41**	**253**	P	**Pn**	**18 43 06.6**	**+2.1**
JEM	**Erimo**	**8.55**	**242**	P	**Pn**	**18 43 04.8**	**-1.7**
ERM	**Erimo**	**8.55**	**242**	*i* PN	**Pn**	**18 43 06.7**	**+0.2**
ERM	**Erimo**	**8.55**	**242**	*e*Pn	**Pn**	**18 43 06.7**	**+0.2**
ERM				*e*Sn	**Sn**	**18 44 38.7**	**-2.7**
JBT2	**Biratori 2**	**8.64**	**249**	P	**Pn**	**18 43 08.0**	**+0.2**
JNBK	**Urakawa-nobuka**	**8.65**	**245**	P	**Pn**	**18 43 06.5**	**-1.4**
JNBK				*e*S	**Sn**	**18 44 40.9**	**-3.0**
JNB	**Noboribetsu**	**9.65**	**250**	P	**Pn**	**18 43 21.5**	**0.0**
JNB				*e*S	**Sn**	**18 45 05.0**	**-3.3**
JKB	**Kayabe**	**9.95**	**247**	P	**Pn**	**18 43 23.4**	**-2.1**
JKB				*e*S	Sn	18 45 08.3	-7.2
JYM2	**Yakumo 2**	**10.25**	**249**	P	**Pn**	**18 43 28.7**	**-1.1**
JANG	**Nango**	**10.53**	**239**	P	Pn	18 43 29.6	-4.0
JANG				*e*S	Sn	18 45 18.9	-11
JTM	**Tenmabayashi**	**10.54**	**242**	P	**Pn**	**18 43 31.3**	**-2.4**
JTM				*e*S	Sn	18 45 21.3	-8.9
JTH	**Tanohata**	**10.61**	**236**	*e*S	Sn	18 45 23.7	-8.1
JOSM	**Okushiri--Mats**	**10.85**	**251**	P	**Pn**	**18 43 37.5**	**-0.4**
OFUJ	**Ofunato**	**11.31**	**233**	*e*S	Sn	18 45 41.6	-7.2
JRG	**Rokugo**	**11.68**	**237**	*e*S	Sn	18 45 49.8	-8.1
JIO	**Ouri**	**11.93**	**232**	P	Pn	18 43 49.5	-3.1
JIO				*e*S	Sn	18 45 54.6	-9.4
HABR	**Khabarovsk**	**12.51**	**286**	*e*PN	P	18 44 16.3	+6.0
HABR				MLR	MLR		
	comp=Z,257nm,16.0s						
FX1	**Attu Island--F**	**14.33**	**56**	*e*Pn	Pn	18 44 21.8	-3.2
FX1				*e*Sn	Sn	18 46 40.6	-22
FX1				S	S	18 46 47.5	-32
FX1	**Attu Island--F**	**14.33**	**56**	P	Pn	18 44 21.9	-3.2
	comp=Z,2.1nm,0.3s,baz=81,slow=22,SNR=9.0						
FX1				S	Sn	18 46 47.5	-15
	comp=Z,1.8nm,0.3s,baz=249,slow=18,SNR=7.6						
FX1				LR	LR	18 49 14.4	
	comp=Z,84nm,20.5s,baz=85,slow=34						
KLR	**Kul'dur**	**14.72**	**289**	*e*P	**Pn**	**18 44 29.2**	**-1.0**
MJAR	**Matsushiro Arr**	**15.03**	**234**	P	**Pn**	**18 44 32.4**	**-1.9**
MJAR	**Matsushiro Arr**	**15.03**	**234**	P	**Pn**	**18 44 32.4**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=28,slow=15,SNR=8.7						
MJAR				LR	LR	18 50 32.9	
	comp=Z,77nm,20.3s,baz=55,slow=38						
MAJO	**Matsushiro**	**15.04**	**234**	*e*P	**Pn**	**18 44 31.0**	**-3.3**
MAJO				pmax	pmax		
	comp=Z,19nm,0.7s						
MAJO	**Matsushiro**	**15.04**	**234**	*e*Pn	**Pn**	**18 44 31.0**	**-3.3**
	comp=Z,19nm,0.7s						
USRK	**Ussuriysk Arra**	**15.16**	**269**	P	**Pn**	**18 44 35.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=77,slow=13,SNR=13						
USRK				LR	LR	18 50 04.8	
	comp=Z,193nm,19.6s,baz=56,slow=36						
SEY	**Seymchan**	**16.49**	**358**	*i* P	**P**	**18 44 53.8**	**-0.5**
MDJ	**Mudanjiang**	**16.71**	**272**	P	**Pn**	**18 44 54.7**	**-0.7**
MDJ				pP	**pP**	**18 45 08.9**	**-0.7**
MDJ				sP	**sP**	**18 45 16.6**	**-0.6**
MDJ				S	**Sn**	**18 48 02.5**	**+2.4**
MDJ				PcP	**PcP**	**18 49 39.2**	**-2.0**
MDJ				ScP	**ScP**	**18 53 08.5**	**-2.0**
MDJ				PcS	**PcS**	**18 53 14.5**	**-2.5**
MDJ				ScS	**ScS**	**18 56 47.3**	**-2.5**
MDJ				pmax	pmax		
	comp=Z,11nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,62nm,5.3s						
MDJ	**Mudanjiang**	**16.71**	**272**	*e*Pn	**Pn**	**18 44 55.3**	**-0.1**
	comp=Z,15nm,0.8s						
JHJ	**Hachijo jima 2**	**16.89**	**223**	LR	LR	18 51 34.8	
	comp=Z,30nm,19.0s,baz=105,slow=37						
ZEA	**Zeya**	**18.15**	**303**	*e*P	**P**	**18 45 10.7**	**-2.0**
ZEA				AMB	AMB	18 45 12.6	
	comp=Z,15nm,0.7s						
CN2	**Changchun**	**19.80**	**272**	*e*P	**P**	**18 45 30.4**	**-0.4**
CN2				*e*pP	**pP**	**18 45 43.5**	**-0.2**

CN2 eS S 18 49 07.0 -3.5
CN2 eSS SnSn 18 49 37.8 +8.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,400nm,19.0s
CN2 LR LR
comp=E,200nm,19.0s
CN2 LR LR
comp=Z,200nm,14.0s
YAK Yakutsk 20.61 328 eP P 18 45 37.6 -1.9
YAK e*PP pP 18 45 55.0 +2.5
YAK eS S 18 49 24.5 -1.8
YAK e 18 49 45.9
YAK e*SS sS 18 49 57.7 +10
YAK e 18 56 57.5
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=N,8.0nm,1.3s
YAK pmax pmax
comp=E,14nm,1.3s
YAK smax smax
comp=N,56nm,3.1s
YAK smax smax
comp=E,50nm,2.8s
KSRS Korea Array 20.85 253 P Pn 18 45 44.2 -1.0
comp=E,6.4nm,0.9s,baz=60,slow=10,SNR=20
KSRS LR LR 18 52 38.4
comp=E,64nm,20.7s,baz=55,slow=33
KSAR Wonju Array Be 20.88 253 P P 18 45 44.2 +1.7
INCN Inchon 21.69 255 P P 18 45 54.9 +3.6
comp=E,10.0nm,0.6s
JNU Nakatsue 21.71 240 eP P 18 45 52.0 +0.5
comp=E,5.9nm,0.9s
JNU Nakatsue 21.71 240 P P 18 45 53.3 +1.8
comp=E,14nm,1.0s,baz=66,slow=4.0,SNR=6.5
SNY Shenyang 21.77 268 ⇑P P 18 45 52.8 +0.8
SNY pmax pmax
comp=Z,11nm,0.5s
SNY pmax pmax
comp=Z,110nm,5.2s
SNY LR LR
comp=N,77nm,10.1s
SNY LR LR
comp=E,210nm,13.5s
SNY LR LR
comp=Z,160nm,21.8s
BILL Bilibino 22.62 13 *i* P P 18 45 59.6 -1.3
BILL pmax pmax
comp=Z,3.0nm,1.0s
BJI Beijing 27.61 270 P P 18 46 45.9 -1.2
BJI S S 18 51 25.6 +1.3
BJI pmax pmax
comp=Z,10.0nm,0.6s
BJI pmax pmax
comp=Z,87nm,3.5s
BJI LR LR
comp=N,130nm,16.1s
BJI LR LR
comp=E,200nm,16.3s
BJI LR LR
comp=Z,94nm,21.9s
HHC Hu-ho-hao-te 30.45 275 eP P 18 47 14.6 +2.2
HHC pP pP 18 47 27.8 +0.6
HHC sP sP 18 47 35.0 +0.8
HHC PP PnPn 18 48 14.2 +1.2
HHC PcP PcP 18 50 12.0 +1.6
HHC S S 18 52 12.1 +3.0
HHC sS sS 18 52 35.9 +1.6
HHC ScP ScP 18 53 48.4 +0.9
HHC ScS ScS 18 57 41.5 -2.3
HHC pmax pmax
comp=Z,25nm,1.1s
HHC LR LR
comp=N,330nm,15.5s
HHC LR LR
comp=E,250nm,17.8s
HHC LR LR
comp=Z,200nm,15.5s
ULN Ulaanbaatar 31.11 290 P P 18 47 19.5 +1.3
comp=Z,5.9nm,0.9s
SONM Songino Array 31.55 290 P P 18 47 21.2 -0.8
SONM PcP PcP 18 50 14.8 +1.5
SONM Songino Array 31.55 290 P P 18 47 21.2 -0.8
comp=Z,1.3nm,0.9s,baz=75,slow=7.9,SNR=6.9
SONM PcP PcP 18 50 14.8 +1.5
comp=Z,0.4nm,0.8s,baz=85,slow=1.7,SNR=3.7
SONM LR LR 19 00 49.9
comp=Z,131nm,18.9s,baz=86,slow=38
ZAK Zakamensk 32.91 295 eP P 18 47 29.9 -4.0
ZAK pmax pmax
comp=Z,2.0nm,1.1s
XAN Xi'an 35.63 266 P P 18 47 57.7 +0.2
XAN pP pP 18 48 07.4 -5.1
XAN pmax pmax
comp=Z,3.0nm,0.9s
XAN pmax pmax
comp=Z,17nm,6.5s
MCK McKinley 35.76 40 eP P 18 47 54.9 -3.4
MCK pmax pmax
comp=Z,5.0nm,1.0s
MCK McKinley 35.76 40 eP P 18 47 54.9 -3.4
comp=Z,5.4nm,1.0s
COLA College 36.26 38 eP P 18 48 03.9 +1.5
COLA pmax pmax
comp=Z,3.0nm,0.5s
COLA College 36.26 38 eP P 18 48 03.9 +1.5
comp=Z,3.5nm,0.5s
LZH Lanzhou 38.03 272 eP P 18 48 17.5 -0.6
LZH pmax pmax
comp=Z,15nm,1.3s
HVS Khovu-Aksy 38.59 299 *i* P P 18 48 22.7 +0.2
HVS pmax pmax
comp=Z,19nm,1.2s
GTA Gaotai 39.15 279 eP P 18 48 28.5 +1.2
GTA pmax pmax
comp=Z,3.0nm,1.2s
CD2 Chengdu 40.99 266 P P 18 48 43.9 +1.3
CD2 pP pP 18 48 58.6 +0.8
CD2 sP sP 18 49 05.4 +0.7
CD2 PP PnPn 18 50 22.8 +0.1
CD2 ScP ScP 18 54 26.7 +0.7
CD2 S S 18 54 52.6 +2.1
CD2 sS sS 18 55 17.6 +1.4
CD2 SS SS 18 57 52.4 -1.8
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,100nm,6.2s
GYA Guiyang 41.79 258 eP P 18 48 47.8 -1.5
GYA pmax pmax
comp=Z,10.0nm,0.8s
INK Inuvik 41.80 32 P P 18 48 48.9 +0.3
INK Inuvik 41.80 32 P P 18 48 48.9 +0.3
comp=Z,2.9nm,0.6s,baz=337,slow=5.4,SNR=12
ZALV Zalesovo Beam 42.88 306 P P 18 48 55.4 -2.2
ZALV 18 50 48.2
ZALV pmax pmax
comp=Z,1.0nm,0.7s
ZALV MLR MLR
comp=Z,177nm,18.7s
ZALV Zalesovo Beam 42.88 306 P P 18 48 55.4 -2.2
ZALV PcP PcP 18 50 48.2 +0.8
ZALV Zalesovo Beam 42.88 306 P P 18 48 55.4 -2.2
comp=Z,0.3nm,0.4s,baz=66,slow=8.3,SNR=4.2
ZALV PcP PcP 18 50 48.2 +0.8
comp=Z,1.0nm,0.7s,baz=64,slow=3.4,SNR=5.5
ZALV LR LR 19 07 58.0
comp=Z,177nm,18.7s,baz=253,slow=38
QIZ Qiongzhong 44.87 247 P P 18 49 09.5 -4.5
QIZ S S 18 55 43.6 -3.8
WMQ Urumqi 45.15 292 eP P 18 49 17.7 +1.7
WMQ pP pP 18 49 29.7 -1.7
WMQ sP sP 18 49 35.4 -2.9
WMQ pmax pmax
comp=Z,5.0nm,0.5s
WMQ pmax pmax
comp=Z,140nm,7.4s
KMI Kunming 45.33 260 P P 18 49 18.6 +0.8
KMI pP pP 18 49 34.3 +1.1
KMI sP sP 18 49 41.8 +1.7
KMI PP PP 18 51 04.8 +0.1

KMI S S 18 55 53.0 -1.4
KMI SS ScS 18 59 09.1 0.0
KMI pmax pmax
comp=Z,4.0nm,1.0s
KMI pmax pmax
comp=Z,75nm,4.1s
KMI LR LR
comp=N,120nm,13.0s
KMI LR LR
comp=E,150nm,14.3s
KMI LR LR
comp=Z,83nm,18.9s
MK31 Makanchi Array 47.18 298 eP P 18 49 30.2 -1.7
MK31 e 18 51 03.0
MK31 Makanchi Array 47.18 298 eP P 18 49 30.2 -1.7
MK31 ePcP PcP 18 51 03.0 +0.5
MKAR Makanchi Array 47.18 298 *i* P P 18 49 30.6 -1.3
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 47.18 298 P P 18 49 30.6 -1.3
MKAR PcP PcP 18 51 03.2 +0.7
MKAR Makanchi Array 47.18 298 P P 18 49 30.6 -1.3
comp=Z,1.5nm,0.6s,baz=66,slow=7.3,SNR=16
MKAR PcP PcP 18 51 03.2 +0.7
comp=Z,1.3nm,0.8s,baz=53,slow=2.4,SNR=6.0
MKAR LR LR 19 10 23.2
comp=Z,130nm,20.1s,baz=356,slow=38
KURK Kurchatov 47.62 304‖ eP P 18 49 33.3 -1.9
KURK pmax pmax
comp=Z,3.0nm,0.9s
KURK MLR MLR
comp=Z,72nm,14.0s
KURK Kurchatov 47.62 304 eP P 18 49 32.3 -2.9
comp=Z,1.4nm,0.6s
LSA Lhasa 50.43 273 eP P 18 49 59.0 +1.5
LSA pmax pmax
comp=Z,7.0nm,0.6s
LSA Lhasa 50.43 273 eP P 18 49 59.0 +1.5
comp=Z,7.1nm,0.6s
RES Resolute Bay 51.04 19 eP P 18 49 57.5 -3.4
comp=Z,3.8nm,1.0s
YKA Yellowknife Ar 51.05 37 P P 18 50 01.9 +0.8
YKA Yellowknife Ar 51.05 37 P P 18 50 01.9 +0.8
comp=Z,0.9nm,0.6s,baz=295,slow=7.2,SNR=12
CHTO Chiang Mai 52.19 257 eP P 18 50 11.8 +1.5
CHTO pmax pmax
comp=Z,7.0nm,0.9s
CHTO Chiang Mai 52.19 257 eP P 18 50 11.8 +1.5
comp=Z,6.9nm,0.9s
CM31 Chiang Mai Arr 52.44 257 eP P 18 50 10.3 -1.8
comp=Z,1.7nm,0.7s
CMAR Chiang Mai Arr 52.44 257 P P 18 50 14.4 +2.3
CMAR Chiang Mai Arr 52.44 257 P P 18 50 14.4 +2.3
comp=Z,2.9nm,0.8s,baz=34,slow=7.6,SNR=28
TKM2 Tokmak 2 53.24 296 eP P 18 50 17.3 -0.6
TKM2 Tokmak 2 53.24 296 eP P 18 50 17.3 -0.6
AAK Ala-Archa 54.07 297‖ eP P 18 50 24.2 +0.2
AAK pmax pmax
comp=Z,6.0nm,1.0s
AAK Ala-Archa 54.07 297 eP P 18 50 22.5 -1.6
comp=Z,2.5nm,1.0s
TAPN Taplejung 54.25 274 eP P 18 50 26.2 +0.5
comp=Z,10nm,0.7s
EKS2 Erkin-Say 54.50 297 eP P 18 50 26.5 -0.6
EKS2 pmax pmax
comp=Z,3.0nm,1.0s
EKS2 Erkin-Say 54.50 297 eP P 18 50 26.5 -0.6
comp=Z,2.6nm,1.0s
ODAN Odare 54.78 273 eP P 18 50 30.5 +1.1
comp=Z,6.2nm,0.5s
KSH Kashi 54.88 293 eP P 18 50 36.3 +6.5
KSH epP pP 18 50 52.0 +6.4
KSH esP sP 18 50 58.9 +6.5
KSH ePcP PcP 18 51 34.1 +2.8
KSH ePP PP 18 52 42.0 +9.1
KSH eScP ScP 18 55 27.2 +2.7
KSH ePcS PcS 18 55 33.3 +2.1
KSH eS S 18 58 15.8 +9.0
KSH esS sS 18 58 43.0 +10
KSH eScS ScS 19 00 15.9 +2.3
KSH eSS SS 19 02 01.2 +11
KSH pmax pmax
comp=Z,5.0nm,1.1s
KSH LR LR
comp=N,150nm,4.6s
KSH LR LR
comp=E,210nm,4.7s
KSH LR LR
comp=Z,190nm,6.0s
GUN Gumba 55.16 275 eP P 18 50 32.8 +0.5
comp=Z,10nm,0.5s
RAMN Ramite 55.27 274 eP P 18 50 33.7 +0.7
comp=Z,32nm,0.7s
ARU Arti 55.30 318*c i* P P 18 50 32.7 +0.3
ARU 18 52 32.8
ARU S S 18 58 12.8 +1.2
ARU SS SS 19 01 50.4 -5.5
ARU pmax pmax
comp=Z,4.0nm,1.2s
KKN Kakani 55.65 276 eP P 18 50 36.7 +1.1
comp=Z,18nm,0.6s
PKI Pulchoki 55.70 275 eP P 18 50 37.1 +1.0
PKIN Phulchoki 55.70 275 eP P 18 50 37.3 +1.2
comp=Z,7.4nm,0.6s
DMN Daman 55.88 276 eP P 18 50 38.6 +1.2
PMG Port Moresby 55.91 187 eP P 18 50 31.3 -5.9
DANN Dangsing 56.34 277 eP P 18 50 42.0 +1.3
comp=Z,29nm,0.5s
KOLN Koldanda 56.82 277 eP P 18 50 44.9 +1.0
comp=Z,12nm,0.7s
ARCES ARCESS Array B 58.14 341 P P 18 50 52.1 -0.3
ARCES ARCESS Array B 58.14 341 P P 18 50 52.1 -0.3
comp=Z,1.7nm,0.9s,baz=30,slow=7.6,SNR=5.0
ABKAR Akbulak array 58.70 310 eP P 18 50 53.8 -2.8
comp=Z,0.6nm,0.4s
FFC Flin Flon 60.85 40 eP P 18 51 12.1 +0.8
FFC pmax pmax
comp=Z,1.0nm,0.4s
FFC Flin Flon 60.85 40 eP P 18 51 12.1 +0.8
comp=Z,1.0nm,0.4s
SUMG Summit 60.95 4 eP P 18 51 11.4 -0.8
SUMG pmax pmax
comp=Z,10.0nm,0.9s
SUMG Summit 60.95 4 eP P 18 51 11.4 -0.8
comp=Z,9.6nm,0.9s
LRM Limekiln Ridge 61.24 53 eP P 18 51 15.2 +0.8
comp=Z,37nm,1.2s
JOF Joensuu 61.63 334 eP P 18 51 15.0 -1.4
JOF pmax pmax
comp=Z,2.0nm,0.6s
JOF Joensuu 61.63 334 *ep* P 18 51 15.0 -1.4
comp=Z,2.2nm,0.6s
KBL Kabul 62.29 292 eP P 18 51 21.3 -0.3
KBL pmax pmax
comp=Z,6.0nm,1.1s
KBL Kabul 62.29 292 *eP* P 18 51 21.3 -0.3
comp=Z,6.2nm,1.1s
NVAR Mina Array Bea 62.43 62 P P 18 51 24.2 +1.8
NVAR Mina Array Bea 62.43 62 P P 18 51 24.2 +1.8
comp=Z,0.8nm,0.8s,baz=279,slow=7.6,SNR=4.9
KAF Kangasniemi 63.74 335 eP P 18 51 21.3 -9.1
KAF pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 63.74 335 *ep* P 18 51 21.3 -9.1
comp=Z,2.5nm,0.6s
FINES FINESS Array B 64.33 335 P P 18 51 33.2 -1.1
FINES FINESS Array B 64.33 335 P P 18 51 33.2 -1.1
comp=Z,4.1nm,0.5s,baz=35,slow=7.6,SNR=49
FINES LR LR 19 22 32.9
comp=Z,111nm,18.6s,baz=270,slow=39
PDAR Pinedale Array 64.79 54 P P 18 51 38.5 +0.6
PDAR Pinedale Array 64.79 54 P P 18 51 38.5 +0.6
comp=Z,1.9nm,0.9s,baz=297,slow=1.0,SNR=11
OBN Obninsk 65.60 326 eP P 18 51 39.9 -2.7
OBN pmax pmax
comp=Z,5.0nm,1.2s
ULM Lac du Bonnet 66.63 41 P P 18 51 49.9 +0.6
ULM Lac du Bonnet 66.63 41 P P 18 51 49.9 +0.6
comp=Z,2.1nm,0.4s,baz=300,slow=8.2,SNR=3.1
WRA Warramunga Arr 68.31 199 P P 18 52 02.2 +2.0
WRA Warramunga Arr 68.31 199 P P 18 52 02.2 +2.0
comp=Z,1.1nm,0.9s,baz=16,slow=7.0,SNR=4.8
NB2 NORSAR Subarra 68.52 341 P P 18 52 00.1 -1.0
comp=Z,7.9nm,0.7s,baz=27,slow=6.5
NOA NORSAR Array B 68.52 341 P P 18 52 00.3 -0.8
NOA NORSAR Array B 68.52 341 P P 18 52 00.3 -0.8
comp=Z,7.1nm,0.7s,baz=28,slow=6.3,SNR=23
SMCO Snowmass 68.64 55 eP P 18 52 02.6 -0.1
comp=Z,1.7nm,0.7s
KIV Kislovodsk 71.08 314 eP P 18 52 19.1 +1.9
KIV pmax pmax
comp=Z,4.0nm,1.1s
KIV MLR MLR
comp=Z,100nm,17.0s
KBZ Khabaz 71.14 314 P P 18 52 16.7 -0.7
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KBZ Khabaz 71.14 314 P P 18 52 16.7 -0.7
KBZ Khabaz 71.14 314 P P 18 52 16.7 -0.7
comp=Z,2.2nm,0.8s,baz=18,slow=8.7,SNR=6.2
AKASG Malin Array Be 71.84 326 P P 18 52 20.4 -1.1
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 71.84 326 P P 18 52 20.4 -1.1
AKASG Malin Array Be 71.84 326 P P 18 52 20.4 -1.1
comp=Z,3.9nm,0.5s,baz=32,slow=6.1,SNR=16
KIEV Kiev 71.85 326 eP P 18 52 20.3 -1.3
KIEV pmax pmax
comp=Z,8.0nm,0.9s
KIEV Kiev 71.85 326 eP P 18 52 20.3 -1.3
comp=Z,8.2nm,0.9s
AK01 Malin Array Si 71.85 326 eP P 18 52 20.2 -1.4
AK02 Malin Array Si 71.88 326 eP P 18 52 20.3 -1.5
AS31 Alice Springs 72.00 199 eP P 18 52 21.2 -1.6
ASAR Alice Springs 72.00 199 P P 18 52 26.0 +3.2
ASAR Alice Springs 72.00 199 P P 18 52 26.0 +3.2
comp=Z,1.0nm,0.7s,baz=15,slow=5.4,SNR=15
BEL Belsk 73.91 332 eP P 18 52 33.7 0.0
KWP Kalwaria Pacla 75.12 329 eP P 18 52 40.6 -0.2
KWP pmax pmax
comp=Z,22nm,1.1s
KWP Kalwaria Pacla 75.12 329 eP P 18 52 40.6 -0.2
comp=Z,22nm,1.1s
KWP Kalwaria Pacla 75.12 329 eP P 18 52 40.7 -0.1
RUE Ruedersdorf 75.50 336 eP P 18 52 43.0 +0.1
comp=Z,12nm,0.9s
OJC Ojcow 75.61 331 eP P 18 52 43.3 -0.4
OJC Ojcow 75.61 331 eP P 18 52 43.3 -0.4
BUR08 Bucovina Ar. S 75.86 327 eP P 18 52 44.8 -0.5
BURAR Bucovina Array 75.88 327‖ *i* P P 18 52 45.3 -0.1
UZH Uzhgorod 76.11 329 eP P 18 52 49.2 +2.7
UZH e 18 53 03.4
NIE Niedzica 76.13 331 eP P 18 52 47.0 +0.4
NIE Niedzica 76.13 331 eP P 18 52 47.0 +0.4
KSP Ksiaz 76.20 334 eP P 18 52 46.5 -0.5
TESR Tescani 76.24 325‖ *i* P P 18 52 47.2 -0.1
TRPA Tarpa 76.44 329⇑ *i* P P 18 52 48.3 -0.1
TRPA Tarpa 76.44 329⇑ eP P 18 52 48.3 -0.1
TLCR 76.44 323‖ *i* P P 18 52 48.5 +0.1
UPC Upice 76.58 334 eP P 18 52 49.6 +0.5
UPC Upice 76.58 334 eP P 18 52 49.6 +0.5
DPC Dobruska-Polom 76.62 333 eP P 18 52 49.4 0.0
DPC *e* 18 52 56.9
DPC Dobruska-Polom 76.62 333 eP P 18 52 49.4 0.0
DPC ex x 18 52 56.9
CFR Carcaliu 76.73 324⇑ *i* P P 18 52 49.8 -0.2
MORC Moravsky Berou 76.73 332 eP P 18 52 48.2 -1.9
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 76.73 332 eP P 18 52 48.2 -1.9
comp=Z,5.9nm,0.9s
MORC Moravsky Berou 76.73 332‖ *i* P P 18 52 50.0 -0.1
VRI Vrincioaia 76.74 325⇑ *i* P P 18 52 51.2 +1.1
CLL Collm 76.76 336‖ *i* P P 18 52 49.6 -0.5
CLL e*PP PcP 18 53 04.0 +2.8
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL Collm 76.76 336 eP P 18 52 49.8 -0.3
comp=Z,7.0nm,0.8s
CLL Collm 76.76 336‖ *i* P P 18 52 49.6 -0.5
comp=Z,8.0nm,0.8s
CLL ePcP PcP 18 53 00.0 -1.2
CLL epP PcP 18 53 04.0 +2.8
CLL esP sP 18 53 11.0 -2.3
BRG Berggiesshubel 76.88 335 eP P 18 52 49.9 -0.9
comp=Z,3.2nm,1.0s
BRG Berggiesshubel 76.88 335 eP P 18 52 49.9 -0.9
BRG pmax pmax
comp=Z,38nm,1.0s
CLZ Clausthal 77.00 337 eP P 18 52 52.1 +0.6
CLZ pmax pmax
comp=Z,4.0nm,0.8s
CLZ Clausthal 77.00 337 eP P 18 52 52.1 +0.6
comp=Z,4.0nm,0.8s
NEUB Neuenburg 77.19 336 eP P 18 52 53.7 +1.2
comp=Z,9.0nm,1.2s
MLR Muntele Rosu 77.36 325⇑ *i* P P 18 52 54.6 +0.8
ISR Istrita 77.43 324⇑ *i* P P 18 52 54.6 +0.5
VRAC Vranov 77.45 333⇑ *i* P P 18 52 54.7 +0.7
PRU Pruhonice 77.48 334 eP P 18 52 54.4 +0.2
PRU Pruhonice 77.48 334 eP P 18 52 54.4 +0.2
TXAR Lajitas Array 77.50 61 P P 18 52 56.6 +1.8
TXAR Lajitas Array 77.50 61 P P 18 52 56.6 +1.8
comp=Z,1.9nm,0.7s,baz=300,slow=4.6,SNR=22
DRGR 77.51 328‖ *i* P P 18 52 54.5 0.0
PSZ Piszkesteto 77.56 330‖ eP P 18 52 55.3 +0.5
TANN Tannenbergstha 77.71 336 eP P 18 52 55.6 0.0
comp=Z,10.0nm,1.7s
WERD Werda 77.73 336 eP P 18 52 55.6 0.0
comp=Z,75nm,2.9s
VOIR 77.75 326‖ *i* P P 18 52 56.8 +0.9
WERN Wernitzgruen 77.85 336 eP P 18 52 56.5 +0.2
comp=Z,4.0nm,0.8s
KHC Kasperske Hory 78.53 334 eP P 18 53 00.6 +0.5
KHC pmax pmax
comp=Z,4.0nm,1.0s
KHC Kasperske Hory 78.53 334 eP P 18 53 00.6 +0.5
comp=Z,4.1nm,1.0s
KHC Kasperske Hory 78.53 334 eP P 18 53 00.9 +0.8
BR131 Keskin Array S 78.67 317 eP P 18 53 00.6 -0.6
comp=Z,4.2nm,0.9s
BRTR Keskin Array B 78.67 317 P P 18 53 01.6 +0.5
BRTR Keskin Array B 78.67 317 P P 18 53 01.6 +0.5
comp=Z,4.3nm,0.8s,baz=67,slow=4.6,SNR=29
GRF Grafenberg Arr 78.71 336 eP P 18 53 01.7 +0.6
GRF pmax pmax
comp=Z,6.0nm,0.9s
GRF Grafenberg Arr 78.71 336 eP P 18 53 01.7 +0.6
comp=Z,6.0nm,0.9s
WET Wettzell 78.73 335 eP P 18 53 01.7 +0.5
WET pmax pmax
comp=Z,4.0nm,0.9s
WET Wettzell 78.73 335 eP P 18 53 01.7 +0.5
comp=Z,4.0nm,0.9s
GERES GERESS Array B 78.75 334 P P 18 53 01.3 -0.1
GERES GERESS Array B 78.75 334 P P 18 53 01.3 -0.1
comp=Z,1.1nm,0.7s,baz=36,slow=5.7,SNR=12
SOP Sopron 78.88 332‖ eP P 18 53 03.0 +1.0
KBD Kabd 79.17 301 eP P 18 53 04.8 +1.0
KBD AMb AMB 18 53 05.1
comp=Z,18nm,0.7s
RST Umm Al-Ruwaisa 79.34 302 eP P 18 53 04.9 +0.1
RST AMb AMB 18 53 06.0
comp=Z,5.0nm,0.8s
NAY Al-Naaiem 79.38 301 eP P 18 53 05.3 +0.2
NAY AMb AMB 18 53 06.5
comp=Z,15nm,0.9s
RDF Al-Radifah 79.44 301 eP P 18 53 05.9 +0.6
RDF AMb AMB 18 53 07.8
comp=Z,26nm,0.8s
BAIF Baives 80.18 340 eP P 18 53 08.5 -0.5
BAIF Baives 80.18 340 eP P 18 53 08.5 -0.5
BAIF Baives 80.18 340 eP P 18 53 08.5 -0.5
VTS Vitosha 80.86 325‖ *i* P P 18 53 13.3 +0.3
CDF Champ du Feu 80.95 338 eP P 18 53 12.8 -0.5
CDF Champ du Feu 80.95 338 eP P 18 53 12.8 -0.5
CDF Champ du Feu 80.95 338 eP P 18 53 12.8 -0.5
SFTF Sexfontaines 81.71 339 eP P 18 53 16.9 -0.3
SFTF Sexfontaines 81.71 339 eP P 18 53 16.9 -0.3
LOR Lormes 82.87 340 eP P 18 53 22.9 -0.4
comp=Z,10.0nm,1.0s
LOR Lormes 82.87 340 eP P 18 53 22.9 -0.4
comp=Z,10.0nm,1.0s
SSF Saint Saulge 83.15 340 eP P 18 53 25.1 +0.4
SSF Saint Saulge 83.15 340 eP P 18 53 25.1 +0.4
SSF Saint Saulge 83.15 340 eP P 18 53 25.1 +0.4
AVF Avril sur Loir 83.44 340 eP P 18 53 26.2 0.0
AVF Avril sur Loir 83.44 340 eP P 18 53 26.2 0.0
AVF Avril sur Loir 83.44 340 eP P 18 53 26.2 0.0
SMF Signal de Mont 83.46 339 eP P 18 53 26.2 -0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,27nm,1.1s						
SMF	**Signal de Mont**	**83.46**	**339**	*e*P	**P**	**18 53 26.2**	**-0.1**
SMF				pmax	pmax		
	comp=Z,27nm,1.1s						
SMF	**Signal de Mont**	**83.46**	**339**	*e*P	**P**	**18 53 26.2**	**-0.1**
	comp=Z,27nm,1.1s						
LPG	**La Plagne**	**83.78**	**337**	*e*P	**P**	**18 53 27.5**	**-0.8**
LPG	**La Plagne**	**83.78**	**337**	*e*P	**P**	**18 53 27.5**	**-0.8**
LPG	**La Plagne**	**83.78**	**337**	*e*P	**P**	**18 53 27.5**	**-0.8**
MBDF	**Montbardon**	**84.48**	**337**	*e*P	**P**	**18 53 31.5**	**-0.2**
	comp=Z,7.1nm,0.8s						
MBDF	**Montbardon**	**84.48**	**337**	*e*P	**P**	**18 53 31.5**	**-0.2**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MBDF	**Montbardon**	**84.48**	**337**	*e*P	**P**	**18 53 31.5**	**-0.2**
	comp=Z,7.1nm,0.8s						
PLCA	**Paso Flores**	**148.04**	**96**	PKPbc	**PKPab**	**19 00 45.9**	**-0.9**
PLCA	**Paso Flores**	**148.04**	**96**	PKPbc	**PKPab**	**19 00 45.9**	**-0.9**
	comp=Z,4.7nm,1.0s,baz=211,slow=1.6,SNR=3.6						
CPUP	**Villa Florida**	**148.47**	**61**	PKPbc	**PKPbc**	**19 00 46.3**	**+1.0**
CPUP	**Villa Florida**	**148.47**	**61**	PKPbc	**PKPbc**	**19 00 46.3**	**+1.0**
	comp=Z,0.7nm,0.5s,baz=213,slow=2.4,SNR=3.9						

*NIED **02** 19:16:00, 44°00N×147°30E, h92km, Mw3.8 Best double couple: M0 6.55000×10^14 NP1:φs54.00000°, δ78.00000°, λ116.00000°. NP2:φs169.00000°, δ28.00000°, λ27.00000°.*
*ISCJB **02** 19:16:40.8±0.6, 44°15N±0°06×147°39E±0°07, h116km±4km, mb4.1/26, Error ellipse: s-maj=11.4km s-min=5.6km az=142.6*
*MOS **02** 19:16:42.0±1.2, 44°42N×147°26E, h117km, mb4.3/22, Error ellipse: s-maj=12.0km s-min=9.1km az=100.6*
*JMA **02** 19:16:43.2±0.3, 43°99N×147°34E, h102km±4km, M4.2*
JMA Felt I J1.
*IDC **02** 19:16:44.6±2.3, 44°48N×147°25E, h121km±19km, mb3.7/17, mb1 3.8/21, mb1mx3.7/30, mbtmp3.6/21, Error ellipse: s-maj=32.3km s-min=11.9km az=166.0*
ISC 02 19:16:41.6±0.9, **44°13N**±0°07×**147°40E**±0°07, **h109**km±7km, **n68**, σ1s15/78, **mb4.1**/26, **2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.11**	**266**	*d i*PN	**Pn**	**19 17 04.3**	**+0.5**
YUK				*i* S	**Sn**	**19 17 20.3**	**-0.3**
YUK				pmax	pmax		
	comp=N,205nm,0.2s						
YUK				pmax	pmax		
	comp=E,166nm,0.2s						
YUK				pmax	pmax		
	comp=Z,743nm,0.2s						
YUK				smax	smax		
	comp=E,4μm,0.4s						
YUK				smax	smax		
	comp=N,3μm,0.3s						
KUR	**Kuril'sk**	**1.15**	**17**	*e*PN	**Pn**	**19 17 04.5**	**+0.2**
KUR				*e*S	**Sn**	**19 17 21.0**	**-0.4**
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,230nm,0.5s						
KUR				pmax	pmax		
	comp=E,110nm,0.3s						
KUR				smax	smax		
	comp=N,540nm,0.3s						
KUR				smax	smax		
	comp=E,760nm,0.5s						
KUR				smax	smax		
	comp=N,2μm,1.0s						
KUR				smax	smax		
	comp=E,3μm,2.0s						
NEM2	**Nemuro 2**	**1.42**	**238**	P	**Pn**	**19 17 07.4**	**0.0**
NEM2				*e*S	**Sn**	**19 17 25.8**	**-1.1**
JRA	**Rausu**	**1.66**	**264**	P	**Pn**	**19 17 11.2**	**+1.1**
JRA				*e*S	**Sn**	**19 17 32.7**	**+0.8**
JNK	**Nakash**	**2.02**	**255**	P	**Pn**	**19 17 15.4**	**+0.7**
JAK	**Akkeshi**	**2.27**	**241**	P	**Pn**	**19 17 18.1**	**+0.2**
JAK				*e*S	**Sn**	**19 17 44.9**	**-0.8**
JTKR	**Abashiri--Toko**	**2.52**	**268**	P	**Pn**	**19 17 22.3**	**+1.1**
JAR	**Ashorobuto**	**2.76**	**254**	P	**Pn**	**19 17 25.7**	**+1.4**
JOB	**Onbets**	**2.87**	**246**	P	**Pn**	**19 17 26.7**	**+0.9**
JOB				*e*S	**Sn**	**19 17 59.6**	**-0.2**
JMP	**Maruseppu**	**2.92**	**269**	P	**Pn**	**19 17 27.7**	**+1.3**
JCH	**Churui**	**3.31**	**244**	P	**Pn**	**19 17 31.9**	**+0.3**
JCH				*e*S	**Sn**	**19 18 09.4**	**-0.9**
JKK2	**Kamakawa 2**	**3.37**	**267**	P	**Pn**	**19 17 34.0**	**+1.6**
ASAJ	**Asahikawa**	**3.46**	**271**	P	**Pn**	**19 17 35.3**	**+1.7**
ASAJ	**Asahikawa**	**3.46**	**271**	P	**Pn**	**19 17 35.4**	**+1.8**
	comp=E,19nm,0.3s,baz=78,slow=13,SNR=158						
JSE	**Soyaes**	**3.54**	**285**	P	**Pn**	**19 17 35.8**	**+1.1**
JFR	**Furan**	**3.62**	**256**	P	**Pn**	**19 17 37.3**	**+1.5**
ERM	**Erimo**	**3.76**	**237**	*i* PN	**Pn**	**19 17 38.9**	**+1.3**
JNBK	**Urakawa-nobuka**	**3.87**	**243**	P	**Pn**	**19 17 38.8**	**-0.3**
JNBK				*e*S	**Sn**	**19 18 22.2**	**-1.4**
JWK2	**Keihoku**	**4.10**	**289**	P	Pn	19 17 44.8	+2.7
JEW	**Eniwo**	**4.52**	**255**	P	**Pn**	**19 17 49.5**	**+1.7**
HABR	**Khabarovsk**	**9.59**	**301**	PN	**Pn**	**19 18 55.5**	**-0.9**
HABR				*e*S	**Sn**	**19 20 43.0**	**+0.9**
HABR				MLR	MLR		
	comp=Z,152nm,20.0s						
USRK	**Ussuriysk Arra**	**11.07**	**276**	P	**Pn**	**19 19 16.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=83,slow=13,SNR=6.4						
PETK	**Petropavlovsk-**	**11.27**	**33**	PN	**Pn**	**19 19 18.2**	**-0.9**
PETK	**Petropavlovsk-**	**11.27**	**33**	P	**Pn**	**19 19 18.2**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=191,slow=14,SNR=4.0						
FX1	**Attu Island--F**	**19.10**	**54**	P	**P**	**19 20 57.2**	**+1.6**
	comp=Z,2.5nm,0.3s,baz=2.8,slow=7.9,SNR=7.0						
YAK	**Yakutsk**	**20.72**	**336**	*e*P	**P**	**19 21 09.6**	**-3.4**
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
SONM	**Songino Array**	**28.49**	**292**	P	**P**	**19 22 27.2**	**+0.7**
	comp=Z,1.4nm,0.6s,baz=82,slow=8.4,SNR=19						
KDAK	**Kodiak Island**	**38.86**	**48**	P	**P**	**19 23 55.9**	**+0.1**
	comp=Z,6.1nm,0.8s,baz=292,slow=19,SNR=4.4						
ZALV	**Zalesovo Beam**	**40.91**	**307**	P	**P**	**19 24 12.1**	**-0.8**
ZALV						19 26 11.1	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**40.91**	**307**	*e*P	**P**	**19 24 14.3**	**+1.4**
ZALV	**Zalesovo Beam**	**40.91**	**307**	P	**P**	**19 24 12.1**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=79,slow=8.0,SNR=3.9						
ZALV				PcP	**PcP**	**19 26 11.1**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=80,slow=2.9,SNR=7.5						
MKAR	**Makanchi Array**	**44.57**	**297**	*e*P	**P**	**19 24 42.7**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**44.57**	**297**	P	**P**	**19 24 42.8**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=78,slow=8.5,SNR=27						
KURK	**Kurchatov**	**45.47**	**304**	*i* P	**P**	**19 24 49.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	**Inuvik**	**45.98**	**31**	P	**P**	**19 24 54.0**	**+0.7**
	comp=Z,2.2nm,0.4s,baz=286,slow=6.0,SNR=23						
CMAR	**Chiang Mai Arr**	**47.81**	**254**	P	**P**	**19 25 09.6**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=43,slow=6.4,SNR=4.4						
AAK	**Ala-Archa**	**51.36**	**295**	*i* P	**P**	**19 25 35.5**	**+0.5**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
RES	**Resolute Bay**	**54.55**	**17**	P	**P**	**19 25 57.0**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=332,slow=5.3,SNR=21						
RES				PcP	**PcP**	**19 27 00.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=244,slow=3.8,SNR=3.8						
YKA	**Yellowknife Ar**	**55.38**	**34**	P	**P**	**19 26 04.3**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=300,slow=7.0,SNR=13						
KEV	**Kevo**	**58.42**	**339**	*e*P	**P**	**19 26 22.8**	**-2.4**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	**Kevo**	**58.42**	**339**	*e*p	**P**	**19 26 22.8**	**-2.4**
	comp=Z,0.5nm,0.3s						
ARCES	**ARCESS Array B**	**58.95**	**340**	P	**P**	**19 26 27.1**	**-1.9**
	comp=Z,0.7nm,0.5s,baz=42,slow=7.5,SNR=14						
JOF	**Joensuu**	**61.84**	**332**	*e*P	**P**	**19 26 47.2**	**-1.4**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOF	**Joensuu**	**61.84**	**332**	*e*p	**P**	**19 26 47.2**	**-1.4**
	comp=Z,1.4nm,0.4s						
KAF	**Kangasniemi**	**64.05**	**333**	*e*P	**P**	**19 27 01.2**	**-2.1**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KAF	**Kangasniemi**	**64.05**	**333**	*e*p	**P**	**19 27 01.2**	**-2.1**
	comp=Z,0.8nm,0.4s						
FINES	**FINESS Array B**	**64.62**	**333**	P	**P**	**19 27 05.8**	**-1.2**
	comp=Z,1.8nm,0.4s,baz=34,slow=7.3,SNR=29						
VRHR	**Novokhopersk**	**65.48**	**318**	*e*P	**P**	**19 27 11.1**	**-1.6**
VRHR				pmax	pmax		
	comp=N,10.0nm,0.8s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.8s						
VRHR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VSR	**Storozhevoye**	**66.56**	**319**	*e*P	**P**	**19 27 19.7**	**+0.1**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
VSR				pmax	pmax		
	comp=N,1.0nm,0.3s						
VSR				pmax	pmax		
	comp=E,7.0nm,0.7s						
VORD	**Divnogorie**	**66.67**	**319**	*e*P	**P**	**19 27 20.4**	**+0.1**
VORD				pmax	pmax		
	comp=N,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NVAR	**Mina Array Bea**	**67.22**	**58**	P	**P**	**19 27 24.9**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=266,slow=12,SNR=2.9						
NB2	**NORSAR Subarra**	**69.31**	**339**	P	**P**	**19 27 36.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=29,slow=6.2						
NOA	**NORSAR Array B**	**69.31**	**339**	P	**P**	**19 27 36.1**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=30,slow=6.3,SNR=8.9						
KBZ	**Khabaz**	**69.68**	**312**	P	**P**	**19 27 39.6**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**69.68**	**312**	P	**P**	**19 27 39.6**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=68,slow=5.0,SNR=8.1						
AKASG	**Malin Array Be**	**71.38**	**324**	*e*P	**P**	**19 27 49.0**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**71.38**	**324**	P	**P**	**19 27 49.0**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=39,slow=6.5,SNR=11						
OKC	**Ostrava-Krasne**	**76.48**	**329**	*e*P	**P**	**19 28 20.3**	**+1.1**
OKC	**Ostrava-Krasne**	**76.48**	**329**	*e*P	**P**	**19 28 20.3**	**+1.1**
DPC	**Dobruska-Polom**	**76.72**	**330**	*e*P	**P**	**19 28 22.0**	**+1.4**
DPC	**Dobruska-Polom**	**76.72**	**330**	*e*P	**P**	**19 28 22.0**	**+1.4**
CLL	**Collm**	**77.06**	**333**	⇑*i*P	**P**	**19 28 21.8**	**-0.6**
CLL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CLL	**Collm**	**77.06**	**333**	⇑*i*P	**P**	**19 28 21.8**	**-0.6**
SCHQ	**Schefferville**	**77.20**	**19**	P	**P**	**19 28 23.1**	**0.0**
	comp=Z,1.2nm,0.5s,baz=297,slow=9.0,SNR=2.8						
KHC	**Kasperske Hory**	**78.72**	**331**	*e*P	**P**	**19 28 32.4**	**+0.7**
KHC	**Kasperske Hory**	**78.72**	**331**	*e*P	**P**	**19 28 32.4**	**+0.7**
GERES	**GERESS Array B**	**78.92**	**331**	P	**P**	**19 28 31.9**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=47,slow=6.6,SNR=4.7						
TXAR	**Lajitas Array**	**82.29**	**56**	P	**P**	**19 28 52.0**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=310,slow=3.3,SNR=9.8						

IDC 02 19:23:11.9±2.2, **7°42S**×**155°40E**, **h0**km, **mb3.5**/6, **mb1 3.7**/6, **mb1mx3.5**/17, **mbtmp3.5**/6, **Error ellipse: s-maj=68.1km s-min=28.6km az=122.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.91**	**237**	P	P	19 28 27.3	-0.5
	1.6nm,1.1s,baz=55,slow=8.7,SNR=4.1						
ASAR	**Alice Springs**	**26.20**	**230**	P	P	19 28 48.8	+0.2
	0.7nm,1.1s,baz=56,slow=9.7,SNR=4.5						
CMAR	**Chiang Mai Arr**	**61.33**	**296**	P	P	19 33 31.1	+1.1
	0.5nm,0.7s,baz=116,slow=5.7,SNR=5.1						
SONM	**Songino Array**	**69.91**	**327**	P	P	19 34 24.5	-0.5
	0.3nm,0.8s,baz=134,slow=6.2,SNR=3.1						
MKAR	**Makanchi Array**	**83.99**	**319**	P	P	19 35 43.7	-0.5
	0.2nm,0.8s,baz=104,slow=6.1,SNR=2.7						
YKA	**Yellowknife Ar**	**96.52**	**28**	P	P	19 36 43.4	+0.3
	0.1nm,0.5s,baz=267,slow=4.3,SNR=3.0						

*NNC **02** 19:39:36.1±5.5, 41°67N×71°46E, h0km, mb3.2, mpv3.1, Error ellipse: s-maj=50.9km s-min=28.6km az=5.0*
ISC 02 19:39:35.1±2.3, **41°4N**±0°2×**71°36E**±0°08, **h23**km, **n10**, σ**0s98**/10, **2C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**1.77**	**339**	⇓Pn	**Pn**	**19 40 03.8**	**-0.6**
	6.5nm,0.3s,baz=153,slow=15,SNR=307						
KK31				⇓Sn	**Sb**	**19 40 29.6**	**+0.8**
	33nm,0.3s,baz=150,slow=26,SNR=27						
AML	**Almayashu**	**1.88**	**68**	P	**Pn**	**19 40 06.5**	**+0.3**
	SNR=72						
EKS2	**Erkin-Say**	**2.17**	**55**	P	**Pb**	**19 40 13.0**	**-0.8**
	SNR=16						
AAK	**Ala-Archa**	**2.62**	**62**	P	**Pb**	**19 40 20.4**	**-1.1**
	SNR=19						
KBK	**Karagaybulak**	**2.93**	**64**	P	**Pb**	**19 40 25.7**	**-1.1**
	SNR=9.3						
USP	**Ospenovka**	**2.95**	**51**	P	**Sb**	**19 41 03.8**	**+1.0**
	SNR=7.0						
KZA	**Kyzart**	**2.98**	**76**	P	**Pb**	**19 40 27.5**	**-0.1**
	SNR=6.8						
TKM2	**Tokmak 2**	**3.48**	**63**	⇑Pn	Pb	19 40 32.5	-3.6
	2.0nm,0.3s						
TKM2				⇑Lg	Lg	19 41 19.8	
	8.5nm,0.5s						
TKM2	**Tokmak 2**	**3.48**	**63**	P	**Pb**	**19 40 35.0**	**-1.1**
	SNR=10						
AB31	**Akbulak array**	**11.20**	**318**	⇓P	**Pn**	**19 42 14.3**	**+0.7**
	0.1nm,0.2s,baz=129,slow=13,SNR=4.9						

*ISCJB **02** 19:45:42.5±0.5, 36°58N±0°02×36°63E±0°04, h0km±7km, Error ellipse: s-maj=6.3km s-min=3.4km az=24.4*
*DDA **02** 19:45:43.0, 36°63N×36°61E, h7km, MD3.2*
*CSEM **02** 19:45:43.2±0.3, 36°54N×36°68E, h2km, MD3.2, Error ellipse: s-maj=12.9km s-min=5.3km az=116.0*
*NSSC **02** 19:45:45.5±2.0, 36°37N×36°73E, h0km±14km, ML1.7*
*ISK **02** 19:45:46.7, 36°84N×36°58E, h5km, MD2.8*
ISC 02 19:45:42.4±1.1, **36°60N**±0°02×**36°60E**±0°03, **h5**km±11km, **n27**, σ**0s88**/42, **Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUZU	**Kuzuini**	**0.42**	**65**	*i* P	**Pg**	**19 45 50.5**	**-0.1**
KUZU				*i* S	**Sg**	**19 45 56.0**	**-0.1**
KUZU	**Kuzuini**	**0.42**	**65**	*i* P	**Pg**	**19 45 50.5**	**-0.1**
KUZU				*i* S	**Sg**	**19 45 56.0**	**-0.1**
BTCH	**Batrach**	**0.57**	**191**	*e*P	**Pg**	**19 45 51.6**	**-1.8**
BTCH				*e*S	**Sg**	**19 45 59.8**	**-1.0**
BTCH				AML	AML	19 46 02.0	
	comp=E,73nm,0.5s						
BTCH				AML	AML	19 46 04.0	
	comp=N,73nm,0.3s						
BTCH				AML	AML	19 46 06.8	
	comp=Z,90nm,0.7s						
BTCH	**Batrach**	**0.57**	**191**	*e*P	**Pg**	**19 45 51.6**	**-1.8**
	SNR=91						
BTCH				*e*S	**Sg**	**19 45 59.8**	**-1.0**
	comp=Z,90nm,0.7s,SNR=59						
YAYL	**Yayladag**	**0.69**	**215**	*i* P	**Pb**	**19 45 57.7**	**+0.7**
YAYL	**Yayladag**	**0.69**	**215**	*i* P	**Pb**	**19 45 57.7**	**+0.7**
GAZ	**Gaziantep**	**0.76**	**40**	*e*PG	**Pn**	**19 45 59.2**	**-0.6**
GAZ				*e*SG	**Sb**	**19 46 09.5**	**+0.7**
GAZ	**Gaziantep**	**0.76**	**40**	*e*Pg	**Pn**	**19 45 59.3**	**-0.6**
GAZ				*e*Sg	**Sb**	**19 46 09.5**	**+0.7**
AYKD	**Aykdinkavak**	**0.83**	**12**	*i* P	**Pg**	**19 45 58.0**	**-0.4**
AYKD				*i* S	**Sg**	**19 46 09.4**	**+0.2**
ARNB	**Al Arnab**	**0.89**	**215**	*e*P	**Pb**	**19 46 01.6**	**+1.1**
ARNB				*e*S	**Sg**	**19 46 13.2**	**+2.1**
ARNB				AML	AML	19 46 17.9	
	comp=E,50nm,0.8s						
ARNB				AML	AML	19 46 18.4	
	comp=N,26nm,0.2s						
ARNB				AML	AML	19 46 18.6	
	comp=Z,35nm,0.2s						
ARNB	**Al Arnab**	**0.89**	**215**	*e*P	**Pb**	**19 46 01.6**	**+1.1**
	SNR=75						
ARNB				*e*S	**Sg**	**19 46 13.2**	**+2.1**
	comp=Z,35nm,0.2s,SNR=59						
KMRS	**Kahramanmaras**	**0.94**	**15**	*e*PG	**Pb**	**19 46 01.0**	**-0.2**
KMRS				*e*SG	**Sg**	**19 46 12.7**	**+0.1**
KMRS	**Kahramanmaras**	**0.94**	**15**	*e*Pg	**Pb**	**19 46 01.0**	**-0.2**
KMRS				*e*Sg	**Sg**	**19 46 12.7**	**+0.1**
KRTS	**Karatas**	**0.98**	**269**	*e*PG	Pn	19 46 07.1	+4.2
KRTS	**Karatas**	**0.98**	**269**	*e*Pg	Pn	19 46 07.1	+4.2
KOZT	**Kozan**	**1.08**	**325**	*e*PG	**Pn**	**19 46 04.7**	**+0.4**
KOZT				*e*SG	**Sb**	**19 46 18.1**	**+0.2**
KOZT	**Kozan**	**1.08**	**325**	*e*Pg	**Pn**	**19 46 04.7**	**+0.4**
KOZT				*e*Sg	**Sb**	**19 46 18.2**	**+0.2**
GZT	**Gaziantep**	**1.08**	**45**	*i* P	**Pg**	**19 46 02.9**	**-0.2**
GZT				*i* S	**Sb**	**19 46 18.1**	**-0.1**
SLMH	**Al Salmeh**	**1.14**	**109**	*e*P	**Pg**	**19 46 04.4**	**+0.2**
SLMH				*e*S	**Sg**	**19 46 18.8**	**-0.2**
SLMH				AML	AML	19 46 22.4	
	comp=Z,49nm,0.4s						
SLMH				AML	AML	19 46 25.2	
	comp=E,55nm,0.5s						
SLMH				AML	AML	19 46 26.5	
	comp=N,25nm,0.5s						
URFA	**Urfa**	**1.97**	**64**	*e*PN	**Pg**	**19 46 21.0**	**+0.8**
URFA	**Urfa**	**1.97**	**64**	*e*Pn	**Pg**	**19 46 21.0**	**+0.8**
HAWK	**Haweek**	**2.08**	**184**	*e*P	**Pn**	**19 46 18.8**	**+0.7**
HAWK				*e*S	**Sn**	**19 46 43.1**	**-1.3**
HAWK				AML	AML	19 46 50.5	
	comp=N,9.6nm,0.4s						
HAWK				AML	AML	19 46 52.1	
	comp=Z,8.2nm,0.4s						
HAWK				AML	AML	19 46 54.6	
	comp=E,5.3nm,0.7s						
HAWK	**Haweek**	**2.08**	**184**	*e*P	**Pn**	**19 46 18.8**	**+0.7**
	SNR=45						
HAWK				*e*S	**Sn**	**19 46 43.1**	**-1.3**
	comp=E,5.3nm,0.7s,SNR=40						
DARE	**Darende-Malaty**	**2.09**	**19**	*e*PN	**Pb**	**19 46 21.2**	**+0.3**
DARE	**Darende-Malaty**	**2.09**	**19**	*e*Pn	**Pb**	**19 46 21.3**	**+0.3**
BNN	**Bunyan**	**2.33**	**345**	*e*PN	**Pb**	**19 46 24.5**	**-0.5**
BNN	**Bunyan**	**2.33**	**345**	*e*Pn	**Pb**	**19 46 24.5**	**-0.5**

*THE **02** 19:49:56.2, 37°80N×21°43E, h15km±1km, ML1.9/2, Error ellipse: s-maj=2.3km s-min=1.5km az=288.0*
*CSEM **02** 19:49:56.4±0.3, 37°81N×21°46E, h2km, MD3.0, Error ellipse: s-maj=6.1km s-min=4.2km az=91.0*
*ISCJB **02** 19:49:57.0±0.5, 37°86N±0°02×21°48E±0°04, h20km±4km, Error ellipse: s-maj=5.3km s-min=3.8km az=179.0*
*ATH **02** 19:49:57.0, 37°84N×21°46E, h18km±1km, MD3.0/19*
ISC 02 19:49:56.8±1.0, **37°84N**±0°02×**21°47E**±0°03, **h12**km±8km, **n56**, σ**0s80**/91, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.22**	**360**	P	**Pg**	**19 50 01.8**	**+0.2**
RLS				S	**Sb**	**19 50 06.2**	**+1.4**
RLS	**Riolos of Patr**	**0.22**	**360**	*e*PB	**Pg**	**19 50 01.8**	**+0.2**
RLS				*e*SB	**Sb**	**19 50 06.2**	**+1.4**
RLS	**Riolos of Patr**	**0.22**	**360**	P	**Pg**	**19 50 01.8**	**+0.2**
RLS				S	**Sb**	**19 50 06.2**	**+1.4**
AMT	**Artemida-Makis**	**0.36**	**148**	P	**Pb**	**19 50 04.0**	**-1.0**
AMT	**Artemida-Makis**	**0.36**	**148**	*e*PB	**Pb**	**19 50 04.1**	**-1.0**
AMT				*e*SB	**Sb**	**19 50 10.4**	**-0.2**
AMT	**Artemida-Makis**	**0.36**	**148**	P	**Pb**	**19 50 04.0**	**-1.0**
UPR	**University Cam**	**0.51**	**29**	P	**Pb**	**19 50 07.3**	**-0.4**
UPR	**University Cam**	**0.51**	**29**	*e*PN	**Pb**	**19 50 07.9**	**+0.2**
UPR				*e*SN	**Sb**	**19 50 15.1**	**-0.1**
UPR	**University Cam**	**0.51**	**29**	P	**Pb**	**19 50 07.3**	**-0.4**
UPR	**University Cam**	**0.51**	**29**	*e*Pn	**Pb**	**19 50 07.9**	**+0.2**
UPR				*e*Sn	**Sb**	**19 50 15.1**	**-0.1**
LAKA	**Lakka**	**0.57**	**45**	P	**Pg**	**19 50 07.8**	**-0.2**
LAKA				S	**Sb**	**19 50 17.4**	**+0.6**
LAKA	**Lakka**	**0.57**	**45**	*e*PN	**Pg**	**19 50 07.7**	**-0.2**
LAKA				*e*SN	**Sb**	**19 50 17.4**	**+0.6**
LAKA	**Lakka**	**0.57**	**45**	P	**Pg**	**19 50 07.8**	**-0.2**
LAKA				S	**Sb**	**19 50 17.4**	**+0.6**
KLV	**Kalavryta, Ach**	**0.58**	**69**	*e*PN	**Pg**	**19 50 07.5**	**-0.6**
KLV				*e*SN	**Sg**	**19 50 13.4**	**-2.4**
KLV	**Kalavryta, Ach**	**0.58**	**69**	*e*Pb	**Pg**	**19 50 07.5**	**-0.6**
KLV				*e*Sb	**Sg**	**19 50 13.4**	**-2.4**
PSA1	**Psathopyrgos**	**0.59**	**34**	*e*PN	**Pg**	**19 50 08.1**	**-0.2**
PSA1				*e*SN	**Sb**	**19 50 17.3**	**0.0**
KFL	**Anninata**	**0.60**	**297**	P	**Pg**	**19 50 08.0**	**-0.6**
KFL	**Anninata**	**0.60**	**297**	P	**Pg**	**19 50 08.0**	**-0.6**
EFP	**Efpalio**	**0.69**	**30**	P	**Pg**	**19 50 09.3**	**-0.8**
EFP				S	**Sn**	**19 50 21.8**	**-1.0**
EFP	**Efpalio**	**0.69**	**30**	*e*PB	**Pg**	**19 50 09.5**	**-0.6**
EFP				*e*SN	**Sb**	**19 50 20.2**	**+0.1**
EFP	**Efpalio**	**0.69**	**30**	*e*Pb	**Pg**	**19 50 09.5**	**-0.6**
EFP				*e*Sn	**Sb**	**19 50 20.2**	**+0.1**
EFP				S	**Sn**	**19 50 21.8**	**-1.0**
GUR	**Goura**	**0.70**	**81**	P	**Pg**	**19 50 09.7**	**-0.7**
GUR	**Goura**	**0.70**	**81**	*e*PB	**Pg**	**19 50 09.7**	**-0.7**
GUR				*e*SN	**Sb**	**19 50 20.5**	**-0.1**
GUR	**Goura**	**0.70**	**81**	P	**Pg**	**19 50 09.7**	**-0.7**
GUR				*e*Sn	**Sb**	**19 50 20.5**	**-0.1**
TRIZ	**Trizonia**	**0.71**	**42**	P	**Pg**	**19 50 10.0**	**-0.6**
TRIZ				S	**Sb**	**19 50 21.9**	**+1.0**
TRIZ	**Trizonia**	**0.71**	**42**	*e*PB	**Pg**	**19 50 10.0**	**-0.6**
TRIZ				*e*SN	**Sb**	**19 50 20.7**	**-0.2**
TRIZ	**Trizonia**	**0.71**	**42**	P	**Pg**	**19 50 10.0**	**-0.6**
TRIZ				*e*Sn	**Sb**	**19 50 20.7**	**-0.2**
TRIZ				S	**Sb**	**19 50 21.9**	**+1.0**
ITM	**Ithomi**	**0.75**	**151**	*e*PN	**Pb**	**19 50 11.5**	**-0.2**
ITM	**Ithomi**	**0.75**	**151**	*e*Pn	**Pb**	**19 50 11.5**	**-0.2**
KALE	**Kalithea**	**0.77**	**43**	P	**Pg**	**19 50 11.2**	**-0.5**
KALE	**Kalithea**	**0.77**	**43**	*e*PB	**Pg**	**19 50 11.0**	**-0.7**
KALE				*e*SN	**Sb**	**19 50 23.1**	**+0.6**
KALE	**Kalithea**	**0.77**	**43**	P	**Pg**	**19 50 11.2**	**-0.5**
KALE				*e*Sn	**Sb**	**19 50 23.1**	**+0.6**
VLS	**Valsamata**	**0.77**	**296**	*e*PN	**Pb**	**19 50 11.9**	**-0.3**
VLS				*e*SN	**Sb**	**19 50 23.1**	**+0.4**
VLX	**Vlachokerasia**	**0.86**	**122**	*e*PN	**Pb**	**19 50 13.6**	**-0.1**
VLX				*e*SN	**Sn**	**19 50 26.7**	**-0.6**
VLX	**Vlachokerasia**	**0.86**	**122**	*e*Pn	**Pb**	**19 50 13.6**	**-0.1**
VLX				*e*Sn	**Sn**	**19 50 26.7**	**-0.6**
PYL	**PYLOS**	**0.96**	**167**	*e*PB	**Pb**	**19 50 14.6**	**-0.8**
PYL				*e*SN	**Sn**	**19 50 29.3**	**-0.4**
PYL	**PYLOS**	**0.96**	**167**	*e*Pb	**Pb**	**19 50 14.6**	**-0.8**
PYL				*e*Sn	**Sn**	**19 50 29.3**	**-0.4**
DSF	**Desfina**	**1.01**	**55**	P	**Pb**	**19 50 15.0**	**-1.3**
DSF				S	**Sn**	**19 50 32.0**	**+0.9**
DSF	**Desfina**	**1.01**	**55**	P	**Pb**	**19 50 15.0**	**-1.3**
EVR	**Evrytania**	**1.11**	**14**	*e*PB	**Pb**	**19 50 17.2**	**-0.8**
EVR				*e*SN	**Sg**	**19 50 33.0**	**+0.2**
EVR	**Evrytania**	**1.11**	**14**	*e*Pb	**Pb**	**19 50 17.2**	**-0.8**
LTK	**Loutraki**	**1.20**	**81**	*e*PN	**Pg**	**19 50 19.7**	**-0.2**
LTK	**Loutraki**	**1.20**	**81**	*e*Pn	**Pg**	**19 50 19.7**	**-0.2**
DYR	**Agios Nikonas**	**1.27**	**147**	*e*PN	**Pg**	**19 50 21.8**	**+0.5**
DYR	**Agios Nikonas**	**1.27**	**147**	*e*Pn	**Pg**	**19 50 21.8**	**+0.5**
AGG	**Agios Georgios**	**1.36**	**29**	*e*PN	**Pg**	**19 50 23.0**	**0.0**
AGG				*e*SN	**Sg**	**19 50 41.6**	**+0.8**
AGG	**Agios Georgios**	**1.36**	**29**	*e*Pn	**Pg**	**19 50 23.0**	**0.0**
AGG				*e*Sn	**Sg**	**19 50 41.6**	**+0.8**
DID	**Didima**	**1.44**	**103**	*e*PN	**Pg**	**19 50 25.0**	**+0.5**
DID				*e*SN	**Sg**	**19 50 45.2**	**+2.0**
DID	**Didima**	**1.44**	**103**	*e*Pn	**Pg**	**19 50 25.0**	**+0.5**
DID				*e*Sn	**Sg**	**19 50 45.2**	**+2.0**
LKR	**Lokris**	**1.46**	**55**	*e*PN	**Pg**	**19 50 24.4**	**-0.3**
LKR	**Lokris**	**1.46**	**55**	*e*Pn	**Pg**	**19 50 24.4**	**-0.3**
VLI	**Veliai**	**1.62**	**133**	*e*PN	**Pg**	**19 50 27.0**	**-0.8**
VLI	**Veliai**	**1.62**	**133**	*e*Pn	**Pg**	**19 50 27.0**	**-0.8**
THL	**Klokotos Trika**	**1.78**	**14**	*e*PN	**Pb**	**19 50 29.4**	**+0.1**
THL	**Klokotos Trika**	**1.78**	**14**	*e*Pn	**Pb**	**19 50 29.4**	**+0.1**
AOS	**Alonnisos**	**2.31**	**54**	*e*PB	**Pn**	**19 50 36.1**	**+1.4**

*IDC **02** 20:00:48.2±2.2, 43°35N×105°29W, h0km, mb3.7/2, mb1 3.7/5, mb1mx3.4/26, mbtmp3.5/5, ML3.3/3, MS2.9/4, Ms1 2.9/4, ms1mx2.6/50, Error ellipse: s-maj=51.5km s-min=8.4km az=154.0*
*ISCJB **02** 20:00:49.4±0.2, 43°62N±0°02×105°25W±0°03, h0km, mb4.0/2, MS2.9/2, Error ellipse: s-maj=2.9km s-min=2.4km az=39.7*
*NEIC **02** 20:00:50.2±0.4, 43°66N×105°19W, h0km, ML3.1, Error ellipse: s-maj=5.9km s-min=5.2km az=150.0, Suspected Mining explosion.*
NEIC 75 km [45 miles] SSE of Gillette.
ISC 02 20:00:50.1±0.6, **43°62N**±0°02×**105°26W**±0°02, **h0**km, **n169**, σ**0s98**/142, **8C-11D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
J23A	**Dilts Ranch, B**	**0.30**	**225**	P	**Pg**	**20 00 55.9**	**0.0**
	baz=0.4						
J23A	**Dilts Ranch, B**	**0.30**	**225**	P	Pg	20 00 36.3	-20
	baz=0.3,SNR=47						
J23A	**Dilts Ranch, B**	**0.30**	**225**	P	**Pg**	**20 00 55.9**	**0.0**
	baz=0.4						
I23A	**Meade Ranch, G**	**0.37**	**337**	⇓P	Pg	20 00 35.5	-22
	baz=0.3,SNR=18						
I24A	**Kuemmerle Ranc**	**0.52**	**62**	P	**Pg**	**20 01 00.3**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=0.5						
I24A	Kuemmerle Ranc	0.52	62	⇓P	Pg	20 00 39.5	-21
	baz=0.5,SNR=37						
I24A	Kuemmerle Ranc	0.52	62	P	Pg	20 01 00.3	+0.2
	baz=0.5						
J24A	Dixon Ranch, L	0.52	123	P	Pg	20 00 59.6	-0.5
	baz=0.5						
J24A				S	Sg	20 01 06.9	+0.1
	baz=0.5						
J24A	Dixon Ranch, L	0.52	123	P	Pg	20 00 40.8	-19
	baz=0.6,SNR=17						
J24A	Dixon Ranch, L	0.52	123	P	Pg	20 00 59.6	-0.5
	baz=0.5						
J24A				S	Sg	20 01 06.9	+0.1
	baz=0.5						
J22A	Midwest	0.91	257	P	Pg	20 01 07.1	-0.5
	baz=1.0						
J22A	Midwest	0.91	257	⇓P	Pg	20 00 45.9	-22
	baz=0.9						
J22A	Midwest	0.91	257	P	Pg	20 01 07.1	-0.5
	baz=1.0						
I22A	9 Mile Ranch,	0.93	288	P	Pg	20 01 08.2	+0.3
	baz=1.0						
I22A	9 Mile Ranch,	0.93	288	⇓P	Pg	20 00 45.8	-22
	baz=0.9,SNR=74						
I22A	9 Mile Ranch,	0.93	288	P	Pg	20 01 08.2	+0.3
	baz=1.0						
H23A	Clabaugh Cattl	0.95	354	⇓P	Pg	20 00 45.6	-23
	baz=0.9						
RSSD	Black Hills	1.02	60	ePg	Pg	20 01 09.1	-0.5
H24A	Dirks Ranch, A	1.24	24	P	Pg	20 01 13.1	-0.7
	baz=1.2						
H24A	Dirks Ranch, A	1.24	24	⇑P	Pg	20 00 50.9	-23
	baz=1.2,SNR=43						
H24A	Dirks Ranch, A	1.24	24	P	Pg	20 01 13.1	-0.7
	baz=1.2						
H22A	Clearmont	1.25	321	P	Pg	20 00 51.2	-23
	baz=1.2,SNR=26						
H22A				⇓Sb	Sg	20 01 08.3	-22
	baz=1.2						
K25A	Mack Ranch, Ha	1.43	134	P	Pn	20 01 16.7	-0.7
	baz=1.4						
K25A				S	Sg	20 01 36.0	0.0
	baz=1.4						
K25A	Mack Ranch, Ha	1.43	134	⇑Pb	Pn	20 00 58.2	-19
	baz=1.5,SNR=9.2						
K25A	Mack Ranch, Ha	1.43	134	P	Pn	20 01 16.7	-0.7
	baz=1.4						
K25A				S	Sg	20 01 36.0	0.0
	baz=1.4						
I21A	Big Trails, Te	1.49	278	P	Pn	20 01 17.1	-1.1
	baz=1.5						
I21A	Big Trails, Te	1.49	278	⇓P	Pn	20 00 54.9	-23
	baz=1.4,SNR=40						
I21A	Big Trails, Te	1.49	278	P	Pn	20 01 17.1	-1.1
	baz=1.5						
L23A	Garrett	1.54	192	P	Pn	20 01 17.1	-1.9
	baz=1.6						
L23A	Garrett	1.54	192	⇑P	Pn	20 00 58.5	-21
	baz=1.6,SNR=32						
L23A	Garrett	1.54	192	P	Pn	20 01 17.1	-1.9
	baz=1.6						
G23A	Biddle	1.58	357	Pb	Pb	20 01 19.9	-0.4
	baz=1.5						
G23A	Biddle	1.58	357	⇓Pb	Pn	20 00 57.7	-22
	baz=1.5,SNR=9.4						
G23A	Biddle	1.58	357	Pb	Pb	20 01 19.9	-0.4
	baz=1.5						
L24A	Wheatland	1.59	171	P	Pn	20 01 18.2	-1.4
	baz=1.6						
L24A	Wheatland	1.59	171	⇑P	Pn	20 00 59.6	-20
	baz=1.7,SNR=7.1						
L24A	Wheatland	1.59	171	P	Pn	20 01 18.2	-1.4
	baz=1.6						
J21A	Lysite	1.61	261	P	Pn	20 01 19.0	-1.0
	baz=1.7						
J21A	Lysite	1.61	261	⇑P	Pn	20 00 57.8	-22
	baz=1.6,SNR=12						
J21A	Lysite	1.61	261	P	Pn	20 01 19.0	-1.0
	baz=1.7						
H21A	Big Horn, Sher	1.63	309	Pg	Pn	20 01 20.7	+0.5
	baz=1.6						
H21A	Big Horn, Sher	1.63	309	⇑P	Pn	20 00 58.0	-22
	baz=1.5,SNR=11						
H21A	Big Horn, Sher	1.63	309	Pg	Pn	20 01 20.7	+0.5
	baz=1.6						
L25A	Engebretsen Ra	1.75	147	Pb	Pn	20 01 21.8	0.0
	baz=1.8						
L25A	Engebretsen Ra	1.75	147	Pb	Pn	20 01 03.2	-19
	baz=1.8						
L25A	Engebretsen Ra	1.75	147	Pb	Pn	20 01 21.8	0.0
	baz=1.8						
K21A	Alcova	1.76	237	Pb	Pn	20 01 21.6	-0.5
	baz=1.8						
K21A				Sb	Sb	20 01 46.6	+0.5
	baz=1.8						
K21A	Alcova	1.76	237	Pb	Pn	20 01 01.5	-21
	baz=1.8						
K21A	Alcova	1.76	237	Pb	Pn	20 01 21.6	-0.5
	baz=1.8						
K21A				Sb	Sb	20 01 46.6	+0.5
	baz=1.8						
G22A	Birney	1.76	336	Pb	Pn	20 01 22.6	+0.6
	baz=1.7						
G22A	Birney	1.76	336	⇓Pb	Pn	20 01 00.2	-22
	baz=1.7,SNR=11						
G22A	Birney	1.76	336	Pb	Pn	20 01 22.6	+0.6
	baz=1.7						
K26A	Motz Farm, Whi	1.78	120	Pb	Pn	20 01 22.2	+0.1
	baz=1.8						
K26A				Sb	Sb	20 01 46.6	+0.1
	baz=1.8						
K26A	Motz Farm, Whi	1.78	120	Pb	Pn	20 01 22.2	+0.1
	baz=1.8						
K26A				Sb	Sb	20 01 46.6	+0.1
	baz=1.8						
L22A	Ellis Ranch, M	1.81	209	P	Pn	20 01 22.0	-0.7
	baz=1.9						
L22A				Sb	Sn	20 01 47.6	+1.2
	baz=1.9						
L22A	Ellis Ranch, M	1.81	209	⇑P	Pn	20 01 02.9	-20
	baz=1.9,SNR=16						
L22A	Ellis Ranch, M	1.81	209	P	Pn	20 01 22.0	-0.7
	baz=1.9						
L22A				Sb	Sn	20 01 47.6	+1.2
	baz=1.9						
G24A	Alzada	1.81	19	Pb	Pb	20 01 23.5	-0.7
	baz=1.8						
G24A	Alzada	1.81	19	Pb	Pn	20 01 01.3	-21
	baz=1.8						
G24A	Alzada	1.81	19	Pb	Pb	20 01 23.5	-0.7
	baz=1.8						
J20A	Shoshoni	2.07	264	Pb	Pn	20 01 27.8	+1.5
	baz=2.1						
J20A	Shoshoni	2.07	264	Pb	Pn	20 01 07.0	-19
	baz=2.0						
J20A	Shoshoni	2.07	264	Pb	Pn	20 01 27.8	+1.5
	baz=2.1						
F23A	Volborg	2.10	357	P	Pn	20 01 26.8	+0.2
	baz=2.1						
F23A				Sb	Sg	20 01 57.5	-0.2
	baz=2.1						
F23A	Volborg	2.10	357	⇑P	Pn	20 01 04.7	-22
	baz=2.0,SNR=18						
F23A	Volborg	2.10	357	P	Pn	20 01 26.8	+0.2
	baz=2.1						
F23A				Sb	Sg	20 01 57.5	-0.2
	baz=2.1						
I20A	Worland	2.10	280	Pb	Pn	20 01 27.7	+1.0
	baz=2.1						
I20A				Sb	Sb	20 01 56.4	+0.5
	baz=2.1						
I20A	Worland	2.10	280	⇓Pb	Pn	20 01 06.0	-21
	baz=2.0,SNR=21						
I20A	Worland	2.10	280	Pb	Pn	20 01 27.7	+1.0
	baz=2.1						
I20A				Sb	Sb	20 01 56.4	+0.5
	baz=2.1						
G21A	Lodge Grass	2.13	320	Pb	Pn	20 01 27.7	+0.7
	baz=2.1						
G21A	Lodge Grass	2.13	320	Pb	Pn	20 01 27.7	+0.7
	baz=2.1						
H20A	Greybull	2.16	295	Sb	Sb	20 01 57.7	+0.3
	baz=2.2						
H20A	Greybull	2.16	295	Sb	Sb	20 01 57.7	+0.3
	baz=2.2						
M24A	Cheyenne	2.17	171	Pb	Pn	20 01 28.1	+0.4
	baz=2.2						
M24A	Cheyenne	2.17	171	Pb	Pn	20 01 10.9	-17
	baz=2.3						
M24A	Cheyenne	2.17	171	Pb	Pn	20 01 28.1	+0.4
	baz=2.2						
M23A	Laramie	2.18	189	Pb	Pn	20 01 28.3	+0.5
	baz=2.2						
M23A	Laramie	2.18	189	Pb	Pn	20 01 28.3	+0.5
	baz=2.2						
L26A	Underwood Farm	2.25	134	Pb	Pn	20 01 30.3	+1.6
	baz=2.2						
L26A	Underwood Farm	2.25	134	Pb	Pn	20 01 30.3	+1.6
	baz=2.2						
L21A	Rawlins	2.27	224	Pb	Pn	20 01 30.1	+1.0
	baz=2.3						
L21A	Rawlins	2.27	224	Pb	Pn	20 01 10.3	-19
	baz=2.3						
L21A	Rawlins	2.27	224	Pb	Pn	20 01 30.1	+1.0
	baz=2.3						
F22A	Rosebud	2.27	342	Sb	Sg	20 02 02.6	-0.6
	baz=2.2						
F22A	Rosebud	2.27	342	⇓Pb	Pn	20 01 08.1	-21
	baz=2.2,SNR=8.2						
F22A	Rosebud	2.27	342	Sb	Sg	20 02 02.6	-0.6
	baz=2.2						
PHWY	Pilot Hill	2.32	184	ePn	Pn	20 01 29.4	-0.4
M25A	Palm-Egli Farm	2.36	157	P	Pn	20 01 30.7	+0.5
	baz=2.4						
M25A	Palm-Egli Farm	2.36	157	P	Pn	20 01 30.7	+0.5
	baz=2.4						
K27A	Flueckinger Fa	2.39	111	P	Pn	20 01 31.9	+1.2
	baz=2.4						
K27A	Flueckinger Fa	2.39	111	P	Pn	20 01 31.9	+1.2
	baz=2.4						
M22A	Cedar Creek Ra	2.42	205	Pb	Pn	20 01 33.0	+1.7
	baz=2.5						
M22A	Cedar Creek Ra	2.42	205	P	Pn	20 01 12.8	-19
	baz=2.5						
M22A	Cedar Creek Ra	2.42	205	Pb	Pn	20 01 33.0	+1.7
	baz=2.5						
K20A	Yellowstone Ra	2.45	248	Sb	Sb	20 02 05.9	-0.1
	baz=2.5						
K20A	Yellowstone Ra	2.45	248	Pb	Pn	20 01 13.0	-19
	baz=2.4						
K20A	Yellowstone Ra	2.45	248	Sb	Sb	20 02 05.9	-0.1
	baz=2.5						
M21A	Separation Pea	2.54	218	P	Pn	20 01 34.0	+1.2
	baz=2.6						
M21A	Separation Pea	2.54	218	P	Pn	20 01 14.2	-19
	baz=2.6						
M21A	Separation Pea	2.54	218	P	Pn	20 01 34.0	+1.2
	baz=2.6						
G20A	Bridger	2.65	308	P	Pn	20 01 34.2	-0.1
	baz=2.7						
G20A	Bridger	2.65	308	P	Pn	20 01 11.8	-23
	baz=2.6						
G20A	Bridger	2.65	308	P	Pn	20 01 34.2	-0.1
	baz=2.7						
I19A	Meeteetse	2.73	280	P	Pn	20 01 36.6	+1.1
	baz=2.8						
I19A	Meeteetse	2.73	280	P	Pn	20 01 15.0	-21
	baz=2.7						
I19A	Meeteetse	2.73	280	P	Pn	20 01 36.6	+1.1
	baz=2.8						
N23A	Red Feather La	2.77	191	P	Pn	20 01 36.7	+0.7
	baz=2.8						
N23A	Red Feather La	2.77	191	P	Pn	20 01 36.7	+0.7
	baz=2.8						
J19A	Crowheart	2.79	264	Pb	Pn	20 01 18.6	-18
	baz=2.7						
E22A	Miles City	2.86	350	P	Pn	20 01 36.5	-0.6
	baz=2.8						
E22A	Miles City	2.86	350	P	Pn	20 01 36.5	-0.6
	baz=2.8						
H19A	Powell	2.88	293	P	Pn	20 01 38.3	+0.9
	baz=2.9						
H19A	Powell	2.88	293	P	Pn	20 01 38.3	+0.9
	baz=2.9						
N22A	Wattenberg Ran	2.95	198	Pb	Pb	20 01 42.0	-1.7
	baz=3.0						
N22A	Wattenberg Ran	2.95	198	Pb	Pb	20 01 42.0	-1.7
	baz=3.0						
F20A	Billings	3.00	318	P	Pn	20 01 38.8	-0.2
	baz=3.0						
F20A	Billings	3.00	318	P	Pn	20 01 38.8	-0.2
	baz=3.0						
M20A	Sweetwater, Wa	3.03	226	Pb	Pb	20 01 43.4	-1.7
	baz=3.1						
M20A	Sweetwater, Wa	3.03	226	Pb	Pb	20 01 43.4	-1.7
	baz=3.1						
RLMT	Red Lodge	3.24	299	ePn	Pn	20 01 42.6	+0.2
PDAR	Pinedale Array	3.26	256	Pn	Pn	20 01 42.9	+0.2
PDAR				Pg	Pb	20 01 47.8	-1.1
PDAR				Lg	Lg	20 02 29.3	
PDAR	Pinedale Array	3.26	256	Pn	Pn	20 01 42.9	+0.2
	3.1nm,0.3s,baz=79,slow=18,SNR=28						
PDAR				Pg	Pb	20 01 47.8	-1.1
	6.6nm,0.3s,baz=68,slow=20,SNR=31						
PDAR				Lg	Lg	20 02 29.3	
	10nm,0.3s,baz=81,slow=24,SNR=6.1						
OGNE	Ogallala	3.59	137	ePn	Pn	20 01 47.6	+0.5
GCMT	Greycliff	3.82	306	ePn	Pn	20 01 50.5	+0.2
LKWY	Lake	3.82	286	ePn	Pn	20 01 53.6	+3.2
ISCO	Idaho Springs	3.83	184	ePn	Pn	20 01 51.2	+0.7
LOHW	Long Hollow	3.88	272	ePn	Pb	20 01 57.7	-1.8
MOOW	Moose Ponds	3.98	274	ePn	Pn	20 01 54.3	+1.7
SNOW	Snow King Moun	4.00	270	ePn	Pn	20 01 57.0	+4.2
REDW	Red Top Meadow	4.08	268	Pn	Pn	20 01 57.6	+3.6
IMW	Indian Meadow	4.12	276	ePn	Pn	20 01 56.5	+1.9
TPAW	Teton Pass	4.14	270	ePn	Pn	20 01 55.8	+1.0
YMR	Madison River	4.24	286	ePn	Pn	20 01 59.9	+3.8
DCID1	Drake Creek	4.30	272	ePn	Pn	20 01 57.2	+0.2
AHID	Auburn Hatcher	4.36	261	ePn	Pn	20 01 57.1	-0.6
RRI2	Red Ridge	4.42	269	Pn	Pn	20 02 01.3	+2.6
QLMT	Earthquake Lak	4.60	287	Pn	Pb	20 02 09.6	-2.1
SMCO	Snowmass	4.62	197	ePn	Pb	20 02 12.3	+0.1
BOZ	Bozeman (W)	4.98	296	ePn	Pn	20 02 06.2	0.0
	4.6nm,0.4s						
HWUT	Hardware Ranch	5.07	249	ePn	Pn	20 02 07.8	+0.2
	11nm,0.5s						
EGMT	Eagleton	5.41	326	ePn	Pn	20 02 12.7	+0.6
	14nm,0.6s						
DAU	Daniels Canyon	5.50	236	Pn	Pn	20 02 18.4	+4.9
	11nm,0.5s						
JLU	Jordanelle	5.50	239	Pn	Pn	20 02 14.2	+0.7
	6.8nm,0.5s						
DLMT	Dillon	5.53	291	ePg	Pg	20 02 35.6	-0.4
	9.5nm,0.9s						
LRM	Limekiln Ridge	5.58	296	ePn	Pn	20 02 14.8	+0.3
	22nm,0.4s						
HRY	Holter Researc	5.58	306	Pn	Pn	20 02 10.8	-3.6
	3.7nm,0.3s						
MCMT	McKenzie Canyo	5.59	285	Pn	Pn	20 02 12.6	-2.0
	1.7nm,0.4s						
PV04	Paradox Valley	5.90	209	ePn	Pn	20 02 20.6	+1.6
SRU	San Rafael	6.00	223	ePn	Pn	20 02 21.5	+1.2
	11nm,0.5s						
PV01	Paradox Valley	6.03	206	Pn	Pn	20 02 21.6	+0.9
	445nm,0.6s						
CHMT	Chamberlain Mo	6.53	303	ePn	Pn	20 02 29.0	+1.4
	1.7nm,0.4s						
DUG	Dugway	6.59	241	ePn	Pn	20 02 27.7	-0.6
	3.8nm,0.8s						
HLID	Hailey	6.65	273	Pn	Pn	20 02 31.4	+2.2
	1.9nm,0.5s						
MVCO	Mesa Verde	6.86	202	Pn	Pn	20 02 37.2	+5.0
	5.3nm,0.6s						
SWMT	Swartz Lake	7.26	305	ePn	Pn	20 02 37.2	-0.3
MSU	Marysvale	7.30	228	Pn	Pn	20 02 40.0	+1.8
	3.6nm,0.5s						
MVU	Marysvale	7.33	228	Pn	Pn	20 02 39.7	+1.2
	4.9nm,0.4s						
AGMN	Agassiz Nation	8.04	51	Pn	Pn	20 02 44.8	-3.4
ULM	Lac du Bonnet	9.22	41	Pn	Pn	20 03 04.4	+0.1
ULM				Lg	Lg	20 05 37.9	
ULM	Lac du Bonnet	9.22	41	Pn	Pn	20 03 04.4	+0.1
	1.2nm,0.3s,baz=223,slow=11,SNR=4.2						
ULM				Lg	Lg	20 05 37.9	
	0.8nm,0.3s,baz=145,slow=19,SNR=3.1						
ULM				LR	LR	20 07 02.4	
	comp=Z,80nm,20.1s,baz=323,slow=40						
TXAR	Lajitas Array	14.31	174	LR	LR	20 09 19.2	
	comp=Z,34nm,21.6s,baz=0.0,slow=36						
YKA	Yellowknife Ar	19.68	347	P	P	20 05 20.2	-0.3
YKA	Yellowknife Ar	19.68	347	P	P	20 05 20.2	-0.3
	0.1nm,0.3s,baz=155,slow=12,SNR=4.6						
DLBC	Dease Lake	21.33	323	LR	LR	20 15 18.3	
	comp=Z,27nm,19.7s,baz=102,slow=40						
SCHQ	Schefferville	27.14	52	LR	LR	20 17 28.0	
	comp=Z,51nm,22.0s,baz=88,slow=37						
ARCES	ARCESS Array B	61.53	18	P	P	20 11 07.3	-1.0
ARCES	ARCESS Array B	61.53	18	P	P	20 11 07.3	-1.0
	0.8nm,0.7s,baz=328,slow=6.6,SNR=5.1						
FINES	FINESS Array B	68.14	23	P	P	20 11 52.1	+0.6
FINES	FINESS Array B	68.14	23	P	P	20 11 52.1	+0.6
	0.7nm,0.9s,baz=318,slow=5.4,SNR=6.1						

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*ROM **02** 20:15:00.7±0.1, 42.°29N×13.°49E, h9km, Ml3.2/12, Error ellipse: s-maj=1.1km s-min=0.8km az=62.0*
*LDG **02** 20:15:01.3±0.2, 42.°24N×13.°48E, h2km, Ml2.8/6, Error ellipse: s-maj=6.4km s-min=3.8km az=39.0*
*CSEM **02** 20:15:01.3±0.1, 42.°27N×13.°43E, h2km, ML3.6/7, Error ellipse: s-maj=3.6km s-min=2.8km az=54.0*
*ISCJB **02** 20:15:01.0±0.2, 42.°28N±0.°02×13.°44E±0.°02, h8km±2km, mb3.1/2, Error ellipse: s-maj=3.2km s-min=2.3km az=144.6*
*IDC **02** 20:15:02.9±1.4, 42.°39N×13.°55E, h0km, mb3.0/3, mb1 3.1/6, mb1mx3.0/27, mbtmp3.1/6, ML2.9/3, Error ellipse: s-maj=37.3km s-min=14.9km az=95.0*
*BEO **02** 20:15:04.7±1.0, 42.°37N×13.°45E, h0km, ML3.3/7*
ISC 02 20:15:01.6±0.8, **42.°29N**±0.°02×**13.°45E**±0.°02, **h8**km±5km, **n113**, σ**1.s74**/154, **1D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	332	Pg	Pg	20 15 03.6	-0.1
AQU				Sg	Sg	20 15 06.1	+0.9
	50μm,1.2s						
AQU	L'Aquila	0.07	332	Pg	Pg	20 15 03.6	-0.1
AQU				Sg	Sg	20 15 06.1	+0.9
	50μm,1.2s						
FAGN	Fagnano	0.10	102	Pg	Pg	20 15 03.3	-0.8
FAGN				Sg	Sg	20 15 04.6	-1.2
FAGN	Fagnano	0.10	102	Pg	Pg	20 15 03.3	-0.8
FAGN				Sg	Sg	20 15 04.6	-1.2
FIAM	Fiamignano	0.25	265	Pg	Pg	20 15 07.1	+0.5
FIAM				Sg	Sg	20 15 12.8	+2.9
	5μm,0.8s						
FIAM	Fiamignano	0.25	265	Pg	Pg	20 15 07.1	+0.5
CAMP	Campotosto	0.25	353	Pg	Pg	20 15 06.4	-0.2
CAMP				Sg	Sg	20 15 10.9	+0.9
CAMP	Campotosto	0.25	353	Pg	Pg	20 15 06.4	-0.2
CAMP				Sg	Sg	20 15 10.9	+0.9
PTQR	Pietraquaria	0.27	188	Pg	Pg	20 15 07.1	+0.1
PTQR				Sg	Sg	20 15 11.9	+1.3
PTQR	Pietraquaria	0.27	188	Pg	Pg	20 15 07.1	+0.1
VCEL	Villa Celiera	0.31	70	Pg	Pg	20 15 07.5	-0.3
VCEL				Sg	Sg	20 15 11.9	0.0
	6μm,0.8s						
VCEL	Villa Celiera	0.31	70	Pg	Pg	20 15 07.5	-0.3
VCEL				Sg	Sg	20 15 11.9	0.0
	6μm,0.8s						
TERO	Teramo	0.35	19	Pg	Pg	20 15 07.8	-0.8
TERO				Sg	Sg	20 15 13.3	0.0
	3μm,0.8s						
TERO	Teramo	0.35	19	Pg	Pg	20 15 07.8	-0.8
TERO				Sg	Sg	20 15 13.3	0.0
	3μm,0.8s						
LNSS	Leonessa	0.44	316	Pg	Pg	20 15 10.1	0.0
LNSS				Sg	Sb	20 15 17.9	-0.5
	3μm,0.9s						
LNSS	Leonessa	0.44	316	Pg	Pg	20 15 10.1	0.0
LNSS				Sg	Sb	20 15 17.9	-0.5
	3μm,0.9s						
VVLD	Villa Vallelon	0.44	163	Pg	Pg	20 15 09.6	-0.5
VVLD				Sg	Sb	20 15 16.5	-1.9
	2μm,0.6s						
VVLD	Villa Vallelon	0.44	163	Pg	Pg	20 15 09.6	-0.5
VVLD				Sg	Sb	20 15 16.5	-1.9
	2μm,0.6s						
INTR	Introdacqua	0.44	129	Pg	Pg	20 15 09.4	-0.7
INTR				Sg	Sg	20 15 16.8	+0.9
	4μm,0.9s						
INTR	Introdacqua	0.44	129	Pg	Pg	20 15 09.4	-0.7
INTR				Sg	Sg	20 15 16.8	+0.9
	4μm,0.9s						
CERT	Cerreto	0.48	226	Pg	Pb	20 15 11.0	-1.4
	3μm,0.8s						
CERT	Cerreto	0.48	226	Pg	Pb	20 15 11.0	-1.4
	3μm,0.8s						
GUAR	Guarcino	0.50	192	Pg	Pb	20 15 11.1	-1.7
	772nm,0.5s						
GUAR	Guarcino	0.50	192	Pg	Pb	20 15 11.1	-1.7
	772nm,0.5s						
MNS	Montasola	0.58	280	Pg	Pb	20 15 12.4	-1.6
	637nm,0.7s						
MNS	Montasola	0.58	280	Pg	Pb	20 15 12.4	-1.6
	637nm,0.7s						
MTCE	Montecelio	0.59	243	Pg	Pb	20 15 12.7	-1.5
MTCE	Montecelio	0.59	243	Pg	Pb	20 15 12.7	-1.5
LPEL	Lama dei Pelig	0.60	114	Pg	Pg	20 15 12.0	-1.1
LPEL				Sg	Sg	20 15 21.0	0.0
	2μm,0.8s						
LPEL	Lama dei Pelig	0.60	114	Pg	Pg	20 15 12.0	-1.1
LPEL				Sg	Sg	20 15 21.0	0.0
	2μm,0.8s						
NRCA	Norcia	0.60	336	Pg	Pg	20 15 12.5	-0.7
NRCA				Sg	Sb	20 15 22.0	-1.1
NRCA	Norcia	0.60	336	Pg	Pg	20 15 12.5	-0.7
NRCA				Sg	Sb	20 15 22.0	-1.1
POFI	Posta Fibreno	0.60	161	Pg	Pg	20 15 12.3	-1.0
	778nm,0.7s						
POFI	Posta Fibreno	0.60	161	Pg	Pg	20 15 12.3	-1.0
	778nm,0.7s						
SDI	San Donato	0.64	155	Pg	Pg	20 15 12.9	-1.0
SDI				Sg	Sb	20 15 23.3	-0.8
SDI	San Donato	0.64	155	Pg	Pg	20 15 12.9	-1.0
SDI				Sg	Sb	20 15 23.3	-0.8
CAFR	Castel Frentan	0.67	95	Pg	Pg	20 15 13.8	-0.7
CAFR	Castel Frentan	0.67	95	Pg	Pg	20 15 13.8	-0.7
OFFI	Offida	0.67	15	Pg	Pg	20 15 14.5	0.0
OFFI	Offida	0.67	15	Pg	Pg	20 15 14.5	0.0
CESX	Cesi	0.72	297	Pg	Pb	20 15 15.5	-0.9
CESX	Cesi	0.72	297	Pg	Pb	20 15 15.5	-0.9
GIUL	Giuliano Di Ro	0.74	191	Pg	Pg	20 15 15.0	-0.9
GIUL	Giuliano Di Ro	0.74	191	Pg	Pg	20 15 15.0	-0.9
RNI2	Rionero Sannit	0.79	138	Pg	Pg	20 15 15.6	-1.1
RNI2	Rionero Sannit	0.79	138	Pg	Pg	20 15 15.6	-1.1
FDMO	Fiordimonte	0.79	341	Pg	Pg	20 15 15.7	-1.2
FDMO				Sg	Sb	20 15 28.0	-0.6
FDMO	Fiordimonte	0.79	341	Pg	Pg	20 15 15.7	-1.2
FDMO				Sg	Sb	20 15 28.0	-0.6
CERA	Filignano	0.81	148	Pg	Pg	20 15 15.6	-1.6
CERA	Filignano	0.81	148	Pg	Pg	20 15 15.6	-1.6
CESI	CESI - Serrava	0.82	331	Pg	Pg	20 15 16.6	-0.8
CESI	CESI - Serrava	0.82	331	Pg	Pg	20 15 16.6	-0.8
GUMA	Gualdo di Mace	0.85	25	Pg	Pg	20 15 15.8	-2.2
GUMA	Gualdo di Mace	0.85	25	Pg	Pg	20 15 15.8	-2.2
MIDA	Miranda	0.88	137	Pg	Pg	20 15 16.9	-1.7
MIDA	Miranda	0.88	137	Pg	Pg	20 15 16.9	-1.7
ASSB	Assisi San Ben	0.95	323	Pg	Pg	20 15 19.2	-0.7
ASSB	Assisi San Ben	0.95	323	Pg	Pg	20 15 19.2	-0.7
CING	Cingoli	1.10	350	Pg	Pg	20 15 21.3	-1.5
CING	Cingoli	1.10	350	Pg	Pg	20 15 21.3	-1.5
NVLJ	Novalja	2.50	24	ePn	Pn	20 15 42.6	+0.1
NVLJ				Sn	Sb	20 16 17.0	-0.7
NVLJ	Novalja	2.50	24	ePn	Pn	20 15 42.6	+0.1
NVLJ				Sn	Sb	20 16 16.9	-0.7
MAIM	Mastiano	2.71	308	P	Pn	20 15 43.1	-2.3
STON	Ston	3.19	78	ePn	Pn	20 15 52.8	+0.7
STON				Sn	Sn	20 16 31.5	+1.1
STON	Ston	3.19	78	ePn	Pn	20 15 52.8	+0.7
STON				Sn	Sn	20 16 31.4	+1.1
SKDS	Skadanscina	3.28	7	i Pn	Pn	20 15 54.0	+0.6
SKDS				i Sn	Sn	20 16 33.7	+1.1
SKDS	Skadanscina	3.28	7	Pn	Pn	20 15 54.0	+0.6
SKDS				i Sn	Sn	20 16 33.7	+1.1
PGF	Pioggiola	3.30	276	eP	Pn	20 15 55.7	+2.0
PGF				eSn	Sn	20 16 30.3	-3.0
	3.0nm,0.5s						
PGF	Pioggiola	3.30	276	eP	Pn	20 15 55.7	+2.0
PGF				eSn	Sn	20 16 30.3	-3.0
	1.5nm,0.5s						
VISS	Visnje	3.65	15	i Pn	Pn	20 16 01.1	+2.7
VISS				i Sn	Sn	20 16 43.5	+1.7
VISS	Visnje	3.65	15	i Pn	Pn	20 16 01.1	+2.7
VISS				i Sn	Sn	20 16 43.5	+1.7
BLY	Banja Luka	3.66	47	ePn	Pb	20 16 03.3	-3.3

BLY	Banja Luka	3.66	47	ePn	Pb	20 16 03.3	-3.3
VOY	Vojsko	3.76	5	ePn	Pb	20 16 05.9	-2.3
VOY				e		20 16 29.3	
VOY				eSn	Sb	20 16 49.8	-4.1
VOY				e		20 17 12.9	
PDG	Podgorica	4.30	86	ePn	Pn	20 16 10.8	+3.4
PDG				eSn	Sn	20 17 01.0	+3.2
PDG	Podgorica	4.30	86	ePn	Pn	20 16 10.8	+3.4
PDG				eSn	Sn	20 17 01.0	+3.2
ABTA	Abfaltersbach	4.51	352⇓	iPn	Pn	20 16 10.5	+0.2
ABTA	Abfaltersbach	4.51	352	Pn	Pn	20 16 10.5	+0.2
BBLS	Lazići	4.64	68	ePn	Pn	20 16 14.9	+2.8
BBLS				eSn	Sn	20 17 07.8	+1.7
BBLS	Lazići	4.64	68	ePn	Pn	20 16 14.9	+2.8
BBLS				eSn	Sn	20 17 07.8	+1.7
SBF	Sospel	4.68	292	ePn	Pn	20 16 12.3	-0.3
SBF				eSn	Sn	20 17 02.9	-4.2
	3.7nm,0.5s						
SBF	Sospel	4.68	292	ePn	Pn	20 16 12.3	-0.3
TIR	Tirane	4.89	99	ePn	Pn	20 16 19.7	+4.3
TIR	Tirane	4.89	99	ePn	Pn	20 16 19.7	+4.3
DIVS	Divibare	5.11	67	ePn	Pn	20 16 21.1	+2.5
DIVS	Divibare	5.11	67	ePn	Pn	20 16 21.1	+2.5
FRF	La Foret Royal	5.15	287	ePn	Pn	20 16 18.2	-0.9
FRF				eSn	Sn	20 17 14.8	-3.9
	1.5nm,0.3s						
FRF	La Foret Royal	5.15	287	ePn	Pn	20 16 18.2	-0.9
FRF				eSn	Sn	20 17 14.8	-3.9
	0.8nm,0.3s						
DAVOX	Davos/Dischmat	5.17	332	Pn	Pn	20 16 22.1	+2.7
	0.5nm,0.3s,baz=155,slow=18,SNR=8.0						
DAVOX				Sn	Sn	20 17 22.6	+3.4
	0.3nm,0.3s,baz=0.0,slow=15,SNR=3.6						
LMR	La Mourre	5.21	284	ePn	Pn	20 16 18.4	-1.4
LMR	La Mourre	5.21	284	ePn	Pn	20 16 18.4	-1.4
MBDF	Montbardon	5.43	299	eP	Pn	20 16 26.2	+3.2
MBDF	Montbardon	5.43	299	eP	Pn	20 16 26.2	+3.2
TRUS	Trudelj	5.44	67	ePn	Pn	20 16 25.1	+2.2
TRUS	Trudelj	5.44	67	ePn	Pn	20 16 25.1	+2.2
GRUS	Gruza	5.56	71	ePn	Pn	20 16 26.8	+2.2
GRUS				eSn	Sn	20 17 30.7	+2.1
GRUS	Gruza	5.56	71	ePn	Pn	20 16 26.8	+2.2
GRUS				eSn	Sn	20 17 30.7	+2.1
LPG	La Plagne	5.80	306	eP	Pn	20 16 31.7	+3.4
GERES	GERESS Array B	6.56	1	Pn	Pn	20 16 38.8	+0.3
	0.2nm,0.3s,baz=172,slow=12,SNR=6.9						
GERES				Sn	Sn	20 17 53.6	+0.2
	0.4nm,0.3s,baz=180,slow=23,SNR=7.5						
ZAPS	Zavoj	6.83	79	ePn	Pn	20 16 44.9	+2.8
ZAPS	Zavoj	6.83	79	ePn	Pn	20 16 44.9	+2.8
KHC	Kasperske Hory	6.84	1	ePN	Pn	20 16 43.8	+1.5
KHC				ex	x	20 16 56.0	
KHC				eSN	Sn	20 17 58.9	-1.5
KHC	Kasperske Hory	6.84	1	Pn	Pn	20 16 43.8	+1.5
HINF	Hinteralfeld	7.24	322	ePn	Pn	20 16 47.4	-0.3
HINF				eSn	Sn	20 18 04.7	-5.3
	3.4nm,0.5s						
HINF	Hinteralfeld	7.24	322	ePn	Pn	20 16 47.4	-0.3
KEST	Kesra	7.28	207	Pn	Pn	20 16 54.3	+5.9
	0.2nm,0.3s,baz=310,slow=5.2,SNR=8.7						
CDF	Champ du Feu	7.51	327	ePn	Pn	20 16 51.7	+0.2
CDF				eSn	Sn	20 18 11.5	-5.3
	4.4nm,0.7s						
CDF	Champ du Feu	7.51	327	ePn	Pn	20 16 51.7	+0.2
HAU	Haudompre	7.61	321	ePn	Pn	20 16 51.6	-1.1
HAU				eSn	Sn	20 18 13.7	-5.4
	2.2nm,0.4s						
HAU	Haudompre	7.61	321	ePn	Pn	20 16 51.6	-1.1
FINES	FINESS Array B	20.64	17	P	Pn	20 19 44.0	+0.5
	0.5nm,0.7s,baz=186,slow=13,SNR=3.6						
TORD	Torodi Ar. Bea	30.78	203	P	P	20 21 20.2	+2.5
	0.2nm,0.5s,baz=14,slow=8.8,SNR=2.8						
MKAR	Makanchi Array	47.85	60	P	P	20 23 41.6	+1.8
	0.1nm,0.6s,baz=290,slow=5.4,SNR=2.5						

IDC 02 20:21:55.8±1.7,0°.46S×128°.97E,h0km,mb3.1/4, mb1 3.3/4,mb1mx3.2/19,mbtmp3.1/4,Error ellipse: s-maj=156.4km s-min=23.2km az=72.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.06	165	P	P	20 26 31.1	+0.2
	0.5nm,1.0s,baz=346,slow=14,SNR=2.7						
ASAR	Alice Springs	23.56	169	P	P	20 27 08.0	-0.2
	0.2nm,0.4s,baz=349,slow=11,SNR=4.3						
SONM	Songino Array	51.96	341	P	P	20 31 05.8	-1.1
	0.1nm,0.5s,baz=165,slow=7.7,SNR=2.2						
MKAR	Makanchi Array	62.25	326	P	P	20 32 20.4	+0.7
	0.2nm,0.3s,baz=118,slow=8.0,SNR=10						

SKO 02 20:40:20.5,39°.91N×21°.59E,h0km
THE 02 20:40:22.8,40°.07N×21°.72E,h4km±14km,ML2.2/2,Error ellipse: s-maj=14.5km s-min=0.6km az=46.0
ATH 02 20:40:22.9,40°.07N×21°.75E,h6km±3km,MD3.0/13,ML2.6
CSEM 02 20:40:22.3±0.2,40°.09N×21°.74E,h1km±2km,ML2.2/2, Error ellipse: s-maj=4.7km s-min=3.4km az=69.0
ISC 02 20:40:22.6±1.0,40°.07N±0°.02×21°.72E±0°.03,h9km±8km, n43,σ0s.59/65,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	Kozani	0.24	8	P	Pg	20 40 27.3	-0.2
KZN				S	Sg	20 40 31.2	+0.3
KZN	Kozani	0.24	8	ePG	Pg	20 40 27.4	-0.1
KZN				eSG	Sg	20 40 31.2	+0.3
KZN	Kozani	0.24	8	P	Pg	20 40 27.3	-0.2
KZN				S	Sg	20 40 31.2	+0.3
THL	Klokotos Trika	0.55	156	P	Pg	20 40 32.9	-0.3
THL				S	Sg	20 40 41.1	+0.7
THL	Klokotos Trika	0.55	156	ePB	Pg	20 40 32.8	-0.4
THL				eSB	Sg	20 40 40.2	-0.2
THL	Klokotos Trika	0.55	156	P	Pg	20 40 32.9	-0.3
THL				eSb	Sg	20 40 40.2	-0.2
THL				S	Sg	20 40 41.1	+0.7
LIT	Litokhoron	0.59	87	P	Pg	20 40 33.5	-0.5
LIT				S	Sb	20 40 43.0	-0.5
LIT	Litokhoron	0.59	87	ePG	Pg	20 40 33.5	-0.5
LIT				eSB	Sg	20 40 42.4	+0.7
LIT	Litokhoron	0.59	87	P	Pg	20 40 33.5	-0.5
LIT				eSb	Sg	20 40 42.4	+0.7
LIT				S	Sb	20 40 43.0	-0.5
NEST	Nestorio	0.62	304	P	Pg	20 40 34.5	-0.2
NEST	Nestorio	0.62	304	P	Pg	20 40 34.5	-0.2
FNA	Florina	0.76	340	P	Pg	20 40 36.6	-0.7
FNA				S	Sb	20 40 48.2	-0.4
FNA	Florina	0.76	340	ePB	Pg	20 40 36.6	-0.7
FNA				eSB	Sb	20 40 48.0	-0.6
FNA	Florina	0.76	340	P	Pg	20 40 36.6	-0.7
FNA				eSb	Sb	20 40 48.0	-0.6
BIA	Bitola	1.00	342	ePg	Pg	20 40 40.5	-1.4
BIA				eSg	Sb	20 40 56.3	+0.9
BIA	Bitola	1.00	342	ePg	Pg	20 40 40.4	-1.4
BIA				eSg	Sb	20 40 56.3	+0.9
GRG	Griva	1.03	30	ePN	Pg	20 40 42.4	0.0
GRG	Griva	1.03	30	ePn	Pg	20 40 42.4	0.0
MAKR	Makrakomi, Fth	1.10	163	P	Pb	20 40 44.0	+0.2
MAKR	Makrakomi, Fth	1.10	163	P	Pb	20 40 44.0	+0.2
AGG	Agios Georgios	1.14	156	P	Pb	20 40 44.8	+0.2
AGG	Agios Georgios	1.14	156	ePB	Pg	20 40 44.5	-0.1
AGG	Agios Georgios	1.14	156	ePb	Pg	20 40 44.5	-0.1
AGG	Agios Georgios	1.14	156	P	Pb	20 40 44.8	+0.2
EVR	Evrytania	1.15	177	P	Pg	20 40 44.2	-0.4
EVR	Evrytania	1.15	177	ePG	Pg	20 40 44.3	-0.4
EVR				eSB	Sn	20 41 01.0	+0.1
EVR	Evrytania	1.15	177	ePg	Pg	20 40 44.3	-0.4
EVR				eSb	Sn	20 41 01.0	+0.1
PLG	Polygyros	1.35	76	ePB	Pn	20 40 47.3	-0.4
PLG	Polygyros	1.35	76	ePb	Pn	20 40 47.3	-0.4
NEO	Neokhori	1.38	123	ePB	Pn	20 40 48.7	+0.6
NEO				eSB	Sg	20 41 07.8	+0.7
NEO	Neokhori	1.38	123	ePb	Pn	20 40 48.7	+0.6
NEO				eSb	Sg	20 41 07.8	+0.7
SOH	Sokhos	1.45	58	ePB	Pb	20 40 50.2	+0.3
SOH				eSB	Sg	20 41 10.3	+0.9
SOH	Sokhos	1.45	58	ePb	Pb	20 40 50.2	+0.3
SOH				eSb	Sg	20 41 10.3	+0.9
PAIG	Paliouri	1.51	95	ePG	Pn	20 40 50.1	+0.3
PAIG	Paliouri	1.51	95	ePg	Pn	20 40 50.1	+0.3
KEK	Kerkira	1.52	257	ePB	Pg	20 40 52.0	+0.2
KEK	Kerkira	1.52	257	ePb	Pg	20 40 52.0	+0.2
AOS	Alonnisos	1.89	118	ePN	Pb	20 40 57.0	-0.3
AOS	Alonnisos	1.89	118	ePn	Pb	20 40 57.0	-0.3
GUR	Goura	2.18	167	ePN	Pb	20 41 01.9	-0.4
GUR	Goura	2.18	167	ePn	Pb	20 41 01.9	-0.4
ATH	Athens Observa	2.60	143	ePN	Pb	20 41 08.1	-1.3
ATH	Athens Observa	2.60	143	ePn	Pb	20 41 08.1	-1.3

ISCJB 02 20:57:09.7±0.6,51°.51N±0°.03×16°.13E±0°.04,h0km,Error ellipse: s-maj=4.4km s-min=3.1km az=18.6
CSEM 02 20:57:11.1±0.4,51°.51N×16°.12E,h2km,ML3.1/12,Error ellipse: s-maj=6.6km s-min=4.2km az=179.0
IPEC 02 20:57:11.0±0.2,51°.54N×16°.21E,h0km±1km,ML1.9/3, Error ellipse: s-maj=1.6km s-min=0.7km az=35.0
PRU 02 20:57:12.0,51°.50N×16°.13E,h0km
WAR 02 20:57:12.7,51°.50N×16°.13E
VIE 02 20:57:14.8±0.6,51°.23N×16°.14E,h0km,mb2.2/3,ML2.5/4, Error ellipse: s-maj=3.8km s-min=3.1km az=166.0 62 km WNW of Wroclaw Suspected Mining induced.
ISC 02 20:57:10.4±0.9,51°.57N±0°.04×16°.15E±0°.03,h0km,n32, σ0s.90/66,3C-1D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.73	173	ePg	Pg	20 57 25.1	+0.8
KSP				eSg	Sg	20 57 34.1	+0.4
KSP	Ksiaz	0.73	173	ePg	Pg	20 57 25.1	+0.8
KSP				eSg	Sg	20 57 34.2	+0.5
UPC	Upice	1.06	185	ePG	Pg	20 57 31.1	+0.4
UPC				eSG	Sg	20 57 44.5	0.0
	comp=Z,18nm,0.3s						
UPC	Upice	1.06	185	Pg	Pg	20 57 31.1	+0.4
UPC				Sg	Sg	20 57 44.5	0.0
	18nm,0.3s						
DPC	Dobruska-Polom	1.22	175	ePG	Pg	20 57 33.9	+0.2
DPC				eSG	Sg	20 57 49.1	-0.5
	comp=Z,18nm,0.3s						
DPC	Dobruska-Polom	1.22	175	Pg	Pg	20 57 33.9	+0.2
DPC				Sg	Sg	20 57 49.1	-0.5
	18nm,0.3s						
PVCC	Panska Ves	1.44	225	ePG	Pn	20 57 38.0	+0.3
PVCC				eSG	Sb	20 57 56.9	-0.1
	comp=Z,72nm,0.3s						
PVCC	Panska Ves	1.44	225	Pg	Pn	20 57 38.0	+0.3
PVCC				Sg	Sb	20 57 56.9	-0.1
	72nm,0.3s						
KRLC	Kraliky	1.54	165	ePG	Pn	20 57 39.4	+0.2
KRLC				eSG	Sb	20 57 59.4	-0.6
KRLC	Kraliky	1.54	165	Pg	Pn	20 57 39.4	+0.2
KRLC				Sg	Sb	20 57 59.4	-0.6
BRG	Berggiesshubel	1.55	244	PN	Pn	20 57 39.1	-0.1
BRG				PG	Pb	20 57 40.3	+0.3
BRG				SG	Sg	20 58 00.7	+0.5
	39nm,0.4s						
PRU	Pruhonice	1.88	214	ePG	Pb	20 57 45.5	-0.1
PRU				eSG	Sg	20 58 10.2	-0.6
	comp=Z,19nm,0.3s						
PRU	Pruhonice	1.88	214	Pg	Pb	20 57 45.5	-0.1
PRU				Sg	Sg	20 58 10.2	-0.6
	19nm,0.3s						
CLL	Collm	1.99	264	ePn	Pn	20 57 45.0	-0.2
CLL				i Pg	Pg	20 57 48.5	0.0
CLL				e		20 57 51.0	
CLL				i		20 57 52.2	
CLL				i Sg	Sg	20 58 14.5	+0.3
	comp=Z,23nm,0.7s						
CLL				i		20 58 20.4	
MORC	Moravsky Berou	2.00	153	ePn	Pn	20 57 45.4	0.0
	baz=335						
OKC	Ostrava-Krasne	2.15	143	ePG	Pb	20 57 50.6	+0.6
OKC				eSG	Sg	20 58 19.2	0.0
	comp=Z,20nm,0.7s						
OKC	Ostrava-Krasne	2.15	143	Pg	Pb	20 57 50.6	+0.6
OKC				Sg	Sg	20 58 19.2	0.0
	comp=Z,20nm,0.7s						
VRAC	Vranov	2.28	173	ePn	Pn	20 57 49.8	+0.6
	baz=354						
VRAC				eSg	Sb	20 58 21.2	+0.2
	comp=Z,7.9nm,0.3s,baz=354						
TREC	Trest	2.31	191	ePN	Pn	20 57 50.2	+0.5
TREC				ePG	Pb	20 57 53.3	+0.4
TREC				eSG	Sg	20 58 23.6	-1.0
	comp=Z,10.0nm,0.3s						
TREC	Trest	2.31	191	Pn	Pn	20 57 50.2	+0.5
KRUC	Moravsky	2.51	176	ePn	Pn	20 57 53.1	+0.7
	baz=357						
KRUC				eSg	Sb	20 58 28.7	+1.0
	comp=Z,5.9nm,0.3s,baz=357						
OJC	Ojcow	2.67	119	ePn	Pn	20 57 53.3	-1.3
OJC				ePg	Pg	20 58 02.6	+1.0
OJC				eSg	Sg	20 58 37.4	+1.2
OJC	Ojcow	2.67	119	ePn	Pn	20 57 53.3	-1.3
NKC	Novy Kostel	2.70	242	ePN	Pn	20 57 56.0	+1.0
NKC				ePG	Pb	20 58 00.7	+1.2
NKC				eSG	Sg	20 58 37.0	0.0
	comp=Z,21nm,0.4s						
NKC	Novy Kostel	2.70	242	Pn	Pn	20 57 56.0	+1.0
KHC	Kasperske Hory	2.94	215	ePN	Pn	20 57 58.7	+0.3
KHC				ePG	Pb	20 58 04.7	+1.0
KHC				eSN	Sn	20 58 34.3	-0.1
KHC				eSG	Sg	20 58 43.7	-1.1
	comp=Z,7.1nm,0.4s						
KHC	Kasperske Hory	2.94	215	Pn	Pn	20 57 58.7	+0.3
BSD	Bornholm Skovb	3.63	349	i P	Pn	20 58 08.1	+0.3
BSD				i S	Sn	20 58 49.0	-2.3
CONA	Conrad Observa	3.65	183⇑	iPn	Pn	20 58 08.0	-0.1
CONA			⇓	iSg	Sg	20 59 05.0	-2.4
	comp=Z,6.8nm,0.3s						
CONA	Conrad Observa	3.65	183	Pn	Pn	20 58 08.0	-0.1
CONA				Sg	Sg	20 59 05.0	-2.4
	comp=Z,6.8nm,0.3s						
MOA	Molln	3.92	199⇑	iPn	Pn	20 58 12.6	+0.8
MOA			⇑	iSg	Sg	20 59 13.7	-2.4
	comp=Z,8.0nm,0.6s						
MOA	Molln	3.92	199	Pn	Pn	20 58 12.6	+0.8
MOA				Sg	Sg	20 59 13.7	-2.4
	comp=Z,8.0nm,0.6s						

ISCJB 02 21:03:43.7±0.8,36°.43N±0°.03×21°.52E±0°.05,h19km±5km, Error ellipse: s-maj=7.5km s-min=4.8km az=144.2
ATH 02 21:03:44.4,36°.47N×21°.58E,h29km±1km,MD3.5/29, ML2.7
CSEM 02 21:03:44.3±0.4,36°.48N×21°.55E,h15km,ML2.7/2,Error ellipse: s-maj=8.6km s-min=4.7km az=59.0
THE 02 21:03:46.1,36°.48N×21°.63E,h18km±1km,ML2.7/2,Error ellipse: s-maj=2.2km s-min=1.2km az=252.0
ISC 02 21:03:44.2±1.5,36°.47N±0°.04×21°.56E±0°.05,h16km±9km, n88,σ0s.86/116,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.45	19	P	Pb	21 03 54.3	+0.5
PYL				S	Sb	21 04 01.2	+0.9
PYL	PYLOS	0.45	19	ePB	Pb	21 03 54.3	+0.5
PYL				eSB	Sb	21 04 00.9	+0.6
PYL	PYLOS	0.45	19	P	Pb	21 03 54.3	+0.5
PYL				eSb	Sb	21 04 00.9	+0.6
PYL				S	Sb	21 04 01.2	+0.9
DYR	Agios Nikonas	0.69	65	P	Pb	21 03 57.9	+0.1
DYR				S	Sb	21 04 08.0	+0.9
DYR	Agios Nikonas	0.69	65	ePN	Pb	21 03 57.8	0.0
DYR				eSN	Sb	21 04 08.0	+0.9
DYR	Agios Nikonas	0.69	65	P	Pb	21 03 57.9	+0.1
DYR				S	Sb	21 04 08.0	+0.9
ITM	Ithomi	0.77	22	P	Pg	21 03 59.4	+0.3
ITM				S	Sn	21 04 10.7	-1.0
ITM	Ithomi	0.77	22	ePN	Pg	21 03 59.4	+0.3
ITM				eSN	Sn	21 04 11.2	-0.5
ITM	Ithomi	0.77	22	P	Pg	21 03 59.4	+0.3
ITM				S	Sn	21 04 10.7	-1.0
ITM				eSn	Sn	21 04 11.2	-0.5
AMT	Artemida-Makis	1.07	6	P	Pg	21 04 04.9	+0.1
AMT				S	Sn	21 04 19.9	+0.8
AMT	Artemida-Makis	1.07	6	ePN	Pg	21 04 04.8	0.0
AMT				eSN	Sn	21 04 19.9	+0.8
AMT	Artemida-Makis	1.07	6	P	Pg	21 04 04.9	+0.1
AMT				S	Sn	21 04 19.9	+0.8
VLX	Vlachokerasia	1.11	36	P	Pg	21 04 05.3	-0.4
VLX				S	Sg	21 04 20.6	+0.3
VLX	Vlachokerasia	1.11	36	ePN	Pg	21 04 05.3	-0.4
VLX				eSN	Sn	21 04 20.2	-0.1
VLX	Vlachokerasia	1.11	36	P	Pg	21 04 05.3	-0.4
VLX				eSn	Sn	21 04 20.2	-0.1
VLX				S	Sg	21 04 20.6	+0.3
VLI	Veliai	1.14	77	P	Pg	21 04 05.9	-0.2
VLI				S	Sb	21 04 20.4	+0.4
VLI	Veliai	1.14	77	ePN	Pg	21 04 05.8	-0.3
VLI				eSN	Sg	21 04 21.7	+0.7
VLI	Veliai	1.14	77	P	Pg	21 04 05.9	-0.2
VLI				S	Sb	21 04 20.4	+0.4
VLI				eSn	Sg	21 04 21.7	+0.7
KYTH	Kithira	1.21	99	P	Pg	21 04 07.5	0.0
KYTH	Kithira	1.21	99	ePN	Pg	21 04 07.4	0.0
KYTH	Kithira	1.21	99	ePn	Pg	21 04 07.4	0.0
ANKY	Antikythira Is	1.53	113	ePN	Pb	21 04 11.7	-0.5
ANKY	Antikythira Is	1.53	113	ePn	Pb	21 04 11.7	-0.5
RLS	Riolos of Patr	1.59	357	P	Pg	21 04 13.5	-1.2
RLS	Riolos of Patr	1.59	357	ePN	Pb	21 04 13.3	+0.2
RLS	Riolos of Patr	1.59	357	ePn	Pb	21 04 13.3	+0.2
GUR	Goura	1.59	23	P	Pb	21 04 13.2	-0.1
GUR	Goura	1.59	23	ePN	Pb	21 04 13.0	-0.3
GUR	Goura	1.59	23	ePn	Pb	21 04 13.0	-0.3
KLV	Kalavryta, Ach	1.64	17	ePN	Pb	21 04 13.4	-0.7
KLV	Kalavryta, Ach	1.64	17	ePn	Pb	21 04 13.4	-0.7
DID	Didima	1.69	52	P	Pn	21 04 12.6	-0.6
DID				S	Sn	21 04 34.8	+0.2
DID	Didima	1.69	52	ePB	Pn	21 04 12.8	-0.4
DID	Didima	1.69	52	P	Pn	21 04 12.6	-0.6
DID				S	Sn	21 04 34.8	+0.2
LAKA	Lakka	1.80	11	ePN	Pb	21 04 16.0	-0.8
LAKA	Lakka	1.80	11	ePn	Pb	21 04 16.0	-0.8
VLS	Valsamata	1.87	336	P	Pn	21 04 15.9	+0.3
VLS	Valsamata	1.87	336	ePB	Pb	21 04 16.2	-1.8
VLS	Valsamata	1.87	336	P	Pn	21 04 15.9	+0.3
VLS	Valsamata	1.87	336	ePb	Pb	21 04 16.2	-1.8
LTK	Loutraki	1.91	36	P	Pn	21 04 15.9	-0.3
LTK	Loutraki	1.91	36	ePN	Pn	21 04 16.2	0.0
LTK	Loutraki	1.91	36	P	Pn	21 04 15.9	-0.3
LTK	Loutraki	1.91	36	ePn	Pn	21 04 16.2	0.0
TRIZ	Trizonia	1.94	12	P	Pb	21 04 18.2	-0.9
TRIZ	Trizonia	1.94	12	ePB	Pb	21 04 18.4	-0.7
TRIZ	Trizonia	1.94	12	ePb	Pb	21 04 18.4	-0.7
EFP	Efpalio	1.97	8	P	Pb	21 04 18.9	-0.8
EFP	Efpalio	1.97	8	ePB	Pb	21 04 18.8	-0.9
EFP	Efpalio	1.97	8	ePb	Pb	21 04 18.8	-0.9
KALE	Kalithea	1.97	13	ePB	Pb	21 04 18.5	-1.3
KALE	Kalithea	1.97	13	ePb	Pb	21 04 18.5	-1.3
NAIG	Nisos Aigina	2.01	50	ePN	Pn	21 04 18.1	+0.6
NAIG	Nisos Aigina	2.01	50	ePn	Pn	21 04 18.1	+0.6
DSF	Desfina	2.08	21	P	Pn	21 04 18.9	+0.3
DSF				S	Sn	21 04 44.4	+0.1
DSF	Desfina	2.08	21	P	Pn	21 04 18.9	+0.3
DSF				S	Sn	21 04 44.4	+0.1
ATH	Athens Observa	2.28	48	ePB	Pb	21 04 22.9	-2.1
ATH	Athens Observa	2.28	48	ePb	Pb	21 04 22.9	-2.1
VAM	Vamos	2.39	116	P	Pn	21 04 23.3	+0.6
VAM				S	Sn	21 04 52.0	+0.3
VAM	Vamos	2.39	116	ePN	Pn	21 04 23.4	+0.7
VAM	Vamos	2.39	116	P	Pn	21 04 23.3	+0.6
VAM				S	Sn	21 04 52.0	+0.3
PTL	Penteli	2.42	49	ePN	Pn	21 04 22.1	-1.1
PTL	Penteli	2.42	49	ePn	Pn	21 04 22.1	-1.1
EVR	Evrytania	2.45	5	ePB	Pb	21 04 26.2	-1.7
EVR	Evrytania	2.45	5	ePb	Pb	21 04 26.2	-1.7
LKR	Lokris	2.46	27	ePN	Pn	21 04 23.5	-0.2
LKR	Lokris	2.46	27	ePn	Pn	21 04 23.5	-0.2
AGG	Agios Georgios	2.62	13	ePN	Pn	21 04 26.9	+1.0
AGG	Agios Georgios	2.62	13	ePn	Pn	21 04 26.9	+1.0
GVD	Gavdhos	2.62	128	ePN	Pn	21 04 27.2	+1.3
GVD	Gavdhos	2.62	128	ePn	Pn	21 04 27.2	+1.3
IDI	Anoyia	2.95	113	P	Pn	21 04 30.6	+0.1
IDI	Anoyia	2.95	113	P	Pn	21 04 30.6	+0.1
THL	Klokotos Trika	3.11	6	ePN	Pn	21 04 33.4	+0.8
THL	Klokotos Trika	3.11	6	ePn	Pn	21 04 33.4	+0.8
NEO	Neokhori	3.12	24	ePN	Pn	21 04 33.3	+0.5
NEO	Neokhori	3.12	24	ePn	Pn	21 04 33.3	+0.5
APE	Apeiranthos	3.24	78	ePN	Pn	21 04 33.1	-1.4
APE	Apeiranthos	3.24	78	ePn	Pn	21 04 33.1	-1.4
AOS	Alonnisos	3.26	34	ePN	Pn	21 04 33.4	-1.3
AOS	Alonnisos	3.26	34	ePn	Pn	21 04 33.4	-1.3
LAST	Lasithi	3.44	111	ePN	Pn	21 04 37.7	+0.4
LAST	Lasithi	3.44	111	ePn	Pn	21 04 37.7	+0.4
LIT	Litokhoron	3.70	11	ePN	Pn	21 04 42.6	+1.9
LIT	Litokhoron	3.70	11	ePn	Pn	21 04 42.6	+1.9
GRG	Griva	4.53	8	ePN	Pn	21 04 53.0	+0.9
GRG	Griva	4.53	8	ePn	Pn	21 04 53.0	+0.9
STON	Ston	7.05	336	ePn	Pn	21 05 24.1	-2.6
STON				Sn	Sn	21 06 38.4	-8.2

IDC 02 21:04:27.2±1.2,0°.75N×121°.93E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.4/21,mbtmp3.5/4,Error ellipse: s-maj=148.6km s-min=20.8km az=64.0,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.89	150	P	P	21 09 42.9	+0.1
	0.6nm,0.4s,baz=328,slow=11,SNR=16						
ASAR	Alice Springs	26.92	155	P	P	21 10 10.4	+0.1
	0.2nm,0.5s,baz=342,slow=8.8,SNR=5.5						
SONM	Songino Array	48.80	346	P	P	21 13 14.7	+0.5
	0.6nm,0.6s,baz=163,slow=8.4,SNR=6.5						
MKAR	Makanchi Array	57.42	329	P	P	21 14 17.0	-0.7
	0.8nm,0.7s,baz=128,slow=8.8,SNR=9.6						

MEX 02 21:20:48.9±1.0,18°.21N×100°.89W,h46km±14km,MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.52	82	i P	Pn	21 20 58.1	-2.1
ARIG				i S	Sn	21 21 06.5	-1.7
ZIIG	Zihuatanejo	0.81	223	i P	Pn	21 21 02.6	-1.3
ZIIG				i S	Sn	21 21 13.3	-1.7
CAIG	El Cayaco	1.30	153	i P	Pn	21 21 08.1	-2.5
CAIG				i S	Sn	21 21 25.0	-1.8
ACX	Acapulco	1.65	143	i P	Pn	21 21 13.0	-2.5
ACX				eS	Sn	21 21 33.1	-2.5
YAIG	Yautepec	1.85	69	i P	Pn	21 21 17.1	-1.2
YAIG				i S	Sn	21 21 39.4	-1.3
PPM	Popocatepetl	2.31	68	i P	Pn	21 21 23.7	-1.5
PPM				eS	Sn	21 21 51.2	-1.6

ISCJB 02 21:21:05.8±0.4,7°.15S±0°.06×124°.74E±0°.07,h559km, mb3.6/9,Error ellipse: s-maj=9.3km s-min=6.9km az=158.0
DJA 02 21:21:06.9±0.4,7°S±4°×12°5E±°,h534km±13km,M4.1/12, mB4.6/7,mb4.4/12,MLv4.2/7,Mw(mB)3.8/7
IDC 02 21:21:06.1±1.1,7°.13S×124°.77E,h535km±14km,mb3.1/9, mb1 3.3/13,mb1mx3.2/22,mbtmp3.2/13,Error ellipse: s-maj=22.5km s-min=8.7km az=64.0
ISC 02 21:21:07.0±0.6,7°.20S±0°.07×124°.70E±0°.10,h559km,n25, σ1s.47/30,mb3.6/9,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	Bau Bau	2.71	309	P	P	21 22 20.3	-0.8
MMRI	Maumere	2.83	239	P	P	21 22 19.8	-1.9
BKSI	Bulukumba	4.92	292	P	P	21 22 35.9	-0.8
	28nm,0.8s,0.1nm						
KAPI	Kappang	5.38	294	P	P	21 22 40.0	-0.6
	32nm,1.0s,334nm0.1nm						
KAPI	Kappang	5.38	294	P	P	21 22 39.2	-1.4
	3.5nm,0.3s,baz=174,slow=6.6,SNR=11						
KAPI				S	S	21 23 54.4	-2.5
	0.4nm,0.3s,baz=233,slow=21,SNR=8.9						
TTSI	Tana Toraja	6.37	310	P	P	21 22 50.4	+0.9
	39nm,0.9s,505nm0.1nm						
LUWI	Luwuk	6.41	342	P	P	21 22 48.9	-1.0
	97nm,1.1s,1μm0.3nm						
LBMI	Labuha	7.09	23	P	P	21 22 54.7	-1.6
	214nm,0.7s,2μm0.8nm						
MNI	Manado	8.59	1	P	P	21 23 10.2	-0.7
	110nm,0.7s						
FAKI	Fak Fak	8.64	61	P	P	21 23 09.9	-1.5
	82nm,0.8s,1μm						
SWI	Sorong	9.08	46	P	P	21 23 13.8	-2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	96nm,0.9s,991nm						
FITZ	**Fitzroy Crossi**	**10.88**	**175**	P	**P**	**21 23 33.5**	**-0.5**
	2.2nm,0.3s,baz=10,slow=7.8,SNR=117						
FITZ				S	**S**	**21 25 32.9**	**-2.0**
	0.5nm,0.3s,baz=136,slow=20,SNR=7.7						
RKPI	**Ransiki, Papua**	**11.01**	**60**	P	**P**	**21 23 34.0**	**-1.5**
	64nm,0.8s						
WRA	**Warramunga Arr**	**15.75**	**145**	P	**P**	**21 24 22.6**	**-1.3**
	1.8nm,0.3s,baz=323,slow=11,SNR=147						
WRA				S	**S**	**21 27 05.1**	**+0.4**
	0.1nm,0.3s,baz=320,slow=17,SNR=9.6						
ASAR	**Alice Springs**	**18.61**	**153**	P	**P**	**21 24 50.9**	**+0.9**
	0.8nm,0.3s,baz=323,slow=7.3,SNR=68						
ASAR				S	**S**	**21 27 54.7**	**+3.3**
	0.0nm,0.3s,baz=345,slow=23,SNR=11						
ASAR				ScP	**ScP**	**21 31 36.4**	**+3.0**
	0.1nm,0.3s,baz=344,slow=1.5,SNR=4.2						
PSI	**Prapat**	**27.57**	**290**	P	**P**	**21 26 11.0**	**+0.7**
	6.6nm,0.9s,baz=127,slow=4.7,SNR=4.5						
STKA	**Stephens Creek**	**29.18**	**150**	P	**P**	**21 26 24.2**	**+0.4**
	2.7nm,0.5s,baz=330,slow=10,SNR=9.3						
CMAR	**Chiang Mai Arr**	**35.99**	**315**	P	**P**	**21 27 22.6**	**+0.9**
	1.4nm,0.8s,baz=150,slow=6.6,SNR=10.0						
KSRS	**Korea Array**	**44.52**	**4**	P	**P**	**21 28 29.9**	**+0.5**
	1.5nm,0.6s,baz=179,slow=9.6,SNR=10						
MJAR	**Matsushiro Arr**	**45.32**	**15**	P	**P**	**21 28 35.0**	**-0.5**
	2.1nm,0.8s,baz=192,slow=9.1,SNR=9.7						
USRK	**Ussuriysk Arra**	**51.58**	**7**	P	**P**	**21 29 22.3**	**+0.5**
	0.7nm,0.6s,baz=208,slow=7.5,SNR=5.5						
SONM	**Songino Array**	**57.13**	**345**	P	**P**	**21 30 01.6**	**+0.7**
	0.5nm,0.6s,baz=164,slow=8.8,SNR=6.0						
MKAR	**Makanchi Array**	**65.61**	**329**	P	**P**	**21 30 57.1**	**+0.9**
	1.4nm,0.6s,baz=132,slow=7.7,SNR=21						
ZALV	**Zalesovo Beam**	**69.53**	**336**	P	**P**	**21 31 19.6**	**-0.3**
	1.4nm,0.8s,baz=126,slow=4.1,SNR=8.0						
TORD	**Torodi Ar. Bea**	**123.68**	**281**	PKP	**PKPdf**	**21 39 03.5**	**+1.0**
	0.5nm,0.6s,baz=52,slow=0.9,SNR=4.0						

IDC 02 21:26:07.3±1.4**, 29°.02S×74°.70E, h0^{km}, mb4.0**/9**, mb1 4.2**/9**, mb1mx3.9**/21**, mbtmp4.0**/9**, Error ellipse: s-maj=45.2km s-min=23.4km az=66.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**52.69**	**29**	P	P	21 35 24.5	+0.9
	0.7nm,0.3s,baz=211,slow=6.8,SNR=7.4						
ASAR	**Alice Springs**	**52.86**	**99**	P	P	21 35 24.9	-0.2
	1.7nm,1.0s,baz=254,slow=6.5,SNR=13						
WRA	**Warramunga Arr**	**54.54**	**95**	P	P	21 35 37.6	+0.1
	3.6nm,0.8s,baz=252,slow=7.6,SNR=13						
STKA	**Stephens Creek**	**56.90**	**111**	P	P	21 35 53.6	-0.7
	2.2nm,0.9s,baz=279,slow=5.6,SNR=5.3						
VNDA	**Vanda**	**61.28**	**166**	P	P	21 36 24.1	+0.2
	0.9nm,0.8s,baz=290,slow=6.4,SNR=5.2						
MKAR	**Makanchi Array**	**75.77**	**5**	P	P	21 37 54.0	-0.7
	1.8nm,1.0s,baz=176,slow=5.5,SNR=9.9						
SONM	**Songino Array**	**81.64**	**21**	P	P	21 38 27.5	+0.3
	0.6nm,0.9s,baz=191,slow=5.2,SNR=5.5						
KSRS	**Korea Array**	**82.81**	**40**	P	P	21 38 32.9	-0.5
	0.7nm,0.8s,baz=212,slow=6.7,SNR=3.8						
ZALV	**Zalesovo Beam**	**83.08**	**6**	P	P	21 38 33.9	-0.5
	0.7nm,0.7s,baz=197,slow=4.5,SNR=4.3						
YKA	**Yellowknife Ar**	**145.97**	**8**	PKPbc	PKPbc	21 45 47.9	-0.2
	1.4nm,0.9s,baz=334,slow=3.4,SNR=19						

MEX 02 21:36:43.4±0.5**, 17°.35N×101°.16W, h24^{km}**±19^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.39**	**311**	*i* P	Pb	21 36 50.4	-1.4
ZIIG				*i* S	Sb	21 36 55.8	-1.7
CAIG	**El Cayaco**	**0.90**	**109**	*i* P	Pb	21 36 57.3	-3.1
CAIG				*i* S	Sb	21 37 08.6	-3.4
CAIG				*e*S	Sn	21 37 09.0	-3.9
ARIG	**Puente Sto Nin**	**1.21**	**40**	*i* P	Pn	21 37 02.4	-2.5
ARIG				*i* S	Sn	21 37 16.4	-4.2
ACX	**Acapulco**	**1.33**	**111**	*i* P	Pn	21 37 03.7	-2.8
ACX				*i* S	Sn	21 37 19.3	-4.3
YAIG	**Yautepec**	**2.49**	**53**	*i* P	Pn	21 37 21.2	-1.5
YAIG				*e*S	Sn	21 37 48.8	-3.8
PPM	**Popocatepetl**	**2.95**	**54**	*i* P	Pn	21 37 26.6	-2.8

*CRAAG **02** 21:42:10.8, 36°.48N×1°.34E, Ml3.3*
*ISCJB **02** 21:42:10.8±1.0, 36°.62N±0°.06×1°.58E±0°.07, h11^{km}±11^{km}, Error ellipse: s-maj=11.3km s-min=7.1km az=43.4*
*MDD **02** 21:42:11.7±0.6, 36°.51N×1°.57E, h0^{km}, mb4.0/5, Error ellipse: s-maj=8.5km s-min=5.5km az=95.0, PRXIMO*
*CSEM **02** 21:42:11.7±0.3, 36°.46N×1°.60E, h15^{km}, mb4.0/5, Error ellipse: s-maj=8.7km s-min=6.0km az=99.0*
ISC 02 21:42:11.0±1.6**, 36°.58N**±0°.05×**1°.57E**±0°.05**, h8^{km}**±14^{km}**, n34,** σ1^s**40**/49**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.29**	**186**	P	**Pg**	**21 42 17.3**	**+0.5**
EBNR	**Beni Rached**	**0.29**	**186**	P	**Pg**	**21 42 17.3**	**+0.5**
ECHA	**Ech Chlef**	**0.46**	**201**	P	**Pg**	**21 42 18.7**	**-1.2**
ECHA	**Ech Chlef**	**0.46**	**201**	P	**Pg**	**21 42 18.7**	**-1.2**
ECHF	**Ech Chlef**	**0.46**	**203**	P	**Pg**	**21 42 18.7**	**-1.3**
ECHF	**Ech Chlef**	**0.46**	**203**	P	**Pg**	**21 42 18.7**	**-1.3**
EANR	**'Ain N'Sour**	**0.73**	**211**	P	**Pg**	**21 42 24.0**	**-1.1**
EANR	**'Ain N'Sour**	**0.73**	**211**	P	**Pg**	**21 42 24.0**	**-1.1**
EANR	**'Ain N'Sour**	**0.73**	**211**	P	**Pg**	**21 42 24.0**	**-1.1**
OKGL	**Djebel Kef Gue**	**0.92**	**234**	P	**Pn**	**21 42 30.4**	**+0.1**
	46nm,0.1s,SNR=4.0						
OKGL				S	**Sn**	**21 42 44.4**	**+0.6**
	283nm,0.2s,SNR=4.0						
OKGL	**Djebel Kef Gue**	**0.92**	**234**	P	**Pn**	**21 42 30.4**	**+0.1**
	46nm,0.1s,SNR=4.0						
OKGL				S	**Sn**	**21 42 44.4**	**+0.6**
	283nm,0.2s,SNR=4.0						
EMHD	**Djebel Mahouad**	**1.18**	**108**	P	**Pg**	**21 42 33.0**	**-0.7**
EMHD	**Djebel Mahouad**	**1.18**	**108**	P	**Pg**	**21 42 33.0**	**-0.7**
EMHD	**Djebel Mahouad**	**1.18**	**108**	P	**Pg**	**21 42 33.0**	**-0.7**
EIBI	**Ibiza**	**2.45**	**356**	P	**Pn**	**21 42 52.0**	**+0.8**
	3.1nm,0.1s,SNR=18						
EIBI				S	**Sn**	**21 43 19.9**	**-1.4**
	16nm,0.1s,SNR=10						
EIBI	**Ibiza**	**2.45**	**356**	P	**Pn**	**21 42 52.0**	**+0.8**
	3.1nm,0.1s,SNR=18						
EIBI				S	**Sn**	**21 43 19.9**	**-1.4**
	16nm,0.1s,SNR=10						
EBEN	**Beniarda**	**2.55**	**327**	P	**Pn**	**21 42 53.8**	**+1.1**
	0.3nm,0.1s,SNR=7.9						
EBEN				S	**Sn**	**21 43 22.6**	**-1.4**
	1.3nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**2.55**	**327**	P	**Pn**	**21 42 53.8**	**+1.1**
	0.3nm,0.1s,SNR=7.9						
EBEN				S	**Sn**	**21 43 22.6**	**-1.4**
	1.3nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**2.57**	**300**	P	**Pn**	**21 42 53.4**	**+0.5**
	0.5nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**2.57**	**300**	P	**Pn**	**21 42 53.4**	**+0.5**
	0.5nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**3.22**	**311**	P	**Pn**	**21 43 03.9**	**+2.0**
	0.3nm,0.1s,SNR=6.6						
ETOB				S	**Sn**	**21 43 40.6**	**+0.1**
	1.5nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.22**	**311**	P	**Pn**	**21 43 03.9**	**+2.0**
	0.3nm,0.1s,SNR=6.6						
ETOB				S	**Sn**	**21 43 40.6**	**+0.1**
	1.5nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.59**	**276**	P	**Pn**	**21 43 06.9**	**-0.3**
	0.5nm,0.2s,SNR=4.0						
EBER	**Berja**	**3.59**	**276**	P	**Pn**	**21 43 06.9**	**-0.3**
	0.5nm,0.2s,SNR=4.0						
EQES	**Quesada**	**3.90**	**290**	P	**Pn**	**21 43 13.7**	**+2.4**
	0.5nm,0.1s,SNR=4.0						
EQES				S	**Sn**	**21 43 58.0**	**+0.7**
	0.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**3.90**	**290**	P	**Pn**	**21 43 13.7**	**+2.4**
	0.5nm,0.1s,SNR=4.0						
EQES				S	**Sn**	**21 43 58.0**	**+0.7**
	0.8nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.10**	**338**	P	**Pn**	**21 43 16.2**	**+2.1**
	1.9nm,0.1s,SNR=20						
EMOS				S	**Sn**	**21 44 00.9**	**-1.5**
	3.4nm,0.2s,SNR=14						
EMOS	**Mosqueruela**	**4.10**	**338**	P	**Pn**	**21 43 16.2**	**+2.1**
	1.9nm,0.1s,SNR=20						
EMOS				S	**Sn**	**21 44 00.9**	**-1.5**
	3.4nm,0.2s,SNR=14						
ERTA	**Horta de San J**	**4.47**	**348**	P	**Pn**	**21 43 21.0**	**+1.9**
	0.3nm,0.1s,SNR=7.9						
ERTA				S	**Sn**	**21 44 09.7**	**-1.7**
	0.8nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**4.47**	**348**	P	**Pn**	**21 43 21.0**	**+1.9**
	0.3nm,0.1s,SNR=7.9						
ERTA				S	**Sn**	**21 44 09.7**	**-1.7**
	0.8nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.78**	**356**	P	**Pn**	**21 43 25.1**	**+1.7**
	0.6nm,0.2s,SNR=4.0						
EPOB				S	**Sn**	**21 44 17.1**	**-1.9**
	0.3nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.78**	**356**	P	**Pn**	**21 43 25.1**	**+1.7**
	0.6nm,0.2s,SNR=4.0						
CFON	**Fontmartina**	**5.22**	**7**	P	**Pn**	**21 43 30.9**	**+1.6**
	1.2nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.33**	**360**	P	**Pn**	**21 43 33.1**	**+2.2**
	1.0nm,0.2s,SNR=7.9						

IDC 02 21:50:19.2±1.0**, 20°.45N×120°.63E, h0^{km}, mb3.5**/9**, mb1 3.7**/10**, mb1mx3.6**/24**, mbtmp3.5**/10**, ML3.3**/1**, Error ellipse: s-maj=29.9km s-min=18.9km az=70.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.10**	**19**	P	Pn	21 54 31.6	-0.5
	0.1nm,0.3s,baz=204,slow=12,SNR=5.8						
CMAR	**Chiang Mai Arr**	**20.55**	**268**	P	P	21 55 00.4	+0.8
	0.3nm,0.4s,baz=84,slow=11,SNR=3.3						
MJAR	**Matsushiro Arr**	**22.21**	**40**	P	P	21 55 18.8	+1.5
	0.6nm,0.7s,baz=241,slow=11,SNR=3.0						
SONM	**Songino Array**	**29.66**	**340**	P	P	21 56 26.8	+0.1
	0.5nm,0.8s,baz=156,slow=7.3,SNR=4.0						
MKAR	**Makanchi Array**	**40.74**	**319**	P	P	21 58 01.5	-0.5
	0.2nm,0.6s,baz=114,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**42.32**	**161**	P	P	21 58 14.1	-1.0
	0.9nm,0.7s,baz=342,slow=9.0,SNR=7.4						
ZALV	**Zalesovo Beam**	**43.15**	**330**	P	P	21 58 20.9	-0.5
	1.1nm,0.6s,baz=113,slow=7.8,SNR=7.2						
KURBB	**Kurchatov Arra**	**44.69**	**323**	P	P	21 58 34.0	+0.1
	1.0nm,0.8s,baz=121,slow=7.4,SNR=9.0						
ASAR	**Alice Springs**	**45.71**	**163**	P	P	21 58 43.2	+0.9
	0.4nm,0.6s,baz=354,slow=8.4,SNR=4.1						
YKA	**Yellowknife Ar**	**86.60**	**22**	P	P	22 03 03.5	-0.8
	0.1nm,0.4s,baz=316,slow=4.1,SNR=4.5						

*IDC **02** 21:50:43.5±2.1, 56°.70N×153°.94W, h0^{km}, mb4.1/17, mb1 4.2/18, mb1mx4.1/29, mbtmp4.1/18, ML3.6/1, MS3.5/4, Ms1 3.5/4, ms1mx2.9/41, Error ellipse: s-maj=51.7km s-min=16.1km az=152.0*
*ISCJB **02** 21:50:44.3±0.8, 56°.51N±0°.04×153°.48W±0°.06, h28^{km}±5^{km}, mb4.1/19, MS3.5/3, Error ellipse: s-maj=7.9km s-min=4.6km az=154.4*
*NEIC **02** 21:50:46.4, 56°.65N×153°.65W, h3^{km}, ML3.6(AEIC), After AEIC.*
ISC 02 21:50:43.4±1.6**, 56°.50N**±0°.06×**153°.57W**±0°.04**, h9^{km}**±9^{km}**, n93,** σ**0^{s}94**/101**, mb4.3**/19**, MS3.2**/3**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SII	**Sitkinak Islan**	**0.34**	**280**	P	**Pb**	**21 50 53.1**	**+1.4**
SII				S	**Sb**	**21 50 57.7**	**+0.4**
OHAK	**Old Harbor**	**0.74**	**12**	*e*Pg	**Pn**	**21 51 00.1**	**+0.1**
OHAK				*e*S	**Sg**	**21 51 06.9**	**-0.4**
KDAK	**Kodiak Island**	**1.39**	**22**	*e*Pg	**Pb**	**21 51 09.8**	**+0.2**
KDAK				*e*S	**Sg**	**21 51 29.9**	**+1.8**
KDAK	**Kodiak Island**	**1.39**	**22**	Pn	**Pb**	**21 51 09.7**	**+0.2**
	86nm,0.3s,baz=216,slow=7.8,SNR=613						
KDAK				Sn	**Sn**	**21 51 26.3**	**-1.1**
	95nm,0.3s,baz=308,slow=19,SNR=16						
KABR	**Katmai Barrier**	**1.80**	**336**	P	**Pn**	**21 51 13.9**	**-0.7**
KABR				S	**Sn**	**21 51 36.2**	**-1.5**
MGLS	**Mageik Landsli**	**1.85**	**333**	P	**Pn**	**21 51 14.7**	**-0.6**
KCE	**Katmai Mt Cerb**	**1.95**	**334**	P	**Pn**	**21 51 16.6**	**-0.1**
KAKN	**Katmai Knife C**	**1.97**	**336**	P	**Pn**	**21 51 16.5**	**-0.5**
KAKN				S	**Sn**	**21 51 41.4**	**-0.4**
KAWH	**Katmai**	**2.00**	**341**	P	**Pn**	**21 51 17.0**	**-0.4**
KABU	**Katmai Buttres**	**2.00**	**333**	P	**Pn**	**21 51 17.4**	**-0.1**
KABU				S	**Sn**	**21 51 42.4**	**-0.2**
KELA	**Mount Kelaz**	**2.27**	**330**	P	**Pn**	**21 51 20.4**	**-0.7**
ANPK	**Aniakchak Peak**	**2.54**	**280**	P	**Pn**	**21 51 25.1**	**+0.3**
ANPK				S	**Sn**	**21 51 56.7**	**+0.9**
ANNW	**Aniakchak Nort**	**2.60**	**282**	P	**Pn**	**21 51 26.1**	**+0.5**
AZAC	**Aniakchak**	**2.60**	**281**	P	**Pn**	**21 51 26.0**	**+0.3**
CHGN	**Chignik**	**2.70**	**268**	*e*Pn	**Pn**	**21 51 29.7**	**+2.8**
CHGN				*e*S	**Sb**	**21 52 05.6**	**+0.6**
AUP	**Augustine Pinn**	**2.87**	**2**	P	**Pn**	**21 51 30.6**	**+1.3**
AUW	**Augustine West**	**2.88**	**1**	P	**Pn**	**21 51 30.5**	**+1.1**
AUNW	**Augustine NWes**	**2.88**	**1**	P	**Pn**	**21 51 30.6**	**+1.1**
OPT	**Oil Point**	**3.16**	**3**	P	**Pn**	**21 51 34.4**	**+1.1**
BRLK	**Bradley Lake**	**3.57**	**22**	P	**Pn**	**21 51 39.3**	**+0.4**
RSO	**Redoubt South**	**3.99**	**6**	*e*Pn	**Pn**	**21 51 45.7**	**+0.8**
RSO				*e*S	**Sb**	**21 52 44.4**	**+2.0**
SDPT	**Sand Point**	**4.05**	**256**	*e*Pn	**Pb**	**21 51 53.1**	**-1.8**
SDPT				*e*S	**Sg**	**21 52 52.6**	**-0.9**
DFR	**Drift River**	**4.13**	**6**	P	**Pn**	**21 51 47.4**	**+0.7**
SEW	**Seward**	**4.21**	**29**	*e*Pn	**Pn**	**21 51 47.6**	**-0.1**
SEW				*e*Pg	**Pg**	**21 52 03.8**	**-0.3**
BKG	**Blockade Glaci**	**4.63**	**8**	P	**Pn**	**21 51 54.1**	**+0.6**
SVW2	**Sparrevohn**	**4.72**	**348**	P	**Pn**	**21 51 54.9**	**+0.1**
CKL	**Chakachamna La**	**4.75**	**7**	P	**Pn**	**21 51 55.7**	**+0.5**
SPU	**Mount Spurr**	**4.76**	**9**	P	**Pn**	**21 51 56.0**	**+0.8**
BGL	**Barrier Glacie**	**4.81**	**7**	P	**Pn**	**21 51 56.6**	**+0.6**
RC01	**Rabbit Creek A**	**5.01**	**22**	*e*Pn	**Pn**	**21 51 58.6**	**-0.1**
STLK	**Strandline Lak**	**5.09**	**9**	P	**Pn**	**21 52 00.6**	**+0.7**
PMR	**Palmer**	**5.59**	**22**	*e*Pn	**Pn**	**21 52 05.5**	**-1.1**
EYAK	**Cordova Ski Ar**	**5.76**	**42**	P	**Pn**	**21 52 09.2**	**+0.2**
SML	**Sawmill**	**5.96**	**25**	*e*Pn	**Pn**	**21 52 12.7**	**+0.9**
	10nm,0.8s						
SML				*e*S	Sg	21 53 46.9	-7.8
VLZ	**Valdez**	**5.97**	**36**	P	**Pn**	**21 52 12.3**	**+0.5**
DIV	**Divide**	**6.16**	**38**	*e*Pn	**Pn**	**21 52 14.4**	**-0.1**
DIV				*e*S	**Sn**	**21 53 22.7**	**-2.3**
GOAT	**Goat Mountain**	**6.17**	**45**	P	**Pn**	**21 52 15.5**	**+0.8**
PPLA	**Purkeypile**	**6.45**	**6**	*e*Pn	**Pn**	**21 52 20.2**	**+1.6**
BMRM	**Bremner River**	**6.46**	**42**	P	**Pn**	**21 52 19.3**	**+0.6**
TT01	**Tatalina**	**6.54**	**350**	P	**Pn**	**21 52 20.0**	**+0.3**
TRF	**Thorofare Moun**	**7.16**	**12**	*e*Pn	**Pn**	**21 52 28.5**	**+0.2**
	26nm,0.8s						
TRF				*e*S	Sb	21 54 05.6	-7.8
MCK	**McKinley**	**7.61**	**16**	*e*Pn	**Pn**	**21 52 35.8**	**+1.4**
	8.9nm,0.6s						
PAX	**Paxson**	**7.66**	**29**	*e*Pn	**Pn**	**21 52 35.5**	**+0.4**
	14nm,0.8s						
PAX				*e*S	Sn	21 53 54.6	-7.4
DOT	**Dot Lake**	**8.59**	**30**	*e*Pn	**Pn**	**21 52 51.0**	**+3.2**
	16nm,1.0s						
DOT				*e*S	Sg	21 55 05.8	-13
COLA	**College**	**8.85**	**16**	*e*Pn	**Pn**	**21 52 53.1**	**+1.8**
EGAK	**Eagle**	**10.27**	**31**	*e*Pn	**Pn**	**21 53 12.2**	**+1.5**
	3.1nm,0.5s						
COLD	**Coldfoot**	**10.88**	**7**	*e*Pn	**Pn**	**21 53 21.1**	**+2.1**
TNA	**Tin City**	**11.41**	**329**	*e*Pn	Pn	21 53 30.4	+4.2
	3.9nm,0.7s						
INK	**Inuvik**	**14.94**	**30**	Pn	**Pn**	**21 54 14.5**	**+0.1**
INK	**Inuvik**	**14.94**	**30**	Pn	**Pn**	**21 54 14.5**	**+0.1**
	0.2nm,0.3s,baz=246,slow=12,SNR=12						
INK				LR	LR	22 00 41.1	
	comp=Z,68nm,20.7s,baz=64,slow=40						
YKW3	**Yellowknife Ar**	**20.40**	**57**	*e*P	Pn	21 55 22.7	+0.4
	0.1nm,0.8s						
YKA	**Yellowknife Ar**	**20.41**	**57**	P	Pn	21 55 23.1	+0.7
YKA	**Yellowknife Ar**	**20.41**	**57**	P	Pn	21 55 23.1	+0.7
	3.6nm,0.7s,baz=270,slow=9.3,SNR=39						
NEW	**Newport**	**23.48**	**95**	LR	LR	22 04 05.3	
	comp=Z,83nm,18.7s,baz=280,slow=34						
YBH	**Yreka Blue Hor**	**24.75**	**114**	LR	LR	22 04 15.2	
	comp=Z,77nm,19.6s,baz=168,slow=32						
PETK	**Petropavlovsk-**	**27.82**	**284**	P	**P**	**21 56 33.8**	**+1.2**
PETK	**Petropavlovsk-**	**27.82**	**284**	P	**P**	**21 56 33.8**	**+1.2**
	1.9nm,0.5s,baz=67,slow=11,SNR=6.8						
RES	**Resolute Bay**	**28.49**	**28**	P	P	21 56 43.8	+5.4
RES	**Resolute Bay**	**28.49**	**28**	P	P	21 56 43.8	+5.4
	0.7nm,0.5s,baz=282,slow=13,SNR=4.5						
KSRS	**Korea Array**	**53.71**	**285**	P	**P**	**22 00 04.3**	**-1.0**
	0.5nm,0.5s,baz=40,slow=6.1,SNR=4.9						
KSAR	**Wonju Array Be**	**53.74**	**285**	P	**P**	**22 00 04.3**	**-1.3**
ARCES	**ARCESS Array B**	**54.26**	**0**	P	**P**	**22 00 08.5**	**-0.5**
ARCES	**ARCESS Array B**	**54.26**	**0**	P	**P**	**22 00 08.5**	**-0.5**
	1.1nm,0.6s,baz=15,slow=7.5,SNR=12						
SONM	**Songino Array**	**56.64**	**307**	P	**P**	**22 00 26.6**	**0.0**
SONM				PcP	**PcP**	**22 01 23.6**	**+0.8**
SONM	**Songino Array**	**56.64**	**307**	P	**P**	**22 00 26.6**	**0.0**
	3.7nm,0.7s,baz=44,slow=6.6,SNR=37						
SONM				PcP	**PcP**	**22 01 23.6**	**+0.8**
	0.6nm,0.6s,baz=59,slow=2.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**60.03**	**324**	P	**P**	**22 00 49.8**	**-0.2**
ZALV	**Zalesovo Beam**	**60.03**	**324**	P	**P**	**22 00 49.8**	**-0.2**
	2.6nm,0.6s,baz=38,slow=7.1,SNR=16						
JOF	**Joensuu**	**60.85**	**357**	*e*p	**P**	**22 00 55.1**	**-0.3**
	1.9nm,0.6s						
KAF	**Kangasniemi**	**61.72**	**0**	*e*p	**P**	**22 01 00.2**	**-1.1**
	2.3nm,0.5s						
NB2	**NORSAR Subarra**	**62.19**	**8**	P	**P**	**22 01 05.0**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=352,slow=6.9						
NOA	**NORSAR Array B**	**62.19**	**8**	P	**P**	**22 01 05.0**	**+0.4**
NOA	**NORSAR Array B**	**62.19**	**8**	P	**P**	**22 01 05.0**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=352,slow=6.8,SNR=6.8						
FINES	**FINESS Array B**	**62.39**	**0**	P	**P**	**22 01 06.0**	**+0.1**
FINES	**FINESS Array B**	**62.39**	**0**	P	**P**	**22 01 06.0**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=11,slow=8.5,SNR=24						
KURK	**Kurchatov**	**64.77**	**326**	P	**P**	**22 01 22.1**	**+0.5**
KURK				PcP	**PcP**	**22 01 55.9**	**+0.8**
KURBB	**Kurchatov Arra**	**64.87**	**326**	P	**P**	**22 01 22.1**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=29,slow=6.8,SNR=15						
KURBB				PcP	**PcP**	**22 01 55.9**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=32,slow=4.7,SNR=4.2						
BVAR	**Borovoye Array**	**65.03**	**332**	P	**P**	**22 01 23.0**	**-0.4**
BVAR	**Borovoye Array**	**65.03**	**332**	P	**P**	**22 01 23.0**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=30,slow=6.4,SNR=26						
MKAR	**Makanchi Array**	**66.99**	**322**	P	**P**	**22 01 35.5**	**-0.7**
MKAR	**Makanchi Array**	**66.99**	**322**	P	**P**	**22 01 35.5**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=38,slow=6.7,SNR=20						
AKTO	**Aktyubinsk**	**70.26**	**339**	P	**P**	**22 01 56.0**	**-0.4**
AKTO	**Aktyubinsk**	**70.26**	**339**	P	**P**	**22 01 56.0**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=17,slow=7.4,SNR=12						
AKASG	**Malin Array Be**	**73.14**	**358**	P	**P**	**22 02 13.3**	**-0.4**
AKASG	**Malin Array Be**	**73.14**	**358**	P	**P**	**22 02 13.4**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=5.9,slow=6.1,SNR=5.7						
AAK	**Ala-Archa**	**73.25**	**325**	P	**P**	**22 02 15.3**	**+0.5**
AAK	**Ala-Archa**	**73.25**	**325**	P	**P**	**22 02 15.3**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=112,slow=2.6,SNR=7.0						
GERES	**GERESS Array B**	**74.48**	**9**	P	**P**	**22 02 22.6**	**+0.8**
GERES	**GERESS Array B**	**74.48**	**9**	P	**P**	**22 02 22.6**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=3.8,slow=5.9,SNR=6.5						
ESDC	**Sonseca Array**	**80.79**	**23**	P	**P**	**22 02 57.7**	**+0.6**
ESDC	**Sonseca Array**	**80.79**	**23**	P	**P**	**22 02 57.7**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=333,slow=5.1,SNR=5.2						
CMAR	**Chiang Mai Arr**	**84.05**	**294**	P	**P**	**22 03 14.3**	**0.0**
CMAR	**Chiang Mai Arr**	**84.05**	**294**	P	**P**	**22 03 14.3**	**0.0**
	comp=Z,0.8nm,0.4s,baz=18,slow=6.0,SNR=7.6						
CTA	**Charters Tower**	**91.43**	**235**	LR	LR	22 35 46.8	
	comp=Z,81nm,21.5s,baz=45,slow=30						

IDC 02 21:58:57.1±6.3**, 6°.09S×127°.83E, h462^{km}**±86^{km}**, mb2.7**/2**, mb1 3.2**/5**, mb1mx2.8**/19**, mbtmp3.0**/5**, Error ellipse: s-maj=67.8km s-min=31.5km az=54.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.13**	**190**	P	P	22 01 37.0	-0.3
	0.1nm,0.3s,baz=10,slow=11,SNR=2.8						
FITZ				S	S	22 03 50.3	+0.9
	0.1nm,0.3s,baz=274,slow=19,SNR=2.6						
WRA	**Warramunga Arr**	**15.15**	**156**	P	P	22 02 09.2	-0.5
	1.9nm,0.3s,baz=335,slow=11,SNR=102						
WRA				S	S	22 04 49.1	+0.3
	0.2nm,0.3s,baz=331,slow=20,SNR=6.8						
ASAR	**Alice Springs**	**18.43**	**162**	P	P	22 02 44.2	+0.7
	1.0nm,0.3s,baz=345,slow=12,SNR=47						
STKA	**Stephens Creek**	**28.70**	**155**	P	P	22 04 14.8	-0.7
	0.9nm,0.5s,baz=332,slow=13,SNR=3.8						
MKAR	**Makanchi Array**	**66.30**	**328**	P	P	22 08 58.7	0.0
	0.1nm,0.4s,baz=118,slow=8.0,SNR=4.3						

IDC 02 22:00:43.8±3.5**, 29°.29S×74°.43E, h0^{km}, mb3.8**/5**, mb1 4.1**/5**, mb1mx3.7**/21**, mbtmp3.8**/5**, MS3.6**/1**, Ms1 3.5**/1**, ms1mx2.9**/37**, Error ellipse: s-maj=106.0km s-min=38.6km az=46.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**38.97**	**187**	LR	LR	22 19 36.9	
	comp=Z,78nm,19.8s,baz=16,slow=29						
CMAR	**Chiang Mai Arr**	**53.04**	**30**	P	P	22 10 03.5	+0.7
	0.5nm,0.3s,baz=215,slow=6.2,SNR=5.0						
ASAR	**Alice Springs**	**53.05**	**99**	P	P	22 10 03.6	+0.5
	0.4nm,0.7s,baz=237,slow=6.5,SNR=3.2						
WRA	**Warramunga Arr**	**54.76**	**95**	P	P	22 10 14.7	-0.9
	1.9nm,0.9s,baz=252,slow=7.1,SNR=3.1						
MKAR	**Makanchi Array**	**76.06**	**6**	P	P	22 12 32.4	-0.5
	1.2nm,1.0s,baz=192,slow=5.6,SNR=6.3						
SONM	**Songino Array**	**81.97**	**21**	P	P	22 13 04.6	-0.8
	0.1nm,0.4s,baz=204,slow=3.2,SNR=3.7						
YKA	**Yellowknife Ar**	**146.27**	**8**	PKPbc	PKPbc	22 20 25.6	0.0
	0.6nm,0.9s,baz=334,slow=2.9,SNR=6.8						

*IDC **02** 22:03:02.0±2.4, 6°.10S×130°.08E, h0^{km}, mb3.4/1, mb1 3.8/4, mb1mx3.5/18, mbtmp3.6/4, ML3.7/3, Error ellipse: s-maj=94.7km s-min=29.9km az=77.0*
*AUST **02** 22:03:11.9, 6°.48S×130°.03E, h100^{km}*
*ISCJB **02** 22:03:11.8±1.0, 6°.52S±0°.05×129°.9E±0°.1, h146^{km}, mb3.2/1, Error ellipse: s-maj=18.4km s-min=6.4km az=13.7*
ISC 02 22:03:10.0±1.1**, 6°.49S**±0°.06×**129°.94E**±0°.10**, h146^{km}, n14,** σ**2^{s}87**/16**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TLE	**Tual**	**2.91**	**73**	P	**Pn**	**22 03 58.6**	**+2.5**
	baz=2.8,SNR=21						
TLE				S	**Sn**	**22 04 27.7**	**-4.0**
	baz=2.8,SNR=4.2						
FAKI	**Fak Fak**	**4.23**	**33**	P	**Pn**	**22 04 14.6**	**+1.4**
	baz=4.2,SNR=40						
FAKI				S	**Sn**	**22 04 58.8**	**-3.6**
	baz=4.2,SNR=19						
SWI	**Sorong**	**5.74**	**13**	P	**Pn**	**22 04 36.4**	**+3.0**
	baz=5.7,SNR=9.0						
SWI				S	**Sn**	**22 05 34.7**	**-3.7**
	baz=5.7,SNR=12						
MTN	**Manton Dam**	**6.42**	**170**	P	Pn	22 04 48.9	+6.5
	baz=6.5,SNR=4.0						
MTN				S	**Sn**	**22 05 55.9**	**+1.2**
	baz=6.5,SNR=6.0						
KDU	**Kakadu**	**6.65**	**158**	P	Pn	22 04 49.3	+3.9
	baz=6.7,SNR=38						
KDU				S	**Sn**	**22 05 57.7**	**-2.3**
	baz=6.7,SNR=9.3						
KNRA	**Kununurra**	**9.20**	**187**	P	Pn	22 05 25.3	+5.8
	baz=9.3,SNR=4.1						
KNRA				S	**Sn**	**22 07 02.1**	**+0.4**
	baz=9.3,SNR=6.9						
JAY	**Jayapura**	**11.44**	**70**	S	S	22 08 05.2	-11
	baz=11,SNR=3.2						
PCI	**Palu**	**11.50**	**298**	S	Sn	22 07 35.0	-22
	baz=12,SNR=5.3						
FITZ	**Fitzroy Crossi**	**12.28**	**200**	Pn	**P**	**22 06 04.9**	**-1.4**
	0.7nm,0.3s,baz=22,slow=13,SNR=13						
FITZ				Sn	**Sn**	**22 08 13.5**	**-2.4**
	1.4nm,0.3s,baz=230,slow=16,SNR=8.1						
FITZ	**Fitzroy Crossi**	**12.28**	**200**	P	**P**	**22 06 06.3**	**-0.1**
	baz=12,SNR=8.5						
FITZ				S	**Sn**	**22 08 16.4**	**+0.5**
	baz=12,SNR=6.1						
WRA	**Warramunga Arr**	**14.04**	**163**	Pn	**P**	**22 06 26.4**	**+0.4**
	0.3nm,0.3s,baz=345,slow=13,SNR=8.2						
WRA				Sn	Sn	22 08 49.9	-8.4
	0.6nm,0.3s,baz=346,slow=25,SNR=8.9						
COEN	**Coen**	**14.99**	**121**	P	**P**	**22 06 39.7**	**+3.2**
	baz=15,SNR=4.9						
ASAR	**Alice Springs**	**17.50**	**168**	Pn	Pn	22 07 11.4	+6.2
	0.2nm,0.3s,baz=348,slow=11,SNR=10						
ASAR				Sn	**S**	**22 10 14.4**	**-4.7**
	0.1nm,0.3s,baz=350,slow=26,SNR=4.1						
MKAR	**Makanchi Array**	**67.77**	**327**	P	P	22 14 00.1	+8.1
	0.2nm,0.4s,baz=114,slow=8.0,SNR=4.6						

*IDC **02** 22:27:01.0±0.4, 58°.93S×25°.61W, h0^{km}, mb4.8/16, mb1 4.8/17, mb1mx4.7/21, mbtmp4.8/17, ML4.6/1, MS4.0/13, Ms1 3.9/13, ms1mx3.9/18, Error ellipse: s-maj=16.8km*

s-min=12.7km az=56.0
ISCJB 02 22:27:04.9±0.3, 58°.94S±0°.06×25°.6W±0°.1, h35km, mb4.7/24, MS4.2/15, Error ellipse: s-maj=10.4km s-min=7.3km az=139.2
MOS 02 22:27:05.2±1.0, 58°.96S×25°.60W, h33km, mb5.0/11, Error ellipse: s-maj=24.7km s-min=12.3km az=102.9
NEIC 02 22:27:07.9±1.4, 58°.97S×25°.59W, h49km±12km, mb4.7/13, Error ellipse: s-maj=7.6km s-min=5.4km az=223.0
ISC 02 22:27:06.5±0.3, 58°.95S±0°.07×25°.68W±0°.07, h35km, n170, σ1§05/196, mb4.8/23, MS4.0/15, 6C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA2	Neumayer--Watz	14.20	155	ePn	Pn	22 30 23.4	-1.2
VNA2	Neumayer--Watz	14.20	155	eSn	Sn	22 32 47.7	-13
SNAA	Sanae	15.76	153	ePn	Pn	22 30 44.0	-1.5
SNAA	Sanae	15.76	153	eSn	Sn	22 33 25.3	-13
SNAA	Sanae	15.76	153	ePn	Pn	22 30 43.7	-1.7
	37nm,0.6s						
SNAA				eS	Sn	22 33 21.1	-18
SNAA				ePcP	PcP	22 35 44.1	+0.8
SNAA	Sanae	15.76	153	Pn	Pn	22 30 44.2	-1.2
	2.5nm,0.3s,baz=318,slow=14,SNR=196						
SNAA				Sn	Sn	22 33 25.3	-13
	0.6nm,0.3s,baz=294,slow=20,SNR=5.9						
SNAA				LR	LR	22 35 35.6	
	comp=Z,186nm,20.7s,baz=22,slow=33						
PMSA	Palmer Station	18.77	236	LR	LR	22 37 40.3	
	comp=Z,371nm,19.2s,baz=285,slow=34						
MAIT	Maitri	19.39	143	eP	P	22 31 18.9	-10
EFI	East Falkland	19.66	278⇑	eP	Pn	22 31 35.0	+1.4
EFI				pmax	pmax		
	comp=Z,106nm,1.1s						
EFI				MLR	MLR		
	comp=Z,151nm,17.0s						
EFI	East Falkland	19.66	278	eP	Pn	22 31 34.9	+1.4
	comp=Z,44nm,0.7s						
USHA	Ushuaia	23.41	261	P	P	22 32 12.4	+0.6
USHA	Ushuaia	23.41	261	P	P	22 32 12.4	+0.6
	comp=Z,18nm,0.6s,baz=95,slow=12,SNR=16						
TRQA	Tornquist	31.27	296	eP	P	22 33 23.9	+1.1
	comp=Z,2.7nm,0.7s						
QSPA	South Pole Qui	31.29	180	P	P	22 33 23.7	+0.9
QSPA				PcP	PcP	22 36 15.7	-0.4
QSPA	South Pole Qui	31.29	180	P	P	22 33 23.7	+0.9
	comp=Z,29nm,0.6s,baz=203,slow=4.2,SNR=398						
QSPA				PcP	PcP	22 36 15.7	-0.4
	comp=Z,10nm,0.8s,baz=284,slow=1.5,SNR=3.8						
PLCA	Paso Flores	33.38	283	eP	P	22 33 42.0	+0.7
PLCA				PcP	PcP	22 36 22.4	+0.2
PLCA	Paso Flores	33.38	283	P	P	22 33 41.8	+0.5
	comp=Z,6.1nm,0.6s,baz=146,slow=8.1,SNR=12						
PLCA				PcP	PcP	22 36 22.4	+0.2
	comp=Z,1.5nm,0.6s,baz=291,slow=1.3,SNR=3.4						
PLCA				LR	LR	22 46 07.8	
	comp=Z,128nm,18.2s,baz=296,slow=34						
MAW	Mawson	37.35	141	P	P	22 34 14.6	-0.3
MAW				PcP	PcP	22 36 33.3	+0.1
MAW	Mawson	37.35	141	P	P	22 34 14.6	-0.3
	comp=Z,5.2nm,0.6s,baz=220,slow=11,SNR=18						
MAW				PcP	PcP	22 36 33.3	+0.1
	comp=Z,5.2nm,0.7s,baz=216,slow=5.6,SNR=6.4						
MAW				LR	LR	22 47 45.8	
	comp=Z,242nm,19.1s,baz=240,slow=33						
CPUP	Villa Florida	39.36	312	P	P	22 34 31.1	-1.1
CPUP	Villa Florida	39.36	312	P	P	22 34 31.1	-1.1
	comp=Z,0.8nm,0.4s,baz=159,slow=9.2,SNR=7.3						
CPUP				LR	LR	22 48 12.4	
	comp=Z,112nm,20.0s,baz=144,slow=32						
CFAA	Coronel Fontan	39.49	295	P	P	22 34 33.3	-0.1
CFAA	Coronel Fontan	39.49	295	P	P	22 34 33.3	-0.1
	comp=Z,2.6nm,0.6s,baz=154,slow=9.0,SNR=56						
TLL	Tololo Astrono	41.90	293	eP	P	22 34 54.1	+0.5
TLL	Tololo Astrono	41.90	293	eP	P	22 34 54.1	+0.5
TLL	Tololo Astrono	41.90	293	eP	P	22 34 54.1	+0.5
LCO	Las Campanas	42.82	294	eP	P	22 35 01.1	0.0
LCO	Las Campanas	42.82	294	eP	P	22 35 01.1	0.0
SBA	Scott Base	43.23	184	eP	P	22 35 05.1	+1.6
SBA				e		22 36 53.4	
SBA				pmax	pmax		
	comp=Z,19nm,1.0s						
SBA	Scott Base	43.23	184	eP	P	22 35 05.1	+1.6
	comp=Z,19nm,1.0s						
SBA				ePcP	PcP	22 36 53.4	+1.4
VNDA	Vanda	43.70	182	eP	P	22 35 08.8	+1.5
	comp=Z,20nm,0.6s						
VNDA				PcP	PcP	22 36 54.0	+0.4
VNDA				ePcP	PP	22 36 54.7	+5.8
VNDA	Vanda	43.70	182	P	P	22 35 08.8	+1.5
	comp=Z,20nm,0.6s,baz=187,slow=6.6,SNR=129						
VNDA				PcP	PcP	22 36 54.0	+0.4
	comp=Z,5.3nm,0.8s,baz=149,slow=4.9,SNR=3.6						
VNDA				LR	LR	22 50 33.8	
	comp=Z,129nm,20.4s,baz=172,slow=32						
BOSA	Boshof	46.00	72	eP	P	22 35 26.6	+0.3
BOSA	Boshof	46.00	72	P	P	22 35 26.6	+0.3
	comp=Z,3.8nm,0.8s,baz=204,slow=9.3,SNR=9.1						
BOSA				LR	LR	22 49 48.9	
	comp=Z,199nm,21.5s,baz=186,slow=30						
BDFB	Brasilia	46.29	330	P	P	22 35 28.8	+0.2
BDFB	Brasilia	46.29	330	P	P	22 35 28.8	+0.2
	comp=Z,2.6nm,0.5s,baz=140,slow=6.2,SNR=8.6						
BDFB				LR	LR	22 51 41.6	
	comp=Z,144nm,20.1s,baz=24,slow=32						
LBTB	Lobatse	49.17	69	eP	P	22 35 51.8	+0.9
TSUM	Tsumeb	50.48	57	eP	P	22 36 01.6	+0.7
	comp=Z,6.0nm,0.9s						
CASY	Casey	50.89	159	eP	P	22 36 03.7	+0.4
LPAZ	La Paz	52.73	305	eP	P	22 36 18.4	+0.1
	comp=Z,4.4nm,0.8s						
LPAZ	La Paz	52.73	305	P	P	22 36 18.1	-0.2
	comp=Z,2.9nm,0.5s,baz=120,slow=6.7,SNR=12						
RCBR	Riachuelo	53.58	347	P	P	22 36 24.1	+0.2
	comp=Z,18nm,1.1s						
SAML	Samuel	57.43	314	eP	P	22 36 50.2	-1.3
	comp=Z,4.2nm,0.9s						
LSZ	Lusaka	58.74	66	eP	P	22 37 00.0	-0.9
	comp=Z,6.9nm,0.7s						
DBIC	Dimbokro	67.51	22	eP	P	22 37 59.2	+0.4
	comp=Z,6.1nm,0.6s						
DBIC	Dimbokro	67.51	22	P	P	22 37 59.2	+0.4
	comp=Z,9.3nm,0.7s,baz=174,slow=6.9,SNR=17						
DBIC				LR	LR	23 00 21.0	
	comp=Z,53nm,18.2s,baz=148,slow=30						
OTAV	Otavalo	71.94	303	eP	P	22 38 27.2	+0.6
	comp=Z,1.4nm,0.6s						
TOA0	Torodi Ar. Sit	75.22	28	eP	P	22 38 46.3	+1.0
TORD	Torodi Ar. Bea	75.22	28	P	P	22 38 46.3	+1.1
TORD	Torodi Ar. Bea	75.22	28	P	P	22 38 46.3	+1.1
	comp=Z,22nm,0.7s,baz=198,slow=6.2,SNR=266						
TORD				LR	LR	23 03 43.6	
	comp=Z,101nm,19.6s,baz=170,slow=29						
RPZ	Rata Peaks	76.76	192	P	P	22 38 54.2	+0.4
RPZ	Rata Peaks	76.76	192	P	P	22 38 54.2	+0.4
	comp=Z,15nm,0.9s,baz=169,slow=5.2,SNR=5.2						
RKT	Rikitea	79.85	242	eLR	LR	23 04 18.6	
	comp=Z,245nm,27.5s						
BBOO	Buckleboo	87.32	165	eP	P	22 39 49.1	-0.3
	comp=Z,656nm,1.6s						
STKA	Stephens Creek	88.89	169	eP	P	22 39 56.4	-0.5
	comp=Z,1.2nm,0.7s						
STKA	Stephens Creek	88.89	169	P	P	22 39 56.6	-0.3
	comp=Z,9.0nm,0.7s,baz=162,slow=4.6,SNR=28						
STKA				LR	LR	23 18 10.2	
	comp=Z,201nm,18.2s,baz=25,slow=34						
PPT2	Papeete2	91.08	232	eLR	LR	23 09 25.3	
	comp=Z,94nm,23.0s						
PPT	Papeete	91.10	232	LR	LR	23 11 31.4	
	comp=Z,132nm,21.1s,baz=195,slow=29						
ASAR	Alice Springs	95.97	161	P	P	22 40 28.8	-0.9
ASAR				PP	PP	22 44 20.6	-0.8
ASAR				PKiKP	PKiKP	22 45 07.5	-0.9
ASAR				PKKPbc	PKKPbc	22 57 16.6	+1.9
ASAR	Alice Springs	95.97	161	P	P	22 40 28.8	-0.9
	comp=Z,5.8nm,0.7s,baz=184,slow=4.0,SNR=60						
ASAR				PP	PP	22 44 20.6	-0.8
	comp=Z,1.3nm,0.9s,baz=175,slow=7.3,SNR=5.9						
ASAR				PKiKP	PKiKP	22 45 07.5	-0.9
	comp=Z,0.6nm,0.9s,baz=180,slow=0.9,SNR=3.9						
ASAR				PKKPbc	PKKPbc	22 57 16.6	+1.9
	comp=Z,1.8nm,0.6s,baz=16,slow=2.1,SNR=34						
ASAR				LR	LR	23 19 38.1	
	comp=Z,181nm,21.0s,baz=128,slow=33						
AS31	Alice Springs	95.97	161	eP	P	22 40 29.0	-0.7
DZM	Mont Dzumac	98.66	191	eLR	LR	23 12 59.0	
	comp=Z,95nm,22.8s						
WRA	Warramunga Arr	99.69	161	P	Pdif	22 40 44.9	-1.5
WRA	Warramunga Arr	99.69	161	P	Pdif	22 40 44.9	-1.5
	comp=Z,0.5nm,0.5s,baz=194,slow=4.2,SNR=4.1						
TXAR	Lajitas Array	108.83	296	PKiKP	PKiKP	22 45 31.0	-0.4
TXAR	Lajitas Array	108.83	296	PKiKP	PKiKP	22 45 31.0	-0.4
	comp=Z,0.8nm,1.1s,baz=166,slow=6.4,SNR=3.5						
GERES	GERESS Array B	112.17	27	PKiKP	PKiKP	22 45 35.7	-1.4
GERES	GERESS Array B	112.17	27	PKiKP	PKiKP	22 45 35.7	-1.4
	comp=Z,0.3nm,0.6s,baz=194,slow=2.0,SNR=4.9						
AKASG	Malin Array Be	118.07	36c	iPKIKP	PKPdf	22 45 47.2	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	118.07	36	PKP	PKPdf	22 45 47.3	-0.9
AKASG	Malin Array Be	118.07	36	PKP	PKPdf	22 45 47.3	-0.9
	comp=Z,1.7nm,0.6s,baz=233,slow=1.3,SNR=8.5						
SCHQ	Schefferville	118.15	334	PKP	PKPdf	22 45 47.5	-0.8
SCHQ	Schefferville	118.15	334	PKP	PKPdf	22 45 47.5	-0.8
	comp=Z,6.1nm,0.8s,baz=191,slow=3.0,SNR=13						
RSSD	Black Hills	121.20	304	ePKIKP	PKPdf	22 45 54.3	-0.5
RSSD	Black Hills	121.20	304	ePKPdf	PKPdf	22 45 54.3	-0.5
HWUT	Hardware Ranch	122.54	297	ePKPdf	PKPdf	22 45 56.9	-0.6
PDAR	Pinedale Array	122.54	300	PKP	PKPdf	22 45 56.5	-1.0
PDAR	Pinedale Array	122.54	300	PKP	PKPdf	22 45 56.5	-1.0
	comp=Z,0.7nm,0.4s,baz=122,slow=5.5,SNR=8.1						
ULM	Lac du Bonnet	122.89	314	PKP	PKPdf	22 45 56.4	-1.2
ULM	Lac du Bonnet	122.89	314	PKP	PKPdf	22 45 56.4	-1.2
	comp=Z,8.2nm,0.5s,baz=121,slow=1.8,SNR=9.9						
NB2	NORSAR Subarra	123.05	20	PKPdf	PKPdf	22 45 57.7	+0.1
	comp=Z,6.2nm,1.1s,baz=188,slow=1.9						
NB2	NORSAR Subarra	123.05	20	PKPdf	PKPdf	22 45 57.7	+0.1
	baz=188,slow=1.9						
NOA	NORSAR Array B	123.05	20	PKP	PKPdf	22 45 57.2	-0.4
NOA	NORSAR Array B	123.05	20	PKP	PKPdf	22 45 57.2	-0.4
	comp=Z,6.6nm,1.0s,baz=195,slow=1.7,SNR=10						
PYUN	Piuthan	123.18	90	eP	PKPdf	22 45 57.6	-1.5
	comp=Z,2µm,0.9s						
NVAR	Mina Array Bea	123.23	290	PKP	PKPdf	22 45 59.5	+0.6
NVAR	Mina Array Bea	123.23	290	PKP	PKPdf	22 45 59.5	+0.6
	comp=Z,1.2nm,0.5s,baz=123,slow=3.3,SNR=10						
CMAR	Chiang Mai Arr	123.27	111	PKP	PKPdf	22 45 59.1	-0.1
CMAR	Chiang Mai Arr	123.27	111	PKP	PKPdf	22 45 59.1	-0.1
	comp=Z,4.1nm,0.7s,baz=231,slow=3.9,SNR=24						
LOHW	Long Hollow	123.68	300	ePKPdf	PKPdf	22 45 59.3	-0.3
DANN	Dangsing	123.78	90	eP	PKPdf	22 45 59.2	-1.2
	comp=Z,20nm,0.7s						
MOOW	Moose Ponds	123.85	300	ePKPdf	PKPdf	22 45 60.0	+0.1
DMN	Daman	123.88	92	eP	PKPdf	22 45 59.8	-0.7
	comp=Z,18nm,0.9s						
GKN	Gorkha	123.95	91	eP	PKPdf	22 45 58.2	-2.3
	comp=Z,0.5nm,0.2s						
PKIN	Phulchoki	124.00	92	eP	PKPdf	22 46 00.6	-0.2
PKI	Pulchoki	124.00	92	eP	PKPdf	22 46 00.0	-0.9
	comp=Z,16nm,0.8s						
IMW	Indian Meadow	124.05	300	ePKPdf	PKPdf	22 46 00.8	+0.4
KKN	Kakani	124.11	92	eP	PKPdf	22 46 00.2	-0.7
	comp=Z,8.7nm,0.7s						
RAMN	Ramite	124.12	94	eP	PKPdf	22 46 01.0	0.0
	comp=Z,21nm,0.7s						
OBN	Obninsk	124.15	38	i PKIKP	PKPdf	22 45 59.2	-0.5
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSU	Vasula	124.15	30	i PKIKP	PKPdf	22 45 59.7	+0.1
ODAN	Odare	124.45	95	eP	PKPdf	22 46 01.4	-0.2
	comp=Z,17nm,0.8s						
GUN	Gumba	124.52	93	eP	PKPdf	22 46 01.4	-0.5
	comp=Z,14nm,0.7s						
GCMT	Greycliff	124.96	302	ePKPdf	PKPdf	22 46 02.5	+0.6
TAPN	Taplejung	125.02	95	eP	PKPdf	22 46 01.8	-1.0
	comp=Z,9.0nm,0.8s						
FINES	FINESS Array B	126.57	28	PKP	PKPdf	22 46 04.0	-0.3
FINES	FINESS Array B	126.57	28	PKP	PKPdf	22 46 04.0	-0.3
	comp=Z,4.6nm,0.6s,baz=148,slow=1.3,SNR=50						
KAF	Kangasniemi	127.21	28	ePKIKP	PKPdf	22 46 03.4	-2.0
KAF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KAF	Kangasniemi	127.21	28	epkp	PKPdf	22 46 03.4	-2.0
	comp=Z,7.6nm,0.7s						
MSO	Missoula	127.66	300	ePKPdf	PKPdf	22 46 06.8	-0.2
SWMT	Swartz Lake	128.20	300	ePKPdf	PKPdf	22 46 07.9	-0.1
ABKAR	Akbulak array	128.33	56	ePKPdf	PKPdf	22 46 07.5	-0.5
KSH	Kashi	128.53	76	ePKP	PKPdf	22 46 09.2	+0.3
KSH				esPKP		22 46 24.3	
KSH				ePKS	PKSdf	22 49 44.0	-1.5
KSH				eSKS	SKSdf	22 53 16.0	-1.5
KSH				AMB	AMB		
	comp=Z,200nm,5.5s						
KSH				LR	LR		
	comp=Z,110nm,4.3s						
KKAR	Karatay Array	128.55	69	ePKIKP	PKPdf	22 46 08.4	-0.2
KKAR	Karatay Array	128.55	69	ePKPdf	PKPdf	22 46 08.4	-0.2
FFC	Flin Flon	128.71	314	i PKIKP	PKPdf	22 46 09.6	+1.1
JOF	Joensuu	129.13	30	ePKIKP	PKPdf	22 46 08.1	-0.9
JOF				pmax	pmax		
	comp=Z,12nm,0.7s						
JOF	Joensuu	129.13	30	epkp	PKPdf	22 46 08.1	-0.9
	comp=Z,12nm,0.7s						
EKS2	Erkin-Say	129.81	71	ePKIKP	PKPdf	22 46 11.0	-0.2
EKS2	Erkin-Say	129.81	71	ePKPdf	PKPdf	22 46 11.0	-0.2
AAK	Ala-Archa	130.14	72	ePKIKP	PKPdf	22 46 11.5	-0.4
AAK	Ala-Archa	130.14	72	ePKPdf	PKPdf	22 46 11.5	-0.4
AAK	Ala-Archa	130.14	72	PKP	PKPdf	22 46 11.6	-0.4
	comp=Z,3.6nm,0.6s,baz=166,slow=2.9,SNR=20						
KMI	Kunming	130.77	110	PKP	PKPdf	22 46 14.8	+1.1
KMI				pPKP	pPKPdf	22 46 28.5	+3.4
KMI				sPKP		22 46 34.2	
KMI				LR	LR		
	comp=Z,32nm,25.9s						
ARCES	ARCESS Array B	133.34	22	PKP	PKPdf	22 46 16.2	-0.7
ARCES				SKPbc	SKPbc	22 49 42.6	+0.6
ARCES	ARCESS Array B	133.34	22	PKP	PKPdf	22 46 16.2	-0.7
	comp=Z,6.3nm,0.7s,baz=198,slow=2.4,SNR=14						
ARCES				SKPbc	SKPbc	22 49 42.6	+0.6
	comp=Z,1.2nm,0.7s,baz=231,slow=2.9,SNR=7.7						
GYA	Guiyang	133.78	113	ePdif	Pdif	22 43 18.0	+0.1
GYA				PKP	PKPdf	22 46 18.9	-0.3
GYA				sPKP		22 46 38.5	
GYA				PP	PP	22 48 52.4	+3.4
GYA				AMB	AMB		
	comp=Z,90nm,7.8s						
KEV	Kevo	133.82	23	ePKHKP	PKPpre	22 46 04.7	
KEV	Kevo	133.82	23	epkp	PKPpre	22 46 04.7	
BRVK	Borovoye	135.59	59⇑	iPKIKP	PKPdf	22 46 22.2	+0.6
BRVK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
BRVK				MLR	MLR		
	comp=Z,115nm,18.0s						
CD2	Chengdu	136.06	107	PKP	PKPdf	22 46 23.4	+0.1
MKAR	Makanchi Array	136.99	73c	iPKIKP	PKPdf	22 46 24.0	-0.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	136.99	73	PKPpre	PKPpre	22 46 15.9	
MKAR				PKP	PKPdf	22 46 22.9	-1.5
MKAR				SKPbc	SKPbc	22 49 51.8	-2.5
MKAR	Makanchi Array	136.99	73	PKhKP	PKPpre	22 46 15.9	
	comp=Z,0.8nm,0.7s,baz=212,slow=1.3,SNR=11						
MKAR				PKP	PKPdf	22 46 22.9	-1.5
	comp=Z,1.6nm,0.7s,baz=160,slow=2.3,SNR=7.3						
MKAR				SKPbc	SKPbc	22 49 51.8	-2.5
	comp=Z,1.2nm,0.9s,baz=239,slow=2.0,SNR=6.4						
WMQ	Urumqi	137.64	80	eP	PKPdf	22 46 26.2	+0.4
KURK	Kurchatov	137.86	67⇑	iPKIKP	PKPdf	22 46 27.4	+1.6
YKA	Yellowknife Ar	138.85	315	PKPpre	PKPpre	22 46 18.9	
YKA				PKP	PKPdf	22 46 26.8	-0.5
YKA				SKPbc	SKPbc	22 49 56.3	-2.8
YKA	Yellowknife Ar	138.85	315	PKhKP	PKPpre	22 46 18.9	
	comp=Z,0.4nm,0.4s,baz=123,slow=3.6,SNR=20						
YKA				PKP	PKPdf	22 46 26.8	-0.5
	comp=Z,17nm,0.6s,baz=128,slow=2.2,SNR=204						
YKA				SKPbc	SKPbc	22 49 56.3	-2.8
	comp=Z,0.5nm,0.8s,baz=134,slow=2.5,SNR=5.5						
YKW3	Yellowknife Ar	138.89	315	ePKPdf	PKPdf	22 46 27.1	-0.3
LZH	Lanzhou	140.23	102	ePKP	PKPdf	22 46 31.5	+0.6
GTA	Gaotai	140.70	95	ePKP	PKPdf	22 46 33.3	+1.7
GTA				sPKP		22 46 47.7	
GTA				PP	PP	22 49 37.7	+5.4
GTA				SKS	SKSdf	22 53 37.3	-1.5
GTA				SKKS	SKKSac	22 56 23.4	+1.1
GTA				SS	SS	23 07 59.0	+3.3
GTA				AMB	AMB		
	comp=Z,140nm,4.7s						
GTA				LR	LR		
	comp=N,120nm,16.4s						
GTA				LR	LR		
	comp=E,100nm,15.7s						
GTA				LR	LR		
	comp=Z,110nm,15.0s						
NVS	Novosibirsk	142.63	64	ePKIKP	PKPdf	22 46 30.7	-3.6
NVS				pmax	pmax		
	comp=N,1.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZALV	Zalesovo Beam	142.85	66	PKHKP	PKPpre	22 46 29.9	
ZALV	Zalesovo Beam	142.85	66	PKPpre	PKPpre	22 46 29.9	
ZALV	Zalesovo Beam	142.85	66	PKhKP	PKPpre	22 46 29.9	
	comp=Z,2.7nm,0.6s,baz=236,slow=2.7,SNR=10						
HVS	Khovu-Aksy	145.52	76⇑	iPKIKP	PKPdf	22 46 39.0	-0.7
HHC	Hu-ho-hao-te	147.77	105	ePKPbc	PKPbc	22 46 45.7	-1.0
HHC				pPKP	pPKPdf	22 46 55.6	+0.3
HHC				sPKP		22 46 59.2	
HHC				PP	PP	22 50 16.6	+2.1
HHC				PKS	PKSdf	22 50 20.2	+1.2
HHC				SKS	SKSdf	22 53 48.3	-1.0
HHC				SKKS	SKKSac	22 57 03.4	+0.8
HHC				AMB	AMB		
	comp=Z,190nm,10.7s						
HHC				LR	LR		
	comp=N,240nm,15.5s						
HHC				LR	LR		
	comp=E,210nm,15.5s						
HHC				LR	LR		
	comp=Z,190nm,16.7s						
MOY	Mondy	149.53	80	ePKP2	PKPab	22 46 57.0	+0.9
MOY				pmax	pmax		
	comp=Z,17nm,1.4s						
ZAK	Zakamensk	149.95	84	ePKIKP	PKPdf	22 46 46.0	-1.0
ZAK				e		22 46 51.3	
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
SONM	Songino Array	149.99	90	PKP	PKPdf	22 46 47.2	0.0
SONM				PKPbc	PKPbc	22 46 52.1	-0.1
SONM	Songino Array	149.99	90	PKP	PKPdf	22 46 47.2	0.0
	comp=Z,12nm,0.8s,baz=193,slow=3.2,SNR=13						
SONM				PKPbc	PKPbc	22 46 52.1	-0.1
	comp=Z,12nm,0.8s,baz=220,slow=3.5,SNR=52						
EGAK	Eagle	150.26	309	ePKPbc	PKPbc	22 46 52.5	+0.4
BMRM	Bremner River	150.33	300	ePKPbc	PKPbc	22 46 52.8	+0.3
ULN	Ulaanbaatar	150.35	91	ePKPbc	PKPbc	22 46 52.7	-0.3
DIV	Divide	150.91	300	ePKPbc	PKPbc	22 46 54.4	+0.5
DOT	Dot Lake	151.08	306	ePKPbc	PKPbc	22 46 54.3	+0.2
PAX	Paxson	151.45	304	ePKIKP	PKPbc	22 46 54.2	-0.9
PAX	Paxson	151.45	304	ePKPbc	PKPbc	22 46 54.2	-0.9
KSAR	Wonju Array Be	152.51	130	PKP	PKPdf	22 46 50.8	-0.4
KSAR				PKPbc	PKPbc	22 46 57.9	-0.3
KSRS	Korea Array	152.54	130	PKP	PKPdf	22 46 50.8	-0.4
	comp=Z,0.5nm,0.7s,baz=176,slow=39,SNR=3.8						
KSRS				PKPbc	PKPbc	22 46 57.9	-0.3
	comp=Z,2.9nm,0.7s,baz=198,slow=2.1,SNR=15						
COLA	College	153.02	307	ePKIKP	PKPbc	22 46 58.1	-0.3
COLA	College	153.02	307	ePKPbc	PKPbc	22 46 58.0	-0.3
MCK	McKinley	153.17	304	ePKIKP	PKPbc	22 46 59.1	+0.2
MCK	McKinley	153.17	304	ePKPbc	PKPbc	22 46 59.0	+0.2
MJAR	Matsushiro Arr	155.23	148	PKPbc	PKPdf	22 47 04.1	+8.9
MJAR				PKPab	PKPab	22 47 19.5	-0.8
MJAR	Matsushiro Arr	155.23	148	PKPbc	PKPdf	22 47 04.1	+8.9
	comp=Z,1.6nm,0.7s,baz=181,slow=2.7,SNR=6.0						
MJAR				PKPab	PKPab	22 47 19.5	-0.8
	comp=Z,2.0nm,0.6s,baz=193,slow=4.9,SNR=8.7						
USRK	Ussuriysk Arra	159.88	127	PKPab	PKPab	22 47 39.8	-0.3
	comp=Z,1.6nm,0.6s,baz=231,slow=2.0,SNR=3.3						
PETK	Petropavlovsk-	173.84	199	PKP2	PKPab	22 48 41.0	-0.5
PETK	Petropavlovsk-	173.84	199	PKPab	PKPab	22 48 41.0	-0.5
PETK	Petropavlovsk-	173.84	199	PKPab	PKPab	22 48 41.0	-0.5
	comp=Z,3.4nm,0.8s,baz=160,slow=10,SNR=3.3						

NNC 02 22:39:43.4±8.5, 38°.27N×70°.39E, h0km, mb3.7, mpv3.5, 1C-4D, Error ellipse: s-maj=66.8km s-min=43.9km az=3.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	4.83	1	⇑Pn	Pn	22 40 57.2	-0.2
	4.4nm,0.6s,baz=178,slow=16,SNR=30						
KK31				⇓Sn	Sn	22 41 53.9	-0.2
	8.4nm,0.3s,baz=176,slow=27,SNR=15						
TKM2	Tokmak 2	6.11	39	⇓Pn	Pn	22 41 13.3	-1.9
	1.6nm,0.4s						
TKM2				⇓Sn	Sn	22 42 30.4	+4.5
	1.3nm,0.5s						
AB31	Akbulak array	13.31	329	⇓P	Pn	22 42 54.9	+1.5
	0.2nm,0.3s,baz=136,slow=14,SNR=7.7						

IDC 02 23:25:47.9±5.6, 54°.66N×162°.33E, h28km±41km, mb3.4/8, mb1 3.7/10, mb1mx3.5/27, mbtmp3.4/10, ML3.3/2, Error ellipse: s-maj=26.5km s-min=12.5km az=6.0
MOS 02 23:25:47.2±1.5, 54°.61N×162°.36E, h46km, mb4.2/1, Error ellipse: s-maj=14.9km s-min=8.5km az=83.3
KRSC 02 23:25:47.3±0.1, 54°.61N×162°.36E, h33km±23km, ML4.0
ISC 02 23:25:44.9±1.4, 54°.63N±0°.03×162°.43E±0°.03, h11km±9km, n64, σ1§23/110, mb3.7/10, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.41	260	PN	Pn	23 25 55.9	-0.9
MKZ				S	Sb	23 26 01.5	+1.0
MKZ	Mys Kozlova	0.41	260	P	Pn	23 25 55.9	-0.9
MKZ				eS	Sb	23 26 01.5	+1.0
TUMR	Tumrok	1.47	297	eP	Pn	23 26 11.8	+0.4
TUMR				eS	Sn	23 26 29.4	-1.3
KBTR	Krutoberegovo	1.60	8	PN	Pg	23 26 15.8	+0.3
KBTR	Krutoberegovo	1.60	8	eP	Pg	23 26 15.8	+0.3
KBG	Krutoberegovo	1.64	5	PN	Pg	23 26 15.9	-0.3
KBG				S	Sg	23 26 37.3	-0.1
KBG	Krutoberegovo	1.64	5	eP	Pg	23 26 15.9	-0.3
KBG				eS	Sg	23 26 37.3	-0.1
BZGR	Bezymyannyi-Gr	1.64	324	eP	Pn	23 26 14.5	+0.7
BZGR				eS	Sn	23 26 34.7	-0.3
ZLN	Zelenaya	1.67	327	eP	Pb	23 26 15.9	+0.2
ZLN				eS	Sb	23 26 36.7	-0.1
KMNR	Kamenistaya	1.69	313	eP	Pb	23 26 15.3	-0.7
KMNR				eS	Sn	23 26 35.7	-0.4
BZMR	Bezymyannaya	1.71	320	eP	Pb	23 26 16.2	-0.3
BZMR				eS	Sn	23 26 36.9	+0.1
BZWR	Bezymyannyi-We	1.73	321	eP	Pb	23 26 16.2	-0.6
BZWR				eS	Sn	23 26 37.4	+0.1
LGNR	Loginova	1.76	326	P	Pb	23 26 17.5	+0.1
LGNR				eS	Sb	23 26 39.6	0.0
CIRR	Tsirk	1.77	328	eP	Pb	23 26 17.2	-0.2
CIRR				eS	Sb	23 26 39.1	-0.6
KIRR	Kirishev	1.78	319	eP	Pb	23 26 17.1	-0.6
KIRR				eS	Sn	23 26 38.7	+0.2
KPT	Kopyto	1.84	318	eP	Pb	23 26 17.6	-1.0
KPT				eS	Sn	23 26 39.8	0.0
KII	Karymskiy	1.84	252	eP	Pn	23 26 17.4	+0.9
KII				eS	Sn	23 26 38.5	-1.4
KRSR	Krestovskiy	1.91	327	eP	Pn	23 26 18.6	+1.1
KRSR				eS	Sn	23 26 41.7	+0.1
KLY	Klyuchi	1.97	330	PN	Pn	23 26 18.4	+0.3
KLY				S	Sn	23 26 41.3	-1.5
KLY	Klyuchi	1.97	330	eP	Pn	23 26 18.4	+0.3
KLY				eS	Sn	23 26 41.3	-1.5
SMKR	Semkarok	2.03	345	eP	Pb	23 26 20.6	-1.2
SMKR				eS	Sb	23 26 45.8	-1.3
KOZR	Kozyr	2.04	316	PN	Pb	23 26 21.0	-0.9
KOZR				S	Sb	23 26 46.0	-1.3
KOZ	Kozyrevsk	2.04	315	eP	Pb	23 26 21.0	-1.0
KOZ				eS	Sb	23 26 46.0	-1.4
BDR	Baidarnaya	2.06	341	eP	Pb	23 26 21.4	-0.9
BDR				eS	Sn	23 26 46.3	+1.0
SPN	Mys Shipunski	2.10	224	PN	Pn	23 26 19.8	-0.1
SPN				S	Sn	23 26 43.2	-2.8
SPN	Mys Shipunski	2.10	224	eP	Pn	23 26 19.8	-0.1
SPN				eS	Sn	23 26 43.2	-2.8
BKI	Bering	2.12	73	PN	Pn	23 26 20.8	+0.5
BKI				S	Sn	23 26 45.6	-1.0
BKI	Bering	2.12	73	eP	Pn	23 26 20.8	+0.5
BKI				eS	Sn	23 26 45.6	-1.0
SRKR	Sorokina	2.15	341	eP	Pb	23 26 22.7	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SRKR				eS	**Sn**	**23 26 48.6**	**+1.2**
SRDR	**Sredinnyy**	**2.29**	**319**	eP	**Pn**	**23 26 23.6**	**+1.0**
SRDR				eS	**Sn**	**23 26 50.6**	**-0.2**
NLC	**Nalytchevo**	**2.34**	**233**	eS	**Sn**	**23 26 50.0**	**-1.9**
SDLR	**Sedlovina**	**2.50**	**239**	eP	**Pn**	**23 26 26.6**	**+1.1**
SDLR				eS	**Sn**	**23 26 55.5**	**-0.5**
ESO	**Esso**	**2.50**	**303**	PN	**Pn**	**23 26 26.3**	**+0.8**
ESO				S	**Sn**	**23 26 54.9**	**-1.0**
ESO	**Esso**	**2.50**	**303**	eP	**Pn**	**23 26 26.3**	**+0.8**
ESO				eS	**Sn**	**23 26 54.9**	**-1.0**
SMAR	**Somma**	**2.55**	**239**	eP	**Pn**	**23 26 27.4**	**+1.1**
SMAR				eS	**Sn**	**23 26 56.7**	**-0.7**
KRER	**Koryakskii**	**2.55**	**240**	P	**Pn**	**23 26 28.1**	**+1.8**
KRER				eS	**Sn**	**23 26 57.9**	**+0.5**
UGLR	**Uglovaya**	**2.56**	**238**	eP	**Pn**	**23 26 27.7**	**+1.2**
UGLR				eS	**Sn**	**23 26 57.2**	**-0.5**
AVH	**Avacha**	**2.58**	**239**	P	**Pn**	**23 26 28.3**	**+1.7**
AVH				eS	**Sn**	**23 26 57.9**	**0.0**
KOK	**Koryaka**	**2.61**	**241**	P	**Pn**	**23 26 28.8**	**+1.7**
KOK				eS	**Sn**	**23 26 59.3**	**+0.4**
PET	**Petropavlovsk**	**2.76**	**236**	PN	**Pn**	**23 26 30.8**	**+1.8**
PET				S	**Sn**	**23 27 02.0**	**-0.3**
PET	**Petropavlovsk**	**2.76**	**236**	eP	**Pn**	**23 26 30.8**	**+1.8**
PET				eS	**Sn**	**23 27 02.0**	**-0.3**
GNL	**Ganaly**	**2.80**	**252**	eP	**Pn**	**23 26 31.5**	**+1.8**
GNL				eS	**Sn**	**23 27 04.1**	**+0.6**
PETK	**Petropavlovsk-**	**3.19**	**243**	PN	**Pn**	**23 26 36.1**	**+1.1**
PETK						23 27 12.5	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax	smax		
	comp=N,2.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.19**	**243**	Pn	**Pn**	**23 26 36.1**	**+1.1**
	comp=N,1.7nm,0.3s,baz=77,slow=17,SNR=26						
PETK				Sn	**Sn**	**23 27 12.5**	**-0.5**
	comp=N,2.4nm,0.3s,baz=84,slow=19,SNR=5.5						
RUS	**Russkaya**	**3.21**	**228**	PN	**Pn**	**23 26 36.3**	**+1.1**
RUS				S	**Sn**	**23 27 11.6**	**-1.8**
RUS	**Russkaya**	**3.21**	**228**	eP	**Pn**	**23 26 36.3**	**+1.1**
RUS				eS	**Sn**	**23 27 11.6**	**-1.8**
MTVR	**Mutnovka**	**3.32**	**231**	eP	**Pn**	**23 26 38.6**	**+1.7**
MTVR				eS	**Sn**	**23 27 16.3**	**-0.2**
ASAK	**Asacha**	**3.52**	**232**	P	**Pn**	**23 26 42.1**	**+2.5**
ASAK				eS	**Sn**	**23 27 22.2**	**+1.0**
APC	**Apacha**	**3.56**	**243**	eP	**Pn**	**23 26 42.7**	**+2.6**
APC				eS	**Sn**	**23 27 22.7**	**+0.6**
FX1	**Attu Island--F**	**6.60**	**101**	Pn	**Pn**	**23 27 23.4**	**+1.5**
	comp=N,2.7nm,0.3s,baz=338,slow=8.6,SNR=7.2						
FX1				Sn	**Sn**	**23 28 34.5**	**-2.6**
	comp=N,2.9nm,0.3s,baz=165,slow=20,SNR=6.6						
BILL	**Bilibino**	**13.58**	**6**	eP	**Pn**	**23 28 57.6**	**+0.5**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
YKA	**Yellowknife Ar**	**41.09**	**45**	P	**P**	**23 33 29.5**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=300,slow=8.3,SNR=7.5						
MKAR	**Makanchi Array**	**48.73**	**296**	P	**P**	**23 34 29.0**	**-0.2**
MKAR	**Makanchi Array**	**48.73**	**296**	P	**P**	**23 34 29.0**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=48,slow=6.7,SNR=4.0						
PDAR	**Pinedale Array**	**55.58**	**63**	P	**P**	**23 35 22.7**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=330,slow=5.3,SNR=3.4						
JOF	**Joensuu**	**56.74**	**336**	eP	**P**	**23 35 25.4**	**-2.7**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**56.74**	**336**	ep	**P**	**23 35 25.4**	**-2.7**
	comp=Z,1.1nm,0.5s						
KAF	**Kangasniemi**	**58.60**	**338**	eP	**P**	**23 35 38.7**	**-2.5**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KAF	**Kangasniemi**	**58.60**	**338**	ep	**P**	**23 35 38.7**	**-2.5**
	comp=Z,1.5nm,0.6s						
FINES	**FINESS Array B**	**59.24**	**337**	P	**P**	**23 35 44.3**	**-1.4**
	comp=Z,2.6nm,0.6s,baz=32,slow=8.2,SNR=18						
TXAR	**Lajitas Array**	**68.78**	**69**	P	**P**	**23 36 50.5**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=302,slow=5.2,SNR=7.5						
GERES	**GERESS Array B**	**73.59**	**339**	P	**P**	**23 37 17.0**	**-0.8**
	comp=Z,0.3nm,0.5s,baz=34,slow=7.1,SNR=4.4						
ASAR	**Alice Springs**	**81.74**	**206**	P	**P**	**23 38 03.7**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=17,slow=5.5,SNR=3.7						
ESDC	**Sonseca Array**	**85.34**	**350**	P	**P**	**23 38 21.8**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=26,slow=3.4,SNR=3.6						

ISK ***02*** *23:39:11.3, 38.°51N×27.°70E, h5^{km}, MD2.7*
DDA ***02*** *23:39:11.3, 38.°55N×27.°68E, h7^{km}, MD2.9*
CSEM ***02*** *23:39:12.1±0.3, 38.°53N×27.°73E, h2^{km}, MD2.7, Error ellipse: s-maj=7.4km s-min=4.9km az=160.0*
ISCJB ***02*** *23:39:12.2±0.7, 38.°52N±0.°06×27.°70E±0.°05, h11^{km}, Error ellipse: s-maj=9.3km s-min=4.4km az=150.1*
ISC 02 23:39:11.3±0.9**, 38.°53N**±0.°04×**27.°71E**±0.°03**, h11**^{km}**, n23,** σ**0.°49**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.36**	**13**	i P	**Pg**	**23 39 18.5**	**+0.1**
AKHS	**Akhisar**	**0.36**	**13**	i P	**Pg**	**23 39 18.5**	**+0.1**
AKS	**Akhisar**	**0.36**	**13**	ePG	**Pg**	**23 39 18.5**	**+0.1**
AKS				eSG	**Sb**	**23 39 24.7**	**-0.6**
AKS	**Akhisar**	**0.36**	**13**	ePg	**Pg**	**23 39 18.5**	**+0.1**
AKS				eSg	**Sb**	**23 39 24.7**	**-0.6**
BLCB	**Balcova**	**0.55**	**255**	ePG	**Pb**	**23 39 22.8**	**0.0**
BLCB				eSG	**Sg**	**23 39 29.3**	**+0.1**
BLCB	**Balcova**	**0.55**	**255**	ePg	**Pb**	**23 39 22.8**	**0.0**
BLCB				eSg	**Sg**	**23 39 29.3**	**+0.1**
KULA	**Kula-Manisa**	**0.74**	**91**	ePG	**Pg**	**23 39 25.8**	**+0.1**
KULA	**Kula-Manisa**	**0.74**	**91**	ePg	**Pg**	**23 39 25.8**	**+0.1**
URLA	**Izmir**	**0.89**	**259**	i P	**Pg**	**23 39 28.1**	**-0.4**
URLA				i S	**Sn**	**23 39 42.4**	**-0.4**
BALB	**Balikesir**	**1.11**	**7**	ePN	**Pn**	**23 39 33.6**	**+0.8**
BALB	**Balikesir**	**1.11**	**7**	ePn	**Pn**	**23 39 33.6**	**+0.8**
DST	**Dursunbey**	**1.28**	**33**	ePN	**Pg**	**23 39 36.7**	**+0.8**
DST	**Dursunbey**	**1.28**	**33**	ePn	**Pg**	**23 39 36.7**	**+0.8**
KHAL	**Karahalli**	**1.41**	**96**	i P	**Pg**	**23 39 38.6**	**+0.3**
KHAL	**Karahalli**	**1.41**	**96**	i P	**Pg**	**23 39 38.6**	**+0.3**
GONE	**Gonen-Balikesi**	**1.51**	**359**	ePN	**Pg**	**23 39 40.7**	**+0.4**
GONE	**Gonen-Balikesi**	**1.51**	**359**	ePn	**Pg**	**23 39 40.7**	**+0.4**
TVSB	**Tavsanli**	**1.64**	**56**	ePN	**Pg**	**23 39 42.6**	**-0.2**
TVSB	**Tavsanli**	**1.64**	**56**	ePn	**Pg**	**23 39 42.6**	**-0.2**
ARMT	**Armutlu**	**2.22**	**23**	ePN	**Pb**	**23 39 50.8**	**-0.6**
ARMT	**Armutlu**	**2.22**	**23**	ePn	**Pb**	**23 39 50.8**	**-0.6**
IZI	**Iznik**	**2.26**	**37**	ePN	**Pb**	**23 39 51.4**	**-0.7**
IZI	**Iznik**	**2.26**	**37**	ePn	**Pb**	**23 39 51.4**	**-0.7**

MEX 02 23:47:22.4±0.8**, 15.°96N**×**98.°77W, h17**^{km}±141^{km}**, MD3.8, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.76**	**55**	eP	Pb	23 47 34.6	-2.6
PNIG				i S	Sb	23 47 43.7	-3.5
ACX	**Acapulco**	**1.38**	**311**	i P	Pn	23 47 43.4	-3.6
ACX				i S	Sn	23 48 00.3	-4.7
CAIG	**El Cayaco**	**1.80**	**307**	eP	Pn	23 47 50.0	-2.7
CAIG				i P	Pb	23 47 50.1	-4.9
CAIG				eS	Sn	23 48 10.5	-4.7
HUIG	**Huatulco**	**2.57**	**94**	i P	Pn	23 48 00.6	-2.8
HUIG				i S	Sn	23 48 29.6	-4.6
ARIG	**Puente Sto Nin**	**2.76**	**327**	eP	Pn	23 48 04.1	-1.9
ARIG				eS	Sn	23 48 35.1	-3.9
YAIG	**Yautepec**	**2.90**	**354**	i P	Pn	23 48 05.6	-2.5
YAIG				eS	Sn	23 48 39.3	-3.6
ZIIG	**Zihuatanejo**	**3.06**	**303**	i P	Pn	23 48 07.2	-2.9

BJI ***03*** *00:10:31.4, 10.°83N×140.°87E, h27^{km}, mB5.3/41, mb4.7/43, Ms4.9/48, Ms7 4.7/48*
ISCJB ***03*** *00:10:34.0±1.1, 11.°09N±0.°04×140.°51E±0.°03, h25^{km}±7^{km}, mb4.9/124, MS4.7/52, Error ellipse: s-maj=6.0km s-min=5.3km az=18.2*
IDC ***03*** *00:10:35.3±5.0, 11.°07N×140.°52E, h23^{km}±32^{km}, mb4.5/21, mb1 4.6/22, mb1mx4.5/28, mbtmp4.5/22, ML4.7/1, MS4.5/26, Ms1 4.5/26, ms1mx4.4/31, Error ellipse: s-maj=16.7km s-min=10.1km az=79.0*
MOS ***03*** *00:10:35.9±1.0, 11.°29N×140.°45E, h33^{km}, mb5.1/55, MS4.9/12, Error ellipse: s-maj=9.8km s-min=6.4km az=113.3*
NEIC ***03*** *00:10:36.0±2.3, 11.°10N×140.°51E, h28^{km}±16^{km}, mb5.0/58, Error ellipse: s-maj=6.0km s-min=5.0km az=70.0*
GCMT ***03*** *00:10:37.9±0.1, 10.°96N×140.°38E, h12^{km}, MW5.2, Moment Tensor Solution. s58,c94; s72,c143; Moment tensor: Scale 10^{16}Nm; M_{rr}6.40±.15; $M_{\theta\theta}$-6.87±.12; $M_{\phi\phi}$0.47±.15; $M_{r\theta}$1.85±.35; $M_{\theta\phi}$-2.70±.12; $M_{\phi r}$-2.28±.43; Best double couple: $M_0$7.80000×10^{16} NP1:ϕ_s230.00000°, δ45.00000°, λ56.00000°. NP2:ϕ_s94.00000°, δ54.00000°, λ119.00000°. Principal axes: T 7.6600, Plg66.0000°, Azm63.0000°; N 0.1700, Plg23.0000°, Azm255.0000°; P -7.8400, Plg4.0000°, Azm163.0000°; Data Used: II IU IC G.*
DJA ***03*** *00:10:41.5±1.6, 12°N±16°×14°0E±1°8, h66^{km}±26^{km}, M5.4/8, mB5.5/5, mb5.0/8, MLv5.9/1, Mw(mB)5.0/5*
ISC 03 00:10:36.7±0.3**, 11.°09N**±0.°04×**140.°53E**±0.°04**, h32**^{km}±1^{km}**, h32**^{km}**:pP-P, n335,** σ**1.°38**/403**, mb5.0**/131**, MS4.6**/52**, 44C-30D, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.92**	**59**	ePn	**Pn**	**00 11 49.8**	**+1.4**
GUMO				eS	**Sb**	**00 12 57.7**	**-3.1**
GUMO	**Guam**	**4.92**	**59**	Pn	**Pn**	**00 11 49.2**	**+0.8**
	31nm,0.3s,baz=212,slow=11,SNR=12						
GUMO				Sn	**Sn**	**00 12 45.2**	**+1.0**
	33nm,0.3s,baz=252,slow=20,SNR=2.5						
BAKI	**Biak**	**12.96**	**200**	P	**P**	**00 13 51.3**	**+2.3**
	110nm,1.4s						
SWI	**Sorong**	**15.03**	**218**	P	**P**	**00 14 15.1**	**+3.2**
	35nm,1.3s,2µm						
DAV	**Davao City (W)**	**15.29**	**256**	LR	LR	00 19 50.5	
	comp=Z,95nm,18.3s,baz=104,slow=36						
FAKI	**Fak Fak**	**16.17**	**211**	P	**P**	**00 14 25.5**	**+0.9**
	103nm,1.2s,2µm						
LBMI	**Labuha**	**17.42**	**229**	P	**P**	**00 14 42.7**	**+4.2**
	90nm,1.3s,2µm						
TLE	**Tual**	**18.33**	**205**	P	Pn	00 14 57.1	+8.4
	124nm,1.7s						
MSAI	**Masohi**	**18.41**	**219**	P	**Pn**	**00 14 52.5**	**+2.9**
	32nm,1.6s						
JOW	**Kunigami**	**19.46**	**325**	ePn	**Pn**	**00 15 02.9**	**+0.7**
	27nm,1.0s						
LUWI	**Luwuk**	**21.38**	**237**	P	**P**	**00 15 22.8**	**+1.1**
	384nm,1.0s,3µm						
PMG	**Port Moresby**	**21.40**	**162**	eP	**P**	**00 15 20.9**	**-1.0**
	98nm,1.1s						
PMG				S	**S**	**00 19 18.2**	**+0.4**
PMG	**Port Moresby**	**21.40**	**162**	P	**P**	**00 15 20.6**	**-1.3**
	14nm,0.6s,baz=359,slow=7.8,SNR=5.8						
PMG				S	**S**	**00 19 18.2**	**+0.4**
	3.7nm,0.5s,baz=356,slow=19,SNR=2.3						
JHJ	**Hachijo jima 2**	**21.94**	**358**	LR	LR	00 22 24.0	
	comp=Z,1µm,18.9s,baz=110,slow=32						
YULB	**Yu-li**	**22.04**	**306**	eP	**P**	**00 15 25.8**	**-3.0**
SSLB	**Suanglung**	**22.51**	**307**	eP	**P**	**00 15 32.6**	**-1.2**
	207nm,1.8s						
TPUB	**Ta-pu**	**22.52**	**305**	eP	**P**	**00 15 34.2**	**+0.2**
	79nm,1.1s						
YHNB	**Yeheng**	**22.65**	**309**	eP	**P**	**00 15 35.6**	**+0.2**
	53nm,0.9s						
JNU	**Nakatsue**	**23.66**	**339**	eP	**P**	**00 15 45.2**	**-0.1**
	22nm,1.0s						
JNU	**Nakatsue**	**23.66**	**339**	P	**P**	**00 15 45.7**	**+0.4**
	22nm,0.6s,baz=136,slow=2.7,SNR=29						
JNU				LR	LR	00 23 36.7	
	comp=Z,617nm,18.6s,baz=321,slow=33						
BBSI	**Bau Bau**	**24.30**	**228**	P	P	00 15 56.4	+4.9
QZH	**Quanzhou**	**24.95**	**306**	P	**P**	**00 15 59.6**	**+2.3**
QZH				S	**S**	**00 20 13.4**	**-5.6**
QZH				LR	LR		
	comp=N,2µm,11.6s						
QZH				LR	LR		
	comp=E,1µm,10.5s						
QZH				LR	LR		
	comp=Z,2µm,13.2s						
MJAR	**Matsushiro Arr**	**25.43**	**356**	P	**P**	**00 16 00.2**	**-1.3**
MJAR	**Matsushiro Arr**	**25.43**	**356**	P	**P**	**00 16 00.2**	**-1.3**
	comp=Z,5.3nm,0.7s,baz=178,slow=9.9,SNR=22						
MJAR				LR	LR	00 25 36.6	
	comp=Z,746nm,18.5s,baz=175,slow=36						
MAJO	**Matsushiro**	**25.43**	**356**	eP	**P**	**00 16 00.6**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,16nm,0.8s						
MAJO	**Matsushiro**	**25.43**	**356**	eP	**P**	**00 16 00.6**	**-1.0**
	comp=Z,16nm,0.8s						
MAT	**Matsushiro**	**25.43**	**356**	P	**P**	**00 16 00.2**	**-1.4**
MAT				S	**S**	**00 20 32.0**	**+5.5**
KAPI	**Kappang**	**26.14**	**233**	P	**P**	**00 16 06.2**	**-2.0**
	comp=Z,22nm,1.1s						
KAPI	**Kappang**	**26.14**	**233**	P	**P**	**00 16 07.0**	**-1.2**
	comp=Z,8.5nm,1.0s,baz=46,slow=8.2,SNR=2.8						
KAPI				LR	LR	00 26 16.4	
	comp=Z,469nm,18.5s,baz=172,slow=36						
HNR	**Honiara**	**28.08**	**136**	eP	**P**	**00 16 24.6**	**-1.0**
HNR	**Honiara**	**28.08**	**136**	P	**P**	**00 16 24.3**	**-1.3**
	comp=Z,37nm,0.6s,baz=213,slow=5.3,SNR=3.5						
HNR				LR	LR	00 25 28.8	
	comp=Z,1µm,19.1s,baz=133,slow=32						
KSRS	**Korea Array**	**28.60**	**339**	P	**P**	**00 16 30.3**	**+0.3**
	comp=Z,3.5nm,0.9s,baz=161,slow=10,SNR=12						
KSRS				PcP	**PcP**	**00 19 41.2**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=179,slow=1.8,SNR=8.5						
KSRS				LR	LR	00 25 43.7	
	comp=Z,1µm,21.9s,baz=73,slow=32						
KSAR	**Wonju Array Be**	**28.60**	**339**	P	**P**	**00 16 30.3**	**+0.2**
KSAR				PcP	**PcP**	**00 19 41.2**	**+0.5**
NJ2	**Nanjing**	**28.90**	**320**	eP	**P**	**00 16 31.4**	**-1.3**
NJ2				pP	**pP**	**00 16 43.8**	**+1.7**
NJ2				sP	sP	00 16 51.7	+5.6
NJ2				PP	**PnPn**	**00 17 25.7**	**+0.8**
NJ2				S	**S**	**00 21 17.0**	**-4.2**
NJ2				sS	**sS**	**00 21 38.5**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,300nm,4.9s						
NJ2				LR	LR		
	comp=N,2µm,23.7s						
NJ2				LR	LR		
	comp=E,2µm,25.5s						
NJ2				LR	LR		
	comp=Z,1µm,33.7s						
QIZ	**Qiongzhong**	**30.63**	**289**	P	**P**	**00 16 48.1**	**-0.2**
QIZ				pP	**pP**	**00 16 54.6**	**-3.0**
QIZ				S	**S**	**00 21 50.2**	**+1.5**
QIZ				pmax	pmax		
	comp=Z,250nm,4.1s						
QIZ				LR	LR		
	comp=N,1µm,17.8s						
QIZ				LR	LR		
	comp=Z,1µm,17.8s						
WRAB	**Tennant Creek**	**31.42**	**191**	eP	**P**	**00 16 54.9**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,23nm,1.2s						
WRAB	**Tennant Creek**	**31.42**	**191**	eP	**P**	**00 16 54.9**	**-0.2**
	comp=Z,23nm,1.2s						
WRAB	**Tennant Creek**	**31.42**	**191**	P	**P**	**00 16 55.9**	**+0.8**
	comp=Z,92nm,1.0s,SNR=8.0						
WRA	**Warramunga Arr**	**31.43**	**191**	P	**P**	**00 16 55.1**	**-0.2**
WRA				PcP	**PcP**	**00 19 49.6**	**+1.3**
WRA	**Warramunga Arr**	**31.43**	**191**	P	**P**	**00 16 55.1**	**-0.2**
	comp=Z,15nm,0.9s,baz=11,slow=9.4,SNR=29						
WRA				PcP	**PcP**	**00 19 49.6**	**+1.3**
	comp=Z,1.9nm,0.6s,baz=8.1,slow=2.9,SNR=5.5						
WRA				LR	LR	00 29 22.1	
	comp=Z,2µm,19.4s,baz=10.0,slow=36						
CTA	**Charters Tower**	**31.49**	**170**	LR	LR	00 28 44.0	
	comp=Z,853nm,18.3s,baz=16,slow=35						
FITZ	**Fitzroy Crossi**	**32.52**	**207**	LR	LR	00 31 22.3	
	comp=Z,144nm,18.1s,baz=32,slow=38						
YUK	**Yuzh-Kuril'sk**	**33.15**	**7**	d iP	**P**	**00 17 08.0**	**-2.1**
YUK				i		00 18 13.4	
YUK				i S	**S**	**00 22 27.4**	**0.0**
YUK				i SS	**SnSn**	**00 24 27.8**	**-0.5**
YUK				pmax	pmax		
	comp=Z,136nm,1.6s						
YUK				pmax	pmax		
	comp=N,93nm,1.6s						
YUK				pmax	pmax		
	comp=E,112nm,1.6s						
YUK				MLR	MLR		
	comp=N,671nm,18.0s						
YUK				MLR	MLR		
	comp=E,418nm,18.0s						
YUK				MLR	MLR		
	comp=Z,432nm,18.0s						
USRK	**Ussuriysk Arra**	**33.81**	**349**	P	**P**	**00 17 16.3**	**+0.5**
	comp=Z,4.4nm,0.7s,baz=164,slow=9.7,SNR=8.7						
USRK				LR	LR	00 27 53.9	
	comp=Z,1µm,20.2s,baz=143,slow=31						
SNY	**Shenyang**	**34.04**	**337**	⇓P	**P**	**00 17 20.3**	**+2.5**
SNY				S	S	00 22 52.8	+12
SNY				pmax	pmax		
	comp=Z,180nm,5.5s						
SNY				LR	LR		
	comp=N,760nm,14.7s						
SNY				LR	LR		
	comp=E,900nm,14.9s						
SNY				LR	LR		
	comp=Z,1µm,16.4s						
MDJ	**Mudanjiang**	**34.71**	**346**	P	**P**	**00 17 25.2**	**+1.5**
MDJ				pP	**pP**	**00 17 31.3**	**-1.8**
MDJ				sP	**sP**	**00 17 34.0**	**-3.0**
MDJ				PP	**PP**	**00 18 44.9**	**+2.2**
MDJ				PcP	**PcP**	**00 19 53.6**	**-3.5**
MDJ				S	**S**	**00 22 55.6**	**+4.0**
MDJ				sS	**sS**	**00 23 09.1**	**+1.9**
MDJ				ScS	**ScS**	**00 27 41.0**	**-2.3**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,130nm,6.7s						
MDJ				LR	LR		
	comp=N,700nm,16.1s						
MDJ				LR	LR		
	comp=E,440nm,16.7s						
MDJ				LR	LR		
	comp=Z,990nm,16.7s						
CN2	**Changchun**	**35.11**	**341**	eP	**P**	**00 17 26.7**	**-0.4**
CN2				epP	**pP**	**00 17 36.4**	**-0.2**
CN2				esP	**sP**	**00 17 40.3**	**-0.2**
CN2				PP	**PnPn**	**00 18 45.9**	**+0.8**
CN2				eS	**S**	**00 22 57.9**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s						
CN2				LR	LR		
	comp=E,600nm,14.0s						
CN2				LR	LR		
	comp=Z,800nm,14.0s						
AS31	**Alice Springs**	**35.14**	**191**	eP	**P**	**00 17 27.1**	**-0.5**
ASAR	**Alice Springs**	**35.14**	**191**	P	**P**	**00 17 27.4**	**-0.2**
ASAR				PcP	**PcP**	**00 19 59.7**	**+1.0**
ASAR	**Alice Springs**	**35.14**	**191**	P	**P**	**00 17 27.4**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=19,slow=12,SNR=35						
ASAR				PcP	**PcP**	**00 19 59.7**	**+1.0**
	comp=Z,2.7nm,0.9s,baz=24,slow=2.5,SNR=4.1						
ASAR				LR	LR	00 31 36.7	
	comp=Z,1µm,18.1s,baz=7.8,slow=36						
GYA	**Guiyang**	**35.38**	**300**	⇑iP	**P**	**00 17 32.0**	**+2.2**
GYA				pP	**pP**	**00 17 38.6**	**-0.7**
GYA				sP	**sP**	**00 17 43.4**	**+0.2**
GYA				PP	**PP**	**00 18 51.0**	**+0.5**
GYA				PcP	**PcP**	**00 20 01.4**	**+1.8**
GYA				S	**S**	**00 23 01.8**	**-0.8**
GYA				ScP	**ScP**	**00 23 41.9**	**-1.3**
GYA				PcS	**PcS**	**00 23 48.0**	**+1.1**
GYA				ScS	**ScS**	**00 27 45.6**	**-2.3**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.1s						
GYA				LR	LR		
	comp=N,840nm,17.6s						
GYA				LR	LR		
	comp=E,610nm,18.7s						
GYA				LR	LR		
	comp=Z,790nm,17.7s						
YSS	**Yuzh-Sakhalins**	**35.80**	**3**	eP	**P**	**00 17 33.0**	**+0.1**
YSS				eS	**S**	**00 23 10.0**	**+1.8**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
BJI	**Beijing**	**36.01**	**327**	P	**P**	**00 17 36.4**	**+1.6**
BJI				pP	**pP**	**00 17 42.2**	**-2.1**
BJI				sP	**sP**	**00 17 44.9**	**-3.3**
BJI				PP	**PP**	**00 18 58.0**	**+0.9**
BJI				S	**S**	**00 23 14.1**	**+2.5**
BJI				pmax	pmax		
	comp=Z,32nm,0.6s						
BJI				pmax	pmax		
	comp=Z,300nm,6.0s						
BJI				LR	LR		
	comp=N,980nm,16.4s						
BJI				LR	LR		
	comp=E,520nm,19.3s						
BJI				LR	LR		
	comp=Z,590nm,16.9s						
HABR	**Khabarovsk**	**37.55**	**354**	eP	**P**	**00 17 45.4**	**-2.4**
HABR				e*SP	**sP**	**00 18 01.7**	**+0.5**
HABR				e		00 19 11.7	
HABR				PPP	PPP	00 19 30.4	
HABR				eS	**S**	**00 23 33.0**	**-1.9**
HABR				e		00 23 51.1	
HABR				SSS	SSS	00 26 32.3	
HABR				e		00 27 54.8	
HABR				pmax	pmax		
	comp=E,111nm,2.9s						
HABR				pmax	pmax		
	comp=N,53nm,1.6s						
HABR				pmax	pmax		
	comp=Z,56nm,1.3s						
HABR				MLR	MLR		
	comp=Z,750nm,17.0s						
KMI	**Kunming**	**38.39**	**297**	P	**P**	**00 17 57.3**	**+1.7**
KMI				pP	**pP**	**00 18 06.1**	**+1.0**
KMI				sP	**sP**	**00 18 11.0**	**+2.0**
KMI				PP	**PnPn**	**00 19 25.0**	**-0.6**
KMI				S	**S**	**00 23 45.0**	**-3.7**
KMI				pmax	pmax		
	comp=Z,280nm,7.3s						
KMI				LR	LR		
	comp=N,1µm,15.7s						
KMI				LR	LR		
	comp=E,640nm,15.0s						
KMI				LR	LR		
	comp=Z,1µm,23.1s						
KLR	**Kul'dur**	**38.72**	**351**	eP	P	00 17 53.3	-4.4
KLR				eS	S	00 23 43.0	-10
KLR				pmax	pmax		
	comp=Z,57nm,1.4s						
KLR				MLR	MLR		
	comp=Z,3µm,13.0s						
HHC	**Hu-ho-hao-te**	**39.11**	**324**	eP	**P**	**00 18 00.3**	**-0.9**
HHC				pP	**pP**	**00 18 10.1**	**-0.7**
HHC				sP	**sP**	**00 18 14.1**	**-0.6**
HHC				PP	**PnPn**	**00 19 34.6**	**+0.7**
HHC				PcP	**PcP**	**00 20 10.4**	**-0.2**
HHC				S	**ScP**	**00 23 57.4**	**+0.6**
HHC				sS	**sS**	**00 24 13.7**	**-0.9**
HHC				pmax	pmax		
	comp=Z,19nm,0.6s						
HHC				pmax	pmax		
	comp=Z,470nm,3.9s						
HHC				LR	LR		
	comp=N,1µm,15.4s						
HHC				LR	LR		
	comp=E,1µm,15.7s						
HHC				LR	LR		
	comp=Z,1µm,18.9s						
CD2	**Chengdu**	**39.34**	**306**	P	**P**	**00 18 03.2**	**0.0**
CD2				pP	**pP**	**00 18 11.4**	**-1.4**
CD2				sP	**sP**	**00 18 15.1**	**-1.6**
CD2				PP	**PnPn**	**00 19 38.1**	**+1.4**
CD2				PcP	**PcP**	**00 20 12.1**	**+0.6**
CD2				PcS	**PcS**	**00 24 00.6**	**-0.8**
CD2				S	**S**	**00 24 02.4**	**-0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,330nm,6.6s						
CD2				LR	LR		
	comp=N,990nm,13.7s						
CD2				LR	LR		
	comp=E,700nm,11.2s						
CD2				LR	LR		
	comp=Z,550nm,16.2s						
BTO	**Baotou**	**39.85**	**323**	eP	**P**	**00 18 07.4**	**0.0**

CMAR Chiang Mai Arr 40.80 285 P **P 00 18 15.1 -0.4**
CMAR Chiang Mai Arr 40.80 285 P **P 00 18 15.1 -0.4**
comp=Z,25nm,1.1s,baz=95,slow=6.9,SNR=44
CMAR LR LR 00 33 36.1
comp=Z,505nm,19.0s,baz=93,slow=34
CHTO Chiang Mai 40.83 286 *e*P **P 00 18 15.4 -0.3**
CHTO pmax pmax
comp=Z,9.0nm,1.1s
CHTO Chiang Mai 40.83 286 *e*P **P 00 18 15.4 -0.3**
comp=Z,8.6nm,1.1s
DZM Mont Dzumac 41.62 142 *e*S **S 00 24 36.2 -0.5**
DZM comp=Z,596nm,26.5s
*e*LR LR 00 29 54.8
comp=Z,3µm,22.9s
DZM Mont Dzumac 41.62 142 LR LR 00 33 09.2
comp=Z,2µm,21.3s,baz=117,slow=32
PSI Prapat 42.07 262 P **P 00 18 26.1 +0.1**
PSI Prapat 42.07 262 P **P 00 18 26.1 +0.1**
comp=Z,17nm,0.8s,baz=123,slow=3.6,SNR=7.2
STKA Stephens Creek 42.73 179 *e*P **P 00 18 30.6 -0.3**
comp=Z,2.5nm,1.0s
STKA Stephens Creek 42.73 179 P **P 00 18 30.8 -0.1**
comp=Z,6.5nm,1.1s,baz=327,slow=9.5,SNR=5.1
STKA LR LR 00 36 44.3
comp=Z,893nm,19.1s,baz=159,slow=37
FORT Forrest 43.31 196 *e*P **P 00 18 36.7 +1.0**
comp=Z,37nm,1.0s
BBOO Buckleboo 43.86 185 *e*P **P 00 18 41.5 +1.5**
comp=Z,1µm,2.0s
PETK Petropavlovsk- 44.12 15 LR LR 00 33 54.3
comp=Z,271nm,19.4s,baz=186,slow=32
PET Petropavlovsk 44.29 16 *e*P **P 00 18 46.1 +2.8**
PET *e*S **S 00 25 17.3 +2.3**
PET pmax pmax
comp=Z,200nm,9.3s
GTA Gaotai 45.80 315 *e*P **P 00 18 56.3 +0.6**
GTA pP **pP 00 19 04.0 -1.4**
GTA sP **sP 00 19 07.3 -2.0**
GTA PcP **PcP 00 20 34.1 +1.2**
GTA S **S 00 25 38.6 +1.0**
GTA sS **sS 00 25 51.4 -2.1**
GTA SS **ScS 00 28 54.1 +4.4**
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,170nm,6.9s
GTA LR LR
comp=N,400nm,15.7s
GTA LR LR
comp=E,430nm,14.0s
GTA LR LR
comp=Z,380nm,17.8s
ULN Ulaanbaatar 46.17 329 *e*P **P 00 18 59.0 +0.4**
comp=Z,16nm,1.0s
SONM Songino Array 46.48 329 P **P 00 19 01.4 +0.5**
SONM Songino Array 46.48 329 P **P 00 19 01.4 +0.5**
comp=Z,5.7nm,0.8s,baz=149,slow=8.1,SNR=35
SONM LR LR 00 39 38.5
comp=Z,1µm,18.4s,baz=130,slow=38
MSVF Nonsavu 46.83 127 *e*P **P 00 19 04.5 +0.5**
MSVF pmax pmax
comp=Z,30nm,1.0s
MSVF Nonsavu 46.83 127 *e*P **P 00 19 04.5 +0.5**
comp=Z,30nm,1.0s
MSVF Nonsavu 46.83 127 P **P 00 19 04.2 +0.2**
comp=Z,183nm,0.9s,SNR=7.9
CLNS Chul'man 47.23 348 *e*P **P 00 19 07.0 +0.5**
CLNS pmax pmax
comp=Z,12nm,1.3s
CLNS pmax pmax
comp=E,5.0nm,1.2s
CLNS pmax pmax
comp=N,15nm,1.2s
NWAO Narrogin (SRO) 49.09 206 LR LR 00 40 48.3
comp=N,420nm,19.2s,baz=27,slow=37
ZAK Zakamensk 49.69 329 *e*P **P 00 19 25.3 -0.3**
ZAK pmax pmax
comp=Z,18nm,1.2s
IRK Irkutsk 50.41 332 *e*P P 00 19 35.2 +4.2
IRK pmax pmax
comp=Z,35nm,1.7s
YAK Yakutsk 51.47 353 *e*P **P 00 19 37.1 -1.6**
YAK *e**PP **pP 00 19 47.7 -0.8**
YAK *e* 00 20 49.3
YAK *e* 00 21 36.9
YAK *e*PPP PPP 00 22 39.2
YAK *e*S **S 00 26 58.2 +1.8**
YAK *e**SS **sS 00 27 13.6 +1.1**
YAK *e* 00 29 23.5
YAK *e*SS **SS 00 30 32.1 -0.4**
YAK pmax pmax
comp=Z,38nm,0.9s
YAK pmax pmax
comp=Z,227nm,7.6s
YAK smax smax
comp=N,130nm,2.5s
YAK smax smax
comp=E,42nm,1.9s
YAK MLR MLR
comp=N,317nm,14.0s
YAK MLR MLR
comp=Z,454nm,14.0s
MOY Mondy 51.62 330 *e*P **P 00 19 41.0 +0.8**
MOY pmax pmax
comp=Z,39nm,3.0s
TAPN Taplejung 52.05 296 *e*P **P 00 19 44.7 +0.6**
comp=Z,52nm,1.2s
ODAN Odare 52.28 295 *e*P **P 00 19 45.9 +0.2**
comp=Z,30nm,1.2s
SEY Seymchan 52.46 7⇑ *e*P **P 00 19 46.4 +0.3**
RAMN Ramite 52.99 295 *e*P **P 00 19 51.4 +0.4**
comp=Z,17nm,0.8s
GUN Gumba 53.73 296 *e*P **P 00 19 56.9 +0.3**
comp=Z,73nm,1.1s
PKI Pulchoki 54.11 296 *e*P **P 00 19 59.4 +0.1**
PKIN Phulchoki 54.12 296 *e*P **P 00 20 00.0 +0.7**
KKN Kakani 54.25 296 *e*P **P 00 19 59.8 -0.4**
DMN Daman 54.38 296 *e*P **P 00 20 00.6 -0.6**
HVS Khovu-Aksy 55.15 326 *d i*P **P 00 20 07.3 +1.2**
HVS pmax pmax
comp=Z,37nm,0.7s
HVS MLR MLR
comp=Z,3µm,17.0s
DANN Dangsing 55.64 297 *e*P **P 00 20 10.5 +0.2**
comp=Z,41nm,1.0s
WMQ Urumqi 55.87 316 P **P 00 20 12.4 +0.9**
WMQ pP **pP 00 20 22.5 +1.2**
WMQ sP **sP 00 20 26.4 +1.3**
WMQ PP **PP 00 22 18.4 +2.1**
WMQ S **S 00 27 55.5 -1.5**
WMQ sS **sS 00 28 12.2 -1.0**
WMQ ScS **ScS 00 29 55.4 -3.1**
WMQ SS **SS 00 31 41.0 -2.0**
WMQ pmax pmax
comp=Z,24nm,0.9s
WMQ pmax pmax
comp=Z,310nm,4.4s
WMQ LR LR
comp=N,400nm,13.6s
WMQ LR LR
comp=E,520nm,14.2s
WMQ LR LR
comp=Z,540nm,23.8s
PYUN Piuthan 56.30 296 *e*P **P 00 20 15.0 +0.1**
comp=Z,68nm,0.9s
BILL Bilibino 59.36 11⇑ *e*P **P 00 20 34.7 -0.8**
BILL *e*S **S 00 28 41.3 -0.5**
BILL pmax pmax
comp=Z,42nm,2.0s
URZ Urewera 59.82 147 *e*P **P 00 20 37.9 -1.1**
comp=Z,148nm,1.6s
MK31 Makanchi Array 60.41 318 *ce*P **P 00 20 42.9 -0.2**
MK31 pmax pmax
comp=Z,12nm,1.0s
MK31 Makanchi Array 60.41 318 *e*P **P 00 20 43.3 +0.2**
MK31 Makanchi Array 60.41 318 *e*P **P 00 20 43.3 +0.2**
MKAR Makanchi Array 60.41 318 *ce*P **P 00 20 43.5 +0.5**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 60.41 318 *e*P **P 00 20 43.6 +0.5**
MKAR Makanchi Array 60.41 318 *e*P **P 00 20 43.5 +0.5**
MKAR Makanchi Array 60.41 318 P **P 00 20 43.2 +0.1**
comp=Z,3.8nm,0.7s,baz=95,slow=8.9,SNR=38
MKAR LR LR 00 45 33.1
comp=Z,263nm,21.4s,baz=107,slow=35
RPZ Rata Peaks 61.21 155 *e*P **P 00 20 48.2 -0.2**
comp=Z,478nm,2.9s
ZAA0 Zalesovo Array 61.25 326 *e*P **P 00 20 47.7 -0.9**
ZALV Zalesovo Beam 61.25 326 P **P 00 20 47.7 -0.9**
ZALV Zalesovo Beam 61.25 326 P **P 00 20 47.7 -0.9**
ZALV Zalesovo Beam 61.25 326 P **P 00 20 47.7 -0.9**
comp=Z,3.7nm,0.6s,baz=103,slow=6.2,SNR=21
ZALV LR LR 00 49 06.9
comp=Z,695nm,18.0s,baz=94,slow=38
NVS Novosibirsk 62.45 327 *e*P **P 00 20 55.9 -0.7**
NVS *e* 00 23 14.0
NVS pmax pmax
comp=Z,34nm,2.0s
NVS pmax pmax
comp=N,4.0nm,1.2s
NVS pmax pmax
comp=E,19nm,2.0s
KSH Kashi 63.43 309 *e*P **P 00 21 06.2 +2.5**
KSH *e*pP pP 00 21 19.0 +5.3
KSH *e*PcP **PcP 00 21 41.8 +1.4**
KSH *e*PP **PP 00 23 27.3 +3.9**
KSH *e*ScP 00 25 40.0
KSH *e*PcS 00 25 44.4
KSH *e*S **S 00 29 33.1 -1.6**
KSH *es*S **sS 00 29 55.3 +4.1**
KSH *e*ScS **SKKSac 00 30 51.2 -3.7**
KSH pmax pmax
comp=Z,10.0nm,1.1s
KSH LR LR
comp=N,270nm,5.1s
KSH LR LR
comp=E,220nm,7.6s
KSH LR LR
comp=Z,240nm,6.3s
KURK Kurchatov 63.81 321 *c i*P **P 00 21 05.3 -0.5**
KURK pmax pmax
comp=Z,15nm,0.7s
KURK MLR MLR
comp=Z,627nm,18.0s
KURK Kurchatov 63.81 321 *e*P **P 00 21 05.1 -0.7**
comp=Z,28nm,0.8s
KURK Kurchatov 63.81 321 P **P 00 21 05.8 0.0**
comp=Z,127nm,0.7s,SNR=21
TKM2 Tokmak 2 64.21 312 *e*P **P 00 21 09.3 +0.5**
TKM2 pmax pmax
comp=Z,6.0nm,0.8s
TKM2 Tokmak 2 64.21 312 *e*P **P 00 21 09.3 +0.5**
comp=Z,5.9nm,0.8s
POO Poona 64.59 285 *e*PKP **P 00 21 09.0 -2.6**
TNA Tin City 64.68 21 *e*P **P 00 21 10.5 -0.6**
comp=Z,12nm,1.2s
AAK Ala-Archa 64.97 312⇑ *e*P **P 00 21 14.5 +0.7**
AAK pmax pmax
comp=Z,27nm,2.5s
AAK Ala-Archa 64.97 312 *e*P **P 00 21 13.6 -0.2**
comp=Z,1.0nm,0.7s
EKS2 Erkin-Say 65.50 312 *e*P **P 00 21 17.2 +0.1**
EKS2 pmax pmax
comp=Z,29nm,1.7s
EKS2 Erkin-Say 65.50 312 *e*P **P 00 21 17.2 +0.1**
comp=Z,30nm,1.7s
KK31 Karatay Array 67.93 312 *ce*P **P 00 21 32.0 -0.5**
KK31 pmax pmax
comp=Z,7.0nm,0.9s
KKAR Karatay Array 67.93 312 *e*P **P 00 21 32.5 0.0**
KKAR Karatay Array 67.93 312 *e*P **P 00 21 32.5 0.0**
KBL Kabul 68.59 303 *e*P **P 00 21 37.5 +0.5**
KBL Kabul 68.59 303 *e*P **P 00 21 37.5 +0.5**
VOSK Vostochnaya 68.89 322 P **P 00 21 36.9 -1.4**
VOSK pmax pmax
comp=Z,8.0nm,1.2s
BVA0 Borovoye Array 69.29 323 *i*P **P 00 21 40.0 -0.8**
BVA0 pmax pmax
comp=Z,3.0nm,1.2s
BRVK Borovoye 69.36 323⇑ *e*P **P 00 21 41.7 +0.6**
BRVK pmax pmax
comp=Z,31nm,1.7s
BRVK MLR MLR
comp=Z,472nm,16.0s
BRVK Borovoye 69.36 323 *e*P **P 00 21 41.4 +0.2**
BRVK Borovoye 69.36 323 P **P 00 21 41.8 +0.6**
comp=Z,78nm,0.8s,SNR=5.9
PPLA Purkeypile 69.91 27 *e*P **P 00 21 44.2 -0.4**
comp=Z,11nm,0.9s
ZRNK Zerenda 70.11 322 *i*P **P 00 21 45.0 -0.8**
ZRNK pmax pmax
comp=Z,28nm,1.6s
SEW Seward 70.53 30 *e*P **P 00 21 46.0 -2.2**
comp=Z,19nm,0.9s
TRF Thorofare Moun 70.89 26 *e*P **P 00 21 48.5 -2.1**
comp=Z,7.8nm,0.8s
PMR Palmer 70.99 28 *e*P **P 00 21 49.4 -1.6**
PMR pmax pmax
comp=Z,9.0nm,0.7s
PMR Palmer 70.99 28 *e*P **P 00 21 49.4 -1.6**
comp=Z,8.8nm,0.7s
SML Sawmill 71.41 28 *e*P **P 00 21 53.0 -0.6**
SML pmax pmax
comp=Z,4.0nm,0.8s
SML Sawmill 71.41 28 *e*P **P 00 21 53.0 -0.6**
comp=Z,4.1nm,0.8s
MCK McKinley 71.54 26 *e*P **P 00 21 52.8 -1.5**
MCK pmax pmax
comp=Z,9.0nm,0.9s
MCK McKinley 71.54 26 *e*P **P 00 21 52.8 -1.5**
comp=Z,8.9nm,0.9s
COLD Coldfoot 71.87 23 *e*P **P 00 21 55.6 -0.6**
comp=Z,15nm,0.9s
DIV Divide 72.50 29 *e*P **P 00 21 59.7 -0.5**
comp=Z,13nm,0.8s
PAX Paxson 72.93 27 *e*P **P 00 22 01.5 -1.2**
PAX pmax pmax
comp=Z,10.0nm,0.8s
PAX Paxson 72.93 27 *e*P **P 00 22 01.5 -1.2**
comp=Z,9.9nm,0.8s
BMRM Bremner River 73.04 29 *e*P **P 00 22 01.6 -1.8**
comp=Z,28nm,1.2s
DOT Dot Lake 73.66 27 *e*P **P 00 22 06.0 -1.0**
comp=Z,38nm,1.0s
MENT Mentasta 73.72 28 *e*P **P 00 22 06.1 -1.2**
PPT Papeete 74.66 112 LR LR 00 50 02.9
comp=Z,285nm,19.3s,baz=309,slow=32
PPT2 Papeete2 74.66 112 *e*S **S 00 31 47.5 -0.5**
comp=Z,192nm,27.2s
PPT2 *e*LR LR 00 44 47.7
comp=Z,739nm,30.8s,baz=280
EGAK Eagle 75.06 26 *e*P **P 00 22 13.9 -1.1**
comp=Z,142nm,2.7s
SVE Sverdlovsk 75.27 326⇓ *e*P **P 00 22 16.8 +0.4**
SVE pmax pmax
comp=Z,16nm,1.2s
SVE MLR MLR
comp=Z,789nm,17.0s
PNL Peninsula 75.49 31 *e*P **P 00 22 17.5 -0.1**
comp=Z,8.3nm,0.7s
AB31 Akbulak array 75.55 318 *ce*P **P 00 22 17.2 -1.0**
AB31 pmax pmax
comp=Z,1.0nm,0.4s
ABKAR Akbulak array 75.55 318 *e*P **P 00 22 17.2 -0.9**
ARU Arti 76.41 326 *c i*P **P 00 22 22.0 -0.9**
ARU S **S 00 32 05.9 0.0**
ARU pmax pmax
comp=Z,14nm,1.7s
TBI Tubuai 76.52 117 *e*S **S 00 32 08.4 +0.2**
comp=Z,276nm,26.8s
TBI *e*LR LR 00 45 55.6
comp=Z,412nm,30.0s
ABKT Ailbek 77.32 307 P **P 00 22 29.6 +1.1**
comp=Z,58nm,0.9s,SNR=7.0
SOKR Solikamsk 77.36 329 *e*P **P 00 22 28.9 +0.8**
SOKR pmax pmax
comp=Z,10.0nm,1.4s
SOKR MLR MLR
comp=Z,700nm,17.0s
SKAG Skagway 77.56 31 *e*P **P 00 22 29.6 +0.3**
comp=Z,80nm,2.0s
DLBC Dease Lake 80.36 32 *e*P **P 00 22 44.1 -0.6**
MAK Makhachkala 84.74 313 *e*P **P 00 23 06.9 -0.9**
MAK S S 00 33 23.6 -10
MAK pmax pmax
comp=Z,4.0nm,0.3s
DGRG David-gareji 86.58 311 P **P 00 23 17.7 +0.6**
CMW Cultus Mountai 86.63 41 P **P 00 23 18.2 +1.0**
MBW Mount Baker 86.69 41 P **P 00 23 18.1 +0.4**
JCW Jim Creek 86.80 42 P **P 00 23 18.5 +0.5**
YKW3 Yellowknife Ar 86.98 27 *e*P **P 00 23 18.2 -0.3**
comp=Z,0.2nm,0.8s
TBLG Delisi 86.99 312 *e*P **P 00 23 18.5 -0.6**
TBLG Delisi 86.99 312 P **P 00 23 18.5 -0.6**
VRHR Novokhopersk 86.99 321 *e*P **P 00 23 16.7 -2.1**
VRHR pmax pmax
comp=Z,7.0nm,1.1s
VRHR pmax pmax
comp=N,3.0nm,0.6s
VRHR pmax pmax
comp=E,8.0nm,1.1s
VRHR MLR MLR
comp=N,180nm,13.0s
VRHR MLR MLR
comp=E,110nm,13.0s
VRHR MLR MLR
comp=Z,400nm,13.0s
YKA Yellowknife Ar 87.00 27 P **P 00 23 17.9 -0.7**
YKA Yellowknife Ar 87.00 27 P **P 00 23 17.9 -0.7**
comp=Z,10nm,0.7s,baz=291,slow=5.3,SNR=149
KBD Kabd 87.12 299 *e*P **P 00 23 19.2 -0.8**
LON Longmire 87.21 43 *e*P **P 00 23 23.1 +3.1**
LON *e**PP **pP 00 23 33.0 +2.6**
LON Longmire 87.21 43 *e*P **P 00 23 23.1 +3.1**
LON *ep*P **pP 00 23 33.0 +2.6**
GNI Garni 87.32 310 *e*P **P 00 23 22.5 +1.6**
comp=Z,29nm,1.4s
HUMO Hull Mountain 87.33 47 *e*P **P 00 23 20.4 -0.2**
ZEI Tsey 87.37 313 *e*P **P 00 23 19.2 -1.9**
ZEI pmax pmax
comp=Z,12nm,1.0s
NAY Al-Naaiem 87.50 299 *e*P **P 00 23 21.0 -0.7**
NAY AMb AMB 00 23 25.8
comp=Z,38nm,1.0s
KEV Kevo 87.55 341 *e*P **P 00 23 19.2 -1.9**
KEV Kevo 87.55 341 *ep* **P 00 23 19.2 -1.9**
comp=Z,0.4nm,0.4s
RST Umm Al-Ruwaisa 87.66 299 *e*P **P 00 23 21.5 -1.1**
RST AMb AMB 00 23 23.9
comp=Z,5.2nm,0.9s
YBH Yreka Blue Hor 87.70 48 *e*P **P 00 23 23.1 +0.5**
comp=Z,13nm,1.0s
KBZ Khabaz 87.88 314 P **P 00 23 23.5 +0.3**
KBZ Khabaz 87.88 314 P **P 00 23 23.4 +0.3**
KBZ Khabaz 87.88 314 P **P 00 23 23.4 +0.3**
comp=Z,4.2nm,0.9s,baz=142,slow=2.7,SNR=6.5
KBZ LR LR 01 07 58.0
comp=Z,203nm,18.2s,baz=247,slow=39
RES Resolute Bay 87.93 13 *e*P **P 00 23 21.9 -1.0**
comp=Z,2.4nm,0.8s
KIV Kislovodsk 87.97 314⇑ *e*P **P 00 23 24.8 +1.0**
KIV *e* 00 26 48.8
KIV *e*S **S 00 34 06.8 +1.5**
KIV *e*PS 00 35 16.0
KIV pmax pmax
comp=Z,6.0nm,0.8s
ETW Entiat 87.99 42 P **P 00 23 24.2 +0.3**
ARCES ARCESS Array B 88.12 341 P **P 00 23 22.8 -1.1**
ARCES ARCESS Array B 88.12 341 P **P 00 23 22.8 -1.1**
comp=Z,1.8nm,0.5s,baz=81,slow=7.5,SNR=8.5
ARCES LR LR 01 05 30.5
comp=Z,404nm,19.0s,baz=70,slow=37
VSR Storozhevoye 88.46 322 *e*P **P 00 23 24.2 -1.6**
VSR pmax pmax
comp=Z,6.0nm,0.9s
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,3.0nm,0.9s
VSR MLR MLR
comp=N,140nm,10.0s
VSR MLR MLR
comp=E,270nm,10.0s
VSR MLR MLR
comp=Z,550nm,10.0s
JOF Joensuu 88.74 334 *e*P **P 00 23 24.4 -2.5**
JOF pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 88.74 334 *ep* **P 00 23 24.4 -2.5**
comp=Z,2.4nm,0.7s
HAWA Hanford 88.82 43 *e*P P 00 23 31.5 +3.9
OBN Obninsk 88.84 326⇑ *e*P **P 00 23 26.2 -1.3**
OBN *e*S S 00 34 03.8 -8.9
OBN *e*PS **PS 00 35 26.3 +5.8**
OBN *e*SS **SS 00 40 01.6 -3.0**
OBN pmax pmax
comp=Z,23nm,1.7s
OBN MLR MLR
comp=Z,500nm,20.0s
OHCM Honcut 89.15 50 *e*P **P 00 23 32.2 +2.8**
VNDA Vanda 89.29 175 LR LR 01 03 18.2
comp=Z,286nm,20.0s,baz=334,slow=35
RKT Rikitea 89.31 114 *e*LR LR 00 51 22.9
comp=Z,325nm,34.8s
BEKR Beckworth 89.87 49 *e*P **P 00 23 33.1 +0.2**
comp=Z,9.4nm,1.0s
NEW Newport 89.89 41 *e*P **P 00 23 33.5 +0.7**
comp=Z,3.8nm,0.7s
NEW Newport 89.89 41⇓ P **P 00 23 31.2 -1.5**
baz=90
RAYN Ar Rayn 90.18 294 P **P 00 23 34.4 -0.2**
comp=Z,35nm,0.7s,SNR=6.3
CMB Columbia Colle 90.30 51 *e*P **P 00 23 35.3 +0.5**
CMB pmax pmax
comp=Z,10.0nm,1.0s
CMB Columbia Colle 90.30 51 *e*P **P 00 23 35.3 +0.5**
comp=Z,10.0nm,1.0s
WCN Washoe City 90.46 50 *e*P **P 00 23 36.9 +1.2**
WCN pmax pmax
comp=Z,9.0nm,1.1s
WCN Washoe City 90.46 50 *e*P **P 00 23 36.9 +1.2**
comp=Z,8.8nm,1.1s
WVOR Wild Horse Val 90.47 47 *e*P **P 00 23 36.1 +0.4**
WVOR pmax pmax
comp=Z,14nm,1.0s
WVOR Wild Horse Val 90.47 47 *e*P **P 00 23 36.1 +0.4**
comp=Z,14nm,1.0s
BMO Blue Mountains 90.74 44 *e*P **P 00 23 36.5 -0.3**
BMO pmax pmax
comp=Z,20nm,1.5s
BMO Blue Mountains 90.74 44 *e*P **P 00 23 36.5 -0.3**
comp=Z,20nm,1.5s
KAF Kangasniemi 91.19 335 *e*P P 00 23 35.0 -3.4
KAF pmax pmax
comp=Z,4.0nm,0.7s
KAF Kangasniemi 91.19 335 *ep* P 00 23 35.0 -3.4
comp=Z,3.6nm,0.7s
ANN Anapa 91.39 316 *e*P P 00 23 35.7 -3.9
ANN pmax pmax
comp=Z,14nm,1.0s
BSMT Bassoo Peak 91.51 41 *e*P **P 00 23 41.0 +0.5**
B13A Whitefish 91.55 40⇓P **P 00 23 41.2 +0.7**
baz=91
FIA1 FINESS Array S 91.59 334 *e*P **P 00 23 38.4 -1.8**
FINES FINESS Array B 91.59 334 P **P 00 23 38.2 -2.0**
FINES FINESS Array B 91.59 334 P **P 00 23 38.2 -2.0**
comp=Z,4.2nm,0.6s,baz=69,slow=4.9,SNR=23
FINES LR LR 01 07 08.9
comp=Z,391nm,18.4s,baz=90,slow=37
C13A Hot Springs 91.70 41⇓P **P 00 23 41.7 +0.5**
baz=92
NVAR Mina Array Bea 91.78 50 P **P 00 23 42.1 +0.2**
NVAR Mina Array Bea 91.78 50 P **P 00 23 42.1 +0.2**
comp=Z,5.3nm,0.8s,baz=263,slow=6.0,SNR=38
F12A Elk City 91.85 43⇓P **P 00 23 42.9 +0.9**
baz=92
NV11 Mina Array Sit 91.89 50 *e*P **P 00 23 42.8 +0.5**
G12A Big Creek, Yel 92.00 43⇑P **P 00 23 43.0 +0.2**
baz=92,SNR=6.9
A14A Double T Ranch 92.01 39⇓P **P 00 23 44.4 +1.7**
baz=92
MFID Camas Ranch 92.17 45 *e*P **P 00 23 43.3 -0.2**
comp=Z,6.2nm,0.7s
MFID Camas Ranch 92.17 45⇓P **P 00 23 43.8 +0.3**
baz=92,SNR=11
B14A Marquette Ranc 92.31 40⇑P **P 00 23 46.0 +1.9**
baz=92
MSO Missoula 92.38 41⇓P **P 00 23 45.4 +1.0**
baz=92
A15A Johnson Ranch, 92.44 39⇓P **P 00 23 44.7 +0.1**
baz=92
F13A Darby 92.46 43⇓P **P 00 23 44.4 -0.4**
baz=92
H12A Diamond D Ranc 92.50 44⇓P **P 00 23 45.5 +0.4**
baz=92
I12A Atlanta 92.54 45⇑P **P 00 23 45.2 -0.1**
baz=92
D14A Greenough 92.58 41⇑P **P 00 23 45.4 +0.1**

baz=92
G13A Cobalt 92.75 43 ⇑P P 00 23 45.8 -0.4
baz=93,SNR=14
B15A Bradely Ranch, 92.77 40 ⇑P P 00 23 45.8 -0.3
baz=93
CHMT Chamberlain Mo 92.80 41 *e*P P 00 23 46.1 -0.4
comp=Z,5.7nm,1.4s
H13A Challis 92.90 44 ⇑P P 00 23 46.5 -0.4
baz=93,SNR=7.5
C15A Salmond Ranch, 92.92 40 ⇑P P 00 23 47.0 +0.1
baz=93
EDW2 Edwards Air Fo 92.97 54 ⇑P P 00 23 50.5 +3.2
baz=93
MWC Mount Wilson 93.09 54 *e*P P 00 23 48.3 +0.3
MWC pmax pmax
comp=Z,16nm,1.3s
MWC Mount Wilson 93.09 54 *e*P P 00 23 48.3 +0.3
comp=Z,16nm,1.3s
HLID Hailey 93.11 45 *e*P P 00 23 47.8 -0.1
comp=Z,4.9nm,0.8s
HLID Hailey 93.11 45 ⇑P P 00 23 48.2 +0.3
baz=93,SNR=12
A16A West Butte Ran 93.15 39 ⇑P P 00 23 48.1 +0.2
baz=93
I13A Wildhorse Cree 93.20 44 ⇓P P 00 23 49.6 +1.2
baz=93,SNR=8.8
J13A Cove Ranch, Pi 93.32 45 ⇓P P 00 23 49.3 +0.4
baz=93,SNR=7.7
E15A Deer Lodge 93.36 42 ⇑P P 00 23 49.0 0.0
baz=93,SNR=12
ELK Elko 93.39 48 *e*P P 00 23 49.8 +0.5
C16A Fuhringer Ranc 93.46 40 ⇓P P 00 23 49.3 -0.1
baz=93
H14A Leadore 93.48 43 ⇑P P 00 23 49.9 +0.2
baz=93,SNR=7.0
I14A Mackay 93.65 44 ⇑P P 00 23 51.4 +1.0
baz=94
F15A Butte 93.66 42 ⇓P P 00 23 50.0 -0.4
baz=94,SNR=6.6
LRM Limekiln Ridge 93.69 42 *e*P P 00 23 50.4 -0.2
comp=Z,41nm,0.9s
A17A Triple J Farms 93.70 39 ⇑P P 00 23 51.1 +0.7
baz=94
DLMT Dillon 93.75 43 *e*P P 00 23 51.3 +0.5
comp=Z,10nm,1.2s
MCMT McKenzie Canyo 93.76 43 *e*P P 00 23 50.8 -0.2
comp=Z,1.4nm,0.7s
GSC Goldstone 93.79 53 *e*P P 00 23 51.7 +0.6
GSC pmax pmax
comp=Z,16nm,1.2s
GSC Goldstone 93.79 53 *e*P P 00 23 51.7 +0.6
comp=Z,16nm,1.2s
J14A Carey 93.80 45 ⇓P P 00 23 52.1 +1.0
baz=94,SNR=7.6
R11A Troy Canyon, C 93.85 50 ⇑P P 00 23 52.7 +1.3
baz=94
D16A Dana Ranch, Ca 93.86 41 ⇓P P 00 23 51.2 -0.1
baz=94,SNR=7.0
G15A Dillon 93.89 43 ⇓P P 00 23 51.9 +0.4
baz=94
E16A East Helena 93.95 41 ⇓P P 00 23 51.4 -0.2
baz=94
C17A Wharram Farm, 94.14 40 ⇑P P 00 23 51.8 -0.7
baz=94,SNR=7.7
A18A Metzger Ranch, 94.24 39 ⇑P P 00 23 52.6 -0.2
baz=94,SNR=7.7
BOZ Bozeman (W) 94.29 42 *e*P P 00 23 50.9 -2.4
BOZ pmax pmax
comp=Z,5.0nm,1.2s
BOZ Bozeman (W) 94.29 42 *e*P P 00 23 50.9 -2.4
comp=Z,5.1nm,1.2s
BOZ Bozeman (W) 94.29 42 ⇑P P 00 23 54.2 +0.9
baz=94
G16A Moss Hill, Enn 94.32 42 ⇓P P 00 23 53.6 +0.1
baz=94,SNR=5.9
D17A Six Diamond Ra 94.36 40 ⇑P P 00 23 54.1 +0.6
baz=94,SNR=8.7
E17A Martinsdale 94.50 41 ⇑P P 00 23 54.5 +0.3
baz=94
J15A Blackfoot 94.52 44 ⇑P P 00 23 54.6 +0.3
baz=94,SNR=9.4
AKASG Malin Array Be 94.55 324 LR LR 01 07 06.0
comp=Z,281nm,19.2s,baz=50,slow=36
EGMT Eagleton 94.63 39 ⇑P P 00 23 54.5 -0.2
baz=94
QLMT Earthquake Lak 94.71 43 *e*P P 00 23 55.7 +0.4
comp=Z,1.0nm,0.7s
F17A Fitzpatrick Pl 94.83 42 ⇓P P 00 23 55.3 -0.4
baz=95
H16A Russell Place, 94.87 43 ⇓P P 00 23 57.0 +1.0
baz=95,SNR=8.6
A19A Klindworth Far 94.91 38 ⇑P P 00 23 55.3 -0.6
baz=95,SNR=13
I16A Newdale 95.00 44 ⇓P P 00 23 57.9 +1.3
baz=95,SNR=8.1
E18A Harlowton 95.07 41 ⇑P P 00 23 57.0 +0.1
baz=95,SNR=8.5
C19A Slack Wire Ran 95.18 39 ⇑P P 00 23 57.9 +0.7
baz=95
K16A Soda Springs 95.30 45 ⇓P P 00 23 58.9 +0.9
baz=95
DUG Dugway 95.32 47 *e*P P 00 23 58.0 -0.1
DUG pmax pmax
comp=Z,8.0nm,1.1s
DUG Dugway 95.32 47 *e*P P 00 23 58.0 -0.1
comp=Z,7.7nm,1.1s
IMW Indian Meadow 95.37 44 *e*P P 00 23 58.9 +0.5
comp=Z,4.0nm,0.9s
F18A Big Timber 95.45 41 ⇑P P 00 23 58.7 +0.2
baz=95,SNR=7.0
LKWY Lake 95.49 43 *e*P P 00 24 00.6 +1.7
LKWY pmax pmax
comp=Z,10.0nm,1.1s
LKWY Lake 95.49 43 *e*P P 00 24 00.6 +1.7
comp=Z,10nm,1.1s
D19A Cripps Ranch, 95.50 40 ⇑P P 00 23 58.7 0.0
baz=95,SNR=6.0
B20A Solberg Farm, 95.54 39 ⇑P P 00 23 59.3 +0.5
baz=95
MOOW Moose Ponds 95.55 44 *e*P P 00 23 58.5 -0.6
comp=Z,6.6nm,1.3s
L16A Fish Haven 95.69 45 ⇓P P 00 24 00.3 +0.4
baz=96
C20A Veseth Ranch, 95.84 39 ⇑P P 00 24 00.2 +0.1
baz=96,SNR=15
D20A Manuel Ranch, 96.00 40 ⇓P P 00 24 00.9 0.0
baz=96,SNR=6.6
FFC Flin Flon 96.16 31 *i* P P 00 24 01.2 -0.2
FFC Flin Flon 96.16 31 *e*P P 00 24 00.6 -0.7
comp=Z,3.9nm,0.9s
J18A Kendall Valley 96.24 44 ⇑P P 00 24 03.4 +1.1
baz=96
MSU Marysvale 96.34 49 *e*P P 00 24 03.4 +0.5
MSU pmax pmax
comp=Z,6.0nm,1.2s
MSU Marysvale 96.34 49 *e*P P 00 24 03.4 +0.5
comp=Z,5.5nm,1.2s
G20A Bridger 96.68 42 ⇓P P 00 24 04.4 +0.2
baz=97
PDAR Pinedale Array 96.72 44 P P 00 24 03.7 -0.8
PDAR PP PP 00 27 58.3 -0.8
PDAR Pinedale Array 96.72 44 P P 00 24 03.7 -0.8
comp=Z,0.7nm,0.8s,baz=228,slow=2.4,SNR=6.0
PDAR PP PP 00 27 58.3 -0.8
comp=Z,1.3nm,1.1s,baz=290,slow=4.3,SNR=4.9
NOA NORSAR Array B 97.81 338 LR LR 01 08 17.9
comp=Z,203nm,19.3s,baz=10.0,slow=35
CLL Collm 103.10 329 *e*(PS) 00 38 09.0
CLL *e*PPS PPS 00 38 46.0
CLL *e*SS SS 00 43 36.0 +10
CLL *e*SSS SSS 00 47 36.0
CLL LmV 01 12 00.0
comp=Z,500nm,20.0s
LRAL Lakeview Retre 116.94 44 *e*PKPdf **PKPdf** 00 29 18.8 +0.1
ESDC Sonseca Array 119.69 329 PKP **PKPdf** 00 29 24.1 +0.1
ESDC Sonseca Array 119.69 329 PKP **PKPdf** 00 29 24.1 +0.1
comp=Z,0.2nm,0.5s,baz=4.6,slow=2.8,SNR=3.5
TAM Tamanrasset 124.54 308 *e*PKIKP **PKPdf** 00 29 34.5 +0.7
TAM Tamanrasset 124.54 308 *e*PKPdf **PKPdf** 00 29 34.5 +0.7
TORD Torodi Ar. Bea 132.58 299 PKPpre PKPpre 00 29 38.9
TORD PKP **PKPdf** 00 29 47.8 -1.3
TORD Torodi Ar. Bea 132.58 299 PKhKP PKPpre 00 29 38.9
comp=Z,0.4nm,0.7s,baz=52,slow=1.7,SNR=4.4
TORD PKP **PKPdf** 00 29 47.8 -1.3
comp=Z,0.4nm,0.9s,baz=64,slow=0.4,SNR=3.5
PLCA Paso Flores 139.73 143 PKPpre PKPpre 00 29 52.0
PLCA Paso Flores 139.73 143 PKhKP PKPpre 00 29 52.0
comp=Z,1.6nm,0.7s,baz=220,slow=7.9,SNR=3.8
DBIC Dimbokro 141.30 296 PKPpre PKPpre 00 30 00.4
DBIC Dimbokro 141.30 296 PKhKP PKPpre 00 30 00.4
comp=Z,1.3nm,0.5s,baz=92,slow=15,SNR=4.0
LZG Guadaloupe-1 145.09 40 *e*P **PKPbc** 00 30 11.0 -0.3
SCG Saint Claude 145.23 40 *e*P **PKPab** 00 30 12.1 +0.2
HMG Houelmont 145.25 40 *e*P **PKPbc** 00 30 11.0 -0.8
TBG Guadaloupe-3 145.38 40 *e*P **PKPab** 00 30 12.4 +0.1
DEG La Desirade 145.40 38 *e*P **PKPbc** 00 30 10.9 -1.4
LCO Las Campanas 145.83 126 *e*PKPbc **PKPbc** 00 30 13.9 +0.1
TRQA Tornquist 146.42 147 *e*PKPbc **PKPbc** 00 30 14.7 -0.2
FDF Fort de France 146.54 40 *e*PKP2 **PKPbc** 00 30 16.1 +0.2
FDF Fort de France 146.54 40 *e*PKPbc **PKPbc** 00 30 16.1 +0.2
LPAZ La Paz 151.69 104 *e*PKPbc **PKPbc** 00 30 30.4 +0.7
LPAZ La Paz 151.69 104 PKPbc **PKPbc** 00 30 30.9 +1.2
comp=Z,9.6nm,0.9s,baz=285,slow=1.8,SNR=32
CPUP Villa Florida 157.33 134 PKPab **PKPab** 00 31 01.0 -0.3
CPUP Villa Florida 157.33 134 PKPab **PKPab** 00 31 01.0 -0.3
comp=Z,0.8nm,0.6s,baz=260,slow=20,SNR=4.1

MEX 03 00:21:21.3±1.2, 16°98N×94°58W, h132km±9km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.32**	**291**	*i* P		Pn	00 21 38.3	-1.4
CMIG				*i* S		Sn	00 21 51.4	-2.2
TGIG		**1.41**	**98**	*i* P		Pn	00 21 47.4	-1.1
TGIG				*e*S		Sn	00 22 07.3	-2.0
PCIG		**1.82**	**134**	*i* P		x	00 23 37.1	
PCIG				*e*S		x	00 24 01.6	
HUIG	**Huatulco**	**1.90**	**231**	*i* P		Pn	00 21 51.6	-2.6
HUIG				*i* S		Sn	00 22 18.2	-1.2
VHO	**Vista Hermosa**	**2.07**	**273**	*e*P		Pn	00 21 55.8	-0.7
VHO				*i* S		Sn	00 22 22.3	-1.1
CCIG	**Comitan**	**2.44**	**106**	*i* P		Pn	00 22 00.3	-0.8
CCIG				*e*S		Sn	00 22 29.9	-1.7
TPIG	**Tehuac#an**	**3.02**	**299**	*i* P		Pn	00 22 07.1	-1.4
TPIG				*i* S		Sn	00 22 42.4	-2.5
THIG		**3.03**	**132**	*i* P		Pn	00 22 06.4	-2.0
UTMO	**Huajuapan**	**3.20**	**286**	*i* P		Pn	00 22 10.1	-0.8
UTMO				*i* S		Sn	00 22 46.8	-2.3
PNIG	**Pinotepa**	**3.45**	**261**	*i* P		Pn	00 22 11.3	-2.6
PNIG				*i* S		Sn	00 22 52.1	-2.6

*TIR **03** 00:49:38.2, 41°.31N×20°.34E, h8km, ML2.5*
*SKO **03** 00:49:48.6, 41°.35N×20°.34E, h12km*
*CSEM **03** 00:49:49.0±0.2, 41°.31N×20°.33E, h15km, ML2.5, Error ellipse: s-maj=5.8km s-min=3.8km az=28.0*
*ISCJB **03** 00:49:49.0±0.8, 41°.30N±0°.05×20°.34E±0°.05, h9km, Error ellipse: s-maj=7.5km s-min=4.9km az=27.6*

ISC 03 00:49:49.0±1.1, 41°.33N±0°.05×20°.36E±0°.04, h9km, n8, σ0s3/16, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.36**	**10**	*i* PG		**Pg**	**00 49 56.4**	**+0.2**
PHP				*i* SG		**Sb**	**00 50 02.6**	**-0.8**
PHP	**Peshkopia**	**0.36**	**10**	*i* Pg		**Pg**	**00 49 56.4**	**+0.2**
PHP				*i* Sg		**Sb**	**00 50 02.6**	**-0.8**
TIR	**Tirane**	**0.37**	**273**	*i* PG		**Pg**	**00 49 56.2**	**-0.2**
TIR				*i* SG		**Sg**	**00 50 01.6**	**+0.3**
TIR	**Tirane**	**0.37**	**273**	*i* Pg		**Pg**	**00 49 56.2**	**-0.2**
TIR				*i* Sg		**Sg**	**00 50 01.6**	**+0.3**
BIA	**Bitola**	**0.79**	**113**	*e*Pg		**Pb**	**00 50 04.6**	**-0.5**
BIA				*e*Sg		**Sb**	**00 50 16.4**	**+0.5**
BIA				*e*Lg		Lg	00 50 17.1	
	comp=N,4.5nm,0.2s							
BIA				*e*Lg		Lg	00 50 17.3	
	comp=E,3.6nm,0.2s							
BIA	**Bitola**	**0.79**	**113**	*e*Pg		**Pb**	**00 50 04.5**	**-0.5**
BIA				*e*Sg		**Sb**	**00 50 16.4**	**+0.5**
BIA				*e*Lg		Lg	00 50 17.3	
	comp=E,3.6nm,0.2s							
PUK	**Puka**	**0.79**	**334**	*i* PG		**Pg**	**00 50 04.6**	**+0.3**
PUK				*i* SG		**Sb**	**00 50 16.5**	**+0.6**
PUK	**Puka**	**0.79**	**334**	*i* Pg		**Pg**	**00 50 04.6**	**+0.3**
PUK				*i* Sg		**Sb**	**00 50 16.5**	**+0.6**

GUC 03 00:50:27.7±0.6, 32°.56S×71°.70W, h25km±13km, MD3.6, ML2.7, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.47**	**174**	*e*P		Pb	00 50 38.0	+0.6
IHA				*e*S		Sb	00 50 45.1	+1.1
CHNG	**Los Chungos**	**0.69**	**14**	⇓*i*P		Pb	00 50 40.7	-0.5
CHNG				*i* S		Sb	00 50 50.3	0.0
ROCH	**El Roble**	**0.71**	**126**	⇑*i*P		Pb	00 50 41.1	0.7
ROCH				*i* S		Sb	00 50 51.3	-0.2
LCCH	**Las Cruces**	**0.92**	**173**	*e*P		Pb	00 50 44.1	-1.0
LCCH				*i* S		Sb	00 50 56.6	-0.3
JACH	**Jahuel**	**0.94**	**98**	*i* P		Pn	00 50 44.8	-0.7
JACH				*i* S		Sb	00 50 57.6	-0.1
PEL	**Peldehue**	**1.03**	**125**	*e*P		Pn	00 50 46.3	-0.5
PEL				*e*S		Sb	00 51 00.2	-0.1
PEL				AML		AML	00 51 02.8	
	comp=E,305nm,0.2s							
CLCH	**Cerro Calan**	**1.29**	**131**	*e*P		Pn	00 50 50.2	0.0
CLCH				*e*S		Sn	00 51 06.9	+0.2
PCH	**Pirque**	**1.45**	**137**	*e*P		Pn	00 50 52.9	+0.4
PCH				*i* S		Sn	00 51 11.6	+0.7
CMCH	**Combarbala**	**1.50**	**23**	*e*P		Pn	00 50 53.1	-0.1
CMCH				*e*S		Sb	00 51 13.2	-0.6
CMCH				AML		AML	00 51 15.6	
	comp=E,280nm,0.3s							
LMEL	**Las Melosas**	**1.80**	**136**	*e*P		Pn	00 50 58.5	+1.2
LMEL				*e*S		Sb	00 51 21.9	-0.6
LMEL				AML		AML	00 51 26.1	
	comp=N,73nm,0.1s							

*TAP **03** 00:53:57.4, 24°.79N×122°.48E, h100km, ML4.0, D*
*JMA **03** 00:53:57.2±0.3, 24°.93N×122°.46E, h97km, M2.6*
*ISCJB **03** 00:53:57.8±0.6, 24°.79N±0°.03×122°.46E±0°.02, h99km±5km, Error ellipse: s-maj=5.5km s-min=3.5km az=174.3*

ISC 03 00:53:58.8±1.6, 24°.76N±0°.05×122°.46E±0°.03, h92km±11km, n46, σ0s82/83, 8C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGS		**0.49**	**280**	*e*P		**Pn**	**00 54 13.8**	**+0.1**
	baz=275							
EGS				*e*S		**Sn**	**00 54 25.1**	**+0.3**
	baz=275							
TWB1	**Santiao Chiao**	**0.49**	**300**	⇑*i*P		**Pn**	**00 54 13.5**	**-0.3**
TWB1	baz=295			S		**Sn**	**00 54 25.1**	**+0.2**
	baz=295							
TWC	**Suao**	**0.57**	**255**	⇑*i*P		**Pn**	**00 54 14.0**	**-0.4**
	baz=251							
TWC				*e*S		**Sn**	**00 54 26.6**	**+0.5**
	baz=251							
YOJ	**Yonaguni jima**	**0.58**	**120**	S		**Sn**	**00 54 27.1**	**+0.9**
NWF	**Wu-fen Shan**	**0.69**	**297**	⇑*i*P		**Pn**	**00 54 15.1**	**-0.5**
	baz=293							
NWF				S		**Sn**	**00 54 28.0**	**0.0**
	baz=293							
TWE	**Neicheng**	**0.72**	**267**	⇑*i*P		**Pn**	**00 54 15.6**	**-0.2**
	baz=264							
TWE				S		**Sn**	**00 54 28.6**	**+0.2**
	baz=264							
ENA	**Nanau**	**0.73**	**243**	⇑*i*P		**Pn**	**00 54 16.0**	**+0.2**
	baz=241							
ENA				*e*S		**Sn**	**00 54 29.2**	**+0.6**
	baz=241							
ENTT	**Nioudou**	**0.82**	**262**	⇑*i*P		**Pn**	**00 54 16.7**	**-0.1**
	baz=259							
ENTT				*e*S		**Sn**	**00 54 30.7**	**+0.4**
	baz=259							
TAP1	**Taipei**	**0.90**	**288**	*e*P		**Pn**	**00 54 16.8**	**-0.7**
	baz=285							
TAP1				*e*S		**Sn**	**00 54 31.2**	**-0.3**
	baz=285							
TAP	**Taipei**	**0.91**	**288**	*e*P		**Pn**	**00 54 16.9**	**-0.8**
	baz=285							
TAP				*e*S		**Sn**	**00 54 31.8**	**0.0**
	baz=285							
TWY	**Chenhua**	**0.94**	**304**	P		**Pn**	**00 54 17.3**	**-0.7**
	baz=301							
TWY				*e*S		**Sn**	**00 54 32.3**	**0.0**
	baz=301							
NSK	**Sanguang**	**1.00**	**266**	P		**Pn**	**00 54 18.4**	**-0.5**
	baz=263							
NSK				S		**Sn**	**00 54 33.9**	**0.0**
	baz=263							
TWS1	**Kuangyinshan**	**1.00**	**290**	⇑P		**Pn**	**00 54 18.3**	**-0.4**
	baz=287							
TWS1				S		**Sn**	**00 54 33.9**	**+0.2**
	baz=287							
TWD	**Chiawan**	**1.04**	**230**	P		**Pn**	**00 54 18.7**	**-0.4**
	baz=228							
TWD				S		**Sn**	**00 54 34.9**	**+0.6**
	baz=228							
NNS	**Nan Shan**	**1.04**	**252**	P		**Pn**	**00 54 19.2**	**-0.1**
	baz=250							
NNS				*e*S		**Sn**	**00 54 34.8**	**+0.2**
	baz=250							
HWA	**Hwalien**	**1.10**	**225**	*e*P		**Pn**	**00 54 19.5**	**-0.3**
	baz=224							
HWA				*e*S		**Sn**	**00 54 36.5**	**+0.8**
	baz=224							
IRIF	**Iriomote-Funau**	**1.23**	**110**	S		**Sn**	**00 54 39.0**	**+0.6**
WHF	**Hehuan Shan**	**1.25**	**241**	*i* P		**Pn**	**00 54 21.7**	**-0.4**
	baz=239							
WHF				*e*S		**Sn**	**00 54 39.7**	**+0.3**
	baz=239							
TWT	**Tachien**	**1.27**	**247**	P		**Pn**	**00 54 22.4**	**+0.4**
	baz=245							
TWT				S		**Sn**	**00 54 40.1**	**+0.5**
	baz=245							
ESL	**Shilin**	**1.33**	**225**	P		**Pn**	**00 54 21.5**	**-1.1**
	baz=224							
ESL				*e*S		**Sn**	**00 54 39.6**	**-0.9**
	baz=224							
NSTT	**Nanjuang**	**1.33**	**265**	⇑P		**Pn**	**00 54 22.0**	**-0.6**
	baz=263							
NSTT				S		**Sn**	**00 54 40.2**	**-0.4**
	baz=263							
HSN	**Hsinchu**	**1.35**	**272**	*e*P		**Pn**	**00 54 22.1**	**-0.8**
	baz=271							
HSN				*e*S		**Sn**	**00 54 40.3**	**-0.8**
	baz=271							
HATJ	**Hateruma jima**	**1.41**	**119**	*e*S		**Sn**	**00 54 44.0**	**+1.7**
JKRS	**Kuro-shima**	**1.50**	**110**	P		**Pn**	**00 54 24.3**	**-0.4**
JKRS				*e*S		**Sn**	**00 54 45.1**	**+0.7**
NSY	**Sanyi**	**1.58**	**258**	*e*P		**Pn**	**00 54 25.7**	**-0.1**
	baz=256							
JIJ	**Ishigaki jima**	**1.58**	**104**	P		**Pn**	**00 54 25.5**	**-0.2**
JIJ				*e*S		**Sn**	**00 54 46.0**	**-0.2**
TWQ1	**Liyutan**	**1.59**	**255**	*e*P		**Pn**	**00 54 25.4**	**-0.4**
	baz=253							
TWQ1				S		**Sn**	**00 54 46.5**	**+0.2**
	baz=253							
EHY	**Hungye**	**1.62**	**220**	P		**Pn**	**00 54 25.0**	**-1.3**
	baz=219							
EHY				*e*S		**Sn**	**00 54 45.3**	**-1.8**
	baz=219							
SMLT	**Sun Moon Lake**	**1.67**	**239**	*e*P		**Pn**	**00 54 27.5**	**+0.6**
	baz=237							
SMLT				*e*S		**Sn**	**00 54 50.3**	**+2.1**
	baz=237							
TYC	**Yuchr**	**1.69**	**240**	*e*P		**Pn**	**00 54 27.4**	**+0.3**
	baz=238							
TYC				*e*S		**Sn**	**00 54 50.3**	**+1.7**
	baz=238							
TCU	**Taichung**	**1.73**	**250**	*e*P		**Pn**	**00 54 27.6**	**-0.1**
	baz=248							
TCU				*e*S		**Sn**	**00 54 49.8**	**+0.2**
	baz=248							
TWF1	**Yuli**	**1.76**	**217**	*e*P		**Pn**	**00 54 26.9**	**-1.1**
	baz=216							
TWF1				*e*S		**Sn**	**00 54 49.0**	**-1.2**
	baz=216							
CHKT	**Chengkung**	**1.93**	**211**	*e*P		**Pn**	**00 54 29.2**	**-1.1**
	baz=210							
CHKT				*e*S		**Sn**	**00 54 52.3**	**-1.8**
	baz=210							
ALS	**Alishan**	**1.96**	**231**	*e*P		**Pn**	**00 54 31.5**	**+0.6**
	baz=229							
ALS				*e*S		**Sn**	**00 54 56.0**	**+0.9**
	baz=229							
CHN5	**Tsauling**	**2.00**	**235**	P		**Pn**	**00 54 31.4**	**+0.2**
	baz=234							
CHN5				*e*S		**Sn**	**00 54 57.5**	**+1.7**
	baz=234							
WGK	**Gukeng**	**2.03**	**239**	*e*P		**Pn**	**00 54 32.4**	**+0.9**
	baz=237							
WGK				*e*S		**Sn**	**00 54 58.2**	**+1.6**
	baz=237							
ELDTW	**Lidau**	**2.04**	**220**	P		**Pn**	**00 54 30.9**	**-0.9**
	baz=219							
ELDTW				*e*S		**Sn**	**00 54 55.7**	**-1.3**
	baz=219							
JTJ	**Tarama**	**2.04**	**93**	*e*S		**Sn**	**00 54 56.8**	**0.0**
CHN2	**Minshiung**	**2.18**	**236**	*e*S		**Sn**	**00 55 01.3**	**+1.3**
	baz=235							
CHN4	**Tsaushan**	**2.21**	**231**	*e*P		**Pn**	**00 54 34.3**	**+0.4**
	baz=230							
CHN4				*e*S		**Sn**	**00 55 01.7**	**+1.0**
	baz=230							
CHY	**Chiayi**	**2.24**	**236**	*e*P		**Pn**	**00 54 34.6**	**+0.2**
	baz=235							
WTP	**Ta-pu**	**2.26**	**229**	*e*P		**Pn**	**00 54 35.3**	**+0.6**
	baz=227							
TWG	**Pinlang**	**2.31**	**214**	*e*P		**Pn**	**00 54 34.5**	**-0.8**
	baz=213							
TWG				*e*S		**Sn**	**00 55 01.4**	**-1.7**
	baz=213							
TWK	**Hsinying**	**2.33**	**231**	*e*P		**Pn**	**00 54 35.9**	**+0.3**
	baz=229							
TWK				*e*S		**Sn**	**00 55 04.8**	**+1.1**
	baz=229							
CHN1	**Nanshi**	**2.36**	**229**	*e*P		**Pn**	**00 54 36.2**	**+0.3**
	baz=228							
CHN1				*e*S		**Sn**	**00 55 05.7**	**+1.4**
	baz=228							
EAST	**Anshuo**	**2.79**	**212**	*e*P		**Pn**	**00 54 41.6**	**0.0**
	baz=211							

MEX 03 00:57:43.9±0.9, 16°.85N×99°.65W, h36km±8km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.21**	**277**	*i* P		Pn	00 57 49.3	-3.4
ACX				*i* S		Sn	00 57 54.3	-6.7
ACP2	**Acapulco**	**0.23**	**277**	*i* P		Pn	00 57 49.6	-2.7
ACP2				*i* S		Sn	00 57 54.9	-5.0
CAIG	**El Cayaco**	**0.63**	**289**	*i* P		Pn	00 57 54.3	-2.1
CAIG				*e*S		Sn	00 58 03.4	-1.9
PNIG	**Pinotepa**	**1.52**	**107**	*e*P		Pn	00 58 06.8	-1.8
PNIG				*i* S		Sn	00 58 25.6	-1.6
ARIG	**Puente Sto Nin**	**1.58**	**335**	*i* P		Pn	00 58 07.8	-1.6
ARIG				*e*S		Sn	00 58 26.9	-1.7
ZIIG	**Zihuatanejo**	**1.90**	**294**	*i* P		Pn	00 58 12.9	-0.8
ZIIG				*i* S		Sn	00 58 35.4	-1.0
YAIG	**Yautepec**	**2.08**	**15**	*i* P		Pn	00 58 14.2	-2.3
YAIG				*e*S		Sn	00 58 39.0	-2.3

IDC 03 00:57:52.4±1.7, 3°.53N×126°.83E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/22, mbtmp3.9/5, Error ellipse: s-maj=95.4km s-min=23.6km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.52**	**183**	P	P	01 02 43.8	+0.6
	5.9nm,0.9s,baz=14,slow=9.2,SNR=6.5						
WRA	**Warramunga Arr**	**24.46**	**163**	P	P	01 03 13.1	-0.2
	11nm,0.8s,baz=342,slow=10,SNR=26						
ASAR	**Alice Springs**	**27.89**	**166**	P	P	01 03 43.9	-0.4
	0.4nm,0.5s,baz=343,slow=6.8,SNR=12						
STKA	**Stephens Creek**	**37.90**	**159**	P	P	01 05 11.7	+0.2
	1.1nm,0.3s,baz=339,slow=6.4,SNR=7.0						
MKAR	**Makanchi Array**	**57.78**	**325**	P	P	01 07 45.4	-0.1
	0.2nm,0.5s,baz=120,slow=7.1,SNR=6.1						

*ISK **03** 01:01:48.9, 40°.28N×41°.69E, h22km, MD2.7*
*DDA **03** 01:01:49.6, 40°.15N×41°.88E, h7km, MD3.0*
*CSEM **03** 01:01:49.7±0.3, 40°.17N×41°.66E, h30km, MD3.0, Error ellipse: s-maj=13.2km s-min=6.5km az=118.0*
*ISCJB **03** 01:01:49.3±0.7, 40°.16N±0°.04×41°.91E±0°.07, h11km±5km, Error ellipse: s-maj=9.9km s-min=6.3km az=29.1*

ISC 03 01:01:48.1±1.6, 40°.20N±0°.05×41°.76E±0°.05, h4km±13km, n21, σ1ˢ18/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOMI	Horasan	0.19	145	*i* P	Pg	01 01 51.9	-0.1
HOMI				*i* S	Sg	01 01 54.9	+0.3
ERZM	Erzurum	0.42	225	*i* P	Pb	01 01 58.7	+0.4
ERZM				*i* S	Sb	01 02 07.0	+1.7
ERZM	Erzurum	0.42	225	*i* P	Pb	01 01 58.7	+0.4
EZM	Erzurum	0.43	226	*e*PG	Pb	01 01 58.9	+0.5
EZM				*e*SG	Sb	01 02 05.9	+0.6
DDEM	Demirkent	0.69	359	*i* P	Pn	01 02 04.2	-0.6
DDEM	Demirkent	0.69	359	*i* P	Pn	01 02 04.2	-0.6
DBAD	Bademkaya	0.81	357	*i* P	Pn	01 02 06.6	+0.1
DBAD	Bademkaya	0.81	357	*i* P	Pn	01 02 06.6	+0.1
DAGI	Agillar	0.88	8	*i* P	Pn	01 02 07.3	-0.2
KOPT	Kop Dagi	0.99	260	*i* P	Pn	01 02 10.3	+1.3
VRTB	Varto-Mus	1.07	193	*e*PN	Pb	01 02 09.4	+0.2
VRTB				*e*SN	Sn	01 02 25.7	+0.3
VRTB	Varto-Mus	1.07	193	*e*Pn	Pb	01 02 09.4	+0.2
VRTB				*e*Sn	Sn	01 02 25.7	+0.3
KARS	Kars	1.09	67	*e*PN	Pb	01 02 09.8	+0.1
KARS	Kars	1.09	67	*e*Pn	Pb	01 02 09.8	+0.1
TUTA	Tutak	1.14	134	*i* P	Sn	01 02 27.8	+0.5
BCA	Borcka	1.24	355	*e*PN	Pn	01 02 10.8	-1.6
BCA	Borcka	1.24	355	*e*Pn	Pn	01 02 10.8	-1.6
BAYT	Ayd˜–ntepe-Bay	1.25	279	*e*PN	Pn	01 02 10.4	-2.1
BAYT	Ayd˜–ntepe-Bay	1.25	279	*e*Pn	Pn	01 02 10.5	-2.1
BNGB	Bingˆ¶l	1.47	215	*e*PN	Pn	01 02 14.9	-0.6
BINT	Bingol	1.65	217	*e*Pn	Pn	01 02 14.9	-3.1

IDC 03 01:06:04.9±8.2, 20°.58S×67°.83W, h198km±53km, mb3.2/2, mb1 3.1/4, mb1mx2.9/18, mbtmp2.9/4, Error ellipse: s-maj=95.9km s-min=29.9km az=29.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.28	356	P	Pn	01 07 10.9	0.0
	0.2nm,0.3s,baz=191,slow=8.4,SNR=7.8						
LPAZ				S	Sn	01 08 03.0	+0.2
	0.1nm,0.3s,baz=181,slow=9.2,SNR=2.8						
SIV	San Ignacio	7.87	56	P	Pn	01 07 56.1	-0.5
	0.5nm,0.3s,baz=249,slow=12,SNR=9.6						
TORD	Torodi Ar. Bea	76.09	70	P	P	01 17 31.4	+0.2
	0.3nm,0.3s,baz=256,slow=5.8,SNR=22						
YKA	Yellowknife Ar	90.66	340	P	P	01 18 44.1	-0.3
	0.2nm,0.5s,baz=132,slow=4.4,SNR=8.4						

*IDC **03** 01:09:56.5±1.0, 19°.08S×168°.27E, h0km, mb4.2/11, mb1 4.4/12, mb1mx4.3/19, mbtmp4.2/12, ML4.1/1, MS3.6/6, Ms1 3.6/6, ms1mx3.4/23, Error ellipse: s-maj=30.9km s-min=19.9km az=129.0*
*NOU **03** 01:09:58.5±1.3, 19°.05S×168°.46E, h30km, MD2.9, ML3.4*
*NEIC **03** 01:09:58.4±7.1, 19°.17S×168°.53E, h23km±46km, mb4.6/8, Error ellipse: s-maj=24.1km s-min=14.8km az=74.0*
*ISCJB **03** 01:10:00.2±0.8, 19°.24S±0°.05×168°.3E±0°.1, h42km, mb4.3/17, MS3.5/5, Error ellipse: s-maj=18.6km s-min=5.3km az=16.7*

ISC 03 01:10:01.6±0.8, 19°.24S±0°.08×168°.4E±0°.1, h42km, n57, σ0ˢ91/59, mb4.4/16, MS3.5/5, 2C-6D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	3.21	205	*e*P	Pn	01 10 49.5	-0.1
BAYA				*e*S	Sn	01 11 25.5	-1.1
BAYA				AMP		01 11 27.0	
	comp=Z,23nm,0.0s						
DZM	Mont Dzumac	3.34	212	*e*P	Pn	01 10 49.9	-1.5
DZM				*e*S	Sn	01 11 28.4	-1.6
DZM				AMP		01 11 43.3	
	comp=Z,3μm,3.8s						
DZM	Mont Dzumac	3.34	212	Pn	Pn	01 10 50.7	-0.7
DZM				Sn	Sn	01 11 29.1	-0.8
DZM	Mont Dzumac	3.34	212	Pn	Pn	01 10 50.7	-0.7
	comp=Z,17nm,0.3s,baz=49,slow=20,SNR=78						
DZM				Sn	Sn	01 11 29.1	-0.8
	comp=Z,60nm,0.3s,baz=118,slow=23,SNR=14						
NOUC	Port Laguerre	3.44	214	*e*P	Pn	01 10 51.7	-1.0
NOUC				*e*S	Sn	01 11 32.7	+0.5
NOUC				AMP		01 11 40.9	
	comp=Z,114nm,1.9s						
NORM	Noumea	3.46	210	*e*P	Pn	01 10 52.4	-0.5
NORM				*e*S	Sn	01 11 31.8	-0.8
NORM				AMP		01 11 33.7	
	comp=Z,429nm,1.8s						
HNR	Honiara	12.71	319	LR	LR	01 16 42.5	
	comp=Z,196nm,20.9s,baz=133,slow=32						
CTA	Charters Tower	20.84	264	P	P	01 14 40.6	+0.7
CTA	Charters Tower	20.84	264	P	P	01 14 40.6	+0.7
	comp=Z,16nm,0.9s,baz=89,slow=12,SNR=8.0						
CTA				LR	LR	01 21 17.2	
	comp=Z,182nm,18.4s,baz=48,slow=33						
CTAO	Charters Tower	20.84	264	*e*P	Pn	01 14 42.2	-0.5
	comp=Z,20nm,1.0s						
PMG	Port Moresby	22.73	293	*e*P	P	01 15 00.9	+0.7
	comp=Z,35nm,1.2s						
RPZ	Rata Peaks	24.51	175	LR	LR	01 22 21.8	
	comp=Z,114nm,21.2s,baz=9.4,slow=30						
STKA	Stephens Creek	27.15	237	P	P	01 15 42.4	+1.4
STKA	Stephens Creek	27.15	237	P	P	01 15 42.4	+1.4
	comp=Z,6.4nm,0.9s,baz=62,slow=8.5,SNR=12						
STKA				LR	LR	01 25 49.4	
	comp=Z,138nm,21.9s,baz=27,slow=35						
WRA	Warramunga Arr	32.03	263	P	P	01 16 23.4	-1.1
WRA	Warramunga Arr	32.03	263	P	P	01 16 23.4	-1.1
	comp=Z,0.6nm,0.9s,baz=159,slow=24,SNR=3.1						
AS31	Alice Springs	32.32	256	*e*P	P	01 16 27.0	0.0
ASAR	Alice Springs	32.33	256	P	P	01 16 27.4	+0.4
ASAR				PcP	PcP	01 19 15.1	+0.7
ASAR	Alice Springs	32.33	256	P	P	01 16 27.4	+0.4
	comp=Z,4.6nm,0.8s,baz=82,slow=8.3,SNR=38						
ASAR				PcP	PcP	01 19 15.1	+0.7
	comp=Z,0.8nm,0.9s,baz=79,slow=4.8,SNR=5.1						
ASAR				LR	LR	01 27 37.7	
	comp=Z,114nm,18.9s,baz=186,slow=33						
FITZ	Fitzroy Crossi	40.42	264	P	P	01 17 35.5	-0.6
FITZ	Fitzroy Crossi	40.42	264	P	P	01 17 35.5	-0.6
	comp=Z,6.2nm,0.9s,baz=99,slow=13,SNR=4.6						
NWAO	Narrogin (SRO)	47.48	243	LR	LR	01 39 00.1	
	comp=Z,100nm,18.4s,baz=98,slow=37						
KAPI	Kappang	49.40	280	*e*P	P	01 18 46.4	-1.2
	comp=Z,15nm,1.1s						
VNDA	Vanda	58.40	182	*e*P	P	01 19 52.7	+0.3
	comp=Z,4.2nm,1.4s						
MJAR	Matsushiro Arr	62.37	333	P	P	01 20 19.7	-0.3
MJAR	Matsushiro Arr	62.37	333	P	P	01 20 19.7	-0.3
	comp=Z,4.9nm,1.1s,baz=167,slow=8.2,SNR=8.3						
MAJO	Matsushiro	62.37	333	*e*P	P	01 20 19.5	-0.6
	comp=Z,8.3nm,1.0s						
KSRS	Korea Array	68.04	326	P	P	01 20 56.2	-0.5
	comp=Z,0.6nm,0.6s,baz=127,slow=9.6,SNR=4.4						
KSAR	Wonju Array Be	68.06	326	P	P	01 20 56.2	-0.6
CMAR	Chiang Mai Arr	77.75	295	P	P	01 21 56.5	+1.8
CMAR	Chiang Mai Arr	77.75	295	P	P	01 21 56.5	+1.8
	comp=Z,0.9nm,0.4s,baz=132,slow=4.2,SNR=6.4						
CHTO	Chiang Mai	77.90	295	*e*P	P	01 21 55.8	+0.3
	comp=Z,2.3nm,0.8s						
MAW	Mawson	78.12	202	P	P	01 21 57.7	+1.8
MAW	Mawson	78.12	202	P	P	01 21 57.7	+1.8
	comp=Z,3.5nm,0.8s,baz=114,slow=3.2,SNR=5.4						
ULN	Ulaanbaatar	86.37	324	*e*P	P	01 22 40.0	+0.5
	comp=Z,1.5nm,0.5s						
SONM	Songino Array	86.73	323	P	P	01 22 41.7	+0.5
SONM	Songino Array	86.73	323	P	P	01 22 41.7	+0.5
	comp=Z,2.2nm,0.9s,baz=157,slow=4.3,SNR=11						
BILL	Bilibino	87.04	359	*e*P	P	01 22 41.0	-1.1
	comp=Z,8.2nm,1.1s						
TXAR	Lajitas Array	97.49	62	P	Pdif	01 23 34.5	+2.9
TXAR	Lajitas Array	97.49	62	P	Pdif	01 23 34.5	+2.9
	comp=Z,0.1nm,0.6s,baz=220,slow=5.4,SNR=2.7						
YKA	Yellowknife Ar	101.05	27	P	Pdif	01 23 46.1	-0.4
YKA	Yellowknife Ar	101.05	27	P	Pdif	01 23 46.1	-0.4
	comp=Z,0.4nm,0.6s,baz=253,slow=4.7,SNR=9.8						
ARCES	ARCESS Array B	124.86	345	PKP	PKPdf	01 28 55.7	-0.6
ARCES	ARCESS Array B	124.86	345	PKP	PKPdf	01 28 55.7	-0.6
	comp=Z,1.6nm,0.7s,baz=29,slow=2.8,SNR=6.2						
CONA	Conrad Observa	143.71	328⇓	*e*PKPdf	PKPdf	01 29 31.1	-1.0
	comp=Z,3.0nm,1.0s						
CONA	Conrad Observa	143.71	328⇓	*e*P	PKPdf	01 29 31.1	-1.0
GERES	GERESS Array B	144.10	331	PKPpre	PKPpre	01 29 30.0	
GERES				PKP	PKPdf	01 29 32.6	-0.2
GERES	GERESS Array B	144.10	331	PKhKP	PKPpre	01 29 30.0	
	comp=Z,0.4nm,0.7s,baz=48,slow=2.0,SNR=4.8						
GERES				PKP	PKPdf	01 29 32.6	-0.2
	comp=Z,0.6nm,0.9s,baz=48,slow=1.5,SNR=4.6						
MOA	Molln	144.55	330⇓	*i*PKPdf	PKPdf	01 29 33.1	-0.4
	comp=Z,4.1nm,1.0s						
MOA	Molln	144.55	330⇓	*i*P	PKPdf	01 29 33.1	-0.4
SOKA	Soboth	144.97	327⇓	*i*PKPab	PKPbc	01 29 32.5	-1.2
	comp=Z,6.5nm,1.3s						
SOKA	Soboth	144.97	327⇓	*i*P	PKPbc	01 29 32.5	-1.2
WLF	Walferdange	146.47	339	*e*PKPbc	PKPab	01 29 38.3	-0.7
FETA	Feichten	146.79	332⇑	*e*PKPab	PKPbc	01 29 38.7	-0.6
	comp=Z,6.3nm,1.1s						
FETA	Feichten	146.79	332⇑	*e*P	PKPbc	01 29 38.7	-0.6
TORD	Torodi Ar. Bea	165.84	247	PKPab	PKPab	01 31 03.4	+0.9
TORD	Torodi Ar. Bea	165.84	247	PKPab	PKPab	01 31 03.4	+0.9
	comp=Z,1.0nm,1.1s,baz=141,slow=4.8,SNR=3.9						

MEX 03 01:20:07.9±0.4, 15°.50N×95°.40W, h12km±7km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.73	292	*i* P	Pg	01 20 20.2	-2.0
HUIG				*i* S	Sg	01 20 29.3	-2.6
PANG	Puerto Angel	1.05	279	*i* P	Pb	01 20 24.9	-3.0
PANG				*i* S	Sb	01 20 37.6	-4.0
CMIG	Matias Romero	1.66	17	*e*P	Pn	01 20 33.0	-3.8
CMIG				*e*S	Sn	01 20 53.3	-4.7
VHO	Vista Hermosa	2.02	321	*i* P	Pn	01 20 39.7	-2.4
VHO				*i* S	Sn	01 21 03.0	-4.5
PCIG		2.11	84	*i* P	x	01 22 25.6	
PCIG				*i* S	x	01 22 49.9	
CCIG	Comitan	3.23	76	*i* P	Pn	01 20 56.4	-2.3
CCIG				*e*S	Sn	01 21 34.4	-2.9
UTMO	Huajuapan	3.27	316	*i* P	Pn	01 20 57.1	-2.1
UTMO				*e*S	Sn	01 21 35.1	-3.1
TPIG	Tehuac#an	3.46	327	*i* P	Pn	01 20 58.8	-3.0
TPIG				*e*S	Sn	01 21 39.7	-3.1
PPM	Popocatepetl	4.70	319	*i* P	Pn	01 21 16.1	-3.2
PPM				*e*S	Sn	01 22 11.1	-3.1

*IDC **03** 01:20:10.7±0.5, 18°.60S×173°.76W, h0km, mb4.5/18, mb1 4.7/20, mb1mx4.6/26, mbtmp4.5/20, ML3.0/2, MS4.0/14, Ms1 3.9/14, ms1mx3.8/26, Error ellipse: s-maj=19.9km s-min=13.0km az=125.0*
*ISCJB **03** 01:20:17.9±0.2, 18°.70S±0°.05×173°.89W±0°.07, h65km, mb4.6/48, Error ellipse: s-maj=10.8km s-min=6.1km az=27.2*
*MOS **03** 01:20:17.8±2.7, 18°.46S×174°.30W, h33km, mb5.1/9, Error ellipse: s-maj=14.9km s-min=12.7km az=56.3*
*NEIC **03** 01:20:18.9±3.2, 18°.60S×173°.86W, h61km±27km, mb4.8/27, Error ellipse: s-maj=11.2km s-min=8.8km az=130.0*
NEIC Felt at Neiafu.
*BJI **03** 01:20:18.4, 19°.27S×173°.78W, h83km, mB5.2/13, mb4.9/17, Ms5.1/4, Ms7 4.6/5*
*SZGRF **03** 01:20:22.3, 18°.83S×173°.35W, h78km, Tonga Islands*

ISC 03 01:20:20.3±0.4, 18°.74S±0°.07×173°.80W±0°.08, h73km±3km, h73km:pP-P, n260, σ1ˢ18/292, mb4.7/48, 49C-10D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.18	22	*e*Pn	Pn	01 21 26.6	-8.9
AFI				Sn	Sn	01 22 18.5	-16
AFI	Afiamalu	5.18	22	Pn	Pn	01 21 26.6	-8.9
	7.8nm,0.3s,baz=207,slow=2.3,SNR=12						
AFI				Sn	Sn	01 22 18.5	-16
	48nm,0.3s,baz=212,slow=21,SNR=7.1						
MSVF	Nonsavu	7.81	276	*e*P	Pn	01 22 18.3	+6.9
MSVF	Nonsavu	7.81	276	*e*Pn	Pn	01 22 18.3	+6.9
RAR	Rarotonga	13.41	103	*e*Pn	Pn	01 23 16.1	-11
RAR	Rarotonga	13.41	103	Pn	Pn	01 23 16.6	-11
	16nm,0.3s,baz=270,slow=11,SNR=17						
RAR				LR	LR	01 26 53.5	
	comp=Z,493nm,19.2s,baz=90,slow=30						
DZM	Mont Dzumac	18.81	257	*e*P	Pn	01 24 37.6	+2.0
	98nm,1.8s						
DZM				*e*LQ	LQ	01 28 18.1	
	1μm,31.7s						
DZM				*e*LR	LR	01 29 05.8	
	745nm,24.9s						
DZM	Mont Dzumac	18.81	257	P	P	01 24 33.6	-0.7
DZM	Mont Dzumac	18.81	257	P	P	01 24 33.6	-0.7
	0.2nm,0.3s,baz=124,slow=23,SNR=2.7						
URZ	Urewera	21.00	200	*e*P	P	01 24 57.9	+0.1
	63nm,0.9s						
URZ				S	S	01 28 35.8	-12
URZ	Urewera	21.00	200	PN	P	01 24 56.3	-1.5
URZ				SN	S	01 28 38.6	-9.1
URZ	Urewera	21.00	200	P	P	01 24 57.6	-0.2
	55nm,0.7s,baz=29,slow=3.9,SNR=47						
URZ				S	S	01 28 35.8	-12
	4.7nm,0.5s,baz=59,slow=11,SNR=5.2						
URZ				LR	LR	01 31 31.4	
	comp=Z,261nm,18.6s,baz=52,slow=32						
BKZ	Black Stump Fm	22.03	200	PN	P	01 25 07.1	-1.8
FWVZ	Far West T-bar	22.43	202	PN	P	01 25 11.2	-2.2
TRVZ	Turoa	22.47	202	PN	P	01 25 12.4	-1.4
TSZ	Takapari Road	23.01	200	PN	P	01 25 17.3	-1.8
PPT2	Papeete2	23.04	91	*e*LR	LR	01 30 35.5	
	528nm,26.0s,baz=252						
PPT	Papeete	23.05	91	LR	LR	01 32 27.4	
	comp=Z,161nm,21.4s,baz=295,slow=32						
TBI	Tubuai	23.16	106	*e*LR	LR	01 30 44.0	
	485nm,26.8s,baz=272						
BFZ	Birch Farm	23.48	199	PN	P	01 25 23.6	0.0
QRZ	Quartz Range	24.94	205	PN	P	01 25 39.5	+2.7
KHZ	Kahutara	25.93	202	*e*P	P	01 25 47.0	+1.3
	27nm,1.0s						
LTZ	Lake Taylor	26.71	203	PN	P	01 25 50.9	-1.9
HNR	Honiara	27.06	286	LR	LR	01 35 11.8	
	comp=Z,239nm,20.2s,baz=110,slow=33						
RPZ	Rata Peaks	27.97	204	*e*P	P	01 26 05.0	+0.9
	332nm,2.7s						
RPZ	Rata Peaks	27.97	204	P	P	01 26 03.3	-0.7
	5.2nm,0.6s,baz=30,slow=18,SNR=7.6						
JCZ	Jackson Bay	29.19	206	PN	P	01 26 13.5	-1.5
RKT	Rikitea	36.45	104	*e*LR	LR	01 36 52.6	
	270nm,24.8s,baz=294						
CTA	Charters Tower	37.64	261	P	P	01 27 28.7	+0.2
CTA	Charters Tower	37.64	261	P	P	01 27 28.7	+0.2
	14nm,0.5s,baz=100,slow=8.6,SNR=10						
CTAO	Charters Tower	37.64	261	*e*P	P	01 27 28.5	0.0
CTAO				pmax	pmax		
	comp=Z,16nm,0.7s						
CTAO	Charters Tower	37.64	261	*e*P	P	01 27 28.5	0.0
	comp=Z,16nm,0.7s						
STKA	Stephens Creek	42.11	243	*e*P	P	01 28 05.0	-0.5
	comp=Z,9.4nm,2.1s						
STKA	Stephens Creek	42.11	243	P	P	01 28 05.0	-0.5
	comp=Z,3.8nm,0.6s,baz=92,slow=13,SNR=13						
STKA				LR	LR	01 44 14.8	
	comp=Z,172nm,20.3s,baz=33,slow=34						
WRAB	Tennant Creek	48.78	260	*e*P	P	01 28 56.8	-1.5
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WRAB	Tennant Creek	48.78	260	*e*P	P	01 28 56.8	-1.5
	comp=Z,8.9nm,0.8s						
AS31	Alice Springs	48.79	255	*e*P	P	01 28 57.7	-0.7
ASAR	Alice Springs	48.79	255	P	P	01 28 58.0	-0.4
ASAR	Alice Springs	48.79	255	P	P	01 28 58.0	-0.4
	comp=Z,12nm,0.8s,baz=93,slow=7.6,SNR=98						
ASAR				LR	LR	01 49 07.3	
	comp=Z,138nm,18.9s,baz=263,slow=36						
WRA	Warramunga Arr	48.79	260	P	P	01 28 57.3	-1.1
WRA	Warramunga Arr	48.79	260	P	P	01 28 57.3	-1.1
	comp=Z,4.6nm,0.6s,baz=97,slow=6.8,SNR=12						
SBA	Scott Base	59.91	185	*e*P	P	01 30 20.8	+2.6
SBA				pmax	pmax		
	comp=Z,25nm,0.8s						
SBA	Scott Base	59.91	185	*e*P	P	01 30 20.8	+2.6
	comp=Z,25nm,0.8s						
VNDA	Vanda	60.03	186	*e*P	P	01 30 20.8	+1.8
	comp=Z,8.7nm,1.0s						
VNDA	Vanda	60.03	186	P	P	01 30 21.1	+2.1
	comp=Z,6.3nm,0.9s,baz=9.7,slow=6.4,SNR=25						
VNDA				LR	LR	01 49 49.9	
	comp=Z,98nm,21.4s,baz=239,slow=30						
MBWA	Marble Bar	62.11	256	*e*P	P	01 30 34.0	-0.1
	comp=Z,92nm,1.7s						
CASY	Casey	67.23	205	*e*P	P	01 31 06.9	+0.3
	comp=Z,5.5nm,0.7s						
MJAR	Matsushiro Arr	71.25	321	P	P	01 31 31.3	-0.6
MJAR	Matsushiro Arr	71.25	321	P	P	01 31 31.3	-0.6
	comp=Z,0.9nm,0.6s,baz=172,slow=6.9,SNR=4.5						
MJAR				LR	LR	01 55 47.7	
	comp=Z,100nm,20.5s,baz=315,slow=30						
QSPA	South Pole Qui	71.32	180	*e*P	P	01 31 32.8	+0.7
	comp=Z,32nm,0.9s						
QSPA	South Pole Qui	71.32	180	P	P	01 31 33.2	+1.2
	comp=Z,33nm,0.9s,baz=29,slow=1.5,SNR=107						
PETK	Petropavlovsk-	75.68	343	P	P	01 31 57.8	+0.3
PETK	Petropavlovsk-	75.68	343	P	P	01 31 57.8	+0.3
PETK	Petropavlovsk-	75.68	343	P	P	01 31 57.7	+0.3
	comp=Z,5.0nm,0.8s,baz=165,slow=12,SNR=4.0						
YBH	Yreka Blue Hor	76.48	37	P	P	01 32 02.5	+0.1
YBH	Yreka Blue Hor	76.48	37	P	P	01 32 02.5	+0.1
	comp=Z,3.0nm,0.9s,baz=107,slow=2.6,SNR=5.2						
NVAR	Mina Array Bea	77.06	42	P	P	01 32 05.3	-0.7
NVAR	Mina Array Bea	77.06	42	P	P	01 32 05.3	-0.7
	comp=Z,2.2nm,1.0s,baz=224,slow=9.9,SNR=9.6						
NV11	Mina Array Sit	77.16	42	*e*P	P	01 32 02.2	-4.1
KSRS	Korea Array	78.28	316	P	P	01 32 09.5	-2.9
	comp=Z,5.8nm,0.8s,baz=122,slow=38,SNR=14						
KSRS				LR	LR	02 04 38.6	
	comp=Z,46nm,18.3s,baz=344,slow=34						
KSAR	Wonju Array Be	78.30	316	P	P	01 32 09.5	-3.0
USRK	Ussuriysk Arra	79.82	324	LR	LR	02 01 04.8	
	comp=Z,124nm,19.7s,baz=277,slow=31						
HABR	Khabarovsk	80.96	328	P	P	01 32 25.9	-0.8
HABR				*SP	sP	01 32 40.4	-14
HABR				*e*PPP	PPP	01 37 20.4	
HABR				*e*SS	SS	01 47 48.0	+2.2
HABR				pmax	pmax		
	comp=E,50nm,1.8s						
HABR				pmax	pmax		
	comp=N,76nm,1.8s						
HABR				pmax	pmax		
	comp=Z,56nm,1.3s						
HABR				MLR	MLR		
	comp=Z,198nm,20.0s						
MDJ	Mudanjiang	81.44	323	P	P	01 32 29.7	+0.4
MDJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MDJ				pmax	pmax		
	comp=Z,56nm,5.2s						
NJ2	Nanjing	81.88	308	*e*P	P	01 32 30.5	-1.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TXAR	Lajitas Array	82.79	56	P	P	01 32 36.8	-0.1
TXAR	Lajitas Array	82.79	56	P	P	01 32 36.8	-0.1
	comp=Z,2.6nm,1.1s,baz=224,slow=5.2,SNR=14						
ANMO	Albuquerque	83.24	50	*e*P	P	01 32 40.2	+1.0
	comp=Z,3.9nm,1.1s						
PV01	Paradox Valley	83.30	46	*e*P	P	01 32 38.9	-0.7
	comp=Z,146nm,0.8s						
CN2	Changchun	83.40	321	*e*P	P	01 32 40.8	+1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TRF	Thorofare Moun	83.96	10	*e*P	P	01 32 41.0	-1.2
	comp=Z,7.3nm,0.8s						
MCMT	McKenzie Canyo	84.08	39	*e*P	P	01 32 42.9	-0.5
	comp=Z,0.9nm,0.8s						
MCK	McKinley	84.46	11	*e*P	P	01 32 44.4	-0.2
MCK				pmax	pmax		
	comp=Z,11nm,1.0s						
MCK	McKinley	84.46	11	*e*P	P	01 32 44.4	-0.2
	comp=Z,11nm,1.0s						
MCK				*e*pP	pP	01 33 06.0	+1.6
TPAW	Teton Pass	84.51	41	*e*P	P	01 32 44.2	-1.4
	comp=Z,3.7nm,1.0s						
MAW	Mawson	84.52	199	P	P	01 32 46.3	+1.3
MAW	Mawson	84.52	199	P	P	01 32 46.3	+1.3
	comp=Z,6.3nm,0.9s,baz=137,slow=2.8,SNR=8.7						
MAW				LR	LR	02 09 53.6	
	comp=Z,122nm,20.6s,baz=298,slow=35						
SNOW	Snow King Moun	84.61	41	*e*P	P	01 32 45.4	-0.7
	comp=Z,4.4nm,0.8s						
IMW	Indian Meadow	84.73	40	*e*P	P	01 32 46.6	-0.1
	comp=Z,4.2nm,0.9s						
IMW				*e*pP	pP	01 33 04.0	-2.7
MOOW	Moose Ponds	84.77	40	*e*P	P	01 32 45.2	-1.6
	comp=Z,2.7nm,1.2s						
LOHW	Long Hollow	84.79	41	*e*P	P	01 32 46.4	-0.6
	comp=Z,2.8nm,1.0s						
SMCO	Snowmass	84.90	46	*e*P	P	01 32 48.2	+0.4
	comp=Z,5.4nm,1.3s						
PDAR	Pinedale Array	85.00	42	P	P	01 32 47.1	-1.0
PDAR	Pinedale Array	85.00	42	P	P	01 32 47.1	-1.0
	comp=Z,1.5nm,0.8s,baz=216,slow=3.1,SNR=13						
PDAR				LR	LR	02 07 39.3	
	comp=Z,66nm,18.6s,baz=258,slow=34						
BOZ	Bozeman (W)	85.25	38	*e*P	P	01 32 49.2	0.0
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BOZ	Bozeman (W)	85.25	38	*e*P	P	01 32 49.2	0.0
	comp=Z,5.2nm,1.2s						
DOT	Dot Lake	85.33	13	*e*P	P	01 32 49.0	+0.1
SEY	Seymchan	85.63	345	*i* P	P	01 32 50.8	+0.4
COLA	College	85.70	11	*e*P	P	01 32 50.5	-0.1
COLA				pmax	pmax		
	comp=Z,19nm,0.8s						
COLA	College	85.70	11	*e*P	P	01 32 50.5	-0.1
	comp=Z,19nm,0.8s						
AMTX	Amarillo	86.71	52	*e*P	P	01 32 55.3	-1.3
	comp=Z,6.9nm,0.9s						
EGAK	Eagle	86.94	13	*e*P	P	01 32 56.7	-0.1
	comp=Z,6.2nm,0.9s						
BILL	Bilibino	87.75	353	*i* P	P	01 33 00.5	-0.1
SYO	Syowa Base	89.27	191⇑	*e*P	P	01 33 07.0	-1.0
GYA	Guiyang	89.27	298	*e*P	P	01 33 08.9	0.0
GYA				pP	pP	01 33 27.4	-1.6
GYA				sP	sP	01 33 35.8	-1.1
GYA				PP	PP	01 36 42.0	+1.3
GYA				SKS	SKSac	01 43 30.7	-2.2
GYA				S	S	01 43 50.8	-2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SNAA	Sanae	89.61	177	*e*P	P	01 33 09.7	+0.1
SNAA	Sanae	89.61	177	*e*P	P	01 33 09.0	-0.7
	comp=Z,10nm,0.8s						
SNAA	Sanae	89.61	177	P	P	01 33 09.9	+0.2
	comp=Z,3.9nm,0.8s,baz=215,slow=3.7,SNR=31						
VNA2	Neumayer--Watz	90.07	176	*e*P	P	01 33 12.5	+0.8
HHC	Hu-ho-hao-te	91.01	313	*e*P	P	01 33 17.9	+1.2
HHC				pP	pP	01 33 35.0	-1.8
HHC				PP	PP	01 36 57.1	+2.9
HHC				S	S	01 44 07.9	-0.5
HHC				SS	SS	01 50 15.9	+1.9
HHC				pmax	pmax		
	comp=Z,31nm,0.5s						
HHC				pmax	pmax		
	comp=Z,210nm,4.4s						
HHC				LR	LR		
	comp=N,180nm,18.4s						
HHC				LR	LR		
	comp=E,230nm,19.6s						
HHC				LR	LR		
	comp=Z,150nm,18.2s						
LCO	Las Campanas	91.95	121	*e*P	P	01 33 21.8	+0.2
	comp=Z,9.2nm,0.9s						
KMI	Kunming	92.12	296	P	P	01 33 25.0	+2.6
KMI				pP	pP	01 33 42.7	+0.2
KMI				sP	sP	01 33 48.6	-1.8
KMI				PP	PP	01 37 05.8	+2.3
KMI				S	S	01 44 15.6	-3.8
KMI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,80nm,5.4s						
KMI				LR	LR		
	comp=Z,55nm,25.9s						
CD2	Chengdu	93.22	301	P	P	01 33 27.4	+0.3
CD2				pP	pP	01 33 45.8	-1.4
CD2				PP	PP	01 37 14.2	+2.4
CD2				SKS	SKSac	01 43 54.1	-1.0
CD2				S	S	01 44 26.1	-2.4
CD2				SS	SS	01 50 46.9	+0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.6s						
CMAR	Chiang Mai Arr	93.29	288	P	P	01 33 28.1	+0.5
CMAR	Chiang Mai Arr	93.29	288	P	P	01 33 28.1	+0.5
	comp=Z,0.7nm,0.3s,baz=112,slow=2.4,SNR=4.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YKA	**Yellowknife Ar**	**93.30**	**24**	P	**P**	**01 33 26.1**	**-0.5**
YKA	**Yellowknife Ar**	**93.30**	**24**	P	**P**	**01 33 26.1**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=235,slow=3.3,SNR=4.7						
ULM	**Lac du Bonnet**	**96.75**	**39**	LR	LR	02 11 22.6	
	comp=Z,142nm,19.2s,baz=304,slow=32						
SONM	**Songino Array**	**97.06**	**318**	LR	LR	02 13 16.3	
	comp=Z,75nm,18.1s,baz=87,slow=33						
LSA	**Lhasa**	**103.30**	**297**	*e*P	**PKiKP**	**01 38 29.4**	**-2.7**
ZALV	**Zalesovo Beam**	**111.60**	**321**	PKIKP	**PKiKP**	**01 38 46.0**	**-0.1**
ZALV	**Zalesovo Beam**	**111.60**	**321**	PKiKP	**PKiKP**	**01 38 46.0**	**-0.1**
ZALV	**Zalesovo Beam**	**111.60**	**321**	PKiKP	**PKiKP**	**01 38 46.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=46,slow=4.2,SNR=3.6						
MKAR	**Makanchi Array**	**112.87**	**314**	PKIKP	**PKiKP**	**01 38 48.9**	**+0.1**
MKAR	**Makanchi Array**	**112.87**	**314**	PKiKP	**PKiKP**	**01 38 48.9**	**+0.1**
MKAR	**Makanchi Array**	**112.87**	**314**	PKiKP	**PKiKP**	**01 38 48.9**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=66,slow=1.1,SNR=11						
KSH	**Kashi**	**117.12**	**305**	*e*PKP	**PKPdf**	**01 38 55.4**	**-2.0**
KSH				*e*PKS	**PKSdf**	**01 42 30.4**	**-3.8**
KSH				*e*SKS	**SKSdf**	**01 46 02.3**	**-1.0**
KSH				AMB	AMB		
	comp=Z,320nm,5.2s						
KSH				LR	LR		
	comp=N,110nm,4.8s						
KSH				LR	LR		
	comp=E,220nm,5.5s						
KSH				LR	LR		
	comp=Z,230nm,5.7s						
ARU	**Arti**	**125.95**	**327**	*i* PKIKP	**PKPdf**	**01 39 14.4**	**+0.8**
ARU						01 41 07.6	
ARU						01 46 15.6	
ARCES	**ARCESS Array B**	**127.84**	**352**	PKP	**PKPdf**	**01 39 16.7**	**-0.2**
ARCES	**ARCESS Array B**	**127.84**	**352**	PKP	**PKPdf**	**01 39 16.7**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=28,slow=5.5,SNR=5.2						
FINES	**FINESS Array B**	**135.10**	**347**	PKP	**PKPdf**	**01 39 31.3**	**+0.5**
FINES	**FINESS Array B**	**135.10**	**347**	PKP	**PKPdf**	**01 39 31.3**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=62,slow=4.5,SNR=6.7						
AKASG	**Malin Array Be**	**143.23**	**335**	PKHKP	PKPpre	01 39 40.4	
AKASG	**Malin Array Be**	**143.23**	**335**	PKPpre	PKPpre	01 39 40.4	
AKASG	**Malin Array Be**	**143.23**	**335**	PKhKP	PKPpre	01 39 40.4	
	comp=Z,0.9nm,0.5s,baz=44,slow=4.3,SNR=6.3						
KIEV	**Kiev**	**143.25**	**335**	*e*PKPdf	PKPbc	01 39 43.1	0.0
KMBO	**Kilima Mbogo**	**143.65**	**240**	*e*PKPdf	**PKPdf**	**01 39 47.1**	**-1.0**
KMBO				PKP	PKPbc	01 39 47.8	+2.0
KMBO	**Kilima Mbogo**	**143.65**	**240**	PKP	**PKPdf**	**01 39 47.8**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=85,slow=2.8,SNR=15						
BEL	**Belsk**	**145.03**	**344**	*e*PKP	**PKPdf**	**01 39 49.4**	**+0.3**
RUE	**Ruedersdorf**	**145.81**	**352**	*e*PKPbc	**PKPab**	**01 39 51.7**	**+0.2**
RUE	**Ruedersdorf**	**145.81**	**352**	*e*PKPbc	**PKPab**	**01 39 51.6**	**+0.2**
LVV	**L'vov**	**145.86**	**339**	*e*PKP2	**PKPab**	**01 39 51.9**	**+0.1**
NRDL	**Niedersach Rie**	**146.18**	**356**	*e*PKPbc	**PKPab**	**01 39 53.0**	**+0.2**
NRDL				*e*pPKPbc	pPKPbc	01 40 14.8	+2.1
KWP	**Kalwaria Pacla**	**146.45**	**340**	*e*PKIKP	**PKPab**	**01 39 53.9**	**-0.2**
KWP	**Kalwaria Pacla**	**146.45**	**340**	*e*PKPbc	**PKPab**	**01 39 53.9**	**-0.2**
KWP	**Kalwaria Pacla**	**146.45**	**340**	⇑*i*P	**PKPab**	**01 39 54.3**	**+0.2**
KWP	**Kalwaria Pacla**	**146.45**	**340**	*e*PKP	**PKPab**	**01 39 54.5**	**+0.4**
OJC	**Ojcow**	**146.77**	**344**	*e*PKiKP	**PKPdf**	**01 39 51.8**	**-0.3**
CLZ	**Clausthal**	**146.81**	**355**	*e*PKIKP	**PKPbc**	**01 39 54.7**	**+0.7**
CLZ	**Clausthal**	**146.81**	**355**	*e*PKPbc	**PKPbc**	**01 39 54.7**	**+0.7**
KSP	**Ksiaz**	**146.98**	**348**	*i* PKP2	**PKPab**	**01 39 55.8**	**-0.3**
KSP	**Ksiaz**	**146.98**	**348**	*e*PKP	**PKPab**	**01 39 55.8**	**-0.3**
CLL	**Collm**	**147.06**	**352**	⇑*i*PKIKP	**PKPbc**	**01 39 55.5**	**+0.8**
CLL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CLL	**Collm**	**147.06**	**352**	*e*PKPbc	**PKPbc**	**01 39 55.4**	**+0.8**
CLL	**Collm**	**147.06**	**352**	⇑*i*PKPbc	**PKPbc**	**01 39 55.5**	**+0.8**
	comp=Z,15nm,0.9s						
CLL				*i* pPKPbc	**pPKPbc**	**01 40 15.2**	**-0.2**
KOLS	**Kolonicke sedl**	**147.20**	**340**	*e*PKP2	**PKPab**	**01 39 56.5**	**-0.5**
KOLS	**Kolonicke sedl**	**147.20**	**340**	*e*PKP	**PKPab**	**01 39 56.5**	**-0.5**
BUR08	**Bucovina Ar. S**	**147.26**	**336**	*e*PKPbc	**PKPab**	**01 39 57.1**	**-0.3**
BURAR	**Bucovina Array**	**147.28**	**336**	⇓*i*P	**PKPab**	**01 39 58.0**	**+0.5**
NEUB	**Neuenburg**	**147.30**	**354**	*e*PKPbc	**PKPbc**	**01 39 56.3**	**+0.9**
NEUB				*e*pPKPbc	**pPKPbc**	**01 40 18.4**	**+2.3**
BRG	**Berggiesshubel**	**147.35**	**351**	*e*PKP	**PKPbc**	**01 39 56.3**	**+0.7**
	comp=Z,8.5nm,1.0s						
BRG				*i* pPKP	**pPKPdf**	**01 40 16.0**	**+2.0**
	comp=Z,7.9nm,0.9s						
BRG				*e*PKS	PKSdf	01 43 37.2	+9.1
	comp=Z,16nm,2.0s						
BRG				*e*		01 55 11.4	
	comp=Z,10nm,1.9s						
BRG	**Berggiesshubel**	**147.35**	**351**	*e*PKIKP	**PKPbc**	**01 39 56.3**	**+0.7**
BRG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,8.0nm,2.0s						
BRG				pmax	pmax		
	comp=Z,16nm,1.9s						
BRG	**Berggiesshubel**	**147.35**	**351**	*e*PKPbc	**PKPbc**	**01 39 56.5**	**+1.0**
BRG				*e*pPKPbc	**pPKPbc**	**01 40 18.2**	**+1.9**
UPC	**Upice**	**147.35**	**348**	⇑*i*PKP2	**PKPab**	**01 39 56.9**	**-0.6**
UPC	**Upice**	**147.35**	**348**	⇑*i*PKP	**PKPab**	**01 39 56.9**	**-0.6**
UPC				*e*pPKP	**pPKPdf**	**01 40 16.3**	**+2.3**
NIE	**Niedzica**	**147.35**	**343**	*i* PKIKP	**PKPbc**	**01 39 56.5**	**+0.8**
NIE	**Niedzica**	**147.35**	**343**	*e*PKiKP	**PKPbc**	**01 39 56.5**	**+0.8**
FBE	**Freiberg**	**147.39**	**352**	*e*PKPbc	**PKPab**	**01 39 56.9**	**-0.8**
FBE				*e*pPKPbc	**pPKPbc**	**01 40 18.9**	**+2.5**
DPC	**Dobruska-Polom**	**147.44**	**348**	*e*PKIKP	**PKPbc**	**01 39 55.4**	**-0.5**
DPC				*e*		01 39 57.3	
DPC				*e*		01 40 11.3	
DPC	**Dobruska-Polom**	**147.44**	**348**	*e*PKP	**PKPbc**	**01 39 55.4**	**-0.5**
DPC				*e*x	x	01 39 57.3	
DPC				*e*pPKP	**pPKPdf**	**01 40 11.3**	**-2.9**
UZH	**Uzhgorod**	**147.46**	**340**	⇑*e*PKIKP	**PKPdf**	**01 39 54.2**	**+0.9**
UZH				*i*		01 39 57.4	
UZH				*e*		01 40 00.4	
UZH				*i*		01 40 05.0	
CRVS	**Cervenica-Dubn**	**147.48**	**341**	*e*PKIKP	**PKPbc**	**01 39 55.4**	**-0.6**
CRVS	**Cervenica-Dubn**	**147.48**	**341**	*e*PKP	**PKPbc**	**01 39 55.4**	**-0.6**
OKC	**Ostrava-Krasne**	**147.53**	**346**	*e*PKP2	**PKPab**	**01 39 57.6**	**-0.6**
OKC				*e*		01 40 00.0	
OKC				*e*		01 40 13.3	
OKC	**Ostrava-Krasne**	**147.53**	**346**	⇑*e*PKP	**PKPab**	**01 39 57.6**	**-0.6**
OKC				*e*x	x	01 40 00.0	
OKC				*e*pPKP	**pPKPdf**	**01 40 13.3**	**-1.0**
PVCC	**Panska Ves**	**147.59**	**350**	*e*PKIKP	**PKPbc**	**01 39 56.9**	**+0.7**
PVCC				*e*		01 40 13.4	
PVCC	**Panska Ves**	**147.59**	**350**	⇑*e*PKP	**PKPbc**	**01 39 56.9**	**+0.7**
PVCC				*e*pPKP	**pPKPdf**	**01 40 13.4**	**-1.0**
PVCC				*e*sPKP		01 40 25.3	
TLCR		**147.61**	**329**	⇑*i*P	**PKPbc**	**01 39 57.5**	**+1.1**
KRLC	**Kraliky**	**147.61**	**347**	*e*PKIKP	**PKPbc**	**01 39 57.2**	**+0.9**
KRLC	**Kraliky**	**147.61**	**347**	⇑*e*PKP	**PKPbc**	**01 39 57.2**	**+0.9**
KRLC				*e*pPKP	**pPKPdf**	**01 40 14.6**	**+0.1**
MORC	**Moravsky Berou**	**147.73**	**346**	*e*PKIKP	**PKPbc**	**01 39 56.6**	**0.0**
MORC	**Moravsky Berou**	**147.73**	**346**	*e*PKPbc	**PKPbc**	**01 39 56.6**	**0.0**
MORC	**Moravsky Berou**	**147.73**	**346**	⇓*i*P	**PKPbc**	**01 39 57.4**	**+0.7**
TRPA	**Tarpa**	**147.81**	**339**	⇓*i*P	**PKPab**	**01 39 58.3**	**-1.1**
UBBA	**Unterbreizbach**	**147.85**	**355**	*e*PKPbc	**PKPbc**	**01 39 57.4**	**+0.6**
MOX	**Moxa**	**147.88**	**354**	*e*PKIKP	**PKPbc**	**01 39 57.6**	**+0.6**
MOX	**Moxa**	**147.88**	**354**	*e*PKPbc	**PKPbc**	**01 39 57.6**	**+0.6**
CFR	**Carcaliu**	**147.94**	**330**	⇑*i*P	**PKPbc**	**01 39 58.2**	**+0.9**
WERD	**Werda**	**147.99**	**353**	*e*PKPbc	**PKPbc**	**01 39 58.6**	**+1.3**
TANN	**Tannenbergstha**	**148.01**	**352**	*e*PKPbc	**PKPbc**	**01 39 58.3**	**+0.9**
PRU	**Pruhonice**	**148.12**	**350**	⇑*i*PKP2	**PKPbc**	**01 39 58.7**	**+1.1**
PRU	**Pruhonice**	**148.12**	**350**	⇑*i*PKP	**PKPbc**	**01 39 58.7**	**+1.1**
PRU				*e*x	x	01 40 04.3	
WERN	**Wernitzgruen**	**148.14**	**352**	*e*PKPbc	**PKPbc**	**01 39 58.8**	**+1.1**
NKC	**Novy Kostel**	**148.19**	**352**	⇑*i*PKP2	**PKPbc**	**01 39 58.9**	**+1.1**
NKC	**Novy Kostel**	**148.19**	**352**	⇑*i*PKP	**PKPbc**	**01 39 58.9**	**+1.1**
NKC				*e*pPKP	**pPKPdf**	**01 40 14.4**	**-1.0**
VRAC	**Vranov**	**148.38**	**347**	⇓*i*P	**PKPbc**	**01 39 59.7**	**+1.3**
TNS	**Taunus Mts**	**148.54**	**357**	*e*PKIKP	**PKPbc**	**01 39 59.7**	**+0.9**
TNS	**Taunus Mts**	**148.54**	**357**	*e*PKPbc	**PKPbc**	**01 39 59.7**	**+0.9**
TNS				*e*pPKPbc	**pPKPbc**	**01 40 21.2**	**+1.6**
VYHS	**Vyhne**	**148.60**	**344**	*e*PKIKP	**PKPdf**	**01 39 56.9**	**+1.7**
VYHS	**Vyhne**	**148.60**	**344**	*e*PKP	**PKPdf**	**01 39 56.9**	**+1.7**
TREC	**Trest**	**148.61**	**348**	*e*PKIKP	**PKPbc**	**01 39 59.9**	**+0.9**
TREC	**Trest**	**148.61**	**348**	⇑*e*PKP	**PKPbc**	**01 39 59.9**	**+0.9**
TREC				*e*pPKP	**pPKPdf**	**01 40 16.9**	**+0.7**
MLR	**Muntele Rosu**	**148.69**	**333**	⇓*i*P	**PKPbc**	**01 40 00.8**	**+1.4**
PSZ	**Piszkesteto**	**148.83**	**342**	*e*PKPdf	**PKPdf**	**01 39 55.7**	**0.0**
PSZ				*e*PKPbc	**PKiKP**	**01 40 00.3**	**-0.7**
PSZ				*e*PKPab	**PKPab**	**01 40 05.1**	**+1.5**
GRF	**Grafenberg Arr**	**148.86**	**354**	*e*PKIKP	**PKPbc**	**01 40 00.5**	**+0.9**
GRF	**Grafenberg Arr**	**148.86**	**354**	*e*PKPbc	**PKPbc**	**01 40 00.5**	**+0.9**
GRF				*e*PKPab	**PKPab**	**01 40 04.5**	**+0.9**
GRF				*e*pPKPbc	**pPKPbc**	**01 40 22.1**	**+1.7**
GRF				*e*pPKPab	**pPKPab**	**01 40 26.2**	**+2.2**
ANTO	**Ankara**	**148.88**	**318**	*e*PKPbc	**PKPdf**	**01 39 57.1**	**+1.1**
DRGR		**148.90**	**338**	⇓*i*P	**PKPbc**	**01 40 01.0**	**+1.1**
KHC	**Kasperske Hory**	**149.10**	**351**	⇑*i*PKP2	**PKPbc**	**01 40 01.5**	**+1.2**
KHC	**Kasperske Hory**	**149.10**	**351**	*e*PKPbc	**PKPbc**	**01 40 01.1**	**+0.9**
KHC	**Kasperske Hory**	**149.10**	**351**	⇑*i*PKP	**PKPbc**	**01 40 01.5**	**+1.2**
KHC				*e*x	x	01 40 07.1	
KHC				*e*pPKP	**pPKPdf**	**01 40 11.8**	**-5.2**
KHC				*e*x	x	01 40 17.7	
WLF	**Walferdange**	**149.15**	**0**	PKPbc	**PKPbc**	**01 39 59.0**	**-1.3**
WLF	**Walferdange**	**149.15**	**0**	*e*PKPbc	**PKPbc**	**01 40 01.6**	**+1.3**
WLF				*e*pPKPbc	**pPKPbc**	**01 40 22.8**	**+1.7**
WLF				*e*pPKPab	**pPKPab**	**01 40 27.4**	**+2.3**
WLF	**Walferdange**	**149.15**	**0**	*e*PKPdf	**PKPdf**	**01 39 56.8**	**+0.8**
WLF				*e*PKPbc	**PKiKP**	**01 40 01.9**	**+0.4**
WET	**Wettzell**	**149.19**	**351**	*e*PKIKP	**PKPbc**	**01 40 01.3**	**+0.8**
WET	**Wettzell**	**149.19**	**351**	*e*PKPbc	**PKPbc**	**01 40 01.3**	**+0.8**
ZST	**Bratislava**	**149.31**	**346**	*e*PKIKP	**PKPbc**	**01 40 01.2**	**+0.5**
ZST	**Bratislava**	**149.31**	**346**	*e*PKP	**PKPbc**	**01 40 01.2**	**+0.5**
GEC2	**GERESS Array S**	**149.36**	**350**	*e*PKIKP	**PKPbc**	**01 40 01.6**	**+0.6**
GEC2	**GERESS Array S**	**149.36**	**350**	*e*PKPbc	**PKPbc**	**01 40 01.6**	**+0.6**
GERES	**GERESS Array B**	**149.36**	**350**	PKPbc	**PKPbc**	**01 40 02.1**	**+1.1**
GERES	**GERESS Array B**	**149.36**	**350**	PKPbc	**PKPbc**	**01 40 02.1**	**+1.1**
	comp=Z,2.9nm,0.8s,baz=11,slow=2.7,SNR=26						
CONA	**Conrad Observa**	**149.84**	**347**	⇑*i*PKiKP	**PKiKP**	**01 40 03.5**	**+0.4**
	comp=Z,16nm,1.3s,SNR=8.6						
CONA	**Conrad Observa**	**149.84**	**347**	⇑*i*P	**PKiKP**	**01 40 03.5**	**+0.4**
MOA	**Molln**	**150.23**	**349**	⇑*e*PKiKP	**PKiKP**	**01 40 03.9**	**+0.1**
	comp=Z,2.8nm,0.6s						
MOA	**Molln**	**150.23**	**349**	⇑*e*P	**PKiKP**	**01 40 03.9**	**+0.1**
BZS	**Buzias**	**150.30**	**338**	⇑*i*P	**PKPbc**	**01 40 04.1**	**+0.9**
FUR	**Furstenfeldbru**	**150.36**	**353**	*e*PKIKP	**PKPbc**	**01 40 04.2**	**+0.9**
FUR	**Furstenfeldbru**	**150.36**	**353**	*e*PKPbc	**PKPbc**	**01 40 04.2**	**+0.9**
FUR				*e*PKPab	**PKPab**	**01 40 10.6**	**+0.8**
BFO	**Black Forest**	**150.44**	**357**	*e*PKIKP	**PKPbc**	**01 40 03.6**	**+0.1**
BFO	**Black Forest**	**150.44**	**357**	*e*PKPbc	**PKPbc**	**01 40 04.2**	**+0.7**
BFO				*e*PKPab	**PKPab**	**01 40 10.6**	**+0.5**
BFO	**Black Forest**	**150.44**	**357**	*e*PKPbc	**PKPbc**	**01 40 03.6**	**+0.1**
ARSA	**Arzberg**	**150.56**	**347**	⇑*i*PKiKP	**PKiKP**	**01 40 04.5**	**0.0**
	comp=Z,2.4nm,0.6s						
ARSA	**Arzberg**	**150.56**	**347**	⇑*i*P	**PKiKP**	**01 40 04.5**	**0.0**
RJOB	**Jochberg**	**150.58**	**351**	*e*PKPbc	**PKPbc**	**01 40 04.6**	**+0.7**
RJOB				*e*pPKPbc	**pPKPbc**	**01 40 27.0**	**+2.3**
RJOB				*e*pPKPab	**pPKPab**	**01 40 33.3**	**+2.2**
PKSM	**Moragy**	**150.74**	**342**	⇑*i*P	**PKPbc**	**01 40 05.2**	**+1.0**
RETA	**Reutte**	**151.09**	**354**	⇑*e*PKiKP	**PKiKP**	**01 40 05.4**	**-0.3**
	comp=Z,12nm,1.5s						
RETA	**Reutte**	**151.09**	**354**	⇑*e*P	**PKiKP**	**01 40 05.4**	**-0.3**
KBA	**Koelnbreinsper**	**151.14**	**350**	⇓*i*PKIKP	**PKPbc**	**01 40 05.8**	**+0.4**
KBA	**Koelnbreinsper**	**151.14**	**350**	⇓*i*PKiKP	**PKPbc**	**01 40 05.8**	**+0.4**
	comp=Z,3.5nm,0.5s						
KBA	**Koelnbreinsper**	**151.14**	**350**	⇓*i*P	**PKPbc**	**01 40 05.8**	**+0.4**
WATA	**Walderalm**	**151.14**	**352**	⇑*i*PKIKP	**PKPbc**	**01 40 05.7**	**+0.3**
WATA	**Walderalm**	**151.14**	**352**	⇑*i*PKiKP	**PKPbc**	**01 40 05.7**	**+0.3**
	comp=Z,4.2nm,0.5s,SNR=7.0						
WATA	**Walderalm**	**151.14**	**352**	⇑*i*P	**PKPbc**	**01 40 05.7**	**+0.3**
MOTA	**Moosalm**	**151.19**	**353**	⇑*i*PKIKP	**PKPbc**	**01 40 05.7**	**+0.2**
MOTA	**Moosalm**	**151.19**	**353**	⇑*i*PKiKP	**PKPbc**	**01 40 05.7**	**+0.2**
	comp=Z,12nm,1.0s						
MOTA	**Moosalm**	**151.19**	**353**	⇑*i*P	**PKPbc**	**01 40 05.7**	**+0.2**
SOKA	**Soboth**	**151.21**	**347**	⇑*e*PKiKP	**PKiKP**	**01 40 05.9**	**-0.1**
	comp=Z,7.9nm,1.2s						
SOKA	**Soboth**	**151.21**	**347**	⇑*e*P	**PKiKP**	**01 40 05.8**	**-0.1**
WTTA	**Wattenberg**	**151.21**	**352**	⇑*i*PKIKP	**PKPbc**	**01 40 06.3**	**+0.7**
WTTA	**Wattenberg**	**151.21**	**352**	⇑*i*PKiKP	**PKPbc**	**01 40 06.3**	**+0.7**
	comp=Z,14nm,0.5s,SNR=19						
WTTA	**Wattenberg**	**151.21**	**352**	⇑*i*P	**PKPbc**	**01 40 06.3**	**+0.7**
PERS	**Pernice**	**151.23**	**347**	*i* PKPbc	**PKPbc**	**01 40 05.6**	**+0.1**
DAVA	**Damuels**	**151.37**	**355**	⇑*i*PKiKP	**PKiKP**	**01 40 06.7**	**+0.4**
	comp=Z,12nm,1.0s						
DAVA	**Damuels**	**151.37**	**355**	⇑*i*P	**PKiKP**	**01 40 06.7**	**+0.4**
ISP	**Isparta**	**151.50**	**317**	*e*PKIKP	**PKPbc**	**01 40 06.6**	**+0.2**
ISP	**Isparta**	**151.50**	**317**	*e*PKPbc	**PKPbc**	**01 40 06.6**	**+0.2**
ISP	**Isparta**	**151.50**	**317**	⇓*i*P	**PKPbc**	**01 40 06.9**	**+0.4**
MYKA	**Terra Mystica**	**151.52**	**349**	⇑*i*PKiKP	**PKPbc**	**01 40 05.7**	**-0.5**
	comp=Z,4.4nm,0.6s						
MYKA	**Terra Mystica**	**151.52**	**349**	⇑*i*P	**PKPbc**	**01 40 05.7**	**-0.5**
FETA	**Feichten**	**151.55**	**353**	⇑*i*PKiKP	**PKiKP**	**01 40 07.2**	**+0.4**
	comp=Z,8.7nm,0.9s,SNR=8.7						
FETA	**Feichten**	**151.55**	**353**	⇑*i*P	**PKiKP**	**01 40 07.2**	**+0.4**
ABTA	**Abfaltersbach**	**151.59**	**351**	⇑*e*PKiKP	**PKiKP**	**01 40 06.6**	**-0.2**
	comp=Z,20nm,1.2s,SNR=16						
ABTA	**Abfaltersbach**	**151.59**	**351**	⇑*e*P	**PKiKP**	**01 40 06.6**	**-0.2**
VNDS	**Vrh nad Dolski**	**151.82**	**347**	*i* PKPbc	**PKPbc**	**01 40 07.3**	**+0.5**
LJU	**Ljubljana**	**151.91**	**348**	*i* PKPbc	**PKPbc**	**01 40 07.6**	**+0.6**
CRNS	**Crni Vrh**	**151.93**	**348**	*i* PKPbc	**PKPbc**	**01 40 07.3**	**+0.3**
VTS	**Vitosha**	**152.19**	**332**	⇑*i*P	**PKPbc**	**01 40 09.1**	**+1.2**
TORD	**Torodi Ar. Bea**	**172.95**	**141**	PKP	**PKPdf**	**01 40 21.0**	**-1.0**
TORD				PKPab	**PKPab**	**01 41 48.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**172.95**	**141**	PKP	**PKPdf**	**01 40 21.0**	**-1.0**
	comp=Z,1.8nm,1.1s,baz=17,slow=1.5,SNR=4.5						
TORD				PKPab	**PKPab**	**01 41 48.6**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=212,slow=4.4,SNR=4.5						

*ISCJB **03** 01:33:52.5±0.7, 22.°79N±0.°02×121.°71E±0.°02, h13km±4km, Error ellipse: s-maj=3.3km s-min=2.5km az=144.4*
*TAP **03** 01:33:54.1, 22.°82N×121.°61E, h13km, ML3.7, C*
*JMA **03** 01:33:54.7±0.3, 22.°81N×122.°00E, h0km, M3.0*
ISC 03 01:33:52.1±1.1**, 22.°79N**±0.°02×**121.°70E**±0.°03**, h9**km±9km**,**
n57, σ**0.s91**/97**, 7C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.43**	**315**	*i* P	**Pg**	**01 34 01.4**	**+0.8**
	baz=322						
CHKT				*i* S	**Sg**	**01 34 06.5**	**+0.2**
	baz=322						
TTN	**Taitung**	**0.51**	**266**	⇑*i*P	**Pb**	**01 34 02.9**	**-0.2**
	baz=261						
TTN				S	**Sg**	**01 34 09.4**	**+0.7**
	baz=261						
TWG	**Pinlang**	**0.58**	**273**	⇑*i*P	**Pg**	**01 34 03.5**	**+0.2**
	baz=270						
TWG				*e*S	**Sg**	**01 34 11.3**	**+0.3**
	baz=270						
TWF1	**Yuli**	**0.67**	**327**	⇑P	**Pg**	**01 34 05.5**	**+0.5**
	baz=344						
ECL	**Taimali**	**0.71**	**254**	P	**Pg**	**01 34 06.2**	**+0.3**
	baz=249						
ECL				*e*S	**Sg**	**01 34 14.8**	**-0.4**
	baz=249						
ELDTW	**Lidau**	**0.74**	**302**	P	**Pg**	**01 34 06.0**	**-0.4**
	baz=304						
ELDTW				*e*S	**Sg**	**01 34 14.8**	**-1.3**
	baz=304						
LAY	**Lan-yu**	**0.76**	**190**	P	**Pg**	**01 34 07.4**	**+0.6**
	baz=184						
LAY				S	**Sb**	**01 34 18.0**	**+0.1**
	baz=184						
EHY	**Hungye**	**0.79**	**334**	⇑*i*P	**Pg**	**01 34 07.5**	**+0.2**
	baz=350						
EHY				*e*S	**Sg**	**01 34 17.7**	**0.0**
	baz=350						
TAW	**Tawu**	**0.86**	**240**	*e*P	**Pg**	**01 34 08.6**	**0.0**
	baz=235						
TAW				*e*S	**Sg**	**01 34 18.8**	**-1.0**
	baz=235						
EAST	**Anshuo**	**0.88**	**243**	⇓*i*P	**Pg**	**01 34 09.0**	**-0.2**
	baz=238						
EAST				*e*S	**Sg**	**01 34 18.5**	**-2.2**
	baz=238						
ESL	**Shilin**	**1.05**	**347**	*e*P	**Pg**	**01 34 11.6**	**-0.7**
	baz=4.0						
ESL				*e*S	**Sg**	**01 34 23.9**	**-2.0**
	baz=4.0						
SCZT	**Fangliau**	**1.08**	**248**	*e*P	**Pg**	**01 34 12.3**	**-0.6**
	baz=244						
ALS	**Alishan**	**1.09**	**311**	⇑P	**Pb**	**01 34 12.8**	**-0.5**
	baz=313						
ALS				*e*S	**Sg**	**01 34 27.1**	**-0.2**
	baz=313						
WTP	**Ta-pu**	**1.10**	**295**	⇑P	**Pb**	**01 34 12.9**	**-0.3**
	baz=302						
WTP				*e*S	**Sb**	**01 34 28.0**	**+0.3**
	baz=302						
CHN1	**Nanshi**	**1.15**	**290**	*e*P	**Pb**	**01 34 14.2**	**+0.1**
	baz=297						
CHN1				*e*S	**Sn**	**01 34 29.9**	**-0.3**
	baz=297						
TSEB	**Hengchuen, Pin**	**1.15**	**220**	*e*P	**Pn**	**01 34 14.7**	**+0.3**
	baz=218						
CHN4	**Tsaushan**	**1.16**	**299**	⇑*i*P	**Pb**	**01 34 14.2**	**-0.1**
	baz=307						
CHN4				*e*S	**Sg**	**01 34 30.0**	**+0.5**
	baz=307						
TWM1	**Shoushan**	**1.18**	**272**	*e*P	**Pg**	**01 34 15.6**	**+0.9**
	baz=270						
TWK1	**Hengchun**	**1.18**	**225**	*e*P	**Pb**	**01 34 13.8**	**-0.9**
	baz=220						
TWK1				*e*S	**Sb**	**01 34 28.5**	**-1.6**
	baz=220						
HEN	**Hengchun**	**1.18**	**229**	*e*P	**Pb**	**01 34 14.2**	**-0.5**
	baz=225						
HEN				*e*S	**Sb**	**01 34 28.7**	**-1.4**
	baz=225						
HWA	**Hwalien**	**1.18**	**356**	*e*P	**Pb**	**01 34 14.9**	**+0.2**
	baz=14						
HWA				*e*S	**Sg**	**01 34 30.5**	**+0.2**
	baz=14						
TWK	**Hsinying**	**1.21**	**293**	P	**Pn**	**01 34 14.9**	**-0.3**
	baz=293						
TWK				*e*S	**Sn**	**01 34 31.9**	**+0.1**
	baz=293						
CHN5	**Tsauling**	**1.23**	**311**	P	**Pn**	**01 34 15.6**	**0.0**
	baz=312						
CHN5				*e*S	**Sg**	**01 34 32.3**	**+0.4**
	baz=312						
CHN3	**Shinhua**	**1.26**	**283**	*e*P	**Pg**	**01 34 17.4**	**+1.1**
	baz=282						
CHN3				*e*S	**Sn**	**01 34 35.6**	**+2.7**
	baz=282						
TWD	**Chiawan**	**1.29**	**356**	*e*P	**Pn**	**01 34 15.1**	**-1.2**
	baz=10.0						
TWP	**Hsiaoliuchiu**	**1.31**	**251**	*e*P	**Pg**	**01 34 18.7**	**+1.5**
	baz=230						
SMLT	**Sun Moon Lake**	**1.31**	**326**	*e*P	**Pn**	**01 34 16.3**	**-0.4**
	baz=342						
SMLT				*e*S	**Sb**	**01 34 33.6**	**-0.3**
	baz=342						
CHN2	**Minshiung**	**1.35**	**303**	*e*P	**Pb**	**01 34 17.9**	**+0.4**
	baz=303						
CHN2				*e*S	**Sn**	**01 34 35.2**	**+0.2**
	baz=303						
TYC	**Yuchr**	**1.35**	**325**	*e*P	**Pn**	**01 34 17.2**	**+0.1**
	baz=341						
TYC				S	**Sb**	**01 34 34.7**	**-0.3**
	baz=341						
CHY	**Chiayi**	**1.37**	**301**	*e*P	**Pb**	**01 34 18.2**	**+0.4**
	baz=301						
CHY				*e*S	**Sb**	**01 34 35.7**	**+0.3**
	baz=301						
WGK	**Gukeng**	**1.37**	**311**	*e*P	**Pn**	**01 34 17.4**	**0.0**
	baz=313						
WGK				*e*S	**Sb**	**01 34 35.8**	**+0.2**
	baz=313						
WHF	**Hehuan Shan**	**1.41**	**344**	*e*P	**Pn**	**01 34 17.2**	**-1.0**
	baz=348						
WHF				*e*S	**Sn**	**01 34 33.6**	**-3.5**
	baz=348						
SCLT	**Jiali**	**1.44**	**286**	*e*P	**Pn**	**01 34 18.3**	**+0.1**
	baz=284						
SCLT				*e*S	**Sg**	**01 34 38.4**	**0.0**
	baz=284						
CHN8	**Yiju**	**1.48**	**292**	*e*P	**Pn**	**01 34 19.1**	**+0.2**
	baz=291						
CHN8				*e*S	**Sb**	**01 34 39.2**	**+0.6**
	baz=291						
TWT	**Tachien**	**1.53**	**342**	*e*P	**Pn**	**01 34 19.9**	**+0.1**
	baz=345						
TWT				*e*S	**Sn**	**01 34 38.0**	**-1.9**
	baz=345						
ENA	**Nanau**	**1.63**	**1**	*e*P	**Pn**	**01 34 20.4**	**-0.5**
	baz=4.0						
TCU	**Taichung**	**1.65**	**325**	*e*P	**Pb**	**01 34 23.3**	**+0.8**
	baz=328						
NNS	**Nan Shan**	**1.67**	**350**	*e*P	**Pn**	**01 34 21.4**	**-0.2**
	baz=6.0						
WTCT	**Ta-ch'eng**	**1.68**	**310**	*e*P	**Pb**	**01 34 22.9**	**-0.3**
	baz=310						
TWQ1	**Liyutan**	**1.77**	**331**	*e*P	**Pb**	**01 34 24.2**	**-0.5**
	baz=336						
TWQ1				*e*S	**Sn**	**01 34 46.2**	**+0.8**
	baz=336						
TWC	**Suao**	**1.82**	**4**	*e*P	**Pn**	**01 34 23.6**	**+0.1**
	baz=19						
TWC				*e*S	**Sn**	**01 34 45.0**	**-1.6**
	baz=19						
NSY	**Sanyi**	**1.83**	**332**	*e*P	**Pb**	**01 34 25.8**	**0.0**
	baz=350						
NSY				*e*S	**Sb**	**01 34 48.2**	**-0.6**
	baz=350						
ENTT	**Nioudou**	**1.84**	**356**	P	**Pn**	**01 34 23.7**	**-0.2**
	baz=359						
NSK	**Sanguang**	**1.90**	**351**	*e*P	**Pn**	**01 34 25.2**	**+0.4**
	baz=6.0						
TWE	**Neicheng**	**1.92**	**359**	*e*P	**Pn**	**01 34 25.2**	**+0.3**
	baz=2.0						
NSTT	**Nanjuang**	**1.94**	**341**	*e*P	**Pn**	**01 34 26.0**	**+0.8**
	baz=355						
NSTT				*e*S	**Sn**	**01 34 50.0**	**+0.3**
	baz=355						
YOJ	**Yonaguni jima**	**2.05**	**36**	*e*P	**Pb**	**01 34 28.8**	**-0.7**
	baz=37						
YOJ	**Yonaguni jima**	**2.05**	**36**	P	**Pb**	**01 34 28.8**	**-0.7**
YOJ				*e*S	**Sn**	**01 34 53.5**	**+1.0**
PNG	**Penghu**	**2.12**	**292**	*e*P	**Pn**	**01 34 28.1**	**+0.4**
	baz=290						
TWB1	**Santiao Chiao**	**2.22**	**7**	*e*P	**Pn**	**01 34 29.9**	**+0.8**
	baz=22						
NWF	**Wu-fen Shan**	**2.27**	**2**	*e*P	**Pn**	**01 34 30.3**	**+0.5**
	baz=355						
NWF				*e*S	**Sn**	**01 34 58.9**	**+0.9**
	baz=355						
HATJ	**Hateruma jima**	**2.31**	**57**	P	**Pn**	**01 34 31.5**	**+1.2**
HATJ				S	**Sn**	**01 34 58.2**	**-0.6**
IRIF	**Iriomote-Funau**	**2.42**	**50**	P	**Pn**	**01 34 33.1**	**+1.3**
IRIF				*e*S	**Sn**	**01 35 02.0**	**+0.6**
JKRS	**Kuro-shima**	**2.56**	**55**	P	**Pn**	**01 34 35.1**	**+1.3**
JKRS				*e*S	**Sn**	**01 35 04.8**	**-0.3**
JIJ	**Ishigaki jima**	**2.74**	**55**	P	**Pn**	**01 34 38.2**	**+2.1**
JIJ				*e*S	**Sn**	**01 35 08.8**	**-0.5**
JTJ	**Tarama**	**3.31**	**56**	P	**Pn**	**01 34 45.6**	**+1.5**
JTJ				*e*S	**Sn**	**01 35 23.0**	**-0.6**
KNM	**Kinmen**	**3.40**	**299**	*e*P	**Pn**	**01 34 46.7**	**+1.4**
	baz=296						

*DDA **03** 02:21:31.6, 37.°84N×27.°54E, h7km, MD3.1*
*ISK **03** 02:21:32.0, 37.°81N×27.°63E, h5km, MD3.4*
*CSEM **03** 02:21:33.0±0.1, 37.°77N×27.°57E, h2km, MD3.1, Error ellipse: s-maj=3.5km s-min=2.6km az=64.0*
ISC 03 02:21:31.4±1.0**, 37.°85N**±0.°02×**27.°57E**±0.°02**, h8**km±9km**,**
n113, σ**1.s12**/120**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.31**	**240**	*i* P	**Pg**	**02 21 37.4**	**0.0**
GCAM				*i* S	**Sg**	**02 21 41.5**	**0.0**
GCAM	**G?zelcaml?**	**0.31**	**240**	*i* P	**Pg**	**02 21 37.4**	**0.0**
GCAM				*i* S	**Sg**	**02 21 41.5**	**0.0**
AYDN	**Tasoluk**	**0.31**	**128**	*i* P	**Pb**	**02 21 38.7**	**-0.6**
AYDN				*i* S	**Sg**	**02 21 43.0**	**+1.2**
AYDN	**Tasoluk**	**0.31**	**128**	*i* P	**Pb**	**02 21 38.7**	**-0.6**
AYDN				*i* S	**Sg**	**02 21 43.0**	**+1.2**
MLSB	**Milas**	**0.58**	**163**	*e*PG	**Pb**	**02 21 43.3**	**-0.6**
MLSB	**Milas**	**0.58**	**163**	*e*Pg	**Pb**	**02 21 43.3**	**-0.6**
BODT	**Bodrum**	**0.82**	**195**	*e*PG	**Pn**	**02 21 48.1**	**-1.2**
BODT				*e*SG	**Sn**	**02 22 00.8**	**-0.8**
BODT	**Bodrum**	**0.82**	**195**	*e*Pg	**Pn**	**02 21 48.1**	**-1.2**
BODT				*e*Sg	**Sn**	**02 22 00.8**	**-0.8**
YER	**Yerkesik**	**0.92**	**141**	*e*PG	**Pn**	**02 21 50.0**	**-0.7**
YER	**Yerkesik**	**0.92**	**141**	*e*Pg	**Pn**	**02 21 50.0**	**-0.7**
URLA	**Izmir**	**0.92**	**304**	*i* P	**Pn**	**02 21 50.0**	**-0.7**
URLA				*i* S	**Sb**	**02 22 02.4**	**+0.3**
URLA	**Izmir**	**0.92**	**304**	*i* P	**Pn**	**02 21 50.0**	**-0.7**
URLA				*i* S	**Sb**	**02 22 02.4**	**+0.3**
AKHS	**Akhisar**	**1.04**	**11**	*i* P	**Pb**	**02 21 51.9**	**+0.2**
AKHS				*i* S	**Sb**	**02 22 05.9**	**+0.3**
AKS	**Akhisar**	**1.04**	**11**	*e*PG	**Pn**	**02 21 52.1**	**-0.3**
AKS	**Akhisar**	**1.04**	**11**	*e*Pg	**Pn**	**02 21 52.1**	**-0.3**
KULA	**Kula-Manisa**	**1.08**	**52**	*e*PG	**Pn**	**02 21 53.0**	**-0.1**
KULA	**Kula-Manisa**	**1.08**	**52**	*e*Pg	**Pn**	**02 21 53.0**	**-0.1**
DAT	**Datca**	**1.12**	**180**	*e*PN	**Pn**	**02 21 53.6**	**0.0**
DAT				*e*SN	**Sn**	**02 22 09.8**	**+0.5**
DAT	**Datca**	**1.12**	**180**	*e*Pn	**Pn**	**02 21 53.6**	**0.0**
DAT				*e*Sn	**Sn**	**02 22 09.8**	**+0.5**
DENT	**Denizli**	**1.17**	**94**	*e*PN	**Pn**	**02 21 54.4**	**+0.3**
DENT				*e*SN	**Sn**	**02 22 11.2**	**+1.0**
DENT	**Denizli**	**1.17**	**94**	*e*Pn	**Pn**	**02 21 54.4**	**+0.3**
DENT				*e*Sn	**Sn**	**02 22 11.2**	**+1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DNZL	Cakiroluk	1.18	98	*i* P	Pn	02 21 54.9	+0.4
DNZL				*i* S	Sn	02 22 12.4	+1.5
DNZL	Cakiroluk	1.18	98	*i* P	Pn	02 21 54.9	+0.4
DNZL				*i* S	Sn	02 22 12.4	+1.5
NIS4	Nisyros Isl.	1.23	197	P	Pn	02 21 55.9	+1.0
TURN	Turunc	1.28	140	*i* P	Pn	02 21 54.4	-1.2
TURN				*i* S	Sn	02 22 14.3	+1.3
TURN	Turunc	1.28	140	*i* P	Pn	02 21 54.4	-1.2
TURN				*i* S	Sn	02 22 14.3	+1.3
NIS1	Nisyros Isl.	1.29	194	P	Pg	02 21 56.8	+0.7
NIS1	Nisyros Isl.	1.29	194	P	Pg	02 21 56.8	+0.7
CHOS	Chios island	1.31	294	P	Pg	02 21 57.5	+1.0
CHOS	Chios island	1.31	294	P	Pg	02 21 57.5	+1.0
NIS2	Nisyros Isl.	1.31	194	P	Pg	02 21 57.8	+1.2
DALY	Dalyan (Mu˜la	1.35	140	*e*PN	Pg	02 21 57.5	+0.2
DALY				*e*SN	Sg	02 22 16.5	+1.7
DALY	Dalyan (Mu˜la	1.35	140	*e*Pn	Pg	02 21 57.5	+0.2
DALY				*e*Sn	Sg	02 22 16.5	+1.7
DEMI	Demirci	1.49	37	*e*P	Pn	02 21 58.1	-0.5
KHAL	Karahalli	1.60	71	*i* P	Pn	02 22 00.5	+0.3
KHL	Karahalli	1.61	73	*e*PN	Pg	02 22 02.2	-0.1
KHL	Karahalli	1.61	73	*e*Pn	Pg	02 22 02.2	-0.1
GLHS	Glhisar (BURDU	1.69	114	*e*PN	Pb	02 22 02.8	0.0
GLHS				*e*SN	Sg	02 22 25.5	-0.1
GLHS	Glhisar (BURDU	1.69	114	*e*Pn	Pb	02 22 02.8	0.0
GLHS				*e*Sn	Sg	02 22 25.5	-0.1
GOLH	Golhisar	1.70	111	*e*P	Pb	02 22 02.9	-0.1
GOLH	Golhisar	1.70	111	*e*P	Pb	02 22 02.9	-0.1
FETY	Fethiye	1.71	135	*e*PN	Pg	02 22 03.6	-0.7
FETY	Fethiye	1.71	135	*e*Pn	Pg	02 22 03.6	-0.7
PRK	Paraskevi	1.72	324	P	Pg	02 22 05.3	+0.9
PRK	Paraskevi	1.72	324	P	Pg	02 22 05.3	+0.9
BALB	Balikesir	1.80	8	*e*PN	Pg	02 22 05.6	-0.3
BALB	Balikesir	1.80	8	*e*Pn	Pg	02 22 05.6	-0.3
APE	Apeiranthos	1.80	245	*e*PN	Pg	02 22 05.5	-0.4
APE	Apeiranthos	1.80	245	*e*Pn	Pg	02 22 05.5	-0.4
DST	Dursunbey	1.93	25	*e*PN	Pb	02 22 07.2	+0.3
DST	Dursunbey	1.93	25	*e*Pn	Pb	02 22 07.2	+0.3
ELL	Elmali	2.17	120	*e*PN	Pb	02 22 10.0	-1.0
ELL	Elmali	2.17	120	*e*Pn	Pb	02 22 10.0	-1.0
TVSB	Tavsanli	2.18	42	*e*PN	Pb	02 22 11.2	+0.1
TVSB	Tavsanli	2.18	42	*e*Pn	Pb	02 22 11.2	+0.1
GONE	Gonen-Balikesi	2.19	2	*e*PN	Pb	02 22 11.5	+0.2
GONE	Gonen-Balikesi	2.19	2	*e*Pn	Pb	02 22 11.5	+0.2
EZN	Ezine	2.19	334	*e*PN	Pb	02 22 11.5	+0.1
EZN	Ezine	2.19	334	*e*Pn	Pb	02 22 11.5	+0.1
AKAS	Kas	2.30	134	*e*P	Pb	02 22 12.1	-1.1
AKAS	Kas	2.30	134	*e*P	Pb	02 22 12.1	-1.1
ALT	Altintas	2.33	58	*e*PN	Pb	02 22 12.8	-0.9
ALT	Altintas	2.33	58	*e*Pn	Pb	02 22 12.8	-0.9
ISP	Isparta	2.34	90	*e*PN	Pb	02 22 12.6	-1.3
ISP	Isparta	2.34	90	*e*Pn	Pb	02 22 12.6	-1.3
BCK	Bucak	2.43	98	*e*PN	Pb	02 22 13.7	-1.7
BCK	Bucak	2.43	98	*e*Pn	Pb	02 22 13.7	-1.7
SHUT	Suhut-Afyon	2.45	73	*e*PN	Pb	02 22 14.1	-1.8
SHUT	Suhut-Afyon	2.45	73	*e*Pn	Pb	02 22 14.1	-1.8
EDC	Edincik	2.50	5	*e*PN	Pb	02 22 15.9	-0.7
EDC	Edincik	2.50	5	*e*Pn	Pb	02 22 15.9	-0.7
BNT	Bandirma	2.51	6	*e*PN	Pb	02 22 16.2	-0.6
BNT	Bandirma	2.51	6	*e*Pn	Pb	02 22 16.2	-0.6
KRBG	Karabiga-Canak	2.54	355	*e*PN	Pb	02 22 16.5	-0.8
KRBG	Karabiga-Canak	2.54	355	*e*Pn	Pb	02 22 16.5	-0.8
LPK	Lapseki	2.59	346	*e*PN	Pb	02 22 17.7	-0.4
LPK	Lapseki	2.59	346	*e*Pn	Pb	02 22 17.7	-0.4
GELI	Tayfur-Gelibol	2.68	342	*e*PN	Pb	02 22 18.7	-0.9
GELI	Tayfur-Gelibol	2.68	342	*e*Pn	Pb	02 22 18.7	-0.9
MDNY	Mudanya-Bursa	2.71	22	*e*PN	Pb	02 22 19.0	-1.2
MDNY	Mudanya-Bursa	2.71	22	*e*Pn	Pb	02 22 19.0	-1.2
MRMT	Marmara Adasi	2.75	0	*e*PN	Pb	02 22 19.6	-1.2
MRMT	Marmara Adasi	2.75	0	*e*Pn	Pb	02 22 19.6	-1.2
GEMT	Gemlik	2.87	26	*e*PN	Pb	02 22 20.9	-2.0
GEMT	Gemlik	2.87	26	*e*Pn	Pb	02 22 20.9	-2.0
ARMT	Armutlu	2.89	20	*e*PN	Pb	02 22 21.5	-1.7
ARMT	Armutlu	2.89	20	*e*Pn	Pb	02 22 21.5	-1.7
IZI	Iznik	2.89	30	*e*PN	Pb	02 22 21.2	-2.1
IZI	Iznik	2.89	30	*e*Pn	Pb	02 22 21.2	-2.1
ERIK	Erikli-Kesan	2.93	344	*e*PN	Pb	02 22 22.7	-1.2
ERIK	Erikli-Kesan	2.93	344	*e*Pn	Pb	02 22 22.7	-1.2
CAVI	Cavuskoy	2.94	36	*e*PN	Pb	02 22 22.4	-1.7
CAVI	Cavuskoy	2.94	36	*e*Pn	Pb	02 22 22.4	-1.7
ADVT	Abdulvahap	3.08	33	*e*PN	Pb	02 22 24.3	-2.2
ADVT	Abdulvahap	3.08	33	*e*Pn	Pb	02 22 24.3	-2.2
BUY	Buyukada	3.23	21	*e*PN	Pb	02 22 26.1	-2.8
BUY	Buyukada	3.23	21	*e*Pn	Pb	02 22 26.1	-2.8
HRT	Hereke	3.38	28	*e*PN	Pb	02 22 28.3	-3.3
HRT	Hereke	3.38	28	*e*Pn	Pb	02 22 28.3	-3.3
ISK	Istanbul-Kandi	3.41	19	*e*PN	Pb	02 22 29.2	-2.8
ISK	Istanbul-Kandi	3.41	19	*e*Pn	Pb	02 22 29.2	-2.8
GULT	Gulveren	3.45	41	*e*PN	Pn	02 22 29.0	+3.5
GULT	Gulveren	3.45	41	*e*Pn	Pn	02 22 29.0	+3.5
BGKT	Bogazkoy	3.45	15	*e*PN	Pb	02 22 29.4	-3.4
BGKT	Bogazkoy	3.45	15	*e*Pn	Pb	02 22 29.4	-3.4
CTKS	Kestanelik-??a	3.46	12	*e*PN	Pb	02 22 29.5	-3.4
CTKS	Kestanelik-??a	3.46	12	*e*Pn	Pb	02 22 29.5	-3.4
SVRH	Sivrihisar-ESK	3.48	62	*e*PN	Pn	02 22 29.2	+3.2
SVRH	Sivrihisar-ESK	3.48	62	*e*Pn	Pn	02 22 29.2	+3.2
SILT	Sile	3.67	25	*e*PN	Pn	02 22 32.3	+3.9
SILT	Sile	3.67	25	*e*Pn	Pn	02 22 32.3	+3.9
EDRB	Edirne	4.04	351	*e*PN	Pb	02 22 38.0	-4.8
EDRB	Edirne	4.04	351	*e*Pn	Pb	02 22 38.0	-4.8

*DDA **03** 02:34:08.4, 37.°86N×27.°54E, h16km, ML4.1*
*ISK **03** 02:34:08.6, 37.°82N×27.°57E, h5km, ML3.7*
*ATH **03** 02:34:09.3, 37.°84N×27.°46E, h16km±2km, MD3.7/14*
*THE **03** 02:34:09.3, 37.°86N×27.°56E, h0km±2km, ML3.3/1, Error ellipse: s-maj=2.3km s-min=0.7km az=100.0*
*ISCJB **03** 02:34:09.2±0.4, 37.°81N±0.°02×27.°50E±0.°02, h6km±3km, Error ellipse: s-maj=2.8km s-min=2.3km az=33.5*
*CSEM **03** 02:34:09.3±0.1, 37.°76N×27.°48E, h2km, ML4.1, Error ellipse: s-maj=3.2km s-min=2.8km az=33.0*
ISC 03 02:34:09.6±1.0, **37.°83N**±0.°02×**27.°54E**±0.°02, **h6**km±9km, **n226**, σ**1.°33**/258, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.28	242	*i* P	Pg	02 34 14.7	-0.2
GCAM				*i* S	Sg	02 34 18.1	-0.5
GCAM	G?zelcaml?	0.28	242	*i* P	Pg	02 34 14.7	-0.2
GCAM				*i* S	Sg	02 34 18.1	-0.5
AYDN	Tasoluk	0.32	122	*i* P	Pg	02 34 15.8	+0.1
AYDN				*i* S	Sg	02 34 20.1	+0.2
AYDN	Tasoluk	0.32	122	*i* P	Pg	02 34 15.8	+0.1
AYDN				*i* S	Sg	02 34 20.1	+0.2
MLSB	Milas	0.56	161	*e*PG	Pg	02 34 20.5	0.0
MLSB	Milas	0.56	161	*e*Pg	Pg	02 34 20.5	0.0
BLCB	Balcova	0.68	325	*e*PG	Pg	02 34 22.4	-0.3
BLCB	Balcova	0.68	325	*e*Pg	Pg	02 34 22.4	-0.3
BODT	Bodrum	0.79	194	*e*PG	Pg	02 34 24.8	+0.1
BODT				*e*SG	Sb	02 34 36.7	+0.1
BODT	Bodrum	0.79	194	*e*Pg	Pg	02 34 24.8	+0.1
BODT				*e*Sg	Sb	02 34 36.7	+0.1
YER	Yerkesik	0.91	139	*e*PG	Pg	02 34 26.1	-0.9
YER				*e*SG	Sb	02 34 40.3	+0.1
YER	Yerkesik	0.91	139	*e*Pg	Pg	02 34 26.1	-0.9
YER				*e*Sg	Sb	02 34 40.3	+0.1
URLA	Izmir	0.92	306	*i* P	Pg	02 34 26.8	-0.4
URLA				*i* S	Sg	02 34 38.9	-0.2
URLA	Izmir	0.92	306	*i* P	Pg	02 34 26.8	-0.4
AKHS	Akhisar	1.07	11	*i* P	Pg	02 34 28.9	-1.2
AKHS				*i* S	Sg	02 34 42.8	-1.3
AKS	Akhisar	1.07	11	*e*PG	Pg	02 34 29.7	-0.4
AKS	Akhisar	1.07	11	*e*Pg	Pg	02 34 29.7	-0.4
DAT	Datca	1.10	178	*e*PN	Pg	02 34 30.6	0.0
DAT	Datca	1.10	178	*e*Pn	Pg	02 34 30.6	0.0
KULA	Kula-Manisa	1.12	52	*e*PN	Pg	02 34 30.6	-0.4
KULA	Kula-Manisa	1.12	52	*e*Pn	Pg	02 34 30.6	-0.4
DENT	Denizli	1.18	93	*e*PN	Pg	02 34 31.7	-0.6
DENT	Denizli	1.18	93	*e*Pn	Pg	02 34 31.7	-0.6
NIS4	Nisyros Isl.	1.20	196	P	Pg	02 34 32.1	-0.5
DNZL	Cakiroluk	1.20	96	*i* P	Pg	02 34 32.0	-0.6
DNZL				*i* S	Sb	02 34 48.7	0.0
DNZL	Cakiroluk	1.20	96	*i* P	Pg	02 34 32.0	-0.6
DNZL				*i* S	Sb	02 34 48.7	0.0
NIS1	Nisyros Isl.	1.26	193	P	Pg	02 34 32.8	-0.9
NIS1	Nisyros Isl.	1.26	193	*e*PN	Pg	02 34 32.6	-1.1
NIS1	Nisyros Isl.	1.26	193	P	Pg	02 34 32.8	-0.9
TURN	Turunc	1.27	138	*i* P	Pg	02 34 31.6	-2.4
TURN				*i* S	Sg	02 34 47.7	-2.8
TURN	Turunc	1.27	138	*i* P	Pg	02 34 31.6	-2.4
TURN				*i* S	Sg	02 34 47.7	-2.8
NIS2	Nisyros Isl.	1.28	193	P	Pn	02 34 33.9	-0.1
CHOS	Chios island	1.30	296	P	Pn	02 34 33.4	-0.9
CHOS				S	Sn	02 34 52.3	+0.3
CHOS	Chios island	1.30	296	*e*PN	Pn	02 34 33.1	-1.2
CHOS				*e*SN	Sg	02 34 50.0	-1.3
CHOS	Chios island	1.30	296	*e*Pn	Pn	02 34 33.1	-1.2
CHOS	Chios island	1.30	296	P	Pn	02 34 33.4	-0.9
CHOS				*e*Sn	Sg	02 34 50.0	-1.3
CHOS				S	Sn	02 34 52.3	+0.3
DALY	Dalyan (Mu˜la	1.34	138	*e*PN	Pn	02 34 35.0	+0.3
DALY	Dalyan (Mu˜la	1.34	138	*e*Pn	Pn	02 34 35.1	+0.3
DEMI	Demirci	1.52	37	*i* P	Pn	02 34 37.6	+0.2
DEMI				*e*S	Sn	02 34 54.3	-3.3
DEMI	Demirci	1.52	37	*i* P	Pn	02 34 37.6	+0.2
KHAL	Karahalli	1.63	70	*i* P	Pn	02 34 37.7	-1.2
KHAL				*i* S	Sn	02 34 58.7	-1.6
KHAL	Karahalli	1.63	70	*i* P	Pn	02 34 37.7	-1.2
KHAL				*i* S	Sn	02 34 58.7	-1.6
KHL	Karahalli	1.64	72	*e*PN	Pb	02 34 39.8	-0.5
KHL	Karahalli	1.64	72	*e*Pn	Pb	02 34 39.8	-0.5
ARG	Arkhangelos	1.68	164	P	Pn	02 34 39.3	-0.1
ARG	Arkhangelos	1.68	164	*e*PB	Pn	02 34 38.5	-0.9
ARG				*e*SN	Sg	02 35 03.6	+0.2
ARG	Arkhangelos	1.68	164	*e*Pb	Pn	02 34 38.5	-0.9
ARG	Arkhangelos	1.68	164	P	Pn	02 34 39.3	-0.1
ARG				*e*Sn	Sg	02 35 03.6	+0.2
GLHS	Glhisar (BURDU	1.69	113	*e*PN	Pn	02 34 40.3	+0.5
GLHS	Glhisar (BURDU	1.69	113	*e*Pn	Pn	02 34 40.3	+0.5
GOLH	Golhisar	1.71	110	*i* P	Pn	02 34 40.3	+0.3
GOLH				*i* S	Sn	02 35 02.5	+0.3
GOLH	Golhisar	1.71	110	*i* P	Pn	02 34 40.3	+0.3
GOLH				*i* S	Sn	02 35 02.5	+0.3
FETY	Fethiye	1.71	134	*e*PN	Pn	02 34 40.3	+0.3
FETY	Fethiye	1.71	134	*e*Pn	Pn	02 34 40.3	+0.3
PRK	Paraskevi	1.73	325	P	Pn	02 34 39.1	-1.1
PRK	Paraskevi	1.73	325	*e*PB	Pn	02 34 39.2	-1.0
PRK				*e*SN	Sb	02 35 03.5	-0.2
PRK	Paraskevi	1.73	325	P	Pn	02 34 39.1	-1.1
PRK				*e*Sn	Sb	02 35 03.5	-0.2
APE	Apeiranthos	1.77	245	*e*PN	Pb	02 34 42.3	-0.1
APE	Apeiranthos	1.77	245	P	Pn	02 34 40.1	-0.7
APE	Apeiranthos	1.77	245	*e*PN	Pn	02 34 40.4	-0.4
APE	Apeiranthos	1.77	245	P	Pn	02 34 40.1	-0.7
APE	Apeiranthos	1.77	245	*e*Pn	Pn	02 34 40.4	-0.4
BALB	Balikesir	1.83	8	*e*PN	Pn	02 34 42.5	+1.0
BALB	Balikesir	1.83	8	*e*Pn	Pn	02 34 42.5	+1.0
BALY	Balya	1.91	2	*i* P	Pn	02 34 41.2	-1.5
BALY				*e*S	Sn	02 35 04.4	-2.7
SIGR	SIGRI	1.91	317	P	Pn	02 34 41.8	-0.9
SIGR	SIGRI	1.91	317	P	Pn	02 34 41.8	-0.9
DURS	Dursunbey	1.92	22	*i* P	Pn	02 34 41.0	-1.8
DURS				*i* S	Sn	02 35 03.7	-3.6
DST	Dursunbey	1.96	25	*e*PN	Pn	02 34 44.4	+1.0
DST	Dursunbey	1.96	25	*e*Pn	Pn	02 34 44.4	+1.0
GDZ	Gediz	1.98	50	*i* P	Pn	02 34 43.7	0.0
GDZ				*i* S	Sn	02 35 08.9	+0.1
GDZ	Gediz	1.98	50	*i* P	Pn	02 34 43.7	0.0
GDZ				*i* S	Sn	02 35 08.9	+0.1
ELL	Elmali	2.17	119	*e*PN	Pn	02 34 46.8	+0.4
ELL	Elmali	2.17	119	*e*Pn	Pn	02 34 46.8	+0.4
EZN	Ezine	2.21	335	*e*PN	Pn	02 34 47.5	+0.8
EZN	Ezine	2.21	335	*e*Pn	Pn	02 34 47.5	+0.8
SANT	Santorini	2.21	229	*e*PB	Pn	02 34 45.7	-1.1
SANT	Santorini	2.21	229	*e*Pb	Pn	02 34 45.7	-1.1
TVSB	Tavsanli	2.21	42	*e*PN	Pn	02 34 47.8	+0.9
TVSB	Tavsanli	2.21	42	*e*Pn	Pn	02 34 47.8	+0.9
GONE	Gonen-Balikesi	2.22	3	*e*PN	Pn	02 34 48.1	+1.3
GONE	Gonen-Balikesi	2.22	3	*e*Pn	Pn	02 34 48.2	+1.3
AKAS	Kas	2.29	133	*i* P	Pn	02 34 49.1	+1.1
AKAS				*i* S	Sb	02 35 19.6	-0.5
AKAS	Kas	2.29	133	*i* P	Pn	02 34 49.1	+1.1
KARP	Karpathos	2.30	188	*e*PB	Pn	02 34 47.7	-0.3
KARP	Karpathos	2.30	188	*e*Pb	Pn	02 34 47.7	-0.3
KSL	Kastellorizon	2.34	135	*e*PN	Pn	02 34 50.4	+1.9
ALT	Altintas	2.36	58	*e*PN	Pn	02 34 49.7	+0.8
ALT	Altintas	2.36	58	*e*Pn	Pn	02 34 49.7	+0.8
ISP	Isparta	2.36	89	*e*PN	Pn	02 34 50.6	+1.6
ISP	Isparta	2.36	89	P	Pn	02 34 47.8	-1.1
ISP	Isparta	2.36	89	P	Pn	02 34 47.8	-1.1
ISP	Isparta	2.36	89	*e*Pn	Pn	02 34 50.6	+1.6
BCK	Bucak	2.45	98	*e*PN	Pn	02 34 50.9	+0.8
BCK	Bucak	2.45	98	*e*Pn	Pn	02 34 50.9	+0.8
SHUT	Suhut-Afyon	2.48	72	*e*PN	Pn	02 34 51.4	+0.8
SHUT	Suhut-Afyon	2.48	72	*e*Pn	Pn	02 34 51.4	+0.8
EDC	Edincik	2.53	6	*e*PN	Pn	02 34 52.7	+1.5
EDC	Edincik	2.53	6	*e*Pn	Pn	02 34 52.7	+1.5
BNT	Bandirma	2.54	7	*e*PN	Pn	02 34 52.5	+1.2
BNT	Bandirma	2.54	7	*e*Pn	Pn	02 34 52.5	+1.2
KRBG	Karabiga-Canak	2.57	356	*e*PN	Pn	02 34 53.4	+1.7
KRBG	Karabiga-Canak	2.57	356	*e*Pn	Pn	02 34 53.4	+1.7
LPK	Lapseki	2.61	347	*e*PN	Pn	02 34 53.6	+1.3
LPK	Lapseki	2.61	347	*e*Pn	Pn	02 34 53.6	+1.3
ANTB	Antalya	2.65	110	*e*PN	Pn	02 34 53.6	+0.8
ANTB	Antalya	2.65	110	*e*Pn	Pn	02 34 53.6	+0.8
GELI	Tayfur-Gelibol	2.70	342	*e*PN	Pn	02 34 54.8	+1.3
GELI	Tayfur-Gelibol	2.70	342	*e*Pn	Pn	02 34 54.8	+1.3
MDNY	Mudanya-Bursa	2.74	22	*e*PN	Pn	02 34 55.5	+1.4
MDNY	Mudanya-Bursa	2.74	22	*e*Pn	Pn	02 34 55.5	+1.4
LIA	Limnos Island	2.77	319	*e*PN	Pn	02 34 54.8	+0.4
LIA				*e*SN	Sn	02 35 27.1	-1.0
LIA	Limnos Island	2.77	319	*e*Pn	Pn	02 34 54.8	+0.4
LIA				*e*Sn	Sn	02 35 27.1	-1.0
MRMT	Marmara Adasi	2.77	1	*e*PN	Pn	02 34 56.3	+1.7
MRMT	Marmara Adasi	2.77	1	*e*Pn	Pn	02 34 56.3	+1.7
GEMT	Gemlik	2.90	26	*e*PN	Pn	02 34 57.7	+1.4
GEMT	Gemlik	2.90	26	*e*Pn	Pn	02 34 57.7	+1.4
ZKR	Zakros	2.91	202	*e*PB	Pn	02 34 58.7	+2.3
ZKR	Zakros	2.91	202	*e*Pb	Pn	02 34 58.7	+2.3
PTL	Penteli	2.92	275	*e*PN	Pn	02 34 56.0	-0.5
PTL	Penteli	2.92	275	*e*Pn	Pn	02 34 56.0	-0.5
ARMT	Armutlu	2.92	20	*e*PN	Pn	02 34 58.4	+1.9
ARMT	Armutlu	2.92	20	*e*Pn	Pn	02 34 58.4	+1.9
IZI	Iznik	2.92	30	*e*PN	Pn	02 34 58.2	+1.6
IZI	Iznik	2.92	30	*e*Pn	Pn	02 34 58.2	+1.6
ERIK	Erikli-Kesan	2.95	345	*e*PN	Pn	02 34 58.7	+1.8
ERIK	Erikli-Kesan	2.95	345	*e*Pn	Pn	02 34 58.7	+1.8
CAVI	Cavuskoy	2.97	36	*e*PN	Pn	02 34 58.9	+1.6
CAVI	Cavuskoy	2.97	36	*e*Pn	Pn	02 34 58.9	+1.6
NPS	Neapolis	2.99	212	*e*PN	Pn	02 34 57.6	0.0
NPS	Neapolis	2.99	212	*e*Pn	Pn	02 34 57.6	0.0
SMTH	Samothraki Isl	3.07	330	*e*PN	Pn	02 34 59.2	+0.6
SMTH	Samothraki Isl	3.07	330	*e*Pn	Pn	02 34 59.2	+0.6
ESKT	Eskisehir	3.09	56	*e*PN	Pn	02 35 00.1	+1.1
ESKT	Eskisehir	3.09	56	*e*Pn	Pn	02 35 00.1	+1.1
ADVT	Abdulvahap	3.11	33	*e*PN	Pn	02 35 00.6	+1.4
ADVT	Abdulvahap	3.11	33	*e*Pn	Pn	02 35 00.6	+1.4
LAST	Lasithi	3.14	213	*e*PB	Pn	02 35 01.4	+1.8
LAST	Lasithi	3.14	213	*e*Pb	Pn	02 35 01.4	+1.8
AOS	Alonnisos	3.17	296	*e*PN	Pn	02 35 00.0	0.0
AOS	Alonnisos	3.17	296	*e*Pn	Pn	02 35 00.0	0.0
BUY	Buyukada	3.26	22	*e*PN	Pn	02 35 02.8	+1.6
BUY	Buyukada	3.26	22	*e*Pn	Pn	02 35 02.8	+1.6
GPA	Golpazari	3.27	40	*e*PN	Pn	02 35 02.8	+1.4
GPA	Golpazari	3.27	40	*e*Pn	Pn	02 35 02.8	+1.4
ALN	Alexandroupoli	3.28	340	*e*PN	Pn	02 35 01.6	+0.2
ALN	Alexandroupoli	3.28	340	*e*Pn	Pn	02 35 01.6	+0.2
CRLT	Corlu	3.30	3	*e*PN	Pn	02 35 03.8	+2.0
CRLT	Corlu	3.30	3	*e*Pn	Pn	02 35 03.8	+2.0
IDI	Anoyia	3.31	221	*e*PB	Pn	02 35 03.6	+1.6
IDI	Anoyia	3.31	221	*e*Pb	Pn	02 35 03.6	+1.6
HRT	Hereke	3.41	28	*e*PN	Pn	02 35 05.2	+1.8
HRT	Hereke	3.41	28	*e*Pn	Pn	02 35 05.2	+1.8
DID	Didima	3.43	266	*e*PN	Pn	02 35 03.8	+0.2
DID	Didima	3.43	266	*e*Pn	Pn	02 35 03.8	+0.2
SLVT	Silivri	3.44	8	*e*PN	Pn	02 35 05.5	+1.9
SLVT	Silivri	3.44	8	*e*Pn	Pn	02 35 05.5	+1.9
ISK	Istanbul-Kandi	3.44	20	*e*PN	Pn	02 35 05.2	+1.5
ISK	Istanbul-Kandi	3.44	20	*e*Pn	Pn	02 35 05.2	+1.5
GULT	Gulveren	3.48	41	*e*PN	Pn	02 35 06.0	+1.7
GULT	Gulveren	3.48	41	*e*Pn	Pn	02 35 06.0	+1.7
BGKT	Bogazkoy	3.48	16	*e*PN	Pn	02 35 06.2	+2.0
BGKT	Bogazkoy	3.48	16	*e*Pn	Pn	02 35 06.2	+2.0
CTKS	Kestanelik-??a	3.48	12	*e*PN	Pn	02 35 06.0	+1.7
CTKS	Kestanelik-??a	3.48	12	*e*Pn	Pn	02 35 06.0	+1.7
SVRH	Sivrihisar-ESK	3.51	61	*e*PN	Pn	02 35 06.7	+1.9
SVRH	Sivrihisar-ESK	3.51	61	*e*Pn	Pn	02 35 06.7	+1.9
SIVA	Sivas	3.57	219	*e*PN	Pn	02 35 05.7	+0.3
SIVA	Sivas	3.57	219	*e*Pn	Pn	02 35 05.7	+0.3
KIZT	Kizilcal	3.57	72	*e*PN	Pn	02 35 06.4	+0.8
KIZT	Kizilcal	3.57	72	*e*Pn	Pn	02 35 06.4	+0.8
SPNC	Sapanca-Adapaz	3.57	36	*e*PN	Pn	02 35 07.2	+1.7
SPNC	Sapanca-Adapaz	3.57	36	*e*Pn	Pn	02 35 07.2	+1.7
VAM	Vamos	3.61	229	*e*PN	Pn	02 35 07.4	+1.3
VAM	Vamos	3.61	229	*e*Pn	Pn	02 35 07.4	+1.3
PAIG	Paliouri	3.67	306	*e*PN	Pn	02 35 07.4	+0.6
PAIG	Paliouri	3.67	306	*e*Pn	Pn	02 35 07.4	+0.6
SILT	Sile	3.70	25	*e*PN	Pn	02 35 09.1	+1.9
SILT	Sile	3.70	25	*e*Pn	Pn	02 35 09.1	+1.9
KONT	Konya--Tatoy	3.81	87	*e*PN	Pn	02 35 10.8	+1.9
KONT	Konya--Tatoy	3.81	87	*e*Pn	Pn	02 35 10.8	+1.9
LADK	Ladik-KONYA	3.83	83	*e*PN	Pn	02 35 11.5	+2.4
LADK	Ladik-KONYA	3.83	83	*e*Pn	Pn	02 35 11.5	+2.4
VLI	Veliai	3.84	255	*e*PB	Pn	02 35 13.2	+4.1
VLI	Veliai	3.84	255	*e*Pb	Pn	02 35 13.2	+4.1
MDUB	Mudurnu	3.88	46	*e*PN	Pn	02 35 11.8	+2.0
MDUB	Mudurnu	3.88	46	*e*Pn	Pn	02 35 11.8	+2.0
EDRB	Edirne	4.06	352	*e*PN	Pn	02 35 14.4	+2.2
EDRB	Edirne	4.06	352	*e*Pn	Pn	02 35 14.4	+2.2
GUR	Goura	4.12	273	*e*PN	Pn	02 35 13.5	+0.4
GUR	Goura	4.12	273	*e*Pn	Pn	02 35 13.5	+0.4
KDZ	Kurdzhali	4.15	337	*i* P	Pn	02 35 12.8	-0.7
KDZ	Kurdzhali	4.15	337	*i* P	Pn	02 35 12.8	-0.7
AGG	Agios Georgios	4.26	288	*e*PN	Pn	02 35 15.6	+0.6
AGG	Agios Georgios	4.26	288	*e*Pn	Pn	02 35 15.6	+0.6
KLV	Kalavryta, Ach	4.27	275	*e*PN	Pn	02 35 17.0	+1.9
KLV	Kalavryta, Ach	4.27	275	*e*Pn	Pn	02 35 17.0	+1.9
TRIZ	Trizonia	4.35	279	*e*PN	Pn	02 35 17.1	+1.0
TRIZ	Trizonia	4.35	279	*e*Pn	Pn	02 35 17.1	+1.0
ITM	Ithomi	4.51	263	*e*PN	Pn	02 35 18.3	-0.1
ITM	Ithomi	4.51	263	*e*Pn	Pn	02 35 18.3	-0.1
LOD	Lodumlu	4.57	62	*e*PN	Pn	02 35 21.2	+2.0
LOD	Lodumlu	4.57	62	*e*Pn	Pn	02 35 21.2	+2.0
ANTO	Ankara	4.58	62	*e*PN	Pn	02 35 22.2	+2.8
ANTO	Ankara	4.58	62	*e*Pn	Pn	02 35 22.2	+2.8
AFSR	Af¯ar-Bala (A	4.62	68	*e*PN	Pn	02 35 22.2	+2.2
AFSR	Af¯ar-Bala (A	4.62	68	*e*Pn	Pn	02 35 22.2	+2.2
EVR	Evrytania	4.63	285	*e*PN	Pn	02 35 21.3	+1.1
EVR	Evrytania	4.63	285	*e*Pn	Pn	02 35 21.3	+1.1
THL	Klokotos Trika	4.66	294	*e*PN	Pn	02 35 21.1	+0.7
THL	Klokotos Trika	4.66	294	*e*Pn	Pn	02 35 21.1	+0.7
JMB	Yambol	4.69	351	*i* P	Pb	02 35 35.3	+3.1
SULT	Sultanhani-AKS	4.73	84	*e*PN	Pn	02 35 23.1	+1.6
SULT	Sultanhani-AKS	4.73	84	*e*Pn	Pn	02 35 23.2	+1.6
GRG	Griva	5.06	310	*e*PN	Pn	02 35 26.7	+0.7
GRG	Griva	5.06	310	*e*Pn	Pn	02 35 26.7	+0.7
LEF	Lefka	5.09	120	*e*PN	Pn	02 35 28.0	+1.7
LEF	Lefka	5.09	120	*e*Pn	Pn	02 35 28.0	+1.7
KKB	Krupnik	5.29	321	*i* P	Pn	02 35 31.0	+1.8
KKB	Krupnik	5.29	321	*i* P	Pn	02 35 31.0	+1.8
LFK	Lefkose	5.45	116	*e*PN	Pn	02 35 34.0	+2.7
LFK	Lefkose	5.45	116	*e*Pn	Pn	02 35 34.1	+2.7
CSS	Prodhromos	5.48	120	*e*PN	Pn	02 35 34.2	+2.5
CSS	Prodhromos	5.48	120	*e*Pn	Pn	02 35 34.2	+2.5
VTS	Vitosha	5.80	326	*i* P	Pn	02 35 37.7	+1.5
VTS	Vitosha	5.80	326	*i* P	Pn	02 35 37.7	+1.5

*DDA **03** 02:36:51.1, 36.°17N×40.°85E, h5km, MD3.6*
*NSSC **03** 02:36:54.4±2.4, 36.°43N×40.°86E, h9km±10km, ML3.4*
*CSEM **03** 02:36:55.7±0.4, 36.°34N×40.°82E, h2km, ML3.4, Error ellipse: s-maj=9.1km s-min=6.9km az=138.0*
*ISCJB **03** 02:36:55.3±0.7, 36.°39N±0.°03×40.°83E±0.°04, h2km±5km, Error ellipse: s-maj=5.6km s-min=3.9km az=38.6*
*ISK **03** 02:36:58.2, 36.°66N×40.°88E, h5km, ML3.6*
ISC 03 02:36:54.4±1.3, **36.°36N**±0.°02×**40.°76E**±0.°02, **h3**km±10km, **n73**, σ**1.°42**/94, **Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFNV	Sufian	0.53	276	*e*P	Pg	02 37 05.7	+1.2
SFNV				*e*S	Sb	02 37 15.4	+1.0
SFNV				AML	AML	02 37 30.9	
	comp=N,2µm,0.6s						
SFNV				AML	AML	02 37 31.9	
	comp=E,5µm,0.5s						
SFNV	Sufian SNR=72	0.53	276	*e*P	Pg	02 37 05.7	+1.2
SFNV				*e*S	Sb	02 37 15.4	+1.0
	comp=E,5µm,0.5s,SNR=95						
MZRK	Al-Mazaregh	0.54	189	*e*P	Pb	02 37 05.9	-0.7
MZRK				*e*S	Sb	02 37 15.0	+0.2
MZRK				AML	AML	02 37 30.6	
	comp=E,3µm,0.6s						
MZRK				AML	AML	02 37 30.6	
	comp=N,1µm,0.5s						
MZRK	Al-Mazaregh SNR=72	0.54	189	*e*P	Pb	02 37 05.9	-0.7
MZRK				*e*S	Sb	02 37 15.0	+0.2
	comp=N,1µm,0.5s,SNR=95						
KBSD	Kabsdagh	0.66	345	*e*P	Pb	02 37 08.0	-0.7
KBSD				*e*S	Sg	02 37 14.3	-1.4
KBSD				AML	AML	02 37 31.5	
	comp=Z,891nm,0.6s						
KBSD				AML	AML	02 37 39.3	
	comp=E,2µm,0.5s						
KBSD				AML	AML	02 37 42.6	
	comp=N,2µm,0.6s						
KBSD	Kabsdagh SNR=72	0.66	345	*e*P	Pb	02 37 08.0	-0.7
KBSD				*e*S	Sg	02 37 14.3	-1.4
	comp=N,2µm,0.6s,SNR=95						
MARD	Mardin	0.95	1	*i* P	Pg	02 37 12.8	+0.2
MARD				*i* S	Sb	02 37 26.2	-0.4
MNKR	ALMNKUR	1.28	251	*e*P	Pn	02 37 19.9	+0.7
MNKR				*e*S	Sn	02 37 37.7	+0.9
MNKR				AML	AML	02 37 44.9	
	comp=Z,2µm,0.4s						
MNKR	ALMNKUR SNR=61	1.28	251	*e*P	Pn	02 37 19.9	+0.7
MNKR				*e*S	Sn	02 37 37.7	+0.9
	comp=Z,2µm,0.4s,SNR=62						
BEST	Besiri	1.58	15	*i* P	Pn	02 37 23.3	-0.1
BEST				*i* S	Sn	02 37 43.8	-0.6
DIY	Diyarbakir	1.59	345	*e*PN	Pb	02 37 24.5	0.0
DIY				*e*SN	Sn	02 37 44.6	-0.1
DIY	Diyarbakir	1.59	345	*e*Pn	Pb	02 37 24.5	0.0
DIY				*e*Sn	Sn	02 37 44.6	-0.1
DIYA	Diyarbakir	1.64	342	*i* P	Pn	02 37 24.8	+0.6
DIYA				*e*S	Sn	02 37 43.3	-2.6
DIYA	Diyarbakir	1.64	342	*i* P	Pn	02 37 24.8	+0.6
DIYA				*e*S	Sn	02 37 43.3	-2.6
URFA	Urfa	1.89	305	*e*PN	Pg	02 37 31.8	+1.2
URFA	Urfa	1.89	305	*e*Pn	Pg	02 37 31.8	+1.2
JHLN	Al Jahlan	2.00	251	*e*P	Pn	02 37 30.2	+1.0
JHLN				*e*S	Sb	02 37 56.6	-0.3
JHLN				AML	AML	02 38 08.8	
	comp=Z,244nm,0.6s						
JHLN	Al Jahlan SNR=47	2.00	251	*e*P	Pn	02 37 30.2	+1.0
JHLN				*e*S	Sb	02 37 56.6	-0.3
	comp=Z,244nm,0.6s,SNR=49						
ATAB	Bozova	2.27	300	*e*P	Pn	02 37 32.1	-0.7
ATAB				*e*S	Sb	02 38 04.4	0.0
ATAB	Bozova	2.27	300	*e*P	Pn	02 37 32.1	-0.7
ATAB				*e*S	Sb	02 38 04.4	0.0
SLMH	Al Salmeh	2.29	267	*e*P	Pn	02 37 33.4	+0.1
SLMH				*e*S	Sn	02 38 00.3	-1.7
SLMH				AML	AML	02 38 24.2	
	comp=Z,452nm,0.6s						
SLMH				AML	AML	02 38 26.5	
	comp=E,445nm,0.6s						
SLMH				AML	AML	02 38 32.3	
	comp=N,166nm,0.6s						
SLMH	Al Salmeh SNR=47	2.29	267	*e*P	Pn	02 37 33.3	+0.1
SLMH				*e*S	Sn	02 38 00.3	-1.7
	comp=N,166nm,0.6s,SNR=49						
SVRC	Sivrice-ELAZID	2.32	330	*e*PN	Pb	02 37 36.6	-0.4
SVRC	Sivrice-ELAZID	2.32	330	*e*Pn	Pb	02 37 36.7	-0.4
CUKT	Cukurca	2.45	68	*e*PN	Pb	02 37 38.0	-1.1
CUKT	Cukurca	2.45	68	*e*Pn	Pb	02 37 38.1	-1.1
BINT	Bingol	2.52	355	*e*Pn	Pb	02 37 39.3	-1.0
ELZG	Elazig	2.56	327	*e*P	Pb	02 37 42.5	+1.4
ELZG				*i* S	Sg	02 38 16.9	+0.3
ELZG	Elazig	2.56	327	*e*P	Pb	02 37 42.5	+1.4
ELZG				*i* S	Sg	02 38 16.9	+0.3
BNGB	Bingˆ¶l	2.62	359	*e*PN	Pn	02 37 39.3	+1.5
HAKT	HAKKARI	2.64	62	*e*P	Pn	02 37 37.8	-0.4
HAKT				*e*S	Sn	02 38 09.8	-1.1

HAKT	**HAKKARI**	**2.64**	**62**	*e*P	**Pn**	**02 37 37.8**	**-0.4**
HAKT				*e*S	**Sn**	**02 38 09.8**	**-1.1**
MYA	**Malataya**	**2.70**	**317**	*e*PN	**Pb**	**02 37 42.5**	**-1.0**
MYA	**Malataya**	**2.70**	**317**	*e*Pn	**Pb**	**02 37 42.5**	**-1.0**
PTK	**Pertek**	**2.75**	**337**	*e*PN	**Pn**	**02 37 42.0**	**+2.4**
PTK	**Pertek**	**2.75**	**337**	*e*Pn	**Pn**	**02 37 42.0**	**+2.4**
VRTB	**Varto-Mus**	**2.85**	**11**	*e*PN	**Pn**	**02 37 41.4**	**+0.5**
VRTB	**Varto-Mus**	**2.85**	**11**	*e*Pn	**Pn**	**02 37 41.4**	**+0.5**
GAZ	**Gaziantep**	**2.96**	**287**	*e*PN	**Pb**	**02 37 48.5**	**+0.6**
GAZ	**Gaziantep**	**2.96**	**287**	*e*Pn	**Pb**	**02 37 48.5**	**+0.6**
AKCD	**Akcadag**	**2.97**	**311**	*e*P	**Pn**	**02 37 42.9**	**+0.2**
AKCD				*e*S	**Sn**	**02 38 20.9**	**+1.9**
AKCD	**Akcadag**	**2.97**	**311**	*e*P	**Pn**	**02 37 42.9**	**+0.2**
AKCD				*e*S	**Sn**	**02 38 20.9**	**+1.9**
VANB	**Van**	**3.06**	**42**	*e*PN	**Pn**	**02 37 45.6**	**+1.9**
VANB	**Van**	**3.06**	**42**	*e*Pn	**Pn**	**02 37 45.6**	**+1.9**
KMRS	**Kahramanmaras**	**3.30**	**291**	*e*PN	**Pb**	**02 37 53.4**	**-0.2**
KMRS	**Kahramanmaras**	**3.30**	**291**	*e*Pn	**Pb**	**02 37 53.4**	**-0.2**
ERZN	**Erzincan**	**3.32**	**346**	*e*PN	**Pn**	**02 37 49.4**	**+2.0**
AYKD	**Aykdinkavak**	**3.34**	**289**	*e*P	**Pn**	**02 37 47.7**	**+0.1**
AYKD				*e*S	**Sg**	**02 38 40.3**	**-1.4**
AYKD	**Aykdinkavak**	**3.34**	**289**	*e*P	**Pn**	**02 37 47.7**	**+0.1**
AYKD				*e*S	**Sg**	**02 38 40.3**	**-1.4**
DARE	**Darende-Malaty**	**3.42**	**311**	*e*PN	**Pb**	**02 37 52.8**	**-2.8**
DARE	**Darende-Malaty**	**3.42**	**311**	*e*Pn	**Pb**	**02 37 52.8**	**-2.8**
ILIC	**ilic-Erzincan**	**3.54**	**331**	*e*PN	**Pn**	**02 37 53.5**	**+3.1**
ILIC	**ilic-Erzincan**	**3.54**	**331**	*e*Pn	**Pn**	**02 37 53.5**	**+3.1**
EZC	**Erzincan**	**3.56**	**342**	*e*Pn	**Pn**	**02 37 49.4**	**-1.3**
HTY	**Hatay**	**3.75**	**268**	*e*PN	**Pb**	**02 38 00.3**	**-0.9**
HTY	**Hatay**	**3.75**	**268**	*e*Pn	**Pb**	**02 38 00.3**	**-0.9**
SARI	**SarD1z-Kayseri**	**4.02**	**302**	*e*PN	Pb	02 38 02.0	-3.9
SARI	**SarD1z-Kayseri**	**4.02**	**302**	*e*Pn	Pb	02 38 02.0	-3.9
BAYT	**Ayd˜–ntepe-Bay**	**4.05**	**353**	*e*PN	**Pn**	**02 37 59.3**	**+1.8**
BAYT	**Ayd˜–ntepe-Bay**	**4.05**	**353**	*e*Pn	**Pn**	**02 37 59.3**	**+1.8**
CEYT	**Ceyhan**	**4.08**	**281**	*e*PN	**Pb**	**02 38 05.0**	**-1.9**
CEYT	**Ceyhan**	**4.08**	**281**	*e*Pn	**Pb**	**02 38 05.0**	**-1.9**
KOZT	**Kozan**	**4.11**	**287**	*e*PN	**Pb**	**02 38 04.9**	**-2.5**
KOZT	**Kozan**	**4.11**	**287**	*e*Pn	**Pb**	**02 38 04.9**	**-2.5**
BHD	**Baghdad**	**4.29**	**135**	*e*x	Pn	02 37 54.0	-6.5
BHD				*e*x	x	02 37 55.0	
BHD				*e*x	**Pb**	**02 38 09.0**	**-1.4**
BHD				*e*x	Sn	02 38 43.0	-8.1
BHD				*e*x	**Sb**	**02 39 06.0**	**+3.4**
KRTS	**Karatas**	**4.35**	**274**	*e*PN	**Pb**	**02 38 08.8**	**-2.6**
KRTS	**Karatas**	**4.35**	**274**	*e*Pn	**Pb**	**02 38 08.8**	**-2.6**
BNN	**Bunyan**	**4.63**	**304**	*e*PN	Pn	02 38 10.1	+4.8
BNN	**Bunyan**	**4.63**	**304**	*e*Pn	Pn	02 38 10.1	+4.8
NIG	**Nigde**	**5.21**	**291**	*e*PN	Pb	02 38 20.4	-5.9
NIG	**Nigde**	**5.21**	**291**	*e*Pn	Pb	02 38 20.4	-5.9
CORM	**Corum**	**6.15**	**310**	*e*PN	Pn	02 38 31.8	+5.6
CORM	**Corum**	**6.15**	**310**	*e*Pn	Pn	02 38 31.8	+5.6

*DDA **03** 02:37:14.7, 37.°83N×27.°54E, h7km, MD3.1*
*ISK **03** 02:37:14.3, 37.°80N×27.°56E, h5km, MD3.3*
*CSEM **03** 02:37:15.4±0.2, 37.°78N×27.°54E, h2km, MD3.1, Error ellipse: s-maj=5.2km s-min=3.5km az=61.0*
ISC 03 02:37:15.3±1.1**, 37.°80N**±0.°02×**27.°53E**±0.°02**, h5**km±10km**, n58,** σ**1.°08**/70**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.26**	**247**	*i* P	**Pg**	**02 37 20.4**	**+0.1**
GCAM				*i* S	**Sg**	**02 37 24.5**	**+0.7**
GCAM	**G?zelcaml?**	**0.26**	**247**	*i* P	**Pg**	**02 37 20.4**	**+0.1**
GCAM				*i* S	**Sg**	**02 37 24.5**	**+0.7**
AYDN	**Tasoluk**	**0.31**	**117**	*i* P	**Pg**	**02 37 21.6**	**+0.2**
AYDN				*i* S	**Sg**	**02 37 25.9**	**+0.4**
AYDN	**Tasoluk**	**0.31**	**117**	*i* P	**Pg**	**02 37 21.6**	**+0.2**
AYDN				*i* S	**Sg**	**02 37 25.9**	**+0.4**
MLSB	**Milas**	**0.54**	**159**	*e*PG	**Pg**	**02 37 25.3**	**-0.5**
MLSB	**Milas**	**0.54**	**159**	*e*Pg	**Pg**	**02 37 25.3**	**-0.5**
BLCB	**Balcova**	**0.70**	**327**	*e*PG	**Pg**	**02 37 28.1**	**-0.6**
BLCB	**Balcova**	**0.70**	**327**	*e*Pg	**Pg**	**02 37 28.2**	**-0.6**
BODT	**Bodrum**	**0.76**	**193**	*e*PG	**Pg**	**02 37 29.9**	**0.0**
BODT				*e*SG	**Sb**	**02 37 42.2**	**+0.5**
BODT	**Bodrum**	**0.76**	**193**	*e*Pg	**Pg**	**02 37 30.0**	**0.0**
BODT				*e*Sg	**Sb**	**02 37 42.2**	**+0.5**
YER	**Yerkesik**	**0.90**	**138**	*e*PG	**Pg**	**02 37 32.8**	**+0.3**
YER				*e*SG	**Sb**	**02 37 45.7**	**0.0**
YER	**Yerkesik**	**0.90**	**138**	*e*Pg	**Pg**	**02 37 32.8**	**+0.3**
YER				*e*Sg	**Sb**	**02 37 45.7**	**0.0**
URLA	**Izmir**	**0.93**	**307**	*i* P	**Pg**	**02 37 32.7**	**-0.4**
URLA				*i* S	**Sb**	**02 37 46.0**	**-0.5**
URLA	**Izmir**	**0.93**	**307**	*i* P	**Pg**	**02 37 32.7**	**-0.4**
URLA				*i* S	**Sb**	**02 37 46.0**	**-0.5**
DAT	**Datca**	**1.07**	**178**	*e*PG	**Pg**	**02 37 35.6**	**-0.3**
DAT	**Datca**	**1.07**	**178**	*e*Pg	**Pg**	**02 37 35.6**	**-0.3**
AKHS	**Akhisar**	**1.10**	**12**	*i* P	**Pb**	**02 37 35.1**	**-1.7**
AKHS	**Akhisar**	**1.10**	**12**	*i* P	**Pb**	**02 37 35.1**	**-1.7**
AKS	**Akhisar**	**1.10**	**12**	*e*PN	**Pb**	**02 37 36.0**	**-0.8**
AKS	**Akhisar**	**1.10**	**12**	*e*Pn	**Pb**	**02 37 36.0**	**-0.8**
KULA	**Kula-Manisa**	**1.14**	**51**	*e*PN	**Pb**	**02 37 36.4**	**-1.1**
KULA	**Kula-Manisa**	**1.14**	**51**	*e*Pn	**Pb**	**02 37 36.4**	**-1.1**
DENT	**Denizli**	**1.19**	**92**	*e*PN	**Pb**	**02 37 37.8**	**-0.6**
DENT	**Denizli**	**1.19**	**92**	*e*Pn	**Pb**	**02 37 37.8**	**-0.6**
DNZL	**Cakiroluk**	**1.21**	**95**	*i* P	**Pb**	**02 37 37.9**	**-0.9**
DNZL				*i* S	**Sn**	**02 37 56.3**	**+0.4**
DNZL	**Cakiroluk**	**1.21**	**95**	*i* P	**Pb**	**02 37 37.9**	**-0.9**
DNZL				*i* S	**Sn**	**02 37 56.3**	**+0.4**
TURN	**Turunc**	**1.26**	**137**	*e*P	**Pn**	**02 37 37.5**	**-2.1**
TURN	**Turunc**	**1.26**	**137**	*e*P	**Pn**	**02 37 37.5**	**-2.1**
DALY	**Dalyan (Mu˜la**	**1.33**	**137**	*e*PN	**Pb**	**02 37 40.3**	**-0.5**
DALY	**Dalyan (Mu˜la**	**1.33**	**137**	*e*Pn	**Pb**	**02 37 40.3**	**-0.5**
DEMI	**Demirci**	**1.55**	**37**	*i* P	**Pn**	**02 37 43.3**	**-0.4**
DEMI	**Demirci**	**1.55**	**37**	*i* P	**Pn**	**02 37 43.3**	**-0.4**
KHL	**Karahalli**	**1.66**	**71**	*e*PN	**Pb**	**02 37 45.6**	**-0.8**
KHL	**Karahalli**	**1.66**	**71**	*e*Pn	**Pb**	**02 37 45.6**	**-0.8**
FETY	**Fethiye**	**1.70**	**133**	*e*PN	**Pb**	**02 37 46.3**	**-0.8**
FETY	**Fethiye**	**1.70**	**133**	*e*Pn	**Pb**	**02 37 46.3**	**-0.8**
APE	**Apeiranthos**	**1.75**	**246**	*e*PN	**Pb**	**02 37 47.6**	**-0.4**
BALB	**Balikesir**	**1.85**	**8**	*e*PN	**Pb**	**02 37 48.8**	**-0.9**
EZN	**Ezine**	**2.23**	**335**	*e*PN	**Pb**	**02 37 54.1**	**-2.0**
EZN	**Ezine**	**2.23**	**335**	*e*Pn	**Pb**	**02 37 54.1**	**-2.0**
TVSB	**Tavsanli**	**2.23**	**42**	*e*PN	**Pn**	**02 37 54.1**	**+1.0**
TVSB	**Tavsanli**	**2.23**	**42**	*e*Pn	**Pn**	**02 37 54.1**	**+1.0**
GONE	**Gonen-Balikesi**	**2.24**	**3**	*e*PN	**Pb**	**02 37 54.5**	**-1.9**
GONE	**Gonen-Balikesi**	**2.24**	**3**	*e*Pn	**Pb**	**02 37 54.5**	**-1.9**
ALT	**Altintas**	**2.38**	**58**	*e*PN	**Pn**	**02 37 55.9**	**+0.8**
ALT	**Altintas**	**2.38**	**58**	*e*Pn	**Pn**	**02 37 55.9**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.72**	**343**	*e*PN	**Pn**	**02 38 01.5**	**+1.9**
GELI	**Tayfur-Gelibol**	**2.72**	**343**	*e*Pn	**Pn**	**02 38 01.5**	**+1.9**
MDNY	**Mudanya-Bursa**	**2.77**	**22**	*e*PN	**Pn**	**02 38 01.6**	**+1.2**
MDNY	**Mudanya-Bursa**	**2.77**	**22**	*e*Pn	**Pn**	**02 38 01.6**	**+1.2**
GEMT	**Gemlik**	**2.93**	**26**	*e*PN	**Pn**	**02 38 03.7**	**+1.2**
GEMT	**Gemlik**	**2.93**	**26**	*e*Pn	**Pn**	**02 38 03.7**	**+1.2**
ARMT	**Armutlu**	**2.95**	**20**	*e*PN	**Pn**	**02 38 04.0**	**+1.3**
ARMT	**Armutlu**	**2.95**	**20**	*e*Pn	**Pn**	**02 38 04.1**	**+1.3**
IZI	**Iznik**	**2.95**	**30**	*e*PN	**Pn**	**02 38 03.9**	**+1.0**
ERIK	**Erikli-Kesan**	**2.97**	**345**	*e*PN	**Pn**	**02 38 05.2**	**+2.1**
ERIK	**Erikli-Kesan**	**2.97**	**345**	*e*Pn	**Pn**	**02 38 05.2**	**+2.1**
GULT	**Gulveren**	**3.50**	**41**	*e*PN	**Pn**	**02 38 12.5**	**+2.0**

*ISCJB **03** 02:46:14.9±0.6, 38.°36N±0.°03×23.°42E±0.°04, h4km±6km, Error ellipse: s-maj=5.4km s-min=4.0km az=150.0*
*THE **03** 02:46:15.7, 38.°37N×23.°39E, h11km±12km, ML1.6/1, Error ellipse: s-maj=12.3km s-min=1.1km az=324.0*
*ATH **03** 02:46:15.6, 38.°37N×23.°39E, h5km±1km, MD2.6/8, ML1.7*
*CSEM **03** 02:46:15.4±0.1, 38.°37N×23.°40E, h10km, ML1.6/1, Error ellipse: s-maj=2.5km s-min=1.8km az=70.0*
ISC 03 02:46:15.7±1.0**, 38.°38N**±0.°02×**23.°39E**±0.°03**, h12**km±9km**, n36,** σ**0.°49**/54**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKA	**Markates**	**0.37**	**26**	P	**Pg**	**02 46 23.0**	**-0.1**
MRKA	**Markates**	**0.37**	**26**	P	**Pg**	**02 46 23.0**	**-0.1**
LKR	**Lokris**	**0.41**	**312**	P	**Pg**	**02 46 23.6**	**-0.3**
	120nm,0.1s						
LKR				S	**Sb**	**02 46 30.5**	**-0.6**
LKR	**Lokris**	**0.41**	**312**	*e*PG	**Pg**	**02 46 23.6**	**-0.3**
LKR				*e*SB	**Sg**	**02 46 29.7**	**+0.4**
LKR	**Lokris**	**0.41**	**312**	P	**Pg**	**02 46 23.6**	**-0.3**
	120nm,0.1s						
LKR				*e*Sb	**Sg**	**02 46 29.7**	**+0.4**
LKR				S	**Sb**	**02 46 30.5**	**-0.6**
ATAL	**Atalanti**	**0.43**	**318**	P	**Pg**	**02 46 23.9**	**-0.3**
ATAL	**Atalanti**	**0.43**	**318**	P	**Pg**	**02 46 23.9**	**-0.3**
ATH	**Athens Observa**	**0.48**	**147**	*e*PB	**Pg**	**02 46 24.9**	**-0.2**
ATH				*e*SB	**Sg**	**02 46 31.5**	**0.0**
ATH	**Athens Observa**	**0.48**	**147**	*e*Pb	**Pg**	**02 46 24.9**	**-0.2**
ATH				*e*Sb	**Sg**	**02 46 31.5**	**0.0**
LTK	**Loutraki**	**0.48**	**223**	*e*PG	**Pg**	**02 46 24.9**	**-0.3**
LTK				*e*SB	**Sg**	**02 46 32.1**	**+0.5**
LTK	**Loutraki**	**0.48**	**223**	*e*Pg	**Pg**	**02 46 24.9**	**-0.3**
LTK				*e*Sb	**Sg**	**02 46 32.1**	**+0.5**
PTL	**Penteli**	**0.50**	**131**	*e*PB	**Pg**	**02 46 25.0**	**-0.5**
PTL				*e*SB	**Sg**	**02 46 32.0**	**-0.1**
PTL	**Penteli**	**0.50**	**131**	*e*Pb	**Pg**	**02 46 25.0**	**-0.5**
PTL				*e*Sb	**Sg**	**02 46 32.0**	**-0.1**
SMIA	**Simia**	**0.52**	**345**	P	**Pg**	**02 46 26.4**	**+0.4**
SMIA	**Simia**	**0.52**	**345**	P	**Pg**	**02 46 26.4**	**+0.4**
NAIG	**Nisos Aigina**	**0.62**	**172**	*e*PB	**Pg**	**02 46 27.9**	**+0.1**
NAIG	**Nisos Aigina**	**0.62**	**172**	*e*Pb	**Pg**	**02 46 27.9**	**+0.1**
DSF	**Desfina**	**0.68**	**273**	P	**Pg**	**02 46 28.0**	**-0.9**
DSF	**Desfina**	**0.68**	**273**	P	**Pg**	**02 46 28.0**	**-0.9**
DID	**Didima**	**0.88**	**188**	P	**Pg**	**02 46 32.2**	**-0.4**
DID	**Didima**	**0.88**	**188**	*e*PG	**Pg**	**02 46 31.9**	**-0.7**
DID				*e*SB	**Sb**	**02 46 45.0**	**+0.5**
DID	**Didima**	**0.88**	**188**	*e*Pg	**Pg**	**02 46 31.9**	**-0.7**
DID	**Didima**	**0.88**	**188**	P	**Pg**	**02 46 32.2**	**-0.4**
DID				*e*Sb	**Sb**	**02 46 45.0**	**+0.5**
AOS	**Alonnisos**	**0.88**	**26**	P	**Pg**	**02 46 31.9**	**-0.9**
AOS	**Alonnisos**	**0.88**	**26**	P	**Pg**	**02 46 31.9**	**-0.9**
GUR	**Goura**	**0.93**	**242**	P	**Pg**	**02 46 33.6**	**-0.1**
GUR	**Goura**	**0.93**	**242**	*e*PB	**Pb**	**02 46 33.8**	**-0.1**
GUR				*e*SB	**Sb**	**02 46 46.8**	**+0.6**
GUR	**Goura**	**0.93**	**242**	P	**Pg**	**02 46 33.6**	**-0.1**
GUR				*e*Sb	**Sb**	**02 46 46.8**	**+0.6**
NEO	**Neokhori**	**0.94**	**352**	*e*PB	**Pg**	**02 46 33.8**	**-0.1**
NEO				*e*SB	**Sb**	**02 46 47.2**	**+0.8**
NEO	**Neokhori**	**0.94**	**352**	*e*Pb	**Pg**	**02 46 33.8**	**-0.1**
NEO				*e*Sb	**Sb**	**02 46 47.2**	**+0.8**
TRIZ	**Trizonia**	**1.03**	**270**	*e*PN	**Pn**	**02 46 36.0**	**0.0**
TRIZ				*e*SB	**Sn**	**02 46 50.2**	**-0.2**
TRIZ	**Trizonia**	**1.03**	**270**	*e*Pn	**Pn**	**02 46 36.0**	**0.0**
TRIZ				*e*Sb	**Sn**	**02 46 50.2**	**-0.2**
AGG	**Agios Georgios**	**1.05**	**308**	*e*PG	**Pg**	**02 46 35.0**	**-0.9**
AGG	**Agios Georgios**	**1.05**	**308**	*e*Pg	**Pg**	**02 46 35.0**	**-0.9**
LAKA	**Lakka**	**1.11**	**264**	*e*PB	**Pn**	**02 46 37.5**	**+0.3**
LAKA	**Lakka**	**1.11**	**264**	*e*Pb	**Pn**	**02 46 37.5**	**+0.3**

*ISK **03** 02:49:49.6, 37.°03N×36.°08E, h16km, MD2.7*
*CSEM **03** 02:49:50.1±0.2, 37.°03N×36.°07E, h17km±1km, MD2.7, Error ellipse: s-maj=5.0km s-min=3.2km az=161.0*
*ISCJB **03** 02:49:50.4±0.6, 37.°14N±0.°05×36.°02E±0.°04, h2km±8km, Error ellipse: s-maj=8.7km s-min=4.2km az=157.2*
*DDA **03** 02:49:51.0, 37.°25N×36.°00E, h7km, MD3.0*
ISC 03 02:49:50.9±1.0**, 37.°13N**±0.°03×**36.°00E**±0.°02**, h8**km±9km**, n30,** σ**1.°25**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.24**	**240**	*e*PG	**Pg**	**02 49 55.5**	**-0.1**
CEYT				*e*SG	**Sg**	**02 50 00.2**	**+1.4**
CEYT	**Ceyhan**	**0.24**	**240**	*e*Pg	**Pg**	**02 49 55.5**	**-0.1**
CEYT				*e*Sg	**Sg**	**02 50 00.2**	**+1.4**
KOZT	**Kozan**	**0.38**	**338**	*e*PG	**Pb**	**02 50 00.6**	**+0.8**
KOZT	**Kozan**	**0.38**	**338**	*e*Pg	**Pb**	**02 50 00.6**	**+0.8**
AYKD	**Aykdinkavak**	**0.70**	**66**	*i* P	**Pg**	**02 50 03.1**	**-1.4**
AYKD				*i* S	**Sg**	**02 50 14.4**	**+0.8**
KRTS	**Karatas**	**0.75**	**222**	*e*PG	**Pg**	**02 50 04.2**	**-1.1**
KRTS	**Karatas**	**0.75**	**222**	*e*Pg	**Pg**	**02 50 04.2**	**-1.1**
KMRS	**Kahramanmaras**	**0.81**	**62**	*e*PG	**Pg**	**02 50 05.7**	**-0.8**
KMRS				*e*SG	**Sg**	**02 50 17.4**	**+0.4**
KMRS	**Kahramanmaras**	**0.81**	**62**	*e*Pg	**Pg**	**02 50 05.7**	**-0.8**
KMRS				*e*Sg	**Sg**	**02 50 17.4**	**+0.4**
KUZU	**Kuzuini**	**0.93**	**112**	*i* P	**Pn**	**02 50 11.0**	**+0.7**
KUZU				*i* S	**Sn**	**02 50 25.8**	**+2.0**
KUZU	**Kuzuini**	**0.93**	**112**	*i* P	**Pn**	**02 50 11.0**	**+0.7**
GAZ	**Gaziantep**	**0.97**	**87**	*e*PG	**Pb**	**02 50 08.1**	**-1.8**
GAZ	**Gaziantep**	**0.97**	**87**	*e*Pg	**Pb**	**02 50 08.1**	**-1.8**
GULE	**Gulek**	**0.99**	**279**	*i* P	**Pb**	**02 50 09.6**	**-0.8**
GULE				*i* S	**Sn**	**02 50 24.9**	**-0.6**
GULE	**Gulek**	**0.99**	**279**	*i* P	**Pb**	**02 50 09.6**	**-0.8**
GULE				*i* S	**Sn**	**02 50 24.9**	**-0.6**
HTY	**Hatay**	**1.01**	**174**	*e*PG	**Pb**	**02 50 08.0**	**-2.7**
HTY	**Hatay**	**1.01**	**174**	*e*Pg	**Pb**	**02 50 08.0**	**-2.7**
YAYL	**Yayladag**	**1.10**	**176**	*i* P	**Pg**	**02 50 13.1**	**+1.1**
YAYL				*i* S	**Sn**	**02 50 31.2**	**+3.2**
YAYL	**Yayladag**	**1.10**	**176**	*i* P	**Pg**	**02 50 13.1**	**+1.1**
GZT	**Gaziantep**	**1.27**	**79**	*i* P	**Pb**	**02 50 15.2**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.32**	**14**	*e*PN	**Pn**	**02 50 15.4**	**-0.3**
NIG	**Nigde**	**1.48**	**312**	*e*PN	**Pn**	**02 50 17.1**	**-0.9**
NIG	**Nigde**	**1.48**	**312**	*e*Pn	**Pn**	**02 50 17.1**	**-0.9**
BNN	**Bunyan**	**1.72**	**356**	*e*PN	**Pn**	**02 50 21.2**	**-0.1**
BNN	**Bunyan**	**1.72**	**356**	*e*Pn	**Pn**	**02 50 21.2**	**-0.1**
DARE	**Darende-Malaty**	**1.86**	**39**	*e*PN	**Pn**	**02 50 23.1**	**0.0**
AKCD	**Akcadag**	**1.92**	**52**	*e*P	**Pn**	**02 50 23.3**	**-0.6**
AKCD				*i* S	**Sg**	**02 50 53.9**	**+1.4**
AKCD	**Akcadag**	**1.92**	**52**	*e*P	**Pn**	**02 50 23.3**	**-0.6**
SULT	**Sultanhani-AKS**	**2.24**	**299**	*e*PN	**Pn**	**02 50 28.3**	**-0.1**
SULT	**Sultanhani-AKS**	**2.24**	**299**	*e*Pn	**Pn**	**02 50 28.3**	**-0.1**

*PGC **03** 02:50:14.6±2.5, 50.°45N×130.°38W, h10km, ML3.6/15, Mw4.2, 211km west of Pt. Hardy, Bc Vancouver Island Region*
*ISCJB **03** 02:50:16.4±0.3, 50.°71N±0.°03×130.°10W±0.°05, h14km, mb3.5/4, MS3.6/8, Error ellipse: s-maj=4.5km s-min=3.2km az=148.6*
*IDC **03** 02:50:20.6±2.5, 50.°62N×130.°00W, h29km±15km, mb3.6/4, mb1 4.0/10, mb1mx3.6/32, mbtmp3.7/10, ML3.8/6, MS3.5/13, Ms1 3.5/13, ms1mx3.4/34, Error ellipse: s-maj=19.5km s-min=9.4km az=76.0*
ISC 03 02:50:16.9±0.9**, 50.°66N**±0.°06×**130.°34W**±0.°07**, h14**km**, n406,** σ**0.°74**/401**, mb3.6**/4**, MS3.5**/8**, 200C-181D, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	**Holberg**	**1.40**	**90**	⇑Pn	Pn	02 50 38.5	-3.7
BPBC	**Brooks Peninsu**	**1.71**	**106**	⇑Pn	Pn	02 50 41.8	-4.6
PHC	**Port Hardy**	**1.85**	**87**	⇓Pn	**Pn**	**02 50 45.1**	**-3.0**
PHC				⇓Sn	**Sn**	**02 51 06.1**	**-5.2**
MAYB	**Maynard**	**2.04**	**96**	⇓Pn	Pn	02 50 47.4	-3.5
BBB	**Bella Bella**	**2.07**	**41**	⇑Pn	**Pn**	**02 50 50.0**	**-1.2**
BBB	**Bella Bella**	**2.07**	**41**	Pn	**Pn**	**02 50 49.9**	**-1.2**
	24nm,0.3s,baz=234,slow=9.2,SNR=956						
BBB				Pg	**Pg**	**02 50 56.7**	**0.0**
	36nm,0.3s,baz=232,slow=15,SNR=26						
BBB				Sn	**Sn**	**02 51 12.7**	**-4.1**
	84nm,0.3s,baz=268,slow=23,SNR=16						
BBB				Lg	Lg	02 51 23.8	
	48nm,0.3s,baz=145,slow=20,SNR=6.5						
BBB				LR	LR	02 51 43.7	
	comp=Z,469nm,18.1s,baz=58,slow=42						
EDB	**Eliza Dome**	**2.21**	**110**	⇓Pn	Pn	02 50 48.6	-4.5
WOSB	**Woss**	**2.46**	**100**	⇑Pn	Pn	02 50 53.4	-3.3
MOBC	**Moresby Island**	**2.69**	**339**	⇑Pn	**Pn**	**02 50 58.6**	**-1.2**
MOBC				⇑Sn	**Sn**	**02 51 31.6**	**-0.6**
NCRB	**Newcastle Ridg**	**2.74**	**94**	⇑Pn	Pn	02 50 57.3	-3.3
ETB	**Estevan Point**	**2.76**	**116**	⇑Pn	Pn	02 50 56.5	-4.2
BCBC	**Bella Coola**	**2.82**	**51**	⇓Pn	**Pn**	**02 51 02.0**	**+0.5**
BCBC				⇓Sn	**Sn**	**02 51 33.7**	**-1.6**
DIB	**Dawson Inlet,**	**2.88**	**333**	⇑Pn	**Pn**	**02 51 01.2**	**-1.1**
DIB				⇓Sn	**Sn**	**02 51 36.1**	**-0.5**
GDR	**Gold River**	**2.90**	**106**	⇑Pn	Pn	02 50 59.0	-3.6
CBB	**Campbell River**	**3.25**	**99**	⇓Pn	**Pn**	**02 51 04.6**	**-2.8**
BTB	**Buttle Lake**	**3.32**	**109**	⇓Pn	Pn	02 51 05.1	-3.5
OZB	**Mount Ozzard**	**3.57**	**117**	⇑Pn	Pn	02 51 07.9	-3.9
ALRB	**Anaheim Lake**	**3.77**	**58**	⇓Pn	**Pn**	**02 51 15.0**	**+0.4**
ALB	**Alberni**	**3.81**	**109**	⇓Pn	Pn	02 51 11.9	-3.3
DLBC	**Dease Lake**	**7.80**	**1**	Pn	**Pn**	**02 52 12.7**	**+2.7**
	3.5nm,0.3s,baz=193,slow=16,SNR=57						
DLBC				Sn	**Sn**	**02 53 39.3**	**+1.2**
	0.3nm,0.3s,baz=180,slow=20,SNR=2.4						
NEW	**Newport**	**8.93**	**100**	Pn	**Pn**	**02 52 24.8**	**-0.8**
	0.8nm,0.3s,baz=300,slow=13,SNR=9.6						
NEW				LR	LR	02 55 56.1	
	comp=Z,467nm,19.0s,baz=293,slow=38						
NEW	**Newport**	**8.93**	**100**	⇑P	**Pn**	**02 52 24.7**	**-0.8**
	baz=8.9						
NEW				⇓S	**Sn**	**02 54 06.2**	**+0.3**
	baz=8.9						
NEW	**Newport**	**8.93**	**100**	⇑P	**Pn**	**02 52 24.7**	**-0.8**
	baz=8.9						
NEW				⇓S	**Sn**	**02 54 06.2**	**+0.3**
	baz=8.9						
C11A	**Tepee Creek (N**	**9.63**	**102**	⇓P	**Pn**	**02 52 34.5**	**-0.6**
	baz=9.6,SNR=6.4						
C11A				⇓S	**Sn**	**02 54 24.2**	**+1.1**
	baz=9.6						
C11A	**Tepee Creek (N**	**9.63**	**102**	⇓P	**Pn**	**02 52 34.5**	**-0.6**
	baz=9.6,SNR=6.4						
C11A				⇓S	**Sn**	**02 54 24.2**	**+1.1**
	baz=9.6						
A12A	**Yaak River Ran**	**9.65**	**95**	⇓S	**Sn**	**02 54 24.2**	**+0.6**
	baz=9.6						
A12A	**Yaak River Ran**	**9.65**	**95**	⇓S	**Sn**	**02 54 24.2**	**+0.6**
	baz=9.6						
C12B	**Naegeli Ranch,**	**10.17**	**101**	⇓S	**Sn**	**02 54 37.3**	**+1.1**
	baz=10						
C12B	**Naegeli Ranch,**	**10.17**	**101**	⇓S	**Sn**	**02 54 37.3**	**+1.1**
	baz=10						
YBH	**Yreka Blue Hor**	**10.37**	**146**	Pn	**Pn**	**02 52 45.1**	**-0.1**
	0.0nm,0.3s,baz=329,slow=18,SNR=2.0						
YBH				LR	LR	02 55 57.9	
	comp=Z,135nm,20.9s,baz=330,slow=33						
A13A	**Flathead Natio**	**10.44**	**93**	⇓P	**Pn**	**02 52 45.9**	**-0.3**
	baz=10						
A13A	**Flathead Natio**	**10.44**	**93**	⇓P	**Pn**	**02 52 45.9**	**-0.3**
	baz=10						
D12A	**Red Ives Fores**	**10.51**	**104**	⇑S	**Sn**	**02 54 45.5**	**+0.9**
	baz=10						
D12A	**Red Ives Fores**	**10.51**	**104**	⇑S	**Sn**	**02 54 45.5**	**+0.9**
	baz=10						
C13A	**Hot Springs**	**10.74**	**100**	⇑P	**Pn**	**02 52 49.7**	**-0.6**
	baz=11						
C13A				⇓S	**Sn**	**02 54 50.4**	**+0.1**
	baz=11						
C13A	**Hot Springs**	**10.74**	**100**	⇑P	**Pn**	**02 52 49.7**	**-0.6**
	baz=11						
C13A				⇓S	**Sn**	**02 54 50.4**	**+0.1**
	baz=11						
D13A	**Huson**	**11.05**	**103**	⇓P	**Pn**	**02 52 53.7**	**-0.8**
	baz=11						
D13A	**Huson**	**11.05**	**103**	⇓P	**Pn**	**02 52 53.7**	**-0.8**
	baz=11						
A14A	**Double T Ranch**	**11.06**	**92**	⇑P	**Pn**	**02 52 54.6**	**-0.1**
	baz=11,SNR=5.4						
A14A	**Double T Ranch**	**11.06**	**92**	⇑P	**Pn**	**02 52 54.6**	**-0.1**
	baz=11,SNR=5.4						
F12A	**Elk City**	**11.19**	**110**	⇓P	**Pn**	**02 52 55.6**	**-0.9**
	baz=11,SNR=8.5						
F12A	**Elk City**	**11.19**	**110**	⇓P	**Pn**	**02 52 55.6**	**-0.9**
	baz=11,SNR=8.5						
C14A	**Swan Lake**	**11.23**	**98**	⇓P	**Pn**	**02 52 55.9**	**-1.1**
	baz=11						
C14A	**Swan Lake**	**11.23**	**98**	⇓P	**Pn**	**02 52 55.9**	**-1.1**
	baz=11						
B14A	**Marquette Ranc**	**11.33**	**95**	⇑P	**Pn**	**02 52 57.8**	**-0.6**
	baz=11						
B14A	**Marquette Ranc**	**11.33**	**95**	⇑P	**Pn**	**02 52 57.8**	**-0.6**
	baz=11						
MSO	**Missoula**	**11.48**	**103**	⇓P	**Pn**	**02 52 59.9**	**-0.5**
	baz=11						
MSO	**Missoula**	**11.48**	**103**	⇓P	**Pn**	**02 52 59.9**	**-0.5**
	baz=11						
G12A	**Big Creek, Yel**	**11.49**	**113**	⇑P	**Pn**	**02 52 59.3**	**-1.3**
	baz=11						
G12A	**Big Creek, Yel**	**11.49**	**113**	⇑P	**Pn**	**02 52 59.3**	**-1.3**
	baz=11						
E13A	**Victor**	**11.50**	**105**	⇑P	**Pn**	**02 52 59.8**	**-0.9**
	baz=11						
E13A	**Victor**	**11.50**	**105**	⇑P	**Pn**	**02 52 59.8**	**-0.9**
	baz=11						
D14A	**Greenough**	**11.64**	**101**	⇑P	**Pn**	**02 53 01.9**	**-0.8**
	baz=12,SNR=6.0						
D14A	**Greenough**	**11.64**	**101**	⇑P	**Pn**	**02 53 01.9**	**-0.8**
	baz=12,SNR=6.0						
F13A	**Darby**	**11.73**	**108**	⇑P	**Pn**	**02 53 02.7**	**-1.1**
	baz=12,SNR=16						
F13A	**Darby**	**11.73**	**108**	⇑P	**Pn**	**02 53 02.7**	**-1.1**
	baz=12,SNR=16						
B15A	**Bradely Ranch,**	**11.80**	**95**	⇑P	**Pn**	**02 53 04.1**	**-0.7**
	baz=12						
B15A	**Bradely Ranch,**	**11.80**	**95**	⇑P	**Pn**	**02 53 04.1**	**-0.7**
	baz=12						
E14A	**Clinton**	**11.94**	**104**	⇓P	**Pn**	**02 53 06.2**	**-0.6**
	baz=12						
E14A	**Clinton**	**11.94**	**104**	⇓P	**Pn**	**02 53 06.2**	**-0.6**
	baz=12						
C15A	**Salmond Ranch,**	**11.95**	**97**	⇓P	**Pn**	**02 53 06.3**	**-0.5**
	baz=12						
C15A	**Salmond Ranch,**	**11.95**	**97**	⇓P	**Pn**	**02 53 06.3**	**-0.5**
	baz=12						
H12A	**Diamond D Ranc**	**12.09**	**114**	⇑P	**Pn**	**02 53 08.3**	**-0.6**
	baz=12,SNR=7.3						
H12A	**Diamond D Ranc**	**12.09**	**114**	⇑P	**Pn**	**02 53 08.3**	**-0.6**
	baz=12,SNR=7.3						
G13A	**Cobalt**	**12.15**	**111**	⇓P	**Pn**	**02 53 08.8**	**-0.8**
	baz=12,SNR=11						
G13A	**Cobalt**	**12.15**	**111**	⇓P	**Pn**	**02 53 08.8**	**-0.8**
	baz=12,SNR=11						
D15A	**Lincoln**	**12.28**	**100**	⇑P	**Pn**	**02 53 10.8**	**-0.5**
	baz=12						
D15A	**Lincoln**	**12.28**	**100**	⇑P	**Pn**	**02 53 10.8**	**-0.5**
	baz=12						
H13A	**Challis**	**12.43**	**113**	P	**Pn**	**02 53 12.8**	**-0.7**
	baz=12,SNR=11						
H13A	**Challis**	**12.43**	**113**	P	**Pn**	**02 53 12.8**	**-0.7**
	baz=12,SNR=11						
E15A	**Deer Lodge**	**12.46**	**103**	⇑P	**Pn**	**02 53 13.5**	**-0.4**
	baz=12						
E15A	**Deer Lodge**	**12.46**	**103**	⇑P	**Pn**	**02 53 13.5**	**-0.4**
	baz=12						
C16A	**Fuhringer Ranc**	**12.48**	**96**	⇑P	**Pn**	**02 53 14.1**	**0.0**
	baz=12						
C16A	**Fuhringer Ranc**	**12.48**	**96**	⇑P	**Pn**	**02 53 14.1**	**0.0**
	baz=12						
A17A	**Triple J Farms**	**12.80**	**90**	⇑P	**Pn**	**02 53 19.1**	**+0.6**
	baz=13,SNR=8.5						
A17A	**Triple J Farms**	**12.80**	**90**	⇑P	**Pn**	**02 53 19.1**	**+0.6**
	baz=13,SNR=8.5						
F15A	**Butte**	**12.82**	**105**	⇓P	**Pn**	**02 53 18.2**	**-0.6**
	baz=13						
F15A	**Butte**	**12.82**	**105**	⇓P	**Pn**	**02 53 18.2**	**-0.6**
	baz=13						
D16A	**Dana Ranch, Ca**	**12.89**	**99**	⇑P	**Pn**	**02 53 19.2**	**-0.5**
	baz=13						
D16A	**Dana Ranch, Ca**	**12.89**	**99**	⇑P	**Pn**	**02 53 19.2**	**-0.5**
	baz=13						
I13A	**Wildhorse Cree**	**12.90**	**115**	⇓P	**Pn**	**02 53 19.3**	**-0.6**
	baz=13						
I13A	**Wildhorse Cree**	**12.90**	**115**	⇓P	**Pn**	**02 53 19.3**	**-0.6**
	baz=13						
H14A	**Leadore**	**12.93**	**111**	⇑P	**Pn**	**02 53 19.8**	**-0.5**
	baz=13						
H14A	**Leadore**	**12.93**	**111**	⇑P	**Pn**	**02 53 19.8**	**-0.5**
	baz=13						
HLID	**Hailey**	**12.94**	**117**	⇓P	**Pn**	**02 53 20.1**	**-0.4**
	baz=13						
HLID	**Hailey**	**12.94**	**117**	⇓P	**Pn**	**02 53 20.1**	**-0.4**
	baz=13						
C17A	**Wharram Farm,**	**13.16**	**96**	⇑P	**Pn**	**02 53 22.9**	**-0.4**
	baz=13,SNR=12						
C17A	**Wharram Farm,**	**13.16**	**96**	⇑P	**Pn**	**02 53 22.9**	**-0.4**
	baz=13,SNR=12						
D17A	**Six Diamond Ra**	**13.39**	**98**	⇑P	**Pn**	**02 53 26.1**	**-0.4**
	baz=13						
D17A	**Six Diamond Ra**	**13.39**	**98**	⇑P	**Pn**	**02 53 26.1**	**-0.4**
	baz=13						
BOZ	**Bozeman (W)**	**13.45**	**105**	⇑P	**Pn**	**02 53 26.8**	**-0.5**
	baz=13						
BOZ	**Bozeman (W)**	**13.45**	**105**	⇑P	**Pn**	**02 53 26.8**	**-0.5**
	baz=13						
G16A	**Moss Hill, Enn**	**13.54**	**106**	⇑P	**Pn**	**02 53 28.7**	**0.0**
	baz=14,SNR=10						
G16A	**Moss Hill, Enn**	**13.54**	**106**	⇑P	**Pn**	**02 53 28.7**	**0.0**
	baz=14,SNR=10						
E17A	**Martinsdale**	**13.56**	**100**	⇑P	**Pn**	**02 53 28.5**	**-0.4**
	baz=14						
E17A	**Martinsdale**	**13.56**	**100**	⇑P	**Pn**	**02 53 28.5**	**-0.4**
	baz=14						
J14A	**Carey**	**13.60**	**116**	⇑P	**Pn**	**02 53 29.5**	**0.0**
	baz=14						
J14A	**Carey**	**13.60**	**116**	⇑P	**Pn**	**02 53 29.5**	**0.0**
	baz=14						
EGMT	**Eagleton**	**13.67**	**93**	⇓P	**Pn**	**02 53 31.9**	**+1.6**
	baz=14						
EGMT	**Eagleton**	**13.67**	**93**	⇓P	**Pn**	**02 53 31.9**	**+1.6**
	baz=14						
I15A	**Monteview**	**13.80**	**112**	⇑P	**Pn**	**02 53 32.0**	**-0.1**
	baz=14						

I15A	Monteview	13.80	112	⇑P	Pn	02 53 32.0	-0.1	baz=14
F17A	Fitzpatrick Pl	13.93	102	⇓P	Pn	02 53 33.5	-0.4	baz=14
F17A	Fitzpatrick Pl	13.93	102	⇓P	Pn	02 53 33.5	-0.4	baz=14
D18A	Linhart Farms,	13.93	96	⇓P	Pn	02 53 33.5	-0.4	baz=14
D18A	Linhart Farms,	13.93	96	⇓P	Pn	02 53 33.5	-0.4	baz=14
H16A	Russell Place,	14.15	107	⇓P	Pn	02 53 36.7	-0.4	baz=14,SNR=7.2
H16A	Russell Place,	14.15	107	⇓P	Pn	02 53 36.7	-0.4	baz=14,SNR=7.2
J15A	Blackfoot	14.18	114	⇓P	Pn	02 53 37.9	+0.6	baz=14
J15A	Blackfoot	14.18	114	⇓P	Pn	02 53 37.9	+0.6	baz=14
C19A	Slack Wire Ran	14.21	94	⇑P	Pn	02 53 38.2	+0.4	baz=14
C19A	Slack Wire Ran	14.21	94	⇑P	Pn	02 53 38.2	+0.4	baz=14
K14A	Jones Ranch, D	14.29	118	⇑P	Pn	02 53 38.3	-0.6	baz=14
K14A	Jones Ranch, D	14.29	118	⇑P	Pn	02 53 38.3	-0.6	baz=14
ELK	Elko	14.45	128	LR	LR	02 59 02.3		comp=Z,105nm,18.9s,baz=310,slow=37
I16A	Newdale	14.46	111	⇓P	Pn	02 53 40.4	-0.8	baz=14
I16A	Newdale	14.46	111	⇓P	Pn	02 53 40.4	-0.8	baz=14
D19A	Cripps Ranch,	14.52	96	⇓P	Pn	02 53 41.6	-0.4	baz=14
D19A	Cripps Ranch,	14.52	96	⇓P	Pn	02 53 41.6	-0.4	baz=14
YKA	Yellowknife Ar	14.64	30	Pn	Pn	02 53 41.6	-1.7	0.2nm,0.3s,baz=220,slow=12,SNR=51
H17A	Grant Village	14.72	108	⇑P	Pn	02 53 44.3	-0.6	baz=15
H17A	Grant Village	14.72	108	⇑P	Pn	02 53 44.3	-0.6	baz=15
E19A	Rath Farm, Rou	14.86	98	⇓P	Pn	02 53 46.4	-0.1	baz=15,SNR=10
E19A	Rath Farm, Rou	14.86	98	⇓P	Pn	02 53 46.4	-0.1	baz=15,SNR=10
G18A	Lazy EL Ranch,	14.88	103	⇓P	Pn	02 53 46.7	-0.2	baz=15
G18A	Lazy EL Ranch,	14.88	103	⇓P	Pn	02 53 46.7	-0.2	baz=15
C20A	Veseth Ranch,	14.89	93	⇑P	Pn	02 53 46.3	-0.5	baz=15,SNR=8.4
C20A	Veseth Ranch,	14.89	93	⇑P	Pn	02 53 46.3	-0.5	baz=15,SNR=8.4
NVAR	Mina Array Bea	14.91	140	Pn	Pn	02 53 46.7	-0.7	0.1nm,0.3s,baz=59,slow=43,SNR=2.6
I17A	Pilgrim Ck.	14.98	109	⇑P	Pn	02 53 48.4	0.0	baz=15
I17A	Pilgrim Ck.	14.98	109	⇑P	Pn	02 53 48.4	0.0	baz=15
K16A	Soda Springs	15.02	114	⇑P	Pn	02 53 48.3	-0.5	baz=15
K16A	Soda Springs	15.02	114	⇑P	Pn	02 53 48.3	-0.5	baz=15
H18A	Shoshone NF, C	15.13	105	⇑P	Pn	02 53 50.7	+0.3	baz=15
H18A	Shoshone NF, C	15.13	105	⇑P	Pn	02 53 50.7	+0.3	baz=15
J17A	Brown Place, J	15.22	111	⇓P	Pn	02 53 51.0	-0.5	baz=15,SNR=7.1
J17A	Brown Place, J	15.22	111	⇓P	Pn	02 53 51.0	-0.5	baz=15,SNR=7.1
B21A	Ellsworth Farm	15.29	89	⇑P	Pn	02 53 52.5	+0.3	baz=15
B21A	Ellsworth Farm	15.29	89	⇑P	Pn	02 53 52.5	+0.3	baz=15
C21A	Desert Coulee	15.43	92	⇑P	Pn	02 53 55.0	+1.0	baz=15
C21A	Desert Coulee	15.43	92	⇑P	Pn	02 53 55.0	+1.0	baz=15
H19A	Powell	15.55	104	⇑P	Pn	02 53 56.1	+0.3	baz=16
H19A	Powell	15.55	104	⇑P	Pn	02 53 56.1	+0.3	baz=16
I18A	Diamond G Ranc	15.56	109	⇑P	Pn	02 53 55.4	-0.6	baz=16
I18A	Diamond G Ranc	15.56	109	⇑P	Pn	02 53 55.4	-0.6	baz=16
L16A	Fish Haven	15.62	116	⇓P	Pn	02 53 56.6	-0.1	baz=16,SNR=6.5
L16A	Fish Haven	15.62	116	⇓P	Pn	02 53 56.6	-0.1	baz=16,SNR=6.5
J18A	Kendall Valley	15.72	110	⇑P	Pn	02 53 58.8	+0.7	baz=16,SNR=10
J18A	Kendall Valley	15.72	110	⇑P	Pn	02 53 58.8	+0.7	baz=16,SNR=10
D21A	La Casta Ranch	15.76	94	⇓P	Pn	02 53 58.8	+0.4	baz=16,SNR=5.4
D21A	La Casta Ranch	15.76	94	⇓P	Pn	02 53 58.8	+0.4	baz=16,SNR=5.4
G20A	Bridger	15.77	102	⇓P	Pn	02 53 57.9	-0.6	baz=16
G20A	Bridger	15.77	102	⇓P	Pn	02 53 57.9	-0.6	baz=16
A22A	Carney Farms,	15.83	87	⇑P	Pn	02 53 59.2	-0.1	baz=16
A22A	Carney Farms,	15.83	87	⇑P	Pn	02 53 59.2	-0.1	baz=16
I19A	Meeteetse	15.88	106	⇑P	Pn	02 53 59.6	-0.5	baz=16,SNR=7.6
I19A	Meeteetse	15.88	106	⇑P	Pn	02 53 59.6	-0.5	baz=16,SNR=7.6
DUG	Dugway	16.11	124	⇓P	Pn	02 54 03.3	+0.3	baz=16,SNR=6.3
DUG	Dugway	16.11	124	⇓P	Pn	02 54 03.3	+0.3	baz=16,SNR=6.3
R11A	Troy Canyon, C	16.15	134	⇑P	Pn	02 54 03.5	-0.1	baz=16
R11A	Troy Canyon, C	16.15	134	⇑P	Pn	02 54 03.5	-0.1	baz=16
D22A	Cohagen	16.24	93	⇓P	Pn	02 54 05.3	+0.8	baz=16,SNR=9.4
D22A	Cohagen	16.24	93	⇓P	Pn	02 54 05.3	+0.8	baz=16,SNR=9.4
BW06	Boulder Array	16.25	111	⇓P	Pn	02 54 04.9	0.0	baz=16
BW06	Boulder Array	16.25	111	⇓P	Pn	02 54 04.9	0.0	baz=16
PDAR	Pinedale Array	16.25	111	Pn	Pn	02 54 05.6	+0.7	0.1nm,0.3s,baz=310,slow=9.4,SNR=36
PDAR				LR	LR	03 00 13.5		comp=Z,121nm,21.9s,baz=349,slow=37
J19A	Crowheart	16.27	109	⇓P	Pn	02 54 04.7	-0.3	baz=16
J19A	Crowheart	16.27	109	⇓P	Pn	02 54 04.7	-0.3	baz=16
M17A	Scullys Gap (B	16.41	116	⇑P	Pn	02 54 06.6	-0.3	baz=16
M17A	Scullys Gap (B	16.41	116	⇑P	Pn	02 54 06.6	-0.3	baz=16
I20A	Worland	16.45	105	⇓P	Pn	02 54 08.2	+0.8	baz=16,SNR=7.4
I20A	Worland	16.45	105	⇓P	Pn	02 54 08.2	+0.8	baz=16,SNR=7.4
C23A	Lambert	16.65	90	⇑P	Pn	02 54 10.3	+0.5	baz=17
C23A	Lambert	16.65	90	⇑P	Pn	02 54 10.3	+0.5	baz=17
L19A	Farson	16.77	113	⇓P	Pn	02 54 11.6	+0.2	baz=17
L19A	Farson	16.77	113	⇓P	Pn	02 54 11.6	+0.2	baz=17
J20A	Shoshoni	16.80	107	⇑P	Pn	02 54 12.2	+0.4	baz=17
J20A	Shoshoni	16.80	107	⇑P	Pn	02 54 12.2	+0.4	baz=17
D23A	Lindsay	16.85	92	⇓P	Pn	02 54 12.6	+0.3	baz=17,SNR=11
D23A	Lindsay	16.85	92	⇓P	Pn	02 54 12.6	+0.3	baz=17,SNR=11
I21A	Big Trails, Te	17.04	105	⇓P	Pn	02 54 14.9	+0.1	baz=17
I21A	Big Trails, Te	17.04	105	⇓P	Pn	02 54 14.9	+0.1	baz=17
A24A	Westby	17.07	86	⇓P	Pn	02 54 15.1	+0.1	baz=17
A24A	Westby	17.07	86	⇓P	Pn	02 54 15.1	+0.1	baz=17
J21A	Lysite	17.20	106	⇓P	Pn	02 54 17.1	+0.3	baz=17
J21A	Lysite	17.20	106	⇓P	Pn	02 54 17.1	+0.3	baz=17
C24A	Savage	17.23	90	⇑P	Pn	02 54 16.9	-0.1	baz=17,SNR=7.7
C24A	Savage	17.23	90	⇑P	Pn	02 54 16.9	-0.1	baz=17,SNR=7.7
D24A	Glendive	17.43	92	⇑P	Pn	02 54 19.9	+0.3	baz=17
D24A	Glendive	17.43	92	⇑P	Pn	02 54 19.9	+0.3	baz=17
I22A	9 Mile Ranch,	17.50	104	⇑P	Pn	02 54 20.9	+0.4	baz=17
I22A	9 Mile Ranch,	17.50	104	⇑P	Pn	02 54 20.9	+0.4	baz=17
G23A	Biddle	17.54	98	⇓P	Pn	02 54 21.2	+0.2	baz=18
G23A	Biddle	17.54	98	⇓P	Pn	02 54 21.2	+0.2	baz=18
E24A	Baker	17.66	93	⇓P	Pn	02 54 22.8	+0.4	baz=18
E24A	Baker	17.66	93	⇓P	Pn	02 54 22.8	+0.4	baz=18
K21A	Alcova	17.71	108	⇑P	Pn	02 54 22.9	-0.4	baz=18
K21A	Alcova	17.71	108	⇑P	Pn	02 54 22.9	-0.4	baz=18
J22A	Midwest	17.75	105	⇑P	Pn	02 54 23.8	+0.1	baz=18
J22A	Midwest	17.75	105	⇑P	Pn	02 54 23.8	+0.1	baz=18
INK	Inuvik	17.78	356	P	Pn	02 54 24.3	+0.7	0.0nm,0.3s,baz=174,slow=9.8,SNR=7.3
INK				LR	LR	03 01 38.7		comp=Z,127nm,20.9s,baz=126,slow=38
F24A	Ekalaka	17.86	96	⇑P	Pn	02 54 24.7	-0.2	baz=18
F24A	Ekalaka	17.86	96	⇑P	Pn	02 54 24.7	-0.2	baz=18
P18A	Preston Nutter	17.89	120	⇑P	Pn	02 54 25.2	-0.4	baz=18
P18A	Preston Nutter	17.89	120	⇑P	Pn	02 54 25.2	-0.4	baz=18
L21A	Rawlins	18.03	110	⇑P	Pn	02 54 26.9	-0.3	baz=18
L21A	Rawlins	18.03	110	⇑P	Pn	02 54 26.9	-0.3	baz=18
O19A	Miners Draw (B	18.06	117	⇓P	Pn	02 54 27.2	-0.4	baz=18,SNR=7.0
O19A	Miners Draw (B	18.06	117	⇓P	Pn	02 54 27.2	-0.4	baz=18,SNR=7.0
H24A	Dirks Ranch, A	18.28	99	⇑P	Pn	02 54 29.0	-1.1	baz=18,SNR=6.3
H24A	Dirks Ranch, A	18.28	99	⇑P	Pn	02 54 29.0	-1.1	baz=18,SNR=6.3
O20A	White River Ci	18.67	116	⇓P	P	02 54 34.5	-0.2	baz=19
O20A	White River Ci	18.67	116	⇓P	P	02 54 34.5	-0.2	baz=19
M22A	Cedar Creek Ra	18.83	110	⇓P	P	02 54 36.3	-0.1	baz=19
M22A	Cedar Creek Ra	18.83	110	⇓P	P	02 54 36.3	-0.1	baz=19
L23A	Garrett	18.95	107	⇓P	P	02 54 37.4	-0.3	baz=19
L23A	Garrett	18.95	107	⇓P	P	02 54 37.4	-0.3	baz=19
U15A	North Rim	19.25	131	⇑P	P	02 54 40.8	-0.2	baz=19
U15A	North Rim	19.25	131	⇑P	P	02 54 40.8	-0.2	baz=19
M23A	Laramie	19.32	109	⇑P	Pn	02 54 42.6	-0.2	baz=19
M23A	Laramie	19.32	109	⇑P	Pn	02 54 42.6	-0.2	baz=19
S18A	Hurst Farm, Bl	19.43	124	⇑P	P	02 54 42.8	-0.2	baz=19
S18A	Hurst Farm, Bl	19.43	124	⇑P	P	02 54 42.8	-0.2	baz=19
Q20A	Ridgley Place,	19.45	118	⇑P	P	02 54 42.4	-0.7	baz=19
Q20A	Ridgley Place,	19.45	118	⇑P	P	02 54 42.4	-0.7	baz=19
L24A	Wheatland	19.46	106	⇑P	P	02 54 42.8	-0.4	baz=19
L24A	Wheatland	19.46	106	⇑P	P	02 54 42.8	-0.4	baz=19
N23A	Red Feather La	19.53	111	⇓P	P	02 54 44.0	-0.2	baz=19
N23A	Red Feather La	19.53	111	⇓P	P	02 54 44.0	-0.2	baz=19
P21A	Newcastle	19.54	116	⇑P	P	02 54 43.8	-0.3	baz=19
P21A	Newcastle	19.54	116	⇑P	P	02 54 43.8	-0.3	baz=19
MURC	Murrieta	19.58	146	⇑P	P	02 54 45.1	+0.7	baz=19
MURC	Murrieta	19.58	146	⇑P	P	02 54 45.1	+0.7	baz=19
W13A	Hualapai Mount	19.60	136	⇓P	P	02 54 44.1	-0.8	baz=20
W13A	Hualapai Mount	19.60	136	⇓P	P	02 54 44.1	-0.8	baz=20
O22A	Kremmling	19.64	113	⇑P	P	02 54 44.0	-1.3	baz=20
O22A	Kremmling	19.64	113	⇑P	P	02 54 44.0	-1.3	baz=20
K25A	Mack Ranch, Ha	19.80	104	⇑P	P	02 54 46.7	-0.1	baz=20
K25A	Mack Ranch, Ha	19.80	104	⇑P	P	02 54 46.7	-0.1	baz=20
P22A	Eagle	19.89	115	⇑P	P	02 54 48.0	0.0	baz=20
P22A	Eagle	19.89	115	⇑P	P	02 54 48.0	0.0	baz=20
R20A	Redvale	19.94	120	⇑P	P	02 54 48.4	-0.2	baz=20
R20A	Redvale	19.94	120	⇑P	P	02 54 48.4	-0.2	baz=20
PDMCI	Parker Dam,Lak	20.17	138	⇑P	P	02 54 50.8	0.0	baz=20
PDMCI	Parker Dam,Lak	20.17	138	⇑P	P	02 54 50.8	0.0	baz=20
MDND	Maddock	20.18	86	⇓P	P	02 54 51.1	+0.2	baz=20
MDND	Maddock	20.18	86	⇓P	P	02 54 51.1	+0.2	baz=20
S20A	Disappointment	20.21	121	⇑P	P	02 54 52.4	+0.9	baz=20,SNR=6.6
S20A	Disappointment	20.21	121	⇑P	P	02 54 52.4	+0.9	baz=20,SNR=6.6
109C	Camp Elliot, M	20.25	146	⇓P	P	02 54 52.1	+0.4	baz=20
109C	Camp Elliot, M	20.25	146	⇓P	P	02 54 52.1	+0.4	baz=20
Q22A	Crested Butte,	20.29	116	⇑P	P	02 54 52.2	-0.3	baz=20
Q22A	Crested Butte,	20.29	116	⇑P	P	02 54 52.2	-0.3	baz=20
MONP	Monument Peak	20.50	145	⇑P	P	02 54 54.4	-0.2	baz=20
MONP	Monument Peak	20.50	145	⇑P	P	02 54 54.4	-0.2	baz=20
MVCO	Mesa Verde	20.59	122	⇓P	P	02 54 55.2	-0.4	baz=20
MVCO	Mesa Verde	20.59	122	⇓P	P	02 54 55.2	-0.4	baz=20
Y14A	Wickenburg	20.97	136	⇑P	P	02 55 00.5	+0.9	baz=21
Y14A	Wickenburg	20.97	136	⇑P	P	02 55 00.5	+0.9	baz=21
S22A	4UR Ranch, Cre	21.11	119	⇑P	P	02 55 02.3	+1.0	baz=21
S22A	4UR Ranch, Cre	21.11	119	⇑P	P	02 55 02.3	+1.0	baz=21
X16A	Lo Mia Camp, P	21.28	132	⇓P	P	02 55 04.2	+1.1	baz=21
X16A	Lo Mia Camp, P	21.28	132	⇓P	P	02 55 04.2	+1.1	baz=21
R23A	Moffat	21.37	116	⇓P	P	02 55 05.6	+1.5	baz=21
R23A	Moffat	21.37	116	⇓P	P	02 55 05.6	+1.5	baz=21
P25A	Willow Gulch B	21.46	111	⇓P	P	02 55 05.1	+0.2	baz=21
P25A	Willow Gulch B	21.46	111	⇓P	P	02 55 05.1	+0.2	baz=21
U21A	Nageezi	21.62	122	⇑P	P	02 55 07.0	+0.3	baz=22
U21A	Nageezi	21.62	122	⇑P	P	02 55 07.0	+0.3	baz=22
V20A	Brimhall	21.66	125	⇑P	P	02 55 08.4	+1.2	baz=22
V20A	Brimhall	21.66	125	⇑P	P	02 55 08.4	+1.2	baz=22
Q25A	Bedland, Calha	21.80	113	⇑P	P	02 55 09.3	+0.6	baz=22
Q25A	Bedland, Calha	21.80	113	⇑P	P	02 55 09.3	+0.6	baz=22
ULM	Lac du Bonnet	21.83	78	LR	LR	03 04 05.6		comp=Z,90nm,20.4s,baz=5.6,slow=38
X18A	Snowflake	21.91	130	⇑P	P	02 55 10.9	+1.1	baz=22
X18A	Snowflake	21.91	130	⇑P	P	02 55 10.9	+1.1	baz=22
P26A	Davis Ranch, A	21.92	110	⇑P	P	02 55 09.9	0.0	baz=22
P26A	Davis Ranch, A	21.92	110	⇑P	P	02 55 09.9	0.0	baz=22
S24A	Houchin Ranch,	22.10	116	⇑P	P	02 55 13.3	+1.4	baz=22
S24A	Houchin Ranch,	22.10	116	⇑P	P	02 55 13.3	+1.4	baz=22
W20A	Ramah	22.17	126	⇑P	P	02 55 13.3	+0.7	baz=22,SNR=11
W20A	Ramah	22.17	126	⇑P	P	02 55 13.3	+0.7	baz=22,SNR=11
R25A	Fountain Ranch	22.29	114	⇓P	P	02 55 13.7	-0.1	baz=22
R25A	Fountain Ranch	22.29	114	⇓P	P	02 55 13.7	-0.1	baz=22
V22A	San Miguel Ran	22.40	122	⇓P	P	02 55 15.7	+0.5	baz=22
V22A	San Miguel Ran	22.40	122	⇓P	P	02 55 15.7	+0.5	baz=22
U23A	El Rito	22.49	120	⇑P	P	02 55 16.3	+0.3	baz=22
U23A	El Rito	22.49	120	⇑P	P	02 55 16.3	+0.3	baz=22
S25A	Robets Cordova	22.53	115	⇑P	P	02 55 16.4	-0.1	baz=22
S25A	Robets Cordova	22.53	115	⇑P	P	02 55 16.4	-0.1	baz=22
T24A	Torres, Weston	22.59	117	⇑P	P	02 55 17.8	+0.6	baz=22
T24A	Torres, Weston	22.59	117	⇑P	P	02 55 17.8	+0.6	baz=22
R26A	Arlington	22.68	113	⇑P	P	02 55 18.1	+0.2	baz=23
R26A	Arlington	22.68	113	⇑P	P	02 55 18.1	+0.2	baz=23
KSCO	Kaye Shedlock'	22.70	110	⇓P	P	02 55 19.1	+1.0	baz=23
KSCO	Kaye Shedlock'	22.70	110	⇓P	P	02 55 19.1	+1.0	baz=23
214A	Organ Pipe Nat	22.75	139	⇓P	P	02 55 19.1	+0.5	baz=23
214A	Organ Pipe Nat	22.75	139	⇓P	P	02 55 19.1	+0.5	baz=23
X21A	Alamocita Cree	23.06	126	⇓P	P	02 55 22.6	+0.5	baz=23
X21A	Alamocita Cree	23.06	126	⇓P	P	02 55 22.6	+0.5	baz=23
S26A	Kim	23.12	114	⇓P	P	02 55 22.3	-0.2	baz=23
S26A	Kim	23.12	114	⇓P	P	02 55 22.3	-0.2	baz=23
ANMO	Albuquerque	23.38	123	P	P	02 55 25.1	-0.1	2.0nm,1.0s,baz=324,slow=12,SNR=5.5
ANMO				LR	LR	03 04 11.8		comp=Z,104nm,19.2s,baz=336,slow=36
W23A	Werner Place,	23.38	122	⇓P	P	02 55 25.3	0.0	baz=23
W23A	Werner Place,	23.38	122	⇓P	P	02 55 25.3	0.0	baz=23
X22A	Bernardo	23.42	125	⇓P	P	02 55 26.2	+0.6	baz=23
X22A	Bernardo	23.42	125	⇓P	P	02 55 26.2	+0.6	baz=23
U25A	Circle Dot Ran	23.43	117	⇑P	P	02 55 26.3	+0.5	baz=23
U25A	Circle Dot Ran	23.43	117	⇑P	P	02 55 26.3	+0.5	baz=23
V24A	Rampart Ranch,	23.44	120	⇑P	P	02 55 26.9	+1.0	baz=23,SNR=6.1
V24A	Rampart Ranch,	23.44	120	⇑P	P	02 55 26.9	+1.0	baz=23,SNR=6.1
Y21A	Point of Rocks	23.46	126	⇑P	P	02 55 26.4	+0.3	baz=23
Y21A	Point of Rocks	23.46	126	⇑P	P	02 55 26.4	+0.3	baz=23
Z20A	Nine Sixteen R	23.71	129	⇑P	P	02 55 29.0	+0.5	baz=24
Z20A	Nine Sixteen R	23.71	129	⇑P	P	02 55 29.0	+0.5	baz=24
V25A	Rancho No Teng	23.72	119	⇓P	P	02 55 29.1	+0.5	baz=24
V25A	Rancho No Teng	23.72	119	⇓P	P	02 55 29.1	+0.5	baz=24
W24A	Lazy 6 Ranch,	23.74	121	⇑P	P	02 55 29.2	+0.3	baz=24,SNR=7.1
W24A	Lazy 6 Ranch,	23.74	121	⇑P	P	02 55 29.2	+0.3	baz=24,SNR=7.1
X23A	Hourglass Bar	23.80	123	⇓P	P	02 55 29.4	0.0	baz=24
X23A	Hourglass Bar	23.80	123	⇓P	P	02 55 29.4	0.0	baz=24
U26A	Atchley Ranch,	23.81	117	⇓P	P	02 55 30.1	+0.6	baz=24
U26A	Atchley Ranch,	23.81	117	⇓P	P	02 55 30.1	+0.6	baz=24
T27A	Campo	23.94	114	⇓P	P	02 55 30.8	+0.2	baz=24
T27A	Campo	23.94	114	⇓P	P	02 55 30.8	+0.2	baz=24
R29A	Marienthal	23.97	109	⇓P	P	02 55 31.3	+0.5	baz=24
R29A	Marienthal	23.97	109	⇓P	P	02 55 31.3	+0.5	baz=24
S28A	Manter	24.06	112	⇑P	P	02 55 31.9	+0.2	baz=24
S28A	Manter	24.06	112	⇑P	P	02 55 31.9	+0.2	baz=24
V26A	Tequesquite Ra	24.21	118	⇑P	P	02 55 33.7	+0.6	baz=24,SNR=9.5
V26A	Tequesquite Ra	24.21	118	⇑P	P	02 55 33.7	+0.6	baz=24,SNR=9.5
T28A	Walsh	24.25	113	⇑P	P	02 55 34.1	+0.6	baz=24
T28A	Walsh	24.25	113	⇑P	P	02 55 34.1	+0.6	baz=24
W25A	X Bar L Ranch,	24.26	120	P	P	02 55 34.3	+0.7	baz=24,SNR=5.6
W25A	X Bar L Ranch,	24.26	120	P	P	02 55 34.3	+0.7	baz=24,SNR=5.6
U27A	Thompson Grove	24.32	115	⇓P	P	02 55 34.7	+0.6	baz=24
U27A	Thompson Grove	24.32	115	⇓P	P	02 55 34.7	+0.6	baz=24
Y23A	Lovelace Mesa,	24.36	124	⇓P	P	02 55 34.7	+0.1	baz=24
Y23A	Lovelace Mesa,	24.36	124	⇓P	P	02 55 34.7	+0.1	baz=24
Z22A	Elephant Butte	24.42	126	⇓P	P	02 55 35.2	+0.1	baz=24
Z22A	Elephant Butte	24.42	126	⇓P	P	02 55 35.2	+0.1	baz=24
R30A	Dighton	24.57	109	⇑P	P	02 55 37.2	+0.8	baz=24
R30A	Dighton	24.57	109	⇑P	P	02 55 37.2	+0.8	baz=24
Y24A	Capitan	24.70	123	P	P	02 55 38.9	+1.2	baz=25,SNR=6.3
Y24A	Capitan	24.70	123	P	P	02 55 38.9	+1.2	baz=25,SNR=6.3
220A	Playas Peak, P	24.73	131	⇑P	P	02 55 38.9	+0.9	baz=25
220A	Playas Peak, P	24.73	131	⇑P	P	02 55 38.9	+0.9	baz=25
Z23A	Rita Site, Whi	24.79	125	⇑P	P	02 55 39.3	+0.8	baz=25
Z23A	Rita Site, Whi	24.79	125	⇑P	P	02 55 39.3	+0.8	baz=25
Y25A	Mesa, Roswell	25.10	122	⇑P	P	02 55 42.3	+1.1	baz=25

Y25A	Mesa, Roswell	25.10	122	⇑P	P	02 55 42.3	+1.1
	baz=25						
W27A	Bowe Ranch, En	25.15	118	⇓P	P	02 55 42.0	+0.3
	baz=25						
W27A	Bowe Ranch, En	25.15	118	⇓P	P	02 55 42.0	+0.3
	baz=25						
X28A	Dimmitt	26.04	117	⇓P	P	02 55 50.2	+0.5
	baz=26						
X28A	Dimmitt	26.04	117	⇓P	P	02 55 50.2	+0.5
	baz=26						
AMTX	Amarillo	26.06	116	⇓P	P	02 55 50.4	+0.5
	baz=26						
AMTX	Amarillo	26.06	116	⇓P	P	02 55 50.4	+0.5
	baz=26						
125A	Gardner Draw,	26.09	124	⇓P	P	02 55 50.3	+0.2
	baz=26						
125A	Gardner Draw,	26.09	124	⇓P	P	02 55 50.3	+0.2
	baz=26						
Z27A	Tatum	26.36	121	⇓P	P	02 55 52.9	+0.3
	baz=26						
Z27A	Tatum	26.36	121	⇓P	P	02 55 52.9	+0.3
	baz=26						
126A	Clayton Basin,	26.44	123	⇓P	P	02 55 54.2	+0.9
	baz=26						
126A	Clayton Basin,	26.44	123	⇓P	P	02 55 54.2	+0.9
	baz=26						
324A	Moseley Ranch,	26.62	127	⇓P	P	02 55 55.7	+0.7
	baz=26						
324A	Moseley Ranch,	26.62	127	⇓P	P	02 55 55.7	+0.7
	baz=26						
226B	Tecolote Peak,	26.80	124	⇓P	P	02 55 56.7	+0.2
	baz=27						
226B	Tecolote Peak,	26.80	124	⇓P	P	02 55 56.7	+0.2
	baz=27						
Y29A	Porterfield Fa	26.81	118	⇑P	P	02 55 56.8	+0.1
	baz=27						
Y29A	Porterfield Fa	26.81	118	⇑P	P	02 55 56.8	+0.1
	baz=27						
325A	Bean Ranch, Si	26.94	126	⇓P	P	02 55 58.4	+0.5
	baz=27						
325A	Bean Ranch, Si	26.94	126	⇓P	P	02 55 58.4	+0.5
	baz=27						
425A	Indio Mountain	27.40	127	⇓P	P	02 56 03.4	+1.4
	baz=27						
425A	Indio Mountain	27.40	127	⇓P	P	02 56 03.4	+1.4
	baz=27						
326A	Caldwell Ranch	27.50	125	⇑P	P	02 56 03.6	+0.8
	baz=27						
326A	Caldwell Ranch	27.50	125	⇑P	P	02 56 03.6	+0.8
	baz=27						
Y31A	Rekieta Farm,	27.54	116	⇑P	P	02 56 03.4	+0.3
	baz=27						
Y31A	Rekieta Farm,	27.54	116	⇑P	P	02 56 03.4	+0.3
	baz=27						
426A	McDonald Obser	27.98	126	⇑P	P	02 56 08.1	+0.7
	baz=28						
426A	McDonald Obser	27.98	126	⇑P	P	02 56 08.1	+0.7
	baz=28						
Y32A	R-V Farms, Ver	27.98	115	⇓P	P	02 56 07.3	+0.2
	baz=28						
Y32A	R-V Farms, Ver	27.98	115	⇓P	P	02 56 07.3	+0.2
	baz=28						
328A	Wristen Ranch,	28.06	123	⇑P	P	02 56 08.4	+0.5
	baz=28						
328A	Wristen Ranch,	28.06	123	⇑P	P	02 56 08.4	+0.5
	baz=28						
Z31A	Sharp Cattle R	28.07	117	⇓P	P	02 56 08.2	+0.2
	baz=28						
Z31A	Sharp Cattle R	28.07	117	⇓P	P	02 56 08.2	+0.2
	baz=28						
RES	Resolute Bay	28.20	19	P	P	02 56 08.1	-0.5
	0.7nm,0.7s,baz=224,slow=8.1,SNR=8.0						
RES				LR	LR	03 07 41.0	
	comp=Z,138nm,18.1s,baz=196,slow=37						
131A	Roby	28.41	118	⇑P	P	02 56 11.2	+0.2
	baz=28						
131A	Roby	28.41	118	⇑P	P	02 56 11.2	+0.2
	baz=28						
526A	Mary Lane Ranc	28.44	126	⇑P	P	02 56 11.5	+0.2
	baz=28						
526A	Mary Lane Ranc	28.44	126	⇑P	P	02 56 11.5	+0.2
	baz=28						
Z32A	Haskell	28.46	116	⇓P	P	02 56 11.9	+0.5
	baz=28						
Z32A	Haskell	28.46	116	⇓P	P	02 56 11.9	+0.5
	baz=28						
527A	Woodward Ranch	28.61	126	⇓P	P	02 56 14.1	+1.2
	baz=28						
527A	Woodward Ranch	28.61	126	⇓P	P	02 56 14.1	+1.2
	baz=28						
TUL1	Tulsa	28.84	107	⇑P	P	02 56 14.8	+0.1
	baz=29						
TUL1	Tulsa	28.84	107	⇑P	P	02 56 14.8	+0.1
	baz=29						
TXAR	Lajitas Array	29.24	127	P	P	02 56 18.5	+0.2
	1.5nm,1.0s,baz=332,slow=7.1,SNR=11						
TXAR				LR	LR	03 08 51.3	
	comp=Z,63nm,19.9s,baz=185,slow=38						
529A	Stev Forest Ra	29.36	124	⇑P	P	02 56 19.8	+0.4
	baz=29						
529A	Stev Forest Ra	29.36	124	⇑P	P	02 56 19.8	+0.4
	baz=29						
332A	Millersview	29.74	119	⇓P	P	02 56 23.3	+0.5
	baz=30						
332A	Millersview	29.74	119	⇓P	P	02 56 23.3	+0.5
	baz=30						
PETK	Petropavlovsk-	42.77	302	LR	LR	03 12 28.5	
	comp=Z,46nm,21.4s,baz=38,slow=31						
ARCES	ARCESS Array B	58.82	10	LR	LR	03 24 18.9	
	comp=Z,120nm,21.9s,baz=145,slow=35						
FINES	FINESS Array B	66.67	12	LR	LR	03 33 12.1	
	comp=Z,188nm,21.4s,baz=270,slow=39						
SONM	Songino Array	70.45	323	LR	LR	03 35 08.4	
	comp=Z,66nm,19.0s,baz=144,slow=38						
MKAR	Makanchi Array	78.93	338	P	P	03 02 23.6	+3.9
	0.4nm,0.6s,baz=32,slow=3.4,SNR=4.5						

*AUST **03** 02:50:28.0, 18°.95S×177°.34W, h200km*

IDC 03 02:50:51.8±59.0**, 18°.92S×176°.42E, h0**km**, mb4.5**/3**, mb1 4.6**/3**, mb1mx3.8**/17**, mbtmp4.5**/3**, Error ellipse: s-maj=1039.0km s-min=127.9km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHI	Lord Howe Isla	20.07	228	S	Sn	02 59 35.6	+21
	baz=25,SNR=3.1						
CMSA	Cobar Meteorol	30.40	240	P	P	02 57 07.8	+1.9
	baz=36,SNR=9.6						
QLP	Quilpie	30.59	250	P	P	02 57 12.4	+4.8
	baz=36,SNR=5.8						
TOO	Toolangi	32.77	229	P	P	02 57 22.8	-3.9
	baz=37,SNR=5.0						
STKA	Stephens Creek	33.85	241	P	P	02 57 36.8	+0.5
	2.4nm,0.5s,baz=94,slow=8.6,SNR=14						
STKA	Stephens Creek	33.85	241	P	P	02 57 36.6	+0.4
	baz=39,SNR=9.6						
JAY	Jayapura	38.57	291	S	S	03 04 35.1	+21
	baz=44,SNR=4.0						
BBOO	Buckleboo	38.63	241	P	P	02 58 13.6	-3.5
	baz=44,SNR=14						
WRA	Warramunga Arr	39.63	261	P	P	02 58 25.4	-0.2
	3.0nm,0.4s,baz=97,slow=8.0,SNR=33						
ASAR	Alice Springs	39.79	256	P	P	02 58 26.4	-0.6
	4.5nm,0.5s,baz=89,slow=8.0,SNR=77						
MTN	Manton Dam	43.89	271	P	P	02 59 04.3	+3.8
	baz=50,SNR=3.4						
FITZ	Fitzroy Crossi	48.03	262	P	P	02 59 27.7	-5.5
	baz=54,SNR=3.3						
MEEK	Meekatharra	53.48	250	P	P	03 00 02.5	-12
	baz=59,SNR=3.2						

*MOS **03** 02:59:20.9±2.3, 49°.88N×156°.98E, h5km, mb4.3/1, Error ellipse: s-maj=59.6km s-min=18.8km az=87.1*
*KRSC **03** 02:59:20.9±1.0, 49°.88N×156°.98E, h5km±5km, ML4.2*

ISC 03 02:59:18.5±3.0**, 49°.8N**±0°.1×**156°.77E**±0°.08**, h2**km±12km**, n21, σ1.s89**/33**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.97	335	*e*PN	Pg	02 59 35.6	-1.4
SKR				*i* S	Sg	02 59 51.0	+1.4
SKR				pmax	pmax		
	comp=Z,90nm,0.3s						
SKR				smax	smax		
	comp=N,2μm,0.3s						
SKR				smax	smax		
	comp=E,2μm,0.3s						
SKR	Severo-Kuril's	0.97	335	*e*P	Pn	02 59 40.1	+1.0
SKR				*e*S	Sn	02 59 54.8	+1.5
PAU	Pauzhetka	1.66	1	PN	Pg	02 59 51.2	+1.0
PAU				S	Sg	03 00 13.4	+1.7
PAU	Pauzhetka	1.66	1	*e*P	Pg	02 59 51.2	+1.0
PAU				*e*S	Sg	03 00 13.4	+1.7
MIPR	Malaya Ipel'ka	2.47	360	P	Pb	03 00 02.1	-1.4
MIPR				S	Sb	03 00 32.4	-1.9
ASAK	Asacha	2.67	15	P	Pb	03 00 05.1	-1.9
ASAK				S	Sb	03 00 37.1	-3.2
MTVR	Mutnovka	2.82	18	*e*P	Pb	03 00 07.2	-2.4
MTVR				*e*S	Sb	03 00 41.2	-3.4
RUS	Russkaya	2.84	22	PN	Pn	03 00 06.6	+1.7
RUS				S	Sn	03 00 40.2	+0.6
RUS	Russkaya	2.84	22	*e*P	Pn	03 00 06.6	+1.7
RUS				*e*S	Sn	03 00 40.2	+0.6
GRL	Gorelyy	2.86	16	P	Pb	03 00 07.9	-2.4
GRL				S	Sn	03 00 41.5	+1.2
APC	Apacha	3.12	4	S	Sn	03 00 48.1	+1.5
UGLR	Uglovaya	3.63	20	P	Pn	03 00 18.1	+2.3
AVH	Avacha	3.67	19	P	Pn	03 00 18.2	+1.9
KOK	Koryaka	3.67	18	P	Pn	03 00 18.9	+2.5
KRER	Koryakskii	3.71	19	P	Pn	03 00 18.2	+1.3
SDLR	Sedlovina	3.71	20	P	Pn	03 00 18.1	+1.2
SPN	Mys Shipunski	3.87	30	PN	Pn	03 00 21.2	+2.3
SPN				S	Sn	03 01 05.6	+0.7
SPN	Mys Shipunski	3.87	30	P	Pn	03 00 21.2	+2.3
SPN				S	Sn	03 01 05.6	+0.7
GNL	Ganaly	3.96	10	P	Pn	03 00 22.4	+2.1
MKZ	Mys Kozlova	5.64	31	PN	Pn	03 00 44.1	+0.8
MKZ	Mys Kozlova	5.64	31	P	Pn	03 00 44.1	+0.8

*AUST **03** 03:04:03.8, 11°.49S×118°.43E, h60km*
*IDC **03** 03:04:11.8±4.1, 11°.38S×119°.16E, h75km±38km, mb3.3/1, mb1 3.4/4, mb1mx3.2/20, mbtmp3.3/4, ML3.5/3, Error ellipse: s-maj=113.6km s-min=15.3km az=47.0*

ISC 03 03:04:06.8±1.2**, 11°.43S**±0°.09×**118°.76E**±0°.09**, h35**km**, n16, σ2.s76**/15**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGM	Wanagama	8.84	293	P	Pn	03 06 03.4	-8.8
	baz=8.6,SNR=4.8						
UGM				S	Sn	03 07 30.9	-20
	baz=8.6,SNR=5.5						
FITZ	Fitzroy Crossi	9.39	136	P	Pn	03 06 21.9	+2.2
	0.7nm,0.3s,baz=309,slow=14,SNR=16						
FITZ	Fitzroy Crossi	9.39	136	P	Pn	03 06 22.2	+2.4
	baz=9.6,SNR=8.7						
FITZ				S	Sn	03 08 08.2	+3.9
	baz=9.6,SNR=4.1						
PCI	Palu	10.51	6	S	Sn	03 08 13.3	-18
	baz=11,SNR=4.4						
GIRL	Giralia	11.96	201	P	Pn	03 06 52.2	-2.6
	baz=12,SNR=8.6						
GIRL				S	Sn	03 08 52.6	-14
	baz=12,SNR=4.5						
MTN	Manton Dam	12.19	98	P	Pn	03 07 00.1	+2.1
	baz=12,SNR=3.5						
MTN				S	Sn	03 09 12.9	+0.2
	baz=12,SNR=3.5						
MEEK	Meekatharra	15.13	180	P	Pn	03 07 36.8	-1.2
	baz=15,SNR=8.9						
MEEK				S	Sn	03 10 09.7	-15
	baz=15,SNR=10						
FAKI	Fak Fak	15.83	59	P	Pn	03 07 48.1	+0.9
	baz=16,SNR=4.0						
FAKI				S	Sn	03 10 37.8	-3.8
	baz=16,SNR=4.2						
WRA	Warramunga Arr	17.21	121	P	Pn	03 08 04.9	+0.2
	0.2nm,0.3s,baz=296,slow=13,SNR=4.1						
WRA				S	Sn	03 11 10.7	-4.5
	baz=295,slow=24,SNR=2.8						
MORW	Morawa	17.73	188	P	Pn	03 08 09.6	-1.4
	baz=18,SNR=4.2						
MORW				S	Sn	03 11 10.0	-18
	baz=18,SNR=5.5						
ASAR	Alice Springs	18.86	132	P	Pn	03 08 24.8	-0.1
	0.1nm,0.3s,baz=311,slow=12,SNR=4.8						
ASAR				S	Sn	03 11 51.4	-3.7
	0.1nm,0.3s,baz=309,slow=23,SNR=3.3						
BLDU	Ballidu	19.18	185	S	Sn	03 11 45.0	-18
	baz=19,SNR=5.4						
KLBR	Kellerberrin	20.08	182	S	S	03 12 10.3	-11
	baz=20,SNR=5.0						
GSI	Gunungsitoli	24.56	300	S	S	03 14 00.2	+18
	baz=24,SNR=31						
MKAR	Makanchi Array	66.51	334	P	P	03 14 54.0	+1.0
	0.3nm,0.4s,baz=141,slow=5.9,SNR=7.0						
KMBO	Kilima Mbogo	81.45	271	P	P	03 16 10.3	-11
	baz=81,SNR=3.3						

*JMA **03** 03:10:39.1±0.3, 24°.34N×122°.41E, h72km, M1.7*
*TAP **03** 03:10:40.7, 23°.97N×122°.62E, h11km, ML3.0, D*
*ISCJB **03** 03:10:41.5±0.6, 23°.94N±0°.04×122°.65E±0°.02, h23km±5km, Error ellipse: s-maj=7.0km s-min=3.1km az=172.2*

ISC 03 03:10:40.8±1.6**, 23°.98N**±0°.05×**122°.65E**±0°.03**, h15**km±12km**, n28, σ0.s40**/54**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.59	34	P	Pb	03 10 52.7	-0.1
YOJ				S	Sn	03 11 02.9	-1.0
ENA	Nanau	0.94	299	*e*P	Pb	03 10 58.5	-0.3
	baz=299						
ENA				*e*S	Sg	03 11 11.8	+0.3
	baz=299						
HWA	Hwalien	0.95	270	*e*P	Pb	03 10 58.8	-0.2
	baz=270						
HWA				*e*S	Sg	03 11 11.9	+0.1
	baz=270						
TWC	Suao	0.96	311	P	Pb	03 10 59.0	-0.2
	baz=312						
TWC				*e*S	Sg	03 11 12.2	+0.1
	baz=312						
TWD	Chiawan	0.97	276	*e*P	Pb	03 10 59.0	-0.2
	baz=276						
TWD				*e*S	Sg	03 11 12.4	+0.2
	baz=276						
IRIF	Iriomote-Funau	1.05	70	P	Pb	03 11 00.4	-0.3
IRIF				S	Sn	03 11 16.3	+0.9
ESL	Shilin	1.12	262	*e*P	Pn	03 11 01.6	-0.4
	baz=261						
ESL				*e*S	Sb	03 11 16.6	+0.3
	baz=261						
TWE	Neicheng	1.16	310	*e*P	Pn	03 11 02.2	-0.3
	baz=311						
TWE				*e*S	Sn	03 11 17.9	-0.2
	baz=311						
ENTT	Nioudou	1.19	304	*e*P	Pb	03 11 02.9	-0.2
	baz=304						
ENTT				*e*S	Sg	03 11 18.8	-0.4
	baz=304						
NNS	Nan Shan	1.25	292	*e*P	Pn	03 11 03.8	-0.1
	baz=292						
NNS				*e*S	Sn	03 11 20.7	+0.1
	baz=292						
JKRS	Kuro-shima	1.27	78	P	Pn	03 11 04.2	+0.2
JKRS				*e*S	Sn	03 11 21.5	+0.7
WHF	Hehuan Shan	1.27	278	*e*P	Pn	03 11 04.0	-0.5
	baz=277						
WHF				*e*S	Sb	03 11 21.1	-0.1
	baz=277						
EHY	Hungye	1.30	249	*e*P	Pn	03 11 04.5	0.0
	baz=248						
EHY				*e*S	Sb	03 11 21.6	+0.1
	baz=248						
NSK	Sanguang	1.37	301	*e*P	Pb	03 11 05.7	-0.4
	baz=301						
NSK				*e*S	Sb	03 11 24.0	+0.5
	baz=301						
TWT	Tachien	1.37	282	*e*P	Pn	03 11 05.7	+0.2
	baz=281						
TWT				*e*S	Sb	03 11 24.0	+0.3
	baz=281						
TWF1	Yuli	1.39	244	*e*P	Pn	03 11 05.7	+0.1
	baz=242						
TWF1				*e*S	Sn	03 11 22.0	-1.7
	baz=242						
JIJ	Ishigaki jima	1.42	74	P	Pn	03 11 05.8	-0.3
JIJ				S	Sn	03 11 24.0	-0.5
CHKT	Chengkung	1.47	234	*e*P	Pn	03 11 06.7	0.0
	baz=232						
CHKT				*e*S	Sn	03 11 25.7	+0.1
	baz=232						
SMLT	Sun Moon Lake	1.60	267	*e*P	Pn	03 11 08.8	+0.1
	baz=266						
NSTT	Nanjuang	1.64	294	*e*P	Pn	03 11 09.3	+0.2
	baz=294						
NSTT				*e*S	Sn	03 11 30.2	+0.3
	baz=294						
TYC	Yuchr	1.64	268	*e*P	Pn	03 11 09.2	+0.1
	baz=267						
TYC				*e*S	Sn	03 11 30.0	+0.1
	baz=267						
ALS	Alishan	1.75	255	*e*P	Pn	03 11 10.9	0.0
	baz=254						
ALS				*e*S	Sn	03 11 32.9	-0.2
	baz=254						
TWQ1	Liyutan	1.75	283	*e*P	Pn	03 11 10.9	+0.2
	baz=282						
NSY	Sanyi	1.78	285	*e*P	Pn	03 11 11.2	+0.2
	baz=284						
NSY				*e*S	Sn	03 11 33.5	+0.2
	baz=284						
WNT	Mingjian	1.80	267	*e*P	Pn	03 11 11.5	+0.3
	baz=266						
WNT				*e*S	Sn	03 11 34.0	+0.2
	baz=266						
TCU	Taichung	1.81	276	*e*P	Pn	03 11 11.6	+0.2
	baz=275						
TCU				*e*S	Sn	03 11 34.3	+0.2
	baz=275						
CHN5	Tsauling	1.84	259	*e*P	Pn	03 11 12.2	+0.3
	baz=258						
CHN5				*e*S	Sn	03 11 35.3	+0.2
	baz=258						
WGK	Gukeng	1.93	262	*e*P	Pn	03 11 13.4	+0.3
	baz=261						
WGK				*e*S	Sn	03 11 37.4	+0.3
	baz=261						

IDC 03 03:25:43.4±7.4**, 19°.98S**×**68°.79W, h124**km±50km**, mb3.0**/2**, mb1 3.1**/4**, mb1mx2.9**/18**, mbtmp2.9**/4**, Error ellipse: s-maj=73.6km s-min=34.1km az=45.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.72	10	P	Pn	03 26 40.2	+0.1
	0.5nm,0.3s,baz=199,slow=8.1,SNR=14						
LPAZ				S	Sn	03 27 24.1	+0.1
	0.1nm,0.3s,baz=208,slow=17,SNR=3.1						
SIV	San Ignacio	8.34	63	P	Pn	03 27 41.1	-0.5
	0.3nm,0.3s,baz=284,slow=14,SNR=9.6						
TORD	Torodi Ar. Bea	76.74	71	P	P	03 37 21.8	+0.2
	0.3nm,0.9s,baz=249,slow=5.1,SNR=5.8						
YKA	Yellowknife Ar	89.79	341	P	P	03 38 27.2	-0.2
	0.2nm,0.6s,baz=131,slow=4.8,SNR=6.6						

*ISK **03** 04:18:48.3, 39°.08N×29°.02E, h7km, MD2.7*
*DDA **03** 04:18:48.5, 39°.10N×29°.02E, h7km, MD2.6, ML2.7*
*CSEM **03** 04:18:48.6±0.1, 39°.09N×29°.03E, h3km±1km, ML2.7, Error ellipse: s-maj=1.8km s-min=1.4km az=22.0*
*ISCJB **03** 04:18:48.3±0.5, 39°.09N±0°.03×29°.03E±0°.03, h1km±7km, Error ellipse: s-maj=5.8km s-min=3.6km az=175.5*

ISC 03 04:18:48.8±1.0**, 39°.09N**±0°.03×**29°.02E**±0°.02**, h6**km±10km**, n50, σ0.s34**/62**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.24	258	*i* P	Pg	04 18 53.6	-0.1
DEMI				*i* S	Sg	04 18 57.2	+0.3
DEMI	Demirci	0.24	258	*i* P	Pg	04 18 53.6	-0.1
DEMI				*i* S	Sg	04 18 57.2	+0.3
GDZ	Gediz	0.36	91	*i* P	Pg	04 18 55.4	-0.4
GDZ				*i* S	Sg	04 19 00.3	-0.2
GDZ	Gediz	0.36	91	*i* P	Pg	04 18 55.4	-0.4
GDZ				*i* S	Sg	04 19 00.3	-0.2
TVSB	Tavsanli	0.49	44	*e*PG	Pg	04 18 57.6	-0.7
TVSB	Tavsanli	0.49	44	*e*Pg	Pg	04 18 57.6	-0.7
DST	Dursunbey	0.60	329	*e*PG	Pg	04 19 00.6	+0.2
DST	Dursunbey	0.60	329	*e*Pg	Pg	04 19 00.6	+0.2
KULA	Kula-Manisa	0.64	206	*e*PG	Pg	04 19 00.9	-0.3
KULA				*e*SG	Sg	04 19 09.7	+0.1
KULA	Kula-Manisa	0.64	206	*e*Pg	Pg	04 19 00.9	-0.3
KULA				*e*Sg	Sg	04 19 09.7	+0.1
DURS	Dursunbey	0.66	320	*i* P	Pg	04 19 01.2	-0.4
DURS	Dursunbey	0.66	320	*i* P	Pg	04 19 01.2	-0.4
KHAL	Karahalli	0.81	153	*i* P	Pg	04 19 04.5	+0.1
KHAL	Karahalli	0.81	153	*i* P	Pg	04 19 04.5	+0.1
ALT	Altintas	0.85	92	*e*PG	Pg	04 19 05.3	+0.2
ALT				*e*SG	Sg	04 19 17.1	+1.0
ALT	Altintas	0.85	92	*e*Pg	Pg	04 19 05.3	+0.2
ALT				*e*Sg	Sg	04 19 17.1	+1.0
KHL	Karahalli	0.86	153	*e*PG	Pg	04 19 05.3	-0.1
KHL	Karahalli	0.86	153	*e*Pg	Pg	04 19 05.3	-0.1
ORLT	Orhaneli	0.96	354	*e*PG	Pg	04 19 07.2	0.0
ORLT	Orhaneli	0.96	354	*e*Pg	Pg	04 19 07.2	0.0
AKHS	Akhisar	0.97	258	*i* P	Pg	04 19 07.1	-0.3
AKHS				*i* S	Sg	04 19 20.3	+0.4
AKHS	Akhisar	0.97	258	*i* P	Pg	04 19 07.1	-0.3
AKHS				*i* S	Sg	04 19 20.3	+0.4
BALB	Balikesir	1.04	302	*e*PG	Pb	04 19 09.2	-0.1
BALB	Balikesir	1.04	302	*e*Pg	Pb	04 19 09.2	-0.1
BALY	Balya	1.27	301	*i* P	Pn	04 19 12.7	-0.4
BALY				*i* S	Sn	04 19 30.4	-0.1
BALY	Balya	1.27	301	*i* P	Pn	04 19 12.7	-0.4
BALY				*i* S	Sn	04 19 30.4	-0.1
CAVI	Cavuskoy	1.27	29	*e*PN	Pn	04 19 13.2	-0.1
CAVI	Cavuskoy	1.27	29	*e*Pn	Pn	04 19 13.2	-0.1
MDNY	Mudanya-Bursa	1.28	355	*e*PN	Pn	04 19 13.1	-0.2
MDNY	Mudanya-Bursa	1.28	355	*e*Pn	Pn	04 19 13.1	-0.2
IZI	Iznik	1.29	15	*e*PN	Pn	04 19 13.6	+0.1
IZI	Iznik	1.29	15	*e*Pn	Pn	04 19 13.6	+0.1
SHUT	Suhut-Afyon	1.31	114	*e*PN	Pn	04 19 13.7	-0.1
SHUT	Suhut-Afyon	1.31	114	*e*Pn	Pn	04 19 13.7	-0.1
GEMT	Gemlik	1.35	5	*e*PN	Pn	04 19 14.2	0.0
GEMT	Gemlik	1.35	5	*e*Pn	Pn	04 19 14.2	0.0
GONE	Gonen-Balikesi	1.41	313	*e*PN	Pn	04 19 15.3	+0.3
GONE	Gonen-Balikesi	1.41	313	*e*Pn	Pn	04 19 15.3	+0.3
ADVT	Abdulvahap	1.45	22	*e*PN	Pn	04 19 15.9	+0.3
ADVT	Abdulvahap	1.45	22	*e*Pn	Pn	04 19 15.9	+0.3
ARMT	Armutlu	1.48	355	*e*PN	Pn	04 19 16.4	+0.4
ARMT	Armutlu	1.48	355	*e*Pn	Pn	04 19 16.5	+0.4
BNT	Bandirma	1.52	326	*e*PN	Pn	04 19 16.9	+0.2
BNT	Bandirma	1.52	326	*e*Pn	Pn	04 19 16.9	+0.2
EDC	Edincik	1.54	325	*e*PN	Pn	04 19 17.0	+0.1
EDC	Edincik	1.54	325	*e*Pn	Pn	04 19 17.0	+0.1
GPA	Golpazari	1.55	39	*e*PN	Pn	04 19 16.7	-0.4
GPA	Golpazari	1.55	39	*e*Pn	Pn	04 19 16.7	-0.4
GULT	Gulveren	1.76	40	*e*PN	Pn	04 19 20.2	+0.2
GULT	Gulveren	1.76	40	*e*Pn	Pn	04 19 20.2	+0.2

IDC 03 04:31:40.5±1.6**, 8°.38S**×**32°.07E, h0**km**, mb3.4**/3**, mb1 3.6**/4**, mb1mx3.4**/26**, mbtmp3.6**/4**, ML3.9**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.7**/15**, Error ellipse: s-maj=42.7km s-min=28.7km az=120.0, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	8.86	36	Pn	Pn	04 33 48.9	-1.4
	1.2nm,0.3s,baz=219,slow=19,SNR=17						
KMBO				Sn	Sn	04 35 23.7	-7.4
	3.9nm,0.3s,baz=265,slow=23,SNR=12						
KMBO				Lg	Lg	04 36 15.3	
	0.4nm,0.3s,baz=263,slow=21,SNR=6.1						
KMBO				LR	LR	04 37 19.5	
	comp=Z,98nm,18.5s,baz=84,slow=38						
BLWY	Bulawayo	12.16	196	*i* P	Pn	04 34 33.3	-2.1
BLWY				*i*		04 34 33.5	
	baz=44,slow=18						
BLWY				*i* S	Sn	04 36 19.7	-32
BOSA	Boshof	21.13	197	P	P	04 36 26.9	-0.3
	0.8nm,0.4s,baz=17,slow=12,SNR=7.0						
TORD	Torodi Ar. Bea	36.98	305	P	P	04 38 51.8	-0.2
	0.5nm,1.0s,baz=108,slow=7.0,SNR=3.3						
MKAR	Makanchi Array	70.74	34	P	P	04 42 59.1	+0.5
	0.4nm,0.7s,baz=233,slow=7.4,SNR=5.5						

IDC 03 04:47:32.4±2.2, 8°.26S×129°.29E, h0km, mb3.3/1, mb1 3.7/4, mb1mx3.4/19, mbtmp3.5/4, ML3.7/3, Error ellipse: s-maj=76.4km s-min=29.5km az=76.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.41	200	Pn	Pn	04 50 02.1	-1.1
	0.5nm,0.3s,baz=22,slow=13,SNR=12						
FITZ				Sn	Sn	04 51 49.4	-11
	1.4nm,0.3s,baz=167,slow=6.4,SNR=8.9						
WRA	Warramunga Arr	12.60	158	Pn	Pn	04 50 34.3	+1.2
	0.4nm,0.3s,baz=344,slow=13,SNR=13						
WRA				Sn	Sn	04 52 49.2	-5.2
	0.9nm,0.3s,baz=338,slow=21,SNR=5.2						
ASAR	Alice Springs	15.95	164	Pn	Pn	04 51 17.9	-0.4
	0.2nm,0.3s,baz=335,slow=10,SNR=9.3						
ASAR				Sn	Sn	04 54 12.7	-3.3
	0.2nm,0.3s,baz=352,slow=27,SNR=4.7						
MKAR	Makanchi Array	68.89	327	P	P	04 58 39.2	+0.1
	0.2nm,0.4s,baz=115,slow=8.0,SNR=3.7						

*IDC **03** 05:09:50.9±0.9, 56°.48N×152°.42W, h0km, mb4.0/16, mb1 4.1/19, mb1mx4.0/28, mbtmp3.9/19, ML3.3/3, Error ellipse: s-maj=23.6km s-min=14.3km az=37.0*
*ISCJB **03** 05:09:50.3±1.1, 56°.50N±0°.04×152°.02W±0°.05, h11km±7km, mb3.9/18, Error ellipse: s-maj=6.3km s-min=4.1km az=171.6*
*NEIC **03** 05:09:51.8, 56°.31N×152°.11W, h15km, ML3.5(AEIC), After AEIC.*
ISC 03 05:09:51.7±1.7, 56°.49N±0°.06×152°.22W±0°.04, h5km±10km, n97, σ1s.15/109, mb4.1/18, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.94	322	P	Pb	05 10 10.5	0.0
OHAK				S	Sn	05 10 24.4	-0.9
SII	Sitkinak Islan	1.09	274	P	Pg	05 10 11.6	-1.0
SII				S	Sg	05 10 26.7	-0.1
KDAK	Kodiak Island	1.31	351	P	Pn	05 10 16.2	-0.4
KDAK	Kodiak Island	1.31	351	Pn	Pn	05 10 16.2	-0.4
	16nm,0.3s,baz=179,slow=10,SNR=252						
KDAK				Sn	Sg	05 10 34.1	+0.3
	33nm,0.3s,baz=196,slow=20,SNR=13						
KABR	Katmai Barrier	2.22	319	P	Pn	05 10 28.6	-0.7
KAKN	Katmai Knife C	2.38	321	P	Pn	05 10 31.6	+0.2
KCE	Katmai Mt Cerb	2.38	319	P	Pn	05 10 31.1	-0.3
KELA	Mount Kelaz	2.73	317	P	Pn	05 10 37.1	+0.9
AUW	Augustine West	2.96	347	P	Pn	05 10 39.9	+0.5
OPT	Oil Point	3.22	351	P	Pn	05 10 44.2	+1.3
ANNE	Aniakchak Nort	3.25	280	P	Pn	05 10 42.3	-1.0
AZAC	Aniakchak	3.34	279	P	Pn	05 10 44.2	-0.5
CHGN	Chignik	3.45	269	ePn	Pn	05 10 44.4	-1.6
CHGN				eSn	Sn	05 11 24.1	-3.1
ILW	Iliamna West	3.61	353	P	Pn	05 10 49.0	+0.6
VNHG	Veniaminof 1	3.87	269	P	Pn	05 10 50.1	-1.9
VNHG				S	Sn	05 11 35.6	-2.2
SEW	Seward	3.91	21	P	Pn	05 10 50.7	-1.6
RSO	Redoubt South	3.99	356	ePn	Pn	05 10 54.1	+0.4
RSO				eSn	Sn	05 11 40.7	-0.2
DFR	Drift River	4.12	357	P	Pn	05 10 55.7	+0.4
SPU	Mount Spurr	4.71	1	P	Pn	05 11 03.8	+0.4
CKL	Chakachamna La	4.72	359	P	Pn	05 11 04.0	+0.4
RC01	Rabbit Creek A	4.79	15	P	Pn	05 11 03.8	-0.6
SVW2	Sparrevohn	4.94	341	P	Pn	05 11 06.5	0.0
STLK	Strandline Lak	5.03	2	P	Pn	05 11 07.9	+0.2
EYAK	Cordova Ski Ar	5.30	37	P	Pn	05 11 10.3	-1.0
PMR	Palmer	5.36	16	ePn	Pn	05 11 10.9	-1.3
	11nm,0.6s						
PMR				eSn	Sn	05 12 14.7	+0.5
SGAM	Sherman Glacie	5.45	40	P	Pn	05 11 12.2	-1.3
RAGM	Ragged Mountai	5.56	42	P	Pn	05 11 13.6	-1.5
VLZ	Valdez	5.57	31	P	Pn	05 11 14.2	-0.9
GOAT	Goat Mountain	5.67	41	P	Pn	05 11 15.9	-0.8
GOAT				S	Sn	05 12 18.6	-3.5
SML	Sawmill	5.70	19	P	Pn	05 11 16.9	0.0
DIV	Divide	5.73	33	P	Pn	05 11 16.4	-1.0
KLU	Klutina	5.98	30	P	Pn	05 11 19.3	-1.6
BMRM	Bremner River	5.99	38	P	Pn	05 11 19.9	-1.1
PPLA	Purkeypile	6.43	0	P	Pn	05 11 26.6	-0.5
VRDI	Verde Repeater	6.57	40	P	Pn	05 11 27.8	-1.2
TT01	Tatalina	6.72	345	P	Pn	05 11 30.9	0.0
KIAG	Kiagna River	6.79	45	P	Pn	05 11 30.6	-1.5
BALM	Baldy	6.86	44	P	Pn	05 11 31.6	-1.3
RKAV	Rock Avalanche	6.87	52	P	Pn	05 11 31.6	-1.5
RKAV				S	Sn	05 12 48.8	-2.9
SAMH	Samovar Hills	7.04	54	P	Pn	05 11 34.1	-1.3
DHY	Denali Highway	7.04	18	P	Pn	05 11 35.1	-0.4
TRF	Thorofare Moun	7.05	7	P	Pn	05 11 34.6	-1.0
RND	Reindeer	7.14	12	P	Pn	05 11 36.3	-0.5
PAX	Paxson	7.34	25	ePn	Pn	05 11 39.6	+0.2
	4.1nm,0.5s						
PAX				eSn	Sn	05 13 00.6	-2.4
MCK	McKinley	7.45	11	ePn	Pn	05 11 41.4	+0.5
	4.2nm,0.3s						
MCK				eSn	Sn	05 13 05.4	-0.3
PNL	Peninsula	7.50	60	P	Pn	05 11 40.7	-1.0
MENT	Mentasta	7.76	30	ePn	Pn	05 11 43.4	-1.8
DDM	Donnelly Dome	7.97	21	P	Pn	05 11 46.3	-1.8
DOT	Dot Lake	8.25	26	ePn	Pn	05 11 53.3	+1.4
	3.8nm,0.7s						
BCA3	Beaver Creek A	8.43	34	P	Pn	05 11 53.6	-0.8
COLA	College	8.68	12	P	Pn	05 11 57.2	-0.5
IL1	Eielson Array	8.71	15	P	Pn	05 11 57.5	-0.6
SKAG	Skagway	9.45	65	ePn	Pn	05 12 08.7	+0.4
	5.1nm,0.4s						
SKAG				eSn	Sn	05 13 52.1	-2.7
IM3	Indian Mountai	9.55	356	P	Pn	05 12 07.8	-2.0
WHY	Whitehorse	9.96	58	P	Pn	05 12 14.6	-0.8
TNA	Tin City	11.82	327	ePn	Pn	05 12 41.6	+0.9
	9.5nm,1.4s						
DLBC	Dease Lake	12.09	72	Pn	Pn	05 12 46.5	+1.9
DLBC	Dease Lake	12.09	72	Pn	Pn	05 12 46.5	+1.9
	0.1nm,0.3s,baz=276,slow=18,SNR=3.4						
INK	Inuvik	14.59	28	Pn	Pn	05 13 18.9	+0.4
INK	Inuvik	14.59	28	Pn	Pn	05 13 18.9	+0.4
	0.1nm,0.3s,baz=220,slow=8.1,SNR=6.4						
YKA	Yellowknife Ar	19.79	57	P	P	05 14 22.6	+0.1
YKA	Yellowknife Ar	19.79	57	P	P	05 14 22.5	+0.1
	0.1nm,0.3s,baz=270,slow=11,SNR=22						
BILL	Bilibino	22.00	318	eP	P	05 14 45.9	-0.4
	4.0nm,0.6s						
YBH	Yreka Blue Hor	24.06	115	P	P	05 15 09.7	+1.9
YBH	Yreka Blue Hor	24.06	115	P	P	05 15 09.7	+1.9
	1.2nm,0.8s,baz=258,slow=16,SNR=3.9						
NVAR	Mina Array Bea	28.77	114	P	P	05 15 51.5	+1.1
NVAR	Mina Array Bea	28.77	114	P	P	05 15 51.5	+1.1
	0.8nm,0.6s,baz=312,slow=8.5,SNR=7.0						
PDAR	Pinedale Array	30.31	99	P	P	05 16 04.5	+0.5
PDAR	Pinedale Array	30.31	99	P	P	05 16 04.5	+0.5
	0.4nm,0.5s,baz=281,slow=5.1,SNR=4.5						
EYMN	Ely	37.03	77	eP	P	05 17 02.9	+0.8
	3.3nm,0.5s						
TXAR	Lajitas Array	43.44	108	P	P	05 17 55.4	-0.1
TXAR	Lajitas Array	43.44	108	P	P	05 17 55.4	-0.1
	0.4nm,0.7s,baz=310,slow=5.9,SNR=4.2						
SCHQ	Schefferville	45.21	54	P	P	05 18 11.4	+2.2
SCHQ	Schefferville	45.21	54	P	P	05 18 11.4	+2.2
	2.0nm,0.8s,baz=307,slow=10.0,SNR=4.4						
ARCES	ARCESS Array B	54.27	1	P	P	05 19 17.6	-0.4
ARCES	ARCESS Array B	54.27	1	P	P	05 19 17.6	-0.4
	0.9nm,0.5s,baz=15,slow=7.9,SNR=9.6						
SONM	Songino Array	57.24	308	P	P	05 19 39.3	-0.5
SONM	Songino Array	57.24	308	P	P	05 19 39.3	-0.5
	2.9nm,0.7s,baz=38,slow=7.5,SNR=10.0						
ZALV	Zalesovo Beam	60.48	325	P	P	05 20 01.2	-0.7
ZALV	Zalesovo Beam	60.48	325	P	P	05 20 01.2	-0.7
	2.1nm,0.6s,baz=39,slow=8.0,SNR=5.9						
NB2	NORSAR Subarra	62.09	9	P	P	05 20 12.6	-0.2
	comp=Z,1.3nm,0.9s,baz=349,slow=6.9						
NOA	NORSAR Array B	62.09	9	P	P	05 20 13.0	+0.2
NOA	NORSAR Array B	62.09	9	P	P	05 20 13.0	+0.2
	comp=Z,1.2nm,0.7s,baz=349,slow=6.6,SNR=5.1						
FINES	FINESS Array B	62.40	1	P	P	05 20 15.0	+0.1
FINES	FINESS Array B	62.40	1	P	P	05 20 15.0	+0.1
	comp=Z,2.3nm,0.8s,baz=352,slow=6.6,SNR=5.7						
MKAR	Makanchi Array	67.46	323	P	P	05 20 47.6	-0.5
MKAR	Makanchi Array	67.46	323	P	P	05 20 47.6	-0.5
	comp=Z,0.9nm,0.6s,baz=34,slow=6.2,SNR=11						
AKASG	Malin Array Be	73.17	359	P	P	05 21 22.3	-0.6
AKASG	Malin Array Be	73.17	359	P	P	05 21 22.3	-0.6
	comp=Z,2.3nm,0.7s,baz=0.5,slow=5.6,SNR=5.8						
GERES	GERESS Array B	74.38	10	P	P	05 21 30.2	+0.1
GERES	GERESS Array B	74.38	10	P	P	05 21 30.2	+0.1
	comp=Z,0.6nm,0.6s,baz=335,slow=5.0,SNR=8.5						
ESDC	Sonseca Array	80.50	24	P	P	05 22 05.1	+0.6
ESDC	Sonseca Array	80.50	24	P	P	05 22 05.1	+0.6
	comp=Z,0.7nm,0.6s,baz=338,slow=5.2,SNR=6.8						
BRTR	Keskin Array B	84.02	355	P	P	05 22 23.2	+0.2
BRTR	Keskin Array B	84.02	355	P	P	05 22 23.2	+0.2
	comp=Z,0.3nm,0.5s,baz=20,slow=3.9,SNR=3.7						
CMAR	Chiang Mai Arr	84.73	296	P	P	05 22 26.3	-0.5
CMAR	Chiang Mai Arr	84.73	296	P	P	05 22 26.3	-0.5
	comp=Z,0.6nm,0.3s,baz=11,slow=5.1,SNR=4.6						

*LDG **03** 05:14:43.7±0.1, 42°.34N×13°.36E, h2km, Ml2.9/6, Error ellipse: s-maj=5.2km s-min=3.2km az=51.0*
*CSEM **03** 05:14:43.5±0.1, 42°.36N×13°.34E, h2km, ML3.6/11, Error ellipse: s-maj=3.2km s-min=2.5km az=62.0*
*ROM **03** 05:14:43.2±0.1, 42°.36N×13°.38E, h10km, Ml3.2/13, Error ellipse: s-maj=1.0km s-min=0.8km az=75.0*
*SZGRF **03** 05:14:43.4, 42°.01N×13°.83E, h10km, mb3.4, Central Italy*
*ISCJB **03** 05:14:43.1±0.2, 42°.36N±0°.02×13°.35E±0°.02, h10km±2km, Error ellipse: s-maj=3.1km s-min=2.6km az=149.2*
ISC 03 05:14:44.0±0.5, 42°.34N±0°.02×13°.34E±0°.02, h5km±4km, n131, σ1s.46/165, 2C-6D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	75	Pg	Pg	05 14 45.2	-0.1
AQU				Sg	Sg	05 14 46.1	0.0
	45µm,0.4s						
AQU	L'Aquila	0.04	75	Pg	Pg	05 14 45.2	-0.1
AQU				Sg	Sg	05 14 46.1	0.0
	45µm,0.4s						
FIAM	Fiamignano	0.18	246	Pg	Pg	05 14 48.6	+1.0
FIAM				Sg	Sg	05 14 52.3	+2.2
	5µm,0.4s						
FIAM	Fiamignano	0.18	246	Pg	Pg	05 14 48.6	+1.0
FIAM				Sg	Sg	05 14 52.3	+2.2
	5µm,0.4s						
FAGN	Fagnano	0.19	113	Pg	Pg	05 14 47.5	-0.3
FAGN				Sg	Sg	05 14 51.0	+0.6
	15µm,0.3s						
FAGN	Fagnano	0.19	113	Pg	Pg	05 14 47.5	-0.3
FAGN				Sg	Sg	05 14 51.0	+0.6
	15µm,0.3s						
CAMP	Campotosto	0.20	14	Pg	Pg	05 14 47.6	-0.4
CAMP				Sg	Sg	05 14 50.6	0.0
	8µm,0.7s						
CAMP	Campotosto	0.20	14	Pg	Pg	05 14 47.6	-0.4
CAMP				Sg	Sg	05 14 50.6	0.0
	8µm,0.7s						
PTQR	Pietraquaria	0.32	172	Pg	Pg	05 14 50.5	+0.2
PTQR				Sg	Sg	05 14 55.2	+0.7
PTQR	Pietraquaria	0.32	172	Pg	Pg	05 14 50.5	+0.2
PTQR				Sg	Sg	05 14 55.2	+0.7
TERO	Teramo	0.34	34	Pg	Pg	05 14 49.6	-1.0
TERO				Sg	Sg	05 14 54.2	-0.9
	3µm,0.4s						
TERO	Teramo	0.34	34	Pg	Pg	05 14 49.6	-1.0
TERO				Sg	Sg	05 14 54.2	-0.9
	3µm,0.4s						
LNSS	Leonessa	0.34	319	Pg	Pg	05 14 50.8	+0.1
LNSS				Sg	Sg	05 14 56.6	+1.4
	3µm,0.4s						
LNSS	Leonessa	0.34	319	Pg	Pg	05 14 50.8	+0.1
LNSS				Sg	Sg	05 14 56.6	+1.4
	3µm,0.4s						
VCEL	Villa Celiera	0.37	82	Pg	Pg	05 14 50.5	-0.7
	5µm,0.5s						
VCEL	Villa Celiera	0.37	82	Pg	Pg	05 14 50.5	-0.7
	5µm,0.5s						
CERT	Cerreto	0.48	214	Pg	Pg	05 14 53.4	+0.2
CERT				Sg	Sb	05 15 01.3	-1.0
	3µm,0.4s						
CERT	Cerreto	0.48	214	Pg	Pg	05 14 53.4	+0.2
CERT				Sg	Sb	05 15 01.3	-1.0
	3µm,0.4s						
MNS	Montasola	0.49	275	Pg	Pg	05 14 53.6	+0.1
	925nm,0.4s						
MNS	Montasola	0.49	275	Pg	Pg	05 14 53.6	+0.1
	925nm,0.4s						
VVLD	Villa Vallelon	0.52	156	Pg	Pg	05 14 53.9	0.0
	1µm,0.5s						
VVLD	Villa Vallelon	0.52	156	Pg	Pg	05 14 53.9	0.0
	1µm,0.5s						
NRCA	Norcia	0.52	341	Pg	Pg	05 14 53.3	-0.7
NRCA	Norcia	0.52	341	Pg	Pg	05 14 53.3	-0.7
INTR	Introdacqua	0.53	128	Pg	Pg	05 14 53.8	-0.4
INTR				Sg	Sg	05 15 01.8	+0.6
	1µm,0.5s						
INTR	Introdacqua	0.53	128	Pg	Pg	05 14 53.8	-0.4
INTR				Sg	Sg	05 15 01.8	+0.6
	1µm,0.5s						
GUAR	Guarcino	0.55	182	Pg	Pg	05 14 54.4	-0.1
	786nm,0.5s						
GUAR	Guarcino	0.55	182	Pg	Pg	05 14 54.4	-0.1
	786nm,0.5s						
MTCE	Montecelio	0.55	235	Pg	Pg	05 14 54.7	+0.2
	448nm,0.4s						
MTCE	Montecelio	0.55	235	Pg	Pg	05 14 54.7	+0.2
	448nm,0.4s						
CESX	Cesi	0.62	296	Pg	Pg	05 14 55.6	-0.4
CESX	Cesi	0.62	296	Pg	Pg	05 14 55.6	-0.4
OFFI	Offida	0.64	23	Pg	Pg	05 14 56.0	-0.4
OFFI	Offida	0.64	23	Pg	Pg	05 14 56.0	-0.4
POFI	Posta Fibreno	0.68	156	Pg	Pg	05 14 56.4	-0.7
POFI	Posta Fibreno	0.68	156	Pg	Pg	05 14 56.4	-0.7
LPEL	Lama dei Pelig	0.69	115	Pg	Pg	05 14 56.1	-1.2
LPEL				Sg	Sg	05 15 06.8	+0.6
LPEL	Lama dei Pelig	0.69	115	Pg	Pg	05 14 56.1	-1.2
LPEL				Sg	Sg	05 15 06.8	+0.6
RMP	Rome, Mte Porz	0.71	222	Pg	Pg	05 14 57.4	-0.3
	685nm,0.4s						
RMP	Rome, Mte Porz	0.71	222	Pg	Pg	05 14 57.4	-0.3
	685nm,0.4s						
FDMO	Fiordimonte	0.72	345	Pg	Pg	05 14 56.7	-1.1
FDMO	Fiordimonte	0.72	345	Pg	Pg	05 14 56.7	-1.1
SDI	San Donato	0.72	151	Pg	Pg	05 14 56.9	-1.0
SDI	San Donato	0.72	151	Pg	Pg	05 14 56.9	-1.0
CESI	CESI - Serrava	0.74	334	Pg	Pg	05 14 57.3	-0.9
CESI	CESI - Serrava	0.74	334	Pg	Pg	05 14 57.3	-0.9
RDP	Rocca di Papa	0.75	219	Pg	Pg	05 14 58.1	-0.2
RDP	Rocca di Papa	0.75	219	Pg	Pg	05 14 58.1	-0.2
CAFR	Castel Frentan	0.75	98	Pg	Pg	05 14 57.9	-0.6
CAFR	Castel Frentan	0.75	98	Pg	Pg	05 14 57.9	-0.6
GIUL	Giuliano Di Ro	0.79	185	Pg	Pg	05 14 58.3	-0.8
GIUL	Giuliano Di Ro	0.79	185	Pg	Pg	05 14 58.3	-0.8
GUMA	Gualdo di Mace	0.84	31	Pg	Pg	05 14 56.9	-3.3
GUMA	Gualdo di Mace	0.84	31	Pg	Pg	05 14 56.9	-3.3
ASSB	Assisi San Ben	0.86	324	Pg	Pg	05 14 59.7	-0.9
ASSB	Assisi San Ben	0.86	324	Pg	Pg	05 14 59.7	-0.9
RNI2	Rionero Sannit	0.88	136	Pg	Pg	05 15 00.4	-0.5
RNI2	Rionero Sannit	0.88	136	Pg	Pg	05 15 00.4	-0.5
CERA	Filignano	0.90	146	Pg	Pg	05 14 59.7	-1.5
CERA	Filignano	0.90	146	Pg	Pg	05 14 59.7	-1.5
SNTG	Esanatoglia	0.96	342	Pg	Pg	05 15 01.0	-1.4
SNTG	Esanatoglia	0.96	342	Pg	Pg	05 15 01.0	-1.4
MIDA	Miranda	0.97	136	Pg	Pg	05 15 01.1	-1.6
MIDA	Miranda	0.97	136	Pg	Pg	05 15 01.1	-1.6
CING	Cingoli	1.04	354	Pg	Pg	05 15 02.5	-1.4
CING	Cingoli	1.04	354	Pg	Pg	05 15 02.5	-1.4
MURB	Monte Urbino	1.10	327	Pg	Pg	05 15 04.2	-0.9
MURB	Monte Urbino	1.10	327	Pg	Pg	05 15 04.2	-0.9
AOI	Ancona	1.22	9	Pg	Pb	05 15 06.2	-1.4
AOI	Ancona	1.22	9	Pg	Pb	05 15 06.2	-1.4
PIEI	Pieia	1.33	334	Pg	Pn	05 15 08.1	-1.3
PIEI	Pieia	1.33	334	Pg	Pn	05 15 08.1	-1.3
FSSB	Fossombrone	1.41	343	Pg	Pn	05 15 09.3	-1.1
FSSB	Fossombrone	1.41	343	Pg	Pn	05 15 09.3	-1.1
MAIM	Mastiano	2.61	308	P	Pn	05 15 27.4	+0.5
PGF	Pioggiola	3.22	275	eP	Pn	05 15 36.5	+1.1
PGF				eSn	Sn	05 16 09.9	-4.3
	8.9nm,0.6s						
PGF	Pioggiola	3.22	275	eP	Pn	05 15 36.5	+1.1
PGF				eSn	Sn	05 16 09.9	-4.3
	4.4nm,0.6s						
SKDS	Skadanscina	3.24	8	i Pn	Pn	05 15 35.3	-0.3
SKDS				eSn	Sn	05 16 14.9	+0.4
SKDS	Skadanscina	3.24	8	i Pn	Pn	05 15 35.3	-0.3
STON	Ston	3.26	79	ePn	Pn	05 15 36.5	+0.7
STON				Sn	Sn	05 16 14.1	-0.8
STON	Ston	3.26	79	ePn	Pn	05 15 36.4	+0.7
STON				Sn	Sn	05 16 14.1	-0.8
BOJS	Bojanci	3.45	23	ePn	Pn	05 15 39.0	+0.6
BOJS				eSn	Sn	05 16 21.3	+1.6
BOJS	Bojanci	3.45	23	ePn	Pn	05 15 39.0	+0.6
BOJS				eSn	Sn	05 16 21.3	+1.6
VOY	Vojsko	3.71	6	ePn	Pn	05 15 43.7	+1.6
VOY				eSn	Sn	05 16 26.6	+0.4
CADS	Cadrg	3.90	4	i Pn	Pn	05 15 45.4	+0.8
CADS				eSn	Sn	05 16 31.9	+1.2
CADS	Cadrg	3.90	4	i Pn	Pn	05 15 45.4	+0.8
CADS				eSn	Sn	05 16 31.9	+1.2
OBKA	Obir	4.25	11	ePn	Pn	05 15 50.2	+0.6
PDG	Podgorica	4.38	87	ePn	Pn	05 15 51.0	-0.2
ABTA	Abfaltersbach	4.44	353	⇓iP	Pn	05 15 53.0	+0.9
	5.0nm,0.4s,SNR=8.6						
ABTA				⇓eSn	Sn	05 16 43.6	-0.8
	9.6nm,0.6s						
ABTA	Abfaltersbach	4.44	353	P	Pn	05 15 53.0	+0.9
	5.0nm,0.4s,SNR=8.6						
ABTA				Sn	Sn	05 16 43.6	-0.8
	9.6nm,0.6s						
SBF	Sospel	4.58	291	ePn	Pn	05 15 52.3	-1.8
SBF				eSn	Sn	05 16 43.0	-4.8
	7.7nm,0.6s						
SBF	Sospel	4.58	291	ePn	Pn	05 15 52.3	-1.8
SBF				eSn	Sn	05 16 43.0	-4.8
	3.8nm,0.6s						
BBLS	Lazići	4.69	69	ePn	Pn	05 15 57.9	+2.3
KBA	Koelnbreinsper	4.74	0	eSn	Sn	05 16 50.5	-1.1
FRF	La Foret Royal	5.06	286	ePn	Pn	05 15 58.8	-1.8
FRF				eSn	Sn	05 16 54.5	-5.0
	1.1nm,0.5s						
FRF	La Foret Royal	5.06	286	ePn	Pn	05 15 58.8	-1.8
WTTA	Wattenberg	5.07	347	ePn	Pn	05 16 02.7	+1.9
WTTA				eSn	Sn	05 17 03.5	+3.6
WTTA	Wattenberg	5.07	347	⇓iPn	Pn	05 16 03.3	+2.5
	1.3nm,0.2s						
WTTA				⇓eSn	Sn	05 17 00.4	+0.6
	8.8nm,0.3s						
WTTA	Wattenberg	5.07	347	Pn	Pn	05 16 03.3	+2.5
	1.3nm,0.2s						
WTTA				Sn	Sn	05 17 00.4	+0.6
	8.8nm,0.3s						
LMR	La Mourre	5.12	283	ePn	Pn	05 15 59.4	-2.0
LMR	La Mourre	5.12	283	ePn	Pn	05 15 59.4	-2.0
ARSA	Arzberg	5.15	17	ePn	Pn	05 16 01.7	-0.1
ARSA				eSn	Sn	05 16 59.4	-2.2
DIVS	Divibare	5.17	68	ePn	Pn	05 16 05.6	+3.5
MOTA	Moosalm	5.25	343	⇓iPn	Pn	05 16 05.8	+2.5
	3.0nm,0.4s						
MOTA	Moosalm	5.25	343	Pn	Pn	05 16 05.8	+2.5
	3.0nm,0.4s						
MBDF	Montbardon	5.34	299	eP	Pn	05 16 06.5	+2.0
MBDF	Montbardon	5.34	299	eP	Pn	05 16 06.5	+2.0
RJOB	Jochberg	5.41	356	ePn	Pn	05 16 07.4	+2.0
RJOB				eSn	Sn	05 17 08.8	+0.7
TRUS	Trudelj	5.49	68	ePn	Pn	05 16 06.8	+0.4
DAVA	Damuels	5.52	335	ePn	Pn	05 16 10.5	+3.4
DAVA	Damuels	5.52	335	⇓iPn	Pn	05 16 10.9	+3.8
	3.0nm,0.4s						
DAVA				⇑iSn	Sn	05 17 11.5	+0.5
	5.4nm,0.5s						
MOA	Molln	5.54	6	ePn	Pn	05 16 08.9	+1.7
GRUS	Gruza	5.61	72	ePn	Pn	05 16 08.7	+0.6
SELS	Selova	5.79	79	ePn	Pn	05 16 12.7	+2.1
CONA	Conrad Observa	5.86	17	⇑iPn	Pn	05 16 10.8	-0.9
CONA	Conrad Observa	5.86	17	Pn	Pn	05 16 10.8	-0.9
BARS	Barje	6.27	83	ePn	Pn	05 16 16.9	-0.3
GEC2	GERESS Array S	6.51	2	ePn	Pn	05 16 21.1	+0.6
GEC2				eSn	Sn	05 17 33.2	-2.0
KHC	Kasperske Hory	6.79	1	ePN	Pn	05 16 24.3	-0.1
KHC				eSN	Sn	05 17 38.2	-3.9
KHC	Kasperske Hory	6.79	1	Pn	Pn	05 16 24.3	-0.1
WET	Wettzell	6.81	357	ePn	Pn	05 16 25.2	+0.6
WET				eSn	Sn	05 17 38.5	-4.0
ZAPS	Zavoj	6.90	79	ePn	Pn	05 16 27.5	+1.7
BFO	Black Forest	6.95	331	eSn	Sn	05 17 45.5	-0.5
HINF	Hinteralfeld	7.14	322	ePn	Pn	05 16 27.1	-2.1
HINF				eSn	Sn	05 17 43.6	-7.2
	2.5nm,0.5s						
HINF	Hinteralfeld	7.14	322	ePn	Pn	05 16 27.1	-2.1
CDF	Champ du Feu	7.42	327	ePn	Pn	05 16 32.1	-0.9
CDF				eSn	Sn	05 17 49.2	-8.4
	1.4nm,0.3s						
CDF	Champ du Feu	7.42	327	ePn	Pn	05 16 32.1	-0.9
GRF	Grafenberg Arr	7.50	349	eSn	Sn	05 17 58.4	-1.0
HAU	Haudompre	7.51	321	ePn	Pn	05 16 32.3	-2.0
HAU				eSn	Sn	05 17 53.3	-6.5
	5.7nm,0.6s						
HAU	Haudompre	7.51	321	ePn	Pn	05 16 32.3	-2.0
MOX	Moxa	8.39	352	eSn	Sn	05 18 16.9	-4.4

*ISCJB **03** 05:20:48.6±0.8, 22°.14S±0°.10×179°.5W±0°.1, h592km, mb3.7/6, Error ellipse: s-maj=16.4km s-min=12.7km az=8.0*
*IDC **03** 05:20:50.1±5.0, 22°.16S×179°.53W, h598km±62km, mb3.1/6, mb1 3.4/8, mb1mx3.1/19, mbtmp3.2/8, Error ellipse: s-maj=32.7km s-min=28.4km az=4.0*
*AUST **03** 05:20:51.0±8.9, 22°.18S×179°.61W, h584km, Error ellipse: s-maj=6.3km s-min=1.5km az=252.0*
ISC 03 05:20:49.5±1.0, 22°.2S±0°.1×179°.5W±0°.1, h592km, n19, σ1s.12/16, mb3.7/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	13.03	268	P	P	05 23 38.2	-0.7
	0.3nm,0.3s,baz=242,slow=18,SNR=3.0						
URZ	Urewera	16.25	190	P	P	05 24 08.4	-0.9
	2.5nm,0.3s,baz=318,slow=5.8,SNR=11						
URZ				S	S	05 26 50.8	-1.2
	0.6nm,0.3s,baz=273,slow=21,SNR=6.1						
CNB	Canberra Magne	30.12	237	P	P	05 26 14.9	+2.2
	baz=30,SNR=4.9						
CMSA	Cobar Meteorol	32.30	246	P	P	05 26 32.6	+1.4
	baz=32,SNR=9.2						
QLP	Quilpie	33.24	255	P	P	05 26 40.2	+1.0
	baz=33,SNR=9.4						
MTSU	Mount Surprise	34.16	270	S	S	05 31 49.1	+16
	baz=34,SNR=6.5						
STKA	Stephens Creek	35.80	246	P	P	05 27 01.7	+1.2
	1.8nm,0.4s,baz=107,slow=10,SNR=10.0						
STKA	Stephens Creek	35.80	246	P	P	05 27 01.8	+1.3
	baz=36,SNR=7.6						
MMPI	Merauke	40.89	283	S	S	05 33 37.9	+26
	baz=41,SNR=4.0						
ASAR	Alice Springs	42.79	259	P	P	05 27 56.9	+0.2
	2.8nm,0.6s,baz=96,slow=8.4,SNR=44						
WRA	Warramunga Arr	43.01	264	P	P	05 27 57.8	-0.6
	1.8nm,0.3s,baz=95,slow=8.1,SNR=41						
KDU	Kakadu	46.62	273	P	P	05 28 25.6	-0.4
	baz=46,SNR=5.5						
MTN	Manton Dam	47.82	273	P	P	05 28 34.5	-0.4
	baz=48,SNR=3.2						
KNRA	Kununurra	49.18	268	P	P	05 28 34.0	-11
	baz=49,SNR=5.3						
KNRA				S	S	05 35 18.5	+11
	baz=49,SNR=4.0						
FITZ	Fitzroy Crossi	51.44	264	P	P	05 29 01.9	+0.5
	baz=51,SNR=7.1						
MJAR	Matsushiro Arr	70.79	325	P	P	05 31 06.4	-0.9
	0.8nm,0.5s,baz=136,slow=6.2,SNR=4.0						
TXAR	Lajitas Array	89.15	58	P	P	05 32 44.3	+1.0
	0.3nm,0.6s,baz=219,slow=7.0,SNR=2.7						
PDAR	Pinedale Array	91.17	44	P	P	05 32 52.1	-0.4
	0.5nm,1.0s,baz=214,slow=3.1,SNR=3.8						
AKASG	Malin Array Be	143.80	329	PKP	PKPbc	05 39 16.0	-1.2
	0.9nm,0.3s,baz=43,slow=4.1,SNR=7.2						

GUC 03 05:29:40.2±0.6, 31°.64S×67°.90W, h140km, ML3.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	2.51	245	eP	Pn	05 30 21.3	+0.3
CMCH	Combarbala	2.69	279	eP	Pn	05 30 23.7	+0.4
CMCH				eS	Sn	05 30 57.3	+0.7
PEL	Peldehue	2.79	237	eP	Pn	05 30 25.3	+0.8
PEL				eS	Sn	05 30 57.7	-1.1
PEL				AML	AML	05 31 01.9	
	comp=N,188nm,0.6s						
CLCH	Cerro Calan	2.83	231	eP	Pn	05 30 25.8	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CLCH				i S	Sn	05 31 00.5	+0.7
CLCH				AML	AML	05 31 05.9	
	comp=E,198nm,0.3s						
ROCH	El Roble	2.95	242	eP	Pn	05 30 27.4	+0.6
ROCH				eS	Sn	05 31 03.5	+0.8
ROCH				AML	AML	05 31 14.1	
	comp=N,152nm,0.3s						
CHNG	Los Chungos	3.07	265	eP	Pn	05 30 30.1	+2.0
CHNG				eS	Sn	05 31 06.7	+1.6

GUC 03 05:44:50.9±0.5, 32°.65S×71°.60W, h25km±10km, MD3.7, ML2.8, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IHA	Instituto Hidr	0.38	186 ⇓	iP	Pb	05 44 58.7	-0.5
IHA				i S	Sb	05 45 04.2	-0.6
ROCH	El Roble	0.59	124	eP	Pb	05 45 02.8	-0.2
ROCH				eS	Sb	05 45 11.7	+0.6
ROCH				AML	AML	05 45 12.8	
	comp=E,487nm,0.4s						
CHNG	Los Chungos	0.77	6	eP	Pb	05 45 05.0	-0.6
CHNG				eS	Sb	05 45 15.7	+0.1
JACH	Jahuel	0.85	93	eP	Pb	05 45 06.4	-0.7
PEL	Peldehue	0.91	123 ⇑	eP	Pb	05 45 07.6	-0.6
PEL				eS	Sb	05 45 19.7	-0.3
PEL				AML	AML	05 45 21.6	
	comp=E,834nm,0.4s						
STL	Santa Lucia	1.12	135	eP	Pn	05 45 10.6	-0.6
STL				eS	Sn	05 45 25.6	-0.3
TACH	Talagante	1.15	151	eP	Pn	05 45 11.1	-0.4
CLCH	Cerro Calan	1.16	130	eP	Pn	05 45 11.2	-0.5
CLCH				eS	Sb	05 45 27.1	-0.1
CLCH				AML	AML	05 45 33.1	
	comp=E,270nm,0.9s						
ANTU	Antumapu	1.22	139	eP	Pn	05 45 12.4	-0.1
ANTU				eS	Sn	05 45 28.6	+0.2
PCH	Pirque	1.33	137	eP	Pn	05 45 13.9	-0.1
CMCH	Combarbala	1.55	19	eP	Pn	05 45 17.3	+0.2
CMCH				i S	Sb	05 45 37.5	-0.9
CMCH				AML	AML	05 45 40.0	
	comp=E,600nm,0.6s						

CASC 03 06:00:16.1±4.1, 14°.44N×90°.53W, h35km, MD3.6, ML3.4, Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCG	Pacaya	0.09	242	eP	Pn	06 00 19.8	-2.6
GCG	Guatemala City	0.15	358	eP	Pn	06 00 21.6	-1.1
GCG				eS	Sn	06 00 26.4	-0.9
NBG	Las Nubes	0.23	49	eP	Pn	06 00 22.0	-1.6
NBG				eS	Sn	06 00 26.5	-2.3
FUG	Fuego 3	0.30	272	eP	Pn	06 00 23.6	-0.7
RBDL	Robledal	0.88	111	eP	Pn	06 00 30.5	-1.7
RTR	El Retiro	1.01	122	eP	Pn	06 00 32.9	-1.1
MRL	Marmol	1.02	52	eP	Pn	06 00 35.9	+1.6
MRL				eS	Sn	06 00 50.2	+2.7
SNJE	San Jose	1.06	122	eP	Pn	06 00 33.6	-1.1
SBLS	San Blas	1.06	124	eP	Pn	06 00 33.5	-1.3
JAT	Jato	1.08	264	eP	Pn	06 00 37.9	+3.1
JAT				eS	Sn	06 00 50.7	+2.1
MTO2	Montecristo 2	1.13	92	eP	Pn	06 00 35.1	-0.6
MTO2				eS	Sn	06 00 51.8	+1.6
BOQS	Boqueron	1.40	120	eP	Pn	06 00 39.7	+0.3
BOQS				eS	Sn	06 00 57.8	+0.9
SNET	Serv Nac Est T	1.46	120	eP	Pn	06 00 41.0	+0.8
SNET				eS	Sn	06 00 59.7	+1.5
SNET				AML	AML	06 01 01.0	
	comp=Z,511nm,0.4s						
LFU	La Fuente	1.53	116	eP	Pn	06 00 42.0	+0.9
LFU				eS	Sn	06 01 00.7	+0.8
LBRS	Las Brisas	1.60	116	eP	Pn	06 00 43.0	+1.0
LFRS	El Faro	1.64	119	eP	Pn	06 00 43.3	+0.8
SNVI	San Vicente	1.83	116	eP	Pn	06 00 46.4	+1.1
CAHU	Cacacuatique	2.34	106	eP	Pn	06 00 55.3	+2.9
VSM	San Miguel	2.41	114	eP	Pn	06 00 55.8	+2.4
TGUH	Tegucigalpa,Un	3.18	96	eP	Pn	06 01 05.7	+2.1

ISK 03 06:06:17.6, 37°.23N×28°.21E, h4km, MD2.6
DDA 03 06:06:17.5, 37°.25N×28°.24E, h7km, MD2.7
ISCJB 03 06:06:17.7±0.5, 37°.25N±0°.03×28°.22E±0°.04, h0km, Error ellipse: s-maj=5.1km s-min=3.3km az=39.6
CSEM 03 06:06:18.0±0.1, 37°.24N×28°.22E, h2km, MD2.6, Error ellipse: s-maj=2.0km s-min=1.4km az=37.0
ISC 03 06:06:18.2±1.1, 37°.25N±0°.03×28°.22E±0°.02, h0km, n22, σ0s.41/34, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.12	157	ePG	Pg	06 06 20.5	0.0
YER				eSG	Sg	06 06 22.7	+0.6
YER	Yerkesik	0.12	157	ePg	Pg	06 06 20.5	0.0
YER				eSg	Sg	06 06 22.7	+0.6
MLSB	Milas	0.36	278	ePG	Pg	06 06 24.9	-0.2
MLSB				eSG	Sg	06 06 30.6	+0.9
MLSB	Milas	0.36	278	ePg	Pg	06 06 24.9	-0.2
MLSB				eSg	Sg	06 06 30.6	+0.9
TURN	Turunc	0.48	141	eP	Pg	06 06 26.7	-0.7
TURN				i S	Sg	06 06 33.6	0.0
TURN	Turunc	0.48	141	eP	Pg	06 06 26.7	-0.7
TURN				i S	Sg	06 06 33.6	0.0
AYDN	Tasoluk	0.49	327	eP	Pg	06 06 27.6	-0.1
AYDN				eS	Sg	06 06 34.3	+0.2
AYDN	Tasoluk	0.49	327	eP	Pg	06 06 27.6	-0.1
AYDN				eS	Sg	06 06 34.3	+0.2
DALY	Dalyan (Mu˜la	0.55	141	ePG	Pg	06 06 28.7	0.0
DALY	Dalyan (Mu˜la	0.55	141	ePg	Pg	06 06 28.7	0.0
DAT	Datca	0.73	225	ePG	Pg	06 06 31.9	-0.3
DAT	Datca	0.73	225	ePg	Pg	06 06 31.9	-0.3
BODT	Bodrum	0.75	256	ePG	Pg	06 06 32.4	-0.2
BODT	Bodrum	0.75	256	ePg	Pg	06 06 32.4	-0.2
DNZL	Cakiroluk	0.79	56	eP	Pg	06 06 33.2	-0.1
DNZL				eS	Sg	06 06 43.9	+0.3
DNZL	Cakiroluk	0.79	56	eP	Pg	06 06 33.2	-0.1
DNZL				eS	Sg	06 06 43.9	+0.3
GCAM	G?zelcaml?	0.91	300	eP	Pg	06 06 35.8	+0.2
GCAM				eS	Sg	06 06 46.6	-0.8
GCAM	G?zelcaml?	0.91	300	eP	Pg	06 06 35.8	+0.2
GCAM				eS	Sg	06 06 46.6	-0.8
FETY	Fethiye	0.92	131	ePG	Pg	06 06 35.8	0.0
FETY	Fethiye	0.92	131	ePg	Pg	06 06 35.8	0.0
KULA	Kula-Manisa	1.31	15	ePN	Pb	06 06 43.7	-0.1
KULA	Kula-Manisa	1.31	15	ePn	Pb	06 06 43.7	-0.1

CSEM 03 06:13:53.9±0.1, 44°.22N×6°.83E, h5km, ML2.4/10, Error ellipse: s-maj=3.3km s-min=2.5km az=67.0
LDG 03 06:13:54.8±0.1, 44°.21N×6°.87E, h3km, Md2.4/2, Ml2.5/8, Error ellipse: s-maj=1.7km s-min=1.0km az=69.0
ISCJB 03 06:13:54.6±0.3, 44°.21N±0°.02×6°.90E±0°.03, h21km±4km, Error ellipse: s-maj=3.9km s-min=2.8km az=167.3
GEN 03 06:13:55.9, 44°.24N×6°.95E, h13km, ML1.9
STR 03 06:13:55.0±0.1, 44°.22N×6°.89E, h5km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
ISC 03 06:13:54.4±0.9, 44°.21N±0°.02×6°.90E±0°.02, h19km±2km, n49, σ0s.57/88, France

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SURF	Saint Ours	0.28	347	Pg	Pg	06 14 00.6	-0.1
SURF	Saint Ours	0.28	347	Pg	Pg	06 14 00.6	-0.1
STV	Sant Anna di V	0.31	84	P	Pb	06 14 01.5	+0.2
STV				S	Sg	06 14 05.3	-0.5
TOUF	Mont Tournerai	0.32	128	Pg	Pg	06 14 01.4	0.0
TOUF	Mont Tournerai	0.32	128	Pg	Pg	06 14 01.4	0.0
PZZ	Stroppo	0.33	28	P	Pb	06 14 01.9	0.0
PZZ				S	Sg	06 14 06.0	-0.6
MVIF	Mont Vial	0.36	150	Pg	Pg	06 14 02.0	-0.2
MVIF				Sg	Sb	06 14 07.7	-0.1
MVIF	Mont Vial	0.36	150	Pg	Pg	06 14 02.0	-0.2
MVIF				Sg	Sb	06 14 07.7	-0.1
ENR	Entracque	0.37	88	P	Pb	06 14 02.6	0.0
ENR				S	Sg	06 14 07.1	-0.6
CALN	Calern	0.46	181	Pg	Pb	06 14 03.9	-0.1
CALN				Sg	Sg	06 14 10.0	-0.2
CALN	Calern	0.46	181	Pg	Pb	06 14 03.9	-0.1
CALN				Sg	Sg	06 14 10.0	-0.2
SBF	Sospel	0.52	132	ePg	Pb	06 14 05.1	+0.2
	SNR=1.0						
SBF				eSg	Sb	06 14 12.3	+0.2
	72nm,0.3s,SNR=1.0						
SBF	Sospel	0.52	132	ePg	Pb	06 14 05.1	+0.2
	SNR=1.0						
SBF				eSg	Sb	06 14 12.3	+0.2
	36nm,0.3s,SNR=1.0						
MBDF	Montbardon	0.52	350	ePg	Pg	06 14 05.1	+0.1
	SNR=1.0						
MBDF				eSg	Sg	06 14 11.8	-0.3
	35nm,0.3s,SNR=1.0						
MBDF	Montbardon	0.52	350	ePg	Pg	06 14 05.1	+0.1
	SNR=1.0						
MBDF				eSg	Sg	06 14 11.8	-0.3
	18nm,0.3s,SNR=1.0						
SAOF	Saorge	0.52	115	Pg	Pb	06 14 05.1	+0.1
SAOF				Sg	Sb	06 14 12.2	+0.1
SAOF	Saorge	0.52	115	Pg	Pb	06 14 05.1	+0.1
SAOF				Sg	Sb	06 14 12.2	+0.1
REVF	Revere	0.58	144	Pg	Pb	06 14 06.7	+0.8
REVF	Revere	0.58	144	Pg	Pb	06 14 06.7	+0.8
REVF				Sg	Sb	06 14 14.6	+0.9
REVF				Sg	Sg	06 14 14.7	+0.9
REVF	Revere	0.58	144	Pg	Pb	06 14 06.7	+0.8
REVF				Sg	Sb	06 14 14.6	+0.9
OG22	Abries	0.61	3	Pg	Pg	06 14 06.7	+0.1
OG22				Sg	Sg	06 14 14.8	-0.1
OG22	Abries	0.61	3	Pg	Pg	06 14 06.7	+0.1
OG22				Sg	Sg	06 14 14.8	-0.1
FRF	La Foret Royal	0.68	196	ePg	Pg	06 14 07.3	-0.4
	SNR=1.0						
FRF				eSg	Sg	06 14 15.9	-0.9
	33nm,0.2s,SNR=1.0						
FRF	La Foret Royal	0.68	196	ePg	Pg	06 14 07.3	-0.4
	SNR=1.0						
FRF				eSg	Sg	06 14 15.9	-0.9
	17nm,0.2s,SNR=1.0						
RORO	Rocca Rossa	0.84	96	P	Pg	06 14 10.8	-0.1
RORO				S	Sb	06 14 20.9	-0.5
LMR	La Mourre	0.92	198	ePg	Pb	06 14 11.5	-0.3
LMR	La Mourre	0.92	198	ePn	Pg	06 14 12.4	+0.1
	SNR=1.0						
LMR				eSg	Sb	06 14 23.4	-0.2
	50nm,0.2s,SNR=1.0						
LMR	La Mourre	0.92	198	ePg	Pb	06 14 11.5	-0.3
LMR	La Mourre	0.92	198	ePn	Pg	06 14 12.4	+0.1
	SNR=1.0						
LMR				eSg	Sb	06 14 23.4	-0.2
	25nm,0.2s,SNR=1.0						
RSP	Reno Superiore	0.97	15	P	Pb	06 14 12.9	+0.2
RSP				S	Sb	06 14 24.2	-1.0
SMRF	Simiane la Rot	0.98	257	ePn	Pn	06 14 13.9	+0.7
	SNR=1.0						
SMRF				eSn	Sn	06 14 27.5	+0.8
	47nm,0.3s,SNR=1.0						
SMRF	Simiane la Rot	0.98	257	ePn	Pn	06 14 13.9	+0.7
	SNR=1.0						
SMRF				eSn	Sn	06 14 27.5	+0.8
	23nm,0.3s,SNR=1.0						
ORIF	Oris-en-Rattie	1.01	314	ePg	Pb	06 14 13.6	+0.2
ORIF				eSg	Sb	06 14 26.8	+0.4
	9.8nm,0.2s,SNR=1.0						
ORIF	Oris-en-Rattie	1.01	314	ePg	Pb	06 14 13.6	+0.2
ORIF				eSg	Sb	06 14 26.8	+0.4
	4.9nm,0.2s,SNR=1.0						
PCP	Piancastagn	1.23	74	P	Pg	06 14 17.6	-0.5
PCP				S	Sb	06 14 31.9	-0.5
LPG	La Plagne	1.29	355	ePg	Pg	06 14 19.2	-0.2
	SNR=1.0						
LPG				eSn	Sb	06 14 34.0	-0.6
	8.6nm,0.5s,SNR=1.0						
LPG	La Plagne	1.29	355	ePg	Pg	06 14 19.2	-0.2
	SNR=1.0						
LPG				eSn	Sb	06 14 34.0	-0.6
	4.3nm,0.5s,SNR=1.0						
LPL	La Plagne	1.31	355	ePg	Pg	06 14 19.5	-0.2
	SNR=1.0						
LPL				eSg	Sg	06 14 36.5	-0.4
	4.6nm,0.3s						
LPL	La Plagne	1.31	355	ePg	Pg	06 14 19.5	-0.2
	SNR=1.0						
LPL				eSg	Sg	06 14 36.5	-0.4
	2.3nm,0.3s						
VIVF	Saint-Julien-l	1.72	293	ePn	Pn	06 14 24.4	+1.1
	SNR=1.0						
VIVF				eSn	Sn	06 14 44.5	-0.3
	4.7nm,0.3s,SNR=1.0						
VIVF	Saint-Julien-l	1.72	293	ePn	Pn	06 14 24.4	+1.1
	SNR=1.0						
VIVF				eSn	Sn	06 14 44.5	-0.3
	2.3nm,0.3s,SNR=1.0						
LASF	Ste Croix	2.19	268	ePn	Pn	06 14 28.0	-1.9
	SNR=1.0						
LASF				eSn	Sn	06 14 56.2	-0.3
	1.0nm,0.2s						
LASF	Ste Croix	2.19	268	ePn	Pn	06 14 28.0	-1.9
	SNR=1.0						
LASF				eSn	Sn	06 14 56.2	-0.3
	0.5nm,0.2s						
PGF	Pioggiola	2.26	137	ePn	Pn	06 14 31.3	+0.5
	SNR=1.0						
PGF				eSn	Sn	06 14 57.5	-0.8
	3.0nm,0.2s						
PGF	Pioggiola	2.26	137	ePn	Pn	06 14 31.3	+0.5
	SNR=1.0						
PGF				eSn	Sn	06 14 57.5	-0.8
	1.5nm,0.2s						
CABF	La Chapelle	2.47	347	ePg	Pb	06 14 39.0	+0.8
	SNR=1.0						
CABF	La Chapelle	2.47	347	ePg	Pb	06 14 39.0	+0.8
	SNR=1.0						
CAF	Calviac	3.53	283	ePn	Pn	06 14 49.0	+0.8
	SNR=1.0						
CAF	Calviac	3.53	283	ePn	Pn	06 14 49.0	+0.8
	SNR=1.0						

NEIC 03 06:44:32.9, 51°.05N×179°.54W, h2km, ML3.4(AEIC), After AEIC.
ISCJB 03 06:44:33.4±0.9, 50°.87N±0°.09×179°.50W±0°.08, h43km, mb3.8/6, Error ellipse: s-maj=14.0km s-min=6.4km az=18.7
IDC 03 06:44:39.0±4.4, 51°.24N×179°.43W, h76km±34km, mb3.5/6, mb1 3.7/8, mb1mx3.4/28, mbtmp3.5/8, MS3.0/2, Ms1 3.0/2, ms1mx2.6/29, Error ellipse: s-maj=67.6km s-min=17.6km az=173.0
ISC 03 06:44:34.5±1.1, 51°.0N±0°.1×179°.31W±0°.06, h43km, n22, σ1s.37/22, mb3.8/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.96	295	P	Pn	06 44 49.6	-2.0
AMKA				S	Sn	06 45 00.7	-3.4
CERAA	Semis' Rag'd T	1.13	327	P	Pn	06 44 52.4	-1.4
CERB	Semis' Cerberu	1.17	326	P	Pn	06 44 53.3	-1.1
CERB				S	Sn	06 45 09.2	+0.1
CEAP	Semis' Anvil P	1.24	326	P	Pn	06 44 55.2	-0.2
CETU	Semis' Tuman	1.24	324	P	Pn	06 44 55.4	-0.1
LSSE	Little Sitkin	1.64	307	P	Pn	06 45 00.6	-0.2
LSPA	Little Sitkin	1.65	307	P	Pn	06 45 00.7	-0.3
LSPA				S	Sn	06 45 23.4	+2.5
LSSA	Little Sitkin	1.68	307	P	Pn	06 45 01.1	-0.3
LSNW	Little Sitkin	1.69	307	P	Pn	06 45 00.8	-0.7
ATKA	Atka Island	3.42	67	P	Pn	06 45 28.8	+3.6
KOFP	Korovin Flat P	3.50	66	P	Pn	06 45 29.8	+3.3
FX1	Attu Island--F	5.03	295	P	Pn	06 45 47.5	+0.1
FX1	Attu Island--F	5.03	295	P	Pn	06 45 49.1	+1.8
	7.9nm,0.3s,baz=225,slow=9.2,SNR=9.5						
FX1				S	Sn	06 46 52.8	+8.6
	0.8nm,0.3s,baz=99,slow=24,SNR=3.1						
FX1				LR	LR	06 47 41.9	
	comp=Z,154nm,21.0s,baz=153,slow=38						
NIKO	Nikolski	6.77	69	ePn	Pn	06 46 03.9	-7.2
NIKO				eSn	Sn	06 47 25.3	-1.5
PETK	Petropavlovsk-	14.30	288	LR	LR	06 53 20.6	
	comp=Z,52nm,18.2s,baz=275,slow=37						
KDAK	Kodiak Island	16.92	56	P	P	06 48 30.9	+1.6
	0.6nm,0.3s,baz=270,slow=8.1,SNR=6.2						
YKA	Yellowknife Ar	35.74	46	P	P	06 51 28.3	-0.4
	0.7nm,0.6s,baz=281,slow=7.7,SNR=21						
KSRS	Korea Array	39.32	271	P	P	06 51 59.8	+0.6
	1.1nm,0.8s,baz=50,slow=7.7,SNR=5.9						
SONM	Songino Array	46.54	297	P	P	06 52 58.0	+0.3
	1.3nm,0.7s,baz=46,slow=8.6,SNR=4.2						
PDAR	Pinedale Array	46.74	72	P	P	06 53 00.5	+1.0
	0.6nm,0.6s,baz=285,slow=3.1,SNR=6.3						
MKAR	Makanchi Array	60.03	308	P	P	06 54 36.0	-0.6
	1.1nm,0.5s,baz=52,slow=6.1,SNR=16						
GERES	GERESS Array B	79.94	351	P	P	06 56 38.0	-0.7
	0.4nm,0.5s,baz=24,slow=7.3,SNR=7.9						

IDC 03 07:00:33.8±2.7, 7°.38S×119°.07E, h0km, mb3.0/2, mb1 3.2/3, mb1mx3.1/21, mbtmp3.0/3, ML2.9/1, Error ellipse: s-maj=253.2km s-min=28.4km az=53.0, Flores Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.37	132	P	P	07 05 00.4	-0.8
	0.0nm,0.3s,baz=306,slow=12,SNR=3.0						
ASAR	Alice Springs	21.56	140	P	P	07 05 25.8	+0.7
	0.2nm,0.4s,baz=316,slow=9.0,SNR=6.8						
MKAR	Makanchi Array	63.06	333	P	P	07 11 02.9	0.0
	0.1nm,0.4s,baz=143,slow=7.2,SNR=3.6						

MEX 03 08:08:55.2±0.7, 18°.52N×103°.00W, h10km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.40	235	i P	Pg	08 09 02.3	-0.7
MMIG				eS	Sg	08 09 08.8	+0.5
EZ5V		1.11	329	i P	Pb	08 09 14.0	-2.9
EZ5V				i S	Sg	08 09 27.9	-3.8
R15V		1.13	305	i P	Pb	08 09 12.9	-4.1
R15V				i S	Sb	08 09 27.4	-4.5

BJI 03 08:18:39.5, 49°.40N×156°.10E, h50km, mB4.6/3, mb4.4/5, Ms4.7/2, Ms7 4.3/2
KRSC 03 08:18:43.2±1.1, 49°.80N×157°.33E, h10km±10km, ML4.6
MOS 03 08:18:43.0±1.0, 49°.72N×156°.71E, h122km, mb3.9/13, Error ellipse: s-maj=15.2km s-min=7.2km az=79.1
IDC 03 08:18:46.7±2.2, 49°.83N×156°.11E, h102km±18km, mb3.6/13, mb1 3.8/16, mb1mx3.6/28, mbtmp3.6/16, Error ellipse: s-maj=22.2km s-min=11.7km az=148.0
ISC 03 08:18:40.9±0.8, 49°.47N±0°.06×156°.65E±0°.06, h54km±5km, n74, σ1s.65/100, mb4.1/18, 1C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.26	345 ⇑	iPN	Pn	08 18 58.6	-3.6
SKR				pmax	pmax		
	comp=Z,390nm,0.5s						
SKR				pmax	pmax		
	comp=N,240nm,0.4s						
SKR	Severo-Kuril's	1.26	345	i P	Pn	08 19 02.7	+0.5
SKR				i S	Sn	08 19 17.0	-1.1
PAU	Pauzhetka	2.00	3	PN	Pn	08 19 13.5	+1.2
PAU				S	Sn	08 19 35.4	-0.7
PAU	Pauzhetka	2.00	3	i P	Pn	08 19 13.5	+1.2
PAU				i S	Sn	08 19 35.4	-0.7
MIPR	Malaya Ipel'ka	2.81	1	eP	Pn	08 19 24.8	+1.5
MIPR				i S	Sn	08 19 55.3	-0.7
ASAK	Asacha	3.02	15	eP	Pn	08 19 27.5	+1.2
ASAK				i S	Sn	08 20 00.4	-0.9
MTVR	Mutnovka	3.17	17	eP	Pn	08 19 29.5	+1.1
MTVR				i S	Sn	08 20 03.4	-1.6
RUS	Russkaya	3.19	21	PN	Pn	08 19 29.1	+0.6
RUS				S	Sn	08 20 03.0	-2.3
RUS	Russkaya	3.19	21	i P	Pn	08 19 29.1	+0.6
RUS				i S	Sn	08 20 03.0	-2.3
GRL	Gorelyy	3.21	16	i P	Pn	08 19 30.6	+1.6
GRL				i S	Sn	08 20 05.2	-0.8
APC	Apacha	3.47	5	i P	Pn	08 19 34.0	+1.6
APC				i S	Sn	08 20 10.8	-1.4
PETK	Petropavlovsk-	3.70	10	PN	Pn	08 19 37.5	+2.0
PETK				S	Sn	08 20 18.8	+1.0
PETK				pmax	pmax		
	comp=Z,25nm,0.3s						
PETK				smax	smax		
	comp=N,3.0nm,0.3s						
PETK	Petropavlovsk-	3.70	10	P	Pn	08 19 37.5	+2.0
	comp=N,25nm,0.3s,baz=183,slow=14,SNR=248						
PETK				S	Sn	08 20 18.8	+1.0
	comp=N,2.9nm,0.3s,baz=161,slow=18,SNR=2.2						
PET	Petropavlovsk	3.77	19 ⇓	iPN	Pn	08 19 37.7	+1.3
PET				i S	Sn	08 20 18.0	-1.6
PET				pmax	pmax		
	comp=Z,182nm,0.5s						
PET				smax	smax		
	comp=E,280nm,0.5s						
PET				smax	smax		
	comp=N,284nm,0.5s						
PET	Petropavlovsk	3.77	19	eP	Pn	08 19 37.8	+1.3
PET				i S	Sn	08 20 17.8	-1.8
UGLR	Uglovaya	3.98	19	i P	Pn	08 19 41.2	+1.7
UGLR				i S	Sn	08 20 24.0	-0.9
AVH	Avacha	4.02	18	eP	Pn	08 19 42.2	+2.3
AVH				i S	Sn	08 20 25.4	-0.3
KOK	Koryaka	4.02	17	i P	Pn	08 19 42.5	+2.5
KOK				eS	Sn	08 20 26.1	+0.2
SMAR	Somma	4.03	19	P	Pn	08 19 41.8	+1.6
KRER	Koryakskii	4.06	18	i P	Pn	08 19 42.7	+2.1
KRER				i S	Sn	08 20 25.9	-1.0
SDLR	Sedlovina	4.06	19	i P	Pn	08 19 41.7	+1.1
SDLR				i S	Sn	08 20 24.8	-2.1
NLC	Nalytchevo	4.07	24	PN	Pn	08 19 40.5	-0.1
NLC				S	Sn	08 20 22.4	-4.5
NLC	Nalytchevo	4.07	24	i P	Pn	08 19 40.5	-0.1
NLC				i S	Sn	08 20 22.4	-4.5
SPN	Mys Shipunski	4.21	29	PN	Pn	08 19 43.3	+0.9
SPN				S	Sn	08 20 27.7	-2.5
SPN	Mys Shipunski	4.21	29	eP	Pn	08 19 43.3	+0.9
SPN				i S	Sn	08 20 27.7	-2.5
GNL	Ganaly	4.31	10	i P	Pn	08 19 45.9	+2.0
KII	Karymskiy	4.89	20	eP	Pn	08 19 54.0	+2.1
KII				i S	Sn	08 20 45.5	-1.7
MKZ	Mys Kozlova	5.98	30	PN	Pn	08 20 06.5	-0.2
MKZ				S	Sn	08 21 07.4	-6.3
MKZ	Mys Kozlova	5.98	30	eP	Pn	08 20 06.5	-0.2
MKZ				i S	Sn	08 21 07.4	-6.3
TUMR	Tumrok	6.20	19	P	Pn	08 20 10.9	+1.0
ESO	Esso	6.58	10	PN	Pn	08 20 16.2	+1.2
ESO	Esso	6.58	10	P	Pn	08 20 16.2	+1.2
KMNR	Kamenistaya	6.66	18	eP	Pn	08 20 18.0	+1.8
KPT	Kopyto	6.86	17	P	Pn	08 20 20.1	+1.3
BZMR	Bezymyannaya	6.88	18	P	Pn	08 20 20.9	+1.7
KOZ	Kozyrevsk	6.88	15	P	Pn	08 20 20.2	+1.1
KOZR	Kozyr	6.89	15	PN	Pn	08 20 20.2	+1.0
BZWR	Bezymyannyi-We	6.91	18	P	Pn	08 20 20.3	+0.7
BZGR	Bezymyannyi-Gr	6.93	19	P	Pn	08 20 21.4	+1.6
SRDR	Sredinnyy	7.10	14	P	Pn	08 20 22.9	+0.7
KRSR	Krestovskiy	7.16	18	P	Pn	08 20 23.1	+0.1
BDR	Baidarnaya	7.62	19	P	Pn	08 20 29.2	0.0
SMKR	Semkarok	7.69	20	P	Pn	08 20 29.4	-0.8
SRKR	Sorokina	7.69	19	P	Pn	08 20 30.6	+0.4
BKI	Bering	8.09	41	PN	Pn	08 20 35.4	-0.2
BKI	Bering	8.09	41	eP	Pn	08 20 35.4	-0.2
BKI				i S	Sn	08 21 56.9	-8.7
YUK	Yuzh-Kuril'sk	9.18	238	ePN	Pn	08 20 52.3	+1.7
YUK				pmax	pmax		
	comp=Z,39nm,0.5s						
YUK				pmax	pmax		
	comp=N,15nm,0.2s						
YUK				pmax	pmax		
	comp=E,21nm,0.5s						
ASAJ	Asahikawa	11.02	246	P	Pn	08 21 17.9	+2.3
	comp=E,0.4nm,0.3s,baz=90,slow=20,SNR=3.1						
MJAR	Matsushiro Arr	18.61	233	P	Pn	08 22 55.4	+0.9
	comp=E,0.4nm,0.3s,baz=27,slow=7.4,SNR=7.8						
BILL	Bilibino	19.23	11 ⇓	eP	P	08 22 59.8	-0.5
BILL				pmax	pmax		
	comp=Z,13nm,1.0s						
YAK	Yakutsk	19.52	320	eP	P	08 23 00.0	-3.4
KSRS	Korea Array	23.91	251	P	P	08 23 49.4	0.0
	comp=Z,1.1nm,0.8s,baz=45,slow=10,SNR=4.7						
COLA	College	32.53	41	eP	P	08 25 06.5	+0.4
ZAK	Zakamensk	33.75	292	eP	P	08 25 13.5	-3.6
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	38.08	34	P	P	08 25 54.0	+0.3
	comp=Z,1.3nm,0.7s,baz=277,slow=6.8,SNR=8.9						

HVS	Khovu-Aksy	39.15	297	eP	P	08 25 59.7	-3.3
HVS				pmax	pmax		
	comp=Z,11nm,0.8s						
ZALV	Zalesovo Beam	42.98	305	P	P	08 26 31.3	-3.0
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	42.98	305	P	P	08 26 31.3	-3.0
	comp=Z,1.6nm,0.4s,baz=58,slow=6.6,SNR=4.3						
YKA	Yellowknife Ar	47.32	39	P	P	08 27 09.1	+0.5
	comp=Z,0.5nm,0.7s,baz=297,slow=7.6,SNR=8.5						
MKAR	Makanchi Array	47.81	297	i P	P	08 27 10.0	-2.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	47.81	297	P	P	08 27 10.1	-2.6
	comp=Z,1.3nm,0.4s,baz=58,slow=7.2,SNR=26						
KURK	Kurchatov	47.85	303	eP	P	08 27 09.3	-3.6
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BRVK	Borovoye	51.00	309	eP	P	08 27 33.9	-3.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	55.30	257	P	P	08 28 08.1	-0.8
	comp=Z,1.2nm,0.5s,baz=34,slow=6.3,SNR=5.4						
KSH	Kashi	55.80	293	eP	P	08 28 14.1	+1.7
KSH				epP	pP	08 28 26.8	-0.3
KSH				esP	sP	08 28 32.3	-1.0
KSH				ePcP	PcP	08 29 12.5	+1.6
KSH				ePP	PP	08 30 20.3	+3.3
KSH				eScP	ScP	08 33 06.2	+1.2
KSH				ePcS	PcS	08 33 11.3	0.0
KSH				eS	S	08 35 56.7	+1.3
KSH				esS	sS	08 36 17.6	-2.4
KSH				eScS	ScS	08 37 55.5	-1.2
KSH				eSS	SS	08 39 42.2	+1.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,230nm,5.1s						
KSH				LR	LR		
	comp=N,520nm,8.4s						
KSH				LR	LR		
	comp=E,530nm,9.2s						
KSH				LR	LR		
	comp=Z,320nm,7.5s						
ARCES	ARCESS Array B	56.04	341	P	P	08 28 10.0	-3.5
	comp=Z,2.7nm,0.8s,baz=35,slow=8.2,SNR=11						
NVAR	Mina Array Bea	59.11	66	P	P	08 28 37.2	+1.3
	comp=Z,0.9nm,0.6s,baz=298,slow=7.8,SNR=7.3						
PDAR	Pinedale Array	61.25	57	P	P	08 28 51.7	+1.3
	comp=Z,1.0nm,0.9s,baz=350,slow=2.7,SNR=6.5						
FINES	FINESS Array B	62.56	336	P	P	08 28 55.2	-3.4
	comp=Z,1.1nm,0.7s,baz=42,slow=6.4,SNR=6.2						
TXAR	Lajitas Array	74.12	63	P	P	08 30 12.9	+1.4
	comp=Z,0.7nm,0.6s,baz=305,slow=4.9,SNR=15						
KHC	Kasperske Hory	76.76	336	eP	P	08 30 25.6	-0.6
KHC	Kasperske Hory	76.76	336	eP	P	08 30 25.6	-0.6
GERES	GERESS Array B	76.99	336	P	P	08 30 25.7	-1.9
	comp=Z,0.7nm,0.6s,baz=31,slow=6.2,SNR=5.5						
BRTR	Keskin Array B	77.97	319	P	P	08 30 31.1	-2.2
	comp=Z,1.2nm,0.9s,baz=41,slow=3.9,SNR=7.1						

*ISK **03** 08:20:31.2, 37°.10N×28°.30E, h27km, MD2.4*
*DDA **03** 08:20:32.9, 36°.97N×28°.21E, h5km, MD2.7*
*CSEM **03** 08:20:32.8±0.4, 36°.98N×28°.25E, h10km, MD2.4, Error ellipse: s-maj=9.4km s-min=7.4km az=12.0*
*ISCJB **03** 08:20:32.9±0.8, 36°.99N±0°.04×28°.18E±0°.05, h4km±8km, Error ellipse: s-maj=7.5km s-min=6.0km az=38.7*
ISC 03 08:20:31.4±1.2, 36°.92N±0°.05×28°.16E±0°.05, h12km±11km, n16, σ1s.53/26, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.24	25	ePG	Pg	08 20 36.4	0.0
YER				eSG	Sg	08 20 39.6	-0.2
YER	Yerkesik	0.24	25	ePg	Pg	08 20 36.4	0.0
YER				eSg	Sg	08 20 39.6	-0.2
TURN	Turunc	0.36	97	i P	Pg	08 20 37.1	-1.5
TURN				i S	Sg	08 20 40.5	-3.0
TURN	Turunc	0.36	97	i P	Pg	08 20 37.1	-1.5
TURN				i S	Sg	08 20 40.5	-3.0
DALY	Dalyan (Mu˜la	0.41	104	ePG	Pb	08 20 39.9	-0.7
DALY				eSG	Sn	08 20 47.7	+2.7
DALY	Dalyan (Mu˜la	0.41	104	ePg	Pb	08 20 39.9	-0.7
DALY				eSg	Sn	08 20 47.7	+2.7
DAT	Datca	0.50	248	ePG	Pn	08 20 45.4	+0.9
DAT	Datca	0.50	248	ePg	Pn	08 20 45.4	+0.9
BODT	Bodrum	0.69	282	ePG	Pn	08 20 46.9	-0.1
BODT	Bodrum	0.69	282	ePg	Pn	08 20 46.9	-0.1
AYDN	Tasoluk	0.77	344	i P	Pn	08 20 47.4	-0.8
AYDN				i S	Sg	08 20 55.8	-0.7
AYDN	Tasoluk	0.77	344	i P	Pn	08 20 47.4	-0.8
AYDN				i S	Sg	08 20 55.8	-0.7
DNZL	Cakiroluk	1.05	42	i P	Pg	08 20 50.6	-0.9
DNZL				i S	Sn	08 21 04.8	-2.0
DNZL	Cakiroluk	1.05	42	i P	Pg	08 20 50.6	-0.9
DNZL				i S	Sn	08 21 04.8	-2.0
GOLH	Golhisar	1.17	74	i P	Pg	08 20 54.6	+0.8
GOLH				i S	Sg	08 21 11.0	+1.9
GOLH	Golhisar	1.17	74	i P	Pg	08 20 54.6	+0.8
GOLH				i S	Sg	08 21 11.0	+1.9

*ISCJB **03** 08:26:41.5±0.6, 5°.91S±0°.05×146°.4E±0°.1, h52km, mb4.2/11, MS3.0/1, Error ellipse: s-maj=18.2km s-min=6.6km az=176.4*
*IDC **03** 08:26:48.2±2.2, 6°.06S×146°.44E, h102km±21km, mb4.0/8, mb1 4.3/10, mb1mx4.0/16, mbtmp4.1/10, MS3.2/1, Ms1 3.2/1, ms1mx2.5/31, Error ellipse: s-maj=25.2km s-min=15.0km az=88.0*
*NEIC **03** 08:26:49.9±0.4, 6°.05S×146°.41E, mb4.6/1, Error ellipse: s-maj=13.3km s-min=7.0km az=94.0*
ISC 03 08:26:42.9±0.7, 5°.90S±0°.06×146°.4E±0°.2, h52km, n39, σ0s.97/38, mb4.2/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.56	168	ePn	Pn	08 27 40.6	+4.9
PMG				eSn	Sn	08 28 18.8	+2.4
PMG				S		08 28 19.1	
PMG	Port Moresby	3.56	168	P	Pn	08 27 40.5	+4.9
	32nm,0.3s,baz=14,slow=4.6,SNR=99						
PMG				S	Sn	08 28 19.1	+2.7
	120nm,0.3s,baz=169,slow=20,SNR=29						
CTA	Charters Tower	14.10	181	P	Pn	08 30 04.0	+4.1
CTA				S	Sn	08 32 34.8	-0.3
CTA	Charters Tower	14.10	181	P	Pn	08 30 04.0	+4.1
	1.0nm,0.3s,baz=358,slow=13,SNR=12						
CTA				S	Sn	08 32 34.8	-0.3
	0.5nm,0.3s,baz=49,slow=20,SNR=4.6						
WRAB	Tennant Creek	18.24	219	eP	P	08 30 52.3	+0.3
	25nm,0.6s						
WRA	Warramunga Arr	18.25	219	P	P	08 30 52.3	+0.1
WRA	Warramunga Arr	18.25	219	P	P	08 30 52.3	+0.1
	2.8nm,0.3s,baz=32,slow=11,SNR=112						
AS31	Alice Springs	21.39	213	eP	P	08 31 26.5	+0.1
ASAR	Alice Springs	21.39	213	P	P	08 31 26.9	+0.5
ASAR	Alice Springs	21.39	213	P	P	08 31 26.9	+0.5
	10nm,0.4s,baz=47,slow=8.7,SNR=193						
FITZ	Fitzroy Crossi	23.64	237	P	P	08 31 49.4	-0.3
FITZ	Fitzroy Crossi	23.64	237	P	P	08 31 49.4	-0.3
	18nm,0.7s,baz=52,slow=10.0,SNR=34						
STKA	Stephens Creek	26.24	189	P	P	08 32 12.2	-0.9
	9.8nm,0.9s						
STKA	Stephens Creek	26.24	189	P	P	08 32 12.2	-0.9
	3.5nm,0.7s,baz=350,slow=9.0,SNR=11						
KAPI	Kappang	26.57	271	LR	LR	08 44 35.3	
	comp=Z,42nm,18.2s,baz=288,slow=40						
YHNB	Yeheng	38.97	322	eP	P	08 34 04.4	+0.1
	42nm,0.3s						
KSRS	Korea Array	46.46	340	P	P	08 35 05.9	+1.1
	0.4nm,0.5s,baz=152,slow=7.9,SNR=2.7						
KSAR	Wonju Array Be	46.46	340	P	P	08 35 05.9	+1.1
USRK	Ussuriysk Arra	51.54	347	P	P	08 35 44.3	+0.8
	1.3nm,0.5s,baz=167,slow=7.1,SNR=4.6						
CMAR	Chiang Mai Arr	52.71	298	P	P	08 35 53.7	+1.0
CMAR				pP	pP	08 36 23.4	+17
CMAR	Chiang Mai Arr	52.71	298	P	P	08 35 53.7	+1.0
	0.6nm,0.4s,baz=126,slow=6.8,SNR=3.4						
CMAR				pP	pP	08 36 23.4	+17
	0.9nm,0.4s,baz=123,slow=6.1,SNR=2.3						
PETK	Petropavlovsk-	59.56	8	P	P	08 36 42.0	+1.0
PETK	Petropavlovsk-	59.56	8	P	P	08 36 42.0	+1.0
	10nm,1.0s,baz=175,slow=8.2,SNR=7.6						
VNDA	Vanda	72.04	177	P	P	08 38 00.0	-1.0
VNDA	Vanda	72.04	177	P	P	08 38 00.0	-1.0
	1.8nm,0.6s,baz=321,slow=6.7,SNR=10.0						
MKAR	Makanchi Array	77.06	321	P	P	08 38 30.6	0.0
MKAR				pP	pP	08 39 00.3	+15
MKAR	Makanchi Array	77.06	321	P	P	08 38 30.7	0.0
	0.2nm,0.6s,baz=112,slow=6.4,SNR=2.7						
MKAR				pP	pP	08 39 00.3	+15
	0.3nm,0.5s,baz=108,slow=6.1,SNR=3.2						
YKA	Yellowknife Ar	99.35	28	P	Pdif	08 40 19.0	-0.3
YKA	Yellowknife Ar	99.35	28	P	Pdif	08 40 19.0	-0.3
	0.2nm,0.7s,baz=270,slow=5.1,SNR=7.0						
LPAZ	La Paz	139.31	123	PKP	PKPdf	08 46 05.0	-1.1
LPAZ	La Paz	139.31	123	PKP	PKPdf	08 46 05.0	-1.1
	0.7nm,0.5s,baz=270,slow=4.4,SNR=7.8						
TOA0	Torodi Ar. Sit	144.52	284	ePKPdf	PKPab	08 46 12.6	-0.5
TORD	Torodi Ar. Bea	144.52	284	PKP	PKPab	08 46 12.8	-0.3
TORD	Torodi Ar. Bea	144.52	284	PKP	PKPab	08 46 12.8	-0.3
	11nm,0.7s,baz=81,slow=2.9,SNR=67						
STVI	Saint Thomas	146.98	65	ePKPbc	PKPdf	08 46 18.3	-0.4
DBIC	Dimbokro	151.45	273	PKPbc	PKPbc	08 46 31.2	-1.0
DBIC	Dimbokro	151.45	273	PKPbc	PKPbc	08 46 31.2	-1.0
	7.9nm,0.6s,baz=131,slow=2.7,SNR=12						
BDFB	Brasilia	154.25	146	PKPbc	PKPbc	08 46 37.2	-1.2
BDFB	Brasilia	154.25	146	PKPbc	PKPbc	08 46 37.2	-1.2
	3.6nm,0.9s,baz=232,slow=2.9,SNR=6.2						

NNC 03 09:04:53.3±3.4, 53°.96N×86°.35E, h0km, mb3.9, mpv3.5, 12C-5D, Error ellipse: s-maj=27.3km s-min=16.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	Kurchatov	5.74	239	⇑Pn	Pn	09 06 21.7	+2.0
	9.5nm,0.8s						
KURK				⇑Sn	Sn	09 07 31.2	+4.9
	4.3nm,0.7s						
KURK				⇑Lg	Lg	09 07 52.7	
	25nm,1.0s						
KUR15	Kurchatov Arra	5.83	238	⇑Sn	Sn	09 07 32.7	+4.3
	0.2nm,0.8s						
KUR15				⇑Lg	Lg	09 07 59.2	
	1.4nm,0.9s						
KUR17	Kurchatov Arra	5.87	239	⇓Pn	Pn	09 06 23.8	+2.4
	0.8nm,0.5s						
MK31	Makanchi Array	7.62	201	⇓Pn	Pn	09 06 48.1	+2.5
	0.6nm,0.2s,baz=25,slow=12,SNR=40						
MK31				⇑Sn	Sn	09 08 17.8	+5.1
	2.6nm,0.5s,baz=25,slow=28,SNR=7.6						
MK31				⇑Lg	Lg	09 08 50.7	
	19nm,0.8s,baz=29,slow=30,SNR=7.2						
VOSK	Vostochnaya	9.28	269	⇑Pn	Pn	09 07 07.1	-1.1
	3.9nm,0.6s						
VOSK				⇓Sn	Sn	09 08 49.8	-3.5
	14nm,0.9s						
BVA0	Borovoye Array	9.56	271	⇑Pn	Pn	09 07 12.9	+0.9
	0.3nm,0.5s,baz=76,slow=15,SNR=12						
BVA0				⇑Sn	Sn	09 08 58.7	-1.5
	0.9nm,1.0s,baz=73,slow=24,SNR=3.9						
BRVK	Borovoye	9.62	271	⇑Pn	Pn	09 07 13.5	+0.7
	2.6nm,0.5s						
BRVK				⇓Sn	Sn	09 08 59.0	-2.5
	6.9nm,0.8s						
ZRNK	Zerenda	10.39	271	⇑Pn	Pn	09 07 24.0	+0.6
	2.9nm,0.5s						
ZRNK				⇓Sn	Sn	09 09 17.0	-3.6
	8.5nm,0.9s						

*NSSC **03** 09:18:07.4±1.6, 36°.64N×36°.19E, h1km±12km, MD0.8, ML2.0*
*DDA **03** 09:18:16.1, 36°.49N×36°.96E, h7km, MD2.8*
*CSEM **03** 09:18:16.1, 36°.49N×36°.96E, h7km, MD2.8, After DDA*
ISC 03 09:18:15.8±1.8, 36°.53N±0°.06×36°.90E±0°.07, h0km±13km, n11, σ1s.10/13, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRWC	Darouich	0.21	296	eP	Pg	09 18 16.2	-3.7
DRWC				eS	Sg	09 18 20.5	-2.1
DRWC				AML	AML	09 18 22.7	
	comp=E,237nm,0.6s						
DRWC				AML	AML	09 18 25.3	
	comp=N,98nm,0.5s						
KUZU	Kuzuini	0.28	29	i P	Pg	09 18 21.3	+0.1
KUZU	Kuzuini	0.28	29	i P	Pg	09 18 21.3	+0.1
BTCH	Batrach	0.61	216	eP	Pg	09 18 19.2	-8.2
BTCH				eS	Sg	09 18 29.4	-5.9
BTCH				AML	AML	09 18 35.0	
	comp=E,42nm,0.3s						
BTCH				AML	AML	09 18 36.2	
	comp=N,69nm,0.3s						
YAYL	Yayladag	0.81	233	i P	Pg	09 18 31.8	+0.5
YAYL				i S	Sb	09 18 45.1	+0.8
YAYL	Yayladag	0.81	233	i P	Pg	09 18 31.8	+0.5
YAYL				i S	Sb	09 18 45.1	+0.8
AYKD	Aykdinkavak	0.89	355	i P	Pg	09 18 34.2	+1.4
AYKD				i S	Sn	09 18 48.9	-0.2
AYKD	Aykdinkavak	0.89	355	i P	Pg	09 18 34.2	+1.4
AYKD				i S	Sn	09 18 48.9	-0.2
GZT	Gaziantep	0.98	32	i P	Pn	09 18 36.4	-0.5
GZT				i S	Sb	09 18 49.9	+0.6
WRDH	Warideh	1.09	201	eP	Pg	09 18 28.7	-8.1
BIDA	Albida	1.58	198	eP	Pn	09 18 36.7	-8.5
BIDA				eS	Sn	09 18 58.6	-7.8
BIDA				AML	AML	09 19 00.7	
	comp=N,34nm,0.3s						
BIDA				AML	AML	09 19 03.2	
	comp=E,31nm,0.3s						

MEX 03 09:47:15.7±0.7, 16°.59N×100°.44W, h5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.49	20	i P	Pg	09 47 24.2	-0.9
CAIG				eS	Sg	09 47 32.3	+0.8
ACP2	Acapulco	0.60	62	i P	Pg	09 47 26.7	-0.7
ACP2				eS	Sg	09 47 36.0	+0.7
ACX	Acapulco	0.63	63	i P	Pg	09 47 26.7	-1.1
ACX				i S	Sg	09 47 35.5	-0.5
ARIG	Puente Sto Nin	1.69	3	eP	Pn	09 47 43.1	-2.8
ARIG				eS	Sn	09 48 03.0	-5.0
YAIG	Yautepec	2.61	30	i P	Pn	09 47 55.3	-3.5
YAIG				i S	Sn	09 48 26.9	-4.2

*ISCJB **03** 10:03:23.0±3.0, 38°.08N±0°.07×25°.8E±0°.2, h7km±18km, Error ellipse: s-maj=26.4km s-min=6.4km az=20.2*
*ATH **03** 10:03:23.3, 38°.09N×25°.88E, h26km±12km*
*CSEM **03** 10:03:23.4±0.3, 38°.06N×25°.80E, h10km, MD2.9, Error ellipse: s-maj=11.8km s-min=4.6km az=116.0*
*DDA **03** 10:03:28.5, 38°.05N×26°.22E, h2km, MD2.9*
ISC 03 10:03:23.5±1.4, 38°.09N±0°.04×25°.83E±0°.10, h13km±11km, n10, σ0s.36/20, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	Chios island	0.34	31	ePB	Pb	10 03 31.3	-0.3
CHOS				eSB	Sb	10 03 36.5	-0.5
CHOS	Chios island	0.34	31	ePb	Pb	10 03 31.3	-0.3
CHOS				eSb	Sb	10 03 36.5	-0.5
URLA	Izmir	0.66	66	i P	Pb	10 03 36.6	-0.3
URLA				i S	Sb	10 03 46.0	0.0
URLA	Izmir	0.66	66	i P	Pb	10 03 36.6	-0.3
URLA				i S	Sb	10 03 46.0	0.0
APE	Apeiranthos	1.05	193	ePN	Pg	10 03 43.6	-0.1
APE				eSN	Sn	10 03 58.7	+0.3
APE	Apeiranthos	1.05	193	ePn	Pg	10 03 43.6	-0.1
APE				eSn	Sn	10 03 58.7	+0.3
PRK	Paraskevi	1.21	16	ePN	Pn	10 03 46.1	0.0
PRK				eSN	Sn	10 04 02.6	+0.4
PRK	Paraskevi	1.21	16	ePn	Pn	10 03 46.1	0.0
PRK				eSn	Sn	10 04 02.6	+0.4
AYVA	Ayvalik	1.39	29	eP	Pg	10 03 50.1	-0.1
AYVA				eS	Sg	10 04 08.9	+0.6
AYVA	Ayvalik	1.39	29	eP	Pg	10 03 50.1	-0.1
AYVA				eS	Sg	10 04 08.9	+0.6

KRSC 03 10:22:17.3±0.1, 55°.86N×161°.66E, h79km±69km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	Zelenaya	0.51	288	P	Pn	10 22 32.3	+1.2
ZLN				i S	Sn	10 22 43.2	+1.8
BZGR	Bezymyannyi-Gr	0.55	279	P	Pn	10 22 32.6	+1.1
BZGR				i S	Sn	10 22 44.1	+2.1
CIRR	Tsirk	0.57	297	P	Pn	10 22 32.6	+0.8
CIRR				i S	Sn	10 22 44.0	+1.5
LGNR	Loginova	0.59	293	P	Pn	10 22 33.2	+1.1
LGNR				i S	Sn	10 22 44.1	+1.0
BZMR	Bezymyannaya	0.66	277	P	Pn	10 22 33.7	+1.0
BZMR				i S	Sn	10 22 45.9	+1.8
BZWR	Bezymyannyi-We	0.66	280	P	Pn	10 22 33.9	+1.2
BZWR				i S	Sn	10 22 46.2	+2.1
KRSR	Krestovskiy	0.71	301	P	Pn	10 22 33.5	+0.4
KRSR				i S	Sn	10 22 45.4	+0.5
KLY	Klyuchi	0.72	309	P	Pn	10 22 32.6	-0.5
KLY				i S	Sn	10 22 44.0	-0.8
SMKR	Semkarok	0.73	352	P	Pn	10 22 33.9	+0.6
SMKR				i S	Sn	10 22 46.2	+1.0
KBTR	Krutoberegovo	0.74	61	P	Pn	10 22 35.0	+1.7
KBTR				i S	Sn	10 22 48.0	+2.9
BDR	Baidarnaya	0.75	341	P	Pn	10 22 34.2	+0.6
BDR				i S	Sn	10 22 46.9	+1.3
KMNR	Kamenistaya	0.81	263	P	Pn	10 22 35.1	+0.9
KMNR				i S	Sn	10 22 48.9	+2.1
KPT	Kopyto	0.82	278	P	Pn	10 22 34.8	+0.5
KPT				i S	Sn	10 22 47.9	+1.0
SRKR	Sorokina	0.84	341	P	Pn	10 22 35.0	+0.5
SRKR				i S	Sn	10 22 48.1	+0.8
KOZ	Kozyrevsk	1.02	282	P	Pn	10 22 37.0	+0.4
KOZ				i S	Sn	10 22 52.3	+1.3
TUMR	Tumrok	1.04	237	P	Pn	10 22 38.4	+1.5
TUMR				i S	Sn	10 22 52.9	+1.4
SRDR	Sredinnyy	1.18	294	P	Pn	10 22 38.4	-0.2
SRDR				i S	Sn	10 22 53.4	-1.1
MKZ	Mys Kozlova	1.31	178	P	Pn	10 22 41.7	+1.7
MKZ				i S	Sn	10 23 00.6	+3.5
ESO	Esso	1.67	273	P	Pn	10 22 45.0	+0.2
ESO				i S	Sn	10 23 04.3	-1.3
KII	Karymskiy	2.23	216	P	Pn	10 22 53.7	+1.4
BKI	Bering	2.54	103	P	Pn	10 22 58.0	+1.7
BKI				i S	Sn	10 23 27.9	+1.7
SPN	Mys Shipunski	2.93	200	P	Pn	10 23 02.3	+0.7
SPN				i S	Sn	10 23 35.2	-0.5
NLC	Nalytchevo	3.01	208	P	Pn	10 23 04.3	+1.6
NLC				i S	Sn	10 23 39.9	+2.2
SDLR	Sedlovina	3.05	213	P	Pn	10 23 05.6	+2.2
GNL	Ganaly	3.06	226	P	Pn	10 23 05.2	+1.7
KRER	Koryakskii	3.07	215	P	Pn	10 23 06.6	+2.8
SMAR	Somma	3.09	214	P	Pn	10 23 06.6	+2.5
AVH	Avacha	3.11	214	P	Pn	10 23 07.2	+3.1
KOK	Koryaka	3.12	216	P	Pn	10 23 07.0	+2.7
UGLR	Uglovaya	3.13	213	P	Pn	10 23 07.0	+2.5
PET	Petropavlovsk	3.34	213	P	Pn	10 23 09.6	+2.4
PET				i S	Sn	10 23 47.3	+1.6
RUS	Russkaya	3.90	210	P	Pn	10 23 16.7	+1.9
MTVR	Mutnovka	3.95	213	P	Pn	10 23 18.4	+2.7
MTVR				i S	Sn	10 24 04.2	+3.2
ASAK	Asacha	4.13	214	P	Pn	10 23 20.7	+2.7

*IDC **03** 10:24:55.3±0.6, 11°.14N×140°.57E, h0km, mb4.1/16, mb1 4.3/16, mb1mx4.2/23, mbtmp4.1/16, MS3.9/17, Ms1 3.9/17, ms1mx3.7/36, Error ellipse: s-maj=26.8km s-min=14.1km az=84.0*
*NEIC **03** 10:24:57.4±0.2, 11°.11N×140°.55E, h10km, mb4.6/20, Error ellipse: s-maj=8.9km s-min=6.2km az=82.0*
*ISCJB **03** 10:24:59.3±0.3, 11°.02N±0°.05×140°.45E±0°.05, h33km, mb4.4/47, MS3.9/23, Error ellipse: s-maj=7.0km s-min=6.5km az=169.8*
*BJI **03** 10:25:01.5, 11°.01N×140°.63E, h61km, mB5.0/19, mb4.6/27, Ms4.3/15, Ms7 4.2/17*
ISC 03 10:25:00.9±0.5, 11°.01N±0°.07×140°.44E±0°.06, h33km, n85, σ1s.47/95, mb4.4/47, MS3.9/23, 1D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.03	59	ePn	Pn	10 26 15.8	+1.8
GUMO				Sn	Sn	10 27 12.9	+1.8
GUMO	Guam	5.03	59	Pn	Pn	10 26 13.6	-0.4
	7.9nm,0.3s,baz=170,slow=13,SNR=8.0						
GUMO				Sn	Sn	10 27 12.9	+1.8
	1.5nm,0.3s,baz=217,slow=20,SNR=2.6						
PMG	Port Moresby	21.36	162	eP	P	10 29 46.1	+0.6
	38nm,1.2s						
JHJ	Hachijo jima 2	22.01	359	LR	LR	10 37 02.1	
	comp=Z,429nm,18.1s,baz=278,slow=33						
SSLB	Suanglung	22.48	307	eP	P	10 29 58.7	+1.1
	15nm,0.7s						
JNU	Nakatsue	23.69	340	eP	P	10 30 10.7	+0.9
	7.5nm,1.1s						
JNU	Nakatsue	23.69	340	P	P	10 30 08.6	-1.2
	24nm,1.2s,baz=60,slow=6.6,SNR=3.8						
JNU				LR	LR	10 38 12.8	
	comp=Z,156nm,19.1s,baz=161,slow=34						
MJAR	Matsushiro Arr	25.50	356	P	P	10 30 23.2	-3.0
MJAR	Matsushiro Arr	25.50	356	P	P	10 30 23.2	-3.0
	0.9nm,0.6s,baz=175,slow=11,SNR=7.4						
MJAR				LR	LR	10 39 01.2	
	comp=Z,58nm,19.0s,baz=225,slow=33						
MAJO	Matsushiro	25.50	356	eP	P	10 30 23.9	-2.4
	6.9nm,0.6s						
MAT	Matsushiro	25.50	356	P	P	10 30 26.7	+0.5
MAT				eS	S	10 34 51.4	-0.1
KSRS	Korea Array	28.63	339	P	P	10 30 53.4	-0.9
	2.7nm,1.0s,baz=165,slow=10,SNR=8.0						
KSRS				LR	LR	10 41 22.4	
	comp=Z,250nm,18.2s,baz=146,slow=35						
KSAR	Wonju Array Be	28.64	339	P	P	10 30 53.4	-1.0
QIZ	Qiongzhong	30.57	289	P	P	10 31 12.5	+0.7
QIZ				S	S	10 36 11.2	-0.5
QIZ				LR	LR		
	comp=Z,270nm,16.9s						
WRAB	Tennant Creek	31.33	191	eP	P	10 31 18.5	+0.1
	comp=Z,8.1nm,0.8s						
WRA	Warramunga Arr	31.34	191	P	P	10 31 18.8	+0.3
WRA				PcP	PcP	10 34 12.2	+0.1
WRA	Warramunga Arr	31.34	191	P	P	10 31 18.8	+0.3
	comp=Z,4.0nm,0.9s,baz=11,slow=9.4,SNR=13						
WRA				PcP	PcP	10 34 12.2	+0.1
	comp=Z,1.3nm,1.0s,baz=1.5,slow=2.9,SNR=4.5						
CTA	Charters Tower	31.43	169	LR	LR	10 43 35.5	
	comp=Z,104nm,20.2s,baz=160,slow=36						
USRK	Ussuriysk Arra	33.86	349	P	P	10 31 41.8	+1.5
	comp=Z,3.8nm,0.8s,baz=161,slow=9.5,SNR=6.8						
USRK				LR	LR	10 43 48.4	
	comp=Z,181nm,18.3s,baz=69,slow=34						
MDJ	Mudanjiang	34.76	346	P	P	10 31 49.0	+0.9
MDJ				pP	pP	10 32 01.9	+4.2
MDJ				sP	sP	10 32 07.8	+6.1
MDJ				PP	PP	10 33 06.3	-1.0
MDJ				S	S	10 37 15.7	-0.7
MDJ				sS	sS	10 37 40.3	+8.1
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,66nm,4.1s						
MDJ				LR	LR		
	comp=N,120nm,15.4s						
MDJ				LR	LR		
	comp=E,110nm,15.0s						
MDJ				LR	LR		
	comp=Z,200nm,15.8s						
AS31	Alice Springs	35.05	190	eP	P	10 31 52.2	+1.3
ASAR	Alice Springs	35.05	190	P	P	10 31 51.2	+0.3
ASAR				PcP	PcP	10 34 22.8	+0.3
ASAR	Alice Springs	35.05	190	P	P	10 31 51.2	+0.3
	comp=Z,1.3nm,0.6s,baz=16,slow=12,SNR=34						
ASAR				PcP	PcP	10 34 22.8	+0.3
	comp=Z,2.3nm,0.9s,baz=14,slow=4.1,SNR=6.9						
CN2	Changchun	35.15	341	eP	P	10 31 48.4	-3.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,13.0s						

CN2				LR	LR		
	comp=E,300nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
GYA	Guiyang	35.34	301	eP	P	10 31 55.0	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	38.34	297	P	P	10 32 21.6	+2.4
KMI				pP	pP	10 32 34.4	+5.5
KMI				sP	sP	10 32 42.0	+9.1
KMI				S	S	10 38 11.6	-0.4
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,27nm,3.6s						
KMI				LR	LR		
	comp=N,100nm,15.3s						
KMI				LR	LR		
	comp=E,110nm,21.8s						
KMI				LR	LR		
	comp=Z,130nm,16.2s						
HHC	Hu-ho-hao-te	39.12	325	eP	P	10 32 26.8	+1.4
HHC				pP	pP	10 32 42.1	+7.0
HHC				sP	sP	10 32 49.3	+10
HHC				PP	PnPn	10 34 02.0	+3.9
HHC				S	S	10 38 22.5	-0.5
HHC				sS	sS	10 38 48.5	+9.5
HHC				ScS	ScS	10 42 27.9	-4.4
HHC				pmax	pmax		
	comp=Z,30nm,0.5s						
HHC				pmax	pmax		
	comp=Z,190nm,7.1s						
HHC				LR	LR		
	comp=N,430nm,17.5s						
HHC				LR	LR		
	comp=E,370nm,15.3s						
HHC				LR	LR		
	comp=Z,410nm,17.7s						
CD2	Chengdu	39.31	306	P	P	10 32 27.8	+0.8
CD2				pP	pP	10 32 41.6	+4.9
CD2				sP	sP	10 32 48.0	+7.3
CD2				PcP	PcP	10 34 34.0	-1.4
CD2				S	S	10 38 25.0	-1.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.2s						
CD2				LR	LR		
	comp=N,210nm,19.6s						
CD2				LR	LR		
	comp=Z,280nm,15.5s						
CM31	Chiang Mai Arr	40.73	285	eP	P	10 32 41.1	+2.1
	comp=Z,7.7nm,0.9s						
CMAR	Chiang Mai Arr	40.73	285	P	P	10 32 39.5	+0.5
CMAR	Chiang Mai Arr	40.73	285	P	P	10 32 39.5	+0.5
	comp=Z,6.2nm,1.0s,baz=94,slow=6.4,SNR=25						
STKA	Stephens Creek	42.66	179	P	P	10 32 54.5	+0.1
STKA	Stephens Creek	42.66	179	P	P	10 32 54.5	+0.1
	comp=Z,0.7nm,0.6s,baz=6.3,slow=9.2,SNR=3.8						
STKA				LR	LR	10 51 32.8	
	comp=Z,115nm,19.4s,baz=31,slow=37						
PETK	Petropavlovsk-	44.22	15	P	P	10 33 05.0	-1.8
PETK	Petropavlovsk-	44.22	15	P	P	10 33 05.0	-1.8
	comp=Z,6.4nm,1.1s,baz=212,slow=8.0,SNR=3.8						
PETK				LR	LR	10 52 09.8	
	comp=Z,48nm,18.3s,baz=222,slow=37						
GTA	Gaotai	45.79	315	eP	P	10 33 27.3	+7.6
GTA				pP	pP	10 33 39.9	+10
GTA				sP	sP	10 33 44.7	+11
GTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ULN	Ulaanbaatar	46.19	329	eP	P	10 33 23.3	+0.6
	comp=Z,9.0nm,1.4s						
SONM	Songino Array	46.50	329	P	P	10 33 24.2	-0.9
SONM	Songino Array	46.50	329	P	P	10 33 24.2	-0.9
	comp=Z,0.7nm,0.5s,baz=139,slow=8.8,SNR=7.7						
SONM				LR	LR	10 53 58.5	
	comp=Z,237nm,18.4s,baz=89,slow=38						
AFI	Afiamalu	53.47	116	LR	LR	10 52 46.6	
	comp=Z,145nm,20.3s,baz=36,slow=31						
WMQ	Urumqi	55.86	316	eP	P	10 34 37.8	+2.4
MK31	Makanchi Array	60.40	318	eP	P	10 35 07.8	+0.7
MKAR	Makanchi Array	60.40	318	eP	P	10 35 07.6	+0.5
MKAR	Makanchi Array	60.40	318	P	P	10 35 06.9	-0.2
	comp=Z,1.8nm,0.9s,baz=99,slow=7.8,SNR=10						
MKAR				LR	LR	11 02 02.4	
	comp=Z,52nm,18.4s,baz=169,slow=37						
ZALV	Zalesovo Beam	61.26	326	P	P	10 35 11.9	-0.8
ZALV	Zalesovo Beam	61.26	326	P	P	10 35 11.9	-0.8
	comp=Z,1.2nm,0.4s,baz=104,slow=7.1,SNR=7.4						
ZALV				LR	LR	11 03 19.1	
	comp=Z,112nm,18.8s,baz=167,slow=38						
KURK	Kurchatov	63.81	321	eP	P	10 35 30.0	+0.2
	comp=Z,5.7nm,0.7s						
POO	Poona	64.53	285 ⇓	iP	P	10 35 33.0	-2.2
	comp=Z,30nm,1.0s						
BRVK	Borovoye	69.36	323	eP	P	10 36 05.5	+0.2
	comp=Z,3.8nm,0.7s						
COLD	Coldfoot	71.97	23	eP	P	10 36 20.9	+0.1
	comp=Z,4.3nm,0.8s						
PAX	Paxson	73.04	27	eP	P	10 36 26.5	-0.9
	comp=Z,3.3nm,0.8s						
BMRM	Bremner River	73.14	29	eP	P	10 36 27.3	-0.7
	comp=Z,17nm,1.3s						
MENT	Mentasta	73.82	28	eP	P	10 36 31.4	-0.6
PPT	Papeete	74.72	112	LR	LR	11 01 31.8	
	comp=Z,52nm,20.4s,baz=244,slow=29						
ABKAR	Akbulak array	75.55	318	eP	P	10 36 41.8	-0.4
	comp=Z,0.8nm,0.4s						
DLBC	Dease Lake	80.47	32	eP	P	10 37 09.6	+0.1
YKW3	Yellowknife Ar	87.08	27	eP	P	10 37 41.9	-1.1
	comp=Z,0.1nm,1.2s						
YKA	Yellowknife Ar	87.11	27	P	P	10 37 42.5	-0.7
YKA	Yellowknife Ar	87.11	27	P	P	10 37 42.5	-0.7
	comp=Z,1.4nm,0.5s,baz=289,slow=5.0,SNR=40						
KBZ	Khabaz	87.86	314	P	P	10 37 47.0	-0.2
KBZ	Khabaz	87.86	314	P	P	10 37 47.0	-0.2
	comp=Z,1.5nm,1.0s,baz=68,slow=5.4,SNR=2.6						
RES	Resolute Bay	88.02	13	eP	P	10 37 46.9	-0.4
	comp=Z,0.8nm,0.6s						
ARCES	ARCESS Array B	88.16	341	P	P	10 37 46.7	-1.5
ARCES	ARCESS Array B	88.16	341	P	P	10 37 46.7	-1.5
	comp=Z,1.8nm,0.7s,baz=77,slow=6.4,SNR=6.2						
ARCES				LR	LR	11 19 10.4	
	comp=Z,170nm,20.0s,baz=61,slow=37						
JOF	Joensuu	88.77	334	ep	P	10 37 48.2	-2.9
	comp=Z,0.3nm,0.3s						
MOD	Modoc	89.52	47	eP	P	10 37 55.2	-0.1
	comp=Z,6.9nm,1.1s						
WVOR	Wild Horse Val	90.58	47	eP	P	10 37 59.9	-0.3
	comp=Z,2.7nm,0.9s						
KAF	Kangasniemi	91.22	335	ep	P	10 37 58.7	-3.8
	comp=Z,0.7nm,0.4s						
FINES	FINESS Array B	91.61	334	P	P	10 38 02.5	-1.9
FINES	FINESS Array B	91.61	334	P	P	10 38 02.5	-1.9
	comp=Z,0.7nm,0.4s,baz=57,slow=4.7,SNR=16						
FINES				LR	LR	11 21 19.6	
	comp=Z,137nm,19.8s,baz=90,slow=37						
BSMT	Bassoo Peak	91.62	41	eP	P	10 38 05.4	+0.4
NVAR	Mina Array Bea	91.89	50	P	P	10 38 06.0	-0.5
NVAR	Mina Array Bea	91.89	50	P	P	10 38 06.0	-0.5
	comp=Z,1.0nm,0.5s,baz=261,slow=6.0,SNR=12						
NV11	Mina Array Sit	92.01	50	eP	P	10 38 07.2	+0.3
MFID	Camas Ranch	92.29	45	eP	P	10 38 08.3	+0.2
	comp=Z,4.1nm,1.0s						
HLID	Hailey	93.22	45	eP	P	10 38 12.6	+0.1
	comp=Z,3.8nm,1.2s						
AKASG	Malin Array Be	94.56	324	LR	LR	11 27 42.3	
	comp=Z,58nm,18.1s,baz=25,slow=40						
DUG	Dugway	95.44	47	eP	P	10 38 22.4	-0.3
	comp=Z,1.0nm,0.7s						
HWUT	Hardware Ranch	95.85	46	eP	P	10 38 24.0	-0.6
	comp=Z,0.8nm,0.8s						
NOA	NORSAR Array B	97.84	338	LR	LR	11 24 15.0	
	comp=Z,60nm,18.9s,baz=355,slow=36						
TORD	Torodi Ar. Bea	132.54	299	PKP	PKPdf	10 44 12.9	-0.1
TORD	Torodi Ar. Bea	132.54	299	PKP	PKPdf	10 44 12.9	-0.1
	comp=Z,1.0nm,1.0s,baz=29,slow=2.5,SNR=3.5						
LCO	Las Campanas	145.86	126	ePKPdf	PKPab	10 44 38.3	0.0
LPAZ	La Paz	151.76	104	ePKPbc	PKPbc	10 44 54.3	+0.4
LPAZ	La Paz	151.76	104	PKPbc	PKPbc	10 44 53.3	-0.6
	comp=Z,3.0nm,0.9s,baz=262,slow=3.5,SNR=12						

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*DDA **03** 10:31:51.1, 37.°09N×36.°38E, h7km, MD3.4*
*ISK **03** 10:31:51.6, 37.°07N×36.°42E, h7km, MD3.1*
*NSSC **03** 10:31:51.8±2.6, 37.°03N×36.°45E, h0km±10km, MD1.2, ML2.8*
*ISCJB **03** 10:31:51.6±0.5, 37.°05N±0.°02×36.°41E±0.°03, h4km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=9.0*
*CSEM **03** 10:31:52.0±0.1, 37.°05N×36.°40E, h5km, ML2.8, Error ellipse: s-maj=2.8km s-min=2.5km az=97.0*
ISC 03 10:31:51.6±1.1**, 37.°06N**±0.°02×**36.°41E**±0.°02**, h6**km±9km**, n48,** σ**0.s63**/77**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYKD	Aykdinkavak	0.47	41	iP	Pg	10 32 00.5	-0.2
AYKD				iS	Sg	10 32 06.9	-0.1
DRWC	Darouich	0.48	155	eP	Pg	10 31 59.9	-0.9
DRWC				eS	Sg	10 32 06.7	-0.4
DRWC				AML	AML	10 32 08.2	
	comp=E,617nm,0.5s						
DRWC				AML	AML	10 32 08.2	
	comp=N,5µm,0.1s						
DRWC	Darouich	0.48	155	eP	Pg	10 31 59.9	-0.9
	SNR=91						
DRWC				eS	Sg	10 32 06.7	-0.4
	comp=N,5µm,0.1s,SNR=59						
CEYT	Ceyhan	0.54	265	ePG	Pb	10 32 02.8	-0.6
CEYT	Ceyhan	0.54	265	ePg	Pb	10 32 02.8	-0.6
KMRS	Kahramanmaras	0.59	41	ePG	Pg	10 32 03.0	0.0
KMRS				eSG	Sb	10 32 11.9	-1.2
KMRS	Kahramanmaras	0.59	41	ePg	Pg	10 32 03.0	0.0
KMRS				eSg	Sb	10 32 11.9	-1.2
KUZU	Kuzuini	0.60	118	iP	Pb	10 32 04.5	-0.1
KUZU				iS	Sb	10 32 13.0	-0.3
KUZU	Kuzuini	0.60	118	iP	Pb	10 32 04.5	-0.1
KUZU				iS	Sb	10 32 13.0	-0.3
KOZT	Kozan	0.63	312	ePG	Pg	10 32 04.0	+0.3
KOZT				eSG	Sb	10 32 13.5	-0.7
KOZT	Kozan	0.63	312	ePg	Pg	10 32 04.0	+0.3
KOZT				eSg	Sb	10 32 13.5	-0.7
GAZ	Gaziantep	0.65	80	ePG	Pg	10 32 04.5	+0.5
GAZ	Gaziantep	0.65	80	ePg	Pg	10 32 04.5	+0.5
HTY	Hatay	0.96	193	ePG	Pb	10 32 11.1	+0.5
HTY	Hatay	0.96	193	ePg	Pb	10 32 11.1	+0.5
KRTS	Karatas	0.96	240	ePG	Pg	10 32 10.1	+0.1
KRTS	Karatas	0.96	240	ePg	Pg	10 32 10.1	+0.1
GZT	Gaziantep	0.96	72	iP	Pb	10 32 10.9	+0.1
GZT				iS	Sb	10 32 24.7	+0.7
BTCH	Batrach	1.02	178	eP	Pg	10 32 11.4	+0.3
BTCH				eS	Sg	10 32 24.7	+0.4
BTCH				AML	AML	10 32 28.3	
BTCH				AML	AML	10 32 29.7	
	comp=E,7µm,0.2s						
BTCH	Batrach	1.02	178	eP	Pg	10 32 11.4	+0.3
	SNR=67						
BTCH				eS	Sg	10 32 24.7	+0.4
	comp=E,7µm,0.2s,SNR=59						
YAYL	Yayladag	1.05	194	iP	Pg	10 32 11.7	0.0
YAYL				iS	Sg	10 32 26.1	+0.7
YAYL	Yayladag	1.05	194	iP	Pg	10 32 11.7	0.0
YAYL				iS	Sg	10 32 26.1	+0.7
GULE	Gulek	1.33	280	iP	Pn	10 32 16.4	-0.5
GULE				iS	Sn	10 32 35.2	+0.2
GULE	Gulek	1.33	280	iP	Pn	10 32 16.4	-0.5
GULE				iS	Sn	10 32 35.2	+0.2
SARI	SarD1z-Kayseri	1.35	0	ePN	Pb	10 32 17.4	0.0
SARI	SarD1z-Kayseri	1.35	0	ePn	Pb	10 32 17.4	0.0
SLMH	Al Salmeh	1.48	124	eP	Pb	10 32 19.4	-0.1
SLMH				eS	Sg	10 32 39.4	+0.2
WRDH	Warideh	1.55	180	eP	Pn	10 32 19.9	+0.1
WRDH				eS	Sn	10 32 39.9	-0.3
WRDH				AML	AML	10 32 46.7	
	comp=Z,115nm,0.3s						
WRDH				AML	AML	10 32 47.2	
	comp=E,54nm,0.2s						
WRDH				AML	AML	10 32 50.2	
	comp=N,125nm,0.3s						
WRDH	Warideh	1.55	180	eP	Pn	10 32 19.9	+0.1
	SNR=57						
WRDH				eS	Sn	10 32 39.9	-0.3
	comp=N,125nm,0.3s,SNR=49						
ATAB	Bozova	1.56	74	iP	Pb	10 32 20.5	-0.4
ATAB				iS	Sg	10 32 41.8	+0.2
ATAB	Bozova	1.56	74	iP	Pb	10 32 20.5	-0.4
ATAB				iS	Sg	10 32 41.8	+0.2
PINB	Pinarbasi	1.62	360	iP	Pn	10 32 21.2	+0.3
PINB				iS	Sn	10 32 42.2	-0.1
PINB	Pinarbasi	1.62	360	iP	Pn	10 32 21.2	+0.3
PINB				iS	Sn	10 32 42.2	-0.1
AKCD	Akcadag	1.72	44	iP	Pn	10 32 22.3	+0.1
AKCD				iS	Sn	10 32 44.2	-0.5
AKCD	Akcadag	1.72	44	iP	Pn	10 32 22.3	+0.1
AKCD				iS	Sn	10 32 44.2	-0.5
DARE	Darende-Malaty	1.73	29	ePN	Pn	10 32 22.7	+0.3
NIG	Nigde	1.78	307	ePN	Pn	10 32 23.0	-0.2
NIG	Nigde	1.78	307	ePn	Pn	10 32 23.0	-0.2
BNN	Bunyan	1.85	346	ePN	Pn	10 32 24.8	+0.8
BNN	Bunyan	1.85	346	ePn	Pn	10 32 24.8	+0.8
KFRA	Kufra	1.87	170	eP	Pb	10 32 25.8	-0.3
KFRA				eS	Sn	10 32 48.6	+0.5
KFRA				AML	AML	10 32 54.1	
	comp=N,274nm,0.3s						
KFRA				AML	AML	10 32 54.2	
	comp=E,337nm,0.5s						
KFRA				AML	AML	10 32 57.8	
	comp=Z,198nm,0.5s						
MYA	Malataya	2.04	51	ePN	Pn	10 32 27.2	+0.6
MYA	Malataya	2.04	51	ePn	Pn	10 32 27.2	+0.6
HAWK	Haweek	2.53	180	eP	Pn	10 32 34.6	+1.3
HAWK				eS	Sn	10 33 04.8	+0.3
HAWK				AML	AML	10 33 13.7	
	comp=E,16nm,0.7s						
HAWK				AML	AML	10 33 19.8	
	comp=N,39nm,0.6s						
HAWK				AML	AML	10 33 23.9	
	comp=Z,17nm,0.2s						
HAWK	Haweek	2.53	180	eP	Pn	10 32 34.6	+1.3
	SNR=45						
HAWK				eS	Sn	10 33 04.8	+0.3
	comp=Z,17nm,0.2s,SNR=40						
MNKR	ALMNKUR	2.56	115	eP	Pn	10 32 31.4	-2.2
MNKR				eS	Sn	10 33 04.9	-0.1
MNKR				AML	AML	10 33 16.9	
	comp=Z,388nm,0.2s						
MNKR				AML	AML	10 33 20.5	
	comp=N,88nm,0.1s						
MNKR				AML	AML	10 33 21.8	
	comp=E,255nm,0.2s						
PTK	Pertek	2.98	51	ePN	Pn	10 32 41.5	+1.8
PTK	Pertek	2.98	51	ePn	Pn	10 32 41.5	+1.8

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*ISCJB **03** 10:35:19.4±1.0, 12.°45N±0.°09×87.°86W±0.°05, h78km±8km, mb3.2/3, Error ellipse: s-maj=15.6km s-min=7.1km az=17.8*
*CASC **03** 10:35:20.8±1.5, 12.°48N×87.°87W, h33km±12km, MD3.8*
*IDC **03** 10:35:29.0±12.0, 12.°97N×87.°70W, h133km±70km, mb2.7/3, mb1 3.2/4, mb1mx3.0/22, mbtmp2.8/4, Error ellipse: s-maj=123.8km s-min=82.1km az=2.0*
ISC 03 10:35:20.0±1.4**, 12.°4N**±0.°1×**87.°88W**±0.°06**, h66**km±12km**, n20,** σ**0.s83**/27**, mb3.2**/3**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	San Miguel	1.06	339	eP	Pn	10 35 39.1	-0.2
BLLM	Bellamira	1.06	341	eP	Pn	10 35 38.6	-0.5
BLLM				eS	Sn	10 35 53.3	-0.1
CNGN	Cerro Negro	1.15	87	eP	Pn	10 35 40.6	+0.3
CNGN				eS	Sn	10 35 55.6	+0.2
CAHU	Cacacuatique	1.36	346	eP	Pn	10 35 43.3	0.0
CAHU				eS	Sn	10 36 00.9	+0.2
SNVI	San Vicente	1.50	321	eP	Pn	10 35 45.6	+0.7
SNVI				eS	Sn	10 36 03.1	-0.6
LFRS	El Faro	1.65	316	eP	Pn	10 35 46.4	-0.5
TGUH	Tegucigalpa,Un	1.71	20	eP	Pn	10 35 48.2	+0.5
TGUH				eS	Sn	10 36 09.1	+0.4
LBRS	Las Brisas	1.72	319	eP	Pn	10 35 48.0	+0.2
LBRS				eS	Sn	10 36 09.8	+0.7
LFU	La Fuente	1.78	317	eP	Pn	10 35 49.3	+0.7
SNET	Serv Nac Est T	1.81	313	eP	Pn	10 35 48.6	-0.5
BOQS	Boqueron	1.88	314	eP	Pn	10 35 50.1	0.0
SBLS	San Blas	2.20	310	eP	Pn	10 35 54.6	+0.2
RBDL	Robledal	2.42	314	eP	Pn	10 35 57.8	+0.4
MTO2	Montecristo 2	2.43	324	eP	Pn	10 35 57.2	-0.3
FUG	Fuego 3	3.51	305	eP	Pn	10 36 14.2	+1.9
FUG				eS	Sn	10 36 53.7	+1.0
TEIG	Tepich	7.75	357	P	Pn	10 37 12.1	+1.9
	0.5nm,0.3s,baz=193,slow=14,SNR=4.2						
TXAR	Lajitas Array	22.32	321	P	P	10 40 12.7	+0.3
	0.9nm,0.7s,baz=141,slow=10,SNR=14						
PDAR	Pinedale Array	35.59	332	P	P	10 42 10.6	-0.8
	0.2nm,0.6s,baz=134,slow=12,SNR=2.8						
YKA	Yellowknife Ar	53.52	345	P	P	10 44 32.0	-1.5
	0.1nm,0.5s,baz=138,slow=7.5,SNR=4.7						
WRA	Warramunga Arr	138.87	254	PKP	PKPdf	10 54 40.6	+0.9
	0.1nm,0.4s,baz=89,slow=2.6,SNR=5.8						

IDC 03 10:58:40.1±4.9**, 17.°18S**×**69.°22W, h182**km±25km**, mb3.0**/2**, mb1 3.1**/3**, mb1mx2.9**/18**, mbtmp2.9**/3**, Error ellipse: s-maj=93.2km s-min=38.7km az=19.0, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	1.37	50	P	Pn	10 59 11.5	-0.2
	3.1nm,0.3s,baz=221,slow=4.7,SNR=93						
LPAZ				S	Sn	10 59 36.1	-0.1
	0.6nm,0.3s,baz=327,slow=22,SNR=8.8						
SIV	San Ignacio	7.90	83	P	Pn	11 00 32.4	+0.3
	0.4nm,0.3s,baz=266,slow=15,SNR=6.1						
SIV				S	Sn	11 01 58.2	-2.7
	0.1nm,0.3s,baz=288,slow=19,SNR=2.9						
TORD	Torodi Ar. Bea	76.22	71	P	P	11 10 08.9	0.0
	0.4nm,0.6s,baz=252,slow=5.5,SNR=3.3						
YKA	Yellowknife Ar	87.03	341	P	P	11 11 04.5	0.0
	0.1nm,0.5s,baz=132,slow=4.5,SNR=5.4						

MAN 03 11:10:45, 7.°35N×**124.°35E, h37**km**, mb3.8, ML2.6, MS2.2, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.17	218 ⇑	iP	Pn	11 10 53.8	-1.6
CTBH				iS	Sn	11 10 59.3	-6.4
BUKP	Musuan	0.88	54	eP	Pn	11 11 01.9	+1.0
BUKP				eS	Sn	11 11 14.4	+1.9
PAGZ	Pagadian	1.08	297	eP	Pn	11 11 04.6	+1.0
PAGZ				eS	Sn	11 11 18.6	+1.4

IDC 03 11:24:45.4±2.7**, 11.°01S**×**162.°27E, h0**km**, mb3.5**/3**, mb1 3.9**/5**, mb1mx3.6**/20**, mbtmp3.8**/5**, ML3.9**/2**, Error ellipse: s-maj=49.6km s-min=32.8km az=96.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.77	304	Pn	Pn	11 25 31.5	+0.4
	32nm,0.3s,baz=153,slow=8.8,SNR=13						
HNR				Sn	Sn	11 26 06.3	+1.1
	21nm,0.3s,baz=52,slow=20,SNR=3.8						
CTA	Charters Tower	17.86	238	P	P	11 28 57.2	+1.0
	0.2nm,0.3s,baz=61,slow=10,SNR=2.8						
WRA	Warramunga Arr	28.30	248	P	P	11 30 40.6	-0.4
	1.1nm,1.1s,baz=76,slow=9.7,SNR=5.1						
ASAR	Alice Springs	29.78	241	P	P	11 30 53.7	-0.5
	0.2nm,0.4s,baz=64,slow=10.0,SNR=9.3						
SONM	Songino Array	76.65	325	P	P	11 36 38.4	+0.2
	0.2nm,0.5s,baz=134,slow=6.2,SNR=3.3						

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*IDC **03** 11:29:18.6±6.9, 3.°74S×139.°82E, h72km±50km, mb3.6/1, mb1 3.9/3, mb1mx3.2/16, mbtmp3.7/3, ML4.1/2, MS3.0/3, Ms1 3.0/3, ms1mx2.6/24, Error ellipse: s-maj=100.9km s-min=24.2km az=142.0*
*AUST **03** 11:30:31.9±0.0, 8.°84S×137.°18E, h142km, Error ellipse: s-maj=2.6km s-min=1.1km az=302.0*
ISC 03 11:29:16.6±2.8**, 3.°7S**±0.°4×**139.°9E**±0.°3**, h56**km**, n10,** σ**0.s90**/8**, MS2.9**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDU	Kakadu	11.55	219	P	Pn	11 31 59.4	+0.6
	baz=6.0,SNR=7.3						
MTN	Manton Dam	12.55	223	P	Pn	11 32 13.5	+1.0
	baz=7.2,SNR=8.0						
KNRA	Kununurra	16.17	222	P	Pn	11 33 00.7	+0.4
	baz=11,SNR=5.3						
WRA	Warramunga Arr	17.00	198	P	Pn	11 33 11.0	+0.3
	1.1nm,0.3s,baz=15,slow=12,SNR=30						
FITZ	Fitzroy Crossi	19.99	223	P	Pn	11 33 45.6	-1.2
	0.2nm,0.3s,baz=32,slow=13,SNR=4.6						
FITZ				S	S	11 37 25.6	-1.0
	0.1nm,0.3s,baz=207,slow=18,SNR=2.8						
ASAR	Alice Springs	20.65	196	P	P	11 33 51.5	-0.3
	4.0nm,0.7s,baz=23,slow=10,SNR=31						
JHJ	Hachijo jima 2	36.66	360	LR	LR	11 49 52.6	
	comp=Z,20nm,18.5s,baz=323,slow=34						
KSRS	Korea Array	42.48	346	LR	LR	11 52 20.3	
	comp=Z,10nm,20.3s,baz=350,slow=32						
PETK	Petropavlovsk-	58.59	12	LR	LR	11 59 51.4	
	comp=Z,21nm,21.8s,baz=40,slow=31						
LPAZ	La Paz	145.85	126	PKPbc	PKPdf	11 48 51.0	+0.1
	0.7nm,0.7s,baz=239,slow=1.7,SNR=4.8						

IDC 03 11:55:56.2±3.7**, 5.°88S**×**154.°04E, h0**km**, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.3**/17**, mbtmp3.4**/2**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx2.9**/19**, Error ellipse: s-maj=172.3km s-min=50.4km az=126.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.83	121	LR	LR	12 00 07.2	
	comp=Z,171nm,18.4s,baz=289,slow=37						
WRA	Warramunga Arr	23.71	232	P	P	12 01 10.8	+0.7
	1.3nm,1.0s,baz=56,slow=9.3,SNR=66						
ASAR	Alice Springs	26.24	226	P	P	12 01 32.2	-1.1
	0.4nm,0.8s,baz=59,slow=9.7,SNR=7.9						
RAO	Raoul Island	35.24	135	LR	LR	12 14 34.0	
	comp=Z,167nm,20.4s,baz=32,slow=32						
TORD	Torodi Ar. Bea	151.81	287	PKPbc	PKPbc	12 15 54.4	+0.3
	0.6nm,0.8s,baz=62,slow=1.9,SNR=3.8						

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*CSEM **03** 12:03:15.3±0.1, 46.°90N×6.°82E, h19km, ML2.4/19, Error ellipse: s-maj=2.1km s-min=1.4km az=90.0*
*LDG **03** 12:03:16.0±0.0, 46.°90N×6.°82E, h13km, Md2.5/1, Ml2.4/18, Error ellipse: s-maj=1.0km s-min=0.7km az=112.0*
*ZUR **03** 12:03:16.0, 46.°89N×6.°88E, h13km±1km, ML1.7/5*
*STR **03** 12:03:17.2±0.6, 46.°95N×6.°93E, h10km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 03 12:03:16.1±0.8**, 46.°93N**±0.°02×**6.°84E**±0.°02**, h14**km±6km**, n74,** σ**1.s52**/116**, 2C-4D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORNY	Torny/Romont	0.17	152 ⇓	iPg	Pg	12 03 19.7	-0.6
	1µm,0.1s						
TORNY				iSg	Sg	12 03 22.2	-0.9
	1µm,0.1s						
TORNY	Torny/Romont	0.17	152 ⇓	iPg	Pg	12 03 19.7	-0.6
	1µm,0.1s						
TORNY				iSg	Sg	12 03 22.2	-0.9
	1µm,0.1s						
LOMF	Lomont	0.42	359	Pg	Pg	12 03 25.6	+0.9
LOMF				Sg	Sg	12 03 31.8	+1.4
LOMF	Lomont	0.42	359	Pg	Pg	12 03 25.6	+0.9
LOMF				Sg	Sg	12 03 31.8	+1.4
BOURR	Bourrignon	0.54	29	ePg	Pn	12 03 34.7	+5.3
	49nm,0.6s						
AIGLE	Aigle	0.59	172	ePg	Pg	12 03 27.2	-0.5
	36nm,0.2s						
AIGLE				eSg	Pg	12 03 27.2	-0.5
	36nm,0.2s						
AIGLE	Aigle	0.59	172	ePg	Pg	12 03 27.2	-0.5
	36nm,0.2s						
CABF	La Chapelle	0.61	239	ePg	Pg	12 03 28.3	+0.3
	SNR=1.0						
CABF				eSg	Sg	12 03 35.3	-0.8
	6.7nm,0.2s,SNR=1.0						
CABF	La Chapelle	0.61	239	ePg	Pg	12 03 28.3	+0.3
	SNR=1.0						
CABF				eSg	Sg	12 03 35.3	-0.8
	3.3nm,0.2s,SNR=1.0						

SENIN	Lac Senin/Sane	0.65	151	⇓iPg	Pg	12 03 27.9	-0.9
	36nm,0.3s						
SENIN	Lac Senin/Sane	0.65	151	⇓iPg	Pg	12 03 27.9	-0.9
	36nm,0.3s						
BBS	Basel-Blauen	0.70	40	Pg	Pg	12 03 30.3	+0.4
BALST	Balsthal	0.71	55	⇑iPg	Pg	12 03 30.0	0.0
	125nm,0.3s						
BALST	Balsthal	0.71	55	⇑iPg	Pg	12 03 30.0	0.0
	125nm,0.3s						
HINF	Hinteralfeld	0.89	1	ePn	Pb	12 03 33.3	-0.1
	SNR=1.0						
HINF	Hinteralfeld	0.89	1	ePg	Pb	12 03 33.5	+0.1
	SNR=1.0						
HINF				eSg	Sb	12 03 45.5	+0.4
	56nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	0.89	1	ePn	Pb	12 03 33.3	-0.1
	SNR=1.0						
HINF	Hinteralfeld	0.89	1	ePg	Pb	12 03 33.5	+0.1
	SNR=1.0						
HINF				eSg	Sb	12 03 45.5	+0.4
	28nm,0.3s,SNR=1.0						
MOF	Molkenrain	0.95	12	Pg	Pb	12 03 34.8	+0.4
MOF				Sg	Sb	12 03 47.4	+0.6
MOF	Molkenrain	0.95	12	Pg	Pb	12 03 34.8	+0.4
MOF				Sg	Sb	12 03 47.4	+0.6
HAU	Haudompre	1.13	343	ePn	Pn	12 03 36.4	-1.1
	SNR=1.0						
HAU	Haudompre	1.13	343	ePg	Pn	12 03 38.0	+0.5
HAU				eSn	Sb	12 03 50.9	-1.1
	SNR=1.0						
HAU				eSg	Sn	12 03 53.0	+0.1
	7.9nm,0.2s						
HAU	Haudompre	1.13	343	ePn	Pn	12 03 36.4	-1.1
	SNR=1.0						
HAU	Haudompre	1.13	343	ePg	Pn	12 03 38.0	+0.5
HAU				eSn	Sb	12 03 50.9	-1.1
	SNR=1.0						
HAU				eSg	Sn	12 03 53.0	+0.1
	4.0nm,0.2s						
FELD	Feldberg im Sc	1.23	39	Pg	Pn	12 03 39.6	+0.5
FELD				Sg	Sb	12 03 55.5	+0.3
FELD	Feldberg im Sc	1.23	39	Pg	Pn	12 03 39.6	+0.5
FELD				Sg	Sb	12 03 55.5	+0.3
ECH	Echery	1.31	9	Pg	Pn	12 03 40.7	+0.7
ECH	Echery	1.31	9	Pg	Pn	12 03 40.7	+0.7
LPL	La Plagne	1.41	183	ePg	Pn	12 03 42.4	+0.8
	SNR=1.0						
LPL				eSg	Sn	12 04 00.4	+0.3
	2.7nm,0.2s,SNR=1.0						
LPL	La Plagne	1.41	183	ePg	Pn	12 03 42.4	+0.8
	SNR=1.0						
LPL				eSg	Sn	12 04 00.4	+0.3
	1.4nm,0.2s,SNR=1.0						
THEF	They Montfort	1.42	336	Pg	Pb	12 03 43.5	+1.0
THEF	They Montfort	1.42	336	Pg	Pb	12 03 43.5	+1.0
LPG	La Plagne	1.43	183	ePg	Pn	12 03 42.6	+0.7
	SNR=1.0						
LPG				eSg	Sn	12 04 00.9	+0.3
	5.2nm,0.2s,SNR=1.0						
LPG	La Plagne	1.43	183	ePg	Pn	12 03 42.6	+0.7
	SNR=1.0						
LPG				eSg	Sn	12 04 00.9	+0.3
	2.6nm,0.2s,SNR=1.0						
CDF	Champ du Feu	1.52	11	ePn	Pn	12 03 41.9	-1.0
	SNR=1.0						
CDF	Champ du Feu	1.52	11	ePg	Pb	12 03 44.9	+0.8
	SNR=1.0						
CDF				eSn	Sn	12 03 59.9	-2.6
	SNR=1.0						
CDF				eSg	Sb	12 04 04.4	+1.2
	7.6nm,0.2s						
CDF	Champ du Feu	1.52	11	ePn	Pn	12 03 41.9	-1.0
	SNR=1.0						
CDF	Champ du Feu	1.52	11	ePg	Pb	12 03 44.9	+0.8
	SNR=1.0						
CDF				eSn	Sn	12 03 59.9	-2.6
	SNR=1.0						
CDF				eSg	Sb	12 04 04.4	+1.2
	3.8nm,0.2s						
SFTF	Sexfontaines	1.77	317	ePn	Pn	12 03 45.0	-1.3
	baz=129						
SFTF	Sexfontaines	1.77	317	eP	Pn	12 03 46.8	+0.5
SFTF	Sexfontaines	1.77	317	ePg	Pb	12 03 49.2	+0.9
	baz=142						
SFTF				eSg	Sb	12 04 12.2	+1.9
	2.4nm,0.2s						
SFTF	Sexfontaines	1.77	317	ePn	Pn	12 03 45.0	-1.3
	baz=129						
SFTF	Sexfontaines	1.77	317	eP	Pn	12 03 46.8	+0.5
SFTF	Sexfontaines	1.77	317	ePg	Pb	12 03 49.2	+0.9
	baz=142						
SFTF				eSg	Sb	12 04 12.2	+1.9
	1.2nm,0.2s						
PAGF	Fort de Pagny	1.79	336	ePg	Pb	12 03 49.8	+1.0
	baz=146						
PAGF	Fort de Pagny	1.79	336	ePg	Pb	12 03 49.8	+1.0
	baz=146						
MEZF	Maizieres J'vi	1.99	323	ePg	Pb	12 03 52.9	+0.9
	baz=141,SNR=1.0						
MEZF				eSg	Sb	12 04 19.0	+2.4
	2.4nm,0.2s						
MEZF	Maizieres J'vi	1.99	323	ePg	Pb	12 03 52.9	+0.9
	baz=141,SNR=1.0						
MEZF				eSg	Sb	12 04 19.0	+2.4
	1.2nm,0.2s						
LOR	Lormes	2.07	281	ePg	Pb	12 03 54.0	+0.6
	baz=98						
LOR				eSg	Sb	12 04 21.0	+2.1
	8.8nm,0.2s,SNR=1.0						
LOR	Lormes	2.07	281	ePg	Pb	12 03 54.0	+0.6
	baz=98						
LOR				eSg	Sb	12 04 21.0	+2.1
	4.4nm,0.2s,SNR=1.0						
SMF	Signal de Mont	2.08	263	ePg	Pb	12 03 54.7	+1.1
	SNR=1.0						
SMF				eSn	Sn	12 04 12.7	-3.6
SMF				eSg	Sb	12 04 21.0	+1.7
	3.9nm,0.2s,SNR=1.0						
SMF	Signal de Mont	2.08	263	ePg	Pb	12 03 54.7	+1.1
	SNR=1.0						
SMF				eSn	Sn	12 04 12.7	-3.6
SMF				eSg	Sb	12 04 21.0	+1.7
	2.0nm,0.2s,SNR=1.0						
ORIF	Oris-en-Rattie	2.12	199	ePg	Pb	12 03 54.4	+0.1
	SNR=1.0						
ORIF				eSg	Sb	12 04 21.9	+1.4
	6.8nm,0.3s						
ORIF	Oris-en-Rattie	2.12	199	ePg	Pb	12 03 54.4	+0.1
	SNR=1.0						
ORIF				eSg	Sb	12 04 21.9	+1.4
	3.4nm,0.3s						
MBDF	Montbardon	2.20	181	ePg	Pb	12 03 56.7	+0.9
MBDF				eSg	Sb	12 04 24.8	+1.9
	1.7nm,0.3s						
MBDF	Montbardon	2.20	181	ePg	Pb	12 03 56.7	+0.9
MBDF				eSg	Sb	12 04 24.8	+1.9
	0.9nm,0.3s						
SSF	Saint Saulge	2.29	275	ePn	Pn	12 03 51.5	-1.9
SSF	Saint Saulge	2.29	275	ePg	Pb	12 03 58.1	+1.0
SSF				eSg	Sb	12 04 28.1	+2.8
	4.3nm,0.3s,SNR=1.0						
SSF	Saint Saulge	2.29	275	ePn	Pn	12 03 51.5	-1.9
SSF	Saint Saulge	2.29	275	ePg	Pb	12 03 58.1	+1.0
SSF				eSg	Sb	12 04 28.1	+2.8
	2.2nm,0.3s,SNR=1.0						
AVF	Avril sur Loir	2.40	268	ePn	Pn	12 03 53.0	-1.9
AVF	Avril sur Loir	2.40	268	ePg	Pb	12 04 00.7	+1.7
AVF				eSn	Sn	12 04 20.4	-3.7
	SNR=1.0						
AVF				eSg	Sb	12 04 30.9	+2.5
	2.1nm,0.4s,SNR=1.0						
AVF	Avril sur Loir	2.40	268	ePn	Pn	12 03 53.0	-1.9
AVF	Avril sur Loir	2.40	268	ePg	Pb	12 04 00.7	+1.7
AVF				eSn	Sn	12 04 20.4	-3.7
	SNR=1.0						
AVF				eSg	Sb	12 04 30.9	+2.5
	1.0nm,0.4s,SNR=1.0						
VIVF	Saint-Julien-l	2.57	217	ePg	Pb	12 04 03.5	+1.6
	SNR=1.0						
VIVF				eSg	Sb	12 04 35.7	+2.4
	3.3nm,0.3s						
VIVF	Saint-Julien-l	2.57	217	ePg	Pb	12 04 03.5	+1.6
	SNR=1.0						
VIVF				eSg	Sb	12 04 35.7	+2.4
	1.6nm,0.3s						
BGF	Bois d'Agland	2.77	264	ePn	Pn	12 03 57.4	-2.7
	SNR=1.0						
BGF				eSg	Sb	12 04 42.6	+3.4
	4.1nm,0.2s,SNR=1.0						
BGF	Bois d'Agland	2.77	264	ePn	Pn	12 03 57.4	-2.7
	SNR=1.0						
BGF				eSg	Sb	12 04 42.6	+3.4
	2.0nm,0.2s,SNR=1.0						
LASF	Ste Croix	3.54	217	eSg	Sb	12 05 06.0	+4.7
	4.5nm,0.8s,SNR=1.0						
LASF	Ste Croix	3.54	217	eSg	Sb	12 05 06.0	+4.7
	2.2nm,0.8s,SNR=1.0						
CAF	Calviac	3.89	241	eSg	Sg	12 05 18.2	-2.7
	1.7nm,0.4s,SNR=1.0						
CAF	Calviac	3.89	241	eSg	Sg	12 05 18.2	-2.7
	0.9nm,0.4s,SNR=1.0						
GRR	Gorron	5.40	289	ePn	Pn	12 04 34.1	-2.1
	SNR=1.0						
GRR	Gorron	5.40	289	ePn	Pn	12 04 34.1	-2.1
	SNR=1.0						

NEIC 03 12:04:45.6, 36.90S×177.06E, h261km, MG4.0(WEL), After WEL.

WEL 03 12:04:45.7±0.4, 36.80S×176.95E, h250km±6km, ML4.1/12, 2C, Error ellipse: s-maj=8.5km s-min=7.0km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.32	126	PN	Pn	12 05 22.9	+0.3
MXZ				SN	S	12 05 51.0	-0.7
MXZ	Matakaoa Point	1.32	126	Pn	Pn	12 05 22.9	+0.3
MXZ				Sn	S	12 05 51.8	0.0
URZ	Urewera	1.47	175	PN	Pn	12 05 23.4	-0.2
URZ				SN	S	12 05 53.3	-0.3
URZ	Urewera	1.47	175	Pn	Pn	12 05 23.5	-0.2
MWZ	Matawai	1.60	164	PN	Pn	12 05 24.8	0.0
MWZ				SN	S	12 05 55.5	-0.1
MWZ	Matawai	1.60	164	Pn	Pn	12 05 24.9	+0.1
PUZ	Puketiti	1.64	141	⇑PN	Pn	12 05 25.1	+0.1
PUZ				SN	S	12 05 55.3	-0.9
PUZ	Puketiti	1.64	141	Pn	Pn	12 05 25.1	0.0
PUZ				Sn	S	12 05 55.3	-0.8
PRRZ	Plateau Road	1.76	194	PN	Pn	12 05 26.7	+0.7
PRRZ	Plateau Road	1.76	194	Pn	Pn	12 05 26.6	+0.7
ALRZ	Allen Road	1.83	195	PN	Pn	12 05 27.1	+0.5
ALRZ	Allen Road	1.83	195	Pn	Pn	12 05 27.1	+0.5
CNGZ	Carnagh Statio	1.96	150	PN	Pn	12 05 28.0	+0.4
CNGZ	Carnagh Statio	1.96	150	Pn	Pn	12 05 28.1	+0.4
RAHZ	Arahi	2.12	177	PN	Pn	12 05 29.3	+0.1
RAHZ	Arahi	2.12	177	Pn	Pn	12 05 29.3	+0.1
NMHZ	Naumai	2.30	183	PN	Pn	12 05 31.2	+0.3
NMHZ	Naumai	2.30	183	Pn	Pn	12 05 31.3	+0.3
BKZ	Black Stump Fm	2.40	189	⇑PN	Pn	12 05 31.2	-0.7
BKZ	Black Stump Fm	2.40	189	Pn	Pn	12 05 31.1	-0.7
MHGZ	Mahia Peninsul	2.47	163	PN	Pn	12 05 32.3	-0.3
MHGZ	Mahia Peninsul	2.47	163	Pn	Pn	12 05 32.4	-0.2
WPVZ	Whakapapa	2.65	204	PN	Pn	12 05 34.4	-0.1
WPVZ	Whakapapa	2.65	204	Pn	Pn	12 05 34.4	-0.2
MCHZ	McNeill Hill	2.65	184	PN	Pn	12 05 34.2	-0.2
MCHZ	McNeill Hill	2.65	184	Pn	Pn	12 05 34.2	-0.2
TUVZ	Tukino	2.67	202	PN	Pn	12 05 34.5	-0.3
TUVZ	Tukino	2.67	202	Pn	Pn	12 05 34.6	-0.2
FWVZ	Far West T-bar	2.69	204	PN	Pn	12 05 35.0	-0.2
FWVZ	Far West T-bar	2.69	204	Pn	Pn	12 05 34.9	-0.3
TRVZ	Turoa	2.73	203	PN	Pn	12 05 35.5	0.0
TRVZ	Turoa	2.73	203	Pn	Pn	12 05 35.2	-0.3
WNVZ	Wahianoa	2.75	203	PN	Pn	12 05 35.0	-0.5
WNVZ	Wahianoa	2.75	203	Pn	Pn	12 05 35.2	-0.4
MOVZ	Moawhango	2.77	200	PN	Pn	12 05 34.8	-0.9
MOVZ				SN	S	12 06 12.7	-2.8
MOVZ	Moawhango	2.77	200	Pn	Pn	12 05 34.9	-0.9
BHHZ	Black Hill Sta	2.78	194	PN	Pn	12 05 34.9	-0.9
BHHZ				SN	S	12 06 12.9	-2.7
BHHZ	Black Hill Sta	2.78	194	Pn	Pn	12 05 35.0	-0.8
MTVZ	Mangateitei	2.84	204	PN	Pn	12 05 36.0	-0.4
MTVZ	Mangateitei	2.84	204	Pn	Pn	12 05 36.2	-0.3
KAHZ	Kahuranaki	3.00	181	PN	Pn	12 05 37.3	-0.8
KAHZ	Kahuranaki	3.00	181	Pn	Pn	12 05 37.3	-0.7
PNHZ	Pukenui	3.17	191	PN	Pn	12 05 38.4	-1.6
PNHZ				SN	S	12 06 20.2	-2.8
PNHZ	Pukenui	3.17	191	Pn	Pn	12 05 38.4	-1.6
PXZ	Pawanui	3.23	181	PN	Pn	12 05 39.3	-1.3
PXZ	Pawanui	3.23	181	Pn	Pn	12 05 39.2	-1.3
WPHZ	Waipukurau	3.29	187	PN	Pn	12 05 39.6	-1.7
WAZ	Wanganui	3.34	207	PN	Pn	12 05 41.1	-0.7
WAZ	Wanganui	3.34	207	Pn	Pn	12 05 41.1	-0.7
TSZ	Takapari Road	3.35	193	PN	Pn	12 05 40.3	-1.7
TSZ	Takapari Road	3.35	193	Pn	Pn	12 05 40.4	-1.6
PRHZ	Porangahau	3.48	184	PN	Pn	12 05 41.9	-1.5
DVHZ	Dannevirke	3.55	190	PN	Pn	12 05 42.7	-1.6
POWZ	Post Office Ro	3.71	194	PN	Pn	12 05 44.3	-1.7
MRZ	Mangatainoka R	4.01	195	PN	Pn	12 05 46.8	-2.7
MRZ	Mangatainoka R	4.01	195	Pn	Pn	12 05 47.1	-2.3
TIWZ	Tintock	4.06	192	PN	Pn	12 05 48.5	-1.7
TIWZ	Tintock	4.06	192	Pn	Pn	12 05 48.3	-1.8
HOWZ	Holdsworth Sta	4.25	195	PN	Pn	12 05 49.6	-2.7
OGWZ	Otaki Gorge	4.25	199	PN	Pn	12 05 49.8	-2.5
KIW	Kapiti Island	4.36	201	PN	Pn	12 05 51.0	-2.7
MTW	Mount Morrison	4.50	194	PN	Pn	12 05 52.8	-2.5
CAW	Cannon Point	4.55	198	PN	Pn	12 05 52.9	-3.0
WEL	Wellington	4.79	200	PN	Pn	12 05 56.1	-2.7
MSWZ	Moikau Station	4.80	195	PN	Pn	12 05 56.3	-2.7
SNZO	South Karori	4.83	201	PN	Pn	12 05 56.3	-3.0
TCW	Tory Channel	4.88	204	PN	Pn	12 05 57.2	-2.6
TUWZ	Tuamarina	5.19	206	PN	Pn	12 06 00.4	-3.2
NNZ	Nelson	5.22	211	PN	Pn	12 06 00.7	-3.3
THZ	Tophouse	5.87	211	PN	Pn	12 06 08.9	-3.3
KHZ	Kahutara	6.20	204	PN	Pn	12 06 12.8	-3.4
DSZ	Denniston Nort	6.36	217	PN	Pn	12 06 13.9	-4.3
LTZ	Lake Taylor	6.98	210	PN	Pn	12 06 21.8	-4.2

IDC 03 12:05:01.4±8.8, 21.09S×68.34W, h142km±61km, mb3.1/2, mb1 3.3/3, mb1mx3.1/16, mbtmp3.1/3, Error ellipse: s-maj=82.5km s-min=49.9km az=35.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.78	2	P	Pn	12 06 12.4	-0.2
	0.9nm,0.3s,baz=181,slow=5.9,SNR=42						
LPAZ				S	Sn	12 07 08.1	+0.1
	baz=90,slow=20,SNR=1.9						
TORD	Torodi Ar. Bea	76.72	70	P	P	12 16 37.5	+0.1
	0.4nm,0.8s,baz=237,slow=5.0,SNR=4.3						
YKA	Yellowknife Ar	90.98	340	P	P	12 17 48.7	-0.1
	0.2nm,0.6s,baz=132,slow=4.8,SNR=7.7						

CSEM 03 12:05:56.9±0.1, 41.35N×22.87E, h10km, MD2.6, Error ellipse: s-maj=3.8km s-min=2.3km az=169.0
SKO 03 12:05:59.2, 41.50N×23.05E, h15km, M1.1, ML1.3
SOF 03 12:05:59.4, 41.51N×23.05E, h20km, MD2.6
ISCJB 03 12:05:59.7±0.8, 41.50N±0.08×23.08E±0.07, h9km, Error ellipse: s-maj=12.4km s-min=6.2km az=157.2

ISC 03 12:05:59.2±1.1, 41.50N±0.06×23.03E±0.05, h9km, n12, σ0.47/12, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.36	6	i Pg	Pb	12 06 07.3	-0.6
KKB	Krupnik	0.36	6	i Pg	Pb	12 06 07.3	-0.6
VAY	Valandovo	0.39	243	ePg	Pb	12 06 08.2	-0.1
VAY				eLg	Lg	12 06 13.9	
	comp=E,20nm,0.2s						
VAY				eSg	Sb	12 06 14.1	-0.4
VAY				eLg	Lg	12 06 14.3	
	comp=N,23nm,0.2s						
VAY	Valandovo	0.39	243	ePg	Pg	12 06 01.6	-5.3
VAY				eLg	Lg	12 06 14.8	
	comp=N,23nm,0.2s						
MMB	Musomiste	0.53	80	i Pg	Pb	12 06 10.5	-0.2
MMB	Musomiste	0.53	80	i Pg	Pb	12 06 10.5	-0.2
VTS	Vitosha	1.09	7	i Pg	Pn	12 06 21.5	+0.6
VTS	Vitosha	1.09	7	i Pg	Pn	12 06 21.5	+0.6
RZN	Rozhen	1.27	81	i P	Pn	12 06 23.2	-0.2
RZN	Rozhen	1.27	81	i P	Pn	12 06 23.2	-0.2
KDZ	Kurdzhali	1.79	85	i Pg	Pg	12 06 33.9	+0.3
KDZ	Kurdzhali	1.79	85	i Pg	Pg	12 06 33.9	+0.3

MAN 03 12:06:38, 13.89N×120.94E, h31km, mb4.1, ML2.9, MS2.7, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.21	360	⇓eP	Pn	12 06 46.0	+0.9
TGY				i S	Sn	12 06 52.3	+2.7
LQP	Lukban	0.62	69	eP	Pn	12 06 51.4	+0.4
BOAC	Boac	0.98	116	eP	Pn	12 06 55.6	0.0
SJMP	San Jose	1.43	173	eP	Pn	12 07 02.8	+0.9
GQP	Guinayangan	1.47	89	⇑eP	Pn	12 07 02.7	+0.4
AUQP	San Andres	1.78	108	eP	Pb	12 07 08.8	-1.2
BALP	Baler	1.94	18	eP	Pb	12 07 12.8	+0.1

IDC 03 12:07:58.5±2.3, 22.84S×175.58W, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.9/20, mbtmp4.0/6, ML2.2/1, MS3.9/3, Ms1 3.9/3, ms1mx3.2/27, Error ellipse: s-maj=102.7km s-min=23.7km az=149.0
NEIC 03 12:08:04.6±1.7, 22.53S×175.68W, h35km, mb4.5/2, Error ellipse: s-maj=60.6km s-min=13.6km az=142.0
ISCJB 03 12:08:05.1±1.7, 22.0S±0.3×176.1W±0.3, h35km, mb4.0/6, MS3.9/3, Error ellipse: s-maj=53.2km s-min=8.9km az=42.8

ISC 03 12:08:06.7±1.6, 22.2S±0.3×176.0W±0.3, h35km, n24, σ1.08/21, mb4.2/6, MS3.7/3, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.17	307	ePn	Pn	12 10 07.8	+19
AFI	Afiamalu	9.15	26	ePn	Pn	12 10 16.6	+0.1
AFI				Sn	Sn	12 11 58.0	-0.4
AFI	Afiamalu	9.15	26	Pn	Pn	12 10 17.4	+1.0
	1.4nm,0.3s,baz=196,slow=7.4,SNR=3.5						
AFI				Sn	Sn	12 11 58.0	-0.4
	1.1nm,0.3s,baz=252,slow=20,SNR=2.5						
TBI	Tubuai	24.46	98	eLR	LR	12 19 15.3	
	73nm,22.8s						
PPT2	Papeete2	25.22	84	eLR	LR	12 19 36.1	
	44nm,21.8s						
PPT	Papeete	25.22	84	LR	LR	12 20 58.9	
	comp=Z,141nm,19.9s,baz=283,slow=31						
CTA	Charters Tower	35.24	266	P	P	12 14 58.2	0.0
CTA	Charters Tower	35.24	266	P	P	12 14 58.2	0.0
	3.0nm,0.4s,baz=101,slow=12,SNR=6.2						
CTAO	Charters Tower	35.24	266	eP	P	12 14 59.4	+1.2
	7.2nm,0.9s						
AS31	Alice Springs	46.00	258	eP	P	12 16 27.2	+0.1
ASAR	Alice Springs	46.00	258	P	P	12 16 25.8	-1.3
ASAR	Alice Springs	46.00	258	P	P	12 16 25.8	-1.3
	0.4nm,0.5s,baz=96,slow=7.0,SNR=17						
WRAB	Tennant Creek	46.26	263	eP	P	12 16 27.9	-1.2
	6.4nm,1.2s						
WRA	Warramunga Arr	46.26	263	P	P	12 16 27.9	-1.2
WRA	Warramunga Arr	46.26	263	P	P	12 16 27.9	-1.2
	0.8nm,0.4s,baz=101,slow=8.4,SNR=35						
NVAR	Mina Array Bea	80.98	42	P	P	12 20 17.2	-0.8
NVAR	Mina Array Bea	80.98	42	P	P	12 20 17.2	-0.8
	0.3nm,0.7s,baz=198,slow=5.7,SNR=2.9						
NVAR				LR	LR	12 52 39.2	
	comp=Z,34nm,18.9s,baz=112,slow=33						
PLCA	Paso Flores	86.73	133	LR	LR	12 50 37.0	
	comp=Z,157nm,19.0s,baz=185,slow=30						
CMAR	Chiang Mai Arr	92.46	289	P	P	12 21 15.6	+1.0
CMAR	Chiang Mai Arr	92.46	289	P	P	12 21 15.6	+1.0
	1.0nm,0.7s,baz=129,slow=3.4,SNR=5.2						
AKASG	Malin Array Be	145.41	332	PKPbc	PKPbc	12 27 39.7	-1.0
AKASG	Malin Array Be	145.41	332	PKPbc	PKPbc	12 27 39.7	-1.0
	0.7nm,0.5s,baz=35,slow=3.9,SNR=3.4						
BRTR	Keskin Array B	149.38	312	PKPbc	PKPdf	12 27 49.5	+1.6
BRTR	Keskin Array B	149.38	312	PKPbc	PKPdf	12 27 49.5	+1.6
	0.8nm,0.8s,baz=86,slow=1.9,SNR=3.7						

IDC 03 12:38:34.5±0.9, 13.36N×120.12E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.6/26, mbtmp3.8/6, Error ellipse: s-maj=17.9km s-min=12.2km az=129.0
MAN 03 12:38:36, 13.58N×120.21E, h30km, mb4.4, ML3.2, MS3.0
ISCJB 03 12:38:37.1±1.1, 13.47N±0.06×120.20E±0.06, h28km±9km, mb3.8/6, Error ellipse: s-maj=11.0km s-min=8.6km az=140.2

ISC 03 12:38:37.3±1.7, 13.52N±0.05×120.28E±0.08, h26km±14km, n17, σ1.16/15, mb4.0/6, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.21	350	eP	Pn	12 38 43.7	-1.1
TGY	Tagaytay City	0.86	48	⇑iP	Pb	12 38 56.6	+3.0
TGY	Tagaytay City	0.86	48	Pg	Pb	12 38 54.6	+1.0
	206nm,0.3s,baz=229,slow=2.5,SNR=13						
TGY				Lg	Lg	12 39 11.0	
	198nm,0.3s,baz=232,slow=17,SNR=13						
SJMP	San Jose	1.33	142	eP	Pn	12 38 59.6	-0.6
SJMP				eS	Sb	12 39 19.3	+1.0
BOAC	Boac	1.52	92	eP	Pn	12 39 02.5	-0.3
BOAC				eS	Sn	12 39 22.7	+1.0
OTRP	Odiongan	2.05	124	eP	Pb	12 39 12.8	-1.1
GQP	Guinayangan	2.13	80	⇑eP	Pb	12 39 12.8	-2.5
AUQP	San Andres	2.33	95	eP	Pb	12 39 19.5	+0.8
ENPP	El Nido	2.45	200	eP	Pn	12 39 15.8	+0.2
BALP	Baler	2.54	29	eP	Pb	12 39 22.0	-0.1
CUYO	Cuyo Island	2.75	165	eP	Pn	12 39 18.7	-1.1
WRA	Warramunga Arr	36.02	157	P	P	12 45 36.5	0.0
	1.4nm,0.6s,baz=333,slow=10,SNR=16						
SONM	Songino Array	36.11	344	P	P	12 45 40.2	+2.9
	1.2nm,0.6s,baz=160,slow=9.7,SNR=12						
ASAR	Alice Springs	39.29	160	P	P	12 46 04.9	+0.7
	2.2nm,0.6s,baz=338,slow=6.8,SNR=76						
MKAR	Makanchi Array	45.94	324	P	P	12 47 00.2	+2.2
	0.2nm,0.7s,baz=131,slow=7.9,SNR=2.4						
KURBB	Kurchatov Arra	50.11	326	P	P	12 47 30.2	+0.1
	0.5nm,0.6s,baz=129,slow=7.9,SNR=5.6						
BVAR	Borovoye Array	55.69	326	P	P	12 48 12.9	+1.6
	0.9nm,0.6s,baz=118,slow=7.8,SNR=5.3						

NNC 03 12:55:31.2±6.5, 37.27N×70.64E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=110.0km s-min=50.7km az=81.0

ISC 03 12:55:31.1±3.6, 36.9N±0.3×71.0E±0.2, h204km, n8, σ0.64/9, 1C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.67	21	P	Pn	12 56 54.8	+0.4
	SNR=58						
KK31	Karatay Array	6.26	357	⇑Pn	Pn	12 57 02.3	+0.7
	3.1nm,0.4s,baz=174,slow=12,SNR=64						
KK31				⇓Sn	S	12 58 12.8	-0.4
	2.8nm,0.6s,baz=182,slow=22,SNR=5.7						
AAK	Ala-Archa	6.37	24	P	Pn	12 57 03.9	+0.7
	SNR=9.7						
KBK	Karagaybulak	6.55	26	P	Pn	12 57 06.3	+0.8
	SNR=5.5						
USP	Ospenovka	6.95	22	P	Pn	12 57 10.9	+0.3
	SNR=6.4						
TKM2	Tokmak 2	7.02	29	⇓Pn	Pn	12 57 11.1	-0.5
	7.7nm,0.8s						
TKM2	Tokmak 2	7.02	29	P	Pn	12 57 11.7	+0.1
	SNR=8.1						
AB31	Akbulak array	14.78	330	⇓Pn	P	12 58 50.6	-0.4
	0.5nm,0.6s,baz=152,slow=12,SNR=12						

ISCJB 03 13:16:39.9±0.4, 31.77S±0.03×69.87W±0.06, h122km±5km, mb3.3/4, Error ellipse: s-maj=8.3km s-min=4.7km az=1.0
GUC 03 13:16:40.7±0.8, 31.82S×70.07W, h130km±9km, MD4.0, ML4.2
IDC 03 13:16:42.4±2.1, 31.68S×69.68W, h127km±14km, mb3.2/4, mb1 3.5/6, mb1mx3.4/16, mbtmp3.2/6, Error ellipse: s-maj=44.6km s-min=28.5km az=24.0

ISC 03 13:16:40.4±0.8, 31.78S±0.04×69.87W±0.05, h117km±7km, n28, σ0.82/43, mb3.3/4, 5C-3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	1.09	214	⇓eP	Pn	13 17 04.0	+0.8
CMCH	Combarbala	1.14	302	⇓iP	Pn	13 17 04.1	+0.4
CMCH				i S	Sn	13 17 21.7	+0.5
CMCH				AML	AML	13 17 22.9	
	comp=N,11μm,0.5s						
CHNG	Los Chungos	1.39	265	eP	Pn	13 17 06.3	0.0
CHNG				eS	Sn	13 17 25.1	-0.9
CFAA	Coronel Fontan	1.40	83	P	Pn	13 17 07.3	+0.8

	comp=N,25nm,0.3s,baz=256,slow=9.1,SNR=3539						
CFAA				S	Sn	13 17 26.4	0.0
	comp=N,13nm,0.3s,baz=52,slow=20,SNR=44						
PEL	Peldehue	1.53	207	⇓eP	Pn	13 17 08.2	+0.2
PEL				eS	Sn	13 17 29.2	+0.2
PEL				AML	AML	13 17 30.6	
	comp=N,3µm,0.4s						
ROCH	El Roble	1.53	219	⇑iP	Pn	13 17 08.2	-0.1
ROCH				eS	Sn	13 17 29.4	0.0
ROCH				AML	AML	13 17 30.9	
	comp=N,3µm,0.3s						
CLCH	Cerro Calan	1.71	199	eP	Pn	13 17 10.6	+0.5
CLCH				eS	Sn	13 17 33.1	+0.3
CLCH				AML	AML	13 17 35.8	
	comp=E,2µm,0.3s						
STL	Santa Lucia	1.78	201	eP	Pn	13 17 11.2	+0.2
STL				eS	Sn	13 17 34.6	+0.3
FSR	Penalolen	1.79	198	eP	Pn	13 17 11.6	+0.5
FSR				eS	Sn	13 17 35.3	+0.8
TLL	Tololo Astrono	1.79	333	⇑iP	Pn	13 17 12.7	+1.3
TLL				eS	Sn	13 17 36.2	+1.2
SAN	Santiago	1.80	202	eP	Pn	13 17 11.4	+0.2
SAN				eS	Sn	13 17 35.1	+0.4
ANTU	Antumapu	1.90	200	⇑eP	Pn	13 17 12.6	+0.1
ANTU				eS	Sn	13 17 37.6	+0.6
ANTU				AML	AML	13 17 38.0	
	comp=N,2µm,0.3s						
PCH	Pirque	1.92	196	eP	Pn	13 17 13.3	+0.6
PCH				eS	Sn	13 17 38.0	+0.6
IHA	Instituto Hidr	1.95	230	eP	Pn	13 17 12.2	-0.8
TACH	Talagante	2.08	205	i P	Pn	13 17 14.3	-0.3
LMEL	Las Melosas	2.08	188	eP	Pn	13 17 15.9	+1.0
LMEL				eS	Sn	13 17 43.3	+2.0
CHCH	Chadas Angostu	2.25	197	⇑eP	Pn	13 17 17.1	+0.2
CACH	El Canelo	2.41	195	eP	Pn	13 17 19.6	+0.5
LCO	Las Campanas	2.85	345	⇑eP	Pn	13 17 25.6	+0.7
LCO				eS	Sn	13 17 58.9	-0.2
CPUP	Villa Florida	12.24	67	P	Pn	13 19 28.1	-2.7
	comp=N,0.6nm,0.3s,baz=218,slow=11,SNR=9.8						
LPAZ	La Paz	15.50	6	P	Pn	13 20 12.6	-0.7
	comp=N,0.1nm,0.3s,baz=190,slow=12,SNR=2.4						
TXAR	Lajitas Array	68.74	329	P	P	13 27 32.5	+0.8
	comp=N,0.1nm,0.5s,baz=150,slow=7.6,SNR=3.7						
TORD	Torodi Ar. Bea	81.73	69	P	P	13 28 45.9	-0.5
	comp=N,1.1nm,0.6s,baz=283,slow=6.2,SNR=11						
PDAR	Pinedale Array	82.64	332	P	P	13 28 52.2	+1.3
	comp=N,0.3nm,0.7s,baz=143,slow=7.9,SNR=2.9						
NVAR	Mina Array Bea	83.14	324	P	P	13 28 53.2	-0.3
	comp=N,0.2nm,0.4s,baz=165,slow=5.1,SNR=3.3						
WRA	Warramunga Arr	123.58	208	PKP	PKPdf	13 35 24.6	-0.2
	comp=N,0.2nm,0.3s,baz=151,slow=1.8,SNR=6.9						
ZALV	Zalesovo Beam	151.38	32	PKPbc	PKPbc	13 36 20.6	+0.7
	comp=N,3.9nm,0.6s,baz=297,slow=3.2,SNR=17						
MKAR	Makanchi Array	153.93	47	PKPbc	PKPbc	13 36 26.6	+0.7
	comp=N,0.2nm,0.4s,baz=291,slow=4.0,SNR=3.9						
MKAR				PKPab	PKPab	13 36 39.8	+0.2
	comp=N,0.5nm,0.8s,baz=296,slow=5.4,SNR=3.4						

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*ISK **03** 13:19:21.2, 37°.99N×30°.11E, h5^{km}, MD2.7*
*DDA **03** 13:19:22.1, 38°.00N×30°.14E, h4^{km}, MD2.9*
*CSEM **03** 13:19:22.4±0.1, 37°.99N×30°.09E, h5^{km}, MD2.7, Error ellipse: s-maj=3.6km s-min=3.2km az=22.0*
ISC 03 13:19:22.4±1.2**, 38°.00N**±0°.02×**30°.10E**±0°.02**, h5**^{km}±11^{km}**, n35,** σ**1^{s}29**/52**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISP	Isparta	0.38	118	ePG	Pg	13 19 29.4	-0.3
ISP				eSG	Sb	13 19 35.8	-2.1
ISP	Isparta	0.38	118	ePg	Pg	13 19 29.4	-0.3
ISP				eSg	Sb	13 19 35.8	-2.1
KHL	Karahalli	0.55	305	ePG	Pg	13 19 33.0	0.0
KHL	Karahalli	0.55	305	ePg	Pg	13 19 33.1	0.0
KHAL	Karahalli	0.60	308	i P	Pg	13 19 33.7	-0.3
KHAL				i S	Sn	13 19 47.6	-0.4
KHAL	Karahalli	0.60	308	i P	Pg	13 19 34.0	+0.1
KHAL				i S	Sn	13 19 48.5	+0.5
KHAL	Karahalli	0.60	308	i P	Pg	13 19 33.7	-0.3
SHUT	Suhut-Afyon	0.65	33	ePG	Pg	13 19 35.1	+0.1
SHUT				eSG	Sb	13 19 45.4	-0.5
SHUT	Suhut-Afyon	0.65	33	ePg	Pg	13 19 35.1	+0.1
SHUT				eSg	Sb	13 19 45.4	-0.5
GOLH	Golhisar	0.88	209	i P	Pg	13 19 39.1	-0.1
GOLH				i S	Sn	13 19 56.0	+1.4
GOLH	Golhisar	0.88	209	i P	Pg	13 19 39.1	-0.1
GOLH				i S	Sn	13 19 55.0	+0.3
GOLH	Golhisar	0.88	209	i P	Pg	13 19 39.1	-0.1
DNZL	Cakiroluk	0.89	250	i P	Pb	13 19 40.2	-0.2
DNZL				i S	Sn	13 19 57.6	+2.4
DNZL	Cakiroluk	0.89	250	i P	Pb	13 19 40.6	+0.2
DNZL				i S	Sn	13 19 57.5	+2.4
DNZL	Cakiroluk	0.89	250	i P	Pb	13 19 40.2	-0.2
ALT	Altintas	1.05	1	ePG	Pg	13 19 42.7	+0.2
ALT	Altintas	1.05	1	ePg	Pg	13 19 42.7	+0.2
GDZ	Gediz	1.19	336	i P	Pg	13 19 45.4	+0.3
GDZ				i S	Sn	13 20 03.4	+1.0
GDZ	Gediz	1.19	336	i P	Pg	13 19 44.2	-0.9
GDZ				i S	Sn	13 20 04.3	+1.9
GDZ	Gediz	1.19	336	i P	Pg	13 19 45.4	+0.3
GDZ				i S	Sn	13 20 03.4	+1.0
KULA	Kula-Manisa	1.24	295	ePN	Pb	13 19 46.5	+0.1
KULA	Kula-Manisa	1.24	295	ePn	Pb	13 19 46.5	+0.1
ELL	Elmali	1.26	187	ePN	Pn	13 19 46.7	-0.1
ELL	Elmali	1.26	187	ePn	Pn	13 19 46.7	-0.1
MANT	Manisa	1.31	292	eP	Pn	13 19 44.5	-3.0
MANT				i S	Sn	13 20 09.9	+4.4
MANT	Manisa	1.31	292	eP	Pn	13 19 44.5	-3.0
KIZT	Kizilcal	1.65	57	ePN	Pb	13 19 52.6	-0.8
KIZT	Kizilcal	1.65	57	ePn	Pb	13 19 52.6	-0.8
KDHN	Kadinhani	1.67	71	i P	Pn	13 19 51.9	-0.5
KDHN				i S	Sg	13 20 17.7	+1.7
KDHN	Kadinhani	1.67	71	i P	Pn	13 19 52.0	-0.4
KDHN				i S	Sg	13 20 17.6	+1.5
KDHN	Kadinhani	1.67	71	i P	Pn	13 19 51.9	-0.5
KDHN				i S	Sg	13 20 17.6	+1.5
KONT	Konya--Tatoy	1.79	91	ePN	Pn	13 19 54.3	+0.3
KONT	Konya--Tatoy	1.79	91	ePn	Pn	13 19 54.3	+0.3
LADK	Ladik-KONYA	1.80	83	ePN	Pb	13 19 55.0	-0.9
LADK	Ladik-KONYA	1.80	83	ePn	Pb	13 19 55.0	-0.9

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*IPEC **03** 13:21:56.7±0.3, 51°.57N×16°.25E, h0^{km}, ML2.2/3, Error ellipse: s-maj=2.0km s-min=1.5km az=34.0*
*ISCJB **03** 13:21:56.2±0.6, 51°.47N±0°.03×16°.13E±0°.03, h0^{km}, Error ellipse: s-maj=4.5km s-min=2.8km az=14.8*
*CSEM **03** 13:21:57.5±0.3, 51°.49N×16°.11E, h2^{km}, ML3.3/14*
*WAR **03** 13:21:58.5, 51°.50N×16°.09E*
*PRU **03** 13:21:58.6, 51°.49N×16°.10E, h0^{km}*
*VIE **03** 13:21:59.8±0.7, 51°.34N×16°.05E, h0^{km}, mb2.5/4, ML2.8/4, Error ellipse: s-maj=4.6km s-min=3.9km az=159.0 72 km WNW of Wroclaw Suspected Mining induced.*
ISC 03 13:21:57.7±1.1**, 51°.49N**±0°.05×**16°.13E**±0°.02**, h0**^{km}**, n39,** σ**0^{s}75**/76**, 3C-6D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.66	171	ePg	Pg	13 22 10.9	+0.6
KSP				eSg	Sg	13 22 20.3	+1.5
KSP	Ksiaz	0.66	171	e	Pn	13 22 18.2	+3.9
KSP	Ksiaz	0.66	171	⇓iPg	Pg	13 22 11.0	+0.6
KSP				eSg	Sg	13 22 20.4	+1.6
UPC	Upice	0.99	184	ePG	Pg	13 22 17.0	+0.4
UPC				eSG	Sb	13 22 30.6	-0.7
	comp=Z,20nm,0.2s						
UPC	Upice	0.99	184	Pg	Pg	13 22 17.0	+0.4
UPC				Sg	Sb	13 22 30.6	-0.7
	20nm,0.2s						
DPC	Dobruska-Polom	1.15	174	ePG	Pg	13 22 19.8	+0.1
DPC				eSG	Sb	13 22 35.8	-0.2
	comp=Z,36nm,0.2s						
DPC	Dobruska-Polom	1.15	174	Pg	Pg	13 22 19.8	+0.1
DPC				Sg	Sb	13 22 35.8	-0.2
	36nm,0.2s						
PVCC	Panska Ves	1.38	226	ePG	Pg	13 22 23.9	-0.2
PVCC				eSG	Sn	13 22 43.2	+0.1
	comp=Z,124nm,0.2s						
PVCC	Panska Ves	1.38	226	Pg	Pg	13 22 23.9	-0.2
PVCC				Sg	Sn	13 22 43.2	+0.1
	124nm,0.2s						
KRLC	Kraliky	1.48	163	ePG	Pn	13 22 25.1	-0.5
KRLC				eSG	Sn	13 22 46.1	+0.4
KRLC	Kraliky	1.48	163	Pg	Pn	13 22 25.1	-0.5
KRLC				Sg	Sn	13 22 46.1	+0.4
BRG	Berggiesshubel	1.51	247	PN	Pn	13 22 25.3	-0.6
BRG				PG	Pb	13 22 26.2	-0.3
BRG				SG	Sn	13 22 46.7	+0.4
	130nm,0.4s						
PRU	Pruhonice	1.81	214	ePG	Pb	13 22 31.5	-0.2
PRU				eSG	Sg	13 22 56.2	+0.4
	comp=Z,49nm,0.3s						
PRU	Pruhonice	1.81	214	Pg	Pb	13 22 31.5	-0.2
PRU				Sg	Sg	13 22 56.2	+0.4
	49nm,0.3s						
MORC	Moravsky Berou	1.94	152	ePn	Pn	13 22 31.2	-0.8
	baz=336						
MORC				eSg	Sb	13 22 58.6	-0.1
	13nm,0.4s,baz=336						
CLL	Collm	1.96	266	ePn	Pn	13 22 31.0	-1.2
CLL				ePg	Pb	13 22 34.0	-0.3
CLL				e		13 22 37.0	
CLL				i Sg	Sg	13 23 00.6	-0.2
	comp=Z,62nm,0.7s						
CLL				i		13 23 06.7	
OKC	Ostrava-Krasne	2.10	141	ePG	Pb	13 22 36.7	+0.1
OKC				eSG	Sg	13 23 05.0	-0.1
	comp=Z,27nm,0.6s						
OKC	Ostrava-Krasne	2.10	141	Pg	Pb	13 22 36.7	+0.1
OKC				Sg	Sg	13 23 05.0	-0.1
	comp=Z,27nm,0.6s						
VRAC	Vranov	2.21	172	ePn	Pn	13 22 35.5	-0.1
VRAC				eSg	Sg	13 23 07.7	-0.9
	comp=Z,16nm,0.3s,baz=354						
TREC	Trest	2.24	191	ePN	Pn	13 22 36.1	+0.1
TREC				ePG	Pb	13 22 39.2	+0.2
TREC				eSG	Sg	13 23 09.5	-0.1
	comp=Z,16nm,0.2s						
TREC	Trest	2.24	191	Pn	Pn	13 22 36.1	+0.1
KRUC	Moravsky	2.44	176	ePn	Pn	13 22 38.8	0.0
	baz=358						
KRUC				eSg	Sg	13 23 15.2	-0.8
	comp=Z,9.7nm,0.3s,baz=358						
NKC	Novy Kostel	2.65	243	ePN	Pn	13 22 42.0	+0.3
NKC				ePG	Pb	13 22 46.9	+0.9
NKC				eSG	Sg	13 23 23.7	+1.0
	comp=Z,58nm,0.5s						
NKC	Novy Kostel	2.65	243	Pn	Pn	13 22 42.0	+0.3
NKC	Novy Kostel	2.65	243	Pg	Pb	13 22 46.9	+0.9
NKC				Sg	Sg	13 23 23.7	+1.0
	comp=Z,58nm,0.5s						
OJC	Ojcow	2.66	117	ePn	Pn	13 22 41.2	-0.5
OJC				ePg	Pg	13 22 49.3	+0.8
OJC				eSg	Sg	13 23 23.9	+1.0
OJC	Ojcow	2.66	117	ePn	Pn	13 22 41.2	-0.5
KHC	Kasperske Hory	2.87	216	ePN	Pn	13 22 44.6	-0.2
KHC				ePG	Pb	13 22 50.8	+1.0
KHC				eSN	Sn	13 23 20.0	0.0
KHC				eSG	Sg	13 23 30.4	+0.4
	comp=Z,13nm,0.4s						
KHC	Kasperske Hory	2.87	216	Pn	Pn	13 22 44.6	-0.2
VYHS	Vyhne	3.48	149	ePN	Pn	13 22 56.8	+3.8
VYHS				eSN	Sn	13 23 36.2	+1.4
CONA	Conrad Observa	3.57	183	⇑iPn	Pn	13 22 54.9	+0.5
	comp=Z,1.1nm,0.2s						
CONA				⇓Sg	Sg	13 23 51.9	-0.5
	comp=Z,14nm,0.4s						
CONA	Conrad Observa	3.57	183	Pn	Pn	13 22 54.9	+0.5
	comp=Z,1.1nm,0.2s						
CONA				Sg	Sg	13 23 51.9	-0.5
	comp=Z,14nm,0.4s						
MOA	Molln	3.84	199	⇑ePn	Pn	13 22 58.3	+0.2
	comp=Z,4.5nm,0.3s						
MOA				⇓iSg	Sg	13 24 01.4	+0.4
ARSA	Arzberg	4.26	186	⇓ePn	Pn	13 23 02.3	-1.6
	comp=Z,0.3nm,0.2s						
ARSA				⇓Sg	Sg	13 24 12.3	-2.3
	comp=Z,5.8nm,0.5s						
ARSA	Arzberg	4.26	186	Pn	Pn	13 23 02.3	-1.6
	comp=Z,0.3nm,0.2s						
ARSA				Sg	Sg	13 24 12.3	-2.3
	comp=Z,5.8nm,0.5s						
CRVS	Cervenica-Dubn	4.30	125	ePG	Pg	13 23 19.6	-0.4
KOLS	Kolonicke sedl	4.71	121	ePG	Pg	13 23 27.2	-0.6
KBA	Koelnbreinsper	4.78	203	⇑iPn	Pn	13 23 11.6	+0.5
	comp=Z,1.9nm,0.3s						
KBA				⇓Sg	Sg	13 24 30.4	-0.7
	comp=Z,2.6nm,0.3s						
KBA	Koelnbreinsper	4.78	203	Pn	Pn	13 23 11.6	+0.5
	comp=Z,1.9nm,0.3s						
KBA				Sg	Sg	13 24 30.4	-0.7
	comp=Z,2.6nm,0.3s						

IDC 03 13:31:32.8±2.0**, 3°.93N**×**126°.83E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/22**, mbtmp3.4**/3**, Error ellipse: s-maj=152.3km s-min=25.3km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.84	163	P	P	13 36 57.1	-0.1
	1.8nm,0.6s,baz=343,slow=11,SNR=19						
ASAR	Alice Springs	28.28	166	P	P	13 37 28.2	0.0
	0.1nm,0.4s,baz=342,slow=7.8,SNR=4.2						
MKAR	Makanchi Array	57.45	325	P	P	13 41 23.5	-0.1
	0.1nm,0.5s,baz=116,slow=6.6,SNR=2.7						

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*ISCJB **03** 14:01:18.4±0.3, 30°.67S±0°.04×178°.50W±0°.07, h125^{km}, mb4.8/43, Error ellipse: s-maj=8.4km s-min=4.3km az=20.7*
*IDC **03** 14:01:19.9±0.7, 30°.03S×178°.58W, h122^{km}±6^{km}, mb4.4/17, mb1 4.5/18, mb1mx4.5/19, mbtmp4.3/18, MS3.7/10, Ms1 3.7/10, ms1mx3.5/25, Error ellipse: s-maj=12.8km s-min=11.8km az=32.0*
*BJI **03** 14:01:20.1, 30°.06S×178°.66W, h122^{km}, mB5.2/11, mb4.9/16*
*NEIC **03** 14:01:21.0±0.7, 30°.08S×178°.57W, h129^{km}±6^{km}, mb4.8/19, Error ellipse: s-maj=10.1km s-min=7.3km az=136.0*
*GCMT **03** 14:01:22.5±0.4, 30°.03S×178°.39W, h128^{km}±5^{km}, MW4.9, Moment Tensor Solution. s20,c23; s58,c81; Moment tensor: Scale 10^{16}Nm; M_{rr}0.54±.16; $M_{\theta\theta}$-0.33±.19; $M_{\phi\phi}$-0.21±.20; $M_{r\theta}$-0.57±.10; $M_{\theta\phi}$-1.00±.19; $M_{\phi r}$-2.49±.11; Best double couple: $M_0$2.80000×10^{16} NP1:ϕ_s85.00000°, δ20.00000°, λ161.00000°. NP2:ϕ_s194.00000°, δ83.00000°, λ71.00000°. Principal axes: T 2.7000, Plg48.0000°, Azm83.0000°; N 0.1600, Plg19.0000°, Azm196.0000°; P -2.8600, Plg36.0000°, Azm300.0000°; Data Used: IU G CN IC II.*
ISC 03 14:01:20.5±0.4**, 30°.43S**±0°.05×**178°.63W**±0°.06**, h127**^{km}±2^{km}**, h127**^{km}**:pP-P, n233,** σ**1^{s}38**/245**, mb4.8**/42**, 20C-18D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.33	28	ePn	Pn	14 01 42.0	-4.5
RAO				S	Sn	14 01 57.9	-8.3
RAO				eSn	Sn	14 01 59.9	-6.4
RAO	Raoul Island	1.33	28	P	Pn	14 01 42.1	-4.5
	2µm,0.3s,baz=252,slow=20,SNR=103						
RAO				S	Sn	14 01 57.9	-8.3
	2µm,0.3s,baz=121,slow=20,SNR=6.2						
PUZ	Puketiti	8.04	198	PN	Pn	14 03 09.9	-4.6
PUZ				SN	Sn	14 04 39.4	-4.4
OUZ	Omahuta	8.10	232	ePn	Pn	14 03 19.8	+4.6
CNGZ	Carnagh Statio	8.45	197	PN	Pn	14 03 15.7	-4.1
MWZ	Matawai	8.50	201	PN	Pn	14 03 15.5	-5.1
MWZ				SN	Sn	14 04 52.1	-2.7
URZ	Urewera	8.56	203	P	Pn	14 03 16.6	-4.9
URZ				S	Sn	14 04 53.8	-2.6
URZ	Urewera	8.56	203	PN	Pn	14 03 16.3	-5.1
URZ	Urewera	8.56	203	P	Pn	14 03 16.6	-4.9
	1.9nm,0.3s,baz=82,slow=3.8,SNR=34						
URZ				S	Sn	14 04 53.8	-2.6
	14nm,0.3s,baz=319,slow=18,SNR=11						
RAHZ	Arahi	9.17	201	ePN	Pn	14 03 24.0	-5.7
RAHZ				SN	Sn	14 05 08.4	-2.6
BKZ	Black Stump Fm	9.59	203	PN	Pn	14 03 29.0	-6.3
FWVZ	Far West T-bar	10.01	207	PN	Pn	14 03 35.1	-6.1
BHHZ	Black Hill Sta	10.03	204	PN	Pn	14 03 37.0	-4.2
KAHZ	Kahuranaki	10.04	200	ePN	Pn	14 03 34.7	-6.6
WNVZ	Wahianoa	10.06	207	PN	Pn	14 03 38.3	-3.5
PNHZ	Pukenui	10.36	203	ePN	Pn	14 03 37.0	-8.7
TSZ	Takapari Road	10.57	203	PN	Pn	14 03 40.8	-7.7
ANWZ	Angora Road	10.77	200	PN	Pn	14 03 42.6	-8.5
BFZ	Birch Farm	11.04	201	PN	Pn	14 03 46.4	-8.3
MRZ	Mangatainoka R	11.24	203	PN	Pn	14 03 48.6	-8.8
HOWZ	Holdsworth Sta	11.47	203	ePN	Pn	14 03 50.6	-10
OGWZ	Otaki Gorge	11.52	204	PN	Pn	14 03 52.4	-8.7
KIW	Kapiti Island	11.65	205	PN	Pn	14 03 54.0	-8.8
MTW	Mount Morrison	11.71	202	PN	Pn	14 03 54.7	-8.9
CAW	Cannon Point	11.81	204	PN	Pn	14 03 55.6	-9.3
SNZO	South Karori	12.12	205	PN	Pn	14 03 59.0	-10
TUWZ	Tuamarina	12.51	207	PN	Pn	14 04 05.1	-8.9
MSVF	Nonsavu	13.00	346	ePn	Pn	14 04 17.7	-3.0
KHZ	Kahutara	13.51	206	ePn	P	14 04 31.6	0.0
KHZ	Kahutara	13.51	206	PN	Pn	14 04 17.4	-10
LTZ	Lake Taylor	14.32	208	ePN	Pn	14 04 27.4	-10
RPZ	Rata Peaks	15.59	209	P	Pn	14 04 50.0	-3.2
RPZ				S	Sn	14 07 29.9	-16
RPZ	Rata Peaks	15.59	209	P	Pn	14 04 50.0	-3.2
	0.3nm,0.3s,baz=27,slow=2.3,SNR=4.2						
RPZ				S	Sn	14 07 29.9	-16
	1.7nm,0.3s,baz=347,slow=23,SNR=11						
RPZ				LR	LR	14 10 47.7	
	comp=Z,218nm,18.3s,baz=170,slow=36						
DZM	Mont Dzumac	15.76	298	ePn	P	14 04 57.8	+0.9
	320nm,1.4s						
DZM				eLR	LR	14 08 28.6	
	626nm,25.6s						
DZM	Mont Dzumac	15.76	298	eP	P	14 04 57.8	+0.9
DZM	Mont Dzumac	15.76	298	eP	P	14 04 58.0	+1.2
DZM	Mont Dzumac	15.76	298	P	Pn	14 04 52.2	-3.3
	0.2nm,0.3s,baz=120,slow=20,SNR=2.6						
DZM				LR	LR	14 09 08.4	
	comp=Z,387nm,19.9s,baz=200,slow=30						
NOUC	Port Laguerre	15.85	298	eP	P	14 04 58.5	+0.8
AFI	Afiamalu	17.62	23	P	P	14 05 07.6	-10
AFI				S	S	14 08 07.5	-27
AFI	Afiamalu	17.62	23	P	P	14 05 07.6	-10
	0.7nm,0.3s,baz=176,slow=19,SNR=2.4						
AFI				S	S	14 08 07.5	-27
	0.7nm,0.3s,baz=151,slow=13,SNR=5.2						
AFI				LR	LR	14 10 44.1	
	comp=Z,86nm,19.7s,baz=164,slow=33						
ARMA	Armidale	25.61	262	eP	P	14 06 41.0	+2.7
	31nm,1.3s						
TBI	Tubuai	26.91	82	eLR	LR	14 13 22.3	
	281nm,35.8s						
CAN	Canberra	27.55	251	eP	P	14 06 58.7	+3.2
	16nm,0.9s						
HNR	Honiara	28.91	312	LR	LR	14 16 21.4	
	comp=Z,78nm,20.8s,baz=200,slow=31						
PPT2	Papeete2	29.36	71	eLR	LR	14 14 42.1	
	327nm,30.5s						
PPT	Papeete	29.38	71	LR	LR	14 15 27.8	
	comp=Z,180nm,21.1s,baz=192,slow=29						
TIAR	Tiarei	29.57	71	eP	P	14 07 13.1	-0.4
	87nm,0.9s						
CTA	Charters Tower	33.27	280	P	P	14 07 47.4	+1.5
CTA	Charters Tower	33.27	280	P	P	14 07 47.4	+1.5
	40nm,0.8s,baz=124,slow=11						
STKA	Stephens Creek	33.94	257	eP	P	14 07 54.0	+2.3
	7.1nm,0.8s						
STKA				epP	pP	14 08 22.4	+3.0
STKA				ScP	ScP	14 14 00.1	-0.2
STKA	Stephens Creek	33.94	257	P	P	14 07 54.2	+2.5
	32nm,0.8s,baz=93,slow=9.5,SNR=76						
STKA				ScP	ScP	14 14 00.1	-0.2
	2.4nm,0.8s,baz=131,slow=3.0,SNR=5.1						
STKA				LR	LR	14 18 29.7	
	comp=Z,172nm,21.5s,baz=184,slow=30						
BBOO	Buckleboo	38.43	254	eP	P	14 08 31.1	+1.2
	538nm,1.2s						
RKT	Rikitea	39.46	90	eLR	LR	14 19 31.6	
	219nm,38.5s						
AS31	Alice Springs	42.56	267	eP	P	14 09 04.7	+0.7
ASAR	Alice Springs	42.56	267	P	P	14 09 04.5	+0.6
ASAR				PcP	PcP	14 10 54.9	+0.7
ASAR				ScP	ScP	14 14 31.8	-1.5
ASAR				S	S	14 15 16.7	-0.6
ASAR	Alice Springs	42.56	267	P	P	14 09 04.5	+0.6
	6.1nm,0.4s,baz=104,slow=7.8,SNR=158						
ASAR				PcP	PcP	14 10 54.9	+0.7
	2.3nm,0.8s,baz=115,slow=4.9,SNR=4.7						
ASAR				ScP	ScP	14 14 31.8	-1.5
	5.8nm,0.8s,baz=114,slow=4.3,SNR=21						
ASAR				S	S	14 15 16.7	-0.6
	1.2nm,0.8s,baz=111,slow=15,SNR=5.2						
WRAB	Tennant Creek	43.55	273	eP	P	14 09 11.8	-0.1
	45nm,0.8s						
WRAB				epP	pP	14 09 44.2	+3.5
WRA	Warramunga Arr	43.55	273	P	P	14 09 12.2	+0.3
WRA				ScP	ScP	14 14 35.8	-1.5
WRA				S	S	14 15 29.8	-2.0
WRA	Warramunga Arr	43.55	273	P	P	14 09 12.2	+0.3
	20nm,0.3s,baz=110,slow=8.1,SNR=399						
WRA				ScP	ScP	14 14 35.7	-1.5
	3.2nm,0.7s,baz=111,slow=4.1,SNR=11						
WRA				S	S	14 15 29.8	-2.0
	3.0nm,0.9s,baz=108,slow=14,SNR=6.3						
FORT	Forrest	45.51	255	eP	P	14 09 27.5	+0.1
	34nm,1.0s						
SBA	Scott Base	47.96	184	eP	P	14 09 50.7	+4.9
	20nm,0.9s						
VNDA	Vanda	48.01	186	eP	P	14 09 50.0	+3.8
VNDA	Vanda	48.01	186	P	P	14 09 48.2	+2.0
	2.1nm,0.6s,baz=3.2,slow=8.5,SNR=16						
FITZ	Fitzroy Crossi	51.81	270	LR	LR	14 31 13.0	
	comp=Z,68nm,19.9s,baz=21,slow=35						
QSPA	South Pole Qui	59.68	180	eP	P	14 11 14.7	+3.4
	20nm,0.9s						
QSPA				S	S	14 19 18.6	+6.9
QSPA	South Pole Qui	59.68	180	P	P	14 11 14.7	+3.4
	16nm,0.8s,baz=18,slow=1.6,SNR=72						
QSPA				S	S	14 19 18.6	+6.9
	2.6nm,1.0s,baz=316,slow=17,SNR=6.6						
MAW	Mawson	72.08	201	P	P	14 12 31.8	+1.3
MAW	Mawson	72.08	201	P	P	14 12 31.8	+1.3
	7.2nm,0.8s,baz=133,slow=5.6,SNR=12						
SYO	Syowa Base	76.96	193	⇑eP	P	14 12 45.6	-13
MJAR	Matsushiro Arr	77.96	326	P	P	14 13 03.4	-1.2
MJAR	Matsushiro Arr	77.96	326	P	P	14 13 03.4	-1.2
	3.2nm,0.8s,baz=168,slow=5.3,SNR=13						
MAJO	Matsushiro	77.96	326	eP	P	14 13 04.7	+0.1
	4.7nm,0.8s						
SNAA	Sanae	78.14	179	eP	P	14 13 06.4	+1.2
	6.0nm,0.9s						
PLCA	Paso Flores	82.88	133	P	P	14 13 32.5	+1.3
PLCA	Paso Flores	82.88	133	P	P	14 13 32.5	+1.3
	6.6nm,1.0s,baz=217,slow=7.0,SNR=3.4						
PLCA				LR	LR	14 41 29.1	
	comp=Z,87nm,19.8s,baz=354,slow=29						
KSRS	Korea Array	84.02	320	P	P	14 13 36.1	-0.5
	1.9nm,0.9s,baz=145,slow=5.6,SNR=6.1						
KSRS				LR	LR	14 49 39.3	
	comp=Z,29nm,18.9s,baz=168,slow=35						
KSAR	Wonju Array Be	84.03	320	P	P	14 13 36.1	-0.6
SBC	Santa Barbara	85.14	45	⇓P	P	14 13 42.8	+0.5
	baz=85						
PETK	Petropavlovsk-	85.71	346	P	P	14 13 44.7	0.0
PETK	Petropavlovsk-	85.71	346	P	P	14 13 44.7	0.0
	8.7nm,0.8s,baz=146,slow=9.0,SNR=6.6						
NJ2	Nanjing	85.85	311	eP	P	14 13 45.2	-0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BFSC	Mount Baldy Ra	86.28	47	⇑P	P	14 13 48.4	+0.2
	baz=86,SNR=6.4						
EDW2	Edwards Air Fo	86.49	46	⇓P	P	14 13 49.4	+0.3
	baz=86,SNR=5.3						
ISA	Isabella	86.71	45	eP	P	14 13 50.7	+0.6
	comp=Z,11nm,0.9s						
ISA	Isabella	86.71	45	⇑P	P	14 13 50.5	+0.3
	baz=87,SNR=6.9						
USRK	Ussuriysk Arra	86.89	327	P	P	14 13 50.8	+0.1
	comp=Z,3.7nm,0.8s,baz=126,slow=4.9,SNR=6.8						
CMB	Columbia Colle	87.15	42	eP	P	14 13 51.9	-0.4
	comp=Z,7.2nm,0.9s						
GLA	Glamis	87.33	49	eP	P	14 13 54.2	+1.0
	comp=Z,11nm,1.0s						
CWC	Cottonwood Cre	87.46	45	⇓P	P	14 13 55.1	+1.2
	baz=87						
GSC	Goldstone	87.50	46	eP	P	14 13 54.2	+0.2
	comp=Z,14nm,1.1s						
GSC	Goldstone	87.50	46	⇑P	P	14 13 54.5	+0.5
	baz=88,SNR=6.6						
MPMC	Manual Prospec	87.57	45	⇓P	P	14 13 54.5	0.0
	baz=88,SNR=6.4						
IRM	Iron Mountain	87.82	48	⇑P	P	14 13 56.3	+0.8
	baz=88,SNR=5.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
214A	Organ Pipe Nat	87.98	51	⇓P	P	14 13 56.3	0.0
	baz=88,SNR=6.3						
TUQ	Turquoise Moun	88.14	47	⇓P	P	14 13 57.8	+0.7
	baz=88						
GRAC	Grapevine Rang	88.26	45	⇑P	P	14 13 58.2	+0.7
	baz=88						
LDFC	Landfair	88.42	47	P	P	14 13 59.1	+0.7
	comp=Z,34nm,1.1s						
PDMCI	Parker Dam,Lak	88.56	48	⇑P	P	14 13 60.0	+1.1
	baz=88						
NVAR	Mina Array Bea	88.63	43	P	P	14 13 58.4	-1.0
NVAR	Mina Array Bea	88.63	43	P	P	14 13 58.4	-1.0
	comp=Z,5.4nm,0.8s,baz=223,slow=9.0,SNR=38						
Z14A	Wintersburg	88.75	50	⇓P	P	14 14 01.3	+1.4
	baz=89						
Y14A	Wickenburg	89.07	49	⇓P	P	14 14 02.0	+0.6
	baz=89,SNR=9.4						
W13A	Hualapai Mount	89.22	48	⇓P	P	14 14 03.3	+1.0
	baz=89						
LCO	Las Campanas	89.41	124	*e*P	P	14 14 04.3	+0.7
	comp=Z,7.7nm,0.8s						
TUC	Tucson	89.56	52	*e*P	P	14 14 04.8	+1.1
	comp=Z,2.8nm,1.2s						
CN2	Changchun	89.84	323	*e*P	P	14 14 04.9	+0.2
CN2				*e*pP	pP	14 14 36.6	-0.7
CN2				*e*S	S	14 24 44.3	-1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
319A	Douglas	90.03	53	⇑P	P	14 14 07.6	+1.5
	baz=90						
X16A	Lo Mia Camp, P	90.39	50	⇑P	P	14 14 08.7	+0.9
	baz=90,SNR=13						
320A	Kipp Ranch, An	90.53	54	⇑P	P	14 14 09.3	+0.9
	baz=90,SNR=5.3						
220A	Playas Peak, P	90.86	53	⇑P	P	14 14 10.9	+0.9
	baz=91,SNR=7.6						
U15A	North Rim	91.06	48	⇓P	P	14 14 12.2	+1.3
	baz=91						
GYA	Guiyang	91.09	300	P	P	14 14 12.8	+1.7
GYA				pP	pP	14 14 44.2	+0.5
GYA				sP	sP	14 14 57.8	+0.7
GYA				PP	PP	14 17 54.7	+4.9
GYA				SKS	SKSac	14 24 32.0	+0.4
GYA				S	S	14 24 58.9	+0.4
GYA				sS	sS	14 25 52.1	-2.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,5.2s						
WUAZ	Wupatki	91.09	49	*e*P	P	14 14 10.1	-0.9
	comp=Z,5.6nm,1.0s						
120A	U Bar Ranch, L	91.17	53	⇑P	P	14 14 12.2	+0.8
	baz=91,SNR=5.8						
Z20A	Nine Sixteen R	91.52	52	⇑P	P	14 14 14.4	+1.4
	baz=92						
121A	Cookes Peak, D	91.74	53	⇓P	P	14 14 14.9	+0.9
	baz=92						
Y20A	Horse Springs,	92.13	52	⇑P	P	14 14 17.0	+1.1
	baz=92,SNR=8.2						
X20A	Quemado	92.42	51	⇑P	P	14 14 18.2	+1.0
	baz=92						
BJI	Beijing	92.56	316	P	P	14 14 19.0	+1.6
BJI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BJI				LR	LR		
	comp=Z,48nm,41.7s						
626A	Big Bend Ranch	92.65	57	⇑P	P	14 14 18.8	+0.7
	baz=93						
Y21A	Point of Rocks	92.67	52	⇓P	P	14 14 19.5	+1.1
	baz=93						
425A	Indio Mountain	92.72	56	⇓P	P	14 14 18.5	0.0
	baz=93						
W20A	Ramah	92.76	51	⇓P	P	14 14 19.5	+0.7
	baz=93						
X21A	Alamocita Cree	92.84	51	⇑P	P	14 14 20.1	+0.9
	baz=93						
TXAR	Lajitas Array	92.87	58	P	P	14 14 17.3	-1.9
TXAR	Lajitas Array	92.87	58	P	P	14 14 17.3	-1.9
	comp=Z,1.4nm,1.0s,baz=217,slow=6.1,SNR=9.7						
CMAR	Chiang Mai Arr	92.90	290	P	P	14 14 19.3	-0.1
CMAR	Chiang Mai Arr	92.90	290	P	P	14 14 19.3	-0.1
	comp=Z,1.3nm,0.8s,baz=145,slow=3.4,SNR=6.4						
526A	Mary Lane Ranc	92.96	57	⇑P	P	14 14 19.6	-0.1
	baz=93						
325A	Bean Ranch, Si	93.05	55	⇑P	P	14 14 19.8	-0.3
	baz=93						
Y22A	Socorro	93.11	52	⇓P	P	14 14 21.0	+0.7
	baz=93						
627A	Terlingua Ranc	93.14	58	⇓P	P	14 14 20.6	+0.1
	baz=93						
MFID	Camas Ranch	93.30	40	*e*P	P	14 14 19.8	-1.1
	comp=Z,3.6nm,0.9s						
KMI	Kunming	93.35	297	P	P	14 14 21.5	-0.2
KMI				pP	pP	14 14 53.2	-1.2
KMI				sP	sP	14 15 08.3	+0.6
KMI				S	S	14 25 16.4	-2.5
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,63nm,4.2s						
KMI				LR	LR		
	comp=Z,39nm,36.5s						
527A	Woodward Ranch	93.35	57	⇓P	P	14 14 21.3	-0.2
	baz=93						
628A	Black Gap, Mar	93.52	58	⇓P	P	14 14 22.5	+0.3
	baz=94						
427A	Hayter Ranch,	93.89	56	⇑P	P	14 14 24.2	+0.3
	baz=94						
HLID	Hailey	94.19	41	*e*P	P	14 14 24.9	-0.1
	comp=Z,11nm,1.6s						
CD2	Chengdu	95.64	302	P	P	14 14 32.6	+0.8
CD2				pP	pP	14 15 05.5	+0.9
CD2				sP	sP	14 15 19.1	+1.2
CD2				PP	PP	14 18 27.9	+2.7
CD2				SKS	SKSac	14 24 55.5	-0.7
CD2				S	S	14 25 35.6	-2.6
CD2				sS	sS	14 26 33.3	-1.8
CD2				SS	SS	14 32 11.6	+0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.4s						
HHC	Hu-ho-hao-te	95.86	314	*e*P	P	14 14 33.6	+0.9
HHC				pP	pP	14 15 06.2	+0.8
HHC				sP	sP	14 15 19.6	+0.9
HHC				PP	PP	14 18 29.6	+2.8
HHC				SKS	SKSac	14 24 56.8	-0.2
HHC				S	S	14 25 37.7	-2.1
HHC				sS	sS	14 26 34.6	-2.2
HHC				SS	SS	14 32 15.0	+1.3
HHC				pmax	pmax		
	comp=Z,36nm,0.5s						
HHC				pmax	pmax		
	comp=Z,120nm,6.8s						
PDAR	Pinedale Array	96.54	44	P	P	14 14 33.1	-2.7
PDAR				PKKPbc	PKKPbc	14 31 19.2	-1.2
PDAR	Pinedale Array	96.54	44	P	P	14 14 33.1	-2.7
	comp=Z,0.4nm,0.6s,baz=212,slow=2.1,SNR=4.4						
PDAR				PKKPbc	PKKPbc	14 31 19.2	-1.2
	comp=Z,0.4nm,0.7s,baz=84,slow=6.1,SNR=4.2						
LPAZ	La Paz	98.63	115	P	Pdif	14 14 47.1	+0.7
LPAZ	La Paz	98.63	115	P	Pdif	14 14 47.1	+0.7
	comp=Z,1.0nm,0.7s,baz=189,slow=4.4,SNR=6.1						
LPAZ				LR	LR	14 51 44.4	
	comp=Z,37nm,18.8s,baz=133,slow=31						
YKA	Yellowknife Ar	105.71	26	PKKPbc	PKKPbc	14 30 50.0	-4.2
YKA				PKKPab	PKKPdf	14 31 05.9	+0.6
YKA	Yellowknife Ar	105.71	26	PKKPbc	PKKPbc	14 30 49.9	-4.2
	comp=Z,0.2nm,0.5s,baz=36,slow=3.1,SNR=9.2						
YKA				PKKPab	PKKPdf	14 31 05.9	+0.6
	comp=Z,0.4nm,1.0s,baz=54,slow=4.7,SNR=5.7						
BOSA	Boshof	117.01	204	PKP	PKPdf	14 19 51.6	+0.6
BOSA	Boshof	117.01	204	PKP	PKPdf	14 19 51.6	+0.6
	comp=Z,2.8nm,0.9s,baz=90,slow=4.4,SNR=6.0						
MK31	Makanchi Array	117.38	310	*e*PKPdf	PKPdf	14 19 50.2	-0.6
MKAR	Makanchi Array	117.38	310	PKP	PKPdf	14 19 49.2	-1.6
MKAR				*e*PKPdf	PKiKP	14 19 50.4	-0.4
MKAR				PKKPbc	PKKPbc	14 30 14.1	-0.9
MKAR	Makanchi Array	117.38	310	PKP	PKPdf	14 19 49.2	-1.6
	comp=Z,1.4nm,0.7s,baz=111,slow=0.5,SNR=14						
MKAR				PKKPbc	PKKPbc	14 30 14.1	-0.9
	comp=Z,0.5nm,0.6s,baz=285,slow=3.9,SNR=5.3						
ZALV	Zalesovo Beam	117.69	318	PKP	PKPdf	14 19 49.2	-1.9
ZALV	Zalesovo Beam	117.69	318	PKP	PKPdf	14 19 49.2	-1.9
	comp=Z,0.7nm,0.3s,baz=108,slow=1.8,SNR=4.0						
KSH	Kashi	119.79	301	*e*PKP	PKPdf	14 19 57.2	+1.4
KSH				*e*PKS	PKSdf	14 23 33.1	+0.6
KSH				*e*SKS	SKSdf	14 26 58.3	+2.2
KSH				AMB	AMB		
	comp=Z,240nm,5.5s						
KSH				LR	LR		
	comp=N,180nm,4.6s						
KSH				LR	LR		
	comp=E,170nm,5.2s						
KSH				LR	LR		
	comp=Z,200nm,4.3s						
KURK	Kurchatov	120.68	314	PKP	PKPdf	14 19 55.7	-1.3
KURK				*e*PKPdf	PKiKP	14 19 56.6	-0.4
KURK				PKKPbc	PKKPab	14 30 01.8	0.0
KURBB	Kurchatov Arra	120.71	314	PKP	PKPdf	14 19 55.7	-1.3
	comp=Z,4.7nm,0.7s,baz=106,slow=1.9,SNR=44						
KURBB				PKKPbc	PKKPab	14 30 01.8	+0.2
	comp=Z,0.7nm,1.0s,baz=286,slow=4.4,SNR=5.5						
TKM2	Tokmak 2	120.96	304	*e*PKPdf	PKPdf	14 19 57.1	-1.0
TKM2	Tokmak 2	120.96	304	P	PKPdf	14 19 58.4	+0.4
	SNR=8.2						
KZA	Kyzart	121.00	303	P	PKPdf	14 19 59.2	+0.8
	SNR=6.8						
CHMS	Chumysh	121.58	304	P	PKPdf	14 19 59.5	+0.5
	SNR=5.4						
AAK	Ala-Archa	121.68	304	PKP	PKPdf	14 19 58.3	-1.0
AAK				*e*PKPdf	PKiKP	14 19 59.3	-0.2
AAK	Ala-Archa	121.68	304	PKP	PKPdf	14 19 58.3	-1.0
	comp=Z,2.4nm,0.7s,baz=137,slow=3.7,SNR=10						
USP	Ospenovka	121.82	305	P	PKPdf	14 19 60.0	+0.5
	SNR=6.8						
AML	Almayashu	122.13	303	P	PKPdf	14 20 01.2	+0.7
	SNR=12						
EKS2	Erkin-Say	122.20	304	*e*PKPdf	PKPdf	14 20 00.6	+0.3
EKS2	Erkin-Say	122.20	304	P	PKPdf	14 20 00.9	+0.6
	SNR=6.1						
KBL	Kabul	123.73	293	*e*PKPdf	PKPdf	14 20 04.2	+0.6
KKAR	Karatay Array	124.64	304	*e*PKPdf	PKPdf	14 20 04.1	-0.8
BVAR	Borovoye Array	126.05	316	PKP	PKPdf	14 20 06.1	-1.1
BVAR	Borovoye Array	126.05	316	PKP	PKPdf	14 20 06.1	-1.1
	comp=Z,5.7nm,0.7s,baz=113,slow=2.3,SNR=32						
BRVK	Borovoye	126.11	316	*e*PKPdf	PKPdf	14 20 07.3	0.0
KMBO	Kilima Mbogo	133.61	234	SKPbc	SKPbc	14 23 40.7	+0.5
KMBO	Kilima Mbogo	133.61	234	SKPbc	SKPbc	14 23 40.7	+0.5
	comp=Z,2.6nm,0.7s,baz=100,slow=6.1,SNR=6.1						
AKTO	Aktyubinsk	133.72	312	SKPbc	SKPbc	14 23 38.1	-0.9
AKTO	Aktyubinsk	133.72	312	SKPbc	SKPbc	14 23 38.1	-0.9
	comp=Z,2.3nm,0.5s,baz=91,slow=7.7,SNR=6.4						
KEV	Kevo	138.03	347	*e*pkp	PKPdf	14 20 31.1	+1.8
ARCES	ARCESS Array B	138.50	347	PKPpre	PKPpre	14 20 21.8	
ARCES	ARCESS Array B	138.50	347	PKhKP	PKPpre	14 20 21.8	
	comp=Z,2.6nm,0.9s,baz=29,slow=2.1,SNR=26						
JOF	Joensuu	142.25	338	*e*pkp	PKPdf	14 20 32.1	-5.0
KAF	Kangasniemi	144.40	340	*e*pkp	PKPab	14 20 37.7	-1.7
FIA1	FINESS Array S	144.99	340	*e*PKP	PKPbc	14 20 40.0	-1.5
FINES	FINESS Array B	144.99	340	PKP	PKPbc	14 20 40.0	-1.6
FINES	FINESS Array B	144.99	340	PKP	PKPbc	14 20 40.0	-1.6
	comp=Z,14nm,0.3s,baz=45,slow=3.3,SNR=121						
NB2	NORSAR Subarra	148.70	351	PKP	PKPbc	14 20 51.0	-1.2
	comp=Z,11nm,0.7s,baz=15,slow=2.8						
NOA	NORSAR Array B	148.70	351	PKPbc	PKPbc	14 20 50.7	-1.5
NOA	NORSAR Array B	148.70	351	PKPbc	PKPbc	14 20 50.7	-1.5
	comp=Z,12nm,0.8s,baz=15,slow=4.2,SNR=29						
NAO01	NORSAR Array S	148.93	351	*e*PKPbc	PKPbc	14 20 52.1	-0.6
GZT	Gaziantep	149.31	293	*i* P	PKPbc	14 20 55.2	+0.6
NACGM	Naroch	149.54	331	*e*	PKPdf	14 20 51.0	+1.3
ASF	Jabal al Asfar	149.67	283	PKPbc	PKPbc	14 20 55.0	-0.6
ASF	Jabal al Asfar	149.67	283	PKPbc	PKPbc	14 20 55.0	-0.6
	comp=Z,6.2nm,0.7s,baz=128,slow=3.3,SNR=7.1						
COBT	Iskenderun	150.38	291	*i* P	PKPbc	14 20 57.6	+0.3
YURE	YUREGIR	150.87	292	*i* P	PKPbc	14 20 59.7	+1.5
EIL	Elat	150.98	277	PKPbc	PKPbc	14 20 59.2	+0.5
EIL	Elat	150.98	277	PKPbc	PKPbc	14 20 59.2	+0.5
	comp=Z,20nm,0.9s,baz=77,slow=2.8,SNR=12						
AKASG	Malin Array Be	150.99	322	PKPbc	PKPbc	14 20 56.9	-1.1
AKASG	Malin Array Be	150.99	322	PKPbc	PKPbc	14 20 56.9	-1.1
	comp=Z,21nm,0.7s,baz=50,slow=2.7,SNR=43						
AK01	Malin Array Si	151.00	322	*e*PKPbc	PKPbc	14 20 57.0	-1.0
KIEV	Kiev	151.00	322	*e*PKPbc	PKPbc	14 20 56.6	-1.3
MMAI	Mount Meron Ar	151.01	284	PKPbc	PKPbc	14 20 59.5	+0.8
MMAI	Mount Meron Ar	151.01	284	PKPbc	PKPbc	14 20 59.5	+0.8
	comp=Z,19nm,0.7s,baz=72,slow=4.7,SNR=24						
AK02	Malin Array Si	151.03	322	*e*PKPbc	PKPbc	14 20 57.1	-0.9
AVNT	Avonos	151.33	296	*i* P	PKPbc	14 20 60.0	+0.6
GULE	Gulek	151.53	293	*i* P	PKPbc	14 21 00.4	+0.5
SUW	Suwalki	151.66	332	*e*PKPbc	PKPbc	14 21 00.1	+0.7
SUW	Suwalki	151.66	332	*e*PKP	PKPbc	14 21 00.1	+0.7
ILGA	Ilgaz	151.83	301	*i* P	PKPbc	14 21 01.2	+0.6
BALT	Daday	151.97	302	*i* P	PKPbc	14 21 01.2	+0.4
BR131	Keskin Array S	152.13	298	*e*PKPbc	PKPbc	14 21 00.5	-0.7
BRTR	Keskin Array B	152.13	298	PKPbc	PKPbc	14 21 00.1	-1.1
BRTR				PKPab	PKPab	14 21 11.3	0.0
BRTR	Keskin Array B	152.13	298	PKPbc	PKPbc	14 21 00.1	-1.1
	comp=Z,6.7nm,0.9s,baz=128,slow=2.4,SNR=30						
BRTR				PKPab	PKPab	14 21 11.3	0.0
	comp=Z,2.4nm,0.7s,baz=115,slow=5.6,SNR=7.5						
ANTO	Ankara	152.75	299	*e*PKPbc	PKPbc	14 21 03.1	+0.7
CSS	Prodhromos	152.79	288	*e*PKPbc	PKPbc	14 21 02.9	+0.3
BEL	Belsk	154.24	332	*e*PKP	PKPbc	14 21 06.3	+1.2
KWP	Kalwaria Pacla	154.96	326	*e*PKP	PKPab	14 21 22.5	-0.2
KOLS	Kolonicke sedl	155.64	325	*e*PKP	PKPab	14 21 25.6	-0.1
CRVS	Cervenica-Dubn	156.05	326	*e*PKP	PKPab	14 21 26.7	-0.8
NIE	Niedzica	156.23	328	*e*PKP	PKPab	14 21 27.2	-1.0
KSP	Ksiaz	156.76	336	*e*PKP	PKPab	14 21 30.8	+0.4
UPC	Upice	157.14	335	*e*PKPAB	PKPab	14 21 32.9	+0.9
DPC	Dobruska-Polom	157.16	335	*e*PKPab	PKPab	14 21 32.8	+0.6
DPC	Dobruska-Polom	157.16	335	*e*PKPAB	PKPab	14 21 33.0	+0.8
CLL	Collm	157.42	341	*e*PKPdiff	PKPdf	14 21 12.0	+11
CLL				*e*PKPab	PKPab	14 21 32.0	-1.2
	comp=Z,13nm,1.4s						
PSZ	Piszkesteto	157.49	326	*e*PKPab	PKPab	14 21 34.1	+0.3
BRG	Berggiesshubel	157.52	339	*e*PKP	PKPab	14 21 33.8	+0.2
	comp=Z,5.7nm,1.1s						
PRU	Pruhonice	158.09	337	*e*PKPAB	PKPab	14 21 36.6	+0.5
KHC	Kasperske Hory	159.15	337	*e*PKPdf	PKPdf	14 21 05.2	+1.9
KHC	Kasperske Hory	159.15	337	*e*PKPAB	PKPab	14 21 37.4	-3.4
KHC				*e*x	x	14 21 41.3	
KHC				*e*pPKP	pPKPdf	14 22 18.6	+41
GERES	GERESS Array B	159.35	336	PKPab	PKPab	14 21 38.3	-3.5
GERES	GERESS Array B	159.35	336	PKPab	PKPab	14 21 38.3	-3.5
	comp=Z,0.4nm,0.4s,baz=34,slow=3.8,SNR=4.1						
TORD	Torodi Ar. Bea	162.79	181	PKP	PKPdf	14 21 08.0	-0.2
TORD				PKPab	PKPab	14 21 57.6	+0.2
TORD	Torodi Ar. Bea	162.79	181	PKP	PKPdf	14 21 08.0	-0.2
	comp=Z,1.3nm,1.1s,baz=199,slow=0.3,SNR=4.3						
TORD				PKPab	PKPab	14 21 57.6	+0.2
	comp=Z,2.7nm,0.7s,baz=172,slow=3.0,SNR=15						
TUE	Stuetta	162.82	341	*e*PKPdf	PKPdf	14 21 06.1	-1.5
TUE				*e*PKPab	PKPab	14 21 57.7	+0.6

MEX 03 14:09:02.1±0.3, 15.°63N×94.°26W, h35km±163km, MD4.1,
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		1.58	44	*i* P	Pn	14 09 26.1	-1.7
TGIG				*i* S	Sn	14 09 44.6	-2.5
HUIG	Huatulco	1.79	275	*i* P	Pn	14 09 29.0	-1.5
HUIG				*e*S	Sn	14 09 49.7	-2.3
THIG		2.05	110	*e*P	Pn	14 09 32.6	-1.5
CCIG	Comitan	2.14	72	*i* P	Pn	14 09 34.0	-1.6
CCIG				*e*S	Sn	14 09 58.0	-3.1
VHO	Vista Hermosa	2.78	301	*i* P	Pn	14 09 42.8	-1.6
VHO				*i* S	Sn	14 10 15.0	-1.9
PNIG	Pinotepa	3.80	282	*e*P	Pn	14 09 56.8	-1.4
PNIG				*i* S	Sn	14 10 39.5	-2.2

IDC ***03*** *14:17:22.2±1.2, 40.°26N×49.°86E, h0km, mb3.7/7, mb1 3.8/12, mb1mx3.6/29, mbtmp3.7/12, ML3.7/4, Error ellipse: s-maj=25.9km s-min=11.9km az=167.0*
MOS ***03*** *14:17:26.1±2.1, 40.°35N×50.°18E, h26km, mb3.9/5, Error ellipse: s-maj=13.5km s-min=9.7km az=125.2*
TIF ***03*** *14:17:28.1, 40.°17N×49.°90E, h78km±1km*
ISCJB ***03*** *14:17:28.3±0.4, 40.°17N±0.°03×49.°99E±0.°04, h71km±3km, mb3.5/8, Error ellipse: s-maj=5.8km s-min=5.2km az=21.6*
CSEM ***03*** *14:17:29.1±0.2, 40.°19N×50.°02E, h60km, mb3.9, mb3.8/5, Error ellipse: s-maj=5.6km s-min=4.4km az=179.0*
AZER ***03*** *14:17:29.4, 40.°20N×49.°85E, h46km*
ISC 03 14:17:29.4±0.7**, 40.°19N**±0.°03×**49.°97E**±0.°04**, h62**km±5km**,**

n74, σ1ˢ00/101, mb3.5/8, 15C-11D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	Gala	0.26	33	⇓P	Pn	14 17 38.8	-0.6
	SNR=27						
GALA				⇓S	Sn	14 17 48.3	+1.6
GALA	Gala	0.26	33	P	Pn	14 17 38.8	-0.6
	SNR=27						
GALA				S	Sn	14 17 48.3	+1.6
GOBA	Gobu	0.28	320	⇓P	Pn	14 17 39.1	-0.4
	SNR=34						
GOBA				⇓S	Sn	14 17 48.3	+1.4
GOBA	Gobu	0.28	320	P	Pn	14 17 39.1	-0.4
	SNR=34						
GOBA				S	Sn	14 17 48.3	+1.4
NDR	Nardaran	0.39	2	⇑P	Pn	14 17 39.6	-0.8
	SNR=100						
NDR				⇑S	Sn	14 17 49.3	+0.9
NDR	Nardaran	0.39	2	P	Pn	14 17 39.6	-0.8
	SNR=100						
NDR				S	Sn	14 17 49.3	+0.9
SIZA	Siyzn	1.20	318	⇑P	Pn	14 17 50.3	0.0
	SNR=28						
SIZA				⇑S	Sn	14 18 06.7	+0.9
SIZA	Siyzn	1.20	318	P	Pn	14 17 50.3	0.0
	SNR=28						
SIZA				S	Sn	14 18 06.7	+0.9
PQL	Pirkuli	1.21	300	⇑P	Pn	14 17 50.9	+0.5
	SNR=8.3						
PQL				⇑S	Sn	14 18 06.5	+0.5
PQL	Pirkuli	1.21	300	P	Pn	14 17 50.9	+0.5
	SNR=8.3						
PQL				S	Sn	14 18 06.5	+0.5
GLBA	Clilabad	1.54	233	⇑P	Pn	14 17 54.6	0.0
	SNR=13						
GLBA				⇓S	Sn	14 18 14.8	+1.2
GLBA	Clilabad	1.54	233	P	Pn	14 17 54.6	0.0
	SNR=13						
GLBA				S	Sn	14 18 14.8	+1.2
QUBA	Quba, Azerbaij	1.62	317	⇑P	Pn	14 17 56.0	+0.3
	SNR=8.0						
QUBA				⇓S	Sn	14 18 15.8	+0.2
QUBA	Quba, Azerbaij	1.62	317	P	Pn	14 17 56.0	+0.3
	SNR=8.0						
QUBA				S	Sn	14 18 15.8	+0.2
LKRN	Lenkeran, Azer	1.74	212	⇑P	Pn	14 17 56.9	-0.4
	SNR=3.7						
LKRN				⇑S	Sn	14 18 18.6	+0.1
LKRN	Lenkeran, Azer	1.74	212	P	Pn	14 17 56.9	-0.4
	SNR=3.7						
LKRN				S	Sn	14 18 18.6	+0.1
KSMR	Kasumkent	1.99	316	*e*PN	Pn	14 18 00.0	-0.7
KSMR				pmax	pmax		
	comp=Z,162nm,0.1s						
KSMR	Kasumkent	1.99	316	*e*Pn	Pn	14 18 00.0	-0.7
	comp=Z,162nm,0.1s						
AKT	Akhty	2.13	308	*e*PN	Pn	14 18 03.0	+0.2
AKT				*e*S	Sn	14 18 30.0	+1.8
AKT				pmax	pmax		
	comp=Z,43nm,0.8s						
AKT	Akhty	2.13	308	*e*Pn	Pn	14 18 03.0	+0.2
	comp=Z,43nm,0.8s						
AKT				*e*Sn	Sn	14 18 30.0	+1.8
DRN	Derbent	2.22	327	*e*PN	Pn	14 18 04.0	+0.2
DRN				*i* S	Sn	14 18 30.5	+0.5
DRN				pmax	pmax		
	comp=Z,87nm,0.2s						
DRN	Derbent	2.22	327	*e*Pn	Pn	14 18 04.0	+0.2
	comp=Z,87nm,0.2s						
DRN				*i* Sn	Sn	14 18 30.5	+0.5
SEKA	Sheki	2.34	297	⇓P	Pn	14 18 05.4	-0.1
	SNR=4.4						
SEKA				⇑S	Sn	14 18 33.4	+0.2
SEKA	Sheki	2.34	297	P	Pn	14 18 05.4	-0.1
	SNR=4.4						
SEKA				S	Sn	14 18 33.4	+0.2
URKR	Urkarakh	2.65	319	*e*PN	Pn	14 18 10.0	+0.2
URKR				*i* S	Sn	14 18 42.0	+1.2
URKR	Urkarakh	2.65	319	*e*Pn	Pn	14 18 10.0	+0.2
URKR				*i* Sn	Sn	14 18 42.0	+1.2
GANJ	Ganja	2.82	280	⇑P	Pn	14 18 11.5	-0.6
	SNR=3.8						
GANJ				⇓S	Sn	14 18 43.2	-1.7
GANJ	Ganja	2.82	280	P	Pn	14 18 11.5	-0.6
	SNR=3.8						
KMKR	Kumukh	2.91	313	⇑*e*PN	Pn	14 18 14.0	+0.6
KMKR				*i* S	Sn	14 18 48.5	+1.2
KMKR				pmax	pmax		
	comp=Z,94nm,0.2s						
KMKR	Kumukh	2.91	313	*e*Pn	Pn	14 18 14.0	+0.6
	comp=Z,94nm,0.2s						
KMKR				*i* Sn	Sn	14 18 48.5	+1.2
MAK	Makhachkala	3.33	327	PN	Pn	14 18 40.9	+22
MAK				*e*		14 18 59.1	
MAK				pmax	pmax		
	comp=Z,85nm,0.3s						
MAK				smax	smax		
	comp=E,610nm,0.4s						
MAK				smax	smax		
	comp=N,527nm,0.5s						
MAK	Makhachkala	3.33	327	*e*Sn	Sn	14 18 59.1	+1.9
	comp=N,527nm,0.5s						
NAX	Nakhchivan	3.60	255	⇓P	Pn	14 18 23.2	+0.5
NAX	Nakhchivan	3.60	255	P	Pn	14 18 23.2	+0.5
DGRG	David-gareji	3.71	291	P	Pn	14 18 24.8	+0.6
DGRG				S	Sn	14 19 07.9	+1.3
DGRG	David-gareji	3.71	291	P	Pn	14 18 24.8	+0.6
DGRG				S	Sn	14 19 07.9	+1.3
GNI	Garni	4.00	271	Pn	Pn	14 18 28.6	+0.2
	comp=N,0.8nm,0.3s,baz=163,slow=20,SNR=1.7						
GNI	Garni	4.00	271	Pn	Pn	14 18 28.6	+0.2
	comp=N,1.0nm,0.3s						
TBLG	Delisi	4.25	293	P	Sn	14 19 19.1	-0.8
GUDG	Gudauri	4.72	301	P	Pn	14 18 38.7	+0.6
GUDG				S	Sn	14 19 30.6	-1.1
GUDG	Gudauri	4.72	301	P	Pn	14 18 38.7	+0.6
GUDG				S	Sn	14 19 30.6	-1.1
KBZ	Khabaz	6.35	306	P	Pn	14 18 58.3	-1.9
KBZ	Khabaz	6.35	306	Pn	Pn	14 18 58.3	-1.9
	comp=N,0.2nm,0.3s,baz=152,slow=18,SNR=2.8						
KBZ				Sn	Sn	14 20 03.5	-7.7
	comp=N,0.7nm,0.3s,baz=133,slow=19,SNR=3.6						
KBZ	Khabaz	6.35	306	P	Pn	14 18 58.3	-1.9
AB31	Akbulak array	11.50	35	⇑Pn	Pn	14 20 08.4	-2.3
	comp=N,0.2nm,0.3s,baz=209,slow=11,SNR=7.2						
AB31				⇑Sn	Sn	14 22 06.7	-11
	comp=N,1.3nm,0.4s,baz=208,slow=28,SNR=9.7						
AB31	Akbulak array	11.50	35	Pn	Pn	14 20 08.4	-2.3
	comp=N,0.2nm,0.3s,baz=209,SNR=7.2						
AKTO	Aktyubinsk	11.70	26	⇓Pn	Pn	14 20 09.5	-3.8
	comp=N,0.4nm,0.7s						
AKTO				⇓Sn	Sn	14 22 09.9	-12
	comp=N,0.9nm,0.7s						
AKTO	Aktyubinsk	11.70	26	P	Pn	14 20 08.7	-4.7
AKTO						14 22 10.4	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax	smax		
	comp=N,1.0nm,0.3s						
AKTO	Aktyubinsk	11.70	26	Pn	Pn	14 20 08.7	-4.7
	comp=N,0.8nm,0.3s,baz=196,slow=11,SNR=12						
AKTO				Sn	Sn	14 22 10.4	-12
	comp=N,0.7nm,0.3s,baz=180,slow=20,SNR=6.5						
VRHR	Novokhopersk	12.36	335	*e*P	P	14 20 33.7	+1.4
VRHR				pmax	pmax		
	comp=N,6.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,6.0nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VORD	Divnogorie	13.10	329	*e*P	P	14 20 42.1	+1.6
VORD				pmax	pmax		
	comp=N,4.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	Storozhevoye	13.35	329	*e*P	P	14 20 41.7	-1.6
VSR				pmax	pmax		
	comp=N,8.0nm,0.8s						
VSR				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.3s						
VSR	Storozhevoye	13.35	329	*e*P	P	14 20 41.7	-1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	18.54	74	P	P	14 21 41.5	+0.4
AAK	Ala-Archa	18.54	74	P	P	14 21 41.5	+0.4
	comp=E,0.2nm,0.3s,baz=195,slow=4.0,SNR=5.4						
AAK	Ala-Archa	18.54	74	P	P	14 21 41.5	+0.4
BVAR	Borovoye Array	18.93	41	P	P	14 21 44.3	-0.7
BVAR	Borovoye Array	18.93	41	P	P	14 21 44.3	-0.7
	comp=E,0.4nm,0.3s,baz=255,slow=8.1,SNR=5.3						
BVAR	Borovoye Array	18.93	41	P	P	14 21 44.3	-0.7
KURBB	Kurchatov Arra	22.47	53	P	P	14 22 22.8	-0.4
	comp=E,0.7nm,0.6s,baz=257,slow=11,SNR=5.5						
KURK	Kurchatov	22.55	53	P	P	14 22 22.8	-1.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	22.55	53	P	P	14 22 22.8	-1.3
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	24.24	63	P	P	14 22 41.7	+1.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	24.24	63	P	P	14 22 41.6	+1.3
	comp=Z,0.9nm,0.5s,baz=263,slow=8.3,SNR=11						
MKAR	Makanchi Array	24.24	63	P	P	14 22 41.7	+1.3
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	25.81	333	P	P	14 22 54.5	+0.1
	comp=Z,0.9nm,0.5s,baz=133,slow=10,SNR=5.0						
FINES	FINESS Array B	25.81	333	P	P	14 22 54.5	+0.1
	comp=Z,1.0nm,0.5s						
ARCES	ARCESS Array B	32.12	344	P	P	14 23 50.6	+0.3
	comp=Z,3.7nm,1.1s,baz=138,slow=9.6,SNR=4.1						
ARCES	ARCESS Array B	32.12	344	P	P	14 23 50.7	+0.3
	comp=Z,4.0nm,1.1s						
TORD	Torodi Ar. Bea	50.06	251	P	P	14 26 17.4	-0.6
	comp=Z,0.4nm,0.6s,baz=48,slow=6.8,SNR=4.8						
KSRS	Korea Array	58.91	65	P	P	14 27 23.4	+1.4
	comp=Z,0.5nm,0.4s,baz=296,slow=7.2,SNR=6.1						
KSRS	Korea Array	58.91	65	P	P	14 27 23.4	+1.4
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	76.91	353	P	P	14 29 14.0	-0.5
	comp=Z,0.2nm,0.6s,baz=9.9,slow=6.1,SNR=7.2						
YKA	Yellowknife Ar	76.91	353	P	P	14 29 14.0	-0.5

IDC 03 14:20:30.5±3.0**, 4°.40S×102°.53E, h0^{km}, mb3.5**/6**, mb1 3.6**/6**, mb1mx3.4**/25**, mbtmp3.5**/6**, Error ellipse: s-maj=173.9km s-min=21.4km az=52.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	34.61	119	P	P	14 27 21.4	-0.3
	0.1nm,0.4s,baz=300,slow=8.6,SNR=3.1						
ASAR	Alice Springs	35.81	125	P	P	14 27 32.9	+0.9
	0.3nm,0.8s,baz=298,slow=7.7,SNR=6.7						
ASAR				PcP	PcP	14 29 57.6	-2.2
	0.2nm,0.5s,baz=310,slow=2.7,SNR=4.0						
MKAR	Makanchi Array	54.03	343	P	P	14 29 57.1	+0.5
	0.4nm,0.4s,baz=144,slow=9.2,SNR=5.7						
KURBB	Kurchatov Arra	58.57	342	P	P	14 30 29.1	+0.1
	0.2nm,0.6s,baz=159,slow=6.8,SNR=3.1						
ZALV	Zalesovo Beam	60.00	348	P	P	14 30 38.6	-0.2
	0.8nm,0.4s,baz=175,slow=6.9,SNR=2.8						
BVAR	Borovoye Array	63.31	339	P	P	14 31 01.2	+0.1
	0.5nm,0.5s,baz=137,slow=7.2,SNR=3.6						

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*CSEM **03** 14:39:37.5, 36°.84N×22°.86E, h5^{km}, MD2.6, After ATH*

ATH 03 14:39:37.5, 36°.84N×22°.86E, h5^{km}±1^{km}**, MD2.6**/3**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLI	Veliai	0.14	153	ePG	Pg	14 39 40.4	+0.1
VLI				eSG	Sg	14 39 42.6	+0.5
VLI	Veliai	0.14	153	ePg	Pg	14 39 40.4	+0.1
VLI				eSg	Sg	14 39 42.6	+0.5
DYR	Agios Nikonas	0.43	260	ePB	Pg	14 39 46.1	+0.2
DYR				eSB	Sg	14 39 52.2	+0.7
DYR	Agios Nikonas	0.43	260	ePb	Pg	14 39 46.1	+0.2
DYR				eSb	Sg	14 39 52.2	+0.7
KYTH	Kithira	0.58	166	ePB	Pg	14 39 49.0	+0.4
KYTH	Kithira	0.58	166	ePb	Pg	14 39 49.0	+0.4
DID	Didima	0.73	24	ePB	Pg	14 39 51.6	0.0
DID				eSB	Sg	14 40 02.1	+0.9
DID	Didima	0.73	24	ePb	Pg	14 39 51.6	0.0
DID				eSb	Sg	14 40 02.1	+0.9

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*ISK **03** 14:50:47.9, 37°.18N×28°.12E, h2^{km}, MD2.4*

*CSEM **03** 14:50:48.9±0.1, 37°.19N×28°.13E, h1^{km}, MD2.4, Error ellipse: s-maj=4.0km s-min=2.7km az=22.0*

*DDA **03** 14:50:48.6, 37°.23N×28°.11E, h14^{km}, MD2.6*

*ISCJB **03** 14:50:48.7±0.6, 37°.18N±0°.04×28°.12E±0°.04, h0^{km}, Error ellipse: s-maj=6.0km s-min=3.7km az=27.4*

ISC 03 14:50:49.3±1.3**, 37°.19N**±0°.03×**28°.13E**±0°.02**, h0^{km}, n16, σ0ˢ.62**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.13	113	ePG	Pg	14 50 51.3	-0.5
YER				eSG	Sg	14 50 54.0	+0.4
YER	Yerkesik	0.13	113	ePg	Pg	14 50 51.3	-0.5
YER				eSg	Sg	14 50 54.0	+0.4
MLSB	Milas	0.30	291	ePG	Pg	14 50 54.9	-0.2
MLSB				eSG	Sg	14 50 59.6	+0.6
MLSB	Milas	0.30	291	ePg	Pg	14 50 54.9	-0.2
MLSB				eSg	Sg	14 50 59.6	+0.6
TURN	Turunc	0.49	129	i P	Pg	14 50 57.9	-0.8
TURN				i S	Sg	14 51 05.5	+0.4
TURN	Turunc	0.49	129	i P	Pg	14 50 57.9	-0.8
TURN				i S	Sg	14 51 05.5	+0.4
AYDN	Tasoluk	0.51	337	i P	Pg	14 50 58.7	-0.5
AYDN				i S	Sg	14 51 06.2	+0.4
AYDN	Tasoluk	0.51	337	i P	Pg	14 50 58.7	-0.5
AYDN				i S	Sg	14 51 06.2	+0.4
DALY	Dalyan (Mu˜la	0.56	131	ePG	Pg	14 51 00.2	+0.2
DALY	Dalyan (Mu˜la	0.56	131	ePg	Pg	14 51 00.2	+0.2
DAT	Datca	0.64	224	ePG	Pg	14 51 01.0	-0.5
DAT	Datca	0.64	224	ePg	Pg	14 51 01.0	-0.5
BODT	Bodrum	0.67	260	ePG	Pg	14 51 01.4	-0.7
BODT	Bodrum	0.67	260	ePg	Pg	14 51 01.4	-0.7
DNZL	Cakiroluk	0.89	55	i P	Pg	14 51 05.5	-0.8
DNZL				i S	Sg	14 51 18.8	+1.0
DNZL	Cakiroluk	0.89	55	i P	Pg	14 51 05.5	-0.8
DNZL				i S	Sg	14 51 18.8	+1.0

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*ATH **03** 14:52:58.5, 38°.93N×24°.73E, h45^{km}, MD3.2/4*

*THE **03** 14:52:59.2, 38°.96N×24°.86E, h13^{km}±1^{km}, ML2.4/3, Error ellipse: s-maj=1.1km s-min=0.4km az=317.0*

*CSEM **03** 14:52:59.0±0.2, 38°.93N×24°.89E, h15^{km}, ML2.4/3, Error ellipse: s-maj=6.1km s-min=4.1km az=175.0*

ISC 03 14:52:59.4±1.8**, 38°.94N**±0°.04×**24°.88E**±0°.03**, h18^{km}**±9^{km}**, n28, σ0ˢ.60**/40**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIGR	SIGRI	0.81	70	P	Pb	14 53 14.4	-0.5
SIGR	SIGRI	0.81	70	P	Pb	14 53 14.4	-0.5
AOS	Alonnisos	0.81	287	P	Pb	14 53 14.6	-0.4
AOS				S	Sb	14 53 25.9	+0.3
AOS	Alonnisos	0.81	287	P	Pb	14 53 14.6	-0.4
AOS				S	Sb	14 53 25.9	+0.3
LIA	Limnos Island	0.99	14	P	Pb	14 53 17.6	-0.4
LIA				S	Sb	14 53 31.0	+0.4
LIA	Limnos Island	0.99	14	eP	Pb	14 53 17.9	-0.1
LIA				eS	Sb	14 53 31.1	+0.4
LIA	Limnos Island	0.99	14	eP	Pb	14 53 17.9	-0.1
LIA				eS	Sb	14 53 31.1	+0.4
MRKA	Markates	1.03	257	P	Pb	14 53 18.3	-0.5
MRKA	Markates	1.03	257	P	Pb	14 53 18.3	-0.5
CHOS	Chios island	1.07	121	P	Pb	14 53 19.4	-0.1
CHOS				S	Sg	14 53 34.8	+0.5
CHOS	Chios island	1.07	121	P	Pb	14 53 19.4	-0.1
CHOS				S	Sg	14 53 34.8	+0.5
SKIA	Skiathos	1.12	282	P	Pn	14 53 19.4	-0.9
SKIA				S	Sb	14 53 35.1	+0.5
SKIA	Skiathos	1.12	282	P	Pn	14 53 19.4	-0.9
SKIA				S	Sb	14 53 35.1	+0.5
PRK	Paraskevi	1.13	74	P	Pn	14 53 19.7	-0.6
PRK				S	Sn	14 53 35.8	+0.5
PRK	Paraskevi	1.13	74	eP	Pb	14 53 21.1	+0.7
PRK				eS	Sg	14 53 36.4	+0.4
PRK	Paraskevi	1.13	74	P	Pn	14 53 19.7	-0.6
PRK				S	Sn	14 53 35.8	+0.5
PTL	Penteli	1.19	222	P	Pn	14 53 20.4	-0.9
PTL	Penteli	1.19	222	P	Pn	14 53 20.4	-0.9
SMIA	Simia	1.30	268	P	Pb	14 53 24.3	+0.9
SMIA	Simia	1.30	268	P	Pb	14 53 24.3	+0.9
XOR	Xorichti	1.38	289	P	Pb	14 53 25.2	+0.5
XOR	Xorichti	1.38	289	P	Pb	14 53 25.2	+0.5
SMTH	Samothraki Isl	1.61	18	eP	Pn	14 53 26.2	-0.8
SMTH	Samothraki Isl	1.61	18	eP	Pn	14 53 26.2	-0.8
LTK	Loutraki	1.76	239	P	Pn	14 53 28.5	-0.5
LTK	Loutraki	1.76	239	P	Pn	14 53 28.5	-0.5
APE	Apeiranthos	1.94	164	eP	Pn	14 53 30.8	-0.7
APE	Apeiranthos	1.94	164	eP	Pn	14 53 30.8	-0.7

IDC 03 14:54:52.8±2.4**, 5°.97S×129°.76E, h0^{km}, mb3.6**/1**, mb1 3.4**/3**, mb1mx3.3**/18**, mbtmp3.3**/3**, ML3.0**/2**, Error ellipse: s-maj=160.3km s-min=31.2km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.59	163	Pn	Pn	14 58 21.1	+0.4
	0.1nm,0.3s,baz=346,slow=13,SNR=7.0						
WRA				Sn	Sn	15 00 48.4	-15
	0.2nm,0.3s,baz=335,slow=21,SNR=5.1						
ASAR	Alice Springs	18.05	168	P	Pn	14 59 04.6	-0.5
	0.0nm,0.3s,baz=348,slow=10,SNR=4.4						
ASAR				S	Sn	15 02 12.5	-15
	0.1nm,0.3s,baz=346,slow=24,SNR=5.5						
MKAR	Makanchi Array	67.23	327	P	P	15 05 49.1	+0.1
	0.3nm,0.4s,baz=118,slow=7.4,SNR=8.2						

GUC 03 15:01:08.1±0.7**, 28°.62S×68°.96W, h145^{km}**±48^{km}**, ML3.9, 1C-2D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	1.58	255⇓	eP	Pn	15 01 39.2	+0.7
LCO				eS	Sn	15 02 02.6	+0.8
LCO				AML	AML	15 02 04.3	
	comp=N,1μm,0.4s						
CPCH	Copiapo	1.76	315	eP	Pn	15 01 38.5	-1.7
CPCH				i S	Sn	15 02 02.8	-2.0
CPCH				AML	AML	15 02 06.5	
	comp=E,3μm,0.1s						
TLL	Tololo Astrono	2.23	226⇓	eP	Pn	15 01 46.4	+0.4
TLL				eS	Sn	15 02 16.1	+0.9
TLL				AML	AML	15 02 21.2	
	comp=E,220nm,0.3s						
CDCH	Caldera	2.26	313	eP	Pn	15 01 46.6	+0.6
CDCH				eS	Sn	15 02 15.5	+0.3
CMCH	Combarbala	3.11	214⇑	eP	Pn	15 01 55.9	-0.8
CMCH				eS	Sn	15 02 33.7	-0.7

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*IDC **03** 15:14:28.4±2.3, 51°.35N×178°.99E, h0^{km}, mb3.4/4, mb1 3.8/6, mb1mx3.5/28, mbtmp3.5/6, ML3.2/2, Error ellipse: s-maj=72.3km s-min=11.9km az=12.0*

*NEIC **03** 15:14:33.0±1.6, 51°.30N×178°.48E, h19^{km}±15^{km}, ML2.9(AEIC), Error ellipse: s-maj=17.8km s-min=10.1km az=174.0*

ISC 03 15:14:31.5±1.2**, 51°.1N**±0°.1×**178°.60E**±0°.05**, h33^{km}, n15, σ1ˢ.88**/19**, mb3.4**/4**, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	0.51	60	P	Pn	15 14 43.5	+1.1
AMKA				S	Sn	15 14 54.1	+4.0
LSSE	Little Sitkin	0.81	359	P	Pn	15 14 45.8	-0.9
LSSA	Little Sitkin	0.83	356	P	Pn	15 14 45.8	-1.1
LSNW	Little Sitkin	0.85	357	P	Pn	15 14 46.0	-1.2
CETU	Semis' Tuman	1.01	33	P	Pb	15 14 50.7	+0.1
CERB	Semis' Cerberu	1.04	38	P	Pb	15 14 50.9	-0.1
CERB				S	Sb	15 15 05.5	+1.3
CERAA	Semis' Rag'd T	1.04	40	P	Pb	15 14 50.9	-0.1
CEAP	Semis' Anvil P	1.07	34	P	Pb	15 14 51.5	-0.1
FX1	Attu Island--F	3.79	300	P	Pn	15 15 28.4	+0.8
FX1				S	Sn	15 16 14.7	+3.7
FX1	Attu Island--F	3.79	300	Pn	Pn	15 15 27.8	+0.2
	3.1nm,0.3s,baz=112,slow=1.8,SNR=14						
FX1				Sn	Sn	15 16 12.5	+1.5
	5.3nm,0.3s,baz=108,slow=19,SNR=8.2						
KDAK	Kodiak Island	17.93	57	P	Pn	15 18 34.9	-3.1
	0.4nm,0.3s,baz=276,slow=5.7,SNR=7.1						
YKA	Yellowknife Ar	36.59	46	P	P	15 21 32.9	-1.0
	0.1nm,0.3s,baz=283,slow=8.9,SNR=7.8						
NVAR	Mina Array Bea	45.21	81	P	P	15 22 43.7	-1.8
	0.3nm,0.6s,baz=294,slow=6.8,SNR=2.6						
PDAR	Pinedale Array	47.94	70	P	P	15 23 05.5	-1.3
	0.4nm,0.6s,baz=316,slow=4.1,SNR=4.3						
TXAR	Lajitas Array	60.31	79	P	P	15 24 38.6	+1.6
	0.2nm,0.6s,baz=303,slow=4.5,SNR=4.9						

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*CSEM **03** 15:19:06.6±0.7, 33°.84N×35°.63E, h20^{km}, ML1.5, Error ellipse: s-maj=24.4km s-min=7.8km az=80.0*

*ISCJB **03** 15:19:06.8±0.9, 33°.85N±0°.04×35°.7E±0°.1, h21^{km}±7^{km}, Error ellipse: s-maj=19.9km s-min=5.5km az=170.4*

*NSSC **03** 15:19:07.1±1.5, 33°.91N×35°.84E, h13^{km}±13^{km}, ML1.5*

*GRAL **03** 15:19:08.6±0.3, 33°.78N×35°.79E, h0^{km}±27^{km}, MD2.7*

ISC 03 15:19:06.8±1.1**, 33°.87N**±0°.05×**35°.9E**±0°.1**, h12^{km}**±16^{km}**, n14, σ1ˢ.12**/26**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.19	280	eP	Pg	15 19 11.5	+0.4
BHL				eS	Sg	15 19 13.8	-0.2
BHL	Bhannes	0.19	280	eP	Pg	15 19 11.5	+0.4
BHL				eS	Sg	15 19 13.8	-0.2
RCY	Rachaya	0.38	186	eP	Pg	15 19 13.7	-0.7
RCY				eS	Sg	15 19 17.5	-1.9
RCY	Rachaya	0.38	186	eP	Pg	15 19 13.7	-0.7
RCY				eS	Sg	15 19 17.5	-1.9
HWQ	Hawqa	0.41	8	eP	Pb	15 19 17.8	+1.7
HWQ	Hawqa	0.41	8	eP	Pb	15 19 17.8	+1.7
BIDA	Albida	1.20	18	eP	Pn	15 19 28.6	-0.9
BIDA				eS	Sb	15 19 44.4	-0.6
BIDA				AML	AML	15 19 53.3	
	comp=N,72nm,0.4s						
BIDA				AML	AML	15 19 53.6	
	comp=Z,27nm,0.4s						
BIDA				AML	AML	15 19 57.8	
	comp=E,43nm,0.5s						
BIDA	Albida	1.20	18	eP	Pn	15 19 28.6	-0.9
	SNR=66						
BIDA				eS	Sb	15 19 44.4	-0.6
	comp=E,43nm,0.5s,SNR=62						
SALA	Sala	1.36	148	eP	Pn	15 19 32.3	+0.5
SALA				eS	Sn	15 19 49.7	-0.2
SALA				AML	AML	15 19 55.3	
	comp=Z,13nm,0.4s						
SALA				AML	AML	15 19 55.3	
	comp=E,0.9nm,0.3s						
SALA				AML	AML	15 19 59.1	
	comp=N,9.2nm,0.4s						
SALA	Sala	1.36	148	eP	Pn	15 19 32.3	+0.5
	SNR=66						
SALA				eS	Sn	15 19 49.7	-0.2
	comp=N,9.2nm,0.4s,SNR=62						
ZALF	Zalf	1.54	127	eP	Pb	15 19 36.7	+1.3
ZALF				eS	Sn	15 19 55.5	+1.3
ZALF				AML	AML	15 20 02.1	
	comp=Z,6.3nm,0.3s						
ZALF				AML	AML	15 20 06.9	
	comp=E,7.1nm,0.6s						
ZALF				AML	AML	15 20 07.0	
	comp=N,2.8nm,0.4s						
ZALF	Zalf	1.54	127	eP	Pb	15 19 36.7	+1.3
	SNR=51						
ZALF				eS	Sn	15 19 55.5	+1.3
	comp=N,2.8nm,0.4s,SNR=49						
ARNB	Al Arnab	1.99	2	eP	Pn	15 19 40.1	-0.3
ARNB				eS	Sn	15 20 03.9	-1.3
ARNB				AML	AML	15 20 13.5	
	comp=Z,8.3nm,0.5s						
ARNB				AML	AML	15 20 19.3	
	comp=E,8.9nm,0.3s						
ARNB				AML	AML	15 20 20.3	
	comp=N,7.1nm,0.7s						
ARNB	Al Arnab	1.99	2	eP	Pn	15 19 40.1	-0.3
	SNR=51						
ARNB				eS	Sn	15 20 03.9	-1.3
	comp=N,7.1nm,0.7s,SNR=49						

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*VIE **03** 15:27:12.2, 15°.07S×170°.73E, h673^{km}, mb3.3   395 km NE of Port Vila*

IDC 03 15:27:12.2±1.3**, 15°.17S×170°.66E, h679^{km}**±16^{km}**, mb3.3**/11**, mb1 3.5**/13**, mb1mx3.3**/22**, mbtmp3.4**/13**, 2C-5D, Error ellipse: s-maj=14.7km s-min=11.2km az=157.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	7.82	207	eP	P	15 29 13.6	+1.1
DZM	Mont Dzumac	7.95	210	eP	P	15 29 14.4	+0.7
DZM	Mont Dzumac	7.95	210	P	P	15 29 13.6	-0.2
	5.7nm,0.3s,baz=310,slow=22,SNR=50						
LASL	Noumea	8.04	208	eP	P	15 29 15.9	+1.5
NOUC	Port Laguerre	8.04	210	eP	P	15 29 14.9	+0.5
HNR	Honiara	11.92	297	P	P	15 29 49.4	-0.5
	8.1nm,0.3s,baz=190,slow=3.3,SNR=9.3						
URZ	Urewera	23.70	167	P	P	15 31 34.3	-1.2
	5.7nm,0.4s,baz=312,slow=9.3,SNR=9.5						
RPZ	Rata Peaks	28.46	179	P	P	15 32 16.4	-0.4
	6.8nm,0.4s,baz=29,slow=9.3,SNR=14						
STKA	Stephens Creek	31.27	233	P	P	15 32 42.4	+1.4
	1.3nm,0.4s,baz=53,slow=8.8,SNR=14						
STKA				ScP	ScP	15 37 54.5	+1.2
	0.3nm,0.3s,baz=102,slow=9.3,SNR=6.0						
WRA	Warramunga Arr	34.91	257	P	P	15 33 12.1	+0.7
	2.8nm,0.7s,baz=88,slow=9.0,SNR=24						
WRA				S	S	15 37 55.5	-2.8
	0.8nm,1.0s,baz=88,slow=14,SNR=2.6						
ASAR	Alice Springs	35.60	250	P	P	15 33 18.1	+1.1
	3.5nm,0.4s,baz=74,slow=10.0,SNR=109						
ASAR				S	S	15 38 07.9	-0.6
	0.8nm,1.0s,baz=77,slow=15,SNR=5.1						
ASAR				ScP	ScP	15 38 10.9	+2.0
	0.6nm,0.7s,baz=80,slow=3.4,SNR=10						
VNDA	Vanda	62.53	182	P	P	15 36 32.8	+0.7
	1.1nm,0.5s,baz=357,slow=6.8,SNR=15						
PETK	Petropavlovsk-	68.91	352	P	P	15 37 12.1	+0.3
	3.7nm,1.0s,baz=164,slow=5.9,SNR=7.6						
NVAR	Mina Array Bea	85.09	48	P	P	15 38 39.5	0.0
	2.8nm,0.8s,baz=228,slow=8.3,SNR=18						
PDAR	Pinedale Array	92.85	47	P	P	15 39 14.6	-0.9
	0.3nm,0.6s,baz=261,slow=4.5,SNR=2.8						
TXAR	Lajitas Array	93.62	61	P	P	15 39 18.9	-0.2
	0.2nm,0.5s,baz=218,slow=6.3,SNR=5.0						
YKA	Yellowknife Ar	96.44	27	P	P	15 39 29.9	-0.9
	0.9nm,0.6s,baz=255,slow=4.7,SNR=34						
ARCES	ARCESS Array B	121.47	346	PKP	PKPdf	15 44 49.4	-0.8
	2.7nm,0.7s,baz=62,slow=2.1,SNR=14						
FINES	FINESS Array B	127.31	340	PKP	PKPdf	15 45 01.8	+0.2
	2.0nm,1.0s,baz=75,slow=1.6,SNR=4.3						
MYKA	Terra Mystica	143.23	333⇓	iPKPab	PKPab	15 45 30.1	-0.2
	2.1nm,0.5s						
WTTA	Wattenberg	143.56	336⇑	iPKPdf	PKPab	15 45 31.7	+0.1
	3.3nm,0.7s						
ABTA	Abfaltersbach	143.62	334⇓	ePKPbc	PKPbc	15 45 30.8	-0.7
	4.1nm,0.7s						
MOTA	Moosalm	143.70	336⇑	iPKPdf	PKPbc	15 45 32.0	+0.1
	3.3nm,0.6s						
RETA	Reutte	143.71	337⇓	iPKPdf	PKPbc	15 45 31.8	0.0
	4.7nm,0.7s						
FETA	Feichten	144.11	336⇓	iPKPab	PKPab	15 45 33.6	-0.2
	3.6nm,0.6s						
DAVA	Damuels	144.21	337⇓	iPKPab	PKPbc	15 45 33.8	+0.3
	4.4nm,0.7s						

IDC 03 15:46:32.0±2.4**, 19°.87S×178°.16W, h520^{km}**±34^{km}**, mb3.1**/6**, mb1 3.4**/8**, mb1mx3.1**/20**, mbtmp3.2**/8**, Error ellipse: s-maj=25.4km s-min=18.4km az=95.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.51	47	P	P	15 48 34.8	+0.4
	1.9nm,0.3s,baz=224,slow=16,SNR=4.3						
AFI				S	S	15 50 11.7	-2.9
	0.2nm,0.3s,baz=188,slow=17,SNR=2.2						
URZ	Urewera	18.78	192	P	P	15 50 16.9	-1.4
	2.6nm,0.3s,baz=334,slow=1.9,SNR=22						
CTA	Charters Tower	33.41	263	P	P	15 52 28.2	+0.7
	8.0nm,0.7s,baz=94,slow=9.4,SNR=6.3						
ASAR	Alice Springs	44.52	256	P	P	15 53 57.1	-0.3
	2.7nm,0.8s,baz=95,slow=8.7,SNR=29						
ASAR				S	S	15 59 49.0	-6.0
	0.3nm,0.6s,baz=88,slow=16,SNR=4.5						
WRA	Warramunga Arr	44.54	261	P	P	15 53 57.5	-0.2
	0.7nm,0.3s,baz=97,slow=7.4,SNR=24						
VNDA	Vanda	58.52	185	P	P	15 55 38.4	+0.6
	0.8nm,0.7s,baz=0.0,slow=4.0,SNR=7.1						
MJAR	Matsushiro Arr	69.62	324	P	P	15 56 48.4	-0.6
	1.2nm,0.7s,baz=152,slow=5.7,SNR=8.4						
KSRS	Korea Array	76.32	319	P	P	15 57 27.6	+0.2
	0.2nm,0.4s,baz=119,slow=6.9,SNR=2.9						

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*BGS **03** 16:21:28.9±1.4, 13°.61N×91°.34W, h24^{km}, mb5.5, MS5.3*

*CASC **03** 16:21:37.8±2.4, 14°.89N×91°.80W, h157^{km}±28^{km}, MD5.2, ML6.1, mb5.6(NEIC)*

*MOS **03** 16:21:43.9±1.0, 14°.66N×91°.04W, h106^{km}, mb5.6/109, MS5.4/25, Error ellipse: s-maj=5.6km s-min=4.1km az=89.7*

*NEIC **03** 16:21:45.3±0.2, 14°.55N×91°.14W, h108^{km}, mb5.6/239, ME6.0, MW6.2, MW6.2, MD5.5(SNET), Error ellipse: s-maj=4.3km s-min=2.8km az=33.0   Broadband fault plane solution: P waves.   NP1:ϕ_s135.00000°, δ85.00000°, λ90.00000°.   NP2:ϕ_s315.00000°, δ5.00000°, λ90.00000°. Principal axes: T Plg50.0000°, Azm45.0000°; N Plg0.0000°, Azm0.0000°; P Plg40.0000°, Azm225.0000°;   Moment Tensor Solution.   s68   Moment tensor: Scale 10^{18} Nm; M_{rr}-0.23; $M_{\theta\theta}$0.44; $M_{\phi\phi}$-0.22; $M_{r\theta}$1.65; $M_{\theta\phi}$-0.16; $M_{\phi r}$-1.68;   Best double couple: $M_0$2.40000×10^{18} NP1:ϕ_s66.00000°, δ9.00000°, λ-159.00000°.   NP2: ϕ_s315.00000°, δ87.00000°, λ-82.00000°.   Principal axes: T 2.4100, Plg41.0000°, Azm37.0000°; N -0.0500, Plg7.0000°, Azm134.0000°; P -2.3700, Plg47.0000°, Azm233.0000°;   Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC   Felt [V] at Atitlan, Chichicastenango and Petapa; [IV] at Antigua Guatemala, Chimaltenango, Guatemala, Quetzaltenango, San Jose, Villa Canales and Villa Nueva; [III] at Mixco and Panajachel. Felt in most of southern Guatemala. Felt [III] at San Salvador, El Salvador. Also felt at Concepcion de Ataco, Opico and Sonsonate. Felt [II] at Tegucigalpa, Honduras. Also felt at Tapachula, Mexico.

*IDC **03** 16:21:46.6±0.5, 14°.76N×90°.94W, h111^{km}±3^{km}, mb5.1/34, mb1 5.2/35, mb1mx5.2/35, mbtmp5.1/35, MS5.4/24, Ms1 5.4/24, ms1mx5.3/32   Error ellipse: s-maj=9.6km s-min=5.5km az=59.0*

*ISCJB **03** 16:21:47.5±0.3, 14°.59N±0°.02×91°.16W±0°.02, h142^{km}±2^{km}, mb5.4/336, Error ellipse: s-maj=4.0km s-min=2.7km az=33.9*

*GCMT **03** 16:21:49.8±0.1, 14°.56N×91°.50W, h90^{km}, MW6.3, Moment Tensor Solution.   s116,c281;   s91,c147; Moment tensor: Scale 10^{18}Nm; M_{rr}-1.10±.02; $M_{\theta\theta}$1.34±.02; $M_{\phi\phi}$-0.24±.03; $M_{r\theta}$1.99±.02; $M_{\theta\phi}$-1.31±.02; $M_{\phi r}$-1.90±.02;   Best double couple: $M_0$3.20000×10^{18} NP1:ϕ_s89.00000°, δ19.00000°, λ-134.00000°.   NP2: ϕ_s316.00000°, δ76.00000°, λ-76.00000°.   Principal axes: T 3.6200, Plg30.0000°, Azm34.0000°; N -0.8100, Plg13.0000°, Azm132.0000°; P -2.8100, Plg57.0000°, Azm244.0000°;   Data Used: II IU CN IC G. Surface waves: sta=104, comp=241, per= 50.*

*MEX **03** 16:21:51.1±0.2, 14°.53N×91°.89W, h77^{km}±5^{km}, MD5.3*

*SZGRF **03** 16:21:57.4, 14°.93N×87°.83W, h123^{km}, mb6.0, Honduras*

*NEIC **03** 16:22:03.6±0.0, 14°.88N×91°.01W, h95^{km}, Moment Tensor Solution.   s165   Moment tensor: Scale 10^{18}Nm; M_{rr}-0.80; $M_{\theta\theta}$0.87; $M_{\phi\phi}$-0.07; $M_{r\theta}$1.59; $M_{\theta\phi}$-0.94; $M_{\phi r}$-1.96; Best double couple: $M_0$2.80000×10^{18} NP1:ϕ_s89.00000°, δ17.00000°, λ-140.00000°.   NP2:ϕ_s322.00000°, δ79.00000°, λ-76.00000°.   Principal axes: T 3.0200, Plg32.0000°, Azm40.0000°; N -0.4500, Plg13.0000°, Azm139.0000°; P -2.5700, Plg53.0000°, Azm247.0000°;*

ISC 03 16:21:46.4±0.2,14°62N±0'02×91°20W±0'03,h114km±1km, h114km:pP-P,n1639,σ1:84/3032,mb5.6/336,305C-248D, Guatemala

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.39**	**116**	*eP*	**Pn**	**16 22 03.1**	**-0.2**
JAT	**Jato**	**0.52**	**235**	*eP*	**Pn**	**16 22 00.8**	**-3.0**
PCG	**Pacaya**	**0.62**	**111**	*eP*	**Pn**	**16 22 05.4**	**+0.6**
GCG	**Guatemala City**	**0.65**	**93**	*eP*	**Pn**	**16 22 06.6**	**+1.6**
GCG				*eS*	Sn	16 22 34.3	+15
GCG	comp=N,332μm,0.5s			AML	AML	16 22 37.8	
NBG	**Las Nubes**	**0.83**	**92**	*eP*	**Pn**	**16 22 08.7**	**+2.1**
IXG	**Ixpaco**	**0.85**	**121**	*eP*	**Pn**	**16 22 07.4**	**+0.7**
THIG		**1.07**	**286**	*i* P	Pn	16 22 03.7	-5.0
THIG				*eS*	Sn	16 22 13.1	-12
THIG		**1.07**	**286**	*i* P	Pn	16 22 03.7	-5.0
THIG				*eS*	Sn	16 22 13.1	-12
CCIG	**Comitan**	**1.88**	**332**	*i* P	**Pn**	**16 22 18.9**	**+0.6**
CCIG				*eS*	**Sn**	**16 22 40.2**	**-2.4**
CCIG	**Comitan**	**1.88**	**332**	*i* P	**Pn**	**16 22 18.9**	**+0.6**
CCIG				*eS*	**Sn**	**16 22 40.2**	**-2.4**
PCIG		**2.23**	**299**	*eP*	x	16 24 04.8	
PCIG				*eS*	x	16 24 25.5	
TGIG		**2.83**	**320**	*i* P	**Pn**	**16 22 28.4**	**-2.0**
TGIG				*eS*	**Sn**	**16 22 58.8**	**-5.5**
TGIG		**2.83**	**320**	*i* P	**Pn**	**16 22 28.4**	**-2.0**
TGIG				*eS*	**Sn**	**16 22 58.8**	**-5.5**
TGUH	**Tegucigalpa,Un**	**3.85**	**98**	⇑*i*Pn	**Pn**	**16 22 46.0**	**+2.2**
HUIG	**Huatulco**	**4.87**	**284**	*i* P	Pn	16 22 52.6	-5.0
HUIG				*eS*	Sn	16 23 41.1	-12
HUIG	**Huatulco**	**4.87**	**284**	*i* P	Pn	16 22 52.6	-5.0
HUIG				*eS*	Sn	16 23 41.1	-12
PANG	**Puerto Angel**	**5.20**	**282**	*i* P	Pn	16 22 57.6	-4.3
PANG				*eS*	Sn	16 23 48.4	-12
OXBJ	**Oaxaca**	**5.84**	**295**	*i* P	Pn	16 23 06.6	-4.4
OXBJ				*eS*	Sn	16 24 06.6	-10
VHO	**Vista Hermosa**	**5.85**	**295**	*i* P	**Pn**	**16 23 08.1**	**-3.0**
VHO				*eS*	Sn	16 24 06.8	-10
VHO	**Vista Hermosa**	**5.85**	**295**	*i* P	**Pn**	**16 23 08.1**	**-3.0**
VHO				*eS*	Sn	16 24 06.8	-10
TEIG	**Tepich**	**6.24**	**26**	⇑*e*Pn	**Pn**	**16 23 17.6**	**+1.6**
TEIG				S	**Sn**	**16 24 28.6**	**+2.6**
TEIG				ScP	**ScP**	**16 33 28.7**	**+2.6**
TEIG	**Tepich**	**6.24**	**26**	P	**Pn**	**16 23 17.6**	**+1.6**
TEIG	comp=N,463nm,0.3s,baz=216,slow=8.2,SNR=680			S	**Sn**	**16 24 28.6**	**+2.6**
TEIG	baz=42,slow=22,SNR=11			ScP	**ScP**	**16 33 28.7**	**+2.6**
PNIG	**Pinotepa**	**6.90**	**286**	*i* P	Pn	16 23 20.7	-4.4
PNIG	comp=N,1.0nm,0.3s,baz=255,slow=4.2,SNR=5.5			*eS*	Sn	16 24 31.1	-11
PNIG	**Pinotepa**	**6.90**	**286**	*i* P	Pn	16 23 20.7	-4.4
PNIG				*eS*	Sn	16 24 31.1	-11
TPIG	**Tehuac#an**	**7.01**	**303**	*i* P	**Pn**	**16 23 24.4**	**-2.3**
TPIG				*eS*	Sn	16 24 37.1	-8.0
TPIG	**Tehuac#an**	**7.01**	**303**	*i* P	**Pn**	**16 23 24.4**	**-2.3**
TPIG				*eS*	Sn	16 24 37.1	-8.0
VCR	**Vista de Mar**	**7.04**	**129**	*eP*	**Pn**	**16 23 29.3**	**+2.3**
UTMO	**Huajuapan**	**7.10**	**298**	*i* P	**Pn**	**16 23 25.4**	**-2.5**
UTMO				*eS*	Sn	16 24 37.7	-10
UTMO	**Huajuapan**	**7.10**	**298**	*i* P	**Pn**	**16 23 25.4**	**-2.5**
UTMO				*eS*	Sn	16 24 37.7	-10
JTS	**JuntasAbangare**	**7.47**	**124**	*eP*	**Pn**	**16 23 34.4**	**+1.6**
FORC	comp=N,234nm,0.7s **Fortuna**	**7.60**	**122**	*eP*	**Pn**	**16 23 36.6**	**+2.1**
FORC	**Fortuna**	**7.60**	**122**	*eP*	**Pn**	**16 23 36.3**	**+1.7**
HMTT	**Tlapaneco**	**7.74**	**295**	*i* P	**Pn**	**16 23 33.5**	**-3.1**
HMTT				*eS*	Sn	16 24 53.0	-10
CGA2	**Cerro Gallo 2**	**8.02**	**124**	*eP*	**Pn**	**16 23 42.9**	**+2.6**
CGA2	**Cerro Gallo 2**	**8.02**	**124**	*eP*	**Pn**	**16 23 42.9**	**+2.6**
LAJ	**Bijagual**	**8.38**	**124**	*eP*	**Pn**	**16 23 44.0**	**-1.3**
LAJ	**Bijagual**	**8.38**	**124**	⇑*e*P	**Pn**	**16 23 44.0**	**-1.3**
SJS	**Escuela Geolog**	**8.39**	**123**	*eP*	Pn	16 23 49.5	+4.0
SJS	**Escuela Geolog**	**8.39**	**123**	*eP*	Pn	16 23 49.4	+3.9
SJS				*eS*	Sn	16 25 33.5	+15
QCR	**Quepos**	**8.60**	**126**	*eP*	**Pn**	**16 23 50.9**	**+2.7**
QCR				*eS*	Sn	16 25 33.9	+10
ACP2	**Acapulco**	**8.66**	**286**	*i* P	Pn	16 23 44.8	-4.1
BUS	**Buena Vista**	**8.85**	**124**	*eP*	**Pn**	**16 23 54.3**	**+2.4**
BUS				*eS*	Sn	16 25 40.2	+10
BUS	**Buena Vista**	**8.85**	**124**	*eP*	**Pn**	**16 23 54.2**	**+2.2**
BUS				*eS*	Sn	16 25 39.6	+9.4
UNM	**Universidad Na**	**8.95**	**303**	*i* P	**Pn**	**16 23 50.9**	**-2.2**
UNM	**Universidad Na**	**8.95**	**303**	*i* P	**Pn**	**16 23 50.9**	**-2.2**
UNM				*eS*	Sn	16 25 23.2	-9.2
UNM	**Universidad Na**	**8.95**	**303**	*i* P	**Pn**	**16 23 50.9**	**-2.2**
UNM				*eS*	Sn	16 25 23.2	-9.2
ACR	**Cerro Adams**	**9.85**	**126**	*eP*	**Pn**	**16 24 07.5**	**+2.3**
ACR	**Cerro Adams**	**9.85**	**126**	*eP*	**Pn**	**16 24 07.8**	**+2.7**
SOR	**Soroa**	**11.24**	**42**	*eP*	**Pn**	**16 24 24.7**	**+1.0**
SOR				*eS*	**Sn**	**16 26 32.0**	**+4.6**
BCIP	**Isla Barro Col**	**12.37**	**115**	*e*Pn	**Pn**	**16 24 39.0**	**+0.3**
MGV	**Manicaragua**	**12.99**	**53**	*eP*	**Pn**	**16 24 49.6**	**+2.8**
MGV				*eS*	**Sn**	**16 27 11.5**	**+1.6**
MCJ	**Malvern**	**13.39**	**74**	*i* P	**P**	**16 24 55.4**	**-2.0**
MTDJ	**Mount Denham**	**13.59**	**73**	⇑*e*P	**Pn**	**16 24 55.1**	**+0.4**
MTDJ				*e*		16 25 03.7	
PCJ	**Portland Cotta**	**13.84**	**75**	*i* P	**P**	**16 25 00.1**	**-2.3**
BBJ	**Bamboo Saint A**	**13.88**	**72**	*i* P	P	16 25 07.4	+4.6
STH	**Stony Hill**	**14.23**	**74**	*i* P	**P**	**16 25 05.1**	**-1.7**
HOJ	**Hope**	**14.28**	**74**	*i* P	**Pn**	**16 25 05.2**	**+1.7**
GWJ	**Greenwich**	**14.31**	**74**	*i* P	**P**	**16 25 06.1**	**-1.6**
LMGC	**Las Mercedes**	**14.59**	**66**	*eP*	**P**	**16 25 09.7**	**-1.0**
LMGC				*eS*	**S**	**16 28 03.0**	**+3.0**
PAYG	**Puerto Ayora**	**15.22**	**177**	*e*Pn	**Pn**	**16 25 15.9**	**+0.5**
RCC	comp=N,474nm,1.1s **Rio Carpintero**	**15.74**	**68**	*eP*	**P**	**16 25 23.5**	**+0.1**
RCC				*eS*	**Sn**	**16 28 17.0**	**+0.7**
HKT	**Hockley**	**15.84**	**345**	*eP*	**P**	**16 25 24.3**	**-0.2**
HKT				pmax	pmax		
HKT	comp=Z,4μm,2.0s **Hockley**	**15.84**	**345**	*e*Pn	**P**	**16 25 24.3**	**-0.2**
HKT	comp=Z,4μm,2.0s			*e*ScP	**ScP**	**16 33 41.2**	**+2.4**
DWPF	**Disney**	**16.20**	**32**	⇑*i*P	**P**	**16 25 29.6**	**+1.1**
732A	comp=Z,1μm,1.1s **Laxson Ranch,**	**16.22**	**331**	⇑P	**Pn**	**16 25 27.1**	**-0.6**
732A	baz=16,SNR=143			S	Sn	16 28 17.4	-10
732A	baz=16			S	Sn	16 28 17.4	-10
GTBY	baz=16 **Guantanamo Bay**	**16.25**	**69**	⇑*i*P	**P**	**16 25 30.0**	**+0.9**
632A	comp=Z,1μm,1.1s **Uvalde**	**16.80**	**333**	⇓P	**Pn**	**16 25 35.0**	**+0.1**
632A	baz=17,SNR=78			S	Sn	16 28 28.4	-14
632A	baz=17			S	Sn	16 28 28.4	-14
631A	baz=17 **Perdido Creek**	**17.08**	**331**	⇑P	**P**	**16 25 37.6**	**-0.7**
631A	baz=17,SNR=141			S	Sn	16 28 35.6	-13
631A	baz=17			S	Sn	16 28 35.6	-13
MASC	baz=17 **Masc**	**17.11**	**69**	*eP*	**Pn**	**16 25 42.5**	**+3.8**
MASC				*eS*	S	16 29 00.0	+8.9
532A	**Rocksprings**	**17.39**	**334**	⇓P	**Pn**	**16 25 42.5**	**+0.3**
532A	baz=18,SNR=419			S	Sn	16 28 43.5	-13
532A	baz=18			S	Sn	16 28 43.5	-13
JCT	baz=18 **Junction City**	**17.66**	**335**	⇑P	**Pn**	**16 25 45.1**	**-0.1**
JCT	baz=18,SNR=208			S	S	16 28 51.4	-11
JCT	baz=18			S	S	16 28 51.4	-11
531A	baz=18 **Rocksprings**	**17.70**	**332**	⇑P	**Pn**	**16 25 45.7**	**-0.2**
531A	baz=18,SNR=145			S	S	16 28 53.6	-10
531A	baz=18			S	S	16 28 53.6	-10
432A	baz=18 **Menard**	**18.00**	**335**	⇑P	**Pn**	**16 25 49.0**	**-0.4**
432A	baz=18,SNR=256			S	S	16 28 58.3	-11
432A	baz=18			S	S	16 28 58.3	-11
530A	baz=18 **J-C Ranch, Com**	**18.06**	**331**	⇑P	**Pn**	**16 25 49.7**	**-0.3**
530A	baz=18,SNR=350			S	S	16 29 01.9	-8.5
530A	baz=18			S	S	16 29 01.9	-8.5
TIGA	baz=18 **Tifton**	**18.14**	**21**	⇓P	**Pn**	**16 25 53.2**	**+2.2**
431A	baz=18 **Sonora**	**18.18**	**333**	⇑P	**Pn**	**16 25 51.4**	**-0.1**
431A	baz=18,SNR=502			S	**S**	**16 29 06.8**	**-5.9**
431A	baz=18			S	**S**	**16 29 06.8**	**-5.9**
WHTX	baz=18 **Lake Whitney**	**18.21**	**343**	⇓P	**Pn**	**16 25 51.4**	**-0.4**
WHTX	baz=18,SNR=60			S	S	16 29 04.8	-8.5
WHTX	baz=18			S	S	16 29 04.8	-8.5
628A	baz=18 **Black Gap, Mar**	**18.31**	**326**	⇑P	**Pn**	**16 25 53.5**	**+0.4**
332A	baz=18,SNR=250 **Millersview**	**18.43**	**336**	⇓P	**Pn**	**16 25 54.0**	**-0.5**
332A	baz=19,SNR=421			S	**S**	**16 29 13.8**	**-4.0**
332A	baz=19			S	**S**	**16 29 13.8**	**-4.0**
529A	baz=19 **Stev Forest Ra**	**18.47**	**328**	⇓P	**P**	**16 25 54.1**	**+0.6**
529A	baz=19,SNR=192			S	**S**	**16 29 14.7**	**-4.0**
529A	baz=19			S	**S**	**16 29 14.7**	**-4.0**
430A	baz=19 **Baggett Ranch,**	**18.54**	**332**	⇓P	**Pn**	**16 25 55.6**	**-0.3**
430A	baz=19,SNR=278			S	**S**	**16 29 16.7**	**-3.4**
430A	baz=19			S	**S**	**16 29 16.7**	**-3.4**
627A	baz=19 **Terlingua Ranc**	**18.56**	**325**	⇓P	**Pn**	**16 25 56.3**	**+0.1**
627A	baz=19,SNR=438			S	**S**	**16 29 20.7**	**0.0**
627A	baz=19			S	**S**	**16 29 20.7**	**0.0**
TXAR	baz=19 **Lajitas Array**	**18.63**	**324**	P	**Pn**	**16 25 57.0**	**0.0**
TXAR				S	**Sn**	**16 29 24.8**	**-1.1**
TXAR				PcP	**PcP**	**16 30 20.8**	**+1.3**
TXAR				ScP	**ScP**	**16 33 47.9**	**+3.1**
TXAR				PKiKP	**PKiKP**	**16 38 09.1**	**-1.3**
TXAR	**Lajitas Array**	**18.63**	**324**	P	**Pn**	**16 25 57.0**	**0.0**
TXAR	comp=Z,23nm,0.3s,baz=152,slow=9.3,SNR=631 baz=218,slow=18,SNR=2.3			S	**Sn**	**16 29 24.8**	**-1.1**
TXAR	comp=Z,2.2nm,0.3s,baz=170,slow=3.7,SNR=10			PcP	**PcP**	**16 30 20.8**	**+1.3**
TXAR	comp=Z,1.5nm,0.3s,baz=152,slow=3.3,SNR=34			ScP	**ScP**	**16 33 47.9**	**+3.1**
TXAR	comp=Z,0.2nm,0.3s,baz=108,slow=2.9,SNR=5.9			PKiKP	**PKiKP**	**16 38 09.1**	**-1.3**
331A	**San Angelo**	**18.64**	**335**	⇓P	**P**	**16 25 56.2**	**+0.8**
331A	baz=19,SNR=928			S	**S**	**16 29 17.7**	**-4.2**
331A	baz=19			S	**S**	**16 29 17.7**	**-4.2**
429A	baz=19 **Davenport Ranc**	**18.72**	**330**	⇓P	**P**	**16 25 57.0**	**+0.8**
429A	baz=19,SNR=223			S	**S**	**16 29 17.1**	**-6.4**
429A	baz=19			S	**S**	**16 29 17.1**	**-6.4**
LRAL	baz=19 **Lakeview Retre**	**18.73**	**11**	*e*Pn	**Pn**	**16 25 59.2**	**+1.3**
528A	comp=Z,2μm,1.4s **Cox Ranch, San**	**18.79**	**327**	⇓P	**P**	**16 25 57.7**	**+0.5**
528A	baz=19,SNR=210			S	**S**	**16 29 24.6**	**-0.5**
528A	baz=19			S	**S**	**16 29 24.6**	**-0.5**
232A	baz=19 **Coleman**	**18.84**	**337**	⇓P	**P**	**16 25 58.3**	**+0.7**
232A	baz=19,SNR=351			S	S	16 29 17.5	-8.5
232A	baz=19			S	S	16 29 17.5	-8.5
RFTA	baz=19 **Plano**	**18.98**	**346**	*e*P	**P**	**16 25 59.3**	**+0.3**
330A	**Mertzon**	**19.04**	**333**	⇑P	**P**	**16 26 00.5**	**+0.7**
330A	baz=19,SNR=628			S	**S**	**16 29 28.2**	**-1.7**
330A	baz=19			S	**S**	**16 29 28.2**	**-1.7**
OTAV	baz=19 **Otavalo**	**19.06**	**137**	*e*Pn	**Pn**	**16 26 02.8**	**+0.3**
OTAV	comp=Z,43nm,1.0s			*e*ScP	**ScP**	**16 33 49.5**	**+3.0**
626A	**Big Bend Ranch**	**19.06**	**323**	⇓P	**Pn**	**16 26 01.6**	**-0.5**
626A	baz=19,SNR=291			S	**S**	**16 29 24.4**	**-6.1**
626A	baz=19			S	**S**	**16 29 24.4**	**-6.1**
231A	baz=19 **Bronte**	**19.14**	**336**	⇓P	**P**	**16 26 01.3**	**+0.5**
231A	baz=19,SNR=584			S	**S**	**16 29 26.6**	**-5.3**
231A	baz=19			S	**S**	**16 29 26.6**	**-5.3**
428A	baz=19 **Kincaid Ranch,**	**19.19**	**329**	⇓P	**Pn**	**16 26 02.7**	**-0.8**
428A	baz=19,SNR=161			S	**S**	**16 29 32.3**	**-0.7**
428A	baz=19			S	**S**	**16 29 32.3**	**-0.7**
527A	baz=19 **Woodward Ranch**	**19.22**	**326**	⇑P	**Pn**	**16 26 03.3**	**-0.7**
527A	baz=19,SNR=320			S	**S**	**16 29 33.4**	**-0.3**
527A	baz=19			S	**S**	**16 29 33.4**	**-0.3**
526A	baz=19 **Mary Lane Ranc**	**19.42**	**324**	⇑P	**Pn**	**16 26 05.5**	**-0.8**
526A	baz=20,SNR=277			S	**S**	**16 29 38.3**	**+0.7**
526A	baz=20			S	**S**	**16 29 38.3**	**+0.7**
230A	baz=20 **Sterling City**	**19.43**	**334**	⇑P	**P**	**16 26 04.2**	**+0.2**
230A	baz=20,SNR=362			S	**S**	**16 29 36.3**	**-1.3**
230A	baz=20			S	**S**	**16 29 36.3**	**-1.3**
329A	baz=20 **Wagon Wheel Ra**	**19.48**	**331**	⇓P	**P**	**16 26 05.2**	**+0.7**
329A	baz=20,SNR=324			S	**S**	**16 29 37.6**	**-0.9**
329A	baz=20			S	**S**	**16 29 37.6**	**-0.9**
ABTX	baz=20 **Abilene, Hawle**	**19.50**	**338**	⇓P	**P**	**16 26 05.2**	**+0.5**
ABTX	baz=20,SNR=429			S	**S**	**16 29 34.1**	**-4.9**
ABTX	baz=20			S	**S**	**16 29 34.1**	**-4.9**
SDDR	baz=20 **Presa de Saban**	**19.55**	**74**	*e*Pn	**Pn**	**16 26 08.4**	**+0.6**
427A	comp=Z,596nm,1.0s **Hayter Ranch,**	**19.66**	**327**	⇑P	**P**	**16 26 07.2**	**+0.7**
427A	baz=20,SNR=125			S	**S**	**16 29 42.0**	**-0.2**
427A	baz=20			S	**S**	**16 29 42.0**	**-0.2**
328A	baz=20 **Wristen Ranch,**	**19.79**	**329**	⇑P	**P**	**16 26 08.8**	**+0.9**
328A	baz=20,SNR=857			S	**S**	**16 29 43.4**	**-1.2**
328A	baz=20			S	**S**	**16 29 43.4**	**-1.2**
229A	baz=20 **Bryant Ranch,**	**19.80**	**332**	⇑P	**P**	**16 26 08.4**	**+0.3**
229A	baz=20,SNR=160			S	**S**	**16 29 43.4**	**-1.6**
229A	baz=20			S	**S**	**16 29 43.4**	**-1.6**
131A	baz=20 **Roby**	**19.82**	**337**	⇑P	**P**	**16 26 08.4**	**+0.1**
131A	baz=20,SNR=133			S	**S**	**16 29 41.8**	**-3.7**
131A	baz=20			S	**S**	**16 29 41.8**	**-3.7**
426A	baz=20 **McDonald Obser**	**19.85**	**326**	⇓P	**P**	**16 26 09.9**	**+1.1**
426A	baz=20,SNR=363			S	**S**	**16 29 43.0**	**-3.3**
426A	baz=20			S	**S**	**16 29 43.0**	**-3.3**
OXF	baz=20 **Oxford**	**19.87**	**4**	*eP*	**P**	**16 26 09.7**	**+1.0**
OXF	comp=Z,2μm,1.3s			pmax	pmax		
OXF	**Oxford**	**19.87**	**4**	*eP*	**P**	**16 26 09.7**	**+1.0**
GOGA	comp=Z,2μm,1.3s **Godfrey**	**19.98**	**19**	*eP*	**Pn**	**16 26 12.6**	**-0.1**
GOGA	comp=Z,1μm,1.0s			pmax	pmax		
GOGA	**Godfrey**	**19.98**	**19**	*e*Pn	**Pn**	**16 26 12.6**	**-0.1**
130A	comp=Z,1μm,1.0s **Snyder**	**19.98**	**335**	⇓P	**P**	**16 26 09.9**	**0.0**
130A	baz=20,SNR=121			S	**S**	**16 29 44.6**	**-4.0**
130A	baz=20			S	**S**	**16 29 44.6**	**-4.0**
Z32A	baz=20 **Haskell**	**20.07**	**339**	⇓P	**P**	**16 26 10.9**	**+0.1**
Z32A	baz=20,SNR=738			S	**S**	**16 29 48.3**	**-1.9**
Z32A	baz=20			S	**S**	**16 29 48.3**	**-1.9**
327A	baz=20 **Balmorhea Ranc**	**20.12**	**328**	⇑P	**P**	**16 26 12.6**	**+1.2**
327A	baz=20,SNR=28			S	**S**	**16 29 50.1**	**-1.2**
327A	baz=20			S	**S**	**16 29 50.1**	**-1.2**
GRTK	baz=20 **Grand Turk**	**20.26**	**67**	*eP*	Pn	16 26 16.8	+0.7
228A	comp=Z,2μm,1.0s **UT Block 9, Go**	**20.29**	**331**	⇓P	**P**	**16 26 13.3**	**0.0**
228A	baz=20,SNR=141			S	**S**	**16 29 51.1**	**-3.5**
228A	baz=20			S	**S**	**16 29 51.1**	**-3.5**
Z31A	baz=20 **Sharp Cattle R**	**20.31**	**338**	⇓P	**P**	**16 26 13.4**	**0.0**
Z31A	baz=20,SNR=602			S	**S**	**16 29 51.4**	**-3.5**
Z31A	baz=20			S	**S**	**16 29 51.4**	**-3.5**
LPIG	baz=20 **La Paz**	**20.32**	**301**	P	Pn	16 26 15.8	-0.9
LPIG				S	**S**	**16 30 00.8**	**+5.5**
LPIG				PcP	**PcP**	**16 30 24.1**	**+1.7**
LPIG				ScP	**ScP**	**16 33 51.1**	**+2.5**
LPIG	**La Paz**	**20.32**	**301**	P	Pn	16 26 15.8	-0.9
LPIG	comp=Z,23nm,1.1s,baz=327,slow=3.9,SNR=44			S	Sn	16 30 00.8	-5.4
LPIG	comp=Z,2.7nm,0.3s,baz=194,slow=9.5,SNR=3.2			PcP	**PcP**	**16 30 24.1**	**+1.7**
LPIG	comp=Z,1.2nm,0.5s,baz=217,slow=1.8,SNR=3.9			ScP	**ScP**	**16 33 51.1**	**+2.5**
LPIG	comp=Z,3.0nm,0.3s,baz=240,slow=0.4,SNR=9.7			LR	LR	16 34 28.3	
326A	comp=Z,588nm,18.2s,baz=116,slow=37 **Caldwell Ranch**	**20.33**	**327**	⇑P	**P**	**16 26 14.7**	**+1.0**
326A	baz=20,SNR=222			S	**S**	**16 29 54.5**	**-1.0**
326A	baz=20			S	**S**	**16 29 54.5**	**-1.0**
129A	baz=20 **Stewart Farms,**	**20.39**	**333**	⇓P	**P**	**16 26 14.4**	**0.0**
129A	baz=20,SNR=158			S	**S**	**16 29 55.1**	**-1.6**
129A	baz=20			S	**S**	**16 29 55.1**	**-1.6**
MET	baz=20 **Memphis--Engin**	**20.45**	**3**	*eP*	Pn	16 26 18.7	+0.7
PLAL	comp=Z,1μm,1.2s **Pickwick Lake**	**20.47**	**7**	*eP*	**P**	**16 26 15.8**	**+0.7**
425A	comp=Z,274nm,0.9s **Indio Mountain**	**20.47**	**324**	⇑P	**P**	**16 26 16.1**	**+0.8**
425A	baz=21,SNR=769			S	**S**	**16 29 56.0**	**-2.4**
425A	baz=21			S	**S**	**16 29 56.0**	**-2.4**
227A	baz=21 **Bennet, Jal**	**20.54**	**330**	⇓P	**P**	**16 26 16.5**	**+0.6**
227A	baz=21,SNR=60			S	**S**	**16 29 57.6**	**-1.9**
227A	baz=21			S	**S**	**16 29 57.6**	**-1.9**
Z30A	baz=21 **Sanderson Ranc**	**20.66**	**336**	⇑P	**P**	**16 26 16.4**	**-0.8**
Z30A	baz=21,SNR=275			S	**S**	**16 29 58.7**	**-3.1**
Z30A	baz=21			S	**S**	**16 29 58.7**	**-3.1**
128A	baz=21 **Castleberry Fa**	**20.66**	**332**	⇓P	**P**	**16 26 17.1**	**-0.1**
128A	baz=21,SNR=322			S	**S**	**16 29 59.8**	**-2.1**
128A	baz=21			S	**S**	**16 29 59.8**	**-2.1**
Y32A	baz=21 **R-V Farms, Ver**	**20.69**	**340**	⇓P	**P**	**16 26 16.9**	**-0.6**
Y32A	baz=21,SNR=313			S	**S**	**16 29 59.4**	**-3.0**
Y32A	baz=21			S	**S**	**16 29 59.4**	**-3.0**
HBAR	baz=21 **Harrisburg**	**20.85**	**1**	*eP*	**P**	**16 26 20.6**	**+1.4**
Z29A	**Hungry Hill Ra**	**20.87**	**335**	⇓P	**P**	**16 26 18.7**	**-0.8**
Z29A	baz=21,SNR=448			S	**S**	**16 30 02.9**	**-3.0**
Z29A	baz=21			S	**S**	**16 30 02.9**	**-3.0**
325A	baz=21 **Bean Ranch, Si**	**20.91**	**325**	⇑P	**P**	**16 26 20.0**	**0.0**
325A	baz=21,SNR=475			S	**S**	**16 30 05.4**	**-1.5**
325A	baz=21			S	**S**	**16 30 05.4**	**-1.5**
SDV	baz=21 **Santo Domingo**	**20.92**	**104**	*eP*	**P**	**16 26 19.4**	**-0.9**
Y31A	comp=Z,72nm,0.6s **Rekieta Farm,**	**20.93**	**339**	⇓P	**P**	**16 26 19.8**	**-0.3**
Y31A	baz=21,SNR=565			S	**S**	**16 30 04.5**	**-2.6**
Y31A	baz=21			S	**S**	**16 30 04.5**	**-2.6**
NHSC	baz=21 **New Hope**	**20.96**	**27**	*eP*	Pn	16 26 24.0	0.0
226B	comp=Z,2μm,1.1s **Tecolote Peak,**	**21.03**	**328**	⇓P	**P**	**16 26 21.7**	**+0.5**
226B	baz=21,SNR=450			S	**S**	**16 30 07.3**	**-1.8**
226B	baz=21			S	**S**	**16 30 07.3**	**-1.8**
CLNB	baz=21 **Carlsbad**	**21.03**	**329**	*eP*	**P**	**16 26 21.8**	**+0.5**
SWET	**Sewanee**	**21.05**	**12**	*eP*	**P**	**16 26 23.1**	**+1.8**
Y30A	comp=Z,530nm,0.9s **Stafford Cattl**	**21.09**	**337**	⇓P	**P**	**16 26 21.4**	**-0.4**
Y30A	baz=21,SNR=104			S	**S**	**16 30 07.3**	**-3.0**
Y30A	baz=21			S	**S**	**16 30 07.3**	**-3.0**
127A	baz=21 **Arkansas Junct**	**21.11**	**330**	⇓P	**P**	**16 26 21.4**	**-0.7**
127A	baz=21,SNR=220			S	**S**	**16 30 06.6**	**-4.2**
127A	baz=21			S	**S**	**16 30 06.6**	**-4.2**
WMOK	baz=21 **Wichita Mounta**	**21.17**	**342**	*eP*	**P**	**16 26 21.0**	**-1.6**
WMOK	comp=Z,341nm,0.9s			pmax	pmax		
WMOK	**Wichita Mounta**	**21.17**	**342**	*eP*	**P**	**16 26 20.9**	**-1.6**
Z28A	comp=Z,341nm,0.9s **Tucker Farm, M**	**21.18**	**333**	⇓P	**P**	**16 26 22.1**	**-0.7**
Z28A	baz=21,SNR=213			S	**S**	**16 30 08.5**	**-3.6**
Z28A	baz=21			S	**S**	**16 30 08.5**	**-3.6**
GDL2	baz=21 **Guadalupe Moun**	**21.23**	**328**	*eP*	**P**	**16 26 23.7**	**+0.3**

324A	**Moseley Ranch,**	**21.25**	**324**	⇓P		**P**	**16 26 23.4**	**-0.2**
	baz=21,SNR=708							
324A				S		**S**	**16 30 12.4**	**-1.1**
	baz=21							
324A				S		**S**	**16 30 12.4**	**-1.1**
	baz=21							
HALT	**Halls**	**21.27**	**4**	*e*P		**P**	**16 26 23.9**	**+0.3**
GNAR	**Gosnell**	**21.28**	**3**	*e*P		**P**	**16 26 24.5**	**+0.7**
	comp=Z,8µm,1.3s							
Y29A	**Porterfield Fa**	**21.37**	**335**	⇓P		**P**	**16 26 24.3**	**-0.7**
	baz=22,SNR=213							
Y29A				S		**S**	**16 30 15.8**	**+0.1**
	baz=22							
Y29A				S		**S**	**16 30 15.8**	**+0.1**
	baz=22							
225A	**Deer Hill, Car**	**21.40**	**327**	⇓P		**P**	**16 26 25.3**	**0.0**
	baz=22,SNR=441							
225A				S		**S**	**16 30 15.9**	**-0.5**
	baz=22							
225A				S		**S**	**16 30 15.9**	**-0.5**
	baz=22							
126A	**Clayton Basin,**	**21.41**	**329**	⇑P		**P**	**16 26 24.7**	**-0.6**
	baz=22,SNR=143							
126A				S		**S**	**16 30 13.1**	**-3.4**
	baz=22							
126A				S		**S**	**16 30 13.1**	**-3.4**
	baz=22							
X31A	**McDonald Ranch**	**21.44**	**340**	⇑P		**P**	**16 26 24.8**	**-0.8**
	baz=22,SNR=169							
X31A				S		**S**	**16 30 14.7**	**-2.2**
	baz=22							
X31A				S		**S**	**16 30 14.7**	**-2.2**
	baz=22							
Z27A	**Tatum**	**21.57**	**332**	⇓P		**P**	**16 26 25.8**	**-1.3**
	baz=22,SNR=376							
Z27A				S		**S**	**16 30 16.2**	**-3.3**
	baz=22							
Z27A				S		**S**	**16 30 16.2**	**-3.3**
	baz=22							
X30A	**Coker Ranch, T**	**21.59**	**338**	⇑P		**P**	**16 26 26.5**	**-0.6**
	baz=22,SNR=178							
X30A				S		**S**	**16 30 16.5**	**-3.2**
	baz=22							
X30A				S		**S**	**16 30 16.5**	**-3.2**
	baz=22							
CPCT	**Cooper Cave**	**21.59**	**15**	*e*P		**P**	**16 26 29.1**	**+1.9**
TUL1	**Tulsa**	**21.60**	**350**	⇑P		**P**	**16 26 26.2**	**-1.0**
	baz=22,SNR=59							
TUL1				S		**S**	**16 30 16.7**	**-3.1**
	baz=22							
TUL1				S		**S**	**16 30 16.7**	**-3.1**
	baz=22							
GLAT	**Glass**	**21.63**	**4**	*e*P		**P**	**16 26 28.5**	**+1.0**
WVT	**Waverly**	**21.63**	**7**	*e*P		**P**	**16 26 27.7**	**+0.1**
WVT				pmax		pmax		
	comp=Z,231nm,0.9s							
WVT	**Waverly**	**21.63**	**7**	*e*P		**P**	**16 26 27.7**	**+0.1**
	comp=Z,231nm,0.9s							
CPRX	**Cap Rock**	**21.65**	**330**	*e*P		**P**	**16 26 28.2**	**+0.3**
Y28A	**McKinney Farm,**	**21.65**	**334**	⇑P		**P**	**16 26 27.0**	**-0.9**
	baz=22,SNR=502							
Y28A				S		**S**	**16 30 17.7**	**-3.3**
	baz=22							
Y28A				S		**S**	**16 30 17.7**	**-3.3**
	baz=22							
UTMT	**University of**	**21.73**	**5**	*e*P		**P**	**16 26 28.7**	**+0.1**
	comp=Z,681nm,0.7s							
125A	**Gardner Draw,**	**21.74**	**328**	⇑P		**P**	**16 26 28.4**	**-0.5**
	baz=22,SNR=169							
125A				S		**S**	**16 30 20.7**	**-2.0**
	baz=22							
125A				S		**S**	**16 30 20.7**	**-2.0**
	baz=22							
PVMO	**Portageville**	**21.75**	**3**	P		**P**	**16 26 29.4**	**+0.7**
	comp=Z,1µm,1.1s							
224A	**Cornudas Mount**	**21.75**	**325**	⇑P		**P**	**16 26 28.6**	**-0.5**
	baz=22,SNR=453							
224A				S		**S**	**16 30 22.1**	**-0.8**
	baz=22							
224A				S		**S**	**16 30 22.1**	**-0.8**
	baz=22							
Z26A	**Caprock**	**21.90**	**330**	⇓P		**P**	**16 26 29.5**	**-1.0**
	baz=22,SNR=284							
Z26A				S		**S**	**16 30 22.7**	**-2.8**
	baz=22							
Z26A				S		**S**	**16 30 22.7**	**-2.8**
	baz=22							
X29A	**Tulia**	**21.90**	**336**	⇓P		**P**	**16 26 29.6**	**-0.9**
	baz=22,SNR=257							
X29A				S		**S**	**16 30 23.4**	**-2.1**
	baz=22							
X29A				S		**S**	**16 30 23.4**	**-2.1**
	baz=22							
MSTX	**Muleshoe**	**21.93**	**333**	⇑P		**P**	**16 26 29.6**	**-1.3**
	baz=22,SNR=258							
MSTX				S		**S**	**16 30 23.1**	**-2.9**
	baz=22							
MSTX				S		**S**	**16 30 23.1**	**-2.9**
	baz=22							
W31A	**Holland Ranch,**	**21.94**	**341**	⇑P		**P**	**16 26 29.9**	**-1.0**
	baz=22,SNR=51							
W31A				S		**S**	**16 30 23.8**	**-2.2**
	baz=22							
W31A				S		**S**	**16 30 23.8**	**-2.2**
	baz=22							
TKL	**Tuckaleechee C**	**21.99**	**16**	*e*P		**P**	**16 26 33.4**	**+2.1**
TKL				S		**S**	**16 30 29.5**	**+2.7**
TKL	**Tuckaleechee C**	**21.99**	**16**	P		**P**	**16 26 33.4**	**+2.1**
	comp=Z,631nm,0.8s,baz=187,slow=11,SNR=550							
TKL				S		**S**	**16 30 29.5**	**+2.7**
	comp=Z,60nm,0.9s,baz=344,slow=18,SNR=3.7							
TKL				LR		LR	16 36 36.6	
	comp=Z,15µm,21.8s,baz=201,slow=41							
PARMO	**Parma**	**21.99**	**3**	*e*P		**P**	**16 26 32.1**	**+0.8**
Y27A	**Causey**	**22.03**	**333**	⇑P		**P**	**16 26 30.6**	**-1.3**
	baz=22,SNR=368							
Y27A				S		**S**	**16 30 27.2**	**-0.6**
	baz=22							
Y27A				S		**S**	**16 30 27.2**	**-0.6**
	baz=22							
W30A	**Crocket Farms**	**22.14**	**339**	⇑P		**P**	**16 26 32.7**	**-0.3**
	baz=22,SNR=30							
W30A				S		**S**	**16 30 28.2**	**-1.4**
	baz=22							
W30A				S		**S**	**16 30 28.2**	**-1.4**
	baz=22							
X28A	**Dimmitt**	**22.16**	**335**	⇑P		**P**	**16 26 32.0**	**-1.3**
	baz=22,SNR=62							
X28A				S		**S**	**16 30 28.0**	**-1.9**
	baz=22							
X28A				S		**S**	**16 30 28.0**	**-1.9**
	baz=22							
124A	**Stringfield Ra**	**22.19**	**327**	⇑P		**P**	**16 26 33.8**	**+0.1**
	baz=22,SNR=876							
124A				S		**S**	**16 30 30.1**	**-0.6**
	baz=22							
124A				S		**S**	**16 30 30.1**	**-0.6**
	baz=22							
223A	**Chaparral, Ant**	**22.20**	**324**	⇑P		**P**	**16 26 33.3**	**-0.4**
	baz=22							
223A				S		**S**	**16 30 30.0**	**-0.8**
	baz=22							
223A				S		**S**	**16 30 30.0**	**-0.8**
	baz=22							
Z25A	**Roswell**	**22.27**	**329**	⇑P		**P**	**16 26 33.7**	**-0.7**
	baz=22,SNR=134							
Z25A				S		**S**	**16 30 30.2**	**-1.6**
	baz=22							
Z25A				S		**S**	**16 30 30.2**	**-1.6**
	baz=22							
AMTX	**Amarillo**	**22.28**	**337**	*e*P		**P**	**16 26 33.5**	**-0.9**
	comp=Z,487nm,0.9s							
AMTX	**Amarillo**	**22.28**	**337**	⇓P		**P**	**16 26 33.5**	**-0.9**
	baz=22,SNR=219							
AMTX				S		**S**	**16 30 30.7**	**-1.2**
	baz=22							
AMTX				S		**S**	**16 30 30.7**	**-1.2**
	baz=22							
AMTX				S		**S**	**16 30 30.7**	**-1.2**
	baz=22							
AMTX				S		**S**	**16 30 30.7**	**-1.2**
	baz=22							
KMSC	**Kings Mountain**	**22.28**	**22**	⇓P		**P**	**16 26 36.1**	**+1.7**
	baz=22							
KMSC				S		**S**	**16 30 30.5**	**-1.2**
	baz=22							
KMSC				S		**S**	**16 30 30.5**	**-1.2**
	baz=22							
Y26A	**Elida**	**22.36**	**331**	⇓P		**P**	**16 26 34.2**	**-1.2**
	baz=22,SNR=142							
Y26A				S		**S**	**16 30 31.5**	**-1.9**
	baz=22							
Y26A				S		**S**	**16 30 31.5**	**-1.9**
	baz=22							
V31A	**Spring Creek L**	**22.45**	**341**	⇑P		**P**	**16 26 34.9**	**-1.2**
	baz=23,SNR=99							
V31A				S		**S**	**16 30 33.3**	**-1.2**
	baz=23							
V31A				S		**S**	**16 30 33.3**	**-1.2**
	baz=23							
W29A	**Amarillo**	**22.48**	**337**	⇑P		**P**	**16 26 35.5**	**-1.0**
	baz=23,SNR=155							
W29A				S		**S**	**16 30 33.8**	**-1.3**
	baz=23							
W29A				S		**S**	**16 30 33.8**	**-1.3**
	baz=23							
123A	**Bell Site, Whi**	**22.58**	**325**	⇓P		**P**	**16 26 37.6**	**+0.1**
	baz=23,SNR=23							
123A				S		**S**	**16 30 40.4**	**+3.6**
	baz=23							
123A				S		**S**	**16 30 40.4**	**+3.6**
	baz=23							
Z24A	**Sheeppen Canyo**	**22.63**	**328**	⇑P		**P**	**16 26 38.3**	**+0.1**
	baz=23,SNR=262							
Z24A				S		**S**	**16 30 40.4**	**+2.5**
	baz=23							
Z24A				S		**S**	**16 30 40.4**	**+2.5**
	baz=23							
X27A	**F and S Farms,**	**22.64**	**334**	⇑P		**P**	**16 26 37.0**	**-1.2**
	baz=23,SNR=105							
X27A				S		**S**	**16 30 38.9**	**+1.1**
	baz=23							
X27A				S		**S**	**16 30 38.9**	**+1.1**
	baz=23							
222A	**Williams Famil**	**22.66**	**323**	⇑P		**P**	**16 26 38.4**	**0.0**
	baz=23,SNR=10							
222A				S		**S**	**16 30 40.3**	**+2.1**
	baz=23							
222A				S		**S**	**16 30 40.3**	**+2.1**
	baz=23							
V30A	**Spur Ranch, Mi**	**22.71**	**340**	⇑P		**P**	**16 26 37.8**	**-0.9**
	baz=23,SNR=20							
V30A				S		**S**	**16 30 41.0**	**+2.2**
	baz=23							
V30A				S		**S**	**16 30 41.0**	**+2.2**
	baz=23							
Y25A	**Mesa, Roswell**	**22.77**	**330**	⇓P		**P**	**16 26 39.4**	**-0.1**
	baz=23							
Y25A				S		**S**	**16 30 39.7**	**-0.2**
	baz=23							
Y25A				S		**S**	**16 30 39.7**	**-0.2**
	baz=23							
W28A	**Vega**	**22.81**	**336**	⇓P		**P**	**16 26 38.9**	**-0.9**
	baz=23,SNR=149							
W28A				S		**S**	**16 30 40.2**	**-0.2**
	baz=23							
W28A				S		**S**	**16 30 40.2**	**-0.2**
	baz=23							
X26A	**CR and CF Fran**	**22.88**	**332**	⇑P		**P**	**16 26 39.4**	**-1.1**
	baz=23,SNR=170							
X26A				S		**S**	**16 30 42.7**	**+1.1**
	baz=23							
X26A				S		**S**	**16 30 42.7**	**+1.1**
	baz=23							
TZTN	**Tazewell**	**22.88**	**16**	*e*P		**P**	**16 26 41.4**	**+1.1**
	comp=Z,873nm,0.8s							
W27A	**Bowe Ranch, En**	**22.99**	**334**	⇓P		**P**	**16 26 40.4**	**-1.1**
	baz=23,SNR=277							
W27A				S		**S**	**16 30 42.9**	**-0.4**
	baz=23							
W27A				S		**S**	**16 30 42.9**	**-0.4**
	baz=23							
320A	**Kipp Ranch, An**	**23.00**	**319**	⇑P		**P**	**16 26 42.7**	**+1.0**
	baz=23,SNR=251							
221A	**Mesquite Ranch**	**23.00**	**322**	⇓P		**P**	**16 26 42.2**	**+0.6**
	baz=23,SNR=203							
221A				S		**S**	**16 30 44.4**	**+0.9**
	baz=23							
221A				S		**S**	**16 30 44.4**	**+0.9**
	baz=23							
U31A	**Nine Bar Ranch**	**23.00**	**342**	⇑P		**P**	**16 26 40.5**	**-1.1**
	baz=23,SNR=11							
U31A				S		**S**	**16 30 46.7**	**+3.4**
	baz=23							
U31A				S		**S**	**16 30 46.7**	**+3.4**
	baz=23							
Z23A	**Rita Site, Whi**	**23.04**	**326**	⇓P		**P**	**16 26 42.4**	**+0.3**
	baz=23,SNR=250							
Z23A				S		**S**	**16 30 46.0**	**+1.9**
	baz=23							
Z23A				S		**S**	**16 30 46.0**	**+1.9**
	baz=23							
122A	**Conniff Cattle**	**23.04**	**324**	⇓P		**P**	**16 26 42.6**	**+0.5**
	baz=23,SNR=39							
122A				S		**S**	**16 30 45.7**	**+1.5**
	baz=23							
122A				S		**S**	**16 30 45.7**	**+1.5**
	baz=23							
SIUC	**Southern Illin**	**23.07**	**4**	*e*P		**P**	**16 26 42.5**	**+0.4**
	comp=Z,1µm,0.7s							
V29A	**Stinnett**	**23.10**	**338**	⇓P		**P**	**16 26 41.5**	**-1.0**
	baz=23,SNR=23							
V29A				S		**S**	**16 30 47.0**	**+2.1**
	baz=23							
V29A				S		**S**	**16 30 47.0**	**+2.1**
	baz=23							
Y24A	**Capitan**	**23.14**	**329**	⇓P		**P**	**16 26 43.0**	**0.0**
	baz=23,SNR=224							
Y24A				S		**S**	**16 30 48.4**	**+2.5**
	baz=23							
Y24A				S		**S**	**16 30 48.4**	**+2.5**
	baz=23							
X25A	**Clemmons Ranch**	**23.25**	**331**	⇓P		**P**	**16 26 43.7**	**-0.3**
	baz=23,SNR=94							
X25A				S		**S**	**16 30 47.7**	**+0.2**
	baz=23							
X25A				S		**S**	**16 30 47.7**	**+0.2**
	baz=23							
V28A	**Channing**	**23.25**	**337**	⇓P		**P**	**16 26 43.3**	**-0.6**
	baz=23,SNR=40							
V28A				S		**S**	**16 30 48.7**	**+1.2**
	baz=23							
V28A				S		**S**	**16 30 48.7**	**+1.2**
	baz=23							
W26A	**Owens Ranch, T**	**23.31**	**333**	⇑P		**P**	**16 26 43.8**	**-0.7**
	baz=23,SNR=25							
W26A				S		**S**	**16 30 49.2**	**+0.7**
	baz=23							
W26A				S		**S**	**16 30 49.2**	**+0.7**
	baz=23							
MPR	**Mayaguez**	**23.35**	**78**	*e*P		**P**	**16 26 47.2**	**+2.3**
	comp=Z,175nm,1.2s							
CRPR	**Cabo Rojo, PR**	**23.36**	**78**	*e*P		**P**	**16 26 44.6**	**-0.4**
	comp=Z,387nm,1.0s							
121A	**Cookes Peak, D**	**23.37**	**323**	⇑P		**P**	**16 26 45.8**	**+0.6**
	baz=24,SNR=398							
121A				S		**S**	**16 30 52.3**	**+2.7**
	baz=24							
121A				S		**S**	**16 30 52.3**	**+2.7**
	baz=24							
220A	**Playas Peak, P**	**23.38**	**320**	⇑P		**P**	**16 26 45.9**	**+0.7**
	baz=24,SNR=850							
220A				S		**S**	**16 30 52.6**	**+3.0**
	baz=24							
220A				S		**S**	**16 30 52.6**	**+3.0**
	baz=24							
U30A	**WK&E Inc. Balk**	**23.40**	**341**	⇓P		**P**	**16 26 44.7**	**-0.6**
	baz=24,SNR=114							
U30A				S		**S**	**16 30 55.9**	**+6.2**
	baz=24							
U30A				S		**S**	**16 30 55.9**	**+6.2**
	baz=24							
LSP	**Las Mesas**	**23.40**	**78**	*e*P		**P**	**16 26 46.8**	**+1.4**
AGPR	**Aguadilla, PR**	**23.40**	**77**	*e*P		**P**	**16 26 44.9**	**-0.4**
	comp=Z,124nm,0.7s							
Z22A	**Elephant Butte**	**23.43**	**325**	⇑P		**P**	**16 26 46.0**	**+0.3**
	baz=24,SNR=255							
Z22A				S		**S**	**16 30 52.9**	**+2.4**
	baz=24							
Z22A				S		**S**	**16 30 52.9**	**+2.4**
	baz=24							
Y23A	**Lovelace Mesa,**	**23.46**	**328**	⇑P		**P**	**16 26 46.5**	**+0.5**
	baz=24,SNR=225							
Y23A				S		**S**	**16 30 54.3**	**+3.3**
	baz=24							
Y23A				S		**S**	**16 30 54.3**	**+3.3**
	baz=24							
USIN	**University of**	**23.46**	**7**	*e*P		**P**	**16 26 46.1**	**+0.4**
	comp=Z,699nm,0.8s							
V27A	**Dan Oppiter Fa**	**23.49**	**336**	⇑P		**P**	**16 26 45.8**	**-0.4**
	baz=24,SNR=104							
V27A				S		**S**	**16 30 51.7**	**+0.3**
	baz=24							
V27A				S		**S**	**16 30 51.7**	**+0.3**
	baz=24							
319A	**Douglas**	**23.50**	**318**	⇑P		**P**	**16 26 47.1**	**+0.8**
	baz=24,SNR=147							
319A				S		**S**	**16 30 51.5**	**-0.1**
	baz=24							
319A				S		**S**	**16 30 51.5**	**-0.1**
	baz=24							
U29A	**Oasis Ranch, S**	**23.53**	**339**	⇓P		**P**	**16 26 46.0**	**-0.5**
	baz=24,SNR=88							
U29A				S		**S**	**16 30 53.2**	**+1.3**
	baz=24							
U29A				S		**S**	**16 30 53.2**	**+1.3**
	baz=24							
T31A	**Randall Ranch,**	**23.63**	**343**	⇓P		**P**	**16 26 46.4**	**-0.9**
	baz=24,SNR=21							
T31A				S		**S**	**16 30 56.6**	**+3.3**
	baz=24							
T31A				S		**S**	**16 30 56.6**	**+3.3**
	baz=24							
LRS	**Lares**	**23.64**	**78**	*e*P		**P**	**16 26 49.3**	**+1.7**
LRS				*e*			16 27 17.6	
X24A	**Lazy VL Ranch,**	**23.65**	**330**	⇑P		**P**	**16 26 48.1**	**+0.4**
	baz=24							
X24A				S		**S**	**16 30 57.2**	**+3.1**
	baz=24							
X24A				S		**S**	**16 30 57.2**	**+3.1**
	baz=24							
W25A	**X Bar L Ranch,**	**23.73**	**332**	⇑P		**P**	**16 26 48.1**	**-0.3**
	baz=24,SNR=243							
W25A				S		**S**	**16 30 57.9**	**+2.7**
	baz=24							
W25A				S		**S**	**16 30 57.9**	**+2.7**
	baz=24							
AOPR	**Arecibo Observ**	**23.73**	**78**	*e*P		**P**	**16 26 47.8**	**-0.5**
	comp=Z,166nm,0.9s							
CNNC	**Cliffs of the**	**23.77**	**28**	*e*P		**P**	**16 26 50.1**	**+1.6**
	comp=Z,919nm,0.6s							
U28A	**Mallet**	**23.81**	**338**	⇑P		**P**	**16 26 48.2**	**-0.8**
	baz=24,SNR=31							
U28A				S		**S**	**16 30 59.3**	**+2.9**
	baz=24							
U28A				S		**S**	**16 30 59.3**	**+2.9**
	baz=24							
T30A	**Plains**	**23.84**	**341**	⇑P		**P**	**16 26 48.4**	**-0.8**
	baz=24,SNR=30							
T30A				S		**S**	**16 31 01.0**	**+4.2**
	baz=24							
T30A				S		**S**	**16 31 01.0**	**+4.2**
	baz=24							
OBIP	**Obispado Ponce**	**23.84**	**78**	*e*P		**P**	**16 26 48.6**	**-0.7**
	comp=Z,158nm,1.0s							
Z21A	**St. Cloud Mine**	**23.87**	**324**	⇑P		**P**	**16 26 51.2**	**+1.5**
	baz=24,SNR=41							
Z21A				S		**S**	**16 30 59.7**	**+1.9**
	baz=24							
Z21A				S		**S**	**16 30 59.7**	**+1.9**
	baz=24							
CELP	**Cerrillos**	**23.87**	**78**	*e*P		**P**	**16 26 48.9**	**-0.7**
120A	**U Bar Ranch, L**	**23.89**	**321**	⇑P		**P**	**16 26 51.3**	**+1.5**
	baz=24,SNR=192							
120A				S		**S**	**16 31 01.5**	**+3.5**
	baz=24							
120A				S		**S**	**16 31 01.5**	**+3.5**
	baz=24							
WCI	**Wyandotte Cave**	**23.91**	**10**	*e*P		**P**	**16 26 49.8**	**0.0**
WCI				pmax		pmax		
	comp=Z,639nm,0.9s							
WCI	**Wyandotte Cave**	**23.91**	**10**	*e*P		**P**	**16 26 49.8**	**0.0**
	comp=Z,640nm,0.9s							
V26A	**Tequesquite Ra**	**23.92**	**334**	⇑P		**P**	**16 26 49.7**	**-0.3**
	baz=24,SNR=108							
V26A				S		**S**	**16 31 01.1**	**+2.8**
	baz=24							
V26A				S		**S**	**16 31 01.1**	**+2.8**
	baz=24							
BNM	**Barren Site**	**23.93**	**327**	*e*P		**P**	**16 26 50.9**	**+0.6**
	comp=Z,302nm,1.3s							
SLM	**Saint Louis**	**23.94**	**2**	*e*P		**P**	**16 26 50.1**	**+0.1**
SLM				pmax		pmax		
	comp=Z,2µm,0.8s							
SLM	**Saint Louis**	**23.94**	**2**	*e*P		**P**	**16 26 50.1**	**+0.1**
	comp=Z,2µm,0.8s							
Y22A	**Socorro**	**23.95**	**326**	⇓P		**P**	**16 26 51.2**	**+0.9**
	baz=24,SNR=210							
Y22A				S		**S**	**16 31 02.1**	**+3.2**
	baz=24							
Y22A				S		**S**	**16 31 02.1**	**+3.2**
	baz=24							
Y22D	**IRIS PASSCAL I**	**24.03**	**326**	⇓P		**P**	**16 26 52.3**	**+1.3**
	baz=24,SNR=21							
Y22D				S		**S**	**16 31 03.7**	**+3.5**
	baz=24							
Y22D				S		**S**	**16 31 03.7**	**+3.5**
	baz=24							
X23A	**Hourglass Bar**	**24.04**	**328**	⇓P		**P**	**16 26 51.9**	**+0.7**
	baz=24							
X23A				S		**S**	**16 31 03.2**	**+2.8**
	baz=24							
X23A				S		**S**	**16 31 03.2**	**+2.8**
	baz=24							
LPM	**Los Pinos Moun**	**24.06**	**327**	*e*P		**P**	**16 26 52.1**	**+0.8**
S31A	**Mullinville**	**24.06**	**344**	⇓P		**P**	**16 26 50.3**	**-0.9**
	baz=24,SNR=14							
S31A				S		**S**	**16 31 03.9**	**+3.5**
	baz=24							
S31A				S		**S**	**16 31 03.9**	**+3.5**
	baz=24							
U27A	**Thompson Grove**	**24.07**	**337**	⇑P		**P**	**16 26 50.6**	**-0.7**
	baz=24,SNR=146							
U27A				S		**S**	**16 31 03.4**	**+2.6**
	baz=24							
U27A				S		**S**	**16 31 03.4**	**+2.6**
	baz=24							
LENM	**Lemitar**	**24.12**	**327**	*e*P		**P**	**16 26 53.0**	**+1.0**
W24A	**Lazy 6 Ranch,**	**24.16**	**331**	⇓P		**P**	**16 26 52.4**	**+0.1**
	baz=24,SNR=210							
W24A				S		**S**	**16 31 01.9**	**-0.5**
	baz=24							
W24A				S		**S**	**16 31 01.9**	**-0.5**
	baz=24							
OLIL	**Olney**	**24.18**	**6**	*e*P		**P**	**16 26 52.6**	**+0.5**
	comp=Z,914nm,0.7s							
T29A	**Hugoton**	**24.18**	**340**	⇑P		**P**	**16 26 51.6**	**-0.7**
	baz=24,SNR=76							
T29A				S		**S**	**16 31 06.3**	**+4.0**
	baz=24							
T29A				S		**S**	**16 31 06.3**	**+4.0**
	baz=24							
Z20A	**Nine Sixteen R**	**24.26**	**322**	⇓P		**P**	**16 26 54.8**	**+1.6**
	baz=24							
Z20A				S		**S**	**16 31 06.0**	**+2.0**
	baz=24							
Z20A				S		**S**	**16 31 06.0**	**+2.0**
	baz=24							
SJG	**San Juan**	**24.28**	**78**	*e*P		**P**	**16 26 51.5**	**-1.8**
	comp=Z,106nm,0.8s							
SJG				PcP		**PcP**	**16 30 30.6**	**0.0**
SJG				ScP		**ScP**	**16 33 59.5**	**+0.5**
SJG	**San Juan**	**24.28**	**78**	P		**P**	**16 26 52.2**	**-1.0**
	comp=Z,52nm,0.7s,baz=260,slow=5.8,SNR=18							
SJG				PcP		**PcP**	**16 30 30.6**	**0.0**
	comp=Z,22nm,0.6s,baz=301,slow=1.8,SNR=3.6							
SJG				ScP		**ScP**	**16 33 59.4**	**+0.5**
	comp=Z,64nm,1.0s,baz=48,slow=1.4,SNR=10							
V25A	**Rancho No Teng**	**24.31**	**333**	⇓P		**P**	**16 26 53.4**	**-0.2**
	baz=24,SNR=134							
V25A				S		**S**	**16 31 04.7**	**-0.1**
	baz=24							
V25A				S		**S**	**16 31 04.7**	**-0.1**
	baz=24							
S30A	**Montezuma**	**24.36**	**342**	⇑P		**P**	**16 26 53.2**	**-0.7**
	baz=24,SNR=48							
S30A				S		**S**	**16 31 10.5**	**+5.3**
	baz=24							
S30A				S		**S**	**16 31 10.5**	**+5.3**
	baz=24							
Y21A	**Point of Rocks**	**24.39**	**325**	⇓P		**P**	**16 26 55.9**	**+1.5**
	baz=24,SNR=162							
Y21A				S		**S**	**16 31 07.7**	**+1.7**
	baz=24							

Y21A				S	S	16 31 07.7	+1.7
	baz=24						
LAZ	Ladron	24.39	327	eP	P	16 26 55.7	+1.3
X22A	Bernardo	24.41	327	⇑P	P	16 26 55.8	+1.3
	baz=24,SNR=60						
X22A				S	S	16 31 09.9	+3.7
	baz=24						
X22A				S	S	16 31 09.9	+3.7
	baz=24						
U26A	Atchley Ranch,	24.41	335	⇓P	P	16 26 54.3	-0.2
	baz=24,SNR=220						
U26A				S	S	16 31 10.6	+4.3
	baz=24						
U26A				S	S	16 31 10.6	+4.3
	baz=24						
T28A	Walsh	24.43	339	⇑P	P	16 26 53.1	-1.5
	baz=25,SNR=50						
T28A				S	S	16 31 07.4	+1.1
	baz=25						
T28A				S	S	16 31 07.4	+1.1
	baz=25						
ANMO	Albuquerque	24.46	329	eP	P	16 26 55.3	+0.3
	comp=Z,402nm,2.1s						
ANMO				PcP	PcP	16 30 31.5	+0.5
ANMO				S	S	16 31 10.6	+3.4
ANMO				ScP	ScP	16 34 01.3	+1.9
ANMO	Albuquerque	24.46	329	P	P	16 26 56.0	+0.9
	comp=Z,16nm,0.5s,baz=148,slow=11,SNR=74						
ANMO				PcP	PcP	16 30 31.5	+0.5
	comp=Z,21nm,0.7s,baz=196,slow=5.9,SNR=4.6						
ANMO				S	S	16 31 10.6	+3.4
	comp=Z,5.3nm,0.8s,baz=191,slow=20,SNR=1.9						
ANMO				ScP	ScP	16 34 01.3	+1.9
	comp=Z,84nm,1.0s,baz=158,slow=6.1,SNR=12						
BLA	Blacksburg	24.46	21	eP	P	16 26 56.3	+1.5
BLA				pmax	pmax		
	comp=Z,397nm,1.0s						
BLA	Blacksburg	24.46	21	eP	P	16 26 56.2	+1.5
	comp=Z,397nm,1.0s						
W23A	Werner Place,	24.48	329	⇓P	P	16 26 55.9	+0.7
	baz=25,SNR=23						
W23A				S	S	16 31 10.3	+2.8
	baz=25						
W23A				S	S	16 31 10.3	+2.8
	baz=25						
CPD	Cerro la Pandu	24.50	79	eP	P	16 26 54.0	-1.3
CPD				pmax	pmax		
	comp=Z,74nm,0.8s						
CPD	Cerro la Pandu	24.50	79	eP	P	16 26 54.0	-1.3
	comp=Z,74nm,0.8s						
V24A	Rampart Ranch,	24.52	332	⇑P	P	16 26 55.5	0.0
	baz=25,SNR=70						
V24A				S	S	16 31 10.1	+2.0
	baz=25						
V24A				S	S	16 31 10.1	+2.0
	baz=25						
S29A	Ulysses	24.54	341	⇑P	P	16 26 54.7	-0.9
	baz=25,SNR=100						
S29A				S	S	16 31 11.0	+2.9
	baz=25						
S29A				S	S	16 31 11.0	+2.9
	baz=25						
HUMP	Col San Antoni	24.57	78	eP	P	16 26 55.0	-0.9
	comp=Z,120nm,0.9s						
CBYP	Canovanas	24.57	78	eP	P	16 26 54.2	-1.8
	comp=Z,1µm,2.4s						
T27A	Campo	24.59	337	⇑P	P	16 26 54.9	-1.3
	baz=25,SNR=42						
T27A				S	S	16 31 12.0	+2.9
	baz=25						
T27A				S	S	16 31 12.0	+2.9
	baz=25						
VWCC	Virginia Weste	24.65	22	eP	P	16 26 58.0	+1.5
U25A	Circle Dot Ran	24.70	334	⇓P	P	16 26 57.2	+0.1
	baz=25,SNR=196						
U25A				S	S	16 31 13.2	+2.3
	baz=25						
U25A				S	S	16 31 13.2	+2.3
	baz=25						
Y20A	Horse Springs,	24.71	324	⇑P	P	16 26 58.6	+1.3
	baz=25,SNR=423						
Y20A				S	S	16 31 14.0	+2.8
	baz=25						
Y20A				S	S	16 31 14.0	+2.8
	baz=25						
W22A	Albuquerque	24.77	328	⇑P	P	16 26 59.2	+1.4
	baz=25,SNR=18						
W22A				S	S	16 31 13.5	+1.4
	baz=25						
W22A				S	S	16 31 13.5	+1.4
	baz=25						
S28A	Manter	24.77	339	⇑P	P	16 26 56.7	-1.0
	baz=25,SNR=67						
S28A				S	S	16 31 16.2	+4.3
	baz=25						
S28A				S	S	16 31 16.2	+4.3
	baz=25						
X21A	Alamocita Cree	24.77	326	⇓P	P	16 26 59.2	+1.3
	baz=25,SNR=409						
X21A				S	S	16 31 14.3	+2.1
	baz=25						
X21A				S	S	16 31 14.3	+2.1
	baz=25						
BLO	Bloomington	24.80	9	eP	P	16 26 58.0	+0.2
BLO				pmax	pmax		
	comp=Z,782nm,1.5s						
BLO	Bloomington	24.80	9	eP	P	16 26 58.0	+0.2
	comp=Z,782nm,1.5s						
MTP	Monte Pirata	24.84	78	eP	P	16 26 57.4	-1.0
	comp=Z,198nm,0.8s						
KSU1	Kansas State U	24.85	350	eP	P	16 26 56.6	-1.6
	comp=Z,2µm,2.2s						
R30A	Dighton	24.90	343	⇓P	P	16 26 58.1	-0.7
	baz=25,SNR=59						
R30A				S	S	16 31 17.1	+3.3
	baz=25						
R30A				S	S	16 31 17.1	+3.3
	baz=25						
V23A	Ortiz Mt. (NFS	24.96	330	⇑P	P	16 27 00.4	+0.8
	baz=25,SNR=60						
V23A				S	S	16 31 13.6	-1.5
	baz=25						
V23A				S	S	16 31 13.6	-1.5
	baz=25						
T26A	Comanche Natio	25.03	336	⇓P	P	16 26 59.8	-0.4
	baz=25,SNR=55						
T26A				S	S	16 31 17.0	+1.0
	baz=25						
T26A				S	S	16 31 17.0	+1.0
	baz=25						
ATAH	Atahualpa	25.07	149	P	P	16 27 02.3	+1.3
ATAH				PcP	PcP	16 30 34.3	+1.4
ATAH				S	S	16 31 20.9	+3.4
ATAH				ScP	ScP	16 34 03.7	+2.1
ATAH				PKiKP	PKiKP	16 38 14.2	0.0
ATAH	Atahualpa	25.07	149	P	P	16 27 02.3	+1.3
	comp=Z,150nm,0.8s,baz=341,slow=5.9,SNR=66						
ATAH				PcP	PcP	16 30 34.3	+1.4
	comp=Z,19nm,0.5s,baz=222,slow=1.3,SNR=7.8						
ATAH				S	S	16 31 20.9	+3.4
	comp=Z,9.5nm,0.7s,baz=226,slow=5.1,SNR=2.2						
ATAH				ScP	ScP	16 34 03.7	+2.1
	comp=Z,14nm,0.9s,baz=150,slow=8.1,SNR=6.7						
ATAH				LR	LR	16 35 14.5	
	comp=Z,6µm,20.4s,baz=160,slow=32						
ATAH				PKiKP	PKiKP	16 38 14.2	0.0
	comp=Z,4.8nm,0.7s,baz=218,slow=14,SNR=4.5						
TUC	Tucson	25.08	318	eP	P	16 27 01.5	+0.9
TUC				pmax	pmax		
	comp=Z,38nm,1.0s						
TUC	Tucson	25.08	318	eP	P	16 27 01.5	+0.9
	comp=Z,38nm,1.0s						
U24A	Moreno Valley	25.08	332	⇑P	P	16 27 01.6	+0.8
	baz=25						
U24A				S	S	16 31 21.1	+3.9
	baz=25						
U24A				S	S	16 31 21.1	+3.9
	baz=25						
W21A	San Fidel	25.21	327	⇓P	P	16 27 03.0	+1.2
	baz=25,SNR=52						
W21A				S	S	16 31 22.7	+3.7
	baz=25						
W21A				S	S	16 31 22.7	+3.7
	baz=25						
S27A	Las Animas	25.21	338	⇓P	P	16 27 01.0	-0.8
	baz=25,SNR=9.3						
S27A				S	S	16 31 19.8	+1.0
	baz=25						
S27A				S	S	16 31 19.8	+1.0
	baz=25						
X20A	Quemado	25.24	325	⇓P	P	16 27 03.5	+1.4
	baz=25,SNR=248						
X20A				S	S	16 31 19.6	0.0
	baz=25						
X20A				S	S	16 31 19.6	0.0
	baz=25						
CBKS	Cedar Bluff	25.25	344	eP	P	16 27 02.0	0.0
CBKS	Cedar Bluff	25.25	344	eP	P	16 27 02.0	0.0
CBKS				eScP	ScP	16 34 03.2	+1.9
R29A	Marienthal	25.29	342	⇓P	P	16 27 01.5	-0.9
	baz=25,SNR=37						
R29A				S	S	16 31 19.7	-0.2
	baz=25						
R29A				S	S	16 31 19.7	-0.2
	baz=25						
T25A	Trinidad	25.32	335	⇑P	P	16 27 03.2	+0.3
	baz=26,SNR=200						
T25A				S	S	16 31 21.7	+0.8
	baz=26						
T25A				S	S	16 31 21.7	+0.8
	baz=26						
S26A	Kim	25.37	337	⇓P	P	16 27 03.0	-0.2
	baz=26,SNR=56						
S26A				S	S	16 31 22.9	+1.5
	baz=26						
S26A				S	S	16 31 22.9	+1.5
	baz=26						
R28A	Tribune	25.43	340	⇓P	P	16 27 02.4	-1.3
	baz=26,SNR=116						
R28A				S	S	16 31 33.7	+12
	baz=26						
R28A				S	S	16 31 33.7	+12
	baz=26						
STVI	Saint Thomas	25.43	78	eP	P	16 27 03.0	-0.7
	comp=Z,407nm,0.9s						
U23A	El Rito	25.44	331	⇓P	P	16 27 04.6	+0.6
	baz=26,SNR=110						
U23A				S	S	16 31 24.9	+2.2
	baz=26						
U23A				S	S	16 31 24.9	+2.2
	baz=26						
V22A	San Miguel Ran	25.45	329	⇓P	P	16 27 04.7	+0.6
	baz=26,SNR=56						
V22A				S	S	16 31 24.7	+1.8
	baz=26						
V22A				S	S	16 31 24.7	+1.8
	baz=26						
T24A	Torres, Weston	25.54	334	⇑P	P	16 27 05.9	+1.0
	baz=26,SNR=68						
T24A				S	S	16 31 27.5	+3.1
	baz=26						
T24A				S	S	16 31 27.5	+3.1
	baz=26						
CDVI	St. Croix	25.57	79	epP	pP	16 27 35.1	+5.3
CDVI				eScP	ScP	16 34 05.7	+3.2
W20A	Ramah	25.67	326	⇑P	P	16 27 07.4	+1.3
	baz=26,SNR=342						
W20A				S	S	16 31 30.0	+3.5
	baz=26						
W20A				S	S	16 31 30.0	+3.5
	baz=26						
R27A	Eads	25.71	339	⇑P	P	16 27 05.1	-1.1
	baz=26,SNR=46						
R27A				S	S	16 31 31.3	+4.6
	baz=26						
R27A				S	S	16 31 31.3	+4.6
	baz=26						
V21A	Milan	25.73	328	⇑P	P	16 27 07.4	+0.8
	baz=26,SNR=38						
V21A				S	S	16 31 29.4	+2.1
	baz=26						
V21A				S	S	16 31 29.4	+2.1
	baz=26						
S25A	Robets Cordova	25.78	335	⇓P	P	16 27 07.0	0.0
	baz=26,SNR=70						
S25A				S	S	16 31 30.8	+2.8
	baz=26						
S25A				S	S	16 31 30.8	+2.8
	baz=26						
U22A	Llaves	25.79	330	⇑P	P	16 27 08.1	+0.9
	baz=26,SNR=56						
U22A				S	S	16 31 31.4	+3.1
	baz=26						
U22A				S	S	16 31 31.4	+3.1
	baz=26						
JSRW	J. Sargeant Re	25.85	25	eP	P	16 27 08.5	+1.2
HDIL	Hopedale	25.89	3	eP	P	16 27 07.5	-0.2
	comp=Z,793nm,1.1s						
SFIN	Scholer Farm	25.91	7	⇑P	P	16 27 07.5	-0.4
	baz=26						
SFIN				S	S	16 31 30.1	+0.5
	baz=26						
SFIN				S	S	16 31 30.1	+0.5
	baz=26						
T23A	Casias Ranch,	25.94	332	⇓P	P	16 27 08.9	+0.4
	baz=26,SNR=6.3						
T23A				S	S	16 31 32.5	+1.8
	baz=26						
T23A				S	S	16 31 32.5	+1.8
	baz=26						
R26A	Arlington	25.96	338	⇑P	P	16 27 08.1	-0.4
	baz=26,SNR=36						
X18A	Snowflake	26.06	323	⇓P	P	16 27 10.8	+1.3
	baz=26,SNR=210						
X18A				S	S	16 31 32.5	+0.1
	baz=26						
X18A				S	S	16 31 32.5	+0.1
	baz=26						
S24A	Houchin Ranch,	26.09	334	⇑P	P	16 27 10.7	+0.8
	baz=26,SNR=17						
S24A				S	S	16 31 35.8	+2.7
	baz=26						
S24A				S	S	16 31 35.8	+2.7
	baz=26						
R25A	Fountain Ranch	26.14	336	⇓P	P	16 27 10.3	+0.1
	baz=26,SNR=40						
R25A				S	S	16 31 36.0	+2.4
	baz=26						
R25A				S	S	16 31 36.0	+2.4
	baz=26						
V20A	Brimhall	26.16	327	⇑P	P	16 27 11.5	+1.1
	baz=26,SNR=31						
V20A				S	S	16 31 37.4	+3.4
	baz=26						
V20A				S	S	16 31 37.4	+3.4
	baz=26						
214A	Organ Pipe Nat	26.21	315	⇑P	P	16 27 11.7	+1.0
	baz=26						
214A				S	S	16 31 36.6	+1.9
	baz=26						
214A				S	S	16 31 36.6	+1.9
	baz=26						
U21A	Nageezi	26.23	329	⇑P	P	16 27 11.9	+0.9
	baz=26,SNR=67						
U21A				S	S	16 31 38.1	+2.9
	baz=26						
U21A				S	S	16 31 38.1	+2.9
	baz=26						
SDCO	Great Sand Dun	26.30	334	eP	P	16 27 12.5	+0.8
	comp=Z,104nm,1.2s						
KSCO	Kaye Shedlock'	26.30	340	⇓P	P	16 27 10.9	-0.7
	baz=26,SNR=28						
T22A	Edith	26.33	331	⇓P	P	16 27 12.7	+0.7
	baz=26,SNR=32						
T22A				S	S	16 31 37.3	+0.6
	baz=26						
T22A				S	S	16 31 37.3	+0.6
	baz=26						
W18A	Petrified Fore	26.36	324	⇓P	P	16 27 13.3	+1.1
	baz=26,SNR=70						
W18A				S	S	16 31 39.1	+2.0
	baz=26						
W18A				S	S	16 31 39.1	+2.0
	baz=26						
CBN	Corbin	26.49	25	eP	P	16 27 14.6	+1.5
	comp=Z,476nm,1.1s						
ACSO	Alum Creek Sta	26.51	14	eP	P	16 27 13.9	+0.7
	comp=Z,595nm,1.3s						
Q26A	Hugo	26.53	338	⇓P	P	16 27 13.6	-0.1
	baz=27,SNR=28						
R24A	Sanders Place,	26.54	335	⇓P	P	16 27 14.1	+0.3
	baz=27,SNR=30						
R24A				S	S	16 31 42.6	+2.6
	baz=27						
R24A				S	S	16 31 42.6	+2.6
	baz=27						
T21A	Navajo Lake	26.61	330	⇑P	P	16 27 15.5	+1.0
	baz=27,SNR=34						
U20A	Newcomb	26.63	328	⇓P	P	16 27 15.6	+1.0
	baz=27,SNR=16						
U20A				S	S	16 31 43.3	+1.9
	baz=27						
U20A				S	S	16 31 43.3	+1.9
	baz=27						
P27A	Ficken Ranch,	26.78	340	⇑P	P	16 27 15.2	-0.6
	baz=27,SNR=8.2						
Q25A	Bedland, Calha	26.80	337	⇑P	P	16 27 15.9	-0.2
	baz=27,SNR=23						
R23A	Moffat	26.81	334	⇓P	P	16 27 16.6	+0.2
	baz=27,SNR=26						
R23A				S	S	16 31 45.9	+1.4
	baz=27						
R23A				S	S	16 31 45.9	+1.4
	baz=27						
X16A	Lo Mia Camp, P	26.88	321	⇑P	P	16 27 18.0	+1.1
	baz=27,SNR=460						
X16A				S	S	16 31 46.2	+0.9
	baz=27						
X16A				S	S	16 31 46.2	+0.9
	baz=27						
S22A	4UR Ranch, Cre	26.89	332	⇓P	P	16 27 17.7	+0.7
	baz=27,SNR=35						
S22A				S	S	16 31 48.2	+2.5
	baz=27						
S22A				S	S	16 31 48.2	+2.5
	baz=27						
P26A	Davis Ranch, A	27.04	339	⇓P	P	16 27 17.7	-0.5
	baz=27,SNR=27						
P26A				S	S	16 31 49.6	+1.9
	baz=27						
P26A				S	S	16 31 49.6	+1.9
	baz=27						
Z14A	Wintersburg	27.15	317	⇓P	P	16 27 20.3	+1.2
	baz=27,SNR=64						
Z14A				S	S	16 31 51.4	+2.0
	baz=27						
Z14A				S	S	16 31 51.4	+2.0
	baz=27						
Q24A	Divide	27.19	336	⇑P	P	16 27 19.8	+0.1
	baz=27						
Q24A				S	S	16 31 51.2	+0.8
	baz=27						
Q24A				S	S	16 31 51.2	+0.8
	baz=27						
SCIA	State Center	27.25	357	eP	P	16 27 19.9	+0.1
	comp=Z,3µm,2.7s						
R22A	Saguache, Gunn	27.25	333	⇑P	P	16 27 21.0	+0.7
	baz=27,SNR=14						
MVCO	Mesa Verde	27.26	329	eP	P	16 27 21.3	+1.0
MVCO	Mesa Verde	27.26	329	⇓P	P	16 27 20.7	+0.4
	baz=27,SNR=77						
MVCO				S	S	16 31 52.8	+1.4
	baz=27						
MVCO				S	S	16 31 52.8	+1.4
	baz=27						
S21A	Coal Bank Pass	27.27	330	⇓P	P	16 27 20.3	-0.2
	baz=27,SNR=21						
S21A				S	S	16 31 54.1	+2.4
	baz=27						
S21A				S	S	16 31 54.1	+2.4
	baz=27						
P25A	Willow Gulch B	27.29	338	⇑P	P	16 27 20.6	+0.1
	baz=27,SNR=9.7						
O27A	Beecher Island	27.32	341	⇓P	P	16 27 20.5	-0.2
	baz=28,SNR=10						
113A	Mohawk Valley,	27.34	315	⇑P	P	16 27 21.8	+1.0
	baz=27,SNR=207						
113A				S	S	16 31 54.5	+2.1
	baz=27						
113A				S	S	16 31 54.5	+2.1
	baz=27						
BGNE	Belgrade	27.36	349	⇓P	P	16 27 20.3	-0.6
	baz=28,SNR=6.6						
BGNE				S	S	16 31 54.3	+1.7
	baz=28						
BGNE				S	S	16 31 54.3	+1.7
	baz=28						
Q23A	Hartsel	27.41	335	⇑P	P	16 27 22.2	+0.4
	baz=28,SNR=13						
Y14A	Wickenburg	27.55	318	⇓P	P	16 27 23.7	+0.9
	baz=28,SNR=162						
Y14A				S	S	16 31 58.6	+2.8
	baz=28						
Y14A				S	S	16 31 58.6	+2.8
	baz=28						
P24A	Kohler Place,	27.57	337	⇓P	P	16 27 23.2	+0.2
	baz=28						
WUAZ	Wupatki	27.58	323	eP	P	16 27 24.6	+1.4
	comp=Z,303nm,0.9s						
WUAZ	Wupatki	27.58	323	⇑P	P	16 27 24.4	+1.3
	baz=28,SNR=217						
WUAZ				S	S	16 31 59.0	+2.5
	baz=28						
WUAZ				S	S	16 31 59.0	+2.5
	baz=28						
O26A	Horse Wrangler	27.64	340	⇓P	P	16 27 23.2	-0.3
	baz=28						
S20A	Disappointment	27.68	330	⇓P	P	16 27 25.0	+0.9
	baz=28,SNR=55						
S20A				S	S	16 31 59.1	+1.1
	baz=28						
S20A				S	S	16 31 59.1	+1.1
	baz=28						
R21A	Cimarron	27.72	332	⇓P	P	16 27 25.1	+0.6
	baz=28,SNR=7.8						
SDMD	Soldier's Deli	27.74	24	eP	P	16 27 25.3	+1.1
	comp=Z,152nm,1.0s						
O25A	Wiggins	27.80	338	⇓P	P	16 27 24.9	-0.1
	baz=28						
O25A				S	S	16 32 03.6	+3.9
	baz=28						
O25A				S	S	16 32 03.6	+3.9
	baz=28						
P23A	Jefferson	27.82	335	⇑P	P	16 27 26.4	+1.1
	baz=28,SNR=39						
P23A				S	S	16 31 59.3	-1.1
	baz=28						
P23A				S	S	16 31 59.3	-1.1
	baz=28						
Q22A	Crested Butte,	27.84	333	⇓P	P	16 27 25.8	+0.2
	baz=28,SNR=20						
Q22A				S	S	16 32 02.0	+1.3
	baz=28						
Q22A				S	S	16 32 02.0	+1.3
	baz=28						
OGNE	Ogallala	27.87	342	eP	P	16 27 25.4	-0.2
	comp=Z,88nm,0.8s						
OGNE	Ogallala	27.87	342	⇑P	P	16 27 25.4	-0.2
	baz=28						
OGNE				S	S	16 32 03.8	+3.1
	baz=28						
OGNE				S	S	16 32 03.8	+3.1
	baz=28						
N27A	Anderson Farm,	27.90	341	⇓P	P	16 27 25.3	-0.5
	baz=28,SNR=12						
N27A				S	S	16 32 04.0	+2.8
	baz=28						
N27A				S	S	16 32 04.0	+2.8
	baz=28						
R20A	Redvale	27.97	330	⇑P	P	16 27 27.4	+0.8
	baz=28,SNR=23						
R20A				S	S	16 32 04.2	+1.7
	baz=28						
R20A				S	S	16 32 04.2	+1.7
	baz=28						
PV01	Paradox Valley	28.02	330	eP	P	16 27 28.2	+1.2
ISCO	Idaho Springs	28.09	336	eP	P	16 27 27.8	0.0
ISCO				pmax	pmax		
	comp=Z,29nm,0.9s						
ISCO	Idaho Springs	28.09	336	eP	P	16 27 27.8	0.0
	comp=Z,29nm,0.9s						
ISCO	Idaho Springs	28.09	336	⇓P	P	16 27 27.8	0.0
	baz=28,SNR=16						
ISCO				S	S	16 32 05.6	+1.1
	baz=28						
ISCO				S	S	16 32 05.6	+1.1
	baz=28						
Q21A	Lamborn Mesa,	28.11	332	⇑P	P	16 27 28.4	+0.6
	baz=28,SNR=9.4						
Q21A				S	S	16 32 04.9	+0.2
	baz=28						
Q21A				S	S	16 32 04.9	+0.2
	baz=28						
SMCO	Snowmass	28.13	333	eP	P	16 27 28.1	-0.1

comp=Z,76nm,1.3s
N26A Koester Ranch, 28.14 340 ⇑P **P** **16 27 28.0 0.0**
baz=28,SNR=7.3
O24A Longmont 28.16 337 ⇑P **P** **16 27 28.5 +0.3**
baz=28,SNR=11
O24A S **S** **16 32 02.9 -2.4**
baz=28
O24A S **S** **16 32 02.9 -2.4**
baz=28
JFWS Jewell Farm 28.21 1 *e*P **P** **16 27 28.3 -0.1**
JFWS pmax pmax
comp=Z,324nm,0.6s
JFWS Jewell Farm 28.21 1 *e*P **P** **16 27 28.3 -0.1**
comp=Z,324nm,0.6s
GLA Glamis 28.23 315 *e*P **P** **16 27 30.1 +1.3**
GLA *e* 16 30 41.0
GLA pmax pmax
comp=Z,325nm,1.0s
GLA Glamis 28.23 315 *e*P **P** **16 27 30.1 +1.3**
comp=Z,81nm,1.0s
GLA *e*PcP **PcP** **16 30 41.0 +1.4**
GLA *e*ScP **ScP** **16 34 12.6 +2.2**
GLA Glamis 28.23 315 ⇑P **P** **16 27 29.9 +1.1**
baz=28,SNR=106
GLA S **S** **16 32 07.6 +1.1**
baz=28
GLA S **S** **16 32 07.6 +1.1**
baz=28
P22A Eagle 28.38 334 ⇓P **P** **16 27 30.7 +0.4**
baz=28,SNR=16
P22A S **S** **16 32 10.7 +1.6**
baz=28
P22A S **S** **16 32 10.7 +1.6**
baz=28
PV04 Paradox Valley 28.38 330 *e*P **P** **16 27 30.8 +0.6**
PV04 *e*ScP **ScP** **16 34 13.3 +2.4**
S18A Hurst Farm, Bl 28.39 327 ⇑P **P** **16 27 30.7 +0.3**
baz=28,SNR=153
S18A S **S** **16 32 10.1 +0.8**
baz=28
S18A S **S** **16 32 10.1 +0.8**
baz=28
SSPA Standing Stone 28.41 22 *e*P **P** **16 27 30.9 +0.8**
comp=Z,464nm,1.4s
N25A Grover 28.41 339 ⇑P **P** **16 27 30.7 +0.3**
baz=29,SNR=13
N25A S **S** **16 32 12.7 +3.4**
baz=29
N25A S **S** **16 32 12.7 +3.4**
baz=29
MVL Millersville 28.43 24 *e*P **P** **16 27 31.9 +1.5**
comp=Z,253nm,1.3s
Y12C Blythe 28.43 316 ⇑P **P** **16 27 31.4 +0.9**
baz=28,SNR=28
Y12C S **S** **16 32 11.9 +2.4**
baz=28
Y12C S **S** **16 32 11.9 +2.4**
baz=28
PV10 Paradox Valley 28.44 330 *e*P **P** **16 27 30.9 +0.1**
PDMCI Parker Dam,Lak 28.51 317 ⇓P **P** **16 27 32.5 +1.3**
baz=29,SNR=119
PDMCI S **S** **16 32 13.5 +2.8**
baz=29
PDMCI S **S** **16 32 13.5 +2.8**
baz=29
M27A Reverse DX Ran 28.52 342 ⇑P **P** **16 27 30.9 -0.4**
baz=29
Q20A Ridgley Place, 28.54 331 ⇓P **P** **16 27 32.1 +0.5**
baz=29
Q20A S **S** **16 32 13.1 +1.7**
baz=29
Q20A S **S** **16 32 13.1 +1.7**
baz=29
O23A Lake Granby, G 28.56 336 ⇑P **P** **16 27 32.2 +0.2**
baz=29,SNR=19
ALLY Alegheny Colle 28.59 17 *e*P **P** **16 27 32.1 +0.3**
comp=Z,151nm,0.8s
P21A Newcastle 28.62 333 ⇓P **P** **16 27 33.1 +0.7**
baz=29
M26A McRoberts Ranc 28.69 341 ⇓P **P** **16 27 32.7 -0.1**
baz=29
N24A Carr 28.70 338 ⇑P **P** **16 27 33.6 +0.6**
baz=29,SNR=10
U15A North Rim 28.75 323 ⇑P **P** **16 27 35.2 +1.5**
baz=29,SNR=284
U15A S **S** **16 32 18.5 +3.5**
baz=29
U15A S **S** **16 32 18.5 +3.5**
baz=29
O22A Kremmling 28.77 335 ⇓P **P** **16 27 33.7 -0.1**
baz=29,SNR=18
O22A S **S** **16 32 17.5 +2.2**
baz=29
O22A S **S** **16 32 17.5 +2.2**
baz=29
GRGR Grenville 28.84 91 P **P** **16 27 34.7 +0.4**
W13A Hualapai Mount 28.84 319 ⇑P **P** **16 27 35.9 +1.4**
baz=29,SNR=191
W13A S **S** **16 32 20.1 +3.7**
baz=29
W13A S **S** **16 32 20.1 +3.7**
baz=29
SWSC Sam W. Stewart 28.85 314 ⇑P **P** **16 27 35.6 +1.4**
baz=29,SNR=43
SWSC S **S** **16 32 20.9 +4.8**
baz=29
SWSC S **S** **16 32 20.9 +4.8**
baz=29
DVTC Desert V Tower 28.91 313 ⇓P **P** **16 27 36.7 +1.9**
baz=29,SNR=31
DVTC S **S** **16 32 22.5 +5.3**
baz=29
DVTC S **S** **16 32 22.5 +5.3**
baz=29
M25A Palm-Egli Farm 28.95 340 ⇓P **P** **16 27 35.5 +0.2**
baz=29
FDF Fort de France 29.06 86 P **P** **16 27 34.6 -1.7**
FDF pmax pmax
comp=Z,77nm,0.8s
FDF Fort de France 29.06 86 P **P** **16 27 34.6 -1.7**
comp=Z,77nm,0.8s
ERPA Erie 29.07 17 *e*P **P** **16 27 36.5 +0.5**
comp=Z,191nm,0.9s
IRM Iron Mountain 29.10 316 ⇓P **P** **16 27 38.0 +1.5**
baz=29,SNR=62
IRM S **S** **16 32 23.9 +3.9**
baz=29
IRM S **S** **16 32 23.9 +3.9**
baz=29
NEE2 Needles Airpor 29.11 318 ⇓P **P** **16 27 38.3 +1.8**
baz=29,SNR=10.0
N23A Red Feather La 29.16 337 ⇑P **P** **16 27 37.5 +0.3**
baz=29
N23A S **S** **16 32 23.4 +2.2**
baz=29
N23A S **S** **16 32 23.4 +2.2**
baz=29
L26A Underwood Farm 29.19 342 ⇓P **P** **16 27 37.0 -0.2**
baz=29
O21A Pagoda 29.20 334 ⇑P **P** **16 27 38.2 +0.6**
baz=29
M24A Cheyenne 29.25 339 ⇓P **P** **16 27 38.4 +0.6**
baz=29,SNR=13
MONP Monument Peak 29.26 313 ⇓P **P** **16 27 39.3 +1.2**
baz=29,SNR=39
MONP S **S** **16 32 25.3 +2.4**
baz=29
MONP S **S** **16 32 25.3 +2.4**
baz=29
N22A Wattenberg Ran 29.28 336 ⇑P **P** **16 27 38.9 +0.6**
baz=29,SNR=38
BAR Barrett 29.33 312 *e*P **P** **16 27 40.7 +2.2**
comp=Z,86nm,1.2s
PHWY Pilot Hill 29.33 338 *e*P **P** **16 27 38.8 +0.1**
comp=Z,243nm,2.3s
PHWY *e*ScP **ScP** **16 34 15.3 +1.3**
ECSD EROS Data Cent 29.38 352 *e*P **P** **16 27 38.5 -0.3**
comp=Z,596nm,2.0s
P19A Cripple Cowboy 29.40 331 ⇓P **P** **16 27 39.7 +0.4**
baz=30,SNR=24
P19A S **S** **16 32 26.6 +1.6**
baz=30
P19A S **S** **16 32 26.6 +1.6**
baz=30
O20A White River Ci 29.47 333 ⇓P **P** **16 27 40.9 +1.0**
baz=30,SNR=30
K27A Fluecklnger Fa 29.56 343 ⇑P **P** **16 27 40.0 -0.5**
baz=30
M23A Laramie 29.57 338 ⇑P **P** **16 27 40.9 +0.1**
baz=30,SNR=5.7
L25A Engebretsen Ra 29.57 341 ⇑P **P** **16 27 40.6 -0.1**
baz=30,SNR=6.1
LDFC Landfair 29.62 318 *e*P **P** **16 27 43.6 +2.5**
comp=Z,538nm,0.8s
LDFC *e*PcP **PcP** **16 30 44.9 +1.7**
LDFC *e*ScP **ScP** **16 34 17.2 +2.4**
PFO Pinyon Flat Ob 29.68 314 ⇑P **P** **16 27 42.0 +0.3**
baz=30,SNR=34
PFO S **S** **16 32 33.2 +3.9**
baz=30
PFO S **S** **16 32 33.2 +3.9**
baz=30
N21A Black Mountain 29.68 334 ⇑P **P** **16 27 42.7 +0.9**
baz=30,SNR=10
N21A S **S** **16 32 31.3 +2.0**
baz=30
N21A S **S** **16 32 31.3 +2.0**
baz=30
BRNJ Basking Ridge 29.75 26 *e*P **P** **16 27 43.8 +1.8**
comp=Z,202nm,0.8s
109C Camp Elliot, M 29.75 312 ⇓P **P** **16 27 43.3 +1.2**
baz=30,SNR=11
109C S **S** **16 32 33.2 +3.0**
baz=30
109C S **S** **16 32 33.2 +3.0**
baz=30
L24A Wheatland 29.80 339 ⇑P **P** **16 27 42.3 -0.3**
baz=30
GMRC Granite Mounta 29.80 317 ⇓P **P** **16 27 44.2 +1.4**
baz=30,SNR=106
GMRC S **S** **16 32 34.9 +3.6**
baz=30
GMRC S **S** **16 32 34.9 +3.6**
baz=30
K26A Motz Farm, Whi 29.82 342 ⇑P **P** **16 27 42.5 -0.3**
baz=30
M22A Cedar Creek Ra 29.85 336 ⇓P **P** **16 27 43.7 +0.4**
baz=30,SNR=10
BBSR BB Station 29.92 49 *e*P **P** **16 27 45.0 +1.3**
comp=Z,130nm,0.6s
Q16A Castle Valley 29.92 328 ⇑P **P** **16 27 45.0 +1.1**
baz=30,SNR=109
Q16A S **S** **16 32 35.6 +2.4**
baz=30
Q16A S **S** **16 32 35.6 +2.4**
baz=30
K25A Mack Ranch, Ha 29.95 341 ⇑P **P** **16 27 44.2 +0.2**
baz=30
K25A S **S** **16 32 36.1 +2.6**
baz=30
K25A S **S** **16 32 36.1 +2.6**
baz=30
O19A Miners Draw (B 30.00 332 ⇑P **P** **16 27 44.7 +0.2**
baz=30,SNR=24
O19A S **S** **16 32 36.9 +2.6**
baz=30
O19A S **S** **16 32 36.9 +2.6**
baz=30
P18A Preston Nutter 30.00 330 ⇓P **P** **16 27 45.3 +0.6**
baz=30,SNR=48
P18A S **S** **16 32 36.6 +2.0**
baz=30
P18A S **S** **16 32 36.6 +2.0**
baz=30
NNA Nana 30.02 151 *e*P **P** **16 27 45.8 +1.0**
comp=Z,62nm,1.0s
NNA PcP **PcP** **16 30 45.0 +0.6**
NNA *e*ScP **ScP** **16 34 19.1 +2.9**
NNA Nana 30.02 151 P **P** **16 27 46.0 +1.2**
comp=Z,293nm,0.9s,SNR=6.8
NNA Nana 30.02 151 P **P** **16 27 45.2 +0.5**
comp=Z,38nm,0.9s,baz=320,slow=9.0,SNR=12
NNA PcP **PcP** **16 30 45.0 +0.6**
comp=Z,22nm,0.5s,baz=337,slow=3.8,SNR=6.3
NNA ScP **ScP** **16 34 19.2 +2.9**
comp=Z,39nm,0.8s,baz=328,slow=5.7,SNR=9.6
N20A Spence Gulch, 30.05 334 ⇓P **P** **16 27 45.7 +0.7**
baz=30,SNR=57
N20A S **S** **16 32 37.9 +2.7**
baz=30
N20A S **S** **16 32 37.9 +2.7**
baz=30
CPNY Central Park 30.10 27 *e*P **P** **16 27 46.4 +1.3**
comp=Z,92nm,0.8s
P17A Butcher Ranch, 30.12 329 ⇓P **P** **16 27 46.3 +0.7**
baz=30,SNR=56
P17A S **S** **16 32 38.2 +1.9**
baz=30
P17A S **S** **16 32 38.2 +1.9**
baz=30
L23A Garrett 30.13 338 ⇑P **P** **16 27 45.7 0.0**
baz=30,SNR=48
L23A S **S** **16 32 37.6 +1.2**
baz=30
L23A S **S** **16 32 37.6 +1.2**
baz=30
MSU Marysvale 30.16 326 *e*P **P** **16 27 47.3 +1.3**
MSU Marysvale 30.16 326 *e*P **P** **16 27 47.3 +1.3**
MVU Marysvale 30.17 326 *e*P **P** **16 27 48.0 +1.9**
comp=Z,124nm,0.9s
MVU *e*ScP **ScP** **16 34 18.6 +2.0**
MURC Murrieta 30.19 313 ⇓P **P** **16 27 47.6 +1.5**
baz=30,SNR=33
HEC Hector,Ludlow 30.28 316 ⇑P **P** **16 27 48.6 +1.7**
baz=30,SNR=38
M21A Separation Pea 30.32 336 ⇑P **P** **16 27 47.7 +0.3**
baz=30,SNR=24
ARUT Antelope Range 30.35 324 *e*P **P** **16 27 49.5 +1.9**
ARUT Antelope Range 30.35 324 *e*P **P** **16 27 49.5 +1.9**
TUQ Turquoise Moun 30.36 318 ⇑P **P** **16 27 49.0 +1.3**
baz=30,SNR=58
TUQ S **S** **16 32 44.0 +3.9**
baz=30
TUQ S **S** **16 32 44.0 +3.9**
baz=30
BRSD Miller 30.45 349 ⇑P **P** **16 27 47.5 -0.7**
baz=31,SNR=11
BINY Binghamton 30.46 23 *e*P **P** **16 27 49.5 +1.0**
comp=Z,760nm,1.4s
SPMN St. Paul 30.54 358 ⇓P **P** **16 27 48.7 -0.3**
baz=31
SPMN S **S** **16 32 41.2 -1.0**
baz=31
SPMN S **S** **16 32 41.2 -1.0**
baz=31
M20A Sweetwater, Wa 30.56 334 ⇓P **P** **16 27 49.7 +0.2**
baz=31,SNR=9.2
L21A Rawlins 30.63 336 ⇑P **P** **16 27 49.6 -0.5**
baz=31,SNR=28
RRX Edison Barstow 30.76 316 ⇓P **P** **16 27 53.2 +2.1**
baz=31,SNR=7.5
SCI San Clemente I 30.84 311 ⇑P **P** **16 27 53.7 +1.9**
baz=31,SNR=7.0
J24A Dixon Ranch, L 30.85 341 ⇑P **P** **16 27 52.4 +0.5**
baz=31
J24A S **S** **16 32 49.8 +2.3**
baz=31
J24A S **S** **16 32 49.8 +2.3**
baz=31
BFSC Mount Baldy Ra 30.86 314 ⇑P **P** **16 27 53.7 +1.6**
baz=31,SNR=36
BFSC S **S** **16 32 51.9 +4.1**
baz=31
BFSC S **S** **16 32 51.9 +4.1**
baz=31
GSC Goldstone 30.87 316 *e*P **P** **16 27 53.8 +1.6**
GSC *e* 16 30 47.5
GSC pmax pmax
comp=Z,118nm,1.1s
GSC Goldstone 30.87 316 *e*P **P** **16 27 53.8 +1.6**
comp=Z,28nm,1.1s
GSC *e*PcP **PcP** **16 30 47.5 +1.1**
GSC *e*ScP **ScP** **16 34 21.0 +2.2**
GSC Goldstone 30.87 316 ⇑P **P** **16 27 53.6 +1.5**
baz=31,SNR=42
GSC S **S** **16 32 50.6 +2.8**
baz=31
GSC S **S** **16 32 50.6 +2.8**
baz=31
SHOC Shoshone 30.88 318 ⇓P **P** **16 27 53.5 +1.3**
baz=31,SNR=30
SHOC S **S** **16 32 50.4 +2.6**
baz=31
SHOC S **S** **16 32 50.4 +2.6**
baz=31
K22A Casper 30.89 338 ⇑P **P** **16 27 52.5 +0.2**
baz=31,SNR=23
CIS Catalina Islan 30.95 312 ⇓P **P** **16 27 54.8 +2.0**
baz=31,SNR=11
CIS S **S** **16 32 53.2 +4.2**
baz=31
CIS S **S** **16 32 53.2 +4.2**
baz=31
YLE Yale 30.97 27 *e*P **P** **16 27 53.8 +1.0**
M19A Rock Springs 30.99 333 ⇑P **P** **16 27 52.5 -0.8**
baz=31,SNR=8.1
M19A S **S** **16 32 51.7 +1.9**
baz=31
M19A S **S** **16 32 51.7 +1.9**
baz=31
FMP Fort Macarthur 31.03 313 S **S** **16 32 55.8 +5.7**
baz=31
L20A Wamsutter 31.06 335 ⇑P **P** **16 27 53.9 0.0**
baz=31,SNR=15
L20A S **S** **16 32 53.4 +2.6**
baz=31
L20A S **S** **16 32 53.4 +2.6**
baz=31
DAU Daniels Canyon 31.10 330 *e*P **P** **16 27 55.1 +0.7**
DAU *e* 16 30 48.4
DAU Daniels Canyon 31.10 330 *e*P **P** **16 27 55.1 +0.7**
DAU *e*PcP **PcP** **16 30 48.4 +1.2**
DAU *e*ScP **ScP** **16 34 21.3 +1.5**
MWC Mount Wilson 31.13 314 *e*P **P** **16 27 56.2 +1.7**
MWC *e* 16 30 48.6
MWC pmax pmax
comp=Z,188nm,1.1s
MWC Mount Wilson 31.13 314 *e*P **P** **16 27 56.2 +1.7**
comp=Z,188nm,1.1s
MWC *e*PcP **PcP** **16 30 48.6 +1.4**
MWC *e*ScP **ScP** **16 34 23.2 +3.3**
K21A Alcova 31.15 337 ⇑P **P** **16 27 54.6 -0.1**
baz=31,SNR=15
PASC Pasadena Art C 31.19 313 *e*P **P** **16 27 56.7 +1.8**
comp=Z,920nm,1.4s
PASC *e*PcP **PcP** **16 30 48.4 +1.2**
PASC *e*ScP **ScP** **16 34 22.4 +2.5**
J23A Dilts Ranch, B 31.21 340 ⇑P **P** **16 27 55.3 +0.1**
baz=31
I24A Kuemmerle Ranc 31.32 341 ⇑P **P** **16 27 55.9 -0.1**
baz=32,SNR=6.3
M18A Lyman 31.33 332 ⇑P **P** **16 27 55.9 -0.4**
baz=32,SNR=8.9
M18A S **S** **16 32 56.6 +1.5**
baz=32
M18A S **S** **16 32 56.6 +1.5**
baz=32
RSSD Black Hills 31.38 342 *e*P **P** **16 27 56.1 -0.5**
RSSD pmax pmax
comp=Z,26nm,0.5s
RSSD Black Hills 31.38 342 *e*P **P** **16 27 56.1 -0.5**
comp=Z,6.6nm,0.5s
RSSD *e*ScP **ScP** **16 34 20.6 +0.1**
COWI Conover 31.43 3 *e*P **P** **16 27 56.0 -0.8**
comp=Z,93nm,0.6s
EDW2 Edwards Air Fo 31.43 315 ⇑P **P** **16 27 58.0 +0.9**
baz=32,SNR=55
EDW2 S **S** **16 32 59.2 +2.5**
baz=32
EDW2 S **S** **16 32 59.2 +2.5**
baz=32
J22A Midwest 31.54 338 ⇑P **P** **16 27 57.9 -0.1**
baz=32,SNR=35
J22A S **S** **16 32 60.0 +1.7**
baz=32
J22A S **S** **16 32 60.0 +1.7**
baz=32
L19A Farson 31.56 334 ⇓P **P** **16 27 58.2 -0.1**
baz=32,SNR=11
L19A S **S** **16 33 00.3 +1.6**
baz=32
L19A S **S** **16 33 00.3 +1.6**
baz=32
LRMC Laurel Mountai 31.56 316 ⇓P **P** **16 27 59.9 +1.7**
baz=32,SNR=33
LRMC S **S** **16 33 03.9 +5.1**
baz=32
LRMC S **S** **16 33 03.9 +5.1**
baz=32
FURC Furnace Creek, 31.59 318 ⇓P **P** **16 28 00.1 +1.8**
baz=32,SNR=65
FURC S **S** **16 33 04.2 +5.4**
baz=32
FURC S **S** **16 33 04.2 +5.4**
baz=32
K20A Yellowstone Ra 31.60 335 ⇓P **P** **16 27 58.2 -0.4**
baz=32,SNR=10
K20A S **S** **16 33 00.2 +0.9**
baz=32
K20A S **S** **16 33 00.2 +0.9**
baz=32
M17A Scullys Gap (B 31.64 331 ⇑P **P** **16 27 59.0 0.0**
baz=32,SNR=34
M17A S **S** **16 33 01.6 +1.5**
baz=32
M17A S **S** **16 33 01.6 +1.5**
baz=32
L18A Fontenelle, Gr 31.71 333 ⇑P **P** **16 27 59.7 +0.1**
baz=32,SNR=40
L18A S **S** **16 33 04.2 +3.0**
baz=32
L18A S **S** **16 33 04.2 +3.0**
baz=32
DUG Dugway 31.72 328 *e*P **P** **16 28 00.7 +1.1**
DUG *e* 16 30 49.3
DUG pmax pmax
comp=Z,104nm,1.3s
DUG Dugway 31.72 328 *e*P **P** **16 28 00.7 +1.1**
comp=Z,104nm,1.3s
DUG *e*PcP **PcP** **16 30 49.3 +0.6**
DUG *e*ScP **ScP** **16 34 23.2 +1.5**
DUG Dugway 31.72 328 ⇑P **P** **16 28 01.0 +1.4**
baz=32,SNR=52
DUG S **S** **16 33 04.1 +3.0**
baz=32
DUG S **S** **16 33 04.1 +3.0**
baz=32
SADO Sadowa 31.75 16 P **P** **16 27 59.6 0.0**
SADO S **S** **16 33 02.0 +0.9**
SADO ScP **ScP** **16 34 20.4 -1.1**
SADO Sadowa 31.75 16 P **P** **16 27 59.6 0.0**
comp=Z,82nm,0.4s,baz=223,slow=9.3,SNR=98
SADO S **S** **16 33 02.0 +0.9**
comp=Z,49nm,1.1s,baz=120,slow=21,SNR=7.8
SADO ScP **ScP** **16 34 20.4 -1.1**
comp=Z,18nm,0.5s,baz=250,slow=3.0,SNR=10
SADO LR LR 16 43 25.9
comp=Z,9μm,18.5s,baz=194,slow=41
MPMC Manual Prospec 31.76 317 ⇑P **P** **16 28 01.2 +1.1**
baz=32,SNR=194
MPMC S **S** **16 33 05.4 +3.4**
baz=32
MPMC S **S** **16 33 05.4 +3.4**
baz=32
BLG Laguna Peak 31.78 313 ⇑P **P** **16 28 01.5 +1.5**
baz=32,SNR=6.6
BLG S **S** **16 33 05.7 +3.8**
baz=32
BLG S **S** **16 33 05.7 +3.8**
baz=32
OSI Osito Adit 31.80 314 *e*P **P** **16 28 02.4 +2.1**
OSI Osito Adit 31.80 314 ⇓P **P** **16 28 01.9 +1.6**
baz=32,SNR=9.8
OSI S **S** **16 33 05.7 +3.3**
baz=32
OSI S **S** **16 33 05.7 +3.3**
baz=32
TRY Troy 31.82 25 *e*P **P** **16 28 01.9 +1.6**
J21A Lysite 31.84 337 ⇓P **P** **16 28 00.6 -0.1**
baz=32,SNR=37
J21A S **S** **16 33 05.0 +2.1**
baz=32
J21A S **S** **16 33 05.0 +2.1**
baz=32
K19A Absolon Red Bu 31.94 335 ⇓P **P** **16 28 00.9 -0.7**
baz=32,SNR=20
K19A S **S** **16 33 05.1 +0.4**
baz=32
K19A S **S** **16 33 05.1 +0.4**
baz=32
DAC Darwin (Calif) 31.95 317 *e*P **P** **16 28 03.5 +1.7**
DAC *e* 16 30 50.6
DAC pmax pmax

comp=Z,186nm,1.2s
DAC Darwin (Calif) 31.95 317 *e*P **P** **16 28 03.5 +1.7**
comp=Z,186nm,1.2s
DAC *e*PcP **PcP** **16 30 50.5 +1.1**
DAC *e*ScP **ScP** **16 34 24.8 +2.1**
I22A 9 Mile Ranch, 31.96 339 ⇓P **P** **16 28 01.4 -0.3**
baz=32,SNR=38
I22A S **S** **16 33 07.5 +2.7**
baz=32
I22A S **S** **16 33 07.5 +2.7**
baz=32
R11A Troy Canyon, C 31.98 322 ⇓P **P** **16 28 03.6 +1.6**
baz=32,SNR=313
R11A S **S** **16 33 09.6 +4.3**
baz=32
R11A S **S** **16 33 09.6 +4.3**
baz=32
QUA2 Belchertown 32.01 27 *e*P **P** **16 28 02.7 +0.8**
BRYW Bryant College 32.08 28 *e*P **P** **16 28 03.3 +0.7**
J20A Shoshoni 32.09 336 ⇑P **P** **16 28 03.2 +0.4**
baz=32,SNR=26
J20A S **S** **16 33 10.0 +3.2**
baz=32
J20A S **S** **16 33 10.0 +3.2**
baz=32
H24A Dirks Ranch, A 32.10 342 ⇓P **P** **16 28 02.3 -0.5**
baz=32,SNR=46
H24A S **S** **16 33 07.1 +0.3**
baz=32
H24A S **S** **16 33 07.1 +0.3**
baz=32
BSC Santa Cruz Isl 32.13 312 ⇓P **P** **16 28 04.8 +1.6**
baz=32
ARVC Arvin 32.15 314 ⇑P **P** **16 28 04.7 +1.4**
baz=32,SNR=28
ARVC S **S** **16 33 11.8 +4.1**
baz=32
ARVC S **S** **16 33 11.8 +4.1**
baz=32
HWUT Hardware Ranch 32.17 331 *e*P **P** **16 28 03.4 -0.2**
comp=Z,162nm,1.4s
HWUT *e*PcP **PcP** **16 30 50.6 +0.7**
HWUT *e*ScP **ScP** **16 34 24.1 +0.8**
I21A Big Trails, Te 32.18 338 ⇓P **P** **16 28 03.4 -0.3**
baz=32,SNR=23
I21A S **S** **16 33 08.9 +0.6**
baz=32
I21A S **S** **16 33 08.9 +0.6**
baz=32
BW06 Boulder Array 32.19 334 *e*P **P** **16 28 03.3 -0.5**
comp=Z,15nm,0.8s
BW06 Boulder Array 32.19 334 ⇑P **P** **16 28 03.3 -0.5**
baz=32,SNR=26
BW06 S **S** **16 33 09.5 +0.9**
baz=32
BW06 S **S** **16 33 09.5 +0.9**
baz=32
BW06 S **S** **16 33 09.5 +0.9**
baz=32
BW06 S **S** **16 33 09.5 +0.9**
baz=32
PDAR Pinedale Array 32.19 334 P **P** **16 28 03.5 -0.4**
PDAR PcP **PcP** **16 30 50.0 0.0**
PDAR ScP **ScP** **16 34 24.5 +1.2**
PDAR PKiKP **PKiKP** **16 38 16.8 -1.0**
PDAR *e* 16 59 30.5
PDAR Pinedale Array 32.19 334 P **P** **16 28 03.5 -0.4**
comp=Z,14nm,0.8s,baz=131,slow=11,SNR=64
PDAR PcP **PcP** **16 30 50.0 0.0**
comp=Z,20nm,0.4s,baz=133,slow=5.6,SNR=27
PDAR ScP **ScP** **16 34 24.5 +1.2**
comp=Z,106nm,0.9s,baz=144,slow=5.5,SNR=49
PDAR PKiKP **PKiKP** **16 38 16.8 -1.0**
comp=Z,5.0nm,0.9s,baz=97,slow=1.9,SNR=7.1
PDAR LR LR 16 43 25.8
comp=Z,4μm,18.3s,baz=145,slow=40
PDAR P3KPbc 16 59 30.5
comp=Z,0.5nm,0.5s,baz=335,slow=0.5,SNR=5.2
H23A Clabaugh Cattl 32.19 341 ⇑P **P** **16 28 03.0 -0.6**
baz=32
ISA Isabella 32.20 316 *e*P **P** **16 28 05.3 +1.5**
ISA *e* 16 30 51.5
ISA pmax pmax
comp=Z,188nm,1.2s
ISA Isabella 32.20 316 *e*P **P** **16 28 05.3 +1.5**
comp=Z,46nm,1.2s
ISA *e*PcP **PcP** **16 30 51.5 +1.5**
ISA *e*ScP **ScP** **16 34 26.2 +2.9**
ISA Isabella 32.20 316 ⇓P **P** **16 28 05.4 +1.5**
baz=32,SNR=66
ISA S **S** **16 33 13.0 +4.5**
baz=32
ISA S **S** **16 33 13.0 +4.5**
baz=32
L17A Cokeville 32.23 332 ⇑P **P** **16 28 03.6 -0.5**
baz=32,SNR=35
L17A S **S** **16 33 10.9 +1.7**
baz=32
L17A S **S** **16 33 10.9 +1.7**
baz=32
GRAC Grapevine Rang 32.24 319 ⇓P **P** **16 28 05.6 +1.5**
baz=32,SNR=150
GRAC S **S** **16 33 14.5 +5.5**
baz=32
GRAC S **S** **16 33 14.5 +5.5**
baz=32
K18A Toltan Ranch, 32.29 334 ⇑P **P** **16 28 04.8 +0.1**
baz=32,SNR=39
K18A S **S** **16 33 12.8 +2.7**
baz=32
K18A S **S** **16 33 12.8 +2.7**
baz=32
ACCN Adirondack Com 32.37 24 *e*P **P** **16 28 05.8 +0.7**
comp=Z,170nm,1.1s
CWC Cottonwood Cre 32.37 317 ⇓P **P** **16 28 07.2 +1.8**
baz=32,SNR=12
J19A Crowheart 32.39 335 ⇓P **P** **16 28 04.8 -0.7**
baz=32,SNR=19
J19A S **S** **16 33 12.9 +1.3**
baz=32
J19A S **S** **16 33 12.9 +1.3**
baz=32
SBC Santa Barbara 32.41 313 ⇓P **P** **16 28 07.4 +1.8**
baz=32
SBC S **S** **16 33 16.8 +5.1**
baz=32
SBC S **S** **16 33 16.8 +5.1**
baz=32
L16A Fish Haven 32.42 331 ⇓P **P** **16 28 05.4 -0.4**
baz=32,SNR=102
L16A S **S** **16 33 13.9 +1.8**
baz=32
L16A S **S** **16 33 13.9 +1.8**
baz=32
H22A Clearmont 32.53 340 ⇓P **P** **16 28 05.9 -0.8**
baz=33,SNR=25
HRV Adam Dziewonsk 32.54 28 *e*P **P** **16 28 07.1 +0.5**
HRV pmax pmax
comp=Z,274nm,1.0s
HRV Adam Dziewonsk 32.54 28 *e*P **P** **16 28 07.1 +0.5**
comp=Z,274nm,1.0s
WES Weston 32.55 28 *e*P **P** **16 28 07.6 +0.9**
WES Weston 32.55 28 *e*P **P** **16 28 07.6 +0.9**
G24A Alzada 32.59 343 ⇓P **P** **16 28 07.1 0.0**
baz=33
I20A Worland 32.61 337 ⇓P **P** **16 28 07.2 -0.1**
baz=33,SNR=75
I20A S **S** **16 33 16.7 +1.9**
baz=33
I20A S **S** **16 33 16.7 +1.9**
baz=33
NCB Newcomb 32.65 23 *e*P **P** **16 28 07.9 +0.4**
comp=Z,199nm,0.6s
VES Vestal, Richgr 32.71 315 ⇑P **P** **16 28 10.0 +1.8**
baz=33,SNR=105
VES S S 16 33 23.0 +6.8
baz=33
VES S S 16 33 23.0 +6.8
baz=33
PKM Peak Mountain 32.72 313 ⇑P **P** **16 28 09.7 +1.3**
baz=33,SNR=39
PKM S **S** **16 33 21.9 +5.1**
baz=33
PKM S **S** **16 33 21.9 +5.1**
baz=33
J18A Kendall Valley 32.75 334 ⇑P **P** **16 28 08.8 +0.1**
baz=33,SNR=44
J18A S **S** **16 33 18.5 +1.2**
baz=33
J18A S **S** **16 33 18.5 +1.2**
baz=33
G23A Biddle 32.76 341 ⇓P **P** **16 28 08.3 -0.4**
baz=33,SNR=26
K17A Gardner Place, 32.77 333 ⇓P **P** **16 28 09.0 +0.2**
baz=33,SNR=27
K17A S **S** **16 33 18.9 +1.4**
baz=33
K17A S **S** **16 33 18.9 +1.4**
baz=33
H21A Big Horn, Sher 32.80 339 ⇑P **P** **16 28 08.1 -0.8**
baz=33
H21A S **S** **16 33 19.0 +1.2**
baz=33
H21A S **S** **16 33 19.0 +1.2**
baz=33
TIN Tinemaha 32.82 318 ⇑P **P** **16 28 11.2 +1.9**
baz=33,SNR=21
AHID Auburn Hatcher 32.86 332 P **P** **16 28 09.2 -0.4**
comp=Z,45nm,0.8s
AHID *e*ScP **ScP** **16 34 27.3 +1.7**
L15A Malad City 32.86 330 ⇑P **P** **16 28 09.6 -0.1**
baz=33,SNR=103
L15A S **S** **16 33 21.4 +2.4**
baz=33
L15A S **S** **16 33 21.4 +2.4**
baz=33
I19A Meeteetse 33.02 336 ⇓P **P** **16 28 11.3 +0.4**
baz=33,SNR=67
I19A S **S** **16 33 22.8 +1.5**
baz=33
I19A S **S** **16 33 22.8 +1.5**
baz=33
H20A Greybull 33.02 338 ⇓P **P** **16 28 10.0 -0.9**
baz=33,SNR=36
H20A S **S** **16 33 21.7 +0.5**
baz=33
H20A S **S** **16 33 21.7 +0.5**
baz=33
SMMC Simmler 33.06 314 ⇓P **P** **16 28 13.6 +2.3**
baz=33,SNR=8.5
SMMC S **S** **16 33 27.2 +5.3**
baz=33
SMMC S **S** **16 33 27.2 +5.3**
baz=33
F24A Ekalaka 33.07 343 ⇓P **P** **16 28 10.8 -0.5**
baz=33,SNR=28
F24A S **S** **16 33 26.6 +4.8**
baz=33
F24A S **S** **16 33 26.6 +4.8**
baz=33
G22A Birney 33.07 340 ⇑P **P** **16 28 10.2 -1.1**
baz=33,SNR=32
I18A Diamond G Ranc 33.07 335 ⇑P **P** **16 28 11.2 -0.3**
baz=33,SNR=32
I18A S **S** **16 33 24.3 +2.1**
baz=33
I18A S **S** **16 33 24.3 +2.1**
baz=33
RCTC Rector, Farmer 33.07 316 ⇑P **P** **16 28 12.9 +1.6**
baz=33,SNR=71
RCTC S **S** **16 33 27.0 +5.2**
baz=33
RCTC S **S** **16 33 27.0 +5.2**
baz=33
LONY Lake Ozonia 33.07 22 *e*P **P** **16 28 11.8 +0.6**
comp=Z,373nm,1.0s
MDV Middlebury 33.08 24 *e*P **P** **16 28 11.6 +0.4**
K16A Soda Springs 33.13 332 ⇓P **P** **16 28 11.9 -0.1**
baz=33
K16A S **S** **16 33 25.7 +2.5**
baz=33
K16A S **S** **16 33 25.7 +2.5**
baz=33
J17A Brown Place, J 33.17 334 ⇑P **P** **16 28 12.4 +0.1**
baz=33,SNR=76
J17A S **S** **16 33 22.9 -0.7**
baz=33
J17A S **S** **16 33 22.9 -0.7**
baz=33
HNH Hanover 33.20 25 *e*P **P** **16 28 13.6 +1.4**
MTUM Tungsten Hills 33.21 318 *e*P **P** **16 28 14.2 +1.4**
MTUM *e*PcP **PcP** **16 30 54.3 +1.4**
MTUM *e*ScP **ScP** **16 34 29.3 +2.3**
REDW Red Top Meadow 33.23 333 *e*P **P** **16 28 13.5 +0.6**
REDW *e*ScP **ScP** **16 34 29.2 +2.3**
EYMN Ely 33.23 360 *e*P **P** **16 28 11.1 -1.4**
comp=Z,77nm,0.7s
F23A Volborg 33.24 342 ⇓P **P** **16 28 12.1 -0.6**
baz=33,SNR=7.8
F23A S **S** **16 33 25.3 +0.9**
baz=33
F23A S **S** **16 33 25.3 +0.9**
baz=33
SNOW Snow King Moun 33.27 334 *e*P **P** **16 28 13.2 0.0**
comp=Z,115nm,0.6s
SNOW *e*ScP **ScP** **16 34 29.4 +2.3**
FFD Franklin Falls 33.27 26 *e*P **P** **16 28 14.8 +1.8**
MSNY Massena 33.30 21 *e*P **P** **16 28 13.5 +0.4**
L14A Malta 33.30 329 ⇓P **P** **16 28 13.8 +0.3**
baz=33,SNR=155
L14A S **S** **16 33 28.7 +3.1**
baz=33
L14A S **S** **16 33 28.7 +3.1**
baz=33
LOHW Long Hollow 33.32 334 *e*P **P** **16 28 13.5 -0.1**
comp=Z,40nm,0.6s
LOHW *e*PcP **PcP** **16 30 53.9 +0.8**
LOHW *e*ScP **ScP** **16 34 28.5 +1.2**
TPAW Teton Pass 33.37 333 *e*P **P** **16 28 14.1 0.0**
comp=Z,442nm,1.8s
TPAW *e*PcP **PcP** **16 30 54.4 +1.0**
TPAW *e*ScP **ScP** **16 34 29.6 +2.2**
G21A Lodge Grass 33.38 339 ⇓P **P** **16 28 13.1 -0.9**
baz=33,SNR=25
PTRM Twissleman Ran 33.38 314 *e*P **P** **16 28 16.4 +2.3**
ELK Elko 33.41 326 *e*P **P** **16 28 16.1 +1.6**
comp=Z,24μm,2.1s
ELK *e*PcP **PcP** **16 30 54.6 +1.1**
ELK S S 16 33 34.0 +6.5
ELK *e*ScP **ScP** **16 34 29.6 +2.1**
ELK PKiKP **PKiKP** **16 38 18.8 +0.1**
ELK Elko 33.41 326 P **P** **16 28 16.1 +1.6**
comp=Z,47nm,0.6s,baz=135,slow=6.3,SNR=202
ELK PcP **PcP** **16 30 54.5 +1.1**
comp=Z,60nm,0.8s,baz=191,slow=2.9,SNR=18
ELK S S 16 33 34.0 +6.5
comp=Z,1.2nm,0.4s,baz=242,slow=16,SNR=7.5
ELK ScP **ScP** **16 34 29.7 +2.1**
comp=Z,33nm,0.9s,baz=123,slow=3.4,SNR=19
ELK PKiKP **PKiKP** **16 38 18.8 +0.1**
comp=Z,1.8nm,0.5s,baz=126,slow=3.6,SNR=7.7
ELK LR LR 16 43 25.6
comp=Z,4μm,18.2s,baz=130,slow=39
RRI2 Red Ridge 33.42 333 *e*P **P** **16 28 15.0 +0.4**
comp=Z,460nm,1.8s
RRI2 *e*PcP **PcP** **16 30 54.4 +0.9**
RRI2 *e*ScP **ScP** **16 34 29.5 +1.8**
K15A Arbon 33.45 331 ⇓P **P** **16 28 15.1 +0.4**
baz=34,SNR=50
K15A S **S** **16 33 30.1 +2.1**
baz=34
K15A S **S** **16 33 30.1 +2.1**
baz=34
MOOW Moose Ponds 33.49 334 *e*P **P** **16 28 14.6 -0.5**
comp=Z,381nm,2.5s
MOOW *e*PcP **PcP** **16 30 53.8 +0.2**
MOOW *e*ScP **ScP** **16 34 29.0 +1.1**
H19A Powell 33.55 337 ⇑P **P** **16 28 15.3 -0.2**
baz=34,SNR=26
H19A S **S** **16 33 29.6 +0.2**
baz=34
H19A S **S** **16 33 29.6 +0.2**
baz=34
MLAC Mammoth Lakes 33.55 318 ⇓P **P** **16 28 18.0 +2.2**
baz=34,SNR=5.4
MLAC S **S** **16 33 33.5 +3.7**
baz=34
MLAC S **S** **16 33 33.5 +3.7**
baz=34
F22A Rosebud 33.55 341 ⇓P **P** **16 28 14.3 -1.1**
baz=34,SNR=15
F22A S **S** **16 33 29.1 -0.2**
baz=34
F22A S **S** **16 33 29.1 -0.2**
baz=34
DCID1 Drake Creek 33.56 333 *e*P **P** **16 28 16.3 +0.6**
DCID1 *e*PcP **PcP** **16 30 55.0 +1.3**
DCID1 *e*ScP **ScP** **16 34 30.2 +2.2**
I17A Pilgrim Ck. 33.56 334 ⇓P **P** **16 28 16.3 +0.5**
baz=34,SNR=24
I17A S **S** **16 33 32.5 +2.7**
baz=34
I17A S **S** **16 33 32.5 +2.7**
baz=34
NV11 Mina Array Sit 33.60 320 *e*P **P** **16 28 17.8 +1.8**
NV11 *e*PcP **PcP** **16 30 55.3 +1.3**
NV11 *e*ScP **ScP** **16 34 29.7 +1.5**
FRNY Flat Rock 33.62 23 *e*P **P** **16 28 16.6 +0.6**
comp=Z,130nm,0.7s
K14A Jones Ranch, D 33.66 330 ⇓P **P** **16 28 16.6 +0.1**
baz=34,SNR=98
K14A S **S** **16 33 33.5 +2.4**
baz=34
K14A S **S** **16 33 33.5 +2.4**
baz=34
E24A Baker 33.68 344 ⇑P **P** **16 28 16.1 -0.5**
baz=34,SNR=68
E24A S **S** **16 33 34.2 +2.9**
baz=34
E24A S **S** **16 33 34.2 +2.9**
baz=34
NVAR Mina Array Bea 33.69 320 P **P** **16 28 18.9 +2.0**
NVAR PcP **PcP** **16 30 55.8 +1.5**
NVAR ScP **ScP** **16 34 30.2 +1.6**
NVAR PKiKP **PKiKP** **16 38 19.8 +0.9**
NVAR Mina Array Bea 33.69 320 P **P** **16 28 18.9 +2.0**
comp=Z,348nm,0.8s,baz=133,slow=8.4,SNR=716
NVAR PcP **PcP** **16 30 55.8 +1.5**
comp=Z,103nm,0.9s,baz=167,slow=2.4,SNR=18
NVAR ScP **ScP** **16 34 30.2 +1.6**
comp=Z,93nm,1.0s,baz=142,slow=4.2,SNR=32
NVAR PKiKP **PKiKP** **16 38 19.8 +0.9**
comp=Z,2.5nm,0.7s,baz=186,slow=2.1,SNR=6.2
NVAR LR LR 16 43 57.9
comp=Z,6μm,18.0s,baz=234,slow=40
IMW Indian Meadow 33.70 334 *e*P **P** **16 28 16.6 -0.4**
comp=Z,29nm,0.6s
G20A Bridger 33.73 338 ⇑P **P** **16 28 15.9 -1.1**
baz=34,SNR=34
G20A S **S** **16 33 30.3 -1.8**
baz=34
G20A S **S** **16 33 30.3 -1.8**
baz=34
LBNH Lisbon 33.78 25 *e*P **P** **16 28 18.6 +1.2**
LBNH pmax pmax
comp=Z,165nm,1.2s
LBNH Lisbon 33.78 25 *e*P **P** **16 28 18.6 +1.2**
comp=Z,165nm,1.2s
H18A Shoshone NF, C 33.81 336 ⇑P **P** **16 28 17.3 -0.6**
baz=34,SNR=165
H18A S **S** **16 33 33.6 -0.1**
baz=34
H18A S **S** **16 33 33.6 -0.1**
baz=34
MDND Maddock 33.86 350 ⇓P **P** **16 28 17.0 -1.0**
baz=34,SNR=18
MDND S **S** **16 33 32.7 -1.2**
baz=34
MDND S **S** **16 33 32.7 -1.2**
baz=34
F21A Absaloka Mine, 33.88 340 ⇑P **P** **16 28 17.1 -1.1**
baz=34
E23A Ismay 33.91 342 ⇓P **P** **16 28 17.4 -1.1**
baz=34,SNR=30
I16A Newdale 33.91 333 ⇓P **P** **16 28 19.2 +0.4**
baz=34,SNR=17
I16A S **S** **16 33 35.2 +0.1**
baz=34
I16A S **S** **16 33 35.2 +0.1**
baz=34
H17A Grant Village 33.95 335 ⇓P **P** **16 28 20.0 +0.8**
baz=34,SNR=19
H17A S **S** **16 33 37.2 +1.4**
baz=34
H17A S **S** **16 33 37.2 +1.4**
baz=34
J15A Blackfoot 33.96 332 ⇑P **P** **16 28 19.3 +0.2**
baz=34,SNR=59
J15A S **S** **16 33 37.3 +1.4**
baz=34
J15A S **S** **16 33 37.3 +1.4**
baz=34
LKWY Lake 34.02 335 *e*P **P** **16 28 21.1 +1.4**
LKWY Lake 34.02 335 *e*P **P** **16 28 21.1 +1.4**
LKWY *e*ScP **ScP** **16 34 33.0 +3.3**
RLMT Red Lodge 34.03 337 *e*P **P** **16 28 18.9 -0.9**
comp=Z,528nm,2.8s
RLMT *e*ScP **ScP** **16 34 31.2 +1.6**
RLMT Red Lodge 34.03 337 ⇓P **P** **16 28 19.1 -0.7**
baz=34,SNR=26
RLMT S **S** **16 33 37.7 +0.6**
baz=34
RLMT S **S** **16 33 37.7 +0.6**
baz=34
RLMT S **S** **16 33 37.7 +0.6**
baz=34
RLMT S **S** **16 33 37.7 +0.6**
baz=34
E22A Miles City 34.05 342 ⇓P **P** **16 28 18.9 -0.8**
baz=34,SNR=19
D24A Glendive 34.20 344 ⇑P **P** **16 28 20.8 -0.2**
baz=34,SNR=21
F20A Billings 34.21 339 ⇓P **P** **16 28 20.5 -0.6**
baz=34,SNR=14
BMN Battle Mountai 34.30 324 *e*P **P** **16 28 23.6 +1.5**
BMN pmax pmax
comp=Z,926nm,1.8s
BMN Battle Mountai 34.30 324 *e*P **P** **16 28 23.6 +1.5**
comp=Z,926nm,1.8s
G18A Lazy EL Ranch, 34.31 337 ⇑P **P** **16 28 21.3 -0.9**
baz=34,SNR=68
G18A S **S** **16 33 40.6 -0.6**
baz=34
G18A S **S** **16 33 40.6 -0.6**
baz=34
LRV Little Rabbit 34.34 315 *e*P **P** **16 28 24.3 +1.9**
J14A Carey 34.41 331 ⇓P **P** **16 28 23.9 +0.9**
baz=34,SNR=70
J14A S **S** **16 33 45.8 +3.1**
baz=34
J14A S **S** **16 33 45.8 +3.1**
baz=34
I15A Monteview 34.45 332 ⇓P **P** **16 28 24.0 +0.7**
baz=35,SNR=12
I15A S **S** **16 33 45.4 +2.0**
baz=35
I15A S **S** **16 33 45.4 +2.0**
baz=35
H16A Russell Place, 34.48 334 ⇑P **P** **16 28 24.4 +0.7**
baz=35,SNR=27
H16A S **S** **16 33 46.5 +2.6**
baz=35
H16A S **S** **16 33 46.5 +2.6**
baz=35
E21A Keefer Ranch, 34.49 341 ⇑P **P** **16 28 23.0 -0.6**
baz=35,SNR=19
E21A S **S** **16 33 43.9 +0.2**
baz=35
E21A S **S** **16 33 43.9 +0.2**
baz=35
D23A Lindsay 34.49 343 ⇑P **P** **16 28 23.7 +0.1**
baz=35,SNR=10
D23A S **S** **16 33 44.2 +0.4**
baz=35
D23A S **S** **16 33 44.2 +0.4**
baz=35
F19A Roth Farm, Mol 34.54 338 ⇓P **P** **16 28 23.0 -1.0**
baz=35,SNR=50
F19A S **S** **16 33 43.7 -0.9**
baz=35
F19A S **S** **16 33 43.7 -0.9**
baz=35
C24A Savage 34.61 344 ⇑P **P** **16 28 24.4 -0.1**
baz=35,SNR=53
C24A S **S** **16 33 48.0 +2.5**
baz=35
C24A S **S** **16 33 48.0 +2.5**
baz=35
QLMT Earthquake Lak 34.66 334 *e*P **P** **16 28 26.6 +1.4**
QLMT *e*PcP **PcP** **16 30 58.4 +1.5**
QLMT *e*ScP **ScP** **16 34 34.6 +2.7**

GCMT **Greycliff** 34.75 337 *e*P **P** 16 28 25.5 -0.4
D22A **Cohagen** 34.76 342 ⇑P **P** 16 28 25.5 -0.3
baz=35,SNR=64
D22A S **S** 16 33 49.5 +1.7
baz=35
D22A S **S** 16 33 49.5 +1.7
baz=35
G17A **Pierce Place,** 34.77 336 ⇑P **P** 16 28 27.1 +1.0
baz=35,SNR=22
G17A S **S** 16 33 52.9 +4.6
baz=35
G17A S **S** 16 33 52.9 +4.6
baz=35
J13A **Cove Ranch, Pi** 34.78 330 ⇑P **P** 16 28 26.7 +0.6
baz=35,SNR=30
CMB **Columbia Colle** 34.79 318 *e*P **P** 16 28 27.1 +0.9
CMB *e* 16 30 57.2
CMB pmax pmax
comp=Z,140nm,1.0s
CMB **Columbia Colle** 34.79 318 *e*P **P** 16 28 27.1 +0.9
comp=Z,140nm,1.0s
CMB *e*PcP **PcP** 16 30 57.2 0.0
CMB *e*ScP **ScP** 16 34 34.1 +1.8
E20A **Meyer Farm, Mu** 34.81 339 ⇑P **P** 16 28 25.9 -0.4
baz=35,SNR=72
E20A S **S** 16 33 49.1 +0.4
baz=35
E20A S **S** 16 33 49.1 +0.4
baz=35
SAO **San Andreas Ge** 34.81 315 *e*P **P** 16 28 27.6 +1.2
SAO *e* 16 30 58.5
SAO pmax pmax
comp=Z,250nm,1.6s
SAO **San Andreas Ge** 34.81 315 *e*P **P** 16 28 27.6 +1.2
comp=Z,250nm,1.6s
SAO *e*PcP **PcP** 16 30 58.5 +1.2
SAO *e*ScP **ScP** 16 34 34.5 +2.1
I14A **Mackay** 34.84 331 ⇑P **P** 16 28 27.7 +1.0
baz=35,SNR=50
I14A S **S** 16 33 52.6 +3.1
baz=35
I14A S **S** 16 33 52.6 +3.1
baz=35
F18A **Big Timber** 34.86 337 ⇑P **P** 16 28 26.1 -0.7
baz=35,SNR=84
F18A S **S** 16 33 49.0 -0.6
baz=35
F18A S **S** 16 33 49.0 -0.6
baz=35
D21A **La Casta Ranch** 34.93 341 ⇑P **P** 16 28 27.3 -0.1
baz=35,SNR=11
D21A S **S** 16 33 52.9 +2.4
baz=35
D21A S **S** 16 33 52.9 +2.4
baz=35
E19A **Rath Farm, Rou** 35.00 339 ⇑P **P** 16 28 27.3 -0.7
baz=35,SNR=39
E19A S **S** 16 33 51.8 +0.2
baz=35
E19A S **S** 16 33 51.8 +0.2
baz=35
H15A **Lima** 35.01 333 ⇑P **P** 16 28 29.1 +0.9
baz=35,SNR=68
H15A S **S** 16 33 55.4 +3.4
baz=35
H15A S **S** 16 33 55.4 +3.4
baz=35
WVL **Waterville** 35.01 27 *e*P **P** 16 28 28.5 +0.5
HLID **Hailey** 35.02 330 *e*P **P** 16 28 28.4 +0.1
comp=Z,127nm,1.1s
HLID *e*PcP **PcP** 16 30 59.5 +1.5
HLID *e*ScP **ScP** 16 34 35.3 +2.1
HLID **Hailey** 35.02 330 ⇓P **P** 16 28 28.4 +0.1
baz=35,SNR=156
HLID S **S** 16 33 54.3 +2.2
baz=35
HLID S **S** 16 33 54.3 +2.2
baz=35
C23A **Lambert** 35.06 344 ⇓P **P** 16 28 28.1 -0.4
baz=35,SNR=45
C23A S **S** 16 33 55.2 +2.8
baz=35
C23A S **S** 16 33 55.2 +2.8
baz=35
G16A **Moss Hill, Enn** 35.14 334 ⇓P **P** 16 28 30.1 +0.8
baz=35,SNR=44
G16A S **S** 16 33 56.8 +2.9
baz=35
G16A S **S** 16 33 56.8 +2.9
baz=35
I13A **Wildhorse Cree** 35.14 331 ⇑P **P** 16 28 30.0 +0.6
baz=35,SNR=130
I13A S **S** 16 33 56.5 +2.4
baz=35
I13A S **S** 16 33 56.5 +2.4
baz=35
C22A **Vida** 35.21 343 ⇑P **P** 16 28 29.4 -0.3
baz=35,SNR=51
F17A **Fitzpatrick Pl** 35.23 336 ⇑P **P** 16 28 30.0 +0.1
baz=35,SNR=50
F17A S **S** 16 33 57.3 +2.1
baz=35
F17A S **S** 16 33 57.3 +2.1
baz=35
MCMT **McKenzie Canyo** 35.27 333 *e*P **P** 16 28 31.1 +0.6
D20A **Manuel Ranch,** 35.32 340 ⇑P **P** 16 28 30.4 -0.2
baz=36,SNR=18
D20A S **S** 16 33 59.6 +3.1
baz=36
D20A S **S** 16 33 59.6 +3.1
baz=36
H14A **Leadore** 35.33 332 ⇑P **P** 16 28 31.8 +0.8
baz=36,SNR=78
H14A S **S** 16 33 59.6 +2.6
baz=36
H14A S **S** 16 33 59.6 +2.6
baz=36
G15A **Dillon** 35.38 334 ⇑P **P** 16 28 31.9 +0.6
baz=36,SNR=51
G15A S **S** 16 33 59.7 +2.1
baz=36
G15A S **S** 16 33 59.7 +2.1
baz=36
BOZ **Bozeman (W)** 35.40 335 *e*P **P** 16 28 31.5 0.0
BOZ *e* 16 30 59.7
BOZ pmax pmax
comp=Z,109nm,1.8s
BOZ **Bozeman (W)** 35.40 335 *e*P **P** 16 28 31.5 0.0
comp=Z,139nm,1.8s
BOZ *e*PcP **PcP** 16 30 59.7 +0.7
BOZ *e*ScP **ScP** 16 34 36.2 +1.7
BOZ **Bozeman (W)** 35.40 335 ⇑P **P** 16 28 31.5 0.0
baz=36,SNR=44
BOZ S **S** 16 33 59.4 +1.5
baz=36
BOZ S **S** 16 33 59.4 +1.5
baz=36
BOZ S **S** 16 33 59.4 +1.5
baz=36
BOZ S **S** 16 33 59.4 +1.5
baz=36
DGMT **Dagmar** 35.42 345 *e*P **P** 16 28 31.3 -0.2
comp=Z,92nm,0.7s
DGMT *e*PcP **PcP** 16 30 59.7 +0.9
DGMT *e*ScP **ScP** 16 34 35.3 +1.0
DGMT **Dagmar** 35.42 345 ⇓P **P** 16 28 31.2 -0.2
baz=36,SNR=22
DGMT S **S** 16 33 59.6 +1.8
baz=36
DGMT S **S** 16 33 59.6 +1.8
baz=36
E18A **Harlowton** 35.50 338 ⇑P **P** 16 28 32.1 -0.2
baz=36,SNR=24
E18A S **S** 16 34 00.5 +1.2
baz=36
E18A S **S** 16 34 00.5 +1.2
baz=36
F16A **Kennard Place,** 35.51 335 ⇓P **P** 16 28 32.6 +0.2
baz=36,SNR=21
F16A S **S** 16 33 59.5 -0.1
baz=36
F16A S **S** 16 33 59.5 -0.1
baz=36
I12A **Atlanta** 35.54 330 ⇓P **P** 16 28 33.0 +0.3
baz=36
I12A S **S** 16 34 03.2 +3.1
baz=36
I12A S **S** 16 34 03.2 +3.1
baz=36
DLMT **Dillon** 35.58 334 *e*P **P** 16 28 33.8 +0.7
comp=Z,132nm,1.4s
DLMT *e*ScP **ScP** 16 34 37.5 +2.4
MFID **Camas Ranch** 35.61 329 *e*P **P** 16 28 34.1 +0.8
comp=Z,114nm,0.9s
MFID *e*PcP **PcP** 16 31 01.1 +1.5
MFID *e*ScP **ScP** 16 34 37.5 +2.2
MFID **Camas Ranch** 35.61 329 ⇑P **P** 16 28 33.7 +0.5
baz=36,SNR=66
MFID S **S** 16 34 02.7 +1.6
baz=36
MFID S **S** 16 34 02.7 +1.6
baz=36
B23A **Brockton** 35.62 344 ⇑P **P** 16 28 33.4 +0.2
baz=36,SNR=45
C21A **Desert Coulee** 35.64 342 ⇑P **P** 16 28 33.0 -0.3
baz=36,SNR=25
C21A S **S** 16 34 02.3 +1.0
baz=36
C21A S **S** 16 34 02.3 +1.0
baz=36
D19A **Cripps Ranch,** 35.64 339 ⇑P **P** 16 28 32.9 -0.5
baz=36,SNR=87
D19A S **S** 16 34 03.1 +1.7
baz=36
D19A S **S** 16 34 03.1 +1.7
baz=36
H13A **Challis** 35.70 331 ⇓P **P** 16 28 34.4 +0.4
baz=36,SNR=159
H13A S **S** 16 34 04.9 +2.4
baz=36
H13A S **S** 16 34 04.9 +2.4
baz=36
ULM **Lac du Bonnet** 35.74 355 *e*P **P** 16 28 32.8 -1.3
comp=Z,93nm,0.7s
ULM S **S** 16 33 58.8 -3.8
ULM ScP **ScP** 16 34 34.9 -0.5
ULM **Lac du Bonnet** 35.74 355 P **P** 16 28 32.8 -1.3
comp=Z,112nm,0.6s,baz=172,slow=9.8,SNR=101
ULM S **S** 16 33 58.8 -3.8
comp=Z,12nm,0.8s,baz=317,slow=18,SNR=4.5
ULM ScP **ScP** 16 34 34.9 -0.5
comp=Z,44nm,0.8s,baz=210,slow=4.0,SNR=12
ULM LR LR 16 47 16.6
comp=Z,5µm,18.5s,baz=176,slow=43
B22A **Reddig Ranch S** 35.74 343 ⇑P **P** 16 28 34.2 0.0
baz=36,SNR=14
B22A S **S** 16 34 03.8 +0.9
baz=36
B22A S **S** 16 34 03.8 +0.9
baz=36
E17A **Martinsdale** 35.77 337 ⇓P **P** 16 28 34.2 -0.5
baz=36,SNR=18
E17A S **S** 16 34 05.3 +1.8
baz=36
E17A S **S** 16 34 05.3 +1.8
baz=36
A24A **Westby** 35.79 346 ⇑P **P** 16 28 34.3 -0.3
baz=36,SNR=39
A24A S **S** 16 34 05.6 +2.0
baz=36
A24A S **S** 16 34 05.6 +2.0
baz=36
C20A **Veseth Ranch,** 35.83 341 ⇑P **P** 16 28 34.7 -0.3
baz=36,SNR=43
C20A S **S** 16 34 05.5 +1.4
baz=36
C20A S **S** 16 34 05.5 +1.4
baz=36
BEKR **Beckworth** 35.83 320 *e*P **P** 16 28 36.4 +1.1
comp=Z,191nm,1.2s
BEKR *e*PcP **PcP** 16 31 01.4 +1.0
G14A **Jackson** 35.86 333 ⇑P **P** 16 28 36.0 +0.5
baz=36,SNR=30
G14A S **S** 16 34 07.1 +2.1
baz=36
G14A S **S** 16 34 07.1 +2.1
baz=36
LRM **Limekiln Ridge** 35.88 334 *e*P **P** 16 28 35.8 0.0
LRM *e*ScP **ScP** 16 34 38.5 +2.1
SAC **San Andreas** 35.90 315 *e*P **P** 16 28 37.4 +1.7
SAC **San Andreas** 35.90 315 *e*P **P** 16 28 37.4 +1.7
F15A **Butte** 35.92 334 ⇑P **P** 16 28 36.0 +0.1
baz=36,SNR=56
F15A S **S** 16 34 07.6 +1.8
baz=36
F15A S **S** 16 34 07.6 +1.8
baz=36
H12A **Diamond D Ranc** 35.97 331 ⇓P **P** 16 28 36.7 +0.3
baz=36,SNR=148
H12A S **S** 16 34 09.7 +3.0
baz=36
H12A S **S** 16 34 09.7 +3.0
baz=36
D18A **Linhart Farms,** 35.99 338 ⇑P **P** 16 28 36.5 +0.1
baz=36,SNR=30
D18A S **S** 16 34 07.8 +1.0
baz=36
D18A S **S** 16 34 07.8 +1.0
baz=36
A23A **Redstone** 36.04 345 ⇑P **P** 16 28 37.2 +0.4
baz=36,SNR=5.0
G13A **Cobalt** 36.09 332 ⇑P **P** 16 28 37.6 +0.2
baz=36,SNR=43
G13A S **S** 16 34 10.2 +1.7
baz=36
G13A S **S** 16 34 10.2 +1.7
baz=36
EMMW **East Machias** 36.13 29 *e*P **P** 16 28 38.2 +0.7
E16A **East Helena** 36.14 336 ⇑P **P** 16 28 37.5 -0.3
baz=36,SNR=37
E16A S **S** 16 34 09.9 +0.7
baz=36
E16A S **S** 16 34 09.9 +0.7
baz=36
B21A **Ellsworth Farm** 36.15 342 ⇓P **P** 16 28 37.4 -0.3
baz=36
B21A S **S** 16 34 11.4 +2.3
baz=36
B21A S **S** 16 34 11.4 +2.3
baz=36
C19A **Slack Wire Ran** 36.19 339 ⇓P **P** 16 28 37.9 -0.2
baz=36,SNR=37
C19A S **S** 16 34 11.1 +1.4
baz=36
C19A S **S** 16 34 11.1 +1.4
baz=36
OHCM **Honcut** 36.23 319 *e*P **P** 16 28 40.5 +2.1
OHCM *e*PcP **PcP** 16 31 03.0 +1.6
OHCM *e*ScP **ScP** 16 34 39.9 +2.5
F14A **Wisdom** 36.27 334 ⇓P **P** 16 28 39.1 +0.2
baz=36
F14A S **S** 16 34 12.5 +1.3
baz=36
F14A S **S** 16 34 12.5 +1.3
baz=36
D17A **Six Diamond Ra** 36.28 337 ⇓P **P** 16 28 38.5 -0.4
baz=36,SNR=109
D17A S **S** 16 34 12.1 +0.9
baz=36
D17A S **S** 16 34 12.1 +0.9
baz=36
SAML **Samuel** 36.34 128 *e*P **P** 16 28 37.8 -1.8
comp=Z,48nm,0.8s
SAML pP **pP** 16 29 05.5 +0.3
SAML *e*PcP **PcP** 16 31 02.3 +0.2
SAML *e*ScP **ScP** 16 34 40.5 +2.2
A22A **Carney Farms,** 36.35 344 ⇑P **P** 16 28 39.4 0.0
baz=36,SNR=48
A22A S **S** 16 34 15.0 +2.9
baz=36
A22A S **S** 16 34 15.0 +2.9
baz=36
HRY **Holter Researc** 36.35 336 *e*P **P** 16 28 39.8 +0.2
HRY *e*PcP **PcP** 16 31 03.2 +1.5
HRY *e*ScP **ScP** 16 34 36.4 -1.5
WVOR **Wild Horse Val** 36.42 325 *e*P **P** 16 28 40.7 +0.5
WVOR *e* 16 31 03.3
WVOR pmax pmax
comp=Z,286nm,1.2s
WVOR **Wild Horse Val** 36.42 325 *e*P **P** 16 28 40.7 +0.5
comp=Z,286nm,1.2s
WVOR *e*PcP **PcP** 16 31 03.3 +1.2
E15A **Deer Lodge** 36.45 335 ⇑P **P** 16 28 40.4 0.0
baz=37,SNR=45
E15A S **S** 16 34 15.5 +1.6
baz=37
E15A S **S** 16 34 15.5 +1.6
baz=37
B20A **Solberg Farm,** 36.47 341 ⇓P **P** 16 28 40.0 -0.4
baz=37,SNR=13
B20A S **S** 16 34 16.0 +2.1
baz=37
B20A S **S** 16 34 16.0 +2.1
baz=37
D16A **Dana Ranch, Ca** 36.50 336 ⇓P **P** 16 28 40.7 -0.2
baz=37,SNR=26
D16A S **S** 16 34 15.7 +1.0
baz=37
D16A S **S** 16 34 15.7 +1.0
baz=37
MCCM **Marconi Confer** 36.50 316 *e*P **P** 16 28 43.4 +2.6
comp=Z,414nm,1.1s
ARE **Arequipa** 36.51 147 *e*P **P** 16 28 42.0 +0.6
ARE **Arequipa** 36.51 147 *e*P **P** 16 28 42.0 +0.6
G12A **Big Creek, Yel** 36.62 331 ⇓P **P** 16 28 42.1 +0.2
baz=37
G12A S **S** 16 34 18.3 +1.7
baz=37
G12A S **S** 16 34 18.3 +1.7
baz=37
F13A **Darby** 36.67 333 ⇓P **P** 16 28 41.9 -0.4
baz=37,SNR=84
F13A S **S** 16 34 17.9 +0.6
baz=37
F13A S **S** 16 34 17.9 +0.6
baz=37
EGMT **Eagleton** 36.68 339 *e*P **P** 16 28 42.3 +0.1
comp=Z,62nm,0.6s
EGMT *e*PcP **PcP** 16 31 02.4 -0.3
EGMT *e*ScP **ScP** 16 34 39.3 +0.2
EGMT **Eagleton** 36.68 339 ⇓P **P** 16 28 42.2 -0.1
baz=37,SNR=71
EGMT S **S** 16 34 18.3 +1.1
baz=37
EGMT S **S** 16 34 18.3 +1.1
baz=37
C17A **Wharram Farm,** 36.71 338 ⇓P **P** 16 28 42.1 -0.4
baz=37,SNR=61
C17A S **S** 16 34 17.7 +0.1
baz=37
C17A S **S** 16 34 17.7 +0.1
baz=37
B19A **Brinkman Farms** 36.78 340 ⇑P **P** 16 28 42.9 -0.2
baz=37,SNR=29
B19A S **S** 16 34 20.3 +1.6
baz=37
B19A S **S** 16 34 20.3 +1.6
baz=37
E14A **Clinton** 36.80 334 ⇓P **P** 16 28 43.2 -0.2
baz=37,SNR=37
E14A S **S** 16 34 19.5 +0.3
baz=37
E14A S **S** 16 34 19.5 +0.3
baz=37
A20A **Cobblestone Ra** 36.83 342 ⇑P **P** 16 28 43.4 -0.1
baz=37,SNR=17
A20A S **S** 16 34 20.7 +1.3
baz=37
A20A S **S** 16 34 20.7 +1.3
baz=37
D15A **Lincoln** 36.90 336 ⇓P **P** 16 28 44.0 -0.2
baz=37,SNR=42
D15A S **S** 16 34 21.8 +1.1
baz=37
D15A S **S** 16 34 21.8 +1.1
baz=37
B18A **Beardsley Farm** 37.01 339 ⇑P **P** 16 28 45.0 0.0
baz=37,SNR=31
B18A S **S** 16 34 23.6 +1.4
baz=37
B18A S **S** 16 34 23.6 +1.4
baz=37
MOD **Modoc** 37.03 323 *e*P **P** 16 28 46.3 +0.9
comp=Z,158nm,1.5s
MOD *e*PcP **PcP** 16 31 04.7 +0.8
F12A **Elk City** 37.06 332 ⇓P **P** 16 28 45.5 -0.1
baz=37,SNR=179
F12A S **S** 16 34 25.1 +1.9
baz=37
F12A S **S** 16 34 25.1 +1.9
baz=37
CHMT **Chamberlain Mo** 37.09 335 *e*P **P** 16 28 45.6 -0.3
E13A **Victor** 37.11 333 ⇓P **P** 16 28 45.4 -0.6
baz=37,SNR=65
E13A S **S** 16 34 25.0 +1.1
baz=37
E13A S **S** 16 34 25.0 +1.1
baz=37
A19A **Klindworth Far** 37.13 341 ⇑P **P** 16 28 46.0 0.0
baz=37,SNR=17
A19A S **S** 16 34 25.7 +1.8
baz=37
A19A S **S** 16 34 25.7 +1.8
baz=37
C16A **Fuhringer Ranc** 37.22 337 ⇑P **P** 16 28 46.4 -0.4
baz=37,SNR=83
C16A S **S** 16 34 26.7 +1.3
baz=37
C16A S **S** 16 34 26.7 +1.3
baz=37
B17A **L&G Farms, Che** 37.28 338 ⇓P **P** 16 28 46.7 -0.6
baz=37,SNR=21
B17A S **S** 16 34 28.1 +1.8
baz=37
B17A S **S** 16 34 28.1 +1.8
baz=37
MSO **Missoula** 37.31 334 *e*P **P** 16 28 47.1 -0.6
comp=Z,72nm,1.4s
MSO *e*PcP **PcP** 16 31 05.2 +0.6
MSO *e*ScP **ScP** 16 34 43.5 +2.1
MSO **Missoula** 37.31 334 ⇑P **P** 16 28 47.3 -0.4
baz=37,SNR=46
MSO S **S** 16 34 28.3 +1.4
baz=37
MSO S **S** 16 34 28.3 +1.4
baz=37
D14A **Greenough** 37.33 335 ⇑P **P** 16 28 47.3 -0.6
baz=38,SNR=46
D14A S **S** 16 34 28.5 +1.3
baz=38
D14A S **S** 16 34 28.5 +1.3
baz=38
PQI **Presque Isle** 37.38 27 *e*P **P** 16 28 48.4 +0.4
comp=Z,295nm,1.0s
BMO **Blue Mountains** 37.38 329 *e*P **P** 16 28 47.0 -1.3
comp=Z,102nm,1.1s
SLMT **Seeley Lake** 37.45 335 *e*P **P** 16 28 48.5 -0.4
A18A **Metzger Ranch,** 37.48 340 ⇓P **P** 16 28 48.4 -0.6
baz=38,SNR=26
A18A S **S** 16 34 30.6 +1.3
baz=38
A18A S **S** 16 34 30.6 +1.3
baz=38
C15A **Salmond Ranch,** 37.52 336 ⇑P **P** 16 28 49.4 -0.1
baz=38,SNR=26
C15A S **S** 16 34 32.4 +2.2
baz=38
C15A S **S** 16 34 32.4 +2.2
baz=38
WDC **Whiskeytown Da** 37.60 320 *e*P **P** 16 28 49.1 -1.0
WDC *e* 16 31 05.9
WDC pmax pmax
comp=Z,71nm,1.1s
WDC **Whiskeytown Da** 37.60 320 *e*P **P** 16 28 49.1 -1.0
comp=Z,71nm,1.1s
WDC *e*PcP **PcP** 16 31 05.9 +0.4
B16A **M & M Farms, S** 37.71 338 ⇑P **P** 16 28 50.2 -0.8
baz=38,SNR=24
B16A S **S** 16 34 33.4 +0.6
baz=38
B16A S **S** 16 34 33.4 +0.6
baz=38
D13A **Huson** 37.74 334 ⇑P **P** 16 28 50.6 -0.6
baz=38,SNR=47
D13A S **S** 16 34 33.6 +0.3
baz=38
D13A S **S** 16 34 33.6 +0.3
baz=38
KCPM **Cahto Peak** 37.78 318 *e*P **P** 16 28 54.1 +2.4
comp=Z,252nm,1.4s
KCPM *e*PcP **PcP** 16 31 08.3 +2.1
KIPM **Iron Peak** 37.78 318 *e*P **P** 16 28 53.8 +2.1

KIPM comp=Z,288nm,1.0s *e*PcP **PcP** **16 31 08.1 +1.8**
A17A **Triple J Farms** **37.80 339** ⇑P **P** **16 28 51.0 -0.7**
baz=38,SNR=88
A17A S **S** **16 34 34.1 0.0**
baz=38
A17A S **S** **16 34 34.1 0.0**
baz=38
SWMT **Swartz Lake** **37.87 335** *e*P **P** **16 28 51.5 -0.9**
SWMT *e*PcP **PcP** **16 31 06.6 +0.2**
SWMT *e*ScP **ScP** **16 34 44.9 +1.3**
B15A **Bradely Ranch,** **37.95 337** ⇓P **P** **16 28 52.4 -0.6**
baz=38,SNR=16
B15A S **S** **16 34 36.7 +0.3**
baz=38
B15A S **S** **16 34 36.7 +0.3**
baz=38
C14A **Swan Lake** **37.98 335** ⇑P **P** **16 28 53.1 -0.2**
baz=38
C14A S **S** **16 34 39.4 +2.6**
baz=38
C14A S **S** **16 34 39.4 +2.6**
baz=38
D12A **Red Ives Fores** **38.09 333** ⇑P **P** **16 28 53.8 -0.4**
baz=38
D12A S **S** **16 34 38.2 -0.5**
baz=38
D12A S **S** **16 34 38.2 -0.5**
baz=38
A16A **West Butte Ran** **38.12 338** ⇑P **P** **16 28 54.0 -0.4**
baz=38,SNR=24
A16A S **S** **16 34 39.5 +0.5**
baz=38
A16A S **S** **16 34 39.5 +0.5**
baz=38
YBMT **Yellow Bay** **38.16 335** *e*P **P** **16 28 54.8 -0.1**
comp=Z,8.0nm,0.5s
YBMT *e*PcP **PcP** **16 31 07.6 +0.3**
JTMT **Jette** **38.18 335** *e*P **P** **16 28 55.0 0.0**
JTMT *e*ScP **ScP** **16 34 46.1 +1.3**
LPAZ **La Paz** **38.24 143** *e*P **P** **16 28 56.6 +0.2**
comp=Z,52nm,0.8s
LPAZ PcP **PcP** **16 31 10.6 +2.0**
LPAZ S **S** **16 34 41.2 -1.2**
LPAZ **La Paz** **38.24 143** P **P** **16 28 57.2 +0.8**
comp=Z,40nm,0.9s,baz=340,slow=9.2,SNR=33
LPAZ PcP **PcP** **16 31 10.6 +2.0**
comp=Z,37nm,0.9s,baz=332,slow=7.7,SNR=6.9
LPAZ S **S** **16 34 41.2 -1.2**
comp=Z,3.0nm,1.0s,baz=115,slow=21,SNR=2.2
LPAZ LR LR 16 42 38.0
comp=Z,3µm,21.4s,baz=149,slow=33
C13A **Hot Springs** **38.25 334** ⇑P **P** **16 28 55.1 -0.4**
baz=38,SNR=16
C13A S **S** **16 34 40.6 -0.3**
baz=38
C13A S **S** **16 34 40.6 -0.3**
baz=38
B14A **Marquette Ranc** **38.26 336** ⇓P **P** **16 28 55.3 -0.4**
baz=38,SNR=18
B14A S **S** **16 34 43.5 +2.2**
baz=38
B14A S **S** **16 34 43.5 +2.2**
baz=38
YBH **Yreka Blue Hor** **38.37 321** *e*P **P** **16 28 56.2 -0.4**
comp=Z,28nm,0.5s
YBH *e*PcP **PcP** **16 31 08.2 +0.2**
YBH PcP **PcP** **16 31 08.3 +0.3**
YBH ScP **ScP** **16 34 46.2 +0.7**
YBH **Yreka Blue Hor** **38.37 321** P **P** **16 28 56.0 -0.6**
comp=Z,35nm,0.5s,baz=114,slow=5.2,SNR=151
YBH PcP **PcP** **16 31 08.3 +0.3**
comp=Z,37nm,0.9s,baz=100,slow=2.9,SNR=9.2
YBH ScP **ScP** **16 34 46.3 +0.7**
comp=Z,24nm,1.0s,baz=133,slow=7.9,SNR=12
BLMT **Blacktail Moun** **38.42 335** *e*P **P** **16 28 57.3 +0.2**
BSMT **Bassoo Peak** **38.47 334** *e*P **P** **16 28 57.1 -0.4**
BSMT *e*PcP **PcP** **16 31 08.0 -0.3**
BSMT *e*ScP **ScP** **16 34 46.1 +0.2**
KHMM **Horse Mountain** **38.52 319** *e*P **P** **16 28 58.8 +0.8**
comp=Z,305nm,1.0s
KHMM *e*PcP **PcP** **16 31 10.5 +1.9**
KHMM *e*ScP **ScP** **16 34 49.3 +3.0**
A15A **Johnson Ranch,** **38.56 337** ⇑P **P** **16 28 57.8 -0.3**
baz=39,SNR=32
A15A S **S** **16 34 46.6 +0.9**
baz=39
A15A S **S** **16 34 46.6 +0.9**
baz=39
C12B **Naegeli Ranch,** **38.65 334** ⇓P **P** **16 28 58.7 -0.1**
baz=39,SNR=21
C12B S **S** **16 34 47.3 +0.3**
baz=39
C12B S **S** **16 34 47.3 +0.3**
baz=39
B13A **Whitefish** **38.75 335** ⇓P **P** **16 28 59.6 -0.1**
baz=39,SNR=34
B13A S **S** **16 34 49.2 +0.8**
baz=39
B13A S **S** **16 34 49.2 +0.8**
baz=39
A14A **Double T Ranch** **38.82 337** ⇑P **P** **16 28 60.0 -0.3**
baz=39,SNR=83
A14A S **S** **16 34 47.6 -2.0**
baz=39
A14A S **S** **16 34 47.6 -2.0**
baz=39
KRMB **Red Mountain** **38.99 320** *e*P **P** **16 29 02.5 +0.7**
comp=Z,2µm,2.2s
HUMO **Hull Mountain** **39.02 322** *e*P **P** **16 29 01.4 -0.6**
comp=Z,123nm,1.6s
WALA **Waterton Lakes** **39.08 336** *e*P **P** **16 29 02.8 +0.4**
comp=Z,1.5nm,1.2s
C11A **Tepee Creek (N** **39.09 333** ⇓P **P** **16 29 02.3 -0.2**
baz=39,SNR=98
C11A S **S** **16 34 54.3 +0.7**
baz=39
C11A S **S** **16 34 54.3 +0.7**
baz=39
A13A **Flathead Natio** **39.17 336** ⇑P **P** **16 29 03.3 +0.1**
baz=39
A13A S **S** **16 34 56.4 +1.5**
baz=39
A13A S **S** **16 34 56.4 +1.5**
baz=39
B12A **Libby** **39.29 334** ⇓P **P** **16 29 04.3 +0.2**
baz=39,SNR=8.9
B12A S **S** **16 34 57.6 +1.1**
baz=39
B12A S **S** **16 34 57.6 +1.1**
baz=39
KBO **Bosley Butte** **39.57 321** *e*P **P** **16 29 08.2 +1.6**
comp=Z,1µm,1.3s
HAWA **Hanford** **39.57 329** *e*P **P** **16 29 05.5 -1.0**
comp=Z,32nm,0.9s
HAWA *e*PcP **PcP** **16 31 12.8 +1.2**
A12A **Yaak River Ran** **39.68 335** ⇑P **P** **16 29 07.7 +0.3**
baz=40,SNR=7.6
A12A S **S** **16 35 02.2 -0.2**
baz=40
A12A S **S** **16 35 02.2 -0.2**
baz=40
BROR **Big Rock Looko** **39.73 324** P **P** **16 29 08.2 +0.4**
NEW **Newport** **39.79 333** *e*P **P** **16 29 07.5 -0.7**
comp=Z,26nm,0.6s
NEW *e*PcP **PcP** **16 31 11.3 -1.0**
NEW PcP **PcP** **16 31 11.5 -0.8**
NEW *e*ScP **ScP** **16 34 51.0 +0.1**
NEW ScP **ScP** **16 34 51.5 +0.6**
NEW **Newport** **39.79 333** P **P** **16 29 08.0 -0.3**
comp=Z,22nm,0.6s,baz=144,slow=8.0,SNR=26
NEW PcP **PcP** **16 31 11.5 -0.8**
comp=Z,21nm,0.4s,baz=115,slow=3.0,SNR=22
NEW ScP **ScP** **16 34 51.5 +0.6**
comp=Z,38nm,1.0s,baz=141,slow=1.6,SNR=13
NEW **Newport** **39.79 333** ⇑P **P** **16 29 07.6 -0.7**
baz=40,SNR=42
NEW S **S** **16 35 04.2 +0.2**
baz=40
NEW S **S** **16 35 04.2 +0.2**
baz=40
VFP **Flag Point** **39.85 326** P **P** **16 29 10.0 +1.0**
OD2 **Odessa Site #2** **39.88 331** P **P** **16 29 09.0 0.0**
KEBM **Edson Butte** **40.01 321** *e*P **P** **16 29 12.1 +1.9**
comp=Z,1µm,1.0s
KEBM *e*ScP **ScP** **16 34 55.6 +3.8**
TRW **Toppenish Ridg** **40.02 328** P **P** **16 29 11.4 +1.2**

VLL **Laurance Lake** **40.06 326** P **P** **16 29 12.8 +2.2**
RNO **Roman Nose** **40.26 323** P **P** **16 29 13.7 +1.5**
COR **Corvallis** **40.41 324** *e*P **P** **16 29 14.4 +1.0**
COR **Corvallis** **40.41 324** *e*P **P** **16 29 14.4 +1.0**
NAC **Naches** **40.46 328** P **P** **16 29 15.2 +1.3**
WPW **White Pass** **40.80 328** P **P** **16 29 17.9 +1.1**
FFC **Flin Flon** **40.89 350** *ce*P **P** **16 29 17.1 -0.1**
FFC **Flin Flon** **40.89 350** *e*P **P** **16 29 16.6 -0.6**
comp=Z,54nm,1.5s
FFC **Flin Flon** **40.89 350** P **P** **16 29 17.7 +0.5**
comp=Z,200nm,0.6s,SNR=26
LON **Longmire** **40.97 328** *e*P **P** **16 29 18.6 +0.5**
LON pmax pmax
comp=Z,160nm,1.0s
LON **Longmire** **40.97 328** *e*P **P** **16 29 18.6 +0.5**
comp=Z,160nm,1.0s
LON *e*ScP **ScP** **16 34 56.5 +1.0**
BLN **Blyn Mountain** **42.40 328** P **P** **16 29 29.9 +0.3**
NLWA **Neilton Lookou** **42.46 327** *e*P **P** **16 29 31.0 +0.8**
comp=Z,276nm,1.0s
VDB **Vedder Mountai** **42.65 330** P **P** **16 29 31.1 -0.4**
PGC **Sidney** **43.06 329** *e*P **P** **16 29 35.3 +0.5**
comp=Z,17nm,1.1s
SCHQ **Schefferville** **44.38 20** *e*P **P** **16 29 44.9 -0.5**
comp=Z,454nm,0.6s
SCHQ S **S** **16 36 09.9 -1.4**
SCHQ **Schefferville** **44.38 20** P **P** **16 29 45.0 -0.4**
comp=Z,486nm,0.7s,baz=220,slow=6.6,SNR=548
SCHQ S **S** **16 36 09.9 -1.4**
comp=Z,19nm,1.0s,baz=341,slow=16,SNR=5.3
SCHQ LR LR 16 49 19.7
comp=Z,20µm,21.0s,baz=211,slow=37
BBB **Bella Bella** **47.61 330** P **P** **16 30 11.4 +0.7**
BBB S **S** **16 37 01.1 +3.7**
BBB **Bella Bella** **47.61 330** P **P** **16 30 11.4 +0.7**
comp=Z,33nm,0.8s,baz=148,slow=8.1,SNR=7.1
BBB S **S** **16 37 01.1 +3.7**
comp=Z,14nm,1.0s,baz=37,slow=5.4,SNR=2.0
LCO **Las Campanas** **47.69 155** *e*P **P** **16 30 12.1 +0.1**
comp=Z,142nm,1.1s
LCO *e*pP **pP** **16 30 40.1 +1.6**
LCO *e*ScP **ScP** **16 35 28.6 +5.0**
TLL **Tololo Astrono** **48.67 156** ⇓*e*P **P** **16 30 18.3 -1.2**
TLL **Tololo Astrono** **48.67 156** ⇓*e*P **P** **16 30 18.3 -1.2**
TLL **Tololo Astrono** **48.67 156** ⇓*e*P **P** **16 30 18.3 -1.2**
CMCH **Combarbala** **49.50 157** *e*P **P** **16 30 25.4 -0.2**
CMCH **Combarbala** **49.50 157** *e*P **P** **16 30 25.4 -0.2**
YKA **Yellowknife Ar** **50.61 346** P **P** **16 30 32.5 -0.9**
YKA PcP **PcP** **16 31 49.5 +0.2**
YKA ScP **ScP** **16 35 34.6 -0.4**
YKA S **S** **16 37 42.1 +3.0**
YKA P'P' 17 01 03.5
YKA *e* 17 08 02.5
YKA **Yellowknife Ar** **50.61 346** P **P** **16 30 32.5 -0.9**
comp=Z,71nm,0.6s,baz=147,slow=7.5,SNR=555
YKA PcP **PcP** **16 31 49.5 +0.2**
comp=Z,18nm,0.8s,baz=153,slow=3.5,SNR=10.0
YKA ScP **ScP** **16 35 34.6 -0.4**
comp=Z,16nm,0.9s,baz=147,slow=4.6,SNR=11
YKA S **S** **16 37 42.1 +3.0**
comp=Z,3.9nm,1.0s,baz=138,slow=14,SNR=5.0
YKA PKPPKP P'P'df 17 01 03.5 -16
comp=Z,2.8nm,0.9s,baz=1.9,slow=2.5,SNR=15
YKA P4KPbc 17 08 02.5
comp=Z,0.4nm,0.6s,baz=148,slow=4.6,SNR=11
YKW3 **Yellowknife Ar** **50.67 346** *e*P **P** **16 30 33.0 -0.9**
comp=Z,1.4nm,0.6s
YKW3 *e*ScP **ScP** **16 35 33.9 -1.4**
FRB **Frobisher Bay** **51.54 13** P **P** **16 30 39.1 -1.3**
FRB S **S** **16 37 49.6 -2.3**
FRB **Frobisher Bay** **51.54 13** P **P** **16 30 39.1 -1.3**
comp=Z,116nm,0.6s,baz=212,slow=8.0,SNR=137
FRB S **S** **16 37 49.6 -2.3**
comp=Z,18nm,1.2s,baz=101,slow=19,SNR=8.5
CLCH **Cerro Calan** **51.66 158** ⇓*e*P **P** **16 30 41.9 +0.2**
CRAG **Craig** **51.95 331** *e*P **P** **16 30 44.9 +1.4**
comp=Z,284nm,1.4s
WRAK **Wrangell Islan** **52.15 332** *e*P **P** **16 30 46.6 +1.6**
comp=Z,26nm,0.6s
LMEL **Las Melosas** **52.19 158** ⇓*e*P **P** **16 30 46.1 +0.3**
LMEL **Las Melosas** **52.19 158** ⇓*e*P **P** **16 30 46.1 +0.3**
BDFB **Brasilia** **52.21 123** P **P** **16 30 45.2 -1.0**
BDFB PcP **PcP** **16 31 56.8 +0.5**
BDFB ScP **ScP** **16 35 45.4 +2.4**
BDFB **Brasilia** **52.21 123** P **P** **16 30 45.2 -1.0**
comp=Z,58nm,0.7s,baz=288,slow=8.9,SNR=51
BDFB PcP **PcP** **16 31 56.8 +0.5**
comp=Z,49nm,1.0s,baz=266,slow=2.2,SNR=5.4
BDFB ScP **ScP** **16 35 45.4 +2.4**
comp=Z,76nm,1.1s,baz=318,slow=7.6,SNR=12
BDFB LR LR 16 52 41.1
comp=Z,3µm,18.6s,baz=90,slow=36
CPUP **Villa Florida** **52.36 141** P **P** **16 30 45.7 -1.3**
CPUP ScP **ScP** **16 35 45.6 +2.3**
CPUP S **S** **16 38 00.7 -3.5**
CPUP **Villa Florida** **52.36 141** P **P** **16 30 45.7 -1.3**
comp=Z,98nm,0.9s,baz=316,slow=8.0,SNR=67
CPUP ScP **ScP** **16 35 45.6 +2.3**
comp=Z,15nm,0.6s,baz=306,slow=4.3,SNR=14
CPUP S **S** **16 38 00.7 -3.5**
comp=Z,1.3nm,0.7s,baz=111,slow=18,SNR=1.8
CPUP LR LR 16 52 34.8
comp=Z,2µm,18.6s,baz=134,slow=35
DLBC **Dease Lake** **52.41 335** *e*P **P** **16 30 47.9 +0.9**
DLBC *e*ScP **ScP** **16 35 44.0 +0.9**
DLBC ScP ScP 16 35 44.9 +1.8
DLBC S **S** **16 38 09.4 +5.2**
DLBC **Dease Lake** **52.41 335** P **P** **16 30 48.0 +1.0**
comp=Z,56nm,0.5s,baz=136,slow=4.5,SNR=232
DLBC ScP **ScP** **16 35 44.9 +1.8**
comp=Z,32nm,1.0s,baz=114,slow=3.0,SNR=9.7
DLBC S **S** **16 38 09.4 +5.2**
comp=Z,2.1nm,0.9s,baz=238,slow=26,SNR=4.4
CCHI **Chillan** **54.05 161** *e*P **P** **16 31 00.1 +1.0**
CCHI **Chillan** **54.05 161** *e*P **P** **16 31 00.1 +1.0**
SKAG **Skagway** **55.22 334** *e*P **P** **16 31 08.3 +1.0**
comp=Z,494nm,2.7s
SKAG *e*PcP **PcP** **16 32 07.6 +0.7**
SKAG *e*ScP **ScP** **16 35 58.7 +3.5**
RKT **Rikitea** **56.93 229** *e*P **P** **16 31 20.6 +0.5**
comp=Z,192nm,1.1s
RKT *e*pP **pP** **16 31 47.3 -0.2**
comp=Z,258nm,1.5s
RKT *e*S **S** **16 39 01.7 -3.8**
comp=Z,5µm,29.8s
RKT *e*LQ LQ 16 45 57.3
comp=Z,6µm,32.0s
RKT *e*LR LR 16 48 17.0
comp=Z,18µm,32.5s,baz=49
PNL **Peninsula** **57.07 333** *e*P **P** **16 31 20.8 +0.3**
comp=Z,110nm,1.0s
SPB **Sao Paulo** **57.22 131** *e*P **P** **16 31 20.9 -1.1**
comp=Z,128nm,1.0s
SPB *e*pP **pP** **16 31 49.0 -0.5**
SPB *e*sP **sP** **16 32 00.4 -1.6**
SPB *e*ScP **ScP** **16 36 08.5 +3.8**
PLCA **Paso Flores** **58.31 162** S **S** **16 39 24.5 +1.4**
comp=Z,3.9nm,1.1s,baz=356,slow=5.5,SNR=2.2
PLCA LR LR 16 52 47.5
comp=Z,3µm,18.4s,baz=344,slow=32
RCBR **Riachuelo** **58.47 106** *e*P **P** **16 31 29.6 -1.5**
comp=Z,24nm,1.2s
SFJD **Kangerlussuaq** **58.70 17** *e*P **P** **16 31 30.7 -1.0**
comp=Z,92nm,1.0s
SFJD **Kangerlussuaq** **58.70 17** P **P** **16 31 30.7 -1.0**
comp=Z,56nm,0.8s,baz=216,slow=6.5,SNR=20
SFJD LR LR 16 57 38.5
comp=Z,13µm,21.1s,baz=229,slow=37
TRQA **Tornquist** **59.14 153** *e*P **P** **16 31 35.0 -0.3**
comp=Z,75nm,2.0s
RAGM **Ragged Mountai** **59.74 332** *e*P **P** **16 31 40.3 +1.1**
comp=Z,155nm,1.1s
ROSA **Rosais** **59.97 54** *e*P **P** **16 31 42.8 +1.8**
comp=Z,109nm,1.7s
BMRM **Bremner River** **59.97 333** *e*P **P** **16 31 40.9 +0.3**
comp=Z,88nm,0.6s
INK **Inuvik** **60.07 343** P **P** **16 31 40.3 -0.8**
INK ScP **ScP** **16 36 16.5 0.0**
INK S **S** **16 39 44.0 -0.9**
INK **Inuvik** **60.07 343** P **P** **16 31 40.3 -0.8**
comp=Z,52nm,0.6s,baz=127,slow=7.2,SNR=170
INK ScP **ScP** **16 36 16.5 0.0**
comp=Z,35nm,1.1s,baz=123,slow=3.9,SNR=5.8
INK S **S** **16 39 44.0 -0.9**
comp=Z,2.5nm,1.0s,baz=350,slow=24,SNR=8.1

RES **Resolute Bay** **60.10 359** ⇑*e*P **P** **16 31 39.7 -1.5**
comp=Z,32nm,0.3s
RES *e*pP **pP** **16 32 06.7 -2.2**
RES *e*PcP **PcP** **16 32 23.6 -2.2**
RES S **S** **16 39 42.7 -2.4**
RES **Resolute Bay** **60.10 359** P **P** **16 31 39.8 -1.5**
comp=Z,67nm,0.7s,baz=183,slow=9.5,SNR=150
RES S **S** **16 39 42.7 -2.4**
comp=Z,3.3nm,0.9s,baz=83,slow=11,SNR=4.4
CAM4 **Nova Friburgo** **60.18 127** ⇑*i*P **P** **16 31 41.0 -1.9**
CAM4 *i* 16 31 42.7
CAM4 *i* 16 31 45.1
CAM4 *i* 16 31 50.8
CAM4 *i* 16 31 59.5
CAM4 *i* 16 32 14.4
CAM4 *i* 16 32 34.9
CAM4 *i* 16 32 41.7
PGRA **Graciosa** **60.20 53** *e*P **P** **16 31 41.5 -1.1**
comp=Z,55nm,0.7s
EGAK **Eagle** **60.43 338** *e*P **P** **16 31 42.8 -0.9**
comp=Z,35nm,0.7s
MENT **Mentasta** **60.50 335** *e*P **P** **16 31 44.3 +0.1**
DIV **Divide** **60.55 333** *e*P **P** **16 31 45.2 +0.5**
comp=Z,2µm,2.9s
DOT **Dot Lake** **60.97 336** *e*P **P** **16 31 47.3 -0.1**
comp=Z,134nm,0.8s
STCH **Steam Cracks** **61.02 284** P **P** **16 31 48.8 +0.2**
comp=Z,5µm,1.8s
PUH **Pauahi** **61.11 284** *e*P **P** **16 31 49.8 +0.6**
comp=Z,4µm,1.8s
PAX **Paxson** **61.22 335** *e*P **P** **16 31 48.6 -0.6**
PAX pmax pmax
comp=Z,91nm,0.6s
PAX **Paxson** **61.22 335** *e*P **P** **16 31 48.6 -0.6**
comp=Z,91nm,0.6s
POHA **Pohakuloa** **61.36 285** *e*P **P** **16 31 51.6 +0.5**
comp=Z,1µm,2.0s
SEW **Seward** **61.82 331** *e*P **P** **16 31 52.3 -0.8**
comp=Z,87nm,1.0s
PSET **Sete Cidades** **61.88 55** *e*P **P** **16 31 53.7 -0.3**
comp=Z,146nm,1.1s
HKL **Haleakala** **61.94 286** *e*P **P** **16 31 56.2 +1.1**
HKL **Haleakala** **61.94 286** *e*P **P** **16 31 56.2 +1.1**
SML **Sawmill** **61.95 333** *e*P **P** **16 31 53.9 -0.2**
SML pmax pmax
comp=Z,108nm,1.6s
SML **Sawmill** **61.95 333** *e*P **P** **16 31 53.9 -0.2**
comp=Z,108nm,1.6s
CMLA **Cha da Macela** **62.03 55** *e*P **P** **16 31 55.1 +0.1**
comp=Z,50nm,0.9s
PMR **Palmer** **62.22 333** *e*P **P** **16 31 55.2 -0.5**
PMR pmax pmax
comp=Z,64nm,0.7s
PMR **Palmer** **62.22 333** *e*P **P** **16 31 55.2 -0.5**
comp=Z,64nm,0.7s
RC01 **Rabbit Creek A** **62.30 332** *e*P **P** **16 31 56.0 -0.3**
comp=Z,1.6nm,1.0s
PSMN **Pico do Norte,** **62.37 56** *e*P **P** **16 31 56.4 -0.8**
comp=Z,129nm,1.3s
KDAK **Kodiak Island** **62.60 328** *e*P **P** **16 31 58.6 +0.3**
comp=Z,153nm,0.7s
KDAK S **S** **16 40 19.6 +2.4**
KDAK **Kodiak Island** **62.60 328** P **P** **16 31 58.0 -0.4**
comp=Z,1µm,0.7s,SNR=87
KDAK **Kodiak Island** **62.60 328** P **P** **16 31 58.5 +0.1**
comp=Z,137nm,0.6s,baz=98,slow=3.3,SNR=152
KDAK S **S** **16 40 19.6 +2.4**
comp=Z,3.5nm,1.1s,baz=17,slow=21,SNR=3.2
OHAK **Old Harbor** **62.81 327** *e*P **P** **16 32 00.2 +0.5**
comp=Z,162nm,0.8s
MCK **McKinley** **62.96 335** *e*P **P** **16 31 59.9 -0.8**
MCK pmax pmax
comp=Z,141nm,1.3s
MCK **McKinley** **62.96 335** *e*P **P** **16 31 59.9 -0.8**
comp=Z,141nm,1.3s
COLA **College** **63.00 336** *e*P **P** **16 32 00.3 -0.6**
COLA pmax pmax
comp=Z,84nm,0.9s
COLA **College** **63.00 336** *e*P **P** **16 32 00.2 -0.6**
comp=Z,22nm,0.9s
PMOR **Pomariorio Ree** **63.31 245** *e*P **P** **16 32 04.4 +0.7**
comp=Z,116nm,1.1s
PMOR *e*pP **pP** **16 32 33.0 +1.4**
comp=Z,919nm,1.6s
SPU **Mount Spurr** **63.39 332** *e*P **P** **16 32 03.1 -0.5**
TRF **Thorofare Moun** **63.41 334** *e*P **P** **16 32 02.5 -1.3**
comp=Z,135nm,0.8s
RSO **Redoubt South** **63.49 331** *e*P **P** **16 32 04.2 -0.2**
HON **Honolulu** **63.50 287** *e*P **P** **16 32 05.7 +0.7**
HON **Honolulu** **63.50 287** *e*P **P** **16 32 05.7 +0.7**
KIP **Kipapa** **63.50 287** *d*P **P** **16 32 05.9 +0.9**
KIP pmax pmax
comp=Z,177nm,1.3s
KIP **Kipapa** **63.50 287** *e*P **P** **16 32 05.9 +0.9**
comp=Z,709nm,1.6s
PPLA **Purkeypile** **64.02 334** *e*P **P** **16 32 06.9 -1.0**
comp=Z,378nm,1.8s
MEH **Mehetia** **64.70 242** *e*P **P** **16 32 13.1 +0.3**
comp=Z,164nm,1.0s
MEH *e*pP **pP** **16 32 41.9 +1.1**
comp=Z,717nm,1.4s
COLD **Coldfoot** **64.84 338** *e*P **P** **16 32 12.9 0.0**
comp=Z,60nm,1.1s
SVW2 **Sparrevohn** **65.00 331** *e*P **P** **16 32 12.9 -1.2**
comp=Z,132nm,1.3s
CHGN **Chignik** **65.34 326** *e*P **P** **16 32 16.4 +0.1**
SUMG **Summit** **65.44 15** ⇑*i*P **P** **16 32 17.1 -0.1**
SUMG *i* *PP **PcP** **16 32 48.3 +0.1**
SUMG *i* S **S** **16 40 52.5 -0.2**
SUMG pmax pmax
comp=Z,33nm,0.7s
SUMG MLR MLR
comp=Z,5µm,20.0s
SUMG **Summit** **65.44 15** *e*P **P** **16 32 16.5 -0.7**
comp=Z,178nm,1.4s
SUMG **Summit** **65.44 15** ⇑*i*P **P** **16 32 17.1 -0.1**
comp=Z,33nm,0.7s
SUMG *i* pP **PcP** **16 32 48.3 +0.1**
SUMG *i* S **S** **16 40 52.5 -0.2**
SUMG
comp=Z,5µm,20.0s
TIAR **Tiarei** **65.66 243** *e*P **P** **16 32 19.2 +0.2**
comp=Z,155nm,1.0s
TIAR *e*pP **pP** **16 32 47.9 +0.8**
comp=Z,352nm,1.1s
TVO **Taravao** **65.67 243** *e*P **P** **16 32 19.4 +0.2**
comp=Z,170nm,1.3s
TVO *e*pP **pP** **16 32 48.3 +1.0**
comp=Z,611nm,1.5s
PPT **Papeete** **65.86 243** P **P** **16 32 21.1 +0.8**
PPT **Papeete** **65.86 243** P **P** **16 32 21.1 +0.8**
comp=Z,18nm,0.8s,baz=65,slow=19,SNR=3.4
PPT LR LR 16 55 06.6
comp=Z,1µm,19.7s,baz=241,slow=30
PPT2 **Papeete2** **65.87 243** *e*P **P** **16 32 20.7 +0.3**
comp=Z,68nm,1.5s
PPT2 *e*pP **PcP** **16 32 49.7 -0.9**
comp=Z,163nm,1.6s
PPT2 *e*S **S** **16 40 53.3 -5.6**
comp=Z,7µm,29.0s
PPT2 *e*SS **SS** **16 45 19.6 +3.5**
comp=Z,3µm,32.8s
PPT2 *e*LQ LQ 16 49 16.8
comp=Z,12µm,34.0s
PPT2 *e*LR LR 16 51 55.9
comp=Z,18µm,31.2s,baz=56
PAE **Paea** **65.90 243** *e*P **P** **16 32 20.9 +0.4**
comp=Z,27nm,1.1s
PAE *e*pP **PcP** **16 32 49.7 -0.9**
comp=Z,89nm,1.4s
SDPT **Sand Point** **66.33 324** *e*P **P** **16 32 22.3 -0.3**
comp=Z,547nm,1.1s
XMAS **Kiritimati** **66.51 266** *e*P **P** **16 32 24.7 +0.1**
FALS **False Pass** **67.94 324** *e*P **P** **16 32 33.2 +0.3**
comp=Z,1µm,0.7s
BORG **Borgarnes** **68.32 26** P **P** **16 32 32.4 -2.7**
BORG **Borgarnes** **68.32 26** P **P** **16 32 32.4 -2.7**
comp=Z,19nm,0.6s,baz=236,slow=5.8,SNR=11
TBI **Tubuai** **68.33 237** *e*P **P** **16 32 35.7 -0.1**
comp=Z,306nm,1.3s
TBI *e*pP **pP** **16 33 04.8 +0.7**
comp=Z,418nm,1.4s
TBI *e*S **S** **16 41 25.2 -3.0**
comp=Z,5µm,31.2s
TBI *e*SS **SS** **16 45 57.6 +3.6**
comp=Z,2µm,35.2s

TBI eLR LR 16 53 18.0
comp=Z,13µm,33.2s,baz=60
ALE Alert 68.90 4 P **P 16 32 36.0 -2.4**
comp=Z,385nm,0.6s,SNR=54
AKUT Akutan 69.25 323 *eP* **P 16 32 40.4 -0.5**
SCO Scoresbysund 69.42 20⇑ *iP* **P 16 32 40.7 -1.1**
SCO *i* 16 33 12.6
SCO *i* S **S 16 41 40.5 +0.9**
SCO pmax pmax
comp=Z,27nm,0.7s
SCO MLR MLR
comp=Z,8µm,22.0s
SCO Scoresbysund 69.42 20⇑ *iP* **P 16 32 40.7 -1.1**
comp=Z,27nm,0.7s
SCO *i* 16 33 12.6
SCO *i* S **S 16 41 40.5 +0.9**
SCO
comp=Z,8µm,21.0s
UNV Unalaska Valle 69.66 322 *eP* **P 16 32 44.0 +0.5**
comp=Z,799nm,1.1s
TNA Tin City 71.30 335 *eP* **P 16 32 53.1 -0.2**
comp=Z,59nm,0.9s
USHA Ushuaia 71.83 166 LR LR 16 58 37.3
comp=Z,3µm,18.2s,baz=310,slow=31
DAG Danmarks Havn 71.88 13⇑ *iP* **P 16 32 55.2 -1.4**
DAG *i* S **S 16 42 03.5 -4.5**
DAG pmax pmax
comp=Z,45nm,0.8s
DAG MLR MLR
comp=Z,5µm,20.0s
DAG Danmarks Havn 71.88 13⇑ *iP* **P 16 32 55.2 -1.4**
comp=Z,60nm,0.8s
DAG *i* 16 33 27.6
DAG
comp=Z,5µm,19.0s
EFI East Falkland 72.03 159 *eP* **P 16 32 59.4 +1.6**
EFI pmax pmax
comp=Z,136nm,1.6s
EFI East Falkland 72.03 159 P **P 16 32 57.9 +0.1**
comp=Z,36nm,1.1s
EFI East Falkland 72.03 159 P **P 16 32 58.3 +0.5**
comp=Z,506nm,0.8s,SNR=6.0
GAMB Gambell 72.80 333 *eP* **P 16 33 01.9 -0.3**
comp=Z,35nm,1.0s
VAL Valentia 73.07 40 *eP* P 16 32 55.1 -9.0
VAL Valentia 73.07 40⇓ *iS* **S 16 42 18.9 -3.4**
JMIC Jan Mayen 73.90 20 *eP* **P 16 33 07.1 -1.6**
JMIC *eP*P **PP 16 35 53.8 -0.8**
JMIC *eS* **S 16 42 31.5 +0.5**
JMIC AMS AMS 17 04 03.1
comp=Z,4µm,27.5s
PMAFR Mafra 74.74 53 *eP* **P 16 33 15.1 +0.9**
LIS Lisbon 74.88 53 *eP* **P 16 33 14.9 0.0**
LIS *eP*P **PP 16 36 03.1 -0.6**
LIS *eS* **S 16 42 43.9 +0.9**
LIS AMS AMS 16 44 15.6
comp=E,3µm,21.2s
LIS Lisbon 74.88 53 *eP* **P 16 33 14.9 0.0**
LIS Lisbon 74.88 53 *eP* **P 16 33 14.9 0.0**
LIS *e* 16 36 03.1
LIS *eS* **S 16 42 43.8 +0.9**
PGAV Gavieira, Arco 75.17 50 *eP* **P 16 33 15.2 -1.5**
comp=E,96nm,1.9s
PGAV *ep*P **pP 16 33 47.9 +2.5**
DLF Lyons Farm 75.25 38 *eP* P 16 33 13.5 -3.2
PFVI Vila Bisbo 75.32 55 *eP* **P 16 33 18.3 +0.8**
PFVI *ep*P **pP 16 33 49.3 +3.0**
PNCL Nicolau / Gran 75.43 54 *eP* **P 16 33 16.4 -1.7**
comp=E,47nm,2.0s
KPL Plockton 75.44 34⇑ *eP* **P 16 33 16.1 -1.6**
KPL AMB AMB 16 33 17.6
comp=Z,68nm,0.9s
KPL *e* 16 33 46.1
KPL AMS AMS 16 57 46.6
comp=Z,4µm,49.8s
KPL Plockton 75.44 34 P **P 16 33 16.1 -1.6**
KPL AMB AMB 16 33 17.6
comp=Z,68nm,0.9s
KPL 16 33 46.1
KPL AMS AMS 16 57 46.6
comp=Z,4µm,49.8s
MORF Marmelete 75.44 55 *eP* **P 16 33 17.1 -1.1**
MORF *ep*P **pP 16 33 51.3 +4.3**
MORF Marmelete 75.44 55 *eP* **P 16 33 18.2 0.0**
MORF *e* 16 36 08.0
MORF *eS* **S 16 42 50.0 +0.6**
GMM Mts of Mourne 75.52 37 *eP* **P 16 33 16.3 -2.0**
GMM Mts of Mourne 75.52 37 P **P 16 33 16.3 -2.0**
PMTG Montargil 75.55 53 *eP* **P 16 33 16.9 -1.9**
comp=Z,135nm,1.2s
PMTG *ep*P **pP 16 33 49.7 +2.2**
KSB Sheil Bridge 75.57 34⇑ *eP* **P 16 33 16.6 -1.9**
KSB Sheil Bridge 75.57 34 P **P 16 33 16.6 -1.9**
POLO Lamas de Olo 75.59 51 *eP* **P 16 33 17.5 -1.6**
comp=Z,28nm,1.9s
POLO *ep*P **pP 16 33 50.7 +2.8**
KAC Achnashellach 75.61 34⇑ *eP* **P 16 33 16.9 -1.8**
KAC Achnashellach 75.61 34 P **P 16 33 16.9 -1.8**
EVOP Sao Brissos 75.69 53⇓ *iP* **P 16 33 18.1 -1.5**
EVOP *e**PP **pP 16 33 48.2 -0.2**
EVOP pmax pmax
comp=Z,79nm,0.9s
EVOP Sao Brissos 75.69 53⇓ *iP* **P 16 33 18.1 -1.5**
comp=Z,79nm,0.9s
EVOP *ep*P **pP 16 33 48.2 -0.2**
MESJ Messejana 75.71 54 *eP* **P 16 33 19.5 -0.2**
MESJ *eS* **S 16 42 53.1 +0.8**
MESJ AMS AMS 17 06 32.4
comp=Z,2µm,18.6s
MESJ Messejana 75.71 54 *eP* **P 16 33 19.5 -0.2**
MESJ *eS* **S 16 42 53.1 +0.8**
MESJ A A 17 06 32.4
comp=Z,2µm,18.6s
MESJ Messejana 75.71 54 *eP* **P 16 33 19.4 -0.2**
MESJ *eS* **S 16 42 53.0 +0.8**
EVO Evora 75.78 53⇓ *iP* **P 16 33 18.1 -2.0**
comp=Z,79nm,0.9s
EVO *ep*P **pP 16 33 48.2 -0.7**
EVO *eR*
comp=Z,5µm,22.8s
EVO Evora 75.78 53 *eP* **P 16 33 18.7 -1.4**
comp=Z,94nm,2.2s
EVO *ep*P **pP 16 33 49.0 +0.1**
PCVE Castro Verde 75.88 54 *eP* **P 16 33 19.3 -1.4**
comp=Z,77nm,1.7s
MTE Manteigas 75.90 51 *eP* **P 16 33 19.0 -1.8**
comp=Z,91nm,2.4s
MTE *ep*P **pP 16 33 51.1 +1.5**
MTE Manteigas 75.90 51 *eP* **P 16 33 19.1 -1.8**
comp=Z,32nm,0.8s
PBDV Barranco-do-Ve 76.02 55 *eP* **P 16 33 20.6 -0.9**
comp=Z,107nm,1.6s
PBDV *ep*P **pP 16 33 50.3 0.0**
PESTR Estremoz 76.06 53 *eP* **P 16 33 20.1 -1.6**
comp=Z,94nm,1.6s
PESTR *ep*P **pP 16 33 53.0 +2.5**
MDO Dochfour 76.12 34 *eP* **P 16 33 20.2 -1.4**
MDO *e* 16 33 50.0
MDO Dochfour 76.12 34 P **P 16 33 20.2 -1.4**
MDO 16 33 50.0
RAR Rarotonga 76.13 243 *eP* **P 16 33 22.8 +0.5**
RAR *ep*P **pP 16 33 53.2 +2.1**
PMRV Marv??o 76.14 52 *eP* **P 16 33 20.7 -1.5**
comp=Z,119nm,1.7s
PMRV *ep*P **pP 16 33 52.9 +1.9**
PVAQ Vaqueiros 76.16 55 *eP* **P 16 33 21.2 -1.1**
comp=Z,94nm,1.8s
MVH1 Achvaich 76.17 33 *eP* **P 16 33 20.2 -1.7**
MVH1 Achvaich 76.17 33 P **P 16 33 20.2 -1.7**
MVO Moncorvo 76.19 51 *eP* **P 16 33 21.0 -1.5**
comp=Z,78nm,1.2s
MVO *ep*P **pP 16 33 53.4 +2.1**
PGBU Glenifferbraes 76.21 35⇑ *eP* **P 16 33 20.3 -1.9**
PGBU AMB AMB 16 33 23.1
comp=Z,92nm,2.0s
PGBU AMS AMS 16 58 04.2
comp=Z,3µm,43.8s
PGBU Glenifferbraes 76.21 35 P **P 16 33 20.3 -1.9**
PGBU AMB AMB 16 33 23.1
comp=Z,92nm,2.0s
PGBU AMS AMS 16 58 04.2
comp=Z,3µm,43.8s
EAB Aberfoyle 76.26 35 *eP* **P 16 33 21.2 -1.2**
EAB *e* 16 33 51.4

EAB Aberfoyle 76.26 35 P **P 16 33 21.2 -1.2**
EAB 16 33 51.4
YRC Rhoscolyn 76.43 38 *eP* **P 16 33 21.7 -1.7**
YRC Rhoscolyn 76.43 38 P **P 16 33 21.7 -1.7**
WLF1 Llynfaes 76.53 38 AMS AMS 16 58 08.7
comp=Z,3µm,38.5s
WLF1 Llynfaes 76.53 38 AMS AMS 16 58 08.7
comp=Z,3µm,38.5s
YRE Yr Eifl 76.55 38 *eP* **P 16 33 22.1 -2.0**
YRE Yr Eifl 76.55 38 P **P 16 33 22.1 -2.0**
WME Myndd Eilian 76.57 38 *eP* **P 16 33 22.2 -2.0**
WME Myndd Eilian 76.57 38 P **P 16 33 22.2 -2.0**
GCD Castle Douglas 76.62 36 *eP* **P 16 33 22.6 -1.9**
GCD Castle Douglas 76.62 36 P **P 16 33 22.6 -1.9**
MCD Coleburn Disti 76.70 34 *eP* **P 16 33 23.5 -1.4**
MCD Coleburn Disti 76.70 34 P **P 16 33 23.5 -1.4**
HTL Hartland 76.74 40 *eP* **P 16 33 23.2 -2.0**
HTL AMB AMB 16 33 25.9
comp=Z,51nm,1.0s
HTL AMS AMS 16 58 07.9
comp=Z,2µm,35.8s
HTL Hartland 76.74 40 P **P 16 33 23.2 -2.0**
HTL AMB AMB 16 33 25.9
comp=Z,51nm,1.0s
HTL AMS AMS 16 58 07.9
comp=Z,2µm,35.8s
WPM1 Penmaenmawr 76.83 38 *eP* **P 16 33 24.0 -1.7**
WPM1 Penmaenmawr 76.83 38 P **P 16 33 24.0 -1.7**
MME1 Meikle Cairn 76.89 34 *eP* **P 16 33 23.9 -2.1**
MME1 *e* 16 33 53.3
MME1 Meikle Cairn 76.89 34 P **P 16 33 23.9 -2.1**
MME1 16 33 53.3
EDI Edinburgh 76.93 35 AMS AMS 16 58 22.6
comp=Z,3µm,44.5s
EDI Edinburgh 76.93 35 AMS AMS 16 58 22.6
comp=Z,3µm,44.5s
ESK Eskdalemuir 76.99 36 *eP* **P 16 33 24.8 -1.7**
ESK AMB AMB 16 33 28.2
comp=Z,86nm,0.7s
ESK *e* 16 33 54.9
ESK AMS AMS 16 58 04.8
comp=Z,2µm,43.7s
ESK Eskdalemuir 76.99 36 P **P 16 33 24.8 -1.7**
ESK AMB AMB 16 33 28.2
comp=Z,86nm,0.7s
ESK 16 33 54.9
ESK AMS AMS 16 58 04.8
comp=Z,2µm,43.7s
ESK Eskdalemuir 76.99 36 *eP* **P 16 33 24.8 -1.7**
ESK *e**PP **pP 16 33 56.2 +0.8**
ESK pmax pmax
comp=Z,154nm,1.0s
ESK Eskdalemuir 76.99 36 *eP* **P 16 33 24.8 -1.7**
comp=Z,154nm,1.0s
ESK *ep*P **pP 16 33 56.2 +0.8**
ESK Eskdalemuir 76.99 36 P **P 16 33 25.2 -1.4**
comp=Z,873nm,0.6s,SNR=62
EBL Broad Law 77.03 35 *eP* **P 16 33 25.4 -1.3**
EBL Broad Law 77.03 35 P **P 16 33 25.4 -1.3**
ECK Cauldkaine Hil 77.05 36⇑ *iP* **P 16 33 25.1 -1.8**
ECK *e* 16 33 56.0
ECK Cauldkaine Hil 77.05 36 P **P 16 33 25.1 -1.8**
ECK 16 33 56.0
KESW Keswick, Cumbr 77.14 37 AMS AMS 16 58 28.5
comp=Z,3µm,36.2s
KESW Keswick, Cumbr 77.14 37 AMS AMS 16 58 28.5
comp=Z,3µm,36.2s
DYA Yadsworthy 77.16 41 AMS AMS 16 58 18.2
comp=Z,2µm,43.9s
DYA Yadsworthy 77.16 41 AMS AMS 16 58 18.2
comp=Z,2µm,43.9s
HEX Exmoor 77.16 40 *eP* **P 16 33 26.1 -1.5**
HEX Exmoor 77.16 40 P **P 16 33 26.1 -1.5**
DRUM Mains of Drumt 77.20 34⇑ *eP* **P 16 33 25.9 -1.8**
DRUM AMB AMB 16 33 29.5
comp=Z,110nm,0.7s
DRUM *e* 16 33 57.3
DRUM Mains of Drumt 77.20 34 P **P 16 33 25.9 -1.8**
DRUM AMB AMB 16 33 29.5
comp=Z,110nm,0.7s
DRUM 16 33 57.3
ESY Stoneypath 77.25 35 *eP* **P 16 33 26.3 -1.7**
ESY *e* 16 33 58.0
ESY Stoneypath 77.25 35 P **P 16 33 26.3 -1.7**
ESY 16 33 58.0
BST Brest 77.35 43 *eP* **P 16 33 26.8 -2.0**
BST Brest 77.35 43 *eP* **P 16 33 26.8 -2.0**
LRW Lerwick 77.47 31 *eP* **P 16 33 27.8 -1.3**
LRW *e* 16 33 58.5
LRW AMS AMS 16 58 53.2
comp=Z,5µm,42.0s
LRW Lerwick 77.47 31 P **P 16 33 27.8 -1.3**
LRW 16 33 58.5
LRW AMS AMS 16 58 53.2
comp=Z,5µm,42.0s
MCH1 Michaelchurch 77.53 39 *eP* **P 16 33 26.9 -2.8**
MCH1 AMB AMB 16 33 30.0
comp=Z,45nm,1.1s
MCH1 *e* 16 33 57.7
MCH1 AMS AMS 16 58 33.4
comp=Z,3µm,43.7s
MCH1 Michaelchurch 77.53 39 P **P 16 33 26.9 -2.8**
MCH1 AMB AMB 16 33 30.0
comp=Z,45nm,1.1s
MCH1 16 33 57.7
MCH1 AMS AMS 16 58 33.4
comp=Z,3µm,43.7s
HLM1 Long Mynd 77.53 39 *eP* **P 16 33 27.5 -2.2**
HLM1 AMB AMB 16 33 28.9
comp=Z,56nm,1.6s
HLM1 Long Mynd 77.53 39 P **P 16 33 27.5 -2.2**
HLM1 AMB AMB 16 33 28.9
comp=Z,56nm,1.6s
XAL Allendale 77.61 36 *eP* **P 16 33 28.5 -1.6**
XAL Allendale 77.61 36 P **P 16 33 28.5 -1.6**
ROSF Rostrenen 77.87 43 *eP* **P 16 33 29.4 -2.2**
comp=Z,83nm,1.2s
ROSF *ep*P **pP 16 33 59.6 -0.9**
ROSF Rostrenen 77.87 43 *eP* **P 16 33 29.4 -2.2**
ROSF *e**PP **pP 16 33 59.6 -0.9**
ROSF pmax pmax
comp=Z,83nm,1.2s
ROSF Rostrenen 77.87 43 *eP* **P 16 33 29.4 -2.2**
comp=Z,83nm,1.2s
ROSF *ep*P **pP 16 33 59.6 -0.9**
QUIF Quistinic 78.00 43 *eP* **P 16 33 30.4 -1.9**
comp=Z,69nm,0.8s
QUIF *ep*P **pP 16 34 00.6 -0.7**
QUIF Quistinic 78.00 43 *eP* **P 16 33 30.4 -1.9**
QUIF *e**PP **pP 16 34 00.6 -0.7**
QUIF pmax pmax
comp=Z,69nm,0.8s
QUIF Quistinic 78.00 43 *eP* **P 16 33 30.4 -1.9**
comp=Z,69nm,0.8s
QUIF *ep*P **pP 16 34 00.6 -0.7**
SSW Stow on the Wo 78.24 39 *eP* **P 16 33 31.8 -1.8**
SSW Stow on the Wo 78.24 39 P **P 16 33 31.8 -1.8**
KBI1 Birley Grange 78.24 38 *eP* **P 16 33 31.2 -2.4**
KBI1 *e* 16 34 02.7
KBI1 Birley Grange 78.24 38 P **P 16 33 31.2 -2.4**
KBI1 16 34 02.7
KBS Kingsbay 78.26 11 *eP* **P 16 33 33.5 +0.3**
KBS *eP*P **PP 16 36 32.2 +1.1**
KBS *eS* **S 16 43 19.9 +1.4**
KBS AMS AMS 17 04 34.1
comp=Z,2µm,27.5s
SWN1 Swindon 78.34 40 AMS AMS 16 58 56.7
comp=Z,3µm,40.3s
SWN1 Swindon 78.34 40 AMS AMS 16 58 56.7
comp=Z,3µm,40.3s
SGMF Saint Gilles 78.35 43 *eP* **P 16 33 32.0 -2.3**
comp=Z,41nm,1.0s
SGMF *ep*P **pP 16 34 03.9 +0.7**
SGMF Saint Gilles 78.35 43 *eP* **P 16 33 32.0 -2.3**
SGMF *e**PP **pP 16 34 03.9 +0.7**
SGMF pmax pmax
comp=Z,41nm,1.0s
SGMF Saint Gilles 78.35 43 *eP* **P 16 33 32.0 -2.3**
comp=Z,41nm,1.0s
SGMF *ep*P **pP 16 34 03.9 +0.7**
AMKA Amchitka 78.42 320 *eP* **P 16 33 34.6 0.0**
comp=Z,842nm,0.8s
PAB San Pablo 78.45 52 *eP* **P 16 33 33.7 -1.5**
PAB pmax pmax
comp=Z,367nm,2.4s
PAB San Pablo 78.45 52 *eP* **P 16 33 33.7 -1.5**
comp=Z,61nm,2.4s
ESDC Sonseca Array 78.73 52 P **P 16 33 35.0 -1.6**
ESDC pP **pP 16 34 05.6 0.0**
ESDC PKKPbc **PKKPbc 16 52 31.9 +0.8**
ESDC Sonseca Array 78.73 52 P **P 16 33 35.0 -1.6**
comp=Z,8.8nm,0.5s,baz=287,slow=4.6,SNR=54
ESDC pP **pP 16 34 05.6 0.0**
comp=Z,25nm,0.9s,baz=289,slow=5.7,SNR=5.6
ESDC PKKPbc **PKKPbc 16 52 31.9 +0.8**
comp=Z,0.5nm,0.6s,baz=85,slow=2.5,SNR=4.4
ESDC LR LR 17 02 02.9
comp=Z,2µm,21.7s,baz=260,slow=31
ESLA Sonseca Array 78.73 52 *eP* **P 16 33 34.9 -1.7**
comp=Z,6.8nm,0.8s
WOL Wolverton 78.73 40⇑ *eP* **P 16 33 34.1 -2.2**
WOL AMB AMB 16 33 36.3
comp=Z,94nm,2.1s
WOL AMS AMS 16 59 08.0
comp=Z,2µm,38.6s
WOL Wolverton 78.73 40 P **P 16 33 34.1 -2.2**
WOL AMB AMB 16 33 36.3
comp=Z,94nm,2.1s
WOL AMS AMS 16 59 08.0
comp=Z,2µm,38.6s
SKP1 Kophill 78.92 39 *eP* **P 16 33 35.0 -2.3**
SKP1 Kophill 78.92 39 P **P 16 33 35.0 -2.3**
GRR Gorron 79.45 43 *eP* **P 16 33 38.5 -1.8**
comp=Z,134nm,0.8s
GRR Gorron 79.45 43 *eP* **P 16 33 38.5 -1.8**
GRR pmax pmax
comp=Z,134nm,0.8s
GRR Gorron 79.45 43 *eP* **P 16 33 38.5 -1.8**
comp=Z,134nm,0.8s
FLN La Foliniere 79.63 42 *eP* **P 16 33 39.6 -1.7**
comp=Z,54nm,0.5s
FLN *ep*P **pP 16 34 09.7 -0.6**
FLN *eR*
comp=Z,3µm,22.5s
FLN La Foliniere 79.63 42 *eP* **P 16 33 39.6 -1.7**
FLN *e**PP **pP 16 34 09.7 -0.6**
FLN pmax pmax
comp=Z,54nm,0.5s
FLN La Foliniere 79.63 42 *eP* **P 16 33 39.6 -1.7**
comp=Z,54nm,0.5s
FLN *ep*P **pP 16 34 09.7 -0.6**
LDF La Druitiere 79.89 42 *eP* **P 16 33 40.9 -1.8**
comp=Z,83nm,0.8s
LDF *ep*P **pP 16 34 12.8 +1.1**
LDF La Druitiere 79.89 42 *eP* **P 16 33 40.9 -1.8**
LDF *e**PP **pP 16 34 12.8 +1.1**
LDF pmax pmax
comp=Z,83nm,0.8s
LDF La Druitiere 79.89 42 *eP* **P 16 33 40.9 -1.8**
comp=Z,83nm,0.8s
LDF *ep*P **pP 16 34 12.8 +1.1**
SJPF Ste Jean 80.15 48 *eP* **P 16 33 42.6 -1.6**
comp=Z,61nm,1.1s
SJPF *ep*P **pP 16 34 14.7 +1.4**
SJPF Ste Jean 80.15 48 *eP* **P 16 33 42.6 -1.6**
SJPF *e**PP **pP 16 34 14.7 +1.4**
SJPF pmax pmax
comp=Z,61nm,1.1s
SJPF Ste Jean 80.15 48 *eP* **P 16 33 42.6 -1.6**
comp=Z,61nm,1.1s
SJPF *ep*P **pP 16 34 14.7 +1.4**
MFF Saint Martin d 80.25 44 *eP* **P 16 33 42.5 -2.1**
comp=Z,36nm,0.9s
MFF *ep*P **pP 16 34 14.6 +0.9**
MFF Saint Martin d 80.25 44 *eP* **P 16 33 42.5 -2.1**
MFF *e**PP **pP 16 34 14.6 +0.9**
MFF pmax pmax
comp=Z,36nm,0.9s
MFF Saint Martin d 80.25 44 *eP* **P 16 33 42.5 -2.1**
comp=Z,36nm,0.9s
MFF *ep*P **pP 16 34 14.6 +0.9**
LARF Larrau 80.33 48 *eP* **P 16 33 43.4 -1.8**
LARF Larrau 80.33 48 *eP* **P 16 33 43.4 -1.8**
ETSF Etsaut 80.67 48 *eP* **P 16 33 45.4 -1.7**
comp=Z,20nm,0.8s
ETSF Etsaut 80.67 48 *eP* **P 16 33 45.4 -1.7**
ETSF pmax pmax
comp=Z,20nm,0.8s
ETSF Etsaut 80.67 48 *eP* **P 16 33 45.4 -1.7**
comp=Z,20nm,0.8s
REYF Montagne du Re 80.76 48 *eP* **P 16 33 46.4 -1.1**
REYF Montagne du Re 80.76 48 *eP* **P 16 33 46.4 -1.1**
BILL Bilibino 81.17 338⇑ *iP* **P 16 33 48.5 -0.6**
BILL *i* S **S 16 43 54.1 +4.6**
BILL pmax pmax
comp=Z,58nm,1.0s
LFF La Frestale 81.18 46 *eP* **P 16 33 47.7 -1.9**
comp=Z,55nm,0.8s
LFF *ep*P **pP 16 34 19.8 +1.0**
LFF La Frestale 81.18 46 *eP* **P 16 33 47.7 -1.9**
LFF *e**PP **pP 16 34 19.8 +1.0**
LFF pmax pmax
comp=Z,55nm,0.8s
LFF La Frestale 81.18 46 *eP* **P 16 33 47.7 -1.9**
comp=Z,55nm,0.8s
LFF *ep*P **pP 16 34 19.8 +1.0**
EPF Esparros 81.29 48 *eP* **P 16 33 48.4 -1.9**
comp=Z,32nm,0.9s
EPF *ep*P **pP 16 34 20.6 +1.1**
EPF Esparros 81.29 48 *eP* **P 16 33 48.4 -1.9**
EPF *e**PP **pP 16 34 20.6 +1.1**
EPF pmax pmax
comp=Z,32nm,0.9s
EPF Esparros 81.29 48 *eP* **P 16 33 48.4 -1.9**
comp=Z,32nm,0.9s
EPF *ep*P **pP 16 34 20.6 +1.1**
BJO Bjornoya 81.32 15 *eP* **P 16 33 50.5 +0.7**
BJO *eS* **S 16 43 54.0 +3.3**
BLS5 Blasjo 81.39 31 *eP* **P 16 33 50.4 -0.1**
BLS5 *e* 16 34 21.8
RJF Les Rejaudoux 81.65 45 *eP* **P 16 33 50.0 -2.1**
comp=Z,49nm,0.8s
RJF *ep*P **pP 16 34 22.1 +0.8**
RJF *eR*
comp=Z,3µm,20.0s
RJF Les Rejaudoux 81.65 45 *eP* **P 16 33 50.0 -2.1**
RJF *e**PP **pP 16 34 22.1 +0.8**
RJF pmax pmax
comp=Z,49nm,0.8s
RJF Les Rejaudoux 81.65 45 *eP* **P 16 33 50.0 -2.1**
comp=Z,49nm,0.8s
RJF *ep*P **pP 16 34 22.1 +0.8**
PMSA Palmer Station 81.81 169 LR LR 17 05 27.7
comp=Z,1µm,18.2s,baz=301,slow=32
FX1 Atu Island--F 81.84 322 *eP* **P 16 33 53.1 +0.1**
SALF Salau 81.96 48 *eP* **P 16 33 52.8 -1.1**
SALF Salau 81.96 48 *eP* **P 16 33 52.8 -1.1**
HYF Humbligny 81.98 43 *eP* **P 16 33 52.1 -1.7**
HYF Humbligny 81.98 43 *eP* **P 16 33 52.1 -1.7**
SNART Snartemo 82.05 32 *eP* **P 16 33 51.1 -2.7**
CAF Calviac 82.11 46 *eP* **P 16 33 52.4 -2.2**
comp=Z,34nm,0.9s
CAF Calviac 82.11 46 *eP* **P 16 33 52.4 -2.2**
CAF pmax pmax
comp=Z,34nm,0.9s
CAF Calviac 82.11 46 *eP* **P 16 33 52.4 -2.2**
comp=Z,34nm,0.9s
TBLU Trondheim 82.15 27 *eP* P 16 33 47.0 -7.3
VERF Verneugheol 82.21 45 *eP* **P 16 33 52.7 -2.4**
VERF Verneugheol 82.21 45 *eP* **P 16 33 52.7 -2.4**
BGF Bois d'Agland 82.28 44 *eP* **P 16 33 53.2 -2.2**
comp=Z,61nm,0.7s
BGF *ep*P **pP 16 34 25.5 +0.9**
BGF Bois d'Agland 82.28 44 *eP* **P 16 33 53.2 -2.2**
BGF *e**PP **pP 16 34 25.5 +0.9**
BGF pmax pmax
comp=Z,61nm,0.7s
BGF Bois d'Agland 82.28 44 *eP* **P 16 33 53.2 -2.2**
comp=Z,61nm,0.7s
BGF *ep*P **pP 16 34 25.5 +0.9**
FRNF Fournols 82.35 45 *eP* **P 16 33 53.7 -2.1**
FRNF Fournols 82.35 45 *eP* **P 16 33 53.7 -2.1**
BAIF Baives 82.36 40 *eP* **P 16 33 53.9 -1.8**
comp=Z,59nm,1.2s
BAIF *ep*P **pP 16 34 26.0 +1.1**
BAIF Baives 82.36 40 *eP* **P 16 33 53.9 -1.8**
BAIF *e**PP **pP 16 34 26.0 +1.1**
BAIF pmax pmax
comp=Z,59nm,1.2s

BAIF **Baives** 82.36 40 *e*P P 16 33 53.9 -1.8
comp=Z,59nm,1.2s
BAIF epP pP 16 34 26.0 +1.1
AVF Avril sur Loir 82.56 44 *e*P P 16 33 54.3 -2.5
comp=Z,37nm,0.8s
AVF epP pP 16 34 26.4 +0.3
AVF Avril sur Loir 82.56 44 *e*P P 16 33 54.3 -2.5
AVF *e**PP pP 16 34 26.4 +0.3
AVF pmax pmax
comp=Z,37nm,0.8s
AVF Avril sur Loir 82.56 44 *e*P P 16 33 54.3 -2.5
comp=Z,37nm,0.8s
AVF epP pP 16 34 26.4 +0.3
MTLF Montolieu 82.56 47 *e*P P 16 33 54.8 -2.1
comp=Z,30nm,0.9s
MTLF epP pP 16 34 27.2 +1.0
MTLF Montolieu 82.56 47 *e*P P 16 33 54.8 -2.1
MTLF *e**PP pP 16 34 27.2 +1.0
MTLF pmax pmax
comp=Z,30nm,0.9s
MTLF Montolieu 82.56 47 *e*P P 16 33 54.8 -2.1
comp=Z,30nm,0.9s
MTLF epP pP 16 34 27.2 +1.0
PYM Petit Puy Mans 82.57 45 *e*P P 16 33 55.7 -1.3
PYM Petit Puy Mans 82.57 45 *e*P P 16 33 55.7 -1.3
PYM Petit Puy Mans 82.57 45 *e*P P 16 33 55.7 -1.3
AGO Saint Agoulin 82.58 44 *e*P P 16 33 56.6 -0.4
AGO Saint Agoulin 82.58 44 *e*P P 16 33 56.6 -0.4
DOU Dourbes 82.59 40 P P 16 33 55.2 -1.7
DOU AP pP 16 34 26.9 +0.8
comp=Z,28nm,1.7s
DOU XP sP 16 34 40.1 +1.9
SSF Saint Saulge 82.60 43 *e*P P 16 33 54.7 -2.4
comp=Z,50nm,0.8s
SSF epP pP 16 34 26.7 +0.4
SSF Saint Saulge 82.60 43 *e*P P 16 33 54.7 -2.4
SSF *e**PP pP 16 34 26.7 +0.4
SSF pmax pmax
comp=Z,50nm,0.8s
SSF Saint Saulge 82.60 43 *e*P P 16 33 54.7 -2.4
comp=Z,50nm,0.8s
SSF epP pP 16 34 26.7 +0.4
STEI Steigen 82.61 21 *e*P P 16 33 56.1 -0.5
STEI *e* 16 34 26.7
HOMB Homborsund 82.72 32 *e* 16 44 06.6
GIVF Givet 82.73 40 *e*P P 16 33 56.0 -1.7
comp=Z,16nm,0.6s
GIVF epP pP 16 34 28.2 +1.3
GIVF Givet 82.73 40 *e*P P 16 33 56.0 -1.7
GIVF *e**PP pP 16 34 28.2 +1.3
GIVF pmax pmax
comp=Z,17nm,0.6s
GIVF Givet 82.73 40 *e*P P 16 33 56.0 -1.7
comp=Z,16nm,0.6s
GIVF epP pP 16 34 28.2 +1.3
LOR Lormes 82.79 43 *e*P P 16 33 56.0 -2.1
comp=Z,67nm,0.9s
LOR epP pP 16 34 28.1 +0.8
LOR *e*R
comp=Z,3µm,22.8s
LOR Lormes 82.79 43 *e*P P 16 33 56.0 -2.1
comp=Z,67nm,0.9s
LOR epP pP 16 34 28.1 +0.8
LBL Lubilhac 82.85 45 *e*P P 16 33 57.1 -1.4
LBL Lubilhac 82.85 45 *e*P P 16 33 57.1 -1.4
LBL Lubilhac 82.85 45 *e*P P 16 33 57.1 -1.4
LRDF Laroque-de-Fa 82.89 48 *e*P P 16 33 55.8 -2.8
LRDF Laroque-de-Fa 82.89 48 *e*P P 16 33 55.8 -2.8
SMF Signal de Mont 82.92 44 *e*P P 16 33 56.3 -2.5
comp=Z,34nm,0.8s
SMF Signal de Mont 82.92 44 *e*P P 16 33 56.3 -2.5
SMF pmax pmax
comp=Z,34nm,0.8s
SMF Signal de Mont 82.92 44 *e*P P 16 33 56.3 -2.5
comp=Z,34nm,0.8s
MOR8 Moi Rana 82.93 23 *e*P P 16 33 58.5 +0.2
BCLA Clavier 82.96 40 P P 16 33 57.0 -1.8
BCLA AP pP 16 34 29.0 +0.9
comp=Z,64nm,1.8s
BEBN Eben Emael 83.09 39 P P 16 33 58.4 -1.1
comp=Z,18nm,1.6s
BEBN AP pP 16 34 29.8 +1.0
NAO01 NORSAR Array S 83.14 29 *e*P P 16 33 59.6 +0.1
comp=Z,50nm,1.1s
TRO Tromso 83.20 19 *e*P P 16 33 59.2 -0.5
TRO *e*PP PP 16 37 11.2 -0.9
TRO *e*S S 16 44 09.3 -0.9
TRO *e*SS SS 16 49 38.8 +2.5
TRO AMS AMS 17 09 40.9
comp=Z,5µm,21.3s
NB2 NORSAR Subarra 83.23 29 P P 16 33 59.5 -0.6
comp=Z,61nm,1.1s,baz=289,slow=5.3
NB2 NORSAR Subarra 83.23 29 P P 16 33 59.5 -0.6
baz=289,slow=5.3
NOA NORSAR Array B 83.23 29 P P 16 33 59.5 -0.6
NOA pP pP 16 34 29.4 +0.1
NOA PKKPbc PKKPbc 16 52 21.4 -0.4
NOA NORSAR Array B 83.23 29 P P 16 33 59.5 -0.6
comp=Z,21nm,0.8s,baz=290,slow=5.2,SNR=46
NOA pP pP 16 34 29.4 +0.1
comp=Z,22nm,0.9s,baz=289,slow=5.1,SNR=5.4
NOA PKKPbc PKKPbc 16 52 21.4 -0.4
comp=Z,1.4nm,0.8s,baz=159,slow=0.6,SNR=3.2
NOA LR LR 17 09 45.8
comp=Z,1µm,21.0s,baz=280,slow=35
HGN Heimansgroeve 83.26 39 *e*P P 16 33 58.9 -1.4
comp=Z,32nm,0.7s
HGN epP pP 16 34 27.6 -1.9
HGN *e*PP PP 16 37 16.9 +3.9
HGN *e*S S 16 44 07.3 -4.1
MEZF Maizieres J'vi 83.27 42 *e*P P 16 33 58.7 -1.8
comp=Z,72nm,0.6s
MEZF epP pP 16 34 30.8 +1.1
MEZF Maizieres J'vi 83.27 42 *e*P P 16 33 58.7 -1.8
comp=Z,72nm,0.6s
MEZF epP pP 16 34 30.8 +1.1
SFTF Sexfontaines 83.34 42 *e*P P 16 33 58.9 -1.9
comp=Z,26nm,0.5s
SFTF epP pP 16 34 31.0 +0.9
SFTF Sexfontaines 83.34 42 *e*P P 16 33 58.9 -1.9
comp=Z,26nm,0.5s
SFTF epP pP 16 34 31.0 +0.9
MEM Membach 83.34 40 P P 16 33 59.8 -1.0
MEM AP pP 16 34 31.4 +1.4
comp=Z,18nm,0.9s
EANR 'Ain N'Sour 83.39 55 P sP 16 34 41.9 -1.0
WTSB Winterswijk 83.47 38 *e*P P 16 34 00.3 -1.1
WTSB epP pP 16 34 32.2 +1.5
HLG Helgoland 83.51 36 *e*P P 16 34 01.6 +0.1
comp=Z,364nm,1.0s
HLG epP pP 16 34 33.6 +2.8
LASF Ste Croix 83.55 46 *e*P P 16 34 00.5 -1.5
comp=Z,32nm,0.9s
LASF Ste Croix 83.55 46 *e*P P 16 34 00.5 -1.5
comp=Z,32nm,0.9s
ECHA Ech Chlef 83.56 54 P sP 16 34 37.2 -6.4
MUD Monsted U'grnd 83.58 33⇑ *e*P P 16 34 01.9 +0.1
MUD *i* 16 34 32.9
MUD *i* S S 16 44 14.8 +0.4
MUD pmax pmax
comp=Z,12nm,1.0s
MUD Monsted U'grnd 83.58 33⇑ *i*P P 16 34 01.9 +0.1
comp=Z,12nm,1.0s
MUD *i* 16 34 32.9
MUD *i* S S 16 44 14.8 +0.4
EBNR Beni Rached 83.66 54 P pP 16 34 35.4 +3.4
WLF Walferdange 83.68 40 P P 16 34 00.8 -1.7
WLF AP pP 16 34 32.1 +0.3
comp=Z,62nm,2.0s
WLF XP sP 16 34 45.3 +1.4
WLF Walferdange 83.68 40 *e*P P 16 34 01.0 -1.5
WLF pmax pmax
comp=Z,19nm,0.7s
WLF Walferdange 83.68 40 *e*P P 16 34 01.4 -1.1
comp=Z,89nm,1.1s
WLF epP pP 16 34 33.5 +1.7
WLF *e*sP sP 16 34 45.2 +1.3
WLF Walferdange 83.68 40 *e*P P 16 34 00.9 -1.5
comp=Z,19nm,0.7s
WLF pP pP 16 34 34.0 +2.2
ETRT Tiaret 83.68 55 P sP 16 34 43.5 -0.9
PAGF Fort de Pagny 83.69 42 *e*P P 16 34 01.0 -1.6
comp=Z,12nm,0.5s
PAGF epP pP 16 34 33.1 +1.2

PAGF Fort de Pagny 83.69 42 *e*P P 16 34 01.0 -1.6
comp=Z,12nm,0.5s
PAGF epP pP 16 34 33.1 +1.2
SSB Saint Sauveur 83.73 45 *e*P P 16 34 00.8 -2.1
SSB *e**PP pP 16 34 33.0 +0.8
SSB pmax pmax
comp=Z,10.0nm,0.8s
SSB Saint Sauveur 83.73 45 *e*P P 16 34 00.8 -2.1
comp=Z,23nm,0.8s
SSB epP pP 16 34 33.0 +0.8
VIVF Saint-Julien-l 83.92 45 *e*P P 16 34 02.6 -1.3
comp=Z,110nm,1.3s
VIVF epP pP 16 34 34.9 +1.7
VIVF Saint-Julien-l 83.92 45 *e*P P 16 34 02.6 -1.3
VIVF *e**PP pP 16 34 34.9 +1.7
VIVF pmax pmax
comp=Z,110nm,1.3s
VIVF Saint-Julien-l 83.92 45 *e*P P 16 34 02.6 -1.3
comp=Z,110nm,1.3s
VIVF epP pP 16 34 34.9 +1.7
THEF They Montfort 83.94 42 *e*P P 16 34 02.0 -1.9
THEF They Montfort 83.94 42 *e*P P 16 34 02.0 -1.9
THEF They Montfort 83.94 42 *e*P P 16 34 02.0 -1.9
OG35 Corcelles 84.23 44 *e*P P 16 34 03.0 -2.5
RUP Ruppelstein 84.23 40 *e*P P 16 34 04.0 -1.4
RUP Ruppelstein 84.23 40 *e*P P 16 34 04.0 -1.4
HAU Haudompre 84.24 42 *e*P P 16 34 03.6 -1.8
comp=Z,35nm,0.5s
HAU *e*R
comp=Z,3µm,22.0s
HAU Haudompre 84.24 42 *e*P P 16 34 03.6 -1.8
HAU pmax pmax
comp=Z,35nm,0.5s
HAU Haudompre 84.24 42 *e*P P 16 34 03.6 -1.8
comp=Z,35nm,0.5s
CABF La Chapelle 84.43 43 *e*P P 16 34 04.6 -1.9
comp=Z,25nm,0.8s
CABF La Chapelle 84.43 43 *e*P P 16 34 04.6 -1.9
CABF pmax pmax
comp=Z,25nm,0.8s
CABF La Chapelle 84.43 43 *e*P P 16 34 04.6 -1.9
comp=Z,25nm,0.8s
ABH Alteburg 84.49 40 *e*P P 16 34 05.9 -0.8
AFI Afiamalu 84.61 254 *e*P P 16 34 08.6 +0.7
AFI epP pP 16 34 37.9 +0.7
HINF Hinteralfeld 84.61 42 *e*P P 16 34 05.3 -2.1
comp=Z,15nm,0.5s
HINF epP pP 16 34 37.6 +0.9
HINF Hinteralfeld 84.61 42 *e*P P 16 34 05.3 -2.1
HINF *e**PP pP 16 34 37.6 +0.9
HINF pmax pmax
comp=Z,15nm,0.5s
HINF Hinteralfeld 84.61 42 *e*P P 16 34 05.3 -2.1
comp=Z,15nm,0.5s
HINF epP pP 16 34 37.6 +0.9
ECH Echery 84.70 42 *e*P P 16 34 06.0 -1.8
ECH *e**PP pP 16 34 38.3 +1.2
ECH pmax pmax
comp=Z,41nm,1.1s
ECH Echery 84.70 42 *e*P P 16 34 06.0 -1.8
comp=Z,41nm,1.1s
ECH epP pP 16 34 38.3 +1.2
ECH Echery 84.70 42 *e*P P 16 34 06.3 -1.5
LOMF Lomont 84.72 43 *e*P P 16 34 06.1 -1.9
LOMF Lomont 84.72 43 *e*P P 16 34 06.1 -1.9
LOMF Lomont 84.72 43 *e*P P 16 34 06.1 -1.9
CDF Champ du Feu 84.72 41 *e*P P 16 34 06.1 -1.9
comp=Z,27nm,0.8s
CDF epP pP 16 34 38.2 +0.9
CDF Champ du Feu 84.72 41 *e*P P 16 34 06.1 -1.9
CDF *e**PP pP 16 34 38.2 +0.9
CDF pmax pmax
comp=Z,27nm,0.8s
CDF Champ du Feu 84.72 41 *e*P P 16 34 06.1 -1.9
comp=Z,27nm,0.8s
CDF epP pP 16 34 38.2 +0.9
ORIF Oris-en-Rattie 84.74 45 *e*P P 16 34 06.8 -1.3
comp=Z,46nm,0.9s
ORIF epP pP 16 34 38.7 +1.2
ORIF *e*R
comp=Z,2µm,23.0s
ORIF Oris-en-Rattie 84.74 45 *e*P P 16 34 06.8 -1.3
ORIF *e**PP pP 16 34 38.7 +1.2
ORIF pmax pmax
comp=Z,46nm,0.9s
ORIF Oris-en-Rattie 84.74 45 *e*P P 16 34 06.8 -1.3
comp=Z,46nm,0.9s
ORIF epP pP 16 34 38.7 +1.2
LIC Lamto 84.77 85 *e*P P 16 34 06.9 -1.8
comp=Z,67nm,0.9s,baz=275
LIC epP pP 16 34 37.9 -0.2
LIC *e*R
comp=Z,2µm,22.8s
LIC Lamto 84.77 85 *e*P P 16 34 06.9 -1.8
comp=Z,67nm,0.9s
LIC epP pP 16 34 37.9 -0.2
SMRF Simiane la Rot 84.78 46 *e*P P 16 34 07.0 -1.3
comp=Z,38nm,1.0s
SMRF Simiane la Rot 84.78 46 *e*P P 16 34 07.0 -1.3
comp=Z,38nm,1.0s
MOF Molkenrain 84.79 42 *e*P P 16 34 06.1 -2.2
MOF Molkenrain 84.79 42 *e*P P 16 34 06.1 -2.2
MOF Molkenrain 84.79 42 *e*P P 16 34 06.1 -2.2
EMHD Djebel Mahouad 84.79 54 P pP 16 34 31.0 -7.0
DBIC Dimbokro 84.82 84 *e*P P 16 34 06.8 -2.2
comp=Z,15nm,0.8s
DBIC PKKPbc PKKPbc 16 52 17.3 +0.8
DBIC Dimbokro 84.82 84 P P 16 34 06.6 -2.4
comp=Z,18nm,0.8s,baz=257,slow=3.9,SNR=17
DBIC PKKPbc PKKPbc 16 52 17.3 +0.8
comp=Z,2.5nm,0.5s,baz=103,slow=5.5,SNR=5.8
DBIC LR LR 17 06 26.2
comp=Z,2µm,21.0s,baz=277,slow=32
KTK1 Kautokeino 84.86 19 *e*P P 16 34 06.4 -1.7
KTK1 *e*PP PP 16 37 26.0 +0.4
KTK1 *e*S S 16 44 23.2 -3.6
KTK1 AMS AMS 17 05 48.7
comp=Z,12µm,32.3s
LANF Langenberg 84.90 41 *e*P P 16 34 08.1 -0.7
LANF Langenberg 84.90 41 *e*P P 16 34 08.1 -0.7
LANF Langenberg 84.90 41 *e*P P 16 34 08.1 -0.7
OG01 Vacheresse 84.90 44 *e*P P 16 34 07.1 -1.8
OG01 Vacheresse 84.90 44 *e*P P 16 34 07.1 -1.8
TNS Taunus Mts 84.95 39 *e*P P 16 34 08.3 -0.7
TNS *e**PP pP 16 34 39.6 +1.2
TNS *e**SP sP 16 34 51.6 +1.1
TNS pmax pmax
comp=Z,182nm,1.7s
TNS Taunus Mts 84.95 39 *e*P P 16 34 08.3 -0.7
comp=Z,182nm,1.7s
TNS epP pP 16 34 39.6 +1.2
TNS *e*sP sP 16 34 51.6 +1.1
BSEG Bad Segeberg 84.95 36 *e*P P 16 34 08.2 -0.6
BSEG *e**PP pP 16 34 40.8 +2.6
BSEG *e**SP sP 16 34 52.1 +1.8
BSEG pmax pmax
comp=Z,458nm,1.3s
BSEG Bad Segeberg 84.95 36 *e*P P 16 34 08.2 -0.6
comp=Z,458nm,1.3s
BSEG epP pP 16 34 40.8 +2.6
BSEG *e*sP sP 16 34 52.1 +1.8
RSL Roselend 85.04 44 *e*P P 16 34 09.8 +0.1
RSL Roselend 85.04 44 *e*P P 16 34 09.8 +0.1
RSL Roselend 85.04 44 *e*P P 16 34 09.8 +0.1
BBS Basel-Blauen 85.14 42 *e*P P 16 34 08.5 -1.5
BBS Basel-Blauen 85.14 42 *e*P P 16 34 08.5 -1.5
LPL La Plagne 85.16 44 *e*P P 16 34 09.1 -1.3
comp=Z,58nm,1.2s
LPL La Plagne 85.16 44 *e*P P 16 34 09.1 -1.3
LPL pmax pmax
comp=Z,58nm,1.2s
LPL La Plagne 85.16 44 *e*P P 16 34 09.1 -1.3
comp=Z,58nm,1.2s
LPG La Plagne 85.18 44 *e*P P 16 34 09.4 -1.1
comp=Z,197nm,1.6s
LPG epP pP 16 34 41.7 +1.8
LPG La Plagne 85.18 44 *e*P P 16 34 09.4 -1.1
LPG *e**PP pP 16 34 41.7 +1.8
LPG pmax pmax
comp=Z,197nm,1.6s
LPG La Plagne 85.18 44 *e*P P 16 34 09.4 -1.1
comp=Z,197nm,1.6s
LPG epP pP 16 34 41.7 +1.8
NRDL Niedersach Rie 85.27 37 *e*P P 16 34 10.0 -0.4
comp=Z,161nm,1.4s
NRDL *e*pP pP 16 34 41.5 +1.7
NRDL *e*sP sP 16 34 53.5 +1.6
SENIN Lac Senin/Sane 85.31 43 *e*P P 16 34 09.8 -1.3
ARCES ARCESS Array B 85.31 18 P P 16 34 08.5 -1.9
ARCES PP PP 16 37 27.4 -1.7
ARCES ScS S 16 44 33.2 +2.0
ARCES PKKPbc PKKPbc 16 52 15.9 -1.4
ARCES ARCESS Array B 85.31 18 P P 16 34 08.5 -1.9
comp=Z,12nm,0.5s,baz=278,slow=3.5,SNR=78
ARCES PP PP 16 37 27.4 -1.7
comp=Z,6.8nm,0.6s,baz=294,slow=5.8,SNR=6.6
ARCES ScS S 16 44 33.2 +2.0
comp=Z,11nm,1.1s,baz=328,slow=4.3,SNR=7.4
ARCES PKKPbc PKKPbc 16 52 15.9 -1.4
comp=Z,4.0nm,0.9s,baz=121,slow=2.5,SNR=8.4
ARCES LR LR 17 12 23.1
comp=Z,3µm,21.5s,baz=310,slow=36
ARE0 ARCESS Array S 85.31 18 *e*P P 16 34 09.1 -1.2
FELD Feldberg im Sc 85.34 42 *e*P P 16 34 09.2 -1.9
FELD Feldberg im Sc 85.34 42 *e*P P 16 34 09.2 -1.9
TOD Tromm 85.35 40 *e*P P 16 34 09.8 -1.2
TOD Tromm 85.35 40 *e*P P 16 34 09.8 -1.2
MBDF Montbardon 85.40 45 *e*P P 16 34 10.0 -1.5
comp=Z,28nm,0.8s
MBDF Montbardon 85.40 45 *e*P P 16 34 10.0 -1.5
MBDF pmax pmax
comp=Z,28nm,0.8s
MBDF Montbardon 85.40 45 *e*P P 16 34 10.0 -1.5
comp=Z,28nm,0.8s
BFO Black Forest 85.42 41 *e*P P 16 34 08.8 -2.6
BFO *e**PP pP 16 34 41.5 +0.7
BFO pmax pmax
comp=Z,73nm,1.5s
BFO Black Forest 85.42 41 *e*P P 16 34 08.8 -2.6
comp=Z,73nm,1.5s
BFO epP pP 16 34 41.5 +0.7
BFO *e*sP sP 16 34 53.4 +0.5
BFO Black Forest 85.42 41 *e*P P 16 34 09.5 -1.9
BFO Black Forest 85.42 41 P P 16 34 08.9 -2.5
comp=Z,71nm,0.7s,SNR=7.8
LLD Lille Linde 85.56 34 *i* P P 16 34 12.2 +0.4
LLD *i* 16 34 44.2
LLD Lille Linde 85.56 34 *i* P P 16 34 12.2 +0.4
LLD *i* 16 34 44.2
COP Copenhagen 85.56 34 *i* P P 16 34 11.2 -0.6
COP *i* 16 34 43.3
comp=Z,660nm,18.0s
LMR La Mourre 85.60 46 *e*P P 16 34 10.4 -1.9
comp=Z,32nm,0.8s
LMR La Mourre 85.60 46 *e*P P 16 34 10.4 -1.9
LMR pmax pmax
comp=Z,32nm,0.8s
LMR La Mourre 85.60 46 *e*P P 16 34 10.4 -1.9
comp=Z,32nm,0.8s
CLZ Clausthal 85.63 38 *e*P P 16 34 11.7 -0.6
CLZ *e**PP pP 16 34 43.8 +2.1
CLZ *e**SP sP 16 34 55.0 +1.1
CLZ pmax pmax
comp=Z,153nm,1.3s
CLZ Clausthal 85.63 38 *e*P P 16 34 11.7 -0.6
comp=Z,153nm,1.3s
CLZ epP pP 16 34 43.8 +2.1
CLZ *e*sP sP 16 34 55.0 +1.1
FRF La Foret Royal 85.63 46 *e*P P 16 34 10.8 -1.7
comp=Z,64nm,0.9s
FRF La Foret Royal 85.63 46 *e*P P 16 34 10.8 -1.7
FRF pmax pmax
comp=Z,64nm,0.9s
FRF La Foret Royal 85.63 46 *e*P P 16 34 10.8 -1.7
comp=Z,64nm,0.9s
KEV Kevo 85.65 18 *e*P P 16 34 10.9 -1.1
KEV pmax pmax
comp=Z,402nm,2.3s
KEV Kevo 85.65 18 *e*p P 16 34 10.4 -1.6
comp=Z,8.5nm,0.6s
KEV Kevo 85.65 18 *e*P P 16 34 10.9 -1.1
comp=Z,402nm,2.3s
KEV epP pP 16 34 44.2 +2.8
UBBA Unterbreizbach 85.72 39 *e*P P 16 34 11.2 -1.4
comp=Z,216nm,1.8s
UBBA epP pP 16 34 43.8 +1.8
UBBA *e*sP sP 16 34 55.1 +1.0
CALN Calern 85.75 46 *e*P P 16 34 12.2 -1.0
CALN Calern 85.75 46 *e*P P 16 34 12.2 -1.0
CALN Calern 85.75 46 *e*P P 16 34 12.2 -1.0
SPAK Spaichingen-Ko 85.78 41 *e*P P 16 34 11.1 -2.1
STU Stuttgart 85.84 41 *e*P P 16 34 12.1 -1.3
comp=Z,89nm,1.1s
STU epP pP 16 34 44.3 +1.5
STU *e*sP sP 16 34 55.5 +0.6
MVIF Mont Vial 85.89 46 *e*P P 16 34 12.6 -1.4
MVIF Mont Vial 85.89 46 *e*P P 16 34 12.6 -1.4
MVIF Mont Vial 85.89 46 *e*P P 16 34 12.6 -1.4
TOUF Mont Tournerai 85.93 46 *e*P P 16 34 15.6 +1.4
TOUF Mont Tournerai 85.93 46 *e*P P 16 34 15.6 +1.4
TOUF Mont Tournerai 85.93 46 *e*P P 16 34 15.6 +1.4
REVF Revere 86.09 46 *e*P P 16 34 15.0 +0.2
REVF Revere 86.09 46 *e*P P 16 34 15.0 +0.2
REVF Revere 86.09 46 *e*P P 16 34 15.0 +0.2
SBF Sospel 86.10 46 *e*P P 16 34 13.2 -1.7
comp=Z,89nm,1.2s
SBF Sospel 86.10 46 *e*P P 16 34 13.2 -1.7
SBF pmax pmax
comp=Z,89nm,1.2s
SBF Sospel 86.10 46 *e*P P 16 34 13.2 -1.7
comp=Z,89nm,1.2s
SAOF Saorge 86.15 46 *e*P P 16 34 13.9 -1.2
SAOF Saorge 86.15 46 *e*P P 16 34 13.9 -1.2
SAOF Saorge 86.15 46 *e*P P 16 34 13.9 -1.2
RGN Rugen 86.42 34 *e*P P 16 34 16.3 +0.2
comp=Z,244nm,1.2s
RGN epP pP 16 34 48.7 +3.2
RGN *e*sP sP 16 34 59.8 +2.2
TUE Stuetta 86.63 43 *e*P P 16 34 16.6 -0.9
comp=Z,72nm,0.8s
TUE epP pP 16 34 50.2 +3.2
NEUB Neuenburg 86.66 38 *e*P P 16 34 16.5 -0.8
comp=Z,144nm,1.1s
NEUB epP pP 16 34 49.1 +2.3
NEUB *e*sP sP 16 35 00.3 +1.4
DAVA Damuels 86.73 42⇑ *e*P P 16 34 17.3 -0.7
comp=Z,44nm,1.0s,SNR=15
DAVA ⇓pP pP 16 34 45.5 -2.0
comp=Z,114nm,1.1s
DAVA Damuels 86.73 42⇑ *e*P P 16 34 17.3 -0.7
comp=Z,44nm,1.0s
DAVA ⇓P pP 16 34 45.5 -2.0
MOX Moxa 86.75 38 *e*P P 16 34 16.8 -1.0
MOX *e**PP pP 16 34 49.5 +2.2
MOX *e**SP sP 16 35 00.5 +1.1
MOX *e* 16 37 40.4
MOX *e*S SKSac 16 44 31.5 -2.8
MOX pmax pmax
comp=Z,104nm,1.2s
MOX Moxa 86.75 38 *e*P P 16 34 16.8 -1.0
comp=Z,104nm,1.2s
MOX epP pP 16 34 49.5 +2.2
MOX *e*sP sP 16 35 00.5 +1.1
MOX *e*PP PP 16 37 40.4 -1.0
MOX *e*S SKSac 16 44 31.5 -2.8
GRFO Grafenberg 86.82 39 *e*P P 16 34 17.7 -0.5
GRFO pmax pmax
comp=Z,95nm,1.0s
GRFO Grafenberg 86.82 39 *e*P P 16 34 17.7 -0.5
comp=Z,95nm,1.0s
GRF Grafenberg Arr 86.82 39 *e*P P 16 34 17.6 -0.6
GRF *e**PP pP 16 34 49.8 +2.1
GRF *e**SP sP 16 35 00.5 +0.7
GRF *e* 16 37 40.7
GRF *e*S SKSac 16 44 31.8 -3.0
GRF pmax pmax
comp=Z,138nm,1.1s
GRF Grafenberg Arr 86.82 39 *e*P P 16 34 17.6 -0.6
comp=Z,138nm,1.1s
GRF epP pP 16 34 49.8 +2.1
GRF *e*sP sP 16 35 00.5 +0.7
GRF *e*PP PP 16 37 40.7 -1.3
GRF *e*S SKSac 16 44 31.8 -3.0
BSD Bornholm Skovb 87.08 34 *i* P P 16 34 23.6 +4.3
BSD *i* 16 34 50.3
BSD *i* S SKSac 16 44 31.5 -4.5
BSD *i* 16 50 26.3

BSD pmax pmax
comp=Z,8.0nm,0.9s
BSD MLR MLR
comp=Z,2µm,15.0s
BSD Bornholm Skovb 87.08 34 *i* P P 16 34 23.6 +4.3
comp=Z,7.9nm,0.9s
BSD *i* 16 34 50.3
BSD *i* 16 50 26.3
BSD
comp=Z,1µm,15.0s
PLN Plauen 87.13 38 *e*P **P 16 34 18.9 -0.8**
comp=Z,3µm,2.4s
PLN *e*pP **pP 16 34 51.7 +2.6**
PLN *e*sP **sP 16 35 02.1 +0.8**
PLN *e*PP **PP 16 37 42.0 -2.4**
FUORN Ofenpass-Fuorn 87.19 43 *e*P **P 16 34 19.4 -0.9**
WERD Werda 87.23 38 *e*P **P 16 34 19.4 -0.8**
comp=Z,115nm,1.3s
WERD *e*pP **pP 16 34 52.2 +2.5**
WERD *e*sP **sP 16 35 02.8 +1.0**
RETA Reutte 87.24 42⇓ *e*P **P 16 34 19.5 -0.8**
comp=Z,43nm,1.1s,SNR=19
RETA ⇓*i*pP **pP 16 34 47.5 -2.3**
comp=Z,111nm,0.9s
RETA Reutte 87.24 42⇓ *e*P **P 16 34 19.6 -0.8**
comp=Z,43nm,1.1s
RETA ⇓*i*P **pP 16 34 47.5 -2.3**
GUNZ Gunzen 87.28 39 *e*P **P 16 34 19.8 -0.6**
comp=Z,126nm,1.1s
GUNZ *e*pP **pP 16 34 52.9 +3.0**
GUNZ *e*sP **sP 16 35 03.2 +1.2**
WERN Wernitzgruen 87.33 39 *e*P **P 16 34 20.4 -0.3**
comp=Z,148nm,1.2s
WERN *e*pP **pP 16 34 52.7 +2.5**
WERN *e*sP **sP 16 35 03.6 +1.3**
WERN *e*PP PP 16 37 39.5 -6.5
TANN Tannenbergstha 87.34 38 *e*P **P 16 34 20.3 -0.4**
comp=Z,131nm,1.2s
TANN *e*pP **pP 16 34 53.1 +2.9**
TANN *e*sP **sP 16 35 03.5 +1.2**
TANN *e*PP **PP 16 37 43.2 -2.9**
FUR Furstenfeldbru 87.35 41 *e*P **P 16 34 20.3 -0.5**
FUR *e**PP **pP 16 34 52.6 +2.3**
FUR *e**SP **sP 16 35 02.9 +0.5**
FUR pmax pmax
comp=Z,74nm,1.1s
FUR Furstenfeldbru 87.35 41 *e*P **P 16 34 20.3 -0.5**
comp=Z,74nm,1.1s
FUR *e*pP **pP 16 34 52.6 +2.3**
FUR *e*sP **sP 16 35 02.9 +0.5**
CLL Collm 87.36 38 *e*P **P 16 34 20.0 -0.7**
CLL *i* *PP **pP 16 34 53.0 +2.8**
CLL *e* 16 44 36.0
CLL *e*S **SKKSac 16 44 46.0 -1.4**
CLL pmax pmax
comp=Z,13nm,1.7s
CLL Collm 87.36 38 *e*P **P 16 34 19.7 -1.0**
comp=Z,96nm,1.0s
CLL *e*pP **pP 16 34 53.1 +2.8**
CLL *e*sP **sP 16 35 03.5 +1.2**
CLL *e*PP **PP 16 37 46.1 -0.1**
CLL Collm 87.36 38 *e*P **P 16 34 20.0 -0.7**
comp=Z,40nm,1.7s
CLL *i* pP **pP 16 34 53.0 +2.8**
comp=Z,96nm,1.0s
CLL *e*sP **sP 16 35 03.0 +0.7**
CLL *e*PP **PP 16 37 48.0 +1.8**
CLL *e*SKSac **SKSac 16 44 36.0 -1.9**
CLL *e*S **SKKSac 16 44 46.0 -1.4**
comp=N,1µm,23.3s
CLL *e*S **SKKSac 16 44 46.0 -1.4**
comp=E,4µm,23.5s
CLL *e*SP **SPn 16 45 49.0 -2.1**
CLL *e*PS **PS 16 46 16.0 +8.1**
CLL *e*SS **SS 16 50 41.0 +2.9**
CLL *e*SSS SSS 16 54 12.0
CLL *e* 16 55 18.0
FETA Feichten 87.36 42⇓ *e*P **P 16 34 19.8 -1.3**
comp=E,14nm,0.6s,SNR=10
FETA ⇓*e*pP **pP 16 34 48.7 -1.9**
comp=E,72nm,0.9s
FETA Feichten 87.36 42⇓ *e*P **P 16 34 19.8 -1.3**
comp=E,14nm,0.6s
FETA ⇓*e*P **pP 16 34 48.7 -1.9**
NKC Novy Kostel 87.39 39 *e*P **P 16 34 20.6 -0.3**
NKC *e* 16 37 49.7
NKC *e* 16 44 37.9
NKC *e*SS SS 16 50 39.3 +0.5
NKC Novy Kostel 87.39 39 *e*P **P 16 34 20.6 -0.3**
NKC *e*pP **pP 16 34 54.1 +3.7**
NKC *e*PP **PP 16 37 49.7 +3.2**
NKC *e*SKS **SKSac 16 44 37.9 -0.3**
NKC *e*SS **SS 16 50 39.3 +0.5**
ROTZ Rotzenmuhle 87.40 39 *e*P **P 16 34 20.3 -0.7**
comp=Z,87nm,1.3s
ROTZ *e*pP **pP 16 34 52.3 +1.8**
ROTZ *e*sP **sP 16 35 03.5 +0.9**
ROTZ *e*PP **PP 16 37 44.8 -1.8**
RUE Ruedersdorf 87.40 36 *e*P **P 16 34 20.9 +0.1**
comp=Z,85nm,1.2s
RUE *e*pP **pP 16 34 53.0 +2.7**
RUE *e*sP **sP 16 35 03.6 +1.2**
RUE *e*PP **PP 16 37 45.1 -1.3**
MOTA Moosalm 87.50 42⇑ *e*P **P 16 34 20.0 -1.7**
MOTA pmax pmax
comp=Z,14nm,0.8s
MOTA Moosalm 87.50 42⇑ *e*P **P 16 34 20.0 -1.7**
comp=Z,14nm,0.8s,SNR=13
MOTA Moosalm 87.50 42⇑ *e*P **P 16 34 20.0 -1.7**
comp=Z,14nm,0.8s
CTEI Djebel Teioual 87.53 54 P **P 16 34 21.0 -1.0**
CASM Ain Smara 87.54 53 P **P 16 34 23.5 +1.5**
PGF Pioggiola 87.58 47 *e*P **P 16 34 21.0 -1.1**
comp=Z,72nm,0.9s
PGF *e*pP **pP 16 34 52.2 +0.6**
PGF Pioggiola 87.58 47 *e*P **P 16 34 21.0 -1.1**
PGF *e**PP **pP 16 34 52.2 +0.6**
PGF pmax pmax
comp=Z,72nm,0.9s
PGF Pioggiola 87.58 47 *e*P **P 16 34 21.0 -1.1**
comp=Z,72nm,0.9s
PGF *e*pP **pP 16 34 52.2 +0.6**
CKFL Kef-Lekhel 87.68 53 P **P 16 34 22.8 +0.1**
FBE Freiberg 87.70 38 *e*P **P 16 34 22.1 -0.2**
comp=Z,142nm,1.2s
FBE *e*pP **pP 16 34 54.9 +3.0**
FBE *e*sP **sP 16 35 05.1 +1.1**
WATA Walderalm 87.81 42⇑ *i*P **P 16 34 22.2 -0.9**
WATA pmax pmax
comp=Z,4.0nm,0.7s
WATA Walderalm 87.81 42⇑ *i*P **P 16 34 22.2 -0.9**
comp=Z,4.1nm,0.7s
WATA Walderalm 87.81 42⇑ *i*P **P 16 34 22.2 -0.9**
comp=Z,4.1nm,0.7s
WTTA Wattenberg 87.87 42⇑ *e*P **P 16 34 22.5 -1.0**
WTTA *e* 16 34 51.0
WTTA pmax pmax
comp=Z,14nm,1.1s
WTTA Wattenberg 87.87 42⇑ *e*P **P 16 34 22.5 -1.0**
comp=Z,14nm,1.1s
WTTA ⇑*e*pP **pP 16 34 51.0 -2.0**
comp=Z,33nm,1.0s
WTTA Wattenberg 87.87 42⇑ *e*P **P 16 34 22.5 -1.0**
comp=Z,14nm,1.1s
WTTA ⇑*e*P **pP 16 34 51.0 -2.0**
WET Wettzell 88.02 40 *e*P **P 16 34 23.3 -0.7**
WET *e**PP **pP 16 34 55.2 +1.7**
WET *e**SP **sP 16 35 06.6 +1.0**
WET pmax pmax
comp=Z,134nm,1.1s
WET Wettzell 88.02 40 *e*P **P 16 34 23.3 -0.7**
comp=Z,134nm,1.1s
WET *e*pP **pP 16 34 55.2 +1.7**
WET *e*sP **sP 16 35 06.6 +1.0**
BRG Berggiesshubel 88.06 38 *i* P **P 16 34 24.4 +0.3**
comp=Z,7.7nm,0.8s
BRG pP **pP 16 34 55.0 +1.4**
BRG *i* sP **sP 16 35 07.0 +1.3**
comp=Z,148nm,2.0s
BRG *i* PP **PP 16 37 51.6 -0.2**
comp=Z,60nm,2.0s
BRG SKS **SKSac 16 44 40.0 -2.2**
BRG S **S 16 44 59.0 +0.5**

BRG SS **SS 16 50 47.0 -1.5**
BRG *e*PKKP **PKKPbc 16 52 09.7 -0.3**
comp=Z,22nm,1.9s
BRG *e*PKPPKP P'P'df 17 00 24.4 +6.9
comp=Z,40nm,2.5s
BRG
comp=N,1µm,23.0s
BRG
comp=E,966nm,19.0s
BRG
comp=Z,2µm,20.0s
BRG Berggiesshubel 88.06 38 *i* P **P 16 34 24.4 +0.3**
BRG *PP **pP 16 34 55.0 +1.4**
BRG *i* *SP **sP 16 35 07.0 +1.3**
BRG *i* 16 37 51.6
BRG 16 44 40.0
BRG S **S 16 44 59.0 +0.5**
BRG SS **SS 16 50 47.0 -1.5**
BRG pmax pmax
comp=Z,6.0nm,0.8s
BRG pmax pmax
comp=N,8.0nm,2.0s
BRG pmax pmax
comp=Z,148nm,2.0s
BRG pmax pmax
comp=Z,60nm,1.9s
BRG Berggiesshubel 88.06 38 *e*P **P 16 34 24.2 +0.1**
comp=Z,85nm,1.3s
BRG *e*pP **pP 16 34 55.8 +2.2**
BRG *e*sP **sP 16 35 06.9 +1.2**
BRG *e*PP **PP 16 37 48.9 -2.9**
CMAH Djebel Manchou 88.15 53 P **P 16 34 23.2 -1.7**
ABSA Djebel Ababsia 88.30 53 P **P 16 34 23.9 -1.8**
RJOB Jochberg 88.45 41 *e*P **P 16 34 25.4 -0.7**
comp=Z,61nm,1.1s
RJOB *e*pP **pP 16 34 56.7 +1.0**
RJOB *e*sP **sP 16 35 08.5 +0.8**
RJOB *e*PP **PP 16 37 50.8 -4.4**
KHC Kasperske Hory 88.46 39 *e*P **P 16 34 24.7 -1.3**
KHC *e* 16 37 57.9
KHC *e* 16 44 44.2
KHC *e*S **S 16 45 02.6 +0.2**
KHC *e*SS **SS 16 50 57.4 +3.0**
KHC MLR MLR
comp=Z,2µm,19.5s
KHC Kasperske Hory 88.46 39 *e*P **P 16 34 24.7 -1.3**
comp=Z,43nm,1.0s
KHC *e*pP **pP 16 34 58.4 +2.8**
KHC Kasperske Hory 88.46 39 *e*P **P 16 34 24.7 -1.3**
KHC *e*PCP **PcP 16 34 27.2 -0.4**
KHC *e*pP **pP 16 34 58.6 +3.0**
KHC *e*PP **PP 16 37 57.9 +2.8**
KHC *e*SKS **SKSac 16 44 44.2 -0.5**
KHC *e*S **S 16 45 02.6 +0.2**
KHC *e*SS **SS 16 50 57.4 +3.0**
KHC AMS AMS 17 13 00.0
comp=Z,2µm,19.5s
SEY Seymchan 88.51 336 *e*P **P 16 34 26.5 +0.6**
PVCC Panska Ves 88.56 38 *e*P **P 16 34 27.4 +1.0**
PVCC *e* 16 34 59.6
PVCC *e* 16 37 53.6
PVCC *e* 16 44 44.7
PVCC *e*SS SS 16 50 52.9 -2.8
PVCC MLR MLR
comp=Z,2µm,19.5s
PVCC Panska Ves 88.56 38 *e*P **P 16 34 27.4 +1.0**
PVCC *e*PCP **PcP 16 34 30.3 +2.3**
PVCC *e*pP **pP 16 34 59.6 +3.6**
PVCC *e*PP **PP 16 37 53.6 -2.2**
PVCC *e*SKS **SKSac 16 44 44.7 -0.5**
PVCC *e*S **ScS 16 45 09.8 +1.4**
PVCC *e*SS **SS 16 50 52.9 -2.8**
PVCC AMS AMS 17 10 30.0
comp=Z,2µm,19.5s
ABTA Abfaltersbach 88.61 42⇑ *e*P **P 16 34 25.8 -1.1**
comp=Z,27nm,1.2s,SNR=10
ABTA ⇓*i*pP **pP 16 34 54.5 -1.9**
comp=Z,69nm,1.0s
ABTA Abfaltersbach 88.61 42⇑ *e*P **P 16 34 25.8 -1.1**
comp=Z,27nm,1.2s
ABTA ⇓*i*P **pP 16 34 54.5 -1.9**
GEC2 GERESS Array S 88.64 40 *e*P **P 16 34 26.1 -0.9**
GEC2 *e**PP **pP 16 34 57.7 +1.2**
GEC2 *e**SP **sP 16 35 09.7 +1.1**
GEC2 *e* 16 37 55.8
GEC2 pmax pmax
comp=Z,69nm,1.3s
GEC2 GERESS Array S 88.64 40 *e*P **P 16 34 26.1 -0.9**
comp=Z,69nm,1.3s
GEC2 *e*pP **pP 16 34 57.7 +1.2**
GEC2 *e*sP **sP 16 35 09.7 +1.1**
GEC2 *e*PP **PP 16 37 55.8 -0.8**
GERES GERESS Array B 88.64 40 P **P 16 34 26.0 -0.9**
GERES pP **pP 16 34 56.1 -0.4**
GERES PP **PP 16 37 56.8 +0.2**
GERES PKKPbc **PKKPbc 16 52 09.2 +0.5**
GERES GERESS Array B 88.64 40 P **P 16 34 26.0 -0.9**
comp=Z,6.2nm,0.8s,baz=295,slow=4.1,SNR=21
GERES pP **pP 16 34 56.1 -0.4**
comp=Z,16nm,0.9s,baz=298,slow=2.9,SNR=13
GERES PP **PP 16 37 56.8 +0.2**
comp=Z,3.5nm,0.9s,baz=296,slow=6.8,SNR=4.2
GERES PKKPbc **PKKPbc 16 52 09.2 +0.5**
comp=Z,0.6nm,0.8s,baz=221,slow=1.4,SNR=5.1
GERES LR LR 17 08 43.5
comp=Z,2µm,21.6s,baz=282,slow=32
PRA Prague 88.64 38 P **P 16 34 25.0 -1.8**
PRA pP **pP 16 34 59.0 +2.6**
PRA PP **PP 16 37 57.0 +0.5**
PRA SKS **SKSac 16 44 46.0 +0.3**
PRU Pruhonice 88.74 38 *e*P **P 16 34 26.5 -0.8**
PRU *e* 16 37 59.8
PRU *e* 16 44 46.0
PRU *e*SS SS 16 51 00.1 +1.8
PRU MLR MLR
comp=Z,2µm,18.4s
PRU Pruhonice 88.74 38 *e*P **P 16 34 26.5 -0.8**
PRU *e*pP **pP 16 34 59.8 +2.9**
PRU *e*PP **PP 16 37 59.8 +2.5**
PRU *e*SKS **SKSac 16 44 46.0 -0.3**
PRU *e*S **ScS 16 45 12.2 +2.2**
PRU *e*SS **SS 16 51 00.1 +1.8**
PRU AMS AMS 17 17 30.0
comp=Z,2µm,18.4s
APA Apatity 88.82 18⇓ *i*P P 16 34 34.0 +6.7
APA *i* 16 44 46.0
APA *i* 16 45 04.0
APA *i* PS **PS 16 46 26.0 +2.5**
APA *i* SS SS 16 50 54.0 -4.5
APA MLR MLR
comp=Z,6µm,22.0s
KBA Koelnbreinsper 89.03 41⇑ *e*P **P 16 34 28.1 -0.9**
KBA *e* 16 34 56.7
KBA pmax pmax
comp=Z,19nm,0.9s
KBA Koelnbreinsper 89.03 41⇑ *e*PcP **P 16 34 28.1 -0.9**
comp=Z,19nm,0.9s,SNR=8.0
KBA ⇓*e*pP **pP 16 34 56.6 -1.9**
comp=Z,34nm,0.9s
KBA Koelnbreinsper 89.03 41⇑ *e*P **P 16 34 28.1 -0.9**
comp=Z,19nm,0.9s
KBA ⇓*e*P **pP 16 34 56.6 -1.9**
GKP Gorka Klasztor 89.05 35 *e*P **P 16 34 28.1 -0.5**
GKP *e*pP **pP 16 35 00.3 +2.1**
GKP *e*PP **PP 16 38 00.6 +1.0**
GKP *e*S **S 16 45 07.3 -0.3**
GKP LMZ LR 17 04 21.3
MOA Molln 89.34 40⇑ *i*P **P 16 34 29.2 -1.1**
comp=Z,6.2nm,0.6s,SNR=13
MOA Molln 89.34 40⇑ *i*P **P 16 34 29.2 -1.1**
comp=Z,6.2nm,0.6s
KAF Kangasniemi 89.36 25 *e*P **P 16 34 26.9 -3.0**
KAF pmax pmax
comp=Z,10.0nm,0.8s
KAF Kangasniemi 89.36 25 *e*p **P 16 34 26.9 -3.0**
comp=Z,10.0nm,0.8s
MYKA Terra Mystica 89.38 42⇑ *i*PcP **P 16 34 29.6 -0.9**
comp=Z,16nm,0.8s
MYKA ⇑*e*pP **pP 16 34 58.7 -1.4**
comp=Z,40nm,1.5s
MYKA Terra Mystica 89.38 42⇑ *i*P **P 16 34 29.6 -0.9**
comp=Z,16nm,0.8s
MYKA ⇑*e*P **pP 16 34 58.7 -1.4**
UPC Upice 89.42 38 *e*P **P 16 34 29.5 -1.0**

UPC *e*PCP **PcP 16 34 31.6 -0.2**
UPC *e*pP **pP 16 35 03.4 +3.3**
KSP Ksiaz 89.46 37⇑ *e*P **P 16 34 30.0 -0.7**
KSP *e* 16 38 00.7
KSP *e* 16 44 46.0
KSP *e* 16 45 11.5
KSP *e*SS SS 16 51 04.5 -4.2
KSP MLR MLR
comp=Z,6µm,21.7s
KSP Ksiaz 89.46 37 *e*P **P 16 34 29.9 -0.7**
KSP *e*pP **pP 16 35 03.4 +3.1**
KSP *e*sP **sP 16 35 15.4 +3.1**
KSP *e*PP **PP 16 38 03.3 +0.3**
KSP *e*SKSac **SKSac 16 44 49.1 -1.4**
KSP *e*S **S 16 45 11.8 +0.2**
KSP LMZ LR 17 04 45.8
TOA0 Torodi Ar. Sit 89.48 77 *e*P **P 16 34 28.6 -2.8**
TORD Torodi Ar. Bea 89.48 77 P **P 16 34 29.7 -1.8**
TORD pP **pP 16 35 00.3 -0.7**
TORD PKiKP **PKiKP 16 39 27.2 -1.6**
TORD PKKPbc **PKKPbc 16 52 07.5 +2.1**
TORD SKKPbc SKKPbc 16 55 38.5 +5.7
TORD P'P' 17 00 15.4
TORD Torodi Ar. Bea 89.48 77 P **P 16 34 29.7 -1.8**
comp=Z,3.2nm,0.6s,baz=279,slow=5.1,SNR=26
TORD pP **pP 16 35 00.3 -0.7**
comp=Z,1.6nm,0.5s,baz=284,slow=5.8,SNR=3.6
TORD PKiKP **PKiKP 16 39 27.2 -1.6**
comp=Z,1.0nm,0.8s,baz=308,slow=3.7,SNR=4.0
TORD PKKPbc **PKKPbc 16 52 07.5 +2.1**
comp=Z,1.6nm,0.8s,baz=98,slow=1.7,SNR=8.2
TORD SKKPbc SKKPbc 16 55 38.5 +5.7
comp=Z,1.3nm,0.9s,baz=70,slow=1.2,SNR=4.5
TORD PKPPKP **P'P'df 17 00 15.4 -0.9**
comp=Z,3.2nm,1.1s,baz=60,slow=1.7,SNR=8.3
TORD LR LR 17 13 16.0
comp=Z,2µm,18.6s,baz=280,slow=35
TREC Trest 89.56 39 *e*P **P 16 34 30.0 -1.2**
TREC *e* 16 38 04.2
TREC *e* 16 44 51.3
TREC *e*SS SS 16 51 12.8 +2.4
TREC MLR MLR
comp=Z,2µm,18.0s
TREC Trest 89.56 39 *e*P **P 16 34 30.0 -1.2**
TREC *e*pP **pP 16 35 03.6 +2.8**
TREC *e*PP **PP 16 38 04.2 +0.3**
TREC *e*SKS **SKSac 16 44 51.3 +0.1**
TREC *e*S **ScS 16 45 19.2 +2.3**
TREC *e*SS **SS 16 51 12.8 +2.4**
TREC AMS AMS 17 18 30.0
comp=Z,2µm,18.0s
CADS Cadrg 89.58 42 *e*P **P 16 34 30.1 -1.3**
CADS *e*SKSac **SKSac 16 44 49.4 -2.1**
CADS *e*S **S 16 45 11.3 -1.7**
FIA1 FINESS Array S 89.61 25 *e*P **P 16 34 29.7 -1.4**
FIA1 *e*pP **pP 16 35 03.1 +2.4**
FINES FINESS Array B 89.61 25 P **P 16 34 30.1 -1.0**
FINES pP **pP 16 35 00.6 -0.1**
FINES PP **PP 16 38 04.3 +0.5**
FINES FINESS Array B 89.61 25 P **P 16 34 30.1 -1.0**
comp=Z,9.2nm,0.8s,baz=291,slow=3.0,SNR=42
FINES pP **pP 16 35 00.6 -0.1**
comp=Z,55nm,0.9s,baz=325,slow=3.0,SNR=14
FINES PP **PP 16 38 04.3 +0.5**
comp=Z,13nm,0.7s,baz=319,slow=5.5,SNR=7.6
FINES LR LR 17 16 49.2
comp=Z,2µm,19.7s,baz=270,slow=37
DPC Dobruska-Polom 89.67 38 *e*P **P 16 34 30.5 -1.2**
DPC *e* 16 38 03.8
DPC *e* 16 44 51.9
DPC *e*S **S 16 45 14.8 +1.2**
DPC *e*SS **SS 16 51 13.4 +1.6**
DPC MLR MLR
comp=Z,2µm,22.0s
DPC Dobruska-Polom 89.67 38 *e*P **P 16 34 30.5 -1.2**
DPC Dobruska-Polom 89.67 38 *e*P **P 16 34 30.5 -1.2**
DPC *e*PCP **PcP 16 34 32.9 0.0**
DPC *e*pP **pP 16 35 04.4 +3.1**
DPC *e*PP **PP 16 38 03.8 -0.9**
DPC *e*SKS **SKSac 16 44 51.9 +0.1**
DPC *e*S **S 16 45 14.8 +1.2**
DPC *e*SS **SS 16 51 13.4 +1.6**
DPC AMS AMS 17 12 50.0
comp=Z,2µm,22.0s
VOY Vojsko 89.75 42 *e*P **P 16 34 30.8 -1.5**
VOY *e* 16 34 34.1
VOY *e* 16 35 06.3
KEST Kesra 89.91 53 P **P 16 34 32.2 -1.0**
KEST Kesra 89.91 53 P **P 16 34 32.2 -1.0**
comp=Z,14nm,0.9s,baz=287,slow=2.7,SNR=20
KEST LR LR 17 11 31.3
comp=Z,421nm,21.5s,baz=211,slow=33
CRNS Crni Vrh 89.97 42 *e*P **P 16 34 32.4 -0.9**
CRNS *e*PP **PP 16 38 07.5 +0.2**
CRNS *e*SKSac **SKSac 16 44 52.3 -1.5**
CRNS *e*S **S 16 45 14.6 -2.1**
OBKA Obir 90.01 42⇓ P **P 16 34 32.1 -1.3**
comp=Z,11nm,0.9s
OBKA ⇑*e*pP **pP 16 35 00.8 -2.3**
comp=Z,18nm,0.9s
OBKA Obir 90.01 42⇓ P **P 16 34 32.1 -1.3**
comp=Z,11nm,0.9s
OBKA ⇑*e*P **pP 16 35 00.8 -2.3**
KRLC Kraliky 90.04 38 *e*P **P 16 34 33.1 -0.4**
KRLC *e* 16 35 06.1
KRLC Kraliky 90.04 38 *e*P **P 16 34 33.1 -0.4**
KRLC *e*pP **pP 16 35 06.1 +3.0**
PET Petropavlovsk 90.08 325 *e*P **P 16 34 32.3 -1.2**
PET *e**SP **sP 16 35 10.3 -4.9**
PET *e* 16 38 14.8
PET *e* 16 44 54.5
PET *e*S **S 16 45 17.5 +0.3**
PET *e*PS **PnS 16 46 41.4 +2.9**
PET *e*SS **SS 16 51 19.5 +2.0**
PET pmax pmax
comp=Z,900nm,4.0s
PET pmax pmax
comp=Z,80nm,0.7s
PET pmax pmax
comp=Z,400nm,8.0s
PET MLR MLR
comp=Z,1µm,21.0s
PET MLR MLR
comp=Z,900nm,18.0s
LJU Ljubljana 90.16 42 *e*P **P 16 34 33.0 -1.0**
LJU *e*pP **pP 16 35 01.2 -2.5**
LJU *e*sP **sP 16 35 16.0 +0.2**
LJU *e*PP **PP 16 38 09.5 +0.8**
LJU *e*SKSac **SKSac 16 44 53.3 -1.4**
LJU *e*S **S 16 45 16.4 -1.9**
LJU *e* 16 45 54.6
VRAC Vranov 90.23 39⇑ *i*P **P 16 34 33.1 -1.2**
SOKA Soboth 90.25 41⇑ *e*P **P 16 34 33.0 -1.6**
comp=Z,3.5nm,0.6s
SOKA Soboth 90.25 41⇑ *e*P **P 16 34 33.0 -1.6**
comp=Z,3.5nm,0.6s
CONA Conrad Observa 90.31 40⇑ *e*P **P 16 34 33.7 -1.2**
comp=Z,12nm,1.2s
CONA ⇑*e*pP **pP 16 35 03.6 -0.8**
comp=Z,27nm,1.5s
CONA Conrad Observa 90.31 40⇑ *e*P **P 16 34 33.7 -1.2**
comp=Z,12nm,1.2s
CONA ⇑*e*P **pP 16 35 03.6 -0.8**
ARSA Arzberg 90.35 41⇑ *i*PcP **P 16 34 34.0 -0.9**
comp=Z,8.8nm,1.2s
ARSA ⇑*e*pP **pP 16 35 04.0 -0.6**
comp=Z,15nm,1.0s
ARSA Arzberg 90.35 41⇑ *i*P **P 16 34 34.0 -0.9**
comp=Z,8.8nm,1.2s
ARSA ⇑*e*P **pP 16 35 04.0 -0.6**
TAM Tamanrasset 90.46 66 *e*P **P 16 34 36.3 +0.2**
TAM pmax pmax
comp=Z,5.0nm,0.8s
TAM Tamanrasset 90.46 66 *e*P **P 16 34 36.2 +0.2**
comp=Z,4.7nm,0.8s
PEA0B Petropavlovsk- 90.57 326 *e*P **P 16 34 36.8 +1.0**
PETK Petropavlovsk- 90.57 326 P **P 16 34 36.7 +0.9**
PETK pmax pmax
comp=Z,48nm,0.8s
PETK Petropavlovsk- 90.57 326 P **P 16 34 36.6 +0.9**
PETK Petropavlovsk- 90.57 326 P **P 16 34 36.6 +0.9**
comp=Z,48nm,0.8s,baz=96,slow=14,SNR=41

MORC Moravsky Berou 90.61 38 *e*P **P 16 34 34.8 -1.3**
MORC pmax pmax
comp=Z,17nm,1.0s
MORC Moravsky Berou 90.61 38 *e*P **P 16 34 34.8 -1.3**
comp=Z,17nm,1.0s
MORC *e*pP **pP 16 35 08.4 +2.7**
MORC Moravsky Berou 90.61 38⇑ *i*P **P 16 34 34.5 -1.6**
SOP Sopron 90.84 40⇓ *e*P **P 16 34 37.1 0.0**
JOF Joensuu 90.87 23 *e*P **P 16 34 34.3 -2.6**
JOF pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 90.87 23 *e*p **P 16 34 34.3 -2.6**
comp=Z,3.2nm,0.6s
OKC Ostrava-Krasne 90.95 38 *e*P **P 16 34 37.2 -0.4**
OKC *e* 16 35 10.2
OKC *e* 16 38 16.7
OKC *e* 16 45 00.4
OKC *e*S **ScS 16 45 27.1 -1.2**
OKC *e*SS **SS 16 51 30.4 +0.2**
OKC MLR MLR
comp=Z,2µm,19.2s
OKC Ostrava-Krasne 90.95 38 *e*P **P 16 34 37.2 -0.4**
OKC *e*pP **pP 16 35 10.2 +3.0**
OKC *e*PP **PP 16 38 16.7 +1.9**
OKC *e*SKS **SKSac 16 45 00.4 +1.3**
OKC *e*S **ScS 16 45 27.1 -1.2**
OKC *e*SS **SS 16 51 30.4 +0.2**
OKC AMS AMS 17 15 30.0
comp=Z,2µm,19.2s
SMOL Smolenice 91.05 39 *e*P **P 16 34 38.2 +0.1**
SMOL *e* 16 35 11.2
SMOL Smolenice 91.05 39 *e*P **P 16 34 38.2 +0.1**
SMOL *e*pP **pP 16 35 11.2 +3.5**
KOGS Kog 91.12 41 *e*P **P 16 34 37.2 -1.3**
KOGS *e*pP **pP 16 35 05.6 -2.5**
KOGS *e*sP **sP 16 35 20.1 -0.1**
KOGS *e*SKSac **SKSac 16 44 57.5 -2.7**
KOGS *i* S **S 16 45 25.9 -1.1**
BEL Belsk 91.62 35 *e*P **P 16 34 39.4 -1.2**
BEL *e*pP **pP 16 35 13.1 +2.8**
BEL *e*PP **PP 16 38 18.1 -1.9**
BEL *e*SKSac **SKSac 16 45 02.0 -0.8**
BEL LMZ LR 17 05 54.2
OJC Ojcow 91.76 37 *e*P **P 16 34 40.3 -1.0**
OJC pmax pmax
comp=Z,29nm,1.2s
OJC Ojcow 91.76 37 *e*P **P 16 34 40.3 -1.0**
comp=Z,28nm,1.2s
OJC *e*pP **pP 16 35 14.0 +3.0**
OJC Ojcow 91.76 37 *e*P P 16 34 36.5 -4.9
OJC *e*PP PP 16 38 10.8 -10
OJC *e*SKS **SKSac 16 45 10.5 +6.8**
OJC L L 17 19 08.7
comp=Z,1µm,20.2s
VYHS Vyhne 91.91 39 *e*P **P 16 34 41.7 -0.4**
VYHS pmax pmax
comp=Z,20nm,2.0s
VYHS Vyhne 91.91 39 *e*P **P 16 34 41.7 -0.4**
VYHS *e*pP **pP 16 35 14.2 +2.4**
SUW Suwalki 91.91 33 *e*P P 16 34 38.6 -3.4
SUW *e**PP pP 16 35 13.4 +1.8
SUW Suwalki 91.91 33 *e*P P 16 34 38.6 -3.4
SUW *e*pP pP 16 35 13.4 +1.8
SUW Suwalki 91.91 33 *e*P **P 16 34 40.6 -1.4**
SUW *e*pP **pP 16 35 13.5 +1.8**
SUW *e*S **S 16 45 30.8 -3.0**
SUW LMZ LR 17 05 39.6
NIE Niedzica 92.40 37 *e*P **P 16 34 44.3 -0.1**
NIE *e**PP **pP 16 35 13.8 -0.2**
NIE *e* 16 38 25.3
NIE Niedzica 92.40 37 *e*P **P 16 34 44.3 -0.1**
NIE *e*pP **pP 16 35 13.8 -0.2**
NIE *e*PP **PP 16 38 25.3 -1.0**
SKR Severo-Kuril's 92.52 324 *e*P P 16 34 36.7 -8.1
SKR *e*SSS SSS 16 55 34.0
SKR pmax pmax
comp=Z,100nm,0.6s
SKR smax smax
comp=N,4µm,18.0s
SKR smax smax
comp=E,3µm,18.0s
IZAR Zarasai 92.60 30 *e*P **P 16 34 44.5 -0.6**
IZAR AMB AMB 16 35 17.8
comp=Z,16nm,1.2s
ISAL Salakas 92.64 30 *e*P **P 16 34 44.6 -0.6**
ISAL AMB AMB 16 35 18.0
comp=Z,15nm,1.1s
PKSM Moragy 92.73 41⇓ *e*P **P 16 34 45.4 -0.5**
IIGN Ignalina 92.80 31 *e*P **P 16 34 45.4 -0.6**
IIGN AMB AMB 16 35 20.4
comp=Z,18nm,1.3s
PSZ Piszkesteto 92.80 39 *e*P **P 16 34 47.1 +0.8**
PSZ pmax pmax
comp=Z,74nm,1.5s
PSZ Piszkesteto 92.80 39 *e*P **P 16 34 47.1 +0.8**
comp=Z,74nm,1.5s
PSZ Piszkesteto 92.80 39⇑ *i*P **P 16 34 45.7 -0.6**
PSZ Piszkesteto 92.80 39⇓ *e*P **P 16 34 47.1 +0.8**
CUC Castrocucco 93.27 47 *e*P **P 16 34 48.3 -0.4**
comp=Z,15nm,0.9s
NACGM Naroch 93.30 31 *e*P P 16 34 44.0 -4.3
CRVS Cervenica-Dubn 93.31 38 *e*P **P 16 34 47.0 -1.6**
CRVS pmax pmax
comp=Z,33nm,2.3s
CRVS Cervenica-Dubn 93.31 38 *e*P **P 16 34 47.0 -1.6**
CRVS *e*pP **pP 16 35 19.0 +0.8**
KWP Kalwaria Pacla 93.70 37 *e*P **P 16 34 50.3 0.0**
KWP *e*pP **pP 16 35 23.0 +3.0**
KWP *e*PP **PP 16 38 36.9 +0.5**
KWP *e*SKSac **SKSac 16 45 11.9 -2.6**
KOLS Kolonicke sedl 93.77 37 *e*P **P 16 34 50.0 -0.7**
KOLS pmax pmax
comp=Z,24nm,2.1s
KOLS Kolonicke sedl 93.77 37 *e*P **P 16 34 50.0 -0.7**
KOLS *e*pP **pP 16 35 23.3 +3.0**
UZH Uzhgorod 93.92 38 *e*P P 16 35 02.0 +11
UZH *e* 16 35 32.7
UZH *e* 16 38 41.9
UZH *e* 16 40 47.5
UZH *e* 16 45 48.1
UZH *e* 16 47 22.3
UZH *e* 16 52 16.3
UZH MLR MLR
comp=N,600nm,18.0s
UZH MLR MLR
comp=E,2µm,18.0s
UZH MLR MLR
comp=Z,530nm,18.0s
MNK Minsk 94.03 31 *e*P **P 16 34 49.0 -2.7**
MNK *e**PP **pP 16 35 22.0 +0.6**
MNK *e*S S 16 45 44.0 -8.5
MNK *e*PS PS 16 47 02.0 -20
MNK *e*SS **SS 16 52 08.0 -6.0**
MNK *e*SSS SSS 16 56 00.0
MICGM Minsk 94.06 31 *e*P **P 16 34 49.0 -2.8**
TRPA Tarpa 94.29 38⇑ *i*P **P 16 34 52.3 -0.7**
TRPA Tarpa 94.29 38⇓ *e*P **P 16 34 52.0 -1.0**
LVV L'vov 94.37 36 *e*P P 16 34 56.9 +3.5
LVV *e**PP pP 16 35 25.9 +2.8
LVV *e* 16 38 39.3
LVV *e* 16 45 12.9
LVV *e* 16 45 47.3
LVV *e*PS PS 16 47 44.3 +19
LVV *e*SS SS 16 52 28.9 +10
LVV MLR MLR
comp=E,900nm,20.0s
LVV MLR MLR
comp=N,200nm,19.0s
LVV MLR MLR
comp=Z,1µm,19.0s
BZS Buzias 94.87 40⇓ *i*P **P 16 34 54.5 -1.3**
MSVF Nonsavu 95.05 253 *e*P **P 16 34 59.0 +1.8**
MSVF *e**PP **pP 16 35 29.4 +2.5**
MSVF pmax pmax
comp=Z,49nm,1.0s
MSVF Nonsavu 95.05 253 *e*P **P 16 34 59.0 +1.8**
comp=Z,56nm,1.0s
MSVF *e*pP **pP 16 35 29.4 +2.5**
GZR Gura Zlata 95.69 40⇑ *i*P **P 16 34 58.5 -1.1**
BURAR Bucovina Array 96.13 38⇑ *i*P P 16 34 57.4 -4.2
KIEV Kiev 96.78 34 *e*P **P 16 35 01.4 -2.9**
KIEV *e**PP **pP 16 35 34.1 +0.1**
KIEV Kiev 96.78 34 *e*P **P 16 35 01.4 -2.9**
KIEV *e*pP **pP 16 35 34.1 +0.1**
AKASG Malin Array Be 96.79 34 *e*P **P 16 35 04.3 0.0**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 96.79 34 P **P 16 35 01.6 -2.7**
AKASG pP **pP 16 35 33.8 -0.2**
AKASG PP **PP 16 38 59.0 -1.1**
AKASG Malin Array Be 96.79 34 P **P 16 35 01.6 -2.7**
comp=Z,2.0nm,0.6s,baz=291,slow=4.4,SNR=7.8
AKASG *e*pP **pP 16 35 33.8 -0.2**
comp=Z,4.4nm,0.8s,baz=302,slow=2.8,SNR=4.6
AKASG PP **PP 16 38 59.0 -1.1**
comp=Z,7.8nm,0.8s,baz=301,slow=7.0,SNR=8.6
YAK Yakutsk 97.11 342 *e*P **P 16 35 03.8 -1.8**
YAK *e**PP **pP 16 35 34.7 -0.6**
YAK *e* 16 39 00.4
YAK *e*S **SKSac 16 45 29.5 -2.5**
YAK *e* 16 46 13.1
YAK *e*SS **SS 16 52 58.0 +1.0**
YAK pmax pmax
comp=Z,15nm,1.2s
YAK pmax pmax
comp=Z,506nm,5.5s
YAK pmax pmax
comp=N,208nm,7.3s
YAK pmax pmax
comp=E,102nm,3.8s
YAK smax smax
comp=E,247nm,3.1s
YAK smax smax
comp=N,460nm,2.0s
MLR Muntele Rosu 97.61 39⇑ *i*P **P 16 35 06.9 -1.5**
OBN Obninsk 97.78 27⇑ *i*P **P 16 35 08.0 -0.7**
OBN *i* *PP **pP 16 35 40.1 +1.7**
OBN *i* 16 39 06.9
OBN *i* S **SKSac 16 45 29.8 -5.8**
OBN *i* PS PS 16 47 46.8 -15
OBN pmax pmax
comp=Z,18nm,1.3s
MOS Moscow 97.84 26 *e*P **P 16 35 06.2 -2.8**
MOS *e**PP **pP 16 35 38.5 -0.2**
MOS *e* 16 45 32.7
MOS *e* 16 46 21.9
MOS *e*PS PS 16 47 43.1 -20
MOS pmax pmax
comp=Z,27nm,0.8s
KIS Kishinev 98.55 37 *e*P **P 16 35 10.0 -2.4**
KIS *e**PP **pP 16 35 40.0 -2.1**
KIS *e* 16 39 15.0
KIS *e*PPP PPP 16 41 18.0
KIS *e*S S 16 46 21.0 -11
KIS *e*PS PS 16 47 50.0 -21
KIS MLR MLR
comp=N,900nm,20.0s
KIS MLR MLR
comp=E,900nm,20.0s
KIS MLR MLR
comp=Z,1µm,20.0s
KIS MLR MLR
comp=Z,1µm,20.0s
KIS Kishinev 98.55 37 *e*P **P 16 35 10.0 -2.4**
KIS *e*pP **pP 16 35 40.0 -2.1**
KIS Kishinev 98.55 37 *e*PP PP 16 39 15.0 +1.2
KIS Kishinev 98.55 37 *e*PPP PPP 16 41 18.0
KIS *e*SKS **SKSac 16 45 33.0 -6.9**
KIS *e*SKKS SKKSac 16 45 50.0 -20
KIS *e*S S 16 46 21.0 -11
KIS *e*sS sS 16 47 07.0 -16
KIS Kishinev 98.55 37 *e*PS PS 16 47 50.0 -21
KIS *e*SS SS 16 53 00.0 -18
KIS *e*SSS SSS 16 56 30.0
KIS LRM MLR 17 22 14.0
comp=Z,900nm,20.0s
YSS Yuzh-Sakhalins 101.97 326 *e*P **Pdif 16 35 27.0 -0.6**
YSS *e* 16 39 46.0
YSS *e*S **Sdif 16 46 56.0 -4.3**
YSS *e*PS PS 16 48 36.0 -11
YSS *i* SS SS 16 54 16.0 +10
YSS pmax pmax
comp=Z,40nm,1.0s
YSS MLR MLR
comp=Z,700nm,20.0s
SIM Simferopol' 102.76 36 *e*P Pdif 16 35 19.5 -12
SIM *e* 16 45 59.0
SIM *e*PS PS 16 48 41.0 -15
SIM pmax pmax
comp=Z,400nm,13.0s
QSPA South Pole Qui 104.57 180 PKiKP **PKiKP 16 39 53.5 -0.5**
QSPA PKKPbc **PKKPbc 16 51 22.1 -4.9**
QSPA South Pole Qui 104.57 180 PKiKP **PKiKP 16 39 53.4 -0.5**
comp=Z,6.4nm,1.0s,baz=156,slow=7.0,SNR=7.3
QSPA PKKPbc **PKKPbc 16 51 22.1 -4.9**
comp=Z,1.2nm,0.9s,baz=285,slow=5.6,SNR=6.8
HABR Khabarovsk 104.96 330 *e*P **Pdif 16 35 39.5 -1.4**
HABR *e* 16 40 01.1
HABR *e*PPP PPP 16 42 14.4
HABR *e*S **Sdif 16 47 22.3 -2.9**
HABR *e*PS **PS 16 49 18.2 -0.3**
HABR *e*SS **SS 16 54 46.5 +0.2**
HABR SSS SSS 16 58 45.1
HABR pmax pmax
comp=N,53nm,2.6s
HABR pmax pmax
comp=Z,60nm,1.9s
HABR pmax pmax
comp=E,122nm,3.4s
HABR MLR MLR
comp=Z,754nm,19.0s
BRTR Keskin Array B 105.48 41 PKiKP **PKiKP 16 39 54.7 -1.9**
BRTR PP **PP 16 40 05.7 -0.4**
BRTR PKKP **PKKPbc 16 51 21.0 -1.6**
BRTR Keskin Array B 105.48 41 PKiKP **PKiKP 16 39 54.7 -1.9**
comp=Z,0.8nm,0.6s,baz=240,slow=1.9,SNR=4.5
BRTR PP **PP 16 40 05.7 -0.4**
comp=Z,5.5nm,0.3s,baz=292,slow=3.9,SNR=6.0
BRTR PKKP **PKKPbc 16 51 21.0 -1.6**
comp=Z,0.9nm,0.6s,baz=137,slow=4.6,SNR=7.9
DZM Mont Dzumac 106.61 251 *e*Pdif **Pdif 16 35 48.8 0.0**
comp=Z,521nm,25.4s
DZM Mont Dzumac 106.61 251 *e*PP PP 16 40 13.0 -2.6
comp=Z,914nm,24.7s
DZM *e*SKSac **SKSac 16 46 17.1 -1.7**
comp=Z,2µm,27.1s
DZM Mont Dzumac 106.61 251 *e*PS PS 16 49 35.4 -1.9
comp=Z,3µm,25.9s
DZM *e*SS SS 16 55 12.2 +0.3
comp=Z,3µm,31.1s
DZM *e*LR LR 17 11 01.4
comp=Z,4µm,28.8s
KIV Kislovodsk 108.13 33⇑ *e*P **Pdif 16 35 51.0 -4.2**
KIV *i* 16 40 25.0
KIV *e*S **SKSac 16 46 22.9 -1.9**
KIV *i* PS **PS 16 49 47.6 -3.9**
KIV pmax pmax
comp=Z,3.0nm,1.2s
ONI Oni 109.47 34 P **PP 16 40 39.2 +4.3**
USRK Ussuriysk Arra 109.47 329 PKiKP **PKiKP 16 40 03.7 0.0**
comp=Z,3.3nm,0.9s,baz=179,slow=1.5,SNR=4.7
AKTO Aktyubinsk 109.82 20 PKKPbc PKKPbc 16 51 09.1 -0.2
AKTO Aktyubinsk 109.82 20 PKKPbc PKKPbc 16 51 09.1 -0.2
comp=Z,1.8nm,0.6s,baz=220,slow=3.6,SNR=6.5
AKH Akhalkalaki 110.30 35 P **PP 16 40 39.4 -1.7**
MDJ Mudanjiang 110.35 330 Pdif **Pdif 16 36 04.4 -0.6**
MDJ SS SS 16 55 59.7 +0.5
MDJ LR LR
comp=N,2µm,27.5s
MDJ LR LR
comp=E,2µm,28.2s
MDJ LR LR
comp=Z,640nm,22.2s
NVS Novosibirsk 110.65 3 *e*PKIKP PKiKP 16 40 23.2 +18
NVS *e* 16 41 05.2
NVS *e* 16 46 31.5
NVS pmax pmax
comp=N,45nm,2.7s
BRVK Borovoye 110.74 12 *i* PKIKP **PKiKP 16 40 05.3 -0.6**
TBLG Delisi 110.75 34 P **PP 16 40 42.5 -1.6**
BVAR Borovoye Array 110.79 12 P **Pdif 16 36 09.4 +2.7**
BVAR Borovoye Array 110.79 12 *i* PKIKP **PKiKP 16 40 05.4 -0.6**
BVAR 16 51 07.9
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BVAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 110.79 12 Pdif **Pdif 16 36 09.4 +2.7**
BVAR PKiKP **PKiKP 16 40 05.4 -0.6**
BVAR PKKPbc **PKKPbc 16 51 07.9 +1.6**
BVAR Borovoye Array 110.79 12 Pdiff **Pdif 16 36 09.4 +2.7**
comp=Z,0.4nm,0.5s,baz=45,slow=0.6,SNR=3.6
BVAR PKiKP **PKiKP 16 40 05.4 -0.6**
comp=Z,2.4nm,0.5s,baz=288,slow=0.8,SNR=7.2
BVAR PKKPbc **PKKPbc 16 51 07.9 +1.6**
comp=Z,1.0nm,0.8s,baz=273,slow=2.5,SNR=3.8
MJAR Matsushiro Arr 111.01 319 Pdif **Pdif 16 36 08.6 +0.6**
MJAR PKiKP **PKiKP 16 40 06.4 -0.5**
MJAR PKKPbc **PKKPbc 16 51 05.1 +0.1**
MJAR SKKPbc SKKPbc 16 54 40.0 +2.6
MJAR Matsushiro Arr 111.01 319 Pdiff **Pdif 16 36 08.6 +0.6**
comp=Z,1.6nm,0.9s,baz=45,slow=2.0,SNR=8.9
MJAR PKiKP **PKiKP 16 40 06.4 -0.5**
comp=Z,3.6nm,0.5s,baz=134,slow=0.6,SNR=32
MJAR PKKPbc **PKKPbc 16 51 05.1 +0.1**
comp=Z,4.4nm,0.9s,baz=222,slow=3.5,SNR=16
MJAR SKKPbc SKKPbc 16 54 40.0 +2.6
comp=Z,2.1nm,1.1s,baz=231,slow=4.4,SNR=5.7
MAJO Matsushiro 111.01 319 *e*PKiKP **PKiKP 16 40 06.5 -0.4**
MAJO Matsushiro 111.01 319 *e*PKiKP **PKiKP 16 40 06.5 -0.4**
MAT Matsushiro 111.01 319 PKP **PKiKP 16 40 06.4 -0.5**
DGRG David-gareji 111.29 34 P **PP 16 40 46.4 -1.6**
MAK Makhachkala 111.32 31 *i* PKiKP **PKiKP 16 40 06.5 -0.7**
MAK *e* 16 46 32.5
MAK *e*SP SP 16 49 57.8 -10
MAK *e*PS **PS 16 50 13.4 -8.2**
MAK pmax pmax
comp=Z,22nm,0.8s
MAK MLR MLR
comp=Z,2µm,25.0s
ABKAR Akbulak array 111.47 20 PKiKP **PKiKP 16 40 07.7 +0.3**
ZAA0 Zalesovo Array 111.62 3 *e*PKiKP **PKiKP 16 40 06.0 -1.5**
ZALV Zalesovo Beam 111.62 3 *i* PKiKP **PKiKP 16 40 06.2 -1.3**
ZALV 16 40 47.8
ZALV pmax pmax
comp=Z,3.0nm,0.4s
ZALV pmax pmax
comp=Z,4.0nm,0.5s
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 111.62 3 PKiKP **PKiKP 16 40 06.2 -1.3**
ZALV PP **PP 16 40 47.8 -1.8**
ZALV PKKPbc **PKKPab 16 51 09.3 -4.6**
ZALV Zalesovo Beam 111.62 3 PKiKP **PKiKP 16 40 06.2 -1.3**
comp=Z,2.8nm,0.4s,baz=290,slow=2.3,SNR=9.0
ZALV PP **PP 16 40 47.8 -1.8**
comp=Z,3.8nm,0.5s,baz=4.8,slow=3.6,SNR=4.8
ZALV PKKPbc **PKKPab 16 51 09.3 -4.6**
comp=Z,0.9nm,0.4s,baz=0.0,slow=0.0,SNR=4.3
TSUM Tsumeb 112.12 105 *e*PKiKP **PKiKP 16 40 09.1 -0.4**
TSUM PKP **PKKPab 16 51 11.3 +1.7**
TSUM Tsumeb 112.12 105 PKP **PKKPab 16 51 11.3 +1.7**
comp=Z,2.6nm,0.7s,baz=95,slow=5.3,SNR=7.8
CN2 Changchun 112.91 332 *e*PKP **PKiKP 16 40 10.1 -0.2**
CN2 PP **PP 16 41 03.7 +4.4**
CN2 SKKS 16 47 45.5
CN2 SS **SS 16 56 34.6 +1.5**
MOY Mondy 113.14 352 *e*PKiKP **PKiKP 16 40 12.5 +1.8**
ZAK Zakamensk 114.04 350 *e*PKiKP PKPdf 16 40 11.6 -0.8
ZAK *e* 16 43 37.4
ZAK *e* 16 46 49.7
ZAK pmax pmax
comp=Z,5.0nm,1.6s
KURK Kurchatov 114.34 7*c i*PKiKP PKPdf 16 40 11.5 -1.3
KURK pmax pmax
comp=Z,12nm,0.8s
KURK Kurchatov 114.34 7 *e*PKiKP **PKiKP 16 40 11.4 -1.4**
KURK SKP 16 43 37.1
KURK PKKPbc **PKKPbc 16 50 52.4 -2.1**
HVS Khovu-Aksy 114.39 357 *i* PKIKP PKPdf 16 40 12.8 -0.2
KURBB Kurchatov Arra 114.42 7 PKP PKPdf 16 40 11.4 -1.5
comp=Z,7.5nm,0.5s,baz=352,slow=1.7,SNR=71
KURBB SKP 16 43 37.1
comp=Z,2.6nm,0.6s,baz=350,slow=1.7,SNR=13
KURBB PKKPbc **PKKPbc 16 50 52.4 -1.8**
comp=Z,2.2nm,0.7s,baz=187,slow=2.8,SNR=13
ULN Ulaanbaatar 115.69 346 *e*PKPdf **PKPdf 16 40 15.1 -0.6**
ULN Ulaanbaatar 115.69 346 P **PKKPbc 16 50 49.7 -0.2**
SONM Songino Array 115.87 347 PKP **PKPdf 16 40 15.5 -0.5**
SONM SKP 16 43 40.4
SONM PKKPbc **PKKPbc 16 50 47.1 -2.2**
SONM PKKP **PKKPdf 16 51 17.6 +4.5**
SONM Songino Array 115.87 347 PKP **PKPdf 16 40 15.5 -0.5**
comp=Z,8.4nm,0.6s,baz=328,slow=0.7,SNR=42
SONM SKP 16 43 40.4
comp=Z,2.2nm,0.6s,baz=332,slow=0.5,SNR=6.7
SONM PKKPbc **PKKPbc 16 50 47.1 -2.2**
comp=Z,2.3nm,0.6s,baz=201,slow=3.3,SNR=10
SONM PKKP **PKKPdf 16 51 17.6 +4.5**
comp=Z,1.8nm,0.6s,baz=202,slow=2.9,SNR=5.3
SUR Sutherland 116.15 119 *e*PKPdf **PKPdf 16 40 16.3 -0.7**
SUR PKKPbc **PKKPab 16 50 50.0 -1.5**
SUR Sutherland 116.15 119 PKKPbc PKKPbc 16 50 50.0 +2.3
comp=Z,4.3nm,0.7s,baz=268,slow=1.5,SNR=5.7
BHD Baghdad 116.25 41 *ex* **Pdif 16 36 29.0 -2.4**
BHD *ex* x 06 46 54.0
BHD *ex* x 16 36 59.0
BHD *ex* x 16 41 22.0
BHD *ex* x 17 10 55.0
BHD *ex* x 17 16 19.0
KSRS Korea Array 116.47 326 PKP **PKPdf 16 40 17.0 -0.3**
comp=Z,29nm,0.7s,baz=359,slow=1.7,SNR=98
KSRS SKP 16 43 43.9
comp=Z,5.6nm,0.8s,baz=8.9,slow=1.3,SNR=9.9
KSRS PKKPbc **PKKPbc 16 50 47.5 +0.9**
comp=Z,1.1nm,0.8s,baz=208,slow=3.6,SNR=4.5
KSAR Wonju Array Be 116.50 326 PKP **PKPdf 16 40 17.0 -0.3**
KSAR SKP 16 43 43.9
KSAR PKKPbc **PKKPbc 16 50 47.5 +1.0**
DRV Dumont d'Urvil 118.14 201 Pdif Pdif 16 36 27.0 -12
DRV Dumont d'Urvil 118.14 201 PP PP 16 41 13.0 -23
DRV SKS SKSac 16 46 26.0 -37
DRV SKKS SKSdf 16 47 50.0 +29
DRV SP SP 16 50 53.0 -16
DRV SS SKKSdf 16 58 01.0 -12
DRV Dumont d'Urvil 118.14 201 L L 17 11 00.0
DRV R 17 17 00.0
DL2 Dalian 118.54 331 *e*PKP **PKPdf 16 40 16.2 -5.0**
DL2 SS SS 16 57 44.6 -2.1
DL2 AMB AMB
comp=Z,280nm,5.6s
DL2 LR LR
comp=N,440nm,18.0s
DL2 LR LR
comp=Z,490nm,18.6s
MK31 Makanchi Array 118.59 5 *e*PKIKP **PKPdf 16 40 19.0 -2.1**
MK31 Makanchi Array 118.59 5 *e*PKPdf **PKPdf 16 40 19.0 -2.1**
MKAR Makanchi Array 118.59 5*c i*PKIKP **PKPdf 16 40 19.1 -2.1**
MKAR pmax pmax
comp=Z,9.0nm,0.8s
MKAR Makanchi Array 118.59 5 PKP **PKPdf 16 40 19.1 -2.1**
MKAR SKP 16 43 46.2
MKAR PKKPbc PKKPbc 16 50 32.4 -7.1
MKAR PKKP **PKKPdf 16 51 07.8 0.0**
MKAR Makanchi Array 118.59 5 PKP **PKPdf 16 40 19.1 -2.1**
comp=Z,9.1nm,0.8s,baz=311,slow=2.3,SNR=39
MKAR SKP 16 43 46.2
comp=Z,2.5nm,0.7s,baz=314,slow=2.7,SNR=5.9
MKAR PKKPbc PKKPbc 16 50 32.4 -7.1
comp=Z,0.8nm,0.8s,baz=176,slow=4.6,SNR=4.3
MKAR PKKP **PKKPdf 16 51 07.8 0.0**
comp=Z,1.1nm,0.8s,baz=136,slow=4.4,SNR=4.4
BOSA Boshof 119.92 115 *e*PKPdf **PKPdf 16 40 23.8 -0.4**
BOSA SKP 16 43 51.1
BOSA PKKPbc **PKKPab 16 50 34.7 -0.3**
BOSA Boshof 119.92 115 PKP **PKPdf 16 40 23.9 -0.4**
comp=Z,34nm,0.4s,baz=277,slow=1.6,SNR=70
BOSA SKP 16 43 51.1
comp=Z,15nm,1.0s,baz=265,slow=3.1,SNR=5.1
BOSA PKKPbc **PKKPab 16 50 34.7 -0.3**
comp=Z,7.5nm,1.1s,baz=125,slow=7.4,SNR=11
BJI Beijing 119.95 336 PKP **PKPdf 16 40 24.0 +0.1**
BJI sPKP 16 41 04.4
BJI PP **PP 16 41 49.4 +1.1**
BJI AMB AMB
comp=Z,640nm,13.6s
BJI LR LR
comp=Z,1µm,20.4s
BJI LR LR
comp=Z,1µm,22.6s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LBTB	Lobatse	120.10	111	ePKPdf	PKPdf	16 40 24.3	-0.4
LBTB				SKP		16 43 51.7	
LBTB				PKKPbc	PKKPab	16 50 34.0	-0.4
LBTB	Lobatse	120.10	111	SKP		16 43 51.7	
	comp=Z,4.9nm,0.6s,baz=253,slow=2.4,SNR=5.2						
LBTB				PKKPbc	PKKPab	16 50 34.0	-0.4
	comp=Z,2.9nm,0.4s,baz=125,slow=4.5,SNR=13						
KKAR	Karatay Array	120.16	15	ePKIKP	PKPdf	16 40 23.2	-1.1
KKAR	Karatay Array	120.16	15	ePKPdf	PKPdf	16 40 23.2	-1.1
RST	Umm Al-Ruwaisa	120.41	42	eP	PKPdf	16 40 23.1	-2.0
RST				AMb	AMB	16 40 25.9	
	comp=Z,2.0nm,1.0s						
NAY	Al-Naaiem	120.74	42	eP	PKPdf	16 40 23.6	-2.1
NAY				AMb	AMB	16 40 28.6	
	comp=Z,10nm,1.0s						
HHC	Hu-ho-hao-te	120.91	340	ePKP	PKPdf	16 40 26.5	+0.6
HHC				SKKS		16 48 40.8	
HHC				SS	SS	16 58 17.8	+0.8
HHC				AMB	AMB		
	comp=Z,740nm,11.8s						
USP	Ospenovka	120.92	12	P	PKPdf	16 40 25.0	-0.8
	SNR=26						
RDF	Al-Radifah	121.15	42	eP	PKPdf	16 40 24.6	-1.9
RDF				AMb	AMB	16 40 27.9	
	comp=Z,23nm,0.4s						
CHMS	Chumysh	121.23	12	P	PKPdf	16 40 27.1	+0.7
	SNR=6.4						
EKS2	Erkin-Say	121.35	13	ePKIKP	PKPdf	16 40 26.3	-0.4
EKS2	Erkin-Say	121.35	13	ePKPdf	PKPdf	16 40 26.3	-0.4
EKS2	Erkin-Say	121.35	13	P	PKPdf	16 40 26.5	-0.2
	SNR=14						
FRU	Bishkek	121.36	12	ePKIKP	PKPdf	16 40 26.0	-0.6
FRU				e		16 41 53.0	
FRU				eSS	SS	16 58 18.0	-4.4
FRU				MLR	MLR		
	comp=Z,2µm,24.5s						
TKM2	Tokmak 2	121.47	11	ePKIKP	PKPdf	16 40 26.4	-0.7
TKM2	Tokmak 2	121.47	11	ePKPdf	PKPdf	16 40 26.4	-0.7
TKM2	Tokmak 2	121.47	11	P	PKPdf	16 40 26.6	-0.5
	SNR=16						
QRN	Al-Qurain	121.52	42	eP	PKPdf	16 40 25.2	-2.0
QRN				AMb	AMB	16 40 28.6	
	comp=Z,45nm,0.3s						
AAK	Ala-Archa	121.53	12c	iPKIKP	PKPdf	16 40 27.1	0.0
AAK	Ala-Archa	121.53	12	ePKPdf	PKPdf	16 40 26.4	-0.7
AAK				PKP	PKPdf	16 40 26.8	-0.3
AAK				SKP		16 43 53.5	
AAK				PKKPbc	PKKPbc	16 50 27.0	-1.7
AAK				PKKP	PKKPdf	16 50 59.2	-3.2
AAK	Ala-Archa	121.53	12	PKPdf	PKPdf	16 40 27.8	+0.6
	SNR=6.4						
AAK	Ala-Archa	121.53	12	P	PKPdf	16 40 26.4	-0.7
	SNR=14						
AAK	Ala-Archa	121.53	12	PKP	PKPdf	16 40 26.8	-0.3
	comp=Z,6.1nm,0.5s,baz=167,slow=3.1,SNR=31						
AAK				SKP		16 43 53.5	
	comp=Z,4.4nm,0.8s,baz=306,slow=0.6,SNR=4.0						
AAK				PKKPbc	PKKPbc	16 50 27.0	-1.7
	comp=Z,2.6nm,0.7s,baz=186,slow=5.0,SNR=6.8						
AAK				PKKP	PKKPdf	16 50 59.2	-3.2
	comp=Z,0.5nm,0.4s,baz=194,slow=5.4,SNR=3.5						
KBK	Karagaybulak	121.60	12	P	PKPdf	16 40 28.1	+0.8
	SNR=13						
LSZ	Lusaka	121.61	99	ePKPdf	PKPdf	16 40 27.3	-0.5
WMQ	Urumqi	121.84	1	PKP	PKPdf	16 40 27.5	0.0
WMQ				PP	PP	16 42 06.3	+5.4
WMQ				PKS	PKSdf	16 44 02.9	-1.3
WMQ				SKS	SKSdf	16 47 28.1	-1.2
WMQ				SKKS	SKKSac	16 48 47.4	-3.2
WMQ				SS	SS	16 58 32.1	+3.8
WMQ				AMB	AMB		
	comp=Z,610nm,21.6s						
WMQ				LR	LR		
	comp=N,5µm,28.0s						
WMQ				LR	LR		
	comp=E,4µm,27.6s						
WMQ				LR	LR		
	comp=Z,5µm,29.8s						
AML	Almayashu	121.84	13	P	PKPdf	16 40 27.6	-0.5
	SNR=23						
KZA	Kyzart	122.22	12	P	PKPdf	16 40 29.1	+0.3
	SNR=9.8						
MAW	Mawson	124.42	168	ePKPdf	PKPdf	16 40 31.5	-0.1
MAW				PKP	PKPdf	16 40 32.6	+1.1
MAW				PKKP	PKKPdf	16 50 54.9	-2.9
MAW	Mawson	124.42	168	PKP	PKPdf	16 40 32.6	+1.1
	comp=Z,15nm,0.5s,baz=264,slow=4.0,SNR=40						
MAW				PKKP	PKKPdf	16 50 54.9	-2.9
	comp=Z,1.8nm,0.6s,baz=11,slow=8.9,SNR=3.5						
KSH	Kashi	124.83	12	ePKP	PKPdf	16 40 34.1	+0.6
KSH				ePKS	PKSdf	16 44 09.2	-1.1
KSH				SKS	SKSdf	16 47 33.5	-1.8
KSH				AMB	AMB		
	comp=Z,1µm,5.8s						
KSH				LR	LR		
	comp=N,2µm,16.3s						
KSH				LR	LR		
	comp=E,1µm,13.0s						
KSH				LR	LR		
	comp=Z,800nm,10.5s						
SSE	Sheshan	124.91	326	⇓PKP	PKPdf	16 40 33.7	0.0
SSE				PP	PP	16 42 26.3	+4.1
SSE				SS	SS	16 59 09.4	+1.1
SSE				AMB	AMB		
	comp=Z,95nm,12.0s						
SSE				LR	LR		
	comp=N,170nm,25.2s						
SSE				LR	LR		
	comp=E,670nm,25.2s						
SSE				LR	LR		
	comp=Z,610nm,25.2s						
CTA	Charters Tower	125.11	256	PKP	PKPdf	16 40 35.7	+1.4
CTA	Charters Tower	125.11	256	PKP	PKPdf	16 40 35.7	+1.4
	comp=Z,26nm,0.9s,baz=102,slow=0.8,SNR=10						
CTAO	Charters Tower	125.11	256	PKIKP	PKPdf	16 40 34.8	+0.5
CTAO	Charters Tower	125.11	256	PKPdf	PKPdf	16 40 34.8	+0.5
GTA	Gaotai	125.28	350	ePKP	PKPdf	16 40 33.6	-0.8
GTA				PP	PP	16 42 27.5	+3.3
GTA				PKS	PKSdf	16 44 09.9	-1.2
GTA				SKS	SKSdf	16 47 35.1	-1.0
GTA				SKKS	SKKSac	16 49 09.4	-3.6
GTA				SS	SS	16 59 10.8	-1.2
GTA				AMB	AMB		
	comp=Z,340nm,9.5s						
GTA				LR	LR		
	comp=N,1µm,19.7s						
GTA				LR	LR		
	comp=E,570nm,18.5s						
GTA				LR	LR		
	comp=Z,2µm,19.7s						
NJ2	Nanjing	125.38	329	ePKP	PKPdf	16 40 34.2	-0.4
NJ2				PP	PP	16 42 30.5	+5.3
NJ2				PKS	PKSdf	16 44 09.5	-1.8
NJ2				AMB	AMB		
	comp=Z,170nm,8.8s						
NJ2				LR	LR		
	comp=N,2µm,16.4s						
NJ2				LR	LR		
	comp=E,2µm,17.4s						
NJ2				LR	LR		
	comp=Z,380nm,17.0s						
KMBO	Kilima Mbogo	127.36	80	ePKPdf	PKPdf	16 40 39.9	+0.8
KMBO				PKP	PKPdf	16 40 40.1	+1.0
KMBO				SKPab	SKiKP	16 43 47.1	-18
KMBO	Kilima Mbogo	127.36	80	PKPdf	PKPdf	16 40 41.0	+1.8
	SNR=7.2						
KMBO	Kilima Mbogo	127.36	80	PKP	PKPdf	16 40 40.1	+1.0
	comp=Z,3.4nm,0.9s,baz=149,slow=0.8,SNR=7.8						
KMBO				SKPab	SKiKP	16 43 47.1	-18
	comp=Z,12nm,1.1s,baz=327,slow=3.6,SNR=8.6						
ATD	Arta Tunnel	127.58	63	PKP	PKPdf	16 40 40.3	+1.0
ATD	Arta Tunnel	127.58	63	PKP	PKPdf	16 40 40.3	+1.0
	comp=Z,14nm,0.7s,baz=245,slow=23,SNR=5.4						
LZH	Lanzhou	127.60	345	ePKP	PKPdf	16 40 40.2	+1.3
LZH				sPKP		16 41 19.3	
LZH				PP	PP	16 42 40.5	+0.8
LZH				PKS	PKSdf	16 44 17.4	+1.7
LZH				SKS	SKSdf	16 47 39.0	-1.6
LZH				SKKS	SKKSac	16 49 25.0	-2.9
LZH				AMB	AMB		
	comp=Z,410nm,7.2s						
LZH				LR	LR		
	comp=N,1µm,18.0s						
LZH				LR	LR		
	comp=E,350nm,12.9s						
LZH				LR	LR		
	comp=Z,2µm,20.8s						
XAN	Xi'an	127.95	339	PKP	PKPdf	16 40 38.8	-0.7
XAN				SKS	SKSdf	16 47 34.1	-7.0
XAN				AMB	AMB		
	comp=Z,110nm,17.9s						
XAN				LR	LR		
	comp=N,1µm,35.1s						
XAN				LR	LR		
	comp=E,330nm,30.9s						
XAN				LR	LR		
	comp=Z,500nm,36.8s						
WHN	Wuhan	128.80	331	PKP	PKPdf	16 40 41.7	+0.6
WHN				LR	LR		
	comp=Z,3µm,29.4s						
STKA	Stephens Creek	129.03	241	PKPpre	PKPpre	16 40 30.9	
STKA				ePKPdf	PKPdf	16 40 41.8	+0.3
STKA				PKP	PKiKP	16 40 42.1	-0.1
STKA				epPKPdf	pPKPdf	16 41 11.6	-0.8
STKA				esPKPdf	sPKPdf	16 41 22.7	-1.5
STKA				SKPbc	SKPbc	16 43 53.6	+1.1
STKA				PKKPbc	PKKPdf	16 49 51.8	-57
STKA				SKKPbc	SKKPbc	16 53 38.0	-3.2
STKA	Stephens Creek	129.03	241	PKhKP	PKPpre	16 40 30.9	
	comp=Z,1.3nm,0.8s,baz=58,slow=5.5,SNR=3.3						
STKA				PKP	PKiKP	16 40 42.1	-0.1
	comp=Z,29nm,0.7s,baz=91,slow=2.5,SNR=4.7						
STKA				SKPbc	SKPbc	16 43 53.6	+1.1
	comp=Z,22nm,1.1s,baz=89,slow=4.3,SNR=11						
STKA				PKKPbc	PKKPdf	16 49 51.8	-57
	comp=Z,1.9nm,0.9s,baz=288,slow=9.3,SNR=3.2						
STKA				SKKPbc	SKKPbc	16 53 38.0	-3.2
	comp=Z,9.8nm,1.4s,baz=4.7,slow=23,SNR=3.6						
SSLB	Suanglung	130.55	320	ePKPdf	PKPdf	16 40 45.4	+0.7
YULB	Yu-li	130.62	319	ePKPdf	PKPdf	16 40 43.8	-1.0
ARQ	Araqi	130.81	40	⇑P	SKPbc	16 43 58.4	-0.7
	SNR=6.1						
HOQ	Hoqain	131.12	39	⇓P	SKPbc	16 43 58.2	-1.9
	SNR=9.9						
BSY	Bisya	131.66	40	⇓P	SKPbc	16 44 00.3	-1.8
	SNR=6.8						
SMDO	Samad	131.96	39	⇓P	SKPbc	16 44 02.4	-0.9
	SNR=13						
CD2	Chengdu	132.50	342	PKP	PKPdf	16 40 46.3	-1.9
CD2				sPKP		16 41 34.2	
CD2				PP	PP	16 43 14.5	+3.1
CD2				PKS	PKSdf	16 44 21.2	-3.6
CD2				SKS	SKSdf	16 47 43.0	-6.5
CD2				SKKS	SKKSac	16 49 51.3	-6.8
CD2				SS	SS	17 00 39.8	-1.4
CD2				AMB	AMB		
	comp=Z,610nm,13.7s						
CD2				LR	LR		
	comp=N,1µm,18.2s						
CD2				LR	LR		
	comp=E,1µm,25.9s						
CD2				LR	LR		
	comp=Z,2µm,22.5s						
ABTO	Aybut	132.71	49	⇓P	SKPbc	16 44 04.3	-1.7
	SNR=7.6						
CAUP	Cauayan	134.76	313	eP	SKPbc	16 44 15.7	+2.9
ABRA	Dolores	135.07	314	eP	SKPbc	16 44 15.6	+1.9
FAKI	Fak Fak	135.61	281	P	SKPab	16 44 25.4	+5.1
LSA	Lhasa	135.88	357	ePKIKP	PKPdf	16 40 55.1	-0.1
LSA	Lhasa	135.88	357	ePKPdf	PKPdf	16 40 55.0	-0.1
WRAB	Tennant Creek	136.28	256	PKIKP	PKPdf	16 40 55.7	+0.2
WRAB	Tennant Creek	136.28	256	PKPdf	PKPdf	16 40 55.7	+0.2
OCLP	Ormoc	136.29	304	eP	SKPbc	16 44 19.6	+2.0
WRA	Warramunga Arr	136.29	256	PKPpre	PKPpre	16 40 44.3	
WRA				PKP	PKPdf	16 40 56.1	+0.6
WRA				SKPbc	SKPbc	16 44 19.4	+2.0
WRA				PKKPbc	PKKPdf	16 49 43.5	-51
WRA				SKKPbc	SKKPbc	16 53 16.2	+2.0
WRA	Warramunga Arr	136.29	256	PKhKP	PKPpre	16 40 44.3	
	comp=Z,3.3nm,0.7s,baz=90,slow=3.4,SNR=13						
WRA				PKP	PKPdf	16 40 56.1	+0.6
	comp=Z,18nm,0.5s,baz=87,slow=2.6,SNR=58						
WRA				SKPbc	SKPbc	16 44 19.4	+2.0
	comp=Z,19nm,1.0s,baz=86,slow=2.8,SNR=12						
WRA				PKKPbc	PKKPdf	16 49 43.5	-51
	comp=Z,0.3nm,0.4s,baz=304,slow=2.3,SNR=4.8						
WRA				SKKPbc	SKKPbc	16 53 16.2	+2.0
	comp=Z,2.7nm,0.8s,baz=282,slow=2.7,SNR=6.0						
AUQP	San Andres	136.46	308	eP	SKPbc	16 44 21.6	+3.6
AS31	Alice Springs	136.60	251	ePKPpre	PKPpre	16 40 43.7	
ASAR	Alice Springs	136.60	251	PKPpre	PKPpre	16 40 42.6	
ASAR				PKP	PKPdf	16 40 56.4	+0.3
ASAR				SKPbc	SKPbc	16 44 19.6	+1.3
ASAR				PKKPbc	PKKPdf	16 49 46.8	-47
ASAR				PKKP		16 50 31.7	
ASAR				SKKPbc	SKKPbc	16 53 15.3	+2.0
ASAR	Alice Springs	136.60	251	PKhKP	PKPpre	16 40 42.6	
	comp=Z,2.5nm,0.5s,baz=96,slow=2.5,SNR=16						
ASAR				PKP	PKPdf	16 40 56.4	+0.3
	comp=Z,22nm,0.9s,baz=93,slow=2.4,SNR=33						
ASAR				SKPbc	SKPbc	16 44 19.6	+1.3
	comp=Z,43nm,1.2s,baz=95,slow=2.3,SNR=11						
ASAR				PKKPbc	PKKPdf	16 49 46.8	-47
	comp=Z,0.3nm,0.5s,baz=288,slow=4.0,SNR=8.0						
ASAR				PKKP		16 50 31.7	
	comp=Z,0.6nm,0.6s,baz=288,slow=1.7,SNR=8.0						
ASAR				SKKPbc	SKKPbc	16 53 15.3	+2.0
	comp=Z,6.6nm,1.0s,baz=280,slow=3.7,SNR=15						
MSLP	Maasin	136.61	302	eP	SKPbc	16 44 20.3	+1.8
BUTP	Butuan	136.61	300	eP	SKPbc	16 44 21.1	+2.6
DANN	Dangsing	137.01	7	eP	PKPdf	16 40 42.2	-15
	comp=Z,82nm,0.4s						
DANN	Dangsing	137.01	7	eP	SKPbc	16 44 18.1	-1.7
	comp=Z,231nm,0.9s						
PYUN	Piuthan	137.16	8	eP	PKPdf	16 40 41.7	-16
	comp=Z,152nm,1.0s						
PYUN	Piuthan	137.16	8	eP	SKPbc	16 44 19.0	-1.1
	comp=Z,141nm,0.8s						
TGY	Tagaytay City	137.27	310	SKPbc	SKPbc	16 44 22.3	+1.8
TGY	Tagaytay City	137.27	310	SKPbc	SKPbc	16 44 22.3	+1.8
	comp=Z,91nm,0.4s,baz=236,slow=16,SNR=6.9						
KOLN	Koldanda	137.56	7	eP	PKPdf	16 40 42.8	-15
	comp=Z,22nm,0.4s						
KOLN	Koldanda	137.56	7	eP	SKPbc	16 44 20.4	-0.9
GUN	Gumba	137.63	4	eP	PKPdf	16 40 43.2	-15
	comp=Z,90nm,0.7s						
GUN	Gumba	137.63	4	eP	SKPbc	16 44 20.3	-1.4
	comp=Z,524nm,1.1s						
DAV	Davao City (W)	137.63	298	P	SKPbc	16 44 25.5	+3.9
	SNR=7.1						
BUKP	Musuan	137.65	300	eP	SKPbc	16 44 25.0	+3.3
KKN	Kakani	137.71	5	eP	PKPdf	16 40 43.2	-15
	comp=Z,92nm,0.6s						
KKN	Kakani	137.71	5	eP	SKPbc	16 44 20.7	-1.0
	comp=Z,305nm,1.4s						
DMN	Daman	137.87	5	eP	PKPdf	16 40 43.8	-15
	comp=Z,43nm,0.6s						
DMN	Daman	137.87	5	eP	SKPbc	16 44 21.3	-1.0
	comp=Z,125nm,1.1s						
PKIN	Phulchoki	137.93	5	eP	PKPdf	16 40 44.0	-15
	comp=Z,39nm,0.7s						
PKIN	Phulchoki	137.93	5	eP	SKPbc	16 44 21.7	-0.8
	comp=Z,34nm,0.7s						
PKI	Pulchoki	137.93	4	eP	PKPdf	16 40 44.1	-15
	comp=Z,50nm,0.6s						
PKI	Pulchoki	137.93	4	eP	SKPbc	16 44 21.1	-1.4
GUIM	Jordan	138.15	305	eP	SKPbc	16 44 24.5	+1.5
SJMP	San Jose	138.18	308	eP	SKPbc	16 44 25.5	+2.4
KMI	Kunming	138.22	341	PKP	PKPdf	16 40 59.0	-0.3
KMI				sPKP		16 41 43.4	
KMI				PKS	PKSdf	16 44 34.0	-1.8
KMI				SKKS		16 50 27.0	
KMI				AMB	AMB		
	comp=Z,610nm,8.3s						
KMI				LR	LR		
	comp=N,510nm,19.8s						
KMI				LR	LR		
	comp=E,930nm,21.9s						
KMI				LR	LR		
	comp=Z,1µm,25.1s						
TAPN	Taplejung	138.27	1	eP	PKPdf	16 40 44.9	-15
	comp=Z,62nm,0.6s						
TAPN	Taplejung	138.27	1	eP	SKPbc	16 44 22.3	-1.2
	comp=Z,250nm,1.2s						
RAMN	Ramite	138.62	3	eP	PKPdf	16 40 45.6	-14
	comp=Z,140nm,0.8s						
RAMN	Ramite	138.62	3	eP	SKPbc	16 44 23.0	-1.4
	comp=Z,301nm,1.5s						
CTBH	Cotabato--PC H	138.69	299	⇑iP	SKPbc	16 44 26.9	+2.4
ODAN	Odare	138.75	2	eP	PKPdf	16 40 45.2	-15
	comp=Z,81nm,1.0s						
ODAN	Odare	138.75	2	eP	SKPbc	16 44 23.4	-1.4
	comp=Z,222nm,1.7s						
PAGZ	Pagadian	139.08	301	eP	SKPbc	16 44 27.6	+1.9
CUYO	Cuyo Island	139.25	307	eP	SKPbc	16 44 28.4	+2.3
LBMI	Labuha	139.30	286	P	SKPab	16 44 36.9	+0.2
	comp=Z,178nm,1.0s						
SHL	Shillong	139.94	356	ePKP	SKPbc	16 44 28.0	0.0
SHL				eS	SKKSac	16 50 35.0	-8.0
OPO	Ambohidratompo	139.99	102	PKP	PKPdf	16 41 01.3	-1.2
OPO				SKPbc	SKPbc	16 44 29.1	+0.9
OPO	Ambohidratompo	139.99	102	PKP	PKPdf	16 41 01.3	-1.2
	comp=Z,10nm,0.8s,baz=160,slow=1.8,SNR=4.8						
OPO				SKPbc	SKPbc	16 44 29.1	+0.9
	comp=Z,25nm,0.8s,baz=226,slow=1.9,SNR=21						
ABPO	Ambohimpanom	140.03	102	ePKHKP	PKPpre	16 40 56.0	
ABPO	Ambohimpanom	140.03	102	ePKPpre	PKPpre	16 40 56.0	
ENPP	El Nido	140.25	309	eP	SKPbc	16 44 32.2	+3.4
QIZ	Qiongzhong	140.66	328	PKP	PKPdf	16 41 01.2	-2.3
QIZ				PP	PP	16 44 04.6	+1.7
QIZ				SS	SS	17 02 22.2	+3.1
QIZ				AMB	AMB		
	comp=Z,270nm,12.3s						
QIZ				LR	LR		
	comp=N,510nm,18.4s						
QIZ				LR	LR		
	comp=Z,1µm,57.4s						
QIZ	Qiongzhong	140.66	328	ePKPdf	PKPdf	16 41 03.7	+0.2
NGP	Nagpur	143.19	15	ePKP	PKPbc	16 41 05.9	+0.7
NGP				ex	x	16 50 18.7	
NGP				ex	x	17 48 27.4	
	comp=Z,1µm,21.2s						
POO	Poona	143.92	25	⇑iP	PKPbc	16 41 08.0	+0.6
	comp=Z,40nm,1.0s						
FITZ	Fitzroy Crossi	144.52	259	PKP	PKPab	16 41 08.9	-0.1
FITZ				SKPbc	SKiKP	16 44 41.8	+1.9
FITZ				SKKPbc	SKKPab	16 52 44.9	+3.1
FITZ	Fitzroy Crossi	144.52	259	PKP	PKPab	16 41 08.9	-0.1
	comp=Z,59nm,0.8s,baz=77,slow=3.6,SNR=67						
FITZ				SKPbc	SKiKP	16 44 41.8	+1.9
	comp=Z,13nm,0.9s,baz=36,slow=4.8,SNR=4.8						
FITZ				SKKPbc	SKKPab	16 52 44.9	+3.1
	comp=Z,3.8nm,0.8s,baz=175,slow=5.3,SNR=4.2						
MYLDM	Lahad Datu	144.58	302	P	PKPdf	16 41 11.8	+1.2
KDM	Kudat	144.91	306	P	PKPdf	16 41 12.4	+1.2
CHTO	Chiang Mai	145.31	343	ePKIKP	PKPbc	16 41 10.0	-1.7
CHTO	Chiang Mai	145.31	343	ePKP	PKPbc	16 41 10.0	-1.7
CHTO	Chiang Mai	145.31	343	PKPbc	PKPbc	16 41 11.1	-0.6
	SNR=31						
SDKM	Sandakan	145.38	304	P	PKPbc	16 41 12.3	+0.1
TSM	Tawau	145.59	301	P	PKPdf	16 41 12.1	-0.3
CM31	Chiang Mai Arr	145.65	343	ePKP	PKPdf	16 41 11.8	-0.6
CMAR	Chiang Mai Arr	145.65	343	PKPbc	PKPdf	16 41 11.4	-0.9
CMAR				SKPbc	SKiKP	16 44 43.5	+1.2
CMAR				SKKPbc	SKKPab	16 52 42.1	+5.0
CMAR	Chiang Mai Arr	145.65	343	PKPbc	PKPdf	16 41 11.4	-0.9
	comp=Z,263nm,0.8s,baz=337,slow=3.4,SNR=458						
CMAR				SKPbc	SKiKP	16 44 43.5	+1.2
	comp=Z,33nm,1.1s,baz=335,slow=2.5,SNR=8.7						
CMAR				SKKPbc	SKKPab	16 52 42.1	+5.0
	comp=Z,3.3nm,1.1s,baz=221,slow=4.6,SNR=6.2						
KKM	Kota Kinabalu	145.93	305	ePKPbc	PKPbc	16 41 13.8	-0.1
KKM	Kota Kinabalu	145.93	305	P	PKPab	16 41 15.0	+0.5
HYB	Hyderabad	146.60	18	iPKP	PKPdf	16 41 12.5	-1.5
	comp=Z,100nm,1.0s						
HYB				e		16 42 05.5	
HYB				ePP	PP	16 44 42.0	+3.9
HYB				eSKKS		16 51 14.0	
GOA	Goa	146.62	27	⇓iP	PKPdf	16 41 11.7	-2.3
GOA				AMS	AMS	17 37 04.3	
	comp=Z,384nm,21.5s						
RER	Riviere de l'E	147.93	107	ePKPbc	PKPbc	16 41 19.7	+0.4
KAPI	Kappang	148.08	284	ePKPbc	PKPbc	16 41 20.0	+0.2
KAPI	Kappang	148.08	284	PKPdf	PKPbc	16 41 18.9	-0.9
	SNR=22						
NWAO	Narrogin (SRO)	148.39	230	ePKPbc	PKPbc	16 41 18.8	-1.3
NWAO	Narrogin (SRO)	148.39	230	PKPdf	PKPbc	16 41 19.3	-0.8
	SNR=12						
NWAO	Narrogin (SRO)	148.39	230	PKPbc	PKPdf	16 41 18.3	+1.8
	comp=Z,61nm,0.8s,baz=133,slow=2.7,SNR=32						
MBWA	Marble Bar	149.89	253	PKPdf	PKPdf	16 41 20.3	+1.1
MBWA				ePKPbc	PKPbc	16 41 24.1	-0.1
MBWA	Marble Bar	149.89	253	PKPdf	PKPdf	16 41 21.7	+2.5
	SNR=12						
BTM	Bintulu	150.12	304	P	PKPdf	16 41 19.5	-0.4
SBUM	Sibu	151.26	304	P	PKPdf	16 41 24.0	+2.4
KSM	Kuching	153.37	305	ePKPdf	PKPdf	16 41 24.1	-0.6
KSM				ePKPbc	PKiKP	16 41 33.1	+0.6
KSM	Kuching	153.37	305	P	PKPdf	16 41 24.8	+0.1
TRD	Trivandrum	154.20	28	⇓ePKP	PKPdf	16 41 23.4	-2.5
TRD				ex	x	16 44 55.4	
KTGM	Kuala Trenggan	155.61	323	P	PKPdf	16 41 28.9	+1.1
KULM	Kulim	156.99	328	ePKPdf	PKPdf	16 41 30.1	+0.5
KULM	Kulim	156.99	328	P	PKPdf	16 41 30.3	+0.7
IPM	Ipoh	157.48	327	ePKPdf	PKPdf	16 41 30.5	+0.3
IPM	Ipoh	157.48	327	P	PKPdf	16 41 31.2	+0.9
MYKOM	Kota Tinggi	157.91	316	P	PKPdf	16 41 31.9	+1.2
KGM	Kluang	158.09	318	P	PKPdf	16 41 32.0	+0.9
FRIM	Kepong	158.17	323	P	PKPdf	16 41 31.7	+0.6
PSI	Prapat	159.99	329	PKP	PKPdf	16 41 32.5	-0.9
PSI	Prapat	159.99	329	PKP	PKPdf	16 41 32.5	-0.9
	comp=Z,17nm,0.6s,baz=213,slow=2.8,SNR=14						

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*ISK **03** 16:40:03.3, 39.°73N×34.°06E, h14km, MD2.6*
*DDA **03** 16:40:03.9, 39.°78N×33.°97E, h7km, MD2.8*
*CSEM **03** 16:40:03.7±0.2, 39.°77N×34.°03E, h10km, MD2.6, Error ellipse: s-maj=4.3km s-min=3.6km az=162.0*
ISC 03 16:40:03.9±1.0**, 39.°76N**±0.°03×**34.°00E**±0.°03**, h14**km±10km**,**
n20, σ0.s82/32**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAMT	Kaman	0.45	210	ePG	Pg	16 40 12.6	-0.3
KAMT				eSG	Sg	16 40 19.4	+0.4
KAMT	Kaman	0.45	210	ePg	Pg	16 40 12.6	-0.3
KAMT				eSg	Sg	16 40 19.4	+0.4
CORM	Corum	0.64	49	ePG	Pg	16 40 15.9	-0.6
CORM				eSG	Sg	16 40 25.4	+0.4
CORM	Corum	0.64	49	ePg	Pg	16 40 15.9	-0.6
CORM				eSg	Sg	16 40 25.4	+0.4
BBAL	Bala	0.71	253	iP	Pg	16 40 17.5	-0.3
BBAL				iS	Sg	16 40 27.4	+0.1
BBAL	Bala	0.71	253	iP	Pg	16 40 17.5	-0.3
BBAL				iS	Sg	16 40 27.4	+0.1
AFSR	Afˉar-Bala (A	0.79	247	ePG	Pg	16 40 18.9	-0.3
AFSR	Afˉar-Bala (A	0.79	247	ePg	Pg	16 40 18.9	-0.3
ELDT	Eldivan	0.85	329	iP	Pg	16 40 20.0	-0.5
ELDT				iS	Sg	16 40 31.8	+0.1
ELDT	Eldivan	0.85	329	iP	Pg	16 40 20.0	-0.5
ELDT				iS	Sg	16 40 31.8	+0.1
ANTO	Ankara	0.94	277	ePG	Pn	16 40 23.3	+0.6
ANTO	Ankara	0.94	277	ePg	Pn	16 40 23.3	+0.6
LOD	Lodumlu	0.96	278	ePG	Pn	16 40 23.5	+0.4
LOD	Lodumlu	0.96	278	ePg	Pn	16 40 23.5	+0.4
YOZ	Yozgat	1.02	96	ePG	Pb	16 40 22.7	-0.8
YOZ	Yozgat	1.02	96	ePg	Pb	16 40 22.7	-0.8
AVNT	Avonos	1.18	146	iP	Pg	16 40 27.1	+0.4
AVNT				iS	Sn	16 40 42.2	+0.1
AVNT	Avonos	1.18	146	iP	Pg	16 40 27.1	+0.4
AVNT				iS	Sn	16 40 42.2	+0.1
ILGA	Ilgaz	1.31	350	eP	Pn	16 40 27.8	-0.2
ILGA				eS	Sg	16 40 48.9	+2.6
ILGA	Ilgaz	1.31	350	eP	Pn	16 40 27.8	-0.2
ILGA				eS	Sg	16 40 48.9	+2.6

KRSC 03 16:44:45.0±0.6**, 49.°93N**×**154.°06E, h292**km±48km**, ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.52	59	eP	Pn	16 45 27.8	+0.4
SKR				S	S	16 45 59.9	-1.2
PAU	Pauzhetka	2.33	48	P	Pn	16 45 34.7	+1.0
MIPR	Malaya Ipel'ka	2.90	35	eP	Pn	16 45 40.3	+1.2
ASAK	Asacha	3.45	43	P	Pn	16 45 46.7	+1.9
APC	Apacha	3.57	32	eP	Pn	16 45 47.2	+1.2
MTVR	Mutnovka	3.64	44	P	Pn	16 45 49.0	+2.1
MTVR				S	S	16 46 34.6	-1.8
RUS	Russkaya	3.76	46	eP	Pn	16 45 49.9	+1.9
RUS				eS	S	16 46 35.8	-2.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PET	**Petropavlovsk**	**4.22**	**41**	P	Pn	16 45 55.7	+2.6
KOK	**Koryaka**	**4.41**	**39**	P	Pn	16 45 57.1	+1.7
UGLR	**Uglovaya**	**4.43**	**40**	P	Pn	16 45 56.9	+1.3
AVH	**Avacha**	**4.43**	**39**	P	Pn	16 45 57.7	+2.1
GNL	**Ganaly**	**4.47**	**31**	P	Pn	16 45 57.8	+1.7
SPN	**Mys Shipunski**	**4.89**	**47**	P	Pn	16 46 02.4	+1.6
SPN				eS	S	16 46 57.3	-4.3

*ISCJB **03** 16:49:13.9±1.3, 0°.2S±0°.1×132°.99E±0°.05, h32km, mb3.6/2, Error ellipse: s-maj=16.1km s-min=7.0km az=7.9*
*DJA **03** 16:49:16.4±0.8, 0°S±6°×13°3E±°, h13km, M4.1/6, mb4.2/3, mB5.8/2, MLv4.0/6, Mw(mB)5.3/2*
*IDC **03** 16:49:17.1±14.0, 0°.91S×133°.31E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=217.9km s-min=96.3km az=164.0*
ISC 03 16:49:14.9±1.5**, 0°.4S**±0°.1×**133°.11E**±0°.06**, h32km, n11, σ2s.19**/13**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.56**	**137**	P	**Pb**	**16 49 43.8**	**+0.7**
RKPI				S	Sb	16 50 09.0	+6.5
SWI	**Sorong**	**1.91**	**255**	P	**Pn**	**16 49 44.2**	**-1.1**
SWI				S	**Sn**	**16 50 07.5**	**-0.8**
FAKI	**Fak Fak**	**2.67**	**199**	P	**Pn**	**16 49 58.0**	**+2.2**
FAKI				S	**Sb**	**16 50 30.6**	**-4.0**
SRPI	**Serui, Papua**	**3.47**	**115**	S	**Sb**	**16 50 52.9**	**-4.4**
MSAI	**Masohi**	**5.12**	**235**	P	**Pn**	**16 50 30.4**	**+1.0**
LBMI	**Labuha**	**5.62**	**267**	P	**Pn**	**16 50 36.7**	**+0.5**
	13nm,1.6s,0.1nm						
AAI	**Ambon**	**5.91**	**236**	P	**Pn**	**16 50 41.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**19.09**	**202**	P	**Pn**	**16 53 36.5**	**+0.5**
	0.1nm,0.3s,baz=45,slow=10.0,SNR=2.8						
WRA	**Warramunga Arr**	**19.49**	**177**	P	**Pn**	**16 53 40.5**	**-0.4**
	0.2nm,0.3s,baz=354,slow=13,SNR=7.3						
ASAR	**Alice Springs**	**23.17**	**178**	P	**P**	**16 54 20.3**	**+1.4**
	0.9nm,0.6s,baz=357,slow=11,SNR=23						
STKA	**Stephens Creek**	**32.35**	**166**	P	**P**	**16 55 42.6**	**+1.1**
	0.8nm,0.6s,baz=348,slow=11,SNR=4.4						

*ISCJB **03** 16:51:52.4±0.5, 10°.67N±0°.04×62°.58W±0°.03, h107km±6km, Error ellipse: s-maj=6.8km s-min=3.8km az=154.8*
*FUNV **03** 16:51:54.0, 10°.66N×62°.49W, h104km, MW3.5*
*TRN **03** 16:51:56.5, 10°.74N×62°.31W, h114km, MD3.5*
ISC 03 16:51:52.2±1.3**, 10°.65N**±0°.04×**62°.57W**±0°.03**, h117**km±9km**, n22, σ1s.58**/40**, 2C-6D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.34**	**91**	⇑iP	**Pn**	**16 52 09.1**	**+0.3**
GUIV				eS	**Sn**	**16 52 19.3**	**-2.1**
CRUV	**Carupano**	**0.66**	**272**	⇓eP	**Pn**	**16 52 11.2**	**+0.4**
CRUV				eS	**Sn**	**16 52 24.1**	**-0.8**
TRN	**Trinidad (W)**	**1.14**	**90**	eP	**Pn**	**16 52 17.1**	**+1.8**
TRN				eS	**Sn**	**16 52 32.3**	**-0.6**
TPP	**Pointe-a-Pierr**	**1.15**	**107**	eP	**Pn**	**16 52 18.3**	**+2.9**
TPP				eS	**Sn**	**16 52 32.3**	**-0.7**
TBH	**Brigand Hill**	**1.48**	**96**	eP	**Pn**	**16 52 21.3**	**+2.1**
TBH				eS	**Sn**	**16 52 38.2**	**-1.5**
GRW	**Mount Saint Ca**	**1.74**	**31**	eP	**Pn**	**16 52 23.8**	**+1.4**
GRW				eS	**Sn**	**16 52 44.6**	**-0.7**
ORIV	**Oritupano**	**1.78**	**208**	⇓iP	**Pn**	**16 52 24.8**	**+2.0**
ORIV				eS	**Sn**	**16 52 46.4**	**+0.3**
TPR	**Prospect**	**1.83**	**73**	eP	**Pn**	**16 52 25.1**	**+1.6**
TPR				eS	**Sn**	**16 52 45.9**	**-1.3**
PCRV	**Puerto La Cruz**	**2.09**	**257**	⇓iP	**Pn**	**16 52 28.1**	**+1.4**
PCRV				eS	**Sn**	**16 52 52.6**	**-0.4**
TOSP	**Speyside**	**2.09**	**72**	eP	**Pn**	**16 52 26.8**	**+0.2**
TOSP				eS	**Sn**	**16 52 50.0**	**-3.0**
RIOV	**Rio Grande**	**2.67**	**164**	eP	**Pn**	**16 52 35.0**	**+0.9**
RIOV				eS	**Sn**	**16 53 03.9**	**-2.5**
PRGV	**PARIAGUAN**	**2.78**	**228**	⇓eP	**Pn**	**16 52 36.9**	**+1.4**
PRGV				eS	**Sn**	**16 53 08.3**	**-0.6**
SVB	**Belmont**	**2.90**	**26**	eP	**Pn**	**16 52 39.3**	**+2.2**
SVB				eS	**Sn**	**16 53 10.9**	**-0.8**
GURV	**El Guri**	**2.92**	**190**	⇓eP	**Pn**	**16 52 39.0**	**+1.7**
CUPV	**Cœpira**	**3.23**	**260**	⇓iP	**Pn**	**16 52 42.8**	**+1.4**
CUPV				eS	**Sn**	**16 53 19.4**	**-0.1**
MCLT	**Moule a Chique**	**3.43**	**27**	eP	**Pn**	**16 52 45.5**	**+1.5**
MCLT				eS	**Sn**	**16 53 22.1**	**-2.0**
BIRV	**Birongo**	**3.65**	**268**	eP	**Pn**	**16 52 49.0**	**+2.1**
BIRV				eS	**Sn**	**16 53 28.9**	**-0.4**
MERV	**Las Mercedes**	**3.93**	**250**	eP	**Pn**	**16 52 51.5**	**+0.7**
MERV				eS	**Sn**	**16 53 35.6**	**-0.6**
LUEV	**Luepa**	**4.90**	**167**	eP	**Pn**	**16 53 04.1**	**+0.1**
TURV	**Turiamo**	**5.19**	**268**	eP	**Pn**	**16 53 08.1**	**+0.4**
BAUV	**El Baul**	**5.66**	**253**	eP	**Pn**	**16 53 14.1**	**+0.1**
MAPV	**Macapo**	**5.86**	**263**	⇑eP	**Pn**	**16 53 17.0**	**+0.3**
MAPV				eS	**Sn**	**16 54 19.2**	**-3.4**

MEX 03 17:09:39.0±0.5**, 18°.10N**×**100°.61W, h63**km±6km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.30**	**54**	iP	Pn	17 09 48.0	-1.5
ARIG				iS	Sn	17 09 55.4	-1.8
ZIIG	**Zihuatanejo**	**0.95**	**239**	iP	Pn	17 09 55.6	-1.0
ZIIG				eS	Sn	17 10 07.6	-2.0
CAIG	**El Cayaco**	**1.10**	**163**	iP	Pn	17 09 56.5	-1.9
CAIG				iS	Sn	17 10 11.2	-1.7
ACX	**Acapulco**	**1.42**	**150**	iP	Pn	17 10 00.4	-2.4
YAIG	**Yautepec**	**1.65**	**62**	iP	Pn	17 10 04.9	-1.1
YAIG				iS	Sn	17 10 24.5	-1.8
UTMO	**Huajuapan**	**2.68**	**95**	iP	Pn	17 10 19.2	-0.9
UTMO				iS	Sn	17 10 49.6	-2.1
PNIG	**Pinotepa**	**2.92**	**125**	iP	Pn	17 10 22.4	-0.7
PNIG				iS	Sn	17 10 55.6	-1.4

IDC 03 17:11:57.8±4.2**, 24°.35S**×**66°.97W, h145**km±31km**, mb2.9**/1**, mb1 3.1**/5**, mb1mx3.0**/18**, mbtmp3.0**/5**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.0**/8**, Error ellipse: s-maj=47.4km s-min=30.3km az=39.0, Salta Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**8.10**	**352**	P	Pn	17 13 53.7	+0.3
	0.4nm,0.3s,baz=165,slow=10,SNR=11						
CPUP	**Villa Florida**	**8.94**	**105**	P	Pn	17 14 03.7	0.0
	0.2nm,0.3s,baz=273,slow=19,SNR=2.4						
SIV	**San Ignacio**	**9.99**	**35**	P	Pn	17 14 17.0	-0.9
	0.8nm,0.3s,baz=235,slow=13,SNR=10						
PLCA	**Paso Flores**	**16.61**	**190**	LR	LR	17 23 22.1	
	comp=Z,274nm,21.4s,baz=164,slow=41						
BDFB	**Brasilia**	**19.79**	**68**	P	P	17 16 17.1	0.0
	0.3nm,0.3s,baz=225,slow=7.1,SNR=4.3						
TORD	**Torodi Ar. Bea**	**76.67**	**69**	P	P	17 23 33.5	+0.4
	0.2nm,0.5s,baz=251,slow=6.0,SNR=3.8						
ASAR	**Alice Springs**	**128.15**	**205**	PKP	PKPdf	17 30 47.0	-0.5
	0.2nm,0.6s,baz=158,slow=1.4,SNR=5.1						
MKAR	**Makanchi Array**	**146.78**	**40**	PKPbc	PKPdf	17 31 21.6	+0.9
	0.2nm,0.5s,baz=322,slow=4.2,SNR=3.6						

IDC 03 17:17:38.2±2.2**, 14°.37S**×**76°.48W, h0km, mb3.5**/2**, mb1 3.7**/5**, mb1mx3.5**/20**, mbtmp3.6**/5**, ML3.6**/3**, Error ellipse: s-maj=53.7km s-min=19.2km az=63.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.40**	**351**	Pn	Pn	17 18 20.2	+1.4
	2.2nm,0.3s,baz=155,slow=16,SNR=5.9						
NNA				Lg	Lg	17 18 53.9	
	39nm,0.3s,baz=243,slow=16,SNR=8.0						
ATAH	**Atahualpa**	**7.43**	**345**	Pn	Pn	17 19 37.9	+10
	0.7nm,0.3s,baz=153,slow=4.5,SNR=5.0						
LPAZ	**La Paz**	**8.28**	**104**	Pn	Pn	17 19 41.6	+1.4
	0.9nm,0.3s,baz=282,slow=7.2,SNR=19						
SIV	**San Ignacio**	**14.96**	**98**	Pn	Pn	17 21 10.0	-1.2
	0.2nm,0.3s,baz=284,slow=12,SNR=3.3						
TORD	**Torodi Ar. Bea**	**82.08**	**74**	P	P	17 30 00.8	-0.5
	0.8nm,0.7s,baz=254,slow=5.4,SNR=4.3						
YKA	**Yellowknife Ar**	**82.21**	**343**	P	P	17 30 00.8	-0.1
	0.1nm,0.7s,baz=138,slow=5.4,SNR=3.7						

*TAP **03** 17:22:25.9, 23°.94N×122°.52E, h13km±1km, ML3.0, D*
*ISCJB **03** 17:22:25.3±0.5, 23°.93N±0°.03×122°.63E±0°.02, h23km±4km, Error ellipse: s-maj=4.6km s-min=2.8km az=169.6*
*JMA **03** 17:22:26.1±0.3, 24°.22N×122°.59E, h51km, M2.3*
ISC 03 17:22:24.2±1.1**, 23°.93N**±0°.03×**122°.63E**±0°.02**, h15**km±9km**, n37, σ0s.51**/68**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.63**	**33**	P	**Pg**	**17 22 36.9**	**+0.2**
YOJ				eS	**Sg**	**17 22 44.5**	**-0.7**
ENA	**Nanau**	**0.96**	**302**	P	**Pn**	**17 22 43.0**	**-0.1**
	baz=304						
ENA				eS	**Sg**	**17 22 55.3**	**0.0**
	baz=304						
TWD	**Chiawan**	**0.96**	**279**	eP	**Pn**	**17 22 43.0**	**-0.1**
	baz=279						
TWD				eS	**Sb**	**17 22 55.0**	**-0.1**
	baz=279						
TWC	**Suao**	**0.99**	**314**	P	**Pb**	**17 22 43.2**	**+0.1**
	baz=317						
TWC				S	**Sg**	**17 22 56.1**	**-0.2**
	baz=317						
HATJ	**Hateruma jima**	**1.08**	**83**	eS	**Sn**	**17 22 59.8**	**+0.3**
IRIF	**Iriomote-Funau**	**1.08**	**68**	P	**Pb**	**17 22 44.4**	**-0.2**
IRIF				eS	**Sg**	**17 22 59.5**	**+0.2**
ESL	**Shilin**	**1.10**	**264**	eP	**Pb**	**17 22 44.9**	**-0.2**
	baz=262						
ESL				eS	**Sb**	**17 22 58.6**	**-0.7**
	baz=262						
EGS		**1.12**	**325**	eP	**Pg**	**17 22 46.3**	**+0.5**
	baz=329						
EGS				eS	**Sn**	**17 23 00.4**	**0.0**
	baz=329						
ILA	**Ilan**	**1.16**	**316**	eP	**Pg**	**17 22 46.7**	**0.0**
	baz=319						
ILA				eS	**Sg**	**17 23 01.9**	**0.0**
	baz=319						
TWE	**Neicheng**	**1.19**	**312**	eP	**Pb**	**17 22 46.6**	**+0.1**
	baz=315						
TWE				eS	**Sn**	**17 23 01.8**	**-0.3**
	baz=315						
ENTT	**Nioudou**	**1.21**	**306**	P	**Pb**	**17 22 47.1**	**+0.3**
	baz=308						
ENTT				eS	**Sg**	**17 23 03.0**	**-0.3**
	baz=308						
TWB1	**Santiao Chiao**	**1.23**	**331**	eP	**Pn**	**17 22 46.1**	**-0.8**
	baz=335						
NNS	**Nan Shan**	**1.26**	**294**	eP	**Pb**	**17 22 48.0**	**+0.2**
	baz=295						
NNS				eS	**Sb**	**17 23 04.1**	**+0.2**
	baz=295						
WHF	**Hehuan Shan**	**1.27**	**280**	P	**Pn**	**17 22 47.9**	**+0.1**
	baz=280						
WHF				S	**Sb**	**17 23 04.3**	**-0.2**
	baz=280						
EHY	**Hungye**	**1.27**	**251**	eP	**Pb**	**17 22 48.2**	**+0.3**
	baz=248						
EHY				eS	**Sb**	**17 23 04.2**	**0.0**
	baz=248						
JKRS	**Kuro-shima**	**1.29**	**76**	P	**Pb**	**17 22 48.3**	**0.0**
JKRS				eS	**Sn**	**17 23 05.5**	**+0.7**
TWF1	**Yuli**	**1.35**	**245**	eP	**Pb**	**17 22 49.3**	**0.0**
	baz=242						
TWF1				eS	**Sb**	**17 23 06.5**	**+0.1**
	baz=242						
TWT	**Tachien**	**1.37**	**284**	eP	**Pb**	**17 22 50.2**	**+0.5**
	baz=284						
TWT				eS	**Sn**	**17 23 06.9**	**-0.1**
	baz=284						
NWF	**Wu-fen Shan**	**1.38**	**326**	eP	**Pn**	**17 22 49.4**	**+0.4**
	baz=329						
NSK	**Sanguang**	**1.38**	**303**	eP	**Pn**	**17 22 49.4**	**+0.4**
	baz=304						
NSK				eS	**Sn**	**17 23 06.9**	**-0.2**
	baz=304						
CHKT	**Chengkung**	**1.43**	**235**	eP	**Pb**	**17 22 51.0**	**+0.5**
	baz=231						
CHKT				eS	**Sn**	**17 23 06.7**	**-1.4**
	baz=231						
JIJ	**Ishigaki jima**	**1.45**	**72**	P	**Pn**	**17 22 49.9**	**+0.1**
JIJ				eS	**Sn**	**17 23 07.6**	**-0.9**
SMLT	**Sun Moon Lake**	**1.59**	**269**	eP	**Pn**	**17 22 52.2**	**+0.3**
	baz=267						
SMLT				eS	**Sn**	**17 23 12.1**	**-0.2**
	baz=267						
TWS1	**Kuangyinshan**	**1.61**	**317**	eP	**Pb**	**17 22 53.6**	**-0.1**
	baz=319						
TWS1				eS	**Sb**	**17 23 14.0**	**+0.2**
	baz=319						
TYC	**Yuchr**	**1.63**	**270**	eP	**Pn**	**17 22 52.5**	**+0.1**
	baz=268						
TYC				eS	**Sn**	**17 23 13.2**	**+0.2**
	baz=268						
NSTT	**Nanjuang**	**1.65**	**296**	eP	**Pb**	**17 22 54.0**	**-0.3**
	baz=296						
ELDTW	**Lidau**	**1.66**	**244**	eP	**Pn**	**17 22 52.8**	**-0.1**
	baz=241						
ELDTW				eS	**Sn**	**17 23 13.8**	**-0.1**
	baz=241						
ALS	**Alishan**	**1.73**	**256**	eP	**Pn**	**17 22 54.9**	**+0.9**
	baz=254						
ALS				eS	**Sn**	**17 23 14.7**	**-1.2**
	baz=254						
TWQ1	**Liyutan**	**1.75**	**284**	eP	**Pb**	**17 22 55.9**	**-0.2**
	baz=284						
TWG	**Pinlang**	**1.81**	**233**	eP	**Pb**	**17 22 56.9**	**-0.2**
	baz=229						
TWG				eS	**Sn**	**17 23 17.8**	**+0.2**
	baz=229						
CHN5	**Tsauling**	**1.82**	**260**	eP	**Pn**	**17 22 56.2**	**+1.1**
	baz=258						
CHN5				eS	**Sn**	**17 23 17.7**	**-0.3**
	baz=258						
CHN4	**Tsaushan**	**1.96**	**253**	eP	**Pb**	**17 22 59.1**	**-0.5**
	baz=251						
CHN4				eS	**Sn**	**17 23 20.7**	**-0.5**
	baz=251						
WTP	**Ta-pu**	**1.97**	**250**	eP	**Pn**	**17 22 57.5**	**+0.4**
	baz=248						
WTP				eS	**Sn**	**17 23 22.5**	**+0.9**
	baz=248						
ECL	**Taimali**	**2.03**	**230**	eP	**Pb**	**17 22 59.7**	**-1.2**
	baz=227						
ECL				eS	**Sn**	**17 23 22.8**	**-0.3**
	baz=227						
CHN1	**Nanshi**	**2.07**	**250**	eP	**Pb**	**17 23 00.8**	**-0.7**
	baz=247						
CHN1				eS	**Sn**	**17 23 24.7**	**+0.8**
	baz=247						
LAY	**Lan-yu**	**2.13**	**208**	eP	**Pb**	**17 23 02.1**	**-0.4**
	baz=205						
EAST	**Anshuo**	**2.25**	**227**	eP	**Pn**	**17 23 01.6**	**+0.6**
	baz=224						
EAST				eS	**Sn**	**17 23 29.6**	**+1.1**
	baz=224						

MAN 03 17:25:40, 7°.33N×**124°.36E, h41km, mb4.4, ML3.2, MS3.1, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.15**	**226**	⇓iP	Pn	17 25 48.0	+0.9
CTBH				iS	Sn	17 25 54.6	+2.6
BUKP	**Musuan**	**0.89**	**52**	eP	Pn	17 25 57.2	+1.1
PAGZ	**Pagadian**	**1.10**	**298**	eP	Pn	17 25 59.8	+0.9

IDC 03 17:35:31.9±56.0**, 13°.83S**×**169°.49E, h0km, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/18**, mbtmp3.7**/3**, Error ellipse: s-maj=958.9km s-min=127.1km az=66.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.70**	**199**	eP	Pn	17 37 41.5	+2.3
DZM				eS	Sn	17 38 53.6	-24
STKA	**Stephens Creek**	**31.22**	**230**	P	P	17 41 52.2	-1.0
	1.1nm,0.7s,baz=49,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**34.13**	**255**	P	P	17 42 18.7	-0.2
	0.3nm,0.5s,baz=85,slow=9.1,SNR=3.8						
ASAR	**Alice Springs**	**35.00**	**248**	P	P	17 42 27.1	+0.6
	1.0nm,0.5s,baz=75,slow=9.0,SNR=39						

*ISK **03** 17:40:05.9, 39°.81N×41°.60E, h8km, MD2.9*
*DDA **03** 17:40:05.7, 39°.88N×41°.81E, h5km, MD2.8*
*CSEM **03** 17:40:05.7±0.3, 39°.89N×41°.62E, h2km, MD2.9, Error ellipse: s-maj=8.9km s-min=5.9km az=121.0*
*ISCJB **03** 17:40:05.3±0.7, 39°.85N±0°.03×41°.67E±0°.05, h1km±6km, Error ellipse: s-maj=7.5km s-min=3.7km az=24.4*
ISC 03 17:40:05.5±1.1**, 39°.87N**±0°.03×**41°.67E**±0°.03**, h4**km±10km**, n34, σ0s.93**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.24**	**278**	iP	**Pg**	**17 40 12.2**	**+2.1**
ERZM	**Erzurum**	**0.24**	**278**	iP	**Pg**	**17 40 12.2**	**+2.1**
EZM	**Erzurum**	**0.24**	**278**	ePG	**Pg**	**17 40 11.2**	**+1.0**
HOMI	**Horasan**	**0.25**	**46**	iP	**Pg**	**17 40 09.4**	**-0.9**
HOMI				iS	**Sg**	**17 40 14.1**	**+0.5**
VRTB	**Varto-Mus**	**0.73**	**193**	ePG	**Pg**	**17 40 19.1**	**-0.4**
VRTB				eSG	**Sg**	**17 40 28.9**	**-0.1**
VRTB	**Varto-Mus**	**0.73**	**193**	ePg	**Pg**	**17 40 19.1**	**-0.4**
VRTB				eSg	**Sg**	**17 40 28.9**	**-0.1**
KOPT	**Kop Dagi**	**0.92**	**279**	iP	**Pb**	**17 40 24.0**	**-0.2**
KOPT	**Kop Dagi**	**0.92**	**279**	iP	**Pb**	**17 40 24.0**	**-0.2**
DDEM	**Demirkent**	**1.02**	**3**	iP	**Pg**	**17 40 24.3**	**-0.8**
DDEM				iS	**Sn**	**17 40 41.5**	**-0.1**
DDEM	**Demirkent**	**1.02**	**3**	iP	**Pg**	**17 40 24.3**	**-0.8**
DDEM				iS	**Sn**	**17 40 41.5**	**-0.1**
DBAD	**Bademkaya**	**1.14**	**1**	iP	**Pg**	**17 40 27.1**	**-0.3**
DBAD				iS	**Sn**	**17 40 44.4**	**-0.3**
DBAD	**Bademkaya**	**1.14**	**1**	iP	**Pg**	**17 40 27.1**	**-0.3**
DBAD				iS	**Sn**	**17 40 44.4**	**-0.3**
BNGB	**Bingˆ¶l**	**1.17**	**221**	ePN	**Pg**	**17 40 26.2**	**-1.8**
BNGB				eSN	**Sg**	**17 40 42.4**	**-0.7**
DAGI	**Agillar**	**1.22**	**9**	iP	**Pg**	**17 40 27.6**	**-1.2**
DAGI				iS	**Sn**	**17 40 46.6**	**+0.2**
BAYT	**Ayd˜–ntepe-Bay**	**1.28**	**294**	ePN	**Pb**	**17 40 30.2**	**-0.1**
BAYT	**Ayd˜–ntepe-Bay**	**1.28**	**294**	ePn	**Pb**	**17 40 30.2**	**-0.1**
KARS	**Kars**	**1.31**	**55**	ePN	**Pn**	**17 40 32.6**	**+1.8**
KARS	**Kars**	**1.31**	**55**	ePn	**Pn**	**17 40 32.6**	**+1.8**
ARTV	**Artvin**	**1.32**	**8**	iP	**Pg**	**17 40 29.4**	**-1.5**
ARTV				iS	**Sg**	**17 40 47.6**	**-0.5**
ARTV	**Artvin**	**1.32**	**8**	iP	**Pg**	**17 40 29.4**	**-1.5**
ARTV				iS	**Sg**	**17 40 47.6**	**-0.5**
ERZN	**Erzincan**	**1.53**	**260**	ePN	**Pn**	**17 40 33.4**	**-0.3**
BCA	**Borcka**	**1.57**	**359**	ePN	**Pb**	**17 40 35.0**	**-0.1**
BCA	**Borcka**	**1.57**	**359**	ePn	**Pb**	**17 40 35.0**	**-0.1**
GUMT	**Gumushane**	**1.78**	**290**	ePN	**Pn**	**17 40 37.2**	**0.0**
GUMT	**Gumushane**	**1.78**	**290**	ePn	**Pn**	**17 40 37.2**	**0.0**
EZC	**Erzincan**	**1.79**	**267**	ePN	**Pn**	**17 40 37.2**	**-0.2**
EZC	**Erzincan**	**1.79**	**267**	ePn	**Pn**	**17 40 37.2**	**-0.2**
KELT	**Kelkit**	**1.88**	**279**	iP	**Pg**	**17 40 41.1**	**-0.4**
KELT	**Kelkit**	**1.88**	**279**	iP	**Pg**	**17 40 41.1**	**-0.4**
BEST	**Besiri**	**2.00**	**189**	iP	**Pn**	**17 40 40.9**	**+0.7**
BEST				iS	**Sb**	**17 41 08.3**	**+0.4**
PTK	**Pertek**	**2.02**	**242**	ePN	**Pn**	**17 40 40.4**	**-0.2**
PTK	**Pertek**	**2.02**	**242**	ePn	**Pn**	**17 40 40.4**	**-0.2**
GNI	**Garni**	**2.37**	**82**	ePN	**Pn**	**17 40 47.2**	**+1.8**
GNI	**Garni**	**2.37**	**82**	ePn	**Pn**	**17 40 47.2**	**+1.8**

*ISK **03** 17:41:33.6, 39°.85N×41°.74E, h5km, MD2.8*
*DDA **03** 17:41:33.8, 39°.80N×41°.85E, h5km, MD3.2*
*CSEM **03** 17:41:33.8±0.2, 39°.86N×41°.75E, h2km, MD3.2, Error ellipse: s-maj=6.1km s-min=4.4km az=121.0*
*ISCJB **03** 17:41:33.7±0.7, 39°.80N±0°.02×41°.79E±0°.04, h5km±5km, Error ellipse: s-maj=5.8km s-min=3.7km az=23.4*
ISC 03 17:41:33.9±1.0**, 39°.82N**±0°.02×**41°.78E**±0°.03**, h10**km±8km**, n33, σ1s.12**/48**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.24**	**24**	iP	**Pg**	**17 41 38.4**	**-0.6**
HOMI				iS	**Sg**	**17 41 43.1**	**+0.7**
ERZM	**Erzurum**	**0.33**	**284**	iP	**Pg**	**17 41 41.0**	**+0.4**
ERZM	**Erzurum**	**0.33**	**284**	iP	**Pg**	**17 41 41.0**	**+0.4**
EZM	**Erzurum**	**0.33**	**284**	ePG	**Pg**	**17 41 39.9**	**-0.7**
VRTB	**Varto-Mus**	**0.71**	**201**	ePG	**Pb**	**17 41 48.6**	**+0.2**
VRTB				eSG	**Sg**	**17 41 58.1**	**+1.2**
VRTB	**Varto-Mus**	**0.71**	**201**	ePg	**Pb**	**17 41 48.6**	**+0.2**
VRTB				eSg	**Sg**	**17 41 58.1**	**+1.2**
TUTA	**Tutak**	**0.90**	**117**	iP	**Pg**	**17 41 49.4**	**-1.9**
TUTA				iS	**Sg**	**17 42 03.0**	**-0.1**
KOPT	**Kop Dagi**	**1.00**	**282**	iP	**Pg**	**17 41 53.1**	**-0.1**
KOPT	**Kop Dagi**	**1.00**	**282**	iP	**Pg**	**17 41 53.1**	**-0.1**
DDEM	**Demirkent**	**1.07**	**359**	iP	**Pg**	**17 41 53.3**	**-1.1**
DDEM				iS	**Sn**	**17 42 10.3**	**+0.3**
DDEM	**Demirkent**	**1.07**	**359**	iP	**Pg**	**17 41 53.3**	**-1.1**
DDEM				iS	**Sn**	**17 42 10.3**	**+0.3**
BNGB	**Bingˆ¶l**	**1.19**	**226**	ePN	**Pb**	**17 41 56.6**	**-0.1**
BNGB				eSN	**Sn**	**17 42 13.6**	**+0.6**
DBAD	**Bademkaya**	**1.20**	**357**	iP	**Pb**	**17 41 55.9**	**-0.8**
DBAD				iS	**Sn**	**17 42 13.4**	**+0.2**
DBAD	**Bademkaya**	**1.20**	**357**	iP	**Pb**	**17 41 55.9**	**-0.8**
DBAD				iS	**Sn**	**17 42 13.4**	**+0.2**
DAGI	**Agillar**	**1.26**	**5**	iP	**Pn**	**17 41 56.6**	**-1.0**
DAGI				iS	**Sn**	**17 42 15.4**	**+0.7**
KARS	**Kars**	**1.28**	**51**	ePN	**Pg**	**17 41 58.5**	**0.0**
KARS				eSN	**Sn**	**17 42 16.8**	**+1.5**
KARS	**Kars**	**1.28**	**51**	ePn	**Pg**	**17 41 58.5**	**0.0**
KARS				eSn	**Sn**	**17 42 16.8**	**+1.5**
ARTV	**Artvin**	**1.36**	**5**	iP	**Pn**	**17 41 58.5**	**-0.7**
ARTV				iS	**Sb**	**17 42 17.5**	**+0.2**
ARTV	**Artvin**	**1.36**	**5**	iP	**Pn**	**17 41 58.5**	**-0.7**
ARTV				iS	**Sb**	**17 42 17.5**	**+0.2**
BINT	**Bingol**	**1.38**	**227**	ePn	**Pn**	**17 41 56.6**	**-2.7**
BINT				eSn	**Sb**	**17 42 13.6**	**-3.9**
BAYT	**Ayd˜–ntepe-Bay**	**1.38**	**295**	ePN	**Pn**	**17 41 59.5**	**+0.2**
BAYT	**Ayd˜–ntepe-Bay**	**1.38**	**295**	ePn	**Pn**	**17 41 59.6**	**+0.2**
ERZN	**Erzincan**	**1.60**	**262**	ePN	**Pn**	**17 42 02.9**	**+0.4**
BCA	**Borcka**	**1.62**	**356**	ePN	**Pn**	**17 42 03.0**	**+0.4**
BCA	**Borcka**	**1.62**	**356**	ePn	**Pn**	**17 42 03.0**	**+0.4**
EZC	**Erzincan**	**1.87**	**269**	ePN	**Pn**	**17 42 06.6**	**+0.5**
EZC	**Erzincan**	**1.87**	**269**	ePn	**Pn**	**17 42 06.6**	**+0.5**
PTK	**Pertek**	**2.07**	**244**	ePN	**Pn**	**17 42 09.7**	**+0.8**
PTK	**Pertek**	**2.07**	**244**	ePn	**Pn**	**17 42 09.7**	**+0.8**
GNI	**Garni**	**2.30**	**81**	ePN	**Pn**	**17 42 13.6**	**+1.6**
GNI	**Garni**	**2.30**	**81**	ePn	**Pn**	**17 42 13.6**	**+1.6**
SVRC	**Sivrice-ELAZID**	**2.41**	**234**	ePN	**Pn**	**17 42 15.1**	**+1.6**
SVRC	**Sivrice-ELAZID**	**2.41**	**234**	ePn	**Pn**	**17 42 15.1**	**+1.6**

*ISK **03** 17:44:25.3, 39°.81N×41°.80E, h5km, MD3.0*
*CSEM **03** 17:44:26.5±0.2, 39°.81N×41°.79E, h2km, MD3.5, Error ellipse: s-maj=4.4km s-min=4.0km az=7.0*
*ISCJB **03** 17:44:26.8±0.6, 39°.78N±0°.02×41°.80E±0°.04, h4km±5km, Error ellipse: s-maj=5.2km s-min=3.4km az=20.7*
*DDA **03** 17:44:27.3, 39°.80N×41°.86E, h5km, MD3.5*
ISC 03 17:44:26.3±1.2**, 39°.80N**±0°.02×**41°.78E**±0°.02**, h4**km±11km**, n44, σ0s.99**/61**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.27**	**21**	iP	**Pg**	**17 44 32.2**	**+0.7**
HOMI				iS	**Sb**	**17 44 37.0**	**-1.9**
ERZM	**Erzurum**	**0.34**	**289**	iP	**Pb**	**17 44 34.5**	**-0.5**
ERZM	**Erzurum**	**0.34**	**289**	iP	**Pb**	**17 44 34.5**	**-0.5**
EZM	**Erzurum**	**0.34**	**289**	ePG	**Pg**	**17 44 33.3**	**+0.4**
VRTB	**Varto-Mus**	**0.68**	**202**	ePG	**Pg**	**17 44 39.8**	**+0.4**
VRTB				eSG	**Sb**	**17 44 50.6**	**-0.1**
VRTB	**Varto-Mus**	**0.68**	**202**	ePg	**Pg**	**17 44 39.8**	**+0.4**
TUTA	**Tutak**	**0.89**	**116**	iP	**Pb**	**17 44 43.6**	**-0.9**
TUTA				iS	**Sb**	**17 44 57.0**	**+0.2**
TUTA	**Tutak**	**0.89**	**116**	iP	**Pb**	**17 44 43.6**	**-0.9**
TUTA				iS	**Sb**	**17 44 57.0**	**+0.2**
BNGL	**BINGOL**	**0.97**	**210**	iP	**Pg**	**17 44 42.5**	**-2.5**
BNGL				iS	**Sg**	**17 44 57.8**	**+0.2**
KOPT	**Kop Dagi**	**1.01**	**283**	iP	**Pn**	**17 44 47.0**	**-0.5**
KOPT	**Kop Dagi**	**1.01**	**283**	iP	**Pn**	**17 44 47.0**	**-0.5**
DDEM	**Demirkent**	**1.09**	**359**	iP	**Pg**	**17 44 47.2**	**-0.1**
DDEM				iS	**Sn**	**17 45 04.2**	**0.0**
DDEM	**Demirkent**	**1.09**	**359**	iP	**Pg**	**17 44 47.2**	**-0.1**
DDEM				iS	**Sn**	**17 45 04.2**	**0.0**
BNGB	**Bingˆ¶l**	**1.17**	**227**	ePN	**Pb**	**17 44 49.1**	**-0.1**
BNGB				eSN	**Sn**	**17 45 06.7**	**+0.6**
DBAD	**Bademkaya**	**1.22**	**357**	iP	**Pg**	**17 44 49.5**	**-0.2**
DBAD				iS	**Sn**	**17 45 07.2**	**-0.1**
DBAD	**Bademkaya**	**1.22**	**357**	iP	**Pg**	**17 44 49.5**	**-0.2**
DBAD				iS	**Sn**	**17 45 07.2**	**-0.1**
DAGI	**Agillar**	**1.28**	**5**	iP	**Pg**	**17 44 50.4**	**-0.5**
DAGI				iS	**Sn**	**17 45 09.3**	**+0.4**
KARS	**Kars**	**1.29**	**50**	ePN	**Pg**	**17 44 50.9**	**-0.2**
KARS	**Kars**	**1.29**	**50**	ePn	**Pg**	**17 44 50.9**	**-0.2**

BINT	**Bingol**	**1.36**	**228**	*e*Pn	**Pn**	**17 44 49.1**	**-3.1**
BINT				*e*Sn	**Sg**	**17 45 06.7**	**-3.3**
ARTV	**Artvin**	**1.39**	**5**	*i* P	**Pn**	**17 44 52.4**	**-0.3**
ARTV				*i* S	**Sn**	**17 45 11.5**	**-0.2**
ARTV	**Artvin**	**1.39**	**5**	*i* P	**Pn**	**17 44 52.4**	**-0.3**
ARTV				*i* S	**Sn**	**17 45 11.5**	**-0.2**
BAYT	**Ayd˜–ntepe-Bay**	**1.39**	**296**	*e*PN	**Pb**	**17 44 53.0**	**+0.1**
BAYT	**Ayd˜–ntepe-Bay**	**1.39**	**296**	*e*Pn	**Pb**	**17 44 53.0**	**+0.1**
PZAR	**Pazar-Rize**	**1.53**	**334**	*e*PN	**Pn**	**17 44 54.8**	**+0.3**
PZAR	**Pazar-Rize**	**1.53**	**334**	*e*Pn	**Pn**	**17 44 54.8**	**+0.3**
ERZN	**Erzincan**	**1.60**	**263**	*e*PN	**Pn**	**17 44 55.9**	**+0.3**
BCA	**Borcka**	**1.65**	**356**	*e*PN	**Pn**	**17 44 56.3**	**+0.2**
BCA	**Borcka**	**1.65**	**356**	*e*Pn	**Pn**	**17 44 56.3**	**+0.2**
CLDR	**Caldiran**	**1.78**	**111**	*e*PN	**Pn**	**17 44 58.5**	**+0.4**
CLDR	**Caldiran**	**1.78**	**111**	*e*Pn	**Pn**	**17 44 58.5**	**+0.4**
EZC	**Erzincan**	**1.87**	**269**	*e*PN	**Pn**	**17 44 59.8**	**+0.5**
EZC	**Erzincan**	**1.87**	**269**	*e*Pn	**Pn**	**17 44 59.8**	**+0.5**
GUMT	**Gumushane**	**1.88**	**291**	*e*PN	**Pn**	**17 45 00.2**	**+0.8**
GUMT	**Gumushane**	**1.88**	**291**	*e*Pn	**Pn**	**17 45 00.2**	**+0.8**
BEST	**Besiri**	**1.94**	**192**	*i* P	**Pg**	**17 45 03.8**	**+0.3**
BEST				*i* S	**Sg**	**17 45 32.1**	**+3.3**
KELT	**Kelkit**	**1.97**	**281**	*i* P	**Pg**	**17 45 04.1**	**0.0**
KELT				*i* S	**Sb**	**17 45 28.6**	**+0.8**
KELT	**Kelkit**	**1.97**	**281**	*i* P	**Pg**	**17 45 04.1**	**0.0**
KELT				*i* S	**Sb**	**17 45 28.6**	**+0.8**
PTK	**Pertek**	**2.06**	**245**	*e*PN	**Pn**	**17 45 02.8**	**+0.9**
PTK	**Pertek**	**2.06**	**245**	*e*Pn	**Pn**	**17 45 02.8**	**+0.9**
GNI	**Garni**	**2.30**	**80**	*e*PN	**Pn**	**17 45 06.2**	**+1.0**
GNI	**Garni**	**2.30**	**80**	*e*Pn	**Pn**	**17 45 06.2**	**+1.0**
SVRC	**Sivrice-ELAZID**	**2.39**	**234**	*e*PN	**Pn**	**17 45 07.5**	**+1.1**
SVRC	**Sivrice-ELAZID**	**2.39**	**234**	*e*Pn	**Pn**	**17 45 07.5**	**+1.1**

*IDC **03** 17:54:02.2±1.3, 40°.76N×124°.03W, h0km, mb3.6/4, mb1 3.9/8, mb1mx3.6/30, mbtmp3.6/8, ML3.3/4, MS3.6/2, Ms1 3.6/2, ms1mx2.8/50, Error ellipse: s-maj=15.8km s-min=12.1km az=105.0*

*ISCJB **03** 17:54:04.0±0.5, 40°.76N±0°.03×124°.16W±0°.07, h27km, mb3.7/6, MS4.0/2, Error ellipse: s-maj=7.3km s-min=4.1km az=164.7*

*BJI **03** 17:54:04.0, 40°.70N×124°.20W, h21km, mB5.0/1, Ms4.7/1, Ms7 4.4/1*

*NEIC **03** 17:54:05.2, 40°.75N×124°.16W, h21km, mb4.1/3, MW4.2(BRK), After NCEDC.*

NEIC Felt [IV] at Samoa; [III] at Arcata, Bayside, Blue Lake, Eureka, Hydesville, McKinleyville, Trinidad and Willow Creek; [II] at Ferndale, Fortuna, Kneeland, Loleta and Rio Dell. Also felt at Carlotta, Korbel, Orick and Scotia.

ISC 03 17:54:05.7±0.7**, 40°.77N**±0°.06×**124°.19W**±0°.07**, h27km, n187, σ1s39**/194**, mb3.9**/6**, 55C-57D, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHMM	**Horse Mountain**	**0.36**	**73**	*e*Pg	**Pb**	**17 54 13.1**	**-0.9**
KHMM				*e*Sg	**Sb**	**17 54 19.2**	**-0.4**
KRMB	**Red Mountain**	**0.79**	**16**	*e*Pg	**Pb**	**17 54 19.1**	**-1.8**
KIPM	**Iron Peak**	**1.10**	**150**	*e*Pn	**Pn**	**17 54 23.7**	**-1.7**
KCPM	**Cahto Peak**	**1.18**	**157**	*e*Pn	**Pn**	**17 54 24.4**	**-2.1**
KCPM				*e*		17 54 30.8	
WDC	**Whiskeytown Da**	**1.27**	**98**	*e*Pn	**Pn**	**17 54 25.7**	**-2.0**
WDC				*e*		17 54 31.8	
KBO	**Bosley Butte**	**1.44**	**359**	*e*Pn	**Pn**	**17 54 28.1**	**-2.1**
YBH	**Yreka Blue Hor**	**1.47**	**49**	*e*Pn	**Pn**	**17 54 29.1**	**-1.5**
YBH				Lg	Lg	17 54 45.9	
YBH	**Yreka Blue Hor**	**1.47**	**49**	Pg	**Pn**	**17 54 29.1**	**-1.5**
	66nm,0.3s,baz=258,slow=10.0,SNR=700						
YBH				Lg	Lg	17 54 45.9	
	159nm,0.3s,baz=183,slow=19,SNR=30						
HOPS	**Hopland**	**1.97**	**154**	*e*Pn	**Pn**	**17 54 36.1**	**-1.2**
HUMO	**Hull Mountain**	**2.06**	**26**	*e*Pn	**Pn**	**17 54 37.4**	**-1.2**
KEBM	**Edson Butte**	**2.11**	**357**	*e*Pn	**Pn**	**17 54 37.3**	**-1.9**
MCCM	**Marconi Confer**	**2.81**	**158**	Pn	**Pn**	**17 54 48.4**	**-0.4**
BEKR	**Beckworth**	**3.06**	**106**	*e*Pn	**Pn**	**17 54 51.4**	**-1.1**
MOD	**Modoc**	**3.14**	**68**	*e*Pn	**Pn**	**17 54 52.0**	**-1.5**
COR	**Corvallis**	**3.87**	**9**	*e*Pn	**Pn**	**17 55 03.8**	**+0.3**
CMB	**Columbia Colle**	**4.01**	**132**	*e*Pn	**Pn**	**17 55 05.3**	**-0.2**
WVOR	**Wild Horse Val**	**4.48**	**66**	*e*Pn	**Pn**	**17 55 10.3**	**-1.7**
SAO	**San Andreas Ge**	**4.54**	**151**	*e*Pn	**Pn**	**17 55 10.6**	**-2.0**
NVAR	**Mina Array Bea**	**5.11**	**115**	Pn	**Pn**	**17 55 19.9**	**-0.7**
NVAR	**Mina Array Bea**	**5.11**	**115**	Pn	**Pn**	**17 55 19.9**	**-0.7**
	2.5nm,0.3s,baz=289,slow=13,SNR=43						
NV11	**Mina Array Sit**	**5.21**	**115**	*e*Pn	**Pn**	**17 55 21.1**	**-0.9**
BMN	**Battle Mountai**	**5.31**	**91**	*e*Pn	**Pn**	**17 55 23.0**	**-0.4**
	44nm,1.1s						
LON	**Longmire**	**6.22**	**15**	*e*Pn	**Pn**	**17 55 36.1**	**+0.3**
	12nm,0.9s						
BMO	**Blue Mountains**	**6.50**	**49**	*e*Pn	**Pn**	**17 55 40.2**	**+0.6**
	16nm,0.6s						
HAWA	**Hanford**	**6.56**	**29**	*e*Pn	**Pn**	**17 55 41.5**	**+1.1**
	48nm,0.8s						
NLWA	**Neilton Lookou**	**6.63**	**2**	*e*Pn	**Pn**	**17 55 41.9**	**+0.6**
MFID	**Camas Ranch**	**6.76**	**64**	*e*Pn	**Pn**	**17 55 44.5**	**+1.2**
	1.4nm,0.4s						
MFID	**Camas Ranch**	**6.76**	**64**	⇓P	**Pn**	**17 55 43.4**	**+0.2**
	baz=6.7						
ELK	**Elko**	**6.80**	**87**	*e*Pn	**Pn**	**17 55 45.4**	**+1.6**
ELK	**Elko**	**6.80**	**87**	Pn	**Pn**	**17 55 43.7**	**-0.1**
	0.2nm,0.3s,baz=274,slow=12,SNR=17						
ELK				LR	LR	17 58 44.4	
	comp=Z,275nm,19.6s,baz=344,slow=42						
ISA	**Isabella**	**6.80**	**137**	*e*Pn	**Pn**	**17 55 45.6**	**+1.9**
	4.1nm,0.8s						
MPMC	**Manual Prospec**	**7.05**	**130**	⇑P	**Pn**	**17 55 48.7**	**+1.4**
	baz=7.0						
R11A	**Troy Canyon, C**	**7.07**	**107**	⇓P	**Pn**	**17 55 47.6**	**0.0**
	baz=7.0,SNR=5.6						
I12A	**Atlanta**	**7.37**	**63**	⇑P	**Pn**	**17 55 53.5**	**+1.9**
	baz=7.3						
OSI	**Osito Adit**	**7.51**	**143**	Pn	**Pn**	**17 55 55.1**	**+1.6**
	12nm,0.7s						
OSI	**Osito Adit**	**7.51**	**143**	⇓P	**Pn**	**17 55 55.5**	**+1.9**
	baz=7.5						
HLID	**Hailey**	**7.78**	**66**	*e*Pn	**Pn**	**17 55 59.0**	**+1.8**
	5.0nm,0.9s						
HLID	**Hailey**	**7.78**	**66**	P	**Pn**	**17 55 59.0**	**+1.8**
	baz=7.8,SNR=9.8						
G12A	**Big Creek, Yel**	**7.83**	**53**	⇓P	**Pn**	**17 55 59.0**	**+1.1**
	baz=7.8						
J13A	**Cove Ranch, Pi**	**7.90**	**67**	⇑P	**Pn**	**17 56 00.3**	**+1.4**
	baz=7.9						
I13A	**Wildhorse Cree**	**8.10**	**64**	⇑P	**Pn**	**17 56 03.3**	**+1.7**
	baz=8.1,SNR=11						
H13A	**Challis**	**8.24**	**59**	⇓P	**Pn**	**17 56 04.8**	**+1.2**
	baz=8.2						
G13A	**Cobalt**	**8.49**	**56**	⇓P	**Pn**	**17 56 08.3**	**+1.4**
	baz=8.5,SNR=6.4						
I14A	**Mackay**	**8.56**	**65**	⇓P	**Pn**	**17 56 09.6**	**+1.7**
	baz=8.5,SNR=5.2						
DUG	**Dugway**	**8.69**	**90**	*e*Pn	**Pn**	**17 56 11.2**	**+1.4**
	24nm,1.1s						
DUG	**Dugway**	**8.69**	**90**	⇑P	**Pn**	**17 56 11.5**	**+1.7**
	baz=8.6,SNR=22						
F13A	**Darby**	**8.77**	**52**	⇓P	**Pn**	**17 56 11.7**	**+0.9**
	baz=8.7,SNR=6.7						
H14A	**Leadore**	**8.85**	**61**	⇑P	**Pn**	**17 56 13.0**	**+1.0**
	baz=8.8						
D12A	**Red Ives Fores**	**8.95**	**42**	⇓P	**Pn**	**17 56 14.3**	**+1.1**
	baz=8.9						
NEW	**Newport**	**9.03**	**32**	Pn	**Pn**	**17 56 13.9**	**-0.4**
NEW	**Newport**	**9.03**	**32**	Pn	**Pn**	**17 56 13.9**	**-0.4**
	0.3nm,0.3s,baz=198,slow=15,SNR=6.9						
NEW	**Newport**	**9.03**	**32**	⇑P	**Pn**	**17 56 14.9**	**+0.6**
	baz=9.0						
C11A	**Tepee Creek (N**	**9.07**	**36**	⇑P	**Pn**	**17 56 15.6**	**+0.8**
	baz=9.1						
J15A	**Blackfoot**	**9.13**	**69**	⇓P	**Pn**	**17 56 16.9**	**+1.1**
	baz=9.1						
E13A	**Victor**	**9.21**	**49**	⇓P	**Pn**	**17 56 19.0**	**+2.2**
	baz=9.2,SNR=12						
MCMT	**McKenzie Canyo**	**9.27**	**60**	*e*Pn	**Pn**	**17 56 19.6**	**+1.8**
	1.7nm,0.8s						
C12B	**Naegeli Ranch,**	**9.34**	**39**	⇓P	**Pn**	**17 56 19.3**	**+0.8**
	baz=9.3,SNR=7.1						
D13A	**Huson**	**9.44**	**45**	P	**Pn**	**17 56 21.1**	**+1.1**
	baz=9.4,SNR=11						
MVU	**Marysvale**	**9.51**	**100**	*e*Pn	**Pn**	**17 56 23.4**	**+2.3**
	25nm,0.7s						
MSU	**Marysvale**	**9.54**	**100**	*e*Pn	**Pn**	**17 56 23.0**	**+1.6**
	23nm,0.7s						
HWUT	**Hardware Ranch**	**9.56**	**81**	*e*Pn	**Pn**	**17 56 23.3**	**+1.6**
	8.6nm,1.0s						
MSO	**Missoula**	**9.57**	**47**	*e*Pn	**Pn**	**17 56 23.6**	**+1.8**
	6.3nm,0.9s						
MSO	**Missoula**	**9.57**	**47**	⇓P	**Pn**	**17 56 23.2**	**+1.4**
	baz=9.5,SNR=7.0						
E14A	**Clinton**	**9.59**	**50**	⇑P	**Pn**	**17 56 24.2**	**+2.1**
	baz=9.6,SNR=16						
G15A	**Dillon**	**9.64**	**59**	⇓P	**Pn**	**17 56 24.1**	**+1.4**
	baz=9.6						
NEE2	**Needles Airpor**	**9.65**	**125**	⇓P	**Pn**	**17 56 24.9**	**+2.1**
	baz=9.6						
L16A	**Fish Haven**	**9.67**	**78**	⇓P	**Pn**	**17 56 24.9**	**+1.6**
	baz=9.6						
BSMT	**Bassoo Peak**	**9.77**	**40**	*e*Pn	**Pn**	**17 56 25.5**	**+0.9**
	5.5nm,0.7s						
I16A	**Newdale**	**9.91**	**68**	⇑P	**Pn**	**17 56 27.8**	**+1.4**
	baz=9.9,SNR=6.8						
F15A	**Butte**	**9.92**	**55**	⇑P	**Pn**	**17 56 28.0**	**+1.4**
	baz=9.9						
SWMT	**Swartz Lake**	**9.95**	**44**	*e*Pn	**Pn**	**17 56 27.9**	**+1.0**
	5.2nm,0.7s						
JTMT	**Jette**	**9.95**	**42**	*e*Pn	**Pn**	**17 56 30.1**	**+3.1**
	2.3nm,0.7s						
D14A	**Greenough**	**9.96**	**47**	P	**Pn**	**17 56 28.8**	**+1.8**
	baz=9.9,SNR=28						
CHMT	**Chamberlain Mo**	**10.00**	**48**	*e*Pn	**Pn**	**17 56 29.5**	**+1.7**
	2.9nm,0.8s						
SLMT	**Seeley Lake**	**10.06**	**46**	*e*Pn	**Pn**	**17 56 29.6**	**+1.1**
	20nm,0.9s						
E15A	**Deer Lodge**	**10.10**	**52**	⇓P	**Pn**	**17 56 30.2**	**+1.2**
	baz=10						
A12A	**Yaak River Ran**	**10.16**	**34**	⇓P	**Pn**	**17 56 31.2**	**+1.4**
	baz=10						
Q16A	**Castle Valley**	**10.18**	**96**	⇑P	**Pn**	**17 56 32.2**	**+2.0**
	baz=10,SNR=6.7						
M17A	**Scullys Gap (B**	**10.23**	**82**	⇑P	**Pn**	**17 56 31.8**	**+0.9**
	baz=10						
C14A	**Swan Lake**	**10.24**	**43**	⇓P	**Pn**	**17 56 32.4**	**+1.4**
	baz=10						
PDMCI	**Parker Dam,Lak**	**10.26**	**126**	⇓P	**Pn**	**17 56 32.8**	**+1.7**
	baz=10						
U15A	**North Rim**	**10.27**	**111**	⇑P	**Pn**	**17 56 33.0**	**+1.4**
	baz=10						
B13A	**Whitefish**	**10.29**	**39**	⇓P	**Pn**	**17 56 32.0**	**+0.5**
	baz=10						
D15A	**Lincoln**	**10.49**	**49**	⇓P	**Pn**	**17 56 36.1**	**+1.7**
	baz=10,SNR=11						
A13A	**Flathead Natio**	**10.71**	**37**	⇑P	**Pn**	**17 56 38.7**	**+1.4**
	baz=11						
P18A	**Preston Nutter**	**10.73**	**92**	⇓P	**Pn**	**17 56 39.4**	**+1.6**
	baz=11,SNR=9.2						
E16A	**East Helena**	**10.74**	**53**	⇑P	**Pn**	**17 56 38.9**	**+1.2**
	baz=11						
C15A	**Salmond Ranch,**	**10.86**	**46**	⇓P	**Pn**	**17 56 41.3**	**+1.9**
	baz=11,SNR=22						
B14A	**Marquette Ranc**	**10.87**	**42**	⇑P	**Pn**	**17 56 40.4**	**+0.9**
	baz=11,SNR=6.7						
WALA	**Waterton Lakes**	**11.03**	**38**	*e*Pn	**Pn**	**17 56 43.0**	**+1.3**
	0.2nm,0.8s						
D16A	**Dana Ranch, Ca**	**11.06**	**51**	⇓P	**Pn**	**17 56 43.2**	**+1.1**
	baz=11						
PDAR	**Pinedale Array**	**11.11**	**75**	Pn	**Pn**	**17 56 43.1**	**+0.2**
PDAR	**Pinedale Array**	**11.11**	**75**	Pn	**Pn**	**17 56 43.1**	**+0.2**
	0.1nm,0.3s,baz=267,slow=8.9,SNR=6.8						
A14A	**Double T Ranch**	**11.20**	**39**	⇑P	**Pn**	**17 56 45.5**	**+1.4**
	baz=11,SNR=14						
B15A	**Bradely Ranch,**	**11.21**	**44**	⇓P	**Pn**	**17 56 45.4**	**+1.3**
	baz=11,SNR=10						
Y14A	**Wickenburg**	**11.21**	**124**	⇑P	**Pn**	**17 56 47.0**	**+2.9**
	baz=11,SNR=5.4						
C16A	**Fuhringer Ranc**	**11.35**	**48**	⇑P	**Pn**	**17 56 47.4**	**+1.3**
	baz=11,SNR=19						
WUAZ	**Wupatki**	**11.37**	**113**	Pn	**Pn**	**17 56 47.5**	**+1.0**
	1.8nm,0.8s						
S18A	**Hurst Farm, Bl**	**11.43**	**101**	⇑P	**Pn**	**17 56 49.5**	**+2.1**
	baz=11,SNR=7.9						
A15A	**Johnson Ranch,**	**11.54**	**41**	⇑P	**Pn**	**17 56 49.7**	**+1.0**
	baz=12						
D17A	**Six Diamond Ra**	**11.63**	**52**	⇑P	**Pn**	**17 56 51.3**	**+1.3**
	baz=12						
C17A	**Wharram Farm,**	**11.82**	**50**	⇑P	**Pn**	**17 56 53.2**	**+0.7**
	baz=12						
H19A	**Powell**	**11.84**	**66**	⇓P	**Pn**	**17 56 53.8**	**+0.9**
	baz=12						
E18A	**Harlowton**	**11.85**	**56**	⇓P	**Pn**	**17 56 53.8**	**+0.9**
	baz=12						
X16A	**Lo Mia Camp, P**	**11.93**	**118**	⇓P	**Pn**	**17 56 56.2**	**+2.0**
	baz=12						
N20A	**Spence Gulch,**	**12.07**	**84**	⇓P	**Pn**	**17 56 57.8**	**+1.6**
	baz=12						
M20A	**Sweetwater, Wa**	**12.09**	**81**	⇑P	**Pn**	**17 56 57.1**	**+0.7**
	baz=12						
B17A	**L&G Farms, Che**	**12.15**	**47**	P	**Pn**	**17 56 57.8**	**+0.8**
	baz=12,SNR=8.1						
O20A	**White River Ci**	**12.17**	**88**	⇓P	**Pn**	**17 56 58.6**	**+1.2**
	baz=12						
J20A	**Shoshoni**	**12.25**	**73**	⇑P	**Pn**	**17 56 59.5**	**+1.0**
	baz=12						
Q20A	**Ridgley Place,**	**12.35**	**93**	⇓P	**Pn**	**17 57 01.1**	**+1.3**
	baz=12						
R20A	**Redvale**	**12.49**	**97**	⇑P	**Pn**	**17 57 03.6**	**+1.8**
	baz=12,SNR=8.8						
E19A	**Rath Farm, Rou**	**12.52**	**58**	⇑P	**Pn**	**17 57 03.2**	**+1.1**
	baz=12						
A17A	**Triple J Farms**	**12.57**	**45**	⇓P	**Pn**	**17 57 04.0**	**+1.2**
	baz=12						
EGMT	**Eagleton**	**12.61**	**50**	Pn	**Pn**	**17 57 03.6**	**+0.3**
	6.1nm,1.0s						
EGMT	**Eagleton**	**12.61**	**50**	⇑P	**Pn**	**17 57 04.2**	**+1.0**
	baz=13						
S20A	**Disappointment**	**12.61**	**98**	⇓P	**Pn**	**17 57 05.1**	**+1.6**
	baz=13,SNR=6.4						
N21A	**Black Mountain**	**12.64**	**85**	⇓P	**Pn**	**17 57 04.9**	**+1.0**
	baz=13						
L21A	**Rawlins**	**12.70**	**79**	⇑P	**Pn**	**17 57 05.4**	**+0.8**
	baz=13						
MVCO	**Mesa Verde**	**12.71**	**101**	Pn	**Pn**	**17 57 03.8**	**-1.1**
	3.8nm,0.8s						
O21A	**Pagoda**	**12.74**	**87**	⇓P	**Pn**	**17 57 06.3**	**+1.0**
	baz=13						
B18A	**Beardsley Farm**	**12.78**	**49**	⇑P	**Pn**	**17 57 06.3**	**+0.7**
	baz=13						
P21A	**Newcastle**	**12.87**	**90**	P	**Pn**	**17 57 08.4**	**+1.4**
	baz=13,SNR=5.6						
C19A	**Slack Wire Ran**	**12.88**	**52**	⇑P	**Pn**	**17 57 09.0**	**+1.9**
	baz=13						
A18A	**Metzger Ranch,**	**13.02**	**46**	⇓P	**Pn**	**17 57 08.2**	**-0.7**
	baz=13						
R21A	**Cimarron**	**13.06**	**95**	⇑P	**Pn**	**17 57 11.5**	**+1.8**
	baz=13						
S21A	**Coal Bank Pass**	**13.09**	**98**	⇑P	**Pn**	**17 57 11.3**	**+1.2**
	baz=13						
SMCO	**Snowmass**	**13.30**	**91**	*e*Pn	**Pn**	**17 57 12.2**	**-0.9**
	4.8nm,1.2s						
J22A	**Midwest**	**13.42**	**73**	⇓P	**Pn**	**17 57 15.2**	**+0.7**
	baz=13						
N22A	**Wattenberg Ran**	**13.44**	**84**	⇑P	**Pn**	**17 57 15.2**	**+0.3**
	baz=13						
I22A	**9 Mile Ranch,**	**13.47**	**71**	⇑P	**Pn**	**17 57 16.1**	**+1.0**
	baz=13						
T21A	**Navajo Lake**	**13.51**	**101**	⇑P	**Pn**	**17 57 16.9**	**+1.1**
	baz=14						
U21A	**Nageezi**	**13.63**	**103**	P	**Pn**	**17 57 19.1**	**+1.6**
	baz=14,SNR=6.5						
A19A	**Klindworth Far**	**13.64**	**48**	⇓P	**Pn**	**17 57 18.5**	**+1.1**
	baz=14						
E21A	**Keefer Ranch,**	**13.66**	**59**	⇑P	**Pn**	**17 57 18.5**	**+0.9**
	baz=14						
N23A	**Red Feather La**	**13.82**	**84**	⇓P	**Pn**	**17 57 20.3**	**+0.3**
	baz=14						
X20A	**Quemado**	**13.89**	**112**	⇑P	**Pn**	**17 57 23.4**	**+2.4**
	baz=14,SNR=7.1						
V21A	**Milan**	**13.91**	**106**	⇓P	**Pn**	**17 57 23.0**	**+1.8**
	baz=14						
O23A	**Lake Granby, G**	**13.92**	**86**	⇑P	**Pn**	**17 57 22.0**	**+0.6**
	baz=14						
T22A	**Edith**	**13.97**	**100**	⇓P	**Pn**	**17 57 23.8**	**+1.6**
	baz=14						
P23A	**Jefferson**	**14.12**	**90**	⇓P	**Pn**	**17 57 25.4**	**+1.1**
	baz=14						
W21A	**San Fidel**	**14.21**	**108**	⇑P	**Pn**	**17 57 25.9**	**+0.5**
	baz=14						
ISCO	**Idaho Springs**	**14.22**	**88**	⇓P	**Pn**	**17 57 26.9**	**+1.4**
	baz=14						
U22A	**Llaves**	**14.25**	**102**	⇑P	**Pn**	**17 57 26.5**	**+0.7**
	baz=14						
Y20A	**Horse Springs,**	**14.31**	**114**	⇑P	**Pn**	**17 57 29.4**	**+2.6**
	baz=14,SNR=5.9						
R23A	**Moffat**	**14.41**	**94**	⇑P	**Pn**	**17 57 29.9**	**+1.7**
	baz=14						
D22A	**Cohagen**	**14.44**	**58**	⇑P	**Pn**	**17 57 28.5**	**+0.2**
	baz=14						
X21A	**Alamocita Cree**	**14.44**	**111**	⇑P	**Pn**	**17 57 30.4**	**+1.8**
	baz=14,SNR=5.9						
Z20A	**Nine Sixteen R**	**14.61**	**117**	⇓P	**Pn**	**17 57 32.5**	**+1.7**
	baz=15						
Y21A	**Point of Rocks**	**14.75**	**112**	P	**Pn**	**17 57 35.3**	**+2.6**
	baz=15,SNR=5.7						
S24A	**Houchin Ranch,**	**15.04**	**96**	⇓P	**Pn**	**17 57 37.7**	**+1.0**
	baz=15						
Z21A	**St. Cloud Mine**	**15.13**	**114**	⇑P	**Pn**	**17 57 39.4**	**+1.6**
	baz=15						
ANMO	**Albuquerque**	**15.16**	**107**	Pn	**Pn**	**17 57 36.6**	**-1.5**
ANMO	**Albuquerque**	**15.16**	**107**	Pn	**Pn**	**17 57 36.6**	**-1.5**
	0.0nm,0.3s,baz=302,slow=12,SNR=5.5						
319A	**Douglas**	**15.25**	**123**	⇓P	**Pn**	**17 57 40.3**	**+1.0**
	baz=15						
P25A	**Willow Gulch B**	**15.37**	**88**	⇓P	**Pn**	**17 57 41.6**	**+0.7**
	baz=15						
220A	**Playas Peak, P**	**15.39**	**120**	⇑P	**Pn**	**17 57 42.9**	**+1.7**
	baz=15						
121A	**Cookes Peak, D**	**15.50**	**117**	⇓P	**Pn**	**17 57 43.9**	**+1.2**
	baz=16,SNR=5.0						
S25A	**Robets Cordova**	**15.62**	**95**	⇓P	**Pn**	**17 57 44.6**	**+0.4**
	baz=16						
V24A	**Rampart Ranch,**	**15.69**	**103**	⇑P	**Pn**	**17 57 46.5**	**+1.4**
	baz=16						
T25A	**Trinidad**	**15.80**	**97**	⇓P	**Pn**	**17 57 47.6**	**+1.0**
	baz=16						
Y23A	**Lovelace Mesa,**	**15.94**	**110**	⇓P	**Pn**	**17 57 49.4**	**+1.2**
	baz=16						
P26A	**Davis Ranch, A**	**15.98**	**88**	⇑P	**Pn**	**17 57 50.1**	**+1.3**
	baz=16						
Q26A	**Hugo**	**15.98**	**90**	⇑P	**Pn**	**17 57 49.7**	**+1.0**
	baz=16						
U25A	**Circle Dot Ran**	**16.07**	**99**	⇓P	**Pn**	**17 57 51.2**	**+1.4**
	baz=16						
V25A	**Rancho No Teng**	**16.13**	**101**	⇑P	**Pn**	**17 57 52.2**	**+1.5**
	baz=16						
R26A	**Arlington**	**16.19**	**92**	⇓P	**Pn**	**17 57 52.3**	**+0.9**
	baz=16						
Y24A	**Capitan**	**16.39**	**109**	⇑P	**Pn**	**17 57 55.1**	**+1.1**
	baz=16						
T26A	**Comanche Natio**	**16.41**	**96**	⇑P	**Pn**	**17 57 54.8**	**+0.5**
	baz=16						
R28A	**Tribune**	**17.42**	**91**	⇓P	**Pn**	**17 58 07.9**	**+1.0**
	baz=17,SNR=7.5						
324A	**Moseley Ranch,**	**17.72**	**116**	⇑P	**P**	**17 58 13.0**	**+1.6**
	baz=18						
527A	**Woodward Ranch**	**19.79**	**116**	⇓P	**Pn**	**17 58 36.3**	**+0.7**
	baz=20						
626A	**Big Bend Ranch**	**19.80**	**118**	⇓P	**Pn**	**17 58 36.0**	**+0.2**
	baz=20,SNR=6.6						
TXAR	**Lajitas Array**	**20.26**	**118**	P	**P**	**17 58 38.9**	**-0.2**
TXAR	**Lajitas Array**	**20.26**	**118**	P	**P**	**17 58 38.9**	**-0.2**
	0.3nm,0.6s,baz=302,slow=9.4,SNR=4.9						
FFC	**Flin Flon**	**20.32**	**39**	*e*Pn	**P**	**17 58 37.9**	**-1.6**
	2.5nm,0.7s						
KSU1	**Kansas State U**	**21.18**	**85**	*e*Pn	**P**	**17 58 50.1**	**+1.1**
	11nm,0.6s						
YKA	**Yellowknife Ar**	**22.51**	**12**	P	**P**	**17 59 02.8**	**-0.1**
YKA	**Yellowknife Ar**	**22.51**	**12**	P	**P**	**17 59 02.8**	**-0.1**
	6.4nm,1.0s,baz=196,slow=11,SNR=52						
YKW3	**Yellowknife Ar**	**22.57**	**12**	P	**P**	**17 59 02.4**	**-1.2**
	0.2nm,1.3s						
INK	**Inuvik**	**28.06**	**353**	P	**P**	**17 59 55.6**	**+1.2**
INK	**Inuvik**	**28.06**	**353**	P	**P**	**17 59 55.6**	**+1.2**
	1.9nm,1.0s,baz=178,slow=8.5,SNR=5.0						
INK				LR	LR	18 11 24.7	
	comp=Z,166nm,18.8s,baz=297,slow=37						
RES	**Resolute Bay**	**36.57**	**13**	*e*P	**P**	**18 01 09.5**	**+0.7**
	2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**82.41**	**343**	P	**P**	**18 06 25.9**	**+0.8**
ZALV	**Zalesovo Beam**	**82.41**	**343**	P	**P**	**18 06 25.9**	**+0.8**
	0.2nm,0.3s,baz=3.4,slow=7.4,SNR=4.3						
HHC	**Hu-ho-hao-te**	**84.29**	**321**	*e*P	**P**	**18 06 35.3**	**+0.1**
HHC				pP	**pP**	**18 06 41.7**	**-2.2**
HHC				sP	**sP**	**18 06 44.4**	**-2.6**
HHC				PP	**PP**	**18 09 50.9**	**+1.7**
HHC				SKS	**SKSac**	**18 16 53.6**	**-3.4**
HHC				S	**S**	**18 16 57.0**	**-2.0**
HHC				SS	**SS**	**18 22 28.1**	**+0.5**
HHC				LR	LR		
	comp=N,140nm,18.2s						
HHC				LR	LR		
	comp=E,130nm,19.6s						
HHC				LR	LR		
	comp=Z,120nm,15.5s						
WMQ	**Urumqi**	**91.03**	**338**	*e*P	**P**	**18 07 09.6**	**+2.0**

IDC 03 17:54:44.5±4.0**, 4°.40S×101°.13E, h0km, mb3.1**/4**, mb1 3.3**/4**, mb1mx3.1**/23**, mbtmp3.2**/4**, Error ellipse: s-maj=158.1km s-min=25.9km az=59.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.81**	**355**	P	P	17 59 49.8	+0.6
	0.4nm,0.6s,baz=188,slow=7.1,SNR=5.9						
ASAR	**Alice Springs**	**36.95**	**124**	P	P	18 01 55.8	0.0
	0.3nm,1.0s,baz=299,slow=7.4,SNR=2.7						
SONM	**Songino Array**	**52.22**	**4**	P	P	18 03 56.7	-0.6
	0.4nm,0.7s,baz=179,slow=5.8,SNR=3.3						
MKAR	**Makanchi Array**	**53.63**	**344**	P	P	18 04 07.6	-0.1
	0.2nm,0.8s,baz=156,slow=7.3,SNR=2.3						

*IDC **03** 17:57:34.0±1.2, 5°.51S×152°.47E, h0km, mb4.1/12, mb1 4.2/13, mb1mx4.0/21, mbtmp4.1/13, ML3.1/1, Error ellipse: s-maj=40.1km s-min=16.1km az=119.0*

*ISCJB **03** 17:57:37.5±0.7, 5°.70S±0°.08×152°.63E±0°.08, h40km, mb4.0/12, Error ellipse: s-maj=13.9km s-min=8.8km az=137.1*

*AUST **03** 17:58:21.5, 6°.66S×150°.65E, h300km*

ISC 03 17:57:39.6±1.0**, 5°.6S**±0°.1×**152°.6E**±0°.2**, h40km, n21, σ1s40**/20**, mb4.0**/12**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.56**	**234**	Pn	**Pn**	**17 59 13.6**	**+0.1**
	2.2nm,0.3s,baz=25,slow=8.3,SNR=6.4						
PMG				Sn	**Sn**	**18 00 27.2**	**+0.1**
	9.6nm,0.3s,baz=7.7,slow=15,SNR=9.9						
JAY	**Jayapura**	**12.20**	**284**	S	Sn	18 02 51.2	+5.4
	baz=11,SNR=3.1						
QIS	**Mount Isa**	**19.48**	**219**	P	**Pn**	**18 02 04.3**	**-0.5**
	baz=18,SNR=4.9						
KDU	**Kakadu**	**21.03**	**249**	P	**P**	**18 02 18.8**	**-1.3**
	baz=19,SNR=21						
MTN	**Manton Dam**	**22.32**	**250**	P	**P**	**18 02 36.1**	**+2.0**
	baz=20,SNR=7.5						
WRA	**Warramunga Arr**	**22.75**	**229**	P	**P**	**18 02 37.1**	**-1.5**
	1.9nm,0.6s,baz=53,slow=9.9,SNR=10						
ASAR	**Alice Springs**	**25.41**	**223**	P	**P**	**18 03 04.0**	**+0.4**
	2.6nm,0.7s,baz=57,slow=8.7,SNR=27						
KNRA	**Kununurra**	**25.41**	**245**	P	**P**	**18 03 07.7**	**+4.0**
	baz=23,SNR=3.7						
STKA	**Stephens Creek**	**28.10**	**200**	P	**P**	**18 03 27.4**	**-0.3**
	1.2nm,0.8s,baz=353,slow=6.3,SNR=4.0						
FITZ	**Fitzroy Crossi**	**29.07**	**242**	P	**P**	**18 03 35.6**	**-0.9**
	3.0nm,0.7s,baz=92,slow=15,SNR=11						
FITZ	**Fitzroy Crossi**	**29.07**	**242**	P	**P**	**18 03 35.5**	**-1.0**
	baz=27,SNR=7.8						
MEEK	**Meekatharra**	**38.53**	**233**	P	P	18 05 02.9	+4.3
	baz=36,SNR=9.0						
CMAR	**Chiang Mai Arr**	**57.98**	**296**	P	**P**	**18 07 28.4**	**-0.3**
	0.5nm,0.7s,baz=134,slow=6.4,SNR=6.8						
PETK	**Petropavlovsk-**	**58.63**	**4**	P	**P**	**18 07 31.6**	**-1.0**
	3.4nm,0.9s,baz=175,slow=7.5,SNR=8.3						
SONM	**Songino Array**	**66.85**	**328**	P	**P**	**18 08 26.6**	**-1.0**
	0.9nm,0.6s,baz=145,slow=5.8,SNR=5.0						
MKAR	**Makanchi Array**	**80.75**	**319**	P	**P**	**18 09 49.8**	**+0.9**
	0.3nm,0.3s,baz=108,slow=4.7,SNR=10						
ZALV	**Zalesovo Beam**	**81.66**	**326**	P	**P**	**18 09 52.5**	**-1.1**
	1.8nm,0.5s,baz=114,slow=5.0,SNR=12						
AAK	**Ala-Archa**	**85.02**	**314**	P	**P**	**18 10 12.2**	**+0.9**
	2.1nm,0.7s,baz=143,slow=6.7,SNR=11						
INK	**Inuvik**	**89.27**	**21**	P	**P**	**18 10 31.7**	**+0.6**
	1.4nm,1.0s,baz=201,slow=6.5,SNR=5.6						
YKA	**Yellowknife Ar**	**96.23**	**28**	P	**P**	**18 11 04.4**	**+1.0**
	0.4nm,0.6s,baz=271,slow=4.8,SNR=14						
TORD	**Torodi Ar. Bea**	**150.30**	**287**	PKPbc	**PKPbc**	**18 17 27.3**	**-0.3**
	0.7nm,0.6s,baz=97,slow=2.9,SNR=4.9						

*AUST **03** 18:02:14.1±24.0, 5°.66S×153°.56E, h0km±1km, Error ellipse: s-maj=4.0km s-min=2.0km az=25.0*
*IDC **03** 18:02:19.9±1.6, 5°.36S×152°.33E, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/21, mbtmp3.8/10, ML2.6/1, Error ellipse: s-maj=53.4km s-min=19.3km az=124.0*
ISC 03 18:02:22.5±0.9**, 5°.8S**±0°.1×**152°.9E**±0°.1**, h33km, n20, σ2s.25**/17**, mb3.8**/9**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.70**	**238**	Pn	**Pn**	**18 03 58.6**	**-0.1**
	0.7nm,0.3s,baz=63,slow=11,SNR=3.5						
PMG				Sn	**Sn**	**18 05 12.9**	**-1.0**
	6.4nm,0.3s,baz=148,slow=17,SNR=10						
KDU	**Kakadu**	**21.26**	**250**	P	**P**	**18 07 06.9**	**+0.7**
	baz=22,SNR=8.5						
KDU				S	Sn	18 11 14.0	+5.1
	baz=22,SNR=4.4						
MTN	**Manton Dam**	**22.56**	**250**	P	**P**	**18 07 21.7**	**+1.5**
	baz=23,SNR=3.2						
WRA	**Warramunga Arr**	**22.85**	**230**	P	**P**	**18 07 25.3**	**+2.1**
	0.8nm,0.5s,baz=54,slow=10,SNR=9.8						
ASAR	**Alice Springs**	**25.47**	**224**	P	**P**	**18 07 49.5**	**+1.7**
	1.2nm,0.6s,baz=60,slow=8.6,SNR=17						
KNRA	**Kununurra**	**25.61**	**246**	P	**P**	**18 07 53.4**	**+4.2**
	baz=26,SNR=4.1						
NFK	**Norfolk Island**	**27.13**	**150**	P	**P**	**18 07 59.4**	**-3.3**
	baz=27,SNR=3.3						
FITZ	**Fitzroy Crossi**	**29.26**	**243**	P	**P**	**18 08 20.3**	**-1.6**
	2.2nm,0.8s,baz=76,slow=12,SNR=3.4						
FITZ	**Fitzroy Crossi**	**29.26**	**243**	P	**P**	**18 08 24.9**	**+3.1**
	baz=30,SNR=3.1						
PCI	**Palu**	**33.35**	**277**	S	S	18 14 26.9	+10
	baz=34,SNR=3.9						
MEEK	**Meekatharra**	**38.66**	**234**	P	P	18 09 48.5	+5.1
	baz=39,SNR=4.8						
LEM	**Lembang**	**45.00**	**266**	P	P	18 10 41.3	+5.8
	baz=46,SNR=3.4						
PPI	**Padang Panjang**	**52.66**	**274**	P	P	18 11 54.0	+20
	baz=53,SNR=3.3						
CMAR	**Chiang Mai Arr**	**58.40**	**296**	P	**P**	**18 12 13.2**	**-2.1**
	0.4nm,0.8s,baz=120,slow=4.0,SNR=4.1						
SONM	**Songino Array**	**67.24**	**328**	P	**P**	**18 13 12.4**	**-1.4**
	0.5nm,0.5s,baz=4.8,slow=1.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**82.05**	**326**	P	**P**	**18 14 37.5**	**-1.9**
	1.0nm,0.5s,baz=112,slow=5.1,SNR=6.3						
AAK	**Ala-Archa**	**85.43**	**314**	P	**P**	**18 14 57.2**	**0.0**
	0.5nm,0.5s,baz=145,slow=4.9,SNR=3.6						
INK	**Inuvik**	**89.38**	**21**	P	**P**	**18 15 17.5**	**+2.1**
	0.9nm,0.8s,baz=251,slow=4.9,SNR=3.8						
YKA	**Yellowknife Ar**	**96.29**	**28**	P	**P**	**18 15 49.6**	**+2.2**
	0.2nm,0.6s,baz=272,slow=4.7,SNR=5.5						
TORD	**Torodi Ar. Bea**	**150.70**	**286**	PKPbc	**PKPbc**	**18 22 12.2**	**-0.2**
	0.3nm,0.7s,baz=75,slow=1.6,SNR=2.7						

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*AUST **03** 18:15:44.8, 20°.07S×178°.84W, h100km*
*ISCJB **03** 18:16:07.7±1.0, 20°.1S±0°.2×177°.9W±0°.2, h450km, mb3.8/7, Error ellipse: s-maj=36.7km s-min=15.2km az=151.3*
*IDC **03** 18:16:08.3±7.3, 20°.09S×177°.82W, h447km±76km, mb3.5/7, mb1 3.7/7, mb1mx3.4/18, mbtmp3.5/7, Error ellipse: s-maj=55.5km s-min=31.5km az=152.0*
ISC 03 18:16:08.4±1.2**, 20°.1S**±0°.3×**177°.8W**±0°.2**, h450km, n24, σ0s.67**/22**, mb3.6**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**7.48**	**84**	P	P	18 17 48.9	-9.4
	baz=8.5,SNR=8.6						
EIDS	**Eidsvold**	**29.15**	**254**	P	**P**	**18 21 31.7**	**+0.2**
	baz=28,SNR=3.5						
RMQ	**Roma**	**31.32**	**252**	P	**P**	**18 21 51.0**	**+0.6**
	baz=30,SNR=6.3						
CTA	**Charters Tower**	**33.73**	**264**	P	**P**	**18 22 11.5**	**+0.4**
	9.5nm,0.4s,baz=97,slow=10.0,SNR=12						
CMSA	**Cobar Meteorol**	**34.64**	**243**	P	**P**	**18 22 18.2**	**-0.5**
	baz=34,SNR=5.8						
QLP	**Quilpie**	**35.37**	**252**	P	**P**	**18 22 24.5**	**-0.3**
	baz=34,SNR=4.8						
MTSU	**Mount Surprise**	**35.81**	**267**	P	**P**	**18 22 29.1**	**+0.4**
	baz=35,SNR=9.7						
TOO	**Toolangi**	**36.29**	**233**	P	P	18 22 26.6	-5.8
	baz=36,SNR=5.4						
STKA	**Stephens Creek**	**38.14**	**244**	P	**P**	**18 22 47.3**	**-0.5**
	1.4nm,0.6s,baz=69,slow=12,SNR=3.1						
ASAR	**Alice Springs**	**44.80**	**256**	P	**P**	**18 23 40.5**	**-0.5**
	12nm,0.7s,baz=94,slow=8.3,SNR=91						
ASAR				PcP	**PcP**	**18 25 14.2**	**+0.3**
	1.1nm,0.5s,baz=99,slow=4.1,SNR=5.5						
WRA	**Warramunga Arr**	**44.85**	**262**	P	**P**	**18 23 40.5**	**-0.9**
	4.4nm,0.3s,baz=94,slow=7.6,SNR=35						
KDU	**Kakadu**	**48.14**	**271**	P	**P**	**18 24 06.5**	**0.0**
	baz=47,SNR=4.7						
MTN	**Manton Dam**	**49.36**	**270**	P	**P**	**18 24 15.6**	**-0.1**
	baz=48,SNR=3.7						
KNRA	**Kununurra**	**50.88**	**266**	P	**P**	**18 24 26.8**	**0.0**
	baz=50,SNR=7.9						
FAKI	**Fak Fak**	**51.60**	**283**	P	**P**	**18 24 31.7**	**-0.5**
	baz=51,SNR=26						
FITZ	**Fitzroy Crossi**	**53.28**	**262**	P	**P**	**18 24 45.6**	**+1.4**
	baz=52,SNR=3.1						
SWI	**Sorong**	**53.34**	**285**	P	**P**	**18 24 45.8**	**+1.1**
	baz=52,SNR=7.0						
KLBR	**Kellerberrin**	**58.41**	**245**	P	**P**	**18 25 19.9**	**0.0**
	baz=58,SNR=5.0						
MJAR	**Matsushiro Arr**	**70.01**	**323**	P	**P**	**18 26 33.6**	**-0.2**
	0.3nm,0.6s,baz=166,slow=6.8,SNR=4.1						
PPI	**Padang Panjang**	**82.16**	**272**	P	P	18 27 47.5	+5.9
	baz=81,SNR=3.3						
TXAR	**Lajitas Array**	**86.67**	**57**	P	**P**	**18 28 04.5**	**+0.7**
	0.6nm,0.8s,baz=215,slow=6.3,SNR=5.8						
PDAR	**Pinedale Array**	**88.53**	**43**	P	**P**	**18 28 12.1**	**-0.3**
	0.5nm,0.7s,baz=221,slow=1.6,SNR=5.0						
BRTR	**Keskin Array B**	**146.72**	**313**	PKPbc	**PKPbc**	**18 34 59.5**	**+0.1**
	1.0nm,0.5s,baz=143,slow=4.7,SNR=9.5						
GERES	**GERESS Array B**	**149.87**	**345**	PKPbc	**PKPbc**	**18 35 05.5**	**-1.4**
	0.8nm,0.8s,baz=355,slow=3.1,SNR=7.8						

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*ISCJB **03** 18:16:19.7±0.8, 3°.88S±0°.05×131°.2E±0°.1, h29km, mb3.7/2, Error ellipse: s-maj=17.4km s-min=5.5km az=18.6*
*IDC **03** 18:16:20.9±1.8, 4°.15S×130°.86E, h0km, mb3.8/2, mb1 4.0/5, mb1mx3.6/19, mbtmp3.8/5, ML3.7/3, Error ellipse: s-maj=77.7km s-min=24.4km az=74.0*
*AUST **03** 18:16:21.5±0.0, 3°.63S×131°.61E, h123km, Error ellipse: s-maj=1.8km s-min=1.3km az=240.0*
ISC 03 18:16:21.0±0.8**, 3°.80S**±0°.06×**131°.15E**±0°.08**, h29km, n12, σ1s.89**/17**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**1.40**	**52**	P	**Pn**	**18 16 43.1**	**-1.5**
	baz=1.0,SNR=342						
FAKI				S	**Sn**	**18 17 01.1**	**-1.1**
	baz=1.0,SNR=6.3						
SWI	**Sorong**	**2.91**	**2**	P	**Pn**	**18 17 05.6**	**+0.2**
	baz=2.8,SNR=14						
SWI				S	**Sn**	**18 17 37.4**	**-2.1**
	baz=2.8,SNR=5.9						
AAI	**Ambon**	**2.95**	**272**	P	**Pb**	**18 17 13.9**	**+1.0**
	baz=3.4,SNR=7.4						
KDU	**Kakadu**	**8.93**	**172**	P	**Pn**	**18 18 29.7**	**+1.6**
	baz=9.1,SNR=12						
KDU				S	**Sn**	**18 20 07.8**	**-0.1**
	baz=9.1,SNR=5.9						
MTN	**Manton Dam**	**8.99**	**180**	P	Pn	18 18 31.5	+2.5
	baz=9.2,SNR=20						
MTN				S	**Sn**	**18 20 09.2**	**-0.2**
	baz=9.2,SNR=7.3						
KNRA	**Kununurra**	**12.04**	**191**	P	**Pn**	**18 19 12.2**	**+1.4**
	baz=12,SNR=10						
KNRA				S	**Sn**	**18 21 21.7**	**-2.4**
	baz=12,SNR=5.2						
FITZ	**Fitzroy Crossi**	**15.21**	**200**	Pn	**Pn**	**18 19 51.1**	**-2.8**
	0.1nm,0.3s,baz=30,slow=10,SNR=14						
FITZ				Sn	**Sn**	**18 22 37.7**	**-3.9**
	0.3nm,0.3s,baz=135,slow=20,SNR=4.7						
FITZ	**Fitzroy Crossi**	**15.21**	**200**	P	**Pn**	**18 19 54.2**	**+0.3**
	baz=16,SNR=8.9						
FITZ				S	**Sn**	**18 22 40.4**	**-1.1**
	baz=16,SNR=3.3						
WRA	**Warramunga Arr**	**16.35**	**169**	Pn	**Pn**	**18 20 06.3**	**-2.3**
	0.3nm,0.3s,baz=350,slow=13,SNR=7.6						
WRA				Sn	Sn	18 23 00.3	-8.9
	0.3nm,0.3s,baz=352,slow=24,SNR=6.2						
ASAR	**Alice Springs**	**19.93**	**173**	P	**Pn**	**18 20 52.6**	**0.0**
	0.6nm,0.3s,baz=352,slow=11,SNR=62						
STKA	**Stephens Creek**	**29.61**	**162**	P	**P**	**18 22 25.1**	**+1.3**
	0.5nm,0.4s,baz=341,slow=9.3,SNR=3.8						
MKAR	**Makanchi Array**	**66.22**	**326**	P	P	18 27 11.6	+5.2
	0.7nm,0.8s,baz=125,slow=5.2,SNR=6.2						

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*AUST **03** 18:21:54.2±19.0, 0°.88N×130°.84E, h24km±2km, Error ellipse: s-maj=3.3km s-min=1.1km az=241.0*
*IDC **03** 18:23:38.0±5.0, 6°.63S×129°.42E, h248km±51km, mb2.8/1, mb1 2.9/4, mb1mx2.7/19, mbtmp2.7/4, Error ellipse: s-maj=64.7km s-min=20.6km az=70.0*
ISC 03 18:23:37.5±3.9**, 7°.0S**±0°.2×**129°.8E**±0°.1**, h104km, n8, σ2s.95**/10**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.96**	**168**	P	**Pn**	**18 25 06.4**	**+3.2**
	baz=14,SNR=7.1						
KDU	**Kakadu**	**6.23**	**155**	P	**Pn**	**18 25 09.0**	**+2.0**
	baz=14,SNR=33						
KNRA	**Kununurra**	**8.69**	**187**	P	**Pn**	**18 25 42.5**	**+2.0**
	baz=17,SNR=10.0						
FITZ	**Fitzroy Crossi**	**11.77**	**200**	P	**Pn**	**18 26 21.0**	**-1.1**
	0.4nm,0.3s,baz=14,slow=13,SNR=13						
FITZ				S	**Sn**	**18 28 34.6**	**+2.9**
	0.1nm,0.3s,baz=108,slow=20,SNR=3.0						
FITZ	**Fitzroy Crossi**	**11.77**	**200**	P	**Pn**	**18 26 22.9**	**+0.8**
	baz=20,SNR=5.8						
WRA	**Warramunga Arr**	**13.60**	**162**	P	**Pn**	**18 26 46.2**	**0.0**
	0.3nm,0.3s,baz=338,slow=15,SNR=6.1						
WRA				S	**Sn**	**18 29 15.1**	**-0.9**
	0.4nm,0.3s,baz=337,slow=22,SNR=6.3						
ASAR	**Alice Springs**	**17.04**	**167**	P	**Pn**	**18 27 26.5**	**-3.0**
	0.1nm,0.3s,baz=340,slow=9.2,SNR=6.6						
ASAR				S	**Sn**	**18 30 34.2**	**-4.8**
	0.0nm,0.3s,baz=356,slow=28,SNR=3.2						
MKAR	**Makanchi Array**	**68.12**	**327**	P	P	18 34 08.1	-18
	0.3nm,0.7s,baz=133,slow=6.1,SNR=2.7						

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*IDC **03** 18:23:57.7±1.2, 14°.41S×76°.35W, h0km, mb3.7/5, mb1 3.9/7, mb1mx3.8/19, mbtmp3.7/7, ML3.7/2, MS3.4/5, Ms1 3.4/5, ms1mx3.1/28, Error ellipse: s-maj=42.6km s-min=14.3km az=68.0*
*ISCJB **03** 18:23:60.0±0.8, 14°.30S±0°.09×76°.28W±0°.08, h29km, mb3.7/6, MS4.0/2, Error ellipse: s-maj=13.6km s-min=10.0km az=32.8*
*NEIC **03** 18:24:06.8±1.9, 13°.74S×75°.94W, h35km, mb4.4/1, ML4.2(ARE), Error ellipse: s-maj=40.0km s-min=10.8km az=45.0*
NEIC Felt [II] at Ica and Pisco.
ISC 03 18:24:01.2±1.0**, 14°.36S**±0°.09×**76°.19W**±0°.09**, h29km, n18, σ1s.90**/16**, mb3.7**/6**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.44**	**345**	*e*Pn	**Pn**	**18 24 38.4**	**-0.9**
NNA				*e*S	**Sb**	**18 25 15.7**	**+1.4**
NNA	**Nana**	**2.44**	**345**	Pn	**Pn**	**18 24 39.2**	**-0.1**
	13nm,0.3s,baz=182,slow=12,SNR=20						
NNA				Pg	**Pb**	**18 24 43.5**	**-1.1**
	24nm,0.3s,baz=154,slow=13,SNR=28						
NNA				LR	LR	18 25 09.4	
	comp=Z,274nm,19.9s,baz=146,slow=29						
NNA				Lg	Lg	18 25 14.4	
	58nm,0.3s,baz=195,slow=16,SNR=13						
ARE	**Arequipa**	**4.99**	**115**	*e*P	Pn	18 25 20.0	+5.6
ARE				*e*S	**Sb**	**18 26 24.0**	**-3.6**
ATAH	**Atahualpa**	**7.50**	**343**	Pn	Pn	18 25 56.6	+7.4
	1.4nm,0.3s,baz=132,slow=4.7,SNR=9.2						
LPAZ	**La Paz**	**8.00**	**105**	*e*Pn	Pn	18 26 01.8	+5.6
LPAZ	**La Paz**	**8.00**	**105**	Pn	Pn	18 26 02.0	+5.8
	1.3nm,0.3s,baz=278,slow=7.0,SNR=38						
LPAZ				LR	LR	18 28 49.7	
	comp=Z,39nm,20.6s,baz=145,slow=36						
SAML	**Samuel**	**13.82**	**69**	*e*Pn	**Pn**	**18 27 14.1**	**-1.2**
SAML				*e*Sn	**Sn**	**18 29 51.0**	**+3.1**
OTAV	**Otavalo**	**14.68**	**351**	*e*Pn	**Pn**	**18 27 25.3**	**-2.1**
SIV	**San Ignacio**	**14.68**	**98**	Pn	**Pn**	**18 27 28.4**	**+1.4**
	0.2nm,0.3s,baz=276,slow=18,SNR=3.6						
SIV				LR	LR	18 33 37.9	
	comp=Z,337nm,21.4s,slow=39						
CPUP	**Villa Florida**	**21.28**	**127**	P	**P**	**18 28 46.9**	**+1.4**
	0.3nm,0.4s,baz=276,slow=11,SNR=4.3						
BCIP	**Isla Barro Col**	**23.66**	**351**	*e*P	**P**	**18 29 08.1**	**-2.2**
	11nm,0.8s						
PLCA	**Paso Flores**	**26.73**	**170**	P	**P**	**18 29 38.1**	**-0.2**
	2.1nm,0.8s,baz=354,slow=9.2,SNR=3.0						
RCBR	**Riachuelo**	**40.50**	**82**	LR	LR	18 48 16.9	
	comp=Z,122nm,20.3s,baz=25,slow=36						
TXAR	**Lajitas Array**	**50.91**	**329**	P	**P**	**18 33 00.8**	**+0.8**
	0.6nm,0.9s,baz=148,slow=7.4,SNR=5.9						
SCHQ	**Schefferville**	**69.38**	**6**	LR	LR	19 04 40.2	
	comp=Z,138nm,21.5s,baz=335,slow=35						
TORD	**Torodi Ar. Bea**	**81.81**	**74**	P	**P**	**18 36 20.4**	**+2.2**
	3.9nm,0.9s,baz=264,slow=4.2,SNR=14						
YKA	**Yellowknife Ar**	**82.29**	**343**	P	**P**	**18 36 20.4**	**+0.8**
	0.3nm,0.8s,baz=140,slow=6.4,SNR=6.3						
SONM	**Songino Array**	**146.56**	**357**	PKPbc	**PKPab**	**18 43 41.0**	**-0.1**
	1.0nm,0.8s,baz=344,slow=1.2,SNR=5.7						

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*VIE **03** 18:39:18.4, 17°.54S×178°.08W, h459km, mb3.4 377 km E of Suva*
*ISCJB **03** 18:39:24.7±0.6, 17°.7S±0°.2×178°.2W±0°.1, h550km, mb3.6/11, Error ellipse: s-maj=26.4km s-min=11.2km az=148.4*
*IDC **03** 18:39:25.6±1.9, 17°.66S×178°.19W, h550km±23km, mb3.2/11, mb1 3.5/12, mb1mx3.4/20, mbtmp3.2/12, Error ellipse: s-maj=30.1km s-min=13.3km az=149.0*
*AUST **03** 18:39:27.5, 17°.01S×178°.02W, h600km*
ISC 03 18:39:25.6±0.7**, 17°.6S**±0°.2×**178°.2W**±0°.1**, h550km, n30, σ0s.83**/26**, mb3.6**/11**, 7C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.17**	**60**	P	**P**	**18 41 16.1**	**+0.7**
	3.8nm,0.3s,baz=126,slow=2.7,SNR=7.6						
LHI	**Lord Howe Isla**	**24.84**	**232**	S	S	18 47 59.4	+10
	baz=25,SNR=3.4						
CMSA	**Cobar Meteorol**	**35.49**	**240**	P	**P**	**18 45 37.0**	**+0.5**
	baz=36,SNR=7.7						
STKA	**Stephens Creek**	**38.97**	**241**	P	**P**	**18 46 04.5**	**-0.5**
	2.0nm,0.5s,baz=83,slow=10,SNR=8.8						
STKA	**Stephens Creek**	**38.97**	**241**	P	**P**	**18 46 05.8**	**+0.7**
	baz=39,SNR=6.9						
ARPS	**Mount Arapiles**	**40.01**	**233**	P	P	18 46 18.0	+4.8
	baz=40,SNR=5.9						
BBOO	**Buckleboo**	**43.75**	**241**	P	**P**	**18 46 42.8**	**0.0**
	baz=44,SNR=9.2						
WRA	**Warramunga Arr**	**44.92**	**259**	P	**P**	**18 46 51.3**	**-0.7**
	1.8nm,0.5s,baz=92,slow=7.4,SNR=38						
ASAR	**Alice Springs**	**45.10**	**254**	P	**P**	**18 46 53.3**	**-0.1**
	10nm,0.5s,baz=87,slow=8.5,SNR=196						
KNRA	**Kununurra**	**50.76**	**264**	P	P	18 47 24.7	-11
	baz=51,SNR=4.4						
AAI	**Ambon**	**54.33**	**278**	P	**P**	**18 48 02.4**	**+1.2**
	baz=54,SNR=3.6						
VNDA	**Vanda**	**60.73**	**185**	P	**P**	**18 48 43.1**	**-0.5**
	1.0nm,1.1s,baz=108,slow=3.6,SNR=3.3						
MJAR	**Matsushiro Arr**	**67.84**	**323**	P	**P**	**18 49 28.7**	**-0.6**
	0.3nm,0.4s,baz=159,slow=5.1,SNR=4.8						
NVAR	**Mina Array Bea**	**79.06**	**44**	P	**P**	**18 50 33.5**	**0.0**
	1.4nm,0.7s,baz=222,slow=9.5,SNR=4.3						
TXAR	**Lajitas Array**	**85.65**	**58**	P	**P**	**18 51 08.0**	**+1.2**
	1.4nm,0.8s,baz=218,slow=6.2,SNR=16						
PDAR	**Pinedale Array**	**86.99**	**43**	P	**P**	**18 51 13.0**	**0.0**
	0.8nm,0.6s,baz=214,slow=3.0,SNR=7.6						
CMAR	**Chiang Mai Arr**	**89.03**	**290**	P	**P**	**18 51 24.1**	**+1.3**
	0.5nm,0.9s,baz=131,slow=4.1,SNR=3.9						
INK	**Inuvik**	**91.57**	**15**	P	**P**	**18 51 32.5**	**-0.8**
	0.6nm,0.6s,baz=163,slow=2.1,SNR=3.6						
YKA	**Yellowknife Ar**	**93.99**	**25**	P	**P**	**18 51 44.0**	**-0.5**
	0.4nm,0.7s,baz=242,slow=4.3,SNR=8.1						
ARCES	**ARCESS Array B**	**126.10**	**350**	PKP	**PKPdf**	**18 57 24.2**	**-0.7**
	3.4nm,0.9s,baz=3.8,slow=7.3,SNR=4.8						
BRTR	**Keskin Array B**	**144.77**	**315**	PKP	PKPbc	18 58 00.3	-0.7
	1.0nm,0.6s,baz=130,slow=4.5,SNR=7.5						
KHC	**Kasperske Hory**	**147.18**	**346**	*e*P	**PKPbc**	**18 58 06.5**	**-0.8**
GERES	**GERESS Array B**	**147.42**	**345**	PKPbc	**PKPbc**	**18 58 07.5**	**-0.5**
	1.0nm,0.5s,baz=19,slow=3.0,SNR=15						
CONA	**Conrad Observa**	**147.69**	**342**	⇑*i*PKPbc	**PKPbc**	**18 58 08.9**	**+0.2**
	3.6nm,1.1s						
KBA	**Koelnbreinsper**	**149.15**	**345**	⇑*i*PKPbc	**PKPbc**	**18 58 11.4**	**-1.0**
	1.3nm,0.5s						
WATA	**Walderalm**	**149.33**	**347**	⇑*i*PKPbc	**PKPbc**	**18 58 12.2**	**-0.6**
	1.2nm,0.5s						
WTTA	**Wattenberg**	**149.38**	**347**	⇑*i*PKPbc	**PKPbc**	**18 58 12.7**	**-0.3**
	3.3nm,0.6s						
MYKA	**Terra Mystica**	**149.49**	**344**	⇑*i*PKPbc	**PKPbc**	**18 58 12.1**	**-1.1**
	1.2nm,0.5s						
ABTA	**Abfaltersbach**	**149.67**	**345**	⇑*i*PKPbc	**PKPbc**	**18 58 12.7**	**-0.9**
	2.8nm,0.6s						
FETA	**Feichten**	**149.80**	**348**	⇑*i*PKPbc	**PKPbc**	**18 58 12.2**	**-1.8**
	2.9nm,1.4s						

IDC 03 18:43:10.0±2.4**, 13°.98S**×**14°.19W, h0km, mb3.9**/6**, mb1 3.9**/6**, mb1mx3.6**/23**, mbtmp3.9**/6**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx3.0**/27**, Error ellipse: s-maj=169.6km s-min=27.9km az=104.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**22.51**	**25**	P	P	18 48 12.8	+1.4
	4.4nm,1.0s,baz=200,slow=14,SNR=3.4						
TORD	**Torodi Ar. Bea**	**31.21**	**31**	P	P	18 49 31.2	-0.1
	2.4nm,0.8s,baz=213,slow=8.9,SNR=12						
PLCA	**Paso Flores**	**55.62**	**230**	LR	LR	19 11 10.9	
	comp=Z,97nm,21.1s,baz=270,slow=30						
SNAA	**Sanae**	**58.07**	**176**	P	P	18 53 05.0	+0.2
	0.4nm,1.1s,baz=358,slow=14,SNR=3.6						
BRTR	**Keskin Array B**	**69.53**	**38**	P	P	18 54 20.9	0.0
	0.6nm,0.9s,baz=208,slow=4.9,SNR=5.6						
AKASG	**Malin Array Be**	**74.74**	**27**	P	P	18 54 50.3	-1.3
	1.4nm,0.7s,baz=227,slow=7.2,SNR=5.0						
FINES	**FINESS Array B**	**81.64**	**18**	P	P	18 55 30.2	+0.6
	0.7nm,0.8s,baz=168,slow=7.1,SNR=2.7						
MJAR	**Matsushiro Arr**	**146.63**	**43**	PKPbc	PKPdf	19 02 53.3	+0.7
	0.4nm,0.7s,baz=282,slow=6.5,SNR=5.1						

IDC 03 18:51:54.7±2.3**, 3°.98N**×**126°.83E, h0km, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/22**, mbtmp3.5**/4**, 1C, Error ellipse: s-maj=202.3km s-min=26.3km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**4.12**	**321**	⇑*i*P	Pn	18 53 02.6	+3.6
WRA	**Warramunga Arr**	**24.89**	**163**	P	P	18 57 17.8	-1.7
	1.3nm,0.6s,baz=343,slow=10,SNR=8.7						
ASAR	**Alice Springs**	**28.33**	**166**	P	P	18 57 51.3	+0.8
	0.2nm,0.7s,baz=339,slow=8.7,SNR=3.0						
STKA	**Stephens Creek**	**38.33**	**160**	P	P	18 59 18.3	+0.9
	0.4nm,0.3s,baz=345,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**57.41**	**325**	P	P	19 01 45.1	-0.1
	0.1nm,0.4s,baz=124,slow=7.9,SNR=4.4						

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*DDA **03** 19:21:07.7, 37°.36N×43°.43E, h8km, MD3.0*
*NSSC **03** 19:21:07.1±2.1, 37°.58N×43°.19E, h0km±274km, ML2.5*
*CSEM **03** 19:21:09.4±0.6, 37°.43N×43°.49E, h5km, ML2.5, Error ellipse: s-maj=20.7km s-min=12.2km az=137.0*
ISC 03 19:21:08.9±1.0**, 37°.53N**±0°.07×**43°.36E**±0°.04**, h10km**±11km**, n14, σ1s.92**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.28**	**83**	*i* P	**Pg**	**19 21 14.2**	**-0.4**
HAKT				*i* S	**Sg**	**19 21 19.0**	**+0.6**
HAKT	**HAKKARI**	**0.28**	**83**	*i* P	**Pg**	**19 21 14.2**	**-0.4**
HAKT				*i* S	**Sg**	**19 21 19.0**	**+0.6**
GEVA	**Gevas**	**0.82**	**343**	*i* P	**Pn**	**19 21 27.2**	**+0.5**
GEVA	**Gevas**	**0.82**	**343**	*i* P	**Pn**	**19 21 27.2**	**+0.5**
BEST	**Besiri**	**1.70**	**283**	*i* P	**Pg**	**19 21 41.0**	**-0.5**
BEST				*i* S	**Sg**	**19 22 06.5**	**+3.0**
MARD	**Mardin**	**2.07**	**265**	*i* P	**Pb**	**19 21 46.0**	**-0.6**
MARD				*i* S	**Sb**	**19 22 12.9**	**+0.5**
KBSD	**Kabsdagh**	**2.31**	**258**	*e*P	Pn	19 21 43.7	-3.3
KBSD				*e*S	**Sn**	**19 22 13.1**	**-2.4**
KBSD				AML	AML	19 22 22.6	
	comp=N,74nm,0.3s						
KBSD				AML	AML	19 22 25.1	
	comp=Z,44nm,0.3s						
KBSD				AML	AML	19 22 25.2	
	comp=E,85nm,0.5s						
DIYA	**Diyarbakir**	**2.60**	**280**	*e*P	**Pb**	**19 21 54.7**	**-0.9**
DIYA				*i* S	**Sg**	**19 22 31.7**	**-0.8**
DIYA	**Diyarbakir**	**2.60**	**280**	*e*P	**Pb**	**19 21 54.7**	**-0.9**
DIYA				*i* S	**Sg**	**19 22 31.7**	**-0.8**
MZRK	**Al-Mazaregh**	**2.76**	**233**	*e*P	**Pn**	**19 21 53.5**	**+0.3**
MZRK				*e*S	**Sn**	**19 22 23.9**	**-2.7**
MZRK				AML	AML	19 22 42.5	
	comp=Z,52nm,0.4s						
MZRK				AML	AML	19 22 43.8	
	comp=E,45nm,0.7s						
MZRK				AML	AML	19 22 44.1	
	comp=N,30nm,0.5s						
MZRK	**Al-Mazaregh**	**2.76**	**233**	*e*P	**Pn**	**19 21 53.5**	**+0.3**
	SNR=45						
SFNV	**Sufian**	**2.83**	**248**	*e*P	**Pn**	**19 21 52.6**	**-1.6**
SFNV				*e*S	**Sn**	**19 22 25.6**	**-2.7**
SFNV				AML	AML	19 22 41.6	
	comp=N,22nm,0.5s						
SFNV				AML	AML	19 22 44.1	
	comp=Z,39nm,0.4s						
SFNV				AML	AML	19 22 45.5	
	comp=E,44nm,0.8s						
KSRV	**Kasrt alli**	**3.88**	**246**	*e*P	**Pn**	**19 22 11.0**	**+2.5**
KSRV				*e*S	**Sn**	**19 22 57.6**	**+3.5**
KSRV	**Kasrt alli**	**3.88**	**246**	*e*P	**Pn**	**19 22 11.0**	**+2.5**
	SNR=45						
KSRV				*e*S	**Sn**	**19 22 57.6**	**+3.5**
	SNR=40						

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*ATH **03** 19:34:48.4, 40°.73N×25°.70E, h23km, MD3.4/10*
*SOF **03** 19:34:48.7, 40°.70N×25°.52E, h2km, MD2.6*
*ISCJB **03** 19:34:48.6±0.4, 40°.70N±0°.02×25°.67E±0°.02, h4km±3km, Error ellipse: s-maj=3.4km s-min=2.4km az=27.6*
*CSEM **03** 19:34:49.4±0.2, 40°.72N×25°.69E, h10km, MD3.4, Error ellipse: s-maj=4.6km s-min=3.5km az=56.0*
*DDA **03** 19:34:49.4, 40°.68N×25°.77E, h6km, MD2.9*
*BEO **03** 19:34:49.4±1.5, 40°.65N×25°.84E, h2km±5km, ML2.5/3*
*THE **03** 19:34:49.5, 40°.71N×25°.71E, h9km±1km, ML2.3/3, Error ellipse: s-maj=1.5km s-min=0.5km az=104.0*
ISC 03 19:34:49.6±0.9**, 40°.71N**±0°.02×**25°.70E**±0°.02**, h10km**±7km**, n70, σ0s.96**/107**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.27**	**209**	*e*PB	**Pg**	**19 34 55.3**	**+0.2**
SMTH				*e*SB	**Sg**	**19 34 59.7**	**+0.9**
SMTH	**Samothraki Isl**	**0.27**	**209**	*e*Pb	**Pg**	**19 34 55.3**	**+0.2**
SMTH				*e*Sb	**Sg**	**19 34 59.7**	**+0.9**
ALN	**Alexandroupoli**	**0.32**	**54**	P	**Pg**	**19 34 55.6**	**-0.4**
ALN				S	**Sg**	**19 35 00.1**	**-0.2**
ALN	**Alexandroupoli**	**0.32**	**54**	*e*PB	**Pg**	**19 34 55.7**	**-0.3**
ALN				*e*SB	**Sg**	**19 35 00.2**	**-0.1**
ALN	**Alexandroupoli**	**0.32**	**54**	*e*Pb	**Pg**	**19 34 55.7**	**-0.3**
ALN				S	**Sg**	**19 35 00.1**	**-0.2**
ERIK	**Erikli-Kesan**	**0.62**	**93**	*e*PG	**Pg**	**19 35 01.0**	**-0.5**
ERIK				*e*SG	**Sg**	**19 35 09.6**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.66**	**118**	*e*PG	**Pg**	**19 35 02.0**	**-0.4**
GELI				*e*SG	**Sb**	**19 35 11.7**	**-0.8**
LPK	**Lapseki**	**0.87**	**112**	*e*PG	**Pg**	**19 35 05.9**	**-0.5**
LPK				*e*SG	**Sb**	**19 35 18.4**	**-0.1**
LIA	**Limnos Island**	**0.90**	**206**	P	**Pg**	**19 35 06.8**	**-0.2**
LIA				S	**Sb**	**19 35 19.8**	**+0.5**
LIA	**Limnos Island**	**0.90**	**206**	*e*PN	**Pg**	**19 35 06.4**	**-0.6**
LIA				*e*SN	**Sb**	**19 35 19.0**	**-0.3**
LIA	**Limnos Island**	**0.90**	**206**	*e*Pn	**Pg**	**19 35 06.4**	**-0.6**
LIA	**Limnos Island**	**0.90**	**206**	P	**Pg**	**19 35 06.8**	**-0.2**
LIA				S	**Sb**	**19 35 19.8**	**+0.5**
BOZC	**Bozcaada**	**0.91**	**163**	*i* P	**Pg**	**19 35 06.7**	**-0.3**
BOZC				*i* S	**Sb**	**19 35 19.1**	**-0.3**
KAVA	**Kavala**	**0.95**	**288**	P	**Pg**	**19 35 07.2**	**-0.6**
KAVA				S	**Sb**	**19 35 21.2**	**+0.6**
KAVA	**Kavala**	**0.95**	**288**	P	**Pg**	**19 35 07.2**	**-0.6**
KAVA				S	**Sb**	**19 35 21.2**	**+0.6**
KDZ	**Kurdzhali**	**0.96**	**347**	*e*Pg	**Pg**	**19 35 07.2**	**-0.9**
KDZ	**Kurdzhali**	**0.96**	**347**	*e*Pg	**Pg**	**19 35 07.2**	**-0.9**
EZN	**Ezine**	**1.00**	**151**	*e*PG	**Pg**	**19 35 08.7**	**-0.2**
RZN	**Rozhen**	**1.23**	**323**	*e*Pg	**Pn**	**19 35 11.9**	**-1.1**
RZN	**Rozhen**	**1.23**	**323**	*e*Pg	**Pn**	**19 35 11.9**	**-1.1**

KRBG	Karabiga-Canak	1.25	104	ePN	Pn	19 35 13.0	-0.1
OUR	Ouranopolis	1.36	255	P	Pn	19 35 13.6	-1.0
OUR	Ouranopolis	1.36	255	P	Pn	19 35 13.6	-1.0
EDRB	Edirne	1.38	34	ePN	Pn	19 35 14.7	-0.2
TKR	Tekirdag	1.42	78	ePN	Pb	19 35 16.1	+0.1
MRMT	Marmara Adasi	1.44	94	ePN	Pn	19 35 15.8	0.0
PRK	Paraskevi	1.53	163	P	Pn	19 35 15.8	-1.0
PRK	Paraskevi	1.53	163	ePN	Pn	19 35 17.0	+0.2
PRK				eSN	Sn	19 35 36.7	0.0
PRK	Paraskevi	1.53	163	P	Pn	19 35 15.8	-1.0
PRK	Paraskevi	1.53	163	ePn	Pn	19 35 17.0	+0.2
PRK				eSn	Sn	19 35 36.7	0.0
NVR	Nevrokopi	1.53	295	P	Pn	19 35 16.4	-0.6
NVR	Nevrokopi	1.53	295	ePN	Pn	19 35 16.5	-0.6
NVR				eSN	Sn	19 35 36.3	-0.7
NVR	Nevrokopi	1.53	295	P	Pn	19 35 16.4	-0.6
NVR				eSn	Sn	19 35 36.3	-0.7
AYVA	Ayvalik	1.59	151	iP	Pn	19 35 17.8	+0.1
AYVA				iS	Sb	19 35 39.0	-0.2
AYVA	Ayvalik	1.59	151	iP	Pn	19 35 17.8	+0.1
AYVA				iS	Sb	19 35 39.0	-0.2
CRLT	Corlu	1.60	74	ePN	Pb	19 35 18.4	-0.7
SRS	Serrai	1.65	285	P	Pn	19 35 17.8	-0.8
GONE	Gonen-Balikesi	1.65	113	ePN	Pb	19 35 19.6	-0.5
MMB	Musomiste	1.73	301	iP	Pn	19 35 19.2	-0.5
PAIG	Paliouri	1.73	244	ePN	Pn	19 35 19.1	-0.6
PAIG				eSN	Sn	19 35 41.7	-0.1
PAIG	Paliouri	1.73	244	ePn	Pn	19 35 19.1	-0.6
PAIG				eSn	Sn	19 35 41.7	-0.1
PLG	Polygyros	1.75	260	ePN	Pn	19 35 19.3	-0.7
PLG				eSN	Sn	19 35 41.8	-0.6
PLG	Polygyros	1.75	260	ePn	Pn	19 35 19.3	-0.7
PLG				eSn	Sn	19 35 41.8	-0.6
BALY	Balya	1.76	123	iP	Pb	19 35 21.0	-0.9
BALY				iS	Sb	19 35 43.3	-0.7
BALY	Balya	1.76	123	iP	Pb	19 35 21.0	-0.9
BALY				iS	Sb	19 35 43.3	-0.7
SOH	Sokhos	1.79	274	ePN	Pn	19 35 19.9	-0.6
SOH				eSN	Sn	19 35 42.6	-0.7
SOH	Sokhos	1.79	274	ePn	Pn	19 35 19.9	-0.6
SOH				eSn	Sn	19 35 42.6	-0.7
JMB	Yambol	1.88	20	iP	Pg	19 35 24.9	-0.6
JMB	Yambol	1.88	20	iP	Pg	19 35 24.9	-0.6
SLVT	Silivri	1.97	74	ePN	Pn	19 35 23.7	+0.7
BALB	Balikesir	1.98	122	ePN	Pb	19 35 24.3	-1.3
CTKS	Kestanelik-??a	2.19	75	ePN	Pn	19 35 27.1	+1.2
CHOS	Chios island	2.34	173	ePN	Pn	19 35 28.0	-0.1
CHOS				eSN	Sn	19 35 57.2	+0.4
CHOS	Chios island	2.34	173	ePn	Pn	19 35 28.0	-0.1
CHOS				eSn	Sn	19 35 57.2	+0.4
BGKT	Bogazkoy	2.37	78	ePN	Pn	19 35 29.6	+1.1
GRG	Griva	2.52	277	ePN	Pn	19 35 30.2	-0.3
GRG	Griva	2.52	277	ePn	Pn	19 35 30.2	-0.3
LIT	Litokhoron	2.53	257	ePN	Pn	19 35 30.8	+0.1
LIT	Litokhoron	2.53	257	ePn	Pn	19 35 30.8	+0.1
ISK	Istanbul-Kandi	2.57	81	ePN	Pn	19 35 32.5	+1.3
VTS	Vitosha	2.65	316	ePg	Pg	19 35 39.7	-0.7
VTS				eSn	Sb	19 36 08.3	-1.6
VTS				eSg	Sg	19 36 16.4	+1.6
VTS	Vitosha	2.65	316	eP	Pb	19 35 36.3	-0.9
VTS	Vitosha	2.65	316	eP	Pb	19 35 36.3	-0.9
VTS	Vitosha	2.65	316	ePg	Pg	19 35 39.7	-0.7
VTS				eSn	Sb	19 36 08.3	-1.6
VTS				eSg	Sg	19 36 16.4	+1.6
TVSB	Tavsanli	3.15	112	ePN	Pn	19 35 40.7	+1.5
KULA	Kula-Manisa	3.17	133	ePN	Pn	19 35 41.1	+1.7
ZAPS	Zavoj	3.44	319	ePn	Pn	19 35 45.3	+2.2
ZAPS				eSn	Sn	19 36 28.0	+4.1
BARS	Barje	3.59	307	ePn	Pn	19 35 46.8	+1.6
BARS				eSg	Sg	19 36 47.7	+2.9
BARS	Barje	3.59	307	ePn	Pn	19 35 46.8	+1.6
BARS				eSg	Sg	19 36 47.7	+2.9
ALT	Altintas	3.77	115	ePN	Pn	19 35 48.8	+0.9

WEL 03 19:36:18.1±0.3**,39°.60S×174°.06E,h166**^{km}±2^{km}**,ML3.5**/7**, 4C-2D,Error ellipse: s-maj=1.5km s-min=1.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFE	Dawson Falls	0.27	7	PN	Pn	19 36 40.3	-0.3
NRZ	Ngariki Road	0.28	339	⇑PN	Pn	19 36 40.5	-0.1
NEZ	North Egmont	0.33	5	PN	Pn	19 36 40.8	0.0
NWEZ	Newall Road	0.35	335	PN	Pn	19 36 40.6	-0.1
RAEZ	Rainy Point	0.40	40	PN	Pn	19 36 40.5	-0.5
PKE	Pukeiti	0.40	352	PN	Pn	19 36 40.7	-0.3
DREZ	Durham Road	0.42	15	PN	Pn	19 36 40.7	-0.3
VRZ	Vera Road	0.72	49	PN	Pn	19 36 41.7	-0.7
VRZ				SN	Sn	19 37 00.0	-1.0
WAZ	Wanganui	0.73	103	PN	Pn	19 36 42.4	-0.1
WAZ				SN	Sn	19 37 00.8	-0.4
PKVZ	Pokaka	1.04	73	PN	Pn	19 36 44.8	0.0
MTVZ	Mangateitei	1.11	80	PN	Pn	19 36 45.2	-0.2
MTVZ				SN	Sn	19 37 04.7	-1.6
TRVZ	Turoa	1.19	76	PN	Pn	19 36 45.2	-1.1
TWVZ	Taurewa	1.19	64	PN	Pn	19 36 45.4	-0.7
FWVZ	Far West T-bar	1.20	74	PN	Pn	19 36 46.3	-0.1
DUWZ	D'Urville Isla	1.21	185	PN	Pn	19 36 46.2	0.0
WPVZ	Whakapapa	1.22	72	PN	Pn	19 36 46.1	-0.3
WNVZ	Wahianoa	1.22	78	PN	Pn	19 36 46.5	+0.1
HIZ	Hauiti	1.24	30	⇑PN	Pn	19 36 46.1	-0.5
TUVZ	Tukino	1.28	76	PN	Pn	19 36 47.2	+0.2
WTVZ	West Tongariro	1.28	68	PN	Pn	19 36 46.6	-0.3
OTVZ	Oturere	1.31	71	PN	Pn	19 36 47.3	0.0
MOVZ	Moawhango	1.32	82	PN	Pn	19 36 46.9	-0.4
KRVZ	Karewarewa	1.32	68	PN	Pn	19 36 47.0	-0.3
KIW	Kapiti Island	1.42	153	⇓PN	Pn	19 36 48.0	-0.1
OGWZ	Otaki Gorge	1.49	146	PN	Pn	19 36 48.8	+0.1
RATZ	Rangitukua	1.51	62	PN	Pn	19 36 49.6	+0.4
POWZ	Post Office Ro	1.53	122	PN	Pn	19 36 49.1	-0.1
TSZ	Takapari Road	1.54	108	PN	Pn	19 36 49.2	0.0
BHHZ	Black Hill Sta	1.55	87	PN	Pn	19 36 48.6	-0.9
MRZ	Mangatainoka R	1.58	133	⇓PN	Pn	19 36 49.6	-0.1
TCW	Tory Channel	1.62	174	PN	Pn	19 36 50.4	+0.3
PNHZ	Pukenui	1.68	102	PN	Pn	19 36 51.0	+0.3
CAW	Cannon Point	1.70	153	PN	Pn	19 36 50.9	+0.1
QRZ	Quartz Range	1.70	223	⇑PN	Pn	19 36 50.8	-0.1
NNZ	Nelson	1.70	198	PN	Pn	19 36 51.0	+0.1
HOWZ	Holdsworth Sta	1.71	140	PN	Pn	19 36 50.9	-0.2
DVHZ	Dannevirke	1.77	114	PN	Pn	19 36 51.3	-0.3
SNZO	South Karori	1.78	164	PN	Pn	19 36 51.7	0.0
TIWZ	Tintock	1.83	131	PN	Pn	19 36 52.4	0.0
TUWZ	Tuamarina	1.83	183	PN	Pn	19 36 52.5	+0.1
MTW	Mount Morrison	1.91	145	PN	Pn	19 36 52.9	-0.3
TMWZ	Te Maipa	2.06	138	PN	Pn	19 36 54.6	-0.3
PAWZ	Paruwai Farm	2.07	150	PN	Pn	19 36 54.7	-0.3
PLWZ	Palliser	2.17	156	PN	Pn	19 36 55.7	-0.5
THZ	Tophouse	2.34	202	PN	Pn	19 36 58.0	-0.1
DSZ	Denniston Nort	2.75	218	PN	Pn	19 37 03.3	+0.2
KHZ	Kahutara	2.85	188	⇑PN	Pn	19 37 04.0	-0.1
LTZ	Lake Taylor	3.46	202	PN	Pn	19 37 11.8	0.0

DJA 03 19:39:11.7±1.1**,3°S**±8°×**13°3E**±°**,h72**^{km}±10^{km}**,M3.5**/4**, MLv3.5**/4**,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	0.28	276	P	Pn	19 39 24.9	+1.9
FAKI				S	Sn	19 39 33.4	+2.1
RKPI	Ransiki, Papua	2.18	49	P	Pn	19 39 46.1	+0.2
RKPI				S	Sn	19 40 13.3	+1.4
SWI	Sorong	2.43	328	P	Pn	19 39 49.0	-0.2
SWI				S	Sn	19 40 19.2	+1.2
SRPI	Serui, Papua	3.86	74	P	Pn	19 40 08.2	-0.5

*SZGRF **03** 19:58:42.7,21°.82S×175°.70W,h33^{km},Tonga Islands*
*ISCJB **03** 19:59:48.2±0.5,20°.4S±0°.1×178°.72W±0°.09,h587^{km}, mb3.8/14,Error ellipse: s-maj=14.5km s-min=9.3km az=149.2*
*AUST **03** 19:59:49.8±0.0,20°.38S×178°.38W,h610^{km},Error ellipse: s-maj=2.2km s-min=1.5km az=262.0*
*IDC **03** 19:59:58.2±2.3,20°.46S×178°.83W,h695^{km}±28^{km}, mb3.3/14,mb1 3.6/14,mb1mx3.5/17,mbtmp3.3/14,Error ellipse: s-maj=15.2km s-min=11.1km az=150.0*
ISC 03 19:59:48.7±0.5**,20°.4S**±0°.1×**178°.63W**±0°.10**,h587**^{km}**,n99, σ0s80**/129**,mb3.9**/14**,18C-23D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	8.30	82	S	S	20 03 46.7	+16
	baz=8.1,SNR=3.8						
AFI	Afiamalu	9.19	46	P	P	20 01 58.9	-0.5
	4.5nm,0.3s,baz=41,slow=3.3,SNR=8.3						
URZ	Urewera	18.18	191	P	P	20 03 24.9	-1.4
	2.0nm,0.3s,baz=40,slow=2.7,SNR=13						
MTSU	Mount Surprise	35.01	267	P	P	20 05 54.8	+1.1
	baz=35,SNR=17						
COEN	Coen	36.99	274	P	P	20 06 11.2	+1.2
	baz=37,SNR=7.7						
STKA	Stephens Creek	37.30	244	P	P	20 06 12.6	+0.2
	4.8nm,0.9s,baz=98,slow=8.0,SNR=14						
STKA	Stephens Creek	37.30	244	P	P	20 06 13.5	+1.2
	baz=38,SNR=7.3						
BBOO	Buckleboo	42.07	243	P	P	20 06 50.7	+0.4
	baz=42,SNR=11						
JAY	Jayapura	43.45	289	P	P	20 07 02.6	+1.1
	baz=44,SNR=13						
ASAR	Alice Springs	43.97	257	P	P	20 07 05.8	+0.5
	1.4nm,0.5s,baz=90,slow=8.2,SNR=67						
ASAR				PcP	PcP	20 08 36.0	-2.0
	0.5nm,0.5s,baz=102,slow=4.5,SNR=5.5						
ASAR				S	S	20 12 53.1	-2.5
	1.4nm,0.9s,baz=98,slow=15,SNR=9.9						
WRA	Warramunga Arr	44.03	262	P	P	20 07 05.5	-0.3
	1.5nm,0.3s,baz=96,slow=7.7,SNR=56						
WRA				S	S	20 12 54.8	-1.7
	0.2nm,0.4s,baz=107,slow=18,SNR=9.3						
KDU	Kakadu	47.36	271	P	P	20 07 31.2	+0.1
	baz=48,SNR=6.2						
MTN	Manton Dam	48.57	271	P	P	20 07 40.2	0.0
	baz=49,SNR=5.2						
KNRA	Kununurra	50.08	266	P	P	20 07 51.5	+0.3
	baz=50,SNR=3.8						
FITZ	Fitzroy Crossi	52.46	262	P	P	20 08 09.0	+0.7
	baz=53,SNR=4.9						
SWI	Sorong	52.65	285	P	P	20 08 10.1	+0.4
	baz=53,SNR=6.2						
VNDA	Vanda	57.96	185	P	P	20 08 47.4	+1.9
	2.1nm,0.6s,baz=1.9,slow=7.7,SNR=19						
MJAR	Matsushiro Arr	69.78	324	P	P	20 10 00.8	-0.3
	3.1nm,0.6s,baz=162,slow=6.4,SNR=27						
MAT	Matsushiro	69.78	324	P	P	20 10 00.7	-0.4
PETK	Petropavlovsk-	76.03	346	P	P	20 10 36.6	+0.2
	6.5nm,0.6s,baz=145,slow=8.3,SNR=5.8						
KSRS	Korea Array	76.42	319	P	P	20 10 40.0	+1.1
	2.0nm,0.7s,baz=135,slow=6.4,SNR=9.5						
USRK	Ussuriysk Arra	78.55	326	P	P	20 10 51.6	+1.4
	4.6nm,0.7s,baz=111,slow=3.5,SNR=13						
NVAR	Mina Array Bea	81.36	44	P	P	20 11 07.0	+1.6
	1.8nm,0.6s,baz=225,slow=9.2,SNR=6.1						
MAW	Mawson	81.46	200	P	P	20 11 05.2	+0.1
	0.9nm,0.5s,baz=37,slow=14,SNR=3.8						
TXAR	Lajitas Array	87.50	58	P	P	20 11 36.4	+1.1
	0.9nm,0.8s,baz=224,slow=5.2,SNR=11						
PDAR	Pinedale Array	89.29	43	P	P	20 11 44.4	+0.8
	1.7nm,0.6s,baz=211,slow=3.6,SNR=17						
CMAR	Chiang Mai Arr	89.53	290	P	P	20 11 45.9	+1.0
	2.0nm,0.9s,baz=129,slow=3.0,SNR=17						
YKA	Yellowknife Ar	96.67	25	P	P	20 12 16.3	-0.1
	0.3nm,0.7s,baz=245,slow=4.5,SNR=7.5						
ZALV	Zalesovo Beam	110.05	321	PKiKP	PKiKP	20 17 11.9	-2.1
	0.5nm,0.6s,baz=191,slow=2.4,SNR=4.4						
MKAR	Makanchi Array	110.70	314	PKiKP	PKiKP	20 17 14.1	-1.5
	0.2nm,0.4s,baz=197,slow=1.6,SNR=6.7						
ARCES	ARCESS Array B	128.72	349	PKP	PKPdf	20 17 49.0	-0.4
	3.5nm,0.9s,baz=46,slow=5.2,SNR=7.1						
FINES	FINESS Array B	135.51	343	PKP	PKPdf	20 18 01.9	-0.4
	0.7nm,0.5s,baz=7.6,slow=5.8,SNR=3.8						
HFS	Hagfors	139.35	351	PKhKP	PKPpre	20 18 01.6	
	2.2nm,0.6s,baz=87,slow=3.1,SNR=9.2						
AKASG	Malin Array Be	142.64	331	PKP	PKPdf	20 18 11.9	-3.7
	5.5nm,0.5s,baz=43,slow=4.4,SNR=18						
MUD	Monsted U'grnd	143.53	353	⇓iP	PKPab	20 18 15.4	-0.4
	11nm,0.8s						
BSD	Bornholm Skovb	143.86	347	⇓iP	PKPbc	20 18 16.1	-0.8
	17nm,0.8s						
EKA	Eskdalemuir Ar	144.95	5	PKPbc	PKPdf	20 18 18.9	-0.7
	3.0nm,0.8s,baz=330,slow=2.9,SNR=7.5						
BSEG	Bad Segeberg	145.83	351	ePKPbc	PKPbc	20 18 22.5	-0.3
KWP	Kalwaria Pacla	146.24	335	⇓iP	PKPbc	20 18 24.3	+0.1
BRTR	Keskin Array B	146.34	312	PKPbc	PKPbc	20 18 24.2	-0.7
	1.5nm,0.6s,baz=130,slow=4.2,SNR=13						
TLCR		146.48	324	⇑iP	PKPbc	20 18 24.9	0.0
RUE	Ruedersdorf	146.56	346	ePKPbc	PKPbc	20 18 25.0	+0.1
BURAR	Bucovina Array	146.68	330	⇓iP	PKPbc	20 18 25.2	-0.4
TESR	Tescani	146.76	327	⇓iP	PKPbc	20 18 25.0	-0.7
CFR	Carcaliu	146.86	324	⇑iP	PKPbc	20 18 25.8	-0.1
TIRR	Tirgusor	147.16	323	⇑iP	PKPbc	20 18 26.9	+0.1
VRI	Vrincioaia	147.16	327	⇑iP	PKPbc	20 18 26.8	0.0
PLOR	Plostina	147.21	327	⇑iP	PKPbc	20 18 26.8	-0.1
NRDL	Niedersach Rie	147.25	350	ePKPbc	PKPbc	20 18 26.5	-0.2
TRPA	Tarpa	147.49	333	⇑iP	PKPbc	20 18 27.8	+0.3
OKC	Ostrava-Krasne	147.74	340	⇑ePKPdf	PKPbc	20 18 28.3	+0.2
OKC				ex	PKPab	20 18 33.1	+0.5
ISR	Istrita	147.76	326	⇓iP	PKPbc	20 18 28.4	0.0
DOPR	Dopca	147.77	328	⇓iP	PKPbc	20 18 29.0	+0.6
UPC	Upice	147.80	342	⇑ePKPdf	PKPbc	20 18 28.4	+0.1
UPC				ex	PKPab	20 18 33.8	+0.9
MLR	Muntele Rosu	147.82	327	⇓iP	PKPbc	20 18 28.1	-0.5
CLL	Collm	147.83	346	ePKPbc	PKPbc	20 18 28.2	-0.1
CLL				ePKPab	PKPab	20 18 32.8	-0.2
CLL	Collm	147.83	346	⇓iPKPbc	PKPbc	20 18 28.1	-0.2
	comp=Z,12nm,0.7s						
CLL				⇑iPKPab	PKPab	20 18 32.7	-0.2
	comp=Z,8.0nm,0.8s						
CLZ	Clausthal	147.84	349	ePKPbc	PKPbc	20 18 28.5	+0.1
DPC	Dobruska-Polom	147.85	342	ePKPdf	PKPbc	20 18 28.8	+0.4
DPC				ex	PKPab	20 18 34.0	+0.9
KRLC	Kraliky	147.96	341	⇑ePKPdf	PKPbc	20 18 29.2	+0.5
KRLC				ex	PKPab	20 18 33.8	+0.2
MORC	Moravsky Berou	147.98	340	⇓iP	PKPbc	20 18 28.9	+0.1
BRG	Berggiesshubel	148.01	345	i PKP	PKPbc	20 18 28.6	-0.2
	comp=Z,5.9nm,0.9s						
BRG	Berggiesshubel	148.01	345	ePKPbc	PKPbc	20 18 28.9	+0.1
BRG				ePKPab	PKPab	20 18 33.6	-0.1
FBE	Freiberg	148.11	346	ePKPbc	PKPbc	20 18 29.5	+0.5
FBE				ePKPab	PKPab	20 18 34.4	+0.3
PVCC	Panska Ves	148.17	344	⇑ePKPdf	PKPbc	20 18 29.7	+0.5
PVCC				ex	PKPab	20 18 34.9	+0.5
NEUB	Neuenburg	148.18	348	ePKPbc	PKPbc	20 18 28.9	-0.3
NEUB				ePKPab	PKPab	20 18 34.1	-0.3
PRU	Pruhonice	148.67	344	⇑ePKPdf	PKPbc	20 18 30.7	+0.3
PRU				ex	PKPab	20 18 36.8	+0.3
MOX	Moxa	148.75	347	ePKPbc	PKPbc	20 18 30.5	-0.1
MOX				ePKPab	PKPab	20 18 36.4	-0.4
TANN	Tannenbergstha	148.79	346	ePKPbc	PKPbc	20 18 30.7	-0.1
PLN	Plauen	148.79	347	ePKPbc	PKPbc	20 18 30.6	-0.1
PLN				ePKPab	PKPab	20 18 36.6	-0.3
WERD	Werda	148.79	346	ePKPbc	PKPbc	20 18 30.8	+0.1
WERD				ePKPab	PKPab	20 18 37.0	0.0
GUNZ	Gunzen	148.86	346	ePKPbc	PKPbc	20 18 31.2	+0.3
GUNZ				ePKPab	PKPab	20 18 37.6	+0.3
WERN	Wernitzgruen	148.93	346	ePKPbc	PKPbc	20 18 31.7	+0.6
WERN				ePKPab	PKPab	20 18 37.9	+0.4
NKC	Novy Kostel	148.96	346	⇑ePKPdf	PKPbc	20 18 31.6	+0.4
NKC				epPKP	PKPab	20 18 37.8	+0.1
TREC	Trest	149.04	342	⇑ePKPdf	PKPbc	20 18 31.6	+0.2
ROTZ	Rotzenmuhle	149.45	346	ePKPbc	PKPbc	20 18 32.1	-0.2
ROTZ				ePKPab	PKPab	20 18 40.3	+0.6
KHC	Kasperske Hory	149.71	344	⇑iPKPdf	PKPbc	20 18 33.2	+0.2
KHC				epPKP	PKPab	20 18 41.3	+0.4
TNS	Taunus Mts	149.72	351	ePKPbc	PKPbc	20 18 32.9	-0.1
GRF	Grafenberg Arr	149.74	347	ePKPbc	PKPbc	20 18 33.7	+0.7
GRF				ePKPab	PKPab	20 18 41.0	+0.1
BZS	Buzias	149.83	331	⇓iP	PKPbc	20 18 33.0	-0.3
WET	Wettzell	149.88	345	ePKPab	PKPab	20 18 41.9	+0.4
GEC2	GERESS Array S	149.94	344	ePKPbc	PKPbc	20 18 33.4	-0.3
GEC2				ePKPab	PKPab	20 18 42.4	+0.5
GERES	GERESS Array B	149.94	344	PKPbc	PKPbc	20 18 33.4	-0.3
	comp=Z,1.8nm,0.8s,baz=45,slow=2.5,SNR=16						
CONA	Conrad Observa	150.14	340	⇓iPKPbc	PKPbc	20 18 34.5	+0.4
	comp=Z,3.0nm,0.7s						
CONA				⇑iPKPab	PKPab	20 18 43.4	+0.6
	comp=Z,2.2nm,0.7s						
WLF	Walferdange	150.55	354	ePKPbc	PKPbc	20 18 34.1	-0.8
WLF				ePKPab	PKPab	20 18 43.0	-1.3
PKSM	Moragy	150.62	335	⇑iP	PKPbc	20 18 34.9	-0.2
ARSA	Arzberg	150.85	340	⇓iPKPbc	PKPbc	20 18 35.3	-0.4
	comp=Z,2.3nm,1.2s						
ARSA				⇓iPKPab	PKPab	20 18 45.4	-0.3
	comp=Z,1.8nm,0.8s						
STU	Stuttgart	151.00	349	ePKPab	PKPab	20 18 45.7	-0.5
FUR	Furstenfeldbru	151.17	346	ePKPbc	PKPbc	20 18 36.1	-0.3
FUR				ePKPab	PKPab	20 18 47.3	+0.3
RJOB	Jochberg	151.20	344	ePKPbc	PKPbc	20 18 36.1	-0.4
RJOB				ePKPab	PKPab	20 18 47.6	+0.4
VTS	Vitosha	151.24	325	⇓iP	PKPbc	20 18 36.6	-0.3
SOKA	Soboth	151.51	340	⇓iPKPbc	PKPbc	20 18 36.6	-0.6
	comp=Z,2.3nm,1.0s						
SOKA				⇓iPKPab	PKPab	20 18 47.7	-0.8
	comp=Z,2.8nm,1.1s						
BFO	Black Forest	151.57	350	ePKPbc	PKPbc	20 18 37.0	-0.3
BFO				ePKPab	PKPab	20 18 46.4	-2.3
KBA	Koelnbreinsper	151.66	343	⇓iPKPbc	PKPbc	20 18 37.3	-0.4
	comp=Z,2.4nm,0.7s						
KBA				⇓iPKPab	PKPab	20 18 47.6	-1.6
	comp=Z,1.5nm,0.7s						
WATA	Walderalm	151.88	345	⇓iPKPbc	PKPbc	20 18 37.7	-0.5
	comp=Z,1.2nm,0.4s						
WTTA	Wattenberg	151.93	345	⇑ePKPbc	PKPbc	20 18 38.1	-0.2
	comp=Z,2.3nm,0.5s						
WTTA				⇓iPKPab	PKPab	20 18 50.8	+0.3
	comp=Z,4.5nm,0.6s						
ABTA	Abfaltersbach	152.19	343	⇓iPKPbc	PKPbc	20 18 38.0	-0.8
	comp=Z,2.9nm,0.6s						
ABTA				⇓iPKPab	PKPab	20 18 51.0	-0.4
	comp=Z,2.7nm,0.7s						
ESDC	Sonseca Array	160.25	12	PKPab	PKPab	20 19 25.6	-0.8
	comp=Z,0.6nm,0.7s,baz=346,slow=3.5,SNR=4.3						
TORD	Torodi Ar. Bea	172.78	182	PKPab	PKPab	20 20 22.0	-0.1
	comp=Z,0.7nm,0.8s,baz=180,slow=3.3,SNR=4.0						

*IDC **03** 20:16:13.9±1.5,82°.05N×6°.63W,h0^{km},mb3.4/4,mb1 3.7/8, mb1mx3.4/31,mbtmp3.7/8,ML3.6/4,MS3.3/6,Ms1 3.3/6, ms1mx2.8/43,Error ellipse: s-maj=33.3km s-min=23.6km az=2.0*
*NAO **03** 20:16:22.8±8.9,81°.86N×3°.28W,h52^{km}±294^{km},ML3.2*
*CSEM **03** 20:16:22.5±0.4,81°.63N×2°.51W,h10^{km},ML3.2,Error ellipse: s-maj=38.8km s-min=8.8km az=35.0*
ISC 03 20:16:17.7±1.5**,81°.7N**±0°.2×**4°.70W**±0°.06**,h10**^{km}**,n23, σ1s88**/27**,mb3.3**/4**,MS3.3**/4**,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	3.94	126	Pn	Pn	20 17 19.1	+1.1
KBS				Sn	Sn	20 18 01.8	-2.4
KBS	Kingsbay	3.94	126	eP	Pn	20 17 18.7	+0.7
KBS				e		20 17 28.2	
KBS				eS	Sn	20 18 01.7	-2.4
KBS				AML	AML	20 18 05.5	
	comp=Z,19nm,0.5s						
KBS	Kingsbay	3.94	126	eP	Pn	20 17 18.7	+0.7
	SNR=49						
KBS	Kingsbay	3.94	126	Pn	Pn	20 17 19.1	+1.1
KBS				Sn	Sn	20 18 01.8	-2.4
SPA0	Spitsbergen Ar	5.07	123	Pn	Pn	20 17 34.4	+0.8
	baz=354,slow=8.6						
SPA0				Sn	Sn	20 18 29.9	-2.3
	baz=326,slow=18						
SPA0	Spitsbergen Ar	5.07	123	Pn	Pn	20 17 34.4	+0.8
	baz=354,slow=8.6						
SPA0				Sn	Sn	20 18 29.9	-2.3
	baz=326,slow=18						
SPA0	Spitsbergen Ar	5.07	123	Pn	Pn	20 17 34.4	+0.8
	SNR=50						
SPA0				Sn	Sn	20 18 29.9	-2.3
	SNR=50						
SPITS	Spitsbergen Ar	5.07	123	Pn	Pn	20 17 34.6	+1.0
	baz=1.0,slow=9.3,SNR=208						
SPITS				Sn	Sn	20 18 29.4	-2.7
	baz=349,slow=8.5,SNR=2.1						
DAG	Danmarks Havn	5.58	215	i P	Pn	20 17 42.0	+1.5
	comp=Z,14nm,0.7s						
DAG				i S	Sn	20 18 43.7	-0.8
SUMG	Summit	11.53	237	i P	Pn	20 18 59.9	-2.5
SUMG				e		20 21 05.3	
ARA0	ARCESS Array S	13.99	133	P	Pn	20 19 37.0	+1.5
	baz=5.4,slow=22						
ARA0	ARCESS Array S	13.99	133	Pn	Pn	20 19 37.0	+1.5
	baz=5.4,slow=22						
ARA0	ARCESS Array S	13.99	133	Pn	Pn	20 19 37.0	+1.5
	SNR=50						
ARCES	ARCESS Array B	13.99	133	Pn	Pn	20 19 37.8	+2.2
	comp=Z,0.1nm,0.3s,baz=6.5,slow=11,SNR=3.6						
RES	Resolute Bay	17.51	298	P	Pn	20 20 13.0	-8.3
	comp=Z,0.2nm,0.3s,baz=37,slow=12,SNR=14						
RES				S	Sn	20 23 15.1	-21
	comp=Z,0.1nm,0.3s,baz=108,slow=21,SNR=3.6						
RES				LR	LR	20 26 56.9	
	comp=Z,111nm,18.7s,baz=140,slow=38						
SFJD	Kangerlussuaq	18.29	244	P	Pn	20 20 27.9	-3.1
	comp=Z,1.6nm,0.3s,baz=14,slow=17,SNR=9.4						
SFJD				S	Sn	20 23 36.3	-18
	comp=Z,1.4nm,0.3s,baz=346,slow=10,SNR=5.3						
SFJD				LR	LR	20 27 50.2	
	comp=Z,64nm,19.3s,baz=10,slow=38						
NOA	NORSAR Array B	21.20	158	P	P	20 21 05.7	+2.8
	comp=Z,0.9nm,0.7s,baz=341,slow=8.7,SNR=3.3						
ZALV	Zalesovo Beam	36.99	79	LR	LR	20 43 40.4	
	comp=Z,38nm,18.2s,baz=59,slow=44						
KURBB	Kurchatov Arra	39.32	87	P	P	20 23 46.1	-0.2
	comp=Z,0.1nm,0.4s,baz=358,slow=7.2,SNR=5.0						
KURBB				LR	LR	20 41 57.2	
	comp=Z,21nm,19.9s,baz=325,slow=39						
ULM	Lac du Bonnet	40.83	281	LR	LR	20 40 01.6	
	comp=Z,45nm,18.9s,baz=332,slow=35						
MKAR	Makanchi Array	43.60	84	P	P	20 24 21.3	-0.2
	comp=Z,0.4nm,0.7s,baz=359,slow=7.5,SNR=3.5						
NEW	Newport	45.65	300	LR	LR	20 45 20.4	
	comp=Z,48nm,18.4s,baz=20,slow=39						
TORD	Torodi Ar. Bea	68.64	173	P	P	20 27 21.0	+0.4
	comp=Z,0.6nm,0.6s,baz=348,slow=6.1,SNR=7.7						

*IDC **03** 20:22:21.4±1.6,35°.17N×88°.41E,h0^{km},mb3.2/2, mb1 3.2/7,mb1mx3.1/29,mbtmp3.1/7,ML3.2/5,Error ellipse: s-maj=40.2km s-min=25.9km az=71.0*
*ISCJB **03** 20:22:22.9±0.7,35°.22N±0°.06×88°.3E±0°.2,h33^{km},mb3.1/2, Error ellipse: s-maj=19.5km s-min=8.1km az=1.1*
ISC 03 20:22:25.6±0.9**,35°.21N**±0°.09×**88°.4E**±0°.2**,h35**^{km}**,n11, σ1s40**/11**,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	Taplejung	7.86	184	eP	Pn	20 24 18.8	+1.0
	17nm,0.5s						
ODAN	Odare	8.37	186	eP	Pn	20 24 24.0	-0.7
	27nm,0.7s						
RAMN	Ramite	8.38	191	eP	Pn	20 24 24.0	-0.8
	5.9nm,0.7s						
PYUN	Piuthan	8.45	214	eP	Pn	20 24 24.7	-1.0
MKAR	Makanchi Array	12.44	340	Pn	Pn	20 25 19.4	-0.8
	0.1nm,0.3s,baz=152,slow=14,SNR=4.6						
KURBB	Kurchatov Arra	16.98	338	Pn	Pn	20 26 18.6	-1.6
	0.0nm,0.3s,baz=156,slow=11,SNR=4.0						
SONM	Songino Array	18.41	41	P	P	20 26 37.0	-0.8
	0.1nm,0.3s,baz=229,slow=11,SNR=2.1						
ZALV	Zalesovo Beam	18.90	354	P	P	20 26 43.3	+0.4
	0.1nm,0.3s,baz=178,slow=7.2,SNR=3.5						
CMAR	Chiang Mai Arr	19.15	148	P	Pn	20 26 47.1	+0.1
	0.1nm,0.3s,baz=328,slow=12,SNR=4.8						
BVAR	Borovoye Array	21.89	330	P	P	20 27 18.2	+2.8
	0.5nm,0.7s,baz=144,slow=13,SNR=4.3						
TORD	Torodi Ar. Bea	79.87	279	P	P	20 34 31.7	+0.7
	0.2nm,0.6s,baz=37,slow=5.0,SNR=3.2						

*IDC **03** 20:25:04.5±1.1,16°.00S×174°.92W,h262^{km}±12^{km},mb3.6/8, mb1 3.8/10,mb1mx3.6/21,mbtmp3.6/10,Error ellipse: s-maj=25.7km s-min=11.3km az=145.0*
*ISCJB **03** 20:25:04.3±0.4,15°.9S±0°.1×174°.96W±0°.08,h278^{km}, mb3.8/9,Error ellipse: s-maj=17.4km s-min=7.2km az=154.0*
*AUST **03** 20:25:06.2±0.0,15°.95S×174°.69W,h297^{km},Error ellipse: s-maj=2.1km s-min=1.6km az=347.0*
ISC 03 20:25:05.6±0.6**,16°.0S**±0°.1×**174°.88W**±0°.09**,h278**^{km}**,n30, σ0s87**/28**,mb3.7**/9**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.62	56	P	Pn	20 26 07.2	+0.6
	30nm,0.3s,baz=174,slow=1.2,SNR=50						
AFI				S	S	20 26 53.5	-1.8
	42nm,0.3s,baz=94,slow=22,SNR=10						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.66	124	P	Pn	20 26 30.8	+0.7
	baz=5.5,SNR=7.2						
DZM	Mont Dzumac	18.67	248	P	P	20 29 04.6	+0.7
	1.1nm,0.3s,baz=58,slow=19,SNR=5.4						
LHI	Lord Howe Isla	28.34	232	S	S	20 35 27.5	+27
	baz=28,SNR=4.5						
ARMA	Armidale	33.84	239	P	P	20 31 22.0	-0.4
	baz=34,SNR=8.7						
CMSA	Cobar Meteorol	39.05	239	P	P	20 32 05.4	-0.7
	baz=39,SNR=13						
QLP	Quilpie	39.39	247	P	P	20 32 08.1	-0.9
	baz=40,SNR=5.2						
COEN	Coen	40.52	267	P	P	20 32 19.5	+1.1
	baz=41,SNR=5.3						
TOO	Toolangi	41.01	231	P	P	20 32 22.1	-0.1
	baz=41,SNR=4.0						
STKA	Stephens Creek	42.52	240	P	P	20 32 34.2	-0.2
	8.0nm,0.7s,baz=86,slow=9.8,SNR=18						
STKA	Stephens Creek	42.52	240	P	P	20 32 34.2	-0.2
	baz=43,SNR=12						
BBOO	Buckleboo	47.30	240	P	P	20 33 11.2	-0.7
	baz=47,SNR=7.4						
WRA	Warramunga Arr	48.33	257	P	P	20 33 18.7	-1.2
	1.4nm,0.5s,baz=91,slow=7.3,SNR=59						
ASAR	Alice Springs	48.58	252	P	P	20 33 21.0	-0.8
	40nm,0.6s,baz=86,slow=8.1,SNR=525						
KDU	Kakadu	51.01	266	P	P	20 33 22.2	-18
	baz=51,SNR=3.4						
FORT	Forrest	53.89	243	P	P	20 33 59.8	-1.1
	baz=54,SNR=10						
KNRA	Kununurra	54.07	262	P	P	20 33 45.4	-17
	baz=54,SNR=3.5						
SWI	Sorong	55.15	280	P	P	20 34 10.8	+0.7
	baz=55,SNR=5.9						
FITZ	Fitzroy Crossi	56.70	259	P	P	20 34 20.9	-0.1
	baz=57,SNR=3.3						
MEEK	Meekatharra	62.28	248	P	P	20 34 58.1	-0.9
	baz=62,SNR=7.4						
VNDA	Vanda	62.69	186	P	P	20 35 01.1	+0.4
	2.1nm,0.9s,baz=5.8,slow=5.8,SNR=9.4						
MJAR	Matsushiro Arr	68.45	321	P	P	20 35 38.0	+0.1
	0.3nm,0.4s,baz=148,slow=6.3,SNR=5.3						
YBH	Yreka Blue Hor	74.90	38	P	P	20 36 16.8	+0.6
	0.4nm,0.3s,baz=211,slow=4.3,SNR=3.8						
TXAR	Lajitas Array	82.11	57	P	P	20 36 56.4	+0.6
	1.0nm,1.0s,baz=242,slow=5.4,SNR=7.9						
ANMO	Albuquerque	82.25	50	P	P	20 36 56.1	-0.4
	0.6nm,0.4s,baz=251,slow=22,SNR=3.2						
PDAR	Pinedale Array	83.63	42	P	P	20 37 03.1	-0.3
	1.1nm,0.9s,baz=205,slow=2.8,SNR=6.6						
ARCES	ARCESS Array B	124.95	351	PKP	PKPdf	20 43 33.9	+1.9
	2.6nm,0.9s,baz=80,slow=2.2,SNR=3.0						
BOSA	Boshof	131.60	204	PKP	PKPdf	20 43 44.8	-1.4
	1.3nm,0.3s,baz=346,slow=0.9,SNR=7.4						
BRTR	Keskin Array B	145.66	319	PKPbc	PKPab	20 44 13.1	0.0
	1.0nm,0.8s,baz=134,slow=3.6,SNR=7.1						
GERES	GERESS Array B	146.45	350	PKPbc	PKPab	20 44 16.0	+0.4
	0.3nm,0.5s,baz=15,slow=4.2,SNR=2.4						

GUC 03 20:42:29.0±0.5, 40.98S×72.82W, h90km±3km, ML4.1, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUYE	Entre Lagos	0.33	29	eP	Pn	20 42 42.7	+0.1
PUYE				eS	Sn	20 42 53.1	+0.4
PUYE				AML	AML	20 42 54.1	
	comp=N,25μm,0.2s						
PMCH	Puerto Montt	0.52	187	eP	Pn	20 42 44.1	+0.2
PMCH				eS	Sn	20 42 55.3	+0.4
PMCH				AML	AML	20 42 59.2	
	comp=E,4μm,0.2s						
CNTO	Contao	0.83	175	eP	Pn	20 42 47.0	+0.2
CNTO				eS	Sn	20 43 00.3	+0.2
CNTO				AML	AML	20 43 03.6	
	comp=E,3μm,0.2s						
ILCA	Isla Las Cabra	1.10	169	eP	Pn	20 42 49.8	-0.1
ILCA				eS	Sn	20 43 06.1	+0.5
VLCH	Valdivia	1.21	344	eP	Pn	20 42 51.5	+0.3
VLCH				eS	Sn	20 43 08.1	+0.2
VLCH				AML	AML	20 43 11.0	
	comp=N,20μm,0.1s						

IDC 03 20:46:30.0±53.0, 15.82S×174.39W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/18, mbtmp4.0/3, Error ellipse: s-maj=1002.0km s-min=166.4km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.00	240	P	P	20 54 32.0	+0.7
	0.8nm,0.4s,baz=102,slow=11,SNR=9.9						
WRA	Warramunga Arr	48.82	257	P	P	20 55 16.9	-0.7
	0.5nm,0.4s,baz=96,slow=7.2,SNR=9.9						
ASAR	Alice Springs	49.07	252	P	P	20 55 19.1	-0.4
	4.4nm,0.5s,baz=89,slow=7.9,SNR=102						

IDC 03 20:47:06.3±1.0, 60.48S×24.42W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/15, mbtmp4.1/4, MS3.7/8, Ms1 3.7/8, ms1mx3.5/23, Error ellipse: s-maj=41.8km s-min=26.5km az=69.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	South Pole Qui	29.76	180	LR	LR	21 04 41.1	
	comp=Z,99nm,18.4s,baz=209,slow=35						
PLCA	Paso Flores	34.36	284	LR	LR	21 06 28.8	
	comp=Z,83nm,20.1s,baz=164,slow=34						
MAW	Mawson	35.77	139	P	P	20 54 05.7	-0.7
	2.3nm,0.8s,baz=256,slow=15,SNR=3.5						
MAW				LR	LR	21 06 32.1	
	comp=Z,94nm,19.8s,baz=59,slow=33						
VNDA	Vanda	42.20	182	P	P	20 55 00.8	+0.7
	1.4nm,0.9s,baz=188,slow=5.0,SNR=5.1						
BOSA	Boshof	45.92	69	LR	LR	21 12 43.0	
	comp=Z,47nm,18.2s,baz=348,slow=34						
BDFB	Brasilia	47.93	329	LR	LR	21 13 10.4	
	comp=Z,81nm,20.8s,baz=25,slow=33						
LPAZ	La Paz	54.13	305	P	P	20 56 33.2	-0.6
	0.4nm,0.3s,baz=146,slow=13,SNR=2.7						
LPAZ				LR	LR	21 18 20.4	
	comp=Z,51nm,19.4s,baz=124,slow=35						
TORD	Torodi Ar. Bea	76.30	26	P	P	20 58 57.4	+0.6
	1.7nm,0.3s,baz=202,slow=6.4,SNR=68						
RAR	Rarotonga	90.93	221	LR	LR	21 36 38.3	
	comp=Z,84nm,19.6s,baz=88,slow=33						
ASAR	Alice Springs	94.31	160	LR	LR	21 41 10.0	
	comp=Z,85nm,18.2s,baz=281,slow=34						
YKA	Yellowknife Ar	140.37	313	PKP	PKPdf	21 06 35.8	+0.3
	0.3nm,0.9s,baz=122,slow=2.0,SNR=3.9						
SONM	Songino Array	149.33	92	PKPbc	PKPbc	21 06 54.7	-1.3
	2.0nm,1.0s,baz=222,slow=2.0,SNR=11						

*ISK **03** 21:12:47.8, 36.97N×29.26E, h6km, MD3.1*
*DDA **03** 21:12:48.1, 36.96N×29.27E, h7km, MD3.2*
*CSEM **03** 21:12:48.5±0.1, 36.97N×29.29E, h5km, MD3.1, Error ellipse: s-maj=3.8km s-min=2.8km az=142.0*
*ISCJB **03** 21:12:48.3±0.5, 36.95N±0.02×29.27E±0.03, h4km±4km, Error ellipse: s-maj=4.8km s-min=3.3km az=43.5*
*ATH **03** 21:12:50.0, 36.93N×29.10E, h15km±2km, MD3.5/10*
ISC 03 21:12:48.0±1.3, 36.96N±0.02×29.25E±0.02, h3km±11km, n73, σ1.39/87, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.28	45	ePG	Pb	21 12 53.8	-1.9
GLHS				eSG	Sb	21 12 58.2	-2.6
GLHS	Glhisar (BURDU	0.28	45	ePg	Pb	21 12 53.8	-1.9
GLHS				eSg	Sb	21 12 58.2	-2.6
FETY	Fethiye	0.35	203	ePG	Pb	21 12 55.3	-1.7
FETY				eSG	Sb	21 13 01.0	-1.9
FETY	Fethiye	0.35	203	ePg	Pb	21 12 55.3	-1.7
FETY				eSg	Sb	21 13 01.0	-1.9
GOLH	Golhisar	0.37	42	i P	Pb	21 12 55.3	-2.0
GOLH				i S	Sb	21 13 02.4	-1.1
GOLH	Golhisar	0.37	42	i P	Pb	21 12 55.3	-2.0
GOLH				i S	Sb	21 13 02.4	-1.1
DALY	Dalyan (Mu˜la	0.50	253	ePG	Pb	21 12 58.1	-1.4
DALY				eSG	Sb	21 13 05.6	-1.6
DALY	Dalyan (Mu˜la	0.50	253	ePg	Pb	21 12 58.1	-1.4
DALY				eSg	Sb	21 13 05.6	-1.6
TURN	Turunc	0.53	261	i P	Pn	21 13 03.2	+0.7
TURN				i S	Sn	21 13 18.9	+7.0
TURN	Turunc	0.53	261	i P	Pn	21 13 03.2	+0.7
TURN				i S	Sn	21 13 18.9	+7.0
ELL	Elmali	0.57	112	ePG	Pb	21 12 59.1	-1.6
ELL	Elmali	0.57	112	ePg	Pb	21 12 59.1	-1.6
DNZL	Cakiroluk	0.74	347	i P	Pg	21 13 01.8	-0.5
DNZL				i S	Sb	21 13 14.3	-0.1
DNZL	Cakiroluk	0.74	347	i P	Pg	21 13 01.8	-0.5
DNZL				i S	Sb	21 13 14.3	-0.1
AKAS	Kas	0.78	159	i P	Pb	21 13 04.0	-0.3
AKAS				i S	Sn	21 13 19.1	+0.8
AKAS	Kas	0.78	159	i P	Pb	21 13 04.0	-0.3
AKAS				i S	Sn	21 13 19.1	+0.8
YER	Yerkesik	0.80	283	ePG	Pb	21 13 03.7	-0.8
YER	Yerkesik	0.80	283	ePg	Pb	21 13 03.7	-0.8
DENT	Denizli	0.81	348	ePG	Pb	21 13 03.5	-1.3
DENT	Denizli	0.81	348	ePg	Pb	21 13 03.5	-1.3
KSL	Kastellorizon	0.85	162	ePN	Pn	21 13 06.7	-0.2
KORT	Korkueli	0.88	87	i P	Pb	21 13 04.8	-1.2
KORT				i S	Sn	21 13 22.6	+1.9
KORT	Korkueli	0.88	87	i P	Pb	21 13 04.8	-1.2
KORT				i S	Sn	21 13 22.6	+1.9
ANTB	Antalya	1.12	93	ePN	Pn	21 13 09.3	-1.3
ANTB	Antalya	1.12	93	ePn	Pn	21 13 09.3	-1.3
ARG	Arkhangelos	1.17	231	ePN	Pn	21 13 10.2	-1.1
ARG	Arkhangelos	1.17	231	ePn	Pn	21 13 10.2	-1.1
BCK	Bucak	1.18	65	ePN	Pn	21 13 10.6	-0.9
BCK	Bucak	1.18	65	ePn	Pn	21 13 10.6	-0.9
MLSB	Milas	1.23	286	ePN	Pn	21 13 11.8	-0.3
MLSB	Milas	1.23	286	ePn	Pn	21 13 11.8	-0.3
AYDN	Tasoluk	1.30	303	i P	Pg	21 13 12.1	-0.8
AYDN				i S	Sn	21 13 31.3	+0.3
AYDN	Tasoluk	1.30	303	i P	Pg	21 13 12.1	-0.8
AYDN				i S	Sn	21 13 31.3	+0.3
ISP	Isparta	1.33	49	ePN	Pg	21 13 14.1	+0.6
ISP	Isparta	1.33	49	ePn	Pg	21 13 14.1	+0.6
DAT	Datca	1.36	261	ePN	Pg	21 13 13.9	-0.3
DAT	Datca	1.36	261	ePn	Pg	21 13 13.9	-0.3
KHL	Karahalli	1.38	9	ePN	Pg	21 13 13.9	-0.5
KHL	Karahalli	1.38	9	ePn	Pg	21 13 13.9	-0.5
KHAL	Karahalli	1.42	8	i P	Pg	21 13 15.3	+0.1
KHAL				i S	Sg	21 13 36.2	+2.5
KHAL	Karahalli	1.42	8	i P	Pg	21 13 15.3	+0.1
KHAL				i S	Sg	21 13 36.2	+2.5
BODT	Bodrum	1.56	274	ePN	Pg	21 13 17.5	-0.4
BODT	Bodrum	1.56	274	ePn	Pg	21 13 17.5	-0.4
KULA	Kula-Manisa	1.62	343	ePN	Pb	21 13 17.8	-0.8
KULA	Kula-Manisa	1.62	343	ePn	Pb	21 13 17.8	-0.8
NIS1	Nisyros Isl.	1.70	258	ePN	Pg	21 13 20.0	-0.7
NIS1	Nisyros Isl.	1.70	258	ePn	Pg	21 13 20.0	-0.7
SHUT	Suhut-Afyon	1.89	33	ePN	Pb	21 13 22.1	-1.2
SHUT	Suhut-Afyon	1.89	33	ePn	Pb	21 13 22.1	-1.2
ALT	Altintas	2.20	18	ePN	Pb	21 13 25.9	-2.6
ALT	Altintas	2.20	18	ePn	Pb	21 13 25.9	-2.6
KARP	Karpathos	2.20	231	ePN	Pb	21 13 26.7	-1.8
KARP	Karpathos	2.20	231	ePn	Pb	21 13 26.7	-1.8
BLCB	Balcova	2.26	310	ePN	Pb	21 13 26.6	-2.8
BLCB	Balcova	2.26	310	ePn	Pb	21 13 26.6	-2.8
TVSB	Tavsanli	2.49	4	ePN	Pn	21 13 30.2	+0.6
TVSB	Tavsanli	2.49	4	ePn	Pn	21 13 30.2	+0.6
KIZT	Kizilcal	2.83	47	ePN	Pn	21 13 34.7	+0.5
KIZT	Kizilcal	2.83	47	ePn	Pn	21 13 34.7	+0.5
CHOS	Chios island	2.91	300	ePN	Pb	21 13 37.0	-3.6
CHOS	Chios island	2.91	300	ePn	Pb	21 13 37.0	-3.6
APE	Apeiranthos	2.98	273	ePN	Pn	21 13 37.4	+1.2
APE	Apeiranthos	2.98	273	ePn	Pn	21 13 37.4	+1.2
ZKR	Zakros	3.08	234	ePN	Pn	21 13 38.9	+1.4
ZKR	Zakros	3.08	234	ePn	Pn	21 13 38.9	+1.4
NPS	Neapolis	3.40	241	ePN	Pn	21 13 43.5	+1.5
NPS	Neapolis	3.40	241	ePn	Pn	21 13 43.5	+1.5
LAST	Lasithi	3.55	241	ePN	Pn	21 13 45.2	+1.1
LAST	Lasithi	3.55	241	ePn	Pn	21 13 45.2	+1.1
IDI	Anoyia	3.91	246	ePN	Pn	21 13 50.9	+1.9
IDI	Anoyia	3.91	246	ePn	Pn	21 13 50.9	+1.9
SIVA	Sivas	4.09	243	ePN	Pn	21 13 52.8	+1.3
SIVA	Sivas	4.09	243	ePn	Pn	21 13 52.8	+1.3

*ISCJB **03** 21:30:05.6±0.7, 8.36S±0.05×117.00E±0.06, h10km, mb3.7/5, Error ellipse: s-maj=8.9km s-min=7.8km az=16.6*
*IDC **03** 21:30:07.8±1.2, 8.32S×117.26E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.7/23, mbtmp3.8/8, ML3.8/2, Error ellipse: s-maj=40.4km s-min=17.3km az=60.0*
*AUST **03** 21:30:09.2, 8.48S×116.95E, h20km*
ISC 03 21:30:08.1±0.8, 8.41S±0.08×116.96E±0.07, h10km, n16, σ2.29/16, mb3.7/5, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	3.53	111	P	Pb	21 31 12.8	+2.1
	baz=3.5,SNR=3.3						
KAPI	Kappang	4.37	40	Pn	Pn	21 31 12.9	-1.6
	5.0nm,0.3s,baz=231,slow=4.3,SNR=36						
KAPI				Sn	Sn	21 32 02.0	-3.5
	8.6nm,0.3s,baz=236,slow=23,SNR=13						
UGM	Wanagama	6.39	274	P	Pn	21 31 41.7	-0.8
	baz=6.4,SNR=8.8						
FITZ	Fitzroy Crossi	12.81	140	Pn	Pn	21 33 10.3	-0.1
	0.5nm,0.3s,baz=112,slow=23,SNR=11						
FITZ	Fitzroy Crossi	12.81	140	P	Pn	21 33 13.1	+2.8
	baz=13,SNR=6.1						
KNRA	Kununurra	13.61	123	P	Pn	21 33 23.1	+1.8
	baz=14,SNR=4.6						
GIRL	Giralia	14.39	190	P	Pn	21 33 30.1	-1.9
	baz=14,SNR=6.3						
MTN	Manton Dam	14.61	109	P	Pn	21 33 36.4	+1.3
	baz=15,SNR=3.9						
MTN				S	Sn	21 36 15.0	-2.1
	baz=15,SNR=4.1						
MEEK	Meekatharra	18.20	175	P	Pn	21 34 20.6	-0.4
	baz=18,SNR=15						
MEEK				S	Sn	21 37 24.5	-20
	baz=18,SNR=6.4						
WRA	Warramunga Arr	20.35	126	P	P	21 34 44.5	-0.5
	3.0nm,0.4s,baz=302,slow=12,SNR=34						
MORW	Morawa	20.57	182	P	Pn	21 34 52.4	+3.0
	baz=21,SNR=6.8						
MORW				S	S	21 38 32.9	-4.3
	baz=21,SNR=3.7						
ASAR	Alice Springs	22.21	135	P	P	21 35 04.8	-0.2
	1.5nm,0.7s,baz=310,slow=9.6,SNR=21						
STKA	Stephens Creek	32.70	139	P	P	21 36 40.2	-0.7
	1.5nm,0.5s,baz=328,slow=11,SNR=6.2						
SONM	Songino Array	56.78	352	P	P	21 39 51.5	-1.0
	0.2nm,0.5s,baz=156,slow=11,SNR=2.8						
MKAR	Makanchi Array	63.03	334	P	P	21 40 38.2	+2.8
	0.7nm,0.8s,baz=148,slow=7.0,SNR=4.7						
ZALV	Zalesovo Beam	67.79	340	P	P	21 41 08.3	+2.2
	0.2nm,0.3s,baz=156,slow=7.4,SNR=3.0						

MAN 03 21:35:12, 17.67N×122.74E, h44km, mb4.7, ML3.5, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.68	207	eP	Pn	21 35 27.4	+2.1
PALP				eS	Sn	21 35 38.3	+3.6
SGCP	Mt. Cagua	0.87	311	eP	Pn	21 35 29.5	+1.6
CAUP	Cauayan	1.14	231	eP	Pn	21 35 33.4	+1.9

*ISCJB **03** 21:59:45.9±0.6, 14.48N±0.05×91.39W±0.06, h121km±5km, mb4.2/16, Error ellipse: s-maj=10.7km s-min=8.0km az=159.5*
*IDC **03** 21:59:46.8±1.0, 14.54N×91.20W, h112km±8km, mb4.0/5, mb1 4.2/7, mb1mx3.7/23, mbtmp4.0/7, Error ellipse: s-maj=21.5km s-min=14.7km az=78.0*
*NEIC **03** 21:59:47.5±0.6, 14.55N×91.37W, mb4.3/17, Error ellipse: s-maj=11.9km s-min=8.2km az=59.0*
*CASC **03** 21:59:48.1±2.7, 14.24N×91.31W, h103km±14km, MD4.1, ML4.2, mb4.3(NEIC)*
ISC 03 21:59:46.6±0.6, 14.47N±0.05×91.41W±0.06, h110km±4km, n117, σ1.14/140, mb4.2/16, 18C-13D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.26	236	eP	Pn	22 00 01.6	-0.7
FUG	Fuego 3	0.55	92	eP	Pn	22 00 03.8	-0.2
PCG	Pacaya	0.78	95	eP	Pn	22 00 06.3	+0.3
IXG	Ixpaco	0.97	107	eP	Pn	22 00 08.0	+0.3
IXG				eS	Sn	22 00 25.9	+2.2
NBG	Las Nubes	1.04	83	eP	Pn	22 00 09.5	+1.0
NBG				eS	Sn	22 00 31.8	+6.7
MRL	Marmol	1.77	70	eP	Pn	22 00 18.3	+1.5
MRL				eS	Sn	22 00 41.6	+1.7
RTR	El Retiro	1.80	108	eP	Pn	22 00 17.3	0.0
RTR				eS	Sn	22 00 38.4	-2.3
SBLS	San Blas	1.84	110	eP	Pn	22 00 17.6	-0.3
SBLS				eS	Sn	22 00 39.9	-1.8
SNJE	San Jose	1.85	109	eP	Pn	22 00 17.7	-0.2
SNJE				eS	Sn	22 00 38.2	-3.6
BOQS	Boqueron	2.19	109	⇑eP	Pn	22 00 21.9	-0.3
SNET	Serv Nac Est T	2.25	110	eP	Pn	22 00 22.5	-0.4
SNET				AML	AML	22 00 58.8	
	comp=Z,2μm,0.4s						
LFU	La Fuente	2.34	107	eP	Pn	22 00 23.7	-0.4
LBRS	Las Brisas	2.41	107	eP	Pn	22 00 25.0	0.0
LFRS	El Faro	2.43	110	eP	Pn	22 00 25.1	-0.1
SNVI	San Vicente	2.64	108	eP	Pn	22 00 28.1	+0.1
CAHU	Cacacuatique	3.18	102	eP	Pn	22 00 35.0	-0.2
TGUH	Tegucigalpa,Un	4.03	95	ePn	Pn	22 00 47.0	+0.6
TEIG	Tepich	6.46	27	ePn	Pn	22 01 18.5	-0.7
TEIG				eSn	Sn	22 02 32.0	+0.4
TEIG	Tepich	6.46	27	P	Pn	22 01 18.8	-0.5
	comp=Z,38nm,0.3s,baz=226,slow=4.0,SNR=44						
TEIG				S	Sn	22 02 30.1	-1.5
	comp=Z,3.2nm,0.3s,baz=220,slow=22,SNR=15						
JTS	JuntasAbangare	7.55	123	ePn	Pn	22 01 35.0	+0.9
	comp=Z,15nm,0.5s						
DWPF	Disney	16.44	33	Pn	Pn	22 03 30.9	+0.1
532A	Rocksprings	17.44	335	⇑P	Pn	22 03 43.8	+0.8
	baz=18						
432A	Menard	18.06	336	⇑P	Pn	22 03 50.1	-0.3
	baz=18						
431A	Sonora	18.22	334	⇑P	Pn	22 03 52.7	+0.2
	baz=18,SNR=8.0						
TIGA	Tifton	18.35	22	⇓P	P	22 03 53.1	+0.5
	baz=18						
332A	Millersview	18.49	337	⇓P	P	22 03 54.8	+0.6
	baz=18,SNR=7.6						
430A	Baggett Ranch,	18.59	333	⇑P	Pn	22 03 56.1	-0.6
	baz=19						
TXAR	Lajitas Array	18.64	325	P	Pn	22 03 57.5	+0.1
TXAR				PcP	PcP	22 08 20.7	+0.6
TXAR				ScP	ScP	22 11 47.5	+1.7
TXAR	Lajitas Array	18.64	325	P	Pn	22 03 57.5	+0.1
	comp=Z,0.2nm,0.3s,baz=151,slow=12,SNR=23						
TXAR				PcP	PcP	22 08 20.7	+0.6
	comp=Z,0.0nm,0.3s,baz=163,slow=4.8,SNR=5.3						
TXAR				ScP	ScP	22 11 47.5	+1.7
	comp=Z,0.0nm,0.3s,baz=161,slow=5.0,SNR=3.8						
331A	San Angelo	18.69	335	P	P	22 03 57.1	+0.7
	baz=19,SNR=16						
429A	Davenport Ranc	18.75	331	⇑P	Pn	22 03 58.2	-0.6
	baz=19,SNR=5.9						
528A	Cox Ranch, San	18.81	328	⇑P	Pn	22 03 58.7	-0.8
	baz=19						
232A	Coleman	18.91	338	P	P	22 03 58.5	-0.2
	baz=19,SNR=5.2						
LRAL	Lakeview Retre	18.92	12	ePn	Pn	22 04 00.5	-0.1
	comp=Z,42nm,1.4s						
330A	Mertzon	19.09	334	P	P	22 04 01.0	+0.3
	baz=19,SNR=8.5						
231A	Bronte	19.20	336	P	P	22 04 01.6	-0.3
	baz=19,SNR=9.1						
527A	Woodward Ranch	19.23	326	⇓P	Pn	22 04 03.5	-1.0
	baz=19,SNR=5.5						
526A	Mary Lane Ranc	19.43	325	⇑P	Pn	22 04 05.8	-0.9
	baz=19,SNR=6.0						
230A	Sterling City	19.48	335	⇓P	P	22 04 04.8	-0.1
	baz=20						
329A	Wagon Wheel Ra	19.52	332	P	P	22 04 05.8	+0.5
	baz=20,SNR=5.4						
ABTX	Abilene, Hawle	19.57	339	P	P	22 04 06.5	+0.6
	baz=20,SNR=7.5						
427A	Hayter Ranch,	19.68	328	⇓P	P	22 04 07.3	+0.1
	baz=20						
328A	Wristen Ranch,	19.82	330	P	P	22 04 09.3	+0.7
	baz=20,SNR=14						
426A	McDonald Obser	19.87	326	⇑P	P	22 04 10.4	+1.0
	baz=20						
130A	Snyder	20.04	336	P	P	22 04 10.2	-0.8
	baz=20,SNR=6.7						
OXF	Oxford	20.04	5	eP	P	22 04 10.0	-0.9
	comp=Z,7.0nm,0.4s						
MIAR	Mount Ida	20.09	355	eP	P	22 04 10.5	-0.9
	comp=Z,12nm,1.2s						
Z32A	Haskell	20.14	340	P	P	22 04 11.8	-0.3
	baz=20,SNR=9.3						
GOGA	Godfrey	20.20	20	eP	P	22 04 13.0	+0.4
	comp=Z,16nm,0.9s						
228A	UT Block 9, Go	20.32	332	⇓P	P	22 04 13.3	-0.8
	baz=20						
326A	Caldwell Ranch	20.35	328	P	P	22 04 15.0	+0.6
	baz=20,SNR=15						
Z31A	Sharp Cattle R	20.38	339	P	P	22 04 13.6	-1.0
	baz=20,SNR=9.1						
129A	Stewart Farms,	20.44	334	P	P	22 04 14.5	-0.8
	baz=20,SNR=16						
425A	Indio Mountain	20.48	325	P	P	22 04 16.5	+0.6
	baz=20,SNR=12						
227A	Bennet, Jal	20.57	330	⇓P	P	22 04 16.7	0.0
	baz=21						
128A	Castleberry Fa	20.70	333	⇑P	P	22 04 17.4	-0.8
	baz=21						
325A	Bean Ranch, Si	20.92	326	⇑P	P	22 04 20.4	-0.2
	baz=21						
Z29A	Hungry Hill Ra	20.92	335	P	P	22 04 19.1	-1.4
	baz=21,SNR=5.7						
Y31A	Rekieta Farm,	21.00	339	P	P	22 04 20.7	-0.6
	baz=21,SNR=9.2						
226B	Tecolote Peak,	21.05	329	P	P	22 04 22.2	+0.3
	baz=21,SNR=6.2						
SDV	Santo Domingo	21.08	103	P	P	22 04 25.1	+2.5
SWET	Sewanee	21.24	12	eP	P	22 04 24.3	+0.4
	comp=Z,8.0nm,0.9s						
WMOK	Wichita Mounta	21.25	343	eP	P	22 04 22.8	-1.1
	comp=Z,4.5nm,1.0s						
324A	Moseley Ranch,	21.25	325	P	P	22 04 23.9	-0.3
	baz=21,SNR=7.9						
225A	Deer Hill, Car	21.41	327	P	P	22 04 25.8	-0.1
	baz=21,SNR=6.5						
X30A	Coker Ranch, T	21.65	338	⇓P	P	22 04 27.5	-0.8
	baz=22						
Y28A	McKinney Farm,	21.70	335	P	P	22 04 27.5	-1.4
	baz=22,SNR=5.6						
224A	Cornudas Mount	21.76	326	P	P	22 04 29.0	-0.6
	baz=22,SNR=7.1						
125A	Gardner Draw,	21.76	329	⇑P	P	22 04 28.9	-0.6
	baz=22						
WVT	Waverly	21.81	8	eP	P	22 04 28.6	-1.2
	comp=Z,2.4nm,0.6s						
Z26A	Caprock	21.93	331	P	P	22 04 30.2	-1.1
	baz=22,SNR=5.1						
MSTX	Muleshoe	21.98	334	⇓P	P	22 04 30.4	-1.3
	baz=22						
W31A	Holland Ranch,	22.02	341	⇑P	P	22 04 31.2	-0.9
	baz=22						
Y27A	Causey	22.07	333	P	P	22 04 32.0	-0.8
	baz=22,SNR=6.2						
TKL	Tuckaleechee C	22.19	17	eP	P	22 04 34.4	+0.5
TKL	Tuckaleechee C	22.19	17	P	P	22 04 32.7	-1.2
	comp=Z,13nm,0.8s,baz=187,slow=9.7,SNR=15						
124A	Stringfield Ra	22.21	327	⇓P	P	22 04 34.2	-0.1
	baz=22,SNR=6.1						
Z25A	Roswell	22.29	329	⇑P	P	22 04 34.4	-0.7
	baz=22						
AMTX	Amarillo	22.34	337	eP	P	22 04 34.2	-1.3
	comp=Z,8.5nm,0.9s						
V30A	Spur Ranch, Mi	22.78	340	⇑P	P	22 04 39.8	-0.1
	baz=23						
Y25A	Mesa, Roswell	22.80	330	P	P	22 04 39.9	-0.3
	baz=23,SNR=5.4						
TZTN	Tazewell	23.08	16	eP	P	22 04 42.4	-0.3
	comp=Z,12nm,0.8s						
SIUC	Southern Illin	23.24	4	eP	P	22 04 43.2	-0.9
	comp=Z,21nm,0.8s						
220A	Playas Peak, P	23.37	321	P	P	22 04 47.0	+1.4
	baz=23,SNR=14						
121A	Cookes Peak, D	23.37	323	P	P	22 04 47.2	+1.5
	baz=23,SNR=7.0						
Z22A	Elephant Butte	23.44	326	⇑P	P	22 04 47.3	+1.0
	baz=24						
Y23A	Lovelace Mesa,	23.48	328	⇑P	P	22 04 47.2	+0.5
	baz=24						
W25A	X Bar L Ranch,	23.77	333	⇓P	P	22 04 48.8	-0.3
	baz=24						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SLM	Saint Louis	24.10	2	eP	P	22 04 51.5	-0.4
	comp=Z,34nm,0.7s						
WCI	Wyandotte Cave	24.10	10	eP	P	22 04 50.2	-1.8
	comp=Z,10nm,0.8s						
W24A	Lazy 6 Ranch,	24.19	331	⇓P	P	22 04 54.5	+1.4
	baz=24						
OLIL	Olney	24.35	6	eP	P	22 04 54.2	0.0
	comp=Z,16nm,0.6s						
V24A	Rampart Ranch,	24.55	332	⇓P	P	22 04 55.7	-0.7
	baz=25						
X16A	Lo Mia Camp, P	26.87	321	P	P	22 05 18.4	+1.1
	baz=27,SNR=7.1						
WUAZ	Wupatki	27.58	323	eP	P	22 05 24.6	+1.0
	comp=Z,5.5nm,0.9s						
WUAZ	Wupatki	27.58	323	⇑P	P	22 05 24.7	+1.1
	baz=28						
CCUT	Cedar City	30.15	324	eP	P	22 05 45.9	-0.5
	comp=Z,1.9nm,0.7s						
PDAR	Pinedale Array	32.24	335	PcP	PcP	22 08 50.5	-0.3
PDAR	Pinedale Array	32.24	335	PcP	PcP	22 08 50.5	-0.3
	comp=Z,0.7nm,0.8s,baz=116,slow=3.4,SNR=3.8						
NVAR	Mina Array Bea	33.67	320	P	P	22 06 19.5	+2.2
NVAR				pP	pP	22 06 41.4	-0.5
NVAR				PcP	PcP	22 08 54.6	-0.2
NVAR	Mina Array Bea	33.67	320	P	P	22 06 19.5	+2.2
	comp=Z,5.0nm,0.7s,baz=134,slow=8.3,SNR=21						
NVAR				pP	pP	22 06 41.4	-0.5
	comp=Z,1.3nm,0.7s,baz=120,slow=11,SNR=2.9						
NVAR				PcP	PcP	22 08 54.6	-0.2
	comp=Z,1.6nm,0.8s,baz=141,slow=4.7,SNR=4.8						
SIV	San Ignacio	42.60	134	P	P	22 07 30.9	-1.2
SIV				pP	pP	22 07 57.8	+0.3
SIV				PcP	PcP	22 09 22.5	-0.1
SIV	San Ignacio	42.60	134	P	P	22 07 30.9	-1.2
	comp=Z,2.4nm,0.8s,baz=311,slow=10,SNR=6.0						
SIV				pP	pP	22 07 57.8	+0.3
	comp=Z,2.1nm,0.7s,baz=307,slow=8.5,SNR=4.1						
SIV				PcP	PcP	22 09 22.5	-0.1
	comp=Z,2.6nm,0.8s,baz=303,slow=4.5,SNR=6.1						
SCHQ	Schefferville	44.59	20	eP	P	22 07 45.2	-2.4
	comp=Z,12nm,1.0s						
SCHQ	Schefferville	44.59	20	P	P	22 07 45.6	-2.0
	comp=Z,8.3nm,0.7s,baz=203,slow=6.0,SNR=15						
RPN	Rapa Nui	44.86	203	P	P	22 07 51.4	+1.4
YKA	Yellowknife Ar	50.71	346	P	P	22 08 33.0	-1.6
YKA				pP	pP	22 09 00.8	0.0
YKA				PcP	PcP	22 09 49.0	-1.4
YKA	Yellowknife Ar	50.71	346	P	P	22 08 33.0	-1.6
	comp=Z,1.2nm,0.6s,baz=148,slow=7.5,SNR=28						
YKA				pP	pP	22 09 00.8	0.0
	comp=Z,0.3nm,0.6s,baz=146,slow=7.4,SNR=2.2						
YKA				PcP	PcP	22 09 48.9	-1.4
	comp=Z,0.2nm,0.4s,baz=147,slow=3.5,SNR=4.9						
KURK	Kurchatov	114.51	7	PKP	PKPdf	22 18 11.5	-2.2
KURBB	Kurchatov Arra	114.59	7	PKP	PKPdf	22 18 11.5	-2.4
	comp=Z,0.3nm,0.7s,baz=344,slow=1.1,SNR=4.6						
HHC	Hu-ho-hao-te	120.98	340	ePKP	PKPdf	22 18 27.5	+0.9
HHC				sPKP		22 19 04.9	
HHC				PP	PP	22 20 00.2	+4.2
HHC				SKS	SKSdf	22 25 28.2	-0.7
HHC				SKKS	SKKSac	22 26 41.7	-4.6
HHC	Hu-ho-hao-te	120.98	340	SS	SS	22 36 18.8	0.0
HHC				AMB	AMB		
	comp=Z,120nm,6.3s						
WMQ	Urumqi	121.99	1	eP	PKPdf	22 18 29.0	+0.6
WRA	Warramunga Arr	136.06	256	PKP	PKPdf	22 18 56.8	+1.1
WRA	Warramunga Arr	136.06	256	PKP	PKPdf	22 18 56.8	+1.1
	comp=Z,0.5nm,0.7s,baz=81,slow=2.5,SNR=3.5						
CMAR	Chiang Mai Arr	145.73	342	PKPbc	PKPdf	22 19 12.7	-0.4
CMAR	Chiang Mai Arr	145.73	342	PKPbc	PKPdf	22 19 12.7	-0.4
	comp=Z,4.6nm,0.8s,baz=332,slow=3.0,SNR=24						

IDC 03 22:06:58.5±3.5**, 2°.43S×140°.42E, h0km, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.5**/18**, mbtmp3.6**/5**, ML3.8**/1**, Error ellipse: s-maj=142.6km s-min=25.3km az=89.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.39	198	P	Pn	22 11 14.3	-0.9
	0.3nm,0.3s,baz=20,slow=12,SNR=6.0						
ASAR	Alice Springs	22.03	196	P	P	22 11 54.6	-0.2
	0.9nm,0.5s,baz=24,slow=11,SNR=12						
MKAR	Makanchi Array	70.62	322	P	P	22 18 16.0	+0.1
	0.4nm,0.6s,baz=98,slow=7.6,SNR=7.4						
KURBB	Kurchatov Arra	74.49	324	P	P	22 18 38.7	-0.1
	0.1nm,0.6s,baz=115,slow=4.9,SNR=4.6						
BVAR	Borovoye Array	80.07	325	P	P	22 19 10.5	+0.4
	0.7nm,0.5s,baz=99,slow=6.5,SNR=5.1						

*ISK **03** 22:28:59.1, 37°.18N×36°.01E, h4km, MD3.0*
*DDA **03** 22:29:00.9, 37°.18N×35°.98E, h7km, MD3.1*
*CSEM **03** 22:29:00.3±0.2, 37°.19N×36°.01E, h5km, MD3.0, Error ellipse: s-maj=4.7km s-min=4.3km az=33.0*
ISC 03 22:29:00.3±1.1**, 37°.17N**±0°.03×**36°.01E**±0°.02**, h4**km±10km**, n30, σ0s.59**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.26	232	ePG	Pg	22 29 05.1	-0.2
CEYT				eSG	Sg	22 29 09.7	+0.9
CEYT	Ceyhan	0.26	232	ePg	Pg	22 29 05.1	-0.2
CEYT				eSg	Sg	22 29 09.7	+0.9
KOZT	Kozan	0.34	335	ePG	Pg	22 29 06.4	-0.4
KOZT	Kozan	0.34	335	ePg	Pg	22 29 06.4	-0.4
COBT	Iskenderun	0.68	163	iP	Pb	22 29 14.5	-0.3
COBT				iS	Sb	22 29 24.3	-0.3
COBT	Iskenderun	0.68	163	iP	Pb	22 29 14.5	-0.3
COBT				iS	Sb	22 29 24.3	-0.3
AYKD	Aykdinkavak	0.68	69	iP	Pg	22 29 12.9	-0.5
AYKD				iS	Sg	22 29 22.6	+0.3
KRTS	Karatas	0.78	220	ePG	Pg	22 29 15.3	0.0
KRTS	Karatas	0.78	220	ePg	Pg	22 29 15.3	0.0
KMRS	Kahramanmaras	0.79	65	ePG	Pg	22 29 14.8	-0.6
KMRS	Kahramanmaras	0.79	65	ePg	Pg	22 29 14.8	-0.6
KUZU	Kuzuini	0.94	115	iP	Pn	22 29 20.2	-0.1
KUZU				iS	Sn	22 29 34.9	+0.6
KUZU	Kuzuini	0.94	115	iP	Pn	22 29 20.2	-0.1
KUZU				iS	Sn	22 29 34.9	+0.6
GAZ	Gaziantep	0.96	90	ePG	Pg	22 29 18.2	-0.5
GAZ	Gaziantep	0.96	90	ePg	Pg	22 29 18.2	-0.5
GULE	Gulek	0.99	277	iP	Pg	22 29 19.5	+0.3
GULE				iS	Sn	22 29 34.9	-0.6
GULE	Gulek	0.99	277	iP	Pg	22 29 19.5	+0.3
GULE				iS	Sn	22 29 34.9	-0.6
HTY	Hatay	1.05	174	ePG	Pg	22 29 19.8	-0.7
HTY	Hatay	1.05	174	ePg	Pg	22 29 19.8	-0.7
GZT	Gaziantep	1.26	81	iP	Pg	22 29 24.6	+0.2
GZT				iS	Sn	22 29 44.3	+2.1
NIG	Nigde	1.45	311	ePN	Pn	22 29 26.8	-0.7
NIG	Nigde	1.45	311	ePn	Pn	22 29 26.8	-0.7
AVNT	Avonos	1.84	331	iP	Pn	22 29 32.8	0.0
AVNT	Avonos	1.84	331	iP	Pn	22 29 32.8	0.0
MYA	Malataya	2.24	58	ePN	Pn	22 29 38.1	0.0
MYA	Malataya	2.24	58	ePn	Pn	22 29 38.2	0.0
YOZ	Yozgat	2.52	348	ePN	Pn	22 29 42.4	+0.2
YOZ	Yozgat	2.52	348	ePn	Pn	22 29 42.4	+0.2
KAMT	Kaman	2.84	321	ePN	Pn	22 29 46.5	+0.1
KAMT	Kaman	2.84	321	ePn	Pn	22 29 46.5	+0.1

IGQ 03 22:47:42.0, 1°.54S×81°.28W, h12km±14km**, Mb4.1, Ms3.9, 2C, Error ellipse: s-maj=13.2km s-min=3.8km az=13.1, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAMA	Jama	1.66	40	P	Pb	22 48 12.1	-0.6
JAMA	Jama	1.66	40	S	Sb	22 48 34.0	+0.3
IGUA	Igualata	2.64	89	P	Pn	22 48 26.2	+1.1
ARRY	Arrayan	2.82	89	P	Pn	22 48 28.7	+1.3
PAT1	Patacocha	2.84	89	P	Pn	22 48 30.1	+2.3
BPAT	Tungurahua Vol	2.84	89	P	Pn	22 48 29.8	+2.0
BULB	Ulba Tungurahu	2.87	88	P	Pn	22 48 29.2	+1.1
BNAS	Cotopaxi Volca	2.92	73	P	Pb	22 48 32.0	-2.8
BMOR	Cotopaxi Volca	2.93	74	P	Pn	22 48 31.2	+2.0
PISA	Pisayambo	2.93	81	P	Pb	22 48 32.1	-2.8
PISA	Pisayambo	2.93	81	S	Sn	22 49 05.8	+1.2
BREF	Cotopaxi Volca	2.96	73	P	Pn	22 48 32.4	+2.6
BVC2	Cotopaxi Volca	2.99	73	P	Pb	22 48 34.1	-2.0
PINO	Pino	3.00	63	P	Pn	22 48 31.6	+1.4
BTAM	Cotopaxi Volca	3.00	73	⇑P	Pb	22 48 33.9	-2.3
GGP	Refugio Guagua	3.00	63	P	Pn	22 48 32.5	+2.3
PITA	Cotopaxi Volc	3.00	71	P	Pb	22 48 33.6	-2.5
VC1	Cotopaxi 1	3.01	73	⇑P	Pb	22 48 34.6	-1.6
COV1	Cotopaxi Volc	3.06	73	P	Pn	22 48 33.0	+1.9
ANTI	Antisana	3.30	71	P	Pb	22 48 37.9	-3.3
OTAV	Otavalo	3.33	58	P	Pn	22 48 37.0	+2.4
COTA	Cotacachi	3.48	58	P	Pn	22 48 35.4	-1.2

IDC 03 23:05:00.2±2.1**, 9°.34S×123°.27E, h0km, mb3.8**/1**, mb1 3.7**/3**, mb1mx3.4**/19**, mbtmp3.5**/3**, ML3.2**/2**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/30**, Error ellipse: s-maj=228.2km s-min=31.3km az=55.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.02	136	Pn	Pn	23 08 32.8	-1.1
	0.1nm,0.3s,baz=309,slow=14,SNR=2.6						
ASAR	Alice Springs	17.50	146	P	P	23 09 06.7	-0.4
	0.2nm,0.3s,baz=320,slow=12,SNR=11						
PSI	Prapat	27.09	295	LR	LR	23 23 43.8	
	comp=Z,51nm,18.7s,baz=256,slow=42						
MKAR	Makanchi Array	66.75	331	P	P	23 15 53.3	0.0
	0.6nm,0.6s,baz=136,slow=7.8,SNR=8.9						

IDC 03 23:16:19.0±2.4**, 19°.73S×68°.80W, h121**km±20km**, mb3.9**/5**, mb1 3.9**/8**, mb1mx3.6**/20**, mbtmp3.9**/8**, Error ellipse: s-maj=35.5km s-min=16.9km az=117.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	3.48	11	P	Pn	23 17 12.3	-0.1
	0.4nm,0.3s,baz=189,slow=5.6,SNR=3.6						
LPAZ				S	Sn	23 17 47.3	-6.4
	4.8nm,0.3s,baz=225,slow=13,SNR=3.8						
SIV	San Ignacio	8.24	64	P	Pn	23 18 15.6	-0.2
	2.6nm,0.3s,baz=262,slow=12,SNR=76						
CFAA	Coronel Fontan	11.84	178	P	Pn	23 19 04.1	+0.1
	0.1nm,0.3s,baz=351,slow=12,SNR=6.5						
CPUP	Villa Florida	12.44	124	P	Pn	23 19 12.1	+0.2
	0.7nm,0.3s,baz=283,slow=12,SNR=11						
BDFB	Brasilia	20.21	82	P	P	23 20 44.5	-0.2
	9.6nm,0.6s,baz=243,slow=11,SNR=20						
PLCA	Paso Flores	20.99	184	P	P	23 20 52.5	-0.2
	7.3nm,0.8s,baz=3.6,slow=11,SNR=9.6						
PLCA				pP	pP	23 21 13.8	-1.3
	3.3nm,0.8s,baz=354,slow=13,SNR=3.2						
DBIC	Dimbokro	68.14	74	P	P	23 27 06.9	+0.4
	6.8nm,0.9s,baz=232,slow=6.3,SNR=11						
QSPA	South Pole Qui	70.46	180	P	P	23 27 20.2	+0.1
	3.2nm,0.8s,baz=132,slow=3.3,SNR=17						
TORD	Torodi Ar. Bea	76.67	71	P	P	23 27 56.9	-0.2
	2.3nm,0.6s,baz=252,slow=5.4,SNR=60						
TORD				pP	pP	23 28 24.6	-3.1
	1.7nm,0.6s,baz=249,slow=5.3,SNR=6.1						
YKA	Yellowknife Ar	89.56	341	P	P	23 29 01.1	-1.1
	1.2nm,0.7s,baz=132,slow=4.9,SNR=12						
WRA	Warramunga Arr	134.52	211	PKP	PKPdf	23 35 23.3	-0.5
	0.5nm,0.5s,baz=150,slow=1.7,SNR=3.5						

*IDC **03** 23:20:14.5±0.5, 7°.48N×124°.25E, h0km, mb4.3/22, mb1 4.4/22, mb1mx4.4/26, mbtmp4.2/22, MS3.5/7, Ms1 3.5/7, ms1mx3.0/37, Error ellipse: s-maj=17.6km s-min=10.2km az=45.0*
*ISCJB **03** 23:20:18.0±0.6, 7°.53N±0°.03×124°.30E±0°.03, h32km±5km, mb4.2/34, MS3.4/7, Error ellipse: s-maj=6.0km s-min=3.9km az=44.2*
*MAN **03** 23:20:18, 7°.64N×124°.31E, h22km, mb5.2, ML4.2, MS4.4*
MAN INTENSITY III - COTABATO CITY.
*NEIC **03** 23:20:20.5±1.6, 7°.50N×124°.41E, h44km±15km, mb4.4/11, Error ellipse: s-maj=14.1km s-min=6.6km az=72.0*
NEIC Felt [III PIVS] at Cotabato.
*BJI **03** 23:20:23.2, 7°.80N×124°.80E, h60km, mB4.9/4, mb4.4/5, Ms4.7/2, Ms7 4.4/2*
*AUST **03** 23:20:28.5±3.1, 6°.33N×125°.23E, h16km, Error ellipse: s-maj=2.3km s-min=1.0km az=289.0*
ISC 03 23:20:18.1±0.4**, 7°.58N**±0°.03×**124°.32E**±0°.03**, h21**km±2km**, n100, σ1s.25**/112**, mb4.3**/34**, MS3.5**/7**, 4C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.36	192	⇓eP	Pb	23 20 24.4	-1.3
CTBH				iS	Sb	23 20 29.9	-1.0
CGP	Cagayan de Oro	0.95	23	⇑eP	Pn	23 20 34.7	-1.5
CGP				iS	Sb	23 20 48.5	+0.5
KCP	Kidapawan	0.95	127	⇑iP	Pn	23 20 35.8	-0.4
KCP				iS	Sn	23 20 48.9	-0.3
PAGZ	Pagadian	0.97	286	eP	Pn	23 20 35.1	-1.4
PAGZ				eS	Sb	23 20 49.7	+1.1
DMPH	Davao City--Mi	1.27	113	⇓eP	Pn	23 20 40.6	-0.1
DMPH				iS	Sb	23 20 58.1	+0.8
DAV	Davao City (W)	1.34	112	ePn	Pn	23 20 41.1	-0.5
DAV				eSn	Sn	23 20 57.3	-1.6
DAV	Davao City (W)	1.34	112	Pg	Pn	23 20 41.5	-0.2
	636nm,0.3s,baz=256,slow=1.8,SNR=60						
DAV				Lg	Lg	23 20 59.6	
	676nm,0.3s,baz=311,slow=19,SNR=19						
GSPH	General Santos	1.60	157	eP	Pb	23 20 48.2	+1.1
GSPH				eS	Sb	23 21 12.5	+5.5
IPIL	Ipil	1.75	277	eP	Pn	23 20 48.1	+0.9
IPIL				eS	Sb	23 21 11.3	+0.2
MATI	Mati	2.02	108	eP	Pn	23 20 51.3	+0.3
MATI				eS	Sn	23 21 15.7	+0.2
SNPH	Sibulan	2.06	329	⇑iP	Pn	23 20 40.2	-11
SNPH				iS	Sn	23 21 13.9	-2.8
TBP	Tagbilaran	2.15	348	eP	Pn	23 20 54.7	+2.0
MSLP	Maasin	2.60	12	eP	Pn	23 21 01.4	+2.5
LLP	Lapu-Lapu	2.75	353	⇓eP	Pn	23 21 03.1	+2.2
LLP				iS	Sb	23 21 37.8	-2.0
GUIM	Jordan	3.48	331	eP	Pn	23 21 12.7	+1.6
RCP	Roxas	4.25	339	⇑eP	Pn	23 21 24.2	+2.5
CUYO	Cuyo Island	4.61	315	eP	Pn	23 21 28.8	+2.3
ENPP	El Nido	6.03	307	eP	Pn	23 21 47.3	+1.1
LUWI	Luwuk	8.70	190	P	Pn	23 22 26.5	+3.7
	baz=7.8,SNR=12						
PCI	Palu	9.54	208	P	Pn	23 22 35.8	+1.4
	baz=9.0,SNR=3.8						
QIZ	Qiongzhong	18.10	310	P	P	23 24 40.9	+12
QIZ				S	S	23 28 05.0	+10
QIZ				LR	LR		
	comp=Z,250nm,14.2s						
GUMO	Guam	21.05	72	LR	LR	23 33 04.0	
	comp=Z,40nm,18.7s,baz=270,slow=36						
KDU	Kakadu	21.70	158	P	P	23 25 07.9	+0.1
	baz=20,SNR=4.1						
KNRA	Kununurra	23.52	169	P	P	23 25 41.7	+15
	baz=22,SNR=3.3						
CMAR	Chiang Mai Arr	26.95	296	P	P	23 25 57.7	-0.7
CMAR				PcP	PcP	23 29 20.6	+0.4
CMAR	Chiang Mai Arr	26.95	296	P	P	23 25 57.7	-0.7
	comp=Z,0.6nm,0.4s,baz=154,slow=6.7,SNR=3.2						
CMAR				PcP	PcP	23 29 20.6	+0.4
	comp=Z,0.5nm,0.3s,baz=121,slow=0.5,SNR=4.4						
CMAR				LR	LR	23 35 52.8	
	comp=Z,88nm,21.4s,baz=150,slow=35						
KMI	Kunming	27.00	313	P	P	23 26 05.2	+6.1
KMI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
WRAB	Tennant Creek	29.06	160	eP	P	23 26 16.2	-1.0
	comp=Z,12nm,1.2s						
WRA	Warramunga Arr	29.07	160	P	P	23 26 15.4	-1.9
WRA	Warramunga Arr	29.07	160	P	P	23 26 15.4	-1.9
	comp=Z,3.1nm,0.8s,baz=338,slow=9.7,SNR=9.2						
KSAR	Wonju Array Be	29.91	6	P	P	23 26 24.3	-0.2
KSRS	Korea Array	29.92	6	P	P	23 26 24.3	-0.3
	comp=Z,1.1nm,0.7s,baz=185,slow=10.0,SNR=6.7						
MJAR	Matsushiro Arr	31.49	22	P	P	23 26 37.3	-1.2
MJAR	Matsushiro Arr	31.49	22	P	P	23 26 37.3	-1.2
	comp=Z,3.0nm,0.8s,baz=200,slow=9.6,SNR=11						
ASAR	Alice Springs	32.43	163	P	P	23 26 45.8	-1.2
ASAR				PcP	PcP	23 29 33.2	-0.9
ASAR	Alice Springs	32.43	163	P	P	23 26 45.8	-1.2
	comp=Z,2.9nm,0.8s,baz=341,slow=6.8,SNR=18						
ASAR				PcP	PcP	23 29 33.2	-0.9
	comp=Z,1.1nm,0.7s,baz=0.9,slow=2.6,SNR=7.5						
MEEK	Meekatharra	34.46	189	P	P	23 27 04.4	-0.1
	baz=34,SNR=4.4						
CTA	Charters Tower	34.95	142	LR	LR	23 42 22.5	
	comp=Z,73nm,19.1s,baz=138,slow=38						
USRK	Ussuriysk Arra	37.09	9	P	P	23 27 26.6	-0.3
	comp=Z,2.1nm,0.7s,baz=193,slow=7.8,SNR=5.8						
KMBL	Kambalda	38.79	183	P	P	23 27 41.8	+0.4
	baz=38,SNR=6.1						
KLBR	Kellerberrin	39.45	189	P	P	23 27 47.8	+0.8
	baz=39,SNR=6.1						
ASAJ	Asahikawa	39.74	21	eP	P	23 27 49.8	+0.5
NWAO	Narrogin (SRO)	40.84	189	eP	P	23 27 59.4	+0.9
	comp=Z,8.1nm,0.7s						
BBOO	Buckleboo	41.69	165	P	P	23 28 05.7	+0.3
	baz=40,SNR=6.4						
STKA	Stephens Creek	42.56	158	eP	P	23 28 12.5	-0.1
	comp=Z,5.7nm,0.8s						
STKA	Stephens Creek	42.56	158	P	P	23 28 12.2	-0.3
	comp=Z,26nm,0.8s,baz=330,slow=7.1,SNR=69						
STKA	Stephens Creek	42.56	158	P	P	23 28 13.0	+0.5
	baz=41,SNR=51						
ULN	Ulaanbaatar	42.75	343	eP	P	23 28 14.6	+0.5
	comp=Z,7.8nm,1.3s						
SONM	Songino Array	42.92	342	P	P	23 28 16.3	+0.8
SONM	Songino Array	42.92	342	P	P	23 28 16.3	+0.8
	comp=Z,1.2nm,0.8s,baz=159,slow=8.1,SNR=8.8						
SONM				LR	LR	23 49 21.3	
	comp=Z,61nm,18.8s,baz=172,slow=41						
CAN	Canberra	48.60	153	eP	P	23 28 57.4	-3.1
PETK	Petropavlovsk-	52.87	25	P	P	23 29 33.8	+1.5
PETK	Petropavlovsk-	52.87	25	P	P	23 29 33.8	+1.5
	comp=Z,5.0nm,0.8s,baz=180,slow=5.8,SNR=5.2						
MK31	Makanchi Array	53.05	325	eP	P	23 29 34.4	+0.6
MK31				ePcP	PcP	23 30 41.5	-0.7
MKAR	Makanchi Array	53.05	325	P	P	23 29 35.4	+1.6
MKAR				PcP	PcP	23 30 42.2	0.0
MKAR	Makanchi Array	53.05	325	P	P	23 29 35.4	+1.6
	comp=Z,0.2nm,0.4s,baz=127,slow=6.9,SNR=8.1						
MKAR				PcP	PcP	23 30 42.2	0.0
	comp=Z,2.2nm,0.8s,baz=108,slow=4.0,SNR=7.5						
KSH	Kashi	53.66	314	eP	P	23 29 46.0	+7.5
KSH				ePcS	PcS	23 34 46.4	+2.4
KSH				eS	S	23 37 13.2	+1.8
KSH				pmax	pmax		
	comp=Z,200nm,3.5s						
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				LR	LR		
	comp=N,110nm,4.7s						
KSH				LR	LR		
	comp=E,110nm,4.3s						
KSH				LR	LR		
	comp=Z,72nm,4.0s						
AAK	Ala-Archa	55.92	317	P	P	23 29 54.6	-0.3
ZALV	Zalesovo Beam	56.10	333	P	P	23 29 55.2	-0.5
ZALV	Zalesovo Beam	56.10	333	P	P	23 29 55.2	-0.5
	comp=Z,0.7nm,0.5s,baz=118,slow=7.0,SNR=5.3						
KURBB	Kurchatov Arra	57.23	327	LR	LR	23 55 51.3	
	comp=Z,27nm,19.1s,baz=130,slow=37						
KURK	Kurchatov	57.23	327	eP	P	23 30 03.8	0.0
	comp=Z,9.6nm,1.2s						
KKAR	Karatay Array	58.81	316	eP	P	23 30 16.2	+1.1
	comp=Z,4.5nm,1.0s						
KKAR				ePcP	PcP	23 31 04.8	+0.2
BVAR	Borovoye Array	62.81	327	P	P	23 30 42.9	+0.8
BVAR	Borovoye Array	62.81	327	P	P	23 30 42.9	+0.8
	comp=Z,4.5nm,1.0s,baz=124,slow=7.4,SNR=16						
BRVK	Borovoye	62.88	327	eP	P	23 30 43.0	+0.4
	comp=Z,11nm,1.1s						
BRVK				ePcP	PcP	23 31 20.7	0.0
TIXI	Tiksi	64.07	2	eP	P	23 30 50.2	+0.1
	comp=Z,1.2nm,0.7s						
ABKAR	Akbulak array	67.68	320	eP	P	23 31 13.7	0.0
	comp=Z,1.0nm,0.6s						
ABKAR				ePcP	PcP	23 31 40.3	-0.3
AKTO	Aktyubinsk	69.18	321	P	P	23 31 23.6	+0.4
AKTO	Aktyubinsk	69.18	321	P	P	23 31 23.6	+0.4
	comp=Z,2.9nm,0.7s,baz=124,slow=7.3,SNR=8.8						
KBZ	Khabaz	78.62	313	P	P	23 32 19.6	+1.1
KBZ	Khabaz	78.62	313	P	P	23 32 19.6	+1.1
	comp=Z,1.7nm,0.9s,baz=88,slow=4.8,SNR=4.8						
BR131	Keskin Array S	85.74	309	eP	P	23 32 55.8	-0.4
	comp=Z,1.3nm,0.8s						
BRTR	Keskin Array B	85.74	309	P	P	23 32 56.5	+0.3
BRTR	Keskin Array B	85.74	309	P	P	23 32 56.5	+0.3
	comp=Z,2.0nm,0.9s,baz=101,slow=5.2,SNR=14						
FINES	FINESS Array B	87.33	332	P	P	23 33 02.0	-1.3
FINES	FINESS Array B	87.33	332	P	P	23 33 02.0	-1.3
	comp=Z,3.5nm,0.9s,baz=90,slow=3.8,SNR=7.1						
AKASG	Malin Array Be	87.42	321	P	P	23 33 03.2	-0.8
AKASG	Malin Array Be	87.42	321	P	P	23 33 03.2	-0.8
	comp=Z,3.1nm,0.8s,baz=71,slow=4.4,SNR=8.8						
KIEV	Kiev	87.43	321	eP	P	23 33 02.6	-1.4
	comp=Z,6.2nm,1.3s						
VNDA	Vanda	87.53	172	P	P	23 33 02.7	-1.1
VNDA	Vanda	87.53	172	P	P	23 33 02.7	-1.1
	comp=Z,2.7nm,0.9s,baz=312,slow=5.2,SNR=11						
MLR	Muntele Rosu	90.49	316	P	P	23 33 18.5	-0.2
MLR	Muntele Rosu	90.49	316	P	P	23 33 18.5	-0.2
	comp=Z,0.9nm,0.8s,baz=182,slow=1.3,SNR=11						
BUR08	Bucovina Ar. S	90.56	318	eP	P	23 33 19.1	+0.1
NB2	NORSAR Subarra	94.30	333	P	P	23 33 34.9	-1.0
	comp=Z,0.8nm,0.8s,baz=61,slow=4.8						
NOA	NORSAR Array B	94.30	333	P	P	23 33 35.0	-1.0
NOA	NORSAR Array B	94.30	333	P	P	23 33 35.0	-1.0
	comp=Z,1.5nm,0.8s,baz=65,slow=4.6,SNR=4.4						
NOA				LR	LR	00 20 17.3	
	comp=Z,37nm,18.6s,baz=55,slow=38						
BRG	Berggiesshubel	96.74	323	eP	P	23 33 47.8	+0.6
	comp=Z,4.8nm,0.9s						
BRG				e		23 33 51.5	
	comp=Z,5.2nm,1.1s						
YKA	Yellowknife Ar	96.98	24	P	P	23 33 48.2	+0.1
YKA	Yellowknife Ar	96.98	24	P	P	23 33 48.2	+0.1
	comp=Z,0.4nm,0.8s,baz=300,slow=4.5,SNR=4.2						
CLL	Collm	97.14	324	eP	P	23 33 47.0	-2.0
CLL				epP	pP	23 34 13.0	+17
GERES	GERESS Array B	97.60	321	P	P	23 33 51.5	+0.2
GERES	GERESS Array B	97.60	321	P	P	23 33 51.5	+0.2
	comp=Z,0.6nm,0.9s,baz=57,slow=4.9,SNR=5.2						
GERES				LR	LR	00 26 40.2	
	comp=Z,24nm,18.8s,baz=79,slow=41						
TORD	Torodi Ar. Bea	119.41	290	PKP	PKPdf	23 39 05.7	-1.4
TORD	Torodi Ar. Bea	119.41	290	PKP	PKPdf	23 39 05.7	-1.4
	comp=Z,0.9nm,0.7s,baz=28,slow=2.1,SNR=5.6						
TXAR	Lajitas Array	121.03	49	PKP	PKPdf	23 39 08.5	-1.5
TXAR	Lajitas Array	121.03	49	PKP	PKPdf	23 39 08.5	-1.5
	comp=Z,0.7nm,0.9s,baz=126,slow=1.7,SNR=6.0						
PLCA	Paso Flores	144.42	160	PKP	PKPbc	23 39 52.1	+0.4
PLCA	Paso Flores	144.42	160	PKP	PKPbc	23 39 52.1	+0.4
	comp=Z,6.4nm,0.9s,baz=205,slow=5.1,SNR=8.1						

*DDA **03** 23:35:11.2, 41°.30N×38°.12E, h7km, MD2.8*
*ISCJB **03** 23:35:11.2±1.4, 41°.31N±0°.07×38°.12E±0°.05, h10km±6km, Error ellipse: s-maj=11.6km s-min=5.9km az=174.9*
*CSEM **03** 23:35:12.7±0.4, 41°.27N×38°.12E, h20km, MD2.6, Error ellipse: s-maj=8.6km s-min=4.6km az=171.0*
*ISK **03** 23:35:15.8, 40°.73N×38°.28E, h5km, MD2.6*
ISC 03 23:35:10.4±1.9**, 41°.36N**±0°.08×**38°.12E**±0°.04**, h18**km±9km**, n18, σ0s.63**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRSN	GIRESUNGRSN	0.45	166	eP	Pb	23 35 21.0	+1.3
GRSN				eS	Sg	23 35 25.2	-0.3
GRSN	GIRESUNGRSN	0.45	166	eP	Pb	23 35 21.0	+1.3
GRSN				eS	Sg	23 35 25.2	-0.3
ESPY	Espiye-Giresun	0.63	134	ePG	Pn	23 35 24.2	-0.3
ESPY				eSG	Sg	23 35 31.2	-0.1
ESPY	Espiye-Giresun	0.63	134	ePg	Pn	23 35 24.2	-0.3
ESPY				eSg	Sg	23 35 31.2	-0.1
RSDY	Resadiye-TOKAT	1.13	212	ePG	Pg	23 35 32.4	+0.1
RSDY				eSG	Sb	23 35 44.6	-1.2
RSDY	Resadiye-TOKAT	1.13	212	ePg	Pg	23 35 32.4	+0.1
RSDY				eSg	Sb	23 35 44.6	-1.2
SUSE	Susehri	1.15	177	iP	Pg	23 35 32.5	-0.1
SUSE				iS	Sb	23 35 46.9	+0.4
SUSE	Susehri	1.15	177	iP	Pg	23 35 32.5	-0.1
SUSE				iS	Sb	23 35 46.9	+0.4
ERBA	Erbaa	1.23	237	iP	Pb	23 35 33.9	+0.7
ERBA				iS	Sb	23 35 48.8	0.0
ERBA	Erbaa	1.23	237	iP	Pb	23 35 33.9	+0.7
MACK	Trabzon	1.31	108	eP	Pb	23 35 35.4	+0.9
MACK				eS	Sn	23 35 50.7	-0.2
MACK	Trabzon	1.31	108	eP	Pb	23 35 35.4	+0.9
MACK				eS	Sn	23 35 50.7	-0.2
GUMT	Gumushane	1.36	131	ePG	Pb	23 35 35.6	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMT	**Gumushane**	**1.36**	**131**	*e*Pg	**Pb**	**23 35 35.6**	**+0.2**
KELT	**Kelkit**	**1.48**	**144**	*i* P	**Pb**	**23 35 38.0**	**+0.5**
KELT				*i* S	**Sn**	**23 35 55.4**	**0.0**
KELT	**Kelkit**	**1.48**	**144**	*i* P	**Pb**	**23 35 38.0**	**+0.5**
KELT				*i* S	**Sn**	**23 35 55.4**	**0.0**
BAYT	**Ayd˜–ntepe-Bay**	**1.81**	**121**	*e*PN	**Pb**	**23 35 43.4**	**+0.3**
BAYT	**Ayd˜–ntepe-Bay**	**1.81**	**121**	*e*Pn	**Pb**	**23 35 43.4**	**+0.3**

*IDC **03** 23:35:49.3±1.3, 2°.87S×129°.49E, h0km, mb4.0/4, mb1 4.2/6, mb1mx3.8/22, mbtmp4.0/6, ML3.7/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/33, Error ellipse: s-maj=109.6km s-min=19.3km az=71.0*
*ISCJB **03** 23:35:51.8±0.6, 2°.95S±0°.06×129°.51E±0°.07, h28km, mb4.0/4, MS3.0/1, Error ellipse: s-maj=10.7km s-min=8.0km az=164.7*
*AUST **03** 23:35:55.3±0.0, 2°.86S×129°.62E, h49km, Error ellipse: s-maj=1.0km s-min=0.9km az=329.0*
ISC 03 23:35:53.9±0.8**, 2°.87S**±0°.08×**129°.55E**±0°.08**, h28**km**, n18, σ1^{s}25**/18**, mb4.1**/4**, Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.57**	**239**	P	**Pb**	**23 36 22.2**	**-0.2**
	baz=1.6,SNR=16						
SWI	**Sorong**	**2.63**	**41**	P	**Pn**	**23 36 34.5**	**0.0**
	baz=2.6,SNR=32						
FAKI	**Fak Fak**	**2.70**	**91**	P	**Pn**	**23 36 35.9**	**+0.4**
	baz=2.6,SNR=8.6						
LUWI	**Luwuk**	**7.01**	**285**	P	**Pn**	**23 37 35.6**	**+0.9**
	baz=7.1,SNR=4.7						
PCI	**Palu**	**9.90**	**281**	S	Sn	23 39 54.4	-10
	baz=10.0,SNR=21						
MTN	**Manton Dam**	**10.03**	**171**	P	**Pn**	**23 38 17.4**	**+1.2**
	baz=10,SNR=42						
KDU	**Kakadu**	**10.17**	**164**	P	**Pn**	**23 38 17.7**	**-0.4**
	baz=10,SNR=14						
KDU				S	**Sn**	**23 40 11.8**	**+0.4**
	baz=10,SNR=3.4						
WSI	**Waingapu**	**11.40**	**233**	P	**Pn**	**23 38 36.5**	**+1.5**
	baz=12,SNR=4.1						
FITZ	**Fitzroy Crossi**	**15.61**	**194**	Pn	**Pn**	**23 39 28.8**	**-3.3**
	0.1nm,0.3s,baz=22,slow=16,SNR=2.2						
FITZ				LR	LR	23 46 28.7	
	comp=Z,45nm,18.1s,baz=272,slow=41						
FITZ	**Fitzroy Crossi**	**15.61**	**194**	P	**P**	**23 39 37.0**	**+0.9**
	baz=16,SNR=4.1						
WRA	**Warramunga Arr**	**17.60**	**165**	P	**Pn**	**23 39 55.7**	**-1.6**
	0.7nm,0.3s,baz=351,slow=12,SNR=5.1						
QIS	**Mount Isa**	**20.13**	**152**	P	**P**	**23 40 26.8**	**+0.9**
	baz=20,SNR=10						
ASAR	**Alice Springs**	**21.10**	**169**	P	**P**	**23 40 36.0**	**-0.4**
	4.9nm,0.6s,baz=347,slow=11,SNR=68						
ASAR				PcP	**PcP**	**23 44 42.2**	**-0.1**
	0.2nm,0.3s,baz=356,slow=1.9,SNR=4.6						
MEEK	**Meekatharra**	**25.85**	**203**	P	**P**	**23 41 21.5**	**-1.7**
	baz=26,SNR=4.4						
STKA	**Stephens Creek**	**31.00**	**160**	P	**P**	**23 42 09.0**	**-0.1**
	0.6nm,0.3s,baz=327,slow=13,SNR=5.7						
KSRS	**Korea Array**	**40.15**	**358**	LR	LR	23 59 19.1	
	comp=Z,20nm,18.4s,baz=140,slow=35						
ZALV	**Zalesovo Beam**	**67.71**	**333**	P	**P**	**23 46 48.0**	**-0.7**
	1.2nm,0.8s,baz=114,slow=6.5,SNR=8.5						
KURBB	**Kurchatov Arra**	**68.78**	**328**	P	**P**	**23 46 55.4**	**0.0**
	1.9nm,0.8s,baz=130,slow=5.5,SNR=22						

*IDC **03** 23:43:16.9±1.1, 39°.36N×73°.82E, h0km, mb3.7/6, mb1 3.8/11, mb1mx3.6/31, mbtmp3.7/11, ML3.7/4, MS2.6/1, Ms1 2.6/1, ms1mx2.2/34, Error ellipse: s-maj=21.1km s-min=12.6km az=118.0*
*NNC **03** 23:43:23.4±2.2, 39°.75N×73°.47E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=22.2km s-min=8.9km az=14.0*
ISC 03 23:43:18.8±0.8**, 39°.62N**±0°.06×**74°.06E**±0°.05**, h10**km**, n33, σ1^{s}78**/37**, mb3.7**/6**, 16C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.48**	**93**	Pg	**Pb**	**23 43 46.6**	**0.0**
KSH				Sg	**Sg**	**23 44 07.7**	**+1.1**
KSH				smax	smax		
	comp=N,530nm,0.6s						
KSH				smax	smax		
	comp=E,320nm,0.6s						
AML	**Almayashu**	**2.52**	**354**	P	**Pb**	**23 44 04.9**	**+0.4**
	SNR=55						
KZA	**Kyzart**	**2.62**	**20**	P	**Pg**	**23 44 07.9**	**-1.1**
	SNR=12						
UCH	**Uchtor**	**2.63**	**7**	P	**Pg**	**23 44 08.8**	**-0.5**
	SNR=19						
AAK	**Ala-Archa**	**3.03**	**6**	P	**Pb**	**23 44 13.4**	**+0.4**
	SNR=50						
AAK	**Ala-Archa**	**3.03**	**6**	Pn	**Pb**	**23 44 13.3**	**+0.4**
	comp=E,10.0nm,0.3s,baz=152,slow=7.0,SNR=100						
AAK				Sn	**Sg**	**23 44 56.1**	**0.0**
	comp=E,5.8nm,0.3s,baz=315,slow=20,SNR=7.2						
AAK				Lg	Lg	23 45 01.2	
	comp=E,22nm,0.3s,baz=325,slow=17,SNR=11						
EKS2	**Erkin-Say**	**3.05**	**356**	P	**Pb**	**23 44 13.7**	**+0.5**
	SNR=39						
ULHL	**Ulahol**	**3.10**	**32**	P	**Pb**	**23 44 15.5**	**+1.3**
	SNR=19						
KBK	**Karagaybulak**	**3.11**	**12**	P	**Pb**	**23 44 14.8**	**+0.5**
	SNR=44						
CHMS	**Chumysh**	**3.42**	**9**	P	**Pb**	**23 44 19.1**	**-0.4**
	SNR=22						
TKM2	**Tokmak 2**	**3.50**	**19**	P	**Pb**	**23 44 20.1**	**-0.8**
	SNR=17						
USP	**Ospenovka**	**3.66**	**5**	P	**Pb**	**23 44 22.8**	**-0.8**
	SNR=13						
KNDC	**Almaty**	**4.21**	**30**	⇑Pn	**Pb**	**23 44 32.1**	**-0.9**
	comp=E,4.4nm,0.3s						
KNDC				⇑Pg	**Pg**	**23 44 40.7**	**+1.3**
	comp=E,19nm,0.5s						
KNDC				⇑Lg	Lg	23 45 39.9	
	comp=E,167nm,0.9s						
KK31	**Karatay Array**	**4.39**	**324**	Pn	**Pn**	**23 44 28.4**	**+2.9**
	comp=E,2.9nm,0.2s,baz=126,slow=13,SNR=218						
KK31				⇑Pg	**Pb**	**23 44 38.6**	**+2.6**
	comp=E,7.0nm,0.5s,baz=142,slow=16,SNR=14						
KK31				⇓Sn	**Sn**	**23 45 20.8**	**+4.2**
	comp=E,11nm,0.3s,baz=140,slow=9.2,SNR=4.1						
KK31				⇓Lg	Lg	23 45 32.9	
	comp=E,49nm,0.7s,baz=134,slow=28,SNR=5.7						
MK31	**Makanchi Array**	**9.35**	**37**	⇓Pn	Pn	23 45 44.8	+11
	comp=E,1.9nm,0.9s,baz=212,slow=10,SNR=5.1						
MK31				⇑Lg	Lg	23 48 21.8	
	comp=E,3.7nm,1.1s,baz=229,slow=26,SNR=3.7						
MKAR	**Makanchi Array**	**9.35**	**37**	Pn	Pn	23 45 39.9	+6.2
	comp=E,0.0nm,0.3s,baz=218,slow=16,SNR=4.3						
MKAR				Lg	Lg	23 48 21.7	
	comp=E,0.1nm,0.3s,baz=244,slow=25,SNR=4.1						
KUR16	**Kurchatov Arra**	**11.44**	**14**	⇓Pn	Pn	23 46 07.3	+5.1
KUR16				⇑Pg		23 46 52.9	
	comp=E,0.1nm,0.9s						
KUR16				⇑Lg	Lg	23 49 23.1	
	comp=E,0.9nm,1.2s						
KURBB	**Kurchatov Arra**	**11.45**	**15**	Pn	**Pn**	**23 46 03.4**	**+1.2**
	baz=204,slow=11,SNR=2.3						
KURBB				Lg	Lg	23 49 21.0	
	comp=E,0.1nm,0.3s,baz=203,slow=29,SNR=9.5						
VOSK	**Vostochnaya**	**13.28**	**352**	⇑Pn	**Pn**	**23 46 27.2**	**-0.1**
	comp=E,2.7nm,1.1s						
VOSK				⇑Lg	Lg	23 50 18.7	
	comp=E,5.1nm,0.9s						
BVA0	**Borovoye Array**	**13.64**	**351**	⇑Pn	**P**	**23 46 38.8**	**-2.4**
	comp=E,0.6nm,0.8s,baz=155,slow=11,SNR=11						
BVA0				⇑Lg	Lg	23 50 28.2	
	comp=E,1.2nm,1.1s						
BVAR	**Borovoye Array**	**13.64**	**351**	Pn	**Pn**	**23 46 33.5**	**+1.2**
	comp=E,0.3nm,0.3s,baz=161,slow=11,SNR=11						
BVAR				LR	LR	23 51 20.3	
	comp=E,25nm,18.2s,baz=204,slow=35						
BRVK	**Borovoye**	**13.69**	**350**	⇑Pn	**P**	**23 46 39.3**	**-2.4**
	comp=E,7.1nm,0.6s						
BRVK				⇑Lg	Lg	23 50 33.8	
	comp=E,2.8nm,0.8s						
ZRNK	**Zerenda**	**13.78**	**347**	⇑Pn	**Pn**	**23 46 34.9**	**+0.8**
ZRNK				⇓Lg	Lg	23 50 38.1	
	comp=E,6.2nm,0.9s						
AB31	**Akbulak array**	**13.92**	**318**	⇓Pn	**Pn**	**23 46 35.0**	**-1.1**
	comp=E,1.2nm,0.6s,baz=127,slow=14,SNR=19						
AB31				⇑Sn	**Sn**	**23 49 05.3**	**-5.3**
	baz=230,slow=8.0,SNR=4.6						
AKTO	**Aktyubinsk**	**15.63**	**319**	⇑Pn	**Pn**	**23 46 59.7**	**+0.6**
	comp=E,0.6nm,0.9s						
AKTO				⇓Sn	**Sn**	**23 49 48.7**	**-3.6**
	comp=E,0.2nm,0.8s						
AKTO	**Aktyubinsk**	**15.63**	**319**	Pn	**Pn**	**23 46 58.3**	**-0.8**
	comp=E,0.3nm,0.3s,baz=123,slow=14,SNR=7.4						
ZALV	**Zalesovo Beam**	**16.09**	**23**	Pn	**P**	**23 47 08.5**	**+0.2**
	comp=E,0.3nm,0.3s,baz=216,slow=11,SNR=7.9						
BRTR	**Keskin Array B**	**30.93**	**283**	P	**P**	**23 49 36.0**	**+0.1**
	comp=E,0.4nm,0.6s,baz=76,slow=7.3,SNR=4.9						
FINES	**FINESS Array B**	**36.35**	**323**	P	**P**	**23 50 22.9**	**+0.4**
	comp=E,2.7nm,0.9s,baz=114,slow=10,SNR=9.1						
ARCES	**ARCESS Array B**	**39.25**	**335**	P	**P**	**23 50 47.7**	**+0.7**
	comp=E,3.0nm,0.8s,baz=102,slow=7.2,SNR=9.8						
TORD	**Torodi Ar. Bea**	**68.19**	**269**	P	**P**	**23 54 17.3**	**-2.4**
	comp=E,0.4nm,0.5s,baz=46,slow=4.5,SNR=11						
YKA	**Yellowknife Ar**	**78.00**	**4**	P	**P**	**23 55 17.1**	**+0.2**
	comp=E,0.2nm,0.6s,baz=349,slow=5.5,SNR=4.8						
ASAR	**Alice Springs**	**84.13**	**127**	P	**P**	**23 55 50.4**	**+0.2**
	comp=E,0.2nm,0.6s,baz=321,slow=5.5,SNR=6.6						

KRSC 03 23:43:22.4±1.3**, 48°.83N**×**155°.51E, h10**km±10km**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.90**	**12**	P	Pn	23 43 54.6	-0.2
SKR				*i* S	Sn	23 44 18.0	-0.7
MIPR	**Malaya Ipel'ka**	**3.54**	**13**	P	Pn	23 44 17.9	+0.5
ASAK	**Asacha**	**3.87**	**22**	*e*P	Pn	23 44 23.5	+1.5
MTVR	**Mutnovka**	**4.03**	**24**	P	Pn	23 44 24.6	+0.2
MTVR				*i* S	Sn	23 45 09.5	-2.3
RUS	**Russkaya**	**4.08**	**27**	*e*P	Pn	23 44 25.0	+0.2
RUS				*e*S	Sn	23 45 10.4	-2.2
UGLR	**Uglovaya**	**4.86**	**24**	P	Pn	23 44 36.4	+0.8
AVH	**Avacha**	**4.88**	**23**	P	Pn	23 44 36.7	+0.7
GNL	**Ganaly**	**5.11**	**16**	P	Pn	23 44 39.9	+0.9

*CSEM **04** 00:08:45.6±0.2, 36°.84N×26°.54E, h10km, MD3.3, Error ellipse: s-maj=6.4km s-min=4.6km az=171.0*
*ISK **04** 00:08:45.3, 36°.87N×26°.57E, h5km, MD3.0*
*DDA **04** 00:08:45.2, 36°.89N×26°.63E, h18km, MD2.9*
*ISCJB **04** 00:08:45.3±0.7, 36°.83N±0°.03×26°.56E±0°.03, h8km±6km, Error ellipse: s-maj=5.4km s-min=4.0km az=173.3*
*ATH **04** 00:08:46.4, 36°.71N×26°.50E, h14km, MD3.3/3*
ISC 04 00:08:46.0±1.2**, 36°.88N**±0°.03×**26°.57E**±0°.02**, h18**km±4km**, n33, σ0^{s}53**/47**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.56**	**119**	*e*PB	**Pb**	**00 08 57.2**	**-0.1**
NIS1				*e*SB	**Sb**	**00 09 05.2**	**+0.2**
NIS1	**Nisyros Isl.**	**0.56**	**119**	*e*Pb	**Pb**	**00 08 57.2**	**-0.1**
NIS1				*e*Sb	**Sb**	**00 09 05.2**	**+0.2**
BODT	**Bodrum**	**0.62**	**73**	*e*PG	**Pg**	**00 08 57.9**	**-0.5**
BODT				*e*SG	**Sb**	**00 09 07.0**	**+0.3**
BODT	**Bodrum**	**0.62**	**73**	*e*Pg	**Pg**	**00 08 57.9**	**-0.5**
BODT				*e*Sg	**Sb**	**00 09 07.0**	**+0.3**
DAT	**Datca**	**0.82**	**100**	*e*PG	**Pb**	**00 09 01.7**	**-0.2**
DAT				*e*SG	**Sg**	**00 09 13.4**	**+0.3**
DAT	**Datca**	**0.82**	**100**	*e*Pg	**Pb**	**00 09 01.7**	**-0.2**
DAT				*e*Sg	**Sg**	**00 09 13.4**	**+0.3**
APE	**Apeiranthos**	**0.85**	**283**	*e*PG	**Pb**	**00 09 02.2**	**-0.2**
APE				*e*SG	**Sg**	**00 09 14.6**	**+0.6**
APE	**Apeiranthos**	**0.85**	**283**	*e*PG	**Pb**	**00 09 02.5**	**+0.1**
APE				*e*SB	**Sn**	**00 09 14.9**	**-0.4**
APE	**Apeiranthos**	**0.85**	**283**	*e*Pg	**Pb**	**00 09 02.2**	**-0.2**
APE				*e*Sg	**Sg**	**00 09 14.6**	**+0.6**
APE				*e*Sb	**Sn**	**00 09 14.9**	**-0.4**
GCAM	**G?zelcaml?**	**0.97**	**33**	*i* P	**Pn**	**00 09 04.6**	**-0.2**
GCAM				*i* S	**Sb**	**00 09 17.0**	**+0.1**
GCAM	**G?zelcaml?**	**0.97**	**33**	*i* P	**Pn**	**00 09 04.6**	**-0.2**
MLSB	**Milas**	**1.05**	**66**	*e*PG	**Pn**	**00 09 05.8**	**-0.1**
MLSB	**Milas**	**1.05**	**66**	*e*Pg	**Pn**	**00 09 05.8**	**-0.1**
AYDN	**Tasoluk**	**1.30**	**53**	*i* P	**Pn**	**00 09 09.5**	**+0.1**
AYDN				*i* S	**Sn**	**00 09 26.0**	**-0.4**
AYDN	**Tasoluk**	**1.30**	**53**	*i* P	**Pn**	**00 09 09.5**	**+0.1**
YER	**Yerkesik**	**1.39**	**79**	*e*PN	**Pb**	**00 09 12.0**	**+0.4**
YER	**Yerkesik**	**1.39**	**79**	*e*Pn	**Pb**	**00 09 12.0**	**+0.4**
URLA	**Izmir**	**1.48**	**1**	*i* P	**Pn**	**00 09 11.7**	**-0.1**
URLA				*i* S	**Sg**	**00 09 34.0**	**+0.2**
URLA	**Izmir**	**1.48**	**1**	*i* P	**Pn**	**00 09 11.7**	**-0.1**
URLA				*i* S	**Sg**	**00 09 34.0**	**+0.2**
BLCB	**Balcova**	**1.55**	**14**	*e*PN	**Pb**	**00 09 14.5**	**+0.3**
BLCB	**Balcova**	**1.55**	**14**	*e*Pn	**Pb**	**00 09 14.5**	**+0.3**
TURN	**Turunc**	**1.63**	**90**	*i* P	Pn	00 09 10.1	-3.7
TURN				*i* S	Sn	00 09 26.7	-7.7
TURN	**Turunc**	**1.63**	**90**	*i* P	Pn	00 09 10.1	-3.7
DALY	**Dalyan (Mu˜la**	**1.67**	**92**	*e*PN	**Pb**	**00 09 16.2**	**-0.1**
DALY	**Dalyan (Mu˜la**	**1.67**	**92**	*e*Pn	**Pb**	**00 09 16.2**	**-0.1**
NPS	**Neapolis**	**1.79**	**206**	*e*PB	**Pn**	**00 09 16.0**	**-0.1**
NPS				*e*SB	**Sn**	**00 09 37.8**	**-0.6**
NPS	**Neapolis**	**1.79**	**206**	*e*Pb	**Pn**	**00 09 16.0**	**-0.1**
NPS				*e*Sb	**Sn**	**00 09 37.8**	**-0.6**
LAST	**Lasithi**	**1.93**	**208**	*e*PN	**Pn**	**00 09 18.7**	**+0.6**
LAST	**Lasithi**	**1.93**	**208**	*e*Pn	**Pn**	**00 09 18.7**	**+0.6**
FETY	**Fethiye**	**2.03**	**96**	*e*PN	**Pb**	**00 09 21.4**	**-1.1**
FETY	**Fethiye**	**2.03**	**96**	*e*Pn	**Pb**	**00 09 21.4**	**-1.1**
ELL	**Elmali**	**2.68**	**92**	*e*PN	**Pn**	**00 09 30.0**	**+1.6**
ELL	**Elmali**	**2.68**	**92**	*e*Pn	**Pn**	**00 09 30.0**	**+1.6**

*MOS **04** 00:19:15.3±2.9, 49°.80N×88°.02E, h8km, mb4.2/1, Error ellipse: s-maj=21.2km s-min=11.1km az=102.1*
*IDC **04** 00:19:16.2±2.1, 49°.79N×87°.79E, h0km, mb3.3/1, mb1 3.5/6, mb1mx3.3/31, mbtmp3.5/6, ML3.4/5, Error ellipse: s-maj=20.2km s-min=12.4km az=95.0*
*ISCJB **04** 00:19:16.9±1.0, 49°.84N±0°.04×87°.61E±0°.09, h11km, mb3.1/1, Error ellipse: s-maj=8.8km s-min=5.8km az=23.4*
*NNC **04** 00:19:17.7±1.3, 49°.79N×87°.63E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=11.5km s-min=7.4km az=59.0*
ISC 04 00:19:17.5±1.7**, 49°.85N**±0°.06×**87°.8E**±0°.1**, h11**km**, n26, σ1^{s}48**/36**, 7C-17D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKAR	**Aktash**	**0.48**	**347**	*i* PG	**Pg**	**00 19 26.1**	**-0.9**
AKAR				*e*		00 19 34.0	
ARTR	**Artybash**	**1.98**	**351**	*e*PN	**Pb**	**00 19 52.5**	**-1.0**
ARTR				*e*		00 20 18.0	
TASR	**Tashtagol**	**2.92**	**1**	*e*PN	**Pb**	**00 20 09.6**	**+0.1**
TASR				*e*		00 20 48.2	
ZALV	**Zalesovo Beam**	**4.50**	**337**	PN	**Pn**	**00 20 26.1**	**+0.6**
ZALV						00 21 19.8	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV				smax	smax		
	comp=N,4.0nm,0.3s						
ZALV	**Zalesovo Beam**	**4.50**	**337**	Pn	**Pn**	**00 20 26.1**	**+0.6**
	comp=N,2.4nm,0.3s,baz=157,slow=14,SNR=51						
ZALV				Sn	**Sn**	**00 21 19.8**	**+2.0**
	comp=N,3.9nm,0.3s,baz=160,slow=28,SNR=6.6						
ZALV				Lg	Lg	00 21 37.0	
	comp=N,4.6nm,0.3s,baz=154,slow=31,SNR=4.4						
MK31	**Makanchi Array**	**4.78**	**232**	⇓Pn	**Pn**	**00 20 29.5**	**+0.1**
	comp=N,3.8nm,0.5s,baz=56,slow=13,SNR=188						
MK31				⇓Pg	**Pb**	**00 20 42.9**	**+1.7**
	comp=N,9.2nm,0.5s,baz=57,slow=17,SNR=36						
MK31				⇓Lg	Lg	00 21 44.7	
	comp=N,34nm,0.6s,baz=59,slow=30,SNR=8.8						
MKAR	**Makanchi Array**	**4.78**	**232**	PN	**Pn**	**00 20 30.4**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	**Makanchi Array**	**4.78**	**232**	Pn	**Pn**	**00 20 30.4**	**+1.0**
	comp=Z,1.5nm,0.3s,baz=53,slow=14,SNR=45						
MKAR				Sn	**Sn**	**00 21 24.9**	**+0.2**
	comp=Z,4.7nm,0.3s,baz=60,slow=22,SNR=5.3						
MKAR				Lg	Lg	00 21 46.7	
	comp=Z,12nm,0.3s,baz=56,slow=28,SNR=8.8						
NVS	**Novosibirsk**	**5.73**	**333**	*e*PN	**Pn**	**00 20 42.7**	**+0.4**
NVS				*e*		00 21 01.1	
KURK	**Kurchatov**	**5.95**	**282**	⇓Pn	**Pn**	**00 20 45.2**	**-0.1**
	comp=Z,2.5nm,0.4s						
KURK				⇑Sn	**Sn**	**00 21 54.9**	**+1.5**
	comp=Z,30nm,0.8s						
KURK				⇓Lg	Lg	00 22 23.9	
	comp=Z,33nm,0.7s						
KURK	**Kurchatov**	**5.95**	**282**	PN	**Pn**	**00 20 46.4**	**+1.0**
KURK						00 21 56.0	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK				smax	smax		
	comp=N,1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**6.00**	**281**	⇓Pn	**Pn**	**00 20 47.3**	**+1.2**
	comp=N,1.6nm,0.5s						
KURBB				⇓Sn	**Sn**	**00 21 56.7**	**+2.1**
	comp=N,8.0nm,0.7s						
KURBB				⇑Lg	Lg	00 22 25.2	
	comp=N,18nm,0.7s						
KURBB	**Kurchatov Arra**	**6.00**	**281**	Pn	**Pn**	**00 20 46.4**	**+0.3**
	comp=N,0.6nm,0.3s,baz=93,slow=15,SNR=85						
KURBB				Sn	**Sn**	**00 21 56.0**	**+1.4**
	comp=N,0.7nm,0.3s,baz=87,slow=27,SNR=18						
KURBB				Lg	Lg	00 22 27.5	
	comp=N,1.5nm,0.3s,baz=92,slow=32,SNR=13						
WMQ	**Urumqi**	**6.03**	**181**	Pn	Pg	00 21 22.4	+10
WMQ				Sn	Sb	00 22 22.6	+7.9
WMQ				smax	smax		
	comp=N,29nm,0.5s						
WMQ				smax	smax		
	comp=E,26nm,0.6s						
TKM2	**Tokmak 2**	**10.90**	**235**	⇑Lg	Lg	00 24 59.7	
	comp=E,6.4nm,1.2s						
VOSK	**Vostochnaya**	**10.92**	**292**	⇓Pn	**Pn**	**00 21 53.8**	**+0.3**
	comp=E,2.4nm,1.3s						
VOSK				⇑Sn	**Sn**	**00 23 55.7**	**+0.2**
	comp=E,1.3nm,0.6s						
VOSK				⇓Lg	Lg	00 25 02.9	
	comp=E,9.6nm,1.0s						
BVA0	**Borovoye Array**	**11.32**	**293**	⇓Pn	**Pn**	**00 21 59.1**	**+0.1**
	comp=E,0.5nm,1.1s,baz=103,slow=15,SNR=3.8						
BVA0				⇓Sn	**Sn**	**00 24 06.2**	**+0.9**
	comp=E,0.4nm,0.9s,baz=105,slow=24,SNR=3.1						
BVAR	**Borovoye Array**	**11.32**	**293**	P	**Pn**	**00 21 57.8**	**-1.2**
BVAR	**Borovoye Array**	**11.32**	**293**	Pn	**Pn**	**00 21 57.8**	**-1.2**
	comp=E,0.3nm,0.3s,baz=110,slow=14,SNR=5.5						
BVAR				Sn	**Sn**	**00 24 01.2**	**-4.2**
	comp=E,0.5nm,0.3s,baz=96,slow=22,SNR=4.9						
BRVK	**Borovoye**	**11.39**	**293**	⇑Pn	**Pn**	**00 22 00.5**	**+0.6**
	comp=E,2.8nm,0.8s						
BRVK				⇓Sn	**Sn**	**00 24 06.5**	**-0.5**
	comp=E,4.3nm,0.6s						
BRVK				⇓Lg	Lg	00 25 15.5	
	comp=E,6.7nm,0.8s						
AAK	**Ala-Archa**	**11.69**	**237**	P	**Pn**	**00 22 02.7**	**-1.5**
AAK						00 24 10.8	
AAK	**Ala-Archa**	**11.69**	**237**	Pn	**Pn**	**00 22 02.7**	**-1.5**
	comp=E,0.1nm,0.3s,baz=34,slow=7.3,SNR=2.1						
AAK				Sn	**Sn**	**00 24 10.8**	**-3.9**
	comp=E,0.1nm,0.3s,baz=47,slow=19,SNR=1.9						
AAK				Lg	Lg	00 25 29.2	
	comp=E,0.1nm,0.3s,baz=161,slow=18,SNR=3.1						
ZRNK	**Zerenda**	**12.13**	**292**	⇓Pn	**Pn**	**00 22 10.6**	**+0.5**
	comp=E,2.5nm,0.9s						
ZRNK				⇑Sn	**Sn**	**00 24 26.6**	**+1.3**
	comp=E,1.1nm,0.7s						
ZRNK				⇓Lg	Lg	00 25 40.9	
	comp=E,4.6nm,1.1s						
SONM	**Songino Array**	**12.42**	**92**	Lg	Lg	00 25 47.0	
	comp=E,0.1nm,0.3s,baz=284,slow=30,SNR=6.1						
KK31	**Karatay Array**	**13.67**	**247**	⇑Pn	**Pn**	**00 22 30.0**	**-1.2**
	comp=E,0.3nm,0.4s,baz=51,slow=13,SNR=7.3						
KK31				⇓Sn	**Sn**	**00 25 02.9**	**-0.1**
	comp=E,1.0nm,0.6s						
KK31				⇓Lg	Lg	00 26 27.1	
	comp=E,2.9nm,0.8s						
BRTR	**Keskin Array B**	**38.96**	**276**	P	**P**	**00 26 45.6**	**+2.0**
	comp=E,0.2nm,0.5s,baz=48,slow=5.7,SNR=4.1						

*DDA **04** 00:52:14.7, 41°.81N×33°.16E, h28km, MD3.0*
*CSEM **04** 00:52:15.5±0.8, 41°.64N×32°.95E, h5km, MD2.7, Error ellipse: s-maj=15.4km s-min=7.5km az=154.0*
*ISK **04** 00:52:18.0, 41°.24N×33°.01E, h24km, MD2.7*
ISC 04 00:52:14.2±1.3**, 41°.70N**±0°.04×**32°.87E**±0°.04**, h20**km±5km**, n16, σ1^{s}72**/29**, 2D, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALT	**Daday**	**0.42**	**113**	*i* P	**Pb**	**00 52 22.6**	**-0.4**
BALT				*i* S	**Sb**	**00 52 28.1**	**-0.9**
BALT	**Daday**	**0.42**	**113**	*i* P	**Pb**	**00 52 22.6**	**-0.4**
BALT				*i* S	**Sb**	**00 52 28.1**	**-0.9**
SAFT	**Safranbolu**	**0.48**	**196**	*e*PG	**Pb**	**00 52 23.9**	**-0.1**
SAFT				*e*SG	**Sb**	**00 52 29.7**	**-0.9**
SAFT	**Safranbolu**	**0.48**	**196**	*e*Pg	**Pb**	**00 52 23.9**	**-0.1**
SAFT				*e*Sg	**Sb**	**00 52 29.7**	**-0.9**
ILGA	**Ilgaz**	**0.91**	**135**	*i* P	**Pn**	**00 52 32.1**	**+0.1**
ILGA				*i* S	**Sn**	**00 52 44.5**	**-0.1**
ILGA	**Ilgaz**	**0.91**	**135**	*i* P	**Pn**	**00 52 32.1**	**+0.1**
ILGA				*i* S	**Sn**	**00 52 44.5**	**-0.1**
TOS	**Tosya**	**1.10**	**127**	*e*PG	**Pn**	**00 52 34.0**	**-0.5**
TOS				*e*SG	**Sb**	**00 52 45.9**	**-2.4**
TOS	**Tosya**	**1.10**	**127**	*e*Pg	**Pn**	**00 52 34.0**	**-0.5**
TOS				*e*Sg	**Sb**	**00 52 45.9**	**-2.4**
ELDT	**Eldivan**	**1.28**	**161**	*i* P	**Pb**	**00 52 39.2**	**+1.5**
ELDT				*i* S	**Sb**	**00 52 58.1**	**+4.2**
ELDT	**Eldivan**	**1.28**	**161**	*i* P	**Pb**	**00 52 39.2**	**+1.5**
ELDT				*i* S	**Sb**	**00 52 58.1**	**+4.2**
BYBT	**Boyabat**	**1.44**	**99**	*e*PN	**Pb**	**00 52 41.6**	**+1.3**
BYBT				*e*SN	**Sb**	**00 52 59.4**	**+1.1**
BYBT	**Boyabat**	**1.44**	**99**	*e*Pn	**Pb**	**00 52 41.7**	**+1.3**
BYBT				*e*Sn	**Sb**	**00 52 59.4**	**+1.1**
KAMT	**Kaman**	**2.42**	**164**	*e*PN	**Pn**	**00 52 50.1**	**-2.6**
TIRR	**Tirgusor**	**4.27**	**312**	⇓*i*P	**Pn**	**00 53 18.5**	**+0.6**
TIRR				S	**Sn**	**00 54 05.1**	**-2.0**
CFR	**Carcaliu**	**4.89**	**317**	⇓*i*P	**Pn**	**00 53 27.2**	**+0.7**
CFR	**Carcaliu**	**4.89**	**317**	S	**Sn**	**00 54 21.8**	**-0.6**

*IDC **04** 00:55:21.3±0.8, 14°.14N×90°.94W, h64km±6km, mb3.7/11, mb1 3.9/12, mb1mx3.7/26, mbtmp3.7/12, MS3.3/7, Ms1 3.3/7, ms1mx3.1/28, Error ellipse: s-maj=25.2km s-min=13.0km az=65.0*
*CASC **04** 00:55:21.6±2.1, 13°.82N×91°.33W, h32km±9km, MD4.0, ML4.2*
*ISCJB **04** 00:55:21.3±0.7, 14°.00N±0°.06×91°.31W±0°.05, h82km±5km, mb4.1/12, Error ellipse: s-maj=11.0km s-min=6.5km az=40.5*
ISC 04 00:55:21.0±0.7**, 13°.93N**±0°.06×**91°.35W**±0°.06**, h66**km±5km**, n42, σ1^{s}62**/56**, mb4.1**/12**, 2C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.48**	**324**	*e*P	**Pn**	**00 55 33.2**	**0.0**
FUG	**Fuego 3**	**0.71**	**43**	*e*P	**Pn**	**00 55 36.1**	**+0.1**
PCG	**Pacaya**	**0.85**	**57**	*e*P	**Pn**	**00 55 38.5**	**+0.8**
IXG	**Ixpaco**	**0.90**	**74**	*e*P	**Pn**	**00 55 38.5**	**+0.2**
IXG				*e*S	**Sn**	**00 55 51.6**	**+0.7**
NBG	**Las Nubes**	**1.17**	**56**	*e*P	**Pn**	**00 55 43.7**	**+1.9**
NBG				*e*S	**Sn**	**00 56 01.9**	**+4.7**
RBDL	**Robledal**	**1.62**	**83**	⇑*i*P	**Pn**	**00 55 48.5**	**+0.9**
RTR	**El Retiro**	**1.65**	**91**	*e*P	**Pn**	**00 55 48.6**	**+0.6**
RTR				*e*S	**Sn**	**00 56 08.9**	**+0.4**
SBLS	**San Blas**	**1.68**	**93**	*e*P	**Pn**	**00 55 48.7**	**+0.3**
SNJE	**San Jose**	**1.69**	**92**	*e*P	**Pn**	**00 55 49.0**	**+0.4**
SNJE				*e*S	**Sn**	**00 56 10.5**	**+1.0**
MRL	**Marmol**	**1.96**	**55**	*e*P	**Pn**	**00 55 54.3**	**+2.0**
MTO2	**Montecristo 2**	**1.98**	**76**	⇑*e*P	**Pn**	**00 55 53.0**	**+0.5**
BOQS	**Boqueron**	**2.02**	**95**	*e*P	**Pn**	**00 55 53.7**	**+0.7**
BOQS				*e*S	**Sn**	**00 56 18.6**	**+1.2**
SNET	**Serv Nac Est T**	**2.07**	**96**	*e*P	**Pn**	**00 55 54.3**	**+0.7**
SNET				*e*S	**Sn**	**00 56 19.0**	**+0.6**
SNET				AML	AML	00 56 26.6	
	comp=Z,2µm,0.3s						
LFU	**La Fuente**	**2.18**	**94**	*e*P	**Pn**	**00 55 55.8**	**+0.8**
LFU				*e*S	**Sn**	**00 56 21.2**	**+0.2**
LFRS	**El Faro**	**2.24**	**97**	*e*P	**Pn**	**00 55 56.6**	**+0.7**
LBRS	**Las Brisas**	**2.25**	**95**	*e*P	**Pn**	**00 55 56.6**	**+0.6**
SNVI	**San Vicente**	**2.46**	**97**	*e*P	**Pn**	**00 55 59.9**	**+1.0**
VSM	**San Miguel**	**3.03**	**99**	*e*P	**Pn**	**00 56 07.4**	**+0.6**
CAHU	**Cacacuatique**	**3.05**	**93**	*e*P	**Pn**	**00 56 07.5**	**+0.4**
BLLM	**Bellamira**	**3.06**	**99**	*e*P	**Pn**	**00 56 08.4**	**+1.4**
CNCH	**Conchagua**	**3.48**	**100**	*e*P	**Pn**	**00 56 13.7**	**+0.9**
CNCH				*e*S	**Sn**	**00 56 54.3**	**+1.5**
TGUH	**Tegucigalpa,Un**	**3.96**	**88**	*e*P	**Pn**	**00 56 19.6**	**+0.4**
TEIG	**Tepich**	**6.92**	**25**	P	**Pn**	**00 57 01.1**	**+1.3**
	comp=Z,22nm,0.3s,baz=200,slow=1.1,SNR=114						
TEIG				S	**Sn**	**00 58 18.3**	**+1.3**
	baz=217,slow=20,SNR=2.9						
TXAR	**Lajitas Array**	**19.11**	**325**	P	**Pn**	**00 59 40.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=145,slow=11,SNR=9.6						
TXAR				pP	**pP**	**00 59 54.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=143,slow=10,SNR=9.9						
TXAR				ScP	**ScP**	**01 07 36.1**	**+5.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.0nm,0.3s,baz=147,slow=7.5,SNR=6.9						
TXAR				LR	LR	01 08 55.5	
	comp=Z,39nm,18.3s,baz=0.0,slow=42						
LPIG	**La Paz**	**20.56**	**302**	P	Pn	01 00 00.7	+3.6
	comp=Z,0.8nm,0.4s,baz=108,slow=3.2,SNR=1.8						
TKL	**Tuckaleechee C**	**22.68**	**16**	P	**P**	**01 00 16.1**	**-1.0**
	comp=Z,1.8nm,0.5s,baz=202,slow=10.0,SNR=5.7						
TKL				LR	LR	01 09 49.1	
	comp=Z,69nm,18.6s,baz=280,slow=39						
ATAH	**Atahualpa**	**24.56**	**148**	P	**P**	**01 00 37.0**	**+1.7**
	comp=Z,18nm,1.0s,baz=331,slow=7.7,SNR=7.7						
ANMO	**Albuquerque**	**24.98**	**330**	P	**P**	**01 00 39.7**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=126,slow=14,SNR=3.9						
ANMO				pP	**pP**	**01 00 55.2**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=178,slow=14,SNR=2.4						
ANMO				LR	LR	01 12 24.3	
	comp=Z,26nm,18.2s,baz=337,slow=41						
SADO	**Sadowa**	**32.45**	**16**	P	**P**	**01 01 43.4**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=225,slow=7.1,SNR=3.1						
NVAR	**Mina Array Bea**	**34.13**	**321**	P	**P**	**01 02 02.1**	**+2.2**
	comp=Z,1.3nm,0.7s,baz=136,slow=8.9,SNR=6.5						
NVAR				pP	**pP**	**01 02 17.7**	**+1.7**
	comp=Z,8.8nm,0.7s,baz=133,slow=8.8,SNR=24						
NVAR				pPcP		01 04 54.7	
	comp=Z,0.8nm,0.6s,baz=137,slow=3.5,SNR=3.7						
LPAZ	**La Paz**	**37.78**	**142**	P	**P**	**01 02 31.9**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=308,slow=2.9,SNR=3.6						
LPAZ				LR	LR	01 18 26.4	
	comp=Z,50nm,18.4s,baz=180,slow=37						
SIV	**San Ignacio**	**42.18**	**134**	P	**P**	**01 03 07.3**	**-0.2**
	comp=Z,5.8nm,0.8s,baz=314,slow=8.1,SNR=16						
RPN	**Rapa Nui**	**44.39**	**203**	P	**P**	**01 03 27.9**	**+2.7**
	comp=Z,34nm,0.3s,baz=78,slow=9.3,SNR=2.3						
SCHQ	**Schefferville**	**45.07**	**20**	P	**P**	**01 03 27.9**	**-2.4**
	comp=Z,2.6nm,0.7s,baz=234,slow=8.7,SNR=7.4						
SCHQ				pP	**pP**	**01 03 44.4**	**-2.6**
	comp=Z,1.9nm,0.6s,baz=223,slow=9.5,SNR=3.4						
SCHQ				LR	LR	01 22 41.9	
	comp=Z,58nm,18.1s,baz=141,slow=37						
YKA	**Yellowknife Ar**	**51.24**	**346**	P	**P**	**01 04 16.7**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=140,slow=8.6,SNR=25						
YKA				pP	**pP**	**01 04 32.4**	**-2.3**
	comp=Z,0.9nm,0.7s,baz=148,slow=7.5,SNR=11						
YKA				PcP	**PcP**	**01 05 31.5**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=152,slow=3.7,SNR=5.5						
YKA				pPcP		01 05 50.1	
	comp=Z,0.3nm,0.7s,baz=148,slow=3.7,SNR=4.8						
YKA				ScP	**ScP**	**01 09 23.2**	**+0.4**
	comp=Z,0.1nm,0.4s,baz=140,slow=4.5,SNR=4.2						
NOA	**NORSAR Array B**	**83.91**	**29**	LR	LR	01 42 15.3	
	comp=Z,18nm,19.6s,baz=0.0,slow=34						
HFS	**Hagfors**	**85.36**	**29**	LR	LR	01 44 54.2	
	comp=Z,47nm,19.9s,baz=41,slow=35						
ARCES	**ARCESS Array B**	**86.01**	**18**	P	**P**	**01 07 51.4**	**-2.5**
	comp=Z,3.9nm,1.0s,baz=297,slow=4.0,SNR=3.9						
TORD	**Torodi Ar. Bea**	**89.78**	**77**	P	**P**	**01 08 10.7**	**-2.3**
	comp=Z,0.5nm,1.1s,baz=304,slow=5.2,SNR=3.7						
MKAR	**Makanchi Array**	**119.29**	**5**	PKP	**PKPdf**	**01 14 00.7**	**-2.3**
	comp=Z,0.1nm,0.4s,baz=285,slow=2.8,SNR=4.0						
ASAR	**Alice Springs**	**136.24**	**250**	PKP	**PKPdf**	**01 14 35.4**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=98,slow=2.8,SNR=3.1						
CMAR	**Chiang Mai Arr**	**146.26**	**342**	PKPbc	**PKPdf**	**01 14 53.8**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=342,slow=3.5,SNR=5.6						
CMAR				pPKPbc	pPKPbc	01 15 12.2	-1.8
	comp=Z,1.7nm,0.4s,baz=343,slow=4.0,SNR=2.7						

*THR **04** 01:10:47.0±0.4, 29°.83N×56°.85E, h9km±3km, ML3.6*
*ISCJB **04** 01:10:47.3±0.5, 29°.79N±0°.03×56°.89E±0°.05, h10km, Error ellipse: s-maj=5.9km s-min=4.3km az=4.0*
*CSEM **04** 01:10:49.3±0.2, 29°.82N×56°.94E, h15km, ML3.7, Error ellipse: s-maj=5.5km s-min=4.4km az=102.0*
*OMAN **04** 01:10:50.9±19.0, 29°.48N×57°.29E, h2km, Error ellipse: s-maj=10.2km s-min=1.0km az=295.0*
*TEH **04** 01:10:50.7, 29°.96N×57°.00E, h13km, ML3.7*
ISC 04 01:10:47.9±1.0, **29°.84N**±0°.04×**56°.98E**±0°.05, **h10km, n41, σ1s.37**/51, **2C-4D, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.23**	**306**	*e*Pg	**Pg**	**01 10 51.1**	**-1.8**
KRBR				AML	AML	01 10 55.3	
	comp=N,20μm,0.2s						
KRBR				AML	AML	01 10 55.8	
	comp=E,21μm,0.2s						
KRBR	**Kerman**	**0.23**	**306**	*e*Pg	**Pg**	**01 10 51.1**	**-1.8**
IBAF	**Bafgh**	**2.12**	**325**	*e*Pn	**Pn**	**01 11 24.4**	**+0.8**
IBAF				*e*Sg	**Sb**	**01 11 53.5**	**+0.4**
IBAF				*e*		01 11 56.2	
	comp=Z,8μm,0.1s						
IBAF	**Bafgh**	**2.12**	**325**	*e*Pn	**Pn**	**01 11 24.5**	**+0.8**
BNDS	**Bandar-Abbas**	**2.54**	**196**	*e*Pn	**Pn**	**01 11 29.8**	**+0.5**
BNDS				AML	AML	01 12 10.7	
	comp=N,197nm,0.3s						
BNDS	**Bandar-Abbas**	**2.54**	**196**	*e*Pn	**Pn**	**01 11 29.8**	**+0.5**
IMEH	**Mehriz**	**2.56**	**308**	*e*Pn	**Pn**	**01 11 30.3**	**+0.7**
IMEH				*e*		01 11 35.3	
	comp=Z,4μm,0.1s						
IMEH	**Mehriz**	**2.56**	**308**	*e*Pn	**Pn**	**01 11 30.4**	**+0.8**
IKOO	**Kooshah**	**3.10**	**34**	*e*Pn	**Pn**	**01 11 37.9**	**+0.7**
IKOO				*e*		01 11 38.7	
	comp=Z,3μm,0.1s						
IKOO	**Kooshah**	**3.10**	**34**	*e*Pn	**Pn**	**01 11 37.9**	**+0.7**
ICHK	**Chekchek**	**3.25**	**318**	*e*Pn	**Pn**	**01 11 41.1**	**+1.9**
ICHK				*e*Sg	**Sb**	**01 12 30.0**	**+4.3**
ICHK				*e*		01 12 32.0	
	comp=Z,2μm,0.2s						
ICHK	**Chekchek**	**3.25**	**318**	*e*Pn	**Pn**	**01 11 41.1**	**+1.9**
ZHSF	**Zahedan**	**3.31**	**93**	*e*Pn	**Pn**	**01 11 42.8**	**+2.8**
ZHSF	**Zahedan**	**3.31**	**93**	*e*Pn	**Pn**	**01 11 42.8**	**+2.8**
ISRV	**Sarvestan**	**3.40**	**263**	*e*Pn	**Pn**	**01 11 43.2**	**+1.9**
ISRV				*e*Sg	**Sg**	**01 12 37.8**	**+0.7**
ISRV				*e*		01 12 49.5	
	comp=Z,1μm,0.4s						
ISRV	**Sarvestan**	**3.40**	**263**	*e*Pn	**Pn**	**01 11 43.2**	**+1.9**
ISRV				*e*Sg	**Sg**	**01 12 37.8**	**+0.7**
ITEG	**Tejag**	**3.40**	**26**	*e*Pn	**Pn**	**01 11 41.7**	**+0.5**
ITEG				*e*		01 11 51.6	
	comp=Z,1μm,0.2s						
ITEG	**Tejag**	**3.40**	**26**	*e*Pn	**Pn**	**01 11 41.7**	**+0.5**
TABS	**Tabas**	**3.80**	**2**	*e*Pn	**Pn**	**01 11 47.8**	**+1.2**
TABS				AML	AML	01 12 52.9	
	comp=N,85nm,0.6s						
TABS	**Tabas**	**3.80**	**2**	*e*Pn	**Pn**	**01 11 47.8**	**+1.2**
IDAH	**Dahanechah**	**3.80**	**40**	*e*Pn	**Pn**	**01 11 47.7**	**+0.9**
IDAH				*e*		01 12 07.9	
	comp=Z,630nm,0.2s						
IDAH	**Dahanechah**	**3.80**	**40**	*e*Pn	**Pn**	**01 11 47.7**	**+0.9**
BANOM	**Banah**	**3.95**	**189**	⇓P	**Pn**	**01 11 48.5**	**-0.2**
	SNR=42						
BANOM				⇑S	**Sn**	**01 12 35.3**	**+0.2**
BANOM	**Banah**	**3.95**	**189**	P	**Pn**	**01 11 48.5**	**-0.2**
	SNR=42						
BANOM				S	**Sn**	**01 12 35.3**	**+0.2**
NASN	**Na'in**	**4.63**	**311**	*e*Pn	**Pn**	**01 11 58.7**	**+0.5**
NASN	**Na'in**	**4.63**	**311**	*e*Pn	**Pn**	**01 11 58.7**	**+0.5**
IGAR	**Gharneh**	**4.94**	**302**	*e*		01 12 20.4	
	comp=Z,156nm,0.2s						
IGAR				*e*Pn	**Pn**	**01 12 04.1**	**+1.7**
IZEF	**Zefreh**	**5.01**	**309**	*e*Pn	**Pn**	**01 12 04.6**	**+1.2**
IZEF				*e*Sg	**Sg**	**01 13 25.7**	**-3.0**
IZEF				*e*		01 13 30.7	
	comp=Z,197nm,0.2s						
IZEF	**Zefreh**	**5.01**	**309**	*e*Pn	**Pn**	**01 12 04.6**	**+1.2**
ASHO	**Ashiyiah**	**5.20**	**189**	⇓P	**Pn**	**01 12 06.4**	**+0.5**
	SNR=7.8						
ASHO				⇑S	**Sn**	**01 13 04.8**	**-1.2**
ASHO	**Ashiyiah**	**5.20**	**189**	P	**Pn**	**01 12 06.4**	**+0.5**
	SNR=7.8						
ASHO				S	**Sn**	**01 13 04.8**	**-1.2**
ASUD	**Al Ashush, Dub**	**5.40**	**196**	⇓P	**Pn**	**01 12 09.3**	**+0.8**
	SNR=13						
ASUD				⇓S	**Sn**	**01 13 10.4**	**-0.4**
ASUD	**Al Ashush, Dub**	**5.40**	**196**	P	**Pn**	**01 12 09.3**	**+0.8**
	SNR=13						
ASUD				S	**Sn**	**01 13 10.4**	**-0.4**
IKLH	**Kolahrood**	**5.76**	**308**	*e*Pn	**Pn**	**01 12 15.0**	**+1.2**
IKLH				*e*		01 14 01.2	
	comp=Z,156nm,0.2s						
IKLH	**Kolahrood**	**5.76**	**308**	*e*Pn	**Pn**	**01 12 15.0**	**+1.2**
QRN	**Al-Qurain**	**7.99**	**264**	*e*P	**Pn**	**01 12 43.5**	**-0.6**
KBD	**Kabd**	**8.12**	**268**	*e*P	**Pn**	**01 12 45.5**	**-0.3**
KBD	**Kabd**	**8.12**	**268**	*e*P	**Pn**	**01 12 45.5**	**-0.3**
RDF	**Al-Radifah**	**8.28**	**266**	*e*P	**Pn**	**01 12 47.5**	**-0.5**
RDF	**Al-Radifah**	**8.28**	**266**	*e*P	**Pn**	**01 12 47.5**	**-0.5**
NAY	**Al-Naaiem**	**8.50**	**268**	AML	AML	01 14 21.0	
	comp=Z,1.7nm,0.5s						

NNC 04 01:17:22.7±2.0, **50°.18N**×**87°.08E, h0km, mb3.5, mpv3.1, 10C-5D, Error ellipse: s-maj=15.5km s-min=8.5km az=70.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.65**	**225**	Pn	Pn	01 18 34.7	+0.4
	1.6nm,0.4s,baz=54,slow=13,SNR=89						
MK31				⇑Pg	Pb	01 18 48.3	+3.1
	1.5nm,0.3s,baz=50,slow=12,SNR=9.3						
MK31				⇓Sn	Sn	01 19 29.7	+0.7
	6.9nm,0.7s,baz=53,slow=21,SNR=5.9						
MK31				⇑Lg	Lg	01 19 50.2	
	9.5nm,0.6s,baz=52,slow=28,SNR=6.6						
KURK	**Kurchatov**	**5.43**	**279**	⇑Pn	Pn	01 18 44.5	-0.3
	2.4nm,0.7s						
KURK				⇑Sn	Sn	01 19 49.1	+1.1
	3.3nm,0.7s						
KURK				⇑Lg	Lg	01 20 16.6	
	16nm,0.6s						
KURBB	**Kurchatov Arra**	**5.49**	**278**	⇓Pn	Pn	01 18 46.0	+0.3
	0.6nm,0.7s						
KURBB				⇓Sn	Sn	01 19 50.9	+1.5
	1.4nm,0.5s						
KURBB				⇑Lg	Lg	01 20 17.7	
	6.5nm,0.6s						
VOSK	**Vostochnaya**	**10.37**	**290**	⇓Pn	Pn	01 19 52.6	0.0
	0.8nm,0.8s						
VOSK				⇑Sn	Sn	01 21 48.9	-0.5
	0.9nm,0.6s						
VOSK				⇑Lg	Lg	01 22 51.9	
	3.5nm,0.9s						
ZRNK	**Zerenda**	**11.58**	**291**	⇑Pn	Pn	01 20 09.1	-0.1
	0.9nm,0.7s						
ZRNK				⇓Sn	Sn	01 22 19.2	0.0
	1.1nm,0.7s						
ZRNK				⇑Lg	Lg	01 23 31.3	
	1.9nm,0.9s						

*ISCJB **04** 01:22:58.0±0.4, 9°.60S±0°.04×123°.44E±0°.03, h75km, mb3.4/3, Error ellipse: s-maj=5.8km s-min=4.0km az=37.7*
*AUST **04** 01:22:58.8, 9°.50S×123°.51E, h60km*
*IDC **04** 01:23:01.1±3.3, 9°.65S×122°.95E, h114km±36km, mb3.3/3, mb1 3.7/6, mb1mx3.4/19, mbtmp3.6/6, Error ellipse: s-maj=186.5km s-min=16.9km az=59.0*
*DJA **04** 01:23:04.7±1.0, 9°S±5°×12°3E±°, h98km±12km, M3.9/5, mb3.9/1, MLv4.0/5*
ISC 04 01:22:58.9±0.6, **9°.55S**±0°.05×**123°.51E**±0°.05, **h75km, n30, σ2s.35**/32, **mb3.3**/3, **Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.56**	**306**	P	**Pn**	**01 23 25.1**	**+0.3**
MMRI				S	**Sn**	**01 23 43.0**	**-1.3**
BASI	**Baing, Sumba**	**2.97**	**257**	P	**Pn**	**01 23 45.4**	**+1.7**
BASI				S	**Sn**	**01 24 16.8**	**-1.5**
WSI	**Waingapu**	**3.17**	**268**	S	**Sn**	**01 24 20.7**	**-2.6**
BBSI	**Bau Bau**	**4.15**	**347**	P	**Pn**	**01 24 01.5**	**+1.7**
BBSI				S	**Sn**	**01 24 48.0**	**+0.9**
BSSI	**Bau Bau, Buton**	**4.52**	**318**	P	**Pn**	**01 24 05.5**	**+0.6**
BKSI	**Bulukumba**	**5.38**	**321**	P	**Pn**	**01 24 16.4**	**-0.3**
BKSI				S	**Sn**	**01 25 14.9**	**-2.5**
KAPI	**Kappang**	**5.85**	**320**	P	**Pn**	**01 24 22.7**	**-0.4**
KAPI	**Kappang**	**5.85**	**320**	P	**Pn**	**01 24 23.0**	**-0.2**
	1.5nm,0.3s,baz=167,slow=3.7,SNR=6.3						
KNRA	**Kununurra**	**7.95**	**140**	P	Pn	01 24 55.2	+3.4
	baz=8.0,SNR=3.4						
KNRA				S	Sn	01 25 55.4	-25
	baz=8.0,SNR=7.8						
MTN	**Manton Dam**	**8.16**	**114**	P	Pn	01 24 57.3	+2.7
	baz=8.2,SNR=7.1						
MTN				S	**Sn**	**01 26 23.5**	**-1.8**
	baz=8.2,SNR=9.0						
FITZ	**Fitzroy Crossi**	**8.74**	**167**	P	**Pn**	**01 25 04.3**	**+1.7**
	4.7nm,0.3s,baz=0.7,slow=9.4,SNR=87						
FITZ				S	**Sn**	**01 26 36.9**	**-2.7**
	4.9nm,0.3s,baz=59,slow=11,SNR=10						
FITZ	**Fitzroy Crossi**	**8.74**	**167**	P	**Pn**	**01 25 04.0**	**+1.4**
	baz=8.8,SNR=61						
FITZ				S	**Sn**	**01 26 39.0**	**-0.6**
	baz=8.8,SNR=6.2						
KDU	**Kakadu**	**9.33**	**110**	P	**Pn**	**01 25 12.3**	**+1.8**
	baz=9.4,SNR=3.3						
KDU				S	Sn	01 26 42.5	-11
	baz=9.4,SNR=4.9						
FAKI	**Fak Fak**	**10.90**	**53**	P	**Pn**	**01 25 33.9**	**+1.8**
	baz=11,SNR=11						
WRA	**Warramunga Arr**	**14.70**	**136**	P	**Pn**	**01 26 21.8**	**-1.1**
	1.1nm,0.3s,baz=311,slow=14,SNR=11						
WRA				S	Sn	01 28 56.6	-8.1
	1.2nm,0.3s,baz=317,slow=25,SNR=6.4						
ASAR	**Alice Springs**	**17.19**	**146**	P	**P**	**01 26 55.2**	**+0.4**
	1.5nm,0.3s,baz=326,slow=13,SNR=80						
ASAR				S	**Sn**	**01 29 59.9**	**-5.3**
	0.3nm,0.3s,baz=319,slow=22,SNR=8.3						
MEEK	**Meekatharra**	**17.61**	**195**	P	P	01 27 06.6	+7.2
	baz=18,SNR=6.3						
MEEK				S	Sn	01 30 06.7	-8.6
	baz=18,SNR=7.8						
JAY	**Jayapura**	**18.46**	**69**	P	Pn	01 27 28.5	+19
	baz=18,SNR=3.1						
JAY				S	**S**	**01 30 30.6**	**-4.6**
	baz=18,SNR=3.0						
QIS	**Mount Isa**	**18.98**	**127**	P	**Pn**	**01 27 17.7**	**+1.7**
	baz=19,SNR=7.4						
COEN	**Coen**	**19.74**	**105**	S	**S**	**01 30 59.6**	**-1.8**
	baz=20,SNR=3.9						
MORW	**Morawa**	**20.64**	**199**	P	Pn	01 27 36.4	+1.0
	baz=21,SNR=3.2						
MORW				S	**S**	**01 31 21.6**	**+2.6**
	baz=21,SNR=3.1						
BBOO	**Buckleboo**	**25.88**	**155**	P	**P**	**01 28 25.5**	**+1.7**
	baz=26,SNR=6.9						
STKA	**Stephens Creek**	**27.83**	**146**	P	**P**	**01 28 43.1**	**+1.8**
	2.4nm,0.6s,baz=323,slow=12,SNR=9.1						
STKA	**Stephens Creek**	**27.83**	**146**	P	**P**	**01 28 43.8**	**+2.5**
	baz=28,SNR=6.1						
RMQ	**Roma**	**29.23**	**128**	S	S	01 33 24.4	-17
	baz=29,SNR=4.2						
NFK	**Norfolk Island**	**45.86**	**121**	S	S	01 37 40.2	-13
	baz=46,SNR=4.3						
SONM	**Songino Array**	**59.12**	**347**	pP	pP	01 33 15.9	+5.0
	0.2nm,0.5s,baz=165,slow=6.0,SNR=2.6						
MKAR	**Makanchi Array**	**67.05**	**331**	P	P	01 33 39.9	-4.3
	0.1nm,0.4s,baz=144,slow=6.9,SNR=2.8						
MKAR				pP	**PcP**	**01 34 08.7**	**-3.2**
	1.1nm,0.5s,baz=136,slow=7.1,SNR=12						
ZALV	**Zalesovo Beam**	**71.22**	**337**	pP	pP	01 34 33.5	+4.0
	0.8nm,0.5s,baz=134,slow=4.3,SNR=3.9						
KURBB	**Kurchatov Arra**	**71.50**	**332**	P	**P**	**01 34 08.9**	**-2.6**
	0.1nm,0.3s,baz=140,slow=5.8,SNR=3.4						
KURBB				pP	**pP**	**01 34 35.8**	**+4.5**
	0.5nm,0.6s,baz=149,slow=5.2,SNR=7.8						

PRE 04 01:25:03.3±2.1, **26°.38S**×**27°.68E, h2km, ML2.6, 3C, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.07**	**293**	⇑*i*P	Pg	01 25 05.3	+0.3
KLOF				*e*S	Sg	01 25 06.3	+0.1
KLOF				AML	AML	01 25 06.4	
	comp=Z,13μm,0.1s						
ERPM	**east rand prop**	**0.50**	**86**	⇑*i*P	Pb	01 25 14.6	-0.6
ERPM				*e*S	Sg	01 25 20.3	+0.4
ERPM				AML	AML	01 25 20.9	
	comp=Z,107nm,0.2s						
PRYS	**Parys**	**0.62**	**208**	*e*P	Pb	01 25 16.3	-0.8
PRYS				*e*S	Sg	01 25 23.7	+0.1
PRYS				AML	AML	01 25 26.2	
	comp=Z,63nm,0.4s						
SLR	**Silverton**	**0.84**	**40**	*e*P	Pg	01 25 19.6	0.0
SLR				*e*S	Sg	01 25 30.1	-0.5
SLR				AML	AML	01 25 35.9	
	comp=Z,48nm,0.4s						
SWZ	**Schweizer**	**2.25**	**249**	⇑*i*P	Pn	01 25 41.7	-0.1
SWZ				*e*S	Sn	01 26 11.0	+0.8
SWZ				AML	AML	01 26 12.8	
	comp=Z,92nm,0.2s						
POGA	**Pongola**	**3.65**	**107**	*e*P	Pn	01 26 03.0	+2.2
POGA				*e*S	Sn	01 26 44.8	+0.4
POGA				AML	AML	01 27 02.7	
	comp=Z,23nm,0.4s						
UPI	**Upington**	**6.05**	**249**	*e*S	Sn	01 27 39.1	-4.7
UPI				AML	AML	01 28 13.9	
	comp=Z,7.8nm,0.5s						
BLWY	**Bulawayo**	**6.27**	**8**	*i* P	Sn	01 27 43.9	-5.5
BLWY				*i*		01 27 44.2	
	baz=219,slow=18						
BLWY				*i* S	Sg	01 28 26.1	+1.0

MAN 04 01:34:07, 12°.40N×121°.76E, h23km, mb3.6, ML2.4, MS1.9, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OTRP	**Odiongan**	**0.26**	**99**	*e*P	Pb	01 34 13.0	-0.2
SJMP	**San Jose**	**0.63**	**275**	*e*P	Pn	01 34 20.4	-0.2
SJMP				*e*S	Sn	01 34 30.3	+0.4
BOAC	**Boac**	**1.05**	**4**	*e*P	Pn	01 34 26.2	-0.2
BOAC				*e*S	Sn	01 34 41.0	+0.7
RCP	**Roxas**	**1.28**	**131**	⇓*e*P	Pn	01 34 29.8	+0.3

IDC 04 01:45:20.1±0.8, **31°.00N**×**86°.57E, h0km, mb3.5**/12, **mb1 3.7**/14, **mb1mx3.6**/30, **mbtmp3.6**/14, **ML3.7**/2, **MS2.6**/1, **Ms1 2.6**/1, **ms1mx2.2**/31, **Error ellipse: s-maj=27.7km s-min=16.7km az=51.0, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.17**	**107**	Pn	Pn	01 46 27.3	+1.7
LSA				Sn	Sg	01 47 31.7	-3.5
LSA				smax	smax		
	comp=N,20nm,0.9s						
LSA				smax	smax		
	comp=E,40nm,0.9s						
AAK	**Ala-Archa**	**15.09**	**324**	LR	LR	01 54 25.5	
	comp=E,22nm,19.0s,baz=37,slow=36						
MKAR	**Makanchi Array**	**16.11**	**349**	Pn	Pn	01 49 06.2	-1.8
	comp=E,0.1nm,0.3s,baz=153,slow=13,SNR=5.0						
CMAR	**Chiang Mai Arr**	**16.79**	**135**	Pn	Pn	01 49 17.1	+0.4
	comp=E,0.3nm,0.3s,baz=320,slow=11,SNR=6.0						
KURBB	**Kurchatov Arra**	**20.50**	**345**	P	P	01 49 58.2	-1.3
	comp=E,3.7nm,0.9s,baz=162,slow=11,SNR=14						
SONM	**Songino Array**	**22.64**	**36**	P	P	01 50 22.9	+0.2
	comp=E,0.3nm,0.5s,baz=224,slow=12,SNR=3.3						
ZALV	**Zalesovo Beam**	**22.97**	**357**	P	P	01 50 25.7	-0.3
	comp=E,0.3nm,0.3s,baz=172,slow=11,SNR=2.8						
BVAR	**Borovoye Array**	**24.96**	**336**	P	P	01 50 45.8	+0.7
	comp=E,0.5nm,0.5s,baz=130,slow=2.3,SNR=5.5						
BRTR	**Keskin Array B**	**43.49**	**297**	P	P	01 53 26.1	+0.7
	comp=E,0.2nm,0.5s,baz=74,slow=11,SNR=2.3						
AKASG	**Malin Array Be**	**46.35**	**312**	P	P	01 53 48.1	+0.3
	comp=E,1.6nm,0.5s,baz=86,slow=6.4,SNR=7.0						
FINES	**FINESS Array B**	**49.25**	**326**	P	P	01 54 09.5	-0.6
	comp=E,0.5nm,0.6s,baz=91,slow=7.6,SNR=3.9						
GERES	**GERESS Array B**	**56.50**	**311**	P	P	01 55 04.2	+0.1
	comp=E,0.6nm,0.7s,baz=69,slow=4.6,SNR=5.9						
WRA	**Warramunga Arr**	**68.34**	**131**	P	P	01 56 23.2	-0.3
	comp=E,1.1nm,0.7s,baz=319,slow=6.6,SNR=5.0						
ASAR	**Alice Springs**	**70.80**	**134**	P	P	01 56 39.1	+0.4
	comp=E,0.4nm,0.7s,baz=319,slow=6.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**79.01**	**279**	P	P	01 57 25.4	-1.0
	comp=E,0.2nm,0.5s,baz=56,slow=5.2,SNR=6.1						
YKA	**Yellowknife Ar**	**85.29**	**10**	P	P	01 57 58.6	+0.1
	comp=E,0.2nm,0.7s,baz=335,slow=5.5,SNR=5.7						

*ISK **04** 01:45:30.6, 36°.08N×27°.56E, h10km, MD2.6*
*ATH **04** 01:45:33.6, 36°.21N×27°.57E, h34km±3km, MD3.1/5*
*DDA **04** 01:45:33.9, 36°.24N×27°.61E, h7km, MD2.9*
*ISCJB **04** 01:45:33.9±0.8, 36°.17N±0°.03×27°.48E±0°.05, h15km±9km, Error ellipse: s-maj=6.8km s-min=5.2km az=27.9*
*CSEM **04** 01:45:34.1±0.3, 36°.20N×27°.59E, h25km±3km, MD3.1, Error ellipse: s-maj=7.3km s-min=6.0km az=147.0*
ISC 04 01:45:34.4±0.9, **36°.21N**±0°.03×**27°.58E**±0°.03, **h25km**±12km, **n30, σ1s.04**/43, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.45**	**89**	*e*PB	**Pb**	**01 45 43.7**	**0.0**
ARG				*e*SB	**Sn**	**01 45 51.5**	**-0.9**
ARG	**Arkhangelos**	**0.45**	**89**	*e*Pb	**Pb**	**01 45 43.7**	**0.0**
ARG				*e*Sb	**Sn**	**01 45 51.5**	**-0.9**
NIS1	**Nisyros Isl.**	**0.51**	**321**	*e*PN	**Pb**	**01 45 44.3**	**-0.4**
NIS1				*e*SN	**Sn**	**01 45 52.8**	**-1.2**
NIS1	**Nisyros Isl.**	**0.51**	**321**	*e*Pn	**Pb**	**01 45 44.3**	**-0.4**
NIS1				*e*Sn	**Sn**	**01 45 52.8**	**-1.2**
DAT	**Datca**	**0.52**	**0**	*e*PG	**Pb**	**01 45 43.9**	**-1.1**
DAT				*e*SG	**Sn**	**01 45 53.6**	**-0.8**
DAT	**Datca**	**0.52**	**0**	*e*Pg	**Pb**	**01 45 43.9**	**-1.1**
DAT				*e*Sg	**Sn**	**01 45 53.6**	**-0.8**
KARP	**Karpathos**	**0.74**	**207**	*e*PN	**Pb**	**01 45 48.1**	**-0.6**
KARP				*e*SN	**Sn**	**01 45 59.6**	**-0.2**
KARP	**Karpathos**	**0.74**	**207**	*e*Pn	**Pb**	**01 45 48.1**	**-0.6**
KARP				*e*Sn	**Sn**	**01 45 59.6**	**-0.2**
BODT	**Bodrum**	**0.88**	**346**	*e*PG	**Pn**	**01 45 50.5**	**-0.6**
BODT				*e*SG	**Sn**	**01 46 04.1**	**+1.0**
BODT	**Bodrum**	**0.88**	**346**	*e*Pg	**Pn**	**01 45 50.5**	**-0.6**
BODT				*e*Sg	**Sn**	**01 46 04.1**	**+1.0**
DALY	**Dalyan (Mu˜la**	**1.06**	**55**	*e*PN	**Pn**	**01 45 52.7**	**-0.9**
DALY	**Dalyan (Mu˜la**	**1.06**	**55**	*e*Pn	**Pn**	**01 45 52.7**	**-0.9**
TURN	**Turunc**	**1.06**	**51**	*i* P	Pn	01 45 50.3	-3.3
TURN				*i* S	Sn	01 45 59.6	-8.0
TURN	**Turunc**	**1.06**	**51**	*i* P	Pn	01 45 50.3	-3.3
YER	**Yerkesik**	**1.08**	**31**	*e*PN	**Pb**	**01 45 54.8**	**+0.3**
YER	**Yerkesik**	**1.08**	**31**	*e*Pn	**Pb**	**01 45 54.8**	**+0.3**
MLSB	**Milas**	**1.09**	**8**	*e*PN	**Pn**	**01 45 53.9**	**-0.3**
MLSB	**Milas**	**1.09**	**8**	*e*Pn	**Pn**	**01 45 53.9**	**-0.3**
FETY	**Fethiye**	**1.29**	**70**	*e*PN	**Pn**	**01 45 55.7**	**-1.1**
FETY	**Fethiye**	**1.29**	**70**	*e*Pn	**Pn**	**01 45 55.7**	**-1.1**
AYDN	**Tasoluk**	**1.47**	**9**	*i* P	**Pb**	**01 46 01.8**	**+0.8**
AYDN				*i* S	**Sb**	**01 46 21.0**	**+1.7**
AYDN	**Tasoluk**	**1.47**	**9**	*i* P	**Pb**	**01 46 01.8**	**+0.8**
NPS	**Neapolis**	**1.86**	**240**	*e*PN	**Pn**	**01 46 05.0**	**+0.4**
NPS				*e*SN	**Sn**	**01 46 27.3**	**0.0**
NPS	**Neapolis**	**1.86**	**240**	*e*Pn	**Pn**	**01 46 05.0**	**+0.4**
NPS				*e*Sn	**Sn**	**01 46 27.3**	**0.0**
DNZL	**Cakiroluk**	**1.89**	**38**	*e*P	**Pb**	**01 46 07.8**	**-0.5**
DNZL				*i* S	**Sb**	**01 46 34.4**	**+2.9**
DNZL	**Cakiroluk**	**1.89**	**38**	*e*P	**Pb**	**01 46 07.8**	**-0.5**
GOLH	**Golhisar**	**1.90**	**57**	*i* P	**Pb**	**01 46 09.6**	**+1.3**
GOLH				*i* S	**Sb**	**01 46 34.5**	**+2.9**
GOLH	**Golhisar**	**1.90**	**57**	*i* P	**Pb**	**01 46 09.6**	**+1.3**
LAST	**Lasithi**	**2.00**	**239**	*e*PN	**Pn**	**01 46 07.3**	**+0.6**
LAST	**Lasithi**	**2.00**	**239**	*e*Pn	**Pn**	**01 46 07.3**	**+0.6**

*CSEM **04** 01:56:48.3, 42°.33N×13°.44E, h10km, MD1.8/8, After ROM*
ROM 04 01:56:48.3±0.1, **42°.33N**×**13°.44E, h10km, Md1.8**/8, **Ml1.1**/4, **Error ellipse: s-maj=1.2km s-min=1.1km az=77.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**312**	Pg	Pg	01 56 50.5	+0.3
AQU				Sg	Sg	01 56 51.5	-0.1
	218nm,0.2s						
AQU	**L'Aquila**	**0.04**	**312**	Pg	Pg	01 56 50.5	+0.3
AQU				Sg	Sg	01 56 51.5	-0.1
	218nm,0.2s						
FAGN	**Fagnano**	**0.13**	**121**	Pg	Pg	01 56 51.9	+0.6
FAGN				Sg	Sg	01 56 54.3	+0.8
	141nm,0.4s						
FAGN	**Fagnano**	**0.13**	**121**	Pg	Pg	01 56 51.9	+0.6
FAGN				Sg	Sg	01 56 54.3	+0.8
	141nm,0.4s						
CAMP	**Campotosto**	**0.21**	**354**	Pg	Pg	01 56 53.5	+0.7
CAMP				Sg	Sg	01 56 57.1	+1.2
	21nm,0.7s						
CAMP	**Campotosto**	**0.21**	**354**	Pg	Pg	01 56 53.5	+0.7
CAMP				Sg	Sg	01 56 57.1	+1.2
	21nm,0.7s						
FIAM	**Fiamignano**	**0.25**	**256**	Pg	Pg	01 56 54.2	+0.7
FIAM				Sg	Sg	01 56 58.5	+1.5
	13nm,0.3s						
FIAM	**Fiamignano**	**0.25**	**256**	Pg	Pg	01 56 54.2	+0.7
FIAM				Sg	Sg	01 56 58.5	+1.5
	13nm,0.3s						
VCEL	**Villa Celiera**	**0.30**	**78**	Pg	Pg	01 56 55.2	+0.6
VCEL				Sg	Sb	01 57 00.4	-0.9

	46nm,0.7s						
VCEL	**Villa Celiera**	**0.30**	**78**	Pg	Pg	01 56 55.2	+0.6
VCEL				Sg	Sb	01 57 00.4	-0.9
	46nm,0.7s						
PTQR	**Pietraquaria**	**0.31**	**185**	Pg	Pg	01 56 55.1	+0.5
PTQR				Sg	Sb	01 57 00.1	-1.2
	1.0nm,0.2s						
PTQR	**Pietraquaria**	**0.31**	**185**	Pg	Pg	01 56 55.1	+0.5
PTQR				Sg	Sb	01 57 00.1	-1.2
	1.0nm,0.2s						
TERO	**Teramo**	**0.32**	**23**	Pg	Pg	01 56 55.0	+0.2
TERO				Sg	Sg	01 56 59.9	+0.8
TERO	**Teramo**	**0.32**	**23**	Pg	Pg	01 56 55.0	+0.2
TERO				Sg	Sg	01 56 59.9	+0.8
NRCA	**Norcia**	**0.56**	**335**	Pg	Pg	01 56 59.4	+0.1
NRCA				Sg	Sb	01 57 08.2	-0.3
NRCA	**Norcia**	**0.56**	**335**	Pg	Pg	01 56 59.4	+0.1
NRCA				Sg	Sb	01 57 08.2	-0.3

*IDC **04** 02:03:08.1±0.6, 4°.21S×78°.19W, h0^{km}, mb3.9/14, mb1 4.1/16, mb1mx4.1/24, mbtmp3.9/16, ML3.6/2, MS3.4/5, Ms1 3.4/5, ms1mx3.0/26, Error ellipse: s-maj=23.2km s-min=12.6km az=66.0*

*ISCJB **04** 02:03:11.5±0.4, 4°.24S±0°.05×78°.11W±0°.08, h33^{km}, mb4.2/21, MS3.7/5, Error ellipse: s-maj=12.1km s-min=5.9km az=160.0*

*NEIC **04** 02:03:15.0±1.1, 4°.24S×78°.03W, h48^{km}±11^{km}, mb4.6/9, Error ellipse: s-maj=13.2km s-min=7.8km az=69.0*

ISC 04 02:03:13.7±0.4**, 4°.25S**±0°.06×**78°.06W**±0°.09**, h35^{km}, n293, σ0^{s}83**/300**, mb4.2**/21**, MS3.5**/5**, 113C-115D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.89**	**187**	Pg	**Pn**	**02 04 00.0**	**+2.3**
ATAH				Lg	Lg	02 04 44.5	
ATAH	**Atahualpa**	**2.89**	**187**	Pg	**Pn**	**02 04 00.0**	**+2.3**
	6.7nm,0.3s,baz=334,slow=4.4,SNR=31						
ATAH				Lg	Lg	02 04 44.5	
	8.6nm,0.3s,baz=201,slow=16,SNR=5.7						
OTAV	**Otavalo**	**4.47**	**355**	*e*Pn	**Pn**	**02 04 22.2**	**+2.7**
OTAV				*e*S	Sn	02 05 30.7	+20
NNA	**Nana**	**7.79**	**171**	*e*Pn	**Pn**	**02 05 03.3**	**-1.4**
NNA				*e*S	**Sn**	**02 06 29.0**	**-2.7**
NNA				Lg	Lg	02 07 24.3	
NNA	**Nana**	**7.79**	**171**	Pn	**Pn**	**02 05 03.8**	**-0.9**
	0.9nm,0.3s,baz=356,slow=8.2,SNR=5.3						
NNA				Sn	**Sn**	**02 06 34.4**	**+2.7**
	2.3nm,0.3s,baz=195,slow=10,SNR=5.1						
NNA				Lg	Lg	02 07 24.3	
	1.5nm,0.3s,baz=275,slow=22,SNR=4.4						
SDV	**Santo Domingo**	**15.00**	**30**	*e*Pn	**Pn**	**02 06 44.5**	**+1.0**
LPAZ	**La Paz**	**15.44**	**142**	*e*Pn	**Pn**	**02 06 49.8**	**+0.2**
	7.1nm,1.2s						
LPAZ	**La Paz**	**15.44**	**142**	Pn	**Pn**	**02 06 51.0**	**+1.3**
	0.1nm,0.3s,baz=336,slow=11,SNR=7.5						
LPAZ				LR	LR	02 13 31.7	
	comp=Z,112nm,22.0s,baz=54,slow=40						
SAML	**Samuel**	**15.50**	**108**	*e*Pn	**Pn**	**02 06 47.7**	**-2.1**
	5.7nm,0.8s						
SAML				*e*S	**S**	**02 09 52.9**	**-2.5**
SIV	**San Ignacio**	**20.37**	**126**	P	**P**	**02 07 47.3**	**-0.3**
SIV				Lg	Lg	02 13 53.3	
SIV	**San Ignacio**	**20.37**	**126**	P	**P**	**02 07 47.3**	**-0.3**
	2.8nm,1.0s,baz=318,slow=11,SNR=7.1						
SIV				Lg	Lg	02 13 53.3	
	4.9nm,0.9s,baz=33,slow=20,SNR=4.1						
SIV				LR	LR	02 16 08.0	
	comp=Z,59nm,21.8s,slow=38						
LRS	**Lares**	**24.98**	**26**	P	**P**	**02 08 33.1**	**-1.2**
SJG	**San Juan**	**25.13**	**28**	*e*P	**P**	**02 08 35.4**	**-0.2**
	37nm,0.8s						
SJG	**San Juan**	**25.13**	**28**	P	**P**	**02 08 35.8**	**+0.1**
	38nm,0.7s,baz=203,slow=5.3,SNR=21						
SJG				LR	LR	02 18 32.1	
	comp=Z,32nm,19.1s,baz=274,slow=37						
CBYP	**Canovanas**	**25.41**	**28**	*e*P	**P**	**02 08 37.9**	**-0.3**
	18nm,0.8s						
CPUP	**Villa Florida**	**29.60**	**140**	P	**P**	**02 09 16.3**	**+0.6**
CPUP	**Villa Florida**	**29.60**	**140**	P	**P**	**02 09 16.3**	**+0.6**
	0.1nm,0.3s,baz=286,slow=15,SNR=2.1						
BDFB	**Brasilia**	**31.64**	**113**	P	**P**	**02 09 34.4**	**+0.4**
BDFB	**Brasilia**	**31.64**	**113**	P	**P**	**02 09 34.4**	**+0.4**
	1.1nm,0.7s,baz=273,slow=4.8,SNR=3.8						
BDFB				LR	LR	02 21 35.7	
	comp=Z,108nm,18.8s,baz=39,slow=35						
PLCA	**Paso Flores**	**36.95**	**170**	P	**P**	**02 10 21.3**	**+1.6**
PLCA	**Paso Flores**	**36.95**	**170**	P	**P**	**02 10 21.3**	**+1.6**
	1.4nm,0.9s,baz=351,slow=8.3,SNR=2.6						
732A	**Laxson Ranch,**	**38.97**	**329**	⇓P	**P**	**02 10 36.2**	**-0.5**
	baz=39						
632A	**Uvalde**	**39.51**	**330**	⇓P	**P**	**02 10 40.6**	**-0.6**
	baz=40						
631A	**Perdido Creek**	**39.83**	**329**	⇑P	**P**	**02 10 43.3**	**-0.7**
	baz=40,SNR=8.4						
532A	**Rocksprings**	**40.07**	**330**	⇓P	**P**	**02 10 45.4**	**-0.6**
	baz=40,SNR=6.4						
531A	**Rocksprings**	**40.42**	**329**	⇑P	**P**	**02 10 48.9**	**0.0**
	baz=41						
432A	**Menard**	**40.63**	**331**	⇓P	**P**	**02 10 50.3**	**-0.3**
	baz=41						
530A	**J-C Ranch, Com**	**40.82**	**328**	⇓P	**P**	**02 10 51.8**	**-0.4**
	baz=41						
431A	**Sonora**	**40.87**	**330**	⇓P	**P**	**02 10 52.3**	**-0.3**
	baz=41						
332A	**Millersview**	**41.02**	**331**	⇓P	**P**	**02 10 53.5**	**-0.3**
	baz=41						
628A	**Black Gap, Mar**	**41.13**	**326**	⇓P	**P**	**02 10 54.8**	**0.0**
	baz=41						
430A	**Baggett Ranch,**	**41.27**	**329**	⇑P	**P**	**02 10 55.5**	**-0.5**
	baz=41						
232A	**Coleman**	**41.39**	**332**	⇑P	**P**	**02 10 56.0**	**-0.9**
	baz=42						
TXAR	**Lajitas Array**	**41.46**	**325**	P	**P**	**02 10 56.8**	**-0.7**
TXAR				PcP	**PcP**	**02 12 54.9**	**0.0**
TXAR	**Lajitas Array**	**41.46**	**325**	P	**P**	**02 10 56.8**	**-0.7**
	1.2nm,1.0s,baz=145,slow=9.8,SNR=8.3						
TXAR				PcP	**PcP**	**02 12 54.9**	**0.0**
	0.3nm,0.7s,baz=152,slow=5.7,SNR=4.3						
429A	**Davenport Ranc**	**41.49**	**328**	⇓P	**P**	**02 10 57.2**	**-0.5**
	baz=42						
528A	**Cox Ranch, San**	**41.60**	**327**	⇓P	**P**	**02 10 58.2**	**-0.5**
	baz=42						
626A	**Big Bend Ranch**	**41.89**	**325**	⇑P	**P**	**02 11 00.4**	**-0.6**
	baz=42,SNR=8.5						
428A	**Kincaid Ranch,**	**41.98**	**328**	⇑P	**P**	**02 11 01.4**	**-0.4**
	baz=42						
ABTX	**Abilene, Hawle**	**42.00**	**332**	⇓P	**P**	**02 11 01.2**	**-0.6**
	baz=42						
527A	**Woodward Ranch**	**42.04**	**326**	⇓P	**P**	**02 11 01.2**	**-1.1**
	baz=42,SNR=6.5						
230A	**Sterling City**	**42.10**	**330**	⇓P	**P**	**02 11 01.6**	**-1.0**
	baz=42						
329A	**Wagon Wheel Ra**	**42.22**	**329**	⇓P	**P**	**02 11 02.8**	**-0.8**
	baz=42						
526A	**Mary Lane Ranc**	**42.25**	**326**	⇑P	**P**	**02 11 03.4**	**-0.6**
	baz=42,SNR=7.6						
131A	**Roby**	**42.39**	**332**	⇑P	**P**	**02 11 03.8**	**-1.2**
	baz=43						
427A	**Hayter Ranch,**	**42.47**	**327**	⇑P	**P**	**02 11 04.7**	**-1.0**
	baz=43						
Z32A	**Haskell**	**42.50**	**333**	⇓P	**P**	**02 11 04.8**	**-1.0**
	baz=43						
328A	**Wristen Ranch,**	**42.56**	**328**	⇑P	**P**	**02 11 05.8**	**-0.7**
	baz=43						
130A	**Snyder**	**42.60**	**331**	⇑P	**P**	**02 11 06.1**	**-0.7**
	baz=43						
426A	**McDonald Obser**	**42.67**	**326**	⇓P	**P**	**02 11 07.0**	**-0.5**
	baz=43						
Z31A	**Sharp Cattle R**	**42.81**	**332**	⇑P	**P**	**02 11 07.9**	**-0.5**
	baz=43						
Y32A	**R-V Farms, Ver**	**43.07**	**334**	⇑P	**P**	**02 11 10.1**	**-0.3**
	baz=43						
326A	**Caldwell Ranch**	**43.14**	**327**	⇓P	**P**	**02 11 10.9**	**-0.3**
	baz=43						
Z30A	**Sanderson Ranc**	**43.25**	**331**	⇓P	**P**	**02 11 11.0**	**-0.9**
	baz=43						
TUL1	**Tulsa**	**43.26**	**339**	⇑P	**P**	**02 11 10.8**	**-1.2**
	baz=44						
425A	**Indio Mountain**	**43.30**	**325**	⇑P	**P**	**02 11 11.7**	**-0.8**
	baz=44,SNR=8.7						
Y31A	**Rekieta Farm,**	**43.40**	**333**	⇓P	**P**	**02 11 12.7**	**-0.5**
	baz=44						
Z29A	**Hungry Hill Ra**	**43.50**	**331**	⇓P	**P**	**02 11 13.4**	**-0.7**
	baz=44						
325A	**Bean Ranch, Si**	**43.73**	**326**	⇑P	**P**	**02 11 15.8**	**-0.3**
	baz=44						
226B	**Tecolote Peak,**	**43.83**	**327**	⇑P	**P**	**02 11 16.4**	**-0.3**
	baz=44,SNR=6.3						
X31A	**McDonald Ranch**	**43.84**	**334**	⇓P	**P**	**02 11 16.0**	**-0.7**
	baz=44						
Y29A	**Porterfield Fa**	**43.98**	**331**	⇓P	**P**	**02 11 17.3**	**-0.6**
	baz=44						
324A	**Moseley Ranch,**	**44.07**	**326**	⇓P	**P**	**02 11 17.2**	**-1.5**
	baz=44,SNR=7.4						
X30A	**Coker Ranch, T**	**44.08**	**333**	⇓P	**P**	**02 11 18.1**	**-0.6**
	baz=44						
126A	**Clayton Basin,**	**44.19**	**328**	⇓P	**P**	**02 11 19.3**	**-0.3**
	baz=44						
225A	**Deer Hill, Car**	**44.21**	**327**	⇓P	**P**	**02 11 19.4**	**-0.5**
	baz=44						
Z27A	**Tatum**	**44.30**	**329**	⇓P	**P**	**02 11 19.8**	**-0.7**
	baz=44						
125A	**Gardner Draw,**	**44.54**	**327**	⇑P	**P**	**02 11 21.6**	**-0.8**
	baz=45,SNR=5.6						
224A	**Cornudas Mount**	**44.57**	**326**	⇑P	**P**	**02 11 22.0**	**-0.7**
	baz=45						
MSTX	**Muleshoe**	**44.60**	**330**	⇓P	**P**	**02 11 22.0**	**-0.9**
	baz=45						
Z26A	**Caprock**	**44.66**	**329**	⇑P	**P**	**02 11 22.7**	**-0.7**
	baz=45,SNR=6.6						
Y27A	**Causey**	**44.73**	**330**	⇓P	**P**	**02 11 23.3**	**-0.6**
	baz=45						
V31A	**Spring Creek L**	**44.74**	**335**	⇓P	**P**	**02 11 23.5**	**-0.4**
	baz=45						
AMTX	**Amarillo**	**44.82**	**332**	⇓P	**P**	**02 11 24.2**	**-0.4**
	baz=45						
124A	**Stringfield Ra**	**45.00**	**327**	⇑P	**P**	**02 11 25.9**	**-0.4**
	baz=45						
Z25A	**Roswell**	**45.05**	**328**	⇓P	**P**	**02 11 25.8**	**-0.7**
	baz=45,SNR=5.9						
123A	**Bell Site, Whi**	**45.40**	**326**	⇓P	**P**	**02 11 29.4**	**+0.1**
	baz=46						
Z24A	**Sheeppen Canyo**	**45.44**	**327**	⇑P	**P**	**02 11 29.2**	**-0.4**
	baz=46						
222A	**Williams Famil**	**45.48**	**325**	⇓P	**P**	**02 11 30.0**	**0.0**
	baz=46,SNR=9.1						
Y25A	**Mesa, Roswell**	**45.54**	**329**	⇓P	**P**	**02 11 29.9**	**-0.4**
	baz=46						
W27A	**Bowe Ranch, En**	**45.62**	**331**	⇓P	**P**	**02 11 30.6**	**-0.4**
	baz=46						
320A	**Kipp Ranch, An**	**45.77**	**323**	⇑P	**P**	**02 11 31.9**	**-0.4**
	baz=46						
Z23A	**Rita Site, Whi**	**45.85**	**327**	⇓P	**P**	**02 11 32.8**	**-0.1**
	baz=46						
122A	**Conniff Cattle**	**45.87**	**325**	⇑P	**P**	**02 11 33.0**	**0.0**
	baz=46						
Y24A	**Capitan**	**45.93**	**328**	⇓P	**P**	**02 11 33.8**	**+0.2**
	baz=46						
X25A	**Clemmons Ranch**	**45.99**	**329**	⇑P	**P**	**02 11 33.3**	**-0.7**
	baz=46						
S31A	**Mullinville**	**46.17**	**336**	⇑P	**P**	**02 11 35.2**	**0.0**
	baz=46						
220A	**Playas Peak, P**	**46.18**	**323**	⇑P	**P**	**02 11 34.9**	**-0.5**
	baz=46,SNR=6.9						
121A	**Cookes Peak, D**	**46.19**	**325**	⇑P	**P**	**02 11 35.4**	**-0.2**
	baz=46						
319A	**Douglas**	**46.26**	**322**	⇑P	**P**	**02 11 36.1**	**0.0**
	baz=46						
Y23A	**Lovelace Mesa,**	**46.27**	**327**	⇓P	**P**	**02 11 36.0**	**-0.2**
	baz=46,SNR=7.0						
X24A	**Lazy VL Ranch,**	**46.42**	**328**	⇓P	**P**	**02 11 36.9**	**-0.5**
	baz=47						
W25A	**X Bar L Ranch,**	**46.43**	**330**	⇓P	**P**	**02 11 37.4**	**0.0**
	baz=47						
V26A	**Tequesquite Ra**	**46.56**	**331**	⇑P	**P**	**02 11 37.8**	**-0.6**
	baz=47,SNR=5.9						
S30A	**Montezuma**	**46.59**	**335**	⇑P	**P**	**02 11 38.3**	**-0.2**
	baz=47						
U27A	**Thompson Grove**	**46.61**	**332**	⇓P	**P**	**02 11 38.2**	**-0.6**
	baz=47						
Z21A	**St. Cloud Mine**	**46.69**	**325**	⇑P	**P**	**02 11 39.6**	**0.0**
	baz=47,SNR=5.1						
120A	**U Bar Ranch, L**	**46.70**	**324**	⇓P	**P**	**02 11 39.2**	**-0.4**
	baz=47						
Y22A	**Socorro**	**46.77**	**327**	⇑P	**P**	**02 11 39.7**	**-0.4**
	baz=47						
S29A	**Ulysses**	**46.85**	**335**	⇓P	**P**	**02 11 40.6**	**0.0**
	baz=47						
W24A	**Lazy 6 Ranch,**	**46.91**	**329**	⇑P	**P**	**02 11 40.5**	**-0.7**
	baz=47						
V25A	**Rancho No Teng**	**47.00**	**330**	⇓P	**P**	**02 11 41.4**	**-0.5**
	baz=47,SNR=8.6						
U26A	**Atchley Ranch,**	**47.02**	**331**	⇑P	**P**	**02 11 41.3**	**-0.7**
	baz=47						
Z20A	**Nine Sixteen R**	**47.08**	**324**	⇑P	**P**	**02 11 42.6**	**+0.1**
	baz=47,SNR=7.6						
T27A	**Campo**	**47.09**	**333**	⇑P	**P**	**02 11 41.7**	**-0.8**
	baz=47						
S28A	**Manter**	**47.16**	**334**	⇓P	**P**	**02 11 42.9**	**-0.1**
	baz=47						
Y21A	**Point of Rocks**	**47.21**	**326**	⇑P	**P**	**02 11 43.6**	**0.0**
	baz=47						
V24A	**Rampart Ranch,**	**47.24**	**330**	⇑P	**P**	**02 11 43.4**	**-0.4**
	baz=47						
ANMO	**Albuquerque**	**47.25**	**328**	*e*P	**P**	**02 11 43.2**	**-0.7**
CBKS	**Cedar Bluff**	**47.30**	**337**	*e*P	**P**	**02 11 44.0**	**0.0**
	14nm,1.0s						
Y20A	**Horse Springs,**	**47.53**	**325**	⇑P	**P**	**02 11 45.8**	**-0.3**
	baz=48						
X21A	**Alamocita Cree**	**47.60**	**326**	⇑P	**P**	**02 11 46.5**	**-0.1**
	baz=48,SNR=6.2						
R28A	**Tribune**	**47.75**	**335**	⇓P	**P**	**02 11 46.8**	**-0.8**
	baz=48						
S26A	**Kim**	**47.89**	**333**	⇑P	**P**	**02 11 48.6**	**-0.1**
	baz=48						
T25A	**Trinidad**	**47.94**	**331**	⇓P	**P**	**02 11 48.7**	**-0.5**
	baz=48						
R27A	**Eads**	**48.13**	**334**	⇓P	**P**	**02 11 49.8**	**-0.7**
	baz=48						
T24A	**Torres, Weston**	**48.19**	**331**	⇑P	**P**	**02 11 50.1**	**-1.1**
	baz=48						
V22A	**San Miguel Ran**	**48.23**	**328**	⇑P	**P**	**02 11 51.4**	**-0.1**
	baz=48						
S25A	**Robets Cordova**	**48.37**	**332**	⇑P	**P**	**02 11 52.0**	**-0.5**
	baz=48						
R26A	**Arlington**	**48.43**	**333**	⇓P	**P**	**02 11 52.3**	**-0.6**
	baz=49						
W20A	**Ramah**	**48.49**	**326**	⇓P	**P**	**02 11 53.4**	**-0.1**
	baz=49						
S24A	**Houchin Ranch,**	**48.72**	**331**	⇓P	**P**	**02 11 54.9**	**-0.4**
	baz=49						
214A	**Organ Pipe Nat**	**48.87**	**320**	⇓P	**P**	**02 11 55.7**	**-0.5**
	baz=49						
SDCO	**Great Sand Dun**	**48.94**	**331**	*e*P	**P**	**02 11 56.9**	**-0.1**
U21A	**Nageezi**	**49.01**	**328**	⇑P	**P**	**02 11 57.3**	**-0.2**
	baz=49						
T21A	**Navajo Lake**	**49.37**	**329**	⇓P	**P**	**02 12 00.2**	**-0.1**
	baz=50						
U20A	**Newcomb**	**49.43**	**327**	⇑P	**P**	**02 12 00.6**	**-0.1**
	baz=50						
R23A	**Moffat**	**49.45**	**331**	⇑P	**P**	**02 12 00.8**	**-0.1**
	baz=50						
S22A	**4UR Ranch, Cre**	**49.60**	**330**	⇓P	**P**	**02 12 01.9**	**-0.2**
	baz=50						
X16A	**Lo Mia Camp, P**	**49.68**	**323**	⇑P	**P**	**02 12 02.4**	**-0.2**
	baz=50						
P25A	**Willow Gulch B**	**49.75**	**334**	⇓P	**P**	**02 12 03.0**	**0.0**
	baz=50						
R22A	**Saguache, Gunn**	**49.94**	**330**	⇓P	**P**	**02 12 04.6**	**0.0**
	baz=50						
Q23A	**Hartsel**	**50.02**	**332**	⇑P	**P**	**02 12 05.2**	**0.0**
	baz=50						
Y14A	**Wickenburg**	**50.30**	**322**	⇓P	**P**	**02 12 07.0**	**-0.1**
	baz=50						
P23A	**Jefferson**	**50.40**	**332**	⇓P	**P**	**02 12 07.7**	**-0.5**
	baz=51						
WUAZ	**Wupatki**	**50.40**	**324**	*e*P	**P**	**02 12 08.3**	**+0.2**
	4.6nm,0.8s						
WUAZ	**Wupatki**	**50.40**	**324**	⇓P	**P**	**02 12 08.2**	**+0.2**
	baz=51						
S20A	**Disappointment**	**50.44**	**329**	⇑P	**P**	**02 12 08.1**	**-0.3**
	baz=51						
Q22A	**Crested Butte,**	**50.50**	**331**	⇓P	**P**	**02 12 08.6**	**-0.3**
	baz=51						
ISCO	**Idaho Springs**	**50.63**	**333**	⇑P	**P**	**02 12 09.6**	**-0.3**
	baz=51						
P22A	**Eagle**	**51.01**	**331**	⇑P	**P**	**02 12 12.2**	**-0.4**
	baz=51						
O23A	**Lake Granby, G**	**51.10**	**333**	⇑P	**P**	**02 12 12.7**	**-0.7**
	baz=51						
Y12C	**Blythe**	**51.12**	**321**	⇓P	**P**	**02 12 13.3**	**0.0**
	baz=51						
PV04	**Paradox Valley**	**51.15**	**329**	*e*P	**P**	**02 12 15.5**	**+1.9**
S18A	**Hurst Farm, Bl**	**51.20**	**327**	⇑P	**P**	**02 12 13.6**	**-0.5**
	baz=51						
M25A	**Palm-Egli Farm**	**51.28**	**335**	⇑P	**P**	**02 12 13.9**	**-0.7**
	baz=52						
P21A	**Newcastle**	**51.28**	**331**	⇓P	**P**	**02 12 14.6**	**-0.1**
	baz=52,SNR=5.2						
O22A	**Kremmling**	**51.35**	**332**	⇓P	**P**	**02 12 14.7**	**-0.6**
	baz=52						
DVTC	**Desert V Tower**	**51.46**	**318**	⇓P	**P**	**02 12 16.4**	**+0.5**
	baz=52						
U15A	**North Rim**	**51.57**	**325**	⇓P	**P**	**02 12 16.6**	**-0.3**
	baz=52						
W13A	**Hualapai Mount**	**51.61**	**322**	⇓P	**P**	**02 12 17.1**	**-0.1**
	baz=52						
N23A	**Red Feather La**	**51.66**	**333**	⇑P	**P**	**02 12 17.1**	**-0.4**
	baz=52						
P20A	**De Beque**	**51.73**	**330**	⇓P	**P**	**02 12 17.2**	**-0.7**
	baz=52						
MONP	**Monument Peak**	**51.81**	**318**	⇓P	**P**	**02 12 18.4**	**-0.3**
	baz=52						
N21A	**Black Mountain**	**52.28**	**332**	⇓P	**P**	**02 12 22.7**	**+0.5**
	baz=52						
PFO	**Pinyon Flat Ob**	**52.28**	**319**	⇓P	**P**	**02 12 22.5**	**+0.4**
	baz=52						
K24A	**Anderson Ranch**	**52.66**	**335**	⇑P	**P**	**02 12 24.9**	**+0.1**
	baz=53						
N20A	**Spence Gulch,**	**52.69**	**331**	⇓P	**P**	**02 12 24.9**	**-0.2**
	baz=53,SNR=5.5						
M20A	**Sweetwater, Wa**	**53.16**	**332**	⇓P	**P**	**02 12 28.3**	**-0.3**
	baz=53						
FMP	**Fort Macarthur**	**53.56**	**318**	⇑P	**P**	**02 12 32.1**	**+0.8**
	baz=54						
GSC	**Goldstone**	**53.56**	**320**	⇑P	**P**	**02 12 31.2**	**-0.3**
	baz=54						
J22A	**Midwest**	**53.93**	**335**	⇑P	**P**	**02 12 33.4**	**-0.7**
	baz=54,SNR=5.4						
M18A	**Lyman**	**54.02**	**330**	⇓P	**P**	**02 12 34.1**	**-0.8**
	baz=54						
EDW2	**Edwards Air Fo**	**54.06**	**319**	⇓P	**P**	**02 12 35.2**	**+0.1**
	baz=54						
K20A	**Yellowstone Ra**	**54.15**	**333**	⇓P	**P**	**02 12 34.8**	**-0.9**
	baz=54						
L19A	**Farson**	**54.19**	**332**	⇑P	**P**	**02 12 35.7**	**-0.4**
	baz=54						
J21A	**Lysite**	**54.29**	**334**	⇑P	**P**	**02 12 36.8**	**0.0**
	baz=54						
I22A	**9 Mile Ranch,**	**54.32**	**335**	⇑P	**P**	**02 12 36.0**	**-0.9**
	baz=54,SNR=5.4						
FURC	**Furnace Creek,**	**54.34**	**322**	⇑P	**P**	**02 12 37.3**	**+0.3**
	baz=54						
L18A	**Fontenelle, Gr**	**54.38**	**331**	⇓P	**P**	**02 12 37.3**	**-0.2**
	baz=55						
MPMC	**Manual Prospec**	**54.47**	**321**	⇑P	**P**	**02 12 38.2**	**-0.1**
	baz=55						
K19A	**Absolon Red Bu**	**54.51**	**332**	⇓P	**P**	**02 12 37.4**	**-1.0**
	baz=55						
DUG	**Dugway**	**54.52**	**328**	⇓P	**P**	**02 12 38.3**	**-0.2**
	baz=55						
J20A	**Shoshoni**	**54.58**	**333**	⇓P	**P**	**02 12 38.7**	**-0.2**
	baz=55						
I21A	**Big Trails, Te**	**54.60**	**334**	⇑P	**P**	**02 12 38.0**	**-1.0**
	baz=55						
R11A	**Troy Canyon, C**	**54.80**	**324**	⇑P	**P**	**02 12 40.4**	**-0.1**
	baz=55						
BW06	**Boulder Array**	**54.80**	**332**	⇓P	**P**	**02 12 39.6**	**-0.9**
	baz=55						
PDAR	**Pinedale Array**	**54.80**	**332**	P	**P**	**02 12 39.4**	**-1.2**
PDAR	**Pinedale Array**	**54.80**	**332**	P	**P**	**02 12 39.4**	**-1.2**
	1.2nm,0.8s,baz=125,slow=9.3,SNR=6.3						
ISA	**Isabella**	**54.85**	**320**	⇓P	**P**	**02 12 40.9**	**+0.1**
	baz=55						
K18A	**Toltan Ranch,**	**54.93**	**331**	⇓P	**P**	**02 12 41.1**	**-0.4**
	baz=55,SNR=5.2						
SBC	**Santa Barbara**	**54.94**	**318**	⇑P	**P**	**02 12 42.6**	**+1.2**
	baz=55						
GRAC	**Grapevine Rang**	**54.99**	**322**	⇓P	**P**	**02 12 42.2**	**+0.4**
	baz=55						
I20A	**Worland**	**55.07**	**334**	⇓P	**P**	**02 12 41.8**	**-0.5**
	baz=55						
F24A	**Ekalaka**	**55.12**	**338**	⇑P	**P**	**02 12 42.1**	**-0.5**
	baz=55						
MDND	**Maddock**	**55.22**	**342**	⇓P	**P**	**02 12 42.5**	**-0.7**
	baz=55						
G22A	**Birney**	**55.32**	**336**	⇓P	**P**	**02 12 43.3**	**-0.8**
	baz=56						
J18A	**Kendall Valley**	**55.36**	**332**	⇑P	**P**	**02 12 43.8**	**-0.8**
	baz=56						
VES	**Vestal, Richgr**	**55.36**	**320**	⇓P	**P**	**02 12 44.6**	**+0.2**
	baz=56						
K17A	**Gardner Place,**	**55.44**	**331**	⇓P	**P**	**02 12 44.3**	**-0.8**
	baz=56						
H20A	**Greybull**	**55.44**	**334**	⇓P	**P**	**02 12 44.0**	**-1.0**
	baz=56,SNR=5.4						
L15A	**Malad City**	**55.61**	**329**	⇑P	**P**	**02 12 45.8**	**-0.5**
	baz=56						
I18A	**Diamond G Ranc**	**55.64**	**332**	⇑P	**P**	**02 12 45.7**	**-0.9**
	baz=56						
G21A	**Lodge Grass**	**55.70**	**335**	⇑P	**P**	**02 12 46.4**	**-0.4**
	baz=56						
G20A	**Bridger**	**56.12**	**335**	⇓P	**P**	**02 12 48.5**	**-1.4**
	baz=56,SNR=6.0						
K14A	**Jones Ranch, D**	**56.40**	**329**	⇑P	**P**	**02 12 51.1**	**-0.8**
	baz=57						
NVAR	**Mina Array Bea**	**56.47**	**323**	P	**P**	**02 12 52.2**	**-0.4**
NVAR	**Mina Array Bea**	**56.47**	**323**	P	**P**	**02 12 52.2**	**-0.4**
	0.8nm,0.7s,baz=131,slow=7.6,SNR=5.2						
D23A	**Lindsay**	**56.52**	**338**	⇑P	**P**	**02 12 52.6**	**+0.1**
	baz=57						
D22A	**Cohagen**	**56.87**	**337**	⇓P	**P**	**02 12 54.6**	**-0.5**
	baz=57						
F19A	**Roth Farm, Mol**	**56.93**	**335**	⇑P	**P**	**02 12 54.9**	**-0.7**
	baz=57						
C23A	**Lambert**	**57.04**	**339**	⇓P	**P**	**02 12 55.8**	**-0.4**
	baz=57						
D21A	**La Casta Ranch**	**57.11**	**337**	⇑P	**P**	**02 12 56.0**	**-0.8**
	baz=57						
E20A	**Meyer Farm, Mu**	**57.11**	**336**	⇑P	**P**	**02 12 55.7**	**-1.2**
	baz=57,SNR=5.6						
J14A	**Carey**	**57.14**	**330**	⇑P	**P**	**02 12 57.0**	**-0.2**
	baz=57,SNR=5.3						
C22A	**Vida**	**57.25**	**338**	⇓P	**P**	**02 12 57.2**	**-0.5**
	baz=57						
F18A	**Big Timber**	**57.31**	**334**	⇓P	**P**	**02 12 57.6**	**-0.6**
	baz=58,SNR=17						
G17A	**Pierce Place,**	**57.31**	**333**	⇓P	**P**	**02 12 57.9**	**-0.4**
	baz=58						
E19A	**Rath Farm, Rou**	**57.35**	**335**	⇑P	**P**	**02 12 57.9**	**-0.6**
	baz=58						
B23A	**Brockton**	**57.52**	**339**	⇑P	**P**	**02 12 59.4**	**-0.3**
	baz=58						
J13A	**Cove Ranch, Pi**	**57.53**	**329**	⇑P	**P**	**02 12 59.6**	**-0.3**
	baz=58						
I14A	**Mackay**	**57.55**	**330**	⇑P	**P**	**02 12 59.7**	**-0.4**
	baz=58						
A24A	**Westby**	**57.57**	**340**	⇓P	**P**	**02 12 59.5**	**-0.5**
	baz=58						
D20A	**Manuel Ranch,**	**57.59**	**336**	⇑P	**P**	**02 12 59.8**	**-0.4**
	baz=58						
H15A	**Lima**	**57.66**	**331**	⇓P	**P**	**02 13 00.9**	**0.0**
	baz=58						
F17A	**Fitzpatrick Pl**	**57.72**	**334**	⇓P	**P**	**02 13 01.0**	**-0.2**
	baz=58						
G16A	**Moss Hill, Enn**	**57.72**	**332**	⇑P	**P**	**02 13 00.8**	**-0.5**
	baz=58						
HLID	**Hailey**	**57.77**	**329**	⇑P	**P**	**02 13 01.0**	**-0.6**
	baz=58						
C21A	**Desert Coulee**	**57.77**	**337**	⇑P	**P**	**02 13 00.8**	**-0.7**
	baz=58						
I13A	**Wildhorse Cree**	**57.87**	**330**	⇓P	**P**	**02 13 01.8**	**-0.6**
	baz=58						
E18A	**Harlowton**	**57.91**	**335**	⇑P	**P**	**02 13 02.4**	**-0.1**
	baz=58						
D19A	**Cripps Ranch,**	**57.95**	**336**	⇑P	**P**	**02 13 01.9**	**-0.9**
	baz=58						
BOZ	**Bozeman (W)**	**57.96**	**333**	⇓P	**P**	**02 13 01.9**	**-1.0**
	baz=58						
H14A	**Leadore**	**58.01**	**331**	⇑P	**P**	**02 13 02.9**	**-0.5**
	baz=58						
C20A	**Veseth Ranch,**	**58.04**	**337**	⇑P	**P**	**02 13 02.5**	**-0.7**
	baz=58						
E17A	**Martinsdale**	**58.24**	**334**	⇑P	**P**	**02 13 04.0**	**-0.9**
	baz=58						
MFID	**Camas Ranch**	**58.39**	**328**	*e*P	**P**	**02 13 05.8**	**-0.1**
	7.0nm,1.0s						
MFID	**Camas Ranch**	**58.39**	**328**	⇓P	**P**	**02 13 05.8**	**-0.1**
	baz=59,SNR=7.9						

H13A	**Challis**	**58.41**	**330**	⇑P	**P**	**02 13 05.9**	**-0.1**
	baz=59						
C19A	**Slack Wire Ran**	**58.47**	**336**	⇓P	**P**	**02 13 05.9**	**-0.5**
	baz=59						
B20A	**Solberg Farm,**	**58.63**	**337**	⇑P	**P**	**02 13 06.9**	**-0.5**
	baz=59						
H12A	**Diamond D Ranc**	**58.69**	**330**	⇓P	**P**	**02 13 07.7**	**-0.4**
	baz=59						
D17A	**Six Diamond Ra**	**58.70**	**334**	⇑P	**P**	**02 13 06.7**	**-1.3**
	baz=59						
G13A	**Cobalt**	**58.78**	**331**	⇓P	**P**	**02 13 07.9**	**-0.7**
	baz=59						
D16A	**Dana Ranch, Ca**	**58.98**	**334**	⇑P	**P**	**02 13 09.1**	**-0.9**
	baz=59						
EGMT	**Eagleton**	**58.99**	**336**	*e*P	**P**	**02 13 08.9**	**-1.1**
	6.9nm,1.0s						
EGMT	**Eagleton**	**58.99**	**336**	⇑P	**P**	**02 13 09.0**	**-1.0**
	baz=59						
C17A	**Wharram Farm,**	**59.11**	**335**	⇓P	**P**	**02 13 10.0**	**-0.8**
	baz=59						
B18A	**Beardsley Farm**	**59.30**	**336**	⇑P	**P**	**02 13 11.4**	**-0.6**
	baz=60,SNR=5.3						
A19A	**Klindworth Far**	**59.31**	**337**	⇑P	**P**	**02 13 11.5**	**-0.6**
	baz=60						
F13A	**Darby**	**59.33**	**331**	⇑P	**P**	**02 13 12.2**	**-0.2**
	baz=60						
E14A	**Clinton**	**59.40**	**332**	⇓P	**P**	**02 13 12.2**	**-0.7**
	baz=60						
C16A	**Fuhringer Ranc**	**59.66**	**334**	⇑P	**P**	**02 13 14.0**	**-0.6**
	baz=60						
A18A	**Metzger Ranch,**	**59.74**	**336**	⇑P	**P**	**02 13 14.7**	**-0.4**
	baz=60						
F12A	**Elk City**	**59.76**	**331**	⇑P	**P**	**02 13 14.7**	**-0.7**
	baz=60						
D14A	**Greenough**	**59.90**	**333**	⇑P	**P**	**02 13 15.5**	**-0.8**
	baz=60						
MSO	**Missoula**	**59.91**	**332**	*e*P	**P**	**02 13 15.9**	**-0.4**
	4.0nm,1.2s						
MSO	**Missoula**	**59.91**	**332**	⇑P	**P**	**02 13 16.1**	**-0.3**
	baz=60,SNR=5.7						
C15A	**Salmond Ranch,**	**60.01**	**334**	⇑P	**P**	**02 13 17.5**	**+0.4**
	baz=60						
A17A	**Triple J Farms**	**60.11**	**336**	⇓P	**P**	**02 13 17.1**	**-0.5**
	baz=60						
B16A	**M & M Farms, S**	**60.11**	**335**	⇓P	**P**	**02 13 16.8**	**-0.9**
	baz=60						
D13A	**Huson**	**60.34**	**332**	⇓P	**P**	**02 13 18.6**	**-0.7**
	baz=60						
B15A	**Bradely Ranch,**	**60.40**	**334**	⇓P	**P**	**02 13 19.4**	**-0.4**
	baz=61						
A16A	**West Butte Ran**	**60.48**	**335**	⇑P	**P**	**02 13 19.6**	**-0.7**
	baz=61						
C14A	**Swan Lake**	**60.52**	**333**	⇑P	**P**	**02 13 20.6**	**+0.1**
	baz=61						
B14A	**Marquette Ranc**	**60.75**	**334**	⇑P	**P**	**02 13 21.6**	**-0.5**
	baz=61,SNR=8.8						
C13A	**Hot Springs**	**60.83**	**333**	⇑P	**P**	**02 13 22.9**	**+0.3**
	baz=61						
A15A	**Johnson Ranch,**	**60.98**	**335**	⇓P	**P**	**02 13 23.3**	**-0.4**
	baz=61						
YBH	**Yreka Blue Hor**	**61.16**	**323**	P	**P**	**02 13 23.4**	**-1.6**
YBH	**Yreka Blue Hor**	**61.16**	**323**	P	**P**	**02 13 23.5**	**-1.6**
	2.0nm,0.9s,baz=90,slow=4.2,SNR=4.6						
A14A	**Double T Ranch**	**61.27**	**334**	⇓P	**P**	**02 13 25.7**	**0.0**
	baz=61						
B13A	**Whitefish**	**61.29**	**333**	⇑P	**P**	**02 13 25.9**	**+0.2**
	baz=62						
A13A	**Flathead Natio**	**61.68**	**334**	⇑P	**P**	**02 13 28.1**	**-0.3**
	baz=62						
NEW	**Newport**	**62.44**	**332**	⇓P	**P**	**02 13 33.2**	**-0.2**
	baz=63						
YKA	**Yellowknife Ar**	**72.13**	**343**	P	**P**	**02 14 32.9**	**-1.5**
YKA	**Yellowknife Ar**	**72.13**	**343**	P	**P**	**02 14 32.9**	**-1.5**
	1.3nm,0.8s,baz=139,slow=5.6,SNR=30						
DBIC	**Dimbokro**	**73.88**	**82**	P	**P**	**02 14 46.1**	**+0.3**
DBIC	**Dimbokro**	**73.88**	**82**	P	**P**	**02 14 46.1**	**+0.3**
	4.4nm,1.0s,baz=223,slow=6.7,SNR=4.0						
ESDC	**Sonseca Array**	**80.55**	**49**	P	**P**	**02 15 22.9**	**+0.1**
ESDC	**Sonseca Array**	**80.55**	**49**	P	**P**	**02 15 22.9**	**+0.1**
	0.5nm,0.8s,baz=262,slow=8.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**81.02**	**76**	P	**P**	**02 15 25.7**	**0.0**
TORD	**Torodi Ar. Bea**	**81.02**	**76**	P	**P**	**02 15 25.7**	**0.0**
	1.0nm,0.8s,baz=282,slow=5.8,SNR=8.6						
ILAR	**Eielson Array**	**84.95**	**336**	P	**P**	**02 15 44.0**	**-1.1**
ILAR	**Eielson Array**	**84.95**	**336**	P	**P**	**02 15 44.0**	**-1.1**
	2.0nm,0.9s,baz=128,slow=3.4,SNR=6.6						
QSPA	**South Pole Qui**	**85.84**	**180**	P	**P**	**02 15 49.0**	**-0.6**
QSPA	**South Pole Qui**	**85.84**	**180**	P	**P**	**02 15 49.0**	**-0.6**
	2.8nm,0.9s,baz=137,slow=1.8,SNR=5.3						
KEST	**Kesra**	**90.35**	**54**	P	**P**	**02 16 14.2**	**+2.4**
KEST	**Kesra**	**90.35**	**54**	P	**P**	**02 16 14.2**	**+2.4**
	1.0nm,0.9s,baz=256,slow=8.3,SNR=3.2						
BOSA	**Boshof**	**99.61**	**120**	LR	LR	02 59 47.4	
	comp=Z,62nm,18.5s,baz=170,slow=34						
STKA	**Stephens Creek**	**127.92**	**223**	PKP	**PKPdf**	**02 22 14.8**	**-1.8**
STKA	**Stephens Creek**	**127.92**	**223**	PKP	**PKPdf**	**02 22 14.8**	**-1.8**
	1.3nm,1.0s,baz=113,slow=7.7,SNR=2.1						
ZALV	**Zalesovo Beam**	**128.51**	**13**	PKP	**PKPdf**	**02 22 17.5**	**+0.5**
ZALV	**Zalesovo Beam**	**128.51**	**13**	PKP	**PKPdf**	**02 22 17.5**	**+0.5**
	0.8nm,0.5s,baz=270,slow=1.4,SNR=3.1						
KURK	**Kurchatov**	**129.72**	**19**	PKP	**PKPdf**	**02 22 19.1**	**-0.2**
KURBB	**Kurchatov Arra**	**129.77**	**19**	PKP	**PKPdf**	**02 22 19.2**	**-0.3**
	0.6nm,0.7s,baz=324,slow=3.4,SNR=2.2						
MKAR	**Makanchi Array**	**134.33**	**19**	PKP	**PKPdf**	**02 22 30.3**	**+2.0**
MKAR	**Makanchi Array**	**134.33**	**19**	PKP	**PKPdf**	**02 22 30.3**	**+2.0**
	0.3nm,0.6s,baz=339,slow=1.7,SNR=2.1						
CN2	**Changchun**	**135.47**	**336**	*e*PKP	PKPdf	02 22 23.7	-6.7
ASAR	**Alice Springs**	**138.28**	**227**	PKP	**PKPdf**	**02 22 35.8**	**-0.5**
ASAR	**Alice Springs**	**138.28**	**227**	PKP	**PKPdf**	**02 22 35.8**	**-0.5**
	0.5nm,0.7s,baz=132,slow=1.4,SNR=4.1						
WMQ	**Urumqi**	**138.63**	**16**	*e*PKP	**PKPdf**	**02 22 33.9**	**-2.5**
HHC	**Hu-ho-hao-te**	**142.54**	**348**	⇓*i*PKP	**PKPdf**	**02 22 44.5**	**+0.9**
HHC				pPKP	**pPKPdf**	**02 22 55.1**	**0.0**
HHC				sPKP		02 22 58.9	
HHC				PP	PP	02 25 56.9	+6.9
HHC				PKS	**PKSdf**	**02 26 18.8**	**-0.7**
HHC				SKS	**SKSdf**	**02 29 49.0**	**-2.1**
HHC				AMB	AMB		
	comp=Z,160nm,5.3s						
HHC				LR	LR		
	comp=N,180nm,20.0s						
HHC				LR	LR		
	comp=E,500nm,21.0s						
HHC				LR	LR		
	comp=Z,140nm,21.4s						
LZH	**Lanzhou**	**148.26**	**357**	*e*PKPbc	**PKPbc**	**02 22 57.0**	**0.0**
LZH				pPKP	**pPKPdf**	**02 23 08.4**	**+3.3**
LZH				sPKP		02 23 12.4	

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*IDC **04** 02:13:58.1±0.9, 43.°77N×88.°18E, h0km, mb3.5/7, mb1 3.7/13, mb1mx3.6/33, mbtmp3.6/13, ML3.6/5, MS2.7/2, Ms1 2.7/2, ms1mx2.3/37, Error ellipse: s-maj=24.7km s-min=14.3km az=39.0*
*ISCJB **04** 02:13:59.3±0.6, 44.°03N±0.°05×88.°24E±0.°06, h18km, mb3.5/8, Error ellipse: s-maj=7.3km s-min=5.9km az=31.0*
*NNC **04** 02:14:02.2±2.4, 44.°01N×87.°83E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=17.9km s-min=16.9km az=51.0*
*BJI **04** 02:14:03.0, 43.°77N×88.°06E, h14km, mb4.2/2, ML3.7/10, Ms3.4/2, Ms7 3.2/2*
ISC 04 02:14:01.1±0.7**, 43.°95N**±0.°07×**88.°20E**±0.°06**, h18**km**, n23,** σ1**s.35**/30**, mb3.5**/8**, 10C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**0.39**	**251**	Pg	**Pg**	**02 14 09.1**	**-0.1**
WMQ				Sg	**Sg**	**02 14 14.3**	**-0.3**
WMQ				smax	smax		
	comp=N,18μm,0.3s						
WMQ				smax	smax		
	comp=E,14μm,0.3s						
MK31	**Makanchi Array**	**5.04**	**306**	Pn	**Pn**	**02 15 16.4**	**+0.6**
	comp=E,2.4nm,0.4s,baz=124,slow=14,SNR=164						
MK31				Sn	**Sn**	**02 16 13.7**	**+0.1**
	comp=E,18nm,0.5s,baz=124,slow=20,SNR=8.1						
MK31				⇑Lg	Lg	02 16 36.5	
	comp=E,31nm,0.5s,baz=125,slow=26,SNR=4.2						
MKAR	**Makanchi Array**	**5.04**	**306**	Pn	**Pn**	**02 15 17.2**	**+1.4**
	comp=E,3.3nm,0.3s,baz=125,slow=13,SNR=138						
MKAR				Sn	**Sn**	**02 16 14.7**	**+1.2**
	comp=E,8.9nm,0.3s,baz=128,slow=23,SNR=7.2						
MKAR				Lg	Lg	02 16 54.6	
	comp=E,9.9nm,0.3s,baz=111,slow=27,SNR=11						
KURBB	**Kurchatov Arra**	**9.36**	**319**	⇓Pn	**Pn**	**02 16 15.6**	**+0.6**
	comp=E,0.2nm,0.3s						
KURBB				⇑Sn	**Sn**	**02 17 58.1**	**-1.6**
	comp=E,2.5nm,0.6s						
KURBB				⇓Lg	Lg	02 18 57.1	
	comp=E,5.9nm,0.7s						
KURBB	**Kurchatov Arra**	**9.36**	**319**	Pn	**Pn**	**02 16 14.9**	**-0.1**
	comp=E,0.4nm,0.3s,baz=132,slow=12,SNR=26						
KURBB				Sn	**Sn**	**02 17 56.1**	**-3.6**
	comp=E,0.7nm,0.3s,baz=209,slow=18,SNR=9.0						
KURBB				Lg	Lg	02 19 11.8	
	comp=E,0.2nm,0.3s,baz=132,slow=30,SNR=6.8						
KURBB				LR	LR	02 20 32.0	
	comp=E,39nm,20.2s,baz=330,slow=42						
KURK	**Kurchatov**	**9.38**	**320**	⇑Pn	**Pn**	**02 16 15.3**	**0.0**
	comp=E,1.4nm,0.3s						
KURK				⇑Sn	**Sn**	**02 17 57.5**	**-2.7**
	comp=E,6.2nm,0.5s						
KURK				⇑Lg	Lg	02 18 56.9	
	comp=E,34nm,0.8s						
GTA	**Gaotai**	**9.80**	**114**	*e*P	**Pn**	**02 16 19.9**	**-1.2**
GTA				pP		02 16 24.4	
GTA				sP		02 16 27.7	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AAK	**Ala-Archa**	**10.08**	**267**	Pn	**Pn**	**02 16 24.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=82,slow=14,SNR=2.2						
AAK				Lg	Lg	02 19 17.2	
	comp=Z,0.3nm,0.3s,baz=68,slow=19,SNR=2.4						
KSH	**Kashi**	**10.15**	**248**	*e*P	Pn	02 16 40.6	+15
KSH				*e*pP		02 16 44.8	
KSH				*e*sP		02 16 47.7	
KSH				*e*S	Sn	02 18 42.0	+22
KSH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KSH				LR	LR		
	comp=N,74nm,8.1s						
KSH				LR	LR		
	comp=E,97nm,5.5s						
KSH				LR	LR		
	comp=Z,67nm,7.5s						
ZALV	**Zalesovo Beam**	**10.25**	**349**	Pn	**Pn**	**02 16 28.1**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=168,slow=13,SNR=7.7						
ZALV				Sn	**Sn**	**02 18 18.7**	**-2.7**
	comp=Z,3.9nm,0.3s,baz=168,slow=27,SNR=15						
ZALV				Lg	Lg	02 19 32.7	
	baz=167,slow=26,SNR=2.4						
KK31	**Karatay Array**	**12.87**	**272**	⇑Lg	Lg	02 20 42.9	
	comp=Z,1.7nm,0.7s						
SONM	**Songino Array**	**13.25**	**67**	Pn	**Pn**	**02 17 09.8**	**+1.5**
	baz=254,slow=16,SNR=2.8						
SONM				Lg	Lg	02 21 07.7	
	comp=Z,0.1nm,0.3s,baz=268,slow=26,SNR=5.3						
VOSK	**Vostochnaya**	**14.40**	**314**	⇑Pn	**Pn**	**02 17 23.4**	**-0.5**
	comp=Z,0.5nm,0.5s						
VOSK				⇑Sn	**Sn**	**02 20 02.4**	**-0.5**
	comp=Z,1.8nm,0.8s						
VOSK				⇓Lg	Lg	02 21 31.9	
	comp=Z,9.1nm,1.2s						
BVAR	**Borovoye Array**	**14.86**	**314**	Pn	**Pn**	**02 17 29.3**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=121,slow=12,SNR=5.9						
BVAR				Lg	Lg	02 22 02.7	
	comp=Z,0.1nm,0.3s,baz=115,slow=27,SNR=3.1						
BVAR				LR	LR	02 23 55.7	
	comp=Z,38nm,20.4s,baz=72,slow=40						
ZRNK	**Zerenda**	**15.56**	**312**	⇓Pn	**Pn**	**02 17 38.7**	**-0.6**
	comp=Z,0.9nm,0.6s						
ZRNK				⇑Sn	**Sn**	**02 20 30.5**	**-0.6**
	comp=Z,1.3nm,0.7s						
ZRNK				⇑Lg	Lg	02 22 09.3	
	comp=Z,6.5nm,1.3s						
AKTO	**Aktyubinsk**	**21.41**	**298**	P	**P**	**02 18 50.0**	**+2.2**
	comp=Z,0.7nm,0.4s,baz=105,slow=11,SNR=4.7						
ARCES	**ARCESS Array B**	**40.19**	**331**	P	**P**	**02 21 36.6**	**+0.8**
	comp=Z,15nm,1.2s,baz=80,slow=7.5,SNR=9.9						
BRTR	**Keskin Array B**	**40.25**	**283**	P	**P**	**02 21 36.1**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=64,slow=6.6,SNR=2.8						
NOA	**NORSAR Array B**	**46.90**	**319**	P	**P**	**02 22 29.3**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=80,slow=8.2,SNR=2.9						
YKA	**Yellowknife Ar**	**72.34**	**11**	P	**P**	**02 25 25.7**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=339,slow=5.9,SNR=3.5						
WRA	**Warramunga Arr**	**76.33**	**136**	P	**P**	**02 25 48.4**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=342,slow=5.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**78.51**	**277**	P	**P**	**02 26 01.8**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=45,slow=6.0,SNR=3.4						
ASAR	**Alice Springs**	**79.25**	**138**	P	**P**	**02 26 04.8**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=340,slow=5.6,SNR=10						

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*ISCJB **04** 02:22:32.3±0.4, 46.°44N±0.°05×150.°07E±0.°08, h162km, mb4.0/38, Error ellipse: s-maj=10.1km s-min=4.3km az=44.9*
*MOS **04** 02:22:34.1±1.1, 46.°60N×149.°98E, h174km, mb3.9/16, Error ellipse: s-maj=12.0km s-min=8.3km az=72.9*
*BJI **04** 02:22:34.7, 46.°57N×150.°16E, h187km, mB4.9/5, mb4.6/8*
*IDC **04** 02:22:36.3±1.8, 46.°53N×150.°01E, h184km±17km, mb3.5/23, mb1 3.7/29, mb1mx3.7/33, mbtmp3.5/29, Error ellipse: s-maj=14.0km s-min=9.2km az=153.0*
*JMA **04** 02:22:37.6±0.5, 45.°55N×150.°28E, h169km, M3.7*
ISC 04 02:22:33.7±0.5**, 46.°33N**±0.°07×**150.°08E**±0.°06**, h162**km**, n104,** σ1**s.72**/112**, mb4.0**/38**, 3C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.90**	**235**	⇓*i*PN	**Pn**	**02 23 11.0**	**+2.7**
KUR				*e*S	**Sn**	**02 23 39.0**	**+4.0**
KUR				pmax	pmax		
	comp=N,80nm,0.5s						
KUR				pmax	pmax		
	comp=Z,420nm,0.5s						
KUR				pmax	pmax		
	comp=E,230nm,1.0s						
KUR				smax	smax		
	comp=N,3μm,2.0s						
KUR				smax	smax		
	comp=E,2μm,1.0s						
KUR				smax	smax		
	comp=N,1μm,1.0s						
KUR				smax	smax		
	comp=E,570nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**3.76**	**234**	*i* PN	**Pn**	**02 23 32.8**	**+1.7**
YUK				*i* S	**Sn**	**02 24 17.7**	**+1.9**
YUK				pmax	pmax		
	comp=N,13nm,0.6s						
YUK				pmax	pmax		
	comp=Z,66nm,0.5s						
YUK				pmax	pmax		
	comp=E,26nm,0.5s						
YUK				smax	smax		
	comp=E,5.0nm,0.6s						
YUK				smax	smax		
	comp=N,105nm,0.7s						
NEM2	**Nemuro 2**	**4.28**	**228**	P	**Pn**	**02 23 37.7**	**-0.1**
NEM2				*e*S	**Sn**	**02 24 24.6**	**-3.1**
YSS	**Yuzh-Sakhalins**	**5.08**	**280**	*e*PN	Pn	02 23 52.6	+4.3
JAK	**Akkeshi**	**5.08**	**231**	P	**Pn**	**02 23 48.6**	**+0.3**
JAK				*e*S	**Sn**	**02 24 43.5**	**-3.2**
JAR	**Ashorobuto**	**5.42**	**238**	P	**Pn**	**02 23 55.3**	**+2.6**
JOB	**Onbets**	**5.62**	**235**	*e*S	**Sn**	**02 24 57.2**	**-2.2**
ASAJ	**Asahikawa**	**5.73**	**250**	P	Pn	02 24 00.5	+3.7
ASAJ	**Asahikawa**	**5.73**	**250**	P	Pn	02 24 00.6	+3.7
	comp=N,3.7nm,0.3s,baz=69,slow=17,SNR=14						
JKK2	**Kamakawa 2**	**5.74**	**247**	P	**Pn**	**02 24 00.1**	**+3.1**
JCH	**Churui**	**6.07**	**235**	P	**Pn**	**02 24 02.1**	**+0.7**
JCH				*e*S	**Sn**	**02 25 06.3**	**-3.8**
JBT2	**Biratori 2**	**6.55**	**240**	P	**Pn**	**02 24 09.4**	**+1.6**
JEM	**Erimo**	**6.58**	**232**	*e*S	**Sn**	**02 25 17.1**	**-5.2**
ERM	**Erimo**	**6.58**	**232**	*e*PN	**Pn**	**02 24 09.7**	**+1.5**
JNBK	**Urakawa-nobuka**	**6.63**	**235**	P	**Pn**	**02 24 08.2**	**-0.6**
JNBK				*e*S	**Sn**	**02 25 18.2**	**-5.3**
JKB	**Kayabe**	**7.88**	**239**	*e*S	Sn	02 25 47.5	-5.8
PETK	**Petropavlovsk-**	**8.39**	**33**	*e*PN	**Pn**	**02 24 31.3**	**-0.7**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**8.39**	**33**	P	**Pn**	**02 24 31.4**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=194,slow=11,SNR=17						
JTM	**Tenmabayashi**	**8.57**	**233**	P	**Pn**	**02 24 32.8**	**-1.7**
JTM				*e*S	Sn	02 26 01.2	-8.7
JANG	**Nango**	**8.62**	**229**	P	**Pn**	**02 24 32.4**	**-2.8**
JANG				*e*S	Sn	02 26 01.1	-10
KLR	**Kul'dur**	**12.66**	**290**	*e*PN	**Pn**	**02 25 26.7**	**-1.3**
USRK	**Ussuriysk Arra**	**12.91**	**267**	P	**Pn**	**02 25 33.0**	**+1.9**
	comp=Z,1.4nm,0.3s,baz=72,slow=13,SNR=17						
MJAR	**Matsushiro Arr**	**13.21**	**226**	P	**P**	**02 25 38.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=28,slow=11,SNR=4.5						
FX1	**Attu Island--F**	**16.30**	**58**	P	**P**	**02 26 12.8**	**-0.4**
	comp=Z,1.5nm,0.3s,baz=287,slow=10,SNR=4.7						
KSRS	**Korea Array**	**18.68**	**250**	P	**Pn**	**02 26 41.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=54,slow=11,SNR=16						
YAK	**Yakutsk**	**19.60**	**331**	*e*P	**P**	**02 26 48.2**	**-0.9**
YAK				*e*S	**S**	**02 30 20.7**	**-0.5**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				smax	smax		
	comp=N,85nm,4.3s						
YAK				smax	smax		
	comp=E,26nm,3.3s						
SONM	**Songino Array**	**29.49**	**289**	P	**P**	**02 28 21.9**	**-0.6**
	comp=E,0.8nm,0.7s,baz=74,slow=6.9,SNR=5.5						
KDAK	**Kodiak Island**	**35.99**	**50**	P	**P**	**02 29 17.1**	**-1.5**
	comp=E,7.6nm,0.8s,baz=298,slow=5.1,SNR=7.7						
GTA	**Gaotai**	**36.96**	**278**	*e*P	**P**	**02 29 28.6**	**+1.4**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ILAR	**Eielson Array**	**38.18**	**38**	P	**P**	**02 29 37.1**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=269,slow=7.5,SNR=23						
ZALV	**Zalesovo Beam**	**41.15**	**305**	P	**P**	**02 30 01.8**	**+0.2**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**41.15**	**305**	P	**P**	**02 30 01.8**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=77,slow=6.2,SNR=3.1						
MKAR	**Makanchi Array**	**45.26**	**296**	*ce*P	P	02 30 38.9	+4.2
MKAR	**Makanchi Array**	**45.26**	**296**	P	**P**	**02 30 34.1**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=63,slow=7.5,SNR=19						
BVAR	**Borovoye Array**	**49.49**	**309**	P	**P**	**02 31 05.6**	**-1.7**
BVAR	**Borovoye Array**	**49.49**	**309**	P	**P**	**02 31 05.6**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=46,slow=7.8,SNR=2.6						
CMAR	**Chiang Mai Arr**	**50.24**	**254**	P	**P**	**02 31 15.1**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=39,slow=7.9,SNR=5.3						
TAPN	**Taplejung**	**52.02**	**271**	*e*P	**P**	**02 31 29.1**	**+2.2**
	comp=Z,6.6nm,0.5s						
YKA	**Yellowknife Ar**	**52.50**	**36**	P	**P**	**02 31 29.6**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=298,slow=7.0,SNR=21						
KSH	**Kashi**	**52.86**	**291**	*e*P	P	02 31 37.6	+4.9
KSH				*e*pP	pP	02 32 14.1	+4.5
KSH				*e*PcP	**PcP**	**02 32 42.4**	**+2.7**
KSH				*e*PP	PP	02 33 41.2	+7.7
KSH				*e*ScP	**ScP**	**02 36 24.0**	**+2.5**
KSH				*e*PcS	**PcS**	**02 36 40.2**	**+1.6**
KSH				*e*S	**S**	**02 38 53.6**	**+4.7**
KSH				*e*ScS	**ScS**	**02 41 07.1**	**+1.3**
KSH				*e*SS	**SKiKP**	**02 42 37.3**	**+3.1**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,130nm,4.6s						
KSH				LR	LR		
	comp=N,66nm,4.1s						
KSH				LR	LR		
	comp=E,55nm,3.5s						
KSH				LR	LR		
	comp=Z,67nm,3.0s						
GUN	**Gumba**	**52.94**	**273**	*e*P	**P**	**02 31 34.7**	**+1.0**
	comp=Z,6.3nm,0.4s						
RAMN	**Ramite**	**53.04**	**272**	*e*P	**P**	**02 31 34.5**	**+0.2**
	comp=Z,12nm,0.4s						
KKN	**Kakani**	**53.43**	**274**	*e*P	**P**	**02 31 38.9**	**+1.8**
DMN	**Daman**	**53.66**	**273**	*e*P	**P**	**02 31 40.0**	**+1.1**
ARU	**Arti**	**53.89**	**317**	*c i*P	**P**	**02 31 38.1**	**-1.6**
ARU						02 32 40.5	
ARU				S	**S**	**02 39 00.3**	**-1.7**
ARU				SS	**SKiKP**	**02 42 36.9**	**+2.2**
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
DANN	**Dangsing**	**54.13**	**275**	*e*P	**P**	**02 31 43.5**	**+1.2**
	comp=Z,25nm,0.7s						
KOLN	**Koldanda**	**54.60**	**275**	*e*P	**P**	**02 31 46.8**	**+1.2**
PYUN	**Piuthan**	**54.82**	**275**	*e*P	**P**	**02 31 46.8**	**-0.3**
ARCES	**ARCESS Array B**	**57.54**	**340**	P	**P**	**02 32 03.3**	**-2.3**
	comp=Z,3.1nm,0.9s,baz=34,slow=8.7,SNR=2.5						
JOF	**Joensuu**	**60.76**	**333**	*e*P	**P**	**02 32 25.6**	**-2.1**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
JOF	**Joensuu**	**60.76**	**333**	*e*p	**P**	**02 32 25.6**	**-2.1**
	comp=Z,4.1nm,0.5s						
FFC	**Flin Flon**	**62.39**	**39**	*ce*P	**P**	**02 32 39.6**	**+0.8**
KAF	**Kangasniemi**	**62.92**	**334**	*e*P	**P**	**02 32 40.2**	**-2.0**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KAF	**Kangasniemi**	**62.92**	**334**	*e*p	**P**	**02 32 40.2**	**-2.0**
	comp=Z,2.9nm,0.6s						
FINES	**FINESS Array B**	**63.51**	**334**	P	**P**	**02 32 44.1**	**-1.9**
	comp=Z,5.6nm,0.6s,baz=32,slow=7.8,SNR=37						
NVAR	**Mina Array Bea**	**64.47**	**60**	P	**P**	**02 32 53.6**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=295,slow=6.8,SNR=8.6						
PDAR	**Pinedale Array**	**66.67**	**52**	P	**P**	**02 33 07.1**	**0.0**
	comp=Z,1.2nm,0.6s,baz=270,slow=1.4,SNR=10						
WRA	**Warramunga Arr**	**67.48**	**196**	P	**P**	**02 33 11.5**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=20,slow=6.8,SNR=3.6						
NB2	**NORSAR Subarra**	**67.92**	**340**	P	**P**	**02 33 12.4**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**67.92**	**340**	P	**P**	**02 33 13.1**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=29,slow=6.5,SNR=4.6						
KBZ	**Khabaz**	**69.62**	**312**	P	**P**	**02 33 25.0**	**0.0**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**69.62**	**312**	P	**P**	**02 33 25.0**	**0.0**
	comp=Z,2.8nm,0.8s,baz=45,slow=8.9,SNR=8.1						
ZEI	**Tsey**	**69.78**	**311**	*e*P	**P**	**02 33 25.8**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	**Malin Array Be**	**70.70**	**325**	*e*P	**P**	**02 33 29.9**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**70.70**	**325**	P	**P**	**02 33 28.8**	**-2.7**
	comp=Z,1.0nm,0.5s,baz=38,slow=6.7,SNR=4.6						
ASAR	**Alice Springs**	**71.19**	**196**	P	**P**	**02 33 35.2**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=11,slow=6.5,SNR=9.0						
SCHQ	**Schefferville**	**74.48**	**21**	P	**P**	**02 33 53.7**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=326,slow=7.3,SNR=4.2						
NIE	**Niedzica**	**75.13**	**329**	*e*P	**P**	**02 33 57.4**	**-0.3**
NIE	**Niedzica**	**75.13**	**329**	*e*P	**P**	**02 33 57.4**	**-0.3**
DPC	**Dobruska-Polom**	**75.72**	**331**	*e*P	**P**	**02 34 01.4**	**+0.3**
DPC	**Dobruska-Polom**	**75.72**	**331**	*e*P	**P**	**02 34 01.4**	**+0.3**
CLL	**Collm**	**75.95**	**334**	*i* P	**P**	**02 34 00.9**	**-1.3**
CLL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CLL	**Collm**	**75.95**	**334**	*i* P	**P**	**02 34 00.9**	**-1.3**
	comp=Z,4.0nm,0.6s						
BRTR	**Keskin Array B**	**77.23**	**315**	P	**P**	**02 34 08.7**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=59,slow=5.6,SNR=5.7						
QRN	**Al-Qurain**	**77.48**	**298**	*e*P	**P**	**02 34 11.6**	**+0.4**
QRN				AMb	AMB	02 34 12.1	
	comp=Z,43nm,0.4s						
RST	**Umm Al-Ruwaisa**	**77.50**	**300**	*e*P	**P**	**02 34 11.1**	**-0.2**
RST				AMb	AMB	02 34 12.5	
	comp=Z,3.8nm,0.9s						
NAY	**Al-Naaiem**	**77.53**	**299**	*e*P	**P**	**02 34 11.4**	**-0.1**
NAY				AMb	AMB	02 34 12.5	
	comp=Z,11nm,0.9s						
KHC	**Kasperske Hory**	**77.67**	**332**	*e*P	**P**	**02 34 12.0**	**0.0**
KHC	**Kasperske Hory**	**77.67**	**332**	*e*P	**P**	**02 34 12.0**	**0.0**
GERES	**GERESS Array B**	**77.88**	**332**	P	**P**	**02 34 12.0**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=349,slow=28,SNR=8.2						
STKA	**Stephens Creek**	**78.22**	**187**	P	**P**	**02 34 16.6**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=64,slow=22,SNR=2.5						
TXAR	**Lajitas Array**	**79.51**	**58**	P	**P**	**02 34 22.4**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=300,slow=4.3,SNR=28						
BAIF	**Baives**	**79.54**	**338**	*e*P	**P**	**02 34 21.2**	**-0.9**
PAGF	**Fort de Pagny**	**80.52**	**337**	*e*P	**P**	**02 34 27.3**	**-0.1**
SFTF	**Sexfontaines**	**81.02**	**337**	*e*P	**P**	**02 34 29.2**	**-0.9**
MMAI	**Mount Meron Ar**	**81.49**	**309**	P	**P**	**02 34 34.0**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=60,slow=7.0,SNR=4.5						
FLN	**La Foliniere**	**81.88**	**341**	*e*P	**P**	**02 34 33.5**	**-1.1**
LDF	**La Druitiere**	**81.95**	**341**	*e*P	**P**	**02 34 33.8**	**-1.2**
LOR	**Lormes**	**82.20**	**338**	*e*P	**P**	**02 34 35.2**	**-1.1**
SSF	**Saint Saulge**	**82.48**	**338**	*e*P	**P**	**02 34 36.7**	**-1.1**
AVF	**Avril sur Loir**	**82.77**	**338**	*e*P	**P**	**02 34 38.4**	**-0.8**
SMF	**Signal de Mont**	**82.78**	**337**	*e*P	**P**	**02 34 38.4**	**-0.9**
	comp=Z,6.6nm,0.7s						
LPL	**La Plagne**	**83.00**	**335**	*e*P	**P**	**02 34 39.7**	**-1.1**
LPG	**La Plagne**	**83.01**	**335**	*e*P	**P**	**02 34 40.0**	**-0.9**
	comp=Z,2.1nm,0.6s						
BGF	**Bois d'Agland**	**83.12**	**338**	*e*P	**P**	**02 34 40.0**	**-1.1**
	comp=Z,9.7nm,0.8s						
TCF	**Toulx Ste Croi**	**83.54**	**338**	*e*P	**P**	**02 34 42.0**	**-1.2**
ORIF	**Oris-en-Rattie**	**83.80**	**335**	*e*P	**P**	**02 34 44.2**	**-0.4**
	comp=Z,4.2nm,0.7s						
MFF	**Saint Martin d**	**83.83**	**340**	*e*P	**P**	**02 34 43.4**	**-1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,18nm,1.0s						
RJF	Les Rejaudoux	84.63	338	eP	P	02 34 48.0	-0.7
CAF	Calviac	84.84	338	eP	P	02 34 49.1	-0.7
LFF	La Frestale	85.17	339	eP	P	02 34 50.4	-1.0
TORD	Torodi Ar. Bea	114.32	326	PKP	PKPdf	02 40 52.9	-1.4
	comp=Z,0.3nm,0.9s,baz=14,slow=2.8,SNR=3.1						
BDFB	Brasilia	145.87	32	PKPbc	PKPdf	02 41 53.6	+0.3
	comp=Z,0.7nm,0.5s,baz=252,slow=6.4,SNR=4.0						
PLCA	Paso Flores	150.26	94	PKPbc	PKPbc	02 42 05.5	+0.3
	comp=Z,1.3nm,0.5s,baz=260,slow=3.7,SNR=5.0						

*ISCJB **04** 02:30:27.8±0.5, 18°.61S±0°.10×174°.34W±0°.06, h130km, mb3.9/10, Error ellipse: s-maj=13.9km s-min=7.4km az=173.1*

*IDC **04** 02:30:28.3±2.9, 18°.49S×174°.74W, h95km±27km, mb3.8/9, mb1 4.0/11, mb1mx3.7/24, mbtmp3.8/11, Error ellipse: s-maj=27.6km s-min=15.9km az=122.0*

*AUST **04** 02:30:31.6±1.1, 18°.32S×173°.98W, h176km, Error ellipse: s-maj=1.8km s-min=1.4km az=13.0*

*NEIC **04** 02:30:39.8±2.5, 18°.77S×174°.76W, h204km±21km, mb4.6/3, Error ellipse: s-maj=21.9km s-min=16.3km az=97.0*

ISC 04 02:30:29.9±0.6, 18°.60S±0°.09×174°.36W±0°.08, h130km, n40, σ1s.68/40, mb4.1/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.22	97	P	Pn	02 31 31.6	-1.1
	baz=3.9,SNR=20						
NIUE				S	Sn	02 32 18.6	-2.8
	baz=3.9,SNR=9.2						
AFI	Afiamalu	5.29	28	ePn	Pn	02 31 44.8	-2.2
AFI				eS	Sn	02 32 38.5	-8.5
AFI				TT		02 37 20.0	
AFI	Afiamalu	5.29	28	P	Pn	02 31 46.1	-0.9
	4.0nm,0.3s,baz=43,slow=4.0,SNR=9.4						
AFI				S	Sn	02 32 39.1	-7.9
	67nm,0.3s,baz=51,slow=21,SNR=21						
AFI				T	T	02 37 20.0	
	3.7nm,0.3s,baz=0.9,slow=23,SNR=4.0						
MSVF	Nonsavu	7.27	276	ePn	Pn	02 32 19.5	+5.9
DZM	Mont Dzumac	18.33	256	P	P	02 34 30.2	-4.1
DZM	Mont Dzumac	18.33	256	P	P	02 34 30.2	-4.1
	0.2nm,0.3s,baz=108,slow=20,SNR=2.6						
URZ	Urewera	20.95	199	eP	P	02 35 01.7	-0.7
	14nm,0.5s						
URZ				S	S	02 38 38.0	-11
URZ	Urewera	20.95	199	P	P	02 35 03.3	+0.9
	17nm,0.5s,baz=71,slow=4.5,SNR=20						
URZ				S	S	02 38 38.0	-11
	3.3nm,0.4s,baz=90,slow=20,SNR=2.0						
RPZ	Rata Peaks	27.89	203	P	P	02 36 09.6	+2.1
RPZ	Rata Peaks	27.89	203	P	P	02 36 09.6	+2.1
	6.4nm,0.4s,baz=315,slow=3.1,SNR=10						
CTAO	Charters Tower	37.13	261	P	P	02 37 28.4	+0.1
	9.7nm,0.4s						
QLP	Quilpie	38.91	251	P	P	02 37 42.2	-0.9
	baz=39,SNR=9.2						
COEN	Coen	40.95	270	P	P	02 38 00.8	+0.7
	baz=41,SNR=6.5						
STKA	Stephens Creek	41.70	243	eP	P	02 38 05.2	-0.8
	0.6nm,1.1s						
STKA	Stephens Creek	41.70	243	P	P	02 38 05.3	-0.8
	1.4nm,0.7s,baz=85,slow=9.1,SNR=4.8						
BBOO	Buckleboo	46.46	242	P	P	02 38 42.8	-1.2
	baz=47,SNR=6.2						
WRAB	Tennant Creek	48.28	260	eP	P	02 38 57.0	-1.3
	5.2nm,0.5s						
WRA	Warramunga Arr	48.29	260	P	P	02 38 57.2	-1.1
WRA	Warramunga Arr	48.29	260	P	P	02 38 57.2	-1.1
	6.7nm,0.7s,baz=97,slow=8.2,SNR=31						
AS31	Alice Springs	48.31	255	eP	P	02 38 57.7	-0.8
ASAR	Alice Springs	48.31	255	P	P	02 38 57.8	-0.7
ASAR				PcP	PcP	02 40 24.5	+1.1
ASAR	Alice Springs	48.31	255	P	P	02 38 57.8	-0.7
	6.6nm,0.5s,baz=90,slow=8.3,SNR=126						
ASAR				PcP	PcP	02 40 24.5	+1.1
	1.1nm,0.7s,baz=107,slow=4.4,SNR=5.0						
KDU	Kakadu	51.39	268	P	P	02 39 21.4	-0.3
	baz=52,SNR=9.5						
FORT	Forrest	53.20	245	P	P	02 39 33.9	-1.1
	baz=54,SNR=12						
FITZ	Fitzroy Crossi	56.70	260	P	P	02 40 00.3	-0.1
	baz=57,SNR=3.4						
VNDA	Vanda	60.11	186	P	P	02 40 25.5	+2.4
VNDA	Vanda	60.11	186	P	P	02 40 25.5	+2.4
	0.3nm,0.7s,baz=13,slow=3.6,SNR=3.9						
MEEK	Meekatharra	61.79	249	P	P	02 40 34.0	-1.3
	baz=62,SNR=5.8						
MJAR	Matsushiro Arr	70.81	321	P	P	02 41 34.2	+1.7
MJAR	Matsushiro Arr	70.81	321	P	P	02 41 34.2	+1.7
	0.7nm,0.6s,baz=167,slow=8.1,SNR=4.2						
TXAR	Lajitas Array	83.15	56	P	P	02 42 45.5	+3.7
TXAR	Lajitas Array	83.15	56	P	P	02 42 45.5	+3.7
	0.1nm,0.5s,baz=226,slow=5.9,SNR=3.5						
ILAR	Eielson Array	85.75	11	P	P	02 42 55.4	+1.5
ILAR	Eielson Array	85.75	11	P	P	02 42 55.4	+1.5
	0.2nm,0.6s,baz=210,slow=8.4,SNR=4.9						
MKAR	Makanchi Array	112.39	314	PKiKP	PKiKP	02 48 50.0	-0.5
MKAR	Makanchi Array	112.39	314	PKiKP	PKiKP	02 48 50.0	-0.5
	0.4nm,0.7s,baz=60,slow=2.3,SNR=3.7						
BRTR	Keskin Array B	147.96	317	PKPbc	PKPbc	02 50 02.0	+1.6
BRTR	Keskin Array B	147.96	317	PKPbc	PKPbc	02 50 02.0	+1.6
	1.1nm,0.7s,baz=126,slow=4.1,SNR=6.9						
GERES	GERESS Array B	149.13	350	PKPbc	PKPbc	02 50 04.3	+1.3
GERES	GERESS Array B	149.13	350	PKPbc	PKPbc	02 50 04.3	+1.3
	0.3nm,0.6s,baz=44,slow=4.1,SNR=5.4						

IGQ 04 02:50:13.5, 0°.47N×79°.94W, h13km±54km, Mb4.2, Ms4.0, 6C-13D, Error ellipse: s-maj=5.6km s-min=1.4km az=3.7, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	Jama	0.77	200	S	Sg	02 50 38.5	-0.4
JAMA	Jama	0.77	200	P	Pg	02 50 28.0	-0.6
GOLV	Golondrinas	0.85	108	⇓P	Pn	02 50 31.1	-0.1
PECV	Mancha de Ca P	1.24	185	P	Pg	02 50 38.1	+0.6
PINO	Pino	1.47	115	⇓P	Pn	02 50 40.9	+0.3
TERV	Terraza Guagua	1.48	116	P	Pn	02 50 41.1	+0.4
GGP	Refugio Guagua	1.49	115	⇓P	Pn	02 50 41.1	+0.3
OTAV	Otavalo	1.51	99	⇓S	Sg	02 51 03.0	-0.1
OTAV	Otavalo	1.51	99	⇓P	Pb	02 50 42.0	0.0
COTA	Cotacachi	1.61	95	⇑P	Pb	02 50 44.1	+0.3
LITE	Lita	1.61	78	S	Sg	02 51 05.0	-0.8
LITE	Lita	1.61	78	P	Pb	02 50 42.9	-0.5
PITA	Cotopaxi Volc	1.82	124	⇑P	Pb	02 50 47.1	-0.3
CAMI	Rancho Maria	1.83	128	P	Pb	02 50 48.2	+0.6
NAS2	Nasa	1.84	127	P	Pb	02 50 47.4	-0.4
BNAS	Cotopaxi Volca	1.85	128	⇓P	Pb	02 50 47.3	-0.6
BREF	Cotopaxi Volca	1.88	127	⇓P	Pb	02 50 48.0	-0.6
VC1	Cotopaxi 1	1.90	126	P	Pb	02 50 48.2	-0.5
BVC2	Cotopaxi Volca	1.90	126	⇓P	Pb	02 50 48.2	-0.6
BMOR	Cotopaxi Volca	1.90	129	⇓P	Pb	02 50 48.0	-0.9
MOV1	Cotopaxi Vol s	1.91	128	P	Pb	02 50 48.2	-0.8
BTAM	Cotopaxi Volca	1.92	126	⇓P	Pb	02 50 48.5	-0.6
COV1	Cotopaxi Volc	1.96	125	P	Pn	02 50 48.1	+0.8
CAYR	Refugio Cayamb	1.99	103	P	Pb	02 50 51.0	+0.6
CAYR	Refugio Cayamb	1.99	103	S	Sg	02 51 19.1	+0.2
CAYA	Cayambe	1.99	101	⇓P	Pb	02 50 50.3	-0.1
ANTI	Antisana	2.00	117	⇓P	Pb	02 50 49.8	-0.8
PISA	Pisayambo	2.17	134	P	Pb	02 50 52.9	-0.5
CHAR	Charly	2.34	104	P	Pb	02 50 57.4	+1.3
JUI6	Juive	2.39	142	⇓P	Pb	02 50 55.7	-1.1
RUN5	Runtun	2.41	141	P	Pb	02 50 57.0	-0.2
BRUN	Tungurahua Vol	2.42	141	P	Pb	02 50 56.0	-1.5
BULB	Ulba Tungurahu	2.44	141	P	Pb	02 50 56.0	-1.8
BMAS	Trigal station	2.44	143	⇑P	Pb	02 50 56.3	-1.6
ULBA	Ulba	2.45	141	P	Pb	02 50 56.3	-1.6
ARRY	Arrayan	2.46	143	⇑S	Sb	02 51 27.1	-1.7
ARRY	Arrayan	2.46	143	⇑P	Pb	02 50 56.5	-1.7
PAT1	Patacocha	2.47	143	P	Pb	02 50 57.1	-1.4
BPAT	Tungurahua Vol	2.47	142	⇑P	Pb	02 50 57.0	-1.6
RIOE	Riobamba	2.57	149	P	Pb	02 50 58.3	-1.7

*ISCJB **04** 03:05:11.0±0.5, 20°.39S±0°.08×178°.70W±0°.09, h587km, mb3.8/14, Error ellipse: s-maj=13.6km s-min=7.5km az=39.4*

*IDC **04** 03:05:13.6±1.7, 20°.41S×178°.70W, h606km±19km, mb3.4/14, mb1 3.6/16, mb1mx3.6/20, mbtmp3.4/16, Error ellipse: s-maj=16.7km s-min=12.3km az=109.0*

*AUST **04** 03:05:23.6, 20°.46S×173°.20E, h10km*

ISC 04 03:05:11.6±0.5, 20°.41S±0°.10×178°.6W±0°.1, h587km, n47, σ1s.36/51, mb3.8/14, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	8.24	82	P	S	03 09 08.6	+16
	baz=16,SNR=4.4						
AFI	Afiamalu	9.15	46	P	P	03 07 22.6	+0.6
	3.4nm,0.3s,baz=208,slow=15,SNR=7.3						
AFI				S	S	03 09 07.1	-1.7
	7.3nm,0.3s,baz=47,slow=23,SNR=7.4						
DZM	Mont Dzumac	14.08	261	P	P	03 08 13.3	+1.7
	1.0nm,0.3s,baz=97,slow=23,SNR=7.8						
URZ	Urewera	18.18	191	P	P	03 08 49.6	+0.4
	1.0nm,0.3s,baz=1.1,slow=17,SNR=5.0						
URZ				S	S	03 11 44.4	-1.6
	0.4nm,0.3s,baz=28,slow=17,SNR=2.4						
RPZ	Rata Peaks	24.81	198	S	S	03 13 25.9	-4.9
	4.5nm,0.8s,baz=32,slow=19,SNR=2.9						
STKA	Stephens Creek	37.35	244	P	P	03 11 35.8	+0.1
	0.7nm,0.3s,baz=26,slow=9.7,SNR=4.7						
STKA	Stephens Creek	37.35	244	P	P	03 11 38.4	+2.7
	baz=30,SNR=3.7						
QIS	Mount Isa	39.11	262	P	P	03 11 47.2	-2.8
	baz=31,SNR=4.7						
BBOO	Buckleboo	42.12	243	P	P	03 12 14.1	+0.5
	baz=35,SNR=5.6						
ASAR	Alice Springs	44.02	257	P	P	03 12 28.8	+0.1
	1.1nm,0.4s,baz=88,slow=8.6,SNR=19						
ASAR				PcP	PcP	03 14 01.0	-0.1
	0.6nm,0.7s,baz=100,slow=4.1,SNR=4.3						
WRA	Warramunga Arr	44.09	262	P	P	03 12 28.8	-0.4
	1.8nm,0.3s,baz=97,slow=7.5,SNR=14						
KDU	Kakadu	47.42	271	P	P	03 12 54.7	+0.3
	baz=40,SNR=3.7						
MTN	Manton Dam	48.63	271	S	S	03 19 02.5	-21
	baz=41,SNR=4.7						
FITZ	Fitzroy Crossi	52.52	262	P	P	03 13 32.2	+0.6
	baz=45,SNR=3.1						
VNDA	Vanda	57.95	185	P	P	03 14 09.9	+1.6
	0.7nm,0.5s,baz=21,slow=6.5,SNR=8.5						
MJAR	Matsushiro Arr	69.82	324	P	P	03 15 23.6	-0.6
	2.1nm,0.7s,baz=160,slow=6.9,SNR=7.8						
PETK	Petropavlovsk-	76.05	346	P	P	03 15 59.5	0.0
	8.1nm,0.8s,baz=141,slow=9.6,SNR=6.9						
KSRS	Korea Array	76.47	319	P	P	03 16 03.1	+1.1
	0.7nm,0.5s,baz=144,slow=6.1,SNR=3.1						
USRK	Ussuriysk Arra	78.59	326	P	P	03 16 14.2	+0.9
	3.6nm,0.9s,baz=168,slow=5.2,SNR=6.5						
NVAR	Mina Array Bea	81.32	44	P	P	03 16 29.2	+1.2
	2.4nm,0.7s,baz=225,slow=9.1,SNR=20						
TXAR	Lajitas Array	87.45	58	P	P	03 16 59.9	+1.9
	2.4nm,0.8s,baz=220,slow=6.0,SNR=27						
ILAR	Eielson Array	88.34	13	P	P	03 17 00.4	-0.8
	3.0nm,0.8s,baz=223,slow=6.0,SNR=29						
PDAR	Pinedale Array	89.26	43	P	P	03 17 06.8	+0.6
	3.5nm,0.9s,baz=220,slow=3.3,SNR=21						
CMAR	Chiang Mai Arr	89.59	290	P	P	03 17 07.4	-0.7
	0.8nm,0.3s,baz=119,slow=3.6,SNR=6.6						
YKA	Yellowknife Ar	96.65	25	P	P	03 17 38.9	-0.3
	0.3nm,0.7s,baz=245,slow=4.5,SNR=7.4						
MKAR	Makanchi Array	110.75	313	PKiKP	PKiKP	03 22 37.6	-1.0
	0.3nm,0.3s,baz=114,slow=0.7,SNR=7.8						
KURBB	Kurchatov Arra	113.62	317	PKiKP	PKiKP	03 22 43.0	-0.8
	0.2nm,0.3s,baz=82,slow=2.0,SNR=4.9						
BVAR	Borovoye Array	118.67	320	PKP	PKPdf	03 22 52.4	-1.1
	0.8nm,0.3s,baz=101,slow=5.1,SNR=5.9						
ARCES	ARCESS Array B	128.74	349	PKP	PKPdf	03 23 11.6	-0.8
	1.7nm,0.6s,baz=15,slow=0.9,SNR=11						
FINES	FINESS Array B	135.54	343	PKhKP	PKPpre	03 23 14.5	
	1.5nm,0.9s,baz=316,slow=3.8,SNR=2.8						
FINES				PKP	PKPdf	03 23 22.5	-2.8
	0.9nm,0.8s,baz=158,slow=2.1,SNR=4.8						
FINES				SKPbc	SKPbc	03 26 01.8	-0.3
	0.9nm,0.8s,baz=3.8,slow=4.2,SNR=4.2						
NOA	NORSAR Array B	138.83	353	PKP	PKPdf	03 23 32.2	+0.7
	0.3nm,0.5s,baz=38,slow=2.3,SNR=2.3						
NOA				SKPbc	SKPbc	03 26 08.6	-3.1
	1.6nm,0.9s,baz=16,slow=4.5,SNR=3.4						
AKASG	Malin Array Be	142.68	331	PKhKP	PKPpre	03 23 34.5	
	2.4nm,0.4s,baz=42,slow=4.3,SNR=19						
BRTR	Keskin Array B	146.39	312	PKPbc	PKPbc	03 23 47.2	-0.7
	0.9nm,0.5s,baz=131,slow=4.1,SNR=12						
KOLS	Kolonicke sedl	147.00	334	e	PKPbc	03 23 49.3	+0.1
CRVS	Cervenica-Dubn	147.35	335	e	PKPab	03 23 52.7	-1.3
UPC	Upice	147.83	342	eP	PKPbc	03 23 51.6	+0.4
CLL	Collm	147.85	346	⇓iPKPbc	PKPbc	03 23 50.8	-0.4
	comp=Z,9.0nm,0.8s						
CLL				ePKPab	PKPab	03 23 56.0	+0.1
	comp=Z,7.0nm,0.9s						
DPC	Dobruska-Polom	147.88	342	eP	PKPbc	03 23 51.5	+0.1
DPC				ex	x	03 23 56.7	
BRG	Berggiesshubel	148.04	345	ePKP	PKPbc	03 23 51.7	0.0
	comp=Z,5.6nm,1.2s						
BRG				e		03 23 56.5	
	comp=Z,4.5nm,0.8s						
PVCC	Panska Ves	148.20	344	eP	PKPbc	03 23 52.6	+0.5
VYHS	Vyhne	148.68	338	e	PKPbc	03 23 52.6	-0.8
PRU	Pruhonice	148.70	344	eP	PKPbc	03 23 53.5	+0.1
PRU				ex	x	03 23 59.7	
NKC	Novy Kostel	148.98	346	eP	PKPdf	03 23 50.9	+1.6
NKC				ex	x	03 24 00.2	
TREC	Trest	149.07	342	eP	PKPbc	03 23 54.3	0.0
KHC	Kasperske Hory	149.74	344	eP	PKPbc	03 23 56.1	+0.1
KHC				ex	x	03 24 04.1	
GERES	GERESS Array B	149.97	344	PKPbc	PKPbc	03 23 56.0	-0.6
	comp=Z,1.6nm,0.8s,baz=36,slow=2.5,SNR=14						
GERES				PKPab	PKPab	03 24 04.6	-0.3
	comp=Z,1.2nm,1.0s,baz=336,slow=6.2,SNR=4.1						
TORD	Torodi Ar. Bea	172.78	182	PKPab	PKPab	03 25 45.8	+0.8
	comp=Z,0.3nm,0.7s,baz=172,slow=4.5,SNR=4.0						

*IDC **04** 03:26:57.6±0.6, 46°.06N×151°.61E, h0km, mb4.0/21, mb1 4.2/24, mb1mx4.2/30, mbtmp4.1/24, ML4.0/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/51, Error ellipse: s-maj=18.3km s-min=12.0km az=154.0*

*NIED **04** 03:27:00, 46°.00N×151°.90E, h41km, Mw4.4 Best double couple: Mo4.48000×10^15 NP1:φs127.00000°, δ79.00000°, λ-31.00000°. NP2:φs224.00000°, δ60.00000°, λ-167.00000°.*

*JMA **04** 03:27:01.2±0.8, 45°.99N×151°.91E, h30km, M4.9*

*ISCJB **04** 03:27:01.1±0.4, 45°.65N±0°.07×151°.86E±0°.07, h48km, mb4.4/45, Error ellipse: s-maj=11.3km s-min=2.9km az=144.5*

*MOS **04** 03:27:02.6±0.9, 46°.10N×151°.63E, h44km, mb4.7/26, Error ellipse: s-maj=10.8km s-min=7.4km az=75.4*

*NEIC **04** 03:27:05.1±0.6, 46°.02N×151°.69E, h56km±5km, mb4.6/20, Error ellipse: s-maj=9.1km s-min=4.5km az=148.0*

ISC 04 03:27:03.3±0.5, 45°.77N±0°.09×151°.80E±0°.06, h48km, n215, σ1s.15/222, mb4.4/45, 13C-13D, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.82	260	ePN	Pn	03 27 46.5	+0.7
KUR				eS	Sn	03 28 20.0	+1.5
KUR				pmax	pmax		
	comp=Z,860nm,0.8s						
KUR				pmax	pmax		
	comp=N,150nm,0.5s						
KUR				smax	smax		
	comp=N,3μm,1.8s						
KUR				smax	smax		
	comp=E,2μm,1.0s						
YUK	Yuzh-Kuril'sk	4.56	250	d iPN	Pn	03 28 11.7	+2.0
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				pmax	pmax		
	comp=E,128nm,0.5s						
YUK				pmax	pmax		
	comp=N,84nm,0.5s						
NEM2	Nemuro 2	4.95	243	P	Pn	03 28 15.0	-0.1
NEM2				eS	Sn	03 29 09.5	-1.5
JRA	Rausu	5.09	251	P	Pn	03 28 19.1	+2.1
JNK	Nakash	5.50	249	eS	Sn	03 29 26.0	+1.4
SKR	Severo-Kuril's	5.70	29	ePN	Pn	03 28 21.9	-3.4
SKR				pmax	pmax		
	comp=Z,70nm,0.7s						
JAK	Akkeshi	5.80	244	P	Pn	03 28 26.6	-0.1
JAK				eS	Sn	03 29 30.1	-1.7
JTKR	Abashiri--Toko	5.89	255	P	Pn	03 28 30.0	+2.0
JAR	Ashorobuto	6.25	250	P	Pn	03 28 34.9	+2.0
JMP	Maruseppu	6.25	257	P	Pn	03 28 35.7	+2.8
JOB	Onbets	6.39	246	P	Pn	03 28 35.6	+0.8
JOB				eS	Sn	03 29 44.5	-1.9
JKK2	Kamakawa 2	6.71	257	P	Pn	03 28 42.5	+3.2
ASAJ	Asahikawa	6.74	259	ePn	Pn	03 28 42.5	+2.9
	comp=Z,36nm,1.2s						
ASAJ				eS	Sn	03 29 57.0	+2.0
ASAJ	Asahikawa	6.74	259	P	Pn	03 28 43.1	+3.5
ASAJ	Asahikawa	6.74	259	Pn	Pn	03 28 42.9	+3.3
	comp=Z,5.3nm,0.3s,baz=29,slow=23,SNR=24						
ASAJ				LR	LR	03 31 17.1	
	comp=Z,222nm,19.3s,baz=138,slow=39						
JCH	Churui	6.84	246	P	Pn	03 28 40.9	0.0
JCH				eS	Sn	03 29 55.1	-2.3
JWK2	Keihoku	6.97	270	P	Pn	03 28 47.6	+4.8
JFR	Furan	7.08	252	P	Pn	03 28 46.3	+1.9
JEM	Erimo	7.29	242	P	Pn	03 28 48.4	+1.3
JEM				eS	Sn	03 30 07.5	-0.9
ERM	Erimo	7.29	242	ePN	Pn	03 28 48.8	+1.7
ERM				pmax	pmax		
	comp=Z,87nm,0.4s						
ERM	Erimo	7.29	242	ePn	Pn	03 28 48.8	+1.7
	comp=Z,87nm,0.4s						
ERM				eS	Sn	03 30 08.9	+0.6
JNBK	Urakawa-nobuka	7.40	245	P	Pn	03 28 48.1	-0.5
JNBK				eS	Sn	03 30 08.6	-2.5
JBT2	Biratori 2	7.41	250	P	Pn	03 28 48.8	+0.1
PEA0B	Petropavlovsk-	8.29	25	ePn	Pn	03 28 58.4	-2.3
PETK	Petropavlovsk-	8.29	25	PN	Pn	03 29 01.3	+0.5
PETK	Petropavlovsk-	8.29	25	Pn	Pn	03 29 01.2	+0.5
PETK	Petropavlovsk-	8.29	25	Pn	Pn	03 29 01.2	+0.5
	comp=Z,0.4nm,0.3s,baz=187,slow=13,SNR=6.2						
JNB	Noboribetsu	8.42	251	P	Pn	03 29 03.6	+1.0
JKB	Kayabe	8.70	247	P	Pn	03 29 05.8	-0.6
JKB				eS	Sn	03 30 36.5	-6.5
JANG	Nango	9.26	238	P	Pn	03 29 11.4	-2.7
JANG				eS	Sn	03 30 47.8	-9.0
JTM	Tenmabayashi	9.28	241	P	Pn	03 29 13.0	-1.4
JTM				eS	Sn	03 30 50.0	-7.3
JTH	Tanohata	9.34	235	eS	Sn	03 30 50.0	-8.7
JOSM	Okushiri--Mats	9.63	252	P	Pn	03 29 18.7	-0.4
OFUJ	Ofunato	10.04	232	P	Pn	03 29 22.5	-2.2
OFUJ				eS	Sn	03 31 07.4	-8.5
JRG	Rokugo	10.41	236	P	Pn	03 29 27.6	-2.2
JRG				eS	Sn	03 31 17.5	-7.4
JIO	Ouri	10.66	230	P	Pn	03 29 30.9	-2.3
JIO				eS	Sn	03 31 22.3	-8.8
MAT	Matsushiro	13.76	233	P	Pn	03 30 13.7	-2.0
MJAR	Matsushiro Arr	13.76	233	Pn	Pn	03 30 14.2	-1.5
MJAR	Matsushiro Arr	13.76	233	Pn	Pn	03 30 14.2	-1.5
	comp=Z,0.2nm,0.3s,baz=27,slow=13,SNR=12						
USRK	Ussuriysk Arra	14.11	271	Pn	Pn	03 30 22.2	+2.0
	comp=Z,1.8nm,0.3s,baz=76,slow=12,SNR=7.9						
USRK				LR	LR	03 35 53.2	
	comp=Z,83nm,18.3s,baz=34,slow=38						
FX1	Attu Island--F	15.60	55	ePn	Pn	03 30 39.4	-0.4
FX1				eS	Sn	03 33 19.9	-12
FX1	Attu Island--F	15.60	55	Pn	Pn	03 30 39.5	-0.3
	comp=Z,2.9nm,0.3s,baz=258,slow=12,SNR=14						
KSRS	Korea Array	19.64	253	P	Pn	03 31 29.2	-0.3
	comp=Z,0.5nm,0.3s,baz=57,slow=11,SNR=19						
KSAR	Wonju Array Be	19.67	253	P	Pn	03 31 29.2	-0.7
JNU	Nakatsue	20.44	239	P	Pn	03 31 38.5	-0.6
JNU	Nakatsue	20.44	239	P	Pn	03 31 38.5	-0.6
	comp=Z,4.9nm,0.7s,baz=63,slow=16,SNR=4.2						
YAK	Yakutsk	20.68	330	eP	Pn	03 31 41.3	-0.4
YAK				e		03 31 51.9	
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
SONM	Songino Array	30.81	291	P	P	03 33 14.2	-0.3
SONM	Songino Array	30.81	291	P	P	03 33 14.2	-0.3
	comp=N,0.7nm,0.6s,baz=70,slow=7.5,SNR=3.9						
KDAK	Kodiak Island	35.43	50	P	P	03 33 53.9	-0.5
KDAK	Kodiak Island	35.43	50	P	P	03 33 53.9	-0.5
	comp=N,3.3nm,0.7s,baz=274,slow=19,SNR=2.6						
ILAR	Eielson Array	37.88	38	P	P	03 34 14.9	-0.3
ILAR	Eielson Array	37.88	38	P	P	03 34 14.9	-0.3
	comp=N,0.5nm,0.5s,baz=263,slow=7.0,SNR=9.8						
ZALV	Zalesovo Beam	42.45	306	PcP	PcP	03 36 45.0	-0.3
ZALV	Zalesovo Beam	42.45	306	PcP	PcP	03 36 44.9	-0.3
	comp=N,1.8nm,0.7s,baz=80,slow=3.5,SNR=7.4						
INK	Inuvik	42.96	32	P	P	03 34 57.1	0.0
INK	Inuvik	42.96	32	P	P	03 34 57.1	0.0
	comp=N,2.5nm,0.7s,baz=306,slow=7.8,SNR=12						
MK31	Makanchi Array	46.59	298	eP	P	03 35 25.5	-0.8
MK31				e		03 36 59.5	
MK31	Makanchi Array	46.59	298	eP	P	03 35 25.5	-0.8
MK31				ePcP	PcP	03 36 59.5	-0.2
MKAR	Makanchi Array	46.59	298	P	P	03 35 25.1	-1.2
MKAR						03 36 59.9	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	Makanchi Array	46.59	298	P	P	03 35 25.1	-1.2
MKAR				PcP	PcP	03 36 59.9	+0.3
MKAR	Makanchi Array	46.59	298	P	P	03 35 25.1	-1.2
	comp=Z,1.2nm,0.6s,baz=73,slow=7.8,SNR=19						
MKAR				PcP	PcP	03 36 59.9	+0.3
	comp=Z,1.7nm,0.7s,baz=61,slow=4.7,SNR=11						
KURK	Kurchatov	47.15	304	P	P	03 35 28.9	-1.7
KURK						03 37 03.6	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KURK	Kurchatov	47.15	304	P	P	03 35 28.9	-1.7
KURK				PcP	PcP	03 37 03.6	+2.1
KURBB	Kurchatov Arra	47.24	304	P	P	03 35 28.9	-2.4
	comp=Z,1.0nm,0.4s,baz=73,slow=8.7,SNR=4.3						
KURBB				PcP	PcP	03 37 03.6	+1.8
	comp=Z,0.7nm,0.2s,baz=70,slow=3.3,SNR=3.4						
BVAR	Borovoye Array	50.78	310	P	P	03 35 56.1	-2.2
BVAR	Borovoye Array	50.78	310	P	P	03 35 56.1	-2.2
BVAR	Borovoye Array	50.78	310	P	P	03 35 56.1	-2.2
	comp=Z,0.4nm,0.4s,baz=54,slow=5.7,SNR=2.7						
CMAR	Chiang Mai Arr	51.25	256	P	P	03 36 03.5	+1.2
CMAR	Chiang Mai Arr	51.25	256	P	P	03 36 03.5	+1.2
	comp=Z,2.5nm,0.9s,baz=41,slow=7.8,SNR=8.7						
RES	Resolute Bay	52.05	18	eP	P	03 36 06.5	-1.0
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	52.25	36	P	P	03 36 09.2	+0.1
YKA	Yellowknife Ar	52.25	36	P	P	03 36 09.2	+0.1
	comp=Z,0.9nm,0.5s,baz=300,slow=6.8,SNR=20						
TAPN	Taplejung	53.24	273	eP	P	03 36 17.9	+0.5
ODAN	Odare	53.77	273	eP	P	03 36 22.1	+0.9
GUN	Gumba	54.18	275	eP	P	03 36 25.6	+1.3
	comp=Z,10nm,0.4s						
RAMN	Ramite	54.27	273	eP	P	03 36 25.2	+0.4
KKN	Kakani	54.67	275	eP	P	03 36 28.7	+1.0
	comp=Z,21nm,0.8s						
PKI	Pulchoki	54.72	275	eP	P	03 36 28.6	+0.5
DMN	Daman	54.90	275	eP	P	03 36 30.2	+0.8
DANN	Dangsing	55.38	277	eP	P	03 36 33.7	+0.8
KOLN	Koldanda	55.85	276	eP	P	03 36 36.8	+0.6
PYUN	Piuthan	56.07	277	eP	P	03 36 38.2	+0.4
	comp=Z,48nm,1.0s						
ABKAR	Akbulak array	58.35	310	eP	P	03 36 51.3	-1.9
	comp=Z,1.6nm,0.4s						
ARCES	ARCESS Array B	58.48	341	P	P	03 36 53.5	-0.4
ARCES	ARCESS Array B	58.48	341	P	P	03 36 53.5	-0.4
	comp=Z,4.1nm,0.9s,baz=46,slow=7.7,SNR=3.6						
SUMG	Summit	61.74	3	iP	P	03 37 15.7	-0.9
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUMG	Summit	61.74	3	iP	P	03 37 15.7	-0.9
	comp=Z,10nm,0.9s						
NVAR	Mina Array Bea	63.70	61	P	P	03 37 31.8	+1.8
NVAR	Mina Array Bea	63.70	61	P	P	03 37 31.8	+1.8
	comp=Z,0.9nm,0.7s,baz=287,slow=6.7,SNR=6.3						
SCO	Scoresbysund	63.97	358	iP	P	03 37 29.8	-1.1
SCO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SCO	Scoresbysund	63.97	358	iP	P	03 37 29.8	-1.1
	comp=Z,2.9nm,0.9s						
FINES	FINESS Array B	64.53	334	P	P	03 37 32.4	-2.4
FINES	FINESS Array B	64.53	334	P	P	03 37 32.4	-2.4
	comp=Z,1.3nm,0.5s,baz=34,slow=7.6,SNR=7.8						
PDAR	Pinedale Array	66.06	53	P	P	03 37 46.1	+0.9
PDAR	Pinedale Array	66.06	53	P	P	03 37 46.1	+0.9

comp=Z,1.4nm,0.8s,baz=294,slow=1.8,SNR=13
NB2 NORSAR Subarra 68.86 341 P **P** 03 38 00.9 -1.5
comp=Z,1.2nm,0.3s,baz=29,slow=6.5
NOA NORSAR Array B 68.86 341 P **P** 03 38 01.1 -1.3
NOA NORSAR Array B 68.86 341 P **P** 03 38 01.1 -1.3
comp=Z,1.1nm,0.4s,baz=28,slow=6.4,SNR=12
KBZ Khabaz 70.88 313 P **P** 03 38 15.4 +0.4
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 70.88 313 P **P** 03 38 15.4 +0.4
KBZ Khabaz 70.88 313 P **P** 03 38 15.4 +0.4
comp=Z,2.9nm,0.8s,baz=92,slow=4.8,SNR=10
ASAR Alice Springs 71.00 197 P **P** 03 38 17.6 +1.7
ASAR Alice Springs 71.00 197 P **P** 03 38 17.6 +1.7
comp=Z,57nm,0.6s,baz=7.7,slow=11,SNR=219
AKASG Malin Array Be 71.85 326 P **P** 03 38 18.6 -2.1
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 71.85 326 P **P** 03 38 18.6 -2.1
AKASG Malin Array Be 71.85 326 P **P** 03 38 18.6 -2.1
comp=Z,1.7nm,0.3s,baz=37,slow=6.2,SNR=10.0
AK02 Malin Array Si 71.89 326 *e*P **P** 03 38 19.6 -1.3
SCHQ Schefferville 74.56 22 P **P** 03 38 36.2 -0.5
SCHQ Schefferville 74.56 22 P **P** 03 38 36.2 -0.5
comp=Z,1.9nm,0.9s,baz=292,slow=7.6,SNR=4.0
KWP Kalwaria Pacla 75.19 329 *e*P **P** 03 38 40.1 -0.3
KWP pmax pmax
comp=Z,8.0nm,0.8s
KWP Kalwaria Pacla 75.19 329 *e*P **P** 03 38 40.1 -0.3
comp=Z,7.8nm,0.8s
KWP Kalwaria Pacla 75.19 329 ⇓*i*P **P** 03 38 40.5 +0.1
BUR08 Bucovina Ar. S 75.88 326 *e*P **P** 03 38 44.0 -0.5
BURAR Bucovina Array 75.90 326 ⇓*i*P **P** 03 38 44.7 +0.1
TLCR 76.38 322 ⇑*i*P **P** 03 38 47.0 -0.2
TRPA Tarpa 76.50 328 ⇑*i*P **P** 03 38 48.0 +0.1
VRI Vrincioaia 76.71 324 ⇑*i*P **P** 03 38 50.8 +1.6
MORC Moravsky Berou 76.87 332 ⇑*i*P **P** 03 38 49.5 -0.5
CLL Collm 76.97 335 ⇑*e*P **P** 03 38 49.5 -1.0
comp=Z,5.0nm,0.7s
MLR Muntele Rosu 77.34 324 ⇑*i*P **P** 03 38 53.1 +0.3
ISR Istrita 77.39 324 ⇑*i*P **P** 03 38 52.3 -0.7
PSZ Piszkesteto 77.64 329 ⇑*i*P **P** 03 38 54.1 -0.3
VOIR 77.74 325 ⇓*i*P **P** 03 38 55.6 +0.6
TREC Trest 77.97 332 *e*P **P** 03 38 56.0 -0.1
TREC Trest 77.97 332 *e*P **P** 03 38 56.0 -0.1
BRTR Keskin Array B 78.47 316 P **P** 03 38 59.3 0.0
BRTR Keskin Array B 78.47 316 P **P** 03 38 59.3 0.0
comp=Z,1.8nm,0.8s,baz=73,slow=4.2,SNR=16
GZR Gura Zlata 78.68 326 ⇓*i*P **P** 03 38 59.5 -0.7
KHC Kasperske Hory 78.72 333 *e*P **P** 03 39 00.1 -0.2
KHC Kasperske Hory 78.72 333 *e*P **P** 03 39 00.1 -0.2
TXAR Lajitas Array 78.77 60 P **P** 03 39 01.9 +0.9
TXAR Lajitas Array 78.77 60 P **P** 03 39 01.9 +0.9
comp=Z,0.6nm,0.8s,baz=292,slow=4.8,SNR=9.1
GERES GERESS Array B 78.93 333 P **P** 03 39 01.1 -0.5
GERES GERESS Array B 78.93 333 P **P** 03 39 01.1 -0.5
comp=Z,1.9nm,0.7s,baz=38,slow=6.2,SNR=15
BZS Buzias 78.94 327 ⇑*i*P **P** 03 39 00.7 -0.8
CONA Conrad Observa 79.03 332 ⇑*e*P **P** 03 39 02.1 0.0
comp=Z,3.5nm,0.7s
CONA Conrad Observa 79.03 332 ⇑*e*P **P** 03 39 02.1 0.0
comp=Z,3.5nm,0.7s
SOKA Soboth 80.40 331 ⇓*i*P **P** 03 39 09.4 -0.1
comp=Z,3.3nm,0.8s
SOKA Soboth 80.40 331 ⇓*i*P **P** 03 39 09.4 -0.1
comp=Z,3.3nm,0.8s
KBA Koelnbreinsper 80.60 333 ⇓*e*P **P** 03 39 10.8 +0.1
KBA pmax pmax
comp=Z,7.0nm,0.9s
KBA Koelnbreinsper 80.60 333 ⇓*e*P **P** 03 39 10.8 +0.1
comp=Z,7.0nm,0.9s
KBA Koelnbreinsper 80.60 333 ⇓*e*P **P** 03 39 10.8 +0.1
comp=Z,7.0nm,0.9s
VTS Vitosha 80.84 324 ⇓*i*P **P** 03 39 11.8 -0.3
RETA Reutte 81.04 334 ⇓*i*P **P** 03 39 12.9 0.0
comp=Z,4.1nm,1.0s
RETA Reutte 81.04 334 ⇓*i*P **P** 03 39 12.9 0.0
comp=Z,4.1nm,1.0s
CDF Champ du Feu 81.21 337 *e*P **P** 03 39 13.2 -0.6
comp=Z,9.9nm,0.9s
CDF Champ du Feu 81.21 337 *e*P **P** 03 39 13.2 -0.6
CDF pmax pmax
comp=Z,10.0nm,0.9s
CDF Champ du Feu 81.21 337 *e*P **P** 03 39 13.2 -0.6
comp=Z,9.9nm,0.9s
FETA Feichten 81.47 334 ⇑*i*P **P** 03 39 15.6 +0.3
comp=Z,5.2nm,1.1s
FETA Feichten 81.47 334 ⇑*i*P **P** 03 39 15.6 +0.3
comp=Z,5.2nm,1.1s
PAGF Fort de Pagny 81.50 338 *e*P **P** 03 39 14.6 -0.6
comp=Z,7.8nm,0.9s
PAGF Fort de Pagny 81.50 338 *e*P **P** 03 39 14.6 -0.6
comp=Z,7.8nm,0.9s
MEZF Maizieres J'vi 81.72 338 *e*P **P** 03 39 16.2 -0.2
comp=Z,20nm,0.8s
MEZF Maizieres J'vi 81.72 338 *e*P **P** 03 39 16.2 -0.2
comp=Z,20nm,0.8s
HAU Haudompre 81.83 337 *e*P **P** 03 39 16.3 -0.8
comp=Z,9.1nm,1.0s
HAU Haudompre 81.83 337 *e*P **P** 03 39 16.3 -0.8
HAU pmax pmax
comp=Z,9.0nm,1.0s
HAU Haudompre 81.83 337 *e*P **P** 03 39 16.3 -0.8
comp=Z,9.1nm,1.0s
HINF Hinteralfeld 81.87 337 *e*P **P** 03 39 16.3 -1.0
HINF Hinteralfeld 81.87 337 *e*P **P** 03 39 16.3 -1.0
HINF Hinteralfeld 81.87 337 *e*P **P** 03 39 16.3 -1.0
SFTF Sexfontaines 82.00 338 *e*P **P** 03 39 17.5 -0.4
SFTF Sexfontaines 82.00 338 *e*P **P** 03 39 17.5 -0.4
FLN La Foliniere 82.79 342 *e*P **P** 03 39 21.4 -0.6
FLN La Foliniere 82.79 342 *e*P **P** 03 39 21.4 -0.6
FLN La Foliniere 82.79 342 *e*P **P** 03 39 21.4 -0.6
LDF La Druitiere 82.87 342 *e*P **P** 03 39 21.7 -0.7
LDF La Druitiere 82.87 342 *e*P **P** 03 39 21.7 -0.7
LDF La Druitiere 82.87 342 *e*P **P** 03 39 21.7 -0.7
LOR Lormes 83.17 339 *e*P **P** 03 39 23.5 -0.5
LOR Lormes 83.17 339 *e*P **P** 03 39 23.5 -0.5
GRR Gorron 83.23 342 *e*P **P** 03 39 24.2 0.0
GRR Gorron 83.23 342 *e*P **P** 03 39 24.2 0.0
GRR Gorron 83.23 342 *e*P **P** 03 39 24.2 0.0
SSF Saint Saulge 83.45 339 *e*P **P** 03 39 25.3 -0.1
comp=Z,7.6nm,0.9s
SSF Saint Saulge 83.45 339 *e*P **P** 03 39 25.3 -0.1
SSF pmax pmax
comp=Z,8.0nm,0.9s
SSF Saint Saulge 83.45 339 *e*P **P** 03 39 25.3 -0.1
comp=Z,7.6nm,0.9s
SGMF Saint Gilles 83.71 343 *e*P **P** 03 39 26.4 -0.3
SGMF Saint Gilles 83.71 343 *e*P **P** 03 39 26.4 -0.3
SGMF Saint Gilles 83.71 343 *e*P **P** 03 39 26.4 -0.3
AVF Avril sur Loir 83.74 339 *e*P **P** 03 39 26.7 -0.2
comp=Z,3.9nm,0.6s
AVF Avril sur Loir 83.74 339 *e*P **P** 03 39 26.7 -0.2
AVF pmax pmax
comp=Z,4.0nm,0.6s
AVF Avril sur Loir 83.74 339 *e*P **P** 03 39 26.7 -0.2
comp=Z,3.9nm,0.6s
SMF Signal de Mont 83.75 338 *e*P **P** 03 39 26.7 -0.3
comp=Z,21nm,1.0s
SMF Signal de Mont 83.75 338 *e*P **P** 03 39 26.7 -0.3
SMF pmax pmax
comp=Z,21nm,1.0s
SMF Signal de Mont 83.75 338 *e*P **P** 03 39 26.7 -0.3
comp=Z,21nm,1.0s
LPL La Plagne 84.01 336 *e*P **P** 03 39 28.7 +0.1
comp=Z,3.0nm,0.5s
LPL La Plagne 84.01 336 *e*P **P** 03 39 28.7 +0.1
LPL pmax pmax
comp=Z,3.0nm,0.5s
LPL La Plagne 84.01 336 *e*P **P** 03 39 28.7 +0.1
comp=Z,3.0nm,0.5s
LPG La Plagne 84.02 336 *e*P **P** 03 39 28.8 0.0
comp=Z,3.4nm,0.6s
LPG La Plagne 84.02 336 *e*P **P** 03 39 28.8 0.0
LPG pmax pmax
comp=Z,3.0nm,0.6s
LPG La Plagne 84.02 336 *e*P **P** 03 39 28.8 0.0
comp=Z,3.4nm,0.6s
TCF Toulx Ste Croi 84.49 339 *e*P **P** 03 39 30.5 -0.3
comp=Z,11nm,1.0s
TCF Toulx Ste Croi 84.49 339 *e*P **P** 03 39 30.5 -0.3
TCF pmax pmax
comp=Z,11nm,1.0s
TCF Toulx Ste Croi 84.49 339 *e*P **P** 03 39 30.5 -0.3
comp=Z,11nm,1.0s

MFF Saint Martin d 84.76 341 *e*P **P** 03 39 31.7 -0.4
MFF Saint Martin d 84.76 341 *e*P **P** 03 39 31.7 -0.4
MFF Saint Martin d 84.76 341 *e*P **P** 03 39 31.7 -0.4
ORIF Oris-en-Rattie 84.80 336 *e*P **P** 03 39 32.4 -0.1
ORIF Oris-en-Rattie 84.80 336 *e*P **P** 03 39 32.4 -0.1
ORIF Oris-en-Rattie 84.80 336 *e*P **P** 03 39 32.4 -0.1
CAF Calviac 85.80 339 *e*P **P** 03 39 37.7 +0.3
comp=Z,4.4nm,0.7s
CAF Calviac 85.80 339 *e*P **P** 03 39 37.7 +0.3
CAF pmax pmax
comp=Z,4.0nm,0.7s
CAF Calviac 85.80 339 *e*P **P** 03 39 37.7 +0.3
comp=Z,4.4nm,0.7s
LFF La Frestale 86.12 340 *e*P **P** 03 39 38.7 -0.2
comp=Z,14nm,0.8s
LFF La Frestale 86.12 340 *e*P **P** 03 39 38.7 -0.2
LFF pmax pmax
comp=Z,14nm,0.8s
LFF La Frestale 86.12 340 *e*P **P** 03 39 38.7 -0.2
comp=Z,14nm,0.8s
TORD Torodi Ar. Bea 115.45 327 PKP **PKPdf** 03 45 39.6 -0.5
TORD Torodi Ar. Bea 115.45 327 PKP **PKPdf** 03 45 39.6 -0.5
comp=Z,0.3nm,0.9s,baz=11,slow=3.0,SNR=6.5
PLCA Paso Flores 149.02 96 PKPbc **PKPbc** 03 46 46.6 +1.0
PLCA Paso Flores 149.02 96 PKPbc **PKPbc** 03 46 46.6 +1.0
comp=Z,1.6nm,0.8s,baz=295,slow=2.2,SNR=4.1
CPUP Villa Florida 149.74 60 PKPbc **PKPbc** 03 46 48.0 +0.3
CPUP Villa Florida 149.74 60 PKPbc **PKPbc** 03 46 48.0 +0.3
comp=Z,1.2nm,0.5s,baz=315,slow=5.7,SNR=6.0
SNAA Sanae 151.36 196 PKPbc **PKPbc** 03 46 50.6 +0.3
SNAA PKPab **PKPab** 03 47 03.0 +4.4
SNAA Sanae 151.36 196 PKPbc **PKPbc** 03 46 50.6 +0.3
comp=Z,0.6nm,0.7s,baz=354,slow=3.0,SNR=8.7
SNAA PKPab **PKPab** 03 47 03.0 +4.4
comp=Z,0.3nm,0.7s,baz=344,slow=3.6,SNR=3.1

AUST ***04*** *03:33:45.8±0.8, 3.°62S×135.°53E, h0km, Error ellipse: s-maj=0.6km s-min=0.5km az=37.0*
BJI ***04*** *03:33:47.7, 3.°75S×135.°96E, h58km, mB5.4/28, mb5.6/65, Ms4.8/56, Ms7.4.4/52*
MOS ***04*** *03:33:48.7±1.0, 3.°45S×135.°45E, h33km, mb5.8/66, MS4.5/21, Error ellipse: s-maj=9.3km s-min=5.0km az=112.8*
ISCJB ***04*** *03:33:50.1±0.4, 3.°56S±0.°02×135.°55E±0.°02, h49km±3km, mb5.6/167, MS4.7/159, Error ellipse: s-maj=3.8km s-min=3.1km az=138.0*
NEIC ***04*** *03:33:52.4±0.7, 3.°54S×135.°50E, h57km±5km, mb5.6/61, MW5.5, MW5.4, Error ellipse: s-maj=4.3km s-min=3.4km az=64.0, Moment Tensor Solution. s18 Moment tensor: Scale 10¹⁷Nm; Mrr1.64; Mθθ-0.74; Mϕϕ-0.90; Mrθ-0.03; Mθϕ 1.00; Mrϕ 0.02; Best double couple: M₀1.70000×10¹⁷ NP1:ϕs317.00000°, δ46.00000°, λ89.00000°. NP2: ϕs138.00000°, δ44.00000°, λ91.00000°. Principal axes: T 1.6400, Plg89.0000°, Azm188.0000°; N 0.1800, Plg0.0000°, Azm317.0000°; P -1.8200, Plg0.0000°, Azm47.0000°;*
NEIC Felt [III] at Nabire.
TEH ***04*** *03:33:52.0, 3.°56S×135.°53E, h51km, ML5.6*
IDC ***04*** *03:33:52.7±0.5, 3.°54S×135.°43E, h55km±3km, mb5.1/33, mb1 5.1/37, mb1mx5.1/37, mbtmp5.1/37, MS4.6/21, Ms1 4.6/21, ms1mx4.5/27, Error ellipse: s-maj=12.8km s-min=7.8km az=74.0*
DJA ***04*** *03:33:53.3±0.2, 4.°S±2.°×13.°6E±.°, h45km±3km, M5.5/78, mb5.5/78, mB5.9/55, MLv5.8/10, Mw(mB)5.5/55, Mwp5.5/1*
GCMT ***04*** *03:33:55.9±0.1, 3.°62S×135.°53E, h57km, MW5.4, Moment Tensor Solution. s91,c168; s16,c17; Moment tensor: Scale 10¹⁷Nm; Mrr1.22±.02; Mθθ-1.55±.02; Mϕϕ 0.33±.02; Mrθ 0.31±.02; Mθϕ 0.25±.02; Mrϕ-0.37±.02; Best double couple: M₀1.50000×10¹⁷ NP1:ϕs260.00000°, δ41.00000°, λ63.00000°. NP2:ϕs114.00000°, δ55.00000°, λ112.00000°. Principal axes: T 1.3700, Plg71.0000°, Azm77.0000°; N 0.2600, Plg18.0000°, Azm281.0000°; P -1.6300, Plg7.0000°, Azm189.0000°; Data Used: II IU CN IC G. Surface waves: sta= 91, comp=155, per= 50.*
NEIC ***04*** *03:34:05.0±0.0, 4.°53S×136.°50E, h50km, Moment Tensor Solution. s118 Moment tensor: Scale 10¹⁷Nm; Mrr1.74; Mθθ-1.66; Mϕϕ-0.08; Mrθ 1.03; Mθϕ 0.38; Mrϕ 0.14; Best double couple: M₀2.00000×10¹⁷ NP1:ϕs93.00000°, δ60.00000°, λ80.00000°. NP2:ϕs292.00000°, δ31.00000°, λ107.00000°. Principal axes: T 2.0500, Plg72.0000°, Azm338.0000°; N -0.0500, Plg8.0000°, Azm97.0000°; P -2.0000, Plg14.0000°, Azm190.0000°;*

ISC 04 03:33:51.9±0.2, 3.°59S±0.°03×135.°49E±.°03, h53km±1km, h53km:pP-P,n1094,s1°36/1110,mb5.6/177,MS4.8/160, 268C-134D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**1.87**	**24**	P	**Pn**	**03 34 19.6**	**-1.9**
SRPI				S	**Sn**	**03 34 45.3**	**+1.4**
RKPI	**Ransiki, Papua**	**2.45**	**328**	P	**Pn**	**03 34 30.2**	**+0.8**
BAKI	**Biak**	**2.46**	**14**	P	**Pn**	**03 34 29.5**	**-0.1**
FAKI	**Fak Fak**	**3.31**	**282**	P	**Pn**	**03 34 41.6**	**+0.4**
FAKI				S	**Sn**	**03 35 19.1**	**-0.2**
FAKI	**Fak Fak**	**3.31**	**282**	P	**Pn**	**03 34 41.6**	**+0.4**
	baz=3.3,SNR=1000						
FAKI				S	**Sn**	**03 35 18.8**	**-0.5**
	baz=3.3,SNR=15						
SWI	**Sorong**	**5.02**	**303**	P	**Pn**	**03 35 04.4**	**-0.3**
	3µm,0.6s,94µm21nm						
SWI	**Sorong**	**5.02**	**303**	P	**Pn**	**03 35 04.7**	**0.0**
	baz=5.1,SNR=446						
SWI				S	**Sn**	**03 35 58.8**	**-2.7**
	baz=5.1,SNR=6.3						
JAY	**Jayapura**	**5.32**	**79**	P	**Pn**	**03 35 10.0**	**+1.2**
	499nm,0.4s,16µm3.8nm						
JAY				S	**Sn**	**03 36 11.0**	**+2.2**
	499nm,0.4s,16µm3.8nm						
JAY	**Jayapura**	**5.32**	**79**	P	**Pn**	**03 35 09.2**	**+0.4**
	baz=5.3,SNR=24						
MSAI	**Masohi**	**6.55**	**272**	P	**Pn**	**03 35 26.7**	**+0.9**
	153nm,0.7s,4µm1.4nm						
MMPI	**Merauke**	**6.86**	**135**	P	**Pn**	**03 35 31.9**	**+1.9**
	1µm,0.6s,39µm14nm						
MMPI	**Merauke**	**6.86**	**135**	S	**Sn**	**03 36 46.5**	**-0.3**
	baz=6.8,SNR=5.2						
AAI	**Ambon**	**7.28**	**269**	P	**Pn**	**03 35 36.6**	**+0.8**
	735nm,0.5s,16µm3.8nm						
AAI	**Ambon**	**7.28**	**269**	P	**Pn**	**03 35 37.1**	**+1.3**
	baz=7.3,SNR=29						
LBMI	**Labuha**	**8.51**	**290**	P	**Pn**	**03 35 53.6**	**+1.1**
	668nm,1.0s,6µm						
TNTI	**Ternate**	**9.20**	**298**	P	**Pn**	**03 36 03.2**	**+1.1**
	201nm,1.1s,2µm9µm						
GAMI	**Galela, Maluku**	**9.40**	**305**	P	**Pn**	**03 36 06.8**	**+2.0**
	276nm,1.0s,3µm						
KDU	**Kakadu**	**9.52**	**198**	P	**Pn**	**03 36 05.8**	**-0.5**
	baz=9.6,SNR=1000						
KDU				S	**Sn**	**03 37 47.9**	**-4.0**
	baz=9.6,SNR=5.4						
MTN	**Manton Dam**	**10.15**	**205**	P	**Pn**	**03 36 14.6**	**-0.5**
	baz=10,SNR=1000						
MTN				S	**Sn**	**03 38 04.2**	**-3.3**
	baz=10,SNR=4.5						
PALU	**Palau**	**10.91**	**355**	P	**Pn**	**03 36 25.7**	**+0.2**
	baz=11,SNR=8.2						
MNI	**Manado**	**11.76**	**295**	P	**Pn**	**03 36 37.5**	**+0.4**
	392nm,1.0s,5µm						
KMSI	**Cibinong**	**12.23**	**290**	P	**Pn**	**03 36 43.8**	**+0.4**
	739nm,1.1s						
COEN	**Coen**	**12.79**	**144**	*e*Pn	**Pn**	**03 36 49.7**	**-1.4**
COEN	**Coen**	**12.79**	**144**	P	**Pn**	**03 36 48.8**	**-2.3**
	baz=13,SNR=284						
PMG	**Port Moresby**	**12.95**	**117**	*e*Pn	**Pn**	**03 36 53.7**	**+0.4**
PMG				S	**Sn**	**03 39 11.4**	**-4.5**
PMG				*e*S	**Sn**	**03 39 13.0**	**-2.9**
PMG	**Port Moresby**	**12.95**	**117**	P	**Pn**	**03 36 56.4**	**+3.1**
	221nm,1.9s,3µm						
PMG	**Port Moresby**	**12.95**	**117**	P	**Pn**	**03 36 53.7**	**+0.4**
	9.8nm,0.3s,baz=324,slow=3.4,SNR=16						
PMG				S	**Sn**	**03 39 11.4**	**-4.5**
	5.8nm,0.3s,baz=279,slow=16,SNR=5.1						
LUWI	**Luwuk**	**12.96**	**281**	P	**Pn**	**03 36 53.0**	**-0.4**
	308nm,0.8s,3µm						
LUWI	**Luwuk**	**12.96**	**281**	P	**Pn**	**03 36 53.4**	**-0.1**
	baz=13,SNR=11						
BBSI	**Bau Bau**	**13.02**	**261**	P	**Pn**	**03 36 57.1**	**+2.9**
	243nm,1.1s,3µm						

KNRA Kununurra 13.71 208 P **Pn** **03 37 01.8 -1.9**
baz=14,SNR=130
KNRA S Sn 03 39 25.8 -8.7
baz=14,SNR=9.1
MMRI Maumere 14.10 249 P **Pn** **03 37 09.7 +0.8**
236nm,1.1s,3µm
MRSI Marisa 14.13 286 P **Pn** **03 37 07.8 -1.6**
159nm,0.8s,2µm
SKSI Soroako, Sulaw 14.18 274 P **Pn** **03 37 11.9 +1.9**
126nm,1.1s,2µm
DAV Davao City (W) 14.49 317 P **P** **03 37 18.6 -0.9**
DAV Davao City (W) 14.49 317 P **P** **03 37 18.6 -0.9**
61nm,0.3s,baz=225,slow=7.1,SNR=5.0
DAV LR LR 03 43 24.1
comp=Z,838nm,18.5s,baz=127,slow=40
BSSI Bau Bau, Buton 15.16 260 P **P** **03 37 26.3 -0.7**
139nm,1.0s,2µm
BKSI Bulukumba 15.42 263 P **P** **03 37 28.6 -1.2**
75nm,1.3s,976nm
TTSI Tana Toraja 15.65 272 P **P** **03 37 32.4 -0.1**
139nm,1.0s,2µm
SPSI Sidrap Palu 15.69 268 P **P** **03 37 31.5 -1.4**
81nm,1.4s,2µm
KAPI Kappang 15.76 264 *e*Pn **P** **03 37 32.5 -1.1**
72nm,1.1s
KAPI Kappang 15.76 264 P **P** **03 37 33.0 -0.6**
SNR=12
KAPI Kappang 15.76 264 P **P** **03 37 32.8 -0.8**
249nm,1.2s,SNR=5.7
KAPI Kappang 15.76 264 P **Pn** **03 37 31.8 +1.2**
62nm,1.7s,737nm
KAPI Kappang 15.76 264 P **Pn** **03 37 30.4 -0.1**
0.7nm,0.3s,baz=90,slow=7.1,SNR=5.6
BASI Baing, Sumba 16.20 245 P P 03 37 44.6 +6.1
WRAB Tennant Creek 16.28 184 *e*P **Pn** **03 37 33.7 -3.5**
WRAB pmax pmax
comp=Z,732nm,0.9s
WRAB Tennant Creek 16.28 184 *e*Pn **Pn** **03 37 33.7 -3.5**
comp=Z,732nm,0.9s
WRAB *e*S Sn 03 40 22.0 -15
WRAB Tennant Creek 16.28 184 Pn **Pn** **03 37 33.0 -4.2**
comp=Z,5µm,1.2s
WRA Warramunga Arr 16.29 184 P **Pn** **03 37 34.0 -3.3**
WRA S Sn 03 40 26.8 -10
WRA Warramunga Arr 16.29 184 P **Pn** **03 37 33.9 -3.3**
comp=Z,23nm,0.3s,baz=5.2,slow=13,SNR=643
WRA S Sn 03 40 26.8 -10
comp=Z,15nm,0.3s,baz=7.0,slow=22,SNR=5.3
WRA LR LR 03 44 31.5
comp=Z,6µm,18.6s,baz=10.0,slow=39
MTSU Mount Surprise 16.84 150 P **Pn** **03 37 42.9 -1.3**
baz=17,SNR=43
MTSU S Sn 03 40 38.0 -13
baz=17,SNR=5.8
QIS Mount Isa 17.33 167 P **Pn** **03 37 49.3 -1.0**
baz=17,SNR=13
FITZ Fitzroy Crossi 17.35 213 *e*Pn **Pn** **03 37 49.3 -1.2**
FITZ S Sn 03 40 51.4 -11
FITZ Fitzroy Crossi 17.35 213 P **Pn** **03 37 48.8 -1.7**
comp=Z,12nm,0.3s,baz=39,slow=13,SNR=108
FITZ S Sn 03 40 51.4 -11
comp=Z,19nm,0.3s,baz=198,slow=14,SNR=10
FITZ LR LR 03 45 29.8
comp=Z,2µm,19.0s,baz=31,slow=40
FITZ Fitzroy Crossi 17.35 213 P **Pn** **03 37 49.2 -1.3**
baz=17,SNR=128
FITZ S Sn 03 40 53.7 -9.2
baz=17,SNR=6.5
SGKI Sangatta, Kali 18.13 279 P Pn 03 38 07.1 +7.0
SMKI Samarinda 18.53 279 P **Pn** **03 38 09.5 +4.5**
comp=Z,338nm,1.1s
MYLDM Lahad Datu 19.08 297 P **Pn** **03 38 14.7 +3.2**
MYLDM Lahad Datu 19.08 297 P **Pn** **03 38 14.1 +2.6**
comp=Z,262nm,1.2s,comp=Z,4µm
GUIM Jordan 19.09 318 *e*P **Pn** **03 38 11.5 -0.2**
TSM Tawau 19.27 294 P **Pn** **03 38 13.9 +0.1**
KBKI Kotabaru 19.29 270 P **Pn** **03 38 14.2 +0.1**
comp=Z,124nm,0.9s,comp=Z,5µm
GUMO Guam 19.44 28 *e*P **P** **03 38 14.0 -0.2**
comp=Z,66nm,0.8s
GUMO Guam 19.44 28 P **Pn** **03 38 15.8 0.0**
comp=Z,4.2nm,0.3s,baz=210,slow=22,SNR=5.1
GUMO LR LR 03 44 29.9
comp=Z,1µm,21.6s,baz=250,slow=33
CTA Charters Tower 19.47 148 P **Pn** **03 38 16.2 +0.1**
CTA S S 03 41 42.2 -10
CTA Charters Tower 19.47 148 P **Pn** **03 38 16.2 +0.1**
comp=Z,12nm,0.3s,baz=326,slow=11,SNR=62
CTA S S 03 41 42.2 -10
comp=Z,2.5nm,0.3s,baz=248,slow=19,SNR=3.3
CTA LR LR 03 46 32.7
comp=Z,4µm,18.9s,baz=329,slow=39
CTAO Charters Tower 19.47 148 *e*P **Pn** **03 38 15.9 -0.2**
CTAO *e*S **S** **03 41 48.2 -3.6**
CTAO pmax pmax
comp=Z,121nm,0.8s
CTAO Charters Tower 19.47 148 *e*Pn **Pn** **03 38 15.9 -0.2**
comp=Z,120nm,0.8s
CTAO *e*S **S** **03 41 48.2 -3.6**
RCP Roxas 19.68 320 ⇑*e*P **Pn** **03 38 18.2 -0.5**
AS31 Alice Springs 20.02 184 *e*Pn Pn 03 38 21.9 -0.8
AS31 *e*S **S** **03 41 56.4 -6.4**
ASAR Alice Springs 20.02 184 P Pn 03 38 22.6 -0.1
ASAR S **S** **03 41 57.6 -5.2**
ASAR *e* 04 12 35.9
ASAR Alice Springs 20.02 184 P Pn 03 38 22.6 -0.1
comp=Z,530nm,1.0s,baz=12,slow=11,SNR=944
ASAR S **S** **03 41 57.6 -5.2**
comp=Z,32nm,0.8s,baz=7.5,slow=29,SNR=5.6
ASAR LR LR 03 47 08.0
comp=Z,2µm,20.3s,baz=0.8,slow=40
ASAR P3KPbc 04 12 35.9
comp=Z,0.8nm,0.9s,baz=174,slow=3.9,SNR=6.1
KHKI Kahang-Kahang 20.33 256 P **P** **03 38 24.7 +0.8**
comp=Z,210nm,1.9s,comp=Z,4µm
SDKM Sandakan 20.45 297 P Pn 03 38 26.8 -1.0
PVCP Virac 20.45 327 *e*P **P** **03 38 25.0 -0.2**
BBKI Banjar Baru 20.61 270 P Pn 03 38 29.5 -0.2
comp=Z,223nm,1.3s
SRBI Singaraja 20.66 257 P Pn 03 38 30.5 +0.3
comp=Z,197nm,1.6s,comp=Z,3µm
MTKI Muara Teweh, K 20.75 277 P Pn 03 38 31.3 0.0
comp=Z,157nm,1.3s
OTRP Odiongan 20.75 320 *e*P Pn 03 38 31.1 -0.1
IGBI Denpasar 20.88 255 P Pn 03 38 33.9 +1.1
comp=Z,128nm,0.8s
AUQP San Andres 21.08 323 *e*P **P** **03 38 34.6 +2.6**
SJMP San Jose 21.41 318 *e*P **P** **03 38 36.7 +1.3**
KKM Kota Kinabalu 21.50 296 *e*P **P** **03 38 37.1 +0.5**
comp=Z,129nm,0.6s
KKM Kota Kinabalu 21.50 296 P **P** **03 38 38.1 +1.5**
KKM Kota Kinabalu 21.50 296 P **P** **03 38 40.1 +3.5**
comp=Z,179nm,0.9s,comp=Z,2µm
KKM Kota Kinabalu 21.50 296 P **P** **03 38 39.3 +2.7**
baz=22,SNR=6.4
BYJI Banyuwangi 21.51 257 P **P** **03 38 40.1 +3.4**
comp=Z,609nm,1.5s,comp=Z,13µm
BOAC Boac 21.69 322 *e*P **P** **03 38 39.8 +1.3**
KMMI Kalianget 21.70 260 P P 03 38 44.1 +5.4
comp=Z,362nm,1.0s,comp=Z,4µm
BLJI Banyuglugur 22.17 258 P **P** **03 38 45.3 +1.6**
comp=Z,205nm,1.0s,comp=Z,8µm
GMJI Gumukmas 22.41 257 P **P** **03 38 49.3 +3.0**
comp=Z,62nm,1.2s
TGY Tagaytay City 22.75 321 P **P** **03 38 50.9 +1.0**
TGY Tagaytay City 22.75 321 P **P** **03 38 50.9 +1.0**
comp=Z,142nm,0.3s,baz=201,slow=5.6,SNR=9.1
LUBP Lubang 22.91 319 *e*P **P** **03 38 51.1 -0.4**
MBWA Marble Bar 23.23 220 *e*P **P** **03 38 56.0 +1.3**
comp=Z,370nm,1.2s
MBWA *e*S **S** **03 43 08.1 +5.2**
MBWA LR LR
comp=Z,2µm,19.0s
MBWA Marble Bar 23.23 220 P **P** **03 38 56.6 +1.9**
SNR=13
BTM Bintulu 23.39 287 P **P** **03 38 58.9 +2.6**
BALP Baler 23.63 325 *e*P **P** **03 38 58.0 -0.5**
PBKI Pangkalan Bun 23.80 271 P **P** **03 39 02.6 +2.5**
comp=Z,796nm,1.1s,comp=Z,8µm
SJI Sawahan 23.96 259 P **P** **03 39 02.9 +1.2**
comp=Z,97nm,0.9s,comp=Z,4µm
PWJI Pagerwojo 23.97 258 P **P** **03 39 01.6 0.0**
comp=Z,65nm,0.7s
SBUM Sibu 24.02 284 P **P** **03 39 04.1 +2.0**
SBUM Sibu 24.02 284 P **P** **03 39 04.2 +2.1**
comp=Z,77nm,2.0s,comp=Z,2µm

STKI Sintang 24.27 278 P **P** **03 39 06.5 +2.1**
comp=Z,90nm,0.7s,comp=Z,14µm
QLP Quilpie 24.35 161 P **P** **03 39 05.3 +0.4**
baz=24,SNR=245
PCJI Pacitan 24.61 258 P **P** **03 39 12.2 +4.7**
comp=Z,97nm,1.3s
SCZP Santa Cruz 24.66 322 *e*P **P** **03 39 06.5 -1.4**
HNR Honiara 24.97 105 PFAKE 03 39 20.0 +9.2
HNR LR LR
comp=Z,927nm,22.0s
SMRI Semarang 25.17 261 P **P** **03 39 15.0 +2.3**
comp=Z,252nm,0.9s
SMRI Semarang 25.17 261 P **P** **03 39 16.5 +3.9**
baz=25,SNR=3.3
UGM Wanagama 25.20 259 *e*P **P** **03 39 13.3 +0.3**
comp=Z,323nm,1.3s
UGM Wanagama 25.20 259 P P 03 39 18.4 +5.4
comp=Z,218nm,1.2s
UGM Wanagama 25.20 259 P **P** **03 39 13.2 +0.3**
baz=25,SNR=10
KSM Kuching 25.67 281 *e*P **P** **03 39 18.0 +0.9**
comp=Z,61nm,0.9s
KSM LR LR
comp=Z,870nm,20.0s
KSM Kuching 25.67 281 P **P** **03 39 18.8 +1.7**
KSM Kuching 25.67 281 P **P** **03 39 18.6 +1.5**
comp=Z,77nm,1.0s,comp=Z,1µm
KSM Kuching 25.67 281 P **P** **03 39 18.6 +1.5**
baz=26,SNR=10
BJII Banjamegara 25.93 261 P **P** **03 39 21.8 +2.2**
comp=Z,252nm,1.0s,comp=Z,2µm
RMQ Roma 26.07 152 P P 03 39 29.2 +8.6
baz=26,SNR=5.1
EIDS Eidsvold 26.34 147 *e*P **P** **03 39 23.9 +0.9**
comp=Z,74nm,1.3s
EIDS Eidsvold 26.34 147 P **P** **03 39 23.7 +0.7**
baz=26,SNR=4.2
TGJI Tegal 26.46 262 P **P** **03 39 27.5 +3.2**
comp=Z,115nm,1.0s
CLJI Cilicap 26.66 260 P P 03 39 30.9 +4.8
comp=Z,114nm,0.9s
CISI Cisompet, Garu 27.82 261 P **P** **03 39 36.9 +0.3**
comp=Z,118nm,0.7s,comp=Z,2µm
CISI Cisompet, Garu 27.82 261 P **P** **03 39 35.7 -0.8**
baz=28,SNR=3.9
FORT Forrest 27.94 194 *e*P **P** **03 39 38.0 +0.7**
comp=Z,427nm,0.9s
FORT Forrest 27.94 194 P **P** **03 39 38.2 +0.9**
baz=28,SNR=65
GIRL Giralia 27.98 226 P **P** **03 39 40.0 +2.2**
baz=28,SNR=3.9
MEEK Meekatharra 28.04 214 P **P** **03 39 39.1 +0.7**
baz=28,SNR=7.8
STKA Stephens Creek 28.72 169 *e*P **P** **03 39 44.1 -0.2**
comp=Z,24nm,1.1s
STKA Stephens Creek 28.72 169 P **P** **03 39 44.6 +0.4**
comp=Z,44nm,0.7s,baz=344,slow=8.4,SNR=122
STKA LR LR 03 52 20.0
comp=Z,3µm,18.1s,baz=343,slow=38
STKA Stephens Creek 28.72 169 P **P** **03 39 44.1 -0.2**
baz=29,SNR=88
BBOO Buckleboo 29.07 179 *e*P **P** **03 39 47.6 +0.1**
comp=Z,5µm,1.3s
BBOO Buckleboo 29.07 179 P **P** **03 39 47.5 +0.1**
baz=29,SNR=59
CMSA Cobar Meteorol 29.41 162 P **P** **03 39 50.2 -0.2**
baz=30,SNR=8.2
KMBL Kambalda 30.46 203 P **P** **03 40 00.7 +1.0**
baz=31,SNR=33
SSLB Suanglung 30.68 333 *e*P **P** **03 39 59.9 -1.9**
comp=Z,82nm,1.2s
SSLB *e*PcP **PcP** **03 42 58.2 -0.8**
NACB Ninganchiao 30.73 335 *e*P **P** **03 40 01.8 -0.4**
ARMA Armidale 30.74 152 P **P** **03 40 02.8 +0.5**
baz=31,SNR=4.8
JOW Kunigami 31.04 347 *e*P **P** **03 40 04.0 -0.9**
comp=Z,28nm,0.9s
CBIJ Chichi jima 31.18 12 LR LR 03 52 01.4
comp=Z,558µm,18.0s,baz=270,slow=35
YHNB Yeheng 31.27 335 *e*P **P** **03 40 07.1 +0.1**
comp=Z,30nm,0.8s
YHNB LR LR
comp=Z,946nm,21.0s
TPRI Tanjung Pinang 31.27 278 P P 03 40 16.3 +9.2
MORW Morawa 31.36 214 P **P** **03 40 08.9 +1.3**
baz=32,SNR=6.1
TATO Taipei 31.49 335 PFAKE 03 40 20.0 +11
TATO LR LR
comp=Z,1µm,19.0s
MYKOM **Kota Tinggi 32.07 279** P **P** **03 40 15.6 +1.5**
MYKOM **Kota Tinggi 32.07 279** P **P** **03 40 16.1 +1.9**
comp=Z,46nm,1.0s
BLDU Ballidu 32.20 211 P **P** **03 40 16.2 +1.1**
baz=32,SNR=13
KLBR Kellerberrin 32.47 209 P **P** **03 40 18.6 +1.1**
baz=33,SNR=15
YNG Young 32.83 160 P **P** **03 40 21.6 +1.0**
baz=33,SNR=6.3
RGRI Rengat 33.29 275 P pP 03 40 39.7 +1.3
ARPS Mount Arapiles 33.53 171 P **P** **03 40 28.1 +1.5**
baz=34,SNR=62
QIZ Qiongzhong 33.80 313 P **P** **03 40 28.7 -0.5**
QIZ pP **pP** **03 40 40.6 -2.1**
QIZ sP **sP** **03 40 45.7 -3.3**
QIZ S **S** **03 45 50.9 +1.3**
QIZ pmax pmax
comp=Z,39nm,0.9s
QIZ LR LR
comp=N,410nm,24.1s
QIZ LR LR
comp=Z,640nm,21.7s
QIZ Qiongzhong 33.80 313 *e*P **P** **03 40 28.4 -0.7**
comp=Z,53nm,1.1s
QIZ LR LR
comp=Z,688nm,21.0s
NWAO Narrogin (SRO) 33.82 208 *e*P **P** **03 40 29.9 +0.8**
comp=Z,34nm,1.0s
NWAO Narrogin (SRO) 33.82 208 P **P** **03 40 30.4 +1.2**
comp=Z,30nm,1.1s,baz=36,slow=9.6,SNR=5.2
NWAO LR LR 03 55 30.1
comp=Z,2µm,19.6s,baz=28,slow=38
CAN Canberra 33.96 160 PFAKE 03 40 40.0 +10
CAN LR LR
comp=Z,3µm,20.0s
FRIM Kepong 34.52 281 P **P** **03 40 36.2 +0.7**
BKNI Bangkinang 34.65 276 P **P** **03 40 37.5 +0.9**
comp=Z,171nm,0.8s,comp=Z,2µm
TOO Toolangi 35.04 166 P **P** **03 40 42.4 +2.7**
baz=35,SNR=4.7
UBPT Khong Chiam 35.14 303 P **P** **03 40 40.8 0.0**
comp=Z,89nm,1.1s
DZM Mont Dzumac 35.19 124 *e*LR LR 03 50 14.3
comp=Z,2µm,24.7s
DZM Mont Dzumac 35.19 124 P **P** **03 40 41.9 +0.6**
DZM Mont Dzumac 35.19 124 P **P** **03 40 41.9 +0.6**
comp=Z,15nm,0.9s,baz=59,slow=17,SNR=4.6
PPI Padang Panjang 35.20 274 P **P** **03 40 41.4 0.0**
comp=Z,123nm,0.9s,comp=Z,3µm
PPI Padang Panjang 35.20 274 P **P** **03 40 41.8 +0.4**
baz=35,SNR=5.1
PPI S **S** **03 46 07.3 -4.1**
baz=35,SNR=3.4
IPM Ipoh 35.36 283 *e*P **P** **03 40 43.2 +0.5**
comp=Z,105nm,1.6s
IPM Ipoh 35.36 283 P **P** **03 40 43.5 +0.7**
KULM Kulim 35.90 284 PFAKE 03 41 00.0 +13
KULM LR LR
comp=Z,744nm,21.0s
KULM Kulim 35.90 284 P **P** **03 40 47.3 -0.1**
MNSI Mandailing Nat 36.16 276 P **P** **03 40 50.6 +1.0**
comp=Z,42nm,0.9s,comp=Z,3µm
CHBT CHBT 36.72 297 P **P** **03 40 54.7 +0.3**
comp=Z,217nm,0.8s,comp=Z,3µm
JHJ Hachijo jima 2 36.74 6 LR LR 03 52 49.7
comp=Z,1µm,21.2s,baz=238,slow=31
JNU Nakatsue 36.77 354 *e*P **P** **03 40 53.8 -0.8**
comp=Z,68nm,1.0s
JNU pP **pP** **03 41 09.2 +0.9**
JNU Nakatsue 36.77 354 P **P** **03 40 54.0 -0.6**
comp=Z,124nm,0.9s,baz=165,slow=3.0,SNR=71
JNU pP **pP** **03 41 09.2 +0.9**
comp=Z,60nm,0.9s,baz=140,slow=5.4,SNR=6.1
JNU LR LR 03 53 30.4
comp=Z,810nm,21.7s,baz=137,slow=32
SSE Sheshan 37.09 339 ⇑P **P** **03 40 57.3 +0.1**
SSE pP **pP** **03 41 11.5 +0.5**
SSE sP **sP** **03 41 16.6 -0.6**
SSE S **S** **03 46 39.5 -0.3**
SSE sS **sS** **03 47 02.7 -0.2**
SSE ScS **ScS** **03 51 01.7 -5.6**
SSE pmax pmax
comp=Z,91nm,1.2s
SSE pmax pmax
comp=Z,160nm,4.6s
SSE LR LR
comp=N,310nm,20.1s
SSE LR LR
comp=E,99nm,20.2s
SSE LR LR
comp=Z,700nm,21.0s
PSI Prapat 37.09 279 P **P** **03 40 56.7 -1.0**
PSI PcP **PcP** **03 43 17.1 -0.5**
PSI Prapat 37.09 279 P **P** **03 40 57.5 -0.2**
comp=Z,43nm,1.1s,comp=Z,682nm
PSI Prapat 37.09 279 P **P** **03 40 56.7 -1.0**
comp=Z,19nm,0.9s,baz=149,slow=6.5,SNR=8.4
PSI PcP **PcP** **03 43 17.1 -0.5**
comp=Z,19nm,0.8s,baz=265,slow=1.3,SNR=5.4
PSI Prapat 37.09 279 P **P** **03 40 57.1 -0.7**
baz=37,SNR=7.3
PSI Prapat 37.09 279 P **PcP** **03 43 17.2 -0.3**
baz=16,SNR=4.7
TARA Tarawa 37.73 83 *e*P **P** **03 41 04.2 +1.2**
comp=Z,426nm,1.6s
GSI Gunungsitoli 38.21 277 P pP 03 41 20.8 +0.1
GSI Gunungsitoli 38.21 277 P **PcP** **03 43 22.1 +1.3**
baz=17,SNR=3.5
NJ2 Nanjing 38.81 337 *e*P **P** **03 41 12.8 +1.0**
NJ2 pP **pP** **03 41 24.6 -0.9**
NJ2 sP **sP** **03 41 27.8 -3.9**
NJ2 PP **PP** **03 42 42.7 +1.1**
NJ2 S **ScP** **03 47 09.5 +3.3**
NJ2 sS **sS** **03 47 27.5 -1.5**
NJ2 pmax pmax
comp=Z,90nm,0.9s
NJ2 pmax pmax
comp=Z,300nm,4.1s
NJ2 LR LR
comp=N,720nm,22.3s
NJ2 LR LR
comp=E,270nm,23.6s
NJ2 LR LR
comp=Z,5µm,22.2s
COCO West Island 39.19 255 PFAKE 03 41 30.0 +15
COCO LR LR
comp=Z,610nm,21.0s
WHN Wuhan 39.50 331 P **P** **03 41 19.1 +1.6**
WHN S **S** **03 47 18.3 +2.2**
WHN pmax pmax
comp=Z,280nm,1.1s
WHN LR LR
comp=Z,2µm,31.6s
MJAR Matsushiro Arr 40.01 3 P **P** **03 41 20.2 -1.5**
MJAR pP **pP** **03 41 37.7 +2.2**
MJAR PcP **PcP** **03 43 26.1 +0.1**
MJAR Matsushiro Arr 40.01 3 P **P** **03 41 20.2 -1.5**
comp=Z,17nm,0.9s,baz=189,slow=9.7,SNR=55
MJAR pP **pP** **03 41 37.7 +2.2**
comp=Z,10nm,0.9s,baz=184,slow=9.1,SNR=4.8
MJAR PcP **PcP** **03 43 26.1 +0.1**
comp=Z,17nm,0.8s,baz=183,slow=3.3,SNR=16
MJAR LR LR 03 54 32.4
comp=Z,862nm,21.0s,baz=190,slow=31
MAJO Matsushiro 40.01 3 *e*P **P** **03 41 19.8 -1.9**
MAJO *e* 03 43 26.2
MAJO pmax pmax
comp=Z,34nm,0.9s
MAJO MLR MLR
comp=Z,986nm,20.0s
MAJO Matsushiro 40.01 3 *e*P **P** **03 41 19.8 -1.9**
comp=Z,34nm,0.9s
*e*PcP **PcP** **03 43 26.2 +0.2**
MAJO LR LR
comp=Z,986nm,20.0s
MAT Matsushiro 40.01 3 P **P** **03 41 19.5 -2.2**
MAT S **S** **03 47 19.6 -4.0**
TAU Tasmania Unive 40.54 167 PFAKE 03 41 40.0 +14
TAU LR LR
comp=Z,3µm,19.0s
GYA Guiyang 40.87 319 ⇑*i*P **P** **03 41 29.2 +0.1**
GYA pP **pP** **03 41 45.8 +2.9**
GYA sP **sP** **03 41 50.0 +0.9**
GYA PP **PnPn** **03 43 10.7 +2.0**
GYA PcP **PcP** **03 43 29.3 +0.2**
GYA ScP **ScP** **03 47 15.0 +0.5**
GYA S **S** **03 47 39.4 +2.4**
GYA sS **sS** **03 48 02.7 +2.4**
GYA SS **SS** **03 50 36.1 -4.0**
GYA ScS **ScS** **03 51 29.0 -0.8**
GYA pmax pmax
comp=Z,60nm,0.9s
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,740nm,18.6s
GYA LR LR
comp=E,650nm,19.7s
GYA LR LR
comp=Z,790nm,18.8s
KSAR Wonju Array Be 41.43 351 P **P** **03 41 33.0 -0.4**
KSAR PcP **PcP** **03 43 31.4 +0.8**
KSAR ScP **ScP** **03 47 15.9 -0.4**
KSRS Korea Array 41.44 351 P **P** **03 41 33.0 -0.4**
comp=Z,32nm,0.9s,baz=170,slow=9.4,SNR=95
KSRS PcP **PcP** **03 43 31.4 +0.8**
comp=Z,22nm,0.8s,baz=185,slow=3.4,SNR=30
KSRS ScP **ScP** **03 47 15.9 -0.4**
comp=Z,1.8nm,0.9s,baz=194,slow=3.3,SNR=4.4
INCN Inchon 41.69 349 PFAKE 03 41 50.0 +14
INCN LR LR
comp=Z,364nm,19.0s
CMAR Chiang Mai Arr 42.14 303 P **P** **03 41 40.0 +0.4**
CMAR PcP **PcP** **03 43 34.5 +1.2**
CMAR Chiang Mai Arr 42.14 303 P **P** **03 41 40.0 +0.4**
comp=Z,51nm,0.9s,baz=127,slow=7.0,SNR=183
CMAR PcP **PcP** **03 43 34.5 +1.2**
comp=Z,8.8nm,0.9s,baz=156,slow=2.8,SNR=6.3
CMMT Chiang Mai 42.30 303 P **P** **03 41 41.2 +0.4**
comp=Z,121nm,1.0s,comp=Z,936nm
CHTO Chiang Mai 42.31 303 *e*P **P** **03 41 41.1 +0.3**
CHTO *e* 03 43 34.8
CHTO pmax pmax
comp=Z,71nm,0.8s
CHTO MLR MLR
comp=Z,210nm,21.0s
CHTO Chiang Mai 42.31 303 *e*P **P** **03 41 41.1 +0.3**
comp=Z,71nm,0.8s
CHTO *e*PcP **PcP** **03 43 34.8 +0.9**
CHTO LR LR
comp=Z,210nm,21.0s
CHTO Chiang Mai 42.31 303 P **P** **03 41 41.4 +0.5**
SNR=14
CHTO Chiang Mai 42.31 303 P **P** **03 41 40.7 -0.1**
comp=Z,134nm,1.1s,comp=Z,1µm
KMI Kunming 42.72 314 P **P** **03 41 45.3 +0.9**
KMI sP **sP** **03 42 02.9 -1.6**
KMI PcP **PcP** **03 43 37.0 +1.6**
KMI S **S** **03 48 02.1 -2.6**
KMI pmax pmax
comp=Z,110nm,1.3s
KMI LR LR
comp=N,180nm,13.3s
KMI LR LR
comp=E,350nm,17.1s
KMI LR LR
comp=Z,530nm,27.7s
FUNA Funafuti 43.71 99 PFAKE 03 42 00.0 +7.7
FUNA LR LR
comp=Z,5µm,19.0s
MSVF Nonsavu 43.99 112 *e*P **P** **03 41 56.6 +2.1**
MSVF pmax pmax
comp=Z,149nm,1.2s
MSVF Nonsavu 43.99 112 *e*P **P** **03 41 56.6 +2.1**
comp=Z,149nm,1.2s
MSVF Nonsavu 43.99 112 P **P** **03 41 56.0 +1.5**
comp=Z,579nm,1.1s,SNR=19
DL2 Dalian 44.18 344 ⇑P **P** **03 41 55.8 +0.2**
DL2 pP **pP** **03 42 10.0 +0.4**
DL2 S **S** **03 48 25.0 -0.1**
DL2 ScS **ScS** **03 51 47.3 -2.2**
DL2 pmax pmax
comp=Z,39nm,0.7s
DL2 pmax pmax
comp=Z,140nm,5.2s
DL2 LR LR
comp=N,180nm,17.5s
DL2 LR LR
comp=E,200nm,16.6s
DL2 LR LR
comp=Z,270nm,15.7s
XAN Xi'an 45.04 328 P **P** **03 42 02.6 -0.1**
XAN S **S** **03 48 34.9 -3.0**
XAN pmax pmax
comp=Z,29nm,1.0s
XAN pmax pmax
comp=Z,74nm,5.3s
XAN LR LR
comp=N,160nm,34.2s
XAN LR LR
comp=E,98nm,24.1s
XAN LR LR
comp=Z,150nm,26.1s
CD2 Chengdu 45.75 321 P **P** **03 42 10.9 +2.6**
CD2 pP **pP** **03 42 24.9 +2.5**
CD2 sP **sP** **03 42 31.2 +2.7**
CD2 PcP **PcP** **03 43 47.8 +2.4**
CD2 PP **PP** **03 43 59.2 +2.8**
CD2 PcS **PcS** **03 47 40.8 +1.0**
CD2 S **S** **03 48 50.5 +2.3**
CD2 sS **sS** **03 49 14.4 +2.6**
CD2 SS **SS** **03 52 07.5 -6.0**
CD2 pmax pmax
comp=Z,90nm,0.8s
CD2 pmax pmax
comp=Z,170nm,4.6s
CD2 LR LR
comp=N,410nm,20.6s
CD2 LR LR
comp=E,530nm,24.0s
CD2 LR LR
comp=Z,460nm,20.1s
ERM Erimo 45.92 8 *e*P **P** **03 42 09.6 +0.2**
ERM pmax pmax
comp=Z,14nm,0.9s
ERM Erimo 45.92 8 *e*P **P** **03 42 09.3 -0.1**
comp=Z,29nm,1.0s
ERM LR LR
comp=Z,400nm,21.0s
TIY Taiyuan 46.34 335 *e*P **P** **03 42 13.2 +0.3**
TIY S **S** **03 48 56.2 -0.3**
TIY pmax pmax
comp=Z,300nm,4.1s
TIY LR LR
comp=N,160nm,5.1s
TIY LR LR
comp=E,130nm,4.7s
TIY LR LR
comp=Z,530nm,32.2s
SNY Shenyang 46.49 348 ⇑P **P** **03 42 13.5 -0.3**
SNY S S 03 49 05.8 +7.5
SNY pmax pmax
comp=Z,63nm,4.1s
SNY LR LR
comp=N,270nm,21.2s
SNY LR LR
comp=E,240nm,17.6s
SNY LR LR
comp=Z,360nm,24.7s
VLA Vladivostok 46.61 356 ⇑*e*P **P** **03 42 12.7 -2.0**
VLA S **S** **03 49 00.1 +0.1**
VLA pmax pmax
comp=Z,48nm,1.2s
BJI Beijing 46.90 340 P **P** **03 42 16.6 -0.5**
BJI pP **pP** **03 42 30.5 -0.7**
BJI sP **sP** **03 42 34.7 -2.6**
BJI PP **PP** **03 44 09.0 +0.9**
BJI S **S** **03 48 59.0 -5.3**
BJI sS **sS** **03 49 27.6 -0.4**
BJI pmax pmax
comp=Z,140nm,1.7s
BJI LR LR
comp=N,460nm,21.0s
BJI LR LR
comp=E,340nm,21.7s
BJI LR LR
comp=Z,590nm,25.3s
USRK Ussuriysk Arra 47.68 357 P **P** **03 42 23.0 0.0**
comp=Z,18nm,0.8s,baz=181,slow=6.9,SNR=45
USRK pP **pP** **03 42 37.7 +0.5**
comp=Z,8.6nm,0.7s,baz=170,slow=5.8,SNR=7.1
USRK PcP **PcP** **03 43 52.1 +0.3**
comp=Z,7.2nm,0.8s,baz=194,slow=1.6,SNR=5.6
USRK LR LR 03 59 46.8
comp=Z,642nm,19.7s,baz=342,slow=33
ASAJ Asahikawa 47.92 7 *e*P **P** **03 42 25.2 +0.3**
comp=Z,28nm,0.8s
ASAJ *e*PcP **PcP** **03 43 54.2 +1.5**
ASAJ Asahikawa 47.92 7 P **P** **03 42 25.3 +0.3**
comp=Z,52nm,0.7s,baz=219,slow=8.8
ASAJ LR LR 04 01 53.1
comp=Z,586nm,21.0s,baz=190,slow=35
CN2 Changchun 48.04 350 ⇑P **P** **03 42 25.0 -0.9**
CN2 *e*pP **pP** **03 42 40.5 +0.5**
CN2 PcP **PcP** **03 43 51.8 -1.3**
CN2 *e*S **S** **03 49 18.6 -1.7**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,23.0s
CN2 LR LR
comp=E,300nm,23.0s
CN2 LR LR
comp=Z,300nm,21.0s
MDJ Mudanjiang 48.28 354 P **P** **03 42 27.7 -0.1**
MDJ pP **pP** **03 42 41.1 -0.8**
MDJ sP **sP** **03 42 47.2 -0.8**
MDJ ScP **ScP** **03 47 44.2 -0.2**
MDJ PcS **PcS** **03 47 49.9 +0.1**
MDJ S **S** **03 49 24.1 +0.4**
MDJ sS **sS** **03 49 47.4 -0.1**
MDJ pmax pmax
comp=Z,55nm,1.1s
MDJ pmax pmax
comp=Z,110nm,3.7s
MDJ LR LR
comp=N,170nm,26.0s
MDJ LR LR
comp=E,120nm,24.1s
MDJ LR LR
comp=Z,370nm,24.8s
MDJ Mudanjiang 48.28 354 *e*P **P** **03 42 27.7 -0.1**
comp=Z,73nm,1.1s
MDJ *e*PcP **PcP** **03 43 54.4 +0.4**
MDJ LR LR
comp=Z,389nm,21.0s
YUK Yuzh-Kuril'sk 48.32 10 *i*P P 03 42 20.6 -7.4
YUK *i* 03 43 48.0
YUK *i*S **S** **03 49 19.3 -4.9**
YUK pmax pmax
comp=E,170nm,1.4s
YUK pmax pmax
comp=Z,349nm,1.4s
YUK pmax pmax
comp=N,122nm,1.4s
YUK pmax pmax
comp=Z,232nm,2.4s
YUK MLR MLR
comp=Z,201nm,20.0s
LZH Lanzhou 49.33 326 *e*P **P** **03 42 37.8 +1.6**
LZH pP **pP** **03 42 49.4 -0.9**
LZH sP **sP** **03 42 56.1 -0.3**
LZH PcP **PcP** **03 43 59.4 +1.2**
LZH PP **PP** **03 44 34.5 +3.9**
LZH *e*S **S** **03 49 40.0 +0.9**
LZH SS **SS** **03 53 09.2 -2.3**
LZH pmax pmax
comp=Z,61nm,1.0s
LZH pmax pmax
comp=Z,400nm,5.3s
LZH LR LR
comp=N,1µm,13.1s
LZH LR LR
comp=E,1µm,13.4s
LZH LR LR
comp=Z,1µm,13.8s
HHC Hu-ho-hao-te 49.34 336 *e*P **P** **03 42 37.1 +1.0**

HHC pP **pP** **03 42 49.5 -0.8**
HHC sP **sP** **03 42 54.8 -1.6**
HHC PP **PP** **03 44 32.1 +1.5**
HHC S **S** **03 49 40.2 +1.1**
HHC sS **sS** **03 50 01.4 -1.5**
HHC ScS **ScS** **03 52 21.8 -1.8**
HHC SS **SS** **03 53 08.6 -2.9**
HHC pmax pmax
comp=Z,270nm,1.5s
HHC pmax pmax
comp=Z,510nm,7.0s
HHC LR LR
comp=N,620nm,13.4s
HHC LR LR
comp=E,680nm,13.3s
HHC LR LR
comp=Z,1μm,15.8s
BTO Baotou 49.78 335 *e*P **P** **03 42 38.8 -0.7**
YSS Yuzh-Sakhalins 50.74 6 *αe*P **P** **03 42 47.3 +0.9**
YSS *e* 03 43 02.0
YSS pmax pmax
comp=N,70nm,1.0s
YSS pmax pmax
comp=Z,120nm,1.0s
RPZ Rata Peaks 50.84 147 *e*P **P** **03 42 48.4 +1.1**
RPZ Rata Peaks 50.84 147 P **P** **03 42 48.0 +0.7**
comp=Z,28nm,0.9s,baz=298,slow=2.3,SNR=12
SHL Shillong 51.24 307 *i* x **P** **03 42 51.0 +0.2**
URZ Urewera 51.26 138 P **P** **03 42 51.4 +0.9**
URZ Urewera 51.26 138 P **P** **03 42 51.4 +0.9**
comp=Z,8.2nm,0.6s,baz=315,slow=2.9,SNR=3.7
SNZO South Karori 51.43 142 PFAKE 03 43 00.0 +8.3
SNZO LR LR
comp=Z,1μm,19.0s
ODZ Otahua Downs 51.51 149 *e*P **P** **03 42 53.2 +0.9**
comp=Z,38nm,1.0s
HABR Khabarovsk 51.85 360 *e*P **P** **03 42 52.9 -1.8**
HABR *e**SP sP 03 43 07.0 -8.0
HABR 03 44 05.7
HABR 03 44 51.0
HABR *e*PPP PPP 03 45 52.3
HABR *e*S **S** **03 50 13.7 +0.4**
HABR *e**SS sS 03 50 30.4 -6.9
HABR *e* 03 52 40.2
HABR *e*SS **SS** **03 53 51.7 +0.9**
HABR *e*SSS SSS 03 55 32.6
HABR pmax pmax
comp=E,80nm,2.2s
HABR pmax pmax
comp=Z,211nm,3.0s
HABR pmax pmax
comp=N,116nm,2.2s
HABR MLR MLR
comp=Z,254nm,18.0s
KLR Kul'dur 52.71 357 *e*P P 03 42 57.0 -4.1
KLR *e* 03 44 59.0
KLR pmax pmax
comp=Z,68μm,1.6s
AFI Afiamalu 53.01 105 *e*P **P** **03 43 05.2 +1.3**
comp=Z,169nm,1.2s
LSA Lhasa 53.82 311 P **P** **03 43 12.0 +1.8**
LSA pmax pmax
comp=Z,30nm,1.0s
LSA Lhasa 53.82 311 *e*P **P** **03 43 11.6 +1.4**
LSA pmax pmax
comp=Z,138nm,0.8s
LSA MLR MLR
comp=Z,213nm,20.0s
LSA Lhasa 53.82 311 *e*P **P** **03 43 11.6 +1.4**
comp=Z,138nm,0.8s
LSA LR LR
comp=Z,213nm,20.0s
GTA Gaotai 53.93 326 ⇑P **P** **03 43 11.8 +1.4**
GTA pP **pP** **03 43 24.0 -0.8**
GTA sP **sP** **03 43 29.4 -1.4**
GTA S **S** **03 50 43.9 +1.6**
GTA sS **sS** **03 51 05.7 -0.7**
GTA SS **SS** **03 54 26.2 +1.9**
GTA pmax pmax
comp=Z,100nm,1.2s
GTA pmax pmax
comp=Z,640nm,5.7s
GTA LR LR
comp=N,200nm,19.5s
GTA LR LR
comp=E,220nm,20.4s
GTA LR LR
comp=Z,350nm,21.1s
HIA Hailar 54.39 347 PFAKE 03 43 30.0 +17
HIA LR LR
comp=Z,506nm,22.0s
TAPN Taplejung 55.38 307 *e*P **P** **03 43 22.0 +0.6**
ODAN Odare 55.43 306 *e*P **P** **03 43 22.2 +0.6**
comp=Z,434nm,0.8s
RAMN Ramite 56.10 306 *e*P **P** **03 43 27.3 +0.8**
comp=Z,414nm,0.8s
ULN Ulaanbaatar 56.98 338 *e*P **P** **03 43 32.9 +0.7**
comp=Z,153nm,1.6s
ULN *e*pP **pP** **03 43 47.4 +0.8**
ULN *e*PcP **PcP** **03 44 27.2 +0.3**
ULN LR LR
comp=Z,415nm,21.0s
ULN Ulaanbaatar 56.98 338 P **P** **03 43 33.2 +1.0**
SNR=38
ULN Ulaanbaatar 56.98 338 P **P** **03 43 32.6 +0.4**
comp=Z,57nm,1.9s,comp=Z,1μm
GUN Gumba 57.09 307 *e*P **P** **03 43 34.4 +0.8**
comp=Z,385nm,0.8s
SONM Songino Array 57.21 337 P **P** **03 43 34.3 +0.6**
SONM pP **pP** **03 43 48.4 +0.2**
SONM PcP **PcP** **03 44 27.9 +0.2**
SONM ⇑*e* 04 13 33.7
SONM *e* 04 20 46.5
SONM Songino Array 57.21 337 P **P** **03 43 34.3 +0.6**
comp=Z,13nm,0.8s,baz=149,slow=7.9,SNR=86
SONM pP **pP** **03 43 48.4 +0.2**
comp=Z,8.7nm,0.9s,baz=141,slow=9.0,SNR=6.2
SONM PcP **PcP** **03 44 27.9 +0.2**
comp=Z,13nm,0.8s,baz=153,slow=5.0,SNR=7.8
SONM LR LR 04 05 32.7
comp=Z,424nm,21.2s,baz=3.1,slow=33
SONM PKP2bc 04 13 33.7
comp=Z,1.4nm,0.9s,baz=278,slow=1.3,SNR=8.2
SONM P4KPbc 04 20 46.5
comp=Z,1.1nm,0.9s,baz=155,slow=6.5,SNR=5.7
PKI Pulchoki 57.33 306 *e*P **P** **03 43 35.6 +0.4**
comp=Z,180nm,1.0s
PKIN Phulchoki 57.34 306 *e*P **P** **03 43 35.5 +0.2**
comp=Z,135nm,1.0s
KKN Kakani 57.52 306 *e*P **P** **03 43 37.1 +0.6**
comp=Z,284nm,0.9s
DMN Daman 57.59 306 *e*P **P** **03 43 37.7 +0.7**
JOHN Johnston Islan 57.93 68 PFAKE 03 43 50.0 +11
JOHN LR LR
comp=Z,50nm,22.0s
CIT Chita 58.46 344 *e*P **P** **03 43 42.6 +0.2**
CIT *e* 03 43 58.8
CIT *e* 03 44 32.9
CIT pmax pmax
comp=Z,215nm,1.7s
KOLN Koldanda 58.87 305 *e*P **P** **03 43 46.7 +0.8**
comp=Z,207nm,0.8s
DANN Dangsing 58.97 306 *e*P **P** **03 43 47.4 +0.7**
comp=Z,499nm,1.1s
PYUN Piuthan 59.50 306 *e*P **P** **03 43 51.2 +1.0**
comp=Z,1μm,1.0s
PEA0B Petropavlovsk- 59.51 15 *e*P **P** **03 43 50.1 +0.6**
PEA0B *epP* **pP** **03 44 00.8 -3.2**
PETK Petropavlovsk- 59.51 15 P **P** **03 43 50.0 +0.4**
PETK *PP **pP** **03 44 06.1 +2.0**
PETK pmax pmax
comp=Z,41nm,0.7s
PETK pmax pmax
comp=Z,11nm,0.8s
PETK MLR MLR
comp=Z,72nm,18.1s
PETK Petropavlovsk- 59.51 15 P **P** **03 43 50.0 +0.4**
PETK pP **pP** **03 44 06.1 +2.0**
PETK Petropavlovsk- 59.51 15 P **P** **03 43 50.0 +0.4**
comp=Z,41nm,0.7s,baz=181,slow=8.2,SNR=46
PETK pP **pP** **03 44 06.1 +2.0**
comp=Z,11nm,0.8s,baz=171,slow=10,SNR=3.3
PETK LR LR 04 12 00.1
comp=Z,72nm,18.1s,baz=194,slow=38
PET Petropavlovsk 59.69 16 *e*P **P** **03 43 50.8 +0.1**
PET *eS* **S** **03 51 57.1 -0.3**
PET *e*PS **PnS** **03 52 13.1 -3.6**
PET *e*PPS PPS 03 52 17.6
PET *e*SS **SS** **03 55 53.1 -1.0**
PET pmax pmax
comp=Z,300nm,2.8s
PET pmax pmax
comp=Z,74nm,1.0s
PET pmax pmax
comp=Z,200nm,11.0s
HYB Hyderabad 59.91 292 ⇑*i*P **P** **03 43 52.0 -1.1**
HYB comp=Z,70nm,1.0s
HYB *es*P **sP** **03 44 16.0 +2.4**
HYB *e*PcP **PcP** **03 44 38.0 -1.0**
ZAK Zakamensk 60.47 337 ⇓*i*P **P** **03 43 55.9 -0.5**
ZAK pmax pmax
comp=Z,64nm,1.7s
CLNS Chul'man 60.84 353 *e*P **P** **03 43 58.2 -0.5**
CLNS *e**PP pP 03 44 07.1 -6.2
CLNS *e* 03 44 41.6
CLNS *e* 03 46 09.5
CLNS *e*PPP PPP 03 47 40.4
CLNS *e*S **S** **03 52 15.7 +3.4**
CLNS *e*SSS SSS 03 58 52.8
CLNS pmax pmax
comp=Z,33nm,1.1s
CLNS pmax pmax
comp=N,22nm,1.1s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS pmax pmax
comp=Z,4.0nm,0.9s
CLNS pmax pmax
comp=N,9.0nm,1.3s
CLNS pmax pmax
comp=E,3.0nm,1.0s
CLNS smax smax
comp=N,156nm,14.2s
CLNS smax smax
comp=E,225nm,12.9s
CLNS MLR MLR
comp=Z,116nm,15.0s
CLNS MLR MLR
comp=N,209nm,13.0s
CLNS MLR MLR
comp=Z,123nm,15.0s
IRK Irkutsk 61.59 339 *e*P **P** **03 44 03.0 -0.8**
IRK pmax pmax
comp=Z,140nm,2.1s
MOY Mondy 62.38 337 *e*P **P** **03 44 10.0 +0.8**
MOY *e* 03 44 25.6
MOY pmax pmax
comp=Z,212nm,2.6s
DRV Dumont d'Urvil 63.04 178 P P 03 44 07.0 -6.2
DRV Dumont d'Urvil 63.04 178 PP PP 03 46 24.0 -8.3
DRV S S 03 52 23.0 -17
DRV SS SS 03 57 01.0 +15
DRV L L 03 59 00.0
DRV R 04 03 00.0
WMQ Urumqi 63.74 323 P **P** **03 44 19.2 +0.8**
WMQ pP **pP** **03 44 32.1 -1.0**
WMQ sP **sP** **03 44 37.4 -1.7**
WMQ PP **PP** **03 46 41.3 +2.1**
WMQ ScP 03 48 52.1
WMQ S **S** **03 52 48.9 -0.5**
WMQ ScS **SKSac** **03 54 05.0 -2.6**
WMQ SS **SS** **03 56 58.7 +0.5**
WMQ pmax pmax
comp=Z,550nm,2.4s
WMQ LR LR
comp=N,150nm,5.2s
WMQ LR LR
comp=E,190nm,6.0s
WMQ LR LR
comp=Z,230nm,24.8s
DDI Dehra Dun 64.33 306 *ex* **P** **03 44 22.6 +0.1**
DDI *ex* x 03 45 23.8
POO Poona 64.52 292 ⇑*i*x **P** **03 44 21.0 -2.9**
comp=Z,50nm,1.0s
FX1 Attu Island--F 64.58 24 *e*P **P** **03 44 24.3 +0.8**
FX1 Attu Island--F 64.58 24 P **P** **03 44 24.4 +0.8**
comp=Z,180nm,0.9s,baz=172,slow=1.1,SNR=41
CASY Casey 64.98 191 *e*P **P** **03 44 27.4 +1.5**
comp=Z,381nm,2.9s
CASY LR LR
comp=Z,972nm,22.0s
HVS Khovu-Aksy 65.13 332 *c i*P **P** **03 44 28.2 +0.9**
HVS pmax pmax
comp=Z,577nm,1.3s
YAK Yakutsk 65.59 357 *c i*P **P** **03 44 29.6 -0.3**
YAK *e**PP pP 03 44 38.3 -6.3
YAK *e* 03 45 00.5
YAK *e* 03 46 54.4
YAK *e*PPP PPP 03 48 31.4
YAK *e*S **S** **03 53 10.3 -0.9**
YAK *e**SS sS 03 53 30.3 -5.6
YAK *e* 03 54 17.9
YAK pmax pmax
comp=Z,42nm,1.0s
YAK pmax pmax
comp=N,27nm,1.4s
YAK pmax pmax
comp=E,4.0nm,1.3s
YAK pmax pmax
comp=Z,40nm,1.4s
YAK pmax pmax
comp=E,20nm,1.3s
YAK pmax pmax
comp=N,17nm,1.4s
YAK smax smax
comp=N,103nm,3.5s
YAK smax smax
comp=E,96nm,4.0s
SEY Seymchan 67.57 8 *c i*P **P** **03 44 42.9 +0.4**
MK31 Makanchi Array 68.56 324 *e*P **P** **03 44 49.8 +0.7**
MK31 *e**PP **pP** **03 45 04.1 +0.1**
MK31 Makanchi Array 68.56 324 *e*P **P** **03 44 49.8 +0.7**
MK31 *epP* **pP** **03 45 04.1 +0.1**
MKAR Makanchi Array 68.56 324 P **P** **03 44 49.9 +0.8**
MKAR *PP **pP** **03 45 04.9 +0.9**
MKAR S **S** **03 53 49.2 +1.6**
MKAR pmax pmax
comp=Z,73nm,0.7s
MKAR pmax pmax
comp=Z,17nm,0.7s
MKAR smax smax
comp=N,1.0nm,1.0s
MKAR Makanchi Array 68.56 324 P **P** **03 44 49.9 +0.8**
MKAR pP **pP** **03 45 04.8 +0.9**
MKAR S **S** **03 53 49.2 +1.6**
MKAR *e* 04 21 36.9
MKAR Makanchi Array 68.56 324 P **P** **03 44 49.9 +0.8**
comp=N,73nm,0.7s,baz=112,slow=8.1,SNR=692
MKAR pP **pP** **03 45 04.8 +0.9**
comp=N,17nm,0.7s,baz=110,slow=7.9,SNR=5.4
MKAR S **S** **03 53 49.2 +1.6**
comp=N,1.2nm,0.9s,baz=124,slow=11,SNR=3.6
MKAR P4KPbc 04 21 36.9
comp=N,0.4nm,0.7s,baz=100,slow=6.3,SNR=3.9
KSH Kashi 69.38 315 ⇑*i*P **P** **03 44 56.4 +1.9**
KSH pP **pP** **03 45 09.1 -0.3**
KSH sP **sP** **03 45 14.4 -0.9**
KSH *e*PcP **PcP** **03 45 20.1 +2.4**
KSH *e*PP **PP** **03 47 31.1 +2.6**
KSH S **S** **03 53 56.1 -1.7**
KSH *e*ScS **SKSac** **03 54 49.1 -1.6**
KSH pmax pmax
comp=Z,110nm,0.8s
KSH pmax pmax
comp=Z,440nm,4.2s
KSH LR LR
comp=N,510nm,7.0s
KSH LR LR
comp=E,850nm,9.1s
KSH LR LR
comp=Z,340nm,8.0s
MIR Mirnyy 69.41 197 ⇑*i*P **P** **03 44 56.0 +2.0**
MIR *i* 03 45 10.0
MIR *i* 03 45 16.0
MIR pmax pmax
comp=Z,81nm,1.5s
KIP Kipapa 69.62 66 *e*P **P** **03 44 57.1 +1.0**
KIP pmax pmax
comp=Z,113nm,1.0s
KIP Kipapa 69.62 66 *e*P **P** **03 44 57.1 +1.0**
comp=Z,113nm,1.0s
ATKA Atka Island 69.93 30 *e*P **P** **03 44 57.8 +0.4**
comp=Z,189nm,1.0s
ULHL Ulahol 70.29 317 *i*P **P** **03 45 01.3 +1.1**
ULHL Ulahol 70.29 317 P **P** **03 45 01.3 +1.1**
SNR=6.2
KZA Kyzart 70.90 317 *i*P **P** **03 45 05.8 +1.7**
KZA Kyzart 70.90 317 P **P** **03 45 05.8 +1.7**
SNR=88
TKM2 Tokmak 2 71.00 318 *i*P **P** **03 45 05.4 +0.9**
TKM2 Tokmak 2 71.00 318 *e*P **P** **03 45 05.4 +0.9**
comp=Z,59nm,0.7s
TKM2 LR LR
comp=Z,254nm,21.0s
TKM2 Tokmak 2 71.00 318 P **P** **03 45 05.5 +0.9**
SNR=70
ZAA0 Zalesovo Array 71.11 331 *e*P **P** **03 45 03.8 -0.9**
ZAA0 *epP* **pP** **03 45 19.1 -0.4**
ZALV Zalesovo Beam 71.11 331 P **P** **03 45 04.1 -0.5**
ZALV *PP **pP** **03 45 19.2 -0.3**
ZALV pmax pmax
comp=Z,48nm,0.7s
ZALV pmax pmax
comp=Z,8.0nm,0.6s
ZALV Zalesovo Beam 71.11 331 P **P** **03 45 04.1 -0.5**
ZALV pP **pP** **03 45 19.2 -0.3**
ZALV Zalesovo Beam 71.11 331 P **P** **03 45 04.1 -0.5**
comp=Z,48nm,0.7s,baz=112,slow=5.7,SNR=183
ZALV pP **pP** **03 45 19.2 -0.3**
comp=Z,8.3nm,0.6s,baz=117,slow=6.2,SNR=4.0
ZALV LR LR 04 14 49.0
comp=Z,173nm,21.4s,baz=96,slow=35
KBK Karagaybulak 71.33 317 *i*P **P** **03 45 07.3 +0.8**
KBK Karagaybulak 71.33 317 P **P** **03 45 07.3 +0.8**
SNR=30
UCH Uchtor 71.46 317 P **P** **03 45 09.1 +1.5**
SNR=17
POHA Pohakuloa 71.56 68 *e*P **P** **03 45 09.6 +1.3**
comp=Z,94nm,0.9s
CHMS Chumysh 71.60 318 *i*P **P** **03 45 08.5 +0.6**
CHMS Chumysh 71.60 318 P **P** **03 45 08.5 +0.6**
SNR=22
FRU Bishkek 71.63 317 ⇑*i*P **P** **03 45 09.0 +0.9**
FRU *e* 03 45 32.0
FRU pmax pmax
comp=Z,100nm,1.8s
AAK Ala-Archa 71.63 317 *i*P **P** **03 45 09.3 +1.1**
AAK pmax pmax
comp=Z,146nm,1.3s
AAK Ala-Archa 71.63 317 *e*P **P** **03 45 09.3 +1.1**
AAK LR LR
comp=Z,216nm,22.0s
AAK Ala-Archa 71.63 317 P **P** **03 45 09.4 +1.2**
SNR=33
AAK Ala-Archa 71.63 317 P **P** **03 45 09.4 +1.1**
SNR=49
AAK Ala-Archa 71.63 317 P **P** **03 45 09.0 +0.7**
comp=Z,311nm,1.1s,SNR=26
AAK Ala-Archa 71.63 317 P **P** **03 45 09.3 +1.1**
comp=Z,27nm,0.7s,baz=107,slow=5.6,SNR=62
USP Ospenovka 71.88 318 *i*P **P** **03 45 09.9 +0.4**
USP Ospenovka 71.88 318 P **P** **03 45 10.0 +0.4**
SNR=147
AML Almayashu 71.98 316 *i*P **P** **03 45 11.9 +1.3**
AML Almayashu 71.98 316 P **P** **03 45 12.0 +1.3**
SNR=148
EKS2 Erkin-Say 72.13 317 *e*P **P** **03 45 12.5 +1.3**
EKS2 *e**PP **pP** **03 45 23.8 -2.3**
EKS2 pmax pmax
comp=Z,481nm,2.0s
EKS2 MLR MLR
comp=Z,279nm,21.0s
EKS2 Erkin-Say 72.13 317 *e*P **P** **03 45 12.5 +1.3**
comp=Z,480nm,2.0s
EKS2 *epP* **pP** **03 45 23.8 -2.3**
EKS2 LR LR
comp=Z,279nm,21.0s
EKS2 Erkin-Say 72.13 317 P **P** **03 45 12.5 +1.3**
SNR=53
NVS Novosibirsk 72.38 331 *e*P **P** **03 45 11.6 -0.6**
NVS *i* 03 45 26.6
NVS *eS* **S** **03 54 31.3 -0.5**
NVS pmax pmax
comp=Z,235nm,1.6s
NVS pmax pmax
comp=N,94nm,1.7s
NVS pmax pmax
comp=E,96nm,1.4s
NVS smax smax
comp=E,62nm,3.3s
NVS smax smax
comp=N,29nm,2.7s
KURK Kurchatov 72.62 326 *c i*P **P** **03 45 13.8 +0.1**
KURK pmax pmax
comp=Z,92nm,0.8s
KURK Kurchatov 72.62 326 *e*P **P** **03 45 14.0 +0.3**
comp=Z,92nm,0.9s
KURK pP **pP** **03 45 28.1 -0.5**
KURK *epP* **pwP** **03 45 28.8 +0.2**
KURK LR LR
comp=Z,221nm,20.0s
KURK Kurchatov 72.62 326 P **P** **03 45 14.3 +0.6**
SNR=44
KURK Kurchatov 72.62 326 P **P** **03 45 14.7 +1.0**
comp=Z,635nm,0.9s,SNR=17
KURBB Kurchatov Arra 72.62 326 P **P** **03 45 14.0 +0.2**
comp=Z,66nm,0.8s,baz=121,slow=5.2,SNR=500
KURBB pP **pP** **03 45 28.1 -0.5**
comp=Z,14nm,0.9s,baz=119,slow=5.1,SNR=4.6
KBL Kabul 72.90 308 *e*P **P** **03 45 16.1 +0.1**
KBL pmax pmax
comp=Z,83nm,0.8s
KBL Kabul 72.90 308 *e*P **P** **03 45 16.1 +0.1**
comp=Z,83nm,0.8s
KBL Kabul 72.90 308 P **P** **03 45 16.2 +0.2**
baz=73,SNR=19
KK31 Karatay Array 74.53 316 *i*P **P** **03 45 25.4 +0.2**
KK31 pmax pmax
comp=Z,58nm,0.6s
KKAR Karatay Array 74.53 316 *e*P **P** **03 45 25.5 +0.3**
KKAR pmax pmax
comp=Z,60nm,0.6s
KKAR Karatay Array 74.53 316 *e*P **P** **03 45 25.5 +0.3**
comp=Z,60nm,0.6s
PAE Paea 74.56 107 *e*P **P** **03 45 27.4 +1.6**
comp=Z,19nm,1.2s
PPT Papeete 74.56 107 P **P** **03 45 27.9 +2.0**
PPT Papeete 74.56 107 P **P** **03 45 27.9 +2.0**
comp=Z,58nm,0.9s,baz=312,slow=3.5,SNR=5.2
PPT LR LR 04 14 37.1
comp=Z,276nm,21.2s,baz=273,slow=33
PPT2 Papeete2 74.56 107 *e*P **P** **03 45 27.6 +1.7**
comp=Z,90nm,1.3s
PPT2 *eS* **S** **03 54 58.2 +0.2**
comp=Z,155nm,27.8s
PPT2 *eSS* **SS** **03 59 47.0 +1.1**
comp=Z,162nm,24.5s
PPT2 *eLR* LR 04 08 21.3
comp=Z,1μm,33.5s
BILL Bilibino 74.64 12 ⇑*i*P **P** **03 45 24.9 -0.4**
BILL *i* 03 45 34.3
BILL *i* 03 48 12.5
BILL *i*S **SKiKP** **03 54 50.9 +4.6**
BILL pmax pmax
comp=Z,50nm,1.6s
UNV Unalaska Valle 74.74 31 *e*P **P** **03 45 26.2 +0.1**
comp=Z,177nm,1.3s
TIAR Tiarei 74.78 107 *e*P **P** **03 45 28.8 +1.7**
comp=Z,71nm,1.0s
TBI Tubuai 74.86 113 *e*S **S** **03 55 01.5 +0.5**
comp=Z,479nm,27.8s
TBI *eLR* LR 04 08 28.8
comp=Z,479nm,26.2s
TVO Taravao 74.88 107 *e*P **P** **03 45 29.7 +2.0**
comp=Z,123nm,1.4s
VNDA Vanda 75.21 174 *e*P **P** **03 45 28.4 -0.1**
comp=Z,136nm,2.8s
VNDA P'P' 04 12 51.2
VNDA Vanda 75.21 174 P **P** **03 45 28.8 +0.3**
comp=Z,3.4nm,0.7s,baz=324,slow=6.5,SNR=20
VNDA PKPPKP **P'P'df** **04 12 51.2 -1.1**
comp=Z,1.2nm,1.1s,baz=295,slow=3.1,SNR=3.6
VNDA LR LR 04 17 28.9
comp=Z,1μm,19.8s,baz=348,slow=35
SBA Scott Base 76.02 173 *e*P **P** **03 45 34.7 +1.6**
SBA pmax pmax

comp=Z,136nm,2.3s
SBA MLR MLR
comp=Z,409nm,19.0s
SBA Scott Base 76.02 173 *e*P **P** **03 45 34.7 +1.6**
comp=Z,136nm,2.3s
SBA LR LR
comp=Z,409nm,19.0s
PMOR Pomariorio Ree 76.16 104 *e*P **P** **03 45 36.5 +1.5**
comp=Z,82nm,1.4s
FALS False Pass 76.81 31 *e*P **P** **03 45 38.5 +0.6**
comp=Z,119nm,0.7s
GAMB Gambell 77.74 21 *e*P **P** **03 45 43.3 +0.4**
comp=Z,158nm,1.9s
VOSK Vostochnaya 77.77 326 P **P** **03 45 42.9 -0.5**
VOSK pmax pmax
comp=Z,108nm,1.0s
BVA0 Borovoye Array 78.22 326 *i* P **P** **03 45 46.0 +0.2**
BVA0 pmax pmax
comp=Z,51nm,1.3s
BVAR Borovoye Array 78.22 326 P **P** **03 45 46.1 +0.3**
BVAR S **S** **03 55 34.7 -1.9**
BVAR pmax pmax
comp=Z,95nm,0.8s
BVAR Borovoye Array 78.22 326 P **P** **03 45 46.1 +0.3**
BVAR S **S** **03 55 34.7 -1.9**
BVAR Borovoye Array 78.22 326 P **P** **03 45 46.1 +0.3**
comp=Z,95nm,0.8s,baz=116,slow=6.8,SNR=455
BVAR S **S** **03 55 34.7 -1.9**
comp=Z,0.2nm,0.4s,baz=127,slow=9.3,SNR=2.6
BRVK Borovoye 78.29 326 P **P** **03 45 46.5 +0.3**
BRVK pmax pmax
comp=Z,227nm,0.8s
BRVK Borovoye 78.29 326 *e*P **P** **03 45 46.5 +0.3**
BRVK
comp=Z,159nm,0.8s
BRVK LR LR
comp=Z,194nm,19.0s
BRVK Borovoye 78.29 326 P **P** **03 45 46.5 +0.3**
comp=Z,1µm,0.8s,SNR=61
SDPT Sand Point 78.55 32 *e*P **P** **03 45 47.5 0.0**
comp=Z,166nm,0.9s
ZRNK Zerenda 78.97 326 P **P** **03 45 49.8 -0.2**
ZRNK pmax pmax
comp=Z,273nm,1.1s
WBK Wadi Bani Khal 78.98 294 ⇑P **P** **03 45 51.2 +0.4**
SMDO Samad 79.88 294 ⇓P **P** **03 45 55.9 +0.1**
SNR=6.8
CHGN Chignik 79.99 31 *e*P **P** **03 45 54.4 -1.0**
TNA Tin City 80.09 21 *e*P **P** **03 45 55.6 -0.1**
comp=Z,37nm,1.1s
MAW Mawson 80.11 202 *e*P **P** **03 45 56.7 +0.8**
comp=Z,13nm,1.1s
MAW pP **pP** **03 46 11.2 +0.2**
MAW Mawson 80.11 202 P **P** **03 45 57.1 +1.3**
comp=Z,34nm,1.0s,baz=68,slow=6.6,SNR=32
MAW pP **pP** **03 46 11.2 +0.2**
comp=Z,13nm,0.8s,baz=104,slow=8.2,SNR=4.9
MAW LR LR 04 18 14.3
comp=Z,498nm,20.5s,baz=77,slow=33
MAW Mawson 80.11 202 P **P** **03 45 57.2 +1.3**
baz=80,SNR=10
HOQ Hoqain 80.63 294 ⇑P **P** **03 45 59.7 +0.1**
SNR=9.2
ARQ Araqi 81.31 294 ⇓P **P** **03 46 03.2 -0.1**
ARQ P PcP 03 46 03.9 -5.4
SNR=7.9
IAKL Akhelmad 81.53 308 *e*P **P** **03 46 05.1 +0.6**
ISFR Sfrayin 82.21 308 *e*P **P** **03 46 09.2 +1.2**
ABKT Ailbek 82.27 309 P **P** **03 46 09.6 +1.5**
comp=Z,869nm,1.0s,SNR=22
ISHV Shirvan 82.53 308 *e*P **P** **03 46 10.9 +1.3**
RBK Rabkut 82.78 288 ⇑P **P** **03 46 10.6 -0.5**
SNR=11
OHAK Old Harbor 82.96 31 *e*P **P** **03 46 11.2 +0.1**
SVW2 Sparrevohn 83.11 27 *e*P **P** **03 46 12.5 +0.7**
comp=Z,32nm,1.5s
IBAF Bafgh 83.31 302 *e*P **P** **03 46 13.6 -0.1**
AB31 Akbulak array 83.33 320 *i* P **P** **03 46 12.8 -0.4**
AB31 pmax pmax
comp=Z,12nm,0.4s
ABKAR Akbulak array 83.33 320 *e*P **P** **03 46 13.0 -0.2**
comp=Z,48nm,0.8s
KDAK Kodiak Island 83.49 31 *e*P **P** **03 46 14.0 +0.3**
comp=Z,114nm,1.5s
KDAK LR LR
comp=Z,519nm,21.0s
KDAK Kodiak Island 83.49 31 P **P** **03 46 14.6 +0.8**
comp=Z,253nm,1.6s,SNR=5.9
KDAK Kodiak Island 83.49 31 P **P** **03 46 14.1 +0.3**
comp=Z,31nm,1.0s,baz=246,slow=3.6,SNR=14
ABTO Aybut 83.63 288 ⇓P **P** **03 46 15.0 -0.5**
SNR=8.0
IMEH Mehriz 84.08 302 *e*P **P** **03 46 16.6 -1.2**
ICHK Chekchek 84.37 303 *e*P **P** **03 46 18.7 -0.5**
SVE Sverdlovsk 84.76 328 *d i*P **P** **03 46 20.5 +0.2**
SVE pmax pmax
comp=Z,137nm,1.3s
SPU Mount Spurr 84.76 28 *e*P **P** **03 46 19.4 -0.8**
AKTO Aktyubinsk 84.80 321 P **P** **03 46 20.2 -0.5**
AKTO pmax pmax
comp=Z,52nm,0.9s
AKTO Aktyubinsk 84.80 321 P **P** **03 46 20.2 -0.5**
AKTO Aktyubinsk 84.80 321 P **P** **03 46 20.2 -0.5**
comp=Z,52nm,0.9s,baz=96,slow=6.1,SNR=142
ISRV Sarvestan 85.11 300 *e*P **P** **03 46 22.9 -0.2**
PPLA Purkeypile 85.21 26 *e*P **P** **03 46 22.0 -0.6**
comp=Z,89nm,1.4s
IKIA Kiasar 85.50 307 *e*P **P** **03 46 25.9 +1.1**
SEW Seward 85.70 29 *e*P **P** **03 46 24.0 -0.9**
comp=Z,377nm,2.5s
ARU Arti 85.78 327 *c i*P **P** **03 46 24.3 -1.1**
ARU 03 49 41.2
ARU S S 03 56 46.4 -7.7
ARU pmax pmax
comp=Z,75nm,1.0s
ARU Arti 85.78 327 P **P** **03 46 24.0 -1.4**
comp=Z,404nm,0.7s,SNR=7.4
RC01 Rabbit Creek A 85.81 28 *e*P **P** **03 46 24.8 -0.7**
comp=Z,32nm,1.0s
IFIR Firoozkooh 86.18 306 *e*P **P** **03 46 28.5 +0.3**
IALA Alasht 86.19 306 *e*P **P** **03 46 28.5 +0.2**
TRF Thorofare Moun 86.19 26 *e*P **P** **03 46 26.1 -1.5**
comp=Z,86nm,1.5s
IZEF Zefreh 86.20 303 *e*P **P** **03 46 27.5 -0.9**
PMR Palmer 86.22 28 *e*P **P** **03 46 26.6 -0.9**
PMR *e* 03 49 50.6
PMR pmax pmax
comp=Z,52nm,1.2s
PMR Palmer 86.22 28 *e*P **P** **03 46 26.6 -0.9**
comp=Z,52nm,1.2s
PMR *e*PP **PP** **03 49 50.6 +1.9**
QSPA South Pole Qui 86.36 180 *e*P **P** **03 46 28.3 0.0**
QSPA PKKPbc **PKKPdf** **04 04 25.1 +3.7**
QSPA LR LR
comp=Z,2µm,20.0s
QSPA South Pole Qui 86.36 180 P **P** **03 46 28.4 0.0**
baz=330,slow=3.0
QSPA PKKPbc **PKKPdf** **04 04 25.1 +3.7**
comp=Z,1.5nm,0.8s,baz=258,slow=1.9,SNR=6.7
IPRN Peran 86.58 306 *e*P **P** **03 46 30.9 +0.9**
SML Sawmill 86.65 28 *e*P **P** **03 46 29.7 +0.1**
SML pmax pmax
comp=Z,32nm,1.1s
SML Sawmill 86.65 28 *e*P **P** **03 46 29.7 +0.1**
comp=Z,32nm,1.1s
MCK McKinley 86.85 26 *e*P **P** **03 46 29.5 -1.1**
MCK McKinley 86.85 26 *e*P **P** **03 46 29.5 -1.1**
IKLH Kolahrood 86.87 304 *e*P **P** **03 46 32.4 +0.7**
IVRN Varamin 86.93 305 *e*P **P** **03 46 32.3 +0.6**
IVRN *e*P **P** **03 46 32.3 +0.6**
COLD Coldfoot 87.26 22 *e*P **P** **03 46 32.4 0.0**
comp=Z,27nm,1.0s
OPO Ambohidratompo 87.26 252 P **P** **03 46 34.6 +0.9**
OPO Ambohidratompo 87.26 252 P **P** **03 46 34.6 +0.9**
comp=Z,5.3nm,0.7s,baz=59,slow=2.6,SNR=16
SOKR Solikamsk 87.37 330 *c i*P **P** **03 46 31.8 -1.3**
SOKR pmax pmax
comp=Z,100nm,1.3s
IR3 Iran Long-Peri 87.56 306 *e*P **P** **03 46 36.1 +1.4**
COLA College 87.59 25 *e*P **P** **03 46 33.1 -0.9**
COLA pmax pmax
comp=Z,34nm,1.0s
COLA MLR MLR
comp=Z,274nm,21.0s
COLA College 87.59 25 *e*P **P** **03 46 33.1 -0.9**
comp=Z,34nm,1.0s
COLA LR LR
comp=Z,274nm,21.0s
DIV Divide 87.70 28 *e*P **P** **03 46 35.1 +0.3**
IR5 Iran Long-Peri 87.89 305 *e*P **P** **03 46 37.1 +0.7**
ILAR Eielson Array 87.97 25 P **P** **03 46 34.2 -1.7**
ILAR Eielson Array 87.97 25 P **P** **03 46 34.2 -1.7**
comp=Z,19nm,0.8s,baz=264,slow=4.5,SNR=139
ILAR LR LR 04 21 34.5
comp=Z,196nm,19.6s,baz=88,slow=32
RAGM Ragged Mountai 88.08 29 *e*P **P** **03 46 37.3 +0.8**
RKT Rikitea 88.18 113 *e*S **S** **03 57 18.6 -0.1**
comp=Z,252nm,26.8s
RKT *e*LR LR 04 14 45.8
comp=Z,440nm,27.5s
PAX Paxson 88.20 27 *e*P **P** **03 46 36.7 -0.5**
PAX pmax pmax
comp=Z,77nm,1.4s
PAX Paxson 88.20 27 *e*P **P** **03 46 36.7 -0.5**
comp=Z,77nm,1.4s
BMRM Bremner River 88.22 29 *e*P **P** **03 46 37.3 0.0**
comp=Z,103nm,1.1s
IGZV Ghazvin 88.30 306 *e*P **P** **03 46 39.2 +0.8**
IRAZ Razeghan 88.44 305 *e*P **P** **03 46 39.6 +0.5**
SYO Syowa Base 88.79 201 ⇑ *e*P **P** **03 46 39.0 -0.7**
SYO Syowa Base 88.79 201 ⇑ *e*PcP **PcP** **03 46 41.0 -0.2**
DOT Dot Lake 88.95 26 *e*P **P** **03 46 41.1 +0.5**
KBD Kabd 89.81 299 *e*P **P** **03 46 44.6 -0.7**
KBD AMb AMB 03 46 45.6
comp=Z,55nm,0.9s
UMR Umm Al-Rimmam 89.81 299 *e*P **P** **03 46 44.9 -0.5**
UMR AMb AMB 03 46 45.7
comp=Z,130nm,0.8s
RDF Al-Radifah 89.92 299 *e*P **P** **03 46 45.3 -0.6**
RDF AMb AMB 03 46 46.5
comp=Z,157nm,1.1s
NAY Al-Naaiem 90.21 299 *e*P **P** **03 46 46.3 -0.9**
NAY AMb AMB 03 46 47.7
comp=Z,112nm,0.9s
IKOM Komasi 90.32 304 *e*P **P** **03 46 46.8 -1.1**
EGAK Eagle 90.38 25 PFAKE 03 47 00.0 +13
EGAK LR LR
comp=Z,383nm,21.0s
RST Umm Al-Ruwaisa 90.44 299 *e*P **P** **03 46 47.3 -1.0**
RST AMb AMB 03 46 48.6
comp=Z,20nm,0.9s
ISRB Sarab 90.46 308 *e*P **P** **03 46 48.4 -0.1**
ILIN Lien 90.83 305 *e*P **P** **03 46 48.6 -1.7**
IVIS Veis 90.89 304 *e*P **P** **03 46 49.3 -1.1**
IHRS Heris 90.98 308 *e*P **P** **03 46 50.2 -0.7**
IGHG Ghaleghazi 91.11 304 *e*P **P** **03 46 50.2 -1.4**
DAMY Dhamar 91.95 284 P **P** **03 46 57.5 +1.6**
baz=92,SNR=4.7
IMRD Marand 92.06 308 *e*P **P** **03 46 55.5 -0.3**
ISHB Shabestar 92.10 308 *e*P **P** **03 46 55.9 -0.2**
DGRG David-gareji 92.44 311 P **P** **03 46 57.3 -0.1**
GNI Garni 92.86 310 *e*P **P** **03 46 59.2 -0.4**
comp=Z,7.5nm,0.6s
GNI LR LR
comp=Z,131nm,21.0s
GNI Garni 92.86 310 P **P** **03 46 59.1 -0.4**
baz=59,slow=5.9
TBLG Delisi 92.93 311 P **P** **03 46 58.7 -0.9**
TBLG Delisi 92.93 311 P **P** **03 46 58.7 -0.9**
KZR Kazreti 93.16 311 P **P** **03 47 00.2 -0.5**
ATD Arta Tunnel 93.30 281 P **P** **03 47 03.5 +1.6**
ATD Arta Tunnel 93.30 281 P **P** **03 47 03.5 +1.6**
comp=Z,9.3nm,0.4s,baz=96,slow=23,SNR=6.4
GOR Gori 93.41 312 P **P** **03 47 01.4 -0.4**
ZEI Tsey 93.58 312 *e*P **P** **03 47 00.7 -2.1**
ZEI pmax pmax
comp=Z,20nm,0.9s
INK Inuvik 93.68 22 P **P** **03 47 01.4 -1.0**
INK Inuvik 93.68 22 P **P** **03 47 01.4 -1.0**
comp=Z,12nm,1.0s,baz=288,slow=8.0,SNR=9.2
AKH Akhalkalaki 93.85 311 P **P** **03 47 03.7 -0.4**
ONI Oni 93.91 312 P **P** **03 47 03.6 -0.6**
KBZ Khabaz 94.34 313 P **P** **03 47 04.3 -1.6**
KBZ pmax pmax
comp=Z,5.0nm,0.7s
KBZ pmax pmax
comp=Z,1.0nm,0.4s
KBZ Khabaz 94.34 313 P **P** **03 47 04.3 -1.6**
KBZ PKKP **PKKPbc** **04 04 09.9 +2.5**
KBZ Khabaz 94.34 313 P **P** **03 47 04.3 -1.6**
comp=Z,5.2nm,0.7s,baz=109,slow=3.2,SNR=18
KBZ PKKP **PKKPbc** **04 04 09.9 +2.5**
comp=Z,0.5nm,0.4s,baz=186,slow=4.8,SNR=4.6
VRHR Novokhopersk 95.21 321 *e*P **P** **03 47 07.1 -2.6**
VRHR *e* 03 50 57.9
VRHR *e*PPP PPP 03 53 03.4
VRHR pmax pmax
comp=N,9.0nm,0.8s
VRHR pmax pmax
comp=Z,40nm,0.8s
VRHR pmax pmax
comp=E,6.0nm,0.4s
VRHR pmax pmax
comp=N,4.0nm,0.6s
VRHR pmax pmax
comp=E,8.0nm,0.6s
VRHR pmax pmax
comp=Z,8.0nm,0.6s
SOC Sochi 96.64 313 *e*P P 03 47 12.9 -3.6
SOC *e*S **SKSac** **03 57 43.7 -5.4**
SOC pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 96.68 321 *e*P **P** **03 47 14.6 -1.9**
VORD pmax pmax
comp=N,110nm,0.8s
VORD pmax pmax
comp=E,110nm,0.8s
VORD pmax pmax
comp=Z,30nm,0.8s
VSR Storozhevoye 96.75 321 *e*P **P** **03 47 14.3 -2.5**
VSR *e* 03 51 13.0
VSR pmax pmax
comp=N,5.0nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
VSR pmax pmax
comp=Z,30nm,0.9s
VSR pmax pmax
comp=Z,20nm,2.2s
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,20nm,2.2s
MOS Moscow 97.39 326 *e*P **P** **03 47 16.8 -2.7**
MOS *e* 03 51 19.7
MOS pmax pmax
comp=Z,55nm,0.8s
OBN Obninsk 98.04 325 *e*P **P** **03 47 20.8 -1.7**
OBN *i* 03 51 21.1
OBN pmax pmax
comp=Z,43nm,1.2s
KMBO Kilima Mbogo 98.15 268 *e*P Pdif 03 47 25.8 +1.5
KMBO Kilima Mbogo 98.15 268 P **P** **03 47 23.8 -0.5**
comp=Z,0.9nm,0.5s,baz=78,slow=6.3,SNR=5.3
KMBO LR LR 04 28 01.2
comp=Z,177nm,21.0s,baz=95,slow=33
ANN Anapa 98.24 315 *e*P **P** **03 47 20.5 -3.1**
ANN pmax pmax
comp=Z,42nm,0.9s
SPITS Spitsbergen Ar 99.27 349 P **Pdif** **03 47 26.1 -1.5**
SPITS Spitsbergen Ar 99.27 349 P **Pdif** **03 47 26.1 -1.5**
comp=Z,23nm,0.8s,baz=77,slow=8.8,SNR=7.7
JOF Joensuu 99.63 333 *e*P **Pdif** **03 47 27.3 -2.1**
JOF pmax pmax
comp=Z,6.0nm,0.6s
JOF Joensuu 99.63 333 *ep* **Pdif** **03 47 27.3 -2.1**
comp=Z,6.1nm,0.6s
KEV Kevo 99.70 340 *e*P **Pdif** **03 47 27.8 -1.8**
KEV pmax pmax
comp=Z,10.0nm,0.6s
KEV Kevo 99.70 340 *ep* **Pdif** **03 47 27.8 -1.8**
comp=Z,10nm,0.6s
NLWA Neilton Lookou 99.84 43 PFAKE 03 47 40.0 +9.2
NLWA LR LR
comp=Z,395nm,20.0s
SNAA Sanae 100.19 192 P **Pdif** **03 47 30.5 -1.4**
SNAA Sanae 100.19 192 P **Pdif** **03 47 30.5 -1.4**
comp=Z,0.9nm,0.9s,baz=11,slow=5.2,SNR=2.5
ARCES ARCESS Array B 100.27 340 P **Pdif** **03 47 31.1 -1.1**
ARCES ARCESS Array B 100.27 340 P **Pdif** **03 47 31.1 -1.1**
comp=Z,40nm,0.6s,baz=85,slow=6.3,SNR=122
SIM Simferopol' 100.58 315 ⇓ *i*P **Pdif** **03 47 31.3 -2.8**
SIM pmax pmax
comp=Z,29nm,0.8s
BRTR Keskin Array B 101.40 310 P **Pdif** **03 47 36.1 -1.9**
BRTR PP **PP** **03 51 49.5 +1.4**
BRTR Keskin Array B 101.40 310 P **Pdif** **03 47 36.1 -1.9**
comp=Z,3.4nm,0.8s,baz=113,slow=4.4,SNR=24
BRTR PP **PP** **03 51 49.5 +1.4**
comp=Z,1.6nm,1.0s,baz=120,slow=3.1,SNR=3.6
CSS Prodhromos 102.02 305 PFAKE 03 47 50.0 +9.2
CSS LR LR
comp=Z,137nm,20.0s
ANTO Ankara 102.04 310 PFAKE 03 47 50.0 +9.2
ANTO LR LR
comp=Z,106nm,20.0s
KAF Kangasniemi 102.07 333 *e*P **Pdif** **03 47 37.0 -3.3**
KAF pmax pmax
comp=Z,7.0nm,0.8s
KAF Kangasniemi 102.07 333 *ep* **Pdif** **03 47 37.0 -3.3**
comp=Z,7.3nm,0.8s
YKA Yellowknife Ar 102.29 27 P **Pdif** **03 47 40.5 -0.8**
YKA PP **PP** **03 51 53.0 -0.9**
YKA PKiKP **PKiKP** **03 52 02.9 0.0**
YKA PKKPbc **PKKPbc** **04 03 42.4 -3.5**
YKA Yellowknife Ar 102.29 27 P **Pdif** **03 47 40.4 -0.8**
comp=Z,1.5nm,0.8s,baz=291,slow=4.8,SNR=21
YKA PP **PP** **03 51 52.9 -0.9**
comp=Z,1.5nm,1.0s,baz=285,slow=7.5,SNR=6.9
YKA PKiKP **PKiKP** **03 52 02.9 0.0**
comp=Z,1.3nm,0.8s,baz=301,slow=1.6,SNR=12
YKA PKKPbc **PKKPbc** **04 03 42.4 -3.5**
comp=Z,0.3nm,0.7s,baz=101,slow=2.7,SNR=7.0
FINES FINESS Array B 102.36 332 P **Pdif** **03 47 40.5 -1.1**
FINES pP 03 47 57.5
FINES PKiKP **PKiKP** **03 52 03.1 +0.1**
FINES PKKPbc **PKKPbc** **04 03 44.1 -1.5**
FINES FINESS Array B 102.36 332 P **Pdif** **03 47 40.5 -1.1**
comp=Z,12nm,0.8s,baz=81,slow=6.0,SNR=30
FINES pP 03 47 57.5
comp=Z,2.0nm,0.7s,baz=79,slow=7.2,SNR=2.1
FINES PKiKP **PKiKP** **03 52 03.1 +0.1**
comp=Z,2.2nm,0.8s,baz=50,slow=2.2,SNR=4.0
FINES PKKPbc **PKKPbc** **04 03 44.1 -1.5**
comp=Z,2.4nm,0.8s,baz=4.8,slow=12,SNR=5.0
HAWA Hanford 102.91 43 PFAKE 03 48 00.0 +16
HAWA LR LR
comp=Z,410nm,20.0s
AKASG Malin Array Be 103.05 321 P **Pdif** **03 47 43.0 -1.9**
AKASG 03 51 59.5
AKASG pmax pmax
comp=Z,9.0nm,0.9s
AKASG pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 103.05 321 Pdif **Pdif** **03 47 43.0 -1.9**
AKASG PP **PP** **03 51 59.5 -0.4**
AKASG Malin Array Be 103.05 321 Pdiff **Pdif** **03 47 43.0 -1.9**
comp=Z,8.7nm,0.9s,baz=69,slow=4.1,SNR=18
AKASG PP **PP** **03 51 59.5 -0.4**
comp=Z,2.8nm,0.9s,baz=69,slow=5.2,SNR=4.2
KIEV Kiev 103.06 321 PFAKE 03 48 00.0 +15
KIEV LR LR
comp=Z,262nm,21.0s
ISP Isparta 104.01 308 PFAKE 03 48 00.0 +10
ISP LR LR
comp=Z,135nm,20.0s
ISP Isparta 104.01 308 ⇑ *i*P **Pdif** **03 47 48.0 -1.7**
WVOR Wild Horse Val 104.12 47 PFAKE 03 48 00.0 +10
WVOR LR LR
comp=Z,332nm,19.0s
NEW Newport 104.22 41 PFAKE 03 48 00.0 +10
NEW LR LR
comp=Z,473nm,22.0s
TLCR 104.27 316 ⇑ *i*P **Pdif** **03 47 49.7 -0.8**
TIRR Tirgusor 104.67 315 ⇑ *i*P **Pdif** **03 47 50.7 -1.6**
MBAR Mbarara 104.68 268 PFAKE 03 48 00.0 +6.7
MBAR LR LR
comp=Z,560nm,21.0s
CFR Carcaliu 104.75 316 ⇑ *i*P **Pdif** **03 47 51.1 -1.5**
NVAR Mina Array Bea 104.91 51 Pdif **Pdif** **03 47 53.6 -0.2**
NVAR PKiKP **PKiKP** **03 52 09.8 +1.1**
NVAR Mina Array Bea 104.91 51 Pdiff **Pdif** **03 47 53.6 -0.2**
comp=Z,1.4nm,0.7s,baz=268,slow=5.4,SNR=8.8
NVAR PKiKP **PKiKP** **03 52 09.8 +1.1**
comp=Z,0.2nm,0.3s,baz=252,slow=2.6,SNR=5.3
BMN Battle Mountai 105.46 49 PFAKE 03 52 20.0
BMN LR LR
comp=Z,359nm,19.0s
PLOR Plostina 105.65 317 ⇑ *i*P **Pdif** **03 47 55.7 -1.0**
LSZ Lusaka 105.68 253 PFAKE 03 52 20.0
LSZ LR LR
comp=Z,127nm,19.0s
DAC Darwin (Calif) 105.74 53 PFAKE 03 52 20.0
DAC LR LR
comp=Z,488nm,19.0s
TPH Tonopah 105.80 52 PFAKE 03 52 20.0
TPH LR LR
comp=Z,295nm,20.0s
A13A Flathead Natio 105.84 40 ⇑P 03 52 09.9
baz=106
MPMC Manual Prospec 105.85 54 ⇓P 03 52 09.8
baz=106
SUW Suwalki 105.89 325 *e*P **Pdif** **03 47 56.2 -1.3**
BOSA Boshof 105.89 239 PKiKP **PKiKP** **03 52 10.4 -0.4**
BOSA PKKPbc **PKKPbc** **04 03 33.5 -0.6**
BOSA Boshof 105.89 239 PKiKP **PKiKP** **03 52 10.4 -0.4**
comp=Z,0.8nm,0.6s,baz=61,slow=3.5,SNR=3.1
BOSA PKKPbc **PKKPbc** **04 03 33.5 -0.6**
comp=Z,3.5nm,1.0s,baz=286,slow=7.7,SNR=3.9
BFSC Mount Baldy Ra 105.93 56 ⇑P 03 52 10.1
baz=106
F12A Elk City 105.95 43 ⇓P 03 52 09.8
baz=106
G12A Big Creek, Yel 106.03 44 ⇓P 03 52 10.0
baz=106
MLR Muntele Rosu 106.21 316 Pdif **Pdif** **03 47 58.5 -0.8**
MLR PKiKP **PKiKP** **03 52 11.5 +0.7**
MLR PKKPbc **PKKPbc** **04 03 32.4 -1.3**
MLR Muntele Rosu 106.21 316 Pdiff **Pdif** **03 47 58.5 -0.8**
comp=Z,2.2nm,1.0s,baz=79,slow=4.9,SNR=6.7
MLR PKiKP **PKiKP** **03 52 11.5 +0.7**
comp=Z,0.4nm,0.6s,baz=34,slow=3.6,SNR=3.0
MLR PKKPbc **PKKPbc** **04 03 32.4 -1.3**
comp=Z,0.3nm,0.8s,baz=169,slow=5.3,SNR=3.0
D13A Huson 106.21 42 ⇑P 03 52 10.4
baz=106
BURAR Bucovina Array 106.25 319 ⇑ *i*P **Pdif** **03 47 58.7 -0.7**
MSO Missoula 106.62 42 PFAKE 03 52 20.0
MSO LR LR
comp=Z,293nm,21.0s
D14A Greenough 106.85 42 ⇑P 03 52 11.6
baz=107
H13A Challis 106.89 44 ⇑P 03 52 12.5
baz=107
HLID Hailey 106.98 46 PFAKE 03 52 20.0
HLID LR LR
comp=Z,299nm,20.0s
HLID Hailey 106.98 46 ⇓P 03 52 12.6
baz=107
PFO Pinyon Flat Ob 107.00 56 PFAKE 03 52 20.0
PFO LR LR
comp=Z,380nm,22.0s
I13A Wildhorse Cree 107.12 45 ⇑P 03 52 13.1
baz=107
MONP Monument Peak 107.12 57 ⇑P 03 52 13.2
baz=107
J13A Cove Ranch, Pi 107.18 46 ⇑P 03 52 13.3
baz=107
LOT Lotru 107.71 317 ⇓ *i*P **Pdif** **03 48 05.4 -0.6**
KOLS Kolonicke sedl 107.83 320 *e*P **Pdif** **03 48 06.5 +0.2**
KOLS Kolonicke sedl 107.83 320 PDIF **Pdif** **03 48 06.5 +0.2**
TRPA Tarpa 107.88 320 ⇓ *i*P **Pdif** **03 48 05.9 -0.5**
UZH Uzhgorod 107.90 320 ⇑ *i*P **Pdif** **03 48 06.1 -0.5**
LDFC Landfair 107.91 54 *e*Pdif **Pdif** **03 48 02.0 -5.0**
CRVS Cervenica-Dubn 108.36 321 *e*P **Pdif** **03 48 07.5 -1.1**
CRVS Cervenica-Dubn 108.36 321 PDIF **Pdif** **03 48 07.5 -1.1**
GZR Gura Zlata 108.40 317 ⇑ *i*P **Pdif** **03 48 08.2 -0.8**
G16A Moss Hill, Enn 108.44 43 ⇓P 03 52 15.7
baz=108
BOZ Bozeman (W) 108.45 43 PFAKE 03 52 30.0
BOZ LR LR
comp=Z,393nm,20.0s
HFS Hagfors 108.49 333 Pdif **Pdif** **03 48 07.9 -1.0**
HFS Hagfors 108.49 333 Pdiff **Pdif** **03 48 07.9 -1.0**
comp=Z,11nm,0.9s,baz=111,slow=3.3,SNR=12
L15A Malad City 108.76 47 ⇓P 03 52 16.0
baz=109

E17A Martinsdale 108.77 42 ⇑P 03 52 16.1
baz=109
DUG Dugway 108.82 49 PFAKE 03 52 30.0
DUG LR LR
comp=Z,356nm,21.0s
DUG Dugway 108.82 49 ⇑P 03 52 16.0
baz=109
W13A Hualapai Mount 108.90 54 ⇑P 03 52 16.5
baz=109
B18A Beardsley Farm 108.95 40 ⇑P 03 52 16.0
baz=109
F17A Fitzpatrick Pl 109.05 43 ⇓P 03 52 16.1
baz=109
EGMT Eagleton 109.07 40 PFAKE 03 52 30.0
EGMT LR LR
comp=Z,360nm,19.0s
EGMT Eagleton 109.07 40 ⇑P 03 52 16.4
baz=109
BZS Buzias 109.14 317⇑*i*P **Pdif 03 48 11.3 -0.8**
NB2 NORSAR Subarra 109.14 335 P **Pdif 03 48 10.1 -1.8**
comp=Z,3.9nm,0.9s,baz=61,slow=4.4
NB2 NORSAR Subarra 109.14 335 P **Pdif 03 48 10.1 -1.8**
baz=61,slow=4.4
NOA NORSAR Array B 109.14 335 Pdif **Pdif 03 48 10.6 -1.3**
NOA PP **PP 03 52 45.3 +0.9**
NOA PKKPbc **PKKPbc 04 03 23.1 -1.8**
NOA NORSAR Array B 109.14 335 Pdiff **Pdif 03 48 10.6 -1.3**
comp=Z,2.3nm,0.8s,baz=60,slow=4.6,SNR=8.2
NOA PP **PP 03 52 45.3 +0.9**
comp=Z,2.2nm,1.0s,baz=68,slow=7.1,SNR=3.4
NOA PKKPbc **PKKPbc 04 03 23.1 -1.8**
comp=Z,0.8nm,0.8s,baz=86,slow=3.0,SNR=3.7
A19A Klindworth Far 109.44 39 ⇓P 03 52 16.3
baz=109
HWUT Hardware Ranch 109.45 47 PFAKE 03 52 30.0
HWUT LR LR
comp=Z,350nm,22.0s
AHID Auburn Hatcher 109.52 46 PFAKE 03 52 30.0
AHID LR LR
comp=Z,266nm,20.0s
LKWY Lake 109.57 44 PFAKE 03 52 30.0
LKWY LR LR
comp=Z,509nm,22.0s
SNOW Snow King Moun 109.60 45 *e*PKPdf **PKiKP 03 52 18.1 +0.8**
MVU Marysvale 109.61 50 PFAKE 03 52 30.0
MVU LR LR
comp=Z,312nm,21.0s
PSZ Piszkesteto 109.64 320 PFAKE 03 52 30.0
PSZ LR LR
comp=Z,258nm,21.0s
J17A Brown Place, J 109.65 45 ⇑P 03 52 17.9
baz=110
F18A Big Timber 109.68 42 ⇓P 03 52 17.5
baz=110
L17A Cokeville 109.84 46 ⇑P 03 52 18.2
baz=110
D19A Cripps Ranch, 109.88 41 ⇓P 03 52 18.2
baz=110
U15A North Rim 109.95 53 ⇑P 03 52 18.1
baz=110
B20A Solberg Farm, 110.05 39 ⇓P 03 52 18.0
baz=110
M17A Scullys Gap (B 110.14 47 ⇑P 03 52 18.3
baz=110
VYHS Vyhne 110.14 321 *e*P **Pdif 03 48 09.3 -7.3**
VYHS Vyhne 110.14 321 *e* **Pdif 03 48 09.3 -7.3**
E19A Rath Farm, Rou 110.15 42 ⇑P 03 52 18.1
baz=110
J18A Kendall Valley 110.18 45 ⇓P 03 52 18.4
baz=110
RLMT Red Lodge 110.20 43 PFAKE 03 52 30.0
RLMT LR LR
comp=Z,349nm,19.0s
C20A Veseth Ranch, 110.28 40 ⇑P 03 52 18.2
baz=110
K18A Toltan Ranch, 110.31 46 ⇓P 03 52 18.8
baz=110
D20A Manuel Ranch, 110.39 41 ⇓P 03 52 18.6
baz=110
L18A Fontenelle, Gr 110.48 46 ⇑P 03 52 19.2
baz=110
BW06 Boulder Array 110.62 46 PFAKE 03 52 30.0
BW06 LR LR
comp=Z,269nm,20.0s
BW06 Boulder Array 110.62 46 ⇑P 03 52 19.1
baz=110
PDAR Pinedale Array 110.62 46 Pdif **Pdif 03 48 19.1 -0.1**
PDAR PKiKP **PKiKP 03 52 19.2 -0.1**
PDAR PKKPbc **PKKPbc 04 03 17.9 -2.0**
PDAR PKPab **PKPab 04 03 29.4 +0.2**
PDAR Pinedale Array 110.62 46 Pdiff **Pdif 03 48 19.1 -0.1**
comp=Z,0.2nm,0.4s,baz=257,slow=7.3,SNR=3.6
PDAR PKiKP **PKiKP 03 52 19.2 -0.1**
comp=Z,1.8nm,0.9s,baz=218,slow=1.0,SNR=12
PDAR PKKPbc **PKKPbc 04 03 17.9 -2.0**
comp=Z,1.0nm,0.6s,baz=125,slow=4.2,SNR=7.2
PDAR PKKPab **PKKPab 04 03 29.4 +0.2**
comp=Z,0.3nm,0.4s,baz=108,slow=4.8,SNR=4.3
B21A Ellsworth Farm 110.69 39 ⇓P 03 52 19.2
baz=111
F20A Billings 110.76 42 ⇑P 03 52 19.4
baz=111
SRU San Rafael 110.78 49 *e*PKIKP **PKiKP 03 52 19.3 -0.4**
SRU San Rafael 110.78 49 *e*PKPdf **PKiKP 03 52 19.3 -0.4**
SRU San Rafael 110.78 49 ⇓P 03 52 19.4
baz=111
C21A Desert Coulee 110.83 40 ⇑P 03 52 19.5
baz=111
J19A Crowheart 110.85 45 ⇓P 03 52 20.1
baz=111
WUAZ Wupatki 110.85 53 PFAKE 03 52 30.0
WUAZ LR LR
comp=Z,248nm,20.0s
WUAZ Wupatki 110.85 53 ⇓P 03 52 20.4
baz=111
G20A Bridger 110.89 43 ⇓P 03 52 19.8
baz=111
KSP Ksiaz 110.90 324 *i* PKIKP **PKiKP 03 52 19.2 -0.1**
KSP Ksiaz 110.90 324 *e*P **Pdif 03 48 19.7 -0.2**
L19A Farson 110.93 46 ⇑P 03 52 20.1
baz=111
X16A Lo Mia Camp, P 111.00 55 ⇓P 03 52 20.4
baz=111
DPC Dobruska-Polom 111.06 323 *e*P **Pdif 03 48 20.6 -0.1**
DPC *e* 03 52 57.0
DPC MLR MLR
comp=Z,100nm,19.4s
DPC Dobruska-Polom 111.06 323 *e*Pdif **Pdif 03 48 19.5 -1.2**
DPC Dobruska-Polom 111.06 323 *e*PDIFF **Pdif 03 48 20.6 -0.1**
DPC *e*PP **PP 03 52 57.0 -1.7**
DPC AMS AMS 04 43 20.0
comp=Z,100nm,19.4s
K19A Absolon Red Bu 111.11 45 ⇑P 03 52 20.5
baz=111
A22A Carney Farms, 111.19 38 ⇓P 03 52 20.2
baz=111
UPC Upice 111.19 323 *e*P **Pdif 03 48 21.4 +0.2**
UPC *e* 03 52 56.0
UPC Upice 111.19 323 *e*PDIFF **Pdif 03 48 21.4 +0.2**
UPC *e*PP **PP 03 52 56.0 -3.5**
FFC Flin Flon 111.22 32 *i* PKIKP **PKiKP 03 52 20.6 +0.9**
FFC Flin Flon 111.22 32 PFAKE 03 52 30.0
FFC LR LR
comp=Z,403nm,20.0s
H20A Greybull 111.24 43 ⇑P 03 52 20.5
baz=111
VRAC Vranov 111.27 322 Pdif **Pdif 03 48 21.3 -0.3**
VRAC PP **PP 03 53 02.9 +2.8**
VRAC Vranov 111.27 322 Pdiff **Pdif 03 48 21.3 -0.3**
comp=Z,1.4nm,0.5s,baz=65,slow=9.5,SNR=3.5
VRAC PP **PP 03 53 02.9 +2.8**
comp=Z,1.1nm,0.3s,baz=88,slow=14,SNR=3.8
I20A Worland 111.31 44 ⇓P 03 52 20.6
baz=111
TIR Tirane 111.47 313 PFAKE 03 52 30.0
TIR LR LR
comp=Z,207nm,20.0s
S18A Hurst Farm, Bl 111.49 51 ⇑P 03 52 21.1
baz=111
J20A Shoshoni 111.50 45 ⇑P 03 52 21.1
baz=111
K20A Yellowstone Ra 111.51 45 ⇓P 03 52 20.9
baz=111
O19A Miners Draw (B 111.55 48 ⇓P 03 52 21.1
baz=112
C22A Vida 111.63 40 ⇑P 03 52 21.3
baz=112
D22A Cohagen 111.64 40 ⇓P 03 52 21.3
baz=112
L20A Wamsutter 111.69 46 ⇑P 03 52 21.1
baz=112
I21A Big Trails, Te 111.92 44 ⇑P 03 52 22.0
baz=112
M20A Sweetwater, Wa 111.94 47 ⇓P 03 52 21.8
baz=112
B23A Brockton 111.95 39 ⇓P 03 52 21.5
baz=112
TREC Trest 111.95 322 *e*P **Pdif 03 48 24.9 +0.3**
TREC *e* 03 52 21.6
TREC *e* 03 53 03.2
TREC MLR MLR
comp=Z,200nm,21.7s
TREC Trest 111.95 322 *e*PDIFF **Pdif 03 48 24.9 +0.3**
TREC *e*PKP **PKiKP 03 52 21.6 +0.3**
TREC *e*PP **PP 03 53 03.2 -1.8**
TREC AMS AMS 04 46 00.0
comp=Z,200nm,21.7s
J21A Lysite 111.95 44 ⇑P 03 52 21.7
baz=112
E22A Miles City 112.02 41 ⇓P 03 52 21.5
baz=112
F22A Rosebud 112.03 42 ⇓P 03 52 21.7
baz=112
PVCC Panska Ves 112.04 324 *e*PP PP 03 53 08.2 +2.6
PVCC AMS AMS 04 43 30.0
comp=Z,300nm,22.9s
N20A Spence Gulch, 112.05 47 ⇓P 03 52 22.5
baz=112,SNR=6.3
C23A Lambert 112.06 39 ⇑P 03 52 21.7
baz=112
O20A White River Ci 112.25 48 ⇓P 03 52 22.8
baz=112,SNR=6.4
PRU Pruhonice 112.26 323 *e*P **Pdif 03 48 26.1 +0.2**
PRU *e* 03 53 08.9
PRU Pruhonice 112.26 323 *e*PDIFF **Pdif 03 48 26.1 +0.2**
PRU *e*PP **PP 03 53 08.9 +1.7**
BRG Berggiesshubel 112.27 324 *e*P **Pdif 03 48 25.7 -0.2**
comp=Z,5.1nm,0.9s
BRG *e* 03 52 21.6
comp=Z,4.4nm,0.7s
BRG Berggiesshubel 112.27 324 *e*PKP **PKiKP 03 52 21.6 -0.3**
comp=Z,4.4nm,0.7s
BRG Berggiesshubel 112.27 324 *e*PKIKP **PKiKP 03 52 21.6 -0.3**
BRG pmax pmax
comp=Z,4.0nm,0.7s
K21A Alcova 112.29 45 ⇓P 03 52 22.4
baz=112
H22A Clearmont 112.33 43 ⇓P 03 52 22.2
baz=112
A24A Westby 112.39 38 ⇓P 03 52 22.2
baz=112
L21A Rawlins 112.39 46 ⇓P 03 52 22.3
baz=112
DGMT Dagmar 112.44 38 PFAKE 03 52 30.0
DGMT LR LR
comp=Z,562nm,22.0s
I22A 9 Mile Ranch, 112.46 44 ⇑P 03 52 22.4
baz=112
PV01 Paradox Valley 112.49 50 *e*PKPdf **PKiKP 03 52 23.9 +0.9**
M21A Separation Pea 112.50 46 ⇓P 03 52 22.3
baz=112
Q20A Ridgley Place, 112.50 49 ⇓P 03 52 23.4
baz=112,SNR=7.3
J22A Midwest 112.61 44 ⇓P 03 52 22.5
baz=112
F23A Volborg 112.61 42 ⇑P 03 52 22.7
baz=112
N21A Black Mountain 112.61 47 ⇑P 03 52 23.4
baz=112,SNR=6.8
R20A Redvale 112.62 50 ⇓P 03 52 23.3
baz=113
C24A Savage 112.63 39 ⇓P 03 52 22.7
baz=112
CLL Collm 112.64 325 *i* PKIKP **PKiKP 03 52 22.2 -0.3**
CLL *e* 03 53 12.0
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL pmax pmax
comp=Z,5.0nm,1.6s
CLL MLR MLR
comp=Z,200nm,19.5s
CLL Collm 112.64 325 *e*Pdif **Pdif 03 48 27.0 -0.6**
CLL *e* 03 52 06.0
CLL *i* PKiKP **PKiKP 03 52 22.2 -0.3**
comp=Z,5.0nm,0.9s
CLL *e*(pPKiKP) 03 52 41.0
CLL *e*PP **PP 03 53 12.0 +2.2**
comp=Z,15nm,1.6s
CLL *e*pPP 03 53 26.0
CLL *e*SP SP 04 02 39.0 +1.1
CLL *e*SSS SSS 04 13 18.0
CLL Lm MLR 04 44 00.0
comp=Z,200nm,19.5s
S20A Disappointment 112.72 50 ⇓P 03 52 23.7
baz=113
MVCO Mesa Verde 112.76 51 *e*PKPdf **PKiKP 03 52 24.0 +0.5**
MVCO LR LR
comp=Z,182nm,20.0s
MVCO Mesa Verde 112.76 51 ⇓P 03 52 23.5
baz=113
O21A Pagoda 112.80 48 ⇑P 03 52 23.0
baz=113
K22A Casper 112.80 45 ⇑P 03 52 22.9
baz=113
D24A Glendive 112.84 40 ⇓P 03 52 23.2
baz=113
M22A Cedar Creek Ra 113.11 46 ⇓P 03 52 24.3
baz=113
KHC Kasperske Hory 113.17 323 *e*P **Pdif 03 48 25.3 -4.8**
KHC *e* 03 52 23.3
KHC *e* 03 53 13.4
KHC Kasperske Hory 113.17 323 *e*PDIFF **Pdif 03 48 31.0 +0.9**
KHC *e*PKP **PKiKP 03 52 23.3 -0.4**
KHC *e*PP **PP 03 53 13.4 -0.3**
S21A Coal Bank Pass 113.20 50 ⇓P 03 52 25.0
baz=113,SNR=8.4
GERES GERESS Array B 113.21 322 Pdif **Pdif 03 48 28.4 -2.0**
GERES PKiKP **PKiKP 03 52 23.8 -0.1**
GERES PP **PP 03 53 16.0 +1.9**
GERES GERESS Array B 113.21 322 Pdiff **Pdif 03 48 28.4 -2.0**
comp=Z,0.9nm,0.8s,baz=64,slow=6.1,SNR=7.9
GERES PKiKP **PKiKP 03 52 23.8 -0.1**
comp=Z,2.5nm,0.8s,baz=75,slow=1.5,SNR=15
GERES PP **PP 03 53 16.0 +1.9**
comp=Z,0.9nm,0.8s,baz=162,slow=0.8,SNR=4.4
W20A Ramah 113.23 53 ⇑P 03 52 24.7
baz=113
MOA Molln 113.23 321⇑*e*PKiKP **PKiKP 03 52 22.9 -0.9**
comp=Z,2.6nm,0.7s
MOA Molln 113.23 321⇑*e*P **PKiKP 03 52 22.9 -0.9**
319A Douglas 113.33 57 ⇑P 03 52 25.1
baz=113
N22A Wattenberg Ran 113.38 47 ⇓P 03 52 24.8
baz=113
NKC Novy Kostel 113.40 324 *e*P **Pdif 03 48 31.1 0.0**
NKC *e* 03 53 19.1
NKC Novy Kostel 113.40 324 *e*PDIFF **Pdif 03 48 31.1 0.0**
NKC *e*PP **PP 03 53 19.1 +3.8**
P22A Eagle 113.49 48 ⇑P 03 52 25.6
baz=113,SNR=6.2
H24A Dirks Ranch, A 113.50 42 ⇓P 03 52 24.0
baz=113
T21A Navajo Lake 113.56 51 ⇓P 03 52 25.4
baz=114
Q22A Crested Butte, 113.57 49 ⇑P 03 52 26.0
baz=114,SNR=7.4
Z20A Nine Sixteen R 113.57 55 ⇓P 03 52 25.9
baz=114
Y20A Horse Springs, 113.59 55 ⇓P 03 52 25.7
baz=114
U21A Nageezi 113.60 52 ⇓P 03 52 26.1
baz=114,SNR=8.2
120A U Bar Ranch, L 113.65 56 ⇑P 03 52 25.6
baz=114
R22A Saguache, Gunn 113.85 50 ⇑P 03 52 26.5
baz=114
220A Playas Peak, P 113.87 57 ⇓P 03 52 25.9
baz=114
S22A 4UR Ranch, Cre 113.92 50 ⇓P 03 52 26.7
baz=114,SNR=8.7
O23A Lake Granby, G 113.94 47 ⇑P 03 52 26.1
baz=114
X21A Alamocita Cree 113.95 54 ⇑P 03 52 26.8
baz=114
320A Kipp Ranch, An 113.97 57 ⇓P 03 52 26.8
baz=114
T22A Edith 114.05 51 ⇑P PKPdf 03 52 26.9 +0.9
baz=114
RSSD Black Hills 114.06 43 *e*PKIKP PKPdf 03 52 25.1 -0.7
RSSD Black Hills 114.06 43 *e*PKPdf PKPdf 03 52 25.1 -0.7
MYKA Terra Mystica 114.08 320⇑*i*PKPdf PKPdf 03 52 24.6 -1.0
comp=Z,4.1nm,0.9s
MYKA Terra Mystica 114.08 320⇑*i*P PKPdf 03 52 24.6 -1.0
KBA Koelnbreinsper 114.10 321⇑*e*PKIKP PKPdf 03 52 24.0 -1.7
KBA Koelnbreinsper 114.10 321⇑*e*PKPdf PKPdf 03 52 24.0 -1.7
comp=Z,4.0nm,0.8s
KBA Koelnbreinsper 114.10 321⇑*e*P PKPdf 03 52 24.0 -1.7
P23A Jefferson 114.23 48 ⇓P PKPdf 03 52 27.0 +0.6
baz=114
U22A Llaves 114.24 52 ⇑P PKPdf 03 52 27.5 +1.1
baz=114,SNR=6.0
ISCO Idaho Springs 114.28 48 PFAKE 03 52 40.0 +14
ISCO LR LR
comp=Z,367nm,21.0s
ISCO Idaho Springs 114.28 48 ⇓P PKPdf 03 52 27.0 +0.5
baz=114
V22A San Miguel Ran 114.31 52 ⇑P PKPdf 03 52 27.6 +1.1
baz=114,SNR=6.2
TIP Timpagrande 114.33 312 PFAKE 03 52 40.0 +14
TIP LR LR
comp=Z,176nm,20.0s
121A Cookes Peak, D 114.36 56 ⇓P PKPdf 03 52 27.6 +0.9
baz=114
Q23A Hartsel 114.37 49 ⇑P PKPdf 03 52 27.4 +0.7
baz=114
X22A Bernardo 114.56 54 ⇑P PKPdf 03 52 28.0 +1.1
baz=114
R23A Moffat 114.57 49 ⇑P PKPdf 03 52 28.0 +1.0
baz=114,SNR=5.4
K25A Mack Ranch, Ha 114.67 44 ⇑P PKPdf 03 52 27.5 +0.6
baz=115
T23A Casias Ranch, 114.71 51 ⇑P PKPdf 03 52 27.9 +0.6
baz=115
Y22A Socorro 114.73 54 ⇑P PKPdf 03 52 28.0 +0.7
baz=115
ABTA Abfaltersbach 114.76 321⇑*i*PKPdf PKPdf 03 52 25.9 -1.0
comp=Z,8.0nm,0.8s
ABTA Abfaltersbach 114.76 321⇑*i*P PKPdf 03 52 25.9 -1.0
U23A El Rito 114.77 52 ⇑P PKPdf 03 52 28.1 +0.7
baz=115
CUC Castrocucco 114.80 313 PFAKE 03 52 40.0 +13
CUC LR LR
comp=Z,120nm,22.0s
Z22A Elephant Butte 114.88 55 ⇓P PKPdf 03 52 28.5 +0.9
baz=115
ANMO Albuquerque 114.90 53 *e*PKPdf PKPdf 03 52 28.1 +0.4
ANMO LR LR
comp=Z,201nm,20.0s
TSUM Tsumeb 114.91 247 PKP PKPdf 03 52 28.0 0.0
TSUM PP **PP 03 53 26.1 -1.0**
TSUM LR LR
comp=Z,153nm,20.0s
TSUM Tsumeb 114.91 247 PKP PKPdf 03 52 28.0 0.0
comp=Z,1.3nm,0.8s,baz=207,slow=2.3,SNR=4.0
TSUM PP **PP 03 53 26.1 -1.0**
comp=Z,1.5nm,0.8s,baz=100,slow=11,SNR=3.0
V23A Ortiz Mt. (NFS 114.92 52 ⇓P PKPdf 03 52 28.6 +0.9
baz=115
BNM Barren Site 114.95 54 *e*PKPdf PKPdf 03 52 28.4 +0.6
W23A Werner Place, 115.09 53 ⇓P **PKPdf 03 52 28.3 +0.2**
baz=115
R24A Sanders Place, 115.10 49 ⇑P **PKPdf 03 52 28.3 +0.3**
baz=115
WTTA Wattenberg 115.10 321⇑*i*PKIKP **PKPdf 03 52 27.3 -0.3**
WTTA Wattenberg 115.10 321⇑*i*PKiKP **PKPdf 03 52 27.3 -0.3**
comp=Z,12nm,0.5s
WTTA Wattenberg 115.10 321⇑*i*P **PKPdf 03 52 27.3 -0.3**
S24A Houchin Ranch, 115.18 50 ⇑P **PKPdf 03 52 28.6 +0.4**
baz=115
CEL Celeste 115.24 311 PFAKE 03 52 40.0 +12
CEL LR LR
comp=Z,170nm,22.0s
MOTA Moosalm 115.40 322⇑*i*PKIKP **PKPdf 03 52 27.5 -0.7**
MOTA Moosalm 115.40 322⇑*i*PKiKP **PKPdf 03 52 27.5 -0.7**
comp=Z,5.7nm,0.6s
MOTA Moosalm 115.40 322⇑*i*P **PKPdf 03 52 27.5 -0.7**
P25A Willow Gulch B 115.43 48 ⇓P **PKPdf 03 52 29.0 +0.5**
baz=115
T24A Torres, Weston 115.46 50 ⇓P **PKPdf 03 52 28.9 +0.2**
baz=115
Y23A Lovelace Mesa, 115.46 54 ⇓P **PKPdf 03 52 29.0 +0.2**
baz=115,SNR=5.6
Z23A Rita Site, Whi 115.47 55 ⇑P **PKPdf 03 52 29.5 +0.8**
baz=115,SNR=5.3
Q25A Bedland, Calha 115.55 48 ⇑P **PKPdf 03 52 29.2 +0.3**
baz=116
123A Bell Site, Whi 115.59 56 ⇓P **PKPdf 03 52 29.5 +0.5**
baz=116
V24A Rampart Ranch, 115.65 52 ⇓P **PKPdf 03 52 29.9 +0.7**
baz=116,SNR=17
W24A Lazy 6 Ranch, 115.67 53 ⇑P **PKPdf 03 52 29.8 +0.7**
baz=116,SNR=5.8
R25A Fountain Ranch 115.75 49 ⇑P **PKPdf 03 52 29.2 +0.1**
baz=116,SNR=13
FETA Feichten 115.77 321⇑*i*PKiKP **PKiKP 03 52 28.8 -0.1**
comp=Z,9.6nm,1.0s
FETA Feichten 115.77 321⇑*i*P **PKiKP 03 52 28.8 -0.1**
AQU L'Aquila 115.77 316 PFAKE 03 52 40.0 +11
AQU LR LR
comp=Z,274nm,20.0s
S25A Robets Cordova 115.77 50 ⇑P **PKPdf 03 52 29.6 +0.3**
baz=116,SNR=5.5
T25A Trinidad 115.94 50 ⇑P **PKPdf 03 52 30.0 +0.4**
baz=116,SNR=5.9
Y24A Capitan 115.97 54 ⇑P **PKPdf 03 52 30.2 +0.4**
baz=116,SNR=18
P26A Davis Ranch, A 116.02 47 ⇑P **PKPdf 03 52 29.7 +0.1**
baz=116
M27A Reverse DX Ran 116.08 45 ⇓P **PKPdf 03 52 29.9 +0.3**
baz=116
Q26A Hugo 116.09 48 ⇓P **PKPdf 03 52 30.1 +0.3**
baz=116
V25A Rancho No Teng 116.13 52 ⇑P **PKPdf 03 52 30.4 +0.4**
baz=116,SNR=7.1
U25A Circle Dot Ran 116.14 51 ⇑P **PKPdf 03 52 30.2 +0.2**
baz=116
Z24A Sheeppen Canyo 116.17 55 ⇑P **PKPdf 03 52 30.7 +0.6**
baz=116,SNR=12
DAVA Damuels 116.18 322⇑*i*PKiKP **PKPdf 03 52 29.4 -0.2**
comp=Z,10nm,0.6s
DAVA Damuels 116.18 322⇑*i*P **PKPdf 03 52 29.4 -0.2**
N27A Anderson Farm, 116.21 46 ⇓P **PKPdf 03 52 30.1 +0.2**
baz=116
124A Stringfield Ra 116.24 55 ⇑P **PKPdf 03 52 30.9 +0.5**
baz=116,SNR=9.9
224A Cornudas Mount 116.33 56 ⇓P **PKPdf 03 52 30.7 +0.3**
baz=116,SNR=5.3
R26A Arlington 116.33 49 ⇓P **PKPdf 03 52 30.4 +0.2**
baz=116,SNR=7.7
DAVOX Davos/Dischmat 116.40 321 PKP **PKPdf 03 52 30.0 -0.1**
DAVOX Davos/Dischmat 116.40 321 PKP **PKPdf 03 52 30.0 -0.1**
comp=Z,6.3nm,0.6s,baz=188,slow=1.1,SNR=17
W25A X Bar L Ranch, 116.42 52 ⇓P **PKPdf 03 52 30.8 +0.3**
baz=116,SNR=6.4
O27A Beecher Island 116.45 47 ⇓P **PKPdf 03 52 30.5 +0.2**
baz=116
324A Moseley Ranch, 116.50 57 ⇑P **PKPdf 03 52 30.9 +0.1**
baz=116
S26A Kim 116.52 49 ⇓P **PKPdf 03 52 30.8 +0.2**
baz=116,SNR=5.7
OGNE Ogallala 116.52 46 PFAKE 03 52 40.0 +10
OGNE LR LR
comp=Z,329nm,21.0s
T26A Comanche Natio 116.55 50 ⇓P **PKPdf 03 52 30.8 0.0**
baz=116,SNR=7.1
Y25A Mesa, Roswell 116.56 54 ⇓P **PKPdf 03 52 30.9 +0.1**
baz=116,SNR=13
ULM Lac du Bonnet 116.60 34 PKP **PKPdf 03 52 29.3 -0.8**
ULM Lac du Bonnet 116.60 34 PKP **PKPdf 03 52 29.3 -0.8**
comp=Z,3.3nm,0.6s,baz=315,slow=3.4,SNR=5.1
BFO Black Forest 116.66 323 PFAKE 03 52 40.0 +10
BFO LR LR
comp=Z,218nm,19.0s
U26A Atchley Ranch, 116.66 51 ⇑P **PKPdf 03 52 31.1 +0.1**
baz=117
Z25A Roswell 116.70 54 ⇓P **PKPdf 03 52 31.3 +0.3**
baz=117,SNR=5.5
KSCO Kaye Shedlock' 116.72 48 ⇓P **PKPdf 03 52 31.2 +0.3**
baz=117

V26A **Tequesquite Ra** 116.79 52 ⇑P PKPdf 03 52 31.0 -0.2
baz=117,SNR=5.5
R27A **Eads** 116.82 49 ⇓P PKPdf 03 52 31.3 +0.2
baz=117
TUE **Stuetta** 116.86 321 *e*PKPdf PKPdf 03 52 30.2 -0.9
TUE LR LR
comp=Z,269nm,20.0s
225A **Deer Hill, Car** 116.90 56 ⇓P PKPdf 03 52 31.4 -0.1
baz=117
125A **Gardner Draw,** 116.90 55 ⇑P PKPdf 03 52 31.5 0.0
baz=117,SNR=5.5
325A **Bean Ranch, Si** 116.94 57 ⇓P PKPdf 03 52 31.3 -0.3
baz=117
W26A **Owens Ranch, T** 117.00 52 ⇑P PKPdf 03 52 31.4 -0.2
baz=117
425A **Indio Mountain** 117.06 57 ⇓P PKPdf 03 52 31.9 0.0
baz=117
X26A **CR and CF Fran** 117.11 53 ⇓P PKPdf 03 52 31.7 -0.2
baz=117
VLC **Villacollemand** 117.15 319 PFAKE 03 52 40.0 +8.5
VLC LR LR
comp=Z,179nm,20.0s
CDF **Champ du Feu** 117.24 324⇑*i*PKIKP PKPdf 03 52 30.7 -0.9
comp=Z,12nm,1.0s
CDF **Champ du Feu** 117.24 324⇑*i*PKIKP PKPdf 03 52 30.7 -0.9
CDF **Champ du Feu** 117.24 324⇑*i*PKPdf PKPdf 03 52 30.7 -0.9
WLF **Walferdange** 117.28 326 PFAKE 03 52 40.0 +8.5
WLF LR LR
comp=Z,237nm,19.0s
U27A **Thompson Grove** 117.36 51 ⇓P PKPdf 03 52 31.9 -0.3
baz=117
ECH **Echery** 117.41 324 PFAKE 03 52 40.0 +8.2
ECH LR LR
comp=Z,184nm,20.0s
126A **Clayton Basin,** 117.43 55 ⇑P PKPdf 03 52 32.0 -0.5
baz=117
226B **Tecolote Peak,** 117.45 56 ⇑P PKPdf 03 52 32.3 -0.1
baz=117,SNR=10
R28A **Tribune** 117.54 48 ⇓P PKPdf 03 52 32.5 0.0
baz=118
W27A **Bowe Ranch, En** 117.56 52 ⇑P PKPdf 03 52 32.2 -0.5
baz=118
X27A **F and S Farms,** 117.65 53 ⇓P PKPdf 03 52 32.3 -0.5
baz=118
T28A **Walsh** 117.70 50 ⇓P PKPdf 03 52 32.6 -0.2
baz=118
S28A **Manter** 117.72 49 ⇓P PKPdf 03 52 32.5 -0.3
baz=118
HINF **Hinteralfeld** 117.77 323⇑*i*PKIKP PKPdf 03 52 31.9 -0.7
comp=Z,16nm,0.7s
HINF **Hinteralfeld** 117.77 323⇑*i*PKIKP PKPdf 03 52 31.9 -0.7
HINF **Hinteralfeld** 117.77 323⇑*i*PKPdf PKPdf 03 52 31.9 -0.7
326A **Caldwell Ranch** 117.78 56 ⇓P PKPdf 03 52 32.7 -0.4
baz=118,SNR=5.6
GIVF **Givet** 117.80 326⇑*i*PKIKP PKPdf 03 52 32.5 0.0
comp=Z,16nm,0.8s
GIVF **Givet** 117.80 326⇑*i*PKIKP PKPdf 03 52 32.5 0.0
GIVF **Givet** 117.80 326⇑*i*PKPdf PKPdf 03 52 32.5 0.0
Y27A **Causey** 117.80 53 ⇓P PKPdf 03 52 33.0 -0.2
baz=118,SNR=7.0
U28A **Mallet** 117.84 50 ⇑P PKPdf 03 52 32.8 -0.3
baz=118
426A **McDonald Obser** 117.89 57 ⇑P PKPdf 03 52 33.0 -0.6
baz=118
Z27A **Tatum** 117.91 54 ⇑P PKPdf 03 52 33.2 -0.2
baz=118,SNR=7.6
526A **Mary Lane Ranc** 117.98 58 ⇓P PKPdf 03 52 33.7 +0.1
baz=118,SNR=15
HAU **Haudompre** 117.98 324⇑*i*PKIKP PKPdf 03 52 32.5 -0.5
comp=Z,16nm,0.8s
HAU *e*R
comp=Z,194nm,20.8s
HAU **Haudompre** 117.98 324⇑*i*PKIKP PKPdf 03 52 32.5 -0.5
HAU **Haudompre** 117.98 324⇑*i*PKPdf PKPdf 03 52 32.5 -0.5
R29A **Marienthal** 118.02 48 ⇓P PKPdf 03 52 33.4 0.0
baz=118
V28A **Channing** 118.02 51 ⇑P PKPdf 03 52 33.6 +0.1
baz=118,SNR=5.4
626A **Big Bend Ranch** 118.05 58 ⇑P PKPdf 03 52 33.3 -0.5
baz=118
MSTX **Muleshoe** 118.09 53 ⇑P PKPdf 03 52 33.4 -0.3
baz=118,SNR=6.6
BAIF **Baives** 118.16 327 *e*PKIKP PKPdf 03 52 33.2 0.0
BAIF **Baives** 118.16 327 *e*PKIKP PKPdf 03 52 33.2 0.0
BAIF **Baives** 118.16 327 *e*PKPdf PKPdf 03 52 33.2 0.0
W28A **Vega** 118.18 52 ⇑P PKPdf 03 52 33.7 -0.2
baz=118
S29A **Ulysses** 118.29 49 ⇓P PKPdf 03 52 34.0 +0.1
baz=118
527A **Woodward Ranch** 118.36 58 ⇑P PKPdf 03 52 34.4 0.0
baz=118
427A **Hayter Ranch,** 118.37 57 ⇓P PKPdf 03 52 34.5 +0.2
baz=118,SNR=11
X28A **Dimmitt** 118.40 52 ⇑P PKPdf 03 52 34.2 0.0
baz=118,SNR=8.5
MEZF **Maizieres J'vi** 118.49 325 *e*PKIKP PKPdf 03 52 33.7 -0.2
MEZF **Maizieres J'vi** 118.49 325 *e*PKPdf PKPdf 03 52 33.7 -0.2
TXAR **Lajitas Array** 118.50 59 PKP PKPdf 03 52 34.5 -0.1
TXAR **Lajitas Array** 118.50 59 PKP PKPdf 03 52 34.5 -0.1
comp=Z,2.9nm,0.8s,baz=259,slow=1.1,SNR=30
Y28A **McKinney Farm,** 118.53 53 ⇓P PKPdf 03 52 34.3 -0.2
baz=118,SNR=5.5
V29A **Stinnett** 118.53 51 ⇓P PKPdf 03 52 34.6 +0.1
baz=118
W29A **Amraillo** 118.66 52 ⇑P PKPdf 03 52 34.6 -0.2
baz=119
128A **Castleberry Fa** 118.69 55 ⇓P PKPdf 03 52 34.5 -0.3
baz=119
R30A **Dighton** 118.70 48 ⇑P PKPdf 03 52 34.5 -0.2
baz=119
AMTX **Amarillo** 118.70 52 *e*PKPdf PKPdf 03 52 34.9 +0.1
AMTX LR LR
comp=Z,291nm,20.0s
AMTX **Amarillo** 118.70 52 ⇓P PKPdf 03 52 34.8 0.0
baz=119,SNR=5.6
627A **Terlingua Ranc** 118.71 58 ⇑P PKPdf 03 52 35.0 -0.1
baz=119,SNR=12
PGF **Pioggiola** 118.72 317⇑*i*PKIKP PKPdf 03 52 34.0 -0.6
comp=Z,10nm,0.8s
PGF **Pioggiola** 118.72 317⇑*i*PKIKP PKPdf 03 52 34.0 -0.6
PGF **Pioggiola** 118.72 317⇑*i*PKPdf PKPdf 03 52 34.0 -0.6
228A **UT Block 9, Go** 118.73 55 ⇑P PKPdf 03 52 34.8 -0.2
baz=119
328A **Wristen Ranch,** 118.74 56 ⇓P PKPdf 03 52 34.8 -0.1
baz=119,SNR=6.2
S30A **Montezuma** 118.78 49 ⇓P PKPdf 03 52 34.8 0.0
baz=119
CABF **La Chapelle** 118.81 323⇑*i*PKIKP PKPdf 03 52 34.6 -0.1
comp=Z,27nm,0.7s
CABF **La Chapelle** 118.81 323⇑*i*PKIKP PKPdf 03 52 34.6 -0.1
CABF **La Chapelle** 118.81 323⇑*i*PKPdf PKPdf 03 52 34.6 -0.1
X29A **Tulia** 118.81 52 ⇑P PKPdf 03 52 35.0 0.0
baz=119,SNR=6.9
LPG **La Plagne** 118.92 321⇑*i*PKIKP PKPdf 03 52 34.8 -0.4
comp=Z,17nm,0.7s
LPG **La Plagne** 118.92 321⇑*i*PKIKP PKPdf 03 52 34.8 -0.4
LPG **La Plagne** 118.92 321⇑*i*PKPdf PKPdf 03 52 34.8 -0.4
LPL **La Plagne** 118.92 321⇑*i*PKIKP PKPdf 03 52 34.7 -0.4
comp=Z,13nm,0.6s
LPL **La Plagne** 118.92 321⇑*i*PKIKP PKPdf 03 52 34.7 -0.4
LPL **La Plagne** 118.92 321⇑*i*PKPdf PKPdf 03 52 34.7 -0.4
T30A **Plains** 118.92 49 ⇑P PKPdf 03 52 35.0 -0.1
baz=119
U30A **WK&E Inc. Balk** 119.00 50 ⇑P PKPdf 03 52 35.2 -0.1
baz=119
428A **Kincaid Ranch,** 119.00 57 ⇓P PKPdf 03 52 35.7 +0.1
baz=119,SNR=7.2
Y29A **Porterfield Fa** 119.00 53 ⇓P PKPdf 03 52 35.4 0.0
baz=119,SNR=11
528A **Cox Ranch, San** 119.05 57 ⇑P PKPdf 03 52 35.7 0.0
baz=119,SNR=8.0
BGNE **Belgrade** 119.08 44 ⇑P PKPdf 03 52 34.9 -0.4
baz=119
628A **Black Gap, Mar** 119.12 58 ⇓P PKPdf 03 52 35.7 -0.1
baz=119,SNR=8.2
Z29A **Hungry Hill Ra** 119.14 54 ⇑P PKPdf 03 52 35.4 -0.4
baz=119,SNR=7.7
ECSD **EROS Data Cent** 119.16 41 *e*PKPdf PKPdf 03 52 34.4 -0.9
ECSD LR LR
comp=Z,334nm,22.0s
129A **Stewart Farms,** 119.19 54 ⇑P PKPdf 03 52 35.4 -0.4
baz=119,SNR=6.1
SBF **Sospel** 119.21 319⇑*i*PKIKP PKPdf 03 52 34.8 -0.7
comp=Z,15nm,0.8s
SBF **Sospel** 119.21 319⇑*i*PKIKP PKPdf 03 52 34.8 -0.7
SBF **Sospel** 119.21 319⇑*i*PKPdf PKPdf 03 52 34.8 -0.7
V30A **Spur Ranch, Mi** 119.21 51 ⇓P PKPdf 03 52 36.0 +0.2
baz=119
MBDF **Montbardon** 119.25 320⇑*i*PKIKP PKPdf 03 52 34.9 -0.8
comp=Z,7.8nm,0.6s
MBDF **Montbardon** 119.25 320⇑*i*PKIKP PKPdf 03 52 34.9 -0.8
MBDF **Montbardon** 119.25 320⇑*i*PKPdf PKPdf 03 52 34.9 -0.8
329A **Wagon Wheel Ra** 119.39 56 ⇓P PKPdf 03 52 36.0 -0.3
baz=119,SNR=8.7
229A **Bryant Ranch,** 119.41 55 ⇑P PKPdf 03 52 36.1 -0.1
baz=119
X30A **Coker Ranch, T** 119.47 52 ⇓P PKPdf 03 52 36.0 -0.2
baz=119,SNR=8.2
529A **Stev Forest Ra** 119.54 57 ⇓P PKPdf 03 52 36.4 -0.2
baz=120,SNR=8.2
T31A **Randall Ranch,** 119.55 49 ⇓P PKPdf 03 52 36.1 -0.2
baz=120
Z30A **Sanderson Ranc** 119.60 54 ⇓P PKPdf 03 52 36.0 -0.5
baz=120
Y30A **Stafford Cattl** 119.61 53 ⇓P PKPdf 03 52 36.5 -0.1
baz=120,SNR=9.2
429A **Davenport Ranc** 119.69 57 ⇓P PKPdf 03 52 36.5 -0.3
baz=120,SNR=9.8
ORIF **Oris-en-Rattie** 119.73 321⇑*i*PKIKP PKPdf 03 52 36.0 -0.5
comp=Z,11nm,0.7s
ORIF *e*R
comp=Z,208nm,22.8s
ORIF **Oris-en-Rattie** 119.73 321⇑*i*PKIKP PKPdf 03 52 36.0 -0.5
ORIF **Oris-en-Rattie** 119.73 321⇑*i*PKPdf PKPdf 03 52 36.0 -0.5
LOR **Lormes** 119.81 324⇑*i*PKIKP PKPdf 03 52 36.1 -0.4
comp=Z,5.3nm,0.6s
LOR *e*R
comp=Z,184nm,21.5s
LOR **Lormes** 119.81 324⇑*i*PKPdf PKPdf 03 52 36.1 -0.4
FRF **La Foret Royal** 119.85 319⇑*i*PKIKP PKPdf 03 52 36.2 -0.4
comp=Z,7.5nm,0.6s
FRF **La Foret Royal** 119.85 319⇑*i*PKIKP PKPdf 03 52 36.2 -0.4
FRF **La Foret Royal** 119.85 319⇑*i*PKPdf PKPdf 03 52 36.2 -0.4
V31A **Spring Creek L** 119.86 50 ⇓P PKPdf 03 52 37.4 +0.4
baz=120
130A **Snyder** 119.93 54 ⇓P PKPdf 03 52 36.8 -0.4
baz=120
W31A **Holland Ranch,** 119.97 51 ⇓P PKPdf 03 52 37.2 0.0
baz=120
230A **Sterling City** 120.00 55 ⇓P PKPdf 03 52 37.1 -0.3
baz=120
LMR **La Mourre** 120.05 319 *e*PKIKP PKPdf 03 52 36.8 -0.2
comp=Z,25nm,1.2s
LMR **La Mourre** 120.05 319 *e*PKIKP PKPdf 03 52 36.8 -0.2
LMR **La Mourre** 120.05 319 *e*PKPdf PKPdf 03 52 36.8 -0.2
330A **Mertzon** 120.08 56 ⇓P PKPdf 03 52 36.9 -0.6
baz=120,SNR=5.1
Y31A **Rekieta Farm,** 120.09 53 ⇓P PKPdf 03 52 37.2 -0.3
baz=120
X31A **McDonald Ranch** 120.11 52 ⇑P PKPdf 03 52 37.2 -0.3
baz=120
SSF **Saint Saulge** 120.12 324⇑*i*PKIKP PKPdf 03 52 36.9 -0.2
comp=Z,16nm,0.9s
SSF **Saint Saulge** 120.12 324⇑*i*PKIKP PKPdf 03 52 36.9 -0.2
SSF **Saint Saulge** 120.12 324⇑*i*PKPdf PKPdf 03 52 36.9 -0.2
SMF **Signal de Mont** 120.14 323⇑*i*PKIKP PKPdf 03 52 36.6 -0.5
comp=Z,21nm,0.9s
SMF **Signal de Mont** 120.14 323⇑*i*PKIKP PKPdf 03 52 36.6 -0.5
SMF **Signal de Mont** 120.14 323⇑*i*PKPdf PKPdf 03 52 36.6 -0.5
430A **Baggett Ranch,** 120.19 56 ⇓P PKPdf 03 52 37.7 -0.1
baz=120,SNR=17
EYMN **Ely** 120.25 35 PFAKE 03 52 50.0 +13
EYMN LR LR
comp=Z,345nm,21.0s
530A **J-C Ranch, Com** 120.27 57 ⇑P PKPdf 03 52 38.0 0.0
baz=120,SNR=12
AVF **Avril sur Loir** 120.35 324⇑*i*PKIKP PKPdf 03 52 36.9 -0.6
comp=Z,8.7nm,0.8s
AVF **Avril sur Loir** 120.35 324⇑*i*PKIKP PKPdf 03 52 36.9 -0.6
AVF **Avril sur Loir** 120.35 324⇑*i*PKPdf PKPdf 03 52 36.9 -0.6
SMRF **Simiane la Rot** 120.36 320⇑*i*PKIKP PKPdf 03 52 37.8 +0.1
comp=Z,28nm,1.0s
SMRF **Simiane la Rot** 120.36 320⇑*i*PKPdf PKPdf 03 52 37.8 +0.1
131A **Roby** 120.37 54 ⇑P PKPdf 03 52 37.7 -0.3
baz=120
Z31A **Sharp Cattle R** 120.38 53 ⇓P PKPdf 03 52 37.8 -0.2
baz=120
VIVF **Saint-Julien-l** 120.51 321⇑*i*PKIKP PKPdf 03 52 37.6 -0.3
comp=Z,17nm,0.8s
VIVF **Saint-Julien-l** 120.51 321⇑*i*PKIKP PKPdf 03 52 37.6 -0.3
VIVF **Saint-Julien-l** 120.51 321⇑*i*PKPdf PKPdf 03 52 37.6 -0.3
231A **Bronte** 120.64 55 ⇑P PKPdf 03 52 38.2 -0.4
baz=121,SNR=9.4
331A **San Angelo** 120.72 56 ⇓P PKPdf 03 52 38.4 -0.4
baz=121,SNR=12
Y32A **R-V Farms, Ver** 120.73 52 ⇑P PKPdf 03 52 38.4 -0.3
baz=121
431A **Sonora** 120.74 56 ⇓P PKPdf 03 52 38.5 -0.3
baz=121,SNR=9.7
BGF **Bois d'Agland** 120.77 324⇑*i*PKIKP PKPdf 03 52 38.2 -0.1
comp=Z,52nm,1.2s
BGF **Bois d'Agland** 120.77 324⇑*i*PKIKP PKPdf 03 52 38.2 -0.1
BGF **Bois d'Agland** 120.77 324⇑*i*PKPdf PKPdf 03 52 38.2 -0.1
SPMN **St. Paul** 120.88 38 ⇑P PKPdf 03 52 38.9 +0.3
baz=121
Z32A **Haskell** 120.92 53 ⇑P PKPdf 03 52 39.0 0.0
baz=121
531A **Rocksprings** 120.93 57 ⇑P PKPdf 03 52 39.2 0.0
baz=121,SNR=14
ABTX **Abilene, Hawle** 120.99 54 ⇑P PKPdf 03 52 39.1 -0.1
baz=121,SNR=5.6
KEST **Kesra** 121.01 310 *e*PKPdf PKPdf 03 52 39.5 +0.3
KEST PP PP 03 54 08.5 -0.3
KEST **Kesra** 121.01 310 PKP PKPdf 03 52 39.5 +0.3
comp=Z,3.8nm,0.9s,baz=286,slow=5.6,SNR=9.3
KEST PP PP 03 54 08.5 -0.3
comp=Z,4.6nm,1.0s,baz=326,slow=4.3,SNR=7.4
WMOK **Wichita Mounta** 121.02 51 *e*PKIKP PKPdf 03 52 38.6 -0.6
WMOK MLR MLR
comp=Z,202nm,21.0s
WMOK **Wichita Mounta** 121.02 51 *e*PKPdf PKPdf 03 52 38.6 -0.6
WMOK LR LR
comp=Z,202nm,21.0s
KSU1 **Kansas State U** 121.07 46 PFAKE 03 52 50.0 +11
KSU1 LR LR
comp=Z,409nm,22.0s
631A **Perdido Creek** 121.10 58 ⇑P PKPdf 03 52 39.2 -0.2
baz=121,SNR=13
232A **Coleman** 121.20 55 ⇑P PKPdf 03 52 39.4 -0.2
baz=121,SNR=8.7
332A **Millersview** 121.27 55 ⇓P PKPdf 03 52 39.5 -0.3
baz=121,SNR=9.9
TCF **Toulx Ste Croi** 121.29 324⇑*i*PKIKP PKPdf 03 52 39.3 -0.1
comp=Z,45nm,1.0s
TCF **Toulx Ste Croi** 121.29 324⇑*i*PKIKP PKPdf 03 52 39.3 -0.1
TCF **Toulx Ste Croi** 121.29 324⇑*i*PKPdf PKPdf 03 52 39.3 -0.1
LDF **La Druitiere** 121.34 327⇑*i*PKIKP PKPdf 03 52 39.0 -0.3
comp=Z,15nm,0.9s
LDF **La Druitiere** 121.34 327⇑*i*PKIKP PKPdf 03 52 39.0 -0.3
LDF **La Druitiere** 121.34 327⇑*i*PKPdf PKPdf 03 52 39.0 -0.3
432A **Menard** 121.36 56 ⇑P PKPdf 03 52 39.7 -0.3
baz=121,SNR=5.5
LASF **Ste Croix** 121.40 321⇑*i*PKIKP PKPdf 03 52 39.4 -0.2
comp=Z,26nm,1.0s
LASF **Ste Croix** 121.40 321⇑*i*PKPdf PKPdf 03 52 39.4 -0.2
FLN **La Foliniere** 121.43 327⇑*i*PKIKP PKPdf 03 52 39.2 -0.3
comp=Z,19nm,0.9s
FLN *e*R
comp=Z,276nm,21.0s
FLN **La Foliniere** 121.43 327⇑*i*PKIKP PKPdf 03 52 39.2 -0.3
FLN **La Foliniere** 121.43 327⇑*i*PKPdf PKPdf 03 52 39.2 -0.3
JCT **Junction City** 121.47 56 ⇓P PKPdf 03 52 39.9 -0.3
baz=121,SNR=18
532A **Rocksprings** 121.47 57 ⇑P PKPdf 03 52 39.9 -0.4
baz=121,SNR=12
MSKU **Masuku** 121.67 266 PFAKE 03 52 50.0 +9.0
MSKU LR LR
comp=Z,2.0nm,21.0s
632A **Uvalde** 121.74 57 ⇑P PKPdf 03 52 41.0 +0.2
baz=122,SNR=13
732A **Laxson Ranch,** 121.78 58 ⇓P PKPdf 03 52 40.9 +0.1
baz=122,SNR=7.4
GRR **Gorron** 121.85 327⇑*i*PKIKP PKPdf 03 52 39.6 -0.7
GRR **Gorron** 121.85 327⇑*i*PKIKP PKPdf 03 52 39.6 -0.7
GRR **Gorron** 121.85 327⇑*i*PKPdf PKPdf 03 52 39.6 -0.7
CAF **Calviac** 122.09 322⇑*i*PKIKP PKPdf 03 52 41.2 +0.2
comp=Z,18nm,1.0s
CAF **Calviac** 122.09 322⇑*i*PKIKP PKPdf 03 52 41.2 +0.2
CAF **Calviac** 122.09 322⇑*i*PKPdf PKPdf 03 52 41.2 +0.2
SCIA **State Center** 122.21 42 PFAKE 03 52 50.0 +8.8
SCIA LR LR
comp=Z,306nm,22.0s
RJF **Les Rejaudoux** 122.22 323⇑*i*PKIKP PKPdf 03 52 41.2 0.0
comp=Z,20nm,1.0s
RJF *e*R
comp=Z,172nm,22.5s
RJF **Les Rejaudoux** 122.22 323⇑*i*PKIKP PKPdf 03 52 41.2 0.0
RJF **Les Rejaudoux** 122.22 323⇑*i*PKPdf PKPdf 03 52 41.2 0.0
MFF **Saint Martin d** 122.48 325⇑*i*PKIKP PKPdf 03 52 41.4 -0.2
comp=Z,29nm,0.9s
MFF **Saint Martin d** 122.48 325⇑*i*PKIKP PKPdf 03 52 41.4 -0.2
MFF **Saint Martin d** 122.48 325⇑*i*PKPdf PKPdf 03 52 41.4 -0.2
COWI **Conover** 122.61 35 *e*PKPdf PKPdf 03 52 41.2 -0.7
COWI LR LR
comp=Z,255nm,21.0s
MTLF **Montolieu** 122.80 321⇑*i*PKIKP PKPdf 03 52 42.1 -0.2
comp=Z,21nm,1.1s
MTLF **Montolieu** 122.80 321⇑*i*PKIKP PKPdf 03 52 42.1 -0.2
MTLF **Montolieu** 122.80 321⇑*i*PKPdf PKPdf 03 52 42.1 -0.2
SGMF **Saint Gilles** 122.84 328⇑*i*PKIKP PKPdf 03 52 41.8 -0.4
comp=Z,17nm,0.7s
SGMF **Saint Gilles** 122.84 328⇑*i*PKIKP PKPdf 03 52 41.8 -0.4
SGMF **Saint Gilles** 122.84 328⇑*i*PKPdf PKPdf 03 52 41.8 -0.4
LFF **La Frestale** 122.88 323⇑*i*PKIKP PKPdf 03 52 42.6 +0.2
comp=Z,19nm,0.8s
LFF **La Frestale** 122.88 323⇑*i*PKIKP PKPdf 03 52 42.6 +0.2
LFF **La Frestale** 122.88 323⇑*i*PKPdf PKPdf 03 52 42.6 +0.2
TUL1 **Tulsa** 122.89 49 ⇓P PKPdf 03 52 42.6 -0.1
baz=123
WHTX **Lake Whitney** 122.94 54 ⇓P PKPdf 03 52 42.8 -0.1
baz=123
ROSF **Rostrenen** 123.17 328⇑*i*PKIKP PKPdf 03 52 42.5 -0.4
comp=Z,22nm,1.0s
ROSF **Rostrenen** 123.17 328⇑*i*PKIKP PKPdf 03 52 42.5 -0.4
ROSF **Rostrenen** 123.17 328⇑*i*PKPdf PKPdf 03 52 42.5 -0.4
QUIF **Quistinic** 123.37 328 *e*PKIKP PKPdf 03 52 42.9 -0.3
QUIF **Quistinic** 123.37 328 *e*PKIKP PKPdf 03 52 42.9 -0.3
QUIF **Quistinic** 123.37 328 *e*PKPdf PKPdf 03 52 42.9 -0.3
EPF **Esparros** 124.14 321⇑*i*PKIKP PKPdf 03 52 44.7 -0.3
comp=Z,8.1nm,0.6s
EPF **Esparros** 124.14 321⇑*i*PKIKP PKPdf 03 52 44.7 -0.3
EPF **Esparros** 124.14 321⇑*i*PKPdf PKPdf 03 52 44.7 -0.3
ETSF **Etsaut** 124.77 322⇑*i*PKIKP PKPdf 03 52 46.9 +0.7
comp=Z,30nm,1.1s
ETSF **Etsaut** 124.77 322⇑*i*PKIKP PKPdf 03 52 46.9 +0.7
ETSF **Etsaut** 124.77 322⇑*i*PKPdf PKPdf 03 52 46.9 +0.7
HDIL **Hopedale** 125.45 41 *e*PKPdf PKPdf 03 52 46.8 -0.7
HDIL LR LR
comp=Z,318nm,20.0s
SCHQ **Schefferville** 125.80 16 *e*PKPdf PKPdf 03 52 47.6 -0.1
SCHQ PKP PKPdf 03 52 47.9 +0.2
SCHQ **Schefferville** 125.80 16 PKP PKPdf 03 52 47.9 +0.2
comp=Z,17nm,1.0s,baz=339,slow=2.2,SNR=19
GLMI **Grayling** 125.94 34 PFAKE 03 53 00.0 +12
GLMI LR LR
comp=Z,352nm,22.0s
SIUC **Southern Illin** 126.90 44 *e*PKPdf PKPdf 03 52 50.2 -0.2
SFIN **Scholer Farm** 126.98 40 ⇑P PKPdf 03 52 50.2 -0.2
baz=127
OLIL **Olney** 127.17 43 *e*PKPdf PKPdf 03 52 50.6 -0.2
BLO **Bloomington** 127.99 41 *e*PKIKP PKPdf 03 52 52.0 -0.4
BLO **Bloomington** 127.99 41 *e*PKPdf PKPdf 03 52 52.0 -0.4
TAM **Tamanrasset** 128.00 296 *e*PKIKP PKPdf 03 52 53.6 +0.5
TAM *e* 03 54 57.3
TAM MLR MLR
comp=Z,95nm,19.0s
TAM **Tamanrasset** 128.00 296 *e*PKPdf PKPdf 03 52 53.6 +0.5
TAM *e*PP PP 03 54 57.3 +1.0
TAM LR LR
comp=Z,95nm,19.0s
OXF **Oxford** 128.24 48 PFAKE 03 53 00.0 +7.0
OXF LR LR
comp=Z,254nm,21.0s
VBMS **Vicksburg** 128.36 51 PFAKE 03 53 00.0 +6.7
VBMS LR LR
comp=Z,258nm,19.0s
WVT **Waverly** 128.63 45 *e*PKIKP PKPdf 03 52 52.9 -0.8
WVT *e* 03 54 57.5
WVT **Waverly** 128.63 45 *e*PKPdf PKPdf 03 52 52.9 -0.8
WVT *e*PP PP 03 54 57.5 -2.1
ESDC **Sonseca Array** 128.68 320 PKP PKPdf 03 52 54.4 +0.6
ESDC PP PP 03 55 00.5 +0.8
ESDC **Sonseca Array** 128.68 320 PKP PKPdf 03 52 54.4 +0.6
comp=Z,0.6nm,0.5s,baz=35,slow=3.5,SNR=7.3
ESDC PP PP 03 55 00.5 +0.8
comp=Z,2.0nm,1.1s,baz=51,slow=8.1,SNR=5.2
PAB **San Pablo** 128.99 320 PFAKE 03 53 10.0 +16
PAB LR LR
comp=Z,266nm,19.0s
PLAL **Pickwick Lake** 129.00 47 PFAKE 03 53 10.0 +16
PLAL LR LR
comp=Z,283nm,20.0s
PBRG **Braganca** 129.14 324 *e*PKP PKPdf 03 52 55.2 +0.6
ACSO **Alum Creek Sta** 129.66 38 *e*PKPdf PKPdf 03 52 54.3 -1.3
ACSO LR LR
comp=Z,468nm,22.0s
MVO **Moncorvo** 129.70 323 *e*PKP PKPdf 03 52 57.4 +1.7
PLCA **Paso Flores** 129.87 154 PKP PKPdf 03 52 57.6 +1.5
PLCA **Paso Flores** 129.87 154 PKP PKPdf 03 52 57.6 +1.5
comp=Z,10nm,1.0s,baz=224,slow=3.9,SNR=10
PGAV **Gavieira, Arco** 129.93 325 *e*PKP PKPdf 03 52 56.9 +0.8
POLO **Lamas de Olo** 130.02 324 *e*PKP PKPdf 03 52 57.8 +1.5
PVRL **Vila Real** 130.04 324 *e*PKP PKPdf 03 52 58.2 +1.9
ERPA **Erie** 130.26 34 PFAKE 03 53 10.0 +13
ERPA LR LR
comp=Z,234nm,20.0s
MTE **Manteigas** 130.48 323 *e*PKP PKPdf 03 52 58.4 +1.2
LRAL **Lakeview Retre** 130.69 48 PFAKE 03 53 10.0 +12
LRAL LR LR
comp=Z,245nm,19.0s
PCBR **Castelo Branco** 130.78 322 *e*PKP PKPdf 03 52 58.0 +0.3
LONY **Lake Ozonia** 131.33 28 PFAKE 03 53 10.0 +11
LONY LR LR
comp=Z,328nm,22.0s
PTOM **Tomar** 131.49 323 *e*PKP PKPdf 03 52 59.8 +0.8
TKL **Tuckaleechee C** 131.71 44 *e*PKPdf PKPdf 03 52 59.3 -0.2
EVO **Evora** 131.90 321 *e*PKIKP PKPdf 03 52 58.2 -1.6
comp=Z,9.1nm,0.8s
EVO *e*R
comp=Z,277nm,21.8s
EVO **Evora** 131.90 321 *e*PKP PKPdf 03 53 00.2 +0.4
EVOP **Sao Brissos** 131.97 321 *e*PKIKP PKPdf 03 52 58.2 -1.7
EVOP **Sao Brissos** 131.97 321 *e*PKPdf PKPdf 03 52 58.2 -1.7
NCB **Newcomb** 131.98 29 PFAKE 03 53 10.0 +10
NCB LR LR
comp=Z,363nm,21.0s
PBEJ **Beja** 132.11 321 *e*PKP PKPdf 03 53 01.9 +1.6
BINY **Binghamton** 132.39 32 PFAKE 03 53 10.0 +9.3
BINY LR LR
comp=Z,534nm,20.0s
PVAQ **Vaqueiros** 132.39 320 *e*PKP PKPdf 03 53 02.4 +1.6
SSPA **Standing Stone** 132.43 35 *e*PKPdf PKPdf 03 53 01.2 +0.5
PCVE **Castro Verde** 132.46 320 *e*PKP PKPdf 03 53 02.0 +1.1
PNCL **Nicolau / Gran** 132.48 321 *e*PKP PKPdf 03 53 02.5 +1.6
LBNH **Lisbon** 132.85 27 PFAKE 03 53 10.0 +8.5
LBNH LR LR
comp=Z,344nm,21.0s
BLA **Blacksburg** 133.06 40 PFAKE 03 53 10.0 +7.9
BLA LR LR
comp=Z,274nm,19.0s
PFVI **Vila Bisbo** 133.26 320 *e*PKP PKPdf 03 53 04.7 +2.3
TOA0 **Torodi Ar. Sit** 133.39 285 *e*PKPdf PKPdf 03 53 02.5 -0.8
TORD **Torodi Ar. Bea** 133.39 285 PKPpre PKPpre 03 52 48.1
TORD PKP PKPdf 03 53 02.5 -0.7
TORD PP PP 03 55 31.9 +0.5
TORD SKPbc SKPbc 03 56 26.0 -1.4
TORD **Torodi Ar. Bea** 133.39 285 PKhKP PKPpre 03 52 48.1
comp=Z,1.0nm,0.8s,baz=80,slow=2.6,SNR=7.8
TORD PKP PKPdf 03 53 02.5 -0.7
comp=Z,13nm,0.9s,baz=60,slow=1.8,SNR=33
TORD PP PP 03 55 31.9 +0.5
comp=Z,2.0nm,1.1s,baz=78,slow=4.3,SNR=3.6
TORD SKPbc SKPbc 03 56 26.0 -1.4
comp=Z,2.6nm,0.9s,baz=77,slow=3.9,SNR=4.3
KMSC **Kings Mountain** 133.66 43 ⇓P PKPdf 03 53 03.0 -0.3
baz=134
TEIG **Tepich** 134.29 65 PFAKE 03 53 20.0 +15
TEIG LR LR
comp=Z,214nm,19.0s
CBN **Corbin** 134.33 37 PFAKE 03 53 20.0 +16
CBN LR LR
comp=Z,460nm,22.0s
TRQA **Tornquist** 135.51 160 PFAKE 03 53 20.0 +13
TRQA LR LR
comp=Z,740nm,20.0s
NHSC **New Hope** 135.59 44 PFAKE 03 53 20.0 +13
NHSC LR LR

	comp=Z,406nm,22.0s						
CNNC	**Cliffs of the**	**135.88**	**40**	PFAKE		03 53 20.0	+13
CNNC				LR	LR		
	comp=Z,562nm,19.0s						
TGUH	**Tegucigalpa,Un**	**136.56**	**73**	PFAKE		03 53 20.0	+11
TGUH				LR	LR		
	comp=Z,213nm,21.0s						
CFAA	**Coronel Fontan**	**138.34**	**149**	PKPpre	PKPpre	03 53 04.7	
CFAA				PKP	**PKiKP**	**03 53 13.3**	**-0.9**
CFAA	**Coronel Fontan**	**138.34**	**149**	PKhKP	PKPpre	03 53 04.7	
	comp=Z,0.3nm,0.6s,baz=278,slow=2.1,SNR=6.8						
CFAA				PKP	**PKiKP**	**03 53 13.3**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=244,slow=4.2,SNR=6.8						
LCO	**Las Campanas**	**138.97**	**144**	*e*PKPdf	**PKPdf**	**03 53 14.2**	**+0.6**
JTS	**JuntasAbangare**	**139.34**	**78**	PFAKE		03 53 30.0	+16
JTS				LR	LR		
	comp=Z,424nm,22.0s						
DBIC	**Dimbokro**	**140.40**	**276**	PKPpre	PKPpre	03 53 07.4	
DBIC				PKP	**PKPdf**	**03 53 15.6**	**-0.7**
DBIC	**Dimbokro**	**140.40**	**276**	PKhKP	PKPpre	03 53 07.4	
	comp=Z,13nm,0.9s,baz=25,slow=5.2,SNR=10						
DBIC				PKP	**PKPdf**	**03 53 15.6**	**-0.7**
	comp=Z,15nm,0.8s,baz=331,slow=1.8,SNR=5.9						
LIC	**Lamto**	**140.58**	**275**	⇑*i*PKIKP	PKPpre	03 53 09.0	
	comp=Z,23nm,0.7s						
LIC	**Lamto**	**140.58**	**275**	⇑*i*PKPdf	PKPpre	03 53 09.0	
NNA	**Nana**	**144.32**	**116**	*e*PKPdf	PKPbc	03 53 22.3	+0.6
NNA				PKP	**PKPdf**	**03 53 22.6**	**-0.7**
NNA				LR	LR		
	comp=Z,186nm,20.0s						
NNA	**Nana**	**144.32**	**116**	PKP	**PKPdf**	**03 53 22.6**	**-0.7**
	comp=Z,58nm,0.8s,baz=263,slow=6.4,SNR=26						
BCIP	**Isla Barro Col**	**144.47**	**79**	*e*PKPdf	**PKPab**	**03 53 22.0**	**+0.1**
BCIP				LR	LR		
	comp=Z,368nm,19.0s						
ATAH	**Atahualpa**	**144.54**	**107**	PKP	**PKPdf**	**03 53 25.1**	**+0.9**
ATAH	**Atahualpa**	**144.54**	**107**	PKP	**PKPdf**	**03 53 25.1**	**+0.9**
	comp=Z,182nm,0.8s,baz=218,slow=1.9,SNR=74						
MTDJ	**Mount Denham**	**144.56**	**63**	*e*PKPdf	**PKPab**	**03 53 21.6**	**-0.5**
MTDJ				LR	LR		
	comp=Z,2μm,20.0s						
STH	**Stony Hill**	**145.25**	**63**	*i* P	**PKPbc**	**03 53 24.5**	**-0.1**
GWJ	**Greenwich**	**145.33**	**63**	*i* P	**PKPbc**	**03 53 24.9**	**+0.1**
HOJ	**Hope**	**145.33**	**63**	*i* P	**PKPbc**	**03 53 24.5**	**-0.3**
BBSR	**BB Station**	**145.68**	**31**	*e*PKPdf	**PKPdf**	**03 53 24.9**	**-0.1**
OTAV	**Otavalo**	**145.92**	**95**	*e*PKPbc	**PKPab**	**03 53 27.7**	**-0.2**
OTAV				LR	LR		
	comp=Z,207nm,22.0s						
GTBY	**Guantanamo Bay**	**146.03**	**59**	*e*PKPdf	**PKPdf**	**03 53 26.2**	**+0.2**
GTBY				LR	LR		
	comp=Z,245nm,20.0s						
ARE	**Arequipa**	**146.71**	**128**	*e*PKP2	**PKPbc**	**03 53 29.0**	**-0.3**
ARE	**Arequipa**	**146.71**	**128**	*e*P	**PKPbc**	**03 53 29.0**	**-0.3**
CPUP	**Villa Florida**	**147.77**	**158**	PKPbc	**PKPbc**	**03 53 32.7**	**+1.0**
CPUP	**Villa Florida**	**147.77**	**158**	PKPbc	**PKPbc**	**03 53 32.7**	**+1.0**
	comp=Z,46nm,0.5s,baz=199,slow=1.8,SNR=228						
GRTK	**Grand Turk**	**148.60**	**53**	*e*PKPbc	**PKPbc**	**03 53 34.1**	**+0.1**
GRTK				LR	LR		
	comp=Z,397nm,21.0s						
LPAZ	**La Paz**	**149.41**	**131**	*e*PKPdf	**PKPdf**	**03 53 34.0**	**+1.5**
LPAZ				PKP	**PKPdf**	**03 53 34.5**	**+2.1**
LPAZ				*e*PKPbc	**PKiKP**	**03 53 38.5**	**+0.4**
LPAZ				PKPbc	**PKiKP**	**03 53 38.8**	**+0.7**
LPAZ	**La Paz**	**149.41**	**131**	PKP	**PKPdf**	**03 53 34.5**	**+2.1**
	comp=Z,92nm,1.0s,baz=242,slow=0.4,SNR=42						
LPAZ				PKPbc	**PKiKP**	**03 53 38.8**	**+0.7**
	comp=Z,92nm,1.0s,baz=230,slow=1.9,SNR=78						
SDDR	**Presa de Saban**	**149.69**	**58**	*e*PKPbc	**PKPbc**	**03 53 36.0**	**-0.9**
SDDR				LR	LR		
	comp=Z,995nm,22.0s						
SPB	**Sao Paulo**	**152.83**	**174**	PFAKE		03 53 50.0	-4.8
SPB				LR	LR		
	comp=Z,485nm,21.0s						
SDV	**Santo Domingo**	**153.51**	**77**	PFAKE		03 53 50.0	+4.0
SDV				LR	LR		
	comp=Z,2.0nm,19.0s						
CRPR	**Cabo Rojo, PR**	**153.63**	**55**	*e*PKPdf	**PKPdf**	**03 53 38.1**	**+0.1**
CRPR				*e*PKPbc	**PKPbc**	**03 53 45.6**	**-0.2**
OBIP	**Obispado Ponce**	**154.03**	**55**	*e*PKPdf	**PKPdf**	**03 53 38.8**	**+0.2**
OBIP				*e*PKPbc	**PKPbc**	**03 53 46.5**	**-0.2**
CELP	**Cerrillos**	**154.03**	**55**	*e*PKPdf	**PKPdf**	**03 53 38.4**	**-0.2**
CELP				*e*PKPbc	**PKPbc**	**03 53 46.2**	**-0.5**
SJG	**San Juan**	**154.36**	**54**	*e*PKPdf	**PKPdf**	**03 53 39.0**	**-0.1**
SJG				*e*PKPbc	**PKPbc**	**03 53 47.1**	**-0.2**
SJG				LR	LR		
	comp=Z,466nm,22.0s						
SIV	**San Ignacio**	**154.56**	**140**	PKP	**PKPdf**	**03 53 40.6**	**+1.1**
SIV				PKPbc	**PKiKP**	**03 53 48.9**	**+0.9**
SIV				PKPab	**PKPab**	**03 54 01.7**	**-0.8**
SIV	**San Ignacio**	**154.56**	**140**	PKP	**PKPdf**	**03 53 40.6**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=278,slow=3.4,SNR=5.7						
SIV				PKPbc	**PKiKP**	**03 53 48.9**	**+0.9**
	comp=Z,7.6nm,0.7s,baz=229,slow=1.9,SNR=21						
SIV				PKPab	**PKPab**	**03 54 01.7**	**-0.8**
	comp=Z,7.0nm,0.8s,baz=220,slow=6.7,SNR=8.9						
MTP	**Monte Pirata**	**154.85**	**53**	*e*PKPdf	**PKPdf**	**03 53 39.6**	**-0.2**
MTP				*e*PKPab	**PKPab**	**03 54 03.4**	**-0.3**
SACV	**Santiago Islan**	**156.51**	**300**	PFAKE		03 53 50.0	+7.9
SACV				LR	LR		
	comp=Z,349nm,21.0s						
SAML	**Samuel**	**157.60**	**124**	*e*PKPdf	**PKPdf**	**03 53 43.9**	**+0.4**
SAML				*e*PKPab	**PKPab**	**03 54 15.5**	**-0.1**
SAML				LR	LR		
	comp=Z,295nm,21.0s						
ANWB	**Willy Bob**	**158.03**	**49**	PFAKE		03 53 50.0	+6.1
ANWB				LR	LR		
	comp=Z,543nm,20.0s						
FDF	**Fort de France**	**160.21**	**55**	PFAKE		03 54 00.0	+13
FDF				LR	LR		
	comp=Z,634nm,19.0s						
BDFB	**Brasilia**	**160.58**	**170**	PKP	**PKPdf**	**03 53 47.5**	**+0.4**
BDFB				PKPab	**PKPab**	**03 54 28.8**	**+0.4**
BDFB	**Brasilia**	**160.58**	**170**	PKP	**PKPdf**	**03 53 47.5**	**+0.4**
	comp=Z,8.0nm,1.0s,baz=215,slow=0.6,SNR=12						
BDFB				PKPab	**PKPab**	**03 54 28.8**	**+0.4**
	comp=Z,4.6nm,0.8s,baz=139,slow=4.0,SNR=5.7						
RCBR	**Riachuelo**	**167.29**	**223**	PKPab	**PKPab**	**03 54 58.7**	**+0.6**
RCBR	**Riachuelo**	**167.29**	**223**	PKPab	**PKPab**	**03 54 58.7**	**+0.6**
	comp=Z,7.0nm,0.9s,baz=158,slow=5.4,SNR=2.8						

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*AUST **04** 03:39:31.5±99.0, 7.°37S×111.°93E, h65km±1km, Error ellipse: s-maj=15.4km s-min=2.8km az=38.0*
*BJI **04** 03:40:37.6, 9.°62S×106.°46E, h30km, mB4.9/2, mb4.7/4*
*IDC **04** 03:40:42.2±0.9, 8.°64S×106.°22E, h0km, mb4.2/12, mb1 4.3/13, mb1mx4.1/27, mbtmp4.2/13, ML3.8/1, MS4.1/3, Ms1 4.2/3, ms1mx3.4/32, Error ellipse: s-maj=33.5km s-min=21.3km az=90.0*
*DJA **04** 03:40:43.4±2.1, 9°S±5°×10°6E±°, h22km±31km, M4.6/12, mb4.8/2, MLv4.4/12*
*ISCJB **04** 03:40:43.3±0.5, 8.°95S±0.°04×106.°04E±0.°04, h33km, mb4.3/13, MS4.2/3, Error ellipse: s-maj=5.9km s-min=5.6km az=145.6*
*NEIC **04** 03:40:47.0±0.6, 8.°71S×106.°13E, h35km, mb4.6/2, Error ellipse: s-maj=16.2km s-min=12.4km az=148.0*
ISC 04 03:40:46.5±0.6, **8.°85S**±0.°05×**106.°08E**±0.°05, **h35km, n95, σ1s.32**/96, **mb4.3**/13, **MS4.4**/3, **22C-14D, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XMI	**Christmas Isla**	**1.64**	**193**	P	**Pn**	**03 41 10.2**	**-2.7**
	baz=54,SNR=12						
XMI	**Christmas Isla**	**1.64**	**193**	P	**Pn**	**03 41 10.1**	**-2.7**
	baz=6.9,SNR=14						
XMIS	**Christmas Isla**	**1.68**	**194**	P	**Pn**	**03 41 13.7**	**+0.3**
	baz=54,SNR=5.3						
XMIS	**Christmas Isla**	**1.68**	**194**	P	**Pn**	**03 41 10.2**	**-3.1**
	baz=6.9,SNR=34						
SKJI	**Sukabumi**	**1.89**	**15**	P	**Pn**	**03 41 14.5**	**-1.8**
CISI	**Cisompet, Garu**	**2.15**	**53**	P	**Pn**	**03 41 17.2**	**-2.7**
CISI				S	**Sn**	**03 41 46.5**	**+1.1**
CISI	**Cisompet, Garu**	**2.15**	**53**	P	**Pn**	**03 41 17.4**	**-2.5**
	baz=54,SNR=17						
CISI	**Cisompet, Garu**	**2.15**	**53**	S	Sn	03 41 17.7	-28
	baz=4.1,SNR=11						
CGJI	**Cibinong**	**2.25**	**350**	P	**Pn**	**03 41 19.5**	**-1.8**
CGJI				S	**Sn**	**03 41 49.7**	**+1.9**
DBJI	**Dramaga**	**2.37**	**16**	P	**Pn**	**03 41 22.5**	**-0.5**
LEM	**Lembang**	**2.52**	**37**	P	**Pn**	**03 41 24.6**	**-0.6**
LEM				S	**Sn**	**03 41 56.4**	**+1.6**
LEM	**Lembang**	**2.52**	**37**	P	**Pn**	**03 41 25.1**	**-0.1**
	baz=54,SNR=36						
SBJI	**Serang**	**2.71**	**1**	P	**Pn**	**03 41 26.4**	**-1.2**
TNG	**Tangerang**	**2.72**	**12**	S	**Sn**	**03 42 01.7**	**+2.3**
CLJI	**Cilicap**	**3.12**	**69**	P	**Pn**	**03 41 34.2**	**+1.0**
TGJI	**Tegal**	**3.60**	**57**	P	**Pn**	**03 41 39.5**	**-0.4**
KASI	**Kota Agung**	**3.65**	**335**	P	**Pn**	**03 41 39.6**	**-1.0**
BJII	**Banjamegara**	**3.90**	**68**	P	**Pn**	**03 41 44.2**	**+0.2**
LWLI	**Liwa**	**4.30**	**332**	P	**Pn**	**03 41 49.1**	**-0.5**
LWLI				S	**Sn**	**03 42 39.2**	**+0.6**
SMRI	**Semarang**	**4.68**	**68**	P	**Pn**	**03 41 54.7**	**0.0**
PCJI	**Pacitan**	**5.09**	**83**	P	**Pn**	**03 41 57.6**	**-2.7**
	96nm,0.8s,0.6nm						
PWJI	**Pagerwojo**	**5.73**	**82**	P	**Pn**	**03 42 09.0**	**-0.1**
SJI	**Sawahan**	**5.74**	**79**	P	**Pn**	**03 42 08.4**	**-1.0**
COCO	**West Island**	**9.67**	**249**	Pn	**Pn**	**03 43 02.9**	**-0.4**
KAPI	**Kappang**	**14.10**	**75**	Pn	**Pn**	**03 44 01.3**	**-2.6**
KAPI	**Kappang**	**14.10**	**75**	Pn	**Pn**	**03 44 01.3**	**-2.6**
	0.5nm,0.3s,baz=252,slow=16,SNR=3.1						
CMAR	**Chiang Mai Arr**	**28.03**	**345**	P	**P**	**03 46 33.1**	**-1.5**
CMAR	**Chiang Mai Arr**	**28.03**	**345**	P	**P**	**03 46 33.1**	**-1.5**
	2.5nm,0.6s,baz=180,slow=9.0,SNR=8.5						
CMAR				LR	LR	03 59 37.0	
	comp=Z,200nm,19.1s,baz=125,slow=41						
KSAR	**Wonju Array Be**	**50.37**	**23**	P	**P**	**03 49 39.7**	**-0.5**
KSRS	**Korea Array**	**50.40**	**23**	P	**P**	**03 49 39.7**	**-0.7**
	2.2nm,0.9s,baz=206,slow=8.5,SNR=8.1						
MJAR	**Matsushiro Arr**	**54.31**	**32**	P	**P**	**03 50 06.8**	**-2.8**
MJAR	**Matsushiro Arr**	**54.31**	**32**	P	**P**	**03 50 06.8**	**-2.8**
	1.4nm,0.6s,baz=214,slow=8.3,SNR=5.1						
SONM	**Songino Array**	**56.43**	**0**	P	**P**	**03 50 24.9**	**+0.1**
SONM	**Songino Array**	**56.43**	**0**	P	**P**	**03 50 24.9**	**+0.1**
	1.6nm,0.7s,baz=170,slow=7.7,SNR=6.5						
USRK	**Ussuriysk Arra**	**57.78**	**22**	P	**P**	**03 50 33.3**	**-0.8**
	1.5nm,0.5s,baz=255,slow=7.3,SNR=4.1						
MK31	**Makanchi Array**	**59.31**	**341**	*e*P	**P**	**03 50 45.0**	**+0.2**
MKAR	**Makanchi Array**	**59.31**	**341**	P	**P**	**03 50 45.0**	**+0.2**
MKAR	**Makanchi Array**	**59.31**	**341**	P	**P**	**03 50 45.0**	**+0.2**
	2.7nm,0.5s,baz=144,slow=7.5,SNR=15						
KURBB	**Kurchatov Arra**	**63.87**	**341**	P	**P**	**03 51 15.7**	**+0.2**
	2.2nm,0.8s,baz=156,slow=6.3,SNR=6.7						
KURK	**Kurchatov**	**63.92**	**341**	P	**P**	**03 51 15.7**	**-0.1**
ZALV	**Zalesovo Beam**	**65.09**	**346**	P	**P**	**03 51 22.7**	**-0.7**
ZALV	**Zalesovo Beam**	**65.09**	**346**	P	**P**	**03 51 22.7**	**-0.7**
	1.4nm,0.3s,baz=131,slow=6.1,SNR=4.5						
BVAR	**Borovoye Array**	**68.71**	**338**	P	**P**	**03 51 46.9**	**+0.4**
BVAR	**Borovoye Array**	**68.71**	**338**	P	**P**	**03 51 46.9**	**+0.4**
	2.1nm,0.5s,baz=137,slow=8.4,SNR=7.7						
ABKAR	**Akbulak array**	**70.53**	**330**	*e*P	**P**	**03 51 58.0**	**+0.2**
	3.2nm,0.6s						
PETK	**Petropavlovsk-**	**75.64**	**29**	P	**P**	**03 52 27.4**	**-0.5**
PETK	**Petropavlovsk-**	**75.64**	**29**	P	**P**	**03 52 27.4**	**-0.5**
	2.2nm,0.6s,baz=182,slow=3.9,SNR=5.2						
QSPA	**South Pole Qui**	**81.16**	**180**	P	**P**	**03 52 60.0**	**+1.6**
QSPA	**South Pole Qui**	**81.16**	**180**	P	**P**	**03 52 60.0**	**+1.6**
	2.4nm,0.7s,baz=207,slow=1.5,SNR=6.1						
SNAA	**Sanae**	**87.50**	**197**	*e*P	**P**	**03 53 32.5**	**+2.1**
	7.6nm,1.4s						
SNAA	**Sanae**	**87.50**	**197**	P	**P**	**03 53 32.9**	**+2.5**
	1.3nm,1.0s,baz=64,slow=2.6,SNR=7.8						
AKASG	**Malin Array Be**	**88.56**	**322**	LR	LR	04 39 05.7	
	comp=Z,157nm,21.4s,baz=25,slow=40						
GERES	**GERESS Array B**	**98.15**	**318**	LR	LR	04 47 19.4	
	comp=Z,125nm,19.8s,baz=64,slow=41						
426A	**McDonald Obser**	**144.51**	**48**	⇓P	**PKPdf**	**04 00 20.5**	**+0.2**
	baz=144						
Z29A	**Hungry Hill Ra**	**144.69**	**42**	⇑P	**PKPdf**	**04 00 20.1**	**-0.1**
	baz=144,SNR=5.1						
526A	**Mary Lane Ranc**	**144.78**	**49**	⇑P	**PKPdf**	**04 00 21.6**	**+1.0**
	baz=145						
Y30A	**Stafford Cattl**	**144.84**	**41**	⇑P	**PKPdf**	**04 00 21.5**	**+1.0**
	baz=145						
427A	**Hayter Ranch,**	**144.87**	**47**	⇑P	**PKPdf**	**04 00 21.6**	**+0.9**
	baz=145						
X31A	**McDonald Ranch**	**144.94**	**39**	⇑P	**PKPdf**	**04 00 21.1**	**+0.6**
	baz=145,SNR=8.6						
626A	**Big Bend Ranch**	**145.00**	**50**	⇑P	**PKPdf**	**04 00 21.5**	**+0.5**
	baz=145						
328A	**Wristen Ranch,**	**145.01**	**46**	⇓P	**PKPdf**	**04 00 21.5**	**+0.6**
	baz=145,SNR=5.8						
Z30A	**Sanderson Ranc**	**145.05**	**42**	⇑P	**PKPdf**	**04 00 21.2**	**+0.4**
	baz=145,SNR=6.2						
527A	**Woodward Ranch**	**145.09**	**49**	⇑P	**PKPdf**	**04 00 22.1**	**+1.0**
	baz=145						
Y31A	**Rekieta Farm,**	**145.19**	**40**	⇑P	**PKPdf**	**04 00 21.4**	**+0.3**
	baz=145						
229A	**Bryant Ranch,**	**145.38**	**44**	⇑P	**PKPab**	**04 00 22.3**	**+0.8**
	baz=145						
428A	**Kincaid Ranch,**	**145.46**	**47**	⇓P	**PKPab**	**04 00 23.6**	**+1.7**
	baz=145,SNR=13						
TXAR	**Lajitas Array**	**145.46**	**50**	PKPbc	**PKPab**	**04 00 23.4**	**+1.5**
TXAR	**Lajitas Array**	**145.46**	**50**	PKPbc	**PKPab**	**04 00 23.4**	**+1.5**
	2.4nm,0.9s,baz=262,slow=1.3,SNR=20						
329A	**Wagon Wheel Ra**	**145.54**	**45**	⇑P	**PKPab**	**04 00 23.1**	**+0.9**
	baz=145,SNR=7.9						
130A	**Snyder**	**145.58**	**43**	⇑P	**PKPab**	**04 00 23.4**	**+1.1**
	baz=145						
WMOK	**Wichita Mounta**	**145.60**	**38**	*e*PKPdf	**PKPab**	**04 00 22.6**	**+0.3**
627A	**Terlingua Ranc**	**145.61**	**49**	⇑P	**PKPab**	**04 00 23.9**	**+1.3**
	baz=145,SNR=10						
Z31A	**Sharp Cattle R**	**145.68**	**41**	⇓P	**PKPab**	**04 00 23.7**	**+1.1**
	baz=146,SNR=6.1						
528A	**Cox Ranch, San**	**145.69**	**48**	⇑P	**PKPab**	**04 00 24.0**	**+1.2**
	baz=146						
Y32A	**R-V Farms, Ver**	**145.69**	**39**	⇓P	**PKPab**	**04 00 23.9**	**+1.3**
	baz=146,SNR=9.1						
230A	**Sterling City**	**145.91**	**44**	⇑P	**PKPab**	**04 00 24.5**	**+1.0**
	baz=146,SNR=7.5						
131A	**Roby**	**145.92**	**42**	⇑P	**PKPab**	**04 00 24.8**	**+1.3**
	baz=146						
628A	**Black Gap, Mar**	**145.97**	**49**	⇓P	**PKPab**	**04 00 24.8**	**+1.0**
	baz=146,SNR=13						
429A	**Davenport Ranc**	**146.08**	**46**	⇓P	**PKPab**	**04 00 24.9**	**+0.7**
	baz=146,SNR=9.0						
Z32A	**Haskell**	**146.11**	**40**	⇓P	**PKPab**	**04 00 26.0**	**+1.8**
	baz=146,SNR=16						
529A	**Stev Forest Ra**	**146.12**	**47**	⇓P	**PKPab**	**04 00 25.9**	**+1.5**
	baz=146						
330A	**Mertzon**	**146.15**	**45**	⇓P	**PKPab**	**04 00 25.6**	**+1.2**
	baz=146						
ABTX	**Abilene, Hawle**	**146.44**	**41**	⇓P	**PKPab**	**04 00 26.2**	**+0.7**
	baz=146						
430A	**Baggett Ranch,**	**146.46**	**46**	⇓P	**PKPab**	**04 00 26.4**	**+0.7**
	baz=146						
331A	**San Angelo**	**146.72**	**44**	⇑P	**PKPab**	**04 00 27.0**	**+0.4**
	baz=146						
530A	**J-C Ranch, Com**	**146.75**	**47**	⇑P	**PKPab**	**04 00 27.3**	**+0.5**
	baz=147,SNR=13						
431A	**Sonora**	**146.96**	**45**	⇓P	**PKPab**	**04 00 27.8**	**+0.2**
	baz=147						
332A	**Millersview**	**147.14**	**43**	⇑P	**PKPab**	**04 00 28.3**	**+0.1**
	baz=147,SNR=8.3						
531A	**Rocksprings**	**147.30**	**46**	⇑P	**PKPab**	**04 00 29.4**	**+0.4**
	baz=147						
432A	**Menard**	**147.41**	**44**	⇑P	**PKPab**	**04 00 29.9**	**+0.6**
	baz=147						
JCT	**Junction City**	**147.64**	**45**	⇓P	**PKPab**	**04 00 29.4**	**-0.9**
	baz=147						
632A	**Uvalde**	**148.22**	**46**	⇑P	**PKPab**	**04 00 31.4**	**-1.2**
	baz=148						
MIAR	**Mount Ida**	**148.71**	**32**	*e*PKPbc	**PKPbc**	**04 00 31.4**	**+0.8**
WVT	**Waverly**	**150.03**	**23**	*e*PKPbc	**PKPbc**	**04 00 34.6**	**+0.7**
TKL	**Tuckaleechee C**	**151.84**	**17**	*e*PKPbc	**PKPbc**	**04 00 38.9**	**+0.8**

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*AUST **04** 03:57:30.1±0.0, 6.°20S×121.°94E, h68km, Error ellipse: s-maj=1.5km s-min=0.9km az=39.0*
*IDC **04** 03:58:21.1±1.3, 9.°40S×125.°24E, h0km, mb3.5/2, mb1 3.9/5, mb1mx3.7/20, mbtmp3.7/5, ML3.9/3, Error ellipse: s-maj=87.4km s-min=24.4km az=70.0*
ISC 04 03:58:25.7±1.1, **9.°58S**±0.°10×**125.°3E**±0.°2, **h35km, n11, σ1s.76**/10, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	**Waingapu**	**4.95**	**269**	S	Sn	03 59 40.1	-54
	baz=3.8,SNR=3.6						
MTN	**Manton Dam**	**6.56**	**120**	P	Pn	04 00 07.1	+7.3
	baz=11,SNR=25						
KNRA	**Kununurra**	**6.93**	**151**	P	Pn	04 00 09.4	+4.6
	baz=12,SNR=6.4						
KDU	**Kakadu**	**7.67**	**114**	P	Pn	04 00 23.2	+8.3
	baz=12,SNR=6.3						
FITZ	**Fitzroy Crossi**	**8.48**	**178**	Pn	**Pn**	**04 00 27.4**	**+1.3**
	1.3nm,0.3s,baz=6.0,slow=12,SNR=47						
FITZ				Sn	**Sn**	**04 01 58.8**	**-1.7**
	1.1nm,0.3s,baz=54,slow=19,SNR=7.3						
FITZ	**Fitzroy Crossi**	**8.48**	**178**	P	**Pn**	**04 00 27.2**	**+1.2**
	baz=12,SNR=3.3						
WRA	**Warramunga Arr**	**13.49**	**141**	Pn	**Pn**	**04 01 36.3**	**+1.6**
	0.7nm,0.3s,baz=315,slow=15,SNR=10						
WRA				Sn	**Sn**	**04 04 02.3**	**-1.3**
	0.6nm,0.3s,baz=312,slow=22,SNR=5.8						
ASAR	**Alice Springs**	**16.23**	**151**	Pn	**Pn**	**04 02 12.7**	**+1.4**
	0.3nm,0.3s,baz=322,slow=11,SNR=19						
ASAR				Sn	**Sn**	**04 05 08.3**	**-2.0**
	0.2nm,0.3s,baz=316,slow=22,SNR=7.5						
SONM	**Songino Array**	**59.58**	**345**	P	**P**	**04 08 25.3**	**-0.7**
	0.4nm,0.7s,baz=159,slow=4.5,SNR=2.3						
MKAR	**Makanchi Array**	**67.96**	**330**	P	**P**	**04 09 19.9**	**-1.2**
	0.5nm,0.8s,baz=134,slow=6.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**124.70**	**279**	PKP	**PKPdf**	**04 17 24.5**	**+1.8**
	0.2nm,0.7s,baz=87,slow=2.0,SNR=3.2						

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*ISK **04** 04:02:16.4, 37.°85N×43.°06E, h5km, MD3.6*
*CSEM **04** 04:02:17.4±0.2, 37.°87N×43.°06E, h2km, MD3.4, Error ellipse: s-maj=5.8km s-min=4.5km az=43.0*
*DDA **04** 04:02:18.6, 38.°01N×43.°12E, h20km, MD3.4*
ISC 04 04:02:17.3±1.2, **37.°95N**±0.°03×**43.°14E**±0.°03, **h13km**±10km, **n36, σ1s.14**/47, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.36**	**351**	*i* P	**Pg**	**04 02 24.9**	**+0.1**
GEVA				*i* S	**Sb**	**04 02 31.6**	**+0.1**
GEVA	**Gevas**	**0.36**	**351**	*i* P	**Pg**	**04 02 24.9**	**+0.1**
GEVA				*i* S	**Sb**	**04 02 31.6**	**+0.1**
HAKT	**HAKKARI**	**0.60**	**131**	*i* P	**Pb**	**04 02 28.2**	**-1.6**
HAKT				*i* S	**Sb**	**04 02 39.0**	**+0.8**
HAKT	**HAKKARI**	**0.60**	**131**	*i* P	**Pb**	**04 02 28.2**	**-1.6**
HAKT				*i* S	**Sb**	**04 02 39.0**	**+0.8**
TVAN	**Van**	**0.61**	**20**	*i* P	**Pn**	**04 02 31.1**	**-0.8**
TVAN	**Van**	**0.61**	**20**	*i* P	**Pn**	**04 02 31.1**	**-0.8**
VANB	**Van**	**0.67**	**17**	*e*PG	**Pn**	**04 02 32.2**	**-0.5**
VANB				*e*SG	**Sn**	**04 02 44.0**	**+0.9**
VANB	**Van**	**0.67**	**17**	*e*Pg	**Pn**	**04 02 32.2**	**-0.5**
VANB				*e*Sg	**Sn**	**04 02 44.0**	**+0.9**
SIRN	**S˜–rnak**	**0.73**	**232**	*i* P	**Pn**	**04 02 35.4**	**+2.0**
SIRN				*i* S	**Sn**	**04 02 45.1**	**+0.6**
CUKT	**Cukurca**	**0.80**	**152**	*e*PG	**Pb**	**04 02 31.5**	**-1.6**
CUKT				*e*SG	**Sb**	**04 02 43.0**	**-0.8**
CUKT	**Cukurca**	**0.80**	**152**	*e*Pg	**Pb**	**04 02 31.5**	**-1.6**
CUKT				*e*Sg	**Sb**	**04 02 43.0**	**-0.8**
TATV	**Tatvan**	**0.88**	**309**	*i* P	**Pb**	**04 02 33.1**	**-1.5**
TATV				*i* S	**Sn**	**04 02 46.6**	**-1.7**
TATV	**Tatvan**	**0.88**	**309**	*i* P	**Pb**	**04 02 33.1**	**-1.5**
TATV				*i* S	**Sn**	**04 02 46.6**	**-1.7**
CLDR	**Caldiran**	**1.34**	**27**	*e*PN	**Pg**	**04 02 45.1**	**+2.0**
CLDR	**Caldiran**	**1.34**	**27**	*e*Pn	**Pg**	**04 02 45.1**	**+2.0**
BEST	**Besiri**	**1.48**	**268**	*i* P	**Pn**	**04 02 43.6**	**-0.1**
BEST				*i* S	**Sg**	**04 03 04.4**	**-0.5**
VRTB	**Varto-Mus**	**1.79**	**313**	*e*PN	**Pb**	**04 02 49.7**	**-0.3**
VRTB	**Varto-Mus**	**1.79**	**313**	*e*Pn	**Pb**	**04 02 49.7**	**-0.3**
BNGL	**BINGOL**	**1.85**	**303**	*i* P	**Pn**	**04 02 48.3**	**-0.6**
BNGL				*i* S	**Sg**	**04 03 16.4**	**-0.5**
MARD	**Mardin**	**1.98**	**252**	*i* P	**Pn**	**04 02 50.2**	**-0.3**
MARD				*i* S	**Sn**	**04 03 15.4**	**+0.2**
BNGB	**Bingˆ¶l**	**2.19**	**299**	*e*PN	**Pb**	**04 02 55.4**	**-1.4**
BINT	**Bingol**	**2.27**	**295**	*e*Pn	**Pn**	**04 02 55.4**	**+0.7**
DIY	**Diyarbakir**	**2.30**	**270**	*e*PN	**Pn**	**04 02 55.7**	**+0.7**
DIY	**Diyarbakir**	**2.30**	**270**	*e*Pn	**Pn**	**04 02 55.7**	**+0.7**
EZM	**Erzurum**	**2.39**	**325**	*e*PN	**Pb**	**04 02 59.1**	**-1.3**
GNI	**Garni**	**2.53**	**29**	*e*PN	**Pb**	**04 03 02.2**	**-0.4**
GNI	**Garni**	**2.53**	**29**	*e*Pn	**Pb**	**04 03 02.2**	**-0.4**
SVRC	**Sivrice-ELAZID**	**3.05**	**279**	*e*PN	**Pn**	**04 03 06.4**	**+1.1**
SVRC	**Sivrice-ELAZID**	**3.05**	**279**	*e*Pn	**Pn**	**04 03 06.4**	**+1.1**
PTK	**Pertek**	**3.09**	**289**	*e*PN	**Pn**	**04 03 07.3**	**+1.4**
PTK	**Pertek**	**3.09**	**289**	*e*Pn	**Pn**	**04 03 07.3**	**+1.4**
EZC	**Erzincan**	**3.46**	**303**	*e*PN	Pn	04 03 13.6	+2.6
EZC	**Erzincan**	**3.46**	**303**	*e*Pn	Pn	04 03 13.6	+2.6
MYA	**Malataya**	**3.73**	**277**	*e*PN	**Pn**	**04 03 16.1**	**+1.4**
MYA	**Malataya**	**3.73**	**277**	*e*Pn	**Pn**	**04 03 16.1**	**+1.4**
BHD	**Baghdad**	**4.78**	**167**	*e*x	Pn	04 03 22.0	-7.0
BHD				*e*x	x	04 04 12.0	

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*NNC **04** 04:09:34.3±1.6, 40.°66N×78.°85E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=12.3km s-min=6.5km az=171.0*
ISC 04 04:09:36.5±4.4, **40.°7N**±0.°3×**78.°7E**±0.°1, **h10km, n18, σ0s.76**/13, **7C-7D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**2.42**	**311**	P	**Pg**	**04 10 23.2**	**+0.2**
	SNR=5.7						
KNDC	**Almaty**	**2.84**	**333**	⇓Pg	**Pb**	**04 10 28.1**	**+0.8**
	36nm,0.6s						
KNDC				⇑Lg	Lg	04 11 07.5	
	480nm,0.9s						
KZA	**Kyzart**	**2.95**	**299**	P	**Pg**	**04 10 34.0**	**+0.9**
	SNR=12						
TKM2	**Tokmak 2**	**3.23**	**315**	⇓Pg	**Pb**	**04 10 33.6**	**-0.3**
	16nm,0.5s						
TKM2				⇑Lg	Lg	04 11 20.8	
	54nm,0.6s						
TKM2	**Tokmak 2**	**3.23**	**315**	P	**Pb**	**04 10 33.9**	**0.0**
	SNR=11						
KBK	**Karagaybulak**	**3.44**	**306**	P	**Pb**	**04 10 36.8**	**-0.7**
	SNR=6.5						
UCH	**Uchtor**	**3.51**	**297**	P	**Pg**	**04 10 44.2**	**+0.4**
	SNR=8.7						
AAK	**Ala-Archa**	**3.71**	**303**	P	**Pg**	**04 10 48.5**	**+1.0**
	SNR=14						
AML	**Almayashu**	**4.04**	**293**	P	**Pg**	**04 10 54.3**	**+0.4**
	SNR=28						
USP	**Ospenovka**	**4.06**	**311**	P	**Pg**	**04 10 52.9**	**-1.4**
	SNR=10						
EKS2	**Erkin-Say**	**4.19**	**300**	P	**Pg**	**04 10 56.4**	**-0.3**
	SNR=40						
KK31	**Karatay Array**	**6.58**	**294**	Pg	Pg	04 11 37.1	-5.3
	4.9nm,0.8s,baz=116,slow=16,SNR=28						
KK31				⇑Lg	Lg	04 13 06.0	
	3.0nm,0.5s,baz=108,slow=26,SNR=5.2						
MK31	**Makanchi Array**	**6.63**	**22**	⇑Pn	**Pn**	**04 11 13.6**	**-0.4**
	0.4nm,0.3s,baz=200,slow=13,SNR=7.5						
MK31				⇓Pg	Pb	04 11 34.8	+2.9
	0.4nm,0.2s						
MK31				⇑Sn	**Sn**	**04 12 30.0**	**+0.4**
	3.5nm,0.6s,baz=74,slow=29,SNR=3.3						
MK31				⇓Lg	Lg	04 13 04.0	
	2.7nm,0.5s						
KURK	**Kurchatov**	**10.03**	**360**	⇓Lg	Lg	04 14 51.4	
	31nm,1.3s						
VOSK	**Vostochnaya**	**13.14**	**339**	⇓Lg	Lg	04 16 33.9	
	10nm,1.4s						
BVA0	**Borovoye Array**	**13.58**	**338**	⇑Lg	Lg	04 16 47.6	
	0.3nm,0.5s,baz=163,slow=33,SNR=3.5						
BRVK	**Borovoye**	**13.64**	**338**	⇓Lg	Lg	04 16 49.1	
	8.3nm,1.2s						
ZRNK	**Zerenda**	**13.93**	**335**	⇑Lg	Lg	04 16 58.6	
	8.0nm,1.4s						

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*ISK **04** 04:15:36.8, 38.°32N×39.°00E, h12km, MD2.7*
*CSEM **04** 04:15:36.6±0.4, 38.°28N×39.°01E, h10km, MD2.6, Error ellipse: s-maj=11.1km s-min=4.5km az=156.0*
*DDA **04** 04:15:37.7, 38.°35N×39.°01E, h7km, MD2.6*
*ISCJB **04** 04:15:38.2±0.7, 38.°36N±0.°05×38.°99E±0.°04, h2km±9km, Error ellipse: s-maj=8.9km s-min=4.9km az=161.3*
ISC 04 04:15:38.0±1.1, **38.°37N**±0.°04×**38.°99E**±0.°03, **h10km**±8km, **n13, σ0s.58**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.13**	**357**	*i* P	**Pg**	**04 15 41.2**	**0.0**
ELZG				*i* S	**Sg**	**04 15 43.8**	**+0.4**
ELZG	**Elazig**	**0.13**	**357**	*i* P	**Pg**	**04 15 41.2**	**0.0**
ELZG				*i* S	**Sg**	**04 15 43.8**	**+0.4**
SVRC	**Sivrice-ELAZID**	**0.25**	**88**	*e*PG	**Pg**	**04 15 42.7**	**-0.4**
SVRC				*e*SG	**Sg**	**04 15 46.4**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.25**	**88**	*e*Pg	**Pg**	**04 15 42.7**	**-0.4**
SVRC				*e*Sg	**Sg**	**04 15 46.4**	**-0.1**
MYA	**Malataya**	**0.45**	**265**	*e*PG	**Pg**	**04 15 45.7**	**-1.1**
MYA				*e*SG	**Sg**	**04 15 53.3**	**+0.5**
MYA	**Malataya**	**0.45**	**265**	*e*Pg	**Pg**	**04 15 45.7**	**-1.1**
MYA				*e*Sg	**Sg**	**04 15 53.3**	**+0.5**
PTK	**Pertek**	**0.61**	**31**	*e*PG	**Pg**	**04 15 50.1**	**+0.2**
PTK				*e*SG	**Sb**	**04 15 59.4**	**-0.2**
PTK	**Pertek**	**0.61**	**31**	*e*Pg	**Pg**	**04 15 50.1**	**+0.2**
PTK				*e*Sg	**Sb**	**04 15 59.4**	**-0.2**
AKCD	**Akcadag**	**0.84**	**265**	*i* P	**Pg**	**04 15 53.7**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKCD				*i* S	Sb	04 16 06.2	-0.2
AKCD	Akcadag	0.84	265	*i* P	Pg	04 15 53.7	-0.6
AKCD				*i* S	Sb	04 16 06.2	-0.2
ILIC	ilic-Erzincan	1.13	343	*e*PN	Pb	04 15 59.8	0.0
ILIC	ilic-Erzincan	1.13	343	*e*Pn	Pb	04 15 59.8	0.0
GZT	Gaziantep	1.52	229	*i* P	Pg	04 16 08.2	+1.1
GZT				*i* S	Sg	04 16 27.8	+1.0

IDC 04 04:43:15.5±3.1**, 16°.02S×175°.15W, h0km, mb3.9**/3**, mb1 4.2**/4**, mb1mx3.8**/17**, mbtmp3.9**/4**, ML2.5**/1**, MS3.7**/13**, Ms1 3.7**/13**, ms1mx3.6**/28**, Error ellipse: s-maj=216.7km s-min=24.6km az=152.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.88	58	Pn	Pn	04 44 15.7	-0.8
	18nm,0.3s,baz=78,slow=1.9,SNR=26						
AFI				Sn	Sn	04 44 57.3	-5.5
	38nm,0.3s,baz=142,slow=21,SNR=10						
AFI				LR	LR	04 45 35.5	
	comp=Z,840nm,21.2s,baz=237,slow=36						
RAO	Raoul Island	13.41	190	LR	LR	04 50 24.8	
	comp=Z,252nm,20.4s,baz=280,slow=32						
DZM	Mont Dzumac	18.41	248	*e*LR	LR	04 51 51.9	
	633nm,25.2s						
DZM	Mont Dzumac	18.41	248	LR	LR	04 53 05.7	
	comp=Z,396nm,19.5s,baz=32,slow=32						
URZ	Urewera	23.18	196	LR	LR	04 56 34.7	
	comp=Z,270nm,20.3s,baz=27,slow=34						
PPT2	Papeete2	24.52	97	*e*LQ	LQ	04 53 34.8	
	718nm,26.0s						
PPT2				*e*LR	LR	04 54 32.7	
	111nm,25.5s						
HNR	Honiara	25.14	282	LR	LR	04 56 49.7	
	comp=Z,249nm,20.0s,baz=315,slow=32						
TBI	Tubuai	25.23	111	*e*LQ	LQ	04 53 51.9	
	608nm,27.2s						
TBI				*e*LR	LR	04 54 55.2	
	132nm,29.2s						
STKA	Stephens Creek	42.27	240	LR	LR	05 08 16.4	
	comp=Z,132nm,18.5s,baz=27,slow=36						
WRA	Warramunga Arr	48.06	257	P	P	04 51 56.3	-0.9
	0.7nm,1.0s,baz=94,slow=9.4,SNR=6.0						
ASAR	Alice Springs	48.32	252	P	P	04 51 59.5	+0.4
	2.0nm,0.7s,baz=86,slow=7.8,SNR=12						
FITZ	Fitzroy Crossi	56.44	259	LR	LR	05 14 40.7	
	comp=Z,58nm,20.7s,baz=83,slow=33						
NWAO	Narrogin (SRO)	62.85	241	LR	LR	05 21 21.1	
	comp=Z,115nm,20.5s,baz=192,slow=36						
KAPI	Kappang	64.71	272	LR	LR	05 20 10.0	
	comp=Z,39nm,19.7s,baz=14,slow=34						
MJAR	Matsushiro Arr	68.34	321	LR	LR	05 19 03.2	
	comp=Z,36nm,19.1s,baz=270,slow=31						
PETK	Petropavlovsk-	72.72	343	LR	LR	05 20 20.7	
	comp=Z,43nm,20.0s,baz=266,slow=31						
KSRS	Korea Array	75.44	316	LR	LR	05 23 50.8	
	comp=Z,35nm,19.2s,baz=146,slow=32						
NVAR	Mina Array Bea	75.92	43	P	P	04 55 07.3	+2.9
	0.2nm,0.2s,baz=213,slow=6.5,SNR=2.0						
USRK	Ussuriysk Arra	76.87	324	LR	LR	05 24 10.5	
	comp=Z,93nm,21.7s,baz=3.1,slow=32						
TXAR	Lajitas Array	82.36	57	P	P	04 55 44.0	+4.3
	1.3nm,1.0s,baz=220,slow=4.9,SNR=10.0						
PDAR	Pinedale Array	83.85	42	P	P	04 55 47.7	+0.3
	0.5nm,0.7s,baz=224,slow=4.1,SNR=5.8						
BRTR	Keskin Array B	145.55	319	PKPbc	PKPdf	05 02 55.5	-0.7
	2.0nm,0.9s,baz=46,slow=6.6,SNR=11						

IDC 04 05:06:16.2±3.0**, 4°.13S×142°.60E, h0km, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.7**/17**, mbtmp3.7**/4**, ML4.2**/1**, Error ellipse: s-maj=108.1km s-min=30.5km az=87.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.66	206	P	Pn	05 10 23.9	+0.1
	0.8nm,0.3s,baz=30,slow=13,SNR=12						
ASAR	Alice Springs	21.16	203	P	P	05 11 03.2	0.0
	1.8nm,0.7s,baz=33,slow=9.8,SNR=17						
STKA	Stephens Creek	27.62	182	P	P	05 12 05.5	0.0
	1.4nm,0.8s,baz=24,slow=8.9,SNR=4.0						
MKAR	Makanchi Array	73.30	321	P	P	05 17 49.6	0.0
	0.1nm,0.5s,baz=101,slow=7.5,SNR=3.7						

*CASC **04** 05:17:50.4, 13°.90N×89°.74W, h1km, MD4.4, ML4.3, mb4.7(NEIC)*

*IDC **04** 05:17:50.4±0.8, 13°.94N×89°.61W, h0km, mb4.1/12, mb1 4.4/13, mb1mx4.2/25, mbtmp4.2/13, ML4.3/1, MS4.0/17, Ms1 4.0/17, ms1mx3.8/41, Error ellipse: s-maj=29.2km s-min=14.4km az=72.0*

*ISCJB **04** 05:17:50.8±0.4, 13°.90N±0°.04×89°.74W±0°.03, h11km±3km, mb4.5/55, MS4.1/18, Error ellipse: s-maj=6.7km s-min=3.8km az=31.3*

*NEIC **04** 05:17:57.2±1.2, 13°.93N×89°.71W, h49km±11km, mb4.7/49, MD4.0(SNET), Error ellipse: s-maj=13.0km s-min=5.7km az=56.0*

NEIC Felt [V] at Atiquizaya and [II] at San Salvador. Also felt at Sonsonate. Felt at Guatemala and Jalapa, Guatemala.

ISC 04 05:17:51.7±0.8**, 13°.90N**±0°.03×**89°.70W**±0°.03**, h11**km±5km**, n424,** σ1s**.04**/414**, mb4.6**/55**, MS4.1**/18**, 153C-146D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTR	El Retiro	0.06	95	⇑*i*P	Pg	05 17 53.2	-0.9
SBLS	San Blas	0.10	128	⇑*i*P	Pg	05 17 53.8	-0.9
SNJE	San Jose	0.10	109	⇑*i*P	Pg	05 17 54.1	-0.5
SONS	Sonsonate	0.16	184	⇑*e*P	Pg	05 17 54.0	-1.4
	comp=Z,67μm,0.7s						
SONS				*e*S	Sg	05 17 57.0	-0.9
SONS				AML	AML	05 18 01.1	
	comp=Z,67μm,0.7s						
RBDL	Robledal	0.21	5	⇑*i*P	Pg	05 17 55.4	-0.9
BOQS	Boqueron	0.45	112	⇓*i*P	Pg	05 18 00.6	0.0
SNET	Serv Nac Est T	0.51	115	*e*P	Pg	05 18 01.3	-0.4
SNET				AML	AML	05 18 25.8	
	comp=Z,9μm,0.7s						
LFU	La Fuente	0.59	105	⇑*e*P	Pg	05 18 03.1	-0.2
MTO2	Montecristo 2	0.60	34	⇑*i*P	Pg	05 18 02.5	-0.9
LBRS	Las Brisas	0.66	104	⇑*i*P	Pg	05 18 04.4	-0.2
LFRS	El Faro	0.68	114	⇑*e*P	Pg	05 18 04.5	-0.5
SNVI	San Vicente	0.89	109	*e*P	Pg	05 18 08.5	-0.4
NBG	Las Nubes	0.92	318	*e*P	Pg	05 18 08.6	-1.0
NBG				*e*S	Sb	05 18 22.7	+0.3
PCG	Pacaya	1.00	299	*e*P	Pg	05 18 09.8	-1.3
PCG				*e*S	Sg	05 18 24.2	0.0
MRL	Marmol	1.16	1	*e*P	Pg	05 18 13.3	-0.7
FUG	Fuego 3	1.23	296	*e*P	Pb	05 18 13.4	-1.8
CAHU	Cacacuatique	1.46	95	⇑*e*P	Pn	05 18 17.7	-0.5
VSM	San Miguel	1.47	109	*e*P	Pn	05 18 18.4	0.0
BLLM	Bellamira	1.50	108	*i* P	Pn	05 18 18.8	+0.2
JAT	Jato	1.92	283	*e*P	Pn	05 18 25.6	+1.2
JAT				*e*S	Sn	05 18 47.0	-1.6
CNCH	Conchagua	1.92	109	*e*P	Pb	05 18 26.3	-0.7
TGUH	Tegucigalpa,Un	2.37	86	*e*Pn	Pn	05 18 31.5	+1.0
TGUH				*e*Sn	Sb	05 19 02.8	-0.9
TGUH	Tegucigalpa,Un	2.37	86	*e*P	Pn	05 18 30.5	0.0
JTS	JuntasAbangare	5.87	127	*e*Pn	Pn	05 19 23.2	+4.4
	comp=Z,98nm,1.3s						
TEIG	Tepich	6.44	12	*e*Pn	Pn	05 19 27.1	+0.5
TEIG				*e*Sn	Sn	05 20 37.0	-3.1
TEIG				Lg	Lg	05 21 15.7	
TEIG	Tepich	6.44	12	Pn	Pn	05 19 27.0	+0.5
	comp=Z,7.2nm,0.3s,baz=179,slow=5.6,SNR=34						
TEIG				Lg	Lg	05 21 15.7	
	comp=Z,8.5nm,0.3s,baz=280,slow=23,SNR=6.3						
TEIG				LR	LR	05 21 43.8	
	comp=Z,464nm,18.6s,baz=1.7,slow=37						
BCIP	Isla Barro Col	10.75	115	*e*Pn	Pn	05 20 29.9	+4.1
BCIP				*e*Sn	Sn	05 22 22.1	-4.2
OTAV	Otavalo	17.56	140	*e*P	P	05 22 00.5	+2.2
	comp=Z,12nm,2.3s						
732A	Laxson Ranch,	17.57	329	⇓P	P	05 21 59.4	+1.7
	baz=18,SNR=13						
632A	Uvalde	18.12	331	⇓P	P	05 22 04.9	+1.0
	baz=18,SNR=15						
VBMS	Vicksburg	18.25	358	*e*P	P	05 22 06.2	+1.0
	comp=Z,56nm,0.8s						
TIGA	Tifton	18.34	17	⇓P	P	05 22 07.7	+1.5
	baz=18						
631A	Perdido Creek	18.43	329	⇓P	Pn	05 22 07.9	+0.6
	baz=18,SNR=9.8						
532A	Rocksprings	18.69	331	⇑P	Pn	05 22 12.0	+1.4
	baz=19,SNR=20						
JCT	Junction City	18.94	332	⇓P	Pn	05 22 14.2	+0.6
	baz=19						
531A	Rocksprings	19.03	330	⇓P	Pn	05 22 15.9	+1.3
	baz=19,SNR=8.0						
LRAL	Lakeview Retre	19.21	7	*e*P	Pn	05 22 18.5	+1.8
432A	Menard	19.28	333	⇓P	Pn	05 22 17.9	+0.2
	baz=19,SNR=22						
WHTX	Lake Whitney	19.36	340	⇑P	P	05 22 18.3	+0.9
	baz=19						
530A	J-C Ranch, Com	19.41	328	⇑P	Pn	05 22 19.7	+0.5
	baz=19,SNR=16						
431A	Sonora	19.49	331	⇑P	Pn	05 22 20.6	+0.4
	baz=20,SNR=18						
332A	Millersview	19.69	334	⇓P	Pn	05 22 22.6	+0.1
	baz=20,SNR=27						
628A	Black Gap, Mar	19.73	324	⇑P	Pn	05 22 24.1	+0.9
	baz=20,SNR=25						
529A	Stev Forest Ra	19.85	326	⇓P	Pn	05 22 24.7	+0.1
	baz=20,SNR=15						
430A	Baggett Ranch,	19.88	330	⇓P	P	05 22 24.5	+1.2
	baz=20,SNR=28						
331A	San Angelo	19.93	332	⇑P	P	05 22 24.7	+0.9
	baz=20,SNR=33						
627A	Terlingua Ranc	20.00	323	⇓P	Pn	05 22 26.4	+0.1
	baz=20,SNR=43						
RFTA	Plano	20.06	343	*e*P	Pn	05 22 27.3	+0.4
TXAR	Lajitas Array	20.08	322	P	Pn	05 22 26.9	-0.3
TXAR	Lajitas Array	20.08	322	P	Pn	05 22 26.9	-0.3
	comp=Z,18nm,1.1s,baz=146,slow=9.9,SNR=64						
429A	Davenport Ranc	20.08	328	⇑P	P	05 22 26.4	+1.0
	baz=20,SNR=19						
232A	Coleman	20.09	335	⇑P	P	05 22 26.0	+0.5
	baz=20,SNR=13						
528A	Cox Ranch, San	20.19	325	⇓P	P	05 22 27.4	+0.7
	baz=20						
GOGA	Godfrey	20.23	15	*e*Pn	Pn	05 22 30.7	+1.8
	comp=Z,12nm,1.2s						
330A	Mertzon	20.36	331	⇑P	P	05 22 29.0	+0.5
	baz=20,SNR=35						
231A	Bronte	20.41	333	⇓P	P	05 22 29.5	+0.5
	baz=20,SNR=28						
626A	Big Bend Ranch	20.52	322	⇓P	P	05 22 31.5	+1.3
	baz=20,SNR=40						
OXF	Oxford	20.52	1	*e*P	Pn	05 22 32.1	-0.2
	comp=Z,53nm,1.1s						
428A	Kincaid Ranch,	20.57	327	⇓P	P	05 22 32.0	+1.2
	baz=21,SNR=8.1						
527A	Woodward Ranch	20.64	324	⇑P	P	05 22 32.9	+1.3
	baz=21,SNR=30						
ABTX	Abilene, Hawle	20.73	336	⇑P	P	05 22 32.5	+0.1
	baz=21,SNR=11						
230A	Sterling City	20.73	332	⇓P	P	05 22 33.2	+0.7
	baz=21,SNR=7.2						
329A	Wagon Wheel Ra	20.82	329	⇑P	P	05 22 33.6	+0.1
	baz=21,SNR=9.6						
MIAR	Mount Ida	20.85	351	P	P	05 22 33.5	-0.2
	comp=Z,39nm,1.0s						
526A	Mary Lane Ranc	20.86	323	⇓P	P	05 22 35.1	+1.1
	baz=21,SNR=23						
427A	Hayter Ranch,	21.06	325	⇓P	P	05 22 36.6	+0.5
	baz=21,SNR=8.4						
131A	Roby	21.08	334	⇓P	P	05 22 36.4	+0.1
	baz=21,SNR=7.4						
229A	Bryant Ranch,	21.12	330	⇑P	P	05 22 36.7	-0.1
	baz=21						
328A	Wristen Ranch,	21.15	327	⇓P	P	05 22 36.9	-0.2
	baz=21,SNR=29						
130A	Snyder	21.26	333	⇑P	P	05 22 38.2	0.0
	baz=21						
Z32A	Haskell	21.27	337	⇓P	P	05 22 37.3	-0.9
	baz=21,SNR=24						
426A	McDonald Obser	21.27	324	⇑P	P	05 22 38.8	+0.2
	baz=21,SNR=21						
SWET	Sewanee	21.49	8	*e*P	P	05 22 42.3	+1.6
	comp=Z,20nm,1.0s						
327A	Balmorhea Ranc	21.51	326	⇓P	P	05 22 40.8	-0.1
	baz=22						
Z31A	Sharp Cattle R	21.54	336	⇓P	P	05 22 40.7	-0.4
	baz=22,SNR=22						
228A	UT Block 9, Go	21.63	329	⇑P	P	05 22 42.0	-0.3
	baz=22						
129A	Stewart Farms,	21.70	331	⇑P	P	05 22 42.9	-0.1
	baz=22						
326A	Caldwell Ranch	21.73	325	⇓P	P	05 22 43.5	+0.1
	baz=22,SNR=12						
Y32A	R-V Farms, Ver	21.88	338	⇑P	P	05 22 45.1	+0.4
	baz=22						
227A	Bennet, Jal	21.90	328	⇓P	P	05 22 45.8	+0.7
	baz=22						
425A	Indio Mountain	21.91	323	⇓P	P	05 22 46.0	+0.6
	baz=22,SNR=6.0						
Z30A	Sanderson Ranc	21.92	334	⇑P	P	05 22 45.0	-0.3
	baz=22						
LPIG	La Paz	21.94	301	LR	LR	05 31 18.9	
	comp=Z,85nm,18.2s,baz=105,slow=37						
CPCT	Cooper Cave	21.96	11	*e*P	P	05 22 51.1	+5.5
128A	Castleberry Fa	21.99	330	⇓P	P	05 22 45.0	-1.0
	baz=22,SNR=7.2						
Y31A	Rekieta Farm,	22.15	336	⇑P	P	05 22 47.1	-0.7
	baz=22,SNR=14						
Z29A	Hungry Hill Ra	22.15	332	⇓P	P	05 22 46.4	-1.4
	baz=22,SNR=7.1						
WVT	Waverly	22.20	4	*e*P	P	05 22 49.8	+1.6
	comp=Z,27nm,1.7s						
WMOK	Wichita Mounta	22.31	340	*e*P	P	05 22 47.1	-2.3
	comp=Z,15nm,1.1s						
TKL	Tuckaleechee C	22.31	13	*e*P	P	05 22 55.8	+6.4
TKL	Tuckaleechee C	22.31	13	P	P	05 22 50.5	+1.1
	comp=Z,2.9nm,0.9s,baz=184,slow=15,SNR=3.0						
TKL				LR	LR	05 32 28.0	
	comp=Z,496nm,18.8s,baz=199,slow=39						
Y30A	Stafford Cattl	22.33	335	⇓P	P	05 22 49.6	-0.1
	baz=22						
325A	Bean Ranch, Si	22.33	324	⇓P	P	05 22 50.5	+0.6
	baz=22,SNR=13						
226B	Tecolote Peak,	22.42	326	⇓P	P	05 22 51.7	+1.0
	baz=22,SNR=13						
KMSC	Kings Mountain	22.46	18	⇑P	P	05 22 52.1	+1.1
	baz=22						
Z28A	Tucker Farm, M	22.49	331	⇓P	P	05 22 50.8	-0.6
	baz=22,SNR=7.8						
TUL1	Tulsa	22.59	347	⇓P	P	05 22 52.7	+0.3
	baz=23						
GDL2	Guadalupe Moun	22.62	326	*e*P	P	05 22 52.1	-0.7
X31A	McDonald Ranch	22.63	338	⇑P	P	05 22 52.6	-0.3
	baz=23,SNR=10						
Y29A	Porterfield Fa	22.64	333	⇓P	P	05 22 53.0	-0.1
	baz=23,SNR=6.6						
324A	Moseley Ranch,	22.68	323	⇓P	P	05 22 53.6	0.0
	baz=23,SNR=11						
126A	Clayton Basin,	22.78	327	⇑P	P	05 22 54.7	+0.1
	baz=23						
225A	Deer Hill, Car	22.80	325	⇑P	P	05 22 55.2	+0.4
	baz=23,SNR=11						
X30A	Coker Ranch, T	22.82	336	⇑P	P	05 22 54.2	-0.6
	baz=23,SNR=19						
Z27A	Tatum	22.91	330	⇑P	P	05 22 55.3	-0.6
	baz=23						
Y28A	McKinney Farm,	22.94	332	⇑P	P	05 22 54.9	-1.3
	baz=23,SNR=8.8						
SJG	San Juan	23.02	76	LR	LR	05 31 45.8	
	comp=Z,394nm,21.7s,baz=286,slow=36						
W31A	Holland Ranch,	23.12	338	⇑P	P	05 22 57.8	-0.1
	baz=23						
125A	Gardner Draw,	23.13	326	⇑P	P	05 22 57.8	-0.3
	baz=23						
X29A	Tulia	23.16	334	⇓P	P	05 22 57.9	-0.5
	baz=23,SNR=13						
224A	Cornudas Mount	23.17	324	⇓P	P	05 22 58.7	+0.1
	baz=23,SNR=8.2						
MSTX	Muleshoe	23.23	332	⇑P	P	05 22 58.4	-0.8
	baz=23,SNR=6.8						
Z26A	Caprock	23.25	328	⇑P	P	05 22 59.3	-0.1
	baz=23						
Y27A	Causey	23.34	331	⇓P	P	05 22 59.7	-0.7
	baz=23,SNR=7.1						
W30A	Crocket Farms	23.35	337	⇑P	P	05 23 00.4	0.0
	baz=23						
X28A	Dimmitt	23.43	333	⇑P	P	05 23 00.4	-0.8
	baz=24						
AMTX	Amarillo	23.52	335	*e*P	P	05 23 01.4	-0.8
	comp=Z,124nm,1.9s						
AMTX	Amarillo	23.52	335	⇑P	P	05 23 02.1	-0.1
	baz=24,SNR=9.1						
MTP	Monte Pirata	23.58	77	*e*P	P	05 23 05.6	+2.9
	comp=Z,18nm,0.9s						
124A	Stringfield Ra	23.59	325	⇑P	P	05 23 02.6	-0.4
	baz=24,SNR=8.7						
V31A	Spring Creek L	23.61	339	⇑P	P	05 23 02.8	-0.1
	baz=24,SNR=12						
Z25A	Roswell	23.64	327	⇑P	P	05 23 03.0	-0.3
	baz=24,SNR=8.9						
223A	Chaparral, Ant	23.64	322	⇓P	P	05 23 02.4	-0.9
	baz=24						
Y26A	Elida	23.70	330	⇑P	P	05 23 03.3	-0.6
	baz=24						
W29A	Amraillo	23.72	335	⇑P	P	05 23 03.2	-0.8
	baz=24						
SIUC	Southern Illin	23.72	1	*e*P	P	05 23 05.5	+1.6
	comp=Z,51nm,1.1s						
V30A	Spur Ranch, Mi	23.90	338	⇑P	P	05 23 05.1	-0.7
	baz=24						
X27A	F and S Farms,	23.94	332	⇓P	P	05 23 05.5	-0.8
	baz=24						
123A	Bell Site, Whi	24.00	324	⇑P	P	05 23 06.5	-0.3
	baz=24						
Z24A	Sheeppen Canyo	24.02	326	⇓P	P	05 23 06.8	-0.2
	baz=24						
W28A	Vega	24.07	334	⇑P	P	05 23 06.9	-0.5
	baz=24						
222A	Williams Famil	24.12	322	⇑P	P	05 23 07.2	-0.7
	baz=24						
Y25A	Mesa, Roswell	24.13	328	⇑P	P	05 23 07.5	-0.5
	baz=24,SNR=11						
U31A	Nine Bar Ranch	24.15	340	⇑P	P	05 23 07.9	-0.2
	baz=24						
STVI	Saint Thomas	24.18	76	*e*P	P	05 23 09.6	+1.2
	comp=Z,37nm,0.8s						
X26A	CR and CF Fran	24.20	331	⇓P	P	05 23 08.1	-0.5
	baz=24						
W27A	Bowe Ranch, En	24.27	333	⇑P	P	05 23 08.2	-1.1
	baz=24,SNR=9.7						
V29A	Stinnett	24.32	336	⇑P	P	05 23 09.2	-0.4
	baz=24						
WCI	Wyandotte Cave	24.42	7	*e*P	P	05 23 13.2	+2.7
	comp=Z,12nm,0.8s						
Z23A	Rita Site, Whi	24.45	325	⇓P	P	05 23 10.4	-0.5
	baz=24						
221A	Mesquite Ranch	24.46	320	⇓P	P	05 23 11.1	0.0
	baz=24						
122A	Conniff Cattle	24.48	323	⇓P	P	05 23 11.2	0.0
	baz=24						
320A	Kipp Ranch, An	24.49	318	⇓P	P	05 23 11.9	+0.6
	baz=24						
V28A	Channing	24.50	335	⇑P	P	05 23 10.9	-0.4
	baz=24,SNR=11						
Y24A	Capitan	24.52	327	⇓P	P	05 23 11.6	0.0
	baz=25,SNR=12						
U30A	WK&E Inc. Balk	24.57	338	⇓P	P	05 23 12.6	+0.6
	baz=25						
X25A	Clemmons Ranch	24.59	329	⇓P	P	05 23 12.5	+0.2
	baz=25						
W26A	Owens Ranch, T	24.62	331	⇑P	P	05 23 12.6	+0.2
	baz=25						
U29A	Oasis Ranch, S	24.73	337	⇓P	P	05 23 14.2	+0.9
	baz=25						
T31A	Randall Ranch,	24.76	341	⇑P	P	05 23 13.7	+0.1
	baz=25						
V27A	Dan Oppiter Fa	24.76	334	⇑P	P	05 23 13.8	+0.1
	baz=25,SNR=6.5						
OLIL	Olney	24.77	3	*e*P	P	05 23 14.0	+0.4
	comp=Z,31nm,1.3s						
121A	Cookes Peak, D	24.83	321	⇑P	P	05 23 14.3	-0.1
	baz=25						
Y23A	Lovelace Mesa,	24.85	326	⇓P	P	05 23 15.3	+0.6
	baz=25,SNR=11						
Z22A	Elephant Butte	24.86	324	⇓P	P	05 23 15.1	+0.5
	baz=25						
220A	Playas Peak, P	24.86	319	⇓P	P	05 23 16.1	+1.4
	baz=25,SNR=10.0						
T30A	Plains	25.00	339	⇑P	P	05 23 16.7	+0.9
	baz=25						
319A	Douglas	25.00	317	⇓P	P	05 23 16.9	+0.9
	baz=25						
W25A	X Bar L Ranch,	25.05	330	⇓P	P	05 23 16.5	+0.2
	baz=25,SNR=11						
V26A	Tequesquite Ra	25.21	332	⇑P	P	05 23 18.6	+0.9
	baz=25,SNR=13						
U27A	Thompson Grove	25.32	335	⇑P	P	05 23 19.8	+1.0
	baz=25,SNR=14						
BNM	Barren Site	25.33	326	*e*P	P	05 23 19.5	+0.5
	comp=Z,5.8nm,1.2s						
Y22A	Socorro	25.36	325	⇑P	P	05 23 20.3	+1.1
	baz=25,SNR=5.7						
120A	U Bar Ranch, L	25.36	320	⇓P	P	05 23 19.9	+0.7
	baz=25						
T29A	Hugoton	25.36	338	⇓P	P	05 23 20.3	+1.2
	baz=25,SNR=5.5						
W24A	Lazy 6 Ranch,	25.51	329	⇓P	P	05 23 21.4	+0.8
	baz=26						
S30A	Montezuma	25.51	340	⇑P	P	05 23 21.1	+0.7
	baz=26,SNR=15						
V25A	Rancho No Teng	25.63	331	⇑P	P	05 23 22.4	+0.8
	baz=26,SNR=8.2						
T28A	Walsh	25.64	337	⇑P	P	05 23 22.5	+0.9
	baz=26						
U26A	Atchley Ranch,	25.69	333	⇓P	P	05 23 22.5	+0.3
	baz=26,SNR=14						
S29A	Ulysses	25.71	339	⇑P	P	05 23 23.3	+1.1
	baz=26,SNR=8.4						
Z20A	Nine Sixteen R	25.72	321	⇑P	P	05 23 22.9	+0.5
	baz=26						
Y21A	Point of Rocks	25.81	324	⇑P	P	05 23 23.7	+0.3
	baz=26						
T27A	Campo	25.83	336	⇓P	P	05 23 24.5	+1.2
	baz=26						
KSU1	Kansas State U	25.83	348	*e*P	P	05 23 25.5	+2.3
	comp=Z,8.2nm,0.9s						
V24A	Rampart Ranch,	25.85	330	⇑P	P	05 23 24.3	+0.5
	baz=26						
S28A	Manter	25.97	337	⇓P	P	05 23 25.2	+0.6
	baz=26						
U25A	Circle Dot Ran	25.99	332	⇓P	P	05 23 25.3	+0.4
	baz=26						
R30A	Dighton	26.03	341	⇓P	P	05 23 26.1	+1.0
	baz=26,SNR=14						
Y20A	Horse Springs,	26.15	323	⇓P	P	05 23 27.4	+1.0
	baz=26,SNR=9.8						
X21A	Alamocita Cree	26.19	324	⇑P	P	05 23 27.4	+0.6
	baz=26,SNR=6.6						
T26A	Comanche Natio	26.28	334	⇑P	P	05 23 28.8	+1.2
	baz=26						
V23A	Ortiz Mt. (NFS	26.32	329	⇑P	P	05 23 29.5	+1.5
	baz=26						
CBKS	Cedar Bluff	26.35	342	*e*P	P	05 23 30.8	+2.8
	comp=Z,24nm,1.4s						
R29A	Marienthal	26.44	340	⇑P	P	05 23 30.2	+1.3
	baz=26,SNR=10						
SFIN	Scholer Farm	26.48	4	⇓P	P	05 23 30.8	+1.8
	baz=26						
HDIL	Hopedale	26.56	1	*e*P	P	05 23 30.9	+1.1
R28A	Tribune	26.61	338	⇓P	P	05 23 30.1	-0.2
	baz=27,SNR=11						
T25A	Trinidad	26.61	333	⇑P	P	05 23 31.3	+0.8
	baz=27,SNR=6.6						
W21A	San Fidel	26.61	326	⇑P	P	05 23 31.4	+0.9
	baz=27						
S26A	Kim	26.61	335	⇑P	P	05 23 32.1	+1.6
	baz=27						
X20A	Quemado	26.67	324	⇓P	P	05 23 32.4	+1.3
	baz=27						
U23A	El Rito	26.78	329	⇑P	P	05 23 32.8	+0.7
	baz=27,SNR=8.9						
V22A	San Miguel Ran	26.82	328	⇓P	P	05 23 34.2	+1.7
	baz=27						
T24A	Torres, Weston	26.84	332	⇑P	P	05 23 34.2	+1.5
	baz=27						
R27A	Eads	26.92	337	⇑P	P	05 23 35.1	+1.8
	baz=27						
S25A	Robets Cordova	27.05	334	⇓P	P	05 23 34.9	+0.4
	baz=27						
R26A	Arlington	27.19	336	⇓P	P	05 23 36.4	+0.8
	baz=27						
T23A	Casias Ranch,	27.27	331	⇑P	P	05 23 37.2	+0.6
	baz=27						
R25A	Fountain Ranch	27.40	334	⇑P	P	05 23 38.6	+1.0
	baz=27						
SDCO	Great Sand Dun	27.59	332	*e*P	P	05 23 40.4	+1.0
	comp=Z,37nm,2.4s						
U21A	Nageezi	27.60	328	⇓P	P	05 23 40.1	+0.6
	baz=28						
T22A	Edith	27.67	329	⇓P	P	05 23 40.7	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=28						
Q26A	Hugo	27.75	336	⇓P	P	05 23 41.7	+0.9
	baz=28						
R24A	Sanders Place,	27.82	333	⇓P	P	05 23 42.4	+1.0
	baz=28						
T21A	Navajo Lake	27.97	328	⇑P	P	05 23 43.7	+0.9
	baz=28						
U20A	Newcomb	28.02	326	⇑P	P	05 23 43.6	+0.4
	baz=28						
Q25A	Bedland, Calha	28.03	335	⇑P	P	05 23 44.0	+0.7
	baz=28						
S22A	4UR Ranch, Cre	28.21	330	⇓P	P	05 23 45.4	+0.4
	baz=28						
R22A	Saguache, Gunn	28.56	331	⇓P	P	05 23 48.2	0.0
	baz=29						
S21A	Coal Bank Pass	28.62	329	⇓P	P	05 23 49.2	+0.6
	baz=29						
MVCO	Mesa Verde	28.63	328	⇑P	P	05 23 49.5	+0.7
	baz=29						
OGNE	Ogallala	29.01	341	⇓P	P	05 23 53.8	+2.0
	baz=29						
S20A	Disappointment	29.03	329	⇓P	P	05 23 53.9	+1.6
	baz=29						
WUAZ	Wupatki	29.04	322	⇓P	P	05 23 53.6	+1.3
	baz=29						
P23A	Jefferson	29.09	334	⇑P	P	05 23 54.3	+1.5
	baz=29						
ISCO	Idaho Springs	29.35	334	*e*P	P	05 23 57.3	+2.2
	comp=Z,74nm,2.8s						
ISCO	Idaho Springs	29.35	334	⇑P	P	05 23 56.4	+1.3
	baz=29						
O24A	Longmont	29.40	336	⇓P	P	05 23 56.5	+1.2
	baz=29						
SMCO	Snowmass	29.43	332	*e*P	P	05 23 56.5	+0.6
	comp=Z,8.4nm,1.4s						
P22A	Eagle	29.67	333	⇑P	P	05 23 59.0	+1.1
	baz=30						
S18A	Hurst Farm, Bl	29.78	326	⇑P	P	05 23 59.9	+0.9
	baz=30						
O22A	Kremmling	30.04	334	⇓P	P	05 24 02.0	+0.7
	baz=30						
ECSD	EROS Data Cent	30.31	350	*e*P	P	05 24 03.4	+0.1
	comp=Z,18nm,1.5s						
N22A	Wattenberg Ran	30.54	334	⇑P	P	05 24 06.7	+1.1
	baz=31						
SRU	San Rafael	31.11	328	⇓P	P	05 24 12.2	+1.7
	baz=31						
PFO	Pinyon Flat Ob	31.22	314	⇑P	P	05 24 12.2	+0.7
	baz=31						
Q16A	Castle Valley	31.31	327	⇓P	P	05 24 13.6	+1.2
	baz=31						
O19A	Miners Draw (B	31.32	331	⇓P	P	05 24 13.0	+0.6
	baz=31						
SPMN	St. Paul	31.33	356	⇑P	P	05 24 12.5	+0.3
	baz=31						
L23A	Garrett	31.34	337	⇓P	P	05 24 13.3	+0.7
	baz=31						
N20A	Spence Gulch,	31.35	332	⇑P	P	05 24 13.7	+1.0
	baz=31						
P18A	Preston Nutter	31.36	329	⇓P	P	05 24 13.4	+0.5
	baz=31						
P17A	Butcher Ranch,	31.49	328	⇓P	P	05 24 13.7	-0.2
	baz=32						
MVU	Marysvale	31.58	325	*e*P	P	05 24 15.6	+0.8
	comp=Z,14nm,2.0s						
M21A	Separation Pea	31.59	334	⇓P	P	05 24 14.9	+0.1
	baz=32						
CCUT	Cedar City	31.59	322	*e*P	P	05 24 17.0	+2.2
	comp=Z,25nm,2.1s						
ARUT	Antelope Range	31.79	323	*e*P	P	05 24 17.7	+1.1
	comp=Z,11nm,1.3s						
L21A	Rawlins	31.88	335	⇑P	P	05 24 18.3	+0.9
	baz=32,SNR=8.0						
COWI	Conover	32.10	1	*e*P	P	05 24 18.6	-0.3
	comp=Z,13nm,0.8s						
DAU	Daniels Canyon	32.46	328	*e*P	P	05 24 24.5	+2.0
M18A	Lyman	32.65	331	⇓P	P	05 24 24.8	+0.7
	baz=33						
M17A	Scullys Gap (B	32.97	330	⇑P	P	05 24 27.3	+0.4
	baz=33						
J21A	Lysite	33.07	336	⇑P	P	05 24 28.8	+1.1
	baz=33						
DUG	Dugway	33.11	327	⇑P	P	05 24 28.8	+0.8
	baz=33						
I22A	9 Mile Ranch,	33.16	338	⇓P	P	05 24 29.7	+1.2
	baz=33						
K19A	Absolon Red Bu	33.21	334	⇓P	P	05 24 29.8	+0.8
	baz=33						
H24A	Dirks Ranch, A	33.24	341	⇑P	P	05 24 30.3	+1.2
	baz=33						
J20A	Shoshoni	33.33	335	⇓P	P	05 24 30.7	+0.7
	baz=33						
R11A	Troy Canyon, C	33.44	321	⇑P	P	05 24 31.5	+0.5
	baz=34,SNR=5.8						
BW06	Boulder Array	33.48	333	*e*P	P	05 24 32.1	+0.7
	comp=Z,46nm,2.8s						
BW06	Boulder Array	33.48	333	⇑P	P	05 24 32.0	+0.7
	baz=34						
PDAR	Pinedale Array	33.48	333	P	P	05 24 32.0	+0.7
PDAR	Pinedale Array	33.48	333	P	P	05 24 32.0	+0.7
	comp=Z,1.1nm,0.8s,baz=134,slow=6.4,SNR=8.3						
HWUT	Hardware Ranch	33.51	330	*e*P	P	05 24 31.1	-0.5
	comp=Z,8.3nm,1.1s						
L17A	Cokeville	33.55	331	⇓P	P	05 24 33.0	+1.0
	baz=34						
K18A	Toltan Ranch,	33.59	332	⇓P	P	05 24 33.2	+0.9
	baz=34,SNR=6.0						
H22A	Clearmont	33.72	338	⇓P	P	05 24 34.4	+1.1
	baz=34						
G23A	Biddle	33.92	340	⇓P	P	05 24 36.6	+1.6
	baz=34						
EYMN	Ely	33.98	358	*e*P	P	05 24 35.0	-0.3
	comp=Z,41nm,1.9s						
J18A	Kendall Valley	34.03	333	⇓P	P	05 24 36.4	+0.2
	baz=34,SNR=6.0						
K17A	Gardner Place,	34.08	332	⇑P	P	05 24 37.3	+0.8
	baz=34						
F24A	Ekalaka	34.19	342	⇑P	P	05 24 38.4	+1.0
	baz=34						
L15A	Malad City	34.21	329	⇓P	P	05 24 38.5	+0.8
	baz=34						
H20A	Greybull	34.24	336	⇓P	P	05 24 38.6	+0.8
	baz=34						
I18A	Diamond G Ranc	34.34	334	⇑P	P	05 24 39.3	+0.4
	baz=34						
J17A	Brown Place, J	34.46	332	⇑P	P	05 24 40.3	+0.4
	baz=34,SNR=12						
SNOW	Snow King Moun	34.56	333	*e*P	P	05 24 40.0	-0.8
	comp=Z,32nm,1.4s						
L14A	Malta	34.66	328	⇓P	P	05 24 42.0	+0.4
	baz=35,SNR=7.0						
TPAW	Teton Pass	34.67	332	*e*P	P	05 24 43.2	+1.5
	comp=Z,29nm,1.6s						
AGMN	Agassiz Nation	34.67	353	*e*P	P	05 24 40.8	-0.6
	comp=Z,10nm,0.9s						
SAML	Samuel	34.76	129	*e*P	P	05 24 41.1	-1.3
	comp=Z,4.8nm,1.0s						
MOOW	Moose Ponds	34.78	333	*e*P	P	05 24 43.2	+0.6
	comp=Z,39nm,2.5s						
H19A	Powell	34.78	336	⇓P	P	05 24 43.4	+0.8
	baz=35						
E24A	Baker	34.79	342	⇓P	P	05 24 43.8	+1.3
	baz=35						
MDND	Maddock	34.83	348	⇓P	P	05 24 43.2	+0.4
	baz=35						
I17A	Pilgrim Ck.	34.84	333	⇓P	P	05 24 44.1	+0.9
	baz=35						
G20A	Bridger	34.94	337	⇓P	P	05 24 44.2	+0.2
	baz=35						
K14A	Jones Ranch, D	35.01	329	⇑P	P	05 24 44.8	+0.3
	baz=35,SNR=7.9						
H18A	Shoshone NF, C	35.07	335	⇑P	P	05 24 45.7	+0.6
	baz=35,SNR=6.6						
NVAR	Mina Array Bea	35.17	319	P	P	05 24 47.0	+0.8
NVAR	Mina Array Bea	35.17	319	P	P	05 24 47.0	+0.8
	comp=Z,2.0nm,0.9s,baz=134,slow=8.6,SNR=9.8						
NVAR				LR	LR	05 41 22.0	
	comp=Z,315nm,19.3s,baz=230,slow=40						
H17A	Grant Village	35.22	334	⇑P	P	05 24 47.6	+1.1
	baz=35						
RLMT	Red Lodge	35.27	336	*e*P	P	05 24 46.6	-0.3
	comp=Z,7.3nm,1.0s						
RLMT	Red Lodge	35.27	336	⇑P	P	05 24 47.8	+1.0
	baz=35						
J15A	Blackfoot	35.28	331	⇑P	P	05 24 47.6	+0.7
	baz=35						
D24A	Glendive	35.30	343	⇓P	P	05 24 49.0	+2.1
	baz=35						
F20A	Billings	35.41	338	⇑P	P	05 24 49.5	+1.7
	baz=36						
G18A	Lazy EL Ranch,	35.55	336	⇑P	P	05 24 49.7	+0.5
	baz=36,SNR=6.1						
D23A	Lindsay	35.61	342	⇑P	P	05 24 50.5	+0.9
	baz=36						
E21A	Keefer Ranch,	35.66	339	⇑P	P	05 24 51.1	+1.1
	baz=36						
C24A	Savage	35.70	343	⇑P	P	05 24 51.6	+1.2
	baz=36						
J14A	Carey	35.75	330	⇑P	P	05 24 51.8	+0.9
	baz=36						
F19A	Roth Farm, Mol	35.75	337	⇓P	P	05 24 51.0	+0.1
	baz=36						
H16A	Russell Place,	35.76	333	⇓P	P	05 24 52.1	+1.0
	baz=36						
D22A	Cohagen	35.90	341	⇑P	P	05 24 53.5	+1.5
	baz=36,SNR=12						
E20A	Meyer Farm, Mu	36.00	338	⇓P	P	05 24 53.9	+1.0
	baz=36,SNR=7.0						
G17A	Pierce Place,	36.03	335	⇓P	P	05 24 54.4	+1.0
	baz=36						
D21A	La Casta Ranch	36.09	340	⇓P	P	05 24 54.2	+0.5
	baz=36						
F18A	Big Timber	36.10	336	⇓P	P	05 24 54.2	+0.4
	baz=36						
J13A	Cove Ranch, Pi	36.13	329	⇓P	P	05 24 54.7	+0.5
	baz=36						
I14A	Mackay	36.17	330	⇑P	P	05 24 55.5	+1.0
	baz=36						
C23A	Lambert	36.17	342	⇑P	P	05 24 55.5	+1.2
	baz=36						
E19A	Rath Farm, Rou	36.20	338	⇑P	P	05 24 56.5	+1.8
	baz=36,SNR=6.6						
H15A	Lima	36.31	332	⇓P	P	05 24 56.6	+0.8
	baz=36,SNR=6.3						
C22A	Vida	36.33	341	⇑P	P	05 24 56.6	+0.9
	baz=36,SNR=9.5						
HLID	Hailey	36.37	329	*e*P	P	05 24 57.3	+1.1
	comp=Z,37nm,2.3s						
HLID	Hailey	36.37	329	⇓P	P	05 24 56.8	+0.6
	baz=36						
G16A	Moss Hill, Enn	36.42	333	⇑P	P	05 24 57.3	+0.7
	baz=36						
F17A	Fitzpatrick Pl	36.47	335	⇑P	P	05 24 57.7	+0.7
	baz=36,SNR=7.7						
I13A	Wildhorse Cree	36.48	330	⇑P	P	05 24 57.9	+0.7
	baz=36,SNR=7.0						
DGMT	Dagmar	36.50	344	*e*P	P	05 24 57.8	+0.7
	comp=Z,52nm,1.5s						
DGMT	Dagmar	36.50	344	⇑P	P	05 24 58.0	+0.9
	baz=37						
D20A	Manuel Ranch,	36.51	339	⇓P	P	05 24 58.6	+1.3
	baz=37,SNR=8.6						
MCMT	McKenzie Canyo	36.57	332	*e*P	P	05 24 57.4	-0.7
	comp=Z,13nm,1.3s						
ULM	Lac du Bonnet	36.60	353	*e*P	P	05 24 56.8	-1.1
	comp=Z,7.4nm,1.0s						
ULM	Lac du Bonnet	36.60	353	P	P	05 24 56.7	-1.1
	comp=Z,7.3nm,0.9s,baz=178,slow=9.1,SNR=6.0						
ULM				LR	LR	05 42 32.6	
	comp=Z,193nm,18.9s,baz=129,slow=40						
H14A	Leadore	36.65	331	⇑P	P	05 24 59.5	+0.9
	baz=37						
G15A	Dillon	36.67	333	⇑P	P	05 24 59.7	+0.9
	baz=37,SNR=7.4						
BOZ	Bozeman (W)	36.67	334	*e*P	P	05 24 58.6	-0.1
	comp=Z,4.5nm,0.9s						
BOZ	Bozeman (W)	36.67	334	⇓P	P	05 24 59.6	+0.9
	baz=37						
B23A	Brockton	36.71	343	⇑P	P	05 25 00.4	+1.5
	baz=37,SNR=8.0						
E18A	Harlowton	36.72	337	⇓P	P	05 24 59.7	+0.6
	baz=37,SNR=6.7						
F16A	Kennard Place,	36.78	334	⇓P	P	05 25 00.4	+0.8
	baz=37						
C21A	Desert Coulee	36.79	340	⇑P	P	05 25 00.6	+1.0
	baz=37,SNR=7.6						
LPAZ	La Paz	36.80	144	P	P	05 25 02.3	+1.6
LPAZ	La Paz	36.80	144	P	P	05 25 02.3	+1.6
	comp=Z,1.0nm,0.8s,baz=350,slow=13,SNR=3.7						
LPAZ				LR	LR	05 40 44.2	
	comp=Z,94nm,19.3s,baz=47,slow=37						
D19A	Cripps Ranch,	36.83	338	⇓P	P	05 25 00.8	+0.8
	baz=37,SNR=8.9						
A24A	Westby	36.86	344	⇓P	P	05 25 01.4	+1.2
	baz=37,SNR=6.0						
B22A	Reddig Ranch S	36.86	342	⇓P	P	05 25 01.1	+0.9
	baz=37						
DLMT	Dillon	36.87	333	*e*P	P	05 25 01.1	+0.7
	comp=Z,12nm,1.1s						
I12A	Atlanta	36.90	329	⇑P	P	05 25 01.4	+0.7
	baz=37,SNR=9.1						
MFID	Camas Ranch	36.98	328	*e*P	P	05 25 03.6	+2.3
	comp=Z,7.2nm,1.3s						
MFID	Camas Ranch	36.98	328	⇑P	P	05 25 02.0	+0.6
	baz=37						
C20A	Veseth Ranch,	36.99	339	⇓P	P	05 25 02.1	+0.7
	baz=37,SNR=6.5						
E17A	Martinsdale	37.01	336	⇓P	P	05 25 02.1	+0.5
	baz=37						
H13A	Challis	37.03	330	⇓P	P	05 25 02.6	+0.8
	baz=37,SNR=16						
LRM	Limekiln Ridge	37.16	333	*e*P	P	05 25 03.6	+0.6
F15A	Butte	37.20	333	⇓P	P	05 25 04.1	+0.8
	baz=37,SNR=6.2						
D18A	Linhart Farms,	37.20	337	⇓P	P	05 25 04.1	+0.9
	baz=37						
H12A	Diamond D Ranc	37.31	330	⇑P	P	05 25 04.4	+0.2
	baz=37,SNR=8.8						
E16A	East Helena	37.40	335	⇑P	P	05 25 05.4	+0.5
	baz=37						
G13A	Cobalt	37.41	331	⇓P	P	05 25 05.7	+0.7
	baz=37						
A22A	Carney Farms,	37.45	342	⇓P	P	05 25 05.9	+0.7
	baz=38,SNR=8.1						
D17A	Six Diamond Ra	37.50	336	⇓P	P	05 25 06.6	+0.8
	baz=38,SNR=9.4						
B20A	Solberg Farm,	37.63	340	⇑P	P	05 25 07.7	+1.0
	baz=38,SNR=5.2						
E15A	Deer Lodge	37.72	334	⇓P	P	05 25 08.1	+0.5
	baz=38						
D16A	Dana Ranch, Ca	37.75	335	⇓P	P	05 25 08.1	+0.3
	baz=38,SNR=5.7						
EGMT	Eagleton	37.88	338	*e*P	P	05 25 09.8	+1.0
	comp=Z,35nm,1.4s						
EGMT	Eagleton	37.88	338	⇑P	P	05 25 08.8	-0.1
	baz=38,SNR=9.5						
B19A	Brinkman Farms	37.95	339	⇑P	P	05 25 10.2	+0.7
	baz=38						
G12A	Big Creek, Yel	37.96	330	⇓P	P	05 25 10.1	+0.3
	baz=38						
A20A	Cobblestone Ra	37.98	340	⇓P	P	05 25 09.9	+0.2
	baz=38,SNR=6.7						
F13A	Darby	37.98	332	⇑P	P	05 25 10.4	+0.6
	baz=38,SNR=8.0						
E14A	Clinton	38.08	333	⇑P	P	05 25 10.9	+0.2
	baz=38						
D15A	Lincoln	38.15	335	⇑P	P	05 25 11.1	-0.3
	baz=38,SNR=7.0						
B18A	Beardsley Farm	38.20	338	⇑P	P	05 25 12.1	+0.6
	baz=38						
A19A	Klindworth Far	38.29	340	⇑P	P	05 25 13.1	+0.7
	baz=38						
F12A	Elk City	38.38	331	⇑P	P	05 25 13.6	+0.3
	baz=38,SNR=19						
E13A	Victor	38.41	333	⇑P	P	05 25 13.3	-0.1
	baz=38,SNR=9.0						
B17A	L&G Farms, Che	38.49	337	⇓P	P	05 25 14.3	+0.3
	baz=38						
MSO	Missoula	38.60	333	*e*P	P	05 25 15.3	+0.4
	comp=Z,20nm,1.7s						
MSO	Missoula	38.60	333	⇑P	P	05 25 15.2	+0.2
	baz=39,SNR=7.1						
D14A	Greenough	38.60	334	⇑P	P	05 25 15.6	+0.5
	baz=39						
A18A	Metzger Ranch,	38.66	339	⇓P	P	05 25 16.2	+0.7
	baz=39,SNR=5.7						
SLMT	Seeley Lake	38.72	334	*e*P	P	05 25 15.2	-0.9
BMO	Blue Mountains	38.75	328	*e*P	P	05 25 15.8	-0.4
	comp=Z,13nm,1.6s						
A17A	Triple J Farms	38.99	338	⇓P	P	05 25 18.5	+0.3
	baz=39,SNR=8.2						
D13A	Huson	39.03	333	⇑P	P	05 25 19.1	+0.5
	baz=39,SNR=7.0						
SWMT	Swartz Lake	39.15	334	*e*P	P	05 25 20.5	+0.9
B15A	Bradely Ranch,	39.19	336	⇓P	P	05 25 20.7	+0.8
	baz=39,SNR=8.7						
C14A	Swan Lake	39.24	334	⇑P	P	05 25 21.0	+0.6
	baz=39						
D12A	Red Ives Fores	39.40	332	⇑P	P	05 25 22.1	+0.5
	baz=39						
JTMT	Jette	39.45	334	*e*P	P	05 25 21.8	-0.4
C13A	Hot Springs	39.52	333	⇓P	P	05 25 23.2	+0.5
	baz=40						
A15A	Johnson Ranch,	39.79	336	⇓P	P	05 25 25.0	+0.1
	baz=40,SNR=8.5						
C12B	Naegeli Ranch,	39.94	333	⇓P	P	05 25 27.0	+0.8
	baz=40						
B13A	Whitefish	40.02	334	⇓P	P	05 25 27.6	+0.8
	baz=40						
A14A	Double T Ranch	40.06	336	⇓P	P	05 25 27.1	-0.1
	baz=40,SNR=10						
C11A	Tepee Creek (N	40.39	332	⇑P	P	05 25 30.4	+0.5
	baz=40						
A13A	Flathead Natio	40.43	335	⇑P	P	05 25 31.1	+0.9
	baz=40						
SIV	San Ignacio	41.03	135	P	P	05 25 34.9	-0.6
SIV	San Ignacio	41.03	135	P	P	05 25 34.9	-0.6
	comp=Z,2.3nm,0.7s,baz=320,slow=11,SNR=7.5						
NEW	Newport	41.10	332	⇓P	P	05 25 36.4	+0.7
	baz=41						
FFC	Flin Flon	41.85	349	*e*P	P	05 25 41.5	-0.2
	comp=Z,46nm,2.1s						
SCHQ	Schefferville	44.57	19	*e*P	P	05 26 02.8	-1.0
	comp=Z,13nm,1.3s						
SCHQ	Schefferville	44.57	19	P	P	05 26 02.9	-0.9
	comp=Z,2.3nm,0.6s,baz=226,slow=5.2,SNR=7.5						
SCHQ				LR	LR	05 45 34.9	
	comp=Z,215nm,18.3s,baz=80,slow=37						
BDFB	Brasilia	50.60	124	LR	LR	05 49 05.2	
	comp=Z,133nm,21.6s,baz=320,slow=37						
YKA	Yellowknife Ar	51.65	346	P	P	05 26 57.6	-0.7
YKA	Yellowknife Ar	51.65	346	P	P	05 26 57.6	-0.7
	comp=Z,8.8nm,1.0s,baz=144,slow=7.6,SNR=61						
YKW3	Yellowknife Ar	51.71	346	*e*P	P	05 26 57.6	-1.1
DLBC	Dease Lake	53.67	335	*e*P	P	05 27 14.0	+0.6
DLBC	Dease Lake	53.67	335	LR	LR	05 53 57.2	
	comp=Z,171nm,18.2s,baz=164,slow=40						
PLCA	Paso Flores	57.19	163	P	P	05 27 39.9	+1.0
PLCA	Paso Flores	57.19	163	P	P	05 27 39.9	+1.0
	comp=Z,1.7nm,0.7s,baz=334,slow=5.7,SNR=4.3						
RKT	Rikitea	57.59	231	*e*LR	LR	05 44 34.1	
	comp=Z,269nm,27.8s						
RES	Resolute Bay	60.84	358	*e*P	P	05 28 03.1	-0.7
	comp=Z,9.7nm,1.3s						
RES				*e*pP	pP	05 28 18.4	+11
TRF	Thorofare Moun	64.68	334	*e*P	P	05 28 28.6	-1.2
	comp=Z,76nm,2.6s						
SUMG	Summit	65.75	15	*e*P	P	05 28 38.0	+1.2
	comp=Z,18nm,1.1s						
SUMG	Summit	65.75	15	*i* P	P	05 28 37.4	+0.6
	comp=Z,8.2nm,1.0s						
COLD	Coldfoot	66.04	338	*e*P	P	05 28 38.9	+0.5
	comp=Z,4.2nm,1.0s						
PPT	Papeete	66.84	244	LR	LR	05 49 40.3	
	comp=Z,203nm,19.1s,baz=358,slow=28						
PPT2	Papeete2	66.85	244	*e*LR	LR	05 48 47.6	
	comp=Z,314nm,26.8s,baz=61						
TBI	Tubuai	69.18	238	*e*LR	LR	05 49 55.8	
	comp=Z,238nm,27.2s						
DAG	Danmarks Havn	72.25	13	*i* P	P	05 29 15.4	-1.2
	comp=Z,2.5nm,1.0s						
JMIC	Jan Mayen	74.08	20	LR	LR	06 03 34.8	
	comp=Z,105nm,19.4s,baz=85,slow=37						
EKA	Eskdalemuir Ar	76.74	36	P	P	05 29 42.1	-1.0
EKA	Eskdalemuir Ar	76.74	36	P	P	05 29 42.1	-1.0
	comp=Z,5.7nm,1.0s,baz=252,slow=4.3,SNR=4.3						
ESDC	Sonseca Array	78.03	52	P	P	05 29 50.4	-0.4
ESDC	Sonseca Array	78.03	52	P	P	05 29 50.4	-0.4
	comp=Z,0.2nm,0.3s,baz=293,slow=4.6,SNR=4.6						
ESDC				LR	LR	05 59 49.9	
	comp=Z,93nm,18.4s,baz=325,slow=32						
MDT	Midelt	78.54	59	LR	LR	05 58 43.0	
	comp=Z,140nm,20.0s,baz=291,slow=31						
SPITS	Spitsbergen Ar	79.74	12	LR	LR	06 04 34.9	
	comp=Z,109nm,19.7s,baz=165,slow=35						
DBIC	Dimbokro	83.44	85	LR	LR	06 03 06.1	
	comp=Z,120nm,20.0s,baz=233,slow=33						
TORD	Torodi Ar. Bea	88.23	77	LR	LR	06 11 07.3	
	comp=Z,110nm,18.0s,baz=280,slow=36						
HHC	Hu-ho-hao-te	122.07	341	*e*PKP	PKPdf	05 36 47.6	+0.5
HHC				sPKP		05 37 02.0	
HHC				PP	PP	05 38 24.9	+4.7
HHC				PKS	PKSdf	05 40 23.0	-0.8
HHC				SKS	SKSdf	05 43 54.5	-4.9
HHC				SKKS	SKKSac	05 45 12.9	-8.2
HHC				SS	SS	05 54 56.2	-1.9
HHC				AMB	AMB		
	comp=Z,100nm,7.1s						
HHC				LR	LR		
	comp=N,150nm,21.4s						
HHC				LR	LR		
	comp=E,270nm,20.0s						
HHC				LR	LR		
	comp=Z,140nm,20.8s						
WMQ	Urumqi	122.51	2	*e*PKP	PKPdf	05 36 49.0	+1.2
WMQ				LR	LR		
	comp=Z,78nm,20.0s						
CD2	Chengdu	133.60	344	PKP	PKPdf	05 37 09.0	-0.3
GYA	Guiyang	136.84	338	*e*Pdif	Pdif	05 34 20.0	-1.7
GYA				PKP	PKPdf	05 37 14.8	-0.7
GYA				sPKP		05 37 30.2	
GYA				PP	PP	05 40 01.2	+4.4
GYA				AMB	AMB		
	comp=Z,80nm,7.8s						
WRA	Warramunga Arr	137.53	256	PKP	PKPdf	05 37 15.1	-1.6
WRA	Warramunga Arr	137.53	256	PKP	PKPdf	05 37 15.1	-1.6
	comp=Z,2.4nm,1.0s,baz=108,slow=0.8,SNR=7.3						
ASAR	Alice Springs	137.73	250	PKP	PKPdf	05 37 16.1	-1.0
ASAR	Alice Springs	137.73	250	PKP	PKPdf	05 37 16.1	-1.0
	comp=Z,0.9nm,0.9s,baz=107,slow=2.8,SNR=5.6						
CMAR	Chiang Mai Arr	146.73	345	PKPbc	PKPbc	05 37 35.2	+0.4
CMAR	Chiang Mai Arr	146.73	345	PKPbc	PKPbc	05 37 35.2	+0.4
	comp=Z,0.7nm,0.3s,baz=351,slow=1.9,SNR=6.9						

CASC 04 05:23:26.8±3.9, 13°.65N×89°.78W, h0km±20km, MD4.0, ML4.0, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.24	38	*e*P	Pg	05 23 34.2	+2.5
SNJE	San Jose	0.27	37	*e*P	Pb	05 23 34.3	-0.6
RTR	El Retiro	0.28	27	*e*P	Pg	05 23 33.5	+1.1
RBDL	Robledal	0.47	11	*e*P	Pg	05 23 35.1	-1.0
NBG	Las Nubes	1.08	329	*e*P	Pg	05 23 48.3	+0.3
NBG				*e*S	Sn	05 24 06.1	+0.4
MRL	Marmol	1.41	3	*e*P	Pn	05 23 53.3	-0.7
MRL				*e*S	Sn	05 24 14.1	+0.6
JAT	Jato	1.93	290	*e*P	Pn	05 23 58.1	-2.8
JAT				*e*S	Sn	05 24 21.5	-4.3

CASC 04 05:31:15.8±2.2, 13°.88N×89°.73W, h0km±4km, MD3.7, ML4.0, 4C, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTR	El Retiro	0.08	80	*i* P	Pg	05 31 18.6	+1.0
SBLS	San Blas	0.11	114	⇑*i*P	Pg	05 31 19.1	+0.9
SNJE	San Jose	0.12	98	⇑*i*P	Pg	05 31 19.4	+1.1
RBDL	Robledal	0.23	9	*i* P	Pg	05 31 20.8	+0.3
BOQS	Boqueron	0.46	109	*e*P	Pg	05 31 25.8	+1.0
SNET	Serv Nac Est T	0.52	112	*e*P	Pg	05 31 26.7	+0.9
SNET				*e*S	Sb	05 31 35.5	-0.5
SNET				AML	AML	05 31 45.7	
	comp=Z,2μm,0.5s						
LFU	La Fuente	0.61	103	*e*P	Pg	05 31 28.5	+0.9
MTO2	Montecristo 2	0.62	34	⇑*i*P	Pg	05 31 27.9	-0.2
LBRS	Las Brisas	0.68	102	⇑*e*P	Pg	05 31 29.7	+0.7
LFRS	El Faro	0.69	112	*e*P	Pg	05 31 29.8	+0.5
NBG	Las Nubes	0.92	319	*e*P	Pg	05 31 34.5	+0.5
NBG				*e*S	Sb	05 31 48.1	0.0
PCG	Pacaya	0.99	301	*e*P	Pg	05 31 35.5	+0.2
PCG				*e*S	Sn	05 31 52.7	+0.4
MRL	Marmol	1.18	2	*e*P	Pb	05 31 39.0	-0.3
MRL				*e*S	Sn	05 31 56.3	-0.3
FUG	Fuego 3	1.22	297	*e*P	Pg	05 31 38.9	-0.6
CAHU	Cacacuatique	1.48	94	*e*P	Pn	05 31 43.1	-0.8
VSM	San Miguel	1.48	108	*e*P	Pn	05 31 44.0	-0.1
JAT	Jato	1.90	283	*e*P	Pb	05 31 51.3	-0.1
JAT				*e*S	Sn	05 32 13.1	-1.1

*IDC **04** 05:39:49.3±1.0, 52°.98N×169°.58W, h0km, mb3.7/9, mb1 4.0/10, mb1mx3.7/30, mbtmp3.7/10, ML3.7/1, Error ellipse: s-maj=35.1km s-min=19.9km az=149.0*
*ISCJB **04** 05:39:56.9±1.1, 53°.0N±0°.2×169°.6W±0°.2, h69km±8km, mb3.6/9, Error ellipse: s-maj=32.0km s-min=11.6km az=147.4*
*NEIC **04** 05:39:58.3, 53°.15N×169°.68W, h32km, ML3.7(AEIC), After AEIC.*
ISC 04 05:39:57.5±2.1**, 53°.0N**±0°.2×**169°.6W**±0°.2**, h61**km±15km**, n23, σ0s.91**/31**, mb3.7**/9**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKSP	**Okmok Steeple**	**0.81**	**70**	P	**Pn**	**05 40 13.2**	**+0.2**
OKSO	**Okmok South**	**0.92**	**66**	P	**Pn**	**05 40 14.3**	**-0.1**
OKSO				S	**Sn**	**05 40 27.4**	**+0.3**
OKCE	**Okmok Cone E**	**0.94**	**62**	P	**Pn**	**05 40 15.1**	**+0.3**
OKCE				S	**Sn**	**05 40 28.2**	**+0.6**
OKFG	**Magazine Ridge**	**1.07**	**66**	P	**Pn**	**05 40 16.4**	**-0.1**
OKFG				S	**Sn**	**05 40 30.4**	**-0.3**
MCIR	**Makushin Cirqu**	**1.86**	**58**	P	**Pn**	**05 40 27.4**	**+0.3**
MREP	**Makushin Rep't**	**1.87**	**63**	P	**Pn**	**05 40 27.5**	**+0.3**
MREP				S	**Sn**	**05 40 48.9**	**-0.9**
MSW	**Makushin Switc**	**1.90**	**60**	P	**Pn**	**05 40 27.6**	**0.0**
MSW				S	**Sn**	**05 40 49.6**	**-0.8**
MTBL	**Makushin Table**	**1.98**	**59**	P	**Pn**	**05 40 28.8**	**+0.2**
MTBL				S	**Sn**	**05 40 51.9**	**-0.5**
UNV	**Unalaska Valle**	**2.02**	**64**	P	**Pn**	**05 40 28.7**	**-0.4**
AKRB	**Akutan Reef Bi**	**2.37**	**60**	P	**Pn**	**05 40 34.4**	**+0.4**
AKRB				S	**Sn**	**05 41 03.3**	**+1.4**
AKGG	**Akutan Green G**	**2.44**	**59**	P	**Pn**	**05 40 35.4**	**+0.5**
AKGG				S	**Sn**	**05 41 04.0**	**+0.4**
AKLV	**Akutan Long Va**	**2.45**	**60**	P	**Pn**	**05 40 35.4**	**+0.4**
AKUT	**Akutan**	**2.53**	**61**	*e*Pn	**Pn**	**05 40 36.8**	**+0.7**
AKUT				*e*Sn	**Sn**	**05 41 08.2**	**+2.5**
KDAK	**Kodiak Island**	**10.77**	**57**	Pn	Pn	05 42 25.5	-3.2
	0.5nm,0.3s,baz=331,slow=15,SNR=8.4						
KDAK				Sn	Sn	05 44 17.6	-10
	0.2nm,0.3s,baz=30,slow=14,SNR=3.3						
DLBC	**Dease Lake**	**22.67**	**60**	P	**P**	**05 44 52.5**	**-0.9**
	3.4nm,1.0s,baz=214,slow=11,SNR=2.2						
INK	**Inuvik**	**22.89**	**34**	P	**P**	**05 44 53.6**	**-1.9**
	0.6nm,0.3s,baz=236,slow=13,SNR=8.2						
YKA	**Yellowknife Ar**	**29.92**	**50**	P	**P**	**05 45 59.2**	**+0.1**
	0.3nm,0.5s,baz=274,slow=7.7,SNR=10.0						
NVAR	**Mina Array Bea**	**37.79**	**92**	P	**P**	**05 47 08.9**	**+1.1**
	0.5nm,0.7s,baz=300,slow=7.6,SNR=4.3						
PDAR	**Pinedale Array**	**40.40**	**80**	P	**P**	**05 47 28.9**	**-0.7**
	0.8nm,0.8s,baz=345,slow=2.7,SNR=5.7						
TXAR	**Lajitas Array**	**52.85**	**89**	P	**P**	**05 49 06.4**	**-0.4**
	0.9nm,0.7s,baz=298,slow=4.8,SNR=10						
HFS	**Hagfors**	**67.20**	**358**	P	**P**	**05 50 45.5**	**+1.0**
	0.7nm,0.3s,baz=20,slow=4.6,SNR=5.9						
WRA	**Warramunga Arr**	**87.30**	**231**	P	**P**	**05 52 36.2**	**-1.2**
	0.4nm,0.7s,baz=33,slow=5.8,SNR=4.6						
ASAR	**Alice Springs**	**90.71**	**230**	P	**P**	**05 52 54.6**	**+1.3**
	0.4nm,0.7s,baz=29,slow=4.4,SNR=5.8						

IDC 04 05:46:31.2±0.7**, 15°.19S**×**173°.75W, h0**km**, mb4.1**/8**, mb1 4.4**/9**, mb1mx4.2**/19**, mbtmp4.1**/9**, ML3.0**/1**, MS3.7**/7**, Ms1 3.7**/7**, ms1mx3.4**/27**, Error ellipse: s-maj=37.5km s-min=17.5km az=140.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.29**	**57**	Pn	Pn	05 47 10.0	-0.5
	252nm,0.3s,baz=138,slow=0.7,SNR=233						
AFI				Sn	Sn	05 47 30.9	-8.6
	509nm,0.3s,baz=106,slow=21,SNR=23						
RAR	**Rarotonga**	**14.56**	**116**	LR	LR	05 53 56.5	
	comp=Z,212nm,18.5s,baz=270,slow=31						
PPT	**Papeete**	**23.31**	**99**	LR	LR	05 59 37.4	
	comp=Z,123nm,19.0s,baz=319,slow=34						
PPT2	**Papeete2**	**23.31**	**99**	*e*LR	LR	05 57 05.1	
	135nm,27.8s						
TBI	**Tubuai**	**24.30**	**113**	*e*LR	LR	05 57 39.2	
	162nm,29.2s						
HNR	**Honiara**	**26.31**	**279**	LR	LR	05 59 25.0	
	comp=Z,50nm,20.5s,baz=123,slow=29						
WRA	**Warramunga Arr**	**49.56**	**257**	P	P	05 55 24.4	-0.1
	3.2nm,0.9s,baz=90,slow=7.1,SNR=17						
ASAR	**Alice Springs**	**49.85**	**252**	P	P	05 55 25.9	-0.7
	13nm,0.7s,baz=86,slow=8.2,SNR=126						
VNDA	**Vanda**	**63.55**	**186**	P	P	05 57 03.6	+0.5
	1.1nm,0.6s,baz=5.9,slow=7.1,SNR=9.4						
NVAR	**Mina Array Bea**	**74.40**	**42**	P	P	05 58 12.5	+1.0
	1.2nm,0.7s,baz=227,slow=11,SNR=11						
NVAR				LR	LR	06 25 36.0	
	comp=Z,41nm,20.3s,baz=129,slow=32						
USRK	**Ussuriysk Arra**	**77.01**	**323**	LR	LR	06 31 18.3	
	comp=Z,58nm,19.0s,baz=352,slow=35						
TXAR	**Lajitas Array**	**80.78**	**56**	P	P	05 58 46.6	-0.5
	0.6nm,0.9s,baz=202,slow=9.5,SNR=4.5						
PDAR	**Pinedale Array**	**82.33**	**42**	P	P	05 58 54.5	-0.8
	0.9nm,0.8s,baz=214,slow=2.5,SNR=8.4						
MAW	**Mawson**	**87.88**	**199**	P	P	05 59 21.9	-0.5
	2.3nm,0.7s,baz=132,slow=9.3,SNR=5.0						
PLCA	**Paso Flores**	**89.90**	**132**	LR	LR	06 30 28.7	
	comp=Z,152nm,20.8s,baz=27,slow=29						
YKA	**Yellowknife Ar**	**90.04**	**23**	P	P	05 59 31.7	-0.7
	0.1nm,0.4s,baz=234,slow=4.7,SNR=5.2						
ULM	**Lac du Bonnet**	**93.98**	**39**	LR	LR	06 36 27.5	
	comp=Z,52nm,18.8s,baz=306,slow=32						
BRTR	**Keskin Array B**	**145.78**	**321**	PKPbc	PKPdf	06 06 12.4	0.0
	2.1nm,0.7s,baz=114,slow=2.5,SNR=14						
GERES	**GERESS Array B**	**145.88**	**351**	PKPbc	PKPdf	06 06 12.3	+0.1
	1.2nm,0.6s,baz=7.6,slow=4.0,SNR=9.4						
DAVOX	**Davos/Dischmat**	**148.36**	**355**	PKPbc	PKPbc	06 06 19.9	-0.1
	4.1nm,0.6s,baz=12,slow=20,SNR=6.5						

*DDA **04** 05:47:35.3, 36°.81N×26°.46E, h5km, MD3.7*
*ISK **04** 05:47:38.7, 36°.96N×26°.56E, h12km, ML3.6*
*CSEM **04** 05:47:38.9±0.1, 36°.85N×26°.56E, h10km, ML3.8/2, Error ellipse: s-maj=3.2km s-min=2.5km az=163.0*
*ISCJB **04** 05:47:38.1±0.5, 36°.89N±0°.02×26°.55E±0°.02, h9km±4km, mb3.8/4, Error ellipse: s-maj=3.0km s-min=2.5km az=163.6*
*IDC **04** 05:47:38.2±1.3, 36°.92N×26°.34E, h0km, mb3.9/4, mb1 3.7/6, mb1mx3.5/26, mbtmp3.7/6, ML3.2/2, Error ellipse: s-maj=40.1km s-min=21.5km az=135.0*
*THE **04** 05:47:39.8, 36°.85N×26°.59E, h18km±1km, ML3.8/2, Error ellipse: s-maj=2.0km s-min=0.7km az=84.0*
ISC 04 05:47:39.5±1.0**, 36°.85N**±0°.02×**26°.58E**±0°.02**, h10**km±8km**, n176, σ1s.21**/210**, mb3.9**/4**, 8C-4D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.54**	**117**	P	**Pg**	**05 47 50.3**	**+0.3**
NIS1				S	**Sb**	**05 47 58.3**	**-0.5**
NIS1	**Nisyros Isl.**	**0.54**	**117**	P	**Pg**	**05 47 50.3**	**+0.3**
NIS1				*e*Sn	**Sg**	**05 47 58.0**	**+0.9**
NIS1				S	**Sb**	**05 47 58.3**	**-0.5**
BODT	**Bodrum**	**0.62**	**70**	*e*PG	**Pg**	**05 47 51.2**	**-0.4**
BODT				*e*SG	**Sg**	**05 47 59.6**	**-0.1**
BODT	**Bodrum**	**0.62**	**70**	*e*Pg	**Pg**	**05 47 51.2**	**-0.4**
BODT				*e*Sg	**Sg**	**05 47 59.6**	**-0.1**
APE	**Apeiranthos**	**0.87**	**285**	*e*PG	**Pg**	**05 47 55.4**	**-1.0**
APE				*e*SG	**Sg**	**05 48 07.2**	**-0.5**
APE	**Apeiranthos**	**0.87**	**285**	P	**Pg**	**05 47 55.3**	**-1.0**
APE				S	**Sg**	**05 48 08.0**	**+0.3**
APE	**Apeiranthos**	**0.87**	**285**	⇑*i*P	**Pg**	**05 47 55.6**	**-0.7**
APE	**Apeiranthos**	**0.87**	**285**	*e*Pg	**Pg**	**05 47 55.4**	**-1.0**
APE				*e*Sg	**Sg**	**05 48 07.2**	**-0.5**
APE				S	**Sg**	**05 48 08.0**	**+0.3**
GCAM	**G?zelcaml?**	**0.99**	**31**	*i* P	**Pb**	**05 47 57.4**	**-1.4**
GCAM				*i* S	**Sg**	**05 48 12.3**	**+0.7**
GCAM	**G?zelcaml?**	**0.99**	**31**	*i* P	**Pb**	**05 47 57.4**	**-1.4**
GCAM				*i* S	**Sg**	**05 48 12.3**	**+0.7**
SANT	**Santorini**	**1.02**	**242**	*e*Pn	**Pb**	**05 47 58.2**	**-1.1**
SANT				*e*Sn	**Sb**	**05 48 12.3**	**-0.5**
MLSB	**Milas**	**1.05**	**65**	*e*PG	**Pb**	**05 47 59.0**	**-0.8**
MLSB				*e*SG	**Sb**	**05 48 13.3**	**-0.3**
MLSB	**Milas**	**1.05**	**65**	*e*Pg	**Pb**	**05 47 59.0**	**-0.8**
MLSB				*e*Sg	**Sb**	**05 48 13.4**	**-0.3**
AYDN	**Tasoluk**	**1.31**	**52**	*i* P	**Pn**	**05 48 02.5**	**-1.5**
AYDN				*i* S	**Sg**	**05 48 22.7**	**+0.9**
AYDN	**Tasoluk**	**1.31**	**52**	*i* P	**Pn**	**05 48 02.5**	**-1.5**
AYDN				*i* S	**Sg**	**05 48 22.7**	**+0.9**
KARP	**Karpathos**	**1.38**	**160**	*e*Pb	**Pn**	**05 48 03.6**	**-1.3**
KARP				*e*Sn	**Sg**	**05 48 23.8**	**-0.2**
YER	**Yerkesik**	**1.39**	**78**	*e*PN	**Pn**	**05 48 04.2**	**-0.8**
YER	**Yerkesik**	**1.39**	**78**	*e*Pn	**Pn**	**05 48 04.2**	**-0.8**
ARG	**Arkhangelos**	**1.40**	**117**	P	**Pn**	**05 48 03.5**	**-1.5**
ARG				S	**Sn**	**05 48 20.9**	**-2.5**
ARG	**Arkhangelos**	**1.40**	**117**	P	**Pn**	**05 48 03.5**	**-1.5**
ARG	**Arkhangelos**	**1.40**	**117**	*e*Pn	**Pb**	**05 48 05.2**	**-0.4**
ARG				S	**Sn**	**05 48 20.9**	**-2.5**
ARG				*e*Sn	**Sg**	**05 48 25.5**	**+1.1**
URLA	**Izmir**	**1.51**	**0**	*i* P	**Pn**	**05 48 04.4**	**-2.2**
URLA				*i* S	**Sg**	**05 48 28.0**	**0.0**
URLA	**Izmir**	**1.51**	**0**	*i* P	**Pn**	**05 48 04.4**	**-2.2**
URLA				*i* S	**Sg**	**05 48 28.0**	**0.0**
BLCB	**Balcova**	**1.57**	**13**	*e*PN	**Pn**	**05 48 05.1**	**-2.4**
BLCB	**Balcova**	**1.57**	**13**	*e*Pn	**Pn**	**05 48 05.1**	**-2.4**
CHOS	**Chios island**	**1.59**	**345**	P	**Pn**	**05 48 05.4**	**-2.4**
CHOS				S	**Sn**	**05 48 26.6**	**-1.8**
CHOS	**Chios island**	**1.59**	**345**	P	**Pn**	**05 48 05.4**	**-2.4**
CHOS				S	**Sn**	**05 48 26.6**	**-1.8**
TURN	**Turunc**	**1.62**	**89**	*i* P	Pn	05 48 03.2	-4.9
TURN				*i* S	**Sn**	**05 48 23.5**	**-5.5**
TURN	**Turunc**	**1.62**	**89**	*i* P	Pn	05 48 03.2	-4.9
TURN				*i* S	**Sn**	**05 48 23.5**	**-5.5**
DALY	**Dalyan (Mu˜la**	**1.66**	**91**	*e*PN	**Pn**	**05 48 08.3**	**-0.3**
DALY	**Dalyan (Mu˜la**	**1.66**	**91**	*e*Pn	**Pn**	**05 48 08.3**	**-0.3**
ZKR	**Zakros**	**1.76**	**190**	*e*Pb	**Pn**	**05 48 09.4**	**-0.6**
ZKR				*e*Sn	**Sb**	**05 48 33.7**	**-0.2**
NPS	**Neapolis**	**1.77**	**207**	P	**Pn**	**05 48 08.9**	**-1.3**
NPS				S	**Sn**	**05 48 30.7**	**-2.0**
NPS	**Neapolis**	**1.77**	**207**	P	**Pn**	**05 48 08.9**	**-1.3**
NPS				S	**Sn**	**05 48 30.7**	**-2.0**
NPS				*e*Sn	**Sb**	**05 48 33.7**	**-0.6**
LAST	**Lasithi**	**1.91**	**208**	*e*Pb	**Pn**	**05 48 10.9**	**-1.2**
LAST				*e*Sn	**Sb**	**05 48 37.6**	**-0.7**
MRMA	**Marmari**	**2.13**	**305**	P	**Pn**	**05 48 14.2**	**-0.9**
MRMA	**Marmari**	**2.13**	**305**	P	**Pn**	**05 48 14.2**	**-0.9**
DENT	**Denizli**	**2.15**	**64**	*e*PN	**Pn**	**05 48 15.0**	**-0.5**
DENT	**Denizli**	**2.15**	**64**	*e*Pn	**Pn**	**05 48 15.0**	**-0.5**
AKHS	**Akhisar**	**2.25**	**25**	*i* P	**Pb**	**05 48 20.2**	**0.0**
AKHS				*i* S	**Sg**	**05 48 54.0**	**+2.2**
AKHS	**Akhisar**	**2.25**	**25**	*i* P	**Pb**	**05 48 20.2**	**0.0**
AKS	**Akhisar**	**2.25**	**25**	*e*PN	**Pn**	**05 48 15.8**	**-0.9**
AKS	**Akhisar**	**2.25**	**25**	*e*Pn	**Pn**	**05 48 15.8**	**-0.9**
SIVA	**Sivas**	**2.33**	**219**	*e*Pn	**Pn**	**05 48 17.4**	**-0.4**
SIVA				*e*Sn	**Sn**	**05 48 45.4**	**-1.0**
KULA	**Kula-Manisa**	**2.34**	**44**	*e*PN	**Pn**	**05 48 17.2**	**-0.9**
KULA	**Kula-Manisa**	**2.34**	**44**	*e*Pn	**Pn**	**05 48 17.2**	**-0.9**
PRK	**Paraskevi**	**2.41**	**354**	P	**Pn**	**05 48 17.2**	**-1.7**
PRK	**Paraskevi**	**2.41**	**354**	P	**Pn**	**05 48 17.2**	**-1.7**
VAM	**Vamos**	**2.41**	**234**	*e*Pn	**Pn**	**05 48 18.1**	**-0.8**
VAM				*e*Sn	**Sn**	**05 48 48.8**	**+0.4**
SIGR	**SIGRI**	**2.43**	**347**	P	**Pn**	**05 48 17.4**	**-1.8**
SIGR	**SIGRI**	**2.43**	**347**	P	**Pn**	**05 48 17.4**	**-1.8**
AYVA	**Ayvalik**	**2.46**	**2**	*i* P	**Pb**	**05 48 24.5**	**+0.7**
AYVA				*i* S	**Sb**	**05 48 55.2**	**+1.2**
PTL	**Penteli**	**2.47**	**300**	*e*Pn	**Pn**	**05 48 18.6**	**-1.3**
AKAS	**Kas**	**2.51**	**103**	*e*P	**Pb**	**05 48 23.9**	**-0.8**
AKAS	**Kas**	**2.51**	**103**	*e*P	**Pb**	**05 48 24.0**	**-0.8**
ATH	**Athens Observa**	**2.54**	**297**	*e*Pb	**Pn**	**05 48 22.0**	**+1.2**
NAIG	**Nisos Aigina**	**2.63**	**291**	*e*Pb	**Pn**	**05 48 22.4**	**+0.4**
ELL	**Elmali**	**2.67**	**91**	*e*PN	**Pn**	**05 48 22.8**	**+0.1**
ELL	**Elmali**	**2.67**	**91**	*e*Pn	**Pn**	**05 48 22.8**	**+0.1**
DID	**Didima**	**2.75**	**285**	*e*Pn	**Pn**	**05 48 22.5**	**-1.2**
KHL	**Karahalli**	**2.76**	**57**	*e*PN	**Pn**	**05 48 23.3**	**-0.6**
KHL	**Karahalli**	**2.76**	**57**	*e*Pn	**Pn**	**05 48 23.3**	**-0.6**
ANKY	**Antikythira Is**	**2.83**	**251**	*e*Pn	**Pn**	**05 48 23.7**	**-1.0**
KYTH	**Kithira**	**2.91**	**260**	*e*Pn	**Pn**	**05 48 25.5**	**-0.4**
VLI	**Veliai**	**2.93**	**269**	*e*Pn	**Pn**	**05 48 25.4**	**-0.7**
BALB	**Balikesir**	**2.97**	**20**	*e*PN	**Pn**	**05 48 25.5**	**-1.1**
BALB	**Balikesir**	**2.97**	**20**	*e*Pn	**Pn**	**05 48 25.5**	**-1.1**
EZN	**Ezine**	**2.98**	**356**	*e*PN	**Pn**	**05 48 24.7**	**-2.1**
EZN	**Ezine**	**2.98**	**356**	*e*Pn	**Pn**	**05 48 24.7**	**-2.1**
BALY	**Balya**	**3.00**	**15**	*i* P	**Pn**	**05 48 25.7**	**-1.4**
BALY				*i* S	**Sb**	**05 49 10.8**	**+1.1**
BALY	**Balya**	**3.00**	**15**	*i* P	**Pn**	**05 48 25.7**	**-1.4**
LTK	**Loutraki**	**3.11**	**293**	*e*Pn	**Pn**	**05 48 27.2**	**-1.4**
DURS	**Dursunbey**	**3.12**	**28**	*i* P	**Pn**	**05 48 28.0**	**-0.9**
DURS				*i* S	**Sg**	**05 49 18.4**	**-1.5**
DURS	**Dursunbey**	**3.12**	**28**	*i* P	**Pn**	**05 48 28.0**	**-0.9**
AOS	**Alonnisos**	**3.15**	**318**	*e*Pb	**Pn**	**05 48 29.1**	**0.0**
DST	**Dursunbey**	**3.18**	**30**	*e*PN	**Pn**	**05 48 28.6**	**-1.0**
DST	**Dursunbey**	**3.18**	**30**	*e*Pn	**Pn**	**05 48 28.6**	**-1.0**
LIA	**Limnos Island**	**3.24**	**341**	*e*Pn	**Pn**	**05 48 28.9**	**-1.4**
BCK	**Bucak**	**3.26**	**78**	*e*PN	**Pn**	**05 48 31.4**	**+0.7**
BCK	**Bucak**	**3.26**	**78**	*e*Pn	**Pn**	**05 48 31.4**	**+0.7**
ISP	**Isparta**	**3.29**	**72**	*e*PN	**Pn**	**05 48 32.1**	**+1.0**
ISP	**Isparta**	**3.29**	**72**	⇑*i*P	**Pg**	**05 48 40.7**	**-1.8**
ISP	**Isparta**	**3.29**	**72**	*e*Pn	**Pn**	**05 48 32.1**	**+1.0**
GONE	**Gonen-Balikesi**	**3.31**	**15**	*e*PN	**Pn**	**05 48 30.3**	**-1.0**
GONE	**Gonen-Balikesi**	**3.31**	**15**	*e*Pn	**Pn**	**05 48 30.3**	**-1.0**
LKR	**Lokris**	**3.36**	**303**	*e*Pn	**Pn**	**05 48 31.4**	**-0.6**
VLX	**Vlachokerasia**	**3.40**	**280**	*e*Pn	**Pn**	**05 48 33.1**	**+0.4**
DYR	**Agios Nikonas**	**3.41**	**270**	*e*Pn	**Pn**	**05 48 33.3**	**+0.5**
TVSB	**Tavsanli**	**3.45**	**40**	*e*PN	**Pn**	**05 48 33.0**	**-0.3**
TVSB	**Tavsanli**	**3.45**	**40**	*e*Pn	**Pn**	**05 48 33.0**	**-0.3**
LPK	**Lapseki**	**3.52**	**2**	*e*PN	**Pn**	**05 48 32.8**	**-1.4**
LPK	**Lapseki**	**3.52**	**2**	*e*Pn	**Pn**	**05 48 32.8**	**-1.4**
GELI	**Tayfur-Gelibol**	**3.54**	**359**	*e*PN	**Pn**	**05 48 32.8**	**-1.8**
GELI	**Tayfur-Gelibol**	**3.54**	**359**	*e*Pn	**Pn**	**05 48 32.8**	**-1.8**
GUR	**Goura**	**3.55**	**289**	*e*Pn	**Pn**	**05 48 34.3**	**-0.4**
ALT	**Altintas**	**3.55**	**51**	*e*PN	**Pn**	**05 48 34.7**	**-0.1**
ALT	**Altintas**	**3.55**	**51**	*e*Pn	**Pn**	**05 48 34.7**	**-0.1**
KRBG	**Karabiga-Canak**	**3.58**	**9**	*e*PN	**Pn**	**05 48 33.3**	**-1.7**
KRBG	**Karabiga-Canak**	**3.58**	**9**	*e*Pn	**Pn**	**05 48 33.3**	**-1.7**
NEO	**Neokhori**	**3.61**	**314**	*e*Pn	**Pn**	**05 48 35.2**	**-0.3**
EDC	**Edincik**	**3.63**	**16**	*e*PN	**Pn**	**05 48 35.8**	**0.0**
EDC	**Edincik**	**3.63**	**16**	*e*Pn	**Pn**	**05 48 35.8**	**0.0**
BNT	**Bandirma**	**3.65**	**16**	*e*PN	**Pn**	**05 48 35.0**	**-1.1**
BNT	**Bandirma**	**3.65**	**16**	*e*Pn	**Pn**	**05 48 35.0**	**-1.1**
ORLT	**Orhaneli**	**3.67**	**29**	*e*PN	**Pn**	**05 48 35.5**	**-0.8**
ORLT	**Orhaneli**	**3.67**	**29**	*e*Pn	**Pn**	**05 48 35.5**	**-0.8**
KCTX	**Karacabey (Bur**	**3.68**	**22**	*e*PN	**Pn**	**05 48 35.5**	**-1.0**
KCTX	**Karacabey (Bur**	**3.68**	**22**	*e*Pn	**Pn**	**05 48 35.5**	**-1.0**
SMTH	**Samothraki Isl**	**3.71**	**347**	*e*Pn	**Pn**	**05 48 35.2**	**-1.6**
KLV	**Kalavryta, Ach**	**3.72**	**290**	*e*Pn	**Pn**	**05 48 36.9**	**-0.2**
ITM	**Ithomi**	**3.74**	**276**	*e*Pb	**Pn**	**05 48 38.6**	**+1.3**
ERIK	**Erikli-Kesan**	**3.81**	**359**	*e*PN	**Pn**	**05 48 36.9**	**-1.4**
ERIK	**Erikli-Kesan**	**3.81**	**359**	*e*Pn	**Pn**	**05 48 36.9**	**-1.4**
KALE	**Kalithea**	**3.85**	**295**	*e*Pn	**Pn**	**05 48 39.5**	**+0.7**
PYL	**PYLOS**	**3.88**	**272**	*e*Pn	**Pn**	**05 48 39.8**	**+0.6**
TRIZ	**Trizonia**	**3.89**	**294**	*e*Pn	**Pn**	**05 48 39.5**	**+0.2**
LAKA	**Lakka**	**3.91**	**292**	*e*Pn	**Pn**	**05 48 38.8**	**-0.9**
AGG	**Agios Georgios**	**4.00**	**304**	*e*Pn	**Pn**	**05 48 40.7**	**-0.2**
EFP	**Efpalio**	**4.03**	**294**	*e*Pn	**Pn**	**05 48 41.6**	**+0.3**
ALN	**Alexandroupoli**	**4.06**	**354**	P	**Pn**	**05 48 40.1**	**-1.6**
ALN	**Alexandroupoli**	**4.06**	**354**	*e*Pn	**Pn**	**05 48 40.3**	**-1.4**
ARMT	**Armutlu**	**4.12**	**25**	*e*PN	**Pn**	**05 48 41.9**	**-0.5**
ARMT	**Armutlu**	**4.12**	**25**	*e*Pn	**Pn**	**05 48 41.9**	**-0.5**
CAVI	**Cavuskoy**	**4.21**	**36**	*e*PN	**Pn**	**05 48 44.1**	**+0.4**
CAVI	**Cavuskoy**	**4.21**	**36**	*e*Pn	**Pn**	**05 48 44.1**	**+0.4**
EVR	**Evrytania**	**4.30**	**300**	*e*Pn	**Pn**	**05 48 43.5**	**-1.6**
ADVT	**Abdulvahap**	**4.35**	**34**	*e*PN	**Pn**	**05 48 45.5**	**-0.1**
ADVT	**Abdulvahap**	**4.35**	**34**	*e*Pn	**Pn**	**05 48 45.5**	**-0.1**
BUY	**Buyukada**	**4.46**	**26**	*e*PN	**Pn**	**05 48 47.2**	**+0.1**
BUY	**Buyukada**	**4.46**	**26**	*e*Pn	**Pn**	**05 48 47.2**	**+0.1**
SLVT	**Silivri**	**4.55**	**16**	*e*PN	**Pn**	**05 48 48.3**	**-0.1**
SLVT	**Silivri**	**4.55**	**16**	*e*Pn	**Pn**	**05 48 48.3**	**-0.1**
CTKS	**Kestanelik-??a**	**4.63**	**18**	*e*PN	**Pn**	**05 48 49.7**	**+0.3**
CTKS	**Kestanelik-??a**	**4.63**	**18**	*e*Pn	**Pn**	**05 48 49.7**	**+0.3**
ISK	**Istanbul-Kandi**	**4.63**	**24**	*e*PN	**Pn**	**05 48 50.2**	**+0.8**
ISK	**Istanbul-Kandi**	**4.63**	**24**	*e*Pn	**Pn**	**05 48 50.3**	**+0.8**
HRT	**Hereke**	**4.64**	**30**	*e*PN	**Pn**	**05 48 50.2**	**+0.6**
HRT	**Hereke**	**4.64**	**30**	*e*Pn	**Pn**	**05 48 50.3**	**+0.6**
BGKT	**Bogazkoy**	**4.65**	**21**	*e*PN	**Pn**	**05 48 50.0**	**+0.3**
BGKT	**Bogazkoy**	**4.65**	**21**	*e*Pn	**Pn**	**05 48 50.0**	**+0.3**
KIZT	**Kizilcal**	**4.66**	**63**	*e*PN	**Pn**	**05 48 50.2**	**+0.3**
KIZT	**Kizilcal**	**4.66**	**63**	*e*Pn	**Pn**	**05 48 50.3**	**+0.3**
SOH	**Sokhos**	**4.70**	**329**	*e*Pn	**Pn**	**05 48 50.7**	**+0.2**
GULT	**Gulveren**	**4.72**	**40**	*e*PN	**Pn**	**05 48 51.4**	**+0.6**
GULT	**Gulveren**	**4.72**	**40**	*e*Pn	**Pn**	**05 48 51.4**	**+0.6**
KONT	**Konya--Tatoy**	**4.73**	**75**	*e*PN	**Pn**	**05 48 51.4**	**+0.5**
KONT	**Konya--Tatoy**	**4.73**	**75**	*e*Pn	**Pn**	**05 48 51.4**	**+0.5**
LADK	**Ladik-KONYA**	**4.79**	**72**	*e*PN	**Pn**	**05 48 52.8**	**+1.0**
LADK	**Ladik-KONYA**	**4.79**	**72**	*e*Pn	**Pn**	**05 48 52.8**	**+1.0**
CTYL	**Yal??k??y-??at**	**4.80**	**15**	*e*PN	**Pn**	**05 48 52.5**	**+0.6**
CTYL	**Yal??k??y-??at**	**4.80**	**15**	*e*Pn	**Pn**	**05 48 52.5**	**+0.6**
SILT	**Sile**	**4.91**	**28**	*e*PN	**Pn**	**05 48 53.6**	**+0.2**
SILT	**Sile**	**4.91**	**28**	*e*Pn	**Pn**	**05 48 53.6**	**+0.2**
EDRB	**Edirne**	**4.99**	**1**	*e*PN	**Pn**	**05 48 53.3**	**-1.1**
EDRB	**Edirne**	**4.99**	**1**	*e*Pn	**Pn**	**05 48 53.3**	**-1.1**
MDUB	**Mudurnu**	**5.11**	**44**	*e*PN	**Pn**	**05 48 57.2**	**+1.0**
MDUB	**Mudurnu**	**5.11**	**44**	*e*Pn	**Pn**	**05 48 57.2**	**+1.0**
KZN	**Kozani**	**5.11**	**314**	*e*Pn	**Pn**	**05 48 56.5**	**+0.3**
GRG	**Griva**	**5.24**	**323**	*e*Pn	**Pn**	**05 48 57.3**	**-0.6**
BRTR	**Keskin Array B**	**6.25**	**61**	Pn	**Pn**	**05 49 12.8**	**+0.9**
	0.5nm,0.3s,baz=245,slow=15,SNR=11						
VTS	**Vitosha**	**6.30**	**337**	⇓*i*P	**Pn**	**05 49 13.5**	**+1.0**
VTS	**Vitosha**	**6.30**	**337**	⇓*i*P	**Pn**	**05 49 13.5**	**+1.0**
CFR	**Carcaliu**	**8.40**	**8**	⇑*i*P	**Pn**	**05 49 39.1**	**-2.1**
MLR	**Muntele Rosu**	**8.65**	**357**	⇓*i*P	**Pn**	**05 49 45.4**	**+0.7**
MLR	**Muntele Rosu**	**8.65**	**357**	Pn	**Pn**	**05 49 44.6**	**-0.1**
	0.1nm,0.3s,baz=159,slow=14,SNR=3.0						
MLR	**Muntele Rosu**	**8.65**	**357**	⇓*i*P	**Pn**	**05 49 45.4**	**+0.7**
PLOR	**Plostina**	**8.99**	**0**	⇑*i*P	**Pn**	**05 49 49.8**	**+0.4**
PLOR	**Plostina**	**8.99**	**0**	⇑*i*P	**Pn**	**05 49 49.8**	**+0.4**
GZR	**Gura Zlata**	**9.00**	**343**	⇑*i*P	**Pn**	**05 49 50.1**	**+0.5**
GZR	**Gura Zlata**	**9.00**	**343**	⇑*i*P	**Pn**	**05 49 50.1**	**+0.5**
VRI	**Vrincioaia**	**9.01**	**1**	⇑*i*P	Pn	05 49 54.7	+5.1
GERES	**GERESS Array B**	**15.24**	**326**	Pn	**P**	**05 51 22.5**	**+2.8**
	0.2nm,0.3s,baz=178,slow=13,SNR=4.4						
AKTO	**Aktyubinsk**	**26.26**	**49**	P	**P**	**05 53 15.9**	**+1.1**
	1.2nm,0.8s,baz=266,slow=9.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**32.46**	**230**	P	**P**	**05 54 09.2**	**-0.9**
	1.0nm,0.4s,baz=34,slow=8.8,SNR=28						
MKAR	**Makanchi Array**	**41.89**	**58**	P	**P**	**05 55 30.2**	**+0.3**
	2.1nm,0.7s,baz=276,slow=6.8,SNR=17						
SONM	**Songino Array**	**57.53**	**52**	P	**P**	**05 57 31.8**	**+2.7**
	0.6nm,0.6s,baz=290,slow=7.4,SNR=4.4						

JMA 04 05:55:02.4±0.3**, 44°.03N**×**147°.94E, h0**km**, M3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.73**	**248**	P	Pn	05 55 34.1	+0.5
NEM2				*e*S	Sn	05 55 56.7	+0.3
JRA	**Rausu**	**2.04**	**268**	P	Pn	05 55 38.5	+0.6
JRA				*e*S	Sb	05 56 05.1	-1.0
JNK	**Nakash**	**2.37**	**260**	*e*S	Sn	05 56 12.9	+0.5
JAK	**Akkeshi**	**2.58**	**247**	P	Pn	05 55 46.3	+1.0
JAK				*e*S	Sn	05 56 18.3	+1.0
JAR	**Ashorobuto**	**3.11**	**258**	P	Pn	05 55 54.6	+1.8
JAR				*e*S	Sn	05 56 33.2	+2.5
JOB	**Onbets**	**3.19**	**251**	*e*S	Sn	05 56 34.3	+1.7
JCH	**Churui**	**3.63**	**249**	*e*S	Sn	05 56 45.0	+1.7
JNBK	**Urakawa-nobuka**	**4.18**	**247**	P	Pn	05 56 09.2	+1.8

*IDC **04** 06:13:35.8±0.9, 50°.99N×30°.24W, h0km, mb3.6/13, mb1 3.8/13, mb1mx3.6/35, mbtmp3.6/13, MS3.5/16, Ms1 3.5/16, ms1mx3.3/40, Error ellipse: s-maj=31.5km s-min=15.5km az=13.0*
*ISCJB **04** 06:13:35.9±0.7, 51°.0N±0°.2×30°.1W±0°.1, h14km, mb4.0/23, MS3.5/15, Error ellipse: s-maj=22.6km s-min=8.1km az=16.2*
ISC 04 06:13:38.1±0.8**, 51°.1N**±0°.2×**30°.06W**±0°.09**, h14**km**, n40, σ1s.44**/31**, mb4.0**/23**, MS3.5**/15**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	**Eskdalemuir Ar**	**16.60**	**65**	Pn	**Pn**	**06 17 26.6**	**-3.5**
	baz=275,slow=13,SNR=5.1						
SFJD	**Kangerlussuaq**	**18.94**	**335**	LR	LR	06 23 39.7	
	comp=Z,81nm,20.4s,baz=138,slow=32						
LDF	**La Druitiere**	**19.40**	**86**	*e*P	**Pn**	**06 18 03.5**	**-1.2**
	36nm,1.2s						
SJPF	**Ste Jean**	**21.09**	**101**	*e*P	**P**	**06 18 23.2**	**+1.3**
	82nm,1.6s						
LFF	**La Frestale**	**21.40**	**95**	*e*P	**P**	**06 18 28.2**	**+3.0**
ESDC	**Sonseca Array**	**21.48**	**112**	P	**P**	**06 18 26.1**	**-0.1**
	0.7nm,0.5s,baz=310,slow=12,SNR=7.5						
ESDC				LR	LR	06 25 18.0	
	comp=Z,69nm,18.2s,baz=325,slow=33						
BAIF	**Baives**	**21.67**	**79**	*e*P	**P**	**06 18 27.3**	**-0.7**
RJF	**Les Rejaudoux**	**21.72**	**93**	*e*P	**P**	**06 18 27.7**	**-1.0**
	35nm,1.2s						
TCF	**Toulx Ste Croi**	**21.73**	**90**	*e*P	**P**	**06 18 27.6**	**-1.2**
	13nm,0.8s						
BGF	**Bois d'Agland**	**22.02**	**89**	*e*P	**P**	**06 18 30.9**	**-1.0**
	81nm,1.5s						
GIVF	**Givet**	**22.04**	**79**	*e*P	**P**	**06 18 32.0**	**0.0**
SSF	**Saint Saulge**	**22.23**	**87**	*e*P	**P**	**06 18 33.1**	**-1.1**
	15nm,0.8s						
CAF	**Calviac**	**22.24**	**94**	*e*P	**P**	**06 18 34.6**	**+0.3**
	52nm,1.4s						
AVF	**Avril sur Loir**	**22.24**	**88**	*e*P	**P**	**06 18 33.6**	**-0.7**
	15nm,0.9s						
SCHQ	**Schefferville**	**22.28**	**294**	P	**P**	**06 18 32.6**	**-2.0**
	2.6nm,0.9s,baz=74,slow=12,SNR=6.0						
LOR	**Lormes**	**22.38**	**87**	*e*P	**P**	**06 18 34.4**	**-1.3**
	63nm,1.5s						
SMF	**Signal de Mont**	**22.61**	**88**	*e*P	**P**	**06 18 37.5**	**-0.7**
	33nm,1.3s						
FRB	**Frobisher Bay**	**23.82**	**317**	P	**P**	**06 18 48.2**	**-2.0**
	1.0nm,0.8s,baz=59,slow=5.9,SNR=3.1						
FRB				LR	LR	06 26 06.7	
	comp=Z,84nm,19.2s,baz=46,slow=32						
CABF	**La Chapelle**	**24.04**	**87**	*e*P	**P**	**06 18 51.1**	**-1.5**
	121nm,1.9s						
NOA	**NORSAR Array B**	**24.66**	**50**	LR	LR	06 26 24.7	
	comp=Z,64nm,21.6s,baz=280,slow=31						
HFS	**Hagfors**	**25.84**	**53**	LR	LR	06 27 36.5	
	comp=Z,116nm,18.2s,baz=246,slow=32						
DAVOX	**Davos/Dischmat**	**26.35**	**84**	LR	LR	06 28 21.6	
	comp=Z,91nm,19.6s,baz=266,slow=34						
GERES	**GERESS Array B**	**27.92**	**77**	LR	LR	06 29 08.0	
	comp=Z,106nm,20.7s,baz=285,slow=33						
VRAC	**Vranov**	**29.52**	**75**	LR	LR	06 31 01.9	
	comp=Z,103nm,18.7s,baz=278,slow=35						
FINES	**FINESS Array B**	**31.82**	**49**	LR	LR	06 30 38.6	
	comp=Z,99nm,19.2s,baz=270,slow=32						
YKA	**Yellowknife Ar**	**44.31**	**319**	P	**P**	**06 21 47.7**	**+0.6**
	0.5nm,0.8s,baz=62,slow=8.6,SNR=5.7						
YKA				PcP	**PcP**	**06 23 30.5**	**-0.4**
	0.5nm,1.0s,baz=68,slow=3.4,SNR=4.4						
BRTR	**Keskin Array B**	**44.80**	**79**	P	**P**	**06 21 53.1**	**+1.8**
	0.3nm,0.5s,baz=271,slow=8.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**45.78**	**134**	P	**P**	**06 21 57.9**	**-1.3**
	0.5nm,0.8s,baz=332,slow=10.0,SNR=4.5						
TORD				LR	LR	06 38 21.9	
	comp=Z,58nm,19.2s,baz=340,slow=32						
KBZ	**Khabaz**	**48.03**	**69**	LR	LR	06 43 27.6	
	comp=Z,62nm,19.8s,baz=110,slow=37						
DBIC	**Dimbokro**	**49.01**	**146**	LR	LR	06 40 22.6	
	comp=Z,52nm,18.6s,baz=318,slow=33						
AKTO	**Aktyubinsk**	**52.37**	**54**	P	**P**	**06 22 50.1**	**+0.8**
	2.4nm,0.7s,baz=322,slow=7.1,SNR=4.6						
PDAR	**Pinedale Array**	**52.42**	**294**	P	**P**	**06 22 50.1**	**0.0**
	0.9nm,0.8s,baz=66,slow=8.3,SNR=6.9						
PDAR				LR	LR	06 44 17.1	
	comp=Z,42nm,18.5s,baz=222,slow=35						
BVAR	**Borovoye Array**	**56.65**	**45**	P	**P**	**06 23 22.3**	**+1.9**
	1.0nm,0.6s,baz=347,slow=6.1,SNR=3.9						
TXAR	**Lajitas Array**	**57.74**	**278**	P	**P**	**06 23 29.5**	**+0.9**
	0.3nm,0.7s,baz=58,slow=12,SNR=4.4						
TXAR				LR	LR	06 46 46.5	
	comp=Z,71nm,18.1s,baz=180,slow=34						
KURBB	**Kurchatov Arra**	**61.92**	**43**	P	**P**	**06 23 58.7**	**+1.8**
	0.5nm,0.6s,baz=313,slow=6.8,SNR=6.0						
MKAR	**Makanchi Array**	**66.45**	**44**	P	**P**	**06 24 27.1**	**+0.4**
	0.6nm,0.6s,baz=330,slow=4.4,SNR=6.0						
MKAR				LR	LR	06 55 00.7	
	comp=Z,40nm,18.5s,baz=353,slow=37						
SONM	**Songino Array**	**74.57**	**29**	P	**P**	**06 25 17.4**	**+1.1**
	0.6nm,0.7s,baz=338,slow=6.5,SNR=3.9						
KMBO	**Kilima Mbogo**	**76.83**	**109**	LR	LR	06 58 18.8	
	comp=Z,50nm,21.0s,baz=93,slow=35						
WRA	**Warramunga Arr**	**146.54**	**27**	PKPbc	**PKPab**	**06 33 19.1**	**-0.8**
	1.5nm,1.0s,baz=338,slow=3.1,SNR=4.8						
ASAR	**Alice Springs**	**149.91**	**30**	PKPbc	**PKPbc**	**06 33 27.2**	**-0.6**
	1.0nm,0.9s,baz=348,slow=1.7,SNR=7.4						

IDC 04 06:17:08.4±5.1**, 29°.45S**×**178°.47W, h0**km**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.7**/16**, mbtmp3.7**/3**, Error ellipse: s-maj=204.8km s-min=78.1km az=159.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.31**	**256**	P	P	06 23 57.0	+0.3
	0.6nm,0.4s,baz=95,slow=12,SNR=3.5						

ASAR	Alice Springs	42.76	266	P	P	06 25 07.8	-0.1
	0.3nm,0.3s,baz=105,slow=7.7,SNR=4.4						
WRA	Warramunga Arr	43.66	271	P	P	06 25 14.7	-0.5
	0.5nm,0.3s,baz=110,slow=8.0,SNR=6.2						
FINES	FINESS Array B	144.12	340	PKP	PKPdf	06 36 45.0	-0.5
	0.8nm,0.5s,baz=57,slow=7.0,SNR=4.9						

MEX 04 06:22:49.1±0.7, 16°.04N×97°.30W, h9km±7km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.87	294	*e*P	Pg	06 23 03.5	-2.4
PNIG				*i* S	Sg	06 23 14.8	-2.4
VHO	Vista Hermosa	1.16	28	*e*P	Pb	06 23 07.7	-3.9
VHO				*i* S	Sg	06 23 22.4	-4.6
HUIG	Huatulco	1.18	103	*e*P	Pb	06 23 07.8	-3.8
HUIG				*i* S	Sb	06 23 23.0	-4.0
UTMO	Huajuapan	1.84	345	*e*P	Pn	06 23 18.6	-2.7
UTMO				*i* S	Sn	06 23 40.9	-4.1
CAIG	El Cayaco	3.02	290	*e*P	Pn	06 23 35.0	-2.1
CAIG				*i* S	Sn	06 24 08.9	-4.5

KRSC 04 06:29:17.3±0.6, 49°.27N×156°.34E, h5km±5km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.42	354	P	Pn	06 29 42.8	-1.0
SKR				*i* S	Sb	06 30 02.0	-0.7
PAU	Pauzhetka	2.22	8	P	Pb	06 29 56.6	-1.3
PAU				*i* S	Sb	06 30 24.5	-1.2
MIPR	Malaya Ipel'ka	3.02	5	P	Pn	06 30 06.4	+0.6
ASAK	Asacha	3.27	17	P	Pn	06 30 11.5	+2.2
MTVR	Mutnovka	3.42	19	P	Pn	06 30 12.6	+1.1
MTVR				*i* S	Sn	06 30 53.2	+0.7
RUS	Russkaya	3.45	23	P	Pn	06 30 12.6	+0.9
RUS				*i* S	Sn	06 30 54.0	+1.1
UGLR	Uglovaya	4.24	21	P	Pn	06 30 25.6	+2.9
AVH	Avacha	4.27	20	P	Pn	06 30 25.5	+2.4
SMAR	Somma	4.29	20	P	Pn	06 30 26.6	+3.2
SDLR	Sedlovina	4.32	21	P	Pn	06 30 26.2	+2.4
GNL	Ganaly	4.54	12	P	Pn	06 30 30.6	+3.8
MKZ	Mys Kozlova	6.25	30	P	Pn	06 30 49.6	-0.5

PDG 04 06:44:29.7±0.2, 42°.63N×19°.88E, h8km±1km, MD1.8/1, ML1.7/10, Error ellipse: s-maj=0.4km s-min=0.4km az=0.0
CSEM 04 06:44:29.7±0.1, 42°.61N×19°.88E, h2km, ML1.7/10, Error ellipse: s-maj=2.8km s-min=2.8km az=109.0
BEO 04 06:44:30.2±0.4, 42°.55N×19°.90E, h1km±4km, ML1.7/6
TIR 04 06:44:29.4±0.5, 42°.58N×19°.91E, h14km±6km, ML2.9, 9C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVY	Plav	0.04	74	⇑*i*Pg	Pg	06 44 31.6	-0.6
PVY				*e*Sg	Sg	06 44 33.2	-0.8
BCI	Bajram Curri	0.25	151	*i* PG	Pb	06 44 35.3	-0.4
BCI				*i* SG	Sb	06 44 39.2	-0.7
BCI	Bajram Curri	0.25	151	*i* Pg	Pb	06 44 35.3	-0.4
	SNR=11						
BCI				*i* Sg	Sb	06 44 39.2	-0.7
	SNR=11						
BEY	Berane	0.29	358	⇓*i*Pg	Pg	06 44 34.4	-1.1
BEY				*e*Sg	Sg	06 44 38.3	-1.3
IVA	Berane	0.29	358	⇓*i*Pg	Pg	06 44 34.4	-1.1
IVA				*e*Sg	Sg	06 44 38.3	-1.3
PDG	Podgorica	0.50	253	*e*Pg	Pg	06 44 38.4	-0.9
PDG				*e*Sg	Sg	06 44 45.9	-0.2
PDG	Podgorica	0.50	253	⇑*i*Pg	Pg	06 44 38.8	-0.5
PDG				*e*Sg	Sg	06 44 45.9	-0.2
TTG	Podgorica	0.50	253	⇑*i*Pg	Pg	06 44 38.8	-0.5
TTG				*e*Sg	Sg	06 44 46.3	+0.2
PUK	Puka	0.54	181	*i* PG	Pb	06 44 40.6	-0.1
PUK				*i* SG	Sb	06 44 48.8	+0.5
PUK	Puka	0.54	181	*i* Pg	Pb	06 44 40.6	-0.1
	SNR=9.0						
PUK				*i* Sg	Sb	06 44 48.8	+0.5
	SNR=9.0						
SJES	Sjenica	0.68	4	*e*Pg	Pb	06 44 43.1	0.0
SJES	Sjenica	0.68	4	*e*Pg	Pb	06 44 43.1	0.0
NKY	Niksic	0.71	289	⇓*i*Pg	Pg	06 44 41.9	-1.4
NKY				*e*Sg	Sb	06 44 53.1	-0.2
NKY	Niksic	0.71	289	⇓*i*Pg	Pg	06 44 41.9	-1.4
NKY				*e*Sg	Sb	06 44 53.1	-0.2
ULC	Ulcinj	0.79	219	⇑*i*Pg	Pb	06 44 45.1	+0.2
ULC				*e*Sg	Sn	06 44 57.8	+0.1
ULC	Ulcinj	0.79	219	⇑*i*Pg	Pb	06 44 45.1	+0.2
ULC				*e*Sg	Sn	06 44 57.8	+0.1
BUM	Brajici-Budva	0.80	250	⇓*i*Pg	Pg	06 44 45.0	0.0
BUM				*e*Sg	Sb	06 44 56.9	+1.1
BUM	Brajici-Budva	0.80	250	⇓*i*Pg	Pg	06 44 45.0	0.0
BUM				*e*Sg	Sb	06 44 56.9	+1.1
PLE	Pljevlja	0.84	333	⇑*i*Pg	Pg	06 44 44.9	-0.8
PLE				*e*Sg	Sb	06 44 57.3	+0.3
PLE	Pljevlja	0.84	333	⇑*i*Pg	Pg	06 44 44.9	-0.8
PLE				*e*Sg	Sb	06 44 57.3	+0.3
UPM	Unac-Piva	0.96	310	⇑*i*Pg	Pb	06 44 46.9	-0.9
UPM				*e*Sg	Sn	06 45 01.6	-0.5
UPM	Unac-Piva	0.96	310	⇑*i*Pg	Pb	06 44 46.9	-0.9
UPM				*e*Sg	Sn	06 45 01.6	-0.5
PHP	Peshkopia	0.98	156	*i* PG	Pn	06 44 48.6	-0.1
PHP				*i* SG	Sn	06 45 03.5	+1.0
PHP	Peshkopia	0.98	156	*i* Pg	Pn	06 44 48.7	-0.1
	SNR=95						
PHP				*i* Sg	Sn	06 45 03.5	+1.0
	SNR=9.0						
HCY	Herceg Novi	1.05	263	*e*Pg	Pb	06 44 49.0	-0.4
HCY				*e*Sg	Sn	06 45 05.3	+1.1
HCY	Herceg Novi	1.05	263	*e*Pg	Pb	06 44 49.0	-0.4
HCY				*e*Sg	Sn	06 45 05.3	+1.1
BRY	Bratogost	1.06	288	⇓*i*Pg	Pb	06 44 48.3	-1.1
BRY				*e*Sg	Sn	06 45 04.7	+0.2
BRY	Bratogost	1.06	288	⇓*i*Pg	Pb	06 44 48.3	-1.1
BRY				*e*Sg	Sn	06 45 04.7	+0.2
SELS	Selova	1.10	54	*e*Sg	Sg	06 45 04.7	-0.1
BBLS	Lazići	1.33	344	*e*Pg	Pg	06 44 54.9	-0.2
BBLS	Lazići	1.33	344	*e*Pg	Pg	06 44 54.9	-0.2
BARS	Barje	1.43	80	*e*Pg	Pg	06 44 56.4	-0.5
BARS				*e*Sg	Sg	06 45 16.0	+0.6
GRUS	Gruza	1.43	24	*e*Pg	Pb	06 44 55.8	-0.1
GRUS				*e*Sg	Sg	06 45 18.0	+2.4
GRUS	Gruza	1.43	24	*e*Pg	Pb	06 44 55.8	-0.1
GRUS				*e*Sg	Sg	06 45 18.0	+2.4
DIVS	Divibare	1.52	2	*e*Pg	Pg	06 44 58.9	+0.4
DIVS	Divibare	1.52	2	*e*Pg	Pg	06 44 58.9	+0.4
STON	Ston	1.65	281	*i* Pn	Pb	06 44 59.0	-0.6
STON				Sn	Sg	06 45 24.3	+1.8
STON	Ston	1.65	281	*i* Pn	Pb	06 44 58.9	-0.6
STON				Sn	Sg	06 45 24.3	+1.8
ZAPS	Zavoj	2.12	70	*e*Pn	Pb	06 45 06.7	-0.9
ZAPS				*e*Sn	Sb	06 45 34.4	+0.6
ZAPS	Zavoj	2.12	70	*e*Pn	Pb	06 45 06.7	-0.9
ZAPS				*e*Sn	Sb	06 45 34.4	+0.6

IDC 04 06:53:57.1±0.8, 26°.95S×13°.55W, h0km, mb4.3/10, mb1 4.4/10, mb1mx4.1/23, mbtmp4.3/10, MS3.5/7, Ms1 3.5/7, ms1mx3.2/23, Error ellipse: s-maj=26.3km s-min=19.1km az=160.0
ISCJB 04 06:53:57.1±0.6, 26°.9S±0°.1×13°.5W±0°.1, h10km, mb4.1/12, MS3.4/7, Error ellipse: s-maj=20.3km s-min=13.9km az=157.4
NEIC 04 06:53:58.7±0.5, 26°.92S×13°.53W, h10km, mb4.6/2, Error ellipse: s-maj=17.7km s-min=12.1km az=157.0
ISC 04 06:53:58.8±0.7, 26°.9S±0°.1×13°.6W±0°.1, h10km, n29, σ0s.78/27, mb4.2/12, MS3.5/7, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	Tsumeb	29.61	82	P	P	07 00 03.8	-0.7
TSUM	Tsumeb	29.61	82	P	P	07 00 03.8	-0.7
	2.5nm,1.0s,baz=239,slow=19,SNR=5.9						
TSUM				LR	LR	07 08 52.4	
	comp=Z,68nm,20.9s,baz=120,slow=30						
SUR	Sutherland	30.29	109	P	P	07 00 10.7	+0.2
SUR	Sutherland	30.29	109	P	P	07 00 10.7	+0.2
	9.1nm,1.1s,baz=315,slow=7.1,SNR=3.8						
BOSA	Boshof	34.30	102	P	P	07 00 44.5	-1.1
BOSA	Boshof	34.30	102	P	P	07 00 44.5	-1.1
	7.3nm,0.9s,baz=254,slow=8.8,SNR=8.5						
BOSA				LR	LR	07 13 06.6	
	comp=Z,53nm,18.2s,baz=158,slow=34						
LBTB	Lobatse	35.17	96	*e*P	P	07 00 51.1	-2.1
	7.3nm,0.8s						
LBTB	Lobatse	35.17	96	P	P	07 00 52.5	-0.6
	12nm,0.8s,baz=269,slow=8.7,SNR=22						
CPUP	Villa Florida	38.98	261	LR	LR	07 14 51.1	
	comp=Z,82nm,19.1s,baz=282,slow=32						
LSZ	Lusaka	40.47	82	P	P	07 01 38.7	+0.7
LSZ	Lusaka	40.47	82	P	P	07 01 38.7	+0.7
	2.3nm,0.7s,baz=239,slow=5.9,SNR=4.6						
TORD	Torodi Ar. Bea	42.47	22	P	P	07 01 54.6	+0.4
TORD	Torodi Ar. Bea	42.47	22	P	P	07 01 54.6	+0.4
	3.6nm,0.9s,baz=198,slow=8.7,SNR=17						
TORD				LR	LR	07 16 07.1	
	comp=Z,78nm,19.1s,baz=210,slow=31						
CFAA	Coronel Fontan	47.52	251	P	P	07 02 34.1	-0.3
CFAA	Coronel Fontan	47.52	251	P	P	07 02 34.1	-0.3
	0.1nm,0.7s,baz=70,slow=3.3,SNR=3.6						
CFAA				LR	LR	07 17 60.0	
	comp=Z,13nm,20.1s,baz=109,slow=30						
PLCA	Paso Flores	48.53	238	P	P	07 02 41.5	-0.7
PLCA	Paso Flores	48.53	238	P	P	07 02 41.5	-0.7
	1.9nm,0.8s,baz=45,slow=5.7,SNR=3.3						
LPAZ	La Paz	51.49	270	LR	LR	07 21 37.1	
	comp=Z,50nm,19.6s,baz=72,slow=32						
QSPA	South Pole Qui	63.33	180	*e*P	P	07 04 28.9	+1.1
	3.7nm,0.8s						
VNDA	Vanda	75.79	179	P	P	07 05 45.0	+0.6
VNDA	Vanda	75.79	179	P	P	07 05 45.0	+0.6
	1.3nm,0.8s,baz=218,slow=5.8,SNR=6.0						
VNDA				LR	LR	07 36 41.4	
	comp=Z,50nm,19.3s,baz=170,slow=34						
GERES	GERESS Array B	79.24	18	P	P	07 06 04.2	+0.1
GERES	GERESS Array B	79.24	18	P	P	07 06 04.2	+0.1
	0.3nm,0.2s,baz=185,slow=4.8,SNR=3.5						
AKASG	Malin Array Be	86.01	26	P	P	07 06 39.7	+0.6
AKASG	Malin Array Be	86.01	26	P	P	07 06 39.7	+0.6
	2.4nm,0.8s,baz=224,slow=6.1,SNR=6.0						
ASAR	Alice Springs	120.72	145	PKP	PKPdf	07 12 50.9	-0.8
ASAR	Alice Springs	120.72	145	PKP	PKPdf	07 12 50.9	-0.8
	0.2nm,0.6s,baz=242,slow=2.0,SNR=3.8						
KSAR	Wonju Array Be	145.92	62	PKPbc	PKPdf	07 13 38.0	0.0
KSRS	Korea Array	145.95	62	PKPbc	PKPdf	07 13 38.0	0.0
	1.2nm,0.7s,baz=298,slow=4.5,SNR=6.1						

MEX 04 06:55:27.3±0.6, 17°.87N×100°.48W, h55km±7km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.43	17	*i* P	Pn	06 55 36.4	-1.8
ARIG				*i* S	Sn	06 55 44.3	-1.8
CAIG	El Cayaco	0.84	166	*e*P	Pn	06 55 41.5	-1.6
CAIG				*i* S	Sn	06 55 52.7	-1.9
ZIIG	Zihuatanejo	0.97	255	*i* P	Pn	06 55 43.0	-1.8
ZIIG				*i* S	Sn	06 55 56.4	-1.4
ACX	Acapulco	1.16	149	*i* P	Pn	06 55 45.1	-2.2
ACX				*i* S	Sn	06 56 00.4	-1.8
YAIG	Yautepec	1.67	53	*i* P	Pn	06 55 52.9	-1.5
YAIG				*i* S	Sn	06 56 13.4	-1.5
UTMO	Huajuapan	2.55	90	*i* P	Pn	06 56 06.0	-0.5
UTMO				*i* S	Sn	06 56 34.5	-2.1
PNIG	Pinotepa	2.69	123	*i* P	Pn	06 56 06.5	-1.6
PNIG				*i* S	Sn	06 56 37.1	-2.4

IDC 04 06:58:09.9±2.1, 1°.61N×126°.42E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.4/30, Error ellipse: s-maj=160.0km s-min=26.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.78	160	P	P	07 03 13.2	-1.2
	1.8nm,0.5s,baz=339,slow=11,SNR=10						
ASAR	Alice Springs	26.16	164	P	P	07 03 47.0	+0.8
	0.8nm,0.4s,baz=350,slow=14,SNR=16						
CTA	Charters Tower	29.04	139	LR	LR	07 16 06.4	
	comp=Z,55nm,20.4s,baz=318,slow=37						
MKAR	Makanchi Array	59.12	326	P	P	07 08 12.3	-0.1
	0.2nm,0.5s,baz=122,slow=7.6,SNR=4.1						

SOF 04 07:15:41.6, 41°.93N×23°.40E, h9km, MD3.7
CSEM 04 07:15:42.9±0.1, 41°.90N×23°.36E, h10km, MD3.7, Error ellipse: s-maj=2.5km s-min=2.3km az=45.0
IDC 04 07:15:42.5±2.1, 41°.68N×23°.65E, h0km, mb3.6/2, mb1 3.5/3, mb1mx3.3/23, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=65.1km s-min=26.7km az=156.0
SKO 04 07:15:42.9, 41°.92N×23°.33E, h4km, M3.2, ML3.5
PDG 04 07:15:42.3±0.5, 41°.90N×23°.37E, h11km, ML3.3/8, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0
THE 04 07:15:43.2, 41°.85N×23°.37E, h2km, ML3.7/9, Error ellipse: s-maj=1.1km s-min=0.7km az=176.0
TIR 04 07:15:43.5, 41°.84N×23°.34E, h52km
BEO 04 07:15:43.3±0.8, 41°.90N×23°.29E, h15km±3km, ML3.5/1
ISC 04 07:15:41.6±1.1, 41°.91N±0°.01×23°.35E±0°.01, h2km±9km, n213, σ1s.21/274, 31C-27D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KKB	Krupnik	0.20	258	*i* Pg	Pg	07 15 46.2	+0.6
KKB	Krupnik	0.20	258	*i* Pg	Pg	07 15 46.2	+0.6
MMB	Musomiste	0.43	138	*i* Pg	Pb	07 15 51.2	-0.7
MMB	Musomiste	0.43	138	*i* Pg	Pb	07 15 51.2	-0.7
NVR	Nevrokopi	0.68	145	P	Pg	07 15 55.0	+0.3
NVR				S	Sg	07 16 04.3	+0.9
NVR	Nevrokopi	0.68	145	*e*Pn	Pg	07 15 54.9	+0.3
NVR				S	Sg	07 16 04.3	+0.9
VTS	Vitosha	0.69	351	⇓*i*P	Pg	07 15 55.4	+0.5
VTS				S	Sg	07 16 04.7	+0.8
VTS	Vitosha	0.69	351	*i* Pg	Pg	07 15 55.3	+0.4
VTS	Vitosha	0.69	351	⇓*i*P	Pg	07 15 55.4	+0.5
VTS				S	Sg	07 16 04.7	+0.8
SOF	Sofiya	0.78	359	*i* Pg	Pg	07 15 57.0	+0.5
SOF	Sofiya	0.78	359	*i* Pg	Pg	07 15 57.0	+0.5
SRS	Serrai	0.81	167	P	Pg	07 15 57.6	+0.4
SRS				S	Sb	07 16 08.8	-1.1
SRS	Serrai	0.81	167	P	Pg	07 15 57.6	+0.4
SRS				S	Sb	07 16 08.8	-1.1
VAY	Valandovo	0.83	225	*e*Pg	Pg	07 15 57.9	+0.4
VAY				*i* Sg	Sb	07 16 09.8	-0.6
VAY				*e*Lg	Lg	07 16 09.9	
	comp=N,3μm,0.6s						
VAY				*e*Lg	Lg	07 16 09.9	
	comp=E,2μm,0.5s						
VAY	Valandovo	0.83	225	*e*Pg	Pb	07 15 58.3	-0.4
VAY				*i* Sg	Sb	07 16 10.2	-0.1
VAY				*e*Lg	Lg	07 16 10.4	
	comp=E,2μm,0.5s						
PGB	Panagyurishte	0.88	43	*i* Pg	Pg	07 15 58.1	-0.5
PGB	Panagyurishte	0.88	43	*i* Pg	Pg	07 15 58.1	-0.5
PLD	Plovdiv	1.03	79	*i* P	Pg	07 16 01.4	+0.1
PLD	Plovdiv	1.03	79	*i* P	Pg	07 16 01.4	+0.1
RZN	Rozhen	1.04	102	*i* P	Pg	07 16 01.7	0.0
RZN	Rozhen	1.04	102	*i* P	Pg	07 16 01.7	0.0
SOH	Sokhos	1.09	180	P	Pg	07 16 02.7	+0.3
SOH				S	Sb	07 16 17.4	-0.4
SOH	Sokhos	1.09	180	P	Pg	07 16 02.7	+0.3
SOH				*e*Sn	Sg	07 16 16.5	0.0
SOH				S	Sb	07 16 17.4	-0.4
GRG	Griva	1.19	217	P	Pb	07 16 04.7	-0.2
GRG				S	Sn	07 16 20.8	-1.3
GRG	Griva	1.19	217	P	Pb	07 16 04.7	-0.2
GRG				*e*Sn	Sg	07 16 20.5	+0.7
GRG				S	Sn	07 16 20.8	-1.3
KAVA	Kavala	1.26	136	P	Pn	07 16 05.2	-1.1
KAVA				S	Sn	07 16 22.7	-1.1
KAVA	Kavala	1.26	136	P	Pn	07 16 05.2	-1.1
KAVA				S	Sn	07 16 22.7	-1.1
THE	Thessaloniki	1.31	193	P	Pg	07 16 07.0	+0.3
THE				S	Sg	07 16 24.7	+1.1
THE	Thessaloniki	1.31	193	P	Pg	07 16 07.0	+0.3
THE				S	Sg	07 16 24.7	+1.1
HORT	Hortiatis	1.32	188	P	Pb	07 16 07.2	0.0
HORT				S	Sg	07 16 24.9	+0.8
HORT	Hortiatis	1.32	188	P	Pb	07 16 07.2	0.0
HORT				S	Sg	07 16 24.9	+0.8
SKO	Skopje	1.43	273	*i* Pn	Pg	07 16 09.5	+0.5
SKO				*i* Sg	Sg	07 16 27.7	+0.2
SKO				*e*Lg	Lg	07 16 30.2	
	comp=N,306nm,0.3s						
SKO				*e*Lg	Lg	07 16 30.4	
	comp=E,351nm,0.5s						
SKO	Skopje	1.43	273	⇑*i*Pg	Pb	07 16 09.1	+0.1
SKO	Skopje	1.43	273	⇑*i*Pg	Pb	07 16 09.1	+0.1
SKO				*i* Sg	Sg	07 16 28.1	+0.6
SKO				*e*Lg	Lg	07 16 30.9	
	comp=E,351nm,0.5s						
BARS	Barje	1.46	309	⇑*i*Pg	Pn	07 16 08.9	-0.1
BARS				*e*Sg	Sb	07 16 28.1	-0.3
BARS	Barje	1.46	309	⇑*i*Pg	Pn	07 16 08.9	-0.1
BARS				*e*Sg	Sb	07 16 28.1	-0.3
ZAPS	Zavoj	1.46	339	⇑*i*Pg	Pg	07 16 10.0	+0.3
ZAPS				*e*Sg	Sg	07 16 30.6	+1.9
MPEP	Malo Peshtene	1.48	11	*i* P	Pb	07 16 09.6	-0.2
PLG	Polygyros	1.54	177	P	Pb	07 16 10.5	-0.3
PLG				S	Sg	07 16 31.1	+0.2
PLG	Polygyros	1.54	177	P	Pb	07 16 10.5	-0.3
PLG				S	Sg	07 16 31.1	+0.2
KDZ	Kurdzhali	1.57	99	*i* P	Pn	07 16 09.8	-0.7
KDZ	Kurdzhali	1.57	99	*i* P	Pn	07 16 09.8	-0.7
DIM	Dimitrovgrad	1.63	84	*i* P	Pb	07 16 12.5	0.0
DIM	Dimitrovgrad	1.63	84	*i* P	Pb	07 16 12.5	0.0
OUR	Ouranopolis	1.64	163	P	Pn	07 16 11.5	0.0
OUR				S	Sb	07 16 33.3	-0.5
OUR	Ouranopolis	1.64	163	P	Pn	07 16 11.5	0.0
OUR				S	Sb	07 16 33.3	-0.5
BIA	Bitola	1.76	240	*i* Pn	Pn	07 16 13.4	+0.2
BIA				*i* Sg	Sg	07 16 38.0	-0.3
BIA	Bitola	1.76	240	*i* Pn	Pn	07 16 13.4	+0.2
BIA				*i* Sg	Sg	07 16 37.9	-0.3
RDO	Rodhopi	1.81	114	P	Pn	07 16 14.1	+0.3
RDO	Rodhopi	1.81	114	*e*Pn	Pb	07 16 14.2	-1.3
FNA	Florina	1.86	234	P	Pn	07 16 15.0	+0.4
FNA	Florina	1.86	234	*e*Pn	Pn	07 16 15.1	+0.4
LIT	Litokhoron	1.92	200	P	Pn	07 16 15.5	+0.1
LIT				S	Sb	07 16 40.6	-1.2
LIT	Litokhoron	1.92	200	P	Pn	07 16 15.5	+0.1
LIT	Litokhoron	1.92	200	*e*Pn	Pb	07 16 16.2	-1.2
LIT				S	Sb	07 16 40.6	-1.2
PVL	Pavlikeni	1.96	48	*i* P	Pb	07 16 17.4	-0.7
PVL	Pavlikeni	1.96	48	*i* P	Pb	07 16 17.4	-0.7
PAIG	Paliouri	2.00	173	P	Pn	07 16 16.4	+0.1
PAIG	Paliouri	2.00	173	P	Pn	07 16 16.4	+0.1
KZN	Kozani	2.00	217	P	Pn	07 16 16.6	+0.1
KZN	Kozani	2.00	217	*e*Pn	Pn	07 16 16.8	+0.3
SELS	Selova	2.11	309	⇓*i*Pn	Pn	07 16 17.5	-0.4
SELS				*e*Sg	Sg	07 16 49.2	-0.1
BOLS	Boljevac	2.18	332	*e*Pn	Pn	07 16 19.8	+0.9
BOLS	Boljevac	2.18	332	*e*Pn	Pn	07 16 19.8	+0.9
SMTH	Samothraki Isl	2.18	130	*e*Pb	Pn	07 16 19.5	+0.5
PHP	Peshkopia	2.19	265	*i* PN	Pn	07 16 19.0	-0.1
PHP				*i* SN	Sb	07 16 48.3	-1.2
PHP	Peshkopia	2.19	265	P	Pn	07 16 19.9	+0.8
PHP	Peshkopia	2.19	265	*i* Pn	Pn	07 16 19.0	-0.1
PHP	Peshkopia	2.19	265	P	Pn	07 16 19.9	+0.8
PHP				*i* Sn	Sb	07 16 48.3	-1.2
ALN	Alexandroupoli	2.27	116	*e*Pn	Pn	07 16 20.5	+0.4
NEST	Nestorio	2.29	230	P	Pn	07 16 21.4	+0.9
NEST	Nestorio	2.29	230	P	Pn	07 16 21.4	+0.9
ZIMR		2.29	40	⇓*i*P	Pb	07 16 22.5	-1.2
ZIMR		2.29	40	S	Sb	07 16 51.5	-0.9
KBN	Korca	2.32	237	*i* PN	Pn	07 16 21.6	+0.7
KBN	Korca	2.32	237	*i* Pn	Pn	07 16 21.6	+0.7
SZH	Strazhica	2.34	54	*i* P	Pn	07 16 21.6	+0.5
SZH	Strazhica	2.34	54	*i* P	Pn	07 16 21.6	+0.5
LIA	Limnos Island	2.44	145	P	Pn	07 16 22.6	+0.1
LIA	Limnos Island	2.44	145	P	Pn	07 16 22.6	+0.1
JMB	Yambol	2.47	76	*i* P	Pn	07 16 23.0	+0.2
JMB	Yambol	2.47	76	*i* P	Pn	07 16 23.0	+0.2
BCI	Bajram Curri	2.48	282	*i* PN	Pn	07 16 23.8	+0.7
BCI	Bajram Curri	2.48	282	*i* Pn	Pn	07 16 23.8	+0.7
EDRB	Edirne	2.54	90	*e*P	Pn	07 16 23.6	-0.2
XOR	Xorichti	2.54	183	P	Pn	07 16 23.8	-0.1
XOR	Xorichti	2.54	183	P	Pn	07 16 23.8	-0.1
THL	Klokotos Trika	2.55	204	*e*Pn	Pn	07 16 24.3	+0.3
PUK	Puka	2.58	274	*i* PN	Pn	07 16 25.8	+1.3
PUK	Puka	2.58	274	*i* Pn	Pn	07 16 25.8	+1.3
PVY	Plav	2.61	286	⇓*i*Pn	Pn	07 16 26.1	+1.2
PVY				*e*Sn	Sb	07 17 00.0	-1.7
TIR	Tirane	2.67	259	*i* PN	Pb	07 16 29.0	-1.2
TIR	Tirane	2.67	259	*i* Pn	Pb	07 16 29.0	-1.2
ERIK	Erikli-Kesan	2.69	116	*e*P	Pn	07 16 26.3	+0.5
BEY	Berane	2.74	292	⇓*i*Pn	Pn	07 16 28.0	+1.4
BEY				*e*Sn	Sb	07 17 02.6	-2.7
IVA	Berane	2.74	292	⇓*i*Pn	Pn	07 16 28.0	+1.4
IVA				*e*Sn	Sb	07 17 02.6	-2.7
AOS	Alonnisos	2.77	171	*e*Pn	Pn	07 16 26.5	-0.4
GELI	Tayfur-Gelibol	2.80	122	*e*P	Pn	07 16 27.7	+0.3
HUMR	Humele	2.88	24	⇑*i*P	Pn	07 16 28.8	+0.3
HUMR	Humele	2.88	24	⇑*i*P	Pn	07 16 28.8	+0.3
LPK	Lapseki	3.00	120	*e*P	Pn	07 16 30.7	+0.6
ULC	Ulcinj	3.06	272	*e*Pn	Pn	07 16 32.8	+1.7
ULC				*e*Sn	Sn	07 17 10.5	+2.2
ULC	Ulcinj	3.06	272	*e*Pn	Pn	07 16 32.8	+1.7
ULC				*e*Sn	Sn	07 17 10.5	+2.2
EZN	Ezine	3.07	132	*e*P	Pn	07 16 30.3	-0.8
PDG	Podgorica	3.09	281	⇓*i*Pn	Pn	07 16 32.8	+1.4
PDG				*e*Sn	Sn	07 17 11.0	+2.2
TTG	Podgorica	3.09	281	⇓*i*Pn	Pn	07 16 32.8	+1.4
TTG				*e*Sn	Sn	07 17 11.0	+2.2
SART	Tekirdag	3.13	112	*i* P	Pg	07 16 40.5	-1.2
TRUS	Trudelj	3.16	318	*e*Pn	Pn	07 16 31.0	-1.4
TRUS				*e*Sn	Sn	07 17 09.4	-1.3
TRUS	Trudelj	3.16	318	*e*Pn	Pn	07 16 31.0	-1.4
TRUS				*e*Sn	Sn	07 17 09.4	-1.3
PLE	Pljevlja	3.25	297	⇑*i*Pn	Pn	07 16 35.3	+1.6
PLE				*e*Sn	Sn	07 17 14.2	+1.1
PLE	Pljevlja	3.25	297	⇑*i*Pn	Pn	07 16 35.3	+1.6
PLE				*e*Sn	Sn	07 17 14.2	+1.1
PRD	Provadia	3.26	65	*i* P	Pn	07 16 34.0	+0.3
PRD	Provadia	3.26	65	*i* P	Pn	07 16 34.0	+0.3
TKR	Tekirdag	3.28	105	*e*P	Pn	07 16 35.5	+1.5
DIVS	Divibare	3.29	313	⇑*i*Pn	Pn	07 16 34.1	-0.2
DIVS				*e*Sn	Sn	07 17 12.6	-1.5
DIVS	Divibare	3.29	313	⇑*i*Pn	Pn	07 16 34.1	-0.2
DIVS				*e*Sn	Sn	07 17 12.6	-1.5
BUM	Brajici-Budva	3.34	278	⇓*i*Pn	Pn	07 16 36.9	+2.0
BUM				*e*Sn	Sn	07 17 16.6	+1.4
BUM	Brajici-Budva	3.34	278	⇓*i*Pn	Pn	07 16 36.9	+2.0
BUM				*e*Sn	Sn	07 17 16.6	+1.4
KRBG	Karabiga-Canak	3.34	116	*e*P	Pn	07 16 35.9	+1.1
MRMT	Marmara Adasi	3.46	111	*e*P	Pn	07 16 36.6	+0.1
SULR		3.49	36	S	Sn	07 17 21.8	+3.1
SULR		3.49	36	S	Sn	07 17 21.8	+3.1
BBLS	Lazići	3.50	305	⇑*i*Pn	Pn	07 16 37.6	+0.5
BBLS	Lazići	3.50	305	⇑*i*Pn	Pn	07 16 37.6	+0.5
UPM	Unac-Piva	3.53	293	⇑*i*Pn	Pn	07 16 39.2	+1.6
UPM				*e*Sn	Sn	07 17 21.7	+1.7
UPM	Unac-Piva	3.53	293	⇑*i*Pn	Pn	07 16 39.2	+1.6
UPM				*e*Sn	Sn	07 17 21.7	+1.7
MTUR	Matau	3.54	20	⇑*i*P	Pn	07 16 38.9	+1.2
MTUR	Matau	3.54	20	⇑*i*P	Pn	07 16 38.9	+1.2
LOT	Lotru	3.55	5	⇓*i*P	Pn	07 16 37.8	-0.1
LOT	Lotru	3.55	5	⇓*i*P	Pn	07 16 37.8	-0.1
LOT				S	Sn	07 17 19.5	-1.0
HCY	Herceg Novi	3.65	280	*e*Pn	Pn	07 16 40.2	+1.1
HCY				*e*Sn	Sn	07 17 24.4	+1.7
HCY	Herceg Novi	3.65	280	*e*Pn	Pn	07 16 40.2	+1.1
HCY				*e*Sn	Sn	07 17 24.4	+1.7
BRY	Bratogost	3.70	287	⇑*i*Pn	Pn	07 16 41.8	+1.9
BRY				*e*Sn	Sn	07 17 26.1	+2.0
BRY	Bratogost	3.70	287	⇑*i*Pn	Pn	07 16 41.8	+1.9
BRY				*e*Sn	Sn	07 17 26.1	+2.0
SLVT	Silivri	3.71	99	*e*P	Pn	07 16 41.6	+1.7
CTYL	Yal??k??y-??at	3.72	95	*e*P	Pn	07 16 41.6	+1.5
VOIR		3.74	19	⇓*i*P	Pn	07 16 41.2	+0.8
VOIR		3.74	19	⇓*i*P	Pn	07 16 41.2	+0.8
VOIR				S	Sn	07 17 25.3	+0.3
EDC	Edincik	3.75	113	*e*P	Pn	07 16 42.2	+1.7
GONE	Gonen-Balikesi	3.77	118	*e*P	Pn	07 16 41.1	+0.3
BNT	Bandirma	3.78	113	*e*P	Pn	07 16 42.2	+1.3
TEKS	Tekeris	3.84	315	⇓*i*Pn	Pn	07 16 41.2	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TEKS	Tekeris	3.84	315	⇓iPn	Pn	07 16 41.2	-0.6
BALY	Balya	3.90	122	iP	Pn	07 16 44.5	+1.9
BALY	Balya	3.90	122	iP	Pn	07 16 44.5	+1.9
BZS	Buzias	3.91	342	⇑iP	Pn	07 16 42.4	-0.3
BZS	Buzias	3.91	342	⇑iP	Pn	07 16 42.4	-0.3
BZS				S	Sn	07 17 27.0	-2.2
CTKS	Kestanelik-??a	3.93	98	eP	Pn	07 16 43.4	+0.5
ISR	Istrita	3.96	35	⇓iP	Pn	07 16 44.4	+1.0
ISR	Istrita	3.96	35	⇓iP	Pn	07 16 44.4	+1.0
PSN	Preselentsi	3.97	62	eP	Pn	07 16 43.6	+0.1
PSN	Preselentsi	3.97	62	eP	Pn	07 16 43.6	+0.1
MLR	Muntele Rosu	4.04	27	⇓iP	Pn	07 16 45.7	+1.0
MLR	Muntele Rosu	4.04	27	⇓iP	Pn	07 16 45.7	+1.0
BALB	Balikesir	4.12	122	eP	Pn	07 16 46.0	+0.4
KCTX	Karacabey (Bur	4.12	112	eP	Pn	07 16 47.0	+1.3
BGKT	Bogazkoy	4.13	98	eP	Pn	07 16 47.0	+1.2
DOPR	Dopca	4.32	19	⇑iP	Pn	07 16 49.1	+0.8
DOPR	Dopca	4.32	19	⇑iP	Pn	07 16 49.1	+0.8
ARMT	Armutlu	4.37	106	eP	Pn	07 16 50.0	+1.0
ISK	Istanbul-Kandi	4.37	99	eP	Pn	07 16 50.4	+1.4
MDNY	Mudanya-Bursa	4.45	108	eP	Pn	07 16 52.2	+2.0
BUY	Buyukada	4.47	102	eP	Pn	07 16 51.5	+1.2
TIRR	Tirgusor	4.49	54	⇓iP	Pn	07 16 51.3	+0.6
TIRR	Tirgusor	4.49	54	⇓iP	Pn	07 16 51.3	+0.6
TIRR				S	Sn	07 17 46.9	+3.4
DURS	Dursunbey	4.52	119	iP	Pn	07 16 53.1	+1.9
DURS	Dursunbey	4.52	119	iP	Pn	07 16 53.1	+1.9
ORLT	Orhaneli	4.59	112	eP	Pn	07 16 52.8	+0.7
PLOR	Plostina	4.61	30	⇓iP	Pn	07 16 53.8	+1.5
PLOR	Plostina	4.61	30	⇓iP	Pn	07 16 53.8	+1.5
DST	Dursunbey	4.62	118	eP	Pn	07 16 53.5	+1.0
VRI	Vrincioaia	4.65	31	⇑iP	Pn	07 16 54.7	+1.9
VRI	Vrincioaia	4.65	31	⇑iP	Pn	07 16 54.7	+1.9
CFR	Carcaliu	4.77	45	⇑iP	Pn	07 16 55.4	+0.9
CFR	Carcaliu	4.77	45	⇑iP	Pn	07 16 55.4	+0.9
CFR				S	Sn	07 17 53.1	+2.8
SILT	Sile	4.78	97	eP	Pn	07 16 56.1	+1.4
HRT	Hereke	4.88	101	eP	Pn	07 16 56.1	+0.1
IZI	Iznik	4.88	107	eP	Pn	07 16 56.3	+0.2
DRGR		4.90	355	⇑iP	Pn	07 16 55.4	-1.0
DRGR		4.90	355	⇑iP	Pn	07 16 55.4	-1.0
DEMI	Demirci	4.99	123	iP	Pn	07 16 59.0	+1.4
DEMI	Demirci	4.99	123	iP	Pn	07 16 59.0	+1.4
ADVT	Abdulvahap	5.04	105	eP	Pn	07 16 59.3	+1.1
TLCR		5.15	49	⇓iP	Pn	07 17 00.6	+0.9
TLCR		5.15	49	⇓iP	Pn	07 17 00.6	+0.9
TVSB	Tavsanli	5.25	116	eP	Pn	07 17 02.1	+0.9
KULA	Kula-Manisa	5.29	128	eP	Pn	07 17 00.7	-1.0
GDZ	Gediz	5.46	119	iP	Pn	07 17 05.9	+1.9
GDZ	Gediz	5.46	119	iP	Pn	07 17 05.9	+1.9
PKSM	Moragy	5.48	323	⇑iP	Pn	07 17 03.1	-1.1
PKSM	Moragy	5.48	323	⇑iP	Pn	07 17 03.1	-1.1
AYDN	Tasoluk	5.49	139	iP	Pn	07 17 05.5	+1.0
AYDN	Tasoluk	5.49	139	iP	Pn	07 17 05.5	+1.0
GULT	Gulveren	5.60	103	eP	Pn	07 17 06.2	+0.2
BODT	Bodrum	5.73	146	eP	Pn	07 17 01.8	-5.9
BORA	Eskisehir	5.75	108	iP	Pn	07 17 09.6	+1.5
BORA	Eskisehir	5.75	108	iP	Pn	07 17 09.6	+1.5
HENT	Hendek	5.78	98	iP	Pn	07 17 09.4	+0.9
HENT	Hendek	5.78	98	iP	Pn	07 17 09.4	+0.9
ALT	Altintas	5.89	117	eP	Pn	07 17 10.4	+0.4
KHL	Karahalli	5.93	125	eP	Pn	07 17 09.4	-1.1
MDUB	Mudurnu	6.09	101	eP	Pn	07 17 13.6	+0.8
SEYT	Eskypehyr	6.18	110	iP	Pn	07 17 13.4	-0.6
SEYT	Eskypehyr	6.18	110	iP	Pn	07 17 13.4	-0.6
KIS	Kishinev	6.42	36	e	Sg	07 19 12.0	+4.4
KOLS	Kolonicke sedl	7.07	354	ePN	Pn	07 17 17.1	-8.9
KOLS				ePG	Pg	07 17 53.4	-3.5
KOLS				eSG	Sg	07 19 25.3	-3.1
CRVS	Cervenica-Dubn	7.12	350	ePG	Pg	07 17 54.4	-3.5
CRVS				eSG	Sg	07 19 23.7	-6.4
KIZT	Kizilcal	7.18	112	eP	Pn	07 17 27.9	+0.2
VYHS	Vyhne	7.32	336	ePG	Pg	07 17 58.0	-3.7
VYHS				eSG	Sg	07 19 32.8	-3.6
SMOL	Smolenice	7.81	330	eSG	Sg	07 19 48.7	-3.7
BRTR	Keskin Array B	8.10	102	Pn	Pn	07 17 37.5	-2.8
	comp=E,0.2nm,0.3s,baz=278,slow=13,SNR=4.2						
BRTR				Sn	Sn	07 19 09.2	-3.5
	comp=E,0.2nm,0.3s,baz=287,slow=14,SNR=3.1						
TORD	Torodi Ar. Bea	34.29	220	P	P	07 22 30.2	+0.9
	comp=E,0.6nm,0.7s,baz=35,slow=9.4,SNR=5.6						
MKAR	Makanchi Array	41.57	62	P	P	07 23 30.9	+0.3
	comp=E,0.7nm,0.7s,baz=285,slow=6.2,SNR=6.5						

IDC 04 07:20:55.6±1.6**, 18°.61S×173°.53W, h0**km**, mb4.0**/5**, mb1 4.2**/6**, mb1mx3.9**/21**, mbtmp4.0**/6**, ML1.8**/1**, Error ellipse: s-maj=54.8km s-min=24.7km az=130.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.96	20	Pn	Pn	07 22 09.5	-2.1
	2.0nm,0.3s,baz=254,slow=18,SNR=4.5						
AFI				Sn	Sn	07 22 59.1	-11
	7.5nm,0.3s,baz=142,slow=19,SNR=5.7						
URZ	Urewera	21.22	201	P	P	07 25 42.0	-1.0
	5.9nm,0.5s,baz=15,slow=5.0,SNR=6.7						
STKA	Stephens Creek	42.40	243	P	P	07 28 52.0	-0.2
	1.4nm,0.8s,baz=112,slow=11,SNR=4.2						
WRA	Warramunga Arr	49.06	259	P	P	07 29 45.0	-0.1
	1.3nm,0.5s,baz=97,slow=7.9,SNR=18						
ASAR	Alice Springs	49.07	255	P	P	07 29 45.2	+0.2
	2.0nm,0.5s,baz=92,slow=8.4,SNR=38						
PDAR	Pinedale Array	84.73	42	P	P	07 33 32.9	+0.9
	0.2nm,0.7s,baz=250,slow=4.4,SNR=3.5						

IDC 04 07:29:11.2±1.3**, 4°.07N×127°.04E, h0**km**, mb3.9**/7**, mb1 4.1**/7**, mb1mx3.8**/23**, mbtmp3.9**/7**, Error ellipse: s-maj=71.0km s-min=16.7km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.07	184	P	P	07 34 09.0	+1.1
	2.4nm,0.7s,baz=17,slow=14,SNR=2.5						
WRA	Warramunga Arr	24.91	164	P	P	07 34 35.5	-0.6
	2.8nm,0.6s,baz=343,slow=11,SNR=14						
ASAR	Alice Springs	28.36	167	P	P	07 35 07.2	-0.1
	0.5nm,0.6s,baz=344,slow=8.5,SNR=7.1						
CMAR	Chiang Mai Arr	30.97	300	P	P	07 35 30.4	-0.1
	0.6nm,0.3s,baz=103,slow=7.4,SNR=4.5						
STKA	Stephens Creek	38.33	160	P	P	07 36 33.9	-0.1
	1.5nm,0.6s,baz=327,slow=7.8,SNR=7.9						
SONM	Songino Array	47.08	341	P	P	07 37 46.0	+1.0
	0.6nm,0.3s,baz=157,slow=7.8,SNR=6.2						
MKAR	Makanchi Array	57.46	325	P	P	07 39 01.1	-0.9
	0.3nm,0.5s,baz=121,slow=8.0,SNR=9.9						

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*BJI **04** 07:47:01.1, 8°.23S×119°.82E, h609km, mB4.6/9, mb4.4/11*
*MOS **04** 07:47:03.6±0.5, 7°.41S×120°.00E, h592km, mb4.4/4, Error ellipse: s-maj=18.8km s-min=10.2km az=128.7*
*ISCJB **04** 07:47:05.5±0.2, 7°.59S±0°.03×119°.95E±0°.03, h615km±3km, mb4.3/30, Error ellipse: s-maj=6.0km s-min=4.0km az=135.2*
*AUST **04** 07:47:05.5±0.0, 7°.52S×119°.99E, h597km, Error ellipse: s-maj=1.0km s-min=0.7km az=11.0*
*NEIC **04** 07:47:06.0±0.4, 7°.47S×120°.00E, h607km±5km, mb4.5/7, Error ellipse: s-maj=9.3km s-min=4.9km az=47.0*
*DJA **04** 07:47:06.0±0.4, 8°S±5°×12°0E±°, h620km±6km, M4.9/21, mB5.3/17, mb5.1/21, MLv5.1/15, Mw(mB)4.7/17, Mwp7.0/1*
*IDC **04** 07:47:06.2±0.5, 7°.48S×120°.09E, h610km±6km, mb3.8/15, mb1 3.8/18, mb1mx3.6/27, mbtmp3.8/18, Error ellipse: s-maj=15.5km s-min=6.6km az=55.0*
ISC 04 07:47:06.0±0.3**, 7°.60S**±0°.04×**119°.98E**±0°.06**, h606**km±3km**, n150, σ1ˢ.42**/207**, mb4.2**/30**, 3C-1D, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	2.08	171	P	S	07 49 21.2	-1.2
WSI	Waingapu	2.08	171	P	P	07 48 21.6	+0.4
	baz=2.2,SNR=9.9						
WSI				S	S	07 49 20.8	-1.6
	baz=2.2,SNR=15						
BKSI	Bulukumba	2.26	4	P	P	07 48 22.5	+0.4
MMRI	Maumere	2.46	115	P	P	07 48 22.0	-0.9
KAPI	Kappang	2.58	355	eP	P	07 48 23.8	+0.3
KAPI				S	S	07 49 26.4	0.0
KAPI				eS	S	07 49 27.4	+1.0
KAPI	Kappang	2.58	355	P	P	07 48 24.0	+0.5
KAPI	Kappang	2.58	355	P	P	07 48 23.8	+0.3
	106nm,0.3s,baz=201,slow=2.2,SNR=600						
KAPI				S	S	07 49 26.4	0.0
	baz=300,slow=22,SNR=11						
BASI	Baing, Sumba	2.67	167	P	P	07 48 25.6	+1.7
BBSI	Bau Bau	3.32	51	P	P	07 48 29.3	+1.7
MJSI	Majene	4.14	346	P	P	07 48 34.3	+1.3
KHKI	Kahang-Kahang	4.39	260	P	P	07 48 34.1	-0.6
SRBI	Singaraja	4.75	264	P	P	07 48 37.6	+0.3
DNP	Denpasar	4.84	257	P	P	07 48 38.4	+0.3
IGBI	Denpasar	4.94	255	P	P	07 48 38.7	-0.1
SKSI	Soroako, Sulaw	5.21	15	P	P	07 48 42.1	+1.0
	484nm,0.8s,5μm1.6nm						
BYJI	Banyuwangi	5.60	263	P	P	07 48 45.1	+0.9
	864nm,0.7s						
KMMI	Kalianget	5.99	275	P	P	07 48 49.1	+1.7
	243nm,0.9s,2μm0.8nm						
BLJI	Banyuglugur	6.33	268	P	P	07 48 50.3	0.0
	617nm,0.5s,8μm2.3nm						
GMJI	Gumukmas	6.51	264	P	P	07 48 51.6	-0.3
	187nm,0.9s,5μm1.2nm						
BBKI	Banjar Baru	6.56	308	P	P	07 48 53.5	+1.1
	336nm,0.6s,10μm1.2nm						
LUWI	Luwuk	7.08	23	P	P	07 48 57.2	+0.1
LUWI	Luwuk	7.08	23	P	P	07 48 57.1	0.0
	baz=7.0,SNR=8.3						
LUWI				S	S	07 50 22.7	-5.2
	baz=7.0,SNR=3.2						
KRKI	Karangkates	7.48	265	P	P	07 49 00.3	-0.4
	612nm,0.4s,27μm3.8nm						
PWJI	Pagerwojo	8.11	266	P	P	07 49 05.5	-1.1
	228nm,0.5s,5μm						
SJI	Sawahan	8.14	268	P	P	07 49 06.7	-0.3
	244nm,0.3s,7μm						
MRSI	Marisa	8.26	14	P	P	07 49 07.7	-0.3
	573nm,0.7s,4μm						
PCJI	Pacitan	8.74	266	P	P	07 49 11.7	-0.9
	524nm,0.5s,9μm						
UGM	Wanagama	9.38	267	eP	P	07 49 18.2	-0.7
UGM	Wanagama	9.38	267	P	P	07 49 18.7	-0.2
	407nm,1.3s,5μm						
UGM	Wanagama	9.38	267	P	P	07 49 18.0	-0.8
	baz=9.4,SNR=25						
SMRI	Semarang	9.48	273	P	P	07 49 19.6	-0.2
SMRI	Semarang	9.48	273	P	P	07 49 20.0	+0.1
	baz=9.5,SNR=3.5						
PBKI	Pangkalan Bun	9.59	300	P	P	07 49 21.8	+0.8
	1μm,0.7s,10μm						
BJII	Banjamegara	10.19	271	P	P	07 49 27.0	+0.1
	114nm,0.9s,2μm						
TGJI	Tegal	10.80	273	P	P	07 49 31.9	-1.0
	94nm,1.1s						
CLJI	Cilicap	10.87	269	P	P	07 49 30.7	-2.9
	167nm,0.7s,14μm						
KNRA	Kununurra	11.77	134	P	P	07 49 42.5	+0.1
	baz=12,SNR=28						
FITZ	Fitzroy Crossi	11.81	153	P	P	07 49 43.4	+0.5
FITZ				S	S	07 51 51.0	-0.7
FITZ	Fitzroy Crossi	11.81	153	P	P	07 49 43.4	+0.5
	1.9nm,0.3s,baz=351,slow=7.4,SNR=122						
FITZ				S	S	07 51 51.0	-0.7
	2.5nm,0.3s,baz=217,slow=2.8,SNR=9.8						
FITZ	Fitzroy Crossi	11.81	153	P	P	07 49 43.4	+0.5
	baz=12,SNR=29						
CISI	Cisompet, Garu	12.06	269	P	P	07 49 44.0	-1.5
CISI	Cisompet, Garu	12.06	269	P	P	07 49 43.7	-1.8
	baz=12,SNR=24						
CISI				S	S	07 51 45.3	-11
	baz=12,SNR=3.6						
MTN	Manton Dam	12.15	116	P	P	07 49 45.9	-0.4
	baz=12,SNR=126						
LEM	Lembang	12.29	273	P	P	07 49 52.1	+4.3
	baz=12,SNR=3.5						
SBUM	Sibu	12.63	322	P	P	07 49 51.6	+0.5
	70nm,0.9s,892nm						
FAKI	Fak Fak	13.07	70	P	P	07 49 53.8	-1.8
FAKI	Fak Fak	13.07	70	P	P	07 49 54.1	-1.5
	baz=13,SNR=5.7						
FAKI				S	S	07 52 07.2	-7.6
	baz=13,SNR=5.9						
DBJI	Dramaga	13.17	274	P	P	07 49 55.0	-1.6
	126nm,0.8s,25μm						
KSM	Kuching	13.20	313	eP	P	07 49 56.3	-0.6
KSM	Kuching	13.20	313	P	P	07 49 56.9	0.0
	79nm,0.9s						
KSM	Kuching	13.20	313	P	P	07 49 56.6	-0.3
	baz=13,SNR=9.5						
KDU	Kakadu	13.30	113	P	P	07 49 56.7	-1.1
	baz=13,SNR=114						
CGJI	Cibinong	14.21	273	P	P	07 50 04.6	-2.2
PPBI	Pangkal Pinang	14.81	291	P	P	07 50 12.8	+0.5
RKPI	Ransiki, Papua	15.38	68	P	P	07 50 18.5	+0.9
KASI	Kota Agung	15.52	277	P	P	07 50 16.7	-2.1
GIRL	Giralia	15.95	200	P	P	07 50 24.9	+2.3
	baz=16,SNR=8.4						
MNAI	Manna	17.23	280	P	P	07 50 34.6	+0.1
	baz=17,SNR=4.7						
WRA	Warramunga Arr	18.56	133	P	P	07 50 47.0	+0.5
WRA				S	S	07 53 45.0	-0.3
WRA	Warramunga Arr	18.56	133	P	P	07 50 47.0	+0.5
	5.3nm,0.3s,baz=312,slow=10,SNR=121						
WRA				S	S	07 53 45.0	-0.3
	0.4nm,0.3s,baz=304,slow=14,SNR=3.1						
WRAB	Tennant Creek	18.56	133	eP	P	07 50 47.0	+0.5
WRAB				pmax	pmax		
	comp=Z,16nm,0.5s						
WRAB	Tennant Creek	18.56	133	eP	P	07 50 47.0	+0.5
	comp=Z,16nm,0.5s						
MEEK	Meekatharra	18.98	184	P	P	07 50 51.2	+0.9
	baz=19,SNR=74						
AS31	Alice Springs	20.83	142	eP	P	07 51 07.6	+0.6
AS31				eS	S	07 54 22.1	+0.8
ASAR	Alice Springs	20.83	142	P	P	07 51 07.7	+0.6
ASAR				S	S	07 54 19.4	-1.9
ASAR	Alice Springs	20.83	142	P	P	07 51 07.7	+0.6
	comp=Z,10nm,0.5s,baz=319,slow=8.3,SNR=326						
ASAR				S	S	07 54 19.4	-1.9
	comp=Z,6.0nm,0.8s,baz=306,slow=15,SNR=11						
MORW	Morawa	21.68	189	P	P	07 51 15.5	+1.0
	baz=22,SNR=8.7						
QIS	Mount Isa	22.95	126	P	P	07 51 26.4	+0.4
	baz=23,SNR=49						
BLDU	Ballidu	23.11	187	P	P	07 51 27.8	+0.7
	baz=23,SNR=46						
COEN	Coen	23.64	107	eP	P	07 51 31.8	-0.3
	comp=Z,112nm,0.6s						
COEN	Coen	23.64	107	P	P	07 51 31.8	-0.3
	baz=24,SNR=25						
KMBL	Kambalda	23.72	176	P	P	07 51 33.2	+0.7
	baz=24,SNR=22						
KLBR	Kellerberrin	23.96	185	P	P	07 51 35.6	+0.9
	baz=24,SNR=14						
FORT	Forrest	24.27	163	P	P	07 51 38.6	+1.2
	baz=24,SNR=17						
NWAO	Narrogin (SRO)	25.34	185	eP	P	07 51 48.1	+1.3
	comp=Z,28nm,0.6s						
NWAO	Narrogin (SRO)	25.34	185	P	P	07 51 48.0	+1.2
	comp=Z,38nm,0.5s,baz=11,slow=7.8,SNR=45						
MTSU	Mount Surprise	25.90	116	P	P	07 51 52.8	+0.8
	baz=26,SNR=45						
PMG	Port Moresby	26.94	96	P	P	07 52 00.9	-0.3
PMG	Port Moresby	26.94	96	P	P	07 52 00.9	-0.3
	comp=Z,17nm,0.6s,baz=203,slow=18,SNR=10						
CTA	Charters Tower	28.32	119	P	P	07 52 13.3	+0.2
CTA	Charters Tower	28.32	119	P	P	07 52 13.3	+0.2
	comp=Z,2.9nm,0.3s,baz=294,slow=14,SNR=5.6						
BBOO	Buckleboo	29.19	151	P	P	07 52 21.1	+0.7
	baz=29,SNR=39						
BBOO				S	S	07 56 31.7	-0.1
	baz=29,SNR=10						
QLP	Quilpie	29.80	132	P	P	07 52 27.5	+1.8
	baz=30,SNR=6.8						
STKA	Stephens Creek	31.45	143	eP	P	07 52 41.0	+1.2
	comp=Z,4.1nm,0.4s						
STKA				PcP	PcP	07 55 13.2	-0.6
STKA				S	S	07 57 05.8	-0.6
STKA	Stephens Creek	31.45	143	P	P	07 52 40.9	+1.2
	comp=Z,17nm,0.4s,baz=320,slow=8.4,SNR=113						
STKA				PcP	PcP	07 55 13.2	-0.6
	comp=Z,2.3nm,0.5s,baz=321,slow=4.8,SNR=3.2						
STKA				S	S	07 57 05.8	-0.6
	comp=Z,3.9nm,0.7s,baz=53,slow=23,SNR=18						
STKA	Stephens Creek	31.45	143	P	P	07 52 40.9	+1.2
	baz=32,SNR=95						
RMQ	Roma	33.18	128	P	P	07 52 56.2	+1.7
	baz=33,SNR=6.2						
CMAR	Chiang Mai Arr	33.18	321	P	P	07 52 53.0	-1.5
CMAR				PcP	PcP	07 55 19.6	+0.6
CMAR	Chiang Mai Arr	33.18	321	P	P	07 52 53.0	-1.5
	comp=Z,1.0nm,0.4s,baz=138,slow=6.8,SNR=7.1						
CMAR				PcP	PcP	07 55 19.6	+0.6
	comp=Z,1.4nm,0.5s,baz=174,slow=2.6,SNR=5.2						
CMSA	Cobar Meteorol	33.80	138	P	P	07 53 01.0	+1.4
	baz=34,SNR=9.5						
GYA	Guiyang	36.23	340	eP	P	07 53 21.0	+1.1
GYA				pP	PP	07 55 02.8	-2.6
GYA				PcP	PcP	07 55 29.5	+1.5
GYA				sP	sP	07 56 11.0	+1.5
GYA				ScP	ScP	07 58 17.4	-0.4
GYA				S	S	07 58 21.0	+2.3
GYA				PcS	PcS	07 59 16.7	-0.3
GYA				ScS	ScS	08 02 19.3	-6.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YNG	Young	37.30	139	P	P	07 53 30.2	+1.8
	baz=37,SNR=6.8						
ARMA	Armidale	37.33	132	P	P	07 53 31.3	+2.5
	baz=37,SNR=7.3						
MGCD	Mangrove Creek	38.47	136	P	P	07 53 40.2	+2.4
	baz=39,SNR=6.3						
NJ2	Nanjing	39.44	358	eP	P	07 53 46.6	+1.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HNR	Honiara	39.56	96	eP	P	07 53 46.9	0.0
	comp=Z,80nm,0.7s						
HNR	Honiara	39.56	96	P	P	07 53 46.9	0.0
	comp=Z,76nm,0.6s,baz=269,slow=6.6,SNR=5.5						
CD2	Chengdu	41.32	339	P	P	07 54 01.0	+0.4
CD2				PcP	PcP	07 55 44.4	+0.2
CD2				pP	pP	07 55 46.4	+1.8
CD2				PP	PP	07 55 53.0	+1.1
CD2				sP	sP	07 56 53.2	+0.4
CD2				ScP	ScP	07 58 37.4	0.0
CD2				S	S	07 59 34.3	+1.6
CD2				PcS	PcS	07 59 35.8	-0.9
CD2				sS	sS	08 02 42.4	-0.6
CD2				SS	SS	08 02 58.3	-1.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,100nm,5.2s						
LHI	Lord Howe Isla	43.49	129	S	S	07 59 45.6	-18
	baz=44,SNR=4.7						
LZH	Lanzhou	46.02	342	eP	P	07 54 38.5	+1.6
LZH				pP	pP	07 56 28.5	+4.0
LZH				sP	sP	07 57 31.5	0.0
LZH				pmax	pmax		
	comp=Z,13nm,1.2s						
HHC	Hu-ho-hao-te	48.82	352	eP	P	07 55 00.0	+2.4
HHC				pP	pP	07 56 49.5	+2.3
HHC				PP	PP	07 57 03.8	+4.1
HHC				sP	sP	07 57 54.3	+0.6
HHC				S	S	08 01 20.3	+2.9
HHC				ScS	ScS	08 03 45.4	+0.4
HHC				sS	sS	08 04 36.4	+0.9
HHC				pmax	pmax		
	comp=Z,34nm,0.7s						
HHC				pmax	pmax		
	comp=Z,180nm,7.1s						
CN2	Changchun	51.40	5	eP	P	07 55 19.2	+3.1
MDJ	Mudanjiang	52.69	9	P	P	07 55 25.5	+0.1
MDJ				pP	pP	07 57 16.4	-1.2
MDJ				sP	sP	07 58 21.9	-1.3
MDJ				ScP	ScP	07 59 25.1	+0.2
MDJ				S	S	08 02 11.5	+2.7
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,26nm,3.6s						
SONM	Songino Array	56.48	349	P	P	07 55 51.4	-0.5
SONM				PcP	PcP	07 56 39.4	-0.4
SONM	Songino Array	56.48	349	P	P	07 55 51.4	-0.5
	comp=Z,1.7nm,0.6s,baz=169,slow=8.1,SNR=9.9						
SONM				PcP	PcP	07 56 39.4	-0.4
	comp=Z,0.4nm,0.4s,baz=159,slow=4.3,SNR=3.7						
MSVF	Nonsavu	57.35	106	eP	P	07 55 58.7	+0.3
WMQ	Urumqi	58.93	333	eP	P	07 56 09.5	+1.0
KSH	Kashi	62.07	323	P	P	07 56 28.7	-0.6
KSH				ePcP	PcP	07 57 05.3	+2.8
KSH				epP	pP	07 58 26.1	-1.2
KSH				ePP	PP	07 58 55.2	-1.5
KSH				esP	sP	07 59 28.6	-2.6
KSH				eScP	ScP	08 00 09.0	+2.2
KSH				ePcS	PcS	08 01 06.6	+0.1
KSH				eScS	SKSac	08 05 17.2	-4.5
KSH				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,69nm,3.7s						
MK31	Makanchi Array	63.67	332	eP	P	07 56 38.6	-0.6
MK31				e		07 57 08.2	
MK31	Makanchi Array	63.67	332	eP	P	07 56 38.6	-0.6
MK31				ePcP	PcP	07 57 08.2	-0.6
MKAR	Makanchi Array	63.67	332	P	P	07 56 38.6	-0.6
MKAR						07 57 08.1	
MKAR	Makanchi Array	63.67	332	P	P	07 56 38.6	-0.6
MKAR				PcP	PcP	07 57 08.1	-0.7
MKAR	Makanchi Array	63.67	332	P	P	07 56 38.6	-0.6
	comp=Z,3.9nm,0.5s,baz=149,slow=7.3,SNR=64						
MKAR				PcP	PcP	07 57 08.1	-0.7
	comp=Z,1.1nm,0.5s,baz=149,slow=4.1,SNR=6.7						
AAK	Ala-Archa	64.89	324	⇓iP	P	07 56 46.7	-0.5
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZALV	Zalesovo Beam	68.09	338	P	P	07 57 04.8	-1.6
ZALV	Zalesovo Beam	68.09	338	P	P	07 57 04.8	-1.6
ZALV	Zalesovo Beam	68.09	338	P	P	07 57 04.8	-1.6
	comp=Z,4.7nm,0.4s,baz=135,slow=5.1,SNR=9.2						
KURK	Kurchatov	68.18	333	⇑iP	P	07 57 06.2	-0.8
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAW	Mawson	70.88	200	P	P	07 57 24.1	+1.4
MAW	Mawson	70.88	200	P	P	07 57 24.1	+1.4
	comp=Z,5.2nm,0.7s,baz=58,slow=8.9,SNR=8.6						
MAW	Mawson	70.88	200	P	P	07 57 23.9	+1.2
	baz=71,SNR=5.7						
VNDA	Vanda	73.22	171	eP	P	07 57 36.9	+0.7
	comp=Z,2.7nm,0.6s						
VNDA	Vanda	73.22	171	P	P	07 57 37.0	+0.9
	comp=Z,4.3nm,0.6s,baz=314,slow=6.7,SNR=49						
SEY	Seymchan	74.57	15	⇑eP	P	07 57 43.1	-0.8
ABKAR	Akbulak array	76.98	324	eP	P	07 57 56.3	-1.2
	comp=Z,1.0nm,0.3s						
RDF	Al-Radifah	78.51	301	eP	P	07 58 05.9	-0.3
RDF				AMb	AMB	07 58 06.6	
	comp=Z,21nm,0.6s						
NAY	Al-Naaiem	78.86	302	eP	P	07 58 07.2	-0.7
NAY				AMb	AMB	07 58 09.2	
	comp=Z,8.2nm,1.0s						
RST	Umm Al-Ruwaisa	79.13	302	eP	P	07 58 08.7	-0.7
RST				AMb	AMB	07 58 09.2	
	comp=Z,3.0nm,0.6s						
SYO	Syowa Base	79.50	201	⇑eP	P	07 58 09.6	-1.0
QSPA	South Pole Qui	82.39	180	eP	P	07 58 25.8	+0.2
	comp=Z,3.7nm,0.6s						
KMBO	Kilima Mbogo	82.64	270	P	P	07 58 28.7	+0.6
KMBO	Kilima Mbogo	82.64	270	P	P	07 58 28.7	+0.6
	comp=Z,1.3nm,0.5s,baz=45,slow=20,SNR=5.3						
ZEI	Tsey	85.02	314	eP	P	07 58 37.5	-1.7
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KBZ	Khabaz	85.97	315	P	P	07 58 44.0	+0.6
KBZ	Khabaz	85.97	315	P	P	07 58 44.0	+0.6
KBZ	Khabaz	85.97	315	P	P	07 58 44.0	+0.6
	comp=Z,0.5nm,0.3s,baz=97,slow=9.1,SNR=4.3						
BOSA	Boshof	90.53	241	P	P	07 59 05.3	+0.1
BOSA	Boshof	90.53	241	P	P	07 59 05.3	+0.1
	comp=Z,1.9nm,0.9s,baz=104,slow=4.3,SNR=12						
COLA	College	97.75	26	eP	Pdif	07 59 36.2	-0.6
YKA	Yellowknife Ar	112.52	24	PKiKP	PKiKP	08 04 32.9	-1.2
YKA				PKKPbc	PKKPbc	08 15 23.8	-3.7
YKA	Yellowknife Ar	112.52	24	PKiKP	PKiKP	08 04 32.9	-1.2
	comp=Z,0.4nm,0.5s,baz=302,slow=1.9,SNR=13						
YKA				PKKPbc	PKKPbc	08 15 23.8	-3.7
	comp=Z,0.2nm,0.6s,baz=120,slow=3.5,SNR=5.3						
TORD	Torodi Ar. Bea	119.16	281	PKP	PKPdf	08 04 47.1	-1.1
TORD	Torodi Ar. Bea	119.16	281	PKP	PKPdf	08 04 47.1	-1.1
	comp=Z,1.4nm,0.6s,baz=46,slow=2.2,SNR=18						
NVAR	Mina Array Bea	119.38	50	PKP	PKPdf	08 04 48.5	+0.2
NVAR	Mina Array Bea	119.38	50	PKP	PKPdf	08 04 48.5	+0.2
	comp=Z,0.3nm,0.5s,baz=224,slow=2.0,SNR=3.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LRAL	Lakeview Retre	144.43	41	ePKPdf	PKPdf	08 05 34.4	-0.5
CPUP	Villa Florida	146.18	184	PKPbc	PKPbc	08 05 40.7	+0.5
CPUP	Villa Florida	146.18	184	PKPbc	PKPbc	08 05 40.7	+0.5
	comp=Z,3.1nm,0.5s,baz=139,slow=2.4,SNR=17						
LPAZ	La Paz	154.95	161	ePKPab	PKPab	08 06 21.2	+1.0
LPAZ	La Paz	154.95	161	PKPab	PKPab	08 06 20.3	+0.1
	comp=Z,2.4nm,0.7s,baz=222,slow=8.0,SNR=12						

*ISCJB **04** 07:50:22.8±0.5, 31.°20S±0.°05×179.°8E±0.°1, h450km, mb3.8/5, Error ellipse: s-maj=13.1km s-min=5.9km az=13.1*

*IDC **04** 07:50:23.4±0.8, 31.°19S×179.°75E, h436km±8km, mb3.4/5, mb1 3.6/8, mb1mx3.4/19, mbtmp3.5/8, Error ellipse: s-maj=21.9km s-min=10.2km az=129.0*

ISC 04 07:50:23.9±0.6, 31.°19S±0.°08×179.°7E±0.°1, h450km, n55, σ1.s39/60, mb3.8/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.80	47	P	P	07 51 27.1	-2.5
	177nm,0.3s,baz=250,slow=22,SNR=11						
RAO				S	S	07 52 20.6	-2.2
	131nm,0.3s,baz=85,slow=21,SNR=4.6						
PUZ	Puketiti	6.97	190	PN	P	07 52 09.4	+1.2
OPRZ	Ohinepanea	7.14	201	PN	P	07 52 12.5	+2.6
MWZ	Matawai	7.36	194	PN	P	07 52 13.2	+0.9
MWZ				SN	S	07 53 41.0	-0.2
URZ	Urewera	7.38	196	PN	P	07 52 13.3	+0.8
URZ				SN	S	07 53 39.7	-1.8
URZ	Urewera	7.38	196	P	P	07 52 13.2	+0.8
	48nm,0.3s,baz=9.2,slow=3.4,SNR=160						
URZ				S	S	07 53 39.6	-1.9
	20nm,0.3s,baz=254,slow=22,SNR=14						
CNGZ	Carnagh Statio	7.38	189	PN	P	07 52 15.0	+2.5
RAHZ	Arahi	8.01	195	PN	P	07 52 20.5	+1.2
NMHZ	Naumai	8.25	196	PN	P	07 52 23.4	+1.5
MCHZ	McNeill Hill	8.60	196	PN	P	07 52 27.0	+1.3
WNVZ	Wahianoa	8.79	201	PN	P	07 52 29.1	+1.2
MTVZ	Mangateitei	8.89	202	PN	P	07 52 30.5	+1.7
KAHZ	Kahuranaki	8.90	194	PN	P	07 52 30.4	+1.5
PXZ	Pawanui	9.13	194	PN	P	07 52 30.7	-0.6
PNHZ	Pukenui	9.17	197	PN	P	07 52 31.3	-0.6
WPHZ	Waipukurau	9.25	196	PN	P	07 52 33.8	+1.1
TSZ	Takapari Road	9.37	198	PN	P	07 52 32.1	-1.9
ANWZ	Angora Road	9.62	195	PN	P	07 52 39.2	+2.5
PRWZ	Pori Road	9.83	197	PN	P	07 52 40.3	+1.2
MRZ	Mangatainoka R	10.03	198	PN	P	07 52 40.1	-1.2
OGWZ	Otaki Gorge	10.29	200	PN	P	07 52 43.7	-0.3
KIW	Kapiti Island	10.41	201	PN	P	07 52 45.1	-0.2
MTW	Mount Morrison	10.52	198	PN	P	07 52 46.7	+0.2
CAW	Cannon Point	10.59	200	PN	P	07 52 47.5	+0.2
SNZO	South Karori	10.88	200	PN	P	07 52 50.2	-0.2
TCW	Tory Channel	10.93	202	PN	P	07 52 50.4	-0.5
PLWZ	Palliser	10.97	198	PN	P	07 52 51.9	+0.5
TUWZ	Tuamarina	11.23	203	PN	P	07 52 53.8	-0.5
NNZ	Nelson	11.24	205	PN	P	07 52 53.9	-0.5
QRZ	Quartz Range	11.24	209	PN	P	07 52 56.0	+1.6
THZ	Tophouse	11.89	206	PN	P	07 53 01.2	-0.3
KHZ	Kahutara	12.25	202	PN	P	07 53 06.0	+0.8
DSZ	Denniston Nort	12.31	209	PN	P	07 53 06.4	+0.4
OXZ	Oxford	13.57	205	PN	P	07 53 18.4	-1.1
WVZ	Waitaha Valley	13.85	209	PN	P	07 53 23.0	+0.4
RPZ	Rata Peaks	14.27	206	P	P	07 53 26.4	-0.6
	1.2nm,0.3s,baz=274,slow=6.1,SNR=11						
RPZ				S	S	07 55 57.2	-1.1
	0.7nm,0.3s,baz=18,slow=6.3,SNR=4.6						
FOZ	Fox Glacier	14.69	210	PN	P	07 53 32.1	+0.6
DZM	Mont Dzumac	14.95	304	P	P	07 53 35.2	+0.5
	0.4nm,0.3s,baz=77,slow=19,SNR=4.5						
JCZ	Jackson Bay	15.51	211	PN	P	07 53 40.1	-0.2
AFI	Afiamalu	18.89	26	P	P	07 54 15.3	-0.1
	2.6nm,0.3s,baz=34,slow=15,SNR=5.1						
AFI				S	S	07 57 26.7	+2.4
	0.9nm,0.3s,baz=233,slow=20,SNR=2.5						
STKA	Stephens Creek	32.41	259	P	P	07 56 16.6	+1.5
	1.1nm,0.3s,baz=110,slow=12,SNR=4.3						
ASAR	Alice Springs	41.13	269	P	P	07 57 27.8	+0.3
	1.8nm,0.6s,baz=102,slow=6.1,SNR=6.9						
ASAR				ScP	ScP	08 02 25.2	+2.2
	0.8nm,0.8s,baz=101,slow=4.0,SNR=6.2						
WRA	Warramunga Arr	42.19	274	P	P	07 57 36.5	+0.5
	2.2nm,0.3s,baz=111,slow=8.1,SNR=24						
WRA				ScP	ScP	08 02 29.0	+1.6
	1.7nm,0.9s,baz=110,slow=3.9,SNR=5.5						
WRA				S	S	08 03 19.5	-3.2
	0.7nm,0.6s,baz=112,slow=14,SNR=3.9						
VNDA	Vanda	47.12	185	ScP	ScP	08 02 50.4	+3.7
	0.7nm,0.8s,baz=328,slow=2.0,SNR=6.0						
FITZ	Fitzroy Crossi	50.42	272	P	P	07 58 39.2	+0.4
	3.6nm,0.9s,baz=107,slow=11,SNR=5.1						
KSRS	Korea Array	83.71	321	P	P	08 02 05.1	+0.9
	0.6nm,0.3s,baz=126,slow=6.2,SNR=4.1						
MKAR	Makanchi Array	116.79	310	PKP	PKPdf	08 08 16.0	0.0
	0.2nm,0.6s,baz=116,slow=3.4,SNR=3.0						
ARCES	ARCESS Array B	138.92	347	PKhKP	PKPpre	08 08 50.8	
	2.0nm,0.8s,baz=112,slow=1.3,SNR=6.1						
JOF	Joensuu	142.41	337	ep	PKPdf	08 09 01.3	-2.3
	0.3nm,0.3s						
KBZ	Khabaz	143.91	303	PKP	PKPdf	08 09 08.3	+1.4
	2.2nm,1.0s,baz=177,slow=2.8,SNR=4.8						
KAF	Kangasniemi	144.61	339	ep	PKPbc	08 09 06.1	-1.3
	3.0nm,0.7s						
FINES	FINESS Array B	145.18	338	PKPbc	PKPab	08 09 09.3	-0.7
	3.9nm,0.5s,baz=51,slow=3.5,SNR=32						
NOA	NORSAR Array B	149.20	349	PKPbc	PKPbc	08 09 19.9	-0.1
	0.9nm,0.6s,baz=16,slow=4.2,SNR=4.0						
BRTR	Keskin Array B	151.23	297	PKPbc	PKPbc	08 09 26.2	+0.6
	0.6nm,0.5s,baz=122,slow=4.0,SNR=4.0						
TORD	Torodi Ar. Bea	161.95	186	PKPab	PKPab	08 10 23.2	+1.1
	0.7nm,0.5s,baz=156,slow=5.0,SNR=8.1						

*MOS **04** 08:11:53.3±1.4, 56.°83N×120.°91E, h10km, mb4.6/1, Error ellipse: s-maj=24.5km s-min=19.2km az=140.7*

*BYKL **04** 08:11:54.7±0.6, 56.°76N×120.°87E*

ISC 04 08:11:52.7±1.2, 56.°86N±0.°05×120.°92E±0.°02, h8km±11km, n36, σ2.s53/48, 2C-5D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKLR	Yuktali	0.48	123	⇑iPg	Pn	08 12 05.5	-0.5
YKLR				ePb	Pb	08 12 07.8	+4.3
YKLR				eSg	Sb	08 12 12.5	+1.7
YKLR				eSb	Sg	08 12 16.6	+8.2
KHNR	Khani	0.52	278	i Pg	Pb	08 12 05.4	+1.3
KHNR				i Sg	Sb	08 12 12.4	+0.6
CRS	Chara	1.46	273	eP	Pg	08 12 21.3	+0.6
CRS				e		08 12 39.3	
CRS				pmax	pmax		
	comp=Z,380nm,0.3s						
CRS				smax	smax		
	comp=E,910nm,0.4s						
CRS	Chara	1.46	273	⇓iPg	Pg	08 12 21.2	+0.6
CRS				i Sg	Sg	08 12 39.7	+0.2
CRS				Pmax			
	comp=E,450nm,1.0s						
CRS				Smax			
	comp=E,2µm,0.8s						
CLNS	Chul'man	2.18	89	eP	Pb	08 12 32.8	+0.3
CLNS				e		08 13 01.2	
CLNS				pmax	pmax		
	comp=Z,24nm,0.3s						
CLNS				pmax	pmax		
	comp=N,38nm,0.3s						
CLNS				pmax	pmax		
	comp=E,32nm,0.3s						
CLNS				smax	smax		
	comp=N,218nm,0.2s						
CLNS				smax	smax		
	comp=Z,164nm,0.3s						
IENR	Iengra	2.27	105	ePg	Pg	08 12 36.0	-0.2
IENR				e		08 12 39.9	
IENR				e		08 12 43.4	
IENR				eSg	Sg	08 13 05.6	-0.1
TUP	Tupik	2.50	193	eP	Pn	08 12 33.9	+0.3
TUP				eS	Sn	08 13 04.1	-0.2
TUP				pmax	pmax		
	comp=Z,107nm,0.4s						
TUP				smax	smax		
	comp=E,2µm,0.6s						
TUP	Tupik	2.50	193	ePn	Pn	08 12 34.0	+0.3
TUP				⇓iPg	Pb	08 12 37.9	+0.1
TUP				i Sg	Sb	08 13 09.6	+0.9
TUP				Pmax			
	comp=E,106nm,0.4s						
TUP				Smax			
	comp=E,1µm,0.7s						
TNDR	Tynda	2.74	127	ePn	Pn	08 12 39.0	+2.1
TNDR				ePg	Pb	08 12 43.1	+1.2
TNDR				e		08 13 11.1	
TNDR				eSg	Sg	08 13 18.6	-2.0
TNDR				e		08 13 21.8	
NLYR	Nelyaty	2.90	265	eP	Pn	08 12 41.0	+1.8
NLYR				e		08 13 20.9	
NLYR				pmax	pmax		
	comp=Z,108nm,0.9s						
NLYR				smax	smax		
	comp=N,964nm,1.2s						
NLYR	Nelyaty	2.90	265	ePn	Pn	08 12 41.2	+2.0
NLYR				⇓i		08 12 41.7	
NLYR				⇓iPg	Pb	08 12 46.0	+1.3
NLYR				e		08 13 18.2	
NLYR				i Sg	Sb	08 13 21.9	+1.6
NLYR				eSgSg	Sg	08 13 28.7	+2.9
NLYR				Pmax			
	comp=N,107nm,0.6s						
NLYR				max			
	comp=N,966nm,1.3s						
BOD	Bodaibo	3.87	287	eP	Pn	08 12 54.4	+1.9
BOD				pmax	pmax		
	comp=Z,19nm,0.3s						
BOD	Bodaibo	3.87	287	ePn	Pb	08 12 58.5	-2.7
BOD				ePg	Pg	08 13 03.3	-3.5
BOD				e		08 13 10.4	
BOD				i Sg	Sb	08 13 51.9	+3.8
BOD				max			
	comp=Z,19nm,0.3s						
BOD				Smax			
	comp=Z,406nm,1.1s						
SVKR	Severomuysk	4.15	263	eSg	Sg	08 14 03.2	-2.6
SVKR				Smax			
	comp=Z,39nm,0.9s						
KROS	Kirovskiy	4.20	123	⇓iPg	Pb	08 13 05.6	-1.2
KROS				eSn	Sn	08 13 41.0	-5.3
KROS				eSg	Sb	08 14 00.5	+2.8
UKT	Uakit	4.30	254	eP	Pn	08 13 00.0	+1.5
UKT				eS	Sn	08 13 44.4	-4.4
UKT				pmax	pmax		
	comp=Z,26nm,0.5s						
UKT				smax	smax		
	comp=N,156nm,0.9s						
UKT	Uakit	4.30	254	⇑iPn	Pn	08 12 59.9	+1.5
UKT				i Pg	Pb	08 13 10.4	+1.9
UKT				e		08 13 15.7	
UKT				eSg	Sb	08 14 05.4	+4.8
UKT				Pmax			
	comp=N,32nm,0.9s						
UKT				Smax			
	comp=N,158nm,0.9s						
ZEA	Zeya	4.78	128	ePn	Pn	08 13 03.9	-1.1
ZEA				ePg	Pb	08 13 18.7	+2.0
ZEA				eSg	Sb	08 14 18.8	+4.5
VTMR	Vitim	5.13	304	e	Sb	08 14 25.2	+0.8
VTMR				eSg	Sg	08 14 33.6	-3.8
YOA	Uoyan	5.15	266	eSg	Sg	08 14 33.0	-4.8
YOA				e		08 14 37.6	
YOA				e		08 14 40.9	
YOA				max			
	comp=N,1µm,1.8s						
KMO	Kumora	5.49	264	eP	Pn	08 13 16.6	+1.9
KMO				eS	Sn	08 14 16.6	-1.4
KMO				pmax	pmax		
	comp=Z,22nm,0.4s						
KMO				smax	smax		
	comp=N,182nm,0.9s						
KMO	Kumora	5.49	264	ePn	Pn	08 13 16.9	+2.2
KMO				i Pg	Pb	08 13 32.5	+3.8
KMO				e		08 14 18.6	
KMO				i Sg	Sg	08 14 43.3	-5.5
KMO				Pmax			
	comp=N,29nm,1.2s						
KMO				Smax			
	comp=N,181nm,1.3s						
NIZ	Nizh Angarsk	6.42	265	ePn	Pg	08 13 51.7	-3.9
NIZ				e		08 14 04.2	
NIZ				e		08 14 20.4	
NIZ				eSg	Sg	08 15 14.4	-4.3
NIZ				e		08 15 20.3	
NIZ				max			
	comp=N,4.0nm,0.7s						
NIZ				Smax			
	comp=N,69nm,0.5s						
CIT	Chita	6.47	225	eP	Pb	08 13 49.0	+3.5
CIT				pmax	pmax		
	comp=Z,156nm,0.2s						
CIT	Chita	6.47	225	eSg	Sb	08 15 09.5	+6.5
CIT				Smax			
	comp=Z,463nm,1.4s						
YAK	Yakutsk	6.84	37	eP	Pn	08 13 34.8	+1.5
YAK				e		08 14 50.3	
YAK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
YAK				smax	smax		
	comp=N,22nm,0.6s						
YAK				smax	smax		
	comp=E,11nm,0.3s						
SYVR	Suvo	7.01	247	eSg	Sg	08 15 29.2	-8.5
SYVR				Smax			
	comp=E,84nm,1.1s						
OGRR	Ongureny	8.26	253	e		08 15 58.3	
OGRR				eSg	Sg	08 16 07.2	-11
OGRR				Smax			
	comp=E,32nm,0.1s						
KPC	Khapcheranga	8.80	219	ePn	Pn	08 13 59.5	-0.6
KPC				e		08 14 08.4	
KPC				e		08 15 41.3	
KPC				eSg	Sg	08 16 26.4	-8.4
KPC				Smax			
	comp=E,152nm,1.3s						
KAB	Kabansk	9.59	246	e	Pn	08 14 29.2	+18
KAB				eSg	Sn	08 16 52.6	+54
KAB				Smax			
	comp=E,104nm,0.3s						
LSTR	Listvyanka	10.62	249	eSg	Sn	08 17 21.5	+57
LSTR				Smax			
	comp=E,51nm,1.8s						
TLY	Talaya	11.34	250	e		08 17 35.8	
TLY				eSg		08 17 43.3	
TLY				Smax			
	comp=E,23nm,1.8s						
ARS	Arshan	11.85	253	e	Pn	08 15 20.2	+38
ARS				e		08 15 28.5	
ARS				eSg		08 18 00.1	
ZAK	Zakamensk	12.29	246	eSg		08 18 14.0	
ZAK				Smax			
	comp=E,16nm,1.3s						
MOY	Mondy	12.73	254	eSg		08 18 25.8	
MOY				e		08 18 35.1	
MOY				max			
	comp=E,27nm,2.1s						
ORL	Orlik	12.93	259	e	Pn	08 15 40.5	+44
ORL				e		08 15 53.3	
ORL				e		08 16 37.4	
ORL				eSg		08 18 31.6	
ORL				Smax			
	comp=E,26nm,1.5s						

*ISK **04** 08:23:19.3, 41.°53N×33.°95E, h6km, MD2.7*

*CSEM **04** 08:23:19.6±0.1, 41.°54N×33.°92E, h2km, MD2.8, Error ellipse: s-maj=3.1km s-min=1.9km az=175.0*

*DDA **04** 08:23:19.8, 41.°49N×33.°95E, h7km, MD2.8*

ISC 04 08:23:19.8±1.2, 41.°54N±0.°05×33.°92E±0.°03, h9km±16km, n15, σ0.s59/23, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALT	Daday	0.40	269	i P	Pg	08 23 27.6	-0.1
BALT				i S	Sb	08 23 35.4	-0.1
BALT	Daday	0.40	269	i P	Pg	08 23 27.6	-0.1
TOS	Tosya	0.51	171	ePG	Pg	08 23 29.5	-0.2
TOS				eSG	Sg	08 23 36.5	0.0
TOS	Tosya	0.51	171	ePg	Pg	08 23 29.5	-0.2
TOS				eSg	Sg	08 23 36.5	0.0
ILGA	Ilgaz	0.51	197	i P	Pg	08 23 29.2	-0.6
ILGA				i S	Sg	08 23 37.0	+0.5
ILGA	Ilgaz	0.51	197	i P	Pg	08 23 29.2	-0.6
ILGA				i S	Sg	08 23 37.0	+0.5
BYBT	Boyabat	0.64	96	ePG	Pg	08 23 31.8	-0.4
BYBT				eSG	Sg	08 23 40.7	+0.1
BYBT	Boyabat	0.64	96	ePg	Pg	08 23 31.8	-0.4
BYBT				eSg	Sg	08 23 40.7	+0.1
CANT	Cankiri	0.96	194	ePG	Pg	08 23 38.3	0.0
SAFT	Safranbolu	0.97	252	ePG	Pg	08 23 38.3	-0.2
SAFT	Safranbolu	0.97	252	ePg	Pg	08 23 38.3	-0.2
HAVZ	Havza	1.43	108	i P	Pb	08 23 46.4	-0.3
HAVZ				i S	Sg	08 24 08.1	+2.2
HAVZ	Havza	1.43	108	i P	Pb	08 23 46.4	-0.3
CORM	Corum	1.46	158	ePN	Pb	08 23 47.3	0.0
CORM	Corum	1.46	158	ePn	Pb	08 23 47.3	0.0

CASC 04 08:43:31.5±2.2, 13.°81N×89.°79W, h0km±7km, MD3.4, ML3.8, El Salvador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBLS	San Blas	0.16	79	eP	Pg	08 43 36.7	+1.7
RTR	El Retiro	0.16	58	eP	Pg	08 43 34.8	-0.1
SNJE	San Jose	0.19	72	eP	Pg	08 43 37.1	+1.7
BOQS	Boqueron	0.50	98	eP	Pg	08 43 42.0	+0.6
LBRS	Las Brisas	0.73	95	eP	Pb	08 43 47.0	-0.2
NBG	Las Nubes	0.94	325	eP	Pb	08 43 51.1	-0.1
NBG				eS	Sb	08 44 04.8	+0.3
FUG	Fuego 3	1.20	302	eP	Pg	08 43 53.1	-1.8
MRL	Marmol	1.25	4	eP	Pg	08 43 55.3	-0.5
MRL				eS	Sn	08 44 13.8	-0.5

IDC 04 09:03:49.6±1.6, 7.°08N×80.°50W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/21, mbtmp3.7/3, Error ellipse: s-maj=176.2km s-min=24.9km az=64.0, Panama

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	26.24	152	P	P	09 09 28.1	+0.7
	0.8nm,0.8s,baz=300,slow=8.1,SNR=3.2						
SIV	San Ignacio	29.92	140	P	P	09 09 59.0	-0.6
	1.1nm,0.8s,baz=331,slow=10,SNR=3.6						
YKA	Yellowknife Ar	60.66	343	P	P	09 14 02.5	+0.2
	0.9nm,0.7s,baz=133,slow=7.2,SNR=14						
WRA	Warramunga Arr	143.89	246	PKP	PKPab	09 23 25.3	+0.2
	1.0nm,0.7s,baz=103,slow=3.2,SNR=8.8						

*ISCJB **04** 09:06:23.7±0.7, 10.°22S±0.°03×161.°51E±0.°03, h85km±6km, mb4.9/94, Error ellipse: s-maj=5.0km s-min=4.9km az=161.6*

*MOS **04** 09:06:23.8±0.9, 10.°25S×161.°42E, h87km, mb5.2/27, MS5.3/11, Error ellipse: s-maj=9.1km s-min=8.6km az=113.2*

*IDC **04** 09:06:23.8±0.5, 10.°26S×161.°43E, h74km±3km, mb4.6/26, mb1 4.7/27, mb1mx4.7/30, mbtmp4.6/27, MS4.1/16, Ms1 4.2/16, ms1mx4.0/31, Error ellipse: s-maj=13.4km s-min=9.6km az=91.0*

*BJI **04** 09:06:23.7, 10.°05S×161.°86E, h92km, mB5.0/27, mb4.9/40*

*NEIC **04** 09:06:23.6±0.2, 10.°21S×161.°53E, mb5.1/45, Error ellipse: s-maj=6.7km s-min=5.3km az=135.0*

NEIC Felt at Honiara.

*GCMT **04** 09:06:25.6±0.2, 10.°20S×161.°43E, h62km±2km, MW5.1, Moment Tensor Solution. s47,c65; s83,c140; Moment tensor: Scale 10^{16}Nm; M_{rr}2.95±.20; $M_{\theta\theta}$0.01±.15; $M_{\phi\phi}$-2.96±.15; $M_{r\theta}$-0.74±.11; $M_{\theta\phi}$3.60±.13; $M_{\phi r}$-4.08±.11; Best double couple: $M_0$6.20000×10^{16} NP1:ϕ_s292.00000°, δ39.00000°, λ29.00000°. NP2:ϕ_s179.00000°, δ72.00000°, λ125.00000°. Principal axes: T 6.0300, Plg50.0000°, Azm128.0000°; N 0.3900, Plg33.0000°, Azm346.0000°; P -6.4200, Plg19.0000°, Azm243.0000°; Data Used: II IU G CN IC.*

*AUST **04** 09:06:26.9, 10.°27S×161.°48E, h100km*

*DJA **04** 09:06:30.3±1.1, 10°S±5°×16°2E±°, h126km±13km, M5.1/23, mB5.6/9, mb5.2/23, Mw(mB)5.1/9*

ISC 04 09:06:24.3±0.3, 10.°29S±0.°04×161.°58E±0.°04, h80km±2km, h80km:pP-P, n296, σ1.s87/358, mb5.0/94, 26C-35D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.82	298	ePn	Pn	09 06 53.4	-0.3
HNR				eSn	Sn	09 07 13.3	-2.8
HNR				S		09 07 15.2	
HNR	Honiara	1.82	298	P	Pn	09 06 53.7	0.0
	723nm,0.3s,baz=146,slow=2.6,SNR=234						
HNR				S	Sn	09 07 15.2	-0.9
	3µm,0.3s,baz=354,slow=21,SNR=8.9						
HNR				LR	LR	09 07 22.5	
	comp=Z,5µm,20.8s,baz=148,slow=35						
NOUC	Port Laguerre	12.59	159	eP	Pn	09 09 22.9	+2.5
NOUC				eS	Sn	09 11 37.1	-1.6
DZM	Mont Dzumac	12.61	159	ePn	Pn	09 09 22.8	+2.0
	54nm,0.3s						
DZM				eSn	Sn	09 11 34.0	-5.5
	86nm,0.3s						
DZM				eLR	LR	09 12 24.7	
	2µm,28.4s						
DZM	Mont Dzumac	12.61	159	eP	Pn	09 09 22.3	+1.6
DZM				eS	Sn	09 11 37.6	-1.8
DZM	Mont Dzumac	12.61	159	P	Pn	09 09 22.7	+2.0
DZM				S	Sn	09 11 36.6	-2.9
DZM	Mont Dzumac	12.61	159	P	Pn	09 09 22.7	+2.0
	11nm,0.3s,baz=13,slow=19,SNR=98						
DZM				S	Sn	09 11 36.6	-2.9
	7.7nm,0.3s,baz=107,slow=20,SNR=6.1						
PMG	Port Moresby	14.23	272	ePn	P	09 09 44.0	-3.1
PMG	Port Moresby	14.23	272	P	P	09 09 45.0	-2.0
	218nm,1.1s,2µm						
PMG	Port Moresby	14.23	272	P	P	09 09 44.8	-2.2
	1.1nm,0.3s,baz=106,slow=6.1,SNR=12						
TARA	Tarawa	16.16	45	ePn	Pn	09 10 06.6	-0.1
	95nm,0.6s						
PATS	Pohnpei	17.32	349	P	Pn	09 10 20.5	-0.5
	baz=17,SNR=4.0						
FUNA	Funafuti	17.47	86	eP	Pn	09 10 21.8	-1.1
	76nm,0.8s						
MSVF	Nonsavu	17.61	117	eP	Pn	09 10 26.1	+1.5
MSVF				pmax	pmax		
	comp=Z,38nm,0.9s						
MSVF	Nonsavu	17.61	117	ePn	Pn	09 10 26.1	+1.5
	comp=Z,43nm,0.9s						
MSVF	Nonsavu	17.61	117	P	Pn	09 10 26.2	+1.6
	comp=Z,248nm,0.9s,SNR=9.6						
CTA	Charters Tower	17.70	235	P	Pn	09 10 27.7	+2.1
CTA	Charters Tower	17.70	235	P	Pn	09 10 27.7	+2.1
	comp=Z,6.4nm,0.3s,baz=60,slow=12,SNR=87						
CTA				LR	LR	09 16 17.1	
	comp=Z,643nm,21.1s,baz=56,slow=34						
CTAO	Charters Tower	17.70	235	eP	Pn	09 10 27.6	+2.1
CTAO				pmax	pmax		
	comp=Z,1µm,2.0s						
CTAO	Charters Tower	17.70	235	ePn	Pn	09 10 27.6	+2.1
	comp=Z,179nm,0.8s						
EIDS	Eidsvold	18.01	212	ePn	Pn	09 10 30.9	+1.6
	comp=Z,140nm,1.2s						
EIDS	Eidsvold	18.01	212	P	Pn	09 10 30.9	+1.6
	baz=18,SNR=35						
COEN	Coen	18.36	257	ePn	Pn	09 10 35.9	+2.3
	comp=Z,5µm,1.3s						
COEN	Coen	18.36	257	P	Pn	09 10 35.6	+2.0
	baz=18,SNR=81						
COEN				S	S	09 13 53.3	-4.5
	baz=18,SNR=5.1						
MTSU	Mount Surprise	18.45	243	P	Pn	09 10 36.8	+2.1
	baz=18,SNR=176						
RMQ	Roma	20.16	215	P	Pn	09 10 54.6	-0.2
	baz=20,SNR=29						
ARMA	Armidale	22.07	203	eP	P	09 11 13.8	+0.9
	comp=Z,38nm,0.8s						
ARMA	Armidale	22.07	203	P	P	09 11 13.5	+0.7
	baz=22,SNR=33						
JAY	Jayapura	22.12	289	P	pP	09 11 27.3	-2.5
JAY	Jayapura	22.12	289	P	P	09 11 11.1	-2.3
	baz=22,SNR=4.3						
QLP	Quilpie	23.05	223	P	P	09 11 22.9	-0.1
	baz=23,SNR=12						
QIS	Mount Isa	23.48	242	P	P	09 11 26.8	-0.4
	baz=23,SNR=16						
MGCD	Mangrove Creek	24.77	201	P	P	09 11 40.0	+1.5
	baz=25,SNR=12						

CMSA Cobar Meteorol 25.77 213 P **P** 09 11 50.0 +2.3
baz=26,SNR=35
AFI Afiamalu 26.29 101 *eP* **P** 09 11 53.1 +0.4
comp=Z,55nm,1.1s
AFI Afiamalu 26.29 101 P **P** 09 11 53.1 +0.4
comp=Z,30nm,0.8s,baz=288,slow=19,SNR=6.1
AFI LR LR 09 20 09.2
comp=Z,528nm,18.7s,baz=283,slow=31
YNG Young 26.77 205 P **P** 09 11 58.1 +1.3
baz=27,SNR=10
RAO Raoul Island 26.90 137 LR LR 09 21 25.5
comp=Z,312nm,18.9s,baz=318,slow=33
OUZ Omahuta 27.13 158 *eP* **P** 09 12 01.9 +2.1
comp=Z,46nm,1.0s
CNB Canberra Magne 27.29 202 P **P** 09 12 02.8 +1.4
baz=27,SNR=21
CAN Canberra 27.43 203 *eP* **P** 09 12 03.3 +0.7
CAN pmax pmax
comp=Z,15nm,0.7s
CAN Canberra 27.43 203 *eP* **P** 09 12 03.3 +0.7
comp=Z,15nm,0.7s
WRAB Tennant Creek 27.94 247 *eP* **P** 09 12 06.6 -0.8
WRAB pmax pmax
comp=Z,54nm,0.8s
WRAB Tennant Creek 27.94 247 *eP* **P** 09 12 06.5 -0.8
comp=Z,54nm,0.8s
WRAB Tennant Creek 27.94 247 P **P** 09 12 06.0 -1.3
comp=Z,416nm,0.7s,SNR=45
WRA Warramunga Arr 27.95 247 P **P** 09 12 06.8 -0.6
WRA pP **pP** 09 12 25.1 -0.9
WRA ScP **ScP** 09 18 53.9 -1.2
WRA Warramunga Arr 27.95 247 P **P** 09 12 06.8 -0.6
comp=Z,42nm,0.7s,baz=77,slow=9.4,SNR=324
WRA pP **pP** 09 12 25.1 -0.9
comp=Z,32nm,0.7s,baz=76,slow=9.0,SNR=10
WRA ScP **ScP** 09 18 53.9 -1.2
comp=Z,4.2nm,1.0s,baz=70,slow=3.5,SNR=6.7
WRA LR LR 09 22 32.8
comp=Z,563nm,20.5s,baz=75,slow=35
STKA Stephens Creek 28.34 218 *eP* **P** 09 12 11.0 +0.2
comp=Z,4.6nm,0.8s
STKA Stephens Creek 28.34 218 P **P** 09 12 11.4 +0.6
comp=Z,12nm,0.8s,baz=29,slow=11,SNR=24
STKA LR LR 09 22 18.2
comp=Z,840nm,20.0s,baz=40,slow=34
STKA Stephens Creek 28.34 218 P **P** 09 12 11.5 +0.7
baz=28,SNR=11
KDU Kakadu 28.61 262 P **P** 09 12 12.5 -0.8
baz=28,SNR=17
MILA Mila 28.92 201 P **P** 09 12 17.5 +1.6
baz=29,SNR=9.8
GUMO Guam 28.94 325 LR LR 09 22 55.3
comp=Z,334nm,21.0s,baz=90,slow=34
AS31 Alice Springs 29.55 240 *eP* **P** 09 12 20.4 -1.2
ASAR Alice Springs 29.55 240 P **P** 09 12 20.3 -1.3
ASAR ScP **ScP** 09 18 59.5 -0.5
ASAR Alice Springs 29.55 240 P **P** 09 12 20.3 -1.3
comp=Z,15nm,0.8s,baz=62,slow=9.7,SNR=138
ASAR ScP **ScP** 09 18 59.5 -0.5
comp=Z,1.9nm,0.9s,baz=80,slow=2.0,SNR=4.6
ASAR LR LR 09 23 54.2
comp=Z,884nm,18.2s,baz=67,slow=36
MTN Manton Dam 29.93 262 P **P** 09 12 24.7 -0.3
baz=30,SNR=6.1
MTN S S 09 16 49.8 -27
baz=30,SNR=3.7
TOO Toolangi 30.79 205 P **P** 09 12 33.8 +1.5
baz=31,SNR=17
URZ Urewera 31.15 156 *eP* **P** 09 12 36.4 +1.0
comp=Z,34nm,0.6s
URZ Urewera 31.15 156 P **P** 09 12 36.6 +1.2
comp=Z,26nm,0.5s,baz=301,slow=5.5,SNR=43
URZ LR LR 09 23 16.9
comp=Z,305nm,21.1s,baz=334,slow=32
ARPS Mount Arapiles 31.84 211 P **P** 09 12 43.8 +2.2
baz=32,SNR=7.2
PALU Palau 32.17 302 P P 09 12 55.2 +10
baz=32,SNR=3.9
KNRA Kununurra 32.40 257 P **P** 09 12 46.1 -0.6
baz=32,SNR=45
BBOO Buckleboo 32.48 222 *eP* **P** 09 12 47.4 +0.1
comp=E,671nm,0.6s
BBOO Buckleboo 32.48 222 P **P** 09 12 47.3 +0.1
baz=32,SNR=59
RPZ Rata Peaks 34.31 168 *eP* **P** 09 13 03.9 +0.9
RPZ Rata Peaks 34.31 168 P **P** 09 13 03.3 +0.3
comp=Z,22nm,0.6s,baz=360,slow=2.7,SNR=22
MOO Moorlands 34.42 199 P **P** 09 13 06.3 +2.3
baz=34,SNR=5.4
FITZ Fitzroy Crossi 35.65 253 P **P** 09 13 13.7 -1.2
FITZ Fitzroy Crossi 35.65 253 P **P** 09 13 13.7 -1.2
comp=Z,45nm,0.8s,baz=94,slow=6.6,SNR=74
FITZ LR LR 09 25 54.1
comp=Z,241nm,19.7s,baz=89,slow=33
FITZ Fitzroy Crossi 35.65 253 P **P** 09 13 13.9 -0.9
baz=36,SNR=40
FORT Forrest 37.20 232 *eP* **P** 09 13 27.9 0.0
comp=Z,55nm,1.0s
FORT Forrest 37.20 232 P **P** 09 13 28.1 +0.1
baz=37,SNR=9.9
LUWI Luwuk 39.65 281 P **P** 09 13 50.6 +1.9
comp=Z,80nm,1.0s,comp=Z,2µm
LUWI Luwuk 39.65 281 S S 09 19 40.3 -6.1
baz=40,SNR=3.1
DAV Davao City (W) 39.78 294 LR LR 09 28 17.2
comp=Z,362nm,20.3s,baz=102,slow=33
SKSI Soroako, Sulaw 40.69 278 P **P** 09 13 58.6 +1.2
comp=Z,35nm,1.1s,comp=Z,508nm
BKSI Bulukumba 41.34 274 P P 09 14 06.2 +3.5
comp=Z,25nm,1.0s,comp=Z,704nm
MBWA Marble Bar 41.59 250 *eP* **P** 09 14 03.9 -0.7
comp=Z,32nm,0.9s
KAPI Kappang 41.76 274 *eP* **P** 09 14 04.3 -1.8
comp=Z,43nm,1.2s
KAPI Kappang 41.76 274 P **P** 09 14 05.3 -0.8
comp=Z,25nm,1.2s,comp=Z,594nm
KAPI Kappang 41.76 274 P **P** 09 14 04.3 -1.8
comp=Z,8.1nm,0.5s,baz=153,slow=12,SNR=7.8
SPSI Sidrap Palu 41.93 276 P **P** 09 14 07.2 -0.2
comp=Z,19nm,1.0s
TTSI Tana Toraja 42.06 277 P **P** 09 14 10.7 +2.2
comp=Z,18nm,1.5s
KMBL Kambalda 42.30 234 P **P** 09 14 10.1 -0.2
baz=42,SNR=9.8
MEEK Meekatharra 43.64 242 P **P** 09 14 21.2 0.0
baz=44,SNR=44
MYLDM Lahad Datu 45.57 288 P **P** 09 14 39.1 +2.4
comp=Z,70nm,1.2s
KLBR Kellerberrin 45.70 236 P **P** 09 14 37.0 -0.5
baz=46,SNR=8.7
BLDU Balliduu 46.27 237 P **P** 09 14 41.8 -0.2
baz=46,SNR=17
MORW Morawa 46.43 240 P **P** 09 14 43.0 -0.3
baz=46,SNR=14
NWAO Narrogin (SRO) 46.54 234 *eP* **P** 09 14 43.5 -0.5
NWAO Narrogin (SRO) 46.54 234 P **P** 09 14 44.0 -0.1
comp=Z,19nm,0.8s,baz=241,slow=3.5,SNR=3.8
NWAO LR LR 09 33 34.7
comp=Z,453nm,20.3s,baz=58,slow=35
GIRL Giralia 46.84 249 P **P** 09 14 48.1 +1.5
baz=47,SNR=4.0
BBKI Banjar Baru 46.85 275 P **P** 09 14 49.5 +2.7
PAE Paea 47.85 104 *eP* **P** 09 14 56.8 +2.3
comp=Z,7.4nm,1.1s
PPT Papeete 47.85 104 LR LR 09 29 42.1
comp=Z,367nm,21.7s,baz=75,slow=29
PPT2 Papeete2 47.85 104 *eS* **S** 09 21 45.9 -0.2
comp=Z,130nm,33.8s
PPT2 *eLQ* LQ 09 26 36.2
comp=Z,630nm,30.6s
PPT2 *eLR* LR 09 28 36.7
comp=Z,1µm,29.2s,baz=281
TVO Taravao 48.17 105 *eP* **P** 09 14 59.2 +2.2
comp=Z,54nm,1.0s
TBI Tubuai 48.41 112 *eS* **S** 09 21 54.0 +0.3
comp=Z,93nm,33.0s
TBI *eLQ* LQ 09 26 52.0
comp=Z,552nm,35.8s
TBI *eLR* LR 09 28 50.9
comp=Z,898nm,29.5s,baz=282
MEH Mehetia 49.30 105 *eP* **P** 09 15 08.5 +2.9
comp=Z,67nm,1.0s
PMOR Pomariorio Ree 49.44 101 *eP* **P** 09 15 08.9 +2.2
comp=Z,149nm,1.2s
PMOR *ep*P **pP** 09 15 25.6 -0.9
comp=Z,46nm,1.2s
UGM Wanagama 50.43 268 P **P** 09 15 13.0 -1.2
baz=50,SNR=3.3

KIP Kipapa 50.67 51 ⇓*i*P **P** 09 15 17.2 +1.4
KIP *i* *PP **pP** 09 15 34.2 -1.5
KIP pmax pmax
comp=Z,22nm,0.6s
KIP Kipapa 50.67 51 *eP* **P** 09 15 17.2 +1.4
MJAR Matsushiro Arr 51.51 336 P **P** 09 15 20.7 -1.2
MJAR Matsushiro Arr 51.51 336 P **P** 09 15 20.7 -1.2
comp=Z,5.0nm,0.7s,baz=170,slow=8.8,SNR=30
MAJO Matsushiro 51.51 336 *eP* **P** 09 15 21.1 -0.8
MAJO Matsushiro 51.51 336 *eP* **P** 09 15 21.1 -0.8
MAT Matsushiro 51.51 336 P **P** 09 15 20.8 -1.1
MAT S **S** 09 22 33.2 -3.0
JNU Nakatsue 52.15 327 *eP* **P** 09 15 26.2 -0.5
comp=Z,13nm,1.2s
JNU Nakatsue 52.15 327 P **P** 09 15 26.4 -0.3
comp=Z,18nm,1.0s,baz=126,slow=4.5,SNR=8.3
KSM Kuching 52.34 280 P **P** 09 15 30.8 +2.3
baz=52,SNR=4.1
ERM Erimo 54.72 343⇑ *eP* **P** 09 15 46.2 +0.8
ERM pmax pmax
comp=Z,8.0nm,1.2s
ERM Erimo 54.72 343 *eP* **P** 09 15 45.8 +0.4
comp=Z,16nm,0.8s
YUK Yuzh-Kuril'sk 55.92 346 *i* P **P** 09 15 54.0 +0.1
YUK *i* 09 17 57.5
YUK *i* PPP PPP 09 19 11.6
YUK *eS* **S** 09 23 33.9 -1.7
YUK pmax pmax
comp=N,228nm,1.6s
YUK pmax pmax
comp=E,405nm,1.6s
YUK pmax pmax
comp=Z,308nm,1.6s
YUK pmax pmax
comp=Z,234nm,1.7s
YUK MLR MLR
comp=N,256nm,20.0s
YUK MLR MLR
comp=Z,183nm,20.0s
ASAJ Asahikawa 56.82 344 P **P** 09 16 00.0 -0.3
ASAJ pP **pP** 09 16 20.1 -0.5
ASAJ Asahikawa 56.82 344 P **P** 09 16 00.0 -0.3
comp=Z,6.7nm,0.6s,baz=227,slow=24,SNR=6.1
ASAJ pP **pP** 09 16 20.1 -0.5
comp=Z,47nm,0.9s,baz=238,slow=10,SNR=9.1
KSRS Korea Array 57.01 328 P **P** 09 16 01.9 +0.1
comp=Z,7.1nm,1.0s,baz=144,slow=7.5,SNR=27
KSRS pP **pP** 09 16 19.4 -2.6
comp=Z,5.1nm,0.6s,baz=141,slow=7.2,SNR=6.1
KSRS LR LR 09 37 32.4
comp=Z,121nm,20.5s,baz=7.4,slow=33
KSAR Wonju Array Be 57.02 328 P **P** 09 16 01.9 0.0
KSAR pP **pP** 09 16 19.4 -2.7
NJ2 Nanjing 58.65 318 *eP* **P** 09 16 13.0 -0.4
NJ2 pP **pP** 09 16 34.8 +1.1
NJ2 sP **sP** 09 16 45.9 +3.2
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
QIZ Qiongzhong 58.73 300 P **P** 09 16 13.1 -1.1
QIZ pP **pP** 09 16 36.8 +2.3
QIZ sP **sP** 09 16 46.7 +3.2
QIZ S **S** 09 24 12.7 -0.7
QIZ pmax pmax
comp=Z,19nm,1.4s
QIZ LR LR
comp=Z,380nm,23.5s
YSS Yuzh-Sakhalins 59.41 345 *eP* P 09 16 24.3 +6.0
YSS MLR MLR
comp=Z,400nm,20.0s
VLA Vladivostok 59.66 335⇓ *eP* **P** 09 16 18.8 -1.3
VLA pmax pmax
comp=Z,34nm,0.8s
USRK Ussuriysk Arra 60.51 336 P **P** 09 16 26.4 +0.5
comp=Z,11nm,0.8s,baz=145,slow=6.3,SNR=24
USRK pP **pP** 09 16 45.2 -1.2
comp=Z,20nm,0.9s,baz=217,slow=6.0,SNR=6.0
USRK LR LR 09 41 19.6
comp=Z,101nm,18.4s,baz=290,slow=35
WHN Wuhan 60.86 314 *eP* P 09 16 40.5 +12
RKT Rikitea 61.69 111 *e*LR LR 09 35 00.3
comp=Z,953nm,30.2s,baz=284
MDJ Mudanjiang 61.84 335 P **P** 09 16 35.0 +0.1
MDJ pP **pP** 09 16 57.5 +2.1
MDJ sP **sP** 09 17 07.8 +3.5
MDJ ScP **ScP** 09 21 08.4 -1.6
MDJ PcS **PcS** 09 21 18.2 0.0
MDJ S **S** 09 24 51.7 -0.6
MDJ sS **sS** 09 25 30.9 +3.7
MDJ ScS **SKKSac** 09 26 18.0 -1.3
MDJ pmax pmax
comp=Z,10.0nm,1.4s
MDJ LR LR
comp=N,110nm,27.6s
MDJ LR LR
comp=E,130nm,30.2s
MDJ LR LR
comp=Z,91nm,39.0s
MDJ Mudanjiang 61.84 335 *eP* **P** 09 16 34.8 -0.1
IPM Ipoh 62.05 281 P pP 09 16 58.4 +0.8
HABR Khabarovsk 63.03 341 *eP* **P** 09 16 41.5 -1.3
HABR *PP **pP** 09 16 59.9 -3.4
HABR *e* 09 17 18.9
HABR *e*PPP PPP 09 20 29.2
HABR *eS* **S** 09 25 06.7 -0.3
HABR *e* 09 25 28.0
HABR *e**SS **sS** 09 25 38.0 -4.1
HABR *e* 09 26 27.4
HABR pmax pmax
comp=Z,36nm,2.1s
HABR pmax pmax
comp=N,45nm,2.7s
HABR pmax pmax
comp=E,58nm,2.1s
HABR MLR MLR
comp=Z,116nm,21.0s
CN2 Changchun 63.05 331 *eP* **P** 09 16 42.5 -0.5
CN2 *ep*P pP 09 17 10.5 +6.9
CN2 *eS* **S** 09 25 04.6 -3.0
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 LR LR
comp=N,200nm,23.0s
CN2 LR LR
comp=E,200nm,23.0s
CN2 LR LR
comp=Z,200nm,21.0s
PET Petropavlovsk 63.11 358 *eP* **pP** 09 17 02.1 -1.6
PET *eS* pS 09 25 37.0 +5.2
PET pmax pmax
comp=Z,37nm,1.4s
CHBT CHBT 63.12 290 P pP 09 17 05.0 +0.4
PETK Petropavlovsk- 63.23 357 P **P** 09 16 44.6 +0.6
PETK *PP **pP** 09 17 04.5 -0.1
PETK Petropavlovsk- 63.23 357 P **P** 09 16 44.6 +0.6
PETK pP **pP** 09 17 04.5 -0.1
PETK Petropavlovsk- 63.23 357 P **P** 09 16 44.6 +0.6
comp=Z,3.7nm,0.8s,baz=263,slow=5.7,SNR=2.4
PETK pP **pP** 09 17 04.5 -0.1
comp=Z,13nm,0.9s,baz=141,slow=7.3,SNR=7.5
FX1 Attu Island--F 63.70 8 *eP* **P** 09 16 47.3 +0.3
FX1 pP **pP** 09 17 07.3 -0.4
FX1 Attu Island--F 63.70 8 P **P** 09 16 47.8 +0.7
comp=Z,6.2nm,0.5s,baz=127,slow=2.9,SNR=14
FX1 pP **pP** 09 17 07.3 -0.4
comp=Z,10nm,0.6s,baz=263,slow=10,SNR=3.7
FX1 LR LR 09 40 24.5
comp=Z,65nm,19.5s,baz=118,slow=32
GYA Guiyang 64.63 306⇑ *i*P **P** 09 16 55.9 +2.0
GYA pP **pP** 09 17 18.9 +4.3
GYA sP sP 09 17 29.0 +5.6
GYA PP **PP** 09 19 21.2 +4.1
GYA ScP 09 21 22.0
GYA S **S** 09 25 26.9 -1.1
GYA sS **sS** 09 26 06.5 +3.3
GYA SKS **SKSac** 09 26 38.3 -3.3
GYA SS **SS** 09 29 41.0 +0.6
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,120nm,5.6s
GYA LR LR
comp=N,540nm,19.6s
GYA LR LR
comp=E,450nm,20.7s
GYA LR LR
comp=Z,590nm,18.8s
KLR Kul'dur 64.80 339 *eP* P 09 16 49.7 -4.7
KLR *e* 09 17 09.0
KLR pmax pmax
comp=E,24nm,1.4s
KLR pmax pmax
comp=Z,48nm,1.4s
CASY Casey 65.63 200 *eP* **P** 09 16 58.9 -0.7
comp=Z,39nm,1.3s
VNDA Vanda 67.22 180 *eP* **P** 09 17 09.8 +0.3
comp=Z,25nm,1.1s
VNDA Vanda 67.22 180 P **P** 09 17 10.3 +0.8
comp=Z,9.3nm,0.7s,baz=342,slow=6.5,SNR=64
KMI Kunming 67.25 303 P P 09 17 14.6 +3.7
KMI pP pP 09 17 33.1 +1.4
KMI sP sP 09 17 46.0 +5.5
KMI PP **PP** 09 19 44.1 +3.9
KMI S **S** 09 25 59.5 -0.7
KMI sS sS 09 26 39.0 +3.5
KMI pmax pmax
comp=Z,11nm,1.1s
KMI pmax pmax
comp=Z,50nm,4.1s
KMI LR LR
comp=N,130nm,24.5s
KMI LR LR
comp=E,130nm,23.6s
KMI LR LR
comp=Z,190nm,29.1s
SBA Scott Base 67.61 179 *eP* **P** 09 17 13.0 +1.0
SBA pmax pmax
comp=Z,13nm,1.0s
SBA Scott Base 67.61 179 *eP* **P** 09 17 13.0 +1.0
comp=Z,13nm,1.0s
CMAR Chiang Mai Arr 68.06 295 P **P** 09 17 15.1 -0.8
CMAR pP **pP** 09 17 33.6 -3.0
CMAR Chiang Mai Arr 68.06 295 P **P** 09 17 15.1 -0.8
comp=Z,0.5nm,0.3s,baz=116,slow=6.1,SNR=4.2
CMAR pP **pP** 09 17 33.6 -3.0
comp=Z,3.3nm,0.7s,baz=123,slow=5.3,SNR=4.2
CMAR LR LR 09 46 24.4
comp=Z,98nm,18.1s,baz=286,slow=35
HHC Hu-ho-hao-te 68.64 321 *eP* **P** 09 17 21.1 +1.9
HHC pP **PcP** 09 17 45.8 +2.2
HHC sP sP 09 17 56.6 +7.8
HHC PP **PP** 09 19 56.3 +4.4
HHC S **S** 09 26 20.2 +4.2
HHC sS **SKiKP** 09 26 57.9 -6.7
HHC ScS **SKSac** 09 27 08.4 -3.0
HHC SS **SS** 09 30 43.0 +0.8
HHC pmax pmax
comp=Z,20nm,0.8s
HHC pmax pmax
comp=Z,110nm,7.1s
HHC LR LR
comp=N,280nm,18.8s
HHC LR LR
comp=E,1µm,19.5s
HHC LR LR
comp=Z,240nm,18.8s
CD2 Chengdu 68.91 309 P **P** 09 17 23.3 +2.3
CD2 pP **PcP** 09 17 46.7 +1.8
CD2 sP sP 09 17 56.9 +6.3
CD2 PP **PP** 09 19 59.0 +4.7
CD2 PcS 09 21 50.8
CD2 S **S** 09 26 19.2 -0.2
CD2 sS sS 09 26 59.5 +4.6
CD2 SS **SS** 09 30 48.1 +1.5
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,140nm,5.4s
CD2 LR LR
comp=Z,290nm,30.4s
LZH Lanzhou 71.24 314 *eP* P 09 17 39.8 +4.5
LZH pP pP 09 18 01.1 +4.8
LZH sP sP 09 18 11.2 +6.2
LZH PP PP 09 20 20.5 +6.1
LZH *eS* **S** 09 26 49.4 +2.7
LZH SS **SS** 09 31 26.2 +3.7
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.4s
LZH LR LR
comp=N,1µm,15.4s
LZH LR LR
comp=E,1µm,14.0s
LZH LR LR
comp=Z,1µm,16.0s
MIR Mirnyy 72.15 203⇓ *i*P **P** 09 17 41.0 +1.0
MIR *i* 09 17 52.0
MIR pmax pmax
comp=Z,63nm,1.0s
CLNS Chul'man 73.41 340 *eP* **P** 09 17 47.8 +0.2
CLNS *e* 09 18 02.0
CLNS *e* 09 20 32.5
CLNS *e*PPP PPP 09 22 19.6
CLNS *eS* S 09 27 03.6 -6.8
CLNS *e* 09 27 37.0
CLNS pmax pmax
comp=Z,4.0nm,1.1s
CLNS pmax pmax
comp=N,10.0nm,1.0s
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS pmax pmax
comp=N,3.0nm,0.7s
CLNS pmax pmax
comp=Z,4.0nm,0.8s
CLNS pmax pmax
comp=E,3.0nm,0.7s
CLNS smax smax
comp=N,37nm,11.8s
CLNS smax smax
comp=E,174nm,18.8s
ULN Ulaanbaatar 75.32 325 *eP* **P** 09 17 59.5 +0.4
comp=E,58nm,1.1s
GTA Gaotai 75.61 315 *eP* **P** 09 18 01.2 +0.3
GTA pP **pP** 09 18 26.4 +4.4
GTA sP sP 09 18 37.1 +6.4
GTA S **S** 09 27 33.9 -1.9
GTA sS sS 09 28 17.1 +5.2
GTA SS **SS** 09 32 30.3 +1.4
GTA pmax pmax
comp=Z,9.0nm,1.2s
GTA pmax pmax
comp=Z,100nm,4.5s
GTA LR LR
comp=N,86nm,12.3s
GTA LR LR
comp=E,110nm,15.2s
GTA LR LR
comp=Z,120nm,12.6s
SONM Songino Array 75.67 325 P **P** 09 18 01.3 +0.3
SONM pP **pP** 09 18 20.4 -1.7
SONM Songino Array 75.67 325 P **P** 09 18 01.3 +0.3
comp=Z,12nm,0.7s,baz=141,slow=5.7,SNR=77
SONM pP **pP** 09 18 20.4 -1.7
comp=Z,18nm,0.9s,baz=136,slow=5.3,SNR=7.1
YAK Yakutsk 76.26 345 *eP* **P** 09 18 03.4 -0.4
YAK *e* 09 18 14.9
YAK *e**PP **pP** 09 18 28.3 +3.3
YAK *e* 09 20 52.2
YAK *eS* **S** 09 27 36.2 -5.5
YAK *e* 09 28 05.0
YAK *e**SS **sS** 09 28 20.9 +3.0
YAK *e*SSS SSS 09 35 54.8
YAK pmax pmax
comp=Z,17nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.2s
YAK pmax pmax
comp=Z,13nm,0.9s
YAK smax smax
comp=N,86nm,4.1s
BILL Bilibino 78.20 2*c i*P **P** 09 18 14.8 +0.2
BILL *i* 09 18 19.8
BILL *i* 09 18 35.7
BILL *i* 09 21 19.1
BILL pmax pmax
comp=Z,30nm,1.2s
BILL Bilibino 78.20 2 *eP* **P** 09 18 14.8 +0.2
comp=Z,44nm,1.1s
ZAK Zakamensk 78.77 326⇑ *i*P **P** 09 18 18.0 -0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZAK				e		09 18 37.0	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TNA	Tin City	78.96	12	eP	P	09 18 19.2	+0.4
	comp=Z,11nm,1.0s						
QSPA	South Pole Qui	79.71	180	eP	P	09 18 22.9	-0.3
	comp=Z,39nm,0.8s						
TRF	Thorofare Moun	82.14	20	eP	P	09 18 35.1	-1.0
	comp=Z,13nm,0.9s						
MCK	McKinley	82.78	20	eP	P	09 18 39.2	-0.1
MCK				pmax	pmax		
	comp=Z,51nm,1.0s						
MCK	McKinley	82.78	20	eP	P	09 18 39.2	-0.1
	comp=Z,51nm,1.0s						
MAW	Mawson	83.87	202	P	P	09 18 45.0	+0.2
MAW				pP	pP	09 19 04.3	-2.0
MAW	Mawson	83.87	202	P	P	09 18 45.0	+0.2
	comp=Z,13nm,0.8s,baz=103,slow=7.7,SNR=14						
MAW				pP	pP	09 19 04.3	-2.0
	comp=Z,18nm,0.8s,baz=93,slow=5.5,SNR=9.2						
MAW	Mawson	83.87	202	P	P	09 18 45.0	+0.2
	baz=84,SNR=9.5						
MENT	Mentasta	84.13	22	eP	P	09 18 46.8	+0.6
DOT	Dot Lake	84.42	21	eP	P	09 18 48.4	+0.7
	comp=Z,18nm,0.8s						
HVS	Khovu-Aksy	84.50	324	⇓eP	P	09 18 48.2	-0.2
HVS				pmax	pmax		
	comp=Z,119nm,1.7s						
WMQ	Urumqi	85.68	316	eP	P	09 18 55.4	+0.9
WMQ				LR	LR		
	comp=N,140nm,31.0s						
WMQ				LR	LR		
	comp=E,180nm,28.0s						
WMQ				LR	LR		
	comp=Z,120nm,28.2s						
WDC	Whiskeytown Da	86.11	48	eP	P	09 18 57.2	+0.6
WDC				pmax	pmax		
	comp=Z,12nm,1.3s						
WDC	Whiskeytown Da	86.11	48	eP	P	09 18 57.1	+0.6
	comp=Z,12nm,1.3s						
YBH	Yreka Blue Hor	86.32	47	eP	P	09 18 58.6	+0.9
	comp=Z,8.3nm,1.0s						
PKM	Peak Mountain	86.63	54	⇓P	P	09 18 59.3	-0.2
	baz=87						
CMB	Columbia Colle	87.00	51	eP	P	09 19 02.2	+1.1
CMB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMB	Columbia Colle	87.00	51	eP	P	09 19 02.2	+1.1
	comp=Z,5.1nm,1.0s						
CIS	Catalina Islan	87.39	56	⇓P	P	09 19 03.4	+0.3
	baz=88						
VES	Vestal, Richgr	87.45	53	⇑P	P	09 19 04.0	+0.9
	baz=88						
ARVC	Arvin	87.47	54	⇓P	P	09 19 04.3	+0.9
	baz=88						
BEKR	Beckworth	87.51	49	eP	P	09 19 04.2	+0.6
	comp=Z,3.2nm,1.0s						
ISA	Isabella	87.89	53	eP	P	09 19 05.9	+0.5
ISA				pmax	pmax		
	comp=Z,13nm,1.4s						
ISA	Isabella	87.89	53	eP	P	09 19 05.9	+0.5
	comp=Z,3.2nm,1.4s						
ISA	Isabella	87.89	53	⇑P	P	09 19 06.2	+0.8
	baz=88						
EDW2	Edwards Air Fo	88.08	54	⇑P	P	09 19 07.8	+1.4
	baz=88						
MOD	Modoc	88.10	47	eP	P	09 19 07.1	+0.8
	comp=Z,2.4nm,0.9s						
BFSC	Mount Baldy Ra	88.19	55	⇓P	P	09 19 08.1	+1.1
	baz=88						
109C	Camp Elliot, M	88.33	56	⇓P	P	09 19 09.1	+1.6
	baz=88						
CWC	Cottonwood Cre	88.38	53	⇓P	P	09 19 09.2	+1.3
	baz=88						
MURC	Murrieta	88.42	56	⇑P	P	09 19 08.9	+1.0
	baz=89						
NVAR	Mina Array Bea	88.69	51	P	P	09 19 11.1	+1.8
NVAR	Mina Array Bea	88.69	51	P	P	09 19 11.1	+1.8
	comp=Z,5.0nm,0.8s,baz=237,slow=6.7,SNR=33						
DAC	Darwin (Calif)	88.73	53	eP	P	09 19 10.9	+1.4
DAC				pmax	pmax		
	comp=Z,12nm,1.1s						
DAC	Darwin (Calif)	88.73	53	eP	P	09 19 10.9	+1.4
	comp=Z,12nm,1.1s						
MPMC	Manual Prospec	88.76	53	⇓P	P	09 19 11.3	+1.7
	baz=89						
MONP	Monument Peak	88.89	56	⇓P	P	09 19 11.6	+1.2
	baz=89						
PFO	Pinyon Flat Ob	89.03	56	⇓P	P	09 19 12.4	+1.5
	baz=89						
GRAC	Grapevine Rang	89.07	52	⇓P	P	09 19 12.3	+1.4
	baz=89						
GSC	Goldstone	89.12	54	eP	P	09 19 12.2	+0.9
GSC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GSC	Goldstone	89.12	54	eP	P	09 19 12.2	+0.9
	comp=Z,1.6nm,1.1s						
GSC	Goldstone	89.12	54	⇑P	P	09 19 12.9	+1.6
	baz=89						
FURC	Furnace Creek,	89.35	53	⇓P	P	09 19 13.8	+1.7
	baz=90						
HEC	Hector,Ludlow	89.40	55	⇑P	P	09 19 14.3	+1.7
	baz=90						
SWSC	Sam W. Stewart	89.42	57	⇓P	P	09 19 14.1	+1.6
	baz=90						
WVOR	Wild Horse Val	89.43	47	eP	P	09 19 14.2	+1.6
WVOR				pmax	pmax		
	comp=Z,58nm,1.1s						
WVOR	Wild Horse Val	89.43	47	eP	P	09 19 14.2	+1.6
	comp=Z,58nm,1.1s						
SHOC	Shoshone	89.67	54	⇓P	P	09 19 15.1	+1.4
	baz=90						
TUQ	Turquoise Moun	89.86	54	⇑P	P	09 19 16.2	+1.4
	baz=90						
GMRC	Granite Mounta	89.92	55	⇑P	P	09 19 16.3	+1.2
	baz=90						
BMN	Battle Mountai	89.98	49	eP	P	09 19 16.2	+0.9
BMN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BMN	Battle Mountai	89.98	49	eP	P	09 19 16.1	+0.9
	comp=Z,10nm,0.9s						
MK31	Makanchi Array	90.18	318	eP	P	09 19 14.6	-1.2
MK31	Makanchi Array	90.18	318	eP	P	09 19 14.6	-1.2
MKAR	Makanchi Array	90.18	318	P	P	09 19 14.9	-0.9
MKAR				*PP	pP	09 19 34.0	-3.6
MKAR	Makanchi Array	90.18	318	P	P	09 19 14.9	-0.9
MKAR				pP	pP	09 19 34.0	-3.6
MKAR	Makanchi Array	90.18	318	P	P	09 19 14.9	-0.9
	comp=Z,2.9nm,0.7s,baz=98,slow=5.7,SNR=34						
MKAR				pP	pP	09 19 34.0	-3.6
	comp=Z,5.2nm,0.8s,baz=103,slow=5.8,SNR=9.0						
ZAA0	Zalesovo Array	90.56	325	eP	P	09 19 17.5	+0.1
ZALV	Zalesovo Beam	90.56	325	P	P	09 19 15.4	-2.0
ZALV				*PP	pP	09 19 34.8	-4.3
ZALV	Zalesovo Beam	90.56	325	P	P	09 19 15.4	-2.0
ZALV				pP	pP	09 19 34.8	-4.3
ZALV	Zalesovo Beam	90.56	325	P	P	09 19 15.4	-2.0
	comp=Z,2.0nm,0.7s,baz=122,slow=5.3,SNR=9.1						
ZALV				pP	pP	09 19 34.8	-4.3
	comp=Z,2.2nm,0.8s,baz=104,slow=4.7,SNR=3.6						
R11A	Troy Canyon, C	90.75	51	⇓P	P	09 19 20.7	+1.8
	baz=91						
BMO	Blue Mountains	90.95	45	eP	P	09 19 20.3	+0.7
BMO				pmax	pmax		
	comp=Z,23nm,1.5s						
BMO	Blue Mountains	90.95	45	eP	P	09 19 20.3	+0.7
	comp=Z,23nm,1.5s						
SYO	Syowa Base	91.28	198	⇑eP	P	09 19 20.9	+0.4
ELK	Elko	91.52	49	eP	P	09 19 22.5	0.0
	comp=Z,19nm,0.6s						
MFID	Camas Ranch	91.67	46	eP	P	09 19 24.3	+1.3
	comp=Z,19nm,1.4s						
MFID	Camas Ranch	91.67	46	⇓P	P	09 19 24.1	+1.1
	baz=92,SNR=10						
NVS	Novosibirsk	91.70	325	eP	P	09 19 21.1	-1.5
NVS				pmax	pmax		
	comp=Z,23nm,1.6s						
NVS				pmax	pmax		
	comp=E,15nm,1.5s						
NEW	Newport	91.86	41	eP	P	09 19 24.4	+0.7
	comp=E,13nm,1.1s						
NEW	Newport	91.86	41	⇓P	P	09 19 24.5	+0.8
	baz=92,SNR=7.4						
I12A	Atlanta	92.24	46	⇓P	P	09 19 26.7	+1.0
	baz=92						
C11A	Tepee Creek (N	92.33	42	⇑P	P	09 19 27.5	+1.6
	baz=92						
G12A	Big Creek, Yel	92.38	45	⇑P	P	09 19 27.5	+1.2
	baz=92,SNR=36						
F12A	Elk City	92.56	44	⇓P	P	09 19 27.9	+0.9
	baz=93,SNR=25						
H12A	Diamond D Ranc	92.59	45	⇑P	P	09 19 28.2	+0.9
	baz=93,SNR=9.4						
HLID	Hailey	92.70	46	eP	P	09 19 29.2	+1.4
	comp=E,37nm,1.1s						
HLID	Hailey	92.70	46	⇑P	P	09 19 28.7	+0.9
	baz=93,SNR=38						
D12A	Red Ives Fores	92.77	43	⇑P	P	09 19 29.0	+1.1
	baz=93						
C12B	Naegeli Ranch,	92.82	42	⇓P	P	09 19 29.7	+1.6
	baz=93						
J13A	Cove Ranch, Pi	92.84	47	⇑P	P	09 19 29.6	+1.2
	baz=93,SNR=13						
I13A	Wildhorse Cree	92.98	46	⇑P	P	09 19 30.5	+1.3
	baz=93,SNR=28						
H13A	Challis	93.01	45	⇓P	P	09 19 30.5	+1.3
	baz=93,SNR=22						
KSH	Kashi	93.10	309	eSKS	S	09 30 22.5	-7.5
G13A	Cobalt	93.13	45	⇑P	P	09 19 31.2	+1.4
	baz=93,SNR=17						
F13A	Darby	93.20	44	⇓P	P	09 19 31.1	+1.1
	baz=93,SNR=26						
E13A	Victor	93.43	44	⇑P	P	09 19 32.0	+1.0
	baz=94,SNR=6.5						
KURK	Kurchatov	93.45	321	⇓eP	P	09 19 31.3	+0.5
KURK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
KURK	Kurchatov	93.45	321	eP	P	09 19 29.4	-1.4
	comp=Z,4.7nm,1.0s						
KURK				pP	pP	09 19 48.6	-4.0
KURBB	Kurchatov Arra	93.49	321	P	P	09 19 29.4	-1.6
	comp=Z,2.2nm,0.8s,baz=107,slow=3.4,SNR=12						
KURBB				pP	pP	09 19 48.6	-4.2
	comp=Z,4.5nm,0.9s,baz=104,slow=3.1,SNR=8.9						
B13A	Whitefish	93.62	42	⇓P	P	09 19 32.9	+1.1
	baz=94						
G14A	Jackson	93.70	45	⇑P	P	09 19 33.7	+1.3
	baz=94						
A13A	Flathead Natio	93.76	41	⇓P	P	09 19 34.7	+2.2
	baz=94						
E14A	Clinton	93.89	44	⇓P	P	09 19 33.8	+0.5
	baz=94						
C14A	Swan Lake	93.98	42	⇓P	P	09 19 34.3	+0.8
	baz=94						
D14A	Greenough	94.01	43	⇓P	P	09 19 34.4	+0.7
	baz=94						
MCMT	McKenzie Canyo	94.05	45	eP	P	09 19 33.9	-0.2
	comp=Z,14nm,0.9s						
B14A	Marquette Ranc	94.40	42	⇓P	P	09 19 36.2	+0.7
	baz=94						
A14A	Double T Ranch	94.41	41	⇓P	P	09 19 36.7	+1.2
	baz=94						
C15A	Salmond Ranch,	94.73	42	⇓P	P	09 19 38.2	+1.2
	baz=95						
AAK	Ala-Archa	94.75	312	⇑eP	P	09 19 37.7	+0.5
AAK				pmax	pmax		
	comp=Z,21nm,3.2s						
B15A	Bradely Ranch,	94.86	42	⇓P	P	09 19 38.6	+1.1
	baz=95						
A15A	Johnson Ranch,	94.86	41	⇑P	P	09 19 38.9	+1.4
	baz=95						
V20A	Brimhall	95.89	55	⇑P	P	09 19 43.5	+0.8
	baz=96						
YKA	Yellowknife Ar	96.19	28	P	P	09 19 43.0	-0.1
YKA				pP	pP	09 20 03.5	-1.4
YKA	Yellowknife Ar	96.19	28	P	P	09 19 43.0	-0.1
	comp=Z,3.7nm,0.8s,baz=258,slow=4.7,SNR=58						
YKA				pP	pP	09 20 03.4	-1.4
	comp=Z,5.3nm,0.8s,baz=258,slow=4.6,SNR=12						
YKW3	Yellowknife Ar	96.20	28	eP	P	09 19 42.5	-0.6
	comp=Z,0.1nm,1.1s						
MAIT	Maitri	96.57	190	eP	P	09 19 33.6	-11
MAIT				e		09 23 39.5	
SNAA	Sanae	97.56	185	eP	P	09 19 48.5	-0.9
	comp=Z,6.7nm,1.0s						
BVAR	Borovoye Array	98.84	322	P	P	09 19 54.0	-1.3
BVAR	Borovoye Array	98.84	322	P	P	09 19 54.0	-1.3
BVAR				pP	pP	09 20 12.6	-4.4
BVAR	Borovoye Array	98.84	322	P	P	09 19 54.0	-1.3
	comp=Z,2.0nm,0.9s,baz=76,slow=6.3,SNR=5.1						
BVAR				pP	pP	09 20 12.6	-4.4
	comp=Z,3.8nm,1.0s,baz=97,slow=4.9,SNR=5.5						
ARCES	ARCESS Array B	114.54	344	PKP	PKPdf	09 24 53.9	-0.7
ARCES	ARCESS Array B	114.54	344	PKP	PKPdf	09 24 53.9	-0.7
	comp=Z,8.2nm,1.1s,baz=64,slow=2.1,SNR=3.3						
BOSA	Boshof	122.77	226	PKP	PKPdf	09 25 10.5	-1.4
BOSA				pPKP	pPKPdf	09 25 30.6	-3.9
BOSA	Boshof	122.77	226	PKP	PKPdf	09 25 10.5	-1.4
	comp=Z,2.3nm,0.7s,baz=83,slow=13,SNR=4.3						
BOSA				pPKP	pPKPdf	09 25 30.6	-3.9
	comp=Z,1.5nm,0.6s,baz=163,slow=8.8,SNR=2.2						
AKASG	Malin Array Be	123.95	325	PKIKP	PKPdf	09 25 11.1	-2.1
AKASG						09 25 32.3	
AKASG	Malin Array Be	123.95	325	PKP	PKPdf	09 25 11.1	-2.1
AKASG				pPKP	pPKPdf	09 25 32.2	-3.5
AKASG	Malin Array Be	123.95	325	PKP	PKPdf	09 25 11.1	-2.1
	comp=Z,0.3nm,0.3s,baz=63,slow=2.5,SNR=2.5						
AKASG				pPKP	pPKPdf	09 25 32.2	-3.5
	comp=Z,2.3nm,0.8s,baz=76,slow=1.0,SNR=3.6						
PBRG	Braganca	146.97	344	ePKP	pPKPdf	09 26 17.6	-1.0
MVO	Moncorvo	147.64	344	ePKP	pPKPdf	09 26 19.6	-0.2
POLO	Lamas de Olo	147.65	345	ePKP	pPKPdf	09 26 19.7	-0.2
PVRL	Vila Real	147.72	345	ePKP	pPKPdf	09 26 20.2	+0.3
ESDC	Sonseca Array	148.03	339	pPKPbc	pPKPbc	09 26 18.8	-4.6
ESDC	Sonseca Array	148.03	339	pPKPbc	pPKPbc	09 26 18.8	-4.6
	comp=Z,3.3nm,0.7s,baz=12,slow=3.3,SNR=8.5						
PVIS	Viseu	148.29	345	ePKP	pPKPdf	09 26 22.0	+1.1
PCBR	Castelo Branco	149.00	344	ePKP	pPKPdf	09 26 23.2	+1.2
PMRV	Marv??o	149.36	343	ePKP	pPKPdf	09 26 24.1	+1.5
PTOM	Tomar	149.46	345	ePKP	pPKPdf	09 26 24.8	+2.1
PMTG	Montargil	149.92	344	ePKP	pPKPdf	09 26 25.2	+1.7
PNCL	Nicolau / Gran	150.90	344	ePKP	pPKPdf	09 26 28.5	+3.5
PCVE	Castro Verde	151.21	343	ePKP	pPKPdf	09 26 28.9	+3.4
MORF	Marmelete	151.69	343	ePKP	PKPab	09 26 23.0	+4.1
TORD	Torodi Ar. Bea	160.10	280	PKP	PKPdf	09 26 13.4	-2.0
TORD				pPKP	pPKPdf	09 26 33.7	-4.3
TORD				PKPab	PKPab	09 26 54.5	-1.1
TORD	Torodi Ar. Bea	160.10	280	PKP	PKPdf	09 26 13.4	-2.0
	comp=Z,1.2nm,0.9s,baz=111,slow=1.4,SNR=3.8						
TORD				pPKP	pPKPdf	09 26 33.7	-4.3
	comp=Z,4.4nm,1.2s,baz=48,slow=2.2,SNR=3.7						
TORD				PKPab	PKPab	09 26 54.5	-1.1
	comp=Z,1.6nm,0.8s,baz=91,slow=2.4,SNR=3.9						

*IDC **04** 09:10:18.7±0.4, 10°.17N×66°.89W, $h0^{km}$, mb5.0/25, mb1 5.1/26, mb1mx5.1/29, mbtmp5.0/26, ML7.3/1, MS5.0/21, Ms1 5.0/21, ms1mx4.8/28, Error ellipse: s-maj=13.6km s-min=9.2km az=99.0*

*LDG **04** 09:10:18.4±0.2, 10°.21N×66°.91W, $h10^{km}$, Mb5.3/44, Ms4.8/10, Error ellipse: s-maj=18.7km s-min=7.9km az=122.0*

*ISCJB **04** 09:10:19.4±0.4, 10°.22N±0°.02×67°.00W±0°.01, $h10^{km}$±2^{km}, mb5.2/266, MS5.0/166, Error ellipse: s-maj=3.1km s-min=2.0km az=179.7*

*FUNV **04** 09:10:20.3, 10°.21N×67°.03W, $h2^{km}$, MW5.6*

*NEIC **04** 09:10:20.9, 10°.20N×67°.01W, $h6^{km}$, mb5.4/188, MS5.0/127, MW5.5, MW5.4(CAR), Moment Tensor Solution. s28 Moment tensor: Scale 10^{17}Nm; M_{rr}0.07; $M_{\theta\theta}$1.32; $M_{\phi\phi}$-1.39; $M_{r\theta}$0.21; $M_{\theta\phi}$-1.90; $M_{\phi r}$-0.59; Best double couple: $M_0$2.40000×10^{17} NP1:ϕ_s72.00000°, δ75.00000°, λ179.00000°. NP2:ϕ_s162.00000°, δ89.00000°, λ15.00000°. Principal axes: T 2.3900, Plg11.0000°, Azm28.0000°; N 0.0500, Plg74.0000°, Azm166.0000°; P -2.4400, Plg9.0000°, Azm296.0000°; After CAR.*

NEIC Felt [VI] at Las Tejerias; [V] at Cagua, Cua, El Limon, Guatire, La Victoria, Ocumare del Tuy and San Antonio de Los Altos; [IV] at Baruta, Calabozo, Caraballeda, Caracas, Carrizal, Chacao, Charallave, El Cafetal, El Hatillo, Guarenas, La Dolorita, Los Dos Caminos, Los Teques, Maiquetia, Maracay, Palo Negro, Petare, San Juan de los Morros, Turmero and Villa de Cura; [III] at Mariara, Puerto Cabello and Valencia. Also felt at Acarigua, Barcelona, Barquisimeto, Cabudare, Caucaguita, Ciudad Bolivar, Cuidad Guayana, Guacara, Guanare, La Guaira, Nirgua, Puerto Ayacucho, San Carlos, San Felipe, San Joaquin and Santa Teresa.

*INMG **04** 09:10:21.5, 10°.23N×66°.89W, $h10^{km}$, MW5.5*

*MOS **04** 09:10:22.8±1.1, 10°.23N×66°.96W, $h33^{km}$, mb5.5/94, MS4.9/31, Error ellipse: s-maj=5.9km s-min=4.5km az=67.8*

*GCMT **04** 09:10:23.4±0.1, 10°.26N×67°.15W, $h12^{km}$, MW5.4, Moment Tensor Solution. s73,c128; s25,c26; Moment tensor: Scale 10^{17}Nm; M_{rr}0.17±.02; $M_{\theta\theta}$1.25±.02; $M_{\phi\phi}$-1.42±.02; $M_{r\theta}$-0.05±.04; $M_{\theta\phi}$-0.86±.02; $M_{\phi r}$-0.22±.05; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s62.00000°, δ85.00000°, λ-176.00000°. NP2:ϕ_s331.00000°, δ86.00000°, λ-5.00000°. Principal axes: T 1.5000, Plg1.0000°, Azm16.0000°; N 0.2000, Plg83.0000°, Azm111.0000°; P -1.7000, Plg7.0000°, Azm286.0000°; Data Used: II IU G CN IC. Surface waves: sta= 95, comp=195, per= 50.*

*SZGRF **04** 09:10:25.2, 9°.48N×65°.97W, $h33^{km}$, mb5.1, MS4.9, Venezuela*

ISC 04 09:10:20.9±0.5, **10°.18N**±0°.03×**67°.04W**±0°.02, **$h12^{km}$**±2^{km}, **n1284**, σ**1§20**/1267, **mb5.3**/266, **MS5.0**/166, **260C-229D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCUV	OCUMARITO	0.24	106	⇓eP	Pg	09 10 24.4	-1.6
OCUV				eS	Sg	09 10 28.6	-0.9
BOTV	Botiquin	0.28	321	⇓eP	Pg	09 10 25.2	-1.7
BOTV				eS	Sg	09 10 29.5	-1.5
FUNV	FUNVISIS	0.36	38	⇑eP	Pg	09 10 26.9	-1.4
FUNV				eS	Sg	09 10 32.2	-0.9
LLAV	El Llanito	0.36	38	⇑eP	Pg	09 10 26.9	-1.4
LLAV				eS	Sg	09 10 32.1	-1.1
FDCV	FORTIN DE LA C	0.37	13	⇑eP	Pg	09 10 27.0	-1.3
FDCV				eS	Sg	09 10 32.4	-1.0
BIRV	Birongo	0.81	69	⇓eP	Pg	09 10 34.7	-1.9
BIRV				eS	Sg	09 10 46.8	-0.4
TURV	Turiamo	0.84	289	⇓eP	Pg	09 10 34.7	-2.4
MERV	Las Mercedes	1.18	142	⇓eP	Pb	09 10 42.4	-0.8
CUPV	Cœpira	1.23	96	⇓eP	Pn	09 10 43.6	-0.5
CUPV				eS	Sb	09 10 59.6	-0.6
MAPV	Macapo	1.44	256	⇓eP	Pn	09 10 47.0	+0.1
MAPV				eS	Sg	09 11 07.3	-0.2
ORCV	Isla La Orchil	1.82	27	⇑eP	Pn	09 10 50.1	-1.9
ORCV				eS	Sn	09 11 14.7	-0.4
JACV	Jacura	1.98	297	⇓eP	Pn	09 10 55.0	+0.6
JACV				eS	Sn	09 11 19.6	+0.5
TEPV	Terepaima	2.13	264	⇓eP	Pn	09 10 57.0	+0.5
TEPV				eS	Sn	09 11 23.0	+0.1
PCRV	Puerto La Cruz	2.36	90	⇓eP	Pn	09 11 01.4	+1.9
PRGV	PARIAGUAN	2.75	121	⇓eP	Pn	09 11 05.1	+0.2
CURV	Curarigua	2.89	267	⇓eP	Pn	09 11 07.3	+0.5
CURV				eS	Sn	09 11 41.3	-0.2
MONV	Montecano	3.38	302	⇓eP	Pn	09 11 11.8	-1.7
MONV				eS	Sn	09 11 51.3	-2.3
QARV	Quebrada Arrib	3.43	271	⇓eP	Pn	09 11 16.3	+1.9
QARV				eS	Sn	09 11 53.6	-1.5
DABV	Dabajuro	3.62	282	⇓eP	Pn	09 11 16.0	-0.8
DABV				eS	Sn	09 11 58.0	-1.4
ORIV	Oritupano	3.74	107	eP	Pn	09 11 18.1	-0.5
CRUV	Carupano	3.77	82	eP	Pn	09 11 19.1	+0.2
CRUV				eS	Sn	09 12 03.0	-0.2
SDV	Santo Domingo	3.77	250	ePn	Pn	09 11 20.1	+1.0
SDV				eSn	Sb	09 12 11.4	-2.1
ELOV	Elorza	3.98	218	⇑eP	Pn	09 11 21.6	-0.3
SOCV	Socops	4.22	244	⇓eP	Pn	09 11 24.0	-1.1
SOCV				eS	Sn	09 12 11.3	-3.0
VIGV	El Vigia	4.47	253	⇓eP	Pn	09 11 29.3	+0.7
VIGV				eS	Sn	09 12 17.7	-3.0
GURV	El Guri	4.58	121	⇓eP	Pn	09 11 29.1	-1.1
GUIV	Guiria	4.76	84	eP	Pn	09 11 31.8	-0.7
PAYV	Puerto Ayacuch	4.77	187	⇑eP	Pn	09 11 31.5	-1.2
ALNG	Atlantic LNG	5.26	90	eP	Pn	09 11 46.0	+6.5
BUAY	Buenos Aires	5.27	90	eP	Pn	09 11 44.5	+5.0
SIPA	Siparia	5.44	90	eP	Pn	09 11 48.2	+6.2
TPP	Pointe-a-Pierr	5.50	88	eP	Pn	09 11 43.2	+0.5
TRN	Trinidad (W)	5.56	85	eP	Pn	09 11 45.9	+2.3
TRN	Trinidad (W)	5.56	85	e	Sn	09 12 51.6	+4.2
RIOV	Rio Grande	5.57	112	eP	Pn	09 11 43.0	-0.7
RIOV				eS	Sn	09 12 43.0	-4.6
GRGR	Grenville	5.62	69	ePn	Pn	09 11 43.4	-1.1
	997nm,0.7s						
GRGR				eSn	Sn	09 12 46.4	-2.7
GRW	Mount Saint Ca	5.63	69	eP	Pn	09 11 45.2	+0.6
GRW	Mount Saint Ca	5.63	69	e	Sn	09 12 49.1	-0.1
CAPV	Capacho	5.70	247	eP	Pn	09 11 44.8	-0.9
TBH	Brigand Hill	5.88	87	eP	Pn	09 11 50.9	+2.9
TPR	Prospect	6.23	80	eP	Pn	09 11 57.7	+4.9
SVB	Belmont	6.44	61	eP	Pn	09 11 54.5	-1.2
SVB	Belmont	6.44	61	e	Sn	09 13 07.9	-1.3
TOSP	Speyside	6.48	80	eP	Pn	09 12 01.8	+5.6
SLDE	Delcer	6.87	58	eP	Pn	09 12 02.2	+0.7
SLB	Belfond	6.89	58	eP	Pn	09 12 01.6	-0.4
MCLT	Moule a Chique	6.92	59	eP	Pn	09 12 01.6	-0.6
MCLT	Moule a Chique	6.92	59	e	Sb	09 13 39.2	-4.6
LUEV	Luepa	7.00	128	eP	Pn	09 12 02.0	-1.5
SLW	Petit Monier	7.08	57	eP	Pn	09 12 05.4	+1.0
FDF	Fort de France	7.31	51	eP	Pn	09 12 05.9	-1.8
FDF				pmax	pmax		
	comp=Z,655nm,0.6s						
FDF	Fort de France	7.31	51	ePn	Pn	09 12 05.9	-1.8
	comp=Z,655nm,0.6s						
FDF	Fort de France	7.31	51	eP	Pn	09 12 05.1	-2.6
DVCT	Vielle Casse P	7.70	45	eP	Pn	09 12 12.3	-0.6
TBG	Guadaloupe-3	7.70	42	eP	Pn	09 12 10.7	-2.3
HMG	Houelmont	7.76	41	eP	Pn	09 12 12.3	-1.6
CRPR	Cabo Rojo, PR	7.78	359	ePn	Pn	09 12 13.2	-0.9
SCG	Saint Claude	7.81	41	eP	Pn	09 12 13.3	-1.2
PHG	Guadaloupe-2	7.82	42	eP	Pn	09 12 12.5	-2.3
OBIP	Obispado Ponce	7.83	3	ePn	Pn	09 12 12.8	-1.9
LZG	Guadaloupe-1	7.83	40	eP	Pn	09 12 12.0	-2.7
CDVI	St. Croix	7.84	16	ePn	Pn	09 12 14.4	-0.5
DOG	Dongo Capester	7.85	42	eP	Pn	09 12 12.8	-2.3
CELP	Cerrillos	7.86	3	ePn	Pn	09 12 13.4	-1.8
CELP				eSn	Sn	09 13 37.4	-6.7
SJG	San Juan	7.93	6	ePn	Pn	09 12 14.1	-2.0
SJG				Sn	Sn	09 13 34.8	-11
SJG	San Juan	7.93	6	Pn	Pn	09 12 13.8	-2.3
	comp=Z,80nm,0.3s,baz=172,slow=12,SNR=63						
SJG				Sn	Sn	09 13 34.7	-11
	comp=Z,139nm,0.3s,baz=287,slow=21,SNR=10						
SJG				LR	LR	09 15 34.1	
	comp=Z,7μm,19.9s,baz=176,slow=40						
LSP	Las Mesas	7.95	360	ePn	Pn	09 12 15.5	-0.9
LSP				eSn	Sn	09 13 42.7	-3.6
MGG	Marie-Galante	7.97	44	eP	Pn	09 12 15.1	-1.6
MPR	Mayaguez	7.98	359	ePn	Pn	09 12 15.6	-1.3
HUMP	Col San Antoni	8.00	8	ePn	Pn	09 12 14.4	-2.6
MTP	Monte Pirata	8.00	10	ePn	Pn	09 12 15.7	-1.3
	comp=Z,162nm,0.7s						
LRS	Lares	8.06	1	ePn	Pn	09 12 16.6	-1.4
LRS				eSn	Sn	09 13 42.4	-6.8
AOPR	Arecibo Observ	8.12	2	ePn	Pn	09 12 17.2	-1.5
CBYP	Canovanas	8.12	8	ePn	Pn	09 12 16.9	-1.9
	comp=Z,72nm,0.9s						
NEV	Hard Times	8.16	32	eP	Pn	09 12 18.5	-0.8
NEV	Hard Times	8.16	32	e	Sn	09 13 49.7	-1.9
AGP	Aguadilla	8.18	359	ePn	Pn	09 12 20.1	+0.6
SEG	Port Louis	8.20	40	eP	Pn	09 12 18.0	-1.7
AGPR	Aguadilla, PR	8.24	359	eP	Pn	09 12 19.4	-0.9
	comp=Z,579nm,0.6s						
SKI	Saint Kitts	8.24	30	eP	Pn	09 12 21.1	+0.7
STVI	Saint Thomas	8.37	14	ePn	Pn	09 12 20.2	-1.9
DEG	La Desirade	8.42	43	eP	Pn	09 12 15.9	-7.1
BPA	Boggy Peak	8.48	36	e	Sb	09 14 21.8	-7.0
ANWB	Willy Bob	9.02	34	ePn	Pn	09 12 30.2	-0.9
	comp=Z,129nm,0.7s						
SDDR	Presa de Saban	9.67	335	ePn	Pn	09 12 40.9	+0.9
SDDR				eSn	Sn	09 14 21.4	-7.3
MASC	Masc	12.12	326	eP	Pn	09 13 14.9	+1.4
HOJ	Hope	12.21	311	i P	Pn	09 13 15.4	+0.6
GWJ	Greenwich	12.24	311	i P	Pn	09 13 14.8	-0.5
GWJ				i	Sn	09 15 19.5	-12
GWJ				i S	Sn	09 15 19.5	-12
STH	Stony Hill	12.30	311	i P	Pn	09 13 15.4	-0.7
STH				i S	Sn	09 15 25.9	-7.3
PCJ	Portland Cotta	12.36	309	i P	Pn	09 13 22.1	+5.2
GTBY	Guantanamo Bay	12.43	322	ePn	Pn	09 13 17.7	-0.1
	comp=Z,140nm,1.0s						
BCIP	Isla Barro Col	12.66	267	ePn	Pn	09 13 19.9	-1.1
RCC	Rio Carpintero	12.84	320	eP	P	09 13 30.3	-4.1

RCC eS Sn 09 15 33.3 -13
comp=N,40nm,0.8s
RCC e
comp=E,56nm,0.8s
LMGC Las Mercedes 13.75 317 eP **Pn 09 13 33.9 -1.9**
LMGC eS Sn 09 15 54.0 -14
comp=N,2µm,17.4s
LMGC e
comp=E,3µm,19.1s
OTAV Otavalo 15.05 230 ePn **Pn 09 13 55.2 +1.2**
comp=E,207nm,1.0s
ACR Cerro Adams 15.99 266 eP **Pn 09 14 05.2 -0.7**
BUS Buena Vista 16.49 269 eP **Pn 09 14 12.6 -0.1**
BUS Buena Vista 16.49 269 eP **Pn 09 14 13.7 +1.0**
SJS Escuela Geolog 16.76 271 eP **Pn 09 14 16.9 +1.0**
SJS Escuela Geolog 16.76 271 eP **P 09 14 17.6 -0.6**
QCR Quepos 16.90 269 eP **Pn 09 14 16.4 -1.1**
CGA2 Cerro Gallo 2 17.16 271 eP **Pn 09 14 21.7 +0.8**
CGA2 Cerro Gallo 2 17.16 271 eP **Pn 09 14 21.3 +0.4**
MGV Manicaragua 17.17 315 eP **P 09 14 23.6 +1.2**
MGV eS **Sn 09 17 35.2 +3.5**
comp=N,5.3nm,3.8s
MGV e
comp=E,4.0nm,4.9s
FORC Fortuna 17.35 273 eP **Pn 09 14 23.5 +0.3**
FORC Fortuna 17.35 273 eP **Pn 09 14 23.3 +0.1**
JTS JuntasAbangare 17.63 272 ePn **Pn 09 14 26.8 +0.1**
comp=E,338nm,1.1s
SAML Samuel 19.39 168 eP **P 09 14 46.2 -0.7**
comp=E,2.8nm,0.6s
SOR Soroa 19.77 311 eP **Pn 09 14 52.7 +0.1**
SOR eS **S 09 18 33.6 -0.2**
comp=N,2.7nm,1.9s
SOR e
comp=E,2.9nm,2.4s
TGUH Tegucigalpa,Un 20.16 283 eP Pn 09 14 56.7 -0.5
comp=E,175nm,0.9s
TGUH LR LR
comp=Z,7µm,20.0s
TGUH Tegucigalpa,Un 20.16 283 eP **P 09 14 54.6 -0.7**
ATAH Atahualpa 20.59 214 P **P 09 15 01.7 +1.3**
ATAH S **S 09 18 50.0 -0.9**
ATAH Atahualpa 20.59 214 P **P 09 15 01.7 +1.3**
comp=Z,257nm,1.0s,baz=13,slow=6.6,SNR=45
ATAH S **S 09 18 50.0 -0.9**
comp=Z,24nm,0.9s,baz=197,slow=19,SNR=2.7
ATAH LR LR 09 24 11.8
comp=Z,10µm,18.7s,baz=5.9,slow=40
CNCH Conchagua 20.59 281 eP **P 09 14 59.4 -0.9**
CAHU Cacacuatique 21.02 282 eP **P 09 15 04.8 -0.1**
LFRS El Faro 21.82 281 eP **P 09 15 14.1 +0.7**
BOQS Boqueron 22.04 281 eP **P 09 15 16.6 +0.7**
BBSR BB Station 22.19 5 eP **P 09 15 19.0 +1.9**
comp=E,248nm,1.4s
BBSR LR LR
comp=Z,3µm,22.0s
TEIG Tepich 22.77 298 eP **P 09 15 24.9 +1.5**
comp=Z,186nm,0.9s
TEIG S **S 09 19 30.7 -1.7**
TEIG LR LR
comp=Z,3µm,20.0s
TEIG Tepich 22.77 298 P **P 09 15 24.2 +0.7**
comp=Z,190nm,0.8s,baz=99,slow=5.3,SNR=32
TEIG S **S 09 19 30.7 -1.7**
comp=Z,8.4nm,0.8s,baz=308,slow=12,SNR=2.4
NNA Nana 24.08 204 eP **P 09 15 36.5 -0.1**
comp=Z,206nm,0.8s
NNA S **S 09 19 55.8 +1.7**
NNA Nana 24.08 204 P **P 09 15 37.1 +0.5**
comp=Z,178nm,0.7s,baz=6.7,slow=8.7,SNR=56
NNA S **S 09 19 55.8 +1.7**
comp=Z,4.8nm,0.6s,baz=238,slow=13,SNR=2.2
NNA LR LR 09 25 41.3
comp=Z,5µm,18.3s,baz=350,slow=38
PAYG Puerto Ayora 25.52 246 eP **P 09 15 51.2 +1.5**
comp=Z,126nm,1.0s
PAYG LR LR
comp=Z,3µm,19.0s
NHSC New Hope 25.83 334 eP **P 09 15 53.8 +1.6**
comp=Z,194nm,1.1s
NHSC LR LR
comp=Z,2µm,20.0s
TIGA Tifton 26.14 326 ⇑P **P 09 15 56.7 +1.7**
baz=26
LPAZ La Paz 26.32 182 eP **P 09 15 57.3 -0.2**
comp=Z,65nm,0.9s
LPAZ S S 09 20 44.1 +13
LPAZ Lg Lg 09 24 10.3
LPAZ La Paz 26.32 182 P **P 09 15 57.4 -0.1**
comp=Z,16nm,0.8s,baz=9.1,slow=8.3,SNR=29
LPAZ S S 09 20 44.1 +13
comp=Z,14nm,0.8s,baz=344,slow=13,SNR=2.6
LPAZ Lg Lg 09 24 10.3
comp=Z,152nm,1.0s,baz=198,slow=6.6,SNR=5.3
LPAZ LR LR 09 27 11.0
comp=Z,6µm,20.9s,baz=345,slow=38
SIV San Ignacio 26.67 167 P **P 09 16 00.0 +0.1**
SIV Lg Lg 09 24 11.5
SIV San Ignacio 26.67 167 P **P 09 16 00.0 +0.1**
comp=Z,16nm,0.7s,baz=15,slow=11,SNR=55
SIV Lg Lg 09 24 11.5
comp=Z,94nm,0.9s,baz=63,slow=22,SNR=3.3
SIV LR LR 09 26 55.0
comp=Z,5µm,19.2s,slow=37
CNNC Cliffs of the 26.84 340 eP **P 09 16 01.7 +0.4**
CNNC LR LR
comp=Z,2µm,20.0s
ARE Arequipa 26.84 190 eP **P 09 16 03.0 +1.2**
ARE Arequipa 26.84 190 eP **P 09 16 03.0 +1.2**
KMSC Kings Mountain 28.06 335 ⇑P **P 09 16 13.3 +1.0**
baz=28
JSRW J. Sargeant Re 29.08 342 eP **P 09 16 22.2 +0.8**
LRAL Lakeview Retre 29.24 324 eP **P 09 16 24.4 +1.5**
comp=Z,29nm,0.9s
LRAL LR LR
comp=Z,2µm,19.0s
CBN Corbin 29.41 343 PFAKE 09 16 40.0 +16
CBN LR LR
comp=Z,2µm,19.0s
BLA Blacksburg 29.50 538 eP **P 09 16 26.3 +1.1**
BLA pmax pmax
comp=Z,40nm,0.9s
BLA MLR MLR
comp=Z,2µm,19.0s
BLA Blacksburg 29.50 538 eP **P 09 16 26.2 +1.1**
comp=Z,40nm,0.9s
BLA LR LR
comp=Z,2µm,19.0s
TKL Tuckaleechee C 29.58 332 P **P 09 16 27.5 +1.6**
TKL Tuckaleechee C 29.58 332 P **P 09 16 27.5 +1.6**
comp=Z,5.3nm,0.9s,baz=173,slow=14,SNR=5.7
CPCT Cooper Cave 29.77 330 eP P 09 16 32.0 +4.5
TZTN Tazewell 30.21 333 eP **P 09 16 32.5 +1.1**
comp=Z,24nm,1.0s
SWET Sewanee 30.29 328 eP **P 09 16 33.3 +1.1**
comp=Z,30nm,1.0s
SDMD Soldier's Deli 30.39 345 eP **P 09 16 33.0 0.0**
comp=Z,23nm,0.9s
MVL Millersville 30.83 346 eP **P 09 16 38.1 +1.4**
comp=Z,23nm,0.8s
VBMS Vicksburg 30.85 319 eP **P 09 16 38.3 +1.3**
comp=Z,92nm,1.2s
VBMS LR LR
comp=Z,2µm,19.0s
PLAL Pickwick Lake 31.27 325 eP **P 09 16 42.3 +1.5**
comp=Z,28nm,0.9s
PLAL LR LR
comp=Z,2µm,20.0s
YLE Yale 31.44 351 eP **P 09 16 43.4 +1.2**
OXF Oxford 31.70 323 PFAKE 09 17 00.0 +15
OXF LR LR
comp=Z,3µm,19.0s
SSPA Standing Stone 31.82 344 eP **P 09 16 45.4 -0.1**
comp=Z,19nm,0.8s
BDFB Brasilia 31.83 143 P **P 09 16 48.4 +2.4**
BDFB Brasilia 31.83 143 P **P 09 16 48.4 +2.4**
comp=Z,5.3nm,0.7s,baz=310,slow=9.4,SNR=6.2
BDFB LR LR 09 30 06.5
comp=Z,3µm,21.8s,baz=315,slow=37
WES Weston 32.30 354 eP **P 09 16 50.5 +0.8**
WES pmax pmax
comp=Z,147nm,1.3s
WES Weston 32.30 354 eP **P 09 16 50.5 +0.8**
comp=Z,147nm,1.3s
QUA2 Belchertown 32.31 353 eP **P 09 16 47.9 -2.0**
comp=Z,53nm,1.2s

UTMT University of 32.70 326 eP **P 09 16 54.5 +1.2**
comp=Z,179nm,1.2s
WCI Wyandotte Cave 32.84 331 eP **P 09 16 55.2 +0.6**
WCI pmax pmax
comp=Z,17nm,0.8s
WCI Wyandotte Cave 32.84 331 eP **P 09 16 55.2 +0.6**
comp=Z,17nm,0.8s
BINY Binghamton 32.85 348 eP **P 09 16 56.1 +1.5**
comp=Z,38nm,1.0s
BINY LR LR
comp=Z,1µm,21.0s
GNAR Gosnell 33.08 325 eP **P 09 16 57.1 +0.4**
comp=Z,1µm,0.9s
ACSO Alum Creek Sta 33.11 337 eP **P 09 16 57.6 +0.7**
comp=Z,39nm,0.8s
ACSO LR LR
comp=Z,1µm,20.0s
PVMO Portageville 33.22 325 eP **P 09 16 59.1 +1.3**
HKT Hockley 33.28 310 eP **P 09 16 59.7 +1.3**
HKT pmax pmax
comp=Z,41nm,1.1s
HKT Hockley 33.28 310 eP **P 09 16 59.7 +1.3**
comp=Z,41nm,1.1s
NATX Nacogdoches 33.39 314 eP **P 09 16 59.9 +0.5**
comp=Z,50nm,0.9s
NATX LR LR
comp=Z,2µm,20.0s
ALLY Alegheny Colle 33.40 342 eP **P 09 16 59.9 +0.5**
comp=Z,25nm,0.6s
PARMO Parma 33.43 326 eP **P 09 17 00.9 +1.3**
ACCN Adirondack Com 33.58 351 eP **P 09 17 02.3 +1.4**
comp=Z,21nm,1.0s
BLO Bloomington 33.71 332 eP **P**
BLO pmax pmax **09 17 03.2 +1.1**
comp=Z,32nm,0.6s
BLO Bloomington 33.71 332 eP **P 09 17 03.2 +1.1**
comp=Z,32nm,0.6s
ERPA Erie 33.78 343 PFAKE
ERPA LR LR 09 17 20.0 +17
comp=Z,2µm,19.0s
SIUC Southern Illin 33.91 328 eP **P 09 17 04.5 +0.6**
comp=Z,73nm,0.8s
LBNH Lisbon 34.20 354 PFAKE
LBNH LR LR 09 17 20.0 +14
comp=Z,1µm,19.0s
NCB Newcomb 34.24 351 eP **P 09 17 08.2 +1.6**
comp=Z,30nm,0.8s
NCB LR LR
comp=Z,1µm,20.0s
MIAR Mount Ida 34.30 319 eP **P 09 17 07.1 -0.2**
MIAR pmax pmax
comp=Z,36nm,0.9s
MIAR MLR MLR
comp=Z,1µm,19.0s
MIAR Mount Ida 34.30 319 eP **P 09 17 07.0 -0.2**
comp=Z,36nm,0.9s
MIAR LR LR
comp=Z,1µm,19.0s
RCBR Riachuelo 34.85 116 eP **P 09 17 13.7 +1.4**
comp=Z,128nm,1.1s
RCBR LR LR
comp=Z,5µm,19.0s
RCBR Riachuelo 34.85 116 P **P 09 17 14.0 +1.6**
comp=Z,70nm,0.8s,baz=287,slow=8.5,SNR=31
LONY Lake Ozonia 34.93 351 eP **P 09 17 14.2 +1.6**
comp=Z,19nm,1.1s
LONY LR LR
comp=Z,1µm,19.0s
SFIN Scholer Farm 34.94 333 ⇑P **P 09 17 14.0 +1.2**
baz=35
FRNY Flat Rock 34.99 352 eP **P 09 17 14.9 +1.8**
comp=Z,16nm,1.0s
WHTX Lake Whitney 35.52 312 ⇑P **P 09 17 18.7 +0.8**
baz=36
732A Laxson Ranch, 35.94 306 ⇑P **P 09 17 22.0 +0.4**
baz=36,SNR=36
HDIL Hopedale 36.11 331 eP **P 09 17 21.6 -1.2**
comp=Z,31nm,0.7s
HDIL LR LR
comp=Z,2µm,22.0s
632A Uvalde 36.12 307 ⇑P **P 09 17 23.9 +0.8**
baz=36,SNR=46
PQI Presque Isle 36.37 359 eP **P 09 17 25.2 +0.2**
comp=Z,18nm,0.7s
532A Rocksprings 36.48 308 ⇓P **P 09 17 26.8 +0.6**
baz=36,SNR=65
JCT Junction City 36.56 308 eP **P 09 17 29.0 +2.1**
JCT pmax pmax
comp=Z,48nm,1.0s
JCT Junction City 36.56 308 eP **P 09 17 29.0 +2.1**
comp=Z,48nm,1.0s
JCT Junction City 36.56 308 ⇑P **P 09 17 27.1 +0.2**
baz=37,SNR=18
TUL1 Tulsa 36.57 319 ⇓P **P 09 17 27.2 +0.4**
baz=37,SNR=22
631A Perdido Creek 36.70 306 ⇑P **P 09 17 28.6 +0.5**
baz=37,SNR=13
432A Menard 36.73 309 ⇑P **P 09 17 29.0 +0.7**
baz=37,SNR=34
332A Millersview 36.92 310 ⇑P **P 09 17 30.1 +0.1**
baz=37,SNR=78
531A Rocksprings 37.00 307 ⇑P **P 09 17 30.7 +0.1**
baz=37,SNR=22
232A Coleman 37.09 311 ⇑P **P 09 17 31.8 +0.5**
baz=37,SNR=91
431A Sonora 37.27 308 ⇑P **P 09 17 33.5 +0.6**
baz=37,SNR=71
331A San Angelo 37.41 309 ⇑P **P 09 17 34.4 +0.3**
baz=37,SNR=156
ABTX Abilene, Hawle 37.44 312 ⇓P **P 09 17 34.4 +0.1**
baz=38,SNR=102
CPUP Villa Florida 37.50 166 P **P 09 17 33.5 -1.2**
CPUP Villa Florida 37.50 166 P **P 09 17 33.5 -1.2**
comp=Z,46nm,1.0s,baz=327,slow=8.2,SNR=21
CPUP LR LR 09 32 08.3
comp=Z,2µm,21.0s,baz=330,slow=35
231A Bronte 37.61 310 ⇑P **P 09 17 36.0 +0.2**
baz=38,SNR=47
530A J-C Ranch, Com 37.61 307 ⇓P **P 09 17 36.5 +0.7**
baz=38,SNR=36
Z32A Haskell 37.65 313 ⇓P **P 09 17 36.9 +0.8**
baz=38,SNR=116
GLMI Grayling 37.70 339 eP **P 09 17 37.7 +1.3**
comp=Z,89nm,0.8s
GLMI LR LR
comp=Z,2µm,20.0s
430A Baggett Ranch, 37.80 308 ⇑P **P 09 17 38.4 +0.9**
baz=38,SNR=30
WMOK Wichita Mounta 37.90 315 eP **P 09 17 37.2 -1.0**
WMOK pmax pmax
comp=Z,22nm,0.6s
WMOK MLR MLR
comp=Z,1µm,20.0s
WMOK Wichita Mounta 37.90 315 eP **P 09 17 37.2 -1.0**
comp=Z,22nm,0.6s
WMOK LR LR
comp=Z,1µm,20.0s
Y32A R-V Farms, Ver 37.98 314 ⇓P **P 09 17 39.3 +0.4**
baz=38,SNR=34
131A Roby 38.01 311 ⇑P **P 09 17 39.8 +0.6**
baz=38,SNR=40
330A Merzon 38.02 309 ⇓P **P 09 17 39.4 +0.1**
baz=38,SNR=54
Z31A Sharp Cattle R 38.14 312 ⇓P **P 09 17 40.9 +0.6**
baz=38,SNR=75
230A Sterling City 38.19 310 ⇑P **P 09 17 41.0 +0.3**
baz=38,SNR=33
429A Davenport Ranc 38.25 307 ⇓P **P 09 17 42.0 +0.8**
baz=38,SNR=33
529A Stev Forest Ra 38.30 306 ⇑P **P 09 17 42.3 +0.6**
baz=38,SNR=33
130A Snyder 38.40 311 ⇑P **P 09 17 43.3 +0.8**
baz=38,SNR=38
Y31A Rekieta Farm, 38.55 313 ⇓P **P 09 17 44.0 +0.4**
baz=39,SNR=32
628A Black Gap, Mar 38.58 305 ⇓P **P 09 17 44.7 +0.6**
baz=39,SNR=35
329A Wagon Wheel Ra 38.68 308 ⇑P **P 09 17 45.1 +0.3**
baz=39,SNR=135
X31A McDonald Ranch 38.68 314 ⇑P **P 09 17 44.8 0.0**
baz=39,SNR=39
229A Bryant Ranch, 38.76 309 ⇓P **P 09 17 45.9 +0.4**
baz=39,SNR=20
528A Cox Ranch, San 38.76 306 ⇓P **P 09 17 46.3 +0.7**
baz=39,SNR=122
Z30A Sanderson Ranc 38.85 312 ⇑P **P 09 17 46.7 +0.4**
baz=39,SNR=100
428A Kincaid Ranch, 38.91 307 ⇑P **P 09 17 47.8 +1.0**
baz=39,SNR=108
W31A Holland Ranch, 38.95 315 ⇓P **P 09 17 46.9 -0.1**
baz=39,SNR=16
Y30A Stafford Cattl 38.96 313 ⇓P **P 09 17 47.3 +0.1**
baz=39,SNR=57
627A Terlingua Ranc 38.98 305 ⇑P **P 09 17 47.6 +0.2**
baz=39,SNR=86
KSU1 Kansas State U 39.06 322 eP **P 09 17 47.2 -0.6**
comp=Z,126nm,0.8s
KSU1 LR LR
comp=Z,1µm,21.0s
SCIA State Center 39.07 329 eP **P 09 17 48.8 +0.9**
comp=Z,70nm,1.0s
SCIA LR LR
comp=Z,2µm,22.0s
129A Stewart Farms, 39.09 310 ⇓P **P 09 17 48.5 +0.2**
baz=39,SNR=37
LCO Las Campanas 39.12 185 eP **P 09 17 47.5 -1.2**
comp=Z,105nm,0.7s
LCO LR LR
comp=Z,4µm,21.0s
TXAR Lajitas Array 39.16 304 P **P 09 17 49.2 +0.3**
TXAR PcP **PcP 09 19 59.5 +1.1**
TXAR Lajitas Array 39.16 304 P **P 09 17 49.2 +0.3**
comp=Z,8.1nm,0.7s,baz=119,slow=9.1,SNR=39
TXAR PcP **PcP 09 19 59.5 +1.1**
comp=Z,6.3nm,0.6s,baz=120,slow=5.1,SNR=6.1
V31A Spring Creek L 39.19 316 ⇓P **P 09 17 49.2 +0.1**
baz=39,SNR=22
X30A Coker Ranch, T 39.23 313 ⇑P **P 09 17 49.7 +0.3**
baz=39,SNR=58
Z29A Hungry Hill Ra 39.26 311 ⇑P **P 09 17 49.9 +0.1**
baz=39,SNR=105
328A Wristen Ranch, 39.27 308 ⇓P **P 09 17 50.4 +0.5**
baz=39,SNR=119
W30A Crocket Farms 39.39 314 ⇑P **P 09 17 51.4 +0.7**
baz=39
527A Woodward Ranch 39.42 306 ⇑P **P 09 17 51.7 +0.5**
baz=40,SNR=36
228A UT Block 9, Go 39.42 309 ⇑P **P 09 17 51.9 +0.9**
baz=40,SNR=9.1
Y29A Porterfield Fa 39.52 312 ⇑P **P 09 17 52.7 +0.8**
baz=40,SNR=66
427A Hayter Ranch, 39.52 307 ⇓P **P 09 17 52.4 +0.5**
baz=40,SNR=91
128A Castleberry Fa 39.56 310 ⇓P **P 09 17 53.0 +0.7**
baz=40,SNR=24
626A Big Bend Ranch 39.62 304 ⇑P **P 09 17 53.4 +0.7**
baz=40,SNR=89
526A Mary Lane Ranc 39.77 305 ⇓P **P 09 17 54.8 +0.8**
baz=40,SNR=54
V30A Spur Ranch, Mi 39.77 315 ⇑P **P 09 17 54.5 +0.6**
baz=40
Z28A Tucker Farm, M 39.78 311 ⇑P **P 09 17 55.1 +1.0**
baz=40,SNR=40
T31A Randall Ranch, 39.80 318 ⇓P **P 09 17 55.5 +1.4**
baz=40,SNR=7.9
327A Balmorhea Ranc 39.80 307 ⇓P **P 09 17 55.6 +1.4**
baz=40,SNR=12
X29A Tulia 39.82 313 ⇑P **P 09 17 55.5 +1.1**
baz=40,SNR=56
227A Bennet, Jal 39.91 308 ⇓P **P 09 17 56.4 +1.2**
baz=40,SNR=17
426A McDod Obser 39.95 306 ⇑P **P 09 17 56.3 +0.7**
baz=40,SNR=67
Y28A McKinney Farm, 39.97 312 ⇑P **P 09 17 56.5 +0.9**
baz=40,SNR=24
S31A Mullinville 39.97 318 ⇓P **P 09 17 56.2 +0.7**
baz=40
AMTX Amarillo 40.02 313 eP **P 09 17 55.8 -0.3**
comp=Z,89nm,1.1s
AMTX LR LR
comp=Z,1µm,20.0s
AMTX Amarillo 40.02 313 ⇓P **P 09 17 56.8 +0.8**
baz=40,SNR=36
W29A Amraillo 40.11 314 ⇓P **P 09 17 56.7 -0.1**
baz=40,SNR=10
U30A WK&E Inc. Balk 40.15 316 ⇓P **P 09 17 57.2 +0.2**
baz=40
326A Caldwell Ranch 40.16 307 ⇑P **P 09 17 58.2 +1.0**
baz=40,SNR=17
X28A Dimmitt 40.22 313 ⇓P **P 09 17 58.2 +0.5**
baz=40,SNR=34
T30A Plains 40.34 317 ⇓P **P 09 17 59.1 +0.5**
baz=40
MSTX Muleshoe 40.38 311 ⇑P **P 09 18 00.0 +1.0**
baz=40,SNR=30
V29A Stinnett 40.40 315 ⇑P **P 09 18 00.8 +1.7**
baz=40,SNR=7.2
Z27A Tatum 40.41 310 ⇑P **P 09 17 59.7 +0.3**
baz=40,SNR=108
CLNB Carlsbad 40.47 308 eP **P 09 18 02.0 +2.2**
comp=Z,1.8nm,0.5s
U29A Oasis Ranch, S 40.53 316 ⇑P **P 09 18 00.6 +0.4**
baz=41
W28A Vega 40.58 314 ⇓P **P 09 18 01.3 +0.6**
baz=41
226B Tecolote Peak, 40.61 308 ⇑P **P 09 18 03.2 +2.2**
baz=41,SNR=58
S30A Montezuma 40.62 318 ⇓P **P 09 18 01.4 +0.5**
baz=41,SNR=20
Y27A Causey 40.63 311 ⇑P **P 09 18 02.0 +0.8**
baz=41,SNR=30
126A Clayton Basin, 40.74 309 ⇑P **P 09 18 02.7 +0.7**
baz=41,SNR=18
425A Indio Mountain 40.76 306 ⇓P **P 09 18 02.9 +0.6**
baz=41,SNR=80
CPRX Cap Rock 40.78 310 eP **P 09 18 02.7 +0.3**
comp=Z,58nm,1.0s
CBKS Cedar Bluff 40.82 320 eP **P 09 18 04.0 +1.5**
CBKS pmax pmax
comp=Z,91nm,1.3s
CBKS Cedar Bluff 40.82 320 eP **P 09 18 04.0 +1.5**
comp=Z,91nm,1.3s
GDL2 Guadalupe Moun 40.82 308 eP **P 09 18 04.6 +1.9**
V28A Channing 40.84 314 ⇓P **P 09 18 02.9 +0.1**
baz=41,SNR=7.1
R30A Dighton 40.86 319 ⇓P **P 09 18 03.1 +0.2**
baz=41,SNR=22
T29A Hugoton 40.91 317 ⇑P **P 09 18 03.8 +0.4**
baz=41,SNR=7.2
X27A F and S Farms, 40.93 312 ⇓P **P 09 18 04.3 +0.7**
baz=41,SNR=19
325A Bean Ranch, Si 40.97 307 ⇑P **P 09 18 04.7 +0.7**
baz=41,SNR=98
Z26A Caprock 40.97 310 ⇓P **P 09 18 04.2 +0.2**
baz=41,SNR=27
S29A Ulysses 41.05 317 ⇓P **P 09 18 04.4 -0.1**
baz=41,SNR=21
W27A Bowe Ranch, En 41.10 313 ⇓P **P 09 18 05.5 +0.5**
baz=41,SNR=47
225A Deer Hill, Car 41.14 308 ⇑P **P 09 18 06.3 +0.8**
baz=41,SNR=131
Y26A Elida 41.14 311 ⇑P **P 09 18 06.2 +0.8**
baz=41,SNR=6.4
125A Gardner Draw, 41.23 309 ⇑P **P 09 18 06.5 +0.4**
baz=41,SNR=63
V27A Dan Oppiter Fa 41.27 314 ⇑P **P 09 18 06.9 +0.5**
baz=41,SNR=26
SPMN St. Paul 41.34 332 ⇓P **P 09 18 07.3 +0.6**
baz=41
324A Moseley Ranch, 41.40 307 ⇓P **P 09 18 08.1 +0.6**
baz=41,SNR=158
X26A CR and CF Fran 41.41 312 ⇑P **P 09 18 08.0 +0.4**
baz=42,SNR=24
BGNE Belgrade 41.44 324 ⇑P **P 09 18 07.6 0.0**
baz=42,SNR=20
T28A Walsh 41.45 316 ⇑P **P 09 18 08.0 +0.1**
baz=42
R29A Marienthal 41.50 318 ⇑P **P 09 18 08.5 +0.3**
baz=42,SNR=6.4
Z25A Roswell 41.53 309 ⇑P **P 09 18 09.3 +0.7**
baz=42,SNR=79
S28A Manter 41.55 317 ⇑P **P 09 18 09.2 +0.5**
baz=42,SNR=9.3
CFAA Coronel Fontan 41.56 182 P **P 09 18 07.2 -1.5**
CFAA Coronel Fontan 41.56 182 P **P 09 18 07.2 -1.5**
comp=Z,3.7nm,0.7s,baz=348,slow=7.9,SNR=28
U27A Thompson Grove 41.59 315 ⇑P **P 09 18 08.7 -0.3**
baz=42,SNR=36
W26A Owens Ranch, T 41.62 312 ⇓P **P 09 18 10.2 +0.9**
baz=42,SNR=17
224A Cornudas Mount 41.67 307 ⇓P **P 09 18 10.5 +0.7**
baz=42,SNR=116
Y25A Mesa, Roswell 41.79 310 ⇓P **P 09 18 12.3 +1.6**
baz=42,SNR=88
T27A Campo 41.84 316 ⇑P **P 09 18 11.6 +0.6**
baz=42,SNR=7.6

comp=Z,26nm,0.8s
SCHQ Schefferville 44.54 0 P P 09 18 32.5 0.0
comp=Z,13nm,0.4s,baz=183,slow=6.1,SNR=42
SCHQ LR LR 09 35 21.5
comp=Z,955nm,21.2s,baz=18,slow=34
R23A Moffat 44.54 315 ⇑P P 09 18 33.9 +0.8
baz=45,SNR=48
P24A Kohler Place, 44.57 317 ⇓P P 09 18 34.5 +1.3
baz=45,SNR=11
Y20A Horse Springs, 44.59 309 ⇓P P 09 18 34.4 +0.9
baz=45,SNR=65
K27A Flueckinger Fa 44.63 323 ⇓P P 09 18 33.0 -0.5
baz=45,SNR=26
N25A Grover 44.71 319 ⇑P P 09 18 35.4 +1.2
baz=45
L26A Underwood Farm 44.75 321 ⇓P P 09 18 35.1 +0.6
baz=45
T22A Edith 44.76 313 ⇑P P 09 18 36.2 +1.4
baz=45,SNR=52
V21A Milan 44.78 311 ⇑P P 09 18 36.9 +2.0
baz=45,SNR=21
Q23A Hartsel 44.89 316 ⇓P P 09 18 36.8 +0.9
baz=45,SNR=13
X20A Quemado 44.92 309 ⇓P P 09 18 37.3 +1.2
baz=45,SNR=49
O24A Longmont 44.99 318 ⇑P P 09 18 37.4 +0.9
baz=45,SNR=23
M25A Palm-Egli Farm 45.02 320 ⇑P P 09 18 37.5 +0.8
baz=45,SNR=11
S22A 4UR Ranch, Cre 45.03 314 ⇓P P 09 18 38.6 +1.6
baz=45,SNR=54
AGMN Agassiz Nation 45.04 333 eP P 09 18 35.1 -1.4
comp=Z,16nm,0.6s
AGMN LR LR
comp=Z,1µm,21.0s
U21A Nageezi 45.05 312 ⇓P P 09 18 38.9 +1.7
baz=45,SNR=90
P23A Jefferson 45.12 317 ⇑P P 09 18 38.9 +1.1
baz=45,SNR=17
W20A Ramah 45.15 310 ⇓P P 09 18 39.4 +1.5
baz=45,SNR=36
ISCO Idaho Springs 45.18 317 eP P 09 18 39.0 +0.8
ISCO pmax pmax
ISCO comp=Z,22nm,0.8s MLR MLR
comp=Z,1µm,19.0s
ISCO Idaho Springs 45.18 317 eP P 09 18 39.0 +0.8
comp=Z,22nm,0.8s
ISCO LR LR
comp=Z,1µm,19.0s
ISCO Idaho Springs 45.18 317 ⇓P P 09 18 39.1 +0.9
baz=45,SNR=44
K26A Motz Farm, Whi 45.19 322 ⇓P P 09 18 38.7 +0.8
baz=45
R22A Saguache, Gunn 45.20 315 ⇑P P 09 18 39.6 +1.2
baz=45,SNR=19
N24A Carr 45.23 319 ⇓P P 09 18 39.1 +0.8
baz=45,SNR=10
L25A Engebretsen Ra 45.37 321 ⇓P P 09 18 40.5 +1.1
baz=45
V20A Brimhall 45.39 311 ⇑P P 09 18 41.2 +1.4
baz=45,SNR=23
M24A Cheyenne 45.53 320 ⇓P P 09 18 41.8 +1.0
baz=45,SNR=21
K25A Mack Ranch, Ha 45.56 322 ⇑P P 09 18 41.9 +0.9
baz=46,SNR=20
O23A Lake Granby, G 45.59 318 ⇑P P 09 18 43.0 +1.6
baz=46,SNR=49
Q22A Crested Butte, 45.61 316 ⇓P P 09 18 42.5 +0.9
baz=46,SNR=20
U20A Newcomb 45.66 312 ⇓P P 09 18 43.2 +1.3
baz=46,SNR=6.3
S21A Coal Bank Pass 45.68 314 ⇑P P 09 18 43.2 +1.0
baz=46,SNR=47
SMCO Snowmass 45.80 316 eP P 09 18 43.9 +0.6
comp=Z,43nm,0.8s
R21A Cimarron 45.82 315 ⇓P P 09 18 44.3 +1.1
baz=46,SNR=35
PHWY Pilot Hill 45.85 319 eP P 09 18 44.4 +1.0
comp=Z,20nm,0.8s
P22A Eagle 45.85 317 ⇑P P 09 18 44.6 +1.1
baz=46,SNR=43
L24A Wheatland 45.91 320 ⇓P P 09 18 44.6 +0.9
baz=46,SNR=18
N23A Red Feather La 45.95 319 ⇑P P 09 18 44.9 +0.6
baz=46,SNR=29
O22A Kremmling 45.98 317 ⇓P P 09 18 45.6 +1.1
baz=46,SNR=62
MVCO Mesa Verde 45.99 313 eP P 09 18 46.2 +1.6
comp=Z,154nm,1.6s
MVCO LR LR
comp=Z,2µm,20.0s
MVCO Mesa Verde 45.99 313 ⇓P P 09 18 45.9 +1.3
baz=46,SNR=38
X18A Snowflake 46.02 309 ⇑P P 09 18 46.2 +1.4
baz=46,SNR=81
Q21A Lamborn Mesa, 46.05 315 ⇑P P 09 18 47.0 +2.0
baz=46,SNR=19
W18A Petrified Fore 46.08 309 ⇑P P 09 18 46.5 +1.2
baz=46,SNR=17
M23A Laramie 46.10 319 ⇓P P 09 18 46.4 +1.0
baz=46,SNR=32
S20A Disappointment 46.16 314 ⇓P P 09 18 47.0 +1.1
baz=46,SNR=129
K24A Anderson Ranch 46.20 321 ⇓P P 09 18 46.8 +0.8
baz=46
N22A Wattenberg Ran 46.24 318 ⇑P P 09 18 47.9 +1.4
baz=46,SNR=32
CMLA Cha da Macela 46.26 47 PFAKE 09 19 00.0 +14
CMLA LR LR
comp=Z,1µm,21.0s
P21A Newcastle 46.29 316 ⇑P P 09 18 48.2 +1.4
baz=46,SNR=40
R20A Redvale 46.33 314 ⇑P P 09 18 49.1 +1.9
baz=46,SNR=105
L23A Garrett 46.43 320 ⇑P P 09 18 48.5 +0.6
baz=46,SNR=26
PV01 Paradox Valley 46.44 314 eP P 09 18 50.3 +2.2
comp=Z,16µm,1.2s
J24A Dixon Ranch, L 46.45 322 ⇓P P 09 18 48.7 +0.8
baz=46,SNR=12
MDND Maddock 46.48 330 ⇑P P 09 18 48.3 +0.4
baz=46
ULM Lac du Bonnet 46.51 335 P P 09 18 46.5 -1.6
comp=Z,20nm,0.8s
ULM Lac du Bonnet 46.51 335 P P 09 18 46.5 -1.6
comp=Z,24nm,0.8s,baz=137,slow=7.4,SNR=11
RSSD Black Hills 46.52 323 eP P 09 18 48.9 +0.3
RSSD Black Hills 46.52 323 eP P 09 18 48.9 +0.3
Q20A Ridgley Place, 46.61 315 ⇓P P 09 18 50.6 +1.3
baz=47,SNR=102
O21A Pagoda 46.63 317 ⇑P P 09 18 50.7 +1.1
baz=47
M22A Cedar Creek Ra 46.63 319 ⇑P P 09 18 50.8 +1.2
baz=47,SNR=22
K23A Bowen Ranch, D 46.72 321 ⇓P P 09 18 51.4 +1.3
baz=47,SNR=14
I24A Kummerle Ranc 46.72 323 ⇓P P 09 18 50.6 +0.6
baz=47
PV04 Paradox Valley 46.79 314 eP P 09 18 53.1 +2.3
L22A Ellis Ranch, M 46.85 320 ⇓P P 09 18 52.3 +1.1
baz=47
P20A De Beque 46.92 316 ⇑P P 09 18 53.2 +1.4
baz=47,SNR=47
N21A Black Mountain 46.92 318 ⇑P P 09 18 53.1 +1.2
baz=47,SNR=22
J23A Dilts Ranch, B 47.03 322 ⇑P P 09 18 53.3 +0.8
baz=47
O20A White River Ci 47.11 316 ⇓P P 09 18 54.7 +1.4
baz=47,SNR=35
X16A Lo Mia Camp, P 47.14 308 ⇓P P 09 18 55.1 +1.6
baz=47,SNR=43
H24A Dirks Ranch, A 47.19 324 ⇑P P 09 18 53.0 -0.6
baz=47,SNR=19
K22A Casper 47.23 320 ⇑P P 09 18 54.8 +0.7
baz=47,SNR=26
M21A Separation Pea 47.23 319 ⇓P P 09 18 55.0 +0.8
baz=47
S18A Hurst Farm, Bl 47.28 313 ⇑P P 09 18 56.0 +1.3
baz=47,SNR=23
P19A Cripple Cowboy 47.39 315 ⇓P P 09 18 56.5 +1.0
baz=47,SNR=22
L21A Rawlins 47.42 319 ⇓P P 09 18 56.4 +0.8
baz=48,SNR=20
G24A Alzada 47.44 324 ⇓P P 09 18 56.1 +0.5
baz=48,SNR=14
N20A Spence Gulch, 47.45 317 ⇑P P 09 18 57.2 +1.2
baz=48,SNR=23
214A Organ Pipe Nat 47.46 304 ⇑P P 09 18 56.7 +0.9
baz=48,SNR=31
WUAZ Wupatki 47.47 309 eP P 09 18 57.8 +1.7
comp=Z,50nm,0.8s
WUAZ LR LR
comp=Z,702nm,19.0s
WUAZ Wupatki 47.47 309 ⇑P P 09 18 57.3 +1.2
baz=48,SNR=35
J22A Midwest 47.60 321 ⇓P P 09 18 57.2 +0.3
baz=48,SNR=31
K21A Alcova 47.68 320 ⇑P P 09 18 58.6 +0.9
baz=48,SNR=31
M20A Sweetwater, Wa 47.72 318 ⇑P P 09 18 59.0 +1.0
baz=48,SNR=20
F24A Ekalaka 47.76 325 ⇑P P 09 18 58.6 +0.5
baz=48,SNR=29
O19A Miners Draw (B 47.79 316 ⇑P P 09 18 59.2 +0.7
baz=48,SNR=44
I22A 9 Mile Ranch, 47.86 322 ⇑P P 09 18 58.9 -0.1
baz=48,SNR=21
G23A Biddle 47.93 324 ⇑P P 09 18 59.7 +0.2
baz=48,SNR=20
Z14A Wintersburg 47.98 306 ⇑P P 09 19 01.6 +1.6
baz=48,SNR=35
L20A Wamsutter 48.07 319 ⇓P P 09 19 01.6 +0.9
baz=48,SNR=22
E24A Baker 48.11 326 ⇑P P 09 19 01.1 +0.3
baz=48
H22A Clearmont 48.16 323 ⇑P P 09 19 01.8 +0.6
baz=48,SNR=5.0
J21A Lysite 48.17 321 ⇑P P 09 19 02.0 +0.6
baz=48,SNR=18
Y14A Wickenburg 48.21 307 ⇑P P 09 19 02.4 +0.7
baz=48,SNR=47
TRQA Tornquist 48.22 175 PFAKE 09 19 10.0 +8.4
TRQA LR LR
comp=Z,2µm,22.0s
F23A Volborg 48.24 324 ⇑P P 09 19 02.0 +0.3
baz=48,SNR=59
SRU San Rafael 48.24 314 eP P 09 19 03.6 +1.6
SRU pmax pmax
comp=Z,61nm,0.8s
SRU San Rafael 48.24 314 eP P 09 19 03.6 +1.6
comp=Z,61nm,0.8s
SRU San Rafael 48.24 314 ⇑P P 09 19 03.0 +1.0
baz=48,SNR=81
P18A Preston Nutter 48.26 315 ⇓P P 09 19 03.1 +0.7
baz=48
I21A Big Trails, Te 48.31 321 ⇓P P 09 19 02.7 +0.2
baz=48,SNR=48
M19A Rock Springs 48.36 318 ⇑P P 09 19 03.6 +0.6
baz=48
K20A Yellowstone Ra 48.39 319 ⇑P P 09 19 03.4 +0.3
baz=48,SNR=28
D24A Glendive 48.46 326 ⇑P P 09 19 03.8 +0.4
baz=48,SNR=41
113A Mohawk Valley, 48.46 305 ⇑P P 09 19 04.2 +0.5
baz=48,SNR=31
G22A Birney 48.47 323 ⇓P P 09 19 03.2 -0.4
baz=48,SNR=36
U15A North Rim 48.49 310 ⇑P P 09 19 05.1 +1.0
baz=48,SNR=52
P17A Butcher Ranch, 48.54 314 ⇑P P 09 19 05.3 +0.9
baz=48,SNR=98
J20A Shoshoni 48.57 320 ⇑P P 09 19 05.3 +0.9
baz=49,SNR=29
H21A Big Horn, Sher 48.59 322 ⇓P P 09 19 04.6 0.0
baz=49,SNR=22
Q16A Castle Valley 48.62 314 ⇑P P 09 19 06.1 +1.1
baz=49,SNR=35
E23A Ismay 48.63 325 ⇑P P 09 19 04.6 -0.2
baz=49,SNR=21
C24A Savage 48.76 327 ⇓P P 09 19 05.7 -0.1
baz=49,SNR=23
F22A Rosebud 48.76 324 ⇑P P 09 19 05.4 -0.4
baz=49,SNR=77
L19A Farson 48.78 318 ⇓P P 09 19 06.4 +0.3
baz=49,SNR=53
K19A Absolon Red Bu 48.79 319 ⇑P P 09 19 06.7 +0.4
baz=49
TMUT Trail Mountain 48.80 314 eP P 09 19 08.7 +2.2
comp=Z,60nm,0.8s
I20A Worland 48.90 321 ⇑P P 09 19 07.1 +0.2
baz=49,SNR=22
M18A Lyman 48.94 317 ⇑P P 09 19 07.9 +0.5
baz=49,SNR=20
E22A Miles City 48.96 325 ⇓P P 09 19 07.4 +0.2
baz=49,SNR=49
D23A Lindsay 48.97 326 ⇑P P 09 19 07.9 +0.5
baz=49,SNR=30
G21A Lodge Grass 49.02 323 ⇓P P 09 19 07.9 +0.1
baz=49,SNR=21
H20A Greybull 49.10 322 ⇑P P 09 19 08.5 0.0
baz=49,SNR=102
J19A Crowheart 49.14 320 ⇓P P 09 19 09.3 +0.4
baz=49,SNR=35
L18A Fontenelle, Gr 49.14 318 ⇓P P 09 19 10.0 +1.0
baz=49,SNR=51
MSU Marysvale 49.18 313 eP P 09 19 11.2 +1.8
MSU Marysvale 49.18 313 eP P 09 19 11.2 +1.8
MVU Marysvale 49.20 313 eP P 09 19 11.2 +1.7
comp=Z,47nm,1.0s
MVU LR LR
comp=Z,1µm,19.0s
PDMCI Parker Dam,Lak 49.21 307 ⇓P P 09 19 10.2 +0.8
baz=49
DGMT Dagmar 49.22 328 eP P 09 19 10.0 +0.8
comp=Z,57nm,0.8s
DGMT LR LR
comp=Z,2µm,20.0s
DGMT Dagmar 49.22 328 ⇓P P 09 19 10.1 +0.9
baz=49,SNR=13
BW06 Boulder Array 49.22 319 eP P 09 19 08.8 -0.8
comp=Z,126nm,1.6s
BW06 LR LR
comp=Z,2µm,20.0s
BW06 Boulder Array 49.22 319 ⇓P P 09 19 10.1 +0.5
baz=49,SNR=70
PDAR Pinedale Array 49.22 319 P P 09 19 09.6 0.0
PDAR PcP PcP 09 20 34.4 +1.7
PDAR Pinedale Array 49.22 319 P P 09 19 09.6 0.0
comp=Z,16nm,0.6s,baz=118,slow=9.7,SNR=66
PDAR PcP PcP 09 20 34.4 +1.7
comp=Z,5.5nm,0.6s,baz=116,slow=6.1,SNR=2.9
PDAR LR LR 09 42 31.2
comp=Z,1µm,19.9s,baz=299,slow=39
W13A Hualapai Mount 49.26 308 ⇑P P 09 19 11.1 +1.1
baz=49,SNR=26
F21A Absaloka Mine, 49.29 324 ⇓P P 09 19 10.7 +0.8
baz=49
DAU Daniels Canyon 49.30 315 eP P 09 19 12.1 +1.8
DAU Daniels Canyon 49.30 315 eP P 09 19 12.1 +1.8
Y12C Blythe 49.35 306 ⇓P P 09 19 11.6 +1.1
baz=49,SNR=11
M17A Scullys Gap (B 49.36 317 ⇑P P 09 19 11.4 +0.7
baz=49,SNR=10
MPU Maple Canyon 49.40 315 eP P 09 19 12.7 +1.7
comp=Z,153nm,1.5s
A24A Westby 49.40 329 ⇑P P 09 19 11.5 +0.9
baz=50,SNR=18
GLA Glamis 49.40 305 eP P 09 19 11.9 +1.1
comp=Z,48nm,0.8s
GLA Glamis 49.40 305 ⇓P P 09 19 11.9 +1.1
baz=49,SNR=24
K18A Toltan Ranch, 49.48 319 ⇑P P 09 19 12.4 +0.9
baz=50,SNR=61
I19A Meeteetse 49.49 321 ⇑P P 09 19 11.8 +0.3
baz=50,SNR=29
D22A Cohagen 49.50 325 ⇓P P 09 19 12.2 +0.8
baz=50,SNR=57
JLU Jordanelle 49.51 316 eP P 09 19 13.8 +1.9
comp=Z,140nm,1.7s
G20A Bridger 49.62 322 ⇓P P 09 19 12.2 -0.2
baz=50,SNR=43
B23A Brockton 49.63 328 ⇑P P 09 19 13.4 +1.1
baz=50,SNR=90
E21A Keefer Ranch, 49.66 324 ⇑P P 09 19 13.4 +0.8
baz=50,SNR=11
C22A Vida 49.68 326 ⇓P P 09 19 13.4 +0.7
baz=50,SNR=55
CCUT Cedar City 49.69 311 eP P 09 19 16.3 +3.0
comp=Z,11nm,0.9s
J18A Kendall Valley 49.73 319 ⇓P P 09 19 14.1 +0.6
baz=50,SNR=54
CTU Camp Tracy 49.76 316 eP P 09 19 15.8 +2.1
comp=Z,74nm,1.1s
L17A Cokeville 49.78 318 ⇑P P 09 19 14.4 +0.6
baz=50,SNR=20

H19A **Powell** 49.80 321 ⇑P P 09 19 14.3 +0.5
baz=50,SNR=43
ARUT **Antelope Range** 49.84 311 eP P 09 19 15.9 +1.7
comp=Z,32nm,0.8s
I18A **Diamond G Ranc** 49.84 320 ⇓P P 09 19 15.1 +0.8
baz=50,SNR=22
A23A **Redstone** 49.87 328 ⇑P P 09 19 15.3 +1.1
baz=50
F20A **Billings** 49.88 323 ⇑P P 09 19 14.7 +0.3
baz=50,SNR=58
D21A **La Casta Ranch** 49.91 325 ⇑P P 09 19 14.8 +0.2
baz=50,SNR=111
IRM **Iron Mountain** 49.97 306 ⇑P P 09 19 16.4 +1.2
baz=50,SNR=12
HWUT **Hardware Ranch** 50.02 317 eP P 09 19 16.3 +0.6
comp=Z,71nm,0.8s
HWUT LR LR
comp=Z,1µm,20.0s
B22A **Reddig Ranch S** 50.07 327 ⇑P P 09 19 16.6 +0.9
baz=50,SNR=71
K17A **Gardner Place,** 50.10 318 ⇓P P 09 19 16.4 +0.1
baz=50,SNR=21
L16A **Fish Haven** 50.11 317 ⇓P P 09 19 17.1 +0.7
baz=50,SNR=28
RLMT **Red Lodge** 50.20 322 eP P 09 19 17.7 +0.7
comp=Z,32nm,0.6s
RLMT LR LR
comp=Z,1µm,19.0s
RLMT **Red Lodge** 50.20 322 ⇑P P 09 19 17.4 +0.4
baz=50,SNR=32
LDFC **Landfair** 50.21 307 eP P 09 19 19.7 +2.6
comp=Z,56nm,1.2s
H18A **Shoshone NF, C** 50.22 321 ⇓P P 09 19 17.3 +0.1
baz=50,SNR=24
AHID **Auburn Hatcher** 50.23 318 PFAKE 09 19 30.0 +13
AHID LR LR
comp=Z,1µm,20.0s
E20A **Meyer Farm, Mu** 50.25 324 ⇓P P 09 19 17.9 +0.7
baz=50,SNR=50
J17A **Brown Place, J** 50.25 319 ⇓P P 09 19 18.4 +1.0
baz=50,SNR=51
DUG **Dugway** 50.30 314 eP P 09 19 19.4 +1.7
comp=Z,63nm,0.9s
DUG LR LR
comp=Z,807nm,19.0s
DUG **Dugway** 50.30 314 ⇓P P 09 19 19.1 +1.4
baz=50,SNR=78
LOHW **Long Hollow** 50.30 319 eP P 09 19 17.9 +0.2
comp=Z,27nm,0.9s
SNOW **Snow King Moun** 50.33 319 eP P 09 19 18.6 +0.5
comp=Z,53nm,1.0s
REDW **Red Top Meadow** 50.34 319 eP P 09 19 19.4 +1.3
comp=Z,1.2nm,1.3s
F19A **Roth Farm, Mol** 50.38 323 ⇓P P 09 19 18.6 +0.4
baz=50,SNR=27
C21A **Desert Coulee** 50.40 326 ⇑P P 09 19 18.6 +0.4
baz=50,SNR=46
I17A **Pilgrim Ck.** 50.43 320 ⇑P P 09 19 19.6 +0.9
baz=50,SNR=6.8
A22A **Carney Farms,** 50.44 328 ⇓P P 09 19 19.3 +0.8
baz=50,SNR=43
MOOW **Moose Ponds** 50.45 320 eP P 09 19 19.4 +0.5
comp=Z,26nm,1.3s
TPAW **Teton Pass** 50.46 319 eP P 09 19 20.3 +1.2
comp=Z,24nm,0.8s
G18A **Lazy EL Ranch,** 50.48 322 ⇓P P 09 19 19.4 +0.3
baz=50,SNR=37
D20A **Manuel Ranch,** 50.57 324 ⇑P P 09 19 19.8 +0.2
baz=51,SNR=74
K16A **Soda Springs** 50.58 318 ⇑P P 09 19 20.5 +0.6
baz=51,SNR=6.6
E19A **Rath Farm, Rou** 50.61 323 ⇑P P 09 19 20.1 +0.2
baz=51,SNR=97
LKWY **Lake** 50.62 321 eP P 09 19 21.9 +1.7
LKWY pmax pmax
comp=Z,34nm,1.1s
LKWY MLR MLR
comp=Z,2µm,21.0s
LKWY **Lake** 50.62 321 eP P 09 19 21.9 +1.7
comp=Z,34nm,1.1s
LKWY LR LR
comp=Z,2µm,21.0s
RRI2 **Red Ridge** 50.64 319 eP P 09 19 22.2 +1.8
comp=Z,24nm,0.7s
IMW **Indian Meadow** 50.65 320 eP P 09 19 21.4 +0.9
comp=Z,15nm,0.8s
MONP **Monument Peak** 50.65 304 ⇑P P 09 19 21.2 +0.6
baz=51
H17A **Grant Village** 50.65 320 ⇑P P 09 19 21.3 +0.8
baz=51
DCID1 **Drake Creek** 50.66 319 eP P 09 19 21.9 +1.4
comp=Z,42nm,0.8s
B21A **Ellsworth Farm** 50.70 326 ⇑P P 09 19 21.5 +1.0
baz=51,SNR=34
L15A **Malad City** 50.75 317 ⇑P P 09 19 22.0 +0.9
baz=51,SNR=76
PLCA **Paso Flores** 50.76 183 eP P 09 19 20.2 -0.8
comp=Z,38nm,0.9s
PLCA **Paso Flores** 50.76 183 P P 09 19 20.2 -0.8
comp=Z,24nm,0.7s,baz=4.4,slow=9.4,SNR=19
PLCA LR LR 09 41 05.5
comp=Z,3µm,18.2s,baz=13,slow=36
BAR **Barrett** 50.80 304 eP P 09 19 23.8 +2.3
comp=Z,17nm,1.0s
C20A **Veseth Ranch,** 50.84 325 ⇑P P 09 19 22.1 +0.5
baz=51
PFO **Pinyon Flat Ob** 50.86 305 PFAKE 09 19 40.0 +18
PFO LR LR
comp=Z,902nm,19.0s
PFO **Pinyon Flat Ob** 50.86 305 ⇓P P 09 19 23.2 +1.1
baz=51
PUYE **Entre Lagos** 50.87 185 eP P 09 19 18.9 -2.8
PUYE **Entre Lagos** 50.87 185 eP P 09 19 18.9 -2.8
F18A **Big Timber** 50.87 322 ⇑P P 09 19 22.2 +0.3
baz=51,SNR=78
HVU **Hansel Valley** 50.92 316 eP P 09 19 23.0 +0.6
comp=Z,28nm,0.9s
I16A **Newdale** 50.99 319 ⇑P P 09 19 23.9 +1.0
baz=51,SNR=58
YMR **Madison River** 51.03 320 eP P 09 19 24.9 +1.6
comp=Z,27nm,0.8s
D19A **Cripps Ranch,** 51.04 324 ⇓P P 09 19 24.1 +0.9
baz=51,SNR=53
HEC **Hector,Ludlow** 51.10 307 ⇓P P 09 19 24.7 +0.9
baz=51
K15A **Arbon** 51.14 318 ⇑P P 09 19 25.2 +1.2
baz=51,SNR=39
109C **Camp Elliot, M** 51.20 304 ⇓P P 09 19 25.2 +0.7
baz=51
G17A **Pierce Place,** 51.20 321 ⇓P P 09 19 25.3 +0.8
baz=51,SNR=17
H16A **Russell Place,** 51.22 320 ⇓P P 09 19 25.3 +0.6
baz=51,SNR=21
B20A **Solberg Farm,** 51.25 326 ⇑P P 09 19 25.2 +0.5
baz=51,SNR=122
E18A **Harlowton** 51.33 323 ⇓P P 09 19 25.9 +0.5
baz=51,SNR=30
L14A **Malta** 51.34 316 ⇓P P 09 19 26.4 +0.9
baz=51,SNR=46
J15A **Blackfoot** 51.38 318 ⇓P P 09 19 26.7 +0.8
baz=51,SNR=39
QLMT **Earthquake Lak** 51.40 320 eP P 09 19 27.8 +1.8
C19A **Slack Wire Ran** 51.44 325 ⇓P P 09 19 26.6 +0.5
baz=52,SNR=32
F17A **Fitzpatrick Pl** 51.44 322 ⇓P P 09 19 26.5 +0.2
baz=52,SNR=64
A20A **Cobblestone Ra** 51.45 326 ⇓P P 09 19 26.3 +0.1
baz=52,SNR=48
MURC **Murrieta** 51.46 305 ⇑P P 09 19 26.8 +0.4
baz=52
K14A **Jones Ranch, D** 51.51 317 ⇓P P 09 19 27.3 +0.6
baz=52,SNR=40
D18A **Linhart Farms,** 51.59 324 ⇑P P 09 19 28.2 +0.9
baz=52
GSC **Goldstone** 51.60 307 ⇑P P 09 19 28.6 +1.0
baz=52
R11A **Troy Canyon, C** 51.62 311 ⇓P P 09 19 28.0 +0.3
baz=52
RRX **Edison Barstow** 51.64 307 ⇑P P 09 19 28.8 +1.1
baz=52
I15A **Monteview** 51.69 319 ⇓P P 09 19 29.5 +1.4
baz=52,SNR=26
B19A **Brinkman Farms** 51.77 326 ⇑P P 09 19 29.2 +0.6
baz=52,SNR=45
G16A **Moss Hill, Enn** 51.82 321 ⇑P P 09 19 30.1 +1.0
baz=52,SNR=21
E17A **Martinsdale** 51.84 322 ⇓P P 09 19 29.9 +0.7
baz=52,SNR=35

BOZ **Bozeman (W)** 51.91 321 eP P 09 19 30.0 +0.2
BOZ LR LR
comp=Z,1µm,19.0s
BOZ **Bozeman (W)** 51.91 321 ⇓P P 09 19 29.9 +0.2
baz=52,SNR=21
A19A **Klindworth Far** 51.92 326 ⇓P P 09 19 30.2 +0.5
baz=52,SNR=76
F16A **Kennard Place,** 51.97 321 ⇓P P 09 19 31.4 +1.2
baz=52,SNR=31
FURC **Furnace Creek,** 51.98 309 ⇓P P 09 19 30.8 +0.6
baz=52
BFSC **Mount Baldy Ra** 51.99 306 ⇑P P 09 19 30.7 +0.2
baz=52
EGMT **Eagleton** 52.00 325 eP P 09 19 30.2 -0.1
comp=Z,53nm,0.8s
EGMT LR LR
comp=Z,2µm,19.0s
EGMT **Eagleton** 52.00 325 ⇑P P 09 19 30.8 +0.6
baz=52,SNR=48
H15A **Lima** 52.06 320 ⇑P P 09 19 32.0 +1.0
baz=52,SNR=63
J14A **Carey** 52.06 318 ⇑P P 09 19 32.0 +1.1
baz=52
D17A **Six Diamond Ra** 52.08 323 ⇓P P 09 19 31.7 +0.7
baz=52,SNR=42
B18A **Beardsley Farm** 52.21 325 ⇓P P 09 19 32.8 +1.0
baz=52,SNR=45
G15A **Dillon** 52.22 320 ⇑P P 09 19 32.7 +0.6
baz=52,SNR=34
I14A **Mackay** 52.28 319 ⇑P P 09 19 32.5 -0.1
baz=52,SNR=44
FFC **Flin Flon** 52.33 335 *i* P P 09 19 31.8 -0.7
FFC **Flin Flon** 52.33 335 PFAKE 09 19 50.0 +18
FFC LR LR
comp=Z,1µm,22.0s
FFC **Flin Flon** 52.33 335 P P 09 19 30.5 -2.0
comp=Z,128nm,0.6s,SNR=8.2
LRMC **Laurel Mountai** 52.35 307 ⇑P P 09 19 33.4 +0.3
baz=52
MPMC **Manual Prospec** 52.35 308 ⇓P P 09 19 34.0 +0.7
baz=52
E16A **East Helena** 52.37 322 ⇓P P 09 19 33.6 +0.5
baz=52,SNR=20
C17A **Wharram Farm,** 52.37 324 ⇑P P 09 19 33.5 +0.4
baz=52,SNR=62
DLMT **Dillon** 52.38 321 eP P 09 19 34.1 +0.9
EDW2 **Edwards Air Fo** 52.42 306 ⇓P P 09 19 34.3 +0.7
baz=52
DAC **Darwin (Calif)** 52.49 308 PFAKE 09 19 50.0 +16
DAC LR LR
comp=Z,1µm,20.0s
LRM **Limekiln Ridge** 52.50 321 eP P 09 19 35.4 +1.1
H14A **Leadore** 52.53 319 ⇓P P 09 19 34.5 +0.1
baz=53,SNR=30
A18A **Metzger Ranch,** 52.53 326 ⇑P P 09 19 34.8 +0.6
baz=53
D16A **Dana Ranch, Ca** 52.53 323 ⇓P P 09 19 35.2 +0.8
baz=53,SNR=33
F15A **Butte** 52.53 321 ⇓P P 09 19 35.2 +0.7
baz=53,SNR=11
HRY **Holter Researc** 52.55 322 eP P 09 19 35.4 +1.0
B17A **L&G Farms, Che** 52.73 325 ⇑P P 09 19 36.2 +0.5
baz=53,SNR=12
TPH **Tonopah** 52.75 310 PFAKE 09 19 50.0 +14
TPH LR LR
comp=Z,1µm,21.0s
HLID **Hailey** 52.76 318 PFAKE 09 19 50.0 +14
HLID LR LR
comp=Z,1µm,21.0s
E15A **Deer Lodge** 52.90 322 ⇑P P 09 19 37.6 +0.6
baz=53,SNR=54
CWC **Cottonwood Cre** 52.92 308 ⇑P P 09 19 37.9 +0.5
baz=53
ISA **Isabella** 53.01 307 eP P 09 19 41.5 +3.5
ISA pmax pmax
comp=Z,14nm,0.9s
ISA **Isabella** 53.01 307 eP P 09 19 41.5 +3.5
comp=Z,14nm,0.9s
ISA **Isabella** 53.01 307 ⇑P P 09 19 38.5 +0.5
baz=53
A17A **Triple J Farms** 53.02 325 ⇑P P 09 19 38.1 +0.3
baz=53,SNR=15
F14A **Wisdom** 53.06 321 ⇑P P 09 19 38.9 +0.5
baz=53,SNR=19
D15A **Lincoln** 53.12 322 ⇓P P 09 19 39.3 +0.6
baz=53,SNR=22
ARVC **Arvin** 53.15 306 ⇑P P 09 19 39.9 +1.0
baz=53,SNR=5.9
B16A **M & M Farms, S** 53.32 324 ⇓P P 09 19 40.2 +0.2
baz=53,SNR=14
I12A **Atlanta** 53.33 318 ⇑P P 09 19 41.2 +0.8
baz=53
E14A **Clinton** 53.42 321 ⇓P P 09 19 41.4 +0.5
baz=54,SNR=18
H12A **Diamond D Ranc** 53.46 319 ⇓P P 09 19 41.9 +0.6
baz=54
CHMT **Chamberlain Mo** 53.50 322 eP P 09 19 42.2 +0.6
BMN **Battle Mountai** 53.52 313 eP P 09 19 40.1 -1.7
BMN MLR MLR
comp=Z,859nm,19.0s
BMN **Battle Mountai** 53.52 313 eP P 09 19 40.1 -1.7
BMN LR LR
comp=Z,859nm,19.0s
BSC **Santa Cruz Isl** 53.52 305 ⇓P P 09 19 42.4 +0.7
baz=54
C15A **Salmond Ranch,** 53.52 323 ⇓P P 09 19 41.9 +0.2
baz=54,SNR=18
A16A **West Butte Ran** 53.53 325 ⇑P P 09 19 42.0 +0.4
baz=54
VES **Vestal, Richgr** 53.54 307 ⇓P P 09 19 43.2 +1.5
baz=54,SNR=38
MTUM **Tungsten Hills** 53.55 309 eP P 09 19 46.8 +4.8
NV11 **Mina Array Sit** 53.56 311 eP P 09 19 43.4 +1.3
MFID **Camas Ranch** 53.64 317 eP P 09 19 43.8 +1.3
MFID **Camas Ranch** 53.64 317 ⇓P P 09 19 43.5 +0.9
baz=54,SNR=6.6
NVAR **Mina Array Bea** 53.67 310 P P 09 19 44.0 +1.1
NVAR **Mina Array Bea** 53.67 310 P P 09 19 44.0 +1.1
comp=Z,37nm,0.9s,baz=117,slow=6.3,SNR=23
NVAR LR LR 09 46 49.8
comp=Z,2µm,20.4s,baz=74,slow=41
D14A **Greenough** 53.73 322 ⇑P P 09 19 43.5 +0.3
baz=54,SNR=26
B15A **Bradely Ranch,** 53.76 324 ⇓P P 09 19 43.6 +0.2
baz=54,SNR=19
RCTC **Rector, Farmer** 53.78 308 ⇓P P 09 19 43.9 +0.4
baz=54
SLMT **Seeley Lake** 53.80 322 eP P 09 19 44.6 +0.9
comp=Z,64nm,1.2s
E13A **Victor** 53.86 321 ⇑P P 09 19 44.8 +0.7
baz=54
MSO **Missoula** 53.88 322 eP P 09 19 44.3 0.0
MSO LR LR
comp=Z,1µm,19.0s
MSO **Missoula** 53.88 322 ⇓P P 09 19 44.7 +0.5
baz=54
PKM **Peak Mountain** 53.88 306 ⇑P P 09 19 45.1 +0.5
baz=54
G12A **Big Creek, Yel** 54.00 319 ⇑P P 09 19 45.9 +0.6
baz=54
A15A **Johnson Ranch,** 54.19 324 ⇓P P 09 19 46.7 +0.2
baz=54
C14A **Swan Lake** 54.20 323 ⇑P P 09 19 47.1 +0.6
baz=54,SNR=20
B14A **Marquette Ranc** 54.20 324 ⇓P P 09 19 47.1 +0.6
baz=54
F12A **Elk City** 54.22 320 ⇑P P 09 19 47.1 +0.3
baz=54
SWMT **Swartz Lake** 54.23 322 eP P 09 19 47.2 +0.4
PTRM **Twissleman Ran** 54.38 307 eP P 09 19 52.2 +4.2
YBMT **Yellow Bay** 54.40 323 eP P 09 19 48.3 +0.3
comp=Z,14nm,0.8s
JTMT **Jette** 54.51 323 eP P 09 19 49.3 +0.4
A14A **Double T Ranch** 54.58 324 ⇓P P 09 19 49.5 +0.2
baz=55,SNR=12
C13A **Hot Springs** 54.65 322 ⇓P P 09 19 50.1 +0.3
baz=55,SNR=25
D12A **Red Ives Fores** 54.84 321 ⇑P P 09 19 51.2 0.0
baz=55
BSMT **Bassoo Peak** 54.86 322 eP P 09 19 51.9 +0.4
WALA **Waterton Lakes** 54.91 324 eP P 09 19 51.0 -0.6
comp=Z,1.1nm,1.3s
B13A **Whitefish** 54.91 323 ⇑P P 09 19 51.6 0.0
baz=55
WCN **Washoe City** 55.01 311 eP P 09 19 53.2 +0.5
WCN pmax pmax
comp=Z,31nm,0.9s

WCN **Washoe City** 55.01 311 eP P 09 19 53.2 +0.5
comp=Z,31nm,0.9s
A13A **Flathead Natio** 55.14 324 ⇓P P 09 19 53.5 +0.2
baz=55
WVOR **Wild Horse Val** 55.20 315 PFAKE 09 20 10.0 +16
WVOR LR LR
comp=Z,1µm,19.0s
C12B **Naegeli Ranch,** 55.21 322 ⇑P P 09 19 54.4 +0.6
baz=55,SNR=11
B12A **Libby** 55.62 323 ⇓P P 09 19 56.9 +0.2
baz=56,SNR=13
SAO **San Andreas Ge** 55.62 308 eP P 09 19 57.7 +0.8
SAO pmax pmax
comp=Z,21nm,0.9s
SAO **San Andreas Ge** 55.62 308 eP P 09 19 57.7 +0.8
comp=Z,21nm,0.9s
BEKR **Beckworth** 55.62 312 eP P 09 19 57.4 +0.3
comp=Z,5.8nm,1.0s
C11A **Tepee Creek (N** 55.74 322 ⇓P P 09 19 57.9 +0.2
baz=56
A12A **Yaak River Ran** 55.86 323 ⇑P P 09 19 59.1 +0.6
baz=56
OHCM **Honcut** 56.30 311 eP P 09 20 03.0 +1.3
NEW **Newport** 56.45 322 eP P 09 20 02.2 -0.5
comp=Z,22nm,0.7s
NEW LR LR
comp=Z,1µm,19.0s
NEW **Newport** 56.45 322 ⇓P P 09 20 02.8 +0.1
baz=56
HAWA **Hanford** 57.21 319 eP P 09 20 08.6 +0.5
comp=Z,18nm,0.9s
HAWA LR LR
comp=Z,988nm,21.0s
SNIWA **Snively Ranch** 57.32 319 P P 09 20 09.8 +1.0
GBB **Gable Butte** 57.35 319 P P 09 20 09.7 +0.6
FHE **Frenchman Hill** 57.40 320 P P 09 20 10.3 +0.9
WDC **Whiskeytown Da** 57.42 312 eP P 09 20 09.6 -0.1
WDC pmax pmax
comp=Z,9.0nm,0.7s
WDC **Whiskeytown Da** 57.42 312 eP P 09 20 09.6 -0.1
comp=Z,8.5nm,0.7s
LHEM **Herd Peak** 57.48 313 P P 09 20 11.2 +0.9
CROR **Criterion Ridg** 57.67 317 P P 09 20 12.9 +1.4
BUOR **Burton Butte** 57.69 314 P P 09 20 13.0 +1.3
SFJD **Kangerlussuaq** 57.82 8 PFAKE 09 20 20.0 +8.1
SFJD LR LR
comp=Z,565nm,20.0s
TRW **Toppenish Ridg** 57.83 319 P P 09 20 13.5 +1.1
YBH **Yreka Blue Hor** 57.86 313 eP P 09 20 12.6 -0.3
comp=Z,28nm,1.0s
KIPM **Iron Peak** 57.92 311 eP P 09 20 14.5 +1.2
comp=Z,40nm,0.9s
BKCOR **Black Crater** 57.92 316 P P 09 20 15.2 +2.0
KCPM **Cahto Peak** 57.96 311 eP P 09 20 15.1 +1.4
comp=Z,41nm,1.2s
EBG **Ellensburg** 58.06 319 P P 09 20 15.4 +1.3
TBM **Table Mountain** 58.17 320 P P 09 20 15.9 +1.0
HUMO **Hull Mountain** 58.28 314 eP P 09 20 16.7 +1.0
comp=Z,11nm,0.6s
KHMM **Horse Mountain** 58.37 312 eP P 09 20 17.8 +1.2
comp=Z,133nm,1.7s
ASR **Mount Adams--S** 58.46 318 P P 09 20 18.5 +1.5
WPW **White Pass** 58.62 319 P P 09 20 18.8 +0.8
PFVI **Vila Bisbo** 58.66 53 eP P 09 20 20.2 +1.8
PFVI *i* S S 09 28 30.3 +7.4
KRMB **Red Mountain** 58.67 313 eP P 09 20 20.0 +1.5
comp=Z,151nm,1.8s
LIS **Lisbon** 58.75 51 eP P 09 20 18.7 -0.3
LIS AMb AMB 09 20 56.9
comp=Z,141nm,2.1s
LIS *e*S S 09 28 23.6 -0.3
LIS **Lisbon** 58.75 51 eP P 09 20 18.7 -0.3
comp=Z,141nm,2.1s
LIS *e*S S 09 28 23.6 -0.3
LIS **Lisbon** 58.75 51 eP P 09 20 18.6 -0.3
LIS *e*S S 09 28 23.6 -0.3
LON **Longmire** 58.80 319 eP P 09 20 20.2 +0.9
LON **Longmire** 58.80 319 eP P 09 20 20.2 +0.9
PTEO **Sao Teotonio** 58.83 52 eP P 09 20 23.8 +4.3
comp=Z,90nm,1.5s
MORF **Marmelete** 58.84 53 eP P 09 20 20.6 +0.9
comp=Z,93nm,1.1s
MORF *i* S S 09 28 37.0 +12
MORF **Marmelete** 58.84 53 eP P 09 20 19.9 +0.2
MORF *e*S S 09 28 24.7 -0.6
KBO **Bosley Butte** 59.08 313 eP P 09 20 22.9 +1.6
comp=Z,238nm,1.2s
PNCL **Nicolau / Gran** 59.09 52 eP P 09 20 22.5 +1.1
comp=Z,66nm,1.6s
PNCL *i* S S 09 28 36.0 +7.5
MESJ **Messejana** 59.28 52 eP P 09 20 21.8 -0.9
MESJ AMb AMB 09 20 30.9
comp=Z,67nm,1.6s
MESJ *e*S S 09 28 30.5 -0.4
MESJ **Messejana** 59.28 52 eP P 09 20 21.8 -0.9
comp=Z,67nm,1.6s
MESJ *e*S S 09 28 30.5 -0.4
MESJ **Messejana** 59.28 52 eP P 09 20 21.8 -0.9
MESJ *e*S S 09 28 30.5 -0.4
KEBM **Edson Butte** 59.33 314 eP P 09 20 24.8 +1.7
comp=Z,218nm,1.3s
PCVE **Castro Verde** 59.38 52 eP P 09 20 24.5 +1.1
comp=Z,79nm,1.1s
PCVE *i* S S 09 28 39.9 +7.7
PBDV **Barranco-do-Ve** 59.39 53 eP P 09 20 24.0 +0.5
comp=Z,95nm,1.6s
PBDV *i* S S 09 28 42.7 +10
PBDV eLQ LQ 09 35 06.3
PBDV eLR LR 09 37 35.6
comp=Z,681nm,20.0s
EVOP **Sao Brissos** 59.49 51 eP P 09 20 24.7 +0.6
EVOP pmax pmax
comp=Z,78nm,0.9s
EVOP **Sao Brissos** 59.49 51 eP P 09 20 24.7 +0.6
comp=Z,78nm,0.9s
PMTG **Montargil** 59.53 51 eP P 09 20 26.7 +2.3
comp=Z,102nm,1.2s
PMTG *i* S S 09 28 41.8 +7.7
EVO **Evora** 59.58 51 eP P 09 20 24.7 -0.1
comp=Z,78nm,0.9s
EVO *e*R
comp=Z,807nm,21.5s
PVAQ **Vaqueiros** 59.59 53 eP P 09 20 26.0 +1.2
comp=Z,74nm,1.6s
PVAQ *i* S S 09 28 40.8 +5.9
PVAQ eLR LR 09 38 23.3
comp=Z,633nm,20.0s
PBEJ **Beja** 59.59 52 eP P 09 20 25.9 +1.1
comp=Z,76nm,1.0s
RTC **Rabat Centre** 59.70 57 PFAKE 09 20 40.0 +14
RTC LR LR
comp=Z,959nm,20.0s
PESTR **Estremoz** 59.97 51 eP P 09 20 29.5 +2.0
comp=Z,110nm,1.2s
PESTR *i* S S 09 28 44.6 +4.8
PESTR eLQ LQ 09 35 35.1
PESTR eLR LR 09 38 14.9
comp=Z,296nm,20.0s
MCW **Mount Constitu** 60.11 321 P P 09 20 28.1 -0.2
MCW **Mount Constitu** 60.11 321 P P 09 20 28.1 -0.2
PVIS **Viseu** 60.14 49 eP P 09 20 29.0 +0.4
comp=Z,82nm,1.3s
PGAV **Gavieira, Arco** 60.15 47 eP P 09 20 29.1 +0.3
comp=Z,76nm,1.5s
PGAV *i* S S 09 28 44.6 +2.4
PGAV eLQ LQ 09 35 31.7
PGAV eLR LR 09 38 37.2
comp=Z,522nm,18.0s
PMRV **Marv??o** 60.24 50 eP P 09 20 31.3 +2.0
comp=Z,47nm,1.4s
PMRV *i* S S 09 28 49.4 +6.2
PMRV eLQ LQ 09 35 14.2
PMRV eLR LR 09 35 29.9
comp=Z,305nm,22.5s
PMRV eLR LR 09 38 09.7
comp=Z,305nm,22.5s
PCBR **Castelo Branco** 60.26 50 eP P 09 20 30.4 +1.0
comp=Z,53nm,1.1s
PCAB **Cabril** 60.27 48 eP P 09 20 29.9 +0.4
MTE **Manteigas** 60.33 49 eP P 09 20 31.4 +1.4
comp=Z,62nm,1.3s
MTE *i* S S 09 28 46.5 +2.0
MTE eLQ LQ 09 35 27.3
MTE eLR LR 09 38 22.2
comp=Z,573nm,24.6s

MTE Manteigas 60.33 49 *e*P **P 09 20 30.7 +0.7**
comp=Z,18nm,0.7s
MTE LR LR
comp=Z,837nm,22.0s
NLWA Neilton Lookou 60.34 319 *e*P **P 09 20 31.4 +1.5**
comp=Z,48nm,1.3s
NLWA LR LR
comp=Z,1µm,21.0s
POLO Lamas de Olo 60.36 48 *e*P **P 09 20 31.2 +1.0**
comp=Z,52nm,1.2s
POLO *i* S S 09 28 53.2 +8.3
POLO *e*LR LR 09 38 41.7
comp=Z,291nm,22.0s
OSD Olympics--Snow 60.38 320 P **P 09 20 31.0 +0.7**
PVRL Vila Real 60.39 48 *e*P **P 09 20 30.7 +0.3**
PGC Sidney 60.49 321 *e*P **P 09 20 31.1 +0.4**
MVO Moncorvo 60.88 48 *e*P **P 09 20 34.1 +0.4**
comp=Z,69nm,0.9s
MVO *i* S **S 09 28 50.3 -1.2**
MVO *e*LQ LQ 09 35 44.9
MVO *e*LR LR 09 38 17.5
comp=Z,494nm,21.8s
PBRG Braganca 61.23 48 *e*P **P 09 20 38.1 +2.1**
LIC Lamto 61.43 88 *e*P P 09 20 34.7 -3.1
comp=Z,25nm,0.7s,baz=272
LIC *e*R
comp=Z,1µm,20.5s
LIC Lamto 61.43 88 *e*P P 09 20 34.7 -3.1
comp=Z,25nm,0.7s
DBIC Dimbokro 61.53 88 P **P 09 20 36.1 -2.4**
DBIC Dimbokro 61.53 88 P **P 09 20 36.1 -2.4**
comp=Z,8.2nm,0.7s,baz=272,slow=8.3,SNR=9.3
EFI East Falkland 62.09 174 PFAKE 09 20 50.0 +8.6
EFI LR LR
comp=Z,4µm,20.0s
YKA Yellowknife Ar 62.36 337 P **P 09 20 41.5 -1.6**
YKA Yellowknife Ar 62.36 337 P **P 09 20 41.5 -1.6**
comp=Z,6.1nm,0.7s,baz=116,slow=6.9,SNR=31
YKW3 Yellowknife Ar 62.40 337 *e*P **P 09 20 41.5 -2.0**
comp=Z,0.2nm,0.7s
PAB San Pablo 62.57 51 *e*P **P 09 20 45.3 +0.1**
PAB MLR MLR
comp=Z,452nm,19.0s
PAB San Pablo 62.57 51 *e*P **P 09 20 45.3 +0.1**
PAB LR LR
comp=Z,452nm,19.0s
ESDC Sonseca Array 62.89 51 P **P 09 20 47.0 -0.2**
ESDC Sonseca Array 62.89 51 P **P 09 20 47.0 -0.2**
comp=Z,15nm,0.7s,baz=263,slow=6.8,SNR=20
ESLA Sonseca Array 62.89 51 *e*P **P 09 20 47.4 +0.2**
comp=Z,15nm,1.2s
BORG Borgarnes 63.03 20 PFAKE 09 21 00.0 +12
BORG LR LR
comp=Z,1µm,19.0s
SUMG Summit 64.67 9 *e*P **P 09 20 58.3 -0.4**
comp=Z,68nm,0.9s
SUMG Summit 64.67 9⇑ *i*P **P 09 20 58.4 -0.4**
comp=Z,17nm,0.8s
SUMG *i* 09 21 05.5
SUMG
comp=Z,980nm,17.0s
QUIF Quistinic 65.06 42 *e*P **P 09 21 00.4 -0.9**
comp=Z,192nm,1.6s
QUIF Quistinic 65.06 42 *e*P **P 09 21 00.4 -0.9**
QUIF pmax pmax
comp=Z,192nm,1.6s
QUIF Quistinic 65.06 42 *e*P **P 09 21 00.4 -0.9**
comp=Z,192nm,1.6s
ROSF Rostrenen 65.09 41 *e*P **P 09 21 00.5 -1.0**
comp=Z,74nm,1.2s
ROSF Rostrenen 65.09 41 *e*P **P 09 21 00.5 -1.0**
ROSF pmax pmax
comp=Z,74nm,1.2s
ROSF Rostrenen 65.09 41 *e*P **P 09 21 00.5 -1.0**
comp=Z,74nm,1.2s
OSSF Osses 65.48 47 *e*P **P 09 21 02.8 -1.3**
OSSF Osses 65.48 47 *e*P **P 09 21 02.8 -1.3**
SJPF Ste Jean 65.48 47 *e*P **P 09 21 04.3 +0.1**
comp=Z,68nm,0.7s
SJPF Ste Jean 65.48 47 *e*P **P 09 21 04.3 +0.1**
SJPF pmax pmax
comp=Z,68nm,0.7s
SJPF Ste Jean 65.48 47 *e*P **P 09 21 04.3 +0.1**
comp=Z,68nm,0.7s
SGMF Saint Gilles 65.54 41 *e*P **P 09 21 03.5 -0.9**
comp=Z,120nm,1.4s
SGMF Saint Gilles 65.54 41 *e*P **P 09 21 03.5 -0.9**
SGMF pmax pmax
comp=Z,120nm,1.4s
SGMF Saint Gilles 65.54 41 *e*P **P 09 21 03.5 -0.9**
comp=Z,120nm,1.4s
LARF Larrau 65.64 47 *e*P **P 09 21 05.9 +0.7**
LARF Larrau 65.64 47 *e*P **P 09 21 05.9 +0.7**
ETSF Etsaut 65.93 48 *e*P **P 09 21 06.5 -0.6**
comp=Z,29nm,0.8s
ETSF Etsaut 65.93 48 *e*P **P 09 21 06.5 -0.6**
ETSF pmax pmax
comp=Z,29nm,0.8s
ETSF Etsaut 65.93 48 *e*P **P 09 21 06.5 -0.6**
comp=Z,29nm,0.8s
REYF Montagne du Re 66.08 47 *e*P **P 09 21 08.9 +0.8**
REYF Montagne du Re 66.08 47 *e*P **P 09 21 08.9 +0.8**
VIEF Viey 66.35 48 *e*P **P 09 21 10.5 +0.6**
VIEF Viey 66.35 48 *e*P **P 09 21 10.5 +0.6**
RES Resolute Bay 66.39 352 *e*P **P 09 21 08.8 -0.6**
comp=Z,8.3nm,0.8s
EANR 'Ain N'Sour 66.41 55 P **P 09 21 11.5 +1.1**
SCO Scoresbysund 66.48 15 *i*P **P 09 21 11.4 +1.4**
comp=Z,2.2nm,0.8s
SCO
comp=Z,640nm,28.0s
RESF Ens 66.57 48 *e*P **P 09 21 10.3 -1.0**
RESF Ens 66.57 48 *e*P **P 09 21 10.3 -1.0**
EPF Esparros 66.60 48 *e*P **P 09 21 11.5 +0.1**
comp=Z,55nm,0.7s
EPF Esparros 66.60 48 *e*P **P 09 21 11.5 +0.1**
EPF pmax pmax
comp=Z,55nm,0.7s
EPF Esparros 66.60 48 *e*P **P 09 21 11.5 +0.1**
comp=Z,55nm,0.7s
GRR Gorron 66.67 42 *e*P **P 09 21 10.5 -1.2**
comp=Z,50nm,0.9s
GRR Gorron 66.67 42 *e*P **P 09 21 10.5 -1.2**
GRR pmax pmax
comp=Z,50nm,0.9s
GRR Gorron 66.67 42 *e*P **P 09 21 10.5 -1.2**
comp=Z,50nm,0.9s
EBNR Beni Rached 66.79 55 P P 09 21 19.5 +6.8
MFF Saint Martin d 66.82 44 *e*P **P 09 21 12.2 -0.5**
comp=Z,67nm,1.0s
MFF Saint Martin d 66.82 44 *e*P **P 09 21 12.2 -0.5**
MFF pmax pmax
comp=Z,67nm,1.0s
MFF Saint Martin d 66.82 44 *e*P **P 09 21 12.2 -0.5**
comp=Z,67nm,1.0s
ESK Eskdalemuir 66.90 34 PFAKE 09 21 30.0 +17
ESK LR LR
comp=Z,977nm,19.0s
FLN La Foliniere 66.99 41 *e*P **P 09 21 13.2 -0.5**
comp=Z,57nm,0.8s
FLN *e*R
comp=Z,2µm,22.5s
FLN La Foliniere 66.99 41 *e*P **P 09 21 13.2 -0.5**
FLN pmax pmax
comp=Z,57nm,0.8s
FLN La Foliniere 66.99 41 *e*P **P 09 21 13.2 -0.5**
comp=Z,57nm,0.8s
LFF La Frestale 67.16 46 *e*P **P 09 21 14.5 -0.4**
comp=Z,47nm,0.8s
LFF La Frestale 67.16 46 *e*P **P 09 21 14.5 -0.4**
LFF pmax pmax
comp=Z,47nm,0.8s
LFF La Frestale 67.16 46 *e*P **P 09 21 14.5 -0.4**
comp=Z,47nm,0.8s
SALF Salau 67.19 48 *e*P **P 09 21 15.4 +0.2**
SALF Salau 67.19 48 *e*P **P 09 21 15.4 +0.2**
LDF La Druitiere 67.19 41 *e*P **P 09 21 13.8 -1.2**
comp=Z,73nm,1.3s
LDF La Druitiere 67.19 41 *e*P **P 09 21 13.8 -1.2**
LDF pmax pmax
comp=Z,73nm,1.3s
LDF La Druitiere 67.19 41 *e*P **P 09 21 13.8 -1.2**
comp=Z,73nm,1.3s
TOA0 Torodi Ar. Sit 67.20 80 *e*P **P 09 21 13.3 -2.3**
TORD Torodi Ar. Bea 67.20 80 P **P 09 21 13.4 -2.2**
TORD ⇑*e* 09 49 44.1
TORD Torodi Ar. Bea 67.20 80 P **P 09 21 13.4 -2.2**
comp=Z,3.5nm,0.6s,baz=289,slow=6.0,SNR=26
TORD PKP2bc 09 49 44.1
comp=Z,2.1nm,1.1s,baz=104,slow=2.0,SNR=8.1
TORD LR LR 09 49 47.2
comp=Z,951nm,20.6s,baz=265,slow=35
DLBC Dease Lake 67.39 329 *e*P **P 09 21 16.6 +0.4**
RJF Les Rejaudoux 67.76 45 *e*P **P 09 21 18.1 -0.6**
comp=Z,46nm,1.0s
RJF *e*R
comp=Z,2µm,21.2s
RJF Les Rejaudoux 67.76 45 *e*P **P 09 21 18.1 -0.6**
RJF pmax pmax
comp=Z,46nm,1.0s
RJF Les Rejaudoux 67.76 45 *e*P **P 09 21 18.1 -0.6**
comp=Z,46nm,1.0s
CARF Carcanieres 67.85 48 *e*P **P 09 21 18.9 -0.5**
CARF Carcanieres 67.85 48 *e*P **P 09 21 18.9 -0.5**
EMHD Djebel Mahouad 67.93 55 P **P 09 21 21.0 +0.9**
MTLF Montolieu 68.00 47 *e*P **P 09 21 19.5 -0.7**
comp=Z,49nm,0.8s
MTLF Montolieu 68.00 47 *e*P **P 09 21 19.5 -0.7**
MTLF pmax pmax
comp=Z,49nm,0.8s
MTLF Montolieu 68.00 47 *e*P **P 09 21 19.5 -0.7**
comp=Z,49nm,0.8s
WRAK Wrangell Islan 68.01 327 PFAKE 09 21 30.0 +10
WRAK LR LR
comp=Z,1µm,19.0s
ABA Alger-Bouzarea 68.03 54 P P 09 21 32.2 +12
CAF Calviac 68.09 46 *e*P **P 09 21 20.3 -0.5**
comp=Z,40nm,0.6s
CAF Calviac 68.09 46 *e*P **P 09 21 20.3 -0.5**
CAF pmax pmax
comp=Z,40nm,0.6s
CAF Calviac 68.09 46 *e*P **P 09 21 20.3 -0.5**
comp=Z,40nm,0.6s
FILF Fillols 68.17 48 *e*P **P 09 21 21.0 -0.4**
FILF Fillols 68.17 48 *e*P **P 09 21 21.0 -0.4**
ADJB Djebel Djouab 68.32 55 P **P 09 21 24.2 +1.7**
TCF Toulx Ste Croi 68.38 44 *e*P **P 09 21 21.8 -0.8**
comp=Z,31nm,1.1s
TCF Toulx Ste Croi 68.38 44 *e*P **P 09 21 21.8 -0.8**
TCF pmax pmax
comp=Z,31nm,1.1s
TCF Toulx Ste Croi 68.38 44 *e*P **P 09 21 21.8 -0.8**
comp=Z,31nm,1.1s
BGF Bois d'Agland 68.85 44 *e*P **P 09 21 24.1 -1.4**
comp=Z,34nm,0.9s
BGF Bois d'Agland 68.85 44 *e*P **P 09 21 24.1 -1.4**
BGF pmax pmax
comp=Z,34nm,0.9s
BGF Bois d'Agland 68.85 44 *e*P **P 09 21 24.1 -1.4**
comp=Z,34nm,0.9s
PYM Petit Puy Mans 68.86 45 *e*P P 09 21 29.9 +4.3
PYM Petit Puy Mans 68.86 45 *e*P P 09 21 29.9 +4.3
PYM Petit Puy Mans 68.86 45 *e*P P 09 21 29.9 +4.3
LBL Lubilhac 68.96 45 *e*P P 09 21 30.4 +4.1
LBL Lubilhac 68.96 45 *e*P P 09 21 30.4 +4.1
LBL Lubilhac 68.96 45 *e*P P 09 21 30.4 +4.1
AVF Avril sur Loir 69.23 44 *e*P **P 09 21 26.7 -1.1**
comp=Z,12nm,0.7s
AVF Avril sur Loir 69.23 44 *e*P **P 09 21 26.7 -1.1**
AVF pmax pmax
comp=Z,12nm,0.7s
AVF Avril sur Loir 69.23 44 *e*P **P 09 21 26.7 -1.1**
comp=Z,12nm,0.7s
AKF Akfadou 69.25 55 P **P 09 21 28.8 +0.4**
LASF Ste Croix 69.27 47 *e*P **P 09 21 27.2 -0.9**
comp=Z,28nm,1.0s
LASF Ste Croix 69.27 47 *e*P **P 09 21 27.2 -0.9**
comp=Z,28nm,1.0s
SSF Saint Saulge 69.37 44 *e*P **P 09 21 27.8 -0.9**
comp=Z,28nm,1.0s
SSF Saint Saulge 69.37 44 *e*P **P 09 21 27.8 -0.9**
SSF pmax pmax
comp=Z,28nm,1.0s
SSF Saint Saulge 69.37 44 *e*P **P 09 21 27.8 -0.9**
comp=Z,28nm,1.0s
SMF Signal de Mont 69.54 44 *e*P **P 09 21 28.9 -0.9**
comp=Z,44nm,0.9s
SMF Signal de Mont 69.54 44 *e*P **P 09 21 28.9 -0.9**
SMF pmax pmax
comp=Z,44nm,0.9s
SMF Signal de Mont 69.54 44 *e*P **P 09 21 28.9 -0.9**
comp=Z,44nm,0.9s
LOR Lormes 69.63 43 *e*P **P 09 21 29.2 -1.1**
comp=Z,25nm,0.7s
LOR *e*R
comp=Z,1µm,21.2s
LOR Lormes 69.63 43 *e*P **P 09 21 29.2 -1.1**
comp=Z,25nm,0.7s
SSB Saint Sauveur 69.88 46 PFAKE 09 21 40.0 +8.1
SSB LR LR
comp=Z,894nm,20.0s
VIVF Saint-Julien-l 69.93 46 *e*P **P 09 21 30.8 -1.4**
comp=Z,58nm,1.1s
VIVF Saint-Julien-l 69.93 46 *e*P **P 09 21 30.8 -1.4**
VIVF pmax pmax
comp=Z,58nm,1.1s
VIVF Saint-Julien-l 69.93 46 *e*P **P 09 21 30.8 -1.4**
comp=Z,58nm,1.1s
CKHR Kef el Ahmar 69.99 55 P P 09 21 40.0 +7.1
TAM Tamanrasset 70.13 69 *e*P **P 09 21 35.2 +1.2**
TAM pmax pmax
comp=Z,12nm,0.9s
TAM MLR MLR
comp=Z,551nm,20.0s
TAM Tamanrasset 70.13 69 *e*P **P 09 21 35.2 +1.2**
comp=Z,12nm,0.9s
TAM LR LR
comp=Z,551nm,20.0s
BAIF Baives 70.23 40 *e*P **P 09 21 33.1 -0.8**
BAIF Baives 70.23 40 *e*P **P 09 21 33.1 -0.8**
BAIF Baives 70.23 40 *e*P **P 09 21 33.1 -0.8**
SKAG Skagway 70.31 330 *e*P **P 09 21 35.0 +0.8**
DOU Dourbes 70.48 40 P **P 09 21 35.6 +0.2**
SMRF Simiane la Rot 70.49 47 *e*P **P 09 21 34.1 -1.6**
comp=Z,32nm,1.0s
SMRF Simiane la Rot 70.49 47 *e*P **P 09 21 34.1 -1.6**
comp=Z,32nm,1.0s
SFTF Sexfontaines 70.53 42 *e*P **P 09 21 34.9 -0.9**
comp=Z,28nm,0.5s
SFTF Sexfontaines 70.53 42 *e*P **P 09 21 34.9 -0.9**
comp=Z,28nm,0.5s
MEZF Maizieres J'vi 70.58 42 *e*P **P 09 21 35.3 -0.8**
comp=Z,50nm,0.7s
MEZF Maizieres J'vi 70.58 42 *e*P **P 09 21 35.3 -0.8**
comp=Z,50nm,0.7s
GIVF Givet 70.62 40 *e*P **P 09 21 35.2 -1.1**
comp=Z,56nm,0.9s
GIVF Givet 70.62 40 *e*P **P 09 21 35.2 -1.1**
GIVF pmax pmax
comp=Z,56nm,0.9s
GIVF Givet 70.62 40 *e*P **P 09 21 35.2 -1.1**
comp=Z,56nm,0.9s
CTEI Djebel Teioual 70.72 55 P P 09 21 40.9 +3.6
CASM Ain Smara 70.79 55 P P 09 21 40.9 +3.2
ORIF Oris-en-Rattie 70.79 46 *e*P **P 09 21 36.2 -1.4**
comp=Z,21nm,0.8s
ORIF *e*R
comp=Z,1µm,21.0s
ORIF Oris-en-Rattie 70.79 46 *e*P **P 09 21 36.2 -1.4**
ORIF pmax pmax
comp=Z,21nm,0.8s
ORIF Oris-en-Rattie 70.79 46 *e*P **P 09 21 36.2 -1.4**
comp=Z,21nm,0.8s
PAGF Fort de Pagny 71.03 42 *e*P **P 09 21 37.5 -1.3**
comp=Z,26nm,1.2s
PAGF Fort de Pagny 71.03 42 *e*P **P 09 21 37.5 -1.3**
comp=Z,26nm,1.2s
CABF La Chapelle 71.08 44 *e*P **P 09 21 38.7 -0.6**
comp=Z,49nm,1.0s
CABF La Chapelle 71.08 44 *e*P **P 09 21 38.7 -0.6**
CABF pmax pmax
comp=Z,49nm,1.0s
CABF La Chapelle 71.08 44 *e*P **P 09 21 38.7 -0.6**
comp=Z,49nm,1.0s
LMR La Mourre 71.12 48 *e*P **P 09 21 38.1 -1.4**
comp=Z,40nm,1.0s
LMR La Mourre 71.12 48 *e*P **P 09 21 38.1 -1.4**
LMR pmax pmax
comp=Z,40nm,1.0s
LMR La Mourre 71.12 48 *e*P **P 09 21 38.1 -1.4**
comp=Z,40nm,1.0s
THEF They Montfort 71.17 43 *e*P **P 09 21 40.0 +0.3**
THEF They Montfort 71.17 43 *e*P **P 09 21 40.0 +0.3**
FRF La Foret Royal 71.24 47 *e*P **P 09 21 38.9 -1.3**
comp=Z,63nm,1.2s
FRF La Foret Royal 71.24 47 *e*P **P 09 21 38.9 -1.3**
FRF pmax pmax
comp=Z,63nm,1.2s
FRF La Foret Royal 71.24 47 *e*P **P 09 21 38.9 -1.3**
comp=Z,63nm,1.2s
DAG Danmarks Havn 71.25 10 *i*P **P 09 21 39.6 0.0**
DAG *i* 09 21 46.9
DAG pmax pmax
comp=Z,5.0nm,0.7s
DAG MLR MLR
comp=Z,1µm,21.0s
DAG Danmarks Havn 71.25 10 *i*P **P 09 21 39.6 0.0**
comp=Z,7.7nm,0.7s
DAG *i* 09 21 46.9
DAG
comp=Z,1µm,20.0s
HAU Haudompre 71.39 43 *e*P **P 09 21 40.3 -0.7**
HAU *e*R
comp=Z,1µm,21.5s
HAU Haudompre 71.39 43 *e*P **P 09 21 40.3 -0.7**
HAU Haudompre 71.39 43 *e*P **P 09 21 40.3 -0.7**
MBDF Montbardon 71.41 46 *e*P **P 09 21 40.7 -0.7**
comp=Z,33nm,0.8s
MBDF Montbardon 71.41 46 *e*P **P 09 21 40.7 -0.7**
MBDF pmax pmax
comp=Z,33nm,0.8s
MBDF Montbardon 71.41 46 *e*P **P 09 21 40.7 -0.7**
comp=Z,33nm,0.8s
HGN Heimansgroeve 71.41 40 *e*P P 09 21 47.3 +6.3
CALN Calern 71.42 47 *e*P **P 09 21 41.9 +0.4**
CALN Calern 71.42 47 *e*P **P 09 21 41.9 +0.4**
CALN Calern 71.42 47 *e*P **P 09 21 41.9 +0.4**
WLF Walferdange 71.43 41 *e*P **P 09 21 41.8 +0.6**
comp=Z,22nm,0.9s
WLF Walferdange 71.43 41 PFAKE 09 21 50.0 +8.8
WLF LR LR
comp=Z,832nm,20.0s
LPL La Plagne 71.44 45 *e*P **P 09 21 41.1 -0.5**
comp=Z,57nm,0.7s
LPL La Plagne 71.44 45 *e*P **P 09 21 41.1 -0.5**
LPL pmax pmax
comp=Z,57nm,0.7s
LPL La Plagne 71.44 45 *e*P **P 09 21 41.1 -0.5**
comp=Z,57nm,0.7s
LPG La Plagne 71.45 45 *e*P **P 09 21 40.7 -1.1**
comp=Z,47nm,0.7s
LPG La Plagne 71.45 45 *e*P **P 09 21 40.7 -1.1**
LPG pmax pmax
comp=Z,47nm,0.7s
LPG La Plagne 71.45 45 *e*P **P 09 21 40.7 -1.1**
comp=Z,47nm,0.7s
CMAH Djebel Manchou 71.55 55 P **P 09 21 43.2 +0.9**
ABSA Djebel Ababsia 71.59 55 P **P 09 21 43.9 +1.3**
LOMF Lomont 71.65 43 *e*P **P 09 21 42.8 +0.1**
LOMF Lomont 71.65 43 *e*P **P 09 21 42.8 +0.1**
LOMF Lomont 71.65 43 *e*P **P 09 21 42.8 +0.1**
TOUF Mont Tournerai 71.70 47 *e*P **P 09 21 43.8 +0.6**
TOUF Mont Tournerai 71.70 47 *e*P **P 09 21 43.8 +0.6**
TOUF Mont Tournerai 71.70 47 *e*P **P 09 21 43.8 +0.6**
HINF Hinteralfeld 71.71 43 *e*P **P 09 21 42.0 -1.0**
comp=Z,25nm,0.8s
HINF Hinteralfeld 71.71 43 *e*P **P 09 21 42.0 -1.0**
HINF pmax pmax
comp=Z,25nm,0.8s
HINF Hinteralfeld 71.71 43 *e*P **P 09 21 42.0 -1.0**
comp=Z,25nm,0.8s
SBF Sospel 71.83 47 *e*P **P 09 21 42.5 -1.3**
comp=Z,69nm,0.8s
SBF Sospel 71.83 47 *e*P **P 09 21 42.5 -1.3**
SBF pmax pmax
comp=Z,69nm,0.8s
SBF Sospel 71.83 47 *e*P **P 09 21 42.5 -1.3**
comp=Z,69nm,0.8s
SENIN Lac Senin/Sane 71.89 45 *e*P **P 09 21 45.6 +1.2**
comp=Z,19nm,0.9s
MOF Molkenrain 71.90 43 *e*P **P 09 21 43.2 -1.0**
MOF Molkenrain 71.90 43 *e*P **P 09 21 43.2 -1.0**
MOF Molkenrain 71.90 43 *e*P **P 09 21 43.2 -1.0**
SAOF Saorge 71.92 47 *e*P **P 09 21 44.3 0.0**
SAOF Saorge 71.92 47 *e*P **P 09 21 44.3 0.0**
SAOF Saorge 71.92 47 *e*P **P 09 21 44.3 0.0**
ECH Echery 71.95 43 *e*P **P 09 21 44.3 -0.1**
ECH pmax pmax
comp=Z,17nm,1.0s
ECH MLR MLR
comp=Z,858nm,22.0s
ECH Echery 71.95 43 *e*P **P 09 21 44.3 -0.1**
comp=Z,17nm,1.0s
ECH LR LR
comp=Z,858nm,22.0s
ECH Echery 71.95 43 *e*P **P 09 21 44.5 +0.1**
CDF Champ du Feu 72.04 42 *e*P **P 09 21 44.0 -1.1**
comp=Z,27nm,0.8s
CDF Champ du Feu 72.04 42 *e*P **P 09 21 44.0 -1.1**
CDF pmax pmax
comp=Z,27nm,0.8s
CDF Champ du Feu 72.04 42 *e*P **P 09 21 44.0 -1.1**
comp=Z,27nm,0.8s
WTSB Winterswijk 72.09 39 *e*P **P 09 21 48.2 +3.1**
BBS Basel-Blauen 72.12 43 *e*P **P 09 21 45.6 +0.1**
BBS Basel-Blauen 72.12 43 *e*P **P 09 21 45.6 +0.1**
ALE Alert 72.36 1 P **P 09 21 45.1 -1.2**
comp=Z,233nm,0.6s,SNR=9.6
PNL Peninsula 72.38 330 *e*P **P 09 21 47.1 +0.4**
comp=Z,25nm,0.9s
LANF Langenberg 72.44 42 *e*P **P 09 21 47.3 0.0**
LANF Langenberg 72.44 42 *e*P **P 09 21 47.3 0.0**
LANF Langenberg 72.44 42 *e*P **P 09 21 47.3 0.0**
FELD Feldberg im Sc 72.48 43 *e*P **P 09 21 50.1 +2.3**
FELD Feldberg im Sc 72.48 43 *e*P **P 09 21 50.1 +2.3**
BFO Black Forest 72.74 43 *e*P **P 09 21 51.7 +2.6**
BFO MLR MLR
comp=Z,876nm,22.0s
BFO Black Forest 72.74 43 *e*P **P 09 21 51.7 +2.6**
BFO LR LR
comp=Z,876nm,22.0s
PGF Pioggiola 72.91 49 *e*P **P 09 21 49.6 -0.8**
comp=Z,42nm,0.7s
PGF Pioggiola 72.91 49 *e*P **P 09 21 49.6 -0.8**
PGF pmax pmax
comp=Z,43nm,0.7s
PGF Pioggiola 72.91 49 *e*P **P 09 21 49.6 -0.8**
comp=Z,42nm,0.7s
TNS Taunus Mts 72.96 41 *e*P **P 09 21 51.0 +0.6**
comp=Z,31nm,1.1s
TNS pmax pmax
comp=Z,31nm,1.1s
TNS Taunus Mts 72.96 41 *e*P **P 09 21 51.0 +0.6**
comp=Z,31nm,1.1s
SPAK Spaichingen-Ko 73.03 43 *e*P **P 09 21 51.4 +0.5**
KEST Kesra 73.10 56 *e*P **P 09 21 52.0 +0.4**
KEST Kesra 73.10 56 P **P 09 21 50.8 -0.8**
comp=Z,26nm,0.9s,baz=190,slow=1.2,SNR=16
VSL Villasalto 73.13 52 PFAKE 09 22 00.0 +8.4
VSL LR LR
comp=Z,914nm,21.0s
TUE Stuetta 73.31 45 *e*P **P 09 21 52.9 +0.1**
comp=Z,23nm,0.7s
TUE LR LR
comp=Z,746nm,22.0s
DAVA Damuels 73.72 44⇑ *e*P **P 09 21 55.6 +0.4**
comp=Z,24nm,0.8s,SNR=12
DAVA Damuels 73.72 44⇑ *e*P **P 09 21 55.6 +0.4**
comp=Z,24nm,0.8s
FUORN Ofenpass-Fuorn 73.95 44 *e*P **P 09 21 57.8 +1.2**
comp=Z,24nm,1.0s
MUD Monsted U'grnd 73.96 34 *i*P P 09 22 02.1 +6.0
comp=Z,16nm,0.9s
VLC Villacollemand 73.97 47 PFAKE 09 22 10.0 +14
VLC LR LR
comp=Z,509nm,20.0s
UBBA Unterbreizbach 73.99 40 *e*P **P 09 21 56.7 +0.4**
comp=Z,7.0nm,1.2s
EGAK Eagle 74.09 335 *e*P **P 09 21 56.5 -0.2**
comp=Z,23nm,0.7s
EGAK LR LR
comp=Z,1µm,21.0s
NRDL Niedersach Rie 74.16 38 *e*P **P 09 21 58.1 +0.8**
comp=Z,12nm,0.7s
RKT Rikitea 74.22 242 *e*P **P 09 21 59.9 +1.7**
comp=Z,86nm,1.3s
RKT *e*LQ LQ 09 41 38.6

comp=Z,874nm,36.5s
RKT eLR LR 09 44 47.8
comp=Z,1µm,26.0s,baz=71
CLZ Clausthal 74.28 39 *e*P **P 09 21 58.9 +0.7**
CLZ pmax pmax
comp=Z,18nm,1.0s
CLZ Clausthal 74.28 39 *e*P **P 09 21 58.9 +0.7**
comp=Z,18nm,1.0s
FETA Feichten 74.29 44⇑*e*P **P 09 21 58.9 +0.4**
comp=Z,43nm,0.8s,SNR=25
FETA Feichten 74.29 44⇑*e*P **P 09 21 58.9 +0.4**
comp=Z,43nm,0.8s
RETA Reutte 74.33 44⇑*e*P **P 09 21 59.1 +0.6**
comp=Z,13nm,1.0s
RETA Reutte 74.33 44⇑*e*P **P 09 21 59.1 +0.6**
comp=Z,13nm,1.0s
MOTA Moosalm 74.55 44⇑*e*P **P 09 22 00.0 0.0**
MOTA pmax pmax
comp=Z,27nm,0.8s
MOTA Moosalm 74.55 44⇑*e*P **P 09 21 60.0 0.0**
comp=Z,27nm,0.8s,SNR=6.7
MOTA Moosalm 74.55 44⇑*e*P **P 09 21 60.0 0.0**
comp=Z,27nm,0.8s
GRF Grafenberg Arr 74.71 41 *e*P **P 09 22 01.2 +0.5**
GRF pmax pmax
comp=Z,17nm,0.9s
GRF Grafenberg Arr 74.71 41 *e*P **P 09 22 01.2 +0.5**
comp=Z,17nm,0.9s
GRF eL L 09 49 22.9
comp=Z,716nm,21.4s
WATA Walderalm 74.87 44⇑*e*P **P 09 22 03.2 +1.3**
WATA pmax pmax
comp=Z,15nm,0.6s
WATA Walderalm 74.87 44⇑*ep*P **P 09 22 03.2 +1.3**
comp=Z,15nm,0.6s
WATA Walderalm 74.87 44⇑*e*P **P 09 22 03.2 +1.3**
comp=Z,15nm,0.6s
WTTA Wattenberg 74.91 44⇑*e*P **P 09 22 02.3 +0.2**
WTTA Wattenberg 74.91 44⇑*e*P **P 09 22 02.3 +0.2**
WTTA Wattenberg 74.91 44⇑*e*P **P 09 22 02.3 +0.2**
MENT Mentasta 74.94 333 *e*P **P 09 22 02.8 +1.1**
RAGM Ragged Mountai 75.10 330 *e*P **P 09 22 04.7 +2.0**
BMRM Bremner River 75.13 330 *e*P **P 09 22 04.7 +1.8**
DOT Dot Lake 75.18 333 *e*P **P 09 22 03.9 +0.8**
comp=Z,35nm,1.0s
NAO01 NORSAR Array S 75.29 30 *e*P **P 09 22 02.6 -1.2**
comp=Z,22nm,1.0s
PLN Plauen 75.34 40 *e*P **P 09 22 04.8 +0.5**
comp=Z,103nm,1.2s
ROTZ Rotzenmuhle 75.35 41 *e*P **P 09 22 05.3 +0.9**
comp=Z,11nm,1.1s
WERD Werda 75.44 40 *e*P **P 09 22 05.4 +0.5**
comp=Z,22nm,1.3s
GUNZ Gunzen 75.45 41 *e*P **P 09 22 05.5 +0.5**
comp=Z,11nm,1.2s
NB2 NORSAR Subarra 75.46 29 P **P 09 22 05.0 +0.2**
comp=Z,12nm,0.8s,baz=264,slow=5.9
NB2 NORSAR Subarra 75.46 29 P **P 09 22 05.0 +0.2**
baz=264,slow=5.9
NOA NORSAR Array B 75.46 29 P **P 09 22 05.2 +0.4**
NOA NORSAR Array B 75.46 29 P **P 09 22 05.2 +0.4**
comp=Z,3.0nm,0.7s,baz=266,slow=5.8,SNR=10
NOA LR LR 09 49 39.7
comp=Z,506nm,20.6s,baz=275,slow=31
WERN Wernitzgruen 75.48 41 *e*P **P 09 22 05.8 +0.7**
comp=Z,21nm,1.1s
ABTA Abfaltersbach 75.50 44⇑*e*P **P 09 22 05.9 +0.5**
comp=Z,31nm,0.8s,SNR=12
ABTA Abfaltersbach 75.50 44⇑*e*P **P 09 22 05.9 +0.5**
comp=Z,31nm,0.8s
NKC Novy Kostel 75.52 41 *e*P **P 09 22 06.1 +0.7**
NKC *e* 09 22 11.7
NKC *e* 09 22 14.9
NKC MLR MLR
comp=Z,800nm,17.0s
NKC Novy Kostel 75.52 41 *e*P **P 09 22 06.1 +0.7**
NKC *ep*P **pP 09 22 09.0 -0.3**
NKC *es*P **sP 09 22 11.7 +0.9**
NKC *e*PCP **PcP 09 22 14.9 -3.4**
NKC AMS AMS 09 49 00.0
comp=Z,800nm,17.0s
TANN Tannenbergstha 75.53 41 *e*P **P 09 22 06.2 +0.7**
comp=Z,28nm,1.3s
RJOB Jochberg 75.71 43 *e*P **P 09 22 06.8 +0.3**
comp=Z,14nm,0.9s
DIV Divide 75.71 331 *e*P P 09 22 10.5 +4.2
PAX Paxson 75.74 332 *e*P **P 09 22 07.5 +1.1**
PAX Paxson 75.74 332 *e*P **P 09 22 07.5 +1.1**
WET Wettzell 75.78 42 *e*P **P 09 22 07.5 +0.6**
WET pmax pmax
comp=Z,12nm,1.0s
WET Wettzell 75.78 42 *e*P **P 09 22 07.5 +0.6**
comp=Z,12nm,1.0s
CLL Collm 75.90 40 *e*P **P 09 22 08.1 +0.7**
comp=Z,21nm,1.0s
CLL Collm 75.90 40⇑*i*P **P 09 22 08.1 +0.7**
comp=Z,15nm,1.3s
CLL *i* (pP) **pP 09 22 13.8 +2.4**
comp=Z,20nm,1.0s
CLL *i* 09 22 16.1
CLL *e*PPP PPP 09 26 42.0
CLL *e*S **S 09 31 53.0 +3.1**
CLL *e* 09 34 48.0
CLL *e*SS **SS 09 36 42.0 0.0**
KBA Koelnbreinsper 76.08 44⇑*e*P **P 09 22 09.3 +0.5**
KBA pmax pmax
comp=Z,49nm,0.8s
KBA Koelnbreinsper 76.08 44⇑*e*P **P 09 22 09.3 +0.5**
comp=Z,49nm,0.8s,SNR=21
KBA Koelnbreinsper 76.08 44⇑*e*P **P 09 22 09.2 +0.5**
comp=Z,49nm,0.8s
FBE Freiberg 76.11 40 *e*P **P 09 22 09.5 +0.8**
comp=Z,23nm,0.9s
AQU L'Aquila 76.17 49 PFAKE 09 22 20.0 +11
AQU LR LR
comp=Z,683nm,20.0s
KHC Kasperske Hory 76.24 42 *e*P **P 09 22 10.0 +0.5**
KHC *e* 09 22 16.0
KHC *e* 09 22 18.5
KHC *e*S **S 09 31 54.7 +0.9**
KHC MLR MLR
comp=Z,700nm,25.0s
KHC Kasperske Hory 76.24 42 *e*P **P 09 22 09.6 +0.1**
comp=Z,21nm,1.0s
KHC Kasperske Hory 76.24 42 *e*P **P 09 22 10.0 +0.5**
KHC *ep*P **pP 09 22 13.2 -0.3**
KHC *es*P **sP 09 22 16.0 +1.1**
KHC *e*PCP **PcP 09 22 18.5 -3.0**
KHC *e*S **S 09 31 54.7 +0.9**
KHC AMS AMS 09 49 10.0
comp=Z,700nm,25.0s
MYKA Terra Mystica 76.28 44⇑*e*P **P 09 22 09.2 -0.6**
comp=Z,19nm,0.9s
MYKA Terra Mystica 76.28 44⇑*e*P **P 09 22 09.2 -0.6**
comp=Z,19nm,0.9s
GEC2 GERESS Array S 76.32 42 *e*P **P 09 22 09.0 -1.0**
GEC2 pmax pmax
comp=Z,27nm,0.9s
GEC2 GERESS Array S 76.32 42 *e*P **P 09 22 09.0 -1.0**
comp=Z,27nm,0.9s
GERES GERESS Array B 76.32 42 P **P 09 22 09.6 -0.5**
GERES GERESS Array B 76.32 42 P **P 09 22 09.6 -0.5**
comp=Z,10nm,0.8s,baz=262,slow=4.0,SNR=31
GERES LR LR 09 49 43.5
comp=Z,652nm,22.0s,baz=265,slow=31
TRI Trieste 76.37 45 *e*P **P 09 22 09.8 -0.5**
TRI Trieste 76.37 45 *e*P **P 09 22 09.8 -0.5**
VOY Vojsko 76.46 45 *e*P **P 09 22 11.3 +0.4**
VOY *e* 09 22 17.9
VOY *e* 09 22 27.8
BRG Berggiesshubel 76.49 40 *e*P **P 09 22 11.6 +0.7**
comp=Z,5.5nm,0.9s
BRG *e* 09 22 16.3
comp=Z,27nm,1.1s
BRG
comp=N,470nm,18.8s
BRG
comp=E,931nm,22.7s
BRG
comp=Z,1µm,22.6s
BRG Berggiesshubel 76.49 40 *e*P **P 09 22 11.5 +0.7**
comp=Z,29nm,1.3s
JAVS Javornik 76.58 45 *i* P **P 09 22 11.3 -0.2**
MOA Molln 76.70 43⇑*e*P **P 09 22 12.5 +0.4**
comp=Z,14nm,0.8s
MOA Molln 76.70 43⇑*e*P **P 09 22 12.5 +0.4**
comp=Z,14nm,0.8s
PRU Pruhonice 76.87 41 *e*P **P 09 22 13.8 +0.8**
PRU *ep*P **pP 09 22 16.8 -0.2**
PRU *es*P **sP 09 22 19.9 +1.5**
PRU *e*S **S 09 31 59.0 -1.6**
PRU AMS AMS 09 50 20.0
comp=Z,700nm,21.4s
PVCC Panska Ves 76.88 40 *e*P **P 09 22 13.5 +0.5**
PVCC *ex* x 09 22 19.9
PVCC AMS AMS 09 49 40.0
comp=Z,1µm,19.4s
OBKA Obir 76.91 45⇑*e*P **P 09 22 13.8 +0.4**
comp=Z,14nm,0.8s
OBKA Obir 76.91 45⇑*e*P **P 09 22 13.8 +0.4**
comp=Z,14nm,0.8s
COLA College 76.94 334 *e*P **P 09 22 15.9 +2.8**
COLA pmax pmax
comp=Z,16nm,0.9s
COLA MLR MLR
comp=Z,962nm,20.0s
COLA College 76.94 334 *e*P **P 09 22 15.9 +2.8**
comp=Z,16nm,0.9s
COLA LR LR
comp=Z,962nm,20.0s
SML Sawmill 76.98 331 *e*P **P 09 22 14.2 +0.7**
SML pmax pmax
comp=Z,8.0nm,1.0s
SML Sawmill 76.98 331 *e*P **P 09 22 14.2 +0.7**
comp=Z,7.9nm,1.0s
BSD Bornholm Skovb 77.12 36 *i* P **P 09 22 16.3 +2.1**
comp=Z,22nm,0.8s
BSD
comp=Z,870nm,22.0s
VISS Visnje 77.12 45 *i* P **P 09 22 15.2 +0.7**
SOKA Soboth 77.24 44⇑*e*P **P 09 22 14.7 -0.5**
comp=Z,11nm,0.8s
SOKA Soboth 77.24 44⇑*e*P **P 09 22 14.7 -0.5**
comp=Z,11nm,0.8s
PERS Pernice 77.30 44 *i* P **P 09 22 15.7 +0.2**
WDD Wield Dalam 77.30 55 PFAKE 09 22 30.0 +14
WDD LR LR
comp=Z,788nm,20.0s
MCK McKinley 77.35 333 *e*P **P 09 22 16.3 +0.9**
MCK pmax pmax
comp=Z,11nm,0.8s
MCK McKinley 77.35 333 *e*P **P 09 22 16.3 +0.9**
comp=Z,11nm,0.8s
PMR Palmer 77.35 331 *e*P **P 09 22 16.5 +1.1**
PMR pmax pmax
comp=Z,15nm,0.8s
PMR Palmer 77.35 331 *e*P **P 09 22 16.5 +1.1**
comp=Z,15nm,0.8s
BOJS Bojanci 77.42 46 *i* P **P 09 22 16.8 +0.6**
SEW Seward 77.46 329 *e*P **P 09 22 17.2 +1.2**
TREC Trest 77.49 42 *e*P **P 09 22 17.2 +0.7**
TREC *ex* x 09 22 23.2
TREC AMS AMS 09 50 30.0
comp=Z,500nm,21.1s
ARSA Arzberg 77.56 44⇑*e*P **P 09 22 17.1 +0.1**
comp=Z,7.8nm,0.6s
ARSA Arzberg 77.56 44⇑*e*P **P 09 22 17.1 +0.1**
comp=Z,7.8nm,0.6s
CONA Conrad Observa 77.77 43⇑*e*P **P 09 22 18.9 +0.7**
comp=Z,18nm,1.4s,SNR=5.9
CONA Conrad Observa 77.77 43⇑*e*P **P 09 22 18.9 +0.7**
comp=Z,18nm,1.4s
UPC Upice 77.81 40 *e*P **P 09 22 18.3 +0.1**
UPC *ep*P **pP 09 22 24.3 +2.1**
TRF Thorofare Moun 77.94 333 *e*P **P 09 22 18.7 -0.3**
KBS Kingsbay 77.95 11 *e*P **P 09 22 19.2 +0.7**
KBS pmax pmax
comp=Z,17nm,1.7s
KBS Kingsbay 77.95 11 PFAKE 09 22 30.0 +11
KBS LR LR
comp=Z,596nm,20.0s
COLD Coldfoot 78.03 337 *e*P **P 09 22 20.3 +1.1**
CUC Castrocucco 78.08 51 *e*P **P 09 22 19.4 -0.6**
comp=Z,20nm,1.0s
CUC LR LR
comp=Z,592nm,22.0s
VRAC Vranov 78.21 42⇓*i*P **P 09 22 21.5 +1.0**
CEL Celeste 78.25 53 PFAKE 09 22 30.0 +9.0
CEL LR LR
comp=Z,421nm,22.0s
ZST Bratislava 78.59 43 *e*P **P 09 22 22.3 -0.3**
ZST *ep*P **pP 09 25 19.7 -0.6**
SPU Mount Spurr 78.75 331 *e*P **P 09 22 24.1 +0.8**
SMOL Smolenice 78.80 42 *e*P **P 09 22 25.3 +1.5**
SMOL *ep*P **pP 09 25 20.2 -1.8**
PPLA Purkeypile 78.80 332 *e*P **P 09 22 23.9 +0.2**
comp=Z,41nm,1.0s
MORC Moravsky Berou 78.81 41 *e*P **P 09 22 24.3 +0.4**
MORC Moravsky Berou 78.81 41⇑*i*P **P 09 22 25.2 +1.3**
TIP Timpagrande 78.86 52 *e*P **P 09 22 22.8 -1.6**
comp=Z,85nm,1.5s
TIP LR LR
comp=Z,834nm,20.0s
KDAK Kodiak Island 79.09 327 PFAKE 09 22 40.0 +15
KDAK LR LR
comp=Z,1µm,19.0s
KDAK Kodiak Island 79.09 327 P **P 09 22 25.0 -0.1**
comp=Z,188nm,0.7s,SNR=7.4
RSO Redoubt South 79.11 330 *e*P **P 09 22 26.2 +0.7**
OKC Ostrava-Krasne 79.20 41 *e*P **P 09 22 27.2 +1.3**
OKC *e*PCP **PcP 09 22 33.0 -1.2**
OKC *e*S S 09 32 19.9 -5.8
OKC AMS AMS 09 52 20.0
comp=Z,700nm,19.2s
OHAK Old Harbor 79.49 326 *e*P **P 09 22 27.9 +0.6**
VYHS Vyhne 79.73 42 *e*P **P 09 22 28.9 0.0**
PKSM Moragy 79.75 45⇑*i*P **P 09 22 30.0 +1.0**
OJC Ojcow 80.24 41 *e*P **P 09 22 33.2 +1.6**
OJC Ojcow 80.24 41 *e*P **P 09 22 33.1 +1.6**
SVW2 Sparrevohn 80.47 330 *e*P **P 09 22 31.6 -1.0**
PSZ Piszkesteto 80.48 43 *e*P **P 09 22 32.4 -0.7**
comp=Z,7.6nm,0.8s
PSZ LR LR
comp=Z,464nm,20.0s
PSZ Piszkesteto 80.48 43⇓*i*P **P 09 22 34.4 +1.4**
TIR Tirane 81.05 50 PFAKE 09 22 50.0 +14
TIR LR LR
comp=Z,468nm,21.0s
ARCES ARCESS Array B 81.43 21 P **P 09 22 36.8 -0.7**
ARCES ARCESS Array B 81.43 21 P **P 09 22 36.8 -0.7**
comp=Z,8.8nm,0.7s,baz=254,slow=2.2,SNR=23
ARCES LR LR 09 53 34.4
comp=Z,322nm,18.6s,baz=254,slow=32
CRVS Cervenica-Dubn 81.43 42 *e*P **P 09 22 38.4 +0.4**
CRVS pmax pmax
comp=Z,8.0nm,1.0s
CRVS Cervenica-Dubn 81.43 42 *e*P **P 09 22 38.4 +0.4**
CRVS *e*PCP **PcP 09 22 44.6 +0.6**
BZS Buzias 81.87 45⇓*i*P **P 09 22 41.0 +0.6**
KEV Kevo 81.92 21 *e*P **P 09 22 40.1 0.0**
KEV pmax pmax
comp=Z,5.0nm,0.7s
KEV Kevo 81.92 21 *ep* **P 09 22 40.1 0.0**
comp=Z,4.7nm,0.7s
KOLS Kolonicke sedl 81.96 42 *e*P **P 09 22 42.5 +1.7**
KOLS pmax pmax
comp=Z,6.0nm,1.3s
KOLS Kolonicke sedl 81.96 42 *e*P **P 09 22 42.5 +1.7**
UZH Uzhgorod 82.01 42 *e*P **P 09 22 38.9 -2.1**
UZH *e* 09 22 45.9
UZH *i* 09 22 51.9
UZH *e* 09 25 43.1
UZH *es* S 09 32 49.3 -5.8
UZH *e* 09 38 08.3
SKO Skopje 82.15 49 *e*P **P 09 22 43.3 +1.3**
KWP Kalwaria Pacla 82.17 41 PFAKE 09 22 50.0 +8.1
KWP LR LR
comp=Z,877nm,21.0s
BIA Bitola 82.17 50 *e*P **P 09 22 42.1 0.0**
TRPA Tarpa 82.22 43⇓*i*P **P 09 22 43.6 +1.5**
CHGN Chignik 82.38 326 *e*P **P 09 22 42.7 -0.1**
DRGR 82.50 44⇑*i*P **P 09 22 45.5 +1.8**
FINES FINESS Array B 82.63 29 P **P 09 22 43.5 -0.5**
FINES FINESS Array B 82.63 29 P **P 09 22 43.5 -0.5**
comp=Z,3.4nm,0.5s,baz=257,slow=4.0,SNR=16
FINES LR LR 09 55 27.5
comp=Z,731nm,20.2s,baz=270,slow=33
KAF Kangasniemi 82.64 28 *e*P **P 09 22 42.5 -1.6**
KAF pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 82.64 28 *ep* **P 09 22 42.5 -1.6**
comp=Z,3.1nm,0.6s
LVV L'vov 83.00 41 *e*P **P 09 22 46.6 +0.4**
LVV *e*S **S 09 33 10.0 +4.8**
VAY Valandovo 83.07 49 *e*P **P 09 22 47.4 +0.7**
VTS Vitosha 83.38 48⇑*i*P **P 09 22 48.2 -0.3**
PMOR Pomariorio Ree 83.92 254 *e*P **P 09 22 53.3 +1.8**
comp=Z,49nm,1.1s
BUR08 Bucovina Ar. S 84.06 43 *e*P **P 09 22 52.9 +1.0**
BURAR Bucovina Array 84.08 43⇓*i*P **P 09 22 53.9 +2.0**
VOIR 84.29 45⇓*i*P **P 09 22 54.4 +1.4**
MNK Minsk 84.61 36 *e*P **P 09 22 53.0 -1.3**
APA Apatity 84.62 22⇑*e*P **P 09 22 53.0 -1.1**
MIGM Minsk 84.64 36 *e* **P 09 22 53.0 -1.4**
JOF Joensuu 84.79 27 *e*P **P 09 22 54.6 -0.4**
JOF pmax pmax
comp=Z,6.0nm,0.7s
JOF Joensuu 84.79 27 *ep* **P 09 22 54.6 -0.4**
comp=Z,6.2nm,0.7s
MLR Muntele Rosu 84.90 45⇓*i*P **P 09 22 56.7 +0.5**
TNA Tin City 85.28 336 *e*P **P 09 22 57.9 +0.5**
comp=Z,316nm,0.8s
PLOR Plostina 85.33 44⇓*i*P **P 09 22 59.5 +1.3**
VRI Vrincioaia 85.38 44⇓*i*P **P 09 22 59.2 +0.8**
PPT Papeete 86.03 251 LR LR 09 53 49.0
comp=Z,920nm,18.1s,baz=79,slow=30
PPT2 Papeete2 86.03 251 *e*LQ LQ 09 46 30.2
comp=Z,2µm,32.2s
PPT2 *e*LR LR 09 50 14.5
comp=Z,1µm,23.2s
KIEV Kiev 86.13 39 *e*P **P 09 23 01.6 -0.4**
KIEV pmax pmax
comp=Z,11nm,1.1s
KIEV MLR MLR
comp=Z,1µm,20.0s
KIEV Kiev 86.13 39 *e*P **P 09 23 01.6 -0.4**
comp=Z,11nm,1.1s
KIEV LR LR
comp=Z,1µm,20.0s
AK01 Malin Array Si 86.14 39 *e*P **P 09 23 02.0 0.0**
AK02 Malin Array Si 86.14 39 *e*P **P 09 23 02.5 +0.5**
AKASG Malin Array Be 86.14 39 P **P 09 23 02.1 +0.1**
AKASG Malin Array Be 86.14 39 P **P 09 23 02.1 +0.1**
AKASG Malin Array Be 86.14 39 P **P 09 23 02.1 +0.1**
comp=Z,2.9nm,0.9s,baz=259,slow=5.1,SNR=5.5
AKASG LR LR 09 58 31.2
comp=Z,993nm,19.8s,baz=295,slow=34
CFR Carcaliu 86.48 45⇑*i*P **P 09 23 04.3 +0.5**
TIRR Tirgusor 86.81 46 *e*P **P 09 23 04.1 -1.3**
TIRR pmax pmax
comp=Z,31nm,1.4s
TIRR Tirgusor 86.81 46 *e*P **P 09 23 04.1 -1.3**
comp=Z,31nm,1.4s
TIRR Tirgusor 86.81 46⇓*i*P **P 09 23 06.0 +0.6**
TBI Tubuai 87.13 246 *e*LQ LQ 09 46 43.5
comp=Z,1µm,34.0s
TBI *e*LR LR 09 50 39.4
comp=Z,1µm,27.8s,baz=74
GAMB Gambell 87.33 335 *e*P **P 09 23 06.9 -0.6**
comp=Z,17nm,1.1s
TSUM Tsumeb 88.29 110 PFAKE 09 23 30.0 +17
TSUM LR LR
comp=Z,710nm,19.0s
OBN Obninsk 89.39 34⇓*i*P **P 09 23 18.1 +0.6**
OBN *i* 09 23 26.1
OBN *e*PS **PS 09 35 16.6 +3.2**
OBN pmax pmax
comp=Z,11nm,1.6s
ISP Isparta 89.73 52 PFAKE 09 23 30.0 +10
ISP LR LR
comp=Z,433nm,22.0s
ANTO Ankara 90.99 49 *e*P **P 09 23 25.8 +0.4**
ANTO pmax pmax
comp=Z,11nm,0.7s
ANTO MLR MLR
comp=Z,288nm,21.0s
ANTO Ankara 90.99 49 *e*P **P 09 23 25.8 +0.4**
comp=Z,11nm,0.7s
ANTO LR LR
comp=Z,288nm,21.0s
BR131 Keskin Array S 91.65 49 *e*P **P 09 23 28.1 -0.6**
comp=Z,7.6nm,0.8s
BRTR Keskin Array B 91.65 49 P **P 09 23 28.3 -0.3**
BRTR Keskin Array B 91.65 49 P **P 09 23 28.3 -0.3**
comp=Z,6.1nm,0.9s,baz=264,slow=3.7,SNR=18
BRTR LR LR 10 01 53.6
comp=Z,161nm,21.9s,baz=40,slow=34
SNAA Sanae 91.78 163 *e*P **P 09 23 28.2 -0.1**
comp=Z,16nm,1.1s
VSR Storozhevoye 92.08 37 *e*P **P 09 23 30.2 +0.1**
VSR pmax pmax
comp=N,5.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,10.0nm,0.9s
VORD Divnogorie 92.23 37 *e*P **P 09 23 31.3 +0.5**
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s
CSS Prodhromos 92.60 54 PFAKE 09 23 40.0 +7.1
CSS LR LR
comp=Z,234nm,20.0s
ANN Anapa 92.97 44 *e*P P 09 23 40.5 +6.2
ANN pmax pmax
comp=Z,13nm,0.6s
ANN MLR MLR
comp=N,315nm,21.0s
ANN MLR MLR
comp=Z,408nm,21.0s
BILL Bilibino 93.36 342⇑*i*P **P 09 23 36.1 +0.4**
BILL *i* S **SKSac 09 34 12.4 +2.7**
BILL *i* PS PS 09 36 29.5 +33
BILL pmax pmax
comp=Z,14nm,1.0s
BILL MLR MLR
comp=Z,100nm,20.0s
BILL Bilibino 93.36 342 *e*P **P 09 23 36.0 +0.4**
comp=Z,17nm,1.1s
BILL LR LR
comp=Z,510nm,19.0s
SUR Sutherland 93.57 122 PFAKE 09 23 50.0 +12
SUR LR LR
comp=Z,878nm,22.0s
VRHR Novokhopersk 93.57 37 *e*P **P 09 23 36.8 -0.2**
VRHR pmax pmax
comp=N,10.0nm,1.4s
VRHR pmax pmax
comp=Z,10.0nm,1.4s
VRHR pmax pmax
comp=E,10.0nm,0.7s
BOSA Boshof 96.79 118 LR LR 10 04 35.4
comp=E,2µm,18.4s,baz=262,slow=34
KBZ Khabaz 97.03 43 LR LR 10 06 09.4
comp=E,239nm,21.1s,baz=309,slow=35
LSZ Lusaka 97.61 104 PFAKE 09 24 10.0 +14
LSZ LR LR
comp=Z,697nm,19.0s
MBAR Mbarara 97.76 89 PFAKE 09 24 10.0 +13
MBAR LR LR
comp=Z,438nm,20.0s
ZEI Tsey 98.05 44 *e*P Pdif 09 24 07.7 +10
ZEI pmax pmax
comp=Z,13nm,2.1s
JOHN Johnston Islan 98.85 289 PFAKE 09 24 10.0 +8.3
JOHN LR LR
comp=Z,327nm,19.0s
GNI Garni 99.62 46 PFAKE 09 24 20.0 +15
GNI LR LR
comp=Z,262nm,19.0s
QSPA South Pole Qui 100.18 180 PFAKE 09 24 20.0 +13
QSPA LR LR
comp=Z,711nm,20.0s
MAK Makhachkala 100.42 43 *e*P **Pdif 09 24 06.4 -1.8**
MAK *e* 09 37 12.5
MAK MLR MLR
comp=Z,743nm,20.0s
KMBO Kilima Mbogo 104.26 89 PFAKE 09 24 40.0 +14
KMBO LR LR
comp=Z,383nm,19.0s
SBA Scott Base 107.15 190 PFAKE 09 29 00.0
SBA LR LR
comp=Z,708nm,19.0s
BRVK Borovoye 107.27 25 PFAKE 09 29 00.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BRVK				LR	LR		
	comp=Z,575nm,21.0s						
ZALV	Zalesovo Beam	111.81	17	PKiKP	PKiKP	09 28 55.4	-0.4
ZALV	Zalesovo Beam	111.81	17	PKiKP	PKiKP	09 28 55.4	-0.4
	comp=Z,2.2nm,0.7s,baz=265,slow=0.8,SNR=7.9						
KURK	Kurchatov	112.41	23	PKiKP	PKiKP	09 28 56.8	-0.2
KURK				LR	LR		
	comp=Z,560nm,22.0s						
KURBB	Kurchatov Arra	112.45	23	PKiKP	PKiKP	09 28 56.8	-0.3
	comp=Z,0.4nm,0.5s,baz=310,slow=2.1,SNR=5.3						
FUNA	Funafuti	114.73	265	PFAKE		09 29 20.0	+18
FUNA				LR	LR		
	comp=Z,4µm,19.0s						
ABPO	Ambohimpanom	116.08	106	PFAKE		09 29 20.0	+15
ABPO				LR	LR		
	comp=Z,704nm,22.0s						
EKS2	Erkin-Say	116.38	31	PFAKE		09 29 20.0	+15
EKS2				LR	LR		
	comp=Z,766nm,20.0s						
AAK	Ala-Archa	116.76	31⇑	*i*PKIKP	PKPdf	09 29 05.3	-0.6
AAK	Ala-Archa	116.76	31	PFAKE		09 29 20.0	+14
AAK				LR	LR		
	comp=Z,548nm,20.0s						
MKAR	Makanchi Array	117.01	23	PKIKP	PKPdf	09 29 04.7	-1.4
MKAR						09 30 19.4	
MKAR	Makanchi Array	117.01	23	PKP	PKPdf	09 29 04.7	-1.4
MKAR				PP	PP	09 30 19.4	+5.0
MKAR				PKKPbc	PKKPbc	09 39 32.5	-0.1
MKAR	Makanchi Array	117.01	23	PKP	PKPdf	09 29 04.7	-1.4
	comp=Z,0.6nm,0.4s,baz=316,slow=2.5,SNR=8.4						
MKAR				PP	PP	09 30 19.4	+5.0
	comp=Z,0.9nm,0.9s,baz=343,slow=3.8,SNR=3.5						
MKAR				PKKPbc	PKKPbc	09 39 32.5	-0.1
	comp=Z,1.4nm,0.7s,baz=131,slow=5.1,SNR=13						
TKM2	Tokmak 2	117.10	30	PFAKE		09 29 20.0	+13
TKM2				LR	LR		
	comp=Z,722nm,20.0s						
TARA	Tarawa	119.25	277	PFAKE		09 29 20.0	+8.8
TARA				LR	LR		
	comp=Z,837nm,22.0s						
KSH	Kashi	119.80	32	*e*PKPbc	PKPdf	09 29 19.2	+7.4
KSH				*e*sPKP		09 29 33.5	
KSH				*e*PP	PP	09 31 02.1	+28
KSH				*e*PKS	PKSdf	09 32 54.1	+5.5
KSH				*e*SKS	SKSdf	09 36 26.0	+1.9
KSH				*e*SKKS	SKKSac	09 37 50.0	+15
KSH	Kashi	119.80	32	*e*SS	SS	09 47 39.4	+41
KSH				AMB	AMB		
	comp=Z,150nm,5.2s						
KSH				LR	LR		
	comp=N,120nm,5.6s						
KSH				LR	LR		
	comp=E,150nm,9.9s						
KSH				LR	LR		
	comp=Z,160nm,5.1s						
HIA	Hailar	120.51	355	PFAKE		09 29 30.0	+17
HIA				LR	LR		
	comp=Z,535nm,20.0s						
DRV	Dumont d'Urvil	120.69	192	L	L	09 30 00.0	
DRV				R		09 33 00.0	
DRV	Dumont d'Urvil	120.69	192	SS	SS	09 47 44.0	+35
ERM	Erimo	121.13	334	PFAKE		09 29 30.0	+16
ERM				LR	LR		
	comp=Z,330nm,21.0s						
WMQ	Urumqi	121.55	21	*e*PKP	PKPdf	09 29 16.5	+1.6
WMQ				PP	PP	09 30 52.3	+6.6
WMQ				SKS	SKSdf	09 36 27.2	+0.1
WMQ				SKKS	SKKSac	09 37 44.3	-2.1
WMQ				SS	SS	09 47 25.4	+5.1
WMQ				LR	LR		
	comp=N,580nm,20.0s						
WMQ				LR	LR		
	comp=E,590nm,25.6s						
WMQ				LR	LR		
	comp=Z,630nm,23.4s						
SONM	Songino Array	121.95	5	PKP	PKPdf	09 29 14.8	-0.9
SONM				PKKPbc	PKKPbc	09 39 12.3	-2.5
SONM	Songino Array	121.95	5	PKP	PKPdf	09 29 14.8	-0.9
	comp=Z,0.9nm,0.5s,baz=52,slow=0.3,SNR=5.8						
SONM				PKKPbc	PKKPbc	09 39 12.3	-2.5
	comp=Z,0.4nm,0.6s,baz=159,slow=4.3,SNR=3.0						
ULN	Ulaanbaatar	121.97	5	PFAKE		09 29 30.0	+14
ULN				LR	LR		
	comp=Z,415nm,20.0s						
USRK	Ussuriysk Arra	123.19	344	PKP	PKPdf	09 29 16.5	-1.5
	comp=Z,1.1nm,0.5s,baz=230,slow=0.9,SNR=4.4						
MDJ	Mudanjiang	123.42	346	PKP	PKPdf	09 29 17.4	-1.0
MDJ				AMB	AMB		
	comp=Z,22nm,4.0s						
MDJ				LR	LR		
	comp=N,460nm,28.8s						
MDJ				LR	LR		
	comp=E,310nm,28.0s						
MDJ				LR	LR		
	comp=Z,290nm,37.1s						
MDJ	Mudanjiang	123.42	346	PFAKE		09 29 30.0	+12
MDJ				LR	LR		
	comp=Z,466nm,21.0s						
CASY	Casey	123.95	179	PFAKE		09 29 30.0	+11
CASY				LR	LR		
	comp=Z,1µm,19.0s						
CN2	Changchun	125.09	349	*e*PKP	PKPdf	09 29 23.0	+1.4
CN2				PP	PP	09 31 14.8	+5.5
CN2				SS	SS	09 48 07.4	+2.8
CN2				LR	LR		
	comp=N,300nm,23.0s						
CN2				LR	LR		
	comp=E,300nm,23.0s						
CN2				LR	LR		
	comp=Z,500nm,24.0s						
DZM	Mont Dzumac	127.52	250	*e*LR	LR	10 09 30.6	
	comp=Z,628nm,27.1s						
MAJO	Matsushiro	127.81	334	PFAKE		09 29 40.0	+13
MAJO				LR	LR		
	comp=Z,293nm,22.0s						
MJAR	Matsushiro Arr	127.81	334	PKP	PKPdf	09 29 26.1	-1.0
MJAR	Matsushiro Arr	127.81	334	PKP	PKPdf	09 29 26.1	-1.0
	comp=Z,1.5nm,0.6s,baz=141,slow=0.5,SNR=8.9						
GTA	Gaotai	129.17	13	*e*PKP	PKPdf	09 29 29.6	-0.1
GTA				PP	PP	09 31 39.6	+3.1
GTA				PKS	PKSdf	09 33 05.1	-1.3
GTA				SKS	SKSdf	09 36 39.8	-1.8
GTA				SKKS	SKKSac	09 38 32.7	-2.4
GTA				SS	SS	09 48 57.4	+1.5
GTA				AMB	AMB		
	comp=Z,91nm,8.1s						
GTA				LR	LR		
	comp=N,570nm,22.6s						
GTA				LR	LR		
	comp=E,270nm,19.5s						
GTA				LR	LR		
	comp=Z,560nm,21.4s						
HHC	Hu-ho-hao-te	129.21	1	SS	SS	09 48 41.9	-14
HHC				AMB	AMB		
	comp=Z,250nm,13.3s						
HHC				LR	LR		
	comp=N,540nm,20.1s						
HHC				LR	LR		
	comp=E,890nm,21.5s						
HHC				LR	LR		
	comp=Z,740nm,20.3s						
BJI	Beijing	129.95	357	PKP	PKPdf	09 29 30.0	-1.0
BJI				LR	LR		
	comp=N,500nm,19.4s						
BJI				LR	LR		
	comp=E,130nm,19.4s						
BJI				LR	LR		
	comp=Z,450nm,30.3s						
KSRS	Korea Array	130.58	344	PKP	PKPdf	09 29 31.4	-0.8
	comp=Z,2.7nm,0.9s,baz=351,slow=0.9,SNR=9.5						
KSRS				SKPab	SKPab	09 32 55.5	-0.3
	comp=Z,8.8nm,1.2s,baz=12,slow=4.4,SNR=7.3						
KSAR	Wonju Array Be	130.60	344	PKP	PKPdf	09 29 31.4	-0.9
KSAR				SKPab	SKPab	09 32 55.5	-0.4
INCN	Inchon	130.88	346	PFAKE		09 29 50.0	+17
INCN				LR	LR		
	comp=Z,461nm,22.0s						
LZH	Lanzhou	133.18	10	*e*PKP	PKPdf	09 29 33.0	-4.5
LZH				sPKP		09 29 43.0	
LZH				LR	LR		
	comp=N,700nm,19.6s						
LZH				LR	LR		
	comp=E,240nm,13.7s						
LZH				LR	LR		
	comp=Z,500nm,18.0s						
HNR	Honiara	133.73	267	PFAKE		09 29 50.0	+11
HNR				LR	LR		
	comp=Z,416nm,20.0s						
LSA	Lhasa	135.12	27	PFAKE		09 29 50.0	+8.3
LSA				LR	LR		
	comp=Z,473nm,22.0s						
XAN	Xi'an	135.86	5	PKP	PKPdf	09 29 42.4	0.0
CD2	Chengdu	138.20	12	PKP	PKPdf	09 29 45.2	-1.6
CD2				PP	PP	09 32 37.0	+3.1
CD2				PKS	PKSdf	09 33 19.9	-3.2
CD2				SKS	SKSdf	09 36 53.0	-4.7
CD2				SKKS	SKKSac	09 39 25.9	-4.1
CD2				SS	SS	09 50 44.5	-0.4
CD2				AMB	AMB		
	comp=Z,460nm,11.2s						
CD2				LR	LR		
	comp=N,780nm,27.4s						
CD2				LR	LR		
	comp=E,510nm,25.0s						
CD2				LR	LR		
	comp=Z,500nm,22.0s						
CAN	Canberra	138.77	227	PFAKE		09 30 00.0	+12
CAN				LR	LR		
	comp=Z,479nm,20.0s						
DGAR	Diego Garcia	139.89	89	PFAKE		09 30 00.0	+10
DGAR				LR	LR		
	comp=Z,560nm,22.0s						
GYA	Guiyang	143.07	9	PKP	PKPbc	09 29 54.0	+1.5
GYA				PP	PP	09 33 07.8	+4.0
GYA				PKS	PKSdf	09 33 29.6	-2.2
GYA				SKKS		09 39 55.0	
GYA				SS	SS	09 51 41.2	-0.7
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
GYA				LR	LR		
	comp=N,140nm,22.6s						
GYA				LR	LR		
	comp=E,150nm,23.7s						
GYA				LR	LR		
	comp=Z,190nm,21.8s						
KMI	Kunming	143.52	16	PKP	PKPbc	09 29 55.2	+1.3
KMI				pPKP	PKiKP	09 29 59.1	-1.0
KMI				sPKP		09 30 01.4	
KMI				PP	PP	09 33 10.4	+3.6
KMI				SS	SS	09 51 48.3	+0.7
KMI				AMB	AMB		
	comp=Z,130nm,5.5s						
KMI				LR	LR		
	comp=N,270nm,25.6s						
KMI				LR	LR		
	comp=E,250nm,25.6s						
KMI				LR	LR		
	comp=Z,330nm,26.7s						
YHNB	Yeheng	144.40	347	PFAKE		09 30 10.0	+12
YHNB				LR	LR		
	comp=Z,484nm,20.0s						
SSLB	Suanglung	145.35	347	*e*PKPdf	PKPbc	09 29 59.0	-0.4
STKA	Stephens Creek	145.84	227	*e*PKPdf	PKPdf	09 30 00.5	+0.3
STKA				PKPbc	PKPdf	09 30 00.7	+0.4
STKA	Stephens Creek	145.84	227	PKPbc	PKPdf	09 30 00.7	+0.4
	comp=Z,27nm,0.9s,baz=113,slow=4.3,SNR=28						
PMG	Port Moresby	146.30	268	PFAKE		09 30 10.0	+6.6
PMG				LR	LR		
	comp=Z,434nm,19.0s						
CTAO	Charters Tower	146.45	249	PFAKE		09 30 10.0	+6.1
CTAO				LR	LR		
	comp=Z,427nm,20.0s						
CHTO	Chiang Mai	148.04	26	*e*PKP2	PKPbc	09 30 07.4	0.0
CHTO				MLR	MLR		
	comp=Z,283nm,20.0s						
CHTO	Chiang Mai	148.04	26	*e*PKPbc	PKPbc	09 30 07.4	0.0
CHTO				LR	LR		
	comp=Z,283nm,20.0s						
CM31	Chiang Mai Arr	148.36	26	*e*PKPbc	PKPbc	09 30 08.4	+0.2
CMAR	Chiang Mai Arr	148.36	26	PKP	PKPdf	09 30 04.8	-0.1
CMAR				PKPbc	PKPbc	09 30 08.4	+0.2
CMAR	Chiang Mai Arr	148.36	26	PKP	PKPdf	09 30 04.8	-0.1
	comp=Z,16nm,0.9s,baz=299,slow=2.1,SNR=15						
CMAR				PKPbc	PKPbc	09 30 08.4	+0.2
	comp=Z,17nm,0.9s,baz=317,slow=3.9,SNR=50						
QIZ	Qiongzhong	150.81	6	PKPbc	PKPdf	09 30 06.1	-2.6
QIZ				SS	SS	09 53 07.6	-1.7
QIZ				AMB	AMB		
	comp=Z,130nm,4.7s						
QIZ				LR	LR		
	comp=N,280nm,22.7s						
QIZ				LR	LR		
	comp=Z,350nm,21.3s						
QIZ	Qiongzhong	150.81	6	PFAKE		09 30 20.0	-1.2
QIZ				LR	LR		
	comp=Z,398nm,20.0s						
AS31	Alice Springs	155.94	233	*e*PKPdf	PKPdf	09 30 16.2	+0.2
ASAR	Alice Springs	155.94	233	PKP	PKPdf	09 30 15.7	-0.4
ASAR				PKPab	PKPab	09 30 43.5	+0.6
ASAR	Alice Springs	155.94	233	PKP	PKPdf	09 30 15.7	-0.4
	comp=Z,2.5nm,0.9s,baz=117,slow=1.5,SNR=16						
ASAR				PKPab	PKPab	09 30 43.5	+0.6
	comp=Z,6.2nm,0.8s,baz=117,slow=3.7,SNR=8.8						
NWAO	Narrogin (SRO)	157.02	189	PFAKE		09 30 30.0	+13
NWAO				LR	LR		
	comp=Z,401nm,19.0s						
WRAB	Tennant Creek	157.21	242	PFAKE		09 30 30.0	+12
WRAB				LR	LR		
	comp=Z,657nm,19.0s						
WRA	Warramunga Arr	157.22	242	PKP	PKPdf	09 30 17.6	-0.2
WRA				PKPab	PKPab	09 30 49.7	+1.1
WRA	Warramunga Arr	157.22	242	PKP	PKPdf	09 30 17.6	-0.2
	comp=Z,4.1nm,1.0s,baz=97,slow=0.9,SNR=24						
WRA				PKPab	PKPab	09 30 49.7	+1.1
	comp=Z,13nm,0.8s,baz=110,slow=3.8,SNR=17						
KULM	Kulim	160.34	39	PFAKE		09 30 30.0	+8.4
KULM				LR	LR		
	comp=Z,501nm,20.0s						
COCO	West Island	164.05	99	PFAKE		09 30 40.0	+15
COCO				LR	LR		
	comp=Z,555nm,22.0s						
MBWA	Marble Bar	167.29	210	PFAKE		09 30 40.0	+12
MBWA				LR	LR		
	comp=Z,761nm,21.0s						
KSM	Kuching	168.12	13	PFAKE		09 30 40.0	+11
KSM				LR	LR		
	comp=Z,412nm,22.0s						
KAPI	Kappang	171.54	307	PFAKE		09 30 40.0	+9.4
KAPI				LR	LR		
	comp=Z,427nm,21.0s						

MAN 04 09:19:00, 17.80N×120.19E, h27km, mb3.9, ML2.7, MS2.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.52	107	*e*P	Pn	09 19 11.8	+0.1
ABRA				*e*S	Sn	09 19 19.9	+0.3
PIP	Pasuquin	0.66	38⇑	*i*P	Pn	09 19 14.4	+0.8
PIP				*e*S	Sn	09 19 24.6	+1.5
BOLP	Bolinao	1.44	191	*e*P	Pn	09 19 24.8	+0.5
CAUP	Cauayan	1.77	118	*e*P	Pb	09 19 30.8	-1.1
PALP	Palanan	2.25	109	*e*P	Sb	09 20 07.0	-0.5

IDC ***04*** *09:27:19.0±1.9, 10.28N×66.69W, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.8/23, mbtmp3.6/6, ML6.6/1, Error ellipse: s-maj=49.9km s-min=29.7km az=15.0*
NEIC ***04*** *09:27:19.8, 10.24N×67.08W, h4km, MW4.0(CAR), After CAR.*
FUNV ***04*** *09:27:20.3, 10.21N×67.04W, h1km, MW4.2*
ISCJB ***04*** *09:27:20.4±0.4, 10.32N±0.03×67.04W±0.02, h27km±3km, mb3.6/6, Error ellipse: s-maj=5.1km s-min=3.3km az=4.1*
ISC 04 09:27:19.9±0.9**, 10.22N**±0.04×**67.04W**±0.02**, h11**km±6km**, n50, σ1.42**/71**, mb3.7**/6**, 5C-4D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOTV	Botiquin	0.25	318⇓	*e*P	Pg	09 27 25.1	-0.2
BOTV				*e*S	Sg	09 27 29.4	+0.5
OCUV	OCUMARITO	0.26	112⇓	*i*P	Pg	09 27 24.5	-0.8
OCUV				*e*S	Sg	09 27 28.7	-0.2
FDCV	FORTIN DE LA C	0.33	15⇑	*i*P	Pg	09 27 27.1	+0.3
FDCV				*e*S	Sb	09 27 32.3	-1.1
FUNV	FUNVISIS	0.34	42⇑	*i*P	Pg	09 27 26.8	0.0
FUNV				*e*S	Sb	09 27 32.3	-1.2
LLAV	El Llanito	0.34	42⇑	*i*P	Pg	09 27 26.9	+0.1
LLAV				*e*S	Sb	09 27 32.5	-1.0
BIRV	Birongo	0.80	71⇑	*e*P	Pg	09 27 35.4	0.0
BIRV				*e*S	Sb	09 27 47.4	+0.6
MERV	Las Mercedes	1.21	142	*e*P	Pn	09 27 42.6	-0.2
MERV				*e*S	Sn	09 27 59.8	+0.8
CUPV	Cœpira	1.25	97	*e*P	Pg	09 27 44.1	+0.2
CUPV				*e*S	Sg	09 28 01.2	+1.1
MAPV	Macapo	1.45	255⇓	*i*P	Pb	09 27 47.4	+0.6
MAPV				*e*S	Sg	09 28 07.3	+0.8
JACV	Jacura	1.96	296	*e*P	Pb	09 27 54.7	-0.9
TEPV	Terepaima	2.13	263	*e*P	Pn	09 27 56.8	+1.4
TEPV				*e*S	Sb	09 28 23.9	-1.1
PCRV	Puerto La Cruz	2.37	91	*e*P	Pn	09 28 00.6	+1.9
PCRV				*e*S	Sn	09 28 28.8	+1.0
PRGV	PARIAGUAN	2.77	121⇓	*e*P	Pn	09 28 04.9	+0.6
CURV	Curarigua	2.88	266	*e*P	Pn	09 28 07.0	+1.2
CURV				*e*S	Sn	09 28 40.9	+0.4
MONV	Montecano	3.35	301	*e*P	Pn	09 28 12.3	0.0
MONV				*e*S	Sn	09 28 51.0	-1.1
DABV	Dabajuro	3.60	282	*e*P	Pn	09 28 16.6	+0.9
ORIV	Oritupano	3.76	107	*e*P	Pn	09 28 18.6	+0.8
ORIV				*e*S	Sn	09 29 00.9	-1.2
CRUV	Carupano	3.77	83	*e*P	Pn	09 28 18.7	+0.7
SDV	Santo Domingo	3.78	250	Pn	Pn	09 28 17.7	-0.6
SDV				*e*Sg	Sg	09 29 18.6	-2.8
ELOV	Elorza	4.00	217	*e*P	Pn	09 28 21.3	+0.2
SOCV	Socops	4.22	243⇑	*e*P	Pn	09 28 23.9	-0.3
VIGV	El Vigia	4.48	253	*e*P	Pn	09 28 27.8	+0.1
VIGV				*e*S	Sn	09 29 18.1	-1.7
GURV	El Guri	4.61	122	*e*P	Pn	09 28 29.2	-0.3
GURV				*e*S	Sn	09 29 20.9	-2.2
GUIV	Guiria	4.76	84	*e*P	Pn	09 28 32.4	+0.8
RIOV	Rio Grande	5.59	112	*e*P	Pn	09 28 43.1	+0.2
RIOV				*e*S	Sn	09 29 43.9	-3.4
GRGR	Grenville	5.62	70	*e*Pn	Pn	09 28 43.9	+0.4
GRGR				*e*Sn	Sn	09 29 48.5	+0.5
LUEV	Luepa	7.03	128	*e*P	Pn	09 29 01.9	-1.1
CRPR	Cabo Rojo, PR	7.75	360	*e*Pn	Pn	09 29 12.8	+0.2
CRPR				*e*Sn	Sn	09 30 37.9	-2.4
OBIP	Obispado Ponce	7.79	3	*e*Pn	Pn	09 29 12.6	-0.7
CELP	Cerrillos	7.83	3	*e*Pn	Pn	09 29 13.1	-0.6
SJG	San Juan	7.90	6	*e*Pn	Pn	09 29 13.4	-1.2
SJG				*e*Sn	Sn	09 30 34.8	-9.2
SJG	San Juan	7.90	6	Pn	Pn	09 29 13.6	-1.0
	16nm,0.3s,baz=3.5,slow=22,SNR=6.3						
SJG				Sn	Sn	09 30 34.9	-9.2
	24nm,0.3s,baz=336,slow=16,SNR=12						
LSP	Las Mesas	7.91	360	*e*Pn	Pn	09 29 15.2	+0.2
LSP				*e*Sn	Sn	09 30 37.9	-6.6
MTP	Monte Pirata	7.97	10	*e*Pn	Pn	09 29 15.2	-0.5
CBYP	Canovanas	8.09	8	*e*Pn	Pn	09 29 16.3	-1.1
CBYP				*e*Sn	Sn	09 30 42.3	-6.7
STVI	Saint Thomas	8.34	14	*e*Pn	Pn	09 29 20.1	-0.7
SDDR	Presa de Saban	9.63	335	*e*Pn	Pn	09 29 40.3	+1.7
SDDR				*e*Sn	Sn	09 31 21.3	-5.6
BCIP	Isla Barro Col	12.66	266	*e*Pn	Pn	09 30 19.8	-0.2
TXAR	Lajitas Array	39.13	304	P	P	09 34 50.4	+2.6
TXAR	Lajitas Array	39.13	304	P	P	09 34 50.4	+2.6
	0.6nm,0.6s,baz=121,slow=9.0,SNR=7.0						
SCHQ	Schefferville	44.50	0	P	P	09 35 32.5	+1.3
SCHQ	Schefferville	44.50	0	P	P	09 35 32.5	+1.3
	0.8nm,0.6s,baz=204,slow=7.2,SNR=4.0						
PDAR	Pinedale Array	49.19	319	P	P	09 36 11.1	+2.7
PDAR				PcP	PcP	09 37 32.6	+1.0
PDAR	Pinedale Array	49.19	319	P	P	09 36 11.1	+2.7
	0.7nm,0.6s,baz=117,slow=12,SNR=7.4						
PDAR				PcP	PcP	09 37 32.6	+1.0
	0.3nm,0.7s,baz=111,slow=4.9,SNR=2.4						
NVAR	Mina Array Bea	53.64	310	P	P	09 36 45.5	+3.7
NVAR	Mina Array Bea	53.64	310	P	P	09 36 45.5	+3.7
	0.7nm,0.7s,baz=121,slow=7.2,SNR=6.0						
YKA	Yellowknife Ar	62.32	337	P	P	09 37 41.5	-0.6
YKA	Yellowknife Ar	62.32	337	P	P	09 37 41.4	-0.6
	0.3nm,0.6s,baz=116,slow=6.6,SNR=3.5						
TORD	Torodi Ar. Bea	67.20	80	P	P	09 38 13.6	-1.1
TORD	Torodi Ar. Bea	67.20	80	P	P	09 38 13.6	-1.1
	0.2nm,0.6s,baz=280,slow=4.8,SNR=4.6						

ISK ***04*** *09:35:47.8, 38.61N×39.66E, h11km, MD2.7*
ISCJB ***04*** *09:35:48.0±0.7, 38.62N±0.04×39.68E±0.04, h2km±8km, Error ellipse: s-maj=7.0km s-min=4.9km az=41.3*
DDA ***04*** *09:35:48.2, 38.58N×39.65E, h7km, MD2.9*
CSEM ***04*** *09:35:48.2±0.2, 38.61N×39.66E, h8km, MD2.7, Error ellipse: s-maj=5.7km s-min=3.3km az=50.0*
ISC 04 09:35:48.5±1.0**, 38.61N**±0.03×**39.66E**±0.03**, h11**km±11km**, n18, σ0.45**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTK	Pertek	0.35	324	*e*PG	Pg	09 35 55.4	-0.2
PTK				*e*SG	Sg	09 36 00.9	+0.5
PTK	Pertek	0.35	324	*e*Pg	Pg	09 35 55.4	-0.2
PTK				*e*Sg	Sg	09 36 00.9	+0.5
SVRC	Sivrice-ELAZID	0.36	231	*e*PG	Pg	09 35 55.0	-0.8
SVRC				*e*SG	Sg	09 36 01.1	+0.5
SVRC	Sivrice-ELAZID	0.36	231	*e*Pg	Pg	09 35 55.0	-0.8
SVRC				*e*Sg	Sg	09 36 01.1	+0.5
DIYA	Diyarbakir	0.77	152	*i* P	Pg	09 36 03.5	+0.1
DIYA				*i* S	Sb	09 36 14.3	-0.2
DIYA	Diyarbakir	0.77	152	*i* P	Pg	09 36 03.5	+0.1
DIYA				*i* S	Sb	09 36 14.3	-0.2
DIY	Diyarbakir	0.84	148	*e*PG	Pg	09 36 04.5	-0.2
DIY	Diyarbakir	0.84	148	*e*Pg	Pg	09 36 04.5	-0.2
ERZN	Erzincan	0.98	3	*e*PG	Pg	09 36 06.7	-0.7
MYA	Malataya	1.01	254	*e*PG	Pg	09 36 07.5	-0.4
MYA	Malataya	1.01	254	*e*Pg	Pg	09 36 07.5	-0.4
ILIC	ilic-Erzincan	1.20	315	*e*PN	Pb	09 36 11.2	-0.1
ILIC	ilic-Erzincan	1.20	315	*e*Pn	Pb	09 36 11.2	-0.1
URFA	Urfa	1.34	210	*e*PN	Pn	09 36 13.0	-0.2
URFA	Urfa	1.34	210	*e*Pn	Pn	09 36 13.0	-0.2
AKCD	Akcadag	1.40	258	*i* P	Pn	09 36 14.3	+0.3
AKCD				*i* S	Sg	09 36 34.2	+0.7
AKCD	Akcadag	1.40	258	*i* P	Pn	09 36 14.3	+0.3
AKCD				*i* S	Sg	09 36 34.2	+0.7
BEST	Besiri	1.46	119	*i* P	Pn	09 36 15.3	+0.5
BEST				*i* S	Sg	09 36 34.9	-0.5

NEIC ***04*** *09:39:19.1±1.6, 6.18S×130.34E, h54km±14km, mb4.4/3, Error ellipse: s-maj=18.1km s-min=7.4km az=58.0*
IDC ***04*** *09:39:20.4±4.2, 6.22S×130.31E, h65km±39km, mb3.9/7, mb1 4.2/9, mb1mx3.9/17, mbtmp4.0/9, ML4.7/3, Error ellipse: s-maj=44.3km s-min=15.8km az=69.0*
ISCJB ***04*** *09:39:22.2±0.3, 6.33S±0.03×130.29E±0.04, h90km, mb4.1/9, Error ellipse: s-maj=6.3km s-min=3.5km az=163.9*
AUST ***04*** *09:39:24.9, 6.48S×130.54E, h60km*
DJA ***04*** *09:39:27.2±0.3, 6°S±3°×13°0E±°, h108km±11km, M5.0/12, mB5.6/6, mb4.8/12, MLv4.9/10, Mw(mB)5.1/6*
ISC 04 09:39:23.0±0.4**, 6.38S**±0.04×**130.30E**±0.06**, h90**km**, n66, σ1.80**/61**, mb4.2**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSAI	Masohi	3.31	335	P	Pn	09 40 16.9	+4.2
AAI	Ambon	3.40	322	P	Pn	09 40 19.8	+5.9
FAKI	Fak Fak	3.94	30	P	Pn	09 40 23.9	+2.6
FAKI				S	Sn	09 41 05.7	-0.8
FAKI	Fak Fak	3.94	30	P	Pn	09 40 23.1	+1.8
	baz=3.9,SNR=169						
FAKI				S	Sn	09 41 06.5	0.0
	baz=3.9,SNR=26						
SWI	Sorong	5.56	10	P	Pn	09 40 44.6	+1.4
	87nm,0.7s,6µm1.2nm						
SWI				S	Sn	09 41 44.2	-1.6
	87nm,0.7s,6µm1.2nm						
SWI	Sorong	5.56	10	P	Pn	09 40 44.7	+1.4
	baz=5.7,SNR=33						
SWI				S	Sn	09 41 43.5	-2.3
	baz=5.7,SNR=6.9						
RKPI	Ransiki, Papua	6.19	39	P	Pn	09 40 55.6	+3.8
	328nm,0.6s,9µm3.0nm						
LBMI	Labuha	6.35	334	P	Pn	09 40 57.5	+3.5
	94nm,1.2s,2µm0.8nm						
LBMI				S	Sn	09 42 05.1	0.0
	94nm,1.2s,2µm0.8nm						
MTN	Manton Dam	6.48	173	P	Pn	09 41 00.1	+4.2
	baz=6.4,SNR=31						
MTN				S	Sn	09 42 11.7	+3.3
	baz=6.4,SNR=9.3						
KDU	Kakadu	6.63	161	P	Pn	09 41 01.4	+3.6

	baz=6.5,SNR=276						
KDU				S	Sn	09 42 13.7	+1.8
	baz=6.5,SNR=12						
TNTI	Ternate	7.68	337	P	Pn	09 41 13.5	+1.3
	75nm,0.9s,0.3nm						
BAKI	Biak	7.75	49	P	Pn	09 41 18.1	+5.0
	577nm,0.8s,5μm2.1nm						
LUWI	Luwuk	9.19	305	P	Pn	09 41 34.8	+1.9
	baz=9.5,SNR=3.5						
KNRA	Kununurra	9.37	189	P	Pn	09 41 37.0	+1.8
	baz=9.4,SNR=55						
KNRA				S	Sn	09 43 15.7	-3.1
	baz=9.4,SNR=10						
BKSI	Bulukumba	10.18	275	P	Pn	09 41 51.2	+4.9
	13nm,0.7s						
MMPI	Merauke	10.21	102	S	Sn	09 43 41.7	+2.3
	baz=10.0,SNR=5.6						
WSI	Waingapu	10.43	251	P	Pn	09 42 04.9	+15
KAPI	Kappang	10.59	277	Pn	Pn	09 41 48.2	-3.7
KAPI	Kappang	10.59	277	P	Pn	09 42 06.9	+15
SPSI	Sidrap Palu	10.76	282	P	Pn	09 42 10.8	+17
MRSI	Marisa	10.77	309	P	Pn	09 41 59.1	+4.8
	35nm,1.1s						
TTSI	Tana Toraja	10.96	287	P	Pn	09 42 10.7	+14
FITZ	Fitzroy Crossi	12.51	201	P	Pn	09 42 16.7	-1.1
FITZ				S	Sn	09 44 28.0	-7.4
FITZ	Fitzroy Crossi	12.51	201	P	Pn	09 42 16.7	-1.1
	3.9nm,0.3s,baz=33,slow=9.3,SNR=152						
FITZ				S	Sn	09 44 28.0	-7.4
	12nm,0.3s,baz=187,slow=24,SNR=7.1						
FITZ	Fitzroy Crossi	12.51	201	P	Pn	09 42 16.9	-0.9
	baz=13,SNR=43						
WRAB	Tennant Creek	14.04	164	ePn	Pn	09 42 37.8	-0.1
	24nm,0.8s						
WRAB				eSn	Sn	09 45 03.1	-9.4
WRA	Warramunga Arr	14.04	164	P	Pn	09 42 37.2	-0.8
WRA				S	Sn	09 45 05.3	-7.3
WRA	Warramunga Arr	14.04	164	P	Pn	09 42 37.2	-0.8
	3.3nm,0.3s,baz=342,slow=13,SNR=95						
WRA				S	Sn	09 45 05.3	-7.3
	14nm,0.3s,baz=344,slow=21,SNR=7.7						
KBKI	Kotabaru	14.41	282	P	P	09 42 45.6	-1.4
	26nm,1.1s						
COEN	Coen	14.73	122	P	P	09 42 50.8	+0.2
	baz=14,SNR=47						
COEN				S	Sn	09 45 22.4	-6.9
	baz=14,SNR=6.4						
BBKI	Banjar Baru	15.67	280	P	P	09 43 01.4	+0.3
QIS	Mount Isa	16.74	148	P	P	09 43 14.9	+2.1
	baz=17,SNR=18						
QIS				S	Sn	09 46 08.9	-8.9
	baz=17,SNR=5.5						
ASAR	Alice Springs	17.54	169	P	Pn	09 43 23.0	+1.2
ASAR				S	Sn	09 46 31.8	-5.3
ASAR	Alice Springs	17.54	169	P	Pn	09 43 23.0	+1.2
	2.5nm,0.3s,baz=348,slow=10,SNR=152						
ASAR				S	Sn	09 46 31.8	-5.3
	1.8nm,0.3s,baz=352,slow=27,SNR=8.3						
MBWA	Marble Bar	17.91	214	eP	Pn	09 43 27.5	+1.2
	13nm,0.8s						
MBWA				eSn	Sn	09 46 36.4	-10
MTSU	Mount Surprise	17.98	132	P	Pn	09 43 32.2	+5.0
	baz=18,SNR=14						
MTSU				S	Sn	09 46 43.1	-4.7
	baz=18,SNR=4.0						
MEEK	Meekatharra	23.02	208	P	P	09 44 22.6	+2.0
	baz=23,SNR=4.2						
BBOO	Buckleboo	26.84	169	P	P	09 44 59.9	+4.8
	baz=27,SNR=5.9						
STKA	Stephens Creek	27.48	159	P	P	09 45 02.7	+1.9
STKA	Stephens Creek	27.48	159	P	P	09 45 02.7	+1.9
	1.2nm,0.5s,baz=328,slow=12,SNR=7.9						
STKA	Stephens Creek	27.48	159	P	P	09 45 02.8	+1.9
	baz=27,SNR=7.2						
CMAR	Chiang Mai Arr	39.57	309	P	P	09 46 45.0	-0.7
CMAR	Chiang Mai Arr	39.57	309	P	P	09 46 45.0	-0.7
	2.4nm,0.5s,baz=141,slow=7.4,SNR=15						
MJAR	Matsushiro Arr	43.33	9	P	P	09 47 14.3	-1.9
MJAR	Matsushiro Arr	43.33	9	P	P	09 47 14.3	-1.9
	0.9nm,0.9s,baz=190,slow=9.8,SNR=6.4						
SONM	Songino Array	57.95	341	P	P	09 49 05.9	-0.2
SONM	Songino Array	57.95	341	P	P	09 49 05.9	-0.2
	0.8nm,0.5s,baz=158,slow=7.3,SNR=10						
MK31	Makanchi Array	67.87	327	eP	P	09 50 11.4	-0.4
MKAR	Makanchi Array	67.87	327	P	P	09 50 11.6	-0.3
MKAR	Makanchi Array	67.87	327	P	P	09 50 11.6	-0.3
	8.4nm,0.7s,baz=122,slow=8.0,SNR=87						
KZA	Kyzart	69.50	319	P	P	09 50 22.2	-0.3
	SNR=5.3						
TKM2	Tokmak 2	69.70	320	P	P	09 50 23.3	-0.1
	SNR=5.5						
AML	Almayashu	70.54	319	P	P	09 50 29.1	+0.3
	SNR=11						
USP	Ospenovka	70.57	320	P	P	09 50 28.4	-0.1
	SNR=8.8						
EKS2	Erkin-Say	70.74	319	P	P	09 50 30.1	+0.4
	SNR=5.3						
ZALV	Zalesovo Beam	71.16	334	P	P	09 50 30.7	-1.2
ZALV	Zalesovo Beam	71.16	334	P	P	09 50 30.7	-1.2
	2.2nm,0.6s,baz=117,slow=4.4,SNR=11						
KURK	Kurchatov	72.14	328	eP	P	09 50 37.1	-0.8
	7.2nm,1.0s						
VNDA	Vanda	73.03	173	P	P	09 50 43.8	+1.1
VNDA	Vanda	73.03	173	P	P	09 50 43.8	+1.1
	0.9nm,0.9s,baz=323,slow=8.1,SNR=5.5						
KKAR	Karatay Array	73.07	319	eP	P	09 50 42.8	-0.8
	5.1nm,1.0s						
BHD	Baghdad	90.06	303	ex	P	09 52 12.0	-1.1
BHD				ex	x	09 52 13.0	
BHD				ex	x	09 52 44.0	
BHD				ex	x	09 55 46.0	
BHD				ex	x	10 02 54.0	
BHD				ex	x	10 02 57.0	
BHD				ex	x	10 03 36.0	
BHD				ex	x	10 08 57.0	
TORD	Torodi Ar. Bea	128.98	282	PKP	PKPdf	09 58 20.4	-1.0
TORD	Torodi Ar. Bea	128.98	282	PKP	PKPdf	09 58 20.4	-1.0
	0.6nm,0.6s,baz=56,slow=2.0,SNR=6.5						
LPAZ	La Paz	151.02	141	PKPbc	PKPbc	09 59 07.8	+0.5
LPAZ	La Paz	151.02	141	PKPbc	PKPbc	09 59 07.8	+0.5
	1.2nm,0.8s,baz=78,slow=2.2,SNR=5.1						

*CSEM **04** 10:02:53.4±0.6, 40°.86N×33°.02E, h8km, MD2.6, Error ellipse: s-maj=16.3km s-min=12.7km az=88.0*

DDA 04 10:02:53.8, 40°.84N×32°.99E, h7km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDT	Eldivan	0.48	136	iP	Pg	10 03 02.0	-1.2
ELDT				iS	Sb	10 03 11.3	-0.9
ELDT	Eldivan	0.48	136	iP	Pg	10 03 02.0	-1.3
ELDT				iS	Sb	10 03 11.3	-0.8
ILGA	Ilgaz	0.59	68	iP	Pn	10 03 11.5	+2.6
BALT	Daday	0.76	23	iP	Pg	10 03 08.7	0.0
BALT				iS	Sg	10 03 14.7	-4.1
BALT	Daday	0.76	23	iP	Pg	10 03 08.7	+0.1
BALT				iS	Sg	10 03 14.7	-4.0
SGKT	Sivrigoynuk	0.76	250	iP	Pg	10 03 08.7	0.0
SGKT				iS	Sn	10 03 24.0	+0.9
SGKT	Sivrigoynuk	0.76	250	iP	Pg	10 03 08.7	0.0

*ISK **04** 10:03:51.3, 37°.17N×35°.97E, h5km, MD3.3*
*CSEM **04** 10:03:53.4±0.2, 37°.19N×35°.98E, h2km, MD3.3, Error ellipse: s-maj=3.9km s-min=3.4km az=33.0*
*DDA **04** 10:03:53.0, 37°.22N×35°.98E, h18km, MD3.3*
*NSSC **04** 10:03:54.9±1.6, 37°.24N×36°.34E, h84km±15km, MD1.2, ML2.7*

ISC 04 10:03:52.9±0.9, 37°.20N±0°.02×35°.96E±0°.02, h10km±8km, n75, σ1s.37/92, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.26	221	ePG	Pg	10 03 57.3	-0.7
CEYT				eSG	Sg	10 04 01.5	0.0
CEYT	Ceyhan	0.26	221	ePg	Pg	10 03 57.3	-0.7
CEYT				eSg	Sg	10 04 01.5	0.0
KOZT	Kozan	0.29	340	ePG	Pg	10 03 58.8	-0.1
KOZT				eSG	Sb	10 04 04.5	-0.8
KOZT	Kozan	0.29	340	ePg	Pg	10 03 58.8	-0.1
KOZT				eSg	Sb	10 04 04.5	-0.8
YURE	YUREGIR	0.46	215	iP	Pb	10 04 03.4	+0.3
YURE				iS	Sg	10 04 17.0	+9.1
YURE	YUREGIR	0.46	215	iP	Pb	10 04 03.4	+0.3
AYKD	Aykdinkavak	0.71	72	iP	Pb	10 04 05.5	-1.9
AYKD				iS	Sg	10 04 17.0	+1.1
COBT	Iskenderun	0.72	160	iP	Pb	10 04 07.0	-0.7
COBT				iS	Sg	10 04 18.4	+2.0
COBT	Iskenderun	0.72	160	iP	Pb	10 04 07.0	-0.7
COBT				iS	Sg	10 04 18.4	+2.0
KRTS	Karatas	0.78	217	ePG	Pb	10 04 07.2	-1.4
KRTS	Karatas	0.78	217	ePg	Pb	10 04 07.2	-1.4
KMRS	Kahramanmaras	0.81	68	ePG	Pb	10 04 07.7	-1.4
KMRS	Kahramanmaras	0.81	68	ePg	Pb	10 04 07.7	-1.4
DRWC	Darouich	0.81	135	eP	Pn	10 04 09.8	-0.7
DRWC				eS	Sn	10 04 22.7	0.0
DRWC				AML	AML	10 04 25.9	
	comp=N,274nm,0.4s						
DRWC				AML	AML	10 04 26.9	
	comp=E,871nm,0.6s						
DRWC	Darouich	0.81	135	eP	Pn	10 04 09.8	-0.7
	SNR=134						
GULE	Gulek	0.94	275	iP	Pb	10 04 11.4	-0.1
GULE				iS	Sn	10 04 25.6	-0.3
GULE	Gulek	0.94	275	iP	Pb	10 04 11.4	-0.1
GULE				iS	Sn	10 04 25.7	-0.3
KUZU	Kuzuini	0.99	115	iP	Pg	10 04 12.9	+0.9
KUZU				iS	Sn	10 04 26.9	-0.2
KUZU	Kuzuini	0.99	115	iP	Pg	10 04 12.9	+0.9
KUZU				iS	Sn	10 04 26.9	-0.2
GAZ	Gaziantep	1.00	91	ePG	Pb	10 04 11.5	-0.9
GAZ	Gaziantep	1.00	91	ePg	Pb	10 04 11.5	-0.9
HTY	Hatay	1.09	172	ePG	Pb	10 04 12.3	-1.5
HTY	Hatay	1.09	172	ePg	Pb	10 04 12.3	-1.5
YAYL	Yayladag	1.17	174	iP	Pn	10 04 14.2	-1.3
YAYL				iS	Sg	10 04 33.5	+2.8
BTCH	Batrach	1.23	161	eP	Pg	10 04 17.2	+0.6
BTCH				eS	Sn	10 04 32.6	-0.3
BTCH				AML	AML	10 04 39.5	
	comp=E,213nm,0.4s						
BTCH				AML	AML	10 04 40.9	
	comp=N,276nm,0.5s						
SARI	SarD1z-Kayseri	1.26	17	ePN	Pn	10 04 16.3	-0.3
GZT	Gaziantep	1.29	83	iP	Pb	10 04 17.4	0.0
GZT				iS	Sg	10 04 37.5	+3.0
NIG	Nigde	1.40	311	ePN	Pn	10 04 18.9	+0.2
NIG	Nigde	1.40	311	ePn	Pn	10 04 18.9	+0.2
PINB	Pinarbasi	1.51	13	iP	Pb	10 04 21.7	+0.5
PINB	Pinarbasi	1.51	13	iP	Pb	10 04 21.7	+0.5
BSTP	Nigde	1.65	298	iP	Pg	10 04 24.6	+0.1
BNN	Bunyan	1.65	357	ePN	Pb	10 04 23.4	-0.1
BNN	Bunyan	1.65	357	ePn	Pb	10 04 23.4	-0.1
WRDH	Warideh	1.73	168	eP	Pn	10 04 23.3	+0.2
WRDH				AML	AML	10 04 53.5	
	comp=N,161nm,0.5s						
WRDH				AML	AML	10 04 53.6	
	comp=E,46nm,0.3s						
WRDH	Warideh	1.73	168	eP	Pn	10 04 23.3	+0.2
	SNR=108						
AVNT	Avonos	1.80	331	iP	Pb	10 04 25.2	-0.8
AVNT				iS	Sg	10 04 50.1	-0.6
AVNT	Avonos	1.80	331	iP	Pb	10 04 25.2	-0.8
AVNT				iS	Sg	10 04 50.1	-0.6
DARE	Darende-Malaty	1.82	41	ePN	Pb	10 04 25.5	-0.9
ATAB	Bozova	1.88	81	iP	Pb	10 04 25.9	-1.5
ATAB				iS	Sb	10 04 49.7	-1.3
AKCD	Akcadag	1.90	54	iP	Pg	10 04 28.6	-0.8
AKCD				iS	Sg	10 04 54.1	0.0
AKCD	Akcadag	1.90	54	iP	Pg	10 04 28.6	-0.8
AKCD				iS	Sg	10 04 54.1	0.0
SULT	Sultanhani-AKS	2.17	298	ePN	Pn	10 04 30.8	+1.6
SULT	Sultanhani-AKS	2.17	298	ePn	Pn	10 04 30.8	+1.6
MYA	Malataya	2.25	59	ePN	Pn	10 04 31.5	+1.2
MYA	Malataya	2.25	59	ePn	Pn	10 04 31.5	+1.2
YOZ	Yozgat	2.48	349	ePN	Pn	10 04 35.1	+1.6
YOZ	Yozgat	2.48	349	ePn	Pn	10 04 35.1	+1.6
ERMK	Ermenek	2.50	258	iP	Pb	10 04 36.9	-1.1
ERMK	Ermenek	2.50	258	iP	Pb	10 04 36.9	-1.1
KAMT	Kaman	2.79	321	ePN	Pn	10 04 39.5	+1.9
KAMT	Kaman	2.79	321	ePn	Pn	10 04 39.6	+1.9
KSRV	Kasrt alli	2.79	118	eP	Pb	10 04 40.8	-2.1
KSRV				eS	Sn	10 05 11.9	+0.5
KSRV				AML	AML	10 05 31.4	
	comp=N,43nm,0.5s						
KSRV				AML	AML	10 05 32.3	
	comp=E,32nm,0.6s						
KSRV	Kasrt alli	2.79	118	eP	Pb	10 04 40.8	-2.1
	SNR=100						
KSRV				eS	Sn	10 05 11.9	+0.5
	comp=E,32nm,0.6s,SNR=100						
SVRC	Sivrice-ELAZID	2.90	65	ePN	Pn	10 04 40.8	+1.5
SVRC	Sivrice-ELAZID	2.90	65	ePn	Pn	10 04 40.8	+1.5
KONT	Konya--Tatoy	2.95	286	ePN	Pn	10 04 42.2	+2.4
KONT	Konya--Tatoy	2.95	286	ePn	Pn	10 04 42.3	+2.4
ILIC	ilic-Erzincan	3.04	42	ePN	Pn	10 04 43.0	+1.8
ILIC	ilic-Erzincan	3.04	42	ePn	Pn	10 04 43.0	+1.8
GAZI	Gazipasa	3.08	253	iP	Pn	10 04 44.1	+2.5
GAZI	Gazipasa	3.08	253	iP	Pn	10 04 44.1	+2.5
CORM	Corum	3.15	341	ePN	Pn	10 04 45.0	+2.4
CORM	Corum	3.15	341	ePn	Pn	10 04 45.0	+2.4
AFSR	Afˉar-Bala (A	3.19	316	ePN	Pn	10 04 45.4	+2.3
AFSR	Afˉar-Bala (A	3.19	316	ePn	Pn	10 04 45.4	+2.3
PTK	Pertek	3.19	57	ePN	Pn	10 04 45.0	+1.6
PTK	Pertek	3.19	57	ePn	Pn	10 04 45.0	+1.6
KELT	Kelkit	3.91	40	iP	Pg	10 05 39.3	+31
KELT				iS	Sb	10 05 46.4	-3.2
MACK	Trabzon	4.77	37	iP	Pg	10 05 42.6	+18
MACK				iS	Sn	10 05 53.0	-7.2
DDEM	Demirkent	5.82	49	iP	Pg	10 06 06.2	+22
DDEM				iS	Sn	10 06 32.9	+6.6
DBAD	Bademkaya	5.87	48	iP	Pg	10 06 06.3	+21
DBAD				iS	Sn	10 06 33.7	+6.4
DAGI	Agillar	6.03	48	iP	Pg	10 06 09.2	+21
DAGI				iS	Sn	10 06 37.7	+6.2
BHD	Baghdad	7.93	117	ex	x	10 05 49.0	
BHD				ex	x	10 06 24.0	
BHD				ex	x	10 07 20.0	
BHD				ex	x	10 08 14.0	
BHD				ex	x	10 12 26.0	
BHD	Baghdad	7.93	117	ePn	Pn	10 05 49.0	+0.8

IDC 04 10:43:36.9±4.1, 49°.92S×126°.86E, h0km, mb4.0/2, mb1 4.1/2, mb1mx3.7/14, mbtmp4.0/2, Error ellipse: s-maj=137.7km s-min=71.5km az=106.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	21.12	37	P	P	10 48 23.1	0.0
	1.3nm,0.7s,baz=197,slow=14,SNR=7.0						
ASAR	Alice Springs	26.78	14	P	P	10 49 18.4	0.0
	2.8nm,0.8s,baz=185,slow=8.3,SNR=18						
YKA	Yellowknife Ar	145.00	45	PKPbc	PKPbc	11 03 13.3	-0.8
	0.6nm,1.0s,baz=267,slow=4.0,SNR=4.6						

*IDC **04** 10:43:45.4±1.0, 13°.84N×89°.59W, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.0/23, mbtmp4.0/10, ML3.9/1, MS3.9/16, Ms1 3.9/16, ms1mx3.7/30, Error ellipse: s-maj=33.1km s-min=18.7km az=71.0*
*CASC **04** 10:43:46.5, 13°.87N×89°.71W, h0km, MD4.0, ML4.3, mb4.2(NEIC)*
*ISCJB **04** 10:43:46.2±0.5, 13°.80N±0°.04×89°.77W±0°.04, h16km±3km, mb4.1/22, MS3.9/15, Error ellipse: s-maj=8.0km s-min=4.5km az=39.2*
*NEIC **04** 10:43:51.6±1.4, 13°.93N×89°.46W, h42km±12km, mb4.2/12, MD4.0(SNET), Error ellipse: s-maj=18.1km s-min=7.2km az=58.0*
NEIC Felt [III] at Los Naranjos.

ISC 04 10:43:46.7±0.8, 13°.82N±0°.04×89°.75W±0°.03, h10km±5km, n219, σ0s.94/207, mb4.2/22, MS4.0/15, 81C-71D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONS	Sonsonate	0.09	161	⇓iP	Pg	10 43 49.5	+0.4
	comp=Z,69μm,0.4s						
SONS				eS	Sg	10 43 52.2	+1.4
SONS				AML	AML	10 43 56.4	
	comp=Z,69μm,0.4s						
SBLS	San Blas	0.12	80	⇑iP	Pg	10 43 49.4	-0.4
SBLS				eS	Sg	10 43 51.6	-0.3
RTR	El Retiro	0.12	51	⇑iP	Pg	10 43 49.0	-0.8
RTR				eS	Sg	10 43 51.8	-0.2
SNJE	San Jose	0.14	70	⇑iP	Pg	10 43 49.7	-0.4
BOQS	Boqueron	0.46	100	⇓eP	Pg	10 43 56.2	+0.4
SNET	Serv Nac Est T	0.52	105	⇓eP	Pb	10 43 57.3	-0.7
SNET				eS	Sb	10 44 05.3	-0.3
SNET				AML	AML	10 44 06.5	
	comp=Z,9μm,0.3s						
LBRS	Las Brisas	0.69	97	⇑eP	Pg	10 44 00.0	0.0
LFRS	El Faro	0.69	106	⇑eP	Pg	10 44 00.0	-0.2
SNVI	San Vicente	0.91	103	eP	Pb	10 44 04.3	-0.3
NBG	Las Nubes	0.96	323	eP	Pg	10 44 05.1	-0.2
NBG				eS	Sb	10 44 20.0	+1.4
PCG	Pacaya	1.01	304	eP	Pg	10 44 05.7	-0.6
PCG				eS	Sn	10 44 23.6	+1.9
FUG	Fuego 3	1.23	301	eP	Pn	10 44 09.2	-1.1
MRL	Marmol	1.24	2	eP	Pn	10 44 09.2	-1.1
MRL				eS	Sb	10 44 26.1	-0.5
VSM	San Miguel	1.48	105	⇑eP	Pb	10 44 14.5	-0.1
CAHU	Cacacuatique	1.49	92	⇑eP	Pn	10 44 13.5	-0.3
CAHU				eS	Sg	10 44 35.3	+0.5
BLLM	Bellamira	1.51	104	eP	Pb	10 44 14.8	-0.1
BLLM				eS	Sg	10 44 36.4	+0.9
JAT	Jato	1.90	285	eP	Pb	10 44 21.9	+0.3
JAT				eS	Sg	10 44 47.0	-0.9
CNCH	Conchagua	1.94	106	⇑eP	Pn	10 44 20.4	+0.5
TGUH	Tegucigalpa,Un	2.41	84	ePn	Pn	10 44 26.0	-0.3
TGUH	Tegucigalpa,Un	2.41	84	eP	Pn	10 44 26.9	+0.6
JTS	JuntasAbangare	5.85	126	ePn	Pn	10 45 14.6	+0.8
	comp=Z,27nm,0.8s						
TEIG	Tepich	6.53	12	Pn	Pn	10 45 22.1	-0.8
TEIG				Sn	Sn	10 46 41.5	+4.1
TEIG				Lg	Lg	10 47 13.8	
TEIG	Tepich	6.53	12	Pn	Pn	10 45 22.0	-0.8
	comp=Z,2.5nm,0.3s,baz=187,slow=17,SNR=12						
TEIG				Sn	Sn	10 46 41.5	+4.1
	baz=17,slow=19,SNR=2.8						
TEIG				Lg	Lg	10 47 13.7	
	comp=Z,7.1nm,0.3s,baz=69,slow=23,SNR=5.5						
TEIG				LR	LR	10 47 40.7	
	comp=Z,360nm,19.3s,baz=344,slow=36						
BCIP	Isla Barro Col	10.75	114	ePn	Pn	10 46 19.1	-1.8
	comp=Z,43nm,1.4s						
732A	Laxson Ranch,	17.62	329	⇓P	P	10 47 55.3	+1.8
	baz=18						
632A	Uvalde	18.17	331	⇑P	P	10 48 00.9	+1.3
	baz=18						
631A	Perdido Creek	18.48	329	⇑P	Pn	10 48 05.1	+2.0
	baz=19,SNR=7.1						
532A	Rocksprings	18.75	332	⇑P	Pn	10 48 07.5	+1.1
	baz=19						
JCT	Junction City	19.00	332	⇑P	Pn	10 48 11.1	+1.7
	baz=19						
531A	Rocksprings	19.08	330	⇑P	Pn	10 48 11.3	+0.8
	baz=19						
432A	Menard	19.33	333	⇑P	Pn	10 48 13.6	+0.1
	baz=19						
530A	J-C Ranch, Com	19.46	329	⇓P	Pn	10 48 16.8	+1.8
	baz=20,SNR=9.0						
431A	Sonora	19.54	331	⇓P	Pn	10 48 17.3	+1.3
	baz=20						
332A	Millersview	19.75	334	⇓P	Pn	10 48 18.3	-0.1
	baz=20,SNR=9.6						
628A	Black Gap, Mar	19.78	324	⇓P	Pn	10 48 19.6	+0.9
	baz=20						
529A	Stev Forest Ra	19.90	327	⇑P	P	10 48 19.7	+1.1
	baz=20						
430A	Baggett Ranch,	19.93	330	⇓P	Pn	10 48 20.3	-0.3
	baz=20						
331A	San Angelo	19.98	332	⇓P	Pn	10 48 21.1	-0.2
	baz=20,SNR=18						
627A	Terlingua Ranc	20.04	323	⇑P	Pn	10 48 22.2	+0.2
	baz=20,SNR=14						
TXAR	Lajitas Array	20.12	322	P	Pn	10 48 23.5	+0.6
TXAR	Lajitas Array	20.12	322	P	Pn	10 48 23.5	+0.6
	comp=Z,4.4nm,0.9s,baz=142,slow=10,SNR=17						
TXAR				LR	LR	10 56 23.7	
	comp=Z,90nm,20.0s,baz=0.0,slow=38						
429A	Davenport Ranc	20.13	328	⇑P	Pn	10 48 22.6	-0.4
	baz=20						
232A	Coleman	20.14	335	⇑P	P	10 48 22.3	+1.0
	baz=20,SNR=8.7						
528A	Cox Ranch, San	20.24	326	⇑P	Pn	10 48 23.8	-0.6
	baz=20						
330A	Mertzon	20.41	331	⇓P	Pn	10 48 26.1	-0.2
	baz=20,SNR=7.4						
231A	Bronte	20.47	334	⇑P	P	10 48 25.8	+1.0
	baz=21,SNR=11						
626A	Big Bend Ranch	20.55	322	⇓P	Pn	10 48 28.0	0.0
	baz=21,SNR=15						
428A	Kincaid Ranch,	20.62	327	⇓P	Pn	10 48 28.0	-0.8
	baz=21						
527A	Woodward Ranch	20.69	324	⇓P	Pn	10 48 28.8	-0.8
	baz=21,SNR=14						
230A	Sterling City	20.78	332	⇓P	P	10 48 29.0	+0.8
	baz=21,SNR=5.5						
ABTX	Abilene, Hawle	20.79	336	⇑P	P	10 48 28.6	+0.4
	baz=21,SNR=6.5						
329A	Wagon Wheel Ra	20.87	329	⇑P	P	10 48 29.6	+0.5
	baz=21						
526A	Mary Lane Ranc	20.90	323	⇓P	P	10 48 31.1	+1.5
	baz=21						
MIAR	Mount Ida	20.93	351	eP	Pn	10 48 31.4	-0.8
	comp=Z,182nm,0.6s						
427A	Hayter Ranch,	21.10	326	⇑P	P	10 48 33.5	+1.7
	baz=21						
131A	Roby	21.14	334	⇓P	P	10 48 33.5	+1.5
	baz=21						
229A	Bryant Ranch,	21.18	331	⇓P	P	10 48 34.5	+2.0
	baz=21						
328A	Wristen Ranch,	21.20	328	⇓P	P	10 48 33.9	+1.2
	baz=21,SNR=20						
426A	McDonald Obser	21.32	324	⇓P	P	10 48 35.1	+0.9
	baz=21,SNR=12						
130A	Snyder	21.32	333	⇓P	P	10 48 34.9	+1.0
	baz=21						
Z32A	Haskell	21.33	337	⇑P	P	10 48 35.3	+1.3
	baz=21,SNR=12						
SWET	Sewanee	21.58	9	P	P	10 48 36.0	-0.7
	comp=Z,7.6nm,0.9s						
Z31A	Sharp Cattle R	21.60	336	⇑P	P	10 48 37.0	+0.1
	baz=22						
129A	Stewart Farms,	21.75	331	⇑P	P	10 48 38.9	+0.3
	baz=22,SNR=10						
326A	Caldwell Ranch	21.78	325	⇑P	P	10 48 39.5	+0.5
	baz=22,SNR=6.9						
Y32A	R-V Farms, Ver	21.94	338	⇑P	P	10 48 41.0	+0.4
	baz=22						
LPIG	La Paz	21.94	301	LR	LR	10 57 07.0	
	comp=Z,54nm,18.9s,baz=125,slow=36						
227A	Bennet, Jal	21.95	328	⇑P	P	10 48 41.5	+0.7
	baz=22						
425A	Indio Mountain	21.95	323	⇓P	P	10 48 40.0	-0.9
	baz=22						
Z30A	Sanderson Ranc	21.98	334	⇑P	P	10 48 41.1	0.0
	baz=22						
128A	Castleberry Fa	22.04	330	⇑P	P	10 48 41.4	-0.3
	baz=22,SNR=11						
Z29A	Hungry Hill Ra	22.21	333	⇑P	P	10 48 43.6	+0.1
	baz=22,SNR=8.5						
Y31A	Rekieta Farm,	22.21	336	⇑P	P	10 48 44.0	+0.5
	baz=22,SNR=7.1						
WMOK	Wichita Mounta	22.37	340	eP	P	10 48 44.2	-1.0
	comp=Z,6.6nm,0.9s						
325A	Bean Ranch, Si	22.38	324	⇓P	P	10 48 45.3	-0.2
	baz=22						
Y30A	Stafford Cattl	22.39	335	⇑P	P	10 48 46.5	+1.0
	baz=22,SNR=10						
TKL	Tuckaleechee C	22.40	13	P	P	10 48 48.8	+3.3
TKL	Tuckaleechee C	22.40	13	P	P	10 48 48.8	+3.3
	comp=Z,3.0nm,0.7s,baz=176,slow=9.7,SNR=4.9						
TKL				LR	LR	10 57 56.1	
	comp=Z,343nm,20.1s,baz=54,slow=38						
226B	Tecolote Peak,	22.46	326	⇓P	P	10 48 46.9	+0.6
	baz=23,SNR=5.1						
Z28A	Tucker Farm, M	22.54	331	⇓P	P	10 48 46.6	-0.6
	baz=23						
X31A	McDonald Ranch	22.70	338	⇓P	P	10 48 48.9	+0.2
	baz=23,SNR=11						
Y29A	Porterfield Fa	22.70	334	⇓P	P	10 48 48.4	-0.5
	baz=23						
324A	Moseley Ranch,	22.72	323	⇑P	P	10 48 49.0	-0.2
	baz=23						
PARMO	Parma	22.75	360	P	P	10 48 49.4	+0.2
126A	Clayton Basin,	22.83	328	⇑P	P	10 48 49.5	-0.7
	baz=23						
225A	Deer Hill, Car	22.85	325	⇑P	P	10 48 50.0	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=23						
X30A	Coker Ranch, T	22.88	336	⇓P	P	10 48 49.5	-1.2
	baz=23						
Z27A	Tatum	22.96	330	⇑P	P	10 48 51.0	-0.6
	baz=23,SNR=8.7						
Y28A	McKinney Farm,	23.00	333	⇓P	P	10 48 51.5	-0.4
	baz=23,SNR=12						
125A	Gardner Draw,	23.18	327	⇑P	P	10 48 52.9	-0.9
	baz=23						
224A	Cornudas Mount	23.21	324	⇓P	P	10 48 53.6	-0.6
	baz=23						
X29A	Tulia	23.21	334	⇓P	P	10 48 54.0	-0.1
	baz=23,SNR=6.4						
MSTX	Muleshoe	23.29	332	⇓P	P	10 48 53.9	-1.0
	baz=23						
Z26A	Caprock	23.30	329	⇑P	P	10 48 53.7	-1.4
	baz=23						
Y27A	Causey	23.40	331	⇓P	P	10 48 55.7	-0.3
	baz=24,SNR=10						
AMTX	Amarillo	23.58	335	⇑P	P	10 48 56.9	-0.9
	baz=24						
124A	Stringfield Ra	23.64	325	⇓P	P	10 48 57.6	-1.0
	baz=24						
V31A	Spring Creek L	23.67	339	⇓P	P	10 48 58.2	-0.5
	baz=24						
Z25A	Roswell	23.69	327	⇑P	P	10 48 57.6	-1.3
	baz=24						
SIUC	Southern Illin	23.80	1	P	P	10 49 01.0	+1.2
X27A	F and S Farms,	24.00	332	⇓P	P	10 49 01.0	-0.9
	baz=24						
Z24A	Sheeppen Canyo	24.07	326	⇓P	P	10 49 02.6	0.0
	baz=24						
Y25A	Mesa, Roswell	24.18	328	⇑P	P	10 49 03.2	-0.4
	baz=24						
W27A	Bowe Ranch, En	24.33	333	⇑P	P	10 49 04.5	-0.5
	baz=24,SNR=7.5						
V28A	Channing	24.55	335	⇑P	P	10 49 07.0	0.0
	baz=25						
Y24A	Capitan	24.57	327	⇑P	P	10 49 06.9	-0.3
	baz=25						
U30A	WK&E Inc. Balk	24.64	339	⇑P	P	10 49 09.0	+1.3
	baz=25,SNR=8.9						
V27A	Dan Oppiter Fa	24.82	334	⇓P	P	10 49 09.4	+0.1
	baz=25						
T31A	Randall Ranch,	24.82	341	⇓P	P	10 49 09.7	+0.4
	baz=25						
220A	Playas Peak, P	24.90	319	⇑P	P	10 49 11.1	+0.9
	baz=25						
Y23A	Lovelace Mesa,	24.90	326	⇓P	P	10 49 10.3	+0.1
	baz=25						
Z22A	Elephant Butte	24.90	324	⇓P	P	10 49 10.3	+0.1
	baz=25						
319A	Douglas	25.04	317	⇑P	P	10 49 12.0	+0.5
	baz=25						
W25A	X Bar L Ranch,	25.10	331	⇑P	P	10 49 12.2	+0.2
	baz=25						
V26A	Tequesquite Ra	25.27	332	⇓P	P	10 49 13.5	+0.1
	baz=25						
U27A	Thompson Grove	25.38	335	⇓P	P	10 49 15.4	+0.9
	baz=26,SNR=5.2						
Y22A	Socorro	25.40	325	⇑P	P	10 49 15.0	+0.2
	baz=26						
T29A	Hugoton	25.43	338	⇓P	P	10 49 16.9	+2.1
	baz=26,SNR=5.4						
W24A	Lazy 6 Ranch,	25.56	329	⇓P	P	10 49 17.1	+1.0
	baz=26,SNR=6.5						
S30A	Montezuma	25.57	340	⇑P	P	10 49 17.0	+0.9
	baz=26						
V25A	Rancho No Teng	25.68	331	⇓P	P	10 49 17.5	+0.3
	baz=26,SNR=8.1						
U26A	Atchley Ranch,	25.75	333	⇑P	P	10 49 18.2	+0.3
	baz=26,SNR=8.9						
Z20A	Nine Sixteen R	25.76	321	⇑P	P	10 49 18.9	+0.9
	baz=26						
LAZ	Ladron	25.84	325	eP	P	10 49 19.7	+1.0
	comp=Z,1.0nm,1.0s						
Y21A	Point of Rocks	25.85	324	⇓P	P	10 49 19.2	+0.3
	baz=26						
T27A	Campo	25.89	336	⇓P	P	10 49 19.4	+0.3
	baz=26						
W23A	Werner Place,	25.89	328	⇓P	P	10 49 19.8	+0.5
	baz=26						
V24A	Rampart Ranch,	25.90	330	⇓P	P	10 49 19.8	+0.5
	baz=26						
U25A	Circle Dot Ran	26.05	332	⇓P	P	10 49 21.2	+0.6
	baz=26,SNR=6.4						
R30A	Dighton	26.10	341	⇓P	P	10 49 21.9	+1.0
	baz=26,SNR=13						
Y20A	Horse Springs,	26.19	323	⇑P	P	10 49 22.6	+0.6
	baz=26						
X21A	Alamocita Cree	26.24	325	⇑P	P	10 49 23.0	+0.6
	baz=26						
R29A	Marienthal	26.51	340	⇑P	P	10 49 25.3	+0.7
	baz=27						
T25A	Trinidad	26.66	333	⇑P	P	10 49 26.5	+0.3
	baz=27						
R28A	Tribune	26.67	339	⇑P	P	10 49 26.9	+0.9
	baz=27,SNR=6.7						
U23A	El Rito	26.83	330	⇑P	P	10 49 27.7	0.0
	baz=27,SNR=8.2						
V22A	San Miguel Ran	26.87	328	⇑P	P	10 49 27.8	-0.2
	baz=27						
R27A	Eads	26.98	337	⇓P	P	10 49 28.8	-0.1
	baz=27						
PDAR	Pinedale Array	33.53	333	P	P	10 50 28.0	+1.0
PDAR	Pinedale Array	33.53	333	P	P	10 50 28.0	+1.0
	comp=Z,0.8nm,0.8s,baz=138,slow=9.8,SNR=5.1						
HWUT	Hardware Ranch	33.56	330	eP	P	10 50 28.3	+1.1
	comp=Z,3.3nm,0.9s						
L16A	Fish Haven	33.80	330	⇓P	P	10 50 29.0	-0.3
	baz=34						
I20A	Worland	33.90	336	⇓P	P	10 50 30.1	0.0
	baz=34						
EYMN	Ely	34.06	358	eP	P	10 50 30.2	-1.0
	comp=Z,3.2nm,0.8s						
J18A	Kendall Valley	34.09	333	⇑P	P	10 50 31.0	-0.8
	baz=34						
F24A	Ekalaka	34.26	342	⇓P	P	10 50 33.0	-0.1
	baz=34						
L15A	Malad City	34.26	329	⇓P	P	10 50 32.7	-0.6
	baz=34						
J17A	Brown Place, J	34.52	333	⇓P	P	10 50 35.2	-0.3
	baz=35						
SNOW	Snow King Moun	34.62	333	eP	P	10 50 37.2	+0.8
	comp=Z,5.9nm,0.8s						
LOHW	Long Hollow	34.67	333	P	P	10 50 36.4	-0.4
	comp=Z,1.5nm,0.7s						
L14A	Malta	34.71	329	⇑P	P	10 50 37.2	+0.1
	baz=35						
SAML	Samuel	34.74	129	eP	P	10 50 35.5	-1.9
	comp=Z,3.2nm,0.7s						
AGMN	Agassiz Nation	34.75	353	eP	P	10 50 36.7	-0.5
	comp=Z,5.4nm,0.9s						
F22A	Rosebud	34.78	340	⇑P	P	10 50 38.1	+0.5
	baz=35						
K15A	Arbon	34.84	330	⇓P	P	10 50 38.3	+0.1
	baz=35						
E24A	Baker	34.86	342	⇑P	P	10 50 38.7	+0.5
	baz=35						
K14A	Jones Ranch, D	35.06	329	⇓P	P	10 50 40.5	+0.4
	baz=35,SNR=8.7						
E23A	Ismay	35.11	341	⇓P	P	10 50 40.4	+0.1
	baz=35						
NVAR	Mina Array Bea	35.21	319	P	P	10 50 45.6	+4.1
NVAR	Mina Array Bea	35.21	319	P	P	10 50 45.7	+4.1
	comp=Z,1.1nm,0.8s,baz=121,slow=8.5,SNR=9.8						
NVAR				LR	LR	11 07 09.4	
	comp=Z,222nm,18.4s,baz=232,slow=40						
D24A	Glendive	35.37	343	⇑P	P	10 50 43.0	+0.4
	baz=35						
G18A	Lazy EL Ranch,	35.61	336	⇓P	P	10 50 44.7	-0.2
	baz=36						
D23A	Lindsay	35.68	342	⇑P	P	10 50 45.1	-0.2
	baz=36						
D22A	Cohagen	35.96	341	⇓P	P	10 50 48.8	+1.1
	baz=36,SNR=6.0						
F18A	Big Timber	36.16	336	⇑P	P	10 50 49.4	0.0
	baz=36						
C23A	Lambert	36.24	342	⇑P	P	10 50 50.5	+0.5
	baz=36						
C22A	Vida	36.40	342	⇓P	P	10 50 52.2	+0.8
	baz=36						
I13A	Wildhorse Cree	36.53	330	⇑P	P	10 50 52.9	+0.1
	baz=37						
F17A	Fitzpatrick Pl	36.53	335	⇑P	P	10 50 53.0	+0.3
	baz=37						
D20A	Manuel Ranch,	36.57	339	⇓P	P	10 50 53.7	+0.8
	baz=37						
ULM	Lac du Bonnet	36.67	353	P	P	10 50 52.8	-0.9
ULM	Lac du Bonnet	36.67	353	P	P	10 50 52.8	-0.9
	comp=Z,1.8nm,0.4s,baz=176,slow=10,SNR=3.5						
ULM				LR	LR	11 08 29.8	
	comp=Z,198nm,18.4s,baz=181,slow=40						
H14A	Leadore	36.70	331	⇑P	P	10 50 54.0	-0.3
	baz=37						
G15A	Dillon	36.72	333	⇓P	P	10 50 54.1	-0.3
	baz=37						
LPAZ	La Paz	36.76	144	LR	LR	11 03 56.1	
	comp=Z,65nm,20.3s,baz=158,slow=33						
E18A	Harlowton	36.78	337	⇑P	P	10 50 54.8	0.0
	baz=37						
C21A	Desert Coulee	36.85	340	⇑P	P	10 50 55.7	+0.4
	baz=37						
D19A	Cripps Ranch,	36.90	338	⇑P	P	10 50 55.8	+0.1
	baz=37						
H13A	Challis	37.08	331	⇑P	P	10 50 57.6	+0.1
	baz=37						
H12A	Diamond D Ranc	37.36	330	⇓P	P	10 50 59.5	-0.3
	baz=38						
A22A	Carney Farms,	37.52	342	⇓P	P	10 51 01.6	+0.6
	baz=38						
B20A	Solberg Farm,	37.69	340	⇑P	P	10 51 02.9	+0.4
	baz=38						
A19A	Klindworth Far	38.35	340	⇑P	P	10 51 08.6	+0.5
	baz=38						
F12A	Elk City	38.44	331	⇓P	P	10 51 09.0	+0.1
	baz=38						
E13A	Victor	38.46	333	⇑P	P	10 51 09.3	+0.2
	baz=39						
C16A	Fuhringer Ranc	38.51	336	⇓P	P	10 51 10.0	+0.6
	baz=39						
A18A	Metzger Ranch,	38.73	339	⇓P	P	10 51 11.5	+0.4
	baz=39						
A14A	Double T Ranch	40.12	336	⇑P	P	10 51 22.9	+0.1
	baz=40						
C11A	Tepee Creek (N	40.45	332	⇑P	P	10 51 25.6	+0.1
	baz=40						
SIV	San Ignacio	41.00	135	P	P	10 51 29.7	-0.7
SIV	San Ignacio	41.00	135	P	P	10 51 29.7	-0.7
	comp=Z,3.5nm,0.9s,baz=325,slow=10,SNR=9.3						
FFC	Flin Flon	41.92	349	eP	P	10 51 37.5	+0.1
	comp=Z,6.9nm,1.5s						
SCHQ	Schefferville	44.66	19	P	P	10 51 59.3	-0.3
SCHQ	Schefferville	44.66	19	P	P	10 51 59.3	-0.3
	comp=Z,2.5nm,0.8s,baz=206,slow=6.6,SNR=5.3						
SCHQ				LR	LR	11 12 55.5	
	comp=Z,185nm,18.4s,baz=244,slow=39						
YKA	Yellowknife Ar	51.72	346	P	P	10 52 53.6	-0.4
YKA	Yellowknife Ar	51.72	346	P	P	10 52 53.6	-0.4
	comp=Z,4.6nm,0.9s,baz=145,slow=7.3,SNR=58						
RKT	Rikitea	57.51	231	eLR	LR	11 10 28.9	
	comp=Z,196nm,32.0s						
RES	Resolute Bay	60.93	358	eP	P	10 53 58.3	-1.2
	comp=Z,2.4nm,0.8s						
ILAR	Eielson Array	63.88	336	P	P	10 54 18.9	-0.6
ILAR	Eielson Array	63.88	336	P	P	10 54 18.9	-0.6
	comp=Z,1.8nm,0.9s,baz=120,slow=4.9,SNR=16						
SUMG	Summit	65.84	15	eP	P	10 54 31.0	-1.5
	comp=Z,9.8nm,1.1s						
PPT	Papeete	66.77	244	LR	LR	11 15 13.6	
	comp=Z,194nm,20.5s,baz=154,slow=28						
PPT2	Papeete2	66.77	244	eLR	LR	11 14 44.5	
	comp=Z,215nm,26.8s,baz=60						
TBI	Tubuai	69.10	238	eLR	LR	11 15 51.0	
	comp=Z,173nm,27.5s						
ESDC	Sonseca Array	78.11	52	LR	LR	11 25 48.0	
	comp=Z,88nm,18.2s,baz=220,slow=32						
NOA	NORSAR Array B	83.25	29	P	P	10 56 13.5	0.0
NOA	NORSAR Array B	83.25	29	P	P	10 56 13.5	0.0
	comp=Z,1.0nm,0.8s,baz=285,slow=5.1,SNR=3.3						
NOA				LR	LR	11 30 19.1	
	comp=Z,60nm,20.1s,baz=215,slow=34						
DBIC	Dimbokro	83.49	85	LR	LR	11 29 03.9	
	comp=Z,86nm,20.6s,baz=204,slow=33						
TORD	Torodi Ar. Bea	88.29	77	P	P	10 56 38.8	-0.6
TORD	Torodi Ar. Bea	88.29	77	P	P	10 56 38.8	-0.6
	comp=Z,0.3nm,0.8s,baz=297,slow=6.3,SNR=2.6						
TORD				LR	LR	11 33 47.6	
	comp=Z,93nm,18.2s,baz=245,slow=34						
GERES	GERESS Array B	88.34	40	LR	LR	11 34 14.7	
	comp=Z,56nm,18.9s,baz=175,slow=34						
FINES	FINESS Array B	89.72	26	LR	LR	11 42 09.2	
	comp=Z,78nm,18.8s,baz=270,slow=39						
AKASG	Malin Array Be	96.66	34	LR	LR	11 43 51.6	
	comp=Z,94nm,18.4s,baz=285,slow=37						
WRA	Warramunga Arr	137.47	256	PKP	PKPdf	11 03 12.6	+0.8
WRA	Warramunga Arr	137.47	256	PKP	PKPdf	11 03 12.6	+0.8
	comp=Z,1.5nm,0.9s,baz=100,slow=0.9,SNR=7.1						
ASAR	Alice Springs	137.66	250	PKP	PKPdf	11 03 13.6	+1.5
ASAR	Alice Springs	137.66	250	PKP	PKPdf	11 03 13.6	+1.5
	comp=Z,0.7nm,0.9s,baz=90,slow=1.9,SNR=4.5						
FITZ	Fitzroy Crossi	145.75	258	PKPbc	PKPab	11 03 27.5	+0.1
FITZ	Fitzroy Crossi	145.75	258	PKPbc	PKPab	11 03 27.5	+0.1
	comp=Z,4.9nm,0.9s,baz=114,slow=4.7,SNR=4.9						

CASC 04 10:50:41.8±1.0**, 13.̊83N×89.̊74W, h4**km±1km**, MD3.5, ML3.5, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTR	El Retiro	0.11	53	eP	Pg	10 50 44.6	+0.3
RTR				eS	Sg	10 50 47.0	+1.0
SBLS	San Blas	0.11	86	eP	Pg	10 50 44.9	+0.6
SBLS				eS	Sg	10 50 47.6	+1.5
SNJE	San Jose	0.13	74	eP	Pg	10 50 45.0	+0.3
BOQS	Boqueron	0.45	102	eP	Pg	10 50 51.7	+0.9
SNET	Serv Nac Est T	0.51	106	eP	Pb	10 50 52.7	-0.8
SNET				AML	AML	10 51 03.6	
	comp=Z,877nm,0.3s						
LFRS	El Faro	0.69	108	eP	Pg	10 50 55.7	+0.5
NBG	Las Nubes	0.96	322	eP	Pg	10 51 00.3	-0.3
NBG				eS	Sn	10 51 15.9	-0.8
MRL	Marmol	1.23	2	eP	Pg	10 51 04.7	-0.9
MRL				eS	Sn	10 51 22.8	-0.4
FUG	Fuego 3	1.24	300	eP	Pg	10 51 04.5	-1.3

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*AUST **04** 10:51:43.4, 7.̊97S×115.̊95E, h25km*
*ISCJB **04** 10:51:52.3±0.4, 8.̊30S±0.̊05×116.̊97E±0.̊03, h33km, mb3.8/5, Error ellipse: s-maj=6.9km s-min=4.3km az=170.8*
*DJA **04** 10:51:54.5±1.0, 8˚S±6˚×11˚7E±˚, h18km±13km, M4.2/9, mb4.4/2, MLv4.1/9*
*IDC **04** 10:51:56.1±2.9, 8.̊33S×117.̊17E, h49km±27km, mb3.5/6, mb1 3.8/8, mb1mx3.6/22, mbtmp3.7/8, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/36, Error ellipse: s-maj=25.6km s-min=12.8km az=64.0*
ISC 04 10:51:53.4±0.6**, 8.̊30S**±0.̊05×**116.̊94E**±0.̊04**, h35**km**, n28,** σ**2.̊25**/34**, mb3.7**/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHKI	Kahang-Kahang	1.32	267	P	Pn	10 52 13.7	-1.7
KHKI				S	Sn	10 52 32.4	+0.6
SRBI	Singaraja	1.73	277	P	Pn	10 52 20.0	-0.9
SRBI				S	Sn	10 52 41.2	-0.5
DNP	Denpasar	1.75	257	P	Pn	10 52 24.2	+2.9
DNP				S	Sn	10 52 44.1	+1.7
IGBI	Denpasar	1.85	254	P	Pn	10 52 24.1	+1.5
IGBI				S	Sn	10 52 44.0	-0.8
BLJI	Banyuglugur	3.36	279	P	Pn	10 52 44.5	+1.1
WSI	Waingapu	3.58	113	P	Pn	10 52 54.5	+8.0
WSI	Waingapu	3.58	113	P	Pn	10 52 52.0	+5.6
	baz=4.6,SNR=3.1						
KAPI	Kappang	4.29	41	P	Pn	10 52 56.7	+0.4
KAPI	Kappang	4.29	41	P	Pn	10 52 56.7	+0.4
	4.4nm,0.3s,baz=211,slow=10,SNR=16						
KAPI				S	Sn	10 53 45.9	+0.8
	9.5nm,0.3s,baz=66,slow=20,SNR=13						
KAPI				LR	LR	10 55 25.1	
	comp=Z,333nm,20.3s,baz=241,slow=50						
BKSI	Bulukumba	4.33	47	P	Pn	10 52 58.2	+1.5
SPSI	Sidrap Palu	5.14	33	P	Pn	10 53 08.5	+0.6
	16nm,0.6s,0.1nm						
MMRI	Maumere	5.25	94	P	Pn	10 53 15.0	+5.6
LUWI	Luwuk	9.26	39	S	Sn	10 55 42.6	-4.8
	baz=9.7,SNR=8.3						
FITZ	Fitzroy Crossi	12.90	140	P	Pn	10 54 53.6	-0.8
	0.6nm,0.3s,baz=325,slow=12,SNR=14						
FITZ				S	Sn	10 57 12.8	-4.0
	0.4nm,0.3s,baz=112,slow=19,SNR=4.7						
FITZ	Fitzroy Crossi	12.90	140	P	Pn	10 54 56.9	+2.5
	baz=14,SNR=7.5						
FITZ				S	Sn	10 57 13.6	-3.3
	baz=14,SNR=3.3						
KNRA	Kununurra	13.69	123	P	Pn	10 55 07.2	+2.1
	baz=15,SNR=3.5						
GIRL	Giralia	14.50	190	P	Pn	10 55 12.9	-3.2
	baz=15,SNR=6.5						
MEEK	Meekatharra	18.31	175	P	Pn	10 56 05.2	+0.4
	baz=19,SNR=12						
MEEK				S	Sn	10 59 13.9	-14
	baz=19,SNR=12						
WRA	Warramunga Arr	20.43	126	P	P	10 56 28.2	+0.3
	3.8nm,0.5s,baz=301,slow=12,SNR=69						
WRA				S	S	11 00 12.0	-3.0
	0.5nm,0.7s,baz=293,slow=24,SNR=3.7						
MORW	Morawa	20.68	182	P	Pn	10 56 40.4	+7.4
	baz=21,SNR=6.0						
MORW				S	S	11 00 16.1	-3.6
	baz=21,SNR=4.1						
ASAR	Alice Springs	22.31	135	P	P	10 56 48.2	+0.2
	2.6nm,0.8s,baz=310,slow=9.5,SNR=35						
ASAR				S	S	11 00 57.0	+5.5
	1.1nm,1.0s,baz=314,slow=26,SNR=4.2						
PALU	Palau	23.39	49	S	S	11 01 11.5	+1.4
	baz=24,SNR=8.9						
CMAR	Chiang Mai Arr	31.97	326	pP	pP	10 58 27.1	+0.7
	0.4nm,0.4s,baz=153,slow=8.1,SNR=4.9						
STKA	Stephens Creek	32.80	139	P	P	10 58 23.8	+0.3
	2.0nm,0.5s,baz=323,slow=9.7,SNR=10						
SONM	Songino Array	56.66	352	P	P	11 01 34.7	+1.4
	0.3nm,0.5s,baz=165,slow=7.4,SNR=4.3						
SONM				pP	pP	11 01 41.7	-2.2
	0.6nm,0.7s,baz=180,slow=9.6,SNR=4.7						
MKAR	Makanchi Array	62.92	334	P	P	11 02 17.6	+1.3
	0.5nm,0.9s,baz=107,slow=5.0,SNR=2.9						
MKAR				pP	pP	11 02 24.2	-2.8
	0.9nm,0.8s,baz=143,slow=7.7,SNR=7.6						
VNDA	Vanda	73.00	171	P	P	11 03 20.2	+1.1
	0.4nm,0.5s,baz=317,slow=7.2,SNR=7.6						
CPUP	Villa Florida	145.13	189	PKPbc	PKPdf	11 11 28.3	+0.3
	2.0nm,0.6s,baz=154,slow=2.5,SNR=10						

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*NEIC **04** 11:21:07.9, 37.̊68S×177.̊70E, h82km, ML4.0(WEL), After WEL.*
WEL 04 11:21:07.8±0.1**, 37.̊68S×177.̊71E, h83**km±1km**, ML3.9**/12**, 3C-10D, Error ellipse: s-maj=0.9km s-min=0.8km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	0.44	290	P*	Pn	11 21 21.1	-0.2
WIZ				S*	Sn	11 21 31.2	-0.2
WIZ	White Island	0.44	290	P*	Pn	11 21 21.1	-0.1
MXZ	Matakaoa Point	0.49	77	⇑P*	Pn	11 21 21.9	+0.2
MXZ				S*	Sn	11 21 32.6	+0.5
MXZ	Matakaoa Point	0.49	77	P*	Pn	11 21 21.9	+0.2
MXZ				S*	Sn	11 21 33.1	+1.0
PUZ	Puketiti	0.59	133	⇑PN	Pn	11 21 22.3	-0.3
PUZ				SN	Sn	11 21 33.6	-0.1
PUZ	Puketiti	0.59	133	Pn	Pn	11 21 22.3	-0.4
MWZ	Matawai	0.67	192	⇑P*	Pn	11 21 23.4	-0.1
MWZ				S*	Sn	11 21 35.5	+0.3
MWZ	Matawai	0.67	192	P*	Pn	11 21 23.4	-0.1
MWZ				S*	Sn	11 21 35.7	+0.5
URZ	Urewera	0.75	219	⇓P*	Pn	11 21 24.0	-0.2
URZ				S*	Sn	11 21 36.2	-0.2
URZ	Urewera	0.75	219	ePn	Pn	11 21 23.9	-0.2
URZ				eSn	Sn	11 21 36.4	-0.1
MARZ	Manawahe	0.88	249	P*	Pn	11 21 25.3	-0.3
MARZ	Manawahe	0.88	249	P*	Pn	11 21 25.4	-0.2
EDRZ	Edgecumbe	0.88	240	P*	Pn	11 21 25.7	0.0
EDRZ	Edgecumbe	0.88	240	P*	Pn	11 21 25.7	0.0
CNGZ	Carnagh Statio	0.90	154	PN	Pn	11 21 25.8	-0.1
CNGZ	Carnagh Statio	0.90	154	Pn	Pn	11 21 25.8	-0.1
OPRZ	Ohinepanea	0.93	259	P*	Pn	11 21 26.1	-0.1
OPRZ				S*	Sn	11 21 39.6	-0.3
OPRZ	Ohinepanea	0.93	259	P*	Pn	11 21 25.7	-0.5
OPRZ				S*	Sn	11 21 39.6	-0.3
LIRZ	Lichensteins R	1.10	252	P*	Pn	11 21 28.3	+0.1
LIRZ	Lichensteins R	1.10	252	P*	Pn	11 21 28.4	+0.2
TARZ	Mount Tarawera	1.10	239	P*	Pn	11 21 28.7	+0.4
TARZ	Mount Tarawera	1.10	239	P*	Pn	11 21 28.8	+0.4
OMRZ	Omania	1.14	247	P*	Pn	11 21 28.9	+0.1
OMRZ	Omania	1.14	247	P*	Pn	11 21 28.9	+0.1
TGRZ	Tauranga	1.15	267	P*	Pn	11 21 28.7	-0.1
TGRZ	Tauranga	1.15	267	P*	Pn	11 21 28.8	0.0
RRRZ	Republican Roa	1.15	234	P*	Pn	11 21 28.9	0.0
RRRZ	Republican Roa	1.15	234	P*	Pn	11 21 28.9	0.0
KARZ	Kaharoa	1.21	253	⇓P*	Pn	11 21 29.6	0.0
KARZ	Kaharoa	1.21	253	P*	Pn	11 21 29.6	0.0
MYRZ	Mayor Island	1.23	288	P*	Pn	11 21 30.1	+0.2
PRGZ	Paritu Road	1.25	174	PN	Pn	11 21 29.8	-0.3
PRGZ	Paritu Road	1.25	174	Pn	Pn	11 21 29.9	-0.3
PRRZ	Plateau Road	1.32	231	⇓P*	Pn	11 21 31.0	0.0
PRRZ				S*	Sn	11 21 48.9	+0.4
PRRZ	Plateau Road	1.32	231	P*	Pn	11 21 31.0	0.0
HRRZ	Handcock Road	1.33	237	P*	Pn	11 21 31.2	+0.1
HRRZ	Handcock Road	1.33	237	P*	Pn	11 21 31.2	+0.1
RAHZ	Arahi	1.33	201	PN	Pn	11 21 31.0	-0.2
RAHZ	Arahi	1.33	201	Pn	Pn	11 21 30.9	-0.2
ALRZ	Allen Road	1.40	230	⇓P*	Pn	11 21 31.9	0.0
ALRZ	Allen Road	1.40	230	P*	Pn	11 21 31.9	0.0
MHGZ	Mahia Peninsul	1.48	174	PN	Pn	11 21 32.5	-0.5
MHGZ	Mahia Peninsul	1.48	174	Pn	Pn	11 21 32.5	-0.5
NMHZ	Naumai	1.59	206	PN	Pn	11 21 34.4	0.0
NMHZ	Naumai	1.59	206	Pn	Pn	11 21 34.4	0.0
WHTZ	Whakaora	1.70	234	P*	Pn	11 21 36.4	+0.6
WHTZ	Whakaora	1.70	234	P*	Pn	11 21 36.4	+0.6
WHTZ				S*	Sn	11 21 49.7	-7.5
TOZ	Tahuroa Road	1.75	268	⇓P*	Pn	11 21 36.8	+0.4
TOZ	Tahuroa Road	1.75	268	P*	Pn	11 21 36.7	+0.3
HATZ	Hinemaiaia	1.76	226	P*	Pn	11 21 36.2	-0.4
HATZ	Hinemaiaia	1.76	226	P*	Pn	11 21 36.4	-0.3
BKZ	Black Stump Fm	1.77	212	P*	Pn	11 21 36.1	-0.6
BKZ	Black Stump Fm	1.77	212	P*	Pn	11 21 36.1	-0.6
KUZ	Kuaotunu	1.84	300	⇓PN	Pn	11 21 37.6	0.0
KUZ	Kuaotunu	1.84	300	Pn	Pn	11 21 37.6	0.0
WATZ	Wairara	1.87	236	PN	Pn	11 21 38.2	+0.2
WATZ	Wairara	1.87	236	Pn	Pn	11 21 38.2	+0.2
RATZ	Rangitukua	1.93	231	PN	Pn	11 21 39.1	+0.2
RATZ	Rangitukua	1.93	231	Pn	Pn	11 21 39.1	+0.2
MCHZ	McNeill Hill	1.94	204	Pn	Pn	11 21 38.1	-0.8
RITZ	Rihia Road	1.95	228	PN	Pn	11 21 39.4	+0.2
RITZ	Rihia Road	1.95	228	Pn	Pn	11 21 39.4	+0.2
KATZ	Kakaramea	2.05	230	PN	Pn	11 21 40.3	-0.3
KATZ	Kakaramea	2.05	230	Pn	Pn	11 21 40.4	-0.1
MKAZ	Moumakai	2.10	285	⇓PN	Pn	11 21 41.5	+0.5
MKAZ	Moumakai	2.10	285	Pn	Pn	11 21 41.5	+0.4
KRVZ	Karewarewa	2.16	228	⇓PN	Pn	11 21 41.8	-0.1
KRVZ	Karewarewa	2.16	228	Pn	Pn	11 21 41.8	-0.1
OTVZ	Oturere	2.19	227	⇓PN	Pn	11 21 42.1	-0.4
OTVZ	Oturere	2.19	227	Pn	Pn	11 21 42.1	-0.4
WTVZ	West Tongariro	2.20	229	PN	Pn	11 21 42.4	-0.1
WTVZ	West Tongariro	2.20	229	Pn	Pn	11 21 42.4	-0.1
KAHZ	Kahuranaki	2.21	197	Pn	Pn	11 21 41.2	-1.5
BHHZ	Black Hill Sta	2.22	215	PN	Pn	11 21 41.7	-1.1
BHHZ	Black Hill Sta	2.22	215	Pn	Pn	11 21 41.7	-1.1
NGZ	Ngauruhoe	2.23	227	PN	Pn	11 21 42.7	-0.3
NGZ	Ngauruhoe	2.23	227	Pn	Pn	11 21 42.7	-0.3
TUVZ	Tukino	2.27	225	PN	Pn	11 21 42.8	-0.6
TUVZ	Tukino	2.27	225	Pn	Pn	11 21 42.9	-0.6
WPVZ	Whakapapa	2.28	227	PN	Pn	11 21 43.5	-0.2
WPVZ	Whakapapa	2.28	227	Pn	Pn	11 21 43.5	-0.2
MOVZ	Moawhango	2.31	221	PN	Pn	11 21 42.9	-1.1
MOVZ	Moawhango	2.31	221	Pn	Pn	11 21 42.9	-1.1
FWVZ	Far West T-bar	2.31	226	PN	Pn	11 21 43.6	-0.7
FWVZ	Far West T-bar	2.31	226	Pn	Pn	11 21 43.6	-0.6
WNVZ	Wahianoa	2.34	224	⇓PN	Pn	11 21 43.7	-0.8
WNVZ	Wahianoa	2.34	224	Pn	Pn	11 21 43.7	-0.8
TRVZ	Turoa	2.35	226	PN	Pn	11 21 43.9	-0.8
TRVZ	Turoa	2.35	226	Pn	Pn	11 21 43.9	-0.8
HIZ	Hauiti	2.40	249	PN	Pn	11 21 46.0	+0.9
HIZ	Hauiti	2.40	249	Pn	Pn	11 21 45.7	+0.6
PXZ	Pawanui	2.44	195	PN	Pn	11 21 43.3	-2.4
PXZ	Pawanui	2.44	195	Pn	Pn	11 21 43.3	-2.4
MTVZ	Mangateitei	2.45	225	PN	Pn	11 21 45.0	-0.8
MTVZ	Mangateitei	2.45	225	Pn	Pn	11 21 45.0	-0.8
PKVZ	Pokaka	2.46	228	PN	Pn	11 21 45.7	-0.2
PKVZ	Pokaka	2.46	228	Pn	Pn	11 21 45.5	-0.5
PNHZ	Pukenui	2.53	207	PN	Pn	11 21 44.5	-2.3
PNHZ	Pukenui	2.53	207	Pn	Pn	11 21 44.6	-2.3

WPHZ	**Waipukurau**	**2.58**	**202**	PN	Pn	11 21 45.3	-2.3
RVAZ	**Riverhead Bore**	**2.66**	**289**	PN	Pn	11 21 49.4	+1.0
VRZ	**Vera Road**	**2.73**	**237**	PN	Pn	11 21 50.4	+0.9
VRZ	**Vera Road**	**2.73**	**237**	Pn	Pn	11 21 49.9	+0.4
TSZ	**Takapari Road**	**2.74**	**209**	PN	Pn	11 21 47.1	-2.6
TSZ	**Takapari Road**	**2.74**	**209**	Pn	Pn	11 21 47.1	-2.6
DVHZ	**Dannevirke**	**2.88**	**204**	PN	Pn	11 21 48.5	-3.1
DVHZ	**Dannevirke**	**2.88**	**204**	Pn	Pn	11 21 48.4	-3.2
WAZ	**Wanganui**	**2.98**	**225**	PN	Pn	11 21 52.2	-0.6
WAZ	**Wanganui**	**2.98**	**225**	Pn	Pn	11 21 52.0	-0.8
RAEZ	**Rainy Point**	**3.06**	**237**	Pn	Pn	11 21 54.7	+0.8
POWZ	**Post Office Ro**	**3.11**	**209**	PN	Pn	11 21 51.7	-2.9
POWZ	**Post Office Ro**	**3.11**	**209**	Pn	Pn	11 21 51.7	-2.9
BFZ	**Birch Farm**	**3.21**	**200**	PN	Pn	11 21 53.3	-2.7
BFZ	**Birch Farm**	**3.21**	**200**	Pn	Pn	11 21 52.8	-3.2
NEZ	**North Egmont**	**3.25**	**240**	PN	Pn	11 21 58.9	+2.2
NEZ	**North Egmont**	**3.25**	**240**	Pn	Pn	11 21 58.9	+2.2
PKE	**Pukeiti**	**3.29**	**241**	PN	Pn	11 21 58.4	+1.2
PKE	**Pukeiti**	**3.29**	**241**	Pn	Pn	11 21 58.2	+1.1
TIWZ	**Tintock**	**3.41**	**204**	PN	Pn	11 21 55.5	-3.2
TIWZ	**Tintock**	**3.41**	**204**	Pn	Pn	11 21 55.2	-3.4
MRZ	**Mangatainoka R**	**3.41**	**208**	PN	Pn	11 21 55.1	-3.6
MRZ	**Mangatainoka R**	**3.41**	**208**	Pn	Pn	11 21 55.1	-3.6
NWEZ	**Newall Road**	**3.41**	**241**	PN	Pn	11 22 01.0	+2.3
NWEZ	**Newall Road**	**3.41**	**241**	Pn	Pn	11 22 00.3	+1.6
HOWZ	**Holdsworth Sta**	**3.64**	**207**	PN	Pn	11 21 57.8	-4.0
HOWZ	**Holdsworth Sta**	**3.64**	**207**	Pn	Pn	11 21 57.8	-4.1
OGWZ	**Otaki Gorge**	**3.71**	**211**	PN	Pn	11 21 59.1	-3.6
OGWZ	**Otaki Gorge**	**3.71**	**211**	Pn	Pn	11 21 59.1	-3.6
TMWZ	**Te Maipa**	**3.71**	**202**	Pn	Pn	11 21 58.7	-4.0
KIW	**Kapiti Island**	**3.85**	**213**	PN	Pn	11 22 01.2	-3.5
KIW	**Kapiti Island**	**3.85**	**213**	Pn	Pn	11 22 01.2	-3.5
MTW	**Mount Morrison**	**3.88**	**205**	PN	Pn	11 22 01.1	-3.9
MTW	**Mount Morrison**	**3.88**	**205**	Pn	Pn	11 22 00.9	-4.1
CAW	**Cannon Point**	**3.99**	**210**	PN	Pn	11 22 02.4	-4.2
CAW	**Cannon Point**	**3.99**	**210**	Pn	Pn	11 22 02.4	-4.2
PAWZ	**Paruwai Farm**	**4.10**	**205**	PN	Pn	11 22 04.1	-4.0
PAWZ	**Paruwai Farm**	**4.10**	**205**	Pn	Pn	11 22 04.1	-4.0
OUZ	**Omahuta**	**4.12**	**305**	Pn	Pn	11 22 10.8	+2.5
DUWZ	**D'Urville Isla**	**4.29**	**222**	PN	Pn	11 22 06.8	-3.8
DUWZ	**D'Urville Isla**	**4.29**	**222**	Pn	Pn	11 22 07.0	-3.7
SNZO	**South Karori**	**4.31**	**212**	PN	Pn	11 22 06.1	-4.7
SNZO	**South Karori**	**4.31**	**212**	Pn	Pn	11 22 06.1	-4.7
BHW	**Baring Head**	**4.33**	**210**	PN	Pn	11 22 06.3	-4.8
PLWZ	**Palliser**	**4.33**	**205**	PN	Pn	11 22 06.1	-5.1
PLWZ	**Palliser**	**4.33**	**205**	Pn	Pn	11 22 06.3	-4.8
TCW	**Tory Channel**	**4.42**	**216**	PN	Pn	11 22 08.0	-4.3
TCW	**Tory Channel**	**4.42**	**216**	Pn	Pn	11 22 08.0	-4.3
TUWZ	**Tuamarina**	**4.75**	**217**	PN	Pn	11 22 12.4	-4.4
TUWZ	**Tuamarina**	**4.75**	**217**	Pn	Pn	11 22 12.1	-4.7
NNZ	**Nelson**	**4.87**	**222**	PN	Pn	11 22 14.3	-4.2
NNZ	**Nelson**	**4.87**	**222**	Pn	Pn	11 22 14.3	-4.2
BSWZ	**Blackbirch Sta**	**5.00**	**215**	PN	Pn	11 22 16.5	-3.8
BSWZ	**Blackbirch Sta**	**5.00**	**215**	Pn	Pn	11 22 15.6	-4.7
QRZ	**Quartz Range**	**5.11**	**230**	PN	Pn	11 22 18.4	-3.3
QRZ	**Quartz Range**	**5.11**	**230**	Pn	Pn	11 22 18.3	-3.4
THZ	**Tophouse**	**5.51**	**221**	PN	Pn	11 22 22.9	-4.4
THZ	**Tophouse**	**5.51**	**221**	Pn	Pn	11 22 23.1	-4.3
DSZ	**Denniston Nort**	**6.10**	**226**	PN	Pn	11 22 30.8	-4.5
DSZ	**Denniston Nort**	**6.10**	**226**	Pn	Pn	11 22 30.9	-4.5
LTZ	**Lake Taylor**	**6.58**	**218**	PN	Pn	11 22 36.0	-5.9
LTZ	**Lake Taylor**	**6.58**	**218**	Pn	Pn	11 22 36.0	-5.9
MQZ	**McQueen's Vall**	**7.14**	**211**	PN	Pn	11 22 43.1	-6.3
MQZ	**McQueen's Vall**	**7.14**	**211**	Pn	Pn	11 22 43.1	-6.4
CTZ	**Chatham Island**	**7.43**	**146**	Pn	Pn	11 22 53.8	+0.5
ODZ	**Otahua Downs**	**9.07**	**214**	PN	Pn	11 23 09.3	-6.5
ODZ	**Otahua Downs**	**9.07**	**214**	Pn	Pn	11 23 09.5	-6.3

*BJI **04** 11:46:38.3, 60°.03N×153°.09W, h74km, mB4.9/3, mb4.9/13, Ms4.9/1, Ms7 4.8/1*

*IDC **04** 11:46:39.4±1.1, 59°.84N×152°.97W, h70km±11km, mb4.0/25, mb1 4.1/32, mb1mx4.1/38, mbtmp4.0/32, MS3.2/2, Ms1 3.2/2, ms1mx2.6/50, Error ellipse: s-maj=9.6km s-min=8.6km az=96.0*

*MOS **04** 11:46:39.8±0.7, 59°.87N×152°.97W, h93km, mb4.8/21, Error ellipse: s-maj=13.4km s-min=5.8km az=81.9*

*ISCJB **04** 11:46:40.2±0.2, 59°.79N±0°.02×152°.69W±0°.04, h100km±2km, mb4.4/53, Error ellipse: s-maj=4.4km s-min=2.9km az=138.0*

*NEIC **04** 11:46:42.6, 59°.78N×152°.73W, h84km, mb4.7/18, After AEIC.*

ISC 04 11:46:41.8±0.4**, 59°.77N**±0°.03×**152°.66W**±0°.03**, h95**km±3km**, n242,** σ1**§22**/278**, mb4.6**/53**, 5C-2D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVE	**Iliamna Volcan**	**0.31**	**324**	P	**Pn**	**11 46 54.8**	**-1.1**
IVE				S	**Sn**	**11 47 04.0**	**-2.5**
OPT	**Oil Point**	**0.31**	**249**	P	**Pn**	**11 46 55.0**	**-0.8**
HOM	**Homer**	**0.52**	**101**	P	**Pn**	**11 46 57.1**	**0.0**
HOM				S	**Sn**	**11 47 09.1**	**+0.4**
AUL	**Augustine Lava**	**0.55**	**226**	P	**Pn**	**11 46 56.9**	**-0.5**
AUL				S	**Sn**	**11 47 08.1**	**-1.0**
AUP	**Augustine Pinn**	**0.56**	**224**	P	**Pn**	**11 46 57.0**	**-0.6**
AUP	**Augustine Pinn**	**0.56**	**224**	P	**Pn**	**11 46 57.0**	**-0.6**
AUNW	**Augustine NWes**	**0.57**	**227**	P	**Pn**	**11 46 56.9**	**-0.6**
AUW	**Augustine West**	**0.57**	**227**	P	**Pn**	**11 46 57.0**	**-0.6**
RSO	**Redoubt South**	**0.70**	**356**	*e*Pn	**Pn**	**11 46 58.1**	**-0.8**
DFR	**Drift River**	**0.83**	**359**	P	**Pn**	**11 46 59.4**	**-0.7**
BRLK	**Bradley Lake**	**0.90**	**89**	P	**Pn**	**11 47 00.3**	**-0.3**
BRLK				S	**Sn**	**11 47 14.5**	**-0.4**
FOSS	**Fourpeaked Sta**	**1.11**	**209**	P	**Pn**	**11 47 02.3**	**-0.7**
BKG	**Blockade Glaci**	**1.32**	**8**	P	**Pn**	**11 47 05.5**	**-0.1**
SLKM	**Skilak Lake**	**1.43**	**58**	P	**Pn**	**11 47 07.1**	**+0.2**
SLKM	**Skilak Lake**	**1.43**	**58**	P	**Pn**	**11 47 07.0**	**+0.2**
CKL	**Chakachamna La**	**1.44**	**6**	P	**Pn**	**11 47 06.8**	**-0.4**
SPU	**Mount Spurr**	**1.45**	**12**	P	**Pn**	**11 47 06.8**	**-0.3**
BGL	**Barrier Glacie**	**1.51**	**5**	P	**Pn**	**11 47 07.7**	**-0.2**
CRP	**Crater Peak**	**1.53**	**9**	P	**Pn**	**11 47 08.1**	**-0.1**
CRP				S	**Sn**	**11 47 27.9**	**-0.3**
SEW	**Seward**	**1.65**	**77**	P	**Pn**	**11 47 09.0**	**-0.6**
SEW				S	**Sn**	**11 47 29.3**	**-1.4**
KAWH	**Katmai**	**1.77**	**220**	P	**Pn**	**11 47 10.7**	**-0.5**
STLK	**Strandline Lak**	**1.79**	**13**	P	**Pn**	**11 47 11.3**	**-0.1**
KAKN	**Katmai Knife C**	**1.93**	**221**	P	**Pn**	**11 47 12.8**	**-0.4**
SVW2	**Sparrevohn**	**1.97**	**314**	P	**Pn**	**11 47 12.6**	**-1.1**
KDAK	**Kodiak Island**	**1.99**	**179**	P	**Pn**	**11 47 12.8**	**-1.1**
KDAK				S	**Sn**	**11 47 36.1**	**-2.4**
KDAK				S		11 47 36.4	
KDAK	**Kodiak Island**	**1.99**	**179**	P	**Pn**	**11 47 12.8**	**-1.1**
	140nm,0.3s,baz=13,slow=12,SNR=511						
KDAK				S	**Sn**	**11 47 36.1**	**-2.4**
	100nm,0.3s,baz=204,slow=20,SNR=9.0						
KCE	**Katmai Mt Cerb**	**2.01**	**222**	P	**Pn**	**11 47 14.5**	**+0.2**
KABU	**Katmai Buttres**	**2.02**	**223**	P	**Pn**	**11 47 14.3**	**-0.2**
KABR	**Katmai Barrier**	**2.03**	**217**	P	**Pn**	**11 47 14.2**	**-0.4**
KELA	**Mount Kelaz**	**2.07**	**231**	P	**Pn**	**11 47 14.6**	**-0.5**
SKT	**Skwentna**	**2.29**	**13**	P	**Pn**	**11 47 17.6**	**-0.3**
PMR	**Palmer**	**2.52**	**42**	P	**Pn**	**11 47 20.2**	**-0.7**
PMR				S	**Sn**	**11 47 48.5**	**-2.5**
PMR	**Palmer**	**2.52**	**42**	P	**Pn**	**11 47 20.2**	**-0.7**
PMR				S	**Sn**	**11 47 48.5**	**-2.5**
OHAK	**Old Harbor**	**2.57**	**188**	P	**Pn**	**11 47 20.2**	**-1.5**
OHAK				S	**Sn**	**11 47 49.2**	**-3.0**
TRAP	**Trapper Creek**	**2.83**	**23**	P	**Pn**	**11 47 25.2**	**+0.1**
SML	**Sawmill**	**2.95**	**44**	P	**Pn**	**11 47 26.5**	**-0.1**
SML				S	**Sn**	**11 47 59.8**	**-1.5**
SML	**Sawmill**	**2.95**	**44**	P	**Pn**	**11 47 26.5**	**-0.1**
SML				S	**Sn**	**11 47 59.8**	**-1.5**
PPLA	**Purkeypile**	**3.15**	**4**	P	**Pn**	**11 47 29.9**	**+0.4**
MID	**Middleton Isla**	**3.23**	**93**	P	**Pn**	**11 47 30.2**	**-0.1**
MID	**Middleton Isla**	**3.23**	**93**	P	**Pn**	**11 47 30.2**	**-0.1**
VLZ	**Valdez**	**3.42**	**64**	P	**Pn**	**11 47 32.2**	**-0.7**
VLZ				S	**Sn**	**11 48 10.3**	**-2.2**
EYAK	**Cordova Ski Ar**	**3.54**	**74**	P	**Pn**	**11 47 33.2**	**-1.3**
TT01	**Tatalina**	**3.54**	**334**	P	**Pn**	**11 47 34.0**	**-0.7**
DIV	**Divide**	**3.67**	**65**	P	**Pn**	**11 47 35.1**	**-1.3**
TRF	**Thorofare Moun**	**3.87**	**16**	P	**Pn**	**11 47 38.2**	**-1.0**
GOAT	**Goat Mountain**	**4.04**	**75**	P	**Pn**	**11 47 40.4**	**-1.1**
RAGM	**Ragged Mountai**	**4.05**	**78**	*e*Pn	**Pn**	**11 47 40.2**	**-1.2**
ANNW	**Aniakchak Nort**	**4.06**	**229**	P	**Pn**	**11 47 41.9**	**+0.3**
RND	**Reindeer**	**4.08**	**25**	P	**Pn**	**11 47 42.1**	**+0.2**
RND	**Reindeer**	**4.08**	**25**	P	**Pn**	**11 47 42.1**	**+0.2**
BMRM	**Bremner River**	**4.18**	**70**	P	**Pn**	**11 47 42.0**	**-1.2**
DHY	**Denali Highway**	**4.18**	**35**	P	**Pn**	**11 47 43.0**	**-0.4**
MCK	**McKinley**	**4.36**	**22**	P	**Pn**	**11 47 45.7**	**+0.1**
MCK	**McKinley**	**4.36**	**22**	P	**Pn**	**11 47 45.7**	**+0.1**
HARP	**HAARP**	**4.50**	**51**	P	**Pn**	**11 47 47.5**	**-0.1**
CHGN	**Chignik**	**4.63**	**224**	*e*Pn	**Pn**	**11 47 49.5**	**+0.2**
PAX	**Paxson**	**4.72**	**44**	P	**Pn**	**11 47 50.4**	**-0.2**
PAX	**Paxson**	**4.72**	**44**	P	**Pn**	**11 47 50.4**	**-0.2**
VRDI	**Verde Repeater**	**4.78**	**68**	P	**Pn**	**11 47 50.5**	**-1.1**
VNHG	**Veniaminof 1**	**4.96**	**227**	P	**Pn**	**11 47 54.4**	**+0.5**
NEA	**Nenana**	**5.11**	**18**	P	**Pn**	**11 47 55.5**	**-0.3**
DDM	**Donnelly Dome**	**5.16**	**36**	P	**Pn**	**11 47 57.0**	**+0.4**
WRH	**Wood River Hil**	**5.18**	**22**	P	**Pn**	**11 47 56.0**	**-0.8**
KIAG	**Kiagna River**	**5.25**	**73**	P	**Pn**	**11 47 58.0**	**+0.2**
BALM	**Baldy**	**5.27**	**72**	P	**Pn**	**11 47 58.0**	**-0.1**
BALM	**Baldy**	**5.27**	**72**	P	**Pn**	**11 47 58.0**	**-0.1**
MENT	**Mentasta**	**5.35**	**50**	*e*Pn	**Pn**	**11 47 59.0**	**-0.1**
MLY	**Manley**	**5.36**	**9**	P	**Pn**	**11 47 59.6**	**+0.4**
HDA	**Harding Lake**	**5.37**	**27**	P	**Pn**	**11 47 59.5**	**+0.1**
MESA	**MESA**	**5.39**	**81**	P	**Pn**	**11 47 59.4**	**-0.5**
CCB	**Clear Creek Bu**	**5.40**	**23**	P	**Pn**	**11 47 58.8**	**-0.9**
COLA	**College**	**5.59**	**22**	P	**Pn**	**11 48 01.8**	**-0.5**
COLA	**College**	**5.59**	**22**	P	**Pn**	**11 48 01.8**	**-0.5**
BARN	**Barnard Glacie**	**5.60**	**72**	P	**Pn**	**11 48 03.1**	**+0.4**
MDM	**Murphy Dome**	**5.60**	**20**	P	**Pn**	**11 48 02.3**	**-0.2**
DOT	**Dot Lake**	**5.64**	**43**	P	**Pn**	**11 48 03.4**	**+0.3**
IL1	**Eielson Array**	**5.70**	**26**	P	**Pn**	**11 48 03.2**	**-0.6**
ILAR	**Eielson Array**	**5.70**	**26**	P	**Pn**	**11 48 03.2**	**-0.5**
ILAR				S	**Sn**	**11 49 04.0**	**-3.7**
ILAR	**Eielson Array**	**5.70**	**26**	P	**Pn**	**11 48 03.2**	**-0.5**
	7.8nm,0.3s,baz=212,slow=14,SNR=210						
ILAR				S	**Sn**	**11 49 04.0**	**-3.7**
	18nm,0.3s,baz=207,slow=25,SNR=11						
SAMH	**Samovar Hills**	**5.98**	**81**	P	**Pn**	**11 48 08.3**	**+0.6**
BCA3	**Beaver Creek A**	**6.18**	**53**	P	**Pn**	**11 48 09.7**	**-0.6**
IM3	**Indian Mountai**	**6.26**	**356**	P	**Pn**	**11 48 10.5**	**-0.9**
PRP	**Porcupine Dome**	**6.64**	**27**	P	**Pn**	**11 48 16.8**	**+0.1**
PNL	**Peninsula**	**6.71**	**85**	P	**Pn**	**11 48 17.4**	**-0.2**
DT1	**Dutton Round H**	**6.98**	**232**	P	**Pn**	**11 48 21.5**	**+0.3**
EGAK	**Eagle**	**7.34**	**42**	*e*Pn	**Pn**	**11 48 26.1**	**-0.1**
COLD	**Coldfoot**	**7.57**	**7**	*e*Pn	**Pn**	**11 48 28.9**	**-0.3**
SKAG	**Skagway**	**8.79**	**85**	*e*Pn	**Pn**	**11 48 46.1**	**+0.3**
TNA	**Tin City**	**9.10**	**316**	Pn	**Pn**	**11 48 50.5**	**+0.6**
	23nm,0.4s						
WRAK	**Wrangell Islan**	**11.24**	**98**	*e*Pn	**Pn**	**11 49 18.9**	**-0.2**
	14nm,0.6s						
DLBC	**Dease Lake**	**11.70**	**87**	P	**Pn**	**11 49 27.1**	**+1.8**
DLBC				S	**Sn**	**11 51 30.4**	**-3.3**
DLBC	**Dease Lake**	**11.70**	**87**	P	**Pn**	**11 49 27.1**	**+1.8**
	6.3nm,0.3s,baz=282,slow=10,SNR=86						
DLBC				S	**Sn**	**11 51 30.4**	**-3.3**
	0.6nm,0.3s,baz=311,slow=19,SNR=4.5						
INK	**Inuvik**	**11.92**	**36**	P	**Pn**	**11 49 27.5**	**-0.7**
INK	**Inuvik**	**11.92**	**36**	P	**Pn**	**11 49 27.5**	**-0.7**
	0.6nm,0.3s,baz=244,slow=13,SNR=15						
BBB	**Bella Bella**	**15.62**	**108**	P	**P**	**11 50 18.2**	**-0.2**
BBB	**Bella Bella**	**15.62**	**108**	P	**P**	**11 50 18.2**	**-0.2**
	0.4nm,0.3s,baz=249,slow=8.6,SNR=6.5						
YKW3	**Yellowknife Ar**	**18.38**	**65**	*e*P	**Pn**	**11 50 49.4**	**-0.5**
YKA	**Yellowknife Ar**	**18.39**	**65**	P	**Pn**	**11 50 50.0**	**-0.1**
YKA				PcP	**PcP**	**11 55 15.8**	**+0.5**
YKA				ScP	**ScP**	**11 58 42.0**	**+0.1**
YKA	**Yellowknife Ar**	**18.39**	**65**	P	**Pn**	**11 50 50.0**	**-0.1**
	1.0nm,0.3s,baz=277,slow=9.8,SNR=190						
YKA				PcP	**PcP**	**11 55 15.8**	**+0.5**
	0.1nm,0.3s,baz=277,slow=1.3,SNR=14						
YKA				ScP	**ScP**	**11 58 41.9**	**+0.1**
	0.1nm,0.3s,baz=286,slow=2.1,SNR=11						
BILL	**Bilibino**	**19.50**	**312**	*e*P	**P**	**11 51 00.2**	**-0.7**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FX1	**Attu Island--F**	**19.98**	**265**	*e*P	**P**	**11 51 06.2**	**-0.1**
FX1	**Attu Island--F**	**19.98**	**265**	P	**P**	**11 51 06.0**	**-0.3**
	comp=Z,4.3nm,0.3s,baz=30,slow=16,SNR=25						
NEW	**Newport**	**23.53**	**103**	*e*P	**P**	**11 51 45.2**	**+2.1**
	comp=Z,3.6nm,0.9s						
NEW	**Newport**	**23.53**	**103**	P	**P**	**11 51 45.8**	**+2.7**
	comp=Z,3.4nm,1.0s,baz=333,slow=10.0,SNR=5.9						
NEW				LR	LR	12 02 12.5	
	comp=Z,60nm,19.2s,baz=188,slow=39						
RES	**Resolute Bay**	**25.41**	**32**	P	**P**	**11 51 59.8**	**0.0**
RES				PcP	**PcP**	**11 55 29.1**	**0.0**
RES	**Resolute Bay**	**25.41**	**32**	P	**P**	**11 51 59.8**	**0.0**
	comp=Z,1.3nm,0.7s,baz=265,slow=12,SNR=7.4						
RES				PcP	**PcP**	**11 55 29.1**	**0.0**
	comp=Z,0.9nm,0.6s,baz=198,slow=3.4,SNR=4.0						
YBH	**Yreka Blue Hor**	**25.82**	**121**	P	**P**	**11 52 06.7**	**+2.8**
YBH	**Yreka Blue Hor**	**25.82**	**121**	P	**P**	**11 52 06.7**	**+2.8**
	comp=Z,1.9nm,0.6s,baz=10,slow=8.7,SNR=11						
PETK	**Petropavlovsk-**	**27.66**	**278**	P	**P**	**11 52 18.6**	**-1.7**
PETK	**Petropavlovsk-**	**27.66**	**278**	P	**P**	**11 52 18.6**	**-1.7**
PETK	**Petropavlovsk-**	**27.66**	**278**	P	**P**	**11 52 18.6**	**-1.7**
	comp=Z,4.2nm,0.7s,baz=75,slow=10,SNR=8.6						
IMW	**Indian Meadow**	**29.66**	**104**	*e*P	**P**	**11 52 41.3**	**+2.9**
	comp=Z,5.4nm,1.0s						
IMW				*e*		11 53 01.4	
LOHW	**Long Hollow**	**30.03**	**104**	*e*P	P	11 52 44.9	+3.3
	comp=Z,3.1nm,1.0s						
NVAR	**Mina Array Bea**	**30.46**	**119**	P	**P**	**11 52 48.1**	**+2.7**
NVAR				PcP	**PcP**	**11 55 43.7**	**+1.3**
NVAR	**Mina Array Bea**	**30.46**	**119**	P	**P**	**11 52 48.1**	**+2.7**
	comp=Z,3.2nm,0.7s,baz=309,slow=9.1,SNR=32						
NVAR				PcP	**PcP**	**11 55 43.7**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=329,slow=3.4,SNR=4.7						
PDAR	**Pinedale Array**	**31.17**	**104**	P	**P**	**11 52 53.9**	**+2.2**
PDAR				pP	**pP**	**11 53 13.6**	**+0.4**
PDAR	**Pinedale Array**	**31.17**	**104**	P	**P**	**11 52 53.9**	**+2.2**
	comp=Z,0.8nm,0.7s,baz=301,slow=7.0,SNR=7.8						
PDAR				pP	**pP**	**11 53 13.6**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=342,slow=4.4,SNR=6.5						
SRU	**San Rafael**	**33.50**	**109**	*e*P	P	11 53 15.3	+3.3
SRU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SRU	**San Rafael**	**33.50**	**109**	*e*P	P	11 53 15.3	+3.3
	comp=Z,3.5nm,0.9s						
ASAJ	**Asahikawa**	**41.08**	**278**	P	**P**	**11 54 15.0**	**-0.7**
ASAJ	**Asahikawa**	**41.08**	**278**	P	**P**	**11 54 15.0**	**-0.7**
	comp=Z,8.0nm,1.0s,baz=22,slow=19,SNR=6.6						
HABR	**Khabarovsk**	**41.74**	**288**	*e*P	**P**	**11 54 18.0**	**-3.0**
HABR				*e**SP	sP	11 54 43.8	-10
HABR						11 55 55.9	
HABR						11 56 13.7	
HABR				*e*S	**S**	**12 00 30.2**	**-0.5**
HABR						12 04 14.1	
HABR				pmax	pmax		
	comp=N,11nm,1.3s						
HABR				pmax	pmax		
	comp=Z,13nm,1.3s						
HABR				pmax	pmax		
	comp=E,35nm,2.0s						
HABR				MLR	MLR		
	comp=Z,86nm,22.0s						
ERM	**Erimo**	**42.32**	**275**	⇓*e*P	P	11 54 22.7	-3.1
ERM				pmax	pmax		
	comp=Z,29nm,1.7s						
SCHQ	**Schefferville**	**43.55**	**57**	P	**P**	**11 54 35.0**	**-0.6**
SCHQ	**Schefferville**	**43.55**	**57**	P	**P**	**11 54 35.0**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=329,slow=9.8,SNR=2.7						
TXAR	**Lajitas Array**	**44.74**	**111**	P	**P**	**11 54 47.2**	**+1.7**
TXAR				pP	**pP**	**11 55 05.5**	**-2.4**
TXAR	**Lajitas Array**	**44.74**	**111**	P	**P**	**11 54 47.2**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=317,slow=7.4,SNR=3.8						
TXAR				pP	**pP**	**11 55 05.5**	**-2.4**
	comp=Z,0.4nm,0.6s,baz=329,slow=4.4,SNR=4.2						
USRK	**Ussuriysk Arra**	**46.27**	**286**	P	**P**	**11 54 55.4**	**-1.8**
	comp=Z,2.1nm,0.6s,baz=50,slow=7.4,SNR=6.0						
MJAR	**Matsushiro Arr**	**48.97**	**274**	P	**P**	**11 55 17.6**	**-0.7**
MJAR	**Matsushiro Arr**	**48.97**	**274**	P	**P**	**11 55 17.6**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=16,slow=6.7,SNR=12						
ARCES	**ARCESS Array B**	**50.99**	**1**	P	**P**	**11 55 31.4**	**-1.6**
ARCES	**ARCESS Array B**	**50.99**	**1**	P	**P**	**11 55 31.4**	**-1.6**
	comp=Z,1.8nm,0.5s,baz=14,slow=7.8,SNR=9.6						
KSRS	**Korea Array**	**53.40**	**283**	P	**P**	**11 55 51.4**	**0.0**
	comp=Z,6.8nm,0.5s,baz=39,slow=7.0,SNR=38						
KSAR	**Wonju Array Be**	**53.43**	**283**	P	**P**	**11 55 51.4**	**-0.2**
SONM	**Songino Array**	**55.07**	**306**	P	**P**	**11 56 03.7**	**+0.2**
SONM	**Songino Array**	**55.07**	**306**	P	**P**	**11 56 03.7**	**+0.2**
	comp=Z,5.7nm,0.8s,baz=46,slow=6.2,SNR=34						
HVS	**Khovu-Aksy**	**57.19**	**317**	⇑*e*P	**P**	**11 56 18.2**	**-0.2**
HVS				pmax	pmax		
	comp=Z,21nm,1.0s						
NVS	**Novosibirsk**	**57.36**	**325**	*e*P	**P**	**11 56 18.1**	**-1.3**
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZALV	**Zalesovo Beam**	**57.67**	**324**	P	**P**	**11 56 21.1**	**-0.5**
ZALV	**Zalesovo Beam**	**57.67**	**324**	P	**P**	**11 56 21.1**	**-0.5**
ZALV	**Zalesovo Beam**	**57.67**	**324**	P	**P**	**11 56 21.1**	**-0.5**
	comp=Z,15nm,0.6s,baz=31,slow=7.0,SNR=76						
ZALV				LR	LR	12 23 03.7	
	comp=Z,22nm,18.4s,baz=253,slow=38						
FINES	**FINESS Array B**	**59.12**	**1**	P	**P**	**11 56 32.0**	**+0.5**
FINES	**FINESS Array B**	**59.12**	**1**	P	**P**	**11 56 32.0**	**+0.5**
	comp=Z,1.4nm,0.6s,baz=12,slow=7.1,SNR=4.6						
ARU	**Arti**	**61.53**	**341**	*d i*P	**P**	**11 56 47.3**	**-0.8**
ARU						11 57 26.2	
ARU						11 59 02.6	
ARU				S	**S**	**12 05 06.4**	**+4.6**
ARU				SS	**SS**	**12 09 07.7**	**+4.5**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KURK	**Kurchatov**	**62.32**	**326**	*c i*P	**P**	**11 56 52.5**	**-1.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KURK	**Kurchatov**	**62.32**	**326**	P	**P**	**11 56 53.5**	**0.0**
BRVK	**Borovoye**	**62.35**	**332**	⇑*e*P	**P**	**11 56 52.8**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BVAR	**Borovoye Array**	**62.36**	**332**	P	**P**	**11 56 52.9**	**-0.8**
BVAR	**Borovoye Array**	**62.36**	**332**	P	**P**	**11 56 52.9**	**-0.8**
BVAR	**Borovoye Array**	**62.36**	**332**	P	**P**	**11 56 52.9**	**-0.8**
	comp=Z,10nm,0.6s,baz=28,slow=6.5,SNR=19						
KURBB	**Kurchatov Arra**	**62.43**	**326**	P	**P**	**11 56 53.4**	**-0.8**
	comp=Z,7.0nm,0.6s,baz=29,slow=6.7,SNR=14						
GTA	**Gaotai**	**64.70**	**305**	*e*P	**P**	**11 57 09.8**	**+0.3**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MKAR	**Makanchi Array**	**64.72**	**322**	*ce*P	**P**	**11 57 08.6**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	**Makanchi Array**	**64.72**	**322**	P	**P**	**11 57 08.0**	**-1.4**
MKAR	**Makanchi Array**	**64.72**	**322**	P	**P**	**11 57 08.0**	**-1.4**
	comp=Z,4.8nm,0.6s,baz=41,slow=6.5,SNR=21						
WHN	**Wuhan**	**65.59**	**289**	*e*P	**P**	**11 57 14.8**	**-0.4**
LZH	**Lanzhou**	**65.79**	**300**	*e*P	**P**	**11 57 16.0**	**-0.6**
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
AKTO	**Aktyubinsk**	**67.37**	**339**	P	**P**	**11 57 25.4**	**-0.9**
AKTO	**Aktyubinsk**	**67.37**	**339**	P	**P**	**11 57 25.4**	**-0.9**
AKTO	**Aktyubinsk**	**67.37**	**339**	P	**P**	**11 57 25.4**	**-0.9**
	comp=Z,2.7nm,0.4s,baz=25,slow=8.9,SNR=13						
ABKAR	**Akbulak array**	**68.15**	**338**	*e*P	**P**	**11 57 30.5**	**-0.6**
	comp=Z,4.5nm,0.6s						
GRR	**Gorron**	**69.78**	**20**	*e*P	**P**	**11 57 40.9**	**-0.3**
GRR	**Gorron**	**69.78**	**20**	*e*P	**P**	**11 57 40.9**	**-0.3**
GRR	**Gorron**	**69.78**	**20**	*e*P	**P**	**11 57 40.9**	**-0.3**
DPC	**Dobruska-Polom**	**69.88**	**7**	*e*P	**P**	**11 57 42.0**	**+0.1**
DPC	**Dobruska-Polom**	**69.88**	**7**	*e*P	**P**	**11 57 42.0**	**+0.1**
PAGF	**Fort de Pagny**	**70.61**	**15**	*e*P	**P**	**11 57 45.9**	**-0.4**
PAGF	**Fort de Pagny**	**70.61**	**15**	*e*P	**P**	**11 57 45.9**	**-0.4**
AAK	**Ala-Archa**	**70.85**	**325**	⇑*e*P	**P**	**11 57 47.0**	**-1.1**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SFTF	**Sexfontaines**	**70.86**	**16**	*e*P	**P**	**11 57 47.2**	**-0.6**
	comp=Z,9.1nm,0.5s						
SFTF	**Sexfontaines**	**70.86**	**16**	*e*P	**P**	**11 57 47.2**	**-0.6**
	comp=Z,9.1nm,0.5s						
KHC	**Kasperske Hory**	**70.88**	**10**	*e*P	**P**	**11 57 48.3**	**+0.3**
KHC	**Kasperske Hory**	**70.88**	**10**	*e*P	**P**	**11 57 48.3**	**+0.3**
CDF	**Champ du Feu**	**70.94**	**14**	*e*P	**P**	**11 57 47.8**	**-0.7**
CDF	**Champ du Feu**	**70.94**	**14**	*e*P	**P**	**11 57 47.8**	**-0.7**
CDF	**Champ du Feu**	**70.94**	**14**	*e*P	**P**	**11 57 47.8**	**-0.7**
GERES	**GERESS Array B**	**71.18**	**9**	P	**P**	**11 57 49.1**	**-0.7**
GERES	**GERESS Array B**	**71.18**	**9**	P	**P**	**11 57 49.1**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=351,slow=4.4,SNR=5.4						
HAU	**Haudompre**	**71.23**	**15**	*e*P	**P**	**11 57 49.3**	**-0.8**
	comp=Z,5.8nm,0.5s						
HAU	**Haudompre**	**71.23**	**15**	*e*P	**P**	**11 57 49.3**	**-0.8**
HAU				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HAU	**Haudompre**	**71.23**	**15**	*e*P	**P**	**11 57 49.3**	**-0.8**
	comp=Z,5.8nm,0.5s						
HINF	**Hinteralfeld**	**71.48**	**14**	*e*P	**P**	**11 57 50.7**	**-0.9**
	comp=Z,3.1nm,0.5s						
HINF	**Hinteralfeld**	**71.48**	**14**	*e*P	**P**	**11 57 50.7**	**-0.9**
HINF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HINF	**Hinteralfeld**	**71.48**	**14**	*e*P	**P**	**11 57 50.7**	**-0.9**
	comp=Z,3.1nm,0.5s						
LOR	**Lormes**	**71.61**	**17**	*e*P	**P**	**11 57 51.2**	**-1.2**
	comp=Z,5.8nm,0.6s						
LOR	**Lormes**	**71.61**	**17**	*e*P	**P**	**11 57 51.2**	**-1.2**
	comp=Z,5.8nm,0.6s						
MFF	**Saint Martin d**	**71.63**	**20**	*e*P	**P**	**11 57 51.4**	**-1.1**
MFF	**Saint Martin d**	**71.63**	**20**	*e*P	**P**	**11 57 51.4**	**-1.1**
MFF	**Saint Martin d**	**71.63**	**20**	*e*P	**P**	**11 57 51.4**	**-1.1**
SSF	**Saint Saulge**	**71.76**	**17**	*e*P	**P**	**11 57 52.5**	**-0.8**
	comp=Z,5.9nm,0.5s						
SSF	**Saint Saulge**	**71.76**	**17**	*e*P	**P**	**11 57 52.5**	**-0.8**
SSF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
SSF	**Saint Saulge**	**71.76**	**17**	*e*P	**P**	**11 57 52.5**	**-0.8**
	comp=Z,5.9nm,0.5s						
AVF	**Avril sur Loir**	**72.00**	**17**	*e*P	**P**	**11 57 53.7**	**-1.0**
	comp=Z,8.6nm,0.6s						
AVF	**Avril sur Loir**	**72.00**	**17**	*e*P	**P**	**11 57 53.7**	**-1.0**
AVF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AVF	**Avril sur Loir**	**72.00**	**17**	*e*P	**P**	**11 57 53.7**	**-1.0**
	comp=Z,8.6nm,0.6s						
BGF	**Bois d'Agland**	**72.15**	**17**	*e*P	**P**	**11 57 54.8**	**-0.8**
	comp=Z,9.2nm,0.5s						
BGF	**Bois d'Agland**	**72.15**	**17**	*e*P	**P**	**11 57 54.8**	**-0.8**
BGF				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BGF	**Bois d'Agland**	**72.15**	**17**	*e*P	**P**	**11 57 54.8**	**-0.8**
	comp=Z,9.2nm,0.5s						
SMF	**Signal de Mont**	**72.22**	**17**	*e*P	**P**	**11 57 54.9**	**-1.1**
SMF	**Signal de Mont**	**72.22**	**17**	*e*P	**P**	**11 57 54.9**	**-1.1**
SMF	**Signal de Mont**	**72.22**	**17**	*e*P	**P**	**11 57 54.9**	**-1.1**
TCF	**Toulx Ste Croi**	**72.32**	**18**	*e*P	**P**	**11 57 55.6**	**-1.1**
TCF	**Toulx Ste Croi**	**72.32**	**18**	*e*P	**P**	**11 57 55.6**	**-1.1**
TCF	**Toulx Ste Croi**	**72.32**	**18**	*e*P	**P**	**11 57 55.6**	**-1.1**
CABF	**La Chapelle**	**72.56**	**15**	*e*P	**P**	**11 57 57.7**	**-0.5**
	comp=Z,7.3nm,0.7s						
CABF	**La Chapelle**	**72.56**	**15**	*e*P	**P**	**11 57 57.7**	**-0.5**
CABF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CABF	**La Chapelle**	**72.56**	**15**	*e*P	**P**	**11 57 57.7**	**-0.5**
	comp=Z,7.3nm,0.7s						
KSH	**Kashi**	**73.27**	**323**	*e*P	**P**	**11 58 05.1**	**+2.6**
KSH				*e*PcP	**PcP**	**11 58 21.2**	**+2.7**
KSH				*e*pP	**pP**	**11 58 30.2**	**+3.4**
KSH				*e*PP	PP	12 00 51.3	+5.1
KSH				*e*S	**S**	**12 07 23.6**	**+0.5**
KSH				*e*SKS	**SKSac**	**12 07 57.2**	**-2.6**
KSH				*e*ScS	**SKKSac**	**12 08 00.5**	**+0.5**
KSH				*e*sS	**sS**	**12 08 07.6**	**+2.9**
KSH				*e*SS	**SS**	**12 12 07.9**	**+2.5**
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,97nm,3.4s						
KSH				LR	LR		
	comp=N,69nm,3.8s						
KSH				LR	LR		
	comp=E,53nm,4.3s						
KSH				LR	LR		
	comp=Z,100nm,3.8s						
LFF	**La Frestale**	**73.39**	**19**	*e*P	**P**	**11 58 02.4**	**-0.6**
LFF	**La Frestale**	**73.39**	**19**	*e*P	**P**	**11 58 02.4**	**-0.6**
LFF	**La Frestale**	**73.39**	**19**	*e*P	**P**	**11 58 02.4**	**-0.6**
VIVF	**Saint-Julien-l**	**74.09**	**17**	*e*P	**P**	**11 58 06.1**	**-1.0**
	comp=Z,6.6nm,0.6s						
VIVF	**Saint-Julien-l**	**74.09**	**17**	*e*P	**P**	**11 58 06.1**	**-1.0**
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
VIVF	**Saint-Julien-l**	**74.09**	**17**	*e*P	**P**	**11 58 06.1**	**-1.0**
	comp=Z,6.6nm,0.6s						
MBDF	**Montbardon**	**74.50**	**15**	*e*P	**P**	**11 58 10.5**	**+0.8**
	comp=Z,7.2nm,0.7s						
MBDF	**Montbardon**	**74.50**	**15**	*e*P	**P**	**11 58 10.5**	**+0.8**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MBDF	**Montbardon**	**74.50**	**15**	*e*P	**P**	**11 58 10.5**	**+0.8**
	comp=Z,7.2nm,0.7s						
SMRF	**Simiane la Rot**	**75.08**	**16**	*e*P	**P**	**11 58 12.6**	**-0.2**
SMRF	**Simiane la Rot**	**75.08**	**16**	*e*P	**P**	**11 58 12.6**	**-0.2**
MTLF	**Montolieu**	**75.19**	**19**	*e*P	**P**	**11 58 12.6**	**-0.9**
	comp=Z,4.9nm,0.7s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MTLF	Montolieu	75.19	19	eP	P	11 58 12.6	-0.9
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MTLF	Montolieu	75.19	19	eP	P	11 58 12.6	-0.9
	comp=Z,4.9nm,0.7s						
SBF	Sospel	75.44	15	eP	P	11 58 13.9	-1.0
	comp=Z,22nm,0.9s						
SBF	Sospel	75.44	15	eP	P	11 58 13.9	-1.0
SBF				pmax	pmax		
	comp=Z,22nm,0.9s						
SBF	Sospel	75.44	15	eP	P	11 58 13.9	-1.0
	comp=Z,22nm,0.9s						
LMR	La Mourre	75.84	16	eP	P	11 58 16.2	-0.9
LMR	La Mourre	75.84	16	eP	P	11 58 16.2	-0.9
LMR	La Mourre	75.84	16	eP	P	11 58 16.2	-0.9
KBZ	Khabaz	76.07	348	P	P	11 58 18.1	-0.3
KBZ	Khabaz	76.07	348	P	P	11 58 18.1	-0.3
KBZ	Khabaz	76.07	348	P	P	11 58 18.1	-0.3
	comp=Z,1.3nm,0.6s,baz=349,slow=5.2,SNR=5.3						
PGF	Pioggiola	76.93	14	eP	P	11 58 22.7	-0.8
	comp=Z,14nm,0.8s						
PGF	Pioggiola	76.93	14	eP	P	11 58 22.7	-0.8
PGF				pmax	pmax		
	comp=Z,14nm,0.8s						
PGF	Pioggiola	76.93	14	eP	P	11 58 22.7	-0.8
	comp=Z,14nm,0.8s						
ESDC	Sonseca Array	77.60	24	P	P	11 58 27.0	-0.2
ESDC	Sonseca Array	77.60	24	P	P	11 58 27.0	-0.2
	comp=Z,0.1nm,0.2s,baz=347,slow=5.3,SNR=5.4						
CMAR	Chiang Mai Arr	83.12	295	P	P	11 58 55.7	-1.3
CMAR	Chiang Mai Arr	83.12	295	P	P	11 58 55.7	-1.3
	comp=Z,1.7nm,0.5s,baz=11,slow=5.7,SNR=8.2						
KEST	Kesra	83.69	15	P	P	11 58 59.9	+0.1
KEST	Kesra	83.69	15	P	P	11 58 59.9	+0.1
	comp=Z,1.1nm,0.5s,baz=30,slow=5.6,SNR=4.1						
BOSA	Boshof	148.82	4	PKPbc	PKPbc	12 06 16.9	-1.0
BOSA	Boshof	148.82	4	PKPbc	PKPbc	12 06 16.9	-1.0
	comp=Z,5.6nm,0.5s,baz=2.1,slow=2.1,SNR=22						

CASC 04 11:52:21.0±1.0, 13.°85N×89.°73W, h3km±1km, MD3.6, ML3.5, 3C, El Salvador

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTR	El Retiro	0.09	61	⇑iP	Pg	11 52 23.9	+0.7
RTR				eS	Sg	11 52 25.6	+1.1
SBLS	San Blas	0.10	98	⇑eP	Pg	11 52 24.2	+0.8
SBLS				eS	Sg	11 52 25.6	+0.5
SNJE	San Jose	0.12	83	⇑iP	Pg	11 52 24.5	+0.9
BOQS	Boqueron	0.45	105	eP	Pg	11 52 30.9	+0.9
NBG	Las Nubes	0.94	321	eP	Pg	11 52 39.7	+0.1
NBG				eS	Sb	11 52 53.4	-0.2
MRL	Marmol	1.21	2	eP	Pg	11 52 44.2	-0.2
MRL				eS	Sb	11 53 00.7	-0.3

*TUN **04** 12:03:25.9, 37.°03N×8.°99E, h9km, MD3.3*
*ISCJB **04** 12:03:26.8±0.5, 37.°00N±0.°04×9.°13E±0.°05, h10km, mb3.6/5, MS3.1/4, Error ellipse: s-maj=6.0km s-min=5.6km az=177.2*
*IDC **04** 12:03:26.3±1.0, 36.°91N×9.°21E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/28, mbtmp3.6/6, ML4.6/1, MS3.2/7, Ms1 3.2/7, ms1mx2.8/37, Error ellipse: s-maj=29.2km s-min=11.5km az=92.0*
*LDG **04** 12:03:26.5±0.2, 37.°01N×9.°04E, h2km, Ml3.3/3, Error ellipse: s-maj=6.6km s-min=3.3km az=82.0*
*CRAAG **04** 12:03:27.6, 36.°92N×9.°16E, Mw3.3*
*CSEM **04** 12:03:28.0±0.3, 36.°92N×9.°10E, h2km, Mw3.3, Error ellipse: s-maj=6.5km s-min=5.5km az=94.0*
ISC 04 12:03:27.9±0.8, 36.°92N±0.°05×9.°14E±0.°05, h10km, n64, σ1.°27/51, mb3.8/5, MS3.1/4, Tunisia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLIT	Baltah	0.25	216	iP	Pg	12 03 32.4	-0.6
KRIT	Krib	0.58	185	iP	Pg	12 03 39.5	+0.4
KCHT	Kechabta	0.67	73	iP	Pb	12 03 41.6	-0.1
GHAT	Ghardimaou	0.79	238	iP	Pg	12 03 41.5	-1.6
KEST	Kesra	1.19	172	Pg	Pb	12 03 48.8	-1.8
	14nm,0.3s,baz=290,slow=3.5,SNR=234						
KEST				Lg	Lg	12 04 06.2	
	84nm,0.3s,baz=315,slow=11,SNR=24						
TROT	Trozza	1.40	164	iP	Pg	12 03 54.7	-0.1
CMAH	Djebel Manchou	1.41	259	P	Pn	12 03 53.5	-0.2
CMAH	Djebel Manchou	1.41	259	P	Pn	12 03 53.5	-0.2
ABSA	Djebel Ababsia	1.48	245	P	Pn	12 03 54.7	0.0
ABSA	Djebel Ababsia	1.48	245	P	Pn	12 03 54.7	0.0
CAEH	'Ain El Ouahch	1.84	266	P	Pn	12 03 59.6	0.0
CAEH	'Ain El Ouahch	1.84	266	P	Pn	12 03 59.6	0.0
CKFL	Kef-Lekhel	2.01	256	P	Pn	12 04 02.3	+0.3
CKFL	Kef-Lekhel	2.01	256	P	Pn	12 04 02.3	+0.3
CASM	Ain Smara	2.23	254	P	Pn	12 04 05.6	+0.7
CASM	Ain Smara	2.23	254	P	Pn	12 04 05.6	+0.7
CTEI	Djebel Teioual	2.36	250	P	Pn	12 04 07.7	+0.9
CTEI	Djebel Teioual	2.36	250	P	Pn	12 04 07.7	+0.9
PGF	Pioggiola	5.63	359	eP	Pn	12 04 53.0	+1.3
PGF				eSn	Sn	12 05 47.7	-8.7
	4.3nm,0.7s						
PGF	Pioggiola	5.63	359	eP	Pn	12 04 53.0	+1.3
PGF				eSn	Sn	12 05 47.7	-8.7
	2.2nm,0.7s						
EIBI	Ibiza	6.51	291	P	Pn	12 05 04.8	+1.1
	8.5nm,0.2s,SNR=24						
LMR	La Mourre	6.72	343	eSn	Sn	12 06 14.9	-8.2
	6.7nm,0.5s						
LMR	La Mourre	6.72	343	eSn	Sn	12 06 14.9	-8.2
	3.3nm,0.5s						
SBF	Sospel	7.06	350	ePn	Pn	12 05 06.7	-4.6
SBF	Sospel	7.06	350	eP	Pn	12 05 11.8	+0.5
SBF	Sospel	7.06	350	ePn	Pn	12 05 06.7	-4.6
SBF	Sospel	7.06	350	eP	Pn	12 05 11.8	+0.5
CFON	Fontmartina	7.10	315	P	Pn	12 05 11.8	-0.1
	0.4nm,0.2s,SNR=7.9						
EJON	La Jonquera	7.33	321	P	Pn	12 05 14.2	-0.8
	1.3nm,0.2s,SNR=7.9						
EBEN	Beniarda	7.62	286	P	Pn	12 05 21.8	+2.7
	2.5nm,0.3s,SNR=7.9						
EPOB	Poblet	7.67	308	P	Pn	12 05 18.8	-0.9
	0.5nm,0.2s,SNR=7.9						
CLLI	Llivia	7.83	317	P	Pn	12 05 21.8	-0.2
	4.1nm,0.4s,SNR=7.9						
MBDF	Montbardon	8.01	348	ePn	Pn	12 05 19.7	-4.7
MBDF	Montbardon	8.01	348	ePn	Pn	12 05 19.7	-4.7
LASF	Ste Croix	8.20	332	ePn	Pn	12 05 24.2	-2.8
LASF	Ste Croix	8.20	332	ePn	Pn	12 05 24.2	-2.8
CSOR	Sort	8.23	314	P	Pn	12 05 27.9	+0.4
	0.9nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	8.27	298	P	Pn	12 05 29.3	+1.3
	0.9nm,0.3s,SNR=7.9						
EMUR	La Murta	8.31	280	P	Pn	12 05 30.9	+2.4
	4.5nm,0.3s,SNR=7.4						
MTLF	Montolieu	8.32	323	ePn	Pn	12 05 23.8	-4.8
MTLF	Montolieu	8.32	323	eP	Pn	12 05 29.2	+0.6
MTLF				eSn	Sn	12 06 52.7	-10
	8.3nm,0.6s						
MTLF	Montolieu	8.32	323	ePn	Pn	12 05 23.8	-4.8
MTLF	Montolieu	8.32	323	eP	Pn	12 05 29.2	+0.6
MTLF				eSn	Sn	12 06 52.7	-10
	4.2nm,0.6s						
ECHE	Chera	8.39	292	P	Pn	12 05 31.5	+2.0
	9.3nm,0.3s,SNR=7.9						
ETOB	Tobarra	8.64	285	P	Pn	12 05 35.0	+2.0
	2.5nm,0.2s,SNR=7.9						
ETOB				S	Sn	12 07 09.7	-0.7
	1.3nm,0.3s,SNR=7.9						
LPG	La Plagne	8.76	349	eP	Pn	12 05 36.1	+1.3
LPG	La Plagne	8.76	349	eP	Pn	12 05 36.1	+1.3
EPF	Esparros	9.10	315	eP	Pn	12 05 40.2	+0.9
EPF	Esparros	9.10	315	eP	Pn	12 05 40.2	+0.9
EBER	Berja	9.63	273	P	Pn	12 05 47.7	+0.9
	1.6nm,0.3s,SNR=7.9						
DAVOX	Davos/Dischmat	9.87	3	LR	LR	12 09 57.0	
	comp=Z,218nm,19.6s,baz=86,slow=40						
ESDC	Sonseca Array	10.66	289	Pn	Pn	12 06 02.4	+1.7
	1.2nm,0.3s,baz=98,slow=14,SNR=10						
ESDC				LR	LR	12 10 00.6	
	comp=Z,89nm,18.6s,baz=85,slow=37						
GUD	Guadarrama	11.02	294	P	Pn	12 06 08.7	+3.0
	SNR=7.9						
ELAN	Lanestosa	11.51	307	P	Pn	12 06 13.4	+1.2
	SNR=7.9						
MDT	Midelt	12.01	254	LR	LR	12 10 35.0	
	comp=Z,44nm,18.9s,baz=343,slow=36						
HFS	Hagfors	23.42	6	LR	LR	12 18 22.2	
	comp=Z,52nm,18.7s,baz=186,slow=38						
NOA	NORSAR Array B	24.18	2	LR	LR	12 19 04.7	
	comp=Z,31nm,18.9s,baz=145,slow=39						
TORD	Torodi Ar. Bea	24.59	198	P	P	12 08 46.9	-1.4
	2.2nm,0.8s,baz=10,slow=9.1,SNR=13						
ARCES	ARCESS Array B	33.87	10	LR	LR	12 24 27.4	
	comp=Z,57nm,21.0s,baz=43,slow=37						
JMIC	Jan Mayen	35.38	350	LR	LR	12 26 23.3	
	comp=Z,48nm,19.4s,baz=63,slow=39						
KURBB	Kurchatov Arra	50.15	51	P	P	12 12 22.8	-0.5
	1.1nm,1.0s,baz=287,slow=8.7,SNR=4.4						
ZALV	Zalesovo Beam	53.16	46	P	P	12 12 45.5	-0.2
	0.6nm,0.5s,baz=282,slow=7.2,SNR=5.4						
MKAR	Makanchi Array	53.55	55	P	P	12 12 48.2	-0.5
	0.3nm,0.6s,baz=270,slow=4.3,SNR=4.4						
YKA	Yellowknife Ar	71.16	336	P	P	12 14 46.9	+0.6
	0.2nm,0.6s,baz=40,slow=6.5,SNR=5.5						

GUC 04 12:06:05.8±0.8, 32.°80S×72.°67W, h31km±4km, MD3.7, ML3.3, 1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	1.35	48	eP	Pn	12 06 28.7	+0.3
CHNG				eS	Sb	12 06 46.9	-0.4
ROCH	El Roble	1.41	97	eP	Pn	12 06 30.4	+0.9
ROCH				eS	Sb	12 06 49.1	-0.4
TACH	Talagante	1.68	121	⇓iP	Pn	12 06 34.2	+1.1
PEL	Peldehue	1.70	102	eP	Pb	12 06 35.1	-1.4
PEL				eS	Sb	12 06 57.1	-0.6
PEL				AML	AML	12 06 58.7	
	comp=N,589nm,0.3s						
CLCH	Cerro Calan	1.89	109	eP	Pn	12 06 34.6	-1.3
CLCH				eS	Sb	12 07 01.3	-1.6
CLCH				AML	AML	12 07 06.2	
	comp=E,224nm,0.7s						
PCH	Pirque	1.98	115	eP	Pn	12 06 39.0	+1.7
PCH				iS	Sb	12 07 04.0	-1.8
CMCH	Combarbala	2.15	42	eP	Pn	12 06 39.4	-0.3
CMCH				eS	Sn	12 07 05.7	+0.3
CMCH				AML	AML	12 07 07.4	
	comp=E,536nm,0.5s						

*IDC **04** 12:06:41.4±5.3, 37.°32N×72.°11E, h183km±36km, mb3.1/3, mb1 3.3/5, mb1mx2.9/28, mbtmp3.1/5, Error ellipse: s-maj=75.0km s-min=32.3km az=133.0*
ISC 04 12:06:35.9±1.8, 37.°1N±0.°1×72.°2E±0.°2, h142km, n7, σ1.°09/6, mb3.4/3, 2D, Tajikistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	5.78	17	P	Pn	12 08 05.2	+5.6
	1.5nm,0.3s,baz=167,slow=6.5,SNR=19						
AAK				S	Sn	12 09 06.3	+1.2
	0.9nm,0.3s,baz=330,slow=20,SNR=4.1						
KK31	Karatay Array	6.10	349	Pn	Pn	12 08 08.3	+4.6
	3.1nm,0.5s,baz=164,slow=12,SNR=25						
KK31				⇓Sn	Sn	12 09 11.9	-0.5
	1.2nm,0.3s,baz=164,slow=22,SNR=5.2						
TKM2	Tokmak 2	6.35	23	⇓Pn	Pn	12 08 11.8	+4.4
	2.9nm,0.6s						
ZALV	Zalesovo Beam	18.96	23	P	Pn	12 10 47.0	-1.1
	0.4nm,0.3s,baz=212,slow=11,SNR=7.1						
ARCES	ARCESS Array B	40.92	337	P	P	12 14 04.4	+0.6
	3.3nm,1.0s,baz=119,slow=7.3,SNR=3.3						
TORD	Torodi Ar. Bea	66.66	269	P	P	12 17 11.9	+0.3
	0.2nm,0.4s,baz=43,slow=5.9,SNR=7.6						
YKA	Yellowknife Ar	80.57	3	P	P	12 18 31.6	-0.4
	0.1nm,0.4s,baz=349,slow=5.5,SNR=4.3						

IDC 04 12:18:49.3±2.7, 16.°48S×172.°89W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/20, mbtmp3.7/5, MS3.6/5, Ms1 3.6/5, ms1mx3.2/29, Error ellipse: s-maj=197.8km s-min=23.4km az=148.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.77	23	Pn	Pn	12 19 27.9	-7.2
	11nm,0.3s,baz=225,slow=8.6,SNR=27						
AFI				Sn	Sn	12 19 56.8	-13
	32nm,0.3s,baz=248,slow=19,SNR=10						
AFI				T	T	12 22 09.6	
	12nm,0.3s,baz=238,slow=20,SNR=3.6						
DZM	Mont Dzumac	20.28	251	LR	LR	12 29 38.8	
	comp=Z,132nm,18.1s,baz=320,slow=32						
PPT2	Papeete2	22.32	96	eLR	LR	12 29 04.2	
	63nm,23.5s						
TBI	Tubuai	23.05	111	eLR	LR	12 29 20.5	
	79nm,25.0s						
HNR	Honiara	27.36	281	LR	LR	12 33 41.5	
	comp=Z,130nm,18.3s,slow=33						
CTA	Charters Tower	38.89	258	LR	LR	12 40 30.4	
	comp=Z,57nm,18.3s,baz=54,slow=34						
STKA	Stephens Creek	43.93	241	P	P	12 26 58.3	+0.1
	0.8nm,0.7s,baz=79,slow=5.2,SNR=2.7						
WRA	Warramunga Arr	50.08	258	P	P	12 27 46.0	-0.4
	0.5nm,0.7s,baz=91,slow=6.8,SNR=9.0						
ASAR	Alice Springs	50.25	253	P	P	12 27 47.5	-0.2
	1.0nm,0.6s,baz=86,slow=8.4,SNR=19						
FITZ	Fitzroy Crossi	58.47	259	LR	LR	12 50 17.3	
	comp=Z,34nm,19.5s,baz=351,slow=32						
NVAR	Mina Array Bea	74.80	42	P	P	12 30 31.9	0.0
	0.6nm,0.7s,baz=225,slow=8.6,SNR=5.1						
PDAR	Pinedale Array	82.74	42	P	P	12 31 15.3	-0.2
	0.9nm,0.8s,baz=234,slow=5.5,SNR=7.3						
ULM	Lac du Bonnet	94.46	39	LR	LR	13 06 38.7	
	comp=Z,44nm,20.8s,baz=20,slow=30						
BRTR	Keskin Array B	147.30	320	PKPbc	PKPbc	12 38 35.0	-0.2
	0.8nm,0.8s,baz=46,slow=4.2,SNR=3.9						

DDA 04 12:19:57.0, 40.°87N×38.°57E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GRSN	GIRESUNGRSN	0.24	283	iP	Pg	12 20 02.3	+0.5
GRSN				iS	Sg	12 20 05.5	+0.5
SUSE	Susehri	0.72	203	iP	Pg	12 20 11.3	+0.1
SUSE				iS	Sb	12 20 21.7	-0.8
KELT	Kelkit	0.89	144	iP	Pg	12 20 14.6	+0.2
KELT				iS	Sg	12 20 26.5	+0.2

*CSEM **04** 12:20:25.0, 39.°87N×33.°09E, h10km, MD2.5, After ISK*
ISK 04 12:20:25.0, 39.°87N×33.°09E, h10km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANTO	Ankara	0.23	270	ePG	Pg	12 20 30.1	+0.3
ANTO				eSG	Sg	12 20 34.1	+0.9
ANTO	Ankara	0.23	270	ePg	Pg	12 20 30.2	+0.3
ANTO				eSg	Sg	12 20 34.1	+0.9
LOD	Lodumlu	0.26	274	ePG	Pg	12 20 30.7	+0.3
LOD				eSG	Sg	12 20 34.7	+0.8
LOD	Lodumlu	0.26	274	ePg	Pg	12 20 30.7	+0.4
LOD				eSg	Sg	12 20 34.7	+0.8
AFSR	Af¯ar-Bala (A	0.42	182	ePG	Pg	12 20 33.9	+0.4
AFSR	Af¯ar-Bala (A	0.42	182	ePg	Pg	12 20 33.9	+0.4
KAMT	Kaman	0.69	136	ePG	Pg	12 20 38.8	+0.2
KAMT	Kaman	0.69	136	ePg	Pg	12 20 38.8	+0.2
CORM	Corum	1.22	75	ePN	Pg	12 20 48.8	+0.2
CORM	Corum	1.22	75	ePn	Pg	12 20 48.8	+0.2
SVRH	Sivrihisar-ESK	1.28	251	ePN	Pb	12 20 49.5	+0.1
SVRH	Sivrihisar-ESK	1.28	251	ePn	Pb	12 20 49.5	+0.1
TOS	Tosya	1.36	31	ePn	Pb	12 20 50.7	-0.1
KIZT	Kizilcal	1.37	224	ePN	Pb	12 20 50.7	-0.1
KIZT	Kizilcal	1.37	224	ePn	Pb	12 20 50.7	-0.1

IDC 04 12:30:33.1±1.3, 1.°15N×125.°49E, h0km, mb3.7/7, mb1 3.8/7, mb1mx3.6/23, mbtmp3.7/7, Error ellipse: s-maj=171.0km s-min=17.6km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.68	158	P	P	12 35 34.6	-1.9
	2.7nm,0.6s,baz=339,slow=11,SNR=32						
ASAR	Alice Springs	25.99	162	P	P	12 36 08.3	+0.4
	1.0nm,0.8s,baz=347,slow=11,SNR=28						
STKA	Stephens Creek	36.22	156	P	P	12 37 39.0	+1.0
	0.5nm,0.4s,baz=354,slow=10,SNR=3.5						
SONM	Songino Array	49.36	343	P	P	12 39 24.6	0.0
	0.3nm,0.6s,baz=165,slow=6.0,SNR=3.4						
MKAR	Makanchi Array	58.99	327	P	P	12 40 34.2	-0.4
	0.4nm,0.4s,baz=120,slow=7.7,SNR=9.4						
AKTO	Aktyubinsk	74.92	322	P	P	12 42 16.2	+0.2
	0.5nm,0.4s,baz=104,slow=8.3,SNR=4.2						
VNDA	Vanda	81.04	172	P	P	12 42 49.8	+0.3
	0.4nm,0.5s,baz=299,slow=6.3,SNR=4.1						

IDC 04 12:38:54.5±2.1, 6.°86S×129.°77E, h0km, mb3.6/1, mb1 3.5/4, mb1mx3.4/19, mbtmp3.4/4, ML3.1/3, Error ellipse: s-maj=77.4km s-min=29.4km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.88	199	Pn	Pn	12 41 46.8	+1.5
	0.1nm,0.3s,baz=20,slow=11,SNR=3.0						
FITZ				Sn	Sn	12 43 48.9	-10
	0.2nm,0.3s,baz=300,slow=20,SNR=6.0						
WRA	Warramunga Arr	13.75	162	Pn	Pn	12 42 10.2	-0.7
	0.1nm,0.3s,baz=339,slow=14,SNR=8.6						
WRA				Sn	Sn	12 44 30.4	-14
	0.3nm,0.3s,baz=334,slow=22,SNR=11						
ASAR	Alice Springs	17.18	167	Pn	Pn	12 42 55.2	-0.9
	0.1nm,0.3s,baz=348,slow=13,SNR=5.2						
ASAR				Sn	Sn	12 45 53.9	-14
	0.1nm,0.3s,baz=343,slow=26,SNR=5.1						
MKAR	Makanchi Array	67.98	327	P	P	12 49 55.4	0.0
	0.4nm,0.5s,baz=118,slow=7.5,SNR=5.2						

IDC 04 13:10:01.0±3.2, 20.°99S×68.°21W, h136km±33km, mb3.6/2, mb1 3.5/4, mb1mx3.3/17, mbtmp3.5/4, Error ellipse: s-maj=42.1km s-min=28.1km az=111.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.67	1	P	Pn	13 11 12.1	+1.3
	0.5nm,0.3s,baz=186,slow=8.7,SNR=12						
LPAZ				S	Sn	13 12 04.3	-0.6
	0.7nm,0.3s,baz=248,slow=12,SNR=4.3						
SIV	San Ignacio	8.40	55	P	Pn	13 11 59.4	-0.6
	2.9nm,0.3s,baz=262,slow=11,SNR=42						
QSPA	South Pole Qui	69.20	180	P	P	13 20 52.7	-0.1
	0.6nm,0.5s,baz=178,slow=5.5,SNR=13						
TORD	Torodi Ar. Bea	76.57	70	P	P	13 21 37.0	+0.1
	1.3nm,0.6s,baz=256,slow=5.5,SNR=21						
MKAR	Makanchi Array	144.84	36	PKP	PKPdf	13 29 21.8	0.0
	0.4nm,0.7s,baz=328,slow=5.2,SNR=4.9						

*IDC **04** 13:20:04.0±0.5, 65.°19S×81.°07E, h0km, mb4.6/17, mb1 4.7/17, mb1mx4.6/19, mbtmp4.5/17, MS3.7/9, Ms1 3.8/9, ms1mx3.4/27, Error ellipse: s-maj=19.3km s-min=14.0km az=140.0*
*MOS **04** 13:20:04.5±1.2, 65.°15S×81.°04E, h10km, mb5.2/7, Error ellipse: s-maj=32.2km s-min=13.5km az=92.5*
*BJI **04** 13:20:04.4, 65.°20S×81.°00E, h11km, mB5.5/7, mb5.4/6, Ms5.0/5, Ms7 4.7/6*
*ISCJB **04** 13:20:04.1±0.4, 65.°16S±0.°07×81.°2E±0.°2, h10km, mb4.7/24, MS4.1/12, Error ellipse: s-maj=10.7km s-min=10.1km az=168.0*
*DJA **04** 13:20:05.7±0.4, 65°S±8°×8°1E±°, h10km, M5.0/9, mb5.0/9*
*NEIC **04** 13:20:05.6±3.4, 65.°19S×81.°08E, h10km±20km, mb4.9/9, Error ellipse: s-maj=8.4km s-min=7.5km az=210.0*
ISC 04 13:20:05.5±0.3, 65.°28S±0.°07×80.°97E±0.°08, h10km, n134, σ1.°25/149, mb4.9/23, MS4.0/12, 3C-1D, Southern Kerguelen Plateau

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MAW	Mawson	7.61	244	Pn	Pn	13 21 53.2	-3.1
MAW				Sn	Sn	13 23 13.0	-9.4
MAW	Mawson	7.61	244	Pn	Pn	13 21 53.2	-3.1
	6.6nm,0.3s,baz=80,slow=14,SNR=66						
MAW				Sn	Sn	13 23 13.0	-9.4
	30nm,0.3s,baz=162,slow=19,SNR=5.0						
MAW				LR	LR	13 24 58.2	
	comp=Z,288nm,18.9s,baz=65,slow=38						
CASY	Casey	12.12	108	eP	Pn	13 22 55.9	-2.1
	36nm,0.6s						
SYO	Syowa Base	16.25	238	⇑eX	Pn	13 23 49.2	-4.3
PAF	Port-aux-Franc	16.95	335	eP	P	13 24 03.2	-1.1
PAF	Port-aux-Franc	16.95	335	eP	P	13 24 03.2	-1.1
QSPA	South Pole Qui	24.84	180	eP	P	13 25 28.7	+1.0
	58nm,0.9s						
QSPA				PP	PnPn	13 25 57.4	-2.4
QSPA	South Pole Qui	24.84	180	P	P	13 25 28.5	+0.8
	22nm,1.0s,baz=298,slow=2.8,SNR=46						
QSPA				PP	PnPn	13 25 57.3	-2.4
	36nm,0.8s,baz=313,slow=16,SNR=7.1						
QSPA				LR	LR	13 35 20.2	
	comp=Z,330nm,21.1s,baz=118,slow=37						
MAIT	Maitri	25.12	227	eP	P	13 25 21.0	-9.0
VNDA	Vanda	25.84	150	eP	P	13 25 37.4	+1.0
	1.7nm,0.6s						
VNDA	Vanda	25.84	150	P	P	13 25 36.9	+0.5
	1.9nm,0.6s,baz=265,slow=10.0,SNR=10						
VNDA				LR	LR	13 34 58.5	
	comp=Z,136nm,21.5s,baz=73,slow=34						
SBA	Scott Base	26.72	152	eP	P	13 25 47.3	+2.9
SBA				pmax	pmax		
	comp=Z,21nm,0.8s						
SBA	Scott Base	26.72	152	eP	P	13 25 47.3	+2.9
	comp=Z,21nm,0.8s						
SNAA	Sanae	28.95	221	eP	P	13 26 05.5	+1.0
	comp=Z,19nm,0.7s						
SNAA	Sanae	28.95	221	P	P	13 26 05.7	+1.2
	comp=Z,8.9nm,0.9s,baz=140,slow=12,SNR=96						
SNAA				LR	LR	13 37 37.2	
	comp=Z,82nm,19.7s,baz=20,slow=36						
STKA	Stephens Creek	49.28	78	P	P	13 28 54.3	+0.1
STKA				PcP	PcP	13 30 16.6	-0.2
STKA	Stephens Creek	49.28	78	P	P	13 28 54.3	+0.1
	comp=Z,4.3nm,0.9s,baz=188,slow=9.8,SNR=13						
STKA				PcP	PcP	13 30 16.6	-0.2
	comp=Z,1.8nm,0.9s,baz=176,slow=4.1,SNR=4.7						
BOSA	Boshof	50.17	289	eP	P	13 29 00.7	-0.4
	comp=Z,17nm,1.1s						
BOSA				e		13 29 09.4	
BOSA	Boshof	50.17	289	P	P	13 29 00.7	-0.4
	comp=Z,9.5nm,0.7s,baz=156,slow=8.9,SNR=23						
LBTB	Lobatse	53.25	291	eP	P	13 29 23.2	-0.9
	comp=Z,14nm,0.9s						
LBTB				e		13 29 31.7	
ASAR	Alice Springs	53.52	65	P	P	13 29 25.5	-0.5
ASAR				PcP	PcP	13 30 31.9	-0.8
ASAR	Alice Springs	53.52	65	P	P	13 29 25.5	-0.5
	comp=Z,7.3nm,0.6s,baz=206,slow=7.2,SNR=138						
ASAR				PcP	PcP	13 30 31.9	-0.8
	comp=Z,1.2nm,0.7s,baz=215,slow=4.0,SNR=4.2						
AS31	Alice Springs	53.52	65	eP	P	13 29 25.3	-0.7
FITZ	Fitzroy Crossi	55.62	54	P	P	13 29 40.7	-0.6
FITZ	Fitzroy Crossi	55.62	54	P	P	13 29 40.7	-0.6
	comp=Z,1.5nm,0.6s,baz=221,slow=7.6,SNR=5.7						
WRA	Warramunga Arr	57.06	64	P	P	13 29 51.0	-0.6
WRA	Warramunga Arr	57.06	64	P	P	13 29 51.0	-0.6
	comp=Z,12nm,0.8s,baz=201,slow=6.2,SNR=54						
WRAB	Tennant Creek	57.08	64	eP	P	13 29 51.2	-0.5
WRAB				pmax	pmax		
	comp=Z,19nm,0.9s						
WRAB	Tennant Creek	57.08	64	eP	P	13 29 51.2	-0.5
	comp=Z,19nm,0.9s						
LSZ	Lusaka	61.12	299	eP	P	13 30 20.1	+0.3
	comp=Z,7.3nm,0.8s						
LSZ				e		13 30 28.9	
TSUM	Tsumeb	61.66	286	eP	P	13 30 23.9	+0.4
	comp=Z,4.1nm,0.8s						
KAPI	Kappang	66.08	43	P	P	13 30 51.1	-1.3
KAPI	Kappang	66.08	43	P	P	13 30 51.1	-1.3
	comp=Z,5.5nm,0.6s,baz=225,slow=8.6,SNR=3.9						
KMBO	Kilima Mbogo	71.24	313	P	P	13 31 26.1	+1.2
KMBO	Kilima Mbogo	71.24	313	P	P	13 31 26.1	+1.2
	comp=Z,1.4nm,0.5s,baz=194,slow=8.3,SNR=5.8						
KMBO				LR	LR	13 57 15.9	
	comp=Z,44nm,19.8s,baz=185,slow=31						
PMG	Port Moresby	71.65	72	P	P	13 31 27.8	+0.7
PMG	Port Moresby	71.65	72	P	P	13 31 27.8	+0.7
	comp=Z,18nm,1.1s,baz=223,slow=10.0,SNR=3.6						
PLCA	Paso Flores	72.01	202	P	P	13 31 30.0	+0.9

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**72.01**	**202**	P	**P**	**13 31 30.0**	**+0.9**
	comp=Z,5.2nm,0.8s,baz=180,slow=7.8,SNR=7.1						
CPUP	**Villa Florida**	**83.20**	**217**	P	**P**	**13 32 31.6**	**0.0**
CPUP	**Villa Florida**	**83.20**	**217**	P	**P**	**13 32 31.6**	**0.0**
	comp=Z,5.4nm,0.7s,baz=142,slow=5.7,SNR=17						
CPUP				LR	LR	14 08 20.9	
	comp=Z,67nm,19.9s,baz=179,slow=35						
CMAR	**Chiang Mai Arr**	**84.59**	**17**	P	**P**	**13 32 38.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**84.59**	**17**	P	**P**	**13 32 38.0**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=207,slow=4.4,SNR=7.4						
CMAR				LR	LR	14 01 36.9	
	comp=Z,34nm,21.8s,baz=205,slow=30						
PPT	**Papeete**	**89.01**	**133**	LR	LR	14 09 30.9	
	comp=Z,93nm,18.9s,baz=122,slow=33						
BDFB	**Brasilia**	**90.68**	**228**	P	**P**	**13 33 08.0**	**-0.3**
BDFB	**Brasilia**	**90.68**	**228**	P	**P**	**13 33 08.0**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=225,slow=5.7,SNR=3.9						
KMI	**Kunming**	**91.66**	**20**	P	P	13 33 18.3	+5.6
KMI				LR	LR		
	comp=N,97nm,19.8s						
KMI				LR	LR		
	comp=E,62nm,21.4s						
KMI				LR	LR		
	comp=Z,89nm,26.9s						
GYA	**Guiyang**	**93.57**	**23**	*e*P	**P**	**13 33 22.9**	**+1.6**
GYA				PP	PP	13 37 11.0	+4.5
GYA				SKS	**SKSac**	**13 43 57.9**	**+2.5**
GYA				S	**ScS**	**13 44 31.2**	**+0.1**
GYA				SS	**SS**	**13 50 52.8**	**+5.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,5.0s						
GYA				LR	LR		
	comp=N,440nm,19.6s						
GYA				LR	LR		
	comp=E,350nm,20.7s						
GYA				LR	LR		
	comp=Z,490nm,19.8s						
LPAZ	**La Paz**	**95.38**	**210**	P	**P**	**13 33 32.0**	**+1.3**
LPAZ	**La Paz**	**95.38**	**210**	P	**P**	**13 33 32.0**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=164,slow=2.3,SNR=4.9						
LPAZ				LR	LR	14 17 48.2	
	comp=Z,44nm,20.0s,baz=298,slow=36						
TORD	**Torodi Ar. Bea**	**97.40**	**285**	P	Pdif	13 33 40.5	+1.4
TORD				PP	**PP**	**13 37 32.8**	**-3.2**
TORD	**Torodi Ar. Bea**	**97.40**	**285**	P	Pdif	13 33 40.5	+1.4
	comp=Z,0.7nm,0.9s,baz=165,slow=5.6,SNR=3.9						
TORD				PP	**PP**	**13 37 32.8**	**-3.2**
	comp=Z,1.2nm,0.9s,baz=152,slow=7.9,SNR=5.1						
CD2	**Chengdu**	**97.50**	**20**	P	Pdif	13 33 41.7	+2.6
CD2				pP	pP	13 33 46.5	+4.1
CD2				sP	sP	13 33 48.7	+5.1
CD2				PP	PP	13 37 42.4	+5.6
CD2				SKS	**SKSac**	**13 44 19.0**	**+3.1**
CD2				S	**ScS**	**13 45 04.7**	**+1.2**
CD2				sS	sS	13 45 11.4	+2.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.2s						
NJ2	**Nanjing**	**101.38**	**32**	*e*P	**Pdif**	**13 33 59.0**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**108.45**	**24**	*e*Pdif	**Pdif**	**13 34 30.9**	**+3.3**
HHC				PP	PP	13 39 05.7	+6.9
HHC				AMB	AMB		
	comp=Z,100nm,10.7s						
HHC				LR	LR		
	comp=N,170nm,21.4s						
HHC				LR	LR		
	comp=E,160nm,21.4s						
HHC				LR	LR		
	comp=Z,130nm,20.8s						
SONM	**Songino Array**	**114.49**	**19**	PKKPbc	PKKPbc	13 49 23.8	+1.6
SONM	**Songino Array**	**114.49**	**19**	PKKPbc	PKKPbc	13 49 23.8	+1.6
	comp=Z,0.6nm,0.6s,baz=331,slow=2.6,SNR=6.4						
MDJ	**Mudanjiang**	**115.88**	**37**	PKP	**PKPdf**	**13 38 47.2**	**+0.1**
BRVK	**Borovoye**	**118.29**	**353⇓**	*i*PKIKP	**PKPdf**	**13 38 51.4**	**-0.1**
HABR	**Khabarovsk**	**120.86**	**39**	*i* PKIKP	**PKPdf**	**13 38 56.3**	**-0.2**
HABR				*e*		13 38 59.6	
HABR				*e*		13 40 24.3	
HABR				*e*PPP	PPP	13 42 58.1	
HABR				*e*PS	**PS**	**13 50 15.7**	**-0.8**
HABR				SS	SS	13 56 57.5	+0.2
HABR				pmax	pmax		
	comp=Z,73nm,3.3s						
HABR				pmax	pmax		
	comp=E,54nm,1.7s						
HABR				pmax	pmax		
	comp=N,53nm,3.3s						
HABR				MLR	MLR		
	comp=Z,276nm,18.0s						
AKASG	**Malin Array Be**	**122.32**	**324**	PKIKP	**PKPdf**	**13 38 58.0**	**-1.3**
AKASG	**Malin Array Be**	**122.32**	**324**	PKP	**PKPdf**	**13 38 58.0**	**-1.3**
AKASG	**Malin Array Be**	**122.32**	**324**	PKP	**PKPdf**	**13 38 58.0**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=134,slow=1.7,SNR=6.4						
ARU	**Arti**	**122.58**	**345**	*i* PKIKP	**PKPdf**	**13 38 59.5**	**-0.1**
ARU						13 40 33.8	
ARU						13 45 58.6	
GERES	**GERESS Array B**	**125.01**	**312**	PKP	**PKPdf**	**13 39 03.6**	**-1.0**
GERES	**GERESS Array B**	**125.01**	**312**	PKP	**PKPdf**	**13 39 03.6**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=145,slow=3.6,SNR=7.4						
BFO	**Black Forest**	**126.30**	**308**	*e*PKIKP	**PKPdf**	**13 39 07.6**	**+0.6**
BFO	**Black Forest**	**126.30**	**308**	*e*PKPdf	**PKPdf**	**13 39 07.6**	**+0.6**
ECH	**Echery**	**126.59**	**307**	*e*PKIKP	**PKPdf**	**13 39 07.4**	**-0.2**
ECH	**Echery**	**126.59**	**307**	*e*PKPdf	**PKPdf**	**13 39 07.4**	**-0.2**
VSU	**Vasula**	**129.99**	**326⇑**	*e*PKIKP	**PKPdf**	**13 39 10.9**	**-2.7**
FINES	**FINESS Array B**	**132.80**	**328**	PKP	**PKPdf**	**13 39 18.2**	**-0.7**
FINES	**FINESS Array B**	**132.80**	**328**	PKP	**PKPdf**	**13 39 18.2**	**-0.7**
	comp=Z,1.5nm,0.6s,baz=139,slow=3.2,SNR=4.2						
ARCES	**ARCESS Array B**	**139.95**	**333**	PKP	**PKPdf**	**13 39 29.7**	**-2.3**
ARCES	**ARCESS Array B**	**139.95**	**333**	PKP	**PKPdf**	**13 39 29.7**	**-2.3**
	comp=Z,4.0nm,1.0s,baz=152,slow=4.1,SNR=4.5						
TXAR	**Lajitas Array**	**143.92**	**173**	PKP	PKPbc	13 39 38.6	+0.3
TXAR	**Lajitas Array**	**143.92**	**173**	PKP	PKPbc	13 39 38.6	+0.3
	comp=Z,3.1nm,0.8s,baz=183,slow=5.4,SNR=16						
BILL	**Bilibino**	**145.86**	**42⇑**	*i*PKP2	**PKPab**	**13 39 43.7**	**+0.1**
BILL				pmax	pmax		
	comp=Z,197nm,1.0s						
LRAL	**Lakeview Retre**	**146.91**	**199**	*e*PKPdf	**PKPbc**	**13 39 46.1**	**-1.1**
ISA	**Isabella**	**148.16**	**149**	*e*PKP2	**PKPbc**	**13 39 51.7**	**+0.9**
ISA	**Isabella**	**148.16**	**149**	*e*PKPbc	**PKPbc**	**13 39 51.6**	**+0.9**
LDFC	**Landfair**	**148.26**	**154**	*e*PKPbc	**PKPbc**	**13 39 52.3**	**+1.2**
BNM	**Barren Site**	**148.50**	**168**	*e*PKPdf	**PKPdf**	**13 39 49.1**	**+0.8**
BNM				*e*PKPbc	**PKiKP**	**13 39 52.4**	**-1.0**
LPM	**Los Pinos Moun**	**148.66**	**168**	*e*PKPbc	**PKPbc**	**13 39 52.9**	**+0.6**
LAZ	**Ladron**	**148.71**	**167**	PKPbc	**PKPbc**	**13 39 51.7**	**-0.7**
SWET	**Sewanee**	**148.90**	**201**	*e*PKPbc	**PKPbc**	**13 39 51.5**	**-1.1**
CPCT	**Cooper Cave**	**148.90**	**203**	*e*PKPdf	**PKPdf**	**13 39 48.8**	**+0.2**
PLAL	**Pickwick Lake**	**148.97**	**198**	*e*PKPbc	**PKPbc**	**13 39 51.5**	**-1.3**
WUAZ	**Wupatki**	**149.30**	**160**	*e*PKPbc	**PKPbc**	**13 39 54.4**	**+0.6**
WMOK	**Wichita Mounta**	**149.43**	**180**	*e*PKPdf	**PKPdf**	**13 39 49.7**	**+0.3**
WMOK				*e*PKPbc	**PKPbc**	**13 39 53.6**	**-0.3**
AMTX	**Amarillo**	**149.53**	**176**	*e*PKPbc	**PKPbc**	**13 39 54.3**	**0.0**
BLA	**Blacksburg**	**149.83**	**210**	*e*PKP2	**PKPbc**	**13 39 54.4**	**-0.5**
BLA	**Blacksburg**	**149.83**	**210**	*e*PKPbc	**PKPbc**	**13 39 54.4**	**-0.5**
CMB	**Columbia Colle**	**149.99**	**145**	*e*PKIKP	**PKPbc**	**13 39 56.1**	**+0.9**
CMB	**Columbia Colle**	**149.99**	**145**	*e*PKPbc	**PKPbc**	**13 39 56.1**	**+0.9**
WVT	**Waverly**	**150.06**	**198**	*e*PKIKP	**PKPbc**	**13 39 54.1**	**-1.3**
WVT	**Waverly**	**150.06**	**198**	*e*PKPbc	**PKPbc**	**13 39 54.1**	**-1.3**
WVT				*e*PKPab	**PKPab**	**13 40 03.1**	**+1.9**
NVAR	**Mina Array Bea**	**150.85**	**148**	PKP	**PKPdf**	**13 39 52.6**	**+0.7**
NVAR				PKPbc	**PKiKP**	**13 39 58.8**	**+0.6**
NVAR	**Mina Array Bea**	**150.85**	**148**	PKP	**PKPdf**	**13 39 52.6**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=191,slow=3.7,SNR=5.5						
NVAR				PKPbc	**PKiKP**	**13 39 58.8**	**+0.6**
	comp=Z,14nm,0.7s,baz=200,slow=3.3,SNR=111						
NV11	**Mina Array Sit**	**150.89**	**148**	*e*PKPbc	**PKPbc**	**13 39 58.6**	**+1.1**
CCUT	**Cedar City**	**150.98**	**156**	*e*PKPdf	**PKPdf**	**13 39 51.6**	**-0.5**
CCUT				*e*PKPbc	**PKiKP**	**13 39 59.1**	**+0.7**
MVCO	**Mesa Verde**	**151.34**	**164**	*e*PKPbc	**PKPbc**	**13 39 59.3**	**+0.5**
WCN	**Washoe City**	**151.35**	**145**	*e*PKIKP	**PKPbc**	**13 39 59.8**	**+1.2**
WCN	**Washoe City**	**151.35**	**145**	*e*PKPbc	**PKPbc**	**13 39 59.8**	**+1.2**
BEKR	**Beckworth**	**151.73**	**144**	*e*PKPbc	**PKPbc**	**13 40 00.2**	**+0.7**
SIUC	**Southern Illin**	**151.80**	**197**	*e*PKPbc	**PKPbc**	**13 39 59.0**	**-0.3**
SIUC				*e*PKPab	**PKPab**	**13 40 08.2**	**-0.2**
WDC	**Whiskeytown Da**	**151.84**	**140**	*e*PKIKP	**PKPbc**	**13 39 59.7**	**+0.3**
WDC	**Whiskeytown Da**	**151.84**	**140**	*e*PKPbc	**PKPbc**	**13 39 59.7**	**+0.3**
WCI	**Wyandotte Cave**	**151.90**	**202**	*e*PKIKP	**PKPbc**	**13 39 59.1**	**-0.6**
WCI				*e*		13 40 08.1	
WCI	**Wyandotte Cave**	**151.90**	**202**	*e*PKPbc	**PKPbc**	**13 39 59.1**	**-0.6**
WCI				*e*PKPab	**PKPab**	**13 40 08.1**	**-0.8**
MVU	**Marysvale**	**152.10**	**158**	*e*PKPbc	**PKPbc**	**13 40 01.8**	**+1.4**
MSU	**Marysvale**	**152.12**	**158**	*e*PKIKP	**PKPbc**	**13 40 01.8**	**+1.4**
MSU	**Marysvale**	**152.12**	**158**	*e*PKPbc	**PKPbc**	**13 40 01.8**	**+1.4**
TNA	**Tin City**	**152.62**	**58**	*e*PKPbc	**PKPbc**	**13 40 00.3**	**0.0**
OLIL	**Olney**	**152.66**	**199**	*e*PKPbc	**PKPbc**	**13 40 01.3**	**0.0**
SRU	**San Rafael**	**152.95**	**160**	*e*PKIKP	**PKPdf**	**13 39 55.4**	**+0.4**
SRU				*e*		13 40 02.2	
SRU	**San Rafael**	**152.95**	**160**	*e*PKPdf	**PKPdf**	**13 39 55.4**	**+0.4**
SRU				*e*PKPbc	**PKiKP**	**13 40 02.2**	**-0.2**
SMCO	**Snowmass**	**153.45**	**166**	*e*PKPbc	**PKPbc**	**13 40 04.5**	**+0.9**
DUG	**Dugway**	**153.65**	**156**	*e*PKIKP	**PKPbc**	**13 40 04.9**	**+1.3**
DUG	**Dugway**	**153.65**	**156**	*e*PKPbc	**PKPbc**	**13 40 04.9**	**+1.3**
MOD	**Modoc**	**153.67**	**142**	*e*PKPbc	**PKPbc**	**13 40 04.8**	**+1.1**
ISCO	**Idaho Springs**	**154.20**	**168**	*e*PKIKP	**PKPdf**	**13 39 57.9**	**+1.0**
ISCO				*e*		13 40 05.8	
ISCO	**Idaho Springs**	**154.20**	**168**	*e*PKPdf	**PKPdf**	**13 39 57.9**	**+1.0**
ISCO				*e*PKPbc	**PKiKP**	**13 40 05.8**	**+0.7**
HWUT	**Hardware Ranch**	**155.24**	**157**	*e*PKPdf	**PKPdf**	**13 39 58.7**	**+0.6**
PDAR	**Pinedale Array**	**156.68**	**160**	PKP	**PKPdf**	**13 39 59.3**	**-0.7**
PDAR				PKPab	**PKPab**	**13 40 29.1**	**-0.3**
PDAR	**Pinedale Array**	**156.68**	**160**	PKP	**PKPdf**	**13 39 59.3**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=151,slow=2.1,SNR=8.0						
PDAR				PKPab	**PKPab**	**13 40 29.1**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=178,slow=5.2,SNR=5.6						
MCMT	**McKenzie Canyo**	**158.13**	**153**	*e*PKPdf	**PKPdf**	**13 40 03.4**	**+1.6**
ECSD	**EROS Data Cent**	**158.37**	**185**	*e*PKPab	**PKPab**	**13 40 36.6**	**+0.3**
RSSD	**Black Hills**	**158.62**	**170**	*e*PKIKP	**PKPdf**	**13 40 02.4**	**0.0**
RSSD	**Black Hills**	**158.62**	**170**	*e*PKPdf	**PKPdf**	**13 40 02.4**	**0.0**
BOZ	**Bozeman (W)**	**159.15**	**155**	*e*PKIKP	**PKPdf**	**13 40 03.3**	**+0.4**
BOZ	**Bozeman (W)**	**159.15**	**155**	*e*PKPdf	**PKPdf**	**13 40 03.3**	**+0.4**
BOZ				*e*PKPdif	PKPab	13 40 14.2	-26
YKA	**Yellowknife Ar**	**172.59**	**105**	PKP	**PKPdf**	**13 40 12.0**	**-0.9**
YKA				PKPab	**PKPab**	**13 41 36.6**	**-1.9**
YKA	**Yellowknife Ar**	**172.59**	**105**	PKP	**PKPdf**	**13 40 12.0**	**-0.9**
	comp=Z,0.7nm,0.9s,baz=298,slow=1.3,SNR=7.3						
YKA				PKPab	**PKPab**	**13 41 36.6**	**-1.9**
	comp=Z,0.5nm,0.6s,baz=246,slow=4.4,SNR=8.3						

IDC 04 14:07:56.7±3.4**, 30°.28S**×**177°.62W, h0**km**, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/18**, mbtmp3.7**/3**, Error ellipse: s-maj=73.2km s-min=28.2km az=114.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.06**	**346**	Pn	Pn	14 08 18.8	0.0
	95nm,0.3s,baz=54,slow=23,SNR=7.6						
RAO				Sn	Sg	14 08 30.4	-0.3
	607nm,0.3s,baz=76,slow=21,SNR=14						
STKA	**Stephens Creek**	**34.82**	**257**	P	P	14 14 49.3	-0.2
	1.0nm,0.9s,baz=102,slow=9.3,SNR=2.6						
ASAR	**Alice Springs**	**43.44**	**267**	P	P	14 16 01.4	-0.2
	0.5nm,0.9s,baz=105,slow=7.5,SNR=9.6						
WRA	**Warramunga Arr**	**44.42**	**272**	P	P	14 16 09.6	0.0
	0.7nm,0.3s,baz=110,slow=8.1,SNR=14						
FINES	**FINESS Array B**	**145.14**	**340**	PKPbc	PKPbc	14 27 34.1	-0.9
	6.7nm,1.2s,baz=60,slow=3.4,SNR=3.7						

IDC 04 14:31:41.8±2.6**, 7°.05S**×**155°.84E, h97**km±26km**, mb3.5**/7**, mb1 3.7**/9**, mb1mx3.5**/20**, mbtmp3.6**/9**, MS3.1**/3**, Ms1 3.1**/3**, ms1mx2.8**/21**, Error ellipse: s-maj=26.0km s-min=16.5km az=176.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.70**	**121**	P	Pn	14 32 50.0	-0.5
	4.5nm,0.3s,baz=347,slow=6.2,SNR=5.8						
HNR				S	Sn	14 33 44.6	+0.7
	5.3nm,0.3s,baz=54,slow=20,SNR=3.2						
PMG	**Port Moresby**	**8.91**	**254**	P	Pn	14 33 48.8	+1.1
	1.7nm,0.3s,baz=82,slow=20,SNR=6.5						
CTA	**Charters Tower**	**15.96**	**215**	LR	LR	14 39 22.1	
	comp=Z,38nm,21.1s,baz=53,slow=29						
WRA	**Warramunga Arr**	**24.48**	**236**	P	P	14 36 52.1	0.0
	1.2nm,0.5s,baz=64,slow=10,SNR=20						
WRA				PcP	PcP	14 40 29.0	+0.5
	0.5nm,0.7s,baz=69,slow=2.9,SNR=5.3						
ASAR	**Alice Springs**	**26.77**	**230**	P	P	14 37 12.5	-0.3
	0.6nm,0.5s,baz=58,slow=10.0,SNR=35						
ASAR				PcP	PcP	14 40 34.0	+0.2
	0.3nm,0.6s,baz=69,slow=2.2,SNR=8.6						
STKA	**Stephens Creek**	**28.05**	**206**	P	P	14 37 27.4	+3.3
	0.9nm,0.5s,baz=46,slow=14,SNR=5.2						
FITZ	**Fitzroy Crossi**	**31.40**	**247**	P	P	14 37 53.4	-0.5
	2.6nm,0.5s,baz=90,slow=8.5,SNR=15						
FITZ				LR	LR	14 49 02.5	
	comp=Z,55nm,20.0s,baz=130,slow=33						
CMAR	**Chiang Mai Arr**	**61.56**	**295**	P	P	14 41 49.7	+0.4
	0.3nm,0.5s,baz=107,slow=5.9,SNR=3.3						
SONM	**Songino Array**	**69.83**	**327**	P	P	14 42 42.5	+0.4
	0.7nm,0.6s,baz=144,slow=7.0,SNR=8.3						
SONM				LR	LR	15 11 15.5	
	comp=Z,18nm,18.3s,baz=242,slow=34						
MKAR	**Makanchi Array**	**84.00**	**319**	P	P	14 44 01.5	0.0
	0.6nm,0.6s,baz=94,slow=5.9,SNR=6.5						
ZALV	**Zalesovo Beam**	**84.69**	**326**	P	P	14 44 03.6	-1.2
	0.5nm,0.4s,baz=114,slow=3.6,SNR=2.8						
GERES	**GERESS Array B**	**127.53**	**329**	PKP	PKPdf	14 50 35.9	+0.1
	0.2nm,0.3s,baz=66,slow=5.5,SNR=2.6						
TORD	**Torodi Ar. Bea**	**153.85**	**285**	PKPbc	PKPbc	14 51 30.1	-0.7
	0.2nm,0.4s,baz=16,slow=2.6,SNR=4.9						

*FUNV **04** 14:46:45.9, 10°.21N×67°.06W, h6km, MW4.4*
*ISCJB **04** 14:46:45.4±0.5, 10°.21N±0°.03×67°.08W±0°.02, h11km±3km, mb3.5/8, Error ellipse: s-maj=4.5km s-min=2.9km az=4.9*
*IDC **04** 14:46:47.7±0.8, 10°.31N×67°.20W, h0km, mb3.6/9, mb1 4.0/10, mb1mx3.8/26, mbtmp3.7/10, ML6.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/26, Error ellipse: s-maj=24.4km s-min=19.6km az=87.0*
ISC 04 14:46:45.7±1.0**, 10°.20N**±0°.03×**67°.05W**±0°.02**, h8**km±7km**, n42,** σ**1ˢ.40**/57**, mb3.7**/8**, 5C-8D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCUV	**OCUMARITO**	**0.26**	**109⇓**	*e*P	**Pg**	**14 46 50.2**	**-0.6**
OCUV				*e*S	**Sg**	**14 46 54.7**	**+0.4**
BOTV	**Botiquin**	**0.26**	**321⇓**	*e*P	**Pg**	**14 46 50.7**	**-0.3**
BOTV				*e*S	**Sg**	**14 46 54.8**	**+0.2**
FDCV	**FORTIN DE LA C**	**0.35**	**15⇑**	*i*P	**Pg**	**14 46 52.8**	**+0.1**
FDCV				*e*S	**Sg**	**14 46 58.5**	**+1.1**
FUNV	**FUNVISIS**	**0.35**	**41⇑**	*i*P	**Pg**	**14 46 52.7**	**0.0**
FUNV				*e*S	**Sg**	**14 46 58.5**	**+1.1**
LLAV	**El Llanito**	**0.36**	**41⇑**	*i*P	**Pg**	**14 46 52.7**	**0.0**
LLAV				*e*S	**Sg**	**14 46 58.6**	**+1.1**
BIRV	**Birongo**	**0.81**	**70⇓**	*e*P	**Pb**	**14 47 00.7**	**-1.4**
BIRV				*e*S	**Sg**	**14 47 12.8**	**+0.9**
TURV	**Turiamo**	**0.82**	**288⇓**	*i*P	**Pb**	**14 47 00.0**	**-2.1**
TURV				*e*S	**Sb**	**14 47 11.6**	**-1.7**
MERV	**Las Mercedes**	**1.20**	**142⇓**	*e*P	**Pn**	**14 47 08.2**	**-0.5**
MERV				*e*S	**Sg**	**14 47 25.4**	**+1.1**
CUPV	**Cœpira**	**1.25**	**96⇓**	*e*P	**Pg**	**14 47 09.7**	**+0.1**
CUPV				*e*S	**Sg**	**14 47 26.2**	**+0.3**
MAPV	**Macapo**	**1.44**	**255⇓**	*i*P	**Pb**	**14 47 12.9**	**+0.2**
MAPV				*e*S	**Sb**	**14 47 31.2**	**0.0**
BAUV	**El Baul**	**1.59**	**218⇑**	*e*P	**Pn**	**14 47 13.2**	**-0.9**
BAUV				*e*S	**Sb**	**14 47 35.4**	**-0.1**
ORCV	**Isla La Orchil**	**1.81**	**28⇑**	*e*P	**Pn**	**14 47 16.0**	**-1.1**
ORCV				*e*S	**Sb**	**14 47 40.0**	**-1.9**
JACV	**Jacura**	**1.96**	**297**	*e*P	**Pn**	**14 47 18.9**	**-0.3**
JACV				*e*S	**Sn**	**14 47 43.0**	**-1.1**
TEPV	**Terepaima**	**2.12**	**264**	*e*P	**Pn**	**14 47 22.2**	**+0.7**
TEPV				*e*S	**Sn**	**14 47 47.6**	**-0.5**
PCRV	**Puerto La Cruz**	**2.38**	**90**	*e*P	**Pn**	**14 47 26.2**	**+1.2**
PCRV				*e*S	**Sn**	**14 47 54.8**	**+0.5**
SANV	**Sanarito**	**2.55**	**254⇓**	*e*P	**Pn**	**14 47 28.2**	**+0.8**
SANV				*e*S	**Sn**	**14 47 57.3**	**-1.4**
SIQV	**Siquisique**	**2.75**	**280**	*e*P	**Pn**	**14 47 29.5**	**-0.6**
SIQV				*e*S	**Sn**	**14 48 02.1**	**-1.5**
PRGV	**PARIAGUAN**	**2.77**	**121**	*e*P	**Pn**	**14 47 30.7**	**+0.3**
CURV	**Curarigua**	**2.87**	**267**	*e*P	**Pn**	**14 47 32.7**	**+0.8**
CURV				*e*S	**Sn**	**14 48 05.1**	**-1.6**
MONV	**Montecano**	**3.36**	**302**	*e*P	**Pn**	**14 47 37.7**	**-0.8**
MONV				*e*S	**Sn**	**14 48 15.5**	**-3.1**
QARV	**Quebrada Arrib**	**3.42**	**270**	*e*P	**Pn**	**14 47 38.4**	**-1.0**
DABV	**Dabajuro**	**3.60**	**282**	*e*P	**Pn**	**14 47 41.3**	**-0.5**
ORIV	**Oritupano**	**3.76**	**107**	*e*P	**Pn**	**14 47 43.9**	**-0.1**
ELOV	**Elorza**	**3.99**	**217**	*e*P	**Pn**	**14 47 46.4**	**-0.7**
SOCV	**Socops**	**4.21**	**243**	*e*P	**Pn**	**14 47 49.5**	**-0.8**
SOCV				*e*S	**Sn**	**14 48 36.0**	**-3.8**
IMOV	**Isla Los Monje**	**4.35**	**300**	*e*P	**Pn**	**14 47 51.1**	**-1.0**
VIGV	**El Vigia**	**4.47**	**253**	*e*P	**Pn**	**14 47 53.3**	**-0.4**
GURV	**El Guri**	**4.61**	**121**	*e*P	**Pn**	**14 47 54.6**	**-1.0**
RIOV	**Rio Grande**	**5.58**	**112**	*e*P	**Pn**	**14 48 08.4**	**-0.8**
RIOV				*e*S	**Sn**	**14 49 08.6**	**-5.0**
LUEV	**Luepa**	**7.02**	**128**	*e*P	**Pn**	**14 48 27.7**	**-1.3**
SJG	**San Juan**	**7.91**	**6**	Pn	**Pn**	**14 48 41.0**	**-0.1**
	7.1nm,0.3s,baz=167,slow=18,SNR=3.9						
SJG				Sn	Sn	14 50 02.2	-8.7
	12nm,0.3s,baz=306,slow=17,SNR=8.1						
SJG				LR	LR	14 51 59.3	
	comp=Z,55nm,20.1s,baz=106,slow=40						
ATAH	**Atahualpa**	**20.60**	**214**	P	Pn	14 51 29.0	+0.8
	5.7nm,0.7s,baz=45,slow=10.0,SNR=3.5						
LPAZ	**La Paz**	**26.34**	**182**	P	P	14 52 27.6	+4.6
	0.7nm,0.8s,baz=7.1,slow=8.1,SNR=3.4						
TXAR	**Lajitas Array**	**39.14**	**304**	P	**P**	**14 54 14.6**	**+0.5**
	0.4nm,0.6s,baz=122,slow=8.7,SNR=5.7						
SCHQ	**Schefferville**	**44.52**	**0**	P	P	14 55 00.5	+2.9
	1.5nm,0.9s,baz=201,slow=9.3,SNR=4.1						
PDAR	**Pinedale Array**	**49.20**	**319**	P	P	14 55 37.4	+2.6
	0.5nm,0.7s,baz=111,slow=8.1,SNR=4.3						
NVAR	**Mina Array Bea**	**53.65**	**310**	P	**P**	**14 56 10.4**	**+2.2**
	0.3nm,0.6s,baz=118,slow=5.2,SNR=3.0						
YKA	**Yellowknife Ar**	**62.34**	**337**	P	**P**	**14 57 10.5**	**+2.2**
	0.4nm,0.7s,baz=116,slow=7.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**67.20**	**80**	P	P	14 57 44.1	+3.1
	0.3nm,0.5s,baz=291,slow=6.2,SNR=3.1						
GERES	**GERESS Array B**	**76.31**	**42**	P	P	14 58 40.4	+5.0
	0.3nm,0.3s,baz=239,slow=7.6,SNR=3.5						
STKA	**Stephens Creek**	**145.84**	**227**	PKPbc	**PKPab**	**15 06 28.3**	**+1.7**
	2.3nm,1.0s,baz=63,slow=4.5,SNR=3.3						
CMAR	**Chiang Mai Arr**	**148.35**	**26**	PKPbc	**PKPab**	**15 06 36.3**	**-0.3**
	0.5nm,0.8s,baz=314,slow=4.0,SNR=4.1						

*MDD **04** 14:57:12.0±2.2, 35°.67N×11°.43W, h0km, mb4.1/4, Error ellipse: s-maj=27.3km s-min=17.4km az=136.0, PRXIMO*
*IGIL **04** 14:57:12.2, 35°.70N×11°.53W, h1km, ML2.2*
*INMG **04** 14:57:12.2±1.0, 35°.60N×11°.55W, h10km, ML2.3, Error ellipse: s-maj=9.9km s-min=5.1km az=113.0*
*CSEM **04** 14:57:13.7±0.4, 35°.76N×11°.31W, h10km, ML3.2/11, Error ellipse: s-maj=9.6km s-min=6.5km az=132.0*
ISC 04 14:57:12.4±4.0**, 35°.7N**±0°.1×**11°.4W**±0°.2**, h10**km**, n53,** σ**0ˢ.73**/80**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.49**	**55**	*e*Pn	**Pn**	**14 57 53.3**	**+0.3**
PFVI				*e*Sn	**Sn**	**14 58 24.1**	**+0.7**
PFVI	**Vila Bisbo**	**2.49**	**55**	Pn	**Pn**	**14 57 53.2**	**+0.3**
	3.2nm,0.1s,SNR=18						
PFVI				Sn	**Sn**	**14 58 23.5**	**0.0**
	10nm,0.1s,SNR=6.6						
PFVI	**Vila Bisbo**	**2.49**	**55**	*e*Pn	**Pn**	**14 57 53.3**	**+0.3**
PFVI				*e*Sn	**Sn**	**14 58 24.1**	**+0.7**
MORF	**Marmelete**	**2.71**	**53**	*e*Pn	**Pn**	**14 57 57.5**	**+1.5**
MORF				*e*Sn	**Sn**	**14 58 29.3**	**+0.5**
MORF				A	A	14 58 33.3	
	9.1nm,0.2s						
MORF	**Marmelete**	**2.71**	**53**	Pn	**Pn**	**14 57 57.5**	**+1.5**
MORF				Sn	**Sn**	**14 58 29.3**	**+0.5**
	9.1nm,0.2s						
MORF	**Marmelete**	**2.71**	**53**	Pn	**Pn**	**14 57 57.5**	**+1.5**
MORF				*e*Sn	**Sn**	**14 58 29.3**	**+0.5**
	9.1nm,0.2s						
PTEO	**Sao Teotonio**	**2.80**	**49**	*e*Pn	**Pn**	**14 57 57.7**	**+0.4**
PTEO				*e*Sn	**Sn**	**14 58 31.6**	**+0.5**
PTEO	**Sao Teotonio**	**2.80**	**49**	Pn	**Pn**	**14 57 57.7**	**+0.4**
PTEO				Sn	**Sn**	**14 58 31.6**	**+0.5**
PTEO	**Sao Teotonio**	**2.80**	**49**	Pn	**Pn**	**14 57 57.7**	**+0.4**
PTEO				Sn	**Sn**	**14 58 31.6**	**+0.5**
PBDV	**Barranco-do-Ve**	**3.16**	**60**	*e*Sn	**Sn**	**14 58 40.1**	**+0.1**
PBDV	**Barranco-do-Ve**	**3.16**	**60**	Sn	**Sn**	**14 58 40.1**	**+0.1**
PBDV	**Barranco-do-Ve**	**3.16**	**60**	Sn	**Sn**	**14 58 40.1**	**+0.1**
PCVE	**Castro Verde**	**3.29**	**54**	*e*Pn	**Pn**	**14 58 05.0**	**+1.0**
PCVE				*e*Sn	**Sn**	**14 58 44.0**	**+0.8**
PCVE	**Castro Verde**	**3.29**	**54**	Pn	**Pn**	**14 58 05.0**	**+1.0**
PCVE				Sn	**Sn**	**14 58 44.0**	**+0.8**
PCVE	**Castro Verde**	**3.29**	**54**	Pn	**Pn**	**14 58 05.0**	**+1.0**
PCVE				Sn	**Sn**	**14 58 44.0**	**+0.8**
MESJ	**Messejana**	**3.30**	**49**	*e*S	**Sn**	**14 58 43.0**	**-0.4**
MESJ				AML	AML	14 58 46.2	
	comp=E,6.0nm,0.1s						
MESJ	**Messejana**	**3.30**	**49**	*e*S	**Sn**	**14 58 43.0**	**-0.4**
MESJ	**Messejana**	**3.30**	**49**	Sn	**Sn**	**14 58 43.0**	**-0.4**
MESJ	**Messejana**	**3.30**	**49**	*e*S	**Sn**	**14 58 43.0**	**-0.4**
PNCL	**Nicolau / Gran**	**3.30**	**43**	*e*Pn	**Pn**	**14 58 04.1**	**0.0**
PNCL				*e*Sn	**Sn**	**14 58 43.5**	**+0.1**
PNCL	**Nicolau / Gran**	**3.30**	**43**	*e*Pn	**Pn**	**14 58 04.1**	**0.0**
PNCL				*e*Sn	**Sn**	**14 58 43.5**	**+0.1**
PVAQ	**Vaqueiros**	**3.39**	**59**	*e*Pn	**Pn**	**14 58 05.8**	**+0.5**
PVAQ				*e*Sn	**Sn**	**14 58 45.6**	**0.0**
PVAQ				A	A	14 58 47.4	
	comp=E,5.6nm,0.1s						
PVAQ	**Vaqueiros**	**3.39**	**59**	Pn	**Pn**	**14 58 05.8**	**+0.5**
PVAQ				Sn	**Sn**	**14 58 45.6**	**0.0**
	comp=E,5.6nm,0.1s						
PVAQ	**Vaqueiros**	**3.39**	**59**	Pn	**Pn**	**14 58 05.8**	**+0.5**
PVAQ				*e*Sn	**Sn**	**14 58 45.6**	**0.0**
	comp=E,5.6nm,0.1s						
EGRO	**El Granado**	**3.62**	**59**	Pn	**Pn**	**14 58 08.7**	**+0.3**
	comp=E,1.3nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**14 58 51.2**	**+0.1**
	comp=E,4.1nm,0.1s,SNR=5.8						
EGRO	**El Granado**	**3.62**	**59**	Pn	**Pn**	**14 58 08.7**	**+0.3**
	comp=E,1.3nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**14 58 51.2**	**+0.1**
	comp=E,4.1nm,0.1s,SNR=5.8						
PBEJ	**Beja**	**3.63**	**50**	*e*Sn	**Sn**	**14 58 51.6**	**0.0**
PBEJ	**Beja**	**3.63**	**50**	Sn	**Sn**	**14 58 51.6**	**0.0**
PBEJ	**Beja**	**3.63**	**50**	Sn	**Sn**	**14 58 51.6**	**0.0**
PMAFR	**Mafra**	**3.64**	**27**	*e*Sn	**Sn**	**14 58 51.4**	**-0.3**
PMAFR				A	A	14 58 53.5	
	comp=E,9.4nm,0.2s						
PMAFR	**Mafra**	**3.64**	**27**	Pn	**Pn**	**14 58 09.1**	**+0.4**
	comp=E,2.6nm,0.2s,SNR=4.0						
PMAFR				Sn	**Sn**	**14 58 51.0**	**-0.7**
	comp=E,13nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.64**	**27**	Pn	**Pn**	**14 58 09.1**	**+0.4**
	comp=E,2.6nm,0.2s,SNR=4.0						
PMAFR				Sn	**Sn**	**14 58 51.0**	**-0.7**
	comp=E,13nm,0.2s,SNR=7.9						
MOE	**Montemor**	**3.70**	**40**	*e*Sn	**Sn**	**14 58 53.4**	**+0.2**
MOE	**Montemor**	**3.70**	**40**	Sn	**Sn**	**14 58 53.4**	**+0.2**
MOE	**Montemor**	**3.70**	**40**	Sn	**Sn**	**14 58 53.4**	**+0.2**
PMTG	**Montargil**	**4.18**	**36**	*e*Sn	**Sn**	**14 59 04.1**	**-1.0**
PMTG				A	A	14 59 08.1	
	comp=E,2.3nm,0.2s						
PMTG	**Montargil**	**4.18**	**36**	*e*Sn	**Sn**	**14 59 04.1**	**-1.0**
	comp=E,2.3nm,0.2s						
EMIN	**Mina Concepcio**	**4.29**	**60**	Pn	**Pn**	**14 58 17.5**	**-0.2**
	comp=E,0.4nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**14 59 07.4**	**-0.5**
	comp=E,0.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.29**	**60**	Pn	**Pn**	**14 58 17.5**	**-0.2**
	comp=E,0.4nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**14 59 07.4**	**-0.5**
	comp=E,0.3nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**4.36**	**43**	*e*Sn	**Sn**	**14 59 09.2**	**-0.3**
PESTR				A	A	14 59 12.8	
	comp=E,4.9nm,0.6s						
PESTR	**Estremoz**	**4.36**	**43**	Sn	**Sn**	**14 59 09.2**	**-0.3**
	comp=E,2.5nm,0.6s						
PESTR	**Estremoz**	**4.36**	**43**	*e*Sn	**Sn**	**14 59 09.2**	**-0.3**
	comp=E,4.9nm,0.6s						
ESPR	**Espera**	**4.60**	**74**	Pn	**Pn**	**14 58 22.5**	**+0.5**
	comp=E,1.3nm,0.1s,SNR=7.9						
ESPR				Sn	**Sn**	**14 59 13.4**	**-2.0**
	comp=E,1.5nm,0.1s,SNR=7.9						
ESPR	**Espera**	**4.60**	**74**	Pn	**Pn**	**14 58 22.5**	**+0.5**
	comp=E,1.3nm,0.1s,SNR=7.9						
ESPR				Sn	**Sn**	**14 59 13.4**	**-2.0**
	comp=E,1.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**4.61**	**48**	Pn	**Pn**	**14 58 22.4**	**+0.3**
	comp=E,0.7nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**14 59 14.7**	**-1.1**
	comp=E,2.0nm,0.1s,SNR=5.6						
EBAD	**Badajoz**	**4.61**	**48**	Pn	**Pn**	**14 58 22.4**	**+0.3**
	comp=E,0.7nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**14 59 14.7**	**-1.1**
	comp=E,2.0nm,0.1s,SNR=5.6						
PMRV	**Marv??o**	**4.87**	**39**	*e*Sn	**Sn**	**14 59 20.6**	**-1.5**
PMRV	**Marv??o**	**4.87**	**39**	Sn	**Sn**	**14 59 20.6**	**-1.5**

PMRV	**Marv??o**	**4.87**	**39**	Sn	**Sn**	**14 59 20.6**	**-1.5**
EADA	**Adamuz**	**5.96**	**64**	Pn	**Pn**	**14 58 40.7**	**-0.1**
	comp=E,0.8nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**14 59 48.3**	**-0.8**
	comp=E,0.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**5.96**	**64**	Pn	**Pn**	**14 58 40.7**	**-0.1**
	comp=E,0.8nm,0.1s,SNR=7.9						
EADA				Sn	**Sn**	**14 59 48.3**	**-0.8**
	comp=E,0.6nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**6.03**	**42**	Sn	Sn	14 59 48.6	-2.1
	comp=E,0.5nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**6.03**	**42**	Sn	Sn	14 59 48.6	-2.1
	comp=E,0.5nm,0.1s,SNR=7.9						

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*IDC **04** 15:01:54.7±3.4, 7°.35S×128°.54E, h124km±32km, mb3.7/8, mb1 4.0/11, mb1mx3.9/20, mbtmp3.9/11, MS3.2/2, Ms1 3.2/2, ms1mx2.5/33, Error ellipse: s-maj=30.9km s-min=13.7km az=72.0*

*ISCJB **04** 15:01:56.0±0.5, 7°.67S±0°.04×128°.51E±0°.09, h151km, mb3.9/8, Error ellipse: s-maj=12.4km s-min=5.5km az=176.1*

*DJA **04** 15:01:59.8±0.4, 8°S±3°×12°9E±°, h129km±14km, M4.6/11, mB5.1/4, mb4.7/11, MLv4.6/6, Mw(mB)4.4/4*

ISC 04 15:01:57.0±0.6**, 7°.65S**±0°.06×**128°.6E**±0°.1**, h151km, n25, σ1ˢ89**/27**, mb4.0**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**3.95**	**355**	P	**Pn**	**15 02 57.8**	**+1.1**
FAKI	**Fak Fak**	**5.95**	**38**	P	**Pn**	**15 03 24.4**	**+1.2**
	46nm,0.5s,1µm0.4nm						
LBMI	**Labuha**	**7.04**	**351**	P	**Pn**	**15 03 39.7**	**+2.0**
	45nm,1.0s,0.2nm						
SWI	**Sorong**	**7.25**	**22**	P	**Pn**	**15 03 40.6**	**+0.1**
	98nm,0.6s,2µm0.5nm						
RKPI	**Ransiki, Papua**	**8.27**	**43**	P	**Pn**	**15 03 54.4**	**+0.3**
	146nm,0.8s						
TNTI	**Ternate**	**8.45**	**352**	P	**Pn**	**15 03 56.8**	**+0.3**
	19nm,1.1s						
MNI	**Manado**	**9.77**	**337**	P	**Pn**	**15 04 15.4**	**+1.4**
	80nm,1.2s						
MRSI	**Marisa**	**10.43**	**320**	P	**Pn**	**15 04 24.8**	**+2.0**
	22nm,1.2s,598nm						
FITZ	**Fitzroy Crossi**	**10.78**	**195**	P	**Pn**	**15 04 28.5**	**+1.1**
	3.3nm,0.3s,baz=28,slow=10.0,SNR=81						
FITZ				S	**Sn**	**15 06 23.2**	**-3.5**
	4.8nm,0.3s,baz=298,slow=23,SNR=8.0						
WRA	**Warramunga Arr**	**13.44**	**156**	P	**Pn**	**15 05 02.9**	**+0.9**
	5.7nm,0.3s,baz=335,slow=14,SNR=161						
WRA				S	**Sn**	**15 07 27.0**	**-3.9**
	4.8nm,0.3s,baz=326,slow=23,SNR=6.9						
ASAR	**Alice Springs**	**16.73**	**163**	P	**Pn**	**15 05 46.4**	**+3.6**
	2.6nm,0.3s,baz=333,slow=9.2,SNR=345						
ASAR				S	**S**	**15 08 47.6**	**-1.2**
	1.0nm,0.3s,baz=340,slow=21,SNR=5.6						
STKA	**Stephens Creek**	**26.99**	**155**	P	**P**	**15 07 28.2**	**+3.4**
	1.6nm,0.6s,baz=324,slow=8.6,SNR=6.5						
CMAR	**Chiang Mai Arr**	**39.08**	**312**	P	**P**	**15 09 08.9**	**-0.8**
	1.3nm,1.0s,baz=142,slow=8.4,SNR=8.9						
KSRS	**Korea Array**	**44.87**	**359**	P	**P**	**15 09 54.6**	**-1.7**
	0.8nm,0.9s,baz=194,slow=15,SNR=4.5						
MJAR	**Matsushiro Arr**	**44.88**	**11**	P	P	15 09 53.3	-3.2
	2.1nm,0.9s,baz=189,slow=11,SNR=8.3						
ASAJ	**Asahikawa**	**53.06**	**13**	LR	LR	15 29 58.6	
	comp=Z,21nm,19.7s,baz=234,slow=32						
SONM	**Songino Array**	**58.62**	**343**	P	**P**	**15 11 37.2**	**-1.1**
	2.2nm,0.9s,baz=166,slow=7.6,SNR=13						
SONM				LR	LR	15 38 52.2	
	comp=Z,20nm,19.3s,baz=225,slow=38						
PETK	**Petropavlovsk-**	**65.38**	**19**	P	**P**	**15 12 22.6**	**-0.5**
	5.4nm,0.6s,baz=187,slow=4.7,SNR=25						
MKAR	**Makanchi Array**	**68.00**	**328**	P	**P**	**15 12 38.9**	**-1.0**
	2.1nm,0.7s,baz=125,slow=7.8,SNR=31						
ZALV	**Zalesovo Beam**	**71.54**	**334**	P	**P**	**15 12 59.5**	**-1.9**
	2.0nm,0.5s,baz=136,slow=5.3,SNR=11						
PDAR	**Pinedale Array**	**118.35**	**45**	PKP	**PKPdf**	**15 20 26.2**	**-0.9**
	0.4nm,0.7s,baz=153,slow=1.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**127.54**	**281**	PKP	**PKPdf**	**15 20 44.2**	**-1.0**
	0.4nm,0.9s,baz=71,slow=2.9,SNR=3.7						
SCHQ	**Schefferville**	**131.35**	**12**	PKP	**PKPdf**	**15 20 52.1**	**+0.7**
	1.8nm,0.8s,baz=270,slow=5.1,SNR=3.6						
CPUP	**Villa Florida**	**145.75**	**171**	PKPbc	**PKPab**	**15 21 20.4**	**+0.8**
	0.5nm,0.4s,baz=320,slow=5.0,SNR=4.3						
LPAZ	**La Paz**	**151.04**	**145**	PKPbc	**PKPbc**	**15 21 35.1**	**+1.2**
	0.8nm,0.5s,baz=85,slow=4.4,SNR=7.3						
LPAZ				PKPab	**PKPab**	**15 21 43.9**	**+2.1**
	1.6nm,0.6s,baz=168,slow=2.9,SNR=7.8						

IDC 04 15:15:36.6±1.5**, 9°.26N**×**93°.12E, h0km, mb3.5**/5**, mb1 3.7**/6**, mb1mx3.4**/27**, mbtmp3.5**/6**, ML3.5**/1**, Error ellipse: s-maj=57.1km s-min=22.5km az=59.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.74**	**31**	Pn	Pn	15 18 13.2	+1.2
	0.1nm,0.3s,baz=216,slow=15,SNR=9.7						
MKAR	**Makanchi Array**	**38.53**	**348**	P	P	15 23 00.1	-0.8
	0.6nm,0.7s,baz=167,slow=8.0,SNR=8.4						
ZALV	**Zalesovo Beam**	**45.06**	**353**	P	P	15 23 53.5	-0.7
	0.5nm,0.4s,baz=178,slow=8.4,SNR=3.5						
WRA	**Warramunga Arr**	**49.88**	**126**	P	P	15 24 33.4	+1.1
	0.3nm,0.6s,baz=306,slow=8.4,SNR=5.3						
ASAR	**Alice Springs**	**51.57**	**130**	P	P	15 24 43.2	-1.8
	0.2nm,0.7s,baz=302,slow=6.6,SNR=4.6						
GERES	**GERESS Array B**	**76.13**	**318**	P	P	15 27 27.6	+1.0
	0.2nm,0.2s,baz=94,slow=6.1,SNR=3.5						

MEX 04 15:27:23.4±0.5**, 18°.29N**×**100°.29W, h54km**±4km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.06**	**265**	*e*P	Pn	15 27 30.3	-1.3
ARIG				*i* S	Sn	15 27 35.5	-1.9
CAIG	**El Cayaco**	**1.23**	**179**	*i* P	Pn	15 27 43.3	-1.1
CAIG				*i* S	Sn	15 27 57.7	-2.3
YAIG	**Yautepec**	**1.29**	**63**	*i* P	Pn	15 27 43.0	-2.4
YAIG				*i* S	Sn	15 27 59.0	-2.7
ZIIG	**Zihuatanejo**	**1.31**	**239**	*i* P	Pn	15 27 43.8	-1.6
ZIIG				*i* S	Sn	15 27 59.7	-2.1
UTMO	**Huajuapan**	**2.41**	**100**	*i* P	Pn	15 27 58.9	-1.7
UTMO				*i* S	Sn	15 28 27.4	-1.8
PNIG	**Pinotepa**	**2.79**	**132**	*i* P	Pn	15 28 04.1	-1.6
PNIG				*i* S	Sn	15 28 36.1	-2.1

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*AUST **04** 15:50:46.7, 10°.00S×120°.98E, h15km*

*ISCJB **04** 15:50:47.2±0.4, 9°.79S±0°.04×120°.69E±0°.04, h100km, mb4.0/5, Error ellipse: s-maj=6.5km s-min=5.0km az=137.1*

*DJA **04** 15:50:48.3±0.9, 10°S±9°×12°1E±°, h93km±13km, M4.3/11, mb4.4/6, MLv4.3/11*

*IDC **04** 15:50:49.2±2.2, 9°.49S×121°.03E, h86km±18km, mb3.7/5, mb1 3.7/9, mb1mx3.5/22, mbtmp3.7/9, Error ellipse: s-maj=46.1km s-min=13.8km az=65.0*

ISC 04 15:50:47.7±0.5**, 9°.83S**±0°.05×**120°.68E**±0°.05**, h100km, n43, σ2ˢ33**/46**, mb4.0**/5**, Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BASI	**Baing, Sumba**	**0.40**	**194**	P	**Pn**	**15 51 04.5**	**+1.7**
BASI	**Baing, Sumba**	**0.40**	**194**	P	**Pn**	**15 51 04.2**	**+1.4**
WSI	**Waingapu**	**0.41**	**294**	P	**Pn**	**15 51 03.5**	**+0.6**
WSI	**Waingapu**	**0.41**	**294**	P	Pn	15 51 06.4	+3.5
WSI	**Waingapu**	**0.41**	**294**	P	**Pn**	**15 51 02.8**	**-0.1**
	baz=0.7,SNR=42						
WSI				S	**Sn**	**15 51 12.8**	**-1.4**
	baz=0.7,SNR=21						
MMRI	**Maumere**	**1.95**	**53**	P	**Pn**	**15 51 19.0**	**-0.7**
MMRI	**Maumere**	**1.95**	**53**	P	**Pn**	**15 51 18.9**	**-0.7**
BKSI	**Bulukumba**	**4.51**	**353**	P	**Pn**	**15 51 54.2**	**+0.3**
BKSI	**Bulukumba**	**4.51**	**353**	P	**Pn**	**15 51 53.8**	**-0.1**
BBSI	**Bau Bau**	**4.71**	**24**	P	**Pn**	**15 51 57.0**	**+0.5**
BBSI	**Bau Bau**	**4.71**	**24**	P	**Pn**	**15 51 56.7**	**+0.2**
KAPI	**Kappang**	**4.87**	**349**	P	**Pn**	**15 51 58.6**	**-0.2**
KAPI	**Kappang**	**4.87**	**349**	P	**Pn**	**15 51 58.5**	**-0.2**
	55nm,0.5s,571nm						
KAPI	**Kappang**	**4.87**	**349**	P	**Pn**	**15 51 58.0**	**-0.8**
	11nm,0.3s,baz=170,slow=12,SNR=45						
KAPI				S	**Sn**	**15 52 49.7**	**-4.3**
	2.2nm,0.3s,baz=64,slow=20,SNR=4.0						
KHKI	**Kahang-Kahang**	**5.21**	**286**	P	**Pn**	**15 52 03.9**	**+0.6**
	38nm,1.2s,0.2nm						
DNP	**Denpasar**	**5.51**	**282**	P	**Pn**	**15 52 06.2**	**-1.2**
	208nm,1.0s,2.0nm						
SRBI	**Singaraja**	**5.67**	**287**	P	**Pn**	**15 52 10.1**	**+0.6**
	27nm,0.8s,0.2nm						
SPSI	**Sidrap Palu**	**5.90**	**351**	P	**Pn**	**15 52 14.7**	**+2.0**
	23nm,0.7s,0.1nm						
SPSI	**Sidrap Palu**	**5.90**	**351**	P	Pn	15 52 08.7	-4.0
TTSI	**Tana Toraja**	**6.80**	**353**	P	Pn	15 52 18.5	-6.4
BLJI	**Banyuglugur**	**7.30**	**286**	P	**Pn**	**15 52 32.4**	**+0.7**
	27nm,0.4s,0.2nm						
LUWI	**Luwuk**	**8.98**	**14**	P	**Pn**	**15 52 57.0**	**+2.4**
	baz=9.1,SNR=3.8						
FITZ	**Fitzroy Crossi**	**9.53**	**150**	P	**Pn**	**15 53 03.6**	**+1.6**
	0.8nm,0.3s,baz=342,slow=12,SNR=42						
FITZ				S	**Sn**	**15 54 43.9**	**-3.4**
	6.7nm,0.3s,baz=216,slow=20,SNR=13						
FITZ	**Fitzroy Crossi**	**9.53**	**150**	P	**Pn**	**15 53 03.2**	**+1.2**
	baz=9.3,SNR=17						
FITZ				S	**Sn**	**15 54 42.3**	**-5.0**
	baz=9.3,SNR=7.4						
KNRA	**Kununurra**	**9.79**	**127**	P	**Pn**	**15 53 06.1**	**+0.4**
	baz=9.5,SNR=68						
KNRA				S	**Sn**	**15 54 48.0**	**-5.8**
	baz=9.5,SNR=4.5						
UGM	**Wanagama**	**10.21**	**280**	P	**Pn**	**15 53 12.9**	**+1.5**
	baz=10,SNR=3.2						
UGM				S	**Sn**	**15 55 00.2**	**-3.8**
	baz=10,SNR=3.8						
MRSI	**Marisa**	**10.32**	**7**	P	**Pn**	**15 53 13.5**	**+0.7**
SMRI	**Semarang**	**10.49**	**284**	P	Pn	15 53 21.0	+5.8
	baz=11,SNR=8.2						
MTN	**Manton Dam**	**10.68**	**107**	P	**Pn**	**15 53 17.4**	**-0.3**
	baz=10,SNR=8.1						
MTN				S	Sn	15 55 07.5	-7.9
	baz=10,SNR=7.5						
KDU	**Kakadu**	**11.91**	**105**	P	**Pn**	**15 53 33.5**	**-0.8**
	baz=12,SNR=18						
FAKI	**Fak Fak**	**13.39**	**60**	P	**Pn**	**15 53 54.0**	**+0.1**
	baz=13,SNR=9.0						
GIRL	**Giralia**	**14.15**	**205**	P	**P**	**15 54 07.0**	**-1.0**
	baz=14,SNR=5.0						
WRA	**Warramunga Arr**	**16.58**	**129**	P	**P**	**15 54 35.0**	**-0.1**
	0.7nm,0.3s,baz=301,slow=15,SNR=40						
WRA				S	Sn	15 57 29.6	-8.7
	0.9nm,0.3s,baz=309,slow=22,SNR=8.9						
MEEK	**Meekatharra**	**16.83**	**186**	P	**P**	**15 54 41.1**	**+3.3**
	baz=17,SNR=10						
MEEK				S	Sn	15 57 33.5	-11
	baz=17,SNR=5.1						
ASAR	**Alice Springs**	**18.68**	**139**	P	**Pn**	**15 55 03.0**	**+3.3**
	0.3nm,0.3s,baz=330,slow=15,SNR=20						
ASAR				S	**S**	**15 58 22.8**	**-3.0**
	0.3nm,0.3s,baz=315,slow=23,SNR=9.6						
MORW	**Morawa**	**19.62**	**192**	P	Pn	15 55 17.9	+7.3
	baz=20,SNR=7.5						
MORW				S	**S**	**15 58 39.3**	**-5.2**
	baz=20,SNR=4.5						
PPI	**Padang Panjang**	**22.22**	**294**	P	P	15 55 46.6	+10
	baz=23,SNR=5.7						
PPI				S	**S**	**15 59 30.6**	**-4.0**
	baz=23,SNR=13						
MJAR	**Matsushiro Arr**	**48.99**	**19**	P	**P**	**15 59 23.2**	**-1.1**
	1.0nm,1.1s,baz=192,slow=9.0,SNR=4.6						
SONM	**Songino Array**	**58.80**	**349**	P	**P**	**16 00 36.0**	**+0.4**
	0.5nm,0.4s,baz=166,slow=9.2,SNR=6.1						
MKAR	**Makanchi Array**	**65.95**	**332**	P	**P**	**16 01 25.5**	**+2.3**
	1.3nm,0.6s,baz=138,slow=7.3,SNR=23						
PETK	**Petropavlovsk-**	**70.18**	**23**	P	**P**	**16 01 50.3**	**+0.8**
	4.8nm,1.1s,baz=208,slow=4.9,SNR=4.7						
ZALV	**Zalesovo Beam**	**70.41**	**338**	P	**P**	**16 01 52.5**	**+1.6**
	1.1nm,0.3s,baz=134,slow=5.1,SNR=8.7						
TORD	**Torodi Ar. Bea**	**120.23**	**280**	PKP	**PKPdf**	**16 09 32.1**	**+4.0**
	0.5nm,0.6s,baz=36,slow=2.0,SNR=7.6						

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*DDA **04** 16:03:27.3, 40°.73N×30°.61E, h7km, MD2.8*

*ISK **04** 16:03:27.1, 40°.63N×30°.60E, h20km, MD2.7*

*CSEM **04** 16:03:27.2±0.2, 40°.68N×30°.62E, h15km, MD2.7, Error ellipse: s-maj=4.5km s-min=3.7km az=22.0*

*ISCJB **04** 16:03:27.0±0.5, 40°.70N±0°.04×30°.61E±0°.04, h14km±4km, Error ellipse: s-maj=6.0km s-min=5.1km az=169.7*

ISC 04 16:03:27.5±0.9**, 40°.68N**±0°.03×**30°.60E**±0°.02**, h14km**±7km**, n46, σ0ˢ79**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPNC	**Sapanca-Adapaz**	**0.22**	**270**	*e*PG	**Pb**	**16 03 33.2**	**-0.1**
SPNC				*e*SG	**Sg**	**16 03 37.5**	**+1.8**
SPNC	**Sapanca-Adapaz**	**0.22**	**270**	*e*Pg	**Pb**	**16 03 33.2**	**-0.1**
SPNC				*e*Sg	**Sg**	**16 03 37.5**	**+1.8**
GULT	**Gulveren**	**0.26**	**194**	*e*PG	**Pg**	**16 03 33.1**	**0.0**
GULT				*e*SG	**Sg**	**16 03 36.8**	**-0.1**
GULT	**Gulveren**	**0.26**	**194**	*e*Pg	**Pg**	**16 03 33.1**	**0.0**
GULT				*e*Sg	**Sg**	**16 03 36.8**	**-0.1**
HENT	**Hendek**	**0.27**	**59**	*i* P	**Pg**	**16 03 32.6**	**-0.5**
HENT				*i* S	**Sg**	**16 03 36.2**	**-0.8**
HENT	**Hendek**	**0.27**	**59**	*i* P	**Pg**	**16 03 32.6**	**-0.5**
HENT				*i* S	**Sg**	**16 03 36.2**	**-0.8**
GPA	**Golpazari**	**0.45**	**209**	*e*PG	**Pg**	**16 03 35.5**	**-1.0**
GPA	**Golpazari**	**0.45**	**209**	*e*Pg	**Pg**	**16 03 35.5**	**-1.0**
MDUB	**Mudurnu**	**0.50**	**115**	*e*PG	**Pg**	**16 03 37.2**	**-0.2**
MDUB	**Mudurnu**	**0.50**	**115**	*e*Pg	**Pg**	**16 03 37.2**	**-0.2**
ADVT	**Abdulvahap**	**0.70**	**249**	*e*PG	**Pg**	**16 03 40.8**	**-0.4**
ADVT	**Abdulvahap**	**0.70**	**249**	*e*Pg	**Pg**	**16 03 40.8**	**-0.4**
HRT	**Hereke**	**0.72**	**281**	*e*PG	**Pb**	**16 03 41.8**	**0.0**
HRT	**Hereke**	**0.72**	**281**	*e*Pg	**Pb**	**16 03 41.8**	**0.0**
CAVI	**Cavuskoy**	**0.75**	**230**	*e*PG	**Pg**	**16 03 41.1**	**-1.0**
CAVI	**Cavuskoy**	**0.75**	**230**	*e*Pg	**Pg**	**16 03 41.1**	**-1.0**
BORA	**Eskisehir**	**0.81**	**188**	*i* P	**Pb**	**16 03 43.8**	**+0.4**
BORA				*i* S	**Sn**	**16 03 56.2**	**-0.2**
BORA	**Eskisehir**	**0.81**	**188**	*i* P	**Pb**	**16 03 43.8**	**+0.4**
BORA				*i* S	**Sn**	**16 03 56.2**	**-0.2**
SILT	**Sile**	**0.86**	**303**	*e*PG	**Pn**	**16 03 45.1**	**-0.1**
SILT	**Sile**	**0.86**	**303**	*e*Pg	**Pn**	**16 03 45.1**	**-0.1**
IZI	**Iznik**	**0.93**	**248**	*e*PG	**Pb**	**16 03 45.7**	**+0.3**
IZI	**Iznik**	**0.93**	**248**	*e*Pg	**Pb**	**16 03 45.7**	**+0.3**
GEMT	**Gemlik**	**1.10**	**257**	*e*PN	**Pb**	**16 03 48.0**	**-0.3**
GEMT	**Gemlik**	**1.10**	**257**	*e*Pn	**Pb**	**16 03 48.0**	**-0.3**
BUY	**Buyukada**	**1.14**	**279**	*e*PN	**Pb**	**16 03 48.8**	**-0.1**
BUY	**Buyukada**	**1.14**	**279**	*e*Pn	**Pb**	**16 03 48.8**	**-0.1**
SEYT	**Eskypehyr**	**1.18**	**171**	*i* P	**Pg**	**16 03 50.2**	**0.0**
SEYT				*i* S	**Sn**	**16 04 07.8**	**+2.2**
SEYT	**Eskypehyr**	**1.18**	**171**	*i* P	**Pg**	**16 03 50.2**	**0.0**
SEYT				*i* S	**Sn**	**16 04 07.8**	**+2.2**
ISK	**Istanbul-Kandi**	**1.23**	**289**	*e*PN	**Pn**	**16 03 49.8**	**-0.4**
ISK	**Istanbul-Kandi**	**1.23**	**289**	*e*Pn	**Pn**	**16 03 49.8**	**-0.4**
ARMT	**Armutlu**	**1.33**	**265**	*e*PN	**Pn**	**16 03 50.9**	**-0.7**
ARMT	**Armutlu**	**1.33**	**265**	*e*Pn	**Pn**	**16 03 50.9**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.43**	**150**	*e*PN	**Pn**	**16 03 52.5**	**-0.5**
SVRH	**Sivrihisar-ESK**	**1.43**	**150**	*e*Pn	**Pn**	**16 03 52.5**	**-0.5**
ORLT	**Orhaneli**	**1.45**	**244**	*e*PN	**Pn**	**16 03 52.5**	**-0.8**
ORLT	**Orhaneli**	**1.45**	**244**	*e*Pn	**Pn**	**16 03 52.5**	**-0.8**
BGKT	**Bogazkoy**	**1.47**	**290**	*e*PN	**Pn**	**16 03 53.3**	**-0.2**
BGKT	**Bogazkoy**	**1.47**	**290**	*e*Pn	**Pn**	**16 03 53.3**	**-0.2**
TVSB	**Tavsanli**	**1.51**	**216**	*e*PN	**Pn**	**16 03 53.5**	**-0.6**
TVSB	**Tavsanli**	**1.51**	**216**	*e*Pn	**Pn**	**16 03 53.6**	**-0.6**
ALT	**Altintas**	**1.67**	**193**	*e*PN	**Pn**	**16 03 54.9**	**-1.5**
ALT	**Altintas**	**1.67**	**193**	*e*Pn	**Pn**	**16 03 54.9**	**-1.5**
SAFT	**Safranbolu**	**1.68**	**70**	*e*PN	**Pn**	**16 03 56.5**	**+0.1**
SAFT	**Safranbolu**	**1.68**	**70**	*e*Pn	**Pn**	**16 03 56.5**	**+0.1**
CTKS	**Kestanelik-??a**	**1.68**	**290**	*e*PN	**Pn**	**16 03 56.2**	**-0.2**
CTKS	**Kestanelik-??a**	**1.68**	**290**	*e*Pn	**Pn**	**16 03 56.2**	**-0.2**

MAN 04 16:04:42, 9°.21N×**125°.48E, h2km, mb4.0, ML2.7, MS2.4, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.28**	**150**	*e*P	Pg	16 04 48.0	+0.5
BUTP				*e*S	Sb	16 04 57.1	+2.2
CGP	**Cagayan de Oro**	**1.08**	**226**⇓	*e*P	Pg	16 05 03.0	+0.3
CGP				*e*S	Sb	16 05 18.8	+0.8
BUKP	**Musuan**	**1.39**	**197**	*e*P	Pb	16 05 08.8	0.0
BUKP				*e*S	Sn	16 05 31.2	+3.7

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*CSEM **04** 16:17:41.3±0.6, 37°.80N×35°.69E, h2km, MD2.5, Error ellipse: s-maj=13.8km s-min=11.6km az=72.0*

*ISK **04** 16:17:42.2, 37°.69N×35°.63E, h15km, MD2.5*

*ISCJB **04** 16:17:42.1±0.6, 37°.70N±0°.04×35°.60E±0°.05, h12km, Error ellipse: s-maj=5.9km s-min=5.4km az=148.6*

*DDA **04** 16:17:43.1, 37°.42N×35°.52E, h7km, MD2.8*

ISC 04 16:17:41.7±0.9**, 37°.68N**±0°.04×**35°.57E**±0°.03**, h12km, n18, σ0ˢ79**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.28**	**133**	*e*PG	**Pb**	**16 17 48.1**	**-0.6**
KOZT				*e*SG	**Sb**	**16 17 52.9**	**-0.5**
KOZT	**Kozan**	**0.28**	**133**	*e*Pg	**Pb**	**16 17 48.1**	**-0.6**
KOZT				*e*Sg	**Sb**	**16 17 52.9**	**-0.5**
CEYT	**Ceyhan**	**0.68**	**168**	*e*PG	**Pg**	**16 17 55.2**	**+0.4**
CEYT				*e*SG	**Sb**	**16 18 06.5**	**+1.8**
CEYT	**Ceyhan**	**0.68**	**168**	*e*Pg	**Pg**	**16 17 55.2**	**+0.4**
CEYT				*e*Sg	**Sb**	**16 18 06.6**	**+1.8**
GULE	**Gulek**	**0.74**	**239**	*i* P	**Pg**	**16 17 55.0**	**-1.1**
GULE				*i* S	**Sb**	**16 18 07.8**	**+1.0**
GULE	**Gulek**	**0.74**	**239**	*i* P	**Pg**	**16 17 55.0**	**-1.1**
GULE				*i* S	**Sb**	**16 18 07.8**	**+1.0**
NIG	**Nigde**	**0.88**	**300**	*e*PG	**Pn**	**16 18 00.1**	**+0.1**
NIG	**Nigde**	**0.88**	**300**	*e*Pg	**Pn**	**16 18 00.1**	**+0.1**
SARI	**SarD1z-Kayseri**	**0.99**	**42**	*e*PG	**Pn**	**16 18 01.6**	**0.0**
SARI	**SarD1z-Kayseri**	**0.99**	**42**	*e*Pg	**Pn**	**16 18 01.6**	**0.0**
KMRS	**Kahramanmaras**	**1.07**	**99**	*e*PG	**Pn**	**16 18 02.1**	**-0.3**
KMRS	**Kahramanmaras**	**1.07**	**99**	*e*Pg	**Pn**	**16 18 02.2**	**-0.3**
BNN	**Bunyan**	**1.20**	**10**	*e*PN	**Pg**	**16 18 04.8**	**+0.1**
BNN	**Bunyan**	**1.20**	**10**	*e*Pn	**Pg**	**16 18 04.8**	**+0.1**
SULT	**Sultanhani-AKS**	**1.71**	**288**	*e*PN	**Pb**	**16 18 12.8**	**-0.2**
SULT	**Sultanhani-AKS**	**1.71**	**288**	*e*Pn	**Pb**	**16 18 12.8**	**-0.2**
DARE	**Darende-Malaty**	**1.75**	**59**	*e*PN	**Pn**	**16 18 11.9**	**0.0**
DARE	**Darende-Malaty**	**1.75**	**59**	*e*Pn	**Pn**	**16 18 12.0**	**0.0**

IDC 04 16:34:35.7±2.0**, 49°.41N**×**148°.80E, h490km**±35km**, mb2.4**/3**, mb1 2.5**/6**, mb1mx2.4**/27**, mbtmp2.4**/6**, Error ellipse: s-maj=32.8km s-min=25.9km az=32.0, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.70**	**53**	P	P	16 36 18.5	+0.2
	0.2nm,0.3s,baz=226,slow=10,SNR=14						
MJAR	**Matsushiro Arr**	**15.00**	**215**	P	P	16 37 44.7	-1.3
	0.2nm,0.3s,baz=19,slow=9.4,SNR=5.7						
KSRS	**Korea Array**	**19.23**	**239**	P	P	16 38 28.4	+0.7
	0.1nm,0.3s,baz=44,slow=10,SNR=5.0						
SONM	**Songino Array**	**27.81**	**283**	P	P	16 39 44.9	+0.4
	0.2nm,0.4s,baz=70,slow=9.3,SNR=2.2						
MKAR	**Makanchi Array**	**43.19**	**293**	P	P	16 41 51.5	-0.9
	0.3nm,0.7s,baz=72,slow=7.8,SNR=3.9						
ASAR	**Alice Springs**	**73.95**	**194**	P	P	16 45 20.4	+0.1
	0.1nm,0.4s,baz=8.3,slow=5.7,SNR=8.3						

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*IDC **04** 16:48:37.0±0.7, 9°.87S×75°.48W, h0km, mb3.8/8, mb1 4.0/11, mb1mx3.9/24, mbtmp3.8/11, ML4.1/3, MS3.4/3, Ms1 3.3/3, ms1mx2.9/29, Error ellipse: s-maj=18.5km s-min=13.2km az=80.0*

*NEIC **04** 16:48:41.9±2.2, 9°.87S×75°.45W, h32km±16km, mb4.6/1, Error ellipse: s-maj=12.1km s-min=7.6km az=56.0*

*ISCJB **04** 16:48:41.4±0.5, 9°.89S±0°.07×75°.48W±0°.09, h41km, mb3.9/9, MS3.5/1, Error ellipse: s-maj=14.5km s-min=7.8km az=150.4*

ISC 04 16:48:42.8±0.5**, 9°.87S**±0°.07×**75°.3W**±0°.1**, h41km, n40, σ1ˢ18**/39**, mb3.9**/9**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.57**	**215**	*e*Pn	**Pn**	**16 49 19.8**	**-2.1**
NNA				Lg	Lg	16 49 55.1	
NNA	**Nana**	**2.57**	**215**	Pn	**Pn**	**16 49 19.9**	**-2.1**
	111nm,0.3s,baz=24,slow=15,SNR=144						
NNA				Lg	Lg	16 49 55.1	
	112nm,0.3s,baz=220,slow=20,SNR=37						
ATAH	**Atahualpa**	**4.06**	**312**	Pn	**Pn**	**16 49 42.5**	**-0.4**
ATAH				Lg	Lg	16 50 38.7	
ATAH	**Atahualpa**	**4.06**	**312**	Pn	**Pn**	**16 49 42.5**	**-0.4**
	7.5nm,0.3s,baz=124,slow=9.2,SNR=20						
ATAH				Lg	Lg	16 50 38.7	
	5.7nm,0.3s,baz=22,slow=12,SNR=4.8						
ATAH				LR	LR	16 51 20.7	
	comp=Z,161nm,21.6s,baz=323,slow=41						
LPAZ	**La Paz**	**9.49**	**133**	*e*Pn	**Pn**	**16 50 59.2**	**+1.7**
	9.4nm,0.8s						
LPAZ				Lg	Lg	16 53 39.0	
LPAZ	**La Paz**	**9.49**	**133**	Pn	**Pn**	**16 50 59.0**	**+1.5**
	0.2nm,0.3s,baz=324,slow=11,SNR=6.3						
LPAZ				Lg	Lg	16 53 39.0	
	0.3nm,0.3s,baz=196,slow=23,SNR=3.5						
OTAV	**Otavalo**	**10.51**	**343**	*e*P	**Pn**	**16 51 11.0**	**-0.3**
	4.7nm,0.6s						
SAML	**Samuel**	**12.03**	**87**	*e*P	**Pn**	**16 51 30.4**	**-1.4**
	12nm,0.4s						
SIV	**San Ignacio**	**15.18**	**115**	Pn	**P**	**16 52 16.7**	**-2.2**
SIV				Lg	Lg	16 56 40.8	
SIV	**San Ignacio**	**15.18**	**115**	Pn	**P**	**16 52 16.7**	**-2.2**
	0.6nm,0.3s,baz=313,slow=12,SNR=7.5						
SIV				Lg	Lg	16 56 40.8	
	1.3nm,0.3s,baz=33,slow=23,SNR=4.6						
SIV				LR	LR	16 58 32.6	
	comp=Z,188nm,20.2s,slow=39						
LCO	**Las Campanas**	**19.53**	**168**	*e*P	**Pn**	**16 53 08.2**	**-0.5**
CFAA	**Coronel Fontan**	**22.61**	**164**	P	**P**	**16 53 41.1**	**+1.0**
CFAA	**Coronel Fontan**	**22.61**	**164**	P	**P**	**16 53 41.1**	**+1.0**
	0.4nm,0.6s,baz=329,slow=10,SNR=6.2						
CPUP	**Villa Florida**	**23.64**	**136**	P	**P**	**16 53 50.2**	**-0.1**
CPUP	**Villa Florida**	**23.64**	**136**	P	**P**	**16 53 50.2**	**-0.1**
	2.2nm,0.6s,baz=295,slow=9.6,SNR=9.7						
BDFB	**Brasilia**	**27.25**	**105**	LR	LR	17 05 54.1	
	comp=Z,150nm,21.2s,baz=3.0,slow=38						
PLCA	**Paso Flores**	**31.03**	**173**	*e*P	**P**	**16 54 56.9**	**+0.1**
PLCA	**Paso Flores**	**31.03**	**173**	P	**P**	**16 54 56.9**	**+0.1**
	1.8nm,0.7s,baz=297,slow=10,SNR=4.1						
TXAR	**Lajitas Array**	**47.59**	**326**	P	**P**	**16 57 14.1**	**-0.8**
TXAR	**Lajitas Array**	**47.59**	**326**	P	**P**	**16 57 14.1**	**-0.8**
	0.4nm,0.6s,baz=149,slow=9.9,SNR=6.1						
PDAR	**Pinedale Array**	**61.00**	**332**	P	**P**	**16 58 54.0**	**+1.6**
PDAR	**Pinedale Array**	**61.00**	**332**	P	**P**	**16 58 54.0**	**+1.6**
	0.4nm,0.9s,baz=140,slow=7.1,SNR=3.1						
ULM	**Lac du Bonnet**	**62.49**	**345**	P	**P**	**16 59 01.6**	**-0.4**
ULM	**Lac du Bonnet**	**62.49**	**345**	P	**P**	**16 59 01.6**	**-0.4**
	3.9nm,0.8s,baz=140,slow=7.7,SNR=3.0						
YKA	**Yellowknife Ar**	**78.27**	**343**	P	**P**	**17 00 37.1**	**-0.9**
YKA	**Yellowknife Ar**	**78.27**	**343**	P	**P**	**17 00 37.1**	**-0.9**
	0.4nm,0.5s,baz=139,slow=5.6,SNR=12						
TOA0	**Torodi Ar. Sit**	**79.81**	**75**	*e*P	**P**	**17 00 49.7**	**+2.1**
TORD	**Torodi Ar. Bea**	**79.81**	**75**	P	**P**	**17 00 48.5**	**+1.0**
TORD	**Torodi Ar. Bea**	**79.81**	**75**	P	**P**	**17 00 48.5**	**+1.0**
	1.5nm,0.7s,baz=284,slow=6.4,SNR=8.1						
EGAK	**Eagle**	**88.91**	**337**	*e*P	**P**	**17 01 34.0**	**+1.5**
	3.0nm,0.8s						
ZALV	**Zalesovo Beam**	**133.26**	**16**	PKP	**PKPdf**	**17 07 55.0**	**+0.8**
ZALV	**Zalesovo Beam**	**133.26**	**16**	PKP	**PKPdf**	**17 07 55.0**	**+0.8**
	0.6nm,0.5s,baz=298,slow=3.2,SNR=4.4						
ASAR	**Alice Springs**	**136.08**	**220**	PKP	**PKPdf**	**17 07 59.8**	**-0.7**
ASAR	**Alice Springs**	**136.08**	**220**	PKP	**PKPdf**	**17 07 59.8**	**-0.7**
	0.3nm,0.5s,baz=118,slow=1.7,SNR=7.4						
WRA	**Warramunga Arr**	**138.39**	**225**	PKP	**PKPdf**	**17 08 04.3**	**-0.5**
WRA	**Warramunga Arr**	**138.39**	**225**	PKP	**PKPdf**	**17 08 04.3**	**-0.5**
	0.4nm,0.6s,baz=130,slow=1.8,SNR=8.8						
MKAR	**Makanchi Array**	**138.58**	**23**	PKP	**PKPdf**	**17 08 05.0**	**+0.7**
MKAR	**Makanchi Array**	**138.58**	**23**	PKP	**PKPdf**	**17 08 05.0**	**+0.7**
	0.5nm,1.0s,baz=29,slow=2.8,SNR=3.8						
KSRS	**Korea Array**	**145.44**	**326**	PKPbc	**PKPbc**	**17 08 16.4**	**-0.4**
	3.2nm,0.8s,baz=49,slow=3.6,SNR=13						
KSAR	**Wonju Array Be**	**145.47**	**326**	PKPbc	**PKPdf**	**17 08 16.4**	**-0.5**

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*ISK **04** 17:02:50.7, 37°.91N×43°.16E, h9km, MD3.1*

*DDA **04** 17:02:50.2, 37°.92N×43°.06E, h23km, MD3.1*

*ISCJB **04** 17:02:50.9±0.7, 37°.91N±0°.03×43°.10E±0°.07, h6km±10km, Error ellipse: s-maj=9.0km s-min=4.4km az=165.1*

*CSEM **04** 17:02:51.0±0.3, 37°.93N×43°.12E, h2km, MD3.1, Error ellipse: s-maj=6.5km s-min=5.0km az=58.0*

ISC 04 17:02:51.4±1.2**, 37°.92N**±0°.02×**43°.09E**±0°.03**, h3km**±12km**, n26, σ1ˢ02**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.40**	**357**	*i* P	**Pg**	**17 02 58.8**	**-0.2**
GEVA				*i* S	**Sg**	**17 03 05.1**	**+0.8**
GEVA	**Gevas**	**0.40**	**357**	*i* P	**Pg**	**17 02 58.8**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
GEVA				*i* S	Sg	17 03 05.1	+0.8
HAKT	HAKKARI	0.61	126	*i* P	Pg	17 03 02.5	-0.5
HAKT				*i* S	Sg	17 03 12.2	+1.2
HAKT	HAKKARI	0.61	126	*i* P	Pg	17 03 02.5	-0.5
HAKT				*i* S	Sg	17 03 12.2	+1.2
TVAN	Van	0.66	22	*i* P	Pg	17 03 04.3	+0.2
TVAN				*i* S	Sb	17 03 16.1	+0.7
TVAN	Van	0.66	22	*i* P	Pg	17 03 04.3	+0.2
VANB	Van	0.72	19	*e*PG	Pg	17 03 03.8	-1.4
VANB				*e*SG	Sg	17 03 15.6	+1.1
VANB	Van	0.72	19	*e*Pg	Pg	17 03 03.8	-1.4
VANB				*e*Sg	Sg	17 03 15.6	+1.1
CUKT	Cukurca	0.79	148	*e*PG	Pg	17 03 06.2	-0.2
CUKT				*e*SG	Sg	17 03 16.2	-0.4
CUKT	Cukurca	0.79	148	*e*Pg	Pg	17 03 06.2	-0.2
CUKT				*e*Sg	Sg	17 03 16.2	-0.4
TATV	Tatvan	0.88	313	*i* P	Pg	17 03 06.6	-1.6
TATV				*i* S	Sg	17 03 20.4	+0.9
TATV	Tatvan	0.88	313	*i* P	Pg	17 03 06.6	-1.6
TATV				*i* S	Sg	17 03 20.4	+0.9
CLDR	Caldiran	1.39	28	*e*PN	Pn	17 03 16.7	-1.1
CLDR	Caldiran	1.39	28	*e*Pn	Pn	17 03 16.7	-1.1
BEST	Besiri	1.44	270	*i* P	Pn	17 03 17.3	-1.1
BEST				*i* S	Sb	17 03 37.1	-0.4
MARD	Mardin	1.93	253	*i* P	Pn	17 03 23.2	-2.0
MARD				*i* S	Sn	17 03 50.7	+0.8
BNGB	Bingˆ¶l	2.17	300	*e*PN	Pn	17 03 28.8	+0.2
BINT	Bingol	2.25	296	*e*Pn	Pn	17 03 28.8	-0.9
DIY	Diyarbakir	2.26	270	*e*PN	Pn	17 03 30.1	+0.4
DIY	Diyarbakir	2.26	270	*e*Pn	Pn	17 03 30.1	+0.4
GNI	Garni	2.58	29	*e*PN	Pn	17 03 33.2	-0.9
GNI	Garni	2.58	29	*e*Pn	Pn	17 03 33.2	-0.9
SVRC	Sivrice-ELAZID	3.02	280	*e*PN	Pn	17 03 40.6	+0.4
SVRC	Sivrice-ELAZID	3.02	280	*e*Pn	Pn	17 03 40.6	+0.4
URFA	Urfa	3.42	263	*e*PN	Pn	17 03 47.3	+1.7
URFA	Urfa	3.42	263	*e*Pn	Pn	17 03 47.3	+1.7

*ISK **04** 17:04:01.2, 37.°86N×43.°05E, h5km, MD3.0*
*DDA **04** 17:04:02.9, 37.°92N×43.°05E, h7km, MD3.2*
*CSEM **04** 17:04:02.6±0.3, 37.°87N×43.°07E, h5km, MD3.2, Error ellipse: s-maj=9.6km s-min=5.8km az=57.0*
*ISCJB **04** 17:04:03.1±0.8, 37.°88N±0.°03×43.°08E±0.°06, h2km±10km, Error ellipse: s-maj=9.1km s-min=4.7km az=153.6*
ISC 04 17:04:02.4±1.4**, 37.°88N**±0.°03×**43.°07E**±0.°03**, h1**km±13km**, n19,** σ**0§76**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
GEVA	Gevas	0.43	359	*i* P	Pg	17 04 11.5	+0.8
GEVA				*i* S	Sb	17 04 18.6	-1.4
GEVA	Gevas	0.43	359	*i* P	Pg	17 04 11.5	+0.8
GEVA				*i* S	Sb	17 04 18.6	-1.4
HAKT	HAKKARI	0.60	122	*i* P	Pg	17 04 14.3	+0.4
HAKT				*i* S	Sb	17 04 25.4	+0.4
HAKT	HAKKARI	0.60	122	*i* P	Pg	17 04 14.3	+0.4
VANB	Van	0.76	19	*e*PG	Pg	17 04 16.6	-0.3
VANB				*e*SG	Sb	17 04 29.6	+0.3
VANB	Van	0.76	19	*e*Pg	Pg	17 04 16.6	-0.3
VANB				*e*Sg	Sb	17 04 29.7	+0.3
CUKT	Cukurca	0.77	146	*e*PG	Pg	17 04 17.2	+0.1
CUKT				*e*SG	Sb	17 04 28.4	-1.2
CUKT	Cukurca	0.77	146	*e*Pg	Pg	17 04 17.2	+0.1
CUKT				*e*Sg	Sb	17 04 28.4	-1.2
TATV	Tatvan	0.89	315	*i* P	Pg	17 04 19.1	-0.4
TATV				*i* S	Sb	17 04 33.2	-0.1
TATV	Tatvan	0.89	315	*i* P	Pg	17 04 19.1	-0.4
TATV				*i* S	Sb	17 04 33.2	-0.1
CLDR	Caldiran	1.42	28	*e*PN	Pb	17 04 29.6	-0.4
CLDR	Caldiran	1.42	28	*e*Pn	Pb	17 04 29.6	-0.4
BEST	Besiri	1.42	271	*i* P	Pg	17 04 29.9	+0.1
BEST				*i* S	Sn	17 04 50.1	+1.1
MARD	Mardin	1.91	253	*i* P	Pg	17 04 38.7	-0.2
MARD				*i* S	Sg	17 05 04.0	+0.3
BNGB	Bingˆ¶l	2.18	301	*e*PN	Pn	17 04 40.2	+0.2
DIY	Diyarbakir	2.25	271	*e*PN	Pn	17 04 40.4	-0.5
BINT	Bingol	2.26	297	*e*Pn	Pn	17 04 40.2	-0.9
SVRC	Sivrice-ELAZID	3.01	281	*e*PN	Pn	17 04 52.6	+1.1
SVRC	Sivrice-ELAZID	3.01	281	*e*Pn	Pn	17 04 52.6	+1.1

FUNV 04 17:11:29.1, 10.°19N×67.°07W, h2km, MW3.5, 6C-6D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
BOTV	Botiquin	0.26	325	⇓*e*P	Pg	17 11 34.4	-0.1
BOTV				*e*S	Sg	17 11 38.3	+0.2
OCUV	OCUMARITO	0.27	106	⇓*e*P	Pg	17 11 33.8	-0.6
OCUV				*e*S	Sg	17 11 38.0	+0.1
FDCV	FORTIN DE LA C	0.36	18	⇑*i*P	Pg	17 11 36.3	0.0
FDCV				*e*S	Sg	17 11 42.0	+0.7
FUNV	FUNVISIS	0.37	42	⇑*i*P	Pg	17 11 36.1	-0.3
FUNV				*e*S	Sg	17 11 41.7	+0.3
LLAV	El Llanito	0.37	42	⇑*i*P	Pg	17 11 36.2	-0.2
LLAV				*e*S	Sg	17 11 41.4	0.0
TURV	Turiamo	0.81	289	⇓*i*P	Pg	17 11 43.7	-0.9
TURV				*e*S	Sg	17 11 55.4	+0.4
BIRV	Birongo	0.83	70	⇑*e*P	Pg	17 11 44.8	-0.3
BIRV				*e*S	Sb	17 11 57.2	-0.8
MERV	Las Mercedes	1.20	141	⇑*e*P	Pg	17 11 52.0	-0.2
CUPV	Cœpira	1.27	96	⇓*e*P	Pg	17 11 53.6	+0.2
CUPV				*e*S	Sg	17 12 09.8	-0.1
MAPV	Macapo	1.42	255	*e*P	Pn	17 11 55.9	-0.1
MAPV				*e*S	Sg	17 12 14.5	-0.3
BAUV	El Baul	1.57	218	*e*P	Pn	17 11 57.0	-1.1
BAUV				*e*S	Sn	17 12 18.6	-0.4
JACV	Jacura	1.95	297	*e*P	Pn	17 12 03.7	+0.4
TEPV	Terepaima	2.11	264	*e*P	Pn	17 12 05.5	0.0
TEPV				*e*S	Sn	17 12 31.7	-0.7
SANV	Sanarito	2.53	254	*e*P	Pn	17 12 10.8	-0.6
SANV				*e*S	Sn	17 12 41.5	-1.5
SIQV	Siquisique	2.74	280	*e*P	Pn	17 12 13.8	-0.4
SIQV				*e*S	Sn	17 12 45.5	-2.4
CURV	Curarigua	2.86	267	*e*P	Pn	17 12 15.0	-0.9
MONV	Montecano	3.35	302	⇑*e*P	Pn	17 12 21.7	-0.8
MONV				*e*S	Sn	17 12 59.5	-3.4
SOCV	Socops	4.20	243	⇓*e*P	Pn	17 12 33.2	-1.0
IMOV	Isla Los Monje	4.34	300	*e*P	Pn	17 12 34.5	-1.7
GURV	El Guri	4.62	121	⇓*e*P	Pn	17 12 38.9	-1.1

*CSEM **04** 17:37:18.7, 42.°58N×13.°46E, h21km, MD1.7/4, After ROM*
ROM 04 17:37:18.7±0.2**, 42.°58N×13.°46E, h21**km±2km**, Md1.7**/4**, Ml1.7**/2**, Error ellipse: s-maj=1.9km s-min=1.0km az=48.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
TERO	Teramo	0.11	69	Pg	Pb	17 37 23.3	-1.9
TERO				Sg	Sb	17 37 26.1	-3.7
	105nm,0.3s						
TERO	Teramo	0.11	69	Pg	Pb	17 37 23.3	-1.9
TERO				Sg	Sb	17 37 26.1	-3.7
	105nm,0.3s						
LNSS	Leonessa	0.31	274	Pg	Pb	17 37 25.9	+0.2
LNSS				Sg	Sb	17 37 31.0	+0.5
	62nm,0.1s						
LNSS	Leonessa	0.31	274	Pg	Pb	17 37 25.9	+0.2
LNSS				Sg	Sb	17 37 31.0	+0.5
	62nm,0.1s						
NRCA	Norcia	0.36	315	Pg	Pb	17 37 26.5	+0.1
NRCA				Sg	Sb	17 37 32.3	+0.7
	3.0nm,0.2s						
NRCA	Norcia	0.36	315	Pg	Pb	17 37 26.5	+0.1
NRCA				Sg	Sb	17 37 32.3	+0.7
	3.0nm,0.2s						
FDMO	Fiordimonte	0.53	329	Pg	Pb	17 37 29.3	-0.2
FDMO				Sg	Sb	17 37 37.4	+0.6
FDMO	Fiordimonte	0.53	329	Pg	Pb	17 37 29.3	-0.2
FDMO				Sg	Sb	17 37 37.4	+0.6

*NNC **04** 17:43:41.0±2.1, 40.°66N×78.°65E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=15.8km s-min=9.3km az=166.0*
*IDC **04** 17:43:45.0±1.6, 40.°83N×78.°92E, h0km, mb3.2/2, mb1 3.4/7, mb1mx3.2/33, mbtmp3.3/7, ML3.2/5, MS2.1/1, Ms1 2.1/1, ms1mx1.8/24, Error ellipse: s-maj=18.5km s-min=15.1km az=30.0*
ISC 04 17:43:48.8±1.7**, 40.°8N**±0.°1×**78.°81E**±0.°06**, h28**km**, n25,** σ**1§56**/24**, 4C-8D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ULHL	Ulahol	2.42	308	P	Pn	17 44 28.2	+1.6
	SNR=110						
KSH	Kashi	2.51	241	Pn	Pn	17 44 34.3	+6.4
KSH				Sn	Sb	17 45 17.0	+13
KSH				smax	smax		
	comp=N,160nm,0.9s						
KSH				smax	smax		
	comp=E,180nm,0.7s						
KNDC	Almaty	2.80	331	⇑Pg	Pn	17 44 32.8	+1.1
	baz=109,slow=29						
KNDC				⇓Lg	Lg	17 45 10.2	
	baz=109,slow=29						
KZA	Kyzart	2.97	297	P	Pn	17 44 35.2	+0.7
	SNR=22						
TKM2	Tokmak 2	3.21	313	⇓Pg	Pn	17 44 38.7	+1.1
	comp=E,15nm,0.5s						
TKM2				⇓Lg	Lg	17 45 25.5	
	comp=E,49nm,0.5s						
TKM2	Tokmak 2	3.21	313	P	Pn	17 44 38.8	+1.3
	SNR=41						
KBK	Karagaybulak	3.44	304	P	Pn	17 44 42.2	+1.4
	SNR=7.9						
AAK	Ala-Archa	3.72	301	P	Pb	17 44 52.1	-1.8
	SNR=13						
AAK	Ala-Archa	3.72	301	Pn	Pn	17 44 46.3	+1.8
	comp=E,1.1nm,0.3s,baz=123,slow=12,SNR=15						
AAK				Pg	Pb	17 44 52.9	-1.0
	comp=E,4.0nm,0.3s,baz=120,slow=16,SNR=37						
AAK				Lg	Lg	17 45 44.7	
	comp=E,3.8nm,0.3s,baz=316,slow=22,SNR=11						
CHMS	Chumysh	3.75	308	P	Pb	17 44 52.6	-1.7
	SNR=6.6						
USP	Ospenovka	4.06	309	P	Pb	17 44 56.2	-3.4
	SNR=13						
AML	Almayashu	4.08	291	P	Pb	17 44 59.3	-0.7
	SNR=25						
EKS2	Erkin-Say	4.21	298	P	Pb	17 45 01.6	-0.6
	SNR=56						
MK31	Makanchi Array	6.52	22	⇑Pn	Pn	17 45 20.8	-2.0
	comp=E,0.5nm,0.3s,baz=201,slow=12,SNR=50						
MK31				⇑Pg	Pb	17 45 43.1	+1.8
	comp=E,1.0nm,0.4s						
MK31				⇓Sn	Sn	17 46 38.4	+2.3
	comp=E,3.0nm,0.6s,baz=193,slow=16,SNR=4.4						
MK31				⇓Lg	Lg	17 47 13.0	
	comp=E,4.8nm,0.6s						
MKAR	Makanchi Array	6.52	22	Pn	Pn	17 45 21.0	-1.7
	comp=E,0.5nm,0.3s,baz=206,slow=13,SNR=32						
MKAR				Sn	Sn	17 46 36.3	+0.1
	comp=E,0.6nm,0.3s,baz=206,slow=19,SNR=4.1						
MKAR				Lg	Lg	17 47 09.3	
	comp=E,0.9nm,0.3s,baz=208,slow=24,SNR=4.2						
KK31	Karatay Array	6.61	293	⇓Pg	Pb	17 45 42.7	-0.2
	comp=E,3.9nm,0.8s,baz=111,slow=16,SNR=33						
KK31				⇑Lg	Lg	17 47 09.7	
	comp=E,6.1nm,0.8s,baz=109,slow=29,SNR=5.5						
WMQ	Urumqi	7.25	62	Pn	Pb	17 45 56.2	+2.3
WMQ				Sn	Sn	17 46 54.5	+0.2
WMQ				smax	smax		
	comp=N,21nm,1.0s						
WMQ				smax	smax		
	comp=E,23nm,1.1s						
KURBB	Kurchatov Arra	9.85	359	⇓Lg	Lg	17 48 56.6	
	comp=E,10nm,0.9s						
KURBB	Kurchatov Arra	9.85	359	Pn	Pn	17 46 07.8	-0.6
	comp=E,0.0nm,0.3s,baz=186,slow=12,SNR=4.5						
KURBB				Lg	Lg	17 48 53.4	
	comp=E,0.1nm,0.3s,baz=182,slow=29,SNR=16						
KURK	Kurchatov	9.94	359	⇓Lg	Lg	17 49 00.6	
	comp=E,33nm,1.3s						
BVAR	Borovoye Array	13.52	338	Pn	Pn	17 46 57.2	-1.4
	comp=E,0.1nm,0.3s,baz=160,slow=4.6,SNR=2.5						
BVAR				Lg	Lg	17 50 54.5	
	comp=E,0.1nm,0.3s,baz=148,slow=30,SNR=4.6						
ZALV	Zalesovo Beam	13.78	15	Pn	Pn	17 47 00.7	-1.4
	comp=E,0.5nm,0.3s,baz=211,slow=16,SNR=2.8						
SONM	Songino Array	20.89	61	P	P	17 48 26.4	-2.3
	comp=E,0.7nm,0.7s,baz=260,slow=11,SNR=6.1						
CMAR	Chiang Mai Arr	28.18	136	P	P	17 49 39.4	+0.5
	comp=E,0.2nm,0.6s,baz=314,slow=11,SNR=4.8						
TGY	Tagaytay City	45.25	114	LR	LR	18 13 12.8	
	comp=E,2.1nm,20.9s,baz=146,slow=39						

IDC 04 17:52:19.3±1.0**, 4.°60N×128.°03E, h0**km**, mb3.6**/7**, mb1 3.8**/7**, mb1mx3.5**/25**, mbtmp3.6**/7**, Error ellipse: s-maj=58.3km s-min=18.3km az=76.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
FITZ	Fitzroy Crossi	22.68	186	P	P	17 57 20.6	-1.9
	1.8nm,0.8s,baz=21,slow=11,SNR=2.9						
WRA	Warramunga Arr	25.16	166	P	P	17 57 46.5	0.0
	0.5nm,0.6s,baz=346,slow=11,SNR=8.6						
ASAR	Alice Springs	28.67	169	P	P	17 58 18.4	+0.2
	0.2nm,0.8s,baz=342,slow=7.1,SNR=4.3						
STKA	Stephens Creek	38.51	161	P	P	17 59 45.0	+1.5
	1.8nm,1.0s,baz=0.0,slow=8.1,SNR=4.2						
MKAR	Makanchi Array	57.59	324	P	P	18 02 11.5	+0.4
	0.4nm,0.7s,baz=119,slow=8.1,SNR=5.8						
KURBB	Kurchatov Arra	61.72	327	P	P	18 02 39.8	+0.4
	0.4nm,0.5s,baz=126,slow=6.4,SNR=4.8						
ILAR	Eielson Array	83.77	25	P	P	18 04 49.1	-1.1
	0.8nm,0.6s,baz=268,slow=5.4,SNR=14						

*ISCJB **04** 17:57:24.2±1.0, 45.°15N±0.°08×148.°7E±0.°1, h140km±6km, mb3.7/11, Error ellipse: s-maj=18.9km s-min=9.7km az=37.8*
*MOS **04** 17:57:25.3±1.3, 45.°21N×148.°58E, h149km, mb3.9/8, Error ellipse: s-maj=15.4km s-min=10.4km az=67.7*
*IDC **04** 17:57:28.1±2.8, 45.°37N×148.°30E, h145km±30km, mb3.5/9, mb1 3.6/13, mb1mx3.4/30, mbtmp3.4/13, Error ellipse: s-maj=46.3km s-min=21.0km az=158.0*
*JMA **04** 17:57:29.1±0.6, 44.°75N×148.°44E, h140km, M4.2*
ISC 04 17:57:25.8±1.3**, 45.°0N**±0.°1×**148.°6E**±0.°1**, h146**km±9km**, n43,** σ**1§71**/51**, mb3.7**/11**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KUR	Kuril'sk	0.53	295	*e*PN	Pn	17 57 41.5	-5.3
KUR				S	Sn	17 58 00.5	-2.3
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax	smax		
	comp=N,1μm,0.5s						
KUR				smax	smax		
	comp=E,1μm,0.5s						
KUR				smax	smax		
	comp=N,3μm,2.0s						
KUR				smax	smax		
	comp=E,3μm,2.0s						
YUK	Yuzh-Kuril'sk	2.15	244	*i* PN	Pn	17 58 03.9	+1.4
YUK				*i* S	Sn	17 58 31.5	+0.9
YUK				pmax	pmax		
	comp=N,16nm,0.1s						
YUK				pmax	pmax		
	comp=E,56nm,0.1s						
YUK				pmax	pmax		
	comp=Z,66nm,0.1s						
YUK				smax	smax		
	comp=E,555nm,0.3s						
YUK				smax	smax		
	comp=N,415nm,0.4s						
NEM2	Nemuro 2	2.60	232	P	Pn	17 58 08.2	+0.3
NEM2				*e*S	Sn	17 58 38.9	-1.5
JRA	Rausu	2.68	248	P	Pn	17 58 10.5	+1.6
JNK	Nakash	3.10	244	P	Pn	17 58 15.7	+1.5
JAK	Akkeshi	3.43	235	P	Pn	17 58 19.0	+0.5
JAK				*e*S	Sn	17 58 57.6	-1.6
JTKR	Abashiri--Toko	3.48	254	P	Pn	17 58 20.6	+1.5
JTKR				*e*S	Sn	17 59 01.3	+0.9
JAR	Ashorobuto	3.84	245	P	Pn	17 58 25.9	+2.1
JSE	Soyaes	4.23	271	P	Pn	17 58 30.7	+1.8
JKK2	Kamakawa 2	4.31	257	P	Pn	17 58 32.1	+2.2
ASAJ	Asahikawa	4.35	260	P	Pn	17 58 31.9	+1.4
	comp=N,3.4nm,0.3s,baz=99,slow=13,SNR=41						
JCH	Churui	4.45	239	P	Pn	17 58 32.6	+0.8
JCH				*e*S	Sn	17 59 21.2	-2.0
YSS	Yuzh-Sakhalins	4.48	298	*e*PN	Pn	17 58 33.2	+1.0
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
JFR	Furan	4.67	249	P	Pn	17 58 37.4	+2.7
JWK2	Keihoku	4.71	276	P	Pn	17 58 38.0	+2.7
ERM	Erimo	4.93	235	*d i*PN	Pn	17 58 41.1	+2.9
JNBK	Urakawa-nobuka	5.01	239	P	Pn	17 58 39.1	-0.2
JNBK				*e*S	Sn	17 59 31.0	-5.5
JKB	Kayabe	6.30	243	P	Pn	17 58 56.4	0.0
JKB				*e*S	Sn	18 00 04.3	-2.9
JOSM	Okushiri--Mats	7.21	249	P	Pn	17 59 08.9	+0.3
MJA0	Matsu Arr-Jizo	11.50	226	*e*PN	Pn	18 00 06.2	+0.5
MJAR	Matsushiro Arr	11.52	226	P	Pn	18 00 07.9	+2.0
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=6.3						
USRK	Ussuriysk Arra	11.83	272	P	Pn	18 00 10.5	+0.6
	comp=Z,0.4nm,0.3s,baz=92,slow=11,SNR=7.5						
KSRS	Korea Array	17.23	251	P	Pn	18 01 18.9	+1.4
	comp=Z,0.1nm,0.3s,baz=55,slow=11,SNR=9.5						
SEY	Seymchan	18.10	6	⇑*e*P	P	18 01 24.2	-1.9
BILL	Bilibino	24.88	16	*e*P	P	18 02 32.0	-2.5
BILL				pmax	pmax		
	comp=Z,2.0nm,0.9s						
INK	Inuvik	44.81	31	P	P	18 05 25.4	+0.8
	comp=Z,0.8nm,0.4s,baz=296,slow=7.2,SNR=19						
MKAR	Makanchi Array	44.90	297	*e*P	P	18 05 26.6	+1.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	44.90	297	P	P	18 05 26.7	+1.0
	comp=Z,0.6nm,0.6s,baz=74,slow=9.2,SNR=8.1						
MKAR				PcP	PcP	18 07 06.1	+1.5
	comp=Z,0.3nm,0.6s,baz=70,slow=3.8,SNR=3.6						
KURK	Kurchatov	45.67	303	P	P	18 05 31.3	-0.3
KURBB	Kurchatov Arra	45.76	303	P	P	18 05 31.3	-0.9
	comp=Z,0.3nm,0.4s,baz=73,slow=8.0,SNR=4.3						
YKA	Yellowknife Ar	54.20	35	P	P	18 06 36.9	+1.2
	comp=Z,0.3nm,0.3s,baz=302,slow=7.4,SNR=5.1						
ARCES	ARCESS Array B	58.42	340	P	P	18 07 04.4	-1.1
	comp=Z,3.0nm,0.8s,baz=37,slow=7.1,SNR=5.5						
FINES	FINESS Array B	64.21	333	P	P	18 07 42.9	-1.7
	comp=Z,2.4nm,0.9s,baz=28,slow=8.6,SNR=4.1						
NB2	NORSAR Subarra	68.79	339	P	P	18 08 12.5	-1.2
	comp=Z,0.7nm,0.3s,baz=31,slow=6.5						
NOA	NORSAR Array B	68.79	339	P	P	18 08 12.7	-1.0
	comp=Z,0.9nm,0.5s,baz=30,slow=6.6,SNR=9.9						
AKASG	Malin Array Be	71.16	324	*e*P	P	18 08 28.0	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	71.16	324	P	P	18 08 28.1	-0.2
	comp=Z,0.6nm,0.3s,baz=39,slow=6.6,SNR=4.8						
CLL	Collm	76.66	333	*i* P	P	18 09 00.7	+0.5
BRG	Berggiesshubel	76.72	332	*e*(P)	P	18 09 00.7	+0.1
	comp=Z,4.4nm,1.2s						
BRG	Berggiesshubel	76.72	332	*e*P	P	18 09 00.7	+0.1
BRG				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KHC	Kasperske Hory	78.34	332	*e*P	P	18 09 11.0	+1.3
KHC	Kasperske Hory	78.34	332	*e*P	P	18 09 11.0	+1.3
GERES	GERESS Array B	78.54	331	P	P	18 09 11.5	+0.6
	comp=Z,0.6nm,0.4s,baz=47,slow=6.0,SNR=11						

*BJI **04** 17:59:43.8, 4.°98N×94.°69E, h25km, mB4.9/5, mb4.7/14, Ms4.6/2, Ms7 4.4/2*
*MOS **04** 17:59:48.9±1.0, 5.°47N×94.°52E, h33km, mb4.9/26, Error ellipse: s-maj=14.5km s-min=5.9km az=116.1*
*ISCJB **04** 17:59:50.0±0.3, 5.°37N±0.°05×94.°48E±0.°04, h46km, mb4.5/60, MS3.3/3, Error ellipse: s-maj=8.4km s-min=3.4km az=39.8*
*IDC **04** 17:59:52.0±3.4, 5.°42N×94.°51E, h46km±31km, mb4.1/23, mb1 4.2/24, mb1mx4.1/33, mbtmp4.1/24, ML4.2/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/30, Error ellipse: s-maj=22.0km s-min=11.7km az=54.0*
*AUST **04** 17:59:52.7, 5.°36N×94.°43E, h60km*
*NEIC **04** 17:59:54.1±1.2, 5.°33N×94.°52E, h70km±11km, mb4.8/17, Error ellipse: s-maj=13.1km s-min=5.7km az=58.0*
*DJA **04** 17:59:57.0±2.0, 5°N±7°×9°5E±1°8, h23km±8km, M4.5/5, mB5.0/2, mb4.6/5, MLv4.4/4, Mw(mB)4.3/2*
ISC 04 17:59:52.0±0.4**, 5.°47N**±0.°06×**94.°56E**±0.°06**, h46**km**, n210,** σ**1§12**/219**, mb4.5**/58**, MS3.2**/3**, 10C-7D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
BSI	Banda Aceh	0.74	88	P	Pn	18 00 07.0	+0.9
LHMI	Lhok Sumawe	2.39	96	P	Pn	18 00 30.6	+1.9
	baz=2.5,SNR=38						
KCSI	Kotacane, Aceh	3.74	121	P	Pn	18 00 49.5	+2.2
PSI	Prapat	5.10	121	P	Pn	18 01 08.4	+2.4
PSI				S	Sn	18 02 04.5	+0.8
PSI	Prapat	5.10	121	P	Pn	18 01 09.0	+3.0
PSI	Prapat	5.10	121	P	Pn	18 01 08.4	+2.4
	8.0nm,0.3s,baz=296,slow=12,SNR=43						
PSI				S	Sn	18 02 04.5	+0.8
	5.2nm,0.3s,baz=308,slow=15,SNR=2.7						
PSI				LR	LR	18 03 33.7	
	comp=Z,181nm,20.4s,baz=172,slow=43						
PSI	Prapat	5.10	121	P	Pn	18 01 09.1	+3.0
	baz=5.2,SNR=10						
GSI	Gunungsitoli	5.12	144	P	Pn	18 01 05.0	-1.2
	baz=5.1,SNR=11						
GSI				S	Sn	18 02 03.4	-0.7
	baz=5.1,SNR=3.2						
KULM	Kulim	6.07	91	*e*P	Pn	18 01 20.4	+1.1
	30nm,0.6s						
KULM				*e*S	Sn	18 02 24.2	-3.3
KULM	Kulim	6.07	91	P	Pn	18 01 20.8	+1.5
KULM	Kulim	6.07	91	P	Pn	18 01 20.7	+1.4
	35nm,0.6s,854nm0.2nm						
IPM	Ipoh	6.52	98	*e*P	Pn	18 01 25.9	+0.5
	21nm,0.4s						
IPM	Ipoh	6.52	98	P	Pn	18 01 26.8	+1.3
MNSI	Mandailing Nat	6.83	133	P	Pn	18 01 30.0	+0.2
	42nm,0.7s,2μm0.4nm						
FRIM	Kepong	7.39	107	P	Pn	18 01 38.4	+1.0
KTGM	Kuala Trenggan	8.54	91	P	Pn	18 01 55.3	+2.1
KGM	Kluang	9.39	111	P	Pn	18 02 05.7	+0.8
RGRI	Rengat	9.68	126	P	Pn	18 02 16.3	+7.5
MYKOM	Kota Tinggi	9.97	111	P	Pn	18 02 13.5	+0.8
CHBT	CHBT	10.55	46	P	Pn	18 02 24.2	+3.6
	46nm,0.5s						
CM31	Chiang Mai Arr	13.60	18	*e*P	P	18 03 08.0	-2.3
	7.0nm,0.3s						
CMAR	Chiang Mai Arr	13.60	18	P	P	18 03 08.4	-1.8
CMAR	Chiang Mai Arr	13.60	18	P	P	18 03 08.4	-1.8
	2.1nm,0.3s,baz=209,slow=14,SNR=73						
CMAR				LR	LR	18 07 55.3	
	comp=Z,58nm,19.1s,baz=195,slow=35						
CHTO	Chiang Mai	13.94	18	*e*P	P	18 03 11.8	-2.2
CHTO				pmax	pmax		
	comp=Z,11nm,0.7s						
CHTO	Chiang Mai	13.94	18	*e*P	P	18 03 11.8	-2.2
	comp=Z,10nm,0.7s						
CHTO	Chiang Mai	13.94	18	P	P	18 03 12.8	-1.2
CMMT	Chiang Mai	13.94	18	P	P	18 03 13.0	-1.0
	comp=Z,14nm,0.9s						
ODAN	Odare	22.34	343	*e*P	P	18 04 46.2	-0.2
	comp=Z,23nm,0.6s						
RAMN	Ramite	22.67	341	*e*P	P	18 04 48.9	-1.0
TAPN	Taplejung	22.72	344	*e*P	P	18 04 49.9	-0.5
	comp=Z,23nm,0.4s						
TSM	Tawau	23.26	92	P	P	18 04 58.6	+2.8
PKI	Pulchoki	23.64	339	*e*P	P	18 04 58.6	-1.0
	comp=Z,8.6nm,0.3s						
PKIN	Phulchoki	23.65	339	*e*P	P	18 04 58.2	-1.5
	comp=Z,9.8nm,0.4s						
DMN	Daman	23.78	339	*e*P	P	18 04 59.8	-1.1
GUN	Gumba	23.79	341	*e*P	P	18 04 59.9	-1.2
KKN	Kakani	23.89	339	*e*P	P	18 05 00.6	-1.2
	comp=Z,12nm,0.4s						
LSA	Lhasa	24.32	353	*e*P	P	18 05 05.0	-1.0
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
LSA	Lhasa	24.32	353	*e*P	P	18 05 05.0	-1.0
	comp=Z,12nm,0.6s						
KOLN	Koldanda	24.50	336	*e*P	P	18 05 07.9	+0.5
	comp=Z,42nm,0.6s						
DANN	Dangsing	24.96	337	*e*P	P	18 05 12.0	+0.4
	comp=Z,46nm,0.6s						
PYUN	Piuthan	25.05	335	*e*P	P	18 05 13.0	+0.6
LUWI	Luwuk	28.91	102	P	P	18 05 52.9	+5.9
	baz=29,SNR=5.3						
GTA	Gaotai	34.12	7	*e*P	P	18 06 32.7	0.0
GTA				pP	pP	18 06 37.0	-7.9
GTA				sP	sP	18 06 40.3	-10
GTA				pmax	pmax		

comp=Z,10.0nm,0.8s
FAKI Fak Fak 38.56 102 P P 18 07 09.9 -0.9
baz=39,SNR=4.2
FITZ Fitzroy Crossi 38.59 128 P P 18 07 09.9 -1.0
FITZ Fitzroy Crossi 38.59 128 P P 18 07 09.9 -1.0
comp=Z,3.1nm,0.7s,baz=320,slow=5.7,SNR=9.7
FITZ Fitzroy Crossi 38.59 128 P P 18 07 09.8 -1.1
baz=39,SNR=6.2
WMQ Urumqi 38.67 352 *eP* P 18 07 01.8 -10
MTN Manton Dam 40.64 117 P P 18 07 26.7 -1.3
baz=41,SNR=6.8
TKM2 Tokmak 2 40.90 339 *eP* **P 18 07 30.5 +0.4**
TKM2 pmax pmax
comp=Z,2.0nm,0.5s
TKM2 Tokmak 2 40.90 339 *eP* **P 18 07 30.5 +0.4**
comp=Z,2.3nm,0.5s
TKM2 Tokmak 2 40.90 339 P P 18 07 31.1 +1.0
SNR=8.9
KBK Karagaybulak 40.91 338 *i* P P **18 07 31.8 +1.7**
KBK Karagaybulak 40.91 338 P P 18 07 31.8 +1.7
SNR=8.8
AML Almayashu 40.95 336 *i* P P **18 07 31.8 +1.0**
AML Almayashu 40.95 336 P P 18 07 31.8 +1.0
SNR=19
AAK Ala-Archa 41.06 337↓ *eP* **P 18 07 31.7 +0.3**
AAK pmax pmax
comp=Z,8.0nm,1.1s
AAK Ala-Archa 41.06 337 *eP* **P 18 07 31.9 +0.6**
comp=Z,3.3nm,0.9s
EKS2 Erkin-Say 41.37 337 *eP* **P 18 07 34.8 +1.0**
EKS2 pmax pmax
comp=Z,2.0nm,0.4s
EKS2 Erkin-Say 41.37 337 *eP* **P 18 07 34.8 +1.0**
comp=Z,2.3nm,0.4s
EKS2 Erkin-Say 41.37 337 P P 18 07 35.2 +1.4
SNR=6.2
USP Ospenovka 41.60 338 *i* P P **18 07 36.7 +1.0**
USP Ospenovka 41.60 338 P P 18 07 36.6 +1.0
SNR=6.5
MK31 Makanchi Array 42.51 348 *ce* P **P 18 07 43.0 0.0**
MK31 pmax pmax
comp=Z,3.0nm,0.3s
MK31 Makanchi Array 42.51 348 *eP* **P 18 07 43.2 +0.2**
MKAR Makanchi Array 42.51 348 P P 18 07 43.3 +0.4
MKAR 18 09 35.4
MKAR Makanchi Array 42.51 348 P P 18 07 43.3 +0.4
MKAR PcP **PcP 18 09 35.4 +0.4**
MKAR Makanchi Array 42.51 348 P P 18 07 43.3 +0.4
comp=Z,12nm,0.6s,baz=170,slow=8.2,SNR=176
MKAR PcP **PcP 18 09 35.4 +0.4**
comp=Z,0.3nm,0.4s,baz=176,slow=2.1,SNR=3.2
MKAR LR LR 18 27 50.7
comp=Z,45nm,18.6s,baz=276,slow=40
KK31 Karatay Array 43.09 334 *ce* P **P 18 07 47.8 +0.1**
KK31 pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 43.09 334 *eP* **P 18 07 48.0 +0.3**
KKAR pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 43.09 334 *eP* **P 18 07 48.0 +0.3**
comp=Z,1.1nm,0.3s
SONM Songino Array 43.41 12 P P 18 07 50.4 +0.1
SONM PcP **PcP 18 09 38.5 +0.4**
SONM Songino Array 43.41 12 P P 18 07 50.4 +0.1
comp=Z,3.7nm,0.6s,baz=190,slow=8.1,SNR=43
SONM PcP **PcP 18 09 38.5 +0.4**
comp=Z,1.2nm,0.4s,baz=199,slow=3.9,SNR=11
SONM LR LR 18 28 02.1
comp=Z,30nm,18.3s,baz=328,slow=39
ULN Ulaanbaatar 43.58 12 *eP* **P 18 07 51.4 -0.4**
comp=Z,3.8nm,0.6s
KSAR Wonju Array Be 44.00 39 P P 18 07 56.0 +0.9
KSRS Korea Array 44.03 39 P P 18 07 56.0 +0.7
comp=Z,0.9nm,0.4s,baz=215,slow=9.1,SNR=12
KSRS LR LR 18 28 07.9
comp=Z,28nm,18.8s,baz=355,slow=38
HVS Khovu-Aksy 45.52 359↓ *eP* **P 18 08 07.2 +0.1**
HVS pmax pmax
comp=Z,17nm,0.7s
WRA Warramunga Arr 46.56 124 P P 18 08 15.1 -0.5
WRA Warramunga Arr 46.56 124 P P 18 08 15.1 -0.5
comp=Z,7.0nm,0.6s,baz=304,slow=9.2,SNR=58
WRAB Tennant Creek 46.56 124 *eP* **P 18 08 15.2 -0.5**
WRAB pmax pmax
comp=Z,7.0nm,0.6s
WRAB Tennant Creek 46.56 124 *eP* **P 18 08 15.2 -0.5**
comp=Z,6.9nm,0.6s
KURBB Kurchatov Arra 46.97 346 P P 18 08 19.1 +0.8
comp=Z,14nm,0.7s,baz=171,slow=6.8,SNR=138
KURK Kurchatov 47.03 346 *eP* **P 18 08 19.5 +0.7**
KURK pmax pmax
comp=Z,7.0nm,0.4s
KURK Kurchatov 47.03 346 *eP* **P 18 08 19.5 +0.7**
comp=Z,6.9nm,0.4s
AS31 Alice Springs 48.08 129 *eP* **P 18 08 26.7 -0.8**
ASAR Alice Springs 48.08 129 P P 18 08 27.0 -0.5
ASAR PcP **PcP 18 09 54.6 -0.1**
ASAR Alice Springs 48.08 129 P P 18 08 27.0 -0.5
comp=Z,1.9nm,0.5s,baz=299,slow=7.7,SNR=92
ASAR PcP **PcP 18 09 54.6 -0.1**
comp=Z,1.1nm,0.7s,baz=300,slow=3.6,SNR=4.8
ZAA0 Zalesovo Array 48.98 352 *eP* **P 18 08 34.2 +0.4**
ZALV Zalesovo Beam 48.98 352 P P 18 08 34.0 +0.2
ZALV Zalesovo Beam 48.98 352 P P 18 08 34.0 +0.2
ZALV Zalesovo Beam 48.98 352 P P 18 08 34.0 +0.2
comp=Z,8.7nm,0.5s,baz=181,slow=6.7,SNR=36
NVS Novosibirsk 50.07 351↑ *iP* **P 18 08 41.9 -0.2**
NVS pmax pmax
comp=Z,12nm,0.9s
NVS pmax pmax
comp=N,7.0nm,0.8s
NVS pmax pmax
comp=E,5.0nm,1.0s
MJAR Matsushiro Arr 50.49 46 P P 18 08 46.5 +0.8
MJAR Matsushiro Arr 50.49 46 P P 18 08 46.5 +0.8
comp=E,0.3nm,0.6s,baz=235,slow=7.0,SNR=5.4
NAY Al-Naaiem 50.52 304 *eP* **P 18 08 46.3 +0.3**
NAY AMb AMB 18 08 47.0
comp=Z,6.0nm,0.7s
MIB Mutribah 50.62 304 *eP* **P 18 08 47.1 +0.4**
MIB AMb AMB 18 08 48.2
comp=Z,17nm,0.9s
USRK Ussuriysk Arra 50.63 34 P P 18 08 46.6 0.0
comp=Z,1.4nm,0.6s,baz=267,slow=8.6,SNR=4.2
RST Umm Al-Ruwaisa 50.80 304 *eP* **P 18 08 48.2 +0.1**
RST AMb AMB 18 08 49.3
comp=Z,1.3nm,1.0s
VOSK Vostochnaya 50.94 342 P P 18 08 48.5 -0.3
VOSK pmax pmax
comp=Z,7.0nm,0.3s
BVAR Borovoye Array 51.39 342 P P 18 08 52.1 0.0
BVAR Borovoye Array 51.39 342 P P 18 08 52.1 0.0
BVAR Borovoye Array 51.39 342 P P 18 08 52.1 0.0
comp=Z,2.2nm,0.4s,baz=136,slow=9.9,SNR=17
BRVK Borovoye 51.45 342↓ *eP* **P 18 08 52.6 +0.1**
BRVK pmax pmax
comp=Z,2.0nm,0.6s
ZRNK Zerenda 51.77 341 *iP* **P 18 08 54.7 -0.3**
ZRNK pmax pmax
comp=Z,3.0nm,0.3s
AB31 Akbulak array 52.53 332 *ce* P **P 18 09 00.4 -0.3**
AB31 pmax pmax
comp=Z,3.0nm,0.3s
ABKAR Akbulak array 52.53 332 *eP* **P 18 09 00.7 0.0**
comp=Z,3.1nm,0.3s
QLP Quilpie 57.67 126 P P 18 09 38.5 +0.3
baz=58,SNR=4.5
SVE Sverdlovsk 57.78 339↑ *eP* **P 18 09 38.8 +0.4**
SVE pmax pmax
comp=Z,9.0nm,0.9s
STKA Stephens Creek 58.17 133 P P 18 09 40.8 -0.7
STKA Stephens Creek 58.17 133 P P 18 09 40.8 -0.7
comp=Z,0.9nm,0.5s,baz=289,slow=15,SNR=5.4
STKA Stephens Creek 58.17 133 P P 18 09 41.2 -0.3
baz=58,SNR=4.0
ARU Arti 58.25 337 *c iP* **P 18 09 41.4 -0.3**
ARU 18 11 49.5
ARU S **S 18 17 43.1 +2.8**
ARU SS **SS 18 21 29.8 -2.9**
ARU pmax pmax
comp=Z,10.0nm,2.5s
KBZ Khabaz 59.14 319 P P 18 09 47.0 -1.1
KBZ Khabaz 59.14 319 P P 18 09 47.0 -1.1
KBZ Khabaz 59.14 319 P P 18 09 47.0 -1.1
comp=Z,2.2nm,0.8s,baz=170,slow=5.1,SNR=5.0
CMSA Cobar Meteorol 61.05 131 P P 18 10 01.6 +0.2
baz=61,SNR=18
ANN Anapa 63.18 318 *eP* **P 18 10 14.6 -0.8**
ANN *eS* **S 18 18 46.6 +3.0**
ANN pmax pmax
comp=Z,71nm,1.4s
BRTR Keskin Array B 64.31 312 P P 18 10 22.4 -0.9
BRTR Keskin Array B 64.31 312 P P 18 10 22.4 -0.9
comp=Z,2.0nm,0.7s,baz=120,slow=7.3,SNR=11
OBN Obninsk 67.62 328 *eP* **P 18 10 42.8 -1.2**
OBN *eS* **S 18 19 33.3 -4.3**
OBN *i* SS **SS 18 24 05.7 +6.7**
OBN pmax pmax
comp=Z,28nm,2.5s
CFR Carcaliu 69.60 316↓ *iP* **P 18 10 56.1 -0.4**
AKASG Malin Array Be 70.29 322 P P 18 10 59.2 -1.5
AKASG Malin Array Be 70.29 322 P P 18 10 59.2 -1.5
AKASG Malin Array Be 70.29 322 P P 18 10 59.2 -1.5
comp=Z,2.2nm,0.6s,baz=90,slow=5.7,SNR=9.0
AK01 Malin Array Si 70.29 322 *eP* **P 18 10 58.9 -1.8**
VRI Vrincioaia 70.72 317↓ *iP* **P 18 11 04.0 +0.6**
PLOR Plostina 70.77 317↓ *iP* **P 18 11 04.0 +0.2**
TESR Tescani 70.91 317↓ *iP* **P 18 11 04.4 -0.2**
MLR Muntele Rosu 71.18 316↑ *iP* **P 18 11 07.2 +0.8**
BURAR Bucovina Array 72.10 318↑ *iP* **P 18 11 12.1 +0.3**
JOF Joensuu 73.18 335 *eP* **P 18 11 16.3 -1.5**
JOF pmax pmax
comp=Z,1.0nm,0.5s
JOF Joensuu 73.18 335 *ep* **P 18 11 16.3 -1.5**
comp=Z,0.8nm,0.5s
TRPA Tarpa 73.97 318↓ *iP* **P 18 11 23.1 +0.4**
FINES FINESS Array B 75.02 332 P P 18 11 27.9 -0.6
FINES FINESS Array B 75.02 332 P P 18 11 27.9 -0.6
comp=Z,1.7nm,0.5s,baz=102,slow=5.9,SNR=15
KAF Kangasniemi 75.11 333 *eP* P 18 11 19.2 -10
KAF pmax pmax
comp=Z,1.0nm,0.7s
KAF Kangasniemi 75.11 333 *ep* P 18 11 19.2 -10
comp=Z,1.4nm,0.7s
KEV Kevo 77.23 341 *eP* **P 18 11 40.0 -0.9**
KEV pmax pmax
comp=Z,1.0nm,0.3s
KEV Kevo 77.23 341 *ep* **P 18 11 40.0 -0.9**
comp=Z,0.5nm,0.3s
MORC Moravsky Berou 77.46 320↑ *iP* **P 18 11 41.3 -1.4**
ARCES ARCESS Array B 77.65 340 P P 18 11 43.2 -0.1
ARCES ARCESS Array B 77.65 340 P P 18 11 43.2 -0.1
comp=Z,1.7nm,0.4s,baz=100,slow=6.8,SNR=25
KRLC Kraliky 77.98 320 *eP* **P 18 11 46.4 +0.8**
KRLC Kraliky 77.98 320 *eP* **P 18 11 46.4 +0.8**
BILL Bilibino 78.16 21 *eP* **P 18 11 45.6 -0.6**
BILL pmax pmax
comp=Z,6.0nm,2.1s
DPC Dobruska-Polom 78.30 320 *eP* **P 18 11 48.3 +0.9**
DPC Dobruska-Polom 78.30 320 *eP* **P 18 11 48.3 +0.9**
FX1 Attu Island--F 78.78 37 P P 18 11 49.5 -0.4
FX1 Attu Island--F 78.78 37 P P 18 11 49.5 -0.4
comp=Z,1.9nm,0.4s,baz=294,slow=1.1,SNR=15
GERES GERESS Array B 79.89 319 P P 18 11 56.5 +0.4
GERES GERESS Array B 79.89 319 P P 18 11 56.5 +0.4
comp=Z,3.7nm,0.7s,baz=97,slow=5.5,SNR=33
KHC Kasperske Hory 79.98 319 *eP* **P 18 11 57.5 +0.9**
KHC Kasperske Hory 79.98 319 *eP* **P 18 11 57.5 +0.9**
KEST Kesra 82.95 305 P P 18 12 13.5 +0.8
KEST Kesra 82.95 305 P P 18 12 13.5 +0.8
comp=Z,1.1nm,0.7s,baz=320,slow=8.1,SNR=3.6
PGF Pioggiola 83.06 312 *eP* **P 18 12 13.0 -0.1**
PGF Pioggiola 83.06 312 *eP* **P 18 12 13.0 -0.1**
PGF Pioggiola 83.06 312 *eP* **P 18 12 13.0 -0.1**
SBF Sospel 84.17 313 *eP* **P 18 12 18.6 -0.1**
comp=Z,31nm,1.0s
SBF Sospel 84.17 313 *eP* **P 18 12 18.6 -0.1**
SBF pmax pmax
comp=Z,31nm,1.0s
SBF Sospel 84.17 313 *eP* **P 18 12 18.6 -0.1**
comp=Z,31nm,1.0s
LPG La Plagne 84.60 315 *eP* **P 18 12 21.1 0.0**
comp=Z,7.4nm,0.8s
LPG La Plagne 84.60 315 *eP* **P 18 12 21.1 0.0**
LPG pmax pmax
comp=Z,7.0nm,0.8s
LPG La Plagne 84.60 315 *eP* **P 18 12 21.1 0.0**
comp=Z,7.4nm,0.8s
LPL La Plagne 84.61 315 *eP* **P 18 12 21.1 0.0**
comp=Z,6.9nm,0.6s
LPL La Plagne 84.61 315 *eP* **P 18 12 21.1 0.0**
LPL pmax pmax
comp=Z,7.0nm,0.6s
LPL La Plagne 84.61 315 *eP* **P 18 12 21.1 0.0**
comp=Z,6.9nm,0.6s
MBDF Montbardon 84.62 314 *eP* **P 18 12 21.0 -0.1**
MBDF Montbardon 84.62 314 *eP* **P 18 12 21.0 -0.1**
MBDF Montbardon 84.62 314 *eP* **P 18 12 21.0 -0.1**
FRF La Foret Royal 84.76 313 *eP* **P 18 12 21.6 0.0**
comp=Z,10.0nm,0.8s
FRF La Foret Royal 84.76 313 *eP* **P 18 12 21.6 0.0**
FRF pmax pmax
comp=Z,10.0nm,0.8s
FRF La Foret Royal 84.76 313 *eP* **P 18 12 21.6 0.0**
comp=Z,10.0nm,0.8s
HAU Haudompre 84.78 318 *eP* **P 18 12 21.1 -0.5**
comp=Z,10nm,0.7s
HAU Haudompre 84.78 318 *eP* **P 18 12 21.1 -0.5**
HAU pmax pmax
comp=Z,10.0nm,0.7s
HAU Haudompre 84.78 318 *eP* **P 18 12 21.1 -0.5**
comp=Z,10nm,0.7s
LMR La Mourre 84.87 313 *eP* **P 18 12 21.5 -0.6**
LMR La Mourre 84.87 313 *eP* **P 18 12 21.5 -0.6**
LMR La Mourre 84.87 313 *eP* **P 18 12 21.5 -0.6**
ORIF Oris-en-Rattie 85.24 315 *eP* **P 18 12 23.6 -0.5**
ORIF Oris-en-Rattie 85.24 315 *eP* **P 18 12 23.6 -0.5**
ORIF Oris-en-Rattie 85.24 315 *eP* **P 18 12 23.6 -0.5**
VIVF Saint-Julien-l 86.10 315 *eP* **P 18 12 28.2 -0.1**
comp=Z,4.4nm,0.7s
VIVF Saint-Julien-l 86.10 315 *eP* **P 18 12 28.2 -0.1**
VIVF pmax pmax
comp=Z,4.0nm,0.7s
VIVF Saint-Julien-l 86.10 315 *eP* **P 18 12 28.2 -0.1**
comp=Z,4.4nm,0.7s
SMF Signal de Mont 86.56 316 *eP* **P 18 12 30.1 -0.4**
comp=Z,6.1nm,0.7s
SMF Signal de Mont 86.56 316 *eP* **P 18 12 30.1 -0.4**
SMF pmax pmax
comp=Z,6.0nm,0.7s
SMF Signal de Mont 86.56 316 *eP* **P 18 12 30.1 -0.4**
comp=Z,6.1nm,0.7s
MTLF Montolieu 87.99 313 *eP* **P 18 12 37.0 -0.5**
MTLF Montolieu 87.99 313 *eP* **P 18 12 37.0 -0.5**
MTLF Montolieu 87.99 313 *eP* **P 18 12 37.0 -0.5**
RJF Les Rejaudoux 88.29 315 *eP* **P 18 12 39.2 +0.3**
comp=Z,10nm,0.8s
RJF Les Rejaudoux 88.29 315 *eP* **P 18 12 39.2 +0.3**
RJF pmax pmax
comp=Z,10.0nm,0.8s
RJF Les Rejaudoux 88.29 315 *eP* **P 18 12 39.2 +0.3**
comp=Z,10nm,0.8s
TORD Torodi Ar. Bea 91.55 283 P P 18 12 55.0 +0.4
TORD Torodi Ar. Bea 91.55 283 P P 18 12 55.0 +0.4
comp=Z,0.4nm,0.6s,baz=95,slow=3.6,SNR=4.1
INK Inuvik 99.17 16 P Pdif 18 13 27.8 -0.4
INK Inuvik 99.17 16 P Pdif 18 13 27.8 -0.4
comp=Z,0.3nm,0.4s,baz=183,slow=0.5,SNR=3.6
RES Resolute Bay 99.77 3 P Pdif 18 13 30.1 -0.7
RES Resolute Bay 99.77 3 P Pdif 18 13 30.1 -0.7
comp=Z,0.8nm,0.6s,baz=27,slow=3.1,SNR=3.9
NVAR Mina Array Bea 126.74 32 PKP PKPdf 18 18 52.3 +1.0
NVAR Mina Array Bea 126.74 32 PKP PKPdf 18 18 52.3 +1.0
comp=Z,0.7nm,0.5s,baz=291,slow=2.5,SNR=7.5
PDAR Pinedale Array 127.23 22 PKP PKPdf 18 18 52.0 -0.2
PDAR Pinedale Array 127.23 22 PKP PKPdf 18 18 52.0 -0.2
comp=Z,1.0nm,0.5s,baz=100,slow=2.8,SNR=8.1
TXAR Lajitas Array 141.22 26 PKP PKPdf 18 19 18.9 +0.4
TXAR Lajitas Array 141.22 26 PKP PKPdf 18 19 18.9 +0.4
comp=Z,1.0nm,0.5s,baz=18,slow=0.9,SNR=9.0
CPUP Villa Florida 146.07 229 PKPbc PKPbc 18 19 27.4 -0.4
CPUP Villa Florida 146.07 229 PKPbc PKPbc 18 19 27.4 -0.4
comp=Z,0.7nm,0.3s,baz=111,slow=2.4,SNR=4.2
CFAA Coronel Fontan 149.40 210 PKPbc PKPbc 18 19 36.8 0.0
CFAA Coronel Fontan 149.40 210 PKPbc PKPbc 18 19 36.8 0.0
comp=Z,0.2nm,0.6s,baz=201,slow=6.4,SNR=4.7

CSEM ***04*** *18:10:23.3, 42°.33N×13°.52E, h9km, MD2.1/9, After ROM*
ROM 04 18:10:23.3±0.1**, 42°.33N×13°.52E, h9km, Md2.1/9, Ml1.3/5,**
1D, Error ellipse: s-maj=1.3km s-min=1.0km az=24.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.08**	**141**	Pg	Pg	18 10 25.8	+0.2
FAGN				Sg	Sg	18 10 27.7	+0.4
	422nm,0.4s						
FAGN	**Fagnano**	**0.08**	**141**	Pg	Pg	18 10 25.8	+0.2
FAGN				Sg	Sg	18 10 27.7	+0.4
	422nm,0.4s						
AQU	**L'Aquila**	**0.09**	**287**↓	*iP*	Pg	18 10 26.0	+0.2
AQU	**L'Aquila**	**0.09**	**287**	Pg	Pg	18 10 26.0	+0.2
AQU				Sg	Sg	18 10 28.4	+0.8
	297nm,0.7s						
AQU	**L'Aquila**	**0.09**	**287**	Pg	Pg	18 10 26.0	+0.2
AQU				Sg	Sg	18 10 28.4	+0.8
	297nm,0.7s						
CAMP	**Campotosto**	**0.22**	**339**	Pg	Pg	18 10 28.6	+0.5
CAMP				Sg	Sg	18 10 32.5	+1.1
	26nm,0.9s						
CAMP	**Campotosto**	**0.22**	**339**	Pg	Pg	18 10 28.6	+0.5
CAMP				Sg	Sg	18 10 32.5	+1.1
	26nm,0.9s						
VCEL	**Villa Celiera**	**0.25**	**74**	Pg	Pg	18 10 29.6	+1.1
VCEL				Sg	Sg	18 10 33.9	+1.9
	52nm,0.4s						
VCEL	**Villa Celiera**	**0.25**	**74**	Pg	Pg	18 10 29.6	+1.1
VCEL				Sg	Sg	18 10 33.9	+1.9
	52nm,0.4s						
TERO	**Teramo**	**0.30**	**12**	Pg	Pg	18 10 29.6	+0.1
	30nm,0.4s						
TERO	**Teramo**	**0.30**	**12**	Pg	Pg	18 10 29.6	+0.1
	30nm,0.4s						
FIAM	**Fiamignano**	**0.30**	**259**	Pg	Pg	18 10 30.1	+0.6
FIAM				Sg	Sb	18 10 35.2	-1.0
	63nm,1.1s						
FIAM	**Fiamignano**	**0.30**	**259**	Pg	Pg	18 10 30.1	+0.6
FIAM				Sg	Sb	18 10 35.2	-1.0
	63nm,1.1s						
PTQR	**Pietraquaria**	**0.32**	**196**	Pg	Pg	18 10 30.2	+0.4
PTQR				Sg	Sb	18 10 35.5	-1.1
	6.0nm,0.6s						
PTQR	**Pietraquaria**	**0.32**	**196**	Pg	Pg	18 10 30.2	+0.4
PTQR				Sg	Sb	18 10 35.5	-1.1
	6.0nm,0.6s						
INTR	**Introdacqua**	**0.43**	**138**	Pg	Pb	18 10 32.5	-0.6
INTR	**Introdacqua**	**0.43**	**138**	Pg	Pb	18 10 32.5	-0.6

IDC 04 18:16:59.5±0.6**, 9°.76S×75°.45W, h0km, mb4.0/10, mb1 4.3/12, mb1mx4.1/24, mbtmp4.0/12, ML4.1/2, MS3.7/15, Ms1 3.8/15, ms1mx3.4/37, Error ellipse: s-maj=23.4km s-min=16.9km az=70.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.60**	**212**	Pn	Pn	18 17 43.6	+0.6
	67nm,0.3s,baz=22,slow=13,SNR=109						
NNA				LR	LR	18 18 14.8	
	comp=Z,290nm,19.2s,baz=118,slow=29						
NNA				Sn	Sn	18 18 14.8	-0.6
	47nm,0.3s,baz=115,slow=23,SNR=18						
ATAH	**Atahualpa**	**3.91**	**312**	Pn	Pn	18 18 05.0	+3.5
	11nm,0.3s,baz=132,slow=8.2,SNR=38						
ATAH				Lg	Lg	18 19 01.1	
	16nm,0.3s,baz=295,slow=14,SNR=4.7						
LPAZ	**La Paz**	**9.64**	**133**	Pn	Pn	18 19 22.6	+2.1
	0.2nm,0.3s,baz=326,slow=12,SNR=6.1						
LPAZ				Lg	Lg	18 22 05.3	
	0.2nm,0.3s,baz=142,slow=6.8,SNR=3.9						
LPAZ				LR	LR	18 23 45.9	
	comp=Z,406nm,19.4s,baz=150,slow=42						
SIV	**San Ignacio**	**15.32**	**115**	Pn	Pn	18 20 36.9	-0.4
	0.3nm,0.3s,baz=310,slow=13,SNR=6.1						
SIV				Lg	Lg	18 25 02.7	
	0.9nm,0.3s,baz=226,slow=21,SNR=5.4						
SIV				LR	LR	18 27 55.1	
	comp=Z,139nm,19.2s,slow=43						
CFAA	**Coronel Fontan**	**22.75**	**164**	P	P	18 22 00.9	-2.6
	0.2nm,0.5s,baz=248,slow=5.4,SNR=2.7						
CPUP	**Villa Florida**	**23.79**	**136**	P	P	18 22 13.0	-1.1
	0.6nm,0.3s,baz=312,slow=8.8,SNR=4.6						
CPUP				LR	LR	18 33 59.2	
	comp=Z,218nm,19.0s,baz=291,slow=43						
BDFB	**Brasilia**	**27.38**	**105**	LR	LR	18 34 24.8	
	comp=Z,387nm,18.2s,baz=90,slow=38						
TXAR	**Lajitas Array**	**47.44**	**326**	P	P	18 25 36.8	+0.5
	0.9nm,0.7s,baz=137,slow=9.4,SNR=6.9						
TXAR				PcP	PcP	18 27 06.3	-0.5
	0.5nm,0.8s,baz=170,slow=5.5,SNR=3.1						
TXAR				LR	LR	18 43 47.8	
	comp=Z,46nm,20.0s,baz=115,slow=34						
ULM	**Lac du Bonnet**	**62.36**	**345**	P	P	18 27 22.0	-1.9
	5.5nm,0.6s,baz=146,slow=5.8,SNR=5.1						
NVAR	**Mina Array Bea**	**62.40**	**323**	P	P	18 27 25.2	+0.6
	0.7nm,0.7s,baz=129,slow=5.7,SNR=4.4						
PPT	**Papeete**	**72.08**	**255**	LR	LR	18 51 27.8	
	comp=Z,70nm,21.0s,baz=191,slow=29						
DBIC	**Dimbokro**	**72.19**	**80**	LR	LR	18 58 25.0	
	comp=Z,73nm,18.1s,baz=53,slow=34						
BBB	**Bella Bella**	**76.39**	**330**	LR	LR	19 07 58.8	
	comp=Z,38nm,18.5s,baz=99,slow=40						
YKA	**Yellowknife Ar**	**78.13**	**343**	P	P	18 28 59.7	-0.5
	0.9nm,0.7s,baz=141,slow=6.1,SNR=17						
TORD	**Torodi Ar. Bea**	**79.89**	**75**	P	P	18 29 11.1	+0.1
	2.5nm,0.9s,baz=262,slow=4.7,SNR=7.2						
TORD				LR	LR	19 02 25.0	
	comp=Z,67nm,19.4s,baz=200,slow=34						
QSPA	**South Pole Qui**	**80.36**	**180**	P	P	18 29 13.3	+0.6
	1.2nm,0.5s,baz=154,slow=1.9,SNR=17						
ESDC	**Sonseca Array**	**82.27**	**48**	P	P	18 29 24.4	+1.3
	0.1nm,0.3s,baz=256,slow=5.2,SNR=3.5						
ESDC				LR	LR	19 00 36.2	
	comp=Z,55nm,20.4s,baz=335,slow=32						
INK	**Inuvik**	**87.85**	**342**	P	P	18 29 49.5	-0.9
	5.9nm,0.9s,baz=101,slow=5.1,SNR=22						
ILAR	**Eielson Array**	**91.01**	**336**	P	P	18 30 05.5	+0.1
	0.5nm,0.8s,baz=166,slow=3.2,SNR=5.4						
AFI	**Afiamalu**	**93.74**	**255**	LR	LR	19 02 03.7	
	comp=Z,73nm,19.0s,baz=151,slow=29						
BOSA	**Boshof**	**94.63**	**120**	LR	LR	19 09 18.9	
	comp=Z,104nm,18.9s,baz=74,slow=33						
GERES	**GERESS Array B**	**96.71**	**42**	LR	LR	19 11 56.5	
	comp=Z,24nm,19.1s,baz=81,slow=34						
SPITS	**Spitsbergen Ar**	**99.86**	**12**	LR	LR	19 16 03.8	
	comp=Z,38nm,18.2s,baz=30,slow=36						
ZALV	**Zalesovo Beam**	**133.18**	**16**	PKP	PKPdf	18 36 17.6	+0.4
	2.1nm,0.7s,baz=318,slow=1.9,SNR=8.7						
ASAR	**Alice Springs**	**136.10**	**220**	PKP	PKPdf	18 36 23.4	-0.4
	0.5nm,0.8s,baz=120,slow=1.4,SNR=5.0						
WRA	**Warramunga Arr**	**138.39**	**225**	PKP	PKPdf	18 36 26.1	-2.0
	1.1nm,1.1s,baz=125,slow=1.9,SNR=4.0						
MKAR	**Makanchi Array**	**138.52**	**23**	PKP	PKPdf	18 36 26.8	-0.7
	0.4nm,0.8s,baz=351,slow=2.6,SNR=4.4						
MJAR	**Matsushiro Arr**	**139.51**	**317**	PKP	PKPdf	18 36 26.8	-2.8
	0.9nm,0.9s,baz=44,slow=0.3,SNR=3.9						
SONM	**Songino Array**	**142.02**	**358**	PKhKP	PKPpre	18 36 30.5	
	0.6nm,0.8s,baz=9.5,slow=1.8,SNR=4.1						
KSRS	**Korea Array**	**145.29**	**326**	PKPbc	PKPbc	18 36 39.3	-0.1
	5.2nm,0.8s,baz=57,slow=4.1,SNR=29						
CMAR	**Chiang Mai Arr**	**169.79**	**32**	PKP	PKPdf	18 37 09.3	-0.9
	0.3nm,0.7s,baz=298,slow=1.9,SNR=3.5						
CMAR				PKPab	PKPab	18 38 25.4	+1.3
	0.9nm,0.8s,baz=322,slow=5.6,SNR=11						

IDC 04 18:20:46.7±3.3**, 44°.08N×129°.27W, h0km, mb2.8/2, mb1 3.5/5, mb1mx3.3/29, mbtmp3.1/5, ML3.7/3, MS3.1/8, Ms1 3.1/8, ms1mx2.9/15, Error ellipse: s-maj=52.7km s-min=23.7km az=44.0, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEW	**Newport**	**9.41**	**59**	Pn	Pn	18 23 05.3	+1.7
	0.3nm,0.3s,baz=230,slow=17,SNR=2.4						
NEW				LR	LR	18 26 46.1	
	comp=Z,224nm,19.1s,baz=4.3,slow=38						
NVAR	**Mina Array Bea**	**10.00**	**121**	Pn	Pn	18 23 13.4	+1.5
	0.2nm,0.3s,baz=285,slow=10,SNR=4.0						
ELK	**Elko**	**10.90**	**103**	LR	LR	18 28 02.7	
	comp=Z,76nm,19.3s,baz=325,slow=40						
DLBC	**Dease Lake**	**14.39**	**358**	LR	LR	18 29 04.0	
	comp=Z,81nm,19.0s,baz=227,slow=35						
PDAR	**Pinedale Array**	**14.39**	**88**	Pn	P	18 24 16.3	-2.8
	0.1nm,0.3s,baz=283,slow=8.0,SNR=2.5						
PFO	**Pinyon Flat Ob**	**14.44**	**132**	LR	LR	18 29 34.2	
	comp=Z,90nm,21.0s,baz=303,slow=36						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	20.33	20	P	P	18 25 22.2	-1.9
	0.1nm,0.5s,baz=217,slow=11,SNR=3.3						
ILAR	Eielson Array	22.97	341	P	P	18 25 53.0	+0.6
	0.7nm,0.9s,baz=159,slow=7.7,SNR=7.0						
ILAR				LR	LR	18 33 03.9	
	comp=Z,74nm,20.1s,baz=75,slow=32						
ULM	Lac du Bonnet	23.39	63	LR	LR	18 35 24.3	
	comp=Z,100nm,20.6s,baz=304,slow=38						
INK	Inuvik	24.39	356	LR	LR	18 34 50.7	
	comp=Z,57nm,20.3s,baz=118,slow=35						
LPIG	La Paz	25.26	136	LR	LR	18 35 31.8	
	comp=Z,4.7nm,18.1s,baz=189,slow=35						

IDC 04 18:23:09.0±3.6, 22°.74N×11°.89W, h0km, mb3.7/3, mb1 3.7/5, mb1mx3.4/26, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=112.2km s-min=32.8km az=83.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	16.05	124	Pn	Pn	18 26 57.2	+1.0
	0.1nm,0.3s,baz=310,slow=12,SNR=7.4						
DBIC	Dimbokro	17.36	156	P	Pn	18 27 11.0	-1.8
	0.2nm,0.3s,baz=340,slow=15,SNR=3.9						
GERES	GERESS Array B	33.01	32	P	P	18 29 44.8	-1.1
	0.3nm,0.5s,baz=235,slow=10,SNR=3.4						
FINES	FINESS Array B	46.62	24	P	P	18 31 38.4	-0.3
	2.8nm,1.0s,baz=220,slow=8.4,SNR=3.5						
MKAR	Makanchi Array	76.53	45	P	P	18 35 01.8	+0.7
	0.2nm,0.5s,baz=307,slow=4.5,SNR=6.4						
ASAR	Alice Springs	148.59	98	PKPbc	PKPbc	18 42 58.4	-0.3
	0.3nm,0.7s,baz=294,slow=2.3,SNR=7.0						

NIED 04 18:25:00, 38°.20N×142°.40E, h17km, Mw3.6 Best double couple: M0 2.66000×10^14 NP1: φs 15.00000°, δ79.00000°, λ66.00000°. NP2: φs 261.00000°, δ26.00000°, λ154.00000°.
IDC 04 18:25:21.4±8.0, 38°.48N×142°.38E, h0km, mb3.3/2, mb1 3.2/3, mb1mx3.1/25, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=133.1km s-min=42.1km az=119.0
JMA 04 18:25:23.6±0.2, 38°.23N×142°.37E, h37km±2km, M3.5
ISC 04 18:25:23.8±2.6, 38°.27N±0°.07×142°.2E±0°.1, h14km±12km, n15, σ1s.38/21, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.70	285	P	Pn	18 25 39.1	-0.3
JIO				eS	Sn	18 25 50.0	0.0
OFUJ	Ofunato	0.91	332	P	Pg	18 25 41.5	0.0
OFUJ				S	Sg	18 25 54.5	+1.1
JMK	Ichinoseki	1.03	311	P	Pg	18 25 43.9	+0.1
JMM	Marumori	1.19	251	P	Pn	18 25 45.2	-0.9
JMM				S	Sb	18 26 01.3	-0.2
JOU	Okura	1.22	275	P	Pb	18 25 47.0	+0.3
JFK	Kawauchi	1.39	230	P	Pn	18 25 47.3	-1.6
JOM	Ohasama	1.40	329	P	Pn	18 25 49.0	+0.1
JYK	Kaneyama	1.59	295	P	Pb	18 25 52.3	-0.7
JFT	Otama	1.66	244	P	Pn	18 25 52.9	+0.3
JRG	Rokugo	1.67	313	P	Pb	18 25 53.9	-0.4
JYS	Shirataka	1.69	269	P	Pb	18 25 54.5	-0.2
JYS				eS	Sg	18 26 18.0	-0.3
MJAR	Matsushiro Arr	3.62	243	Pn	Pn	18 26 21.4	+1.8
	1.3nm,0.3s,baz=56,slow=9.8,SNR=24						
MJAR				Sn	Sb	18 27 08.7	-2.9
	0.4nm,0.3s,baz=58,slow=17,SNR=3.5						
MAT	Matsushiro	3.63	243	P	Pn	18 26 21.9	+2.3
MAT				eS	Sn	18 27 05.4	+3.2
SONM	Songino Array	27.65	302	P	P	18 31 11.0	-0.1
	0.2nm,0.4s,baz=101,slow=7.8,SNR=2.8						
MKAR	Makanchi Array	44.01	301	P	P	18 33 30.4	-0.4
	0.3nm,0.7s,baz=90,slow=8.8,SNR=4.2						

IDC 04 18:48:34.4±3.9, 1°.78N×99°.48E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/25, mbtmp3.7/4, Error ellipse: s-maj=167.0km s-min=27.2km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.44	124	P	P	18 56 14.8	-0.1
	0.5nm,0.4s,baz=303,slow=9.0,SNR=6.8						
SONM	Songino Array	46.27	6	P	P	18 57 02.0	+0.2
	0.2nm,0.5s,baz=190,slow=8.5,SNR=2.4						
MKAR	Makanchi Array	47.27	344	P	P	18 57 09.8	+0.3
	0.8nm,0.3s,baz=156,slow=7.9,SNR=28						
ZALV	Zalesovo Beam	53.38	349	P	P	18 57 54.8	-0.8
	0.5nm,0.4s,baz=164,slow=5.8,SNR=2.3						

IDC 04 18:56:02.5±1.8, 52°.15N×173°.09W, h0km, mb3.4/4, mb1 3.8/6, mb1mx3.4/28, mbtmp3.4/6, ML3.3/2, MS3.0/1, Ms1 3.0/1, ms1mx2.2/41, Error ellipse: s-maj=53.2km s-min=13.4km az=178.0
NEIC 04 18:56:09.1, 51°.83N×173°.33W, h22km, mb3.9/1, ML3.3(AEIC), After AEIC.
ISC 04 18:56:08.4±1.2, 52°.0N±0°.2×173°.46W±0°.05, h59km, n16, σ1s.71/21, mb3.3/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	0.52	300	P	Pn	18 56 20.7	+0.2
ATKA				S	Sn	18 56 29.7	+0.5
KOKL	Mount Kliuchef	0.59	310	P	Pn	18 56 22.5	+1.1
KOKL				S	Sn	18 56 31.9	+1.1
KOKV	Korovin Volcan	0.60	314	P	Pn	18 56 22.7	+1.2
KOKV				S	Sn	18 56 32.8	+1.8
KOWE	Korovin West	0.65	311	P	Pn	18 56 23.1	+1.2
OKCE	Okmok Cone E	3.55	63	P	Pn	18 57 02.2	+1.3
OKCE				S	Sn	18 57 44.9	+3.3
CEPE	Semis' Perret	4.26	273	P	Pn	18 57 12.8	+2.1
MSOM	Makushin Julie	4.37	62	P	Pn	18 57 13.0	+1.0
MREP	Makushin Rep't	4.47	63	P	Pn	18 57 14.9	+1.2
FX1	Attu Island--F	8.23	282	Pn	Pn	18 58 04.4	-0.6
	0.4nm,0.3s,baz=0.0,slow=5.1,SNR=3.9						
FX1				Sn	Sn	18 59 38.6	+2.1
	0.3nm,0.3s,baz=97,slow=17,SNR=2.6						
ILAR	Eielson Array	18.76	37	P	P	19 00 18.9	-3.3
	0.3nm,0.3s,baz=241,slow=9.4,SNR=19						
EGAK	Eagle	20.96	40	eP	P	19 00 44.9	-1.2
	4.0nm,0.7s						
INK	Inuvik	25.10	34	P	P	19 01 25.5	-1.6
	1.5nm,0.9s,baz=246,slow=9.8,SNR=5.7						
INK				LR	LR	19 12 48.1	
	comp=Z,34nm,20.5s,baz=327,slow=40						
YKA	Yellowknife Ar	32.41	48	P	P	19 02 30.5	-1.6
	0.1nm,0.3s,baz=274,slow=8.6,SNR=3.3						
PDAR	Pinedale Array	42.95	76	P	P	19 04 01.2	-0.4
	0.8nm,0.5s,baz=302,slow=3.1,SNR=7.1						
PDAR				pP	pP	19 04 15.4	-1.2
	1.6nm,0.6s,baz=298,slow=2.8,SNR=11						
TXAR	Lajitas Array	55.28	85	P	P	19 05 36.2	+0.5
	0.1nm,0.5s,baz=316,slow=5.0,SNR=2.2						
ASAR	Alice Springs	88.23	227	pP	pP	19 09 09.8	+0.2
	0.4nm,0.6s,baz=35,slow=4.5,SNR=4.9						

ISCJB 04 19:01:25.6±0.3, 3°.15N±0°.06×122°.61E±0°.07, h552km, mb3.6/17, Error ellipse: s-maj=9.6km s-min=6.5km az=148.2
IDC 04 19:01:26.5±1.4, 3°.08N×122°.59E, h554km±17km, mb3.0/17, mb1 3.1/17, mb1mx3.0/30, mbtmp3.0/17, Error ellipse: s-maj=19.0km s-min=10.5km az=71.0
DJA 04 19:01:27.4±1.6, 3°N±19°×12°3E±°, h537km±14km, M4.3/7, mB4.8/5, mb4.4/7, MLv4.3/4, Mw(mB)4.0/5
MAN 04 19:02:33, 6°.28N×124°.81E, h32km, mb3.9, ML2.6, MS2.2
ISC 04 19:01:26.5±0.6, 3°.10N±0°.08×122°.58E±0°.10, h552km, n40, σ0s.83/43, mb3.6/17, 1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	Marisa	2.68	194	P	P	19 02 39.3	-0.6
MNI	Manado	2.79	126	P	P	19 02 40.9	+0.3
KMSI	Cibinong	2.87	151	P	P	19 02 41.5	+0.5
LUWI	Luwuk	4.11	177	P	P	19 02 48.7	-0.8
CTBH	Cotabato--PC H	4.42	22	⇓iP	P	19 02 51.8	0.0
DAV	Davao City (W)	4.95	37	S	S	19 04 12.1	+2.9
	32nm,0.3s,baz=297,slow=20,SNR=7.6						
MATI	Mati	5.30	44	eP	P	19 02 58.8	-0.3
TNTI	Ternate	5.32	116	P	P	19 02 58.4	-0.8
	91nm,0.6s,2µm						
GAMI	Galela, Maluku	5.36	103	P	P	19 02 58.8	-0.8
	118nm,0.7s,3µm						
BUKP	Musuan	5.36	27	eP	P	19 03 00.2	+0.5
LBMI	Labuha	6.16	127	P	P	19 03 06.4	-0.4
	62nm,0.7s,970nm						
SMKI	Samarinda	6.42	237	P	P	19 03 10.9	+1.8
	127nm,0.9s						
TTSI	Tana Toraja	6.69	204	P	P	19 03 13.2	+1.5
	88nm,1.0s,1µm						
AAI	Ambon	8.77	140	P	P	19 03 33.6	+1.5
	24nm,0.7s						
WRA	Warramunga Arr	25.64	154	P	P	19 06 12.0	-1.0
	0.7nm,0.3s,baz=335,slow=9.7,SNR=13						
WRA				ScP	ScP	19 12 11.9	-0.6
	0.4nm,0.5s,baz=336,slow=2.9,SNR=6.6						
CMAR	Chiang Mai Arr	27.72	305	P	P	19 06 31.6	+0.3
	0.8nm,0.9s,baz=139,slow=7.8,SNR=7.0						
CMAR				ScP	ScP	19 12 19.1	+0.3
	0.4nm,0.9s,baz=134,slow=1.7,SNR=4.7						
ASAR	Alice Springs	28.80	158	P	P	19 06 40.5	-0.1
	0.2nm,0.3s,baz=334,slow=6.8,SNR=6.0						
ASAR				ScP	ScP	19 12 21.4	-0.7
	0.3nm,0.4s,baz=342,slow=2.9,SNR=8.6						
KSRS	Korea Array	34.55	8	P	P	19 07 29.8	+0.5
	1.3nm,0.5s,baz=186,slow=9.5,SNR=13						
MJAR	Matsushiro Arr	36.27	22	P	P	19 07 42.8	-0.9
	1.8nm,0.6s,baz=198,slow=9.0,SNR=14						
STKA	Stephens Creek	39.20	154	P	P	19 08 08.2	+0.6
	0.6nm,0.4s,baz=318,slow=12,SNR=3.0						
TAPN	Taplejung	41.13	309	eP	P	19 08 23.3	-0.2
	4.7nm,0.4s						
USRK	Ussuriysk Arra	41.77	10	P	P	19 08 28.0	+0.1
	4.1nm,0.5s,baz=198,slow=7.7,SNR=10.0						
RAMN	Ramite	41.80	308	eP	P	19 08 29.2	+0.5
	13nm,0.7s						
GUN	Gumba	42.82	309	eP	P	19 08 37.0	+0.2
PKI	Pulchoki	43.02	308	eP	P	19 08 38.2	-0.2
PKIN	Phulchoki	43.04	308	eP	P	19 08 38.1	-0.3
KKN	Kakani	43.23	308	eP	P	19 08 39.8	-0.1
ASAJ	Asahikawa	44.52	21	P	P	19 08 49.6	+0.3
	4.3nm,0.4s,baz=234,slow=9.8,SNR=11						
KOLN	Koldanda	44.54	307	eP	P	19 08 50.4	+0.4
	19nm,0.6s						
DANN	Dangsing	44.68	308	eP	P	19 08 51.2	+0.1
	28nm,0.7s						
PYUN	Piuthan	45.17	307	eP	P	19 08 55.3	+0.4
	24nm,0.6s						
SONM	Songino Array	46.70	345	P	P	19 09 06.5	+0.4
	0.8nm,0.8s,baz=160,slow=8.0,SNR=8.3						
MKAR	Makanchi Array	55.78	328	P	P	19 10 11.9	+0.3
	0.9nm,0.3s,baz=123,slow=8.1,SNR=44						
ZALV	Zalesovo Beam	59.34	335	P	P	19 10 34.8	-0.8
	0.4nm,0.3s,baz=108,slow=9.4,SNR=2.9						
KURBB	Kurchatov Arra	60.10	329	P	P	19 10 40.5	-0.2
	0.9nm,0.4s,baz=139,slow=6.3,SNR=17						
FX1	Attu Island--F	64.73	31	P	P	19 11 10.6	0.0
	0.7nm,0.3s,baz=283,slow=3.9,SNR=8.2						
BVAR	Borovoye Array	65.64	328	P	P	19 11 15.8	-0.5
	0.2nm,0.3s,baz=139,slow=9.1,SNR=4.6						
AKTO	Aktyubinsk	71.61	323	P	P	19 11 52.2	-0.2
	1.3nm,0.5s,baz=107,slow=6.4,SNR=7.7						
ILAR	Eielson Array	87.45	25	P	P	19 13 14.6	-0.7
	0.4nm,0.7s,baz=254,slow=5.0,SNR=5.2						
SPITS	Spitsbergen Ar	90.29	349	P	P	19 13 26.8	-1.5
	4.7nm,0.9s,baz=94,slow=8.4,SNR=10						

IDC 04 19:06:33.3±2.1, 43°.42N×105°.24W, h0km, mb4.3/1, mb1 3.8/4, mb1mx3.4/28, mbtmp3.6/4, ML3.5/3, Error ellipse: s-maj=47.4km s-min=8.4km az=153.0
NEIC 04 19:06:35.8±0.5, 43°.67N×105°.16W, h0km, ML3.1, Error ellipse: s-maj=6.8km s-min=5.7km az=152.0, Suspected Mining explosion.
NEIC 75 km [45 miles] SSE of Gillette.
ISCJB 04 19:06:35.4±0.2, 43°.68N±0°.01×105°.26W±0°.03, h0km, mb4.5/1, Error ellipse: s-maj=2.8km s-min=2.1km az=174.7
ISC 04 19:06:35.6±0.6, 43°.67N±0°.01×105°.28W±0°.02, h0km, n126, σ0s.83/161, 70C-48D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	Meade Ranch, G	0.32	336	P	Pg	19 06 42.9	+1.1
	baz=0.4,SNR=66						
I23A				⇑S	Sg	19 06 46.4	+0.4
	baz=0.4						
I23A	Meade Ranch, G	0.32	336	P	Pg	19 06 42.9	+1.1
	baz=0.4,SNR=66						
I23A				⇑S	Sg	19 06 46.4	+0.4
	baz=0.4						
J23A	Dilts Ranch, B	0.33	217	⇑P	Pg	19 06 42.4	+0.5
	baz=0.4						
J23A				⇓S	Sg	19 06 45.9	-0.2
	baz=0.4						
J23A	Dilts Ranch, B	0.33	217	⇑P	Pg	19 06 42.4	+0.5
	baz=0.4						
J23A				⇓S	Sg	19 06 45.9	-0.2
	baz=0.4						
I24A	Kuemmerle Ranc	0.51	68	⇑P	Pg	19 06 46.1	+0.7
	baz=0.4						
I24A	Kuemmerle Ranc	0.51	68	⇑P	Pg	19 06 46.1	+0.7
	baz=0.4						
J24A	Dixon Ranch, L	0.56	126	⇓P	Pg	19 06 46.6	+0.3
	baz=0.5						
J24A	Dixon Ranch, L	0.56	126	⇓P	Pg	19 06 46.6	+0.3
	baz=0.5						
H23A	Clabaugh Cattl	0.90	354	P	Pg	19 06 52.9	0.0
	baz=0.9,SNR=12						
H23A				⇓S	Sg	19 07 04.7	+0.1
	baz=0.9						
H23A	Clabaugh Cattl	0.90	354	P	Pg	19 06 52.9	0.0
	baz=0.9,SNR=12						
H23A				⇓S	Sg	19 07 04.7	+0.1
	baz=0.9						
I22A	9 Mile Ranch,	0.90	285	⇓P	Pg	19 06 52.9	0.0
	baz=1.0						
I22A	9 Mile Ranch,	0.90	285	⇓P	Pg	19 06 52.9	0.0
	baz=1.0						
J22A	Midwest	0.91	254	⇓P	Pg	19 06 52.6	-0.4
	baz=1.0						
J22A	Midwest	0.91	254	⇓P	Pg	19 06 52.6	-0.4
	baz=1.0						
K23A	Bowen Ranch, D	0.94	196	⇑S	Sg	19 07 06.8	+0.9
	baz=1.0						
K23A	Bowen Ranch, D	0.94	196	⇑S	Sg	19 07 06.8	+0.9
	baz=1.0						
K24A	Anderson Ranch	1.00	160	⇑P	Pg	19 06 54.4	-0.3
	baz=1.0,SNR=22						
K24A	Anderson Ranch	1.00	160	⇑P	Pg	19 06 54.4	-0.3
	baz=1.0,SNR=22						
RSSD	Black Hills	1.01	63	eP	Pg	19 06 54.7	-0.2
H24A	Dirks Ranch, A	1.20	26	P	Pg	19 06 58.0	-0.6
	baz=1.2,SNR=143						
H24A				⇑S	Sb	19 07 14.9	-0.5
	baz=1.2						
H24A	Dirks Ranch, A	1.20	26	P	Pg	19 06 58.0	-0.6
	baz=1.2,SNR=143						
H24A				⇑S	Sb	19 07 14.9	-0.5
	baz=1.2						
H22A	Clearmont	1.21	321	⇓P	Pg	19 06 58.7	0.0
	baz=1.3,SNR=25						
H22A				⇑Sb	Sb	19 07 16.4	+0.8
	baz=1.3						
H22A	Clearmont	1.21	321	⇓P	Pg	19 06 58.7	0.0
	baz=1.3,SNR=25						
H22A				⇑Sb	Sb	19 07 16.4	+0.8
	baz=1.3						
K22A	Casper	1.36	222	⇓P	Pg	19 07 00.5	-1.2
	baz=1.4						
K22A				⇑S	Sg	19 07 20.2	+0.9
	baz=1.4						
K22A	Casper	1.36	222	⇓P	Pg	19 07 00.5	-1.2
	baz=1.4						
K22A				⇑S	Sg	19 07 20.2	+0.9
	baz=1.4						
I21A	Big Trails, Te	1.47	276	⇓P	Pn	19 07 01.9	-1.5
	baz=1.5						
I21A	Big Trails, Te	1.47	276	⇓P	Pn	19 07 01.9	-1.5
	baz=1.5						
K25A	Mack Ranch, Ha	1.47	135	⇓P	Pn	19 07 03.4	-0.1
	baz=1.4,SNR=33						
K25A				⇓S	Sn	19 07 24.2	+0.6
	baz=1.4						
K25A	Mack Ranch, Ha	1.47	135	⇓P	Pn	19 07 03.4	-0.1
	baz=1.4,SNR=33						
K25A				⇓S	Sn	19 07 24.2	+0.6
	baz=1.4						
G23A	Biddle	1.54	357	⇑P	Pn	19 07 04.1	-0.2
	baz=1.5,SNR=55						
G23A	Biddle	1.54	357	⇑P	Pn	19 07 04.1	-0.2
	baz=1.5,SNR=55						
L23A	Garrett	1.58	191	⇓P	Pn	19 07 04.3	-0.8
	baz=1.6,SNR=16						
L23A				⇓S	Sn	19 07 26.3	0.0
	baz=1.6						
L23A	Garrett	1.58	191	⇓P	Pn	19 07 04.3	-0.8
	baz=1.6,SNR=16						
L23A				⇓S	Sn	19 07 26.3	0.0
	baz=1.6						
H21A	Big Horn, Sher	1.59	308	⇓P	Pn	19 07 05.1	-0.1
	baz=1.7,SNR=21						
H21A				⇑Sb	Sg	19 07 27.7	+1.0
	baz=1.7						
H21A	Big Horn, Sher	1.59	308	⇓P	Pn	19 07 05.1	-0.1
	baz=1.7,SNR=21						
H21A				⇑Sb	Sg	19 07 27.7	+1.0
	baz=1.7						
J21A	Lysite	1.61	259	⇑P	Pn	19 07 04.7	-0.8
	baz=1.7						
J21A				⇓S	Sn	19 07 26.6	-0.3
	baz=1.7						
J21A	Lysite	1.61	259	⇑P	Pn	19 07 04.7	-0.8
	baz=1.7						
J21A				⇓S	Sn	19 07 26.6	-0.3
	baz=1.7						
L24A	Wheatland	1.64	171	P	Pn	19 07 05.7	-0.2
	baz=1.6,SNR=13						
L24A				⇑S	Sg	19 07 28.6	+0.3
	baz=1.6						
L24A	Wheatland	1.64	171	P	Pn	19 07 05.7	-0.2
	baz=1.6,SNR=13						
L24A				⇑S	Sg	19 07 28.6	+0.3
	baz=1.6						
G22A	Birney	1.71	335	⇑P	Pn	19 07 07.3	+0.5
	baz=1.7						
G22A	Birney	1.71	335	⇑P	Pn	19 07 07.3	+0.5
	baz=1.7						
G24A	Alzada	1.77	20	⇑P	Pn	19 07 08.3	+0.7
	baz=1.7						
G24A	Alzada	1.77	20	⇑P	Pn	19 07 08.3	+0.7
	baz=1.7						
K21A	Alcova	1.77	235	⇑P	Pn	19 07 07.8	+0.1
	baz=1.8						
K21A				⇑S	Sn	19 07 31.3	+0.2
	baz=1.8						
K21A	Alcova	1.77	235	⇑P	Pn	19 07 07.8	+0.1
	baz=1.8						
K21A				⇑S	Sn	19 07 31.3	+0.2
	baz=1.8						
L25A	Engebretsen Ra	1.79	147	⇑P	Pn	19 07 08.7	+0.8
	baz=1.8						
L25A				⇓S	Sb	19 07 32.3	-0.1
	baz=1.8						
L25A	Engebretsen Ra	1.79	147	⇑P	Pn	19 07 08.7	+0.8
	baz=1.8						
L25A				⇓S	Sb	19 07 32.3	-0.1
	baz=1.8						
F23A	Volborg	2.06	358	⇑P	Pn	19 07 11.8	+0.4
	baz=2.1,SNR=29						
F23A	Volborg	2.06	358	⇑P	Pn	19 07 11.8	+0.4
	baz=2.1,SNR=29						
J20A	Shoshoni	2.06	262	⇑Pb	Pb	19 07 13.6	-0.4
	baz=2.1,SNR=60						
J20A	Shoshoni	2.06	262	⇑Pb	Pb	19 07 13.6	-0.4
	baz=2.1,SNR=60						
G21A	Lodge Grass	2.08	319	⇓P	Pn	19 07 12.4	+0.5
	baz=2.1						
G21A				⇑Sb	Sg	19 07 42.4	-0.1
	baz=2.1						
G21A	Lodge Grass	2.08	319	⇓P	Pn	19 07 12.4	+0.5
	baz=2.1						
G21A				⇑Sb	Sg	19 07 42.4	-0.1
	baz=2.1						
I20A	Worland	2.08	279	P	Pn	19 07 12.7	+0.9
	baz=2.2,SNR=103						
I20A				⇑Sb	Sb	19 07 41.7	+0.9
	baz=2.2						
I20A	Worland	2.08	279	P	Pn	19 07 12.7	+0.9
	baz=2.2,SNR=103						
I20A				⇑Sb	Sb	19 07 41.7	+0.9
	baz=2.2						
H20A	Greybull	2.12	294	⇑P	Pn	19 07 12.8	+0.3
	baz=2.2,SNR=14						
H20A	Greybull	2.12	294	⇑P	Pn	19 07 12.8	+0.3
	baz=2.2,SNR=14						
M23A	Laramie	2.22	189	⇑P	Pn	19 07 14.4	+0.5
	baz=2.2,SNR=18						
M23A	Laramie	2.22	189	⇑P	Pn	19 07 14.4	+0.5
	baz=2.2,SNR=18						
F22A	Rosebud	2.23	342	⇑P	Pn	19 07 13.9	+0.1
	baz=2.2,SNR=17						
F22A	Rosebud	2.23	342	⇑P	Pn	19 07 13.9	+0.1
	baz=2.2,SNR=17						
PHWY	Pilot Hill	2.37	183	eP	Pn	19 07 15.8	-0.1
M25A	Palm-Egli Farm	2.41	157	⇓P	Pn	19 07 17.5	+1.1
	baz=2.4,SNR=7.6						
M25A	Palm-Egli Farm	2.41	157	⇓P	Pn	19 07 17.5	+1.1
	baz=2.4,SNR=7.6						
K20A	Yellowstone Ra	2.46	247	⇓P	Pn	19 07 18.2	+1.1
	baz=2.5,SNR=39						
K20A	Yellowstone Ra	2.46	247	⇓P	Pn	19 07 18.2	+1.1
	baz=2.5,SNR=39						
M22A	Cedar Creek Ra	2.46	204	⇓P	Pn	19 07 19.1	+1.9
	baz=2.5,SNR=28						
M22A	Cedar Creek Ra	2.46	204	⇓P	Pn	19 07 19.1	+1.9
	baz=2.5,SNR=28						
M21A	Separation Pea	2.57	217	⇑P	Pn	19 07 20.3	+1.7
	baz=2.6,SNR=16						
M21A				⇑Sb	Sb	19 07 55.4	+0.5
	baz=2.6						
M21A	Separation Pea	2.57	217	⇑P	Pn	19 07 20.3	+1.7
	baz=2.6,SNR=16						
M21A				⇑Sb	Sb	19 07 55.4	+0.5
	baz=2.6						
G20A	Bridger	2.61	307	⇓P	Pn	19 07 19.0	-0.2
	baz=2.7,SNR=74						
G20A	Bridger	2.61	307	⇓P	Pn	19 07 19.0	-0.2
	baz=2.7,SNR=74						
I19A	Meeteetse	2.71	279	⇓P	Pn	19 07 21.5	+0.9
	baz=2.8,SNR=21						
I19A	Meeteetse	2.71	279	⇓P	Pn	19 07 21.5	+0.9
	baz=2.8,SNR=21						
K19A	Absolon Red Bu	2.74	253	⇑Sb	Sb	19 07 59.8	+0.1
	baz=2.8						
K19A	Absolon Red Bu	2.74	253	⇑Sb	Sb	19 07 59.8	+0.1
	baz=2.8						
J19A	Crowheart	2.78	263	⇑Sb	Sb	19 08 00.5	-0.3
	baz=2.9						
J19A	Crowheart	2.78	263	⇑Sb	Sb	19 08 00.5	-0.3
	baz=2.9						
E22A	Miles City	2.81	351	⇑P	Pn	19 07 21.7	-0.2
	baz=2.8						
E22A	Miles City	2.81	351	⇑P	Pn	19 07 21.7	-0.2
	baz=2.8						
N23A	Red Feather La	2.81	190	⇓P	Pn	19 07 23.1	+1.1
	baz=2.8,SNR=11						
N23A				⇑Sb	Sb	19 08 03.1	+1.1
	baz=2.8						
N23A	Red Feather La	2.81	190	⇓P	Pn	19 07 23.1	+1.1
	baz=2.8,SNR=11						
N23A				⇑Sb	Sb	19 08 03.1	+1.1
	baz=2.8						
E23A	Ismay	2.83	360	⇓P	Pn	19 07 22.0	-0.1
	baz=2.8,SNR=8.8						
E23A	Ismay	2.83	360	⇓P	Pn	19 07 22.0	-0.1
	baz=2.8,SNR=8.8						
H19A	Powell	2.85	292	P	Pn	19 07 23.4	+1.0
	baz=2.9,SNR=18						
H19A	Powell	2.85	292	P	Pn	19 07 23.4	+1.0
	baz=2.9,SNR=18						
F20A	Billings	2.96	317	⇑P	Pn	19 07 23.8	-0.1
	baz=3.0,SNR=6.4						
F20A	Billings	2.96	317	⇑P	Pn	19 07 23.8	-0.1
	baz=3.0,SNR=6.4						
RLMT	Red Lodge	3.21	298	eP	Pn	19 07 27.8	+0.3
BW06	Boulder Array	3.25	255	eP	Pn	19 07 28.4	+0.4
PDAR	Pinedale Array	3.25	255	Pn	Pn	19 07 28.9	+0.9
PDAR				Pg	Pb	19 07 34.5	+0.1
PDAR				Lg	Lg	19 08 14.5	
PDAR	Pinedale Array	3.25	255	Pn	Pn	19 07 28.9	+0.9
	4.7nm,0.3s,baz=78,slow=17,SNR=36						
PDAR				Pg	Pb	19 07 34.5	+0.1
	6.1nm,0.3s,baz=66,slow=20,SNR=56						
PDAR				Lg	Lg	19 08 14.5	
	13nm,0.3s,baz=76,slow=34,SNR=19						
F19A	Roth Farm, Mol	3.41	311	⇑P	Pn	19 07 30.5	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=3.5,SNR=10						
F19A	Roth Farm, Mol	3.41	311	⇑P	Pn	19 07 30.5	+0.5
	baz=3.5,SNR=10						
G18A	Lazy EL Ranch,	3.48	300	⇑P	Pn	19 07 32.1	+1.0
	baz=3.5,SNR=6.9						
G18A	Lazy EL Ranch,	3.48	300	⇑P	Pn	19 07 32.1	+1.0
	baz=3.5,SNR=6.9						
OGNE	Ogallala	3.63	137	eP	Pn	19 07 32.5	-0.6
LKWY	Lake	3.79	285	eP	Pn	19 07 37.2	+1.7
LOHW	Long Hollow	3.87	271	eP	Pn	19 07 39.0	+2.5
ISCO	Idaho Springs	3.87	184	eP	Pn	19 07 38.1	+1.5
MOOW	Moose Ponds	3.96	273	eP	Pn	19 07 38.4	+0.5
SNOW	Snow King Moun	3.98	269	eP	Pb	19 07 47.0	+0.2
IMW	Indian Meadow	4.11	275	eP	Pn	19 07 41.1	+1.3
TPAW	Teton Pass	4.12	270	eP	Pn	19 07 41.3	+1.2
RRI2	Red Ridge	4.41	268	eP	Pn	19 07 45.3	+1.3
F17A	Fitzpatrick Pl	4.44	302	⇑P	Pn	19 07 45.0	+0.8
	baz=4.5,SNR=7.5						
F17A	Fitzpatrick Pl	4.44	302	⇑P	Pn	19 07 45.0	+0.8
	baz=4.5,SNR=7.5						
SMCO	Snowmass	4.66	196	eP	Pb	19 07 59.0	+0.6
B23A	Brockton	4.80	2	⇑P	Pn	19 07 50.1	+0.9
	baz=4.8,SNR=6.4						
B23A	Brockton	4.80	2	⇑P	Pn	19 07 50.1	+0.9
	baz=4.8,SNR=6.4						
DGMT	Dagmar	4.86	9	eP	Pn	19 07 50.5	+0.4
HWUT	Hardware Ranch	5.07	248	eP	Pn	19 07 50.4	-2.7
	4.7nm,0.5s						
D17A	Six Diamond Ra	5.16	314	⇓P	Pn	19 07 54.6	+0.4
	baz=5.2,SNR=20						
D17A	Six Diamond Ra	5.16	314	⇓P	Pn	19 07 54.6	+0.4
	baz=5.2,SNR=20						
DAU	Daniels Canyon	5.51	236	eP	Pn	19 08 00.9	+1.7
	7.6nm,0.5s						
LRM	Limekiln Ridge	5.54	295	eP	Pn	19 08 00.3	+0.8
	14nm,0.4s						
MCMT	McKenzie Canyo	5.56	285	eP	Pn	19 08 03.8	+4.0
	1.5nm,0.6s						
PV04	Paradox Valley	5.94	209	eP	Pn	19 08 06.2	+1.3
SRU	San Rafael	6.02	223	eP	Pn	19 08 05.8	-0.3
	5.8nm,0.4s						
CHMT	Chamberlain Mo	6.49	303	eP	Pn	19 08 13.0	+0.4
	1.1nm,0.4s						
ULM	Lac du Bonnet	9.20	41	Pn	Pn	19 08 47.3	-2.1
ULM				Lg	Lg	19 11 23.6	
ULM	Lac du Bonnet	9.20	41	Pn	Pn	19 08 47.3	-2.1
	1.8nm,0.3s,baz=245,slow=12,SNR=6.7						
ULM				Lg	Lg	19 11 23.6	
	0.5nm,0.3s,baz=8.3,slow=15,SNR=2.9						
YKA	Yellowknife Ar	19.64	347	P	P	19 11 06.1	+0.7
YKA	Yellowknife Ar	19.64	347	P	P	19 11 06.1	+0.7
	0.1nm,0.3s,baz=157,slow=9.3,SNR=4.2						
ARCES	ARCESS Array B	61.49	18	P	P	19 16 52.2	-1.3
ARCES	ARCESS Array B	61.49	18	P	P	19 16 52.2	-1.3
	3.6nm,1.0s,baz=334,slow=6.0,SNR=3.9						

IDC ***04*** *19:09:57.3±1.2, 19°.49N×70°.36W, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.5/25, mbtmp3.5/4, ML5.5/1, Error ellipse: s-maj=49.1km s-min=26.6km az=30.0*

ISCJB ***04*** *19:09:58.8±0.7, 19°.4N±0°.2×70°.43W±0°.06, h25km, mb3.3/3, Error ellipse: s-maj=31.0km s-min=6.0km az=11.9*

ISC 04 19:10:01.0±0.8**, 19°.4N**±0°.2×**70°.37W**±0°.08**, h25km, n10,** σ1s.10/12**, mb3.2**/3**, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MASC	Masc	3.70	282	eP	Pn	19 10 51.3	-5.3
MASC				eS	Sn	19 11 41.9	+2.4
SJG	San Juan	4.21	108	Pn	Pn	19 11 03.5	-0.1
	5.7nm,0.3s,baz=310,slow=22,SNR=5.0						
SJG				Sn	Sn	19 11 53.3	+1.3
	15nm,0.3s,baz=251,slow=14,SNR=4.6						
RCC	Rio Carpintero	5.04	277	eP	Pn	19 11 09.6	-5.5
RCC				eS	Sn	19 12 11.9	-0.7
	comp=N,43nm,0.5s						
RCC				e			
	comp=E,42nm,0.5s						
LMGC	Las Mercedes	6.28	277	eP	Pn	19 11 31.8	-0.2
LMGC				eS	Sn	19 12 42.3	-0.6
	comp=N,17nm,0.4s						
LMGC				e			
	comp=E,33nm,0.8s						
NVAR	Mina Array Bea	45.46	305	P	P	19 18 18.8	+0.4
	comp=E,0.8nm,0.7s,baz=83,slow=7.4,SNR=4.3						
YKA	Yellowknife Ar	52.63	336	P	P	19 19 11.7	-0.9
	comp=E,0.2nm,0.7s,baz=116,slow=7.2,SNR=2.7						
ILAR	Eielson Array	66.84	333	P	P	19 20 50.8	+0.4
	comp=E,0.1nm,0.5s,baz=96,slow=5.5,SNR=3.8						
STKA	Stephens Creek	148.76	240	PKPbc	PKPbc	19 29 46.6	-0.1
	comp=E,1.5nm,0.7s,baz=117,slow=3.5,SNR=7.0						
WRA	Warramunga Arr	156.73	265	PKPab	PKPab	19 30 23.3	-1.0
	comp=E,0.7nm,1.1s,baz=82,slow=3.6,SNR=3.2						
ASAR	Alice Springs	157.04	255	PKPbc	PKPdf	19 30 07.2	+12
	comp=E,0.2nm,0.6s,baz=108,slow=2.7,SNR=4.5						
ASAR				PKPab	PKPab	19 30 26.2	+0.6
	comp=E,1.0nm,0.8s,baz=106,slow=4.3,SNR=9.3						

JMA ***04*** *19:12:14.0±0.1, 30°.13N×140°.17E, h213km, M4.1*

ISCJB ***04*** *19:12:14.9±0.5, 30°.22N±0°.04×140°.17E±0°.07, h182km±5km, mb3.5/13, Error ellipse: s-maj=10.3km s-min=6.1km az=170.3*

IDC ***04*** *19:12:15.9±1.7, 30°.19N×139°.69E, h180km±14km, mb3.3/13, mb1 3.5/16, mb1mx3.3/31, mbtmp3.3/16, Error ellipse: s-maj=22.2km s-min=13.8km az=118.0*

ISC 04 19:12:15.6±1.0**, 30°.21N**±0°.06×**140°.11E**±0°.08**, h178km**±9km**, n42,** σ1s.**88**/52**, mb3.4**/13**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.91	355	P	Pn	19 13 05.2	+2.2
JHJ2				eS	Sn	19 13 42.3	+2.3
JHJ	Hachijo jima 2	2.92	355	P	Pn	19 13 05.3	+2.2
	26nm,0.3s,baz=92,slow=14,SNR=21						
JHJ				S	Sn	19 13 40.5	+0.3
	21nm,0.3s,baz=88,slow=19,SNR=5.5						
CBIJ	Chichi jima	3.60	149	P	Pn	19 13 10.5	-1.1
CBIJ				eS	Sn	19 13 54.0	-1.3
JMY	Miyakejima3	3.88	353	eS	Sn	19 14 04.5	+2.6
TK01	Tokai 1	4.14	329	P	Pn	19 13 18.7	+0.6
TK02	Tokai 2	4.23	332	P	Pn	19 13 21.2	+1.9
TTO1	TONANKAI O.B.S	4.43	321	P	Pn	19 13 23.0	+1.2
BSO1	Boso 1	4.49	9	P	Pn	19 13 23.0	+0.6
BSO1				eS	Sn	19 14 13.9	-1.0
BSO2	Boso 2	4.56	7	eS	Sn	19 14 16.9	0.0
BSO3	Boso 3	4.59	4	P	Pn	19 13 24.7	+0.8
BSO3				eS	Sn	19 14 16.7	-0.9
BSO4	Boso 4	4.77	2	P	Pn	19 13 27.9	+1.5
BSO4				eS	Sn	19 14 19.5	-2.5
JWZ	Kozaga	5.00	313	P	Pn	19 13 29.9	+0.5
HMMJ	Hamamatsu 2	5.05	337	P	Pn	19 13 31.6	+1.4
JIE	Ise	5.07	326	P	Pn	19 13 31.5	+1.1
JOD2	Odawara 2	5.11	351	P	Pn	19 13 32.5	+1.5
JOD2				eS	Sn	19 14 28.9	-1.3
JKN2	Miekihoku	5.17	322	P	Pn	19 13 32.3	+0.6
JNY	Yasuok	5.47	340	P	Pn	19 13 37.0	+1.3
JHU	Hanno	5.67	353	P	Pn	19 13 38.0	-0.2
JHU				eS	Sn	19 14 37.8	-5.5
JRY	Ryogami san	5.88	350	P	Pn	19 13 41.8	+0.8
JRY				eS	Sn	19 14 45.8	-2.5
JYT	Yasato	6.00	1	P	Pn	19 13 42.1	-0.5
JYT				eS	Sn	19 14 47.1	-4.0
JAG	Ashikaga	6.22	355	P	Pn	19 13 44.2	-1.3
JAG				eS	Sn	19 14 50.8	-5.5
JHO	Hitachi	6.40	3	P	Pn	19 13 46.8	-0.9
MJAR	Matsushiro Arr	6.51	346	P	Pn	19 13 49.3	0.0
	0.5nm,0.3s,baz=163,slow=12,SNR=11						
MJAR				S	Sn	19 15 00.2	-3.0
	1.0nm,0.3s,baz=171,slow=16,SNR=5.4						
JTO	Tosashimizu	6.78	295	P	Pn	19 13 53.2	+0.4
JHS	Saijyo	7.59	311	P	Pn	19 14 04.5	+1.0
SAI	Saigo	8.24	318	P	Pn	19 14 14.0	+2.0
JMK	Ichinoseki	8.77	6	P	Pn	19 14 17.7	-1.3
ASAJ	Asahikawa	14.02	7	P	Pn	19 15 26.0	-0.6
	0.5nm,0.3s,baz=48,slow=27,SNR=5.3						
FX1	Attu Island--F	33.08	37	P	P	19 18 38.0	+3.8
	5.1nm,0.6s,baz=284,slow=4.2,SNR=12						
CMAR	Chiang Mai Arr	39.10	262	P	P	19 19 24.5	-1.3
	0.1nm,0.5s,baz=69,slow=4.9,SNR=4.2						
WRA	Warramunga Arr	50.17	187	P	P	19 20 51.8	-1.4
	0.3nm,0.4s,baz=3.5,slow=7.5,SNR=5.4						
KDAK	Kodiak Island	53.01	38	P	P	19 21 15.7	+1.9
	3.7nm,0.8s,baz=288,slow=9.6,SNR=6.6						
ASAR	Alice Springs	53.90	187	P	P	19 21 19.6	-1.1
	0.2nm,0.6s,baz=17,slow=12,SNR=5.0						
BVAR	Borovoye Array	54.54	316	P	P	19 21 22.4	-2.6
	0.3nm,0.5s,baz=98,slow=6.1,SNR=3.2						
ILAR	Eielson Array	55.89	30	P	P	19 21 35.6	+1.1
	0.3nm,0.5s,baz=282,slow=7.3,SNR=5.9						
INK	Inuvik	60.98	25	P	P	19 22 11.2	+1.5
	1.4nm,0.3s,baz=304,slow=7.5,SNR=11						
YKA	Yellowknife Ar	70.28	28	P	P	19 23 09.8	+0.6
	0.2nm,0.5s,baz=297,slow=6.7,SNR=4.3						
FINES	FINESS Array B	74.36	333	P	P	19 23 32.4	-1.0
	1.0nm,0.5s,baz=42,slow=4.7,SNR=8.5						
NVAR	Mina Array Bea	80.02	51	P	P	19 24 06.8	+1.1
	0.8nm,0.6s,baz=297,slow=6.0,SNR=5.3						
PDAR	Pinedale Array	83.27	44	P	P	19 24 23.5	+0.9
	0.3nm,0.6s,baz=234,slow=0.8,SNR=4.2						
TXAR	Lajitas Array	95.16	52	P	P	19 25 20.1	+0.9
	0.2nm,0.5s,baz=345,slow=1.4,SNR=3.8						
LPAZ	La Paz	150.68	68	PKPbc	PKPbc	19 31 48.9	+0.9
	1.4nm,0.7s,baz=326,slow=3.6,SNR=6.6						

PRE 04 19:30:09.8±1.0**, 26°.43S**×**27°.28E, h2km, ML2.8, South Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KLOF	Kloof	0.30	75	eP	Pg	19 30 16.4	+0.4
KLOF				eS	Sg	19 30 19.4	-0.7
KLOF				AML	AML	19 30 20.0	
	comp=Z,1μm,0.1s						
PRYS	Parys	0.50	172	eP	Pg	19 30 20.2	+0.6
PRYS				eS	Sg	19 30 25.9	-0.3
PRYS				AML	AML	19 30 27.9	
	comp=Z,251nm,0.2s						
ERPM	east rand prop	0.86	84	eP	Pg	19 30 26.6	0.0
ERPM				eS	Sb	19 30 39.7	-0.3
ERPM				AML	AML	19 30 44.3	
	comp=Z,66nm,0.2s						
SLR	Silverton	1.14	53	eP	Pg	19 30 31.6	-0.2
SLR				eS	Sg	19 30 47.0	+0.3
SLR				AML	AML	19 30 50.4	
	comp=Z,232nm,0.6s						
SWZ	Schweizer	1.90	246	eP	Pn	19 30 43.1	-0.3
SWZ				eS	Sn	19 31 08.7	+0.7
SWZ				AML	AML	19 31 12.9	
	comp=Z,101nm,0.2s						
POGA	Pongola	3.98	105	eP	Pn	19 31 13.2	+1.3
POGA				eS	Sn	19 31 60.0	+0.9
POGA				AML	AML	19 32 15.6	
	comp=Z,22nm,0.5s						
UPI	Upington	5.70	249	eP	Pn	19 31 36.3	+0.7
UPI				eS	Sn	19 32 39.6	-2.0
UPI				AML	AML	19 33 13.2	
	comp=Z,6.9nm,0.6s						
BLWY	Bulawayo	6.38	11	i P	Pn	19 31 34.1	-11
BLWY				i		19 31 40.3	
	baz=149,slow=9.3						
BLWY				i S	Sg	19 33 42.4	+7.2
SOE	Somerset East	6.44	193	eP	Pn	19 31 46.3	+0.6
SOE				eS	Sn	19 32 57.3	-2.6
SOE				AML	AML	19 33 45.6	
	comp=Z,5.0nm,0.6s						

NDI 04 19:43:16.7±0.9**, 28°.70N**×**76°.46E, h10km, ML2.6, Northern India**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RTK	Rohtak	0.33	353	ePKP	Pg	19 43 23.2	-0.2
RTK				eS	Sg	19 43 28.1	+0.3
RTK				AML	AML	19 43 28.8	
	comp=Z,133nm,0.1s						
KUDL	Kundal	0.56	178	ePKP	Pg	19 43 27.1	-0.4
KUDL				eS	Sg	19 43 34.9	0.0
KHET	Khetri	0.85	223	eS	Sb	19 43 45.7	+0.5
KHET				AML	AML	19 43 48.5	
	comp=E,201nm,0.1s						
KHET				AML	AML	19 43 48.9	
	comp=N,142nm,0.1s						
AGRA	Agra	1.97	138	eS	Sn	19 44 15.8	+1.0
AGRA				AML	AML	19 44 46.6	
	comp=E,110nm,0.3s						
AGRA				AML	AML	19 44 46.6	
	comp=N,87nm,0.4s						

NIED ***04*** *19:51:00, 38°.70N×141°.50E, h77km, Mw4.1 Best double couple: M0 1.63000×10^15 NP1:φs172.00000°, δ67.00000°, λ76.00000°. NP2:φs25.00000°, δ26.00000°, λ121.00000°.*

ISCJB ***04*** *19:51:37.1±0.5, 38°.75N±0°.03×141°.57E±0°.06, h78km±2km, mb3.8/13, Error ellipse: s-maj=8.3km s-min=5.0km az=24.8*

JMA ***04*** *19:51:38.3, 38°.73N×141°.50E, h71km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs162.00000°, δ80.00000°, λ67.00000°. NP2:φs49.00000°, δ25.00000°, λ155.00000°. Principal axes: T Plg50.0000°, Azm46.0000°; N Plg23.0000°, Azm166.0000°; P Plg31.0000°, Azm271.0000°;*

JMA Felt II J1.

IDC ***04*** *19:51:40.9±2.4, 38°.70N×141°.41E, h97km±22km, mb3.5/13, mb1 3.7/17, mb1mx3.6/31, mbtmp3.6/17, MS2.5/1, Ms1 2.5/1, ms1mx2.0/30 Error ellipse: s-maj=18.2km s-min=16.6km az=135.0*

ISC 04 19:51:38.0±0.8**, 38°.72N**±0°.04×**141°.60E**±0°.06**, h73km**±6km**, n42,** σ0s.**98**/54**, mb3.8**/13**, 10C, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.33	217	⇑P	Pn	19 51 49.7	0.0
JIO				S	Sn	19 51 57.9	-0.4
OFUJ	Ofunato	0.36	8	P	Pn	19 51 50.2	+0.2
OFUJ				S	Sn	19 51 58.9	+0.2
JMK	Ichinoseki	0.38	308	⇑P	Pn	19 51 49.7	-0.4
JMK				S	Sn	19 51 58.2	-0.7
JOM	Ohasama	0.79	342	⇑P	Pn	19 51 54.0	-0.1
JOM				S	Sn	19 52 05.5	-0.6
JOU	Okura	0.82	244	⇑P	Pn	19 51 54.2	-0.3
JOU				S	Sn	19 52 06.1	-0.6
JYK	Kaneyama	0.99	282	⇑P	Pn	19 51 56.0	-0.5
JYK				S	Sn	19 52 09.3	-1.1
JRG	Rokugo	1.01	312	⇑P	Pn	19 51 56.6	-0.2
JRG				S	Sn	19 52 10.7	-0.1
JMM	Marumori	1.07	217	⇑P	Pn	19 51 57.0	-0.5
JMM				S	Sn	19 52 11.1	-0.9
JYS	Shirataka	1.31	248	⇑P	Pn	19 52 00.3	-0.2
JYS				S	Sn	19 52 17.1	-0.4
JFK	Kawauchi	1.47	203	⇑P	Pn	19 52 02.8	+0.1
JFK				S	Sn	19 52 20.8	-0.5
JYA	Atsumi	1.48	266	P	Pn	19 52 02.6	-0.3
JYA				eS	Sn	19 52 20.8	-0.8
JFT	Otama	1.56	220	⇑P	Pn	19 52 04.3	+0.4
JFT				S	Sn	19 52 24.3	+0.8
MJAR	Matsushiro Arr	3.46	232	P	Pn	19 52 30.9	+1.3
	5.6nm,0.3s,baz=41,slow=12,SNR=222						
MAT	Matsushiro	3.46	232	P	Pn	19 52 31.2	+1.6
MAT				S	Sn	19 53 10.0	+0.6
ASAJ	Asahikawa	5.44	8	P	Pn	19 52 55.0	-1.5
	1.4nm,0.3s,baz=194,slow=22,SNR=11						
JHJ	Hachijo jima 2	5.78	195	P	Pn	19 52 57.9	-3.3
	9.9nm,0.3s,baz=79,slow=12,SNR=4.2						
JHJ				S	Sn	19 54 01.8	-4.4
	12nm,0.3s,baz=69,slow=23,SNR=6.5						
USRK	Ussuriysk Arra	9.05	310	P	Pn	19 53 46.6	+0.9
	0.7nm,0.3s,baz=121,slow=14,SNR=17						
JNU	Nakatsue	10.33	241	P	Pn	19 54 04.7	+1.2
	0.4nm,0.3s,baz=13,slow=7.9,SNR=5.7						
KSRS	Korea Array	10.86	268	P	Pn	19 54 12.2	+1.8
	0.3nm,0.3s,baz=82,slow=14,SNR=27						
PETK	Petropavlovsk-	18.17	32	LR	LR	20 02 43.3	
	comp=Z,15nm,19.6s,baz=21,slow=36						
SONM	Songino Array	27.00	301	P	P	19 57 12.6	-0.5
	0.4nm,0.4s,baz=103,slow=8.9,SNR=5.5						
ZALV	Zalesovo Beam	40.91	311	P	P	19 59 11.9	-0.9
	1.2nm,0.4s,baz=82,slow=11,SNR=4.2						
CMAR	Chiang Mai Arr	42.09	254	P	P	19 59 22.7	-0.2
	0.3nm,0.6s,baz=40,slow=7.5,SNR=3.7						
MKAR	Makanchi Array	43.37	301	P	P	19 59 32.1	-0.9
	2.1nm,0.6s,baz=85,slow=9.3,SNR=25						
KURBB	Kurchatov Arra	45.10	307	P	P	19 59 46.2	-0.4
	4.0nm,0.5s,baz=81,slow=8.2,SNR=58						
ODAN	Odare	46.48	272	eP	P	19 59 57.5	-0.7
RAMN	Ramite	47.05	273	eP	P	20 00 02.0	-0.7
GUN	Gumba	47.16	274	eP	P	20 00 03.7	+0.1
KKN	Kakani	47.68	274	eP	P	20 00 07.5	0.0
	8.0nm,0.7s						
PKIN	Phulchoki	47.69	274	eP	P	20 00 07.3	-0.4
ILAR	Eielson Array	48.00	33	P	P	20 00 10.1	+0.9
	1.8nm,0.6s,baz=265,slow=5.9,SNR=32						
DANN	Dangsing	48.60	276	eP	P	20 00 14.7	0.0
KOLN	Koldanda	49.00	275	eP	P	20 00 17.3	-0.4
PYUN	Piuthan	49.32	276	eP	P	20 00 19.0	-1.1
BVAR	Borovoye Array	49.56	311	P	P	20 00 20.8	-0.6
	0.4nm,0.4s,baz=88,slow=7.2,SNR=4.7						
INK	Inuvik	52.82	28	P	P	20 00 46.7	+1.3
	1.0nm,0.6s,baz=310,slow=7.2,SNR=9.5						
WRA	Warramunga Arr	58.75	188	P	P	20 01 27.8	-0.6
	0.3nm,0.6s,baz=5.9,slow=7.3,SNR=12						
YKA	Yellowknife Ar	62.28	31	P	P	20 01 52.6	+0.7
	0.4nm,0.6s,baz=303,slow=6.6,SNR=5.4						
FINES	FINESS Array B	67.39	332	P	P	20 02 24.9	-0.3
	2.3nm,0.9s,baz=56,slow=7.4,SNR=3.8						
NVAR	Mina Array Bea	73.86	54	P	P	20 03 06.5	+1.2
	0.5nm,0.5s,baz=291,slow=5.7,SNR=4.0						
TXAR	Lajitas Array	88.97	52	P	P	20 04 24.8	-0.2
	0.2nm,0.5s,baz=318,slow=3.5,SNR=3.6						
LPAZ	La Paz	145.69	58	PKPbc	PKPab	20 11 10.3	+0.3
	1.1nm,0.6s,baz=315,slow=4.3,SNR=3.8						

ISCJB ***04*** *19:56:12.9±1.8, 0°.2N±0°.1×132°.8E±0°.1, h35km, Error ellipse: s-maj=17.7km s-min=13.3km az=36.1*

DJA ***04*** *19:56:14.1±0.9, 0°N±7°×13°3E±°, h121km±17km, M4.4/4, mb5.7/1, mB5.9/1, MLv3.8/4, Mw(mB)5.5/1*

ISC 04 19:56:14.4±2.2**, 0°.1N**±0°.1×**132°.7E**±0°.1**, h35km, n4,** σ**0s.75**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SWI	Sorong	1.71	235	P	Pn	19 56 43.8	+2.1
SWI				S	Sn	19 57 07.1	+4.7
RKPI	Ransiki, Papua	2.24	137	P	Pn	19 56 49.0	+0.1
FAKI	Fak Fak	3.06	188	P	Pn	19 57 00.8	+0.5
FAKI				S	Sn	19 57 35.2	-0.6
GAMI	Galela, Maluku	5.15	289	P	Pn	19 57 29.1	+0.1

TAP ***04*** *20:33:17.4, 24°.73N×122°.64E, h125km, ML3.2, C*

JMA ***04*** *20:33:18.0±0.3, 24°.84N×122°.68E, h114km, M1.8*

ISCJB ***04*** *20:33:18.2±0.8, 24°.63N±0°.05×122°.64E±0°.03, h113km±6km, Error ellipse: s-maj=8.7km s-min=3.8km az=175.4*

ISC 04 20:33:18.2±1.9**, 24°.65N**±0°.07×**122°.64E**±0°.03**, h117km**±13km**, n31,** σ**0s.51**/54**, 2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.38	119	P	Pn	20 33 35.2	+0.1
YOJ				eS	Sn	20 33 48.7	+0.9
TWB1	Santiao Chiao	0.69	301	P	Pn	20 33 37.1	0.0
	baz=296						
TWB1				eS	Sn	20 33 51.6	+0.2
	baz=296						
TWC	Suao	0.72	267	i P	Pn	20 33 37.2	-0.2
	baz=256						
TWC				S	Sn	20 33 51.5	-0.3
	baz=256						
ENA	Nanau	0.85	255	eP	Pn	20 33 38.7	+0.2
	baz=249						
ENA				eS	Sn	20 33 54.1	+0.3
	baz=249						
NWF	Wu-fen Shan	0.89	298	eP	Pn	20 33 38.9	-0.1
	baz=287						
TWE	Neicheng	0.89	275	⇓iP	Pn	20 33 39.0	+0.2
	baz=266						
TWE				eS	Sn	20 33 53.9	-0.6
	baz=266						
ENTT	Nioudou	0.98	270	P	Pn	20 33 40.3	+0.5
	baz=270						
IRIF	Iriomote-Funau	1.04	107	P	Pn	20 33 40.5	+0.2
IRIF				S	Sn	20 33 57.2	+0.2
TWD	Chiawan	1.11	240	eP	Pn	20 33 41.0	-0.1
	baz=233						
TWD				eS	Sn	20 33 58.0	-0.3
	baz=233						
HWA	Hwalien	1.16	235	eP	Pn	20 33 41.8	+0.2
	baz=231						
NSK	Sanguang	1.17	272	⇓iP	Pn	20 33 42.0	+0.3
	baz=272						
NSK				S	Sn	20 33 59.6	0.0
	baz=272						
NNS	Nan Shan	1.17	260	eP	Pn	20 33 42.2	+0.3
	baz=252						
NNS				eS	Sn	20 33 59.2	-0.6
	baz=252						
TWS1	Kuangyinshan	1.20	292	eP	Pn	20 33 41.8	-0.2
	baz=283						
TWS1				eS	Sn	20 33 59.7	-0.4
	baz=283						
JKRS	Kuro-shima	1.31	108	P	Pn	20 33 43.8	+0.6
JKRS				S	Sn	20 34 02.8	+0.6
WHF	Hehuan Shan	1.35	248	eP	Pn	20 33 44.2	+0.1
	baz=245						
WHF				eS	Sn	20 34 03.4	-0.4
	baz=245						
ESL	Shilin	1.38	233	eP	Pn	20 33 43.7	-0.3
	baz=226						
ESL				eS	Sn	20 34 02.8	-0.9
	baz=226						
TWT	Tachien	1.39	254	eP	Pn	20 33 44.9	+0.6
	baz=245						
TWT				eS	Sn	20 34 04.7	+0.6
	baz=245						
JIJ	Ishigaki jima	1.40	101	P	Pn	20 33 44.2	0.0
JIJ				S	Sn	20 34 02.7	-1.2
NSTT	Nanjuang	1.49	270	eP	Pn	20 33 45.2	-0.1
	baz=266						
NSTT				eS	Sn	20 34 05.7	-0.3
	baz=266						
EHY	Hungye	1.66	227	eP	Pn	20 33 47.1	-0.2
	baz=219						
EHY				eS	Sn	20 34 08.9	-0.5
	baz=219						
TWQ1	Liyutan	1.73	260	eP	Pn	20 33 48.5	+0.3
	baz=257						
TWQ1				eS	Sn	20 34 10.9	-0.1
	baz=257						
SMLT	Sun Moon Lake	1.76	245	eP	Pn	20 33 49.4	+0.7
	baz=237						
TWF1	Yuli	1.78	224	eP	Pn	20 33 48.2	-0.6
	baz=231						
TYC	Yuchr	1.79	246	eP	Pn	20 33 49.9	+1.0
	baz=246						
TYC				eS	Sn	20 34 11.6	-0.7
	baz=246						
JTJ	Tarama	1.88	90	P	Pn	20 33 50.0	+0.1
JTJ				eS	Sn	20 34 13.4	-0.7
ALS	Alishan	2.03	236	eP	Pn	20 33 53.0	+0.9
	baz=228						
CHN5	Tsauling	2.08	240	eP	Pn	20 33 53.5	+0.9
	baz=247						
CHN5				eS	Sn	20 34 19.1	+0.3
	baz=247						
ELDTW	Lidau	2.08	226	eP	Pn	20 33 52.3	-0.3
	baz=224						
ELDTW				eS	Sn	20 34 18.2	-0.7
	baz=224						
CHN4	Tsaushan	2.28	236	eP	Pn	20 33 55.1	+0.1
	baz=234						
WTP	Ta-pu	2.32	233	eP	Pn	20 33 56.3	+0.6
	baz=231						
WTP				eS	Sn	20 34 24.8	+0.5
	baz=231						
CHN1	Nanshi	2.42	233	eP	Pn	20 33 57.0	+0.1
	baz=239						

IDC ***04*** *20:40:12.3±0.9, 6°.15S×151°.00E, h0km, mb4.2/8, mb1 4.4/9, mb1mx4.1/19, mbtmp4.2/9, ML2.6/1, MS3.0/3, Ms1 3.0/3, ms1mx2.7/21, Error ellipse: s-maj=38.8km s-min=18.2km az=121.0*

NEIC ***04*** *20:40:17.5±6.7, 6°.18S×150°.92E, h32km±45km, mb4.5/1, Error ellipse: s-maj=26.6km s-min=16.6km az=102.0*

ISCJB ***04*** *20:40:17.0±0.8, 6°.2S±0°.2×150°.9E±0°.2, h43km, mb4.1/9, MS2.9/1, Error ellipse: s-maj=30.7km s-min=10.2km*

az=42.9

ISC 04 20:40:18.4±0.9, 6.°2S±0.°2×151.°0E±0.°2, h43km, n25, σ0.s66/26, mb4.3/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.96	230	Pn	Pn	20 41 29.0	-1.4
PMG				Sn	Sn	20 42 27.6	+1.1
PMG	Port Moresby	4.96	230	Pn	Pn	20 41 29.0	-1.4
	1.5nm,0.3s,baz=349,slow=6.5,SNR=3.8						
PMG				Sn	Sn	20 42 27.6	+1.1
	3.4nm,0.3s,baz=15,slow=20,SNR=3.4						
PMG				LR	LR	20 43 06.9	
	comp=Z,374nm,20.0s,baz=282,slow=35						
HNR	Honiara	9.45	111	LR	LR	20 45 43.2	
	comp=Z,38nm,21.1s,baz=8.3,slow=35						
WRAB	Tennant Creek	21.16	228	eP	P	20 44 59.5	-0.7
	14nm,0.7s						
WRA	Warramunga Arr	21.18	228	P	P	20 44 60.0	-0.4
WRA				PcP	PcP	20 49 05.4	+0.4
WRA	Warramunga Arr	21.18	228	P	P	20 44 60.0	-0.4
	16nm,0.7s,baz=52,slow=11,SNR=128						
WRA				PcP	PcP	20 49 05.4	+0.4
	0.6nm,0.7s,baz=57,slow=3.5,SNR=4.7						
AS31	Alice Springs	23.91	222	eP	P	20 45 28.2	-0.4
ASAR	Alice Springs	23.91	222	P	P	20 45 28.8	+0.2
ASAR	Alice Springs	23.91	222	P	P	20 45 28.8	+0.2
	4.6nm,0.4s,baz=57,slow=8.2,SNR=68						
ASAR				LR	LR	20 53 50.1	
	comp=Z,45nm,20.6s,baz=269,slow=34						
STKA	Stephens Creek	27.03	198	P	P	20 45 57.4	+0.8
STKA	Stephens Creek	27.03	198	P	P	20 45 57.4	+0.8
	6.8nm,0.8s,baz=359,slow=9.0,SNR=15						
FITZ	Fitzroy Crossi	27.41	242	P	P	20 45 59.8	-0.5
FITZ	Fitzroy Crossi	27.41	242	P	P	20 45 59.8	-0.5
	6.8nm,0.8s,baz=49,slow=7.8,SNR=13						
VNDA	Vanda	71.53	178	P	P	20 51 34.1	-0.3
VNDA	Vanda	71.53	178	P	P	20 51 34.1	-0.3
	1.6nm,0.8s,baz=326,slow=4.9,SNR=7.5						
MKAR	Makanchi Array	80.18	319	P	P	20 52 24.7	+0.3
MKAR	Makanchi Array	80.18	319	P	P	20 52 24.7	+0.3
	0.4nm,0.8s,baz=107,slow=6.5,SNR=4.6						
ILAR	Eielson Array	84.12	22	P	P	20 52 44.4	-0.2
ILAR	Eielson Array	84.12	22	P	P	20 52 44.4	-0.2
	0.9nm,0.7s,baz=248,slow=5.1,SNR=16						
YKA	Yellowknife Ar	97.49	28	P	Pdif	20 53 48.8	+1.2
YKA	Yellowknife Ar	97.49	28	P	Pdif	20 53 48.7	+1.2
	0.1nm,0.4s,baz=269,slow=4.3,SNR=4.8						
GERES	GERESS Array B	124.25	327	PKP	PKPdf	20 59 13.1	+0.3
GERES	GERESS Array B	124.25	327	PKP	PKPdf	20 59 13.1	+0.3
	0.2nm,0.6s,baz=64,slow=3.1,SNR=3.7						
TORD	Torodi Ar. Bea	148.96	285	PKPbc	PKPbc	21 00 03.0	+0.1
TORD	Torodi Ar. Bea	148.96	285	PKPbc	PKPbc	21 00 03.0	+0.1
	1.4nm,0.6s,baz=89,slow=2.3,SNR=24						

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*AUST **04** 21:22:29.8, 18.°34S×171.°59W, h0km*
*IDC **04** 21:22:42.5±0.9, 19.°30S×173.°27W, h0km, mb4.2/13, mb1 4.4/14, mb1mx4.3/22, mbtmp4.2/14, ML4.3/1, MS3.7/9, Ms1 3.7/9, ms1mx3.4/33, Error ellipse: s-maj=35.4km s-min=17.1km az=143.0*
*NEIC **04** 21:22:50.0±2.8, 19.°81S×173.°10W, h70km±23km, mb4.7/4, Error ellipse: s-maj=23.9km s-min=14.8km az=138.0*
ISC 04 21:22:45.5±0.8, 19.°6S±0.°2×173.°1W±0.°1, h26km, n74, σ1.s03/61, mb4.2/14, MS3.8/9, 5C-3D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	3.07	80	S	Pn	21 23 25.5	-6.9
	baz=1.7,SNR=16						
AFI	Afiamalu	5.82	13	ePn	Pn	21 24 00.5	-10
AFI				Sn	Sn	21 24 52.2	-24
AFI				TT		21 29 22.1	
AFI	Afiamalu	5.82	13	Pn	Pn	21 24 00.5	-10
	12nm,0.3s,baz=267,slow=4.8,SNR=5.4						
AFI				Sn	Sn	21 24 52.2	-24
	41nm,0.3s,baz=233,slow=15,SNR=4.7						
AFI				T	T	21 29 22.1	
	14nm,0.3s,baz=66,slow=18,SNR=4.3						
MSVF	Nonsavu	8.57	281	ePn	Pn	21 24 52.7	+4.7
	32nm,1.0s						
DZM	Mont Dzumac	19.25	259	eLR	LR	21 31 51.8	
	164nm,22.1s						
DZM	Mont Dzumac	19.25	259	eP	Pn	21 27 10.3	+1.0
	63nm,1.5s						
DZM	Mont Dzumac	19.25	259	P	Pn	21 27 09.5	+0.2
	0.8nm,0.3s,baz=84,slow=19,SNR=7.1						
URZ	Urewera	20.42	202	eP	P	21 27 18.3	-2.5
	12nm,0.6s						
URZ	Urewera	20.42	202	P	Pn	21 27 24.8	+1.9
	8.3nm,0.5s,baz=359,slow=8.3,SNR=9.5						
TBI	Tubuai	22.33	104	eLR	LR	21 32 42.5	
	202nm,30.8s						
PPT2	Papeete2	22.41	89	eLR	LR	21 32 36.2	
	274nm,28.0s						
PPT	Papeete	22.41	89	LR	LR	21 34 50.2	
	comp=Z,242nm,19.8s,baz=197,slow=32						
HNR	Honiara	27.92	287	LR	LR	21 36 17.1	
	comp=Z,44nm,20.9s,baz=142,slow=29						
EIDS	Eidsvold	33.49	253	P	P	21 29 22.9	-0.1
	baz=35,SNR=3.2						
MILA	Mila	37.17	234	S	S	21 36 05.2	+25
	baz=39,SNR=4.9						
CTAO	Charters Tower	38.14	262	eP	P	21 30 02.0	-0.9
	15nm,0.6s						
CMSA	Cobar Meteorol	38.78	244	P	P	21 30 08.6	+0.4
	baz=41,SNR=8.8						
MTSU	Mount Surprise	40.22	265	P	P	21 30 19.4	-1.0
	baz=42,SNR=11						
COEN	Coen	42.12	271	P	P	21 30 35.6	-0.4
	baz=44,SNR=4.8						
STKA	Stephens Creek	42.29	244	eP	P	21 30 37.7	+0.5
	0.3nm,0.5s						
STKA	Stephens Creek	42.29	244	P	P	21 30 37.6	+0.5
	2.3nm,0.7s,baz=79,slow=10,SNR=13						
STKA				LR	LR	21 46 56.6	
	comp=Z,169nm,21.2s,baz=25,slow=34						
STKA	Stephens Creek	42.29	244	P	P	21 30 37.7	+0.5
	baz=44,SNR=5.9						
BBOO	Buckleboo	47.03	243	P	P	21 31 15.3	+0.3
	baz=49,SNR=5.9						
AS31	Alice Springs	49.17	255	eP	P	21 31 31.6	-0.2
ASAR	Alice Springs	49.17	255	P	P	21 31 31.6	-0.2
ASAR	Alice Springs	49.17	255	P	P	21 31 31.6	-0.2
	6.2nm,0.5s,baz=94,slow=8.2,SNR=51						
WRAB	Tennant Creek	49.25	260	eP	P	21 31 30.8	-1.5
	4.4nm,0.6s						
WRA	Warramunga Arr	49.26	260	P	P	21 31 31.1	-1.3
WRA	Warramunga Arr	49.26	260	P	P	21 31 31.1	-1.3
	2.2nm,0.4s,baz=97,slow=7.6,SNR=64						
KDU	Kakadu	52.53	269	P	P	21 31 56.4	-0.6
	baz=54,SNR=6.2						
MTN	Manton Dam	53.75	268	P	P	21 32 04.9	-1.1
	baz=55,SNR=3.8						
FORT	Forrest	53.84	246	P	P	21 32 07.0	+0.5
	baz=56,SNR=8.5						
KNRA	Kununurra	55.29	264	P	P	21 32 16.7	-0.5
	baz=57,SNR=3.2						
FITZ	Fitzroy Crossi	57.69	261	P	P	21 32 34.5	+0.3
	baz=59,SNR=4.5						
BLDU	Ballidu	63.58	245	P	P	21 33 15.9	+1.5
	baz=65,SNR=4.9						
MJAR	Matsushiro Arr	72.33	321	P	P	21 34 08.2	-0.9
MJAR	Matsushiro Arr	72.33	321	P	P	21 34 08.2	-0.9
	2.6nm,0.7s,baz=160,slow=5.9,SNR=13						
MJAR				LR	LR	22 01 30.1	
	comp=Z,44nm,18.8s,baz=135,slow=32						
MAT	Matsushiro	72.33	321	P	P	21 34 07.9	-1.2
LPIG	La Paz	75.05	57	LR	LR	22 00 48.7	
	comp=Z,10nm,18.5s,baz=243,slow=30						
PFO	Pinyon Flat Ob	75.62	46	LR	LR	22 00 29.2	
	comp=Z,70nm,21.1s,baz=317,slow=30						
PETK	Petropavlovsk-	76.70	342	P	P	21 34 33.0	-1.1
PETK	Petropavlovsk-	76.70	342	P	P	21 34 33.0	-1.1
	1.4nm,0.6s,baz=132,slow=8.3,SNR=2.5						
NVAR	Mina Array Bea	77.30	41	P	P	21 34 37.8	-0.3
NVAR	Mina Array Bea	77.30	41	P	P	21 34 37.8	-0.3
	1.0nm,0.6s,baz=227,slow=9.6,SNR=6.5						
KSRS	Korea Array	79.35	316	P	P	21 34 49.8	+0.6
	2.1nm,0.7s,baz=132,slow=5.9,SNR=12						
KSAR	Wonju Array Be	79.36	316	P	P	21 34 49.8	+0.5
TXAR	Lajitas Array	82.76	56	P	P	21 35 09.2	+1.5
TXAR	Lajitas Array	82.76	56	P	P	21 35 09.2	+1.5
	0.7nm,0.9s,baz=205,slow=5.5,SNR=5.8						
TXAR				LR	LR	22 05 11.6	
	comp=Z,53nm,19.0s,baz=0.0,slow=31						
ANMO	Albuquerque	83.32	49	P	P	21 35 09.3	-1.2
ANMO	Albuquerque	83.32	49	LR	LR	22 07 56.7	
	comp=Z,39nm,18.1s,baz=247,slow=33						
NEW	Newport	84.04	34	LR	LR	22 07 37.5	
	comp=Z,97nm,18.4s,baz=242,slow=32						
PDAR	Pinedale Array	85.23	41	P	P	21 35 21.0	+0.9
PDAR	Pinedale Array	85.23	41	P	P	21 35 21.0	+0.9
	0.6nm,0.6s,baz=189,slow=3.0,SNR=5.0						
ILAR	Eielson Array	86.51	11	P	P	21 35 24.4	-1.2
ILAR	Eielson Array	86.51	11	P	P	21 35 24.4	-1.2
	1.2nm,0.7s,baz=223,slow=5.9,SNR=10						
YKA	Yellowknife Ar	93.84	23	P	P	21 35 59.0	-1.1
YKA				PP	PP	21 39 47.3	+1.2
YKA	Yellowknife Ar	93.84	23	P	P	21 35 58.9	-1.1
	0.1nm,0.3s,baz=246,slow=4.6,SNR=3.6						
YKA				PP	PP	21 39 47.3	+1.2
	0.1nm,0.7s,baz=232,slow=6.9,SNR=4.4						
CMAR	Chiang Mai Arr	94.17	288	P	P	21 36 04.4	+1.8
CMAR	Chiang Mai Arr	94.17	288	P	P	21 36 04.4	+1.8
	1.1nm,0.9s,baz=102,slow=2.9,SNR=8.2						
MKAR	Makanchi Array	113.92	313	PKiKP	PKiKP	21 41 21.6	-0.6
MKAR	Makanchi Array	113.92	313	PKiKP	PKiKP	21 41 21.6	-0.6
	0.1nm,0.5s,baz=279,slow=1.7,SNR=4.1						
KWP	Kalwaria Pacla	147.48	341⇑	iP	PKPbc	21 42 27.3	+0.1
CLL	Collm	148.01	353	ePKPbc	PKPbc	21 42 29.0	+0.5
	comp=Z,7.0nm,1.0s						
CLL				esPKPbc	sPKPbc	21 42 56.0	+16
BURAR	Bucovina Array	148.33	336⇓	iP	PKPbc	21 42 28.4	-1.2
TLCR		148.68	329⇑	iP	PKPab	21 42 32.6	-1.5
CFR	Carcaliu	149.01	330⇓	iP	PKPbc	21 42 31.7	+0.4
BRTR	Keskin Array B	149.49	317	PKPbc	PKPbc	21 42 33.9	+1.0
BRTR	Keskin Array B	149.49	317	PKPbc	PKPbc	21 42 33.9	+1.0
	comp=Z,1.6nm,0.7s,baz=153,slow=2.5,SNR=10						
MLR	Muntele Rosu	149.76	333⇑	iP	PKPbc	21 42 34.3	+1.0
DRGR		149.95	338⇓	iP	PKPbc	21 42 35.2	+1.5
GERES	GERESS Array B	150.32	351	PKPbc	PKPbc	21 42 35.4	+0.8
GERES	GERESS Array B	150.32	351	PKPbc	PKPbc	21 42 35.4	+0.8
	comp=Z,0.5nm,0.7s,baz=23,slow=7.2,SNR=5.4						
BZS	Buzias	151.35	338⇑	iP	PKPbc	21 42 37.4	+0.5
PKSM	Moragy	151.76	343⇑	iP	PKPbc	21 42 38.9	+1.1

KRSC 04 21:41:52.7±1.4, 50.°27N×157.°67E, h43km±42km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.07	293	i P	Pn	21 42 10.9	-0.4
SKR				i S	Sn	21 42 25.0	0.0
PAU	Pauzhetka	1.32	336	i P	Pn	21 42 16.5	+1.9
PAU				eS	Sn	21 42 34.0	+3.1
ASAK	Asacha	2.12	4	eP	Pn	21 42 28.0	+2.2
ASAK				eS	Sn	21 42 53.7	+2.8
RUS	Russkaya	2.23	13	eP	Pn	21 42 28.9	+1.8
RUS				eS	Sn	21 42 55.3	+1.9
MTVR	Mutnovka	2.24	8	eP	Pn	21 42 29.7	+2.2
MTVR				eS	Sn	21 42 56.7	+2.7
GRL	Gorelyy	2.30	6	i P	Pn	21 42 30.9	+2.6
APC	Apacha	2.68	353	eP	Pn	21 42 36.1	+2.8
PET	Petropavlovsk	2.83	12	P	Pn	21 42 37.5	+2.2
UGLR	Uglovaya	3.03	13	eP	Pn	21 42 41.2	+2.9
SMAR	Somma	3.08	13	P	Pn	21 42 41.3	+2.2
SDLR	Sedlovina	3.11	14	eP	Pn	21 42 41.5	+2.2
SPN	Mys Shipunski	3.19	26	S	Sn	21 43 18.1	+1.1
GNL	Ganaly	3.44	3	eP	Pn	21 42 47.0	+3.2

IDC 04 21:48:06.8±6.2, 23.°75S×174.°99W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/17, mbtmp3.9/3, Error ellipse: s-maj=304.1km s-min=51.0km az=151.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.04	248	P	P	21 55 38.8	+3.3
	0.4nm,0.4s,baz=90,slow=12,SNR=4.0						
ASAR	Alice Springs	46.58	259	P	P	21 56 37.0	+0.1
	1.5nm,0.9s,baz=97,slow=8.1,SNR=11						
WRA	Warramunga Arr	46.99	264	P	P	21 56 39.4	-0.7
	0.2nm,0.3s,baz=104,slow=9.3,SNR=8.5						
CMAR	Chiang Mai Arr	93.81	288	P	P	22 01 27.2	+0.8
	0.3nm,0.3s,baz=140,slow=3.2,SNR=5.2						
AKASG	Malin Array Be	147.20	331	PKPbc	PKPdf	22 07 50.3	+0.7
	0.6nm,0.5s,baz=39,slow=3.9,SNR=4.2						
BRTR	Keskin Array B	151.07	310	PKPbc	PKPbc	22 08 02.1	-0.2
	0.2nm,0.4s,baz=42,slow=2.3,SNR=2.7						

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*IDC **04** 21:56:36.7±1.6, 23.°39S×175.°48W, h0km, mb4.0/9, mb1 4.2/9, mb1mx4.0/20, mbtmp4.0/9, MS3.6/2, Ms1 3.6/2, ms1mx2.8/36, Error ellipse: s-maj=73.0km s-min=23.7km az=155.0*
*ISCJB **04** 21:56:39.5±0.8, 23.°5S±0.°1×175.°5W±0.°1, h30km, mb4.0/11, MS3.5/2, Error ellipse: s-maj=17.6km s-min=14.5km az=6.5*
*NEIC **04** 21:56:45.1±1.6, 23.°54S×175.°56W, h65km±13km, mb4.4/3, Error ellipse: s-maj=14.0km s-min=10.8km az=99.0*
ISC 04 21:56:41.3±0.8, 23.°4S±0.°2×175.°5W±0.°2, h30km, n34, σ0.s91/26, mb4.2/11, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.30	312	ePn	Pn	21 58 43.4	+3.7
	77nm,1.3s						
URZ	Urewera	16.07	202	Pn	Pn	22 00 25.1	+0.1
DZM	Mont Dzumac	16.73	271	eLR	LR	22 04 37.2	
	162nm,25.0s						
TBI	Tubuai	23.88	95	eLR	LR	22 07 19.5	
	151nm,23.8s						
PPT2	Papeete2	24.93	81	eLR	LR	22 07 44.4	
	146nm,22.2s						
PPT	Papeete	24.94	81	LR	LR	22 09 54.6	
	comp=Z,178nm,20.2s,baz=229,slow=32						
HNR	Honiara	27.31	297	LR	LR	22 11 33.2	
	comp=Z,84nm,19.1s,baz=157,slow=33						
CTA	Charters Tower	35.62	268	P	P	22 03 36.3	-0.3
CTA	Charters Tower	35.62	268	P	P	22 03 36.3	-0.3
	2.0nm,0.4s,baz=87,slow=12,SNR=5.2						
CTAO	Charters Tower	35.62	268	eP	P	22 03 36.3	-0.3
	2.1nm,0.4s						
STKA	Stephens Creek	38.73	248	P	P	22 04 02.2	-0.7
STKA	Stephens Creek	38.73	248	P	P	22 04 03.9	+1.0
	0.5nm,0.4s,baz=110,slow=12,SNR=3.1						
ASAR	Alice Springs	46.19	259	P	P	22 05 03.2	-0.5
ASAR	Alice Springs	46.19	259	P	P	22 05 03.2	-0.5
	1.5nm,0.9s,baz=91,slow=8.2,SNR=9.2						
WRAB	Tennant Creek	46.56	264	eP	P	22 05 05.7	-0.9
	3.4nm,0.7s						
WRA	Warramunga Arr	46.57	264	P	P	22 05 05.3	-1.4
WRA	Warramunga Arr	46.57	264	P	P	22 05 05.3	-1.4
	3.0nm,0.7s,baz=100,slow=8.2,SNR=11						
SBA	Scott Base	55.12	185	eP	P	22 06 10.2	0.0
	1.6nm,0.7s						
KSRS	Korea Array	80.63	318	P	P	22 08 50.7	-0.4
	0.7nm,0.6s,baz=134,slow=7.2,SNR=5.9						
KSAR	Wonju Array Be	80.64	318	P	P	22 08 50.7	-0.5
NVAR	Mina Array Bea	81.60	42	P	P	22 08 56.4	-0.2
NVAR	Mina Array Bea	81.60	42	P	P	22 08 56.4	-0.2
	0.4nm,0.7s,baz=226,slow=6.1,SNR=3.5						
USRK	Ussuriysk Arra	82.69	325	P	P	22 09 02.3	+0.5
	1.9nm,0.8s,baz=160,slow=6.2,SNR=5.4						
TXAR	Lajitas Array	86.71	56	P	P	22 09 22.1	-0.6
TXAR	Lajitas Array	86.71	56	P	P	22 09 22.1	-0.6
	0.2nm,0.8s,baz=209,slow=7.2,SNR=3.2						
CMAR	Chiang Mai Arr	93.28	289	P	P	22 09 55.7	+2.1
CMAR	Chiang Mai Arr	93.28	289	P	P	22 09 55.7	+2.1
	2.3nm,0.9s,baz=127,slow=3.2,SNR=16						
MKAR	Makanchi Array	114.90	312	PKP	PKPdf	22 15 19.4	+0.4
MKAR	Makanchi Array	114.90	312	PKP	PKPdf	22 15 19.4	+0.4
	0.2nm,0.6s,baz=64,slow=3.4,SNR=3.7						
AKASG	Malin Array Be	146.71	331	PKPbc	PKPbc	22 16 19.3	-0.6
AKASG	Malin Array Be	146.71	331	PKPbc	PKPbc	22 16 19.3	-0.6
	0.2nm,0.2s,baz=41,slow=4.7,SNR=4.2						
BRTR	Keskin Array B	150.53	310	PKPbc	PKPbc	22 16 30.3	-0.1
BRTR	Keskin Array B	150.53	310	PKPbc	PKPbc	22 16 30.3	-0.1
	0.9nm,0.8s,baz=64,slow=2.9,SNR=5.6						
CLL	Collm	151.42	349	ePKPbc	PKPbc	22 16 33.0	+1.1

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*AUST **04** 22:23:24.4, 7.°44S×156.°64E, h35km*
*GCMT **04** 22:23:28.6±0.2, 7.°45S×155.°59E, h18km, MW5.0, Moment Tensor Solution. s41,c47; s68,c96; Moment tensor: Scale 10^{16}Nm; M_{rr}3.67±.16; $M_{\theta\theta}$-2.55±.11; $M_{\phi\phi}$-1.12±.12; $M_{r\theta}$1.63±.26; $M_{\theta\phi}$1.88±.09; $M_{\phi r}$-0.37±.28; Best double couple: $M_0$4.10000×10^{16} NP1:ϕ_s314.00000°, δ34.00000°, λ105.00000°. NP2:ϕ_s116.00000°, δ57.00000°, λ80.00000°. Principal axes: T 4.0700, Plg76.0000°, Azm356.0000°; N 0.0900, Plg8.0000°, Azm121.0000°; P -4.1600, Plg11.0000°, Azm213.0000°; Data Used: II IU IC G CN.*
*NEIC **04** 22:23:28.9±1.4, 7.°14S×155.°48E, h37km±13km, mb4.9/13 Error ellipse: s-maj=9.5km s-min=7.5km az=157.0*
*ISCJB **04** 22:23:28.9±0.3, 7.°17S±0.°04×155.°50E±0.°04, h50km, mb4.6/40, MS4.0/21, Error ellipse: s-maj=6.3km s-min=5.5km az=27.3*
*IDC **04** 22:23:31.2±2.2, 7.°16S×155.°42E, h57km±21km, mb4.1/19, mb1 4.2/23, mb1mx4.2/26, mbtmp4.2/23, ML3.7/4, MS4.0/17, Ms1 4.1/17, ms1mx3.8/39, Error ellipse: s-maj=14.3km s-min=12.5km az=163.0*
*BJI **04** 22:23:31.7, 7.°50S×155.°50E, h86km, mB5.0/18, mb4.8/29, Ms5.1/12, Ms7 4.5/17*
ISC 04 22:23:30.5±0.3, 7.°15S±0.°06×155.°53E±0.°05, h50km, n131, σ1.s63/141, mb4.6/40, MS4.2/21, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.92	118	ePn	Pn	22 24 40.8	-1.1
HNR				eSn	Sn	22 25 40.3	+2.6
HNR	Honiara	4.92	118	P	Pn	22 24 45.2	+3.2
	26nm,0.3s,baz=243,slow=14,SNR=7.9						
HNR				S	Sn	22 25 41.1	+3.4
	35nm,0.3s,baz=300,slow=20,SNR=5.7						
HNR				LR	LR	22 26 40.0	
	comp=Z,6μm,18.0s,baz=290,slow=38						
PMG	Port Moresby	8.58	254	P	Pn	22 25 32.9	+0.8
PMG				S	Sn	22 27 10.5	+2.9
PMG	Port Moresby	8.58	254	P	Pn	22 25 32.9	+0.8
	1.6nm,0.3s,baz=80,slow=12,SNR=4.4						
PMG				S	Sn	22 27 10.5	+2.9
	0.9nm,0.3s,baz=320,slow=16,SNR=2.7						
CTA	Charters Tower	15.69	214	P	Pn	22 27 07.9	-0.5
CTA	Charters Tower	15.69	214	P	Pn	22 27 07.9	-0.5
	0.1nm,0.3s,baz=48,slow=12,SNR=2.8						
CTA				LR	LR	22 32 33.1	
	comp=Z,387nm,19.2s,baz=41,slow=35						
DZM	Mont Dzumac	18.19	146	eP	Pn	22 27 40.3	+0.7
	82nm,1.3s						
DZM				eLR	LR	22 32 00.8	
	638nm,22.5s						
DZM	Mont Dzumac	18.19	146	P	Pn	22 27 40.4	+0.9
DZM	Mont Dzumac	18.19	146	P	Pn	22 27 40.4	+0.9
	0.3nm,0.3s,baz=348,slow=16,SNR=3.3						
RMQ	Roma	20.28	198	P	Pn	22 28 02.8	-1.6
	baz=20,SNR=4.6						
QLP	Quilpie	22.11	208	P	P	22 28 20.2	-1.5
	baz=22,SNR=11						
GUMO	Guam	23.17	333	LR	LR	22 35 46.6	
	comp=Z,209nm,20.2s,baz=322,slow=32						
KDU	Kakadu	23.36	255	P	P	22 28 35.0	+0.2
	baz=24,SNR=5.4						
WRAB	Tennant Creek	24.15	236	eP	P	22 28 40.8	-1.3
	65nm,1.4s						
WRA	Warramunga Arr	24.16	236	P	P	22 28 41.0	-1.3
WRA	Warramunga Arr	24.16	236	P	P	22 28 41.0	-1.3
	5.7nm,0.9s,baz=59,slow=9.0,SNR=18						
MSVF	Nonsavu	24.34	118	eP	P	22 28 42.2	-1.8
	79nm,1.2s						
CMSA	Cobar Meteorol	25.94	199	P	P	22 28 58.3	0.0
	baz=26,SNR=6.5						
ASAR	Alice Springs	26.47	229	P	P	22 29 02.1	-1.1
ASAR	Alice Springs	26.47	229	P	P	22 29 02.1	-1.1
	0.7nm,0.6s,baz=59,slow=9.1,SNR=6.7						
ASAR				LR	LR	22 39 25.1	
	comp=Z,334nm,19.1s,baz=227,slow=36						
STKA	Stephens Creek	27.82	206	eP	P	22 29 14.2	-0.9
	1.6nm,0.8s						
STKA	Stephens Creek	27.82	206	P	P	22 29 14.2	-0.9
	5.2nm,0.9s,baz=35,slow=11,SNR=7.8						
STKA				LR	LR	22 39 38.9	
	comp=Z,434nm,19.4s,baz=298,slow=35						
STKA	Stephens Creek	27.82	206	P	P	22 29 16.1	+0.9
	baz=28,SNR=5.8						
MILA	Mila	30.32	190	P	P	22 29 32.0	-5.4
	baz=30,SNR=9.4						
FITZ	Fitzroy Crossi	31.08	247	P	P	22 29 43.0	-1.2
FITZ	Fitzroy Crossi	31.08	247	P	P	22 29 43.0	-1.2
	8.5nm,1.0s,baz=63,slow=9.9,SNR=5.1						
FITZ	Fitzroy Crossi	31.08	247	P	P	22 29 48.0	+3.8
	baz=32,SNR=4.9						
AFI	Afiamalu	32.81	105	LR	LR	22 42 07.4	
	comp=Z,447nm,18.3s,baz=280,slow=34						
DAV	Davao City (W)	33.05	295	LR	LR	22 42 31.1	
	comp=Z,98nm,18.1s,baz=279,slow=35						
WSI	Waingapu	34.93	263	S	S	22 35 59.0	+13
	baz=36,SNR=6.7						
KAPI	Kappang	35.63	271	eP	P	22 30 23.1	-0.9
	28nm,0.8s						
KAPI	Kappang	35.63	271	P	P	22 30 23.0	-0.9
	23nm,0.7s,baz=100,slow=3.9,SNR=10						
URZ	Urewera	36.61	151	LR	LR	22 41 41.1	
	comp=Z,186nm,19.4s,baz=333,slow=30						
MBWA	Marble Bar	37.28	244	P	P	22 30 38.1	+0.2
MEEK	Meekatharra	40.07	237	P	P	22 31 05.9	+4.7
	baz=41,SNR=4.3						
KSM	Kuching	45.93	279	eP	P	22 31 48.8	0.0
MJAR	Matsushiro Arr	46.41	341	P	P	22 31 50.6	-1.5
MJAR	Matsushiro Arr	46.41	341	P	P	22 31 50.6	-1.5
	1.1nm,0.6s,baz=171,slow=8.7,SNR=5.9						
KSRS	Korea Array	51.33	332	P	P	22 32 29.6	-0.2
	1.1nm,0.6s,baz=145,slow=8.1,SNR=7.7						
KSAR	Wonju Array Be	51.34	332	P	P	22 32 29.6	-0.3
QIZ	Qiongzhong	52.00	301	P	P	22 32 35.0	-0.2
QIZ				pP	pP	22 32 57.2	+8.3
QIZ				sP	sP	22 33 09.0	+14
QIZ				S	S	22 39 54.1	-1.3
QIZ				sS	sS	22 40 32.7	+14
QIZ				pmax	pmax		
	comp=Z,89nm,4.0s						
QIZ				LR	LR		
	comp=Z,260nm,24.2s						
ASAJ	Asahikawa	52.35	348	P	P	22 32 37.8	+0.4
ASAJ	Asahikawa	52.35	348	P	P	22 32 37.8	+0.4
	comp=Z,7.1nm,0.7s,baz=321,slow=6.5,SNR=4.8						
PPT	Papeete	54.44	106	LR	LR	22 52 50.9	
	comp=Z,180nm,19.3s,baz=254,slow=32						
PPT2	Papeete2	54.45	106	eLQ	LQ	22 46 22.9	
	comp=Z,302nm,25.8s						
PPT2				eLR	LR	22 48 54.5	
	comp=Z,162nm,25.0s						
TBI	Tubuai	55.13	113	eLQ	LQ	22 46 45.5	
	comp=Z,517nm,29.0s						
TBI				eLR	LR	22 49 05.5	
	comp=Z,263nm,34.0s						
USRK	Ussuriysk Arra	55.36	340	P	P	22 32 59.1	-0.2
	comp=Z,1.3nm,0.7s,baz=146,slow=11,SNR=3.5						
PMOR	Pomariorio Ree	55.94	103	eP	P	22 33 05.3	+1.2
	comp=Z,117nm,1.3s						
KULM	Kulim	56.14	281	P	P	22 33 04.9	-0.6
MDJ	Mudanjiang	56.58	338	P	P	22 33 09.4	+1.3
MDJ				pP	pP	22 33 31.6	+10
MDJ				sP	sP	22 33 42.0	+14
MDJ				PcS	PcS	22 38 04.8	+0.1
MDJ				S	S	22 40 53.9	-2.5
MDJ				sS	sS	22 41 35.6	+16
MDJ				ScS	ScS	22 42 49.7	-3.4
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,28nm,4.3s						
MDJ				LR	LR		
	comp=Z,46nm,23.9s						
CN2	Changchun	57.56	335	eP	P	22 33 18.9	+3.9
GYA	Guiyang	57.97	307	P	P	22 33 21.0	+2.6
GYA				pP	pP	22 33 44.7	+12
GYA				sP	sP	22 33 54.2	+16
GYA				PcP	PcP	22 34 11.0	+0.9
GYA				ScP	ScP	22 38 01.0	-5.3
GYA				S	S	22 41 14.5	-1.0
GYA				sS	sS	22 41 53.2	+14
GYA				SS	SS	22 45 08.9	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,340nm,18.6s						
GYA				LR	LR		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,250nm,19.7s						
GYA				LR	LR		
	comp=Z,390nm,18.8s						
PETK	Petropavlovsk-	60.06	2	P	P	22 33 32.9	+0.7
PETK	Petropavlovsk-	60.06	2	P	P	22 33 32.9	+0.7
	comp=Z,4.4nm,1.0s,baz=149,slow=8.4,SNR=5.8						
PETK				LR	LR	22 56 56.9	
	comp=Z,70nm,18.3s,baz=180,slow=33						
KMI	Kunming	60.55	304	P	P	22 33 36.8	+0.4
KMI				pmax	pmax		
	comp=Z,12nm,1.2s						
KMI				LR	LR		
	comp=Z,160nm,15.9s						
CMAR	Chiang Mai Arr	61.33	295	P	P	22 33 40.9	-0.6
CMAR	Chiang Mai Arr	61.33	295	P	P	22 33 40.9	-0.6
	comp=Z,2.4nm,0.4s,baz=126,slow=5.9,SNR=15						
CMAR				LR	LR	22 58 39.5	
	comp=Z,75nm,19.0s,baz=272,slow=34						
CHTO	Chiang Mai	61.45	296	eP	P	22 33 43.3	+1.0
	comp=Z,66nm,2.3s						
FX1	Attu Island--F	61.66	12	P	P	22 33 43.0	-0.1
FX1	Attu Island--F	61.66	12	P	P	22 33 43.0	-0.1
	comp=Z,4.7nm,0.6s,baz=322,slow=2.5,SNR=15						
CD2	Chengdu	62.32	310	P	P	22 33 50.3	+2.3
CD2				pP	pP	22 34 13.4	+11
CD2				sP	sP	22 34 23.8	+16
CD2				PcP	PcP	22 34 27.9	+0.5
CD2				PP	PP	22 36 10.9	+5.2
CD2				PcS	PcS	22 38 29.9	-0.9
CD2				S	S	22 42 09.7	-1.3
CD2				sS	sS	22 42 49.7	+15
CD2				SS	SS	22 46 17.7	+2.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,100nm,5.2s						
CD2				LR	LR		
	comp=Z,200nm,22.5s						
HHC	Hu-ho-hao-te	62.53	324	eP	P	22 33 51.3	+2.0
HHC				pP	pP	22 34 15.6	+12
HHC				sP	sP	22 34 26.6	+18
HHC				PP	PP	22 36 12.3	+4.8
HHC				S	S	22 42 14.4	+0.9
HHC				sS	sS	22 42 53.7	+17
HHC				ScS	SKSac	22 43 30.8	-6.9
HHC				SS	SS	22 46 20.7	+2.1
HHC				pmax	pmax		
	comp=Z,16nm,0.8s						
HHC				pmax	pmax		
	comp=Z,220nm,3.5s						
HHC				LR	LR		
	comp=N,220nm,14.4s						
HHC				LR	LR		
	comp=E,170nm,16.7s						
HHC				LR	LR		
	comp=Z,150nm,18.4s						
LZH	Lanzhou	64.80	315	eP	P	22 34 06.6	+2.2
LZH				pP	PcP	22 34 29.7	-7.9
LZH				sP	sP	22 34 39.5	+15
LZH				PP	PP	22 36 32.0	+4.4
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
GTA	Gaotai	69.22	317	eP	P	22 34 33.2	+0.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ULN	Ulaanbaatar	69.42	327	eP	P	22 34 33.4	-0.2
	comp=Z,6.2nm,1.3s						
SONM	Songino Array	69.76	327	P	P	22 34 35.7	+0.2
SONM	Songino Array	69.76	327	P	P	22 34 35.7	+0.2
	comp=Z,1.6nm,0.5s,baz=140,slow=7.6,SNR=6.9						
SHL	Shillong	69.83	300	ePKP	P	22 34 38.0	+1.5
VNDA	Vanda	70.41	179	LR	LR	23 01 41.3	
	comp=Z,136nm,18.7s,baz=63,slow=32						
LSA	Lhasa	71.80	304	eP	P	22 34 47.7	-1.0
	comp=Z,5.7nm,0.8s						
TAPN	Taplejung	73.94	301	eP	P	22 35 01.0	-0.3
	comp=Z,33nm,1.0s						
ODAN	Odare	74.07	300	eP	P	22 35 01.9	-0.1
	comp=Z,49nm,0.9s						
RAMN	Ramite	74.77	300	eP	P	22 35 05.8	-0.3
	comp=Z,32nm,1.2s						
GUN	Gumba	75.65	301	eP	P	22 35 11.1	-0.2
	comp=Z,69nm,1.0s						
PKI	Pulchoki	75.96	301	eP	P	22 35 12.8	-0.2
PKIN	Phulchoki	75.97	301	eP	P	22 35 12.6	-0.4
	comp=Z,29nm,1.2s						
KKN	Kakani	76.13	301	eP	P	22 35 13.5	-0.3
DMN	Daman	76.23	301	eP	P	22 35 14.0	-0.4
KOLN	Koldanda	77.56	300	eP	P	22 35 21.3	-0.6
	comp=Z,16nm,0.8s						
DANN	Dangsing	77.57	301	eP	P	22 35 21.1	-0.9
	comp=Z,16nm,0.6s						
PYUN	Piuthan	78.17	301	eP	P	22 35 24.3	-0.9
	comp=Z,65nm,0.9s						
WMQ	Urumqi	79.30	317	eP	P	22 35 30.5	-0.5
MCK	McKinley	82.01	22	eP	P	22 35 45.3	+0.4
	comp=Z,13nm,1.1s						
QSPA	South Pole Qui	82.82	180	LR	LR	23 10 04.1	
	comp=Z,147nm,18.3s,baz=234,slow=34						
ILAR	Eielson Array	83.33	21	P	P	22 35 50.0	-1.7
ILAR	Eielson Array	83.33	21	P	P	22 35 50.0	-1.7
	comp=Z,1.2nm,0.5s,baz=246,slow=4.8,SNR=20						
ILAR				LR	LR	23 07 24.4	
	comp=Z,147nm,21.6s,baz=257,slow=32						
MK31	Makanchi Array	83.87	319	eP	P	22 35 55.1	+0.1
MKAR	Makanchi Array	83.87	319	eP	P	22 35 54.9	-0.1
MKAR	Makanchi Array	83.87	319	P	P	22 35 54.8	-0.1
	comp=Z,3.9nm,0.7s,baz=101,slow=6.1,SNR=45						
MAW	Mawson	84.45	203	P	P	22 35 56.6	-0.8
MAW	Mawson	84.45	203	P	P	22 35 56.6	-0.8
	comp=Z,3.1nm,0.8s,baz=46,slow=2.3,SNR=4.5						
ZAA0	Zalesovo Array	84.61	326	eP	P	22 35 57.3	-1.2
ZALV	Zalesovo Beam	84.61	326	P	P	22 35 57.5	-0.9
ZALV	Zalesovo Beam	84.61	326	P	P	22 35 57.5	-0.9
	comp=Z,4.7nm,0.6s,baz=117,slow=5.9,SNR=27						
EGAK	Eagle	85.46	23	eP	P	22 36 03.0	+0.5
KSH	Kashi	86.52	310	eP	P	22 36 10.1	+1.6
KSH				epP	pP	22 36 35.6	+12
KSH				esP	sP	22 36 46.4	+18
KSH				ePP	PP	22 39 34.3	+3.5
KSH				eSKS	SKSac	22 46 23.6	-7.7
KSH				eS	SKKSac	22 46 36.3	-3.1
KSH				esS	sS	22 47 19.9	+14
KSH				eSS	SS	22 52 21.0	-2.0
KSH				pmax	pmax		
	comp=Z,30nm,1.4s						
KSH				pmax	pmax		
	comp=Z,200nm,7.2s						
KSH				LR	LR		
	comp=N,100nm,4.1s						
KSH				LR	LR		
	comp=E,150nm,5.0s						
KSH				LR	LR		
	comp=Z,210nm,4.1s						
KURK	Kurchatov	87.28	322	eP	P	22 36 10.9	-0.8
	comp=Z,15nm,1.5s						
TKM2	Tokmak 2	87.51	314	eP	P	22 36 13.5	+0.2
	comp=Z,58nm,2.9s						
AAK	Ala-Archa	88.25	313	eP	P	22 36 14.8	-2.0
	comp=Z,2.7nm,1.7s						
EKS2	Erkin-Say	88.77	313	eP	P	22 36 20.3	+1.1
	comp=Z,2.7nm,0.8s						
KBL	Kabul	91.12	305	eP	P	22 36 29.3	-1.2
	comp=Z,2.4nm,0.8s						
NVAR	Mina Array Bea	91.40	52	P	P	22 36 32.8	+1.0
NVAR	Mina Array Bea	91.40	52	P	P	22 36 32.8	+1.0
	comp=Z,0.8nm,0.9s,baz=256,slow=8.2,SNR=5.5						
NVAR				LR	LR	23 13 19.3	
	comp=Z,90nm,20.9s,baz=357,slow=33						
BRVK	Borovoye	92.81	323	eP	P	22 36 37.4	-0.2
	comp=Z,3.0nm,1.0s						
YKA	Yellowknife Ar	96.23	28	P	P	22 36 52.8	-0.2
YKA	Yellowknife Ar	96.23	28	P	P	22 36 52.8	-0.2
	comp=Z,0.6nm,0.5s,baz=262,slow=4.8,SNR=15						
LPIG	La Paz	96.67	67	LR	LR	23 13 34.8	
	comp=Z,14nm,19.7s,baz=237,slow=31						
PDAR	Pinedale Array	98.41	48	LR	LR	23 20 19.9	
	comp=Z,122nm,18.4s,baz=255,slow=35						
ARCES	ARCESS Array B	109.89	343	PKiKP	PKiKP	22 41 56.0	+0.2
ARCES	ARCESS Array B	109.89	343	PKiKP	PKiKP	22 41 56.0	+0.2
	comp=Z,3.2nm,1.0s,baz=90,slow=1.8,SNR=4.1						
AKASG	Malin Array Be	117.98	325	PKP	PKPdf	22 42 10.7	-0.9
AKASG	Malin Array Be	117.98	325	PKP	PKPdf	22 42 10.7	-0.9
	comp=Z,1.2nm,0.5s,baz=62,slow=2.1,SNR=4.7						
BRTR	Keskin Array B	118.89	312	PKP	PKPdf	22 42 13.4	-0.6
BRTR	Keskin Array B	118.89	312	PKP	PKPdf	22 42 13.4	-0.6
	comp=Z,0.3nm,0.5s,baz=97,slow=1.7,SNR=2.5						
NOA	NORSAR Array B	120.02	341	PKP	PKPdf	22 42 15.3	-0.1
NOA	NORSAR Array B	120.02	341	PKP	PKPdf	22 42 15.3	-0.1
	comp=Z,0.6nm,0.8s,baz=38,slow=2.2,SNR=2.7						
GERES	GERESS Array B	127.46	329	PKP	PKPdf	22 42 30.6	+0.5
GERES	GERESS Array B	127.46	329	PKP	PKPdf	22 42 30.6	+0.5
	comp=Z,0.7nm,0.7s,baz=90,slow=1.3,SNR=8.3						
LPAZ	La Paz	130.92	119	PKP	PKPdf	22 42 39.2	+1.0
LPAZ	La Paz	130.92	119	PKP	PKPdf	22 42 39.2	+1.0
	comp=Z,3.1nm,1.0s,baz=271,slow=1.3,SNR=9.5						
PMRV	Marv??o	144.38	337	ePKP	PKPbc	22 43 00.6	+0.6
PESTR	Estremoz	144.94	337	ePKP	PKPdf	22 43 02.3	-0.3
PMTG	Montargil	145.01	338	ePKP	PKPbc	22 43 01.4	-0.6
PNCL	Nicolau / Gran	145.97	337	ePKP	PKPab	22 43 05.7	+0.1
PVAQ	Vaqueiros	146.25	336	ePKP	PKPab	22 43 07.4	+0.7
BDFB	Brasilia	147.49	134	PKPbc	PKPbc	22 43 10.2	0.0
BDFB	Brasilia	147.49	134	PKPbc	PKPbc	22 43 10.2	0.0
	comp=Z,6.9nm,0.6s,baz=223,slow=0.9,SNR=11						
TORD	Torodi Ar. Bea	153.58	285	PKP	PKPdf	22 43 16.8	-0.2
TORD				PKPbc	PKPbc	22 43 24.4	-0.4
TORD				PKPab	PKPab	22 43 33.5	-3.9
TORD	Torodi Ar. Bea	153.58	285	PKP	PKPdf	22 43 16.8	-0.2
	comp=Z,0.5nm,0.9s,baz=2.0,slow=3.0,SNR=3.4						
TORD				PKPbc	PKPbc	22 43 24.4	-0.4
	comp=Z,1.3nm,0.7s,baz=17,slow=2.7,SNR=9.3						
TORD				PKPab	PKPab	22 43 33.5	-3.9
	comp=Z,0.8nm,0.7s,baz=89,slow=2.1,SNR=5.9						
DBIC	Dimbokro	160.52	270	PKPab	PKPab	22 44 07.4	+0.1
DBIC	Dimbokro	160.52	270	PKPab	PKPab	22 44 07.4	+0.1
	comp=Z,2.0nm,0.6s,baz=99,slow=2.7,SNR=6.4						

CASC 04 22:26:42.4±2.8, 8.55N×83.20W, h6km±21km, MD4.2, 3C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.11	17⇑	iP	Pg	22 26 46.0	+1.1
BUS	Buena Vista	1.14	331⇑	eP	Pg	22 27 02.8	-2.2
BUS				eS	Sg	22 27 20.5	+0.2
QCR	Quepos	1.29	313⇑	eP	Pn	22 27 05.1	-2.0
QCR				eS	Sn	22 27 24.5	-0.2
LAJ	Bijagual	1.59	325	eP	Pb	22 27 12.5	-0.1
LAJ				eS	Sg	22 27 39.2	+5.0
SJS	Escuela Geolog	1.62	329	eP	Pn	22 27 10.2	-1.6
SJS				eS	Sg	22 27 35.0	+0.1
CGA2	Cerro Gallo 2	1.92	320	eP	Pn	22 27 15.3	-0.7
CGA2				eS	Sb	22 27 42.7	+0.2
FORC	Fortuna	2.40	323	eP	Pn	22 27 23.6	+1.3
CHPA	Chiripa	2.53	318	i P	Pb	22 27 26.4	-2.1
CHPA				i S	Sb	22 27 58.8	-1.2
AMAS	Alto Masis	2.71	319	i P	Pn	22 27 26.2	-0.5
AMAS				i S	Sn	22 28 00.0	0.0
PTEN	Parque Tenorio	2.78	321	i P	Pn	22 27 28.5	+0.8
CUI	Cuipilapa	2.85	317	i P	Pn	22 27 29.1	+0.5
VCR	Vista de Mar	2.87	303⇓	eP	Pn	22 27 28.9	0.0
VCR				eS	Sn	22 28 02.3	-1.6
LIM1	Limonal	2.94	317	i P	Pn	22 27 30.2	+0.3
LAPC	Finca la Perla	3.12	315	i P	Pn	22 27 32.6	+0.4
LAPC				i S	Sn	22 28 10.6	+0.7

IDC 04 22:28:32.2±4.0, 3.18S×139.63E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML3.8/1, MS4.2/1, Ms1 4.2/1, ms1mx2.9/22, Error ellipse: s-maj=129.0km s-min=28.5km az=92.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.44	197	P	Pn	22 32 36.5	-0.7
	0.3nm,0.3s,baz=14,slow=12,SNR=6.7						
FITZ	Fitzroy Crossi	20.20	222	P	P	22 33 08.9	+0.2
	3.4nm,0.9s,baz=55,slow=12,SNR=3.3						
ASAR	Alice Springs	21.10	195	P	P	22 33 18.7	+0.1
	0.6nm,0.5s,baz=24,slow=9.1,SNR=3.5						
RAR	Rarotonga	61.49	112	LR	LR	22 59 54.2	
	comp=Z,198nm,19.9s,baz=286,slow=31						
MKAR	Makanchi Array	70.72	322	P	P	22 39 50.3	0.0
	0.2nm,0.3s,baz=119,slow=8.0,SNR=7.5						

*IDC **04** 22:46:34.7±6.3, 5.53N×82.25W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/21, mbtmp3.6/3, MS2.6/1, Ms1 2.6/1, ms1mx2.3/35, Error ellipse: s-maj=240.8km s-min=39.3km az=30.0*

*CASC **04** 22:46:38.0±2.9, 5.45N×82.50W, h35km±999km, MD4.5*

ISC 04 22:46:40.0±1.7, 5.6N±0.2×82.3W±0.2, h35km, n15, σ1.40/22, mb3.8/3, 1C, South of Panama

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	3.15	343	eP	Pn	22 47 26.7	-0.6
ACR				eS	Sn	22 48 04.3	+0.5
QCR	Quepos	4.23	334	eP	Pn	22 47 40.2	-1.9
QCR				eS	Sn	22 48 31.1	+0.8
LAJ	Bijagual	4.61	337⇑	eP	Pn	22 47 46.0	-1.5
LAJ				eS	Sn	22 48 37.2	-2.8
CGA2	Cerro Gallo 2	4.89	334	eP	Pn	22 47 50.1	-1.3
CGA2				eS	Sn	22 48 48.6	+1.8
FORC	Fortuna	5.38	334	eP	Pn	22 47 57.7	-0.3
CHPA	Chiripa	5.47	332	i P	Pn	22 47 58.7	-0.6
CHPA				i S	Sn	22 49 04.2	+3.1
CUI	Cuipilapa	5.78	330	i P	Pn	22 48 02.2	-1.3
CUI				i S	Sn	22 49 09.5	+0.9
COLC	Colonia	5.81	330	i P	Pn	22 48 03.6	-0.2
LIM1	Limonal	5.86	330	i P	Pn	22 48 03.1	-1.5
LIM1				i S	Sn	22 49 11.0	+0.4
GPS2	Hotel Rincˆ‡n	5.96	329	i P	Pn	22 48 05.3	-0.6
NY14	Universidad de	5.96	327	i P	Pn	22 48 04.4	-1.5
NY14				i S	Sn	22 49 12.9	-0.1
ATAH	Atahualpa	13.23	163	LR	LR	22 53 04.5	
	comp=Z,27nm,21.6s,baz=97,slow=30						
NVAR	Mina Array Bea	46.20	320	P	P	22 55 02.2	+0.2
	1.1nm,0.9s,baz=143,slow=7.0,SNR=5.7						
YKA	Yellowknife Ar	61.55	344	P	P	22 56 53.9	+0.5
	0.3nm,0.7s,baz=138,slow=6.6,SNR=5.2						
TORD	Torodi Ar. Bea	82.88	77	P	P	22 59 02.1	+0.3
	0.8nm,1.0s,baz=286,slow=4.2,SNR=3.2						

*ISCJB **04** 22:59:14.9±0.5, 43.63S±0.10×16.2W±0.1, h10km, mb4.2/18, MS4.1/12, Error ellipse: s-maj=14.2km s-min=11.3km az=11.4*

*IDC **04** 22:59:15.2±0.6, 43.60S×16.13W, h0km, mb4.1/15, mb1 4.2/15, mb1mx4.1/19, mbtmp4.1/15, MS4.1/12, Ms1 4.0/12, ms1mx3.9/19, Error ellipse: s-maj=18.2km s-min=15.8km az=14.0*

*NEIC **04** 22:59:16.8±0.4, 43.58S×16.21W, h10km, mb4.5/7, Error ellipse: s-maj=14.6km s-min=12.3km az=151.0*

ISC 04 22:59:16.6±0.5, 43.6S±0.1×16.16W±0.09, h10km, n51, σ1.10/46, mb4.3/18, MS4.1/12, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNAA	Sanae	28.87	171	eP	P	23 05 14.7	-0.3
SNAA	Sanae	28.87	171	P	P	23 05 15.1	0.0
	0.2nm,0.7s,baz=337,slow=12,SNR=2.2						
SUR	Sutherland	30.98	81	LR	LR	23 15 06.3	
	comp=Z,222nm,20.1s,baz=236,slow=31						
BOSA	Boshof	36.25	80	eP	P	23 06 16.1	-4.0
BOSA	Boshof	36.25	80	P	P	23 06 19.7	-0.3
	2.0nm,0.9s,baz=232,slow=12,SNR=2.8						
BOSA				LR	LR	23 18 54.9	
	comp=Z,262nm,19.2s,baz=195,slow=33						
TSUM	Tsumeb	37.30	60	eP	P	23 06 28.1	-1.0
	12nm,1.5s						
TSUM	Tsumeb	37.30	60	P	P	23 06 27.9	-1.1
	2.3nm,0.7s,baz=217,slow=8.0,SNR=6.2						
CPUP	Villa Florida	37.45	284	P	P	23 06 30.3	+0.2
	12nm,0.9s,baz=103,slow=7.4,SNR=30						
CPUP				LR	LR	23 20 38.4	
	comp=Z,386nm,19.8s,baz=152,slow=34						
LBTB	Lobatse	38.68	75	eP	P	23 06 40.4	-0.2
	3.3nm,0.8s						
LBTB	Lobatse	38.68	75	P	P	23 06 40.5	-0.2
	1.7nm,0.8s,baz=230,slow=10,SNR=2.4						
BDFB	Brasilia	38.88	306	P	P	23 06 42.8	+0.5
	4.5nm,0.9s,baz=121,slow=7.0,SNR=6.5						
BDFB				LR	LR	23 20 00.7	
	comp=Z,271nm,20.4s,baz=24,slow=32						
PLCA	Paso Flores	39.81	255	eP	P	23 06 49.3	-0.7
	5.9nm,0.7s						
PLCA	Paso Flores	39.81	255	LR	LR	23 21 22.6	
	comp=Z,288nm,20.5s,baz=168,slow=33						
CFAA	Coronel Fontan	42.33	268	P	P	23 07 09.8	-0.9
CFAA	Coronel Fontan	42.33	268	P	P	23 07 09.8	-0.9
	0.8nm,1.1s,baz=116,slow=6.3,SNR=6.4						
MAW	Mawson	46.53	149	P	P	23 07 42.8	-0.9
	2.7nm,0.9s,baz=253,slow=10,SNR=2.4						
MAW				LR	LR	23 22 27.9	
	comp=Z,108nm,18.9s,baz=29,slow=30						
QSPA	South Pole Qui	46.64	180	eP	P	23 07 46.0	+1.1
	9.9nm,0.9s						
QSPA				PcP	PcP	23 09 16.9	-1.6
QSPA				ePcP	PcP	23 09 17.6	-0.9
QSPA	South Pole Qui	46.64	180	P	P	23 07 46.2	+1.4
	7.9nm,0.8s,baz=217,slow=5.7,SNR=50						
QSPA				PcP	PcP	23 09 16.8	-1.6
	3.6nm,0.8s,baz=211,slow=1.5,SNR=5.4						
DBIC	Dimbokro	51.09	14	LR	LR	23 24 18.8	
	comp=Z,101nm,20.1s,baz=166,slow=29						
LPAZ	La Paz	51.59	285	eP	P	23 08 22.3	-1.6
	4.7nm,1.2s						
LPAZ	La Paz	51.59	285	P	P	23 08 22.4	-1.4
	3.5nm,1.2s,baz=113,slow=6.4,SNR=7.3						
SAML	Samuel	53.46	296	eP	P	23 08 36.8	-0.3
	19nm,1.1s						
SAML				ePcP	PcP	23 09 42.4	-1.7
ARE	Arequipa	53.85	282	eP	P	23 08 40.0	-0.2
TORD	Torodi Ar. Bea	58.80	20	P	P	23 09 13.2	-1.8
TORD	Torodi Ar. Bea	58.80	20	P	P	23 09 13.2	-1.8
	0.6nm,0.8s,baz=200,slow=3.8,SNR=4.0						
TORD				LR	LR	23 28 36.8	
	comp=Z,135nm,18.6s,baz=175,slow=30						
VNDA	Vanda	59.13	179	eP	P	23 09 17.5	+0.8
	9.2nm,1.5s						
VNDA	Vanda	59.13	179	P	P	23 09 17.0	+0.3
	3.6nm,1.1s,baz=196,slow=7.6,SNR=5.4						
VNDA				LR	LR	23 33 58.7	
	comp=Z,122nm,18.1s,baz=156,slow=35						
KMBO	Kilima Mbogo	63.49	64	LR	LR	23 34 31.5	
	comp=Z,366nm,19.4s,baz=96,slow=33						
ATAH	Atahualpa	65.13	285	P	P	23 09 60.0	+1.7
ATAH	Atahualpa	65.13	285	P	P	23 09 60.0	+1.7
	5.6nm,0.6s,baz=135,slow=5.7,SNR=4.4						
KEST	Kesra	82.32	21	eP	P	23 11 38.4	+0.2
KEST	Kesra	82.32	21	P	P	23 11 47.2	+9.0
	2.8nm,1.0s,baz=190,slow=3.8,SNR=5.7						
ESDC	Sonseca Array	83.64	9	P	P	23 11 46.6	+1.7
ESDC	Sonseca Array	83.64	9	P	P	23 11 46.6	+1.7
	0.2nm,0.4s,baz=198,slow=4.2,SNR=5.0						
NWAO	Narrogin (SRO)	92.73	142	LR	LR	23 44 47.9	
	comp=Z,109nm,21.4s,baz=194,slow=30						
BRTR	Keskin Array B	94.36	36	P	P	23 12 38.0	+1.8
BRTR	Keskin Array B	94.36	36	P	P	23 12 38.0	+1.8
	2.6nm,0.9s,baz=190,slow=6.3,SNR=4.9						
BRTR				LR	LR	23 53 45.0	
	comp=Z,71nm,19.3s,baz=169,slow=35						
TBI	Tubuai	100.77	223	eLR	LR	23 45 57.3	
	118nm,27.2s						
PPT2	Papeete2	105.65	226	eLR	LR	23 48 13.2	
	82nm,24.8s						
ELK	Elko	122.28	297	PKP	PKPdf	23 18 12.2	+0.5
ELK	Elko	122.28	297	PKP	PKPdf	23 18 12.2	+0.5
	1.5nm,0.8s,baz=121,slow=2.0,SNR=5.0						
NVAR	Mina Array Bea	123.06	294	PKP	PKPdf	23 18 14.1	+0.8
NVAR	Mina Array Bea	123.06	294	PKP	PKPdf	23 18 14.1	+0.8
	0.6nm,0.8s,baz=151,slow=3.0,SNR=4.4						
MKAR	Makanchi Array	124.94	56	PKP	PKPdf	23 18 17.5	+1.2
MKAR	Makanchi Array	124.94	56	PKP	PKPdf	23 18 17.5	+1.2
	0.2nm,0.6s,baz=222,slow=2.4,SNR=2.9						
YKA	Yellowknife Ar	131.18	322	PKP	PKPdf	23 18 27.3	-0.3
YKA	Yellowknife Ar	131.18	322	PKP	PKPdf	23 18 27.3	-0.3
	1.1nm,0.8s,baz=111,slow=2.0,SNR=14						
INK	Inuvik	139.66	329	PKP	PKPdf	23 18 43.3	+0.1
INK	Inuvik	139.66	329	PKP	PKPdf	23 18 43.3	+0.1
	3.9nm,1.1s,baz=119,slow=1.0,SNR=7.4						
ILAR	Eielson Array	145.50	325	PKPbc	PKPdf	23 18 53.6	-0.1
ILAR	Eielson Array	145.50	325	PKPbc	PKPdf	23 18 53.6	-0.1
	14nm,1.1s,baz=84,slow=1.2,SNR=64						

IDC 04 23:12:01.8±2.2, 15.74S×176.62W, h340km±31km, mb3.4/9, mb1 3.6/10, mb1mx3.4/23, mbtmp3.4/10, Error ellipse: s-maj=104.7km s-min=13.5km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.02	69	P	Pn	23 13 21.4	0.0
	3.8nm,0.3s,baz=310,slow=3.2,SNR=11						
STKA	Stephens Creek	41.19	239	P	P	23 19 14.2	-0.3
	0.7nm,0.5s,baz=95,slow=11,SNR=2.8						
WRA	Warramunga Arr	46.75	257	P	P	23 19 57.7	-0.8
	0.7nm,0.4s,baz=96,slow=7.8,SNR=6.0						
ASAR	Alice Springs	47.06	252	P	P	23 20 00.6	-0.3
	3.4nm,0.3s,baz=90,slow=7.5,SNR=55						
FITZ	Fitzroy Crossi	55.10	259	P	P	23 21 01.6	+1.4
	4.3nm,0.9s,baz=121,slow=5.9,SNR=2.9						
YBH	Yreka Blue Hor	75.77	39	P	P	23 23 11.7	+0.6
	2.1nm,0.6s,baz=175,slow=3.8,SNR=5.1						
NVAR	Mina Array Bea	76.68	43	P	P	23 23 16.3	-0.1
	1.0nm,0.7s,baz=230,slow=8.5,SNR=7.2						
ELK	Elko	79.91	43	P	P	23 23 33.6	-0.4
	1.1nm,0.8s,baz=231,slow=6.5,SNR=3.2						
ILAR	Eielson Array	83.40	12	P	P	23 23 51.0	-0.3
	1.3nm,0.8s,baz=220,slow=5.6,SNR=20						
PDAR	Pinedale Array	84.60	43	P	P	23 23 58.1	0.0
	0.2nm,0.5s,baz=242,slow=2.9,SNR=2.5						
GERES	GERESS Array B	145.91	348	PKPbc	PKPdf	23 31 01.1	+0.4
	0.2nm,0.5s,baz=38,slow=5.0,SNR=2.7						

*AUST **04** 23:20:50.2±0.0, 0.30N×133.42E, h63km, Error ellipse: s-maj=2.4km s-min=1.0km az=286.0*

*IDC **04** 23:20:58.8±1.8, 0.56S×132.58E, h0km, mb3.8/3, mb1 4.0/5, mb1mx3.7/23, mbtmp3.8/5, ML3.7/2, Error ellipse: s-maj=61.5km s-min=25.3km az=70.0*

*ISCJB **04** 23:21:00.1±1.4, 0.6S±0.1×133.11E±0.09, h32km, mb3.7/3, Error ellipse: s-maj=17.4km s-min=9.8km az=39.6*

ISC 04 23:21:02.5±1.5, 0.4S±0.1×133.0E±0.1, h32km, n10, σ1.69/12, mb4.0/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SWI	Sorong	1.74	256	P	Pn	23 21 30.1	-0.3
	baz=2.5,SNR=82						
SWI				S	Sn	23 21 53.4	+1.9
	baz=2.5,SNR=7.6						
FAKI	Fak Fak	2.56	196	P	Pn	23 21 42.1	+0.4
	baz=3.4,SNR=103						
FAKI				S	Sn	23 22 13.8	+2.0
	baz=3.4,SNR=8.2						
KDU	Kakadu	12.17	182	P	Pn	23 23 53.0	-0.8
	baz=13,SNR=7.5						
MTN	Manton Dam	12.45	188	P	Pn	23 23 55.7	-1.9
	baz=13,SNR=4.2						
KNRA	Kununurra	15.69	195	P	Pn	23 24 39.4	-1.9
	baz=17,SNR=4.0						
FITZ	Fitzroy Crossi	18.96	202	P	P	23 25 19.8	-1.4
	0.1nm,0.3s,baz=16,slow=10,SNR=3.5						
FITZ				S	Sn	23 28 38.4	-15
	0.1nm,0.3s,baz=69,slow=17,SNR=2.8						
WRA	Warramunga Arr	19.43	176	P	P	23 25 26.0	-0.4
	0.3nm,0.3s,baz=355,slow=11,SNR=6.6						
WRA				S	S	23 28 53.6	-11
	0.3nm,0.3s,baz=357,slow=22,SNR=4.0						
ASAR	Alice Springs	23.11	178	P	P	23 26 04.7	-1.1
	3.8nm,0.8s,baz=6.1,slow=11,SNR=22						
CTA	Charters Tower	23.47	147	P	P	23 26 12.1	+2.6
	5.2nm,0.9s,baz=323,slow=11,SNR=2.5						
MKAR	Makanchi Array	64.53	324	P	P	23 31 36.8	+0.3
	0.2nm,0.6s,baz=122,slow=7.0,SNR=4.0						

*IDC **04** 23:40:48.4±0.7, 18.11S×71.31W, h0km, mb4.2/11, mb1 4.3/13, mb1mx4.2/18, mbtmp4.2/13, ML4.3/2, MS4.1/8, Ms1 4.0/8, ms1mx3.8/28, Error ellipse: s-maj=25.8km s-min=16.7km az=49.0*

*ISCJB **04** 23:40:50.4±1.6, 18.35S±0.03×71.74W±0.04, h27km±12km, mb4.2/18, MS4.5/6, Error ellipse: s-maj=6.9km s-min=4.5km az=149.3*

*NEIC **04** 23:40:51.0±2.9, 18.28S×71.67W, h16km±18km, mb4.3/8, Error ellipse: s-maj=10.9km s-min=6.6km az=70.0*

NEIC Felt [II] at Arequipa, Peru.

*GUC **04** 23:40:51.2±0.8, 18.°72S×71.°71W, h25km±17km, ML4.9*

ISC 04 23:40:51.2±1.3**, 18.°32S**±0.°04×**71.°70W**±0.°06**, h20**km±9km**,**
n86, σ1^{s}75/104**, mb4.3**/18**, MS4.5**/6**, 6C-3D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCH	Arica	1.34	97	eP	Pn	23 41 14.2	-0.6
ARCH				eS	Sb	23 41 32.5	0.0
ARCH	Arica	1.34	97	eP	Pn	23 41 14.2	-0.6
ARCH				eS	Sb	23 41 32.5	0.0
ARCH				AML	AML	23 41 37.6	
	comp=E,33μm,0.4s						
ARE	Arequipa	1.86	6	⇓iP	Pn	23 41 20.3	-2.0
ARE				iS	Sn	23 41 42.6	-2.7
MNMC	Minimini	2.15	112	⇑iP	Pn	23 41 26.7	+0.5
MNMC				eS	Sn	23 41 52.9	+0.5
MNMC	Minimini	2.15	112	⇑iP	Pn	23 41 26.7	+0.5
MNMC				eS	Sn	23 41 52.9	+0.5
MNMC				AML	AML	23 42 02.8	
	comp=E,23μm,0.7s						
HMBC	Humberstone	2.59	139	⇑iP	Pn	23 41 33.4	+1.3
HMBC				eS	Sn	23 42 02.8	-0.3
HMBC	Humberstone	2.59	139	⇑iP	Pn	23 41 33.4	+1.3
HMBC				eS	Sn	23 42 02.8	-0.3
HMBC				AML	AML	23 42 20.7	
	comp=N,6μm,0.6s						
PB01	Plate Boundary	3.42	143	⇑iP	Pn	23 41 44.5	+1.0
PB01				eS	Sn	23 42 22.6	-0.9
PB01	Plate Boundary	3.42	143	⇑iP	Pn	23 41 44.5	+1.0
PB01				eS	Sn	23 42 22.6	-0.9
PB01				AML	AML	23 42 24.4	
	comp=E,2μm,0.4s						
PB07	Plate Boundary	3.79	154	⇓eP	Pn	23 41 49.6	+0.9
PB07				eS	Sn	23 42 30.8	-2.1
PB07	Plate Boundary	3.79	154	⇓eP	Pn	23 41 49.6	+0.9
PB07				eS	Sn	23 42 30.8	-2.1
PB07				AML	AML	23 42 39.6	
	comp=E,3μm,0.2s						
LPAZ	La Paz	3.96	60	ePn	Pn	23 41 53.6	+2.2
LPAZ	La Paz	3.96	60	Pn	Pn	23 41 53.9	+2.4
	comp=E,3.4nm,0.3s,baz=242,slow=9.4,SNR=118						
LPAZ				LR	LR	23 43 09.5	
	comp=E,856nm,21.9s,baz=301,slow=40						
PB04	Plate Boundary	4.44	152	P	Pn	23 41 55.3	-2.2
PB04				eS	Sn	23 42 38.3	-10
PB04	Plate Boundary	4.44	152	eP	Pn	23 41 55.3	-2.2
PB04				eS	Sn	23 42 38.3	-10
LVC	Limon Verde	5.00	149	eP	Pn	23 42 06.9	+1.4
LVC				iS	Sn	23 43 01.7	-1.2
LVC	Limon Verde	5.00	149	eP	Pn	23 42 06.9	+1.4
LVC				iS	Sn	23 43 01.7	-1.2
NNA	Nana	8.02	321	ePn	Pn	23 42 46.8	0.0
	comp=E,45nm,0.8s						
NNA				eSn	Sn	23 44 27.7	+11
NNA	Nana	8.02	321	Pn	Pn	23 42 48.4	+1.7
	comp=E,2.8nm,0.3s,baz=154,slow=8.7,SNR=5.3						
NNA				Sn	Sn	23 44 13.8	-3.1
	comp=E,5.7nm,0.3s,baz=180,slow=13,SNR=4.0						
NNA				LR	LR	23 45 46.4	
	comp=E,465nm,21.2s,baz=155,slow=37						
SIV	San Ignacio	10.42	79	Pn	Pn	23 43 19.8	+0.1
SIV				Sn	Sn	23 45 19.5	+3.6
SIV	San Ignacio	10.42	79	Pn	Pn	23 43 19.8	+0.1
	comp=E,2.9nm,0.3s,baz=281,slow=8.8,SNR=58						
SIV				Sn	Sn	23 45 19.5	+3.6
	comp=E,0.4nm,0.3s,baz=345,slow=19,SNR=2.1						
SIV				LR	LR	23 47 56.3	
	comp=E,3μm,18.1s,slow=43						
LCO	Las Campanas	10.68	175	ePn	Pn	23 43 23.5	+0.1
LCO				eSn	Sn	23 45 20.1	-2.4
SAML	Samuel	12.46	43	ePn	Pn	23 43 46.1	-1.4
	comp=E,8.6nm,0.6s						
SAML				eSn	Sn	23 46 09.7	+3.9
ATAH	Atahualpa	12.89	329	LR	LR	23 49 08.3	
	comp=E,843nm,20.5s,baz=1.0,slow=39						
CFAA	Coronel Fontan	13.59	167	Pn	Pn	23 44 03.9	+0.9
CFAA				Sn	Sn	23 46 25.2	-8.2
CFAA	Coronel Fontan	13.59	167	Pn	Pn	23 44 03.8	+0.9
	comp=E,0.1nm,0.3s,baz=342,slow=12,SNR=3.3						
CFAA				Sn	Sn	23 46 25.2	-8.2
	comp=E,0.1nm,0.3s,baz=283,slow=23,SNR=3.5						
CFAA				LR	LR	23 49 10.5	
	comp=E,51nm,19.6s,baz=360,slow=37						
CPUP	Villa Florida	15.49	124	Pn	Pn	23 44 26.0	-2.6
CPUP	Villa Florida	15.49	124	Pn	Pn	23 44 26.0	-2.6
	comp=E,0.4nm,0.3s,baz=287,slow=16,SNR=4.3						
OTAV	Otavalo	19.60	339	eP	Pn	23 45 20.3	0.0
	comp=E,6.7nm,1.4s						
TRQA	Tornquist	21.42	159	ePn	P	23 45 40.9	+2.9
	comp=E,2.5nm,0.7s						
PLCA	Paso Flores	22.36	178	P	P	23 45 50.5	+2.4
PLCA	Paso Flores	22.36	178	P	P	23 45 50.5	+2.4
	comp=E,11nm,0.9s,baz=345,slow=10,SNR=16						
BDFB	Brasilia	22.80	87	P	P	23 45 49.4	-3.7
BDFB	Brasilia	22.80	87	P	P	23 45 49.4	-3.7
	comp=E,6.9nm,0.5s,baz=259,slow=12,SNR=12						
SDV	Santo Domingo	27.05	2	eP	P	23 46 38.2	+5.5
MTP	Monte Pirata	36.69	10	eP	P	23 47 57.0	+0.1
	comp=E,17nm,0.9s						
RCBR	Riachuelo	37.05	75	eP	P	23 48 02.0	+1.8
TEIG	Tepich	41.62	336	eP	P	23 48 38.0	-0.1
TXAR	Lajitas Array	56.54	326	P	P	23 50 32.4	-0.2
TXAR	Lajitas Array	56.54	326	P	P	23 50 32.4	-0.2
	comp=E,0.5nm,0.8s,baz=156,slow=9.6,SNR=3.9						
TXAR				LR	LR	00 15 16.2	
	comp=E,80nm,20.4s,baz=180,slow=37						
RKT	Rikitea	58.98	254	eS	S	23 58 58.9	+3.3
	comp=E,225nm,24.8s						
RKT				eLR	LR	00 08 26.1	
	comp=E,216nm,22.2s						
ANMO	Albuquerque	62.42	328	eP	P	23 51 14.3	+1.2
ECSD	EROS Data Cent	65.84	340	eP	P	23 51 34.3	-0.9
	comp=E,9.3nm,1.1s						
MVU	Marysvale	68.11	327	eP	P	23 51 50.7	+0.7
	comp=E,13nm,1.8s						
DUG	Dugway	69.68	328	eP	P	23 52 00.2	+0.6
	comp=E,1.6nm,1.0s						
PDAR	Pinedale Array	70.07	331	P	P	23 52 02.7	+0.6
PDAR	Pinedale Array	70.07	331	P	P	23 52 02.7	+0.6
	comp=E,0.4nm,0.8s,baz=148,slow=7.1,SNR=2.8						
HWUT	Hardware Ranch	70.12	329	P	P	23 52 03.5	+1.2
DBIC	Dimbokro	70.43	76	eP	P	23 52 05.2	+0.6
DBIC	Dimbokro	70.43	76	P	P	23 52 02.1	-2.5
	comp=E,2.0nm,0.8s,baz=266,slow=5.6,SNR=2.6						
NVAR	Mina Array Bea	71.39	323	P	P	23 52 11.3	+1.0
NVAR	Mina Array Bea	71.39	323	P	P	23 52 11.3	+1.0
	comp=E,1.4nm,0.8s,baz=144,slow=6.1,SNR=8.2						
ULM	Lac du Bonnet	71.53	344	P	P	23 52 10.3	-0.2
ULM	Lac du Bonnet	71.53	344	P	P	23 52 10.3	-0.2
	comp=E,1.8nm,0.4s,baz=175,slow=7.3,SNR=2.3						
ULM				LR	LR	00 26 06.6	
	comp=E,113nm,20.9s,baz=22,slow=38						
TBI	Tubuai	72.05	251	eS	S	00 01 37.9	+2.4
	comp=E,171nm,23.8s						
TBI				eLR	LR	00 14 32.0	
	comp=E,290nm,30.2s						
HLID	Hailey	72.97	329	eP	P	23 52 20.1	+0.5
	comp=E,15nm,2.1s						
PPT2	Papeete2	73.49	257	eS	SKiKP	00 01 52.7	-0.4
	comp=E,122nm,23.0s						
PPT2				eLR	LR	00 15 10.1	
	comp=E,169nm,23.8s						
TOA0	Torodi Ar. Sit	78.82	72	eP	P	23 52 51.0	-2.4
TORD	Torodi Ar. Bea	78.82	72	P	P	23 52 51.2	-2.2
TORD	Torodi Ar. Bea	78.82	72	P	P	23 52 51.2	-2.2
	comp=E,2.2nm,0.9s,baz=254,slow=5.5,SNR=12						
TORD				LR	LR	00 26 40.7	
	comp=E,426nm,18.5s,baz=240,slow=35						
TSUM	Tsumeb	83.49	108	eP	P	23 53 20.1	+1.8
ESDC	Sonseca Array	85.46	46	P	P	23 53 27.6	-0.1
ESDC	Sonseca Array	85.46	46	P	P	23 53 27.6	-0.1
	comp=E,0.6nm,0.6s,baz=255,slow=5.6,SNR=5.4						
YKA	Yellowknife Ar	87.34	342	P	P	23 53 36.0	-0.3
YKA	Yellowknife Ar	87.34	342	P	P	23 53 36.0	-0.3
	comp=E,5.6nm,0.8s,baz=136,slow=4.9,SNR=93						
YKW3	Yellowknife Ar	87.40	342	eP	P	23 53 35.8	-0.8
	comp=E,0.3nm,1.1s						
MAW	Mawson	88.10	164	P	P	23 53 41.3	+1.2
MAW	Mawson	88.10	164	P	P	23 53 41.3	+1.2
	comp=E,2.0nm,0.6s,baz=187,slow=6.1,SNR=7.2						
KEST	Kesra	93.52	54	LR	LR	00 33 21.9	
	comp=E,106nm,21.5s,baz=312,slow=34						
WRA	Warramunga Arr	134.19	215	PKP	PKPdf	00 00 08.8	+0.5
WRA	Warramunga Arr	134.19	215	PKP	PKPdf	00 00 08.8	+0.5
	comp=E,0.7nm,0.5s,baz=138,slow=2.0,SNR=4.3						
ZALV	Zalesovo Beam	140.09	22	PKP	PKPdf	00 00 18.8	+0.6
ZALV	Zalesovo Beam	140.09	22	PKP	PKPdf	00 00 18.8	+0.6
	comp=E,0.7nm,0.6s,baz=298,slow=3.2,SNR=3.6						
MKAR	Makanchi Array	144.45	31	PKP	PKPbc	00 00 24.9	+0.2
MKAR	Makanchi Array	144.45	31	PKP	PKPbc	00 00 24.9	+0.2
	comp=E,0.4nm,0.7s,baz=325,slow=4.2,SNR=5.7						
KSH	Kashi	144.98	46	ePKP	PKPbc	00 00 27.1	+0.3
KSH				ePKS	PKSdf	00 04 01.2	-1.9
KSH				eSKS	SKSdf	00 07 31.6	-4.3
KSH				AMB	AMB		
	comp=Z,260nm,3.9s						
KSH				LR	LR		
	comp=Z,97nm,4.6s						
USRK	Ussuriysk Arra	147.43	328	PKPbc	PKPbc	00 00 33.0	-0.8
	comp=Z,2.9nm,0.8s,baz=114,slow=2.3,SNR=4.1						
MJAR	Matsushiro Arr	148.03	311	PKPbc	PKPbc	00 00 36.5	+0.8
MJAR	Matsushiro Arr	148.03	311	PKPbc	PKPbc	00 00 36.5	+0.8
	comp=Z,3.7nm,0.7s,baz=98,slow=1.7,SNR=19						
MAT	Matsushiro	148.03	311	PKP	PKPbc	00 00 36.3	+0.6
WMQ	Urumqi	149.22	30	ePKPbc	PKPdf	00 00 34.9	+0.5
WMQ				LR	LR		
	comp=N,120nm,24.4s						
WMQ				LR	LR		
	comp=E,220nm,28.0s						
WMQ				LR	LR		
	comp=Z,100nm,23.0s						
SONM	Songino Array	150.52	3	PKPbc	PKPbc	00 00 41.9	+0.2
SONM				PKPab	PKPab	00 00 50.4	+2.1
SONM	Songino Array	150.52	3	PKPbc	PKPbc	00 00 41.9	+0.2
	comp=Z,1.0nm,0.5s,baz=339,slow=3.8,SNR=3.5						
SONM				PKPab	PKPab	00 00 50.4	+2.1
	comp=Z,0.9nm,0.5s,baz=329,slow=2.6,SNR=4.0						
CN2	Changchun	150.78	334	ePKPbc	PKPdf	00 00 36.9	+0.2
HHC	Hu-ho-hao-te	157.37	354	ePKP	PKPdf	00 00 46.2	-0.1
HHC				PKS	PKSdf	00 04 18.7	-1.4
HHC				SKS	SKSdf	00 07 46.8	-4.5
HHC				AMB	AMB		
	comp=Z,69nm,7.1s						
HHC				LR	LR		
	comp=N,110nm,18.4s						
HHC				LR	LR		
	comp=E,210nm,19.0s						
HHC				LR	LR		
	comp=Z,170nm,18.0s						
LZH	Lanzhou	161.87	12	ePKP	PKPdf	00 00 55.0	+3.4

*TIF **04** 23:52:41.9, 41.°25N×43.°77E, h12km±2km*
*ISCJB **04** 23:52:41.8±1.0, 41.°21N±0.°05×43.°72E±0.°03, h4km±7km, Error ellipse: s-maj=8.4km s-min=4.1km az=167.9*
*DDA **04** 23:52:44.5, 42.°03N×42.°88E, h7km, MD2.8*

ISC 04 23:52:41.5±1.3**, 41.°20N**±0.°06×**43.°70E**±0.°03**, h8**km±11km**,**
n10, σ0^{s}54/19**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.26	323	P	Pb	23 52 47.4	-1.1
AKH				S	Sg	23 52 51.2	+1.0
KZR	Kazreti	0.57	71	P	Pg	23 52 52.7	+0.2
KZR				S	Sg	23 52 59.7	-0.3
GOR	Gori	0.84	21	P	Pg	23 52 57.8	+0.2
GOR				S	Sb	23 53 09.5	-0.3
TBLG	Delisi	0.94	56	P	Pg	23 52 59.1	-0.4
TBLG				S	Sg	23 53 11.9	0.0
DGRG	David-gareji	1.29	78	P	Pg	23 53 06.3	+0.2
DGRG				S	Sn	23 53 24.3	+1.1
DAGI	Agillar	1.35	265	iP	Pg	23 53 07.9	+0.5
DAGI				iS	Sn	23 53 25.3	+0.4
GUDG	Gudauri	1.39	25	P	Pn	23 53 07.2	-0.1
ONI	Oni	1.40	353	P	Pb	23 53 07.9	0.0
ONI				S	Sg	23 53 26.4	0.0
DDEM	Demirkent	1.50	259	iP	Pg	23 53 10.2	-0.2
DDEM				iS	Sg	23 53 30.0	+0.2
DBAD	Bademkaya	1.52	264	iP	Pg	23 53 10.5	-0.2
DBAD				iS	Sb	23 53 29.4	-0.1

IDC 04 23:54:27.4±6.2**, 5.°51S**×**152.°60E, h59**km±53km**, mb3.5**/8**,**
mb1 3.8/9**, mb1mx3.6**/20**, mbtmp3.6**/9**, ML2.8**/1**, Error ellipse: s-maj=47.6km s-min=28.0km az=111.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.64	234	P	Pn	23 56 02.8	+0.4
	1.3nm,0.3s,baz=21,slow=14,SNR=2.9						
PMG				S	Sn	23 57 18.1	+1.4
	7.8nm,0.3s,baz=45,slow=20,SNR=7.6						
WRA	Warramunga Arr	22.83	229	P	P	23 59 25.1	-0.7
	0.9nm,0.5s,baz=54,slow=10,SNR=3.9						
ASAR	Alice Springs	25.49	223	P	P	23 59 51.9	+1.5
	1.3nm,0.7s,baz=54,slow=9.4,SNR=9.7						
STKA	Stephens Creek	28.18	200	P	P	00 00 13.4	-1.0
	0.6nm,0.5s,baz=21,slow=14,SNR=2.4						
FITZ	Fitzroy Crossi	29.15	242	P	P	00 00 21.9	-1.3
	5.4nm,1.1s,baz=48,slow=6.6,SNR=1.9						
MKAR	Makanchi Array	80.73	319	P	P	00 06 34.0	-0.4
	0.3nm,0.5s,baz=110,slow=5.9,SNR=5.8						
ZALV	Zalesovo Beam	81.63	326	P	P	00 06 38.8	-0.2
	0.4nm,0.4s,baz=131,slow=8.1,SNR=3.9						
ILAR	Eielson Array	82.89	22	P	P	00 06 45.4	0.0
	0.4nm,0.6s,baz=250,slow=5.5,SNR=6.5						
YKA	Yellowknife Ar	96.14	28	P	P	00 07 48.8	+0.3
	0.1nm,0.4s,baz=271,slow=4.5,SNR=4.7						
TORD	Torodi Ar. Bea	150.33	287	PKPbc	PKPbc	00 14 13.7	+0.6
	0.4nm,0.7s,baz=97,slow=2.7,SNR=4.7						

*IGIL **04** 23:57:35.8, 37.°08N×14.°81W, h9km, ML2.3*
*MDD **04** 23:57:38.9±1.7, 37.°32N×14.°43W, h0km, mb4.4/8, Error ellipse: s-maj=18.4km s-min=14.9km az=137.0, PRXIMO*
*INMG **04** 23:57:39.8±1.6, 36.°98N×14.°83W, h10km, ML2.5, Error ellipse: s-maj=12.1km s-min=8.1km az=163.0*
*CSEM **04** 23:57:40.6±0.3, 37.°26N×14.°22W, h10km, ML3.4/8, Error ellipse: s-maj=8.1km s-min=5.9km az=148.0*
*ISCJB **04** 23:57:40.2±1.0, 37.°32N±0.°08×14.°08W±0.°06, h10km, Error ellipse: s-maj=12.1km s-min=7.2km az=6.6*

ISC 04 23:57:38.9±1.5**, 37.°31N**±0.°06×**14.°32W**±0.°09**, h10**km**, n80,**
σ1^{s}35/122**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	4.30	66	ePn	Pn	23 58 45.9	+1.6
PMAFR				eSn	Sn	23 59 36.4	+1.9
PMAFR				A	A	23 59 43.3	
	12nm,0.5s						
PMAFR	Mafra	4.30	66	Pn	Pn	23 58 45.8	+1.5
	8.6nm,0.1s,SNR=18						
PMAFR				Sn	Sn	23 59 35.9	+1.4
	11nm,0.2s						
PMAFR	Mafra	4.30	66	Pn	Pn	23 58 45.8	+1.5
	8.6nm,0.1s,SNR=18						
PMAFR				Sn	Sn	23 59 35.9	+1.4
	11nm,0.2s						
PFVI	Vila Bisbo	4.39	91	ePn	Pn	23 58 46.3	+0.7
PFVI				eSn	Sn	23 59 35.7	-1.0
PFVI	Vila Bisbo	4.39	91	Pn	Pn	23 58 46.3	+0.7
	1.5nm,0.1s,SNR=15						
PFVI				Sn	Sn	23 59 34.1	-2.6
	2.3nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	4.39	91	Pn	Pn	23 58 46.3	+0.7
	1.5nm,0.1s,SNR=15						
PFVI				eSn	Sn	23 59 35.7	-1.0
PTEO	Sao Teotonio	4.46	85	ePn	Pn	23 58 47.7	+1.2
PTEO				eSn	Sn	23 59 36.8	-1.7
PTEO				A	A	23 59 41.8	
	5.7nm,0.5s						
PTEO	Sao Teotonio	4.46	85	Pn	Pn	23 58 47.7	+1.2
PTEO				Sn	Sn	23 59 36.8	-1.7
	2.8nm,0.5s						
PTEO	Sao Teotonio	4.46	85	Pn	Pn	23 58 47.7	+1.2
PTEO				eSn	Sn	23 59 36.8	-1.7
	5.7nm,0.5s						
MORF	Marmelete	4.52	88	ePn	Pn	23 58 48.2	+0.8
MORF	Marmelete	4.52	88	Pn	Pn	23 58 48.2	+0.8
MORF	Marmelete	4.52	88	Pn	Pn	23 58 48.2	+0.8
PNCL	Nicolau / Gran	4.66	78	ePn	Pn	23 58 50.2	+0.9
PNCL				eSn	Sn	23 59 43.6	+0.2
PNCL	Nicolau / Gran	4.66	78	ePn	Pn	23 58 50.2	+0.9
PNCL				eSn	Sn	23 59 43.6	+0.2
MESJ	Messejana	4.87	82	eP	Pn	23 58 52.9	+0.7
MESJ				eS	Sn	23 59 49.4	+0.7
MESJ				AML	AML	23 59 50.1	
	comp=N,3.4nm,0.3s						
MESJ	Messejana	4.87	82	eP	Pn	23 58 52.9	+0.7
MESJ				eS	Sn	23 59 49.4	+0.7
MESJ	Messejana	4.87	82	Pn	Pn	23 58 52.9	+0.7
MESJ				Sn	Sn	23 59 49.4	+0.7
MESJ	Messejana	4.87	82	eP	Pn	23 58 52.9	+0.7
MESJ				eS	Sn	23 59 49.4	+0.7
PCVE	Castro Verde	5.00	84	ePn	Pn	23 58 54.8	+0.7
PCVE				eSn	Sn	23 59 50.9	-1.1
PCVE	Castro Verde	5.00	84	Pn	Pn	23 58 54.8	+0.7
PCVE				Sn	Sn	23 59 50.9	-1.1
PCVE	Castro Verde	5.00	84	Pn	Pn	23 58 54.8	+0.7
PCVE				Sn	Sn	23 59 50.9	-1.1
PBDV	Barranco-do-Ve	5.09	89	ePn	Pn	23 58 56.6	+1.3
PBDV				eSn	Sn	23 59 53.2	-1.0
PBDV	Barranco-do-Ve	5.09	89	Pn	Pn	23 58 56.6	+1.3
PBDV				Sn	Sn	23 59 53.2	-1.0
PBDV	Barranco-do-Ve	5.09	89	Pn	Pn	23 58 56.6	+1.3
PBDV				Sn	Sn	23 59 53.2	-1.0
PMTG	Montargil	5.11	68	ePn	Pn	23 58 56.4	+0.9
PMTG				eSn	Sn	23 59 55.2	+0.6
PMTG	Montargil	5.11	68	ePn	Pn	23 58 56.4	+0.9
PMTG				eSn	Sn	23 59 55.2	+0.6
EVO	Evora	5.13	74	ePn	Pn	23 58 56.9	+1.1
EVO				eSn	Sn	23 59 55.1	0.0
EVO				A	A	23 59 58.2	
	comp=N,11nm,0.1s						
EVO	Evora	5.13	74	Pn	Pn	23 58 56.9	+1.1
EVO				Sn	Sn	23 59 55.1	0.0
	comp=N,11nm,0.1s						
EVO	Evora	5.13	74	Pn	Pn	23 58 56.9	+1.1
EVO				eSn	Sn	23 59 55.1	0.0
	comp=N,11nm,0.1s						
PBEJ	Beja	5.17	80	ePn	Pn	23 58 57.9	+1.6
PBEJ				eSn	Sn	23 59 55.5	-0.5
PBEJ	Beja	5.17	80	Pn	Pn	23 58 57.9	+1.6
PBEJ				Sn	Sn	23 59 55.5	-0.5
PBEJ	Beja	5.17	80	Pn	Pn	23 58 57.9	+1.6
PBEJ				Sn	Sn	23 59 55.5	-0.5
PTOM	Tomar	5.18	62	ePn	Pn	23 58 58.5	+2.1
PTOM				eSn	Sn	23 59 57.8	+1.6
PTOM	Tomar	5.18	62	Pn	Pn	23 58 58.5	+2.1
PTOM				Sn	Sn	23 59 57.8	+1.6
PTOM	Tomar	5.18	62	Pn	Pn	23 58 58.5	+2.1
PTOM				Sn	Sn	23 59 57.8	+1.6
PVAQ	Vaqueiros	5.26	87	ePn	Pn	23 58 58.6	+1.1
PVAQ				eSn	Sn	23 59 57.3	-0.9
PVAQ	Vaqueiros	5.26	87	Pn	Pn	23 58 58.6	+1.1
PVAQ				Sn	Sn	23 59 57.3	-0.9
PVAQ	Vaqueiros	5.26	87	Pn	Pn	23 58 58.6	+1.1
PVAQ				Sn	Sn	23 59 57.3	-0.9
EGRO	El Granado	5.45	86	Pn	Pn	23 59 00.9	+0.8
	comp=N,1.2nm,0.1s,SNR=14						
EGRO				Sn	Sn	00 00 01.0	-1.8
	comp=N,1.2nm,0.1s,SNR=7.9						
EGRO	El Granado	5.45	86	Sn	Sn	00 00 01.0	-1.8
	comp=N,1.2nm,0.1s,SNR=7.9						
EGRO	El Granado	5.45	86	Pn	Pn	23 59 00.9	+0.8
	comp=N,1.2nm,0.1s,SNR=14						
PMRV	Marv??o	5.84	67	ePn	Pn	23 59 06.4	+0.9
PMRV	Marv??o	5.84	67	Pn	Pn	23 59 06.4	+0.9
PMRV	Marv??o	5.84	67	Pn	Pn	23 59 06.4	+0.9
PCBR	Castelo Branco	5.93	63	ePn	Pn	23 59 08.2	+1.5
PCBR	Castelo Branco	5.93	63	Pn	Pn	23 59 08.2	+1.5
PCBR	Castelo Branco	5.93	63	Pn	Pn	23 59 08.2	+1.5
EBAD	Badajoz	5.95	74	Pn	Pn	23 59 07.7	+0.8
	comp=N,0.5nm,0.1s,SNR=15						
EBAD				Sn	Sn	00 00 13.0	-2.1
	comp=N,0.7nm,0.1s,SNR=6.7						
EBAD	Badajoz	5.95	74	Sn	Sn	00 00 13.0	-2.1
	comp=N,0.7nm,0.1s,SNR=6.7						
EBAD	Badajoz	5.95	74	Pn	Pn	23 59 07.7	+0.8
	comp=N,0.5nm,0.1s,SNR=15						
EMIN	Mina Concepcio	6.09	83	Pn	Pn	23 59 09.9	+0.9
	comp=N,0.5nm,0.1s,SNR=16						
EMIN				Sn	Sn	00 00 16.2	-2.6
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	6.09	83	Sn	Sn	00 00 16.2	-2.6
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	6.09	83	Pn	Pn	23 59 09.9	+0.9
	comp=N,0.5nm,0.1s,SNR=16						
ELOB	Lobios	6.64	45	Pn	Pn	23 59 17.5	+0.9
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB				Sn	Sn	00 00 28.3	-4.0
	comp=N,1.7nm,0.1s,SNR=7.9						
ELOB	Lobios	6.64	45	Pn	Pn	23 59 17.5	+0.9
	comp=N,0.4nm,0.1s,SNR=7.9						
ESPR	Espera	6.78	91	Pn	Pn	23 59 20.9	+2.5
	comp=N,0.7nm,0.1s,SNR=7.9						
ESPR				Sn	Sn	00 00 34.8	-0.8
	comp=N,1.8nm,0.2s,SNR=7.9						
ESPR	Espera	6.78	91	Sn	Sn	00 00 34.8	-0.8
	comp=N,1.8nm,0.2s,SNR=7.9						
ESPR	Espera	6.78	91	Pn	Pn	23 59 20.9	+2.5
	comp=N,0.7nm,0.1s,SNR=7.9						
MVO	Moncorvo	6.84	54	Pn	Pn	23 59 20.1	+0.8
	comp=N,1.2nm,0.1s,SNR=10						
MVO				Sn	Sn	00 00 33.4	-3.9
	comp=N,0.9nm,0.1s						
MVO	Moncorvo	6.84	54	Pn	Pn	23 59 20.1	+0.8
	comp=N,1.2nm,0.1s,SNR=10						
EMAZ	Mazaricos	6.96	34	Sn	Sn	00 00 35.1	-5.1
	comp=N,2.2nm,0.1s,SNR=4.0						
ECAL	Calabor	7.46	49	Pn	Pn	23 59 28.7	+0.9
	comp=N,2.3nm,0.2s,SNR=7.1						
ECAL				Sn	Sn	00 00 48.9	-3.6
	comp=N,0.9nm,0.1s,SNR=7.9						
ECAL	Calabor	7.46	49	Pn	Pn	23 59 28.7	+0.9
	comp=N,2.3nm,0.2s,SNR=7.1						
ERUA	La Rua	7.50	45	Pn	Pn	23 59 28.7	+0.4
	comp=N,3.6nm,0.3s,SNR=7.9						
ERUA	La Rua	7.50	45	Pn	Pn	23 59 28.7	+0.4
	comp=N,3.6nm,0.3s,SNR=7.9						
EMIJ	Mijas	7.68	93	Pn	Pn	23 59 31.8	+1.0
	comp=N,0.3nm,0.1s,SNR=7.9						
EMIJ	Mijas	7.68	93	Pn	Pn	23 59 31.8	+1.0
	comp=N,0.3nm,0.1s,SNR=7.9						
EADA	Adamuz	7.77	81	Pn	Pn	23 59 33.0	+1.0
	comp=N,0.3nm,0.1s,SNR=7.9						
EADA				Sn	Sn	00 00 58.8	-1.2
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA	Adamuz	7.77	81	Sn	Sn	00 00 58.8	-1.2
	comp=N,0.6nm,0.1s,SNR=7.9						
EADA	Adamuz	7.77	81	Pn	Pn	23 59 33.0	+1.0
	comp=N,0.3nm,0.1s,SNR=7.9						
EBAN	Banos Encina	8.39	81	Pn	Pn	23 59 41.9	+1.4
	comp=N,0.7nm,0.1s,SNR=4.0						
EBAN	Banos Encina	8.39	81	Pn	Pn	23 59 41.9	+1.4
	comp=N,0.7nm,0.1s,SNR=4.0						
ESDC	Sonseca Array	8.46	71	Pn	Pn	23 59 42.1	+0.6
	comp=N,1.1nm,0.1s,baz=255,slow=13,SNR=7.9						
ESDC	Sonseca Array	8.46	71	Pn	Pn	23 59 42.1	+0.6
	comp=N,1.1nm,0.1s,baz=255,slow=13,SNR=7.9						
EBAJ	Bajamar	8.91	192	Pn	Pn	23 59 47.5	-0.2
	comp=N,2.0nm,0.2s,SNR=7.9						
EBAJ	Bajamar	8.91	192	Pn	Pn	23 59 47.5	-0.2
	comp=N,2.0nm,0.2s,SNR=7.9						
EQES	Quesada	8.95	83	Pn	Pn	23 59 48.9	+0.6
	comp=N,0.1nm,0.2s,SNR=7.9						
EQES	Quesada	8.95	83	Pn	Pn	23 59 48.9	+0.6
	comp=N,0.1nm,0.2s,SNR=7.9						
ETOR	Torete	10.16	66	Pn	Pn	00 00 05.6	+0.8
	SNR=7.9						
ETOR	Torete	10.16	66	Pn	Pn	00 00 05.6	+0.8
	SNR=7.9						

SKHL 04 23:58:18.8±1.2**, 54.°65N**×**142.°36E, h10**km**, mb3.8**/4**, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKH	Okha	1.15	163	ePg	Pn	23 58 41.1	+0.2
OKH				AMB	AMB	23 58 42.0	
	251nm,0.8s						
OKH				eS	Sb	23 58 55.0	-0.7
OKH				iSg	Sg	23 58 55.9	0.0
OKH				A	A	23 58 58.0	
	4μm,0.4s						
OKH				A	A	23 58 58.0	
	4μm,0.6s						
OKH				A	A	23 58 58.6	
	2μm,0.5s						
NKL	Nikolayevsk	1.80	214	iPb	Pb	23 58 51.0	-0.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKL				AMB	AMB	23 58 51.7	
	12nm,0.5s						
NKL				*i* Pg	Pg	23 58 54.0	+0.7
NKL				*e*Sg	Sg	23 59 19.5	+2.8
NKL				A	A	23 59 21.5	
	90nm,0.4s						
NKL				A	A	23 59 21.5	
	17nm,0.4s						
TYV	**Tymovskoe**	**3.80**	**177**	*e*Pg	Pg	23 59 34.2	+2.7
TYV				*e*Sg	Sg	00 00 27.8	+7.1
TYV				A	A	00 00 32.0	
	10.0nm,0.5s						
TYV				A	A	00 00 32.0	
	7.0nm,0.5s						
GRNR	**Gornyy**	**5.30**	**225**	*e*Pg	Pg	00 00 04.0	+3.6
GRNR				AMB	AMB	00 00 04.5	
	9.0nm,0.5s						
GRNR				*e*Sg	Sg	00 01 17.0	+7.9
GRNR				A	A	00 01 21.3	
	28nm,0.8s						
EKMR	**Ekimchan**	**5.79**	**258**	*e*Pg	Pg	00 00 12.5	+2.8
EKMR				AMB	AMB	00 00 23.4	
	3.0nm,0.3s						
EKMR				*e*Sg	Sg	00 01 35.0	+10
EKMR				A	A	00 01 41.9	
	8.0nm,0.6s						

*IDC **04** 23:58:16.4±0.6, 55°.42S×26°.84W, h0^{km}, mb4.5/10, mb1 4.4/11, mb1mx4.2/18, mbtmp4.4/11, ML3.5/1, MS4.3/14, Ms1 4.2/14, ms1mx4.2/21, Error ellipse: s-maj=20.5km s-min=17.6km az=62.0*

*ISCJB **04** 23:58:18.0±0.5, 55°.43S±0°.08×27°.0W±0°.2, h25^{km}, mb4.5/12, MS4.3/13, Error ellipse: s-maj=14.3km s-min=10.8km az=169.1*

*NEIC **04** 23:58:21.5±0.3, 55°.42S×26°.83W, h35^{km}, mb4.5/8, Error ellipse: s-maj=12.1km s-min=9.7km az=95.0*

*GCMT **04** 23:58:25.9±0.3, 55°.39S×26°.81W, h20^{km}±1^{km}, MW5.0, Moment Tensor Solution. s25,c31; s47,c74; Moment tensor: Scale 10^{16}Nm; M_{rr}3.42±.28; $M_{\theta\theta}$-1.24±.18; $M_{\phi\phi}$-2.17±.19; $M_{r\theta}$-1.21±.34; $M_{\theta\phi}$2.12±.09; $M_{\phi r}$-0.34±.33; Best double couple: $M_0$3.90000×10^{16} NP1:ϕ_s159.00000°, δ44.00000°, λ117.00000°. NP2:ϕ_s303.00000°, δ52.00000°, λ66.00000°. Principal axes: T 3.8500, Plg71.0000°, Azm152.0000°; N 0.0700, Plg19.0000°, Azm319.0000°; P -3.9100, Plg4.0000°, Azm50.0000°; Data Used: II IU G IC CN.*

ISC 04 23:58:20.1±0.5**, 55°.43S**±0°.09×**26°.9W**±0°.1**, h25^{km}, n62, σ0^s.83**/56**, mb4.6**/11**, MS4.3**/13**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA2	**Neumayer--Watz**	**17.70**	**159**	*e*P	**P**	**00 02 26.7**	**+1.5**
SNAA	**Sanae**	**19.23**	**157**	*e*P	**P**	**00 02 41.6**	**-0.5**
SNAA	**Sanae**	**19.23**	**157**	*e*P	**P**	**00 02 42.0**	**-0.1**
	9.3nm,0.7s						
SNAA	**Sanae**	**19.23**	**157**	P	**P**	**00 02 41.6**	**-0.5**
	0.2nm,0.3s,baz=311,slow=10.0,SNR=17						
SNAA				LR	LR	00 09 04.5	
	comp=Z,239nm,19.2s,baz=154,slow=34						
PMSA	**Palmer Station**	**20.45**	**228**	PP	**P**	**00 02 55.7**	**+0.4**
PMSA	**Palmer Station**	**20.45**	**228**	P	**P**	**00 02 54.8**	**-0.5**
	31nm,1.0s,baz=68,slow=7.5,SNR=2.2						
PMSA				LR	LR	00 09 22.6	
	comp=Z,892nm,19.5s,baz=290,slow=32						
MAIT	**Maitri**	**22.65**	**148**	*e*P	P	00 03 05.5	-13
MAIT	**Maitri**	**22.65**	**148**	*e*P	P	00 03 08.0	-11
PLCA	**Paso Flores**	**32.08**	**279**	LR	LR	00 16 42.9	
	comp=Z,457nm,22.0s,baz=266,slow=34						
QSPA	**South Pole Qui**	**34.82**	**180**	*e*P	**P**	**00 05 07.3**	**-1.3**
	8.5nm,0.7s						
CPUP	**Villa Florida**	**36.55**	**310**	P	**P**	**00 05 23.2**	**-0.4**
	5.7nm,0.9s,baz=138,slow=6.6,SNR=7.5						
SUR	**Sutherland**	**40.30**	**75**	*e*P	**P**	**00 05 55.4**	**+0.1**
SUR	**Sutherland**	**40.30**	**75**	P	**P**	**00 05 55.1**	**-0.2**
	5.8nm,1.0s,baz=247,slow=8.4,SNR=2.6						
MAW	**Mawson**	**40.54**	**144**	*e*P	**P**	**00 05 56.4**	**-0.2**
	2.5nm,1.2s						
MAW	**Mawson**	**40.54**	**144**	P	**P**	**00 05 56.5**	**-0.2**
	5.1nm,0.8s,baz=228,slow=5.9,SNR=6.9						
MAW				LR	LR	00 21 34.2	
	comp=Z,418nm,19.1s,baz=256,slow=34						
BDFB	**Brasilia**	**42.92**	**329**	LR	LR	00 21 02.5	
	comp=Z,135nm,21.3s,baz=17,slow=32						
BOSA	**Boshof**	**45.64**	**76**	*e*P	**P**	**00 06 37.5**	**-0.9**
	5.9nm,0.9s						
BOSA	**Boshof**	**45.64**	**76**	P	**P**	**00 06 37.5**	**-0.9**
	3.4nm,0.9s,baz=267,slow=3.8,SNR=6.3						
BOSA				LR	LR	00 22 14.9	
	comp=Z,828nm,19.3s,baz=193,slow=32						
VNDA	**Vanda**	**47.20**	**183**	P	**P**	**00 06 50.1**	**+0.2**
VNDA	**Vanda**	**47.20**	**183**	P	**P**	**00 06 50.1**	**+0.2**
	5.6nm,0.9s,baz=194,slow=7.2,SNR=19						
LPAZ	**La Paz**	**50.18**	**304**	*e*P	**P**	**00 07 14.3**	**0.0**
	13nm,0.8s						
LPAZ	**La Paz**	**50.18**	**304**	P	**P**	**00 07 14.6**	**+0.3**
	4.8nm,0.6s,baz=128,slow=7.6,SNR=17						
LPAZ				LR	LR	00 28 41.0	
	comp=Z,162nm,21.4s,baz=62,slow=36						
SAML	**Samuel**	**54.50**	**314**	*e*P	**P**	**00 07 44.5**	**-1.2**
	7.0nm,1.0s						
DBIC	**Dimbokro**	**64.53**	**24**	*e*P	**P**	**00 08 53.8**	**-0.9**
	4.5nm,0.7s						
DBIC	**Dimbokro**	**64.53**	**24**	P	**P**	**00 08 56.0**	**+1.3**
	5.8nm,0.8s,baz=167,slow=6.0,SNR=6.8						
DBIC				LR	LR	00 31 13.9	
	comp=Z,292nm,18.3s,baz=182,slow=31						
TOA0	**Torodi Ar. Sit**	**72.42**	**29**	*e*P	**P**	**00 09 43.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**72.42**	**29**	P	**P**	**00 09 43.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**72.42**	**29**	P	**P**	**00 09 43.8**	**-0.3**
	13nm,0.8s,baz=200,slow=6.8,SNR=100						
KMBO	**Kilima Mbogo**	**74.64**	**69**	LR	LR	00 42 35.8	
	comp=Z,206nm,18.6s,baz=103,slow=36						
RPZ	**Rata Peaks**	**80.06**	**193**	LR	LR	00 45 12.6	
	comp=Z,332nm,18.7s,baz=273,slow=35						
TAM	**Tamanrasset**	**82.66**	**30**	*e*P	**P**	**00 10 41.7**	**+0.5**
	2.0nm,1.0s						
TBI	**Tubuai**	**87.62**	**231**	*e*LR	LR	00 39 01.3	
	193nm,30.2s						
PPT2	**Papeete2**	**92.70**	**233**	*e*LR	LR	00 41 20.7	
	116nm,21.2s						
PPT	**Papeete**	**92.72**	**233**	LR	LR	00 44 26.1	
	comp=Z,221nm,18.7s,baz=159,slow=30						
KEST	**Kesra**	**95.94**	**29**	LR	LR	00 50 46.2	
	comp=Z,68nm,18.6s,baz=201,slow=33						
ESDC	**Sonseca Array**	**96.73**	**18**	LR	LR	00 54 13.1	
	comp=Z,92nm,18.2s,baz=215,slow=35						
ASAR	**Alice Springs**	**99.52**	**162**	P	**Pdif**	**00 12 02.8**	**+1.8**
ASAR	**Alice Springs**	**99.52**	**162**	P	**Pdif**	**00 12 02.8**	**+1.8**
	0.5nm,0.8s,baz=183,slow=3.9,SNR=4.8						
ASAR				LR	LR	00 55 32.8	
	comp=Z,162nm,21.2s,baz=191,slow=34						
DZM	**Mont Dzumac**	**101.98**	**193**	*e*LR	LR	00 45 50.9	
	189nm,24.4s						
FINES	**FINESS Array B**	**123.75**	**27**	PKP	**PKPdf**	**00 17 14.1**	**+0.1**
FINES	**FINESS Array B**	**123.75**	**27**	PKP	**PKPdf**	**00 17 14.1**	**+0.1**
	4.9nm,1.1s,baz=222,slow=2.6,SNR=7.1						
CMAR	**Chiang Mai Arr**	**125.10**	**110**	PKP	**PKPdf**	**00 17 19.3**	**+1.2**
CMAR	**Chiang Mai Arr**	**125.10**	**110**	PKP	**PKPdf**	**00 17 19.3**	**+1.2**
	1.2nm,0.3s,baz=224,slow=2.5,SNR=3.1						
ABKAR	**Akbulak array**	**126.86**	**55**	*e*PKPdf	**PKPdf**	**00 17 19.8**	**-0.6**
KKAR	**Karatay Array**	**127.81**	**67**	*e*PKPdf	**PKPdf**	**00 17 23.2**	**+0.7**
EKS2	**Erkin-Say**	**129.23**	**69**	*e*PKPdf	**PKPdf**	**00 17 25.3**	**-0.1**
ARCES	**ARCESS Array B**	**130.30**	**21**	PKP	**PKPdf**	**00 17 26.4**	**-0.1**
ARCES	**ARCESS Array B**	**130.30**	**21**	PKP	**PKPdf**	**00 17 26.4**	**-0.1**
	3.8nm,0.9s,baz=238,slow=2.3,SNR=6.3						
YKA	**Yellowknife Ar**	**135.84**	**318**	PKP	**PKPdf**	**00 17 37.4**	**+0.4**
YKA				PP	**PP**	**00 20 16.6**	**-0.2**
YKA				SKPbc	**SKPbc**	**00 21 07.5**	**+0.9**
YKA	**Yellowknife Ar**	**135.84**	**318**	PKP	**PKPdf**	**00 17 37.4**	**+0.4**
	0.6nm,0.7s,baz=124,slow=2.0,SNR=12						
YKA				PP	**PP**	**00 20 16.6**	**-0.2**
	0.3nm,0.9s,baz=120,slow=6.0,SNR=3.8						
YKA				SKPbc	**SKPbc**	**00 21 07.5**	**+0.9**
	0.3nm,1.0s,baz=110,slow=2.7,SNR=4.9						
MKAR	**Makanchi Array**	**136.51**	**71**	PKP	**PKPdf**	**00 17 39.3**	**+0.5**
MKAR	**Makanchi Array**	**136.51**	**71**	PKP	**PKPdf**	**00 17 39.3**	**+0.5**
	0.3nm,0.6s,baz=223,slow=2.4,SNR=3.3						
ZALV	**Zalesovo Beam**	**141.93**	**63**	PKP	**PKPdf**	**00 17 46.2**	**-2.2**
ZALV	**Zalesovo Beam**	**141.93**	**63**	PKP	**PKPdf**	**00 17 46.2**	**-2.2**
	0.3nm,0.3s,baz=236,slow=1.6,SNR=2.8						
ILAR	**Eielson Array**	**149.84**	**312**	PKPbc	**PKPbc**	**00 18 06.0**	**-0.4**
ILAR	**Eielson Array**	**149.84**	**312**	PKPbc	**PKPbc**	**00 18 06.0**	**-0.4**
	4.7nm,0.8s,baz=120,slow=1.5,SNR=24						
SONM	**Songino Array**	**150.50**	**85**	PKPbc	**PKPbc**	**00 18 08.6**	**0.0**
SONM	**Songino Array**	**150.50**	**85**	PKPbc	**PKPbc**	**00 18 08.6**	**0.0**
	2.7nm,0.6s,baz=225,slow=3.4,SNR=7.4						
KDAK	**Kodiak Island**	**150.71**	**297**	PKPbc	**PKPbc**	**00 18 08.9**	**+0.3**
KDAK	**Kodiak Island**	**150.71**	**297**	PKPbc	**PKPbc**	**00 18 08.9**	**+0.3**
	3.1nm,0.4s,baz=307,slow=2.1,SNR=12						
ULN	**Ulaanbaatar**	**150.88**	**86**	*e*PKPdf	**PKPdf**	**00 18 04.3**	**+0.4**
ULN				*e*PKPbc	**PKiKP**	**00 18 11.1**	**+0.9**
PPLA	**Purkeypile**	**151.81**	**308**	*e*PKPdf	**PKPdf**	**00 18 05.9**	**+1.0**
PPLA				*e*PKPbc	**PKPbc**	**00 18 11.2**	**-0.1**

IDC 04 23:58:31.9±6.2**, 17°.65S**×**178°.75W, h581^{km}**±70^{km}**, mb3.3**/8**, mb1 3.6**/8**, mb1mx3.3**/20**, mbtmp3.3**/8**, Error ellipse: s-maj=38.4km s-min=26.5km az=135.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.47**	**241**	P	P	00 05 05.5	+0.2
	5.4nm,0.5s,baz=94,slow=9.7,SNR=28						
WRA	**Warramunga Arr**	**44.36**	**259**	P	P	00 05 51.2	-0.7
	3.2nm,0.5s,baz=93,slow=7.1,SNR=30						
ASAR	**Alice Springs**	**44.55**	**254**	P	P	00 05 53.0	-0.2
	27nm,0.6s,baz=88,slow=8.3,SNR=324						
ASAR				PcP	PcP	00 07 22.9	-0.7
	1.0nm,0.5s,baz=104,slow=3.9,SNR=4.5						
FITZ	**Fitzroy Crossi**	**52.75**	**260**	P	P	00 06 54.1	+0.2
	2.6nm,0.7s,baz=97,slow=4.1,SNR=12						
MJAR	**Matsushiro Arr**	**67.50**	**323**	P	P	00 08 31.1	+0.1
	0.8nm,0.6s,baz=158,slow=6.8,SNR=3.9						
ILAR	**Eielson Array**	**85.71**	**13**	P	P	00 10 08.3	-1.2
	0.3nm,0.4s,baz=224,slow=5.2,SNR=7.8						
TXAR	**Lajitas Array**	**86.13**	**58**	P	P	00 10 13.3	+0.7
	0.7nm,0.7s,baz=215,slow=6.2,SNR=9.8						
PDAR	**Pinedale Array**	**87.39**	**44**	P	P	00 10 17.9	-0.4
	0.4nm,0.6s,baz=234,slow=3.6,SNR=5.0						
ARCES	**ARCESS Array B**	**126.00**	**350**	PKP	PKPdf	00 16 28.1	+0.1
	1.4nm,0.7s,baz=46,slow=3.9,SNR=3.0						
BRTR	**Keskin Array B**	**144.37**	**315**	PKP	PKPdf	00 17 02.8	-0.1
	0.5nm,0.4s,baz=103,slow=2.1,SNR=8.5						
GERES	**GERESS Array B**	**147.28**	**345**	PKPbc	PKPbc	00 17 10.5	-0.3
	0.5nm,0.6s,baz=24,slow=3.6,SNR=6.0						
TORD	**Torodi Ar. Bea**	**175.51**	**186**	PKPab	PKPab	00 19 16.6	-1.3
	0.8nm,1.3s,baz=180,slow=3.9,SNR=2.7						

IDC 05 00:38:22.7±65.0**, 20°.25S**×**178°.42E, h0^{km}, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/18**, mbtmp3.9**/3**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx2.4**/33**, Error ellipse: s-maj=1160.0km s-min=161.6km az=81.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	**Rarotonga**	**20.42**	**97**	LR	LR	00 49 31.8	
	comp=Z,306nm,18.0s,baz=277,slow=33						
STKA	**Stephens Creek**	**34.88**	**243**	P	P	00 45 16.8	+0.7
	1.5nm,0.8s,baz=95,slow=11,SNR=3.1						
ASAR	**Alice Springs**	**41.30**	**257**	P	P	00 46 09.9	-0.4
	1.8nm,0.6s,baz=96,slow=8.3,SNR=20						
WRA	**Warramunga Arr**	**41.30**	**263**	P	P	00 46 10.0	-0.4
	1.3nm,0.9s,baz=98,slow=9.1,SNR=3.2						

*IDC **05** 00:47:16.2±2.0, 36°.97S×178°.36E, h0^{km}, mb3.6/2, mb1 3.9/2, mb1mx3.7/16, mbtmp3.6/2, MS3.9/2, Ms1 3.9/2, ms1mx3.3/24, Error ellipse: s-maj=46.2km s-min=36.6km az=96.0*

*ISCJB **05** 00:47:21.6±1.0, 37°.31S±0°.06×178°.13E±0°.10, h139^{km}, mb3.4/2, Error ellipse: s-maj=12.7km s-min=5.7km az=143.2*

*NEIC **05** 00:47:27.4, 37°.18S×177°.81E, h33^{km}, ML4.1(WEL), After WEL.*

*WEL **05** 00:47:28.6±0.2, 37°.31S×177°.77E, h33^{km}, ML4.0/27, Error ellipse: s-maj=1.9km s-min=1.5km az=0.0*

ISC 05 00:47:23.6±1.3**, 37°.36S**±0°.07×**177°.98E**±0°.09**, h139^{km}, n161, σ1^s.55**/152**, 4C-7D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.33**	**128**	⇑P*	Pn	00 47 38.6	-4.2
MXZ	**Matakaoa Point**	**0.33**	**128**	P*	Pn	00 47 38.6	-4.2
WIZ	**White Island**	**0.65**	**255**	⇑P*	Pn	00 47 39.8	-4.7
WIZ				S*	Sn	00 47 48.5	-12
WIZ	**White Island**	**0.65**	**255**	P*	Pn	00 47 39.8	-4.7
WIZ				S*	Sn	00 47 48.7	-12
PUZ	**Puketiti**	**0.74**	**163**	PN	**Pn**	**00 47 44.1**	**-1.1**
PUZ				SN	**Sn**	**00 47 57.6**	**-4.1**
PUZ	**Puketiti**	**0.74**	**163**	Pn	**Pn**	**00 47 44.0**	**-1.1**
PUZ				Sn	**Sn**	**00 47 58.4**	**-3.4**
MWZ	**Matawai**	**1.04**	**200**	P*	**Pn**	**00 47 45.9**	**-1.7**
MWZ				S*	Sn	00 47 58.9	-7.1
MWZ	**Matawai**	**1.04**	**200**	P*	**Pn**	**00 47 45.9**	**-1.7**
URZ	**Urewera**	**1.13**	**217**	⇑P*	**Pn**	**00 47 46.6**	**-1.9**
URZ	**Urewera**	**1.13**	**217**	P*	**Pn**	**00 47 46.6**	**-1.9**
URZ				Sn	Sn	00 48 00.3	-7.2
URZ	**Urewera**	**1.13**	**217**	Pn	**Pn**	**00 47 46.6**	**-1.9**
	74nm,0.3s,baz=61,slow=9.5,SNR=199						
URZ				Sn	Sn	00 48 00.3	-7.2
	121nm,0.3s,baz=180,slow=20,SNR=67						
CNGZ	**Carnagh Statio**	**1.14**	**171**	⇓PN	**Pn**	**00 47 49.1**	**+0.6**
CNGZ				SN	**Sn**	**00 48 07.7**	**+0.1**
CNGZ	**Carnagh Statio**	**1.14**	**171**	Pn	**Pn**	**00 47 49.1**	**+0.6**
CNGZ				Sn	**Sn**	**00 48 07.8**	**+0.2**
MARZ	**Manawahe**	**1.21**	**239**	P*	**Pn**	**00 47 47.2**	**-2.1**
OPRZ	**Ohinepanea**	**1.23**	**247**	P*	**Pn**	**00 47 47.0**	**-2.4**
OPRZ	**Ohinepanea**	**1.23**	**247**	P*	**Pn**	**00 47 47.0**	**-2.4**
EDRZ	**Edgecumbe**	**1.23**	**233**	*e*P*	**Pn**	**00 47 48.0**	**-1.5**
MYRZ	**Mayor Island**	**1.39**	**273**	⇓P*	**Pn**	**00 47 48.9**	**-2.2**
TGRZ	**Tauranga**	**1.42**	**254**	⇓P*	**Pn**	**00 47 49.5**	**-1.8**
TGRZ	**Tauranga**	**1.42**	**254**	P*	**Pn**	**00 47 49.5**	**-1.8**
TARZ	**Mount Tarawera**	**1.46**	**233**	P*	**Pn**	**00 47 51.9**	**0.0**
TARZ	**Mount Tarawera**	**1.46**	**233**	P*	**Pn**	**00 47 51.9**	**0.0**
RRRZ	**Republican Roa**	**1.52**	**230**	P*	**Pn**	**00 47 51.8**	**-0.7**
RRRZ	**Republican Roa**	**1.52**	**230**	P*	**Pn**	**00 47 51.8**	**-0.7**
KARZ	**Kaharoa**	**1.53**	**244**	⇓P*	**Pn**	**00 47 51.5**	**-1.1**
KARZ	**Kaharoa**	**1.53**	**244**	P*	**Pn**	**00 47 51.5**	**-1.1**
PRGZ	**Paritu Road**	**1.56**	**183**	*e*PN	**Pn**	**00 47 52.7**	**-0.2**
PRGZ	**Paritu Road**	**1.56**	**183**	Pn	**Pn**	**00 47 54.0**	**+1.1**
PRRZ	**Plateau Road**	**1.69**	**227**	P*	**Pn**	**00 47 54.4**	**-0.1**
PRRZ	**Plateau Road**	**1.69**	**227**	P*	**Pn**	**00 47 54.4**	**-0.1**
RAHZ	**Arahi**	**1.71**	**204**	PN	**Pn**	**00 47 56.0**	**+1.4**
RAHZ	**Arahi**	**1.71**	**204**	Pn	**Pn**	**00 47 56.0**	**+1.4**
ALRZ	**Allen Road**	**1.77**	**227**	*e*P*	**Pn**	**00 47 55.2**	**0.0**
ALRZ	**Allen Road**	**1.77**	**227**	P*	**Pn**	**00 47 55.2**	**0.0**
ALRZ				S*	Sn	00 48 10.9	-8.7
MHGZ	**Mahia Peninsul**	**1.79**	**182**	PN	**Pn**	**00 47 56.9**	**+1.4**
MHGZ	**Mahia Peninsul**	**1.79**	**182**	Pn	**Pn**	**00 47 56.9**	**+1.4**
KUZ	**Kuaotunu**	**1.91**	**288**	PN	**Pn**	**00 47 55.6**	**-1.3**
KUZ	**Kuaotunu**	**1.91**	**288**	Pn	**Pn**	**00 47 55.4**	**-1.6**
NMHZ	**Naumai**	**1.96**	**208**	PN	**Pn**	**00 47 59.5**	**+1.9**
NMHZ	**Naumai**	**1.96**	**208**	Pn	**Pn**	**00 47 59.5**	**+1.9**
TOZ	**Tahuroa Road**	**2.00**	**259**	⇓P*	**Pn**	**00 47 57.5**	**-0.5**
TOZ	**Tahuroa Road**	**2.00**	**259**	P*	**Pn**	**00 47 57.5**	**-0.5**
BKZ	**Black Stump Fm**	**2.15**	**213**	P*	**Pn**	**00 48 00.8**	**+1.0**
BKZ	**Black Stump Fm**	**2.15**	**213**	P*	**Pn**	**00 48 01.3**	**+1.5**
MKAZ	**Moumakai**	**2.26**	**276**	⇑PN	**Pn**	**00 48 01.0**	**-0.1**
MKAZ	**Moumakai**	**2.26**	**276**	Pn	**Pn**	**00 48 01.0**	**-0.1**
MCHZ	**McNeill Hill**	**2.31**	**206**	PN	**Pn**	**00 48 03.5**	**+1.8**
MCHZ	**McNeill Hill**	**2.31**	**206**	Pn	**Pn**	**00 48 03.5**	**+1.8**
WTVZ	**West Tongariro**	**2.57**	**226**	P*	**Pn**	**00 48 07.5**	**+2.4**
WTVZ	**West Tongariro**	**2.57**	**226**	P*	**Pn**	**00 48 07.8**	**+2.7**
KAHZ	**Kahuranaki**	**2.58**	**199**	PN	**Pn**	**00 48 06.4**	**+1.3**
KAHZ	**Kahuranaki**	**2.58**	**199**	Pn	**Pn**	**00 48 06.5**	**+1.3**
BHHZ	**Black Hill Sta**	**2.60**	**215**	P*	**Pn**	**00 48 07.5**	**+2.0**
BHHZ	**Black Hill Sta**	**2.60**	**215**	P*	**Pn**	**00 48 07.5**	**+2.0**
NGZ	**Ngauruhoe**	**2.61**	**225**	P*	**Pn**	**00 48 07.9**	**+2.4**
NGZ	**Ngauruhoe**	**2.61**	**225**	P*	**Pn**	**00 48 08.1**	**+2.5**
TWVZ	**Taurewa**	**2.63**	**229**	P*	**Pn**	**00 48 08.4**	**+2.6**
TWVZ	**Taurewa**	**2.63**	**229**	P*	**Pn**	**00 48 08.1**	**+2.2**
ABAZ	**Army Bay**	**2.63**	**286**	⇓PN	**Pn**	**00 48 06.5**	**+0.7**
TUVZ	**Tukino**	**2.64**	**223**	P*	**Pn**	**00 48 08.2**	**+2.2**
TUVZ	**Tukino**	**2.64**	**223**	P*	**Pn**	**00 48 08.2**	**+2.2**
WPVZ	**Whakapapa**	**2.66**	**225**	P*	**Pn**	**00 48 08.7**	**+2.5**
WPVZ	**Whakapapa**	**2.66**	**225**	P*	**Pn**	**00 48 08.8**	**+2.5**
FWVZ	**Far West T-bar**	**2.69**	**225**	P*	**Pn**	**00 48 09.0**	**+2.3**
FWVZ	**Far West T-bar**	**2.69**	**225**	P*	**Pn**	**00 48 09.0**	**+2.3**
MOVZ	**Moawhango**	**2.69**	**220**	P*	**Pn**	**00 48 08.2**	**+1.6**
MOVZ	**Moawhango**	**2.69**	**220**	P*	**Pn**	**00 48 08.3**	**+1.7**
DRZ	**Dome Shelter**	**2.70**	**224**	P*	**Pn**	**00 48 09.2**	**+2.3**
WNVZ	**Wahianoa**	**2.71**	**223**	P*	**Pn**	**00 48 09.1**	**+2.1**
WNVZ	**Wahianoa**	**2.71**	**223**	P*	**Pn**	**00 48 09.1**	**+2.1**
TRVZ	**Turoa**	**2.72**	**224**	P*	**Pn**	**00 48 09.3**	**+2.1**
TRVZ	**Turoa**	**2.72**	**224**	P*	**Pn**	**00 48 09.3**	**+2.1**
HIZ	**Hauiti**	**2.73**	**244**	⇓PN	**Pn**	**00 48 08.4**	**+1.5**
HIZ	**Hauiti**	**2.73**	**244**	Pn	**Pn**	**00 48 08.4**	**+1.5**
PXZ	**Pawanui**	**2.81**	**198**	PN	**Pn**	**00 48 08.4**	**+0.4**
PXZ	**Pawanui**	**2.81**	**198**	Pn	**Pn**	**00 48 08.6**	**+0.6**
MTVZ	**Mangateitei**	**2.83**	**224**	P*	**Pn**	**00 48 10.4**	**+2.1**
MTVZ	**Mangateitei**	**2.83**	**224**	P*	**Pn**	**00 48 10.4**	**+2.1**
PKVZ	**Pokaka**	**2.83**	**226**	P*	**Pn**	**00 48 08.1**	**-0.2**
PNHZ	**Pukenui**	**2.91**	**208**	PN	**Pn**	**00 48 10.0**	**+0.8**
PNHZ	**Pukenui**	**2.91**	**208**	Pn	**Pn**	**00 48 10.0**	**+0.8**
WPHZ	**Waipukurau**	**2.96**	**204**	Pn	**Pn**	**00 48 11.3**	**+1.4**
PRHZ	**Porangahau**	**3.09**	**200**	PN	**Pn**	**00 48 12.1**	**+0.6**
PRHZ	**Porangahau**	**3.09**	**200**	Pn	**Pn**	**00 48 12.2**	**+0.6**
TSZ	**Takapari Road**	**3.12**	**210**	PN	**Pn**	**00 48 12.6**	**+0.6**
TSZ	**Takapari Road**	**3.12**	**210**	Pn	**Pn**	**00 48 12.7**	**+0.6**
WCZ	**Waipu Caves**	**3.25**	**295**	PN	**Pn**	**00 48 14.6**	**+0.9**
WCZ	**Waipu Caves**	**3.25**	**295**	Pn	**Pn**	**00 48 14.6**	**+0.9**
WAZ	**Wanganui**	**3.35**	**224**	PN	**Pn**	**00 48 17.3**	**+2.3**
WAZ	**Wanganui**	**3.35**	**224**	Pn	**Pn**	**00 48 17.5**	**+2.5**
POWZ	**Post Office Ro**	**3.48**	**209**	*e*PN	**Pn**	**00 48 16.7**	**0.0**
POWZ	**Post Office Ro**	**3.48**	**209**	Pn	**Pn**	**00 48 17.4**	**+0.7**
BFZ	**Birch Farm**	**3.58**	**202**	*e*PN	**Pn**	**00 48 18.1**	**+0.1**
BFZ	**Birch Farm**	**3.58**	**202**	Pn	**Pn**	**00 48 18.3**	**+0.3**
TIWZ	**Tintock**	**3.78**	**205**	Pn	**Pn**	**00 48 20.9**	**+0.2**
MRZ	**Mangatainoka R**	**3.79**	**209**	*e*PN	**Pn**	**00 48 20.7**	**0.0**
MRZ	**Mangatainoka R**	**3.79**	**209**	Pn	**Pn**	**00 48 21.1**	**+0.4**
HOWZ	**Holdsworth Sta**	**4.02**	**208**	PN	**Pn**	**00 48 23.2**	**-0.5**
HOWZ	**Holdsworth Sta**	**4.02**	**208**	Pn	**Pn**	**00 48 23.2**	**-0.5**
TMWZ	**Te Maipa**	**4.08**	**203**	PN	**Pn**	**00 48 24.1**	**-0.4**
TMWZ	**Te Maipa**	**4.08**	**203**	Pn	**Pn**	**00 48 24.1**	**-0.4**
OGWZ	**Otaki Gorge**	**4.09**	**212**	PN	**Pn**	**00 48 24.9**	**+0.3**
OGWZ	**Otaki Gorge**	**4.09**	**212**	Pn	**Pn**	**00 48 24.9**	**+0.3**
OUZ	**Omahuta**	**4.14**	**300**	PN	**Pn**	**00 48 26.9**	**+1.6**
OUZ	**Omahuta**	**4.14**	**300**	Pn	**Pn**	**00 48 27.1**	**+1.8**
KIW	**Kapiti Island**	**4.23**	**213**	PN	**Pn**	**00 48 26.8**	**+0.2**
KIW	**Kapiti Island**	**4.23**	**213**	Pn	**Pn**	**00 48 26.8**	**+0.2**
MTW	**Mount Morrison**	**4.25**	**206**	PN	**Pn**	**00 48 26.3**	**-0.5**
MTW	**Mount Morrison**	**4.25**	**206**	Pn	**Pn**	**00 48 26.3**	**-0.5**
CAW	**Cannon Point**	**4.37**	**210**	*e*PN	**Pn**	**00 48 27.4**	**-0.9**
CAW	**Cannon Point**	**4.37**	**210**	Pn	**Pn**	**00 48 28.2**	**-0.1**
TRWZ	**Traveller**	**4.41**	**203**	*e*PN	**Pn**	**00 48 27.8**	**-1.0**
TRWZ	**Traveller**	**4.41**	**203**	Pn	**Pn**	**00 48 28.3**	**-0.5**
PAWZ	**Paruwai Farm**	**4.48**	**205**	*e*PN	**Pn**	**00 48 28.7**	**-1.1**
PAWZ	**Paruwai Farm**	**4.48**	**205**	Pn	**Pn**	**00 48 28.8**	**-1.0**
MSWZ	**Moikau Station**	**4.57**	**207**	PN	**Pn**	**00 48 30.6**	**-0.4**
MSWZ	**Moikau Station**	**4.57**	**207**	Pn	**Pn**	**00 48 30.6**	**-0.4**
DUWZ	**D'Urville Isla**	**4.67**	**221**	PN	**Pn**	**00 48 32.5**	**+0.2**
DUWZ	**D'Urville Isla**	**4.67**	**221**	Pn	**Pn**	**00 48 32.5**	**+0.2**
SNZO	**South Karori**	**4.69**	**212**	PN	**Pn**	**00 48 32.0**	**-0.6**
SNZO	**South Karori**	**4.69**	**212**	Pn	**Pn**	**00 48 32.1**	**-0.5**
PLWZ	**Palliser**	**4.70**	**206**	*e*PN	**Pn**	**00 48 31.2**	**-1.6**
PLWZ	**Palliser**	**4.70**	**206**	Pn	**Pn**	**00 48 31.6**	**-1.2**
TCW	**Tory Channel**	**4.80**	**216**	*e*PN	**Pn**	**00 48 33.1**	**-0.9**
TCW	**Tory Channel**	**4.80**	**216**	Pn	**Pn**	**00 48 33.6**	**-0.4**
TUWZ	**Tuamarina**	**5.13**	**216**	PN	**Pn**	**00 48 37.9**	**-0.5**
TUWZ	**Tuamarina**	**5.13**	**216**	Pn	**Pn**	**00 48 37.9**	**-0.5**
NNZ	**Nelson**	**5.25**	**221**	PN	**Pn**	**00 48 39.8**	**-0.3**
NNZ	**Nelson**	**5.25**	**221**	Pn	**Pn**	**00 48 39.8**	**-0.3**
BSWZ	**Blackbirch Sta**	**5.38**	**215**	*e*PN	**Pn**	**00 48 40.6**	**-1.2**
BSWZ	**Blackbirch Sta**	**5.38**	**215**	Pn	**Pn**	**00 48 41.0**	**-0.8**
QRZ	**Quartz Range**	**5.47**	**229**	*e*PN	**Pn**	**00 48 43.5**	**+0.4**
QRZ	**Quartz Range**	**5.47**	**229**	Pn	**Pn**	**00 48 43.4**	**+0.3**
THZ	**Tophouse**	**5.89**	**220**	PN	**Pn**	**00 48 48.0**	**-0.6**
THZ	**Tophouse**	**5.89**	**220**	Pn	**Pn**	**00 48 48.1**	**-0.6**
KHZ	**Kahutara**	**6.09**	**213**	*e*PN	**Pn**	**00 48 50.2**	**-1.1**
LTZ	**Lake Taylor**	**6.96**	**217**	*e*PN	**Pn**	**00 49 01.2**	**-1.8**
LTZ	**Lake Taylor**	**6.96**	**217**	Pn	**Pn**	**00 49 01.3**	**-1.7**
MQZ	**McQueen's Vall**	**7.53**	**211**	*e*PN	**Pn**	**00 49 08.2**	**-2.2**
MQZ	**McQueen's Vall**	**7.53**	**211**	Pn	**Pn**	**00 49 08.4**	**-2.0**
CTZ	**Chatham Island**	**7.58**	**149**	*e*PN	Pn	00 49 15.1	+3.9
CTZ				SN	**Sn**	**00 50 33.9**	**-1.7**
CTZ	**Chatham Island**	**7.58**	**149**	Pn	Pn	00 49 15.9	+4.7
WVZ	**Waitaha Valley**	**7.95**	**222**	Pn	**Pn**	**00 49 18.3**	**+2.1**
FOZ	**Fox Glacier**	**8.85**	**223**	*e*PN	**Pn**	**00 49 25.2**	**-3.0**
FOZ	**Fox Glacier**	**8.85**	**223**	Pn	**Pn**	**00 49 25.8**	**-2.4**
LBZ	**Lake Benmore**	**9.17**	**218**	*e*PN	**Pn**	**00 49 31.5**	**-1.0**
LBZ	**Lake Benmore**	**9.17**	**218**	Pn	**Pn**	**00 49 31.8**	**-0.7**
ODZ	**Otahua Downs**	**9.46**	**213**	*e*PN	**Pn**	**00 49 34.8**	**-1.5**
ODZ	**Otahua Downs**	**9.46**	**213**	Pn	**Pn**	**00 49 34.9**	**-1.4**
TUZ	**Tuapeka**	**10.61**	**213**	*e*PN	**Pn**	**00 49 50.4**	**-1.3**
TUZ	**Tuapeka**	**10.61**	**213**	Pn	**Pn**	**00 49 51.5**	**-0.2**
DZM	**Mont Dzumac**	**18.21**	**324**	LR	LR	00 56 56.4	
	comp=Z,109nm,18.9s,baz=354,slow=32						
RAR	**Rarotonga**	**25.11**	**56**	LR	LR	00 59 57.7	
	comp=Z,888nm,19.0s,baz=284,slow=31						
ASAR	**Alice Springs**	**40.00**	**277**	P	P	00 54 54.6	+10
ASAR	**Alice Springs**	**40.00**	**277**	P	P	00 54 54.6	+10
	0.5nm,0.5s,baz=119,slow=7.9,SNR=6.4						
WRA	**Warramunga Arr**	**41.64**	**282**	P	P	00 55 07.8	+10
WRA	**Warramunga Arr**	**41.64**	**282**	P	P	00 55 07.8	+10
	0.5nm,0.5s,baz=123,slow=7.4,SNR=2.7						
FINES	**FINESS Array B**	**150.19**	**333**	PKPbc	**PKPab**	**01 07 08.0**	**+4.3**
FINES	**FINESS Array B**	**150.19**	**333**	PKPbc	**PKPab**	**01 07 08.0**	**+4.3**
	1.5nm,0.8s,baz=51,slow=4.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**155.66**	**189**	PKPab	PKPab	01 07 39.1	+11
TORD	**Torodi Ar. Bea**	**155.66**	**189**	PKPab	PKPab	01 07 39.1	+11
	0.2nm,0.5s,baz=166,slow=4.0,SNR=6.6						

IDC 05 00:50:01.3±2.0**, 20°.52S**×**71°.07W, h0^{km}, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.5**/17**, mbtmp3.4**/3**, ML3.1**/1**, Error ellipse: s-maj=65.3km s-min=44.7km az=133.0, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.05**	**34**	Pn	Pn	00 51 19.4	+0.2
	0.4nm,0.3s,baz=216,slow=10,SNR=6.3						
LPAZ				Sn	Sn	00 52 19.1	+0.2
	baz=206,slow=11,SNR=1.7						
TORD	**Torodi Ar. Bea**	**78.95**	**71**	P	P	01 02 07.0	-0.3
	0.3nm,0.8s,baz=251,slow=4.8,SNR=2.1						
YKA	**Yellowknife Ar**	**89.61**	**341**	P	P	01 02 59.8	-0.6
	0.2nm,0.6s,baz=133,slow=4.8,SNR=5.8						
MKAR	**Makanchi Array**	**145.98**	**33**	PKPbc	PKPab	01 09 43.4	-0.2
	0.2nm,0.8s,baz=316,slow=4.0,SNR=4.3						

*NEIC **05** 00:58:20.8±0.8, 32°.89N×109°.24W, h0^{km}, ML2.6, Error ellipse: s-maj=11.6km s-min=6.7km az=171.0, Suspected Mining explosion.*

NEIC 20 km [10 miles] S of Clifton.

*ISCJB **05** 00:58:21.1±0.3, 33°.13N±0°.02×109°.38W±0°.02, h0^{km}, Error ellipse: s-maj=2.8km s-min=2.6km az=141.7*

ISC 05 00:58:21.9±0.7**, 33°.13N**±0°.02×**109°.35W**±0°.02**, h0^{km}, n66, σ1^s.11**/110**, 34C-40D, Eastern Arizona**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
Z20A	**Nine Sixteen R**	**0.64**	**91**	P	**Pg**	**00 58 34.4**	**+0.3**
	baz=0.6,SNR=147						
Z20A				⇓S	**Sb**	**00 58 43.7**	**-1.9**
	baz=0.6						
Z20A	**Nine Sixteen R**	**0.64**	**91**	P	**Pg**	**00 58 34.4**	**+0.3**
	baz=0.6,SNR=147						
Z20A				⇓S	**Sb**	**00 58 43.7**	**-1.9**
	baz=0.6						
120A	**U Bar Ranch, L**	**0.84**	**134**	⇓P	**Pg**	**00 58 38.1**	**+0.1**
	baz=0.6,SNR=81						
120A				⇑S	**Sb**	**00 58 50.3**	**-1.0**
	baz=0.6						
120A	**U Bar Ranch, L**	**0.84**	**134**	⇓P	**Pg**	**00 58 38.1**	**+0.1**
	baz=0.6,SNR=81						
120A				⇑S	**Sb**	**00 58 50.3**	**-1.0**
	baz=0.6						
Y20A	**Horse Springs,**	**1.12**	**46**	P	**Pg**	**00 58 43.4**	**-0.1**
	baz=1.2,SNR=240						
Y20A	**Horse Springs,**	**1.12**	**46**	P	**Pg**	**00 58 43.4**	**-0.1**
	baz=1.2,SNR=240						
220A	**Playas Peak, P**	**1.41**	**150**	⇑P	**Pn**	**00 58 47.8**	**-1.2**
	baz=1.2,SNR=80						
220A				⇓S	**Sb**	**00 59 07.9**	**+0.2**
	baz=1.2						
220A	**Playas Peak, P**	**1.41**	**150**	⇑P	**Pn**	**00 58 47.8**	**-1.2**
	baz=1.2,SNR=80						
220A				⇓S	**Sb**	**00 59 07.9**	**+0.2**
	baz=1.2						
Z21A	**St. Cloud Mine**	**1.42**	**82**	P	**Pn**	**00 58 48.8**	**-0.5**
	baz=1.4,SNR=58						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
Z21A				⇓S	Sb	00 59 08.1	0.0
	baz=1.4						
Z21A	St. Cloud Mine	1.42	82	P	Pn	00 58 48.8	-0.5
	baz=1.4,SNR=58						
Z21A				⇓S	Sb	00 59 08.1	0.0
	baz=1.4						
121A	Cookes Peak, D	1.45	114	P	Pn	00 58 49.0	-0.5
	baz=1.3,SNR=160						
121A				⇑S	Sn	00 59 09.3	0.0
	baz=1.3						
121A	Cookes Peak, D	1.45	114	P	Pn	00 58 49.0	-0.5
	baz=1.3,SNR=160						
121A				⇑S	Sn	00 59 09.3	0.0
	baz=1.3						
TUC	Tucson	1.46	236	ePn	Pn	00 58 47.7	-1.9
TUC				eSg	Sg	00 59 07.7	-1.1
X18A	Snowflake	1.48	340	⇓P	Pn	00 58 49.2	-0.8
	baz=1.7,SNR=90						
X18A				⇑S	Sg	00 59 08.3	-1.4
	baz=1.7						
X18A	Snowflake	1.48	340	⇓P	Pn	00 58 49.2	-0.8
	baz=1.7,SNR=90						
X18A				⇑S	Sg	00 59 08.3	-1.4
	baz=1.7						
X20A	Quemado	1.58	26	⇓P	Pn	00 58 50.6	-0.8
	baz=1.8,SNR=17						
X20A	Quemado	1.58	26	⇓P	Pn	00 58 50.6	-0.8
	baz=1.8,SNR=17						
Y21A	Point of Rocks	1.65	57	⇑P	Pn	00 58 52.1	-0.3
	baz=1.7,SNR=65						
Y21A	Point of Rocks	1.65	57	⇑P	Pn	00 58 52.1	-0.3
	baz=1.7,SNR=65						
221A	Mesquite Ranch	1.73	130	⇓P	Pn	00 58 53.0	-0.4
	baz=1.5,SNR=20						
221A				⇑Sg	Sg	00 59 20.0	+2.4
	baz=1.5						
221A	Mesquite Ranch	1.73	130	⇓P	Pn	00 58 53.0	-0.4
	baz=1.5,SNR=20						
221A				⇑Sg	Sg	00 59 20.0	+2.4
	baz=1.5						
319A	Douglas	1.75	178	⇑P	Pn	00 58 52.7	-0.9
	baz=1.5,SNR=27						
319A				⇑S	Sn	00 59 16.7	0.0
	baz=1.5						
319A	Douglas	1.75	178	⇑P	Pn	00 58 52.7	-0.9
	baz=1.5,SNR=27						
319A				⇑S	Sn	00 59 16.7	0.0
	baz=1.5						
X21A	Alamocita Cree	1.85	44	⇓Pb	Pb	00 58 56.4	-0.4
	baz=2.0						
X21A				⇓Sb	Sg	00 59 21.7	+0.3
	baz=2.0						
X21A	Alamocita Cree	1.85	44	⇓Pb	Pb	00 58 56.4	-0.4
	baz=2.0						
X21A				⇓Sb	Sg	00 59 21.7	+0.3
	baz=2.0						
320A	Kipp Ranch, An	1.92	158	⇓P	Pn	00 58 55.2	-0.8
	baz=1.7,SNR=29						
320A				⇓Sg	Sg	00 59 25.2	+1.7
	baz=1.7						
320A	Kipp Ranch, An	1.92	158	⇓P	Pn	00 58 55.2	-0.8
	baz=1.7,SNR=29						
320A				⇓Sg	Sg	00 59 25.2	+1.7
	baz=1.7						
Z22A	Elephant Butte	2.00	86	P	Pn	00 58 56.6	-0.6
	baz=1.9,SNR=58						
Z22A				⇓Sb	Sg	00 59 26.6	+0.2
	baz=1.9						
Z22A	Elephant Butte	2.00	86	P	Pn	00 58 56.6	-0.6
	baz=1.9,SNR=58						
Z22A				⇓Sb	Sg	00 59 26.6	+0.2
	baz=1.9						
W18A	Petrified Fore	2.01	351	⇓P	Pn	00 58 57.0	-0.3
	baz=2.3						
W18A	Petrified Fore	2.01	351	⇓P	Pn	00 58 57.0	-0.3
	baz=2.3						
W20A	Ramah	2.11	19	⇓Pg	Pb	00 59 01.8	+0.5
	baz=2.3						
W20A	Ramah	2.11	19	⇓Pg	Pb	00 59 01.8	+0.5
	baz=2.3						
Y22A	Socorro	2.15	67	⇓P	Pn	00 58 58.4	-0.8
	baz=2.2						
Y22A				⇑Sb	Sg	00 59 30.8	-0.2
	baz=2.2						
Y22A	Socorro	2.15	67	⇓P	Pn	00 58 58.4	-0.8
	baz=2.2						
Y22A				⇑Sb	Sg	00 59 30.8	-0.2
	baz=2.2						
222A	Williams Famil	2.15	118	⇑P	Pn	00 58 58.7	-0.6
	baz=2.0						
222A				⇓Sb	Sg	00 59 31.9	+0.7
	baz=2.0						
222A	Williams Famil	2.15	118	⇑P	Pn	00 58 58.7	-0.6
	baz=2.0						
222A				⇓Sb	Sg	00 59 31.9	+0.7
	baz=2.0						
X16A	Lo Mia Camp, P	2.17	307	⇑Pg	Pb	00 59 02.0	-0.1
	baz=2.4						
X16A				⇑Sb	Sn	00 59 29.1	+2.0
	baz=2.4						
X16A	Lo Mia Camp, P	2.17	307	⇑Pg	Pb	00 59 02.0	-0.1
	baz=2.4						
X16A				⇑Sb	Sn	00 59 29.1	+2.0
	baz=2.4						
LENM	Lemitar	2.23	62	ePn	Pn	00 58 59.9	-0.5
LENM				eSg	Sg	00 59 33.4	-0.4
Y22D	IRIS PASSCAL I	2.24	64	⇑Sb	Sg	00 59 33.6	-0.2
	baz=2.3						
Y22D	IRIS PASSCAL I	2.24	64	⇑Sb	Sg	00 59 33.6	-0.2
	baz=2.3						
LAZ	Ladron	2.24	55	ePn	Pn	00 59 00.1	-0.4
LAZ				ePg	Pg	00 59 05.2	+0.4
LAZ				Sn	Sb	00 59 30.8	-0.9
X22A	Bernardo	2.38	54	⇑P	Pn	00 59 02.4	0.0
	baz=2.5,SNR=6.4						
X22A				⇑Sg	Sg	00 59 40.4	+1.8
	baz=2.5						
X22A	Bernardo	2.38	54	⇑P	Pn	00 59 02.4	0.0
	baz=2.5,SNR=6.4						
X22A				⇑Sg	Sg	00 59 40.4	+1.8
	baz=2.5						
BNM	Barren Site	2.49	65	ePn	Pn	00 59 03.3	-0.7
BNM				ePg	Pb	00 59 08.3	+0.6
BNM				eSg	Sg	00 59 42.1	+0.2
LPM	Los Pinos Moun	2.55	62	ePn	Pn	00 59 04.4	-0.4
LPM				ePg	Pg	00 59 10.4	-0.5
LPM				eSg	Sg	00 59 44.1	+0.1
Y23A	Lovelace Mesa,	2.87	73	⇑P	Pn	00 59 08.2	-0.9
	baz=2.9						
Y23A	Lovelace Mesa,	2.87	73	⇑P	Pn	00 59 08.2	-0.9
	baz=2.9						
WUAZ	Wupatki	2.91	325	ePn	Pn	00 59 12.3	+2.6
WUAZ				eSn	Sb	00 59 53.3	+2.2
ANMO	Albuquerque	3.01	52	ePn	Pn	00 59 10.8	-0.3
ANMO				ePg	Pg	00 59 18.9	-0.7
ANMO				eSg	Sg	01 00 00.1	+1.4
Y14A	Wickenburg	3.16	286	⇓P	Pn	00 59 11.8	-1.1
	baz=3.3,SNR=7.4						
Y14A	Wickenburg	3.16	286	⇓P	Pn	00 59 11.8	-1.1
	baz=3.3,SNR=7.4						
124A	Stringfield Ra	3.30	96	⇓P	Pn	00 59 14.3	-0.8
	baz=3.2						
124A	Stringfield Ra	3.30	96	⇓P	Pn	00 59 14.3	-0.8
	baz=3.2						
Z24A	Sheeppen Canyo	3.35	85	⇓P	Pn	00 59 14.8	-0.9
	baz=3.3						
Z24A	Sheeppen Canyo	3.35	85	⇓P	Pn	00 59 14.8	-0.9
	baz=3.3						
Y24A	Capitan	3.36	75	⇓P	Pn	00 59 15.3	-0.6
	baz=3.3						
Y24A	Capitan	3.36	75	⇓P	Pn	00 59 15.3	-0.6
	baz=3.3						
324A	Moseley Ranch,	3.68	116	⇑P	Pn	00 59 19.5	-0.8
	baz=3.5,SNR=10						
324A	Moseley Ranch,	3.68	116	⇑P	Pn	00 59 19.5	-0.8
	baz=3.5,SNR=10						
MVCO	Mesa Verde	4.13	9	ePn	Pn	00 59 27.7	+1.2
MVCO				ePg	Pg	00 59 44.8	+3.6
MVCO				eSn	Sb	01 00 24.8	-1.5
PV01	Paradox Valley	5.04	7	ePn	Pn	00 59 41.3	+2.4
	335nm,0.7s						
PV01				eSn	Sb	01 00 46.4	-5.8
PV04	Paradox Valley	5.27	4	ePn	Pn	00 59 43.0	+0.9
PV04				ePg	Pg	01 00 01.5	-1.4
PV04				eSn	Sb	01 00 54.5	-4.3
CCUT	Cedar City	5.50	325	ePn	Pn	00 59 48.0	+2.7
	11nm,0.9s						
CCUT				ePg	Pg	01 00 04.4	-2.9
CCUT				S	Sb	01 01 12.5	+6.9
MVU	Marysvale	5.85	337	ePn	Pn	00 59 52.0	+1.9
MVU				ePg	Pb	01 00 09.2	+4.2

IDC 05 01:01:02.8±12.0, 3.56N×126.66E, h75km±127km, mb3.5/9, mb1 3.7/9, mb1mx3.5/26, mbtmp3.5/9, Error ellipse: s-maj=66.3km s-min=21.3km az=73.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.55	183	P	P	01 05 46.5	+0.3
	2.9nm,0.8s,baz=18,slow=16,SNR=6.1						
WRA	Warramunga Arr	24.55	162	P	P	01 06 15.4	-0.3
	9.2nm,0.8s,baz=343,slow=10,SNR=24						
ASAR	Alice Springs	27.97	166	P	P	01 06 46.5	-0.1
	0.7nm,0.5s,baz=341,slow=11,SNR=7.0						
KSRS	Korea Array	33.75	2	P	P	01 07 37.0	-0.2
	0.4nm,0.3s,baz=183,slow=9.8,SNR=4.6						
STKA	Stephens Creek	38.00	159	P	P	01 08 13.7	0.0
	1.2nm,0.4s,baz=330,slow=6.2,SNR=6.8						
MKAR	Makanchi Array	57.65	325	P	P	01 10 44.6	-0.8
	0.3nm,0.4s,baz=126,slow=7.4,SNR=8.2						
ZALV	Zalesovo Beam	60.70	333	P	P	01 11 07.0	+0.7
	0.3nm,0.3s,baz=114,slow=9.6,SNR=2.7						
KURBB	Kurchatov Arra	61.84	327	P	P	01 11 15.0	+1.0
	0.6nm,0.6s,baz=130,slow=6.4,SNR=9.2						
BVAR	Borovoye Array	67.42	327	P	P	01 11 49.2	-1.2
	0.3nm,0.6s,baz=123,slow=5.3,SNR=3.6						

MEX 05 01:04:29.0±0.5, 17.01N×100.09W, h5km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.18	283	eP	Pg	01 04 32.2	-0.3
CAIG				i S	Sg	01 04 34.8	-0.2
ACX	Acapulco	0.26	122	i P	Pg	01 04 32.8	-1.3
ACX				i S	Sg	01 04 36.4	-1.1
ARIG	Puente Sto Nin	1.29	349	eP	Pn	01 04 49.8	-4.0
ARIG				i S	Sg	01 05 06.7	-4.0
ZIIG	Zihuatanejo	1.45	295	i P	Pn	01 04 53.0	-2.9
ZIIG				i S	Sb	01 05 10.6	-4.6
PNIG	Pinotepa	1.97	108	i P	Pn	01 04 59.1	-4.0
PNIG				i S	Sn	01 05 23.5	-4.8
YAIG	Yautepec	2.08	28	i P	Pn	01 05 01.9	-2.9
YAIG				i S	Sn	01 05 27.6	-3.7
PPM	Popocatepetl	2.48	34	i P	Pn	01 05 08.0	-2.7
PPM				i S	Sn	01 05 36.6	-5.2

MEX 05 01:14:52.3±0.7, 15.95N×98.68W, h16km±16km, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.70	50	i P	Pg	01 15 03.0	-3.0
PNIG				i S	Sg	01 15 12.6	-2.6
CAIG	El Cayaco	1.87	306	eP	Pn	01 15 19.7	-4.0
CAIG				i S	Sn	01 15 42.6	-4.5
VHO	Vista Hermosa	2.18	59	i P	Pn	01 15 25.3	-2.9
VHO				i S	Sn	01 15 50.2	-4.9
HUIG	Huatulco	2.48	94	eP	Pn	01 15 28.9	-3.3
HUIG				i S	Sn	01 15 58.1	-4.1
ARIG	Puente Sto Nin	2.81	326	i P	Pn	01 15 34.4	-2.4
ARIG				i S	Sn	01 16 05.8	-4.6
YAIG	Yautepec	2.92	353	i P	Pn	01 15 36.3	-2.2
YAIG				i S	Sn	01 16 10.0	-3.4
PPM	Popocatepetl	3.10	1	i P	Pn	01 15 39.1	-2.3
PPM				i S	Sn	01 16 14.6	-4.0

*ISK **05** 01:23:07.6, 36.90N×26.58E, h10km, MD2.8*
*CSEM **05** 01:23:07.8±0.3, 36.93N×26.59E, h2km, MD3.2, Error ellipse: s-maj=6.6km s-min=5.6km az=8.0*
*ATH **05** 01:23:08.2, 36.89N×26.61E, h12km±2km, MD3.2/6*
ISC 05 01:23:08.1±1.1, 36.89N±0.03×26.58E±0.03, h11km±11km, n31, σ0s79/42, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIS1	Nisyros Isl.	0.56	121	ePB	Pg	01 23 18.8	-0.2
NIS1				eSB	Sg	01 23 26.4	0.0
NIS1	Nisyros Isl.	0.56	121	ePb	Pg	01 23 18.8	-0.2
NIS1				eSb	Sg	01 23 26.4	0.0
BODT	Bodrum	0.61	74	ePG	Pg	01 23 19.5	-0.4
BODT	Bodrum	0.61	74	ePg	Pg	01 23 19.5	-0.4
DAT	Datca	0.81	101	ePG	Pg	01 23 23.4	-0.5
DAT				eSG	Sn	01 23 36.6	-1.2
DAT	Datca	0.81	101	ePg	Pg	01 23 23.4	-0.5
APE	Apeiranthos	0.86	282	ePG	Pg	01 23 24.8	+0.1
APE				eSG	Sb	01 23 36.9	+0.3
APE	Apeiranthos	0.86	282	ePG	Pg	01 23 24.4	-0.3
APE				eSB	Sb	01 23 37.8	+1.1
MLSB	Milas	1.04	67	ePG	Pb	01 23 27.9	-0.2
MLSB	Milas	1.04	67	ePg	Pb	01 23 27.9	-0.2
YER	Yerkesik	1.38	79	ePN	Pn	01 23 33.1	-0.2
YER	Yerkesik	1.38	79	ePn	Pn	01 23 33.2	-0.2
BLCB	Balcova	1.53	14	ePN	Pb	01 23 36.3	-0.2
BLCB	Balcova	1.53	14	ePn	Pb	01 23 36.3	-0.2
CHOS	Chios island	1.55	344	ePG	Pb	01 23 36.8	-0.1
CHOS				eSB	Sg	01 23 59.2	+1.2
CHOS	Chios island	1.55	344	ePg	Pb	01 23 36.8	-0.1
CHOS				eSb	Sg	01 23 59.2	+1.2
IZM	Izmir	1.60	20	ePN	Pb	01 23 37.3	-0.4
IZM	Izmir	1.60	20	ePn	Pb	01 23 37.3	-0.4
DALY	Dalyan (Mu˜la	1.66	92	ePN	Pn	01 23 37.0	-0.2
DALY	Dalyan (Mu˜la	1.66	92	ePn	Pn	01 23 37.0	-0.2
NPS	Neapolis	1.81	206	ePN	Pb	01 23 40.9	-0.3
NPS				eSN	Sb	01 24 05.1	+1.2
NPS	Neapolis	1.81	206	ePn	Pb	01 23 40.9	-0.3
NPS				eSn	Sb	01 24 05.1	+1.2
LAST	Lasithi	1.95	208	ePN	Pb	01 23 43.6	0.0
LAST				eSN	Sb	01 24 09.0	+1.1
LAST	Lasithi	1.95	208	ePn	Pb	01 23 43.6	0.0
LAST				eSn	Sb	01 24 09.0	+1.1
FETY	Fethiye	2.02	97	ePN	Pn	01 23 43.0	+0.8
FETY	Fethiye	2.02	97	ePn	Pn	01 23 43.0	+0.8
DENT	Denizli	2.13	66	ePN	Pn	01 23 43.7	-0.1
DENT	Denizli	2.13	66	ePn	Pn	01 23 43.7	-0.1
KULA	Kula-Manisa	2.31	45	ePN	Pn	01 23 46.5	+0.3
DID	Didima	2.74	284	ePB	Pb	01 23 55.0	-2.2
DID	Didima	2.74	284	ePb	Pb	01 23 55.0	-2.2

IDC 05 01:24:57.8±3.5, 63.14S×155.62E, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.9/12, mbtmp4.0/3, MS4.1/10, Ms1 4.1/10, ms1mx4.0/17, Error ellipse: s-maj=246.8km s-min=39.2km az=74.0, Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	14.58	175	Pn	Pn	01 28 24.7	-0.3
	0.5nm,0.3s,baz=349,slow=14,SNR=22						
VNDA				LR	LR	01 33 39.2	
	comp=Z,1μm,19.7s,baz=357,slow=36						
RPZ	Rata Peaks	21.41	32	LR	LR	01 37 18.0	
	comp=Z,1μm,18.5s,baz=193,slow=35						
QSPA	South Pole Qui	26.94	180	LR	LR	01 41 07.6	
	comp=Z,303nm,19.6s,baz=194,slow=36						
URZ	Urewera	28.10	38	LR	LR	01 40 30.8	
	comp=Z,271nm,19.6s,baz=3.2,slow=33						
STKA	Stephens Creek	32.53	337	LR	LR	01 41 19.6	
	comp=Z,185nm,21.0s,baz=16,slow=30						
MAW	Mawson	35.46	221	LR	LR	01 47 00.4	
	comp=Z,415nm,19.8s,baz=117,slow=37						
ASAR	Alice Springs	42.05	330	P	P	01 32 51.1	+0.2
	3.1nm,1.0s,baz=161,slow=9.1,SNR=14						
ASAR				PcP	PcP	01 34 45.9	0.0
	0.4nm,0.8s,baz=166,slow=2.6,SNR=4.0						
ASAR				LR	LR	01 48 06.7	
	comp=Z,170nm,19.8s,baz=160,slow=33						
WRA	Warramunga Arr	45.55	331	P	P	01 33 18.4	-0.7
	1.7nm,0.9s,baz=165,slow=7.0,SNR=4.3						
BOSA	Boshof	80.46	223	LR	LR	02 08 00.4	
	comp=Z,86nm,19.9s,baz=172,slow=32						
CPUP	Villa Florida	87.08	151	LR	LR	02 12 33.5	
	comp=Z,126nm,21.7s,baz=178,slow=33						
CMAR	Chiang Mai Arr	92.49	307	LR	LR	02 12 55.8	
	comp=Z,47nm,21.6s,baz=158,slow=31						

*BJI **05** 01:39:20.2, 48.29N×6.83E, h7km, mB4.9/4, mb4.8/6, Ms4.8/3, Ms7 4.5/3*
*MOS **05** 01:39:22.0±1.2, 47.69N×7.72E, h10km, mb4.3/3, Error ellipse: s-maj=4.3km s-min=2.9km az=71.4*
*PRU **05** 01:39:22.4, 47.77N×7.62E, h2km*
*IDC **05** 01:39:22.5±1.4, 47.75N×7.63E, h0km, mb3.0/2, mb1 3.5/6, mb1mx3.3/29, mbtmp3.4/6, ML3.8/3, Error ellipse: s-maj=16.1km s-min=12.7km az=162.0*
*CSEM **05** 01:39:23.7±0.1, 47.67N×7.72E, h10km, ML4.6/42, Mw3.6, Error ellipse: s-maj=1.5km s-min=1.3km az=149.0*
*ISCJB **05** 01:39:24.8±0.2, 47.66N±0.01×7.73E±0.02, h28km±1km, mb4.0/2, Error ellipse: s-maj=1.8km s-min=1.7km az=25.2*
*LDG **05** 01:39:24.6±0.1, 47.67N×7.79E, h10km, Md4.2/4, Ml4.5/48, Error ellipse: s-maj=1.2km s-min=1.1km az=155.0*
*NEIC **05** 01:39:24.9, 47.67N×7.73E, h10km, ML4.5(LDG), ML4.2(ZUR), ML4.0(STR), MW3.6(USGS), After STR.*
NEIC Felt [II] at Mulhouse, France. Also felt at Bartenheim, Bruebach, Brunstatt, Gerstheim, Gries, Huningue, Jungholtz, Kembs, Marckolsheim, Munster, Muntzenheim, Rhinau, Saales, Saint-Louis, Steinbrunn-le-Bas and Waltenheim. Felt at Friesenheim and Marktoberdorf, Germany. Felt [III] at Basel and [II] at Reinach, Switzerland. Also felt at Aarau, Aesch, Allschwil, Arlesheim, Augst, Baden, Bettingen, Binningen, Bottmingen, Brugg, Freienbach, Frenkendorf, Holderbank, Lausanne, Lausen, Liestal, Luzern, Matzendorf, Nunningen, Oberendingen, Oberwil, Olten, Pfeffingen, Pratteln, Riehen, Schaffhausen, Thun and Wilchingen.
*BGR **05** 01:39:24.9±0.2, 47.72N×7.76E, h10km, ML4.5/22, Error ellipse: s-maj=3.3km s-min=2.2km az=75.0*
*STR **05** 01:39:24.9±0.1, 47.67N×7.73E, h10km, Ml4.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*GEN **05** 01:39:25.7, 47.56N×7.81E, h1km, ML4.1*
*ZUR **05** 01:39:25.1, 47.68N×7.74E, h12km, ML4.2/28*
*BNS **05** 01:39:27.1±1.0, 47.70N×7.77E, h10km, ML3.9*
ISC 05 01:39:23.7±0.5, 47.672N±0.009×7.716E±0.009, h18km±2km, n736, σ1s39/1166, 66C-97D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBS	Basel-Blauen	0.25	214	⇑P*	Pb	01 39 30.9	+1.2
BBS	Basel-Blauen	0.25	214	P	Pb	01 39 30.9	+1.2
BBS						01 39 33.7	
BBS	Basel-Blauen	0.25	214	Pg	Pb	01 39 30.9	+1.2
BBS				Sg	Sb	01 39 33.7	+0.1
BBS	Basel-Blauen	0.25	214	P	Pb	01 39 30.9	+1.2
BBS				Sg	Sb	01 39 33.7	+0.1
FELD	Feldberg im Sc	0.28	43	⇑P*	Pb	01 39 30.9	+0.6
FELD	Feldberg im Sc	0.28	43	Pg	Pb	01 39 30.9	+0.6
FELD	Feldberg im Sc	0.28	43	Pg	Pb	01 39 30.9	+0.6
FELD	Feldberg im Sc	0.28	43	Pb	Pb	01 39 30.9	+0.6
SULZ	Cheisacher	0.30	118	ePg	Pb	01 39 31.1	+0.5
	SNR=2186						
SULZ				eSg	Sg	01 39 35.1	+0.4
SULZ	Cheisacher	0.30	118	⇓iPg	Pb	01 39 31.1	+0.5
	74μm,0.4s						
SULZ				eSg	Sg	01 39 35.2	+0.4
	74μm,0.4s						
SULZ	Cheisacher	0.30	118	⇓iPg	Pb	01 39 31.1	+0.5
SULZ				eSg	Sg	01 39 35.2	+0.4
SULZ	Cheisacher	0.30	118	⇓iPg	Pb	01 39 31.1	+0.5
	74μm,0.4s						
SULZ				eSg	Sg	01 39 35.2	+0.4
	74μm,0.4s						
KIZ	Kirchzarten	0.32	25	⇑iP*	Pb	01 39 31.5	+0.7
KIZ				i S*	Sb	01 39 35.6	-0.1
KIZ	Kirchzarten	0.32	25	Pb	Pb	01 39 31.5	+0.7
KIZ				Sb	Sb	01 39 35.6	-0.1
BALST	Balsthal	0.34	182	ePg	Pb	01 39 32.2	+1.0
	SNR=2495						
BALST				eSg	Sg	01 39 36.2	+0.5
BALST	Balsthal	0.34	182	⇓iPg	Pb	01 39 32.2	+1.0
	72μm,0.4s						
BALST	Balsthal	0.34	182	⇓iPg	Pb	01 39 32.2	+1.0
BALST	Balsthal	0.34	182	⇓iPg	Pb	01 39 32.2	+1.0
	72μm,0.4s						
BALST				Sg	Sg	01 39 36.2	+0.5
FBB	Freiburg im Br	0.34	16	⇓P*	Pb	01 39 32.2	+0.9
FBB	Freiburg im Br	0.34	16	Pb	Pb	01 39 32.2	+0.9
BOURR	Bourrignon	0.43	230	⇑iPg	Pb	01 39 34.2	+1.4
	20μm,0.3s						
BOURR	Bourrignon	0.43	230	⇑iPg	Pb	01 39 34.2	+1.4
BOURR	Bourrignon	0.43	230	⇑iPg	Pb	01 39 34.2	+1.4
	20μm,0.3s						
MOF	Molkenrain	0.43	295	⇑P*	Pn	01 39 34.4	-0.8
MOF	Molkenrain	0.43	295	P	Pb	01 39 34.1	+1.2
MOF						01 39 40.6	
MOF	Molkenrain	0.43	295	Pg	Pb	01 39 34.1	+1.2
MOF				Sg	Sb	01 39 40.6	+1.5
MOF	Molkenrain	0.43	295	Pg	Pb	01 39 34.1	+1.2
MOF				Sg	Sb	01 39 40.6	+1.5
MOF	Molkenrain	0.43	295	Pg	Pb	01 39 34.1	+1.2
MOF	Molkenrain	0.43	295	Pb	Pn	01 39 34.4	-0.8
MOF				Sg	Sb	01 39 40.6	+1.5
LIBD	Limburg	0.48	351	⇓P*	Pn	01 39 35.3	-0.5
LIBD	Limburg	0.48	351	P	Pn	01 39 35.2	-0.6
LIBD	Limburg	0.48	351	Pg	Pn	01 39 35.2	-0.6
LIBD	Limburg	0.48	351	Pg	Pn	01 39 35.2	-0.6
SLE	Schleitheim	0.53	80	ePg	Pb	01 39 35.2	+0.7
	SNR=7864						
SLE				eSg	Sg	01 39 41.9	+0.4
SLE	Schleitheim	0.53	80	⇑iP	Pb	01 39 35.2	+0.7
SLE	Schleitheim	0.53	80	⇑iPg	Pb	01 39 35.2	+0.7
	77μm,0.3s						
SLE	Schleitheim	0.53	80	⇑iPg	Pb	01 39 35.2	+0.7
SLE	Schleitheim	0.53	80	i P	Pb	01 39 35.2	+0.7
SLE				Sg	Sg	01 39 41.9	+0.4
FLACH	Flaach	0.58	100	⇓iPg	Pb	01 39 36.3	+0.9
	33μm,0.4s						
FLACH	Flaach	0.58	100	⇓iPg	Pb	01 39 36.3	+0.9
FLACH	Flaach	0.58	100	⇓iPg	Pb	01 39 36.3	+0.9
	33μm,0.4s						
HINF	Hinteralfeld	0.60	284	ePg	Pn	01 39 36.9	-0.5
HINF	Hinteralfeld	0.60	284	eP	Pn	01 39 38.0	+0.6
	SNR=1.0						
HINF				eSg	Sb	01 39 45.1	+1.3
	42μm,0.3s,SNR=1.0						
HINF	Hinteralfeld	0.60	284	eP	Pn	01 39 36.9	-0.5
HINF				e		01 39 45.1	
HINF	Hinteralfeld	0.60	284	ePg	Pn	01 39 36.9	-0.5
HINF				eSg	Sb	01 39 45.1	+1.3
HINF	Hinteralfeld	0.60	284	ePg	Pn	01 39 36.9	-0.5
HINF	Hinteralfeld	0.60	284	eP	Pn	01 39 38.0	+0.6
	SNR=1.0						
HINF				eSg	Sb	01 39 45.1	+1.3
	21μm,0.3s,SNR=1.0						
TRULL	Truellikon	0.65	92	⇓iPg	Pb	01 39 37.5	+0.9
	33μm,0.2s						
TRULL	Truellikon	0.65	92	⇓iPg	Pb	01 39 37.5	+0.9
TRULL	Truellikon	0.65	92	⇓iPg	Pb	01 39 37.5	+0.9
	33μm,0.2s						
ZUR	Degenried	0.66	117	⇓iP	Pb	01 39 37.7	+1.0
ZUR	Degenried	0.66	117	⇓iPg	Pb	01 39 37.7	+1.0
	44μm,0.4s						
ZUR	Degenried	0.66	117	⇓iPg	Pb	01 39 37.7	+1.0
ZUR	Degenried	0.66	117	⇓iPg	Pb	01 39 37.7	+1.0
	44μm,0.4s						
ECH	Echery	0.66	326	⇓iP*	Pn	01 39 38.1	-0.1
ECH				S*	Sn	01 39 47.2	-1.0
ECH	Echery	0.66	326	eP	Pn	01 39 38.0	-0.2
ECH				eS	Sb	01 39 46.6	+1.0
ECH	Echery	0.66	326	ePg	Pn	01 39 38.0	-0.2
ECH				eS	Sb	01 39 46.6	+1.0
ECH	Echery	0.66	326	Pg	Pn	01 39 38.2	-0.1
ECH				Sg	Sb	01 39 47.1	+1.5
ECH	Echery	0.66	326	eP	Pn	01 39 38.0	-0.2
ECH				eS	Sb	01 39 46.6	+1.0
ECH				Sg	Sb	01 39 47.1	+1.5
LOMF	Lomont	0.68	242	⇑P*	Pn	01 39 38.8	+0.2
LOMF	Lomont	0.68	242	P	Pn	01 39 38.9	+0.3
LOMF						01 39 48.8	
LOMF	Lomont	0.68	242	Pg	Pn	01 39 38.9	+0.3
LOMF				Sg	Sn	01 39 48.8	0.0
LOMF	Lomont	0.68	242	Pg	Pn	01 39 38.9	+0.3
LOMF				Sg	Sn	01 39 48.8	0.0
LOMF	Lomont	0.68	242	Pb	Pn	01 39 38.8	+0.2
LOMF				Sg	Sn	01 39 48.8	0.0

BFO Black Forest 0.78 32 ⇑P* Pn 01 39 39.9 0.0
BFO S* Sb 01 39 49.9 +0.9
BFO Black Forest 0.78 32 eP Pn 01 39 39.5 -0.3
BFO eS Sb 01 39 49.9 +0.9
BFO Black Forest 0.78 32 ePg Pn 01 39 39.5 -0.3
BFO eS Sb 01 39 49.9 +0.9
BFO Black Forest 0.78 32 eP Pn 01 39 39.5 -0.3
BFO Black Forest 0.78 32 Pb Pn 01 39 39.8 0.0
BFO Sb Sb 01 39 49.9 +0.9
STEIN Stein am Rhein 0.78 90⇑iPg Pn 01 39 40.0 +0.2
18µm,0.3s
STEIN Stein am Rhein 0.78 90⇑iPg Pn 01 39 40.0 +0.2
STEIN Stein am Rhein 0.78 90⇑iPg Pn 01 39 40.0 +0.2
18µm,0.3s
CDF Champ du Feu 0.80 338 ePn Pn 01 39 40.7 +0.5
SNR=1.0
CDF eSg Sb 01 39 50.2 +0.6
CDF eSn Sn 01 39 51.8 +0.1
6µm,0.3s,SNR=1.0
CDF Champ du Feu 0.80 338 eP Pn 01 39 40.7 +0.5
CDF e 01 39 50.2
CDF Champ du Feu 0.80 338 ePn Pn 01 39 40.7 +0.5
CDF eSg Sb 01 39 50.2 +0.6
CDF eSn Sn 01 39 51.8 +0.1
CDF Champ du Feu 0.80 338 ePn Pn 01 39 40.7 +0.5
SNR=1.0
CDF eSg Sb 01 39 50.2 +0.6
CDF eSn Sn 01 39 51.8 +0.1
3µm,0.3s,SNR=1.0
SPAK Spaichingen-Ko 0.84 59 ⇑P* Pn 01 39 41.0 +0.3
SPAK Spaichingen-Ko 0.84 59 Pg Pn 01 39 41.0 +0.3
SPAK Sg Sg 01 39 51.6 +0.4
SPAK Spaichingen-Ko 0.84 59 Pb Pn 01 39 41.0 +0.3
SPAK Sg Sg 01 39 51.6 +0.4
SISB Singen-Schiene 0.84 89⇑iP* Pn 01 39 41.2 +0.5
SISB S* Sn 01 39 52.4 -0.3
SISB Singen-Schiene 0.84 89 Pb Pn 01 39 41.2 +0.5
SISB Sb Sn 01 39 52.4 -0.3
WILA Wila 0.85 107 ePg Pn 01 39 41.4 +0.5
SNR=2129
WILA eSg Sn 01 39 52.6 -0.2
WILA Wila 0.85 107⇓iPg Pn 01 39 41.3 +0.5
160µm,0.3s
WILA Wila 0.85 107⇓iPg Pn 01 39 41.3 +0.5
WILA Wila 0.85 107⇓iPg Pn 01 39 41.3 +0.5
160µm,0.3s
WILA Sg Sn 01 39 52.6 -0.2
WEIN Weingarten 0.87 99⇓iPg Pn 01 39 41.7 +0.6
27µm,0.2s
WEIN Weingarten 0.87 99⇓iPg Pn 01 39 41.7 +0.6
WEIN Weingarten 0.87 99⇓iPg Pn 01 39 41.7 +0.6
27µm,0.2s
STR Strasbourg 0.91 2 P Pn 01 39 42.5 +0.8
STR 01 39 55.7
STR Strasbourg 0.91 2 Pn Pn 01 39 42.5 +0.8
STR Pg Pg 01 39 43.4 +1.9
STR Sg Sn 01 39 55.7 +1.3
STR Strasbourg 0.91 2 Pn Pn 01 39 42.5 +0.8
STR Strasbourg 0.91 2 Pn Pn 01 39 42.5 +0.8
BNALP Bannalp 0.94 149⇓iPg Pn 01 39 43.2 +1.1
6µm,0.6s
BNALP Bannalp 0.94 149⇓iPg Pn 01 39 43.2 +1.1
BNALP Bannalp 0.94 149⇓iPg Pn 01 39 43.2 +1.1
6µm,0.6s
MUO Muotathal 0.94 138⇓iPg Pn 01 39 43.3 +1.1
14µm,0.5s
MUO Muotathal 0.94 138⇓iPg Pn 01 39 43.3 +1.1
MUO Muotathal 0.94 138⇓iPg Pn 01 39 43.3 +1.1
14µm,0.5s
HASLI Hasliberg/Brie 0.96 162⇓iPn Pn 01 39 43.5 +1.1
24µm,0.3s
HASLI Hasliberg/Brie 0.96 162⇓iPn Pn 01 39 43.5 +1.1
HASLI Hasliberg/Brie 0.96 162⇓iPn Pn 01 39 43.5 +1.1
24µm,0.3s
HAU Haudompre 0.98 290 ePn Pn 01 39 43.5 +0.9
SNR=1.0
HAU Haudompre 0.98 290 ePg Pn 01 39 44.2 +1.6
HAU eSg Sn 01 39 56.9 +0.8
24µm,0.2s,SNR=1.0
HAU Haudompre 0.98 290 eP Pn 01 39 43.5 +0.9
HAU e 01 39 56.9
HAU Haudompre 0.98 290 ePn Pn 01 39 43.5 +0.9
HAU ePg Pn 01 39 44.2 +1.6
HAU eSg Sn 01 39 56.9 +0.8
HAU Haudompre 0.98 290 ePn Pn 01 39 43.5 +0.9
SNR=1.0
HAU Haudompre 0.98 290 ePg Pn 01 39 44.2 +1.6
HAU eSg Sn 01 39 56.9 +0.8
12µm,0.2s,SNR=1.0
WIMIS Wimmis 1.01 184⇓iPg Pg 01 39 44.0 +0.7
9µm,0.3s
WIMIS Wimmis 1.01 184⇓iPn Pg 01 39 44.0 +0.7
WIMIS Wimmis 1.01 184⇓iPn Pg 01 39 44.0 +0.7
9µm,0.3s
GUT Gutenstein 1.02 66⇑iP Pn 01 39 43.4 +0.2
GUT S Sg 01 39 56.9 -0.1
GUT Gutenstein 1.02 66 P Pn 01 39 43.4 +0.2
GUT S Sg 01 39 56.9 -0.1
TORNY Torny/Romont 1.04 210⇑iPn Pg 01 39 44.4 +0.6
25µm,0.2s
TORNY Torny/Romont 1.04 210⇑iPn Pg 01 39 44.4 +0.6
TORNY Torny/Romont 1.04 210⇑iPn Pg 01 39 44.4 +0.6
25µm,0.2s
BRANT Les Verrieres 1.12 230⇑iPn Pg 01 39 45.6 +0.2
8µm,0.3s
BRANT Les Verrieres 1.12 230⇑iPn Pg 01 39 45.6 +0.2
BRANT Les Verrieres 1.12 230⇑iPn Pg 01 39 45.6 +0.2
8µm,0.3s
LLS Linth-Limmern 1.21 133⇓iP Pg 01 39 47.3 +0.3
LLS Linth-Limmern 1.21 133⇓iPn Pg 01 39 47.3 +0.3
5µm,0.1s
LLS Linth-Limmern 1.21 133⇓iPn Pg 01 39 47.3 +0.3
LBG Lerchenberg 1.23 36⇑iP Pn 01 39 45.9 -0.1
LBG Sg Sg 01 40 03.8 +0.3
LBG Lerchenberg 1.23 36 P Pn 01 39 45.9 -0.1
LBG Sg Sg 01 40 03.8 +0.3
TUBL Tuebingen-Lenn 1.25 47⇑iP Pn 01 39 46.4 +0.1
TUBL S Sb 01 40 02.2 -0.3
TUBL Tuebingen-Lenn 1.25 47 P Pn 01 39 46.4 +0.1
TUBL S Sb 01 40 02.2 -0.3
LIENZ Kamor/St.Gall 1.26 107⇑iPn Pg 01 39 48.1 0.0
18µm,0.3s
LIENZ Kamor/St.Gall 1.26 107⇑iPn Pg 01 39 48.1 0.0
LIENZ Kamor/St.Gall 1.26 107⇑iPn Pg 01 39 48.1 0.0
18µm,0.3s
LKBD Leukerbad 1.29 183⇓iPn Pg 01 39 48.5 0.0
4µm,0.7s
LKBD Leukerbad 1.29 183⇓iPn Pg 01 39 48.5 0.0
LKBD Leukerbad 1.29 183⇓iPn Pg 01 39 48.5 0.0
4µm,0.7s
THEF They Montfort 1.29 296 P Pg 01 39 48.0 -0.6
THEF They Montfort 1.29 296 P Pg 01 39 49.0 +0.4
THEF They Montfort 1.29 296 Pg Pg 01 39 49.0 +0.4
THEF They Montfort 1.29 296 Pg Pg 01 39 49.0 +0.4
THEF They Montfort 1.29 296 P Pg 01 39 48.0 -0.6
THEF They Montfort 1.29 296 Pg Pg 01 39 49.0 +0.4
PLONS Plons/SG 1.29 118 ePn Pg 01 39 48.5 -0.1
SNR=126
PLONS ePg Pb 01 39 49.6 +2.1
SNR=546
PLONS eSn Sb 01 40 04.3 +0.5
PLONS eSg Sg 01 40 06.2 +0.7
PLONS Plons/SG 1.29 118⇓iPn Pb 01 39 48.2 +0.7
10µm,0.3s
PLONS Plons/SG 1.29 118⇓iPn Pb 01 39 48.2 +0.7
PLONS Plons/SG 1.29 118⇓iPn Pb 01 39 48.2 +0.7
10µm,0.3s
LANF Langenberg 1.31 3 P Pb 01 39 47.7 -0.1
LANF Langenberg 1.31 3 P Pn 01 39 47.5 +0.3
LANF Langenberg 1.31 3 Pn Pn 01 39 47.5 +0.3
LANF Pg Pg 01 39 50.1 +1.1
LANF Langenberg 1.31 3 Pn Pn 01 39 47.5 +0.3
LANF Langenberg 1.31 3 P Pb 01 39 47.7 -0.1
SENIN Lac Senin/Sane 1.34 192⇓iPn Pb 01 39 48.8 +0.4
7µm,0.3s
SENIN Lac Senin/Sane 1.34 192⇓iPn Pb 01 39 48.8 +0.4
SENIN Lac Senin/Sane 1.34 192⇓iPn Pb 01 39 48.8 +0.4
7µm,0.3s
BUCH Bad Urach 1.35 54⇑iP Pn 01 39 47.7 0.0
BUCH S Sn 01 40 04.6 -0.5
BUCH Bad Urach 1.35 54 P Pn 01 39 47.7 0.0
BUCH S Sn 01 40 04.6 -0.5
FUSIO Fusio 1.38 152⇓iPn Pg 01 39 50.1 -0.2
3µm,0.3s
FUSIO Fusio 1.38 152⇓iPn Pg 01 39 50.1 -0.2
FUSIO Fusio 1.38 152⇓iPn Pg 01 39 50.1 -0.2
3µm,0.3s
STU Stuttgart 1.48 41 ⇑P Pn 01 39 49.1 -0.3
STU ePg Pg 01 39 52.9 +0.7
SNR=3.1
STU eSg Sg 01 40 11.1 -0.5
STU Stuttgart 1.48 41 eP Pn 01 39 49.0 -0.5
STU eS Sg 01 40 11.0 -0.5
STU Stuttgart 1.48 41 ePn Pn 01 39 49.0 -0.5
STU eS Sg 01 40 11.0 -0.5
STU Stuttgart 1.48 41 P Pn 01 39 49.1 -0.3
GIMEL St. Georges / 1.51 222⇑iPn Pn 01 39 50.8 +0.9
9µm,0.3s
GIMEL St. Georges / 1.51 222⇑iPn Pn 01 39 50.8 +0.9
GIMEL St. Georges / 1.51 222⇑iPn Pn 01 39 50.8 +0.9
9µm,0.3s
DAVA Damuels 1.52 104⇑ePn Pb 01 39 51.7 +0.3
SNR=83
DAVA ⇓iSn Sb 01 40 11.2 +0.8
1µm,0.1s
DAVA Damuels 1.52 104⇑ePn Pb 01 39 51.7 +0.3
DAVA iSg Sb 01 40 11.2 +0.8
DAVA Damuels 1.52 104⇑ePn Pb 01 39 51.7 +0.3
DAVA Sn Sb 01 40 11.2 +0.8
1µm,0.1s
OG01 Vacheresse 1.52 208 Pg Pg 01 39 54.1 +1.2
OG01 Sg Sg 01 40 13.7 +1.0
OG01 Vacheresse 1.52 208 Pg Pg 01 39 54.1 +1.2
OG01 Sg Sg 01 40 13.7 +1.0
OG01 Vacheresse 1.52 208 Pg Pg 01 39 54.1 +1.2
OG01 Sg Sg 01 40 13.7 +1.0
CABF La Chapelle 1.54 227 ePn Pb 01 39 51.3 -0.4
SNR=1.0
CABF La Chapelle 1.54 227 ePg Pg 01 39 54.1 +0.8
CABF eSn Sn 01 40 09.6 -0.3
SNR=1.0
CABF eSg Sg 01 40 14.4 +1.1
839nm,0.2s,SNR=1.0
CABF La Chapelle 1.54 227 eP Pb 01 39 51.3 -0.4
CABF e 01 40 09.6
CABF La Chapelle 1.54 227 ePn Pb 01 39 51.3 -0.4
CABF ePg Pg 01 39 54.1 +0.8
CABF eSn Sn 01 40 09.6 -0.3
CABF eSg Sg 01 40 14.4 +1.1
CABF La Chapelle 1.54 227 ePn Pb 01 39 51.3 -0.4
SNR=1.0
CABF La Chapelle 1.54 227 ePg Pg 01 39 54.1 +0.8
CABF eSn Sn 01 40 09.6 -0.3
SNR=1.0
CABF eSg Sg 01 40 14.4 +1.1
419nm,0.2s,SNR=1.0
PAGF Fort de Pagny 1.60 304 ePn Pb 01 39 52.7 0.0
PAGF Fort de Pagny 1.60 304 ePg Pg 01 39 55.9 +1.4
baz=129
PAGF eSg Sg 01 40 16.3 +1.0
371nm,0.2s,baz=119
PAGF Fort de Pagny 1.60 304 ePn Pb 01 39 52.7 0.0
PAGF ePg Pg 01 39 55.9 +1.4
PAGF eSg Sg 01 40 16.3 +1.0
PAGF Fort de Pagny 1.60 304 ePn Pb 01 39 52.7 0.0
PAGF Fort de Pagny 1.60 304 ePg Pg 01 39 55.9 +1.4
baz=129
PAGF eSg Sg 01 40 16.3 +1.0
186nm,0.2s,baz=119
DIX Grande Dixence 1.61 188⇓iP Pn 01 39 52.4 +1.0
DIX Grande Dixence 1.61 188⇓iPn Pn 01 39 52.4 +1.0
4µm,0.3s
DIX Grande Dixence 1.61 188⇓iPn Pn 01 39 52.4 +1.0
DIX Grande Dixence 1.61 188⇓iPn Pn 01 39 52.4 +1.0
4µm,0.3s
SALAN Lac Salanfe 1.61 199 ePn Pb 01 39 53.1 +0.1
SALAN Lac Salanfe 1.61 199 ePn Pb 01 39 53.1 +0.1
SALAN Lac Salanfe 1.61 199 ePn Pb 01 39 53.1 +0.1
UBR Ueberruh 1.62 89⇑iP Pb 01 39 52.6 -0.4
UBR S Sn 01 40 12.4 +0.6
UBR Ueberruh 1.62 89 P Pb 01 39 52.6 -0.4
UBR S Sn 01 40 12.4 +0.6
MMK Mattmark 1.63 174⇓iP Pb 01 39 53.6 +0.2
MMK Mattmark 1.63 174⇓iPn Pb 01 39 53.6 +0.2
4µm,0.3s
MMK Mattmark 1.63 174⇓iPn Pb 01 39 53.6 +0.2
MMK Mattmark 1.63 174⇓iPn Pb 01 39 53.6 +0.2
4µm,0.3s
TUE Stuetta 1.64 137 ePn Pb 01 39 54.1 +0.6
TUE ePg Pg 01 39 58.6 +3.4
TUE eS Sg 01 40 17.2 +0.6
TUE Stuetta 1.64 137 ePn Pb 01 39 54.1 +0.6
KTD Kalmit 1.67 8 P Pn 01 39 52.5 +0.4
KTD Kalmit 1.67 8 P Pn 01 39 52.3 +0.2
KTD 01 40 18.5
KTD Kalmit 1.67 8 Pn Pn 01 39 52.3 +0.2
KTD Pg Pg 01 39 56.8 +1.0
KTD Sg Sg 01 40 18.5 +1.0
KTD Kalmit 1.67 8 P Pn 01 39 52.5 +0.4
VDL Val di Lei 1.68 134⇓iP Pb 01 39 54.9 +0.7
VDL Val di Lei 1.68 134⇓iPn Pb 01 39 54.9 +0.7
3µm,0.4s
VDL Val di Lei 1.68 134⇓iPn Pb 01 39 54.9 +0.7
VDL Val di Lei 1.68 134⇓iPn Pb 01 39 54.9 +0.7
3µm,0.4s
DAVOX Davos/Dischmat 1.72 120⇓iPn Pb 01 39 55.2 +0.3
5µm,0.3s
DAVOX Davos/Dischmat 1.72 120⇓iPn Pb 01 39 55.2 +0.3
DAVOX Pg Pg 01 39 57.3 +0.5
DAVOX Lg Lg 01 40 19.8
DAVOX Davos/Dischmat 1.72 120 Pn Pb 01 39 55.2 +0.3
94nm,0.3s,baz=281,slow=5.2,SNR=233
DAVOX Pg Pg 01 39 57.3 +0.5
94nm,0.3s,baz=298,slow=15,SNR=258
DAVOX Lg Lg 01 40 19.8
475nm,0.3s,baz=204,slow=19,SNR=21
DAVOX Davos/Dischmat 1.72 120⇓iPn Pb 01 39 55.2 +0.3
5µm,0.3s
DAVOX Davos/Dischmat 1.72 120 Pg Pg 01 39 57.3 +0.5
OBER Oberstdorf 1.77 98 ⇑P Pb 01 39 55.0 -0.6
OBER S Sn 01 40 15.6 +0.1
OBER Oberstdorf 1.77 98 P Pb 01 39 55.0 -0.6
OBER S Sn 01 40 15.6 +0.1
SFTF Sexfontaines 1.88 288 ePn Pn 01 39 56.1 +1.2
baz=114
SFTF Sexfontaines 1.88 288 ePg Pg 01 40 01.1 +1.3
baz=111
SFTF eSn Sn 01 40 17.9 -0.3
SFTF eSg Sg 01 40 25.3 +1.1
1µm,0.2s
SFTF Sexfontaines 1.88 288 ePn Pn 01 39 56.1 +1.2
SFTF ePg Pg 01 40 01.1 +1.3
SFTF eSn Sn 01 40 17.9 -0.3
SFTF eSg Sg 01 40 25.3 +1.1
SFTF Sexfontaines 1.88 288 ePn Pn 01 39 56.1 +1.2
baz=114
SFTF Sexfontaines 1.88 288 ePg Pg 01 40 01.1 +1.3
baz=111
SFTF eSn Sn 01 40 17.9 -0.3
SFTF eSg Sg 01 40 25.3 +1.1
510nm,0.2s
SWS Schriesheim-Wi 1.93 19 ⇑P Pn 01 39 55.2 -0.4
SWS S Sn 01 40 18.2 -1.2
SWS Schriesheim-Wi 1.93 19 P Pn 01 39 55.2 -0.4
SWS S Sn 01 40 18.2 -1.2
MEZF Maizieres J'vi 1.97 296 ePn Pn 01 39 57.6 +1.4
baz=105,SNR=1.0
MEZF Maizieres J'vi 1.97 296 ePg Pg 01 40 02.1 +0.6
baz=107
MEZF eSg Sg 01 40 27.5 +0.4
2µm,0.3s,baz=108,SNR=1.0
MEZF Maizieres J'vi 1.97 296 ePn Pn 01 39 57.6 +1.4
MEZF ePg Pg 01 40 02.1 +0.6
MEZF eSg Sg 01 40 27.5 +0.4
MEZF Maizieres J'vi 1.97 296 ePn Pn 01 39 57.6 +1.4
baz=105,SNR=1.0
MEZF Maizieres J'vi 1.97 296 ePg Pg 01 40 02.1 +0.6
baz=107
MEZF eSg Sg 01 40 27.5 +0.4
759nm,0.3s,baz=108,SNR=1.0
FUORN Ofenpass-Fuorn 2.03 120⇓iPn Pb 01 39 59.8 -0.4
2µm,0.6s
FUORN Ofenpass-Fuorn 2.03 120⇓iPn Pb 01 39 59.8 -0.4
FUORN Ofenpass-Fuorn 2.03 120⇓iPn Pb 01 39 59.8 -0.4
2µm,0.6s
TOD Tromm 2.07 20 P Pn 01 39 57.1 -0.4
TOD Tromm 2.07 20 P Pn 01 39 57.3 -0.2
TOD Tromm 2.07 20 Pn Pn 01 39 57.3 -0.2
TOD Tromm 2.07 20 Pn Pn 01 39 57.3 -0.2
RETA Reutte 2.07 94⇓ePn Pn 01 39 58.8 +1.2
SNR=68
RETA ⇓iSn Sn 01 40 23.9 +0.9
RETA ⇑iSg Sg 01 40 29.2 -1.1
594nm,0.2s
RETA Reutte 2.07 94⇓ePn Pn 01 39 58.8 +1.2
RETA iSn Sn 01 40 23.9 +0.9
RETA iSg Sg 01 40 29.2 -1.1
RETA Reutte 2.07 94⇓ePn Pn 01 39 58.8 +1.2
RETA iSn Sn 01 40 23.9 +0.9
RETA Sg Sg 01 40 29.2 -1.1
594nm,0.2s
RUP Ruppelstein 2.08 348 P Pn 01 39 59.2 +1.5
RUP Ruppelstein 2.08 348 P Pb 01 40 00.1 -0.8
RUP Ruppelstein 2.08 348 Pn Pb 01 40 00.1 -0.8
RUP Pg Pg 01 40 04.4 +0.8
RUP Ruppelstein 2.08 348 P Pn 01 39 59.2 +1.5
RUP Ruppelstein 2.08 348 Pn Pb 01 40 00.1 -0.8
SIND Sindeldorf 2.10 36 ⇑P Pn 01 39 57.0 -0.9
SIND Sg Sg 01 40 30.3 -0.9
SIND Sindeldorf 2.10 36 P Pn 01 39 57.0 -0.9
SIND Sg Sg 01 40 30.3 -0.9
RSL Roselend 2.12 201 P Pb 01 40 00.5 -1.2
RSL 01 40 32.7
RSL Roselend 2.12 201 Pn Pb 01 40 00.5 -1.2
RSL Pg Pg 01 40 05.9 +1.5
RSL Sg Sg 01 40 32.7 +0.7
RSL Roselend 2.12 201 Pn Pb 01 40 00.5 -1.2
RSL Roselend 2.12 201 Pn Pb 01 40 00.5 -1.2
FETA Feichten 2.15 107 ePn Pb 01 40 01.0 -1.2
SNR=69
FETA ⇑iSg Sg 01 40 32.0 -0.9
192nm,0.2s
FETA Feichten 2.15 107 ePn Pb 01 40 01.0 -1.2
FETA iSg Sg 01 40 31.9 -0.9
FETA Feichten 2.15 107 eP Pb 01 40 01.0 -1.2
FETA iSg Sg 01 40 32.0 -0.9
ABH Alteburg 2.21 357 P Pn 01 40 00.3 +0.7
ABH Alteburg 2.21 357 Pn Pn 01 40 00.5 +0.9
ABH Pg Pg 01 40 06.8 +0.6
ABH Alteburg 2.21 357 P Pn 01 40 00.3 +0.7
WLF Walferdange 2.25 333 PN Pb 01 40 02.1 -1.7
WLF PB Pg 01 40 07.7 +0.9
WLF SN Sb 01 40 29.6 -1.7
comp=E,122nm,0.0s
WLF SB Sg 01 40 36.3 +0.3
WLF Walferdange 2.25 333 P Pb 01 40 02.2 -1.5
WLF ePg Pg 01 40 07.8 +1.0
SNR=7.5
WLF eSg Sg 01 40 36.4 +0.4
WLF Walferdange 2.25 333 eP Pb 01 40 02.1 -1.7
WLF eS Sg 01 40 37.5 +1.5
WLF Walferdange 2.25 333 ePn Pb 01 40 02.1 -1.7
WLF ePg Pg 01 40 07.5 +0.7
WLF eS Sg 01 40 37.5 +1.5
WLF Walferdange 2.25 333 eP Pb 01 40 02.1 -1.7
WLF Walferdange 2.25 333 ePg Pg 01 40 07.5 +0.7
WLF Sn Sb 01 40 29.5 -1.7
WLF Sg Sg 01 40 36.4 +0.4
LPL La Plagne 2.26 198 ePn Pn 01 40 01.4 +1.0
SNR=1.0
LPL La Plagne 2.26 198 ePg Pg 01 40 07.2 +0.1
LPL eSn Sn 01 40 26.5 -1.4
SNR=1.0
LPL eSg Sg 01 40 36.5 +0.1
comp=E,539nm,0.3s,SNR=1.0
LPL La Plagne 2.26 198 eP Pn 01 40 01.4 +1.0
LPL e 01 40 26.5
LPL La Plagne 2.26 198 ePn Pn 01 40 01.4 +1.0
LPL ePg Pg 01 40 07.2 +0.1
LPL eSn Sn 01 40 26.5 -1.4
LPL eSg Sg 01 40 36.5 +0.1
LPL La Plagne 2.26 198 ePn Pn 01 40 01.4 +1.0
SNR=1.0
LPL La Plagne 2.26 198 ePg Pg 01 40 07.2 +0.1
LPL eSn Sn 01 40 26.5 -1.4
SNR=1.0
LPL eSg Sg 01 40 36.5 +0.1
comp=E,270nm,0.3s,SNR=1.0
LPG La Plagne 2.27 197 ePn Pn 01 40 02.2 +1.6
SNR=1.0
LPG La Plagne 2.27 197 ePg Pg 01 40 07.6 +0.3
LPG eSn Sn 01 40 26.7 -1.6
SNR=1.0
LPG eSg Sg 01 40 36.6 -0.3
comp=E,1µm,0.4s,SNR=1.0
LPG La Plagne 2.27 197 eP Pn 01 40 02.2 +1.6
LPG e 01 40 26.7
LPG La Plagne 2.27 197 ePn Pn 01 40 02.2 +1.6
LPG ePg Pg 01 40 07.6 +0.3
LPG eSn Sn 01 40 26.7 -1.6
LPG eSg Sg 01 40 36.6 -0.3
LPG La Plagne 2.27 197 ePn Pn 01 40 02.2 +1.6
SNR=1.0
LPG La Plagne 2.27 197 ePg Pg 01 40 07.6 +0.3
LPG eSn Sn 01 40 26.7 -1.6
SNR=1.0
LPG eSg Sg 01 40 36.6 -0.3
comp=E,595nm,0.4s,SNR=1.0
MOTA Moosalm 2.32 97⇓eP Pn 01 40 02.8 +1.7
MOTA i 01 40 30.3
MOTA Moosalm 2.32 97⇓ePn Pn 01 40 02.8 +1.7
SNR=68
MOTA ⇓iPg Pg 01 40 08.4 +0.2
MOTA ⇓iSn Sn 01 40 30.3 +1.0
MOTA ⇑iSg Sg 01 40 37.6 -0.7
comp=E,560nm,0.1s
MOTA Moosalm 2.32 97⇓ePn Pn 01 40 02.8 +1.7
MOTA ⇓iPg Pg 01 40 08.4 +0.2
MOTA iSn Sn 01 40 30.3 +1.0
MOTA iSg Sg 01 40 37.6 -0.7
MOTA Moosalm 2.32 97 eP Pn 01 40 02.8 +1.7
MOTA Moosalm 2.32 97⇓iPg Pg 01 40 08.4 +0.2
MOTA iS Sn 01 40 30.3 +1.0
MOTA Sg Sg 01 40 37.6 -0.7
comp=E,560nm,0.1s
FUR Furstenfeldbru 2.44 77 ePn Pn 01 40 03.6 +0.9
SNR=49
FUR ePg Pg 01 40 11.2 +0.6
SNR=4.8
FUR eSg Sg 01 40 42.6 +0.3
FUR Furstenfeldbru 2.44 77 eP Pn 01 40 03.6 +0.9
FUR Furstenfeldbru 2.44 77 Pn Pn 01 40 03.6 +0.9
SNR=49
RSP Reno Superiore 2.54 187 P Pn 01 40 06.3 +2.1
RSP S Sn 01 40 33.7 -1.0
BGG Burgeitz 2.55 355 ePn Pb 01 40 06.9 -2.0
BGG eSn Sn 01 40 36.9 +2.2
comp=E,550nm,0.4s
BGG Burgeitz 2.55 355 Pn Pb 01 40 06.9 -2.0
BGG Sn Sn 01 40 36.9 +2.2
comp=E,550nm,0.4s
TNS Taunus Mts 2.60 10 ⇑P Pn 01 40 05.0 +0.1
TNS ePg Pg 01 40 14.0 +0.5
SNR=2.6
TNS eSn Sn 01 40 35.3 -0.7
TNS Sg Sg 01 40 47.2 0.0
TNS Taunus Mts 2.60 10 eP Pn 01 40 05.2 +0.3
TNS Taunus Mts 2.60 10 eP Pn 01 40 05.2 +0.3
WATA Walderalm 2.64 96⇑eP Pn 01 40 07.8 +2.3
WATA i 01 40 38.1
WATA Walderalm 2.64 96⇑ePn Pn 01 40 07.8 +2.3
SNR=16
WATA ⇓iSn Sn 01 40 38.1 +1.0
WATA ⇓iSg Sg 01 40 48.0 -0.5
comp=E,184nm,0.2s
WATA Walderalm 2.64 96⇑ePn Pn 01 40 07.8 +2.3
WATA i Sn 01 40 38.1 +1.0
WATA i Sg 01 40 48.0 -0.5
WATA Walderalm 2.64 96 eP Pn 01 40 07.8 +2.3
WATA iS Sn 01 40 38.1 +1.0
WATA Sg Sg 01 40 48.0 -0.5
comp=E,184nm,0.2s
LOR Lormes 2.65 263 ePn Pn 01 40 05.5 0.0
baz=88,SNR=1.0
LOR Lormes 2.65 263 eP Pn 01 40 08.0 +2.5
baz=83
LOR Lormes 2.65 263 ePg Pg 01 40 14.9 +0.5
baz=85
LOR eSn Sn 01 40 36.3 -0.9
SNR=1.0

LOR eSg **Sg** 01 40 48.9 +0.1
comp=E,418nm,0.2s,baz=79,SNR=1.0
LOR Lormes 2.65 263 ePn **Pn** 01 40 05.5 0.0
LOR ePg **Pg** 01 40 14.9 +0.5
LOR eSn **Sn** 01 40 36.3 -0.9
LOR eSg **Sg** 01 40 48.9 +0.1
LOR Lormes 2.65 263 ePn **Pn** 01 40 05.5 0.0
baz=88,SNR=1.0
LOR Lormes 2.65 263 eP **Pn** 01 40 08.0 +2.5
baz=83
LOR Lormes 2.65 263 ePg **Pg** 01 40 14.9 +0.5
baz=85
LOR eSn **Sn** 01 40 36.3 -0.9
SNR=1.0
LOR eSg **Sg** 01 40 48.9 +0.1
comp=E,209nm,0.2s,baz=79,SNR=1.0
WTTA Wattenberg 2.69 97⇓ eP **Pn** 01 40 08.9 +2.7
WTTA Wattenberg 2.69 97⇓ ePn **Pn** 01 40 08.9 +2.7
SNR=11
WTTA ⇑*i*Sg **Sg** 01 40 49.7 -0.5
comp=E,475nm,0.3s
WTTA Wattenberg 2.69 97⇓ ePn **Pn** 01 40 08.9 +2.7
WTTA *i* Sg **Sg** 01 40 49.7 -0.5
WTTA Wattenberg 2.69 97 eP **Pn** 01 40 08.9 +2.7
WTTA *i* Sg **Sg** 01 40 49.7 -0.5
GDM Grand'Maison 2.71 205 Pn **Pn** 01 40 07.6 +1.2
GDM Pg **Pg** 01 40 15.7 +0.1
GDM Grand'Maison 2.71 205 Pn **Pn** 01 40 07.6 +1.2
GDM Grand'Maison 2.71 205 Pn **Pn** 01 40 07.6 +1.2
HILG Hillesheim 2.71 346 ePn **Pn** 01 40 09.1 +2.7
HILG eSn **Sn** 01 40 41.6 +2.9
comp=E,285nm,0.5s
HILG Hillesheim 2.71 346 Pn **Pn** 01 40 09.1 +2.7
HILG Sn **Sn** 01 40 41.6 +2.9
comp=E,285nm,0.5s
KOE Koeppel 2.76 0 ePn **Pn** 01 40 09.8 +2.8
KOE Koeppel 2.76 0 Pn **Pn** 01 40 09.8 +2.8
GRN Grenoble 2.79 210 P **Pn** 01 40 08.2 +0.7
GRN Grenoble 2.79 210 Pn **Pn** 01 40 08.2 +0.7
GRN Pg **Pg** 01 40 17.5 +0.4
GRN Grenoble 2.79 210 Pn **Pn** 01 40 08.2 +0.7
GRN Grenoble 2.79 210 Pn **Pn** 01 40 08.2 +0.7
SMF Signal de Mont 2.84 250 ePn **Pn** 01 40 08.4 +0.3
SNR=1.0
SMF Signal de Mont 2.84 250 ePg **Pg** 01 40 18.2 +0.2
SMF eSg **Sg** 01 40 54.7 -0.1
comp=E,456nm,0.2s,SNR=1.0
SMF Signal de Mont 2.84 250 eP **Pn** 01 40 08.4 +0.3
SMF Signal de Mont 2.84 250 ePn **Pn** 01 40 08.4 +0.3
SMF ePg **Pg** 01 40 18.2 +0.2
SMF eSg **Sg** 01 40 54.7 -0.1
SMF Signal de Mont 2.84 250 ePn **Pn** 01 40 08.4 +0.3
SNR=1.0
SMF Signal de Mont 2.84 250 ePg **Pg** 01 40 18.2 +0.2
SMF eSg **Sg** 01 40 54.7 -0.1
comp=E,228nm,0.2s,SNR=1.0
ROTM Rocchetta Tana 2.86 171 P **Pn** 01 40 10.9 +2.5
ROTM S **Sn** 01 40 41.8 -0.5
SSF Saint Saulge 2.93 260 ePn **Pn** 01 40 10.5 +1.2
SNR=1.0
SSF Saint Saulge 2.93 260 eP **Pg** 01 40 19.9 +0.1
SSF eSn **Sn** 01 40 41.6 -2.4
SNR=1.0
SSF eSg **Sg** 01 40 57.1 -0.6
comp=E,348nm,0.3s,SNR=1.0
SSF Saint Saulge 2.93 260 eP **Pn** 01 40 10.5 +1.2
SSF *e* 01 40 41.6
SSF Saint Saulge 2.93 260 ePn **Pn** 01 40 10.5 +1.2
SSF eSn **Sn** 01 40 41.6 -2.4
SSF eSg **Sg** 01 40 57.1 -0.6
SSF Saint Saulge 2.93 260 ePn **Pn** 01 40 10.5 +1.2
SNR=1.0
SSF eSn **Sn** 01 40 41.6 -2.4
SNR=1.0
SSF eSg **Sg** 01 40 57.1 -0.6
comp=E,174nm,0.3s,SNR=1.0
STB Steinbach 2.98 349⇓ *i*Pn **Pn** 01 40 13.0 +2.9
STB eSn **Sn** 01 40 47.4 +2.1
comp=E,272nm,0.5s
STB Steinbach 2.98 349 Pn **Pn** 01 40 13.0 +2.9
STB Sn **Sn** 01 40 47.4 +2.1
comp=E,272nm,0.5s
MBDF Montbardon 3.02 193 eP **Pn** 01 40 13.2 +2.5
SNR=1.0
MBDF Montbardon 3.02 193 ePg **Pg** 01 40 21.7 +0.2
MBDF eSg **Sg** 01 40 59.9 -0.7
comp=E,307nm,0.4s
MBDF Montbardon 3.02 193 eP **Pn** 01 40 13.2 +2.5
MBDF Montbardon 3.02 193 eP **Pn** 01 40 13.2 +2.5
MBDF ePg **Pg** 01 40 21.7 +0.2
MBDF eSg **Sg** 01 40 59.9 -0.7
MBDF Montbardon 3.02 193 eP **Pn** 01 40 13.2 +2.5
SNR=1.0
MBDF Montbardon 3.02 193 ePg **Pg** 01 40 21.7 +0.2
MBDF eSg **Sg** 01 40 59.9 -0.7
comp=E,154nm,0.4s
ORIF Oris-en-Rattie 3.03 205 ePn **Pn** 01 40 11.7 +0.8
SNR=1.0
ORIF Oris-en-Rattie 3.03 205 ePg **Pg** 01 40 21.0 -0.8
ORIF eSg **Sg** 01 41 00.4 -0.7
comp=E,701nm,0.3s
ORIF Oris-en-Rattie 3.03 205 eP **Pn** 01 40 11.7 +0.8
ORIF Oris-en-Rattie 3.03 205 ePn **Pn** 01 40 11.7 +0.8
ORIF ePg **Pg** 01 40 21.0 -0.8
ORIF eSg **Sg** 01 41 00.4 -0.7
ORIF Oris-en-Rattie 3.03 205 ePn **Pn** 01 40 11.7 +0.8
SNR=1.0
ORIF Oris-en-Rattie 3.03 205 ePg **Pg** 01 40 21.0 -0.8
ORIF eSg **Sg** 01 41 00.4 -0.7
comp=E,351nm,0.3s
GRA1 Grafenberg Arr 3.08 48 Pn **Pn** 01 40 10.5 -0.9
SNR=35
GRA1 Grafenberg Arr 3.08 48 Pg **Pg** 01 40 22.7 0.0
SNR=17
GRA1 Sg **Sg** 01 41 01.3 -1.3
GRF Grafenberg Arr 3.08 48 ePn **Pn** 01 40 10.5 -0.9
SNR=35
GRF ePg **Pg** 01 40 22.7 0.0
SNR=17
GRF eSg **Sg** 01 41 01.3 -1.3
GRF Grafenberg Arr 3.08 48 eP **Pn** 01 40 10.5 -0.9
GIVF Givet 3.09 323 eP **Pn** 01 40 13.7 +2.1
SNR=1.0
GIVF Givet 3.09 323 ePg **Pg** 01 40 22.8 -0.1
GIVF eSg **Sg** 01 41 01.7 -1.3
comp=E,344nm,0.3s
GIVF Givet 3.09 323 eP **Pn** 01 40 13.7 +2.1
GIVF Givet 3.09 323 eP **Pn** 01 40 13.7 +2.1
GIVF ePg **Pg** 01 40 22.8 -0.1
GIVF eSg **Sg** 01 41 01.7 -1.3
GIVF Givet 3.09 323 eP **Pn** 01 40 13.7 +2.1
SNR=1.0
GIVF Givet 3.09 323 ePg **Pg** 01 40 22.8 -0.1
GIVF eSg **Sg** 01 41 01.7 -1.3
comp=E,172nm,0.3s
AVF Avril sur Loir 3.10 255 ePn **Pn** 01 40 12.1 +0.4
SNR=1.0
AVF Avril sur Loir 3.10 255 ePg **Pg** 01 40 22.9 -0.2
AVF eSg **Sg** 01 41 02.4 -0.9
comp=E,100nm,0.2s
AVF Avril sur Loir 3.10 255 eP **Pn** 01 40 12.1 +0.4
AVF Avril sur Loir 3.10 255 ePn **Pn** 01 40 12.1 +0.4
AVF ePg **Pg** 01 40 22.9 -0.2
AVF eSg **Sg** 01 41 02.4 -0.9
AVF Avril sur Loir 3.10 255 ePn **Pn** 01 40 12.1 +0.4
SNR=1.0
AVF Avril sur Loir 3.10 255 ePg **Pg** 01 40 22.9 -0.2
AVF eSg **Sg** 01 41 02.4 -0.9
comp=E,50nm,0.2s
KLL Kalltalsperre 3.12 343 ePn **Pn** 01 40 14.4 +2.4
KLL Kalltalsperre 3.12 343 Pn **Pn** 01 40 14.4 +2.4
MEM Membach 3.15 340 PN **Pn** 01 40 14.0 +1.6
MEM APN 01 40 18.9
MEM PB **Pg** 01 40 23.7 -0.3
MEM SN **Sn** 01 40 50.1 +0.7
comp=E,110nm,0.0s
MEM Membach 3.15 340 Pn **Pn** 01 40 13.9 +1.6
DREG Dreilaegerbach 3.15 343 ePn **Pn** 01 40 13.6 +1.2
SNR=43
DREG ePg **Pg** 01 40 24.1 +0.1
SNR=2.0
DREG Dreilaegerbach 3.15 343 Pn **Pn** 01 40 13.6 +1.2
SNR=43
BCLA Clavier 3.18 331 PN **Pn** 01 40 14.9 +2.2
BCLA SN **Sn** 01 40 49.7 -0.4
comp=E,100nm,0.0s
BCLA Clavier 3.18 331 Pn **Pn** 01 40 14.9 +2.2
BCLA Sn **Sn** 01 40 49.7 -0.4
DOU Dourbes 3.18 321 PN **Pn** 01 40 15.8 +2.9
DOU PG **Pg** 01 40 24.7 0.0
DOU SN **Sn** 01 40 52.5 +2.2
comp=E,145nm,0.0s
DOU SG **Sg** 01 41 05.8 -0.1
DOU Dourbes 3.18 321 Pn **Pn** 01 40 15.7 +2.9
PCP Piancastagn 3.18 169 P **Pn** 01 40 14.8 +1.9
PCP S **Sn** 01 40 47.8 -2.6
PZZ Stroppo 3.19 188 P **Pn** 01 40 15.6 +2.5
SSB Saint Sauveur 3.25 224 eP **Pn** 01 40 13.1 -0.7
SSB Saint Sauveur 3.25 224 ePn **Pn** 01 40 13.1 -0.7
SSB ePg **Pg** 01 40 25.6 -0.3
SSB Saint Sauveur 3.25 224 eP **Pn** 01 40 13.1 -0.7
SURF Saint Ours 3.25 191 Pn **Pn** 01 40 16.2 +2.2
SURF Pg **Pg** 01 40 25.9 -0.1
SURF Saint Ours 3.25 191 Pn **Pn** 01 40 16.2 +2.2
SURF Saint Ours 3.25 191 Pn **Pn** 01 40 16.2 +2.2
HGN Heimansgroeve 3.31 340 ePn **Pn** 01 40 16.4 +1.8
comp=E,12nm,0.1s
HGN ePg **Pb** 01 40 21.4 -0.4
comp=E,27nm,0.2s
HGN ePb **Pg** 01 40 26.6 -0.5
HGN eSn **Sn** 01 40 54.8 +1.4
HGN eSg **Sg** 01 41 08.2 -1.7
BNS Bensberg 3.31 354 ePn Pn 01 40 17.9 +3.3
BNS eSn **Sn** 01 40 56.6 +3.1
comp=E,609nm,0.5s
HOBG Hohbusch 3.33 356 ePn **Pn** 01 40 17.7 +2.9
HOBG eSn **Sn** 01 40 55.3 +1.5
comp=E,624nm,0.6s
HOBG Hohbusch 3.33 356 Pn **Pn** 01 40 17.7 +2.9
HOBG Sn **Sn** 01 40 55.3 +1.5
comp=E,624nm,0.6s
BAIF Baives 3.33 317 eP **Pn** 01 40 17.3 +2.5
SNR=1.0
BAIF Baives 3.33 317 ePg **Pg** 01 40 27.0 -0.4
BAIF eSn **Sn** 01 40 51.6 -2.3
SNR=1.0
BAIF eSg **Sg** 01 41 09.1 -1.4
comp=E,311nm,0.5s,SNR=1.0
BAIF Baives 3.33 317 eP **Pn** 01 40 17.3 +2.5
BAIF *e* 01 40 51.6
BAIF Baives 3.33 317 eP **Pn** 01 40 17.3 +2.5
BAIF ePg **Pg** 01 40 27.0 -0.4
BAIF eSn **Sn** 01 40 51.6 -2.3
BAIF eSg **Sg** 01 41 09.1 -1.4
BAIF Baives 3.33 317 eP **Pn** 01 40 17.3 +2.5
SNR=1.0
BAIF Baives 3.33 317 ePg **Pg** 01 40 27.0 -0.4
BAIF eSn **Sn** 01 40 51.6 -2.3
SNR=1.0
BAIF eSg **Sg** 01 41 09.1 -1.4
comp=E,156nm,0.5s,SNR=1.0
ABTA Abfaltersbach 3.40 104⇑ *i*Pn Pn 01 40 19.3 +3.4
SNR=14
ABTA ⇓*i*Sn **Sn** 01 40 56.2 +0.4
ABTA ⇓*i*Sg **Sg** 01 41 12.6 -0.2
comp=E,73nm,0.2s
ABTA Abfaltersbach 3.40 104⇑ *i*Pn Pn 01 40 19.3 +3.4
ABTA *i* Sn **Sn** 01 40 56.2 +0.4
ABTA *i* Sg **Sg** 01 41 12.6 -0.2
ABTA Abfaltersbach 3.40 104⇑ *i*Pn Pn 01 40 19.3 +3.4
ABTA *i* Sn **Sn** 01 40 56.2 +0.4
ABTA Sg **Sg** 01 41 12.6 -0.2
comp=E,73nm,0.2s
BEBN Eben Emael 3.40 338 PN **Pn** 01 40 18.1 +2.3
BEBN PB **Pg** 01 40 28.7 -0.1
BEBN Eben Emael 3.40 338 Pn **Pn** 01 40 18.1 +2.3
RJOB Jochberg 3.43 87 ePn **Pn** 01 40 18.1 +1.8
SNR=78
RJOB eSg **Sg** 01 41 13.8 0.0
RJOB Jochberg 3.43 87 Pn **Pn** 01 40 18.1 +1.8
SNR=78
RJOB Sg **Sg** 01 41 13.8 0.0
STV Sant Anna di V 3.44 185 P **Pn** 01 40 17.2 +0.8
ENR Entracque 3.45 184 P **Pn** 01 40 17.6 +1.0
HYF Humbligny 3.47 265 ePn **Pn** 01 40 17.6 +0.8
HYF Humbligny 3.47 265 ePg **Pg** 01 40 30.6 +0.5
HYF eSg **Sg** 01 41 15.3 +0.3
HYF Humbligny 3.47 265 ePn **Pn** 01 40 17.6 +0.8
HYF ePg **Pg** 01 40 30.6 +0.5
HYF eSg **Sg** 01 41 15.3 +0.3
HYF Humbligny 3.47 265 ePn **Pn** 01 40 17.6 +0.8
BGF Bois d'Agland 3.51 253 ePn **Pn** 01 40 17.6 +0.3
SNR=1.0
BGF Bois d'Agland 3.51 253 ePg **Pg** 01 40 30.9 0.0
BGF eSn **Sn** 01 40 56.6 -1.7
SNR=1.0
BGF eSg **Sg** 01 41 14.9 -1.4
comp=E,564nm,0.4s,SNR=1.0
BGF Bois d'Agland 3.51 253 eP **Pn** 01 40 17.6 +0.3
BGF *e* 01 40 56.6
BGF Bois d'Agland 3.51 253 ePn **Pn** 01 40 17.6 +0.3
BGF ePg **Pg** 01 40 30.9 0.0
BGF eSn **Sn** 01 40 56.6 -1.7
BGF eSg **Sg** 01 41 14.9 -1.4
BGF Bois d'Agland 3.51 253 ePn **Pn** 01 40 17.6 +0.3
SNR=1.0
BGF Bois d'Agland 3.51 253 ePg **Pg** 01 40 30.9 0.0
BGF eSn **Sn** 01 40 56.6 -1.7
SNR=1.0
BGF eSg **Sg** 01 41 14.9 -1.4
comp=E,282nm,0.4s,SNR=1.0
COLF Collangettes 3.51 234 Pn **Pn** 01 40 17.1 -0.3
COLF Pg **Pg** 01 40 30.2 -0.7
COLF Collangettes 3.51 234 Pn **Pn** 01 40 17.1 -0.3
COLF Collangettes 3.51 234 Pn **Pn** 01 40 17.1 -0.3
VIVF Saint-Julien-l 3.52 218 ePn **Pn** 01 40 17.2 -0.3
SNR=1.0
VIVF Saint-Julien-l 3.52 218 ePg **Pg** 01 40 30.6 -0.5
VIVF eSg **Sg** 01 41 16.0 -0.7
comp=E,531nm,0.3s
VIVF Saint-Julien-l 3.52 218 eP **Pn** 01 40 17.2 -0.3
VIVF Saint-Julien-l 3.52 218 ePn **Pn** 01 40 17.2 -0.3
VIVF ePg **Pg** 01 40 30.6 -0.5
VIVF eSg **Sg** 01 41 16.0 -0.7
VIVF Saint-Julien-l 3.52 218 ePn **Pn** 01 40 17.2 -0.3
SNR=1.0
VIVF Saint-Julien-l 3.52 218 ePg **Pg** 01 40 30.6 -0.5
VIVF eSg **Sg** 01 41 16.0 -0.7
comp=E,266nm,0.3s
OCF Saint Nazaire 3.52 209 Pn **Pn** 01 40 18.3 +0.8
OCF Pg **Pg** 01 40 30.6 -0.5
OCF Saint Nazaire 3.52 209 Pn **Pn** 01 40 18.3 +0.8
OG26 St.-Nazaire-De 3.52 209 Pn **Pn** 01 40 18.3 +0.8
OG26 St.-Nazaire-De 3.52 209 Pg **Pg** 01 40 30.6 -0.5
OG26 St.-Nazaire-De 3.52 209 Pn **Pn** 01 40 18.3 +0.8
OG26 St.-Nazaire-De 3.52 209 Pg **Pg** 01 40 30.6 -0.5
AGO Saint Agoulin 3.54 244 Pn **Pn** 01 40 17.7 -0.1
AGO Saint Agoulin 3.54 244 Pn **Pn** 01 40 17.7 -0.1
AGO Saint Agoulin 3.54 244 Pn **Pn** 01 40 17.7 -0.1
CODM Codolo 3.60 155 P **Pn** 01 40 21.6 +3.0
RODG Roetgen-Dahlhe 3.62 344 ePn Pn 01 40 22.3 +3.5
SNF Seneffe 3.63 323 PN **Pn** 01 40 21.9 +2.9
SNF XPN 01 40 26.6
SNF Seneffe 3.63 323 Pn **Pn** 01 40 21.8 +2.9
ROTZ Rotzenmuhle 3.64 53 ePn **Pn** 01 40 18.1 -1.0
SNR=46
ROTZ ePg **Pg** 01 40 32.4 -1.0
SNR=4.7
ROTZ Rotzenmuhle 3.64 53 Pn **Pn** 01 40 18.1 -1.0
SNR=46
TOUF Mont Tournerai 3.67 185 P **Pn** 01 40 21.0 +1.2
TOUF Mont Tournerai 3.67 185 Pn **Pn** 01 40 21.0 +1.2
TOUF Mont Tournerai 3.67 185 Pn **Pn** 01 40 21.0 +1.2
TOUF Mont Tournerai 3.67 185 Pn **Pn** 01 40 21.0 +1.2
AUTN L'Aution 3.68 183 P **Pn** 01 40 21.0 +1.1
AUTN L'Aution 3.68 183 Pn **Pn** 01 40 21.0 +1.1
AUTN L'Aution 3.68 183 Pn **Pn** 01 40 21.0 +1.1
AUTN L'Aution 3.68 183 Pn **Pn** 01 40 21.0 +1.1
CLF Chambon-Foret 3.69 277 eP **Pn** 01 40 21.6 +1.9
CLF Chambon-Foret 3.69 277 eP **Pn** 01 40 21.6 +1.9
SAOF Saorge 3.69 182 P **Pn** 01 40 21.1 +1.3
SAOF Saorge 3.69 182 Pn **Pn** 01 40 21.1 +1.3
SAOF Saorge 3.69 182 Pn **Pn** 01 40 21.1 +1.3
SAOF Saorge 3.69 182 Pn **Pn** 01 40 21.1 +1.3
MANZ Manzenberg 3.71 50 ePn **Pn** 01 40 19.1 -1.0
SNR=24
MANZ ePg **Pg** 01 40 33.9 -0.9
SNR=6.1
MANZ eSg **Sg** 01 41 19.8 -3.1
MANZ Manzenberg 3.71 50 Pn **Pn** 01 40 19.1 -1.0
SNR=24
LAUG Laupendahl 3.72 353 ePn **Pn** 01 40 22.7 +2.5
LAUG Laupendahl 3.72 353 Pn **Pn** 01 40 22.7 +2.5
WET Wettzell 3.74 65 ePn **Pn** 01 40 20.7 +0.2
SNR=35
WET ePg **Pg** 01 40 34.6 -0.8
SNR=5.4
WET eSn **Sn** 01 41 02.5 -1.6
WET eSg **Sg** 01 41 21.9 -1.9
WET Wettzell 3.74 65 eP **Pn** 01 40 20.7 +0.2
WET Wettzell 3.74 65 Pn **Pn** 01 40 20.7 +0.2
SNR=35
PYM Petit Puy Mans 3.77 241 P **Pn** 01 40 20.3 -0.6
PYM Petit Puy Mans 3.77 241 Pn **Pn** 01 40 20.3 -0.6
PYM Petit Puy Mans 3.77 241 Pn **Pn** 01 40 20.3 -0.6
PYM Petit Puy Mans 3.77 241 Pn **Pn** 01 40 20.3 -0.6
MVIF Mont Vial 3.80 186 P **Pn** 01 40 23.0 +1.6
MVIF Mont Vial 3.80 186 Pn **Pn** 01 40 23.0 +1.6
MVIF Mont Vial 3.80 186 Pn **Pn** 01 40 23.0 +1.6
MVIF Mont Vial 3.80 186 Pn **Pn** 01 40 23.0 +1.6
SBF Sospel 3.81 183 ePn **Pn** 01 40 22.7 +1.1
SNR=1.0
SBF Sospel 3.81 183 ePg **Pg** 01 40 34.7 -2.0
SBF eSn **Sn** 01 41 04.1 -1.9
SBF eSg **Sg** 01 41 24.4 -1.7
comp=E,251nm,0.4s,SNR=1.0
SBF Sospel 3.81 183 eP **Pn** 01 40 22.7 +1.1
SBF *e* 01 41 04.1
SBF Sospel 3.81 183 ePn **Pn** 01 40 22.7 +1.1
SBF ePg **Pg** 01 40 34.7 -2.0
SBF eSn **Sn** 01 41 04.1 -1.9
SBF eSg **Sg** 01 41 24.4 -1.7
SBF Sospel 3.81 183 ePn **Pn** 01 40 22.7 +1.1
SNR=1.0
SBF Sospel 3.81 183 ePg **Pg** 01 40 34.7 -2.0
SBF eSn **Sn** 01 41 04.1 -1.9
SBF eSg **Sg** 01 41 24.4 -1.7
comp=E,126nm,0.4s,SNR=1.0
UCC Uccle 3.83 326 PN **Pn** 01 40 23.6 +2.0
UCC Uccle 3.83 326 Pn **Pn** 01 40 23.6 +2.0
KBA Koelnbreinsper 3.87 97 *i* P **Pn** 01 40 25.3 +2.8
KBA *i* 01 41 08.2
KBA Koelnbreinsper 3.87 97 *i* Pn **Pn** 01 40 25.3 +2.8
SNR=71
KBA ⇑*i*Sn **Sn** 01 41 08.2 +0.6
KBA Koelnbreinsper 3.87 97 *i* Pn **Pn** 01 40 25.3 +2.8
KBA *i* Sn **Sn** 01 41 08.2 +0.6
KBA Koelnbreinsper 3.87 97 *i* P **Pn** 01 40 25.3 +2.8
KBA *i* S **Sn** 01 41 08.2 +0.6
MOX Moxa 3.92 39 ePn **Pn** 01 40 21.6 -1.4
SNR=62
MOX ePg **Pg** 01 40 37.1 -1.7
SNR=5.5
MOX eSg **Sg** 01 41 27.3 -2.4
MOX Moxa 3.92 39 eP **Pn** 01 40 21.6 -1.4
MOX Moxa 3.92 39 Pn **Pn** 01 40 21.6 -1.4
SNR=62
LBL Lubilhac 3.94 233 P **Pn** 01 40 22.9 -0.4
LBL Lubilhac 3.94 233 Pn **Pn** 01 40 22.9 -0.4
LBL Lubilhac 3.94 233 Pn **Pn** 01 40 22.9 -0.4
LBL Lubilhac 3.94 233 Pn **Pn** 01 40 22.9 -0.4
REVF Revere 3.94 184 P **Pn** 01 40 22.1 -1.2
REVF Revere 3.94 184 Pn **Pn** 01 40 22.1 -1.2
REVF Revere 3.94 184 Pn **Pn** 01 40 22.1 -1.2
REVF Revere 3.94 184 Pn **Pn** 01 40 22.1 -1.2
CALN Calern 3.96 189 P **Pn** 01 40 24.3 +0.6
CALN Calern 3.96 189 Pn **Pn** 01 40 24.3 +0.6
CALN Calern 3.96 189 Pn **Pn** 01 40 24.3 +0.6
CALN Calern 3.96 189 Pn **Pn** 01 40 24.3 +0.6
VLC Villacollemand 3.98 151 ePn **Pn** 01 40 26.4 +2.6
VLC Villacollemand 3.98 151 ePn **Pn** 01 40 26.4 +2.6
SMRF Simiane la Rot 3.99 203 ePn **Pn** 01 40 24.5 +0.5
SNR=1.0
SMRF Simiane la Rot 3.99 203 ePg **Pg** 01 40 40.2 +0.2
SMRF eSn **Sn** 01 41 08.0 -2.2
SMRF eSg **Sg** 01 41 30.2 -1.5
comp=E,115nm,0.6s,SNR=1.0
SMRF Simiane la Rot 3.99 203 ePn **Pn** 01 40 24.5 +0.5
SMRF ePg **Pg** 01 40 40.2 +0.2
SMRF eSn **Sn** 01 41 08.0 -2.2
SMRF eSg **Sg** 01 41 30.2 -1.5
SMRF Simiane la Rot 3.99 203 ePn **Pn** 01 40 24.5 +0.5
SNR=1.0
SMRF Simiane la Rot 3.99 203 ePg **Pg** 01 40 40.2 +0.2
SMRF eSn **Sn** 01 41 08.0 -2.2
SMRF eSg **Sg** 01 41 30.2 -1.5
comp=E,58nm,0.6s,SNR=1.0
TCF Toulx Ste Croi 4.01 252 ePn **Pn** 01 40 24.5 +0.2
SNR=1.0
TCF Toulx Ste Croi 4.01 252 eP **Pg** 01 40 39.5 -1.1
TCF eSn **Sn** 01 41 09.2 -1.7
SNR=1.0
TCF eSg **Sg** 01 41 31.4 -1.2
comp=E,290nm,0.5s,SNR=1.0
TCF Toulx Ste Croi 4.01 252 eP **Pn** 01 40 24.5 +0.2
TCF *e* 01 41 09.2
TCF Toulx Ste Croi 4.01 252 ePn **Pn** 01 40 24.5 +0.2
TCF eSn **Sn** 01 41 09.2 -1.7
TCF eSg **Sg** 01 41 31.4 -1.2
TCF Toulx Ste Croi 4.01 252 ePn **Pn** 01 40 24.5 +0.2
SNR=1.0
TCF eSn **Sn** 01 41 09.2 -1.7
SNR=1.0
TCF eSg **Sg** 01 41 31.4 -1.2
comp=E,145nm,0.5s,SNR=1.0
WERN Wernitzgruen 4.03 48 ePn **Pn** 01 40 23.3 -1.2
SNR=7.6
WERN ePg **Pg** 01 40 40.1 -0.8
SNR=16
WERN eSg **Sg** 01 41 30.1 -3.1
WERN Wernitzgruen 4.03 48 Pn **Pn** 01 40 23.3 -1.2
SNR=7.6
NKC Novy Kostel 4.04 49 eP **Pn** 01 40 23.5 -1.1
NKC Novy Kostel 4.04 49 ePN **Pn** 01 40 23.5 -1.1
NKC eSG **Sg** 01 41 31.0 -2.2
comp=E,442nm,0.3s
NKC Novy Kostel 4.04 49 Pn **Pn** 01 40 23.5 -1.1
NKC Sg **Sg** 01 41 31.0 -2.2
comp=E,442nm,0.3s
PLN Plauen 4.05 44 ePn **Pn** 01 40 23.3 -1.5
SNR=23
PLN eSg **Sg** 01 41 30.6 -3.2
PLN Plauen 4.05 44 Pn **Pn** 01 40 23.3 -1.5
SNR=23
GUNZ Gunzen 4.06 47 ePn **Pn** 01 40 23.5 -1.4
SNR=22
GUNZ eSg **Sg** 01 41 31.3 -2.7
GUNZ Gunzen 4.06 47 Pn **Pn** 01 40 23.5 -1.4
SNR=22
VERF Verneugheol 4.08 244 Pn **Pn** 01 40 25.0 -0.2
VERF Pg **Pg** 01 40 41.4 -0.4
VERF Verneugheol 4.08 244 Pn **Pn** 01 40 25.0 -0.2
VERF Verneugheol 4.08 244 Pn **Pn** 01 40 25.0 -0.2
WERD Werda 4.10 46 ePn **Pn** 01 40 24.0 -1.5
SNR=28
WERD eSg **Sg** 01 41 31.9 -3.5
WERD Werda 4.10 46 Pn **Pn** 01 40 24.0 -1.5
SNR=28
TANN Tannenbergstha 4.16 47 ePn **Pn** 01 40 24.8 -1.5
SNR=26
TANN ePg **Pg** 01 40 41.9 -1.4
SNR=13
TANN eSg **Sg** 01 41 34.3 -2.7
TANN Tannenbergstha 4.16 47 Pn **Pn** 01 40 24.8 -1.5
SNR=26
GEC2 GERESS Array S 4.17 71 eP **Pn** 01 40 26.9 +0.5
GEC2 GERESS Array S 4.17 71 ePn **Pn** 01 40 26.9 +0.5
GEC2 GERESS Array S 4.17 71 eP **Pn** 01 40 26.9 +0.5
GERES GERESS Array B 4.17 71 Pn **Pn** 01 40 26.9 +0.5
GERES Pg **Pg** 01 40 41.8 -1.7
GERES Sn **Sn** 01 41 14.0 -0.8
GERES Lg Lg 01 41 35.0
GERES GERESS Array B 4.17 71 Pn **Pn** 01 40 26.9 +0.5
comp=E,8.4nm,0.3s,baz=259,slow=13,SNR=273
GERES Pg **Pg** 01 40 41.8 -1.7
comp=E,41nm,0.3s,baz=256,slow=17,SNR=48
GERES Sn **Sn** 01 41 14.0 -0.8
comp=E,18nm,0.3s,baz=259,slow=20,SNR=100
GERES Lg Lg 01 41 35.0
comp=E,32nm,0.3s,baz=255,slow=31,SNR=7.8
GERES GERESS Array B 4.17 71 P **Pn** 01 40 27.0 +0.5

comp=E,41nm,0.3s
GERES GERESS Array B 4.17 71 Pg Pg 01 40 41.8 -1.7
GERES S Sn 01 41 14.0 -0.8
comp=E,18nm,0.3s
KHC Kasperske Hory 4.17 67 *e*P **Pn 01 40 26.7 +0.3**
KHC Kasperske Hory 4.17 67 *e*Pn **Pn 01 40 26.6 +0.3**
KHC *e*Pg Pg 01 40 41.9 -1.6
KHC *e*S Sg 01 41 36.1 -1.4
KHC Kasperske Hory 4.17 67 *e*PN **Pn 01 40 26.8 +0.3**
KHC *ex* x 01 40 32.0
KHC *e*PG **Pg 01 40 42.0 -1.5**
KHC *e*SG **Sg 01 41 35.5 -2.0**
comp=E,282nm,0.6s
KHC Kasperske Hory 4.17 67 Pn Pn 01 40 26.8 +0.3
KHC Kasperske Hory 4.17 67 *e*Pg **Pg 01 40 41.9 -1.6**
KHC Sg **Sg 01 41 35.5 -2.0**
comp=E,282nm,0.6s
MYKA Terra Mystica 4.17 102⇑ *i*Pn **Pn 01 40 29.3 +2.7**
MYKA ⇓ *i*Sn **Sn 01 41 15.8 +0.9**
MYKA Terra Mystica 4.17 102⇑ *i*Pn **Pn 01 40 29.3 +2.7**
MYKA *i* Sn **Sn 01 41 15.8 +0.9**
MYKA Terra Mystica 4.17 102⇑ *i*Pn **Pn 01 40 29.3 +2.7**
MYKA *i* Sn **Sn 01 41 15.8 +0.9**
FRF La Foret Royal 4.18 191 *e*Pn **Pn 01 40 27.8 +1.3**
SNR=1.0
FRF *e*Sn **Sn 01 41 12.1 -2.8**
FRF *e*Sg **Sg 01 41 36.0 -1.8**
comp=E,218nm,0.6s,SNR=1.0
FRF La Foret Royal 4.18 191 *e*P **Pn 01 40 27.8 +1.3**
FRF *e* 01 41 12.1
FRF La Foret Royal 4.18 191 *e*Pn **Pn 01 40 27.8 +1.3**
FRF *e*Pg **Pb 01 40 39.0 +2.3**
FRF *e*Sn **Sn 01 41 12.1 -2.8**
FRF *e*Sg **Sg 01 41 36.0 -1.8**
FRF La Foret Royal 4.18 191 *e*Pn **Pn 01 40 27.8 +1.3**
SNR=1.0
FRF *e*Sn **Sn 01 41 12.1 -2.8**
FRF *e*Sg **Sg 01 41 36.0 -1.8**
comp=E,109nm,0.6s,SNR=1.0
FRNF Fournols 4.23 239 Pn Pn 01 40 27.3 +0.1
FRNF Pg **Pg 01 40 44.8 +0.2**
FRNF Fournols 4.23 239 Pn Pn 01 40 27.3 +0.1
FRNF Fournols 4.23 239 Pn Pn 01 40 27.3 +0.1
WTSB Winterswijk 4.34 352 *e*Pn **Pn 01 40 31.3 +2.6**
WTSB *e*S **Sg 01 41 38.8 -4.1**
WTSB Winterswijk 4.34 352 *e*Pn **Pn 01 40 31.3 +2.6**
LMR La Mourre 4.42 192 *e*Pn **Pn 01 40 30.2 +0.4**
SNR=1.0
LMR La Mourre 4.42 192 *e*Pg **Pg 01 40 46.5 -1.8**
LMR *e*Sn **Sn 01 41 17.8 -3.0**
LMR *e*Sg **Sg 01 41 42.3 -3.2**
comp=E,91nm,0.4s
LMR La Mourre 4.42 192 *e*P **Pn 01 40 30.2 +0.4**
LMR *e* 01 41 17.8
LMR La Mourre 4.42 192 *e*Pn **Pn 01 40 30.2 +0.4**
LMR *e*Pg **Pg 01 40 46.5 -1.8**
LMR *e*Sn **Sn 01 41 17.8 -3.0**
LMR *e*Sg **Sg 01 41 42.3 -3.2**
LMR La Mourre 4.42 192 *e*Pn **Pn 01 40 30.2 +0.4**
SNR=1.0
LMR La Mourre 4.42 192 *e*Pg **Pg 01 40 46.5 -1.8**
LMR *e*Sn **Sn 01 41 17.8 -3.0**
LMR *e*Sg **Sg 01 41 42.3 -3.2**
comp=E,46nm,0.4s
NEUB Neuenburg 4.42 35 *e*Pn **Pn 01 40 28.9 -0.8**
SNR=2.8
NEUB *e*Pg **Pg 01 40 47.8 -0.5**
SNR=11
NEUB Neuenburg 4.42 35 Pn Pn 01 40 29.0 -0.8
SNR=2.8
MOA Molln 4.42 85 *i* Pn **Pn 01 40 31.2 +1.3**
SNR=49
MOA ⇓ *i*Sn **Sn 01 41 21.3 +0.4**
MOA Molln 4.42 85 *i* Pn **Pn 01 40 31.2 +1.3**
MOA *i* Sn **Sn 01 41 21.3 +0.4**
MOA Molln 4.42 85 *i* Pn **Pn 01 40 31.2 +1.3**
MOA *i* Sn **Sn 01 41 21.3 +0.4**
LASF Ste Croix 4.49 218 *e*Pn **Pn 01 40 30.5 -0.4**
SNR=1.0
LASF Ste Croix 4.49 218 *e*Pg **Pg 01 40 48.7 -1.0**
LASF *e*Sn **Sn 01 41 20.7 -2.0**
SNR=1.0
LASF *e*Sg **Sg 01 41 45.9 -2.0**
comp=E,178nm,0.3s,SNR=1.0
LASF Ste Croix 4.49 218 *e*Pn **Pn 01 40 30.5 -0.4**
LASF *e*Pg **Pg 01 40 48.7 -1.0**
LASF *e*Sn **Sn 01 41 20.7 -2.0**
LASF *e*Sg **Sg 01 41 45.9 -2.0**
LASF Ste Croix 4.49 218 *e*Pn **Pn 01 40 30.5 -0.4**
SNR=1.0
LASF Ste Croix 4.49 218 *e*Pg **Pg 01 40 48.7 -1.0**
LASF *e*Sn **Sn 01 41 20.7 -2.0**
SNR=1.0
LASF *e*Sg **Sg 01 41 45.9 -2.0**
comp=E,89nm,0.3s,SNR=1.0
CLZ Clausthal 4.51 21 *e*Pn **Pn 01 40 30.0 -1.2**
SNR=11
CLZ Clausthal 4.51 21 *e*P **Pn 01 40 30.0 -1.2**
CLZ Clausthal 4.51 21 Pn Pn 01 40 30.0 -1.2
SNR=11
TRI Trieste 4.60 113 *e*P **Pn 01 40 33.9 +1.6**
TRI *e*S **Sn 01 41 23.8 -1.5**
TRI Trieste 4.60 113 *e*Pn **Pn 01 40 33.9 +1.6**
TRI *e*Pg **Pg 01 40 50.0 -1.8**
TRI *e*S **Sn 01 41 23.8 -1.5**
TRI *e*Sg **Sg 01 41 52.5 +1.2**
TRI Trieste 4.60 113 *e*P **Pn 01 40 33.9 +1.6**
TRI Trieste 4.60 113 *e*Pg **Pg 01 40 50.0 -1.8**
TRI *e*S **Sn 01 41 23.8 -1.5**
IBBN Ibbenburen 4.64 0 *e*Sn **Sn 01 41 21.7 -4.5**
MENF Mencas 4.66 310 Pn Pn 01 40 33.9 +0.8
MENF Mencas 4.66 310 Pn Pn 01 40 33.9 +0.8
MENF Mencas 4.66 310 Pn Pn 01 40 33.9 +0.8
CAF Calviac 4.78 237 *e*Pn **Pn 01 40 34.8 -0.1**
SNR=1.0
CAF Calviac 4.78 237 *e*Pg **Pg 01 40 55.7 +0.4**
CAF *e*Sg **Sg 01 41 54.3 -2.9**
comp=E,65nm,0.3s,SNR=1.0
CAF Calviac 4.78 237 *e*P **Pn 01 40 34.8 -0.1**
CAF Calviac 4.78 237 *e*Pn **Pn 01 40 34.8 -0.1**
CAF *e*Pg **Pg 01 40 55.7 +0.4**
CAF *e*Sg **Sg 01 41 54.3 -2.9**
CAF Calviac 4.78 237 *e*Pn **Pn 01 40 34.8 -0.1**
SNR=1.0
CAF Calviac 4.78 237 *e*Pg **Pg 01 40 55.7 +0.4**
CAF *e*Sg **Sg 01 41 54.3 -2.9**
comp=E,32nm,0.3s,SNR=1.0
OBKA Obir 4.81 101 *i* Pn **Pn 01 40 37.5 +2.2**
SNR=11
OBKA ⇓ *i*Sn **Sn 01 41 32.2 +1.6**
OBKA ⇑ *i*Sg **Sg 01 41 58.1 +0.1**
comp=E,58nm,0.4s
OBKA Obir 4.81 101 *i* Pn **Pn 01 40 37.5 +2.2**
OBKA *i* Sn **Sn 01 41 32.2 +1.6**
OBKA *i* Sg **Sg 01 41 58.1 +0.1**
OBKA Obir 4.81 101 *i* Pn **Pn 01 40 37.5 +2.2**
OBKA *i* Sn **Sn 01 41 32.2 +1.6**
OBKA Sg **Sg 01 41 58.1 +0.1**
comp=E,58nm,0.4s
ASSE Asse, Remlinge 4.86 22 *e*Pn **Pn 01 40 34.9 -0.8**
SNR=3.8
ASSE Asse, Remlinge 4.86 22 Pn Pn 01 40 34.9 -0.8
SNR=3.8
RJF Les Rejaudoux 4.89 243 *e*Pn **Pn 01 40 36.4 0.0**
SNR=1.0
RJF Les Rejaudoux 4.89 243 *e*Pg **Pg 01 40 56.4 -0.9**
RJF *e*Sn **Sn 01 41 29.2 -3.3**
SNR=1.0
RJF *e*Sg **Sg 01 41 59.2 -1.5**
comp=E,110nm,0.3s
RJF Les Rejaudoux 4.89 243 *e*P **Pn 01 40 36.4 0.0**
RJF *e* 01 41 29.2
RJF Les Rejaudoux 4.89 243 *e*Pn **Pn 01 40 36.4 0.0**
RJF *e*Pg **Pg 01 40 56.4 -0.9**
RJF *e*Sn **Sn 01 41 29.2 -3.3**
RJF *e*Sg **Sg 01 41 59.2 -1.5**
RJF Les Rejaudoux 4.89 243 *e*Pn **Pn 01 40 36.4 0.0**
SNR=1.0
RJF Les Rejaudoux 4.89 243 *e*Pg **Pg 01 40 56.4 -0.9**
RJF *e*Sn **Sn 01 41 29.2 -3.3**
SNR=1.0
RJF *e*Sg **Sg 01 41 59.2 -1.5**
comp=E,55nm,0.3s
FBE Freiberg 4.92 47 *e*Pg **Pg 01 40 55.9 -1.9**
SNR=9.2
FBE *e*Sg **Sg 01 41 57.7 -3.7**
CLL Collm 5.01 41 *e*Pn **Pn 01 40 36.0 -1.9**
SNR=14
CLL Collm 5.01 41 *e*P **Pn 01 40 36.0 -1.9**
CLL Collm 5.01 41 *e*Pn **Pn 01 40 36.0 -1.9**
CLL *e*Pg **Pg 01 40 57.0 -2.6**
CLL *e*Sg **Sg 01 42 02.0 -2.4**
comp=Z,169nm,0.7s
CLL *e*Sglp 01 42 04.0
comp=N,100nm,16.5s
CLL *e*Sglp 01 42 04.0
comp=E,200nm,15.5s
PRU Pruhonice 5.07 60 *e*P **Pn 01 40 39.3 +0.6**
PRU Pruhonice 5.07 60 *e*PN **Pn 01 40 39.3 +0.6**
PRU *e*SG **Sg 01 42 04.1 -2.2**
comp=E,171nm,0.5s
PRU Pruhonice 5.07 60 Pn Pn 01 40 39.3 +0.6
PRU Sg **Sg 01 42 04.1 -2.2**
comp=E,171nm,0.5s
SOKA Soboth 5.09 99⇑ *i*Pn **Pn 01 40 40.7 +1.6**
SOKA ⇑ *i*Sn **Sn 01 41 38.6 +1.2**
SOKA Soboth 5.09 99⇑ *i*Pn **Pn 01 40 40.7 +1.6**
SOKA *i* Sn **Sn 01 41 38.6 +1.2**
SOKA Soboth 5.09 99⇑ *i*Pn **Pn 01 40 40.7 +1.6**
SOKA *i* Sn **Sn 01 41 38.6 +1.2**
BRG Berggiesshubel 5.18 50 PN **Pn 01 40 39.8 -0.5**
BRG PG **Pg 01 41 00.3 -2.6**
BRG *i* 01 41 58.8
BRG Berggiesshubel 5.18 50 SG **Sg 01 42 06.2 -3.8**
comp=E,132nm,0.5s
BRG Berggiesshubel 5.18 50 P **Pn 01 40 39.8 -0.5**
BRG Berggiesshubel 5.18 50 P **Pn 01 40 39.8 -0.5**
PGF Pioggiola 5.20 169 *e*Pn **Pn 01 40 41.1 +0.4**
SNR=1.0
PGF *e*Sn **Sn 01 41 37.3 -3.0**
comp=E,7.9nm,0.3s,SNR=1.0
PGF Pioggiola 5.20 169 *e*P **Pn 01 40 41.1 +0.4**
PGF *e* 01 41 37.3
PGF Pioggiola 5.20 169 *e*Pn **Pn 01 40 41.1 +0.4**
PGF *e*Sn **Sn 01 41 37.3 -3.0**
PGF Pioggiola 5.20 169 *e*Pn **Pn 01 40 41.1 +0.4**
SNR=1.0
PGF *e*Sn **Sn 01 41 37.3 -3.0**
comp=E,4.0nm,0.3s,SNR=1.0
ARSA Arzberg 5.31 92⇑ *i*Pn **Pn 01 40 43.5 +1.4**
SNR=10
ARSA ⇓ *i*Sn **Sn 01 41 43.0 +0.1**
ARSA Arzberg 5.31 92⇑ *i*Pn **Pn 01 40 43.5 +1.4**
ARSA *i* Sn **Sn 01 41 43.0 +0.1**
ARSA Arzberg 5.31 92⇑ *i*Pn **Pn 01 40 43.5 +1.4**
ARSA *i* Sn **Sn 01 41 43.0 +0.1**
LDF La Druitiere 5.33 283 *e*Pn **Pn 01 40 43.6 +1.3**
LDF La Druitiere 5.33 283 *e*Pg **Pg 01 41 04.5 -1.2**
LDF *e*Sn **Sn 01 41 39.3 -3.9**
SNR=1.0
LDF *e*Sg **Sg 01 42 12.9 -1.7**
comp=E,230nm,0.3s,SNR=1.0
LDF La Druitiere 5.33 283 *e*P **Pn 01 40 43.6 +1.3**
LDF *e* 01 41 39.3
LDF La Druitiere 5.33 283 *e*Pn **Pn 01 40 43.6 +1.3**
LDF *e*Pg **Pg 01 41 04.5 -1.2**
LDF *e*Sn **Sn 01 41 39.3 -3.9**
LDF *e*Sg **Sg 01 42 12.9 -1.7**
LDF La Druitiere 5.33 283 *e*Pn **Pn 01 40 43.6 +1.3**
LDF La Druitiere 5.33 283 *e*Pg **Pg 01 41 04.5 -1.2**
LDF *e*Sn **Sn 01 41 39.3 -3.9**
SNR=1.0
LDF *e*Sg **Sg 01 42 12.9 -1.7**
comp=E,115nm,0.3s,SNR=1.0
PVCC Panska Ves 5.33 55 *e*P **Pn 01 40 43.4 +1.1**
PVCC Panska Ves 5.33 55 *e*PN **Pn 01 40 43.4 +1.1**
PVCC *e*SG **Sg 01 42 11.8 -2.9**
comp=E,204nm,0.3s
PVCC Panska Ves 5.33 55 Pn Pn 01 40 43.4 +1.1
PVCC Sg **Sg 01 42 11.8 -2.9**
comp=E,204nm,0.3s
TREC Trest 5.42 70 *e*P **Pn 01 40 43.5 0.0**
TREC Trest 5.42 70 *e*PN **Pn 01 40 43.5 0.0**
TREC *e*SG **Sg 01 42 15.4 -2.0**
comp=E,109nm,0.4s
TREC Trest 5.42 70 Pn **Pn 01 40 43.5 0.0**
MFF Saint Martin d 5.47 262 *e*Pn **Pn 01 40 45.0 +0.7**
SNR=1.0
MFF Saint Martin d 5.47 262 *e*Pg **Pg 01 41 07.5 -0.9**
MFF *e*Sn **Sn 01 41 43.0 -3.7**
MFF *e*Sg **Sg 01 42 17.3 -1.9**
comp=E,194nm,0.5s
MFF Saint Martin d 5.47 262 *e*P **Pn 01 40 45.0 +0.7**
MFF *e* 01 41 43.0
MFF Saint Martin d 5.47 262 *e*Pn **Pn 01 40 45.0 +0.7**
MFF *e*Pg **Pg 01 41 07.5 -0.9**
MFF *e*Sn **Sn 01 41 43.0 -3.7**
MFF *e*Sg **Sg 01 42 17.3 -1.9**
MFF Saint Martin d 5.47 262 *e*Pn **Pn 01 40 45.0 +0.7**
SNR=1.0
MFF Saint Martin d 5.47 262 *e*Pg **Pg 01 41 07.5 -0.9**
MFF *e*Sg **Sg 01 42 17.3 -1.9**
comp=E,97nm,0.5s
CONA Conrad Observa 5.50 84 *i* Pn **Pn 01 40 45.8 +1.1**
SNR=52
CONA Conrad Observa 5.50 84 *i* Pn **Pn 01 40 45.8 +1.1**
CONA Conrad Observa 5.50 84 *i* Pn **Pn 01 40 45.8 +1.1**
LFF La Frestale 5.55 243 *e*Pn **Pn 01 40 45.6 +0.2**
LFF La Frestale 5.55 243 *e*Pg **Pg 01 41 08.5 -1.4**
LFF *e*Sg **Sg 01 42 19.8 -2.0**
comp=E,208nm,0.5s
LFF La Frestale 5.55 243 *e*P **Pn 01 40 45.6 +0.2**
LFF La Frestale 5.55 243 *e*Pn **Pn 01 40 45.6 +0.2**
LFF *e*Pg **Pg 01 41 08.5 -1.4**
LFF *e*Sg **Sg 01 42 19.8 -2.0**
LFF La Frestale 5.55 243 *e*Pn **Pn 01 40 45.6 +0.2**
LFF La Frestale 5.55 243 *e*Pg **Pg 01 41 08.5 -1.4**
LFF *e*Sg **Sg 01 42 19.8 -2.0**
comp=E,104nm,0.5s
FLN La Foliniere 5.59 284 *e*Pn **Pn 01 40 46.7 +0.8**
baz=101,SNR=1.0
FLN La Foliniere 5.59 284 *e*Pg **Pg 01 41 10.8 +0.2**
baz=111
FLN *e*Sg **Sg 01 42 21.1 -1.8**
comp=E,405nm,0.5s
FLN La Foliniere 5.59 284 *e*P **Pn 01 40 46.7 +0.8**
FLN La Foliniere 5.59 284 *e*Pn **Pn 01 40 46.7 +0.8**
FLN *e*Pg **Pg 01 41 10.8 +0.2**
FLN *e*Sg **Sg 01 42 21.1 -1.8**
FLN La Foliniere 5.59 284 *e*Pn **Pn 01 40 46.7 +0.8**
baz=101,SNR=1.0
FLN La Foliniere 5.59 284 *e*Pg **Pg 01 41 10.8 +0.2**
baz=111
FLN *e*Sg **Sg 01 42 21.1 -1.8**
comp=E,203nm,0.5s
GRR Gorron 5.80 280 *e*Pn **Pn 01 40 49.5 +0.8**
SNR=1.0
GRR Gorron 5.80 280 *e*Pg **Pg 01 41 14.4 -0.2**
GRR *e*Sn **Sn 01 41 51.3 -3.4**
SNR=1.0
GRR *e*Sg **Sg 01 42 27.9 -1.7**
comp=E,148nm,0.3s
GRR Gorron 5.80 280 *e*P **Pn 01 40 49.5 +0.8**
GRR *e* 01 41 51.3
GRR Gorron 5.80 280 *e*Pn **Pn 01 40 49.5 +0.8**
GRR *e*Pg **Pg 01 41 14.4 -0.2**
GRR *e*Sn **Sn 01 41 51.3 -3.4**
GRR *e*Sg **Sg 01 42 27.9 -1.7**
GRR Gorron 5.80 280 *e*Pn **Pn 01 40 49.5 +0.8**
SNR=1.0
GRR Gorron 5.80 280 *e*Pg **Pg 01 41 14.4 -0.2**
GRR *e*Sg **Sg 01 42 27.9 -1.7**
comp=E,74nm,0.3s
MTLF Montolieu 5.80 224 *e*Pn **Pn 01 40 48.3 -0.6**
SNR=1.0
MTLF Montolieu 5.80 224 *e*Pg **Pg 01 41 13.0 -1.7**
MTLF *e*Sg **Sg 01 42 28.0 -1.8**
comp=E,60nm,0.4s
MTLF Montolieu 5.80 224 *e*P **Pn 01 40 48.3 -0.6**
MTLF Montolieu 5.80 224 *e*Pn **Pn 01 40 48.3 -0.6**
MTLF *e*Pg **Pg 01 41 13.0 -1.7**
MTLF *e*Sg **Sg 01 42 28.0 -1.8**
MTLF Montolieu 5.80 224 *e*Pn **Pn 01 40 48.3 -0.6**
SNR=1.0
MTLF Montolieu 5.80 224 *e*Pg **Pg 01 41 13.0 -1.7**
MTLF *e*Sg **Sg 01 42 28.0 -1.8**
comp=E,30nm,0.4s
SOP Sopron 5.97 87 *e*Sn **Sg 01 42 35.7 +0.5**
VRAC Vranov 6.12 71 Pn **Pn 01 40 53.7 +0.5**
VRAC Pg Pg 01 41 16.9 -4.0
VRAC Sn **Sn 01 41 59.9 -3.0**
VRAC Lg Lg 01 42 38.1
VRAC Vranov 6.12 71 Pn **Pn 01 40 53.7 +0.5**
comp=E,0.6nm,0.3s,baz=248,slow=16,SNR=5.5
VRAC Pg Pg 01 41 16.9 -4.0
comp=E,6.4nm,0.3s,baz=264,slow=16,SNR=13
VRAC Sn **Sn 01 41 59.9 -3.0**
comp=E,4.3nm,0.3s,baz=258,slow=19,SNR=1.9
VRAC Lg Lg 01 42 38.1
comp=E,13nm,0.3s,baz=180,slow=20,SNR=12
VRAC Vranov 6.12 71 P **Pn 01 40 53.7 +0.5**
comp=E,6.0nm,0.3s
UPC Upice 6.14 59 *e*P **Pn 01 40 53.9 +0.4**
UPC Upice 6.14 59 *e*PN **Pn 01 40 53.9 +0.4**
UPC *e*SG **Sg 01 42 37.4 -3.3**
comp=E,44nm,0.5s
UPC Upice 6.14 59 Pn **Pn 01 40 53.9 +0.4**
DPC Dobruska-Polom 6.26 61 *e*P **Pn 01 40 55.7 +0.5**
DPC Dobruska-Polom 6.26 61 *e*PN **Pn 01 40 55.7 +0.5**
DPC *e*SG **Sg 01 42 41.9 -2.6**
comp=E,74nm,0.5s
DPC Dobruska-Polom 6.26 61 Pn **Pn 01 40 55.7 +0.5**
ZST Bratislava 6.33 82 *e*P **Pn 01 40 55.8 -0.3**
ZST *e* 01 42 03.4
ZST Bratislava 6.33 82 *e*PN **Pn 01 40 55.8 -0.3**
ZST *e*PG Pg 01 41 20.9 -3.9
ZST *e*SN **Sn 01 42 03.4 -4.5**
ZST *e*SG **Sg 01 42 44.8 -1.9**
ZST Bratislava 6.33 82 *e*P **Pn 01 40 55.8 -0.3**
KRLC Kraliky 6.45 65 *e*P **Pn 01 40 58.5 +0.8**
KRLC Kraliky 6.45 65 *e*PN **Pn 01 40 58.5 +0.8**
KRLC *e*SG **Sg 01 42 47.9 -2.5**
KRLC Kraliky 6.45 65 Pn **Pn 01 40 58.5 +0.8**
KSP Ksiaz 6.45 57 *e*P Pb 01 41 09.1 -6.2
KSP Ksiaz 6.45 57 *e*Pn **Pb 01 41 16.7 +1.4**
KSP *e*Pb **Pg 01 41 26.8 -0.2**
KSP *e*Pg Pn 01 41 38.4 +41
KSP *e*Sn **Sg 01 42 48.6 -1.8**
SMOL Smolenice 6.56 79 *e*SG **Sg 01 42 51.7 -2.4**
MORC Moravsky Berou 6.83 68 *e*P **Pn 01 41 02.7 -0.3**
MORC Moravsky Berou 6.83 68 *e*Pn **Pn 01 41 02.6 -0.3**
MORC *e*S **Sg 01 43 02.3 -0.5**
MORC Moravsky Berou 6.83 68 *e*P **Pn 01 41 02.7 -0.3**
MELF Melles 6.86 228 Pg **Pg 01 41 33.2 -1.8**
MELF Melles 6.86 228 Pg **Pg 01 41 33.2 -1.8**
SGMF Saint Gilles 6.92 279 *e*Pn **Pn 01 41 04.8 +0.6**
SNR=1.0
SGMF *e*Sn **Sn 01 42 19.4 -3.1**
comp=E,28nm,0.2s,SNR=1.0
SGMF *e*Sg **Sg 01 43 02.6 -3.1**
comp=E,131nm,0.5s
SGMF Saint Gilles 6.92 279 *e*P **Pn 01 41 04.8 +0.6**
SGMF *e* 01 42 19.4
SGMF Saint Gilles 6.92 279 *e*Pn **Pn 01 41 04.8 +0.6**
SGMF *e*Sn **Sn 01 42 19.4 -3.1**
SGMF *e*Sg **Sg 01 43 02.6 -3.1**
SGMF Saint Gilles 6.92 279 *e*Pn **Pn 01 41 04.8 +0.6**
SNR=1.0
EPF Esparros 6.96 231 *e*Pn **Pn 01 41 04.5 -0.4**
SNR=1.0
EPF Esparros 6.96 231 *e*Pg Pg 01 41 33.0 -4.0
EPF *e*Sg **Sg 01 43 02.9 -4.2**
comp=E,26nm,0.3s
EPF Esparros 6.96 231 *e*P **Pn 01 41 04.5 -0.4**
EPF Esparros 6.96 231 *e*Pn **Pn 01 41 04.5 -0.4**
EPF *e*Pg Pg 01 41 33.0 -4.0
EPF *e*Sg **Sg 01 43 02.9 -4.2**
EPF Esparros 6.96 231 *e*Pn **Pn 01 41 04.5 -0.4**
SNR=1.0
RESF Ens 7.12 230 Pg **Pg 01 41 39.9 -0.1**
RESF Ens 7.12 230 Pg **Pg 01 41 39.9 -0.1**
OKC Ostrava-Krasne 7.23 69 *e*P **Pn 01 41 08.8 +0.4**
OKC Ostrava-Krasne 7.23 69 *e*PN **Pn 01 41 08.8 +0.4**
OKC *e*SG **Sg 01 43 12.4 -3.0**
comp=E,117nm,0.8s
OKC Ostrava-Krasne 7.23 69 Pn **Pn 01 41 08.8 +0.4**
PKSG 7.23 88 *e*Sn Sn 01 42 24.2 -5.9
PKS9 Tamasi 7.29 95⇓ *e*Pn **Pn 01 41 10.1 +0.9**
PKS9 *e*Sn **Sn 01 42 27.1 -4.3**
REYF Montagne du Re 7.33 234 Pg **Pg 01 41 43.3 -0.7**
REYF Montagne du Re 7.33 234 Pg **Pg 01 41 43.3 -0.7**
QUIF Quistinic 7.33 276 *e*Pn **Pn 01 41 09.8 0.0**
SNR=1.0
QUIF *e*Sn **Sn 01 42 29.4 -3.2**
comp=E,28nm,0.3s,SNR=1.0
QUIF *e*Sg **Sg 01 43 16.0 -2.9**
comp=E,87nm,0.5s
QUIF Quistinic 7.33 276 *e*P **Pn 01 41 09.8 0.0**
QUIF *e* 01 42 29.4
QUIF Quistinic 7.33 276 *e*Pn **Pn 01 41 09.8 0.0**
QUIF *e*Sn **Sn 01 42 29.4 -3.2**
QUIF *e*Sg **Sg 01 43 16.0 -2.9**
QUIF Quistinic 7.33 276 *e*Pn **Pn 01 41 09.8 0.0**
SNR=1.0
ROSF Rostrenen 7.40 279 *e*Pn **Pn 01 41 11.1 +0.3**
SNR=1.0
ROSF *e*Sn **Sn 01 42 30.4 -3.9**
comp=E,30nm,0.4s,SNR=1.0
ROSF *e*Sg **Sg 01 43 18.1 -3.0**
comp=E,147nm,0.7s
ROSF Rostrenen 7.40 279 *e*P **Pn 01 41 11.1 +0.3**
ROSF *e* 01 42 30.4
ROSF Rostrenen 7.40 279 *e*Pn **Pn 01 41 11.1 +0.3**
ROSF *e*Sn **Sn 01 42 30.4 -3.9**
ROSF *e*Sg **Sg 01 43 18.1 -3.0**
ROSF Rostrenen 7.40 279 *e*Pn **Pn 01 41 11.1 +0.3**
SNR=1.0
VYHS Vyhne 7.50 80 *e*P **Pn 01 41 11.7 -0.4**
VYHS Vyhne 7.50 80 *e*PN **Pn 01 41 11.7 -0.4**
VYHS *e*PG Pg 01 41 43.0 -4.0
VYHS *e*SN Sn 01 42 28.5 -8.1
VYHS *e*SG **Sg 01 43 21.7 -2.3**
VYHS Vyhne 7.50 80 *e*P **Pn 01 41 11.7 -0.4**
ETSF Etsaut 7.54 234 *e*Pn **Pn 01 41 12.1 -0.6**
ETSF *e*Sg Sb 01 43 21.6 +18
comp=E,35nm,0.6s
ETSF Etsaut 7.54 234 *e*P **Pn 01 41 12.1 -0.6**
ETSF Etsaut 7.54 234 *e*Pn **Pn 01 41 12.1 -0.6**
ETSF *e*Sg Sb 01 43 21.6 +18
ETSF Etsaut 7.54 234 *e*Pn **Pn 01 41 12.1 -0.6**
PKSM Moragy 7.62 97⇓ *e*Pn **Pn 01 41 13.3 -0.5**
PKSM *e*Sn Sn 01 42 33.3 -6.3
SJPF Ste Jean 7.77 237 *e*P Pn 01 41 20.5 +4.7
SJPF Ste Jean 7.77 237 *e*Pg Pb 01 41 48.4 +11
SJPF *e*Sg Sb 01 43 29.2 +19
comp=E,22nm,0.5s
SJPF Ste Jean 7.77 237 *e*P Pn 01 41 20.5 +4.7
SJPF Ste Jean 7.77 237 *e*P Pn 01 41 20.5 +4.7
SJPF *e*Pg Pb 01 41 48.4 +11
SJPF *e*Sg Sb 01 43 29.2 +19
OJC Ojcow 8.35 68 *e*P Pb 01 41 57.3 +10
OJC *e*S Sb 01 43 47.4 +21
STON Ston 8.52 121 *e*Pn **Pn 01 41 27.6 +1.5**
STON Sn **Sn 01 42 58.7 -3.0**
STON Ston 8.52 121 *e*Pn **Pn 01 41 27.5 +1.5**
BSD Bornholm Skovb 8.70 28 *i* P **Pn 01 41 25.9 -2.6**
BSD *i* S Sn 01 43 00.2 -5.9
BSD Bornholm Skovb 8.70 28 *i* P **Pn 01 41 25.9 -2.6**
BSD *i* S Sn 01 43 00.2 -5.9
CRVS Cervenica-Dubn 9.25 77 *e*SG Sn 01 44 18.1 +58
KOLS Kolonicke sedl 9.79 77 *e*SG 01 44 38.0
EKA Eskdalemuir Ar 10.23 323 Pn **Pn 01 41 49.6 +0.2**
EKA Sn **Sn 01 43 38.5 -5.1**
EKA Eskdalemuir Ar 10.23 323 Pn **Pn 01 41 49.6 +0.2**
baz=139,slow=14,SNR=100
EKA Sn **Sn 01 43 38.5 -5.1**
baz=143,slow=25,SNR=4.0
EKA Eskdalemuir Ar 10.23 323 P **Pn 01 41 49.6 +0.2**
ESK Eskdalemuir 10.23 322 *e*P **Pn 01 41 49.9 +0.4**
ESK Eskdalemuir 10.23 322 *e*Pn **Pn 01 41 49.9 +0.4**
ESK Eskdalemuir 10.23 322 *e*P **Pn 01 41 49.9 +0.4**
ESDC Sonseca Array 11.63 231 Pn **Pn 01 42 08.5 -0.2**
ESDC Sonseca Array 11.63 231 Pn **Pn 01 42 08.5 -0.2**
comp=E,0.1nm,0.3s,baz=48,slow=14,SNR=2.6
ESDC Sonseca Array 11.63 231 Pn **Pn 01 42 08.5 -0.2**
BUR08 Bucovina Ar. S 11.79 84 Pn **Pn 01 42 12.8 +1.8**
BUR08 Bucovina Ar. S 11.79 84 Pn **Pn 01 42 12.8 +1.8**
VSU Vasula 15.66 39⇓ *e*P **Pn 01 43 04.2 +1.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VSU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	17.33	31	P	Pn	01 43 23.4	-1.1
FINES	FINESS Array B	17.33	31	P	Pn	01 43 23.4	-1.1
	comp=Z,0.1nm,0.3s,baz=211,slow=9.7,SNR=2.6						
BRTR	Keskin Array B	20.29	104	P	Pn	01 44 01.4	+0.9
BRTR	Keskin Array B	20.29	104	P	Pn	01 44 01.4	+0.9
	comp=Z,0.6nm,0.9s,baz=312,slow=8.5,SNR=2.9						
BRTR	Keskin Array B	20.29	104	P	Pn	01 44 01.4	+0.8
	comp=Z,1.0nm,0.9s						
ANN	Anapa	20.70	87	eP	Pn	01 44 04.9	-0.2
ANN				e*PP	pP	01 44 11.3	+3.6
ANN				pmax	pmax		
	comp=Z,48nm,1.6s						
ANN	Anapa	20.70	87	eP	Pn	01 44 04.9	-0.2
	comp=Z,48nm,1.6s						
LVZ	Lovozero	24.46	24⇑	eP	P	01 44 40.6	-0.6
LVZ				pmax	pmax		
	comp=Z,86nm,2.5s						
BHD	Baghdad	31.06	104	ex	P	01 45 41.0	+0.5
BHD				ex	x	01 45 46.0	
BHD				ex	x	01 45 48.0	
BHD				ex	x	01 48 36.0	
BHD				ex	S	01 50 46.0	+1.2
BHD				ex	x	01 52 59.0	
BHD	Baghdad	31.06	104	eP	P	01 45 41.0	+0.5
BHD				epP	pP	01 45 46.0	0.0
TORD	Torodi Ar. Bea	34.78	190	P	P	01 46 14.3	+1.1
TORD	Torodi Ar. Bea	34.78	190	P	P	01 46 14.3	+1.1
	comp=Z,0.2nm,0.6s,baz=6.7,slow=8.1,SNR=4.7						
WMQ	Urumqi	53.58	62	eP	P	01 48 46.5	+3.0
LZH	Lanzhou	68.05	60	eP	P	01 50 27.5	+5.3
LZH				pP	pP	01 50 32.0	+4.0
LZH				sP	sP	01 50 34.5	+4.4
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC	Hu-ho-hao-te	69.05	52⇑	iP	P	01 50 29.0	+0.7
HHC				pP	pP	01 50 33.7	-0.4
HHC				sP	sP	01 50 36.0	-0.3
HHC				PcP	PcP	01 50 55.9	+3.5
HHC				PP	PP	01 53 03.0	+2.6
HHC				PcS		01 54 57.5	
HHC				S	S	01 59 30.3	-2.2
HHC				ScS	SKSac	02 00 24.9	-2.4
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,6.5s						
HHC				LR	LR		
	comp=N,200nm,19.0s						
HHC				LR	LR		
	comp=E,260nm,16.7s						
HHC				LR	LR		
	comp=Z,230nm,19.0s						
CN2	Changchun	73.70	42	eP	P	01 50 56.5	+0.3
GYA	Guiyang	76.56	66	eP	P	01 51 15.0	+1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2	Nanjing	79.50	54	eP	P	01 51 29.9	+0.8
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						

IDC 05 02:17:49.9±1.7, 22°.46S×174°.75W, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.2/19, mbtmp4.2/10, MS4.6/2, Ms1 4.6/2, ms1mx3.3/32, Error ellipse: s-maj=65.5km s-min=24.2km az=151.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	7.34	202	LR	LR	02 21 43.2	
	comp=Z,198nm,19.4s,baz=16,slow=32						
CTA	Charters Tower	36.35	266	P	P	02 24 56.2	+0.2
	4.4nm,0.8s,baz=85,slow=12,SNR=3.9						
ASAR	Alice Springs	47.05	258	P	P	02 26 22.9	-0.7
	2.4nm,0.8s,baz=95,slow=7.8,SNR=22						
WRA	Warramunga Arr	47.35	263	P	P	02 26 24.9	-1.1
	2.0nm,0.7s,baz=100,slow=8.1,SNR=8.4						
FITZ	Fitzroy Crossi	55.78	263	P	P	02 27 29.1	0.0
	2.6nm,0.8s,baz=135,slow=8.6,SNR=4.0						
MJAR	Matsushiro Arr	73.59	322	P	P	02 29 24.3	-0.8
	0.6nm,0.5s,baz=155,slow=6.9,SNR=3.5						
PETK	Petropavlovsk-	78.97	343	P	P	02 29 55.7	+0.6
	3.6nm,0.7s,baz=134,slow=8.4,SNR=7.7						
NVAR	Mina Array Bea	80.42	42	P	P	02 30 00.1	-3.6
	0.5nm,0.4s,baz=212,slow=3.2,SNR=3.5						
USHA	Ushuaia	80.82	146	LR	LR	02 57 34.6	
	comp=Z,403nm,21.8s,baz=242,slow=30						
USRK	Ussuriysk Arra	82.29	324	P	P	02 30 12.4	-0.8
	1.8nm,0.8s,baz=105,slow=6.5,SNR=4.7						
TXAR	Lajitas Array	85.60	56	P	P	02 30 29.1	-1.5
	0.6nm,1.0s,baz=210,slow=5.2,SNR=4.8						
ATAH	Atahualpa	93.14	99	LR	LR	03 02 21.6	
	comp=Z,230nm,21.0s,baz=299,slow=29						
CMAR	Chiang Mai Arr	93.61	288	P	P	02 31 09.1	+0.5
	1.2nm,0.4s,baz=127,slow=2.8,SNR=6.6						
YKA	Yellowknife Ar	97.04	24	P	P	02 31 22.9	-0.3
	0.1nm,0.6s,baz=250,slow=5.0,SNR=2.6						
SONM	Songino Array	99.22	318	P	Pdif	02 31 36.6	+3.0
	0.3nm,0.6s,baz=116,slow=3.4,SNR=2.7						
AKASG	Malin Array Be	146.17	332	PKPbc	PKPdf	02 37 31.4	+0.4
	2.1nm,0.7s,baz=42,slow=3.8,SNR=7.1						
BRTR	Keskin Array B	150.40	312	PKPbc	PKPbc	02 37 43.9	+0.1
	0.9nm,0.9s,baz=134,slow=2.7,SNR=4.1						
MMAI	Mount Meron Ar	151.41	298	PKPbc	PKPbc	02 37 48.4	+2.2
	3.3nm,0.7s,baz=67,slow=3.7,SNR=5.1						

IDC 05 02:18:49.7±2.3, 4°.25N×96°.85E, h133km±18km, mb3.5/9, mb1 3.6/11, mb1mx3.4/28, mbtmp3.5/11, Error ellipse: s-maj=49.2km s-min=13.7km az=57.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.52	125	P	Pn	02 19 32.1	+1.6
	5.5nm,0.3s,baz=282,slow=9.7,SNR=8.0						
PSI				S	Sn	02 20 03.5	+1.7
	14nm,0.3s,baz=320,slow=17,SNR=18						
CMAR	Chiang Mai Arr	14.26	8	P	P	02 22 07.7	-1.3
	0.4nm,0.3s,baz=196,slow=12,SNR=15						
FITZ	Fitzroy Crossi	36.05	129	P	P	02 25 37.6	-0.9
	4.1nm,0.9s,baz=329,slow=5.9,SNR=3.6						
WRA	Warramunga Arr	43.99	124	P	P	02 26 44.4	+0.3
	0.8nm,0.5s,baz=300,slow=9.5,SNR=2.9						
SONM	Songino Array	44.19	9	P	P	02 26 45.4	0.0
	0.3nm,0.4s,baz=188,slow=9.6,SNR=3.2						
MKAR	Makanchi Array	44.22	346	P	P	02 26 45.4	-0.2
	0.8nm,0.6s,baz=158,slow=9.6,SNR=12						
ASAR	Alice Springs	45.54	129	P	P	02 26 57.0	+0.5
	0.9nm,0.5s,baz=302,slow=7.9,SNR=8.5						
ZALV	Zalesovo Beam	50.51	351	P	P	02 27 32.9	-1.1
	0.5nm,0.4s,baz=177,slow=5.6,SNR=3.2						
BRTR	Keskin Array B	66.83	312	P	P	02 29 27.6	+0.1
	0.5nm,0.6s,baz=129,slow=6.0,SNR=4.2						
AKASG	Malin Array Be	72.65	322	P	P	02 29 59.4	-3.4
	0.6nm,0.4s,baz=89,slow=5.7,SNR=4.1						
ARCES	ARCESS Array B	79.56	340	P	P	02 30 41.8	+0.2
	2.0nm,1.0s,baz=98,slow=6.5,SNR=3.6						
HFS	Hagfors	82.92	330	P	P	02 30 59.4	0.0
	2.3nm,0.9s,baz=69,slow=5.2,SNR=3.4						

JMA 05 02:22:31.3, 32°.06N×140°.56E, h18km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	1.20	328	P	Pn	02 22 52.9	-0.3
JHCJ				eS	Sb	02 23 08.3	-0.3
JHJ2	Mitsune	1.22	329	P	Pn	02 22 53.3	-0.2
JHJ2				eS	Sn	02 23 09.5	-0.1
BSO1	Boso 1	2.61	8	P	Pn	02 23 13.5	+1.6
BSO1				eS	Sn	02 23 45.0	+2.4
BSO2	Boso 2	2.69	3	S	Sn	02 23 47.6	+2.5
BSO3	Boso 3	2.73	359	eS	Sn	02 23 48.9	+2.6
BSO4	Boso 4	2.93	356	P	Pn	02 23 18.7	+1.9
BSO4				eS	Sn	02 23 53.7	+2.2
JHU	Hanno	3.93	345	eS	Sn	02 24 16.7	+0.3
JAG	Ashikaga	4.45	348	eS	Sn	02 24 30.6	+1.4

IDC 05 02:23:17.3±9.9, 5°.49S×147°.41E, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.5/17, mbtmp3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/21, Error ellipse: s-maj=319.1km s-min=33.2km az=103.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	13.04	108	LR	LR	02 30 08.8	
	comp=Z,58nm,19.9s,baz=112,slow=32						
WRA	Warramunga Arr	19.18	220	P	P	02 27 42.1	-0.6
	0.2nm,0.3s,baz=39,slow=11,SNR=6.9						
ASAR	Alice Springs	22.27	214	P	P	02 28 16.4	+0.3
	1.0nm,0.7s,baz=53,slow=8.0,SNR=6.8						
MKAR	Makanchi Array	77.36	320	P	P	02 35 14.3	+0.1
	0.1nm,0.4s,baz=117,slow=5.0,SNR=3.0						

ISK 05 02:25:47.3, 39°.24N×29°.28E, h6km, MD2.6
DDA 05 02:25:47.7, 39°.19N×29°.31E, h7km, MD2.7
CSEM 05 02:25:47.8±0.1, 39°.23N×29°.31E, h5km, MD2.7, Error ellipse: s-maj=3.7km s-min=2.8km az=112.0
ISCJB 05 02:25:47.7±0.5, 39°.22N±0°.03×29°.31E±0°.04, h7km±5km, Error ellipse: s-maj=5.9km s-min=4.4km az=25.5
ISC 05 02:25:48.0±1.0, 39°.23N±0°.02×29°.31E±0°.03, h5km±11km, n26, σ0s.34/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.19	137	iP	Pg	02 25 51.7	-0.1
GDZ				iS	Sg	02 25 54.5	+0.2
GDZ	Gediz	0.19	137	iP	Pg	02 25 51.7	-0.1
GDZ				iS	Sg	02 25 54.5	+0.2
TVSB	Tavsanli	0.25	28	ePG	Pg	02 25 52.6	-0.3
TVSB				eSG	Sg	02 25 56.1	-0.1
TVSB	Tavsanli	0.25	28	ePg	Pg	02 25 52.6	-0.3
TVSB				eSg	Sg	02 25 56.1	-0.1
DEMI	Demirci	0.50	248	iP	Pg	02 25 58.1	+0.5
DEMI				iS	Sg	02 26 04.3	+0.2
DEMI	Demirci	0.50	248	iP	Pg	02 25 58.1	+0.5
DEMI				iS	Sg	02 26 04.3	+0.2
ALT	Altintas	0.64	105	ePG	Pg	02 26 01.1	+0.7
ALT	Altintas	0.64	105	ePg	Pg	02 26 01.1	+0.7
DURS	Dursunbey	0.75	300	eP	Pg	02 26 02.5	+0.2
DURS				eS	Sn	02 26 17.0	-0.2
DURS	Dursunbey	0.75	300	eP	Pg	02 26 02.5	+0.2
KHAL	Karahalli	0.87	171	iP	Pg	02 26 04.2	-0.5
KHAL				iS	Sg	02 26 15.4	-0.5
KHAL	Karahalli	0.87	171	iP	Pg	02 26 04.2	-0.5
KHAL				iS	Sg	02 26 15.4	-0.5
KULA	Kula-Manisa	0.88	216	ePG	Pg	02 26 04.5	-0.3
KULA				eSG	Sg	02 26 16.3	+0.2
KULA	Kula-Manisa	0.88	216	ePg	Pg	02 26 04.5	-0.3
KULA				eSg	Sg	02 26 16.3	+0.2
KHL	Karahalli	0.92	170	ePG	Pb	02 26 06.5	0.0
KHL	Karahalli	0.92	170	ePg	Pb	02 26 06.5	0.0
MANT	Manisa	0.94	219	iP	Pg	02 26 06.0	-0.1
MANT				iS	Sg	02 26 17.9	-0.4
MANT	Manisa	0.94	219	iP	Pg	02 26 06.0	-0.1
MANT				iS	Sg	02 26 17.9	-0.4
IZI	Iznik	1.11	6	ePN	Pg	02 26 09.0	-0.4
IZI	Iznik	1.11	6	ePn	Pg	02 26 09.0	-0.4
ARMT	Armutlu	1.38	346	ePN	Pn	02 26 14.1	+0.1
ARMT	Armutlu	1.38	346	ePn	Pn	02 26 14.1	+0.1
GONE	Gonen-Balikesi	1.50	304	ePN	Pn	02 26 15.7	+0.1
GONE	Gonen-Balikesi	1.50	304	ePn	Pn	02 26 15.7	+0.1
GULT	Gulveren	1.52	37	ePN	Pn	02 26 16.2	+0.3
GULT	Gulveren	1.52	37	ePn	Pn	02 26 16.2	+0.3

ISCJB 05 02:29:29.0±0.3, 21°.23S±0°.07×179°.17W±0°.06, h602km, mb4.5/39, Error ellipse: s-maj=9.6km s-min=7.4km az=170.7
IDC 05 02:29:31.5±1.1, 21°.24S×179°.19W, h620km±12km, mb3.8/21, mb1 4.0/23, mb1mx3.9/26, mbtmp3.8/23, Error ellipse: s-maj=11.5km s-min=9.1km az=163.0
NEIC 05 02:29:32.1±0.9, 21°.25S×179°.15W, h633km±10km, mb4.5/14, Error ellipse: s-maj=11.4km s-min=10.2km az=146.0
ISC 05 02:29:29.8±0.4, 21°.38S±0°.06×179°.12W±0°.07, h602km, n132, σ1s.58/159, mb4.5/39, 17C-3D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.50	323	eP	P	02 31 02.3	+3.0
DZM	Mont Dzumac	13.44	264	eP	P	02 32 26.0	+2.8
	2.9nm,0.2s						
DZM	Mont Dzumac	13.44	264	P	P	02 32 24.6	+1.4
DZM	Mont Dzumac	13.44	264	P	P	02 32 24.6	+1.4
	1.7nm,0.3s,baz=81,slow=19,SNR=11						
URZ	Urewera	17.14	190	eP	P	02 32 57.0	-0.3
URZ				S	S	02 35 41.4	-4.6
URZ	Urewera	17.14	190	P	P	02 32 57.8	+0.5
	5.8nm,0.3s,baz=290,slow=2.2,SNR=21						
URZ				S	S	02 35 41.4	-4.6
	0.9nm,0.3s,baz=154,slow=16,SNR=6.8						
PPT	Papeete	28.09	87	P	P	02 34 36.0	+0.8
PPT	Papeete	28.09	87	P	P	02 34 36.0	+0.8
	20nm,0.7s,baz=252,slow=19,SNR=3.4						
TIAR	Tiarei	28.31	88	eP	P	02 34 38.2	+1.2
	33nm,0.8s						
TVO	Taravao	28.35	88	eP	P	02 34 38.3	+0.9
	31nm,0.7s						
PMOR	Pomariorio Ree	30.30	83	eP	P	02 34 54.3	+0.1
	37nm,1.0s						
CTA	Charters Tower	32.37	266	P	P	02 35 12.8	+1.0
CTA	Charters Tower	32.37	266	P	P	02 35 12.8	+1.0
	29nm,0.4s,baz=95,slow=11,SNR=45						
CTAO	Charters Tower	32.37	266	eP	P	02 35 12.8	+1.0
	27nm,0.4s						
PMG	Port Moresby	34.54	285	eP	P	02 35 30.0	0.0
	51nm,0.8s						
PMG	Port Moresby	34.54	285	P	P	02 35 30.3	+0.3
	52nm,0.8s,baz=87,slow=4.8,SNR=13						
STKA	Stephens Creek	36.47	245	eP	P	02 35 46.7	+1.0
	1.6nm,0.6s						
STKA	Stephens Creek	36.47	245	P	P	02 35 47.2	+1.5
	11nm,0.7s,baz=94,slow=9.3,SNR=27						
BBOO	Buckleboo	41.22	244	eP	P	02 36 24.7	+0.8
	256nm,0.6s						
AS31	Alice Springs	43.30	258	eP	P	02 36 40.6	+0.3
ASAR	Alice Springs	43.30	258	P	P	02 36 40.8	+0.5
ASAR				ScP	ScP	02 41 10.5	+0.4
ASAR				S	S	02 42 23.4	-2.1
ASAR	Alice Springs	43.30	258	P	P	02 36 40.8	+0.5
	26nm,0.5s,baz=98,slow=7.7,SNR=291						
ASAR				ScP	ScP	02 41 10.5	+0.4
	3.3nm,0.8s,baz=108,slow=4.1,SNR=12						
ASAR				S	S	02 42 23.4	-2.1
	3.0nm,0.7s,baz=95,slow=16,SNR=17						
WRAB	Tennant Creek	43.44	263	eP	P	02 36 40.8	-0.6
	37nm,1.0s						
WRA	Warramunga Arr	43.45	263	P	P	02 36 41.2	-0.3
WRA				ScP	ScP	02 41 10.9	+0.2
WRA				S	S	02 42 23.7	-4.0
WRA	Warramunga Arr	43.45	263	P	P	02 36 41.2	-0.3
	15nm,0.3s,baz=97,slow=7.8,SNR=69						
WRA				ScP	ScP	02 41 10.9	+0.2
	1.3nm,0.7s,baz=88,slow=3.9,SNR=5.0						
WRA				S	S	02 42 23.7	-4.0
	2.6nm,0.8s,baz=99,slow=14,SNR=4.9						
FORT	Forrest	47.99	247	eP	P	02 37 15.7	+0.1
FITZ	Fitzroy Crossi	51.88	263	P	P	02 37 44.5	+0.3
FITZ	Fitzroy Crossi	51.88	263	P	P	02 37 44.5	+0.3
	6.5nm,0.4s,baz=128,slow=5.5,SNR=51						
MBWA	Marble Bar	56.65	258	eP	P	02 38 17.1	-0.4
	20nm,0.4s						
SBA	Scott Base	56.93	184	eP	P	02 38 21.6	+3.1
	8.0nm,0.8s						
VNDA	Vanda	56.95	185	eP	P	02 38 20.9	+2.3
	71nm,2.7s						
VNDA	Vanda	56.95	185	P	P	02 38 21.0	+2.3
	2.1nm,0.5s,baz=353,slow=7.3,SNR=28						
QSPA	South Pole Qui	68.69	180	eP	P	02 39 35.1	+1.0
	14nm,0.8s						
MJAR	Matsushiro Arr	70.30	325	P	P	02 39 43.1	-0.9
MJAR	Matsushiro Arr	70.30	325	P	P	02 39 43.1	-0.9
	7.7nm,0.6s,baz=165,slow=6.1,SNR=27						
MAT	Matsushiro	70.31	325	P	P	02 39 43.2	-0.8
JNU	Nakatsue	72.20	318	eP	P	02 39 54.9	-0.3
	10nm,1.2s						
SSLB	Suanglung	73.59	304	eP	P	02 40 01.5	-1.9
	437nm,2.8s						
ASAJ	Asahikawa	74.01	332	P	P	02 40 05.9	+0.8
ASAJ	Asahikawa	74.01	332	P	P	02 40 05.9	+0.8
	11nm,0.8s,baz=126,slow=18,SNR=7.0						
FX1	Attu Island--F	74.25	355	eP	P	02 40 04.6	-1.7
FX1	Attu Island--F	74.25	355	P	P	02 40 04.8	-1.5
	11nm,0.6s,baz=167,slow=2.1,SNR=18						
PETK	Petropavlovsk-	76.86	346	P	P	02 40 19.8	-0.9
PETK	Petropavlovsk-	76.86	346	P	P	02 40 19.8	-0.9
	7.4nm,0.7s,baz=148,slow=8.6,SNR=7.8						
KSRS	Korea Array	76.86	319	P	P	02 40 21.2	+0.1
	2.1nm,0.8s,baz=140,slow=6.0,SNR=8.1						
KSAR	Wonju Array Be	76.87	319	P	P	02 40 21.2	0.0
USRK	Ussuriysk Arra	79.10	327	P	P	02 40 33.6	+0.7
	9.3nm,0.9s,baz=105,slow=3.6,SNR=10.0						
MDJ	Mudanjiang	80.64	326	P	P	02 40 41.3	+0.3
MDJ				pP	pP	02 42 52.4	+5.0
MDJ				sP	sP	02 43 56.1	+7.9
MDJ				PP	PP	02 43 57.2	+0.6
MDJ				S	S	02 49 59.5	-0.2
MDJ				SS	SS	02 55 29.2	-2.1
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,55nm,4.1s						
IPM	Ipoh	82.21	278	eP	P	02 40 49.6	-0.1
	comp=Z,23nm,0.8s						
KULM	Kulim	82.86	278	eP	P	02 40 53.2	+0.2
TUC	Tucson	84.34	52	eP	P	02 41 01.4	+1.4
GYA	Guiyang	86.18	300	eP	P	02 41 09.4	+0.4
GYA				pP	pP	02 43 23.0	+5.3
GYA				sP	sP	02 44 23.6	+5.6
GYA				PP	PP	02 44 44.8	+3.4
GYA				SKS	SKSac	02 50 33.6	-5.1
GYA				S	SKKSac	02 50 51.2	+2.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SNAA	Sanae	87.16	179	eP	P	02 41 12.2	-0.5
SNAA	Sanae	87.16	179	e	P	02 41 16.8	+4.1
SNAA	Sanae	87.16	179	P	P	02 41 12.3	-0.4
SNAA	Sanae	87.16	179	P	P	02 41 12.3	-0.4
	comp=Z,0.7nm,0.6s,baz=197,slow=11,SNR=17						
TRF	Thorofare Moun	87.53	13	eP	P	02 41 12.2	-2.2
	comp=Z,8.8nm,0.8s						
VNA2	Neumayer--Watz	87.76	177	eP	P	02 41 15.9	+0.5
MCK	McKinley	88.06	13	eP	P	02 41 15.5	-1.3
	comp=Z,2.6nm,0.7s						
TXAR	Lajitas Array	88.41	58	P	P	02 41 20.2	+0.9
TXAR	Lajitas Array	88.41	58	P	P	02 41 20.2	+0.9
	comp=Z,2.5nm,0.8s,baz=219,slow=5.9,SNR=34						
HHC	Hu-ho-hao-te	89.22	315⇓	eP	P	02 41 21.0	-1.8
HHC				pP	pP	02 43 36.9	+4.2
HHC				sP	sP	02 44 38.2	+5.6
HHC				PP	PP	02 45 04.8	-0.3
HHC				S	S	02 51 18.1	-4.1
HHC				sS	sS	02 55 15.8	+1.9
HHC				SS	SS	02 57 34.6	-1.5
HHC				pmax	pmax		
	comp=Z,38nm,1.2s						
HHC				pmax	pmax		
	comp=Z,180nm,4.3s						
ILAR	Eielson Array	89.40	13	P	P	02 41 20.9	-2.0
ILAR	Eielson Array	89.40	13	P	P	02 41 20.9	-2.0
	comp=Z,1.0nm,0.4s,baz=215,slow=5.3,SNR=31						
CMAR	Chiang Mai Arr	89.42	290	P	P	02 41 25.6	+1.5
CMAR	Chiang Mai Arr	89.42	290	P	P	02 41 25.6	+1.5
	comp=Z,7.2nm,0.9s,baz=125,slow=3.1,SNR=29						
PLCA	Paso Flores	89.42	134	P	P	02 41 25.3	+1.4
PLCA	Paso Flores	89.42	134	P	P	02 41 25.3	+1.4
	comp=Z,3.5nm,0.8s,baz=266,slow=3.4,SNR=9.9						
CHTO	Chiang Mai	89.56	290	eP	P	02 41 25.4	+0.7
	comp=Z,2.1nm,0.5s						
PDAR	Pinedale Array	90.32	44	P	P	02 41 27.6	-0.4
PDAR	Pinedale Array	90.32	44	P	P	02 41 27.6	-0.4
	comp=Z,0.9nm,1.0s,baz=207,slow=3.0,SNR=5.2						
LZH	Lanzhou	92.47	308	eP	P	02 41 39.0	+1.0
LZH				pP	pP	02 43 51.0	+2.7
LZH				sP	sP	02 44 50.1	+2.1
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
SONM	Songino Array	95.73	319	P	P	02 41 52.2	-0.3
SONM	Songino Array	95.73	319	P	P	02 41 52.2	-0.3
	comp=Z,0.2nm,0.4s,baz=122,slow=5.2,SNR=3.3						
ZALV	Zalesovo Beam	110.52	321	PKiKP	PKiKP	02 46 52.4	-2.1
ZALV	Zalesovo Beam	110.52	321	PKiKP	PKiKP	02 46 52.4	-2.1
	comp=Z,0.7nm,0.6s,baz=114,slow=1.7,SNR=3.9						
MKAR	Makanchi Array	111.04	313	PKiKP	PKiKP	02 46 54.2	-1.5
MKAR				PKKPbc	PKKPbc	02 57 54.0	-1.4
MKAR	Makanchi Array	111.04	313	PKiKP	PKiKP	02 46 54.2	-1.5
	comp=Z,0.2nm,0.4s,baz=114,slow=1.7,SNR=4.1						
MKAR				PKKPbc	PKKPbc	02 57 54.0	-1.4
	comp=Z,0.6nm,0.8s,baz=274,slow=4.6,SNR=5.4						
ARCES	ARCESS Array B	129.59	349	PKP	PKPdf	02 47 29.0	-1.7
ARCES	ARCESS Array B	129.59	349	PKP	PKPdf	02 47 29.0	-1.7
	comp=Z,1.5nm,0.6s,baz=64,slow=1.1,SNR=22						
FINES	FINESS Array B	136.31	343	PKPpre	PKPpre	02 47 39.3	
FINES				PKP	PKPdf	02 47 43.7	+0.3
FINES				SKPbc	SKPbc	02 50 17.8	-2.1
FINES	FINESS Array B	136.31	343	PKhKP	PKPpre	02 47 39.3	
	comp=Z,0.8nm,0.3s,baz=48,slow=2.8,SNR=5.5						
FINES				PKP	PKPdf	02 47 43.7	+0.3
	comp=Z,0.8nm,0.3s,baz=122,slow=1.9,SNR=9.5						
FINES				SKPbc	SKPbc	02 50 17.8	-2.1
	comp=Z,4.4nm,0.9s,baz=46,slow=4.0,SNR=5.2						
RDF	Al-Radifah	137.31	290	eP	SKPbc	02 50 22.6	-1.3
RDF				AMb	AMB	02 50 23.8	
	comp=Z,42nm,1.0s						
MIB	Mutribah	137.50	291	eP	SKPbc	02 50 22.8	-1.6
MIB				AMb	AMB	02 50 23.7	
	comp=Z,18nm,0.7s						
NAY	Al-Naaiem	137.58	290	eP	SKPbc	02 50 23.1	-1.6
NAY				AMb	AMB	02 50 25.2	
	comp=Z,4.8nm,1.0s						
RST	Umm Al-Ruwaisa	137.80	291	eP	SKPbc	02 50 23.5	-1.8
RST				AMb	AMB	02 50 24.6	
	comp=Z,3.6nm,0.8s						
NB2	NORSAR Subarra	139.72	352	PKP	PKPpre	02 47 41.8	
	comp=Z,0.8nm,0.6s,baz=32,slow=3.0						
NOA	NORSAR Array B	139.72	352	PKPpre	PKPpre	02 47 40.9	
NOA	NORSAR Array B	139.72	352	PKhKP	PKPpre	02 47 40.9	
	comp=Z,1.0nm,0.6s,baz=37,slow=5.5,SNR=5.3						
BHD	Baghdad	139.84	297	ex	x	02 47 21.0	
BHD				ex	PKPdf	02 47 49.0	-1.8
BHD				ex	x	02 50 54.0	
BHD				ex	x	02 54 01.0	
BHD				ex	x	03 08 28.0	
AKASG	Malin Array Be	143.26	330	PKP	PKPab	02 47 53.0	-1.6
AKASG				SKPbc	SKPbc	02 50 36.8	-1.9
AKASG	Malin Array Be	143.26	330	PKP	PKPab	02 47 53.0	-1.6
	comp=Z,14nm,0.6s,baz=43,slow=4.2,SNR=74						
AKASG				SKPbc	SKPbc	02 50 36.8	-1.9
	comp=Z,1.7nm,0.8s,baz=25,slow=1.4,SNR=6.6						
AK01	Malin Array Si	143.27	330	ePKPdf	PKPab	02 47 53.0	-1.6
KIEV	Kiev	143.27	330	ePKPdf	PKPab	02 47 53.1	-1.6
SUW	Suwalki	143.27	338	ePKP	PKPab	02 47 53.7	-0.9
AK02	Malin Array Si	143.29	330	ePKPdf	PKPab	02 47 53.2	-1.5
BR131	Keskin Array S	146.63	311	ePKPbc	PKPbc	02 48 04.3	-1.1
BRTR	Keskin Array B	146.63	311	PKPbc	PKPdf	02 48 04.0	+1.3
BRTR	Keskin Array B	146.63	311	PKPbc	PKPdf	02 48 04.0	+1.3
	comp=Z,3.2nm,0.6s,baz=134,slow=4.3,SNR=24						
KWP	Kalwaria Pacla	146.92	334	ePKPbc	PKPbc	02 48 04.9	-0.7
KWP	Kalwaria Pacla	146.92	334	ePKP	PKPbc	02 48 04.9	-0.7
TLCR		146.99	323⇑	iP	PKPbc	02 48 05.2	-0.7
BUR08	Bucovina Ar. S	147.28	329	ePKPbc	PKPbc	02 48 06.4	-0.4
BURAR	Bucovina Array	147.29	329⇑	iP	PKPbc	02 48 06.7	-0.1
TESR	Tescani	147.33	326⇑	iP	PKPbc	02 48 06.1	-0.7
CFR	Carcaliu	147.37	323⇑	iP	PKPbc	02 48 06.0	-0.9
TIRR	Tirgusor	147.65	322⇑	iP	PKPdf	02 48 05.5	+1.6
VRI	Vrincioaia	147.71	325⇑	iP	PKPbc	02 48 07.1	-0.7
PLOR	Plostina	147.76	325⇑	iP	PKPbc	02 48 07.8	-0.2
TRPA	Tarpa	148.14	332⇑	iP	PKPbc	02 48 07.8	-1.0
MLR	Muntele Rosu	148.37	325⇑	iP	PKPbc	02 48 08.6	-1.0
OKC	Ostrava-Krasne	148.48	338	ePKPAB	PKPab	02 48 15.2	-0.2
UPC	Upice	148.58	341⇑	ePKP	PKPbc	02 48 09.6	-0.2
UPC				ePKPAB	PKPab	02 48 15.7	-0.1
DPC	Dobruska-Polom	148.63	341⇑	ePKP	PKPbc	02 48 09.8	-0.2
DPC				ePKPAB	PKPab	02 48 16.2	+0.2
CLL	Collm	148.66	345⇓	iPKPbc	PKPbc	02 48 09.2	-0.7
	comp=Z,6.0nm,0.7s						
CLL				ePKPab	PKPab	02 48 15.0	-1.0
	comp=Z,4.0nm,0.6s						
KRLC	Kraliky	148.72	340⇑	ePKP	PKPbc	02 48 10.0	-0.2
KRLC				ePKPAB	PKPab	02 48 16.2	-0.2
BRG	Berggiesshubel	148.83	344	ePKP	PKPbc	02 48 09.8	-0.6
	comp=Z,5.5nm,0.8s						
BRG				e		02 48 16.0	
	comp=Z,5.7nm,1.1s						
PVCC	Panska Ves	148.98	343⇑	ePKP	PKPbc	02 48 10.5	-0.2
DRGR		149.07	330⇓	iP	PKPbc	02 48 10.3	-0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PRU	**Pruhonice**	**149.47**	**343⇑**	*e*PKP	**PKPbc**	**02 48 11.4**	**-0.6**
PRU				*e*PKPAB	**PKPab**	**02 48 19.2**	**-0.3**
NKC	**Novy Kostel**	**149.79**	**345⇑**	*e*PKP	**PKPbc**	**02 48 12.1**	**-0.6**
TREC	**Trest**	**149.81**	**341⇑**	*e*PKP	**PKPbc**	**02 48 12.4**	**-0.4**
TREC				*e*PKPAB	**PKPab**	**02 48 20.5**	**-0.5**
KHC	**Kasperske Hory**	**150.51**	**343**	*e*PKPbc	**PKPbc**	**02 48 14.0**	**-0.5**
KHC	**Kasperske Hory**	**150.51**	**343⇑**	*e*PKP	**PKPbc**	**02 48 14.0**	**-0.5**
KHC				*e*PKPAB	**PKPab**	**02 48 23.7**	**-0.2**
GERES	**GERESS Array B**	**150.74**	**343**	PKPbc	**PKPbc**	**02 48 14.2**	**-0.9**
GERES	**GERESS Array B**	**150.74**	**343**	PKPbc	**PKPbc**	**02 48 14.2**	**-0.9**
	comp=Z,1.9nm,0.6s,baz=36,slow=2.5,SNR=19						
KEST	**Kesra**	**163.89**	**334**	PKPab	**PKPab**	**02 49 21.5**	**-0.8**
KEST	**Kesra**	**163.89**	**334**	PKPab	**PKPab**	**02 49 21.5**	**-0.8**
	comp=Z,1.7nm,0.8s,baz=332,slow=3.4,SNR=4.5						
DBIC	**Dimbokro**	**164.36**	**158**	PKPab	**PKPab**	**02 49 24.1**	**-0.5**
DBIC	**Dimbokro**	**164.36**	**158**	PKPab	**PKPab**	**02 49 24.1**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=174,slow=5.7,SNR=5.5						
TORD	**Torodi Ar. Bea**	**171.78**	**186**	PKP	**PKPdf**	**02 48 29.6**	**-1.5**
TORD	**Torodi Ar. Bea**	**171.78**	**186**	PKP	**PKPdf**	**02 48 29.6**	**-1.5**
	comp=Z,0.4nm,0.8s,baz=177,slow=2.6,SNR=2.8						

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*MOS **05** 02:31:48.7±1.3, 56°.33N×163°.03E, h14km, mb3.8/6, Error ellipse: s-maj=17.4km s-min=11.0km az=64.1*

*KRSC **05** 02:31:48.4±0.5, 56°.30N×163°.18E, h11km±11km, ML4.3*

*ISCJB **05** 02:31:49.0±0.7, 56°.26N±0°.03×163°.18E±0°.04, h11km±4km, mb3.6/8, MS3.0/2, Error ellipse: s-maj=5.3km s-min=3.3km az=8.2*

*IDC **05** 02:31:52.6±5.5, 56°.31N×162°.85E, h26km±40km, mb3.4/7, mb1 3.7/9, mb1mx3.4/29, mbtmp3.4/9, ML3.2/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/30, Error ellipse: s-maj=22.4km s-min=12.6km az=12.0*

ISC 05 02:31:49.8±1.1**, 56°.34N**±0°.05×**163°.05E**±0°.03**, h13**km±6km**, n53,** σ1**§37**/88**, mb3.6**/8**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.21**	**246**	PN	**Pg**	**02 31 54.7**	**+0.3**
KBG				S	**Sg**	**02 31 58.9**	**+1.4**
KBG	**Krutoberegovo**	**0.21**	**246**	*i* P	**Pg**	**02 31 54.7**	**+0.3**
KBG				*i* S	**Sg**	**02 31 58.9**	**+1.4**
SMKR	**Semkarok**	**0.91**	**286**	*i* P	**Pn**	**02 32 07.4**	**-1.0**
SMKR				*i* S	**Sn**	**02 32 20.9**	**-0.5**
BDR	**Baidarnaya**	**1.05**	**283**	*i* P	**Pn**	**02 32 09.9**	**-0.4**
BDR				*i* S	**Sn**	**02 32 25.2**	**+0.4**
SRKR	**Sorokina**	**1.09**	**287**	*i* P	**Pn**	**02 32 10.6**	**-0.2**
SRKR				*i* S	**Sn**	**02 32 26.2**	**+0.4**
ZLN	**Zelenaya**	**1.30**	**256**	*i* P	**Pg**	**02 32 13.5**	**-1.2**
ZLN				*i* S	**Sn**	**02 32 31.5**	**+0.5**
CIRR	**Tsirk**	**1.30**	**261**	*i* P	**Pg**	**02 32 13.6**	**-1.3**
CIRR				*i* S	**Sn**	**02 32 32.5**	**+1.3**
LGNR	**Loginova**	**1.34**	**260**	*i* P	**Pg**	**02 32 14.3**	**-1.3**
LGNR				*i* S	**Sn**	**02 32 33.7**	**+1.3**
BZGR	**Bezymyannyi-Gr**	**1.38**	**254**	*i* P	**Pn**	**02 32 14.4**	**-0.4**
BZGR				*i* S	**Sg**	**02 32 33.1**	**-1.0**
KRSR	**Krestovskiy**	**1.39**	**266**	*i* P	**Pn**	**02 32 14.3**	**-0.7**
KRSR				*i* S	**Sg**	**02 32 33.7**	**-0.9**
BZWR	**Bezymyannyi-We**	**1.48**	**256**	*i* P	**Pn**	**02 32 16.0**	**-0.3**
BZWR				*i* S	**Sg**	**02 32 36.3**	**-1.1**
BZMR	**Bezymyannaya**	**1.49**	**255**	*i* P	**Pn**	**02 32 16.1**	**-0.3**
BZMR				*i* S	**Sg**	**02 32 36.6**	**-1.1**
KIRR	**Kirishev**	**1.56**	**257**	*i* P	**Pn**	**02 32 17.1**	**-0.3**
KIRR				*i* S	**Sg**	**02 32 38.5**	**-1.6**
KPT	**Kopyto**	**1.62**	**258**	*e*P	**Pn**	**02 32 18.1**	**-0.1**
KPT				*i* S	**Sg**	**02 32 40.3**	**-1.8**
KMNR	**Kamenistaya**	**1.68**	**251**	*e*P	**Pb**	**02 32 19.4**	**-1.3**
KMNR				*i* S	**Sg**	**02 32 42.1**	**-1.8**
KOZR	**Kozyr**	**1.78**	**262**	PN	**Pb**	**02 32 21.5**	**-0.8**
KOZR				S	**Sg**	**02 32 45.5**	**-1.6**
KOZ	**Kozyrevsk**	**1.80**	**262**	*i* P	**Pb**	**02 32 21.5**	**-1.1**
KOZ				*i* S	**Sg**	**02 32 45.5**	**-2.1**
SRDR	**Sredinnyy**	**1.85**	**271**	*i* P	**Pb**	**02 32 22.1**	**-1.5**
SRDR				*i* S	**Sg**	**02 32 46.9**	**-2.5**
MKZ	**Mys Kozlova**	**1.94**	**203**	PN	**Pn**	**02 32 20.9**	**-1.5**
MKZ				S	**Sn**	**02 32 45.2**	**-1.5**
MKZ	**Mys Kozlova**	**1.94**	**203**	*e*P	**Pn**	**02 32 20.9**	**-1.5**
MKZ				*i* S	**Sn**	**02 32 45.2**	**-1.5**
TUMR	**Tumrok**	**1.95**	**238**	*i* P	**Pn**	**02 32 23.2**	**+0.5**
TUMR				*i* S	**Sb**	**02 32 49.1**	**-0.4**
BKI	**Bering**	**2.01**	**123**	PN	**Pn**	**02 32 22.2**	**-1.2**
BKI				S	**Sn**	**02 32 47.0**	**-1.3**
BKI	**Bering**	**2.01**	**123**	*e*P	**Pn**	**02 32 22.2**	**-1.2**
BKI				*i* S	**Sn**	**02 32 47.0**	**-1.3**
ESO	**Esso**	**2.47**	**262**	PN	**Pn**	**02 32 31.0**	**+1.2**
ESO				S	**Sb**	**02 33 02.5**	**-1.8**
ESO	**Esso**	**2.47**	**262**	*e*P	**Pn**	**02 32 31.0**	**+1.2**
ESO				*e*S	**Sb**	**02 33 02.5**	**-1.8**
KII	**Karymskiy**	**3.10**	**223**	*e*P	**Pn**	**02 32 39.3**	**+0.8**
KII				*i* S	**Sn**	**02 33 16.4**	**+1.1**
SDLR	**Sedlovina**	**3.90**	**220**	P	**Pn**	**02 32 50.4**	**+0.9**
SDLR				*i* S	**Sn**	**02 33 36.7**	**+1.5**
KRER	**Koryakskii**	**3.93**	**221**	P	**Pn**	**02 32 51.0**	**+1.0**
KRER				*i* S	**Sn**	**02 33 37.8**	**+1.8**
SMAR	**Somma**	**3.94**	**220**	*e*P	**Pn**	**02 32 50.9**	**+0.7**
SMAR				*e*S	**Sn**	**02 33 36.9**	**+0.5**
GNL	**Ganaly**	**3.96**	**230**	*e*P	**Pn**	**02 32 51.1**	**+0.8**
AVH	**Avacha**	**3.96**	**221**	*e*P	**Pn**	**02 32 51.6**	**+1.2**
AVH				*i* S	**Sn**	**02 33 38.5**	**+1.8**
UGLR	**Uglovaya**	**3.98**	**220**	*e*P	**Pn**	**02 32 51.6**	**+1.0**
UGLR				*i* S	**Sn**	**02 33 37.9**	**+0.8**
KOK	**Koryaka**	**3.98**	**222**	P	**Pn**	**02 32 52.0**	**+1.4**
PET	**Petropavlovsk**	**4.19**	**219**	*e*PN	**Pn**	**02 32 54.9**	**+1.5**
PET				pmax	pmax		
	comp=Z,32nm,0.6s						
PETK	**Petropavlovsk-**	**4.48**	**226**	PN	**Pn**	**02 32 58.5**	**+1.0**
PETK						02 33 55.0	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**4.48**	**226**	Pn	**Pn**	**02 32 58.5**	**+1.0**
	comp=N,2.2nm,0.3s,baz=63,slow=16,SNR=26						
PETK				Sn	**Sn**	**02 33 55.0**	**+5.6**
	comp=N,0.6nm,0.3s,baz=88,slow=20,SNR=2.3						
RUS	**Russkaya**	**4.73**	**216**	PN	**Pn**	**02 33 00.8**	**0.0**
RUS	**Russkaya**	**4.73**	**216**	*e*P	**Pn**	**02 33 00.8**	**0.0**
RUS				*i* S	**Sn**	**02 33 54.6**	**-0.8**
MTVR	**Mutnovka**	**4.80**	**218**	*e*P	**Pn**	**02 33 02.6**	**+0.7**
MTVR				*i* S	**Sn**	**02 33 57.8**	**+0.5**
APC	**Apacha**	**4.84**	**227**	P	**Pn**	**02 33 04.3**	**+2.0**
ASAK	**Asacha**	**4.98**	**219**	*e*P	**Pn**	**02 33 05.7**	**+1.4**
ASAK				*e*S	**Sn**	**02 34 02.8**	**+1.1**
MIPR	**Malaya Ipel'ka**	**5.49**	**225**	P	**Pn**	**02 33 12.1**	**+0.9**
FX1	**Attu Island--F**	**6.82**	**116**	Pn	**Pn**	**02 33 31.1**	**+1.6**
	comp=N,1.2nm,0.3s,baz=309,slow=21,SNR=19						
FX1				Sn	**Sn**	**02 34 46.5**	**-0.4**
	comp=N,1.0nm,0.3s,baz=319,slow=19,SNR=2.7						
ERM	**Erimo**	**19.25**	**230**	*e*P	P	02 36 07.7	-6.0
ILAR	**Eielson Array**	**25.36**	**50**	P	**P**	**02 37 17.6**	**+1.5**
	comp=N,1.2nm,0.9s,baz=260,slow=8.1,SNR=8.6						
ILAR				LR	LR	02 48 27.8	
	comp=N,23nm,18.1s,baz=93,slow=39						
SONM	**Songino Array**	**34.91**	**280**	P	**P**	**02 38 40.9**	**-0.1**
	comp=N,0.4nm,0.5s,baz=64,slow=6.6,SNR=3.4						
SONM				LR	LR	02 55 02.7	
	comp=N,59nm,18.7s,baz=29,slow=40						
YKA	**Yellowknife Ar**	**39.64**	**46**	P	**P**	**02 39 22.1**	**+1.4**
	comp=N,0.6nm,0.7s,baz=300,slow=7.9,SNR=4.5						
KURK	**Kurchatov**	**47.50**	**301**	*e*P	**P**	**02 40 22.2**	**-2.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
MKAR	**Makanchi Array**	**48.32**	**295**	*e*P	**P**	**02 40 29.5**	**-1.1**
MKAR	**Makanchi Array**	**48.32**	**295**	P	**P**	**02 40 29.5**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=60,slow=7.2,SNR=4.0						
PDAR	**Pinedale Array**	**54.51**	**65**	P	**P**	**02 41 19.3**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=337,slow=1.4,SNR=2.8						
TXAR	**Lajitas Array**	**67.85**	**70**	P	**P**	**02 42 49.6**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=305,slow=4.7,SNR=9.8						
WRA	**Warramunga Arr**	**79.76**	**207**	P	**P**	**02 43 57.4**	**+0.1**
	comp=Z,1.1nm,1.1s,baz=11,slow=5.2,SNR=3.1						

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*ISCJB **05** 02:39:58.9±0.3, 43°.55S±0°.07×16°.13W±0°.09, h10km, mb5.0/54, MS4.2/20, Error ellipse: s-maj=10.7km s-min=8.7km az=152.7*

*IDC **05** 02:39:58.4±0.5, 43°.55S×16°.03W, h0km, mb4.4/17, mb1 4.5/17, mb1mx4.4/19, mbtmp4.4/17, MS4.1/16, Ms1 4.1/16, ms1mx4.0/21, Error ellipse: s-maj=16.7km s-min=14.1km az=7.0*

*MOS **05** 02:39:59.4±0.8, 43°.48S×16°.07W, h10km, mb5.8/24, Error ellipse: s-maj=17.7km s-min=9.5km az=82.0*

*NEIC **05** 02:40:00.4±0.2, 43°.52S×16°.12W, h10km, mb5.2/28, Error ellipse: s-maj=7.3km s-min=6.1km az=146.0*

*BJI **05** 02:40:00.3, 43°.40S×16°.10W, h10km, mB5.4/10, Ms5.3/6, Ms7 4.9/7*

*GCMT **05** 02:40:00.5±0.3, 44°.12S×15°.92W, h13km±1km, MW5.0, Moment Tensor Solution. s25,c29; s68,c93; Moment tensor: Scale 10[16]Nm; Mrr-2.56±.18; Mθθ-0.40±.13; Mφφ2.96±.13; Mrθ-3.08±.50; Mθφ-0.25±.09; Mφr-0.39±.25; Best double couple: M0 3.90000×10[16] NP1:φs148.00000°, δ52.00000°, λ-137.00000°. NP2:φs28.00000°, δ58.00000°, λ-47.00000°. Principal axes: T 2.9900, Plg4.0000°, Azm89.0000°; N 1.7900, Plg35.0000°, Azm182.0000°; P -4.7700, Plg55.0000°, Azm354.0000°; Data Used: II IU G IC CN.*

ISC 05 02:39:60.0±0.3**, 43°.51S**±0°.09×**16°.06W**±0°.07**, h10**km**, n254,** σ1**§11**/259**, mb5.3**/54**, MS4.3**/20**, 6C-1D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**28.97**	**171**	*e*P	**P**	**02 46 01.4**	**+2.1**
	4.8nm,1.2s						
SNAA	**Sanae**	**28.97**	**171**	P	**P**	**02 45 58.5**	**-0.8**
	1.5nm,1.2s,baz=345,slow=11,SNR=3.0						
SNAA				LR	LR	02 54 53.3	
	comp=Z,73nm,18.9s,baz=4.8,slow=31						
MAIT	**Maitri**	**30.63**	**162**	*e*P	P	02 46 03.6	-10
TRQA	**Tornquist**	**34.85**	**263**	*e*P	**P**	**02 46 50.4**	**-0.8**
	2.4nm,1.0s						
BOSA	**Boshof**	**36.16**	**80**	*e*P	**P**	**02 47 03.0**	**+0.4**
	22nm,1.4s						
BOSA	**Boshof**	**36.16**	**80**	P	**P**	**02 47 02.8**	**+0.1**
	3.4nm,0.9s,baz=251,slow=10,SNR=4.3						
BOSA				LR	LR	02 59 38.1	
	comp=Z,307nm,18.8s,baz=234,slow=33						
TSUM	**Tsumeb**	**37.18**	**60**	*e*P	**P**	**02 47 11.1**	**-0.4**
	20nm,1.1s						
TSUM	**Tsumeb**	**37.18**	**60**	P	**P**	**02 47 12.0**	**+0.6**
	8.8nm,1.1s,baz=221,slow=9.8,SNR=6.5						
CPUP	**Villa Florida**	**37.49**	**283**	P	**P**	**02 47 14.0**	**+0.1**
CPUP	**Villa Florida**	**37.49**	**283**	P	**P**	**02 47 14.0**	**+0.1**
	7.8nm,0.8s,baz=106,slow=7.6,SNR=32						
CPUP				LR	LR	03 01 30.0	
	comp=Z,495nm,19.2s,baz=150,slow=34						
SYO	**Syowa Base**	**38.02**	**151⇑**	*e*X	P	02 47 12.6	-5.2
SYO	**Syowa Base**	**38.02**	**151⇑**	*e*sP	sP	02 47 21.4	-0.7
LBTB	**Lobatse**	**38.58**	**75**	*e*P	**P**	**02 47 23.7**	**+0.5**
	66nm,2.2s						
LBTB	**Lobatse**	**38.58**	**75**	P	**P**	**02 47 22.9**	**-0.3**
	4.9nm,0.8s,baz=236,slow=8.6,SNR=8.1						
BDFB	**Brasilia**	**38.87**	**306**	P	**P**	**02 47 26.8**	**+1.1**
BDFB	**Brasilia**	**38.87**	**306**	P	**P**	**02 47 26.8**	**+1.1**
	10nm,1.0s,baz=125,slow=6.8,SNR=9.6						
BDFB				LR	LR	03 00 22.7	
	comp=Z,456nm,18.1s,baz=307,slow=32						
PLCA	**Paso Flores**	**39.91**	**255**	*e*P	**P**	**02 47 36.2**	**+2.1**
PLCA	**Paso Flores**	**39.91**	**255**	P	**P**	**02 47 34.2**	**+0.1**
	7.4nm,1.0s,baz=97,slow=6.2,SNR=4.9						
RCBR	**Riachuelo**	**41.40**	**329**	*e*P	**P**	**02 47 47.3**	**+0.7**
RCBR	**Riachuelo**	**41.40**	**329**	P	**P**	**02 47 46.2**	**-0.3**
	12nm,1.0s,baz=144,slow=7.3,SNR=5.9						
CFAA	**Coronel Fontan**	**42.40**	**268**	P	**P**	**02 47 54.0**	**-0.7**
CFAA	**Coronel Fontan**	**42.40**	**268**	P	**P**	**02 47 54.0**	**-0.7**
	0.8nm,0.8s,baz=143,slow=11,SNR=3.6						
MAW	**Mawson**	**46.59**	**149**	P	**P**	**02 48 27.6**	**0.0**
MAW	**Mawson**	**46.59**	**149**	P	**P**	**02 48 27.6**	**0.0**
	8.3nm,0.9s,baz=253,slow=5.9,SNR=10						
MAW				LR	LR	03 04 05.5	
	comp=Z,259nm,21.0s,baz=267,slow=31						
QSPA	**South Pole Qui**	**46.76**	**180**	*e*P	**P**	**02 48 29.9**	**+0.8**
	22nm,0.8s						
QSPA				*e*PcP	**PcP**	**02 50 01.9**	**-0.3**
LSZ	**Lusaka**	**46.95**	**67**	*e*P	**P**	**02 48 31.4**	**+0.2**
	7.9nm,1.0s						
LIC	**Lamto**	**50.50**	**14**	*e*P	**P**	**02 48 58.1**	**-0.1**
	22nm,0.9s						
LIC	**Lamto**	**50.50**	**14**	*e*P	**P**	**02 48 58.1**	**-0.1**
	22nm,0.9s						
DBIC	**Dimbokro**	**50.96**	**14**	P	**P**	**02 49 01.8**	**0.0**
DBIC	**Dimbokro**	**50.96**	**14**	P	**P**	**02 49 01.8**	**0.0**
	2.8nm,0.9s,baz=162,slow=3.2,SNR=3.0						
DBIC				LR	LR	03 03 35.2	
	comp=Z,73nm,19.5s,baz=165,slow=28						
LPAZ	**La Paz**	**51.63**	**285**	*e*P	**P**	**02 49 06.4**	**-1.2**
	9.4nm,1.2s						
LPAZ	**La Paz**	**51.63**	**285**	P	**P**	**02 49 07.7**	**+0.1**
	2.2nm,0.8s,baz=109,slow=1.0,SNR=8.3						
SAML	**Samuel**	**53.48**	**296**	*e*P	**P**	**02 49 20.5**	**0.0**
	20nm,1.0s						
ARE	**Arequipa**	**53.89**	**282**	*e*P	**P**	**02 49 23.0**	**-0.9**
ARE	**Arequipa**	**53.89**	**282**	*e*P	**P**	**02 49 23.0**	**-0.9**
TOA0	**Torodi Ar. Sit**	**58.67**	**20**	*e*P	**P**	**02 49 57.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**58.67**	**20**	P	**P**	**02 49 56.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**58.67**	**20**	P	**P**	**02 49 56.8**	**-0.7**
	3.8nm,0.9s,baz=186,slow=6.7,SNR=18						
TORD				LR	LR	03 09 31.6	
	comp=Z,154nm,19.9s,baz=200,slow=30						
VNDA	**Vanda**	**59.24**	**179**	*e*P	**P**	**02 50 01.9**	**+1.1**
VNDA	**Vanda**	**59.24**	**179**	P	**P**	**02 50 01.0**	**+0.2**
	7.7nm,1.1s,baz=205,slow=5.2,SNR=12						
KMBO	**Kilima Mbogo**	**63.38**	**64**	LR	LR	03 14 54.0	
	comp=Z,510nm,21.5s,baz=97,slow=33						
TAM	**Tamanrasset**	**68.89**	**21**	*e*P	**P**	**02 51 05.2**	**+0.2**
TAM				pmax	pmax		
	comp=Z,12nm,1.3s						
TAM	**Tamanrasset**	**68.89**	**21**	*e*P	**P**	**02 51 05.2**	**+0.2**
	comp=Z,12nm,1.3s						
OTAV	**Otavalo**	**70.47**	**290**	*e*P	**P**	**02 51 15.5**	**+0.2**
	comp=Z,3.1nm,1.2s						
SDV	**Santo Domingo**	**71.85**	**302**	*e*P	**P**	**02 51 23.5**	**+0.2**
	comp=Z,14nm,1.3s						
MDT	**Midelt**	**76.67**	**10**	LR	LR	03 24 20.5	
	comp=Z,126nm,18.8s,baz=203,slow=35						
EVOP	**Sao Brissos**	**81.97**	**6**	*e*P	**P**	**02 52 19.9**	**+0.4**
EVOP				pmax	pmax		
	comp=Z,44nm,1.4s						
EVOP	**Sao Brissos**	**81.97**	**6**	*e*P	**P**	**02 52 19.9**	**+0.4**
	comp=Z,44nm,1.4s						
EVO	**Evora**	**81.98**	**6**	*e*P	**P**	**02 52 19.9**	**+0.3**
	comp=Z,44nm,1.4s						
EVO				*e*R			
	comp=Z,161nm,19.8s						
KEST	**Kesra**	**82.19**	**21**	*e*P	**P**	**02 52 22.5**	**+1.6**
KEST	**Kesra**	**82.19**	**21**	P	**P**	**02 52 21.5**	**+0.6**
	comp=Z,2.5nm,1.0s,baz=162,slow=16,SNR=4.1						
KEST				LR	LR	03 27 07.0	
	comp=Z,37nm,18.0s,baz=192,slow=34						
ESDC	**Sonseca Array**	**83.52**	**9**	P	**P**	**02 52 28.3**	**+0.6**
ESDC	**Sonseca Array**	**83.52**	**9**	P	**P**	**02 52 28.3**	**+0.6**
	comp=Z,6.0nm,1.1s,baz=185,slow=4.9,SNR=16						
EIL	**Elat**	**86.53**	**43**	LR	LR	03 27 03.2	
	comp=Z,131nm,19.0s,baz=94,slow=33						
ETSF	**Etsaut**	**87.14**	**11**	*e*P	**P**	**02 52 47.0**	**+1.3**
	comp=Z,39nm,1.2s						
ETSF	**Etsaut**	**87.14**	**11**	*e*P	**P**	**02 52 47.0**	**+1.3**
ETSF				pmax	pmax		
	comp=Z,39nm,1.2s						
ETSF	**Etsaut**	**87.14**	**11**	*e*P	**P**	**02 52 47.0**	**+1.3**
	comp=Z,39nm,1.2s						
SJPF	**Ste Jean**	**87.25**	**11**	*e*P	**P**	**02 52 46.3**	**+0.1**
	comp=Z,74nm,1.6s						
SJPF	**Ste Jean**	**87.25**	**11**	*e*P	**P**	**02 52 46.3**	**+0.1**
SJPF				pmax	pmax		
	comp=Z,74nm,1.6s						
SJPF	**Ste Jean**	**87.25**	**11**	*e*P	**P**	**02 52 46.3**	**+0.1**
	comp=Z,74nm,1.6s						
EPF	**Esparros**	**87.40**	**12**	*e*P	**P**	**02 52 48.0**	**+1.1**
	comp=Z,20nm,1.0s						
EPF	**Esparros**	**87.40**	**12**	*e*P	**P**	**02 52 48.0**	**+1.1**
EPF				pmax	pmax		
	comp=Z,20nm,1.0s						
EPF	**Esparros**	**87.40**	**12**	*e*P	**P**	**02 52 48.0**	**+1.1**
	comp=Z,20nm,1.0s						
MTLF	**Montolieu**	**88.00**	**13**	*e*P	**P**	**02 52 49.9**	**+0.2**
	comp=Z,36nm,1.1s						
MTLF	**Montolieu**	**88.00**	**13**	*e*P	**P**	**02 52 49.9**	**+0.2**
MTLF				pmax	pmax		
	comp=Z,36nm,1.1s						
MTLF	**Montolieu**	**88.00**	**13**	*e*P	**P**	**02 52 49.9**	**+0.2**
	comp=Z,36nm,1.1s						
PGF	**Pioggiola**	**88.57**	**18**	*e*P	**P**	**02 52 54.0**	**+1.4**
	comp=Z,26nm,1.0s						
PGF	**Pioggiola**	**88.57**	**18**	*e*P	**P**	**02 52 54.0**	**+1.4**
PGF				pmax	pmax		
	comp=Z,26nm,1.0s						
PGF	**Pioggiola**	**88.57**	**18**	*e*P	**P**	**02 52 54.0**	**+1.4**
	comp=Z,26nm,1.0s						
LASF	**Ste Croix**	**89.00**	**14**	*e*P	**P**	**02 52 55.3**	**+0.8**
	comp=Z,71nm,1.3s						
LASF	**Ste Croix**	**89.00**	**14**	*e*P	**P**	**02 52 55.3**	**+0.8**
	comp=Z,71nm,1.3s						
FRF	**La Foret Royal**	**89.03**	**16**	*e*P	**P**	**02 52 55.0**	**+0.4**
	comp=Z,63nm,1.4s						
FRF	**La Foret Royal**	**89.03**	**16**	*e*P	**P**	**02 52 55.0**	**+0.4**
FRF				pmax	pmax		
	comp=Z,63nm,1.4s						
FRF	**La Foret Royal**	**89.03**	**16**	*e*P	**P**	**02 52 55.0**	**+0.4**
	comp=Z,63nm,1.4s						
SMRF	**Simiane la Rot**	**89.22**	**15**	*e*P	**P**	**02 52 56.8**	**+1.3**
	comp=Z,47nm,1.2s						
SMRF	**Simiane la Rot**	**89.22**	**15**	*e*P	**P**	**02 52 56.8**	**+1.3**
	comp=Z,47nm,1.2s						
LFF	**La Frestale**	**89.33**	**12**	*e*P	**P**	**02 52 57.2**	**+1.3**
	comp=Z,57nm,1.2s						
LFF	**La Frestale**	**89.33**	**12**	*e*P	**P**	**02 52 57.2**	**+1.3**
LFF				pmax	pmax		
	comp=Z,57nm,1.2s						
LFF	**La Frestale**	**89.33**	**12**	*e*P	**P**	**02 52 57.2**	**+1.3**
	comp=Z,57nm,1.2s						
MMAI	**Mount Meron Ar**	**89.49**	**41**	LR	LR	03 31 24.9	
	comp=Z,139nm,18.4s,baz=215,slow=34						
CAF	**Calviac**	**89.52**	**13**	*e*P	**P**	**02 52 57.9**	**+1.0**
	comp=Z,44nm,1.4s						
CAF	**Calviac**	**89.52**	**13**	*e*P	**P**	**02 52 57.9**	**+1.0**
CAF				pmax	pmax		
	comp=Z,44nm,1.4s						
CAF	**Calviac**	**89.52**	**13**	*e*P	**P**	**02 52 57.9**	**+1.0**
	comp=Z,44nm,1.4s						
ASF	**Jabal al Asfar**	**89.53**	**43**	LR	LR	03 27 24.5	
	comp=Z,61nm,20.9s,baz=72,slow=32						
RJF	**Les Rejaudoux**	**89.80**	**12**	*e*P	**P**	**02 52 59.3**	**+1.1**
	comp=Z,38nm,1.0s						
RJF				*e*R			
	comp=Z,118nm,21.5s						
RJF	**Les Rejaudoux**	**89.80**	**12**	*e*P	**P**	**02 52 59.3**	**+1.1**
RJF				pmax	pmax		
	comp=Z,39nm,1.0s						
RJF	**Les Rejaudoux**	**89.80**	**12**	*e*P	**P**	**02 52 59.3**	**+1.1**
	comp=Z,38nm,1.0s						
VIVF	**Saint-Julien-l**	**89.90**	**15**	*e*P	**P**	**02 52 59.6**	**+0.9**
	comp=Z,41nm,1.4s						
VIVF	**Saint-Julien-l**	**89.90**	**15**	*e*P	**P**	**02 52 59.6**	**+0.9**
VIVF				pmax	pmax		
	comp=Z,41nm,1.4s						
VIVF	**Saint-Julien-l**	**89.90**	**15**	*e*P	**P**	**02 52 59.6**	**+0.9**
	comp=Z,41nm,1.4s						
MBDF	**Montbardon**	**90.18**	**16**	*e*P	**P**	**02 53 01.0**	**+0.9**
	comp=Z,30nm,1.2s						
MBDF	**Montbardon**	**90.18**	**16**	*e*P	**P**	**02 53 01.0**	**+0.9**
MBDF				pmax	pmax		
	comp=Z,30nm,1.2s						
MBDF	**Montbardon**	**90.18**	**16**	*e*P	**P**	**02 53 01.0**	**+0.9**
	comp=Z,30nm,1.2s						
ORIF	**Oris-en-Rattie**	**90.19**	**15**	*e*P	**P**	**02 53 01.1**	**+1.0**
	comp=Z,28nm,1.2s						
ORIF				*e*R			
	comp=Z,144nm,18.5s						
ORIF	**Oris-en-Rattie**	**90.19**	**15**	*e*P	**P**	**02 53 01.1**	**+1.0**
ORIF				pmax	pmax		
	comp=Z,28nm,1.2s						
ORIF	**Oris-en-Rattie**	**90.19**	**15**	*e*P	**P**	**02 53 01.1**	**+1.0**
	comp=Z,28nm,1.2s						
MFF	**Saint Martin d**	**90.83**	**11**	*e*P	**P**	**02 53 04.2**	**+1.3**
	comp=Z,37nm,1.4s						
MFF	**Saint Martin d**	**90.83**	**11**	*e*P	**P**	**02 53 04.2**	**+1.3**
MFF				pmax	pmax		
	comp=Z,37nm,1.4s						
MFF	**Saint Martin d**	**90.83**	**11**	*e*P	**P**	**02 53 04.2**	**+1.3**
	comp=Z,37nm,1.4s						
TCF	**Toulx Ste Croi**	**90.87**	**13**	*e*P	**P**	**02 53 04.4**	**+1.2**
	comp=Z,29nm,1.0s						
TCF	**Toulx Ste Croi**	**90.87**	**13**	*e*P	**P**	**02 53 04.4**	**+1.2**
TCF				pmax	pmax		
	comp=Z,29nm,1.0s						
TCF	**Toulx Ste Croi**	**90.87**	**13**	*e*P	**P**	**02 53 04.4**	**+1.2**
	comp=Z,29nm,1.0s						
LPG	**La Plagne**	**90.91**	**16**	*e*P	**P**	**02 53 04.7**	**+1.0**
	comp=Z,25nm,1.1s						
LPG	**La Plagne**	**90.91**	**16**	*e*P	**P**	**02 53 04.7**	**+1.0**
LPG				pmax	pmax		
	comp=Z,25nm,1.1s						
LPG	**La Plagne**	**90.91**	**16**	*e*P	**P**	**02 53 04.7**	**+1.0**
	comp=Z,25nm,1.1s						
LPL	**La Plagne**	**90.93**	**16**	*e*P	**P**	**02 53 04.6**	**+0.9**
	comp=Z,31nm,1.1s						
LPL	**La Plagne**	**90.93**	**16**	*e*P	**P**	**02 53 04.6**	**+0.9**
LPL				pmax	pmax		
	comp=Z,31nm,1.1s						
LPL	**La Plagne**	**90.93**	**16**	*e*P	**P**	**02 53 04.6**	**+0.9**
	comp=Z,31nm,1.1s						
BGF	**Bois d'Agland**	**91.23**	**13**	*e*P	**P**	**02 53 05.7**	**+0.9**
	comp=Z,16nm,1.1s						
BGF	**Bois d'Agland**	**91.23**	**13**	*e*P	**P**	**02 53 05.7**	**+0.9**
BGF				pmax	pmax		
	comp=Z,16nm,1.1s						
BGF	**Bois d'Agland**	**91.23**	**13**	*e*P	**P**	**02 53 05.7**	**+0.9**
	comp=Z,16nm,1.1s						
SMF	**Signal de Mont**	**91.48**	**14**	*e*P	**P**	**02 53 06.9**	**+0.9**
	comp=Z,32nm,1.1s						
SMF	**Signal de Mont**	**91.48**	**14**	*e*P	**P**	**02 53 06.9**	**+0.9**
SMF				pmax	pmax		
	comp=Z,32nm,1.1s						
SMF	**Signal de Mont**	**91.48**	**14**	*e*P	**P**	**02 53 06.9**	**+0.9**
	comp=Z,32nm,1.1s						
AVF	**Avril sur Loir**	**91.54**	**13**	*e*P	**P**	**02 53 07.2**	**+1.0**
	comp=Z,35nm,1.1s						
AVF	**Avril sur Loir**	**91.54**	**13**	*e*P	**P**	**02 53 07.2**	**+1.0**
AVF				pmax	pmax		
	comp=Z,35nm,1.1s						
AVF	**Avril sur Loir**	**91.54**	**13**	*e*P	**P**	**02 53 07.2**	**+1.0**
	comp=Z,35nm,1.1s						
QUIF	**Quistinic**	**91.75**	**9**	*e*P	**P**	**02 53 07.8**	**+0.7**
	comp=Z,127nm,1.7s						
QUIF	**Quistinic**	**91.75**	**9**	*e*P	**P**	**02 53 07.8**	**+0.7**
QUIF				pmax	pmax		
	comp=Z,127nm,1.7s						
QUIF	**Quistinic**	**91.75**	**9**	*e*P	**P**	**02 53 07.8**	**+0.7**
	comp=Z,127nm,1.7s						
SSF	**Saint Saulge**	**91.83**	**13**	*e*P	**P**	**02 53 08.3**	**+0.7**
	comp=Z,20nm,1.0s						
SSF	**Saint Saulge**	**91.83**	**13**	*e*P	**P**	**02 53 08.3**	**+0.7**
SSF				pmax	pmax		
	comp=Z,20nm,1.0s						
SSF	**Saint Saulge**	**91.83**	**13**	*e*P	**P**	**02 53 08.3**	**+0.7**
	comp=Z,20nm,1.0s						
CABF	**La Chapelle**	**91.85**	**15**	*e*P	**P**	**02 53 08.2**	**+0.4**
CABF	**La Chapelle**	**91.85**	**15**	*e*P	**P**	**02 53 08.2**	**+0.4**
CABF	**La Chapelle**	**91.85**	**15**	*e*P	**P**	**02 53 08.2**	**+0.4**
LOR	**Lormes**	**92.09**	**13**	*e*P	**P**	**02 53 09.5**	**+0.7**
	comp=Z,18nm,1.1s						
LOR				*e*R			
	comp=Z,152nm,20.5s						
LOR	**Lormes**	**92.09**	**13**	*e*P	**P**	**02 53 09.5**	**+0.7**
	comp=Z,18nm,1.1s						
SGMF	**Saint Gilles**	**92.15**	**9**	*e*P	**P**	**02 53 10.4**	**+1.4**
SGMF	**Saint Gilles**	**92.15**	**9**	*e*P	**P**	**02 53 10.4**	**+1.4**
SGMF	**Saint Gilles**	**92.15**	**9**	*e*P	**P**	**02 53 10.4**	**+1.4**
GRR	**Gorron**	**92.48**	**10**	*e*P	**P**	**02 53 11.9**	**+1.4**
GRR	**Gorron**	**92.48**	**10**	*e*P	**P**	**02 53 11.9**	**+1.4**
GRR	**Gorron**	**92.48**	**10**	*e*P	**P**	**02 53 11.9**	**+1.4**
LDF	**La Druitiere**	**92.78**	**11**	*e*P	**P**	**02 53 13.2**	**+1.3**
LDF	**La Druitiere**	**92.78**	**11**	*e*P	**P**	**02 53 13.2**	**+1.3**
LDF	**La Druitiere**	**92.78**	**11**	*e*P	**P**	**02 53 13.2**	**+1.3**
DAVOX	**Davos/Dischmat**	**92.79**	**18**	LR	LR	03 32 18.7	
	comp=Z,123nm,18.0s,baz=158,slow=34						
FLN	**La Foliniere**	**92.90**	**10**	*e*P	**P**	**02 53 12.9**	**+0.5**
	comp=Z,26nm,0.9s						
FLN				*e*R			
	comp=Z,98nm,19.0s						
FLN	**La Foliniere**	**92.90**	**10**	*e*P	**P**	**02 53 12.9**	**+0.5**
FLN				pmax	pmax		
	comp=Z,26nm,0.9s						
FLN	**La Foliniere**	**92.90**	**10**	*e*P	**P**	**02 53 12.9**	**+0.5**
	comp=Z,26nm,0.9s						
SFTF	**Sexfontaines**	**93.20**	**14**	*e*P	**P**	**02 53 14.5**	**+0.6**
	comp=Z,38nm,1.2s						
SFTF	**Sexfontaines**	**93.20**	**14**	*e*P	**P**	**02 53 14.5**	**+0.6**
	comp=Z,38nm,1.2s						
HAU	**Haudompre**	**93.24**	**15**	*e*P	**P**	**02 53 14.4**	**+0.3**
HAU				*e*R			

comp=Z,111nm,18.8s
HAU Haudompre 93.24 15 eP P 02 53 14.4 +0.3
HAU Haudompre 93.24 15 eP P 02 53 14.4 +0.3
MEZF Maizieres J'vi 93.49 14 eP P 02 53 16.1 +0.9
comp=Z,30nm,1.0s
MEZF Maizieres J'vi 93.49 14 eP P 02 53 16.1 +0.9
comp=Z,30nm,1.0s
PAGF Fort de Pagny 93.66 14 eP P 02 53 16.9 +0.9
PAGF Fort de Pagny 93.66 14 eP P 02 53 16.9 +0.9
BRTR Keskin Array B 94.23 36 P P 02 53 20.9 +1.9
BRTR Keskin Array B 94.23 36 P P 02 53 20.9 +1.9
comp=Z,6.0nm,0.9s,baz=190,slow=4.7,SNR=28
BRTR LR LR 03 34 16.4
comp=Z,62nm,18.1s,baz=127,slow=35
BR131 Keskin Array S 94.23 36 eP P 02 53 20.9 +1.9
comp=Z,10.0nm,1.1s
GERES GERESS Array B 95.61 19 LR LR 03 36 33.8
comp=Z,57nm,18.2s,baz=6.6,slow=36
KHC Kasperske Hory 95.85 19 eP P 02 53 26.6 +0.6
KHC Kasperske Hory 95.85 19 eP P 02 53 26.6 +0.6
KHC ex x 02 53 36.2
427A Hayter Ranch, 108.72 295 P 02 58 30.5
baz=109
Y23A Lovelace Mesa, 112.40 296 P 02 58 37.0
baz=113
S25A Robets Cordova 113.64 300 P 02 58 38.6
baz=114
U22A Llaves 114.41 298 P PKPdf 02 58 41.2 +1.2
baz=115
T22A Edith 114.82 298 P PKPdf 02 58 41.7 +0.9
baz=115
Q20A Ridgley Place, 116.85 299 P PKPdf 02 58 44.9 +0.3
baz=117
AAK Ala-Archa 117.91 57⇑ iPKIKP PKPdf 02 58 46.8 +0.3
W13A Hualapai Mount 118.29 293 P PKPdf 02 58 47.8 +0.3
baz=118
P18A Preston Nutter 118.48 299 P PKPdf 02 58 48.0 +0.1
baz=119
BC3 Big Chuckawall 118.52 291 P PKPdf 02 58 48.1 +0.2
baz=119
IRM Iron Mountain 118.60 291 P PKPdf 02 58 48.0 +0.1
baz=119
L20A Wamsutter 118.62 302 P PKPdf 02 58 48.4 +0.4
baz=119
PDAR Pinedale Array 119.79 302 PKP PKPdf 02 58 48.9 -1.3
PDAR Pinedale Array 119.79 302 PKP PKPdf 02 58 48.9 -1.3
comp=Z,0.6nm,0.8s,baz=115,slow=6.7,SNR=4.7
CMAR Chiang Mai Arr 120.52 93 PKP PKPdf 02 58 51.4 -0.6
CMAR Chiang Mai Arr 120.52 93 PKP PKPdf 02 58 51.4 -0.6
comp=Z,0.6nm,0.3s,baz=238,slow=3.9,SNR=6.8
L16A Fish Haven 120.55 301 P PKPdf 02 58 51.2 -0.4
baz=121
J17A Brown Place, J 120.82 302 P PKPdf 02 58 52.2 +0.1
baz=121
EDW2 Edwards Air Fo 120.94 290 P PKPdf 02 58 52.5 +0.1
baz=121
R11A Troy Canyon, C 121.23 295 P PKPdf 02 58 52.1 -1.0
baz=121
BRVK Borovoye 121.26 45⇑ iPKIKP PKPdf 02 58 52.3 0.0
BRVK MLR MLR
comp=Z,108nm,22.0s
C20A Veseth Ranch, 121.51 308 P PKPdf 02 58 53.3 +0.3
baz=122
F18A Big Timber 121.57 305 P PKPdf 02 58 53.1 -0.2
baz=122
D19A Cripps Ranch, 121.73 307 P PKPdf 02 58 53.4 -0.1
baz=122
J15A Blackfoot 121.91 301 P PKPdf 02 58 54.1 0.0
baz=122
FFC Flin Flon 121.92 317 i PKIKP PKPdf 02 58 55.3 +1.8
E18A Harlowton 122.03 306 P PKPdf 02 58 54.5 +0.3
baz=122
C19A Slack Wire Ran 122.12 307 P PKPdf 02 58 54.4 +0.1
baz=122
ELK Elko 122.29 297 ePKPdf PKPdf 02 58 55.6 +0.6
B19A Brinkman Farms 122.43 308 P PKPdf 02 58 55.9 +1.1
baz=123
A19A Klindworth Far 122.56 309 P PKPdf 02 58 55.5 +0.4
baz=123
EGMT Eagleton 122.68 307 P PKPdf 02 58 55.7 +0.3
baz=123
D17A Six Diamond Ra 122.78 306 P PKPdf 02 58 55.5 -0.1
baz=123
I14A Mackay 122.81 302 P PKPdf 02 58 55.3 -0.5
baz=123
B18A Beardsley Farm 122.88 308 P PKPdf 02 58 55.3 -0.4
baz=123
C17A Wharram Farm, 123.07 306 P PKPdf 02 58 56.2 +0.1
baz=123
NVAR Mina Array Bea 123.08 294 PKP PKPdf 02 58 57.2 +0.6
NVAR Mina Array Bea 123.08 294 PKP PKPdf 02 58 57.2 +0.6
comp=Z,0.7nm,0.7s,baz=132,slow=2.7,SNR=5.1
D16A Dana Ranch, Ca 123.23 306 P PKPdf 02 58 56.4 -0.1
baz=123
B17A L&G Farms, Che 123.42 307 P PKPdf 02 58 56.9 +0.1
baz=124
H13A Challis 123.63 302 P PKPdf 02 58 57.8 +0.4
baz=124
C16A Fuhringer Ranc 123.73 306 P PKPdf 02 58 57.2 -0.2
baz=124
F13A Darby 124.29 303 P PKPdf 02 58 58.5 -0.1
baz=124
E13A Victor 124.52 304 P PKPdf 02 58 59.0 +0.1
baz=125
MSO Missoula 124.56 304 P PKPdf 02 58 59.0 0.0
baz=125
KURK Kurchatov 124.56 50⇓ iPKIKP PKPdf 02 58 58.5 -0.2
KURK MLR MLR
comp=Z,118nm,19.0s
KURK Kurchatov 124.56 50 ePKPdf PKPdf 02 58 58.9 +0.1
G12A Big Creek, Yel 124.58 302 P PKPdf 02 58 58.9 -0.3
baz=125
MKAR Makanchi Array 124.82 56 PKIKP PKPdf 02 58 59.0 -0.4
MKAR Makanchi Array 124.82 56 PKP PKPdf 02 58 59.0 -0.4
MKAR Makanchi Array 124.82 56 PKP PKPdf 02 58 59.0 -0.4
comp=Z,1.5nm,0.9s,baz=251,slow=3.3,SNR=9.3
A15A Johnson Ranch, 124.87 307 P PKPdf 02 58 59.4 -0.2
baz=125
C14A Swan Lake 124.89 305 P PKPdf 02 58 58.5 -1.1
baz=125
D13A Huson 125.00 304 P PKPdf 02 58 59.6 -0.2
baz=125
A14A Double T Ranch 125.27 307 P PKPdf 02 58 59.8 -0.5
baz=126
C13A Hot Springs 125.34 305 P PKPdf 02 58 58.5 -2.0
baz=126
D12A Red Ives Fores 125.52 304 P PKPdf 02 59 00.4 -0.5
baz=126
A13A Flathead Natio 125.83 306 P PKPdf 02 59 01.1 -0.3
baz=126
C12B Naegeli Ranch, 125.90 305 P PKPdf 02 59 01.0 -0.5
baz=126
ZALV Zalesovo Beam 129.38 49 PKIKP PKPdf 02 59 07.0 -0.8
ZALV Zalesovo Beam 129.38 49 PKP PKPdf 02 59 07.0 -0.8
ZALV Zalesovo Beam 129.38 49 PKP PKPdf 02 59 07.0 -0.8
comp=Z,0.3nm,0.3s,baz=278,slow=4.2,SNR=4.2
GYA Guiyang 131.04 91 ePdif Pdif 02 56 03.4 -0.1
GYA PKP PKPdf 02 59 11.8 -0.3
GYA PP PP 03 01 34.2 +4.8
GYA PKS PKSdf 03 02 47.0 -1.7
GYA SKKS 03 08 23.7
GYA SS SS 03 19 02.0 +1.1
GYA AMB AMB
comp=Z,110nm,7.8s
GYA LR LR
comp=N,110nm,22.6s
GYA LR LR
comp=E,90nm,23.7s
YKA Yellowknife Ar 131.13 322 PKP PKPdf 02 59 10.6 -0.3
YKA Yellowknife Ar 131.13 322 PKP PKPdf 02 59 10.6 -0.3
comp=E,3.2nm,0.9s,baz=105,slow=2.0,SNR=28
YKW3 Yellowknife Ar 131.16 323 ePKPdf PKPdf 02 59 10.7 -0.2
CD2 Chengdu 131.42 84 PKP PKPdf 02 59 13.0 +0.4
CD2 PP PP 03 01 36.5 +4.8
CD2 PKS PKSdf 03 02 47.9 -1.2
CD2 SKS SKSdf 03 06 21.8 -2.2
CD2 SKKS SKKSac 03 08 26.3 -1.5
CD2 SS SS 03 19 07.4 +1.9
CD2 AMB AMB
comp=Z,120nm,7.8s
GTA Gaotai 132.82 72 ePKP PKPdf 02 59 16.1 +1.1
LZH Lanzhou 134.12 78 ePKP PKPdf 02 59 16.0 -1.6
LZH sPKP 02 59 23.5
SONM Songino Array 140.35 63 PKP PKPdf 02 59 28.8 +0.1
SONM Songino Array 140.35 63 PKP PKPdf 02 59 28.8 +0.1
comp=Z,2.5nm,0.9s,baz=264,slow=2.2,SNR=14
HHC Hu-ho-hao-te 141.62 75⇑ iPKP PKPdf 02 59 28.1 -3.1
HHC PP PP 03 02 35.8 +0.1
HHC PKS PKSdf 03 03 02.4 -4.7
HHC SKS SKSdf 03 06 36.5 -4.7
HHC SKKS SKKSac 03 09 25.8 -2.7
HHC SS SS 03 21 06.0 -1.1
HHC AMB AMB
comp=Z,180nm,6.0s
HHC LR LR
comp=N,310nm,20.0s
HHC LR LR
comp=E,450nm,21.9s
HHC LR LR
comp=Z,170nm,21.4s
EGAK Eagle 143.04 324 ePKPdf PKPbc 02 59 29.2 -0.5
DOT Dot Lake 144.47 323 ePKPdf PKPbc 02 59 34.2 +0.2
BJI Beijing 144.59 79 PKP PKPbc 02 59 35.5 +0.5
BMRM Bremner River 145.09 318 ePKPdf PKPbc 02 59 36.0 -0.1
PAX Paxson 145.21 322 ePKIKP PKPbc 02 59 36.6 +0.1
PAX Paxson 145.21 322 ePKPdf PKPbc 02 59 36.6 +0.1
ILAR Eielson Array 145.46 325 PKPbc PKPdf 02 59 36.9 -0.2
ILAR Eielson Array 145.46 325 PKPbc PKPdf 02 59 36.9 -0.2
comp=Z,17nm,0.9s,baz=94,slow=1.6,SNR=118
DIV Divide 145.63 319 ePKPdf PKPbc 02 59 38.0 +0.2
COLA College 145.83 325 ePKP2 PKPdf 02 59 37.7 +0.1
COLA College 145.83 325 ePKPdf PKPdf 02 59 37.7 +0.1
COLD Coldfoot 146.01 330 ePKPbc PKPab 02 59 39.3 0.0
MCK McKinley 146.58 324 ePKP2 PKPbc 02 59 40.0 -0.6
MCK McKinley 146.58 324 ePKPbc PKPbc 02 59 40.0 -0.6
PMR Palmer 147.15 320 ePKP2 PKPbc 02 59 41.7 -0.5
PMR Palmer 147.15 320 ePKPbc PKPbc 02 59 41.7 -0.5
TRF Thorofare Moun 147.24 323 ePKPbc PKPbc 02 59 41.7 -0.9
PPLA Purkeypile 148.22 323 ePKPdf PKPdf 02 59 41.7 -0.2
PPLA ePKPbc PKPbc 02 59 45.2 -0.1
KSAR Wonju Array Be 152.06 90 PKP PKPdf 02 59 48.9 +0.3
KSAR PKPbc PKPbc 02 59 53.8 -1.3
KSAR PKPab PKPab 03 00 02.1 -2.6
KSRS Korea Array 152.10 90 PKP PKPdf 02 59 48.9 +0.3
comp=Z,0.4nm,0.3s,baz=239,slow=6.6,SNR=4.8
KSRS PKPbc PKPbc 02 59 53.8 -1.4
comp=Z,2.0nm,0.8s,baz=269,slow=3.5,SNR=11
KSRS PKPab PKPab 03 00 02.1 -2.7
comp=Z,3.2nm,1.0s,baz=243,slow=3.0,SNR=9.1
CN2 Changchun 152.31 76 ePKPbc PKPdf 02 59 52.0 +3.3
TNA Tin City 152.97 334 ePKPbc PKPbc 02 59 56.6 +0.3
BILL Bilibino 155.38 358⇑ iPKIKP PKPdf 02 59 51.5 -0.8
BILL i 02 59 58.2
BILL pmax pmax
comp=Z,32nm,1.2s
MDJ Mudanjiang 155.39 75 PKP PKPdf 02 59 51.9 -1.2
MDJ PP PP 03 03 53.7 -2.1
MDJ AMB AMB
comp=Z,61nm,7.9s
MJAR Matsushiro Arr 159.15 101 PKP PKPdf 02 59 58.9 +0.7
MJAR PKPab PKPab 03 00 34.9 -0.2
MJAR Matsushiro Arr 159.15 101 PKP PKPdf 02 59 58.9 +0.7
comp=Z,1.8nm,1.1s,baz=240,slow=1.0,SNR=4.0
MJAR PKPab PKPab 03 00 34.9 -0.2
comp=Z,1.3nm,0.9s,baz=212,slow=4.3,SNR=3.5

*ISCJB **05** 03:13:27.4±0.6, 50°.30N±0°.04×18°.74E±0°.03, h0km, Error ellipse: s-maj=6.3km s-min=3.0km az=7.7*
*CSEM **05** 03:13:28.0±0.3, 50°.33N×18°.74E, h2km, ML2.5/10, Error ellipse: s-maj=8.1km s-min=3.8km az=179.0*
*IPEC **05** 03:13:28.3±0.2, 50°.31N×18°.80E, h0km, ML1.7/3, Error ellipse: s-maj=2.4km s-min=1.1km az=168.0*
*PRU **05** 03:13:29.0, 50°.26N×18°.76E, h0km*
ISC 05 03:13:28.5±0.9, 50°.26N±0°.04×18°.76E±0°.02, h0km, n23, σ0$62/40, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.57	223	ePG	Pb	03 13 40.6	-0.8
OKC				eSG	Sg	03 13 47.3	+0.4
comp=Z,13nm,0.4s							
OKC	Ostrava-Krasne	0.57	223	Pg	Pb	03 13 40.6	-0.8
OKC				Sg	Sg	03 13 47.3	+0.4
13nm,0.4s							
OJC	Ojcow	0.67	93	ePg	Pg	03 13 41.3	0.0
OJC				eSg	Sg	03 13 49.9	-0.1
OJC	Ojcow	0.67	93	ePg	Pg	03 13 41.3	0.0
OJC				eSg	Sg	03 13 49.9	-0.1
MORC	Moravsky Berou	0.92	239	ePg	Pg	03 13 46.7	+0.6
baz=56							
MORC				eSg	Sg	03 13 59.0	+1.0
12nm,0.3s,baz=56							
KRLC	Kraliky	1.28	263	ePG	Pg	03 13 52.5	-0.6
KRLC				eSG	Sb	03 14 10.5	-0.1
KRLC	Kraliky	1.28	263	Pg	Pg	03 13 52.5	-0.6
KRLC				Sg	Sb	03 14 10.5	-0.1
NIE	Niedzica	1.31	129	ePg	Pg	03 13 53.7	+0.1
NIE				eSg	Sb	03 14 11.6	+0.3
DPC	Dobruska-Polom	1.56	274	ePG	Pn	03 13 57.4	-0.2
DPC				eSG	Sg	03 14 19.1	+0.4
comp=Z,4.0nm,0.3s							
DPC	Dobruska-Polom	1.56	274	Pg	Pn	03 13 57.4	-0.2
DPC				Sg	Sg	03 14 19.1	+0.4
4.0nm,0.3s							
KSP	Ksiaz	1.68	291	ePg	Pg	03 14 00.7	+0.1
KSP				eSg	Sg	03 14 24.4	+2.0
VRAC	Vranov	1.69	237	ePn	Pn	03 13 59.9	+0.6
VRAC				eSg	Sg	03 14 23.0	+0.2
8.8nm,0.4s,baz=54							
UPC	Upice	1.77	279	ePG	Pb	03 14 01.3	-0.6
UPC				eSG	Sg	03 14 26.1	+0.6
comp=Z,1.7nm,0.5s							
UPC	Upice	1.77	279	Pg	Pb	03 14 01.3	-0.6
UPC				Sg	Sg	03 14 26.1	+0.6
1.7nm,0.5s							
KRUC	Moravsky	1.94	233	ePn	Pn	03 14 03.5	+0.7
baz=50							
KRUC				eSn	Sb	03 14 29.9	+0.3
3.2nm,0.2s,baz=50							
TREC	Trest	2.33	247	ePG	Pb	03 14 11.2	-0.1
TREC				eSG	Sg	03 14 43.1	-0.1
comp=Z,2.9nm,0.4s							
TREC	Trest	2.33	247	Pg	Pb	03 14 11.2	-0.1
TREC				Sg	Sg	03 14 43.1	-0.1
2.9nm,0.4s							
PVCC	Panska Ves	2.69	277	eSG	Sg	03 14 55.4	+0.4
comp=Z,4.8nm,0.4s							
PVCC	Panska Ves	2.69	277	Sg	Sg	03 14 55.4	+0.4
4.8nm,0.4s							
PRU	Pruhonice	2.73	266	eSG	Sg	03 14 55.5	-0.5
comp=Z,2.0nm,0.4s							
PRU	Pruhonice	2.73	266	Sg	Sg	03 14 55.5	-0.5
2.0nm,0.4s							
KHC	Kasperske Hory	3.55	253	eSG	Sg	03 15 21.2	-1.1
comp=Z,2.4nm,0.5s							
KHC	Kasperske Hory	3.55	253	Sg	Sg	03 15 21.2	-1.1
2.4nm,0.5s							

*AUST **05** 03:19:59.0±3.1, 17°.55S×172°.32W, h21km, Error ellipse: s-maj=2.6km s-min=1.1km az=18.0*
*IDC **05** 03:19:59.5±0.6, 17°.77S×173°.15W, h0km, mb4.5/17, mb1 4.7/18, mb1mx4.6/23, mbtmp4.5/18, ML3.2/1, MS4.4/16, Ms1 4.4/16, ms1mx4.3/25, Error ellipse: s-maj=22.1km s-min=12.5km az=147.0*
*ISCJB **05** 03:20:03.9±0.3, 17°.65S±0°.06×173°.27W±0°.06, h36km, mb4.9/68, MS4.5/24, Error ellipse: s-maj=11.2km s-min=6.0km az=136.7*
*SZGRF **05** 03:20:05.8, 17°.53S×171°.56W, h33km, Tonga Islands region*
*NEIC **05** 03:20:05.4±0.3, 17°.66S×173°.24W, h35km, mb4.9/33, Error ellipse: s-maj=13.9km s-min=6.5km az=136.0*
*GCMT **05** 03:20:06.7±0.4, 17°.80S×172°.35W, h23km±1km, MW5.0, Moment Tensor Solution. s24,c29; s57,c76; Moment tensor: Scale 10^16^Nm; Mrr3.03±.21; Mθθ-0.45±.14; Mφφ-2.59±.14; Mrθ0.94±.24; Mrφ-0.93±.11; Mθφ1.47±.18; Best double couple: M0 3.50000×10^16^ NP1:φs 195.00000°, δ30.00000°, λ80.00000°. NP2:φs 26.00000°, δ60.00000°, λ96.00000°. Principal axes: T 3.5200, Plg74.0000°, Azm311.0000°; N -0.1300, Plg5.0000°, Azm203.0000°; P -3.3900, Plg15.0000°, Azm112.0000°; Data Used: II IU IC CN G.*
*BJI **05** 03:20:07.7, 17°.54S×174°.13W, h35km, mB5.3/16, mb5.0/25, Ms5.1/14, Ms7 4.8/13*

*MOS **05** 03:20:08.6±1.9, 16°.66S×173°.96W, h33km, mb5.1/14, Error ellipse: s-maj=13.8km s-min=10.9km az=78.9*
ISC 05 03:20:05.6±0.5, 17°.60S±0°.07×173°.18W±0°.08, h34km±1km, h33km:pP-P,n256,σ1$46/248, mb4.9/68, MS4.5/24, 28C-5D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	3.42	116	P	Pn	03 20 43.1	-13
baz=2.7,SNR=47							
NIUE				S	Sn	03 21 14.2	-22
baz=2.7,SNR=4.5							
AFI	Afiamalu	3.91	20	ePn	Pn	03 20 59.5	-3.8
AFI				eS	Sn	03 21 45.1	-2.9
AFI	Afiamalu	3.91	20	Pn	Pn	03 20 54.8	-8.5
9.7nm,0.3s,baz=79,slow=16,SNR=6.6							
AFI				Sn	Sn	03 21 36.9	-11
59nm,0.3s,baz=168,slow=20,SNR=8.5							
AFI				LR	LR	03 22 11.4	
comp=Z,2μm,18.7s,baz=176,slow=32							
MSVF	Nonsavu	8.36	268	eP	Pn	03 22 12.9	+8.5
MSVF				pmax	pmax		
comp=Z,143nm,1.0s							
MSVF	Nonsavu	8.36	268	ePn	Pn	03 22 12.9	+8.5
comp=Z,143nm,1.0s							
RAR	Rarotonga	13.15	108	LR	LR	03 27 07.4	
comp=Z,1μm,20.5s,baz=283,slow=33							
DZM	Mont Dzumac	19.67	254	eLR	LR	03 29 19.4	
comp=Z,631nm,22.1s							
DZM	Mont Dzumac	19.67	254	P	P	03 24 29.7	-2.2
DZM	Mont Dzumac	19.67	254	P	P	03 24 29.7	-2.2
comp=Z,0.1nm,0.3s,baz=110,slow=16,SNR=2.5							
OUZ	Omahuta	21.13	211	ePn	P	03 24 47.7	+0.2
comp=Z,46nm,1.1s							
URZ	Urewera	22.27	200	eP	P	03 24 58.0	-1.7
comp=Z,103nm,0.9s							
URZ	Urewera	22.27	200	P	P	03 24 57.7	-1.9
comp=Z,81nm,0.8s,baz=31,slow=5.6,SNR=26							
URZ				S	S	03 28 56.4	-6.4
comp=Z,3.6nm,0.7s,baz=202,slow=18,SNR=1.3							
PPT2	Papeete2	22.50	94	eLQ	LQ	03 29 06.5	
comp=Z,705nm,24.2s							
PPT2				eLR	LR	03 30 25.6	
comp=Z,557nm,20.8s							
PPT	Papeete	22.50	94	LR	LR	03 32 11.2	
comp=Z,943nm,19.3s,baz=259,slow=33							
TBI	Tubuai	22.93	108	eLQ	LQ	03 29 24.5	
comp=Z,556nm,24.5s							
TBI				eLR	LR	03 30 24.4	
comp=Z,890nm,27.2s,baz=286							
LHI	Lord Howe Isla	28.70	236	S	S	03 30 51.2	+4.8
baz=29,SNR=3.2							
RPZ	Rata Peaks	29.25	204	eP	P	03 26 04.5	+0.2
comp=Z,99nm,1.4s							
RPZ	Rata Peaks	29.25	204	P	P	03 26 08.6	+4.3
comp=Z,25nm,0.8s,baz=48,slow=12,SNR=7.5							
RKT	Rikitea	36.17	105	eLR	LR	03 36 27.9	
comp=Z,499nm,28.8s,baz=276							
CTA	Charters Tower	38.40	260	P	P	03 27 22.2	-1.9
CTA	Charters Tower	38.40	260	P	P	03 27 22.2	-1.9
comp=Z,9.0nm,0.7s,baz=58,slow=8.6,SNR=5.2							
QLP	Quilpie	40.30	250	P	P	03 27 38.4	-1.4
baz=41,SNR=4.1							
STKA	Stephens Creek	43.16	242	eP	P	03 28 01.8	-1.3
STKA	Stephens Creek	43.16	242	P	P	03 28 01.6	-1.5
comp=Z,7.1nm,0.9s,baz=50,slow=7.2,SNR=13							
STKA				LR	LR	03 45 15.2	
comp=Z,641nm,18.8s,baz=34,slow=35							
STKA	Stephens Creek	43.16	242	P	P	03 28 02.6	-0.5
baz=44,SNR=7.7							
BBOO	Buckleboo	47.92	241	eP	P	03 28 39.2	-1.6
comp=Z,202nm,0.8s							
BBOO	Buckleboo	47.92	241	P	P	03 28 39.3	-1.5
baz=49,SNR=19							
WRAB	Tennant Creek	49.57	259	eP	P	03 28 51.5	-2.2
WRAB				pmax	pmax		
comp=Z,21nm,1.1s							
WRAB	Tennant Creek	49.57	259	eP	P	03 28 51.5	-2.2
comp=Z,21nm,1.1s							
WRA	Warramunga Arr	49.58	259	P	P	03 28 51.7	-2.1
WRA	Warramunga Arr	49.58	259	P	P	03 28 51.7	-2.1
comp=Z,7.1nm,0.7s,baz=95,slow=7.3,SNR=33							
WRA				S	S	03 36 04.1	+4.2
comp=Z,0.8nm,1.0s,baz=19,slow=24,SNR=1.3							
AS31	Alice Springs	49.66	254	eP	P	03 28 53.1	-1.2
ASAR	Alice Springs	49.66	254	P	P	03 28 53.4	-1.0
ASAR	Alice Springs	49.66	254	P	P	03 28 53.4	-1.0
comp=Z,34nm,0.7s,baz=88,slow=8.4,SNR=225							
ASAR				S	S	03 36 00.4	-0.6
comp=Z,1.3nm,0.8s,baz=94,slow=15,SNR=7.9							
KDU	Kakadu	52.54	267	P	P	03 29 08.2	-7.8
baz=53,SNR=3.0							
FITZ	Fitzroy Crossi	57.98	259	P	P	03 29 55.5	+0.2
baz=59,SNR=3.5							
SBA	Scott Base	61.09	185	eP	P	03 30 16.7	+1.0
SBA				pmax	pmax		
comp=Z,135nm,2.6s							
SBA	Scott Base	61.09	185	eP	P	03 30 16.7	+1.0
comp=Z,135nm,2.6s							
VNDA	Vanda	61.22	186	P	P	03 30 16.1	-0.5
VNDA	Vanda	61.22	186	P	P	03 30 16.1	-0.5
comp=Z,2.0nm,0.8s,baz=357,slow=6.9,SNR=5.9							
VNDA				LR	LR	03 53 37.4	
comp=Z,259nm,18.7s,baz=309,slow=33							
MEEK	Meekatharra	63.19	249	P	P	03 30 30.0	-0.7
baz=54,SNR=4.2							
MORW	Morawa	65.15	246	P	P	03 30 43.9	+0.4
baz=66,SNR=4.2							
MJAR	Matsushiro Arr	70.75	320	P	P	03 31 19.1	+0.7
MJAR	Matsushiro Arr	70.75	320	P	P	03 31 19.1	+0.7
comp=Z,5.5nm,1.0s,baz=166,slow=6.3,SNR=12							
MJAR				LR	LR	03 56 23.4	
comp=Z,130nm,20.2s,baz=120,slow=31							
MAT	Matsushiro	70.75	320	P	P	03 31 18.8	+0.4
MAT				S	S	03 40 41.0	+10
FX1	Attu Island--F	71.18	351	eP	P	03 31 19.9	-0.7
ERM	Erimo	71.71	327⇓	eP	P	03 31 19.9	-4.2
ERM				pmax	pmax		
comp=Z,20nm,1.2s							
YUK	Yuzh-Kuril'sk	71.86	330	di	P	03 31 25.2	+0.3
YUK				i		03 33 54.6	
YUK				i	PPP	03 35 39.7	
YUK				pmax	pmax		
comp=N,176nm,1.6s							
YUK				pmax	pmax		
comp=Z,350nm,1.6s							
YUK				pmax	pmax		
comp=E,214nm,1.6s							
YUK				pmax	pmax		
comp=Z,207nm,1.7s							
CMB	Columbia Colle	74.28	41	eP	P	03 31 40.3	+0.9
CMB				pmax	pmax		
comp=Z,11nm,1.4s							
CMB	Columbia Colle	74.28	41	eP	P	03 31 40.3	+0.9
comp=Z,11nm,1.4s							
PET	Petropavlovsk	74.43	343	eP	P	03 31 45.9	+6.0
PET				pmax	pmax		
comp=Z,100nm,12.8s							
PET				MLR	MLR		
comp=Z,200nm,20.0s							
PETK	Petropavlovsk-	74.78	342	P	P	03 31 42.5	+0.6
PETK	Petropavlovsk-	74.78	342	P	P	03 31 42.5	+0.6
PETK	Petropavlovsk-	74.78	342	P	P	03 31 42.5	+0.6
comp=Z,7.4nm,1.1s,baz=155,slow=11,SNR=4.1							
YSS	Yuzh-Sakhalins	75.49	331	eP	P	03 31 43.0	-3.1
YSS				e		03 31 59.5	
NVAR	Mina Array Bea	75.82	41	P	P	03 31 47.4	-1.2
NVAR	Mina Array Bea	75.82	41	P	P	03 31 47.4	-1.2
comp=Z,1.7nm,0.7s,baz=229,slow=9.4,SNR=9.7							
KSM	Kuching	77.60	276	eP	P	03 32 00.2	+1.3
comp=Z,88nm,1.4s							
KSM	Kuching	77.60	276	P	P	03 32 01.4	+2.5
baz=78,SNR=5.8							
TUC	Tucson	77.62	50	eP	P	03 31 57.1	-1.6
TUC				pmax	pmax		
comp=Z,12nm,2.6s							
TUC	Tucson	77.62	50	eP	P	03 31 57.1	-1.6
comp=Z,12nm,2.6s							
KSRS	Korea Array	77.87	316	P	P	03 32 02.1	+2.3
comp=Z,10nm,1.1s,baz=132,slow=6.3,SNR=33							
KSRS				LR	LR	04 02 05.4	
comp=Z,92nm,18.6s,baz=90,slow=32							
KSAR	Wonju Array Be	77.89	316	P	P	03 32 02.1	+2.2
CCUT	Cedar City	78.54	45	eP	P	03 32 04.6	+0.7
comp=Z,6.8nm,1.3s							
VLA	Vladivostok	78.66	322⇑	eP	P	03 32 01.9	-2.2
VLA				pmax	pmax		

comp=Z,24nm,0.6s
ELK Elko 79.09 41 *e*P **P** **03 32 08.6 +1.7**
comp=Z,8.7nm,1.3s
USRK Ussuriysk Arra 79.25 323 P **P** **03 32 08.3 +1.0**
comp=Z,1.4nm,0.8s,baz=90,slow=5.7,SNR=4.9
USRK LR LR 04 01 32.2
comp=Z,190nm,19.2s,baz=188,slow=31
MVU Marysvale 79.82 44 *e*P **P** **03 32 11.3 +0.5**
comp=Z,9.8nm,1.4s
MSU Marysvale 79.84 44 *e*P **P** **03 32 12.2 +1.2**
MSU pmax pmax
comp=Z,8.0nm,1.2s
MSU Marysvale 79.84 44 *e*P **P** **03 32 12.2 +1.2**
comp=Z,8.1nm,1.2s
HABR Khabarovsk 80.30 328 *e*P **P** **03 32 12.1 -0.8**
HABR *e* 03 32 17.9
HABR *e**SP **sP** **03 32 25.2 -2.4**
HABR *e* 03 35 13.2
HABR *e*S **S** **03 42 14.6 -1.3**
HABR *e* 03 42 27.3
HABR pmax pmax
comp=Z,55nm,2.1s
HABR pmax pmax
comp=N,53nm,3.1s
HABR pmax pmax
comp=E,65nm,2.1s
HABR MLR MLR
comp=Z,80nm,17.0s
MDJ Mudanjiang 80.89 323 P **P** **03 32 17.2 +1.1**
MDJ pP **pP** **03 32 26.6 -0.4**
MDJ sP **sP** **03 32 30.6 -0.3**
MDJ PP **PP** **03 35 21.0 -0.1**
MDJ pmax pmax
comp=Z,8.0nm,2.0s
MDJ pmax pmax
comp=Z,120nm,9.7s
MDJ LR LR
comp=N,47nm,25.7s
MDJ LR LR
comp=E,95nm,21.8s
MDJ LR LR
comp=Z,100nm,20.3s
HLID Hailey 81.19 39 *e*P **P** **03 32 18.9 +0.8**
comp=Z,40nm,2.3s
PMR Palmer 81.22 11 *e*P **P** **03 32 16.5 -1.0**
PMR pmax pmax
comp=Z,87nm,2.2s
PMR Palmer 81.22 11 *e*P **P** **03 32 16.5 -1.0**
comp=Z,87nm,2.2s
JLU Jordanelle 81.42 43 *e*P **P** **03 32 19.3 -0.2**
comp=Z,14nm,1.6s
BMRM Bremner River 81.59 14 *e*P **P** **03 32 19.6 0.0**
comp=Z,12nm,1.0s
NJ2 Nanjing 81.65 307 *e*P **P** **03 32 19.6 -0.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
TXAR Lajitas Array 81.67 56 P **P** **03 32 19.5 -1.3**
TXAR Lajitas Array 81.67 56 P **P** **03 32 19.5 -1.3**
comp=Z,1.6nm,0.9s,baz=222,slow=6.7,SNR=6.6
TXAR LR LR 04 03 44.6
comp=Z,145nm,18.1s,baz=185,slow=32
ANMO Albuquerque 82.05 50 *e*P **P** **03 32 21.5 -1.3**
comp=Z,8.4nm,1.2s
PV01 Paradox Valley 82.09 46 *e*P **P** **03 32 23.2 +0.2**
comp=Z,1µm,1.3s
KLR Kul'dur 82.47 327 *e*P **P** **03 32 21.8 -2.6**
TRF Thorofare Moun 82.74 10 *e*P **P** **03 32 23.1 -2.6**
comp=Z,17nm,1.1s
MCMT McKenzie Canyo 82.83 39 *e*P **P** **03 32 26.2 -0.5**
comp=Z,5.0nm,1.2s
MCMT *e* 03 32 38.8
CN2 Changchun 82.90 320 *e*P **P** **03 32 28.5 +1.8**
CN2 *es*P **sP** **03 32 43.0 +1.5**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,500nm,22.0s
CN2 LR LR
comp=E,300nm,22.0s
CN2 LR LR
comp=Z,200nm,23.0s
TNA Tin City 83.00 2 *e*P **P** **03 32 26.2 -0.5**
comp=Z,13nm,1.2s
MCK McKinley 83.23 11 *e*P **P** **03 32 27.1 -1.0**
MCK pmax pmax
comp=Z,13nm,1.0s
MCK McKinley 83.23 11 *e*P **P** **03 32 27.1 -1.0**
comp=Z,13nm,1.0s
TPAW Teton Pass 83.26 40 *e*P **P** **03 32 29.7 +0.7**
comp=Z,11nm,1.1s
SNOW Snow King Moun 83.37 41 *e*P **P** **03 32 30.8 +1.3**
comp=Z,10nm,1.0s
BSMT Bassoo Peak 83.42 35 *e*P **P** **03 32 30.5 +0.8**
IMW Indian Meadow 83.48 40 *e*P **P** **03 32 31.4 +1.3**
comp=Z,12nm,1.1s
MOOW Moose Ponds 83.53 40 *e*P P 03 32 34.8 +4.5
comp=Z,13nm,1.4s
LOHW Long Hollow 83.54 40 *e*P **P** **03 32 30.5 +0.1**
comp=Z,14nm,1.4s
SWMT Swartz Lake 83.67 36 *e*P **P** **03 32 29.3 -1.5**
SMCO Snowmass 83.69 46 *e*P **P** **03 32 30.2 -1.2**
comp=Z,14nm,1.2s
CHMT Chamberlain Mo 83.75 37 *e*P **P** **03 32 32.5 +1.1**
BW06 Boulder Array 83.76 42 *e*P **P** **03 32 31.6 +0.1**
comp=Z,8.1nm,1.1s
PDAR Pinedale Array 83.76 42 P **P** **03 32 30.1 -1.4**
PDAR Pinedale Array 83.76 42 P **P** **03 32 30.1 -1.4**
comp=Z,2.3nm,0.9s,baz=208,slow=3.5,SNR=8.6
PDAR LR LR 04 05 15.3
comp=Z,181nm,18.4s,baz=148,slow=32
QIZ Qiongzhong 83.92 292 P P 03 32 29.2 -3.3
QIZ S **S** **03 42 51.2 -3.1**
QIZ LR LR
comp=Z,200nm,8.5s
SDCO Great Sand Dun 84.03 48 *e*P P 03 32 37.0 +3.9
comp=Z,6.5nm,1.3s
DOT Dot Lake 84.09 13 *e*P **P** **03 32 32.2 -0.3**
comp=Z,25nm,1.1s
LKWY Lake 84.17 40 *e*P P 03 32 37.1 +3.5
LKWY pmax pmax
comp=Z,15nm,1.1s
LKWY Lake 84.17 40 *e*P P 03 32 37.1 +3.5
comp=Z,15nm,1.1s
HRY Holter Researc 84.46 37 *e*P **P** **03 32 34.4 -0.4**
COLA College 84.47 11 *e*P **P** **03 32 33.2 -1.1**
COLA pmax pmax
comp=Z,19nm,0.9s
COLA College 84.47 11 *e*P **P** **03 32 33.2 -1.1**
comp=Z,18nm,0.9s
ILAR Eielson Array 84.55 11 P **P** **03 32 33.5 -1.2**
ILAR Eielson Array 84.55 11 P **P** **03 32 33.5 -1.2**
comp=Z,1.5nm,0.7s,baz=222,slow=5.3,SNR=23
ILAR LR LR 04 06 42.5
comp=Z,191nm,18.7s,baz=167,slow=33
WALA Waterton Lakes 84.59 35 *e*P **P** **03 32 36.3 +0.8**
SEY Seymchan 84.68 345‖ *e*P **P** **03 32 36.0 +0.6**
EGAK Eagle 85.70 13 *e*P **P** **03 32 40.4 0.0**
comp=Z,10nm,1.3s
MAW Mawson 85.79 199 LR LR 04 10 42.5
comp=Z,324nm,18.9s,baz=34,slow=36
BILL Bilibino 86.70 352α *i*P **P** **03 32 45.0 -0.4**
BILL *i* 03 32 58.5
BILL pmax pmax
comp=Z,12nm,1.2s
BILL MLR MLR
comp=Z,100nm,18.0s
BJI Beijing 87.12 314 P **P** **03 32 46.5 -1.5**
BJI PP **PP** **03 36 11.5 -0.7**
BJI S **S** **03 43 25.4 +0.3**
BJI pmax pmax
comp=Z,13nm,0.8s
BJI pmax pmax
comp=Z,230nm,3.2s
BJI LR LR
comp=N,150nm,23.0s
BJI LR LR
comp=E,140nm,21.5s
PLCA Paso Flores 87.89 132 LR LR 04 05 10.2
comp=E,380nm,18.6s,baz=185,slow=31
PSI Prapat 88.83 273 P **P** **03 32 56.8 -0.2**
PSI Prapat 88.83 273 P **P** **03 32 56.8 -0.2**
comp=E,13nm,0.9s,baz=163,slow=2.8,SNR=5.6
GYA Guiyang 89.25 298 *e*P **P** **03 32 58.7 0.0**
GYA pP **pP** **03 33 09.4 -0.2**
GYA sP **sP** **03 33 15.6 +2.1**
GYA PP **PP** **03 36 31.0 +1.2**
GYA SKS **SKSac** **03 43 23.5 -3.1**
GYA S **SKKSac** **03 43 42.8 +4.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,5.3s
GYA LR LR
comp=N,310nm,19.6s
GYA LR LR
comp=E,290nm,20.7s
GYA LR LR
comp=Z,320nm,18.8s
XAN Xi'an 90.08 306 P **P** **03 33 04.5 +2.2**
XAN pmax pmax
comp=Z,2.0nm,1.7s
CLNS Chul'man 90.25 331 *e*P P 03 33 13.0 +11
CLNS pmax pmax
comp=Z,10.0nm,0.9s
CLNS pmax pmax
comp=E,5.0nm,1.1s
CLNS pmax pmax
comp=N,6.0nm,1.1s
HHC Hu-ho-hao-te 90.67 313‖ *e*P P 03 33 00.6 -4.3
HHC pP pP 03 33 11.2 -4.7
HHC sP sP 03 33 15.1 -4.7
HHC PP PP 03 36 33.9 -6.8
HHC Hu-ho-hao-te 90.67 313 SKS SKSac 03 43 27.5 -6.6
HHC Hu-ho-hao-te 90.67 313 S S 03 43 51.9 -6.7
HHC Hu-ho-hao-te 90.67 313 sS sS 03 44 09.4 -7.4
HHC Hu-ho-hao-te 90.67 313 SS SS 03 49 55.9 -5.4
HHC pmax pmax
comp=Z,29nm,1.0s
HHC pmax pmax
comp=Z,210nm,4.5s
HHC LR LR
comp=N,120nm,20.2s
HHC LR LR
comp=E,420nm,20.8s
HHC LR LR
comp=Z,250nm,21.6s
SNAA Sanae 90.71 177 *e*P **P** **03 33 05.6 +1.0**
SNAA Sanae 90.71 177 *ep*P pP 03 33 15.3 -0.3
VNA2 Neumayer--Watz 91.16 175 *ep*P pP 03 33 16.0 -1.5
YKA Yellowknife Ar 92.02 23 P **P** **03 33 09.6 -1.0**
YKA Yellowknife Ar 92.02 23 P **P** **03 33 09.5 -1.0**
comp=Z,1.5nm,1.1s,baz=232,slow=4.2,SNR=6.9
KMI Kunming 92.16 296 P **P** **03 33 12.3 0.0**
KMI pmax pmax
comp=Z,9.0nm,0.6s
CD2 Chengdu 93.12 301 P **P** **03 33 16.2 -0.3**
CD2 pP **pP** **03 33 27.3 -0.1**
CD2 sP **sP** **03 33 31.4 +0.1**
CD2 PP **PP** **03 37 02.0 +1.7**
CD2 SKS **SKSac** **03 43 45.7 -2.6**
CD2 S **S** **03 44 17.0 -4.1**
CD2 sS **sS** **03 44 35.6 -3.7**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
CMAR Chiang Mai Arr 93.50 288 P **P** **03 33 20.1 +1.8**
CMAR Chiang Mai Arr 93.50 288 P **P** **03 33 20.1 +1.8**
comp=Z,1.8nm,0.7s,baz=93,slow=3.0,SNR=13
CMAR LR LR 04 13 50.9
comp=Z,100nm,18.5s,baz=276,slow=34
LZH Lanzhou 94.69 306 *e*P **P** **03 33 25.5 +1.8**
LZH pP **pP** **03 33 36.0 +1.4**
LZH sP **sP** **03 33 40.5 +1.9**
LZH pmax pmax
comp=Z,26nm,1.6s
LZH pmax pmax
comp=Z,70nm,4.5s
LZH LR LR
comp=N,120nm,11.4s
LZH LR LR
comp=E,220nm,15.6s
LZH LR LR
comp=Z,130nm,11.1s
ULM Lac du Bonnet 95.50 39 LR LR 04 14 47.4
comp=Z,375nm,18.0s,baz=350,slow=34
SONM Songino Array 96.61 318 PP PP 03 37 27.1 0.0
comp=Z,0.2nm,0.4s,baz=91,slow=8.6,SNR=2.7
TIXI Tiksi 97.16 344‖ *e*P **P** **03 33 33.4 -0.5**
TIXI pmax pmax
comp=Z,3.0nm,1.2s
LPAZ La Paz 98.87 110 LR LR 04 12 48.1
comp=Z,126nm,18.2s,baz=33,slow=32
KURK Kurchatov 114.92 318 PKIKP PKPdf 03 38 42.7 0.0
KURK Kurchatov 114.92 318 PKiKP PKPdf 03 38 42.7 +0.1
KURBB Kurchatov Arra 114.98 318 PKiKP PKPdf 03 38 42.7 0.0
comp=Z,0.7nm,0.9s,baz=102,slow=1.5,SNR=6.0
BVAR Borovoye Array 119.73 321 PKIKP **PKPdf** **03 38 52.1 +0.2**
BVAR Borovoye Array 119.73 321 PKP **PKPdf** **03 38 52.1 +0.2**
BVAR Borovoye Array 119.73 321 PKP **PKPdf** **03 38 52.1 +0.2**
comp=Z,1.2nm,0.8s,baz=101,slow=1.5,SNR=6.4
BRVK Borovoye 119.78 322α *i*PKIKP **PKPdf** **03 38 51.5 -0.5**
ARU Arti 125.30 328 PKIKP **PKPdf** **03 39 02.1 -0.4**
OBN Obninsk 136.19 336 *i* PKIKP **PKPdf** **03 39 27.0 +3.9**
OBN *e* 03 39 33.7
OBN *e* 03 39 43.4
VSU Vasula 136.63 345‖ *i*PKIKP **PKPdf** **03 39 25.4 +1.6**
KMBO Kilima Mbogo 144.72 241 *e*PKPdf PKPbc 03 39 39.5 +0.4
KMBO PKP **PKPdf** **03 39 40.4 +0.2**
KMBO Kilima Mbogo 144.72 241 PKP **PKPdf** **03 39 40.4 +0.2**
comp=Z,11nm,1.0s,baz=49,slow=3.0,SNR=12
LVV L'vov 144.99 340 *e*PKIKP **PKPab** **03 39 37.9 -0.6**
NRDL Niedersach Rie 145.08 356 *e*PKPbc **PKPbc** **03 39 38.4 -0.2**
KWP Kalwaria Pacla 145.56 342 *e*PKIKP **PKPab** **03 39 41.3 +0.7**
KWP Kalwaria Pacla 145.56 342 *e*PKPdf **PKPab** **03 39 41.3 +0.7**
KWP Kalwaria Pacla 145.56 342 *e*PKP **PKPab** **03 39 41.7 +1.1**
CLZ Clausthal 145.72 356 *e*PKIKP **PKPbc** **03 39 41.0 +0.2**
CLZ Clausthal 145.72 356 *e*PKPbc **PKPbc** **03 39 41.0 +0.2**
OJC Ojcow 145.82 345 *e*PKIKP **PKPbc** **03 39 41.3 +0.2**
OJC Ojcow 145.82 345 *e*PKP **PKPbc** **03 39 41.3 +0.2**
KSP Ksiaz 145.98 349 *e*PKIKP **PKPab** **03 39 42.3 +0.2**
KSP *e* 03 39 53.2
KSP Ksiaz 145.98 349 *e*PKP **PKPab** **03 39 43.0 +0.9**
CLL Collm 146.01 353‖ *i*PKIKP **PKPdf** **03 39 41.6 +0.8**
CLL *i* 03 39 48.6
CLL pmax pmax
comp=Z,44nm,1.2s
CLL Collm 146.01 353 *e*PKPbc **PKPbc** **03 39 41.7 +0.1**
CLL Collm 146.01 353‖ *i*PKPbc **PKPdf** **03 39 41.6 +0.8**
comp=Z,44nm,1.2s
CLL *i* 03 39 48.6
CLL *i* pPKPbc pPKPbc 03 39 53.2 +0.4
NEUB Neuenburg 146.24 354 *e*PKPbc **PKPbc** **03 39 42.7 +0.4**
BRG Berggiesshubel 146.32 352 *e*PKP **PKPbc** **03 39 43.0 +0.4**
comp=Z,42nm,1.5s
BRG
comp=N,161nm,17.7s
BRG
comp=E,84nm,17.7s
BRG
comp=Z,220nm,17.6s
BRG Berggiesshubel 146.32 352 *e*PKIKP **PKPbc** **03 39 43.0 +0.4**
BRG pmax pmax
comp=Z,42nm,1.5s
BRG MLR MLR
comp=N,161nm,17.7s
BRG MLR MLR
comp=E,84nm,17.7s
BRG MLR MLR
comp=Z,220nm,17.6s
BRG Berggiesshubel 146.32 352 *e*PKPbc **PKPbc** **03 39 43.0 +0.4**
KOLS Kolonicke sedl 146.32 342 *e*PKIKP **PKPab** **03 39 43.8 +0.3**
KOLS Kolonicke sedl 146.32 342 *e*PKP **PKPab** **03 39 43.8 +0.3**
FBE Freiberg 146.35 353 *e*PKPbc **PKPbc** **03 39 43.4 +0.7**
UPC Upice 146.35 349 *e*PKIKP **PKPab** **03 39 43.8 +0.3**
UPC *e* 03 39 54.9
UPC Upice 146.35 349 *e*PKP **PKPab** **03 39 43.8 +0.3**
UPC *ep*PKP **pPKPdf** **03 39 54.9 +2.2**
DPC Dobruska-Polom 146.45 349 *e*PKIKP **PKPab** **03 39 44.4 +0.4**
DPC *e* 03 39 54.9
DPC Dobruska-Polom 146.45 349 *e*PKP **PKPab** **03 39 44.4 +0.4**
DPC *ep*PKP **pPKPdf** **03 39 54.9 +1.9**
BUR08 Bucovina Ar. S 146.45 337 *e*PKPbc **PKPbc** **03 39 43.4 +0.2**
BURAR Bucovina Array 146.47 337‖ *i*P **PKPab** **03 39 46.1 +1.9**
PVCC Panska Ves 146.56 351 *e*PKP2 **PKPbc** **03 39 44.0 +0.7**
PVCC Panska Ves 146.56 351 *e*PKP **PKPbc** **03 39 44.0 +0.7**
PVCC *ep*PKP **pPKPdf** **03 39 55.0 +1.9**
OKC Ostrava-Krasne 146.57 347 *e*PKIKP **PKPab** **03 39 44.3 -0.1**
OKC Ostrava-Krasne 146.57 347 *e*PKP **PKPab** **03 39 44.3 -0.1**
UZH Uzhgorod 146.58 341 *e*PKP2 **PKPbc** **03 39 43.2 -0.2**
CRVS Cervenica-Dubn 146.58 342 *e*PKIKP **PKPab** **03 39 45.6 +1.1**
CRVS Cervenica-Dubn 146.58 342 *e*PKP **PKPab** **03 39 45.6 +1.1**
KRLC Kraliky 146.62 348 *e*PKP2 **PKPbc** **03 39 44.1 +0.5**
KRLC Kraliky 146.62 348 *e*PKP **PKPbc** **03 39 44.1 +0.5**
KRLC *ep*PKP **pPKPdf** **03 39 55.2 +1.9**
MORC Moravsky Berou 146.75 347 *e*PKP2 **PKPbc** **03 39 44.0 0.0**
MORC Moravsky Berou 146.75 347 *e*PKPbc **PKPbc** **03 39 44.0 0.0**
MORC Moravsky Berou 146.75 347‖ *i*P **PKPbc** **03 39 44.6 +0.6**
MOX Moxa 146.81 354 *e*PKP2 **PKPbc** **03 39 44.3 +0.3**
MOX Moxa 146.81 354 *e*PKPbc **PKPbc** **03 39 44.3 +0.3**
TESR Tescani 146.82 335‖ *i*P **PKPab** **03 39 50.0 +4.5**
PLN Plauen 146.91 354 *e*PKPbc **PKPbc** **03 39 44.6 +0.3**
WERD Werda 146.93 354 *e*PKPbc **PKPbc** **03 39 44.1 -0.3**
TRPA Tarpa 146.94 341‖ *i*P PKPab 03 39 51.8 +5.9
TANN Tannenbergstha 146.95 353 *e*PKPbc **PKPbc** **03 39 44.4 -0.1**
GUNZ Gunzen 147.01 354 *e*PKPbc **PKPbc** **03 39 45.0 +0.3**
WERN Wernitzgruen 147.08 353 *e*PKPbc **PKPbc** **03 39 45.4 +0.5**
PRU Pruhonice 147.09 351 *e*PKP2 **PKPbc** **03 39 45.7 +0.8**
PRU Pruhonice 147.09 351 *e*PKP **PKPbc** **03 39 45.7 +0.8**
PRU *ep*PKP **pPKPdf** **03 39 56.4 +2.4**
NKC Novy Kostel 147.13 353 *e*PKP2 **PKPbc** **03 39 45.9 +0.9**
NKC Novy Kostel 147.13 353 *e*PKP **PKPbc** **03 39 45.9 +0.9**
CFR Carcaliu 147.23 332‖ *i*P **PKPab** **03 39 48.0 +0.9**
VRI Vrincioaia 147.31 334‖ *i*P **PKPab** **03 39 51.3 +3.9**
VRAC Vranov 147.39 348‖ *i*P **PKPbc** **03 39 45.2 -0.5**
MANZ Manzenberg 147.41 354 *e*PKPbc **PKPbc** **03 39 46.2 +0.4**
TREC Trest 147.61 349 *e*PKP2 **PKPbc** **03 39 47.4 +1.1**
TREC Trest 147.61 349 *e*PKP **PKPbc** **03 39 47.4 +1.1**
TREC *ep*PKP **pPKPdf** **03 39 58.4 +3.5**
VYHS Vyhne 147.66 345 *e*PKP2 **PKPbc** **03 39 47.4 +0.9**
VYHS Vyhne 147.66 345 *e*PKP **PKPbc** **03 39 47.4 +0.9**
GRF Grafenberg Arr 147.79 355 *e*PKP2 **PKPbc** **03 39 47.1 +0.3**
GRF Grafenberg Arr 147.79 355 *e*PKPbc **PKPbc** **03 39 47.1 +0.3**
PSZ Piszkesteto 147.92 343 *e*PKP2 **PKPbc** **03 39 47.9 +0.6**
PSZ Piszkesteto 147.92 343 *e*PKPbc **PKPbc** **03 39 47.9 +0.6**
PSZ Piszkesteto 147.92 343‖ *i*P **PKPab** **03 39 51.6 +1.7**
MLR Muntele Rosu 147.94 334‖ *i*P **PKPab** **03 39 50.2 +0.1**
BR131 Keskin Array S 147.96 319 *e*PKPbc **PKPbc** **03 39 48.3 +0.5**
BRTR Keskin Array B 147.97 319 PKPbc **PKPbc** **03 39 48.3 +0.5**
BRTR Keskin Array B 147.97 319 PKPbc **PKPbc** **03 39 48.3 +0.5**
comp=Z,8.3nm,0.9s,baz=108,slow=2.7,SNR=16
DRGR 148.06 339‖ *i*P **PKPbc** **03 39 48.7 +1.0**
KHC Kasperske Hory 148.07 352 *e*PKP2 **PKPbc** **03 39 47.9 +0.3**
KHC Kasperske Hory 148.07 352 *e*PKPbc **PKPbc** **03 39 47.8 +0.3**
KHC Kasperske Hory 148.07 352 *e*PKP **PKPbc** **03 39 47.9 +0.3**
KHC *ep*PKP **pPKPdf** **03 39 59.0 +3.3**
GEC2 GERESS Array S 148.33 351 *e*PKP2 **PKPbc** **03 39 48.7 +0.3**
GEC2 GERESS Array S 148.33 351 *e*PKPbc **PKPbc** **03 39 48.7 +0.3**
GERES GERESS Array B 148.33 351 PKPbc **PKPbc** **03 39 48.3 -0.1**
GERES GERESS Array B 148.33 351 PKPbc **PKPbc** **03 39 48.3 -0.1**
comp=Z,2.4nm,1.0s,baz=343,slow=2.8,SNR=8.5
ZST Bratislava 148.34 347 *e*PKP2 **PKPab** **03 39 51.1 -0.3**
ZST Bratislava 148.34 347 *e*PKP **PKPab** **03 39 51.1 -0.3**
CONA Conrad Observa 148.85 348‖ *i*PKiKP **PKPbc** **03 39 50.5 +0.7**
comp=Z,14nm,1.4s
CONA Conrad Observa 148.85 348‖ *i*P **PKPbc** **03 39 50.5 +0.7**
GZR Gura Zlata 149.25 338‖ *i*P **PKPab** **03 39 57.2 +1.9**
BFO Black Forest 149.32 358 *e*PKIKP **PKPbc** **03 39 50.9 +0.1**
BFO Black Forest 149.32 358 *e*PKPbc **PKPbc** **03 39 50.9 +0.1**
BFO Black Forest 149.32 358 *e*PKPbc **PKPbc** **03 39 51.0 +0.1**
THEF They Montfort 149.44 1 PKP **PKPdf** **03 39 43.6 -3.1**
ECH Echery 149.46 360 PKP PKPdf 03 39 41.3 -5.4
RJOB Jochberg 149.54 352 *e*PKPbc **PKPbc** **03 39 51.7 +0.3**
FELD Feldberg im Sc 149.79 358 PKP PKPdf 03 39 40.2 -7.2
PKSM Moragy 149.82 344‖ *i*P **PKPab** **03 39 55.5 -2.0**
MOF Molkenrain 149.83 360 PKP PKPdf 03 39 39.3 -8.1
MOTA Moosalm 150.12 354‖ *i*PKiKP **PKPbc** **03 39 52.7 -0.3**
MOTA Moosalm 150.12 354‖ *i*PKiKP **PKPbc** **03 39 52.7 -0.3**
comp=Z,16nm,1.1s
MOTA Moosalm 150.12 354‖ *i*P **PKPbc** **03 39 52.7 -0.3**
DAVA Damuels 150.28 356‖ *i*PKiKP **PKPbc** **03 39 54.2 +0.8**
comp=Z,13nm,1.0s
DAVA Damuels 150.28 356‖ *i*P **PKPbc** **03 39 54.2 +0.8**
LOMF Lomont 150.33 360 PKP PKPdf 03 39 41.3 -6.9
FETA Feichten 150.48 355‖ *i*PKPbc **PKPbc** **03 39 52.9 -1.0**
comp=Z,13nm,1.1s
FETA Feichten 150.48 355‖ *i*P **PKPbc** **03 39 52.9 -1.0**
TUE Stuetta 151.13 356 *e*PKPbc **PKPbc** **03 39 56.2 +0.7**
TORD Torodi Ar. Bea 173.37 131 PKP **PKPdf** **03 40 13.1 +0.8**
TORD Torodi Ar. Bea 173.37 131 PKP **PKPdf** **03 40 13.1 +0.8**
comp=Z,0.7nm,1.1s,baz=298,slow=2.1,SNR=3.0
TORD PKPab **PKPab** **03 41 37.9 -2.7**
comp=Z,1.1nm,1.0s,baz=290,slow=6.1,SNR=3.8

ISK ***05*** *03:33:44.9, 40.°78N×30.°75E, h4km, MD3.3*
DDA ***05*** *03:33:44.7, 40.°75N×30.°68E, h10km, MD3.0*
CSEM ***05*** *03:33:45.7±0.2, 40.°78N×30.°73E, h0km±1km, MD3.0, Error ellipse: s-maj=3.3km s-min=2.2km az=179.0*
ISCJB ***05*** *03:33:45.6±0.5, 40.°77N±0.°03×30.°72E±0.°02, h2km±3km, Error ellipse: s-maj=4.5km s-min=3.0km az=174.4*

ISC 05 03:33:45.8±0.9, **40.°77N**±0.°02×**30.°73E**±0.°02, **h10**km±7km, **n91**, σ**0.98**/110, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HENT	**Hendek**	**0.14**	**69**	*i* P		**Pg**	**03 33 49.2**	**+0.2**
HENT				*i* S		**Sg**	**03 33 51.1**	**0.0**
HENT	**Hendek**	**0.14**	**69**	*i* P		**Pg**	**03 33 49.2**	**+0.2**
HENT				*i* S		**Sg**	**03 33 51.1**	**0.0**
SPNC	**Sapanca-Adapaz**	**0.33**	**255**	*e*PG		**Pg**	**03 33 52.4**	**0.0**
SPNC				*e*SG		**Sb**	**03 33 58.1**	**-1.2**
SPNC	**Sapanca-Adapaz**	**0.33**	**255**	*e*Pg		**Pg**	**03 33 52.4**	**0.0**
SPNC				*e*Sg		**Sb**	**03 33 58.1**	**-1.2**
GULT	**Gulveren**	**0.38**	**206**	*e*PG		**Pg**	**03 33 53.1**	**-0.2**
GULT				*e*SG		**Sg**	**03 33 58.4**	**+0.1**
GULT	**Gulveren**	**0.38**	**206**	*e*Pg		**Pg**	**03 33 53.1**	**-0.2**
GULT				*e*Sg		**Sg**	**03 33 58.4**	**+0.1**
MDUB	**Mudurnu**	**0.47**	**130**	*e*PG		**Pg**	**03 33 54.6**	**-0.3**
MDUB				*e*SG		**Sg**	**03 34 00.9**	**-0.2**
MDUB	**Mudurnu**	**0.47**	**130**	*e*Pg		**Pg**	**03 33 54.6**	**-0.3**
MDUB				*e*Sg		**Sg**	**03 34 00.9**	**-0.2**
GPA	**Golpazari**	**0.58**	**214**	*e*PG		**Pg**	**03 33 57.2**	**+0.1**
GPA	**Golpazari**	**0.58**	**214**	*e*Pg		**Pg**	**03 33 57.2**	**+0.1**
HRT	**Hereke**	**0.81**	**274**	*e*PG		**Pg**	**03 34 01.6**	**+0.2**
HRT	**Hereke**	**0.81**	**274**	*e*Pg		**Pg**	**03 34 01.6**	**+0.2**
ADVT	**Abdulvahap**	**0.83**	**246**	*e*PG		**Pg**	**03 34 01.3**	**-0.5**
ADVT	**Abdulvahap**	**0.83**	**246**	*e*Pg		**Pg**	**03 34 01.3**	**-0.5**
CAVI	**Cavuskoy**	**0.89**	**230**	*e*PG		**Pb**	**03 34 03.2**	**-0.1**
CAVI	**Cavuskoy**	**0.89**	**230**	*e*Pg		**Pb**	**03 34 03.2**	**-0.1**
SILT	**Sile**	**0.91**	**295**	*e*PG		**Pg**	**03 34 02.7**	**-0.6**
SILT	**Sile**	**0.91**	**295**	*e*Pg		**Pg**	**03 34 02.7**	**-0.6**
BORA	**Eskisehir**	**0.92**	**194**	*i* P		**Pg**	**03 34 02.8**	**-0.7**
BORA				*i* S		**Sg**	**03 34 14.7**	**-0.7**
BORA	**Eskisehir**	**0.92**	**194**	*i* P		**Pg**	**03 34 02.8**	**-0.7**
BORA				*i* S		**Sg**	**03 34 14.7**	**-0.7**
IZI	**Iznik**	**1.05**	**246**	*e*PG		**Pg**	**03 34 05.6**	**-0.5**
IZI	**Iznik**	**1.05**	**246**	*e*Pg		**Pg**	**03 34 05.6**	**-0.5**
BUY	**Buyukada**	**1.23**	**274**	*e*P		Pb	03 34 05.0	-4.1
BUY				*i* S		**Sb**	**03 34 24.5**	**-0.5**
ESKT	**Eskisehir**	**1.26**	**176**	*e*PN		**Pn**	**03 34 09.4**	**-0.2**
ESKT	**Eskisehir**	**1.26**	**176**	*e*Pn		**Pn**	**03 34 09.4**	**-0.2**
SEYT	**Eskypehyr**	**1.26**	**176**	*i* P		**Pn**	**03 34 08.8**	**-0.8**
SEYT				*i* S		**Sb**	**03 34 24.3**	**-1.7**
SEYT	**Eskypehyr**	**1.26**	**176**	*i* P		**Pn**	**03 34 08.8**	**-0.8**
SEYT				*i* S		**Sb**	**03 34 24.3**	**-1.7**
ISK	**Istanbul-Kandi**	**1.30**	**283**	*e*PN		**Pb**	**03 34 10.3**	**-0.1**
ISK	**Istanbul-Kandi**	**1.30**	**283**	*e*Pn		**Pb**	**03 34 10.3**	**-0.1**
ULDT	**Uludag**	**1.37**	**243**	*i* P		**Pn**	**03 34 11.0**	**-0.2**
ULDT				*i* S		**Sb**	**03 34 27.2**	**-2.2**
ULDT	**Uludag**	**1.37**	**243**	*i* P		**Pn**	**03 34 11.0**	**-0.2**
ARMT	**Armutlu**	**1.44**	**262**	*e*PN		**Pb**	**03 34 12.4**	**-0.3**
ARMT	**Armutlu**	**1.44**	**262**	*e*Pn		**Pb**	**03 34 12.4**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.46**	**155**	*e*PN		**Pb**	**03 34 13.0**	**-0.1**
SVRH	**Sivrihisar-ESK**	**1.46**	**155**	*e*Pn		**Pb**	**03 34 13.0**	**-0.1**
BGKT	**Bogazkoy**	**1.54**	**286**	*e*PN		**Pb**	**03 34 13.9**	**-0.5**
BGKT	**Bogazkoy**	**1.54**	**286**	*e*Pn		**Pb**	**03 34 13.9**	**-0.5**
SAFT	**Safranbolu**	**1.55**	**72**	*e*PN		**Pn**	**03 34 13.5**	**0.0**
SAFT	**Safranbolu**	**1.55**	**72**	*e*Pn		**Pn**	**03 34 13.5**	**0.0**
TVSB	**Tavsanli**	**1.64**	**217**	*e*PN		**Pb**	**03 34 15.9**	**-0.4**
TVSB	**Tavsanli**	**1.64**	**217**	*e*Pn		**Pb**	**03 34 15.9**	**-0.4**
CTKS	**Kestanelik-??a**	**1.75**	**286**	*e*PN		**Pb**	**03 34 17.2**	**-0.8**
CTKS	**Kestanelik-??a**	**1.75**	**286**	*e*Pn		**Pb**	**03 34 17.2**	**-0.8**
ALT	**Altintas**	**1.78**	**196**	*e*PN		**Pn**	**03 34 17.5**	**+0.7**
ALT	**Altintas**	**1.78**	**196**	*e*P		Pn	03 34 12.8	-4.0
ALT				*e*S		Sn	03 34 33.3	-6.3
ALT	**Altintas**	**1.78**	**196**	*e*Pn		**Pn**	**03 34 17.5**	**+0.7**
LOD	**Lodumlu**	**1.79**	**119**	*e*PN		**Pn**	**03 34 17.5**	**+0.6**

LOD	**Lodumlu**	**1.79**	**119**	*e*Pn	**Pn**	**03 34 17.5**	**+0.6**
ANTO	**Ankara**	**1.82**	**119**	*e*PN	**Pn**	**03 34 18.3**	**+1.1**
ANTO	**Ankara**	**1.82**	**119**	*e*Pn	**Pn**	**03 34 18.3**	**+1.1**
KCTX	**Karacabey (Bur**	**1.88**	**255**	*e*PN	**Pb**	**03 34 19.7**	**-0.6**
KCTX	**Karacabey (Bur**	**1.88**	**255**	*e*Pn	**Pb**	**03 34 19.7**	**-0.6**
GDZ	**Gediz**	**1.94**	**210**	*i* P	**Pb**	**03 34 21.5**	**+0.2**
GDZ				*i* S	**Sb**	**03 34 45.2**	**-0.4**
GDZ	**Gediz**	**1.94**	**210**	*i* P	**Pb**	**03 34 21.5**	**+0.2**
GDZ				*i* S	**Sb**	**03 34 45.2**	**-0.4**
SLVT	**Silivri**	**1.96**	**284**	*e*PN	**Pn**	**03 34 20.0**	**+0.8**
SLVT	**Silivri**	**1.96**	**284**	*e*Pn	**Pn**	**03 34 20.0**	**+0.8**
CTYL	**Yal??k??y-??at**	**1.97**	**292**	*e*PN	**Pn**	**03 34 20.5**	**+1.2**
CTYL	**Yal??k??y-??at**	**1.97**	**292**	*e*Pn	**Pn**	**03 34 20.5**	**+1.2**
KIZT	**Kizilcal**	**2.09**	**155**	*e*PN	**Pn**	**03 34 22.5**	**+1.5**
KIZT	**Kizilcal**	**2.09**	**155**	*e*Pn	**Pn**	**03 34 22.5**	**+1.5**
BALT	**Daday**	**2.14**	**68**	*i* P	**Pb**	**03 34 23.9**	**-0.9**
BALT				*i* S	**Sn**	**03 34 49.5**	**+1.0**
BALT	**Daday**	**2.14**	**68**	*i* P	**Pb**	**03 34 23.9**	**-0.9**
BALT				*i* S	**Sn**	**03 34 49.6**	**+1.0**
CANT	**Cankiri**	**2.20**	**93**	*e*PN	**Pn**	**03 34 23.2**	**+0.7**
BBAL	**Bala**	**2.21**	**123**	*e*P	**Pb**	**03 34 24.8**	**-1.1**
BBAL				*e*S	**Sb**	**03 34 53.2**	**-0.2**
BBAL	**Bala**	**2.21**	**123**	*e*P	**Pb**	**03 34 24.8**	**-1.1**
BBAL				*e*S	**Sb**	**03 34 53.2**	**-0.2**
SHUT	**Suhut-Afyon**	**2.22**	**184**	*e*PN	**Pn**	**03 34 24.0**	**+1.1**
SHUT	**Suhut-Afyon**	**2.22**	**184**	*e*Pn	**Pn**	**03 34 24.0**	**+1.1**
AFSR	**Af¯ar-Bala (A**	**2.23**	**126**	*e*PN	**Pn**	**03 34 24.5**	**+1.6**
AFSR	**Af¯ar-Bala (A**	**2.23**	**126**	*e*Pn	**Pn**	**03 34 24.5**	**+1.6**
MRMT	**Marmara Adasi**	**2.39**	**267**	*e*PN	**Pn**	**03 34 26.4**	**+1.3**
MRMT	**Marmara Adasi**	**2.39**	**267**	*e*Pn	**Pn**	**03 34 26.4**	**+1.3**
GONE	**Gonen-Balikesi**	**2.44**	**254**	*e*PN	**Pn**	**03 34 27.0**	**+1.3**
GONE	**Gonen-Balikesi**	**2.44**	**254**	*e*Pn	**Pn**	**03 34 27.0**	**+1.3**
BALB	**Balikesir**	**2.46**	**244**	*e*PN	**Pn**	**03 34 27.5**	**+1.5**
BALB	**Balikesir**	**2.46**	**244**	*e*Pn	**Pn**	**03 34 27.5**	**+1.5**
TOS	**Tosya**	**2.51**	**83**	*e*PN	**Pn**	**03 34 27.2**	**+0.5**
TOS	**Tosya**	**2.51**	**83**	*e*Pn	**Pn**	**03 34 27.2**	**+0.5**
BALY	**Balya**	**2.60**	**248**	*e*P	**Pn**	**03 34 28.3**	**+0.4**
BALY				*e*S	**Sb**	**03 35 04.2**	**-0.2**
BALY	**Balya**	**2.60**	**248**	*e*P	**Pn**	**03 34 28.3**	**+0.4**
KHL	**Karahalli**	**2.62**	**201**	*e*PN	**Pn**	**03 34 30.2**	**+1.9**
KHL	**Karahalli**	**2.62**	**201**	*e*Pn	**Pn**	**03 34 30.2**	**+1.9**
KAMT	**Kaman**	**2.68**	**121**	*e*PN	**Pn**	**03 34 30.8**	**+1.6**
KAMT	**Kaman**	**2.68**	**121**	*e*Pn	**Pn**	**03 34 30.8**	**+1.6**
KULA	**Kula-Manisa**	**2.77**	**216**	*e*PN	**Pn**	**03 34 32.1**	**+1.8**
KULA	**Kula-Manisa**	**2.77**	**216**	*e*Pn	**Pn**	**03 34 32.1**	**+1.8**
AKS	**Akhisar**	**2.94**	**231**	*e*PN	**Pn**	**03 34 34.5**	**+1.9**
AKS	**Akhisar**	**2.94**	**231**	*e*Pn	**Pn**	**03 34 34.5**	**+1.9**
CORM	**Corum**	**3.03**	**100**	*e*PN	**Pn**	**03 34 35.1**	**+1.1**
CORM	**Corum**	**3.03**	**100**	*e*Pn	**Pn**	**03 34 35.1**	**+1.1**
FETY	**Fethiye**	**4.33**	**198**	*e*PN	**Pn**	**03 34 54.2**	**+2.5**
FETY	**Fethiye**	**4.33**	**198**	*e*Pn	**Pn**	**03 34 54.2**	**+2.5**

*ISCJB **05** 03:39:13.9±0.7, 22°.78N±0°.03×122°.37E±0°.02, h19km±5km, Error ellipse: s-maj=4.9km s-min=3.3km az=148.3*
*TAP **05** 03:39:15.9, 22°.74N×122°.31E, h44km±1km, ML3.4, D*
*JMA **05** 03:39:16.5±0.6, 22°.83N×122°.49E, h82km, M2.9*
ISC 05 03:39:13.9±1.5**, 22°.74N**±0°.03×**122°.36E**±0°.03**, h23**km±15km**, n38,** σ1s.06/67**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.98**	**292**	P	**Pn**	**03 39 31.7**	**-0.6**
	baz=293						
CHKT				S	**Sn**	**03 39 43.2**	**-2.4**
	baz=293						
LAY	**Lan-yu**	**1.02**	**227**	*i* P	**Pn**	**03 39 32.5**	**-0.4**
	baz=232						
LAY				*e*S	**Sn**	**03 39 44.1**	**-2.4**
	baz=232						
TWF1	**Yuli**	**1.15**	**302**	⇑*i*P	**Pn**	**03 39 34.6**	**-0.1**
	baz=312						
TWF1				S	**Sn**	**03 39 48.6**	**-1.1**
	baz=312						
TWG	**Pinlang**	**1.19**	**274**	P	**Pn**	**03 39 35.8**	**+0.6**
	baz=281						
TWG				S	**Sn**	**03 39 49.9**	**-0.8**
	baz=281						
EHY	**Hungye**	**1.22**	**309**	*e*P	**Pn**	**03 39 35.9**	**+0.2**
	baz=318						
EHY				*e*S	**Sn**	**03 39 51.0**	**-0.5**
	baz=318						
ELDTW	**Lidau**	**1.32**	**290**	P	**Pn**	**03 39 37.2**	**+0.2**
	baz=291						
ESL	**Shilin**	**1.37**	**322**	*e*P	**Pn**	**03 39 38.1**	**+0.5**
	baz=332						
ESL				S	**Sn**	**03 39 53.1**	**-2.0**
	baz=332						
EAST	**Anshuo**	**1.44**	**256**	P	**Pn**	**03 39 39.6**	**+0.9**
	baz=266						
EAST				*e*S	**Sn**	**03 39 55.9**	**-1.0**
	baz=266						
TWD	**Chiawan**	**1.51**	**332**	*e*P	**Pn**	**03 39 40.4**	**+0.9**
	baz=335						
TWD				*e*S	**Sn**	**03 39 56.7**	**-1.8**
	baz=335						
TSEB	**Hengchuen, Pin**	**1.59**	**239**	*e*P	**Pb**	**03 39 42.6**	**0.0**
	baz=239						
TSEB				*e*S	**Sn**	**03 40 01.3**	**+0.8**
	baz=239						
ALS	**Alishan**	**1.62**	**299**	P	**Pb**	**03 39 43.0**	**-0.4**
	baz=307						
ALS				*e*S	**Sn**	**03 40 02.2**	**+0.4**
	baz=307						
TWK1	**Hengchun**	**1.64**	**241**	*e*P	**Pn**	**03 39 42.7**	**+1.3**
	baz=241						
TWK1				*e*S	**Sn**	**03 40 01.3**	**-0.5**
	baz=241						
SCZT	**Fangliau**	**1.65**	**258**	*e*P	**Pb**	**03 39 44.4**	**+0.7**
	baz=264						
SCZT				*e*S	**Sb**	**03 40 03.7**	**-0.3**
	baz=264						
HEN	**Hengchun**	**1.67**	**244**	*e*S	**Sn**	**03 40 02.7**	**+0.3**
	baz=235						
WTP	**Ta-pu**	**1.69**	**288**	*e*P	**Pb**	**03 39 44.5**	**+0.1**
	baz=290						
WHF	**Hehuan Shan**	**1.72**	**325**	P	**Pn**	**03 39 43.7**	**+0.8**
	baz=327						
WHF				S	**Sn**	**03 40 03.0**	**-1.4**
	baz=327						
CHN1	**Nanshi**	**1.75**	**285**	*e*P	**Pb**	**03 39 45.7**	**+0.4**
	baz=286						
SMLT	**Sun Moon Lake**	**1.76**	**311**	P	**Pn**	**03 39 44.6**	**+1.5**
	baz=312						
SMLT				*e*S	**Sn**	**03 40 05.3**	**+0.4**
	baz=312						
CHN5	**Tsauling**	**1.77**	**299**	P	**Pb**	**03 39 45.8**	**+0.1**
	baz=306						
ENA	**Nanau**	**1.77**	**341**	P	**Pn**	**03 39 44.1**	**+0.9**
	baz=344						
ENA				*e*S	**Sn**	**03 40 04.3**	**-0.8**
	baz=344						
TWK	**Hsinying**	**1.80**	**287**	P	**Pb**	**03 39 46.6**	**+0.3**
	baz=288						
TWK				*e*S	**Sb**	**03 40 08.8**	**+0.3**
	baz=288						
TYC	**Yuchr**	**1.80**	**310**	P	**Pn**	**03 39 44.7**	**+1.1**
	baz=312						
TYC				S	**Sn**	**03 40 05.8**	**+0.1**
	baz=312						
YOJ	**Yonaguni jima**	**1.82**	**19**	P	**Pn**	**03 39 44.8**	**+1.0**
YOJ				S	**Sn**	**03 40 06.2**	**+0.1**
TWT	**Tachien**	**1.86**	**324**	*e*P	**Pn**	**03 39 45.7**	**+1.2**
	baz=326						
TWT				*e*S	**Sn**	**03 40 06.5**	**-0.9**
	baz=326						
HATJ	**Hateruma jima**	**1.87**	**45**	P	**Pn**	**03 39 45.4**	**+0.9**
HATJ				S	**Sn**	**03 40 06.5**	**-0.8**
NNS	**Nan Shan**	**1.92**	**332**	*e*P	**Pb**	**03 39 47.7**	**-0.6**
	baz=334						
NNS				*e*S	**Sn**	**03 40 09.0**	**+0.1**
	baz=334						
TWC	**Suao**	**1.92**	**346**	*e*P	**Pn**	**03 39 47.1**	**+1.9**
	baz=359						
TWC				S	**Sn**	**03 40 08.4**	**-0.3**
	baz=359						
IRIF	**Iriomote-Funau**	**2.03**	**38**	P	**Pn**	**03 39 47.9**	**+1.2**
IRIF				S	**Sn**	**03 40 11.1**	**-0.2**
ENTT	**Nioudou**	**2.03**	**339**	*e*P	**Pn**	**03 39 47.8**	**+1.1**
	baz=341						
TWE	**Neicheng**	**2.07**	**342**	*e*P	**Pb**	**03 39 50.3**	**-0.5**
	baz=344						
JKRS	**Kuro-shima**	**2.13**	**45**	P	**Pn**	**03 39 47.9**	**-0.1**
JKRS				S	**Sn**	**03 40 13.1**	**-0.6**
NSK	**Sanguang**	**2.14**	**335**	*e*P	**Pn**	**03 39 50.1**	**+1.9**
	baz=337						
NSK				*e*S	**Sn**	**03 40 13.8**	**-0.3**
	baz=337						
TWQ1	**Liyutan**	**2.17**	**318**	*e*P	**Pn**	**03 39 50.5**	**+1.9**
	baz=320						
TWQ1				*e*S	**Sb**	**03 40 18.2**	**-0.7**
	baz=320						
NSTT	**Nanjuang**	**2.26**	**327**	*e*P	**Pb**	**03 39 52.5**	**-1.5**
	baz=338						
NSTT				*e*S	**Sn**	**03 40 18.0**	**+1.0**
	baz=338						
TWB1	**Santiao Chiao**	**2.29**	**352**	*e*P	**Pn**	**03 39 50.2**	**0.0**
	baz=353						
JIJ	**Ishigaki jima**	**2.30**	**45**	P	**Pn**	**03 39 51.1**	**+0.7**
JIJ				S	**Sn**	**03 40 16.6**	**-1.4**
NWF	**Wu-fen Shan**	**2.38**	**347**	*e*P	**Pn**	**03 39 54.1**	**+2.5**
	baz=349						
JTJ	**Tarama**	**2.86**	**48**	P	**Pn**	**03 39 59.2**	**+1.0**
JTJ				S	**Sn**	**03 40 31.2**	**-0.7**

MAN 05 03:42:39, 7°.42N×124°.33E, h30km, mb3.8, ML2.5, MS2.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**0.21**	**202**	⇑*i*P	Pn	03 42 47.7	+1.6
CTBH				*i* S	Sb	03 42 53.1	+3.5
BUKP	**Musuan**	**0.86**	**58**	*e*P	Pn	03 42 54.7	-0.5
BUKP				*e*S	Sb	03 43 08.2	+1.3
PAGZ	**Pagadian**	**1.03**	**295**	*e*P	Pb	03 42 58.5	+0.2
PAGZ				*e*S	Sn	03 43 07.8	-3.1

*IDC **05** 04:25:20.2±1.4, 5°.65S×130°.83E, h0km, mb3.8/3, mb1 4.1/6, mb1mx3.8/19, mbtmp4.0/6, ML4.1/3, MS3.3/1, Ms1 3.3/1, ms1mx2.4/28, Error ellipse: s-maj=82.0km s-min=21.5km az=72.0*
*ISCJB **05** 04:25:29.6±0.7, 5°.91S±0°.04×130°.6E±0°.1, h86km, mb3.6/3, Error ellipse: s-maj=16.3km s-min=6.1km az=3.7*
*AUST **05** 04:25:32.0, 5°.97S×131°.03E, h30km*
ISC 05 04:25:30.9±0.8**, 5°.92S**±0°.06×**130°.7E**±0°.1**, h86**km**, n21,** σ**1s.78**/16**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.35**	**27**	P	**Pn**	**04 26 22.1**	**+0.9**
	baz=3.3,SNR=16						
FAKI				S	**Sn**	**04 26 58.1**	**-1.8**
	baz=3.3,SNR=27						
AAI	**Ambon**	**3.36**	**311**	P	Pn	04 26 26.2	+5.0
	baz=3.6,SNR=7.2						
SWI	**Sorong**	**5.05**	**6**	P	**Pn**	**04 26 45.0**	**+0.7**
	baz=5.1,SNR=13						
MTN	**Manton Dam**	**6.89**	**177**	P	Pn	04 27 12.9	+3.6
	baz=6.9,SNR=13						
MTN				S	**Sn**	**04 28 26.5**	**+0.2**
	baz=6.9,SNR=9.2						
KDU	**Kakadu**	**6.94**	**166**	P	**Pn**	**04 27 11.8**	**+1.8**
	baz=6.9,SNR=79						
KNRA	**Kununurra**	**9.88**	**191**	P	Pn	04 27 51.9	+1.8
	baz=10.0,SNR=8.2						
KNRA				S	**Sn**	**04 29 35.1**	**-4.3**
	baz=10.0,SNR=7.6						
FITZ	**Fitzroy Crossi**	**13.09**	**202**	Pn	**Pn**	**04 28 32.9**	**-0.6**
	0.5nm,0.3s,baz=32,slow=13,SNR=38						
FITZ				Sn	Sn	04 30 47.5	-10
	1.6nm,0.3s,baz=93,slow=23,SNR=12						
FITZ	**Fitzroy Crossi**	**13.09**	**202**	P	**Pn**	**04 28 34.7**	**+1.2**
	baz=13,SNR=11						
PALU	**Palau**	**13.70**	**16**	S	S	04 31 21.8	-7.6
	baz=14,SNR=6.2						
WRA	**Warramunga Arr**	**14.37**	**166**	Pn	**Pn**	**04 28 47.7**	**-2.6**
	1.0nm,0.3s,baz=348,slow=13,SNR=12						
WRA				Sn	Sn	04 31 20.2	-8.4
	0.8nm,0.3s,baz=343,slow=22,SNR=4.1						
COEN	**Coen**	**14.62**	**124**	P	**P**	**04 28 56.3**	**-1.3**
	baz=14,SNR=6.3						
ASAR	**Alice Springs**	**17.91**	**170**	P	**Pn**	**04 29 35.2**	**+0.7**
	1.0nm,0.3s,baz=344,slow=8.3,SNR=40						
ASAR				S	Sn	04 32 45.0	-9.0
	0.2nm,0.3s,baz=358,slow=29,SNR=2.4						
MTSU	**Mount Surprise**	**17.98**	**134**	P	**Pn**	**04 29 37.1**	**+1.8**
	baz=18,SNR=5.1						
CISI	**Cisompet, Garu**	**22.81**	**265**	S	Sn	04 34 54.6	+2.8
	baz=23,SNR=3.8						
STKA	**Stephens Creek**	**27.75**	**160**	P	**P**	**04 31 12.2**	**+0.7**
	0.7nm,0.5s,baz=324,slow=15,SNR=3.9						
PSI	**Prapat**	**32.92**	**284**	LR	LR	04 45 55.2	
	comp=Z,45nm,18.4s,baz=154,slow=38						
MILA	**Mila**	**35.27**	**154**	S	S	04 37 26.1	-19
	baz=35,SNR=5.1						
LHI	**Lord Howe Isla**	**36.77**	**137**	S	S	04 38 20.9	+13
	baz=37,SNR=3.7						
MKAR	**Makanchi Array**	**67.73**	**326**	P	**P**	**04 36 19.3**	**0.0**
	0.8nm,0.5s,baz=121,slow=8.1,SNR=13						
KURBB	**Kurchatov Arra**	**71.98**	**328**	P	**P**	**04 36 44.4**	**-0.8**
	0.2nm,0.3s,baz=132,slow=5.7,SNR=4.8						
TORD	**Torodi Ar. Bea**	**129.30**	**282**	PKP	**PKPdf**	**04 44 30.1**	**-0.3**
	0.3nm,0.8s,baz=107,slow=1.5,SNR=2.3						

MAN 05 04:39:57, 17°.63N×123°.00E, h31km, mb4.6, ML3.5, MS3.5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.79**	**224**	⇑*i*P	Pb	04 40 12.3	0.0
ABRA	**Dolores**	**2.19**	**271**	*e*P	Pn	04 40 32.1	+0.9
BALP	**Baler**	**2.33**	**216**	*e*P	Pn	04 40 34.8	+1.6

*STR **05** 05:21:31.5±0.2, 48°.09N×6°.59E, h10km, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **05** 05:21:31.8±0.1, 48°.10N×6°.59E, h16km, Md2.4/4, Ml2.6/9, Error ellipse: s-maj=1.3km s-min=0.9km az=175.0*
*BGR **05** 05:21:31.4±2.0, 48°.17N×6°.53E, h10km, ML1.9/2, Error ellipse: s-maj=20.0km s-min=10.0km az=65.0*
*CSEM **05** 05:21:31.1±0.1, 48°.09N×6°.56E, h15km, ML2.2/12, Error ellipse: s-maj=2.6km s-min=1.7km az=173.0*
ISC 05 05:21:31.7±0.8**, 48°.12N**±0°.02×**6°.59E**±0°.01**, h17**km±6km**, n55,** σ**1s.21**/88**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAU	**Haudompre**	**0.20**	**236**	*e*Pg	**Pg**	**05 21 36.2**	**-0.3**
HAU				*e*Sg	**Sg**	**05 21 39.1**	**-0.6**
	91nm,0.2s						
HAU	**Haudompre**	**0.20**	**236**	*e*Pg	**Pg**	**05 21 36.2**	**-0.3**
HAU				*e*Sg	**Sg**	**05 21 39.1**	**-0.6**
	45nm,0.2s						
HINF	**Hinteralfeld**	**0.35**	**150**	*e*Pg	**Pg**	**05 21 38.8**	**-0.1**
HINF				*e*Sg	**Sg**	**05 21 43.7**	**-0.2**
	56nm,0.2s						
HINF	**Hinteralfeld**	**0.35**	**150**	*e*Pg	**Pg**	**05 21 38.8**	**-0.1**
HINF				*e*Sg	**Sg**	**05 21 43.7**	**-0.2**
	28nm,0.2s						
ECH	**Echery**	**0.39**	**75**	*e*Pg	**Pg**	**05 21 39.5**	**-0.3**
ECH				*e*Sg	**Sg**	**05 21 45.4**	**+0.2**
ECH	**Echery**	**0.39**	**75**	Pg	**Pb**	**05 21 40.0**	**-0.2**
ECH	**Echery**	**0.39**	**75**	Pg	**Pg**	**05 21 39.5**	**-0.3**
ECH				Sg	**Sg**	**05 21 45.4**	**+0.2**
THEF	**They Montfort**	**0.42**	**286**	Pg	**Pg**	**05 21 40.0**	**-0.2**
THEF				Sg	**Sg**	**05 21 45.7**	**-0.3**
THEF	**They Montfort**	**0.42**	**286**	Pg	**Pg**	**05 21 40.0**	**-0.2**
THEF				Sg	**Sg**	**05 21 45.7**	**-0.3**
MOF	**Molkenrain**	**0.45**	**126**	Pg	**Pg**	**05 21 41.0**	**+0.2**
MOF				Sg	**Sg**	**05 21 46.2**	**-0.7**
MOF	**Molkenrain**	**0.45**	**126**	Pg	**Pg**	**05 21 41.0**	**+0.2**
MOF				Sg	**Sg**	**05 21 46.2**	**-0.7**
CDF	**Champ du Feu**	**0.55**	**57**	*e*Pg	**Pg**	**05 21 42.6**	**0.0**
CDF	**Champ du Feu**	**0.55**	**57**	*e*Pn	**Pb**	**05 21 43.4**	**+0.5**
CDF				*e*Sg	**Sg**	**05 21 49.9**	**0.0**
	20nm,0.3s						
CDF	**Champ du Feu**	**0.55**	**57**	*e*Pg	**Pg**	**05 21 42.6**	**0.0**
CDF	**Champ du Feu**	**0.55**	**57**	*e*Pn	**Pb**	**05 21 43.4**	**+0.5**
CDF				*e*Sg	**Sg**	**05 21 49.9**	**0.0**
	9.9nm,0.3s						
LIBD	**Limburg**	**0.68**	**87**	Pg	**Pg**	**05 21 44.8**	**-0.2**
PAGF	**Fort de Pagny**	**0.73**	**308**	*e*Pg	**Pg**	**05 21 46.2**	**+0.3**
PAGF				*e*Sg	**Sg**	**05 21 55.8**	**+0.2**
	3.8nm,0.2s						
PAGF	**Fort de Pagny**	**0.73**	**308**	*e*Pg	**Pg**	**05 21 46.2**	**+0.3**
PAGF				*e*Sg	**Sg**	**05 21 55.8**	**+0.2**
	1.9nm,0.2s						
LOMF	**Lomont**	**0.78**	**168**	Pg	**Pg**	**05 21 46.6**	**-0.3**
LOMF				Sg	**Sg**	**05 21 56.2**	**-1.1**
LOMF	**Lomont**	**0.78**	**168**	Pg	**Pg**	**05 21 46.6**	**-0.3**
LOMF				Sg	**Sg**	**05 21 56.2**	**-1.1**
BBS	**Basel-Blauen**	**0.90**	**136**	Pg	**Pg**	**05 21 48.6**	**-0.5**
BBS				Sg	**Sg**	**05 22 00.7**	**-0.2**
FELD	**Feldberg im Sc**	**0.98**	**104**	Pg	**Pb**	**05 21 50.2**	**-0.1**
FELD				Sg	**Sb**	**05 22 02.9**	**-0.1**
FELD	**Feldberg im Sc**	**0.98**	**104**	Pg	**Pb**	**05 21 50.2**	**-0.1**
FELD				Sg	**Sb**	**05 22 02.9**	**-0.1**
SFTF	**Sexfontaines**	**1.04**	**276**	*e*Pn	**Pb**	**05 21 50.2**	**-1.1**
SFTF	**Sexfontaines**	**1.04**	**276**	*e*Pg	**Pb**	**05 21 51.3**	**0.0**
	baz=106						
SFTF				*e*Sg	**Sb**	**05 22 05.2**	**+0.4**
	15nm,0.2s						
SFTF	**Sexfontaines**	**1.04**	**276**	*e*Pn	**Pb**	**05 21 50.2**	**-1.1**
SFTF	**Sexfontaines**	**1.04**	**276**	*e*Pg	**Pb**	**05 21 51.3**	**0.0**
	baz=106						
SFTF				*e*Sg	**Sb**	**05 22 05.2**	**+0.4**
	7.7nm,0.2s						
MEZF	**Maizieres J'vi**	**1.10**	**291**	*e*Pg	**Pb**	**05 21 52.7**	**+0.4**
MEZF				*e*Sg	**Sb**	**05 22 06.7**	**+0.4**
	19nm,0.2s						
MEZF	**Maizieres J'vi**	**1.10**	**291**	*e*Pg	**Pb**	**05 21 52.7**	**+0.4**
MEZF				*e*Sg	**Sb**	**05 22 06.7**	**+0.4**
	9.4nm,0.2s						
BFO	**Black Forest**	**1.18**	**79**	*e*Pg	**Pg**	**05 21 54.5**	**0.0**
BFO				*e*Sg	**Sn**	**05 22 09.8**	**+0.6**
BFO	**Black Forest**	**1.18**	**79**	Pg	**Pg**	**05 21 54.5**	**0.0**
BFO				Sg	**Sn**	**05 22 09.8**	**+0.6**
LANF	**Langenberg**	**1.18**	**42**	Pg	**Pn**	**05 21 53.8**	**+0.3**
LANF	**Langenberg**	**1.18**	**42**	Pg	**Pn**	**05 21 53.8**	**+0.3**
CABF	**La Chapelle**	**1.54**	**193**	*e*Pn	**Pn**	**05 21 57.3**	**-1.3**
CABF	**La Chapelle**	**1.54**	**193**	*e*Pg	**Pb**	**05 22 00.7**	**+0.8**
CABF				*e*Sg	**Sb**	**05 22 20.1**	**+0.9**
	4.1nm,0.3s						
CABF	**La Chapelle**	**1.54**	**193**	*e*Pn	**Pn**	**05 21 57.3**	**-1.3**
CABF	**La Chapelle**	**1.54**	**193**	*e*Pg	**Pb**	**05 22 00.7**	**+0.8**
CABF				*e*Sg	**Sb**	**05 22 20.1**	**+0.9**
	2.0nm,0.3s						
LOR	**Lormes**	**2.03**	**246**	*e*Pn	**Pn**	**05 22 03.2**	**-2.0**
LOR	**Lormes**	**2.03**	**246**	*e*Pg	**Pb**	**05 22 09.4**	**+1.2**
	baz=71						
LOR				*e*Sg	**Sg**	**05 22 36.3**	**-0.7**
	4.7nm,0.2s						
LOR	**Lormes**	**2.03**	**246**	*e*Pn	**Pn**	**05 22 03.2**	**-2.0**
LOR	**Lormes**	**2.03**	**246**	*e*Pg	**Pb**	**05 22 09.4**	**+1.2**
	baz=71						
LOR				*e*Sg	**Sg**	**05 22 36.3**	**-0.7**
	2.3nm,0.2s						
SSF	**Saint Saulge**	**2.34**	**244**	*e*Pn	**Pn**	**05 22 07.3**	**-2.1**
SSF	**Saint Saulge**	**2.34**	**244**	*e*Pg	**Pb**	**05 22 15.4**	**+2.0**
SSF				*e*Sg	**Sb**	**05 22 45.0**	**+3.0**
	3.3nm,0.2s						
SSF	**Saint Saulge**	**2.34**	**244**	*e*Pn	**Pn**	**05 22 07.3**	**-2.1**
SSF	**Saint Saulge**	**2.34**	**244**	*e*Pg	**Pb**	**05 22 15.4**	**+2.0**
SSF				*e*Sg	**Sb**	**05 22 45.0**	**+3.0**
	1.6nm,0.2s						
SMF	**Signal de Mont**	**2.38**	**233**	*e*Pg	**Pb**	**05 22 15.7**	**+1.6**
SMF				*e*Sg	**Sb**	**05 22 45.5**	**+2.3**
	8.1nm,0.2s						
SMF	**Signal de Mont**	**2.38**	**233**	*e*Pg	**Pb**	**05 22 15.7**	**+1.6**
SMF				*e*Sg	**Sb**	**05 22 45.5**	**+2.3**
	4.1nm,0.2s						
TNS	**Taunus Mts**	**2.44**	**29**	*e*Sg	**Sg**	**05 22 47.8**	**-2.1**
TNS	**Taunus Mts**	**2.44**	**29**	Sg	**Sg**	**05 22 47.8**	**-2.1**
AVF	**Avril sur Loir**	**2.57**	**240**	*e*Sg	**Sb**	**05 22 51.9**	**+3.4**
	1.7nm,0.2s						
AVF	**Avril sur Loir**	**2.57**	**240**	*e*Sg	**Sb**	**05 22 51.9**	**+3.4**
	0.9nm,0.2s						
HYF	**Humbligny**	**2.80**	**254**	*e*Pg	**Pg**	**05 22 24.4**	**-1.0**
HYF	**Humbligny**	**2.80**	**254**	*e*Pg	**Pg**	**05 22 24.4**	**-1.0**
BGF	**Bois d'Agland**	**2.99**	**240**	*e*Sg	**Sg**	**05 23 05.4**	**-2.2**
	4.5nm,0.3s						
BGF	**Bois d'Agland**	**2.99**	**240**	*e*Sg	**Sg**	**05 23 05.4**	**-2.2**
	2.2nm,0.3s						

*ISCJB **05** 05:33:03.6±0.4, 10°.95N±0°.03×62°.09W±0°.03, h73km±8km, Error ellipse: s-maj=5.8km s-min=3.8km az=139.5*
*FUNV **05** 05:33:05.0, 10°.94N×61°.92W, h38km, MW3.7*
*TRN **05** 05:33:07.1, 11°.10N×61°.85W, h20km, MD3.6*
TRN Felt Trinidad II.
ISC 05 05:33:03.9±1.2**, 10°.94N**±0°.04×**62°.05W**±0°.03**, h67**km±10km**, n34,** σ**1s.46**/51**, 3C-3D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.34**	**211**	⇓*i*P	**Pn**	**05 33 15.1**	**0.0**
GUIV				*e*S	**Sn**	**05 33 21.2**	**-1.9**
TRN	**Trinidad (W)**	**0.70**	**115**	⇑*e*P	**Pn**	**05 33 19.4**	**+0.9**
TRN				*e*S	**Sn**	**05 33 28.8**	**-0.5**
TPP	**Pointe-a-Pierr**	**0.85**	**137**	*e*P	**Pn**	**05 33 23.5**	**+3.1**
TPP				*e*S	**Sn**	**05 33 35.6**	**+3.0**
TBH	**Brigand Hill**	**1.06**	**115**	*e*P	Pn	05 33 26.5	+3.4
TBH				*e*S	**Sn**	**05 33 40.5**	**+3.1**
CRUV	**Carupano**	**1.20**	**257**	*i* P	**Pn**	**05 33 25.4**	**+0.6**
CRUV				*e*S	**Sn**	**05 33 41.3**	**+0.9**
GRW	**Mount Saint Ca**	**1.27**	**17**	*e*P	**Pn**	**05 33 27.3**	**+1.5**
TPR	**Prospect**	**1.27**	**79**	*e*P	**Pn**	**05 33 27.3**	**+1.5**
TPR				*e*S	**Sn**	**05 33 41.4**	**-0.7**
BOT	**Bacolet**	**1.32**	**80**	*e*P	**Pn**	**05 33 28.4**	**+1.9**
GRHS	**Sauteurs**	**1.33**	**17**	*e*P	**Pn**	**05 33 27.9**	**+1.3**
GRHS				*e*S	**Sn**	**05 33 43.1**	**-0.6**
GRIC	**Isle de Caille**	**1.41**	**19**	*e*P	**Pn**	**05 33 29.4**	**+1.7**
GRIC				*e*S	**Sn**	**05 33 45.3**	**-0.1**
GRSS	**Sisters**	**1.41**	**17**	*e*P	**Pn**	**05 33 29.9**	**+2.2**
GRSS				*e*S	**Sn**	**05 33 45.5**	**0.0**
TOSP	**Speyside**	**1.53**	**76**	*e*P	**Pn**	**05 33 29.5**	**+0.3**
TOSP				*e*S	**Sn**	**05 33 47.0**	**-1.2**
ORIV	**Oritupano**	**2.29**	**216**	*e*P	**Pn**	**05 33 40.9**	**+1.4**
ORIV				*e*S	**Sn**	**05 34 07.5**	**+0.8**
SVB	**Belmont**	**2.44**	**18**	*e*P	**Pn**	**05 33 43.9**	**+2.3**
SVB				*e*S	**Sn**	**05 34 10.5**	**+0.1**
PCRV	**Puerto La Cruz**	**2.66**	**254**	⇑*i*P	**Pn**	**05 33 46.2**	**+1.7**
PCRV				*e*S	**Sn**	**05 34 16.0**	**+0.4**
RIOV	**Rio Grande**	**2.86**	**175**	*e*P	**Pn**	**05 33 47.5**	**+0.2**
RIOV				*e*S	**Sn**	**05 34 18.9**	**-1.8**
PRGV	**PARIAGUAN**	**3.35**	**230**	⇓*e*P	**Pn**	**05 33 54.8**	**+0.8**
CUPV	**Cœpira**	**3.78**	**257**	⇑*e*P	**Pn**	**05 34 02.2**	**+2.3**
CUPV				*e*S	**Sn**	**05 34 42.8**	**-0.4**
ORCV	**Isla La Orchil**	**4.16**	**282**	*e*P	**Pn**	**05 34 06.0**	**+1.1**
BIRV	**Birongo**	**4.17**	**264**	*e*P	**Pn**	**05 34 07.1**	**+1.9**
MERV	**Las Mercedes**	**4.51**	**249**	*e*P	**Pn**	**05 34 11.0**	**+1.2**
MERV				*e*S	**Sn**	**05 34 59.6**	**-1.4**
LLAV	**El Llanito**	**4.70**	**265**	*e*P	**Pn**	**05 34 13.9**	**+1.4**
FDCV	**FORTIN DE LA C**	**4.84**	**266**	*e*P	**Pn**	**05 34 15.0**	**+0.6**
FDCV				*e*S	**Sn**	**05 35 07.9**	**-1.4**
IVIV	**IVIC**	**4.87**	**264**	*e*P	**Pn**	**05 34 16.1**	**+1.1**
IVIV				*e*S	**Sn**	**05 35 08.7**	**-1.5**
LUEV	**Luepa**	**5.10**	**173**	⇓*e*P	**Pn**	**05 34 16.4**	**-1.6**
BOTV	**Botiquin**	**5.11**	**264**	*e*P	**Pn**	**05 34 19.9**	**+1.7**
TURV	**Turiamo**	**5.71**	**266**	*e*P	**Pn**	**05 34 27.5**	**+1.2**
BAUV	**El Baul**	**6.23**	**252**	*e*P	**Pn**	**05 34 33.4**	**+0.1**
MAPV	**Macapo**	**6.40**	**261**	*e*P	**Pn**	**05 34 36.2**	**+0.6**
TEPV	**Terepaima**	**7.09**	**263**	*e*P	**Pn**	**05 34 46.0**	**+0.8**
SANV	**Sanarito**	**7.51**	**260**	*e*P	**Pn**	**05 34 51.8**	**+0.8**
SIQV	**Siquisique**	**7.63**	**269**	*e*P	**Pn**	**05 34 53.1**	**+0.6**
MONV	**Montecano**	**7.83**	**278**	*e*P	**Pn**	**05 34 55.6**	**+0.3**
SOCV	**Socops**	**9.08**	**254**	*e*P	**Pn**	**05 35 11.3**	**-1.0**

CASC 05 05:43:53.7±1.9**, 13°.28N**×**89°.65W, h34**km±3km**, MD3.7, ML3.5, 5C, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.56**	**2**	⇑*i*P	Pn	05 44 05.4	-0.2
SBLS				*e*S	Sn	05 44 14.4	+0.5
SNET	**Serv Nac Est T**	**0.57**	**45**	*e*P	Pb	05 44 05.6	0.0
SNET				*e*S	Sn	05 44 15.2	+1.3
SNET				AML	AML	05 44 21.2	
	comp=Z,2μm,0.4s						
BOQS	**Boqueron**	**0.58**	**38**	*e*P	Pb	05 44 06.1	+0.2
BOQS				*e*S	Sn	05 44 14.5	+0.2
SNJE	**San Jose**	**0.59**	**4**	⇑*e*P	Pn	05 44 05.9	0.0
SNJE				*e*S	Sn	05 44 14.6	+0.1
RTR	**El Retiro**	**0.61**	**0**	⇑*i*P	Pn	05 44 06.2	0.0
RTR				*e*S	Sn	05 44 14.9	-0.2
LFRS	**El Faro**	**0.66**	**59**	⇑*e*P	Pn	05 44 06.6	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LFRS				eS	Sb	05 44 16.9	+0.5
LFU	La Fuente	0.70	48	eP	Pb	05 44 07.7	0.0
LBRS	Las Brisas	0.74	52	eP	Pn	05 44 08.2	+0.2
RBDL	Robledal	0.83	357	⇑eP	Pn	05 44 09.6	+0.3
SNVI	San Vicente	0.85	67	eP	Pn	05 44 09.4	-0.1
SNVI				eS	Sn	05 44 21.1	+0.1
VSM	San Miguel	1.34	83	eP	Pn	05 44 16.4	-0.1
VSM				eS	Sb	05 44 35.0	-0.9
BLLM	Bellamira	1.38	83	eP	Pn	05 44 16.6	-0.1
BLLM				eS	Sn	05 44 34.5	+0.6
PCG	Pacaya	1.45	320	eP	Pn	05 44 17.8	-0.1
PCG				eS	Sb	05 44 38.5	-0.4
NBG	Las Nubes	1.47	332	eP	Pn	05 44 19.2	+1.0
NBG				eS	Sn	05 44 35.4	-1.2
CAHU	Cacacuatique	1.48	70	eP	Pn	05 44 17.9	-0.4
CAHU				eS	Sn	05 44 37.0	+0.3
FUG	Fuego 3	1.64	315	eP	Pn	05 44 20.4	-0.1
CNCH	Conchagua	1.77	90	eP	Pn	05 44 21.3	-0.7
CNCH				eS	Sn	05 44 44.3	+0.8
MRL	Marmol	1.78	359	eP	Pn	05 44 23.9	+1.6
MRL				eS	Sn	05 44 38.5	-5.5
JAT	Jato	2.19	298	eP	Pn	05 44 27.3	-0.5
JAT				eS	Sn	05 44 55.4	+1.6

IDC 05 05:57:10.1±3.6, 15°.65S×173°.09W, h0km, mb4.3/4, mb1 4.4/5, mb1mx3.9/22, mbtmp4.4/5, ML4.7/1, Error ellipse: s-maj=85.3km s-min=38.3km az=22.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAR	Rarotonga	13.79	116	Pn	Pn	06 00 26.9	0.0
	3.7nm,0.3s,baz=115,slow=3.6,SNR=3.4						
URZ	Urewera	24.12	199	P	P	06 02 27.7	0.0
	7.9nm,1.0s,baz=14,slow=8.3,SNR=3.3						
STKA	Stephens Creek	44.17	240	P	P	06 05 21.4	+0.5
	1.6nm,0.5s,baz=83,slow=10,SNR=5.5						
WRA	Warramunga Arr	50.08	257	P	P	06 06 06.9	-0.4
	0.8nm,0.5s,baz=96,slow=7.1,SNR=9.5						
ASAR	Alice Springs	50.32	252	P	P	06 06 08.7	-0.4
	8.1nm,0.6s,baz=88,slow=8.1,SNR=99						

IDC 05 05:57:50.9±5.5, 23°.50N×108°.68W, h0km, mb3.0/1, mb1 3.5/4, mb1mx3.4/23, mbtmp3.0/4, ML3.4/2, Error ellipse: s-maj=81.7km s-min=23.7km az=155.0, Gulf of California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.61	292	Pn	Pn	05 58 18.7	-1.9
	2.7nm,0.3s,baz=150,slow=4.8,SNR=19						
LPIG				Sn	Sn	05 58 36.8	-5.3
	7.1nm,0.3s,baz=237,slow=17,SNR=7.8						
TXAR	Lajitas Array	7.34	37	Pn	Pn	05 59 38.5	-1.0
	0.1nm,0.3s,baz=208,slow=14,SNR=5.7						
TXAR				Sn	Sn	06 00 58.2	-5.5
	0.1nm,0.3s,baz=288,slow=28,SNR=3.8						
TXAR				Lg	Lg	06 01 40.7	
	0.2nm,0.3s,baz=220,slow=29,SNR=6.4						
NVAR	Mina Array Bea	17.00	333	Pn	P	06 01 54.8	+2.4
	0.2nm,0.3s,baz=176,slow=13,SNR=3.7						
PDAR	Pinedale Array	19.23	358	P	Pn	06 02 18.2	+0.3
	0.0nm,0.3s,baz=174,slow=10.0,SNR=3.7						
YKA	Yellowknife Ar	39.18	356	P	P	06 05 21.0	+0.7
	0.1nm,0.4s,baz=165,slow=8.0,SNR=3.9						

ISCJB 05 06:00:23.6±0.3, 42°.32N±0°.02×2°.16E±0°.03, h15km±3km, Error ellipse: s-maj=3.5km s-min=3.1km az=154.9
CSEM 05 06:00:24.5±0.1, 42°.31N×2°.17E, h10km, ML2.8/11, Error ellipse: s-maj=1.8km s-min=1.6km az=149.0
STR 05 06:00:24.7±0.4, 42°.29N×2°.18E, h5km, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
MDD 05 06:00:25.5±0.2, 42°.29N×2°.18E, h6km±2km, mbLg2.1/30, Error ellipse: s-maj=1.8km s-min=1.7km az=41.0, PRXIMO
LDG 05 06:00:25.0±0.1, 42°.29N×2°.19E, h5km, Md2.5/1, Ml2.7/9, Error ellipse: s-maj=1.1km s-min=0.9km az=155.0
ISC 05 06:00:25.1±0.8, 42°.29N±0°.02×2°.19E±0°.02, h10km±5km, n84, σ1s.16/110, 4C-1D, Pyrenees

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBRU	Bruguera	0.01	275	Pg	Pg	06 00 26.7	-0.3
CBRU				Lg	Lg	06 00 28.1	
	154nm,0.1s						
CBRU	Bruguera	0.01	275	Pg	Pg	06 00 26.7	-0.3
CBRU				Lg	Lg	06 00 28.1	
	154nm,0.1s						
CLLI	Llivia	0.25	320	⇓Pg	Pg	06 00 30.2	-0.1
	13nm,0.1s,SNR=18						
CLLI				Lg	Lg	06 00 33.6	
	25nm,0.0s,SNR=5.0						
CLLI	Llivia	0.25	320	Pg	Pg	06 00 30.2	-0.1
	13nm,0.1s,SNR=18						
CLLI				Lg	Lg	06 00 33.6	
	25nm,0.0s,SNR=5.0						
CORI	Orista	0.33	199	Pg	Pg	06 00 31.3	-0.3
CORI				Lg	Lg	06 00 35.7	
	33nm,0.2s						
CORI	Orista	0.33	199	Pg	Pg	06 00 31.3	-0.3
CORI				Lg	Lg	06 00 35.7	
	33nm,0.2s						
CBEU	Beuda	0.36	94	Pg	Pg	06 00 32.3	0.0
CBEU				Lg	Lg	06 00 37.6	
	20nm,0.2s						
CBEU	Beuda	0.36	94	Pg	Pg	06 00 32.3	0.0
CBEU				Lg	Lg	06 00 37.6	
	20nm,0.2s						
FILF	Fillols	0.39	45	Pg	Pg	06 00 31.4	-1.3
FILF				Sg	Sg	06 00 35.3	-2.6
FILF	Fillols	0.39	45	Pg	Pg	06 00 31.5	-1.3
FILF				Sg	Sg	06 00 35.3	-2.6
FILF				Lg	Lg	06 00 35.7	
CARF	Carcanieres	0.44	352	Pg	Pg	06 00 33.6	-0.1
CARF				Sg	Sg	06 00 39.2	-0.2
CARF	Carcanieres	0.44	352	Pg	Pg	06 00 33.6	-0.1
CARF				Sg	Sg	06 00 39.2	-0.2
CARF				Lg	Lg	06 00 39.3	
PAND	Andorre	0.53	297	Pg	Pg	06 00 35.0	-0.5
PAND				Lg	Lg	06 00 43.0	
PAND	Andorre	0.53	297	Pg	Pg	06 00 35.0	-0.5
PAND				Lg	Lg	06 00 43.0	
EJON	La Jonquera	0.54	72	⇑Pg	Pg	06 00 35.7	+0.1
	35nm,0.1s,SNR=18						
EJON				Lg	Lg	06 00 43.0	
	107nm,0.2s,SNR=28						
EJON	La Jonquera	0.54	72	Pg	Pg	06 00 35.7	+0.1
	35nm,0.1s,SNR=18						
EJON				Lg	Lg	06 00 43.0	
	107nm,0.2s,SNR=28						
SJAF	Saint Jean de	0.55	68	Pg	Pg	06 00 35.6	-0.2
SJAF				Sg	Sg	06 00 42.5	-0.5
SJAF	Saint Jean de	0.55	68	Pg	Pg	06 00 35.6	-0.2
SJAF				Sg	Sg	06 00 42.5	-0.5
CFON	Fontmartina	0.55	161	⇑Pg	Pg	06 00 35.6	-0.3
	7.5nm,0.0s,SNR=18						
CFON				Lg	Lg	06 00 42.9	
	187nm,0.1s,SNR=7.9						
CFON	Fontmartina	0.55	161	Pg	Pg	06 00 35.6	-0.3
	7.5nm,0.0s,SNR=18						
CFON				Lg	Lg	06 00 42.9	
	187nm,0.1s,SNR=7.9						
EMIR	Miracle	0.62	233	⇑Pg	Pg	06 00 36.8	-0.3
	17nm,0.2s,SNR=18						
EMIR				Lg	Lg	06 00 44.1	
	12nm,0.1s,SNR=9.3						
EMIR	Miracle	0.62	233	Pg	Pg	06 00 36.8	-0.3
	17nm,0.2s,SNR=18						
EMIR				Lg	Lg	06 00 44.1	
	12nm,0.1s,SNR=9.3						
CORG	Organya	0.65	265	Pg	Pg	06 00 37.3	-0.4
CORG				Lg	Lg	06 00 46.0	
CORG	Organya	0.65	265	Pg	Pg	06 00 37.3	-0.4
CORG				Lg	Lg	06 00 46.0	
CCAS	Cassa de la Se	0.67	127	Pg	Pg	06 00 37.8	-0.1
CCAS				Lg	Lg	06 00 47.0	
	4.5nm,0.1s						
CCAS	Cassa de la Se	0.67	127	Pg	Pg	06 00 37.8	-0.1
CCAS				Lg	Lg	06 00 47.0	
	4.5nm,0.1s						
LPEF	Le Peyrat	0.70	343	Pg	Pg	06 00 38.7	+0.2
LPEF				Lg	Lg	06 00 48.1	
LRDF	Laroque-de-Fa	0.70	21	Pg	Pg	06 00 38.6	-0.1
LRDF				Sg	Sg	06 00 48.3	+0.5
LRDF	Laroque-de-Fa	0.70	21	Pg	Pg	06 00 38.5	-0.1
LRDF				Lg	Lg	06 00 47.7	
LRDF				Sg	Sg	06 00 48.3	+0.5
CPAL	Palau Saverder	0.72	88	Pg	Pg	06 00 38.4	-0.6
CPAL				Lg	Lg	06 00 48.4	
	12nm,0.1s						
CPAL	Palau Saverder	0.72	88	Pg	Pg	06 00 38.4	-0.6
CPAL				Lg	Lg	06 00 48.4	
	12nm,0.1s						
GRBF	Gourbit	0.74	319	Pg	Pg	06 00 38.8	-0.5
GRBF				Lg	Lg	06 00 48.4	
CEST	Esterri de Car	0.76	295	Pg	Pg	06 00 38.9	-0.9
CEST				Lg	Lg	06 00 49.2	
	4.7nm,0.1s						
CEST	Esterri de Car	0.76	295	Pg	Pg	06 00 38.9	-0.9
CEST				Lg	Lg	06 00 49.2	
	4.7nm,0.1s						
CSOR	Sort	0.79	277	Pg	Pg	06 00 40.0	-0.3
	2.3nm,0.1s,SNR=24						
CSOR				Lg	Lg	06 00 50.8	
	16nm,0.1s,SNR=13						
CSOR	Sort	0.79	277	Pg	Pg	06 00 40.0	-0.3
	2.3nm,0.1s,SNR=24						
CSOR				Lg	Lg	06 00 50.8	
	16nm,0.1s,SNR=13						
CTRE	Tremp	1.05	273	Pg	Pg	06 00 44.5	-0.8
CTRE				Lg	Lg	06 00 58.7	
	4.4nm,0.2s						
CTRE	Tremp	1.05	273	Pg	Pg	06 00 44.5	-0.8
CTRE				Lg	Lg	06 00 58.7	
	4.4nm,0.2s						
MLS	Moulis	1.05	310	Lg	Lg	06 00 58.8	
MTLF	Montolieu	1.06	1	ePg	Pg	06 00 44.8	-0.6
MTLF				eSg	Sg	06 00 58.0	-1.1
	25nm,0.2s						
MTLF	Montolieu	1.06	1	Pg	Pg	06 00 44.8	-0.6
MTLF				eSg	Sg	06 00 58.0	-1.1
	13nm,0.2s						
CAVN	Les Avellanes	1.14	250	Pg	Pg	06 00 46.2	-0.9
CAVN				Lg	Lg	06 01 01.5	
	7.4nm,0.1s						
CAVN	Les Avellanes	1.14	250	Pg	Pg	06 00 46.2	-0.9
CAVN				Lg	Lg	06 01 01.5	
	7.4nm,0.1s						
MELF	Melles	1.21	300	Pg	Pg	06 00 47.6	-0.7
MELF				Sg	Sg	06 01 03.4	-0.7
MELF	Melles	1.21	300	Pg	Pg	06 00 47.6	-0.7
MELF				Lg	Lg	06 01 03.3	
MELF				Sg	Sg	06 01 03.4	-0.7
EPOB	Poblet	1.25	222	⇑Pg	Pg	06 00 48.2	-0.8
	10nm,0.1s,SNR=18						
EPOB				Lg	Lg	06 01 04.5	
	30nm,0.2s,SNR=15						
EPOB	Poblet	1.25	222	Pg	Pg	06 00 48.2	-0.8
	10nm,0.1s,SNR=18						
EPOB				Lg	Lg	06 01 04.5	
	30nm,0.2s,SNR=15						
CGAR	Garraf	1.27	219	Pg	Pn	06 00 43.8	-5.1
CGAR				Lg	Lg	06 00 57.2	
	4.3nm,0.2s						
RESF	Ens	1.47	292	Lg	Lg	06 01 13.0	
EPF	Esparros	1.56	299	ePg	Pn	06 00 53.6	+0.7
EPF				eSg	Sb	06 01 14.3	+0.5
	15nm,0.3s						
EPF	Esparros	1.56	299	Pg	Pn	06 00 53.6	+0.7
EPF				eSg	Sb	06 01 14.3	+0.5
	7.4nm,0.3s						
VIEF	Viey	1.71	291	Lg	Lg	06 01 18.3	
ERTA	Horta de San J	1.92	227	Pg	Pb	06 01 00.9	+0.6
	4.7nm,0.2s,SNR=4.0						
ERTA				Lg	Lg	06 01 26.5	
	14nm,0.1s,SNR=7.9						
ERTA	Horta de San J	1.92	227	Pg	Pb	06 01 00.9	+0.6
	4.7nm,0.2s,SNR=4.0						
ERTA				Lg	Lg	06 01 26.5	
	14nm,0.1s,SNR=7.9						
ESAC	San Caprasio	2.06	255	Pn	Pn	06 01 00.8	+0.9
	4.4nm,0.1s,SNR=7.9						
ESAC				Pg	Pb	06 01 03.5	+0.8
	9.8nm,0.2s,SNR=7.9						
ESAC				Lg	Lg	06 01 29.9	
	45nm,0.2s,SNR=7.9						
ESAC	San Caprasio	2.06	255	Pn	Pn	06 01 00.8	+0.9
	4.4nm,0.1s,SNR=7.9						
ETSF	Etsaut	2.12	288	ePg	Pb	06 01 04.6	+0.9
ETSF				eSg	Sg	06 01 32.8	-0.5
	13nm,0.2s						
ETSF	Etsaut	2.12	288	Pg	Pb	06 01 04.6	+0.9
ETSF				eSg	Sg	06 01 32.8	-0.5
	6.6nm,0.2s						
LASF	Ste Croix	2.17	34	eSg	Sb	06 01 32.9	+1.5
	1.5nm,0.1s						
LASF	Ste Croix	2.17	34	eSg	Sb	06 01 32.9	+1.5
	0.8nm,0.1s						
IELO	Elcoad	2.59	284	Pg	Pg	06 01 14.4	-0.4
	0.9nm,0.2s,SNR=7.9						
IELO				Lg	Lg	06 01 47.4	
	4.8nm,0.2s,SNR=7.9						
IELO	Elcoad	2.59	284	Pg	Pg	06 01 14.4	-0.4
	0.9nm,0.2s,SNR=7.9						
IELO				Lg	Lg	06 01 47.4	
	4.8nm,0.2s,SNR=7.9						
IEPA	Eparoz	2.60	282	Pg	Pg	06 01 17.0	+2.0
	1.8nm,0.3s,SNR=7.9						
IEPA				Lg	Lg	06 01 48.7	
	3.1nm,0.2s,SNR=7.9						
CAF	Calviac	2.64	358	ePg	Pb	06 01 13.9	+1.3
CAF				eSg	Sb	06 01 47.5	+2.4
	13nm,0.2s						
CAF	Calviac	2.64	358	Pg	Pb	06 01 13.9	+1.3
CAF				eSg	Sb	06 01 47.5	+2.4
	6.4nm,0.2s						
SJPF	Ste Jean	2.65	289	ePg	Pb	06 01 14.1	+1.4
SJPF				eSg	Sg	06 01 49.0	-1.2
	4.8nm,0.3s						
SJPF	Ste Jean	2.65	289	Pg	Pb	06 01 14.1	+1.4
SJPF				eSg	Sg	06 01 49.0	-1.2
	2.4nm,0.3s						
EMOS	Mosqueruela	2.78	227	Pn	Pn	06 01 10.8	+1.0
	0.1nm,0.1s,SNR=7.9						
EMOS				Pg	Pg	06 01 17.0	-1.3
	2.4nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	06 01 43.0	-0.5
	0.0nm,0.3s,SNR=7.9						
EMOS				Lg	Lg	06 01 53.5	
	3.5nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	2.78	227	Pn	Pn	06 01 10.8	+1.0
	0.1nm,0.1s,SNR=7.9						
IUSE	Utxeti	2.84	285	Pg	Pg	06 01 18.5	-1.0
	0.8nm,0.3s,SNR=7.9						
IUSE				Lg	Lg	06 01 56.5	
	1.3nm,0.2s,SNR=7.9						
IUSE	Utxeti	2.84	285	Pg	Pg	06 01 18.5	-1.0
	0.8nm,0.3s,SNR=7.9						
IUSE				Lg	Lg	06 01 56.5	
	1.3nm,0.2s,SNR=7.9						
LFF	La Frestale	2.85	339	ePg	Pb	06 01 17.7	+1.5
LFF				eSg	Sg	06 01 54.8	-2.0
	7.8nm,0.3s						
LFF	La Frestale	2.85	339	Pg	Pb	06 01 17.7	+1.5
LFF				eSg	Sg	06 01 54.8	-2.0
	3.9nm,0.3s						
ELIZ	Elizondo	2.88	289	Pg	Pb	06 01 17.8	+1.2
	1.7nm,0.2s,SNR=7.9						
ELIZ				Lg	Lg	06 01 56.3	
	3.9nm,0.2s,SNR=7.9						
ELIZ	Elizondo	2.88	289	Pg	Pb	06 01 17.8	+1.2
	1.7nm,0.2s,SNR=7.9						
ELIZ				Lg	Lg	06 01 56.3	
	3.9nm,0.2s,SNR=7.9						
RJF	Les Rejaudoux	3.06	351	eSn	Sn	06 01 47.4	-2.8
RJF				eSg	Sg	06 02 01.3	-2.0
	3.9nm,0.2s						
RJF	Les Rejaudoux	3.06	351	Sn	Sn	06 01 47.4	-2.8
RJF				eSg	Sg	06 02 01.3	-2.0
	2.0nm,0.2s						
VIVF	Saint-Julien-l	3.14	34	eSg	Sg	06 02 03.3	-2.6
	3.0nm,0.3s						
VIVF	Saint-Julien-l	3.14	34	eSg	Sg	06 02 03.3	-2.6
	1.5nm,0.3s						
EIBI	Ibiza	3.32	191	Pg	Pb	06 01 25.0	+0.9
	0.7nm,0.3s,SNR=7.9						
EIBI				Sn	Sn	06 01 54.7	-1.9
	2.1nm,0.4s,SNR=7.9						
ETOR	Torete	3.51	247	Pn	Pn	06 01 20.3	+0.5
	2.9nm,0.1s,SNR=5.7						
ETOR				Pg	Pb	06 01 28.6	+1.3
	1.8nm,0.2s,SNR=7.9						
ETOR				Sn	Sn	06 02 02.1	+0.7
	3.0nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	06 02 18.2	
	3.5nm,0.1s,SNR=7.9						
ETOR	Torete	3.51	247	Pn	Pn	06 01 20.3	+0.5
	2.9nm,0.1s,SNR=5.7						
ETOR				Lg	Lg	06 02 18.2	
	3.5nm,0.1s,SNR=7.9						
GUD	Guadarrama	5.04	253	Sn	Sn	06 02 37.5	-1.8
	0.7nm,0.3s,SNR=7.9						
GUD	Guadarrama	5.04	253	Sn	Sn	06 02 37.5	-1.8
	0.7nm,0.3s,SNR=7.9						

AUST 05 06:11:55.1±46.0, 25°.46S×172°.69E, h672km±5km, Error ellipse: s-maj=13.8km s-min=3.5km az=268.0
IDC 05 06:10:06.1±1.5, 24°.03S×179°.71E, h0km, mb4.3/5, mb1 4.5/5, mb1mx4.0/18, mbtmp4.3/5, Error ellipse: s-maj=48.0km s-min=29.3km az=179.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMSA	Cobar Meteorol	30.92	248	P	P	06 16 27.5	+2.8
	baz=24,SNR=11						
QLP	Quilpie	32.11	258	P	P	06 16 37.6	+2.4
	baz=26,SNR=5.3						
TOO	Toolangi	32.15	237	P	P	06 16 38.7	+3.2
	baz=26,SNR=5.6						
STKA	Stephens Creek	34.43	248	P	P	06 16 57.3	+1.9
	4.8nm,0.5s,baz=93,slow=10,SNR=35						
STKA	Stephens Creek	34.43	248	P	P	06 16 57.5	+2.1
	baz=28,SNR=28						
BBOO	Buckleboo	39.15	247	P	P	06 17 35.4	-0.2
	baz=33,SNR=28						
ASAR	Alice Springs	41.75	261	P	P	06 17 56.6	-0.7
	3.6nm,0.5s,baz=98,slow=7.1,SNR=41						
WRA	Warramunga Arr	42.13	266	P	P	06 17 59.3	-1.1
	7.2nm,0.6s,baz=104,slow=8.2,SNR=33						
FORT	Forrest	46.02	250	P	P	06 18 29.2	-2.3
	baz=40,SNR=10						
KNRA	Kununurra	48.42	270	P	P	06 18 48.4	-2.0
	baz=42,SNR=4.7						
FITZ	Fitzroy Crossi	50.55	266	P	P	06 19 04.5	-2.2
	baz=44,SNR=5.7						
PALU	Palau	54.03	300	P	P	06 19 46.9	+14
	baz=50,SNR=8.8						
MORW	Morawa	56.58	250	P	P	06 19 46.3	-4.5
	baz=50,SNR=5.1						
QSPA	South Pole Qui	66.06	180	P	P	06 20 54.1	-0.5
	0.4nm,0.5s,baz=180,slow=1.0,SNR=5.2						
MNAI	Manna	76.14	271	P	P	06 22 08.6	+12
	baz=70,SNR=3.8						
TXAR	Lajitas Array	90.73	58	P	P	06 23 11.8	+0.5
	0.3nm,0.8s,baz=207,slow=5.2,SNR=5.0						

CSEM 05 06:15:55.6±0.8, 75°.88N×8°.40E, h10km, ML2.6, Error ellipse: s-maj=19.7km s-min=9.3km az=78.0
BER 05 06:15:56.0±1.8, 75°.81N×7°.91E, h10km, MD2.5, ML2.6(NAO)
NAO 05 06:15:57.5±3.3, 75°.85N×9°.21E, ML2.6
ISC 05 06:15:54.7±2.4, 75°.88N±0°.10×8°.1E±0°.1, h10km, n12, σ1s.18/21, Greenland Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HSP	Hornsund	2.08	54	eP	Pn	06 16 30.9	+1.3
HSP				eS	Sn	06 16 54.5	-1.0
SPA0	Spitsbergen Ar	2.96	35	Pn	Pn	06 16 43.6	+1.9
	baz=216,slow=14						
SPA0				Sn	Sn	06 17 16.7	-0.5
	baz=232,slow=28						
SPA0	Spitsbergen Ar	2.96	35	Pn	Pn	06 16 43.6	+1.9
	baz=216,slow=14						
SPA0				Sn	Sn	06 17 16.7	-0.5
	baz=232,slow=28						
SPA0	Spitsbergen Ar	2.96	35	Pn	Pn	06 16 43.6	+1.9
	baz=216,slow=13,SNR=130						
SPA0				Sn	Sn	06 17 16.7	-0.5
	baz=232,slow=24,SNR=4.3						
KBS	Kingsbay	3.17	13	Pn	Pn	06 16 45.0	+0.5
KBS				Sn	Sn	06 17 21.1	-1.3
KBS	Kingsbay	3.17	13	Pn	Pn	06 16 45.0	+0.5
KBS				Sn	Sn	06 17 21.1	-1.3
KBS	Kingsbay	3.17	13	Pn	Pn	06 16 45.0	+0.5
KBS				Sn	Sn	06 17 21.1	-1.3
HOPEN	Hopen	4.09	73	eP	Pn	06 16 57.9	+0.8
HOPEN				eS	Sn	06 17 43.5	-1.4
HOPEN	Hopen	4.09	73	eP	Pn	06 16 57.9	+0.8
	SNR=49						
HOPEN				eS	Sn	06 17 43.5	-1.4
	SNR=49						
ARA0	ARCESS Array S	8.17	132	Pn	Pn	06 17 52.9	-0.2
	baz=332,slow=12						
ARA0				Sn	Sn	06 19 19.0	-6.3
	baz=332,slow=22						
ARA0	ARCESS Array S	8.17	132	Pn	Pn	06 17 52.9	-0.2
	baz=332,slow=12						
ARA0				Sn	Sn	06 19 19.0	-6.3
	baz=332,slow=22						
ARA0	ARCESS Array S	8.17	132	Pn	Pn	06 17 52.9	-0.2
	baz=332,slow=12,SNR=1.8						

IDC 05 06:16:01.7±0.4, 58°.66S×25°.10W, h0km, mb4.9/16, mb1 4.9/18, mb1mx4.8/22, mbtmp4.9/18, ML5.4/2, MS4.3/18, Ms1 4.3/18, ms1mx4.2/24, Error ellipse: s-maj=16.4km s-min=12.8km az=62.0
ISCJB 05 06:16:01.4±5.3, 58°.67S±0°.06×25°.1W±0°.1, h6km±33km, mb4.9/27, MS4.5/19, Error ellipse: s-maj=12.5km s-min=9.3km az=137.0
MOS 05 06:16:05.9±1.1, 58°.73S×25°.16W, h33km, mb5.2/9, Error ellipse: s-maj=26.0km s-min=12.7km az=101.4
BJI 05 06:16:06.0, 57°.79S×25°.21W, h37km, mB5.4/10, Ms5.4/6, Ms7 4.9/9
NEIC 05 06:16:07.3±1.3, 58°.70S×25°.12W, h36km±10km, mb5.1/21, Error ellipse: s-maj=7.0km s-min=5.5km az=217.0
GCMT 05 06:16:11.1±0.3, 59°.07S×24°.70W, h36km, MW5.1, Moment Tensor Solution. s38,c47; s66,c84; Moment tensor: Scale 10^{16}Nm; M_{rr}3.98±.27; $M_{\theta\theta}$1.35±.19; $M_{\phi\phi}$-5.33±.17; $M_{r\theta}$-1.55±.22; $M_{\theta\phi}$-0.38±.11; $M_{\phi r}$0.76±.16; Best double couple: $M_0$5.10000×10^{16} NP1:ϕ_s207.00000°, δ46.00000°, λ126.00000°. NP2:ϕ_s341.00000°, δ54.00000°, λ59.00000°. Principal axes: T 4.7700, Plg65.0000°, Azm191.0000°; N 0.6300, Plg25.0000°, Azm0.0000°; P -5.4000, Plg4.0000°, Azm92.0000°; Data Used: IU II G IC CN.
ISC 05 06:16:07.4±0.3, 58°.72S±0°.08×25°.29W±0°.07, h36km±6km, n451, σ0s.84/429, mb4.9/26, MS4.4/19, 2C-2D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA2	Neumayer--Watz	14.33	156	ePn	Pn	06 19 25.6	-1.7
VNA2	Neumayer--Watz	14.33	156	eSn	Sn	06 21 51.3	-13
SNAA	Sanae	15.88	154	ePn	Pn	06 19 45.7	-2.2
SNAA	Sanae	15.88	154	eSn	Sn	06 22 28.6	-14
SNAA	Sanae	15.88	154	eP	Pn	06 19 45.3	-2.6
	62nm,0.6s						
SNAA				eS	Sn	06 22 28.3	-14
SNAA	Sanae	15.88	154	Pn	Pn	06 19 45.7	-2.2
	4.4nm,0.3s,baz=322,slow=14,SNR=207						
SNAA				Sn	Sn	06 22 26.2	-16
	0.5nm,0.3s,baz=330,slow=19,SNR=3.6						
SNAA				LR	LR	06 24 38.5	
	comp=Z,382nm,19.9s,baz=332,slow=32						
PMSA	Palmer Station	19.07	235	eP	Pn	06 20 29.0	+1.8
	203nm,1.4s						
PMSA	Palmer Station	19.07	235	P	Pn	06 20 28.1	+0.9
	3.3nm,0.3s,baz=125,slow=6.2,SNR=9.2						
PMSA				LR	LR	06 26 18.0	
	comp=Z,1μm,19.7s,baz=294,slow=32						
MAIT	Maitri	19.46	143	eP	P	06 20 20.2	-10
MAIT	Maitri	19.46	143	eP	P	06 20 20.1	-10
EFI	East Falkland	19.83	276	eP	Pn	06 20 37.0	+0.6
EFI				pmax	pmax		

comp=Z,124nm,1.1s
EFI East Falkland 19.83 276 *e*P P **06 20 37.0 +0.6**
comp=Z,124nm,1.1s
USHA Ushuaia 23.64 261 P P **06 21 16.2 +1.3**
USHA Ushuaia 23.64 261 P P **06 21 16.2 +1.3**
comp=Z,37nm,0.9s,baz=108,slow=11,SNR=7.2
TRQA Tornquist 31.35 295 *e*P P **06 22 24.3 0.0**
comp=Z,3.1nm,0.8s
TRQA *e* 06 22 39.2
QSPA South Pole Qui 31.52 180 *e*P P **06 22 26.3 +0.5**
comp=Z,30nm,0.7s
QSPA *e*PcP PcP **06 25 17.2 -0.3**
QSPA South Pole Qui 31.52 180 P P **06 22 26.4 +0.7**
comp=Z,31nm,0.6s,baz=206,slow=3.3,SNR=284
QSPA PcP PcP **06 25 17.4 -0.1**
comp=Z,12nm,0.9s,baz=284,slow=3.7,SNR=3.3
PLCA Paso Flores 33.53 282 *e*P P **06 22 42.7 -0.7**
comp=Z,21nm,1.1s
PLCA Paso Flores 33.53 282 P P **06 22 43.4 0.0**
comp=Z,8.9nm,0.7s,baz=145,slow=8.8,SNR=21
PLCA LR LR 06 35 14.7
comp=Z,310nm,19.7s,baz=170,slow=34
MAW Mawson 37.40 141 P P **06 23 15.6 -0.7**
MAW PcP PcP **06 25 34.4 +0.3**
MAW Mawson 37.40 141 P P **06 23 15.6 -0.7**
comp=Z,5.7nm,0.5s,baz=228,slow=8.0,SNR=16
MAW PcP PcP **06 25 34.4 +0.3**
comp=Z,2.9nm,0.8s,baz=251,slow=8.2,SNR=3.5
MAW LR LR 06 36 45.7
comp=Z,519nm,18.5s,baz=239,slow=33
CAM4 Nova Friburgo 38.38 334⇑ *i*P P **06 23 24.7 -0.5**
CAM4 *i* 06 23 26.3
CAM4 *i* 06 23 28.9
CAM4 *i* 06 23 33.7
CAM4 *i* 06 23 34.9
CAM4 *i* 06 23 39.4
CAM4 *i* 06 23 49.3
CAM4 *i* 06 24 00.6
CPUP Villa Florida 39.35 311 P P **06 23 31.6 -1.4**
CPUP PcP PcP **06 25 39.8 -1.0**
CPUP Villa Florida 39.35 311 P P **06 23 31.6 -1.4**
comp=Z,1.3nm,0.4s,baz=130,slow=7.0,SNR=12
CPUP PcP PcP **06 25 39.8 -1.0**
comp=Z,1.1nm,0.5s,baz=90,slow=2.5,SNR=3.9
CPUP LR LR 06 38 35.2
comp=Z,325nm,21.9s,baz=146,slow=34
SBA Scott Base 43.48 184 *e*P P **06 24 08.0 +1.7**
SBA *e* 06 24 20.8
SBA *e* 06 25 55.2
SBA pmax pmax
comp=Z,83nm,1.6s
SBA Scott Base 43.48 184 *e*P P **06 24 08.0 +1.7**
comp=Z,83nm,1.6s
SBA *e* 06 24 20.8
SBA *e*PcP PcP **06 25 55.2 +1.5**
VNDA Vanda 43.95 182 *e*P P **06 24 11.3 +1.2**
comp=Z,27nm,0.8s
VNDA *e*PcP PcP **06 25 54.9 -0.3**
VNDA Vanda 43.95 182 P P **06 24 11.4 +1.3**
comp=Z,24nm,0.6s,baz=187,slow=6.5,SNR=203
VNDA PcP PcP **06 25 56.1 +0.9**
comp=Z,4.6nm,0.8s,baz=234,slow=5.4,SNR=3.4
VNDA LR LR 06 40 10.8
comp=Z,318nm,19.2s,baz=154,slow=33
BOSA Boshof 45.74 71 *e*P P **06 24 25.1 +0.1**
comp=Z,23nm,1.5s
BOSA Boshof 45.74 71 P P **06 24 25.0 0.0**
comp=Z,3.3nm,0.7s,baz=220,slow=9.5,SNR=7.2
BOSA LR LR 06 39 23.8
comp=Z,332nm,19.1s,baz=170,slow=31
BDFB Brasilia 46.19 329 P P **06 24 29.5 +0.8**
BDFB PcP PcP **06 26 04.6 +0.6**
BDFB Brasilia 46.19 329 P P **06 24 29.5 +0.8**
comp=Z,9.3nm,0.7s,baz=144,slow=6.1,SNR=14
BDFB PcP PcP **06 26 04.6 +0.6**
comp=Z,4.7nm,0.6s,baz=158,slow=5.3,SNR=6.0
LVC Limon Verde 47.53 300 *e*P P **06 24 40.4 +1.1**
comp=Z,42nm,1.0s
LBTB Lobatse 48.90 69 *e*P P **06 24 49.8 +0.2**
comp=Z,16nm,1.1s
TSUM Tsumeb 50.19 57 *e*P P **06 24 60.0 +0.5**
comp=Z,6.5nm,0.9s
LPAZ La Paz 52.76 305 *e*P P **06 25 18.6 -0.8**
comp=Z,6.4nm,0.8s
LPAZ PcP PcP **06 26 28.8 +0.2**
LPAZ La Paz 52.76 305 P P **06 25 18.5 -0.8**
comp=Z,6.4nm,0.7s,baz=162,slow=5.6,SNR=28
LPAZ PcP PcP **06 26 28.8 +0.2**
comp=Z,3.6nm,0.6s,baz=198,slow=4.5,SNR=3.5
DRV Dumont d'Urvil 54.45 173 P P 06 25 45.0 +15
DRV Dumont d'Urvil 54.45 173 SS SS 06 37 17.0 +29
SAML Samuel 57.41 314 *e*P P **06 25 50.5 -1.6**
comp=Z,6.1nm,0.6s
LSZ Lusaka 58.46 66 *e*P P **06 25 59.5 -0.2**
comp=Z,53nm,2.3s
LSZ Lusaka 58.46 66 LR LR 06 48 01.9
comp=Z,465nm,19.0s,baz=359,slow=33
DBIC Dimbokro 67.21 22 *e*P P **06 26 58.0 +0.3**
comp=Z,7.4nm,0.8s
DBIC Dimbokro 67.21 22 P P **06 26 57.4 -0.3**
comp=Z,4.7nm,0.6s,baz=174,slow=9.8,SNR=7.2
DBIC LR LR 06 50 26.4
comp=Z,128nm,20.0s,baz=146,slow=31
OTAV Otavalo 71.98 303 *e*P P **06 27 27.7 -0.1**
comp=Z,10nm,1.3s
TOA0 Torodi Ar. Sit 74.92 27 *e*P P **06 27 44.5 +0.2**
TORD Torodi Ar. Bea 74.92 27 P P **06 27 44.7 +0.4**
TORD Torodi Ar. Bea 74.92 27 P P **06 27 44.7 +0.4**
comp=Z,11nm,0.7s,baz=198,slow=6.0,SNR=80
TORD LR LR 06 53 19.4
comp=Z,219nm,21.7s,baz=190,slow=30
KMBO Kilima Mbogo 75.09 67 LR LR 06 59 16.6
comp=Z,454nm,18.1s,baz=92,slow=35
RPZ Rata Peaks 77.03 192 P P **06 27 56.7 +0.5**
RPZ Rata Peaks 77.03 192 P P **06 27 56.7 +0.5**
comp=Z,21nm,1.0s,baz=0.0,slow=8.1,SNR=4.0
RKT Rikitea 80.14 242 *e*LR LR 06 53 18.1
comp=Z,1μm,37.0s
URZ Urewera 81.59 198 *e*P P **06 28 21.5 +0.4**
comp=Z,38nm,1.2s
URZ Urewera 81.59 198 P P **06 28 21.7 +0.6**
comp=Z,18nm,1.0s,baz=165,slow=3.9,SNR=5.3
OUZ Omahuta 85.09 195 *e*P P **06 28 38.9 -0.3**
comp=Z,31nm,1.0s
TBI Tubuai 86.17 230 *e*LR LR 06 56 07.4
comp=Z,184nm,24.0s,baz=162
BBOO Buckleboo 87.50 164 *e*P P **06 28 50.6 -0.5**
comp=Z,1μm,2.3s
FORT Forrest 88.11 157 *e*P P **06 28 53.5 -0.5**
comp=Z,23nm,0.7s
ATD Arta Tunnel 88.79 65 LR LR 07 02 54.6
comp=Z,95nm,21.5s,baz=182,slow=32
STKA Stephens Creek 89.09 169 *e*P P **06 28 58.1 -0.5**
comp=Z,1.4nm,0.9s
STKA Stephens Creek 89.09 169 P P **06 28 58.3 -0.3**
comp=Z,11nm,0.9s,baz=170,slow=3.8,SNR=22
STKA LR LR 07 06 46.8
comp=Z,310nm,18.2s,baz=204,slow=34
PPT2 Papeete2 91.39 232 *e*LR LR 06 58 33.8
comp=Z,209nm,23.0s
PPT Papeete 91.40 232 LR LR 07 01 53.0
comp=Z,235nm,18.9s,baz=159,slow=30
ASAR Alice Springs 96.13 161 P P **06 29 30.1 -1.1**
ASAR PKKPbc **PKKPbc** **06 46 16.9 +1.8**
ASAR Alice Springs 96.13 161 P P **06 29 30.1 -1.1**
comp=Z,4.2nm,0.8s,baz=182,slow=4.1,SNR=42
ASAR PKKPbc **PKKPbc** **06 46 16.9 +1.8**
comp=Z,0.5nm,0.5s,baz=11,slow=1.9,SNR=12
KEST Kesra 98.43 28 LR LR 07 12 06.9
comp=Z,55nm,19.2s,baz=255,slow=34
DZM Mont Dzumac 98.93 191 *e*LR LR 07 02 02.8
comp=Z,217nm,22.9s
ESDC Sonseca Array 99.63 17 LR LR 07 12 10.3
comp=Z,69nm,18.6s,baz=130,slow=34
FITZ Fitzroy Crossi 99.81 152 LR LR 07 13 52.4
comp=Z,145nm,19.6s,baz=188,slow=35
WRA Warramunga Arr 99.84 161 P **Pdif** **06 29 46.6 -1.4**
WRA PKKPbc **PKKPdf** **06 46 07.8 -0.2**
WRA Warramunga Arr 99.84 161 P **Pdif** **06 29 46.6 -1.4**
comp=Z,0.5nm,0.9s,baz=195,slow=4.5,SNR=4.5
WRA PKKPbc **PKKPdf** **06 46 07.8 -0.2**
comp=Z,0.3nm,0.4s,baz=1.1,slow=2.8,SNR=14
WRA LR LR 07 09 55.6
comp=Z,269nm,21.8s,baz=155,slow=32
632A Uvalde 107.25 298 P 06 34 29.3
baz=108
631A Perdido Creek 107.53 298 P 06 34 29.8
baz=108
JCT Junction City 108.08 299 P 06 34 30.7
baz=108
530A J-C Ranch, Com 108.50 298 P 06 34 31.9
baz=109
628A Black Gap, Mar 108.67 296 P 06 34 32.0
baz=109
627A Terlingua Ranc 108.87 296 P 06 34 32.4
baz=109
529A Stev Forest Ra 108.89 297 P 06 34 32.6
baz=109
TXAR Lajitas Array 108.91 295 PKiKP **PKiKP** **06 34 32.5 +0.1**
TXAR Lajitas Array 108.91 295 PKiKP **PKiKP** **06 34 32.5 +0.1**
comp=Z,0.6nm,0.7s,baz=159,slow=4.9,SNR=7.7
430A Baggett Ranch, 108.99 298 P 06 34 32.6
baz=109
429A Davenport Ranc 109.16 297 P 06 34 33.0
baz=110
626A Big Bend Ranch 109.31 295 P 06 34 33.3
baz=110
330A Mertzon 109.49 298 P 06 34 33.1
baz=110
527A Woodward Ranch 109.56 296 P 06 34 34.1
baz=110
428A Kincaid Ranch, 109.61 297 P 06 34 34.2
baz=110
427A Hyter Ranch, 110.05 296 P 06 34 34.3
baz=110
328A Wristen Ranch, 110.22 297 P 06 34 34.6
baz=110
425A Indio Mountain 110.74 295 P 06 34 35.0
baz=111
125A Gardner Draw, 112.14 296 P 06 34 37.8
baz=112
Z25A Roswell 112.69 297 P 06 34 39.2
baz=113
319A Douglas 113.28 292 P 06 34 41.0
baz=114
Z23A Rita Site, Whi 113.38 296 P 06 34 41.8
baz=114
W27A Bowe Ranch, En 113.41 299 P 06 34 40.8
baz=114
121A Cookes Peak, D 113.52 294 P 06 34 41.7
baz=114
Y24A Capitan 113.56 297 P 06 34 41.5
baz=114
T31A Randall Ranch, 113.58 303 P 06 34 41.4
baz=114
Z22A Elephant Butte 113.72 295 P 06 34 41.6
baz=114
Y23A Lovelace Mesa, 113.85 296 P 06 34 42.2
baz=114
120A U Bar Ranch, L 113.93 293 P 06 34 42.6
baz=114
S31A Mullinville 113.93 303 P 06 34 42.0
baz=114
Z21A St. Cloud Mine 114.10 295 P PKPdf 06 34 42.7 +0.4
baz=114
W25A X Bar L Ranch, 114.17 298 P PKPdf 06 34 42.8 +0.5
baz=114
Y22A Socorro 114.28 296 P PKPdf 06 34 42.0 -0.6
baz=115
V26A Tequesquite Ra 114.34 299 P PKPdf 06 34 42.6 +0.1
baz=115
U27A Thompson Grove 114.42 300 P PKPdf 06 34 42.6 -0.1
baz=115
W24A Lazy 6 Ranch, 114.60 297 P PKPdf 06 34 43.2 0.0
baz=115
S29A Ulysses 114.65 302 P PKPdf 06 34 43.5 +0.4
baz=115
TUC Tucson 114.78 292 *e*PKIKP PKPdf 06 34 43.6 +0.1
TUC Tucson 114.78 292 *e*PKPdf PKPdf 06 34 43.6 +0.2
R30A Dighton 114.83 303 P PKPdf 06 34 43.6 +0.3
baz=115
Y20A Horse Springs, 114.93 294 P PKPdf 06 34 44.4 +0.5
baz=115
V24A Rampart Ranch, 114.97 298 P PKPdf 06 34 44.0 +0.1
baz=115
X21A Alamocita Cree 115.09 295 P **PKPdf** **06 34 44.1 -0.1**
baz=115
U25A Circle Dot Ran 115.12 299 P **PKPdf** **06 34 44.1 0.0**
baz=115
T26A Comanche Natio 115.39 300 P **PKPdf** **06 34 45.0 +0.3**
baz=116
V23A Ortiz Mt. (NFS 115.40 297 P **PKPdf** **06 34 45.7 +0.9**
baz=116
X20A Quemado 115.50 295 P **PKPdf** **06 34 45.4 +0.5**
baz=116
R28A Tribune 115.56 302 P **PKPdf** **06 34 44.8 0.0**
baz=116
S26A Kim 115.70 300 P **PKPdf** **06 34 45.4 +0.2**
baz=116
T25A Trinidad 115.73 299 P **PKPdf** **06 34 45.7 +0.4**
baz=116
V22A San Miguel Ran 115.88 297 P **PKPdf** **06 34 46.1 +0.4**
baz=116
U23A El Rito 115.88 298 P **PKPdf** **06 34 44.9 -0.8**
baz=116
R27A Eads 115.95 301 P **PKPdf** **06 34 45.5 0.0**
baz=116
T24A Torres, Weston 115.97 299 P **PKPdf** **06 34 45.8 -0.1**
baz=116
S25A Robets Cordova 116.17 300 P **PKPdf** **06 34 46.5 +0.3**
baz=116
X18A Snowflake 116.18 294 P **PKPdf** **06 34 46.8 +0.6**
baz=116
R26A Arlington 116.25 301 P **PKPdf** **06 34 46.4 +0.2**
baz=117
S24A Houchin Ranch, 116.51 299 P **PKPdf** **06 34 47.0 +0.1**
baz=117
V20A Brimhall 116.51 296 P **PKPdf** **06 34 47.1 +0.2**
baz=117
113A Mohawk Valley, 116.61 290 P **PKPdf** **06 34 47.3 +0.5**
baz=117
U21A Nageezi 116.65 297 P **PKPdf** **06 34 47.5 +0.4**
baz=117
Z14A Wintersburg 116.69 291 P **PKPdf** **06 34 47.1 +0.1**
baz=117
T22A Edith 116.77 298 P **PKPdf** **06 34 48.3 +0.9**
baz=117
Q26A Hugo 116.79 301 P **PKPdf** **06 34 47.8 +0.6**
baz=117
X16A Lo Mia Camp, P 116.81 292 P **PKPdf** **06 34 48.0 +0.6**
baz=117
S23A Nye Farm, Mont 116.92 299 P **PKPdf** **06 34 48.1 +0.4**
baz=117
R24A Sanders Place, 116.94 300 P **PKPdf** **06 34 48.1 +0.5**
baz=117
Q25A Bedland, Calha 117.11 301 P **PKPdf** **06 34 48.2 +0.2**
baz=117
Y14A Wickenburg 117.18 291 P **PKPdf** **06 34 48.1 +0.1**
baz=118
P26A Davis Ranch, A 117.24 302 P **PKPdf** **06 34 48.0 -0.1**
baz=118
S22A 4UR Ranch, Cre 117.33 298 P **PKPdf** **06 34 48.9 +0.4**
baz=118
GLA Glamis 117.36 289 P **PKPdf** **06 34 49.0 +0.6**
baz=118
WUAZ Wupatki 117.67 293 P **PKPdf** **06 34 49.4 +0.3**
baz=118
MVCO Mesa Verde 117.67 296 P **PKPdf** **06 34 49.3 +0.2**
baz=118
R22A Saguache, Gunn 117.69 298 P **PKPdf** **06 34 50.0 +0.8**
baz=118
S21A Coal Bank Pass 117.71 297 P **PKPdf** **06 34 50.1 +0.9**
baz=118
OGNE Ogallala 117.79 304 P **PKPdf** **06 34 49.4 +0.4**
baz=118
ECSD EROS Data Cent 117.81 309 *e*PKPdf **PKPdf** **06 34 47.9 -1.0**
Q23A Hartsel 117.82 300 P **PKPdf** **06 34 49.4 0.0**
baz=118
N27A Anderson Farm, 117.90 303 P **PKPdf** **06 34 49.6 +0.3**
baz=118
SCHQ Schefferville 118.02 334 PKP **PKPdf** **06 34 48.4 -0.5**
SCHQ Schefferville 118.02 334 PKP **PKPdf** **06 34 48.4 -0.5**
comp=Z,3.0nm,0.6s,baz=104,slow=3.5,SNR=9.8
PDMCI Parker Dam,Lak 118.03 290 P **PKPdf** **06 34 50.1 +0.5**
baz=118
S20A Disappointment 118.11 297 P **PKPdf** **06 34 50.3 +0.3**
baz=118
BC3 Big Chuckawall 118.15 289 P **PKPdf** **06 34 50.3 +0.3**
baz=118
P23A Jefferson 118.20 300 P **PKPdf** **06 34 50.3 +0.2**
baz=118
Q22A Crested Butte, 118.28 299 P **PKPdf** **06 34 50.6 +0.3**
baz=119
IRM Iron Mountain 118.41 289 P **PKPdf** **06 34 51.2 +0.8**
baz=119
R20A Redvale 118.41 297 P **PKPdf** **06 34 50.6 +0.2**
baz=119
ISCO Idaho Springs 118.45 300 P **PKPdf** **06 34 50.9 +0.3**
baz=119
PV01 Paradox Valley 118.45 297 *e*PKPdf **PKPdf** **06 34 50.4 -0.2**
W13A Hualapai Mount 118.54 291 P **PKPdf** **06 34 51.1 +0.3**
baz=119
BELC Belle Mtn. Jos 118.70 289 P **PKPdf** **06 34 51.9 +0.9**
baz=119
S18A Hurst Farm, Bl 118.76 296 P **PKPdf** **06 34 51.8 +0.6**
baz=119
P22A Eagle 118.80 299 P **PKPdf** **06 34 51.3 +0.1**
baz=119
U15A North Rim 118.84 293 P **PKPdf** **06 34 51.9 +0.5**
baz=119
O23A Lake Granby, G 118.92 300 P **PKPdf** **06 34 51.7 +0.3**
baz=119
Q20A Ridgley Place, 118.99 298 P **PKPdf** **06 34 51.9 +0.5**
baz=119
P21A Newcastle 119.06 299 P **PKPdf** **06 34 52.1 +0.4**
baz=119
GMRC Granite Mounta 119.16 290 P **PKPdf** **06 34 52.4 +0.5**
baz=119
O22A Kremmling 119.16 300 P **PKPdf** **06 34 52.1 +0.1**
baz=120
M24A Cheyenne 119.44 302 P **PKPdf** **06 34 52.7 +0.4**
baz=120
N23A Red Feather La 119.48 301 P **PKPdf** **06 34 52.5 0.0**
baz=120
N22A Wattenberg Ran 119.63 300 P **PKPdf** **06 34 53.0 +0.2**
baz=120
BFSC Mount Baldy Ra 119.71 288 P **PKPdf** **06 34 53.4 +0.4**
baz=120
M23A Laramie 119.84 301 P **PKPdf** **06 34 53.0 -0.1**
baz=120
P19A Cripple Cowboy 119.85 298 P **PKPdf** **06 34 53.5 +0.3**
baz=120
O20A White River Ci 119.91 299 P **PKPdf** **06 34 53.3 +0.1**
baz=120
K25A Mack Ranch, Ha 119.95 303 P **PKPdf** **06 34 53.5 +0.3**
baz=120
N21A Black Mountain 120.08 300 P **PKPdf** **06 34 53.7 +0.1**
baz=120
GSC Goldstone 120.14 289 P **PKPdf** **06 34 53.1 -0.6**
baz=120
SRU San Rafael 120.15 296 *e*PKIKP **PKPdf** **06 34 53.2 -0.5**
SRU San Rafael 120.15 296 *e*PKPdf **PKPdf** **06 34 53.2 -0.5**
SRU San Rafael 120.15 296 P **PKPdf** **06 34 52.6 -1.1**
baz=120
Q16A Castle Valley 120.30 296 P **PKPdf** **06 34 54.1 +0.1**
baz=121
L23A Garrett 120.35 302 P **PKPdf** **06 34 53.9 -0.2**
baz=121
SHOC Shoshone 120.35 290 P **PKPdf** **06 34 54.6 +0.6**
baz=121
EDW2 Edwards Air Fo 120.39 288 P **PKPdf** **06 34 54.6 +0.4**
baz=121
P18A Preston Nutter 120.43 297 P **PKPdf** **06 34 55.1 +0.7**
baz=121
O19A Miners Draw (B 120.44 298 P **PKPdf** **06 34 54.5 +0.3**
baz=121
MSU Marysvale 120.45 295 *e*PKIKP **PKPdf** **06 34 55.1 +0.7**
MSU Marysvale 120.45 295 *e*PKPdf **PKPdf** **06 34 55.1 +0.7**
MVU Marysvale 120.46 295 *e*PKPdf **PKPdf** **06 34 55.0 +0.6**
ARUT Antelope Range 120.48 293 *e*PKIKP **PKPdf** **06 34 55.1 +0.7**
ARUT Antelope Range 120.48 293 *e*PKPdf **PKPdf** **06 34 55.1 +0.7**
N20A Spence Gulch, 120.48 299 P **PKPdf** **06 34 54.5 +0.1**
baz=121
M21A Separation Pea 120.69 300 P **PKPdf** **06 34 54.3 -0.5**
baz=121
LRMC Laurel Mountai 120.71 288 P **PKPdf** **06 34 54.2 -0.7**
baz=121
K23A Bowen Ranch, D 120.83 302 P **PKPdf** **06 34 54.8 -0.1**
baz=121
SBC Santa Barbara 120.90 286 P **PKPdf** **06 34 55.2 +0.2**
baz=121
L21A Rawlins 120.98 301 P **PKPdf** **06 34 55.0 -0.2**
baz=121
MPMC Manual Prospec 121.08 289 P **PKPdf** **06 34 55.8 +0.2**
baz=121
FURC Furnace Creek, 121.09 290 P **PKPdf** **06 34 55.7 +0.4**
baz=121
K22A Casper 121.15 302 P **PKPdf** **06 34 55.1 -0.4**
baz=122
RSSD Black Hills 121.23 304 *e*PKIKP **PKPdf** **06 34 55.0 -0.7**
RSSD Black Hills 121.23 304 *e*PKPdf **PKPdf** **06 34 55.0 -0.7**
ISA Isabella 121.25 288 P **PKPdf** **06 34 56.2 +0.4**
baz=122
I24A Kuemmerle Ranc 121.28 304 P **PKPdf** **06 34 55.0 -0.6**
baz=122
PKM Peak Mountain 121.31 286 P **PKPdf** **06 34 56.6 +0.5**
baz=122
L20A Wamsutter 121.45 300 P **PKPdf** **06 34 56.4 +0.3**
baz=122
DAU Daniels Canyon 121.52 297 *e*PKIKP **PKPdf** **06 34 57.2 +0.7**
DAU Daniels Canyon 121.52 297 *e*PKPdf **PKPdf** **06 34 57.2 +0.7**
VES Vestal, Richgr 121.69 288 P **PKPdf** **06 34 56.6 +0.1**
baz=122
J22A Midwest 121.73 302 P **PKPdf** **06 34 55.6 -1.0**
baz=122
GRAC Grapevine Rang 121.76 290 P **PKPdf** **06 34 57.4 +0.7**
baz=122
JLU Jordanelle 121.76 297 *e*PKPdf **PKPdf** **06 34 57.4 +0.5**
R11A Troy Canyon, C 121.95 292 P **PKPdf** **06 34 57.7 +0.5**
baz=122
H24A Dirks Ranch, A 121.95 304 P **PKPdf** **06 34 56.2 -0.7**
baz=122
K20A Yellowstone Ra 121.97 300 P **PKPdf** **06 34 56.6 -0.5**
baz=122
L19A Farson 121.98 299 P **PKPdf** **06 34 56.8 -0.4**
baz=122
DUG Dugway 122.08 295 *e*PKIKP **PKPdf** **06 34 57.4 +0.1**
DUG Dugway 122.08 295 *e*PKPdf **PKPdf** **06 34 57.4 +0.1**
DUG Dugway 122.08 295 P **PKPdf** **06 34 58.0 +0.7**
baz=122
M17A Scullys Gap (B 122.09 298 P **PKPdf** **06 34 57.5 0.0**
baz=122
J21A Lysite 122.11 301 P **PKPdf** **06 34 57.0 -0.4**
baz=122
K19A Absolon Red Bu 122.32 300 P **PKPdf** **06 34 57.3 -0.5**
baz=123
J20A Shoshoni 122.40 301 P **PKPdf** **06 34 58.0 +0.1**
baz=123
I21A Big Trails, Te 122.41 302 P **PKPdf** **06 34 57.1 -0.8**
baz=123
PDAR Pinedale Array 122.60 300 PKP **PKPdf** **06 34 57.6 -0.8**
PDAR Pinedale Array 122.60 300 PKP **PKPdf** **06 34 57.6 -0.8**
comp=Z,2.0nm,0.5s,baz=125,slow=5.2,SNR=24
BW06 Boulder Array 122.60 300 P **PKPdf** **06 34 57.8 -0.5**
baz=123
HWUT Hardware Ranch 122.61 297 *e*PKPdf **PKPdf** **06 34 58.1 -0.3**
G23A Biddle 122.68 304 P **PKPdf** **06 34 57.1 -1.1**
baz=123
L17A Cokeville 122.68 298 P **PKPdf** **06 34 58.2 -0.3**
baz=123
K18A Toltan Ranch, 122.72 299 P **PKPdf** **06 34 58.4 -0.2**
baz=123
NB2 NORSAR Subarra 122.76 20 PKPdf **PKPdf** **06 34 57.2 -0.6**
comp=Z,3.2nm,1.1s,baz=202,slow=1.9
NOA NORSAR Array B 122.76 20 PKP **PKPdf** **06 34 57.3 -0.5**
NOA NORSAR Array B 122.76 20 PKP **PKPdf** **06 34 57.3 -0.5**
comp=Z,1.3nm,0.7s,baz=204,slow=1.9,SNR=4.0
J19A Crowheart 122.76 300 P **PKPdf** **06 34 57.8 -0.8**
baz=123
F24A Ekalaka 122.78 305 P **PKPdf** **06 34 58.1 -0.3**
baz=123
L16A Fish Haven 122.87 298 P **PKPdf** **06 34 58.8 0.0**
baz=123
ULM Lac du Bonnet 122.87 314 PKP **PKPdf** **06 34 57.5 -0.8**
ULM Lac du Bonnet 122.87 314 PKP **PKPdf** **06 34 57.5 -0.8**
comp=Z,5.4nm,0.6s,baz=154,slow=0.4,SNR=8.4
I20A Worland 122.89 301 P **PKPdf** **06 34 58.0 -0.8**
baz=123
G22A Birney 123.08 304 P **PKPdf** **06 34 58.6 -0.5**
baz=123
F23A Volborg 123.09 305 P **PKPdf** **06 34 58.2 -0.8**
baz=123
J18A Kendall Valley 123.16 300 P **PKPdf** **06 34 59.3 -0.2**
baz=124
CMAR Chiang Mai Arr 123.17 110 PKP **PKPdf** **06 34 58.6 -1.3**
CMAR Chiang Mai Arr 123.17 110 PKP **PKPdf** **06 34 58.6 -1.3**
comp=Z,3.2nm,0.8s,baz=224,slow=4.0,SNR=14
K17A Gardner Place, 123.21 299 P **PKPdf** **06 34 59.9 +0.4**
baz=124
H20A Greybull 123.25 302 P **PKPdf** **06 34 59.0 -0.4**
baz=124
L15A Malad City 123.30 297 P **PKPdf** **06 34 60.0 +0.3**

baz=124
NVAR Mina Array Bea 123.34 290 PKP PKPdf 06 35 00.8 +0.9
NVAR Mina Array Bea 123.34 290 PKP PKPdf 06 35 00.8 +0.9
comp=Z,4.2nm,0.6s,baz=139,slow=3.3,SNR=34
I19A Meeteetse 123.34 301 P PKPdf 06 34 59.8 0.0
baz=124
I18A Diamond G Ranc 123.45 300 P PKPdf 06 35 00.2 +0.2
baz=124
F22A Rosebud 123.51 304 P PKPdf 06 34 59.5 -0.3
baz=124
K16A Soda Springs 123.58 298 P PKPdf 06 35 01.0 +0.8
baz=124
J17A Brown Place, J 123.59 299 P PKPdf 06 35 00.3 +0.1
baz=124
E23A Ismay 123.66 305 P PKPdf 06 34 59.9 -0.2
baz=124
L14A Malta 123.72 296 P PKPdf 06 35 01.2 +0.7
baz=124
D24A Glendive 123.73 306 P PKPdf 06 35 00.8 +0.7
baz=124
LOHW Long Hollow 123.74 299 ePKPdf PKPdf 06 35 00.3 -0.2
TPAW Teton Pass 123.80 299 ePKPdf PKPdf 06 35 01.2 +0.5
H19A Powell 123.84 301 P PKPdf 06 35 01.1 +0.5
baz=124
E22A Miles City 123.89 305 P PKPdf 06 35 00.4 -0.1
baz=124
K15A Arbon 123.90 297 P PKPdf 06 35 01.5 +0.7
baz=124
MOOW Moose Ponds 123.91 299 ePKPdf PKPdf 06 35 00.9 +0.1
G20A Bridger 123.92 302 P PKPdf 06 35 00.3 -0.4
baz=124
I17A Pilgrim Ck. 123.97 300 P PKPdf 06 35 00.9 0.0
baz=124
CMB Columbia Colle 124.06 288 ePKIKP PKPdf 06 35 01.6 +0.5
CMB Columbia Colle 124.06 288 ePKPdf PKPdf 06 35 01.6 +0.5
K14A Jones Ranch, D 124.09 297 P PKPdf 06 35 02.1 +1.0
baz=124
C24A Savage 124.10 307 P PKPdf 06 35 01.1 +0.3
baz=124
IMW Indian Meadow 124.11 299 ePKPdf PKPdf 06 35 01.5 +0.2
H18A Shoshone NF, C 124.14 301 P PKPdf 06 35 01.2 -0.1
baz=124
D23A Lindsay 124.15 306 P PKPdf 06 35 01.3 +0.3
baz=124
RLMT Red Lodge 124.31 302 P PKPdf 06 35 02.0 +0.4
baz=125
H17A Grant Village 124.33 300 P PKPdf 06 35 02.6 +1.0
baz=125
I16A Newdale 124.34 299 P PKPdf 06 35 02.3 +0.7
baz=125
BMN Battle Mountai 124.37 292 ePKIKP PKPdf 06 35 02.1 +0.3
BMN Battle Mountai 124.37 292 ePKPdf PKPdf 06 35 02.1 +0.3
J15A Blackfoot 124.41 298 P PKPdf 06 35 03.0 +1.3
baz=125
D22A Cohagen 124.55 305 P PKPdf 06 35 02.3 +0.5
baz=125
G18A Lazy EL Ranch, 124.60 301 P PKPdf 06 35 02.3 +0.3
baz=125
C23A Lambert 124.64 306 P PKPdf 06 35 02.2 +0.4
baz=125
F19A Roth Farm, Mol 124.74 302 P PKPdf 06 35 02.5 +0.3
baz=125
DGMT Dagmar 124.74 307 P PKPdf 06 35 02.2 +0.2
baz=125
D21A La Casta Ranch 124.83 305 P PKPdf 06 35 02.5 +0.2
baz=125
J14A Carey 124.85 297 P PKPdf 06 35 04.2 +1.6
baz=125
C22A Vida 124.89 306 P PKPdf 06 35 02.7 +0.4
baz=125
E20A Meyer Farm, Mu 124.89 303 P PKPdf 06 35 02.7 +0.3
baz=125
I15A Monteview 124.90 298 P PKPdf 06 35 04.2 +1.6
baz=125
A24A Westby 125.02 308 P PKPdf 06 35 02.8 +0.2
baz=125
B23A Brockton 125.07 307 P PKPdf 06 35 02.9 +0.2
baz=125
F18A Big Timber 125.12 302 P PKPdf 06 35 03.2 +0.3
baz=125
E19A Rath Farm, Rou 125.14 303 P PKPdf 06 35 03.0 +0.1
baz=125
J13A Cove Ranch, Pi 125.21 297 P PKPdf 06 35 03.8 +0.5
baz=126
I14A Mackay 125.29 298 P PKPdf 06 35 04.5 +1.1
baz=126
D20A Manuel Ranch, 125.34 304 P PKPdf 06 35 03.5 +0.2
baz=126
B22A Reddig Ranch S 125.36 306 P PKPdf 06 35 03.9 +0.7
baz=126
H15A Lima 125.45 299 P PKPdf 06 35 04.8 +1.1
baz=126
HLID Hailey 125.45 297 P PKPdf 06 35 04.2 +0.4
baz=126
BEKR Beckworth 125.46 290 ePKPdf PKPdf 06 35 04.6 +0.7
C21A Desert Coulee 125.46 305 P PKPdf 06 35 03.3 -0.2
baz=126
G16A Moss Hill, Enn 125.53 300 P PKPdf 06 35 04.5 +0.7
baz=126
F17A Fitzpatrick Pl 125.54 301 P PKPdf 06 35 05.1 +1.3
baz=126
I13A Wildhorse Cree 125.58 297 P PKPdf 06 35 04.5 +0.5
baz=126
MCMT McKenzie Canyo 125.70 299 ePKPdf PKPdf 06 35 05.1 +0.8
E18A Harlowton 125.72 302 P PKPdf 06 35 04.8 +0.7
baz=126
D19A Cripps Ranch, 125.72 303 P PKPdf 06 35 04.0 0.0
baz=126
C20A Veseth Ranch, 125.77 304 P PKPdf 06 35 04.3 +0.2
baz=126
H14A Leadore 125.78 298 P PKPdf 06 35 05.5 +1.1
baz=126
G15A Dillon 125.80 299 P PKPdf 06 35 05.2 +0.9
baz=126
A22A Carney Farms, 125.87 307 P PKPdf 06 35 04.9 +0.7
baz=126
F16A Kennard Place, 125.88 300 P PKPdf 06 35 05.0 +0.6
baz=126
B21A Ellsworth Farm 125.89 306 P PKPdf 06 35 04.9 +0.7
baz=126
I12A Atlanta 125.97 297 P PKPdf 06 35 05.6 +0.9
baz=126
DLMT Dillon 126.00 299 ePKPdf PKPdf 06 35 05.6 +0.9
MFID Camas Ranch 126.00 296 P PKPdf 06 35 05.3 +0.6
baz=126
E17A Martinsdale 126.06 302 P PKPdf 06 35 05.2 +0.4
baz=126
H13A Challis 126.14 298 P PKPdf 06 35 05.9 +0.9
baz=126
D18A Linhart Farms, 126.15 303 P PKPdf 06 35 05.4 +0.5
baz=126
C19A Slack Wire Ran 126.23 304 P PKPdf 06 35 05.6 +0.6
baz=126
FINES FINESS Array B 126.27 28 PKP PKPdf 06 35 03.9 -0.5
FINES FINESS Array B 126.27 28 PKP PKPdf 06 35 03.9 -0.5
comp=Z,3.0nm,0.5s,baz=159,slow=2.4,SNR=18
LRM Limekiln Ridge 126.28 300 ePKPdf PKPdf 06 35 05.8 +0.5
G14A Jackson 126.30 299 P PKPdf 06 35 06.5 +1.1
baz=127
F15A Butte 126.31 300 P PKPdf 06 35 06.2 +0.8
baz=127
B20A Solberg Farm, 126.33 305 P PKPdf 06 35 05.3 +0.2
baz=127
H12A Diamond D Ranc 126.41 297 P PKPdf 06 35 06.2 +0.6
baz=127
E16A East Helena 126.47 301 P PKPdf 06 35 06.2 +0.7
baz=127
D17A Six Diamond Ra 126.51 302 P PKPdf 06 35 06.2 +0.6
baz=127
G13A Cobalt 126.54 298 P PKPdf 06 35 06.1 +0.4
baz=127
WVOR Wild Horse Val 126.59 293 ePKIKP PKPdf 06 35 06.7 +0.8
WVOR Wild Horse Val 126.59 293 ePKPdf PKPdf 06 35 06.7 +0.8
A20A Cobblestone Ra 126.63 305 P PKPdf 06 35 06.2 +0.6
baz=127
HRY Holter Researc 126.68 301 ePKPdf PKPdf 06 35 06.9 +1.0
B19A Brinkman Farms 126.74 304 P PKPdf 06 35 06.6 +0.7
baz=127
EGMT Eagleton 126.76 303 ePKPdf PKPdf 06 35 06.2 +0.3
EGMT Eagleton 126.76 303 P PKPdf 06 35 06.3 +0.3
baz=127
D16A Dana Ranch, Ca 126.80 302 P PKPdf 06 35 07.1 +1.0
baz=127
E15A Deer Lodge 126.83 300 P PKPdf 06 35 06.8 +0.5
baz=127
KAF Kangasniemi 126.90 27 ePKIKP PKPdf 06 35 04.1 -1.5
KAF pmax pmax

comp=Z,4.0nm,0.7s
KAF Kangasniemi 126.90 27 ep PKPdf 06 35 04.1 -1.5
comp=Z,3.8nm,0.7s
C17A Wharram Farm, 126.91 303 P PKPdf 06 35 06.8 +0.6
baz=127
A19A Klindworth Far 127.02 305 P PKPdf 06 35 06.9 +0.5
baz=127
B18A Beardsley Farm 127.05 304 P PKPdf 06 35 07.2 +0.7
baz=127
G12A Big Creek, Yel 127.07 297 P PKPdf 06 35 07.2 +0.4
baz=127
F13A Darby 127.11 299 P PKPdf 06 35 07.3 +0.5
baz=127
E14A Clinton 127.20 300 P PKPdf 06 35 07.9 +0.9
baz=128
D15A Lincoln 127.24 301 P PKPdf 06 35 07.8 +0.8
baz=128
B17A L&G Farms, Che 127.42 303 P PKPdf 06 35 07.7 +0.5
baz=128
C16A Fuhringer Ranc 127.47 302 P PKPdf 06 35 07.7 +0.3
baz=128
CHMT Chamberlain Mo 127.47 300 ePKPdf PKPdf 06 35 07.3 -0.2
A18A Metzger Ranch, 127.48 304 P PKPdf 06 35 07.8 +0.5
baz=128
F12A Elk City 127.51 298 P PKPdf 06 35 08.1 +0.5
baz=128
E13A Victor 127.54 299 P PKPdf 06 35 08.6 +1.1
baz=128
D14A Greenough 127.71 300 P PKPdf 06 35 08.0 +0.2
baz=128
MSO Missoula 127.72 300 ePKPdf PKPdf 06 35 08.1 +0.2
MSO Missoula 127.72 300 P PKPdf 06 35 08.8 +0.9
baz=128
C15A Salmond Ranch, 127.83 301 P PKPdf 06 35 07.8 -0.3
baz=128
A17A Triple J Farms 127.87 304 P PKPdf 06 35 08.3 +0.3
baz=128
ABKAR Akbulak array 128.03 56 ePKPdf PKPdf 06 35 07.8 -0.4
AKTO Aktyubinsk 128.09 54 PKIKP PKPdf 06 35 07.8 -0.5
AKTO Aktyubinsk 128.09 54 PKP PKPdf 06 35 07.8 -0.5
AKTO Aktyubinsk 128.09 54 PKP PKPdf 06 35 07.8 -0.5
comp=Z,4.0nm,0.8s,baz=208,slow=2.7,SNR=13
D13A Huson 128.15 300 P PKPdf 06 35 08.6 -0.1
baz=128
B15A Bradely Ranch, 128.21 302 P PKPdf 06 35 07.8 -1.0
baz=128
SWMT Swartz Lake 128.25 300 ePKPdf PKPdf 06 35 08.9 0.0
A16A West Butte Ran 128.26 303 P PKPdf 06 35 08.9 0.0
baz=129
KSH Kashi 128.28 75 ePKP PKPdf 06 35 09.1 -0.1
KSH ePKS PKSdf 06 38 44.1 -1.7
KSH eSKS SKSdf 06 42 15.7 -2.1
KSH AMB AMB
comp=Z,220nm,4.4s
KSH LR LR
comp=N,130nm,5.6s
KSH LR LR
comp=E,150nm,6.3s
KSH LR LR
comp=Z,160nm,4.4s
C14A Swan Lake 128.33 301 P PKPdf 06 35 09.1 +0.1
baz=129
D12A Red Ives Fores 128.53 299 P PKPdf 06 35 09.2 -0.2
baz=129
JTMT Jette 128.56 300 ePKPdf PKPdf 06 35 09.3 -0.1
B14A Marquette Ranc 128.56 302 P PKPdf 06 35 09.5 0.0
baz=129
QIZ Qiongzhong 128.78 121 PKP PKPdf 06 35 12.4 +1.8
QIZ SS SS 06 54 36.0 +3.5
QIZ AMB AMB
comp=Z,69nm,3.7s
QIZ LR LR
comp=Z,210nm,16.0s
A15A Johnson Ranch, 128.78 302 P PKPdf 06 35 09.6 -0.3
baz=129
HUMO Hull Mountain 128.81 290 ePKPdf PKPdf 06 35 11.3 +1.3
JOF Joensuu 128.83 29 ePKIKP PKPdf 06 35 08.3 -1.0
JOF pmax pmax
comp=Z,6.0nm,0.7s
JOF Joensuu 128.83 29 ep PKPdf 06 35 08.3 -1.0
comp=Z,6.4nm,0.7s
A14A Double T Ranch 129.09 302 P PKPdf 06 35 10.8 +0.4
baz=129
B13A Whitefish 129.11 301 P PKPdf 06 35 10.8 +0.4
baz=129
A13A Flathead Natio 129.50 301 P PKPdf 06 35 11.5 +0.3
baz=130
C11A Tepee Creek (N 129.52 299 P PKPdf 06 35 11.0 -0.2
baz=130
EKS2 Erkin-Say 129.54 71 ePKIKP PKPdf 06 35 11.7 +0.2
EKS2 Erkin-Say 129.54 71 ePKPdf PKPdf 06 35 11.7 +0.2
B12A Libby 129.68 300 P PKPdf 06 35 11.9 +0.4
baz=130
AAK Ala-Archa 129.87 71 ePKIKP PKPdf 06 35 11.9 -0.3
AAK Ala-Archa 129.87 71 ePKPdf PKPdf 06 35 11.9 -0.3
NEW Newport 130.23 299 P PKPdf 06 35 12.6 +0.1
baz=130
KMI Kunming 130.66 110 PKP PKPdf 06 35 16.8 +2.5
ARCES ARCESS Array B 133.04 22 PKP PKPdf 06 35 16.9 -0.3
ARCES ARCESS Array B 133.04 22 PKP PKPdf 06 35 16.9 -0.3
comp=Z,4.0nm,0.6s,baz=230,slow=2.3,SNR=24
GYA Guiyang 133.69 113 ePdif Pdif 06 32 18.0 -0.3
GYA PKP PKiKP 06 35 20.6 -0.5
GYA sPKP 06 35 34.8
GYA PP PP 06 37 52.4 +3.2
GYA PKS PKSdf 06 38 55.0 -1.4
GYA SKKS 06 44 40.6
GYA SS SS 06 55 33.2 +0.3
GYA AMB AMB
comp=Z,130nm,7.9s
GYA LR LR
comp=N,290nm,22.6s
GYA LR LR
comp=E,160nm,23.7s
GYA LR LR
comp=Z,200nm,21.8s
BVAR Borovoye Array 135.32 59 PKIKP PKPdf 06 35 21.5 -0.4
BVAR Borovoye Array 135.32 59 PKP PKPdf 06 35 21.5 -0.4
BVAR Borovoye Array 135.32 59 PKP PKPdf 06 35 21.5 -0.4
comp=Z,4.1nm,0.7s,baz=222,slow=2.0,SNR=12
CD2 Chengdu 135.94 106 PKP PKPdf 06 35 24.5 +0.7
CD2 sPKP 06 35 39.6
CD2 PP PP 06 38 07.6 +4.2
CD2 PKS PKSdf 06 38 59.4 -0.8
CD2 SKKS 06 44 54.3
CD2 SS SS 06 56 01.6 +1.7
CD2 AMB AMB
comp=Z,160nm,8.6s
MKAR Makanchi Array 136.73 73 PKHKP PKPpre 06 35 11.1
MKAR 06 35 26.1
MKAR Makanchi Array 136.73 73 PKPpre PKPpre 06 35 11.1
MKAR PKP PKiKP 06 35 26.1 -0.5
MKAR SKPbc SKPbc 06 38 54.0 -0.3
MKAR Makanchi Array 136.73 73 PKhKP PKPpre 06 35 11.1
comp=Z,0.3nm,0.5s,baz=221,slow=4.8,SNR=4.1
MKAR PKP PKiKP 06 35 26.1 -0.5
comp=Z,0.4nm,0.4s,baz=180,slow=1.2,SNR=4.5
MKAR SKPbc SKPbc 06 38 54.0 -0.3
comp=Z,0.8nm,0.9s,baz=251,slow=3.7,SNR=4.8
WMQ Urumqi 137.40 80 ePKP PKPdf 06 35 27.2 +1.0
KURBB Kurchatov Arra 137.48 66 PKhKP PKPpre 06 35 15.7
comp=Z,0.5nm,0.8s,baz=243,slow=2.0,SNR=4.5
KURBB PKP PKPdf 06 35 25.2 -0.8
comp=Z,1.3nm,0.7s,baz=227,slow=2.5,SNR=11
KURBB SKPbc SKPbc 06 38 56.3 0.0
comp=Z,0.1nm,0.3s,baz=198,slow=27,SNR=3.6
KURK Kurchatov 137.58 66 PKHKP PKPpre 06 35 15.7
KURK 06 35 25.2
KURK Kurchatov 137.58 66 PKPpre PKPpre 06 35 15.7
KURK PKP PKPdf 06 35 25.2 -0.9
KURK SKPbc SKPbc 06 38 56.3 -0.3
YKA Yellowknife Ar 138.82 315 PKPpre PKPpre 06 35 16.8
YKA PKP PKPdf 06 35 28.0 0.0
YKA SKPbc SKPbc 06 38 58.6 -1.1
YKA Yellowknife Ar 138.82 315 PKhKP PKPpre 06 35 16.7
comp=Z,0.6nm,0.4s,baz=122,slow=3.3,SNR=14
YKA PKP PKPdf 06 35 28.0 0.0
comp=Z,14nm,0.7s,baz=127,slow=2.3,SNR=70
YKA SKPbc SKPbc 06 38 58.6 -1.1
comp=Z,0.9nm,0.8s,baz=132,slow=2.8,SNR=5.9
YKW3 Yellowknife Ar 138.87 315 ePKPdf PKPdf 06 35 27.7 -0.4
LZH Lanzhou 140.09 102 ePKP PKPdf 06 35 34.0 +2.5
LZH sPKP 06 35 48.5
ZALV Zalesovo Beam 142.57 66 PKHKP PKPpre 06 35 30.2
ZALV Zalesovo Beam 142.57 66 PKPpre PKPpre 06 35 30.1

ZALV Zalesovo Beam 142.57 66 PKhKP PKPpre 06 35 30.1
comp=Z,1.3nm,0.5s,baz=277,slow=1.8,SNR=5.8
SKAG Skagway 145.56 302 ePKPdf PKPdf 06 35 40.2 +0.1
PNL Peninsula 147.48 300 ePKPbc PKPbc 06 35 45.8 -0.3
HHC Hu-ho-hao-te 147.63 104 ePKPbc PKPdf 06 35 45.4 +1.0
HHC pPKP pPKPdf 06 35 56.1 +0.1
HHC sPKP 06 35 59.8
HHC PP PP 06 39 19.3 +4.8
HHC SKS SKSdf 06 42 48.6 -1.3
HHC SS SS 06 58 17.8 +1.9
HHC AMB AMB
comp=Z,210nm,7.9s
HHC LR LR
comp=N,160nm,20.6s
HHC LR LR
comp=E,620nm,20.8s
HHC LR LR
comp=Z,140nm,21.5s
MOY Mondy 149.29 79 ePKP2 PKPbc 06 35 51.4 +0.3
MOY pmax pmax
comp=Z,36nm,2.2s
ZAK Zakamensk 149.72 83 ePKHKP PKPpre 06 35 46.6
ZAK pmax pmax
comp=Z,16nm,1.4s
SONM Songino Array 149.79 90 PKP PKPdf 06 35 47.3 -0.4
SONM PKPbc PKPbc 06 35 51.9 -0.6
SONM Songino Array 149.79 90 PKP PKPdf 06 35 47.3 -0.4
comp=Z,13nm,1.0s,baz=207,slow=1.7,SNR=3.7
SONM PKPbc PKPbc 06 35 51.9 -0.6
comp=Z,13nm,1.0s,baz=222,slow=2.4,SNR=54
ULN Ulaanbaatar 150.15 90 ePKPbc PKPbc 06 35 52.4 -1.0
BMRM Bremner River 150.38 301 ePKPbc PKPbc 06 35 53.4 0.0
MENT Mentasta 150.72 305 ePKPbc PKPbc 06 35 54.0 -0.2
DIV Divide 150.97 300 ePKPbc PKPbc 06 35 55.2 +0.4
DOT Dot Lake 151.10 306 ePKPbc PKPbc 06 35 55.6 +0.6
PAX Paxson 151.48 304 ePKIKP PKPbc 06 35 56.0 0.0
PAX Paxson 151.48 304 ePKPbc PKPbc 06 35 56.0 0.0
SEW Seward 152.26 297 ePKPbc PKPbc 06 35 57.3 -0.3
SML Sawmill 152.36 301 ePKIKP PKPbc 06 35 58.1 +0.2
SML Sawmill 152.36 301 ePKPbc PKPbc 06 35 58.1 +0.2
KSAR Wonju Array Be 152.50 129 PKPbc PKPbc 06 35 58.5 -0.4
KSAR PKPab PKPab 06 36 09.3 -0.1
KSRS Korea Array 152.53 129 PKPbc PKPbc 06 35 58.5 -0.5
comp=Z,1.9nm,0.6s,baz=199,slow=2.7,SNR=11
KSRS PKPab PKPab 06 36 09.3 -0.2
comp=Z,2.8nm,0.7s,baz=214,slow=3.7,SNR=10
ILAR Eielson Array 152.61 307 PKPbc PKPbc 06 35 58.4 +0.1
ILAR Eielson Array 152.61 307 PKPbc PKPbc 06 35 58.4 +0.1
comp=Z,35nm,0.8s,baz=135,slow=2.1,SNR=227
PMR Palmer 152.64 300 ePKIKP PKPbc 06 35 58.3 -0.1
PMR Palmer 152.64 300 ePKPbc PKPbc 06 35 58.3 -0.1
KDAK Kodiak Island 152.84 291 ePKPbc PKPbc 06 35 58.9 -0.1
OHAK Old Harbor 152.94 290 ePKPbc PKPbc 06 35 59.1 -0.1
COLA College 153.04 307 ePKIKP PKPbc 06 35 58.6 -0.6
COLA College 153.04 307 ePKPbc PKPbc 06 35 58.6 -0.6
MCK McKinley 153.20 305 ePKIKP PKPbc 06 35 59.7 0.0
MCK McKinley 153.20 305 ePKPbc PKPbc 06 35 59.7 0.0
TRF Thorofare Moun 153.71 304 ePKPbc PKPbc 06 36 00.3 -0.7
PPLA Purkeypile 154.40 302 ePKPbc PKPbc 06 36 02.4 0.0
COLD Coldfoot 154.43 312 ePKPbc PKPbc 06 36 02.9 +0.7
MJAR Matsushiro Arr 155.32 147 PKPbc PKPdf 06 36 04.5 +8.5
MJAR PKPab PKPab 06 36 19.0 -2.4
MJAR Matsushiro Arr 155.32 147 PKPbc PKPdf 06 36 04.5 +8.5
comp=Z,1.0nm,0.7s,baz=217,slow=7.5,SNR=4.6
MJAR PKPab PKPab 06 36 19.0 -2.4
comp=Z,2.7nm,0.7s,baz=204,slow=6.2,SNR=7.6
CN2 Changchun 156.63 117 ePKP PKPdf 06 35 58.8 +1.3
MDJ Mudanjiang 159.15 122 PKP PKPdf 06 35 59.6 -1.0
MDJ sPKP 06 36 14.3
MDJ PP PP 06 40 19.3 0.0
YUK Yuzh-Kuril'sk 164.32 156 dPKP2 PKPab 06 36 56.0 -4.3
YUK pmax pmax
comp=N,42nm,0.2s
YUK pmax pmax
comp=E,22nm,0.2s
YUK pmax pmax
comp=Z,58nm,0.3s

*IDC **05** 06:19:02.3±1.6,41°.15N×73°.70E,h0km,mb3.8/4,*
mb1 3.8/9,mb1mx3.5/32,mbtmp3.6/9,ML3.2/5,Error
ellipse: s-maj=26.8km s-min=11.6km az=134.0
*KNET **05** 06:19:06.9±0.3,41°.50N×73°.60E,h7km±1km,ml3.5,Error*
ellipse: s-maj=2.2km s-min=2.1km az=34.0
*NNC **05** 06:19:07.2±0.8,41°.51N×73°.37E,h0km,mb3.8,mpv3.7,*
Error ellipse: s-maj=9.1km s-min=2.5km az=174.0

ISC 05 06:19:04.6±1.8,41°.40N±0°.07×73°.50E±0°.05,h3km±10km,
n31,σ1°25/41,mb3.8/4,21C-13D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
AML	**Almayashu**	**0.74**	**11**	P		**Pb**	**06 19 19.5**	**-0.9**
	423nm,0.2s,SNR=1404							
AML				⇑S		**Sb**	**06 19 29.7**	**-1.5**
	2μm,0.3s							
UCH	**Uchtor**	**1.12**	**42**	⇓P		**Pb**	**06 19 26.3**	**-0.6**
	24nm,0.1s,SNR=22							
UCH				⇑S		**Sn**	**06 19 41.8**	**-2.0**
	153nm,0.3s							
EKS2	**Erkin-Say**	**1.27**	**9**	⇓P		**Pn**	**06 19 28.9**	**-0.5**
	181nm,0.2s,SNR=194							
AAK	**Ala-Archa**	**1.44**	**31**	Pg		**Pg**	**06 19 32.2**	**+0.1**
	29nm,0.3s,baz=176,slow=8.6,SNR=168							
AAK				Lg		Lg	06 19 50.8	
	87nm,0.3s,baz=45,slow=17,SNR=42							
KZA	**Kyzart**	**1.47**	**62**	⇓P		**Pg**	**06 19 32.7**	**-0.2**
	50nm,0.2s,SNR=78							
KZA				⇓S		**Sg**	**06 19 53.3**	**+1.4**
	322nm,0.3s							
KBK	**Karagaybulak**	**1.65**	**40**	⇓P		**Pg**	**06 19 36.1**	**-0.2**
	58nm,0.1s,SNR=36							
KBK				⇑S		**Sg**	**06 19 58.6**	**+0.9**
	807nm,0.4s							
CHMS	**Chumysh**	**1.84**	**30**	⇓P		**Pg**	**06 19 39.3**	**-0.6**
	96nm,0.3s,SNR=59							
CHMS				⇑S		**Sg**	**06 20 03.7**	**-0.2**
	465nm,0.4s							
USP	**Ospenovka**	**2.00**	**21**	P		**Pg**	**06 19 42.1**	**-0.9**
	256nm,0.5s,SNR=215							
USP				⇑S		**Sg**	**06 20 08.8**	**-0.2**
	546nm,0.3s							
TKM2	**Tokmak 2**	**2.17**	**45**	⇑Pn		**Pg**	**06 19 45.1**	**-1.2**
	56nm,0.4s							
TKM2				⇑Sn		**Sg**	**06 20 14.0**	**-0.5**
	208nm,0.6s							
TKM2	**Tokmak 2**	**2.17**	**45**	P		**Pg**	**06 19 45.3**	**-1.0**
	87nm,0.3s,SNR=108							
ULHL	**Ulahol**	**2.21**	**67**	⇓P		**Pb**	**06 19 45.7**	**+0.2**
	12nm,0.2s,SNR=41							
KK31	**Karatay Array**	**2.79**	**308**	⇑Pn		**Pn**	**06 19 51.6**	**+1.4**
	1.3nm,0.4s,baz=124,slow=14,SNR=393							
KK31				⇑Pg		**Pb**	**06 19 55.7**	**+0.5**
	5.1nm,0.2s,baz=129,slow=16,SNR=9.2							
KK31				Lg		Lg	06 20 31.6	
	86nm,0.4s,baz=131,slow=28,SNR=14							
KNDC	**Almaty**	**3.15**	**54**	⇑Pg		**Pg**	**06 20 04.4**	**-0.5**
	71nm,0.6s							
KNDC				⇑Lg		Lg	06 20 45.9	
	627nm,1.4s							
MK31	**Makanchi Array**	**8.31**	**47**	⇓Pn		**Pn**	**06 21 08.2**	**+2.3**
	4.7nm,0.8s,baz=228,slow=13,SNR=7.7							
MK31				⇑Lg		Lg	06 23 30.5	
	7.1nm,0.7s,baz=231,slow=26,SNR=5.4							
MKAR	**Makanchi Array**	**8.31**	**47**	Pn		**Pn**	**06 21 06.0**	**+0.1**
	0.2nm,0.3s,baz=226,slow=14,SNR=7.2							
MKAR				Lg		Lg	06 23 26.9	
	0.5nm,0.3s,baz=234,slow=21,SNR=4.2							
KURBB	**Kurchatov Arra**	**9.86**	**19**	Pn		**Pn**	**06 21 28.8**	**+1.7**
	0.1nm,0.3s,baz=209,slow=13,SNR=8.5							
KURBB				Sn		**Sn**	**06 23 19.1**	**+0.8**
	0.1nm,0.3s,baz=284,slow=40,SNR=1.9							
KURBB				Lg		Lg	06 24 13.5	
	0.1nm,0.3s,baz=208,slow=30,SNR=5.1							
KUR14	**Kurchatov Arra**	**9.87**	**19**	⇑Pn		**Pn**	**06 21 28.5**	**+1.3**
	0.1nm,0.5s							
KUR14				⇑Lg		Lg	06 24 17.6	
	1.1nm,0.9s							
KURK	**Kurchatov**	**9.97**	**19**	⇓Pn		**Pn**	**06 21 30.8**	**+2.2**
	2.9nm,1.1s							
KURK				⇓Lg		Lg	06 24 21.5	
	25nm,0.9s							
VOSK	**Vostochnaya**	**11.45**	**352**	⇑Pn		**Pn**	**06 21 49.7**	**+0.7**
	3.7nm,1.2s							
VOSK				⇓Lg		Lg	06 25 09.8	
	14nm,1.1s							

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BVA0	Borovoye Array	11.81	351	⇓Pn	Pn	06 21 53.7	-0.3
	0.8nm,1.1s,baz=172,slow=16,SNR=14						
BVA0				⇑Lg	Lg	06 25 17.7	
	1.2nm,0.7s,baz=165,slow=25,SNR=4.0						
BVAR	Borovoye Array	11.81	351	Pn	Pn	06 21 56.1	+2.2
	0.3nm,0.3s,baz=151,slow=18,SNR=2.8						
BVAR				Sn	Sn	06 24 12.3	+6.1
	0.3nm,0.3s,baz=280,slow=41,SNR=2.7						
BVAR				Lg	Lg	06 25 16.5	
	0.5nm,0.3s,baz=152,slow=29,SNR=5.3						
BRVK	Borovoye	11.86	351	⇓Lg	Lg	06 25 18.5	
	19nm,0.8s						
ZRNK	Zerenda	11.95	347	⇑Pn	Pn	06 21 56.4	+0.7
	1.0nm,0.5s						
ZRNK				⇑Lg	Lg	06 25 22.5	
	5.8nm,0.8s						
AB31	Akbulak array	12.34	314	⇑Pn	Pn	06 22 03.0	+1.9
	1.0nm,0.5s,baz=120,slow=14,SNR=14						
AB31				⇑Sn	Sn	06 24 19.6	+0.4
	0.7nm,0.3s						
AKTO	Aktyubinsk	14.04	315	⇑Pn	Pn	06 22 23.9	-0.3
	0.7nm,1.1s						
AKTO	Aktyubinsk	14.04	315	Pn	Pn	06 22 24.0	-0.3
	0.1nm,0.3s,baz=125,slow=12,SNR=4.1						
ZALV	Zalesovo Beam	14.66	27	Pn	Pn	06 22 33.2	+0.5
	0.1nm,0.3s,baz=224,slow=10,SNR=3.2						
ZALV				Sn	Sn	06 25 19.1	+3.4
	0.2nm,0.3s,baz=219,slow=30,SNR=2.1						
ZALV				Lg	Lg	06 26 46.1	
	0.1nm,0.3s,baz=336,slow=22,SNR=1.1						
ARCES	ARCESS Array B	37.45	335	P	P	06 26 18.4	-0.4
	2.4nm,0.9s,baz=108,slow=8.6,SNR=4.7						
GERES	GERESS Array B	41.87	301	P	P	06 26 55.7	-0.3
	0.4nm,0.2s,baz=59,slow=5.9,SNR=3.7						
TORD	Torodi Ar. Bea	67.81	268	P	P	06 30 02.3	-1.9
	0.3nm,0.5s,baz=58,slow=4.8,SNR=4.3						
YKA	Yellowknife Ar	76.25	4	P	P	06 30 53.4	-0.6
	0.4nm,0.7s,baz=348,slow=5.8,SNR=7.9						

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*IDC **05** 06:33:29.4±1.0, 2°.39S×68°.11E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.7/28, mbtmp3.9/8, MS3.9/10, Ms1 3.9/10, ms1mx3.6/34, Error ellipse: s-maj=27.2km s-min=25.2km az=113.0*
*ISCJB **05** 06:33:29.2±0.8, 2°.29S±0°.10×68°.2E±0°.1, h11km, mb4.2/12, MS3.9/10, Error ellipse: s-maj=21.6km s-min=12.7km az=158.4*
*NEIC **05** 06:33:31.1±0.7, 2°.28S×68°.14E, h10km, mb4.6/6, Error ellipse: s-maj=21.6km s-min=13.2km az=68.0*
ISC 05 06:33:31.3±0.9, 2°.4S±0°.1×68°.1E±0°.2, h11km, n29, σ1s.13/23, mb4.2/12, MS3.9/10, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DGAR	Diego Garcia	6.61	139	ePn	Pn	06 35 08.0	-0.6
ATD	Arta Tunnel	28.68	299	LR	LR	06 47 43.7	
	comp=Z,90nm,21.3s,baz=109,slow=30						
CMAR	Chiang Mai Arr	36.72	54	P	P	06 40 39.2	+0.4
CMAR	Chiang Mai Arr	36.72	54	P	P	06 40 39.2	+0.4
	1.3nm,0.4s,baz=250,slow=9.7,SNR=5.8						
CMAR				LR	LR	06 54 03.5	
	comp=Z,137nm,18.1s,baz=314,slow=34						
LSZ	Lusaka	41.40	250	eP	P	06 41 19.3	+1.0
	4.3nm,0.8s						
LSZ	Lusaka	41.40	250	P	P	06 41 18.2	-0.1
	3.6nm,0.8s,baz=63,slow=10,SNR=6.6						
EKS2	Erkin-Say	45.11	6	eP	P	06 41 45.7	-2.1
	13nm,1.3s						
AAK	Ala-Archa	45.16	7	eP	P	06 41 47.4	-0.8
	10nm,1.4s						
AAK	Ala-Archa	45.16	7	P	P	06 41 46.8	-1.4
	0.6nm,0.4s,baz=189,slow=11,SNR=5.8						
TKM2	Tokmak 2	45.58	8	eP	P	06 41 49.6	-2.0
	7.1nm,1.1s						
BOSA	Boshof	48.45	233	LR	LR	07 01 14.5	
	comp=Z,135nm,18.7s,baz=242,slow=34						
MKAR	Makanchi Array	50.52	13	P	P	06 42 29.8	+0.2
MKAR	Makanchi Array	50.52	13	P	P	06 42 29.8	+0.2
	0.6nm,0.8s,baz=189,slow=7.0,SNR=5.2						
MKAR				LR	LR	07 04 19.8	
	comp=Z,83nm,18.3s,baz=182,slow=37						
KURK	Kurchatov	53.63	8	eP	P	06 42 51.0	-1.7
	6.3nm,1.1s						
ZALV	Zalesovo Beam	57.81	12	P	P	06 43 21.8	-0.8
ZALV	Zalesovo Beam	57.81	12	P	P	06 43 21.8	-0.8
	0.7nm,0.4s,baz=187,slow=10,SNR=5.6						
ZALV				LR	LR	07 06 38.1	
	comp=Z,68nm,19.1s,baz=135,slow=34						
SONM	Songino Array	60.12	29	P	P	06 43 40.4	+1.4
SONM	Songino Array	60.12	29	P	P	06 43 40.4	+1.4
	1.4nm,1.0s,baz=222,slow=6.9,SNR=8.5						
SONM				LR	LR	07 09 39.8	
	comp=Z,249nm,18.2s,baz=82,slow=36						
MAW	Mawson	65.22	182	LR	LR	07 06 07.3	
	comp=Z,133nm,18.5s,baz=355,slow=30						
WRA	Warramunga Arr	66.86	111	P	P	06 44 23.6	-0.3
WRA	Warramunga Arr	66.86	111	P	P	06 44 23.6	-0.3
	0.9nm,0.7s,baz=286,slow=5.9,SNR=6.1						
WRAB	Tennant Creek	66.87	111	eP	P	06 44 26.0	+2.0
	12nm,1.4s						
ASAR	Alice Springs	66.91	115	P	P	06 44 23.9	-0.4
ASAR	Alice Springs	66.91	115	P	P	06 44 23.9	-0.4
	0.4nm,0.6s,baz=280,slow=5.9,SNR=7.2						
KSRS	Korea Array	67.96	48	LR	LR	07 15 01.0	
	comp=Z,63nm,18.5s,baz=339,slow=37						
GERES	GERESS Array B	69.31	325	LR	LR	07 16 40.8	
	comp=Z,90nm,18.0s,baz=96,slow=37						
MJAR	Matsushiro Arr	75.53	51	LR	LR	07 18 52.2	
	comp=Z,57nm,18.8s,baz=265,slow=36						
TXAR	Lajitas Array	152.06	345	PKPbc	PKPbc	06 53 27.6	-0.1
TXAR	Lajitas Array	152.06	345	PKPbc	PKPbc	06 53 27.6	-0.1
	0.3nm,0.9s,baz=60,slow=3.0,SNR=4.6						

IDC 05 06:35:50.3±2.9, 46°.43N×152°.25E, h72km±25km, mb3.3/9, mb1 3.7/12, mb1mx3.5/28, mbtmp3.4/12, MS2.5/1, Ms1 2.5/1, ms1mx2.1/19, Error ellipse: s-maj=46.9km s-min=15.3km az=158.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAJ	Asahikawa	7.19	255	P	Pn	06 37 31.0	-1.7
	0.9nm,0.3s,baz=86,slow=13,SNR=3.8						
ASAJ				S	Sn	06 38 57.3	+4.4
	0.5nm,0.3s,baz=275,slow=33,SNR=1.4						
PETK	Petropavlovsk-	7.56	26	P	Pn	06 37 37.8	0.0
	0.7nm,0.3s,baz=176,slow=13,SNR=16						
MJAR	Matsushiro Arr	14.41	232	LR	LR	06 44 01.4	
	comp=Z,19nm,19.9s,baz=130,slow=34						
FX1	Attu Island--F	14.98	57	P	Pn	06 39 15.9	-1.9
	0.7nm,0.3s,baz=318,slow=4.4,SNR=7.6						
KSRS	Korea Array	20.13	252	P	P	06 40 17.2	-1.1
	0.6nm,0.4s,baz=52,slow=12,SNR=3.6						
ILAR	Eielson Array	37.17	38	P	P	06 42 54.1	+0.2
	0.4nm,0.7s,baz=258,slow=7.7,SNR=7.5						
MKAR	Makanchi Array	46.56	297	P	P	06 44 09.8	-0.9
	0.2nm,0.6s,baz=67,slow=8.1,SNR=3.0						
YKA	Yellowknife Ar	51.54	36	P	P	06 44 49.1	+0.7
	0.3nm,0.6s,baz=295,slow=6.8,SNR=5.9						
NVAR	Mina Array Bea	63.11	62	P	P	06 46 11.4	+0.8
	0.7nm,0.8s,baz=293,slow=8.4,SNR=3.3						
PDAR	Pinedale Array	65.42	53	P	P	06 46 24.5	-1.1
	0.3nm,0.6s,baz=276,slow=3.5,SNR=3.8						
TXAR	Lajitas Array	78.17	60	P	P	06 47 42.3	+0.3
	1.0nm,0.7s,baz=304,slow=4.3,SNR=14						
BRTR	Keskin Array B	78.21	316	P	P	06 47 42.3	+0.1
	0.8nm,0.8s,baz=66,slow=4.9,SNR=3.4						
GERES	GERESS Array B	78.48	333	P	P	06 47 43.0	-0.4
	0.4nm,0.2s,baz=64,slow=10,SNR=3.4						

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*IDC **05** 06:42:35.2±2.5, 22°.39S×68°.91W, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.7/16, mbtmp4.0/3, ML4.4/1, Error ellipse: s-maj=79.2km s-min=53.0km az=58.0*
*GUC **05** 06:42:53.5±0.8, 21°.22S×68°.77W, h123km±7km, ML3.8*
*ISCJB **05** 06:42:53.8±0.7, 21°.21S±0°.05×68°.8W±0°.1, h127km±8km, mb3.6/2, Error ellipse: s-maj=23.7km s-min=6.6km az=166.1*
ISC 05 06:42:54.4±1.0, 21°.21S±0°.05×68°.8W±0°.1, h122km±10km, n14, σ0s.70/18, 4C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	0.68	284	⇓iP	Pn	06 43 13.5	-0.5
PB01				iS	Sn	06 43 28.8	+0.1
PB01				AML	AML	06 43 30.5	
	comp=E,3µm,0.2s						
PB09	Plate Boundary	0.72	216	⇑iP	Pn	06 43 14.4	0.0
PB09				iS	Sn	06 43 30.0	+0.5
PB09				AML	AML	06 43 31.7	
	comp=E,11µm,0.4s						
PB04	Plate Boundary	1.23	212	⇓iP	Pn	06 43 24.6	+5.6
PB04				iS	Sn	06 43 47.9	+10
PB04				AML	AML	06 43 54.9	
	comp=N,863nm,0.4s						
HMBC	Humberstone	1.39	312	⇑iP	Pn	06 43 20.8	-0.1
HMBC				iS	Sn	06 43 41.3	+0.3
HMBC				AML	AML	06 43 42.6	
	comp=N,2µm,0.6s						
LVC	Limon Verde	1.40	185	⇓iP	Pn	06 43 20.9	-0.2
LVC				iS	Sn	06 43 41.3	-0.1
SPCH	San Pedro de A	1.77	162	iP	Pn	06 43 25.8	+0.3
PSGC	Pisagua	2.04	322	⇑iP	Pn	06 43 27.9	-0.7
PSGC				iS	Sn	06 43 54.9	+0.2
PSGC				AML	AML	06 43 55.8	
	comp=E,426nm,0.5s						
MNMC	Minimini	2.21	340	⇑iP	Pn	06 43 30.7	-0.2
MNMC				iS	Sn	06 44 00.2	+1.4
MNMC				AML	AML	06 44 01.8	
	comp=N,2µm,0.2s						
CEN1	Los Morros	2.53	211	eP	Pn	06 43 38.3	+3.5
CEN1				AML	AML	06 44 18.9	
	comp=N,121nm,0.4s						
ANCH	Antofagasta	2.88	211	eP	Pn	06 43 39.9	+0.7
LPAZ	La Paz	4.94	7	Pn	Pn	06 44 07.8	+0.6
	comp=N,4.6nm,0.3s,baz=203,slow=7.9,SNR=148						
TORD	Torodi Ar. Bea	77.15	70	P	P	06 54 33.6	-1.5
	comp=N,1.6nm,0.8s,baz=255,slow=5.3,SNR=7.2						
YKA	Yellowknife Ar	90.96	341	P	P	06 55 44.7	+0.7
	comp=N,0.2nm,0.5s,baz=137,slow=4.5,SNR=6.6						
MKAR	Makanchi Array	145.33	36	PKPbc	PKPab	07 02 18.4	+0.3
	comp=N,0.9nm,0.7s,baz=324,slow=2.6,SNR=12						

IDC 05 06:59:51.3±3.9, 30°.68S×138°.10E, h0km, mb1 3.0/3, mb1mx2.9/16, mbtmp2.7/3, ML2.8/3, Error ellipse: s-maj=78.5km s-min=16.6km az=39.0, South Australia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.22	113	Pn	Pn	07 00 43.2	0.0
	0.3nm,0.3s,baz=293,slow=10,SNR=7.5						
STKA				Pg	Pb	07 00 50.9	+1.4
	1.7nm,0.3s,baz=295,slow=14,SNR=26						
STKA				Sn	Sn	07 01 22.3	0.0
	1.7nm,0.3s,baz=340,slow=12,SNR=6.5						
STKA				Lg	Lg	07 01 33.2	
	1.6nm,0.3s,baz=204,slow=19,SNR=5.8						
ASAR	Alice Springs	7.92	331	Pn	Pn	07 01 48.5	+0.6
	0.1nm,0.3s,baz=153,slow=11,SNR=5.4						
ASAR				Sn	Sn	07 03 17.6	-0.7
	0.1nm,0.3s,baz=153,slow=22,SNR=2.3						
WRA	Warramunga Arr	11.22	342	Pn	Pn	07 02 32.7	-0.4
	0.1nm,0.3s,baz=151,slow=13,SNR=4.0						

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*ISCJB **05** 07:13:02.5±1.2, 23°.97N±0°.03×122°.42E±0°.02, h9km±9km, Error ellipse: s-maj=4.3km s-min=3.0km az=170.9*
*TAP **05** 07:13:03.8, 23°.98N×122°.43E, h26km±1km, ML3.0, D*
*JMA **05** 07:13:03.3±0.4, 24°.08N×122°.35E, h24km, M2.3*
ISC 05 07:13:02.4±1.1, 23°.97N±0°.03×122°.40E±0°.02, h15km±9km, n31, σ0s.50/51, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWD	Chiawan	0.74	279	eP	Pn	07 13 18.1	-0.3
	baz=277						
TWD				eS	Sn	07 13 28.2	-1.2
	baz=277						
YOJ	Yonaguni jima	0.74	49	P	Pg	07 13 16.8	-0.1
YOJ				eS	Sg	07 13 26.4	-0.4
ENA	Nanau	0.75	307	eP	Pn	07 13 18.2	-0.3
	baz=305						
ENA				S	Sn	07 13 29.3	-0.4
	baz=305						
TWC	Suao	0.81	322	iP	Pb	07 13 18.4	+0.2
	baz=320						
TWC				S	Sg	07 13 28.7	-0.2
	baz=320						
TWE	Neicheng	1.00	318	eP	Pn	07 13 22.2	+0.3
	baz=317						
TWE				eS	Sn	07 13 36.1	+0.3
	baz=317						
ENTT	Nioudou	1.01	311	eP	Pn	07 13 23.2	+1.1
	baz=310						
ENTT				eS	Sn	07 13 35.9	-0.2
	baz=310						
NNS	Nan Shan	1.04	297	eP	Pg	07 13 22.9	+0.2
	baz=295						
NNS				S	Sg	07 13 36.8	+0.4
	baz=295						
WHF	Hehuan Shan	1.05	280	eP	Pb	07 13 22.8	+0.2
	baz=279						
WHF				S	Sb	07 13 37.0	+0.7
	baz=279						
EHY	Hungye	1.09	245	P	Pn	07 13 23.2	0.0
	baz=245						
EHY				S	Sg	07 13 37.4	-0.3
	baz=245						
TWB1	Santiao Chiao	1.10	340	eP	Pn	07 13 23.3	0.0
	baz=339						
TWB1				eS	Sb	07 13 36.3	-1.0
	baz=339						
NSK	Sanguang	1.18	307	eP	Pb	07 13 24.8	+0.2
	baz=305						
NSK				eS	Sb	07 13 39.8	+0.1
	baz=305						
TWF1	Yuli	1.18	239	iP	Pb	07 13 24.8	+0.2
	baz=238						
TWF1				S	Sb	07 13 39.9	+0.2
	baz=238						
NWF	Wu-fen Shan	1.23	333	eP	Pn	07 13 25.0	-0.2
	baz=331						
NWF				eS	Sg	07 13 42.2	-0.1
	baz=331						
IRIF	Iriomote-Funau	1.27	73	P	Pn	07 13 25.6	-0.1
IRIF				eS	Sn	07 13 42.5	0.0
CHKT	Chengkung	1.28	228	eP	Pn	07 13 25.1	-0.7
	baz=227						
HATJ	Hateruma jima	1.29	86	eS	Sb	07 13 42.8	0.0
SMLT	Sun Moon Lake	1.37	267	eP	Pb	07 13 27.9	0.0
	baz=266						
TYC	Yuchr	1.41	268	P	Pb	07 13 28.5	0.0
	baz=267						
TYC				eS	Sb	07 13 46.4	+0.1
	baz=267						
NSTT	Nanjuang	1.43	298	eP	Pn	07 13 28.1	+0.2
	baz=296						
NSTT				eS	Sb	07 13 46.7	-0.3
	baz=296						
ELDTW	Lidau	1.49	239	eP	Pn	07 13 28.2	-0.5
	baz=238						
JKRS	Kuro-shima	1.50	79	P	Pb	07 13 30.1	+0.2
JKRS				eS	Sg	07 13 50.7	0.0
ALS	Alishan	1.53	253	P	Pb	07 13 30.5	-0.2
	baz=252						
CHN5	Tsauling	1.62	257	P	Pb	07 13 32.0	-0.1
	baz=256						
CHN5				eS	Sb	07 13 52.8	+0.4
	baz=256						
JIJ	Ishigaki jima	1.64	76	P	Pn	07 13 31.4	+0.6
JIJ				eS	Sn	07 13 51.4	-0.2
TWG	Pinlang	1.67	227	eP	Pn	07 13 31.6	+0.4
	baz=227						
WTP	Ta-pu	1.79	247	P	Pb	07 13 34.8	-0.2
	baz=246						
CHN1	Nanshi	1.89	246	P	Pb	07 13 36.3	-0.3
	baz=245						
CHN1				eS	Sb	07 14 00.9	+0.9
	baz=245						
TWK	Hsinying	1.89	249	eP	Pb	07 13 36.5	-0.1
	baz=248						
EAST	Anshuo	2.13	222	eP	Pn	07 13 38.8	+1.3
	baz=222						
SCZT	Fangliau	2.28	226	eP	Pb	07 13 42.2	-1.2
	baz=226						
TWK1	Hengchun	2.50	216	eP	Pn	07 13 43.4	+0.8
	baz=216						

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*IDC **05** 07:35:06.5±1.6, 31°.69S×179°.61E, h445km±17km, mb3.3/4, mb1 3.6/8, mb1mx3.4/20, mbtmp3.5/8, Error ellipse: s-maj=25.8km s-min=14.7km az=129.0*
*ISCJB **05** 07:35:06.6±0.5, 31°.73S±0°.04×179°.4E±0°.1, h451km, mb3.6/4, Error ellipse: s-maj=15.7km s-min=4.8km az=9.1*
ISC 05 07:35:06.8±0.7, 31°.74S±0°.07×179°.6E±0°.1, h451km, n61, σ1s.37/76, mb3.8/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.31	42	S	S	07 37 05.1	-7.7
	57nm,0.3s,baz=89,slow=21,SNR=1.3						
MXZ	Matakaoa Point	5.90	190	ePN	P	07 36 40.5	+0.6
MXZ				SN	S	07 37 54.7	-1.4
PUZ	Puketiti	6.40	189	PN	P	07 36 45.3	+0.1
PUZ				SN	S	07 38 01.4	-4.4
OPRZ	Ohinepanea	6.57	201	PN	P	07 36 50.2	+3.3
MWZ	Matawai	6.78	194	ePN	P	07 36 49.6	+0.5
MWZ				SN	S	07 38 12.7	-0.4
URZ	Urewera	6.80	196	ePN	P	07 36 49.4	+0.1
URZ				SN	S	07 38 11.9	-1.4
URZ	Urewera	6.80	196	P	P	07 36 51.1	+1.8
	45nm,0.3s,baz=340,slow=2.5,SNR=205						
URZ				S	S	07 38 12.9	-0.4
	19nm,0.3s,baz=207,slow=23,SNR=5.4						
CNGZ	Carnagh Statio	6.82	189	ePN	P	07 36 50.6	+1.2
CNGZ				SN	S	07 38 15.5	+1.9
TOZ	Tahuroa Road	6.84	208	ePN	P	07 36 48.7	-1.0
RRRZ	Republican Roa	7.04	200	ePN	P	07 36 53.8	+1.9
PRGZ	Paritu Road	7.29	190	ePN	P	07 36 58.1	+3.6
RAHZ	Arahi	7.44	195	ePN	P	07 36 57.9	+1.8
RAHZ				SN	S	07 38 24.7	-1.0
MHGZ	Mahia Peninsul	7.52	190	ePN	P	07 36 59.1	+2.2
NMHZ	Naumai	7.67	196	ePN	P	07 37 01.0	+2.3
NMHZ				SN	S	07 38 29.5	-0.9
HIZ	Hauiti	7.77	208	ePN	P	07 37 04.3	+4.7
BKZ	Black Stump Fm	7.82	198	ePN	P	07 36 59.4	-0.7
BKZ				SN	S	07 38 30.6	-2.6
MCHZ	McNeill Hill	8.03	196	ePN	P	07 37 04.3	+1.9
MCHZ				SN	S	07 38 37.3	0.0
MOVZ	Moawhango	8.25	201	PN	P	07 37 06.0	+1.2
PKVZ	Pokaka	8.27	203	PN	P	07 37 07.7	+2.6
KAHZ	Kahuranaki	8.32	194	PN	P	07 37 06.9	+1.3
PXZ	Pawanui	8.55	194	PN	P	07 37 07.9	-0.2
PXZ				SN	S	07 38 45.2	-2.4
PNHZ	Pukenui	8.60	198	ePN	P	07 37 07.6	-1.0
WPHZ	Waipukurau	8.68	196	ePN	P	07 37 10.9	+1.5
WPHZ				SN	S	07 38 50.9	+0.7
PRHZ	Porangahau	8.83	195	ePN	P	07 37 11.5	+0.5
DVHZ	Dannevirke	8.97	197	ePN	P	07 37 14.0	+1.4
ANWZ	Angora Road	9.05	195	ePN	P	07 37 13.8	+0.4
ANWZ				SN	S	07 38 56.8	-0.7
POWZ	Post Office Ro	9.16	198	ePN	P	07 37 14.3	-0.3
PRWZ	Pori Road	9.26	197	PN	P	07 37 17.9	+2.2
MRZ	Mangatainoka R	9.46	199	ePN	P	07 37 17.3	-0.6
MRZ				SN	S	07 39 04.6	-1.1
HOWZ	Holdsworth Sta	9.70	198	PN	P	07 37 21.3	+0.8
OGWZ	Otaki Gorge	9.72	200	ePN	P	07 37 21.1	+0.4
TMWZ	Te Maipa	9.80	196	PN	P	07 37 23.0	+1.4
KIW	Kapiti Island	9.84	201	PN	P	07 37 22.9	+0.8
MTW	Mount Morrison	9.95	198	PN	P	07 37 23.5	+0.3
CAW	Cannon Point	10.02	200	PN	P	07 37 24.5	+0.5
TCW	Tory Channel	10.36	203	PN	P	07 37 28.9	+1.3
PLWZ	Palliser	10.40	198	ePN	P	07 37 30.2	+2.1
TUWZ	Tuamarina	10.66	203	PN	P	07 37 30.9	-0.1
NNZ	Nelson	10.68	206	PN	P	07 37 32.1	+1.0
QRZ	Quartz Range	10.69	210	ePN	P	07 37 33.2	+1.9
THZ	Tophouse	11.33	206	PN	P	07 37 39.3	+1.0
KHZ	Kahutara	11.68	203	PN	P	07 37 43.5	+1.5
LTZ	Lake Taylor	12.45	206	ePN	P	07 37 51.2	+0.8
OXZ	Oxford	13.00	205	ePN	P	07 37 55.9	-0.4
RPZ	Rata Peaks	13.70	207	P	P	07 38 04.4	+0.5
	0.8nm,0.3s,baz=351,slow=13,SNR=3.9						
RPZ				S	S	07 40 29.5	-0.7
	0.3nm,0.3s,baz=161,slow=18,SNR=1.4						
DZM	Mont Dzumac	15.14	306	P	P	07 38 20.2	+0.6
	0.7nm,0.3s,baz=313,slow=22,SNR=8.4						
AFI	Afiamalu	19.45	26	P	P	07 39 02.5	-0.9
	2.5nm,0.3s,baz=191,slow=6.5,SNR=5.9						
AFI				S	S	07 42 16.1	-0.2
	0.7nm,0.3s,baz=210,slow=21,SNR=2.3						
ASAR	Alice Springs	40.97	270	P	P	07 42 09.2	+0.1
	0.7nm,0.6s,baz=105,slow=7.2,SNR=9.8						
ASAR				pP	pP	07 43 32.4	-0.8
	0.4nm,0.7s,baz=100,slow=7.9,SNR=3.2						
ASAR				PcP	PcP	07 43 59.0	0.0
	0.3nm,0.5s,baz=125,slow=3.9,SNR=5.0						
ASAR				ScP	ScP	07 47 06.3	+1.1
	0.6nm,0.7s,baz=110,slow=3.8,SNR=7.1						
WRA	Warramunga Arr	42.08	275	P	P	07 42 17.9	-0.1
	1.8nm,0.4s,baz=111,slow=8.1,SNR=53						
VNDA	Vanda	46.56	185	ScP	ScP	07 47 30.9	+3.9
	0.4nm,0.6s,baz=337,slow=2.9,SNR=3.5						
KSRS	Korea Array	84.04	321	P	P	07 46 49.0	+0.3
	1.1nm,0.5s,baz=140,slow=5.7,SNR=7.2						
USRK	Ussuriysk Arra	87.14	328	P	P	07 47 04.4	+0.9
	1.6nm,0.9s,baz=116,slow=13,SNR=3.7						
SONM	Songino Array	102.74	319	PKiKP	PKiKP	07 52 32.9	+0.5
	0.2nm,0.6s,baz=104,slow=6.1,SNR=2.1						
ARCES	ARCESS Array B	139.42	346	PKhKP	PKPpre	07 53 34.6	
	2.5nm,1.0s,baz=50,slow=1.9,SNR=6.9						
KBZ	Khabaz	144.08	302	PKP	PKPbc	07 53 49.0	-0.2
	1.2nm,0.6s,baz=165,slow=5.4,SNR=3.6						
KAF	Kangasniemi	145.06	338	epkp	PKPdf	07 53 49.1	-2.0
	2.0nm,0.4s						
FINES	FINESS Array B	145.63	338	PKPbc	PKPbc	07 53 52.9	-0.4
	4.1nm,0.3s,baz=46,slow=5.3,SNR=50						
NB2	NORSAR Subarra	149.71	349	PKP	PKPbc	07 54 03.4	-0.7
	comp=Z,2.1nm,1.0s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.71	349	PKPbc	PKPbc	07 54 03.9	-0.2
	comp=Z,0.5nm,0.4s,baz=15,slow=4.1,SNR=2.5						
NOA				PKPab	PKPab	07 54 10.7	-0.5
	comp=Z,1.3nm,0.7s,baz=26,slow=4.0,SNR=4.3						
AKASG	Malin Array Be	151.02	319	PKPbc	PKPbc	07 54 07.0	-0.4
	comp=Z,0.5nm,0.4s,baz=167,slow=1.0,SNR=4.0						
BRTR	Keskin Array B	151.34	296	PKPbc	PKPbc	07 54 08.9	+0.2
	comp=Z,0.3nm,0.4s,baz=158,slow=2.9,SNR=4.3						
BRTR				PKPab	PKPab	07 54 18.7	-0.2
	comp=Z,0.9nm,0.8s,baz=114,slow=4.5,SNR=3.9						

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*NEIC **05** 07:44:19.6, 17°.93N×68°.40W, h98km, MD3.8(RSPR), After RSPR.*
RSPR 05 07:44:19.6, 17°.93N×68°.40W, h99km±9km, MD3.8/6, 12C, Mona Passage

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	1.33	66	⇑eP	Pn	07 44 43.4	-0.4
AGPR	Aguadilla, PR	1.33	66	eS	Sn	07 45 01.7	-0.4
AGPR	Aguadilla, PR	1.33	66	⇑eP	Pn	07 44 43.4	-0.4
AGPR				eS	Sn	07 45 01.7	-0.4
AOPR	Arecibo Observ	1.62	75	⇑eP	Pn	07 44 46.4	-0.9
AOPR	Arecibo Observ	1.62	75	eS	Sn	07 45 08.2	-0.1
AOPR	Arecibo Observ	1.62	75	⇑eP	Pn	07 44 46.4	-0.9
AOPR				eS	Sn	07 45 08.2	-0.1
CPD	Cerro la Pandu	2.37	87	⇑eP	Pn	07 44 56.4	-0.6
CPD	Cerro la Pandu	2.37	87	eS	Sn	07 45 25.6	0.0
CPD	Cerro la Pandu	2.37	87	⇑eP	Pn	07 44 56.4	-0.6
CPD				eS	Sn	07 45 25.6	0.0
HUMP	Col San Antoni	2.43	85	⇑eP	Pn	07 44 58.0	+0.1
HUMP	Col San Antoni	2.43	85	eS	Sn	07 45 26.9	-0.3
HUMP	Col San Antoni	2.43	85	⇑eP	Pn	07 44 58.0	+0.1
HUMP				eS	Sn	07 45 26.9	-0.3
CBYP	Canovanas	2.44	82	⇑eP	Pn	07 44 57.4	-0.6
CBYP	Canovanas	2.44	82	eS	Sn	07 45 27.4	0.0
CBYP	Canovanas	2.44	82	⇑eP	Pn	07 44 57.4	-0.6
CBYP				eS	Sn	07 45 27.4	0.0
MTP	Monte Pirata	2.71	86	⇑eP	Pn	07 45 01.4	-0.1
MTP	Monte Pirata	2.71	86	eS	Sn	07 45 33.8	0.0
MTP	Monte Pirata	2.71	86	⇑eP	Pn	07 45 01.4	-0.1
MTP				eS	Sn	07 45 33.8	0.0

MEX 05 07:52:47.2±0.7, 15°.37N×96°.82W, h20km±30km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.80	60	iP	Pb	07 52 59.9	-2.5
HUIG				iS	Sb	07 53 09.5	-3.2
PNIG	Pinotepa	1.61	309	iP	Pn	07 53 12.2	-2.4
PNIG				iS	Sn	07 53 30.1	-4.7
VHO	Vista Hermosa	1.69	3	eP	Pn	07 53 12.9	-3.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO				*i* S	Sn	07 53 33.4	-3.9
UTMO	**Huajuapan**	**2.62**	**339**	*i* P	Pn	07 53 26.5	-2.2
UTMO				*i* S	Sn	07 53 57.2	-2.9
TPIG	**Tehuac#an**	**3.08**	**350**	*i* P	Pn	07 53 32.1	-2.8
TPIG				*i* S	Sn	07 54 07.0	-4.3
ACX	**Acapulco**	**3.27**	**297**	*i* P	Pn	07 53 36.7	-0.8
ACX				*i* S	Sn	07 54 14.4	-1.5
TGIG		**3.82**	**68**	*i* P	Pn	07 53 43.2	-1.8
TGIG				*i* S	Sn	07 54 26.2	-3.3
YAIG	**Yautepec**	**4.08**	**329**	*i* P	Pn	07 53 46.6	-2.1
YAIG				*e*S	Sn	07 54 33.4	-2.7

*NIED **05** 08:02:00, 29°.20N×130°.00E, h38km, Mw4.8 Best double couple: M0 1.61000×10[16] NP1:φs45.00000°, δ83.00000°, λ78.00000°. NP2:φs287.00000°, δ14.00000°, λ152.00000°.*
*JMA **05** 08:02:46.3±0.1, 29°.23N×129°.95E, h67km±3km, M4.3*
JMA Felt I J1.
*ISCJB **05** 08:02:46.7±0.4, 29°.19N±0°.03×130°.03E±0°.06, h54km±3km, mb4.2/32, MS3.8/14, Error ellipse: s-maj=9.6km s-min=3.1km az=24.5*
*NEIC **05** 08:02:48.8±0.8, 29°.16N×130°.06E, h61km±6km, mb4.4/12, Error ellipse: s-maj=9.7km s-min=6.8km az=122.0*
NEIC Recorded [1 JMA] on Akuseki-jima and Amami-oshima.
*IDC **05** 08:02:48.7±0.7, 29°.20N×129°.98E, h59km±6km, mb3.8/18, mb1 4.0/21, mb1mx4.0/29, mbtmp3.9/21, MS3.8/17, Ms1 3.8/17, ms1mx3.6/40, Error ellipse: s-maj=17.7km s-min=11.5km az=71.0*
ISC 05 08:02:48.3±0.6**, 29°.22N**±0°.04×**130°.00E**±0°.07**, h55**km±5km**, n87, σ0^s.88**/105**, mb4.2**/32**, MS3.9**/14**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.63**	**350**	P	**Pn**	**08 02 59.8**	**-1.7**
JNN				*e*S	**Sn**	**08 03 10.5**	**-0.5**
JAM	**Amami Oshima**	**0.87**	**204**	P	**Pn**	**08 03 02.8**	**-1.7**
JAM				*e*S	**Sn**	**08 03 14.4**	**-2.0**
JZK	**Kikaishima**	**0.90**	**182**	P	**Pn**	**08 03 03.7**	**-1.1**
JZK				*e*S	**Sn**	**08 03 18.5**	**+1.5**
JAMN	**Amaminishikomi**	**1.21**	**217**	P	**Pn**	**08 03 07.6**	**-1.4**
JAMN				*e*S	**Sn**	**08 03 23.6**	**-0.8**
JKC	**Kuchinoerabu**	**1.25**	**8**	P	**Pn**	**08 03 08.1**	**-1.4**
JKC				*e*S	**Sn**	**08 03 24.2**	**-1.2**
JTN	**Tanegashima 3**	**1.67**	**30**	P	**Pn**	**08 03 14.1**	**-1.1**
JTN				*e*S	**Sn**	**08 03 35.4**	**0.0**
JTK	**Tokunoshima**	**1.70**	**213**	P	**Pn**	**08 03 14.7**	**-0.9**
JTK				*e*S	**Sn**	**08 03 35.8**	**-0.4**
JTSR	**Tashiro 2**	**2.10**	**22**	P	**Pn**	**08 03 20.0**	**-1.1**
JTSR				*e*S	**Sn**	**08 03 45.3**	**-0.8**
JIH	**Iheya**	**2.82**	**220**	P	**Pn**	**08 03 30.4**	**-0.5**
JIH				*e*S	**Sn**	**08 04 02.6**	**-1.1**
JOW	**Kunigami**	**2.82**	**213**	*e*Pn	**Pn**	**08 03 29.7**	**-1.3**
JOW	**Kunigami**	**2.82**	**213**	P	**Pn**	**08 03 29.9**	**-1.1**
JOW				*e*S	**Sn**	**08 04 03.0**	**-0.8**
JAGN	**Aguni-jima**	**3.58**	**224**	P	**Pn**	**08 03 41.0**	**-0.3**
JAGN				*e*S	**Sn**	**08 04 21.9**	**-0.5**
JJT2	**Tamagusuku 2**	**3.66**	**214**	P	**Pn**	**08 03 42.1**	**-0.3**
JJT2				*e*S	**Sn**	**08 04 23.6**	**-0.7**
JNU	**Nakatsue**	**3.96**	**11**	*e*Pn	**Pn**	**08 03 47.8**	**+1.2**
JNU				S	**Sn**	**08 04 32.5**	**+0.6**
JNU	**Nakatsue**	**3.96**	**11**	P	**Pn**	**08 03 47.8**	**+1.2**
	20nm,0.3s,baz=178,slow=8.9,SNR=120						
JNU				S	**Sn**	**08 04 32.5**	**+0.6**
	2.1nm,0.3s,baz=53,slow=18,SNR=2.3						
JKE	**Kume jima 2**	**4.05**	**225**	P	**Pn**	**08 03 47.4**	**-0.4**
KSAR	**Wonju Array Be**	**8.39**	**348**	P	Pn	08 04 51.6	+4.4
KSRS	**Korea Array**	**8.40**	**349**	P	Pn	08 04 51.6	+4.3
	0.6nm,0.3s,baz=166,slow=15,SNR=33						
KSRS				LR	LR	08 08 18.0	
	comp=Z,426nm,18.8s,baz=161,slow=39						
YHNB	**Yeheng**	**8.93**	**242**	*e*Pn	Pn	08 05 01.2	+6.4
JHJ	**Hachijo jima 2**	**9.24**	**63**	P	**Pn**	**08 04 56.5**	**-2.3**
	6.5nm,0.3s,baz=252,slow=20,SNR=2.1						
JHJ				LR	LR	08 08 11.5	
	comp=Z,272nm,18.3s,baz=22,slow=35						
YULB	**Yu-li**	**9.72**	**235**	*e*Pn	Pn	08 05 01.5	-4.1
SSLB	**Suanglung**	**9.74**	**238**	*e*Pn	**Pn**	**08 05 08.1**	**+2.4**
MAJO	**Matsushiro**	**10.04**	**41**	*e*Pn	**Pn**	**08 05 09.1**	**-0.7**
	6.4nm,0.4s						
MJAR	**Matsushiro Arr**	**10.04**	**41**	P	**Pn**	**08 05 09.6**	**-0.3**
MJAR	**Matsushiro Arr**	**10.04**	**41**	P	**Pn**	**08 05 09.6**	**-0.3**
	0.8nm,0.3s,baz=235,slow=15,SNR=12						
USRK	**Ussuriysk Arra**	**15.04**	**6**	P	**P**	**08 06 21.4**	**-0.2**
	0.2nm,0.3s,baz=186,slow=10,SNR=6.5						
ASAJ	**Asahikawa**	**17.95**	**31**	*e*P	**P**	**08 06 53.8**	**+0.1**
	4.7nm,0.8s						
ASAJ	**Asahikawa**	**17.95**	**31**	P	**P**	**08 06 53.9**	**+0.1**
	1.2nm,0.3s,baz=243,slow=10,SNR=9.2						
ASAJ				LR	LR	08 13 57.4	
	comp=Z,197nm,21.0s,baz=161,slow=37						
GUMO	**Guam**	**20.78**	**135**	LR	LR	08 13 37.9	
	comp=Z,223nm,18.8s,baz=272,slow=31						
DAV	**Davao City (W)**	**22.42**	**192**	LR	LR	08 16 50.5	
	comp=Z,130nm,18.4s,baz=336,slow=38						
ULN	**Ulaanbaatar**	**25.70**	**323**	*e*P	**P**	**08 08 13.5**	**+0.1**
	6.1nm,0.8s						
SONM	**Songino Array**	**26.03**	**322**	P	**P**	**08 08 16.1**	**-0.3**
SONM				pP	**pP**	**08 08 30.1**	**0.0**
SONM	**Songino Array**	**26.03**	**322**	P	**P**	**08 08 16.1**	**-0.3**
	4.6nm,0.7s,baz=137,slow=9.3,SNR=24						
SONM				pP	**pP**	**08 08 30.1**	**0.0**
	2.8nm,0.7s,baz=146,slow=10,SNR=5.1						
SONM				LR	LR	08 19 58.9	
	comp=Z,318nm,18.3s,baz=318,slow=40						
CMAR	**Chiang Mai Arr**	**30.27**	**256**	LR	LR	08 21 54.7	
	comp=Z,80nm,19.9s,baz=203,slow=38						
PETK	**Petropavlovsk-**	**31.34**	**33**	LR	LR	08 22 27.6	
	comp=Z,56nm,18.8s,baz=64,slow=38						
MKAR	**Makanchi Array**	**40.80**	**309**	P	**P**	**08 10 24.4**	**+0.1**
MKAR				PcP	**PcP**	**08 12 24.6**	**+0.1**
MKAR	**Makanchi Array**	**40.80**	**309**	P	**P**	**08 10 24.4**	**+0.1**
	0.7nm,0.7s,baz=97,slow=9.9,SNR=9.5						
MKAR				PcP	**PcP**	**08 12 24.6**	**+0.1**
	1.8nm,0.7s,baz=72,slow=2.7,SNR=11						
MKAR				LR	LR	08 28 57.3	
	comp=Z,79nm,18.3s,baz=252,slow=38						
ZALV	**Zalesovo Beam**	**40.90**	**320**	P	**P**	**08 10 25.4**	**+0.5**
ZALV				PcP	**PcP**	**08 12 24.1**	**-0.4**
ZALV	**Zalesovo Beam**	**40.90**	**320**	P	**P**	**08 10 25.4**	**+0.5**
	0.6nm,0.3s,baz=108,slow=9.7,SNR=5.9						
ZALV				PcP	**PcP**	**08 12 24.1**	**-0.4**
	1.4nm,0.6s,baz=93,slow=3.1,SNR=8.0						
ZALV				LR	LR	08 28 53.7	
	comp=Z,136nm,19.3s,baz=41,slow=38						
KURK	**Kurchatov**	**43.80**	**314**	*e*P	**P**	**08 10 48.8**	**+0.2**
	5.2nm,1.0s						
KURK				PcP	**PcP**	**08 12 33.8**	**-0.5**
KURBB	**Kurchatov Arra**	**43.85**	**314**	P	**P**	**08 10 47.9**	**-1.1**
	2.0nm,0.5s,baz=101,slow=8.8,SNR=16						
KURBB				PcP	**PcP**	**08 12 33.8**	**-0.6**
	1.5nm,0.8s,baz=95,slow=3.5,SNR=6.0						
KURBB				LR	LR	08 30 47.7	
	comp=Z,204nm,20.5s,baz=95,slow=38						
BILL	**Bilibino**	**44.35**	**19**	*e*P	**P**	**08 10 52.8**	**+0.1**
	3.0nm,0.7s						
WRAB	**Tennant Creek**	**49.04**	**175**	*e*P	**P**	**08 11 29.7**	**-0.3**
	7.9nm,0.9s						
WRA	**Warramunga Arr**	**49.05**	**175**	P	**P**	**08 11 29.1**	**-1.0**
WRA				pP	**pP**	**08 11 44.6**	**+0.1**
WRA	**Warramunga Arr**	**49.05**	**175**	P	**P**	**08 11 29.1**	**-1.0**
	2.3nm,0.6s,baz=355,slow=8.2,SNR=28						
WRA				pP	**pP**	**08 11 44.6**	**+0.1**
	2.8nm,0.7s,baz=353,slow=8.3,SNR=6.7						
BVAR	**Borovoye Array**	**49.15**	**316**	P	**P**	**08 11 31.2**	**+0.7**
BVAR				PcP	**PcP**	**08 12 53.4**	**+0.2**
BVAR	**Borovoye Array**	**49.15**	**316**	P	**P**	**08 11 31.2**	**+0.7**
	5.2nm,0.7s,baz=91,slow=9.0,SNR=19						
BVAR				PcP	**PcP**	**08 12 53.4**	**+0.2**
	3.2nm,0.7s,baz=101,slow=3.0,SNR=6.1						
BVAR				LR	LR	08 34 05.1	
	comp=Z,163nm,18.3s,baz=238,slow=38						
ASAR	**Alice Springs**	**52.71**	**176**	P	**P**	**08 11 57.1**	**-0.4**
ASAR				pP	**pP**	**08 12 13.0**	**+0.8**
ASAR	**Alice Springs**	**52.71**	**176**	P	**P**	**08 11 57.1**	**-0.4**
	1.9nm,0.6s,baz=7.7,slow=14,SNR=38						
ASAR				pP	**pP**	**08 12 13.0**	**+0.8**
	2.2nm,0.6s,baz=7.8,slow=14,SNR=10						
ABKAR	**Akbulak array**	**55.79**	**312**	*e*P	**P**	**08 12 20.2**	**+0.5**
	4.0nm,0.7s						
AKTO	**Aktyubinsk**	**56.89**	**313**	LR	LR	08 39 04.1	
	comp=Z,147nm,19.0s,baz=261,slow=38						
KDAK	**Kodiak Island**	**59.20**	**37**	P	**P**	**08 12 43.2**	**-0.3**
KDAK	**Kodiak Island**	**59.20**	**37**	P	**P**	**08 12 43.2**	**-0.3**
	6.4nm,0.7s,baz=292,slow=5.4,SNR=3.6						
STKA	**Stephens Creek**	**61.75**	**169**	P	**P**	**08 13 01.0**	**-0.1**
	0.5nm,0.6s,baz=0.0,slow=8.1,SNR=2.2						
STKA				pP	**pP**	**08 13 18.0**	**+1.9**
	0.6nm,0.4s,baz=348,slow=12,SNR=1.9						
ARCES	**ARCESS Array B**	**67.81**	**338**	P	**P**	**08 13 37.9**	**-2.3**
ARCES	**ARCESS Array B**	**67.81**	**338**	P	**P**	**08 13 37.9**	**-2.3**
	4.2nm,0.9s,baz=42,slow=7.3,SNR=3.2						
ARCES				LR	LR	08 48 09.7	
	comp=Z,78nm,19.3s,baz=314,slow=40						
JOF	**Joensuu**	**68.20**	**331**	*e*p	**P**	**08 13 42.3**	**-0.4**
KBZ	**Khabaz**	**68.50**	**309**	P	**P**	**08 13 45.8**	**+0.9**
KBZ	**Khabaz**	**68.50**	**309**	P	**P**	**08 13 45.8**	**+0.9**
	4.5nm,0.8s,baz=75,slow=2.5,SNR=8.6						
FINES	**FINESS Array B**	**71.05**	**330**	P	**P**	**08 13 59.0**	**-1.2**
FINES	**FINESS Array B**	**71.05**	**330**	P	**P**	**08 13 59.0**	**-1.2**
	2.1nm,0.7s,baz=52,slow=6.4,SNR=12						
FINES				LR	LR	08 47 41.6	
	comp=Z,82nm,19.7s,baz=90,slow=38						
RES	**Resolute Bay**	**72.33**	**11**	*e*P	**P**	**08 14 07.6**	**-0.1**
	8.6nm,0.8s						
AKASG	**Malin Array Be**	**74.29**	**320**	P	**P**	**08 14 19.3**	**-0.3**
AKASG	**Malin Array Be**	**74.29**	**320**	P	**P**	**08 14 19.3**	**-0.3**
	1.2nm,0.5s,baz=52,slow=6.8,SNR=5.3						
AKASG				LR	LR	08 49 42.8	
	comp=Z,99nm,18.1s,baz=205,slow=38						
YKW3	**Yellowknife Ar**	**75.12**	**26**	*e*P	**P**	**08 14 24.9**	**+0.7**
	0.1nm,1.2s						
YKA	**Yellowknife Ar**	**75.16**	**26**	P	**P**	**08 14 24.8**	**+0.3**
YKA	**Yellowknife Ar**	**75.16**	**26**	P	**P**	**08 14 24.7**	**+0.3**
	1.4nm,0.7s,baz=305,slow=5.5,SNR=27						
BRTR	**Keskin Array B**	**76.44**	**308**	P	**P**	**08 14 32.4**	**-0.1**
BRTR	**Keskin Array B**	**76.44**	**308**	P	**P**	**08 14 32.4**	**-0.1**
	1.1nm,0.7s,baz=73,slow=4.3,SNR=5.4						
NOA	**NORSAR Array B**	**77.33**	**334**	P	**P**	**08 14 37.7**	**+0.8**
NOA	**NORSAR Array B**	**77.33**	**334**	P	**P**	**08 14 37.7**	**+0.8**
	1.2nm,0.8s,baz=54,slow=5.3,SNR=2.8						
NOA				LR	LR	08 52 03.3	
	comp=Z,44nm,18.3s,baz=55,slow=38						
SUMG	**Summit**	**78.17**	**356**	*e*P	**P**	**08 14 41.9**	**+0.1**
	3.3nm,0.6s						
GERES	**GERESS Array B**	**83.76**	**323**	P	**P**	**08 15 11.7**	**+0.1**
GERES	**GERESS Array B**	**83.76**	**323**	P	**P**	**08 15 11.7**	**+0.1**
	0.4nm,0.3s,baz=52,slow=6.9,SNR=5.0						
FFC	**Flin Flon**	**85.23**	**27**	*e*P	**P**	**08 15 19.2**	**+0.5**
	2.7nm,0.8s						
CMB	**Columbia Colle**	**86.20**	**48**	*e*P	**P**	**08 15 24.6**	**+0.5**
	2.4nm,0.8s						
HLID	**Hailey**	**86.61**	**41**	*e*P	**P**	**08 15 26.2**	**0.0**
	1.7nm,0.9s						
NVAR	**Mina Array Bea**	**87.32**	**47**	P	**P**	**08 15 30.7**	**+1.0**
NVAR	**Mina Array Bea**	**87.32**	**47**	P	**P**	**08 15 30.7**	**+1.0**
	0.6nm,0.7s,baz=297,slow=4.8,SNR=4.4						
PDAR	**Pinedale Array**	**89.86**	**39**	P	**P**	**08 15 41.8**	**+0.1**
PDAR	**Pinedale Array**	**89.86**	**39**	P	**P**	**08 15 41.8**	**+0.1**
	0.8nm,0.8s,baz=320,slow=1.2,SNR=8.8						
RSSD	**Black Hills**	**91.88**	**36**	*e*P	**P**	**08 15 51.4**	**+0.4**
	1.4nm,0.6s						
PV10	**Paradox Valley**	**93.05**	**42**	*e*P	**P**	**08 15 58.2**	**+1.6**
	50nm,0.9s						
TORD	**Torodi Ar. Bea**	**114.71**	**303**	PKP	PKPdf	08 21 23.0	-0.3
TORD	**Torodi Ar. Bea**	**114.71**	**303**	PKP	PKPdf	08 21 23.0	-0.3
	0.5nm,0.8s,baz=5.8,slow=2.7,SNR=3.8						
LPAZ	**La Paz**	**158.94**	**56**	PKPab	**PKPab**	**08 23 17.6**	**-0.3**
LPAZ	**La Paz**	**158.94**	**56**	PKPab	**PKPab**	**08 23 17.6**	**-0.3**
	0.6nm,0.3s,baz=321,slow=5.3,SNR=8.9						

GUC 05 08:31:12.0±0.8**, 30°.70S**×**71°.65W, h41**km±3km**, MD3.9, ML3.7, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.73**	**131**	⇑*i*P	Pn	08 31 26.2	+0.2
CMCH				*i* S	Sn	08 31 36.9	+0.9
CMCH				AML	AML	08 31 44.0	
	comp=E,5μm,0.8s						
TLL	**Tololo Astrono**	**0.90**	**54**	⇓*i*P	Pn	08 31 29.4	+0.9
TLL				*i* S	Sn	08 31 42.5	+1.9
TLL				AML	AML	08 31 46.2	
	comp=N,4μm,0.5s						
CHNG	**Los Chungos**	**1.19**	**174**	*e*P	Pn	08 31 33.2	+1.1
CHNG				*i* S	Sn	08 31 48.9	+1.8
CHNG				AML	AML	08 31 52.5	
	comp=E,912nm,0.5s						
LCO	**Las Campanas**	**1.87**	**26**	*e*P	Pn	08 31 42.8	+0.9
LCO				*e*S	Sn	08 32 06.8	+2.3
LCO				AML	AML	08 32 15.9	
	comp=E,793nm,0.3s						
ROCH	**El Roble**	**2.33**	**167**	*e*P	Pn	08 31 49.5	+1.3
ROCH				*e*S	Sn	08 32 18.0	+2.3
ROCH				AML	AML	08 32 26.8	
	comp=N,589nm,0.4s						
PEL	**Peldehue**	**2.57**	**162**	AML	AML	08 32 35.4	
	comp=E,733nm,0.4s						
CLCH	**Cerro Calan**	**2.85**	**161**	*e*P	Pn	08 31 58.9	+3.8
CLCH				*e*S	Sn	08 32 32.8	+4.6
CLCH				AML	AML	08 32 47.4	
	comp=E,548nm,0.5s						
SAN	**Santiago**	**2.87**	**163**	AML	AML	08 32 50.0	
	comp=N,254nm,0.5s						
ANTU	**Antumapu**	**2.99**	**164**	AML	AML	08 32 58.3	
	comp=E,257nm,0.5s						
LMEL	**Las Melosas**	**3.37**	**159**	*e*P	Pn	08 32 04.6	+2.3
LMEL				*e*S	Sn	08 32 43.3	+2.1
LMEL				AML	AML	08 32 56.7	
	comp=N,140nm,0.2s						

*ISK **05** 08:38:47.3, 37°.07N×28°.57E, h19km, MD2.6*
*CSEM **05** 08:38:48.4±0.4, 37°.01N×28°.50E, h25km±5km, MD2.8, Error ellipse: s-maj=13.2km s-min=7.8km az=34.0*
*ISCJB **05** 08:38:48.5±0.7, 36°.97N±0°.05×28°.46E±0°.06, h30km±5km, Error ellipse: s-maj=10.1km s-min=6.2km az=40.3*
*DDA **05** 08:38:49.4, 37°.01N×28°.48E, h7km, MD2.8*
ISC 05 08:38:49.0±1.0**, 37°.05N**±0°.04×**28°.50E**±0°.03**, h24**km±7km**, n22, σ1^s.34**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TURN	**Turunc**	**0.19**	**155**	*i* P	**Pb**	**08 38 55.6**	**+1.2**
TURN				*i* S	**Sb**	**08 39 00.6**	**+2.5**
TURN	**Turunc**	**0.19**	**155**	*i* P	**Pb**	**08 38 55.6**	**+1.2**
TURN				*i* S	**Sb**	**08 39 00.6**	**+2.5**
YER	**Yerkesik**	**0.20**	**297**	*e*PG	**Pb**	**08 38 52.8**	**-1.8**
YER				*e*SG	**Sb**	**08 38 58.2**	**-0.2**
YER	**Yerkesik**	**0.20**	**297**	*e*Pg	**Pb**	**08 38 52.8**	**-1.8**
YER				*e*Sg	**Sb**	**08 38 58.2**	**-0.2**
DALY	**Dalyan (Mu˜la**	**0.26**	**152**	*e*PG	**Pb**	**08 38 53.5**	**-1.8**
DALY				*e*SG	**Sb**	**08 38 58.3**	**-1.3**
DALY	**Dalyan (Mu˜la**	**0.26**	**152**	*e*Pg	**Pb**	**08 38 53.5**	**-1.8**
DALY				*e*Sg	**Sb**	**08 38 58.3**	**-1.3**
FETY	**Fethiye**	**0.62**	**131**	*e*PG	**Pb**	**08 39 00.3**	**-0.9**
FETY	**Fethiye**	**0.62**	**131**	*e*Pg	**Pb**	**08 39 00.3**	**-0.9**
MLSB	**Milas**	**0.63**	**294**	*e*PG	**Pb**	**08 39 00.6**	**-0.8**
MLSB	**Milas**	**0.63**	**294**	*e*Pg	**Pb**	**08 39 00.6**	**-0.8**
DNZL	**Cakiroluk**	**0.78**	**34**	*i* P	**Pb**	**08 39 04.4**	**+0.4**
DNZL				*i* S	**Sn**	**08 39 17.1**	**+1.5**
DNZL	**Cakiroluk**	**0.78**	**34**	*i* P	**Pb**	**08 39 04.4**	**+0.4**
AYDN	**Tasoluk**	**0.79**	**321**	*i* P	**Pn**	**08 39 05.2**	**+0.5**
AYDN				*i* S	**Sn**	**08 39 16.4**	**+0.7**
AYDN	**Tasoluk**	**0.79**	**321**	*i* P	**Pn**	**08 39 05.2**	**+0.5**
AYDN				*i* S	**Sn**	**08 39 16.4**	**+0.7**
DAT	**Datca**	**0.81**	**247**	*e*PG	**Pb**	**08 39 04.3**	**-0.1**
DAT	**Datca**	**0.81**	**247**	*e*Pg	**Pb**	**08 39 04.3**	**-0.1**
DENT	**Denizli**	**0.82**	**31**	*e*PG	**Pb**	**08 39 03.1**	**-1.6**
DENT	**Denizli**	**0.82**	**31**	*e*Pg	**Pb**	**08 39 03.1**	**-1.6**
GOLH	**Golhisar**	**0.87**	**77**	*e*P	**Pn**	**08 39 06.3**	**+0.5**
GOLH	**Golhisar**	**0.87**	**77**	*e*P	**Pn**	**08 39 06.3**	**+0.5**
ELL	**Elmali**	**1.17**	**104**	*e*PN	**Pn**	**08 39 08.5**	**-1.4**
ELL	**Elmali**	**1.17**	**104**	*e*Pn	**Pn**	**08 39 08.5**	**-1.4**

IDC 05 08:48:18.1±2.5**, 14°.67S**×**167°.77E, h0**km**, mb4.1**/6**, mb1 4.3**/7**, mb1mx3.9**/19**, mbtmp4.1**/7**, ML4.2**/1**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.9**/26**, Error ellipse: s-maj=64.1km s-min=25.7km az=100.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.46**	**190**	*e*P	Pn	08 50 08.1	-0.4
DZM	**Mont Dzumac**	**7.46**	**190**	Pn	Pn	08 50 08.1	-0.4
	4.0nm,0.3s,baz=173,slow=15,SNR=39						
DZM				Sn	Sn	08 51 33.9	-0.1
	0.9nm,0.3s,baz=315,slow=20,SNR=2.1						
DZM				LR	LR	08 51 51.3	
	comp=Z,131nm,18.0s,baz=35,slow=29						
CTA	**Charters Tower**	**21.22**	**252**	LR	LR	08 58 54.1	
	comp=Z,122nm,19.4s,baz=229,slow=30						
STKA	**Stephens Creek**	**29.40**	**230**	P	P	08 54 24.4	+1.1
	3.1nm,0.3s,baz=46,slow=9.2,SNR=22						
WRA	**Warramunga Arr**	**32.31**	**256**	P	P	08 54 48.2	-1.0
	0.5nm,0.6s,baz=85,slow=8.9,SNR=9.6						
ASAR	**Alice Springs**	**33.15**	**249**	P	P	08 54 56.0	-0.5
	1.6nm,0.4s,baz=79,slow=9.0,SNR=37						
CMAR	**Chiang Mai Arr**	**75.37**	**294**	P	P	09 00 05.2	+1.1
	0.5nm,0.3s,baz=93,slow=7.7,SNR=3.4						
SONM	**Songino Array**	**82.74**	**323**	P	P	09 00 43.7	-0.3
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.6						
MKAR	**Makanchi Array**	**97.50**	**316**	P	P	09 01 53.4	-0.7
	0.5nm,0.8s,baz=101,slow=5.2,SNR=5.0						
TORD	**Torodi Ar. Bea**	**166.40**	**265**	PKPab	PKPab	09 09 27.3	-0.7
	0.5nm,0.8s,baz=131,slow=3.5,SNR=2.7						

IDC 05 08:49:20.3±3.3**, 49°.52S**×**112°.99E, h0**km**, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.6**/16**, mbtmp3.7**/2**, MS3.7**/2**, Ms1 3.6**/2**, ms1mx3.0**/31**, Error ellipse: s-maj=192.8km s-min=29.8km az=107.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**27.70**	**61**	LR	LR	09 04 11.9	
	comp=Z,122nm,18.9s,baz=206,slow=32						
WRA	**Warramunga Arr**	**34.09**	**38**	P	P	08 56 06.2	-0.2
	1.2nm,0.8s,baz=203,slow=9.1,SNR=5.3						
QSPA	**South Pole Qui**	**40.61**	**180**	P	P	08 57 01.2	-0.3
	1.0nm,0.8s,baz=286,slow=2.3,SNR=3.9						
OPO	**Ambohidratompo**	**60.43**	**276**	LR	LR	09 19 36.8	
	comp=Z,65nm,19.7s,baz=196,slow=30						
TXAR	**Lajitas Array**	**145.71**	**112**	PKPbc	PKPbc	09 09 00.8	-0.1
	0.5nm,0.9s,baz=200,slow=4.8,SNR=4.3						
YKA	**Yellowknife Ar**	**151.14**	**45**	PKPbc	PKPbc	09 09 13.5	-0.5
	0.4nm,0.7s,baz=284,slow=2.4,SNR=6.2						
YKA				PKPab	PKPab	09 09 21.4	-0.5
	0.5nm,0.8s,baz=286,slow=2.0,SNR=4.1						

DDA 05 08:50:54.0, 37°.90N×**43°.05E, h7**km**, MD3.0, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GEVA	**Gevas**	**0.41**	**1**	*i* P	Pg	08 51 01.9	-0.4
GEVA				*i* S	Sg	08 51 08.9	+1.0
HAKT	**HAKKARI**	**0.62**	**123**	*i* P	Pg	08 51 05.9	-0.5
HAKT				*i* S	Sb	08 51 15.8	-1.0
BEST	**Besiri**	**1.41**	**270**	*i* P	Pb	08 51 20.6	-0.2
BEST				*i* S	Sg	08 51 41.0	+1.4
MARD	**Mardin**	**1.90**	**253**	*i* P	Pb	08 51 29.2	+0.1
MARD				*i* S	Sg	08 51 54.4	-1.0
DIYA	**Diyarbakir**	**2.32**	**271**	*i* P	Sg	08 52 10.8	+2.1

IDC 05 09:05:27.0±5.0**, 1°.67S**×**139°.05E, h0**km**, mb3.1**/2**, mb1 3.4**/3**, mb1mx3.2**/17**, mbtmp3.2**/3**, ML3.3**/1**, Error ellipse: s-maj=202.2km s-min=30.0km az=85.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.74**	**194**	P	Pn	09 09 48.0	+0.1
	0.1nm,0.3s,baz=15,slow=11,SNR=8.5						
ASAR	**Alice Springs**	**22.43**	**192**	P	P	09 10 27.5	-0.1
	0.3nm,0.8s,baz=24,slow=10,SNR=3.5						
MKAR	**Makanchi Array**	**69.18**	**322**	P	P	09 16 35.5	-0.1
	0.3nm,0.5s,baz=111,slow=7.9,SNR=4.0						

IDC 05 09:05:29.9±1.1**, 9°.81S**×**75°.56W, h0**km**, mb3.5**/3**, mb1 3.7**/6**, mb1mx3.7**/21**, mbtmp3.5**/6**, ML3.4**/3**, Error ellipse: s-maj=31.1km s-min=21.1km az=67.0, Central Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.50**	**210**	Pn	Pn	09 06 12.2	+0.2
	42nm,0.3s,baz=31,slow=14,SNR=48						
NNA				Sn	Sn	09 06 43.3	+0.1
	29nm,0.3s,baz=324,slow=19,SNR=8.6						
NNA				Lg	Lg	09 06 47.2	
	57nm,0.3s,baz=216,slow=15,SNR=26						
ATAH	**Atahualpa**	**3.86**	**313**	Pn	Pb	09 06 35.7	-3.8
	4.1nm,0.3s,baz=162,slow=5.6,SNR=20						
ATAH				Sn	Sb	09 07 28.4	+1.2
	2.0nm,0.3s,baz=75,slow=20,SNR=2.2						
LPAZ	**La Paz**	**9.69**	**132**	Pn	Pn	09 07 52.3	+0.9
	0.0nm,0.3s,baz=313,slow=15,SNR=2.1						
LPAZ				Lg	Lg	09 10 28.7	
	0.2nm,0.3s,baz=168,slow=20,SNR=2.1						
SIV	**San Ignacio**	**15.40**	**115**	Pn	Pn	09 09 08.1	-0.6
	0.1nm,0.3s,baz=299,slow=14,SNR=3.6						
SIV				Lg	Lg	09 13 30.3	
	0.6nm,0.3s,baz=239,slow=20,SNR=5.0						
CPUP	**Villa Florida**	**23.83**	**136**	P	P	09 10 44.7	0.0
	1.4nm,0.8s,baz=320,slow=17,SNR=4.8						
TXAR	**Lajitas Array**	**47.42**	**326**	P	P	09 14 07.3	+0.8
	0.2nm,0.5s,baz=146,slow=8.6,SNR=5.0						
TXAR				PcP	PcP	09 15 36.9	-0.2
	0.2nm,0.7s,baz=161,slow=5.7,SNR=3.2						
PDAR	**Pinedale Array**	**60.84**	**332**	P	P	09 15 48.9	+4.5
	0.4nm,0.8s,baz=102,slow=8.4,SNR=2.7						
YKA	**Yellowknife Ar**	**78.14**	**343**	P	P	09 17 29.9	-0.7
	0.2nm,0.4s,baz=143,slow=5.9,SNR=5.1						
WRA	**Warramunga Arr**	**138.28**	**225**	PKP	PKPdf	09 24 56.6	-1.5
	0.3nm,0.7s,baz=128,slow=2.3,SNR=2.8						

*IDC **05** 09:05:17.4±0.4, 56°.34S×26°.62W, h0km, mb4.6/15, mb1 4.6/17, mb1mx4.6/21, mbtmp4.6/17, ML4.2/2, MS4.3/16, Ms1 4.2/16, ms1mx4.1/24, Error ellipse: s-maj=15.2km s-min=12.5km az=41.0*
*NEIC **05** 09:05:18.9±0.2, 56°.34S×26°.58W, h10km, mb5.1/13, Error ellipse: s-maj=9.5km s-min=7.4km az=223.0*
*BJI **05** 09:05:21.8, 56°.30S×26°.50W, h30km, mB5.3/9, Ms5.4/8, Ms7 5.3/6*
*MOS **05** 09:05:21.6±0.9, 56°.37S×26°.54W, h33km, mb5.3/5, Error ellipse: s-maj=27.4km s-min=13.0km az=102.9*
*ISCJB **05** 09:05:28.3±0.3, 56°.38S±0°.07×26°.6W±0°.1, h101km, mb4.6/23, Error ellipse: s-maj=10.7km s-min=8.2km az=138.7*
ISC 05 09:05:30.6±0.3**, 56°.38S**±0°.07×**26°.94W**±0°.07**, h101**km**, n169, σ1^s.49**/220**, mb4.6**/23**, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA2	**Neumayer--Watz**	**16.84**	**158**	*e*P	**Pn**	**09 09 17.8**	**-1.9**
SNAA	**Sanae**	**18.39**	**156**	*e*P	**P**	**09 09 34.0**	**-3.2**
SNAA	**Sanae**	**18.39**	**156**	*e*	**Pn**	**09 09 42.9**	**+4.5**
SNAA	**Sanae**	**18.39**	**156**	*e*Pn	**P**	**09 09 32.9**	**-4.3**
	20nm,0.9s						
SNAA	**Sanae**	**18.39**	**156**	P	**P**	**09 09 33.5**	**-3.7**
	0.1nm,0.3s,baz=323,slow=9.7,SNR=15						
SNAA				LR	LR	09 14 56.4	
	comp=Z,264nm,21.8s,baz=344,slow=32						
PMSA	**Palmer Station**	**19.79**	**230**	P	**P**	**09 09 51.9**	**-0.6**
PMSA	**Palmer Station**	**19.79**	**230**	P	**P**	**09 09 51.9**	**-0.6**
	0.3nm,0.3s,baz=117,slow=6.8,SNR=1.5						
PMSA				LR	LR	09 16 31.0	
	comp=Z,1μm,19.0s,baz=195,slow=34						
PLCA	**Paso Flores**	**32.20**	**280**	P	**P**	**09 11 49.1**	**+0.3**
PLCA	**Paso Flores**	**32.20**	**280**	P	**P**	**09 11 49.1**	**+0.3**
	1.7nm,0.7s,baz=154,slow=5.4,SNR=5.6						
PLCA				LR	LR	09 22 57.6	
	comp=Z,610nm,18.3s,baz=144,slow=33						
QSPA	**South Pole Qui**	**33.87**	**180**	*e*P	**P**	**09 12 02.0**	**-1.3**
	21nm,0.6s						
QSPA				PcP	**PcP**	**09 14 39.8**	**+0.4**
QSPA	**South Pole Qui**	**33.87**	**180**	P	**P**	**09 12 02.1**	**-1.1**
	10nm,0.7s,baz=201,slow=3.8,SNR=48						
QSPA				PcP	**PcP**	**09 14 39.8**	**+0.4**
	6.8nm,1.0s,baz=156,slow=3.3,SNR=2.8						
QSPA				LR	LR	09 25 14.1	
	comp=Z,450nm,19.1s,baz=12,slow=35						
SPB	**Sao Paulo**	**36.02**	**327**	*e*P	**P**	**09 12 23.3**	**+1.5**
	43nm,1.1s						
CPUP	**Villa Florida**	**37.13**	**311**	P	**P**	**09 12 30.9**	**-0.3**
CPUP				PcP	**PcP**	**09 14 49.4**	**+0.1**
CPUP	**Villa Florida**	**37.13**	**311**	P	**P**	**09 12 30.9**	**-0.3**

3.8nm,0.6s,baz=148,slow=8.6,SNR=15
CPUP PcP **PcP** 09 14 49.4 +0.1
1.0nm,0.5s,baz=109,slow=7.1,SNR=3.5
CPUP LR LR 09 26 25.9
comp=Z,176nm,18.6s,baz=158,slow=34
CFAA Coronel Fontan 37.82 293 P **P** 09 12 34.8 -2.3
CFAA PcP **PcP** 09 14 51.7 +0.2
CFAA Coronel Fontan 37.82 293 P **P** 09 12 34.8 -2.3
0.2nm,0.3s,baz=146,slow=9.7,SNR=14
CFAA PcP **PcP** 09 14 51.7 +0.2
0.7nm,0.8s,baz=148,slow=2.9,SNR=3.9
MAW Mawson 39.80 143 P **P** 09 12 51.1 -2.0
MAW Mawson 39.80 143 P **P** 09 12 51.1 -2.0
4.3nm,0.8s,baz=233,slow=8.0,SNR=7.3
MAW LR LR 09 26 23.8
comp=Z,488nm,19.6s,baz=247,slow=32
SUR Sutherland 40.59 74 LR LR 09 25 50.6
comp=Z,656nm,19.5s,baz=355,slow=30
BDFB Brasilia 43.72 330 P **P** 09 13 26.3 +0.6
BDFB Brasilia 43.72 330 P **P** 09 13 26.3 +0.6
13nm,1.0s,baz=139,slow=5.3,SNR=10
BDFB LR LR 09 28 14.7
comp=Z,310nm,19.2s,baz=59,slow=32
LVC Limon Verde 45.58 300 *e*P **P** 09 13 40.3 -0.4
119nm,1.2s
SBA Scott Base 45.76 184 *e*P **P** 09 13 42.0 +0.9
SBA pmax pmax
comp=Z,126nm,2.7s
SBA Scott Base 45.76 184 *e*P **P** 09 13 42.0 +0.9
comp=Z,126nm,2.7s
BOSA Boshof 45.91 75 P **P** 09 13 42.0 -1.1
BOSA PcP **PcP** 09 15 18.4 0.0
BOSA Boshof 45.91 75 P **P** 09 13 42.0 -1.1
comp=Z,3.0nm,0.8s,baz=270,slow=9.3,SNR=3.5
BOSA PcP **PcP** 09 15 18.4 0.0
comp=Z,4.1nm,1.0s,baz=288,slow=3.2,SNR=3.2
BOSA LR LR 09 29 02.4
comp=Z,590nm,20.2s,baz=183,slow=31
VNDA Vanda 46.25 183 *e*P **P** 09 13 44.9 -0.1
comp=Z,8.3nm,0.8s
VNDA Vanda 46.25 183 P **P** 09 13 44.9 -0.1
comp=Z,4.4nm,0.8s,baz=182,slow=7.4,SNR=18
VNDA LR LR 09 30 60.0
comp=Z,266nm,18.6s,baz=135,slow=33
LBTB Lobatse 48.97 73 *e*P **P** 09 14 03.8 -3.0
comp=Z,1.7nm,0.5s
TSUM Tsumeb 49.72 60 *e*P **P** 09 14 10.1 -2.4
comp=Z,13nm,1.1s
TSUM *e*pP pP 09 14 25.4 -11
TSUM Tsumeb 49.72 60 P **P** 09 14 09.7 -2.8
comp=Z,5.5nm,0.9s,baz=186,slow=6.0,SNR=6.3
LPAZ La Paz 50.68 305 *e*P **P** 09 14 21.3 +0.9
comp=Z,42nm,1.4s
LPAZ La Paz 50.68 305 P **P** 09 14 21.4 +1.1
comp=Z,13nm,0.5s,baz=136,slow=5.8,SNR=56
LPAZ LR LR 09 36 51.6
comp=Z,75nm,18.4s,baz=87,slow=37
ARE Arequipa 52.09 301 *e*P **P** 09 14 31.0 +0.5
ARE Arequipa 52.09 301 *e*P **P** 09 14 31.0 +0.5
SAML Samuel 55.13 315 *e*P **P** 09 14 52.4 0.0
LSZ Lusaka 58.36 68 P **P** 09 15 13.2 -2.1
LSZ Lusaka 58.36 68 P **P** 09 15 13.2 -2.1
baz=169,slow=5.2
ATAH Atahualpa 63.48 300 P **P** 09 15 49.9 -0.4
ATAH Atahualpa 63.48 300 P **P** 09 15 49.9 -0.4
comp=Z,5.1nm,0.6s,baz=354,slow=7.9,SNR=5.3
DBIC Dimbokro 65.41 24 *e*P **P** 09 16 01.3 -1.0
comp=Z,14nm,0.9s
DBIC *e*pP pP 09 16 16.8 -11
DBIC Dimbokro 65.41 24 P **P** 09 16 01.2 -1.1
comp=Z,16nm,1.0s,baz=171,slow=6.1,SNR=12
DBIC LR LR 09 37 32.5
comp=Z,332nm,20.5s,baz=160,slow=30
OPO Ambohidratompo 65.96 88 P **P** 09 16 05.4 -0.7
OPO Ambohidratompo 65.96 88 P **P** 09 16 05.4 -0.7
comp=Z,2.4nm,0.8s,baz=150,slow=5.9,SNR=6.1
OTAV Otavalo 69.95 304 *e*P **P** 09 16 32.5 +1.1
comp=Z,8.5nm,1.3s
TOA0 Torodi Ar. Sit 73.27 29 *e*P **P** 09 16 49.4 -1.3
TORD Torodi Ar. Bea 73.27 29 P **P** 09 16 49.5 -1.2
TORD Torodi Ar. Bea 73.27 29 P **P** 09 16 49.5 -1.2
comp=Z,16nm,0.5s,baz=200,slow=6.0,SNR=101
TORD LR LR 09 41 30.7
comp=Z,147nm,20.9s,baz=160,slow=30
SDV Santo Domingo 74.34 315 *e*P **P** 09 16 57.6 +0.4
KMBO Kilima Mbogo 75.03 69 LR LR 09 46 54.0
comp=Z,132nm,19.9s,baz=94,slow=33
JTS JuntasAbangare 81.81 303 *e*P **P** 09 17 39.4 +1.2
comp=Z,37nm,1.3s
TBI Tubuai 86.99 231 *e*LR LR 09 45 45.3
comp=Z,296nm,24.0s,baz=158
STKA Stephens Creek 91.56 170 P **P** 09 18 26.2 +0.5
STKA Stephens Creek 91.56 170 P **P** 09 18 26.2 +0.5
comp=Z,1.1nm,0.6s,baz=142,slow=6.3,SNR=4.7
STKA LR LR 09 57 45.7
comp=Z,172nm,21.5s,baz=206,slow=34
TEIG Tepich 92.01 304 *e*P **P** 09 18 28.4 +0.6
comp=Z,34nm,1.0s
PPT2 Papeete2 92.10 233 *e*LR LR 09 48 07.7
comp=Z,312nm,26.2s
PPT Papeete 92.12 233 LR LR 09 49 32.3
comp=Z,244nm,18.9s,baz=156,slow=29
RAR Rarotonga 93.10 223 LR LR 09 53 06.4
comp=Z,2µm,18.3s,baz=284,slow=31
ASAR Alice Springs 98.64 162 P **P** 09 18 57.1 -1.1
ASAR Alice Springs 98.64 162 P **P** 09 18 57.1 -1.1
comp=Z,1.1nm,0.7s,baz=189,slow=3.7,SNR=11
WRA Warramunga Arr 102.35 162 P **Pdif** 09 19 13.8 -0.9
WRA Warramunga Arr 102.35 162 P **Pdif** 09 19 13.8 -0.9
comp=Z,0.5nm,0.8s,baz=194,slow=4.8,SNR=2.9
U25A Circle Dot Ran 113.18 301 P 09 23 55.7
baz=114
R11A Troy Canyon, C 120.21 295 P **PKPdf** 09 24 09.9 +0.8
baz=121
DUG Dugway 120.23 298 P **PKPdf** 09 24 09.8 +0.8
baz=121
PDAR Pinedale Array 120.64 302 PKP **PKPdf** 09 24 09.0 -0.9
PDAR PKKPab **PKKPab** 09 34 15.5 +1.1
PDAR Pinedale Array 120.64 302 PKP **PKPdf** 09 24 09.0 -0.9
comp=Z,0.2nm,0.4s,baz=114,slow=3.7,SNR=5.4
PDAR PKKPab **PKKPab** 09 34 15.5 +1.1
comp=Z,0.4nm,0.8s,baz=278,slow=1.0,SNR=4.2
J18A Kendall Valley 121.19 302 P **PKPdf** 09 24 12.1 +1.2
baz=122
D24A Glendive 121.60 309 P **PKPdf** 09 24 12.0 +0.7
baz=122
NVAR Mina Array Bea 121.65 293 PKP **PKPdf** 09 24 11.6 -0.3
NVAR Mina Array Bea 121.65 293 PKP **PKPdf** 09 24 11.6 -0.3
comp=Z,0.2nm,0.4s,baz=149,slow=3.7,SNR=2.9
G20A Bridger 121.89 305 P **PKPdf** 09 24 13.6 +1.6
baz=122
K14A Jones Ranch, D 122.20 299 P **PKPdf** 09 24 13.9 +1.2
baz=123
J15A Blackfoot 122.48 301 P **PKPdf** 09 24 14.5 +1.2
baz=123
D20A Manuel Ranch, 123.27 306 P **PKPdf** 09 24 14.8 +0.2
baz=124
I14A Mackay 123.37 300 P **PKPdf** 09 24 16.2 +1.2
baz=124
F17A Fitzpatrick Pl 123.53 304 P **PKPdf** 09 24 16.0 +0.8
baz=124
C20A Veseth Ranch, 123.68 307 P **PKPdf** 09 24 15.7 +0.5
baz=124
A22A Carney Farms, 123.72 309 P **PKPdf** 09 24 15.9 +0.6
baz=124
B21A Ellsworth Farm 123.78 308 P **PKPdf** 09 24 16.2 +0.7
baz=124
G15A Dillon 123.83 302 P **PKPdf** 09 24 16.5 +0.6
baz=124
H14A Leadore 123.84 301 P **PKPdf** 09 24 16.7 +0.8
baz=124
C19A Slack Wire Ran 124.16 306 P **PKPdf** 09 24 16.7 +0.4
baz=124
H12A Diamond D Ranc 124.51 300 P **PKPdf** 09 24 18.0 +0.8
baz=125
FINES FINESS Array B 124.61 28 PKP **PKPdf** 09 24 15.3 -1.2
FINES FINESS Array B 124.61 28 PKP **PKPdf** 09 24 15.3 -1.2
comp=Z,1.2nm,0.5s,baz=231,slow=1.2,SNR=5.6
B19A Brinkman Farms 124.65 307 P **PKPdf** 09 24 17.7 +0.6
baz=125
EGMT Eagleton 124.69 306 P **PKPdf** 09 24 17.7 +0.4
baz=125
CMAR Chiang Mai Arr 124.82 110 PKP **PKPdf** 09 24 18.4 0.0
CMAR Chiang Mai Arr 124.82 110 PKP **PKPdf** 09 24 18.4 0.0
comp=Z,1.7nm,0.4s,baz=235,slow=3.9,SNR=12
A19A Klindworth Far 124.91 307 P **PKPdf** 09 24 18.3 +0.7
baz=125
B18A Beardsley Farm 124.98 306 P **PKPdf** 09 24 18.2 +0.4
baz=125
G12A Big Creek, Yel 125.16 300 P **PKPdf** 09 24 18.7 +0.3
baz=126
F13A Darby 125.17 301 P **PKPdf** 09 24 18.6 +0.3
baz=126
D15A Lincoln 125.24 303 P **PKPdf** 09 24 17.2 -1.3
baz=126
B17A L&G Farms, Che 125.36 305 P **PKPdf** 09 24 19.3 +0.8
baz=126
MSO Missoula 125.74 302 *e*PKPdf **PKPdf** 09 24 19.9 +0.5
MSO Missoula 125.74 302 P **PKPdf** 09 24 19.8 +0.4
baz=126
A17A Triple J Farms 125.80 306 P **PKPdf** 09 24 19.6 +0.2
baz=126
D13A Huson 126.18 302 P **PKPdf** 09 24 20.6 +0.5
baz=127
D12A Red Ives Fores 126.57 302 P **PKPdf** 09 24 20.5 -0.4
baz=127
A15A Johnson Ranch, 126.74 305 P **PKPdf** 09 24 21.0 -0.2
baz=127
A14A Double T Ranch 127.06 305 P **PKPdf** 09 24 22.2 +0.3
baz=127
ABKAR Akbulak array 127.44 55 *e*PKPdf **PKPdf** 09 24 21.8 -0.5
KSH Kashi 128.52 75 *e*PKP **PKPdf** 09 24 24.2 -0.7
KSH *es*PKP 09 24 38.4
KSH *e*PKS **PKSdf** 09 27 59.5 -2.0
KSH *e*SKS **SKSdf** 09 31 30.6 +3.5
KSH AMB AMB
comp=Z,370nm,5.1s
KSH LR LR
comp=N,82nm,11.7s
KSH LR LR
comp=E,160nm,5.4s
KSH LR LR
comp=Z,160nm,4.5s
EKS2 Erkin-Say 129.59 70 *e*PKIKP **PKPdf** 09 24 27.0 +0.1
EKS2 Erkin-Say 129.59 70 *e*PKPdf **PKPdf** 09 24 27.0 +0.1
AAK Ala-Archa 129.95 71 PKIKP **PKPdf** 09 24 27.4 -0.2
AAK Ala-Archa 129.95 71 PKP **PKPdf** 09 24 27.4 -0.2
AAK Ala-Archa 129.95 71 PKP **PKPdf** 09 24 27.4 -0.2
comp=Z,1.7nm,0.7s,baz=152,slow=2.3,SNR=4.3
ARCES ARCESS Array B 131.19 22 PKP **PKPdf** 09 24 28.4 -0.5
ARCES ARCESS Array B 131.19 22 PKP **PKPdf** 09 24 28.4 -0.5
comp=Z,3.7nm,1.0s,baz=214,slow=2.8,SNR=7.4
KMI Kunming 132.29 109 PKP **PKPdf** 09 24 32.2 -0.5
BVAR Borovoye Array 134.84 58 PKIKP **PKPdf** 09 24 36.4 +0.1
BVAR Borovoye Array 134.84 58 PKP **PKPdf** 09 24 36.4 +0.1
BVAR Borovoye Array 134.84 58 PKP **PKPdf** 09 24 36.4 +0.1
comp=Z,1.6nm,0.8s,baz=307,slow=0.7,SNR=8.9
GYA Guiyang 135.41 112 *e*Pdif **Pdif** 09 21 40.5 -1.1
GYA PKP **PKPdf** 09 24 38.9 +0.5
GYA *s*PKP 09 24 53.8
GYA PP **PP** 09 27 19.0 +2.8
GYA PKS **PKSdf** 09 28 13.2 -1.6
GYA SKKS 09 34 04.3
GYA SS **SS** 09 45 08.2 +3.9
GYA AMB AMB
comp=Z,130nm,8.0s
GYA LR LR
comp=N,190nm,21.6s
GYA LR LR
comp=E,140nm,22.7s
YKA Yellowknife Ar 136.51 318 PKP **PKPdf** 09 24 38.8 -0.2
YKA PP **PP** 09 27 21.0 -1.8
YKA Yellowknife Ar 136.51 318 PKP **PKPdf** 09 24 38.8 -0.2
comp=E,1.9nm,0.7s,baz=124,slow=2.0,SNR=5.1
YKA PP **PP** 09 27 21.0 -1.8
comp=E,1.1nm,1.0s,baz=121,slow=7.3,SNR=7.3
MKAR Makanchi Array 136.86 72 PKIKP **PKPdf** 09 24 40.6 +0.3
MKAR Makanchi Array 136.86 72 PKP **PKPdf** 09 24 40.5 +0.3
MKAR Makanchi Array 136.86 72 PKhKP PKPpre 09 24 28.3
comp=E,0.4nm,0.7s,baz=227,slow=4.8,SNR=4.1
MKAR PKP **PKPdf** 09 24 40.5 +0.3
comp=E,0.4nm,0.7s,baz=233,slow=3.7,SNR=5.6
KURBB Kurchatov Arra 137.31 65 PKP **PKPdf** 09 24 39.6 -1.3
comp=E,0.6nm,0.6s,baz=238,slow=3.2,SNR=5.5
KURK Kurchatov 137.42 65 PKIKP **PKPdf** 09 24 39.6 -1.5
KURK Kurchatov 137.42 65 PKP **PKPdf** 09 24 39.6 -1.5
CD2 Chengdu 137.44 106 PKP **PKPdf** 09 24 43.0 +1.1
CD2 *s*PKP 09 24 58.0
CD2 PP **PP** 09 27 31.9 +3.0
CD2 PKS **PKSdf** 09 28 17.7 -0.4
CD2 SKS **SKSdf** 09 31 48.1 +4.9
CD2 SKKS **SKKSac** 09 34 18.3 +5.1
CD2 SS **SS** 09 45 33.4 +5.0
CD2 AMB AMB
comp=Z,190nm,5.6s
WMQ Urumqi 137.83 79 *e*PKP **PKPdf** 09 24 43.8 +1.6
RES Resolute Bay 138.21 338 *e*PKPdf **PKPdf** 09 24 42.2 +0.3
LZH Lanzhou 141.41 100 *e*PKP **PKPdf** 09 24 50.0 +0.9
LZH *s*PKP 09 25 05.5
GTA Gaotai 141.57 93 *e*PKP **PKPdf** 09 24 48.2 -1.0
ZALV Zalesovo Beam 142.39 64 PKHKP PKPpre 09 24 45.4
ZALV Zalesovo Beam 142.39 64 PKPpre PKPpre 09 24 45.4
ZALV Zalesovo Beam 142.39 64 PKhKP PKPpre 09 24 45.4
comp=Z,0.7nm,0.5s,baz=318,slow=2.0,SNR=3.6
WHN Wuhan 142.63 117 PKP **PKPdf** 09 24 56.3 +5.1
WHN PP PP 09 28 06.0 +5.6
SKAG Skagway 143.52 305 *e*PKPdf PKPbc 09 24 50.4 +0.9
BMRM Bremner River 148.37 305 *e*PKPdf **PKPdf** 09 25 00.8 +0.7
BMRM *e*PKPbc **PKPbc** 09 25 04.3 +0.6
BMRM *e*PKPab **PKPab** 09 25 08.2 +0.9
MENT Mentasta 148.61 308 *e*PKPdf **PKPdf** 09 25 00.3 -0.2
MENT *e*PKPbc **PKPbc** 09 25 04.8 +0.6
MENT *e*PKPab **PKPab** 09 25 08.6 +0.3
DIV Divide 148.96 304 *e*PKPbc **PKPbc** 09 25 06.3 +1.1
DIV *e*PKPab **PKPab** 09 25 10.5 +0.8
DOT Dot Lake 148.96 310 *e*PKPdf **PKPdf** 09 25 01.1 +0.2
DOT *e*PKPbc **PKPbc** 09 25 06.0 +0.9
DOT *e*PKPab **PKPab** 09 25 10.5 +0.8
HHC Hu-ho-hao-te 149.04 102 *e*PKPbc **PKPdf** 09 25 03.2 +1.3
HHC pPKP **PKPab** 09 25 14.0 +3.3
HHC sPKP 09 25 17.6
HHC PKS **PKSdf** 09 28 36.7 -0.2
HHC PP **PP** 09 28 41.5 +2.8
HHC SKS **SKSdf** 09 32 06.1 +5.5
HHC SS **SS** 09 47 46.3 +4.2
HHC AMB AMB
comp=Z,96nm,5.9s
HHC LR LR
comp=N,230nm,20.1s
HHC LR LR
comp=E,1µm,20.1s
PAX Paxson 149.38 308 *e*PKHKP **PKPdf** 09 25 02.4 +0.7
PAX *e* 09 25 12.0
PAX Paxson 149.38 308 *e*PKPdf **PKPdf** 09 25 02.4 +0.7
PAX *e*PKPbc **PKiKP** 09 25 07.1 -0.2
PAX *e*PKPab **PKPab** 09 25 12.0 +0.5
MOY Mondy 149.67 77 *e*PKP2 **PKPbc** 09 25 07.5 +0.1
ZAK Zakamensk 150.26 80 *e*PKIKP **PKPdf** 09 25 01.9 -1.7
ZAK *e* 09 25 07.5
ZAK pmax pmax
comp=Z,8.0nm,1.3s
SML Sawmill 150.33 305 *e*PKPdf **PKPdf** 09 25 04.4 +1.2
SML *e*PKPbc **PKiKP** 09 25 09.5 +0.2
SML *e*PKPab **PKPab** 09 25 16.8 +1.4
SEW Seward 150.34 301 *e*PKPdf **PKPdf** 09 25 04.6 +1.5
SEW *e*PKPbc **PKiKP** 09 25 09.1 -0.1
SEW *e*PKPab **PKPab** 09 25 15.9 +0.6
SONM Songino Array 150.61 87 PKP **PKPdf** 09 25 03.3 -0.9
SONM PKPbc **PKPbc** 09 25 08.8 -1.0
SONM PKPab **PKPab** 09 25 15.4 -1.7
SONM Songino Array 150.61 87 PKP **PKPdf** 09 25 03.3 -0.9
comp=Z,0.2nm,0.3s,baz=191,slow=1.5,SNR=4.2
SONM PKPbc **PKPbc** 09 25 08.8 -1.0
comp=Z,12nm,1.0s,baz=231,slow=2.0,SNR=45
SONM PKPab **PKPab** 09 25 15.4 -1.7
comp=Z,6.3nm,0.8s,baz=228,slow=3.7,SNR=9.1
PMR Palmer 150.64 304 *e*PKIKP **PKPdf** 09 25 04.4 +0.8
PMR *e* 09 25 09.7
PMR *e* 09 25 17.0
PMR Palmer 150.64 304 *e*PKPdf **PKPdf** 09 25 04.4 +0.8
PMR *e*PKPbc **PKPbc** 09 25 09.7 +0.6
PMR *e*PKPab **PKPab** 09 25 17.0 +0.5
COLA College 150.86 311 *e*PKIKP **PKPdf** 09 25 04.3 +0.5
COLA *e* 09 25 09.4
COLA *e* 09 25 18.4
COLA College 150.86 311 *e*PKPdf **PKPdf** 09 25 04.3 +0.5
COLA *e*PKPbc **PKPbc** 09 25 09.3 -0.2
COLA *e*PKPab **PKPab** 09 25 18.4 +1.0
BJI Beijing 150.94 108 PKPbc **PKPbc** 09 25 09.5 -1.1
ULN Ulaanbaatar 150.99 87 *e*PKPdf **PKPdf** 09 25 05.0 +0.2
ULN *e*PKPbc **PKPbc** 09 25 10.2 -0.5
ULN *e*PKPab **PKPab** 09 25 17.5 -1.1
MCK McKinley 151.09 309 *e*PKIKP **PKPbc** 09 25 10.7 +0.5
MCK *e* 09 25 17.8
MCK McKinley 151.09 309 *e*PKPbc **PKPbc** 09 25 10.7 +0.5
MCK *e*PKPab **PKPab** 09 25 17.8 -0.6
TRF Thorofare Moun 151.62 308 *e*PKPdf **PKPdf** 09 25 05.8 +0.4
TRF *e*PKPbc **PKPbc** 09 25 11.5 -0.1
TRF *e*PKPab **PKPab** 09 25 21.5 +0.6
COLD Coldfoot 152.15 316 *e*PKPdf **PKPdf** 09 25 06.2 +0.4
COLD *e*PKPbc **PKiKP** 09 25 13.6 +0.7
COLD *e*PKPab **PKPab** 09 25 23.7 +0.9
JNU Nakatsue 152.16 137 PKPbc **PKPbc** 09 25 15.7 +2.0
JNU Nakatsue 152.16 137 PKPbc **PKPbc** 09 25 15.7 +2.0
comp=Z,4.2nm,0.8s,baz=29,slow=1.1,SNR=2.5
PPLA Purkeypile 152.34 306 *e*PKPbc **PKPbc** 09 25 13.5 +0.3
PPLA *e*PKPab **PKPab** 09 25 24.4 +0.5
KSAR Wonju Array Be 154.66 128 PKP **PKPdf** 09 25 08.6 -1.7
KSAR PKPbc **PKiKP** 09 25 19.2 +0.3
KSAR PKPab **PKPab** 09 25 32.5 -1.6
KSRS Korea Array 154.69 128 PKP **PKPdf** 09 25 08.6 -1.7
comp=Z,0.5nm,0.4s,baz=48,slow=4.2,SNR=5.3
KSRS PKPbc **PKiKP** 09 25 19.2 +0.3
comp=Z,0.4nm,0.4s,baz=208,slow=4.1,SNR=5.4
KSRS PKPab **PKPab** 09 25 32.5 -1.7
comp=Z,1.6nm,0.8s,baz=210,slow=3.7,SNR=5.0
MJAR Matsushiro Arr 157.77 147 PKPab **PKPab** 09 25 45.2 -2.3
MJAR Matsushiro Arr 157.77 147 PKPab **PKPab** 09 25 45.2 -2.3
comp=Z,1.5nm,0.7s,baz=198,slow=6.6,SNR=4.3
CN2 Changchun 158.45 114 *e*PKP **PKPdf** 09 25 16.5 +1.5
MDJ Mudanjiang 161.10 119 PKP **PKPdf** 09 25 19.5 +1.5
MDJ PP **PP** 09 29 45.5 -0.1
USRK Ussuriysk Arra 161.93 124 PKPab **PKPab** 09 26 03.7 -1.8
comp=Z,0.8nm,0.5s,baz=234,slow=3.5,SNR=5.1
BILL Bilibino 166.82 338 PKP2 **PKPab** 09 26 27.0 +0.6
BILL pmax pmax
comp=Z,17nm,1.2s

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*BJI **05** 09:22:49.3, 23°.27N±94°.68E, h15km, mB4.6/15, mb4.5/20, ML4.0/3, Ms4.1/12, Ms7 3.7/14*
*ISCJB **05** 09:22:57.5±0.8, 23°.46N±0°.04×94°.68E±0°.04, h84km±7km, mb4.3/32, Error ellipse: s-maj=7.6km s-min=5.3km az=26.0*
*IDC **05** 09:23:02.4±0.6, 23°.50N×94°.72E, h115km±5km, mb3.9/20, mb1 4.0/21, mb1mx3.9/30, mbtmp3.9/21, MS3.5/5, Ms1 3.5/5, ms1mx2.9/42, Error ellipse: s-maj=19.8km s-min=9.1km az=59.0*
*NEIC **05** 09:23:02.1±0.2, 23°.50N×94°.73E, mb4.7/10, Error ellipse: s-maj=10.8km s-min=4.5km az=58.0*
ISC 05 09:23:01.6±0.5, 23°.45N±0°.05×94°.66E±0°.05, h110km±4km, n94, σ1s37/124, mb4.3/32, 1C, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHTO	**Chiang Mai**	**6.10**	**138**	*e*Pn		**Pn**	**09 24 29.7**	**+0.2**
CHTO				*e*Sn		**Sn**	**09 25 35.7**	**-2.3**
CM31	**Chiang Mai Arr**	**6.38**	**140**	*e*Pn		**Pn**	**09 24 35.1**	**+1.9**
CMAR	**Chiang Mai Arr**	**6.38**	**140**	P		**Pn**	**09 24 34.0**	**+0.8**
CMAR	**Chiang Mai Arr**	**6.38**	**140**	P		**Pn**	**09 24 34.0**	**+0.8**
	1.0nm,0.3s,baz=321,slow=13,SNR=25							
LSA	**Lhasa**	**6.97**	**334**	*e*Pn		**Pn**	**09 24 41.2**	**-0.4**
	63nm,0.4s							
LSA				*e*Sn		**Sn**	**09 25 56.5**	**-3.2**
TAPN	**Taplejung**	**7.39**	**303**	*e*Pn		**Pn**	**09 24 44.8**	**-2.3**
TAPN				*e*Sn		Sn	09 26 02.3	-7.2
	1µm,0.7s							
ODAN	**Odare**	**7.41**	**299**	*e*Pn		**Pn**	**09 24 45.1**	**-2.2**
ODAN				*e*Sn		Sn	09 26 02.1	-7.8
	932nm,0.5s							
KMI	**Kunming**	**7.56**	**76**	Pn		Pn	09 24 41.0	-8.4
RAMN	**Ramite**	**8.09**	**297**	*e*Pn		**Pn**	**09 24 54.5**	**-2.0**
BWNR	**Bhubaneshwar**	**8.80**	**251**	*e*PKP		Pn	09 24 56.0	-10
BWNR				*e*S		Sn	09 26 26.0	-17
BWNR	**Bhubaneshwar**	**8.80**	**251**	*e*PKP		Pn	09 24 56.0	-10
BWNR				*e*S		Sn	09 26 26.0	-17
GUN	**Gumba**	**9.08**	**301**	*e*Pn		**Pn**	**09 25 07.3**	**-2.8**
GUN				*e*Sn		Sn	09 26 42.6	-8.1
	723nm,0.6s							
PKI	**Pulchoki**	**9.31**	**298**	*e*Pn		**Pn**	**09 25 10.7**	**-2.5**
PKI				*e*Sn		Sn	09 26 48.0	-8.2
	630nm,0.9s							
PKIN	**Phulchoki**	**9.32**	**298**	*e*Pn		**Pn**	**09 25 10.8**	**-2.5**
PKIN				*e*Sn		Sn	09 26 48.1	-8.3
	231nm,0.4s							
KKN	**Kakani**	**9.50**	**299**	*e*Pn		**Pn**	**09 25 13.1**	**-2.6**
KKN				*e*Sn		Sn	09 26 52.0	-8.8
	221nm,0.5s							
DMN	**Daman**	**9.57**	**298**	*e*Pn		Pn	09 25 13.3	-3.3
DMN				*e*Sn		Sn	09 26 52.2	-10
	208nm,0.5s							
KOLN	**Koldanda**	**10.87**	**296**	*e*Pn		Pn	09 25 30.5	-3.7
KOLN				*e*Sn		Sn	09 27 23.2	-11
	219nm,0.4s							
DANN	**Dangsing**	**10.96**	**299**	*e*Pn		Pn	09 25 31.2	-4.3
DANN				*e*Sn		Sn	09 27 26.3	-10
	230nm,0.6s							
GYA	**Guiyang**	**11.30**	**72**	*e*P		Pn	09 25 33.8	-6.2
GYA				PP		P	09 25 44.2	-5.3
GYA				S		**Sn**	**09 27 41.9**	**-2.4**
GYA				SS		S	09 27 56.7	-22
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
GYA				pmax		pmax		
	comp=Z,90nm,4.2s							
GYA				LR		LR		
	comp=N,490nm,14.6s							
GYA				LR		LR		
	comp=E,340nm,15.7s							
GYA				LR		LR		
	comp=Z,470nm,13.8s							
HYB	**Hyderabad**	**16.23**	**251**	*i* P		**P**	**09 26 45.5**	**+1.0**
HYB				*e*			09 29 32.0	
HYB				*e*S		**Sn**	**09 29 41.0**	**-2.7**
HYB	**Hyderabad**	**16.23**	**251**	P		**P**	**09 26 45.5**	**+1.0**
HYB				*e*S		**Sn**	**09 29 41.0**	**-2.7**
XAN	**Xi'an**	**16.35**	**47**	P		**Pn**	**09 26 45.1**	**+0.3**
XAN				pmax		pmax		
	comp=Z,4.0nm,0.8s							
XAN				pmax		pmax		
	comp=Z,17nm,5.1s							
GTA	**Gaotai**	**16.51**	**14**	*e*P		**Pn**	**09 26 45.1**	**-1.7**
GTA				pP		**P**	**09 26 49.1**	**+1.6**
GTA				sP		sP	09 26 51.9	-30
GTA				S		**Sn**	**09 29 49.7**	**-0.4**
GTA				pmax		pmax		
	comp=Z,3.0nm,0.7s							
GTA				pmax		pmax		
	comp=Z,84nm,5.9s							
GTA				LR		LR		
	comp=N,100nm,10.5s							
GTA				LR		LR		
	comp=E,100nm,12.6s							
GTA				LR		LR		
	comp=Z,80nm,13.1s							
WHN	**Wuhan**	**18.91**	**64**	*e*P		**P**	**09 27 12.8**	**-0.9**
IPM	**Ipoh**	**19.83**	**161**	*e*P		**P**	**09 27 20.7**	**-3.2**
	comp=Z,13nm,0.4s							
PSI	**Prapat**	**20.93**	**168**	P		Pn	09 27 38.8	-0.7
PSI	**Prapat**	**20.93**	**168**	P		Pn	09 27 38.8	-0.7
	comp=Z,7.5nm,0.7s,baz=210,slow=19,SNR=4.0							
PSI				LR		LR	09 36 07.8	
	comp=Z,55nm,20.4s,baz=30,slow=37							
WMQ	**Urumqi**	**21.12**	**346**	P		**P**	**09 27 38.1**	**+0.5**
WMQ				pP		pP	09 27 42.2	-16
WMQ				sP		sP	09 27 45.1	-27
WMQ				PP		**PnPn**	**09 28 01.5**	**-1.6**
WMQ				pmax		pmax		
	comp=Z,160nm,4.2s							
THW	**Thamme Wali**	**22.21**	**300**	P		**P**	**09 27 50.6**	**+1.3**
HHC	**Hu-ho-hao-te**	**22.43**	**35**	*e*P		**P**	**09 27 51.3**	**-0.1**
HHC				pP		pP	09 27 55.5	-17
HHC				sP		sP	09 27 58.3	-28
HHC				PP		**PnPn**	**09 28 19.1**	**-1.7**
HHC				S		**S**	**09 31 52.8**	**+2.7**
HHC				sS		Sn	09 31 59.6	-12
HHC				PcS		**PcS**	**09 35 24.1**	**+3.1**
HHC				ScS		ScS	09 39 05.9	+11
HHC				pmax		pmax		
	comp=Z,28nm,0.9s							
HHC				pmax		pmax		

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,150nm,5.4s						
HHC				LR	LR		
	comp=N,310nm,20.8s						
HHC				LR	LR		
	comp=E,440nm,20.8s						
HHC				LR	LR		
	comp=Z,250nm,21.4s						
CEP	Cherat	22.44	303	P	P	09 27 51.5	-0.2
KSH	Kashi	22.52	320	P	P	09 27 52.5	0.0
KSH				epP	pP	09 27 56.8	-17
KSH				ePP	PnPn	09 28 20.8	-1.3
KSH				ePcP	PcP	09 31 46.3	+4.0
KSH				eS	S	09 31 54.2	+2.5
KSH				esS	Sn	09 32 02.0	-12
KSH				eSS	SnSn	09 32 36.2	+3.5
KSH				eScP	ScP	09 35 22.1	+12
KSH				eScS	ScS	09 39 05.9	+10
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
KSH				pmax	pmax		
	comp=Z,110nm,3.6s						
KSH				LR	LR		
	comp=N,220nm,6.7s						
KSH				LR	LR		
	comp=E,210nm,4.9s						
KSH				LR	LR		
	comp=Z,260nm,9.9s						
BJI	Beijing	24.57	43	P	P	09 28 09.0	-2.3
BJI				S	S	09 32 32.1	+7.9
BJI				pmax	pmax		
	comp=Z,26nm,0.5s						
TKM2	Tokmak 2	25.03	325	eP	P	09 28 15.6	-0.1
	comp=Z,17nm,0.6s						
TKM2				ePcP	PcP	09 31 48.0	+0.3
MK31	Makanchi Array	25.33	340	eP	P	09 28 18.4	+0.2
MKAR	Makanchi Array	25.33	340	P	P	09 28 18.7	+0.5
MKAR				pP	pP	09 28 44.0	+1.9
MKAR				PcP	PcP	09 31 47.5	-0.6
MKAR				ScP	ScP	09 35 16.8	-0.6
MKAR	Makanchi Array	25.33	340	P	P	09 28 18.7	+0.5
	comp=Z,20nm,0.5s,baz=148,slow=10,SNR=277						
MKAR				pP	pP	09 28 44.0	+1.9
	comp=Z,5.6nm,0.6s,baz=144,slow=9.2,SNR=2.9						
MKAR				PcP	PcP	09 31 47.5	-0.6
	comp=Z,1.0nm,0.7s,baz=128,slow=1.8,SNR=5.8						
MKAR				ScP	ScP	09 35 16.8	-0.6
	comp=Z,0.5nm,0.6s,baz=99,slow=1.1,SNR=4.8						
MKAR				LR	LR	09 40 34.2	
	comp=Z,52nm,20.1s,baz=152,slow=42						
AAK	Ala-Archa	25.42	324	eP	P	09 28 20.8	+1.6
	comp=Z,1.0nm,0.7s						
AAK	Ala-Archa	25.42	324	P	P	09 28 20.8	+1.6
	comp=Z,2.5nm,0.4s,baz=125,slow=7.6,SNR=9.9						
AAK				LR	LR	09 40 46.0	
	comp=Z,40nm,18.4s,baz=107,slow=42						
EKS2	Erkin-Say	25.83	323	eP	P	09 28 19.7	-3.2
EKS2				ePcP	PcP	09 31 50.7	+1.2
SONM	Songino Array	26.08	18	P	P	09 28 24.5	-0.5
SONM				ScP	ScP	09 35 18.4	-1.3
SONM	Songino Array	26.08	18	P	P	09 28 24.5	-0.5
	comp=Z,0.5nm,0.5s,baz=179,slow=10,SNR=4.3						
SONM				ScP	ScP	09 35 18.4	-1.3
	comp=Z,0.8nm,0.6s,baz=201,slow=3.2,SNR=7.3						
KURBB	Kurchatov Arra	29.89	339	P	P	09 28 59.1	+0.3
	comp=Z,2.4nm,0.4s,baz=149,slow=9.9,SNR=14						
KURBB				PcP	PcP	09 31 59.0	0.0
	comp=Z,3.7nm,0.7s,baz=169,slow=2.3,SNR=21						
KURBB				ScP	ScP	09 35 30.4	-0.8
	comp=Z,1.4nm,0.6s,baz=150,slow=2.7,SNR=10						
KURK	Kurchatov	29.94	339	eP	P	09 28 59.5	+0.3
	comp=Z,17nm,1.5s						
KURK				PcP	PcP	09 31 59.0	-0.2
KURK				ScP	ScP	09 35 30.4	-0.9
ZALV	Zalesovo Beam	31.35	349	P	P	09 29 11.1	-0.5
ZALV	Zalesovo Beam	31.35	349	P	P	09 29 11.1	-0.5
	comp=Z,3.7nm,0.4s,baz=174,slow=9.0,SNR=17						
CN2	Changchun	32.42	44	eP	P	09 29 20.3	-0.8
BVAR	Borovoye Array	34.81	334	P	P	09 29 42.1	+0.4
BVAR				PcP	PcP	09 32 12.5	-0.1
BVAR	Borovoye Array	34.81	334	P	P	09 29 42.1	+0.4
	comp=Z,2.7nm,0.6s,baz=142,slow=11,SNR=10						
BVAR				PcP	PcP	09 32 12.5	-0.1
	comp=Z,1.8nm,0.4s,baz=151,slow=3.4,SNR=9.2						
MDJ	Mudanjiang	35.45	45	P	P	09 29 47.7	+0.4
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,43nm,6.5s						
ABKAR	Akbulak array	37.48	322	eP	P	09 30 05.2	+0.7
	comp=Z,2.2nm,0.5s						
AKTO	Aktyubinsk	39.16	323	P	P	09 30 18.7	+0.2
AKTO				ScP	ScP	09 36 03.7	-0.6
AKTO	Aktyubinsk	39.16	323	P	P	09 30 18.7	+0.2
	comp=Z,1.2nm,0.4s,baz=126,slow=11,SNR=6.4						
AKTO				ScP	ScP	09 36 03.7	-0.6
	comp=Z,0.6nm,0.3s,baz=117,slow=4.5,SNR=4.9						
MJAR	Matsushiro Arr	39.59	61	pP	pP	09 30 48.9	+1.5
	comp=Z,2.2nm,0.9s,baz=274,slow=9.8,SNR=4.9						
NAY	Al-Naaiem	42.66	288	eP	P	09 30 48.0	+0.4
NAY				AMb	AMB	09 30 49.7	
	comp=Z,7.4nm,0.9s						
RST	Umm Al-Ruwaisa	42.85	289	eP	P	09 30 48.7	-0.5
RST				AMb	AMB	09 30 53.0	
	comp=Z,1.2nm,0.8s						
MBWA	Marble Bar	50.62	149	eP	P	09 31 50.2	+0.6
	comp=Z,15nm,0.6s						
BRTR	Keskin Array B	53.48	303	P	P	09 32 11.4	+0.5
BRTR	Keskin Array B	53.48	303	P	P	09 32 11.4	+0.5
	comp=Z,0.7nm,0.6s,baz=110,slow=6.6,SNR=3.3						
AKASG	Malin Array Be	56.76	316	P	P	09 32 33.1	-0.9
AKASG	Malin Array Be	56.76	316	P	P	09 32 33.1	-0.9
	comp=Z,0.7nm,0.4s,baz=82,slow=6.4,SNR=4.9						
WRA	Warramunga Arr	57.94	135	P	P	09 32 43.1	+0.4
WRA				pP	pP	09 33 10.6	+1.2
WRA	Warramunga Arr	57.94	135	P	P	09 32 43.1	+0.4
	comp=Z,10.0nm,0.6s,baz=321,slow=7.5,SNR=119						
WRA				pP	pP	09 33 10.6	+1.2
	comp=Z,2.4nm,0.6s,baz=324,slow=7.5,SNR=4.1						
WRAB	Tennant Creek	57.94	135	eP	P	09 32 43.4	+0.6
	comp=Z,8.3nm,0.6s						
FINES	FINESS Array B	59.46	329	P	P	09 32 52.4	-0.3
FINES	FINESS Array B	59.46	329	P	P	09 32 52.4	-0.3
	comp=Z,0.6nm,0.3s,baz=59,slow=3.8,SNR=6.4						
AS31	Alice Springs	60.38	138	eP	P	09 33 00.3	+0.7
ASAR	Alice Springs	60.38	138	P	P	09 33 00.4	+0.8
ASAR				pP	pP	09 33 26.8	+0.4
ASAR	Alice Springs	60.38	138	P	P	09 33 00.4	+0.8
	comp=Z,8.0nm,0.5s,baz=321,slow=6.9,SNR=226						
ASAR				pP	pP	09 33 26.8	+0.4
	comp=Z,1.3nm,0.8s,baz=320,slow=6.8,SNR=2.1						
KMBO	Kilima Mbogo	60.86	255	P	P	09 33 04.1	+0.8
KMBO	Kilima Mbogo	60.86	255	P	P	09 33 04.1	+0.8
	comp=Z,1.8nm,0.5s,baz=52,slow=12,SNR=7.5						
ARCES	ARCESS Array B	60.97	338	P	P	09 33 02.8	0.0
ARCES	ARCESS Array B	60.97	338	P	P	09 33 02.8	0.0
	comp=Z,0.6nm,0.4s,baz=100,slow=7.8,SNR=20						
NOA	NORSAR Array B	66.63	328	P	P	09 33 39.5	-0.7
NOA	NORSAR Array B	66.63	328	P	P	09 33 39.5	-0.7
	comp=Z,1.3nm,0.9s,baz=74,slow=4.7,SNR=2.9						
GERES	GERESS Array B	66.90	315	P	P	09 33 42.5	+0.3
GERES				pP	PcP	09 34 10.5	+0.5
GERES	GERESS Array B	66.90	315	P	P	09 33 42.5	+0.3
	comp=Z,0.3nm,0.3s,baz=105,slow=6.2,SNR=4.8						
GERES				pP	PcP	09 34 10.5	+0.5
	comp=Z,0.4nm,0.4s,baz=60,slow=7.9,SNR=1.6						
GERES				LR	LR	10 04 24.2	
	comp=Z,97nm,18.9s,baz=87,slow=37						
BFO	Black Forest	70.49	315	eP	P	09 34 05.4	+1.0
	comp=Z,4.0nm,0.4s						
STKA	Stephens Creek	71.00	139	eP	P	09 34 07.6	0.0
	comp=Z,15nm,2.6s						
STKA	Stephens Creek	71.00	139	P	P	09 34 07.4	-0.2
	comp=Z,3.1nm,0.9s,baz=261,slow=4.9,SNR=7.5						
HNR	Honiara	71.68	109	LR	LR	10 05 31.5	
	comp=Z,106nm,18.1s,baz=161,slow=36						
LSZ	Lusaka	75.50	246	eP	P	09 34 35.0	+0.5
	comp=Z,7.8nm,0.5s						
BOSA	Boshof	84.51	236	P	P	09 35 23.0	+0.2
BOSA	Boshof	84.51	236	P	P	09 35 23.0	+0.2
	comp=Z,3.0nm,0.4s,baz=61,slow=5.1,SNR=17						
TORD	Torodi Ar. Bea	87.52	283	P	P	09 35 38.4	+0.6
TORD				pP	pP	09 36 08.1	+1.7
TORD	Torodi Ar. Bea	87.52	283	P	P	09 35 38.4	+0.6
	comp=Z,4.0nm,0.8s,baz=64,slow=4.5,SNR=37						
TORD				pP	pP	09 36 08.1	+1.7
	comp=Z,0.8nm,1.1s,baz=56,slow=3.3,SNR=3.0						
LRM	Limekiln Ridge	106.79	19	ePdif	Pdif	09 37 06.2	+1.1
	comp=Z,28nm,0.7s						
CBN	Corbin	118.22	353	ePKPdf	PKPdf	09 41 35.4	-0.8
TXAR	Lajitas Array	124.64	19	PKP	PKPdf	09 41 48.2	-0.8
TXAR	Lajitas Array	124.64	19	PKP	PKPdf	09 41 48.2	-0.8
	comp=Z,0.2nm,0.6s,baz=70,slow=0.7,SNR=6.2						
BDFB	Brasilia	144.06	276	PKP	PKPbc	09 42 23.8	+0.3
BDFB	Brasilia	144.06	276	PKP	PKPbc	09 42 23.8	+0.3
	comp=Z,1.3nm,0.4s,baz=129,slow=5.1,SNR=3.7						
CPUP	Villa Florida	154.44	258	PKP	PKPdf	09 42 40.9	-0.4
CPUP				PKPbc	PKPbc	09 42 49.1	-0.7
CPUP	Villa Florida	154.44	258	PKP	PKPdf	09 42 40.9	-0.4
	comp=Z,2.0nm,0.9s,baz=90,slow=20,SNR=5.4						
CPUP				PKPbc	PKPbc	09 42 49.1	-0.7
	comp=Z,2.8nm,0.6s,baz=88,slow=2.3,SNR=13						

DDA 05 09:25:27.1,39°.10N×27°.63E,h7km,MD2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.26	147	iP	Pg	09 25 32.8	+0.5
AKHS				iS	Sb	09 25 38.1	-0.8
BALY	Balya	0.64	359	iP	Pg	09 25 39.4	-0.1
BALY				iS	Sb	09 25 49.3	-0.7
DEMI	Demirci	0.85	93	eP	Pg	09 25 43.6	+0.1

IDC 05 09:29:56.6±1.5,32°.50S×178°.14W,h46km±8km,mb3.6/2, mb1 3.9/3,mb1mx3.5/18,mbtmp3.7/3,ML3.6/1,Error ellipse: s-maj=35.4km s-min=21.5km az=116.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.94	213	P	Pn	09 31 34.7	-0.9
	1.0nm,0.3s,baz=300,slow=9.2,SNR=7.6						
URZ				S	Sn	09 32 52.3	-0.8
	3.0nm,0.3s,baz=300,slow=23,SNR=11						
ASAR	Alice Springs	42.92	269	P	P	09 37 50.9	-0.3
	0.6nm,0.5s,baz=108,slow=7.2,SNR=12						
ASAR				pP	pP	09 38 04.5	+0.9
	1.6nm,0.6s,baz=107,slow=7.4,SNR=11						
WRA	Warramunga Arr	44.10	274	P	P	09 38 00.0	-0.6
	1.4nm,0.5s,baz=112,slow=8.0,SNR=29						
WRA				pP	pP	09 38 13.7	+0.6
	3.3nm,0.5s,baz=114,slow=7.9,SNR=14						
FINES	FINESS Array B	147.06	339	PKPbc	PKPbc	09 49 32.7	-0.9
	1.8nm,0.5s,baz=72,slow=4.5,SNR=14						
FINES				pPKPbc	pPKPbc	09 49 45.5	-2.1
	1.0nm,0.5s,baz=49,slow=5.8,SNR=1.8						
TORD	Torodi Ar. Bea	160.74	179	PKPab	PKPab	09 50 34.6	+0.6
	0.3nm,0.8s,baz=191,slow=4.6,SNR=2.2						

UPP 05 09:51:59.7,59°.82N×22°.38E,h0km,ML2.0,Suspected Mining explosion.
ISCJB 05 09:51:59.7±0.5,59°.81N±0°.03×22°.31E±0°.05,h0km,Error ellipse: s-maj=5.1km s-min=3.5km az=160.8
CSEM 05 09:52:00.4±0.3,59°.81N×22°.35E,h2km,ML1.6,Error ellipse: s-maj=9.4km s-min=6.3km az=160.0,Mining explosion.
IDC 05 09:52:01.6±2.0,59°.88N×22°.47E,h0km,mb1 3.1/3, mb1mx2.9/26,mbtmp3.0/3,ML2.5/3,Error ellipse: s-maj=24.8km s-min=8.3km az=160.0
HEL 05 09:52:01.3,59°.84N×22°.31E,h0km,ML1.6,Explosion
ISC 05 09:51:59.6±0.8,59°.82N±0°.03×22°.34E±0°.03,h0km,n35, σ1s02/54,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	Metsahovi	1.11	68	eP	Pg	09 52 21.1	+0.3
MEF				eS	Sb	09 52 36.4	-0.1
MEF				MSG		09 52 36.4	
	comp=Z,1.9nm,0.4s						
MEF	Metsahovi	1.11	68	P	Pg	09 52 21.1	+0.3
MEF				S	Sb	09 52 36.4	-0.1
	comp=Z,1.9nm,0.4s						
RAF	Rauma	1.24	347	eP	Pg	09 52 23.1	-0.2
RAF				eS	Sg	09 52 40.2	+0.8
RAF				MSG		09 52 40.2	
	comp=Z,5.4nm,0.1s						
RAF				eRG	Rg	09 52 44.0	
RAF	Rauma	1.24	347	P	Pg	09 52 23.1	-0.2
RAF				S	Sg	09 52 40.2	+0.8
	comp=Z,5.4nm,0.1s						
MTSE	Matsula	1.34	145	eP	Pg	09 52 25.0	-0.4
MTSE				eSB	Sg	09 52 42.7	-0.1
MTSE	Matsula	1.34	145	P	Pg	09 52 24.9	-0.4
MTSE				Sb	Sg	09 52 42.6	-0.1
NRTU	Norrtaelje	1.88	267	eP	Pn	09 52 33.2	+0.2
NRTU				eS	Sb	09 52 59.5	+0.6
NRTU	Norrtaelje	1.88	267	P	Pn	09 52 33.2	+0.2
NRTU				S	Sb	09 52 59.5	+0.6
PVF	Pernaja	1.90	66	eP	Pb	09 52 35.0	-0.2
PVF				eS	Sg	09 53 00.4	-0.3
PVF				MSG		09 53 00.4	
	comp=Z,1.6nm,0.2s						
PVF	Pernaja	1.90	66	P	Pb	09 52 34.9	-0.2
PVF				S	Sg	09 53 00.4	-0.3
	comp=Z,1.6nm,0.2s						
GRAU	Graesoe	1.97	287	eP	Pn	09 52 34.4	+0.1
GRAU	Graesoe	1.97	287	P	Pn	09 52 34.4	+0.1
FORU	Forsmark	2.16	287	eP	Pn	09 52 37.8	+1.0
FORU	Forsmark	2.16	287	P	Pn	09 52 37.8	+1.0
FLYU	Flymyra	2.26	280	eP	Pn	09 52 38.7	+0.5
FLYU	Flymyra	2.26	280	P	Pn	09 52 38.7	+0.5
NYNU	Nynaeshamn	2.36	252	eP	Pn	09 52 40.3	+0.7
NYNU	Nynaeshamn	2.36	252	P	Pn	09 52 40.3	+0.7
FIA0	FINESS Array S	2.46	47	eP	Pb	09 52 43.5	-1.1
	baz=234						
FIA0				MSG	Sb	09 53 15.7	+0.3
	comp=Z,3.9nm,0.3s						
FIA0				eSB	Sb	09 53 15.7	+0.3
FIA0	FINESS Array S	2.46	47	P	Pb	09 52 43.5	-1.1
FIA0				Sb	Sb	09 53 15.7	+0.3
FINES	FINESS Array B	2.46	47	Pn	Pb	09 52 43.5	-1.1
	comp=Z,1.1nm,0.3s,baz=231,slow=13,SNR=34						
FINES				Lg	Lg	09 53 15.6	
	comp=Z,3.3nm,0.3s,baz=232,slow=29,SNR=30						
BACU	Backbrunna	2.64	273	eP	Pn	09 52 44.2	+0.7
BACU	Backbrunna	2.64	273	P	Pn	09 52 44.1	+0.7
KEF	Keuruu	2.66	27	ePB	Pb	09 52 47.1	-0.9
KEF				MSG	Sb	09 53 21.9	+0.8
	comp=Z,2.6nm,0.2s						
KEF				eSB	Sb	09 53 21.9	+0.8
KEF	Keuruu	2.66	27	Pb	Pb	09 52 47.1	-0.9
KEF				Sb	Sb	09 53 21.9	+0.8
IGGU	Iggoen	2.71	295	eP	Pn	09 52 45.1	+0.7
IGGU	Iggoen	2.71	295	P	Pn	09 52 45.1	+0.7
KAF	Kangasniemi	3.00	38	ePB	Pb	09 52 52.2	-1.8
KAF				eSB	Sb	09 53 30.6	-0.5
KAF				MSG		09 53 30.6	
	comp=Z,3.0nm,0.2s						
KAF	Kangasniemi	3.00	38	Pb	Pb	09 52 52.1	-1.8
KAF				Sb	Sb	09 53 30.6	-0.5
	comp=Z,3.0nm,0.2s						
VAF	Ylistaro	3.24	3	eP	Pb	09 52 55.2	-2.7
	baz=182						
VAF	Ylistaro	3.24	3	P	Pb	09 52 55.1	-2.7
SUF	Sumiainen	3.44	31	eP	Pn	09 52 57.1	+2.7
SUF	Sumiainen	3.44	31	P	Pn	09 52 57.1	+2.7
NOA	NORSAR Array B	5.64	287	Pn	Pn	09 53 24.4	-0.3
	comp=Z,0.1nm,0.3s,baz=100,slow=11,SNR=2.7						
NOA				Sn	Sn	09 54 30.1	-0.1
	comp=Z,0.1nm,0.3s,baz=155,slow=18,SNR=2.6						
NOA				Lg	Lg	09 54 53.2	
	comp=Z,0.2nm,0.3s,baz=225,slow=26,SNR=2.6						
ARCES	ARCESS Array B	9.85	7	Pn	Pn	09 54 21.3	-0.9
	comp=Z,0.1nm,0.3s,baz=192,slow=13,SNR=9.5						
ARCES				Sn	Sn	09 56 05.7	-7.6
	comp=Z,0.1nm,0.3s,baz=191,slow=23,SNR=2.7						

IDC 05 09:55:21.8±9.5,14°.35N×89°.86W,h64km±61km,mb3.6/2, mb1 3.7/4,mb1mx3.4/22,mbtmp3.5/4,ML3.6/2,Error ellipse: s-maj=78.3km s-min=46.6km az=152.0, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	6.04	14	P	Pn	09 56 48.7	+0.1
	4.4nm,0.3s,baz=188,slow=1.6,SNR=28						
TEIG				S	Sn	09 57 57.0	+0.7
	1.1nm,0.3s,baz=1.3,slow=18,SNR=3.0						
TXAR	Lajitas Array	19.63	322	P	P	09 59 45.1	-0.3
	0.0nm,0.3s,baz=154,slow=11,SNR=5.2						
SCHQ	Schefferville	44.20	19	P	P	10 03 24.1	-0.3
	2.1nm,0.8s,baz=209,slow=13,SNR=3.3						
YKA	Yellowknife Ar	51.19	346	P	P	10 04 18.5	+0.1
	0.9nm,0.9s,baz=149,slow=7.7,SNR=13						

AUST 05 09:54:52.2,21°.22S×174°.98W,h300km
IDC 05 09:55:39.5±3.4,23°.34S×179°.86E,h418km±46km,mb3.3/3, mb1 3.4/5,mb1mx3.1/19,mbtmp3.3/5,Error ellipse: s-maj=49.9km s-min=26.6km az=143.0
ISCJB 05 09:55:41.5±1.0,23°.66S±0°.10×179°.6W±0°.2,h512km, mb3.8/3,Error ellipse: s-maj=19.4km s-min=12.7km az=11.7
ISC 05 09:55:42.1±1.1,23°.8S±0°.1×179°.4W±0°.2,h512km,n12, σ1s06/12,mb3.8/3,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	12.20	38	P	P	09 58 22.8	-0.2
	0.9nm,0.3s,baz=228,slow=15,SNR=2.7						
URZ	Urewera	14.73	191	P	P	09 58 50.8	+1.7
	0.3nm,0.3s,baz=3.5,slow=19,SNR=4.2						
URZ				S	S	10 01 21.2	-2.1
	0.2nm,0.3s,baz=221,slow=20,SNR=2.8						
EIDS	Eidsvold	26.84	261	P	P	10 00 42.1	+0.9
	baz=31,SNR=3.2						
STKA	Stephens Creek	35.24	248	P	P	10 01 53.8	+0.4
	0.6nm,0.4s,baz=92,slow=10,SNR=4.3						
ASAR	Alice Springs	42.56	260	P	P	10 02 52.5	-0.2
	1.7nm,0.5s,baz=95,slow=7.4,SNR=37						
WRA	Warramunga Arr	42.93	266	P	P	10 02 54.6	-1.1
	3.0nm,0.3s,baz=96,slow=8.4,SNR=70						
KNRA	Kununurra	49.20	269	P	P	10 03 43.1	-0.3
	baz=53,SNR=6.9						
FITZ	Fitzroy Crossi	51.35	265	P	P	10 03 59.7	+0.6
	baz=56,SNR=4.0						
MEEK	Meekatharra	55.64	253	P	P	10 04 29.1	-0.5
	baz=60,SNR=3.9						
MORW	Morawa	57.40	250	P	P	10 04 41.5	-0.2
	baz=62,SNR=6.5						
LUWI	Luwuk	60.30	283	P	P	10 04 55.6	-5.8
	baz=64,SNR=3.1						
BRTR	Keskin Array B	147.92	308	PKPbc	PKPab	10 14 34.0	-0.3
	0.4nm,0.6s,baz=68,slow=4.4,SNR=3.0						

IDC 05 09:56:37.8±0.8,4°.45N×32°.61W,h0km,mb3.9/11, mb1 4.1/11,mb1mx3.9/25,mbtmp3.9/11,MS3.6/7, Ms1 3.6/7,ms1mx3.3/30,Error ellipse: s-maj=30.5km s-min=17.9km az=146.0,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	10.73	198	LR	LR	10 02 26.4	
	comp=Z,106nm,21.0s,baz=212,slow=32						
BBTS	Babate	18.80	56	LR	LR	10 06 00.5	
	comp=Z,139nm,20.9s,baz=239,slow=30						
DBIC	Dimbokro	27.70	84	LR	LR	10 11 45.8	
	comp=Z,134nm,18.5s,baz=215,slow=33						
SIV	San Ignacio	34.73	234	P	P	10 03 29.7	-0.3
	2.3nm,0.8s,baz=95,slow=11,SNR=6.0						
TORD	Torodi Ar. Bea	34.94	73	P	P	10 03 30.5	-1.3
	2.5nm,0.9s,baz=264,slow=8.9,SNR=11						
TORD				LR	LR	10 16 04.5	
	comp=Z,133nm,18.4s,baz=205,slow=33						
CPUP	Villa Florida	38.86	217	P	P	10 04 05.0	-0.1
	0.9nm,0.6s,baz=63,slow=11,SNR=4.0						
CPUP				LR	LR	10 21 15.7	
	comp=Z,138nm,21.7s,baz=264,slow=38						
LPAZ	La Paz	40.73	239	P	P	10 04 21.9	+0.3
	2.4nm,0.9s,baz=3.7,slow=5.4,SNR=7.3						
LPAZ				LR	LR	10 21 48.1	
	comp=Z,95nm,20.7s,baz=67,slow=37						
SCHQ	Schefferville	57.33	337	P	P	10 06 27.8	+0.2
	4.1nm,0.8s,baz=138,slow=7.8,SNR=5.6						
NOA	NORSAR Array B	65.32	22	LR	LR	10 35 19.3	
	comp=Z,40nm,18.3s,baz=270,slow=36						
AKASG	Malin Array Be	68.97	37	P	P	10 07 44.8	-0.2
	0.2nm,0.3s,baz=245,slow=7.6,SNR=5.3						
BRTR	Keskin Array B	68.97	49	P	P	10 07 47.2	+1.8
	0.9nm,0.9s,baz=270,slow=10,SNR=3.1						
TXAR	Lajitas Array	71.33	299	P	P	10 08 00.1	0.0
	0.3nm,0.7s,baz=125,slow=5.6,SNR=5.0						
PDAR	Pinedale Array	77.41	313	P	P	10 08 35.1	-0.3
	0.5nm,0.8s,baz=108,slow=2.9,SNR=5.5						
YKA	Yellowknife Ar	82.37	332	P	P	10 09 00.7	-0.8
	0.4nm,0.6s,baz=92,slow=5.2,SNR=10						
NVAR	Mina Array Bea	83.89	308	P	P	10 09 10.3	+0.1
	0.5nm,0.6s,baz=98,slow=3.9,SNR=3.7						
CMAR	Chiang Mai Arr	127.11	63	PKP	PKPdf	10 15 44.7	-0.4
	1.1nm,0.2s,baz=298,slow=1.9,SNR=4.3						

IDC 05 10:16:57.2±1.2,7°.75S×119°.04E,h0km,mb3.9/4, mb1 4.0/7,mb1mx3.7/23,mbtmp3.8/7,ML3.4/3,MS3.6/1, Ms1 3.6/1,ms1mx2.3/35,Error ellipse: s-maj=52.3km s-min=19.8km az=67.0,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	2.81	15	Pn	Pn	10 17 43.7	+0.3
	3.8nm,0.3s,baz=210,slow=7.6,SNR=12						
KAPI				Sn	Sn	10 18 14.9	-3.0
	6.2nm,0.3s,baz=83,slow=22,SNR=9.0						
FITZ	Fitzroy Crossi	12.13	149	Pn	Pn	10 19 51.3	-0.2
	0.1nm,0.3s,baz=315,slow=16,SNR=2.8						
FITZ				Sn	Sn	10 21 59.0	-8.6
	0.2nm,0.3s,baz=14,slow=18,SNR=5.7						
WRA	Warramunga Arr	19.15	131	P	P	10 21 21.7	-0.6
	0.3nm,0.3s,baz=308,slow=11,SNR=20						
ASAR	Alice Springs	21.30	140	P	P	10 21 45.8	0.0
	3.6nm,0.3s,baz=314,slow=8.9,SNR=57						
STKA	Stephens Creek	31.90	142	P	P	10 23 24.5	0.0
	1.1nm,0.4s,baz=314,slow=11,SNR=9.6						
SONM	Songino Array	56.46	350	LR	LR	10 54 18.7	
	comp=Z,53nm,20.6s,baz=72,slow=40						
MKAR	Makanchi Array	63.37	333	P	P	10 27 28.1	-0.2
	0.6nm,0.6s,baz=147,slow=7.3,SNR=6.2						
VNDA	Vanda	73.21	171	P	P	10 28 29.8	+0.3
	0.3nm,0.5s,baz=303,slow=6.9,SNR=4.3						

IDC 05 10:17:25.4±2.0,3°.84S×151°.75E,h0km,mb4.2/4, mb1 4.5/4,mb1mx3.8/19,mbtmp4.3/4,Error ellipse: s-maj=43.6km s-min=33.0km az=2.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	23.06	143	P	P	10 22 32.4	-0.4
	5.2nm,0.9s,baz=322,slow=19,SNR=4.6						
WRA	Warramunga Arr	23.33	225	P	P	10 22 36.4	+1.0
	2.0nm,0.4s,baz=51,slow=10,SNR=21						
ASAR	Alice Springs	26.18	220	P	P	10 23 01.9	+0.1
	0.2nm,0.3s,baz=53,slow=8.0,SNR=2.9						
FITZ	Fitzroy Crossi	29.22	239	P	P	10 23 29.7	+0.6
	1.0nm,0.3s,baz=45,slow=10.0,SNR=3.7						
TORD	Torodi Ar. Bea	149.00	289	PKPbc	PKPbc	10 37 14.9	-1.7
	0.3nm,0.4s,baz=84,slow=2.3,SNR=8.6						

ISCJB 05 10:20:51.0±1.5,41°.40N±0°.08×22°.52E±0°.08,h11km±4km, Error ellipse: s-maj=14.4km s-min=9.1km az=153.1
ATH 05 10:20:51.5,41°.40N×22°.49E,h17km±3km,MD2.9/5
CSEM 05 10:20:51.0±0.5,41°.40N×22°.49E,h14km±1km,MD2.9, Error ellipse: s-maj=10.7km s-min=6.5km az=164.0
SKO 05 10:20:52.1,41°.33N×22°.58E,h15km,M0.4,ML2.3
ISC 05 10:20:50.4±1.9,41°.46N±0°.09×22°.49E±0°.05,h9km±8km, n12,σ0s39/22,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.14	157	ePg	Pg	10 20 53.7	+0.1
VAY				iSg	Sg	10 20 55.0	-0.8
VAY				eLg	Lg	10 20 55.3	
	comp=E,3μm,0.5s						
VAY				eLg	Lg	10 20 55.6	
	comp=N,4μm,0.5s						
VAY	Valandovo	0.14	157	ePg	Pg	10 20 54.1	+0.5
VAY				iSg	Sg	10 20 55.5	-0.3
VAY				eLg	Lg	10 20 56.0	
	comp=N,4μm,0.5s						
GRG	Griva	0.50	188	ePB	Pg	10 21 00.5	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GRG				eSB	Sg	10 21 07.1	+0.3
GRG	Griva	0.50	188	ePb	Pg	10 21 00.5	+0.3
GRG				eSb	Sg	10 21 07.1	+0.3
SOH	Sokhos	0.91	134	ePN	Pg	10 21 08.2	+0.3
SOH				eSN	Sg	10 21 20.0	+0.3
SOH	Sokhos	0.91	134	ePn	Pg	10 21 08.2	+0.3
SOH				eSn	Sg	10 21 20.0	+0.3
NVR	Nevrokopi	1.03	95	ePN	Pn	10 21 11.4	+0.2
NVR				eSN	Sn	10 21 25.4	-0.4
NVR	Nevrokopi	1.03	95	ePn	Pn	10 21 11.4	+0.2
NVR				eSn	Sn	10 21 25.4	-0.4
FNA	Florina	1.08	232	ePN	Pb	10 21 11.1	-0.2
FNA	Florina	1.08	232	ePn	Pb	10 21 11.1	-0.2
PLG	Polygyros	1.30	146	ePN	Pb	10 21 14.9	-0.1
PLG				eSN	Sn	10 21 31.8	-0.5
PLG	Polygyros	1.30	146	ePn	Pb	10 21 14.9	-0.1
PLG				eSn	Sn	10 21 31.8	-0.5

BJI ***05*** *10:28:53.5, 4.̊66S×152.̊71E, h155km, mB4.9/22, mb4.7/39*
ISCJB ***05*** *10:28:57.8±1.0, 4.̊64S±0.̊04×151.̊75E±0.̊04, h154km±9km, mb4.5/64, Error ellipse: s-maj=7.6km s-min=5.8km az=25.3*
NEIC ***05*** *10:28:59.6±0.9, 4.̊66S×151.̊76E, h160km±8km, mb4.6/30, Error ellipse: s-maj=6.9km s-min=5.6km az=103.0*
IDC ***05*** *10:28:59.6±0.9, 4.̊68S×151.̊75E, h160km±7km, mb4.2/22, mb1 4.3/26, mb1mx4.3/28, mbtmp4.2/26, MS3.4/3, Ms1 3.4/3, ms1mx3.0/24, Error ellipse: s-maj=13.4km s-min=8.3km az=86.0*
AUST ***05*** *10:29:01.6, 4.̊71S×152.̊08E, h200km*
DJA ***05*** *10:29:03.6±1.6, 5°S±8°×15°1E±1°6, h178km±13km, M5.1/9, mB5.1/1, mb4.9/9, MLv5.2/1, Mw(mB)4.5/1*
ISC 05 10:29:00.1±0.4**, 4.̊71S**±0.̊04**×151.̊79E**±0.̊06**, h165**km±2km**, h165km:pP-P, n239, σ1§13**/297**, mb4.6**/63**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.55	224	ePn	Pn	10 30 33.8	-0.4
PMG				S	Sn	10 31 48.4	+0.2
PMG	Port Moresby	6.55	224	P	Pn	10 30 34.6	+0.4
	61nm,0.9s,3µm0.9nm						
PMG	Port Moresby	6.55	224	P	Pn	10 30 34.6	+0.4
	8.3nm,0.3s,baz=354,slow=3.7,SNR=25						
PMG				S	Sn	10 31 48.4	+0.2
	29nm,0.3s,baz=125,slow=20,SNR=9.9						
HNR	Honiara	9.36	121	ePn	Pn	10 31 10.5	-1.0
HNR	Honiara	9.36	121	P	Pn	10 31 10.7	-0.7
	4.5nm,0.3s,baz=252,slow=2.5,SNR=6.1						
HNR				LR	LR	10 34 08.4	
	comp=Z,116nm,19.3s,baz=46,slow=33						
COEN	Coen	12.51	222	P	P	10 32 00.3	+2.6
	baz=13,SNR=5.5						
MTSU	Mount Surprise	15.21	208	P	P	10 32 31.0	+3.3
	baz=15,SNR=6.3						
CTA	Charters Tower	16.21	199	P	P	10 32 39.4	+0.7
CTA	Charters Tower	16.21	199	P	P	10 32 39.4	+0.7
	0.4nm,0.3s,baz=16,slow=14,SNR=5.3						
CTAO	Charters Tower	16.21	199	ePn	P	10 32 40.7	+2.0
	18nm,1.0s						
GUMO	Guam	19.43	339	eP	P	10 33 14.2	+0.2
	308nm,1.0s						
GUMO	Guam	19.43	339	P	P	10 33 15.1	+1.2
	7.5nm,0.3s,baz=184,slow=8.6,SNR=11						
FAKI	Fak Fak	19.58	275	P	P	10 33 12.2	-3.3
	42nm,1.4s						
FAKI	Fak Fak	19.58	275	P	P	10 33 15.8	+0.2
	baz=20,SNR=12						
QIS	Mount Isa	19.71	216	P	P	10 33 17.8	+0.9
	baz=20,SNR=7.5						
KDU	Kakadu	20.66	246	P	P	10 33 26.3	-0.7
	baz=21,SNR=43						
SWI	Sorong	20.85	280	P	P	10 33 26.0	-3.2
	65nm,0.9s						
SWI	Sorong	20.85	280	P	P	10 33 30.2	+1.0
	baz=21,SNR=4.2						
PALU	Palau	21.02	305	P	P	10 33 31.2	+0.2
	baz=21,SNR=7.2						
RMQ	Roma	21.85	187	P	P	10 33 41.0	+1.4
	baz=22,SNR=6.4						
MTN	Manton Dam	21.94	247	P	P	10 33 40.9	+0.2
	baz=22,SNR=6.4						
DZM	Mont Dzumac	22.35	142	P	P	10 33 45.2	+0.6
DZM	Mont Dzumac	22.35	142	P	P	10 33 45.2	+0.6
	25nm,0.9s,baz=329,slow=13,SNR=5.3						
WRAB	Tennant Creek	22.75	227	eP	P	10 33 48.2	-0.1
	74nm,0.7s						
WRA	Warramunga Arr	22.76	227	P	P	10 33 48.2	-0.2
WRA				PcP	PcP	10 37 34.9	+0.1
WRA				S	S	10 37 43.4	-1.4
WRA				ScP	ScP	10 40 57.1	-0.1
WRA	Warramunga Arr	22.76	227	P	P	10 33 48.2	-0.2
	40nm,0.4s,baz=50,slow=10,SNR=366						
WRA				PcP	PcP	10 37 34.9	+0.1
	1.7nm,0.6s,baz=44,slow=2.2,SNR=5.8						
WRA				S	S	10 37 43.4	-1.4
	6.0nm,0.9s,baz=48,slow=17,SNR=12						
WRA				ScP	ScP	10 40 57.1	-0.1
	1.2nm,0.6s,baz=51,slow=3.0,SNR=9.0						
QLP	Quilpie	22.92	198	P	P	10 33 50.4	+0.7
	baz=23,SNR=38						
GAMI	Galela, Maluku	24.85	285	P	P	10 34 06.5	-1.0
	69nm,0.9s						
KNRA	Kununurra	25.11	243	P	P	10 34 09.2	-0.6
	baz=25,SNR=65						
AS31	Alice Springs	25.55	221	eP	P	10 34 13.7	-0.1
AS31				eS	S	10 38 30.3	+1.1
ASAR	Alice Springs	25.55	221	P	P	10 34 13.7	-0.1
ASAR				pP	pP	10 34 46.8	-1.0
ASAR				PcP	PcP	10 37 41.2	+0.4
ASAR				S	S	10 38 26.5	-2.8
ASAR	Alice Springs	25.55	221	P	P	10 34 13.7	-0.1
	4.0nm,0.4s,baz=53,slow=9.1,SNR=249						
ASAR				pP	pP	10 34 46.8	-1.0
	8.4nm,0.8s,baz=50,slow=9.1,SNR=7.1						
ASAR				PcP	PcP	10 37 41.2	+0.4
	1.4nm,0.8s,baz=56,slow=2.9,SNR=4.1						
ASAR				S	S	10 38 26.5	-2.8
	0.9nm,0.5s,baz=54,slow=14,SNR=5.6						
CMSA	Cobar Meteorol	27.30	191	P	P	10 34 29.8	+0.6
	baz=28,SNR=7.3						
STKA	Stephens Creek	28.67	198	P	P	10 34 41.1	-0.3
STKA	Stephens Creek	28.67	198	P	P	10 34 41.1	-0.3
	1.1nm,0.5s,baz=36,slow=15,SNR=6.5						
FITZ	Fitzroy Crossi	28.82	240	P	P	10 34 42.0	-1.0
FITZ				pP	pP	10 35 16.5	-1.0
FITZ				PcP	PcP	10 37 49.6	+0.9
FITZ	Fitzroy Crossi	28.82	240	P	P	10 34 42.0	-1.0
	6.5nm,0.5s,baz=59,slow=6.2,SNR=29						
FITZ				pP	pP	10 35 16.5	-1.0
	6.6nm,0.7s,baz=66,slow=11,SNR=2.6						
FITZ				PcP	PcP	10 37 49.6	+0.9
	4.2nm,0.7s,baz=135,slow=4.3,SNR=3.2						
FITZ				LR	LR	10 46 48.7	
	comp=Z,90nm,19.7s,baz=55,slow=37						
FITZ	Fitzroy Crossi	28.82	240	P	P	10 34 42.0	-1.0
	baz=29,SNR=23						
BBOO	Buckleboo	31.58	206	P	P	10 35 07.0	-0.1
	baz=32,SNR=6.5						
FORT	Forrest	34.23	218	P	P	10 35 29.6	-0.5
	baz=34,SNR=12						
MEEK	Meekatharra	38.46	232	P	P	10 36 05.5	-0.6
	baz=39,SNR=35						
KMBL	Kambalda	38.62	223	P	P	10 36 06.8	-0.6
	baz=39,SNR=13						
GIRL	Giralia	40.43	240	P	P	10 36 22.9	+0.4
	baz=41,SNR=6.5						
URZ	Urewera	40.58	149	P	P	10 36 24.9	+1.5
URZ	Urewera	40.58	149	P	P	10 36 24.9	+1.5
	3.3nm,0.3s,baz=268,slow=3.4,SNR=12						
MORW	Morawa	41.62	230	P	P	10 36 31.3	-0.9
	baz=42,SNR=18						
KLBR	Kellerberrin	41.64	226	P	P	10 36 30.9	-1.4
	baz=42,SNR=12						
BLDU	Ballidu	41.88	228	P	P	10 36 33.2	-1.1
	baz=42,SNR=19						
KSM	Kuching	41.90	277	P	P	10 36 35.5	+0.9
	baz=42,SNR=3.9						
JNU	Nakatsue	42.53	334	eP	P	10 36 39.4	0.0
	16nm,0.9s						
JNU	Nakatsue	42.53	334	P	P	10 36 39.2	-0.2
	baz=109,slow=3.5						
NWAO	Narrogin (SRO)	42.74	225	P	P	10 36 40.0	-1.1
NWAO	Narrogin (SRO)	42.74	225	P	P	10 36 40.0	-1.1
	4.3nm,0.9s,baz=83,slow=8.1,SNR=4.0						
MJAR	Matsushiro Arr	42.96	344	P	P	10 36 40.6	-2.2
MJAR	Matsushiro Arr	42.96	344	P	P	10 36 40.6	-2.2
	9.8nm,0.8s,baz=170,slow=8.9,SNR=25						
MJAR				LR	LR	10 51 12.0	
	comp=Z,64nm,20.8s,baz=5.0,slow=31						
MAJO	Matsushiro	42.96	344	eP	P	10 36 41.0	-1.9
	13nm,0.8s						
MAT	Matsushiro	42.96	344	P	P	10 36 40.8	-2.0
KSRS	Korea Array	47.47	334	P	P	10 37 18.4	+0.1
	4.9nm,0.8s,baz=151,slow=9.2,SNR=27						
KSRS				PcP	PcP	10 38 45.8	-0.1
	0.9nm,0.6s,baz=153,slow=3.6,SNR=5.1						
KSAR	Wonju Array Be	47.48	334	P	P	10 37 18.4	0.0
KSAR				PcP	PcP	10 38 45.8	-0.2
INCN	Inchon	48.07	333	eP	P	10 37 23.9	+1.0
	38nm,0.9s						
NJ2	Nanjing	48.14	322	eP	P	10 37 23.5	-0.1
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
ASAJ	Asahikawa	49.30	351	P	P	10 37 31.9	-0.3
ASAJ	Asahikawa	49.30	351	P	P	10 37 31.9	-0.3
	comp=Z,11nm,0.9s,baz=235,slow=26,SNR=6.8						
USRK	Ussuriysk Arra	51.84	342	P	P	10 37 51.2	+0.1
	comp=Z,9.4nm,0.9s,baz=165,slow=7.8,SNR=16						
MDJ	Mudanjiang	52.99	340	P	P	10 37 58.9	-0.8
MDJ				pP	pP	10 38 37.4	0.0
MDJ				PP	PP	10 39 59.4	-1.8
MDJ				S	S	10 45 15.7	-0.7
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,72nm,6.7s						
MDJ				LR	LR		
	comp=N,26nm,28.9s						
MDJ				LR	LR		
	comp=E,26nm,25.3s						
MDJ				LR	LR		
	comp=Z,29nm,41.6s						
GYA	Guiyang	53.54	308	eP	P	10 38 06.8	+2.6
GYA				pP	pP	10 38 42.6	+0.6
GYA				sP	sP	10 39 01.4	+1.2
GYA				PcP	PcP	10 39 11.4	+2.6
GYA				PP	PP	10 40 09.9	+3.2
GYA				ScP	ScP	10 42 53.0	+1.8
GYA				S	S	10 45 26.9	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2	Changchun	53.81	337	eP	P	10 38 05.3	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	Beijing	55.27	327	P	P	10 38 18.0	+1.8
BJI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI	Kunming	56.10	304	P	P	10 38 29.8	+7.0
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
CM31	Chiang Mai Arr	56.93	295	eP	P	10 38 29.9	+1.4
	comp=Z,13nm,0.9s						
CMAR	Chiang Mai Arr	56.93	295	P	P	10 38 29.7	+1.3
CMAR				PcP	PcP	10 39 22.4	+0.4
CMAR	Chiang Mai Arr	56.93	295	P	P	10 38 29.7	+1.3
	comp=Z,9.1nm,0.8s,baz=110,slow=5.1,SNR=45						
CMAR				PcP	PcP	10 39 22.4	+0.4
	comp=Z,0.7nm,0.3s,baz=97,slow=2.9,SNR=4.4						
CMMT	Chiang Mai	57.03	296	P	P	10 38 27.8	-1.4
	comp=Z,12nm,1.3s						
CHTO	Chiang Mai	57.04	296	eP	P	10 38 30.3	+1.1
	comp=Z,12nm,1.2s						
PETK	Petropavlovsk-	57.82	4	P	P	10 38 33.4	-0.6
PETK	Petropavlovsk-	57.82	4	P	P	10 38 33.4	-0.6
	comp=Z,6.6nm,0.7s,baz=162,slow=7.6,SNR=12						
HHC	Hu-ho-hao-te	58.39	325	eP	P	10 38 39.5	+1.1
HHC				pP	pP	10 39 18.1	+1.3
HHC				sP	sP	10 39 35.8	+0.9
HHC				PP	PP	10 40 53.7	+4.1
HHC				PcS	PcS	10 43 29.3	+0.1
HHC				S	S	10 46 29.5	+1.1
HHC				sS	sS	10 47 34.8	-0.2
HHC				ScS	ScS	10 48 10.4	-1.5
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,5.4s						
HHC				LR	LR		
	comp=N,230nm,21.0s						
HHC				LR	LR		
	comp=E,240nm,20.3s						
HHC				LR	LR		
	comp=Z,120nm,20.2s						
FX1	Attu Island--F	60.16	15	eP	P	10 38 49.8	-0.3
LZH	Lanzhou	60.47	316	eP	P	10 38 54.0	+1.2
LZH				pmax	pmax		
	comp=Z,15nm,0.9s						
GTA	Gaotai	64.91	318	eP	P	10 39 23.4	+1.3
GTA				pP	pP	10 40 02.2	+0.9
GTA				sP	sP	10 40 18.8	-0.3
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
ULN	Ulaanbaatar	65.39	329	eP	P	10 39 26.0	+1.0
	comp=Z,20nm,1.1s						
ULN	Ulaanbaatar	65.39	329	P	P	10 39 24.2	-0.8
	comp=Z,16nm,1.0s						
SONM	Songino Array	65.71	328	P	P	10 39 27.9	+0.8
SONM	Songino Array	65.71	328	P	P	10 39 27.9	+0.8
	comp=Z,9.6nm,0.6s,baz=145,slow=5.1,SNR=56						
TAPN	Taplejung	69.50	301	eP	P	10 39 51.6	+0.2
	comp=Z,4.2nm,0.4s						
ODAN	Odare	69.63	301	eP	P	10 39 52.6	+0.4
	comp=Z,20nm,0.7s						
RAMN	Ramite	70.33	301	eP	P	10 39 56.8	+0.3
GUN	Gumba	71.21	301	eP	P	10 40 01.5	-0.4
	comp=Z,22nm,0.5s						
PKI	Pulchoki	71.52	301	eP	P	10 40 03.5	-0.2
KKN	Kakani	71.69	301	eP	P	10 40 04.8	+0.2
	comp=Z,11nm,0.6s						
DMN	Daman	71.79	301	eP	P	10 40 05.2	-0.1
VNDA	Vanda	72.96	178	P	P	10 40 11.9	+1.0
VNDA	Vanda	72.96	178	P	P	10 40 11.9	+1.0
	comp=Z,0.8nm,0.8s,baz=327,slow=8.1,SNR=3.8						
KOLN	Koldanda	73.12	301	eP	P	10 40 12.9	-0.2
	comp=Z,18nm,0.7s						
DANN	Dangsing	73.13	301	eP	P	10 40 13.0	-0.3
	comp=Z,16nm,0.7s						
BILL	Bilibino	73.30	6	eP	P	10 40 12.3	-0.7
	comp=Z,4.3nm,0.8s						
SBA	Scott Base	73.52	177	eP	P	10 40 17.3	+3.1
	comp=Z,23nm,1.8s						
GAMB	Gambell	73.57	16	eP	P	10 40 14.7	0.0
	comp=Z,2.5nm,0.6s						
PYUN	Piuthan	73.73	301	eP	P	10 40 15.4	-1.2
	comp=Z,49nm,1.0s						
WMQ	Urumqi	74.99	318	P	P	10 40 23.8	+0.4
WMQ				pP	pP	10 41 03.1	-0.6
WMQ				sP	sP	10 41 20.4	-0.9
WMQ				PP	PP	10 43 15.6	+1.9
WMQ				S	S	10 49 46.2	-1.5
WMQ				sS	sS	10 50 54.5	-3.0
WMQ				pmax	pmax		
	comp=Z,16nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,180nm,5.2s						
WMQ				LR	LR		
	comp=N,150nm,5.6s						
WMQ				LR	LR		
	comp=E,220nm,5.4s						
WMQ				LR	LR		
	comp=Z,160nm,5.2s						
SEW	Seward	79.14	26	eP	P	10 40 46.2	+0.1
MK31	Makanchi Array	79.60	319	eP	P	10 40 48.8	-0.1
MKAR	Makanchi Array	79.60	319	P	P	10 40 48.8	-0.1
MKAR	Makanchi Array	79.60	319	P	P	10 40 48.8	-0.1
	comp=Z,7.0nm,0.8s,baz=108,slow=5.6,SNR=58						
PMR	Palmer	80.02	25	eP	P	10 40 50.4	-0.5
	comp=Z,4.5nm,0.7s						
SML	Sawmill	80.46	25	eP	P	10 40 53.7	+0.4
TRF	Thorofare Moun	80.50	23	eP	P	10 40 51.9	-1.8
	comp=Z,5.5nm,0.7s						
ZAA0	Zalesovo Array	80.52	327	eP	P	10 40 52.4	-1.2
ZALV	Zalesovo Beam	80.52	327	P	P	10 40 52.5	-1.1
ZALV				pP	pP	10 41 33.0	-1.4
ZALV	Zalesovo Beam	80.52	327	P	P	10 40 52.5	-1.1
	comp=Z,2.6nm,0.4s,baz=107,slow=5.0,SNR=23						
ZALV				pP	pP	10 41 33.0	-1.4
	comp=Z,1.3nm,0.7s,baz=120,slow=5.8,SNR=1.8						
MCK	McKinley	81.17	23	eP	P	10 40 56.1	-0.9
	comp=Z,11nm,0.7s						
BMRM	Bremner River	81.67	26	eP	P	10 41 00.1	+0.4
	comp=Z,2.7nm,0.7s						
KSH	Kashi	82.11	311	P	P	10 41 04.4	+1.8
KSH				epP	pP	10 41 44.1	+0.6
KSH				esP	sP	10 42 00.9	0.0
KSH				ePP	PP	10 44 14.0	+0.9
KSH				eS	S	10 51 00.0	-3.8
KSH				eSKS	SKSac	10 51 03.4	-4.4
KSH				pmax	pmax		
	comp=Z,19nm,0.8s						
KSH				pmax	pmax		
	comp=Z,560nm,5.3s						
KSH				LR	LR		
	comp=N,250nm,4.2s						
KSH				LR	LR		
	comp=E,250nm,6.4s						
KSH				LR	LR		
	comp=Z,310nm,4.8s						
COLA	College	82.14	22	eP	P	10 41 01.0	-1.0
	comp=Z,16nm,0.6s						
COLD	Coldfoot	82.51	19	eP	P	10 41 04.5	+0.7
	comp=Z,3.1nm,0.7s						
ULHL	Ulahol	82.53	314	P	P	10 41 05.1	+0.4
	SNR=9.4						
MENT	Mentasta	82.89	25	eP	P	10 41 06.0	+0.1
DOT	Dot Lake	83.05	24	eP	P	10 41 06.6	-0.1
	comp=Z,19nm,0.8s						
KURK	Kurchatov	83.08	322	eP	P	10 41 06.1	-1.0
	comp=Z,12nm,1.0s						
KURBB	Kurchatov Arra	83.11	322	P	P	10 41 06.7	-0.6
	comp=Z,5.6nm,0.8s,baz=105,slow=4.2,SNR=16						
TKM2	Tokmak 2	83.14	314	eP	P	10 41 08.1	+0.1
	comp=Z,2.5nm,0.4s						
TKM2	Tokmak 2	83.14	314	P	P	10 41 08.0	+0.1
	SNR=13						
KZA	Kyzart	83.21	313	P	P	10 41 09.7	+1.2
	SNR=21						
KBK	Karagaybulak	83.55	314	P	P	10 41 10.6	+0.7
	SNR=7.7						
CHMS	Chumysh	83.77	314	P	P	10 41 10.9	+0.1
	SNR=5.8						
AAK	Ala-Archa	83.87	314	eP	P	10 41 11.8	+0.2
	comp=Z,2.7nm,0.9s						
AAK	Ala-Archa	83.87	314	P	P	10 41 12.2	+0.5
	SNR=10						
AAK	Ala-Archa	83.87	314	P	P	10 41 12.1	+0.5
	baz=120,slow=6.2						
USP	Ospenovka	84.00	314	P	P	10 41 12.4	+0.3
	SNR=16						
AML	Almayashu	84.35	313	P	P	10 41 15.2	+0.9
	SNR=54						
EKS2	Erkin-Say	84.40	314	eP	P	10 41 14.4	+0.2
	comp=Z,17nm,0.9s						
EKS2	Erkin-Say	84.40	314	P	P	10 41 14.8	+0.6
	SNR=16						
EGAK	Eagle	84.67	23	eP	P	10 41 15.1	+0.2
	comp=Z,10nm,0.8s						
QSPA	South Pole Qui	85.25	180	eP	P	10 41 18.1	+0.1
QSPA	South Pole Qui	85.25	180	P	P	10 41 18.0	+0.1
	comp=Z,3.2nm,0.9s,baz=263,slow=0.9,SNR=13						
KKAR	Karatay Array	86.84	314	eP	P	10 41 25.8	-0.3
	comp=Z,0.8nm,0.5s						
BRVK	Borovoye	88.63	323	eP	P	10 41 33.4	-1.0
	comp=Z,9.9nm,1.3s						
MOD	Modoc	91.55	48	eP	P	10 41 49.3	+0.8
	comp=Z,8.3nm,0.6s						
MTUM	Tungsten Hills	92.55	53	eP	P	10 41 54.4	+1.2
NVAR	Mina Array Bea	92.82	52	P	P	10 41 55.3	+0.9
NVAR	Mina Array Bea	92.82	52	P	P	10 41 55.3	+0.9
	comp=Z,4.9nm,0.8s,baz=252,slow=6.2,SNR=28						
NV11	Mina Array Sit	92.94	52	eP	P	10 41 55.6	+0.7
NEW	Newport	94.21	42	eP	P	10 42 00.6	+0.2
	comp=Z,49nm,2.5s						
YKA	Yellowknife Ar	95.82	28	P	P	10 42 07.0	-0.4
YKA				PKiKP	PKiKP	10 46 45.9	+0.2
YKA				PKKPbc	PKKPbc	10 58 55.0	-3.9
YKA	Yellowknife Ar	95.82	28	P	P	10 42 06.9	-0.4
	comp=Z,0.9nm,0.6s,baz=270,slow=4.8,SNR=22						
YKA				PKiKP	PKiKP	10 46 45.9	+0.2
	comp=Z,0.3nm,0.8s,baz=240,slow=1.5,SNR=4.1						
YKA				PKKPbc	PKKPbc	10 58 54.9	-3.9
	comp=Z,0.3nm,0.8s,baz=91,slow=3.0,SNR=5.1						
HLID	Hailey	95.97	47	eP	P	10 42 09.1	+0.3
	comp=Z,1.3nm,0.7s						
CCUT	Cedar City	96.69	53	eP	P	10 42 13.6	+1.5
	comp=Z,48nm,2.9s						
MOOW	Moose Ponds	98.63	47	eP	P	10 42 20.2	-0.6
	comp=Z,1.3nm,0.8s						
PDAR	Pinedale Array	99.53	48	P	Pdif	10 42 24.1	-0.7
PDAR	Pinedale Array	99.53	48	P	Pdif	10 42 24.1	-0.7
	comp=Z,1.9nm,0.9s,baz=233,slow=2.0,SNR=15						
TXAR	Lajitas Array	104.97	61	PKiKP	PKiKP	10 47 03.8	+0.5
TXAR	Lajitas Array	104.97	61	PKiKP	PKiKP	10 47 03.8	+0.5
	comp=Z,0.2nm,0.9s,baz=238,slow=2.4,SNR=3.5						
ARCES	ARCESS Array B	106.49	343	PKiKP	PKiKP	10 47 04.3	-0.5
ARCES	ARCESS Array B	106.49	343	PKiKP	PKiKP	10 47 04.3	-0.5
	comp=Z,2.2nm,0.8s,baz=21,slow=0.8,SNR=10.0						
FINES	FINESS Array B	110.55	335	PKiKP	PKiKP	10 47 11.7	-0.9
FINES	FINESS Array B	110.55	335	PKiKP	PKiKP	10 47 11.7	-0.9
	comp=Z,2.2nm,0.6s,baz=108,slow=4.2,SNR=6.3						
AKASG	Malin Array Be	113.83	324	PKiKP	PKiKP	10 47 18.1	-1.0
AKASG	Malin Array Be	113.83	324	PKiKP	PKiKP	10 47 18.1	-1.0
	comp=Z,1.1nm,0.4s,baz=62,slow=2.4,SNR=7.4						
BRTR	Keskin Array B	114.49	312	PKPpre	PKPpre	10 47 12.4	
BRTR				PKP	PKPdf	10 47 20.1	-0.9
BRTR	Keskin Array B	114.49	312	PKhKP	PKPpre	10 47 12.4	
	comp=Z,0.6nm,0.3s,baz=123,slow=2.6,SNR=8.8						
BRTR				PKP	PKPdf	10 47 20.1	-0.9
	comp=Z,1.2nm,0.6s,baz=120,slow=2.0,SNR=7.4						
NB2	NORSAR Subarra	116.48	340	PKPdf	PKPdf	10 47 22.9	-1.1
	comp=Z,1.6nm,0.8s,baz=44,slow=1.9						
NOA	NORSAR Array B	116.48	340	PKP	PKPdf	10 47 23.1	-0.9
NOA	NORSAR Array B	116.48	340	PKP	PKPdf	10 47 23.1	-0.9
	comp=Z,2.4nm,0.7s,baz=48,slow=1.9,SNR=7.0						
SCHQ	Schefferville	121.13	25	PKP	PKPdf	10 47 32.9	-0.2
SCHQ	Schefferville	121.13	25	PKP	PKPdf	10 47 32.9	-0.2
	comp=Z,2.4nm,0.8s,baz=231,slow=6.5,SNR=2.8						
BRG	Berggiesshubel	122.09	330	eP	PKPdf	10 47 35.1	+0.1
	comp=Z,5.1nm,0.6s						
TREC	Trest	122.23	328	ePKPdf	PKPdf	10 47 35.5	+0.1
CLL	Collm	122.28	331	⇑iPKPdf	PKPdf	10 47 35.4	0.0
	comp=Z,7.0nm,0.7s						
KHC	Kasperske Hory	123.34	328	ePKPdf	PKPdf	10 47 37.7	+0.1
KHC				ex	x	10 47 47.5	
GERES	GERESS Array B	123.45	328	PKP	PKPdf	10 47 37.7	-0.2
GERES	GERESS Array B	123.45	328	PKP	PKPdf	10 47 37.7	-0.2
	comp=Z,4.4nm,0.5s,baz=70,slow=1.6,SNR=25						
GIVF	Givet	126.90	334	ePKIKP	PKPdf	10 47 44.2	-0.1
GIVF	Givet	126.90	334	ePKPdf	PKPdf	10 47 44.2	-0.1
BAIF	Baives	127.20	334	ePKIKP	PKPdf	10 47 44.9	0.0
BAIF	Baives	127.20	334	ePKPdf	PKPdf	10 47 44.9	0.0
HINF	Hinteralfeld	127.59	331	ePKIKP	PKPdf	10 47 45.3	-0.5
	comp=Z,12nm,1.0s						
HINF	Hinteralfeld	127.59	331	ePKPdf	PKPdf	10 47 45.3	-0.5
HAU	Haudompre	127.71	331	ePKIKP	PKPdf	10 47 45.6	-0.4
HAU	Haudompre	127.71	331	ePKPdf	PKPdf	10 47 45.6	-0.4
MEZF	Maizieres J'vi	127.96	332	ePKIKP	PKPdf	10 47 46.6	+0.2
	comp=Z,11nm,0.7s						
MEZF	Maizieres J'vi	127.96	332	ePKPdf	PKPdf	10 47 46.6	+0.2
CABF	La Chapelle	128.81	330	ePKIKP	PKPdf	10 47 49.0	+0.8
	comp=Z,14nm,0.9s						
CABF	La Chapelle	128.81	330	ePKPdf	PKPdf	10 47 49.0	+0.8
LPL	La Plagne	129.23	329	ePKIKP	PKPdf	10 47 49.3	+0.1
	comp=Z,4.6nm,0.5s						
LPL	La Plagne	129.23	329	ePKPdf	PKPdf	10 47 49.3	+0.1
LPG	La Plagne	129.23	329	ePKIKP	PKPdf	10 47 49.4	+0.1
	comp=Z,6.1nm,0.6s						
LPG	La Plagne	129.23	329	ePKPdf	PKPdf	10 47 49.4	+0.1
LOR	Lormes	129.41	332	ePKIKP	PKPdf	10 47 49.9	+0.7
LOR	Lormes	129.41	332	ePKPdf	PKPdf	10 47 49.9	+0.7
SSF	Saint Saulge	129.73	332	ePKIKP	PKPdf	10 47 50.6	+0.8
	comp=Z,7.0nm,0.7s						
SSF	Saint Saulge	129.73	332	ePKPdf	PKPdf	10 47 50.6	+0.8
MBDF	Montbardon	129.74	328	ePKIKP	PKPdf	10 47 50.3	+0.2
MBDF	Montbardon	129.74	328	ePKPdf	PKPdf	10 47 50.3	+0.2
PGF	Pioggiola	129.90	324	ePKIKP	PKPdf	10 47 50.2	-0.2
	comp=Z,14nm,0.5s						
PGF	Pioggiola	129.90	324	ePKPdf	PKPdf	10 47 50.2	-0.2
ORIF	Oris-en-Rattie	130.08	329	ePKIKP	PKPdf	10 47 50.7	0.0
	comp=Z,9.9nm,0.7s						
ORIF	Oris-en-Rattie	130.08	329	ePKPdf	PKPdf	10 47 50.7	0.0
LDF	La Druitiere	130.15	336	ePKIKP	PKPdf	10 47 49.7	-0.8
LDF	La Druitiere	130.15	336	ePKPdf	PKPdf	10 47 49.7	-0.8
FLN	La Foliniere	130.16	336	ePKIKP	PKPdf	10 47 50.1	-0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,11nm,0.7s						
FLN	**La Foliniere**	**130.16**	**336**	*e*PKPdf	**PKPdf**	**10 47 50.1**	**-0.4**
BGF	**Bois d'Agland**	**130.41**	**332**	*e*PKIKP	**PKPdf**	**10 47 51.4**	**+0.3**
BGF	**Bois d'Agland**	**130.41**	**332**	*e*PKPdf	**PKPdf**	**10 47 51.4**	**+0.3**
FRF	**La Foret Royal**	**130.58**	**327**	*e*PKIKP	**PKPdf**	**10 47 50.7**	**-0.8**
FRF	**La Foret Royal**	**130.58**	**327**	*e*PKPdf	**PKPdf**	**10 47 50.7**	**-0.8**
GRR	**Gorron**	**130.61**	**336**	*e*PKIKP	**PKPdf**	**10 47 51.1**	**-0.3**
	comp=Z,7.6nm,0.6s						
GRR	**Gorron**	**130.61**	**336**	*e*PKPdf	**PKPdf**	**10 47 51.1**	**-0.3**
LMR	**La Mourre**	**130.81**	**327**	*e*PKIKP	**PKPdf**	**10 47 52.0**	**+0.1**
LMR	**La Mourre**	**130.81**	**327**	*e*PKPdf	**PKPdf**	**10 47 52.0**	**+0.1**
SMRF	**Simiane la Rot**	**130.88**	**328**	*e*PKIKP	**PKPdf**	**10 47 52.5**	**+0.4**
SMRF	**Simiane la Rot**	**130.88**	**328**	*e*PKPdf	**PKPdf**	**10 47 52.5**	**+0.4**
TCF	**Toulx Ste Croi**	**130.90**	**332**	*e*PKIKP	**PKPdf**	**10 47 52.3**	**+0.2**
	comp=Z,11nm,0.8s						
TCF	**Toulx Ste Croi**	**130.90**	**332**	*e*PKPdf	**PKPdf**	**10 47 52.3**	**+0.2**
SGMF	**Saint Gilles**	**131.38**	**337**	*e*PKIKP	**PKPdf**	**10 47 53.0**	**+0.1**
	comp=Z,8.6nm,0.5s						
SGMF	**Saint Gilles**	**131.38**	**337**	*e*PKPdf	**PKPdf**	**10 47 53.0**	**+0.1**
QUIF	**Quistinic**	**131.89**	**338**	*e*PKIKP	**PKPdf**	**10 47 54.4**	**+0.6**
QUIF	**Quistinic**	**131.89**	**338**	*e*PKPdf	**PKPdf**	**10 47 54.4**	**+0.6**
MTLF	**Montolieu**	**133.06**	**330**	*e*PKIKP	**PKPdf**	**10 47 57.1**	**+0.9**
MTLF	**Montolieu**	**133.06**	**330**	*e*PKPdf	**PKPdf**	**10 47 57.1**	**+0.9**
KEST	**Kesra**	**133.65**	**317**	PKP	**PKPdf**	**10 47 58.7**	**+1.0**
KEST	**Kesra**	**133.65**	**317**	PKP	**PKPdf**	**10 47 58.7**	**+1.0**
	comp=Z,1.8nm,0.8s,baz=234,slow=3.0,SNR=3.9						
EPF	**Esparros**	**134.22**	**331**	*e*PKIKP	**PKPdf**	**10 47 59.6**	**+1.1**
EPF	**Esparros**	**134.22**	**331**	*e*PKPdf	**PKPdf**	**10 47 59.6**	**+1.1**
ETSF	**Etsaut**	**134.75**	**331**	*e*PKIKP	**PKPdf**	**10 48 00.8**	**+1.3**
	comp=Z,4.1nm,0.5s						
ETSF	**Etsaut**	**134.75**	**331**	*e*PKPdf	**PKPdf**	**10 48 00.8**	**+1.3**
SJPF	**Ste Jean**	**134.90**	**332**	*e*PKIKP	**PKPdf**	**10 48 00.3**	**+0.6**
	comp=Z,7.2nm,0.7s						
SJPF	**Ste Jean**	**134.90**	**332**	*e*PKPdf	**PKPdf**	**10 48 00.3**	**+0.6**
LPAZ	**La Paz**	**135.35**	**119**	PKP	**PKPdf**	**10 48 03.1**	**+1.1**
LPAZ	**La Paz**	**135.35**	**119**	PKP	**PKPdf**	**10 48 03.1**	**+1.1**
	comp=Z,2.2nm,0.5s,baz=252,slow=1.0,SNR=11						
TAM	**Tamanrasset**	**142.78**	**302**	*e*PKPdf	**PKPdf**	**10 48 12.1**	**-2.8**
TOA0	**Torodi Ar. Sit**	**149.32**	**288**	*e*PKPdf	**PKPdf**	**10 48 27.1**	**+1.2**
TOA0				*e*PKPbc	**PKPbc**	**10 48 29.8**	**-0.6**
TOA0				*e*PKPab	**PKPab**	**10 48 35.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**149.32**	**288**	PKP	**PKPdf**	**10 48 24.9**	**-1.0**
TORD				PKPbc	**PKPbc**	**10 48 29.6**	**-0.8**
TORD	**Torodi Ar. Bea**	**149.32**	**288**	PKP	**PKPdf**	**10 48 24.9**	**-1.0**
	comp=Z,29nm,0.9s,baz=22,slow=1.4,SNR=5.6						
TORD				PKPbc	**PKPbc**	**10 48 29.6**	**-0.8**
	comp=Z,23nm,0.7s,baz=89,slow=2.2,SNR=179						
BDFB	**Brasilia**	**151.84**	**136**	PKPbc	**PKPbc**	**10 48 36.4**	**-0.1**
BDFB	**Brasilia**	**151.84**	**136**	PKPbc	**PKPbc**	**10 48 36.4**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=344,slow=2.1,SNR=4.6						
DBIC	**Dimbokro**	**156.68**	**276**	PKPab	**PKPab**	**10 49 05.5**	**-1.2**
DBIC	**Dimbokro**	**156.68**	**276**	PKPab	**PKPab**	**10 49 05.5**	**-1.2**
	comp=Z,3.1nm,0.6s,baz=81,slow=3.0,SNR=4.0						
LIC	**Lamto**	**156.87**	**275**	*e*PKP2	**PKPab**	**10 49 06.2**	**-1.3**
LIC	**Lamto**	**156.87**	**275**	*e*PKPab	**PKPab**	**10 49 06.2**	**-1.3**

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*ROM **05** 10:44:03.8±0.1, 42°.28N×13°.49E, h10km, Ml3.1/27, Error ellipse: s-maj=0.9km s-min=0.7km az=58.0*
*ISCJB **05** 10:44:03.9±0.3, 42°.28N±0°.02×13°.48E±0°.03, h13km±3km, Error ellipse: s-maj=3.9km s-min=2.8km az=152.2*
*CSEM **05** 10:44:04.3±0.1, 42°.28N×13°.48E, h2km, ML3.6/11, Error ellipse: s-maj=2.8km s-min=1.9km az=63.0*
ISC 05 10:44:05.1±0.9**, 42°.29N**±0°.02×**13°.48E**±0°.02**, h6**km±5km**, n67,** σ**1ˢ.06**/95**, 1C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.08**	**105**	Pg	**Pg**	**10 44 06.5**	**-0.5**
FAGN				Sg	**Sg**	**10 44 07.8**	**-0.6**
	45μm,0.5s						
FAGN	**Fagnano**	**0.08**	**105**	Pg	**Pg**	**10 44 06.5**	**-0.5**
FAGN				Sg	**Sg**	**10 44 07.8**	**-0.6**
	45μm,0.5s						
AQU	**L'Aquila**	**0.09**	**318**	Pg	**Pg**	**10 44 06.8**	**-0.4**
AQU				Sg	**Sg**	**10 44 08.6**	**-0.1**
	10μm,0.3s						
AQU	**L'Aquila**	**0.09**	**318**	Pg	**Pg**	**10 44 06.8**	**-0.4**
AQU				Sg	**Sg**	**10 44 08.6**	**-0.1**
	10μm,0.3s						
CAMP	**Campotosto**	**0.26**	**348**	Pg	**Pg**	**10 44 09.7**	**-0.5**
CAMP				Sg	**Sg**	**10 44 14.2**	**+0.6**
	3μm,0.5s						
CAMP	**Campotosto**	**0.26**	**348**	Pg	**Pg**	**10 44 09.7**	**-0.5**
CAMP				Sg	**Sg**	**10 44 14.2**	**+0.6**
	3μm,0.5s						
PTQR	**Pietraquaria**	**0.27**	**193**	Pg	**Pg**	**10 44 10.1**	**-0.3**
PTQR				Sg	**Sg**	**10 44 14.7**	**+0.7**
PTQR	**Pietraquaria**	**0.27**	**193**	Pg	**Pg**	**10 44 10.1**	**-0.3**
PTQR				Sg	**Sg**	**10 44 14.7**	**+0.7**
FIAM	**Fiamignano**	**0.27**	**266**	Pg	**Pg**	**10 44 10.2**	**-0.3**
FIAM				Sg	**Sg**	**10 44 15.1**	**+1.0**
	3μm,0.9s						
FIAM	**Fiamignano**	**0.27**	**266**	Pg	**Pg**	**10 44 10.2**	**-0.3**
FIAM				Sg	**Sg**	**10 44 15.1**	**+1.0**
	3μm,0.9s						
VCEL	**Villa Celiera**	**0.29**	**68**	Pg	**Pg**	**10 44 10.4**	**-0.4**
VCEL				Sg	**Sg**	**10 44 15.1**	**+0.5**
	6μm,0.4s						
VCEL	**Villa Celiera**	**0.29**	**68**	Pg	**Pg**	**10 44 10.4**	**-0.4**
VCEL				Sg	**Sg**	**10 44 15.1**	**+0.5**
	6μm,0.4s						
TERO	**Teramo**	**0.35**	**15**	Pg	**Pg**	**10 44 11.1**	**-0.8**
TERO				Sg	**Sg**	**10 44 16.5**	**-0.1**
	4μm,0.6s						
TERO	**Teramo**	**0.35**	**15**	Pg	**Pg**	**10 44 11.1**	**-0.8**
TERO				Sg	**Sg**	**10 44 16.5**	**-0.1**
	4μm,0.6s						
INTR	**Introdacqua**	**0.42**	**131**	Pg	**Pg**	**10 44 12.6**	**-0.6**
INTR				Sg	**Sg**	**10 44 19.2**	**+0.5**
	2μm,0.6s						
INTR	**Introdacqua**	**0.42**	**131**	Pg	**Pg**	**10 44 12.6**	**-0.6**
INTR				Sg	**Sg**	**10 44 19.2**	**+0.5**
	2μm,0.6s						
VVLD	**Villa Vallelon**	**0.43**	**166**	Pg	**Pg**	**10 44 12.7**	**-0.7**
VVLD				Sg	**Sg**	**10 44 18.6**	**-0.4**
	2μm,0.7s						
VVLD	**Villa Vallelon**	**0.43**	**166**	Pg	**Pg**	**10 44 12.7**	**-0.7**
VVLD				Sg	**Sg**	**10 44 18.6**	**-0.4**
	2μm,0.7s						
LNSS	**Leonessa**	**0.46**	**314**	Pg	**Pg**	**10 44 13.2**	**-0.8**
LNSS				Sg	**Sg**	**10 44 20.8**	**+0.8**
	3μm,0.8s						
LNSS	**Leonessa**	**0.46**	**314**	Pg	**Pg**	**10 44 13.2**	**-0.8**
LNSS				Sg	**Sg**	**10 44 20.8**	**+0.8**
	3μm,0.8s						
CERT	**Cerreto**	**0.50**	**228**	Pg	**Pg**	**10 44 14.0**	**-0.8**
	3μm,0.8s						
CERT	**Cerreto**	**0.50**	**228**	Pg	**Pg**	**10 44 14.0**	**-0.8**
	3μm,0.8s						
GUAR	**Guarcino**	**0.51**	**195**	Pg	**Pg**	**10 44 14.1**	**-0.8**
	697nm,0.3s						
GUAR	**Guarcino**	**0.51**	**195**	Pg	**Pg**	**10 44 14.1**	**-0.8**
	697nm,0.3s						
LPEL	**Lama dei Pelig**	**0.57**	**114**	Pg	**Pg**	**10 44 15.3**	**-0.9**
LPEL				Sg	**Sg**	**10 44 24.3**	**+0.7**
	1μm,0.3s						
LPEL	**Lama dei Pelig**	**0.57**	**114**	Pg	**Pg**	**10 44 15.3**	**-0.9**
LPEL				Sg	**Sg**	**10 44 24.3**	**+0.7**
	1μm,0.3s						
POFI	**Posta Fibreno**	**0.59**	**163**	Pg	**Pg**	**10 44 15.2**	**-1.3**
	552nm,0.9s						
POFI	**Posta Fibreno**	**0.59**	**163**	Pg	**Pg**	**10 44 15.2**	**-1.3**
	552nm,0.9s						
MNS	**Montasola**	**0.60**	**280**	Pg	**Pg**	**10 44 15.6**	**-1.1**
	593nm,0.6s						
MNS	**Montasola**	**0.60**	**280**	Pg	**Pg**	**10 44 15.6**	**-1.1**
	593nm,0.6s						
MTCE	**Montecelio**	**0.61**	**245**	Pg	**Pg**	**10 44 15.8**	**-1.1**
	639nm,0.8s						
MTCE	**Montecelio**	**0.61**	**245**	Pg	**Pg**	**10 44 15.8**	**-1.1**
	639nm,0.8s						
NRCA	**Norcia**	**0.61**	**334**	Pg	**Pg**	**10 44 15.9**	**-1.0**
NRCA				Sg	**Sg**	**10 44 25.3**	**+0.4**
	713nm,0.4s						
NRCA	**Norcia**	**0.61**	**334**	Pg	**Pg**	**10 44 15.9**	**-1.0**
NRCA				Sg	**Sg**	**10 44 25.3**	**+0.4**
	713nm,0.4s						
SDI	**San Donato**	**0.63**	**157**	Pg	**Pg**	**10 44 16.0**	**-1.2**
SDI	**San Donato**	**0.63**	**157**	Pg	**Pg**	**10 44 16.0**	**-1.2**
CAFR	**Castel Frentan**	**0.64**	**95**	Pg	**Pg**	**10 44 17.3**	**-0.2**
CAFR	**Castel Frentan**	**0.64**	**95**	Pg	**Pg**	**10 44 17.3**	**-0.2**
OFFI	**Offida**	**0.67**	**13**	Pg	**Pg**	**10 44 17.7**	**-0.2**
	3μm,0.7s						
OFFI	**Offida**	**0.67**	**13**	Pg	**Pg**	**10 44 17.7**	**-0.2**
	3μm,0.7s						
CESX	**Cesi**	**0.74**	**296**	Pg	**Pg**	**10 44 18.2**	**-1.2**
	491nm,0.5s						
CESX	**Cesi**	**0.74**	**296**	Pg	**Pg**	**10 44 18.2**	**-1.2**
	491nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.75**	**193**	Pg	**Pg**	**10 44 18.0**	**-1.5**
	388nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.75**	**193**	Pg	**Pg**	**10 44 18.0**	**-1.5**
	388nm,0.7s						
RNI2	**Rionero Sannit**	**0.77**	**139**	Pg	**Pg**	**10 44 19.2**	**-0.7**
	800nm,0.7s						
RNI2	**Rionero Sannit**	**0.77**	**139**	Pg	**Pg**	**10 44 19.2**	**-0.7**
	800nm,0.7s						
CERA	**Filignano**	**0.80**	**150**	Pg	**Pg**	**10 44 18.8**	**-1.6**
	2μm,1.5s						
CERA	**Filignano**	**0.80**	**150**	Pg	**Pg**	**10 44 18.8**	**-1.6**
	2μm,1.5s						
FDMO	**Fiordimonte**	**0.81**	**339**	Pg	**Pg**	**10 44 19.0**	**-1.6**
	320nm,0.4s						
FDMO	**Fiordimonte**	**0.81**	**339**	Pg	**Pg**	**10 44 19.0**	**-1.6**
	320nm,0.4s						
CESI	**CESI - Serrava**	**0.84**	**329**	Pg	**Pg**	**10 44 19.8**	**-1.4**
	307nm,0.7s						
CESI	**CESI - Serrava**	**0.84**	**329**	Pg	**Pg**	**10 44 19.8**	**-1.4**
	307nm,0.7s						
GUMA	**Gualdo di Mace**	**0.84**	**23**	Pg	**Pg**	**10 44 19.2**	**-2.2**
	1μm,0.4s						
GUMA	**Gualdo di Mace**	**0.84**	**23**	Pg	**Pg**	**10 44 19.2**	**-2.2**
	1μm,0.4s						
MIDA	**Miranda**	**0.86**	**138**	Pg	**Pg**	**10 44 20.0**	**-1.7**
	376nm,0.4s						
MIDA	**Miranda**	**0.86**	**138**	Pg	**Pg**	**10 44 20.0**	**-1.7**
	376nm,0.4s						
ASSB	**Assisi San Ben**	**0.97**	**321**	Pg	**Pg**	**10 44 22.3**	**-1.5**
	398nm,0.7s						
ASSB	**Assisi San Ben**	**0.97**	**321**	Pg	**Pg**	**10 44 22.3**	**-1.5**
	398nm,0.7s						
CING	**Cingoli**	**1.11**	**349**	Pg	**Pg**	**10 44 24.8**	**-1.6**
	308nm,0.6s						
CING	**Cingoli**	**1.11**	**349**	Pg	**Pg**	**10 44 24.8**	**-1.6**
	308nm,0.6s						
MAIM	**Mastiano**	**2.73**	**308**	P	**Pn**	**10 44 50.3**	**+0.9**
VOY	**Vojsko**	**3.76**	**4**	*e*Pn	**Pn**	**10 45 06.4**	**+2.8**
VOY				*e*Sn	**Sn**	**10 45 48.3**	**+0.1**
VOY	**Vojsko**	**3.76**	**4**	*e*Pn	**Pn**	**10 45 06.4**	**+2.8**
VOY				*e*Sn	**Sn**	**10 45 48.3**	**+0.1**
ABTA	**Abfaltersbach**	**4.51**	**351**	⇑*i*Pn	**Pn**	**10 45 14.7**	**+0.6**
ABTA	**Abfaltersbach**	**4.51**	**351**	Pn	**Pn**	**10 45 14.7**	**+0.6**
KHC	**Kasperske Hory**	**6.85**	**1**	*e*PN	**Pn**	**10 45 47.1**	**+1.1**
KHC				*e*SN	**Sn**	**10 47 02.6**	**-1.6**
KHC	**Kasperske Hory**	**6.85**	**1**	Pn	**Pn**	**10 45 47.1**	**+1.1**
KHC				Sn	**Sn**	**10 47 02.6**	**-1.6**

IDC 05 10:55:20.2±3.1**, 5°.48S**×**152°.62E, h0**km**, mb3.6**/4**, mb1 3.7**/4**, mb1mx3.5**/17**, mbtmp3.6**/4**, Error ellipse: s-maj=103.7km s-min=26.6km az=109.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.86**	**229**	P	P	11 00 25.3	-0.2
	0.6nm,0.5s,baz=54,slow=10.0,SNR=10.0						
ASAR	**Alice Springs**	**25.53**	**223**	P	P	11 00 50.8	0.0
	0.8nm,0.6s,baz=62,slow=9.4,SNR=16						
SONM	**Songino Array**	**66.80**	**328**	P	P	11 06 14.3	+0.5
	0.3nm,0.5s,baz=140,slow=7.6,SNR=2.6						
ZALV	**Zalesovo Beam**	**81.61**	**326**	P	P	11 07 39.8	-0.2
	0.5nm,0.3s,baz=98,slow=6.1,SNR=1.8						
TORD	**Torodi Ar. Bea**	**150.33**	**287**	PKPbc	PKPbc	11 15 14.1	-0.6
	0.2nm,0.5s,baz=89,slow=3.9,SNR=2.6						

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*ISCJB **05** 11:01:27.0±0.4, 59°.81N±0°.04×22°.36E±0°.06, h0km, Error ellipse: s-maj=6.6km s-min=3.4km az=144.7*
*CSEM **05** 11:01:27.4±0.1, 59°.84N×22°.44E, h2km, ML1.5, Error ellipse: s-maj=4.8km s-min=2.8km az=135.0, Mining explosion.*
*IDC **05** 11:01:28.8±1.9, 59°.90N×22°.33E, h0km, mb1 2.9/4, mb1mx2.8/27, mbtmp2.8/4, ML2.1/4, Error ellipse: s-maj=29.2km s-min=6.4km az=161.0*
*HEL **05** 11:01:29.0, 59°.84N×22°.31E, h0km, ML1.5, Explosion*
*UPP **05** 11:01:30.6, 59°.85N×21°.89E, h0km, ML1.9, Suspected Mining explosion.*
ISC 05 11:01:27.2±0.9**, 59°.83N**±0°.04×**22°.31E**±0°.03**, h0**km**, n41,** σ**1ˢ.08**/55**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.12**	**69**	*e*P	**Pg**	**11 01 48.6**	**0.0**
RAF	**Rauma**	**1.23**	**347**	*e*P	**Pg**	**11 01 50.6**	**-0.1**
RAF				*e*SB	**Sb**	**11 02 07.7**	**+0.1**
RAF				MSG		11 02 07.7	
	comp=Z,3.1nm,0.1s						
RAF				*e*RG	Rg	11 02 12.2	
RAF	**Rauma**	**1.23**	**347**	P	**Pg**	**11 01 50.6**	**-0.1**
RAF				Sb	**Sb**	**11 02 07.7**	**+0.1**
	comp=Z,3.1nm,0.1s						
MTSE	**Matsula**	**1.36**	**145**	*e*P	**Pg**	**11 01 52.5**	**-0.7**
MTSE	**Matsula**	**1.36**	**145**	P	**Pg**	**11 01 52.4**	**-0.7**
NRTU	**Norrtaelje**	**1.87**	**267**	*e*P	**Pn**	**11 02 00.8**	**+0.4**
NRTU	**Norrtaelje**	**1.87**	**267**	P	**Pn**	**11 02 00.8**	**+0.4**
PVF	**Pernaja**	**1.91**	**66**	*e*P	**Pn**	**11 02 02.4**	**+1.4**
PVF				MSG	**Sb**	**11 02 28.0**	**+0.7**
	comp=Z,1.2nm,0.4s						
PVF				*e*SG	**Sb**	**11 02 28.0**	**+0.7**
GRAU	**Graesoe**	**1.96**	**287**	*e*P	**Pn**	**11 02 01.9**	**+0.3**
GRAU	**Graesoe**	**1.96**	**287**	P	**Pn**	**11 02 01.9**	**+0.3**
FORU	**Forsmark**	**2.14**	**287**	*e*P	**Pn**	**11 02 05.2**	**+1.1**
FORU	**Forsmark**	**2.14**	**287**	P	**Pn**	**11 02 05.2**	**+1.1**
FLYU	**Flymyra**	**2.25**	**280**	*e*P	**Pn**	**11 02 06.2**	**+0.6**
FLYU	**Flymyra**	**2.25**	**280**	P	**Pn**	**11 02 06.2**	**+0.6**
NYNU	**Nynaeshamn**	**2.35**	**251**	*e*P	**Pn**	**11 02 08.3**	**+1.2**
NYNU	**Nynaeshamn**	**2.35**	**251**	P	**Pn**	**11 02 08.2**	**+1.2**
FIA0	**FINESS Array S**	**2.46**	**47**	*e*PB	**Pb**	**11 02 11.2**	**-1.1**
	baz=233						
FIA0				MSG	**Sb**	**11 02 43.2**	**0.0**
	comp=Z,2.5nm,0.3s						
FIA0				*e*SB	**Sb**	**11 02 43.2**	**0.0**
FIA0	**FINESS Array S**	**2.46**	**47**	Pb	**Pb**	**11 02 11.2**	**-1.1**
FIA0				Sb	**Sb**	**11 02 43.2**	**0.0**
FINES	**FINESS Array B**	**2.46**	**47**	Pn	**Pn**	**11 02 10.9**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=230,slow=13,SNR=18						
FINES				Lg	Lg	11 02 43.5	
	comp=Z,1.5nm,0.3s,baz=230,slow=30,SNR=17						
BACU	**Backbrunna**	**2.63**	**273**	*e*P	**Pn**	**11 02 11.8**	**+1.0**
BACU	**Backbrunna**	**2.63**	**273**	P	**Pn**	**11 02 11.8**	**+1.0**
KEF	**Keuruu**	**2.66**	**27**	*e*PB	**Pb**	**11 02 15.0**	**-0.7**
KEF				*e*SB	**Sb**	**11 02 49.3**	**+0.6**
KEF				MSG		11 02 49.3	
	comp=Z,2.3nm,0.2s						
KEF	**Keuruu**	**2.66**	**27**	Pb	**Pb**	**11 02 14.9**	**-0.7**
KEF				Sb	**Sb**	**11 02 49.3**	**+0.6**
	comp=Z,2.3nm,0.2s						
GOTU	**Gotland**	**2.90**	**224**	*e*P	**Pn**	**11 02 15.3**	**+0.8**
GOTU	**Gotland**	**2.90**	**224**	P	**Pn**	**11 02 15.3**	**+0.8**
KAF	**Kangasniemi**	**3.01**	**39**	*e*PB	**Pb**	**11 02 19.6**	**-2.0**
KAF				MSG	**Sb**	**11 02 58.8**	**0.0**
	comp=Z,2.1nm,0.1s						
KAF				*e*SB	**Sb**	**11 02 58.8**	**0.0**
KAF	**Kangasniemi**	**3.01**	**39**	Pb	**Pb**	**11 02 19.5**	**-2.0**
KAF				Sb	**Sb**	**11 02 58.8**	**0.0**
ESKU	**Eskilstuna**	**3.07**	**261**	*e*P	**Pn**	**11 02 18.2**	**+1.2**
ESKU	**Eskilstuna**	**3.07**	**261**	P	**Pn**	**11 02 18.1**	**+1.2**
VIKU	**Vikbolandet**	**3.18**	**248**	*e*P	**Pn**	**11 02 19.6**	**+1.1**
VIKU	**Vikbolandet**	**3.18**	**248**	P	**Pn**	**11 02 19.5**	**+1.1**
SUF	**Sumiainen**	**3.44**	**31**	*e*P	**Pn**	**11 02 25.2**	**+3.2**
VSTU	**Vaestervik**	**3.71**	**237**	*e*P	**Pn**	**11 02 26.9**	**+1.1**
VSTU	**Vaestervik**	**3.71**	**237**	P	**Pn**	**11 02 26.8**	**+1.1**
LNKU	**Linkoeping**	**3.87**	**248**	*e*P	**Pn**	**11 02 29.2**	**+1.3**
LNKU	**Linkoeping**	**3.87**	**248**	P	**Pn**	**11 02 29.1**	**+1.3**
OSKU	**Oskarshamn**	**4.19**	**234**	*e*P	**Pn**	**11 02 33.1**	**+0.8**
OSKU	**Oskarshamn**	**4.19**	**234**	P	**Pn**	**11 02 33.1**	**+0.8**
HFS	**Hagfors**	**4.34**	**278**	Pn	**Pn**	**11 02 35.9**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=126,slow=14,SNR=5.1						
HFS				Pg	**Pb**	**11 02 44.5**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=93,slow=15,SNR=9.5						
HFS				Lg	Lg	11 03 40.7	
	comp=Z,0.4nm,0.3s,baz=89,slow=30,SNR=5.8						
NOA	**NORSAR Array B**	**5.63**	**287**	Pn	**Pn**	**11 02 50.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=118,slow=18,SNR=2.8						
NOA				Sn	**Sn**	**11 03 57.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=64,slow=13,SNR=2.7						
NOA				Lg	Lg	11 04 20.9	
	comp=Z,0.2nm,0.3s,baz=130,slow=12,SNR=3.7						
ARCES	**ARCESS Array B**	**9.84**	**7**	Pn	**Pn**	**11 03 48.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=192,slow=13,SNR=5.2						

IDC 05 11:09:10.1±3.3**, 5°.41S**×**152°.65E, h0**km**, mb3.6**/5**, mb1 3.7**/6**, mb1mx3.5**/19**, mbtmp3.6**/6**, ML2.5**/1**, Error ellipse: s-maj=108.1km s-min=24.0km az=112.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.74**	**234**	Pn	Pn	11 10 51.2	+0.8
	0.6nm,0.3s,baz=41,slow=19,SNR=2.2						
PMG				Sn	Sn	11 12 05.3	-2.5
	2.7nm,0.3s,baz=137,slow=14,SNR=6.7						
WRA	**Warramunga Arr**	**22.93**	**229**	P	P	11 14 15.5	-0.5
	0.3nm,0.5s,baz=52,slow=9.9,SNR=3.9						
ASAR	**Alice Springs**	**25.60**	**223**	P	P	11 14 41.5	+0.1
	0.6nm,0.7s,baz=57,slow=9.1,SNR=14						
SONM	**Songino Array**	**66.75**	**328**	P	P	11 20 03.6	+0.2
	0.2nm,0.5s,baz=126,slow=4.4,SNR=2.2						
ZALV	**Zalesovo Beam**	**81.57**	**326**	P	P	11 21 29.4	-0.3
	0.4nm,0.4s,baz=101,slow=6.0,SNR=2.9						
KURBB	**Kurchatov Arra**	**84.18**	**322**	P	P	11 21 43.5	+0.2
	0.2nm,0.2s,baz=99,slow=2.6,SNR=3.2						
TORD	**Torodi Ar. Bea**	**150.34**	**287**	PKPbc	PKPbc	11 29 04.0	-0.5
	0.4nm,0.9s,baz=38,slow=2.6,SNR=2.8						

MEX 05 11:27:59.6±0.7**, 16°.17N**×**99°.58W, h16**km±15km**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.74**	**339**	*i* P	Pg	11 28 11.4	-2.8
ACX				*i* S	Sg	11 28 20.5	-3.5
CAIG	**El Cayaco**	**1.09**	**323**	*e*P	Pb	11 28 15.8	-4.3
CAIG				*i* S	Sb	11 28 28.7	-5.4
PNIG	**Pinotepa**	**1.42**	**81**	*e*P	Pn	11 28 21.2	-3.6
PNIG				*i* S	Sn	11 28 37.4	-5.7
MEIG	**Mezcala**	**1.74**	**359**	*e*P	Pn	11 28 25.8	-3.5
MEIG				*i* S	Sn	11 28 47.0	-4.3
ARIG	**Puente Sto Nin**	**2.22**	**341**	*e*P	Pn	11 28 33.5	-2.3
ARIG				*i* S	Sn	11 28 58.8	-4.2
ZIIG	**Zihuatanejo**	**2.30**	**309**	*i* P	Pn	11 28 34.5	-2.3
ZIIG				*i* S	Sn	11 29 00.3	-4.5
UTMO	**Huajuapan**	**2.37**	**46**	*i* P	Pn	11 28 34.7	-3.4
UTMO				*i* S	Sn	11 29 03.2	-3.9
YAIG	**Yautepec**	**2.72**	**10**	*i* P	Pn	11 28 39.9	-3.0
YAIG				*i* S	Sn	11 29 11.6	-4.0
VHO	**Vista Hermosa**	**2.87**	**71**	*i* P	Pn	11 28 45.0	-0.1
VHO				*i* S	Sn	11 29 15.0	-4.5
PPM	**Popocatepetl**	**3.02**	**17**	*i* P	Pn	11 28 45.6	-1.8

CASC 05 11:33:02.6±2.0**, 13°.48N**×**89°.50W, h60**km±8km**, MD3.8, ML3.7, 1C-1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOQS	**Boqueron**	**0.33**	**40**	⇑*e*P	Pn	11 33 13.4	+0.1
BOQS				*e*S	Sn	11 33 22.5	+1.5
SNET	**Serv Nac Est T**	**0.33**	**52**	*e*P	Pn	11 33 12.9	-0.3
SNET				*e*S	Sn	11 33 22.2	+1.5
SNET				AML	AML	11 33 27.2	
	comp=Z,4μm,0.2s						
SBLS	**San Blas**	**0.38**	**342**	*e*P	Pn	11 33 12.9	-0.8
SBLS				*e*S	Sn	11 33 23.2	+1.5
SNJE	**San Jose**	**0.40**	**345**	*e*P	Pn	11 33 13.1	-0.8
SNJE				*e*S	Sn	11 33 22.3	+0.3
RTR	**El Retiro**	**0.44**	**341**	*e*P	Pn	11 33 13.8	-0.5
RTR				*e*S	Sn	11 33 22.1	-0.5
LFRS	**El Faro**	**0.45**	**71**	⇓*e*P	Pn	11 33 14.3	+0.1
LFRS				*e*S	Sn	11 33 24.1	+1.5
SNVI	**San Vicente**	**0.66**	**78**	*e*P	Pn	11 33 16.6	0.0
SNVI				*e*S	Sn	11 33 27.4	+0.6
VSM	**San Miguel**	**1.20**	**92**	*e*P	Pn	11 33 22.8	-0.8
VSM				*e*S	Sn	11 33 40.1	+1.0
BLLM	**Bellamira**	**1.23**	**92**	*e*P	Pn	11 33 23.8	0.0
BLLM				*e*S	Sn	11 33 40.5	+0.9
MRL	**Marmol**	**1.59**	**353**	*e*P	Pn	11 33 30.2	+1.4
MRL				*e*S	Sn	11 33 48.4	-0.1
FUG	**Fuego 3**	**1.62**	**307**	*e*P	Pn	11 33 28.7	-0.5
CNCH	**Conchagua**	**1.64**	**97**	*e*P	Pn	11 33 29.1	-0.2
CNCH				*e*S	Sn	11 33 50.6	+1.2
JAT	**Jato**	**2.23**	**292**	*e*P	Pn	11 33 37.2	0.0
JAT				*e*S	Sn	11 34 04.7	+0.9

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*NNC **05** 11:48:20.5±1.8, 43°.06N×72°.27E, h3km±10km, mb3.5, mpv3.2, Error ellipse: s-maj=8.4km s-min=2.6km az=178.0*
*KNET **05** 11:48:21.6±0.8, 42°.86N×72°.48E, h20km±8km, ml2.7, Error ellipse: s-maj=5.8km s-min=4.3km az=157.0*
ISC 05 11:48:20.1±1.0**, 42°.92N**±0°.08×**72°.33E**±0°.05**, h10**km**, n14,** σ**1ˢ.40**/21**, 18C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**1.09**	**103**	⇑P	**Pb**	**11 48 40.0**	**-1.2**
	18nm,0.1s,SNR=14						
EKS2				⇑S	**Sb**	**11 48 54.7**	**-0.9**
	65nm,0.1s						
AML	**Almayashu**	**1.28**	**127**	⇓P	**Pn**	**11 48 42.4**	**-1.9**
	37nm,0.1s,SNR=39						
KK31	**Karatay Array**	**1.35**	**279**	⇓Pn	**Pg**	**11 48 45.9**	**-0.1**
	6.8nm,0.3s,baz=98,slow=18,SNR=130						
KK31				Sn	**Sg**	**11 49 04.2**	**+0.7**
	38nm,0.3s,baz=103,slow=31,SNR=28						
AAK	**Ala-Archa**	**1.62**	**99**	⇑P	**Pn**	**11 48 49.6**	**+0.8**
	34nm,0.2s,SNR=60						
AAK				⇑S	**Sn**	**11 49 10.0**	**+0.1**
	28nm,0.1s						
USP	**Ospenovka**	**1.63**	**77**	⇑P	**Pn**	**11 48 49.4**	**+0.6**
	32nm,0.2s,SNR=66						
USP				⇑S	**Sb**	**11 49 10.8**	**0.0**
	170nm,0.2s						
CHMS	**Chumysh**	**1.78**	**87**	⇓P	**Pn**	**11 48 52.1**	**+1.2**
	34nm,0.3s,SNR=28						
KBK	**Karagaybulak**	**1.94**	**97**	⇑P	**Pb**	**11 48 55.1**	**-0.6**
	26nm,0.1s,SNR=16						
TKM2	**Tokmak 2**	**2.40**	**89**	⇑Pn	**Pn**	**11 49 01.2**	**+1.6**
	8.9nm,0.4s						
TKM2				⇑Sn	**Sb**	**11 49 33.1**	**0.0**
	24nm,0.4s						
TKM2	**Tokmak 2**	**2.40**	**89**	⇑P	**Pn**	**11 49 01.3**	**+1.6**
	22nm,0.3s,SNR=42						
MK31	**Makanchi Array**	**8.07**	**58**	⇑Pn	**Pn**	**11 50 18.7**	**+1.5**
	0.2nm,0.3s,baz=240,slow=17,SNR=16						
MK31				⇑Sn	**Sn**	**11 51 51.8**	**+3.3**
	0.4nm,0.4s,baz=242,slow=25,SNR=4.3						
MK31				⇓Lg	Lg	11 52 35.1	
	3.3nm,0.8s,baz=242,slow=25,SNR=4.3						
KUR14	**Kurchatov Arra**	**8.81**	**27**	⇓Pn	**Pn**	**11 50 27.1**	**-0.4**
KUR14				⇑Sn	**Sn**	**11 52 04.5**	**-2.3**
KUR14				⇑Lg	Lg	11 52 56.2	
	0.4nm,0.9s						
KURK	**Kurchatov**	**8.91**	**27**	⇑Pn	**Pn**	**11 50 28.2**	**-0.6**
	2.1nm,1.2s						
KURK				⇑Sn	**Sn**	**11 52 08.7**	**-0.4**
	0.9nm,0.4s						
KURK				⇑Lg	Lg	11 53 00.1	
	11nm,0.9s						
VOSK	**Vostochnaya**	**9.86**	**355**	⇓Lg	Lg	11 53 28.2	
	5.2nm,0.7s						
ZRNK	**Zerenda**	**10.28**	**349**	⇑Sn	**Sn**	**11 52 41.5**	**-1.3**
	1.3nm,0.5s						
ZRNK				⇓Lg	Lg	11 53 42.3	
	6.2nm,1.2s						

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*ISCJB **05** 11:50:55.3±1.1, 19°.46S±0°.08×169°.5E±0°.1, h33km, mb3.8/4, Error ellipse: s-maj=17.9km s-min=8.2km az=32.1*
*IDC **05** 11:51:01.9±4.2, 19°.51S×169°.17E, h88km±34km, mb3.5/4, mb1 3.8/7, mb1mx3.6/19, mbtmp3.7/7, Error ellipse: s-maj=31.2km s-min=27.6km az=62.0*
*NOU **05** 11:51:02.1±2.1, 19°.97S×169°.82E, h30km, MD3.0, ML3.6*
ISC 05 11:50:55.9±1.2**, 19°.5S**±0°.1×**169°.6E**±0°.1**, h35**km**, n14,** σ**2ˢ.44**/18**, mb3.5**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.71**	**223**	*e*S	**Sn**	**11 52 31.9**	**-1.4**
DZM	**Mont Dzumac**	**3.95**	**228**	*e*P	**Pn**	**11 51 56.1**	**+2.0**
DZM				*e*S	**Sn**	**11 52 37.1**	**-2.3**
DZM				AMP		11 52 43.2	
	comp=Z,1µm,3.8s						
DZM	**Mont Dzumac**	**3.95**	**228**	P	**Pn**	**11 51 56.2**	**+2.0**
	comp=Z,39nm,0.3s,baz=141,slow=18,SNR=556						
DZM				S	**Sn**	**11 52 37.1**	**-2.3**
	comp=Z,46nm,0.3s,baz=102,slow=23,SNR=9.3						
PLUM	**Mont Dore**	**3.96**	**224**	*e*P	**Pn**	**11 51 56.6**	**+2.5**
PLUM				*e*S	**Sn**	**11 52 38.0**	**-1.3**
PLUM				AMP		11 52 40.6	
	comp=Z,396nm,2.1s						
NORM	**Noumea**	**4.03**	**226**	*e*P	**Pn**	**11 51 57.8**	**+2.7**
NORM				*e*S	**Sn**	**11 52 38.4**	**-2.8**
NOUC	**Port Laguerre**	**4.07**	**229**	*e*P	Pn	11 52 01.6	+5.9
NOUC				*e*S	**Sn**	**11 52 43.7**	**+1.4**
NOUC				AMP		11 52 47.9	
	comp=Z,96nm,0.8s						
HNR	**Honiara**	**13.68**	**315**	P	**Pn**	**11 54 08.8**	**+1.3**
	comp=Z,5.4nm,0.3s,baz=218,slow=17,SNR=3.1						
URZ	**Urewera**	**19.83**	**162**	P	**Pn**	**11 55 26.5**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=333,slow=16,SNR=3.1						
STKA	**Stephens Creek**	**28.04**	**238**	P	**P**	**11 56 42.7**	**-1.3**
	comp=Z,0.6nm,0.5s,baz=66,slow=12,SNR=4.2						
WRA	**Warramunga Arr**	**33.19**	**263**	P	P	11 57 26.4	-3.3
	comp=Z,0.3nm,0.5s,baz=102,slow=7.5,SNR=8.0						
ASAR	**Alice Springs**	**33.43**	**256**	P	**P**	**11 57 28.6**	**-3.1**
	comp=Z,2.8nm,0.4s,baz=84,slow=8.7,SNR=72						
ASAR				pP	**pP**	**11 57 46.8**	**+5.0**
	comp=Z,0.4nm,0.5s,baz=86,slow=8.7,SNR=2.1						
SONM	**Songino Array**	**87.61**	**323**	P	**P**	**12 03 39.8**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=157,slow=4.1,SNR=2.8						
ARCES	**ARCESS Array B**	**125.37**	**345**	PKP	**PKPdf**	**12 09 51.2**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=46,slow=2.6,SNR=5.7						
GERES	**GERESS Array B**	**144.86**	**332**	PKP	**PKPab**	**12 10 26.9**	**-1.6**
	comp=Z,0.4nm,0.4s,baz=23,slow=5.3,SNR=5.0						

MEX 05 11:53:47.8±0.6**, 16°.32N×99°.54W, h15km, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.63**	**331**	*i* P	Pg	11 53 58.9	-1.3
ACX				*i* S	Sg	11 54 07.3	-1.2
CAIG	**El Cayaco**	**1.01**	**316**	*i* P	Pb	11 54 03.5	-3.5
CAIG				*i* S	Sb	11 54 15.2	-4.8
PNIG	**Pinotepa**	**1.36**	**87**	*e*P	Pn	11 54 08.8	-3.5
PNIG				*i* S	Sn	11 54 24.8	-5.4
MEIG	**Mezcala**	**1.60**	**357**	*i* P	Pn	11 54 12.3	-3.4
MEIG				*i* S	Sn	11 54 30.9	-5.3
ARIG	**Puente Sto Nin**	**2.10**	**339**	*i* P	Pn	11 54 19.1	-3.4
ARIG				*i* S	Sn	11 54 43.3	-5.1

*IDC **05** 12:21:45.0±1.2, 39°.33N×95°.71E, h0km, mb3.4/4, mb1 3.7/8, mb1mx3.5/32, mbtmp3.6/8, ML3.5/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/33, Error ellipse: s-maj=26.2km s-min=17.4km az=42.0*
*BJI **05** 12:21:46.8, 39°.42N×95°.61E, h6km, ML3.5/6, Ms3.0/1, Ms7 2.8/1*
*ISCJB **05** 12:21:46.4±0.8, 39°.5N±0°.1×95°.5E±0°.1, h33km, mb3.4/4, Error ellipse: s-maj=17.6km s-min=11.3km az=36.8*
ISC 05 12:21:48.3±1.0**, 39°.5N**±0°.1×**95°.3E**±0°.1**, h35km, n10, σ2ˢ.79**/9**, mb3.4**/4**, Gansu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**3.49**	**90**	Pg	Pn	12 22 45.2	+5.0
GTA				Sg	Sn	12 23 28.1	+7.7
GTA				smax	smax		
	comp=N,150nm,0.8s						
GTA				smax	smax		
	comp=E,85nm,0.8s						
GTA				LR	LR		
	comp=N,190nm,9.3s						
GTA				LR	LR		
	comp=E,180nm,6.4s						
GTA				LR	LR		
	comp=Z,130nm,9.5s						
WMQ	**Urumqi**	**7.15**	**310**	Pn	Pn	12 23 26.7	-3.8
WMQ				Sn	**Sn**	**12 24 45.4**	**-5.1**
WMQ				smax	smax		
	comp=N,37nm,0.8s						
WMQ				smax	smax		
	comp=E,32nm,0.7s						
SONM	**Songino Array**	**11.57**	**40**	Pn	**Pn**	**12 24 30.7**	**-0.3**
	comp=E,0.2nm,0.3s,baz=220,slow=15,SNR=6.0						
SONM				Lg	Lg	12 27 51.4	
	comp=E,0.2nm,0.3s,baz=227,slow=31,SNR=3.8						
SONM				LR	LR	12 29 12.3	
	comp=E,38nm,20.7s,baz=57,slow=39						
MKAR	**Makanchi Array**	**11.97**	**312**	Pn	Pn	12 24 39.5	+3.0
	comp=E,0.3nm,0.3s,baz=125,slow=14,SNR=8.8						
MKAR				Sn	**Sn**	**12 26 49.0**	**+0.3**
	comp=E,0.0nm,0.3s,baz=118,slow=24,SNR=5.2						
MKAR				Lg	Lg	12 28 17.5	
	baz=119,slow=27,SNR=3.5						
AAK	**Ala-Archa**	**16.00**	**288**	Pn	**P**	**12 25 34.5**	**+0.5**
	comp=E,0.2nm,0.3s,baz=104,slow=8.3,SNR=3.6						
KURBB	**Kurchatov Arra**	**16.21**	**319**	Pn	**Pn**	**12 25 34.2**	**+0.9**
	comp=E,0.0nm,0.3s,baz=125,slow=13,SNR=5.8						
CMAR	**Chiang Mai Arr**	**21.20**	**170**	P	**P**	**12 26 29.4**	**-1.5**
	comp=E,0.7nm,0.4s,baz=347,slow=11,SNR=5.2						
BVAR	**Borovoye Array**	**21.76**	**317**	P	**P**	**12 26 40.5**	**+3.8**
	comp=E,0.9nm,0.6s,baz=123,slow=10,SNR=4.9						
KSRS	**Korea Array**	**25.54**	**84**	P	**P**	**12 27 12.2**	**-1.5**
	comp=E,0.4nm,0.5s,baz=280,slow=10,SNR=3.1						
ASAR	**Alice Springs**	**72.44**	**143**	P	**P**	**12 33 11.9**	**+0.8**
	comp=E,0.5nm,0.8s,baz=335,slow=5.9,SNR=6.2						

*ISK **05** 12:35:03.7, 40°.24N×39°.76E, h30km, MD2.5*
*CSEM **05** 12:35:05.0±0.5, 40°.30N×39°.81E, h20km, MD2.5, Error ellipse: s-maj=14.0km s-min=9.3km az=4.0*
*DDA **05** 12:35:06.2, 40°.11N×39°.80E, h7km, MD2.8*
ISC 05 12:35:04.6±1.1**, 40°.23N**±0°.05×**39°.85E**±0°.03**, h26km**±10km**, n15, σ1ˢ.38**/23**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYT	**Ayd˜–ntepe-Bay**	**0.28**	**55**	*e*PG	**Pb**	**12 35 12.2**	**+0.6**
BAYT	**Ayd˜–ntepe-Bay**	**0.28**	**55**	*e*Pg	**Pb**	**12 35 12.2**	**+0.6**
GUMT	**Gumushane**	**0.36**	**309**	*e*PG	**Pb**	**12 35 11.9**	**-0.9**
GUMT	**Gumushane**	**0.36**	**309**	*e*Pg	**Pb**	**12 35 11.9**	**-0.9**
KELT	**Kelkit**	**0.46**	**260**	*i* P	**Pb**	**12 35 14.7**	**+0.3**
KELT				*i* S	**Sb**	**12 35 21.0**	**0.0**
KELT	**Kelkit**	**0.46**	**260**	*i* P	**Pb**	**12 35 14.7**	**+0.3**
KELT				*i* S	**Sb**	**12 35 21.0**	**0.0**
KOPT	**Kop Dagi**	**0.54**	**113**	*i* P	**Pb**	**12 35 16.7**	**+0.9**
KOPT				*i* S	**Sn**	**12 35 25.2**	**-0.2**
KOPT	**Kop Dagi**	**0.54**	**113**	*i* P	**Pb**	**12 35 16.7**	**+0.9**
KOPT				*i* S	**Sn**	**12 35 25.2**	**-0.2**
EZC	**Erzincan**	**0.61**	**218**	*e*PG	**Pb**	**12 35 16.0**	**-0.9**
EZC	**Erzincan**	**0.61**	**218**	*e*Pg	**Pb**	**12 35 17.1**	**+0.2**
EZC				*e*Sg	**Sn**	**12 35 26.8**	**-0.1**
ERZN	**Erzincan**	**0.65**	**188**	*e*PG	**Pb**	**12 35 17.1**	**-0.5**
ERZN				*e*SG	**Sb**	**12 35 26.8**	**+0.5**
ESPY	**Espiye-Giresun**	**1.09**	**309**	*e*PG	**Pn**	**12 35 22.5**	**-1.7**
ESPY	**Espiye-Giresun**	**1.09**	**309**	*e*Pg	**Pn**	**12 35 22.5**	**-1.7**
SUSE	**Susehri**	**1.26**	**269**	*i* P	**Pb**	**12 35 29.6**	**+1.8**
SUSE				*i* S	**Sb**	**12 35 46.7**	**+3.0**
SUSE	**Susehri**	**1.26**	**269**	*i* P	**Pb**	**12 35 29.6**	**+1.8**
SUSE				*i* S	**Sb**	**12 35 46.7**	**+3.0**

GUC 05 12:39:06.5±0.5**, 23°.63S×67°.17W, h217km**±23km**, ML3.8, 2C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.90**	**302**	⇑*i*P	Pn	12 39 46.8	+1.2
PB04	**Plate Boundary**	**2.53**	**302**	⇓*i*P	Pn	12 39 59.4	+7.5
PB04				*i* S	S	12 40 39.8	+13
PB04				AML	AML	12 40 44.3	
	comp=N,132nm,0.3s						
PB09	**Plate Boundary**	**2.65**	**313**	*i* P	Pn	12 39 55.2	+1.9
PB09				*i* S	S	12 40 32.1	+2.5
PB09				AML	AML	12 40 35.6	
	comp=N,183nm,0.2s						
CEN1	**Los Morros**	**2.79**	**274**	*i* P	Pn	12 39 58.0	+3.2
CEN1				*i* S	S	12 40 36.6	+4.3
CEN1				AML	AML	12 40 37.5	
	comp=N,78nm,0.4s						
ANCH	**Antofagasta**	**2.97**	**268**	⇑*i*P	Pn	12 39 58.4	+1.8
ANCH				*i* S	S	12 40 37.9	+2.3
PB01	**Plate Boundary**	**3.35**	**320**	⇓*i*P	Pn	12 40 02.3	+1.0
PB01				*i* S	S	12 40 45.5	+1.5
PB01				AML	AML	12 40 47.7	
	comp=E,78nm,0.5s						
HMBC	**Humberstone**	**4.18**	**322**	*e*P	Pn	12 40 11.7	+0.3
HMBC				*i* S	S	12 41 02.5	+0.2

*IDC **05** 12:48:00.6±2.8, 1°.64N×127°.12E, h75km±25km, mb3.8/11, mb1 4.0/13, mb1mx3.8/23, mbtmp3.8/13, Error ellipse: s-maj=31.5km s-min=10.4km az=77.0*
*ISCJB **05** 12:48:02.8±0.3, 1°.64N±0°.03×126°.95E±0°.04, h103km, mb4.0/11, Error ellipse: s-maj=5.2km s-min=4.6km az=140.3*
*AUST **05** 12:48:04.3, 1°.50N×127°.00E, h100km*
*DJA **05** 12:48:06.2±0.5, 2°N±6°×12°7E±°, h83km±10km, M4.6/11, mb4.8/10, mB5.1/4, MLv4.5/11, Mw(mB)4.4/4*
*MAN **05** 12:49:18, 6°.88N×124°.69E, h48km, mb4.3, ML3.1, MS2.9*
ISC 05 12:48:03.8±0.5**, 1°.60N**±0°.05×**126°.93E**±0°.05**, h103km, n49, σ1ˢ.63**/53**, mb4.1**/11**, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.89**	**74**	P	**Pn**	**12 48 23.2**	**-0.1**
GAMI				S	**Sn**	**12 48 40.1**	**+2.1**
TNTI	**Ternate**	**0.93**	**152**	P	**Pn**	**12 48 25.4**	**+1.6**
MNI	**Manado**	**2.09**	**266**	P	**Pn**	**12 48 38.7**	**+0.9**
MNI				S	**Sn**	**12 49 05.6**	**+1.9**
LBMI	**Labuha**	**2.29**	**166**	P	**Pn**	**12 48 42.5**	**+2.1**
KMSI	**Cibinong**	**3.12**	**251**	P	**Pn**	**12 48 52.9**	**+1.7**
KMSI				S	**Sn**	**12 49 30.7**	**+2.9**
LUWI	**Luwuk**	**4.92**	**238**	P	Pn	12 49 19.1	+3.6
SWI	**Sorong**	**4.97**	**119**	P	**Pn**	**12 49 18.4**	**+2.2**
	51nm,1.0s,0.2nm						
SWI	**Sorong**	**4.97**	**119**	P	**Pn**	**12 49 18.1**	**+1.9**
	baz=4.9,SNR=4.6						
MRSI	**Marisa**	**5.11**	**257**	P	**Pn**	**12 49 20.0**	**+1.9**
	73nm,0.6s,1µm0.3nm						
MSAI	**Masohi**	**5.30**	**158**	P	Pn	12 49 24.4	+3.7
	14nm,0.7s,0.1nm						
AAI	**Ambon**	**5.40**	**166**	P	**Pn**	**12 49 24.3**	**+2.3**
	78nm,0.4s,0.5nm						
AAI	**Ambon**	**5.40**	**166**	P	**Pn**	**12 49 23.9**	**+1.9**
	baz=5.3,SNR=8.4						
AAI				S	**Sn**	**12 50 25.2**	**+2.3**
	baz=5.3,SNR=5.0						
CTBH	**Cotabato--PC H**	**6.19**	**334**	⇓*i*P	**Pn**	**12 49 32.4**	**-0.5**
BUKP	**Musuan**	**6.51**	**343**	*e*P	**Pn**	**12 49 37.4**	**+0.2**
BUKP				*e*S	Px	12 49 55.1	
SKSI	**Soroako, Sulaw**	**6.93**	**234**	P	**Pn**	**12 49 43.8**	**+0.9**
	158nm,0.8s,2µm						
FAKI	**Fak Fak**	**6.96**	**130**	P	**Pn**	**12 49 45.6**	**+2.4**
	36nm,0.6s						
FAKI	**Fak Fak**	**6.96**	**130**	P	**Pn**	**12 49 45.7**	**+2.5**
	baz=6.9,SNR=4.7						
PAGZ	**Pagadian**	**7.14**	**330**	*e*P	**Pn**	**12 49 45.3**	**-0.4**
TTSI	**Tana Toraja**	**8.47**	**237**	P	**Pn**	**12 50 04.8**	**+1.0**
	122nm,0.6s,1µm						
SPSI	**Sidrap Palu**	**9.04**	**232**	P	**Pn**	**12 50 12.8**	**+1.3**
	116nm,0.7s,1µm						
MYLDM	**Lahad Datu**	**9.13**	**293**	P	**Pn**	**12 50 15.1**	**+2.3**
PALU	**Palau**	**9.44**	**53**	P	Pn	12 50 23.4	+6.5
	baz=9.5,SNR=3.5						
PALU				S	**Sn**	**12 52 04.2**	**+2.8**
	baz=9.5,SNR=4.3						
KAPI	**Kappang**	**9.72**	**227**	P	**Pn**	**12 50 21.4**	**+0.5**
	7.4nm,0.3s,baz=52,slow=8.1,SNR=11						
KAPI				S	**Sn**	**12 52 06.2**	**-2.0**
	2.6nm,0.3s,baz=84,slow=19,SNR=5.8						
MTN	**Manton Dam**	**14.94**	**164**	P	**Pn**	**12 51 28.2**	**-1.5**
	baz=15,SNR=8.3						
KDU	**Kakadu**	**15.22**	**159**	P	**P**	**12 51 36.8**	**+0.9**
	baz=15,SNR=6.6						
KNRA	**Kununurra**	**17.26**	**174**	P	**Pn**	**12 51 58.6**	**+0.1**
	baz=17,SNR=12						
FITZ	**Fitzroy Crossi**	**19.62**	**184**	P	**P**	**12 52 23.3**	**-0.9**
	0.5nm,0.3s,baz=358,slow=9.1,SNR=26						
FITZ	**Fitzroy Crossi**	**19.62**	**184**	P	**P**	**12 52 24.0**	**-0.2**
	baz=20,SNR=9.1						
WRA	**Warramunga Arr**	**22.61**	**162**	P	**P**	**12 52 54.7**	**-1.4**
	3.5nm,0.3s,baz=337,slow=11,SNR=30						
WRA				S	**S**	**12 56 52.3**	**-4.1**
	2.2nm,0.7s,baz=338,slow=18,SNR=9.4						
ASAR	**Alice Springs**	**26.01**	**165**	P	**P**	**12 53 26.6**	**-0.9**
	1.1nm,0.3s,baz=346,slow=12,SNR=18						
ASAR				S	**S**	**12 57 54.0**	**+3.1**
	2.2nm,0.9s,baz=338,slow=17,SNR=5.7						
MEEK	**Meekatharra**	**29.20**	**195**	P	**P**	**12 53 55.2**	**-0.6**
	baz=29,SNR=8.4						
GSI	**Gunungsitoli**	**29.35**	**270**	S	S	12 58 51.8	+8.2
	baz=29,SNR=10						
CMAR	**Chiang Mai Arr**	**32.16**	**303**	P	**P**	**12 54 21.9**	**-0.1**
	0.4nm,0.7s,baz=119,slow=7.3,SNR=5.2						
MORW	**Morawa**	**32.23**	**198**	P	**P**	**12 54 22.3**	**-0.2**
	baz=32,SNR=8.9						
KMBL	**Kambalda**	**33.13**	**188**	P	**P**	**12 54 30.2**	**-0.1**
	baz=33,SNR=7.3						
BLDU	**Ballidu**	**33.48**	**196**	P	**P**	**12 54 33.2**	**-0.2**
	baz=34,SNR=9.2						
KLBR	**Kellerberrin**	**34.14**	**194**	P	**P**	**12 54 38.9**	**-0.1**
	baz=34,SNR=12						
BBOO	**Buckleboo**	**35.29**	**167**	P	**P**	**12 54 48.4**	**-0.6**
	baz=35,SNR=7.1						
KSRS	**Korea Array**	**35.69**	**1**	P	**P**	**12 54 51.8**	**-0.5**
	0.6nm,0.6s,baz=184,slow=9.1,SNR=3.9						
STKA	**Stephens Creek**	**36.08**	**159**	P	**P**	**12 54 55.0**	**-0.7**
	0.9nm,0.3s,baz=331,slow=10,SNR=9.1						
STKA	**Stephens Creek**	**36.08**	**159**	P	**P**	**12 54 55.8**	**+0.1**
	baz=36,SNR=7.5						
MJAR	**Matsushiro Arr**	**36.30**	**15**	P	**P**	**12 54 55.7**	**-1.9**
	1.5nm,1.0s,baz=197,slow=10,SNR=4.3						
LHI	**Lord Howe Isla**	**44.89**	**140**	S	**S**	**13 02 36.2**	**-2.3**
	baz=45,SNR=3.2						
SONM	**Songino Array**	**49.37**	**342**	P	**P**	**12 56 43.2**	**+0.2**
	2.0nm,0.9s,baz=163,slow=7.3,SNR=9.7						
MKAR	**Makanchi Array**	**59.42**	**326**	P	**P**	**12 57 56.1**	**+0.4**
	3.1nm,0.4s,baz=120,slow=8.2,SNR=52						
ZALV	**Zalesovo Beam**	**62.57**	**333**	P	**P**	**12 58 16.8**	**0.0**
	0.9nm,0.4s,baz=129,slow=6.7,SNR=5.5						
VNDA	**Vanda**	**81.30**	**173**	P	**P**	**13 00 07.8**	**-0.5**
	1.2nm,0.5s,baz=324,slow=7.4,SNR=12						
MAW	**Mawson**	**81.84**	**200**	P	**P**	**13 00 11.6**	**+0.4**
	2.9nm,0.5s,baz=75,slow=6.9,SNR=10						
TORD	**Torodi Ar. Bea**	**123.75**	**287**	PKP	**PKPdf**	**13 06 49.3**	**-1.3**
	0.5nm,0.5s,baz=47,slow=2.2,SNR=3.5						

IDC 05 12:53:42.9±26.0**, 23°.30S×176°.63W, h0km, mb4.1**/4**, mb1 4.2**/4**, mb1mx3.8**/20**, mbtmp4.1**/4**, Error ellipse: s-maj=496.7km s-min=147.0km az=92.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.81**	**248**	P	P	13 00 59.4	-1.8
	0.6nm,0.4s,baz=97,slow=8.1,SNR=4.3						
ASAR	**Alice Springs**	**45.18**	**259**	P	P	13 02 01.5	-0.4
	0.9nm,0.4s,baz=91,slow=7.2,SNR=23						
WRA	**Warramunga Arr**	**45.53**	**264**	P	P	13 02 05.0	+0.3
	0.9nm,0.4s,baz=101,slow=7.5,SNR=17						
FITZ	**Fitzroy Crossi**	**53.96**	**264**	P	P	13 03 09.8	+0.9
	6.9nm,1.2s,baz=126,slow=8.7,SNR=5.4						

*JMA **05** 13:14:27.1±0.3, 24°.19N×122°.88E, h57km±4km, M2.1*
*TAP **05** 13:14:28.2, 24°.05N×122°.86E, h58km±2km, ML2.9, C*
ISC 05 13:14:27.6±1.9**, 24°.01N**±0°.07×**122°.92E**±0°.03**, h30km**±15km**, n26, σ0ˢ.76**/37**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.45**	**10**	P	Pb	13 14 36.9	-0.4
YOJ				S	**Sb**	**13 14 43.8**	**-0.1**
IRIF	**Iriomote-Funau**	**0.80**	**66**	P	**Pn**	**13 14 42.2**	**-0.7**
IRIF				*e*S	**Sn**	**13 14 54.4**	**+0.6**
HATJ	**Hateruma jima**	**0.81**	**87**	P	**Pn**	**13 14 43.2**	**+0.3**
HATJ				*e*S	**Sn**	**13 14 54.9**	**+1.0**
JKRS	**Kuro-shima**	**1.02**	**77**	P	**Pn**	**13 14 45.8**	**0.0**
JKRS				*e*S	**Sn**	**13 15 00.5**	**+1.4**
TWC	**Suao**	**1.15**	**301**	*i* P	**Pn**	**13 14 47.3**	**-0.3**
	baz=292						
TWC				S	**Sn**	**13 15 01.5**	**-0.7**
	baz=292						
ENA	**Nanau**	**1.16**	**291**	*e*P	**Pn**	**13 14 47.3**	**-0.4**
	baz=298						
JIJ	**Ishigaki jima**	**1.17**	**72**	P	**Pn**	**13 14 47.1**	**-0.8**
JIJ				*e*S	**Sn**	**13 15 02.2**	**-0.6**
TWE	**Neicheng**	**1.34**	**302**	P	**Pn**	**13 14 50.6**	**+0.3**
	baz=293						
TWE				*e*S	**Sn**	**13 15 06.6**	**-0.6**
	baz=293						
ESL	**Shilin**	**1.38**	**262**	*e*P	Pn	13 14 49.4	-1.4
	baz=253						
ENTT	**Nioudou**	**1.39**	**297**	P	**Pn**	**13 14 51.2**	**+0.3**
	baz=288						
ENTT				S	**Sn**	**13 15 07.9**	**-0.3**
	baz=288						
NNS	**Nan Shan**	**1.48**	**287**	*e*P	**Pn**	**13 14 52.6**	**+0.4**
	baz=286						
NNS				*e*S	**Sn**	**13 15 10.4**	**-0.2**
	baz=286						
WHF	**Hehuan Shan**	**1.52**	**275**	*e*P	**Pn**	**13 14 52.8**	**-0.4**
	baz=274						
EHY	**Hungye**	**1.55**	**251**	*e*P	**Pn**	**13 14 52.6**	**-0.6**
	baz=243						
NSK	**Sanguang**	**1.57**	**295**	P	**Pn**	**13 14 53.8**	**+0.2**
	baz=284						
NSK				*e*S	**Sn**	**13 15 12.0**	**-1.0**
	baz=284						
TWT	**Tachien**	**1.61**	**279**	*e*P	**Pn**	**13 14 54.8**	**+0.6**
	baz=270						
TWF1	**Yuli**	**1.63**	**246**	P	**Pn**	**13 14 53.9**	**-0.4**
	baz=237						
TWF1				*e*S	**Sn**	**13 15 13.4**	**-0.8**
	baz=237						
JTJ	**Tarama**	**1.74**	**69**	P	**Pn**	**13 14 55.6**	**-0.1**
JTJ				*e*S	**Sn**	**13 15 16.2**	**-0.7**
SMLT	**Sun Moon Lake**	**1.85**	**266**	*e*P	**Pn**	**13 14 58.6**	**+1.1**
	baz=265						
NSTT	**Nanjuang**	**1.86**	**290**	*e*P	**Pn**	**13 14 57.9**	**+0.5**
	baz=289						
NSTT				*e*S	**Sn**	**13 15 20.9**	**+1.0**
	baz=289						
TYC	**Yuchr**	**1.89**	**267**	*e*P	**Pn**	**13 14 57.4**	**-0.4**
	baz=265						
ELDTW	**Lidau**	**1.93**	**245**	P	**Pn**	**13 14 57.8**	**-0.7**
	baz=243						
TWQ1	**Liyutan**	**1.99**	**280**	*e*P	**Pn**	**13 15 01.0**	**+1.8**
	baz=279						
CHN5	**Tsauling**	**2.10**	**259**	*e*P	**Pn**	**13 15 02.0**	**+1.2**
	baz=257						
WTP	**Ta-pu**	**2.25**	**251**	*e*P	**Pn**	**13 15 03.9**	**+1.0**
	baz=242						
CHN1	**Nanshi**	**2.35**	**250**	*e*P	**Pn**	**13 15 04.9**	**+0.8**
	baz=240						
EAST	**Anshuo**	**2.50**	**230**	*e*P	**Pn**	**13 15 06.0**	**-0.3**
	baz=235						

IDC 05 13:16:09.2±6.4**, 2°.21N×100°.14E, h0km, mb3.6**/3**, mb1 3.7**/3**, mb1mx3.3**/25**, mbtmp3.6**/3**, Error ellipse: s-maj=329.8km s-min=28.3km az=54.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.13**	**125**	P	P	13 23 47.1	-0.2
	0.2nm,0.5s,baz=303,slow=8.9,SNR=7.1						
MKAR	**Makanchi Array**	**47.06**	**343**	P	P	13 24 42.9	+0.2
	0.5nm,0.3s,baz=164,slow=7.5,SNR=9.8						
ZALV	**Zalesovo Beam**	**53.09**	**349**	P	P	13 25 27.9	-0.5
	0.4nm,0.3s,baz=163,slow=5.9,SNR=3.6						

WEL 05 14:25:03.7±0.5**, 37°.59S×178°.34E, h40km**±3km**, ML3.7**/5**, 6C, Error ellipse: s-maj=4.6km s-min=2.2km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.04**	**318**	⇑PN	Pn	14 25 10.0	-0.1
MXZ				SN	Sn	14 25 14.5	0.0
PUZ	**Puketiti**	**0.48**	**188**	⇑PN	Pn	14 25 13.9	-0.3
PUZ				SN	Sn	14 25 21.4	-0.3
MWZ	**Matawai**	**0.98**	**221**	⇑PN	Pn	14 25 21.0	-0.1
URZ	**Urewera**	**1.18**	**235**	⇑PN	Pn	14 25 23.4	-0.3
OPRZ	**Ohinepanea**	**1.44**	**259**	PN	Pn	14 25 26.3	-0.9
NMHZ	**Naumai**	**1.93**	**218**	PN	Pn	14 25 34.4	+0.3
BKZ	**Black Stump Fm**	**2.14**	**222**	PN	Pn	14 25 36.8	-0.2
MCHZ	**McNeill Hill**	**2.25**	**214**	PN	Pn	14 25 38.2	-0.3
KUZ	**Kuaotunu**	**2.26**	**291**	⇑PN	Pn	14 25 38.0	-0.5
MKAZ	**Moumakai**	**2.57**	**280**	⇑PN	Pn	14 25 42.7	-0.1
MOVZ	**Moawhango**	**2.72**	**227**	PN	Pn	14 25 44.0	-1.0
RVAZ	**Riverhead Bore**	**3.11**	**284**	PN	Pn	14 25 50.8	+0.6
WAZ	**Wanganui**	**3.40**	**230**	*e*PN	Pn	14 25 52.9	-1.3
TCW	**Tory Channel**	**4.79**	**220**	SN	Sn	14 27 01.8	-5.8
MQZ	**McQueen's Vall**	**7.48**	**214**	SN	Sn	14 28 02.4	-11

*NNC **05** 14:27:11.5±3.7, 37°.13N×73°.51E, h60km±49km, mb3.4, mpv3.3, Error ellipse: s-maj=26.3km s-min=22.4km az=175.0*
ISC 05 14:27:07.2±1.1**, 36°.87N**±0°.06×**73°.4E**±0°.2**, h35km, n18, σ1ˢ.43**/15**, 6C-4D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**3.21**	**183**	P	**Pn**	**14 27 54.5**	**-0.6**
CEP	**Cherat**	**3.29**	**203**	P	**Pn**	**14 27 56.0**	**-0.3**
CEP				S	**Sn**	**14 28 35.0**	**+0.8**
THW	**Thamme Wali**	**4.30**	**199**	P	**Pn**	**14 28 09.3**	**-0.8**
DLH	**Dalhousie**	**4.80**	**153**	*e*PKP	Pn	14 28 10.0	-7.1
DLH				*e*S	Sn	14 29 00.0	-12
SDNR	**Sundarnagar**	**6.11**	**150**	*e*PKP	Pn	14 28 27.5	-7.4
SDNR				*e*S	Sn	14 29 30.5	-13
TKM2	**Tokmak 2**	**6.27**	**15**	⇑Pn	**Pn**	**14 28 37.5**	**+0.3**
	0.8nm,0.3s						
TKM2				⇓Sn	**Sn**	**14 29 45.3**	**-2.4**
	2.2nm,0.5s						
KK31	**Karatay Array**	**6.62**	**341**	⇑Pn	**Pn**	**14 28 43.1**	**+1.2**
	1.1nm,0.3s,baz=35,slow=2.2,SNR=38						
KK31				⇓Sn	**Sn**	**14 29 56.0**	**0.0**
	2.4nm,0.5s,baz=155,slow=23,SNR=5.7						
AYAN	**Aya Nagar**	**8.93**	**159**	*e*S	Sn	14 30 34.7	-18
KHET	**Khetri**	**9.00**	**166**	*e*S	Sn	14 30 36.4	-18
KHET				AML	AML	14 30 38.5	
	comp=N,98nm,0.0s						
KHET				AML	AML	14 30 39.0	
	comp=E,124nm,0.0s						
KUDL	**Kundal**	**9.08**	**163**	*e*PKP	Pn	14 29 08.6	-7.0
KUDL				*e*S	Sn	14 30 38.2	-18
KUDL				AML	AML	14 30 42.4	
	comp=E,5.9nm,0.4s						
KUDL				AML	AML	14 30 42.6	
	comp=N,7.6nm,0.0s						
AGRA	**Agra**	**10.34**	**157**	*e*S	Sn	14 31 07.1	-21
AGRA				AML	AML	14 31 44.0	
	comp=E,48nm,0.2s						
AGRA				AML	AML	14 31 46.2	
	comp=N,67nm,0.6s						
KUR14	**Kurchatov Arra**	**14.23**	**13**	⇑P	**Pn**	**14 30 28.2**	**+2.3**
	comp=N,0.1nm,0.6s						
KURK	**Kurchatov**	**14.33**	**13**	⇓P	**Pn**	**14 30 29.5**	**+2.2**
	comp=N,4.7nm,1.1s						
AB31	**Akbulak array**	**15.79**	**326**	⇑P	**Pn**	**14 30 44.5**	**-2.2**
	comp=N,1.1nm,0.6s,baz=135,slow=12,SNR=19						
VOSK	**Vostochnaya**	**15.94**	**355**	⇑P	**Pn**	**14 30 49.0**	**+0.3**
	comp=N,1.8nm,0.8s						
BVA0	**Borovoye Array**	**16.29**	**353**	P	**Pn**	**14 30 54.0**	**+0.9**
	comp=N,0.5nm,0.6s,baz=262,slow=40,SNR=5.8						
ZRNK	**Zerenda**	**16.38**	**350**	⇑P	**Pn**	**14 30 54.6**	**+0.4**
	comp=N,3.7nm,1.0s						
AKTO	**Aktyubinsk**	**17.51**	**326**	⇓P	**Pn**	**14 31 08.4**	**0.0**
	comp=N,0.7nm,1.4s						

KRSC 05 14:35:17.9±1.3**, 48°.80N×155°.33E, h10km**±10km**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.95**	**15**	*e*P	Pn	14 35 50.4	-0.7
SKR				*e*S	Sn	14 36 14.0	-1.6
PAU	**Pauzhetka**	**2.83**	**19**	S	Sn	14 36 35.3	-2.1
MIPR	**Malaya Ipel'ka**	**3.60**	**14**	P	Pn	14 36 14.3	+0.6
ASAK	**Asacha**	**3.94**	**24**	*e*P	Pn	14 36 20.1	+1.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MTVR	**Mutnovka**	**4.11**	**25**	P	Pn	14 36 21.5	+0.6
MTVR				S	Sn	14 37 06.9	-2.3
RUS	**Russkaya**	**4.16**	**28**	*e*P	Pn	14 36 21.8	+0.4
RUS				S	Sn	14 37 07.8	-2.3
UGLR	**Uglovaya**	**4.94**	**25**	P	Pn	14 36 34.1	+1.9
SDLR	**Sedlovina**	**5.01**	**25**	*e*P	Pn	14 36 34.8	+1.5
GNL	**Ganaly**	**5.17**	**18**	P	Pn	14 36 37.6	+2.2
MKZ	**Mys Kozlova**	**7.00**	**32**	P	Pn	14 37 02.0	+1.6

WEL 05 14:52:20.1±0.5**, 38°.22S**×**175°.91E, h156**km±4km**, ML3.7**/18**, 3C-3D, Error ellipse: s-maj=3.6km s-min=3.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.94**	**93**	⇓PN	Pn	14 52 44.8	-0.2
URZ				SN	Sn	14 53 03.7	-0.3
BKZ	**Black Stump Fm**	**1.05**	**154**	⇑PN	Pn	14 52 45.8	-0.1
BKZ				SN	Sn	14 53 04.4	-1.4
FWVZ	**Far West T-bar**	**1.07**	**195**	PN	Pn	14 52 46.5	+0.2
RAHZ	**Arahi**	**1.15**	**127**	PN	Pn	14 52 47.3	+0.5
RAHZ				SN	Sn	14 53 07.4	+0.1
PKVZ	**Pokaka**	**1.15**	**202**	PN	Pn	14 52 46.9	0.0
MOVZ	**Moawhango**	**1.19**	**186**	PN	Pn	14 52 46.8	-0.4
BHHZ	**Black Hill Sta**	**1.27**	**175**	PN	Pn	14 52 47.4	-0.5
VRZ	**Vera Road**	**1.27**	**225**	PN	Pn	14 52 48.3	+0.4
MWZ	**Matawai**	**1.28**	**96**	PN	Pn	14 52 47.8	-0.1
MCHZ	**McNeill Hill**	**1.36**	**154**	PN	Pn	14 52 49.3	+0.6
WAZ	**Wanganui**	**1.69**	**205**	PN	Pn	14 52 51.6	-0.6
PRGZ	**Paritu Road**	**1.70**	**115**	PN	Pn	14 52 52.2	0.0
PNHZ	**Pukenui**	**1.70**	**173**	PN	Pn	14 52 51.6	-0.7
KAHZ	**Kahuranaki**	**1.74**	**155**	PN	Pn	14 52 52.5	-0.2
MHGZ	**Mahia Peninsul**	**1.82**	**121**	PN	Pn	14 52 53.6	+0.1
CNGZ	**Carnagh Statio**	**1.82**	**99**	PN	Pn	14 52 54.1	+0.5
TSZ	**Takapari Road**	**1.83**	**179**	PN	Pn	14 52 52.8	-0.9
PUZ	**Puketiti**	**1.85**	**86**	⇓PN	Pn	14 52 53.6	-0.4
PUZ				SN	Sn	14 53 18.9	-1.2
WPHZ	**Waipukurau**	**1.89**	**168**	⇑PN	Pn	14 52 53.4	-0.9
PXZ	**Pawanui**	**1.95**	**158**	PN	Pn	14 52 54.3	-0.7
MXZ	**Matakaoa Point**	**2.01**	**72**	PN	Pn	14 52 55.8	+0.2
DVHZ	**Dannevirke**	**2.08**	**175**	PN	Pn	14 52 55.1	-1.4
PRHZ	**Porangahau**	**2.12**	**165**	PN	Pn	14 52 55.9	-1.0
PRHZ				SN	Sn	14 53 22.0	-3.4
POWZ	**Post Office Ro**	**2.17**	**183**	PN	Pn	14 52 56.0	-1.5
MRZ	**Mangatainoka R**	**2.45**	**186**	⇑PN	Pn	14 52 58.8	-2.0
BFZ	**Birch Farm**	**2.47**	**174**	PN	Pn	14 52 59.2	-1.9
TIWZ	**Tintock**	**2.55**	**180**	PN	Pn	14 52 59.9	-2.2
OGWZ	**Otaki Gorge**	**2.65**	**192**	PN	Pn	14 53 01.2	-2.1
HOWZ	**Holdsworth Sta**	**2.69**	**186**	PN	Pn	14 53 01.3	-2.5
KIW	**Kapiti Island**	**2.75**	**196**	PN	Pn	14 53 01.9	-2.6
TMWZ	**Te Maipa**	**2.88**	**180**	⇓PN	Pn	14 53 03.6	-2.6
MTW	**Mount Morrison**	**2.95**	**186**	PN	Pn	14 53 04.0	-3.0
CAW	**Cannon Point**	**2.95**	**192**	PN	Pn	14 53 04.3	-2.7
DUWZ	**D'Urville Isla**	**3.00**	**210**	PN	Pn	14 53 05.0	-2.7
TRWZ	**Traveller**	**3.18**	**183**	PN	Pn	14 53 07.0	-2.9
PAWZ	**Paruwai Farm**	**3.18**	**187**	PN	Pn	14 53 06.7	-3.2
WEL	**Wellington**	**3.18**	**196**	PN	Pn	14 53 06.7	-3.2
SNZO	**South Karori**	**3.22**	**196**	PN	Pn	14 53 07.1	-3.3
MSWZ	**Moikau Station**	**3.23**	**189**	PN	Pn	14 53 07.3	-3.3
TCW	**Tory Channel**	**3.24**	**202**	PN	Pn	14 53 07.6	-3.0
PLWZ	**Palliser**	**3.38**	**188**	PN	Pn	14 53 09.0	-3.6
TUWZ	**Tuamarina**	**3.54**	**205**	PN	Pn	14 53 11.0	-3.5
NNZ	**Nelson**	**3.57**	**212**	PN	Pn	14 53 11.5	-3.4
QRZ	**Quartz Range**	**3.69**	**224**	PN	Pn	14 53 12.8	-3.6
BSWZ	**Blackbirch Sta**	**3.82**	**204**	PN	Pn	14 53 14.8	-3.3
THZ	**Tophouse**	**4.22**	**212**	PN	Pn	14 53 19.8	-3.6
KHZ	**Kahutara**	**4.56**	**203**	PN	Pn	14 53 23.9	-3.8
LTZ	**Lake Taylor**	**5.33**	**210**	*e*PN	Pn	14 53 32.7	-5.3
CRLZ	**Canterbury Las**	**5.90**	**204**	SN	Sn	14 54 41.7	-11
MQZ	**McQueen's Vall**	**6.01**	**203**	SN	Sn	14 54 43.7	-11

MEX 05 15:03:59.0±0.8**, 17°.02N**×**94°.43W, h160**km±11km**, MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGIG		**1.28**	**100**	*i* P	Pn	15 04 26.2	-1.0
TGIG				*i* S	Sn	15 04 46.2	-2.6
HUIG	**Huatulco**	**2.03**	**233**	*e*P	Pn	15 04 33.6	-1.5
HUIG				*i* S	Sn	15 05 01.6	-1.3
VHO	**Vista Hermosa**	**2.20**	**272**	*e*P	Pn	15 04 36.3	-1.0
VHO				*i* S	Sn	15 05 05.3	-1.5
CCIG	**Comitan**	**2.32**	**108**	*i* P	Pn	15 04 37.9	-0.8
CCIG				*i* S	Sn	15 05 07.0	-2.2
TPIG	**Tehuac#an**	**3.12**	**297**	*i* P	Pn	15 04 47.1	-1.5
TPIG				*i* S	Sn	15 05 24.0	-2.9
UTMO	**Huajuapan**	**3.32**	**285**	*e*P	Pn	15 04 49.7	-1.4
UTMO				*i* S	Sn	15 05 29.4	-2.1
PNIG	**Pinotepa**	**3.59**	**261**	*i* P	Pn	15 04 52.3	-2.0
PNIG				*i* S	Sn	15 05 34.5	-2.9
YAIG	**Yautepec**	**4.78**	**293**	*i* P	Pn	15 05 09.1	-0.8
YAIG				*i* S	Sn	15 06 03.0	-2.2

*IDC **05** 15:15:07.0±1.8, 23°.92S×66°.71W, h191km±17km, mb3.0/1, mb1 3.2/6, mb1mx3.1/19, mbtmp3.1/6, Error ellipse: s-maj=26.8km s-min=17.7km az=86.0*
*ISCJB **05** 15:15:06.5±0.7, 23°.95S±0°.06×66°.8W±0°.1, h213km±16km, mb3.4/1, Error ellipse: s-maj=15.0km s-min=9.9km az=178.8*
*GUC **05** 15:15:09.8±0.7, 23°.73S×67°.30W, h237km±15km, ML4.3*
ISC 05 15:15:08.0±1.4**, 23°.90S**±0°.09×**66°.9W**±0°.2**, h212**km±18km**, n16,** σ**1s.02**/20**, 5C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.27**	**304**	⇑*i*P	**Pn**	**15 15 51.6**	**+1.2**
LVC				*i* S	**S**	**15 16 24.0**	**+0.9**
PB04	**Plate Boundary**	**2.90**	**304**	⇑*i*P	Pn	15 16 03.5	+6.4
PB04				*i* S	S	15 16 44.7	+10
PB04				AML	AML	15 16 46.5	
	comp=N,408nm,0.2s						
CEN1	**Los Morros**	**3.09**	**279**	⇓*i*P	**Pn**	**15 16 00.1**	**+0.7**
CEN1				*i* S	**S**	**15 16 38.5**	**-0.7**
CEN1				AML	AML	15 16 40.1	
	comp=N,311nm,0.5s						
MACH	**Maria Elena**	**3.15**	**302**	*i* S	**S**	**15 16 40.0**	**-0.7**
ANCH	**Antofagasta**	**3.25**	**273**	⇓*i*P	**Pn**	**15 16 01.9**	**+0.8**
ANCH				*i* S	**S**	**15 16 41.1**	**-1.1**
MECH	**Mejillones**	**3.37**	**283**	⇑*i*P	**Pn**	**15 16 03.6**	**+1.0**
MECH				*i* S	**S**	**15 16 45.0**	**0.0**
MECH				AML	AML	15 16 48.7	
	comp=N,420nm,0.3s						
PB07	**Plate Boundary**	**3.52**	**307**	⇑*i*P	**Pn**	**15 16 05.0**	**+0.4**
PB07				*i* S	**S**	**15 16 47.1**	**-1.5**
PB07				AML	AML	15 16 48.5	
	comp=N,400nm,0.2s						
PB01	**Plate Boundary**	**3.73**	**319**	⇑*i*P	**Pn**	**15 16 07.3**	**+0.2**
PB01				*i* S	**S**	**15 16 52.1**	**-1.0**
PB01				AML	AML	15 16 55.7	
	comp=N,145nm,0.3s						
LPAZ	**La Paz**	**7.67**	**351**	P	**Pn**	**15 16 57.8**	**+0.2**
	comp=N,1.9nm,0.3s,baz=174,slow=7.7,SNR=44						
LPAZ				S	**S**	**15 18 24.0**	**-0.7**
	comp=N,0.3nm,0.3s,baz=36,slow=18,SNR=4.0						
CFAA	**Coronel Fontan**	**7.77**	**189**	P	**Pn**	**15 16 56.9**	**-1.4**
	comp=N,0.2nm,0.3s,baz=17,slow=14,SNR=15						
CPUP	**Villa Florida**	**8.98**	**108**	P	Pn	15 17 11.5	-2.4
	comp=N,0.9nm,0.3s,baz=282,slow=9.3,SNR=6.5						
SIV	**San Ignacio**	**9.57**	**36**	P	Pn	15 17 19.4	-2.3
	comp=N,0.4nm,0.3s,baz=223,slow=13,SNR=10						
BDFB	**Brasilia**	**19.54**	**69**	P	**P**	**15 19 20.0**	**+0.1**
	comp=N,0.4nm,0.3s,baz=235,slow=11,SNR=5.1						
TORD	**Torodi Ar. Bea**	**76.43**	**69**	P	**P**	**15 26 33.7**	**-0.9**
	comp=N,1.1nm,1.2s,baz=247,slow=7.0,SNR=4.1						
WRA	**Warramunga Arr**	**131.77**	**207**	PKP	**PKPdf**	**15 33 58.3**	**+1.8**
	comp=N,0.3nm,0.7s,baz=158,slow=1.7,SNR=4.4						
MKAR	**Makanchi Array**	**146.38**	**39**	PKPbc	**PKPab**	**15 34 24.9**	**-0.1**
	comp=N,0.6nm,0.6s,baz=300,slow=3.1,SNR=8.0						

*ISCJB **05** 15:22:51.9±0.6, 50°.16N±0°.04×18°.37E±0°.03, h0km, Error ellipse: s-maj=6.2km s-min=3.1km az=1.0*
*WAR **05** 15:22:53.8, 50°.08N×18°.45E*
*CSEM **05** 15:22:53.2±0.5, 50°.14N×18°.38E, h1km, ML2.5/9, Error ellipse: s-maj=7.4km s-min=4.5km az=51.0*
*IPEC **05** 15:22:53.6±0.2, 50°.07N×18°.47E, h0km±2km, ML1.5/3, Error ellipse: s-maj=2.0km s-min=1.1km az=160.0*
*PRU **05** 15:22:54.0, 50°.13N×18°.38E, h0km*
ISC 05 15:22:53.3±1.0**, 50°.15N**±0°.05×**18°.41E**±0°.03**, h0**km**, n18,** σ**0s.62**/27**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.35**	**208**	*e*PG	**Pg**	**15 23 00.3**	**+0.3**
OKC				*e*SG	**Sg**	**15 23 04.7**	**+0.1**
	comp=Z,19nm,0.3s						
OKC	**Ostrava-Krasne**	**0.35**	**208**	Pg	**Pg**	**15 23 00.3**	**+0.3**
OKC				Sg	**Sg**	**15 23 04.7**	**+0.1**
	19nm,0.3s						
MORC	**Moravsky Berou**	**0.67**	**237**	*e*Pg	**Pg**	**15 23 06.3**	**+0.2**
MORC				*e*Sg	**Sg**	**15 23 14.3**	**-0.5**
	10nm,0.2s,baz=63						
OJC	**Ojcow**	**0.90**	**85**	*e*Pg	**Pg**	**15 23 10.4**	**-0.1**
OJC				*e*Sg	**Sg**	**15 23 22.3**	**+0.2**
DPC	**Dobruska-Polom**	**1.35**	**279**	*e*PG	**Pg**	**15 23 18.8**	**-0.4**
DPC				*e*SG	**Sg**	**15 23 37.3**	**+0.6**
	comp=Z,7.6nm,0.3s						
DPC	**Dobruska-Polom**	**1.35**	**279**	Pg	**Pg**	**15 23 18.8**	**-0.4**
DPC				Sg	**Sg**	**15 23 37.3**	**+0.6**
	7.6nm,0.3s						
NIE	**Niedzica**	**1.44**	**120**	*e*Pg	**Pn**	**15 23 20.4**	**-0.2**
NIE				*e*Sg	**Sn**	**15 23 39.8**	**-0.4**
VRAC	**Vranov**	**1.45**	**235**	*e*Pn	**Pn**	**15 23 19.3**	**-1.4**
VRAC	**Vranov**	**1.45**	**235**	*e*Pg	**Pn**	**15 23 20.2**	**-0.5**
	baz=57						
VRAC				*e*Sg	**Sg**	**15 23 38.7**	**-1.0**
	8.3nm,0.3s,baz=57						
UPC	**Upice**	**1.58**	**284**	*e*SG	**Sb**	**15 23 44.1**	**+0.4**
	comp=Z,2.6nm,0.3s						
UPC	**Upice**	**1.58**	**284**	Sg	**Sb**	**15 23 44.1**	**+0.4**
	2.6nm,0.3s						
KRUC	**Moravsky**	**1.70**	**231**	*e*Pn	**Pn**	**15 23 24.2**	**0.0**
	baz=52						
KRUC				*e*Sg	**Sn**	**15 23 46.4**	**-0.2**
	3.0nm,0.2s,baz=52						
PVCC	**Panska Ves**	**2.49**	**280**	*e*SG	**Sg**	**15 24 13.2**	**+0.1**
	comp=Z,6.6nm,0.2s						
PVCC	**Panska Ves**	**2.49**	**280**	Sg	**Sg**	**15 24 13.2**	**+0.1**
	6.6nm,0.2s						
PRU	**Pruhonice**	**2.50**	**268**	*e*SG	**Sb**	**15 24 11.6**	**+1.4**
	comp=Z,2.5nm,0.3s						
PRU	**Pruhonice**	**2.50**	**268**	Sg	**Sb**	**15 24 11.6**	**+1.4**
	2.5nm,0.3s						
KHC	**Kasperske Hory**	**3.30**	**254**	*e*SG	**Sg**	**15 24 39.0**	**-0.2**
	comp=Z,2.0nm,0.4s						
KHC	**Kasperske Hory**	**3.30**	**254**	Sg	**Sg**	**15 24 39.0**	**-0.2**
	2.0nm,0.4s						

WEL 05 15:35:56.7±0.4**, 38°.13S**×**175°.70E, h162**km±5km**, ML3.5**/17**, 3C-3D, Error ellipse: s-maj=4.9km s-min=3.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.12**	**97**	⇑PN	Pn	15 36 23.7	+0.1
BKZ	**Black Stump Fm**	**1.21**	**149**	⇓PN	Pn	15 36 24.6	+0.2
BKZ				SN	Sn	15 36 45.3	-0.5
MOVZ	**Moawhango**	**1.28**	**178**	PN	Pn	15 36 25.3	+0.2
MOVZ				SN	Sn	15 36 46.4	-0.6
RAHZ	**Arahi**	**1.34**	**126**	PN	Pn	15 36 26.1	+0.5
RAHZ				SN	Sn	15 36 48.3	+0.4
BHHZ	**Black Hill Sta**	**1.39**	**168**	PN	Pn	15 36 26.0	-0.1
BHHZ				SN	Sn	15 36 47.6	-1.3
MWZ	**Matawai**	**1.45**	**99**	⇓PN	Pn	15 36 26.6	-0.1
MWZ				SN	Sn	15 36 48.9	-1.0
MCHZ	**McNeill Hill**	**1.53**	**150**	PN	Pn	15 36 27.8	+0.5
MCHZ				SN	Sn	15 36 51.4	+0.2
WAZ	**Wanganui**	**1.72**	**199**	PN	Pn	15 36 29.5	+0.1
PNHZ	**Pukenui**	**1.82**	**168**	PN	Pn	15 36 29.9	-0.7
CKHZ	**Cape Kidnapper**	**1.87**	**145**	SN	Sn	15 36 55.8	-1.8
PRGZ	**Paritu Road**	**1.89**	**116**	PN	Pn	15 36 30.5	-0.8
KAHZ	**Kahuranaki**	**1.90**	**151**	PN	Pn	15 36 31.0	-0.4
TSZ	**Takapari Road**	**1.94**	**174**	⇑PN	Pn	15 36 30.9	-0.9
CNGZ	**Carnagh Statio**	**2.00**	**101**	PN	Pn	15 36 32.3	-0.2
MHGZ	**Mahia Peninsul**	**2.01**	**121**	PN	Pn	15 36 32.0	-0.5
WPHZ	**Waipukurau**	**2.02**	**164**	PN	Pn	15 36 31.6	-1.1
PUZ	**Puketiti**	**2.02**	**89**	PN	Pn	15 36 32.0	-0.7
PXZ	**Pawanui**	**2.10**	**155**	PN	Pn	15 36 32.6	-1.1
MXZ	**Matakaoa Point**	**2.14**	**75**	PN	Pn	15 36 33.7	-0.4
PRHZ	**Porangahau**	**2.25**	**162**	PN	Pn	15 36 33.7	-1.7
PRHZ				SN	Sn	15 37 02.0	-3.6
MRZ	**Mangatainoka R**	**2.53**	**182**	⇑PN	Pn	15 36 36.5	-2.2
MRZ				SN	Sn	15 37 07.1	-4.3
BFZ	**Birch Farm**	**2.58**	**171**	PN	Pn	15 36 37.1	-2.2
TIWZ	**Tintock**	**2.65**	**177**	PN	Pn	15 36 37.8	-2.4
OGWZ	**Otaki Gorge**	**2.72**	**189**	PN	Pn	15 36 38.8	-2.1
HOWZ	**Holdsworth Sta**	**2.77**	**183**	PN	Pn	15 36 38.9	-2.7
KIW	**Kapiti Island**	**2.80**	**192**	PN	Pn	15 36 39.4	-2.6
TMWZ	**Te Maipa**	**2.98**	**177**	PN	Pn	15 36 41.3	-2.9
CAW	**Cannon Point**	**3.02**	**189**	PN	Pn	15 36 41.9	-2.8
MTW	**Mount Morrison**	**3.03**	**183**	PN	Pn	15 36 41.5	-3.3
WEL	**Wellington**	**3.23**	**193**	PN	Pn	15 36 44.3	-3.0
SNZO	**South Karori**	**3.27**	**193**	PN	Pn	15 36 44.6	-3.2
TCW	**Tory Channel**	**3.27**	**199**	PN	Pn	15 36 44.8	-3.0
MSWZ	**Moikau Station**	**3.30**	**186**	SN	Sn	15 37 22.0	-6.5
BHW	**Baring Head**	**3.34**	**191**	PN	Pn	15 36 45.2	-3.4
PLWZ	**Palliser**	**3.45**	**186**	PN	Pn	15 36 46.2	-4.0
TUWZ	**Tuamarina**	**3.56**	**202**	PN	Pn	15 36 48.4	-3.1
NNZ	**Nelson**	**3.57**	**209**	PN	Pn	15 36 48.7	-2.9
QRZ	**Quartz Range**	**3.64**	**221**	PN	Pn	15 36 49.4	-3.2
THZ	**Tophouse**	**4.22**	**210**	*e*PN	Pn	15 36 56.3	-3.8
KHZ	**Kahutara**	**4.59**	**200**	⇓PN	Pn	15 37 01.1	-3.8
LTZ	**Lake Taylor**	**5.33**	**208**	PN	Pn	15 37 10.0	-4.6
MQZ	**McQueen's Vall**	**6.03**	**202**	PN	Pn	15 37 17.6	-6.2
MQZ				SN	Sn	15 38 21.8	-10

*IDC **05** 15:39:40.6±0.8, 26°.95S×13°.40W, h0km, mb4.4/14, mb1 4.5/14, mb1mx4.3/24, mbtmp4.4/14, MS3.9/15, Ms1 3.9/15, ms1mx3.7/37, Error ellipse: s-maj=20.7km s-min=19.2km az=37.0*
*ISCJB **05** 15:39:40.7±0.5, 26°.95S±0°.10×13°.40W±0°.10, h10km, mb4.5/18, MS3.9/15, Error ellipse: s-maj=14.2km s-min=12.7km az=7.6*
*NEIC **05** 15:39:42.4±0.4, 26°.93S×13°.41W, h10km, mb4.7/7, Error ellipse: s-maj=13.2km s-min=11.2km az=189.0*
ISC 05 15:39:42.4±0.6**, 27°.0S**±0°.1×**13°.4W**±0°.1**, h10**km**, n49,** σ**0s.95**/40**, mb4.5**/18**, MS3.9**/15**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**29.47**	**81**	*e*P	**P**	**15 45 46.2**	**-0.7**
	9.9nm,1.0s						
TSUM	**Tsumeb**	**29.47**	**81**	P	**P**	**15 45 44.9**	**-2.0**
	7.0nm,1.0s,baz=252,slow=8.1,SNR=7.9						
TSUM				LR	LR	15 55 09.1	
	comp=Z,167nm,21.3s,baz=89,slow=32						
SUR	**Sutherland**	**30.14**	**109**	P	**P**	**15 45 53.0**	**+0.3**
SUR	**Sutherland**	**30.14**	**109**	P	**P**	**15 45 53.0**	**+0.3**
	12nm,0.9s,baz=251,slow=1.9,SNR=5.7						
BDFB	**Brasilia**	**34.05**	**282**	P	**P**	**15 46 27.4**	**+0.2**
BDFB	**Brasilia**	**34.05**	**282**	P	**P**	**15 46 27.4**	**+0.2**
	4.2nm,0.8s,baz=147,slow=7.7,SNR=5.1						
BOSA	**Boshof**	**34.15**	**102**	P	**P**	**15 46 27.4**	**-0.4**
BOSA	**Boshof**	**34.15**	**102**	P	**P**	**15 46 27.4**	**-0.4**
	16nm,0.9s,baz=256,slow=7.5,SNR=18						
BOSA				LR	LR	15 58 13.6	
	comp=Z,168nm,19.3s,baz=36,slow=33						
DBIC	**Dimbokro**	**34.43**	**15**	LR	LR	15 56 56.7	
	comp=Z,92nm,21.0s,baz=157,slow=30						
LBTB	**Lobatse**	**35.02**	**96**	*e*P	**P**	**15 46 34.5**	**-0.9**
	30nm,0.9s						
LBTB	**Lobatse**	**35.02**	**96**	P	**P**	**15 46 34.8**	**-0.7**
	26nm,0.9s,baz=272,slow=9.3,SNR=34						
LSZ	**Lusaka**	**40.33**	**82**	*e*P	**P**	**15 47 21.0**	**+0.5**
	17nm,1.2s						
TOA0	**Torodi Ar. Sit**	**42.47**	**22**	*e*P	**P**	**15 47 37.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**42.47**	**22**	P	**P**	**15 47 37.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**42.47**	**22**	P	**P**	**15 47 37.5**	**-0.2**
	8.1nm,1.0s,baz=198,slow=8.4,SNR=26						
TORD				LR	LR	16 01 16.8	
	comp=Z,232nm,21.6s,baz=210,slow=30						
SNAA	**Sanae**	**45.15**	**175**	*e*P	**P**	**15 47 58.5**	**-0.3**
	2.9nm,1.0s						
SNAA	**Sanae**	**45.15**	**175**	P	**P**	**15 47 58.0**	**-0.8**
	0.6nm,0.9s,baz=306,slow=9.7,SNR=4.3						
PLCA	**Paso Flores**	**48.63**	**238**	LR	LR	16 06 45.9	
	comp=Z,340nm,18.5s,baz=288,slow=33						
SAML	**Samuel**	**50.27**	**281**	*e*P	**P**	**15 48 40.3**	**+1.0**
	17nm,1.6s						
KMBO	**Kilima Mbogo**	**54.93**	**71**	P	**P**	**15 49 15.3**	**+1.2**
KMBO	**Kilima Mbogo**	**54.93**	**71**	P	**P**	**15 49 15.3**	**+1.2**
	0.7nm,0.4s,baz=214,slow=11,SNR=5.4						
KMBO				LR	LR	16 10 02.8	
	comp=Z,177nm,19.5s,baz=92,slow=33						
ABPO	**Ambohimpanom**	**55.93**	**96**	*e*P	**P**	**15 49 23.2**	**+2.0**
	7.7nm,1.0s						
OPO	**Ambohidratompo**	**56.05**	**95**	P	**P**	**15 49 23.7**	**+1.7**
OPO	**Ambohidratompo**	**56.05**	**95**	P	**P**	**15 49 23.7**	**+1.7**
	2.5nm,0.9s,baz=277,slow=7.2,SNR=4.5						
QSPA	**South Pole Qui**	**63.28**	**180**	*e*P	**P**	**15 50 11.0**	**-0.2**
	16nm,1.0s						
KEST	**Kesra**	**65.94**	**20**	P	**P**	**15 50 29.5**	**+0.8**
KEST	**Kesra**	**65.94**	**20**	P	**P**	**15 50 29.5**	**+0.8**
	2.1nm,0.9s,baz=100,slow=1.7,SNR=4.2						
KEST				LR	LR	16 16 48.0	
	comp=Z,81nm,18.1s,baz=211,slow=34						
EIL	**Elat**	**72.89**	**43**	LR	LR	16 23 47.7	
	comp=Z,84nm,18.2s,baz=97,slow=36						
MMAI	**Mount Meron Ar**	**75.55**	**41**	LR	LR	16 21 28.8	
	comp=Z,72nm,19.9s,baz=185,slow=33						
VNDA	**Vanda**	**75.73**	**179**	P	**P**	**15 51 27.8**	**+0.1**
VNDA	**Vanda**	**75.73**	**179**	P	**P**	**15 51 27.8**	**+0.1**
	5.8nm,1.2s,baz=213,slow=5.2,SNR=12						
ASF	**Jabal al Asfar**	**75.83**	**42**	LR	LR	16 22 11.2	
	comp=Z,47nm,20.4s,baz=87,slow=34						
GERES	**GERESS Array B**	**79.25**	**18**	P	**P**	**15 51 47.1**	**-0.6**
GERES	**GERESS Array B**	**79.25**	**18**	P	**P**	**15 51 47.1**	**-0.6**
	0.7nm,0.7s,baz=182,slow=5.1,SNR=4.0						
GERES				LR	LR	16 24 20.6	
	comp=Z,59nm,19.1s,baz=291,slow=34						
BRTR	**Keskin Array B**	**79.50**	**35**	P	**P**	**15 51 49.4**	**0.0**
BRTR	**Keskin Array B**	**79.50**	**35**	P	**P**	**15 51 49.4**	**0.0**
	2.1nm,1.1s,baz=192,slow=3.7,SNR=5.3						
AKASG	**Malin Array Be**	**86.00**	**26**	P	**P**	**15 52 22.2**	**-0.4**
AKASG	**Malin Array Be**	**86.00**	**26**	P	**P**	**15 52 22.2**	**-0.4**
	3.1nm,0.8s,baz=223,slow=5.7,SNR=9.2						
KBZ	**Khabaz**	**87.22**	**37**	LR	LR	16 33 49.1	
	comp=Z,34nm,18.2s,baz=28,slow=37						
NOA	**NORSAR Array B**	**89.93**	**12**	LR	LR	16 30 42.8	
	comp=Z,38nm,19.5s,baz=115,slow=34						
FINES	**FINESS Array B**	**93.68**	**18**	LR	LR	16 35 46.7	
	comp=Z,82nm,18.9s,baz=90,slow=36						
AKTO	**Aktyubinsk**	**99.48**	**38**	LR	LR	16 39 21.4	
	comp=Z,36nm,18.9s,baz=86,slow=36						
YKA	**Yellowknife Ar**	**118.67**	**329**	PKP	**PKPdf**	**15 58 28.3**	**-1.7**
YKA	**Yellowknife Ar**	**118.67**	**329**	PKP	**PKPdf**	**15 58 28.3**	**-1.7**
	0.4nm,0.8s,baz=88,slow=1.7,SNR=4.5						
ILAR	**Eielson Array**	**132.11**	**335**	PKP	**PKPdf**	**15 58 55.9**	**+0.2**
ILAR	**Eielson Array**	**132.11**	**335**	PKP	**PKPdf**	**15 58 55.9**	**+0.2**
	1.7nm,0.9s,baz=332,slow=0.7,SNR=18						
BILL	**Bilibino**	**138.89**	**0**	*e*PKPdf	**PKPdf**	**15 59 09.0**	**+0.7**
KSAR	**Wonju Array Be**	**145.82**	**62**	PKPbc	**PKPdf**	**15 59 20.2**	**-1.3**
KSRS	**Korea Array**	**145.85**	**62**	PKPbc	**PKPdf**	**15 59 20.2**	**-1.3**
	4.2nm,1.0s,baz=281,slow=5.1,SNR=11						

*IDC **05** 15:50:11.0±2.6, 4°.27S×152°.75E, h29km±17km, mb4.1/19, mb1 4.3/20, mb1mx4.3/21, mbtmp4.1/20, ML3.9/1, MS3.6/11, Ms1 3.6/11, ms1mx3.3/34, Error ellipse: s-maj=20.7km s-min=11.9km az=94.0*
*ISCJB **05** 15:50:12.2±0.3, 4°.32S±0°.04×152°.81E±0°.05, h55km, mb4.4/34, MS3.6/10, Error ellipse: s-maj=7.9km s-min=5.0km az=24.4*
*AUST **05** 15:50:13.0±0.0, 4°.25S×153°.00E, h66km, Error ellipse: s-maj=1.9km s-min=1.1km az=289.0*
*BJI **05** 15:50:15.6, 4°.30S×152°.60E, h78km, mB5.0/7, mb4.7/15, Ms5.1/1, Ms7 4.8/1*
*NEIC **05** 15:50:16.3±1.3, 4°.30S×152°.67E, h77km±12km, mb4.5/7, Error ellipse: s-maj=10.4km s-min=8.0km az=117.0*
ISC 05 15:50:14.1±0.3**, 4°.31S**±0°.05×**152°.81E**±0°.06**, h55**km**, n100,** σ**1s.55**/114**, mb4.3**/34**, MS3.5**/10**, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.55**	**228**	*e*P	**Pn**	**15 52 03.5**	**+1.9**
PMG				Sn	**Sn**	**15 53 25.7**	**-0.3**
PMG	**Port Moresby**	**7.55**	**228**	Pn	**Pn**	**15 52 02.7**	**+1.1**
	11nm,0.3s,baz=61,slow=8.5,SNR=35						
PMG				Sn	**Sn**	**15 53 25.7**	**-0.3**
	2.4nm,0.3s,baz=139,slow=20,SNR=3.5						
HNR	**Honiara**	**8.73**	**126**	*e*P	Pn	15 52 21.6	+3.9
HNR				Sn	**Sn**	**15 53 53.0**	**-1.7**
HNR	**Honiara**	**8.73**	**126**	Pn	**Pn**	**15 52 19.4**	**+1.7**
	8.1nm,0.3s,baz=174,slow=3.0,SNR=5.8						
HNR				Sn	**Sn**	**15 53 53.0**	**-1.7**
	2.6nm,0.3s,baz=201,slow=17,SNR=2.0						
PATS	**Pohnpei**	**12.36**	**26**	P	**Pn**	**15 53 06.1**	**-1.3**
	baz=12,SNR=4.2						
MTSU	**Mount Surprise**	**16.06**	**210**	P	**P**	**15 54 01.0**	**+2.1**
	baz=16,SNR=7.5						
CTA	**Charters Tower**	**16.93**	**202**	Pn	**Pn**	**15 54 07.8**	**+0.4**
CTA	**Charters Tower**	**16.93**	**202**	Pn	**Pn**	**15 54 07.8**	**+0.4**
	0.3nm,0.3s,baz=19,slow=13,SNR=4.2						
CTA				LR	LR	15 59 37.7	
	comp=Z,238nm,21.6s,baz=32,slow=33						
GUMO	**Guam**	**19.45**	**336**	LR	LR	16 00 21.4	
	comp=Z,127nm,20.1s,baz=38,slow=32						
QIS	**Mount Isa**	**20.64**	**217**	P	**P**	**15 54 49.6**	**+0.4**
	baz=21,SNR=9.0						
PALU	**Palau**	**21.65**	**302**	P	**P**	**15 55 01.3**	**+1.2**
	baz=22,SNR=5.1						
KDU	**Kakadu**	**21.75**	**246**	P	**P**	**15 54 59.5**	**-1.6**
	baz=22,SNR=18						
DZM	**Mont Dzumac**	**22.06**	**144**	P	**P**	**15 55 05.2**	**+0.7**
DZM	**Mont Dzumac**	**22.06**	**144**	P	**P**	**15 55 05.2**	**+0.7**
	5.7nm,0.6s,baz=260,slow=11,SNR=8.6						
DZM				LR	LR	16 02 28.4	
	comp=Z,168nm,21.5s,baz=308,slow=33						
RMQ	**Roma**	**22.39**	**190**	P	**P**	**15 55 08.6**	**+0.5**
	baz=23,SNR=4.7						
MTN	**Manton Dam**	**23.03**	**247**	P	**P**	**15 55 14.6**	**-0.2**
	baz=23,SNR=5.4						
QLP	**Quilpie**	**23.62**	**199**	P	**P**	**15 55 20.7**	**+0.4**
	baz=24,SNR=12						
WRAB	**Tennant Creek**	**23.76**	**228**	*e*P	**P**	**15 55 20.4**	**-1.3**
	17nm,0.6s						
WRA	**Warramunga Arr**	**23.78**	**228**	P	**P**	**15 55 20.6**	**-1.2**
WRA				PcP	**PcP**	**15 59 04.6**	**+0.2**
WRA				S	**S**	**15 59 31.5**	**-2.2**
WRA				ScP	**ScP**	**16 02 40.1**	**+1.8**
WRA	**Warramunga Arr**	**23.78**	**228**	P	**P**	**15 55 20.6**	**-1.2**
	7.7nm,0.4s,baz=52,slow=10,SNR=85						
WRA				PcP	**PcP**	**15 59 04.6**	**+0.2**
	1.7nm,0.6s,baz=52,slow=2.6,SNR=6.1						
WRA				S	**S**	**15 59 31.5**	**-2.2**
	2.1nm,0.9s,baz=54,slow=16,SNR=4.9						
WRA				ScP	**ScP**	**16 02 40.1**	**+1.8**
	1.5nm,0.9s,baz=54,slow=3.1,SNR=7.8						
KNRA	**Kununurra**	**26.20**	**243**	P	**P**	**15 55 44.7**	**+0.8**
	baz=26,SNR=14						
AS31	**Alice Springs**	**26.52**	**222**	*e*P	**P**	**15 55 45.3**	**-1.4**
ASAR	**Alice Springs**	**26.52**	**222**	P	**P**	**15 55 45.6**	**-1.1**
ASAR				PcP	**PcP**	**15 59 10.9**	**+0.4**
ASAR				S	**S**	**16 00 13.9**	**-3.3**
ASAR				ScP	**ScP**	**16 02 48.5**	**+2.5**
ASAR	**Alice Springs**	**26.52**	**222**	P	**P**	**15 55 45.6**	**-1.1**
	2.3nm,0.5s,baz=59,slow=8.6,SNR=62						
ASAR				PcP	**PcP**	**15 59 10.9**	**+0.4**
	0.9nm,0.6s,baz=47,slow=3.2,SNR=4.6						
ASAR				S	**S**	**16 00 13.9**	**-3.3**
	0.6nm,0.8s,baz=47,slow=15,SNR=4.5						
ASAR				ScP	**ScP**	**16 02 48.5**	**+2.5**
	1.0nm,0.9s,baz=58,slow=3.0,SNR=6.5						
ASAR				LR	LR	16 06 21.3	
	comp=Z,155nm,20.8s,baz=110,slow=37						
STKA	**Stephens Creek**	**29.38**	**200**	P	**P**	**15 56 10.8**	**-1.3**
STKA				ScP	**ScP**	**16 02 58.2**	**+3.6**
STKA	**Stephens Creek**	**29.38**	**200**	P	**P**	**15 56 10.8**	**-1.3**
	1.8nm,0.7s,baz=28,slow=12,SNR=5.3						
STKA				ScP	**ScP**	**16 02 58.2**	**+3.6**
	6.5nm,1.1s,baz=21,slow=5.7,SNR=5.7						
STKA				LR	LR	16 08 18.0	
	comp=Z,117nm,18.6s,baz=25,slow=37						
STKA	**Stephens Creek**	**29.38**	**200**	P	**P**	**15 56 11.3**	**-0.8**
	baz=30,SNR=3.8						
FITZ	**Fitzroy Crossi**	**29.90**	**241**	P	**P**	**15 56 15.3**	**-1.6**
FITZ	**Fitzroy Crossi**	**29.90**	**241**	P	**P**	**15 56 15.3**	**-1.6**
	3.6nm,0.7s,baz=60,slow=7.8,SNR=9.1						
FITZ	**Fitzroy Crossi**	**29.90**	**241**	P	**P**	**15 56 15.6**	**-1.3**
	baz=30,SNR=10						
FORT	**Forrest**	**35.17**	**219**	P	**P**	**15 57 01.9**	**-1.0**
	baz=35,SNR=13						

MBWA	Marble Bar	36.22	240	eP	P	15 57 09.8	-2.2
MEEK	Meekatharra	39.51	232	P	P	15 57 38.5	-1.2
	baz=40,SNR=11						
RPZ	Rata Peaks	42.43	160	LR	LR	16 13 05.7	
	comp=Z,442nm,18.1s,baz=41,slow=32						
JNU	Nakatsue	42.63	332	P	P	15 58 04.5	-0.8
JNU	Nakatsue	42.63	332	P	P	15 58 04.5	-0.8
	14nm,0.8s,baz=150,slow=8.1,SNR=5.6						
JNU				LR	LR	16 12 42.3	
	comp=Z,22nm,19.9s,baz=29,slow=32						
MORW	Morawa	42.66	231	P	P	15 58 04.1	-1.5
	baz=43,SNR=4.2						
MJAR	Matsushiro Arr	42.87	343	P	P	15 58 05.9	-1.2
MJAR	Matsushiro Arr	42.87	343	P	P	15 58 05.9	-1.2
	0.8nm,0.6s,baz=163,slow=6.7,SNR=5.6						
MJAR				LR	LR	16 13 36.8	
	comp=Z,47nm,20.0s,baz=15,slow=33						
KSRS	Korea Array	47.57	333	P	P	15 58 44.6	+0.3
	3.8nm,0.9s,baz=153,slow=8.1,SNR=18						
KSAR	Wonju Array Be	47.57	333	P	P	15 58 44.6	+0.3
INCN	Inchon	48.18	332	eP	P	15 58 49.6	+0.5
	40nm,1.1s						
NJ2	Nanjing	48.47	321	eP	P	15 58 52.8	+1.4
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
ASAJ	Asahikawa	49.07	350	LR	LR	16 17 19.1	
	comp=Z,38nm,18.4s,baz=351,slow=33						
USRK	Ussuriysk Arra	51.78	341	P	P	15 59 16.3	+0.1
	comp=Z,2.6nm,0.8s,baz=176,slow=6.8,SNR=9.6						
MDJ	Mudanjiang	52.97	339	P	P	15 59 19.6	-5.4
MDJ				pP	pP	15 59 37.0	-2.7
MDJ				sP	sP	15 59 45.3	-0.7
MDJ				PcP	PcP	16 00 28.3	-4.9
MDJ				S	S	16 06 51.6	+1.1
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,57nm,11.1s						
MDJ				LR	LR		
	comp=N,16nm,36.4s						
MDJ				LR	LR		
	comp=E,29nm,36.4s						
MDJ				LR	LR		
	comp=Z,30nm,32.5s						
GYA	Guiyang	54.10	307	eP	P	15 59 35.0	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	56.27	316	P	P	15 59 56.8	+7.5
KMI	Kunming	56.72	304	P	P	15 59 54.5	+1.7
KMI				pP	pP	16 00 14.9	+7.2
KMI				sP	sP	16 00 23.5	+10
KMI				pmax	pmax		
	comp=Z,8.0nm,1.6s						
KMI				pmax	pmax		
	comp=Z,84nm,4.8s						
PEA0B	Petropavlovsk-	57.35	4	eP	P	15 59 57.3	+0.8
PETK	Petropavlovsk-	57.35	4	P	P	15 59 57.0	+0.5
PETK	Petropavlovsk-	57.35	4	P	P	15 59 57.0	+0.5
	comp=Z,3.9nm,0.6s,baz=181,slow=7.2,SNR=25						
PETK				LR	LR	16 20 34.7	
	comp=Z,46nm,20.3s,baz=79,slow=32						
CMAR	Chiang Mai Arr	57.68	295	P	P	16 00 01.9	+2.5
CMAR	Chiang Mai Arr	57.68	295	P	P	16 00 01.9	+2.5
	comp=Z,0.8nm,0.8s,baz=119,slow=5.6,SNR=4.9						
FX1	Attu Island--F	59.52	14	eP	P	16 00 12.0	+0.5
LZH	Lanzhou	60.88	316	eP	P	16 00 25.0	+3.5
LZH				pP	pP	16 00 45.6	+9.1
LZH				sP	sP	16 00 54.6	+12
LZH				pmax	pmax		
	comp=Z,14nm,1.3s						
GTA	Gaotai	65.30	317	eP	P	16 00 48.5	-2.2
GTA				pP	pP	16 01 07.7	+1.9
GTA				sP	sP	16 01 17.1	+5.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	65.91	328	P	P	16 00 54.7	+0.3
SONM	Songino Array	65.91	328	P	P	16 00 54.7	+0.3
	comp=Z,1.5nm,0.5s,baz=140,slow=4.8,SNR=14						
VNDA	Vanda	73.32	178	P	P	16 01 41.1	+1.7
VNDA	Vanda	73.32	178	P	P	16 01 41.1	+1.7
	comp=Z,1.9nm,0.7s,baz=327,slow=7.9,SNR=11						
SBA	Scott Base	73.86	177	P	P	16 01 45.2	+2.6
	comp=Z,3.3nm,1.0s						
WMQ	Urumqi	75.39	317	eP	P	16 01 52.7	+0.6
SML	Sawmill	79.67	24	eP	P	16 02 15.7	+0.1
	comp=Z,0.9nm,0.5s						
TRF	Thorofare Moun	79.75	22	eP	P	16 02 14.4	-1.7
	comp=Z,3.4nm,0.7s						
MKAR	Makanchi Array	79.96	319	P	P	16 02 17.4	-0.1
MKAR	Makanchi Array	79.96	319	P	P	16 02 17.4	-0.1
	comp=Z,0.6nm,0.4s,baz=104,slow=6.1,SNR=21						
MCK	McKinley	80.41	23	eP	P	16 02 18.2	-1.3
	comp=Z,17nm,1.3s						
ZALV	Zalesovo Beam	80.75	326	P	P	16 02 20.8	-0.7
ZALV	Zalesovo Beam	80.75	326	P	P	16 02 20.8	-0.7
	comp=Z,1.1nm,0.5s,baz=102,slow=6.5,SNR=6.8						
ILAR	Eielson Array	81.70	22	P	P	16 02 24.9	-1.4
ILAR	Eielson Array	81.70	22	P	P	16 02 24.9	-1.4
	comp=Z,3.6nm,0.8s,baz=251,slow=5.5,SNR=42						
KSH	Kashi	82.62	311	eP	P	16 02 25.3	-6.6
KSH				ePcP	PcP	16 02 32.7	-4.1
KSH				epP	pP	16 02 45.3	-2.2
KSH				esP	sP	16 02 53.4	-0.2
KSH				ePP	PP	16 05 32.5	-10
KSH				eS	S	16 12 25.7	-20
KSH	Kashi	82.62	311	eSKS	S	16 12 32.2	-13
KSH	Kashi	82.62	311	eSS	SS	16 17 43.3	-25
KSH				pmax	pmax		
	comp=Z,210nm,3.5s						
KSH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSH				LR	LR		
	comp=N,180nm,9.4s						
KSH				LR	LR		
	comp=E,250nm,4.5s						
KSH				LR	LR		
	comp=Z,400nm,4.2s						
EGAK	Eagle	83.91	23	eP	P	16 02 38.0	+0.3
	comp=Z,3.3nm,0.7s						
DIB	Dawson Inlet,	84.35	36	T	T	17 35 44.5	
	SNR=28						
MAW	Mawson	86.02	203	P	P	16 02 48.3	0.0
MAW	Mawson	86.02	203	P	P	16 02 48.3	0.0
	comp=Z,1.5nm,0.6s,baz=81,slow=8.6,SNR=8.2						
NVAR	Mina Array Bea	91.78	52	P	P	16 03 15.9	-0.6
NVAR	Mina Array Bea	91.78	52	P	P	16 03 15.9	-0.6
	comp=Z,0.5nm,0.5s,baz=260,slow=5.0,SNR=2.9						
NVAR				LR	LR	16 39 02.5	
	comp=Z,92nm,18.7s,baz=39,slow=32						
YKA	Yellowknife Ar	94.99	28	P	P	16 03 29.9	-0.5
YKA	Yellowknife Ar	94.99	28	P	P	16 03 29.9	-0.5
	comp=Z,0.9nm,0.6s,baz=272,slow=4.8,SNR=6.7						
PDAR	Pinedale Array	98.51	48	P	P	16 03 45.5	-1.8
PDAR				PKiKP	PKiKP	16 08 18.8	-0.2
PDAR	Pinedale Array	98.51	48	P	P	16 03 45.5	-1.8
	comp=Z,0.3nm,0.4s,baz=261,slow=3.6,SNR=3.6						
PDAR				PKiKP	PKiKP	16 08 18.8	-0.2
	comp=Z,0.5nm,0.9s,baz=284,slow=3.6,SNR=3.7						
ARCES	ARCESS Array B	106.40	343	PKiKP	PKiKP	16 08 32.1	-0.1
ARCES	ARCESS Array B	106.40	343	PKiKP	PKiKP	16 08 32.1	-0.1
	comp=Z,4.2nm,1.0s,baz=66,slow=1.1,SNR=4.0						
AKASG	Malin Array Be	114.10	325	PKP	PKPdf	16 08 46.4	-0.8
AKASG	Malin Array Be	114.10	325	PKP	PKPdf	16 08 46.4	-0.8
	comp=Z,1.0nm,0.4s,baz=49,slow=2.5,SNR=6.7						
GERES	GERESS Array B	123.64	329	PKP	PKPdf	16 09 05.6	-0.2
GERES	GERESS Array B	123.64	329	PKP	PKPdf	16 09 05.6	-0.2
	comp=Z,1.5nm,0.5s,baz=64,slow=2.3,SNR=12						
DAVOX	Davos/Dischmat	126.94	329	PKP	PKPdf	16 09 12.1	-0.2
DAVOX	Davos/Dischmat	126.94	329	PKP	PKPdf	16 09 12.1	-0.2
	comp=Z,2.8nm,0.5s,baz=180,slow=3.0,SNR=6.0						
LPAZ	La Paz	134.64	118	ePKPdf	PKPdf	16 09 29.2	+1.0
LPAZ	La Paz	134.64	118	PKP	PKPdf	16 09 29.3	+1.0
	comp=Z,4.0nm,0.7s,baz=336,slow=1.2,SNR=15						
TOA0	Torodi Ar. Sit	150.16	289	ePKPbc	PKPbc	16 09 59.0	-0.9
TORD	Torodi Ar. Bea	150.16	289	PKP	PKPdf	16 09 54.5	-0.3
TORD				PKPbc	PKPbc	16 09 59.4	-0.6
TORD	Torodi Ar. Bea	150.16	289	PKP	PKPdf	16 09 54.5	-0.3
	comp=Z,2.6nm,0.5s,baz=55,slow=1.4,SNR=3.3						
TORD				PKPbc	PKPbc	16 09 59.4	-0.6
	comp=Z,6.5nm,0.7s,baz=62,slow=1.9,SNR=61						
BDFB	Brasilia	151.41	134	PKPbc	PKPbc	16 10 03.6	+0.6
BDFB	Brasilia	151.41	134	PKPbc	PKPbc	16 10 03.6	+0.6
	comp=Z,9.5nm,0.4s,baz=204,slow=3.5,SNR=15						

IDC 05 16:07:34.2±9.3**, 6°.50S**×**155°.06E, h368**^{km}±89^{km}**, mb3.1**/9**, mb1 3.3**/9**, mb1mx3.1**/19**, mbtmp3.1**/9**, Error ellipse: s-maj=43.7km s-min=20.8km az=76.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.16	234	P	P	16 12 19.0	+0.2
	1.1nm,0.5s,baz=58,slow=9.3,SNR=21						
WRA				PcP	PcP	16 15 48.2	-0.3
	0.5nm,1.0s,baz=60,slow=2.8,SNR=4.7						
ASAR	Alice Springs	26.55	228	P	P	16 12 40.3	+0.1
	1.2nm,0.4s,baz=57,slow=9.4,SNR=50						
FITZ	Fitzroy Crossi	30.92	245	P	P	16 13 17.5	-1.1
	1.2nm,0.4s,baz=55,slow=8.6,SNR=9.2						
CMAR	Chiang Mai Arr	60.63	295	P	P	16 17 08.4	+0.3
	0.7nm,0.7s,baz=116,slow=5.3,SNR=8.0						
SONM	Songino Array	68.96	327	P	P	16 18 01.6	+0.8
	0.2nm,0.8s,baz=134,slow=6.2,SNR=2.9						
VNDA	Vanda	71.07	178	P	P	16 18 13.3	+0.4
	0.3nm,0.7s,baz=324,slow=8.7,SNR=2.7						
ILAR	Eielson Array	82.89	21	P	P	16 19 17.6	-0.7
	0.4nm,0.8s,baz=253,slow=0.9,SNR=4.9						
MKAR	Makanchi Array	83.08	319	P	P	16 19 19.7	0.0
	0.9nm,0.6s,baz=102,slow=4.2,SNR=11						
ZALV	Zalesovo Beam	83.81	326	P	P	16 19 22.3	-0.8
	0.6nm,0.4s,baz=111,slow=4.5,SNR=4.0						
TORD	Torodi Ar. Bea	152.96	286	PKPbc	PKPbc	16 26 48.8	-0.8
	0.4nm,0.7s,baz=71,slow=2.3,SNR=2.7						

*IDC **05** 16:10:58.0±0.9, 3°.14S×81°.78W, h0^{km}, mb3.9/8, mb1 4.3/11, mb1mx4.1/23, mbtmp4.0/11, ML4.4/3, MS3.8/6, Ms1 3.8/6, ms1mx3.5/24, Error ellipse: s-maj=48.8km s-min=15.1km az=51.0*

*ISCJB **05** 16:11:01.4±0.4, 3°.21S±0°.05×81°.81W±0°.06, h33^{km}, mb4.2/22, MS4.0/6, Error ellipse: s-maj=9.6km s-min=6.0km az=146.3*

*NEIC **05** 16:11:02.2±0.4, 3°.21S×81°.75W, mb4.5/16, Error ellipse: s-maj=13.6km s-min=6.8km az=54.0*

NEIC Felt at Tumbes.

ISC 05 16:11:02.3±0.6**, 3°.27S**±0°.06×**81°.80W**±0°.09**, h31**^{km}±4^{km}**, h30**^{km}**:pP-P, n243,** σ1^{s}**19**/257**, mb4.4**/22**, MS3.9**/6**, 93C-71D, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	Otavalo	4.83	44	ePn	Pn	16 12 11.9	-1.4
OTAV				eSn	Sn	16 13 08.9	+0.5
ATAH	Atahualpa	5.12	139	Pn	Pn	16 12 18.9	+1.6
ATAH				Sn	Sn	16 13 18.8	+3.1
ATAH	Atahualpa	5.12	139	Pn	Pn	16 12 18.9	+1.6
	8.0nm,0.3s,baz=331,slow=8.7,SNR=39						
ATAH				Sn	Sn	16 13 18.8	+3.1
	33nm,0.3s,baz=160,slow=23,SNR=12						
NNA	Nana	9.96	151	P	Pn	16 13 22.9	-0.5
	18nm,0.4s						
NNA				Sn	Sn	16 15 11.3	-2.9
NNA	Nana	9.96	151	Pn	Pn	16 13 23.8	+0.4
	7.6nm,0.3s,baz=319,slow=13,SNR=7.8						
NNA				Sn	Sn	16 15 11.3	-2.9
	6.7nm,0.3s,baz=225,slow=17,SNR=5.3						
SDV	Santo Domingo	16.42	43	eP	Pn	16 14 51.0	+0.2
	0.6nm,1.0s						
LPAZ	La Paz	18.66	135	eP	Pn	16 15 19.4	+0.5
	12nm,0.8s						
LPAZ	La Paz	18.66	135	P	Pn	16 15 19.8	+0.9
	0.5nm,0.3s,baz=316,slow=11,SNR=18						
LPAZ				LR	LR	16 23 31.0	
	comp=Z,413nm,18.8s,baz=141,slow=40						
SAML	Samuel	19.34	108	eP	P	16 15 23.3	-2.1
	54nm,1.1s						
SIV	San Ignacio	23.99	123	P	P	16 16 15.7	+1.2
SIV	San Ignacio	23.99	123	P	P	16 16 15.7	+1.2
	2.1nm,0.6s,baz=308,slow=9.3,SNR=7.8						
TEIG	Tepich	24.20	345	LR	LR	16 24 44.9	
	comp=Z,122nm,20.0s,baz=263,slow=34						
CPUP	Villa Florida	32.81	137	LR	LR	16 32 48.4	
	comp=Z,149nm,21.9s,baz=142,slow=40						
BDFB	Brasilia	35.45	113	LR	LR	16 34 09.5	
	comp=Z,175nm,21.9s,baz=48,slow=39						
532A	Rocksprings	37.45	334	⇓P	P	16 18 12.8	-0.3
	baz=38						
530A	J-C Ranch, Com	38.12	332	⇑P	P	16 18 17.9	-0.8
	baz=38						
628A	Black Gap, Mar	38.33	330	⇑P	P	16 18 21.2	+0.7
	baz=38						
529A	Stev Forest Ra	38.52	331	⇓P	P	16 18 22.7	+0.5
	baz=39						
TXAR	Lajitas Array	38.61	329	P	P	16 18 23.4	+0.5
TXAR				PcP	PcP	16 20 35.9	+0.9
TXAR	Lajitas Array	38.61	329	P	P	16 18 23.5	+0.5
	0.5nm,0.8s,baz=148,slow=12,SNR=3.9						
TXAR				PcP	PcP	16 20 35.9	+0.9
	0.4nm,0.7s,baz=132,slow=3.8,SNR=3.2						
429A	Davenport Ranc	38.78	332	⇑P	P	16 18 23.9	-0.4
	baz=39						
528A	Cox Ranch, San	38.83	330	⇑P	P	16 18 25.0	+0.2
	baz=39						
626A	Big Bend Ranch	39.03	328	⇓P	P	16 18 27.1	+0.7
	baz=39						
527A	Woodward Ranch	39.23	329	⇓P	P	16 18 28.9	+0.7
	baz=39						
526A	Mary Lane Ranc	39.41	329	⇓P	P	16 18 30.5	+0.8
	baz=40						
329A	Wagon Wheel Ra	39.54	332	⇑P	P	16 18 31.1	+0.4
	baz=40,SNR=6.7						
TZTN	Tazewell	39.64	358	P	P	16 18 33.1	+1.8
	52nm,0.9s						
427A	Hayter Ranch,	39.70	330	⇑P	P	16 18 32.3	+0.3
	baz=40						
328A	Wristen Ranch,	39.84	331	⇓P	P	16 18 33.5	+0.3
	baz=40						
426A	McDonald Obser	39.87	329	⇑P	P	16 18 34.4	+0.8
	baz=40						
Z32A	Haskell	40.03	337	⇓P	P	16 18 34.0	-0.7
	baz=40						
326A	Caldwell Ranch	40.36	330	⇓P	P	16 18 38.5	+0.9
	baz=40,SNR=6.8						
425A	Indio Mountain	40.45	329	⇓P	P	16 18 39.3	+0.9
	baz=41,SNR=7.7						
Z30A	Sanderson Ranc	40.69	335	⇑P	P	16 18 39.5	-0.7
	baz=41						
325A	Bean Ranch, Si	40.91	329	⇓P	P	16 18 43.2	+1.0
	baz=41						
Y31A	Rekieta Farm,	40.92	336	⇑P	P	16 18 43.1	+1.0
	baz=41,SNR=6.3						
WMOK	Wichita Mounta	41.04	339	eP	P	16 18 42.4	-0.5
	9.9nm,1.1s						
226B	Tecolote Peak,	41.07	331	⇓P	P	16 18 44.2	+0.8
	baz=41						
Y30A	Stafford Cattl	41.11	336	⇑P	P	16 18 43.3	-0.2
	baz=41						
TUL1	Tulsa	41.12	343	⇓P	P	16 18 43.4	-0.1
	baz=41						
324A	Moseley Ranch,	41.23	329	⇑P	P	16 18 45.3	+0.6
	baz=41,SNR=5.8						
X31A	McDonald Ranch	41.40	337	⇑P	P	16 18 45.3	-0.6
	baz=42						
225A	Deer Hill, Car	41.42	330	⇓P	P	16 18 47.0	+0.6
	baz=42						
X30A	Coker Ranch, T	41.59	336	⇓P	P	16 18 47.4	-0.2
	baz=42						
Z27A	Tatum	41.64	333	⇑P	P	16 18 48.8	+0.8
	baz=42,SNR=5.3						
224A	Cornudas Mount	41.75	329	⇑P	P	16 18 49.9	+0.9
	baz=42						
125A	Gardner Draw,	41.79	331	⇑P	P	16 18 49.7	+0.5
	baz=42						
FVM	French Village	41.82	350	eP	P	16 18 46.9	-2.4
	4.6nm,0.8s						
X29A	Tulia	41.93	335	⇑P	P	16 18 49.4	-1.0
	baz=42						
Z26A	Caprock	41.96	332	⇑P	P	16 18 51.6	+1.0
	baz=42,SNR=10.0						
MSTX	Muleshoe	41.99	334	⇑P	P	16 18 50.8	-0.1
	baz=42						
Y27A	Causey	42.09	333	⇓P	P	16 18 51.8	0.0
	baz=42						
124A	Stringfield Ra	42.22	330	⇓P	P	16 18 54.6	+1.7
	baz=42						
Z25A	Roswell	42.32	331	⇑P	P	16 18 54.6	+1.0
	baz=42						
V31A	Spring Creek L	42.35	338	⇓P	P	16 18 54.1	+0.4
	baz=42						
Y26A	Elida	42.43	332	⇓P	P	16 18 55.4	+1.0
	baz=43						
222A	Williams Famil	42.60	328	⇓P	P	16 18 57.6	+1.6
	baz=43,SNR=5.8						
Z24A	Sheeppen Canyo	42.68	330	⇑P	P	16 18 57.8	+1.2
	baz=43,SNR=6.0						
320A	Kipp Ranch, An	42.80	325	⇓P	P	16 19 00.0	+2.4
	baz=43						
Y25A	Mesa, Roswell	42.83	332	⇓P	P	16 18 58.8	+1.0
	baz=43						
X26A	CR and CF Fran	42.94	333	⇑P	P	16 18 59.4	+0.8
	baz=43						
W27A	Bowe Ranch, En	43.04	334	⇓P	P	16 18 59.5	0.0
	baz=43						
Z23A	Rita Site, Whi	43.06	329	⇑P	P	16 19 01.2	+1.6
	baz=43						
Y24A	Capitan	43.19	331	⇑P	P	16 19 01.8	+1.1
	baz=43						
220A	Playas Peak, P	43.23	326	⇑P	P	16 19 02.6	+1.6
	baz=43						
319A	Douglas	43.26	325	⇑P	P	16 19 03.3	+2.0
	baz=43						
121A	Cookes Peak, D	43.30	327	⇑P	P	16 19 03.6	+2.0
	baz=43						
U30A	WK&E Inc. Balk	43.33	338	⇓P	P	16 19 02.0	+0.3
	baz=44						
Z22A	Elephant Butte	43.43	329	⇓P	P	16 19 04.2	+1.6
	baz=44,SNR=7.9						
T31A	Randall Ranch,	43.47	339	⇑P	P	16 19 03.2	+0.4
	baz=44						
U29A	Oasis Ranch, S	43.49	337	⇓P	P	16 19 03.2	+0.2
	baz=44						
Y23A	Lovelace Mesa,	43.50	330	⇑P	P	16 19 04.4	+1.1
	baz=44						
X24A	Lazy VL Ranch,	43.71	331	⇑P	P	16 19 05.5	+0.5
	baz=44						
120A	U Bar Ranch, L	43.77	327	⇑P	P	16 19 07.5	+2.1
	baz=44						
W25A	X Bar L Ranch,	43.79	333	⇓P	P	16 19 06.3	+0.8
	baz=44						
BNM	Barren Site	43.96	330	eP	P	16 19 08.2	+1.2
	4.2nm,1.1s						
Y22A	Socorro	43.96	329	⇓P	P	16 19 08.8	+1.9
	baz=44						
V26A	Tequesquite Ra	43.98	334	⇑P	P	16 19 07.9	+0.9
	baz=44						
X23A	Hourglass Bar	44.09	331	⇑P	P	16 19 09.5	+1.6
	baz=44						
U27A	Thompson Grove	44.09	335	⇓P	P	16 19 08.7	+0.8
	baz=44						
T29A	Hugoton	44.12	337	⇓P	P	16 19 09.2	+1.2
	baz=44						
Z20A	Nine Sixteen R	44.18	327	⇓P	P	16 19 09.8	+1.1
	baz=44						
W24A	Lazy 6 Ranch,	44.22	332	⇑P	P	16 19 10.1	+1.1
	baz=44						
V25A	Rancho No Teng	44.38	333	⇑P	P	16 19 11.3	+1.0
	baz=44,SNR=7.5						
Y21A	Point of Rocks	44.38	329	⇓P	P	16 19 13.0	+2.6
	baz=44						
U26A	Atchley Ranch,	44.46	334	⇓P	P	16 19 11.7	+0.7
	baz=45						
S29A	Ulysses	44.46	338	⇓P	P	16 19 11.8	+1.1
	baz=45						
ANMO	Albuquerque	44.51	331	eP	P	16 19 12.1	+0.7
	8.9nm,0.9s						
W23A	Werner Place,	44.54	331	⇓P	P	16 19 13.1	+1.5
	baz=45						
V24A	Rampart Ranch,	44.58	333	⇓P	P	16 19 12.9	+0.9
	baz=45,SNR=5.7						
T27A	Campo	44.60	336	⇑P	P	16 19 13.1	+1.1
	baz=45						
Y20A	Horse Springs,	44.67	328	⇓P	P	16 19 14.2	+1.5
	baz=45						
R30A	Dighton	44.74	339	⇑P	P	16 19 14.0	+1.0
	baz=45						
U25A	Circle Dot Ran	44.75	334	⇓P	P	16 19 14.1	+0.8
	baz=45						
X21A	Alamocita Cree	44.78	329	⇑P	P	16 19 15.7	+2.1
	baz=45,SNR=7.4						
R29A	Marienthal	45.18	338	⇑P	P	16 19 17.2	+0.8
	baz=45						
X20A	Quemado	45.23	328	⇓P	P	16 19 18.8	+1.7
	baz=45						
R28A	Tribune	45.36	338	⇑P	P	16 19 18.5	+0.6
	baz=46,SNR=6.8						
T25A	Trinidad	45.38	334	⇓P	P	16 19 19.2	+1.0
	baz=46						
S26A	Kim	45.39	336	⇓P	P	16 19 18.8	+0.6
	baz=46						
V22A	San Miguel Ran	45.51	331	⇑P	P	16 19 21.3	+2.0
	baz=46						
T24A	Torres, Weston	45.60	334	⇑P	P	16 19 21.1	+1.0
	baz=46						
W20A	Ramah	45.68	329	⇑P	P	16 19 22.9	+2.2
	baz=46						
R27A	Eads	45.69	337	⇓P	P	16 19 21.5	+0.9
	baz=46						
214A	Organ Pipe Nat	45.77	322	⇓P	P	16 19 23.0	+1.8
	baz=46						
S25A	Robets Cordova	45.82	335	⇓P	P	16 19 22.8	+1.0
	baz=46						
R26A	Arlington	45.96	336	⇓P	P	16 19 23.8	+1.1
	baz=46,SNR=7.3						
X18A	Snowflake	45.99	327	⇑P	P	16 19 25.1	+2.0
	baz=46						
T23A	Casias Ranch,	46.01	333	⇓P	P	16 19 25.2	+1.9
	baz=46						
S24A	Houchin Ranch,	46.14	334	⇑P	P	16 19 25.4	+1.0
	baz=46						
R25A	Fountain Ranch	46.17	335	⇑P	P	16 19 25.8	+1.4
	baz=46						
W18A	Petrified Fore	46.32	328	⇓P	P	16 19 26.8	+1.1
	baz=46						
Q26A	Hugo	46.52	337	⇑P	P	16 19 27.2	+0.1
	baz=47						
R24A	Sanders Place,	46.59	335	⇓P	P	16 19 27.7	-0.1
	baz=47						
U20A	Newcomb	46.67	330	⇓P	P	16 19 30.3	+2.0
	baz=47						
T21A	Navajo Lake	46.67	331	⇓P	P	16 19 30.3	+1.9
	baz=47						
X16A	Lo Mia Camp, P	46.73	326	⇑P	P	16 19 31.0	+2.1
	baz=47						
Q25A	Bedland, Calha	46.81	336	⇑P	P	16 19 30.1	+0.7
	baz=47						
113A	Mohawk Valley,	46.91	322	⇑P	P	16 19 35.0	+4.9
	baz=47						
S22A	4UR Ranch, Cre	46.95	333	⇑P	P	16 19 31.9	+1.2
	baz=47						
MVCO	Mesa Verde	47.31	331	eP	P	16 19 42.0	+8.6
	5.1nm,0.8s						
WUAZ	Wupatki	47.50	327	⇓P	P	16 19 36.7	+1.8
	baz=48						
S20A	Disappointment	47.74	331	⇑P	P	16 19 38.5	+1.7
	baz=48						
P23A	Jefferson	47.86	335	⇑P	P	16 19 39.3	+1.5
	baz=48,SNR=9.3						
Q22A	Crested Butte,	47.90	333	⇑P	P	16 19 39.7	+1.6
	baz=48						
ISCO	Idaho Springs	48.12	335	eP	P	16 19 40.1	+0.3
	4.6nm,0.9s						
ISCO				e	pP	16 19 48.8	-0.3
ISCO	Idaho Springs	48.12	335	⇑P	P	16 19 40.7	+0.9
	baz=48						
S18A	Hurst Farm, Bl	48.43	330	⇑P	P	16 19 43.4	+1.3
	baz=49						
ECSD	EROS Data Cent	48.65	346	eP	P	16 19 41.6	-1.8
	6.6nm,1.1s						
IRM	Iron Mountain	48.71	323	⇑P	P	16 19 45.6	+1.5
	baz=49						
SPMN	St. Paul	49.27	350	⇓P	P	16 19 48.2	+0.1
	baz=49						
P19A	Cripple Cowboy	49.47	332	⇓P	P	16 19 51.5	+1.5
	baz=50						
N21A	Black Mountain	49.73	334	⇑P	P	16 19 54.1	+2.1
	baz=50						
BBRC	Big Bear Solar	49.86	321	⇑P	P	16 19 54.8	+1.6
	baz=50						
HEC	Hector,Ludlow	49.88	322	⇑P	P	16 19 54.4	+1.3
	baz=50						
MVU	Marysvale	50.17	329	eP	P	16 19 56.1	+0.6
	3.1nm,1.0s						
MVU				e	pP	16 20 04.7	-0.1
DAU	Daniels Canyon	51.16	331	eP	P	16 20 03.8	+0.8
	6.4nm,1.1s						
K20A	Yellowstone Ra	51.64	335	⇑P	P	16 20 06.6	+0.3
	baz=52						
J21A	Lysite	51.84	336	⇑P	P	16 20 09.3	+1.4

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time	Res
	baz=52						
R11A	**Troy Canyon, C**	**51.87**	**326**	⇑P	**P**	**16 20 09.8**	**+1.7**
	baz=52						
K19A	**Absolon Red Bu**	**51.99**	**335**	⇓P	**P**	**16 20 09.4**	**+0.5**
	baz=52						
I21A	**Big Trails, Te**	**52.17**	**337**	⇓P	**P**	**16 20 09.9**	**-0.3**
	baz=52						
PDAR	**Pinedale Array**	**52.24**	**334**	P	**P**	**16 20 10.4**	**-0.5**
PDAR	**Pinedale Array**	**52.24**	**334**	P	**P**	**16 20 10.4**	**-0.5**
	1.1nm,0.9s,baz=132,slow=8.8,SNR=5.8						
J18A	**Kendall Valley**	**52.80**	**334**	⇑P	**P**	**16 20 15.3**	**+0.3**
	baz=53						
L15A	**Malad City**	**52.93**	**332**	⇓P	**P**	**16 20 16.4**	**+0.5**
	baz=53						
H20A	**Greybull**	**53.01**	**337**	⇑P	**P**	**16 20 16.7**	**+0.3**
	baz=53						
F23A	**Volborg**	**53.09**	**339**	⇓P	**P**	**16 20 17.1**	**+0.2**
	baz=53						
L14A	**Malta**	**53.36**	**331**	⇓P	**P**	**16 20 19.0**	**-0.1**
	baz=54						
ELK	**Elko**	**53.40**	**329**	eP	**P**	**16 20 20.0**	**+0.5**
	3.0nm,1.1s						
ELK				e	**pP**	**16 20 28.6**	**-0.4**
NVAR	**Mina Array Bea**	**53.47**	**324**	P	**P**	**16 20 20.5**	**+0.5**
NVAR	**Mina Array Bea**	**53.47**	**324**	P	**P**	**16 20 20.5**	**+0.5**
	1.8nm,0.9s,baz=129,slow=7.1,SNR=8.2						
J14A	**Carey**	**54.47**	**332**	⇑P	**P**	**16 20 28.5**	**+1.3**
	baz=55						
F19A	**Roth Farm, Mol**	**54.52**	**337**	⇓P	**P**	**16 20 27.5**	**+0.1**
	baz=55						
H16A	**Russell Place,**	**54.53**	**334**	⇓P	**P**	**16 20 27.9**	**+0.3**
	baz=55						
D22A	**Cohagen**	**54.60**	**340**	⇓P	**P**	**16 20 28.6**	**+0.8**
	baz=55						
ULM	**Lac du Bonnet**	**54.67**	**349**	P	**P**	**16 20 28.2**	**0.0**
ULM	**Lac du Bonnet**	**54.67**	**349**	P	**P**	**16 20 28.2**	**0.0**
	2.9nm,0.7s,baz=188,slow=6.5,SNR=4.7						
E20A	**Meyer Farm, Mu**	**54.75**	**338**	⇑P	**P**	**16 20 29.7**	**+0.7**
	baz=55						
J13A	**Cove Ranch, Pi**	**54.84**	**331**	⇑P	**P**	**16 20 31.0**	**+1.1**
	baz=55						
F18A	**Big Timber**	**54.87**	**336**	⇑P	**P**	**16 20 30.6**	**+0.6**
	baz=55						
I14A	**Mackay**	**54.91**	**332**	⇑P	**P**	**16 20 31.4**	**+1.1**
	baz=55						
E19A	**Rath Farm, Rou**	**54.96**	**337**	⇑P	**P**	**16 20 31.1**	**+0.5**
	baz=55						
C22A	**Vida**	**55.02**	**340**	⇑P	**P**	**16 20 31.8**	**+0.9**
	baz=55						
H15A	**Lima**	**55.07**	**333**	⇑P	**P**	**16 20 33.0**	**+1.4**
	baz=55						
HLID	**Hailey**	**55.08**	**331**	⇓P	**P**	**16 20 32.7**	**+1.1**
	baz=55						
I13A	**Wildhorse Cree**	**55.21**	**332**	⇓P	**P**	**16 20 33.8**	**+1.2**
	baz=55						
F17A	**Fitzpatrick Pl**	**55.25**	**336**	⇓P	**P**	**16 20 34.1**	**+1.4**
	baz=55						
B23A	**Brockton**	**55.35**	**341**	⇑P	**P**	**16 20 34.7**	**+1.4**
	baz=56						
H14A	**Leadore**	**55.40**	**333**	⇑P	**P**	**16 20 35.2**	**+1.3**
	baz=56						
G15A	**Dillon**	**55.43**	**334**	⇑P	**P**	**16 20 35.3**	**+1.1**
	baz=56						
A24A	**Westby**	**55.45**	**342**	⇓P	**P**	**16 20 34.9**	**+0.9**
	baz=56						
C21A	**Desert Coulee**	**55.50**	**340**	⇑P	**P**	**16 20 35.1**	**+0.7**
	baz=56						
D19A	**Cripps Ranch,**	**55.59**	**338**	⇑P	**P**	**16 20 35.4**	**+0.4**
	baz=56						
MFID	**Camas Ranch**	**55.66**	**330**	⇑P	**P**	**16 20 37.0**	**+1.3**
	baz=56						
C20A	**Veseth Ranch,**	**55.73**	**339**	⇑P	**P**	**16 20 36.4**	**+0.4**
	baz=56						
H13A	**Challis**	**55.76**	**332**	⇑P	**P**	**16 20 37.7**	**+1.2**
	baz=56						
H12A	**Diamond D Ranc**	**56.03**	**332**	⇓P	**P**	**16 20 39.5**	**+1.1**
	baz=56						
C19A	**Slack Wire Ran**	**56.12**	**338**	⇑P	**P**	**16 20 39.4**	**+0.5**
	baz=56						
D16A	**Dana Ranch, Ca**	**56.52**	**336**	⇓P	**P**	**16 20 43.2**	**+1.4**
	baz=57						
B19A	**Brinkman Farms**	**56.69**	**339**	⇑P	**P**	**16 20 43.6**	**+0.7**
	baz=57						
C17A	**Wharram Farm,**	**56.70**	**337**	⇓P	**P**	**16 20 43.4**	**+0.5**
	baz=57						
F13A	**Darby**	**56.74**	**333**	⇑P	**P**	**16 20 44.5**	**+1.2**
	baz=57						
B18A	**Beardsley Farm**	**56.95**	**338**	⇑P	**P**	**16 20 45.4**	**+0.7**
	baz=57						
MSO	**Missoula**	**57.37**	**334**	⇑P	**P**	**16 20 48.7**	**+0.9**
	baz=58						
A18A	**Metzger Ranch,**	**57.41**	**338**	⇑P	**P**	**16 20 48.2**	**+0.2**
	baz=58						
B16A	**M & M Farms, S**	**57.70**	**337**	⇑P	**P**	**16 20 50.6**	**+0.5**
	baz=58						
D13A	**Huson**	**57.80**	**334**	⇑P	**P**	**16 20 51.9**	**+1.2**
	baz=58						
B15A	**Bradely Ranch,**	**57.96**	**336**	⇑P	**P**	**16 20 52.8**	**+0.9**
	baz=58						
A16A	**West Butte Ran**	**58.09**	**337**	⇓P	**P**	**16 20 53.2**	**+0.3**
	baz=58						
D12A	**Red Ives Fores**	**58.16**	**334**	⇑P	**P**	**16 20 53.7**	**+0.4**
	baz=58						
B14A	**Marquette Ranc**	**58.28**	**336**	⇑P	**P**	**16 20 54.8**	**+0.6**
	baz=58						
C13A	**Hot Springs**	**58.30**	**335**	⇓P	**P**	**16 20 55.5**	**+1.2**
	baz=58						
BSMT	**Bassoo Peak**	**58.52**	**335**	P	**P**	**16 20 57.1**	**+1.1**
	5.0nm,1.0s						
BSMT				e	**pP**	**16 21 05.3**	**-0.1**
B13A	**Whitefish**	**58.79**	**335**	⇓P	**P**	**16 20 58.3**	**+0.6**
	baz=59						
A14A	**Double T Ranch**	**58.83**	**336**	⇑P	**P**	**16 20 58.7**	**+0.7**
	baz=59						
C11A	**Tepee Creek (N**	**59.15**	**334**	⇓P	**P**	**16 21 02.4**	**+2.2**
	baz=59						
YKA	**Yellowknife Ar**	**70.16**	**344**	P	**P**	**16 22 10.9**	**-0.7**
YKA	**Yellowknife Ar**	**70.16**	**344**	P	**P**	**16 22 10.9**	**-0.7**
	0.8nm,0.9s,baz=139,slow=6.1,SNR=14						
DLBC	**Dease Lake**	**72.44**	**336**	eP	**P**	**16 22 27.2**	**+1.5**
DLBC				e	**pP**	**16 22 35.5**	**+0.1**
DBIC	**Dimbokro**	**77.44**	**82**	LR	LR	16 52 39.4	
	comp=Z,74nm,19.6s,baz=170,slow=32						
EGAK	**Eagle**	**80.39**	**338**	eP	**P**	**16 23 11.1**	**+0.6**
	6.3nm,1.1s						
ESDC	**Sonseca Array**	**82.74**	**50**	P	**P**	**16 23 24.1**	**+0.5**
ESDC	**Sonseca Array**	**82.74**	**50**	P	**P**	**16 23 24.1**	**+0.5**
	0.2nm,0.3s,baz=256,slow=5.2,SNR=4.0						
SNAA	**Sanae**	**83.44**	**162**	eP	**P**	**16 23 26.3**	**-0.2**
	7.0nm,1.0s						
SNAA				e	**pP**	**16 23 34.8**	**-1.6**
TORD	**Torodi Ar. Bea**	**84.41**	**77**	P	**P**	**16 23 32.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**84.41**	**77**	P	**P**	**16 23 32.1**	**-0.4**
	0.4nm,0.4s,baz=279,slow=5.0,SNR=6.6						
TORD				LR	LR	16 58 44.6	
	comp=Z,83nm,19.2s,baz=195,slow=34						
ABKAR	**Akbulak array**	**123.81**	**29**	ePKPdf	**PKPdf**	**16 29 57.6**	**+0.4**
ABKAR				e		16 30 06.5	
ZAA0	**Zalesovo Array**	**128.30**	**10**	ePKPdf	**PKPdf**	**16 30 05.3**	**-0.5**
ZAA0				e		16 30 13.7	
ZALV	**Zalesovo Beam**	**128.30**	**10**	PKP	**PKPdf**	**16 30 05.3**	**-0.4**
ZALV	**Zalesovo Beam**	**128.30**	**10**	PKP	**PKPdf**	**16 30 05.3**	**-0.4**
	4.2nm,0.9s,baz=318,slow=2.0,SNR=18						
USRK	**Ussuriysk Arra**	**129.51**	**329**	PKP	**PKPdf**	**16 30 08.3**	**0.0**
	0.8nm,0.6s,baz=354,slow=2.0,SNR=4.7						
KURK	**Kurchatov**	**129.92**	**16**	ePKPdf	**PKPdf**	**16 30 08.5**	**-0.4**
KURK				e		16 30 17.3	
MDJ	**Mudanjiang**	**130.41**	**331**	PKP	**PKPdf**	**16 30 09.0**	**-1.0**
MDJ				PP	**PP**	**16 32 24.1**	**+0.7**
MDJ				AMB	AMB		
	comp=Z,53nm,7.2s						
CN2	**Changchun**	**132.98**	**333**	ePKP	**PKPdf**	**16 30 13.9**	**-1.0**
MKAR	**Makanchi Array**	**134.49**	**15**	PKP	**PKPdf**	**16 30 17.3**	**-0.4**
MKAR	**Makanchi Array**	**134.49**	**15**	PKP	**PKPdf**	**16 30 17.3**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=337,slow=1.8,SNR=5.7						
SONM	**Songino Array**	**135.04**	**352**	PKP	**PKPdf**	**16 30 18.7**	**-0.2**
SONM	**Songino Array**	**135.04**	**352**	PKP	**PKPdf**	**16 30 18.7**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=349,slow=0.8,SNR=7.5						
EKS2	**Erkin-Say**	**135.13**	**26**	ePKPdf	**PKPdf**	**16 30 20.4**	**+1.3**
EKS2				e		16 30 28.9	
AAK	**Ala-Archa**	**135.46**	**25**	PKPdf	**PKPdf**	**16 30 21.0**	**+1.1**
AAK				e		16 30 29.6	
ASAR	**Alice Springs**	**136.12**	**231**	PKP	**PKPdf**	**16 30 21.4**	**-0.1**
ASAR	**Alice Springs**	**136.12**	**231**	PKP	**PKPdf**	**16 30 21.4**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=116,slow=2.5,SNR=9.3						
KSRS	**Korea Array**	**136.41**	**325**	PKP	**PKPdf**	**16 30 21.2**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=21,slow=1.9,SNR=9.1						
KSAR	**Wonju Array Be**	**136.44**	**325**	PKP	**PKPdf**	**16 30 21.2**	**-0.4**
WRA	**Warramunga Arr**	**137.68**	**235**	PKPpre	PKPpre	16 30 12.3	
WRA				PKP	**PKPdf**	**16 30 23.9**	**-0.5**
WRA	**Warramunga Arr**	**137.68**	**235**	PKhKP	PKPpre	16 30 12.3	
	comp=Z,0.4nm,0.7s,baz=264,slow=1.5,SNR=6.0						
WRA				PKP	**PKPdf**	**16 30 23.9**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=114,slow=2.4,SNR=6.7						
WMQ	**Urumqi**	**138.56**	**12**	ePKP	**PKPdf**	**16 30 24.4**	**-1.0**
HHC	**Hu-ho-hao-te**	**140.69**	**344**	⇑ePKP	**PKPdf**	**16 30 28.2**	**-1.3**
HHC				sPKP		16 30 42.6	
HHC				PP	**PP**	**16 33 31.6**	**+3.6**
HHC				PKS	**PKSdf**	**16 34 02.6**	**-2.9**
HHC				SKS	**SKSdf**	**16 37 32.9**	**-4.9**
HHC				SKKS	**SKKSac**	**16 40 17.5**	**-3.3**
HHC				SS	**SS**	**16 51 51.2**	**0.0**
HHC				AMB	AMB		
	comp=Z,100nm,4.9s						
HHC				LR	LR		
	comp=N,170nm,20.7s						
HHC				LR	LR		
	comp=E,120nm,21.0s						
HHC				LR	LR		
	comp=Z,150nm,20.9s						
LZH	**Lanzhou**	**146.93**	**352**	ePKPbc	**PKPbc**	**16 30 42.5**	**0.0**
LZH				PKPab	**PKiKP**	**16 30 45.5**	**+0.4**
LZH				pPKP	**pPKPdf**	**16 30 50.0**	**-0.8**
LZH				sPKP		16 30 54.0	
XAN	**Xi'an**	**147.79**	**343**	P	PKPab	16 30 52.9	+5.8
XAN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PYUN	**Piuthan**	**151.36**	**29**	eP	**PKPdf**	**16 30 48.6**	**+0.6**
DANN	**Dangsing**	**151.51**	**27**	eP	**PKPdf**	**16 30 49.1**	**+0.8**
	comp=Z,79nm,0.8s						
KOLN	**Koldanda**	**151.93**	**28**	eP	**PKPdf**	**16 30 48.9**	**+0.1**
KKN	**Kakani**	**152.67**	**26**	eP	**PKPdf**	**16 30 49.2**	**-0.8**
DMN	**Daman**	**152.75**	**26**	eP	**PKPdf**	**16 30 49.9**	**-0.2**
	comp=Z,9.2nm,0.7s						
PKIN	**Phulchoki**	**152.91**	**26**	eP	**PKPdf**	**16 30 49.9**	**-0.5**
PKI	**Pulchoki**	**152.92**	**26**	eP	**PKPdf**	**16 30 50.2**	**-0.3**
RAMN	**Ramite**	**153.96**	**24**	eP	**PKPdf**	**16 30 52.0**	**+0.1**
TAPN	**Taplejung**	**154.04**	**22**	eP	**PKPdf**	**16 30 52.0**	**0.0**
ODAN	**Odare**	**154.36**	**23**	eP	**PKPdf**	**16 30 52.7**	**+0.3**
CMAR	**Chiang Mai Arr**	**164.89**	**357**	PKP	**PKPdf**	**16 31 04.1**	**-0.2**
CMAR	**Chiang Mai Arr**	**164.89**	**357**	PKP	**PKPdf**	**16 31 04.1**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=326,slow=2.2,SNR=5.9						

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*SOF **05** 16:11:13.7, 41°.86N×22°.06E, h5km, MD3.8*
*BEO **05** 16:11:14.9±0.6, 41°.79N×22°.09E, h5km±2km, ML3.6/1*
*TIR **05** 16:11:14.6, 41°.89N×21°.97E, h3km, ML3.9*
*PDG **05** 16:11:14.9±0.4, 41°.88N×22°.09E, h8km, ML3.6/9, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*SKO **05** 16:11:14.2, 41°.81N×22°.07E, h20km, M3.2, ML3.7*
*IDC **05** 16:11:14.8±1.1, 41°.82N×22°.02E, h0km, mb3.7/4, mb1 3.7/8, mb1mx3.5/28, mbtmp3.6/8, ML3.2/4, MS2.9/1, Ms1 2.9/1, ms1mx2.2/41, Error ellipse: s-maj=20.2km s-min=14.1km az=147.0*
*ATH **05** 16:11:15.3, 41°.80N×22°.08E, h20km±1km, MD3.8/26*
*THE **05** 16:11:15.9, 41°.80N×22°.10E, h0km±1km, ML3.7/4, Error ellipse: s-maj=1.2km s-min=0.5km az=329.0*
*CSEM **05** 16:11:15.1±0.1, 41°.85N×22°.06E, h2km, ML3.7, Error ellipse: s-maj=2.3km s-min=2.0km az=54.0*
*PRU **05** 16:11:16.9, 41°.85N×22°.10E, h2km*
ISC 05 16:11:15.0±1.1**, 41°.85N**±0°.01×**22°.07E**±0°.01**, h3**km±8km**, n263, σ0s.98**/308**, mb3.6**/4**, 42C-27D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.49**	**285**	P	**Pg**	**16 11 24.5**	**+0.1**
SKO				S	**Sg**	**16 11 31.7**	**+1.0**
SKO	**Skopje**	**0.49**	**285**	iPg	**Pg**	**16 11 24.6**	**+0.1**
SKO				iSg	**Sg**	**16 11 31.2**	**+0.5**
SKO				eLg	Lg	16 11 31.6	
	comp=N,3μm,0.5s						
SKO				eLg	Lg	16 11 31.8	
	comp=E,4μm,0.6s						
SKO	**Skopje**	**0.49**	**285**	P	**Pg**	**16 11 24.5**	**+0.1**
SKO	**Skopje**	**0.49**	**285**	iPg	**Pg**	**16 11 25.1**	**+0.7**
SKO				eSg	**Sg**	**16 11 31.9**	**+1.2**
SKO				eLg	Lg	16 11 32.3	
	comp=E,4μm,0.6s						
VAY	**Valandovo**	**0.65**	**144**	P	**Pg**	**16 11 27.1**	**-0.3**
VAY				S	**Sg**	**16 11 35.9**	**+0.2**
VAY	**Valandovo**	**0.65**	**144**	iPg	**Pg**	**16 11 26.8**	**-0.6**
VAY				iSg	**Sg**	**16 11 35.7**	**0.0**
VAY				eLg	Lg	16 11 35.9	
	comp=E,4μm,0.6s						
VAY				eLg	Lg	16 11 36.1	
	comp=N,4μm,0.6s						
VAY	**Valandovo**	**0.65**	**144**	P	**Pg**	**16 11 27.1**	**-0.3**
VAY				S	**Sg**	**16 11 35.9**	**+0.2**
VAY				eLg	Lg	16 11 36.6	
	comp=N,4μm,0.6s						
KKB	**Krupnik**	**0.76**	**88**	iPg	**Pb**	**16 11 30.2**	**-0.6**
KKB	**Krupnik**	**0.76**	**88**	iPg	**Pb**	**16 11 30.2**	**-0.6**
GRG	**Griva**	**0.92**	**164**	P	**Pg**	**16 11 32.3**	**-0.4**
GRG				S	**Sg**	**16 11 45.3**	**+0.6**
GRG	**Griva**	**0.92**	**164**	ePN	**Pg**	**16 11 32.0**	**-0.7**
GRG	**Griva**	**0.92**	**164**	ePn	**Pg**	**16 11 32.0**	**-0.7**
GRG	**Griva**	**0.92**	**164**	P	**Pg**	**16 11 32.3**	**-0.4**
GRG				S	**Sg**	**16 11 45.3**	**+0.6**
BARS	**Barje**	**0.99**	**349**	⇑iPg	**Pg**	**16 11 33.0**	**-0.9**
BARS				eSg	**Sb**	**16 11 48.6**	**+0.4**
BARS	**Barje**	**0.99**	**349**	⇑iPg	**Pg**	**16 11 33.0**	**-0.9**
BARS				eSg	**Sb**	**16 11 48.6**	**+0.4**
BIA	**Bitola**	**1.00**	**214**	P	**Pg**	**16 11 33.8**	**-0.4**
BIA				S	**Sb**	**16 11 48.2**	**-0.4**
BIA	**Bitola**	**1.00**	**214**	iPg	**Pg**	**16 11 33.6**	**-0.6**
BIA	**Bitola**	**1.00**	**214**	P	**Pg**	**16 11 33.8**	**-0.4**
BIA				S	**Sb**	**16 11 48.2**	**-0.4**
VTS	**Vitosha**	**1.12**	**48**	P	**Pg**	**16 11 36.8**	**+0.2**
VTS				S	**Sb**	**16 11 52.4**	**+0.1**
VTS	**Vitosha**	**1.12**	**48**	⇓iPg	**Pg**	**16 11 36.7**	**+0.2**
VTS				eSg	**Sb**	**16 11 52.3**	**0.0**
VTS	**Vitosha**	**1.12**	**48**	⇓iP	**Pb**	**16 11 37.0**	**-0.3**
VTS				S	**Sg**	**16 11 51.3**	**+0.1**
VTS	**Vitosha**	**1.12**	**48**	iP	**Pb**	**16 11 36.9**	**-0.3**
VTS	**Vitosha**	**1.12**	**48**	iP	**Pb**	**16 11 36.9**	**-0.3**
VTS				S	**Sb**	**16 11 52.4**	**+0.1**
FNA	**Florina**	**1.19**	**206**	P	**Pg**	**16 11 37.2**	**-0.5**
FNA				S	**Sb**	**16 11 54.0**	**+0.1**
FNA	**Florina**	**1.19**	**206**	ePN	**Pg**	**16 11 37.2**	**-0.5**
FNA				eSN	**Sg**	**16 11 52.9**	**-0.2**
FNA	**Florina**	**1.19**	**206**	P	**Pg**	**16 11 37.2**	**-0.5**
FNA				eSn	**Sg**	**16 11 52.9**	**-0.2**
FNA				S	**Sb**	**16 11 54.0**	**+0.1**
PHP	**Peshkopia**	**1.23**	**263**	iPN	**Pg**	**16 11 37.0**	**-1.6**
PHP				iSN	**Sg**	**16 11 53.4**	**-1.2**
PHP	**Peshkopia**	**1.23**	**263**	P	**Pg**	**16 11 37.5**	**-1.1**
PHP	**Peshkopia**	**1.23**	**263**	iPn	**Pg**	**16 11 37.0**	**-1.6**
PHP	**Peshkopia**	**1.23**	**263**	P	**Pg**	**16 11 37.5**	**-1.1**
PHP				iSn	**Sg**	**16 11 53.4**	**-1.2**
MMB	**Musomiste**	**1.27**	**101**	iPg	**Pn**	**16 11 39.7**	**0.0**
MMB	**Musomiste**	**1.27**	**101**	iPg	**Pn**	**16 11 39.7**	**0.0**
SRS	**Serrai**	**1.35**	**122**	P	**Pn**	**16 11 40.5**	**-0.4**
THE	**Thessaloniki**	**1.39**	**151**	P	**Pn**	**16 11 41.0**	**-0.3**
THE	**Thessaloniki**	**1.39**	**151**	P	**Pn**	**16 11 41.0**	**-0.3**
SOH	**Sokhos**	**1.41**	**136**	P	**Pn**	**16 11 41.2**	**-0.4**
SOH				S	**Sb**	**16 12 00.6**	**+0.2**
SOH	**Sokhos**	**1.41**	**136**	ePN	**Pn**	**16 11 41.2**	**-0.4**
SOH				eSN	**Sb**	**16 12 00.5**	**+0.2**
SOH	**Sokhos**	**1.41**	**136**	P	**Pn**	**16 11 41.2**	**-0.4**
SOH				eSn	**Sb**	**16 12 00.5**	**+0.2**
NVR	**Nevrokopi**	**1.43**	**110**	P	**Pn**	**16 11 41.9**	**0.0**
NVR				S	**Sn**	**16 12 01.9**	**+0.6**
NVR	**Nevrokopi**	**1.43**	**110**	ePN	**Pn**	**16 11 42.1**	**+0.2**
NVR				eSN	**Sn**	**16 12 01.8**	**+0.5**
HORT	**Hortiatis**	**1.47**	**148**	P	**Pn**	**16 11 41.8**	**-0.7**
HORT	**Hortiatis**	**1.47**	**148**	P	**Pn**	**16 11 41.8**	**-0.7**
ZAPS	**Zavoj**	**1.48**	**16**	⇑iPn	**Pb**	**16 11 43.3**	**0.0**
ZAPS				eSn	**Sg**	**16 12 03.7**	**+1.0**
KZN	**Kozani**	**1.56**	**189**	P	**Pn**	**16 11 43.8**	**+0.1**
KZN	**Kozani**	**1.56**	**189**	ePN	**Pn**	**16 11 44.1**	**+0.4**
KZN	**Kozani**	**1.56**	**189**	P	**Pn**	**16 11 43.8**	**+0.1**
KZN	**Kozani**	**1.56**	**189**	ePn	**Pn**	**16 11 44.1**	**+0.4**
KBN	**Korca**	**1.56**	**219**	iPN	**Pb**	**16 11 44.7**	**+0.1**
KBN				iSN	**Sg**	**16 12 07.6**	**+2.5**
KBN	**Korca**	**1.56**	**219**	P	**Pn**	**16 11 43.8**	**+0.1**
KBN				S	**Sb**	**16 12 05.1**	**+0.4**
KBN	**Korca**	**1.56**	**219**	iPn	**Pb**	**16 11 44.7**	**+0.1**
KBN				S	**Sb**	**16 12 05.1**	**+0.4**
KBN				iSn	**Sg**	**16 12 07.6**	**+2.5**
BCI	**Bajram Curri**	**1.58**	**290**	iPN	**Pn**	**16 11 44.1**	**+0.1**
BCI				iSN	**Sn**	**16 12 04.1**	**-0.8**
BCI	**Bajram Curri**	**1.58**	**290**	iPn	**Pn**	**16 11 44.1**	**+0.1**
BCI				iSn	**Sn**	**16 12 04.1**	**-0.8**
NEST	**Nestorio**	**1.63**	**209**	P	**Pb**	**16 11 45.3**	**-0.4**
PUK	**Puka**	**1.64**	**278**	iPN	**Pn**	**16 11 44.9**	**+0.1**
PUK				iSN	**Sg**	**16 12 08.3**	**+0.7**
PUK	**Puka**	**1.64**	**278**	iPn	**Pn**	**16 11 44.9**	**+0.1**
PUK				iSn	**Sg**	**16 12 08.3**	**+0.7**
PGB	**Panagyurishte**	**1.71**	**65**	iP	**Pn**	**16 11 46.2**	**+0.4**
PGB	**Panagyurishte**	**1.71**	**65**	iP	**Pn**	**16 11 46.2**	**+0.4**
TIR	**Tirane**	**1.73**	**254**	ePn	**Pb**	**16 11 47.4**	**0.0**
TIR	**Tirane**	**1.73**	**254**	ePn	**Pb**	**16 11 47.4**	**0.0**
PVY	**Plav**	**1.74**	**296**	⇓iPn	**Pn**	**16 11 46.2**	**0.0**
PVY				eSn	**Sg**	**16 12 11.4**	**+0.5**
LIT	**Litokhoron**	**1.77**	**170**	P	**Pn**	**16 11 46.4**	**-0.2**
LIT	**Litokhoron**	**1.77**	**170**	ePN	**Pn**	**16 11 46.7**	**+0.1**
LIT				eSN	**Sn**	**16 12 08.5**	**-1.2**
LIT	**Litokhoron**	**1.77**	**170**	P	**Pn**	**16 11 46.4**	**-0.2**
LIT	**Litokhoron**	**1.77**	**170**	ePn	**Pn**	**16 11 46.7**	**+0.1**
LIT				eSn	**Sn**	**16 12 08.5**	**-1.2**
PLG	**Polygyros**	**1.80**	**144**	P	**Pn**	**16 11 47.0**	**0.0**
PLG	**Polygyros**	**1.80**	**144**	ePN	**Pn**	**16 11 47.3**	**+0.3**
PLG	**Polygyros**	**1.80**	**144**	ePn	**Pn**	**16 11 47.3**	**+0.3**
BEY	**Berane**	**1.91**	**303**	⇓iPn	**Pn**	**16 11 48.6**	**0.0**
BEY				eSn	**Sb**	**16 12 15.2**	**+0.3**
IVA	**Berane**	**1.91**	**303**	⇓iPn	**Pn**	**16 11 48.6**	**0.0**
IVA				eSn	**Sb**	**16 12 15.2**	**+0.3**
MPEP	**Malo Peshtene**	**1.95**	**39**	Pg	**Pg**	**16 11 52.0**	**-0.3**
MPEP				iP	**Pn**	**16 11 48.8**	**-0.2**
PLD	**Plovdiv**	**1.98**	**82**	P	**Pn**	**16 11 49.9**	**+0.5**
PLD				S	**Sb**	**16 12 16.3**	**-0.4**
PLD	**Plovdiv**	**1.98**	**82**	P	**Pn**	**16 11 50.0**	**+0.5**
PLD	**Plovdiv**	**1.98**	**82**	P	**Pn**	**16 11 49.9**	**+0.5**
PLD				S	**Sb**	**16 12 16.3**	**-0.4**
BOLS	**Boljevac**	**1.98**	**358**	ePn	**Pn**	**16 11 50.4**	**+0.9**
BOLS				eSn	**Sb**	**16 12 16.7**	**-0.1**
BOLS	**Boljevac**	**1.98**	**358**	ePn	**Pn**	**16 11 50.4**	**+0.9**
BOLS				eSn	**Sb**	**16 12 16.7**	**-0.1**
RZN	**Rozhen**	**1.98**	**94**	iP	**Pn**	**16 11 50.0**	**+0.3**
RZN	**Rozhen**	**1.98**	**94**	iP	**Pn**	**16 11 50.0**	**+0.3**
KAVA	**Kavala**	**2.02**	**114**	P	**Pn**	**16 11 50.1**	**+0.1**
KAVA	**Kavala**	**2.02**	**114**	P	**Pn**	**16 11 50.1**	**+0.1**
OUR	**Ouranopolis**	**2.09**	**136**	P	**Pn**	**16 11 51.4**	**+0.5**
SJES	**Sjenica**	**2.10**	**313**	ePn	**Pn**	**16 11 51.6**	**+0.4**
ULC	**Ulcinj**	**2.11**	**274**	⇑iPn	**Pn**	**16 11 52.2**	**+0.9**
ULC				eSn	**Sb**	**16 12 21.1**	**+0.5**
ULC	**Ulcinj**	**2.11**	**274**	⇑iPn	**Pn**	**16 11 52.2**	**+0.9**
ULC				eSn	**Sb**	**16 12 21.1**	**+0.5**
PDG	**Podgorica**	**2.17**	**286**	ePn	**Pn**	**16 11 53.6**	**+1.4**
PDG				eSg	**Sg**	**16 12 25.4**	**+0.5**
PDG	**Podgorica**	**2.17**	**286**	⇓iPn	**Pn**	**16 11 53.5**	**+1.4**
PDG				eSn	**Sb**	**16 12 22.4**	**+0.1**
TTG	**Podgorica**	**2.17**	**286**	⇓iPn	**Pn**	**16 11 53.5**	**+1.4**
TTG				eSn	**Sb**	**16 12 22.4**	**+0.1**
GRUS	**Gruza**	**2.27**	**334**	⇑iPn	**Pn**	**16 11 52.8**	**-0.6**
GRUS				eSn	**Sb**	**16 12 24.4**	**-0.7**
GRUS	**Gruza**	**2.27**	**334**	⇑iPn	**Pn**	**16 11 52.8**	**-0.6**
GRUS				eSn	**Sb**	**16 12 24.4**	**-0.7**
PAIG	**Paliouri**	**2.27**	**147**	P	**Pn**	**16 11 53.9**	**+0.5**
PAIG	**Paliouri**	**2.27**	**147**	ePN	**Pn**	**16 11 53.6**	**+0.2**
THL	**Klokotos Trika**	**2.28**	**181**	P	**Pn**	**16 11 54.3**	**+0.7**
THL	**Klokotos Trika**	**2.28**	**181**	ePB	**Pn**	**16 11 52.8**	**-0.8**
THL	**Klokotos Trika**	**2.28**	**181**	ePb	**Pn**	**16 11 52.8**	**-0.8**
JAN	**Janina**	**2.38**	**203**	ePB	**Pn**	**16 11 55.4**	**+0.5**
JAN	**Janina**	**2.38**	**203**	ePb	**Pn**	**16 11 55.4**	**+0.5**
BUM	**Brajici-Budva**	**2.41**	**282**	⇑iPn	**Pn**	**16 11 56.4**	**+1.0**
BUM				eSn	**Sb**	**16 12 28.2**	**-1.0**
BUM	**Brajici-Budva**	**2.41**	**282**	⇑iPn	**Pn**	**16 11 56.4**	**+1.0**
BUM				eSn	**Sb**	**16 12 28.2**	**-1.0**
PLE	**Pljevlja**	**2.47**	**308**	⇑iPn	**Pn**	**16 11 57.1**	**+0.8**
PLE				eSn	**Sn**	**16 12 28.8**	**+1.7**
PLE	**Pljevlja**	**2.47**	**308**	⇑iPn	**Pn**	**16 11 57.1**	**+0.8**
PLE				eSn	**Sn**	**16 12 28.8**	**+1.7**
NKY	**Niksic**	**2.48**	**294**	⇓iPn	**Pn**	**16 11 56.9**	**+0.5**
NKY				eSn	**Sb**	**16 12 29.4**	**-1.8**
NKY	**Niksic**	**2.48**	**294**	⇓iPn	**Pn**	**16 11 56.9**	**+0.5**
NKY				eSn	**Sb**	**16 12 29.4**	**-1.8**
KDZ	**Kurdzhali**	**2.51**	**93**	iP	**Pn**	**16 11 55.8**	**-0.9**
KDZ	**Kurdzhali**	**2.51**	**93**	iP	**Pn**	**16 11 55.8**	**-0.9**
DIM	**Dimitrovgrad**	**2.59**	**84**	P	**Pn**	**16 11 59.8**	**+2.0**
DIM	**Dimitrovgrad**	**2.59**	**84**	P	**Pn**	**16 11 59.8**	**+2.0**
XOR	**Xorichti**	**2.62**	**161**	P	**Pn**	**16 11 58.5**	**+0.2**
TRUS	**Trudelj**	**2.67**	**333**	⇑iPn	**Pn**	**16 11 57.2**	**-1.7**
TRUS	**Trudelj**	**2.67**	**333**	⇑iPn	**Pn**	**16 11 57.2**	**-1.7**
NEO	**Neokhori**	**2.69**	**161**	ePN	**Pn**	**16 11 59.4**	**+0.2**
UPM	**Unac-Piva**	**2.71**	**301**	⇑iPn	**Pn**	**16 12 00.0**	**+0.4**
UPM				eSn	**Sn**	**16 12 34.9**	**+2.0**
UPM	**Unac-Piva**	**2.71**	**301**	⇑iPn	**Pn**	**16 12 00.0**	**+0.4**
UPM				eSn	**Sn**	**16 12 34.9**	**+2.0**
DIVS	**Divibare**	**2.72**	**327**	P	**Pn**	**16 11 59.5**	**-0.2**
DIVS	**Divibare**	**2.72**	**327**	⇑iPn	**Pn**	**16 11 58.9**	**-0.8**
DIVS	**Divibare**	**2.72**	**327**	⇑iPn	**Pn**	**16 11 58.9**	**-0.8**
DIVS	**Divibare**	**2.72**	**327**	P	**Pn**	**16 11 59.5**	**-0.2**
HCY	**Herceg Novi**	**2.73**	**284**	⇓iPn	**Pn**	**16 12 00.0**	**+0.3**
HCY				eSn	**Sn**	**16 12 35.5**	**+2.3**
HCY	**Herceg Novi**	**2.73**	**284**	⇓iPn	**Pn**	**16 12 00.0**	**+0.3**
HCY				eSn	**Sn**	**16 12 35.5**	**+2.3**
KEK	**Kerkira**	**2.74**	**220**	ePN	**Pn**	**16 12 00.6**	**+0.7**
KEK	**Kerkira**	**2.74**	**220**	ePn	**Pn**	**16 12 00.6**	**+0.7**
PVL	**Pavlikeni**	**2.77**	**59**	P	**Pn**	**16 11 58.6**	**-1.7**
PVL	**Pavlikeni**	**2.77**	**59**	P	**Pn**	**16 11 58.6**	**-1.7**
BBLS	**Lazići**	**2.81**	**317**	⇑iPn	**Pn**	**16 12 00.4**	**-0.6**
BBLS	**Lazići**	**2.81**	**317**	⇑iPn	**Pn**	**16 12 00.4**	**-0.6**
BRY	**Bratogost**	**2.82**	**293**	⇓iPn	**Pn**	**16 12 01.9**	**+0.8**
BRY				eSn	**Sn**	**16 12 37.8**	**+2.1**
BRY	**Bratogost**	**2.82**	**293**	⇓iPn	**Pn**	**16 12 01.9**	**+0.8**
BRY				eSn	**Sn**	**16 12 37.8**	**+2.1**
AGG	**Agios Georgios**	**2.83**	**176**	P	**Pn**	**16 12 01.2**	**+0.1**
AGG	**Agios Georgios**	**2.83**	**176**	ePN	**Pn**	**16 12 00.6**	**-0.5**
MAKR	**Makrakomi, Fth**	**2.83**	**179**	P	**Pn**	**16 12 00.8**	**-0.4**
DJES	**Djerdap**	**2.84**	**6**	ePn	**Pn**	**16 12 02.4**	**+1.2**
DJES				eSn	**Sn**	**16 12 36.9**	**+1.0**
EVR	**Evrytania**	**2.94**	**184**	ePB	**Pn**	**16 12 03.6**	**+0.9**
EVR	**Evrytania**	**2.94**	**184**	ePb	**Pn**	**16 12 03.6**	**+0.9**
SMTH	**Samothraki Isl**	**2.95**	**117**	ePN	**Pn**	**16 12 02.7**	**-0.1**
SMTH	**Samothraki Isl**	**2.95**	**117**	ePn	**Pn**	**16 12 02.7**	**-0.1**
AOS	**Alonnisos**	**3.01**	**152**	P	**Pn**	**16 12 03.4**	**-0.1**
AOS	**Alonnisos**	**3.01**	**152**	ePN	**Pn**	**16 12 03.5**	**-0.1**
ZIMR		**3.02**	**52**	⇑iP	**Pn**	**16 12 05.8**	**+2.0**
LIA	**Limnos Island**	**3.06**	**129**	P	**Pn**	**16 12 04.9**	**+0.7**
LIA	**Limnos Island**	**3.06**	**129**	ePN	**Pn**	**16 12 04.3**	**+0.1**
LIA	**Limnos Island**	**3.06**	**129**	ePn	**Pn**	**16 12 04.3**	**+0.1**
LIA	**Limnos Island**	**3.06**	**129**	P	**Pn**	**16 12 04.9**	**+0.7**
ALN	**Alexandroupoli**	**3.14**	**106**	P	**Pn**	**16 12 05.4**	**+0.1**
ALN	**Alexandroupoli**	**3.14**	**106**	ePN	**Pn**	**16 12 05.3**	**0.0**
ALN	**Alexandroupoli**	**3.14**	**106**	P	**Pn**	**16 12 05.4**	**+0.1**
SZH	**Strazhica**	**3.19**	**62**	iP	**Pn**	**16 12 06.6**	**+0.6**
SZH	**Strazhica**	**3.19**	**62**	iP	**Pn**	**16 12 06.6**	**+0.6**
LKD2	**Lefkada island**	**3.24**	**200**	ePN	**Pn**	**16 12 07.1**	**+0.3**
LKD2	**Lefkada island**	**3.24**	**200**	ePn	**Pn**	**16 12 07.1**	**+0.3**
TEKS	**Tekeris**	**3.28**	**326**	ePn	**Pn**	**16 12 06.3**	**-1.0**
TEKS	**Tekeris**	**3.28**	**326**	ePn	**Pn**	**16 12 06.3**	**-1.0**
EFP	**Efpalio**	**3.42**	**182**	ePN	**Pn**	**16 12 09.8**	**+0.6**
EFP	**Efpalio**	**3.42**	**182**	ePn	**Pn**	**16 12 09.8**	**+0.6**
HUMR	**Humele**	**3.42**	**37**	⇓iP	**Pn**	**16 12 10.0**	**+0.8**
HUMR	**Humele**	**3.42**	**37**	⇓iP	**Pn**	**16 12 10.0**	**+0.8**
KALE	**Kalithea**	**3.45**	**179**	ePN	**Pn**	**16 12 09.2**	**-0.5**
KALE	**Kalithea**	**3.45**	**179**	ePn	**Pn**	**16 12 09.2**	**-0.5**
EDRB	**Edirne**	**3.49**	**88**	ePN	**Pb**	**16 12 14.9**	**-2.6**
ERIK	**Erikli-Kesan**	**3.55**	**108**	ePN	Pn	16 12 14.3	+3.4
GZR	**Gura Zlata**	**3.58**	**8**	⇑iP	**Pn**	**16 12 11.9**	**+0.4**
GZR	**Gura Zlata**	**3.58**	**8**	⇑iP	**Pn**	**16 12 11.9**	**+0.4**
LAKA	**Lakka**	**3.60**	**181**	ePN	**Pn**	**16 12 12.6**	**+0.8**
LAKA	**Lakka**	**3.60**	**181**	ePn	**Pn**	**16 12 12.6**	**+0.8**
GELI	**Tayfur-Gelibol**	**3.63**	**112**	ePN	Pn	16 12 15.7	+3.6
FGSL	**Fruska Gora**	**3.69**	**334**	ePn	**Pn**	**16 12 12.1**	**-0.9**
FRGS	**Fruska Gora**	**3.69**	**334**	ePn	**Pn**	**16 12 12.1**	**-0.9**
BZS	**Buzias**	**3.78**	**355**	⇓iP	**Pn**	**16 12 12.9**	**-1.3**
BZS	**Buzias**	**3.78**	**355**	⇓iP	**Pn**	**16 12 12.9**	**-1.3**
BZS				S	**Sn**	**16 12 55.6**	**-3.6**
KLV	**Kalavryta, Ach**	**3.80**	**179**	ePN	**Pn**	**16 12 15.2**	**+0.7**
KLV	**Kalavryta, Ach**	**3.80**	**179**	ePn	**Pn**	**16 12 15.2**	**+0.7**
LOT	**Lotru**	**3.80**	**18**	⇓iP	**Pn**	**16 12 14.0**	**-0.6**
LOT	**Lotru**	**3.80**	**18**	⇓iP	**Pn**	**16 12 14.0**	**-0.6**
EZN	**Ezine**	**3.81**	**121**	ePN	Pb	16 12 18.8	-4.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPK	Lapseki	3.84	111	ePN	Pn	16 12 18.1	+3.1
LTK	Loutraki	3.88	170	ePN	Pn	16 12 16.4	+0.8
LTK	Loutraki	3.88	170	ePn	Pn	16 12 16.4	+0.8
PRD	Provadia	4.16	69	P	Pn	16 12 20.0	+0.6
PRD	Provadia	4.16	69	P	Pn	16 12 20.0	+0.6
VOIR		4.19	30	⇓iP	Pn	16 12 20.0	+0.1
VOIR		4.19	30	⇓iP	Pn	16 12 20.0	+0.1
TKR	Tekirdag	4.20	100	ePN	Pn	16 12 23.1	+3.2
KRBG	Karabiga-Canak	4.21	108	ePN	Pn	16 12 23.3	+3.3
NAIG	Nisos Aigina	4.23	165	ePN	Pn	16 12 20.4	+0.1
NAIG	Nisos Aigina	4.23	165	ePn	Pn	16 12 20.4	+0.1
AMT	Artemida-Makis	4.32	184	ePN	Pn	16 12 21.5	-0.1
AMT	Artemida-Makis	4.32	184	ePn	Pn	16 12 21.5	-0.1
MRMT	Marmara Adasi	4.35	105	ePN	Pn	16 12 25.2	+3.2
DID	Didima	4.43	168	ePN	Pn	16 12 24.1	+1.0
DID	Didima	4.43	168	ePn	Pn	16 12 24.1	+1.0
BLY	Banja Luka	4.60	311	ePn	Pn	16 12 26.1	+0.7
BLY	Banja Luka	4.60	311	ePn	Pn	16 12 26.1	+0.7
MLR	Muntele Rosu	4.60	36	⇑iP	Pn	16 12 26.2	+0.6
MLR	Muntele Rosu	4.60	36	Pn	Pn	16 12 27.6	+2.1
	comp=N,0.5nm,0.3s,baz=227,slow=13,SNR=15						
MLR				Lg	Lg	16 13 43.4	
	comp=N,0.2nm,0.3s,baz=253,slow=19,SNR=3.2						
MLR	Muntele Rosu	4.60	36	⇑iP	Pn	16 12 26.2	+0.6
CHOS	Chios island	4.61	137	ePN	Pn	16 12 26.9	+1.2
CHOS	Chios island	4.61	137	ePn	Pn	16 12 26.9	+1.2
GONE	Gonen-Balikesi	4.62	111	ePN	Pn	16 12 29.4	+3.8
EDC	Edincik	4.62	107	ePN	Pn	16 12 28.6	+2.8
SLVT	Silivri	4.65	96	ePN	Pn	16 12 30.0	+3.9
BNT	Bandirma	4.66	107	ePN	Pn	16 12 30.0	+3.6
CTYL	Yal??k??y-??at	4.67	93	ePN	Pn	16 12 30.2	+3.8
CTKS	Kestanelik-??a	4.87	95	ePN	Pn	16 12 33.1	+4.1
BALB	Balikesir	4.93	115	ePN	Pn	16 12 33.4	+3.4
KCTX	Karacabey (Bur	5.01	106	ePN	Pn	16 12 34.2	+3.1
PKSM	Moragy	5.01	332	ePn	Pn	16 12 30.8	-0.4
PKSM	Moragy	5.01	332	⇓iP	Pn	16 12 30.7	-0.4
PKSM	Moragy	5.01	332	⇑eSKPdf	Pn	16 12 31.0	-0.1
PKSM	Moragy	5.01	332	ePn	Pn	16 12 30.8	-0.4
BGKT	Bogazkoy	5.08	95	ePN	Pn	16 12 35.8	+3.8
VRI	Vrincioaia	5.24	38	⇑iP	Pn	16 12 35.2	+0.9
VRI	Vrincioaia	5.24	38	⇑iP	Pn	16 12 35.2	+0.9
ARMT	Armutlu	5.28	102	ePN	Pn	16 12 38.5	+3.7
ISK	Istanbul-Kandi	5.31	96	ePN	Pn	16 12 39.5	+4.3
TIRR	Tirgusor	5.32	59	⇑iP	Pn	16 12 35.7	+0.4
TIRR	Tirgusor	5.32	59	⇑iP	Pn	16 12 35.7	+0.4
BUY	Buyukada	5.40	98	ePN	Pn	16 12 40.0	+3.7
PKS9	Tamasi	5.47	331	⇓eSKPdf	Pn	16 12 37.5	+0.2
APE	Apeiranthos	5.47	150	ePN	Pb	16 12 50.1	-1.1
GEMT	Gemlik	5.55	102	ePN	Pn	16 12 42.7	+4.1
KYTH	Kithira	5.61	172	ePN	Pn	16 12 41.3	+1.9
KYTH	Kithira	5.61	172	ePn	Pn	16 12 41.3	+1.9
TESR	Tescani	5.71	34	⇑iP	Pn	16 12 41.6	+1.0
TESR	Tescani	5.71	34	⇑iP	Pn	16 12 41.6	+1.0
SILT	Sile	5.73	94	ePN	Pn	16 12 44.5	+3.6
HRT	Hereke	5.81	98	ePN	Pn	16 12 46.1	+4.0
TLCR		5.93	53	⇑iP	Pn	16 12 44.5	+0.8
TLCR		5.93	53	⇑iP	Pn	16 12 44.5	+0.8
BEHE	Becsehely	5.99	322	⇓eSKPdf	Pn	16 12 42.7	-1.8
TVSB	Tavsanli	6.11	111	ePN	Pn	16 12 50.1	+3.8
PKST	T˜'s	6.13	333	⇑eSKPdf	Pn	16 12 46.8	+0.3
PKSG		6.13	336	⇓eSKPdf	Pn	16 12 46.8	+0.3
BURAR	Bucovina Array	6.19	20	⇑iP	Pn	16 12 47.1	-0.2
BURAR	Bucovina Array	6.19	20	⇑iP	Pn	16 12 47.1	-0.2
CRES	Cresnjev	6.22	312	i Pn	Pn	16 12 47.6	-0.1
CRES	Cresnjev	6.22	312	Pn	Pn	16 12 47.6	-0.1
PSZ	Piszkesteto	6.26	346	⇑iP	Pn	16 12 47.9	-0.5
PSZ	Piszkesteto	6.26	346	⇑eSKPdf	Pn	16 12 48.0	-0.4
PSZ	Piszkesteto	6.26	346	⇑iP	Pn	16 12 47.9	-0.5
GULT	Gulveren	6.53	100	ePN	Pn	16 12 55.7	+3.6
ALT	Altintas	6.74	112	ePN	Pn	16 12 59.9	+5.0
SOKA	Soboth	6.99	316	⇓iPn	Pn	16 12 57.3	-1.0
SOKA				⇑iSn	Sn	16 14 14.3	-4.0
SOKA	Soboth	6.99	316	Pn	Pn	16 12 57.3	-1.0
MDUB	Mudurnu	7.02	98	eP	Pn	16 13 03.4	+4.5
VYHS	Vyhne	7.03	342	ePN	Pn	16 12 58.1	-0.7
CRVS	Cervenica-Dubn	7.07	357	ePN	Pn	16 12 56.5	-2.8
KOLS	Kolonicke sedl	7.09	1	ePN	Pn	16 12 58.7	-0.9
OBKA	Obir	7.14	313	⇑iPn	Pn	16 13 00.0	-0.4
OBKA	Obir	7.14	313	Pn	Pn	16 13 00.0	-0.4
ARSA	Arzberg	7.14	321	⇓iPn	Pn	16 12 59.4	-1.0
ARSA				⇑iSn	Sn	16 14 18.3	-3.8
ARSA	Arzberg	7.14	321	Pn	Pn	16 12 59.4	-1.0
VOY	Vojsko	7.23	308	eP	Pn	16 13 02.9	+1.2
VOY				eS	Sg	16 15 20.2	+13
VOY	Vojsko	7.23	308	ePn	Pn	16 13 02.9	+1.2
ZST	Bratislava	7.26	333	ePN	Pn	16 13 01.4	-0.5
VRAC	Vranov	8.39	335	LR	LR	16 16 33.2	
	comp=N,77nm,18.3s,baz=221,slow=38						
BRTR	Keskin Array B	9.03	100	Pn	Pn	16 13 27.2	+0.8
	comp=N,0.2nm,0.3s,baz=280,slow=14,SNR=8.0						
GERES	GERESS Array B	9.14	323	Pn	Pn	16 13 29.0	+1.1
	comp=N,0.4nm,0.3s,baz=135,slow=14,SNR=7.7						
DPC	Dobruska-Polom	9.39	337	ePN	Pn	16 13 32.5	+1.3
DPC	Dobruska-Polom	9.39	337	Pn	Pn	16 13 32.5	+1.3
KHC	Kasperske Hory	9.41	324	ePN	Pn	16 13 32.8	+1.3
KHC	Kasperske Hory	9.41	324	Pn	Pn	16 13 32.8	+1.3
FINES	FINESS Array B	19.77	6	P	Pn	16 15 47.1	-0.3
	comp=N,0.2nm,0.3s,baz=199,slow=9.3,SNR=7.0						
MDT	Midelt	22.98	256	P	P	16 16 19.6	-1.3
	comp=N,1.3nm,0.7s,baz=49,slow=9.3,SNR=4.6						
TORD	Torodi Ar. Bea	33.65	218	P	P	16 17 57.5	+0.5
	comp=N,1.3nm,0.7s,baz=30,slow=8.7,SNR=9.2						
ZALV	Zalesovo Beam	42.41	51	P	P	16 19 10.6	0.0
	comp=N,0.9nm,0.6s,baz=296,slow=8.1,SNR=6.4						
MKAR	Makanchi Array	42.45	62	P	P	16 19 11.4	+0.4
	comp=N,0.8nm,0.7s,baz=281,slow=7.8,SNR=10						

*SOF **05** 16:17:03.7, 41.°86N×21.°99E, h0km, MD2.5*
*SKO **05** 16:17:05.7, 41.°81N×22.°10E, h8km, M1.4, ML1.9*
*ISCJB **05** 16:17:05.8±0.8, 41.°79N±0.°05×22.°06E±0.°06, h6km±18km, Error ellipse: s-maj=9.7km s-min=6.3km az=30.3*
*CSEM **05** 16:17:06.4±0.2, 41.°78N×22.°07E, h10km, ML2.0, Error ellipse: s-maj=4.8km s-min=3.1km az=9.0*
ISC 05 16:17:05.8±1.1**, 41.°81N**±0.°05×**22.°07E**±0.°03**, h15**km±12km**,**
n11, σ0.s32/17**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKO	Skopje	0.49	290	ePg	Pb	16 17 16.4	+0.1
SKO				eSg	Sg	16 17 22.1	-0.2
SKO				eLg	Lg	16 17 22.3	
	comp=E,32nm,0.5s						
SKO				eLg	Lg	16 17 22.3	
	comp=N,36nm,0.4s						
SKO	Skopje	0.49	290	ePg	Pb	16 17 16.8	+0.6
SKO				eSg	Sb	16 17 22.6	-0.7
SKO				eLg	Lg	16 17 22.8	
	comp=N,36nm,0.4s						
VAY	Valandovo	0.62	142	i Pg	Pg	16 17 17.7	-0.3
VAY				i Sg	Sg	16 17 26.3	+0.2
VAY				eLg	Lg	16 17 26.6	
	comp=E,50nm,0.3s						
VAY				eLg	Lg	16 17 26.8	
	comp=N,42nm,0.5s						
VAY	Valandovo	0.62	142	i Pg	Pb	16 17 18.1	-0.1
VAY				i Sg	Sb	16 17 26.8	+0.1
VAY				eLg	Lg	16 17 27.3	
	comp=N,42nm,0.5s						
KKB	Krupnik	0.76	85	i Pg	Pb	16 17 20.7	-0.1
KKB	Krupnik	0.76	85	i Pg	Pb	16 17 20.7	-0.1
BIA	Bitola	0.96	216	ePg	Pg	16 17 24.5	-0.1
BIA				eSg	Sb	16 17 37.1	+0.2
BIA	Bitola	0.96	216	ePg	Pg	16 17 24.4	-0.1
BIA				eSg	Sb	16 17 37.0	+0.2
VTS	Vitosha	1.16	47	i P	Pn	16 17 27.4	-0.2
MMB	Musomiste	1.26	99	i P	Pg	16 17 30.5	+0.3
MMB	Musomiste	1.26	99	i P	Pg	16 17 30.5	+0.3

*ISCJB **05** 16:54:35.4±0.3, 48.°82N±0.°02×14.°08E±0.°03, h0km, Error ellipse: s-maj=2.5km s-min=2.3km az=137.3*
*VIE **05** 16:54:36.2±0.2, 48.°78N×14.°04E, h0km, mb1.7/3, ML2.4/4, Error ellipse: s-maj=2.4km s-min=1.6km az=43.0 16 km NNE of Aigen im Muehlkreis Suspected Mining explosion.*
*CSEM **05** 16:54:36.6±0.1, 48.°80N×14.°06E, h2km, ML3.0/6, Error ellipse: s-maj=2.8km s-min=2.2km az=30.0, Suspected Mining explosion.*
*BGR **05** 16:54:37.0±0.4, 48.°82N×14.°06E, h10km, ML1.9/10, Error ellipse: s-maj=4.4km s-min=2.2km az=65.0*
*IPEC **05** 16:54:37.2±0.1, 48.°79N×14.°03E, h0km, ML1.8/8, Error ellipse: s-maj=0.6km s-min=0.3km az=2.0*
*PRU **05** 16:54:37.2, 48.°79N×14.°03E, h0km, Tectonic Event Near Lipno-felt In Horni Plana, Manava, Pernek*
ISC 05 16:54:36.9±0.7**, 48.°80N**±0.°02×**14.°06E**±0.°02**, h0**km**, n36,**
σ0.s39/68**, 4C-4D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEC2	GERESS Array S	0.24	282	ePg	Pg	16 54 41.5	0.0
	SNR=13						
GEC2				eSg	Sg	16 54 44.3	-0.2
GEC2	GERESS Array S	0.24	282	Pg	Pg	16 54 41.5	0.0
	SNR=13						
GEC2				Sg	Sg	16 54 44.3	-0.2
KHC	Kasperske Hory	0.46	317	ePg	Pg	16 54 45.7	0.0
	SNR=11						
KHC				eSg	Sg	16 54 51.6	0.0
KHC	Kasperske Hory	0.46	317	ePG	Pg	16 54 45.7	0.0
KHC				eSG	Sg	16 54 51.7	0.0
	comp=Z,23nm,0.2s						
KHC	Kasperske Hory	0.46	317	Pg	Pg	16 54 45.7	0.0
	SNR=11						
KHC				Sg	Sg	16 54 51.6	0.0
WET	Wettzell	0.85	295	ePg	Pg	16 54 53.1	-0.1
	SNR=6.7						
WET				eSg	Sg	16 55 03.7	-0.5
WET	Wettzell	0.85	295	Pg	Pg	16 54 53.1	-0.1
	SNR=6.7						
WET				Sg	Sg	16 55 03.7	-0.5
MOA	Molln	0.96	172	ePg	Pg	16 54 55.4	+0.2
	SNR=4.9						
MOA				eSg	Sg	16 55 08.4	+0.8
MOA	Molln	0.96	172	⇓iPg	Pg	16 54 55.5	+0.2
MOA				⇑iSg	Sg	16 55 07.7	0.0
	7.4nm,0.1s						
MOA	Molln	0.96	172	Pg	Pg	16 54 55.4	+0.2
	SNR=4.9						
MOA				Sg	Sg	16 55 07.7	0.0
	7.4nm,0.1s						
TREC	Trest	1.06	62	ePG	Pg	16 54 57.1	-0.2
TREC				eSG	Sg	16 55 11.2	+0.1
	comp=Z,22nm,0.2s						
PRU	Pruhonice	1.23	15	ePg	Pg	16 55 00.3	-0.2
	SNR=9.5						
PRU	Pruhonice	1.23	15	ePG	Pg	16 54 59.7	-0.8
PRU				eSG	Sg	16 55 16.6	+0.1
PRU	Pruhonice	1.23	15	Pg	Pg	16 55 00.3	-0.2
	SNR=9.5						
RJOB	Jochberg	1.35	219	ePg	Pb	16 55 03.3	+0.1
	SNR=15						
RJOB				eSg	Sn	16 55 21.5	-0.3
RJOB	Jochberg	1.35	219	Pg	Pb	16 55 03.3	+0.1
	SNR=15						
RJOB				Sg	Sn	16 55 21.5	-0.3
CONA	Conrad Observa	1.49	125	⇓iPn	Pn	16 55 04.2	-0.7
CONA				⇑iPg	Pn	16 55 04.9	0.0
CONA				⇓iSn	Sg	16 55 24.1	-0.5
CONA				⇑iSg	Sb	16 55 24.8	-0.1
	6.1nm,0.2s						
CONA	Conrad Observa	1.49	125	Pn	Pn	16 55 04.2	-0.7
CONA	Conrad Observa	1.49	125	Pg	Pn	16 55 04.9	0.0
CONA				Sn	Sg	16 55 24.1	-0.5
CONA				Sg	Sb	16 55 24.8	-0.1
	6.1nm,0.2s						
ROTZ	Rotzenmuhle	1.55	309	ePg	Pn	16 55 06.1	+0.3
	SNR=2.8						
ROTZ				eSg	Sn	16 55 26.1	-0.5
ROTZ	Rotzenmuhle	1.55	309	Pg	Pn	16 55 06.1	+0.3
	SNR=2.8						
ROTZ				Sg	Sn	16 55 26.1	-0.5
KRUC	Moravsky	1.56	79	ePn	Pn	16 55 06.5	+0.5
	baz=261						
KRUC				eSg	Sn	16 55 27.1	+0.2
	16nm,0.2s,baz=261						
VRAC	Vranov	1.75	72	ePn	Pb	16 55 09.7	-0.1
VRAC				eSg	Sb	16 55 32.4	+0.1
	18nm,0.3s,baz=254						
PVCC	Panska Ves	1.76	11	ePG	Pn	16 55 09.3	+0.6
PVCC				eSG	Sb	16 55 33.2	+0.4
	comp=Z,19nm,0.2s						
NKC	Novy Kostel	1.78	325	ePG	Pb	16 55 09.8	-0.6
NKC				eSG	Sg	16 55 33.9	-0.1
	comp=Z,5.9nm,0.2s						
KBA	Koelnbreinsper	1.79	196	ePg	Pb	16 55 10.3	-0.2
	SNR=5.7						
KBA				eSg	Sg	16 55 34.0	-0.2
KBA	Koelnbreinsper	1.79	196	⇑iPg	Pb	16 55 10.4	-0.2
KBA				⇓iSg	Sg	16 55 34.2	0.0
	16nm,0.4s						
KBA	Koelnbreinsper	1.79	196	Pg	Pb	16 55 10.4	-0.2
KBA				Sg	Sg	16 55 34.2	0.0
	16nm,0.4s						
ARSA	Arzberg	1.83	147	eSg	Sb	16 55 35.3	+0.5
ARSA	Arzberg	1.83	147	Sg	Sb	16 55 35.3	+0.5
TANN	Tannenbergstha	1.92	328	eSg	Sb	16 55 37.6	+0.2
TANN	Tannenbergstha	1.92	328	Sg	Sb	16 55 37.6	+0.2
BRG	Berggiesshubel	2.08	358	PG	Pb	16 55 15.7	+0.2
BRG				SG	Sg	16 55 43.3	-0.4
	8.7nm,0.3s						
UPC	Upice	2.13	36	ePN	Pn	16 55 14.2	+0.4
UPC				eSG	Sb	16 55 44.1	+0.7
	comp=Z,2.4nm,0.3s						
DPC	Dobruska-Polom	2.14	43	ePN	Pn	16 55 14.7	+0.8
DPC				eSG	Sb	16 55 44.2	+0.5
	comp=Z,3.3nm,0.2s						
MORC	Moravsky Berou	2.48	65	ePg	Pb	16 55 22.9	+0.5
	baz=248						
MORC				eSg	Sg	16 55 55.5	-1.2
	7.8nm,0.6s,baz=248						

*ATH **05** 16:54:44.2, 38.°19N×20.°22E, h5km±3km, MD3.5/15*
*CSEM **05** 16:54:46.7±0.5, 38.°29N×20.°42E, h2km, ML2.4/2, Error ellipse: s-maj=9.4km s-min=5.2km az=73.0*
*THE **05** 16:54:47.5, 38.°30N×20.°46E, h7km±1km, ML2.4/2, Error ellipse: s-maj=1.4km s-min=0.6km az=67.0*
ISC 05 16:54:46.9±1.3**, 38.°27N**±0.°03×**20.°41E**±0.°06**, h8**km±8km**,**
n49, σ0.s84/65**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.17	124	P	Pg	16 54 50.3	-0.2
VLS				S	Sg	16 54 53.5	+0.6
VLS	Valsamata	0.17	124	ePG	Pg	16 54 50.3	-0.2
VLS	Valsamata	0.17	124	P	Pg	16 54 50.3	-0.2
VLS				S	Sg	16 54 53.5	+0.6
KFL	Anninata	0.34	118	P	Pg	16 54 53.3	-0.3
KFL				S	Sg	16 54 58.8	+0.7
KFL	Anninata	0.34	118	P	Pg	16 54 53.3	-0.3
KFL				S	Sg	16 54 58.8	+0.7
LKD2	Lefkada island	0.55	21	P	Pg	16 54 57.6	0.0
LKD2				S	Sg	16 55 04.5	-0.3
LKD2	Lefkada island	0.55	21	ePG	Pg	16 54 57.3	-0.3
LKD2				eSB	Sb	16 55 07.9	+1.0
LKD2	Lefkada island	0.55	21	ePg	Pg	16 54 57.3	-0.3
LKD2	Lefkada island	0.55	21	P	Pg	16 54 57.6	0.0
LKD2				S	Sg	16 55 04.5	-0.3
LKD2				eSb	Sb	16 55 07.9	+1.0
RLS	Riolos of Patr	0.86	104	P	Pg	16 55 03.0	-0.5
RLS				S	Sb	16 55 14.9	-0.9
RLS	Riolos of Patr	0.86	104	ePN	Pb	16 55 04.1	0.0
RLS				eSB	Sn	16 55 17.4	-0.7
RLS	Riolos of Patr	0.86	104	P	Pg	16 55 03.0	-0.5
RLS	Riolos of Patr	0.86	104	ePn	Pb	16 55 04.1	0.0
RLS				S	Sb	16 55 14.9	-0.9
RLS				eSb	Sn	16 55 17.4	-0.7
EFP	Efpalio	1.19	82	ePB	Pn	16 55 10.3	+0.5
EFP				eSB	Sn	16 55 28.8	+2.7
EFP	Efpalio	1.19	82	ePb	Pn	16 55 10.3	+0.5
EFP				eSb	Sn	16 55 28.8	+2.7
LAKA	Lakka	1.24	91	P	Pg	16 55 09.6	-1.0
LAKA				S	Sn	16 55 27.1	-0.3
LAKA	Lakka	1.24	91	ePG	Pg	16 55 09.7	-0.9
LAKA	Lakka	1.24	91	P	Pg	16 55 09.6	-1.0
LAKA				S	Sn	16 55 27.1	-0.3
AMT	Artemida-Makis	1.27	125	P	Pn	16 55 10.8	-0.1
AMT	Artemida-Makis	1.27	125	ePB	Pn	16 55 10.3	-0.6
AMT	Artemida-Makis	1.27	125	ePb	Pn	16 55 10.3	-0.6
AMT	Artemida-Makis	1.27	125	P	Pn	16 55 10.8	-0.1
EVR	Evrytania	1.27	59	ePB	Pn	16 55 11.4	+0.3
EVR	Evrytania	1.27	59	ePb	Pn	16 55 11.4	+0.3
KALE	Kalithea	1.37	85	ePB	Pg	16 55 13.2	+0.1
KALE	Kalithea	1.37	85	ePb	Pg	16 55 13.2	+0.1
KLV	Kalavryta, Ach	1.39	99	ePG	Pn	16 55 12.1	-0.6
KLV	Kalavryta, Ach	1.39	99	ePb	Pn	16 55 12.1	-0.6
KEK	Kerkira	1.52	342	P	Pn	16 55 14.1	-0.2
KEK	Kerkira	1.52	342	ePB	Pn	16 55 13.9	-0.4
KEK	Kerkira	1.52	342	P	Pn	16 55 14.1	-0.2
GUR	Goura	1.56	102	ePG	Pb	16 55 15.7	-0.4
GUR	Goura	1.56	102	ePg	Pb	16 55 15.7	-0.4
ITM	Ithomi	1.62	132	P	Pn	16 55 15.2	-0.6
ITM	Ithomi	1.62	132	ePN	Pb	16 55 16.8	-0.3
ITM	Ithomi	1.62	132	P	Pn	16 55 15.2	-0.6
ITM	Ithomi	1.62	132	ePn	Pb	16 55 16.8	-0.3
AGG	Agios Georgios	1.68	63	ePG	Pg	16 55 18.8	-0.3
AGG	Agios Georgios	1.68	63	ePg	Pg	16 55 18.8	-0.3
PYL	PYLOS	1.74	142	ePN	Pn	16 55 17.7	+0.4
PYL	PYLOS	1.74	142	ePn	Pn	16 55 17.7	+0.4
THL	Klokotos Trika	1.80	44	ePG	Pg	16 55 20.6	-0.8
THL	Klokotos Trika	1.80	44	ePg	Pg	16 55 20.6	-0.8
VLX	Vlachokerasia	1.80	119	ePN	Pg	16 55 21.0	-0.5
VLX	Vlachokerasia	1.80	119	ePn	Pg	16 55 21.0	-0.5
DID	Didima	2.37	108	ePN	Pb	16 55 28.4	-1.4
DID	Didima	2.37	108	ePn	Pb	16 55 28.4	-1.4
KYTH	Kithira	2.89	133	ePN	Pn	16 55 35.4	+2.2
KYTH	Kithira	2.89	133	ePn	Pn	16 55 35.4	+2.2

*SOF **05** 17:03:07.3, 41.°89N×22.°00E, h5km, MD2.5*
*SKO **05** 17:03:08.7, 41.°81N×22.°09E, h9km, M1.9, ML2.3*
*BEO **05** 17:03:09.4±0.8, 41.°82N×22.°04E, h0km, ML2.2/5*
*ATH **05** 17:03:09.4, 41.°80N×22.°09E, h5km±4km, MD3.3/5*
*THE **05** 17:03:09.8, 41.°80N×22.°11E, h1km±1km, ML2.7/1, Error ellipse: s-maj=1.6km s-min=0.5km az=240.0*
*CSEM **05** 17:03:09.1±0.1, 41.°82N×22.°06E, h2km, ML2.2, Error ellipse: s-maj=2.6km s-min=2.1km az=41.0*
ISC 05 17:03:08.7±1.1**, 41.°83N**±0.°02×**22.°08E**±0.°02**, h1**km±10km**,**
n53, σ0.s67/82**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKO	Skopje	0.50	287	P	Pg	17 03 18.7	+0.4
SKO				S	Sg	17 03 25.1	+0.3
SKO	Skopje	0.50	287	i Pg	Pg	17 03 18.9	+0.6
SKO				eSg	Sg	17 03 25.3	+0.5
SKO				eLg	Lg	17 03 25.8	
	comp=E,93nm,0.4s						
SKO				eLg	Lg	17 03 25.9	
	comp=N,106nm,0.5s						
SKO	Skopje	0.50	287	eSg	Sg	17 03 23.3	-1.5
SKO	Skopje	0.50	287	P	Pg	17 03 18.7	+0.4
SKO	Skopje	0.50	287	i Pg	Pg	17 03 19.4	+1.1
SKO				S	Sg	17 03 25.1	+0.3
SKO				eSg	Sb	17 03 25.8	-2.3
SKO				eLg	Lg	17 03 26.3	
	comp=N,106nm,0.5s						
VAY	Valandovo	0.62	144	P	Pg	17 03 20.8	+0.1
VAY				S	Sg	17 03 29.4	+0.7
VAY	Valandovo	0.62	144	i Pg	Pg	17 03 20.9	+0.3
VAY				i Sg	Sg	17 03 29.7	+0.9
VAY				eLg	Lg	17 03 29.9	
	comp=E,177nm,0.2s						
VAY				eLg	Lg	17 03 29.9	
	comp=N,189nm,0.7s						
VAY	Valandovo	0.62	144	P	Pg	17 03 20.8	+0.1
VAY	Valandovo	0.62	144	i Pg	Pg	17 03 21.4	+0.7
VAY				S	Sg	17 03 29.4	+0.7
VAY				i Sg	Sb	17 03 30.1	-1.6
VAY				eLg	Lg	17 03 30.3	
	comp=N,189nm,0.7s						
KKB	Krupnik	0.75	86	i Pg	Pb	17 03 24.4	-0.2
KKB	Krupnik	0.75	86	i Pg	Pb	17 03 24.4	-0.2
GRG	Griva	0.90	164	P	Pg	17 03 26.3	+0.3
GRG	Griva	0.90	164	ePG	Pg	17 03 26.0	0.0
GRG				eSB	Sb	17 03 38.6	-1.1
GRG	Griva	0.90	164	ePg	Pg	17 03 26.0	0.0
GRG	Griva	0.90	164	P	Pg	17 03 26.3	+0.3
GRG				eSb	Sb	17 03 38.6	-1.1
BIA	Bitola	0.98	215	ePg	Pg	17 03 28.1	+0.5
BIA				eSg	Sb	17 03 41.5	-0.6
BIA	Bitola	0.98	215	ePg	Pg	17 03 28.1	+0.5
BIA				eSg	Sb	17 03 41.5	-0.6
BARS	Barje	1.01	349	ePg	Pg	17 03 27.5	-0.6
BARS				eSg	Sg	17 03 41.7	+0.5
BARS	Barje	1.01	349	ePg	Pg	17 03 27.5	-0.6
BARS				eSg	Sg	17 03 41.7	+0.5
VTS	Vitosha	1.14	47	P	Pg	17 03 30.7	+0.2
VTS				S	Sb	17 03 46.2	-0.4
VTS	Vitosha	1.14	47	ePg	Pg	17 03 30.6	+0.1
VTS				eSg	Sb	17 03 46.0	-0.6
VTS	Vitosha	1.14	47	i P	Pg	17 03 30.4	-0.1
VTS	Vitosha	1.14	47	P	Pg	17 03 30.7	+0.2
VTS				eSg	Sb	17 03 46.0	-0.6
FNA	Florina	1.17	207	P	Pg	17 03 31.1	0.0
FNA	Florina	1.17	207	ePN	Pg	17 03 31.1	0.0
FNA				eSB	Sb	17 03 47.5	+0.1
FNA	Florina	1.17	207	P	Pg	17 03 31.1	0.0
FNA				eSb	Sb	17 03 47.5	+0.1
PHP	Peshkopia	1.23	264	P	Pg	17 03 31.5	-0.9
PHP				S	Sg	17 03 47.8	-0.6
PHP	Peshkopia	1.23	264	P	Pg	17 03 31.5	-0.9
PHP				S	Sg	17 03 47.8	-0.6
MMB	Musomiste	1.26	100	i P	Pn	17 03 33.7	+0.2
MMB	Musomiste	1.26	100	i P	Pn	17 03 33.7	+0.2
SRS	Serrai	1.34	121	P	Pn	17 03 34.4	-0.2
SRS	Serrai	1.34	121	P	Pn	17 03 34.4	-0.2
SOH	Sokhos	1.39	136	ePB	Pb	17 03 35.7	+0.2
SOH				eSB	Sn	17 03 54.2	-0.1
SOH	Sokhos	1.39	136	ePb	Pb	17 03 35.7	+0.2
SOH				eSb	Sn	17 03 54.2	-0.1
NVR	Nevrokopi	1.42	109	P	Pg	17 03 35.8	-0.1
NVR				S	Sn	17 03 55.5	+0.4
NVR	Nevrokopi	1.42	109	ePB	Pb	17 03 36.1	+0.1
NVR				eSB	Sn	17 03 55.5	+0.4
NVR	Nevrokopi	1.42	109	P	Pg	17 03 35.8	-0.1
NVR	Nevrokopi	1.42	109	ePb	Pb	17 03 36.1	+0.1
NVR				S	Sn	17 03 55.5	+0.4
ZAPS	Zavoj	1.50	16	ePn	Pn	17 03 37.2	+0.3
ZAPS				eSn	Sn	17 03 57.9	+0.7
SELS	Selova	1.56	333	ePn	Pn	17 03 37.0	-0.7
PGB	Panagyurishte	1.71	64	i P	Pn	17 03 40.0	+0.2
PGB	Panagyurishte	1.71	64	i P	Pn	17 03 40.0	+0.2
PLG	Polygyros	1.78	144	ePN	Pg	17 03 42.5	-0.3
PLG	Polygyros	1.78	144	ePn	Pg	17 03 42.5	-0.3
MPEP	Malo Peshtene	1.96	38	i P	Pb	17 03 44.8	-0.5
RZN	Rozhen	1.98	93	i P	Pb	17 03 45.2	-0.5
RZN	Rozhen	1.98	93	i P	Pb	17 03 45.2	-0.5
KAVA	Kavala	2.01	114	P	Pn	17 03 43.7	-0.1
KAVA	Kavala	2.01	114	P	Pn	17 03 43.7	-0.1
GRUS	Gruza	2.29	335	ePn	Pn	17 03 48.8	+1.1
GRUS				eSn	Sn	17 04 17.9	+1.3
GRUS	Gruza	2.29	335	ePn	Pn	17 03 48.8	+1.1
GRUS				eSn	Sn	17 04 17.9	+1.3
DIVS	Divibare	2.74	327	ePn	Pn	17 03 55.1	+1.2
DIVS	Divibare	2.74	327	ePn	Pn	17 03 55.1	+1.2

*IDC **05** 17:24:32.6±1.1, 32.°26N×140.°36E, h110km±6km, mb3.5/11, mb1 3.7/13, mb1mx3.5/28, mbtmp3.5/13, Error ellipse: s-maj=18.4km s-min=16.9km az=63.0*
*ISCJB **05** 17:24:32.7±0.8, 32.°38N±0.°06×140.°42E±0.°07, h122km±5km, mb3.8/11, Error ellipse: s-maj=11.9km s-min=7.9km az=40.8*
*JMA **05** 17:24:34.3±0.3, 32.°40N×140.°49E, h106km±3km, M3.7*
ISC 05 17:24:32.9±1.2**, 32.°32N**±0.°08×**140.°45E**±0.°08**, h113**km±8km**,**
n39, σ1.s08/50**, mb3.7**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	Hachijojimakas	0.93	324	P	Pn	17 24 54.2	+0.6
JHCJ				S	Sn	17 25 09.0	-0.3
JHJ2	Mitsune	0.95	326	P	Pn	17 24 54.6	+0.7
JHJ2				S	Sn	17 25 09.9	+0.2
JHJ	Hachijo jima 2	0.98	325	P	Pn	17 24 53.4	-0.7
	156nm,0.3s,baz=72,slow=22,SNR=154						
JHJ				S	Sn	17 25 09.7	-0.5
	460nm,0.3s,baz=61,slow=22,SNR=23						
JMY	Miyakejima3	1.92	336	P	Pn	17 25 05.9	+0.9
JKO	Kozu shima	2.17	330	P	Pn	17 25 09.0	+0.9
BSO1	Boso 1	2.37	11	P	Pn	17 25 10.8	+0.6

BSO1				eS	Sn	17 25 39.6	+0.7
BSO2	**Boso 2**	**2.44**	**6**	eS	**Sn**	**17 25 41.5**	**+0.6**
BSO3	**Boso 3**	**2.48**	**1**	P	**Pn**	**17 25 12.6**	**+0.7**
BSO3				S	**Sn**	**17 25 42.6**	**+0.8**
TK02	**Tokai 2**	**2.78**	**306**	P	**Pn**	**17 25 17.1**	**+1.2**
JOD2	**Odawara 2**	**3.15**	**339**	P	**Pn**	**17 25 21.6**	**+0.6**
JOD2				eS	**Sn**	**17 25 56.9**	**-1.2**
TTO1	**TONANKAI O.B.S**	**3.34**	**294**	P	**Pn**	**17 25 24.1**	**+0.9**
JYN	**Shimob**	**3.55**	**334**	P	**Pn**	**17 25 27.5**	**+1.2**
JIE	**Ise**	**3.75**	**304**	P	**Pn**	**17 25 29.4**	**+0.4**
JRY	**Ryogami san**	**3.91**	**341**	P	**Pn**	**17 25 31.8**	**+0.7**
JRY				eS	**Sn**	**17 26 15.8**	**-0.3**
JWZ	**Kozaga**	**4.16**	**288**	P	**Pn**	**17 25 34.8**	**+0.3**
JAG	**Ashikaga**	**4.18**	**349**	P	**Pn**	**17 25 33.9**	**-0.8**
JWY	**Kouya**	**4.49**	**296**	P	**Pn**	**17 25 40.0**	**+1.1**
JGM	**Miyama**	**4.58**	**318**	P	**Pn**	**17 25 41.9**	**+1.8**
MJAR	**Matsushiro Arr**	**4.60**	**337**	P	**Pn**	**17 25 40.2**	**-0.2**
	4.2nm,0.3s,baz=160,slow=9.6,SNR=76						
MJAR				S	**Sn**	**17 26 32.4**	**-0.4**
	2.2nm,0.3s,baz=162,slow=21,SNR=12						
MAT	**Matsushiro**	**4.61**	**337**	P	**Pn**	**17 25 41.2**	**+0.8**
MAT				S	**Sn**	**17 26 32.4**	**-0.5**
MAT	**Matsushiro**	**4.61**	**337**	P	**Pn**	**17 25 41.6**	**+1.2**
MAT				eS	**Sn**	**17 26 32.4**	**-0.5**
JWT	**Wachi**	**5.14**	**307**	P	**Pn**	**17 25 48.9**	**+1.3**
JFT	**Otama**	**5.19**	**359**	P	**Pn**	**17 25 47.6**	**-0.7**
JFT				eS	**Sn**	**17 26 42.6**	**-4.4**
JAI	**Aioi**	**5.25**	**288**	P	**Pn**	**17 25 49.9**	**+0.8**
JNU	**Nakatsue**	**8.11**	**278**	P	**Pn**	**17 26 27.3**	**-0.5**
	0.1nm,0.3s,baz=93,slow=11,SNR=3.2						
ASAJ	**Asahikawa**	**11.90**	**8**	P	**Pn**	**17 27 17.0**	**-1.8**
	0.8nm,0.3s,baz=218,slow=14,SNR=12						
ASAJ				S	Sn	17 29 21.0	-8.7
	0.3nm,0.3s,baz=233,slow=20,SNR=3.9						
SONM	**Songino Array**	**30.03**	**311**	P	**P**	**17 30 31.9**	**+0.8**
	0.3nm,0.5s,baz=110,slow=8.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**44.63**	**316**	PcP	**PcP**	**17 34 14.0**	**-0.7**
	0.2nm,0.4s,baz=90,slow=3.1,SNR=3.7						
MKAR	**Makanchi Array**	**46.09**	**306**	P	**P**	**17 32 45.1**	**-0.5**
	1.0nm,0.4s,baz=86,slow=8.9,SNR=20						
KURBB	**Kurchatov Arra**	**48.39**	**311**	P	**P**	**17 33 02.8**	**-0.5**
	0.5nm,0.4s,baz=88,slow=8.5,SNR=8.5						
KDAK	**Kodiak Island**	**51.19**	**39**	P	**P**	**17 33 24.8**	**+0.5**
	3.1nm,0.6s,baz=277,slow=8.1,SNR=5.7						
WRA	**Warramunga Arr**	**52.29**	**187**	P	**P**	**17 33 31.8**	**-1.1**
	1.3nm,1.1s,baz=6.5,slow=7.6,SNR=3.4						
BVAR	**Borovoye Array**	**53.24**	**315**	P	**P**	**17 33 39.4**	**-0.3**
	1.5nm,0.5s,baz=98,slow=7.7,SNR=7.7						
ILAR	**Eielson Array**	**53.93**	**30**	P	**P**	**17 33 45.2**	**+0.8**
	0.5nm,0.7s,baz=264,slow=6.7,SNR=7.3						
YKA	**Yellowknife Ar**	**68.30**	**29**	P	**P**	**17 35 21.1**	**-0.3**
	0.3nm,0.5s,baz=300,slow=5.9,SNR=6.3						
FINES	**FINESS Array B**	**72.62**	**333**	P	**P**	**17 35 47.4**	**-0.3**
	0.6nm,0.4s,baz=24,slow=5.2,SNR=6.9						
PDAR	**Pinedale Array**	**81.56**	**44**	P	**P**	**17 36 39.1**	**+0.7**
	0.5nm,0.7s,baz=237,slow=3.0,SNR=2.9						
TXAR	**Lajitas Array**	**93.64**	**52**	P	**P**	**17 37 38.9**	**+1.9**
	0.6nm,0.7s,baz=314,slow=3.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**120.00**	**312**	PKP	**PKPdf**	**17 43 10.4**	**-0.5**
	0.2nm,0.5s,baz=48,slow=2.6,SNR=4.5						

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*IDC **05** 17:26:23.9±4.1, 37.06N×71.67E, h107km±37km, mb3.3/6, mb1 3.6/11, mb1mx3.3/31, mbtmp3.4/11, MS3.0/1, Ms1 2.9/1, ms1mx2.2/32, Error ellipse: s-maj=28.2km s-min=20.3km az=27.0*

*BJI **05** 17:26:23.0, 37.26N×71.21E, h207km, mB4.7/9, mb4.5/12*

*NEIC **05** 17:26:24.6±0.9, 37.33N×71.07E, h233km±19km, mb4.3/8, Error ellipse: s-maj=19.5km s-min=12.6km az=100.0*

*ISCJB **05** 17:26:24.6±0.4, 37.18N±0.02×71.93E±0.06, h142km, mb3.9/13, Error ellipse: s-maj=6.8km s-min=2.9km az=168.6*

*NNC **05** 17:26:32.2±2.0, 37.72N×71.64E, h178km±17km, mb2.9, mpv4.5, Error ellipse: s-maj=17.8km s-min=10.1km az=17.0*

ISC 05 17:26:24.0±0.6**, 37.17N**±0.03×**71.89E**±0.06**, h142**km**, n74, σ2.33**/77**, mb3.6**/13**, 8C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.34**	**180**	P	**Pn**	**17 27 18.3**	**+2.8**
CEP				S	**Sn**	**17 27 57.0**	**+1.6**
KBL	**Kabul**	**3.49**	**222**	ePn	**Pn**	**17 27 18.6**	**+1.0**
KBL				eS	**Sn**	**17 27 55.3**	**-3.8**
CHCP	**Chirah Chowk**	**3.68**	**162**	P	Pn	17 27 23.9	+4.0
KSH	**Kashi**	**3.98**	**53**	P	**Pn**	**17 27 22.7**	**-1.1**
KSH				S	**Sn**	**17 28 04.7**	**-5.5**
KSH				smax	smax		
	comp=N,510nm,0.7s						
KSH				smax	smax		
	comp=E,340nm,0.6s						
THW	**Thamme Wali**	**4.37**	**182**	P	**Pn**	**17 27 30.8**	**+1.9**
AML	**Almayashu**	**5.15**	**15**	P	**Pn**	**17 27 41.9**	**+2.4**
	SNR=150						
UCH	**Uchtor**	**5.44**	**21**	P	**Sn**	**17 28 44.6**	**-0.9**
	SNR=11						
KZA	**Kyzart**	**5.55**	**27**	P	**Pn**	**17 27 47.5**	**+2.7**
	SNR=20						
EKS2	**Erkin-Say**	**5.67**	**14**	ePn	**Pn**	**17 27 48.9**	**+2.6**
	comp=E,38nm,0.5s						
EKS2				eS	**Sn**	**17 28 49.5**	**-1.1**
EKS2	**Erkin-Say**	**5.67**	**14**	P	**Pn**	**17 27 49.2**	**+2.9**
	SNR=124						
DLH	**Dalhousie**	**5.71**	**143**	ePKP	**Pn**	**17 27 49.0**	**+2.1**
DLH				eS	**Sn**	**17 28 50.0**	**-1.6**
AAK	**Ala-Archa**	**5.81**	**19**	ePn	**Pn**	**17 27 51.0**	**+2.8**
	comp=E,55nm,0.5s						
AAK				eS	**Sn**	**17 28 53.1**	**-0.8**
AAK	**Ala-Archa**	**5.81**	**19**	P	**Pn**	**17 27 51.1**	**+3.0**
	comp=E,17nm,0.3s,baz=198,slow=12,SNR=344						
AAK				S	**Sn**	**17 28 56.0**	**+2.1**
	comp=E,2.7nm,0.3s,baz=124,slow=23,SNR=14						
KBK	**Karagaybulak**	**5.96**	**22**	P	Pn	17 27 53.5	+3.3
	SNR=26						
KK31	**Karatay Array**	**6.02**	**350**	⇓P	**Pn**	**17 27 52.1**	**+1.3**
	comp=E,12nm,0.3s,baz=174,slow=12,SNR=510						
KK31				⇑S	**Sn**	**17 28 55.0**	**-3.7**
	comp=E,29nm,0.5s,baz=171,slow=18,SNR=10.0						
KKAR	**Karatay Array**	**6.02**	**350**	ePn	**Pn**	**17 27 51.8**	**+1.0**
	comp=E,37nm,0.3s						
KKAR				eS	Sn	17 28 45.3	-13
ULHL	**Ulahol**	**6.08**	**32**	P	**Pn**	**17 27 54.8**	**+3.0**
	SNR=12						
DHRM	**DHARAMSHALA**	**6.11**	**142**	ePKP	**Pn**	**17 27 54.4**	**+2.1**
DHRM				eS	**Sn**	**17 29 01.4**	**+0.2**
DHRM				AML	AML	17 29 06.4	
	comp=E,637nm,0.3s						
DHRM				AML	AML	17 29 06.5	
	comp=N,482nm,0.4s						
CHMS	**Chumysh**	**6.22**	**20**	P	**Pn**	**17 27 56.6**	**+3.1**
	SNR=10						
TKM2	**Tokmak 2**	**6.41**	**25**	⇑P	**Pn**	**17 27 58.6**	**+2.4**
	comp=N,38nm,0.6s						
TKM2				⇓S	**Sn**	**17 29 09.3**	**+0.9**
	comp=N,23nm,1.0s						
TKM2	**Tokmak 2**	**6.41**	**25**	ePn	**Pn**	**17 27 58.8**	**+2.6**
	comp=N,47nm,0.6s						
TKM2	**Tokmak 2**	**6.41**	**25**	P	Pn	17 27 59.5	+3.3
	SNR=9.7						
USP	**Ospenovka**	**6.41**	**17**	P	Pn	17 27 59.2	+3.1
	SNR=9.2						
SDNR	**Sundarnagar**	**7.05**	**142**	ePKP	**Pn**	**17 28 07.5**	**+2.8**
SDNR				eS	**Sn**	**17 29 21.5**	**-2.0**
SMLA	**Simla**	**7.45**	**142**	i P	**Pn**	**17 28 12.3**	**+2.4**
SMLA				i S	**Sn**	**17 29 29.3**	**-3.8**
SMLA				AML	AML	17 29 35.9	
	comp=E,173nm,0.3s						
SMLA				AML	AML	17 29 36.4	
	comp=N,160nm,0.2s						
DDI	**Dehra Dun**	**8.54**	**141**	eS	**Sn**	**17 29 54.5**	**-5.2**
MK31	**Makanchi Array**	**12.33**	**36**	P	**Pn**	**17 29 17.1**	**+2.4**
	comp=N,2.5nm,0.8s,baz=217,slow=11,SNR=17						
MK31	**Makanchi Array**	**12.33**	**36**	ePn	**Pn**	**17 29 16.2**	**+1.6**
MKAR	**Makanchi Array**	**12.33**	**36**	P	**Pn**	**17 29 17.3**	**+2.6**
	comp=N,0.1nm,0.3s,baz=223,slow=12,SNR=17						
PYUN	**Piuthan**	**13.00**	**131**	eP	**Pn**	**17 29 22.7**	**-1.0**
	comp=N,34nm,0.3s						
DANN	**Dangsing**	**13.30**	**128**	eP	**Pn**	**17 29 27.6**	**0.0**
	comp=N,21nm,0.4s						
DANN				eS	Sn	17 31 45.7	-9.1
KOLN	**Koldanda**	**13.61**	**130**	eP	**Pn**	**17 29 32.0**	**+0.5**
	comp=N,16nm,0.5s						
WMQ	**Urumqi**	**13.73**	**56**	eP	**P**	**17 29 36.5**	**-0.1**
KURBB	**Kurchatov Arra**	**14.27**	**17**	P	**Pn**	**17 29 39.2**	**-0.1**
	comp=N,0.1nm,0.3s,baz=216,slow=12,SNR=9.9						
KUR14	**Kurchatov Arra**	**14.27**	**18**	⇑P	**Pn**	**17 29 39.5**	**0.0**
	comp=N,0.1nm,0.7s						
KURK	**Kurchatov**	**14.37**	**17**	⇑P	**Pn**	**17 29 40.8**	**+0.2**
KURK	**Kurchatov**	**14.37**	**17**	ePn	Pn	17 29 37.4	-3.3
	comp=N,4.3nm,1.0s						
KKN	**Kakani**	**14.66**	**126**	eP	**Pn**	**17 29 44.3**	**-0.4**
	comp=N,20nm,0.6s						
DMN	**Daman**	**14.67**	**127**	eP	**Pn**	**17 29 44.7**	**-0.2**
	comp=N,13nm,0.4s						
BHPL	**Bhopal**	**14.68**	**159**	eS	Sn	17 32 19.1	-8.5
AB31	**Akbulak array**	**14.87**	**328**	P	**Pn**	**17 29 47.0**	**+0.1**
	comp=N,0.6nm,0.3s,baz=135,slow=14,SNR=32						
AB31				S	Sn	17 32 24.1	-7.6
	comp=N,1.3nm,0.4s,baz=150,slow=23,SNR=15						
ABKAR	**Akbulak array**	**14.87**	**328**	Pn	Pn	17 29 37.5	-9.4
ABKAR				eS	Sn	17 32 13.4	-18
PKIN	**Phulchoki**	**14.88**	**126**	eP	**P**	**17 29 48.6**	**-1.1**
	comp=N,15nm,0.4s						
PKIN				eS	Sn	17 32 23.0	-10
PKI	**Pulchoki**	**14.89**	**126**	eP	**Pn**	**17 29 48.3**	**+0.6**
GUN	**Gumba**	**14.97**	**124**	eP	**Pn**	**17 29 49.2**	**+0.5**
	comp=N,96nm,1.0s						
VOSK	**Vostochnaya**	**15.57**	**358**	⇑P	**Pn**	**17 29 55.9**	**+0.3**
	comp=N,4.2nm,1.4s						
BVA0	**Borovoye Array**	**15.89**	**357**	P	**Pn**	**17 29 59.8**	**+0.3**
	comp=N,0.4nm,0.9s,baz=98,slow=9.1,SNR=10						
BVA0				S	**Sn**	**17 32 49.2**	**-7.0**
	comp=N,0.3nm,1.0s,baz=171,slow=17,SNR=6.0						
BVAR	**Borovoye Array**	**15.89**	**357**	P	**P**	**17 30 02.2**	**+1.8**
	comp=N,0.2nm,0.3s,baz=172,slow=12,SNR=7.5						
BVAR				S	Sn	17 32 48.7	-7.4
	comp=N,0.3nm,0.3s,baz=171,slow=22,SNR=6.6						
ZRNK	**Zerenda**	**15.91**	**354**	⇓P	**P**	**17 30 01.6**	**+1.0**
	comp=N,5.7nm,1.7s						
BRVK	**Borovoye**	**15.93**	**356**	⇑P	**Pn**	**17 29 59.7**	**-0.3**
	comp=N,3.5nm,0.7s						
BRVK	**Borovoye**	**15.93**	**356**	P	**Pn**	**17 29 58.4**	**-1.6**
	comp=N,2.1nm,0.7s						
RAMN	**Ramite**	**16.09**	**125**	eP	**P**	**17 30 03.4**	**+0.4**
	comp=N,20nm,0.4s						
RAMN				eS	Sn	17 32 51.8	-10
TAPN	**Taplejung**	**16.56**	**122**	eP	**P**	**17 30 09.5**	**+1.2**
	comp=N,21nm,0.6s						
AKTO	**Aktyubinsk**	**16.57**	**327**	⇑P	**P**	**17 30 08.4**	**+0.5**
	comp=N,1.1nm,1.2s						
AKTO				⇑S	S	17 33 05.2	-7.4
AKTO	**Aktyubinsk**	**16.57**	**327**	P	**P**	**17 30 10.6**	**+2.6**
	comp=N,0.3nm,0.3s,baz=137,slow=14,SNR=7.9						
AKTO				S	S	17 33 01.4	-11
	comp=N,0.1nm,0.3s,baz=307,slow=20,SNR=3.8						
ODAN	**Odare**	**16.67**	**124**	eP	**Pn**	**17 30 11.5**	**+2.0**
	comp=N,25nm,0.5s						
LSA	**Lhasa**	**17.70**	**109**	eP	**Pn**	**17 30 23.4**	**+1.3**
	comp=N,3.5nm,0.7s						
ZAA0	**Zalesovo Array**	**19.01**	**24**	eP	**Pn**	**17 30 38.4**	**+1.6**
ZALV	**Zalesovo Beam**	**19.01**	**24**	P	**Pn**	**17 30 39.0**	**+2.2**
	comp=N,1.0nm,0.3s,baz=227,slow=10,SNR=20						
GTA	**Gaotai**	**22.00**	**76**	eP	P	17 31 14.6	+7.7
GTA				pP	pP	17 31 55.1	+22
GTA				sP	sP	17 32 23.0	+33
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KBZ	**Khabaz**	**22.94**	**296**	LR	LR	17 42 20.6	
	comp=Z,38nm,18.2s,baz=254,slow=42						
SONM	**Songino Array**	**27.37**	**56**	P	P	17 32 02.0	+6.1
	comp=Z,1.1nm,0.8s,baz=258,slow=9.5,SNR=9.5						
ULN	**Ulaanbaatar**	**27.81**	**56**	P	**P**	**17 32 04.2**	**+4.3**
	comp=Z,0.8nm,0.6s						
KMI	**Kunming**	**28.88**	**106**	P	**P**	**17 32 09.5**	**-0.1**
KMI				pP	pP	17 32 53.8	+14
KMI				sP	sP	17 33 14.0	+18
KMI				pmax	pmax		
	comp=Z,12nm,1.4s						
CMAR	**Chiang Mai Arr**	**30.17**	**121**	P	P	17 32 25.4	+4.6
	comp=Z,0.6nm,0.7s,baz=312,slow=9.9,SNR=8.0						
HHC	**Hu-ho-hao-te**	**30.87**	**71**	eP	**P**	**17 32 25.2**	**-1.7**
HHC				pP	pP	17 33 10.6	+13
HHC				sP	sP	17 33 35.3	+22
HHC				PP	**PP**	**17 33 38.6**	**-0.6**
HHC				S	S	17 37 13.0	-7.3
HHC				sS	ScP	17 38 33.3	-16
HHC				PcS	PcS	17 38 58.2	-6.2
HHC				SS	**SnSn**	**17 39 18.1**	**+1.3**
HHC				ScS	ScS	17 42 32.4	-14
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,93nm,5.8s						
HHC				LR	LR		
	comp=N,290nm,20.3s						
HHC				LR	LR		
	comp=E,310nm,21.6s						
HHC				LR	LR		
	comp=Z,220nm,20.8s						
GYA	**Guiyang**	**31.27**	**100**	P	**P**	**17 32 31.0**	**+0.5**
GYA				pP	pP	17 33 15.6	+15
GYA				sP	sP	17 33 41.8	+25
GYA				PP	**PP**	**17 33 46.0**	**+2.2**
GYA				PcP	PcP	17 35 15.4	-6.1
GYA				S	**S**	**17 37 25.0**	**-1.8**
GYA				ScP	ScP	17 38 37.5	-14
GYA				PcS	**PcS**	**17 39 01.2**	**-5.0**
GYA				ScS	ScS	17 42 34.8	-14
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**38.69**	**83**	eP	**P**	**17 33 31.5**	**-2.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2	**Changchun**	**40.67**	**63**	eP	**P**	**17 33 47.7**	**-2.5**
MDJ	**Mudanjiang**	**43.46**	**61**	P	P	17 34 09.1	-3.7
MDJ				pP	pP	17 34 56.0	+12
MDJ				sP	sP	17 35 20.1	+20
MDJ				S	S	17 40 22.2	-8.2
MDJ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,43nm,6.6s						
TORD	**Torodi Ar. Bea**	**66.44**	**269**	P	**P**	**17 37 00.9**	**+2.6**
	comp=Z,0.3nm,0.7s,baz=46,slow=6.1,SNR=3.6						
YKA	**Yellowknife Ar**	**80.54**	**3**	P	P	17 38 24.6	+4.7
	comp=Z,0.4nm,0.6s,baz=346,slow=5.4,SNR=6.9						
WRA	**Warramunga Arr**	**81.75**	**123**	P	P	17 38 30.2	+3.3
	comp=Z,0.4nm,0.9s,baz=330,slow=5.2,SNR=3.1						
ASAR	**Alice Springs**	**84.06**	**126**	P	P	17 38 42.9	+4.1
	comp=Z,0.3nm,0.6s,baz=309,slow=4.8,SNR=6.1						

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*MAN **05** 17:38:38, 6.63N×126.01E, h156km, mb4.7, ML3.6, MS3.5*

*IDC **05** 17:38:39.9±0.6, 6.52N×125.63E, h158km±3km, mb3.5/8, mb1 3.5/8, mb1mx3.3/26, mbtmp3.5/8, Error ellipse: s-maj=40.6km s-min=11.9km az=78.0*

*ISCJB **05** 17:38:39.4±0.4, 6.65N±0.05×126.09E±0.08, h150km, mb3.7/8, Error ellipse: s-maj=12.3km s-min=5.5km az=150.4*

*AUST **05** 17:38:59.7±7.6, 5.06N×126.23E, h197km±1km, Error ellipse: s-maj=5.9km s-min=2.2km az=352.0*

ISC 05 17:38:40.4±0.7**, 6.61N**±0.07×**125.92E**±0.10**, h150**km**, n27, σ1.48**/29**, mb3.9**/8**, 1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**0.47**	**46**	eP	**Pn**	**17 39 01.4**	**-0.2**
DAV	**Davao City (W)**	**0.56**	**324**	P	**Pn**	**17 39 02.8**	**+0.7**
	321nm,0.3s,baz=250,slow=3.2,SNR=41						
DAV				S	**Sn**	**17 39 20.8**	**+2.2**
	310nm,0.3s,baz=106,slow=23,SNR=16						
DMPH	**Davao City--Mi**	**0.62**	**319**	⇓eP	**Pn**	**17 39 05.0**	**+2.6**
DMPH				i S	**Sn**	**17 39 23.0**	**+3.8**
KCP	**Kidapawan**	**0.91**	**296**	⇑iP	**Pn**	**17 39 04.3**	**-0.1**
KCP				i S	**Sn**	**17 39 24.5**	**+1.6**
BUKP	**Musuan**	**1.52**	**326**	eP	**Pn**	**17 39 10.5**	**+0.3**
CTBH	**Cotabato--PC H**	**1.77**	**290**	⇓iP	**Pn**	**17 39 12.9**	**+0.1**
CGP	**Cagayan de Oro**	**2.19**	**327**	⇓e	**Pn**	**17 39 17.5**	**-0.3**
CGP				eS	**Sn**	**17 39 47.2**	**+0.5**
BUTP	**Butuan**	**2.36**	**353**	eP	**Pn**	**17 39 19.9**	**+0.1**
PAGZ	**Pagadian**	**2.80**	**296**	eP	**Pn**	**17 39 25.9**	**+0.7**
LUWI	**Luwuk**	**8.23**	**203**	P	Pn	17 40 39.6	+2.8
	baz=7.0,SNR=16						
SWI	**Sorong**	**9.14**	**144**	P	**Pn**	**17 40 49.3**	**+0.2**
	baz=7.8,SNR=3.9						
AAI	**Ambon**	**10.48**	**167**	P	**Pn**	**17 41 06.5**	**-0.3**
	baz=9.0,SNR=3.7						
MTN	**Manton Dam**	**20.01**	**165**	P	**Pn**	**17 43 04.0**	**-0.9**
	baz=19,SNR=5.8						
MTN				S	S	17 46 26.5	-12
	baz=19,SNR=4.3						
KDU	**Kakadu**	**20.25**	**161**	P	**P**	**17 43 04.2**	**+0.1**
	baz=19,SNR=6.5						
KDU				S	S	17 46 19.8	-23
	baz=19,SNR=3.8						
KNRA	**Kununurra**	**22.32**	**173**	P	**P**	**17 43 25.5**	**-0.4**
	baz=21,SNR=3.9						
FITZ	**Fitzroy Crossi**	**24.56**	**181**	P	P	17 43 52.7	+6.3
	baz=23,SNR=3.8						
COEN	**Coen**	**26.67**	**140**	P	**P**	**17 44 09.0**	**+3.5**
	baz=25,SNR=9.5						
WRA	**Warramunga Arr**	**27.66**	**163**	P	**P**	**17 44 12.8**	**-1.5**
	1.1nm,0.7s,baz=346,slow=9.4,SNR=20						
KSRS	**Korea Array**	**30.75**	**3**	P	**P**	**17 44 41.2**	**-0.3**
	1.3nm,0.5s,baz=187,slow=9.7,SNR=8.5						
ASAR	**Alice Springs**	**31.09**	**166**	P	**P**	**17 44 43.8**	**-0.9**
	0.9nm,0.3s,baz=339,slow=7.3,SNR=42						
USRK	**Ussuriysk Arra**	**37.82**	**7**	P	**P**	**17 45 42.3**	**+0.1**
	2.1nm,0.6s,baz=182,slow=7.5,SNR=4.2						
ASAJ	**Asahikawa**	**40.11**	**19**	P	**P**	**17 46 01.4**	**0.0**
	1.1nm,0.3s,baz=231,slow=9.4,SNR=8.3						
BBOO	**Buckleboo**	**40.37**	**167**	P	**P**	**17 46 03.4**	**-0.2**
	baz=39,SNR=34						
STKA	**Stephens Creek**	**41.09**	**160**	P	**P**	**17 46 08.2**	**-1.4**
	1.3nm,0.4s,baz=342,slow=9.1,SNR=8.6						
STKA	**Stephens Creek**	**41.09**	**160**	P	**P**	**17 46 09.3**	**-0.2**
	baz=40,SNR=7.7						
MKAR	**Makanchi Array**	**54.75**	**325**	P	**P**	**17 47 52.6**	**-1.8**
	0.2nm,0.4s,baz=113,slow=7.3,SNR=7.5						
KURBB	**Kurchatov Arra**	**58.89**	**327**	P	**P**	**17 48 21.4**	**-2.1**
	0.1nm,0.2s,baz=125,slow=6.1,SNR=5.1						

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*ISCJB **05** 17:39:32.2±0.4, 41.84N±0.01×22.11E±0.02, h1km±3km, mb3.5/4, Error ellipse: s-maj=2.4km s-min=2.0km az=145.0*

*TIR **05** 17:39:32.5, 41.82N×21.99E, h7km, ML3.9*

*SOF **05** 17:39:32.9, 41.85N×22.11E, h7km, MD3.7*

*SKO **05** 17:39:32.9, 41.80N×22.09E, h2km, M3.2, ML3.7*

*BEO **05** 17:39:33.3±0.5, 41.81N×22.06E, h6km±2km, ML3.5/1*

*PDG **05** 17:39:33.4±0.6, 41.86N×22.09E, h8km, ML3.4/9, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*IDC **05** 17:39:33.7±1.2, 41.88N×22.17E, h0km, mb3.6/4, mb1 3.6/9, mb1mx3.5/29, mbtmp3.5/9, ML3.1/5, MS2.9/3, Ms1 2.9/3, ms1mx2.3/41, Error ellipse: s-maj=17.1km s-min=13.9km az=12.0*

*CSEM **05** 17:39:33.3±0.1, 41.85N×22.09E, h2km, ML3.8, Error ellipse: s-maj=2.5km s-min=2.1km az=46.0*

*ATH **05** 17:39:34.2, 41.77N×22.16E, h19km, MD3.9/19*

*PRU **05** 17:39:34.3, 41.77N×22.13E, h2km*

ISC 05 17:39:33.0±1.1**, 41.83N**±0.01×**22.06E**±0.01**, h1**km±8km**, n195, σ1.05**/272**, mb3.5**/4**, 39C-28D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.49**	**287**	i Pg	**Pg**	**17 39 42.9**	**+0.5**
SKO				i Sg	**Sg**	**17 39 49.9**	**+1.2**
SKO				eLg	Lg	17 39 50.1	
	comp=E,3µm,0.6s						
SKO				eLg	Lg	17 39 50.2	
	comp=N,3µm,0.5s						
SKO	**Skopje**	**0.49**	**287**	⇑iPg	**Pg**	**17 39 42.9**	**+0.5**
SKO	**Skopje**	**0.49**	**287**	⇑iPg	**Pg**	**17 39 42.9**	**+0.5**
SKO				i Sg	**Sb**	**17 39 50.4**	**-1.6**
SKO				eLg	Lg	17 39 50.6	
	comp=N,3µm,0.5s						
VAY	**Valandovo**	**0.64**	**143**	⇑iPg	**Pg**	**17 39 44.7**	**-0.4**
VAY				i Sg	**Sg**	**17 39 53.9**	**+0.5**
VAY				eLg	Lg	17 39 54.1	
	comp=E,3µm,0.3s						
VAY				eLg	Lg	17 39 54.2	
	comp=N,3µm,0.3s						
VAY	**Valandovo**	**0.64**	**143**	⇑iPg	**Pg**	**17 39 45.2**	**0.0**
VAY				i Sg	**Sb**	**17 39 54.4**	**-1.8**
VAY				eLg	Lg	17 39 54.6	
	comp=N,3µm,0.3s						
KKB	**Krupnik**	**0.76**	**87**	i Pg	**Pb**	**17 39 48.6**	**-0.5**
KKB	**Krupnik**	**0.76**	**87**	i Pg	**Pb**	**17 39 48.6**	**-0.5**
GRG	**Griva**	**0.91**	**164**	ePN	**Pg**	**17 39 50.5**	**+0.1**
GRG				eSN	**Sg**	**17 40 01.7**	**-0.5**
GRG	**Griva**	**0.91**	**164**	ePn	**Pg**	**17 39 50.5**	**+0.1**
BIA	**Bitola**	**0.98**	**215**	i Pg	**Pg**	**17 39 51.7**	**-0.1**
BIA				i Sg	**Sb**	**17 40 05.6**	**-0.7**
BIA				eLg	Lg	17 40 05.8	
	comp=E,1µm,0.4s						
BIA				eLg	Lg	17 40 06.7	
	comp=N,879nm,0.3s						
BIA	**Bitola**	**0.98**	**215**	i Pg	**Pg**	**17 39 51.7**	**-0.1**
BIA				i Sg	**Sb**	**17 40 05.6**	**-0.7**
BIA				eLg	Lg	17 40 06.6	
	comp=N,879nm,0.3s						
BARS	**Barje**	**1.00**	**350**	⇑iPg	**Pg**	**17 39 51.4**	**-0.9**
BARS				eSg	**Sg**	**17 40 06.1**	**+0.8**
BARS	**Barje**	**1.00**	**350**	⇑iPg	**Pg**	**17 39 51.4**	**-0.9**
BARS				eSg	**Sg**	**17 40 06.1**	**+0.8**
VTS	**Vitosha**	**1.14**	**48**	⇓iPg	**Pg**	**17 39 55.1**	**+0.1**
VTS				eSg	**Sg**	**17 40 10.5**	**+0.7**
VTS	**Vitosha**	**1.14**	**48**	⇓iP	**Pg**	**17 39 55.1**	**+0.1**
VTS				S	**Sg**	**17 40 10.5**	**+0.7**
VTS	**Vitosha**	**1.14**	**48**	i P	**Pg**	**17 39 55.1**	**+0.1**
VTS	**Vitosha**	**1.14**	**48**	i P	**Pg**	**17 39 55.1**	**+0.1**
VTS				eSg	**Sg**	**17 40 10.5**	**+0.7**
FNA	**Florina**	**1.17**	**207**	ePN	**Pb**	**17 39 55.5**	**-0.5**
FNA				eSN	**Sn**	**17 40 11.8**	**-1.2**
FNA	**Florina**	**1.17**	**207**	ePn	**Pb**	**17 39 55.5**	**-0.5**
FNA				eSn	**Sn**	**17 40 11.8**	**-1.2**
PHP	**Peshkopia**	**1.22**	**264**	ePN	**Pg**	**17 39 55.5**	**-0.9**
PHP				i SN	**Sg**	**17 40 11.9**	**-0.4**
PHP	**Peshkopia**	**1.22**	**264**	ePn	**Pg**	**17 39 55.5**	**-0.9**
PHP				i Sn	**Sg**	**17 40 11.9**	**-0.4**
MMB	**Musomiste**	**1.27**	**100**	i P	**Pg**	**17 39 57.8**	**+0.4**
MMB	**Musomiste**	**1.27**	**100**	i P	**Pg**	**17 39 57.8**	**+0.4**
SOH	**Sokhos**	**1.40**	**136**	ePN	**Pb**	**17 39 59.3**	**-0.7**
SOH				eSN	**Sb**	**17 40 17.1**	**-1.2**
SOH	**Sokhos**	**1.40**	**136**	ePn	**Pb**	**17 39 59.3**	**-0.7**
SOH				eSn	**Sb**	**17 40 17.1**	**-1.2**
NVR	**Nevrokopi**	**1.43**	**109**	ePN	**Pg**	**17 40 00.3**	**-0.2**
NVR				eSN	**Sb**	**17 40 17.7**	**-1.6**
NVR	**Nevrokopi**	**1.43**	**109**	ePn	**Pg**	**17 40 00.3**	**-0.2**
NVR				eSn	**Sb**	**17 40 17.7**	**-1.6**
ZAPS	**Zavoj**	**1.50**	**16**	ePn	**Pb**	**17 40 01.4**	**-0.4**
ZAPS				eSn	**Sg**	**17 40 21.9**	**+0.5**
KZN	**Kozani**	**1.54**	**188**	ePN	**Pg**	**17 40 02.2**	**-0.3**
KZN				eSN	**Sg**	**17 40 22.8**	**+0.4**
KZN	**Kozani**	**1.54**	**188**	ePn	**Pg**	**17 40 02.2**	**-0.3**
KZN				eSn	**Sg**	**17 40 22.8**	**+0.4**
KBN	**Korca**	**1.54**	**219**	ePN	**Pg**	**17 40 02.7**	**+0.1**
KBN				i SN	**Sn**	**17 40 19.5**	**-2.9**
KBN	**Korca**	**1.54**	**219**	ePn	**Pg**	**17 40 02.7**	**+0.1**
KBN				i Sn	**Sn**	**17 40 19.5**	**-2.9**
SELS	**Selova**	**1.56**	**334**	⇓iPn	**Pn**	**17 40 00.7**	**-1.2**
BCI	**Bajram Curri**	**1.58**	**291**	ePN	**Pn**	**17 40 02.2**	**0.0**
BCI				i SN	**Sg**	**17 40 23.8**	**0.0**
BCI	**Bajram Curri**	**1.58**	**291**	ePn	**Pn**	**17 40 02.2**	**0.0**
BCI				i Sn	**Sg**	**17 40 23.8**	**0.0**
PUK	**Puka**	**1.63**	**278**	ePN	**Pb**	**17 40 03.4**	**-0.6**
PUK				i SN	**Sg**	**17 40 25.8**	**+0.3**
PUK	**Puka**	**1.63**	**278**	ePn	**Pb**	**17 40 03.4**	**-0.6**
PUK				i Sn	**Sg**	**17 40 25.8**	**+0.3**
TIR	**Tirane**	**1.72**	**254**	ePg	**Pg**	**17 40 05.9**	**0.0**
TIR				eSg	**Sg**	**17 40 28.6**	**+0.4**
TIR	**Tirane**	**1.72**	**254**	ePg	**Pg**	**17 40 05.9**	**0.0**
TIR				eSg	**Sg**	**17 40 28.6**	**+0.4**
TIR				eSn	**Sb**	**17 40 29.7**	**+2.3**
PGB	**Panagyurishte**	**1.72**	**65**	i P	**Pn**	**17 40 04.3**	**+0.1**
PGB	**Panagyurishte**	**1.72**	**65**	i P	**Pn**	**17 40 04.3**	**+0.1**
PVY	**Plav**	**1.74**	**297**	⇑iPn	**Pb**	**17 40 04.9**	**-0.9**
PVY				eSn	**Sg**	**17 40 29.9**	**+1.0**
PVY	**Plav**	**1.74**	**297**	⇑iPn	**Pb**	**17 40 04.9**	**-0.9**
PVY				eSn	**Sg**	**17 40 29.9**	**+1.0**
PLG	**Polygyros**	**1.79**	**144**	ePN	**Pn**	**17 40 04.7**	**-0.4**
PLG				eSN	**Sn**	**17 40 26.8**	**-1.7**
PLG	**Polygyros**	**1.79**	**144**	ePn	**Pn**	**17 40 04.7**	**-0.4**
PLG				eSn	**Sn**	**17 40 26.8**	**-1.7**
BEY	**Berane**	**1.92**	**304**	ePn	**Pn**	**17 40 06.7**	**-0.2**
BEY				eSn	**Sb**	**17 40 33.9**	**+0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
IVA	Berane	1.92	304	ePn	Pn	17 40 06.7	-0.2
IVA				eSn	Sb	17 40 33.9	+0.6
MPEP	Malo Peshtene	1.97	39	P	Pb	17 40 08.5	-1.1
PLD	Plovdiv	1.99	81	P	Pb	17 40 08.5	-1.5
PLD	Plovdiv	1.99	81	P	Pb	17 40 08.5	-1.5
RZN	Rozhen	1.99	93	i P	Pn	17 40 08.7	+0.7
RZN	Rozhen	1.99	93	i P	Pn	17 40 08.7	+0.7
BOLS	Boljevac	2.00	358	ePn	Pn	17 40 06.4	-1.6
BOLS				eSn	Sb	17 40 35.0	-0.6
BOLS	Boljevac	2.00	358	ePn	Pn	17 40 06.4	-1.6
BOLS				eSn	Sb	17 40 35.0	-0.6
LSK	Leskovik	2.01	214	ePN	Pb	17 40 09.2	-1.2
LSK				i SN	Sg	17 40 38.7	+1.1
LSK	Leskovik	2.01	214	ePn	Pb	17 40 09.2	-1.2
LSK				i Sn	Sg	17 40 38.7	+1.1
SJES	Sjenica	2.10	314	ePn	Pn	17 40 09.2	-0.3
ULC	Ulcinj	2.11	275	⇑iPn	Pb	17 40 10.6	-1.4
ULC				eSn	Sb	17 40 39.4	+0.7
ULC	Ulcinj	2.11	275	⇑iPn	Pb	17 40 10.6	-1.4
ULC				eSn	Sb	17 40 39.4	+0.7
PDG	Podgorica	2.17	287	ePn	Pn	17 40 10.6	+0.3
PDG				eSn	Sn	17 40 37.2	-0.6
PDG	Podgorica	2.17	287	ePn	Pn	17 40 10.6	+0.3
PDG				eSn	Sn	17 40 37.2	-0.6
TTG	Podgorica	2.17	287	⇓iPn	Pb	17 40 11.5	-1.6
TTG				eSn	Sb	17 40 40.9	+0.4
PAIG	Paliouri	2.26	147	ePN	Pn	17 40 12.2	+0.7
PAIG				eSN	Sn	17 40 39.4	-0.6
PAIG	Paliouri	2.26	147	ePn	Pn	17 40 12.2	+0.7
PAIG				eSn	Sn	17 40 39.4	-0.6
THL	Klokotos Trika	2.26	181	ePB	Pn	17 40 12.0	+0.5
THL	Klokotos Trika	2.26	181	ePb	Pn	17 40 12.0	+0.5
GRUS	Gruza	2.28	335	⇑iPn	Pn	17 40 11.1	-0.8
GRUS	Gruza	2.28	335	⇑iPn	Pn	17 40 11.1	-0.8
JAN	Janina	2.36	203	ePB	Pb	17 40 14.1	-2.2
JAN				eSN	Sn	17 40 42.9	+0.5
JAN	Janina	2.36	203	ePb	Pb	17 40 14.1	-2.2
JAN				eSn	Sn	17 40 42.9	+0.5
BUM	Brajici-Budva	2.41	282	⇑iPn	Pb	17 40 15.3	-1.8
BUM				eSn	Sb	17 40 46.7	-0.6
BUM	Brajici-Budva	2.41	282	⇑iPn	Pb	17 40 15.3	-1.8
BUM				eSn	Sb	17 40 46.7	-0.6
NKY	Niksic	2.48	294	ePn	Pn	17 40 15.3	+0.7
NKY				eSn	Sb	17 40 47.7	-1.8
NKY	Niksic	2.48	294	ePn	Pn	17 40 15.3	+0.7
NKY				eSn	Sb	17 40 47.7	-1.8
PLE	Pljevlja	2.48	308	ePn	Pn	17 40 15.2	+0.6
PLE				eSn	Sb	17 40 48.1	-1.4
PLE	Pljevlja	2.48	308	ePn	Pn	17 40 15.2	+0.6
PLE				eSn	Sb	17 40 48.1	-1.4
KDZ	Kurdzhali	2.52	93	P	Pn	17 40 14.2	-0.9
KDZ				i Pg	Pb	17 40 18.7	-0.3
KDZ	Kurdzhali	2.52	93	P	Pn	17 40 14.2	-0.9
DIM	Dimitrovgrad	2.60	84	P	Pn	17 40 17.6	+1.4
DIM	Dimitrovgrad	2.60	84	P	Pn	17 40 17.6	+1.4
NEO	Neokhori	2.67	160	ePN	Pn	17 40 17.4	+0.2
NEO				eSN	Sn	17 40 49.5	-0.7
NEO	Neokhori	2.67	160	ePn	Pn	17 40 17.4	+0.2
NEO				eSn	Sn	17 40 49.5	-0.7
TRUS	Trudelj	2.68	334	ePn	Pn	17 40 15.8	-1.6
TRUS	Trudelj	2.68	334	ePn	Pn	17 40 15.8	-1.6
UPM	Unac-Piva	2.71	302	ePn	Pn	17 40 18.1	+0.2
UPM				eSn	Sn	17 40 53.2	+1.9
UPM	Unac-Piva	2.71	302	ePn	Pn	17 40 18.1	+0.2
UPM				eSn	Sn	17 40 53.2	+1.9
KEK	Kerkira	2.72	220	ePN	Pb	17 40 19.6	-2.9
KEK	Kerkira	2.72	220	ePn	Pb	17 40 19.6	-2.9
HCY	Herceg Novi	2.73	284	⇓iPn	Pn	17 40 19.2	+1.3
HCY				eSn	Sb	17 40 54.3	-2.1
HCY	Herceg Novi	2.73	284	⇓iPn	Pn	17 40 19.2	+1.3
HCY				eSn	Sb	17 40 54.3	-2.1
DIVS	Divibare	2.73	327	⇑iPn	Pn	17 40 17.3	-0.8
DIVS				eSn	Sn	17 40 51.6	-0.1
DIVS	Divibare	2.73	327	⇑iPn	Pn	17 40 17.3	-0.8
DIVS				eSn	Sn	17 40 51.6	-0.1
PVL	Pavlikeni	2.79	59	i P	Pn	17 40 16.6	-2.2
PVL	Pavlikeni	2.79	59	i P	Pn	17 40 16.6	-2.2
AGG	Agios Georgios	2.81	176	ePN	Pn	17 40 19.6	+0.5
AGG				eSN	Sn	17 40 53.0	-0.6
AGG	Agios Georgios	2.81	176	ePn	Pn	17 40 19.6	+0.5
AGG				eSn	Sn	17 40 53.0	-0.6
BBLS	Lazići	2.82	317	ePn	Pn	17 40 18.8	-0.5
BBLS				eSn	Sn	17 40 53.1	-0.9
BBLS	Lazići	2.82	317	ePn	Pn	17 40 18.8	-0.5
BBLS				eSn	Sn	17 40 53.1	-0.9
BRY	Bratogost	2.82	294	⇑iPn	Pn	17 40 21.1	+1.7
BRY				eSn	Sb	17 40 56.7	-2.7
BRY	Bratogost	2.82	294	⇑iPn	Pn	17 40 21.1	+1.7
BRY				eSn	Sb	17 40 56.7	-2.7
DJES	Djerdap	2.86	7	ePn	Pn	17 40 19.4	-0.3
DJES				eSn	Sn	17 40 55.2	+0.5
EVR	Evrytania	2.92	184	ePN	Pn	17 40 21.2	+0.6
EVR	Evrytania	2.92	184	ePn	Pn	17 40 21.2	+0.6
SMTH	Samothraki Isl	2.95	116	ePN	Pn	17 40 21.3	+0.3
SMTH	Samothraki Isl	2.95	116	ePn	Pn	17 40 21.3	+0.3
AOS	Alonnisos	3.00	152	ePN	Pn	17 40 21.8	+0.2
AOS				eSN	Sn	17 40 56.6	-1.5
AOS	Alonnisos	3.00	152	ePn	Pn	17 40 21.8	+0.2
AOS				eSn	Sn	17 40 56.6	-1.5
ZIMR		3.04	52	⇓iP	Pn	17 40 23.3	+1.0
LIA	Limnos Island	3.05	128	ePN	Pn	17 40 22.4	0.0
LIA	Limnos Island	3.05	128	ePn	Pn	17 40 22.4	0.0
ALN	Alexandroupoli	3.14	106	ePN	Pn	17 40 23.8	+0.2
ALN	Alexandroupoli	3.14	106	ePn	Pn	17 40 23.8	+0.2
LKD2	Lefkada island	3.22	200	ePN	Pn	17 40 26.4	+1.7
LKD2	Lefkada island	3.22	200	ePn	Pn	17 40 26.4	+1.7
LKR	Lokris	3.25	167	ePN	Pn	17 40 26.0	+0.8
LKR	Lokris	3.25	167	ePn	Pn	17 40 26.0	+0.8
STON	Ston	3.40	289	ePn	Pn	17 40 28.6	+1.5
STON	Ston	3.40	289	ePn	Pn	17 40 28.6	+1.5
HUMR	Humele	3.44	37	⇑iP	Pn	17 40 27.3	-0.4
HUMR	Humele	3.44	37	⇑iP	Pn	17 40 27.3	-0.4
GZR	Gura Zlata	3.60	8	⇓iP	Pn	17 40 29.6	-0.4
GZR	Gura Zlata	3.60	8	⇓iP	Pn	17 40 29.6	-0.4
FGSL	Fruska Gora	3.71	335	ePn	Pn	17 40 30.2	-1.2
FRGS	Fruska Gora	3.71	335	ePn	Pn	17 40 30.2	-1.3
KLV	Kalavryta, Ach	3.78	179	ePN	Pn	17 40 33.1	+0.6
KLV	Kalavryta, Ach	3.78	179	ePn	Pn	17 40 33.1	+0.6
RLS	Riolos of Patr	3.79	187	ePN	Pn	17 40 34.6	+2.0
RLS	Riolos of Patr	3.79	187	ePn	Pn	17 40 34.6	+2.0
BZS	Buzias	3.80	355	ePn	Pn	17 40 31.1	-1.6
BZS				eSn	Sn	17 41 17.9	-0.1
BZS	Buzias	3.80	355	⇓iP	Pn	17 40 31.4	-1.3
BZS	Buzias	3.80	355	ePn	Pn	17 40 31.1	-1.6
BZS	Buzias	3.80	355	⇓iP	Pn	17 40 31.4	-1.3
BZS				eSn	Sn	17 41 17.9	-0.1
VLS	Valsamata	3.82	198	ePN	Pn	17 40 33.8	+0.9
VLS	Valsamata	3.82	198	ePn	Pn	17 40 33.8	+0.9
DEV	Deva	4.10	8	⇑iP	Pn	17 40 36.5	-0.3
DEV	Deva	4.10	8	⇑iP	Pn	17 40 36.5	-0.3
SECR		4.33	41	⇑iP	Pb	17 40 45.0	-5.0
SECR		4.33	41	⇑iP	Pb	17 40 45.0	-5.0
CHOS	Chios island	4.60	137	ePN	Pn	17 40 44.8	+1.0
CHOS	Chios island	4.60	137	ePn	Pn	17 40 44.8	+1.0
MLR	Muntele Rosu	4.62	36	⇓iP	Pn	17 40 45.0	+0.9
MLR	Muntele Rosu	4.62	36	Pn	Pn	17 40 45.2	+1.1
	comp=N,0.3nm,0.3s,baz=222,slow=12,SNR=18						
MLR				Lg	Lg	17 41 59.0	
	comp=N,0.4nm,0.3s,baz=253,slow=18,SNR=3.2						
MLR	Muntele Rosu	4.62	36	⇓iP	Pn	17 40 45.0	+0.9
DOPR	Dopca	4.79	29	⇑iP	Pn	17 40 47.0	+0.8
DOPR	Dopca	4.79	29	⇑iP	Pn	17 40 47.0	+0.8
PSN	Preselentsi	4.87	66	P	Pn	17 40 47.6	+0.2
PSN	Preselentsi	4.87	66	P	Pn	17 40 47.6	+0.2
DRGR		4.98	5	⇓iP	Pn	17 40 48.9	-0.1
DRGR		4.98	5	⇓iP	Pn	17 40 48.9	-0.1
PKSM	Moragy	5.03	332	ePn	Pn	17 40 49.1	-0.4
PKSM	Moragy	5.03	332	⇓iP	Pn	17 40 48.8	-0.7
PKSM	Moragy	5.03	332	⇑e	Pn	17 40 49.3	-0.2
PKSM	Moragy	5.03	332	⇓iP	Pn	17 40 48.8	-0.7
PKSM	Moragy	5.03	332	ePn	Pn	17 40 49.1	-0.4
PKS6	Bocsa	5.10	340	⇓e	Pn	17 40 51.6	+1.1
PLOR	Plostina	5.21	38	⇑iP	Pn	17 40 51.6	-0.5
PLOR	Plostina	5.21	38	⇑iP	Pn	17 40 51.6	-0.5
VRI	Vrincioaia	5.26	38	⇓iP	Pn	17 40 53.7	+0.9
VRI	Vrincioaia	5.26	38	⇓iP	Pn	17 40 53.7	+0.9
TIRR	Tirgusor	5.34	58	⇑iP	Pn	17 40 53.7	-0.1
TIRR	Tirgusor	5.34	58	⇑iP	Pn	17 40 53.7	-0.1
PKS9	Tamasi	5.48	332	⇓e	Pn	17 40 55.8	+0.1
CFR	Carcaliu	5.54	51	⇓iP	Pn	17 40 56.7	+0.1
CFR	Carcaliu	5.54	51	⇓iP	Pn	17 40 56.7	+0.1
TLCR		5.95	53	⇓iP	Pn	17 41 02.9	+0.8
TLCR		5.95	53	⇓iP	Pn	17 41 02.9	+0.8
BUD	Budapest	6.05	340	⇑e	Pn	17 41 03.4	-0.2
PKST	T˜'s	6.14	333	⇑e	Pn	17 41 05.2	+0.3
PKSG		6.15	336	⇑e	Pn	17 41 04.8	-0.1
BURAR	Bucovina Array	6.21	20	⇑iP	Pn	17 41 07.1	+1.3
BURAR	Bucovina Array	6.21	20	⇑iP	Pn	17 41 07.1	+1.3
CRES	Cresnjev	6.23	312	i Pn	Pn	17 41 06.2	+0.1
CRES	Cresnjev	6.23	312	Pn	Pn	17 41 06.2	+0.1
PSZ	Piszkesteto	6.28	347	⇓iP	Pn	17 41 05.5	-1.3
PSZ	Piszkesteto	6.28	347	⇑e	Pn	17 41 06.3	-0.5
PSZ	Piszkesteto	6.28	347	⇓iP	Pn	17 41 05.5	-1.3
VYHS	Vyhne	7.04	342	ePN	Pn	17 41 16.7	-0.5
OBKA	Obir	7.14	313	⇑iPn	Pn	17 41 17.1	-1.6
OBKA	Obir	7.14	313	Pn	Pn	17 41 17.1	-1.6
ZST	Bratislava	7.27	333	ePN	Pn	17 41 18.0	-2.3
CONA	Conrad Observa	7.52	326	⇓iPn	Pn	17 41 23.2	-0.7
CONA				⇑iSn	Sn	17 42 48.9	-0.9
CONA	Conrad Observa	7.52	326	Pn	Pn	17 41 23.2	-0.7
CONA				Sn	Sn	17 42 48.9	-0.9
VRAC	Vranov	8.40	335	LR	LR	17 44 51.5	
	comp=N,51nm,19.4s,baz=293,slow=38						
BRTR	Keskin Array B	9.03	100	Pn	Pn	17 41 44.5	-0.1
	comp=N,0.5nm,0.3s,baz=281,slow=14,SNR=12						
GERES	GERESS Array B	9.15	323	Pn	Pn	17 41 47.4	+1.1
	comp=N,0.1nm,0.3s,baz=141,slow=13,SNR=5.7						
GERES				Sn	Sn	17 43 31.4	+1.4
	comp=N,0.3nm,0.3s,baz=126,slow=27,SNR=3.6						
GERES				LR	LR	17 45 30.0	
	comp=N,44nm,18.9s,baz=256,slow=39						
DPC	Dobruska-Polom	9.41	337	ePN	Pn	17 41 50.6	+0.9
DPC	Dobruska-Polom	9.41	337	Pn	Pn	17 41 50.6	+0.9
KHC	Kasperske Hory	9.42	324	ePN	Pn	17 41 50.8	+1.0
KHC	Kasperske Hory	9.42	324	Pn	Pn	17 41 50.8	+1.0
DAVOX	Davos/Dischmat	10.03	304	Pn	Pn	17 41 60.0	+1.6
	comp=N,0.3nm,0.3s,baz=133,slow=19,SNR=3.6						
DAVOX				LR	LR	17 46 40.6	
	comp=N,125nm,19.1s,baz=123,slow=42						
FINES	FINESS Array B	19.79	6	P	P	17 44 04.0	-0.4
	comp=N,0.2nm,0.3s,baz=196,slow=8.4,SNR=5.0						
TORD	Torodi Ar. Bea	33.62	218	P	P	17 46 17.3	+2.2
	comp=N,1.4nm,0.9s,baz=29,slow=8.6,SNR=8.1						
KURBB	Kurchatov Arra	39.18	57	P	P	17 47 02.0	-0.3
	comp=N,0.2nm,0.6s,baz=296,slow=10,SNR=3.1						
ZALV	Zalesovo Beam	42.43	51	P	P	17 47 28.9	0.0
	comp=N,0.5nm,0.4s,baz=294,slow=8.1,SNR=5.5						
MKAR	Makanchi Array	42.46	62	P	P	17 47 29.5	+0.1
	comp=N,0.5nm,0.5s,baz=282,slow=8.0,SNR=9.3						

IDC 05 18:05:00.2±2.1, 5°.02S×152°.92E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/18, mbtmp3.2/3, Error ellipse: s-maj=154.4km s-min=27.8km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.39	229	P	P	18 10 11.2	+0.3
	1.2nm,1.1s,baz=55,slow=10,SNR=8.0						
ASAR	Alice Springs	26.07	223	P	P	18 10 35.5	-0.2
	0.1nm,0.7s,baz=56,slow=8.6,SNR=3.3						
ILAR	Eielson Array	82.32	22	P	P	18 17 23.6	0.0
	0.2nm,0.7s,baz=244,slow=6.5,SNR=3.5						

PRE 05 18:07:41.8±4.2, 20°.95S×33°.34E, h10km, ML5.1, 2D, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSNA	Messina	3.38	245	⇓iP	Pn	18 08 38.2	+3.4
MSNA				eS	Sn	18 09 15.8	+0.7
MSNA				AML	AML	18 09 34.9	
	comp=Z,490nm,0.7s						
BLWY	Bulawayo	4.50	279	i P	Sn	18 09 46.2	+3.2
BLWY				i		18 09 46.3	
	baz=340,slow=14						
BLWY				i S	Sg	18 10 07.7	+0.8
CNG	Changalane	5.42	191	eP	Pn	18 09 04.1	+1.4
CNG				eS	Sn	18 10 04.9	-0.4
POGA	Pongola	6.59	194	eP	Pn	18 09 19.5	+0.8
POGA				eS	Sn	18 10 32.5	-1.5
POGA				AML	AML	18 11 24.3	
	comp=Z,110nm,0.5s						
SLR	Silverton	6.66	223	eP	Pn	18 09 21.8	+1.9
SLR				eS	Sn	18 10 34.7	-1.4
SLR				AML	AML	18 11 24.3	
	comp=Z,212nm,0.5s						
ERPM	east rand prop	7.12	220	⇓iP	Pn	18 09 26.4	+0.1
ERPM				eS	Sn	18 10 45.1	-2.4
ERPM				AML	AML	18 11 37.4	
	comp=Z,90nm,0.5s						
LSZ	Lusaka	7.47	318	eP	Pn	18 09 31.7	+0.6
LSZ				eS	Sn	18 10 54.5	-1.5
KSR	Koster	7.67	229	eP	Pn	18 09 36.5	+2.6
KSR				eS	Sn	18 10 57.9	-3.2
KSR				AML	AML	18 11 51.7	
	comp=Z,132nm,0.5s						
PRYS	Parys	8.08	221	eP	Pn	18 09 39.8	+0.3
PRYS				eS	Sn	18 11 07.2	-3.9
PRYS				AML	AML	18 12 11.4	
	comp=Z,74nm,0.6s						
LBTB	Lobatse	8.20	239	eP	Pn	18 09 42.6	+1.5
LBTB				eS	Sn	18 11 11.9	-2.1
LBTB				AML	AML	18 12 02.1	
	comp=Z,82nm,0.6s						
SEK	Senekal	9.00	214	eP	Pn	18 09 52.4	+0.3
SEK				eS	Sn	18 11 29.3	-4.4
SEK				AML	AML	18 12 35.7	
	comp=Z,71nm,0.6s						
SWZ	Schweizer	9.59	228	eP	Pn	18 10 00.4	+0.2
SWZ				eS	Sn	18 11 43.3	-5.0
SWZ				AML	AML	18 12 58.6	
	comp=Z,89nm,0.6s						
KSD	Kokstad	10.19	199	eP	Pn	18 10 09.4	+1.0
KSD				eS	Sn	18 11 56.2	-6.6
KSD				AML	AML	18 13 04.5	
	comp=Z,46nm,0.6s						
BOSA	Boshof	10.59	222	eP	Pn	18 10 13.6	-0.3
BOSA				eS	Sn	18 12 05.3	-7.3
BOSA				AML	AML	18 13 29.1	
	comp=Z,35nm,0.7s						
TSUM	Tsumeb	14.91	274	eP	Pn	18 11 11.0	-1.9
TSUM				eS	Sn	18 13 51.5	-6.9
SUR	Sutherland	15.96	222	eP	Pn	18 11 27.3	+0.6
SUR				eS	Sn	18 14 14.8	-9.1
SUR				AML	AML	18 16 15.8	
	comp=Z,14nm,0.7s						
CVNA	Calvinia	16.06	226	eP	Pn	18 11 27.7	-0.3
CVNA				eS	Sn	18 14 14.6	-12
CVNA				AML	AML	18 16 10.4	
	comp=Z,30nm,0.7s						
KOMG	Komaggas	16.81	235	eS	Sn	18 14 32.7	-12
KOMG				AML	AML	18 16 34.7	
	comp=Z,13nm,0.6s						

GUC 05 18:55:33.0±0.6, 20°.81S×69°.15W, h106km±6km, ML3.7, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	Plate Boundary	0.99	185	⇑iP	Pn	18 55 54.7	+0.7
PB09				i S	Sn	18 56 10.9	+1.0
PB09				AML	AML	18 56 13.5	
	comp=N,4µm,0.6s						
PB07	Plate Boundary	1.15	217	⇑iP	Pn	18 55 56.6	+0.9
PB07				i S	Sn	18 56 14.1	+1.2
PB07				AML	AML	18 56 15.9	
	comp=N,2µm,0.4s						
PB04	Plate Boundary	1.49	192	eP	Pn	18 56 04.0	+4.5
PB04				AML	AML	18 56 34.2	
	comp=N,534nm,0.3s						
MACH	Maria Elena	1.50	202	eP	Pn	18 56 00.7	+0.9
MACH				i S	Sn	18 56 21.2	+1.0
PSGC	Pisagua	1.51	323	⇑iP	Pn	18 56 00.4	+0.5
PSGC				i S	Sn	18 56 21.2	+0.9
PSGC				AML	AML	18 56 23.9	
	comp=N,752nm,0.5s						
MNMC	Minimini	1.72	346	⇓iP	Pn	18 56 03.4	+0.8
MNMC				i S	Sn	18 56 26.4	+1.2
MNMC				AML	AML	18 56 30.2	
	comp=N,2µm,0.3s						
LVC	Limon Verde	1.81	173	⇓iP	Pn	18 56 04.6	+0.8
LVC				i S	Sn	18 56 28.6	+1.4

IDC 05 19:17:03.0±1.4, 0°.91N×126°.08E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, Error ellipse: s-maj=137.0km s-min=21.5km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.25	159	P	P	19 22 01.6	0.0
	1.4nm,0.7s,baz=338,slow=11,SNR=10.0						
ASAR	Alice Springs	25.58	163	P	P	19 22 34.1	0.0
	0.6nm,0.6s,baz=342,slow=10,SNR=7.3						
SONM	Songino Array	49.77	343	P	P	19 25 58.0	+0.4
	0.4nm,0.7s,baz=150,slow=6.1,SNR=3.8						
MKAR	Makanchi Array	59.51	327	P	P	19 27 07.8	-0.4
	0.6nm,0.7s,baz=128,slow=7.2,SNR=8.2						

IDC 05 19:29:23.6±3.5, 14°.31N×93°.74W, h0km, mb3.8/3, mb1 4.1/5, mb1mx3.7/23, mbtmp3.7/5, ML4.1/2, MS3.6/3, Ms1 3.7/3, ms1mx3.0/36, Error ellipse: s-maj=69.6km s-min=38.9km az=158.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	7.86	41	Pn	Pn	19 31 20.6	+1.2
	3.2nm,0.3s,baz=267,slow=1.6,SNR=7.4						
TEIG				Sn	Sn	19 32 49.7	+0.6
	0.9nm,0.3s,baz=24,slow=20,SNR=2.6						
TEIG				LR	LR	19 34 49.2	
	comp=Z,352nm,18.2s,baz=127,slow=41						
TXAR	Lajitas Array	17.55	330	P	P	19 33 31.2	+0.1
	0.1nm,0.3s,baz=164,slow=14,SNR=6.6						
TKL	Tuckaleechee C	23.07	21	LR	LR	19 45 27.8	
	comp=Z,56nm,19.9s,baz=96,slow=42						
NVAR	Mina Array Bea	32.38	322	P	P	19 35 56.0	+0.6
	1.0nm,0.5s,baz=145,slow=9.5,SNR=5.0						
YKA	Yellowknife Ar	50.35	348	P	P	19 38 21.1	-1.0
	1.5nm,0.8s,baz=153,slow=7.3,SNR=20						
ILAR	Eielson Array	61.90	337	P	P	19 39 44.2	-0.5
	0.7nm,0.8s,baz=132,slow=4.3,SNR=8.4						
NOA	NORSAR Array B	84.67	28	LR	LR	20 24 32.5	
	comp=Z,90nm,18.3s,baz=285,slow=39						
CMAR	Chiang Mai Arr	145.12	339	PKPbc	PKPbc	19 49 03.3	-0.2
	0.8nm,0.8s,baz=335,slow=4.0,SNR=8.3						

MEX 05 20:01:02.9±1.0, 16°.87N×94°.82W, h128km±14km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		1.62	93	i P	Pn	20 01 31.1	-1.3
TGIG				i S	Sn	20 01 52.4	-2.4
HUIG	Huatulco	1.65	229	eP	Pn	20 01 30.9	-1.7
HUIG				i S	Sn	20 01 54.2	-1.1
VHO	Vista Hermosa	1.85	277	eP	Pn	20 01 34.5	-0.7
VHO				i S	Sn	20 01 58.4	-1.5
CCIG	Comitan	2.63	102	eP	Pn	20 01 44.4	-0.6
CCIG				i S	Sn	20 02 15.7	-1.6
TPIG	Tehuac#an	2.88	303	i P	Pn	20 01 46.4	-1.8
TPIG				i S	Sn	20 02 20.4	-2.6
PNIG	Pinotepa	3.21	262	i P	Pn	20 01 50.0	-2.2
PNIG				i S	Sn	20 02 27.7	-2.6
PPM	Popocatepetl	4.24	302	i P	Pn	20 02 05.9	-0.5
PPM				i S	Sn	20 02 52.9	-2.8
YAIG	Yautepec	4.51	297	i P	Pn	20 02 09.4	-0.3
YAIG				i S	Sn	20 02 58.9	-2.6
MEIG	Mezcala	4.71	284	i P	Pn	20 02 11.4	-0.7
MEIG				i S	Sn	20 03 04.9	-1.2
CAIG	El Cayaco	5.22	273	i P	Pn	20 02 17.3	-1.7
CAIG				i S	Sn	20 03 16.6	-1.5
ARIG	Puente Sto Nin	5.46	286	eP	Pn	20 02 21.6	-0.6
ARIG				i S	Sn	20 03 22.9	-1.1
ZIIG	Zihuatanejo	6.40	278	i P	Pn	20 02 33.8	-1.0
ZIIG				i S	Sn	20 03 43.9	-2.6

WEL 05 20:05:00.3±0.7, 37°.40S×177°.02E, h156km±6km, ML3.6/4, 1D, Error ellipse: s-maj=3.7km s-min=3.2km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	Matawai	1.02	157	PN	Pn	20 05 25.8	-0.1
MWZ				SN	Sn	20 05 45.3	-0.3
MXZ	Matakaoa Point	1.04	100	⇓PN	Pn	20 05 25.8	-0.1
MXZ				SN	Sn	20 05 45.1	-0.5
CNGZ	Carnagh Statio	1.44	139	PN	Pn	20 05 30.7	+1.0
MKAZ	Moumakai	1.50	280	PN	Pn	20 05 30.6	+0.2
NMHZ	Naumai	1.71	186	PN	Pn	20 05 33.4	+0.9
BKZ	Black Stump Fm	1.81	193	PN	Pn	20 05 34.1	+0.4
MCHZ	McNeill Hill	2.06	187	PN	Pn	20 05 37.3	+0.8
MOVZ	Moawhango	2.24	206	PN	Pn	20 05 38.7	0.0
CKHZ	Cape Kidnapper	2.26	179	PN	Pn	20 05 39.3	+0.5
KAHZ	Kahuranaki	2.40	183	PN	Pn	20 05 40.7	+0.2
PNHZ	Pukenui	2.59	194	PN	Pn	20 05 42.5	-0.4
PXZ	Pawanui	2.63	183	PN	Pn	20 05 43.2	-0.1
WPHZ	Waipukurau	2.70	189	PN	Pn	20 05 43.4	-0.8
TSZ	Takapari Road	2.78	197	PN	Pn	20 05 44.7	-0.5
PRHZ	Porangahau	2.88	186	PN	Pn	20 05 45.7	-0.7
DVHZ	Dannevirke	2.97	193	PN	Pn	20 05 46.3	-1.3
BFZ	Birch Farm	3.33	190	PN	Pn	20 05 50.7	-1.4
MRZ	Mangatainoka R	3.45	199	PN	Pn	20 05 51.3	-2.2
TIWZ	Tintock	3.49	194	PN	Pn	20 05 52.7	-1.4
HOWZ	Holdsworth Sta	3.69	198	PN	Pn	20 05 54.8	-1.9
OGWZ	Otaki Gorge	3.71	202	PN	Pn	20 05 55.3	-1.5
TMWZ	Te Maipa	3.81	193	PN	Pn	20 05 56.4	-1.8
KIW	Kapiti Island	3.83	205	PN	Pn	20 05 56.7	-1.7
MTW	Mount Morrison	3.94	197	PN	Pn	20 05 57.5	-2.3
CAW	Cannon Point	4.00	202	PN	Pn	20 05 58.5	-2.1
TRWZ	Traveller	4.13	194	ePN	Pn	20 06 00.6	-1.7
MSWZ	Moikau Station	4.24	198	PN	Pn	20 06 01.2	-2.6
TCW	Tory Channel	4.36	208	PN	Pn	20 06 03.2	-2.2
PLWZ	Palliser	4.38	198	PN	Pn	20 06 02.9	-2.9
NNZ	Nelson	4.75	215	SN	Sn	20 07 01.8	-3.3
THZ	Tophouse	5.39	215	PN	Pn	20 06 17.0	-2.0
LTZ	Lake Taylor	6.49	213	ePN	Pn	20 06 30.5	-3.1
MQZ	McQueen's Vall	7.12	206	ePN	Pn	20 06 37.3	-4.5
MQZ				SN	Sn	20 07 53.5	-8.2

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*IDC **05** 20:09:33.3±2.1, 5°.98N×126°.24E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, Error ellipse: s-maj=128.7km s-min=24.1km az=68.0*
*ISCJB **05** 20:09:46.9±0.9, 5°.81N±0°.09×126°.5E±0°.2, h127km, mb3.2/4, Error ellipse: s-maj=24.5km s-min=7.5km az=152.5*
*MAN **05** 20:09:48, 5°.75N×126°.17E, h149km, mb4.8, ML3.7, MS3.7*
ISC 05 20:09:48.4±1.1, 5°.8N±0°.1×126°.4E±0°.2, h127km, n11, σ1s.21/13, mb3.3/4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.13	351	eP	Pn	20 10 15.8	+3.4
MATI				eS	Sn	20 10 29.5	-1.1
KCP	Kidapawan	1.79	312	⇑iP	Pn	20 10 20.4	+0.7
KCP				i S	Sn	20 10 44.5	+0.9
BUKP	Musuan	2.46	326	eP	Pn	20 10 29.3	+1.2
CGP	Cagayan de Oro	3.14	327	eP	Pn	20 10 36.3	-0.5
CGP				i S	Sn	20 11 15.3	+1.2
PAGZ	Pagadian	3.64	304	eP	Pn	20 10 42.7	-0.7
IPIL	Ipil	4.31	297	eP	Pn	20 10 52.0	-0.3
FITZ	Fitzroy Crossi	23.78	182	P	P	20 14 49.3	-0.3
	2.2nm,1.0s,baz=352,slow=8.1,SNR=8.3						
WRA	Warramunga Arr	26.75	163	P	P	20 15 16.9	+0.5
	0.5nm,0.5s,baz=344,slow=10,SNR=12						
ASAR	Alice Springs	30.20	166	P	P	20 15 47.3	+0.3
	0.3nm,0.5s,baz=341,slow=7.1,SNR=7.8						
MKAR	Makanchi Array	55.69	325	P	P	20 19 09.6	-2.0
	0.1nm,0.5s,baz=114,slow=8.8,SNR=3.5						
TBG	Guadaloupe-3	157.03	20	eP	PKPdf	20 29 32.0	+2.0

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*DDA **05** 20:22:48.8, 38°.22N×27°.45E, h7km, MD3.0*
*ISCJB **05** 20:22:48.9±0.4, 38°.23N±0°.02×27°.46E±0°.03, h8km±4km, Error ellipse: s-maj=4.2km s-min=3.3km az=142.8*
*ISK **05** 20:22:49.0, 38°.31N×27°.34E, h27km, MD2.9*

*ATH **05** 20:22:49.0, 38°.19N×27°.44E, h3km, MD3.1/5*
*CSEM **05** 20:22:49.2±0.2, 38°.24N×27°.44E, h15km, MD2.9, Error ellipse: s-maj=4.4km s-min=3.8km az=61.0*
ISC 05 20:22:48.6±0.8**, 38°.23N**±0°.02×**27°.44E**±0°.02**, h17**km±7km**, n58, σ0s.73**/80**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.22**	**321**	*e*PG	**Pg**	**20 22 53.6**	**-0.1**
IZM				*e*SG	**Sg**	**20 22 57.2**	**0.0**
IZM	**Izmir**	**0.22**	**321**	*e*Pg	**Pg**	**20 22 53.6**	**-0.1**
IZM				*e*Sg	**Sg**	**20 22 57.2**	**0.0**
BLCB	**Balcova**	**0.35**	**297**	*e*PG	**Pb**	**20 22 56.4**	**+0.1**
BLCB				*e*SG	**Sb**	**20 23 01.2**	**-0.3**
BLCB	**Balcova**	**0.35**	**297**	*e*Pg	**Pb**	**20 22 56.4**	**+0.1**
BLCB				*e*Sg	**Sb**	**20 23 01.2**	**-0.3**
GCAM	**G?zelcaml?**	**0.55**	**197**	*i* P	**Pg**	**20 22 59.1**	**-0.4**
GCAM				*i* S	**Sg**	**20 23 06.6**	**-0.3**
GCAM	**G?zelcaml?**	**0.55**	**197**	*i* P	**Pg**	**20 22 59.1**	**-0.4**
GCAM				*i* S	**Sg**	**20 23 06.6**	**-0.3**
AYDN	**Tasoluk**	**0.67**	**148**	*i* P	**Pg**	**20 23 01.8**	**+0.1**
AYDN				*i* S	**Sg**	**20 23 10.8**	**+0.2**
AYDN	**Tasoluk**	**0.67**	**148**	*i* P	**Pg**	**20 23 01.8**	**+0.1**
AYDN				*i* S	**Sg**	**20 23 10.8**	**+0.2**
URLA	**Izmir**	**0.67**	**281**	*i* P	**Pb**	**20 23 02.5**	**+0.6**
URLA				*i* S	**Sb**	**20 23 12.1**	**+1.1**
URLA	**Izmir**	**0.67**	**281**	*i* P	**Pb**	**20 23 02.5**	**+0.6**
URLA				*i* S	**Sb**	**20 23 12.1**	**+1.1**
AKS	**Akhisar**	**0.71**	**24**	*e*PG	**Pn**	**20 23 03.6**	**-0.4**
AKS	**Akhisar**	**0.71**	**24**	*e*Pg	**Pn**	**20 23 03.6**	**-0.4**
AKHS	**Akhisar**	**0.71**	**24**	*i* P	**Pn**	**20 23 03.3**	**-0.6**
AKHS				*i* S	**Sn**	**20 23 13.7**	**-0.9**
AKHS	**Akhisar**	**0.71**	**24**	*i* P	**Pn**	**20 23 03.3**	**-0.6**
AKHS				*i* S	**Sn**	**20 23 13.7**	**-0.9**
MANT	**Manisa**	**0.92**	**73**	*e*P	**Pn**	**20 23 07.4**	**+0.4**
MANT				*e*S	**Sb**	**20 23 18.1**	**-0.2**
MANT	**Manisa**	**0.92**	**73**	*e*P	**Pn**	**20 23 07.4**	**+0.4**
MANT				*e*S	**Sb**	**20 23 18.1**	**-0.2**
MLSB	**Milas**	**0.97**	**164**	*e*PG	**Pn**	**20 23 08.1**	**+0.6**
MLSB	**Milas**	**0.97**	**164**	*e*Pg	**Pn**	**20 23 08.1**	**+0.6**
KULA	**Kula-Manisa**	**1.00**	**73**	*e*PG	**Pn**	**20 23 09.4**	**+1.4**
KULA	**Kula-Manisa**	**1.00**	**73**	*e*Pg	**Pn**	**20 23 09.4**	**+1.4**
CHOS	**Chios island**	**1.10**	**279**	*e*PB	**Pg**	**20 23 10.6**	**+0.8**
CHOS				*e*SB	**Sg**	**20 23 24.6**	**+0.4**
CHOS	**Chios island**	**1.10**	**279**	*e*Pb	**Pg**	**20 23 10.6**	**+0.8**
CHOS				*e*Sb	**Sg**	**20 23 24.6**	**+0.4**
BODT	**Bodrum**	**1.17**	**185**	*e*PN	**Pb**	**20 23 10.8**	**+0.4**
BODT	**Bodrum**	**1.17**	**185**	*e*Pn	**Pb**	**20 23 10.8**	**+0.4**
AYVA	**Ayvalik**	**1.23**	**332**	*i* P	**Pg**	**20 23 13.0**	**+0.8**
AYVA				*i* S	**Sg**	**20 23 29.1**	**+0.9**
AYVA	**Ayvalik**	**1.23**	**332**	*i* P	**Pg**	**20 23 13.0**	**+0.8**
AYVA				*i* S	**Sg**	**20 23 29.1**	**+0.9**
YER	**Yerkesik**	**1.28**	**148**	*e*PN	**Pg**	**20 23 13.8**	**+0.5**
YER	**Yerkesik**	**1.28**	**148**	*e*Pn	**Pg**	**20 23 13.8**	**+0.5**
DENT	**Denizli**	**1.35**	**110**	*e*PN	**Pb**	**20 23 13.8**	**+0.4**
DENT	**Denizli**	**1.35**	**110**	*e*Pn	**Pb**	**20 23 13.8**	**+0.4**
PRK	**Paraskevi**	**1.36**	**319**	*e*PB	**Pg**	**20 23 15.3**	**+0.4**
PRK				*e*SB	**Sg**	**20 23 33.9**	**+1.3**
PRK	**Paraskevi**	**1.36**	**319**	*e*Pb	**Pg**	**20 23 15.3**	**+0.4**
PRK				*e*Sb	**Sg**	**20 23 33.9**	**+1.3**
BALY	**Balya**	**1.52**	**5**	*e*P	**Pb**	**20 23 16.9**	**+0.6**
BALY				*e*S	**Sb**	**20 23 35.8**	**+0.5**
BALY	**Balya**	**1.52**	**5**	*e*P	**Pb**	**20 23 16.9**	**+0.6**
BALY				*e*S	**Sb**	**20 23 35.8**	**+0.5**
KHL	**Karahalli**	**1.65**	**86**	*e*PN	**Pb**	**20 23 18.3**	**-0.2**
KHL	**Karahalli**	**1.65**	**86**	*e*Pn	**Pb**	**20 23 18.3**	**-0.2**
DST	**Dursunbey**	**1.66**	**34**	*e*PN	**Pn**	**20 23 17.2**	**+0.3**
DST	**Dursunbey**	**1.66**	**34**	*e*Pn	**Pn**	**20 23 17.3**	**+0.3**
GONE	**Gonen-Balikesi**	**1.83**	**6**	*e*PN	**Pn**	**20 23 18.1**	**-1.2**
GONE	**Gonen-Balikesi**	**1.83**	**6**	*e*Pn	**Pn**	**20 23 18.1**	**-1.2**
APE	**Apeiranthos**	**1.90**	**233**	*e*PB	**Pg**	**20 23 24.5**	**-0.7**
APE	**Apeiranthos**	**1.90**	**233**	*e*Pb	**Pg**	**20 23 24.5**	**-0.7**
FETY	**Fethiye**	**2.06**	**140**	*e*PN	**Pb**	**20 23 24.9**	**-0.7**
FETY	**Fethiye**	**2.06**	**140**	*e*Pn	**Pb**	**20 23 24.9**	**-0.7**
ARG	**Arkhangelos**	**2.08**	**164**	*e*PN	**Pb**	**20 23 26.1**	**+0.2**
ARG	**Arkhangelos**	**2.08**	**164**	*e*Pn	**Pb**	**20 23 26.1**	**+0.2**
KCTX	**Karacabey (Bur**	**2.16**	**19**	*e*PN	**Pn**	**20 23 22.6**	**-1.2**
KCTX	**Karacabey (Bur**	**2.16**	**19**	*e*Pn	**Pn**	**20 23 22.6**	**-1.2**
BNT	**Bandirma**	**2.16**	**10**	*e*PN	**Pn**	**20 23 22.3**	**-1.5**
KRBG	**Karabiga-Canak**	**2.16**	**357**	*e*PN	**Pn**	**20 23 23.1**	**-0.8**
KRBG	**Karabiga-Canak**	**2.16**	**357**	*e*Pn	**Pn**	**20 23 23.1**	**-0.8**
GELI	**Tayfur-Gelibol**	**2.29**	**341**	*e*PN	**Pn**	**20 23 23.9**	**-1.8**
MRMT	**Marmara Adasi**	**2.37**	**3**	*e*PN	**Pn**	**20 23 25.7**	**-1.1**
MRMT	**Marmara Adasi**	**2.37**	**3**	*e*Pn	**Pn**	**20 23 25.7**	**-1.1**
ERIK	**Erikli-Kesan**	**2.54**	**344**	*e*PN	**Pn**	**20 23 28.4**	**-0.7**
ERIK	**Erikli-Kesan**	**2.54**	**344**	*e*Pn	**Pn**	**20 23 28.4**	**-0.7**
ALN	**Alexandroupoli**	**2.87**	**338**	*e*PB	**Pb**	**20 23 38.8**	**-0.6**
ALN	**Alexandroupoli**	**2.87**	**338**	*e*Pb	**Pb**	**20 23 38.8**	**-0.6**

IDC 05 20:32:32.1±8.0**, 5°.39S×150°.45E, h104**km±56km**, mb2.9**/2**, mb1 3.2**/3**, mb1mx3.0**/18**, mbtmp3.1**/3**, Error ellipse: s-maj=134.9km s-min=54.1km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.16**	**219**	P	Pn	20 33 46.6	-0.4
	7.5nm,0.3s,baz=53,slow=14,SNR=19						
PMG				S	Sn	20 34 46.8	+1.4
	2.5nm,0.3s,baz=336,slow=20,SNR=3.1						
WRA	**Warramunga Arr**	**21.33**	**226**	P	P	20 37 10.7	-0.3
	0.6nm,0.8s,baz=51,slow=10,SNR=6.7						
ASAR	**Alice Springs**	**24.18**	**220**	P	P	20 37 38.4	-0.5
	0.5nm,0.8s,baz=58,slow=8.5,SNR=6.5						
TORD	**Torodi Ar. Bea**	**148.25**	**286**	PKPbc	PKPbc	20 52 06.9	-0.3
	0.9nm,0.5s,baz=80,slow=2.9,SNR=14						

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*IDC **05** 20:38:46.0±1.2, 8°.45S×143°.21E, h0km, mb3.6/4, mb1 3.8/8, mb1mx3.7/17, mbtmp3.7/8, ML3.7/4, MS3.2/1, Ms1 3.2/1, ms1mx2.7/21, Error ellipse: s-maj=31.5km s-min=24.1km az=85.0*
*AUST **05** 20:38:52.5, 8°.79S×142°.67E, h0km*
ISC 05 20:38:53.0±1.2**, 8°.64S**±0°.08×**142°.8E**±0°.1**, h35**km**, n14, σ1s.77**/18**, mb3.5**/4**, Near south coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.33**	**100**	Pn	Pn	20 39 48.5	-7.9
	5.7nm,0.3s,baz=197,slow=6.9,SNR=12						
PMG				Sn	Sn	20 40 33.0	-13
	6.0nm,0.3s,baz=208,slow=14,SNR=6.8						
PMG				LR	LR	20 41 07.1	
	comp=Z,312nm,20.5s,baz=285,slow=35						
COEN	**Coen**	**5.30**	**176**	P	**Pn**	**20 40 10.7**	**+1.0**
	baz=5.2,SNR=5.5						
KDU	**Kakadu**	**10.96**	**248**	P	**Pn**	**20 41 29.0**	**+1.7**
	baz=11,SNR=24						
FAKI	**Fak Fak**	**11.97**	**298**	P	**Pn**	**20 41 40.6**	**-0.7**
	baz=12,SNR=4.3						
MTN	**Manton Dam**	**12.24**	**249**	P	**Pn**	**20 41 46.7**	**+1.8**
	baz=12,SNR=4.3						
MTN				S	**Sn**	**20 44 02.9**	**+2.7**
	baz=12,SNR=3.8						
WRA	**Warramunga Arr**	**13.93**	**215**	Pn	**Pn**	**20 42 08.8**	**+0.8**
	0.8nm,0.3s,baz=33,slow=13,SNR=110						
WRA				Sn	**Sn**	**20 44 39.9**	**-1.6**
	0.5nm,0.3s,baz=36,slow=26,SNR=3.6						
KNRA	**Kununurra**	**15.43**	**242**	P	**Pn**	**20 42 28.1**	**-0.1**
	baz=15,SNR=6.5						
KNRA				S	**Sn**	**20 45 17.3**	**-0.8**
	baz=15,SNR=3.1						
ASAR	**Alice Springs**	**17.22**	**209**	P	**P**	**20 42 52.5**	**+0.3**
	0.4nm,0.3s,baz=41,slow=11,SNR=13						
ASAR				S	**Sn**	**20 45 59.3**	**-2.3**
	0.2nm,0.3s,baz=22,slow=27,SNR=4.3						
FITZ	**Fitzroy Crossi**	**19.18**	**239**	P	**Pn**	**20 43 15.3**	**+0.4**
	0.3nm,0.3s,baz=62,slow=13,SNR=7.8						
FITZ				S	**S**	**20 46 46.4**	**-3.1**
	0.1nm,0.3s,baz=164,slow=20,SNR=3.3						
FITZ	**Fitzroy Crossi**	**19.18**	**239**	P	**Pn**	**20 43 17.9**	**+3.0**
	baz=19,SNR=6.7						
STKA	**Stephens Creek**	**23.15**	**183**	P	**P**	**20 43 57.0**	**+0.6**
	0.9nm,0.7s,baz=4.4,slow=13,SNR=3.0						
CMAR	**Chiang Mai Arr**	**51.00**	**302**	P	**P**	**20 47 52.1**	**+0.3**
	0.4nm,0.7s,baz=121,slow=5.0,SNR=4.7						
MKAR	**Makanchi Array**	**76.96**	**322**	P	**P**	**20 50 41.3**	**-0.8**
	0.7nm,0.7s,baz=112,slow=7.0,SNR=11						
ZALV	**Zalesovo Beam**	**79.09**	**329**	P	**P**	**20 50 52.0**	**-1.7**
	0.3nm,0.5s,baz=122,slow=5.2,SNR=3.0						

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*ISCJB **05** 21:09:13.5±0.8, 43°.98N±0°.05×105°.49W±0°.05, h0km, mb3.2/1, Error ellipse: s-maj=7.9km s-min=4.6km az=28.7*
*NEIC **05** 21:09:16.0±1.3, 43°.86N×105°.41W, h0km, ML3.2, Error ellipse: s-maj=19.5km s-min=17.6km az=144.0, Suspected Mining explosion.*
NEIC 50 km [30 miles] S of Gillette.
*IDC **05** 21:09:16.8±1.7, 43°.57N×105°.41W, h0km, mb3.1/1, mb1 3.5/5, mb1mx3.3/29, mbtmp3.1/5, ML3.0/4, Error ellipse: s-maj=38.1km s-min=9.1km az=148.0*
ISC 05 21:09:16.3±1.0**, 43°.78N**±0°.05×**105°.54W**±0°.05**, h0**km**, n23, σ2s.00**/33**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**1.14**	**72**	*e*Pn	Pg	21 09 31.6	-6.5
RSSD				*e*S	Sg	21 09 37.8	-16
PHWY	**Pilot Hill**	**2.47**	**179**	*e*Pn	**Pn**	**21 09 59.4**	**+1.3**
PHWY				*e*Sn	**Sn**	**21 10 30.1**	**+0.9**
PDAR	**Pinedale Array**	**3.11**	**252**	Pn	**Pb**	**21 10 10.8**	**-1.8**
PDAR				Lg	Lg	21 10 53.1	
PDAR	**Pinedale Array**	**3.11**	**252**	Pn	**Pb**	**21 10 10.8**	**-1.8**
	1.1nm,0.3s,baz=84,slow=14,SNR=31						
PDAR				Lg	Lg	21 10 53.1	
	1.2nm,0.3s,baz=75,slow=32,SNR=5.0						
LOHW	**Long Hollow**	**3.68**	**269**	*e*Pn	**Pn**	**21 10 14.6**	**0.0**
LOHW				*e*Pg	**Pg**	**21 10 27.3**	**+0.5**
LOHW				*e*Sn	**Sn**	**21 10 60.0**	**+1.1**
MOOW	**Moose Ponds**	**3.77**	**271**	*e*Pn	**Pn**	**21 10 13.3**	**-2.6**
MOOW				*e*Pg	**Pg**	**21 10 28.9**	**+0.3**
MOOW				*e*Sn	**Sn**	**21 11 02.0**	**+0.8**
SNOW	**Snow King Moun**	**3.80**	**267**	*e*Pn	**Pn**	**21 10 15.3**	**-1.1**
SNOW				*e*Pg	**Pg**	**21 10 30.4**	**+1.2**
SNOW				Sn	**Sn**	**21 11 02.6**	**+0.7**
SNOW				*e*Sg	**Sg**	**21 11 21.0**	**+2.5**
IMW	**Indian Meadow**	**3.91**	**274**	*e*Pn	**Pn**	**21 10 16.4**	**-1.5**
TPAW	**Teton Pass**	**3.94**	**268**	*e*Pn	**Pn**	**21 10 17.2**	**-1.1**
TPAW				*e*Pg	**Pg**	**21 10 31.8**	**-0.1**
TPAW				*e*Sn	**Sn**	**21 11 07.0**	**+1.6**
TPAW				*e*Sg	**Sg**	**21 11 25.6**	**+2.7**
ISCO	**Idaho Springs**	**3.97**	**181**	*e*Pn	**Pn**	**21 10 21.2**	**+2.4**
RRI2	**Red Ridge**	**4.23**	**266**	*e*Pn	**Pn**	**21 10 20.9**	**-1.4**
RRI2				*e*Pg	**Pg**	**21 10 36.8**	**-0.5**
SMCO	**Snowmass**	**4.72**	**194**	*e*Pn	**Pn**	**21 10 31.0**	**+1.8**
SMCO				*e*Pg	**Pg**	**21 10 45.3**	**-1.4**
SMCO				Sn	**Sb**	**21 11 32.0**	**-5.7**
JLU	**Jordanelle**	**5.42**	**236**	*e*Pn	**Pn**	**21 10 38.6**	**+0.1**
JLU				*e*Pg	**Pg**	**21 11 01.9**	**+1.8**
PV04	**Paradox Valley**	**5.95**	**206**	*e*Pn	**Pn**	**21 10 47.1**	**+1.3**
SDCO	**Great Sand Dun**	**6.03**	**180**	*e*Pn	**Pn**	**21 10 48.3**	**+1.3**
SDCO				*e*Sn	Sn	21 12 02.3	+5.5
ULM	**Lac du Bonnet**	**9.24**	**42**	Pn	**Pn**	**21 11 29.0**	**-1.7**
ULM				Lg	Lg	21 14 05.9	
ULM	**Lac du Bonnet**	**9.24**	**42**	Pn	**Pn**	**21 11 29.0**	**-1.7**
	0.6nm,0.3s,baz=228,slow=12,SNR=3.0						
ULM				Lg	Lg	21 14 05.9	
	0.4nm,0.3s,baz=314,slow=6.7,SNR=3.3						
NVAR	**Mina Array Bea**	**11.01**	**245**	Pn	Pn	21 11 59.1	+3.9
NVAR	**Mina Array Bea**	**11.01**	**245**	Pn	Pn	21 11 59.2	+3.9
	0.3nm,0.3s,baz=50,slow=14,SNR=4.3						
YKA	**Yellowknife Ar**	**19.49**	**347**	P	**Pn**	**21 13 49.0**	**+3.2**
YKA	**Yellowknife Ar**	**19.49**	**347**	P	**Pn**	**21 13 48.9**	**+3.2**
	0.0nm,0.3s,baz=156,slow=12,SNR=5.4						
ILAR	**Eielson Array**	**31.14**	**327**	P	P	21 15 39.7	+3.4
ILAR	**Eielson Array**	**31.14**	**327**	P	P	21 15 39.7	+3.4
	0.2nm,0.7s,baz=100,slow=9.6,SNR=3.0						

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*BEO **05** 21:10:04.8±0.9, 43°.83N×15°.90E, h0km, ML3.2/4*
*VIE **05** 21:10:08.1±0.5, 43°.71N×16°.46E, h10km, mb2.7/10, ML3.0/12, Error ellipse: s-maj=5.0km s-min=3.4km az=47.0 22 km N of Split*
*PDG **05** 21:10:09.1±0.6, 43°.88N×16°.36E, h3km±1km, ML3.0/10, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*LDG **05** 21:10:09.9±0.2, 43°.86N×16°.42E, h10km, Ml3.3/9, Error ellipse: s-maj=5.4km s-min=2.6km az=90.0*
*CSEM **05** 21:10:09.0±0.2, 43°.80N×16°.22E, h2km, ML3.2, Error ellipse: s-maj=6.1km s-min=2.8km az=32.0*
*PRU **05** 21:10:10.9, 43°.96N×16°.47E, h0km*
ISC 05 21:10:07.3±1.2**, 43°.81N**±0°.03×**16°.28E**±0°.03**, h2**km±10km**, n110, σ1s.92**/169**, 13C-26D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**1.14**	**34**	*e*Sg	**Sn**	**21 10 46.5**	**0.0**
BLY	**Banja Luka**	**1.14**	**34**	*e*Sg	**Sn**	**21 10 46.5**	**0.0**
STON	**Ston**	**1.40**	**132**	*i* Pn	**Pg**	**21 10 35.2**	**+1.1**
STON				Sg	**Sg**	**21 10 54.1**	**+1.9**
STON	**Ston**	**1.40**	**132**	*i* Pn	**Pg**	**21 10 35.2**	**+1.1**
STON				Sg	**Sg**	**21 10 54.1**	**+1.9**
SISC	**Sisak**	**1.66**	**2**	*e*Pn	**Pb**	**21 10 39.3**	**+0.7**
SISC				Sn	**Sg**	**21 11 01.4**	**+0.7**
SISC	**Sisak**	**1.66**	**2**	*e*Pn	**Pb**	**21 10 39.3**	**+0.7**
SISC				Sn	**Sg**	**21 11 01.3**	**+0.7**
BOJS	**Bojanci**	**1.84**	**337**	*i* Pn	**Pb**	**21 10 42.5**	**+0.7**
BOJS				*e*Sn	**Sg**	**21 11 07.3**	**+0.7**
BOJS							
	comp=Z,37nm,0.2s						
BOJS	**Bojanci**	**1.84**	**337**	*i* Pn	**Pb**	**21 10 42.5**	**+0.7**
BOJS				*e*Sn	**Sg**	**21 11 07.3**	**+0.7**
	comp=Z,37nm,0.2s						
BRY	**Bratogost**	**1.88**	**118**	⇓*i*Pn	**Pb**	**21 10 42.5**	**0.0**
BRY				*e*Sn	**Sg**	**21 11 09.5**	**+1.8**
BRY	**Bratogost**	**1.88**	**118**	⇓*i*Pn	**Pb**	**21 10 42.5**	**0.0**
BRY				*e*Sn	**Sg**	**21 11 09.5**	**+1.8**
UPM	**Unac-Piva**	**2.00**	**107**	⇓*i*Pn	**Pb**	**21 10 45.2**	**+0.6**
UPM				*e*Sn	**Sg**	**21 11 12.5**	**+0.9**
UPM	**Unac-Piva**	**2.00**	**107**	⇓*i*Pn	**Pb**	**21 10 45.2**	**+0.6**
UPM				*e*Sn	**Sg**	**21 11 12.5**	**+0.9**
CRES	**Cresnjev**	**2.10**	**344**	*i* Pn	**Pb**	**21 10 45.5**	**-0.6**
CRES	**Cresnjev**	**2.10**	**344**	*i* Pn	**Pb**	**21 10 45.5**	**-0.6**
HCY	**Herceg Novi**	**2.12**	**129**	⇓*i*Pn	**Pb**	**21 10 46.2**	**-0.2**
HCY				*e*Sn	**Sg**	**21 11 15.4**	**+0.1**
HCY	**Herceg Novi**	**2.12**	**129**	⇓*i*Pn	**Pb**	**21 10 46.2**	**-0.2**
HCY				*e*Sn	**Sg**	**21 11 15.4**	**+0.1**
NKY	**Niksic**	**2.21**	**116**	⇓*i*Pn	**Pb**	**21 10 47.2**	**-1.0**
NKY				*e*Sn	**Sg**	**21 11 17.4**	**-1.1**
NKY	**Niksic**	**2.21**	**116**	⇓*i*Pn	**Pb**	**21 10 47.2**	**-1.0**
NKY				*e*Sn	**Sg**	**21 11 17.4**	**-1.1**
BBLS	**Lazići**	**2.26**	**88**	*e*Pn	**Pn**	**21 10 46.8**	**+1.0**
BBLS				*e*Sn	**Sg**	**21 11 19.1**	**-0.8**
BBLS	**Lazići**	**2.26**	**88**	*e*Pn	**Pn**	**21 10 46.8**	**+1.0**
BBLS				*e*Sn	**Sg**	**21 11 19.1**	**-0.8**
PLE	**Pljevlja**	**2.31**	**101**	⇑*i*Pn	**Pb**	**21 10 49.1**	**-0.6**
PLE				*e*Sn	**Sb**	**21 11 19.1**	**+0.4**
PLE	**Pljevlja**	**2.31**	**101**	⇑*i*Pn	**Pb**	**21 10 49.1**	**-0.6**
PLE				*e*Sn	**Sb**	**21 11 19.1**	**+0.4**
SKDS	**Skadanscina**	**2.37**	**318**	*i* Pn	**Pn**	**21 10 49.4**	**+2.1**
SKDS	**Skadanscina**	**2.37**	**318**	*i* Pn	**Pn**	**21 10 49.4**	**+2.1**
BUM	**Brajici-Budva**	**2.44**	**127**	⇓*i*Pn	**Pb**	**21 10 51.5**	**-0.4**
BUM				*e*Sn	**Sg**	**21 11 23.7**	**-1.9**
BUM	**Brajici-Budva**	**2.44**	**127**	⇓*i*Pn	**Pb**	**21 10 51.5**	**-0.4**
BUM				*e*Sn	**Sg**	**21 11 23.7**	**-1.9**
PDG	**Podgorica**	**2.58**	**121**	*e*Pn	**Pn**	**21 10 50.4**	**+0.4**
PDG				*e*Sn	**Sb**	**21 11 25.6**	**-0.7**
PDG	**Podgorica**	**2.58**	**121**	*e*Pn	**Pn**	**21 10 50.4**	**+0.4**
PDG				*e*Sn	**Sb**	**21 11 25.6**	**-0.7**
TTG	**Podgorica**	**2.58**	**121**	⇓*i*Pn	**Pb**	**21 10 52.6**	**-1.6**
TTG				*e*Sn	**Sb**	**21 11 26.6**	**+0.3**
BEHE	**Becsehely**	**2.68**	**7**	⇓*e*	**Pn**	**21 10 52.3**	**+0.8**
DIVS	**Divibare**	**2.69**	**83**	*e*Pn	**Pn**	**21 10 52.1**	**+0.4**
DIVS				*e*Sn	**Sb**	**21 11 29.7**	**-0.1**
DIVS	**Divibare**	**2.69**	**83**	*e*Pn	**Pn**	**21 10 52.1**	**+0.4**
DIVS				*e*Sn	**Sb**	**21 11 29.7**	**-0.1**
VOY	**Vojsko**	**2.79**	**323**	*e*Pn	**Pb**	**21 10 56.2**	**-1.8**
VOY				*e*Sn	**Sb**	**21 11 31.2**	**-1.5**
VOY	**Vojsko**	**2.79**	**323**	*e*Pn	**Pb**	**21 10 56.2**	**-1.8**
VOY				*e*Sn	**Sb**	**21 11 31.2**	**-1.5**
BEY	**Berane**	**2.80**	**108**	⇓*i*Pn	**Pb**	**21 10 56.0**	**-2.0**
BEY				*e*Sn	**Sb**	**21 11 32.0**	**-0.8**
IVA	**Berane**	**2.80**	**108**	⇓*i*Pn	**Pb**	**21 10 56.0**	**-2.0**
IVA				*e*Sn	**Sb**	**21 11 32.0**	**-0.8**
ULC	**Ulcinj**	**2.85**	**129**	⇓*i*Pn	**Pb**	**21 10 56.5**	**-2.5**
ULC				*e*Sn	**Sb**	**21 11 33.9**	**-0.5**
ULC	**Ulcinj**	**2.85**	**129**	⇓*i*Pn	**Pb**	**21 10 56.5**	**-2.5**
ULC				*e*Sn	**Sb**	**21 11 33.9**	**-0.5**
PKSM	**Moragy**	**2.92**	**34**	*e*Pn	**Pn**	**21 10 54.8**	**0.0**
PKSM	**Moragy**	**2.92**	**34**	⇓*e*	**Pn**	**21 10 54.2**	**-0.6**
PKSM	**Moragy**	**2.92**	**34**	*e*Pn	**Pn**	**21 10 54.8**	**0.0**
PVY	**Plav**	**2.95**	**113**	⇑*i*Pn	**Pb**	**21 10 58.5**	**-2.2**
PVY				*e*Sn	**Sb**	**21 11 36.0**	**-1.2**
OBKA	**Obir**	**2.96**	**336**	⇓*i*Pn	**Pn**	**21 10 57.3**	**+1.8**
	SNR=7.9						
OBKA				⇑*i*Sn	**Sb**	**21 11 35.4**	**-2.2**
OBKA	**Obir**	**2.96**	**336**	Pn	**Pn**	**21 10 57.3**	**+1.8**
	SNR=7.9						
OBKA				Sn	**Sb**	**21 11 35.4**	**-2.2**
SOKA	**Soboth**	**3.00**	**343**	⇓*i*Pn	**Pn**	**21 10 57.3**	**+1.3**
SOKA				⇑*i*Sn	**Sb**	**21 11 36.1**	**-2.5**
SOKA	**Soboth**	**3.00**	**343**	Pn	**Pn**	**21 10 57.3**	**+1.3**
SOKA				Sn	**Sb**	**21 11 36.1**	**-2.5**
PKS9	**Tamasi**	**3.11**	**26**	*e*	**Pn**	**21 10 55.9**	**-1.5**
BCI	**Bajram Curri**	**3.12**	**116**	*e*PN	**Pb**	**21 11 02.8**	**-0.8**
BCI				*i* SN	**Sb**	**21 11 40.7**	**-1.5**
BCI	**Bajram Curri**	**3.12**	**116**	*e*Pn	**Pb**	**21 11 02.8**	**-0.8**
BCI				*i* Sn	**Sb**	**21 11 40.7**	**-1.5**
PUK	**Puka**	**3.19**	**122**	*e*PN	**Pb**	**21 11 05.4**	**+0.7**
PUK	**Puka**	**3.19**	**122**	*e*Pn	**Pb**	**21 11 05.4**	**+0.7**
GRUS	**Gruza**	**3.21**	**87**	*e*Pn	**Pn**	**21 11 00.2**	**+1.5**
GRUS	**Gruza**	**3.21**	**87**	*e*Pn	**Pn**	**21 11 00.2**	**+1.5**
MYKA	**Terra Mystica**	**3.38**	**327**	⇓*i*Pn	**Pn**	**21 11 02.9**	**+1.7**
MYKA				⇑*i*Sn	**Sn**	**21 11 46.1**	**+4.2**
MYKA	**Terra Mystica**	**3.38**	**327**	Pn	**Pn**	**21 11 02.9**	**+1.7**
MYKA				Sn	**Sn**	**21 11 46.1**	**+4.2**
ARSA	**Arzberg**	**3.48**	**351**	⇑*i*Pn	**Pn**	**21 11 03.7**	**+1.2**
	SNR=6.8						
ARSA	**Arzberg**	**3.48**	**351**	Pn	**Pn**	**21 11 03.7**	**+1.2**
	SNR=6.8						
TIR	**Tirane**	**3.61**	**132**	*e*Sn	**Sn**	**21 11 49.7**	**+2.2**
TIR	**Tirane**	**3.61**	**132**	*e*Sn	**Sn**	**21 11 49.7**	**+2.2**
PKST	**Tˆ's**	**3.66**	**19**	⇓*e*	**Pn**	**21 11 05.5**	**+0.5**
PHP	**Peshkopia**	**3.73**	**123**	*e*PN	**Pg**	**21 11 17.3**	**-1.4**
PHP				*i* SN	**Sb**	**21 11 57.4**	**-2.1**
KBA	**Koelnbreinsper**	**3.87**	**329**	⇓*i*Pn	**Pn**	**21 11 10.0**	**+2.0**
KBA				⇑*i*Sn	**Sn**	**21 11 57.2**	**+3.2**
KBA	**Koelnbreinsper**	**3.87**	**329**	Pn	**Pn**	**21 11 10.0**	**+2.0**
KBA				Sn	**Sn**	**21 11 57.2**	**+3.2**
CONA	**Conrad Observa**	**4.13**	**356**	⇑*i*Pn	**Pn**	**21 11 12.5**	**+1.1**
CONA	**Conrad Observa**	**4.13**	**356**	Pn	**Pn**	**21 11 12.5**	**+1.1**
BARS	**Barje**	**4.16**	**102**	*e*Pn	**Pn**	**21 11 13.6**	**+1.8**
BARS	**Barje**	**4.16**	**102**	*e*Pn	**Pn**	**21 11 13.6**	**+1.8**
BZS	**Buzias**	**4.21**	**63**	*e*Pn	**Pn**	**21 11 12.5**	**0.0**
BZS	**Buzias**	**4.21**	**63**	*e*Pn	**Pn**	**21 11 12.5**	**0.0**
MOA	**Molln**	**4.28**	**341**	⇑*i*Pn	**Pn**	**21 11 15.6**	**+2.2**
	SNR=12						
MOA				⇓*i*Sn	**Sn**	**21 12 07.8**	**+3.8**
MOA	**Molln**	**4.28**	**341**	Pn	**Pn**	**21 11 15.6**	**+2.2**
	SNR=12						
MOA				Sn	**Sn**	**21 12 07.8**	**+3.8**
ZAPS	**Zavoj**	**4.65**	**94**	*e*Pn	**Pn**	**21 11 20.4**	**+1.8**
WTTA	**Wattenberg**	**4.75**	**318**	⇑*i*Pn	**Pn**	**21 11 21.9**	**+1.8**
WTTA				⇑*i*Sn	**Sn**	**21 12 19.2**	**+3.4**
WTTA	**Wattenberg**	**4.75**	**318**	Pn	**Pn**	**21 11 21.9**	**+1.8**
WTTA				Sn	**Sn**	**21 12 19.2**	**+3.4**
WATA	**Walderalm**	**4.83**	**318**	⇓*i*Pn	**Pn**	**21 11 23.5**	**+2.3**
WATA				⇓*i*Sn	**Sn**	**21 12 21.9**	**+4.1**
WATA	**Walderalm**	**4.83**	**318**	Pn	**Pn**	**21 11 23.5**	**+2.3**
WATA				Sn	**Sn**	**21 12 21.9**	**+4.1**
MOTA	**Moosalm**	**5.07**	**316**	⇑*i*Pn	**Pn**	**21 11 26.8**	**+2.3**
MOTA				⇓*i*Sn	**Sn**	**21 12 28.2**	**+4.6**
MOTA	**Moosalm**	**5.07**	**316**	Pn	**Pn**	**21 11 26.8**	**+2.3**
MOTA				Sn	**Sn**	**21 12 28.2**	**+4.6**
VTS	**Vitosha**	**5.21**	**101**	*e*Pn	**Pn**	**21 11 27.6**	**+1.2**
VTS	**Vitosha**	**5.21**	**101**	*e*Pn	**Pn**	**21 11 27.6**	**+1.2**
PGF	**Pioggiola**	**5.47**	**259**	*e*Pn	**Pn**	**21 11 31.0**	**+1.0**
PGF	**Pioggiola**	**5.47**	**259**	*e*Pn	**Pn**	**21 11 31.0**	**+1.0**
VRAC	**Vranov**	**5.50**	**2**	*e*Pn	**Pn**	**21 11 30.9**	**+0.6**
PCP	**Piancastagn**	**5.61**	**280**	P	**Pn**	**21 11 34.5**	**+2.6**
KHC	**Kasperske Hory**	**5.64**	**342**	*e*PN	**Pn**	**21 11 34.2**	**+2.0**
KHC				*e*SN	**Sn**	**21 12 36.4**	**-1.1**
KHC	**Kasperske Hory**	**5.64**	**342**	Pn	**Pn**	**21 11 34.2**	**+2.0**
PRU	**Pruhonice**	**6.29**	**350**	*e*SN	**Sn**	**21 12 51.3**	**-2.2**
SBF	**Sospel**	**6.40**	**274**	*e*Pn	**Pn**	**21 11 43.6**	**+0.9**
SBF				*e*Sn	**Sn**	**21 12 52.9**	**-3.4**
	comp=Z,7.1nm,0.4s						
SBF	**Sospel**	**6.40**	**274**	*e*Pn	**Pn**	**21 11 43.6**	**+0.9**
MBDF	**Montbardon**	**6.89**	**281**	*e*Pn	**Pn**	**21 11 49.9**	**+0.4**
MBDF				*e*Sn	**Sn**	**21 13 04.1**	**-4.4**
	comp=Z,4.4nm,0.5s						
MBDF	**Montbardon**	**6.89**	**281**	*e*Pn	**Pn**	**21 11 49.9**	**+0.4**
FRF	**La Foret Royal**	**6.99**	**271**	*e*Pn	**Pn**	**21 11 51.5**	**+0.8**
FRF				*e*Sn	**Sn**	**21 13 07.0**	**-3.8**
	comp=Z,1.1nm,0.2s						
FRF	**La Foret Royal**	**6.99**	**271**	*e*Pn	**Pn**	**21 11 51.5**	**+0.8**
LPG	**La Plagne**	**7.00**	**287**	*e*Pn	**Pn**	**21 11 51.3**	**+0.1**
LPG	**La Plagne**	**7.00**	**287**	*e*P	Pn	21 11 56.4	+5.2
LPG				*e*Sn	**Sn**	**21 13 07.4**	**-4.1**
	comp=Z,5.8nm,0.4s						
LPG	**La Plagne**	**7.00**	**287**	*e*Pn	**Pn**	**21 11 51.3**	**+0.1**
LPL	**La Plagne**	**7.02**	**287**	*e*Pn	**Pn**	**21 11 52.4**	**+1.1**
LPL				*e*Sn	**Sn**	**21 13 07.8**	**-4.0**
	comp=Z,9.6nm,0.5s						
LPL	**La Plagne**	**7.02**	**287**	*e*Pn	**Pn**	**21 11 52.4**	**+1.1**
ORIF	**Oris-en-Rattie**	**7.54**	**282**	*e*Pn	**Pn**	**21 11 58.8**	**+0.5**
ORIF				*e*Sn	**Sn**	**21 13 19.5**	**-4.9**
	comp=Z,3.2nm,0.4s						
ORIF	**Oris-en-Rattie**	**7.54**	**282**	*e*Pn	**Pn**	**21 11 58.8**	**+0.5**
HINF	**Hinteralfeld**	**7.71**	**305**	*e*Pn	**Pn**	**21 12 01.2**	**+0.6**
HINF				*e*Sn	**Sn**	**21 13 22.9**	**-5.6**
	comp=Z,1.7nm,0.3s						
HINF	**Hinteralfeld**	**7.71**	**305**	*e*Pn	**Pn**	**21 12 01.2**	**+0.6**
CABF	**La Chapelle**	**7.72**	**295**	*e*Pn	**Pn**	**21 12 01.6**	**+0.7**
CABF	**La Chapelle**	**7.72**	**295**	*e*Pn	**Pn**	**21 12 01.6**	**+0.7**
CDF	**Champ du Feu**	**7.77**	**309**	*e*Pn	**Pn**	**21 12 02.4**	**+1.0**
CDF				*e*Sn	Sn	21 13 23.7	-6.2
	comp=Z,2.2nm,0.5s						
CDF	**Champ du Feu**	**7.77**	**309**	*e*Pn	**Pn**	**21 12 02.4**	**+1.0**
HAU	**Haudompre**	**8.10**	**305**	*e*Pn	**Pn**	**21 12 06.2**	**+0.3**
HAU				*e*Sn	**Sn**	**21 13 32.6**	**-5.4**
	comp=Z,2.1nm,0.2s						
HAU	**Haudompre**	**8.10**	**305**	*e*Pn	**Pn**	**21 12 06.2**	**+0.3**
VIVF	**Saint-Julien-l**	**8.39**	**281**	*e*Pn	**Pn**	**21 12 10.2**	**+0.3**
VIVF	**Saint-Julien-l**	**8.39**	**281**	*e*Pn	**Pn**	**21 12 10.2**	**+0.3**

MEX 05 21:16:21.1±0.6**, 15°.45N×93°.30W, h66**km±19km**, MD3.5, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.14**	**118**	*i* P	Pn	21 16 40.6	-0.5
THIG				*i* S	Sn	21 16 54.3	-1.8
TGIG		**1.33**	**7**	*i* P	Pn	21 16 42.3	-1.6
TGIG				*i* S	Sn	21 16 59.3	-1.6
CCIG	**Comitan**	**1.39**	**53**	*i* P	Pn	21 16 43.6	-1.2
CCIG				*i* S	Sn	21 17 00.2	-2.3
HUIG	**Huatulco**	**2.72**	**277**	*i* P	Pn	21 17 00.9	-1.6
HUIG				*i* S	Sn	21 17 32.8	-1.5

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*MOS **05** 21:31:10.4±0.9, 62°.56N×149°.59W, h10km, mb4.9/10, Error ellipse: s-maj=19.0km s-min=6.5km az=93.0*
*ISCJB **05** 21:31:16.7±0.2, 62°.24N±0°.02×149°.35W±0°.04, h72km±2km, mb4.1/31, Error ellipse: s-maj=3.4km s-min=2.9km az=31.8*
*IDC **05** 21:31:17.4±0.7, 62°.36N×149°.52W, h57km±5km, mb3.7/18, mb1 3.8/23, mb1mx3.8/32, mbtmp3.7/23, MS3.2/4, Ms1 3.2/4, ms1mx2.7/50, Error ellipse: s-maj=15.5km s-min=11.3km az=27.0*
*NEIC **05** 21:31:18.5, 62°.23N×149°.35W, h44km, ML3.8(AEIC), After AEIC.*
NEIC Felt [IV] at Sutton, [III] at Talkeetna and [II] at Anchorage and Palmer. Also felt at Big Lake, Eagle River and Wasilla.
ISC 05 21:31:17.3±0.5**, 62°.27N**±0°.03×**149°.41W**±0°.03**, h58**km±4km**, n179, σ1s.05**/212**, mb4.2**/31**, MS3.4**/3**, 1C, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRAP	**Trapper Creek**	**0.40**	**280**	P	**Pn**	**21 31 28.3**	**+0.3**
TRAP				S	**Sn**	**21 31 34.4**	**-1.4**
CUT	**Chulitna**	**0.43**	**289**	P	**Pn**	**21 31 28.7**	**+0.4**
SML	**Sawmill**	**0.68**	**132**	P	**Pn**	**21 31 30.9**	**-0.4**
SML				S	**Sn**	**21 31 41.4**	**0.0**
SML	**Sawmill**	**0.68**	**132**	P	**Pn**	**21 31 30.9**	**-0.4**
SML				S	**Sn**	**21 31 41.4**	**0.0**
PMR	**Palmer**	**0.69**	**169**	P	**Pn**	**21 31 30.4**	**-0.8**
PMR				S	**Sn**	**21 31 40.5**	**-0.9**
PMR	**Palmer**	**0.69**	**169**	P	**Pn**	**21 31 30.4**	**-0.8**
PMR				S	**Sn**	**21 31 40.5**	**-0.9**

SKT Skwentna 1.04 255 P Pn 21 31 35.9 +0.2
SKT S Sn 21 31 50.8 +1.4
RND Reindeer 1.17 12 P Pn 21 31 38.3 +0.7
RND Reindeer 1.17 12 P Pn 21 31 38.3 +0.7
RND S Sn 21 31 53.3 +0.7
RC01 Rabbit Creek A 1.19 188 P Pn 21 31 38.0 +0.3
RC01 S Sn 21 31 54.0 +1.0
DHY Denali Highway 1.24 48 P Pn 21 31 38.6 0.0
DHY S Sn 21 31 55.7 +1.2
TRF Thorofare Moun 1.26 342 P Pn 21 31 39.3 +0.5
TRF S Sn 21 31 56.0 +1.2
STLK Strandline Lak 1.38 237 P Pn 21 31 40.8 +0.4
PPLA Purkeypile 1.43 297 P Pn 21 31 42.1 +1.0
MCK McKinley 1.49 8 P Pn 21 31 43.0 +1.3
MCK McKinley 1.49 8 P Pn 21 31 43.0 +1.3
SPU Mount Spurr 1.67 230 P Pn 21 31 44.8 +0.7
BGL Barrier Glacie 1.74 236 P Pn 21 31 46.9 +1.7
CKL Chakachamna La 1.76 234 P Pn 21 31 46.8 +1.3
SLKM Skilak Lake 1.81 193 P Pn 21 31 47.0 +0.9
SLKM Skilak Lake 1.81 193 P Pn 21 31 47.0 +0.9
KLU Klutina 1.82 114 P Pn 21 31 46.5 +0.2
VLZ Valdez 1.85 126 P Pn 21 31 46.3 -0.3
PAX Paxson 1.95 67 P Pn 21 31 49.3 +1.2
PAX Paxson 1.95 67 P Pn 21 31 49.3 +1.2
HARP HAARP 1.99 84 P Pn 21 31 49.8 +1.3
DIV Divide 2.07 122 P Pn 21 31 49.2 -0.5
CHUM Lake Minchumin 2.09 322 P Pn 21 31 51.3 +1.4
SEW Seward 2.17 181 P Pn 21 31 52.1 +1.2
DDM Donnelly Dome 2.22 45 P Pn 21 31 54.5 +2.7
WRH Wood River Hil 2.29 14 P Pn 21 31 53.4 +0.8
DFR Drift River 2.30 225 P Pn 21 31 54.5 +1.6
NEA Nenana 2.33 4 P Pn 21 31 53.8 +0.8
HDA Harding Lake 2.42 26 P Pn 21 31 56.1 +1.8
RSO Redoubt South 2.42 223 *e*Pn Pn 21 31 57.0 +2.4
RSO *e*Sn Sn 21 32 25.3 +2.1
EYAK Cordova Ski Ar 2.46 133 P Pn 21 31 55.0 0.0
CCB Clear Creek Bu 2.50 16 P Pn 21 31 56.1 +0.7
BRLK Bradley Lake 2.61 197 P Pn 21 31 57.8 +0.8
BMRM Bremner River 2.64 117 P Pn 21 31 57.1 -0.3
COLA College 2.71 14 P Pn 21 31 59.3 +1.0
COLA College 2.71 14 P Pn 21 31 59.2 +1.0
MENT Mentasta 2.71 73 *e*Pn Pn 21 31 59.4 +1.0
MENT *e*Sn Sn 21 32 33.5 +3.4
MDM Murphy Dome 2.75 10 P Pn 21 31 60.0 +1.0
IL1 Eielson Array 2.76 23 P Pn 21 31 59.5 +0.6
ILAR Eielson Array 2.76 23 P Pn 21 31 59.6 +0.6
ILAR S Sn 21 32 33.0 +1.9
ILAR Eielson Array 2.76 23 P Pn 21 31 59.6 +0.6
13nm,0.3s,baz=206,slow=14,SNR=529
ILAR S Sn 21 32 33.0 +1.9
68nm,0.3s,baz=201,slow=25,SNR=17
DOT Dot Lake 2.81 58 P Pn 21 32 01.4 +1.7
GOAT Goat Mountain 2.81 125 P Pn 21 31 59.6 -0.2
MLY Manley 2.84 349 P Pn 21 32 01.1 +1.0
GLM Gilmore Dome 2.88 17 P Pn 21 32 01.7 +1.0
TT01 Tatalina 3.13 285 P Pn 21 32 04.7 +0.7
SVW2 Sparrevohn 3.17 251 P Pn 21 32 05.5 +0.9
OPT Oil Point 3.22 217 P Pn 21 32 06.2 +0.9
MID Middleton Isla 3.22 151 P Pn 21 32 06.0 +0.7
MID Middleton Isla 3.22 151 P Pn 21 32 06.0 +0.7
AUW Augustine West 3.52 216 P Pn 21 32 11.4 +2.0
BALM Baldy 3.59 107 P Pn 21 32 09.9 -0.5
BALM Baldy 3.59 107 P Pn 21 32 09.9 -0.5
BCA3 Beaver Creek A 3.61 74 P Pn 21 32 11.1 +0.5
PRP Porcupine Dome 3.69 26 P Pn 21 32 13.6 +1.7
MESA MESA 4.17 117 P Pn 21 32 18.2 -0.3
IM3 Indian Mountai 4.19 335 P Pn 21 32 19.7 +1.2
SAMH Samovar Hills 4.69 113 P Pn 21 32 26.4 +0.9
KDAK Kodiak Island 4.77 201 P Pn 21 32 25.9 -0.6
KDAK S Sn 21 33 17.1 -3.4
KDAK Kodiak Island 4.77 201 P Pn 21 32 25.8 -0.6
3.2nm,0.3s,baz=54,slow=10,SNR=46
KDAK S Sn 21 33 17.1 -3.4
10nm,0.3s,baz=60,slow=22,SNR=13
KAKN Katmai Knife C 4.88 218 P Pn 21 32 28.7 +0.6
DAWY Dawson 4.88 64 P Pn 21 32 29.1 +0.9
KCE Katmai Mt Cerb 4.96 218 P Pn 21 32 30.6 +1.5
KABR Katmai Barrier 4.99 216 P Pn 21 32 30.2 +0.6
COLD Coldfoot 4.99 356 P Pn 21 32 31.0 +1.5
OHAK Old Harbor 5.43 203 *e*Pn Pn 21 32 37.0 +1.5
32nm,0.6s
OHAK *e*Sn Sn 21 33 37.3 +0.8
PNL Peninsula 5.53 114 P Pn 21 32 36.7 -0.2
BM3 Burnt Mountain 5.56 19 P Pn 21 32 38.5 +1.2
HYT Haines Junctio 5.87 99 P Pn 21 32 42.1 +0.4
WHY Whitehorse 7.14 97 P Pn 21 32 59.2 +0.2
SKAG Skagway 7.42 106 P Pn 21 33 03.3 +0.5
TNA Tin City 8.79 300 P Pn 21 33 23.3 +1.9
SIT Sitka 8.82 120 P Pn 21 33 20.9 -1.0
SIT Sitka 8.82 120 P Pn 21 33 20.9 -1.0
INK Inuvik 8.97 41 P Pn 21 33 25.2 +1.2
INK S Sn 21 35 02.3 -1.0
INK Inuvik 8.97 41 P Pn 21 33 25.2 +1.2
0.4nm,0.3s,baz=236,slow=16,SNR=12
INK S Sn 21 35 02.3 -1.0
0.8nm,0.3s,baz=108,slow=32,SNR=5.6
GAMB Gambell 10.23 288 *e*Pn Pn 21 33 42.4 +1.4
6.9nm,0.3s
DLBC Dease Lake 10.32 103 *e*Pn Pn 21 33 42.0 -0.5
DLBC *e*Sn Sn 21 35 38.2 +1.6
DLBC Dease Lake 10.32 103 P Pn 21 33 41.9 -0.5
0.8nm,0.3s,baz=309,slow=11,SNR=9.1
DLBC LR LR 21 37 22.2
comp=Z,56nm,21.4s,baz=9.0,slow=35
YKA Yellowknife Ar 16.02 74 P Pn 21 34 58.0 -0.5
YKA PcP PcP 21 39 51.0 -0.5
YKA Yellowknife Ar 16.02 74 P Pn 21 34 58.0 -0.5
0.2nm,0.3s,baz=283,slow=10,SNR=17
YKA PcP PcP 21 39 51.0 -0.5
0.0nm,0.3s,baz=314,slow=1.9,SNR=3.8
FX1 Attu Island--F 21.85 262 P P 21 36 04.8 +0.2
FX1 Attu Island--F 21.85 262 P P 21 36 04.8 +0.2
2.4nm,0.5s,baz=270,slow=14,SNR=6.0
RES Resolute Bay 22.45 35 P P 21 36 10.6 -0.2
RES Resolute Bay 22.45 35 P P 21 36 10.6 -0.2
1.2nm,0.4s,baz=256,slow=14,SNR=4.6
NEW Newport 22.80 113 P P 21 36 15.5 +0.6
NEW Newport 22.80 113 P P 21 36 15.5 +0.6
2.0nm,0.6s,baz=322,slow=12,SNR=3.5
NEW LR LR 21 44 55.6
comp=Z,45nm,19.0s,baz=257,slow=36
SEY Seymchan 26.02 298 *e*P P 21 36 45.0 +0.7
PDAR Pinedale Array 30.41 111 P P 21 37 25.4 +1.5
PDAR pP pP 21 37 39.7 +1.3
PDAR Pinedale Array 30.41 111 P P 21 37 25.4 +1.5
0.2nm,0.4s,baz=294,slow=1.5,SNR=4.2
PDAR pP pP 21 37 39.7 +1.3
0.6nm,0.9s,baz=297,slow=6.5,SNR=3.6
NVAR Mina Array Bea 30.49 127 P P 21 37 26.3 +1.6
NVAR Mina Array Bea 30.49 127 P P 21 37 26.3 +1.6
0.6nm,0.6s,baz=325,slow=11,SNR=2.4
FRB Frobisher Bay 34.45 51 P P 21 37 58.7 +0.1
FRB Frobisher Bay 34.45 51 P P 21 37 58.7 +0.1
2.0nm,0.6s,baz=308,slow=11,SNR=4.5
TXAR Lajitas Array 44.29 116 P P 21 39 22.2 +1.2
TXAR pP pP 21 39 36.7 +0.6
TXAR Lajitas Array 44.29 116 P P 21 39 22.2 +1.2
0.3nm,0.5s,baz=330,slow=7.2,SNR=4.6
TXAR pP pP 21 39 36.7 +0.6
0.2nm,0.5s,baz=136,slow=31,SNR=2.6
TXAR LR LR 21 57 11.5
comp=Z,42nm,19.3s,baz=0.0,slow=35
TKL Tuckaleechee C 47.92 92 LR LR 22 01 10.0
comp=Z,67nm,20.1s,baz=283,slow=37
VLA Vladivostok 48.00 285 *e*P P 21 39 49.9 -0.1
VLA pmax pmax
comp=Z,19nm,0.9s
ARCES ARCESS Array B 48.44 2 P P 21 39 52.2 -0.8
ARCES PcP PcP 21 41 17.8 -0.5
ARCES ARCESS Array B 48.44 2 P P 21 39 52.2 -0.8
comp=Z,2.3nm,0.9s,baz=350,slow=4.7,SNR=7.9
ARCES PcP PcP 21 41 17.8 -0.5
comp=Z,4.6nm,0.9s,baz=15,slow=5.0,SNR=3.7
KSRS Korea Array 54.36 284 P P 21 40 38.5 +0.8
comp=Z,1.5nm,0.7s,baz=28,slow=6.6,SNR=7.3
KSAR Wonju Array Be 54.39 284 P P 21 40 38.5 +0.6
SONM Songino Array 54.84 307 P P 21 40 42.0 +0.8
SONM Songino Array 54.84 307 P P 21 40 42.0 +0.8
comp=Z,1.7nm,0.7s,baz=35,slow=8.1,SNR=14
ZALV Zalesovo Beam 56.55 325 P P 21 40 52.2 -0.9
ZALV Zalesovo Beam 56.55 325 P P 21 40 52.1 -0.9
ZALV pP pP 21 41 08.1 -0.5
ZALV Zalesovo Beam 56.55 325 P P 21 40 52.1 -0.9
comp=Z,2.2nm,0.5s,baz=21,slow=7.2,SNR=12
ZALV pP pP 21 41 08.1 -0.5
comp=Z,0.7nm,0.4s,baz=17,slow=7.5,SNR=2.9
FINES FINESS Array B 56.56 3 P P 21 40 52.1 -0.9
FINES FINESS Array B 56.56 3 P P 21 40 52.1 -0.9
comp=Z,1.6nm,1.0s,baz=5.7,slow=7.7,SNR=5.4
ARU Arti 59.65 342*c* *i*P P 21 41 13.7 -1.0
ARU 21 43 24.0
ARU S S 21 49 21.3 +1.1
ARU SS SS 21 53 11.7 -3.8
ARU pmax pmax
comp=Z,8.0nm,0.6s
MK31 Makanchi Array 63.71 323 *e*P P 21 41 40.7 -1.5
MK31 Makanchi Array 63.71 323 *e*P P 21 41 40.7 -1.5
MKAR Makanchi Array 63.71 323 P P 21 41 40.9 -1.4
MKAR Makanchi Array 63.71 323 P P 21 41 40.9 -1.4
MKAR sP sP 21 42 03.2 -1.4
MKAR Makanchi Array 63.71 323 P P 21 41 40.9 -1.4
comp=Z,1.0nm,0.5s,baz=38,slow=6.9,SNR=22
MKAR sP sP 21 42 03.2 -1.4
comp=Z,0.8nm,0.6s,baz=44,slow=7.6,SNR=3.8
BAIF Baives 66.07 18 *e*P P 21 41 57.1 -0.3
BAIF Baives 66.07 18 *e*P P 21 41 57.1 -0.3
BAIF Baives 66.07 18 *e*P P 21 41 57.1 -0.3
ABKAR Akbulak array 66.39 339 *e*P P 21 41 58.7 -0.8
comp=Z,2.7nm,0.6s
ROSF Rostrenen 66.48 24 *e*P P 21 42 00.0 -0.1
ROSF Rostrenen 66.48 24 *e*P P 21 42 00.0 -0.1
ROSF Rostrenen 66.48 24 *e*P P 21 42 00.0 -0.1
FLN La Foliniere 66.58 22 *e*P P 21 42 00.1 -0.6
FLN La Foliniere 66.58 22 *e*P P 21 42 00.1 -0.6
FLN La Foliniere 66.58 22 *e*P P 21 42 00.1 -0.6
SGMF Saint Gilles 66.69 23 *e*P P 21 42 01.0 -0.5
comp=Z,33nm,1.1s
SGMF Saint Gilles 66.69 23 *e*P P 21 42 01.0 -0.5
SGMF pmax pmax
comp=Z,33nm,1.1s
SGMF Saint Gilles 66.69 23 *e*P P 21 42 01.0 -0.5
comp=Z,33nm,1.1s
LDF La Druitiere 66.80 22 *e*P P 21 42 02.0 -0.2
LDF La Druitiere 66.80 22 *e*P P 21 42 02.0 -0.2
LDF La Druitiere 66.80 22 *e*P P 21 42 02.0 -0.2
AKASG Malin Array Be 67.38 1 P P 21 42 04.5 -1.2
AKASG Malin Array Be 67.38 1 P P 21 42 04.5 -1.2
AKASG Malin Array Be 67.38 1 P P 21 42 04.5 -1.2
comp=Z,1.0nm,0.4s,baz=0.5,slow=6.5,SNR=5.3
CDF Champ du Feu 68.11 17 *e*P P 21 42 10.1 -0.4
comp=Z,2.2nm,0.5s
CDF Champ du Feu 68.11 17 *e*P P 21 42 10.1 -0.4
CDF pmax pmax
comp=Z,2.0nm,0.5s
CDF Champ du Feu 68.11 17 *e*P P 21 42 10.1 -0.4
comp=Z,2.2nm,0.5s
GERES GERESS Array B 68.42 12 P P 21 42 11.9 -0.5
GERES GERESS Array B 68.42 12 P P 21 42 11.9 -0.5
comp=Z,0.3nm,0.7s,baz=337,slow=6.4,SNR=3.8
LOR Lormes 68.74 19 *e*P P 21 42 14.1 -0.3
comp=Z,6.1nm,0.7s
LOR Lormes 68.74 19 *e*P P 21 42 14.1 -0.3
comp=Z,6.1nm,0.7s
SSF Saint Saulge 68.88 19 *e*P P 21 42 14.3 -1.0
comp=Z,14nm,1.0s
SSF Saint Saulge 68.88 19 *e*P P 21 42 14.3 -1.0
SSF pmax pmax
comp=Z,14nm,1.0s
SSF Saint Saulge 68.88 19 *e*P P 21 42 14.3 -1.0
comp=Z,14nm,1.0s
AVF Avril sur Loir 69.12 20 *e*P P 21 42 16.2 -0.5
comp=Z,17nm,1.2s
AVF Avril sur Loir 69.12 20 *e*P P 21 42 16.2 -0.5
AVF pmax pmax
comp=Z,17nm,1.2s
AVF Avril sur Loir 69.12 20 *e*P P 21 42 16.2 -0.5
comp=Z,17nm,1.2s
BGF Bois d'Agland 69.27 20 *e*P P 21 42 17.0 -0.7
comp=Z,6.8nm,0.7s
BGF Bois d'Agland 69.27 20 *e*P P 21 42 17.0 -0.7
BGF pmax pmax
comp=Z,7.0nm,0.7s
BGF Bois d'Agland 69.27 20 *e*P P 21 42 17.0 -0.7
comp=Z,6.8nm,0.7s
SMF Signal de Mont 69.34 19 *e*P P 21 42 17.8 -0.3
SMF Signal de Mont 69.34 19 *e*P P 21 42 17.8 -0.3
SMF Signal de Mont 69.34 19 *e*P P 21 42 17.8 -0.3
TCF Toulx Ste Croi 69.43 21 *e*P P 21 42 18.1 -0.6
TCF Toulx Ste Croi 69.43 21 *e*P P 21 42 18.1 -0.6
TCF Toulx Ste Croi 69.43 21 *e*P P 21 42 18.1 -0.6
AAK Ala-Archa 69.65 327 *e*P P 21 42 20.1 -0.2
AAK pmax pmax
comp=Z,2.0nm,0.7s
EKS2 Erkin-Say 69.81 327 *e*P P 21 42 20.8 -0.5
EKS2 pmax pmax
comp=Z,2.0nm,0.7s
EKS2 Erkin-Say 69.81 327 *e*P P 21 42 20.8 -0.5
comp=Z,1.9nm,0.7s
VIVF Saint-Julien-l 71.22 19 *e*P P 21 42 29.4 -0.2
comp=Z,12nm,1.0s
VIVF Saint-Julien-l 71.22 19 *e*P P 21 42 29.4 -0.2
VIVF pmax pmax
comp=Z,12nm,1.0s
VIVF Saint-Julien-l 71.22 19 *e*P P 21 42 29.4 -0.2
comp=Z,12nm,1.0s
KIV Kislovodsk 73.68 351 *e*P P 21 42 44.7 +0.3
KIV pmax pmax
comp=Z,7.0nm,1.0s
PGF Pioggiola 74.10 16 *e*P P 21 42 46.1 -0.8
PGF Pioggiola 74.10 16 *e*P P 21 42 46.1 -0.8
PGF Pioggiola 74.10 16 *e*P P 21 42 46.1 -0.8
ESDC Sonseca Array 74.65 27 P P 21 42 50.0 0.0
ESDC Sonseca Array 74.65 27 P P 21 42 50.0 0.0
comp=Z,1.0nm,0.5s,baz=342,slow=6.3,SNR=7.5
BRTR Keskin Array B 78.33 358 P P 21 43 10.7 -0.3
BRTR Keskin Array B 78.33 358 P P 21 43 10.7 -0.3
comp=Z,0.6nm,0.7s,baz=354,slow=9.9,SNR=3.6
CMAR Chiang Mai Arr 83.44 297 P P 21 43 38.0 -0.2
CMAR Chiang Mai Arr 83.44 297 P P 21 43 38.0 -0.2
comp=Z,1.4nm,0.7s,baz=6.3,slow=4.8,SNR=13
BOSA Boshof 146.16 8 PKPbc PKPbc 21 50 49.7 -0.7
BOSA Boshof 146.16 8 PKPbc PKPbc 21 50 49.7 -0.7
comp=Z,2.0nm,0.7s,baz=22,slow=8.1,SNR=7.0

NAO ***05*** *21:55:26.3±0.7, 63°.67N×21°.46E, ML3.5*
IDC ***05*** *21:55:27.1±0.6, 63°.70N×21°.55E, h0km, mb1 3.6/7, mb1mx3.3/31, mbtmp3.6/7, ML3.7/5, Error ellipse: s-maj=7.3km s-min=6.6km az=69.0*
CSEM ***05*** *21:55:27.3±0.1, 63°.68N×21°.56E, h5km, ML3.4, Error ellipse: s-maj=2.9km s-min=2.0km az=82.0*
HEL ***05*** *21:55:28.6±0.1, 63°.68N×21°.49E, h14km±1km, ML3.4, ML2.5(UPP), ML3.3(BER)*
UPP ***05*** *21:55:29.0, 63°.68N×21°.48E, h16km, ML2.5*
BER ***05*** *21:55:29.7, 63°.66N×21°.68E, h15km, MD3.3, ML3.3, ML3.5(NAO)*
ISC 05 21:55:26.7±1.0**, 63°.69N**±0°.01×**21°.45E**±0°.02**, h5**km±8km**,**
n182, σ1s**68**/325**, 2C-1D, Finland**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
UMAU Umeaa 0.40 300⇓*i*P Pb 21 55 36.7 +0.5
UMAU *i* S Sb 21 55 42.8 +0.3
UMAU Umeaa 0.40 300 P Pb 21 55 36.6 +0.5
UMAU S Sb 21 55 42.8 +0.3
VAF Ylistaro 0.85 139 *e*P Pg 21 55 42.9 -0.1
VAF *e*S Sg 21 55 53.2 -0.8
VAF Ylistaro 0.85 139 *e*P Pg 21 55 42.9 -0.1
VAF *e*S Sg 21 55 53.2 -0.8
VAF Ylistaro 0.85 139 P Pg 21 55 42.8 -0.1
VAF S Sg 21 55 53.2 -0.8
BURU Burvik 0.90 358⇑*e*P Pb 21 55 45.5 +0.8
BURU *e*S Sg 21 55 57.9 +2.4
BURU Burvik 0.90 358 ⇑P Pb 21 55 45.5 +0.8
baz=172
BURU S Sg 21 55 57.9 +2.4
LILU Lilltraesk 1.75 337 *e*P Pb 21 55 59.5 +0.3
LILU Lilltraesk 1.75 337 P Pb 21 55 59.4 +0.3
SJUU Sjulsmark 1.83 2 *e*P Pb 21 56 00.4 -0.2
SJUU Sjulsmark 1.83 2 P Pb 21 56 00.3 -0.2
HEMU Hemsoen 1.85 238 *e*P Pn 21 55 59.9 +0.8
HEMU *e*S Sb 21 56 24.3 -0.1
HEMU Hemsoen 1.85 238 P Pn 21 55 59.9 +0.8
HEMU S Sb 21 56 24.3 -0.1
SOLU Sollefteaa 1.94 259 *e*P Pn 21 56 01.4 +1.2
SOLU Sollefteaa 1.94 259 P Pn 21 56 01.4 +1.2
KEF Keuruu 2.19 133 *e*P Pn 21 56 04.8 +1.2
KEF *e*PG Pg 21 56 08.4 -0.1
KEF *e*S Sb 21 56 32.4 -1.6
KEF MSG 21 56 34.3
comp=Z,450nm,0.3s
KEF Keuruu 2.19 133 *e*P Pn 21 56 04.8 +1.2
KEF *e*PG Pg 21 56 08.4 -0.1
KEF *e*S Sb 21 56 32.4 -1.6
KEF MSG 21 56 34.3
comp=Z,450nm,0.3s
KEF Keuruu 2.19 133 P Pn 21 56 04.8 +1.2
KALU Kalix 2.33 20 *e*P Pn 21 56 06.7 +1.2
KALU *e*S Sn 21 56 35.4 +0.9
KALU Kalix 2.33 20 P Pn 21 56 06.7 +1.2
KALU S Sn 21 56 35.4 +0.9
SUF Sumiainen 2.34 112 *e*P Pn 21 56 07.3 +1.6
SUF *e*S Sb 21 56 36.6 -1.8
SUF Sumiainen 2.34 112 *e*P Pn 21 56 07.3 +1.6
SUF *e*S Sb 21 56 36.6 -1.8
SUF Sumiainen 2.34 112 P Pn 21 56 07.3 +1.6
SUF *e*S Sb 21 56 36.7 -1.8
SNR=48
OUL Oulu 2.39 52 *e*P Pn 21 56 08.0 +1.7
OUL *e*S Sb 21 56 39.0 -0.7
OUL Oulu 2.39 52 *e*P Pn 21 56 08.0 +1.7
OUL *e*S Sb 21 56 39.0 -0.7
OUL Oulu 2.39 52 P Pn 21 56 08.0 +1.7
OUL *e*S Sb 21 56 39.0 -0.7
SNR=48
HARU Harads 2.49 356 *e*P Pn 21 56 09.8 +2.0
HARU Harads 2.49 356 P Pn 21 56 09.8 +2.0
RAF Rauma 2.68 177 *e*P Pn 21 56 12.7 +2.3
RAF *e*S Sn 21 56 43.7 +0.5
RAF *e*SG Sg 21 56 50.8 -1.9
RAF MSG 21 56 52.0
comp=Z,266nm,0.3s
RAF Rauma 2.68 177 *e*P Pn 21 56 12.7 +2.3
RAF *e*S Sn 21 56 43.7 +0.5
RAF *e*SG Sg 21 56 50.8 -1.9
RAF MSG 21 56 52.0
comp=Z,266nm,0.3s
RAF Rauma 2.68 177 P Pn 21 56 12.7 +2.3
RAF S Sn 21 56 43.6 +0.5
RAF *e*Sg Sg 21 56 50.8 -1.9
comp=Z,266nm,0.3s,SNR=90
KAF Kangasniemi 2.73 123 *e*P Pb 21 56 13.5 -2.4
KAF *e*PG Pb 21 56 17.0 +1.1
KAF *e*S Sb 21 56 47.2 -2.4
KAF MSG 21 56 53.6
comp=Z,284nm,0.3s
KAF Kangasniemi 2.73 123 *e*P Pb 21 56 13.5 -2.4
KAF *e*PG Pb 21 56 17.0 +1.1
KAF *e*S Sb 21 56 47.2 -2.4
KAF MSG 21 56 53.6
comp=Z,284nm,0.3s
KAF Kangasniemi 2.73 123 *e*P Pb 21 56 13.5 -2.4
SNR=48
KAF Kangasniemi 2.73 123 *e*Pg Pb 21 56 17.0 +1.1
SNR=90
KAF *e*S Sb 21 56 47.2 -2.4
comp=Z,284nm,0.3s,SNR=48
ARNU Arnoeviken 2.75 225 *e*P Pn 21 56 12.7 +1.4
ARNU Arnoeviken 2.75 225 P Pn 21 56 12.7 +1.4
KJN Kajaani 2.80 79 *e*P Pn 21 56 13.7 +1.7
KJN *e*PG Pb 21 56 17.7 +0.6
KJN *e*S Sb 21 56 49.4 -2.2
KJN *e*SG Sg 21 56 54.6 -1.8
KJN MSG 21 56 55.9
comp=Z,424nm,0.3s
KJN Kajaani 2.80 79 *e*P Pn 21 56 13.7 +1.7
KJN *e*PG Pb 21 56 17.7 +0.6
KJN *e*S Sb 21 56 49.4 -2.2
KJN *e*SG Sg 21 56 54.6 -1.8
KJN MSG 21 56 55.9
comp=Z,424nm,0.3s
KJN Kajaani 2.80 79 P Pn 21 56 13.7 +1.7
ERTU Ertsjaerv 2.89 6 *e*P Pn 21 56 14.6 +1.2
ERTU *e*S Sn 21 56 48.8 +0.3
ERTU Ertsjaerv 2.89 6 P Pn 21 56 14.5 +1.2
ERTU S Sn 21 56 48.8 +0.3
NOD Norderasen 2.96 268 *e*P Pn 21 56 14.8 +0.6
NOD Norderasen 2.96 268 P Pn 21 56 14.9 +0.6
FIA0 FINESS Array S 3.11 134 Pn Pn 21 56 17.3 +1.0
baz=317,slow=12
FIA0 Pg Pb 21 56 22.2 -0.1
baz=320,slow=14
FIA0 Lg Lg 21 57 01.5
baz=321,slow=37
FIA0 FINESS Array S 3.11 134 Pn Pn 21 56 17.3 +1.0
baz=317,slow=12
FIA0 Pg Pb 21 56 22.2 -0.1
baz=320,slow=14
FIA0 Lg Lg 21 57 01.5
baz=321,slow=37
FIA0 FINESS Array S 3.11 134 *e*P Pn 21 56 17.7 +1.4
FIA0 *e*S Sn 21 56 53.7 -0.1
FIA0 *e*SG Sg 21 57 05.1 -1.3
FIA0 MSG 21 57 06.4
comp=Z,131nm,0.3s
FIA0 FINESS Array S 3.11 134 *e*P Pn 21 56 17.7 +1.4
FIA0 *e*S Sn 21 56 53.7 -0.1
FIA0 *e*SG Sg 21 57 05.1 -1.3
FIA0 MSG 21 57 06.4
comp=Z,131nm,0.3s
FIA0 FINESS Array S 3.11 134 Pn Pn 21 56 17.3 +1.0
baz=317,slow=12,SNR=55
FIA0 FINESS Array S 3.11 134 P Pn 21 56 17.7 +1.4
FIA0 FINESS Array S 3.11 134 Pg Pb 21 56 22.2 -0.1
baz=320,slow=13,SNR=91
FIA0 S Sn 21 56 53.6 -0.1
FIA0 Lg Lg 21 57 01.5
baz=321,slow=28,SNR=50
FIA0 *e*Sg Sg 21 57 05.1 -1.3
comp=Z,131nm,0.3s,SNR=90
FINES FINESS Array B 3.11 134 Pn Pn 21 56 17.2 +1.0
comp=Z,1.2nm,0.3s,baz=321,slow=12,SNR=38
FINES Pg Pb 21 56 21.9 -0.4
comp=Z,11nm,0.3s,baz=322,slow=13,SNR=66
FINES Sn Sn 21 56 55.9 +2.2
comp=Z,9.8nm,0.3s,baz=331,slow=30,SNR=13
FINES Lg Lg 21 57 02.2
comp=Z,71nm,0.3s,baz=318,slow=26,SNR=32
PAJU Pajala 3.42 11 *e*P Pn 21 56 21.7 +1.1
PAJU *e*S Sn 21 57 01.6 +0.1
PAJU Pajala 3.42 11 P Pn 21 56 21.7 +1.1
PAJU S Sn 21 57 01.6 +0.1
IGGU Iggoen 3.42 216 *e*P Pn 21 56 22.1 +1.4
IGGU Iggoen 3.42 216 P Pn 21 56 22.0 +1.4
ROTU Roteberg 3.46 231 *e*P Pn 21 56 22.1 +0.9
ROTU Roteberg 3.46 231 P Pn 21 56 22.1 +0.9
DUNU Dundret 3.47 354 *e*P Pn 21 56 22.8 +1.5
DUNU Dundret 3.47 354 P Pn 21 56 22.7 +1.5
RNF Rovaniemi 3.51 31 *e*P Pn 21 56 21.9 +0.1
RNF *e*PG Pb 21 56 31.4 +2.3
RNF *e*SG Sg 21 57 16.7 -2.5
RNF Rovaniemi 3.51 31 *e*P Pn 21 56 21.9 +0.1
RNF *e*PG Pb 21 56 31.4 +2.3
RNF *e*SG Sg 21 57 16.7 -2.5
RNF Rovaniemi 3.51 31 P Pn 21 56 21.9 +0.1
AAL Aland 3.59 192 *e*P Pn 21 56 24.1 +1.2
AAL *e*PG Pb 21 56 32.2 +1.7
AAL *e*SG Sb 21 57 16.9 +2.5
AAL Aland 3.59 192 *e*P Pn 21 56 24.1 +1.2
AAL *e*PG Pb 21 56 32.2 +1.7
AAL *e*SG Sb 21 57 16.9 +2.5
AAL Aland 3.59 192 P Pn 21 56 24.1 +1.2
GRAU Graesoe 3.64 203 *e*P Pn 21 56 24.2 +0.6
GRAU Graesoe 3.64 203 P Pn 21 56 24.1 +0.6
MEF Metsahovi 3.75 157 *e*P Pn 21 56 26.3 +1.2
MEF *e*S Sn 21 57 11.4 +1.7
MEF *e*SG Sg 21 57 25.3 -1.7
MEF MSG 21 57 27.8
comp=Z,107nm,0.3s
MEF Metsahovi 3.75 157 *e*P Pn 21 56 26.3 +1.2
MEF *e*S Sn 21 57 11.4 +1.7
MEF *e*SG Sg 21 57 25.3 -1.7
MEF MSG 21 57 27.8
comp=Z,107nm,0.3s
MEF Metsahovi 3.75 157 P Pn 21 56 26.3 +1.2
MEF S Sn 21 57 11.3 +1.7
MEF *e*Sg Sg 21 57 25.3 -1.7
comp=Z,107nm,0.3s,SNR=90

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PVF	Pernaja	3.77	145	eP	Pn	21 56 27.4	+1.9
PVF				eS	Sn	21 57 11.3	+1.1
PVF				eSG	Sg	21 57 24.5	-3.3
PVF	Pernaja	3.77	145	eP	Pn	21 56 27.4	+1.9
PVF				eS	Sn	21 57 11.3	+1.1
PVF				eSG	Sg	21 57 24.5	-3.3
PVF	Pernaja	3.77	145	P	Pn	21 56 27.3	+1.9
PVF				S	Sn	21 57 11.2	+1.1
PVF				Sg	Sg	21 57 24.5	-3.3
MASU	Masugnsbyn	3.79	3	eP	Pn	21 56 26.7	+1.0
MASU	Masugnsbyn	3.79	3	P	Pn	21 56 26.7	+1.0
MOR8	Moi Rana	3.89	313	eP	Pn	21 56 27.8	+0.8
MOR8				eSn	Sn	21 57 13.1	+0.1
MOR8				AML	AML	21 57 35.0	
	comp=Z,172nm,0.4s						
MOR8	Moi Rana	3.89	313	eP	Pn	21 56 27.8	+0.8
MOR8				eS	Sn	21 57 13.1	+0.1
MOR8				AML	AML	21 57 35.0	
	comp=Z,172nm,0.4s						
MOR8	Moi Rana	3.89	313	P	Pn	21 56 27.8	+0.8
MOR8				S	Sn	21 57 13.1	+0.1
	comp=Z,172nm,0.4s						
SALU	Saltoluokta	3.90	343	eP	Pn	21 56 29.2	+2.0
SALU	Saltoluokta	3.90	343	P	Pn	21 56 29.2	+2.0
MSF	Maaselka	3.94	52	eP	Pn	21 56 30.8	+3.1
MSF				eSG	Sb	21 57 28.6	+4.2
MSF	Maaselka	3.94	52	eP	Pn	21 56 30.8	+3.1
MSF				eSG	Sb	21 57 28.6	+4.2
MSF	Maaselka	3.94	52	eP	Pn	21 56 30.8	+3.1
	SNR=48						
MSF				eSg	Sb	21 57 28.6	+4.2
	SNR=90						
FLYU	Flymyra	3.95	207	eP	Pn	21 56 28.9	+1.1
FLYU				eS	Sn	21 57 13.9	-0.6
FLYU	Flymyra	3.95	207	P	Pn	21 56 28.9	+1.1
FLYU				S	Sn	21 57 13.9	-0.6
NRTU	Norrtaelje	4.25	200	eP	Pn	21 56 32.8	+0.9
NRTU	Norrtaelje	4.25	200	P	Pn	21 56 32.8	+0.9
VJF	Virojoki	4.27	135	eP	Pn	21 56 32.7	+0.5
VJF				eSB	Sb	21 57 36.6	+2.8
VJF	Virojoki	4.27	135	eP	Pn	21 56 32.7	+0.5
VJF				eSG	Sb	21 57 36.6	+2.8
VJF	Virojoki	4.27	135	P	Pn	21 56 32.7	+0.5
VJF				eSb	Sb	21 57 36.6	+2.8
KUA	Kurravaara	4.31	354	eP	Pn	21 56 34.7	+1.9
KUA	Kurravaara	4.31	354	P	Pn	21 56 34.7	+1.9
NIKU	Nikkaluokta	4.31	348	eP	Pn	21 56 34.6	+1.7
NIKU	Nikkaluokta	4.31	348	P	Pn	21 56 34.5	+1.7
SGF	Sodankyl	4.32	27	eP	Pn	21 56 32.5	-0.4
SGF				eS	Sn	21 57 21.1	-2.4
SGF				eSG	Sb	21 57 38.5	+3.3
SGF	Sodankyl	4.32	27	eP	Pn	21 56 32.5	-0.4
SGF				eS	Sn	21 57 21.1	-2.4
SGF				eSG	Sb	21 57 38.5	+3.3
SGF	Sodankyl	4.32	27	eP	Pn	21 56 32.5	-0.4
	SNR=45						
SGF				eS	Sn	21 57 21.1	-2.4
	SNR=45						
SGF				eSg	Sb	21 57 38.5	+3.3
	SNR=90						
FLOS	Flostrand	4.34	311	eP	Pn	21 56 34.2	+1.1
FLOS				eSn	Sn	21 57 24.0	0.0
FLOS				AML	AML	21 57 49.4	
	comp=Z,169nm,0.4s						
FLOS	Flostrand	4.34	311	eP	Pn	21 56 34.2	+1.1
FLOS				eS	Sn	21 57 24.0	0.0
FLOS				AML	AML	21 57 49.4	
	comp=Z,169nm,0.4s						
FLOS	Flostrand	4.34	311	P	Pn	21 56 34.2	+1.1
FLOS				S	Sn	21 57 24.0	0.0
	comp=Z,169nm,0.4s						
BACU	Backbrunna	4.37	210	eP	Pn	21 56 34.2	+0.6
BACU	Backbrunna	4.37	210	P	Pn	21 56 34.2	+0.6
LANU	Lannavaara	4.38	3	eP	Pn	21 56 34.6	+0.7
LANU				eS	Sn	21 57 24.8	-0.5
LANU				eSG	Sg	21 57 43.7	-3.7
LANU	Lannavaara	4.38	3	eP	Pn	21 56 34.6	+0.7
LANU				eS	Sn	21 57 24.8	-0.5
LANU				eSG	Sg	21 57 43.7	-3.7
LANU	Lannavaara	4.38	3	eP	Pn	21 56 34.6	+0.7
LANU				eS	Sn	21 57 24.8	-0.5
LANU				eSg	Sg	21 57 43.7	-3.7
STOK	Stokkvaagen	4.45	310	eP	Pn	21 56 35.6	+0.9
STOK				eSn	Sn	21 57 26.4	-0.5
STOK				AML	AML	21 57 51.9	
	comp=N,178nm,0.4s						
STOK	Stokkvaagen	4.45	310	eP	Pn	21 56 35.6	+0.9
STOK				eS	Sn	21 57 26.4	-0.5
STOK				AML	AML	21 57 51.9	
	comp=N,178nm,0.4s						
STOK	Stokkvaagen	4.45	310	P	Pn	21 56 35.6	+0.9
JOF	Joensuu	4.52	95	eP	Pn	21 56 35.1	-0.5
JOF				eSB	Sb	21 57 43.8	+2.8
JOF				MSG		21 57 48.3	
	comp=Z,63nm,0.3s						
JOF	Joensuu	4.52	95	eP	Pn	21 56 35.1	-0.5
JOF				eSG	Sb	21 57 43.8	+2.8
JOF				MSG		21 57 48.3	
	comp=Z,63nm,0.3s						
JOF	Joensuu	4.52	95	P	Pn	21 56 35.1	-0.5
JOF				eSb	Sb	21 57 43.8	+2.8
	comp=Z,63nm,0.3s						
HEF	Hetta	4.82	10	eP	Pn	21 56 40.4	+0.5
HEF				eS	Sn	21 57 34.8	-1.2
HEF				eSG	Sg	21 57 57.0	-4.4
HEF				MSG		21 57 58.4	
	comp=Z,26nm,0.4s						
HEF	Hetta	4.82	10	eP	Pn	21 56 40.4	+0.5
HEF				eS	Sn	21 57 34.8	-1.2
HEF				eSG	Sg	21 57 57.0	-4.4
HEF				MSG		21 57 58.4	
	comp=Z,26nm,0.4s						
HEF	Hetta	4.82	10	eP	Pn	21 56 40.4	+0.5
HEF				S	Sn	21 57 34.8	-1.2
HEF				eSg	Sg	21 57 57.0	-4.4
STEI	Steigen	4.96	332	eP	Pn	21 56 43.6	+1.9
STEI				eSn	Sn	21 57 38.8	-0.6
STEI				AML	AML	21 58 07.1	
	comp=Z,82nm,0.6s						
STEI	Steigen	4.96	332	eP	Pn	21 56 43.6	+1.9
STEI				eS	Sn	21 57 38.8	-0.6
STEI				AML	AML	21 58 07.1	
	comp=Z,82nm,0.6s						
STEI	Steigen	4.96	332	P	Pn	21 56 43.6	+1.9
NYNU	Nynaeshamn	4.99	201	eP	Pn	21 56 42.9	+0.9
NYNU	Nynaeshamn	4.99	201	P	Pn	21 56 42.9	+0.9
ESKU	Eskilstuna	5.09	211	eP	Pn	21 56 44.3	+0.8
ESKU	Eskilstuna	5.09	211	P	Pn	21 56 44.3	+0.8
HFS	Hagfors	5.11	229	Pn	Pn	21 56 45.2	+1.4
	baz=44,slow=14						
HFS				Sn	Sn	21 57 40.4	-2.8
	baz=45,slow=28						
HFS				Lg	Lg	21 57 59.4	
	baz=51,slow=37						
HFS	Hagfors	5.11	229	Pn	Pn	21 56 45.2	+1.4
	baz=44,slow=14						
HFS				Sn	Sn	21 57 40.4	-2.8
	baz=45,slow=28						
HFS				Sg	Sb	21 57 59.4	+1.2
	baz=51,slow=37						
HFS	Hagfors	5.11	229	eP	Pn	21 56 45.2	+1.4
HFS				eS	Sn	21 57 40.4	-2.8
HFS				eSB	Sb	21 57 59.4	+1.2
HFS	Hagfors	5.11	229	Pn	Pn	21 56 44.6	+0.7
	comp=Z,0.4nm,0.3s,baz=57,slow=12,SNR=15						
HFS				Pg	Pb	21 56 56.1	-0.4
	comp=Z,2.1nm,0.3s,baz=42,slow=12,SNR=17						
HFS				Sn	Sn	21 57 40.4	-2.8
	comp=Z,6.7nm,0.3s,baz=45,slow=23,SNR=9.4						
HFS				Lg	Lg	21 58 01.0	
	comp=Z,26nm,0.3s,baz=45,slow=31,SNR=19						
HFS	Hagfors	5.11	229	P	Pn	21 56 45.2	+1.4
HFS				Sn	Sn	21 57 40.4	-2.8
	baz=45,slow=25,SNR=55						
HFS				Lg	Lg	21 57 59.4	
	baz=51,slow=29,SNR=7.7						
MTSE	Matsula	5.12	166	eP	Pn	21 56 44.4	+0.4
MTSE				eS	Sn	21 57 41.7	-1.6
MTSE				eSB	Sb	21 58 01.2	+2.9
MTSE	Matsula	5.12	166	eP	Pn	21 56 44.4	+0.4
MTSE				eS	Sn	21 57 41.7	-1.6
MTSE				eSB	Sb	21 58 01.2	+2.9
MTSE	Matsula	5.12	166	P	Pn	21 56 44.3	+0.4
MTSE				eS	Sn	21 57 41.7	-1.6
	SNR=45						
NRAU	Nora	5.14	219	eP	Pn	21 56 45.1	+0.9
NRAU	Nora	5.14	219	P	Pn	21 56 45.1	+0.9
VRF	Varrio	5.28	36	eP	Pn	21 56 45.7	-0.4
VRF				eS	Sn	21 57 45.7	-1.6
VRF				eSG	Sb	21 58 09.2	+6.1
VRF	Varrio	5.28	36	eP	Pn	21 56 45.7	-0.4
VRF				eS	Sn	21 57 45.7	-1.6
VRF				eSG	Sb	21 58 09.2	+6.1
VRF	Varrio	5.28	36	P	Pn	21 56 45.7	-0.4
VRF				S	Sn	21 57 45.7	-1.6
KIF	Kilpisjarvi	5.35	357	eP	Pn	21 56 48.3	+1.3
KIF				ePG	Pb	21 57 04.5	+4.1
KIF				eS	Sn	21 57 46.4	-2.4
KIF				e		21 58 17.1	
KIF	Kilpisjarvi	5.35	357	eP	Pn	21 56 48.3	+1.3
KIF				ePG	Pb	21 57 04.5	+4.1
KIF				eS	Sn	21 57 46.4	-2.4
KIF				eSG	Sg	21 58 17.1	-1.0
KIF	Kilpisjarvi	5.35	357	P	Pn	21 56 48.3	+1.3
KTK1	Kautokeino	5.39	7	eP	Pn	21 56 47.3	-0.4
KTK1				eSn	Sn	21 57 47.7	-2.4
KTK1	Kautokeino	5.39	7	eP	Pn	21 56 47.3	-0.4
KTK1				eS	Sn	21 57 47.7	-2.4
KTK1	Kautokeino	5.39	7	eP	Pn	21 56 47.3	-0.4
	SNR=53						
NB2	NORSAR Subarra	5.46	245	Pn	Pn	21 56 48.4	-0.2
	baz=58,slow=14						
NB2				Sn	Sn	21 57 49.9	-1.8
	baz=56,slow=22						
NB2				Lg	Lg	21 58 12.6	
	baz=62,slow=37						
NB2	NORSAR Subarra	5.46	245	Pn	Pn	21 56 48.4	-0.2
	baz=58,slow=14						
NB2				Sn	Sn	21 57 49.9	-1.8
	baz=56,slow=22						
NB2				Sg	Sb	21 58 12.6	+4.5
	baz=62,slow=37						
NB2	NORSAR Subarra	5.46	245	eP	Pn	21 56 48.4	-0.2
NB2				eS	Sn	21 57 49.9	-1.8
NB2	NORSAR Subarra	5.46	245	Pn	Pn	21 56 48.4	-0.2
	baz=58,slow=13,SNR=1.8						
NB2				Lg	Lg	21 58 12.6	
	baz=62,slow=31,SNR=3.3						
NOA	NORSAR Array B	5.46	245	Pn	Pn	21 56 48.3	-0.2
	comp=Z,0.5nm,0.3s,baz=56,slow=14,SNR=6.0						
NOA				Sn	Sn	21 57 48.8	-2.9
	comp=Z,3.5nm,0.3s,baz=52,slow=15,SNR=5.8						
NOA				Lg	Lg	21 58 07.4	
	comp=Z,10nm,0.3s,baz=28,slow=20,SNR=11						
LOF	Lofoten	5.51	328	eP	Pg	21 57 32.5	+20
LOF				eSn	Sg	21 58 33.9	+11
LOF				AML	AML	21 59 14.0	
	comp=Z,50nm,0.3s						
VIKU	Vikbolandet	5.69	206	eP	Pn	21 56 51.6	-0.1
VIKU	Vikbolandet	5.69	206	P	Pn	21 56 51.6	-0.1
ASKU	Askersund	5.77	217	eP	Pn	21 56 53.2	+0.4
ASKU	Askersund	5.77	217	P	Pn	21 56 53.2	+0.4
VSU	Vasula	5.84	152	Pn	Pn	21 56 53.2	-0.5
VSU				Sn	Sn	21 57 57.4	-3.5
VSU				Lg	Lg	21 58 27.0	
VSU	Vasula	5.84	152	Pn	Pn	21 56 53.2	-0.5
VSU				Sn	Sn	21 57 57.4	-3.5
VSU				Lg	Lg	21 58 27.0	
VSU	Vasula	5.84	152	eP	Pn	21 56 53.6	-0.1
VSU				eS	Sn	21 57 58.6	-2.3
VSU				eSG	Sg	21 58 27.6	-6.3
VSU	Vasula	5.84	152	eP	Pn	21 56 53.6	-0.1
VSU				eS	Sn	21 57 58.6	-2.3
VSU				eSG	Sg	21 58 27.6	-6.3
VSU	Vasula	5.84	152	Pn	Pn	21 56 53.2	-0.5
VSU	Vasula	5.84	152	P	Pn	21 56 53.6	-0.1
VSU				eS	Sn	21 57 58.6	-2.3
	SNR=45						
VSU				Lg	Lg	21 58 27.0	
VSU				eSg	Sg	21 58 27.6	-6.3
	SNR=90						
TRO	Tromso	6.05	352	eP	Pn	21 56 57.8	+1.1
TRO				eSn	Sn	21 58 03.6	-2.6
TRO	Tromso	6.05	352	eP	Pn	21 56 57.8	+1.1
TRO				eS	Sn	21 58 03.6	-2.6
TRO	Tromso	6.05	352	P	Pn	21 56 57.8	+1.1
ARA0	ARCESS Array S	6.09	14	Pn	Pn	21 56 56.7	-0.5
	baz=194,slow=16						
ARA0				Sn	Sn	21 58 00.9	-6.2
	baz=193,slow=22						
ARA0				Lg	Lg	21 58 35.8	
	baz=189,slow=37						
ARA0	ARCESS Array S	6.09	14	Pn	Pn	21 56 56.7	-0.5
	baz=194,slow=16						
ARA0				Sn	Sn	21 58 00.9	-6.2
	baz=193,slow=22						
ARA0				Lg	Lg	21 58 35.8	
	baz=189,slow=37						
ARA0	ARCESS Array S	6.09	14	eP	Pn	21 56 56.7	-0.5
ARA0				eS	Sn	21 58 00.9	-6.2
ARA0				eSG	Sg	21 58 35.8	-6.1
ARA0	ARCESS Array S	6.09	14	Pn	Pn	21 56 56.7	-0.5
	baz=194,slow=14,SNR=55						
ARA0				Lg	Lg	21 58 35.8	
	baz=189,slow=28						
ARCES	ARCESS Array B	6.09	14	Pn	Pn	21 56 56.9	-0.3
	comp=Z,4.0nm,0.3s,baz=191,slow=14,SNR=84						
ARCES				Sn	Sn	21 58 01.5	-5.6
	comp=Z,4.4nm,0.3s,baz=192,slow=22,SNR=8.2						
ARCES				Lg	Lg	21 58 36.0	
	comp=Z,7.9nm,0.3s,baz=193,slow=26,SNR=9.5						
APA0	Apatity Array	6.18	45	Pn	Pn	21 56 57.1	-1.3
	baz=244,slow=12						
APA0	Apatity Array	6.18	45	Pn	Pn	21 56 57.1	-1.3
	baz=244,slow=12						
APA0	Apatity Array	6.18	45	eP	Pn	21 56 57.1	-1.3
APA0	Apatity Array	6.18	45	Pn	Pn	21 56 57.1	-1.3
	baz=244,slow=12,SNR=55						
GOTU	Gotland	6.19	195	eP	Pn	21 56 58.8	+0.2
GOTU	Gotland	6.19	195	P	Pn	21 56 58.7	+0.2
KEV	Kevo	6.47	17	eP	Pn	21 57 03.1	+0.6
KEV				eS	Sn	21 58 14.6	-2.0
KEV				eSG	Sb	21 58 46.1	+8.9
KEV	Kevo	6.47	17	eP	Pn	21 57 03.1	+0.6
KEV				eS	Sn	21 58 14.6	-2.0
KEV				eSG	Sb	21 58 46.1	+8.9
KEV	Kevo	6.47	17	P	Pn	21 57 03.1	+0.6
KEV				eS	Sn	21 58 14.6	-2.0
	SNR=45						
BSD	Bornholm Skovb	9.22	204	i P	Pn	21 57 38.2	-1.9
BSD				i S	Sn	21 59 17.7	-6.4
AKASG	Malin Array Be	13.67	159	Pn	Pn	21 58 34.5	-6.5
	comp=Z,0.8nm,0.3s,baz=341,slow=13,SNR=3.5						
AKASG				Sn	Sn	22 01 02.1	-11
	comp=Z,1.4nm,0.3s,baz=342,slow=23,SNR=4.1						
AKASG				Lg	Lg	22 02 30.2	
	comp=Z,1.1nm,0.3s,baz=349,slow=30,SNR=4.9						
SPA0	Spitsbergen Ar	14.65	356	P	Pn	21 58 53.5	-0.7
	baz=158,slow=14						
SPA0	Spitsbergen Ar	14.65	356	Pn	Pn	21 58 53.5	-0.7
	baz=158,slow=14						
SPA0	Spitsbergen Ar	14.65	356	eP	Pn	21 58 53.5	-0.7
SPA0	Spitsbergen Ar	14.65	356	Pn	Pn	21 58 53.5	-0.7
	baz=158,slow=14,SNR=55						
SPITS	Spitsbergen Ar	14.65	356	Pn	Pn	21 58 53.0	-1.2
	baz=166,slow=19,SNR=8.7						
GERES	GERESS Array B	15.47	200	Pn	Pn	21 59 03.0	-2.5
	comp=Z,0.1nm,0.3s,baz=12,slow=12,SNR=3.7						

DDA **05** *22:10:28.0, 38°.09N×42°.88E, h6km, MD3.1*
ISK **05** *22:10:29.2, 38°.04N×42°.97E, h2km, MD2.8*
CSEM **05** *22:10:29.1±0.2, 38°.08N×42°.92E, h2km, MD3.1, Error ellipse: s-maj=6.4km s-min=4.2km az=52.0*
ISC 05 22:10:27.7±1.3**, 38°.08N**±0°.03×**42°.93E**±0°.03**, h3**km±12km**, n18, σ1s.51**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	Gevas	0.25	24	i P	Pb	22 10 33.9	-1.1
GEVA				i S	Sb	22 10 37.9	-2.0
GEVA	Gevas	0.25	24	i P	Pb	22 10 33.9	-1.1
GEVA				i S	Sb	22 10 37.9	-2.0
TVAN	Van	0.58	40	eP	Pb	22 10 40.0	-0.7
TVAN				eS	Sg	22 10 48.1	+1.7
TVAN	Van	0.58	40	eP	Pb	22 10 40.0	-0.7
TVAN				eS	Sg	22 10 48.1	+1.7
TATV	Tatvan	0.67	309	eP	Pb	22 10 41.8	-0.4
TATV				eS	Sb	22 10 51.4	-0.6
TATV	Tatvan	0.67	309	eP	Pb	22 10 41.8	-0.4
TATV				eS	Sb	22 10 51.4	-0.6
SIRN	S˜–rnak	0.71	215	eP	Pn	22 10 51.1	+6.3
SIRN				eS	Sn	22 11 01.1	+4.8
HAKT	HAKKARI	0.81	130	eP	Pb	22 10 44.5	0.0
HAKT				eS	Sb	22 10 56.2	+0.3
HAKT	HAKKARI	0.81	130	eP	Pb	22 10 44.5	0.0
HAKT				eS	Sb	22 10 56.2	+0.3
CUKT	Cukurca	0.99	147	ePG	Pn	22 10 48.0	-0.7
CUKT				eSG	Sn	22 11 02.0	-1.2
CUKT	Cukurca	0.99	147	ePg	Pn	22 10 48.0	-0.7
CUKT				eSg	Sn	22 11 02.1	-1.2
CLDR	Caldiran	1.31	36	ePN	Pg	22 10 55.9	+3.1
CLDR				eSN	Sn	22 11 14.7	+3.4
CLDR	Caldiran	1.31	36	ePn	Pg	22 10 55.9	+3.1
CLDR				eSn	Sn	22 11 14.7	+3.4
BEST	Besiri	1.33	262	eP	Pg	22 10 54.8	+1.7
BEST				eS	Sn	22 11 13.6	+2.2
BNGL	BINGOL	1.65	302	eP	Pg	22 10 58.0	-1.2
BNGL				eS	Sg	22 11 22.0	+1.5
MARD	Mardin	1.87	246	eP	Pg	22 11 03.1	-0.4
MARD				eS	Sg	22 11 28.2	+0.4
BNGB	Bingˆ¶l	1.98	298	ePN	Pg	22 11 05.6	-0.1
BINT	Bingol	2.07	293	ePn	Pg	22 11 05.6	-1.8

BJI **05** *22:26:01.9, 5°.02S×152°.52E, h108km, mB5.1/31, mb5.0/48*
IDC **05** *22:26:07.9±0.5, 4°.81S×151°.77E, h111km±3km, mb4.8/25, mb1 4.9/29, mb1mx4.9/30, mbtmp4.8/29, MS4.1/19, Ms1 4.1/19, ms1mx4.0/32, Error ellipse: s-maj=12.3km s-min=8.1km az=85.0*
ISCJB **05** *22:26:07.9±0.8, 4°.83S±0°.03×151°.79E±0°.03, h124km±7km, mb5.2/148, Error ellipse: s-maj=4.8km s-min=4.1km az=29.3*
NEIC **05** *22:26:07.3±0.1, 4°.79S×151°.77E, mb5.2/59, MW5.4, Error ellipse: s-maj=5.3km s-min=4.1km az=106.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; Mrr0.43; Mθθ-0.19; Mφφ-0.24; Mrθ-1.10; Mθφ0.20; Mφr0.70; Best double couple: M0 1.40000×10^{17} NP1:φs303.00000°, δ81.00000°, λ86.00000°. NP2:φs150.00000°, δ10.00000°, λ116.00000°. Principal axes: T 1.3900, Plg53.0000°, Azm208.0000°; N -0.0500, Plg4.0000°, Azm304.0000°; P -1.3500, Plg36.0000°, Azm37.0000°;*
MOS **05** *22:26:07.1±1.0, 4°.73S×151°.76E, h114km, mb5.2/28 Error ellipse: s-maj=9.4km s-min=6.3km az=97.5*
AUST **05** *22:26:07.6±0.8, 4°.82S×151°.92E, h115km, Error ellipse: s-maj=1.3km s-min=0.6km az=238.0*
GCMT **05** *22:26:10.6±0.1, 4°.93S×151°.72E, h108km±1km, MW5.4, Moment Tensor Solution. s91,c152; s8,c8; Moment tensor: Scale 10^{17}Nm; Mrr0.23±.03; Mθθ-0.46±.03; Mφφ0.23±.03; Mrθ-1.14±.02; Mθφ-0.04±.03; Mφr0.80±.02; Best double couple: M0 1.50000×10^{17} NP1:φs52.00000°, δ14.00000°, λ19.00000°. NP2:φs304.00000°, δ85.00000°, λ103.00000°. Principal axes: T 1.4600, Plg48.0000°, Azm228.0000°; N -0.0200, Plg13.0000°, Azm123.0000°; P -1.4400, Plg39.0000°, Azm22.0000°; Data Used: II IU IC G CN. Surface waves: sta=102, comp=184, per= 50.*
DJA **05** *22:26:13.3±0.7, 5°S±4°×15°2E±°, h156km±6km, M5.5/62, mb5.5/62, mB5.8/36, MLv6.1/1, Mw(mB)5.4/36*
ISC 05 22:26:08.2±0.2**, 4°.82S**±0°.03×**151°.83E**±0°.04**, h115**km±1km**, h115**km**:pP-P, n591, σ1s.35**/749**, mb5.2**/157**, 16C-10D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.50	225	ePn	Pn	22 27 42.7	+1.3
PMG				eSn	Sn	22 28 52.6	-1.6
PMG	Port Moresby	6.50	225	P	Pn	22 27 44.9	+3.5
	633nm,1.2s,30µm7.9nm						
PMG	Port Moresby	6.50	225	P	Pn	22 27 42.1	+0.7
	47nm,0.3s,baz=43,slow=8.7,SNR=64						
PMG				S	Sn	22 28 52.7	-1.6
	85nm,0.3s,baz=24,slow=18,SNR=12						
PMG				LR	LR	22 30 19.1	
	comp=Z,4µm,21.3s,baz=360,slow=39						
HNR	Honiara	9.26	120	ePn	Pn	22 28 20.9	+2.0
HNR				eSn	Sn	22 30 02.5	+1.2
HNR	Honiara	9.26	120	P	Pn	22 28 21.2	+2.3
	13nm,0.3s,baz=203,slow=9.1,SNR=4.2						
HNR				S	Sn	22 30 03.8	+2.5
	41nm,0.3s,baz=232,slow=22,SNR=2.9						
JAY	Jayapura	11.34	281	P	Pn	22 28 48.4	+1.4
	230nm,1.1s						
JAY	Jayapura	11.34	281	P	Pn	22 28 47.2	+0.3
	baz=11,SNR=12						
COEN	Coen	12.46	223	ePn	Pn	22 29 01.6	-0.1
COEN				eSn	Sn	22 31 19.0	+0.1
COEN	Coen	12.46	223	P	Pn	22 29 03.5	+1.8
	baz=13,SNR=8.5						
MTSU	Mount Surprise	15.13	208	P	P	22 29 37.9	-0.7
	baz=15,SNR=100						
SRPI	Serui, Papua	15.84	280	P	Pn	22 29 45.1	+0.2
	570nm,0.7s						
BAKI	Biak	16.11	282	P	P	22 29 49.5	+0.1
	483nm,1.2s,5µm						
CTA	Charters Tower	16.12	199	P	P	22 29 49.2	-0.2
CTA	Charters Tower	16.12	199	P	P	22 29 49.2	-0.2
	2.8nm,0.3s,baz=22,slow=15,SNR=28						
CTAO	Charters Tower	16.12	199	eP	Pn	22 29 48.7	+0.4
CTAO				pmax	pmax		
	comp=Z,181nm,1.1s						
CTAO	Charters Tower	16.12	199	ePn	Pn	22 29 48.7	+0.4
	comp=Z,181nm,1.1s						
RKPI	Ransiki, Papua	17.93	280	P	Pn	22 30 11.2	+0.8
	comp=Z,630nm,1.3s,comp=Z,8µm						
GUMO	Guam	19.55	339	eP	Pn	22 30 28.6	-1.0
GUMO	Guam	19.55	339	P	P	22 30 28.1	+1.0
	comp=Z,17nm,0.3s,baz=171,slow=7.4,SNR=54						
FAKI	Fak Fak	19.63	275	P	P	22 30 28.8	+0.8
	comp=Z,797nm,1.2s,comp=Z,10µm						
FAKI	Fak Fak	19.63	275	P	P	22 30 28.4	+0.4
	baz=20,SNR=65						
QIS	Mount Isa	19.65	216	P	P	22 30 28.7	+0.5
	baz=20,SNR=144						
EIDS	Eidsvold	20.44	182	eP	P	22 30 36.8	+0.2
	comp=Z,150nm,1.0s						
EIDS	Eidsvold	20.44	182	P	P	22 30 37.4	+0.8
	baz=21,SNR=20						
KDU	Kakadu	20.66	247	P	P	22 30 38.4	-0.6
	baz=21,SNR=103						
SWI	Sorong	20.92	280	P	P	22 30 42.3	+0.5
	comp=Z,929nm,0.6s,comp=Z,8µm						
SWI	Sorong	20.92	280	P	P	22 30 43.1	+1.3
	baz=21,SNR=79						
PALU	Palau	21.12	305	P	P	22 30 45.9	+1.9
	baz=21,SNR=7.3						
RMQ	Roma	21.74	187	P	P	22 30 51.1	+0.6
	baz=22,SNR=224						
MTN	Manton Dam	21.94	247	P	P	22 30 52.1	-0.6
	baz=22,SNR=15						
TARA	Tarawa	21.95	74	eP	P	22 30 52.4	-0.5
	comp=Z,650nm,1.3s						
DZM	Mont Dzumac	22.23	142	eP	P	22 30 56.4	+0.6
	comp=Z,147nm,0.9s						
DZM	Mont Dzumac	22.23	142	i P	P	22 30 55.2	-0.6
DZM	Mont Dzumac	22.23	142	eP	P	22 30 55.9	+0.1
	comp=Z,62nm,0.7s						
DZM				e		22 31 25.1	
DZM	Mont Dzumac	22.23	142	P	P	22 30 55.9	+0.1
	comp=Z,70nm,0.7s,baz=337,slow=14,SNR=40						
DZM				LR	LR	22 38 09.1	
	comp=Z,382nm,21.2s,baz=326,slow=32						
WRAB	Tennant Creek	22.70	227	eP	P	22 30 59.5	-1.0
WRAB				pmax	pmax		
	comp=Z,414nm,0.5s						
WRAB	Tennant Creek	22.70	227	eP	P	22 30 59.5	-1.0
	comp=Z,414nm,0.5s						
WRAB	Tennant Creek	22.70	227	P	P	22 30 59.3	-1.2
	comp=Z,4µm,0.4s						
WRA	Warramunga Arr	22.72	227	P	P	22 30 59.5	-1.1
WRA				S	S	22 35 01.9	+1.2
WRA				ScP	ScP	22 38 16.8	+0.4
WRA	Warramunga Arr	22.72	227	P	P	22 30 59.5	-1.1
	comp=Z,217nm,0.4s,baz=52,slow=9.8,SNR=433						
WRA				S	S	22 35 01.9	+1.2
	comp=Z,21nm,1.1s,baz=61,slow=22,SNR=7.5						
WRA				ScP	ScP	22 38 16.8	+0.4
	comp=Z,33nm,1.0s,baz=48,slow=2.9,SNR=17						

WRA LR LR 22 40 29.6
comp=Z,584nm,18.7s,baz=50,slow=38
QLP Quilpie 22.83 198 P **P** **22 31 01.5 -0.1**
baz=23,SNR=96
AAI Ambon 23.60 272 P **P** **22 31 09.3 +0.4**
comp=Z,134nm,0.6s,comp=Z,3µm
AAI Ambon 23.60 272 P **P** **22 31 09.9 +0.9**
baz=24,SNR=4.5
LBMI Labuha 24.65 279 P **P** **22 31 19.6 +1.1**
comp=Z,1µm,0.9s,comp=Z,8µm
GAMI Galela, Maluku 24.92 285 P **P** **22 31 21.9 +1.0**
comp=Z,278nm,0.2s,comp=Z,32µm
TNTI Ternate 25.07 282 P **P** **22 31 22.9 +0.7**
comp=Z,264nm,1.1s,comp=Z,3µm
KNRA Kununurra 25.10 243 P **P** **22 31 22.3 -0.2**
baz=25,SNR=103
ARMA Armidale 25.46 180 *e*P **P** **22 31 26.2 +0.5**
comp=Z,565nm,1.8s
ARMA Armidale 25.46 180 P **P** **22 31 26.9 +1.1**
baz=26,SNR=25
AS31 Alice Springs 25.49 221 *e*P **P** **22 31 25.8 -0.2**
ASAR Alice Springs 25.49 221 P **P** **22 31 25.5 -0.6**
ASAR S **S** **22 35 47.2 +2.1**
ASAR ScP **ScP** **22 38 24.6 +0.6**
ASAR Alice Springs 25.49 221 P **P** **22 31 25.5 -0.6**
comp=Z,160nm,0.8s,baz=54,slow=9.2,SNR=316
ASAR S **S** **22 35 47.2 +2.1**
comp=Z,1.9nm,0.6s,baz=56,slow=15,SNR=2.8
ASAR ScP **ScP** **22 38 24.6 +0.6**
comp=Z,6.4nm,0.7s,baz=50,slow=3.3,SNR=11
ASAR LR LR 22 41 31.2
comp=Z,500nm,20.0s,baz=24,slow=36
CMSA Cobar Meteorol 27.20 192 P **P** **22 31 40.8 -0.4**
baz=27,SNR=42
MNI Manado 27.68 282 P **P** **22 31 45.7 -0.1**
comp=Z,327nm,1.1s,comp=Z,3µm
MGCD Mangrove Creek 28.25 181 P **P** **22 31 51.6 +1.0**
baz=28,SNR=16
KMSI Cibinong 28.34 280 P **P** **22 31 52.3 +0.7**
comp=Z,709nm,0.7s,comp=Z,6µm
STKA Stephens Creek 28.58 198 *e*P **P** **22 31 52.6 -0.9**
STKA ScP **ScP** **22 38 35.3 +2.3**
STKA Stephens Creek 28.58 198 P **P** **22 31 52.4 -1.1**
comp=Z,24nm,0.6s,baz=3.4,slow=8.6,SNR=87
STKA ScP **ScP** **22 38 35.3 +2.3**
comp=Z,9.4nm,1.0s,baz=49,slow=4.9,SNR=4.0
STKA LR LR 22 44 21.6
comp=Z,431nm,19.2s,baz=23,slow=38
STKA Stephens Creek 28.58 198 P **P** **22 31 52.6 -0.9**
baz=29,SNR=68
FITZ Fitzroy Crossi 28.81 241 P **P** **22 31 55.0 -0.7**
comp=Z,157nm,0.8s
FITZ Fitzroy Crossi 28.81 241 P **P** **22 31 55.0 -0.7**
comp=Z,70nm,0.4s,baz=63,slow=7.3,SNR=331
FITZ LR LR 22 44 51.8
comp=Z,227nm,18.9s,baz=47,slow=39
FITZ Fitzroy Crossi 28.81 241 P **P** **22 31 54.8 -0.9**
baz=29,SNR=187
BBSI Bau Bau 29.15 267 P P 22 32 08.1 +9.3
LUWI Luwuk 29.26 276 P **P** **22 32 00.3 +0.5**
comp=Z,239nm,1.0s,comp=Z,2µm
LUWI Luwuk 29.26 276 P **P** **22 32 00.7 +0.9**
baz=29,SNR=7.7
YNG Young 29.50 186 P **P** **22 32 02.6 +0.9**
baz=30,SNR=15
MMRI Maumere 29.63 261 P **P** **22 32 05.7 +2.6**
comp=Z,100nm,1.3s
MRSI Marisa 30.32 279 P **P** **22 32 08.8 -0.4**
comp=Z,66nm,0.7s
CNB Canberra Magne 30.43 184 P **P** **22 32 10.9 +1.0**
baz=31,SNR=22
CAN Canberra 30.46 185 *e*P **P** **22 32 09.3 -0.9**
CAN pmax pmax
comp=Z,78nm,1.2s
CAN Canberra 30.46 185 *e*P **P** **22 32 09.3 -0.9**
comp=Z,78nm,1.2s
SKSI Soroako, Sulaw 30.52 273 P **P** **22 32 12.5 +1.5**
comp=Z,42nm,1.1s
BBOO Buckleboo 31.50 206 *e*P **P** **22 32 18.6 -0.7**
comp=Z,3µm,0.8s
BBOO Buckleboo 31.50 206 P **P** **22 32 18.6 -0.7**
baz=32,SNR=242
KAPI Kappang 31.96 268 *e*P **P** **22 32 22.0 -1.6**
comp=Z,15nm,0.7s
TTSI Tana Toraja 31.98 272 P P 22 32 33.9 +10
MILA Mila 32.17 184 P **P** **22 32 26.4 +1.2**
baz=32,SNR=12
ARPS Mount Arapiles 33.09 195 P **P** **22 32 33.2 +0.1**
baz=33,SNR=58
TOO Toolangi 33.11 189 P **P** **22 32 34.3 +1.0**
baz=33,SNR=16
FORT Forrest 34.17 218 *e*P **P** **22 32 40.9 -1.7**
comp=Z,252nm,0.7s
FORT Forrest 34.17 218 P **P** **22 32 42.0 -0.6**
baz=34,SNR=61
MYLDM Lahad Datu 34.74 286 P **P** **22 32 48.3 +0.5**
MYLDM Lahad Datu 34.74 286 P **P** **22 32 49.5 +1.7**
comp=Z,156nm,1.4s,comp=Z,2µm
TSM Tawau 35.11 284 P **P** **22 32 50.0 -1.0**
MBWA Marble Bar 35.13 240 *e*P **P** **22 32 50.3 -0.7**
comp=Z,134nm,0.7s
MBWA Marble Bar 35.13 240 P **P** **22 32 50.8 -0.2**
SNR=7.0
SDKM Sandakan 36.12 286 P **P** **22 32 59.9 +0.3**
OUZ Omahuta 36.32 149 *e*P **P** **22 33 03.9 +2.9**
comp=Z,56nm,1.0s
KDM Kudat 36.83 288 P **P** **22 33 04.7 -0.9**
BBKI Banjar Baru 36.92 271 P **P** **22 33 07.5 +1.1**
comp=Z,38nm,1.1s
AFI Afiamalu 36.97 107 LR LR 22 45 58.5
comp=Z,165nm,19.6s,baz=279,slow=32
KKM Kota Kinabalu 37.16 287 *e*P **P** **22 33 08.6 +0.1**
comp=Z,94nm,1.2s
KKM Kota Kinabalu 37.16 287 P **P** **22 33 08.8 +0.2**
KKM Kota Kinabalu 37.16 287 P **P** **22 33 08.9 +0.3**
comp=Z,77nm,1.4s,comp=Z,1µm
KKM Kota Kinabalu 37.16 287 P **P** **22 33 09.1 +0.6**
baz=37,SNR=11
MOO Moorlands 37.69 186 P **P** **22 33 13.9 +1.5**
baz=38,SNR=11
TAU Tasmania Unive 38.14 185 *e*P **P** **22 33 17.0 +0.8**
TAU pmax pmax
comp=Z,216nm,1.3s
TAU Tasmania Unive 38.14 185 *e*P **P** **22 33 17.0 +0.8**
comp=Z,216nm,1.3s
TAU Tasmania Unive 38.14 185 P **P** **22 33 17.0 +0.8**
comp=Z,698nm,1.3s,SNR=5.2
MEEK Meekatharra 38.43 232 P **P** **22 33 18.1 -0.8**
baz=38,SNR=507
KMBL Kambalda 38.57 223 P **P** **22 33 19.3 -0.7**
baz=39,SNR=38
JOW Kunigami 38.86 325 *e*P **P** **22 33 24.4 +2.0**
comp=Z,21nm,0.9s
BTM Bintulu 39.53 281 P **P** **22 33 30.1 +1.9**
PWJI Pagerwojo 39.89 263 P **P** **22 33 32.3 +1.0**
comp=Z,49nm,1.6s
SJI Sawahan 39.92 264 P P 22 33 38.2 +6.6
comp=Z,49nm,1.3s
PBKI Pangkalan Bun 40.13 272 P **P** **22 33 34.7 +1.5**
comp=Z,160nm,1.0s,comp=Z,2µm
SBUM Sibu 40.23 279 P **P** **22 33 35.3 +1.2**
SBUM Sibu 40.23 279 P **P** **22 33 35.3 +1.2**
comp=Z,45nm,1.8s,comp=Z,921nm
GIRL Giralia 40.42 240 P **P** **22 33 36.2 +0.8**
baz=40,SNR=12
URZ Urewera 40.46 149 *e*P **P** **22 33 37.2 +1.7**
URZ Urewera 40.46 149 P **P** **22 33 36.4 +0.8**
comp=Z,18nm,0.6s,baz=351,slow=1.5,SNR=10
PCJI Pacitan 40.52 263 P **P** **22 33 36.1 -0.3**
comp=Z,134nm,0.9s
STKI Sintang 40.60 276 P **P** **22 33 38.0 +0.9**
comp=Z,52nm,1.1s,comp=Z,14µm
UGM Wanagama 41.16 264 P **P** **22 33 42.2 +0.4**
baz=41,SNR=4.7
SSLB Suanglung 41.41 315 *e*P **P** **22 33 45.5 +1.9**
comp=Z,267nm,2.4s
MORW Morawa 41.59 230 P **P** **22 33 43.9 -1.1**
baz=42,SNR=74
KLBR Kellerberrin 41.59 226 P **P** **22 33 43.9 -1.2**
baz=42,SNR=25
YHNB Yeheng 41.68 316 *e*P **P** **22 33 46.5 +0.6**
comp=Z,24nm,0.8s
YHNB *e*pP **pP** **22 34 12.3 +0.2**
BLDU Ballidu 41.84 228 P **P** **22 33 46.6 -0.5**
baz=42,SNR=17
LTZ Lake Taylor 41.93 157 PN **P** **22 33 48.7 +1.1**
LTZ sP **sP** **22 34 30.4 +3.5**

BJII Banjamegara 41.95 264 P P 22 33 54.4 +6.2
comp=Z,55nm,1.8s
KSM Kuching 41.95 278 *e*P **P** **22 33 48.8 +0.6**
comp=Z,84nm,1.1s
KSM Kuching 41.95 278 P **P** **22 33 46.7 -1.5**
KSM Kuching 41.95 278 P **P** **22 33 48.8 +0.6**
comp=Z,82nm,1.4s,comp=Z,1µm
KSM Kuching 41.95 278 P **P** **22 33 48.9 +0.6**
baz=42,SNR=18
RPZ Rata Peaks 42.29 159 *e*P **P** **22 33 51.9 +1.4**
comp=Z,265nm,1.3s
JNU Nakatsue 42.65 334 P **P** **22 33 54.5 +0.9**
comp=Z,6.5nm,1.2s
JNU Nakatsue 42.65 334 P **P** **22 33 54.5 +0.9**
comp=Z,66nm,0.8s,baz=101,slow=4.2,SNR=9.4
JNU LR LR 22 49 40.6
comp=Z,200nm,20.4s,baz=320,slow=33
NWAO Narrogin (SRO) 42.69 225 *e*P **P** **22 33 51.8 -2.1**
comp=Z,60nm,1.1s
NWAO Narrogin (SRO) 42.69 225 LR LR 22 52 01.0
comp=Z,584nm,20.6s,baz=53,slow=36
MJAR Matsushiro Arr 43.08 344 P **P** **22 33 55.0 -2.0**
MJAR PcP **PcP** **22 35 45.3 +0.4**
MJAR ScP **ScP** **22 39 26.0 +0.3**
MJAR Matsushiro Arr 43.08 344 P **P** **22 33 55.0 -2.0**
comp=Z,18nm,0.7s,baz=170,slow=8.5,SNR=49
MJAR PcP **PcP** **22 35 45.3 +0.4**
comp=Z,2.9nm,0.6s,baz=169,slow=4.0,SNR=5.0
MJAR ScP **ScP** **22 39 26.0 +0.3**
comp=Z,7.4nm,1.0s,baz=182,slow=5.0,SNR=8.1
MJAR LR LR 22 49 22.0
comp=Z,130nm,21.3s,baz=205,slow=32
MAJO Matsushiro 43.08 344 *e*P **P** **22 33 55.6 -1.4**
MAJO pmax pmax
comp=Z,71nm,1.3s
MAJO Matsushiro 43.08 344 *e*P **P** **22 33 55.5 -1.4**
comp=Z,71nm,1.3s
MAT Matsushiro 43.08 344 P **P** **22 33 55.4 -1.5**
MAT S S 22 40 05.0 -9.4
CISI Cisompet, Garu 43.83 264 P **P** **22 34 02.6 -0.8**
comp=Z,194nm,0.8s
CISI Cisompet, Garu 43.83 264 P **P** **22 34 01.7 -1.7**
baz=44,SNR=13
PPBI Pangkal Pinang 45.68 272 P **P** **22 34 18.6 +0.6**
comp=Z,42nm,1.3s,comp=Z,2µm
SSE Sheshan 46.17 323 P **P** **22 34 22.0 +0.5**
SSE sP **sP** **22 35 02.8 +1.7**
SSE S **S** **22 41 01.6 +2.4**
SSE pmax pmax
comp=Z,48nm,0.7s
SSE pmax pmax
comp=Z,120nm,6.5s
SSE LR LR
comp=N,300nm,22.1s
SSE LR LR
comp=E,360nm,22.1s
SSE LR LR
comp=Z,220nm,26.3s
KASI Kota Agung 47.14 267 P **P** **22 34 27.6 -1.8**
comp=Z,97nm,1.1s
ERM Erimo 47.28 351 P **P** **22 34 30.3 +0.3**
comp=Z,211nm,0.7s,SNR=7.2
LWLI Liwa 47.59 268 P **P** **22 34 33.0 -0.1**
comp=Z,125nm,0.9s
KSRS Korea Array 47.59 334 P **P** **22 34 33.2 +0.7**
comp=Z,15nm,1.0s,baz=152,slow=9.2,SNR=62
KSRS pP **pP** **22 34 58.0 -1.3**
comp=Z,12nm,0.9s,baz=151,slow=8.6,SNR=5.6
KSRS ScP **ScP** **22 39 44.7 +0.4**
comp=Z,1.2nm,0.6s,baz=143,slow=5.4,SNR=5.1
KSAR Wonju Array Be 47.60 334 P **P** **22 34 33.2 +0.7**
KSAR pP **pP** **22 34 58.0 -1.4**
KSAR ScP **ScP** **22 39 44.7 +0.3**
QIZ Qiongzhong 47.65 301 P **P** **22 34 35.2 +1.9**
QIZ S **S** **22 41 18.9 -1.8**
QIZ pmax pmax
comp=Z,39nm,1.1s
INCN Inchon 48.19 333 *e*P **P** **22 34 38.6 +1.4**
INCN Inchon 48.19 333 P **P** **22 34 38.5 +1.4**
SNR=9.4
NJ2 Nanjing 48.26 322 *e*P **P** **22 34 40.2 +2.5**
NJ2 pP **pP** **22 35 07.8 +3.2**
NJ2 sP **sP** **22 35 20.4 +2.9**
NJ2 PP **PP** **22 36 32.3 +1.0**
NJ2 S **S** **22 41 31.0 +2.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 pmax pmax
comp=Z,280nm,4.4s
NJ2 LR LR
comp=N,1µm,24.4s
NJ2 LR LR
comp=E,490nm,26.4s
NJ2 LR LR
comp=Z,160nm,18.5s
MYKOM Kota Tinggi 48.39 277 P **P** **22 34 37.5 -1.6**
MYKOM Kota Tinggi 48.39 277 P **P** **22 34 40.0 +0.9**
comp=Z,56nm,1.2s,comp=Z,748nm
YUK Yuzh-Kuril'sk 48.93 354*c* *i*P **P** **22 34 41.8 -0.8**
YUK *i* S S 22 41 28.5 -9.3
YUK *i* SS SS 22 45 00.2 -10
YUK pmax pmax
comp=N,112nm,1.7s
YUK pmax pmax
comp=E,163nm,1.7s
YUK pmax pmax
comp=Z,160nm,1.7s
YUK pmax pmax
comp=Z,183nm,3.2s
KGM Kluang 48.94 277 P **P** **22 34 43.0 -0.3**
ASAJ Asahikawa 49.42 351 *e*P **P** **22 34 46.7 +0.3**
ASAJ Asahikawa 49.42 351 P **P** **22 34 46.6 +0.2**
comp=Z,42nm,0.7s,baz=212,slow=11,SNR=54
ASAJ LR LR 22 51 51.4
comp=Z,178nm,20.3s,baz=7.7,slow=31
RGRI Rengat 49.63 274 P P 22 34 43.3 -5.3
KTGM Kuala Trenggan 49.67 281 P **P** **22 34 48.0 -0.8**
WHN Wuhan 50.21 317 P **P** **22 34 55.0 +2.4**
WHN pP **pP** **22 35 22.3 +2.6**
WHN S **S** **22 41 58.2 +2.0**
WHN LR LR
comp=Z,960nm,33.8s
FRIM Kepong 50.80 278 P **P** **22 34 57.7 +0.4**
VLA Vladivostok 51.02 341*c* *i*P **P** **22 34 59.5 +1.0**
VLA pmax pmax
comp=Z,53nm,1.2s
PPI Padang Panjang 51.55 273 P **P** **22 35 01.8 -1.2**
comp=Z,192nm,1.1s
PPI Padang Panjang 51.55 273 P **P** **22 35 02.0 -0.9**
baz=52,SNR=18
IPM Ipoh 51.59 280 *e*P **P** **22 35 03.0 -0.3**
comp=Z,61nm,1.1s
IPM Ipoh 51.59 280 P **P** **22 35 03.7 +0.4**
IPM Ipoh 51.59 280 P **P** **22 35 03.3 0.0**
comp=Z,51nm,1.2s,comp=Z,573nm
DL2 Dalian 51.70 330 P **P** **22 35 04.5 +0.8**
DL2 pP **pP** **22 35 31.8 +1.0**
DL2 S **S** **22 42 15.2 -1.3**
DL2 sS **sS** **22 43 03.0 -0.3**
DL2 pmax pmax
comp=Z,40nm,0.9s
DL2 pmax pmax
comp=Z,76nm,7.6s
USRK Ussuriysk Arra 51.96 342 P **P** **22 35 05.9 +0.4**
comp=Z,29nm,0.8s,baz=174,slow=8.4,SNR=58
USRK pP **pP** **22 35 31.1 -1.6**
comp=Z,8.8nm,0.7s,baz=165,slow=7.9,SNR=4.1
USRK ScP **ScP** **22 40 01.4 -1.4**
comp=Z,3.5nm,0.9s,baz=194,slow=3.9,SNR=5.8
KULM Kulim 52.09 280 *e*P **P** **22 35 06.2 -0.8**
KULM Kulim 52.09 280 P **P** **22 35 06.1 -0.9**
KULM Kulim 52.09 280 P **P** **22 35 06.8 -0.2**
comp=Z,48nm,1.3s
YSS Yuzh-Sakhalins 52.17 352⇑ *e*P **P** **22 35 08.0 +1.0**
YSS *e**PP **pP** **22 35 33.6 -0.6**
YSS *e*S **S** **22 42 23.0 +0.4**
YSS *e**SS **sS** **22 43 06.0 -3.5**
YSS pmax pmax
comp=Z,30nm,1.0s
CHBT CHBT 52.19 290 P **P** **22 35 08.7 +1.0**
comp=Z,41nm,0.8s,comp=Z,811nm
MDJ Mudanjiang 53.11 340 P **P** **22 35 14.1 +0.2**
MDJ pP **pP** **22 35 39.3 -1.9**
MDJ ScP **ScP** **22 40 09.4 +1.5**
MDJ S **S** **22 42 34.6 -0.9**
MDJ pmax pmax
comp=Z,22nm,1.1s
MDJ pmax pmax
comp=Z,190nm,7.3s
MDJ LR LR
comp=N,200nm,49.7s
MDJ LR LR
comp=E,310nm,46.2s
MDJ LR LR
comp=Z,430nm,40.8s
MDJ Mudanjiang 53.11 340 *e*P **P** **22 35 13.8 -0.1**
comp=Z,16nm,0.9s
MDJ *e*pP **pP** **22 35 39.6 -1.6**
PSI Prapat 53.40 277 P **P** **22 35 15.8 -1.0**
comp=Z,30nm,1.3s,comp=Z,429nm
PSI Prapat 53.40 277 P **P** **22 35 15.6 -1.2**
baz=54,SNR=8.9
GYA Guiyang 53.64 308⇑ *i*P **P** **22 35 19.3 +0.9**
GYA pP **pP** **22 35 45.0 -0.7**
GYA sP **sP** **22 35 57.2 -1.3**
GYA PcP **PcP** **22 36 25.8 +2.4**
GYA ScP **ScP** **22 40 11.0 +0.2**
GYA PcS **PcS** **22 40 21.2 -1.7**
GYA S **S** **22 42 44.8 +1.2**
GYA sS **sS** **22 43 28.9 -1.8**
GYA ScS **ScS** **22 44 55.0 -2.0**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,4.9s
CN2 Changchun 53.93 337 *e*P **P** **22 35 20.3 +0.4**
CN2 *e*S **S** **22 42 47.5 +0.9**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
CN2 LR LR
comp=N,300nm,20.0s
CN2 LR LR
comp=E,600nm,20.0s
CN2 LR LR
comp=Z,200nm,27.0s
KCSI Kotacane, Aceh 54.64 278 P **P** **22 35 23.8 -1.9**
comp=Z,42nm,1.4s
BJI Beijing 55.38 327 P **P** **22 35 31.5 +1.0**
BJI pP **pP** **22 35 56.9 -1.1**
BJI S **S** **22 43 08.6 +2.4**
BJI sS **sS** **22 43 54.3 +0.8**
BJI pmax pmax
comp=Z,11nm,1.0s
BJI pmax pmax
comp=Z,70nm,3.4s
KIP Kipapa 55.62 60 *e*P **P** **22 35 33.4 +0.8**
KIP pmax pmax
comp=Z,86nm,1.2s
KIP Kipapa 55.62 60 *e*P **P** **22 35 33.6 +1.0**
comp=Z,84nm,0.7s
XAN Xi'an 55.98 317 P **P** **22 35 35.2 +0.2**
XAN pmax pmax
comp=Z,4.0nm,0.7s
KMI Kunming 56.20 304 P **P** **22 35 38.8 +1.9**
KMI pP **pP** **22 36 06.8 +2.3**
KMI S **S** **22 43 19.7 +1.6**
KMI sS **sS** **22 44 08.0 +2.5**
KMI SS **SS** **22 47 08.7 +2.2**
KMI pmax pmax
comp=Z,22nm,1.2s
KLR Kul'dur 56.60 344 *e*P P 22 35 34.8 -4.2
KLR *e* 22 36 00.0
HKL Haleakala 56.90 62 *e*P P 22 35 37.3 -4.8
HKL Haleakala 56.90 62 *e*P P 22 35 37.3 -4.8
CMAR Chiang Mai Arr 57.02 296 P **P** **22 35 43.9 +1.3**
CMAR pP **pP** **22 36 09.8 -0.3**
CMAR ScP **ScP** **22 40 25.4 -0.3**
CMAR ⇑*e* 23 05 44.6
CMAR Chiang Mai Arr 57.02 296 P **P** **22 35 43.9 +1.3**
comp=Z,23nm,0.9s,baz=119,slow=5.1,SNR=18
CMAR pP **pP** **22 36 09.8 -0.3**
comp=Z,8.9nm,0.8s,baz=112,slow=5.4,SNR=5.0
CMAR ScP **ScP** **22 40 25.4 -0.3**
comp=Z,0.8nm,0.4s,baz=103,slow=2.9,SNR=4.2
CMAR PKP2bc 23 05 44.6
comp=Z,1.2nm,0.8s,baz=285,slow=3.9,SNR=8.5
CHTO Chiang Mai 57.13 296 *e*P **P** **22 35 43.3 0.0**
CHTO *e**PP **pP** **22 36 10.6 -0.4**
CHTO pmax pmax
comp=Z,37nm,1.2s
CHTO Chiang Mai 57.13 296 *e*P **P** **22 35 43.3 0.0**
comp=Z,37nm,1.2s
CHTO *e*pP **pP** **22 36 10.6 -0.4**
POHA Pohakuloa 57.21 63 *e*P **P** **22 35 45.2 +1.0**
comp=Z,77nm,0.8s
BSI Banda Aceh 57.38 280 P **P** **22 35 45.3 +0.1**
PET Petropavlovsk 57.92 5 *e*P **P** **22 35 48.1 0.0**
PET *e**PP **pP** **22 36 16.5 +0.6**
PET *e**SP **sP** **22 36 27.4 -1.1**
PET *e*S **S** **22 43 40.0 +0.9**
PET *e*SS **SS** **22 47 32.6 +0.6**
PET pmax pmax
comp=Z,100nm,10.1s
PET pmax pmax
comp=Z,93nm,1.1s
PET MLR MLR
comp=Z,100nm,17.0s
PETK Petropavlovsk- 57.93 4 P **P** **22 35 47.5 -0.7**
PETK *PP **pP** **22 36 15.4 -0.6**
PETK Petropavlovsk- 57.93 4 P **P** **22 35 47.5 -0.7**
PETK pP **pP** **22 36 15.4 -0.6**
PETK Petropavlovsk- 57.93 4 P **P** **22 35 47.5 -0.7**
comp=Z,6.3nm,0.4s,baz=166,slow=8.0,SNR=16
PETK pP **pP** **22 36 15.4 -0.6**
comp=Z,14nm,0.8s,baz=181,slow=8.9,SNR=5.5
PETK LR LR 22 57 08.8
comp=Z,143nm,21.4s,baz=181,slow=32
CD2 Chengdu 58.02 311 P P 22 35 52.8 +3.4
CD2 PcP **PcP** **22 36 42.8 +2.6**
CD2 PcS **PcS** **22 40 42.8 +0.9**
CD2 S **S** **22 43 42.6 +1.2**
CD2 SS **SS** **22 47 37.6 +2.9**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,4.6s
CD2 LR LR
comp=N,230nm,23.5s
CD2 LR LR
comp=Z,270nm,26.5s
HHC Hu-ho-hao-te 58.51 325⇓ *e*P **P** **22 35 55.7 +3.0**
HHC PP **PP** **22 38 07.7 +4.2**
HHC PcS **PcS** **22 40 44.3 +0.5**
HHC S **S** **22 43 48.6 +1.1**
HHC ScS **ScS** **22 45 29.3 -2.3**
HHC SS **SS** **22 47 44.8 +2.7**
HHC pmax pmax
comp=Z,35nm,1.4s
HHC pmax pmax
comp=Z,130nm,5.4s
HHC LR LR
comp=N,420nm,21.7s
HHC LR LR
comp=E,370nm,20.8s
HHC LR LR
comp=Z,350nm,21.1s
PPT Papeete 58.64 108 P **P** **22 35 56.1 +2.2**
PPT Papeete 58.64 108 P **P** **22 35 56.1 +2.2**
comp=Z,15nm,0.3s,baz=238,slow=16,SNR=3.8
PPT2 Papeete2 58.64 108 *e*P **P** **22 35 56.0 +2.0**
comp=Z,43nm,1.1s
PPT2 *e*S **S** **22 43 49.7 -0.2**
comp=Z,84nm,24.3s
PPT2 *e*LR LR 22 53 13.8
comp=Z,332nm,35.8s
PAE Paea 58.64 108 *e*P **P** **22 35 55.7 +1.8**
comp=Z,8.5nm,1.1s
TIAR Tiarei 58.85 108 *e*P **P** **22 35 57.6 +2.2**
comp=Z,128nm,0.9s
TBI Tubuai 59.43 114 *e*LR LR 22 53 34.2
comp=Z,323nm,36.0s
PMOR Pomariorio Ree 60.07 104 *e*P **P** **22 36 05.4 +1.7**
comp=Z,209nm,1.3s
MEH Mehetia 60.10 108 *e*P **P** **22 36 05.8 +1.8**
comp=Z,102nm,1.0s
FX1 Attu Island--F 60.26 15 *e*P **P** **22 36 06.0 +1.6**
FX1 Attu Island--F 60.26 15 P **P** **22 36 04.0 -0.3**
comp=Z,9.2nm,0.6s,baz=124,slow=6.8,SNR=9.4
LZH Lanzhou 60.58 316 *e*P **P** **22 36 08.7 +1.6**

LZH pP **pP** **22 36 35.2 +0.2**
LZH *e*S **S** **22 44 17.2 +2.8**
LZH sS **sS** **22 45 01.0 -1.4**
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,86nm,4.4s
HIA **Hailar** **60.66 336** *e*P **P** **22 36 06.8 -0.5**
comp=Z,7.3nm,0.3s
HIA *e*pP **pP** **22 36 33.8 -1.4**
DRV **Dumont d'Urvil** **62.28 185** P pP 22 36 48.0 +2.2
DRV **Dumont d'Urvil** **62.28 185** PP PP 22 39 16.0 +40
DRV S S 22 43 37.0 -58
DRV SS SS 22 49 52.0 +72
DRV L L 22 51 00.0
DRV R 22 55 00.0
GTA **Gaotai** **65.02 318** *e*P **P** **22 36 37.2 +0.8**
GTA pP **pP** **22 37 05.5 +0.8**
GTA S **S** **22 45 08.3 -1.5**
GTA sS **sS** **22 46 01.3 +2.9**
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,68nm,7.1s
GTA LR LR
comp=N,240nm,17.3s
GTA LR LR
comp=E,220nm,20.4s
GTA LR LR
comp=Z,110nm,18.1s
CLNS **Chul'man** **65.26 344** *e*P **P** **22 36 38.2 +0.7**
CLNS *e**PP **pP** **22 37 03.0 -2.8**
CLNS *e* 22 37 14.6
CLNS *e* 22 38 57.4
CLNS *e*PPP PPP 22 40 38.4
CLNS *e*S S 22 45 01.1 -11
CLNS pmax pmax
comp=Z,22nm,1.1s
CLNS pmax pmax
comp=E,4.0nm,0.8s
CLNS pmax pmax
comp=N,11nm,1.3s
CLNS pmax pmax
comp=Z,10.0nm,1.6s
CLNS pmax pmax
comp=N,5.0nm,1.1s
CLNS smax smax
comp=E,224nm,13.1s
CLNS smax smax
comp=N,27nm,11.8s
ULN **Ulaanbaatar** **65.51 329** *e*P **P** **22 36 40.2 +0.7**
comp=N,61nm,1.3s
ULN **Ulaanbaatar** **65.51 329** P **P** **22 36 41.0 +1.6**
SNR=6.5
SONM **Songino Array** **65.83 328** P **P** **22 36 41.8 +0.3**
SONM pP **pP** **22 37 08.8 -1.0**
SONM ⇑*e* 23 05 21.5
SONM **Songino Array** **65.83 328** P **P** **22 36 41.8 +0.3**
comp=N,8.3nm,0.7s,baz=141,slow=5.4,SNR=38
SONM pP **pP** **22 37 08.8 -1.0**
comp=N,14nm,0.8s,baz=145,slow=5.8,SNR=11
SONM LR LR 23 01 40.5
comp=N,160nm,20.1s,baz=358,slow=32
SONM PKP2bc 23 05 21.5
comp=N,0.7nm,0.9s,baz=333,slow=1.7,SNR=3.8
LSA **Lhasa** **67.46 305** *e*P **P** **22 36 52.8 +0.2**
LSA *e**PP **pP** **22 37 21.5 +0.4**
LSA pmax pmax
comp=Z,6.0nm,0.7s
LSA **Lhasa** **67.46 305** *e*P **P** **22 36 52.8 +0.2**
comp=Z,6.4nm,0.7s
LSA *e*pP **pP** **22 37 21.5 +0.4**
SEY **Seymchan** **67.57 0**⇓*i*P **P** **22 36 52.2 +0.2**
CASY **Casey** **67.71 197** *e*P **P** **22 36 52.3 -0.6**
comp=Z,63nm,1.0s
YAK **Yakutsk** **68.81 349** *e*P **P** **22 36 59.1 -0.6**
YAK *e* 22 37 25.4
YAK *e* 22 39 29.1
YAK *e*PPP PPP 22 41 12.9
YAK *e*S **S** **22 45 52.5 -1.6**
YAK *e* 22 46 45.3
YAK *e*SS **SS** **22 50 23.4 +1.9**
YAK pmax pmax
comp=Z,28nm,1.0s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.2s
YAK pmax pmax
comp=Z,149nm,4.8s
YAK pmax pmax
comp=N,41nm,3.8s
YAK smax smax
comp=N,23nm,2.5s
YAK smax smax
comp=E,48nm,3.2s
ZAK **Zakamensk** **69.01 329** *e*P **P** **22 37 01.6 +0.2**
ZAK pmax pmax
comp=Z,15nm,1.1s
TAPN **Taplejung** **69.59 301** *e*P **P** **22 37 05.3 -0.5**
comp=Z,59nm,1.1s
ODAN **Odare** **69.72 301** *e*P **P** **22 37 06.5 0.0**
comp=Z,66nm,0.9s
RAMN **Ramite** **70.43 301** *e*P **P** **22 37 11.2 +0.4**
comp=Z,14nm,0.6s
MOY **Mondy** **70.94 329** *e*P **P** **22 37 14.2 +1.0**
MOY pmax pmax
comp=Z,21nm,1.4s
GUN **Gumba** **71.31 301** *e*P **P** **22 37 16.1 -0.1**
comp=Z,61nm,0.8s
PKI **Pulchoki** **71.62 301** *e*P **P** **22 37 18.1 0.0**
PKIN **Phulchoki** **71.63 301** *e*P **P** **22 37 17.3 -0.8**
comp=Z,18nm,0.9s
KKN **Kakani** **71.79 301** *e*P **P** **22 37 18.5 -0.4**
comp=Z,36nm,0.8s
DMN **Daman** **71.89 301** *e*P **P** **22 37 19.9 +0.3**
comp=Z,88nm,1.0s
VNDA **Vanda** **72.84 178** *e*P **P** **22 37 24.2 +0.2**
VNDA *e*pP **pP** **22 37 51.2 -1.7**
VNDA **Vanda** **72.84 178** P **P** **22 37 24.1 +0.1**
comp=Z,19nm,1.0s,baz=334,slow=6.4,SNR=56
KOLN **Koldanda** **73.22 301** *e*P **P** **22 37 27.6 +0.2**
comp=Z,33nm,0.7s
DANN **Dangsing** **73.23 301** *e*P **P** **22 37 26.9 -0.7**
comp=Z,46nm,1.0s
BILL **Bilibino** **73.40 6***c i*P **P** **22 37 27.9 +0.5**
BILL *e* 22 37 43.7
BILL *e**PP **pP** **22 37 56.2 -0.1**
BILL 22 40 10.0
BILL pmax pmax
comp=Z,10.0nm,1.2s
MIR **Mirnyy** **73.56 201**⇓*i*P **P** **22 37 29.7 +1.3**
MIR *i* 22 37 42.0
MIR pmax pmax
comp=Z,188nm,1.0s
GAMB **Gambell** **73.67 16** *e*P **P** **22 37 28.9 -0.1**
comp=Z,9.2nm,1.2s
GAMB *e*pP **pP** **22 37 56.1 -1.8**
PYUN **Piuthan** **73.82 301** *e*P **P** **22 37 30.2 -0.8**
comp=Z,80nm,0.9s
HVS **Khovu-Aksy** **74.54 326***d i*P **P** **22 37 35.1 +0.6**
HVS pmax pmax
comp=Z,118nm,1.2s
WMQ **Urumqi** **75.11 318** P **P** **22 37 38.5 +0.6**
WMQ PcP **PcP** **22 37 51.7 +0.7**
WMQ pP **pP** **22 38 10.0 +3.1**
WMQ PP **PP** **22 40 30.5 +2.9**
WMQ S **S** **22 47 05.1 -2.0**
WMQ SKS **SKSac** **22 47 30.6 -6.1**
WMQ sS **sS** **22 48 00.0 +3.0**
WMQ pmax pmax
comp=Z,22nm,1.0s
WMQ pmax pmax
comp=Z,170nm,4.5s
WMQ LR LR
comp=N,200nm,24.2s
WMQ LR LR
comp=E,100nm,21.8s
WMQ LR LR
comp=Z,120nm,28.0s
HYB **Hyderabad** **75.59 289** *i*P **P** **22 37 39.5 -1.6**
KDAK **Kodiak Island** **76.63 27** P **P** **22 37 45.8 -0.3**
KDAK **Kodiak Island** **76.63 27** P **P** **22 37 45.8 -0.3**
comp=Z,7.6nm,0.8s,baz=270,slow=8.1,SNR=7.3
SEW **Seward** **79.22 26** *e*P **P** **22 37 59.8 -0.6**
comp=Z,10nm,0.6s
SEW *e*pP **pP** **22 38 33.0 +3.3**
PPLA **Purkeypile** **79.56 23** *e*P **P** **22 38 01.8 -0.6**
comp=Z,40nm,1.6s
PPLA *e*pP **pP** **22 38 33.4 +1.7**
MK31 **Makanchi Array** **79.71 319***c e*P **P** **22 38 02.9 -0.6**
MK31 pmax pmax
comp=Z,2.0nm,0.5s
MK31 **Makanchi Array** **79.71 319** *e*P **P** **22 38 02.9 -0.6**
MK31 *e*pP **pP** **22 38 30.7 -2.0**
MKAR **Makanchi Array** **79.71 319** P **P** **22 38 02.9 -0.5**
MKAR **PP* **pP** **22 38 31.1 -1.6**
MKAR **Makanchi Array** **79.71 319** P **P** **22 38 02.9 -0.5**
MKAR pP **pP** **22 38 31.1 -1.6**
MKAR P'P' 23 04 55.1
MKAR **Makanchi Array** **79.71 319** P **P** **22 38 02.9 -0.5**
comp=Z,4.6nm,0.9s,baz=104,slow=6.1,SNR=44
MKAR pP **pP** **22 38 31.1 -1.6**
comp=Z,3.9nm,0.7s,baz=116,slow=5.5,SNR=5.2
MKAR PKPPKP **P'P'df** **23 04 55.1 +1.4**
comp=Z,0.2nm,0.9s,baz=327,slow=3.3,SNR=3.6
MKAR LR LR 23 09 40.5
comp=Z,91nm,21.1s,baz=114,slow=33
PMR **Palmer** **80.10 25** *e*P **P** **22 38 04.5 -0.6**
PMR *e**PP **pP** **22 38 37.2 +2.8**
PMR pmax pmax
comp=Z,12nm,0.8s
PMR **Palmer** **80.10 25** *e*P **P** **22 38 04.5 -0.6**
comp=Z,12nm,0.8s
PMR *e*pP **pP** **22 38 37.2 +2.8**
TRF **Thorofare Moun** **80.59 23** *e*P **P** **22 38 06.3 -1.6**
comp=Z,6.6nm,0.7s
TRF *e*pP **pP** **22 38 40.1 +2.8**
ZAA0 **Zalesovo Array** **80.64 327** *e*P **P** **22 38 07.2 -1.0**
ZAA0 *e*pP **pP** **22 38 34.0 -3.5**
ZALV **Zalesovo Beam** **80.64 327** P **P** **22 38 07.0 -1.2**
ZALV **Zalesovo Beam** **80.64 327** P **P** **22 38 07.0 -1.2**
ZALV **Zalesovo Beam** **80.64 327** P **P** **22 38 07.0 -1.2**
comp=Z,7.9nm,0.5s,baz=112,slow=6.4,SNR=48
ZALV LR LR 23 13 09.2
comp=Z,106nm,19.5s,baz=250,slow=35
MCK **McKinley** **81.25 23** *e*P **P** **22 38 10.0 -1.3**
MCK *e**PP pP 22 38 34.7 -6.0
MCK pmax pmax
comp=Z,46nm,1.0s
MCK **McKinley** **81.25 23** *e*P **P** **22 38 10.0 -1.3**
comp=Z,46nm,1.0s
MCK *e*pP pP 22 38 34.7 -6.0
DIV **Divide** **81.31 26** *e*P **P** **22 38 11.2 -0.5**
comp=Z,14nm,0.8s
DIV *e*pP **pP** **22 38 43.8 +2.8**
BMRM **Bremner River** **81.75 26** *e*P **P** **22 38 13.5 -0.5**
comp=Z,48nm,1.4s
NVS **Novosibirsk** **81.82 327** *e*P **P** **22 38 12.4 -2.0**
NVS *i* *PP **pP** **22 38 39.6 -4.2**
NVS *e*S **S** **22 48 17.1 -1.1**
NVS pmax pmax
comp=N,6.0nm,1.6s
NVS pmax pmax
comp=E,13nm,1.6s
NVS pmax pmax
comp=Z,19nm,1.6s
NVS smax smax
comp=N,4.0nm,1.1s
NVS smax smax
comp=E,16nm,1.8s
KSH **Kashi** **82.22 311** P **P** **22 38 19.0 +2.0**
KSH *e*PP **PP** **22 41 30.3 +3.2**
KSH *e*S **S** **22 48 20.3 -2.9**
KSH *e*SKS **SKSac** **22 48 22.9 -4.6**
KSH sS **sS** **22 49 16.2 +2.3**
KSH pmax pmax
comp=Z,25nm,0.9s
KSH LR LR
comp=N,990nm,14.6s
KSH LR LR
comp=E,500nm,9.4s
KSH LR LR
comp=Z,380nm,5.2s
COLA **College** **82.23 22** *e*P **P** **22 38 14.8 -1.5**
COLA *e**PP **pP** **22 38 48.5 +2.7**
COLA pmax pmax
comp=Z,25nm,0.9s
COLA **College** **82.23 22** *e*P **P** **22 38 14.8 -1.5**
comp=Z,25nm,0.9s
COLA *e*pP **pP** **22 38 48.5 +2.7**
ILAR **Eielson Array** **82.54 22** LR LR 23 11 10.8
comp=Z,92nm,19.4s,baz=263,slow=33
COLD **Coldfoot** **82.60 19** *e*P **P** **22 38 17.5 -0.7**
comp=Z,11nm,1.1s
ULHL **Ulahol** **82.64 314** P **P** **22 38 19.9 +0.7**
SNR=14
DOT **Dot Lake** **83.14 24** *e*P **P** **22 38 20.9 -0.3**
comp=Z,24nm,1.1s
DOT *e*pP pP 22 38 56.2 +5.6
KURK **Kurchatov** **83.19 322***c i*P **P** **22 38 21.0 -0.6**
KURK pmax pmax
comp=Z,10.0nm,1.3s
KURK **Kurchatov** **83.19 322** *e*P **P** **22 38 21.1 -0.5**
comp=Z,23nm,1.4s
KURK *e*pP **pP** **22 38 48.0 -3.1**
KURK **Kurchatov** **83.19 322** P **P** **22 38 21.7 +0.1**
SNR=7.5
KURK **Kurchatov** **83.19 322** P **P** **22 38 21.7 +0.1**
comp=Z,56nm,0.9s,SNR=9.4
KURBB **Kurchatov Arra** **83.22 322** P **P** **22 38 21.6 -0.2**
comp=Z,2.2nm,0.6s,baz=111,slow=4.0,SNR=20
TKM2 **Tokmak 2** **83.25 314** *e*P **P** **22 38 22.2 -0.3**
TKM2 pmax pmax
comp=Z,12nm,0.9s
TKM2 **Tokmak 2** **83.25 314** *e*P **P** **22 38 22.1 -0.3**
comp=Z,12nm,0.9s
TKM2 **Tokmak 2** **83.25 314** P **P** **22 38 23.1 +0.6**
SNR=5.3
KZA **Kyzart** **83.32 313** P **P** **22 38 23.8 +0.8**
SNR=28
PNL **Peninsula** **83.61 28** *e*P **P** **22 38 24.0 +0.4**
comp=Z,51nm,1.4s
PNL *e*pP **pP** **22 38 50.7 -2.4**
KBK **Karagaybulak** **83.66 314** P **P** **22 38 25.8 +1.3**
SNR=9.9
CHMS **Chumysh** **83.88 314** P **P** **22 38 25.5 +0.1**
SNR=10
FRU **Bishkek** **83.94 314**⇓*i*P **P** **22 38 25.8 +0.1**
FRU pmax pmax
comp=Z,50nm,1.8s
AAK **Ala-Archa** **83.98 314** *e*P **P** **22 38 26.0 -0.1**
AAK *e**PP **pP** **22 38 53.6 -2.0**
AAK pmax pmax
comp=Z,13nm,0.9s
AAK **Ala-Archa** **83.98 314** *e*P **P** **22 38 26.0 -0.1**
comp=Z,13nm,0.9s
AAK *e*pP **pP** **22 38 53.6 -2.0**
AAK **Ala-Archa** **83.98 314** P **P** **22 38 26.6 +0.5**
SNR=8.3
AAK **Ala-Archa** **83.98 314** P **P** **22 38 26.1 0.0**
SNR=14
AAK **Ala-Archa** **83.98 314** P **P** **22 38 26.8 +0.7**
comp=Z,73nm,1.1s,SNR=5.6
USP **Ospenovka** **84.11 314** P **P** **22 38 27.1 +0.6**
SNR=24
AML **Almayashu** **84.46 313** P **P** **22 38 29.4 +0.6**
SNR=60
EKS2 **Erkin-Say** **84.51 314** *e*P **P** **22 38 29.3 +0.6**
EKS2 *e**PP **pP** **22 38 57.2 -1.1**
EKS2 pmax pmax
comp=Z,28nm,1.0s
EKS2 **Erkin-Say** **84.51 314** *e*P **P** **22 38 29.3 +0.6**
comp=Z,28nm,1.0s
EKS2 *e*pP **pP** **22 38 57.2 -1.1**
EKS2 **Erkin-Say** **84.51 314** P **P** **22 38 29.1 +0.4**
SNR=26
MAW **Mawson** **85.18 203** P **P** **22 38 30.8 -0.5**
MAW **Mawson** **85.18 203** P **P** **22 38 30.8 -0.5**
comp=Z,17nm,1.0s,baz=79,slow=5.5,SNR=22
MAW LR LR 23 14 09.8
comp=Z,83nm,19.6s,baz=152,slow=34
MAW **Mawson** **85.18 203** P **P** **22 38 31.7 +0.4**
baz=85,SNR=12
SKAG **Skagway** **85.50 29** *e*P **P** **22 38 33.2 +0.1**
comp=Z,40nm,1.6s
KBL **Kabul** **86.78 305** *e*P **P** **22 38 38.3 -2.0**
KBL pmax pmax
comp=Z,3.0nm,0.7s
KBL **Kabul** **86.78 305** *e*P **P** **22 38 38.3 -2.0**
comp=Z,2.8nm,0.7s
KK31 **Karatay Array** **86.95 314***c e*P **P** **22 38 39.4 -1.2**
KK31 pmax pmax
comp=Z,8.0nm,0.8s
KKAR **Karatay Array** **86.95 314** *e*P **P** **22 38 40.3 -0.3**
KKAR *e**PP **pP** **22 39 12.5 +2.2**
KKAR pmax pmax
comp=Z,8.0nm,0.9s
KKAR **Karatay Array** **86.95 314** *e*P **P** **22 38 40.3 -0.3**
comp=Z,7.7nm,0.9s
KKAR *e*pP **pP** **22 39 12.5 +2.2**
DLBC **Dease Lake** **87.90 31** *e*P **P** **22 38 45.5 +0.7**
DLBC *e*pP **pP** **22 39 12.8 -1.8**
BRVK **Borovoye** **88.75 323** *e*P **P** **22 38 47.4 -1.5**
BRVK pmax pmax
comp=Z,9.0nm,1.3s
BRVK **Borovoye** **88.75 323** *e*P **P** **22 38 47.4 -1.5**
comp=Z,14nm,1.3s
BRVK *e*pP **pP** **22 39 14.7 -4.0**
BRVK **Borovoye** **88.75 323** P **P** **22 38 48.4 -0.5**
SNR=5.8
BRVK **Borovoye** **88.75 323** P **P** **22 38 48.1 -0.8**
comp=Z,45nm,0.9s,SNR=6.8
INK **Inuvik** **88.82 21** P **P** **22 38 47.8 -1.1**
INK **Inuvik** **88.82 21** P **P** **22 38 47.8 -1.1**
comp=Z,6.6nm,0.9s,baz=248,slow=6.4,SNR=24
ZRNK **Zerenda** **89.50 323** *i* P **P** **22 38 50.7 -1.7**
ZRNK pmax pmax
comp=Z,8.0nm,1.3s
HUMO **Hull Mountain** **89.71 47** *e*P **P** **22 38 53.7 0.0**
comp=Z,54nm,1.1s
CMB **Columbia Colle** **91.19 52** *e*P **P** **22 39 01.0 +0.2**
CMB pmax pmax
comp=Z,18nm,1.3s
CMB **Columbia Colle** **91.19 52** *e*P **P** **22 39 01.0 +0.2**
comp=Z,18nm,1.3s
CMB *e*pP pP 22 39 23.2 -7.4
PKM **Peak Mountain** **91.37 55** P **P** **22 39 02.2 +0.4**
baz=91
BEKR **Beckworth** **91.37 50** *e*P **P** **22 39 02.2 +0.5**
comp=Z,5.7nm,0.8s
BEKR *e*pP **pP** **22 39 28.0 -3.6**
MOD **Modoc** **91.59 48** *e*P **P** **22 39 03.3 +0.6**
comp=Z,91nm,1.4s
WCN **Washoe City** **91.79 51** *e*P **P** **22 39 04.1 +0.5**
WCN pmax pmax
comp=Z,9.0nm,1.0s
WCN **Washoe City** **91.79 51** *e*P **P** **22 39 04.1 +0.5**
comp=Z,8.7nm,1.0s
MRIV **Mauritius Mete** **92.40 250** *e*P **P** **22 39 06.2 -0.5**
ISA **Isabella** **92.53 55** P **P** **22 39 07.4 +0.4**
baz=93
MWC **Mount Wilson** **92.77 56** *e*P **P** **22 39 08.7 +0.4**
MWC *e**PP **pP** **22 39 34.2 -4.0**
MWC pmax pmax
comp=Z,60nm,1.2s
MWC **Mount Wilson** **92.77 56** *e*P **P** **22 39 08.7 +0.4**
comp=Z,60nm,1.2s
MWC *e*pP **pP** **22 39 34.2 -4.0**
TIN **Tinemaha** **92.82 53** P **P** **22 39 09.3 +0.9**
baz=93
NVAR **Mina Array Bea** **92.86 52** P **P** **22 39 09.4 +0.8**
NVAR **Mina Array Bea** **92.86 52** P **P** **22 39 09.4 +0.8**
comp=Z,13nm,0.8s,baz=256,slow=6.0,SNR=46
NVAR LR LR 23 11 13.0
comp=Z,224nm,21.6s,baz=175,slow=29
EDW2 **Edwards Air Fo** **92.87 55** P **P** **22 39 09.4 +0.8**
baz=93
CWC **Cottonwood Cre** **92.90 54** P **P** **22 39 09.2 +0.4**
baz=93
NV11 **Mina Array Sit** **92.97 52** *e*P **P** **22 39 09.8 +0.7**
NV11 *e*pP **pP** **22 39 35.6 -3.4**
BFSC **Mount Baldy Ra** **93.10 56** P **P** **22 39 10.2 +0.5**
baz=93
LRMC **Laurel Mountai** **93.15 55** P **P** **22 39 10.9 +1.0**
baz=93
SYO **Syowa Base** **93.33 200**⇑*e*P **P** **22 39 08.0 -1.8**
SYO **Syowa Base** **93.33 200**⇑*e*X 22 39 34.0
MPMC **Manual Prospec** **93.35 54** P **P** **22 39 11.9 +0.9**
baz=93
BMN **Battle Mountai** **93.81 50** *e*P **P** **22 39 13.0 +0.1**
BMN *e**PP **pP** **22 39 40.5 -2.3**
BMN pmax pmax
comp=Z,15nm,1.2s
BMN **Battle Mountai** **93.81 50** *e*P **P** **22 39 13.0 +0.1**
comp=Z,15nm,1.2s
BMN *e*pP **pP** **22 39 40.5 -2.3**
GSC **Goldstone** **93.86 55** P **P** **22 39 14.1 +0.9**
baz=94
FURC **Furnace Creek,** **93.88 54** P **P** **22 39 14.2 +1.1**
baz=94
MONP **Monument Peak** **94.05 57** P **P** **22 39 15.9 +1.6**
baz=94
PFO **Pinyon Flat Ob** **94.06 57** P **P** **22 39 15.6 +1.4**
baz=94
HEC **Hector,Ludlow** **94.23 56** P **P** **22 39 15.6 +0.7**
baz=94
NEW **Newport** **94.26 42** P **P** **22 39 14.7 0.0**
baz=94
SHOC **Shoshone** **94.32 54** P **P** **22 39 15.8 +0.6**
baz=94
TUQ **Turquoise Moun** **94.59 55** P **P** **22 39 17.6 +1.0**
baz=95
GMRC **Granite Mounta** **94.78 56** P **P** **22 39 18.7 +1.3**
baz=95
C11A **Tepee Creek (N** **94.82 43** P **P** **22 39 16.2 -1.1**
baz=95
BC3 **Big Chuckawall** **94.90 57** P **P** **22 39 19.0 +1.0**
baz=95
MFID **Camas Ranch** **94.98 47** P **P** **22 39 18.4 +0.3**
baz=95
R11A **Troy Canyon, C** **94.98 52** P **P** **22 39 18.7 +0.3**
baz=95
IRM **Iron Mountain** **95.17 56** P **P** **22 39 20.6 +1.5**
baz=95
B12A **Libby** **95.29 42** P **P** **22 39 19.7 +0.3**
baz=95
ELK **Elko** **95.33 50** *e*P **P** **22 39 19.9 -0.1**
ELK *e*pP **pP** **22 39 45.3 -4.6**
G12A **Big Creek, Yel** **95.39 45** P **P** **22 39 20.2 +0.1**
baz=95
GLA **Glamis** **95.40 57** P **P** **22 39 22.9 +2.7**
baz=96
D12A **Red Ives Fores** **95.42 43** P **P** **22 39 20.1 +0.1**
baz=96
F12A **Elk City** **95.45 45** P **P** **22 39 19.9 -0.4**
baz=96
I12A **Atlanta** **95.50 47** P **P** **22 39 20.9 +0.3**
baz=96
Y12C **Blythe** **95.68 57** P **P** **22 39 22.7 +1.3**
baz=96
ARU **Arti** **95.80 326** P **P** **22 39 20.4 -1.0**
ARU 22 43 13.7
ARU S **SKSac** **22 49 42.9 -4.0**
ARU SS **SS** **22 56 56.8 -4.7**
YKW3 **Yellowknife Ar** **95.89 28** *e*P **P** **22 39 20.6 -1.1**
comp=Z,0.1nm,0.8s
YKA **Yellowknife Ar** **95.89 28** P **P** **22 39 21.4 -0.2**
YKA PKKP **PKKPbc** **22 56 08.7 -4.1**
YKA **Yellowknife Ar** **95.89 28** P **P** **22 39 21.4 -0.2**
comp=Z,2.9nm,0.6s,baz=270,slow=4.7,SNR=46
YKA PKKP **PKKPbc** **22 56 08.7 -4.1**
comp=Z,1.7nm,0.7s,baz=87,slow=2.8,SNR=32
C13A **Hot Springs** **95.95 43** P **P** **22 39 22.7 +0.2**
baz=96
HLID **Hailey** **96.01 47** P **P** **22 39 23.7 +0.7**
baz=96
PDMCI **Parker Dam,Lak** **96.01 56** P **P** **22 39 24.3 +1.4**
baz=96
D13A **Huson** **96.03 43** P **P** **22 39 23.6 +0.8**
baz=96
B13A **Whitefish** **96.03 42** P **P** **22 39 23.0 +0.3**
baz=96
A13A **Flathead Natio** **96.07 41** P **P** **22 39 23.7 +0.7**
baz=96
F13A **Darby** **96.10 45** P **P** **22 39 22.5 -0.7**
baz=96
H13A **Challis** **96.14 46** P **P** **22 39 23.8 +0.3**
baz=96
G13A **Cobalt** **96.16 45** P **P** **22 39 23.9 +0.3**
baz=96
I13A **Wildhorse Cree** **96.23 46** P **P** **22 39 24.2 +0.2**
baz=96
W13A **Hualapai Mount** **96.25 55** P **P** **22 39 25.4 +1.2**
baz=96
WALA **Waterton Lakes** **96.40 41** *e*P **P** **22 39 25.4 +0.9**
comp=Z,0.4nm,0.9s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
B14A	Marquette Ranc	96.83	42	P	P	22 39 26.6	+0.1
	baz=97						
L14A	Malta	96.86	48	P	P	22 39 27.4	+0.6
	baz=97						
K14A	Jones Ranch, D	96.91	48	P	P	22 39 27.5	+0.5
	baz=97						
DUG	Dugway	97.17	50	P	Pdif	22 39 28.6	+0.3
	baz=97						
A15A	Johnson Ranch,	97.18	41	P	Pdif	22 39 28.3	+0.2
	baz=97						
E15A	Deer Lodge	97.28	44	P	P	22 39 28.6	+0.1
	baz=97						
C15A	Salmond Ranch,	97.28	43	P	P	22 39 28.4	-0.1
	baz=97						
F15A	Butte	97.39	45	P	Pdif	22 39 29.4	+0.2
	baz=97						
K15A	Arbon	97.39	48	P	Pdif	22 39 29.7	+0.5
	baz=97						
U15A	North Rim	97.56	54	P	Pdif	22 39 31.3	+1.0
	baz=98						
L16A	Fish Haven	98.21	48	P	P	22 39 33.1	+0.2
	baz=98						
H16A	Russell Place,	98.29	46	P	Pdif	22 39 33.7	+0.4
	baz=98						
WUAZ	Wupatki	98.31	55	P	Pdif	22 39 34.5	+1.0
	baz=98						
Q16A	Castle Valley	98.45	52	P	Pdif	22 39 34.9	+0.8
	baz=98						
C17A	Wharram Farm,	98.53	43	P	Pdif	22 39 34.3	+0.2
	baz=99						
D17A	Six Diamond Ra	98.60	43	P	Pdif	22 39 35.1	+0.6
	baz=99						
H17A	Grant Village	98.78	46	P	Pdif	22 39 36.0	+0.5
	baz=99						
M17A	Scullys Gap (B	98.79	49	P	Pdif	22 39 36.0	+0.5
	baz=99						
P18A	Preston Nutter	99.16	51	P	Pdif	22 39 38.0	+0.7
	baz=99						
EGMT	Eagleton	99.19	42	P	Pdif	22 39 38.0	+1.0
	baz=99						
J18A	Kendall Valley	99.22	47	P	Pdif	22 39 37.5	0.0
	baz=99						
K18A	Toltan Ranch,	99.22	48	P	Pdif	22 39 38.3	+0.8
	baz=99						
M18A	Lyman	99.24	49	P	Pdif	22 39 37.7	+0.1
	baz=99						
S18A	Hurst Farm, Bl	99.39	53	P	Pdif	22 39 38.7	+0.3
	baz=99						
PDAR	Pinedale Array	99.58	48	P	Pdif	22 39 38.6	-0.4
PDAR				PP	PP	22 43 44.2	0.0
PDAR				PKKPbc	PKKPbc	22 56 00.1	-2.2
PDAR	Pinedale Array	99.58	48	P	Pdif	22 39 38.6	-0.4
	comp=Z,4.1nm,0.7s,baz=246,slow=2.3,SNR=35						
PDAR				PP	PP	22 43 44.2	0.0
	comp=Z,0.9nm,1.0s,baz=188,slow=3.0,SNR=4.3						
PDAR				PKKPbc	PKKPbc	22 56 00.1	-2.2
	comp=Z,0.7nm,0.6s,baz=106,slow=5.7,SNR=4.9						
PDAR				LR	LR	23 18 11.2	
	comp=Z,118nm,18.9s,baz=352,slow=31						
W18A	Petrified Fore	99.65	55	P	Pdif	22 39 40.3	+0.9
	baz=100						
C19A	Slack Wire Ran	99.68	43	P	Pdif	22 39 39.8	+0.6
	baz=100						
B19A	Brinkman Farms	99.71	42	P	Pdif	22 39 40.1	+0.8
	baz=100						
D19A	Cripps Ranch,	99.83	43	P	Pdif	22 39 40.5	+0.6
	baz=100						
E19A	Rath Farm, Rou	99.94	44	P	Pdif	22 39 40.5	+0.1
	baz=100						
P19A	Cripple Cowboy	100.13	51	P	Pdif	22 39 41.5	-0.1
	baz=100						
K20A	Yellowstone Ra	100.47	48	P	Pdif	22 39 42.3	-0.7
	baz=100						
H20A	Greybull	100.62	46	P	Pdif	22 39 43.7	+0.3
	baz=101						
N20A	Spence Gulch,	100.63	50	P	Pdif	22 39 43.9	+0.2
	baz=101						
W20A	Ramah	100.66	55	P	Pdif	22 39 45.5	+1.5
	baz=101						
V20A	Brimhall	100.67	55	P	Pdif	22 39 45.1	+1.1
	baz=101						
S20A	Disappointment	100.68	53	P	Pdif	22 39 44.4	+0.3
	baz=101						
C21A	Desert Coulee	100.99	42	P	Pdif	22 39 45.7	+0.8
	baz=101						
I21A	Big Trails, Te	101.17	46	P	Pdif	22 39 46.0	0.0
	baz=101						
N21A	Black Mountain	101.20	50	P	Pdif	22 39 47.0	+0.7
	baz=101						
Q21A	Lamborn Mesa,	101.26	52	P	Pdif	22 39 47.6	+1.0
	baz=101						
R21A	Cimarron	101.30	52	P	Pdif	22 39 48.0	+1.1
	baz=101						
U21A	Nageezi	101.30	54	P	Pdif	22 39 48.2	+1.4
	baz=101						
P21A	Newcastle	101.32	51	P	Pdif	22 39 47.9	+1.1
	baz=101						
T21A	Navajo Lake	101.38	53	P	Pdif	22 39 48.9	+1.7
	baz=101						
I22A	9 Mile Ranch,	101.75	46	P	Pdif	22 39 48.6	+0.1
	baz=102						
G22A	Birney	101.77	45	P	Pdif	22 39 49.1	+0.5
	baz=102						
Q22A	Crested Butte,	101.77	51	P	Pdif	22 39 50.3	+1.3
	baz=102						
H22A	Clearmont	101.78	46	P	Pdif	22 39 49.6	+0.9
	baz=102						
J22A	Midwest	101.79	47	P	Pdif	22 39 49.1	+0.3
	baz=102						
M22A	Cedar Creek Ra	101.85	49	P	Pdif	22 39 49.8	+0.6
	baz=102						
SNAA	Sanae	101.87	188	P	Pdif	22 39 46.7	-1.7
SNAA				PP	PP	22 43 58.4	-1.8
SNAA	Sanae	101.87	188	P	Pdif	22 39 46.7	-1.7
	comp=Z,0.6nm,0.9s,baz=195,slow=14,SNR=4.3						
SNAA				PP	PP	22 43 58.4	-1.8
	comp=Z,1.9nm,1.1s,baz=169,slow=7.0,SNR=4.8						
S22A	4UR Ranch, Cre	101.90	53	P	Pdif	22 39 50.5	+0.9
	baz=102						
U22A	Llaves	101.95	54	P	Pdif	22 39 50.4	+0.7
	baz=102						
O22A	Kremmling	101.97	50	P	Pdif	22 39 49.9	0.0
	baz=102						
N23A	Red Feather La	102.38	49	P	Pdif	22 39 52.3	+0.7
	baz=102						
G23A	Biddle	102.41	45	P	Pdif	22 39 51.9	+0.5
	baz=102						
L23A	Garrett	102.46	48	P	Pdif	22 39 52.1	+0.2
	baz=102						
K23A	Bowen Ranch, D	102.47	47	P	Pdif	22 39 52.5	+0.7
	baz=102						
H24A	Dirks Ranch, A	103.05	45	P	Pdif	22 39 54.1	-0.1
	baz=103						
S24A	Houchin Ranch,	103.19	53	P	Pdif	22 39 56.0	+0.7
	baz=103						
RSSD	Black Hills	103.48	46	eP	Pdif	22 39 56.2	-0.2
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
RSSD	Black Hills	103.48	46	ePdif	Pdif	22 39 56.2	-0.2
	comp=Z,4.7nm,0.7s						
S25A	Robets Cordova	103.80	53	P	Pdif	22 39 58.7	+0.8
	baz=104						
U25A	Circle Dot Ran	103.92	54	P	Pdif	22 40 00.1	+1.6
	baz=104						
Q26A	Hugo	104.41	51	P	Pdif	22 40 01.4	+0.9
	baz=104						
R26A	Arlington	104.52	52	P	Pdif	22 40 01.6	+0.5
	baz=105						
S26A	Kim	104.56	53	P	Pdif	22 40 02.3	+1.1
	baz=105						
TXAR	Lajitas Array	104.98	61	Pdif	Pdif	22 40 04.0	+0.7
TXAR				PP	PP	22 44 24.3	-0.7
TXAR				PKKPbc	PKKPbc	22 55 46.2	+0.5
TXAR				PKKPab	PKKPab	22 56 03.5	+0.2
TXAR	Lajitas Array	104.98	61	Pdiff	Pdif	22 40 04.0	+0.7
	comp=Z,0.2nm,0.5s,baz=206,slow=3.9,SNR=2.1						
TXAR				PP	PP	22 44 24.3	-0.7
	comp=Z,0.4nm,0.7s,baz=258,slow=6.1,SNR=4.0						
TXAR				PKKPbc	PKKPbc	22 55 46.2	+0.5
	comp=Z,0.3nm,0.6s,baz=75,slow=5.3,SNR=4.4						
TXAR				PKKPab	PKKPab	22 56 03.5	+0.2
	comp=Z,1.3nm,0.8s,baz=120,slow=6.4,SNR=13						
ARCES	ARCESS Array B	106.61	343	PKiKP	PKiKP	22 44 18.8	-0.6
ARCES	ARCESS Array B	106.61	343	PKiKP	PKiKP	22 44 18.8	-0.6
	comp=Z,1.6nm,0.8s,baz=110,slow=1.2,SNR=11						
FINES	FINESS Array B	110.67	335	Pdif	Pdif	22 40 26.8	-0.8
FINES				PKiKP	PKiKP	22 44 26.6	-0.5
FINES	FINESS Array B	110.67	335	Pdiff	Pdif	22 40 26.8	-0.8
	comp=Z,1.6nm,0.8s,baz=83,slow=3.5,SNR=4.9						
FINES				PKiKP	PKiKP	22 44 26.6	-0.5
	comp=Z,1.7nm,0.9s,baz=97,slow=4.6,SNR=7.2						
BRTR	Keskin Array B	114.60	312	PKP	PKPdf	22 44 34.6	-0.9
BRTR	Keskin Array B	114.60	312	PKP	PKPdf	22 44 34.6	-0.9
	comp=Z,1.0nm,0.8s,baz=98,slow=2.5,SNR=6.6						
HFS	Hagfors	116.34	338	PKP	PKPdf	22 44 38.4	+0.3
HFS	Hagfors	116.34	338	PKP	PKPdf	22 44 38.4	+0.3
	comp=Z,2.5nm,0.9s,baz=50,slow=2.3,SNR=4.3						
NB2	NORSAR Subarra	116.60	340	PKPdf	PKPdf	22 44 38.7	+0.1
	comp=Z,2.1nm,1.0s,baz=44,slow=1.9						
NOA	NORSAR Array B	116.60	340	PKP	PKPdf	22 44 37.4	-1.2
NOA	NORSAR Array B	116.60	340	PKP	PKPdf	22 44 37.4	-1.2
	comp=Z,1.2nm,0.7s,baz=47,slow=2.0,SNR=4.6						
BOSA	Boshof	118.84	234	PKP	PKPdf	22 44 43.6	-0.4
BOSA				SKP		22 48 10.5	
BOSA				PKKPbc	PKKPbc	22 54 59.5	-0.5
BOSA	Boshof	118.84	234	PKP	PKPdf	22 44 43.6	-0.4
	comp=Z,2.2nm,0.4s,baz=137,slow=5.3,SNR=15						
BOSA				SKP		22 48 10.5	
	comp=Z,1.8nm,0.7s,baz=117,slow=5.5,SNR=3.2						
BOSA				PKKPbc	PKKPbc	22 54 59.5	-0.5
	comp=Z,3.1nm,1.0s,baz=59,slow=7.6,SNR=4.9						
NIE	Niedzica	119.64	326	ePKIKP	PKPdf	22 44 45.1	+0.3
NIE	Niedzica	119.64	326	ePKPdf	PKPdf	22 44 45.1	+0.3
LBTB	Lobatse	119.95	238	PKP	PKPdf	22 44 45.9	-0.4
LBTB				SKP		22 48 11.7	
LBTB				PKKPbc	PKKPbc	22 54 54.9	-0.8
LBTB	Lobatse	119.95	238	PKP	PKPdf	22 44 45.9	-0.4
	comp=Z,2.0nm,0.3s,baz=72,slow=1.6,SNR=10.0						
LBTB				SKP		22 48 11.7	
	comp=Z,2.0nm,0.7s,baz=164,slow=6.4,SNR=3.8						
LBTB				PKKPbc	PKKPbc	22 54 54.9	-0.8
	comp=Z,1.9nm,0.8s,baz=4.2,slow=6.6,SNR=4.1						
PLCA	Paso Flores	120.34	144	PKP	PKPdf	22 44 46.4	-0.1
PLCA	Paso Flores	120.34	144	PKP	PKPdf	22 44 46.4	-0.1
	comp=Z,1.4nm,0.6s,baz=226,slow=7.7,SNR=3.0						
TKL	Tuckaleechee C	120.45	51	PKP	PKPdf	22 44 46.4	-0.4
TKL	Tuckaleechee C	120.45	51	PKP	PKPdf	22 44 46.4	-0.4
	comp=Z,1.3nm,0.5s,baz=306,slow=19						
SUR	Sutherland	120.59	228	PKP	PKPdf	22 44 47.0	-0.4
SUR	Sutherland	120.59	228	PKP	PKPdf	22 44 47.0	-0.4
	comp=Z,2.6nm,0.9s,baz=143,slow=5.1,SNR=2.9						
OKC	Ostrava-Krasne	120.62	327	ePKIKP	PKPdf	22 44 51.5	+4.9
LSZ	Lusaka	120.73	249	PKP	PKPdf	22 44 47.0	-0.9
LSZ				ePKPdf	PKiKP	22 44 48.0	0.0
LSZ				ePP	PP	22 46 14.9	-2.3
LSZ				PP	PP	22 46 15.1	-2.2
LSZ				PKKPab	PKKPab	22 54 53.9	-0.5
LSZ	Lusaka	120.73	249	PKP	PKPdf	22 44 47.0	-0.9
	comp=Z,2.6nm,0.5s,baz=168,slow=4.1,SNR=14						
LSZ				PP	PP	22 46 15.1	-2.2
	comp=Z,1.6nm,0.8s,baz=62,slow=12,SNR=5.0						
LSZ				PKKPab	PKKPab	22 54 53.9	-0.5
	comp=Z,1.2nm,0.8s,baz=294,slow=1.6,SNR=3.9						
SCHQ	Schefferville	121.22	25	PKP	PKPdf	22 44 48.6	+1.0
SCHQ				PP	PP	22 46 24.7	+5.8
SCHQ				PKKPab	PKKPab	22 54 50.1	-0.9
SCHQ	Schefferville	121.22	25	PKP	PKPdf	22 44 48.6	+1.0
	comp=Z,2.4nm,0.6s,baz=249,slow=7.0,SNR=8.1						
SCHQ				PP	PP	22 46 24.7	+5.8
	comp=Z,2.9nm,1.0s,baz=228,slow=9.4,SNR=3.5						
SCHQ				PKKPab	PKKPab	22 54 50.1	-0.9
	comp=Z,2.8nm,0.8s,baz=113,slow=5.8,SNR=3.8						
DPC	Dobruska-Polom	121.30	328	ePKIKP	PKPdf	22 44 55.2	+7.2
UPC	Upice	121.37	329	ePKIKP	PKPdf	22 44 54.6	+6.5
UPC	Upice	121.37	329	ePKPdf	PKPdf	22 44 54.6	+6.5
VAY	Valandovo	122.00	317	ePKP	PKPdf	22 44 48.9	-0.6
BRG	Berggiesshubel	122.21	330	eP	PKPdf	22 44 49.7	+0.1
	comp=Z,5.2nm,1.2s						
BRG	Berggiesshubel	122.21	330	ePKIKP	PKPdf	22 44 49.7	+0.1
BRG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CLL	Collm	122.40	331	ePKIKP	PKPdf	22 44 50.0	0.0
CLL	Collm	122.40	331	ePKPdf	PKPdf	22 44 50.0	0.0
CLL				epPP		22 46 55.0	
CLL				e(SKPdf)		22 48 18.0	
CLL				epPS		22 56 45.0	
PRU	Pruhonice	122.44	329	ePKIKP	PKPdf	22 44 49.5	-0.6
PRU	Pruhonice	122.44	329	ePKPdf	PKPdf	22 44 49.5	-0.6
SKO	Skopje	122.49	318	ePKP	PKPdf	22 44 49.9	-0.6
BIA	Bitola	122.98	317	ePKP	PKPdf	22 44 50.6	-0.9
NKC	Novy Kostel	123.35	330	ePKIKP	PKPdf	22 44 52.7	+0.8
NKC	Novy Kostel	123.35	330	ePKPdf	PKPdf	22 44 52.7	+0.8
KHC	Kasperske Hory	123.46	328	ePKIKP	PKPdf	22 44 52.5	+0.3
KHC				e		22 45 18.5	
KHC	Kasperske Hory	123.46	328	ePKPdf	PKPdf	22 44 52.1	0.0
KHC	Kasperske Hory	123.46	328	ePKPdf	PKPdf	22 44 52.5	+0.3
KHC				epPKP	pPKPdf	22 45 18.5	-4.8
GERES	GERESS Array B	123.57	328	PKP	PKPdf	22 44 51.7	-0.7
GERES				SKP		22 48 17.2	
GERES	GERESS Array B	123.57	328	PKP	PKPdf	22 44 51.7	-0.7
	comp=Z,1.8nm,0.5s,baz=84,slow=1.6,SNR=17						
GERES				SKP		22 48 17.2	
	comp=Z,1.2nm,0.7s,baz=80,slow=1.1,SNR=4.1						
GOLS	Golise	124.14	324	i PKPdf	PKPdf	22 44 54.7	+1.2
LJU	Ljubljana	124.75	325	i PKPdf	PKPdf	22 44 53.8	-0.9
CRNS	Crni Vrh	124.89	325	i PKPdf	PKPdf	22 44 54.8	-0.2
ABTA	Abfaltersbach	125.47	327	⇑iPKPdf	PKPdf	22 44 55.3	-0.8
	comp=Z,3.3nm,0.7s						
ABTA	Abfaltersbach	125.47	327	⇑iP	PKPdf	22 44 55.3	-0.8
MOTA	Moosalm	125.86	328	⇓iPKIKP	PKPdf	22 44 56.0	-0.9
MOTA	Moosalm	125.86	328	⇓iPKPdf	PKPdf	22 44 56.0	-0.9
	comp=Z,5.3nm,0.7s						
MOTA	Moosalm	125.86	328	⇓iP	PKPdf	22 44 56.0	-0.9
FETA	Feichten	126.27	328	⇓iPKiKP	PKPdf	22 44 57.4	-0.3
	comp=Z,3.9nm,0.8s						
FETA	Feichten	126.27	328	⇓iP	PKPdf	22 44 57.4	-0.3
DAVA	Damuels	126.54	329	⇑iPKiKP	PKPdf	22 44 58.2	-0.1
	comp=Z,2.7nm,0.5s						
DAVA	Damuels	126.54	329	⇑iP	PKPdf	22 44 58.2	-0.1
CDF	Champ du Feu	127.10	331	ePKIKP	PKPdf	22 44 58.7	-0.5
CDF	Champ du Feu	127.10	331	ePKIKP	PKPdf	22 44 58.7	-0.5
CDF	Champ du Feu	127.10	331	ePKPdf	PKPdf	22 44 58.7	-0.5
CFAA	Coronel Fontan	127.38	136	PKP	PKPdf	22 45 00.2	0.0
CFAA	Coronel Fontan	127.38	136	PKP	PKPdf	22 45 00.2	0.0
	comp=Z,0.3nm,0.7s,baz=240,slow=4.9,SNR=4.7						
HINF	Hinteralfeld	127.71	331	ePKIKP	PKPdf	22 45 00.1	-0.2
	comp=Z,11nm,1.0s						
HINF	Hinteralfeld	127.71	331	ePKIKP	PKPdf	22 45 00.1	-0.2
HINF	Hinteralfeld	127.71	331	ePKPdf	PKPdf	22 45 00.1	-0.2
HAU	Haudompre	127.83	331	ePKIKP	PKPdf	22 45 00.5	0.0
	comp=Z,9.5nm,0.9s						
HAU	Haudompre	127.83	331	ePKIKP	PKPdf	22 45 00.5	0.0
HAU	Haudompre	127.83	331	ePKPdf	PKPdf	22 45 00.5	0.0
ATAH	Atahualpa	128.49	103	PKP	PKPdf	22 45 05.6	+2.4
ATAH	Atahualpa	128.49	103	PKP	PKPdf	22 45 05.6	+2.4
	comp=Z,5.1nm,0.8s,baz=88,slow=23,SNR=4.7						
CABF	La Chapelle	128.93	330	ePKIKP	PKPdf	22 45 02.0	-0.8
CABF	La Chapelle	128.93	330	ePKIKP	PKPdf	22 45 02.0	-0.8
CABF	La Chapelle	128.93	330	ePKPdf	PKPdf	22 45 02.0	-0.8
TSUM	Tsumeb	129.04	241	PKP	PKPdf	22 45 04.0	+0.2
TSUM				SKPbc	SKPbc	22 48 14.7	-0.1
TSUM	Tsumeb	129.04	241	PKP	PKPdf	22 45 04.0	+0.2
	comp=Z,1.2nm,0.4s,baz=150,slow=7.9,SNR=3.7						
TSUM				SKPbc	SKPbc	22 48 14.7	-0.1
	comp=Z,17nm,1.0s,baz=107,slow=5.4,SNR=12						
LPL	La Plagne	129.35	329	ePKIKP	PKPdf	22 45 03.1	-0.7
LPL	La Plagne	129.35	329	ePKIKP	PKPdf	22 45 03.1	-0.7
LPL	La Plagne	129.35	329	ePKPdf	PKPdf	22 45 03.1	-0.7
LPG	La Plagne	129.35	329	ePKIKP	PKPdf	22 45 03.1	-0.8
LPG	La Plagne	129.35	329	ePKIKP	PKPdf	22 45 03.1	-0.8
LPG	La Plagne	129.35	329	ePKPdf	PKPdf	22 45 03.1	-0.8
SSF	Saint Saulge	129.85	332	ePKIKP	PKPdf	22 45 04.7	+0.3
	comp=Z,4.9nm,0.7s						
SSF	Saint Saulge	129.85	332	ePKIKP	PKPdf	22 45 04.7	+0.3
SSF	Saint Saulge	129.85	332	ePKPdf	PKPdf	22 45 04.7	+0.3
SMF	Signal de Mont	129.99	332	ePKIKP	PKPdf	22 45 03.4	-1.3
SMF	Signal de Mont	129.99	332	ePKIKP	PKPdf	22 45 03.4	-1.3
SMF	Signal de Mont	129.99	332	ePKPdf	PKPdf	22 45 03.4	-1.3
PGF	Pioggiola	130.02	324	ePKIKP	PKPdf	22 45 03.0	-2.0
PGF	Pioggiola	130.02	324	ePKIKP	PKPdf	22 45 03.0	-2.0
PGF	Pioggiola	130.02	324	ePKPdf	PKPdf	22 45 03.0	-2.0
SBF	Sospel	130.07	327	ePKIKP	PKPdf	22 45 03.4	-1.6
SBF	Sospel	130.07	327	ePKIKP	PKPdf	22 45 03.4	-1.6
SBF	Sospel	130.07	327	ePKPdf	PKPdf	22 45 03.4	-1.6
ORIF	Oris-en-Rattie	130.19	329	ePKIKP	PKPdf	22 45 04.6	-0.6
	comp=Z,8.7nm,0.9s						
ORIF	Oris-en-Rattie	130.19	329	ePKIKP	PKPdf	22 45 04.6	-0.6
ORIF	Oris-en-Rattie	130.19	329	ePKPdf	PKPdf	22 45 04.6	-0.6
LDF	La Druitiere	130.27	336	ePKIKP	PKPdf	22 45 05.2	+0.1
LDF	La Druitiere	130.27	336	ePKIKP	PKPdf	22 45 05.2	+0.1
LDF	La Druitiere	130.27	336	ePKPdf	PKPdf	22 45 05.2	+0.1
FRF	La Foret Royal	130.70	327	ePKIKP	PKPdf	22 45 04.9	-1.2
FRF	La Foret Royal	130.70	327	ePKIKP	PKPdf	22 45 04.9	-1.2
FRF	La Foret Royal	130.70	327	ePKPdf	PKPdf	22 45 04.9	-1.2
LMR	La Mourre	130.92	327	ePKIKP	PKPdf	22 45 06.2	-0.3
LMR	La Mourre	130.92	327	ePKIKP	PKPdf	22 45 06.2	-0.3
LMR	La Mourre	130.92	327	ePKPdf	PKPdf	22 45 06.2	-0.3
TCF	Toulx Ste Croi	131.02	332	ePKIKP	PKPdf	22 45 07.2	+0.5
	comp=Z,16nm,1.0s						
TCF	Toulx Ste Croi	131.02	332	ePKIKP	PKPdf	22 45 07.2	+0.5
TCF	Toulx Ste Croi	131.02	332	ePKPdf	PKPdf	22 45 07.2	+0.5
KEST	Kesra	133.76	317	PKP	PKPdf	22 45 12.5	+0.3
KEST				SKPbc	SKPbc	22 48 28.6	-2.2
KEST	Kesra	133.76	317	PKP	PKPdf	22 45 12.5	+0.3
	comp=Z,2.0nm,1.0s,baz=267,slow=8.0,SNR=4.1						
KEST				SKPbc	SKPbc	22 48 28.6	-2.2
	comp=Z,12nm,1.0s,baz=28,slow=0.5,SNR=14						
LPAZ	La Paz	135.25	119	PKP	PKPdf	22 45 16.9	+0.8
LPAZ				ePKPdf	PKiKP	22 45 17.2	-0.5
LPAZ				SKP		22 48 40.5	
LPAZ	La Paz	135.25	119	PKP	PKPdf	22 45 16.9	+0.8
	comp=Z,3.0nm,0.5s,baz=246,slow=2.3,SNR=12						
LPAZ				SKP		22 48 40.5	
	comp=Z,4.9nm,1.0s,baz=322,slow=1.4,SNR=6.5						
CPUP	Villa Florida	138.08	139	PKP	PKPdf	22 45 20.8	+0.4
CPUP				SKP		22 48 46.8	
CPUP	Villa Florida	138.08	139	PKP	PKPdf	22 45 20.8	+0.4
	comp=Z,1.1nm,0.6s,baz=235,slow=2.1,SNR=5.3						
CPUP				SKP		22 48 46.8	
	comp=Z,0.8nm,0.6s,baz=177,slow=4.7,SNR=3.2						
ESDC	Sonseca Array	138.99	331	PKP	PKPdf	22 45 22.0	+0.2
ESDC				PP	PP	22 48 14.0	-0.3
ESDC				SKPbc	SKPbc	22 48 46.0	-0.5
ESDC	Sonseca Array	138.99	331	PKP	PKPdf	22 45 22.0	+0.2
	comp=Z,0.2nm,0.3s,baz=3.3,slow=3.1,SNR=3.1						
ESDC				PP	PP	22 48 14.0	-0.3
	comp=Z,0.2nm,0.4s,baz=25,slow=6.9,SNR=5.4						
ESDC				SKPbc	SKPbc	22 48 46.0	-0.5
	comp=Z,2.5nm,1.0s,baz=29,slow=3.7,SNR=8.6						
MVO	Moncorvo	139.16	335	ePP	SKPbc	22 48 49.6	+2.7
POLO	Lamas de Olo	139.29	336	ePP	SKPbc	22 48 48.4	+1.1
PVIS	Viseu	139.89	336	ePP	SKPbc	22 48 49.9	+1.0
MTE	Manteigas	140.01	335	ePP	SKPbc	22 48 49.9	+0.7
PCBR	Castelo Branco	140.45	335	ePP	SKPbc	22 48 51.7	+1.4
PMRV	Marv??o	140.75	334	ePP	SKPbc	22 48 52.5	+1.3
PTOM	Tomar	141.03	335	ePP	SKPbc	22 48 53.8	+2.0
PMTG	Montargil	141.41	335	ePP	SKPbc	22 48 53.8	+1.0
SIV	San Ignacio	141.43	123	PKPpre	PKPpre	22 45 19.8	
SIV				SKPbc	SKPbc	22 48 53.4	-0.2
SIV	San Ignacio	141.43	123	PKhKP	PKPpre	22 45 19.8	
	comp=Z,1.9nm,0.5s,baz=254,slow=5.3,SNR=9.8						
SIV				SKPbc	SKPbc	22 48 53.4	-0.2
	comp=Z,2.4nm,0.7s,baz=316,slow=2.9,SNR=4.5						
PBEJ	Beja	142.12	333	ePP	SKPbc	22 48 54.8	+0.1
PNCL	Nicolau / Gran	142.34	334	ePP	SKPbc	22 48 56.9	+1.7
SAML	Samuel	142.51	111	ePKPdf	PKPdf	22 45 23.7	-5.0
SAML				epPKPdf	pPKPdf	22 45 55.0	-4.9
PCVE	Castro Verde	142.52	333	ePP	SKPbc	22 48 57.2	+1.5
PVAQ	Vaqueiros	142.57	333	ePP	SKPbc	22 48 54.2	-1.6
TAM	Tamanrasset	142.88	302	ePKIKP	PKPdf	22 45 25.6	-3.7
TAM	Tamanrasset	142.88	302	ePKPdf	PKPdf	22 45 25.6	-3.7
TAM				epPKPdf	pPKPdf	22 46 02.5	+2.0
PHG	Guadaloupe-2	145.31	69	eP	PKPab	22 45 34.3	+0.4
SPB	Sao Paulo	146.08	147	ePKPdf	PKPdf	22 45 34.3	-0.4
SPB				epPKPdf	pPKPdf	22 46 02.5	-3.4
TOA0	Torodi Ar. Sit	149.40	288	ePKPdf	PKPdf	22 45 40.7	+0.3
TOA0				ePKPbc	PKPbc	22 45 44.5	-0.4
TORD	Torodi Ar. Bea	149.40	288	PKP	PKPdf	22 45 39.8	-0.6
TORD				PKPbc	PKPbc	22 45 43.9	-1.0
TORD				pPKP	pPKPdf	22 46 11.2	-0.4
TORD				SKPbc		22 49 10.4	
TORD	Torodi Ar. Bea	149.40	288	PKP	PKPdf	22 45 39.8	-0.6
	comp=Z,31nm,1.1s,baz=70,slow=1.3,SNR=9.2						
TORD				PKPbc	PKPbc	22 45 43.9	-1.0
	comp=Z,40nm,1.0s,baz=36,slow=2.3,SNR=101						
TORD				pPKP	pPKPdf	22 46 11.2	-0.4
	comp=Z,14nm,0.8s,baz=68,slow=2.2,SNR=4.5						
TORD				SKPbc		22 49 10.4	
	comp=Z,2.1nm,0.9s,baz=166,slow=2.1,SNR=4.0						
BDFB	Brasilia	151.72	136	PKP	PKPdf	22 45 44.6	+0.5
BDFB				PKPbc	PKPbc	22 45 49.9	-0.6
BDFB				PKPab	PKPab	22 45 58.9	-0.7
BDFB	Brasilia	151.72	136	PKP	PKPdf	22 45 44.6	+0.5
	comp=Z,3.0nm,0.9s,baz=110,slow=7.2,SNR=3.6						
BDFB				PKPbc	PKPbc	22 45 49.9	-0.6
	comp=Z,5.1nm,0.5s,baz=294,slow=1.3,SNR=8.8						
BDFB				PKPab	PKPab	22 45 58.9	-0.7
	comp=Z,5.8nm,0.7s,baz=136,slow=2.2,SNR=6.7						
DBIC	Dimbokro	156.74	276	PKPab	PKPab	22 46 19.9	-1.1
DBIC	Dimbokro	156.74	276	PKPbc	PKPdf	22 46 00.3	+9.3
	comp=Z,4.5nm,1.0s,baz=103,slow=6.2,SNR=2.9						
DBIC				PKPab	PKPab	22 46 19.9	-1.1
	comp=Z,5.9nm,0.8s,baz=85,slow=5.4,SNR=4.4						

AUST ***05*** *22:47:45.2±5.0, 17°.56S×174°.47W, h73km, Error ellipse: s-maj=2.7km s-min=1.5km az=256.0*

ISCJB ***05*** *22:47:46.4±1.0, 17°.60S±0°.06×174°.39W±0°.06, h109km±9km, mb4.7/37, Error ellipse: s-maj=11.2km s-min=7.4km az=144.7*

BJI ***05*** *22:47:48.6, 17°.50S×174°.40W, h110km, mB5.1/8, mb4.9/12*

NEIC ***05*** *22:47:51.5±0.3, 17°.61S×174°.44W, mb4.6/12, Error ellipse: s-maj=10.1km s-min=6.6km az=146.0*

IDC ***05*** *22:47:52.1±0.6, 17°.63S×174°.41W, h147km±5km, mb4.1/15, mb1 4.2/17, mb1mx4.1/25, mbtmp4.1/17, MS3.5/3, Ms1 3.5/3, ms1mx3.1/32, Error ellipse: s-maj=15.7km s-min=10.9km az=129.0*

SZGRF ***05*** *22:47:55.2, 17°.04S×173°.71W, h154km, Tonga Islands*

ISC 05 22:47:51.6±0.4**, 17°.73S**±0°.07×**174°.39W**±0°.07**, h142**km±3km**, h141**km**:pP-P, n144,** σ1s**43**/172**, mb4.6**/37**, 11C-5D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	4.44	108	P	Pn	22 48 53.5	-4.0
	baz=4.6,SNR=47						
NIUE				S	Sn	22 49 41.3	-7.5
	baz=4.6,SNR=10						
AFI	Afiamalu	4.56	34	ePn	Pn	22 48 52.0	-7.2
AFI				eSn	Sn	22 49 37.0	-15
AFI				S		22 49 37.4	
AFI	Afiamalu	4.56	34	P	Pn	22 48 52.1	-7.2
	45nm,0.3s,baz=54,slow=1.9,SNR=20						
AFI				S	Sn	22 49 37.4	-14
	331nm,0.3s,baz=45,slow=23,SNR=21						
MSVF	Nonsavu	7.20	269	ePn	Pn	22 49 32.6	-1.9
RAR	Rarotonga	14.21	106	eP	Pn	22 51 07.3	+0.7
RAR	Rarotonga	14.21	106	P	Pn	22 51 06.5	-0.1
	4.9nm,0.3s,baz=271,slow=4.3,SNR=5.3						
DZM	Mont Dzumac	18.53	253	eP	Pn	22 51 59.2	-0.2
DZM	Mont Dzumac	18.53	253	P	Pn	22 51 58.7	-0.6
DZM	Mont Dzumac	18.53	253	P	Pn	22 51 58.7	-0.6
	0.9nm,0.3s,baz=76,slow=20,SNR=7.0						
DZM				LR	LR	22 57 08.5	
	comp=Z,172nm,19.3s,baz=74,slow=30						
URZ	Urewera	21.76	198	eP	P	22 52 31.6	-0.3
	70nm,1.5s						
URZ				S	S	22 56 21.8	-1.6
URZ	Urewera	21.76	198	P	P	22 52 32.3	+0.3
	18nm,0.3s,baz=0.5,slow=2.5,SNR=20						
URZ				S	S	22 56 21.8	-1.6
	8.6nm,0.8s,baz=132,slow=19,SNR=3.1						
HNR	Honiara	26.25	285	LR	LR	23 01 24.0	
	comp=Z,104nm,21.8s,baz=82,slow=31						
RPZ	Rata Peaks	28.67	202	P	P	22 53 36.8	+1.7
RPZ	Rata Peaks	28.67	202	P	P	22 53 36.8	+1.7
	16nm,0.8s,baz=3.8,slow=11,SNR=5.1						
ARMA	Armidale	33.36	241	P	P	22 54 18.2	+1.6
	baz=33,SNR=6.2						
CMSA	Cobar Meteorol	38.58	241	P	P	22 55 00.7	-0.2
	baz=39,SNR=17						
QLP	Quilpie	39.18	250	P	P	22 55 05.7	-0.2
	baz=39,SNR=11						
MTSU	Mount Surprise	39.23	263	P	P	22 55 05.6	-0.9
	baz=39,SNR=5.7						
COEN	Coen	40.93	269	eP	P	22 55 20.5	-0.1
	729nm,2.0s						
COEN	Coen	40.93	269	P	P	22 55 20.4	-0.1
	baz=41,SNR=12						
STKA	Stephens Creek	42.08	242	eP	P	22 55 29.5	-0.1
STKA	Stephens Creek	42.08	242	P	P	22 55 29.1	-0.5
	12nm,0.9s,baz=88,slow=9.0,SNR=22						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.08**	**242**	P	**P**	**22 55 29.8**	**+0.1**
	baz=42,SNR=10						
MIDW	**Midway**	**45.77**	**356**	*e*P	**P**	**22 55 57.1**	**-1.9**
	438nm,1.8s						
BBOO	**Buckleboo**	**46.84**	**241**	*e*P	**P**	**22 56 06.9**	**-0.6**
	291nm,0.8s						
BBOO	**Buckleboo**	**46.84**	**241**	P	**P**	**22 56 06.8**	**-0.7**
	baz=47,SNR=22						
WRAB	**Tennant Creek**	**48.41**	**259**	*e*P	**P**	**22 56 17.9**	**-1.9**
	12nm,0.9s						
WRA	**Warramunga Arr**	**48.42**	**259**	P	**P**	**22 56 18.3**	**-1.6**
WRA	**Warramunga Arr**	**48.42**	**259**	P	**P**	**22 56 18.3**	**-1.6**
	8.8nm,0.7s,baz=95,slow=7.0,SNR=58						
AS31	**Alice Springs**	**48.52**	**254**	*e*P	**P**	**22 56 19.9**	**-0.7**
ASAR	**Alice Springs**	**48.52**	**254**	P	**P**	**22 56 20.0**	**-0.6**
ASAR	**Alice Springs**	**48.52**	**254**	P	**P**	**22 56 20.0**	**-0.6**
	81nm,0.7s,baz=88,slow=8.4,SNR=647						
KDU	**Kakadu**	**51.39**	**268**	P	**P**	**22 56 41.5**	**-0.8**
	baz=51,SNR=4.9						
MTN	**Manton Dam**	**52.63**	**267**	P	**P**	**22 56 50.6**	**-0.9**
	baz=52,SNR=4.0						
FORT	**Forrest**	**53.54**	**245**	*e*P	**P**	**22 56 56.5**	**-1.4**
	20nm,0.6s						
FORT	**Forrest**	**53.54**	**245**	P	**P**	**22 56 56.9**	**-1.1**
	baz=54,SNR=9.1						
FITZ	**Fitzroy Crossi**	**56.83**	**260**	P	**P**	**22 57 22.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**56.83**	**260**	P	**P**	**22 57 22.0**	**+0.2**
	1.0nm,0.3s,baz=87,slow=9.2,SNR=8.0						
FITZ	**Fitzroy Crossi**	**56.83**	**260**	P	**P**	**22 57 22.6**	**+0.9**
	baz=57,SNR=4.8						
VNDA	**Vanda**	**60.97**	**186**	*e*P	**P**	**22 57 51.3**	**+2.0**
VNDA	**Vanda**	**60.97**	**186**	P	**P**	**22 57 51.0**	**+1.6**
	1.9nm,0.7s,baz=2.0,slow=8.1,SNR=11						
MEEK	**Meekatharra**	**62.07**	**249**	P	**P**	**22 57 56.6**	**-1.1**
	baz=62,SNR=5.8						
KLBR	**Kellerberrin**	**62.33**	**243**	P	**P**	**22 57 58.6**	**-0.6**
	baz=62,SNR=9.8						
BLDU	**Ballidu**	**63.31**	**244**	P	**P**	**22 58 05.1**	**-0.7**
	baz=63,SNR=11						
MJAR	**Matsushiro Arr**	**70.12**	**321**	P	**P**	**22 58 47.2**	**-1.4**
MJAR	**Matsushiro Arr**	**70.12**	**321**	P	**P**	**22 58 47.2**	**-1.4**
	2.7nm,0.9s,baz=166,slow=7.6,SNR=6.2						
QSPA	**South Pole Qui**	**72.32**	**180**	P	**P**	**22 59 02.5**	**+0.8**
QSPA	**South Pole Qui**	**72.32**	**180**	P	**P**	**22 59 02.5**	**+0.8**
	4.6nm,0.8s,baz=22,slow=2.8,SNR=11						
ASAJ	**Asahikawa**	**73.03**	**329**	P	**P**	**22 59 06.2**	**+0.4**
ASAJ	**Asahikawa**	**73.03**	**329**	P	**P**	**22 59 06.2**	**+0.4**
	2.6nm,0.5s,baz=114,slow=20,SNR=5.2						
BEKR	**Beckworth**	**76.26**	**40**	*e*P	**P**	**22 59 23.4**	**-1.5**
KSM	**Kuching**	**76.47**	**276**	*e*P	**P**	**22 59 27.3**	**+0.9**
	27nm,1.1s						
KSM	**Kuching**	**76.47**	**276**	P	**P**	**22 59 28.0**	**+1.6**
	baz=76,SNR=7.8						
NVAR	**Mina Array Bea**	**76.69**	**42**	P	**P**	**22 59 27.0**	**-0.4**
NVAR				pP	**pP**	**23 00 02.8**	**+0.2**
NVAR	**Mina Array Bea**	**76.69**	**42**	P	**P**	**22 59 27.0**	**-0.4**
	2.4nm,0.8s,baz=224,slow=9.0,SNR=13						
NVAR				pP	**pP**	**23 00 02.8**	**+0.2**
	1.3nm,0.8s,baz=234,slow=8.3,SNR=2.2						
KSRS	**Korea Array**	**77.17**	**316**	P	**P**	**22 59 30.6**	**+0.8**
	1.6nm,0.7s,baz=132,slow=6.3,SNR=12						
KSRS				LR	LR	23 28 08.3	
	comp=Z,29nm,21.1s,baz=197,slow=31						
KSAR	**Wonju Array Be**	**77.19**	**316**	P	**P**	**22 59 30.6**	**+0.7**
XMIS	**Christmas Isla**	**77.40**	**263**	P	**P**	**22 59 33.1**	**+1.4**
	baz=77,SNR=3.1						
CCUT	**Cedar City**	**79.44**	**45**	*e*P	**P**	**22 59 42.5**	**-0.1**
	25nm,2.3s						
MDJ	**Mudanjiang**	**80.30**	**323**	P	**P**	**22 59 47.7**	**+1.0**
MDJ				pP	pP	23 00 16.2	-6.0
MDJ				PP	**PP**	**23 02 51.3**	**-0.4**
MDJ				S	**S**	**23 09 44.5**	**+4.0**
MDJ				sS	sS	23 10 32.5	-9.2
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,69nm,10.3s						
NJ2	**Nanjing**	**80.82**	**308**	*e*P	**P**	**22 59 49.5**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BMRM	**Bremner River**	**82.00**	**14**	*e*P	**P**	**22 59 54.5**	**-1.0**
	comp=Z,17nm,1.4s						
PNL	**Peninsula**	**82.22**	**17**	*e*P	P	22 59 52.7	-3.9
	comp=Z,13nm,0.8s						
TXAR	**Lajitas Array**	**82.69**	**56**	P	**P**	**22 59 59.4**	**-0.5**
TXAR				pP	**pP**	**23 00 35.9**	**+0.4**
TXAR	**Lajitas Array**	**82.69**	**56**	P	**P**	**22 59 59.4**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=224,slow=3.8,SNR=3.5						
TXAR				pP	**pP**	**23 00 35.9**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=207,slow=8.1,SNR=4.0						
PV04	**Paradox Valley**	**82.91**	**46**	*e*P	**P**	**23 00 00.5**	**-0.4**
ANMO	**Albuquerque**	**83.02**	**50**	*e*P	**P**	**23 00 01.3**	**-0.2**
	comp=Z,7.6nm,1.3s						
TRF	**Thorofare Moun**	**83.08**	**11**	*e*P	**P**	**22 59 58.8**	**-2.3**
	comp=Z,6.1nm,0.8s						
MCK	**McKinley**	**83.58**	**11**	*e*P	**P**	**23 00 02.5**	**-1.0**
	comp=Z,8.7nm,0.8s						
DOT	**Dot Lake**	**84.48**	**13**	*e*P	**P**	**23 00 07.4**	**-0.7**
	comp=Z,5.2nm,0.8s						
PDAR	**Pinedale Array**	**84.63**	**42**	P	**P**	**23 00 09.1**	**-0.5**
PDAR				pP	**pP**	**23 00 45.1**	**-0.2**
PDAR	**Pinedale Array**	**84.63**	**42**	P	**P**	**23 00 09.1**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=221,slow=3.3,SNR=17						
PDAR				pP	**pP**	**23 00 45.1**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=225,slow=3.4,SNR=2.8						
COLA	**College**	**84.82**	**11**	*e*P	**P**	**23 00 07.8**	**-1.9**
	comp=Z,8.8nm,0.8s						
MAW	**Mawson**	**85.29**	**199**	P	**P**	**23 00 12.6**	**+0.5**
MAW	**Mawson**	**85.29**	**199**	P	**P**	**23 00 12.6**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=122,slow=5.9,SNR=3.7						
GYA	**Guiyang**	**88.30**	**298**	*e*P	**P**	**23 00 27.8**	**+0.1**
GYA				pP	**pP**	**23 00 58.9**	**-4.8**
GYA				sP	sP	23 01 11.3	-7.3
GYA				S	**S**	**23 11 02.8**	**+1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**89.92**	**313**	⇑*i*P	**P**	**23 00 35.8**	**+0.9**
HHC				pP	pP	23 01 01.7	-9.3
HHC				sP	sP	23 01 12.2	-14
HHC				PP	**PP**	**23 04 12.0**	**+2.1**
HHC				SKS	**SKSac**	**23 10 55.8**	**+3.2**
HHC				S	**ScS**	**23 11 18.2**	**-1.2**
HHC				sS	sS	23 12 03.0	-15
HHC				SS	**SS**	**23 17 22.0**	**+4.8**
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,5.6s						
HHC				LR	LR		
	comp=N,240nm,20.8s						
HHC				LR	LR		
	comp=E,150nm,21.8s						
HHC				LR	LR		
	comp=Z,130nm,20.8s						
KMI	**Kunming**	**91.18**	**296**	P	**P**	**23 00 39.3**	**-2.0**
KMI				pP	pP	23 01 11.7	-5.7
KMI				sP	sP	23 01 27.1	-5.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.5s						
CMAR	**Chiang Mai Arr**	**92.44**	**288**	P	**P**	**23 00 47.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**92.44**	**288**	P	**P**	**23 00 47.5**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=100,slow=3.4,SNR=6.8						
YKA	**Yellowknife Ar**	**92.61**	**24**	P	**P**	**23 00 45.8**	**-0.9**
YKA	**Yellowknife Ar**	**92.61**	**24**	P	**P**	**23 00 45.7**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=233,slow=4.0,SNR=8.2						
LZH	**Lanzhou**	**93.84**	**307**	*e*P	**P**	**23 00 55.0**	**+1.7**
LZH				pP	**pP**	**23 01 25.5**	**-3.9**
LZH				sP	sP	23 01 37.0	-7.3
LZH				pmax	pmax		
	comp=Z,20nm,1.6s						
MKAR	**Makanchi Array**	**111.77**	**314**	PKiKP	**PKiKP**	**23 06 08.3**	**-1.3**
MKAR				*e*		23 06 48.8	
MKAR	**Makanchi Array**	**111.77**	**314**	PKiKP	**PKiKP**	**23 06 08.3**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=54,slow=2.3,SNR=5.4						
MKAR				pPKiKP	**pPKiKP**	**23 06 48.8**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=98,slow=2.9,SNR=3.2						
KURK	**Kurchatov**	**114.25**	**318**	PKiKP	PKPdf	23 06 13.1	-1.1
KURBB	**Kurchatov Arra**	**114.31**	**318**	PKiKP	PKPdf	23 06 13.1	-1.2
	comp=Z,0.3nm,0.6s,baz=77,slow=1.2,SNR=4.9						
KSH	**Kashi**	**116.08**	**306**	*e*PKP	PKPdf	23 06 24.9	+6.6
KSH				*e*sPKP		23 07 02.1	
KSH				AMB	AMB		
	comp=Z,220nm,4.8s						
KSH				LR	LR		
	comp=N,370nm,9.7s						
KSH				LR	LR		
	comp=E,290nm,12.2s						
KSH				LR	LR		
	comp=Z,260nm,8.4s						
BVAR	**Borovoye Array**	**119.12**	**321**	PKP	**PKPdf**	**23 06 22.0**	**-1.5**
BVAR				pPKP	**pPKPdf**	**23 07 03.2**	**+1.9**
BVAR	**Borovoye Array**	**119.12**	**321**	PKP	**PKPdf**	**23 06 22.0**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=80,slow=1.7,SNR=7.2						
BVAR				pPKP	**pPKPdf**	**23 07 03.2**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=101,slow=1.5,SNR=3.4						
ARCES	**ARCESS Array B**	**126.77**	**351**	PKP	**PKPdf**	**23 06 36.8**	**-1.0**
ARCES	**ARCESS Array B**	**126.77**	**351**	PKP	**PKPdf**	**23 06 36.8**	**-1.0**
	comp=Z,2.2nm,0.7s,baz=30,slow=0.8,SNR=13						
KMBO	**Kilima Mbogo**	**143.64**	**242**	PKP	PKPbc	23 07 09.2	+0.4
KMBO	**Kilima Mbogo**	**143.64**	**242**	PKP	PKPbc	23 07 09.2	+0.4
	comp=Z,2.2nm,0.9s,baz=183,slow=7.5,SNR=6.6						
NRDL	**Niedersach Rie**	**145.13**	**355**	*e*PKPbc	**PKPbc**	**23 07 11.6**	**-0.2**
KWP	**Kalwaria Pacla**	**145.32**	**340**	⇑*i*P	**PKPdf**	**23 07 12.0**	**-0.5**
KWP	**Kalwaria Pacla**	**145.32**	**340**	*e*PKP	**PKPdf**	**23 07 12.0**	**-0.5**
CLZ	**Clausthal**	**145.76**	**355**	*e*PKPbc	**PKPbc**	**23 07 14.0**	**+0.1**
CLL	**Collm**	**145.99**	**352**	*e*PKPbc	**PKPbc**	**23 07 14.4**	**-0.2**
CLL	**Collm**	**145.99**	**352**	⇑*i*PKPbc	**PKPdf**	**23 07 13.9**	**+0.3**
	comp=Z,19nm,1.0s						
CLL				*i* (PKiKP)		23 07 19.0	
CLL				*e*pPKiKP	**pPKiKP**	**23 07 53.0**	**-2.5**
BUR08	**Bucovina Ar. S**	**146.12**	**336**	*e*PKP	**PKPbc**	**23 07 15.1**	**-0.2**
BURAR	**Bucovina Array**	**146.14**	**336**	⇓*i*P	**PKPab**	**23 07 15.8**	**-0.4**
NEUB	**Neuenburg**	**146.24**	**353**	*e*PKPbc	**PKPbc**	**23 07 15.5**	**+0.2**
BRG	**Berggiesshubel**	**146.27**	**350**	*e*PKP	**PKPbc**	**23 07 14.8**	**-0.7**
	comp=Z,19nm,1.6s						
BRG				*e*		23 07 56.2	
	comp=Z,4.5nm,1.0s						
BRG	**Berggiesshubel**	**146.27**	**350**	*e*PKPbc	**PKPbc**	**23 07 15.5**	**0.0**
BRG				*e*pPKPbc	pPKPbc	23 07 55.9	+3.1
FBE	**Freiberg**	**146.32**	**351**	*e*PKPbc	**PKPbc**	**23 07 15.9**	**+0.3**
FBE				*e*pPKPbc	pPKPbc	23 07 56.3	+3.4
DPC	**Dobruska-Polom**	**146.34**	**348**	*e*PKP	**PKPbc**	**23 07 15.8**	**0.0**
DPC				*e*pPKP	**pPKPdf**	**23 07 56.3**	**+4.1**
OKC	**Ostrava-Krasne**	**146.42**	**345**	*e*PKP	**PKPbc**	**23 07 15.4**	**-0.5**
PVCC	**Panska Ves**	**146.50**	**350**	*e*PKP	**PKPbc**	**23 07 16.1**	**0.0**
PVCC				*e*pPKP	**pPKPdf**	**23 07 55.8**	**+3.4**
CFR	**Carcaliu**	**146.79**	**330**	⇑*i*P	**PKPbc**	**23 07 17.3**	**+0.2**
MOX	**Moxa**	**146.82**	**353**	*e*PKPbc	**PKPbc**	**23 07 17.1**	**+0.1**
VRI	**Vrincioaia**	**146.91**	**333**	⇑*i*P	**PKPbc**	**23 07 17.3**	**-0.2**
WERD	**Werda**	**146.93**	**352**	*e*PKPbc	**PKPbc**	**23 07 17.5**	**+0.1**
TANN	**Tannenbergstha**	**146.94**	**352**	*e*PKPbc	**PKPbc**	**23 07 17.5**	**0.0**
GUNZ	**Gunzen**	**147.00**	**352**	*e*PKPbc	**PKPbc**	**23 07 17.8**	**+0.2**
PRU	**Pruhonice**	**147.03**	**349**	*e*PKP	**PKPbc**	**23 07 17.6**	**0.0**
PRU				*e*pPKP	**pPKPdf**	**23 07 57.9**	**+4.6**
WERN	**Wernitzgruen**	**147.07**	**352**	*e*PKPbc	**PKPbc**	**23 07 18.1**	**+0.3**
NKC	**Novy Kostel**	**147.12**	**352**	*e*PKP	**PKPbc**	**23 07 17.3**	**-0.6**
NKC				*e*pPKP	**pPKPdf**	**23 07 58.3**	**+4.9**
TIRR	**Tirgusor**	**147.19**	**329**	⇓*i*P	**PKPbc**	**23 07 18.3**	**+0.1**
BRTR	**Keskin Array B**	**147.30**	**318**	PKPbc	**PKPbc**	**23 07 17.9**	**-1.1**
BRTR				pPKPbc	**pPKPbc**	**23 07 57.0**	**+0.6**
BRTR	**Keskin Array B**	**147.30**	**318**	PKPbc	**PKPbc**	**23 07 17.9**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=143,slow=3.2,SNR=11						
BRTR				pPKPbc	**pPKPbc**	**23 07 57.0**	**+0.6**
	comp=Z,0.2nm,0.4s,baz=34,slow=33,SNR=3.0						
MANZ	**Manzenberg**	**147.40**	**352**	*e*PKPbc	**PKPbc**	**23 07 19.0**	**+0.3**
TNS	**Taunus Mts**	**147.51**	**357**	*e*PKPbc	**PKPbc**	**23 07 19.1**	**+0.1**
MLR	**Muntele Rosu**	**147.54**	**333**	⇓*i*P	**PKPbc**	**23 07 19.1**	**-0.3**
ROTZ	**Rotzenmuhle**	**147.60**	**352**	*e*PKPbc	**PKPbc**	**23 07 19.7**	**+0.5**
ROTZ				*e*pPKPbc	**pPKPbc**	**23 07 59.4**	**+2.7**
KHC	**Kasperske Hory**	**148.02**	**350**	*e*PKPdf	**PKPdf**	**23 07 16.8**	**-0.3**
KHC				*e*PKPbc	**PKPbc**	**23 07 20.1**	**-0.3**
KHC	**Kasperske Hory**	**148.02**	**350**	*e*PKP	**PKPbc**	**23 07 20.3**	**-0.1**
KHC				*e*pPKP	**pPKPdf**	**23 07 59.7**	**+4.7**
WLF	**Walferdange**	**148.15**	**359**	PKPbc	**PKPbc**	**23 07 21.1**	**+0.5**
WLF	**Walferdange**	**148.15**	**359**	*e*PKPbc	**PKPbc**	**23 07 21.3**	**+0.6**
GEC2	**GERESS Array S**	**148.28**	**350**	*e*PKPbc	**PKPbc**	**23 07 21.2**	**0.0**
GEC2				*e*pPKPbc	**pPKPbc**	**23 08 01.0**	**+2.3**
GERES	**GERESS Array B**	**148.28**	**350**	PKPbc	**PKPbc**	**23 07 20.6**	**-0.5**
GERES				pPKPbc	**pPKPbc**	**23 07 58.9**	**+0.2**
GERES	**GERESS Array B**	**148.28**	**350**	PKPbc	**PKPbc**	**23 07 20.6**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=2.9,slow=2.7,SNR=15						
GERES				pPKPbc	**pPKPbc**	**23 07 58.9**	**+0.2**
	comp=Z,3.0nm,1.0s,baz=38,slow=2.4,SNR=4.4						
CONA	**Conrad Observa**	**148.74**	**347**	⇑*i*PKiKP	**PKPbc**	**23 07 22.1**	**-0.2**
	comp=Z,14nm,1.4s						
CONA				⇑*i*pPKiKP	**pPKiKP**	**23 08 00.2**	**-1.3**
	comp=Z,7.1nm,1.2s						
STU	**Stuttgart**	**148.90**	**355**	*e*PKPbc	**PKPbc**	**23 07 23.0**	**+0.4**
FUR	**Furstenfeldbru**	**149.30**	**353**	*e*PKPbc	**PKPbc**	**23 07 23.7**	**0.0**
BFO	**Black Forest**	**149.40**	**356**	*e*PKPbc	**PKPbc**	**23 07 23.9**	**0.0**
BFO				*e*pPKPbc	**pPKPbc**	**23 08 03.8**	**+2.3**
RJOB	**Jochberg**	**149.50**	**350**	*e*PKPbc	**PKPbc**	**23 07 24.2**	**0.0**
DAVA	**Damuels**	**150.32**	**354**	⇑*i*PKiKP	**PKPbc**	**23 07 25.8**	**-0.5**
	comp=Z,6.3nm,0.8s						
DAVA				⇓*i*pPKiKP	**pPKiKP**	**23 08 05.0**	**+0.2**
	comp=Z,7.3nm,0.8s						
FETA	**Feichten**	**150.49**	**353**	⇑*i*PKiKP	**PKPbc**	**23 07 26.3**	**-0.5**
	comp=Z,6.6nm,0.9s						
FETA				⇑*i*pPKiKP	**pPKiKP**	**23 08 05.0**	**-0.2**
	comp=Z,9.5nm,1.2s						
ABTA	**Abfaltersbach**	**150.51**	**350**	⇑*i*PKPbc	**PKPbc**	**23 07 25.6**	**-1.1**
	comp=Z,7.7nm,0.7s						
ABTA				⇓*i*pPKiKP	**pPKiKP**	**23 08 04.0**	**-1.2**
	comp=Z,8.4nm,0.8s						
ESDC	**Sonseca Array**	**156.61**	**19**	PKPab	**PKPab**	**23 07 59.8**	**+0.1**
ESDC	**Sonseca Array**	**156.61**	**19**	PKPab	**PKPab**	**23 07 59.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=333,slow=2.9,SNR=2.9						
TORD	**Torodi Ar. Bea**	**174.08**	**140**	PKP	**PKPdf**	**23 07 43.4**	**-1.8**
TORD	**Torodi Ar. Bea**	**174.08**	**140**	PKP	**PKPdf**	**23 07 43.4**	**-1.8**
	comp=Z,1.1nm,0.9s,baz=14,slow=1.7,SNR=5.6						

WEL 05 22:48:05.3±0.7**, 38°.55S**×**175°.75E, h160**^{km}±5^{km}**, ML3.5**/10**, 3C-2D, Error ellipse: s-maj=4.4km s-min=4.1km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRVZ	**Turoa**	**0.77**	**192**	PN	Pn	22 48 29.6	0.0
PKVZ	**Pokaka**	**0.81**	**203**	PN	Pn	22 48 29.5	-0.1
BKZ	**Black Stump Fm**	**0.85**	**137**	SN	Sn	22 48 47.5	-1.4
MOVZ	**Moawhango**	**0.86**	**180**	⇑PN	Pn	22 48 29.8	-0.3
MCHZ	**McNeill Hill**	**1.16**	**141**	PN	Pn	22 48 33.3	+0.8
MCHZ				SN	Sn	22 48 53.7	+0.3
WAZ	**Wanganui**	**1.35**	**206**	PN	Pn	22 48 34.1	-0.1
PNHZ	**Pukenui**	**1.41**	**166**	PN	Pn	22 48 34.7	-0.1
MWZ	**Matawai**	**1.41**	**82**	PN	Pn	22 48 34.2	-0.6
TSZ	**Takapari Road**	**1.52**	**174**	⇑PN	Pn	22 48 35.6	-0.3
KAHZ	**Kahuranaki**	**1.53**	**145**	PN	Pn	22 48 36.3	+0.3
WPHZ	**Waipukurau**	**1.61**	**161**	PN	Pn	22 48 36.6	-0.2
PXZ	**Pawanui**	**1.72**	**150**	⇓PN	Pn	22 48 37.8	-0.1
DVHZ	**Dannevirke**	**1.78**	**170**	PN	Pn	22 48 38.0	-0.7
POWZ	**Post Office Ro**	**1.85**	**180**	PN	Pn	22 48 38.5	-0.8
PRHZ	**Porangahau**	**1.85**	**158**	PN	Pn	22 48 39.2	-0.2
MRZ	**Mangatainoka R**	**2.12**	**183**	⇑PN	Pn	22 48 41.2	-1.2
BFZ	**Birch Farm**	**2.17**	**170**	PN	Pn	22 48 42.1	-0.9
TIWZ	**Tintock**	**2.23**	**177**	PN	Pn	22 48 42.7	-1.0
MXZ	**Matakaoa Point**	**2.25**	**65**	⇓PN	Pn	22 48 43.4	-0.5
OGWZ	**Otaki Gorge**	**2.31**	**191**	PN	Pn	22 48 43.4	-1.2
HOWZ	**Holdsworth Sta**	**2.36**	**184**	PN	Pn	22 48 43.8	-1.5
KIW	**Kapiti Island**	**2.40**	**195**	PN	Pn	22 48 44.1	-1.6
TMWZ	**Te Maipa**	**2.56**	**178**	PN	Pn	22 48 46.1	-1.6
CAW	**Cannon Point**	**2.61**	**191**	PN	Pn	22 48 46.6	-1.7
MTW	**Mount Morrison**	**2.62**	**184**	PN	Pn	22 48 46.5	-1.8
MSWZ	**Moikau Station**	**2.89**	**187**	PN	Pn	22 48 49.5	-2.2
TCW	**Tory Channel**	**2.90**	**203**	PN	Pn	22 48 49.7	-2.0
PLWZ	**Palliser**	**3.04**	**187**	PN	Pn	22 48 51.2	-2.5
TUWZ	**Tuamarina**	**3.20**	**205**	SN	Sn	22 49 30.5	-4.1
NNZ	**Nelson**	**3.23**	**214**	SN	Sn	22 49 31.5	-3.9
KHZ	**Kahutara**	**4.22**	**203**	PN	Pn	22 49 05.9	-2.7
LTZ	**Lake Taylor**	**4.99**	**211**	SN	Sn	22 50 08.6	-7.6
MQZ	**McQueen's Vall**	**5.66**	**203**	SN	Sn	22 50 22.5	-9.5

IDC 05 23:02:52.1±17.0**, 44°.16N**×**148°.76E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/24**, mbtmp3.6**/3**, Error ellipse: s-maj=491.3km s-min=37.4km az=167.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**40.47**	**37**	P	P	23 10 32.8	+0.7
	0.8nm,0.5s,baz=267,slow=7.5,SNR=19						
MKAR	**Makanchi Array**	**45.42**	**298**	P	P	23 11 12.4	0.0
	0.3nm,0.5s,baz=69,slow=7.7,SNR=3.6						
YKA	**Yellowknife Ar**	**54.81**	**34**	P	P	23 12 22.3	-1.0
	0.5nm,0.6s,baz=302,slow=7.2,SNR=9.9						

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*CSEM **05** 23:09:08.6±0.7, 45°.04N×14°.89E, h15^{km}, ML2.5/4, Error ellipse: s-maj=10.6km s-min=5.5km az=169.0*
*VIE **05** 23:09:11.4±0.5, 45°.20N×14°.83E, h8^{km}, mb1.6/1, ML2.0/2, Error ellipse: s-maj=3.0km s-min=2.0km az=174.0 37 km ESE of Rijeka*
*ISCJB **05** 23:09:11.3±0.9, 45°.18N±0°.04×14°.86E±0°.05, h2^{km}±8^{km}, Error ellipse: s-maj=6.9km s-min=5.4km az=7.9*
ISC 05 23:09:09.8±1.3**, 45°.11N**±0°.04×**14°.94E**±0°.04**, h10**^{km}±10^{km}**, n26, σ0^{s}65**/47**, 5C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBRS	**Gornja Briga**	**0.43**	**348**	Sg	**Sg**	**23 09 24.7**	**+0.5**
	11nm,0.1s						
BOJS	**Bojanci**	**0.46**	**29**	*i* Pg	**Pb**	**23 09 19.8**	**-0.2**
BOJS				*i* Sg	**Sb**	**23 09 26.7**	**-0.1**
BOJS							
	comp=Z,24nm,0.2s						
BOJS	**Bojanci**	**0.46**	**29**	*i* Pg	**Pb**	**23 09 19.8**	**-0.2**
BOJS				*i* Sg	**Sb**	**23 09 26.7**	**-0.1**
	comp=Z,24nm,0.2s						
KNDS	**Knezji Dol**	**0.58**	**317**	*i* Pg	**Pg**	**23 09 20.5**	**-0.6**
KNDS				*i* Sg	**Sg**	**23 09 28.8**	**+0.1**
KNDS	**Knezji Dol**	**0.58**	**317**	*i* Pg	**Pg**	**23 09 20.5**	**-0.6**
KNDS				*e*Sg	**Sg**	**23 09 28.8**	**+0.1**
VISS	**Visnje**	**0.70**	**354**	*i* Pg	**Pg**	**23 09 23.3**	**-0.1**
VISS	**Visnje**	**0.70**	**354**	*i* Pg	**Pg**	**23 09 23.3**	**-0.1**
CEY	**Cerknica**	**0.73**	**331**	*i* Pg	**Pg**	**23 09 23.6**	**-0.4**
CEY				*e*Sg	**Sb**	**23 09 35.0**	**+0.3**
CEY	**Cerknica**	**0.73**	**331**	*i* Pg	**Pg**	**23 09 23.6**	**-0.4**
CEY				*e*Sg	**Sb**	**23 09 35.0**	**+0.3**
SKDS	**Skadanscina**	**0.79**	**304**	*i* Pg	**Pg**	**23 09 23.8**	**-1.2**
SKDS	**Skadanscina**	**0.79**	**304**	*i* Pg	**Pg**	**23 09 23.8**	**-1.2**
CRES	**Cresnjev**	**0.81**	**27**	*i* Pg	**Pb**	**23 09 26.3**	**+0.3**
CRES				*i* Sg	**Sb**	**23 09 37.4**	**+0.4**
CRES	**Cresnjev**	**0.81**	**27**	*i* Pg	**Pb**	**23 09 26.3**	**+0.3**
CRES				*e*Sg	**Sb**	**23 09 37.4**	**+0.4**
VOY	**Vojsko**	**1.18**	**322**	*e*Pg	**Pg**	**23 09 34.1**	**+1.5**
VOY				*e*Sg	**Sn**	**23 09 49.3**	**+0.6**
VOY	**Vojsko**	**1.18**	**322**	*e*Pg	**Pg**	**23 09 34.1**	**+1.5**
VOY				*e*Sg	**Sn**	**23 09 49.3**	**+0.6**
SABO	**M.te Sabotino**	**1.28**	**313**	⇓*e*Pg	**Pn**	**23 09 32.7**	**-1.2**
SABO				*e*Sg	**Sg**	**23 09 52.0**	**+0.8**
SABO	**M.te Sabotino**	**1.28**	**313**	⇓*e*Pg	**Pn**	**23 09 32.7**	**-1.2**
SABO				*e*Sg	**Sg**	**23 09 52.0**	**+0.8**
OBKA	**Obir**	**1.43**	**349**	⇑*i*Pg	**Pg**	**23 09 37.6**	**+0.3**
OBKA				⇓*i*Sg	**Sb**	**23 09 55.2**	**+0.2**
	comp=Z,14nm,0.4s						
OBKA	**Obir**	**1.43**	**349**	⇑*i*Pg	**Pg**	**23 09 37.6**	**+0.3**
OBKA				Sg	**Sb**	**23 09 55.2**	**+0.2**
	comp=Z,14nm,0.4s						
SOKA	**Soboth**	**1.57**	**2**	⇑*i*Pg	**Pg**	**23 09 39.9**	**-0.2**
SOKA				⇑*i*Sn	**Sn**	**23 09 58.2**	**-0.2**
SOKA				⇓*i*Sg	**Sg**	**23 10 00.5**	**0.0**
	comp=Z,2.9nm,0.4s						
SOKA	**Soboth**	**1.57**	**2**	⇑*i*Pg	**Pg**	**23 09 39.9**	**-0.2**
SOKA				*i* Sn	**Sn**	**23 09 58.2**	**-0.2**
SOKA				Sg	**Sg**	**23 10 00.5**	**0.0**
	comp=Z,2.9nm,0.4s						
VINO	**Villanova**	**1.64**	**315**	⇓*e*Pg	**Pb**	**23 09 40.3**	**+0.2**
VINO				*e*Sg	**Sg**	**23 10 03.5**	**+1.1**
VINO	**Villanova**	**1.64**	**315**	⇓*e*Pg	**Pb**	**23 09 40.3**	**+0.2**
VINO				*e*Sg	**Sg**	**23 10 03.5**	**+1.1**
ACOM	**Acomizza, Ital**	**1.75**	**326**	*e*Pg	**Pg**	**23 09 43.5**	**0.0**
ACOM	**Acomizza, Ital**	**1.75**	**326**	*e*Pg	**Pg**	**23 09 43.5**	**0.0**
STON	**Ston**	**2.99**	**137**	*e*Pn	**Pb**	**23 10 03.4**	**+0.2**
STON				Sn	**Sb**	**23 10 40.8**	**+1.1**

IDC 05 23:35:28.1±4.3**, 26°.42S**×**177°.69W, h100**^{km}±38^{km}**, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.6**/18**, mbtmp3.7**/5**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.9**/22**, Error ellipse: s-maj=43.0km s-min=33.9km az=38.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.83**	**184**	P	Pn	23 36 11.6	0.0
	86nm,0.3s,baz=72,slow=20,SNR=3.6						
RAO				S	Sn	23 36 52.0	+6.9
	69nm,0.3s,baz=270,slow=20,SNR=5.0						
URZ	**Urewera**	**12.60**	**199**	S	Sn	23 40 30.6	-12
	0.7nm,0.3s,baz=168,slow=19,SNR=4.3						
AFI	**Afiamalu**	**13.62**	**25**	P	Pn	23 38 28.9	-8.3
	2.0nm,0.3s,baz=217,slow=10,SNR=3.2						
AFI				S	Sn	23 40 47.1	-20
	1.8nm,0.3s,baz=53,slow=20,SNR=3.6						
DZM	**Mont Dzumac**	**15.11**	**283**	LR	LR	23 42 43.0	
	comp=Z,82nm,21.2s,baz=55,slow=29						
CTA	**Charters Tower**	**33.65**	**273**	LR	LR	23 51 57.5	
	comp=Z,66nm,21.3s,baz=39,slow=29						
ASAR	**Alice Springs**	**43.75**	**263**	P	P	23 43 23.5	-0.3
	0.9nm,0.7s,baz=94,slow=7.6,SNR=8.0						
ASAR				pP	pP	23 43 53.1	+5.8
	0.7nm,0.7s,baz=102,slow=6.8,SNR=2.4						
WRA	**Warramunga Arr**	**44.37**	**268**	P	P	23 43 28.6	-0.2
	1.0nm,0.7s,baz=105,slow=7.6,SNR=4.0						
WRA				pP	pP	23 43 56.9	+4.6
	1.4nm,0.8s,baz=103,slow=8.0,SNR=4.5						
MJAR	**Matsushiro Arr**	**75.15**	**325**	P	P	23 46 59.6	+0.2
	1.5nm,0.8s,baz=164,slow=5.5,SNR=3.5						
KSRS	**Korea Array**	**81.51**	**319**	P	P	23 47 34.6	+0.3
	1.8nm,0.6s,baz=136,slow=5.5,SNR=10.0						
NB2	**NORSAR Subarra**	**144.86**	**352**	PKP	PKPab	23 54 49.9	-2.2
	comp=Z,1.3nm,0.8s,baz=14,slow=3.5						
NOA	**NORSAR Array B**	**144.86**	**352**	PKP	PKPab	23 54 50.1	-1.9
	comp=Z,1.3nm,0.7s,baz=12,slow=2.4,SNR=4.1						
AKASG	**Malin Array Be**	**148.21**	**327**	PKPbc	PKPbc	23 55 01.4	-0.7
	comp=Z,1.0nm,0.5s,baz=42,slow=4.4,SNR=4.2						
BRTR	**Keskin Array B**	**150.75**	**305**	PKPbc	PKPbc	23 55 09.1	+0.2
	comp=Z,0.2nm,0.5s,baz=117,slow=5.2,SNR=3.7						
BRTR				PKPab	PKPab	23 55 15.6	-0.7
	comp=Z,0.5nm,0.5s,baz=79,slow=3.2,SNR=5.1						
TORD	**Torodi Ar. Bea**	**166.79**	**177**	PKPab	PKPab	23 56 25.7	0.0
	comp=Z,0.3nm,0.9s,baz=201,slow=3.9,SNR=2.5						

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*ISCJB **06** 00:16:57.1±0.6, 21°.11S±0°.06×67°.53W±0°.08, h175^{km}±6^{km}, mb3.8/9, Error ellipse: s-maj=13.5km s-min=8.6km az=145.4*
*IDC **06** 00:16:58.2±1.6, 21°.21S×67°.47W, h171^{km}±15^{km}, mb3.7/9, mb1 3.8/15, mb1mx3.7/20, mbtmp3.6/15, Error ellipse: s-maj=18.8km s-min=13.1km az=59.0*
*GUC **06** 00:16:59.7±0.6, 21°.21S×68°.10W, h206^{km}±7^{km}, ML4.5*
ISC 06 00:16:58.3±0.8**, 21°.12S**±0°.07×**67°.53W**±0°.09**, h171**^{km}±8^{km}**, n26, σ0^{s}97**/29**, mb3.9**/9**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**1.73**	**247**	*e*P	**Pn**	**00 17 32.7**	**+0.7**
PB09				*e*S	**Sn**	**00 17 58.2**	**+0.2**
PB09				AML	AML	00 18 02.1	
	comp=E,2μm,0.4s						
PB01	**Plate Boundary**	**1.83**	**272**	*e*P	**Pn**	**00 17 33.5**	**+0.6**
PB01				*e*S	**Sn**	**00 17 58.8**	**-0.9**
PB01				AML	AML	00 18 02.4	
	comp=N,2μm,0.2s						
LVC	**Limon Verde**	**1.96**	**221**	*e*P	**Pn**	**00 17 34.5**	**0.0**
PB04	**Plate Boundary**	**2.15**	**238**	*e*P	Pn	00 17 42.6	+6.3
PB04				*e*S	Sn	00 18 15.0	+9.2
PB04				AML	AML	00 18 17.8	
	comp=N,876nm,0.1s						
HMBC	**Humberstone**	**2.36**	**290**	*e*P	**Pn**	**00 17 39.2**	**+0.2**
HMBC				*e*S	**Sn**	**00 18 09.5**	**-1.0**
HMBC				AML	AML	00 18 11.0	
	comp=E,4μm,0.3s						
PSGC	**Pisagua**	**2.87**	**302**	*e*P	**Pn**	**00 17 44.6**	**-0.3**
PSGC				*e*S	**Sn**	**00 18 19.3**	**-1.9**
PSGC				AML	AML	00 18 22.4	
	comp=N,2μm,0.7s						
ARCH	**Arica**	**3.69**	**315**	*e*P	**Pn**	**00 17 55.1**	**-0.1**
ARCH				*e*S	**Sn**	**00 18 38.1**	**-1.5**
ARCH				AML	AML	00 18 42.3	
	comp=E,2μm,0.1s						
LPAZ	**La Paz**	**4.84**	**353**	P	**Pn**	**00 18 13.4**	**+2.8**
	comp=E,42nm,0.3s,baz=156,slow=6.9,SNR=660						
SIV	**San Ignacio**	**7.97**	**51**	P	**Pn**	**00 18 50.7**	**-0.7**
	comp=E,7.8nm,0.3s,baz=254,slow=11,SNR=69						
SIV				S	Sn	00 20 08.0	-13
	comp=E,0.7nm,0.3s,baz=257,slow=14,SNR=4.4						
CFAA	**Coronel Fontan**	**10.46**	**183**	P	Pn	00 19 20.9	-3.0
	comp=E,0.3nm,0.3s,baz=9.8,slow=12,SNR=41						
CFAA				S	Sn	00 21 09.4	-11
	comp=E,0.3nm,0.3s,baz=107,slow=22,SNR=6.2						
CPUP	**Villa Florida**	**10.69**	**121**	P	**Pn**	**00 19 26.6**	**-0.3**
	comp=E,1.3nm,0.3s,baz=280,slow=11,SNR=16						

NNA	**Nana**	**12.73**	**314**	P	**Pn**	**00 19 54.4**	**+1.0**
	comp=E,1.3nm,0.3s,baz=133,slow=12,SNR=2.5						
PLCA	**Paso Flores**	**19.72**	**187**	P	**P**	**00 21 13.5**	**-1.1**
	comp=E,0.2nm,0.3s,baz=45,slow=15,SNR=4.4						
TXAR	**Lajitas Array**	**61.07**	**324**	P	**P**	**00 26 55.0**	**+0.7**
	comp=E,0.3nm,0.7s,baz=150,slow=6.3,SNR=3.3						
DBIC	**Dimbokro**	**67.40**	**73**	P	**P**	**00 27 35.1**	**-0.6**
	comp=E,2.4nm,0.6s,baz=165,slow=7.0,SNR=6.0						
PDAR	**Pinedale Array**	**74.44**	**329**	P	**P**	**00 28 18.3**	**+0.5**
	comp=E,0.4nm,0.4s,baz=120,slow=8.6,SNR=6.8						
ULM	**Lac du Bonnet**	**75.36**	**342**	P	**P**	**00 28 21.5**	**-1.1**
	comp=E,0.8nm,0.3s,baz=166,slow=6.0,SNR=3.1						
NVAR	**Mina Array Bea**	**76.00**	**321**	P	**P**	**00 28 27.3**	**+0.4**
	comp=E,0.4nm,0.5s,baz=144,slow=7.8,SNR=2.5						
TORD	**Torodi Ar. Bea**	**76.02**	**70**	P	**P**	**00 28 26.7**	**-0.5**
	comp=E,4.3nm,0.5s,baz=253,slow=5.5,SNR=131						
BOSA	**Boshof**	**82.49**	**118**	P	**P**	**00 29 02.1**	**-0.2**
	comp=E,3.3nm,1.1s,baz=230,slow=5.8,SNR=3.8						
MAW	**Mawson**	**84.32**	**163**	P	**P**	**00 29 10.7**	**0.0**
	comp=E,1.0nm,0.5s,baz=225,slow=4.3,SNR=5.4						
YKA	**Yellowknife Ar**	**91.27**	**340**	P	**P**	**00 29 44.3**	**+0.6**
	comp=E,1.8nm,0.6s,baz=133,slow=4.6,SNR=66						
ASAR	**Alice Springs**	**130.83**	**206**	PKP	**PKPdf**	**00 35 49.8**	**-0.2**
	comp=E,0.4nm,0.4s,baz=76,slow=2.0,SNR=5.7						
WRA	**Warramunga Arr**	**133.92**	**209**	PKP	**PKPdf**	**00 35 56.0**	**+0.1**
	comp=E,0.5nm,0.6s,baz=152,slow=1.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**141.06**	**26**	PKP	**PKPdf**	**00 36 08.9**	**+1.0**
	comp=E,1.3nm,0.5s,baz=283,slow=3.4,SNR=7.2						
MKAR	**Makanchi Array**	**144.57**	**37**	PKP	**PKPdf**	**00 36 14.3**	**-0.1**
	comp=E,2.3nm,0.4s,baz=317,slow=3.4,SNR=50						

*CSEM **06** 00:31:00.9, 42.°29N×13.°50E, h10km, MD1.8/8, After ROM*

ROM 06 00:31:00.9±0.1**, 42.°29N×13.°50E, h10**km±1km**, Md1.8**/8**, Ml1.4**/3**, Error ellipse: s-maj=2.4km s-min=1.7km az=33.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**109**	Pg	Pg	00 31 03.5	+0.4
FAGN				Sg	Sg	00 31 05.0	+0.2
FAGN	**Fagnano**	**0.06**	**109**	Pg	Pg	00 31 03.5	+0.4
FAGN				Sg	Sg	00 31 05.0	+0.2
AQU	**L'Aquila**	**0.10**	**312**	Pg	Pg	00 31 04.1	+0.5
AQU				Sg	Sg	00 31 05.8	+0.3
AQU	**L'Aquila**	**0.10**	**312**	Pg	Pg	00 31 04.1	+0.5
AQU				Sg	Sg	00 31 05.8	+0.3
CAMP	**Campotosto**	**0.26**	**345**	Pg	Pg	00 31 06.4	0.0
CAMP				Sg	Sg	00 31 11.1	+1.1
	23nm,0.6s						
CAMP	**Campotosto**	**0.26**	**345**	Pg	Pg	00 31 06.4	0.0
CAMP				Sg	Sg	00 31 11.1	+1.1
	23nm,0.6s						
VCEL	**Villa Celiera**	**0.27**	**67**	Pg	Pb	00 31 07.9	-0.2
	120nm,1.3s						
VCEL	**Villa Celiera**	**0.27**	**67**	Pg	Pb	00 31 07.9	-0.2
	120nm,1.3s						
PTQR	**Pietraquaria**	**0.28**	**196**	Pg	Pg	00 31 06.6	0.0
	6.0nm,0.8s						
PTQR	**Pietraquaria**	**0.28**	**196**	Pg	Pg	00 31 06.6	0.0
	6.0nm,0.8s						
FIAM	**Fiamignano**	**0.29**	**266**	Pg	Pb	00 31 07.7	-0.6
FIAM				Sg	Sb	00 31 12.4	-0.9
FIAM	**Fiamignano**	**0.29**	**266**	Pg	Pb	00 31 07.7	-0.6
FIAM				Sg	Sb	00 31 12.4	-0.9
NRCA	**Norcia**	**0.62**	**332**	Pg	Pg	00 31 12.9	-0.1
NRCA				Sg	Sb	00 31 22.2	-0.6
NRCA	**Norcia**	**0.62**	**332**	Pg	Pg	00 31 12.9	-0.1
NRCA				Sg	Sb	00 31 22.2	-0.6

MAN 06 00:38:14, 19.°07N×120.°68E, h1km, mb4.7, ML3.6, MS3.6, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.75**	**185**	⇑*i*P	Pg	00 38 28.9	+0.6
PIP				*e*S	Sg	00 38 35.3	-2.8
SIPP	**Brgy, Tapao**	**1.16**	**191**	⇑*e*P	Pg	00 38 35.6	-0.7
SIPP				*e*S	Sg	00 38 50.7	-0.7
ABRA	**Dolores**	**1.42**	**179**	*e*P	Pn	00 38 32.9	-8.0
ABRA				*e*S	Sg	00 38 50.4	-9.2
CAUP	**Cauayan**	**2.38**	**153**	*e*P	Pb	00 38 56.3	-1.4
PALP	**Palanan**	**2.60**	**140**	*e*P	Pb	00 39 00.5	-0.9

*CRAAG **06** 00:57:05.1, 37.°04N×4.°01E, Ml4.0*
*CSEM **06** 00:57:05.8±0.2, 36.°82N×4.°19E, h10km, mb4.1/9, Error ellipse: s-maj=5.9km s-min=5.4km az=36.0*
*MDD **06** 00:57:06.2±0.8, 36.°88N×4.°15E, h0km, mb4.1/9, Error ellipse: s-maj=10.0km s-min=7.2km az=52.0, PRXIMO*

ISC 06 00:57:04.6±1.2**, 36.°89N**±0.°05**×4.°22E**±0.°05**, h13**km**, n41, σ2.°10**/62**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.96**	**265**	P	Pg	00 57 17.0	-6.1
ABA	**Alger-Bouzarea**	**0.96**	**265**	P	Pg	00 57 17.0	-6.1
ABA	**Alger-Bouzarea**	**0.96**	**265**	P	Pg	00 57 17.0	-6.1
SET	**Setif**	**1.17**	**126**	P	**Pn**	**00 57 28.0**	**+1.2**
SET	**Setif**	**1.17**	**126**	P	**Pn**	**00 57 28.0**	**+1.2**
SET	**Setif**	**1.17**	**126**	P	**Pn**	**00 57 28.0**	**+1.2**
EMHD	**Djebel Mahouad**	**1.23**	**237**	P	**Pb**	**00 57 27.6**	**-0.2**
EMHD	**Djebel Mahouad**	**1.23**	**237**	P	**Pb**	**00 57 27.6**	**-0.2**
EMHD	**Djebel Mahouad**	**1.23**	**237**	P	**Pb**	**00 57 27.6**	**-0.2**
EBNR	**Beni Rached**	**2.25**	**255**	P	Pn	00 57 35.0	-6.6
EBNR	**Beni Rached**	**2.25**	**255**	P	Pn	00 57 35.0	-6.6
EIBI	**Ibiza**	**3.12**	**314**	P	**Pn**	**00 57 55.3**	**+1.8**
	6.6nm,0.3s,SNR=7.3						
EIBI				S	**Sn**	**00 58 29.4**	**-1.2**
	5.2nm,0.2s,SNR=6.6						
EIBI	**Ibiza**	**3.12**	**314**	P	**Pn**	**00 57 55.3**	**+1.8**
	6.6nm,0.3s,SNR=7.3						
EIBI				S	**Sn**	**00 58 29.4**	**-1.2**
	5.2nm,0.2s,SNR=6.6						
EBEN	**Beniarda**	**3.96**	**299**	P	**Pn**	**00 58 07.0**	**+1.8**
	0.5nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**00 58 49.7**	**-1.8**
	0.4nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.96**	**299**	P	**Pn**	**00 58 07.0**	**+1.8**
	0.5nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**00 58 49.7**	**-1.8**
	0.4nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**4.46**	**284**	P	**Pn**	**00 58 13.1**	**+1.2**
	0.5nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**4.46**	**284**	P	**Pn**	**00 58 13.1**	**+1.2**
	0.5nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.90**	**305**	P	**Pn**	**00 58 19.8**	**+1.9**
	2.1nm,0.3s,SNR=7.9						
ECHE	**Chera**	**4.90**	**305**	P	**Pn**	**00 58 19.8**	**+1.9**
	2.1nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**4.90**	**293**	P	**Pn**	**00 58 20.1**	**+2.1**
	2.4nm,0.2s,SNR=18						
ETOB				S	**Sn**	**00 59 11.4**	**-3.2**
	1.0nm,0.2s,SNR=6.2						
ETOB	**Tobarra**	**4.90**	**293**	P	**Pn**	**00 58 20.1**	**+2.1**
	2.4nm,0.2s,SNR=18						
ETOB				S	**Sn**	**00 59 11.4**	**-3.2**
	1.0nm,0.2s,SNR=6.2						
EMOS	**Mosqueruela**	**5.05**	**315**	P	**Pn**	**00 58 22.5**	**+2.2**
	0.2nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**00 59 16.5**	**-2.1**
	0.8nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.05**	**315**	P	**Pn**	**00 58 22.5**	**+2.2**
	0.2nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**00 59 16.5**	**-2.1**
	0.8nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.06**	**345**	P	**Pn**	**00 58 21.9**	**+1.6**
	6.7nm,0.2s,SNR=13						
CFON				S	**Sn**	**00 59 16.2**	**-2.4**
	3.8nm,0.3s,SNR=8.4						
CFON	**Fontmartina**	**5.06**	**345**	P	**Pn**	**00 58 21.9**	**+1.6**
	6.7nm,0.2s,SNR=13						
CFON				S	**Sn**	**00 59 16.2**	**-2.4**
	3.8nm,0.3s,SNR=8.4						
ERTA	**Horta de San J**	**5.07**	**324**	P	**Pn**	**00 58 21.9**	**+1.6**
	0.5nm,0.2s,SNR=7.9						
ERTA				S	**Sn**	**00 59 16.9**	**-1.8**
	0.5nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**5.07**	**324**	P	**Pn**	**00 58 21.9**	**+1.6**
	0.5nm,0.2s,SNR=7.9						
ERTA				S	**Sn**	**00 59 16.9**	**-1.8**
	0.5nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.08**	**332**	P	**Pn**	**00 58 22.5**	**+1.9**
	0.3nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**00 59 15.9**	**-3.2**
	0.3nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.08**	**332**	P	**Pn**	**00 58 22.5**	**+1.9**
	0.3nm,0.1s,SNR=7.9						
EPOB				S	**Sn**	**00 59 15.9**	**-3.2**
	0.3nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.44**	**338**	P	**Pn**	**00 58 27.9**	**+2.5**
	3.3nm,0.2s,SNR=9.1						
EMIR				S	**Sn**	**00 59 26.9**	**-0.8**
	1.7nm,0.2s,SNR=5.9						
EMIR	**Miracle**	**5.44**	**338**	P	**Pn**	**00 58 27.9**	**+2.5**
	3.3nm,0.2s,SNR=9.1						
EMIR				S	**Sn**	**00 59 27.0**	**-0.8**
	1.7nm,0.2s,SNR=5.9						
EVIA	**Vianos**	**5.61**	**290**	P	**Pn**	**00 58 29.0**	**+1.2**
	1.1nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**00 59 28.7**	**-3.5**
	0.5nm,0.2s,SNR=4.0						
EVIA	**Vianos**	**5.61**	**290**	P	**Pn**	**00 58 29.0**	**+1.2**
	1.1nm,0.2s,SNR=7.9						
EVIA				S	**Sn**	**00 59 28.7**	**-3.5**
	0.5nm,0.2s,SNR=4.0						
EJON	**La Jonquera**	**5.65**	**350**	P	**Pn**	**00 58 30.3**	**+2.1**
	1.4nm,0.2s,SNR=11						
EJON				S	**Sn**	**00 59 30.9**	**-2.1**
	0.7nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**5.65**	**350**	P	**Pn**	**00 58 30.3**	**+2.1**
	1.4nm,0.2s,SNR=11						
EJON				S	**Sn**	**00 59 30.9**	**-2.1**
	0.7nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**5.85**	**343**	P	**Pn**	**00 58 33.8**	**+2.7**
	1.5nm,0.2s,SNR=14						
CLLI				S	**Sn**	**00 59 36.0**	**-2.0**
	0.3nm,0.2s						
CLLI	**Llivia**	**5.85**	**343**	P	**Pn**	**00 58 33.8**	**+2.7**
	1.5nm,0.2s,SNR=14						
CLLI				S	**Sn**	**00 59 36.0**	**-2.0**
	0.3nm,0.2s						
EQES	**Quesada**	**5.88**	**281**	P	**Pn**	**00 58 34.3**	**+2.7**
	2.6nm,0.3s,SNR=7.9						
EQES				S	**Sn**	**00 59 39.4**	**+0.5**
	0.8nm,0.3s,SNR=7.9						
EQES	**Quesada**	**5.88**	**281**	P	**Pn**	**00 58 34.3**	**+2.7**
	2.6nm,0.3s,SNR=7.9						
EQES				S	**Sn**	**00 59 39.4**	**+0.5**
	0.8nm,0.3s,SNR=7.9						
CSOR	**Sort**	**5.97**	**337**	P	**Pn**	**00 58 35.7**	**+2.9**
	0.4nm,0.2s,SNR=7.9						
CSOR				S	**Sn**	**00 59 39.6**	**-1.6**
	1.2nm,0.2s,SNR=7.9						
CSOR	**Sort**	**5.97**	**337**	P	**Pn**	**00 58 35.7**	**+2.9**
	0.4nm,0.2s,SNR=7.9						
CSOR				S	**Sn**	**00 59 39.6**	**-1.6**
	1.2nm,0.2s,SNR=7.9						

*IDC **06** 01:00:44.1±0.7, 4.°17N×126.°77E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.9/25, mbtmp4.0/11, MS2.9/1, Ms1 2.9/1, ms1mx2.5/30, Error ellipse: s-maj=40.2km s-min=13.7km az=71.0*
*ISCJB **06** 01:00:47.1±0.5, 4.°19N±0.°07×126.°8E±0.°2, h36km, mb4.1/18, Error ellipse: s-maj=26.2km s-min=8.1km az=163.5*
*NEIC **06** 01:00:49.2±0.4, 4.°15N×126.°75E, h35km, mb4.4/7, Error ellipse: s-maj=20.3km s-min=6.5km az=72.0*

ISC 06 01:00:49.5±0.6**, 4.°2N**±0.°1**×126.°8E**±0.°2**, h36**km**, n36, σ0.°79**/36**, mb4.1**/18**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**3.13**	**338**	LR	LR	01 03 05.6	
	comp=Z,200nm,19.8s,baz=316,slow=45						
CTBH	**Cotabato--PC H**	**3.95**	**321**	⇑*i*P	Pn	01 01 55.0	+7.4
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P	**P**	**01 05 41.2**	**-1.1**
FITZ	**Fitzroy Crossi**	**22.14**	**183**	P	**P**	**01 05 41.2**	**-1.1**
	2.5nm,0.5s,baz=0.5,slow=12,SNR=7.9						
WRAB	**Tennant Creek**	**25.07**	**163**	*e*P	**P**	**01 06 10.5**	**-0.2**
	8.9nm,0.7s						
WRA	**Warramunga Arr**	**25.07**	**163**	P	**P**	**01 06 10.7**	**-0.2**
WRA	**Warramunga Arr**	**25.07**	**163**	P	**P**	**01 06 10.7**	**-0.2**
	6.5nm,0.7s,baz=343,slow=11,SNR=22						
MBWA	**Marble Bar**	**26.08**	**195**	*e*P	**P**	**01 06 20.1**	**+0.2**
	12nm,0.9s						
AS31	**Alice Springs**	**28.51**	**166**	*e*P	**P**	**01 06 40.7**	**-1.1**
ASAR	**Alice Springs**	**28.51**	**166**	P	**P**	**01 06 40.9**	**-0.9**
ASAR	**Alice Springs**	**28.51**	**166**	P	**P**	**01 06 40.9**	**-0.9**
	0.6nm,0.5s,baz=350,slow=7.8,SNR=13						
CMAR	**Chiang Mai Arr**	**30.69**	**300**	P	**P**	**01 07 01.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**30.69**	**300**	P	**P**	**01 07 01.9**	**+0.8**
	0.5nm,0.4s,baz=116,slow=9.2,SNR=2.6						
KSAR	**Wonju Array Be**	**33.15**	**2**	P	**P**	**01 07 21.7**	**-0.8**
KSRS	**Korea Array**	**33.16**	**2**	P	**P**	**01 07 21.7**	**-0.9**
	0.4nm,0.4s,baz=180,slow=11,SNR=6.4						
FORT	**Forrest**	**34.76**	**178**	*e*P	**P**	**01 07 36.6**	**+0.1**
	11nm,0.8s						
STKA	**Stephens Creek**	**38.51**	**160**	P	**P**	**01 08 08.3**	**-0.1**
STKA	**Stephens Creek**	**38.51**	**160**	P	**P**	**01 08 08.3**	**-0.1**
	5.2nm,0.9s,baz=350,slow=7.5,SNR=12						
MK31	**Makanchi Array**	**57.23**	**325**	*e*P	**P**	**01 10 33.2**	**-0.1**
MKAR	**Makanchi Array**	**57.23**	**325**	P	**P**	**01 10 33.0**	**-0.3**
MKAR				PcP	**PcP**	**01 11 28.1**	**+0.6**
MKAR	**Makanchi Array**	**57.23**	**325**	P	**P**	**01 10 33.0**	**-0.3**
	0.9nm,0.6s,baz=123,slow=7.9,SNR=13						
MKAR				PcP	**PcP**	**01 11 28.1**	**+0.6**
	0.3nm,0.6s,baz=123,slow=4.2,SNR=2.4						
ZALV	**Zalesovo Beam**	**60.23**	**333**	P	**P**	**01 10 52.2**	**-1.7**
ZALV	**Zalesovo Beam**	**60.23**	**333**	P	**P**	**01 10 52.2**	**-1.7**
	0.5nm,0.4s,baz=116,slow=6.8,SNR=3.8						
KBL	**Kabul**	**61.30**	**307**	*e*P	**P**	**01 11 01.5**	**-0.4**
	2.7nm,0.6s						
KURBB	**Kurchatov Arra**	**61.41**	**327**	P	**P**	**01 11 01.8**	**-0.2**
	1.5nm,0.6s,baz=123,slow=6.4,SNR=24						
KURK	**Kurchatov**	**61.41**	**327**	*e*P	**P**	**01 11 01.6**	**-0.5**
	1.9nm,0.6s						
BRVK	**Borovoye**	**67.06**	**327**	*e*P	**P**	**01 11 38.8**	**-0.3**
	1.8nm,0.8s						
ABKAR	**Akbulak array**	**71.85**	**321**	*e*P	**P**	**01 12 07.9**	**-0.8**
	0.6nm,0.6s						
VNDA	**Vanda**	**83.84**	**173**	*e*P	**P**	**01 13 16.1**	**+1.3**
	1.6nm,1.0s						
VNDA	**Vanda**	**83.84**	**173**	P	**P**	**01 13 15.7**	**+0.9**
	0.8nm,0.8s,baz=302,slow=5.4,SNR=5.4						
ILAR	**Eielson Array**	**84.71**	**25**	P	**P**	**01 13 20.4**	**+0.8**
ILAR	**Eielson Array**	**84.71**	**25**	P	**P**	**01 13 20.4**	**+0.8**
	0.4nm,0.8s,baz=240,slow=6.3,SNR=5.3						
TXAR	**Lajitas Array**	**121.31**	**52**	PKP	**PKPdf**	**01 19 40.5**	**+0.7**
TXAR	**Lajitas Array**	**121.31**	**52**	PKP	**PKPdf**	**01 19 40.5**	**+0.7**
	0.3nm,1.0s,baz=231,slow=0.6,SNR=2.8						
TORD	**Torodi Ar. Bea**	**122.82**	**288**	PKP	**PKPdf**	**01 19 43.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**122.82**	**288**	PKP	**PKPdf**	**01 19 43.1**	**+0.3**
	0.5nm,0.8s,baz=75,slow=1.9,SNR=3.6						

*SOF **06** 01:01:37.5, 41.°89N×21.°94E, h5km, MD3.2*
*PDG **06** 01:01:39.7±0.6, 41.°90N×22.°15E, h2km±1km, ML2.4/6, Error ellipse: s-maj=1.0km s-min=1.0km az=0.0*
*SKO **06** 01:01:39.2, 41.°82N×22.°09E, h7km, M2.2, ML2.8*
*CSEM **06** 01:01:40.0±0.1, 41.°87N×22.°08E, h2km, ML2.6, Error ellipse: s-maj=2.8km s-min=2.2km az=50.0*
*BEO **06** 01:01:40.8±0.5, 41.°88N×22.°02E, h2km±2km, ML2.6/1*
*THE **06** 01:01:40.3, 41.°82N×22.°10E, h0km±1km, ML2.9/6, Error ellipse: s-maj=1.8km s-min=0.7km az=310.0*
*ATH **06** 01:01:42.0, 41.°70N×22.°16E, h19km±2km, MD3.3/11*

ISC 06 01:01:39.6±1.1**, 41.°85N**±0.°02**×22.°08E**±0.°01**, h0**km±10km**, n157, σ0.°93**/219**, 20C-12D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKO	**Skopje**	**0.50**	**285**	P	**Pg**	**01 01 49.3**	**+0.2**
SKO				S	**Sg**	**01 01 56.1**	**+0.6**
SKO	**Skopje**	**0.50**	**285**	*i* Pg	**Pg**	**01 01 49.3**	**+0.2**
SKO				*e*Sg	**Sg**	**01 01 56.4**	**+0.8**
SKO				*e*Lg	Lg	01 01 58.3	
	comp=N,351nm,0.6s						
SKO				*e*Lg	Lg	01 01 58.4	
	comp=E,318nm,0.5s						
SKO	**Skopje**	**0.50**	**285**	⇑*i*Pg	**Pg**	**01 01 49.2**	**+0.2**
SKO				*e*Sg	**Sg**	**01 01 54.1**	**-1.4**
SKO	**Skopje**	**0.50**	**285**	P	**Pg**	**01 01 49.3**	**+0.2**
SKO				S	**Sg**	**01 01 56.1**	**+0.6**
SKO				*e*Sg	**Sb**	**01 01 56.8**	**-2.1**
SKO				*e*Lg	Lg	01 01 58.8	
	comp=E,318nm,0.5s						
VAY	**Valandovo**	**0.64**	**145**	P	**Pg**	**01 01 51.7**	**-0.2**
VAY				S	**Sg**	**01 02 00.4**	**+0.2**
VAY	**Valandovo**	**0.64**	**145**	*i* Pg	**Pg**	**01 01 51.2**	**-0.6**
VAY				*i* Sg	**Sg**	**01 02 00.3**	**+0.2**
VAY				*e*Lg	Lg	01 02 00.4	
	comp=E,456nm,0.4s						
VAY				*e*Lg	Lg	01 02 01.8	
	comp=N,472nm,0.7s						
VAY	**Valandovo**	**0.64**	**145**	P	**Pg**	**01 01 51.7**	**-0.2**
VAY				S	**Sg**	**01 02 00.4**	**+0.2**
VAY				*i* Sg	**Sb**	**01 02 00.8**	**-2.3**
VAY				*e*Lg	Lg	01 02 01.2	
	comp=N,472nm,0.7s						
KKB	**Krupnik**	**0.75**	**88**	*i* Pg	**Pb**	**01 01 56.0**	**+0.5**
KKB	**Krupnik**	**0.75**	**88**	*i* Pg	**Pb**	**01 01 56.0**	**+0.5**
GRG	**Griva**	**0.92**	**165**	P	**Pg**	**01 01 56.8**	**-0.5**
GRG				S	**Sg**	**01 02 10.5**	**+1.3**
GRG	**Griva**	**0.92**	**165**	*e*PN	**Pg**	**01 01 56.8**	**-0.5**
GRG				*e*SN	**Sg**	**01 02 08.0**	**-1.2**
GRG	**Griva**	**0.92**	**165**	*e*Pn	**Pg**	**01 01 56.8**	**-0.5**
GRG				S	**Sg**	**01 02 10.5**	**+1.3**
BARS	**Barje**	**0.99**	**349**	*e*Pg	**Pg**	**01 01 57.6**	**-0.9**
BARS				*e*Sg	**Sb**	**01 02 12.4**	**-0.7**
BARS	**Barje**	**0.99**	**349**	*e*Pg	**Pg**	**01 01 57.6**	**-0.9**
BARS				*e*Sg	**Sb**	**01 02 12.4**	**-0.7**
BIA	**Bitola**	**1.01**	**215**	P	**Pg**	**01 01 58.3**	**-0.6**
BIA				S	**Sg**	**01 02 12.8**	**+0.9**
BIA	**Bitola**	**1.01**	**215**	*i* Pg	**Pg**	**01 01 58.2**	**-0.6**
BIA				*i* Sg	**Sg**	**01 02 11.8**	**-0.1**
BIA	**Bitola**	**1.01**	**215**	P	**Pg**	**01 01 58.3**	**-0.6**
BIA				*i* Sg	**Sg**	**01 02 11.8**	**-0.1**
BIA				S	**Sg**	**01 02 12.8**	**+0.9**
VTS	**Vitosha**	**1.12**	**48**	P	**Pg**	**01 02 01.3**	**+0.2**
VTS				S	**Sb**	**01 02 16.8**	**-0.2**
VTS	**Vitosha**	**1.12**	**48**	⇑*i*Pg	**Pg**	**01 02 01.2**	**+0.2**
VTS				*e*Sg	**Sb**	**01 02 16.9**	**-0.1**
VTS	**Vitosha**	**1.12**	**48**	⇓*i*P	**Pg**	**01 02 01.3**	**+0.2**
VTS				S	**Sb**	**01 02 17.0**	**-0.1**
VTS	**Vitosha**	**1.12**	**48**	*i* P	**Pg**	**01 02 01.4**	**+0.4**
VTS	**Vitosha**	**1.12**	**48**	*i* P	**Pg**	**01 02 01.4**	**+0.4**
VTS				S	**Sb**	**01 02 16.8**	**-0.2**
FNA	**Florina**	**1.19**	**207**	P	**Pg**	**01 02 01.9**	**-0.4**
FNA				S	**Sb**	**01 02 19.3**	**+0.4**
FNA	**Florina**	**1.19**	**207**	*e*PB	**Pg**	**01 02 02.0**	**-0.4**
FNA				*e*SN	**Sg**	**01 02 17.7**	**-0.1**
FNA	**Florina**	**1.19**	**207**	P	**Pg**	**01 02 01.9**	**-0.4**
FNA				*e*Sn	**Sg**	**01 02 17.7**	**-0.1**
FNA				S	**Sb**	**01 02 19.3**	**+0.4**
MMB	**Musomiste**	**1.26**	**101**	*i* P	**Pn**	**01 02 04.4**	**0.0**
MMB	**Musomiste**	**1.26**	**101**	*i* P	**Pn**	**01 02 04.4**	**0.0**
SRS	**Serrai**	**1.35**	**122**	P	**Pg**	**01 02 05.1**	**-0.3**
SRS				S	**Sn**	**01 02 25.1**	**+0.9**
SRS	**Serrai**	**1.35**	**122**	P	**Pg**	**01 02 05.1**	**-0.3**
SRS				S	**Sn**	**01 02 25.1**	**+0.9**
SOH	**Sokhos**	**1.40**	**137**	P	**Pn**	**01 02 05.8**	**-0.6**
SOH				S	**Sn**	**01 02 26.2**	**+0.6**
SOH	**Sokhos**	**1.40**	**137**	*e*PN	**Pn**	**01 02 06.3**	**-0.1**
SOH				*e*SN	**Sg**	**01 02 22.8**	**-1.8**
SOH	**Sokhos**	**1.40**	**137**	P	**Pn**	**01 02 05.8**	**-0.6**
SOH	**Sokhos**	**1.40**	**137**	*e*Pn	**Pn**	**01 02 06.3**	**-0.1**
SOH				*e*Sn	**Sg**	**01 02 22.8**	**-1.8**
SOH				S	**Sn**	**01 02 26.2**	**+0.6**
NVR	**Nevrokopi**	**1.42**	**110**	P	**Pn**	**01 02 06.6**	**-0.1**
NVR				S	**Sn**	**01 02 26.1**	**0.0**
NVR	**Nevrokopi**	**1.42**	**110**	*e*PN	**Pg**	**01 02 06.9**	**0.0**
NVR				*e*SN	**Sn**	**01 02 26.2**	**+0.1**
NVR	**Nevrokopi**	**1.42**	**110**	P	**Pn**	**01 02 06.6**	**-0.1**
NVR	**Nevrokopi**	**1.42**	**110**	*e*Pn	**Pg**	**01 02 06.9**	**0.0**
NVR				*e*Sn	**Sn**	**01 02 26.2**	**+0.1**
HORT	**Hortiatis**	**1.47**	**148**	P	**Pn**	**01 02 07.0**	**-0.3**
HORT	**Hortiatis**	**1.47**	**148**	P	**Pn**	**01 02 07.0**	**-0.3**
ZAPS	**Zavoj**	**1.48**	**16**	*e*Sg	**Sn**	**01 02 27.8**	**+0.2**
SELS	**Selova**	**1.54**	**333**	⇑*i*Pg	**Pn**	**01 02 07.3**	**-1.1**
SELS				*e*Sg	**Sn**	**01 02 28.9**	**-0.2**
KZN	**Kozani**	**1.56**	**189**	*e*PN	**Pn**	**01 02 08.7**	**+0.1**
KZN				*e*SN	**Sn**	**01 02 28.1**	**-1.4**
KZN	**Kozani**	**1.56**	**189**	*e*Pn	**Pn**	**01 02 08.7**	**+0.1**
KZN				*e*Sn	**Sn**	**01 02 28.1**	**-1.4**
BCI	**Bajram Curri**	**1.59**	**290**	*e*PG	**Pn**	**01 02 08.6**	**-0.3**
BCI				*i* SG	**Sn**	**01 02 30.3**	**+0.2**
BCI	**Bajram Curri**	**1.59**	**290**	*e*Pg	**Pn**	**01 02 08.6**	**-0.3**
BCI				*i* Sg	**Sn**	**01 02 30.3**	**+0.2**
NEST	**Nestorio**	**1.63**	**209**	P	**Pn**	**01 02 09.8**	**+0.2**
NEST	**Nestorio**	**1.63**	**209**	P	**Pn**	**01 02 09.8**	**+0.2**
PUK	**Puka**	**1.65**	**278**	*i* PN	**Pb**	**01 02 11.0**	**+0.2**
PUK				*i* SN	**Sg**	**01 02 34.7**	**+2.3**
PUK	**Puka**	**1.65**	**278**	*i* Pn	**Pb**	**01 02 11.0**	**+0.2**
PGB	**Panagyurishte**	**1.70**	**65**	*i* P	**Pn**	**01 02 10.6**	**+0.1**
PGB	**Panagyurishte**	**1.70**	**65**	*i* P	**Pn**	**01 02 10.6**	**+0.1**
PGB	**Panagyurishte**	**1.70**	**65**	Pg	Pg	01 02 16.7	+4.5
TIR	**Tirane**	**1.74**	**254**	⇑*i*Pn	**Pg**	**01 02 13.4**	**+0.5**
TIR				*e*Sn	**Sb**	**01 02 34.5**	**-0.1**
TIR	**Tirane**	**1.74**	**254**	⇑*i*Pn	**Pg**	**01 02 13.4**	**+0.5**
TIR				*e*Sn	**Sb**	**01 02 34.5**	**-0.1**
PVY	**Plav**	**1.75**	**296**	⇑*i*Pn	**Pb**	**01 02 12.5**	**0.0**
PVY				*e*Sn	**Sg**	**01 02 37.8**	**+2.1**
LIT	**Litokhoron**	**1.77**	**170**	*e*PN	**Pn**	**01 02 11.8**	**+0.3**
LIT	**Litokhoron**	**1.77**	**170**	*e*Pn	**Pn**	**01 02 11.8**	**+0.3**
PLG	**Polygyros**	**1.80**	**145**	P	**Pn**	**01 02 12.0**	**+0.2**
PLG	**Polygyros**	**1.80**	**145**	*e*PN	**Pn**	**01 02 12.0**	**+0.2**
PLG	**Polygyros**	**1.80**	**145**	P	**Pn**	**01 02 12.0**	**+0.2**
BEY	**Berane**	**1.92**	**303**	⇓*i*Pn	**Pn**	**01 02 13.9**	**+0.4**
IVA	**Berane**	**1.92**	**303**	⇓*i*Pn	**Pn**	**01 02 13.9**	**+0.4**
IVA				*e*Sn	**Sg**	**01 02 41.7**	**+0.5**
MPEP	**Malo Peshtene**	**1.94**	**39**	P	**Pn**	**01 02 13.7**	**-0.1**
MPEP				Pg	**Pg**	**01 02 16.7**	**-0.1**
PLD	**Plovdiv**	**1.97**	**82**	P	**Pn**	**01 02 14.3**	**+0.1**
PLD	**Plovdiv**	**1.97**	**82**	P	**Pn**	**01 02 14.3**	**+0.1**
PLD	**Plovdiv**	**1.97**	**82**	P	**Pn**	**01 02 14.3**	**+0.1**
RZN	**Rozhen**	**1.98**	**94**	*i* P	**Pn**	**01 02 15.4**	**+1.0**
RZN	**Rozhen**	**1.98**	**94**	*i* P	**Pn**	**01 02 15.4**	**+1.0**
BOLS	**Boljevac**	**1.98**	**357**	*e*Pn	**Pn**	**01 02 14.9**	**+0.6**
BOLS				*e*Sn	**Sn**	**01 02 40.5**	**+0.7**
BOLS	**Boljevac**	**1.98**	**357**	*e*Pn	**Pn**	**01 02 14.9**	**+0.6**
BOLS				*e*Sn	**Sn**	**01 02 40.5**	**+0.7**
KAVA	**Kavala**	**2.02**	**114**	P	**Pn**	**01 02 14.6**	**-0.2**
KAVA				S	**Sn**	**01 02 41.5**	**+0.8**
KAVA	**Kavala**	**2.02**	**114**	P	**Pn**	**01 02 14.6**	**-0.2**
KAVA				S	**Sn**	**01 02 41.5**	**+0.8**
OUR	**Ouranopolis**	**2.08**	**136**	P	**Pn**	**01 02 15.7**	**0.0**
OUR	**Ouranopolis**	**2.08**	**136**	P	**Pn**	**01 02 15.7**	**0.0**
ULC	**Ulcinj**	**2.12**	**274**	⇑*i*Pn	**Pb**	**01 02 18.0**	**-0.9**
ULC				*e*Sn	**Sg**	**01 02 47.4**	**-0.3**
ULC	**Ulcinj**	**2.12**	**274**	⇑*i*Pn	**Pb**	**01 02 18.0**	**-0.9**
ULC				*e*Sn	**Sg**	**01 02 47.4**	**-0.3**
PDG	**Podgorica**	**2.18**	**286**	*e*Pn	**Pn**	**01 02 18.1**	**+1.0**
PDG	**Podgorica**	**2.18**	**286**	*e*Pn	**Pn**	**01 02 18.1**	**+1.0**
TTG	**Podgorica**	**2.18**	**286**	⇑*i*Pn	**Pb**	**01 02 19.1**	**-0.8**
TTG				*e*Sn	**Sg**	**01 02 49.5**	**-0.2**
PAIG	**Paliouri**	**2.27**	**147**	*e*PN	**Pn**	**01 02 18.6**	**+0.3**
PAIG	**Paliouri**	**2.27**	**147**	*e*Pn	**Pn**	**01 02 18.6**	**+0.3**
GRUS	**Gruza**	**2.27**	**334**	*e*Pn	**Pn**	**01 02 17.9**	**-0.4**
GRUS				*e*Sn	**Sn**	**01 02 46.5**	**-0.5**
GRUS	**Gruza**	**2.27**	**334**	*e*Pn	**Pn**	**01 02 17.9**	**-0.4**
GRUS				*e*Sn	**Sn**	**01 02 46.5**	**-0.5**
THL	**Klokotos Trika**	**2.28**	**181**	*e*PN	**Pn**	**01 02 19.5**	**+1.1**
THL	**Klokotos Trika**	**2.28**	**181**	*e*Pn	**Pn**	**01 02 19.5**	**+1.1**
JAN	**Janina**	**2.38**	**204**	*e*PB	**Pb**	**01 02 21.9**	**-1.4**
JAN	**Janina**	**2.38**	**204**	*e*Pn	**Pb**	**01 02 21.9**	**-1.4**
BUM	**Brajici-Budva**	**2.42**	**282**	⇑*i*Pn	**Pn**	**01 02 22.1**	**+1.7**
BUM				*e*Sn	**Sb**	**01 02 54.5**	**+0.2**
BUM	**Brajici-Budva**	**2.42**	**282**	⇑*i*Pn	**Pn**	**01 02 22.1**	**+1.7**
BUM				*e*Sn	**Sb**	**01 02 54.5**	**+0.2**
SVIS	**Svilajnac**	**2.50**	**346**	*e*Pn	**Pn**	**01 02 20.2**	**-1.2**
KDZ	**Kurdzhali**	**2.50**	**93**	*i* P	**Pn**	**01 02 20.5**	**-1.0**
KDZ	**Kurdzhali**	**2.50**	**93**	*i* P	**Pn**	**01 02 20.5**	**-1.0**
DIM	**Dimitrovgrad**	**2.58**	**84**	P	**Pb**	**01 02 27.6**	**+0.9**
DIM	**Dimitrovgrad**	**2.58**	**84**	P	**Pb**	**01 02 27.6**	**+0.9**
XOR	**Xorichti**	**2.62**	**161**	P	**Pn**	**01 02 23.4**	**+0.3**
XOR	**Xorichti**	**2.62**	**161**	P	**Pn**	**01 02 23.4**	**+0.3**
TRUS	**Trudelj**	**2.67**	**333**	*e*Pn	**Pn**	**01 02 21.9**	**-1.9**
TRUS				*e*Sn	**Sn**	**01 02 56.5**	**-0.4**
TRUS	**Trudelj**	**2.67**	**333**	*e*Pn	**Pn**	**01 02 21.9**	**-1.9**
TRUS				*e*Sn	**Sn**	**01 02 56.5**	**-0.4**
NEO	**Neokhori**	**2.68**	**161**	*e*PN	**Pn**	**01 02 24.0**	**0.0**
NEO	**Neokhori**	**2.68**	**161**	*e*Pn	**Pn**	**01 02 24.0**	**0.0**
RDO	**Rodhopi**	**2.69**	**104**	P	**Pn**	**01 02 24.0**	**0.0**
RDO	**Rodhopi**	**2.69**	**104**	*e*PN	**Pn**	**01 02 24.8**	**+0.8**
RDO	**Rodhopi**	**2.69**	**104**	P	**Pn**	**01 02 24.0**	**0.0**
RDO	**Rodhopi**	**2.69**	**104**	*e*Pn	**Pn**	**01 02 24.8**	**+0.8**

DIVS	Divibare	2.72	326	P	Pn	01 02 24.2	-0.4
DIVS	Divibare	2.72	326	ePn	Pn	01 02 23.7	-0.9
DIVS				eSn	Sn	01 02 58.2	0.0
DIVS	Divibare	2.72	326	ePn	Pn	01 02 23.7	-0.9
DIVS	Divibare	2.72	326	P	Pn	01 02 24.2	-0.4
DIVS				eSn	Sn	01 02 58.2	0.0
PVL	Pavlikeni	2.76	59	P	Pn	01 02 21.7	-3.4
PVL	Pavlikeni	2.76	59	P	Pn	01 02 21.7	-3.4
BBLS	Lazići	2.82	317	eSg	Sb	01 03 07.9	+2.1
BBLS	Lazići	2.82	317	eSg	Sb	01 03 07.9	+2.1
BRY	Bratogost	2.83	293	⇓iPn	Pn	01 02 27.9	+1.8
BRY				eSn	Sb	01 03 04.8	-1.4
BRY	Bratogost	2.83	293	⇓iPn	Pn	01 02 27.9	+1.8
BRY				eSn	Sb	01 03 04.8	-1.4
AGG	Agios Georgios	2.83	176	ePN	Pn	01 02 26.3	+0.3
AGG	Agios Georgios	2.83	176	ePn	Pn	01 02 26.3	+0.3
EVR	Evrytania	2.94	184	ePN	Pn	01 02 28.6	+1.1
EVR	Evrytania	2.94	184	ePn	Pn	01 02 28.6	+1.1
SMTH	Samothraki Isl	2.94	117	ePN	Pn	01 02 28.5	+0.9
SMTH	Samothraki Isl	2.94	117	ePn	Pn	01 02 28.5	+0.9
AOS	Alonnisos	3.01	152	ePN	Pn	01 02 28.3	-0.1
AOS	Alonnisos	3.01	152	ePn	Pn	01 02 28.3	-0.1
ZIMR		3.02	52	⇓iP	Pn	01 02 29.6	+1.0
LIA	Limnos Island	3.05	129	ePN	Pn	01 02 30.4	+1.4
LIA	Limnos Island	3.05	129	ePn	Pn	01 02 30.4	+1.4
ALN	Alexandroupoli	3.13	106	P	Pn	01 02 30.3	+0.2
ALN	Alexandroupoli	3.13	106	ePN	Pn	01 02 30.4	+0.3
ALN	Alexandroupoli	3.13	106	P	Pn	01 02 30.3	+0.2
SZH	Strazhica	3.18	62	iP	Pn	01 02 31.7	+0.9
SZH	Strazhica	3.18	62	iP	Pn	01 02 31.7	+0.9
BEO	Beograd	3.18	339	ePn	Pn	01 02 30.9	+0.1
EFP	Efpalio	3.42	182	ePB	Pn	01 02 36.5	+2.4
EFP	Efpalio	3.42	182	ePb	Pn	01 02 36.5	+2.4
KALE	Kalithea	3.45	179	ePN	Pn	01 02 36.2	+1.6
KALE	Kalithea	3.45	179	ePn	Pn	01 02 36.2	+1.6
GZR	Gura Zlata	3.58	8	⇑iP	Pn	01 02 33.4	-3.0
GZR	Gura Zlata	3.58	8	⇑iP	Pn	01 02 33.4	-3.0
FGSL	Fruska Gora	3.70	334	ePn	Pn	01 02 37.0	-0.9
FRGS	Fruska Gora	3.70	334	ePn	Pn	01 02 37.0	-0.9
BZS	Buzias	3.78	355	ePn	Pn	01 02 37.4	-1.7
BZS				eSn	Sn	01 03 22.6	-1.6
BZS	Buzias	3.78	355	⇓iP	Pn	01 02 37.6	-1.5
BZS	Buzias	3.78	355	⇓iP	Pn	01 02 37.6	-1.5
BZS				eSn	Sn	01 03 22.6	-1.6
KLV	Kalavryta, Ach	3.80	179	ePN	Pn	01 02 41.4	+2.0
KLV	Kalavryta, Ach	3.80	179	ePn	Pn	01 02 41.4	+2.0
MLR	Muntele Rosu	4.59	36	⇓iP	Pn	01 02 50.7	+0.4
MLR	Muntele Rosu	4.59	36	⇓iP	Pn	01 02 50.7	+0.4
BLY	Banja Luka	4.60	311	ePn	Pn	01 02 51.3	+1.0
BLY	Banja Luka	4.60	311	ePn	Pn	01 02 51.3	+1.0
ISR	Istrita	4.61	43	⇓iP	Pn	01 02 51.6	+1.2
ISR	Istrita	4.61	43	⇓iP	Pn	01 02 51.6	+1.2
PKSM	Moragy	5.02	332	⇑iPn	Pn	01 02 55.5	-0.5
PKSM	Moragy	5.02	332	⇑iP	Pn	01 02 55.6	-0.5
PKSM	Moragy	5.02	332	⇑iP	Pn	01 02 55.6	-0.5
VRI	Vrincioaia	5.24	38	⇑iP	Pn	01 02 59.8	+0.8
VRI	Vrincioaia	5.24	38	⇑iP	Pn	01 02 59.8	+0.8
TIRR	Tirgusor	5.31	58	⇑iP	Pn	01 03 00.2	+0.1
TIRR	Tirgusor	5.31	58	⇑iP	Pn	01 03 00.2	+0.1

*ISCJB **06** 01:12:36.0±0.2, 41°.72N±0°.04×131°.33E±0°.04, h550km, mb3.9/41, Error ellipse: s-maj=4.9km s-min=3.4km az=9.7*
*SKHL **06** 01:12:36.2±1.2, 41°.81N×131°.27E, h551km±10km, mb4.6/2, msh4.0/1*
*MOS **06** 01:12:36.2±1.0, 41°.76N×131°.24E, h552km, mb3.9/21, Error ellipse: s-maj=12.8km s-min=8.3km az=111.0*
*JMA **06** 01:12:36.9±0.5, 41°.61N×131°.71E, h614km, M3.8*
*IDC **06** 01:12:37.9±0.6, 41°.67N×131°.21E, h558km±6km, mb3.3/22, mb1 3.5/26, mb1mx3.5/32, mbtmp3.4/26, Error ellipse: s-maj=10.5km s-min=8.7km az=111.0*
ISC 06 01:12:36.8±0.4**, 41°.70N**±0°.06×**131°.36E**±0°.05**, h550**km**, n117, σ1s44**/135**, mb4.0**/41**, 8C-7D, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLA	Vladivostok	1.47	15	iP	P	01 13 44.3	+0.1
VLA	Vladivostok	1.47	15	iP	P	01 13 44.3	+0.1
USRK	Ussuriysk Arra	2.54	10	P	P	01 13 51.4	+2.5
	26nm,0.3s,baz=177,slow=3.5,SNR=323						
USRK				S	S	01 14 51.0	+3.0
	baz=187,slow=12,SNR=9.3						
KSRS	Korea Array	5.00	213	eP	P	01 14 08.7	+2.0
KSRS	Korea Array	5.00	213	P	P	01 14 08.7	+2.0
	20nm,0.3s,baz=28,slow=8.3,SNR=257						
TEY	Ternei	5.07	47	⇓iP	P	01 14 09.3	+2.3
TEY				AMB	AMB	01 14 11.1	
	52nm,0.6s						
TEY				AMB	AMB	01 14 11.1	
	59nm,0.6s						
TEY				eS	S	01 15 22.8	+1.9
JHG	Hegura jima	5.75	130	P	P	01 14 15.5	+2.3
JOSM	Okushiri--Mats	6.07	84	P	P	01 14 17.5	+1.6
JSZ	Suzu	6.28	131	P	P	01 14 20.2	+2.2
JKB	Kayabe	7.23	85	P	P	01 14 26.8	0.0
HABR	Khabarovsk	7.26	20	P	P	01 14 25.5	-1.4
HABR				eS	S	01 15 56.1	-1.3
HABR	Khabarovsk	7.26	20	eP	P	01 14 25.5	-1.4
JOT	Ohata	7.27	89	P	P	01 14 28.0	+0.7
JTU	Tsushima	7.33	193	P	P	01 14 29.6	+1.6
MAT	Matsushiro	7.40	132	P	P	01 14 28.5	-0.2
MAT				eS	S	01 15 53.9	-6.4
MAT	Matsushiro	7.40	132	P	P	01 14 29.0	+0.3
MJAR	Matsushiro Arr	7.40	132	eP	P	01 14 29.6	+0.9
MJAR	Matsushiro Arr	7.40	132	P	P	01 14 29.6	+0.9
	1.0nm,0.3s,baz=311,slow=11,SNR=21						
KLR	Kul'dur	7.54	2	eP	P	01 14 27.7	-2.0
KLR				eS	S	01 16 00.0	-2.4
KLR	Kul'dur	7.54	2	eP	P	01 14 27.7	-2.0
KLR				eS	S	01 16 00.0	-2.4
JHR	Hokuryu	7.90	72	P	P	01 14 34.4	+1.1
JMK	Ichinoseki	8.01	107	P	P	01 14 33.7	-0.9
JMK				S	S	01 16 07.6	-3.6
JRY	Ryogami san	8.17	132	P	P	01 14 37.4	+1.2
JRY				eS	S	01 16 10.2	-4.0
JWK2	Keihoku	8.47	61	P	P	01 14 40.6	+1.7
JOD2	Odawara 2	8.83	134	P	P	01 14 42.2	-0.6
JOD2				eS	S	01 16 23.1	-3.2
JCH	Churui	8.96	80	P	P	01 14 43.5	-0.5
JCH				S	S	01 16 25.1	-3.4
JTKR	Abashiri--Toko	9.49	72	P	P	01 14 49.9	+0.6
JTKR				S	S	01 16 37.8	-0.5
YSS	Yuzh-Sakhalins	9.70	53	⇑eP	P	01 14 54.0	+2.6
YSS				eS	S	01 16 46.0	+3.8
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				smax	smax		
	comp=N,20nm,0.9s						
YSS	Yuzh-Sakhalins	9.70	53	⇑eP	P	01 14 54.0	+2.6
YSS				AMB	AMB	01 14 54.4	
	comp=N,20nm,0.4s						
YSS				eS	S	01 16 44.5	+2.3
YSS				A	A	01 16 48.0	
	comp=N,20nm,0.9s						
BSO1	Boso 1	10.33	130	P	P	01 14 57.1	-0.4
NEM2	Nemuro 2	10.74	76	P	P	01 15 02.2	0.0
NEM2				S	S	01 16 59.0	-2.8
EKMR	Ekimchan	11.43	5	eP	P	01 15 05.6	-3.5
EKMR				AMB	AMB	01 15 06.6	
	comp=N,4.0nm,0.5s						
TYV	Tymovskoe	12.03	37	eP	P	01 15 12.8	-2.5
TYV				AMB	AMB	01 15 19.5	
	comp=N,10.0nm,0.7s						
KROS	Kirovskiy	13.07	349	eP	P	01 15 25.0	-1.1
BMKR	Bomnak	13.13	354	eP	P	01 15 22.0	-4.6
SONM	Songino Array	18.72	298	P	P	01 16 22.4	+1.3
	comp=N,2.0nm,0.3s,baz=104,slow=9.3,SNR=53						
ZAK	Zakamensk	21.24	304	eP	P	01 16 44.5	+0.6
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZAK	Zakamensk	21.24	304	eP	P	01 16 44.5	+0.6
BILL	Bilibino	32.32	24	eP	P	01 18 21.6	+1.1
BILL				e		01 20 49.7	
BILL				eS	S	01 22 53.2	-2.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZALV	Zalesovo Beam	32.97	308	P	P	01 18 26.1	-0.1
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV				pmax	pmax		
	comp=N,3.0nm,0.7s						
ZALV	Zalesovo Beam	32.97	308	P	P	01 18 26.1	-0.1
	comp=N,1.5nm,0.3s,baz=104,slow=8.8,SNR=11						
ZALV				ScP	ScP	01 23 44.1	-1.6
	comp=N,2.5nm,0.7s,baz=116,slow=2.6,SNR=13						
MK31	Makanchi Array	35.06	295	iP	P	01 18 43.2	-0.6
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	Makanchi Array	35.06	295	ceP	P	01 18 43.7	-0.1
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	35.06	295	eP	P	01 18 43.7	-0.1
MKAR	Makanchi Array	35.06	295	P	P	01 18 43.8	-0.1
	comp=Z,3.8nm,0.8s,baz=87,slow=9.7,SNR=44						
MKAR				ScP	ScP	01 23 51.5	-1.8
	comp=Z,0.5nm,0.6s,baz=76,slow=4.0,SNR=5.6						
CMAR	Chiang Mai Arr	36.04	240	eP	P	01 18 52.6	+0.3
CMAR	Chiang Mai Arr	36.04	240	P	P	01 18 52.6	+0.3
	comp=Z,3.0nm,0.3s,baz=33,slow=7.4,SNR=12						
KURK	Kurchatov	36.89	303	d iP	P	01 18 58.6	-0.2
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
KURK	Kurchatov	36.89	303	eP	P	01 18 58.6	-0.2
TAPN	Taplejung	38.30	262	eP	P	01 19 11.6	+0.6
	comp=Z,24nm,0.7s						
ODAN	Odare	38.81	262	eP	P	01 19 15.2	+0.1
	comp=Z,16nm,0.5s						
RAMN	Ramite	39.34	263	eP	P	01 19 19.2	-0.2
GUN	Gumba	39.35	264	eP	P	01 19 19.8	+0.2
	comp=Z,82nm,0.5s						
KKN	Kakani	39.87	265	eP	P	01 19 23.7	+0.1
PKI	Pulchoki	39.89	264	eP	P	01 19 23.6	-0.3
	comp=Z,29nm,0.6s						
PKIN	Phulchoki	39.90	264	eP	P	01 19 23.7	-0.2
DMN	Daman	40.09	265	eP	P	01 19 25.5	+0.1
TKM2	Tokmak 2	40.61	291	P	P	01 19 30.0	+0.7
TKM2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
DANN	Dangsing	40.70	266	eP	P	01 19 30.9	+0.6
	comp=Z,120nm,0.4s						
KOLN	Koldanda	41.13	266	eP	P	01 19 33.8	+0.2
VOSK	Vostochnaya	41.31	307	P	P	01 19 33.6	-0.8
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PYUN	Piuthan	41.41	267	eP	P	01 19 36.1	+0.3
AAK	Ala-Archa	41.47	291	c iP	P	01 19 36.3	+0.2
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AAK	Ala-Archa	41.47	291	⇑iP	P	01 19 36.3	+0.2
BVA0	Borovoye Array	41.62	307	iP	P	01 19 36.6	-0.2
BRVK	Borovoye	41.67	307	eP	P	01 19 37.2	-0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BRVK	Borovoye	41.67	307	eP	P	01 19 37.2	-0.1
KK31	Karatay Array	44.08	293	P	P	01 19 55.7	-0.5
SVE	Sverdlovsk	46.41	314	eP	P	01 20 14.2	+0.4
SVE				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SVE	Sverdlovsk	46.41	314	eP	P	01 20 14.2	+0.4
ARU	Arti	47.62	314	d iP	P	01 20 22.7	-0.2
ARU						01 21 40.4	
ARU						01 22 18.6	
ARU				S	S	01 26 39.1	+1.3
ARU				SS	SS	01 30 08.8	-5.9
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ARU	Arti	47.62	314	⇓iP	P	01 20 22.7	-0.2
PSI	Prapat	48.44	226	P	P	01 20 29.7	0.0
	comp=Z,6.8nm,0.6s,baz=46,slow=4.4,SNR=5.9						
AB31	Akbulak array	48.93	305	eP	P	01 20 32.1	-0.6
AB31				pmax	pmax		
	comp=Z,11nm,0.4s						
KDAK	Kodiak Island	48.98	44	P	P	01 20 34.4	+1.5
	comp=Z,6.5nm,0.6s,baz=294,slow=5.9,SNR=9.6						
AKTO	Aktyubinsk	49.70	307	P	P	01 20 37.5	-0.9
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	Eielson Array	49.85	34	P	P	01 20 40.5	+1.2
ILAR	Eielson Array	49.85	34	P	P	01 20 40.5	+1.2
	comp=Z,2.3nm,0.6s,baz=291,slow=7.6,SNR=38						
ILAR				PcP	PcP	01 21 48.9	-0.7
	comp=Z,0.5nm,0.9s,baz=288,slow=4.5,SNR=4.4						
ILAR				pP	pP	01 22 24.4	+2.6
	comp=Z,0.3nm,0.9s,baz=281,slow=6.9,SNR=4.2						
ARCES	ARCESS Array B	56.74	336	P	P	01 21 28.1	+0.1
ARCES	ARCESS Array B	56.74	336	P	P	01 21 28.1	+0.1
	comp=Z,3.0nm,0.9s,baz=66,slow=9.4,SNR=6.0						
JOF	Joensuu	58.03	328	eP	P	01 21 36.1	-0.8
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JOF	Joensuu	58.03	328	ep	P	01 21 36.1	-0.8
	comp=Z,0.6nm,0.3s						
FITZ	Fitzroy Crossi	59.73	186	P	P	01 21 49.0	+0.2
	comp=Z,2.4nm,0.7s,baz=18,slow=13,SNR=4.1						
KAF	Kangasniemi	60.44	329	eP	P	01 21 52.2	-0.7
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KAF	Kangasniemi	60.44	329	ep	P	01 21 52.2	-0.7
	comp=Z,0.6nm,0.3s						
KAF	Kangasniemi	60.44	329	eP	P	01 21 52.2	-0.7
FINES	FINESS Array B	60.90	328	P	P	01 21 55.8	-0.2
	comp=Z,1.4nm,0.4s,baz=76,slow=5.7,SNR=23						
WRA	Warramunga Arr	61.39	177	P	P	01 21 59.5	-0.3
	comp=Z,0.5nm,0.4s,baz=354,slow=7.3,SNR=5.6						
KBZ	Khabaz	61.90	305	P	P	01 22 04.3	+1.5
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KBZ	Khabaz	61.90	305	P	P	01 22 04.3	+1.5
	comp=Z,0.7nm,0.5s,baz=345,slow=2.3,SNR=4.1						
KIV	Kislovodsk	61.91	305	eP	P	01 22 02.6	-0.5
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BANOM	Banah	62.49	281	⇓P	P	01 22 07.5	+0.5
	SNR=11						
BANOM				⇓P	P	01 22 07.6	+0.6
BANOM				⇓P	P	01 22 07.6	+0.6
JMDO	Jabal Madar	63.23	277	P	P	01 22 12.2	+0.4
	SNR=12						
HATD	Hatta, Dubai	63.25	280	⇑P	P	01 22 12.6	+0.7
	SNR=14						
ASHO	Ashiyiah	63.38	280	P	P	01 22 13.1	+0.3
	SNR=6.0						
YKA	Yellowknife Ar	63.55	28	P	P	01 22 14.2	+1.1
YKA	Yellowknife Ar	63.55	28	P	P	01 22 14.2	+1.1
	comp=Z,3.7nm,0.7s,baz=310,slow=6.5,SNR=72						
BSY	Bisya	63.68	278	⇑P	P	01 22 15.3	+0.6
	SNR=11						
ASAR	Alice Springs	65.08	177	P	P	01 22 23.6	+0.3
	comp=Z,0.5nm,0.3s,baz=357,slow=7.2,SNR=11						
AKASG	Malin Array Be	65.71	317	ceP	P	01 22 26.0	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	65.71	317	P	P	01 22 26.0	-1.0
	comp=Z,1.6nm,0.5s,baz=51,slow=6.4,SNR=6.9						
NOA	NORSAR Array B	66.68	333	P	P	01 22 32.3	-0.6
	comp=Z,0.6nm,0.7s,baz=43,slow=6.2,SNR=1.7						
MIB	Mutribah	66.70	290	eP	P	01 22 32.7	-0.8
MIB				AMb	AMB	01 22 33.7	
	comp=Z,31nm,0.8s						
RDF	Al-Radifah	67.07	289	eP	P	01 22 35.0	-0.7
RDF				AMb	AMB	01 22 35.8	
	comp=Z,21nm,0.7s						
NAY	Al-Naaiem	67.10	289	eP	P	01 22 34.9	-1.0
NAY				AMb	AMB	01 22 35.6	
	comp=Z,10nm,0.7s						
RST	Umm Al-Ruwaisa	67.12	290	eP	P	01 22 34.7	-1.4
RST				AMb	AMB	01 22 35.8	
	comp=Z,2.3nm,0.8s						
BRTR	Keskin Array B	69.87	306	P	P	01 22 52.4	-0.4
	comp=Z,0.7nm,0.4s,baz=119,slow=3.2,SNR=8.3						
FFC	Flin Flon	73.71	29	iP	P	01 23 15.8	+1.2
STKA	Stephens Creek	73.82	171	P	P	01 23 15.8	+0.5
	comp=Z,1.2nm,0.5s,baz=330,slow=8.1,SNR=2.3						
NVAR	Mina Array Bea	78.12	49	P	P	01 23 41.7	+2.2
	comp=Z,3.7nm,0.7s,baz=290,slow=4.9,SNR=20						
NVAR				pP	pP	01 25 37.5	+1.8
	comp=Z,0.3nm,0.2s,baz=276,slow=5.4,SNR=3.8						
ULM	Lac du Bonnet	79.53	29	P	P	01 23 46.4	-0.1
ULM	Lac du Bonnet	79.53	29	P	P	01 23 46.4	-0.1
	comp=Z,4.6nm,0.7s,baz=341,slow=5.0,SNR=5.7						
PDAR	Pinedale Array	79.61	41	P	P	01 23 48.7	+1.3
	comp=Z,4.3nm,0.8s,baz=329,slow=0.8,SNR=38						
SCHQ	Schefferville	82.59	10	P	P	01 24 01.6	-0.5
	comp=Z,1.4nm,0.7s,baz=302,slow=9.5,SNR=3.6						
TXAR	Lajitas Array	92.97	46	P	P	01 24 53.4	+1.6
	comp=Z,0.7nm,0.7s,baz=265,slow=3.4,SNR=11						
SNAA	Sanae	142.55	202	PKP	PKPdf	01 31 03.3	-2.8
	comp=Z,0.3nm,0.4s,baz=168,slow=7.8,SNR=8.9						
LPAZ	La Paz	149.62	39	PKPbc	PKPbc	01 31 25.7	+0.1
	comp=Z,1.3nm,0.5s,baz=24,slow=5.8,SNR=7.5						

*CSEM **06** 01:13:35.3±0.1, 77°.05N×18°.17E, h2km, ML2.4, Error ellipse: s-maj=5.5km s-min=2.2km az=62.0*
*NAO **06** 01:13:35.6±1.1, 77°.12N×19°.07E, ML2.6*
*ISCJB **06** 01:13:37.2±0.7, 77°.05N±0°.08×18°.3E±0°.2, h16km, Error ellipse: s-maj=11.8km s-min=6.1km az=18.1*
*BER **06** 01:13:39.0±3.0, 77°.10N×18°.55E, h15km±22km, MD2.4, ML2.4, ML2.6(NAO)*
ISC 06 01:13:37.9±0.9**, 77°.08N**±0°.04×**18°.35E**±0°.05**, h16**km**, n16, σ0s95**/25**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSP	Hornsund	0.64	265	eP	Pg	01 13 49.8	-0.6
HSP				eS	Sg	01 13 58.3	-0.5
SPA0	Spitsbergen Ar	1.18	340	Pg	Pn	01 13 58.8	-0.9
	baz=150,slow=18						
SPA0				Lg	Lg	01 14 14.4	
	baz=148,slow=28						
SPA0	Spitsbergen Ar	1.18	340	Pg	Pn	01 13 58.8	-0.9
	baz=150,slow=18						
SPA0				Lg	Lg	01 14 14.4	
	baz=148,slow=28						
SPA0	Spitsbergen Ar	1.18	340	Pg	Pn	01 13 58.8	-0.9
	baz=150,slow=18,SNR=96						
SPA0				Lg	Lg	01 14 14.4	
	baz=148,slow=28,SNR=91						
HOPEN	Hopen	1.63	107	eP	Pn	01 14 05.1	-0.8
HOPEN				eSg	Sb	01 14 28.5	+0.6
HOPEN	Hopen	1.63	107	eP	Pn	01 14 05.1	-0.8
	SNR=62						
HOPEN				eSg	Sb	01 14 28.5	+0.6
	SNR=94						
KBS	Kingsbay	2.29	327	Pn	Pn	01 14 14.2	-0.7
KBS				Pg	Pb	01 14 19.1	+0.4
KBS				Lg	Lg	01 14 47.6	
KBS	Kingsbay	2.29	327	eP	Pn	01 14 14.1	-0.7
KBS				ePg	Pb	01 14 18.9	+0.2
KBS				eSg	Sb	01 14 48.2	+1.6
KBS				AML	AML	01 14 52.1	
	comp=Z,76nm,0.2s						
KBS	Kingsbay	2.29	327	eP	Pn	01 14 14.1	-0.7
	SNR=62						
KBS	Kingsbay	2.29	327	Pg	Pb	01 14 19.1	+0.4
KBS				Lg	Lg	01 14 47.6	
KBS				eSg	Sb	01 14 48.2	+1.6
	comp=Z,76nm,0.2s,SNR=92						
BJO	Bjornoya	2.60	175	ePg	Pb	01 14 24.2	+0.1
BJO				eSg	Sb	01 14 57.1	+1.4
BJO				AML	AML	01 15 00.4	
	comp=Z,19nm,0.2s						
BJO	Bjornoya	2.60	175	ePg	Pb	01 14 24.2	+0.1
	SNR=92						
BJO				eSg	Sb	01 14 57.1	+1.4
	comp=Z,19nm,0.2s,SNR=92						
KEV	Kevo	7.76	157	ep	Pn	01 15 31.8	+1.9
	comp=Z,0.2nm,0.3s						
ARA0	ARCESS Array S	7.85	161	Pn	Pn	01 15 31.1	-0.2
	baz=338,slow=10						
ARA0				Sn	Sn	01 16 52.5	-7.2
	baz=354,slow=18						
ARA0	ARCESS Array S	7.85	161	Pn	Pn	01 15 31.1	-0.2
	baz=338,slow=10						
ARA0				Sn	Sn	01 16 52.5	-7.2
	baz=354,slow=18						
ARA0	ARCESS Array S	7.85	161	Pn	Pn	01 15 31.1	-0.2
	baz=338,slow=9.8,SNR=62						

IDC 06 01:22:47.0±2.6**, 11°.17N**×**85°.44W, h0**km**, mb3.7**/7**, mb1 4.0**/7**, mb1mx3.8**/23**, mbtmp3.7**/7**, MS3.3**/3**, Ms1 3.4**/3**, ms1mx2.9**/32**, Error ellipse: s-maj=63.7km s-min=49.7km az=25.0, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	9.41	343	LR	LR	01 29 19.6	
	comp=Z,150nm,18.5s,baz=230,slow=42						
TXAR	Lajitas Array	24.82	319	P	P	01 28 10.9	-0.2
	2.0nm,0.6s,baz=140,slow=9.3,SNR=26						
TXAR				PcP	PcP	01 31 47.4	-0.4
	0.4nm,0.7s,baz=143,slow=4.9,SNR=6.9						
ANMO	Albuquerque	30.43	324	P	P	01 29 02.4	+0.7
	0.7nm,0.7s,baz=62,slow=22,SNR=5.2						
SADO	Sadowa	33.92	8	LR	LR	01 44 32.9	
	comp=Z,50nm,18.5s,baz=204,slow=38						
PDAR	Pinedale Array	37.84	331	P	P	01 30 05.0	-0.8
	0.3nm,0.3s,baz=82,slow=11,SNR=3.7						
NVAR	Mina Array Bea	39.96	318	P	P	01 30 24.8	+1.2
	2.3nm,0.7s,baz=135,slow=7.5,SNR=12						
NVAR				PcP	PcP	01 32 29.2	+0.1
	1.1nm,0.8s,baz=106,slow=4.8,SNR=4.0						
NVAR				LR	LR	01 50 22.8	
	comp=Z,48nm,18.1s,baz=199,slow=42						
SCHQ	Schefferville	45.97	15	P	P	01 31 13.1	+1.3
	1.7nm,0.7s,baz=220,slow=8.1,SNR=3.6						
YKA	Yellowknife Ar	55.37	344	P	P	01 32 21.4	-1.2
	0.3nm,0.7s,baz=137,slow=7.1,SNR=9.1						
ILAR	Eielson Array	67.99	336	P	P	01 33 46.6	-1.1
	0.1nm,0.4s,baz=113,slow=4.4,SNR=3.5						

IDC 06 01:25:59.2±4.3**, 27°.28S**×**13°.66W, h0**km**, mb4.0**/5**, mb1 4.1**/5**, mb1mx3.8**/20**, mbtmp4.0**/5**, MS3.8**/4**, Ms1 3.8**/4**, ms1mx3.4**/18**, Error ellipse: s-maj=111.2km s-min=34.4km az=52.0, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	34.31	101	P	P	01 32 46.6	-1.0
	4.9nm,1.2s,baz=261,slow=13,SNR=3.3						
BOSA				LR	LR	01 44 15.4	
	comp=Z,164nm,19.7s,baz=330,slow=32						
LBTB	Lobatse	35.22	95	P	P	01 32 56.1	+0.5
	3.3nm,0.6s,baz=265,slow=12,SNR=8.4						
CPUP	Villa Florida	38.84	261	LR	LR	01 46 35.3	
	comp=Z,148nm,21.4s,baz=281,slow=32						
TORD	Torodi Ar. Bea	42.86	22	P	P	01 33 59.4	+0.1
	1.7nm,0.8s,baz=201,slow=8.4,SNR=17						
TORD				LR	LR	01 47 13.3	
	comp=Z,95nm,21.4s,baz=215,slow=30						
KMBO	Kilima Mbogo	55.26	71	LR	LR	01 58 16.8	
	comp=Z,90nm,18.8s,baz=96,slow=35						
BRTR	Keskin Array B	79.91	35	P	P	01 38 10.8	+0.8
	0.8nm,0.9s,baz=226,slow=5.4,SNR=4.6						
AKASG	Malin Array Be	86.40	26	P	P	01 38 41.1	-2.0
	0.2nm,0.3s,baz=204,slow=6.7,SNR=4.0						
KSRS	Korea Array	146.21	63	PKPbc	PKPbc	01 45 41.8	+0.2
	0.6nm,0.3s,baz=284,slow=4.4,SNR=4.3						

*ISK **06** 01:36:23.9, 37°.79N×36°.28E, h28km, MD2.5*
*DDA **06** 01:36:26.5, 37°.76N×36°.29E, h7km, MD2.9*
*CSEM **06** 01:36:26.3±0.4, 37°.77N×35°.97E, h23km±5km, MD2.5, Error ellipse: s-maj=9.2km s-min=7.2km az=89.0*
ISC 06 01:36:24.4±1.3**, 37°.79N**±0°.03×**36°.11E**±0°.04**, h3**km±11km**, n16, σ1s10**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	Kozan	0.38	216	ePG	Pb	01 36 34.1	+0.3
KOZT				eSG	Sb	01 36 42.8	+2.8
KOZT	Kozan	0.38	216	ePg	Pb	01 36 34.1	+0.3
SARI	SarD1z-Kayseri	0.66	22	ePG	Pg	01 36 37.1	-0.1
SARI				eSG	Sg	01 36 46.8	+1.0
AYKD	Aykdinkavak	0.67	124	eP	Pg	01 36 36.7	-0.6
AYKD				eS	Sg	01 36 44.9	-1.1
CEYT	Ceyhan	0.83	200	ePG	Pg	01 36 39.9	-0.4
CEYT	Ceyhan	0.83	200	ePg	Pg	01 36 39.9	-0.4
PINB	Pinarbasi	0.92	15	eP	Pn	01 36 44.1	-0.3
PINB				eS	Sn	01 36 57.3	-0.9
PINB	Pinarbasi	0.92	15	eP	Pn	01 36 44.1	-0.3
PINB				eS	Sn	01 36 57.3	-0.9
GAZ	Gaziantep	1.07	125	ePG	Pg	01 36 42.8	-2.2
GZT	Gaziantep	1.24	110	eP	Pg	01 36 47.4	-0.7
GZT				eS	Sg	01 37 04.5	+0.3
KUZU	Kuzuini	1.27	142	eP	Pn	01 36 49.4	+0.3
KUZU				eS	Sn	01 37 06.4	-0.3
KUZU	Kuzuini	1.27	142	eP	Pn	01 36 49.4	+0.3
KUZU				eS	Sn	01 37 06.4	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKCD	Akcadag	1.52	70	eP	Pb	01 36 53.5	+0.2
AKCD				eS	Sg	01 37 14.7	+1.4
AKCD	Akcadag	1.52	70	eP	Pb	01 36 53.5	+0.2
AKCD				eS	Sg	01 37 14.7	+1.4
SULT	Sultanhani-AKS	2.09	282	ePN	Pn	01 36 58.9	-1.4
SULT	Sultanhani-AKS	2.09	282	ePn	Pn	01 36 58.9	-1.4

IDC 06 02:09:34.1±2.8, 22°.56S×179°.69W, h523km±33km, mb3.1/7, mb1 3.4/8, mb1mx3.2/19, mbtmp3.2/8, Error ellipse: s-maj=27.8km s-min=17.0km az=148.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	11.42	42	P	P	02 12 05.5	-1.2
	4.5nm,0.3s,baz=58,slow=13,SNR=4.2						
URZ	Urewera	15.89	189	P	P	02 12 49.2	-3.8
	1.6nm,0.3s,baz=299,slow=16,SNR=5.6						
URZ				S	S	02 15 38.0	+1.7
	1.7nm,0.3s,baz=97,slow=17,SNR=8.9						
STKA	Stephens Creek	35.51	246	P	P	02 15 47.3	+0.5
	1.5nm,0.5s,baz=79,slow=10,SNR=6.0						
ASAR	Alice Springs	42.55	259	P	P	02 16 43.9	-0.1
	1.9nm,0.8s,baz=101,slow=7.4,SNR=16						
WRA	Warramunga Arr	42.80	265	P	P	02 16 45.5	-0.4
	2.2nm,0.8s,baz=99,slow=7.7,SNR=5.5						
VNDA	Vanda	55.73	185	P	P	02 18 20.9	+0.4
	0.7nm,0.6s,baz=355,slow=6.5,SNR=5.1						
MAW	Mawson	79.10	200	P	P	02 20 43.2	-0.5
	1.1nm,0.6s,baz=105,slow=7.6,SNR=3.2						
TXAR	Lajitas Array	89.48	58	P	P	02 21 36.2	+0.5
	0.5nm,0.8s,baz=205,slow=5.5,SNR=7.2						
PDAR	Pinedale Array	91.53	44	P	P	02 21 46.0	+1.0
	0.3nm,0.7s,baz=165,slow=3.7,SNR=3.1						
AKASG	Malin Array Be	144.00	328	PKP	PKPbc	02 28 08.1	-0.9
	1.1nm,0.4s,baz=40,slow=4.8,SNR=6.2						
BRTR	Keskin Array B	146.98	309	PKPbc	PKPbc	02 28 17.1	-1.2
	0.5nm,0.6s,baz=153,slow=4.1,SNR=4.1						
TORD	Torodi Ar. Bea	170.55	188	PKPab	PKPab	02 30 01.9	-1.5
	0.1nm,0.6s,baz=174,slow=4.5,SNR=4.3						

*GRAL **06** 02:13:24.8±0.4, 33°.32N×35°.45E, h5km±4km, MD2.9*
*NSSC **06** 02:13:24.4±0.5, 33°.30N×35°.44E, h6km±2km, MD1.5, ML1.8*
*CSEM **06** 02:13:24.4±0.1, 33°.34N×35°.46E, h5km, ML2.9, Error ellipse: s-maj=2.8km s-min=2.0km az=109.0*
*ISCJB **06** 02:13:24.2±0.5, 33°.34N±0°.03×35°.44E±0°.04, h10km±4km, Error ellipse: s-maj=5.3km s-min=4.1km az=35.7*
ISC 06 02:13:24.7±1.0, 33°.33N±0°.02×35°.47E±0°.03, h10km±8km, n24, σ0s.54/37, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATL	Matarih	0.19	324	eP	Pg	02 13 28.6	-0.2
MATL	Matarih	0.19	324	eP	Pg	02 13 28.6	-0.2
KSDI	Kefar Szold	0.21	131	Pg	Pg	02 13 28.7	-0.4
KSDI				Sg	Sg	02 13 32.4	+0.3
MMC7	Mount Meron ar	0.32	191	Pg	Pg	02 13 30.2	-0.8
MMC5	Mount Meron ar	0.33	188	Pg	Pg	02 13 30.4	-0.8
RCY	Rachaya	0.35	62	eP	Pg	02 13 31.4	-0.3
RCY				eS	Sg	02 13 36.6	+0.3
HNTI	Hanita	0.35	225	Pg	Pg	02 13 31.8	+0.2
HNTI				Sg	Sg	02 13 36.6	+0.3
BRBR	Barbar	0.41	79	eP	Pg	02 13 33.0	+0.1
BRBR				eS	Sg	02 13 39.7	+1.3
BRBR				AML	AML	02 13 42.3	
	comp=N,122nm,0.4s						
BRBR				AML	AML	02 13 43.1	
	comp=E,70nm,0.4s						
BRBR	Barbar	0.41	79	eP	Pg	02 13 33.0	+0.1
	SNR=95						
KSHT	Keshet	0.45	140	Pg	Pg	02 13 34.1	+0.5
KSHT				Sg	Sb	02 13 41.0	-0.6
BHL	Bhannes	0.59	15	eP	Pg	02 13 35.7	-0.5
BHL				eS	Sg	02 13 44.0	0.0
BHL	Bhannes	0.59	15	eP	Pg	02 13 35.7	-0.5
BHL				eS	Sg	02 13 44.0	0.0
BLGI	Bet Lehem HaGe	0.64	201	Pg	Pg	02 13 36.7	-0.4
TCHB	Talchebab	0.79	147	eP	Pg	02 13 39.3	-0.5
TCHB				eS	Sg	02 13 49.8	-0.3
TCHB				AML	AML	02 13 51.0	
	comp=N,193nm,0.6s						
TCHB				AML	AML	02 13 53.4	
	comp=E,61nm,0.2s						
TCHB	Talchebab	0.79	147	eP	Pg	02 13 39.3	-0.5
	SNR=72						
TCHB				eS	Sg	02 13 49.8	-0.3
	comp=E,61nm,0.2s,SNR=92						
HWQ	Hawqa	1.02	23	eP	Pg	02 13 43.6	-0.8
HWQ	Hawqa	1.02	23	eP	Pg	02 13 43.6	-0.8
SALA	Sala	1.23	120	eP	Pn	02 13 47.7	-0.4
SALA				eS	Sb	02 14 03.6	-0.5
SALA				AML	AML	02 14 08.9	
	comp=N,61nm,0.6s						
SALA				AML	AML	02 14 10.9	
	comp=E,3.4nm,0.5s						
SALA	Sala	1.23	120	eP	Pn	02 13 47.7	-0.4
	SNR=61						
SALA				eS	Sb	02 14 03.7	-0.5
	comp=E,3.4nm,0.5s,SNR=62						
ZALF	Zalf	1.62	104	eP	Pn	02 13 53.9	+0.6
ZALF				eS	Sb	02 14 15.1	-0.1
ZALF				AML	AML	02 14 19.5	
	comp=E,20nm,0.7s						
ZALF				AML	AML	02 14 21.7	
	comp=N,9.0nm,0.5s						
ZALF	Zalf	1.62	104	eP	Pn	02 13 53.9	+0.6
	SNR=47						
ZALF				eS	Sb	02 14 15.1	-0.1
	comp=N,9.0nm,0.5s,SNR=49						
RTMI	Retamim	2.37	196	Sn	Sn	02 14 33.0	+0.4
PRNI	Paran	3.00	188	Pn	Pn	02 14 13.1	+0.8
KRMI	Paran Flat	3.27	191	Pn	Pn	02 14 16.6	+0.6

IDC 06 02:13:36.9±1.1, 56°.28S×26°.69W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/15, mbtmp3.8/3, Error ellipse: s-maj=45.5km s-min=31.7km az=91.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	Vanda	46.35	183	P	P	02 22 04.2	+0.2
	0.5nm,0.6s,baz=168,slow=9.3,SNR=6.5						
LPAZ	La Paz	50.74	305	P	P	02 22 39.5	+0.4
	1.3nm,0.7s,baz=156,slow=5.5,SNR=10.0						
TORD	Torodi Ar. Bea	73.12	29	P	P	02 25 09.3	+0.3
	0.8nm,0.6s,baz=202,slow=6.5,SNR=16						
YKA	Yellowknife Ar	136.53	318	PKP	PKPdf	02 32 57.9	-1.3
	0.2nm,0.6s,baz=122,slow=2.0,SNR=6.3						
ILAR	Eielson Array	150.48	311	PKPbc	PKPbc	02 33 27.5	-1.4
	0.6nm,0.8s,baz=137,slow=3.3,SNR=6.5						

*IDC **06** 02:15:18.2±6.7, 36°.40N×71°.45E, h104km±59km, mb3.3/2, mb1 3.3/6, mb1mx3.0/30, mbtmp3.2/6, Error ellipse: s-maj=95.4km s-min=40.9km az=124.0*
*NNC **06** 02:15:22.9±6.7, 36°.81N×71°.00E, h109km±111km, mb3.0, mpv3.7, Error ellipse: s-maj=51.9km s-min=38.4km az=24.0*
*ISCJB **06** 02:15:26.8±1.4, 36°.97N±0°.09×71°.3E±0°.1, h188km, mb3.6/2, Error ellipse: s-maj=14.8km s-min=10.8km az=138.9*
ISC 06 02:15:27.9±1.7, 37°.1N±0°.1×71°.2E±0°.1, h188km, n10, σ2s.44/14, 3C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.04	355	P	Pn	02 16 54.0	-1.5
	5.3nm,0.5s,baz=178,slow=12,SNR=148						
KK31				⇑S	Sn	02 18 05.7	+1.0
	4.5nm,0.4s,baz=185,slow=22,SNR=12						
AAK	Ala-Archa	6.10	23	P	Pn	02 16 54.4	-1.9
	1.5nm,0.3s,baz=136,slow=5.9,SNR=14						
AAK				S	Sn	02 18 06.6	+0.4
	0.7nm,0.3s,baz=123,slow=23,SNR=8.6						
TKM2	Tokmak 2	6.74	29	⇓P	Pn	02 17 02.2	-2.5
	2.4nm,0.7s						
TKM2				⇓S	Sn	02 18 22.6	+1.2
	1.9nm,0.9s						
KURBB	Kurchatov Arra	14.52	19	P	P	02 18 47.9	+1.8
	0.1nm,0.3s,baz=207,slow=11,SNR=7.1						
AB31	Akbulak array	14.66	330	P	Pn	02 18 46.6	+0.2
	0.5nm,0.4s,baz=134,slow=13,SNR=31						
AB31				S	Sn	02 21 26.8	-3.2
	1.1nm,0.6s,baz=153,slow=22,SNR=15						
BVAR	Borovoye Array	15.96	358	P	Pn	02 19 06.6	+4.5
	0.5nm,0.3s,baz=195,slow=10,SNR=4.4						
AKTO	Aktyubinsk	16.37	329	⇑P	Pn	02 19 10.7	+3.7
	0.3nm,0.8s						
AKTO				⇑S	S	02 22 09.0	+1.3
	0.4nm,1.1s						
ZALV	Zalesovo Beam	19.32	25	P	Pn	02 19 40.6	-1.2
	0.6nm,0.3s,baz=205,slow=9.9,SNR=8.1						
ARCES	ARCESS Array B	40.67	337	P	P	02 22 54.1	+4.6
	2.1nm,0.8s,baz=119,slow=9.4,SNR=3.9						
TORD	Torodi Ar. Bea	65.90	268	P	P	02 25 53.9	0.0
	0.2nm,0.4s,baz=45,slow=5.3,SNR=8.2						

*JMA **06** 02:18:00.6±0.3, 24°.23N×126°.84E, h95km, M3.7*
*NIED **06** 02:18:00, 24°.20N×126°.80E, h5km, Mw3.9 Best double couple: $M_0$7.47000×10^14 NP1:ϕ_s247.00000°, δ56.00000°, λ-50.00000°. NP2:ϕ_s10.00000°, δ51.00000°, λ-134.00000°.*
*ISCJB **06** 02:18:00.3±0.5, 24°.17N±0°.04×126°.89E±0°.04, h42km, mb4.0/16, MS3.4/4, Error ellipse: s-maj=6.8km s-min=3.4km az=148.2*
*IDC **06** 02:18:01.9±0.9, 24°.08N×127°.03E, h38km±6km, mb3.7/11, mb1 3.9/12, mb1mx3.7/25, mbtmp3.7/12, ML4.1/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/47, Error ellipse: s-maj=24.0km s-min=17.4km az=71.0*
*NEIC **06** 02:18:02.0±0.7, 24°.09N×126°.89E, mb4.6/4, MW3.9(NIED), Error ellipse: s-maj=14.6km s-min=11.6km az=137.0*
ISC 06 02:18:01.7±0.7, 24°.07N±0°.07×126°.93E±0°.05, h34km, h34km:pP-P, n56, σ1s.99/79, mb4.0/16, MS3.4/4, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOGS	Gusukube	1.55	297	P	Pn	02 18 25.7	-1.2
JOGS				eS	Sn	02 18 43.9	-2.0
JMJ	Miyako jima 2	1.67	297	P	Pn	02 18 27.4	-1.1
JMJ				eS	Sn	02 18 47.1	-1.6
JTJ	Tarama	2.11	286	P	Pn	02 18 33.1	-1.5
JTJ				eS	Sn	02 18 57.5	-2.2
JJT2	Tamagusuku 2	2.19	20	P	Pn	02 18 34.1	-1.5
JJT2				eS	Sn	02 18 59.7	-1.8
JKE	Kume jima 2	2.25	357	P	Pn	02 18 34.8	-1.7
JKE				eS	Sn	02 18 59.8	-3.3
JAGN	Aguni-jima	2.52	6	P	Pn	02 18 38.7	-1.5
JAGN				eS	Sn	02 19 07.5	-2.3
JIJ	Ishigaki jima	2.56	277	P	Pn	02 18 39.3	-1.5
JIJ				eS	Sn	02 19 08.3	-2.6
JKRS	Kuro-shima	2.68	274	P	Pn	02 18 40.9	-1.5
JKRS				eS	Sn	02 19 10.4	-3.2
HATJ	Hateruma jima	2.86	270	P	Pn	02 18 42.9	-2.0
HATJ				eS	Sn	02 19 13.3	-4.8
IRIF	Iriomote-Funau	2.94	276	P	Pn	02 18 44.2	-1.7
IRIF				eS	Sn	02 19 16.9	-3.1
JOW	Kunigami	3.00	23	ePn	Pn	02 18 45.4	-1.4
JOW	Kunigami	3.00	23	P	Pn	02 18 45.5	-1.4
JOW				eS	Sn	02 19 19.1	-2.6
JIH	Iheya	3.10	17	P	Pn	02 18 46.8	-1.3
JIH				eS	Sn	02 19 21.4	-2.5
YOJ	Yonaguni jima	3.60	277	P	Pn	02 18 53.4	-1.7
YOJ				eS	Sn	02 19 31.7	-4.7
JTK	Tokunoshima	4.12	26	P	Pn	02 19 00.5	-1.7
JTK				eS	Sn	02 19 45.1	-4.2
JMZ	Minamidaito 2	4.26	65	P	Pn	02 18 59.5	-4.7
JMZ				eS	Sn	02 19 45.7	-7.0
JAMN	Amaminishikomi	4.62	25	P	Pn	02 19 07.3	-1.7
JAMN				eS	Sn	02 19 57.0	-4.5
JAM	Amami Oshima	4.94	28	P	Pn	02 19 11.5	-2.0
JAM				eS	Sn	02 20 02.7	-6.8
YHNB	Yeheng	5.10	278	ePn	Pn	02 19 14.2	-1.6
	23nm,0.4s						
YULB	Yu-li	5.21	264	ePn	Pn	02 19 12.9	-4.3
	21nm,0.8s						
TPUB	Ta-pu	5.83	264	ePn	Pn	02 19 22.9	-2.8
	29nm,0.4s						
JNU	Nakatsue	9.66	20	Pn	Pn	02 20 16.4	-1.9
JNU	Nakatsue	9.66	20	Pn	Pn	02 20 16.4	-1.9
	1.7nm,0.3s,baz=180,slow=5.1,SNR=13						
KSRS	Korea Array	13.37	3	LR	LR	02 26 37.3	
	comp=Z,35nm,18.1s,baz=180,slow=39						
USRK	Ussuriysk Arra	20.50	10	LR	LR	02 31 27.4	
	comp=Z,59nm,20.6s,baz=123,slow=39						
CMAR	Chiang Mai Arr	26.65	263	P	P	02 23 38.6	+1.1
CMAR	Chiang Mai Arr	26.65	263	P	P	02 23 38.6	+1.1
	0.7nm,0.4s,baz=65,slow=8.3,SNR=6.9						
SONM	Songino Array	28.79	331	P	P	02 23 58.9	+2.4
SONM				pP	pP	02 24 10.9	+4.6
SONM	Songino Array	28.79	331	P	P	02 23 58.9	+2.4
	1.2nm,0.6s,baz=140,slow=9.8,SNR=5.4						
SONM				pP	pP	02 24 10.9	+4.6
	1.1nm,0.4s,baz=149,slow=10,SNR=5.3						
MK31	Makanchi Array	42.14	314	eP	P	02 25 50.2	-0.6
MKAR	Makanchi Array	42.14	314	P	P	02 25 50.9	+0.1
MKAR				pP	pP	02 26 02.2	+1.4
MKAR				PcP	PcP	02 27 44.0	-0.8
MKAR	Makanchi Array	42.14	314	P	P	02 25 50.9	+0.1
	1.7nm,0.7s,baz=92,slow=10,SNR=18						
MKAR				pP	pP	02 26 02.2	+1.4
	0.9nm,0.5s,baz=96,slow=10,SNR=7.3						
MKAR				PcP	PcP	02 27 44.0	-0.8
	0.2nm,0.6s,baz=123,slow=5.3,SNR=3.1						
ZALV	Zalesovo Beam	43.29	325	P	P	02 25 59.1	-0.8
ZALV				pP	pP	02 26 10.6	+0.6
ZALV	Zalesovo Beam	43.29	325	P	P	02 25 59.1	-0.8
	1.5nm,0.5s,baz=119,slow=8.2,SNR=11						
ZALV				pP	pP	02 26 10.6	+0.6
	1.8nm,0.6s,baz=114,slow=8.1,SNR=6.9						
ZALV				LR	LR	02 44 46.0	
	comp=Z,32nm,18.5s,baz=69,slow=37						
WRA	Warramunga Arr	44.34	170	P	P	02 26 07.2	-1.5
WRA	Warramunga Arr	44.34	170	P	P	02 26 07.2	-1.5
	2.1nm,0.8s,baz=352,slow=8.5,SNR=7.8						
KURK	Kurchatov	45.61	318	eP	P	02 26 17.8	-0.7
	2.9nm,0.5s						
KURK				pP	pP	02 26 29.9	+1.3
KURBB	Kurchatov Arra	45.64	318	P	P	02 26 18.4	-0.4
	1.1nm,0.5s,baz=108,slow=9.2,SNR=10						
KURBB				pP	pP	02 26 29.9	+1.1
	1.5nm,0.4s,baz=108,slow=9.2,SNR=7.6						
TKM2	Tokmak 2	46.00	307	eP	P	02 26 22.2	+0.2
	9.8nm,1.3s						
TKM2				epP	pP	02 26 34.4	+2.3
AAK	Ala-Archa	46.77	307	LR	LR	02 48 37.8	
	comp=Z,57nm,19.6s,baz=92,slow=39						
ASAR	Alice Springs	47.93	171	P	P	02 26 37.0	+0.1
ASAR	Alice Springs	47.93	171	P	P	02 26 37.0	+0.1
	0.4nm,0.5s,baz=357,slow=13,SNR=7.6						
BRVK	Borovoye	51.20	320	eP	P	02 27 01.4	-0.2
	9.5nm,1.3s						
BRVK				epP	pP	02 27 14.1	+2.4
ABKAR	Akbulak array	57.28	314	eP	P	02 27 46.2	+0.3
	5.2nm,0.7s						
ILAR	Eielson Array	66.89	28	P	P	02 28 49.9	-0.3
ILAR	Eielson Array	66.89	28	P	P	02 28 49.9	-0.3
	0.2nm,0.7s,baz=283,slow=6.4,SNR=4.1						
KBZ	Khabaz	69.62	310	LR	LR	03 04 20.3	
	comp=Z,46nm,18.8s,baz=279,slow=40						
FINES	FINESS Array B	74.16	331	P	P	02 29 34.5	0.0
FINES	FINESS Array B	74.16	331	P	P	02 29 34.5	0.0
	2.3nm,0.9s,baz=2.7,slow=4.0,SNR=5.0						
BUR08	Bucovina Ar. S	80.03	318	eP	P	02 30 07.1	-0.9
NOA	NORSAR Array B	80.72	334	P	P	02 30 10.7	-0.6
NOA	NORSAR Array B	80.72	334	P	P	02 30 10.7	-0.6
	0.9nm,0.9s,baz=52,slow=5.5,SNR=3.7						
YKA	Yellowknife Ar	80.97	24	P	P	02 30 12.6	+0.1
YKA				pP	pP	02 30 23.8	+0.5
YKA	Yellowknife Ar	80.97	24	P	P	02 30 12.6	+0.1
	0.4nm,0.6s,baz=303,slow=5.3,SNR=11						
YKA				pP	pP	02 30 23.7	+0.5
	0.3nm,0.7s,baz=305,slow=5.5,SNR=4.0						
GERES	GERESS Array B	86.20	323	P	P	02 30 40.0	+0.2
GERES	GERESS Array B	86.20	323	P	P	02 30 40.0	+0.2
	0.3nm,0.3s,baz=33,slow=8.1,SNR=3.6						

WEL 06 02:28:21.7±0.7, 34°.61S×177°.91E, h33km, ML4.3/4, Error ellipse: s-maj=13.7km s-min=5.1km az=90.0, North of New Zealand

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.97	174	ePN	Pn	02 29 05.8	-0.7
URZ	Urewera	3.70	190	ePN	Pn	02 29 15.7	-0.9
URZ				SN	Sn	02 29 57.0	-2.1
MWZ	Matawai	3.73	185	PN	Pn	02 29 17.0	-0.1
MWZ				SN	Sn	02 29 57.2	-2.8
MRZ	Mangatainoka R	6.32	196	ePN	Pn	02 29 47.9	-4.7

IDC 06 02:30:21.4±1.3, 21°.97S×176°.49W, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.9/19, mbtmp4.2/5, Error ellipse: s-maj=54.0km s-min=29.6km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	34.77	266	P	P	02 37 15.0	+1.2
	8.0nm,0.6s,baz=91,slow=9.3,SNR=8.2						
STKA	Stephens Creek	38.45	246	P	P	02 37 46.0	+0.9
	1.4nm,0.4s,baz=92,slow=12,SNR=6.1						
ASAR	Alice Springs	45.57	258	P	P	02 38 43.0	-0.4
	2.6nm,0.5s,baz=99,slow=7.2,SNR=31						
WRA	Warramunga Arr	45.81	263	P	P	02 38 44.0	-1.3
	1.7nm,0.6s,baz=95,slow=7.9,SNR=12						
ILAR	Eielson Array	89.43	12	P	P	02 43 21.1	+1.5
	0.2nm,0.5s,baz=224,slow=6.7,SNR=5.6						
AKASG	Malin Array Be	144.97	331	PKP	PKPab	02 49 57.9	-1.7
	0.6nm,0.3s,baz=38,slow=4.1,SNR=3.4						
BRTR	Keskin Array B	148.86	312	PKPbc	PKPbc	02 50 09.7	-1.7
	0.2nm,0.4s,baz=108,slow=3.2,SNR=2.4						
TORD	Torodi Ar. Bea	171.06	169	PKPab	PKPab	02 51 51.2	-0.1
	0.5nm,0.7s,baz=180,slow=4.7,SNR=6.7						

*ISK **06** 02:32:36.8, 38°.65N×27°.00E, h6km, MD3.3*
*ATH **06** 02:32:37.4, 38°.64N×27°.00E, h29km±1km, MD3.2/6*
*DDA **06** 02:32:37.2, 38°.62N×27°.02E, h7km, ML3.3*
*CSEM **06** 02:32:37.9±0.1, 38°.62N×26°.99E, h10km, MD3.3, Error ellipse: s-maj=2.1km s-min=1.7km az=57.0*
*ISCJB **06** 02:32:37.5±0.5, 38°.63N±0°.02×26°.99E±0°.02, h9km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=26.2*
*THE **06** 02:32:38.2, 38°.65N×26°.95E, h1km, ML2.6/5, Error ellipse: s-maj=1.5km s-min=0.5km az=124.0*
ISC 06 02:32:37.6±1.0, 38°.64N±0°.02×27°.01E±0°.02, h8km±9km, n94, σ0s.59/126, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.26	174	PG	Pg	02 32 42.3	-0.4
BLCB				eSG	Sg	02 32 46.5	+0.5
BLCB	Balcova	0.26	174	i Pg	Pg	02 32 42.3	-0.4
BLCB				eSg	Sg	02 32 46.6	+0.5
IZM	Izmir	0.31	140	PG	Pg	02 32 44.0	+0.2
IZM				eSG	Sg	02 32 48.3	+0.3
IZM	Izmir	0.31	140	i Pg	Pg	02 32 44.0	+0.2
IZM				eSg	Sg	02 32 48.3	+0.3
URLA	Izmir	0.43	229	i P	Pg	02 32 45.8	-0.1
URLA				i S	Sg	02 32 51.7	+0.2
URLA	Izmir	0.43	229	i P	Pg	02 32 45.8	-0.1
URLA				i S	Sg	02 32 51.7	+0.2
AKS	Akhisar	0.67	69	ePG	Pb	02 32 51.0	-0.6
AKS	Akhisar	0.67	69	ePg	Pb	02 32 51.0	-0.6
AKHS	Akhisar	0.67	69	eP	Pg	02 32 50.9	+0.3
AKHS				eS	Sb	02 33 00.4	-0.7
AKHS	Akhisar	0.67	69	eP	Pg	02 32 50.9	+0.3
AKHS				eS	Sb	02 33 00.4	-0.7
AYVA	Ayvalik	0.71	340	i P	Pb	02 32 51.9	-0.3
AYVA				i S	Sb	02 33 01.9	-0.2
AYVA	Ayvalik	0.71	340	i P	Pb	02 32 51.9	-0.3
AYVA				i S	Sb	02 33 01.9	-0.2
CHOS	Chios island	0.79	252	P	Pg	02 32 52.6	-0.2
CHOS				S	Sb	02 33 04.3	-0.1
CHOS	Chios island	0.79	252	ePN	Pg	02 32 52.8	0.0
CHOS				eSN	Sb	02 33 04.5	+0.1
CHOS	Chios island	0.79	252	P	Pg	02 32 52.6	-0.2
CHOS				eSn	Sb	02 33 04.5	+0.1
PRK	Paraskevi	0.83	317	P	Pg	02 32 53.6	0.0
PRK				S	Sb	02 33 05.7	0.0
PRK	Paraskevi	0.83	317	ePN	Pb	02 32 53.7	-0.6
PRK				eSN	Sb	02 33 05.6	-0.1
PRK	Paraskevi	0.83	317	P	Pg	02 32 53.6	0.0
PRK				S	Sb	02 33 05.7	0.0
GCAM	G?zelcaml?	0.95	169	eP	Pg	02 32 55.3	-0.6
GCAM				eS	Sg	02 33 08.3	0.0
GCAM	G?zelcaml?	0.95	169	eP	Pg	02 32 55.3	-0.6
GCAM				eS	Sg	02 33 08.3	0.0
SIGR	SIGRI	1.06	303	P	Pg	02 32 57.8	-0.2
SIGR				S	Sb	02 33 12.8	+0.5
SIGR	SIGRI	1.06	303	P	Pg	02 32 57.8	-0.2
SIGR				S	Sb	02 33 12.8	+0.5
AYDN	Tasoluk	1.19	145	eP	Pg	02 32 59.7	-0.8
AYDN				eS	Sg	02 33 15.2	-0.8
AYDN	Tasoluk	1.19	145	eP	Pg	02 32 59.7	-0.8
AYDN				eS	Sg	02 33 15.2	-0.8
BALY	Balya	1.20	23	i P	Pb	02 33 00.4	-0.1
BALY				i S	Sn	02 33 17.2	+0.1
BALY	Balya	1.20	23	i P	Pb	02 33 00.4	-0.1
BALY				i S	Sn	02 33 17.2	+0.1
MANT	Manisa	1.22	96	eP	Pg	02 33 00.5	-0.6
MANT				eS	Sg	02 33 16.2	-0.8
MANT	Manisa	1.22	96	eP	Pg	02 33 00.5	-0.6
MANT				eS	Sg	02 33 16.2	-0.8
KULA	Kula-Manisa	1.30	95	ePN	Pn	02 33 01.8	-0.3
KULA	Kula-Manisa	1.30	95	ePn	Pn	02 33 01.8	-0.3
MLSB	Milas	1.47	155	ePN	Pb	02 33 05.1	-0.1
MLSB	Milas	1.47	155	ePn	Pb	02 33 05.1	-0.1
GONE	Gonen-Balikesi	1.50	20	ePN	Pn	02 33 04.6	-0.1
GONE	Gonen-Balikesi	1.50	20	ePn	Pn	02 33 04.6	-0.1
DST	Dursunbey	1.58	52	ePN	Pn	02 33 06.0	+0.1
DST	Dursunbey	1.58	52	ePn	Pn	02 33 06.0	+0.1
BODT	Bodrum	1.59	171	ePN	Pb	02 33 06.9	-0.3
BODT	Bodrum	1.59	171	ePn	Pb	02 33 06.9	-0.3
KRBG	Karabiga-Canak	1.77	7	ePN	Pn	02 33 08.8	+0.4
KRBG	Karabiga-Canak	1.77	7	ePn	Pn	02 33 08.8	+0.4
GELI	Tayfur-Gelibol	1.80	347	ePN	Pn	02 33 08.9	0.0
GELI	Tayfur-Gelibol	1.80	347	ePn	Pn	02 33 08.9	0.0
YER	Yerkesik	1.81	146	ePN	Pn	02 33 09.8	+0.8
YER	Yerkesik	1.81	146	ePn	Pn	02 33 09.8	+0.8
DENT	Denizli	1.82	118	ePN	Pn	02 33 10.1	+0.8
DENT	Denizli	1.82	118	ePn	Pn	02 33 10.1	+0.8
BNT	Bandirma	1.85	22	ePN	Pn	02 33 09.4	-0.2
BNT	Bandirma	1.85	22	ePn	Pn	02 33 09.4	-0.2
LIA	Limnos Island	1.89	312	P	Pn	02 33 10.1	0.0
LIA				S	Sn	02 33 34.9	+0.7
LIA	Limnos Island	1.89	312	ePB	Pn	02 33 10.1	0.0
LIA				eSN	Sn	02 33 33.5	-0.7
LIA	Limnos Island	1.89	312	P	Pn	02 33 10.1	0.0
LIA				eSn	Sn	02 33 33.5	-0.7
LIA				S	Sn	02 33 34.9	+0.7
KCTX	Karacabey (Bur	1.93	32	ePN	Pn	02 33 10.6	-0.1
KCTX	Karacabey (Bur	1.93	32	ePn	Pn	02 33 10.6	-0.1
KHL	Karahalli	2.00	98	ePN	Pn	02 33 12.2	+0.5
KHL	Karahalli	2.00	98	ePn	Pn	02 33 12.2	+0.5
MRMT	Marmara Adasi	2.01	13	ePN	Pn	02 33 11.9	+0.1
MRMT	Marmara Adasi	2.01	13	ePn	Pn	02 33 12.0	+0.1
ERIK	Erikli-Kesan	2.06	349	ePN	Pn	02 33 12.9	+0.4
ERIK	Erikli-Kesan	2.06	349	ePn	Pn	02 33 12.9	+0.4
SMTH	Samothraki Isl	2.16	328	ePN	Pn	02 33 13.8	0.0
SMTH	Samothraki Isl	2.16	328	ePn	Pn	02 33 13.8	0.0
MDNY	Mudanya-Bursa	2.26	39	ePN	Pn	02 33 16.2	+1.1
MDNY	Mudanya-Bursa	2.26	39	ePn	Pn	02 33 16.2	+1.1
ALN	Alexandroupoli	2.37	342	P	Pn	02 33 16.8	0.0
ALN				S	Sn	02 33 46.8	+0.8
ALN	Alexandroupoli	2.37	342	ePN	Pn	02 33 16.8	0.0
ALN	Alexandroupoli	2.37	342	P	Pn	02 33 16.8	0.0
ALN				S	Sn	02 33 46.8	+0.8
ALT	Altintas	2.46	79	ePN	Pn	02 33 18.6	+0.6
ALT	Altintas	2.46	79	ePn	Pn	02 33 18.6	+0.6
AOS	Alonnisos	2.50	283	ePN	Pn	02 33 18.2	-0.3
AOS	Alonnisos	2.50	283	ePn	Pn	02 33 18.2	-0.3
CRLT	Corlu	2.55	12	ePN	Pn	02 33 19.9	+0.7
CRLT	Corlu	2.55	12	ePn	Pn	02 33 19.9	+0.7
FETY	Fethiye	2.59	140	ePN	Pn	02 33 21.0	+1.2
FETY	Fethiye	2.59	140	ePn	Pn	02 33 21.0	+1.2
RDO	Rodhopi	2.75	336	ePN	Pn	02 33 22.2	+0.3
RDO	Rodhopi	2.75	336	ePn	Pn	02 33 22.2	+0.3
SLVT	Silivri	2.75	19	ePN	Pn	02 33 23.6	+1.7
SLVT	Silivri	2.75	19	ePn	Pn	02 33 23.6	+1.7
CTKS	Kestanelik-??a	2.84	23	ePN	Pn	02 33 23.9	+0.8

CTKS	**Kestanelik-??a**	**2.84**	**23**	*e*Pn	**Pn**	**02 33 23.9**	**+0.8**
BGKT	**Bogazkoy**	**2.88**	**28**	*e*PN	**Pn**	**02 33 24.4**	**+0.7**
BGKT	**Bogazkoy**	**2.88**	**28**	*e*Pn	**Pn**	**02 33 24.4**	**+0.7**
PAIG	**Paliouri**	**2.88**	**298**	*e*PN	**Pn**	**02 33 23.4**	**-0.4**
PAIG	**Paliouri**	**2.88**	**298**	*e*Pn	**Pn**	**02 33 23.4**	**-0.4**
ISK	**Istanbul-Kandi**	**2.89**	**32**	*e*PN	**Pn**	**02 33 24.7**	**+0.8**
ISK	**Istanbul-Kandi**	**2.89**	**32**	*e*Pn	**Pn**	**02 33 24.7**	**+0.8**
HRT	**Hereke**	**2.99**	**42**	*e*PN	**Pn**	**02 33 26.3**	**+1.0**
HRT	**Hereke**	**2.99**	**42**	*e*Pn	**Pn**	**02 33 26.3**	**+1.0**
ESKT	**Eskisehir**	**3.12**	**72**	*e*PN	**Pn**	**02 33 27.6**	**+0.5**
ESKT	**Eskisehir**	**3.12**	**72**	*e*Pn	**Pn**	**02 33 27.6**	**+0.5**
GULT	**Gulveren**	**3.25**	**55**	*e*PN	**Pn**	**02 33 30.2**	**+1.3**
GULT	**Gulveren**	**3.25**	**55**	*e*Pn	**Pn**	**02 33 30.2**	**+1.3**
SVRH	**Sivrihisar-ESK**	**3.61**	**76**	*e*PN	**Pn**	**02 33 35.0**	**+1.2**
SVRH	**Sivrihisar-ESK**	**3.61**	**76**	*e*Pn	**Pn**	**02 33 35.0**	**+1.2**

*ISK **06** 02:36:59.8, 38.67N×26.95E, h8km, MD3.0*
*ATH **06** 02:37:01.4, 38.63N×26.99E, h23km±2km, MD3.3/5*
*DDA **06** 02:37:01.1, 38.61N×27.00E, h11km, MD3.0*
*CSEM **06** 02:37:01.4±0.1, 38.63N×27.00E, h15km, MD3.0, Error ellipse: s-maj=2.9km s-min=2.6km az=59.0*
*ISCJB **06** 02:37:01.1±0.5, 38.64N±0.02×27.00E±0.03, h12km±4km, Error ellipse: s-maj=4.0km s-min=3.4km az=1.3*
*THE **06** 02:37:03.3, 38.64N×26.84E, h2km±13km, ML2.4/3, Error ellipse: s-maj=15.5km s-min=0.8km az=108.0*
ISC 06 02:37:01.3±0.9**, 38.63N**±0.02×**27.00E**±0.02**, h13**km±8km**, n61, σ0.55**/87**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.25**	**173**	PG	**Pg**	**02 37 06.3**	**-0.3**
BLCB				*e*SG	**Sg**	**02 37 10.1**	**0.0**
BLCB	**Balcova**	**0.25**	**173**	*i* Pg	**Pg**	**02 37 06.3**	**-0.3**
BLCB				*e*Sg	**Sg**	**02 37 10.1**	**0.0**
IZM	**Izmir**	**0.31**	**139**	PG	**Pg**	**02 37 07.5**	**-0.2**
IZM				*e*SG	**Sg**	**02 37 12.8**	**+0.8**
IZM	**Izmir**	**0.31**	**139**	*i* Pg	**Pg**	**02 37 07.5**	**-0.2**
IZM				*e*Sg	**Sg**	**02 37 12.8**	**+0.8**
URLA	**Izmir**	**0.42**	**230**	*e*P	**Pg**	**02 37 09.6**	**-0.1**
URLA				*e*S	**Sg**	**02 37 15.3**	**-0.1**
URLA	**Izmir**	**0.42**	**230**	*e*P	**Pg**	**02 37 09.6**	**-0.1**
URLA				*e*S	**Sg**	**02 37 15.3**	**-0.1**
AKS	**Akhisar**	**0.68**	**69**	*e*PG	**Pg**	**02 37 14.2**	**-0.3**
AKS				*e*SG	**Sb**	**02 37 24.1**	**-0.1**
AKS	**Akhisar**	**0.68**	**69**	*e*Pg	**Pg**	**02 37 14.2**	**-0.3**
AKS				*e*Sg	**Sb**	**02 37 24.2**	**-0.1**
AKHS	**Akhisar**	**0.68**	**69**	*e*P	**Pg**	**02 37 14.8**	**+0.2**
AKHS				*e*S	**Sg**	**02 37 24.0**	**+0.5**
AKHS	**Akhisar**	**0.68**	**69**	*e*P	**Pg**	**02 37 14.8**	**+0.2**
AKHS				*e*S	**Sg**	**02 37 24.0**	**+0.5**
AYVA	**Ayvalik**	**0.72**	**340**	*e*P	**Pb**	**02 37 15.7**	**0.0**
AYVA				*e*S	**Sb**	**02 37 25.5**	**+0.1**
AYVA	**Ayvalik**	**0.72**	**340**	*e*P	**Pb**	**02 37 15.7**	**0.0**
AYVA				*e*S	**Sb**	**02 37 25.5**	**+0.1**
CHOS	**Chios island**	**0.78**	**252**	P	**Pg**	**02 37 16.5**	**0.0**
CHOS				S	**Sg**	**02 37 26.1**	**-0.7**
CHOS	**Chios island**	**0.78**	**252**	*e*PN	**Pb**	**02 37 16.8**	**0.0**
CHOS				*e*SN	**Sb**	**02 37 27.2**	**-0.2**
CHOS	**Chios island**	**0.78**	**252**	P	**Pg**	**02 37 16.5**	**0.0**
CHOS	**Chios island**	**0.78**	**252**	*e*Pn	**Pb**	**02 37 16.8**	**0.0**
CHOS				S	**Sg**	**02 37 26.1**	**-0.7**
CHOS				*e*Sn	**Sb**	**02 37 27.2**	**-0.2**
PRK	**Paraskevi**	**0.84**	**317**	P	**Pg**	**02 37 17.6**	**0.0**
PRK				S	**Sb**	**02 37 29.2**	**+0.3**
PRK	**Paraskevi**	**0.84**	**317**	*e*PN	**Pg**	**02 37 17.5**	**0.0**
PRK				*e*SN	**Sb**	**02 37 29.4**	**+0.5**
PRK	**Paraskevi**	**0.84**	**317**	P	**Pg**	**02 37 17.6**	**0.0**
PRK				S	**Sb**	**02 37 29.2**	**+0.3**
GCAM	**G?zelcaml?**	**0.95**	**169**	*e*P	**Pn**	**02 37 20.1**	**-0.2**
GCAM				*e*S	**Sb**	**02 37 31.1**	**-0.9**
GCAM	**G?zelcaml?**	**0.95**	**169**	*e*P	**Pn**	**02 37 20.1**	**-0.2**
GCAM				*e*S	**Sb**	**02 37 31.1**	**-0.9**
SIGR	**SIGRI**	**1.07**	**303**	P	**Pb**	**02 37 21.4**	**-0.2**
SIGR				S	**Sg**	**02 37 35.7**	**-0.1**
SIGR	**SIGRI**	**1.07**	**303**	P	**Pb**	**02 37 21.4**	**-0.2**
MANT	**Manisa**	**1.23**	**96**	*e*P	**Pb**	**02 37 24.8**	**+0.3**
MANT				*e*S	**Sb**	**02 37 39.9**	**-0.4**
MANT	**Manisa**	**1.23**	**96**	*e*P	**Pb**	**02 37 24.8**	**+0.3**
MANT				*e*S	**Sb**	**02 37 39.9**	**-0.4**
KULA	**Kula-Manisa**	**1.30**	**95**	*e*PN	**Pn**	**02 37 25.5**	**+0.2**
KULA	**Kula-Manisa**	**1.30**	**95**	*e*Pn	**Pn**	**02 37 25.5**	**+0.2**
MLSB	**Milas**	**1.47**	**155**	*e*PN	**Pb**	**02 37 28.4**	**-0.1**
MLSB	**Milas**	**1.47**	**155**	*e*Pn	**Pb**	**02 37 28.4**	**-0.1**
GONE	**Gonen-Balikesi**	**1.51**	**20**	*e*PN	**Pn**	**02 37 27.2**	**-0.8**
GONE	**Gonen-Balikesi**	**1.51**	**20**	*e*Pn	**Pn**	**02 37 27.2**	**-0.8**
BODT	**Bodrum**	**1.59**	**171**	*e*PN	**Pn**	**02 37 29.8**	**+0.7**
BODT	**Bodrum**	**1.59**	**171**	*e*Pn	**Pn**	**02 37 29.8**	**+0.7**
DST	**Dursunbey**	**1.59**	**52**	*e*PN	**Pn**	**02 37 29.1**	**0.0**
DST	**Dursunbey**	**1.59**	**52**	*e*Pn	**Pn**	**02 37 29.1**	**0.0**
KRBG	**Karabiga-Canak**	**1.77**	**7**	*e*PN	**Pn**	**02 37 30.9**	**-0.8**
KRBG	**Karabiga-Canak**	**1.77**	**7**	*e*Pn	**Pn**	**02 37 30.9**	**-0.8**
YER	**Yerkesik**	**1.81**	**146**	*e*PN	**Pn**	**02 37 33.3**	**+1.1**
YER	**Yerkesik**	**1.81**	**146**	*e*Pn	**Pn**	**02 37 33.3**	**+1.1**
GELI	**Tayfur-Gelibol**	**1.81**	**347**	*e*PN	**Pn**	**02 37 30.9**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.81**	**347**	*e*Pn	**Pn**	**02 37 30.9**	**-1.3**
BNT	**Bandirma**	**1.86**	**22**	*e*PN	**Pn**	**02 37 32.2**	**-0.7**
BNT	**Bandirma**	**1.86**	**22**	*e*Pn	**Pn**	**02 37 32.2**	**-0.7**
LIA	**Limnos Island**	**1.90**	**312**	*e*PN	**Pn**	**02 37 34.4**	**+1.1**
LIA				*e*SN	**Sb**	**02 37 59.0**	**-0.3**
LIA	**Limnos Island**	**1.90**	**312**	*e*Pn	**Pn**	**02 37 34.4**	**+1.1**
LIA				*e*Sn	**Sb**	**02 37 59.0**	**-0.3**
KCTX	**Karacabey (Bur**	**1.94**	**32**	*e*PN	**Pn**	**02 37 33.0**	**-1.0**
KCTX	**Karacabey (Bur**	**1.94**	**32**	*e*Pn	**Pn**	**02 37 33.0**	**-1.0**
KHL	**Karahalli**	**2.00**	**98**	*e*PN	**Pn**	**02 37 34.6**	**-0.3**
KHL	**Karahalli**	**2.00**	**98**	*e*Pn	**Pn**	**02 37 34.6**	**-0.3**
MRMT	**Marmara Adasi**	**2.02**	**13**	*e*PN	**Pn**	**02 37 34.9**	**-0.3**
MRMT	**Marmara Adasi**	**2.02**	**13**	*e*Pn	**Pn**	**02 37 34.9**	**-0.3**
ERIK	**Erikli-Kesan**	**2.07**	**350**	*e*PN	**Pn**	**02 37 35.6**	**-0.1**
ERIK	**Erikli-Kesan**	**2.07**	**350**	*e*Pn	**Pn**	**02 37 35.7**	**-0.1**
SMTH	**Samothraki Isl**	**2.16**	**329**	*e*PN	**Pn**	**02 37 37.9**	**+0.9**
SMTH	**Samothraki Isl**	**2.16**	**329**	*e*Pn	**Pn**	**02 37 37.9**	**+0.9**
MDNY	**Mudanya-Bursa**	**2.26**	**39**	*e*PN	**Pn**	**02 37 38.3**	**-0.1**
MDNY	**Mudanya-Bursa**	**2.26**	**39**	*e*Pn	**Pn**	**02 37 38.3**	**-0.1**
ALN	**Alexandroupoli**	**2.38**	**342**	*e*PN	**Pn**	**02 37 40.6**	**+0.6**
ALN	**Alexandroupoli**	**2.38**	**342**	*e*Pn	**Pn**	**02 37 40.6**	**+0.6**
RDO	**Rodhopi**	**2.75**	**336**	*e*PN	**Pn**	**02 37 45.8**	**+0.7**
RDO	**Rodhopi**	**2.75**	**336**	*e*Pn	**Pn**	**02 37 45.8**	**+0.7**

IDC 06 02:47:45.7±1.1**, 57.29S**×**25.00W, h0**km**, mb4.0**/3**, mb1 4.1**/3**, mb1mx3.8**/14**, mbtmp4.0**/3**, Error ellipse: s-maj=48.4km s-min=30.3km az=88.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**38.54**	**310**	P	P	02 55 09.8	0.0
	1.1nm,0.6s,baz=130,slow=17,SNR=4.9						
VNDA	**Vanda**	**45.38**	**182**	P	P	02 56 05.0	-0.1
	0.7nm,0.7s,baz=186,slow=4.6,SNR=7.6						
TORD	**Torodi Ar. Bea**	**73.58**	**27**	P	P	02 59 20.5	+0.1
	1.8nm,0.8s,baz=200,slow=6.3,SNR=16						
YKA	**Yellowknife Ar**	**137.91**	**316**	PKP	PKPdf	03 07 10.0	-0.5
	0.2nm,0.8s,baz=127,slow=2.2,SNR=5.6						
ILAR	**Eielson Array**	**151.84**	**310**	PKPbc	PKPbc	03 07 40.4	-0.4
	1.1nm,0.9s,baz=136,slow=1.2,SNR=11						

*IDC **06** 02:54:24.6±21.0, 29.42S×69.05W, h0km, mb3.3/1, mb1 3.8/1, mb1mx3.4/15, mbtmp3.3/1, Error ellipse: s-maj=1217.0km s-min=68.4km az=34.0*
*GUC **06** 02:54:33.6±0.5, 30.79S×70.38W, h109km±5km, ML3.7*
*ISCJB **06** 02:54:33.7±0.8, 30.81S±0.04×70.5W±0.2, h117km±9km, mb3.1/1, Error ellipse: s-maj=29.3km s-min=6.4km az=1.9*
ISC 06 02:54:34.6±1.1**, 30.80S**±0.04×**70.4W**±0.2**, h108**km±10km**, n11, σ0.35**/17**, 3C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.62**	**233**⇑	*i*P	**Pn**	**02 54 51.9**	**-0.4**
CMCH				*i* S	**Sn**	**02 55 05.8**	**+0.3**
CMCH				AML	AML	02 55 07.0	
	comp=E,22μm,0.7s						
TLL	**Tololo Astrono**	**0.71**	**332**⇓	*i*P	**Pn**	**02 54 53.1**	**-0.1**
TLL				*i* S	**Sn**	**02 55 07.4**	**+0.3**
TLL				AML	AML	02 55 07.8	
	comp=N,1μm,0.4s						
CHNG	**Los Chungos**	**1.42**	**220**⇑	*i*P	**Pn**	**02 55 00.1**	**-0.2**
CHNG				*i* S	**Sn**	**02 55 19.8**	**0.0**
CHNG				AML	AML	02 55 27.8	
	comp=E,738nm,0.5s						
LCO	**Las Campanas**	**1.80**	**352**⇓	*i*P	**Pn**	**02 55 04.9**	**-0.3**
LCO				*i* S	**Sn**	**02 55 28.6**	**+0.1**
LCO				AML	AML	02 55 30.8	
	comp=E,538nm,0.2s						
ROCH	**El Roble**	**2.22**	**193**	*e*P	**Pn**	**02 55 10.0**	**-0.5**
ROCH				*e*S	**Sn**	**02 55 38.7**	**+0.6**
PEL	**Peldehue**	**2.35**	**185**⇑	*i*P	**Pn**	**02 55 11.7**	**-0.3**
PEL				*e*S	**Sn**	**02 55 40.6**	**-0.1**
PEL				AML	AML	02 55 50.1	
	comp=E,423nm,0.8s						
CLCH	**Cerro Calan**	**2.59**	**182**	*e*P	**Pn**	**02 55 15.1**	**-0.1**
CLCH				AML	AML	02 55 55.4	
	comp=E,237nm,0.7s						
LMEL	**Las Melosas**	**3.04**	**177**	*e*P	**Pn**	**02 55 21.2**	**-0.1**
LMEL				AML	AML	02 56 09.0	
	comp=N,193nm,0.2s						
TXAR	**Lajitas Array**	**67.67**	**329**	P	**P**	**03 05 20.3**	**+0.1**
	comp=N,0.2nm,0.7s,baz=145,slow=8.5,SNR=4.6						
ZALV	**Zalesovo Beam**	**150.79**	**30**	PKPbc	**PKPbc**	**03 14 14.2**	**+0.4**
	comp=N,2.2nm,0.5s,baz=305,slow=3.2,SNR=12						
MKAR	**Makanchi Array**	**153.59**	**45**	PKPbc	**PKPbc**	**03 14 20.1**	**-0.3**
	comp=N,0.1nm,0.4s,baz=310,slow=1.0,SNR=4.1						

*ISCJB **06** 02:57:57.9±0.4, 26.96S±0.07×13.37W±0.08, h10km, mb4.3/26, MS3.8/11, Error ellipse: s-maj=10.9km s-min=9.9km az=144.9*
*IDC **06** 02:57:58.1±0.6, 26.93S×13.38W, h0km, mb4.0/15, mb1 4.2/15, mb1mx4.1/23, mbtmp4.0/15, MS3.8/11, Ms1 3.7/11, ms1mx3.5/34, Error ellipse: s-maj=18.6km s-min=16.0km az=145.0*
*NEIC **06** 02:57:59.7±0.2, 26.96S×13.37W, h10km, mb4.7/15, Error ellipse: s-maj=6.9km s-min=6.3km az=147.0*
ISC 06 02:57:59.7±0.5**, 27.0S**±0.1×**13.38W**±0.08**, h10**km**, n68, σ0.63**/62**, mb4.3**/26**, MS3.9**/11**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**29.45**	**81**	P	**P**	**03 04 03.5**	**-0.6**
TSUM	**Tsumeb**	**29.45**	**81**	P	**P**	**03 04 03.5**	**-0.6**
	1.8nm,0.5s,baz=220,slow=6.4,SNR=5.1						
TSUM				LR	LR	03 13 46.9	
	comp=Z,88nm,18.1s,baz=244,slow=32						
SUR	**Sutherland**	**30.11**	**109**	*e*P	**P**	**03 04 09.5**	**-0.4**
	7.6nm,0.9s						
SUR	**Sutherland**	**30.11**	**109**	P	**P**	**03 04 10.5**	**+0.6**
	5.8nm,0.9s,baz=219,slow=4.6,SNR=4.3						
BDFB	**Brasilia**	**34.07**	**282**	P	**P**	**03 04 44.6**	**-0.1**
BDFB	**Brasilia**	**34.07**	**282**	P	**P**	**03 04 44.6**	**-0.1**
	1.0nm,0.5s,baz=138,slow=4.6,SNR=3.7						
BDFB				LR	LR	03 16 17.4	
	comp=Z,197nm,18.8s,baz=178,slow=32						
BOSA	**Boshof**	**34.12**	**102**	*e*P	**P**	**03 04 44.8**	**-0.3**
	11nm,1.0s						
BOSA	**Boshof**	**34.12**	**102**	P	**P**	**03 04 44.9**	**-0.1**
	9.8nm,0.9s,baz=263,slow=9.2,SNR=14						
BOSA				LR	LR	03 15 29.5	
	comp=Z,106nm,20.2s,baz=38,slow=31						
DBIC	**Dimbokro**	**34.44**	**15**	LR	LR	03 15 12.4	
	comp=Z,83nm,19.1s,baz=152,slow=30						
LBTB	**Lobatse**	**34.99**	**96**	*e*P	**P**	**03 04 52.4**	**-0.2**
	18nm,0.9s						
CPUP	**Villa Florida**	**39.14**	**261**	P	**P**	**03 05 28.2**	**+0.5**
CPUP	**Villa Florida**	**39.14**	**261**	P	**P**	**03 05 28.2**	**+0.5**
	0.5nm,0.4s,baz=53,slow=10,SNR=3.7						
CPUP				LR	LR	03 18 18.9	
	comp=Z,111nm,20.8s,baz=33,slow=31						
LSZ	**Lusaka**	**40.31**	**82**	*e*P	**P**	**03 05 38.3**	**+0.6**
	14nm,1.4s						
TOA0	**Torodi Ar. Sit**	**42.47**	**22**	*e*P	**P**	**03 05 54.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**42.47**	**22**	P	**P**	**03 05 54.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**42.47**	**22**	P	**P**	**03 05 54.9**	**-0.3**
	4.1nm,1.0s,baz=198,slow=9.0,SNR=28						
TORD				LR	LR	03 19 35.3	
	comp=Z,133nm,21.2s,baz=195,slow=31						
SNAA	**Sanae**	**45.13**	**175**	*e*P	**P**	**03 06 15.3**	**-0.8**
	8.8nm,1.6s						
SNAA	**Sanae**	**45.13**	**175**	P	**P**	**03 06 14.4**	**-1.7**
	0.7nm,1.0s,baz=328,slow=8.7,SNR=3.7						
CFAA	**Coronel Fontan**	**47.66**	**251**	P	**P**	**03 06 35.2**	**-1.3**
CFAA	**Coronel Fontan**	**47.66**	**251**	P	**P**	**03 06 35.2**	**-1.3**
	0.2nm,0.7s,baz=73,slow=7.2,SNR=5.4						
PLCA	**Paso Flores**	**48.64**	**238**	P	**P**	**03 06 44.3**	**+0.3**
PLCA	**Paso Flores**	**48.64**	**238**	P	**P**	**03 06 44.3**	**+0.3**
	1.9nm,0.9s,baz=68,slow=11,SNR=3.4						
SAML	**Samuel**	**50.30**	**281**	*e*P	**P**	**03 06 57.9**	**+1.0**
	3.0nm,1.0s						
TAM	**Tamanrasset**	**52.73**	**22**	*e*P	**P**	**03 07 16.0**	**+0.9**
	4.2nm,1.4s						
KMBO	**Kilima Mbogo**	**54.91**	**71**	LR	LR	03 28 30.3	
	comp=Z,95nm,18.3s,baz=87,slow=33						
ABPO	**Ambohimpanom**	**55.91**	**96**	*e*P	**P**	**03 07 39.0**	**+0.6**
	7.7nm,1.1s						
MDT	**Midelt**	**60.03**	**9**	LR	LR	03 32 50.6	
	comp=Z,78nm,18.8s,baz=202,slow=35						
MAW	**Mawson**	**60.14**	**155**	P	**P**	**03 08 07.5**	**+0.4**
MAW	**Mawson**	**60.14**	**155**	P	**P**	**03 08 07.5**	**+0.4**
	4.4nm,1.1s,baz=289,slow=6.0,SNR=6.1						
QSPA	**South Pole Qui**	**63.26**	**180**	*e*P	**P**	**03 08 28.9**	**+0.6**
	9.0nm,0.9s						
ESDC	**Sonseca Array**	**66.87**	**8**	P	**P**	**03 08 52.4**	**+0.5**
ESDC	**Sonseca Array**	**66.87**	**8**	P	**P**	**03 08 52.4**	**+0.5**
	0.1nm,0.3s,baz=198,slow=5.8,SNR=3.9						
LFF	**La Frestale**	**72.71**	**10**	*e*P	**P**	**03 09 26.9**	**-0.8**
	23nm,1.0s						
LFF	**La Frestale**	**72.71**	**10**	*e*P	**P**	**03 09 26.9**	**-0.8**
	23nm,1.0s						
RJF	**Les Rejaudoux**	**73.19**	**11**	*e*P	**P**	**03 09 31.3**	**+0.7**
	8.6nm,0.9s						
RJF	**Les Rejaudoux**	**73.19**	**11**	*e*P	**P**	**03 09 31.3**	**+0.7**
	8.6nm,0.9s						
ORIF	**Oris-en-Rattie**	**73.66**	**14**	*e*P	**P**	**03 09 33.6**	**+0.1**
ORIF	**Oris-en-Rattie**	**73.66**	**14**	*e*P	**P**	**03 09 33.6**	**+0.1**
MBDF	**Montbardon**	**73.68**	**15**	*e*P	**P**	**03 09 33.9**	**+0.3**
MBDF	**Montbardon**	**73.68**	**15**	*e*P	**P**	**03 09 33.9**	**+0.3**
TCF	**Toulx Ste Croi**	**74.26**	**11**	*e*P	**P**	**03 09 36.0**	**-0.9**
	29nm,1.4s						
TCF	**Toulx Ste Croi**	**74.26**	**11**	*e*P	**P**	**03 09 36.0**	**-0.9**
	29nm,1.4s						
LPG	**La Plagne**	**74.41**	**15**	*e*P	**P**	**03 09 38.2**	**+0.2**
	7.9nm,0.8s						
LPG	**La Plagne**	**74.41**	**15**	*e*P	**P**	**03 09 38.2**	**+0.2**
	7.9nm,0.8s						
LPL	**La Plagne**	**74.42**	**15**	*e*P	**P**	**03 09 38.1**	**+0.1**
	17nm,1.0s						
LPL	**La Plagne**	**74.42**	**15**	*e*P	**P**	**03 09 38.1**	**+0.1**
	17nm,1.0s						
AVF	**Avril sur Loir**	**74.95**	**12**	*e*P	**P**	**03 09 40.7**	**-0.1**
AVF	**Avril sur Loir**	**74.95**	**12**	*e*P	**P**	**03 09 40.7**	**-0.1**
QUIF	**Quistinic**	**75.10**	**7**	*e*P	**P**	**03 09 41.3**	**-0.3**
QUIF	**Quistinic**	**75.10**	**7**	*e*P	**P**	**03 09 41.3**	**-0.3**
VNDA	**Vanda**	**75.72**	**179**	*e*P	**P**	**03 09 45.0**	**+0.1**
	2.1nm,0.8s						
VNDA	**Vanda**	**75.72**	**179**	P	**P**	**03 09 46.0**	**+1.0**
	1.7nm,0.9s,baz=210,slow=5.4,SNR=10.0						
GERES	**GERESS Array B**	**79.26**	**18**	LR	LR	03 43 07.3	
	comp=Z,52nm,18.0s,baz=282,slow=34						
BRTR	**Keskin Array B**	**79.50**	**35**	P	**P**	**03 10 07.0**	**+0.3**
BRTR	**Keskin Array B**	**79.50**	**35**	P	**P**	**03 10 07.0**	**+0.3**
	0.5nm,0.9s,baz=276,slow=5.7,SNR=2.9						
MLR	**Muntele Rosu**	**80.50**	**27**	P	**P**	**03 10 10.8**	**-1.1**
MLR	**Muntele Rosu**	**80.50**	**27**	P	**P**	**03 10 10.8**	**-1.1**
	1.1nm,0.9s,baz=171,slow=6.9,SNR=8.3						
VRAC	**Vranov**	**80.50**	**19**	LR	LR	03 43 14.1	
	comp=Z,70nm,20.9s,baz=56,slow=34						
AKASG	**Malin Array Be**	**86.00**	**26**	P	**P**	**03 10 39.2**	**-0.8**
AKASG	**Malin Array Be**	**86.00**	**26**	P	**P**	**03 10 39.2**	**-0.8**
	1.8nm,0.7s,baz=217,slow=5.4,SNR=7.2						
NOA	**NORSAR Array B**	**89.94**	**12**	LR	LR	03 49 35.2	
	comp=Z,46nm,19.4s,baz=340,slow=34						
YKA	**Yellowknife Ar**	**118.69**	**329**	PKP	**PKPdf**	**03 16 46.8**	**-0.7**
YKA	**Yellowknife Ar**	**118.69**	**329**	PKP	**PKPdf**	**03 16 46.7**	**-0.7**
	0.4nm,0.9s,baz=89,slow=1.8,SNR=4.4						
ILAR	**Eielson Array**	**132.13**	**335**	PKP	**PKPdf**	**03 17 13.0**	**-0.1**
ILAR	**Eielson Array**	**132.13**	**335**	PKP	**PKPdf**	**03 17 13.0**	**-0.1**
	1.1nm,0.9s,baz=312,slow=1.0,SNR=12						
MCK	**McKinley**	**133.43**	**335**	*e*PKPdf	**PKPdf**	**03 17 16.0**	**+0.4**
KSAR	**Wonju Array Be**	**145.81**	**62**	PKPbc	**PKPdf**	**03 17 39.0**	**+0.2**
KSRS	**Korea Array**	**145.83**	**62**	PKPbc	**PKPdf**	**03 17 39.0**	**+0.2**
	2.1nm,1.0s,baz=284,slow=4.3,SNR=9.2						

IDC 06 03:03:21.5±59.0**, 20.69S**×**176.22W, h0**km**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/19**, mbtmp3.8**/3**, Error ellipse: s-maj=1104.0km s-min=175.9km az=84.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.21**	**245**	P	P	03 10 50.4	-1.2
	1.5nm,0.8s,baz=96,slow=14,SNR=4.3						
ASAR	**Alice Springs**	**46.10**	**257**	P	P	03 11 47.1	-0.7
	0.6nm,0.4s,baz=99,slow=6.9,SNR=8.7						
WRA	**Warramunga Arr**	**46.22**	**262**	P	P	03 11 50.0	+1.2
	0.7nm,0.5s,baz=92,slow=8.3,SNR=9.2						

*ISK **06** 03:17:26.8, 38.63N×26.99E, h6km, MD2.9*
*DDA **06** 03:17:26.7, 38.62N×27.01E, h7km, MD3.0*
*CSEM **06** 03:17:26.9±0.1, 38.63N×26.99E, h2km, MD2.9, Error ellipse: s-maj=2.8km s-min=2.3km az=76.0*
*ATH **06** 03:17:27.1, 38.60N×27.00E, h25km±2km, MD3.1/5*
*ISCJB **06** 03:17:27.1±0.5, 38.62N±0.02×26.97E±0.03, h11km±4km, Error ellipse: s-maj=3.9km s-min=3.5km az=139.7*
ISC 06 03:17:27.1±0.9**, 38.62N**±0.02×**27.00E**±0.02**, h14**km±7km**, n60, σ0.66**/85**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.23**	**172**	PG	**Pg**	**03 17 32.1**	**-0.1**
BLCB				*e*SG	**Sg**	**03 17 35.5**	**-0.1**
BLCB	**Balcova**	**0.23**	**172**	*i* Pg	**Pg**	**03 17 32.1**	**-0.1**
BLCB				*e*Sg	**Sg**	**03 17 35.5**	**-0.1**
IZM	**Izmir**	**0.30**	**137**	PG	**Pg**	**03 17 33.5**	**+0.1**
IZM				*e*SG	**Sb**	**03 17 38.8**	**-0.4**
IZM	**Izmir**	**0.30**	**137**	*i* Pg	**Pg**	**03 17 33.5**	**+0.1**
IZM				*e*Sg	**Sb**	**03 17 38.8**	**-0.4**
URLA	**Izmir**	**0.41**	**231**	*i* P	**Pg**	**03 17 35.3**	**0.0**
URLA				*i* S	**Sg**	**03 17 41.3**	**+0.4**
URLA	**Izmir**	**0.41**	**231**	*i* P	**Pg**	**03 17 35.3**	**0.0**
URLA				*i* S	**Sg**	**03 17 41.3**	**+0.4**
AKS	**Akhisar**	**0.69**	**67**	*e*PG	**Pg**	**03 17 40.6**	**+0.1**
AKS				*e*SG	**Sb**	**03 17 50.5**	**+0.2**
AKS	**Akhisar**	**0.69**	**67**	*e*Pg	**Pg**	**03 17 40.6**	**+0.1**
AKS				*e*Sg	**Sb**	**03 17 50.5**	**+0.2**
AKHS	**Akhisar**	**0.69**	**67**	*i* P	**Pb**	**03 17 40.6**	**-0.3**
AKHS				*i* S	**Sg**	**03 17 49.8**	**+0.2**
AKHS	**Akhisar**	**0.69**	**67**	*i* P	**Pb**	**03 17 40.6**	**-0.3**
AKHS				*i* S	**Sg**	**03 17 49.8**	**+0.2**
AYVA	**Ayvalik**	**0.73**	**341**	*e*P	Pg	03 17 33.8	-7.6
AYVA				*e*S	**Sb**	**03 17 51.3**	**-0.2**
CHOS	**Chios island**	**0.78**	**253**	*e*PN	**Pg**	**03 17 42.3**	**+0.1**
CHOS				*e*SN	**Sb**	**03 17 53.0**	**+0.1**
CHOS	**Chios island**	**0.78**	**253**	*e*Pn	**Pg**	**03 17 42.3**	**+0.1**
CHOS				*e*Sn	**Sb**	**03 17 53.0**	**+0.1**
PRK	**Paraskevi**	**0.85**	**318**	*e*PN	**Pn**	**03 17 44.1**	**-0.5**
PRK				*e*SN	**Sb**	**03 17 55.7**	**+0.9**
PRK	**Paraskevi**	**0.85**	**318**	*e*Pn	**Pn**	**03 17 44.1**	**-0.5**
PRK				*e*Sn	**Sb**	**03 17 55.7**	**+0.9**
GCAM	**G?zelcaml?**	**0.93**	**169**	*e*P	**Pg**	**03 17 44.8**	**-0.3**
GCAM				*e*S	**Sg**	**03 17 57.0**	**-0.4**
GCAM	**G?zelcaml?**	**0.93**	**169**	*e*P	**Pg**	**03 17 44.8**	**-0.3**
GCAM				*e*S	**Sg**	**03 17 57.0**	**-0.4**
AYDN	**Tasoluk**	**1.18**	**144**	*e*P	**Pn**	**03 17 49.1**	**-0.1**
AYDN				*e*S	**Sb**	**03 18 04.6**	**+0.2**
AYDN	**Tasoluk**	**1.18**	**144**	*e*P	**Pn**	**03 17 49.1**	**-0.1**
AYDN				*e*S	**Sb**	**03 18 04.6**	**+0.2**
BALY	**Balya**	**1.22**	**23**	*i* P	**Pn**	**03 17 49.8**	**0.0**
BALY				*i* S	**Sg**	**03 18 06.9**	**+0.3**
BALY	**Balya**	**1.22**	**23**	*i* P	**Pn**	**03 17 49.8**	**0.0**
BALY				*i* S	**Sg**	**03 18 06.9**	**+0.3**
MANT	**Manisa**	**1.23**	**95**	*e*P	**Pn**	**03 17 50.0**	**-0.1**
MANT				*e*S	**Sb**	**03 18 05.7**	**-0.3**
MANT	**Manisa**	**1.23**	**95**	*e*P	**Pn**	**03 17 50.0**	**-0.1**
MANT				*e*S	**Sb**	**03 18 05.7**	**-0.3**
KULA	**Kula-Manisa**	**1.31**	**94**	*e*PN	**Pb**	**03 17 51.6**	**+0.1**
KULA	**Kula-Manisa**	**1.31**	**94**	*e*Pn	**Pb**	**03 17 51.6**	**+0.1**
BOZC	**Bozcaada**	**1.43**	**329**	*e*P	**Pn**	**03 17 52.8**	**+0.1**
BOZC				*e*S	**Sn**	**03 18 10.7**	**-0.5**
MLSB	**Milas**	**1.46**	**155**	*e*PN	**Pg**	**03 17 54.8**	**-0.3**
MLSB	**Milas**	**1.46**	**155**	*e*Pn	**Pg**	**03 17 54.8**	**-0.3**
GONE	**Gonen-Balikesi**	**1.52**	**20**	*e*PN	**Pb**	**03 17 54.9**	**-0.2**
GONE	**Gonen-Balikesi**	**1.52**	**20**	*e*Pn	**Pb**	**03 17 54.9**	**-0.2**
BODT	**Bodrum**	**1.57**	**171**	*e*PN	**Pb**	**03 17 56.7**	**+0.7**
BODT	**Bodrum**	**1.57**	**171**	*e*Pn	**Pb**	**03 17 56.7**	**+0.7**
KRBG	**Karabiga-Canak**	**1.79**	**7**	*e*PN	**Pn**	**03 17 58.5**	**+0.9**
KRBG	**Karabiga-Canak**	**1.79**	**7**	*e*Pn	**Pn**	**03 17 58.5**	**+0.9**
YER	**Yerkesik**	**1.79**	**145**	*e*PN	**Pb**	**03 17 59.5**	**-0.2**
YER	**Yerkesik**	**1.79**	**145**	*e*Pn	**Pb**	**03 17 59.6**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.82**	**347**	*e*PN	**Pb**	**03 17 59.5**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.82**	**347**	*e*Pn	**Pb**	**03 17 59.5**	**-0.8**
BNT	**Bandirma**	**1.88**	**22**	*e*PN	**Pb**	**03 18 00.1**	**-1.1**
BNT	**Bandirma**	**1.88**	**22**	*e*Pn	**Pb**	**03 18 00.1**	**-1.1**
LIA	**Limnos Island**	**1.91**	**313**	*e*PB	**Pn**	**03 17 59.8**	**+0.6**
LIA				*e*SN	**Sb**	**03 18 25.1**	**-0.2**
LIA	**Limnos Island**	**1.91**	**313**	*e*Pb	**Pn**	**03 17 59.8**	**+0.6**
LIA				*e*Sn	**Sb**	**03 18 25.1**	**-0.2**
KCTX	**Karacabey (Bur**	**1.95**	**32**	*e*PN	**Pn**	**03 18 00.9**	**+1.0**
KCTX	**Karacabey (Bur**	**1.95**	**32**	*e*Pn	**Pn**	**03 18 00.9**	**+1.0**
KHL	**Karahalli**	**2.00**	**98**	*e*PN	**Pb**	**03 18 02.2**	**-1.2**
KHL	**Karahalli**	**2.00**	**98**	*e*Pn	**Pb**	**03 18 02.2**	**-1.2**
MRMT	**Marmara Adasi**	**2.04**	**13**	*e*PN	**Pb**	**03 18 03.0**	**-0.9**
MRMT	**Marmara Adasi**	**2.04**	**13**	*e*Pn	**Pb**	**03 18 03.0**	**-0.9**
ERIK	**Erikli-Kesan**	**2.09**	**350**	*e*PN	**Pb**	**03 18 03.2**	**-1.4**
ERIK	**Erikli-Kesan**	**2.09**	**350**	*e*Pn	**Pb**	**03 18 03.3**	**-1.4**
SMTH	**Samothraki Isl**	**2.17**	**329**	*e*PN	**Pn**	**03 18 03.7**	**+0.8**
SMTH	**Samothraki Isl**	**2.17**	**329**	*e*Pn	**Pn**	**03 18 03.7**	**+0.8**
MDNY	**Mudanya-Bursa**	**2.28**	**39**	*e*PN	**Pn**	**03 18 05.4**	**+1.1**
MDNY	**Mudanya-Bursa**	**2.28**	**39**	*e*Pn	**Pn**	**03 18 05.4**	**+1.1**
ALN	**Alexandroupoli**	**2.39**	**342**	*e*PN	**Pn**	**03 18 07.1**	**+1.2**
ALN	**Alexandroupoli**	**2.39**	**342**	*e*Pn	**Pn**	**03 18 07.1**	**+1.2**
ALT	**Altintas**	**2.47**	**79**	*e*PN	**Pn**	**03 18 08.6**	**+1.6**
ALT	**Altintas**	**2.47**	**79**	*e*Pn	**Pn**	**03 18 08.6**	**+1.6**
RDO	**Rodhopi**	**2.77**	**336**	*e*PN	**Pn**	**03 18 11.6**	**+0.6**
RDO	**Rodhopi**	**2.77**	**336**	*e*Pn	**Pn**	**03 18 11.6**	**+0.6**

*ISK **06** 03:21:35.2, 39.47N×40.11E, h15km, MD2.5*
*DDA **06** 03:21:35.4, 39.45N×40.15E, h7km, MD2.9*
*CSEM **06** 03:21:35.9±0.2, 39.48N×40.12E, h10km, MD2.9, Error ellipse: s-maj=4.7km s-min=4.1km az=158.0*
*ISCJB **06** 03:21:35.7±0.5, 39.48N±0.03×40.14E±0.03, h4km±6km, Error ellipse: s-maj=4.8km s-min=4.0km az=26.2*
ISC 06 03:21:35.5±1.1**, 39.47N**±0.03×**40.13E**±0.02**, h10**km±10km**, n18, σ0.59**/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZN	**Erzincan**	**0.34**	**291**	*e*PG	**Pg**	**03 21 42.3**	**0.0**
ERZN				*e*SG	**Sb**	**03 21 47.9**	**-1.3**
KOPT	**Kop Dagi**	**0.62**	**27**	*e*P	**Pg**	**03 21 47.9**	**+0.3**
KOPT				*e*S	**Sg**	**03 21 56.3**	**+0.5**
KOPT	**Kop Dagi**	**0.62**	**27**	*e*P	**Pg**	**03 21 47.9**	**+0.3**
KOPT				*e*S	**Sg**	**03 21 56.3**	**+0.5**
BNGB	**Bingˆ¶l**	**0.64**	**138**	*e*PG	**Pb**	**03 21 48.8**	**-0.1**
BNGB				*e*SG	**Sb**	**03 21 57.7**	**-0.2**
BINT	**Bingol**	**0.65**	**154**	*e*Pg	**Pb**	**03 21 48.8**	**-0.3**
BINT				*e*Sg	**Sb**	**03 21 57.7**	**-0.6**
EZC	**Erzincan**	**0.66**	**296**	*e*PG	**Pb**	**03 21 48.5**	**-0.8**
EZC				*e*SG	**Sg**	**03 21 57.1**	**0.0**
EZC	**Erzincan**	**0.66**	**296**	*e*Pg	**Pb**	**03 21 48.5**	**-0.8**
EZC				*e*Sg	**Sg**	**03 21 57.1**	**0.0**
BAYT	**Ayd˜–ntepe-Bay**	**0.93**	**1**	*e*PG	**Pg**	**03 21 53.1**	**-0.3**
BAYT	**Ayd˜–ntepe-Bay**	**0.93**	**1**	*e*Pg	**Pg**	**03 21 53.1**	**-0.3**
KELT	**Kelkit**	**0.96**	**316**	*e*P	**Pb**	**03 21 54.2**	**-0.1**
KELT				*e*S	**Sb**	**03 22 07.2**	**+0.1**
KELT	**Kelkit**	**0.96**	**316**	*e*P	**Pb**	**03 21 54.2**	**-0.1**
KELT				*e*S	**Sb**	**03 22 07.2**	**+0.1**
EZM	**Erzurum**	**1.05**	**65**	*e*PG	**Pn**	**03 21 56.4**	**-0.2**
ERZM	**Erzurum**	**1.05**	**65**	*e*P	**Pg**	**03 21 55.8**	**0.0**
ERZM				*e*S	**Sg**	**03 22 09.5**	**+0.1**
ERZM	**Erzurum**	**1.05**	**65**	*e*P	**Pg**	**03 21 55.8**	**0.0**
ERZM				*e*S	**Sg**	**03 22 09.5**	**+0.1**
KEMA	**Kemaliye**	**1.28**	**262**	*e*P	**Pg**	**03 22 00.5**	**+0.4**
KEMA				*e*S	**Sn**	**03 22 18.5**	**+1.6**
KEMA	**Kemaliye**	**1.28**	**262**	*e*P	**Pg**	**03 22 00.5**	**+0.4**
KEMA				*e*S	**Sn**	**03 22 18.5**	**+1.6**
ELZG	**Elazig**	**1.31**	**223**	*e*P	**Pb**	**03 22 00.2**	**-0.2**
ELZG				*e*S	**Sn**	**03 22 17.5**	**-0.3**
ELZG	**Elazig**	**1.31**	**223**	*e*P	**Pb**	**03 22 00.2**	**-0.2**
ELZG				*e*S	**Sn**	**03 22 17.5**	**-0.3**

MEX 06 03:28:46.2±0.6**, 18°.21N×97°.85W, h64km**±7km**, MD3.7, Central Mexico**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UTMO	Huajuapan	0.38	173	eP	Pn	03 28 56.3	-1.4
UTMO				i S	Sn	03 29 04.4	-1.7
TPIG	Tehuac#an	0.51	66	i P	Pn	03 28 57.4	-1.5
TPIG				i S	Sn	03 29 06.1	-2.0
PPM	Popocatepetl	1.12	319	eP	Pn	03 29 05.3	-1.3
PPM				i S	Sn	03 29 20.2	-1.6
YAIG	Yautepec	1.32	299	i P	Pn	03 29 07.2	-1.6
YAIG				i S	Sn	03 29 23.1	-2.6
VHO	Vista Hermosa	1.56	137	i P	Pn	03 29 11.0	-1.1
VHO				i S	Sn	03 29 28.8	-2.8
IIO	Organos	1.60	329	i P	Pn	03 29 12.1	-0.7
IIO				i S	Sn	03 29 31.3	-1.6
PNIG	Pinotepa	1.83	188	eP	Pn	03 29 14.1	-1.4
PNIG				i S	Sn	03 29 36.3	-1.4

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*SOF **06** 03:32:37.9, 41°.89N×21°.97E, h10km, MD3.7*
*TIR **06** 03:32:37.3, 41°.87N×22°.04E, h8km, ML3.3*
*SKO **06** 03:32:38.9, 41°.82N×22°.07E, h10km, M2.8, ML3.3*
*IDC **06** 03:32:39.6±1.3, 41°.77N×22°.11E, h0km, mb3.3/2, mb1 3.3/5, mb1mx3.2/26, mbtmp3.1/5, ML3.0/3, MS2.9/1, Ms1 2.9/1, ms1mx2.1/32, Error ellipse: s-maj=21.5km s-min=18.3km az=160.0*
*ATH **06** 03:32:39.4, 41°.87N×22°.11E, h15km±2km, MD3.4/14*
*PDG **06** 03:32:39.7±0.4, 41°.85N×22°.08E, h11km, ML3.0/9, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*CSEM **06** 03:32:40.0±0.1, 41°.85N×22°.09E, h2km, ML3.5, Error ellipse: s-maj=2.5km s-min=1.9km az=33.0*
*THE **06** 03:32:40.0, 41°.84N×22°.08E, h0km±1km, ML3.5/7, Error ellipse: s-maj=1.7km s-min=0.6km az=310.0*
ISC 06 03:32:39.3±1.1**, 41°.86N**±0°.02×**22°.03E**±0°.01**, h4km**±9km**, n192, σ1.s11**/228**, 20C-18D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKO	Skopje	0.45	285	P	Pb	03 32 48.9	-0.9
SKO				S	Sg	03 32 55.0	+1.1
SKO	Skopje	0.45	285	i Pg	Pb	03 32 49.0	-0.9
SKO				i Sg	Sb	03 32 56.2	-0.8
SKO				eLg	Lg	03 32 58.3	
	comp=E,1μm,0.5s						
SKO				eLg	Lg	03 33 00.5	
	comp=N,1μm,0.7s						
SKO	Skopje	0.45	285	P	Pb	03 32 48.9	-0.9
SKO	Skopje	0.45	285	i Pg	Pb	03 32 49.5	-0.3
SKO				S	Sg	03 32 55.0	+1.1
SKO				i Sg	Sb	03 32 56.6	-0.3
SKO				eLg	Lg	03 33 01.0	
	comp=N,1μm,0.7s						
VAY	Valandovo	0.68	143	P	Pg	03 32 51.4	-0.9
VAY				S	Sb	03 33 01.9	-1.4
VAY	Valandovo	0.68	143	i Pg	Pg	03 32 51.3	-0.9
VAY				i Sg	Sg	03 33 00.0	-1.0
VAY				eLg	Lg	03 33 02.6	
	comp=N,2μm,0.5s						
VAY				eLg	Lg	03 33 03.8	
	comp=E,2μm,0.3s						
VAY	Valandovo	0.68	143	P	Pg	03 32 51.4	-0.9
VAY	Valandovo	0.68	143	i Pg	Pg	03 32 51.8	-0.5
VAY				i Sg	Sg	03 33 00.5	-0.5
VAY				eLg	Lg	03 33 01.3	
	comp=E,2μm,0.3s						
VAY				S	Sb	03 33 01.9	-1.4
KKB	Krupnik	0.79	89	i P	Pb	03 32 55.1	-0.5
KKB	Krupnik	0.79	89	i P	Pb	03 32 55.1	-0.5
GRG	Griva	0.94	162	P	Pg	03 32 56.5	-0.9
GRG				S	Sb	03 33 10.6	-0.5
GRG	Griva	0.94	162	ePB	Pg	03 32 56.8	-0.6
GRG				eSN	Sb	03 33 10.6	-0.5
GRG	Griva	0.94	162	P	Pg	03 32 56.5	-0.9
GRG	Griva	0.94	162	ePg	Pg	03 32 56.8	-0.6
GRG				S	Sb	03 33 10.6	-0.5
BIA	Bitola	0.99	212	P	Pg	03 32 58.1	-0.2
BIA				S	Sn	03 33 13.6	-0.9
BIA	Bitola	0.99	212	i Pg	Pg	03 32 58.1	-0.2
BIA				i Sg	Sb	03 33 11.8	-0.7
BIA	Bitola	0.99	212	P	Pg	03 32 58.1	-0.2
BIA				i Sg	Sb	03 33 11.7	-0.7
BIA				S	Sn	03 33 13.6	-0.9
VTS	Vitosha	1.14	50	P	Pg	03 33 01.1	-0.2
VTS	Vitosha	1.14	50⇑	iP	Pg	03 33 01.0	-0.2
VTS				S	Sg	03 33 16.8	+0.7
VTS	Vitosha	1.14	50	i P	Pg	03 33 00.8	-0.5
VTS	Vitosha	1.14	50	P	Pg	03 33 01.1	-0.2
VTS				S	Sg	03 33 16.8	+0.7
FNA	Florina	1.18	205	P	Pg	03 33 01.6	-0.3
FNA				S	Sn	03 33 19.1	-0.1
FNA	Florina	1.18	205	ePB	Pb	03 33 01.7	-0.6
FNA				eSN	Sn	03 33 19.2	+0.1
FNA	Florina	1.18	205	P	Pg	03 33 01.6	-0.3
FNA				eSb	Sn	03 33 19.2	+0.1
MMB	Musomiste	1.30	101	i P	Pg	03 33 04.2	-0.1
MMB	Musomiste	1.30	101	i P	Pg	03 33 04.2	-0.1
SRS	Serrai	1.39	122	P	Pn	03 33 04.9	-0.6
SRS				S	Sg	03 33 24.6	+0.6
SRS	Serrai	1.39	122	P	Pn	03 33 04.9	-0.6
SRS				S	Sg	03 33 24.6	+0.6
THE	Thessaloniki	1.42	150	P	Pg	03 33 06.7	+0.3
THE	Thessaloniki	1.42	150	P	Pg	03 33 06.7	+0.3
SOH	Sokhos	1.44	136	P	Pn	03 33 05.6	-0.6
SOH				S	Sg	03 33 26.0	+0.4
SOH	Sokhos	1.44	136	ePN	Pb	03 33 06.1	-0.6
SOH				eSN	Sb	03 33 24.9	-0.5
SOH	Sokhos	1.44	136	P	Pn	03 33 05.6	-0.6
SOH	Sokhos	1.44	136	ePb	Pb	03 33 06.1	-0.6
SOH				eSb	Sb	03 33 24.9	-0.5
SOH				S	Sg	03 33 26.0	+0.4
NVR	Nevrokopi	1.47	110	P	Pn	03 33 06.1	-0.5
NVR				S	Sg	03 33 26.9	+0.4
NVR	Nevrokopi	1.47	110	ePN	Pb	03 33 06.5	-0.7
NVR				eSN	Sb	03 33 25.6	-0.6
NVR	Nevrokopi	1.47	110	P	Pn	03 33 06.1	-0.5
NVR	Nevrokopi	1.47	110	ePb	Pb	03 33 06.5	-0.7
NVR				eSb	Sb	03 33 25.6	-0.6
NVR				S	Sg	03 33 26.9	+0.4
HORT	Hortiatis	1.50	147	P	Pb	03 33 06.8	-0.9
HORT	Hortiatis	1.50	147	P	Pb	03 33 06.8	-0.9
BCI	Bajram Curri	1.54	290	ePN	Pb	03 33 07.8	-0.7
BCI				i SN	Sg	03 33 31.9	+3.0
KZN	Kozani	1.56	187	P	Pb	03 33 08.1	-0.7
KZN				S	Sg	03 33 30.0	+0.5
KZN	Kozani	1.56	187	ePN	Pg	03 33 09.2	-0.1
KZN				eSN	Sg	03 33 31.6	+2.1
KZN	Kozani	1.56	187	P	Pb	03 33 08.1	-0.7
KZN	Kozani	1.56	187	ePg	Pg	03 33 09.2	-0.1
KZN				S	Sg	03 33 30.0	+0.5
KZN				eSb	Sg	03 33 31.6	+2.1
PUK	Puka	1.60	277	ePN	Pn	03 33 07.3	-1.2
PUK				i SN	Sg	03 33 31.4	+0.6
NEST	Nestorio	1.62	207	P	Pb	03 33 09.5	-0.3
NEST	Nestorio	1.62	207	P	Pb	03 33 09.5	-0.3
TIR	Tirane	1.70	253	ePg	Pg	03 33 12.8	+0.9
TIR				eSn	Sg	03 33 36.2	+2.3
PVY	Plav	1.70	296⇓	iPn	Pb	03 33 10.8	-0.4
PVY				eSn	Sg	03 33 35.4	+1.4
PVY	Plav	1.70	296⇓	iPn	Pb	03 33 10.8	-0.4
PVY				eSn	Sg	03 33 35.4	+1.4
PGB	Panagyurishte	1.73	66	i P	Pb	03 33 11.5	-0.3
PGB	Panagyurishte	1.73	66	i P	Pb	03 33 11.5	-0.3
PLG	Polygyros	1.83	144	P	Pn	03 33 11.8	+0.2
PLG	Polygyros	1.83	144	ePN	Pb	03 33 12.1	-1.3
PLG	Polygyros	1.83	144	P	Pn	03 33 11.8	+0.2
PLG	Polygyros	1.83	144	ePn	Pb	03 33 12.1	-1.3
BEY	Berane	1.88	303⇑	iPn	Pb	03 33 13.6	-0.6
BEY				eSn	Sg	03 33 39.9	+0.3
IVA	Berane	1.88	303⇑	iPn	Pb	03 33 13.6	-0.6
IVA				eSn	Sg	03 33 39.9	+0.3
MPEP	Malo Peshtene	1.96	40	i P	Pb	03 33 16.2	+0.6
PLD	Plovdiv	2.01	82	P	Pn	03 33 14.4	+0.4
PLD				S	Sb	03 33 40.8	-1.0
PLD	Plovdiv	2.01	82	i P	Pb	03 33 16.8	+0.4
PLD	Plovdiv	2.01	82	P	Pn	03 33 14.4	+0.4
PLD				S	Sb	03 33 40.8	-1.0
RZN	Rozhen	2.02	94	i P	Pb	03 33 16.8	+0.1
RZN	Rozhen	2.02	94	i P	Pb	03 33 16.8	+0.1
KAVA	Kavala	2.06	114	P	Pn	03 33 14.9	+0.2
KAVA				S	Sn	03 33 41.1	+0.3
KAVA	Kavala	2.06	114	P	Pn	03 33 14.9	+0.2
KAVA				S	Sn	03 33 41.1	+0.3
ULC	Ulcinj	2.08	274⇓	iPn	Pb	03 33 16.6	-1.0
ULC				eSn	Sg	03 33 45.1	-1.0
ULC	Ulcinj	2.08	274⇓	iPn	Pb	03 33 16.6	-1.0
ULC				eSn	Sg	03 33 45.1	-1.0
OUR	Ouranopolis	2.12	135	P	Pn	03 33 15.7	+0.2
OUR	Ouranopolis	2.12	135	P	Pn	03 33 15.7	+0.2
PDG	Podgorica	2.14	286	ePn	Pb	03 33 17.9	-0.7
PDG				eSn	Sb	03 33 46.1	+0.7
TTG	Podgorica	2.14	286	ePn	Pb	03 33 17.9	-0.7
TTG				eSn	Sb	03 33 46.1	+0.7
THL	Klokotos Trika	2.29	180	P	Pn	03 33 18.6	+0.8
THL	Klokotos Trika	2.29	180	ePN	Pb	03 33 19.2	-2.0
THL	Klokotos Trika	2.29	180	P	Pn	03 33 18.6	+0.8
THL	Klokotos Trika	2.29	180	ePn	Pb	03 33 19.2	-2.0
PAIG	Paliouri	2.30	146	P	Pn	03 33 18.1	+0.1
PAIG	Paliouri	2.30	146	ePB	Pn	03 33 18.5	+0.5
PAIG	Paliouri	2.30	146	P	Pn	03 33 18.1	+0.1
PAIG	Paliouri	2.30	146	ePn	Pn	03 33 18.5	+0.5
BUM	Brajici-Budva	2.37	282⇑	iPn	Pb	03 33 20.8	-1.8
BUM				eSn	Sb	03 33 52.0	-0.3
BUM	Brajici-Budva	2.37	282⇑	iPn	Pb	03 33 20.8	-1.8
BUM				eSn	Sb	03 33 52.0	-0.3
PLE	Pljevlja	2.44	308⇓	iPn	Pn	03 33 21.0	+1.0
PLE				eSn	Sb	03 33 53.9	-0.4
PLE	Pljevlja	2.44	308⇓	iPn	Pn	03 33 21.0	+1.0
PLE				eSn	Sb	03 33 53.9	-0.4
NKY	Niksic	2.44	294⇑	iPn	Pn	03 33 21.0	+1.0
NKY				eSn	Sb	03 33 53.5	-0.8
NKY	Niksic	2.44	294⇑	iPn	Pn	03 33 21.0	+1.0
NKY				eSn	Sb	03 33 53.5	-0.8
XOR	Xorichti	2.64	160	P	Pn	03 33 22.9	+0.2
XOR	Xorichti	2.64	160	P	Pn	03 33 22.9	+0.2
UPM	Unac-Piva	2.67	301⇓	iPn	Pn	03 33 23.9	+0.7
UPM				eSn	Sb	03 33 59.0	-1.9
UPM	Unac-Piva	2.67	301⇓	iPn	Pn	03 33 23.9	+0.7
UPM				eSn	Sb	03 33 59.0	-1.9
DIVS	Divibare	2.69	327	P	Pn	03 33 23.7	+0.3
DIVS	Divibare	2.69	327	P	Pn	03 33 23.7	+0.3
HCY	Herceg Novi	2.69	284⇑	iPn	Pn	03 33 24.4	+1.0
HCY				eSn	Sb	03 33 59.0	-2.4
HCY	Herceg Novi	2.69	284⇑	iPn	Pn	03 33 24.4	+1.0
HCY				eSn	Sb	03 33 59.0	-2.4
NEO	Neokhori	2.71	160	ePN	Pn	03 33 23.8	+0.2
NEO	Neokhori	2.71	160	ePn	Pn	03 33 23.8	+0.2
KEK	Kerkira	2.73	219	ePB	Pb	03 33 27.1	-1.6
KEK	Kerkira	2.73	219	ePb	Pb	03 33 27.1	-1.6
RDO	Rodhopi	2.73	104	P	Pn	03 33 24.0	+0.1
RDO	Rodhopi	2.73	104	ePB	Pn	03 33 24.5	+0.6
RDO	Rodhopi	2.73	104	P	Pn	03 33 24.0	+0.1
RDO	Rodhopi	2.73	104	ePb	Pn	03 33 24.5	+0.6
BRY	Bratogost	2.79	293⇑	iPn	Pn	03 33 26.0	+1.2
BRY				eSn	Sb	03 34 01.9	-2.3
BRY	Bratogost	2.79	293⇑	iPn	Pn	03 33 26.0	+1.2
BRY				eSn	Sb	03 34 01.9	-2.3
AGG	Agios Georgios	2.84	175	P	Pn	03 33 25.8	+0.3
AGG	Agios Georgios	2.84	175	ePN	Pn	03 33 26.1	+0.6
AGG	Agios Georgios	2.84	175	P	Pn	03 33 25.8	+0.3
AGG	Agios Georgios	2.84	175	ePn	Pn	03 33 26.1	+0.6
EVR	Evrytania	2.94	183	ePB	Pb	03 33 29.0	-3.4
EVR	Evrytania	2.94	183	ePb	Pb	03 33 29.0	-3.4
AOS	Alonnisos	3.04	152	P	Pn	03 33 27.7	-0.4
AOS	Alonnisos	3.04	152	ePN	Pn	03 33 27.9	-0.2
AOS	Alonnisos	3.04	152	ePn	Pn	03 33 27.9	-0.2
ZIMR		3.05	53⇑	iP	Pn	03 33 28.4	+0.2
LIA	Limnos Island	3.09	128	P	Pn	03 33 28.8	-0.1
LIA	Limnos Island	3.09	128	ePN	Pn	03 33 29.7	+0.8
LIA	Limnos Island	3.09	128	P	Pn	03 33 28.8	-0.1
LIA	Limnos Island	3.09	128	ePn	Pn	03 33 29.7	+0.8
ALN	Alexandroupoli	3.17	106	P	Pn	03 33 29.9	-0.1
ALN	Alexandroupoli	3.17	106	ePN	Pn	03 33 29.8	-0.2
ALN	Alexandroupoli	3.17	106	P	Pn	03 33 29.9	-0.1
LKD2	Lefkada island	3.24	199	ePN	Pn	03 33 32.6	+1.7
LKD2	Lefkada island	3.24	199	ePn	Pn	03 33 32.6	+1.7
STON	Ston	3.36	289	ePn	Pb	03 33 36.5	-3.0
STON				Sn	Sb	03 34 16.5	-4.2
STON	Ston	3.36	289	ePn	Pb	03 33 36.4	-3.0
STON				Sn	Sb	03 34 16.4	-4.2
EFP	Efpalio	3.43	182	ePN	Pn	03 33 35.6	+2.1
EFP	Efpalio	3.43	182	ePn	Pn	03 33 35.6	+2.1
JMB	Yambol	3.44	78	P	Pn	03 33 33.5	-0.2
JMB	Yambol	3.44	78	P	Pn	03 33 33.5	-0.2
KALE	Kalithea	3.46	179	ePN	Pn	03 33 35.6	+1.5
KALE	Kalithea	3.46	179	ePn	Pn	03 33 35.6	+1.5
EDRB	Edirne	3.52	89	eP	Pn	03 33 37.1	+2.3
GZR	Gura Zlata	3.58	9⇓	iP	Pn	03 33 36.4	+0.8
GZR	Gura Zlata	3.58	9⇓	iP	Pn	03 33 36.4	+0.8
ERIK	Erikli-Kesan	3.58	108	eP	Pn	03 33 37.1	+1.5
LAKA	Lakka	3.61	181	ePN	Pn	03 33 38.7	+2.6
LAKA	Lakka	3.61	181	ePn	Pn	03 33 38.7	+2.6
GELI	Tayfur-Gelibol	3.66	112	eP	Pn	03 33 40.1	+3.4
BZS	Buzias	3.77	356⇓	iP	Pn	03 33 37.4	-0.8
BZS	Buzias	3.77	356⇓	iP	Pn	03 33 37.4	-0.8
VLS	Valsamata	3.84	197	ePN	Pn	03 33 41.7	+2.5
VLS	Valsamata	3.84	197	ePn	Pn	03 33 41.7	+2.5
LTK	Loutraki	3.90	169	ePN	Pn	03 33 41.8	+1.8
LTK	Loutraki	3.90	169	ePn	Pn	03 33 41.8	+1.8
GUR	Goura	3.92	176	ePN	Pn	03 33 42.4	+2.0
GUR	Goura	3.92	176	ePn	Pn	03 33 42.4	+2.0
TKR	Tekirdag	4.23	100	eP	Pn	03 33 47.8	+3.2
KRBG	Karabiga-Canak	4.24	108	eP	Pn	03 33 48.1	+3.4
AMT	Artemida-Makis	4.33	183	ePB	Pb	03 33 50.3	-5.6
CRLT	Corlu	4.35	98	eP	Pn	03 33 47.7	+1.6
MRMT	Marmara Adasi	4.38	105	eP	Pn	03 33 49.7	+3.0
DID	Didima	4.45	167	ePN	Pn	03 33 48.5	+1.0
DID	Didima	4.45	167	ePn	Pn	03 33 48.5	+1.0
MLR	Muntele Rosu	4.61	37⇑	iP	Pn	03 33 51.1	+1.2
MLR	Muntele Rosu	4.61	37	Pn	Pn	03 33 52.7	+2.8
	comp=E,0.3nm,0.3s,baz=242,slow=7.7,SNR=13						
MLR				Sn	Sb	03 34 53.8	-3.0
	comp=E,0.3nm,0.3s,baz=118,slow=22,SNR=4.0						
MLR	Muntele Rosu	4.61	37⇑	iP	Pn	03 33 51.1	+1.2
GONE	Gonen-Balikesi	4.65	111	eP	Pn	03 33 53.7	+3.4
ITM	Ithomi	4.67	181	ePN	Pn	03 33 55.1	+4.5
ITM	Ithomi	4.67	181	ePn	Pn	03 33 55.1	+4.5
SLVT	Silivri	4.68	96	eP	Pn	03 33 54.0	+3.3
BNT	Bandirma	4.70	107	eP	Pn	03 33 54.4	+3.4
CTYL	Yal??k??y-??at	4.71	93	eP	Pn	03 33 55.4	+4.3
CTKS	Kestanelik-??a	4.90	95	eP	Pn	03 33 52.6	-1.1
PYL	PYLOS	4.96	183	ePN	Pn	03 33 56.3	+1.7
PYL	PYLOS	4.96	183	ePn	Pn	03 33 56.3	+1.7
PKSM	Moragy	4.99	332⇑	iP	Pn	03 33 55.3	+0.4
PKSM	Moragy	4.99	332⇑	e	Pn	03 33 55.4	+0.5
PKSM	Moragy	4.99	332⇑	iP	Pn	03 33 55.3	+0.4
KCTX	Karacabey (Bur	5.04	106	eP	Pn	03 33 59.0	+3.3
BGKT	Bogazkoy	5.11	95	eP	Pn	03 34 00.7	+4.1
PLOR	Plostina	5.21	38⇓	iP	Pn	03 33 59.2	+1.2
PLOR	Plostina	5.21	38⇓	iP	Pn	03 33 59.2	+1.2
VRI	Vrincioaia	5.25	39⇓	iP	Pn	03 33 59.6	+1.0
VRI	Vrincioaia	5.25	39⇓	iP	Pn	03 33 59.6	+1.0
ISK	Istanbul-Kandi	5.34	96	eP	Pn	03 34 03.3	+3.5
TIRR	Tirgusor	5.35	59⇓	iP	Pn	03 33 59.8	0.0
TIRR	Tirgusor	5.35	59⇓	iP	Pn	03 33 59.8	0.0
DST	Dursunbey	5.49	112	eP	Pn	03 34 06.3	+4.4
SILT	Sile	5.76	94	eP	Pn	03 34 09.0	+3.4
HRT	Hereke	5.85	98	eP	Pn	03 34 09.6	+2.9
BURAR	Bucovina Array	6.19	20⇑	iP	Pn	03 34 19.4	+7.9
PSZ	Piszkesteto	6.25	347⇑	e	Pn	03 34 12.4	+0.1
GULT	Gulveren	6.56	100	eP	Pn	03 34 20.6	+3.9
ALT	Altintas	6.77	112	eP	Pn	03 34 23.6	+4.0
ARSA	Arzberg	7.11	321⇑	iPn	Pn	03 34 25.0	+0.8
BRTR	Keskin Array B	9.06	100	Pn	Pn	03 34 51.2	+0.2
	comp=E,0.1nm,0.3s,baz=286,slow=16,SNR=3.2						
GERES	GERESS Array B	9.11	323	Pn	Pn	03 34 55.0	+3.4
	comp=E,0.2nm,0.3s,baz=133,slow=9.5,SNR=3.0						
KHC	Kasperske Hory	9.38	324	ePN	Pn	03 34 56.8	+1.6
DAVOX	Davos/Dischmat	9.99	304	LR	LR	03 39 15.1	
	comp=E,62nm,18.0s,baz=81,slow=39						
TORD	Torodi Ar. Bea	33.63	218	P	P	03 39 21.6	+0.6
	comp=E,0.5nm,0.9s,baz=44,slow=9.8,SNR=3.1						
MKAR	Makanchi Array	42.47	62	P	P	03 40 35.7	+0.4
	comp=E,0.2nm,0.5s,baz=299,slow=8.7,SNR=3.1						

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*DDA **06** 04:01:34.1, 38°.20N×25°.69E, h7km, MD3.1*
*ATH **06** 04:01:35.1, 38°.08N×25°.99E, h32km±2km, MD3.4/5*
*CSEM **06** 04:01:36.3±0.3, 38°.09N×25°.86E, h20km, MD3.4, Error ellipse: s-maj=9.5km s-min=5.4km az=112.0*
*ISCJB **06** 04:01:36.2±1.3, 38°.10N±0°.04×25°.8E±0°.1, h21km±12km, Error ellipse: s-maj=17.9km s-min=6.8km az=10.2*
ISC 06 04:01:35.5±1.6**, 38°.06N**±0°.05×**25°.97E**±0°.07**, h16km**±14km**, n13, σ0.s52**/22**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOS	Chios island	0.34	12	ePB	Pb	04 01 43.4	+0.2
CHOS				eSB	Sb	04 01 48.7	+0.3
CHOS	Chios island	0.34	12	ePb	Pb	04 01 43.4	+0.2
CHOS				eSb	Sb	04 01 48.7	+0.3
URLA	Izmir	0.58	58	i P	Pn	04 01 49.0	-0.2
URLA				i S	Sn	04 01 59.0	+0.6
URLA	Izmir	0.58	58	i P	Pn	04 01 49.0	-0.2
URLA				i S	Sn	04 01 59.0	+0.6
APE	Apeiranthos	1.04	199	ePN	Pg	04 01 55.8	+0.1
APE				eSN	Sn	04 02 09.9	0.0
APE	Apeiranthos	1.04	199	ePn	Pg	04 01 55.8	+0.1
APE				eSn	Sn	04 02 09.9	0.0
PRK	Paraskevi	1.21	11	ePN	Pn	04 01 57.3	-0.5
PRK				eSN	Sb	04 02 12.8	-0.7
PRK	Paraskevi	1.21	11	ePn	Pn	04 01 57.3	-0.5
PRK				eSn	Sb	04 02 12.8	-0.7
BOZC	Bozcaada	1.78	2	i P	Pn	04 02 05.9	+0.2
BOZC				i S	Sb	04 02 28.6	-1.4
LIA	Limnos Island	1.94	342	ePN	Pn	04 02 07.9	+0.1
LIA	Limnos Island	1.94	342	ePn	Pn	04 02 07.9	+0.1
SMTH	Samothraki Isl	2.43	352	ePN	Pn	04 02 15.1	+0.4
SMTH	Samothraki Isl	2.43	352	ePn	Pn	04 02 15.1	+0.4

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*ISCJB **06** 04:10:28.7±0.8, 56°.6S±0°.1×142°.1W±0°.3, h10km, mb4.2/6, MS4.2/14, Error ellipse: s-maj=24.2km s-min=14.4km az=168.0*
*IDC **06** 04:10:29.4±1.2, 56°.69S×142°.21W, h0km, mb4.1/5, mb1 4.2/5, mb1mx3.9/14, mbtmp4.1/5, MS4.2/14, Ms1 4.2/14, ms1mx4.1/21, Error ellipse: s-maj=42.4km s-min=27.5km az=36.0*
*NEIC **06** 04:10:30.7±0.7, 56°.59S×142°.14W, h10km, mb4.4/2, Error ellipse: s-maj=27.5km s-min=21.5km az=198.0*
*GCMT **06** 04:10:35.2±0.2, 56°.83S×142°.04W, h25km±1km, MW5.2, Moment Tensor Solution. s44,c61; s76,c118; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.15±.21; $M_{\theta\theta}$5.14±.21; $M_{\phi\phi}$-4.98±.18; $M_{r\theta}$0.85±.45; $M_{\theta\phi}$4.37±.17; $M_{\phi r}$0.40±.41; Best double couple: $M_0$6.80000×10^{16} NP1:ϕ_s115.00000°, δ84.00000°, λ5.00000°. NP2:ϕ_s24.00000°, δ85.00000°, λ174.00000°. Principal axes: T 6.8900, Plg8.0000°, Azm340.0000°; N -0.2700, Plg82.0000°, Azm165.0000°; P -6.6100, Plg1.0000°, Azm70.0000°; Data Used: II IU G CN IC.*
ISC 06 04:10:30.2±0.7**, 56°.6S**±0°.1×**142°.0W**±0°.2**, h10km, n31, σ0.s82**/20**, mb4.3**/6**, MS4.3**/14**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNDA	Vanda	28.38	202	LR	LR	04 25 00.3	
	comp=Z,207nm,21.0s,baz=77,slow=31						
RPZ	Rata Peaks	32.07	273	LR	LR	04 26 35.1	
	comp=Z,703nm,19.6s,baz=319,slow=30						
URZ	Urewera	32.56	287	LR	LR	04 27 00.7	
	comp=Z,618nm,19.9s,baz=142,slow=30						
QSPA	South Pole Qui	33.60	180	P	P	04 17 11.3	+1.0
QSPA	South Pole Qui	33.60	180	P	P	04 17 11.3	+1.0
	3.2nm,0.9s,baz=89,slow=5.1,SNR=4.7						
QSPA				LR	LR	04 28 10.0	
	comp=Z,410nm,20.2s,baz=71,slow=32						
TBI	Tubuai	33.62	347	eS	S	04 22 33.0	-0.1
	155nm,28.2s						
TBI				eLR	LR	04 25 56.5	
	1μm,27.2s						
RAO	Raoul Island	37.20	302	LR	LR	04 28 55.1	
	comp=Z,275nm,18.6s,baz=170,slow=30						
RAR	Rarotonga	37.68	332	LR	LR	04 27 43.5	
	comp=Z,377nm,21.3s,baz=208,slow=27						
PPT2	Papeete2	39.32	349	eS	S	04 24 00.3	-0.1
	172nm,26.1s						
PPT2				eLR	LR	04 28 44.2	
	1μm,25.8s,baz=181						
PPT	Papeete	39.34	349	LR	LR	04 30 45.5	
	comp=Z,364nm,18.2s,baz=143,slow=31						
SNAA	Sanae	48.89	164	eP	P	04 19 14.7	-0.9
	2.0nm,0.6s						
SNAA	Sanae	48.89	164	P	P	04 19 13.9	-1.7
	0.5nm,0.5s,baz=221,slow=5.5,SNR=17						
DZM	Mont Dzumac	50.94	291	LR	LR	04 36 10.5	
	comp=Z,230nm,20.4s,baz=168,slow=30						
MAW	Mawson	54.79	191	LR	LR	04 40 39.5	
	comp=Z,252nm,19.3s,baz=158,slow=33						
STKA	Stephens Creek	56.76	261	P	P	04 20 15.2	+1.0
STKA	Stephens Creek	56.76	261	P	P	04 20 15.2	+1.0
	2.3nm,0.6s,baz=137,slow=8.3,SNR=5.9						
STKA				LR	LR	04 40 04.4	
	comp=Z,307nm,20.1s,baz=203,slow=31						
ASAR	Alice Springs	67.40	261	P	P	04 21 25.1	-0.7
ASAR	Alice Springs	67.40	261	P	P	04 21 25.1	-0.7
	2.0nm,0.9s,baz=136,slow=6.3,SNR=11						
NWAO	Narrogin (SRO)	68.70	242	LR	LR	04 43 30.7	
	comp=Z,256nm,21.8s,baz=353,slow=29						
WRA	Warramunga Arr	70.15	264	P	P	04 21 42.5	-0.4
WRA	Warramunga Arr	70.15	264	P	P	04 21 42.5	-0.4
	1.8nm,0.9s,baz=152,slow=5.6,SNR=5.8						
WRA				LR	LR	04 47 02.3	
	comp=Z,73nm,19.0s,baz=135,slow=31						
SAML	Samuel	76.40	86	eP	P	04 22 20.8	+0.9
	4.0nm,1.3s						
BOSA	Boshof	94.47	169	LR	LR	05 02 43.8	
	comp=Z,194nm,18.7s,baz=177,slow=33						
NVAR	Mina Array Bea	96.73	19	LR	LR	04 57 26.3	
	comp=Z,168nm,21.1s,baz=117,slow=29						
ILAR	Eielson Array	121.06	358	PKP	PKPdf	04 29 21.4	0.0
ILAR	Eielson Array	121.06	358	PKP	PKPdf	04 29 21.4	0.0
	0.2nm,0.8s,baz=178,slow=6.3,SNR=2.4						
ESDC	Sonseca Array	147.90	104	PKPbc	PKPab	04 30 17.4	-0.1
ESDC	Sonseca Array	147.90	104	PKPbc	PKPab	04 30 17.4	-0.1
	0.1nm,0.3s,baz=233,slow=1.4,SNR=3.1						
MKAR	Makanchi Array	151.34	269	PKPbc	PKPbc	04 30 22.2	-0.9
MKAR	Makanchi Array	151.34	269	PKPbc	PKPbc	04 30 22.2	-0.9
	0.5nm,0.8s,baz=108,slow=4.7,SNR=5.7						
KURK	Kurchatov	155.52	274	ePKPdf	PKPdf	04 30 22.8	-0.1
KURK				ePKPbc	PKPab	04 30 32.2	-17

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*ISK **06** 04:39:43.2, 39°.13N×28°.98E, h13km, MD2.8*
*DDA **06** 04:39:43.6, 39°.13N×29°.07E, h7km, MD3.0*
*CSEM **06** 04:39:43.6±0.1, 39°.12N×29°.03E, h10km, MD3.0, Error ellipse: s-maj=2.6km s-min=2.4km az=50.0*
*ISCJB **06** 04:39:43.5±0.4, 39°.12N±0°.02×29°.04E±0°.03, h9km±4km, Error ellipse: s-maj=4.1km s-min=3.7km az=38.9*
ISC 06 04:39:43.9±0.9**, 39°.12N**±0°.02×**29°.04E**±0°.02**, h12km**±8km**, n48, σ0.s52**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.27	253	i P	Pg	04 39 49.8	+0.3
DEMI				i S	Sg	04 39 53.9	+0.7
DEMI	Demirci	0.27	253	i P	Pg	04 39 49.8	+0.3
DEMI				i S	Sg	04 39 53.9	+0.7
GDZ	Gediz	0.34	96	i P	Pg	04 39 50.2	-0.6
GDZ				i S	Sg	04 39 55.0	-0.5
GDZ	Gediz	0.34	96	i P	Pg	04 39 50.2	-0.6
GDZ				i S	Sg	04 39 55.0	-0.5
DST	Dursunbey	0.58	326	PG	Pg	04 39 54.4	-0.9
DST				eSG	Sg	04 40 03.0	0.0
DST	Dursunbey	0.58	326	i Pg	Pg	04 39 54.4	-0.9
DST				eSg	Sg	04 40 03.0	0.0
DURS	Dursunbey	0.65	317	i P	Pb	04 39 57.2	0.0
DURS				i S	Sg	04 40 05.6	+0.5
DURS	Dursunbey	0.65	317	i P	Pb	04 39 57.2	0.0
DURS				i S	Sg	04 40 05.6	+0.5
KULA	Kula-Manisa	0.68	206	PG	Pg	04 39 56.6	-0.5
KULA				eSG	Sg	04 40 06.0	0.0
KULA	Kula-Manisa	0.68	206	i Pg	Pg	04 39 56.6	-0.5
KULA				eSg	Sg	04 40 06.0	0.0
MANT	Manisa	0.74	211	i P	Pg	04 39 58.1	-0.1
MANT				i S	Sg	04 40 07.7	-0.2
MANT	Manisa	0.74	211	i P	Pg	04 39 58.1	-0.1
MANT				i S	Sg	04 40 07.7	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHAL	Karahalli	0.83	155	i P	Pg	04 39 59.6	-0.3
KHAL				i S	Sg	04 40 10.3	-0.5
KHAL	Karahalli	0.83	155	i P	Pg	04 39 59.6	-0.3
KHAL				i S	Sg	04 40 10.3	-0.5
ALT	Altintas	0.83	94	ePG	Pb	04 40 00.6	+0.3
ALT	Altintas	0.83	94	ePg	Pb	04 40 00.6	+0.3
KHL	Karahalli	0.88	155	ePG	Pb	04 40 01.3	+0.1
KHL	Karahalli	0.88	155	ePg	Pb	04 40 01.3	+0.1
AKS	Akhisar	0.99	256	ePG	Pg	04 40 01.4	-1.6
AKS	Akhisar	0.99	256	ePg	Pg	04 40 01.4	-1.6
CAVI	Cavuskoy	1.24	30	ePN	Pn	04 40 07.2	+0.2
CAVI	Cavuskoy	1.24	30	ePn	Pn	04 40 07.2	+0.2
MDNY	Mudanya-Bursa	1.25	354	ePN	Pn	04 40 06.9	-0.2
MDNY	Mudanya-Bursa	1.25	354	ePn	Pn	04 40 06.9	-0.2
KCTX	Karacabey (Bur	1.26	335	ePN	Pn	04 40 06.2	-1.0
KCTX	Karacabey (Bur	1.26	335	ePn	Pn	04 40 06.2	-1.0
BALY	Balya	1.26	300	i P	Pg	04 40 08.4	+0.2
BALY				i S	Sg	04 40 24.8	+0.2
BALY	Balya	1.26	300	i P	Pg	04 40 08.4	+0.2
BALY				i S	Sg	04 40 24.8	+0.2
SHUT	Suhut-Afyon	1.31	115	ePN	Pb	04 40 08.9	+0.5
SHUT	Suhut-Afyon	1.31	115	ePn	Pb	04 40 08.9	+0.5
BORA	Eskisehir	1.33	55	i P	Pn	04 40 08.6	+0.3
BORA				i S	Sn	04 40 26.5	+0.6
BORA	Eskisehir	1.33	55	i P	Pn	04 40 08.6	+0.3
BORA				i S	Sn	04 40 26.5	+0.6
GONE	Gonen-Balikesi	1.40	312	ePN	Pn	04 40 08.6	-0.5
GONE	Gonen-Balikesi	1.40	312	ePn	Pn	04 40 08.6	-0.5
ADVT	Abdulvahap	1.41	22	ePN	Pn	04 40 08.9	-0.5
ADVT	Abdulvahap	1.41	22	ePn	Pn	04 40 08.9	-0.5
ESKT	Eskisehir	1.46	74	ePN	Pn	04 40 10.2	+0.1
ESKT	Eskisehir	1.46	74	ePn	Pn	04 40 10.2	+0.1
GPA	Golpazari	1.52	40	ePN	Pn	04 40 11.2	+0.3
GPA	Golpazari	1.52	40	ePn	Pn	04 40 11.2	+0.3
GULT	Gulveren	1.73	40	ePN	Pn	04 40 14.6	+0.8
GULT	Gulveren	1.73	40	ePn	Pn	04 40 14.6	+0.8
KRBG	Karabiga-Canak	1.85	314	ePN	Pn	04 40 15.2	-0.1
KRBG	Karabiga-Canak	1.85	314	ePn	Pn	04 40 15.2	-0.1
MRMT	Marmara Adasi	1.85	323	ePN	Pn	04 40 15.5	+0.1
MRMT	Marmara Adasi	1.85	323	ePn	Pn	04 40 15.5	+0.1
CTKS	Kestanelik-??a	2.15	349	ePN	Pn	04 40 19.2	-0.3
CTKS	Kestanelik-??a	2.15	349	ePn	Pn	04 40 19.2	-0.3

*ISCJB **06** 04:50:07.1±2.0, 36°.3N±0°.1×78°.2E±0°.3, h33km, Error ellipse: s-maj=32.3km s-min=9.3km az=23.0*
*BJI **06** 04:50:10.8, 36°.32N×78°.12E, h30km, ML3.6/6*
*NNC **06** 04:50:19.5±4.6, 37°.11N×77°.98E, h80km±106km, mb3.2, mpv3.1, Error ellipse: s-maj=41.5km s-min=20.7km az=166.0*

ISC 06 04:50:09.6±2.0**, 36°.4N**±0°.1×**78°.0E**±0°.1**, h35km, n9, σ2s75**/11**, 3C-2D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	3.52	333	Pn	Pn	04 51 05.0	+3.1
KSH				smax	smax		
	comp=N,160nm,0.7s						
KSH				smax	smax		
	comp=E,110nm,0.4s						
CHCP	Chirah Chowk	4.75	237	P	Pn	04 51 20.6	+1.9
CEP	Cherat	5.62	245	P	Pn	04 51 32.0	+1.3
CEP				S	Sn	04 52 31.0	-3.1
SARP	Sargodha	6.28	226	P	Pn	04 51 39.1	-0.6
THW	Thamme Wali	6.29	237	P	Pn	04 51 40.5	+0.6
TKM2	Tokmak 2	6.79	345	⇓Pn	Pn	04 51 51.2	+4.3
	comp=E,1.3nm,0.5s						
KK31	Karatay Array	8.86	322	⇑Pn	Pn	04 52 17.0	+2.0
	comp=E,0.2nm,0.3s,baz=134,slow=13,SNR=6.5						
KK31				⇑Sn	Sn	04 53 52.0	-1.6
	comp=E,0.2nm,0.3s,baz=142,slow=24,SNR=6.4						
MK31	Makanchi Array	10.88	16	⇓Pn	Pn	04 52 44.3	+1.6
	comp=E,1.8nm,0.4s,baz=198,slow=14,SNR=103						
MK31				⇑Sn	Sn	04 54 38.3	-5.0
	comp=E,8.5nm,0.9s,baz=197,slow=23,SNR=17						
AB31	Akbulak array	18.41	320	P	Pn	04 54 23.2	+1.4
	comp=E,1.1nm,0.9s,baz=125,slow=14,SNR=5.6						

*IDC **06** 05:02:01.0±3.3, 6°.77S×105°.97E, h0km, mb3.9/5, mb1 4.0/5, mb1mx3.7/23, mbtmp3.8/5, Error ellipse: s-maj=178.4km s-min=21.9km az=49.0*
*ISCJB **06** 05:02:11.2±0.9, 7°.2S±0°.1×106°.02E±0°.07, h89km±8km, mb3.7/5, Error ellipse: s-maj=21.4km s-min=6.0km az=29.2*
*DJA **06** 05:02:12.9±0.6, 7°S±7°×10°6E±°, h57km±6km, M4.7/13, mb5.2/1, MLv4.5/13*

ISC 06 05:02:12.4±1.3**, 7°.2S**±0°.1×**106°.03E**±0°.07**, h77km**±11km**, n19, σ0s85**/22**, mb3.8**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.56	69	P	Pn	05 02 26.1	-0.4
SKJI				S	Sn	05 02 36.8	-0.1
CGJI	Cibinong	0.68	331	P	Pn	05 02 28.4	+0.8
CGJI				S	Sn	05 02 39.4	+0.5
DBJI	Dramaga	0.97	48	P	Pn	05 02 30.7	-0.3
DBJI				S	Sn	05 02 45.7	+0.9
SBJI	Serang	1.09	5	P	Pn	05 02 32.2	-0.2
TNG	Tangerang	1.20	31	P	Pn	05 02 33.7	-0.1
TNG	Tangerang	1.20	31	P	Pn	05 02 33.7	-0.1
LEM	Lembang	1.62	77	P	Pn	05 02 40.9	+1.5
CISI	Cisompet, Garu	1.81	101	P	Pn	05 02 41.4	-0.4
CISI				S	Sn	05 03 02.2	-1.8
BLSI	Bandar Lampung	1.99	337	P	Pn	05 02 43.9	-0.2
BLSI				S	Sn	05 03 07.3	-0.9
KASI	Kota Agung	2.26	318	P	Pn	05 02 47.7	-0.1
KASI				S	Sn	05 03 13.3	-1.5
LWLI	Liwa	2.93	318	P	Pn	05 02 57.8	+0.9
TGJI	Tegal	3.09	84	P	Pn	05 02 59.9	+0.9
KSI	Kapahiang	4.92	316	P	Pn	05 03 24.3	+0.4
MASI	Maura Aman, Be	5.53	317	P	Pn	05 03 32.6	+0.3
WRA	Warramunga Arr	30.23	118	P	P	05 08 15.9	-0.2
	0.3nm,0.4s,baz=288,slow=11,SNR=3.3						
ASAR	Alice Springs	31.36	125	P	P	05 08 26.5	+0.4
	0.3nm,0.6s,baz=310,slow=8.4,SNR=3.2						
MKAR	Makanchi Array	57.76	341	P	P	05 11 51.6	-3.8
	0.8nm,0.4s,baz=151,slow=8.6,SNR=11						
ZALV	Zalesovo Beam	63.50	346	P	P	05 12 29.1	-5.2
	0.3nm,0.3s,baz=156,slow=5.3,SNR=2.5						
ARCES	ARCESS Array B	93.39	340	P	P	05 15 15.8	-2.9
	1.8nm,0.8s,baz=112,slow=6.9,SNR=3.3						

MEX 06 05:04:32.4±2.0**, 20°.37N×99°.11W, h11km**±11km**, MD3.5, Central Mexico**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEIG	Demacu	0.10	136	eP	Pg	05 04 34.5	-0.9
DEIG				i S	Sg	05 04 36.6	-1.0
IIO	Organos	0.86	155	eP	Pg	05 04 46.3	-3.1
IIO				i S	Sg	05 04 57.7	-3.3
PBIG	Penon de los B	0.93	179	eP	Pg	05 04 47.0	-3.2
PBIG				i S	Sg	05 04 58.6	-3.8
SZVM	Salazar	1.07	194	eP	Pb	05 04 49.3	-4.3
SZVM				i S	Sg	05 05 02.7	-5.3
MZVM		1.18	186	i P	Pb	05 04 52.0	-2.9
MZVM				i S	Sb	05 05 06.3	-4.0
PPM	Popocatepetl	1.38	161	eP	Pn	05 04 54.2	-4.1
PPM				i S	Sb	05 05 10.5	-6.4
YAIG	Yautepec	1.50	178	eP	Pn	05 04 57.0	-2.6
YAIG				i S	Sn	05 05 15.6	-3.8
ARIG	Puente Sto Nin	2.39	210	eP	Pn	05 05 08.2	-3.4
ARIG				i S	Sn	05 05 35.8	-5.1
MEIG	Mezcala	2.48	191	i P	Pn	05 05 10.7	-2.2
MEIG				i S	Sn	05 05 40.4	-3.0
UTMO	Huajuapan	2.81	154	i P	Pn	05 05 11.1	-6.6
ZIIG	Zihuatanejo	3.54	219	i P	Pn	05 05 25.3	-2.1
ZIIG				i S	Sn	05 06 05.0	-4.3
ZAIG	Zacatecas	4.00	307	i P	Pb	05 05 39.5	-4.0
LNIG	Linares	4.52	356	i P	Pg	05 05 57.2	-1.8

IDC 06 05:13:59.6±0.8**, 3°.53N×126°.76E, h0km, mb3.9**/9**, mb1 4.0**/9**, mb1mx3.8**/25**, mbtmp3.9**/9**, 1D, Error ellipse: s-maj=57.3km s-min=14.9km az=74.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	4.43	326	⇓iP	Pn	05 15 11.0	+2.8
FITZ	Fitzroy Crossi	21.53	183	P	P	05 18 50.4	-0.1
	2.3nm,0.8s,baz=0.0,slow=9.1,SNR=3.0						
WRA	Warramunga Arr	24.49	163	P	P	05 19 20.6	-0.2
	4.5nm,0.8s,baz=329,slow=12,SNR=23						
ASAR	Alice Springs	27.92	166	P	P	05 19 51.1	-0.6
	0.3nm,0.5s,baz=354,slow=8.4,SNR=4.7						
ASAR				PcP	PcP	05 23 08.0	+0.5
	0.5nm,0.4s,baz=353,slow=2.7,SNR=5.3						
KSRS	Korea Array	33.77	2	P	P	05 20 43.4	+0.3
	1.3nm,0.5s,baz=184,slow=11,SNR=7.2						
STKA	Stephens Creek	37.94	159	P	P	05 21 19.3	+0.3
	1.5nm,0.4s,baz=334,slow=7.7,SNR=11						
MKAR	Makanchi Array	57.73	325	P	P	05 23 51.9	-0.5
	0.6nm,0.3s,baz=119,slow=6.6,SNR=9.6						
ZALV	Zalesovo Beam	60.77	333	P	P	05 24 14.0	+0.8
	0.3nm,0.3s,baz=150,slow=12,SNR=2.4						
KURBB	Kurchatov Arra	61.92	327	P	P	05 24 20.5	-0.5
	0.7nm,0.4s,baz=128,slow=6.2,SNR=9.4						
ILAR	Eielson Array	85.27	25	P	P	05 26 37.2	-0.9
	0.3nm,0.9s,baz=257,slow=5.6,SNR=4.4						

IDC 06 05:14:06.2±8.9**, 27°.98N×53°.67E, h0km, mb3.5**/4**, mb1 3.5**/4**, mb1mx3.3**/28**, mbtmp3.5**/4**, Error ellipse: s-maj=402.7km s-min=26.8km az=150.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	Ala-Archa	22.34	44	P	P	05 19 07.8	+1.9
	0.9nm,0.6s,baz=231,slow=13,SNR=4.0						
MKAR	Makanchi Array	29.25	42	P	P	05 20 08.9	-1.0
	0.2nm,0.4s,baz=238,slow=8.5,SNR=3.2						
ZALV	Zalesovo Beam	34.53	33	P	P	05 20 55.8	-0.4
	0.3nm,0.3s,baz=247,slow=7.7,SNR=3.6						
TORD	Torodi Ar. Bea	50.49	264	P	P	05 23 06.5	0.0
	0.6nm,0.7s,baz=58,slow=8.1,SNR=5.7						

WEL 06 05:14:59.5±0.5**, 38°.25S×176°.12E, h150km**±4km**, ML3.5**/6**, 13C-1D, Error ellipse: s-maj=3.5km s-min=3.1km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.78	91	⇑PN	Pn	05 15 22.4	-0.2
URZ				SN	Sn	05 15 39.6	-0.5
BKZ	Black Stump Fm	0.96	163	⇑PN	Pn	05 15 24.0	-0.1
BKZ				SN	Sn	05 15 42.0	-1.0
NMHZ	Naumai	1.01	148	⇑PN	Pn	05 15 25.2	+0.7
RAHZ	Arahi	1.01	132	PN	Pn	05 15 24.8	+0.4
RAHZ				SN	Sn	05 15 43.8	+0.3
TUVZ	Tukino	1.08	200	⇑PN	Pn	05 15 25.4	+0.2
MWZ	Matawai	1.11	95	⇑PN	Pn	05 15 25.2	-0.2
MWZ				SN	Sn	05 15 44.1	-0.9
TRVZ	Turoa	1.14	203	PN	Pn	05 15 25.7	-0.2
WNVZ	Wahianoa	1.16	201	⇑PN	Pn	05 15 25.9	0.0
MOVZ	Moawhango	1.20	194	PN	Pn	05 15 25.7	-0.5
PKVZ	Pokaka	1.21	210	PN	Pn	05 15 26.3	0.0
BHHZ	Black Hill Sta	1.24	182	⇑PN	Pn	05 15 26.2	-0.4
MTVZ	Mangateitei	1.25	204	PN	Pn	05 15 26.6	0.0
MCHZ	McNeill Hill	1.28	160	PN	Pn	05 15 27.2	+0.4
CKHZ	Cape Kidnapper	1.60	152	PN	Pn	05 15 30.0	-0.1
KAHZ	Kahuranaki	1.66	159	⇑PN	Pn	05 15 30.5	-0.3
MHGZ	Mahia Peninsul	1.67	124	PN	Pn	05 15 30.7	-0.1
PNHZ	Pukenui	1.67	178	PN	Pn	05 15 30.1	-0.9
PUZ	Puketiti	1.69	85	PN	Pn	05 15 30.8	-0.4
WAZ	Wanganui	1.75	210	PN	Pn	05 15 31.5	-0.3
TSZ	Takapari Road	1.82	184	⇑PN	Pn	05 15 31.6	-1.0
WPHZ	Waipukurau	1.83	172	PN	Pn	05 15 31.9	-0.9
PXZ	Pawanui	1.88	162	⇑PN	Pn	05 15 32.4	-0.8
DVHZ	Dannevirke	2.05	179	⇑PN	Pn	05 15 33.8	-1.5
PRHZ	Porangahau	2.06	169	PN	Pn	05 15 34.2	-1.1
POWZ	Post Office Ro	2.16	187	PN	Pn	05 15 35.1	-1.5
BFZ	Birch Farm	2.44	178	PN	Pn	05 15 37.9	-2.0
MRZ	Mangatainoka R	2.45	190	⇑PN	Pn	05 15 38.0	-2.0
TIWZ	Tintock	2.54	184	PN	Pn	05 15 39.1	-2.0
OGWZ	Otaki Gorge	2.67	196	⇑PN	Pn	05 15 40.7	-2.0
HOWZ	Holdsworth Sta	2.69	190	PN	Pn	05 15 40.5	-2.5
KIW	Kapiti Island	2.78	199	PN	Pn	05 15 41.5	-2.5
TMWZ	Te Maipa	2.86	183	PN	Pn	05 15 42.5	-2.7
MTW	Mount Morrison	2.95	189	PN	Pn	05 15 43.3	-2.9
CAW	Cannon Point	2.97	196	⇓PN	Pn	05 15 43.9	-2.6
TRWZ	Traveller	3.17	186	PN	Pn	05 15 46.0	-3.0
MSWZ	Moikau Station	3.24	192	PN	Pn	05 15 46.7	-3.2
PLWZ	Palliser	3.39	191	PN	Pn	05 15 48.4	-3.4
TUWZ	Tuamarina	3.60	207	PN	Pn	05 15 51.5	-2.9
QRZ	Quartz Range	3.79	226	ePN	Pn	05 15 53.1	-3.9
BSWZ	Blackbirch Sta	3.87	206	PN	Pn	05 15 54.8	-3.2
LTZ	Lake Taylor	5.40	212	PN	Pn	05 16 13.7	-4.5
MQZ	McQueen's Vall	6.05	205	SN	Sn	05 17 24.7	-10

IDC 06 05:17:09.9±3.1**, 16°.92N×145°.43E, h0km, mb4.0**/8**, mb1 4.1**/8**, mb1mx3.8**/26**, mbtmp4.0**/8**, Error ellipse: s-maj=83.7km s-min=47.7km az=15.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	20.56	343	P	P	05 21 49.8	-0.5
	1.4nm,0.6s,baz=159,slow=9.5,SNR=4.5						
KSRS	Korea Array	25.62	326	P	P	05 22 40.8	-0.2
	1.9nm,0.5s,baz=145,slow=9.3,SNR=9.1						
SONM	Songino Array	44.38	323	P	P	05 25 22.4	+0.2
	1.3nm,0.6s,baz=135,slow=8.2,SNR=4.5						
MKAR	Makanchi Array	59.51	315	P	P	05 27 16.5	+1.5
	1.1nm,0.5s,baz=93,slow=8.0,SNR=12						
KURBB	Kurchatov Arra	62.47	319	P	P	05 27 34.9	-0.1
	2.6nm,0.7s,baz=97,slow=7.5,SNR=22						
YKA	Yellowknife Ar	79.67	28	P	P	05 29 20.6	+1.5
	0.2nm,0.4s,baz=288,slow=5.1,SNR=4.1						
ARCES	ARCESS Array B	84.09	342	P	P	05 29 40.8	-1.6
	2.3nm,0.8s,baz=80,slow=8.7,SNR=5.6						
FINES	FINESS Array B	88.38	335	P	P	05 30 01.8	-1.8
	1.2nm,0.5s,baz=64,slow=3.5,SNR=6.5						

JMA 06 05:45:07.9±0.1**, 27°.02N×130°.48E, h45km, M3.5, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JMZ	Minamidaito 2	1.37	151	P	Pn	05 45 31.0	+0.4
JMZ				S	Sn	05 45 48.0	+0.5
JTK	Tokunoshima	1.56	300	P	Pn	05 45 34.0	+0.8
JTK				S	Sn	05 45 52.4	+0.2
JAM	Amami Oshima	1.59	331	P	Pn	05 45 34.5	+0.9
JAM				eS	Sn	05 45 53.0	+0.1
JAMN	Amaminishikomi	1.68	317	eS	Sn	05 45 55.2	0.0
JOW	Kunigami	1.98	265	P	Pn	05 45 39.9	+1.0
JOW				S	Sn	05 46 03.0	+0.5
JIH	Iheya	2.24	271	P	Pn	05 45 44.0	+1.5
JIH				eS	Sn	05 46 09.3	+0.3
JAGN	Aguni-jima	2.92	262	S	Sn	05 46 26.1	+0.3
JKE	Kume jima 2	3.38	259	eS	Sn	05 46 37.1	+0.1

*ISCJB **06** 05:50:09.3±0.4, 51°.50N±0°.02×16°.13E±0°.03, h0km, mb3.5/1, Error ellipse: s-maj=3.1km s-min=2.8km az=30.8*
*WAR **06** 05:50:11.8, 51°.53N×16°.17E*
*IPEC **06** 05:50:11.4±0.3, 51°.51N×16°.24E, h0km, ML2.6/3, Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*
*CSEM **06** 05:50:12.0±0.3, 51°.45N×16°.10E, h2km, ML3.6/13, Error ellipse: s-maj=5.8km s-min=3.7km az=1.0*
*IDC **06** 05:50:12.8±0.7, 51°.46N×16°.04E, h0km, mb3.5/1, mb1 3.6/7, mb1mx3.3/26, mbtmp3.4/7, ML3.2/6, Error ellipse: s-maj=14.9km s-min=6.8km az=109.0*
*PRU **06** 05:50:13.3, 51°.42N×16°.07E, h0km*
*VIE **06** 05:50:14.0±0.4, 51°.30N×16°.08E, h0km, mb2.7/4, ML3.1/4, Error ellipse: s-maj=2.7km s-min=1.9km az=19.0 69 km WNW of Wroclaw Suspected Mining induced.*

ISC 06 05:50:10.2±0.6**, 51°.55N**±0°.03×**16°.12E**±0°.02**, h0km, n44, σ1s19**/87**, 3C-1D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	171	ePg	Pg	05 50 24.7	+0.8
KSP				eSg	Sg	05 50 33.2	+0.1
UPC	Upice	1.04	184	ePG	Pg	05 50 30.8	+0.6
UPC				eSG	Sg	05 50 43.4	-0.3
	comp=Z,114nm,0.4s						
UPC	Upice	1.04	184	Pg	Pg	05 50 30.8	+0.6
UPC				Sg	Sg	05 50 43.4	-0.3
	114nm,0.4s						
DPC	Dobruska-Polom	1.21	174	ePG	Pg	05 50 33.5	+0.2
DPC				eSG	Sg	05 50 48.0	-0.9
	comp=Z,66nm,0.4s						
DPC	Dobruska-Polom	1.21	174	Pg	Pg	05 50 33.5	+0.2
DPC				Sg	Sg	05 50 48.0	-0.9
	66nm,0.4s						
PVCC	Panska Ves	1.41	224	ePG	Pb	05 50 38.0	+0.6
PVCC				eSG	Sg	05 50 55.8	+0.2
	comp=Z,197nm,0.2s						
PVCC	Panska Ves	1.41	224	Pg	Pb	05 50 38.0	+0.6
PVCC				Sg	Sg	05 50 55.8	+0.2
	197nm,0.2s						
BRG	Berggiesshubel	1.52	245	PN	Pn	05 50 38.8	+0.1
BRG				PG	Pg	05 50 40.4	+1.0
BRG				SG	Sn	05 51 00.1	+0.9
	112nm,0.4s						
KRLC	Kraliky	1.53	164	ePG	Pb	05 50 39.5	0.0
KRLC				eSG	Sb	05 50 58.2	-1.3
KRLC	Kraliky	1.53	164	Pg	Pb	05 50 39.5	0.0
KRLC				Sg	Sb	05 50 58.2	-1.3
PRU	Pruhonice	1.85	213	ePG	Pb	05 50 45.5	+0.6
PRU				eSG	Sb	05 51 08.3	-0.4
	comp=Z,32nm,0.4s						
PRU	Pruhonice	1.85	213	Pg	Pb	05 50 45.5	+0.6
PRU				Sg	Sb	05 51 08.3	-0.4
	32nm,0.4s						
CLL	Collm	1.96	264	ePn	Pn	05 50 45.0	+0.2
CLL				ePg	Pg	05 50 48.0	+0.1
CLL				e		05 50 51.0	
CLL				i		05 50 52.7	
CLL				eSg	Sg	05 51 14.0	+0.7
	comp=Z,29nm,0.9s						
MORC	Moravsky Berou	1.99	152	ePn	Pn	05 50 45.3	+0.1
MORC				eSg	Sn	05 51 11.6	+0.8
	comp=Z,28nm,0.3s,baz=335						
OKC	Ostrava-Krasne	2.14	142	ePG	Pb	05 50 50.9	+1.0
OKC				eSG	Sb	05 51 18.1	+1.1
	comp=Z,64nm,0.6s						
OKC	Ostrava-Krasne	2.14	142	Pg	Pb	05 50 50.9	+1.0
OKC				Sg	Sb	05 51 18.1	+1.1
	comp=Z,64nm,0.6s						
VRAC	Vranov	2.26	172	Pn	Pb	05 50 50.7	-1.3
	comp=Z,6.4nm,0.3s,baz=339,slow=15,SNR=9.5						
VRAC				Lg	Lg	05 51 20.5	
	comp=Z,10nm,0.3s,baz=264,slow=22,SNR=12						
VRAC	Vranov	2.26	172	ePn	Pn	05 50 49.6	+0.7
	baz=354						
VRAC				eSg	Sb	05 51 20.7	+0.3
	comp=Z,32nm,0.4s,baz=354						
TREC	Trest	2.29	190	ePN	Pn	05 50 50.4	+1.1
TREC				ePG	Pb	05 50 53.0	+0.6
TREC				eSG	Sg	05 51 22.8	-0.9
	comp=Z,43nm,0.3s						
TREC	Trest	2.29	190	Pn	Pn	05 50 50.4	+1.1
TREC	Trest	2.29	190	Pg	Pb	05 50 53.0	+0.6
TREC				Sg	Sg	05 51 22.8	-0.9
	comp=Z,43nm,0.3s						
KRUC	Moravsky	2.49	176	ePn	Pn	05 50 52.8	+0.8
	baz=358						
KRUC				eSg	Sb	05 51 28.2	+1.1
	comp=Z,36nm,0.5s,baz=358						
NKC	Novy Kostel	2.67	242	ePN	Pn	05 50 55.9	+1.4
NKC				ePG	Pg	05 51 00.7	-0.7
NKC				eSG	Sg	05 51 36.8	+0.8
	comp=Z,66nm,0.3s						
NKC	Novy Kostel	2.67	242	Pn	Pn	05 50 55.9	+1.4
OJC	Ojcow	2.68	118	ePn	Pn	05 50 54.7	+0.1
OJC				ePg	Pg	05 51 03.6	+2.0
OJC				eSn	Sn	05 51 25.0	-2.8
OJC				eSg	Sg	05 51 38.8	+2.4
OJC	Ojcow	2.68	118	ePn	Pn	05 50 54.7	+0.1
KHC	Kasperske Hory	2.91	215	ePN	Pn	05 50 59.1	+1.2
KHC				ePG	Pb	05 51 04.5	+1.4
KHC				eSN	Sn	05 51 32.9	-0.7
KHC				eSG	Sg	05 51 43.2	-0.6
	comp=Z,17nm,0.4s						
KHC	Kasperske Hory	2.91	215	Pn	Pn	05 50 59.1	+1.2
KHC	Kasperske Hory	2.91	215	Pg	Pb	05 51 04.5	+1.4
KHC				Sn	Sn	05 51 32.9	-0.7
KHC				Sg	Sg	05 51 43.2	-0.6
	comp=Z,17nm,0.4s						
GERES	GERESS Array B	3.12	211	Pn	Pn	05 51 02.1	+1.4
	comp=Z,1.9nm,0.3s,baz=25,slow=12,SNR=25						
GERES				Pg	Pb	05 51 07.7	+1.2
	comp=Z,5.5nm,0.3s,baz=28,slow=17,SNR=34						
GERES				Sn	Sn	05 51 38.5	-0.2
	comp=Z,4.7nm,0.3s,baz=38,slow=29,SNR=8.1						
GERES				Lg	Lg	05 51 48.8	
	comp=Z,6.2nm,0.3s,baz=35,slow=28,SNR=8.0						
NIE	Niedzica	3.42	127	eP	Pg	05 51 15.8	0.0
NIE				eS	Sg	05 51 59.8	-0.3
VYHS	Vyhne	3.52	149	ePG	Pg	05 51 17.0	-0.7
VYHS				eSG	Sb	05 52 00.1	+3.4
CONA	Conrad Observa	3.63	183	⇑iPn	Pn	05 51 08.8	+1.1
CONA				⇑iSg	Sg	05 52 06.0	-0.7
	comp=Z,25nm,0.4s						
CONA	Conrad Observa	3.63	183	Pn	Pn	05 51 08.8	+1.1
CONA				Sg	Sg	05 52 06.0	-0.7
	comp=Z,25nm,0.4s						
BSD	Bornholm Skovb	3.65	349	i P	Pn	05 51 09.1	+1.3
BSD				i S	Sn	05 51 51.8	+0.3
MOA	Molln	3.89	199	⇓iPn	Pn	05 51 12.1	+0.8
MOA				⇑iSg	Sg	05 52 14.6	-0.5
	comp=Z,32nm,0.7s						
MOA	Molln	3.89	199	Pn	Pn	05 51 12.1	+0.8
MOA				Sg	Sg	05 52 14.6	-0.5
	comp=Z,32nm,0.7s						
CRVS	Cervenica-Dubn	4.33	126	ePG	Pg	05 51 34.9	+1.7
CRVS				eSG	Sg	05 52 36.7	+7.4
AKASG	Malin Array Be	8.29	91	Pn	Pn	05 52 11.2	-0.4
	comp=Z,1.0nm,0.3s,baz=279,slow=12,SNR=4.0						
HFS	Hagfors	8.71	352	Pn	Pn	05 52 18.9	+1.5
	comp=Z,0.2nm,0.3s,baz=174,slow=15,SNR=5.3						
FINES	FINESS Array B	11.33	25	Pn	Pn	05 52 52.7	-0.5
	comp=Z,0.3nm,0.3s,baz=205,slow=12,SNR=7.6						
FINES				Sn	Sn	05 54 55.6	-4.7
	comp=Z,0.3nm,0.3s,baz=213,slow=21,SNR=4.1						
EKA	Eskdalemuir Ar	12.09	296	Pn	Pn	05 53 01.9	-1.8
	baz=100,slow=14,SNR=2.0						
ARCES	ARCESS Array B	18.59	10	Pn	P	05 54 26.4	-2.1
	comp=Z,0.4nm,0.3s,baz=196,slow=12,SNR=12						
YKA	Yellowknife Ar	59.83	336	P	P	06 00 18.8	+2.0
	comp=Z,0.3nm,0.5s,baz=29,slow=6.8,SNR=6.7						

IDC 06 05:57:41.0±1.4**, 15°.06S×166°.33E, h0km, mb4.1**/5**, mb1 4.4**/8**, mb1mx4.0**/22**, mbtmp4.3**/8**, ML4.3**/3**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.8**/39**, Error ellipse: s-maj=35.5km s-min=25.2km az=126.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.98	179	Pn	Pn	05 59 25.9	+1.2
	2.5nm,0.3s,baz=113,slow=8.7,SNR=28						
DZM				Sn	Sn	06 00 40.2	-4.7
	1.7nm,0.3s,baz=319,slow=19,SNR=3.6						
HNR	Honiara	8.37	311	Pn	Pn	05 59 44.7	+1.0
	11nm,0.3s,baz=184,slow=14,SNR=2.4						
CTA	Charters Tower	19.77	252	P	P	06 02 13.5	+0.5
	0.5nm,0.3s,baz=48,slow=12,SNR=4.1						
STKA	Stephens Creek	28.09	229	P	P	06 03 34.0	-0.5
	1.1nm,0.3s,baz=90,slow=10,SNR=3.0						
WRA	Warramunga Arr	30.86	256	P	P	06 03 58.1	-1.2
	0.9nm,0.5s,baz=86,slow=9.3,SNR=11						
ASAR	Alice Springs	31.71	249	P	P	06 04 06.0	-0.7
	3.2nm,0.6s,baz=71,slow=9.8,SNR=57						
KAPI	Kappang	46.84	277	LR	LR	06 26 09.5	
	comp=Z,57nm,19.6s,baz=38,slow=36						
KSRS	Korea Array	63.50	326	LR	LR	06 33 46.1	
	comp=Z,20nm,18.9s,baz=170,slow=34						
CMAR	Chiang Mai Arr	74.25	294	P	P	06 09 22.1	+1.6
	0.4nm,0.4s,baz=125,slow=4.8,SNR=4.4						
ILAR	Eielson Array	87.12	18	P	P	06 10 26.5	-1.9
	0.8nm,0.8s,baz=244,slow=4.7,SNR=12						
ARCES	ARCESS Array B	120.33	345	PKP	PKPdf	06 16 35.7	+2.0
	2.4nm,0.8s,baz=48,slow=1.8,SNR=6.6						

*IDC **06** 06:04:23.5±3.8, 19°.82S×170°.04E, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.9/18, mbtmp3.9/6, ML3.2/1, MS3.7/7, Ms1 3.7/7, ms1mx3.2/40, Error ellipse: s-maj=133.4km s-min=26.3km az=140.0*
*ISCJB **06** 06:04:27.6±2.1, 19°.6S±0°.3×169°.8E±0°.4, h33km, mb4.0/5, MS3.9/5, Error ellipse: s-maj=68.9km s-min=7.5km*

az=40.7
*NOU **06** 06:04:38.5±1.6,23.°06S×170.°68E,h30km,MD3.0,ML2.9*
ISC 06 06:04:29.1±2.3**,19.°7S**±0.°4×**170.°0E**±0.°4**,h35km,n18, σ1.s34**/13**,mb4.0**/5**,MS4.1**/5**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	3.77	229	eS	Sn	06 06 09.6	+1.7
PLUM	Mont Dore	4.02	230	eS	Sn	06 06 15.4	+1.4
DZM	Mont Dzumac	4.04	234	eP	Pn	06 05 27.3	-1.3
DZM				eS	Sn	06 06 13.4	-1.3
DZM	Mont Dzumac	4.04	234	Pn	Pn	06 05 27.9	-0.7
	1.6nm,0.3s,baz=76,slow=19,SNR=20						
DZM				Sn	Sn	06 06 15.3	+0.6
	21nm,0.3s,baz=147,slow=22,SNR=14						
DZM				LR	LR	06 06 52.5	
	comp=Z,525nm,20.5s,baz=19,slow=37						
MVNO	Noumea	4.16	231	eS	Sn	06 06 18.4	+0.9
NOUC	Port Laguerre	4.16	234	eP	Pn	06 05 40.3	+10
NOUC				eS	Sn	06 06 27.3	+10
NOUC				AMP		06 06 28.6	
	comp=Z,54nm,0.8s						
AFI	Afiamalu	18.41	75	LR	LR	06 14 19.2	
	comp=Z,184nm,20.7s,baz=282,slow=32						
WRA	Warramunga Arr	33.46	263	P	P	06 11 03.5	-1.7
	comp=Z,1.1nm,0.9s,baz=95,slow=8.4,SNR=4.7						
ASAR	Alice Springs	33.67	257	P	P	06 11 06.6	-0.4
	comp=Z,3.4nm,0.7s,baz=82,slow=9.1,SNR=28						
GUMO	Guam	41.27	321	LR	LR	06 27 50.3	
	comp=Z,27nm,20.8s,baz=261,slow=34						
QSPA	South Pole Qui	70.36	180	LR	LR	06 40 08.4	
	comp=Z,290nm,20.7s,baz=166,slow=30						
PETK	Petropavlovsk-	73.27	352	LR	LR	06 44 25.3	
	comp=Z,19nm,18.4s,baz=278,slow=33						
CMAR	Chiang Mai Arr	79.30	294	P	P	06 16 33.5	+1.9
	comp=Z,0.6nm,0.3s,baz=127,slow=2.9,SNR=4.7						
YBH	Yreka Blue Hor	87.16	44	LR	LR	06 50 21.4	
	comp=Z,93nm,19.3s,baz=172,slow=32						
SONM	Songino Array	87.98	323	P	P	06 17 16.3	+0.7
	comp=Z,1.3nm,0.9s,baz=134,slow=6.2,SNR=5.8						
ILAR	Eielson Array	90.47	17	P	P	06 17 25.9	-0.8
	comp=Z,0.5nm,1.0s,baz=236,slow=6.4,SNR=4.4						
ANMO	Albuquerque	96.01	55	LR	LR	06 51 59.4	
	comp=Z,63nm,19.2s,baz=336,slow=30						
GERES	GERESS Array B	145.20	332	PKPbc	PKPdf	06 24 03.3	+0.2
	comp=Z,0.5nm,0.4s,baz=68,slow=4.7,SNR=4.8						

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*ISK **06** 06:04:49.7,35.°89N×31.°89E,h82km,MD3.1*
*ISCJB **06** 06:04:50.6±0.9,35.°78N±0.°07×31.°81E±0.°09,h73km,Error ellipse: s-maj=11.4km s-min=7.5km az=138.8*
*CSEM **06** 06:04:51.1±0.5,35.°75N×31.°77E,h30km,MD3.1,Error ellipse: s-maj=15.9km s-min=10.5km az=41.0*
*DDA **06** 06:04:55.0,36.°29N×31.°70E,h7km,MD3.1*
ISC 06 06:04:51.0±1.4**,35.°79N**±0.°06×**31.°82E**±0.°06**,h73km,n16, σ1.s33**/22**,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	Gazipasa	0.59	42	iP	Pn	06 05 04.5	-0.5
GAZI				iS	Sn	06 05 12.8	-2.6
GAZI	Gazipasa	0.59	42	iP	Pn	06 05 04.5	-0.5
GAZI				iS	Sn	06 05 12.8	-2.6
LEF	Lefka	1.10	127	ePN	Pn	06 05 11.8	+1.0
LEF				eSN	Sn	06 05 26.1	+0.4
LEF	Lefka	1.10	127	ePn	Pn	06 05 11.8	+1.0
LEF				eSn	Sn	06 05 26.1	+0.4
ERMK	Ermenek	1.22	46	iP	Pn	06 05 14.2	+1.6
ERMK				iS	Sn	06 05 30.6	+1.8
ERMK	Ermenek	1.22	46	iP	Pn	06 05 14.2	+1.6
ERMK				iS	Sn	06 05 30.6	+1.8
CSS	Prodhromos	1.48	124	ePN	Pn	06 05 15.4	-0.4
CSS	Prodhromos	1.48	124	ePn	Pn	06 05 15.4	-0.4
LFK	Lefkose	1.48	110	ePN	Pn	06 05 14.9	-0.9
LFK	Lefkose	1.48	110	ePn	Pn	06 05 14.9	-0.9
KORT	Korkueli	1.69	316	eP	Pn	06 05 19.9	+1.2
KORT	Korkueli	1.69	316	eP	Pn	06 05 19.9	+1.2
ELL	Elmali	1.82	302	ePN	Pn	06 05 20.0	-0.3
ELL	Elmali	1.82	302	ePn	Pn	06 05 20.0	-0.3
KONT	Konya--Tatoy	2.19	11	ePN	Pn	06 05 24.5	-0.8
KONT	Konya--Tatoy	2.19	11	ePn	Pn	06 05 24.5	-0.8

IDC 06 06:05:25.1±7.4**,1.°76N×98.°55E,h0km,mb3.6**/4**,mb1 3.7**/4**, mb1mx3.4**/25**,mbtmp3.6**/4**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.6**/37**,Error ellipse: s-maj=379.6km s-min=23.3km az=56.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.20	123	P	P	06 13 12.1	+0.2
	0.3nm,0.5s,baz=303,slow=8.8,SNR=3.3						
ASAR	Alice Springs	42.67	128	P	P	06 13 23.5	-0.5
	0.4nm,0.8s,baz=307,slow=7.2,SNR=2.9						
JNU	Nakatsue	43.51	41	LR	LR	06 32 34.7	
	comp=Z,37nm,19.9s,baz=86,slow=38						
MKAR	Makanchi Array	47.04	345	P	P	06 13 57.8	-0.6
	0.5nm,0.5s,baz=156,slow=7.4,SNR=5.1						
ZALV	Zalesovo Beam	53.23	350	P	P	06 14 45.6	+0.4
	1.5nm,0.8s,baz=178,slow=8.1,SNR=6.2						

IDC 06 06:14:59.3±4.0**,30.°03S×138.°79E,h0km,mb1 3.0**/3**, mb1mx2.9**/16**,mbtmp2.7**/3**,ML2.3**/3**,Error ellipse: s-maj=162.2km s-min=16.2km az=46.0,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.03	128	Pn	Pn	06 15 49.3	+0.7
	0.1nm,0.3s,baz=299,slow=10,SNR=3.6						
STKA				Pg	Pb	06 15 55.2	+1.1
	0.7nm,0.3s,baz=302,slow=13,SNR=12						
STKA				Lg	Lg	06 16 33.9	
	1.0nm,0.3s,baz=185,slow=24,SNR=4.5						
ASAR	Alice Springs	7.70	324	Pn	Pn	06 16 51.5	-1.3
	0.0nm,0.3s,baz=153,slow=13,SNR=1.9						
ASAR				Sn	Sn	06 18 20.1	-0.7
	0.1nm,0.3s,baz=154,slow=22,SNR=3.0						
WRA	Warramunga Arr	10.83	337	Pn	Pn	06 17 36.9	+1.2
	0.0nm,0.3s,baz=153,slow=11,SNR=2.8						

AUST 06 06:23:01.0,2.°49S×129.°01E,h35km,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	1.44	214	S	Sn	06 23 39.5	-2.8
	baz=1.4,SNR=5.9						
FAKI	Fak Fak	3.27	98	P	Pn	06 23 49.3	-0.5
	baz=3.3,SNR=21						
LUWI	Luwuk	6.39	283	P	Pn	06 24 36.9	+4.1
	baz=6.4,SNR=3.6						
MTN	Manton Dam	10.50	169	P	Pn	06 25 33.2	+4.1
	baz=11,SNR=6.6						
MTN				S	Sn	06 27 14.4	-11
	baz=11,SNR=3.5						
KDU	Kakadu	10.70	161	P	Pn	06 25 32.4	+0.6
	baz=11,SNR=5.0						
PALU	Palau	11.19	29	P	Pn	06 25 34.4	-4.2
	baz=11,SNR=4.4						
PALU				S	Sn	06 27 56.7	+14
	baz=11,SNR=5.5						

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*IDC **06** 06:35:38.2±1.7,59.°83N×153.°70W,h130km±30km,mb3.4/2, mb1 3.2/5,mb1mx3.0/27,mbtmp3.1/5,MS3.0/1,Ms1 3.0/1, ms1mx2.2/35,Error ellipse: s-maj=34.3km s-min=21.1km az=115.0*
*ISCJB **06** 06:35:38.0±0.4,59.°84N±0.°03×153.°60W±0.°07, h149km±4km,mb3.7/2,Error ellipse: s-maj=6.7km s-min=4.3km az=36.0*
*NEIC **06** 06:35:40.1,59.°82N×153.°58W,h140km,MG2.9(AEIC), After AEIC.*
ISC 06 06:35:39.0±0.9**,59.°84N**±0.°04×**153.°62W**±0.°04**, h145km**±6km**,n68,σ0.s77**/76**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDB	Pedro Bay	0.29	261	P	Pn	06 35 58.6	-0.4
ILS	Iliamna Low So	0.31	66	P	Pn	06 35 59.0	-0.1
INE	Iliamna NE	0.36	51	P	Pn	06 35 59.3	-0.1
AUL	Augustine Lava	0.46	168	P	Pn	06 35 60.0	+0.3
AUL				S	Sn	06 36 16.3	+1.0
AUP	Augustine Pinn	0.48	168	P	Pn	06 36 00.7	+0.8
RSO	Redoubt South	0.77	34	Pn	Pn	06 36 01.3	-0.4
DFR	Drift River	0.89	31	P	Pn	06 36 02.4	-0.1
FONW	Fourpeaked Sta	1.01	189	P	Pn	06 36 03.5	0.0
HOM	Homer	1.02	99	P	Pn	06 36 03.9	+0.4
FOSS	Fourpeaked Sta	1.04	182	P	Pn	06 36 03.6	-0.1
BRLK	Bradley Lake	1.39	92	P	Pn	06 36 07.3	+0.2
CKL	Chakachamna La	1.51	24	P	Pn	06 36 08.6	+0.2
BGL	Barrier Glacie	1.56	22	P	Pn	06 36 09.5	+0.6
SPU	Mount Spurr	1.56	29	P	Pn	06 36 08.9	0.0
SVW2	Sparrevohn	1.59	323	P	Pn	06 36 08.6	-0.6
KAKN	Katmai Knife C	1.71	206	P	Pn	06 36 10.5	-0.1
KAKN				S	Sn	06 36 33.8	-0.9
KABU	Katmai Buttres	1.79	209	P	Pn	06 36 11.4	-0.1
KABU				S	Sn	06 36 36.2	-0.1
KCE	Katmai Mt Cerb	1.79	207	P	Pn	06 36 12.0	+0.5
SLKM	Skilak Lake	1.83	67	P	Pn	06 36 12.1	+0.3
SLKM				S	Sn	06 36 35.7	-1.3
KABR	Katmai Barrier	1.85	203	P	Pn	06 36 12.0	-0.1
STLK	Strandline Lak	1.89	27	P	Pn	06 36 12.8	+0.3
ANCK	Angle Creek	1.91	211	P	Pn	06 36 12.9	+0.1
CAHL	Cahill	1.99	207	P	Pn	06 36 14.1	+0.3
SEW	Seward	2.12	81	P	Pn	06 36 15.3	+0.1
SEW				S	Sn	06 36 42.0	-0.9
KDAK	Kodiak Island	2.13	165	P	Pn	06 36 14.3	-1.1
KDAK				S	Sn	06 36 41.3	-1.8
KDAK				S		06 36 42.5	
KDAK	Kodiak Island	2.13	165	P	Pn	06 36 14.3	-1.1
	6.1nm,0.3s,baz=9.9,slow=9.3,SNR=71						
KDAK				S	Sn	06 36 41.3	-1.8
	36nm,0.3s,baz=113,slow=23,SNR=43						
OHAK	Old Harbor	2.63	176	P	Pn	06 36 20.0	-1.4
OHAK				S	Sn	06 36 52.1	-2.0
PMR	Palmer	2.83	49	P	Pn	06 36 22.8	-1.1
PMR				S	Sn	06 36 56.4	-2.1
CUT	Chulitna	3.05	31	P	Pn	06 36 26.9	+0.2
PPLA	Purkeypile	3.15	12	P	Pn	06 36 28.6	+0.4
SML	Sawmill	3.26	50	P	Pn	06 36 28.5	-1.0
TT01	Tatalina	3.29	341	P	Pn	06 36 29.0	-0.8
MID	Middleton Isla	3.72	93	P	Pn	06 36 35.5	+0.1
VLZ	Valdez	3.83	67	P	Pn	06 36 36.3	-0.6
TRF	Thorofare Moun	3.96	22	P	Pn	06 36 37.9	-0.8
EYAK	Cordova Ski Ar	4.00	76	P	Pn	06 36 38.8	-0.2
DIV	Divide	4.10	68	P	Pn	06 36 40.7	+0.3
RND	Reindeer	4.25	30	P	Pn	06 36 41.8	-0.6
SGAM	Sherman Glacie	4.26	77	P	Pn	06 36 42.4	-0.1
DHY	Denali Highway	4.42	40	P	Pn	06 36 43.9	-0.8
MCK	McKinley	4.50	28	P	Pn	06 36 45.6	0.0
GOAT	Goat Mountain	4.50	77	P	Pn	06 36 45.9	+0.2
RAGM	Ragged Mountai	4.51	79	P	Pn	06 36 46.5	+0.7
BMRM	Bremner River	4.62	72	P	Pn	06 36 47.3	+0.1
KAIM	Kayak Island	4.64	85	P	Pn	06 36 47.8	+0.3
WASW	Wrangell South	5.07	61	P	Pn	06 36 53.9	+0.5
VRDI	Verde Repeater	5.21	70	P	Pn	06 36 55.6	+0.3
WRH	Wood River Hil	5.33	27	P	Pn	06 36 55.5	-1.0
DDM	Donnelly Dome	5.41	40	P	Pn	06 36 57.6	-0.1
CCB	Clear Creek Bu	5.54	27	P	Pn	06 36 58.4	-1.0
HDA	Harding Lake	5.55	31	P	Pn	06 36 58.9	-0.6
KIAG	Kiagna River	5.69	74	P	Pn	06 37 01.9	+0.3
BALM	Baldy	5.71	73	P	Pn	06 37 02.1	+0.3
ILAR	Eielson Array	5.86	29	P	Pn	06 37 02.6	-1.1
ILAR				S	Sn	06 38 03.8	-6.1
ILAR	Eielson Array	5.86	29	P	Pn	06 37 02.6	-1.1
	0.4nm,0.3s,baz=218,slow=12,SNR=40						
ILAR				S	Sn	06 38 03.8	-6.1
	0.3nm,0.3s,baz=207,slow=16,SNR=5.8						
IL1	Eielson Array	5.86	29	P	Pn	06 37 02.8	-0.9
BARN	Barnard Glacie	6.05	73	P	Pn	06 37 06.3	0.0
IM3	Indian Mountai	6.17	360	P	Pn	06 37 07.7	-0.1
SAMH	Samovar Hills	6.45	82	P	Pn	06 37 12.5	+0.8
BCA3	Beaver Creek A	6.53	55	P	Pn	06 37 12.3	-0.4
PNL	Peninsula	7.19	85	P	Pn	06 37 22.0	+0.5
YKA	Yellowknife Ar	18.81	65	P	P	06 39 47.9	+0.8
YKA	Yellowknife Ar	18.81	65	P	P	06 39 47.8	+0.8
	0.1nm,0.3s,baz=275,slow=9.9,SNR=17						
NEW	Newport	24.02	102	LR	LR	06 49 22.3	
	comp=Z,34nm,19.9s,baz=351,slow=34						
SONM	Songino Array	54.63	306	P	P	06 44 53.0	+0.7
SONM	Songino Array	54.63	306	P	P	06 44 53.0	+0.7
	0.6nm,0.7s,baz=35,slow=5.5,SNR=3.7						
ZALV	Zalesovo Beam	57.32	323	P	P	06 45 11.6	+0.4
ZALV	Zalesovo Beam	57.32	323	P	P	06 45 11.6	+0.4
	0.8nm,0.4s,baz=31,slow=9.1,SNR=4.4						

IDC 06 06:38:30.0±1.7**,17.°13S×173.°13W,h0km,mb3.8**/7**, mb1 4.1**/8**,mb1mx3.9**/20**,mbtmp3.8**/8**,ML1.7**/1**,MS3.5**/2**, Ms1 3.5**/2**,ms1mx2.8**/35**,Error ellipse: s-maj=91.6km s-min=19.5km az=142.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.45	22	Pn	Pn	06 39 23.5	-1.6
	4.5nm,0.3s,baz=115,slow=20,SNR=9.8						
AFI				Sn	Sn	06 40 03.4	-3.5
	16nm,0.3s,baz=11,slow=23,SNR=8.9						
RAR	Rarotonga	13.26	110	LR	LR	06 45 04.1	
	comp=Z,138nm,19.0s,baz=108,slow=30						
STKA	Stephens Creek	43.42	242	P	P	06 46 33.9	-0.9
	2.0nm,0.9s,baz=101,slow=9.3,SNR=4.3						
WRA	Warramunga Arr	49.72	258	P	P	06 47 24.3	-0.1
	1.1nm,0.5s,baz=96,slow=7.8,SNR=12						
ASAR	Alice Springs	49.84	253	P	P	06 47 25.0	-0.3
	3.6nm,0.5s,baz=89,slow=8.6,SNR=88						
FX1	Attu Island--F	70.72	351	LR	LR	07 16 59.3	
	comp=Z,49nm,18.1s,baz=269,slow=33						
NVAR	Mina Array Bea	75.44	42	P	P	06 50 16.1	-0.1
	0.5nm,0.7s,baz=239,slow=8.5,SNR=6.6						
PDAR	Pinedale Array	83.37	42	P	P	06 50 58.6	-0.8
	0.5nm,0.9s,baz=129,slow=4.0,SNR=4.7						
ILAR	Eielson Array	84.08	11	P	P	06 51 02.2	0.0
	0.2nm,0.6s,baz=224,slow=5.0,SNR=6.6						
YKA	Yellowknife Ar	91.57	23	P	P	06 51 39.8	+1.5
	0.1nm,0.6s,baz=238,slow=4.8,SNR=3.8						
BRTR	Keskin Array B	147.64	320	PKPbc	PKPbc	06 58 17.2	+0.3
	1.8nm,1.1s,baz=67,slow=3.7,SNR=3.1						

IDC 06 06:45:36.3±1.6**,12.°20N×86.°29W,h0km,mb3.7**/5**, mb1 4.1**/5**,mb1mx3.7**/22**,mbtmp3.7**/5**,Error ellipse: s-maj=132.5km s-min=21.7km az=54.0,Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	23.50	319	P	P	06 50 48.1	+0.1
	1.8nm,0.8s,baz=144,slow=9.5,SNR=24						
PDAR	Pinedale Array	36.53	331	P	P	06 52 44.8	+0.8
	0.4nm,0.5s,baz=134,slow=14,SNR=4.7						
SIV	San Ignacio	37.51	138	P	P	06 52 52.3	0.0
	4.7nm,0.7s,baz=321,slow=9.4,SNR=17						
YKA	Yellowknife Ar	54.15	344	P	P	06 55 02.8	-0.2
	0.7nm,0.7s,baz=139,slow=7.5,SNR=18						
ILAR	Eielson Array	66.70	336	P	P	06 56 28.4	-0.5
	0.2nm,0.4s,baz=119,slow=5.6,SNR=3.8						

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*NSSC **06** 06:49:05.7±2.0,34.°10N×35.°61E,h14km±9km,MD1.5, ML3.4*
*ISCJB **06** 06:49:07.2±0.3,34.°10N±0.°02×35.°66E±0.°03,h28km±3km, Error ellipse: s-maj=3.7km s-min=2.6km az=12.0*
*CSEM **06** 06:49:07.4±0.1,34.°09N×35.°69E,h20km,Mw3.1,Error ellipse: s-maj=3.4km s-min=2.2km az=96.0*
*HLW **06** 06:49:08.8,34.°12N×35.°64E,h20km±27km,Md0.0,Ml3.1*
*GRAL **06** 06:49:08.4±0.2,34.°08N×35.°73E,h27km±1km,MD4.1*
*NIC **06** 06:49:09.7±0.2,34.°08N×35.°61E,h25km,ML3.3,MW3.2*
ISC 06 06:49:07.9±0.8**,34.°07N**±0.°02×**35.°72E**±0.°02**,h29km**±5km**, n89,σ0.s90**/127**,Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.17	198	eP	Pb	06 49 13.9	0.0
BHL				eS	Sb	06 49 17.7	-0.3
BHL	Bhannes	0.17	198	eP	Pb	06 49 13.9	0.0
BHL				eS	Sb	06 49 17.7	-0.3
BEYL	Beirut	0.27	223	eP	Pb	06 49 14.8	-0.1
BEYL	Beirut	0.27	223	eP	Pb	06 49 14.8	-0.1
HWQ	Hawqa	0.28	43	eP	Pb	06 49 14.8	-0.3
HWQ				eS	Sb	06 49 19.5	-0.6
HWQ	Hawqa	0.28	43	eP	Pb	06 49 14.8	-0.3
HWQ				eS	Sb	06 49 19.5	-0.6
RCY	Rachaya	0.58	170	eP	Pb	06 49 19.4	-0.3
RCY				eS	Sb	06 49 27.4	-0.4
RCY	Rachaya	0.58	170	eP	Pb	06 49 19.4	-0.3
RCY				eS	Sb	06 49 27.4	-0.4
BRBR	Barbar	0.69	164	eP	Pb	06 49 21.3	-0.2
BRBR				eS	Sn	06 49 31.2	-0.4
BRBR				AML	AML	06 49 32.7	
	comp=N,1μm,0.2s						
BRBR				AML	AML	06 49 33.6	
	comp=E,1μm,0.4s						
BRBR	Barbar	0.69	164	eP	Pb	06 49 21.3	-0.2
	SNR=66						
BRBR				eS	Sn	06 49 31.2	-0.4
	comp=E,1μm,0.4s,SNR=62						
QASN	Qassioun	0.71	139	eP	Pb	06 49 19.6	-2.2
QASN				eS	Sb	06 49 30.6	-0.7
QASN				AML	AML	06 49 31.9	
	comp=E,3μm,0.5s						
QASN				AML	AML	06 49 33.5	
	comp=N,2μm,0.7s						
QASN	Qassioun	0.71	139	eP	Pb	06 49 19.6	-2.2
	SNR=66						
QASN				eS	Sb	06 49 30.6	-0.7
	comp=N,2μm,0.7s,SNR=62						
HAWK	Haweek	0.72	52	eP	Pb	06 49 21.1	-1.0
HAWK				eS	Sb	06 49 31.4	-0.3
HAWK				AML	AML	06 49 32.6	
	comp=N,2μm,0.4s						
HAWK				AML	AML	06 49 34.5	
	comp=E,964nm,0.2s						
HAWK	Haweek	0.72	52	eP	Pb	06 49 21.1	-1.0
	SNR=66						
HAWK				eS	Sb	06 49 31.4	-0.3
	comp=E,964nm,0.2s,SNR=62						
KSDI	Kefar Szold	0.88	183	Pg	Pn	06 49 23.8	-0.5
KSDI				Sg	Sn	06 49 36.2	+0.2
BIDA	Albida	1.06	28	eP	Pn	06 49 26.5	-0.4
BIDA				eS	Sn	06 49 40.6	-0.2
BIDA				AML	AML	06 49 42.2	
	comp=N,6μm,0.3s						
BIDA				AML	AML	06 49 42.5	
	comp=E,5μm,0.6s						
BIDA	Albida	1.06	28	eP	Pn	06 49 26.5	-0.4
	SNR=66						
BIDA				eS	Sn	06 49 40.6	-0.2
	comp=E,2μm,0.3s,SNR=62						
MMC7	Mount Meron ar	1.08	195	Pg	Pn	06 49 27.3	+0.2
HNTI	Hanita	1.09	205	Pg	Pb	06 49 27.5	-0.6
HNTI				Sg	Sb	06 49 42.8	+0.9
MMA0	Mount Meron ar	1.09	194	Pg	Pn	06 49 27.3	+0.1
KSHT	Keshet	1.09	176	Pg	Pb	06 49 27.7	-0.5
RABH	Abou Rabah	1.28	73	eP	Pn	06 49 30.4	+0.5
RABH				eS	Sb	06 49 47.6	0.0
RABH				AML	AML	06 49 48.7	
	comp=N,874nm,0.5s						
RABH				AML	AML	06 49 49.4	
	comp=E,2μm,0.3s						
BLGI	Bet Lehem HaGe	1.41	198	Pn	Pn	06 49 32.1	+0.6
TCHB	Talchebab	1.41	171	eP	Pn	06 49 30.9	-0.8
TCHB				eS	Sn	06 49 50.0	+0.7
TCHB				AML	AML	06 49 51.3	
	comp=N,2μm,0.7s						
TCHB				AML	AML	06 49 58.8	
	comp=E,624nm,0.6s						
TCHB	Talchebab	1.41	171	eP	Pn	06 49 30.9	-0.8
	SNR=66						
TCHB				eS	Sn	06 49 50.0	+0.7
	comp=E,624nm,0.6s,SNR=62						
SALA	Sala	1.60	148	eP	Pn	06 49 35.4	+1.0
SALA				eS	Sb	06 49 55.9	-0.9
SALA				AML	AML	06 49 57.8	
	comp=N,734nm,0.6s						
SALA				AML	AML	06 50 01.3	
	comp=E,54nm,0.3s						
SALA	Sala	1.60	148	eP	Pn	06 49 35.3	+1.0
	SNR=51						
SALA				eS	Sb	06 49 55.9	-0.9
	comp=E,54nm,0.3s,SNR=49						
MMLI	Mount Malkishu	1.65	189	Pn	Pn	06 49 35.7	+0.8
MMLI				Sn	Sb	06 49 58.3	+0.3
PHNC	Paralimni	1.67	304	P	Pn	06 49 34.7	-0.5
PHNC				S	Sn	06 49 54.5	-1.2
PHNC	Paralimni	1.67	304	P	Pn	06 49 34.7	-0.5
PHNC				S	Sn	06 49 54.5	-1.2
ZALF	Zalf	1.77	130	eP	Pn	06 49 38.0	+1.4
ZALF				eS	Sb	06 50 01.0	-0.6
ZALF				AML	AML	06 50 05.5	
	comp=N,229nm,0.7s						
ZALF				AML	AML	06 50 08.6	
	comp=E,281nm,0.4s						
ZALF	Zalf	1.77	130	eP	Pn	06 49 38.0	+1.4
	SNR=51						
ZALF				eS	Sb	06 50 01.0	-0.6
	comp=E,281nm,0.4s,SNR=49						
ARNB	Al Arnab	1.80	7	eP	Pn	06 49 36.4	-0.6
ARNB				eS	Sn	06 49 56.8	-2.0
ARNB				AML	AML	06 50 03.2	
	comp=E,950nm,0.4s						
ARNB				AML	AML	06 50 11.1	
	comp=N,488nm,0.3s						
HMDT	Nahal Hemdat	1.82	185	Pn	Pn	06 49 38.0	+0.8
HMDT				Sn	Sb	06 50 02.7	-0.2
YAYL	Yayladag	1.98	9	iP	Pn	06 49 39.3	-0.3
YAYL	Yayladag	1.98	9	iP	Pn	06 49 39.3	-0.3
BTCH	Batrach	2.05	17	eP	Pn	06 49 40.0	-0.5
BTCH				eS	Sn	06 50 05.7	+0.5
BTCH				AML	AML	06 50 20.2	
	comp=E,524nm,0.3s						
BTCH				AML	AML	06 50 21.0	
	comp=N,618nm,0.6s						
BTCH	Batrach	2.05	17	eP	Pn	06 49 40.0	-0.5
	SNR=51						
BTCH				eS	Sn	06 50 05.7	+0.5
	comp=N,618nm,0.6s,SNR=49						
CSS	Prodhromos	2.16	295	P	Pn	06 49 41.5	-0.4
	comp=N,3.4nm,0.2s						
CSS				S	Sn	06 50 06.4	-1.4
SZAC	Souni-Zanaja	2.44	287	P	Pn	06 49 45.2	-0.6
SZAC				S	Sn	06 50 13.3	-1.4
COBT	Iskenderun	2.48	10	iP	Pn	06 49 46.4	-0.1
COBT	Iskenderun	2.48	10	iP	Pn	06 49 46.4	-0.1
DSI	Dead Sea	2.51	187	Pn	Pn	06 49 47.1	+0.4
YTIR	Yattir	2.75	191	Pn	Pn	06 49 51.5	+1.4
JHLN	Al Jahlan	2.75	54	eP	Pn	06 49 50.0	-0.1
JHLN				eS	Sn	06 50 22.3	0.0
JHLN				AML	AML	06 50 35.9	
	comp=E,237nm,0.6s						
JHLN				AML	AML	06 50 36.4	
	comp=N,251nm,0.3s						
JHLN	Al Jahlan	2.75	54	eP	Pn	06 49 50.0	-0.1
	SNR=51						
JHLN				eS	Sn	06 50 22.3	0.0
	comp=N,251nm,0.3s,SNR=49						
ALFC	Alevga	2.79	294	P	Pn	06 49 50.4	-0.2
	comp=N,8.7nm,0.2s						
ALFC				S	Sn	06 50 24.2	+0.9
ALFC	Alevga	2.79	294	P	Pn	06 49 50.4	-0.2
	comp=N,8.7nm,0.2s						
ALFC				S	Sn	06 50 24.2	+0.9
PPCY	Paphos	2.90	287	P	Pn	06 49 52.2	+0.1
PPCY	Paphos	2.90	287	P	Pn	06 49 52.2	+0.1
KUZU	Kuzuini	2.92	22	eP	Pn	06 49 53.5	+1.2
KUZU	Kuzuini	2.92	22	eP	Pn	06 49 53.5	+1.2
AKMC	Akamas	2.95	290	P	Pn	06 49 53.4	+0.6
AKMC	Akamas	2.95	290	P	Pn	06 49 53.4	+0.6
RTMI	Retamim	3.13	196	Pn	Pn	06 49 56.4	+1.1
GULE	Gulek	3.29	347	iP	Pn	06 49 58.4	+0.7
GULE	Gulek	3.29	347	iP	Pn	06 49 58.4	+0.7
ERMK	Ermenek	3.44	319	iP	Pn	06 50 01.4	+1.7
ERMK	Ermenek	3.44	319	iP	Pn	06 50 01.4	+1.7
AYKD	Aykdinkavak	3.45	15	iP	Pn	06 49 59.6	-0.1
GZT	Gaziantep	3.60	24	iP	Pn	06 50 02.7	+0.9
PRNI	Paran	3.76	189	Pn	Pn	06 50 05.0	+1.1
ATAB	Bozova	3.98	31	iP	Pb	06 50 19.1	+1.7
AMAG	Maghara	4.03	213	P	Pn	06 50 07.8	+0.2
HNKL	Nakhl	4.39	200	P	Pn	06 50 12.6	+0.1
	baz=200						
HNKL				AMP		06 51 00.0	
	comp=N,50μm,0.6s,logA/T=4.9,baz=200						
HNKL				S	Sn	06 51 01.9	-0.8
	baz=200						
HNKL	Nakhl	4.39	200	P	Pn	06 50 12.6	+0.1
HNKL				S	Sn	06 51 01.9	-0.8
AKCD	Akcadag	4.58	22	iP	Pn	06 50 17.7	+2.5
AKCD	Akcadag	4.58	22	iP	Pn	06 50 17.7	+2.5
SUZ		4.88	211	P	Pn	06 50 19.7	+0.4
	baz=210						

SUZ		4.88	211	P	Pn	06 50 19.7	+0.4
HHAG	Hagoal	5.13	218	P	Pn	06 50 23.0	+0.3
	baz=217						
ELZG	Elazig	5.14	30	*i* P	Pn	06 50 25.0	+1.9
ELZG	Elazig	5.14	30	*i* P	Pn	06 50 25.0	+1.9
ZNM		5.27	208	P	Pn	06 50 24.8	+0.1
	baz=208						
ZNM		5.27	208	P	Pn	06 50 24.8	+0.1
KOT	Kottamia	5.29	220	P	Pn	06 50 25.4	+0.4
	baz=219						
KOT				S	Sn	06 51 22.2	-2.7
	baz=219						
KOT	Kottamia	5.29	220	S	Sn	06 51 22.2	-2.7
ZAF		5.49	210	P	Pn	06 50 27.3	-0.3
	baz=210						
ZAF		5.49	210	P	Pn	06 50 27.3	-0.3
GLL	Jalalah	5.63	218	P	Pn	06 50 30.1	+0.5
	baz=218						
GLL	Jalalah	5.63	218	P	Pn	06 50 30.2	+0.5
HSAF	As Saff	5.68	220	P	Pn	06 50 30.4	+0.1
	baz=219						
HSAF	As Saff	5.68	220	P	Pn	06 50 30.4	+0.1
HKAT	Jabal Katrina	5.72	195	P	Pn	06 50 31.1	0.0
	baz=195						
HKAT	Jabal Katrina	5.72	195	P	Pn	06 50 31.1	0.0
HNAT	Natroun	6.20	226	P	Pn	06 50 37.5	+0.1
	baz=226						
HNAT	Natroun	6.20	226	P	Pn	06 50 37.5	+0.1
GRB	Gharib	6.30	204	P	Pn	06 50 38.7	-0.2
	baz=204						
BHD	Baghdad	7.26	94	*e*x	Pn	06 50 57.0	+5.0
BHD				*e*x	x	06 51 31.0	
BHD				*e*x	x	06 52 22.0	
BHD				*e*x	x	06 53 15.0	

*ISK **06** 06:52:16.8, 40.50N×35.40E, h3km, MD3.3*
*DDA **06** 06:52:17.6, 40.49N×35.40E, h7km, ML3.3*
*CSEM **06** 06:52:17.8±0.1, 40.52N×35.41E, h5km, ML3.3, Error ellipse: s-maj=3.7km s-min=3.1km az=172.0*
*ISCJB **06** 06:52:17.8±0.7, 40.49N±0.03×35.41E±0.03, h5km±6km, Error ellipse: s-maj=4.9km s-min=4.0km az=160.0*
ISC 06 06:52:17.9±1.2, **40.50N**±0.02×**35.41E**±0.02, **h6**km±11km, **n53**, σ**0.53**/64, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAVZ	Havza	0.62	22	*i* P	Pg	06 52 30.2	+0.4
HAVZ				*i* S	Sb	06 52 40.7	+0.5
HAVZ	Havza	0.62	22	*i* P	Pg	06 52 30.2	+0.4
CORM	Corum	0.67	242	*e*PG	Pg	06 52 30.3	-0.5
CORM				*e*SG	Sg	06 52 40.4	+0.8
CORM	Corum	0.67	242	*e*Pg	Pg	06 52 30.3	-0.5
CORM				*e*Sg	Sg	06 52 40.4	+0.8
TOKA	Tokat	0.84	102	*i* P	Pg	06 52 34.0	0.0
TOKA				*i* S	Sb	06 52 46.1	-0.3
TOKA	Tokat	0.84	102	*i* P	Pg	06 52 34.0	0.0
TOKA				*i* S	Sb	06 52 46.1	-0.3
YOZ	Yozgat	0.86	184	*e*PG	Pg	06 52 34.0	-0.4
YOZ				*e*SG	Sb	06 52 46.5	-0.7
YOZ	Yozgat	0.86	184	*e*Pg	Pg	06 52 34.0	-0.4
YOZ				*e*Sg	Sb	06 52 46.5	-0.7
ERBA	Erbaa	1.04	80	*i* P	Pg	06 52 37.6	-0.3
ERBA				*i* S	Sb	06 52 52.4	+0.1
ERBA	Erbaa	1.04	80	*i* P	Pg	06 52 37.6	-0.3
ERBA				*i* S	Sb	06 52 52.4	+0.1
BYBT	Boyabat	1.08	334	*e*PN	Pg	06 52 38.0	-0.6
BYBT	Boyabat	1.08	334	*e*Pn	Pg	06 52 38.0	-0.6
DIKM	Dikmen	1.15	355	*e*PN	Pg	06 52 39.8	-0.2
DIKM	Dikmen	1.15	355	*e*Pn	Pg	06 52 39.8	-0.2
TOS	Tosya	1.18	297	*e*PN	Pg	06 52 39.9	-0.6
TOS	Tosya	1.18	297	*e*Pn	Pg	06 52 39.9	-0.6
CANT	Cankiri	1.36	275	*e*PN	Pn	06 52 43.3	-0.3
ILGA	Ilgaz	1.40	294	*i* P	Pn	06 52 43.9	-0.2
ILGA				*i* S	Sn	06 53 03.4	+0.4
ILGA	Ilgaz	1.40	294	*i* P	Pn	06 52 43.9	-0.2
ILGA				*i* S	Sn	06 53 03.4	+0.4
RSDY	Resadiye-TOKAT	1.47	93	*e*PN	Pn	06 52 45.1	+0.1
RSDY	Resadiye-TOKAT	1.47	93	*e*Pn	Pn	06 52 45.1	+0.1
ELDT	Eldivan	1.51	270	*i* P	Pn	06 52 46.1	+0.5
ELDT	Eldivan	1.51	270	*i* P	Pn	06 52 46.1	+0.5
BNN	Bunyan	1.68	168	*e*PN	Pn	06 52 47.6	-0.4
BNN	Bunyan	1.68	168	*e*Pn	Pn	06 52 47.6	-0.4
KAMT	Kaman	1.72	230	*e*PN	Pn	06 52 48.6	+0.1
KAMT	Kaman	1.72	230	*e*Pn	Pn	06 52 48.6	+0.1
AVNT	Avonos	1.77	194	*i* P	Pb	06 52 50.8	0.0
AVNT	Avonos	1.77	194	*i* P	Pb	06 52 50.8	0.0
BZK	Bozkurt	1.80	325	*e*PN	Pn	06 52 49.5	0.0
BZK	Bozkurt	1.80	325	*e*Pn	Pn	06 52 49.5	0.0
BALT	Daday	1.84	305	*i* P	Pb	06 52 51.4	-0.7
BALT	Daday	1.84	305	*i* P	Pb	06 52 51.4	-0.7
AFSR	Af¯ar-Bala (A	2.08	240	*e*PN	Pn	06 52 53.5	+0.1
AFSR	Af¯ar-Bala (A	2.08	240	*e*Pn	Pn	06 52 53.5	+0.1
ANTO	Ankara	2.10	253	*e*PN	Pn	06 52 54.3	+0.7
ANTO	Ankara	2.10	253	*e*Pn	Pn	06 52 54.3	+0.7
LOD	Lodumlu	2.11	254	*e*PN	Pn	06 52 53.8	-0.1
LOD	Lodumlu	2.11	254	*e*Pn	Pn	06 52 53.8	-0.1
SUSE	Susehri	2.16	97	*i* P	Pn	06 52 53.9	-0.7
SUSE	Susehri	2.16	97	*i* P	Pn	06 52 53.9	-0.7
SAFT	Safranbolu	2.19	291	*e*PN	Pn	06 52 55.3	+0.5
SAFT	Safranbolu	2.19	291	*e*Pn	Pn	06 52 55.3	+0.5
NIG	Nigde	2.46	195	*e*PN	Pn	06 52 59.6	+0.7
NIG	Nigde	2.46	195	*e*Pn	Pn	06 52 59.6	+0.7
SULT	Sultanhani-AKS	2.73	213	*e*PN	Pn	06 53 02.8	+0.5
SULT	Sultanhani-AKS	2.73	213	*e*Pn	Pn	06 53 02.8	+0.5
SVRH	Sivrihisar-ESK	3.16	252	*e*PN	Pn	06 53 09.5	+1.2
SVRH	Sivrihisar-ESK	3.16	252	*e*Pn	Pn	06 53 09.5	+1.2
LADK	Ladik-KONYA	3.29	227	*e*PN	Pn	06 53 10.8	+0.7
LADK	Ladik-KONYA	3.29	227	*e*Pn	Pn	06 53 10.8	+0.7
KONT	Konya--Tatoy	3.48	224	*e*PN	Pn	06 53 13.5	+0.9
KONT	Konya--Tatoy	3.48	224	*e*Pn	Pn	06 53 13.5	+0.9

*NIED **06** 06:54:00, 27.10N×130.00E, h5km, Mw3.7 Best double couple: $M_0$4.05000×10^14 NP1:ϕ_s244.00000°, δ63.00000°, λ-58.00000°. NP2:ϕ_s10.00000°, δ41.00000°, λ-136.00000°.*
*IDC **06** 06:54:56.0±1.1, 27.07N×130.58E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/25, mbtmp3.6/5, ML3.6/1, MS2.9/2, Ms1 2.9/2, ms1mx2.3/39, Error ellipse: s-maj=64.6km s-min=21.7km az=86.0*
*JMA **06** 06:54:57.6±0.1, 27.10N×130.02E, h51km, M3.5*
*ISCJB **06** 06:54:57.1±2.0, 27.12N±0.03×130.04E±0.04, h30km±17km, mb3.5/4, MS3.0/1, Error ellipse: s-maj=6.2km s-min=5.5km az=178.9*
ISC 06 06:54:56.6±2.0, **27.13N**±0.04×**130.04E**±0.05, **h15**km±13km, **n18**, σ**1.02**/24, **mb3.5**/4, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.17	304	P	Pn	06 55 17.9	-0.5
JTK				S	Sb	06 55 33.1	-0.3
JZK	Kikaishima	1.18	357	P	Pg	06 55 19.3	-0.1
JZK				S	Sb	06 55 33.9	+0.1
JAM	Amami Oshima	1.33	343	P	Pn	06 55 20.4	-0.2
JAM				S	Sn	06 55 37.0	-1.1
JAMN	Amaminishikomi	1.35	326	P	Pn	06 55 20.2	-0.6
JAMN				S	Sn	06 55 36.7	-1.8
JOW	Kunigami	1.60	260	P	Pn	06 55 24.3	-0.1
JOW				S	Sn	06 55 43.3	-1.5
JMZ	Minamidaito 2	1.68	141	P	Pn	06 55 24.7	-0.7
JMZ				S	Sn	06 55 44.7	-1.9
JIH	Iheya	1.85	268	P	Pn	06 55 27.7	0.0
JIH				S	Sn	06 55 50.6	-0.2
JJT2	Tamagusuku 2	2.28	245	P	Pn	06 55 33.6	0.0
JAGN	Aguni-jima	2.56	258	P	Pn	06 55 37.3	-0.2
JAGN				S	Sn	06 56 07.5	-0.8
JNN	Nakanoshima	2.71	357	S	Sn	06 56 10.3	-1.7
JKE	Kume jima 2	3.02	255	P	Pn	06 55 43.2	-0.6
JKE				S	Sn	06 56 19.2	-0.5
JNU	Nakatsue	6.02	7	Pn	Pn	06 56 26.0	+0.9
	1.5nm,0.3s,baz=312,slow=2.7,SNR=11						
JNU				Sn	Sn	06 57 26.8	-6.9
	baz=165,slow=16,SNR=1.4						
ASAJ	Asahikawa	19.75	28	LR	LR	07 06 41.6	
	comp=Z,16nm,18.9s,baz=11,slow=36						
SONM	Songino Array	27.72	324	P	P	07 00 49.5	+5.1
	0.4nm,0.6s,baz=139,slow=9.6,SNR=3.6						
KAPI	Kappang	33.47	199	LR	LR	07 14 12.3	
	comp=Z,32nm,19.6s,baz=294,slow=34						
WRA	Warramunga Arr	46.98	174	P	P	07 03 27.1	0.0
	1.2nm,0.9s,baz=353,slow=8.4,SNR=4.3						
ASAR	Alice Springs	50.64	175	P	P	07 03 57.0	+1.8
	0.4nm,0.5s,baz=5.9,slow=15,SNR=7.4						
YKA	Yellowknife Ar	77.03	26	P	P	07 06 49.6	+1.0
	0.3nm,0.8s,baz=306,slow=5.5,SNR=3.4						

JMA 06 06:56:29.9±0.5, **31.00N**×**141.73E**, **h94**km, **M3.5**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	2.66	323	*e*S	Sn	06 57 43.2	+0.7
JOD2	Odawara 2	4.79	333	*e*S	Sn	06 58 35.8	+1.7
JYT	Yasato	5.37	347	*e*S	Sn	06 58 53.0	+5.0
JHO	Hitachi	5.68	351	P	Pn	06 57 53.3	+1.5
JHO				*e*S	Sn	06 58 57.6	+2.0
JAG	Ashikaga	5.73	341	P	Pn	06 57 52.1	-0.4

IDC 06 07:03:17.4±0.8, **58.62S**×**29.67W**, **h0**km, **mb4.2**/8, **mb1 4.3**/9, **mb1mx4.1**/16, **mbtmp4.2**/9, **ML2.9**/1, **MS3.8**/1, **Ms1 3.7**/1, **ms1mx3.2**/17, **Error ellipse: s-maj=26.1km s-min=20.8km az=92.0**, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	Sanae	17.03	151	P	Pn	07 07 16.4	-0.4
	0.0nm,0.3s,baz=315,slow=12,SNR=10						
MAIT	Maitri	20.92	142	*e*P	P	07 07 50.8	-10
PLCA	Paso Flores	31.29	287	P	P	07 09 38.3	-0.6
	2.2nm,0.9s,baz=123,slow=3.5,SNR=3.0						
QSPA	South Pole Qui	31.62	180	P	P	07 09 41.9	+0.1
	1.8nm,0.8s,baz=168,slow=5.9,SNR=9.1						
MAW	Mawson	38.90	142	P	P	07 10 43.9	-0.1
	2.5nm,0.8s,baz=245,slow=11,SNR=4.0						
VNDA	Vanda	43.92	184	P	P	07 11 26.1	+0.9
	2.8nm,0.9s,baz=191,slow=5.0,SNR=14						
BOSA	Boshof	47.90	76	P	P	07 11 56.6	-0.7
	4.6nm,1.1s,baz=234,slow=8.8,SNR=4.5						
BOSA				LR	LR	07 27 01.3	
	comp=Z,97nm,19.7s,baz=53,slow=30						
LBTB	Lobatse	51.03	74	P	P	07 12 21.3	0.0
	2.7nm,0.7s,baz=215,slow=10,SNR=4.6						
TORD	Torodi Ar. Bea	75.96	32	P	P	07 15 06.8	+0.9
	2.6nm,0.8s,baz=196,slow=6.2,SNR=13						
ASAR	Alice Springs	96.89	165	P	P	07 16 48.5	-2.0
	0.5nm,0.9s,baz=169,slow=5.6,SNR=4.1						
YKA	Yellowknife Ar	137.17	317	PKP	PKPdf	07 22 40.7	-0.2
	3.0nm,1.0s,baz=127,slow=2.2,SNR=21						
BVAR	Borovoye Array	137.25	61	PKP	PKPdf	07 22 40.9	-0.5
	1.6nm,0.9s,baz=238,slow=2.8,SNR=5.1						
ZALV	Zalesovo Beam	144.64	68	PKP	PKPab	07 22 52.3	-1.0
	1.8nm,0.6s,baz=238,slow=3.2,SNR=8.7						
ILAR	Eielson Array	150.75	309	PKPbc	PKPbc	07 23 09.8	-0.1
	6.5nm,1.0s,baz=141,slow=1.6,SNR=42						

*THE **06** 07:06:46.8, 38.17N×24.18E, h2km±2km, ML2.7/5, Error ellipse: s-maj=2.0km s-min=0.7km az=104.0*
*ATH **06** 07:06:46.7, 38.16N×24.16E, h21km±1km, MD3.1/10, ML2.8*
*CSEM **06** 07:06:46.5±0.2, 38.17N×24.20E, h2km, ML2.7/5, Error ellipse: s-maj=3.8km s-min=3.2km az=98.0*
*ISCJB **06** 07:06:46.5±0.6, 38.17N±0.03×24.19E±0.04, h7km±4km, Error ellipse: s-maj=5.3km s-min=4.6km az=145.9*
ISC 06 07:06:47.0±1.0, **38.17N**±0.02×**24.18E**±0.02, **h6**km±10km, **n43**, σ**0.42**/72, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRMA	Marmari	0.19	125	P	Pg	07 06 50.4	-0.4
MRMA				S	Sg	07 06 53.6	+0.2
MRMA	Marmari	0.19	125	P	Pg	07 06 50.4	-0.4
MRMA				S	Sg	07 06 53.6	+0.2
PTL	Penteli	0.27	244	P	Pg	07 06 52.0	-0.3
PTL				S	Sg	07 06 56.4	+0.4
PTL	Penteli	0.27	244	*e*PB	Pg	07 06 52.0	-0.3
PTL				*e*SB	Sg	07 06 56.4	+0.4
PTL	Penteli	0.27	244	P	Pg	07 06 52.0	-0.3
PTL				S	Sg	07 06 56.4	+0.4
ATH	Athens Observa	0.41	242	P	Pg	07 06 54.7	-0.2
ATH				S	Sg	07 07 00.9	+0.5
ATH	Athens Observa	0.41	242	*e*PB	Pg	07 06 54.7	-0.2
ATH				*e*SB	Sg	07 07 01.1	+0.7
ATH	Athens Observa	0.41	242	P	Pg	07 06 54.7	-0.2
ATH				S	Sg	07 07 00.9	+0.5
NAIG	Nisos Aigina	0.68	233	*e*PN	Pg	07 06 59.8	-0.2
NAIG	Nisos Aigina	0.68	233	*e*Pn	Pg	07 06 59.8	-0.2
MRKA	Markates	0.71	319	P	Pg	07 07 01.1	+0.5
MRKA				S	Sg	07 07 09.8	0.0
MRKA	Markates	0.71	319	P	Pg	07 07 01.1	+0.5
MRKA				S	Sg	07 07 09.8	0.0
LTK	Loutraki	0.97	262	P	Pg	07 07 05.0	-0.5
LTK				S	Sb	07 07 18.7	-0.5
LTK	Loutraki	0.97	262	*e*PN	Pg	07 07 05.5	0.0
LTK				*e*SN	Sb	07 07 18.7	-0.5
LTK	Loutraki	0.97	262	P	Pg	07 07 05.0	-0.5
LTK				*e*Sn	Sb	07 07 18.7	-0.5
DID	Didima	1.00	229	P	Pg	07 07 05.7	-0.4
DID	Didima	1.00	229	P	Pg	07 07 05.7	-0.4
AOS	Alonnisos	1.03	347	P	Pg	07 07 06.2	-0.5
AOS				S	Sg	07 07 19.9	-0.1
AOS	Alonnisos	1.03	347	*e*PN	Pg	07 07 06.4	-0.3
AOS				*e*SN	Sb	07 07 20.8	-0.2
AOS	Alonnisos	1.03	347	P	Pg	07 07 06.2	-0.5
AOS				S	Sg	07 07 19.9	-0.1
AOS				*e*Sn	Sb	07 07 20.8	-0.2
SMIA	Simia	1.04	313	P	Pg	07 07 06.7	-0.2
SMIA	Simia	1.04	313	P	Pg	07 07 06.7	-0.2
LKR	Lokris	1.04	298	P	Pg	07 07 06.5	-0.4
LKR				S	Sb	07 07 21.5	+0.1
LKR	Lokris	1.04	298	*e*PN	Pg	07 07 06.6	-0.4
LKR				*e*SN	Sg	07 07 20.7	+0.2
LKR	Lokris	1.04	298	P	Pg	07 07 06.5	-0.4
LKR				*e*Sn	Sg	07 07 20.7	+0.2
LKR				S	Sb	07 07 21.5	+0.1
SKIA	Skiathos	1.14	331	P	Pg	07 07 08.1	-0.8
SKIA				S	Sb	07 07 24.8	+0.5
SKIA	Skiathos	1.14	331	P	Pg	07 07 08.1	-0.8
SKIA				S	Sb	07 07 24.8	+0.5
DSF	Desfina	1.32	281	P	Pn	07 07 11.6	-0.5
DSF				S	Sn	07 07 30.4	+0.4
DSF	Desfina	1.32	281	P	Pn	07 07 11.6	-0.5
DSF				S	Sn	07 07 30.4	+0.4
NEO	Neokhori	1.36	327	*e*PN	Pn	07 07 12.3	-0.3
NEO				*e*SN	Sg	07 07 30.7	0.0
NEO	Neokhori	1.36	327	*e*Pn	Pn	07 07 12.3	-0.3
NEO				*e*Sn	Sg	07 07 30.7	0.0
CHOS	Chios island	1.49	81	*e*PN	Pn	07 07 14.6	+0.2
CHOS	Chios island	1.49	81	*e*Pn	Pn	07 07 14.6	+0.2
KLV	Kalavryta, Ach	1.60	266	*e*PN	Pb	07 07 17.3	+0.2
KLV				*e*SN	Sg	07 07 38.8	+0.3
KLV	Kalavryta, Ach	1.60	266	*e*Pn	Pb	07 07 17.3	+0.2
KLV				*e*Sn	Sg	07 07 38.8	+0.3
KALE	Kalithea	1.62	279	*e*PB	Pn	07 07 15.2	-1.0
KALE	Kalithea	1.62	279	*e*Pn	Pn	07 07 15.2	-1.0
LAKA	Lakka	1.73	273	*e*PN	Pn	07 07 17.2	-0.5
LAKA	Lakka	1.73	273	*e*Pn	Pn	07 07 17.2	-0.5
EVR	Evrytania	2.00	293	*e*PN	Pn	07 07 21.5	0.0
EVR	Evrytania	2.00	293	*e*Pn	Pn	07 07 21.5	0.0
THL	Klokotos Trika	2.19	310	*e*PN	Pn	07 07 24.3	+0.4
THL	Klokotos Trika	2.19	310	*e*Pb	Pn	07 07 24.3	+0.4

*DJA **06** 07:17:21.7±0.6, 6°S±4°×12°9E±°, h250km±14km, M4.7/5, mb5.0/3, mB5.3/3, MLv4.6/5, Mw(mB)4.7/3*
*ISCJB **06** 07:17:21.7±0.3, 6.19S±0.04×129.10E±0.07, h264km, mb3.9/11, Error ellipse: s-maj=9.2km s-min=4.7km az=166.5*
*AUST **06** 07:17:22.1±0.0, 6.27S×129.08E, h234km, Error ellipse: s-maj=1.2km s-min=1.0km az=238.0*
*IDC **06** 07:17:23.0±2.0, 6.22S×128.81E, h254km±20km, mb3.5/10, mb1 3.9/14, mb1mx3.7/24, mbtmp3.8/14, Error ellipse: s-maj=21.7km s-min=8.1km az=71.0*
ISC 06 07:17:22.8±0.5, **6.22S**±0.05×**129.07E**±0.08, **h264**km, **n40**, σ**1.91**/43, **mb3.8**/11, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	2.66	341	P	Pn	07 18 10.9	-1.9
AAI	Ambon	2.66	341	P	Pn	07 18 11.3	-1.5
	baz=2.7,SNR=8.8						
NLAI	Namlea	3.55	326	P	Pn	07 18 22.6	+0.4
FAKI	Fak Fak	4.55	44	P	Pn	07 18 30.1	-3.7
FAKI	Fak Fak	4.55	44	P	Pn	07 18 30.1	-3.7
	baz=4.6,SNR=19						
FAKI				S	S	07 19 20.9	-10
	baz=4.6,SNR=22						
MTN	Manton Dam	6.89	163	P	Pn	07 19 01.4	-0.9
	baz=6.9,SNR=188						
RKPI	Ransiki, Papua	6.91	48	P	Pn	07 19 00.1	-2.5
	445nm,0.6s,11μm						
TNTI	Ternate	7.15	346	P	Pn	07 19 02.4	-3.2
KDU	Kakadu	7.25	153	P	Pn	07 19 05.8	-1.0
	baz=7.2,SNR=218						
KDU				S	S	07 20 25.7	-4.9
	baz=7.2,SNR=4.8						
LUWI	Luwuk	8.12	309	P	Pn	07 19 17.9	+0.1
LUWI	Luwuk	8.12	309	P	Pn	07 19 18.2	+0.4
	baz=8.2,SNR=4.7						
KNRA	Kununurra	9.41	182	P	Pn	07 19 33.3	-0.5
	baz=9.4,SNR=42						
KNRA				S	S	07 21 15.5	-4.6
	baz=9.4,SNR=5.3						
FITZ	Fitzroy Crossi	12.28	196	P	Pn	07 20 08.5	-1.1
	6.6nm,0.3s,baz=26,slow=11,SNR=106						
FITZ				S	S	07 22 21.7	-4.7
	2.6nm,0.3s,baz=114,slow=21,SNR=4.2						
FITZ	Fitzroy Crossi	12.28	196	P	Pn	07 20 08.5	-1.1
	baz=12,SNR=82						
WRA	Warramunga Arr	14.57	160	P	Pn	07 20 37.1	-0.4
	5.4nm,0.3s,baz=338,slow=13,SNR=133						
WRA				S	S	07 23 17.8	-0.4
	0.9nm,0.3s,baz=344,slow=22,SNR=5.3						
COEN	Coen	15.86	120	P	Pn	07 20 52.7	-0.1
	baz=16,SNR=38						
QIS	Mount Isa	17.54	145	P	Pn	07 21 11.5	-1.0
	baz=18,SNR=17						
QIS				S	S	07 24 16.6	-1.6
	baz=18,SNR=7.8						
ASAR	Alice Springs	17.96	166	P	Pn	07 21 16.4	-1.0
	6.5nm,0.3s,baz=345,slow=11,SNR=481						
ASAR				S	S	07 24 29.3	+2.7
	0.4nm,0.3s,baz=348,slow=20,SNR=30						
ASAR				ScP	ScP	07 28 49.0	+2.1
	0.1nm,0.3s,baz=358,slow=1.9,SNR=4.2						
PMG	Port Moresby	18.19	101	P	Pn	07 21 22.0	+1.8
	1.2nm,0.3s,baz=262,slow=7.1,SNR=4.3						
MTSU	Mount Surprise	19.01	130	P	Pn	07 21 27.1	-2.7
	baz=19,SNR=8.4						
CTA	Charters Tower	21.64	131	P	P	07 21 54.9	+2.3
	11nm,0.8s,baz=316,slow=11,SNR=6.4						
TGY	Tagaytay City	21.74	338	P	P	07 21 53.9	+0.3
	246nm,0.4s,baz=168,slow=8.7,SNR=3.3						
MEEK	Meekatharra	22.62	205	P	P	07 22 02.7	+1.2
	baz=23,SNR=5.6						
MORW	Morawa	25.85	207	P	P	07 22 31.9	+1.3
	baz=26,SNR=3.7						
KLBR	Kellerberrin	27.38	201	P	P	07 22 45.9	+1.7
	baz=27,SNR=6.0						
KLBR				S	S	07 27 25.9	+21
	baz=27,SNR=5.2						
STKA	Stephens Creek	28.09	157	P	P	07 22 52.7	+2.3
	0.9nm,0.3s,baz=317,slow=11,SNR=3.3						
NWAO	Narrogin (SRO)	28.77	201	P	P	07 22 57.2	+0.8
	3.7nm,0.6s,baz=47,slow=7.7,SNR=3.7						
CMSA	Cobar Meteorol	29.61	150	P	P	07 23 06.1	+2.3
	baz=30,SNR=12						
CMSA				S	S	07 27 31.8	-7.5
	baz=30,SNR=4.8						
YNG	Young	33.17	150	P	P	07 23 38.0	+3.0
	baz=33,SNR=6.2						
CMAR	Chiang Mai Arr	38.53	310	P	P	07 24 20.6	+0.2
	1.9nm,0.6s,baz=129,slow=6.3,SNR=5.1						
KSRS	Korea Array	43.46	359	P	P	07 24 59.6	-0.5
	1.0nm,0.6s,baz=172,slow=8.5,SNR=4.7						
SONM	Songino Array	57.41	342	P	P	07 26 45.4	+1.2
	0.7nm,0.5s,baz=158,slow=9.3,SNR=4.2						
MKAR	Makanchi Array	67.07	327	P	P	07 27 48.5	+0.5
	1.3nm,0.4s,baz=113,slow=8.8,SNR=18						
ZALV	Zalesovo Beam	70.48	334	P	P	07 28 07.6	-1.1
	0.6nm,0.4s,baz=134,slow=6.2,SNR=3.3						
KURBB	Kurchatov Arra	71.37	329	P	P	07 28 14.6	+0.5
	0.8nm,0.4s,baz=127,slow=5.0,SNR=4.9						
VNDA	Vanda	73.33	173	P	P	07 28 26.6	+1.3
	0.8nm,0.8s,baz=312,slow=6.9,SNR=7.2						
BHD	Baghdad	88.95	303	*e*x	P	07 29 50.0	+2.0
BHD				*e*x	x	07 29 52.0	
BHD				*e*x	x	07 33 23.0	
BHD				*e*x	S	07 40 12.0	-1.3
BHD				*e*x	x	07 40 23.0	
BHD				*e*x	x	07 46 19.0	
TXAR	Lajitas Array	125.31	58	PKP	PKPdf	07 35 54.3	+1.2
	0.4nm,0.8s,baz=174,slow=1.1,SNR=4.5						
TORD	Torodi Ar. Bea	127.75	282	PKP	PKPdf	07 35 58.5	+0.6
	0.6nm,0.7s,baz=65,slow=3.1,SNR=3.6						
CPUP	Villa Florida	147.06	169	PKPbc	PKPab	07 36 37.0	-0.4
	2.5nm,0.6s,baz=162,slow=1.2,SNR=9.4						

*NIED **06** 07:17:00, 27.10N×130.00E, h5km, Mw4.6 Best double couple: $M_0$8.47000×10^15 NP1:ϕ_s209.00000°, δ69.00000°, λ-86.00000°. NP2:ϕ_s18.00000°, δ21.00000°, λ-100.00000°.*
*ISCJB **06** 07:17:19.7±0.9, 27.10N±0.02×130.00E±0.02, h7km±5km, mb4.6/68, MS4.2/36, Error ellipse: s-maj=4.3km s-min=3.4km az=151.7*
*IDC **06** 07:17:20.0±0.6, 27.18N×130.03E, h0km, mb4.3/19, mb1 4.4/22, mb1mx4.4/29, mbtmp4.3/22, ML3.8/3, MS4.0/21, Ms1 4.0/21, ms1mx3.8/39, Error ellipse: s-maj=17.6km s-min=13.9km az=78.0*
*BJI **06** 07:17:20.3, 27.20N×129.94E, h8km, mB4.7/37, mb4.6/41, Ms4.7/44, Ms7 4.5/45*
*NEIC **06** 07:17:21.8±0.3, 27.10N×129.96E, h10km, mb4.9/26, MW4.6(NIED), Error ellipse: s-maj=7.3km s-min=4.4km az=147.0*
*JMA **06** 07:17:22.3±0.1, 27.12N×130.03E, h61km, M4.5*
*MOS **06** 07:17:23.5±1.3, 27.16N×130.07E, h33km, mb4.7/38, MS4.2/12, Error ellipse: s-maj=11.4km s-min=6.1km az=96.1*
ISC 06 07:17:22.8±0.4, **27.20N**±0.03×**130.01E**±0.03, **h15**km±1km, **h15**km**:pP-P**, **n202**, σ**1.83**/261, **mb4.7**/68, **MS4.2**/36, **8C-6D**, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.11	302	P	Pb	07 17 42.9	-0.8
JTK				S	Sb	07 17 57.8	-0.1
JZK	Kikaishima	1.12	358	P	Pb	07 17 43.5	-0.3
JZK				*e*S	Sg	07 17 59.6	+0.6
JAM	Amami Oshima	1.26	344	P	Pn	07 17 45.4	-0.5
JAM				S	Sb	07 18 01.6	-0.8
JAMN	Amaminishikomi	1.28	325	P	Pn	07 17 45.1	-1.0
JAMN				*e*S	Sb	07 18 01.6	-1.2
JOW	Kunigami	1.59	257	*e*Pn	Pn	07 17 49.3	-1.0
JOW	Kunigami	1.59	257	P	Pn	07 17 49.0	-1.4
JOW				*e*S	Sn	07 18 08.6	-2.0
JMZ	Minamidaito 2	1.75	141	P	Pn	07 17 49.7	-2.9
JMZ				*e*S	Sn	07 18 09.9	-4.7
JIH	Iheya	1.83	265	P	Pn	07 17 52.6	-1.0
JIH				*e*S	Sn	07 18 15.1	-1.4
JJT2	Tamagusuku 2	2.28	243	P	Pn	07 17 58.5	-1.4
JJT2				*e*S	Sn	07 18 25.6	-2.1
JAGN	Aguni-jima	2.54	257	P	Pn	07 18 02.1	-1.4
JAGN				S	Sn	07 18 32.2	-2.0
JNN	Nakanoshima	2.64	357	P	Pn	07 18 04.3	-0.6
JNN				S	Sn	07 18 35.2	-1.4
JKE	Kume jima 2	3.01	254	P	Pn	07 18 07.9	-2.0
JKE				*e*S	Sn	07 18 43.1	-2.6
JKC	Kuchinoerabu	3.26	3	P	Pn	07 18 13.0	-0.4
JKC				S	Sn	07 18 49.4	-2.5
JTN	Tanegashima 3	3.55	14	P	Pn	07 18 16.7	-0.7
JTN				*e*S	Sn	07 18 57.1	-2.0
JNU	Nakatsue	5.96	7	*e*Pn	Pn	07 18 51.2	+0.7
JNU				Sn	Sn	07 19 54.0	-4.4
JNU				*e*Sn	Sn	07 19 56.2	-2.3
JNU	Nakatsue	5.96	7	Pn	Pn	07 18 51.0	+0.6
	7.5nm,0.3s,baz=345,slow=4.0,SNR=59						
JNU				Sn	Sn	07 19 54.0	-4.4
	1.8nm,0.3s,baz=52,slow=19,SNR=3.2						
NACB	Ninganchiao	8.16	250	*e*Pn	Pn	07 19 19.1	-1.6

YHNB	Yeheng	8.17	254	ePn	Pn	07 19 19.6	-1.3
	100nm,1.0s						
SSE	Sheshan	8.64	299	P	Pn	07 19 25.6	-1.6
SSE				S	Sn	07 21 03.5	-0.8
SSE				pmax	pmax		
	comp=Z,35nm,0.7s						
SSE				pmax	pmax		
	comp=Z,100nm,9.7s						
SSE				LR	LR		
	comp=N,1µm,11.5s						
SSE				LR	LR		
	comp=E,1µm,11.5s						
SSE				LR	LR		
	comp=Z,2µm,11.9s						
YULB	Yu-li	8.74	246	ePn	Pn	07 19 26.7	-2.1
SSLB	Suanglung	8.86	249	ePn	Pn	07 19 28.7	-1.6
KSAR	Wonju Array Be	10.37	351	Pn	Pn	07 19 53.5	+2.5
KSRS	Korea Array	10.38	351	Pn	Pn	07 19 53.5	+2.5
	comp=Z,0.3nm,0.3s,baz=168,slow=14,SNR=13						
KSRS				LR	LR	07 24 28.9	
	comp=Z,198nm,18.8s,baz=171,slow=41						
QZH	Quanzhou	10.51	260	eP	Pn	07 19 54.0	+1.1
QZH				S	Sn	07 21 53.0	+2.7
QZH				LR	LR		
	comp=N,2µm,15.6s						
QZH				LR	LR		
	comp=E,1µm,8.5s						
QZH				LR	LR		
	comp=Z,2µm,9.8s						
NJ2	Nanjing	10.84	299	eP	Pn	07 19 57.9	+0.4
NJ2				pP		07 20 01.0	
NJ2				sP		07 20 03.9	
NJ2				S	Sn	07 21 58.0	-0.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,270nm,4.5s						
NJ2				LR	LR		
	comp=N,1µm,11.2s						
NJ2				LR	LR		
	comp=E,3µm,10.7s						
NJ2				LR	LR		
	comp=Z,3µm,11.2s						
MAJO	Matsushiro	11.63	35	eP	Pn	07 20 08.9	+0.7
MAJO	Matsushiro	11.63	35	ePn	Pn	07 20 08.9	+0.7
MJAR	Matsushiro Arr	11.63	35	Pn	Pn	07 20 09.4	+1.2
MJAR	Matsushiro Arr	11.63	35	Pn	Pn	07 20 09.4	+1.2
	comp=Z,0.2nm,0.3s,baz=208,slow=13,SNR=3.6						
MJAR				LR	LR	07 24 21.6	
	comp=Z,151nm,19.1s,baz=220,slow=36						
DL2	Dalian	13.62	331	eP	Pn	07 20 30.9	-4.5
DL2				S	Sn	07 23 03.6	-2.8
DL2				LR	LR		
	comp=N,5µm,14.1s						
DL2				LR	LR		
	comp=E,5µm,15.3s						
DL2				LR	LR		
	comp=Z,5µm,11.6s						
SNY	Shenyang	15.52	342	⇑P	P	07 21 06.7	+1.3
SNY				S	S	07 24 10.5	+2.2
SNY				pmax	pmax		
	comp=Z,15nm,1.3s						
SNY				pmax	pmax		
	comp=Z,200nm,6.9s						
SNY				LR	LR		
	comp=N,600nm,15.4s						
SNY				LR	LR		
	comp=E,1µm,16.6s						
SNY				LR	LR		
	comp=Z,1µm,10.5s						
CN2	Changchun	16.98	349	eP	P	07 21 23.1	+1.6
CN2				LR	LR		
	comp=N,2µm,15.0s						
CN2				LR	LR		
	comp=E,1µm,15.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
USRK	Ussuriysk Arra	17.05	5	P	P	07 21 24.8	+2.6
	comp=Z,0.1nm,0.3s,baz=176,slow=9.4,SNR=19						
BJT	Baijiatuau	17.19	322	eP	Pn	07 21 22.6	+0.3
	comp=Z,80nm,0.8s						
BJI	Beijing	17.20	322	P	P	07 21 24.7	+0.7
BJI				S	S	07 24 39.8	-2.8
BJI				pmax	pmax		
	comp=Z,91nm,0.9s						
BJI				pmax	pmax		
	comp=Z,170nm,7.5s						
BJI				LR	LR		
	comp=N,760nm,13.1s						
BJI				LR	LR		
	comp=E,600nm,11.8s						
BJI				LR	LR		
	comp=Z,330nm,18.1s						
XAN	Xi'an	19.37	296	P	P	07 21 46.7	-1.3
XAN				pP	pP	07 21 51.5	-0.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,55nm,10.8s						
GUMO	Guam	19.39	131	LR	LR	07 27 25.2	
	comp=Z,432nm,20.6s,baz=89,slow=31						
ASAJ	Asahikawa	19.70	28	P	P	07 21 49.2	-2.3
ASAJ	Asahikawa	19.70	28	P	P	07 21 49.2	-2.3
	comp=Z,0.3nm,0.3s,baz=204,slow=25,SNR=3.9						
QIZ	Qiongzhong	20.23	251	P	P	07 21 57.0	-0.5
QIZ				S	S	07 25 43.9	-0.2
QIZ				pmax	pmax		
	comp=Z,19nm,2.3s						
QIZ				pmax	pmax		
	comp=Z,120nm,3.5s						
QIZ				LR	LR		
	comp=N,360nm,10.4s						
QIZ				LR	LR		
	comp=Z,390nm,12.6s						
HHC	Hu-ho-hao-te	20.42	317⇑	eP	Pn	07 22 01.1	-0.5
HHC				pP	pP	07 22 05.1	+1.3
HHC				sP	sP	07 22 08.1	+2.3
HHC				PP	PnPn	07 22 21.8	+5.1
HHC				S	S	07 25 44.1	-3.6
HHC				sS	Sn	07 25 50.2	-1.3
HHC				SS	SnSn	07 26 13.9	+7.8
HHC				PcS	PcS	07 29 49.6	+0.3
HHC				ScS	ScS	07 33 29.5	-1.1
HHC				pmax	pmax		
	comp=Z,39nm,1.2s						
HHC				pmax	pmax		
	comp=Z,270nm,5.5s						
HHC				LR	LR		
	comp=N,340nm,18.2s						
HHC				LR	LR		
	comp=E,310nm,17.4s						
HHC				LR	LR		
	comp=Z,400nm,19.6s						
GYA	Guiyang	20.84	273⇑	iP	Pn	07 22 07.7	+1.0
GYA				PcP	PcP	07 26 13.8	+1.1
GYA				ScP	ScP	07 29 50.0	+1.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,520nm,14.8s						
GYA				LR	LR		
	comp=E,480nm,15.2s						
GYA				LR	LR		
	comp=Z,510nm,14.6s						
YUK	Yuzh-Kuril'sk	21.11	33d	iP	P	07 22 01.8	-5.0
YUK				i PPP	PPP	07 22 29.9	
YUK				i S	S	07 26 00.1	-1.1
YUK				i SS	SnSn	07 26 24.2	+1.2
YUK				i SSS	SSS	07 26 49.7	
YUK				pmax	pmax		
	comp=N,53nm,0.5s						
YUK				pmax	pmax		
	comp=E,69nm,0.5s						
YUK				pmax	pmax		
	comp=Z,114nm,0.5s						
YUK				pmax	pmax		
	comp=Z,131nm,1.0s						
YUK				MLR	MLR		
	comp=Z,316nm,21.0s						
BTO	Baotou	21.25	314	eP	P	07 22 09.1	+0.7
HABR	Khabarovsk	21.60	9	eP	P	07 22 10.5	-1.5
HABR				PPP	PPP	07 22 38.7	
HABR				eS	S	07 26 09.2	-1.6
HABR				e*SS	sS	07 26 14.3	-3.5
HABR				eSSS	SSS	07 26 47.1	
HABR				pmax	pmax		
	comp=E,24nm,1.4s						
HABR				pmax	pmax		
	comp=N,8.0nm,1.1s						
HABR				pmax	pmax		
	comp=Z,17nm,1.0s						
HABR				MLR	MLR		
	comp=Z,476nm,17.0s						
KLR	Kul'dur	22.04	3	eP	P	07 22 10.8	-5.9
KLR				MLR	MLR		
	comp=Z,2µm,13.0s						
YSS	Yuzh-Sakhalins	22.14	24⇑	eP	P	07 22 18.8	+1.1
YSS				e*SP	sP	07 22 23.0	-1.1
YSS				eS	S	07 26 19.0	-2.1
YSS				e		07 26 34.0	
YSS				pmax	pmax		
	comp=N,30nm,1.1s						
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
CD2	Chengdu	23.23	285	P	P	07 22 29.4	-0.1
CD2				pP	pP	07 22 33.6	-0.3
CD2				sP	sP	07 22 36.4	+0.5
CD2				PP	PnPn	07 22 59.8	+4.7
CD2				PcP	PcP	07 26 19.4	+2.1
CD2				S	S	07 26 36.7	-4.4
CD2				sS	sS	07 26 43.1	-5.7
CD2				SS	SnSn	07 27 21.7	+6.8
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,170nm,4.5s						
CD2				LR	LR		
	comp=N,2µm,12.7s						
CD2				LR	LR		
	comp=E,2µm,12.1s						
CD2				LR	LR		
	comp=Z,3µm,11.9s						
LZH	Lanzhou	23.92	298	eP	P	07 22 34.5	-1.8
LZH				pP	pP	07 22 37.7	-3.3
LZH				sP	sP	07 22 39.4	-3.5
LZH				S	S	07 26 47.0	-5.4
LZH				sS	sS	07 26 54.3	-5.7
LZH				SS	SnSn	07 27 33.1	+1.1
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.0s						
LZH				LR	LR		
	comp=N,950nm,12.7s						
LZH				LR	LR		
	comp=E,1µm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,14.2s						
KMI	Kunming	24.55	271	P	P	07 22 42.5	+0.2
KMI				S	S	07 27 02.9	+0.2
KMI				pmax	pmax		
	comp=Z,31nm,0.8s						
KMI				pmax	pmax		
	comp=Z,80nm,3.8s						
KMI				LR	LR		
	comp=N,670nm,12.2s						
KMI				LR	LR		
	comp=E,1µm,12.8s						
KMI				LR	LR		
	comp=Z,1µm,12.8s						
ULN	Ulaanbaatar	27.33	325	eP	P	07 23 07.0	-0.2
	comp=Z,6.7nm,0.9s						
SONM	Songino Array	27.65	324	P	P	07 23 11.5	+1.5
SONM	Songino Array	27.65	324	P	P	07 23 11.5	+1.5
	comp=Z,3.8nm,1.0s,baz=141,slow=8.8,SNR=12						
SONM				LR	LR	07 35 13.9	
	comp=Z,303nm,18.6s,baz=76,slow=39						
GTA	Gaotai	27.89	304	eP	P	07 23 10.7	-1.5
GTA				pP	pP	07 23 14.4	-2.5
GTA				sP	sP	07 23 17.1	-1.8
GTA				S	S	07 27 52.7	-2.6
GTA				sS	sS	07 27 59.3	-3.8
GTA				SS	SnSn	07 29 09.2	+0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GTA				pmax	pmax		
	comp=Z,82nm,4.8s						
GTA				LR	LR		
	comp=N,940nm,13.3s						
GTA				LR	LR		
	comp=E,1µm,11.9s						
GTA				LR	LR		
	comp=Z,1µm,12.8s						
CHTO	Chiang Mai	29.72	260	eP	P	07 23 28.7	+0.1
CHTO				pmax	pmax		
	comp=Z,12nm,0.9s						
CHTO	Chiang Mai	29.72	260	eP	P	07 23 28.7	+0.1
	comp=Z,12nm,0.9s						
CMAR	Chiang Mai Arr	29.86	260	P	P	07 23 31.2	+1.4
CMAR	Chiang Mai Arr	29.86	260	P	P	07 23 31.2	+1.4
	comp=Z,2.7nm,0.7s,baz=57,slow=7.9,SNR=20						
CMAR				LR	LR	07 35 50.4	
	comp=Z,105nm,18.4s,baz=75,slow=37						
PETK	Petropavlovsk-	33.05	31	P	P	07 23 57.4	-0.1
PETK				pmax	pmax		
	comp=Z,11nm,1.0s						
PETK				MLR	MLR		
	comp=Z,58nm,19.7s						
PETK	Petropavlovsk-	33.05	31	P	P	07 23 57.4	-0.1
PETK	Petropavlovsk-	33.05	31	P	P	07 23 57.4	-0.1
	comp=Z,11nm,1.0s,baz=225,slow=3.6,SNR=7.7						
PETK				LR	LR	07 36 27.3	
	comp=Z,58nm,19.6s,baz=231,slow=35						
KAPI	Kappang	33.52	199	LR	LR	07 36 25.3	
	comp=Z,95nm,21.6s,baz=285,slow=34						
YAK	Yakutsk	34.83	360	eP	P	07 24 12.6	-0.2
YAK				e		07 24 21.6	
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
YAK				pmax	pmax		
	comp=N,12nm,1.1s						
TAPN	Taplejung	37.46	280	eP	P	07 24 36.5	+0.3
WMQ	Urumqi	37.78	307	eP	P	07 24 39.3	+0.9
WMQ				pP	pP	07 24 43.8	+0.7
WMQ				sP	sP	07 24 46.3	+1.3
WMQ				PP	PnPn	07 26 08.1	+2.4
WMQ				PcP	PcP	07 26 56.8	+1.8
WMQ				S	S	07 30 28.7	+0.1
WMQ				sS	sS	07 30 36.0	-0.4
WMQ				ScP	ScP	07 30 42.1	+0.1
WMQ				SS	SnSn	07 33 03.0	-5.8
WMQ				ScS	ScS	07 34 49.9	-0.9
WMQ				pmax	pmax		
	comp=Z,17nm,0.4s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.8s						
WMQ				LR	LR		
	comp=Z,230nm,18.2s						
ODAN	Odare	37.83	280	eP	P	07 24 39.0	-0.2
	comp=Z,53nm,0.7s						
RAMN	Ramite	38.51	280	eP	P	07 24 45.3	+0.3
SEY	Seymchan	38.65	16⇑	eP	P	07 24 45.7	+0.4
GUN	Gumba	38.97	282	eP	P	07 24 49.4	+0.4
PKI	Pulchoki	39.44	281	eP	P	07 24 52.9	0.0
	comp=Z,40nm,0.9s						
PKIN	Phulchoki	39.45	281	eP	P	07 24 52.9	0.0
	comp=Z,51nm,1.1s						
KKN	Kakani	39.52	282	eP	P	07 24 53.3	-0.1
	comp=Z,58nm,0.9s						
DMN	Daman	39.70	281	eP	P	07 24 54.8	-0.1
	comp=Z,52nm,0.9s						
DANN	Dangsing	40.74	283	eP	P	07 25 04.0	+0.4
	comp=Z,47nm,0.7s						
KOLN	Koldanda	40.98	282	eP	P	07 25 05.8	+0.3
	comp=Z,33nm,0.9s						
PYUN	Piuthan	41.46	283	eP	P	07 25 09.7	+0.3
	comp=Z,106nm,1.0s						
MKAR	Makanchi Array	42.10	311	P	P	07 25 12.4	-1.8
MKAR						07 27 08.5	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,135nm,18.4s						
MKAR	Makanchi Array	42.10	311	P	P	07 25 12.4	-1.8
MKAR				PcP	PcP	07 27 08.4	-0.3
MKAR	Makanchi Array	42.10	311	P	P	07 25 12.4	-1.8
	comp=Z,1.1nm,0.7s,baz=98,slow=9.6,SNR=4.2						
MKAR				PcP	PcP	07 27 08.5	-0.3
	comp=Z,1.4nm,0.9s,baz=87,slow=2.3,SNR=4.1						
MKAR				LR	LR	07 44 57.7	
	comp=Z,135nm,18.4s,baz=256,slow=39						
ZALV	Zalesovo Beam	42.46	322	P	P	07 25 15.4	-1.6
ZALV						07 27 08.9	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZALV				MLR	MLR		
	comp=Z,147nm,18.5s						
ZALV	Zalesovo Beam	42.46	322	P	P	07 25 15.4	-1.6
ZALV				PcP	PcP	07 27 08.9	-0.8
ZALV	Zalesovo Beam	42.46	322	P	P	07 25 15.4	-1.6
	comp=Z,0.9nm,0.4s,baz=107,slow=9.5,SNR=6.3						
ZALV				PcP	PcP	07 27 08.9	-0.8
	comp=Z,1.8nm,0.8s,baz=116,slow=3.4,SNR=5.1						
ZALV				LR	LR	07 42 51.8	
	comp=Z,147nm,18.5s,baz=68,slow=36						
TIXI	Tiksi	44.50	359	eP	P	07 25 34.3	+1.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TIXI	Tiksi	44.50	359	eP	P	07 25 34.3	+1.2
	comp=Z,4.2nm,0.7s						
KURK	Kurchatov	45.23	316⇓	eP	P	07 25 38.1	-1.2
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURK				MLR	MLR		
	comp=Z,323nm,15.0s						
KURK	Kurchatov	45.23	316	eP	P	07 25 38.1	-1.2
KURBB	Kurchatov Arra	45.27	315	P	P	07 25 38.0	-1.6
	comp=Z,4.1nm,1.0s,baz=101,slow=8.3,SNR=9.1						
KURBB				LR	LR	07 46 15.3	
	comp=Z,306nm,18.2s,baz=100,slow=38						
KSH	Kashi	46.15	300	eP	P	07 25 50.3	+3.4
KSH				epP	pP	07 25 55.9	+4.1
KSH				esP	sP	07 25 57.3	+3.6
KSH				ePcP	PcP	07 27 25.2	+2.4
KSH				ePP	PP	07 27 39.3	+4.1
KSH				eScP	ScP	07 31 16.1	+0.5
KSH				ePcS	PcS	07 31 18.5	+1.1
KSH				eS	S	07 32 36.7	+4.1
KSH				esS	sS	07 32 44.1	+3.5
KSH				eScS	ScS	07 35 42.2	-0.1
KSH				eSS	SS	07 35 54.4	-3.3
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,290nm,5.3s						
KSH				LR	LR		
	comp=N,710nm,12.8s						
KSH				LR	LR		
	comp=E,960nm,10.6s						
KSH				LR	LR		
	comp=Z,450nm,5.8s						
BILL	Bilibino	46.26	18⇓	eP	P	07 25 47.2	0.0
BILL				e*PP	pP	07 25 54.2	+2.2
BILL				e		07 27 23.1	
BILL				e		07 27 33.3	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WRA	Warramunga Arr	47.05	174	P	P	07 25 52.7	-1.2
WRA				PcP	PcP	07 27 25.6	-0.3
WRA	Warramunga Arr	47.05	174	P	P	07 25 52.7	-1.2
	comp=Z,9.3nm,0.9s,baz=352,slow=8.3,SNR=6.8						
WRA				PcP	PcP	07 27 25.6	-0.3
	comp=Z,2.9nm,0.9s,baz=354,slow=3.8,SNR=4.3						
CTA	Charters Tower	49.57	160	P	P	07 26 13.5	+0.2
CTA	Charters Tower	49.57	160	P	P	07 26 13.5	+0.2
	comp=Z,18nm,0.9s,baz=356,slow=13,SNR=9.1						
BVAR	Borovoye Array	50.63	318	P	P	07 26 20.4	-0.7
BVAR						07 27 38.3	
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR				MLR	MLR		
	comp=Z,511nm,18.3s						
BVAR	Borovoye Array	50.63	318	P	P	07 26 20.4	-0.7
BVAR				PcP	PcP	07 27 38.3	-0.2
BVAR	Borovoye Array	50.63	318	P	P	07 26 20.4	-0.7
	comp=Z,1.7nm,0.6s,baz=83,slow=12,SNR=9.5						
BVAR				PcP	PcP	07 27 38.3	-0.2
	comp=Z,1.6nm,0.7s,baz=102,slow=6.1,SNR=2.3						
BVAR				LR	LR	07 49 56.3	
	comp=Z,511nm,18.3s,baz=288,slow=39						
BRVK	Borovoye	50.69	318⇓	eP	P	07 26 22.8	+1.2
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRVK	Borovoye	50.69	318	eP	P	07 26 22.7	+1.1
	comp=Z,19nm,1.2s						
ASAR	Alice Springs	50.70	175	P	P	07 26 19.6	-2.4
ASAR				PcP	PcP	07 27 38.9	-0.2
ASAR	Alice Springs	50.70	175	P	P	07 26 19.6	-2.4
	comp=Z,3.6nm,0.8s,baz=359,slow=7.3,SNR=4.7						
ASAR				PcP	PcP	07 27 38.9	-0.2
	comp=Z,3.0nm,1.0s,baz=358,slow=5.6,SNR=3.9						
GAMB	Gambell	52.03	29	eP	P	07 26 31.5	+0.1
	comp=Z,9.8nm,1.2s						
SVE	Sverdlovsk	56.48	322⇓	eP	P	07 27 05.9	+2.0
SVE				e		07 30 34.3	
SVE				eS	S	07 34 54.4	0.0
SVE				pmax	pmax		
	comp=Z,30nm,1.3s						
SVE				MLR	MLR		
	comp=Z,454nm,15.0s						
ABKAR	Akbulak array	57.15	313	eP	P	07 27 08.5	-0.3
ARU	Arti	57.63	321d	iP	P	07 27 12.7	+0.6
ARU						07 28 02.2	
ARU						07 29 19.8	
ARU				S	S	07 35 12.9	+3.4
ARU				SS	SS	07 38 54.2	-5.1
ARU				pmax	pmax		
	comp=Z,11nm,1.0s						
AKTO	Aktyubinsk	58.29	314	P	P	07 27 17.7	+0.8
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKTO	Aktyubinsk	58.29	314	P	P	07 27 17.7	+0.8
AKTO	Aktyubinsk	58.29	314	P	P	07 27 17.7	+0.8
	comp=Z,2.3nm,0.9s,baz=84,slow=2.6,SNR=6.4						
STKA	Stephens Creek	59.77	169	LR	LR	07 52 15.0	
	comp=Z,118nm,21.9s,baz=116,slow=35						
DZM	Mont Dzumac	60.34	141	eS	S	07 35 43.3	-2.3
	comp=Z,110nm,26.6s						
DZM				eLR	LR	07 45 19.5	
	comp=Z,167nm,26.6s						
DZM	Mont Dzumac	60.34	141	LR	LR	07 47 52.9	
	comp=Z,137nm,21.6s,baz=351,slow=30						
PPLA	Purkeypile	60.64	31	eP	P	07 27 34.0	+0.9
	comp=Z,35nm,1.5s						
SPU	Mount Spurr	60.80	33	eP	P	07 27 34.7	+0.6
MCK	McKinley	62.05	30	eP	P	07 27 42.7	+0.3
MCK				pmax	pmax		
	comp=Z,21nm,1.1s						
MCK	McKinley	62.05	30	eP	P	07 27 42.7	+0.3
	comp=Z,21nm,1.1s						
PMR	Palmer	62.17	32	eP	P	07 27 42.8	-0.4
PMR				e*PP	pP	07 27 52.3	+4.2
PMR				pmax	pmax		
	comp=Z,11nm,1.1s						
PMR	Palmer	62.17	32	eP	P	07 27 42.8	-0.4
	comp=Z,11nm,1.1s						
PMR				epP	pP	07 27 52.3	+4.2
SEW	Seward	62.18	34	eP	P	07 27 43.1	-0.1
	comp=Z,29nm,1.2s						
COLA	College	62.41	29	eP	P	07 27 45.3	+0.6
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
COLA	College	62.41	29	eP	P	07 27 45.3	+0.6
	comp=Z,5.1nm,0.9s						
SML	Sawmill	62.52	32	eP	P	07 27 46.6	+1.0
SML				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SML	Sawmill	62.52	32	eP	P	07 27 46.6	+1.0
	comp=Z,4.1nm,1.2s						
ILAR	Eielson Array	62.84	29	P	P	07 27 46.6	-1.0
ILAR	Eielson Array	62.84	29	P	P	07 27 46.6	-1.0
	comp=Z,1.8nm,0.8s,baz=270,slow=5.7,SNR=19						
DIV	Divide	63.83	33	eP	P	07 27 55.1	+0.8
	comp=Z,18nm,1.2s						
DOT	Dot Lake	64.21	30	eP	P	07 27 56.9	+0.1
	comp=Z,11nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BMRM	Bremner River	64.42	33	eP	P	07 27 58.6	+0.4
	comp=Z,21nm,1.1s						
MENT	Mentasta	64.49	30	eP	P	07 27 59.2	+0.6
MAK	Makhachkala	66.80	308	eP	P	07 28 21.4	+7.6
APA	Apatity	67.64	336	⇑eP	P	07 28 17.2	-1.5
APA				MLR	MLR		
	comp=Z,1μm,17.0s						
VRHR	Novokhopersk	68.37	317	eP	P	07 28 23.3	-0.2
VRHR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VRHR				pmax	pmax		
	comp=N,9.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.6s						
KEV	Kevo	69.12	339	eP	P	07 28 25.6	-2.3
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KEV	Kevo	69.12	339	ep	P	07 28 25.6	-2.3
	comp=Z,5.9nm,0.7s						
MOS	Moscow	69.27	323	eP	P	07 28 38.2	+9.1
SKAG	Skagway	69.28	33	eP	P	07 28 30.3	+1.3
	comp=Z,12nm,1.2s						
ZEI	Tsey	69.39	308	eP	P	07 28 31.0	+0.6
ZEI				pmax	pmax		
	comp=Z,13nm,1.0s						
ARCES	ARCESS Array B	69.69	339	P	P	07 28 33.7	+2.2
ARCES	ARCESS Array B	69.69	339	P	P	07 28 33.7	+2.2
	comp=Z,3.4nm,0.9s,baz=77,slow=9.5,SNR=2.6						
ARCES				LR	LR	08 06 00.1	
	comp=Z,149nm,18.1s,baz=223,slow=42						
KBZ	Khabaz	69.78	310	LR	LR	08 02 41.9	
	comp=Z,137nm,18.3s,baz=143,slow=39						
VSR	Storozhevoye	69.81	318	eP	P	07 28 33.8	+1.3
VSR				pmax	pmax		
	comp=N,10.0nm,1.1s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.1s						
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV	Kislovodsk	69.85	310	eP	P	07 28 35.4	+2.4
KIV				pmax	pmax		
	comp=Z,35nm,1.1s						
KIV				MLR	MLR		
	comp=Z,145nm,19.0s						
JOF	Joensuu	69.97	331	eP	P	07 28 34.7	+1.4
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JOF	Joensuu	69.97	331	ep	P	07 28 34.7	+1.4
	comp=Z,3.1nm,0.6s						
OBN	Obninsk	70.04	322	i P	P	07 28 35.8	+2.0
OBN				e		07 28 42.6	
OBN				e		07 28 55.1	
OBN				eSS	SS	07 42 16.6	+4.0
OBN				pmax	pmax		
	comp=Z,9.0nm,1.3s						
OBN				MLR	MLR		
	comp=Z,200nm,15.0s						
BHD	Baghdad	72.24	299	ex	P	07 28 46.0	-1.6
BHD				ex	x	07 28 59.0	
BHD				ex	x	07 31 27.0	
BHD				ex	S	07 38 07.0	-3.0
BHD				ex	x	07 42 46.0	
BHD				ex	x	07 47 55.0	
BHD				ex	x	07 51 17.0	
KAF	Kangasniemi	72.42	331	eP	P	07 28 51.5	+3.4
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KAF	Kangasniemi	72.42	331	ep	P	07 28 51.5	+3.4
	comp=Z,2.9nm,0.7s						
FINES	FINESS Array B	72.80	331	P	P	07 28 49.9	-0.5
FINES	FINESS Array B	72.80	331	P	P	07 28 49.9	-0.5
	comp=Z,6.1nm,0.9s,baz=81,slow=5.4,SNR=9.3						
FINES				LR	LR	08 03 11.3	
	comp=Z,178nm,19.6s,baz=90,slow=38						
RES	Resolute Bay	74.30	11	eP	P	07 28 59.0	0.0
	comp=Z,6.5nm,0.9s						
AKASG	Malin Array Be	75.83	320	i P	P	07 29 08.6	+0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	75.83	320	P	P	07 29 08.0	-0.2
AKASG	Malin Array Be	75.83	320	P	P	07 29 08.0	-0.2
	comp=Z,0.9nm,0.4s,baz=56,slow=6.3,SNR=8.1						
AKASG				LR	LR	08 05 19.2	
	comp=Z,211nm,19.1s,baz=75,slow=38						
YKA	Yellowknife Ar	76.98	26	P	P	07 29 14.6	0.0
YKA	Yellowknife Ar	76.98	26	P	P	07 29 14.5	0.0
	comp=Z,2.6nm,0.8s,baz=303,slow=5.5,SNR=26						
BR131	Keskin Array S	77.69	308	eP	P	07 29 19.4	+0.2
	comp=Z,0.6nm,0.4s						
BRTR	Keskin Array B	77.69	308	P	P	07 29 19.4	+0.2
BRTR	Keskin Array B	77.69	308	P	P	07 29 19.4	+0.2
	comp=Z,3.6nm,1.0s,baz=90,slow=3.7,SNR=11						
BRTR				LR	LR	08 08 52.8	
	comp=Z,64nm,18.1s,baz=64,slow=40						
NB2	NORSAR Subarra	79.14	334	P	P	07 29 25.9	-0.8
	comp=Z,2.8nm,0.8s,baz=49,slow=5.9						
NOA	NORSAR Array B	79.14	334	P	P	07 29 25.9	-0.8
NOA	NORSAR Array B	79.14	334	P	P	07 29 25.9	-0.8
	comp=Z,1.3nm,0.7s,baz=52,slow=5.5,SNR=3.3						
NOA				LR	LR	08 09 28.4	
	comp=Z,90nm,18.4s,baz=50,slow=40						
BUR08	Bucovina Ar. S	79.57	318	eP	P	07 29 30.2	+0.8
SUMG	Summit	80.18	356	i P	P	07 29 33.1	+0.6
SUMG				pmax	pmax		
	comp=Z,16nm,0.9s						
SUMG	Summit	80.18	356	eP	P	07 29 33.1	+0.6
	comp=Z,22nm,1.0s						
SUMG	Summit	80.18	356	i P	P	07 29 33.1	+0.6
	comp=Z,16nm,0.9s						
SCO	Scoresbysund	80.56	351	eP	P	07 29 36.5	+2.4
SCO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SCO	Scoresbysund	80.56	351	i P	P	07 29 36.5	+2.4
	comp=Z,4.3nm,0.9s						
OJC	Ojcow	81.33	322	eP	pP	07 29 50.4	+6.7
OJC	Ojcow	81.33	322	epP	pP	07 29 50.4	+6.7
DPC	Dobruska-Polom	83.12	324	eP	pP	07 29 54.2	+1.1
DPC	Dobruska-Polom	83.12	324	epP	pP	07 29 54.2	+1.1
CLL	Collm	84.26	326	eP	P	07 29 54.0	+0.2
CLL				e		07 30 01.0	
CLL	Collm	84.26	326	eP	P	07 29 54.0	+0.2
CLL				e(sP)	sP	07 30 01.0	+0.3
CONA	Conrad Observa	84.76	322	⇑iPcP	P	07 29 57.6	+1.1
	comp=Z,16nm,1.3s						
CONA	Conrad Observa	84.76	322	⇑iP	P	07 29 57.6	+1.1
	comp=Z,16nm,1.3s						
KHC	Kasperske Hory	85.28	324	eP	P	07 30 04.5	+5.5
KHC	Kasperske Hory	85.28	324	eP	P	07 30 04.5	+5.5
BSMT	Bassoo Peak	85.38	38	eP	P	07 30 00.0	+0.2
GERES	GERESS Array B	85.38	324	P	P	07 30 03.4	+3.7
GERES	GERESS Array B	85.38	324	P	P	07 30 03.4	+3.7
	comp=Z,1.5nm,0.7s,baz=54,slow=3.4,SNR=6.7						
GERES				LR	LR	08 11 14.2	
	comp=Z,195nm,18.4s,baz=72,slow=38						
SWMT	Swartz Lake	86.01	38	eP	P	07 30 04.0	+1.2
SLMT	Seeley Lake	86.45	38	eP	P	07 30 05.4	+0.4
FFC	Flin Flon	87.01	27	eP	P	07 30 07.4	0.0
FFC	Flin Flon	87.01	27	eP	P	07 30 07.4	0.0
LRM	Limekiln Ridge	87.88	38	eP	P	07 30 12.9	+0.8
EGMT	Eagleton	87.95	35	eP	P	07 30 12.8	+0.6
	comp=Z,14nm,1.3s						
DLMT	Dillon	88.08	39	eP	P	07 30 13.6	+0.6
	comp=Z,11nm,1.1s						
DLMT				epP	pP	07 30 21.4	+3.3
HLID	Hailey	88.13	41	eP	P	07 30 14.3	+1.0
	comp=Z,2.4nm,0.9s						
FUORN	Ofenpass-Fuorn	88.58	323	epP	pP	07 30 21.0	+0.4
NVAR	Mina Array Bea	88.69	47	P	P	07 30 16.6	+0.5
NVAR	Mina Array Bea	88.69	47	P	P	07 30 16.6	+0.5
	comp=Z,0.7nm,0.8s,baz=276,slow=5.7,SNR=6.3						
PPT	Papeete	89.71	110	LR	LR	08 10 12.7	
	comp=Z,174nm,18.4s,baz=229,slow=35						
PPT2	Papeete2	89.72	110	eLR	LR	07 58 51.2	
	comp=Z,74nm,22.2s						
IMW	Indian Meadow	89.92	39	eP	P	07 30 23.6	+1.8
	comp=Z,4.7nm,1.0s						
DUG	Dugway	91.11	43	eP	P	07 30 27.6	+0.3
DUG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DUG	Dugway	91.11	43	eP	P	07 30 27.6	+0.3
	comp=Z,6.1nm,1.2s						
MWC	Mount Wilson	91.21	50	eP	P	07 30 23.1	-4.8
MWC				pmax	pmax		
	comp=Z,28nm,1.0s						
MWC	Mount Wilson	91.21	50	eP	P	07 30 23.1	-4.8
	comp=Z,28nm,1.0s						
PDAR	Pinedale Array	91.42	39	P	P	07 30 28.9	+0.2
PDAR	Pinedale Array	91.42	39	P	P	07 30 28.9	+0.2
	comp=Z,2.1nm,0.9s,baz=321,slow=1.4,SNR=15						
MSU	Marysvale	92.53	44	eP	P	07 30 35.6	+1.6
MSU	Marysvale	92.53	44	eP	P	07 30 35.6	+1.6
TBI	Tubuai	92.55	115	eLR	LR	08 00 04.0	
	comp=Z,68nm,22.0s						

IDC 06 07:38:25.6±9.0, 17°.55S×172°.47W, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.4/19, mbtmp3.3/3, Error ellipse: s-maj=391.1km s-min=41.0km az=140.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	50.26	258	P	P	07 47 24.8	+0.7
	0.1nm,0.3s,baz=95,slow=7.5,SNR=6.1						
ASAR	Alice Springs	50.33	254	P	P	07 47 23.6	-1.0
	0.1nm,0.3s,baz=96,slow=7.6,SNR=4.4						
ILAR	Eielson Array	84.38	11	P	P	07 50 59.3	0.0
	0.2nm,0.5s,baz=188,slow=6.0,SNR=4.1						

IDC 06 07:47:13.4±3.1, 28°.23N×55°.45E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.5/28, mbtmp3.7/5, Error ellipse: s-maj=70.4km s-min=29.8km az=151.0
CSEM 06 07:47:16.4, 28°.42N×55°.32E, h14^{km}, ML3.3, After THR
ISCJB 06 07:47:16.6±0.8, 28°.3N±0°.1×55°.16E±0°.07, h22^{km}, mb3.6/5, Error ellipse: s-maj=14.6km s-min=9.1km az=4.8
ISC 06 07:47:17.6±0.9, 28°.37N±0°.07×55°.32E±0°.06, h22^{km}, n10, σ0s.86/11, mb3.7/5, Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	1.23	142	ePg	Pb	07 47 40.0	-0.2
KRBR	Kerman	2.04	38	ePg	Pb	07 47 53.0	-1.1
GHIR	Ghir-Karzin	2.06	268	ePg	Pb	07 47 54.0	-0.4
NASN	Na'in	4.92	334	ePn	Pn	07 48 31.8	+1.3
NAY	Al-Naaiem	7.14	279	eP	Pn	07 49 00.5	-0.3
NAY				eS	Sn	07 50 20.4	-1.0
NAY				AML	AML	07 50 24.5	
	comp=Z,4.3nm,0.5s						
BRTR	Keskin Array B	21.18	308	P	P	07 52 02.2	+0.6
	comp=Z,0.5nm,0.5s,baz=129,slow=14,SNR=3.3						
BVAR	Borovoye Array	27.03	20	P	P	07 52 58.6	+0.6
	comp=Z,0.8nm,0.7s,baz=216,slow=7.1,SNR=5.5						
ZALV	Zalesovo Beam	33.42	32	P	P	07 53 53.6	-0.8
	comp=Z,0.9nm,0.5s,baz=227,slow=9.6,SNR=4.6						
FINES	FINESS Array B	38.37	338	P	P	07 54 37.4	+0.6
	comp=Z,2.0nm,0.9s,baz=138,slow=13,SNR=3.9						
TORD	Torodi Ar. Bea	51.98	265	P	P	07 56 25.5	0.0
	comp=Z,0.5nm,0.6s,baz=60,slow=8.0,SNR=4.7						

CSEM 06 08:11:38.2±0.2, 41°.79N×22°.09E, h20^{km}, ML2.0, Error ellipse: s-maj=4.7km s-min=3.7km az=44.0
BEO 06 08:11:38.9±0.6, 41°.82N×22°.10E, h8^{km}±8^{km}, ML1.9/6
SKO 06 08:11:38.1, 41°.83N×22°.11E, h11^{km}, M1.4, ML2.0
ISC 06 08:11:38.2±1.0, 41°.82N±0°.03×22°.08E±0°.03, h9^{km}±14^{km}, n17, σ0s.45/29, 2C-6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKO	Skopje	0.50	287	i Pg	Pb	08 11 49.0	-0.3
SKO				i Sg	Sg	08 11 55.2	+0.6
SKO				eLg	Lg	08 11 56.3	
	comp=N,51nm,0.4s						
SKO				eLg	Lg	08 11 57.0	
	comp=E,54nm,0.6s						
SKO	Skopje	0.50	287	ePg	Pb	08 11 49.1	-0.2
SKO				eSg	Sg	08 11 55.1	+0.5
SKO				eLg	Lg	08 11 56.4	
	comp=N,51nm,0.4s						
SKO				eLg	Lg	08 11 57.1	
	comp=E,54nm,0.6s						
SKO	Skopje	0.50	287	ePg	Pb	08 11 49.2	-0.1
SKO	Skopje	0.50	287	ePg	Pb	08 11 49.2	-0.1
SKO				eSg	Sg	08 11 55.5	+0.9
SKO				eLg	Lg	08 11 57.6	
	comp=E,54nm,0.6s						
VAY	Valandovo	0.62	144	i Pg	Pg	08 11 50.1	-0.2
VAY				i Sg	Sg	08 11 58.6	+0.3
VAY				eLg	Lg	08 11 59.0	
	comp=E,50nm,0.4s						
VAY				eLg	Lg	08 12 00.1	
	comp=N,44nm,0.5s						
VAY	Valandovo	0.62	144	i Pg	Pg	08 11 50.1	-0.2
VAY				i Sg	Sg	08 11 58.7	+0.3
VAY				eLg	Lg	08 11 59.0	
	comp=E,50nm,0.4s						
VAY				eLg	Lg	08 12 00.7	
	comp=N,44nm,0.5s						
VAY	Valandovo	0.62	144	ePg	Pg	08 11 50.0	-0.2
VAY				⇓iSg	Sg	08 11 58.6	+0.3
VAY	Valandovo	0.62	144	ePg	Pg	08 11 50.0	-0.2
VAY				⇓iSg	Sg	08 11 58.6	+0.3
VAY				eLg	Lg	08 12 01.2	
	comp=N,44nm,0.5s						
BIA	Bitola	0.99	216	ePg	Pg	08 11 56.8	-0.3
BIA	Bitola	0.99	216	ePg	Pg	08 11 56.4	-0.8
BIA	Bitola	0.99	216	ePg	Pg	08 11 56.4	-0.8
BARS	Barje	1.01	349	ePg	Pg	08 11 57.1	-0.6
BARS				⇓iSg	Sg	08 12 11.1	+0.3
BARS	Barje	1.01	349	ePg	Pg	08 11 57.1	-0.6
BARS				⇓iSg	Sg	08 12 11.1	+0.3
VTS	Vitosha	1.13	47	⇑iPg	Pb	08 11 59.8	-0.3
VTS				⇓iSg	Sg	08 12 15.1	+0.3
VTS	Vitosha	1.13	47	⇑iPg	Pb	08 11 59.8	-0.3
VTS				⇓iSg	Sg	08 12 15.1	+0.3
ZAPS	Zavoj	1.50	15	ePg	Pb	08 12 06.4	0.0
SELS	Selova	1.57	333	ePg	Pn	08 12 06.4	+0.1
SELS				eSg	Sb	08 12 28.0	+0.6

NEIC 06 08:16:52.8, 17°.44N×95°.14W, h137^{km}, MD4.2(MEX), After MEX.
MEX 06 08:16:52.8±1.0, 17°.44N×95°.14W, h137^{km}±19^{km}, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.56	257	eP	Pn	08 17 21.8	-0.6
VHO				i S	Sn	08 17 42.9	-2.1
VHO	Vista Hermosa	1.56	257	eP	Pn	08 17 21.8	-0.6
VHO				i S	Sn	08 17 42.9	-2.1
HUIG	Huatulco	1.90	209	i P	Pn	08 17 24.8	-1.3
HUIG				i S	Sn	08 17 49.6	-2.0
HUIG	Huatulco	1.90	209	i P	Pn	08 17 24.8	-1.3
HUIG				i S	Sn	08 17 49.6	-2.0
TGIG		2.04	109	eP	Pn	08 17 26.7	-1.1
TGIG				i S	Sn	08 17 51.9	-2.6
TGIG		2.04	109	eP	Pn	08 17 26.7	-1.1
TGIG				i S	Sn	08 17 51.9	-2.6
TPIG	Tehuac#an	2.33	295	eP	Pn	08 17 29.9	-1.5
TPIG				i S	Sn	08 17 58.3	-2.8
TPIG	Tehuac#an	2.33	295	eP	Pn	08 17 29.9	-1.5
TPIG				i S	Sn	08 17 58.3	-2.8
UTMO	Huajuapan	2.57	279	i P	Pn	08 17 33.4	-1.1
UTMO				i S	Sn	08 18 05.5	-1.0
UTMO	Huajuapan	2.57	279	i P	Pn	08 17 33.4	-1.1
UTMO				i S	Sn	08 18 05.5	-1.0
PNIG	Pinotepa	3.04	250	i P	Pn	08 17 37.7	-2.6
PNIG				i S	Sn	08 18 15.2	-1.8
PNIG	Pinotepa	3.04	250	i P	Pn	08 17 37.7	-2.6
PNIG				i S	Sn	08 18 15.2	-1.8
CCIG	Comitan	3.10	111	eP	Pn	08 17 40.2	-1.0
CCIG				i S	Sn	08 18 16.5	-2.1
CCIG	Comitan	3.10	111	eP	Pn	08 17 40.2	-1.0
CCIG				i S	Sn	08 18 16.5	-2.1
YAIG	Yautepec	3.99	291	eP	Pn	08 17 51.8	-1.0
YAIG				i S	Sn	08 18 37.1	-2.3
YAIG	Yautepec	3.99	291	eP	Pn	08 17 51.8	-1.0
YAIG				i S	Sn	08 18 37.1	-2.3

NNC 06 08:21:27.4±3.7, 53°.95N×85°.89E, h0^{km}, mb3.6, mpv3.2, 9C-4D, Error ellipse: s-maj=28.9km s-min=19.2km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	Kurchatov	5.51	237	⇑Pn	Pn	08 22 53.3	+2.8
	3.7nm,1.0s						
KURK				⇑Sn	Sn	08 23 56.9	+2.3
	2.2nm,0.8s						
KURK				⇑Lg	Lg	08 24 25.7	
	6.4nm,0.8s						
KUR16	Kurchatov Arra	5.62	237	⇑Pn	Pn	08 22 54.6	+2.4
	0.3nm,0.8s						
KUR16				⇓Sn	Sn	08 23 59.3	+1.8
	0.1nm,0.8s						
KUR16				⇑Lg	Lg	08 24 29.8	
	0.7nm,1.5s						
MK31	Makanchi Array	7.52	199	⇑Pn	Pn	08 23 20.6	+2.3
	2.1nm,0.7s,baz=26,slow=13,SNR=31						
MK31				⇓Sn	Sn	08 24 49.7	+5.4
	1.6nm,0.8s,baz=27,slow=27,SNR=3.5						
MK31				⇓Lg	Lg	08 25 25.1	
	3.3nm,0.8s,baz=23,slow=32,SNR=4.2						
VOSK	Vostochnaya	9.01	268	⇑Pn	Pn	08 23 37.0	-1.6
	1.3nm,0.7s						
VOSK				⇑Sn	Sn	08 25 17.1	-3.6
	2.6nm,0.7s						
ZRNK	Zerenda	10.12	271	⇑Pn	Pn	08 23 55.3	+1.4
	3.7nm,0.7s						
ZRNK				⇓Sn	Sn	08 25 44.7	-3.3
	1.9nm,0.9s						

CSEM 06 08:28:50.5, 38°.13N×22°.66E, h26^{km}, MD3.5, After ATH
ATH 06 08:28:50.5, 38°.13N×22°.66E, h26^{km}±10^{km}, MD3.5/6, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KLV	Kalavryta, Ach	0.41	258	ePB	Pn	08 29 00.6	-0.3
KLV	Kalavryta, Ach	0.41	258	ePn	Pn	08 29 00.6	-0.3
KALE	Kalithea	0.48	303	ePB	Pb	08 29 00.9	+0.3
KALE				eSB	Sb	08 29 08.0	+0.5
KALE	Kalithea	0.48	303	ePb	Pb	08 29 00.9	+0.3
KALE				eSb	Sb	08 29 08.0	+0.5
LAKA	Lakka	0.55	282	ePN	Pb	08 29 02.1	+0.5
LAKA				eSN	Sb	08 29 09.7	+0.5
LAKA	Lakka	0.55	282	ePn	Pb	08 29 02.1	+0.5
LAKA				eSn	Sb	08 29 09.7	+0.5
LKR	Lokris	0.58	27	ePN	Pb	08 29 01.9	-0.3
LKR				eSN	Sn	08 29 11.6	-0.3
LKR	Lokris	0.58	27	ePn	Pb	08 29 01.9	-0.3
LKR				eSn	Sn	08 29 11.6	-0.3
NAIG	Nisos Aigina	0.75	119	ePN	Pn	08 29 05.3	-0.2
NAIG	Nisos Aigina	0.75	119	ePn	Pn	08 29 05.3	-0.2
ITM	Ithomi	1.11	212	ePN	Pb	08 29 11.9	+0.8
ITM	Ithomi	1.11	212	ePn	Pb	08 29 11.9	+0.8

CSEM 06 08:31:30.9±0.2, 37°.70N×36°.06E, h2^{km}, MD2.7, Error ellipse: s-maj=5.0km s-min=3.9km az=145.0
DDA 06 08:31:30.6, 37°.67N×36°.05E, h17^{km}, MD3.0
ISCJB 06 08:31:30.9±0.7, 37°.67N±0°.03×36°.10E±0°.03, h3^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=4.2km az=170.5
ISK 06 08:31:31.1, 37°.66N×36°.08E, h5^{km}, MD2.7
ISC 06 08:31:31.1±1.1, 37°.68N±0°.03×36°.09E±0°.02, h6^{km}±11^{km}, n26, σ0s.75/40, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOZT	Kozan	0.29	226	ePG	Pg	08 31 36.7	0.0
KOZT				eSG	Sg	08 31 41.0	+0.5
KOZT	Kozan	0.29	226	ePg	Pg	08 31 36.7	0.0
KOZT				eSg	Sg	08 31 41.0	+0.5
AYKD	Aykdinkavak	0.63	115	i P	Pg	08 31 42.7	-0.6
AYKD				i S	Sg	08 31 49.7	-1.8
KMRS	Kahramanmaras	0.67	105	ePG	Pg	08 31 44.5	+0.5
KMRS				eSG	Sg	08 31 53.7	+1.0
KMRS	Kahramanmaras	0.67	105	ePg	Pg	08 31 44.5	+0.5
KMRS				eSg	Sg	08 31 53.7	+1.0
CEYT	Ceyhan	0.72	202	ePG	Pg	08 31 45.2	+0.2
CEYT	Ceyhan	0.72	202	ePg	Pg	08 31 45.2	+0.2
SARI	SarD1z-Kayseri	0.77	20	ePG	Pg	08 31 46.4	+0.4
PINB	Pinarbasi	1.02	14	i P	Pg	08 31 49.9	-0.9
PINB				eS	Sg	08 32 04.4	+0.3
PINB	Pinarbasi	1.02	14	i P	Pg	08 31 49.9	-0.9
PINB				eS	Sg	08 32 04.4	+0.3
GAZ	Gaziantep	1.03	119	ePG	Pb	08 31 51.6	+0.2
GAZ	Gaziantep	1.03	119	ePg	Pb	08 31 51.6	+0.2
GULE	Gulek	1.11	250	i P	Pg	08 31 51.5	-1.0
GULE				i S	Sg	08 32 07.4	+0.4
GULE	Gulek	1.11	250	i P	Pg	08 31 51.5	-1.0
GULE				i S	Sg	08 32 07.4	+0.4
BNN	Bunyan	1.18	351	ePN	Pn	08 31 54.6	+0.2
BNN	Bunyan	1.18	351	ePn	Pn	08 31 54.6	+0.2
KUZU	Kuzuini	1.20	139	i P	Pg	08 31 53.4	-0.7
KUZU				i S	Sg	08 32 08.6	-1.1
KUZU	Kuzuini	1.20	139	i P	Pg	08 31 53.4	-0.7
KUZU				i S	Sg	08 32 08.6	-1.1
GZT	Gaziantep	1.22	105	i P	Pg	08 31 53.7	-0.8
GZT				i S	Sg	08 32 10.2	-0.1
DARE	Darende-Malaty	1.42	51	ePN	Pg	08 31 58.9	+0.6
AKCD	Akcadag	1.57	67	eP	Pn	08 31 59.8	0.0
AKCD				i S	Sn	08 32 20.5	-0.1
AKCD	Akcadag	1.57	67	eP	Pn	08 31 59.8	0.0
AKCD				i S	Sn	08 32 20.5	-0.1
MYA	Malataya	1.96	70	ePN	Pb	08 32 06.7	-0.5
MYA	Malataya	1.96	70	ePn	Pb	08 32 06.7	-0.5
URFA	Urfa	2.19	95	ePN	Pn	08 32 09.5	+1.4
URFA	Urfa	2.19	95	ePn	Pn	08 32 09.5	+1.4

IDC 06 08:49:47.8±1.3, 0°.40N×96°.57E, h31^{km}±7^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.5/26, mbtmp3.6/8, ML4.0/2, Error ellipse: s-maj=38.4km s-min=18.5km az=64.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.35	45	Pn	Pn	08 50 35.9	-2.5
	3.4nm,0.3s,baz=214,slow=8.2,SNR=5.4						
PSI				Sn	Sn	08 51 16.8	-0.4
	4.6nm,0.3s,baz=162,slow=18,SNR=6.9						
CMAR	Chiang Mai Arr	18.10	7	P	P	08 53 57.2	0.0
	0.6nm,0.3s,baz=197,slow=12,SNR=4.1						
WRA	Warramunga Arr	42.16	121	P	P	08 57 37.9	-0.1
	0.5nm,0.5s,baz=303,slow=8.1,SNR=11						
ASAR	Alice Springs	43.43	126	P	P	08 57 48.0	-0.3
	0.4nm,0.5s,baz=299,slow=8.1,SNR=8.5						
MKAR	Makanchi Array	47.87	347	P	P	08 58 22.7	-0.3
	0.5nm,0.6s,baz=157,slow=6.6,SNR=5.9						
MKAR				pP	pP	08 58 32.1	-0.1
	1.2nm,0.6s,baz=160,slow=8.1,SNR=10						
SONM	Songino Array	48.02	9	P	P	08 58 24.5	+0.3
	0.2nm,0.4s,baz=204,slow=4.9,SNR=3.7						
SONM				pP	pP	08 58 33.8	+0.3
	0.6nm,0.5s,baz=187,slow=11,SNR=3.4						
STKA	Stephens Creek	53.30	131	P	P	08 59 04.3	+0.1
	2.3nm,0.9s,baz=304,slow=9.1,SNR=4.2						
ZALV	Zalesovo Beam	54.25	351	P	P	08 59 10.7	-0.1
	1.1nm,0.3s,baz=175,slow=5.7,SNR=6.4						
ZALV				pP	pP	08 59 19.9	-0.3
	2.8nm,0.5s,baz=177,slow=6.7,SNR=6.5						
TXAR	Lajitas Array	144.68	31	PKP	PKPab	09 09 20.8	-0.3
	0.4nm,0.7s,baz=270,slow=1.2,SNR=5.6						

MEX 06 08:53:14.1±0.3, 16°.22N×98°.13W, h6^{km}±6^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.17	360	i P	Pg	08 53 17.4	-0.3
PNIG				i S	Sg	08 53 19.9	-0.1
VHO	Vista Hermosa	1.58	57	i P	Pn	08 53 39.3	-3.7
VHO				i S	Sn	08 53 59.0	-5.0
UTMO	Huajuapan	1.63	11	i P	Pn	08 53 39.3	-4.4
UTMO				i S	Sn	08 54 00.3	-5.0
HUIG	Huatulco	1.99	103	i P	Pn	08 53 45.0	-3.3
HUIG				i S	Sn	08 54 09.0	-4.6

CSEM 06 08:53:54.7±0.9, 42°.65N×42°.00E, h10^{km}, MD2.8, Error ellipse: s-maj=20.4km s-min=8.1km az=150.0
TIF 06 08:53:58.0, 42°.55N×42°.32E, h17^{km}±5^{km}
DDA 06 08:53:59.4, 42°.30N×41°.30E, h7^{km}, MD2.8
ISC 06 08:53:56.7±2.8, 42°.54N±0°.09×42°.29E±0°.09, h14^{km}±13^{km},

n19, σ0s.74/34, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	**Oni**	**0.86**	**87**	P	**Pn**	**08 54 14.8**	**+0.3**
ONI				S	**Sn**	**08 54 26.8**	**-0.1**
ONI	**Oni**	**0.86**	**87**	P	**Pn**	**08 54 14.8**	**+0.3**
ONI				S	**Sn**	**08 54 26.8**	**-0.1**
DBOC	**Borcka**	**1.28**	**201**	*i* P	**Pn**	**08 54 20.3**	**+0.1**
DBOC				*i* S	**Sn**	**08 54 36.6**	**-0.6**
DBOC	**Borcka**	**1.28**	**201**	*i* P	**Pn**	**08 54 20.3**	**+0.1**
DBOC				*i* S	**Sn**	**08 54 36.6**	**-0.6**
ARTV	**Artvin**	**1.38**	**191**	*i* P	**Pn**	**08 54 22.5**	**+0.7**
ARTV				*i* S	**Sn**	**08 54 40.2**	**+0.2**
ARTV	**Artvin**	**1.38**	**191**	*i* P	**Pn**	**08 54 22.5**	**+0.7**
ARTV				*i* S	**Sn**	**08 54 40.2**	**+0.2**
AKH	**Akhalkalaki**	**1.45**	**141**	P	**Pg**	**08 54 24.3**	**-0.2**
AKH				S	**Sg**	**08 54 44.0**	**+0.6**
AKH	**Akhalkalaki**	**1.45**	**141**	P	**Pg**	**08 54 24.3**	**-0.2**
AKH				S	**Sg**	**08 54 44.0**	**+0.6**
GOR	**Gori**	**1.46**	**112**	P	**Pg**	**08 54 24.5**	**-0.3**
GOR				S	**Sg**	**08 54 44.4**	**+0.5**
GOR	**Gori**	**1.46**	**112**	P	**Pg**	**08 54 24.5**	**-0.3**
GOR				S	**Sg**	**08 54 44.4**	**+0.5**
DAGI	**Agillar**	**1.49**	**191**	*i* P	**Pn**	**08 54 23.8**	**+0.7**
DAGI				*i* S	**Sn**	**08 54 42.9**	**+0.4**
GUDG	**Gudauri**	**1.62**	**92**	P	**Pg**	**08 54 27.5**	**-0.4**
GUDG				S	**Sg**	**08 54 49.2**	**+0.2**
GUDG	**Gudauri**	**1.62**	**92**	P	**Pg**	**08 54 27.5**	**-0.4**
GUDG				S	**Sg**	**08 54 49.2**	**+0.2**
DDEM	**Demirkent**	**1.70**	**194**	*i* P	**Pn**	**08 54 26.5**	**+0.5**
DDEM				*i* S	**Sn**	**08 54 46.1**	**-1.5**
DDEM	**Demirkent**	**1.70**	**194**	*i* P	**Pn**	**08 54 26.5**	**+0.5**
DDEM				*i* S	**Sn**	**08 54 46.1**	**-1.5**
TBLG	**Delisi**	**2.00**	**113**	P	**Pb**	**08 54 33.2**	**+0.4**
TBLG				S	**Sg**	**08 54 59.1**	**-1.8**
TBLG	**Delisi**	**2.00**	**113**	P	**Pb**	**08 54 33.2**	**+0.4**
TBLG				S	**Sg**	**08 54 59.1**	**-1.8**
MACK	**Trabzon**	**2.47**	**231**	*e*P	Pn	08 54 31.9	-4.7
MACK				*e*S	Sn	08 54 58.6	-8.0
MACK	**Trabzon**	**2.47**	**231**	*e*P	Pn	08 54 31.9	-4.7
MACK				*e*S	Sn	08 54 58.6	-8.0

IDC 06 09:00:42.7±2.6**, 16°.37S×174°.32W, h127km**±24km**, mb3.5**/9**, mb1 3.8**/10**, mb1mx3.6**/21**, mbtmp3.5**/10**, Error ellipse: s-maj=32.2km s-min=13.9km az=136.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.46**	**45**	P	Pn	09 01 35.6	+0.2
	54nm,0.3s,baz=190,slow=2.4,SNR=56						
AFI				S	Sn	09 02 12.2	-4.1
	252nm,0.3s,baz=52,slow=21,SNR=27						
URZ	**Urewera**	**23.07**	**197**	P	P	09 05 35.8	-1.3
	6.5nm,0.8s,baz=57,slow=5.3,SNR=5.9						
STKA	**Stephens Creek**	**42.79**	**241**	P	P	09 08 28.4	+0.5
	0.8nm,0.4s,baz=51,slow=4.1,SNR=3.0						
WRA	**Warramunga Arr**	**48.77**	**258**	P	P	09 09 14.4	-0.7
	0.3nm,0.4s,baz=92,slow=6.7,SNR=9.5						
ASAR	**Alice Springs**	**48.98**	**253**	P	P	09 09 17.1	+0.4
	1.6nm,0.8s,baz=88,slow=7.8,SNR=21						
VNDA	**Vanda**	**62.33**	**186**	P	P	09 10 51.8	+0.8
	0.6nm,0.8s,baz=12,slow=5.4,SNR=5.1						
NVAR	**Mina Array Bea**	**75.64**	**42**	P	P	09 12 14.4	+0.2
	1.4nm,0.8s,baz=226,slow=9.0,SNR=13						
TXAR	**Lajitas Array**	**81.88**	**56**	P	P	09 12 48.5	+0.1
	0.8nm,1.0s,baz=224,slow=5.8,SNR=5.7						
ILAR	**Eielson Array**	**83.56**	**11**	P	P	09 12 55.8	-0.4
	0.6nm,0.5s,baz=223,slow=5.7,SNR=18						
PDAR	**Pinedale Array**	**83.57**	**42**	P	P	09 12 56.9	-0.1
	1.2nm,0.6s,baz=210,slow=2.8,SNR=13						

IDC 06 09:05:32.9±6.5**, 20°.76N×120°.98E, h54km**±65km**, mb3.6**/10**, mb1 3.8**/11**, mb1mx3.6**/26**, mbtmp3.6**/11**, ML3.6**/1**, MS3.4**/3**, Ms1 3.4**/3**, ms1mx2.7**/31**, 1C, Error ellipse: s-maj=24.2km s-min=15.3km az=79.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**2.45**	**188**	⇑*i*P	Pn	09 06 06.9	-3.5
PIP				*e*S	Sn	09 06 31.8	-7.4
JNU	**Nakatsue**	**15.14**	**34**	LR	LR	09 14 46.2	
	comp=Z,69nm,19.6s,baz=61,slow=37						
KSRS	**Korea Array**	**17.70**	**18**	P	Pn	09 09 34.7	-0.8
	0.2nm,0.3s,baz=201,slow=11,SNR=3.6						
CMAR	**Chiang Mai Arr**	**20.88**	**267**	P	P	09 10 10.5	-0.3
	2.2nm,0.7s,baz=72,slow=9.2,SNR=12						
MJAR	**Matsushiro Arr**	**21.76**	**40**	P	P	09 10 20.4	+0.4
	0.6nm,0.4s,baz=230,slow=10,SNR=5.3						
GUMO	**Guam**	**23.89**	**104**	LR	LR	09 17 48.0	
	comp=Z,71nm,19.7s,baz=279,slow=31						
SONM	**Songino Array**	**29.47**	**340**	P	P	09 11 33.6	+1.8
	0.5nm,0.7s,baz=157,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**42.52**	**161**	P	P	09 13 23.2	-0.1
	4.0nm,0.5s,baz=343,slow=9.1,SNR=41						
PETK	**Petropavlovsk-**	**42.83**	**32**	P	P	09 13 24.7	-0.7
	3.0nm,0.9s,baz=218,slow=3.9,SNR=5.0						
ZALV	**Zalesovo Beam**	**43.04**	**329**	P	P	09 13 26.6	-0.5
	0.5nm,0.4s,baz=92,slow=7.4,SNR=2.7						
KURBB	**Kurchatov Arra**	**44.64**	**322**	P	P	09 13 39.1	-0.8
	0.4nm,0.2s,baz=119,slow=7.6,SNR=6.0						
ASAR	**Alice Springs**	**45.92**	**163**	P	P	09 13 50.0	-0.5
	1.6nm,0.5s,baz=343,slow=6.8,SNR=29						
STKA	**Stephens Creek**	**55.95**	**159**	P	P	09 15 06.3	+0.7
	1.0nm,0.6s,baz=334,slow=9.7,SNR=3.7						
NOA	**NORSAR Array B**	**81.15**	**332**	LR	LR	09 55 26.9	
	comp=Z,40nm,18.1s,baz=65,slow=37						
YKA	**Yellowknife Ar**	**86.19**	**23**	P	P	09 18 07.9	-0.2
	0.4nm,0.7s,baz=312,slow=4.7,SNR=7.1						

*ISK **06** 09:11:39.9, 39°.23N×27°.53E, h5km, MD2.4*
*DDA **06** 09:11:42.3, 39°.12N×27°.56E, h7km, MD2.8*
*CSEM **06** 09:11:42.7±0.7, 39°.08N×27°.60E, h1km, MD2.8, Error ellipse: s-maj=13.9km s-min=9.9km az=104.0*
*ISCJB **06** 09:11:42.7±0.6, 39°.12N±0°.03×27°.53E±0°.04, h0km, Error ellipse: s-maj=4.5km s-min=3.7km az=146.5*
ISC 06 09:11:41.8±0.9**, 39°.13N**±0°.03×**27°.57E**±0°.03**, h0km, n19, σ1s.01**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.31**	**142**	*i* P	**Pg**	**09 11 49.0**	**+1.2**
AKHS				*i* S	**Sg**	**09 11 53.9**	**+2.1**
AKHS	**Akhisar**	**0.31**	**142**	*i* P	**Pg**	**09 11 49.0**	**+1.2**
AKHS				*i* S	**Sg**	**09 11 53.9**	**+2.1**
AKS	**Akhisar**	**0.31**	**142**	*e*PG	**Pg**	**09 11 48.4**	**+0.6**
AKS				*e*SG	**Sb**	**09 11 55.0**	**-0.9**
AKS	**Akhisar**	**0.31**	**142**	*e*Pg	**Pg**	**09 11 48.4**	**+0.6**
AKS				*e*Sg	**Sb**	**09 11 55.0**	**-0.9**
BALY	**Balya**	**0.61**	**4**	*i* P	**Pb**	**09 11 55.5**	**+0.1**
BALY				*i* S	**Sb**	**09 12 05.2**	**+0.5**
BALY	**Balya**	**0.61**	**4**	*i* P	**Pb**	**09 11 55.5**	**+0.1**
BALY				*i* S	**Sb**	**09 12 05.2**	**+0.5**
BLCB	**Balcova**	**0.85**	**209**	*e*PG	**Pg**	**09 11 58.4**	**+0.3**
BLCB				*e*SG	**Sb**	**09 12 11.5**	**+0.2**
BLCB	**Balcova**	**0.85**	**209**	*e*Pg	**Pg**	**09 11 58.4**	**+0.3**
BLCB				*e*Sg	**Sb**	**09 12 11.5**	**+0.2**
DURS	**Dursunbey**	**0.85**	**56**	*i* P	**Pb**	**09 11 59.6**	**+0.1**
DURS				*i* S	**Sb**	**09 12 12.9**	**+1.5**
DURS	**Dursunbey**	**0.85**	**56**	*i* P	**Pb**	**09 11 59.6**	**+0.1**
DURS				*i* S	**Sb**	**09 12 12.9**	**+1.5**
DEMI	**Demirci**	**0.90**	**95**	*i* P	**Pb**	**09 12 00.4**	**+0.1**
DEMI				*i* S	**Sb**	**09 12 12.9**	**0.0**
DEMI	**Demirci**	**0.90**	**95**	*i* P	**Pb**	**09 12 00.4**	**+0.1**
DEMI				*i* S	**Sb**	**09 12 12.9**	**0.0**
MANT	**Manisa**	**1.00**	**129**	*e*P	**Pg**	**09 11 59.1**	**-1.9**
MANT				*e*S	**Sn**	**09 12 18.2**	**-0.1**
MANT	**Manisa**	**1.00**	**129**	*e*P	**Pg**	**09 11 59.1**	**-1.9**
MANT				*e*S	**Sn**	**09 12 18.2**	**-0.1**
KULA	**Kula-Manisa**	**1.05**	**125**	*e*PN	**Pg**	**09 12 02.1**	**+0.2**
KULA	**Kula-Manisa**	**1.05**	**125**	*e*Pn	**Pg**	**09 12 02.1**	**+0.2**
BOZC	**Bozcaada**	**1.37**	**302**	*e*P	**Pg**	**09 12 08.0**	**-0.1**
BOZC				*e*S	**Sn**	**09 12 26.8**	**-0.3**
TVSB	**Tavsanli**	**1.50**	**77**	*e*PN	**Pn**	**09 12 08.5**	**-1.7**
TVSB	**Tavsanli**	**1.50**	**77**	*e*Pn	**Pn**	**09 12 08.5**	**-1.7**

*NAO **06** 09:20:21.7±1.0, 59°.28N×26°.87E, ML2.5*
*CSEM **06** 09:20:21.2±0.3, 59°.27N×27°.00E, h2km, ML2.5, Error ellipse: s-maj=6.3km s-min=4.5km az=109.0, Mining explosion.*
*BER **06** 09:20:22.1±2.7, 59°.31N×27°.07E, h0km, ML2.5(NAO), Suspected explosion*
*HEL **06** 09:20:23.2±1.0, 59°.33N×27°.04E, h0km, ML1.8, Explosion*
ISC 06 09:20:20.7±1.0**, 59°.26N**±0°.03×**27°.05E**±0°.04**, h0km, n33, σ1s.27**/39**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSU	**Vasula**	**0.81**	**192**	Pg	**Pg**	**09 20 36.3**	**+0.1**
VSU				Lg	Lg	09 20 49.4	
VSU	**Vasula**	**0.81**	**192**	Pg	**Pg**	**09 20 36.3**	**+0.1**
VSU				Lg	Lg	09 20 49.4	
VSU	**Vasula**	**0.81**	**192**	Pg	**Pg**	**09 20 36.3**	**+0.1**
VSU				Lg	Lg	09 20 49.4	
	SNR=50						
VJF	**Virojoki**	**1.31**	**11**	PG	**Pg**	**09 20 45.0**	**-0.8**
VJF				SG	**Sg**	**09 21 02.4**	**-0.3**
VJF				MSG		09 21 02.4	
	comp=Z,5.7nm,0.1s						
VJF				RG	Rg	09 21 06.6	
VJF	**Virojoki**	**1.31**	**11**	Pg	**Pg**	**09 20 45.0**	**-0.8**
VJF				Sg	**Sg**	**09 21 02.4**	**-0.3**
PVF	**Pernaja**	**1.42**	**336**	PG	**Pb**	**09 20 48.1**	**+0.1**
PVF				SG	**Sg**	**09 21 06.1**	**-0.2**
PVF				MSG		09 21 06.1	
	comp=Z,3.6nm,0.2s						
PVF				RG	Rg	09 21 09.9	
PVF	**Pernaja**	**1.42**	**336**	Pg	**Pb**	**09 20 48.1**	**+0.1**
PVF				Sg	**Sg**	**09 21 06.1**	**-0.2**
MEF	**Metsahovi**	**1.65**	**307**	PG	**Pg**	**09 20 52.7**	**+0.4**
MEF				SG	**Sb**	**09 21 13.5**	**+0.2**
MEF				MSG		09 21 13.5	
	comp=Z,5.6nm,0.2s						
MEF	**Metsahovi**	**1.65**	**307**	Pg	**Pg**	**09 20 52.7**	**+0.4**
MEF				Sg	**Sb**	**09 21 13.4**	**+0.2**
MTSE	**Matsula**	**1.76**	**253**	PN	**Pb**	**09 20 53.5**	**-0.2**
MTSE				SG	**Sb**	**09 21 16.2**	**-0.1**
MTSE	**Matsula**	**1.76**	**253**	Pn	**Pb**	**09 20 53.5**	**-0.2**
MTSE				Sg	**Sb**	**09 21 16.2**	**-0.1**
FIA0	**FINESS Array S**	**2.25**	**348**	Pn	**Pn**	**09 21 00.4**	**+1.3**
	baz=164,slow=16						
FIA0				Lg	Lg	09 21 30.6	
	baz=165,slow=28						
FIA0				Rg	Rg	09 21 43.6	
	baz=170,slow=37						
FIA0	**FINESS Array S**	**2.25**	**348**	Pn	**Pn**	**09 21 00.4**	**+1.3**
	baz=164,slow=16						
FIA0				Lg	Lg	09 21 30.6	
	baz=165,slow=28						
FIA0				Rg	Rg	09 21 43.6	
	baz=170,slow=37						
FIA0	**FINESS Array S**	**2.25**	**348**	PN	**Pn**	**09 21 00.3**	**+1.3**
	baz=166						
FIA0				SG	**Sn**	**09 21 29.0**	**+1.6**
FIA0				MSG		09 21 29.0	
	comp=Z,8.8nm,0.6s						
FIA0				RG	Rg	09 21 42.1	
FIA0	**FINESS Array S**	**2.25**	**348**	Pn	**Pn**	**09 21 00.3**	**+1.3**
FIA0				Lg	Lg	09 21 30.6	
	baz=165,slow=26,SNR=50						
KAF	**Kangasniemi**	**2.89**	**353**	SG	**Sn**	**09 21 44.5**	**+1.2**
KAF				MSG		09 21 44.5	
	comp=Z,5.8nm,0.4s						
KEF	**Keuruu**	**3.11**	**341**	SG	**Sb**	**09 21 56.3**	**+1.1**
KEF				MSG		09 21 56.3	
	comp=Z,3.6nm,0.4s						
RAF	**Rauma**	**3.18**	**306**	PN	**Pb**	**09 21 15.5**	**-2.5**
	baz=121						
RAF				SG	**Sb**	**09 21 58.5**	**+1.3**
RAF				MSG		09 21 58.5	
	comp=Z,1.8nm,0.4s						
RAF	**Rauma**	**3.18**	**306**	Pn	**Pb**	**09 21 15.5**	**-2.5**
RAF				Sg	**Sb**	**09 21 58.5**	**+1.3**
SUF	**Sumiainen**	**3.50**	**353**	SG	**Sb**	**09 22 08.0**	**+1.6**
SUF				MSG		09 22 08.0	
	comp=Z,3.8nm,0.4s						
AAL	**Aland**	**3.69**	**288**	SG	**Sg**	**09 22 17.6**	**-1.5**
AAL	**Aland**	**3.69**	**288**	Sg	**Sg**	**09 22 17.6**	**-1.5**
JOF	**Joensuu**	**4.22**	**28**	PN	**Pn**	**09 21 27.8**	**+1.7**
JOF				SG	**Sg**	**09 22 32.3**	**-3.7**
JOF				MSG		09 22 32.3	
	comp=Z,3.3nm,0.4s						
JOF	**Joensuu**	**4.22**	**28**	Pn	**Pn**	**09 21 27.8**	**+1.7**
HFS	**Hagfors**	**6.81**	**283**	Sn	Sn	09 23 14.1	-5.9
HFS				Lg	Lg	09 23 51.2	
	baz=90,slow=37						
HFS	**Hagfors**	**6.81**	**283**	Sn	Sn	09 23 14.1	-5.9
HFS				Lg	Lg	09 23 51.2	
	baz=90,slow=37						
HFS	**Hagfors**	**6.81**	**283**	Lg	Lg	09 23 51.2	
	baz=90,slow=31						
NB2	**NORSAR Subarra**	**8.10**	**290**	Lg	Lg	09 24 33.5	
	baz=103,slow=37						
NB2	**NORSAR Subarra**	**8.10**	**290**	Lg	Lg	09 24 33.5	
	baz=103,slow=37						
NB2	**NORSAR Subarra**	**8.10**	**290**	Lg	Lg	09 24 33.5	
	baz=103,slow=33,SNR=2.6						
ARA0	**ARCESS Array S**	**10.34**	**357**	Pn	**Pn**	**09 22 49.2**	**-0.9**
	baz=179,slow=12						
ARA0				Sn	Sn	09 24 39.2	-7.3
	baz=173,slow=22						
ARA0				Lg	Lg	09 25 37.1	
	baz=175,slow=28						
ARA0	**ARCESS Array S**	**10.34**	**357**	Pn	**Pn**	**09 22 49.2**	**-0.9**
	baz=179,slow=12						
ARA0				Sn	Sn	09 24 39.2	-7.3
	baz=173,slow=22						
ARA0				Lg	Lg	09 25 37.1	
	baz=175,slow=28						
ARA0	**ARCESS Array S**	**10.34**	**357**	Pn	**Pn**	**09 22 49.2**	**-0.9**
	baz=179,slow=12,SNR=7.3						
ARA0				Lg	Lg	09 25 37.1	
	baz=175,slow=23,SNR=50						

*ISK **06** 09:40:00.2, 37°.25N×28°.22E, h6km, MD2.6*
*DDA **06** 09:40:00.2, 37°.23N×28°.17E, h7km, MD2.9*
*CSEM **06** 09:40:00.5±0.2, 37°.25N×28°.22E, h1km, MD2.6, Error ellipse: s-maj=4.3km s-min=2.9km az=45.0*
*ISCJB **06** 09:40:00.5±0.5, 37°.24N±0°.03×28°.21E±0°.04, h0km, Error ellipse: s-maj=5.5km s-min=3.7km az=44.7*
ISC 06 09:40:00.5±1.0**, 37°.26N**±0°.03×**28°.24E**±0°.03**, h0km, n20, σ0s.64**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**165**	*e*PG	**Pg**	**09 40 03.2**	**+0.2**
YER				*e*SG	**Sg**	**09 40 05.7**	**+1.0**
YER	**Yerkesik**	**0.13**	**165**	*e*Pg	**Pg**	**09 40 03.2**	**+0.2**
YER				*e*Sg	**Sg**	**09 40 05.7**	**+1.0**
MLSB	**Milas**	**0.37**	**276**	*e*PG	**Pg**	**09 40 07.2**	**-0.4**
MLSB				*e*SG	**Sg**	**09 40 13.7**	**+1.2**
MLSB	**Milas**	**0.37**	**276**	*e*Pg	**Pg**	**09 40 07.2**	**-0.4**
MLSB				*e*Sg	**Sg**	**09 40 13.7**	**+1.2**
TURN	**Turunc**	**0.48**	**143**	*i* P	**Pg**	**09 40 09.2**	**-0.6**
TURN				*i* S	**Sg**	**09 40 16.4**	**+0.3**
TURN	**Turunc**	**0.48**	**143**	*i* P	**Pg**	**09 40 09.2**	**-0.6**
TURN				*i* S	**Sg**	**09 40 16.4**	**+0.3**
AYDN	**Tasoluk**	**0.49**	**324**	*i* P	**Pg**	**09 40 10.0**	**0.0**
AYDN				*i* S	**Sg**	**09 40 17.1**	**+0.7**
AYDN	**Tasoluk**	**0.49**	**324**	*i* P	**Pg**	**09 40 10.0**	**0.0**
AYDN				*i* S	**Sg**	**09 40 17.1**	**+0.7**
DALY	**Dalyan (Mu˜la**	**0.55**	**143**	*e*PG	**Pg**	**09 40 11.5**	**+0.4**
DALY	**Dalyan (Mu˜la**	**0.55**	**143**	*e*Pg	**Pg**	**09 40 11.5**	**+0.4**
DAT	**Datca**	**0.75**	**225**	*e*PG	**Pg**	**09 40 14.3**	**-0.6**
DAT	**Datca**	**0.75**	**225**	*e*Pg	**Pg**	**09 40 14.3**	**-0.6**
DNZL	**Cakiroluk**	**0.77**	**56**	*e*P	**Pb**	**09 40 16.4**	**-0.6**
DNZL				*i* S	**Sb**	**09 40 28.3**	**+0.2**
DNZL	**Cakiroluk**	**0.77**	**56**	*e*P	**Pb**	**09 40 16.4**	**-0.6**
FETY	**Fethiye**	**0.92**	**132**	*e*PG	**Pb**	**09 40 18.7**	**-0.6**
FETY	**Fethiye**	**0.92**	**132**	*e*Pg	**Pb**	**09 40 18.7**	**-0.6**
KULA	**Kula-Manisa**	**1.29**	**15**	*e*PN	**Pb**	**09 40 25.3**	**-0.5**
KULA	**Kula-Manisa**	**1.29**	**15**	*e*Pn	**Pb**	**09 40 25.3**	**-0.5**
ELL	**Elmali**	**1.43**	**110**	*e*PN	**Pg**	**09 40 27.7**	**-0.2**
ELL	**Elmali**	**1.43**	**110**	*e*Pn	**Pg**	**09 40 27.7**	**-0.2**

*ISCJB **06** 09:45:30.5±0.5, 59°.81N±0°.04×22°.31E±0°.05, h0km, Error ellipse: s-maj=6.1km s-min=3.9km az=6.0*
*HEL **06** 09:45:31.9±0.1, 59°.81N×22°.30E, h0km, ML1.9, ML2.2(UPP), Explosion*
*CSEM **06** 09:45:31.3±0.2, 59°.82N×22°.33E, h2km, ML1.9, Error ellipse: s-maj=6.7km s-min=4.2km az=6.0, Mining explosion.*
*IDC **06** 09:45:32.8±2.3, 59°.96N×22°.31E, h0km, mb1 3.2/3, mb1mx2.9/27, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=32.4km s-min=8.2km az=162.0*
*UPP **06** 09:45:32.5, 59°.82N×22°.13E, h0km, ML2.2, Suspected Mining explosion.*
ISC 06 09:45:30.1±0.8**, 59°.80N**±0°.03×**22°.27E**±0°.02**, h0km, n26, σ0s.99**/36**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.15**	**68**	*e*P	**Pg**	**09 45 52.2**	**+0.1**
MEF				*e*S	**Sg**	**09 46 06.1**	**-0.7**
MEF	**Metsahovi**	**1.15**	**68**	P	**Pg**	**09 45 52.1**	**+0.1**
MEF				S	**Sg**	**09 46 06.1**	**-0.7**
AAL	**Aland**	**1.21**	**289**	*e*P	**Pg**	**09 45 53.5**	**+0.3**
AAL				*e*S	**Sg**	**09 46 09.3**	**+0.5**
AAL	**Aland**	**1.21**	**289**	P	**Pg**	**09 45 53.5**	**+0.3**
AAL				S	**Sb**	**09 46 09.7**	**-0.1**
RAF	**Rauma**	**1.25**	**349**	*e*P	**Pg**	**09 45 54.2**	**+0.2**
RAF				*e*S	**Sg**	**09 46 11.1**	**+0.8**
RAF	**Rauma**	**1.25**	**349**	P	**Pg**	**09 45 54.2**	**+0.2**
RAF				S	**Sg**	**09 46 11.0**	**+0.8**
MTSE	**Matsula**	**1.35**	**143**	*e*P	**Pg**	**09 45 56.2**	**+0.2**
MTSE				*e*S	**Sg**	**09 46 13.2**	**-0.2**
MTSE	**Matsula**	**1.35**	**143**	P	**Pg**	**09 45 56.1**	**+0.2**
MTSE				S	**Sg**	**09 46 13.2**	**-0.2**
NRTU	**Norrtaelje**	**1.85**	**268**	*e*P	**Pb**	**09 46 04.4**	**-0.3**
NRTU				*e*S	**Sb**	**09 46 28.9**	**+0.6**
NRTU	**Norrtaelje**	**1.85**	**268**	P	**Pb**	**09 46 04.4**	**-0.3**
NRTU				S	**Sb**	**09 46 28.9**	**+0.6**
PVF	**Pernaja**	**1.94**	**66**	*e*P	**Pb**	**09 46 06.0**	**-0.3**
PVF				*e*S	**Sn**	**09 46 30.3**	**+1.0**
PVF	**Pernaja**	**1.94**	**66**	P	**Pb**	**09 46 06.0**	**-0.3**
PVF				S	**Sn**	**09 46 30.3**	**+1.0**
GRAU	**Graesoe**	**1.95**	**287**	*e*P	**Pb**	**09 46 05.5**	**-0.8**
GRAU	**Graesoe**	**1.95**	**287**	P	**Pb**	**09 46 05.6**	**-0.8**
FORU	**Forsmark**	**2.13**	**288**	*e*P	**Pb**	**09 46 09.1**	**-0.5**
FORU	**Forsmark**	**2.13**	**288**	P	**Pb**	**09 46 09.0**	**-0.5**
FLYU	**Flymyra**	**2.23**	**280**	*e*P	**Pb**	**09 46 10.6**	**-0.7**
FLYU	**Flymyra**	**2.23**	**280**	P	**Pb**	**09 46 10.5**	**-0.7**
FINES	**FINESS Array B**	**2.50**	**47**	Pn	**Pb**	**09 46 14.7**	**-1.1**
	1.2nm,0.3s,baz=231,slow=13,SNR=39						
FINES				Lg	Lg	09 46 46.5	
	3.5nm,0.3s,baz=233,slow=28,SNR=32						
BACU	**Backbrunna**	**2.61**	**273**	*e*P	**Pn**	**09 46 15.3**	**+1.9**
BACU	**Backbrunna**	**2.61**	**273**	P	**Pn**	**09 46 15.3**	**+1.9**
KEF	**Keuruu**	**2.69**	**27**	MSG		09 46 55.6	
	comp=Z,3.1nm,0.1s						
VJF	**Virojoki**	**2.74**	**72**	MSG		09 46 57.8	
	comp=Z,4.1nm,0.2s						
KAF	**Kangasniemi**	**3.04**	**39**	MSG		09 47 04.7	
	comp=Z,4.0nm,0.1s						
NOA	**NORSAR Array B**	**5.62**	**288**	Pn	**Pn**	**09 46 55.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=332,slow=15,SNR=3.1						
NOA				Sn	**Sn**	**09 47 56.2**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=340,slow=9.0,SNR=2.9						
ARCES	**ARCESS Array B**	**9.87**	**7**	Pn	**Pn**	**09 47 52.1**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=190,slow=13,SNR=8.6						

*MOS **06** 09:46:29.4±0.9, 54°.04N×159°.94E, h119km, mb3.8/9, Error ellipse: s-maj=17.9km s-min=7.8km az=71.6*
*ISCJB **06** 09:46:29.7±0.3, 54°.06N±0°.02×159°.93E±0°.07, h120km±2km, mb3.9/13, Error ellipse: s-maj=6.9km s-min=2.2km az=24.2*
*KRSC **06** 09:46:30.2±0.7, 54°.06N×159°.99E, h105km±45km, ML4.1*
*IDC **06** 09:46:31.0±1.0, 54°.27N×159°.50E, h122km±11km, mb3.6/12, mb1 3.8/13, mb1mx3.6/27, mbtmp3.6/13, Error ellipse: s-maj=24.5km s-min=11.9km az=144.0*
ISC 06 09:46:30.3±0.6**, 54°.05N**±0°.03×**159°.95E**±0°.04**, h117km**±6km**, n73, σ0s.96**/120**, mb3.8**/13**, 1C-1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.29**	**267**	*i* P	**Pn**	**09 46 46.5**	**-0.4**
KII				*i* S	**Sn**	**09 46 58.9**	**-0.6**
NLC	**Nalytchevo**	**0.95**	**202**	PN	**Pn**	**09 46 51.4**	**-0.1**
NLC				S	**Sn**	**09 47 07.3**	**-0.2**
NLC	**Nalytchevo**	**0.95**	**202**	*i* P	**Pn**	**09 46 51.4**	**-0.1**
NLC				*i* S	**Sn**	**09 47 07.3**	**-0.2**
SPN	**Mys Shipunski**	**0.95**	**177**	PN	**Pn**	**09 46 51.3**	**-0.3**
SPN				S	**Sn**	**09 47 07.1**	**-0.6**
SPN	**Mys Shipunski**	**0.95**	**177**	*i* P	**Pn**	**09 46 51.3**	**-0.3**
SPN				*i* S	**Sn**	**09 47 07.1**	**-0.6**
SDLR	**Sedlovina**	**1.00**	**220**	*i* P	**Pn**	**09 46 52.2**	**+0.1**
SDLR				*i* S	**Sn**	**09 47 08.4**	**-0.3**
KRER	**Koryakskii**	**1.03**	**224**	*i* P	**Pn**	**09 46 52.9**	**+0.3**
KRER				*i* S	**Sn**	**09 47 09.7**	**+0.3**
SMAR	**Somma**	**1.04**	**221**	*i* P	**Pn**	**09 46 52.8**	**+0.1**
SMAR				*i* S	**Sn**	**09 47 09.4**	**-0.2**
AVH	**Avacha**	**1.07**	**223**	*i* P	**Pn**	**09 46 53.2**	**+0.4**
AVH				*i* S	**Sn**	**09 47 10.1**	**+0.3**
UGLR	**Uglovaya**	**1.08**	**219**	*i* P	**Pn**	**09 46 53.1**	**+0.2**
UGLR				*i* S	**Sn**	**09 47 09.9**	**-0.1**
KOK	**Koryaka**	**1.09**	**226**	*i* P	**Pn**	**09 46 53.4**	**+0.4**
KOK				*i* S	**Sn**	**09 47 10.5**	**+0.3**
MKZ	**Mys Kozlova**	**1.16**	**63**	PN	**Pn**	**09 46 53.6**	**0.0**
MKZ				S	**Sn**	**09 47 10.8**	**-0.6**
MKZ	**Mys Kozlova**	**1.16**	**63**	*i* P	**Pn**	**09 46 53.6**	**0.0**
MKZ				*i* S	**Sn**	**09 47 10.8**	**-0.6**
GNL	**Ganaly**	**1.24**	**254**	*i* P	**Pn**	**09 46 54.5**	**-0.1**
GNL				*i* S	**Sn**	**09 47 12.3**	**-0.8**
TUMR	**Tumrok**	**1.24**	**5**	*i* P	**Pn**	**09 46 55.0**	**+0.4**
TUMR				*i* S	**Sn**	**09 47 13.0**	**-0.2**
PET	**Petropavlovsk**	**1.29**	**217**	⇓*i*PN	**Pn**	**09 46 54.9**	**-0.1**
PET				*i* S	**Sn**	**09 47 13.9**	**+0.1**
PET				pmax	pmax		
	comp=Z,638nm,0.3s						
PET				smax	smax		
	comp=E,2µm,0.5s						
PET				smax	smax		
	comp=E,2µm,0.6s						
PET				smax	smax		
	comp=N,2µm,0.7s						
PET	**Petropavlovsk**	**1.29**	**217**	*i* P	**Pn**	**09 46 55.1**	**+0.1**
PET				*i* S	**Sn**	**09 47 13.7**	**-0.1**
PETK	**Petropavlovsk-**	**1.64**	**236**	*e*PN	**Pn**	**09 46 59.0**	**-0.1**
PETK				pmax	pmax		
	comp=Z,80nm,0.3s						
PETK	**Petropavlovsk-**	**1.64**	**236**	P	**Pn**	**09 46 59.1**	**-0.1**
	comp=Z,80nm,0.3s,baz=70,slow=15,SNR=282						
PETK				S	**Sn**	**09 47 21.1**	**0.0**
	comp=Z,12nm,0.3s,baz=98,slow=20,SNR=6.1						
KMNR	**Kamenistaya**	**1.72**	**5**	*i* P	**Pn**	**09 47 00.7**	**+0.6**
KMNR				*i* S	**Sn**	**09 47 23.4**	**+0.4**
RUS	**Russkaya**	**1.83**	**209**	PN	**Pn**	**09 47 01.3**	**-0.2**
RUS				S	**Sn**	**09 47 24.4**	**-0.9**
RUS	**Russkaya**	**1.83**	**209**	*i* P	**Pn**	**09 47 01.3**	**-0.2**
RUS				*i* S	**Sn**	**09 47 24.4**	**-0.9**
GRL	**Gorelyy**	**1.88**	**218**	*i* P	**Pn**	**09 47 02.9**	**+0.8**
GRL				*i* S	**Sn**	**09 47 27.0**	**+0.6**
MTVR	**Mutnovka**	**1.89**	**215**	*i* P	**Pn**	**09 47 02.8**	**+0.4**
MTVR				*e*S	**Sn**	**09 47 26.7**	**-0.2**
BZMR	**Bezymyannaya**	**1.92**	**9**	*i* P	**Pn**	**09 47 03.1**	**+0.5**
BZMR				*i* S	**Sn**	**09 47 27.3**	**0.0**
KIRR	**Kirishev**	**1.92**	**7**	*i* P	**Pn**	**09 47 02.8**	**+0.1**
KIRR				*i* S	**Sn**	**09 47 26.5**	**-1.0**
KPT	**Kopyto**	**1.93**	**5**	*i* P	**Pn**	**09 47 02.8**	**+0.1**
KPT				*i* S	**Sn**	**09 47 27.1**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**1.94**	**13**	*i* P	**Pn**	**09 47 03.4**	**+0.5**
BZGR				*i* S	**Sn**	**09 47 27.8**	**-0.1**
BZWR	**Bezymyannyi-We**	**1.94**	**9**	*i* P	**Pn**	**09 47 03.7**	**+0.7**
BZWR				*i* S	**Sn**	**09 47 28.2**	**+0.2**
APC	**Apacha**	**2.01**	**237**	*i* P	**Pn**	**09 47 04.1**	**+0.4**
APC				*i* S	**Sn**	**09 47 28.9**	**-0.3**
ESO	**Esso**	**2.01**	**340**	PN	**Pn**	**09 47 03.3**	**-0.4**
ESO				S	**Sn**	**09 47 27.9**	**-1.4**
ESO	**Esso**	**2.01**	**340**	*i* P	**Pn**	**09 47 03.3**	**-0.4**
ESO				*i* S	**Sn**	**09 47 27.9**	**-1.4**
KOZ	**Kozyrevsk**	**2.01**	**359**	*i* P	**Pn**	**09 47 03.9**	**+0.2**
KOZ				*i* S	**Sn**	**09 47 28.7**	**-0.6**
KOZR	**Kozyr**	**2.02**	**359**	PN	**Pn**	**09 47 03.9**	**+0.1**
KOZR				S	**Sn**	**09 47 28.7**	**-0.8**
ZLN	**Zelenaya**	**2.03**	**14**	*e*P	**Pn**	**09 47 04.9**	**+0.9**

ZLN				eS	Sn	09 47 30.5	+0.7
ASAK	Asacha	2.08	217	i P	Pn	09 47 05.3	+0.7
ASAK				i S	Sn	09 47 31.3	+0.5
LGNR	Loginova	2.08	12	i P	Pn	09 47 05.9	+1.1
LGNR				i S	Sn	09 47 31.7	+0.5
CIRR	Tsirk	2.12	12	P	Pn	09 47 05.9	+0.7
CIRR				i S	Sn	09 47 32.5	+0.6
KRSR	Krestovskiy	2.20	9	i P	Pn	09 47 06.2	+0.1
KRSR				i S	Sn	09 47 32.7	-0.9
SRDR	Sredinnyy	2.28	357	i P	Pn	09 47 06.8	-0.3
SRDR				i S	Sn	09 47 33.5	-1.8
KLY	Klyuchi	2.30	10	PN	Pn	09 47 08.2	+0.9
KLY				S	Sn	09 47 36.3	+0.5
KLY	Klyuchi	2.30	10	eP	Pn	09 47 08.2	+0.9
KLY				i S	Sn	09 47 36.3	+0.5
BDR	Baidarnaya	2.62	15	i P	Pn	09 47 12.6	+1.0
BDR				i S	Sn	09 47 43.8	+0.5
SMKR	Semkarok	2.68	18	eP	Pn	09 47 13.2	+0.9
SMKR				i S	Sn	09 47 45.3	+0.6
SRKR	Sorokina	2.70	14	i P	Pn	09 47 13.3	+0.8
SRKR				i S	Sn	09 47 45.3	+0.2
KBG	Krutoberegovo	2.72	34	PN	Pn	09 47 13.8	+1.1
KBG				S	Sn	09 47 44.9	-0.4
KBG	Krutoberegovo	2.72	34	eP	Pn	09 47 13.8	+1.1
KBG				i S	Sn	09 47 44.9	-0.4
BKI	Bering	3.69	69	PN	Pn	09 47 25.3	-0.1
BKI				S	Sn	09 48 05.0	-3.2
BKI	Bering	3.69	69	i P	Pn	09 47 25.3	-0.1
BKI				i S	Sn	09 48 05.0	-3.2
SKR	Severo-Kuril's	4.11	216	ePN	Pn	09 47 26.5	-4.6
SKR				eS	Sn	09 48 12.0	-6.3
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax	smax		
	comp=N,80nm,0.5s						
SKR				smax	smax		
	comp=E,150nm,0.5s						
SKR	Severo-Kuril's	4.11	216	P	Pn	09 47 31.7	+0.6
SKR				i S	Sn	09 48 17.0	-1.3
FX1	Attu Island--F	7.98	93	P	Pn	09 48 23.8	+0.5
	comp=E,1.6nm,0.3s,baz=66,slow=17,SNR=18						
FX1				S	Sn	09 49 48.9	-2.9
	comp=E,6.1nm,0.3s,baz=352,slow=24,SNR=15						
SEY	Seymchan	9.74	339	⇑ePN	Pn	09 48 48.2	+1.2
BILL	Bilibino	14.35	10	i P	P	09 49 51.8	+0.6
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ASAJ	Asahikawa	15.06	236	P	Pn	09 49 57.5	+0.8
	comp=Z,0.5nm,0.3s,baz=42,slow=3.7,SNR=4.4						
ERM	Erimo	16.41	230	i P	Pn	09 50 11.3	-2.2
USRK	Ussuriysk Arra	20.65	253	pP	pP	09 51 23.0	+1.1
	comp=Z,2.1nm,0.8s,baz=52,slow=13,SNR=6.0						
MJA0	Matsu Arr-Jizo	23.07	229	eP	P	09 51 26.8	+1.3
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MJAR	Matsushiro Arr	23.09	230	P	P	09 51 25.8	+0.2
	comp=Z,1.0nm,0.5s,baz=12,slow=12,SNR=4.6						
ILAR	Eielson Array	28.21	47	P	P	09 52 12.2	+0.7
	comp=Z,1.3nm,0.6s,baz=254,slow=5.9,SNR=22						
SONM	Songino Array	33.61	282	P	P	09 52 57.8	-1.4
	comp=Z,0.3nm,0.3s,baz=88,slow=8.8,SNR=2.4						
YKA	Yellowknife Ar	42.52	43	P	P	09 54 13.4	-0.1
	comp=Z,0.6nm,0.6s,baz=298,slow=8.9,SNR=11						
KURK	Kurchatov	47.16	301	i P	P	09 54 48.1	-2.3
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	47.67	295	P	P	09 54 51.6	-2.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	47.67	295	P	P	09 54 51.6	-2.8
	comp=Z,0.6nm,0.5s,baz=57,slow=6.4,SNR=7.3						
NVAR	Mina Array Bea	55.50	71	P	P	09 55 54.4	+1.3
	comp=Z,1.7nm,0.7s,baz=299,slow=7.1,SNR=16						
PDAR	Pinedale Array	57.13	61	P	P	09 56 06.5	+1.9
	comp=Z,2.7nm,0.6s,baz=329,slow=2.9,SNR=30						
ULM	Lac du Bonnet	58.23	47	P	P	09 56 12.5	+0.7
	comp=Z,2.7nm,0.4s,baz=334,slow=4.6,SNR=4.1						
SCHQ	Schefferville	64.84	28	P	P	09 56 54.9	-1.3
	comp=Z,1.4nm,0.6s,baz=309,slow=7.1,SNR=5.1						
TXAR	Lajitas Array	70.34	67	P	P	09 57 32.9	+1.6
	comp=Z,1.2nm,0.4s,baz=294,slow=5.2,SNR=55						
WRA	Warramunga Arr	76.92	205	P	P	09 58 09.6	+0.2
	comp=Z,0.6nm,0.4s,baz=21,slow=6.2,SNR=14						
ASAR	Alice Springs	80.60	204	P	P	09 58 30.4	+0.9
	comp=Z,0.5nm,0.4s,baz=17,slow=4.9,SNR=8.5						
PLCA	Paso Flores	144.10	89	PKP	PKPbc	10 05 50.6	+0.9
	comp=Z,1.1nm,0.5s,baz=333,slow=5.1,SNR=8.3						

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*IGQ **06** 10:08:05.3, 2°.69S×80°.29W, h27km±146km, Mb4.6, Ms4.4, Error ellipse: s-maj=3.1km s-min=1.5km az=5.7*

*ISCJB **06** 10:08:06.7±0.5, 2°.73S±0°.03×80°.33W±0°.04, h53km, mb3.7/6, Error ellipse: s-maj=5.6km s-min=4.0km az=179.4*

*IDC **06** 10:08:09.8±3.6, 2°.71S×80°.08W, h76km±38km, mb3.3/5, mb1 3.8/8, mb1mx3.5/23, mbtmp3.5/8, ML4.4/2, Error ellipse: s-maj=59.0km s-min=20.5km az=60.0*

*NEIC **06** 10:08:10.8±1.0, 2°.65S×79°.87W, h88km±11km, mb4.5/2, MD4.6(IGQ), Error ellipse: s-maj=20.7km s-min=7.3km az=71.0*

ISC 06 10:08:07.6±0.7**, 2°.76S**±0°.04×**80°.29W**±0°.06**, h53**km**, n67, σ1ˢ.44**/70**, mb3.7**/6**, 6C-8D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CATE	Catamayo	1.50	142	⇑P	Pn	10 08 33.7	+1.3
CATE	Catamayo	1.50	142	⇑S	Sn	10 08 52.9	+1.9
CHIS	Cerro-Chispas-	1.76	346	S	Sn	10 08 56.2	-0.8
CHIS	Cerro-Chispas-	1.76	346	P	Pn	10 08 35.0	-0.7
RIOE	Riobamba	1.94	59	S	Sn	10 08 59.2	-2.8
RIOE	Riobamba	1.94	59	P	Pn	10 08 37.2	-1.3
PECV	Mancha de Ca P	1.99	7	P	Pn	10 08 37.5	-1.3
IGUA	Igualata	2.08	53	P	Pn	10 08 39.4	-1.2
MACE	Macas	2.15	77	⇑P	Pn	10 08 41.9	+0.6
MACE	Macas	2.15	77	⇑S	Sn	10 09 06.7	-0.2
BIL2	Estacion Bilba	2.21	54	S	Sn	10 09 08.0	-0.6
BIL2	Estacion Bilba	2.21	54	P	Pn	10 08 41.9	-0.3
ARRY	Arrayan	2.22	56	⇑P	Pn	10 08 41.3	-1.1
PAT1	Patacocha	2.23	56	P	Pn	10 08 41.9	-0.8
JUI6	Juive	2.26	54	P	Pn	10 08 42.1	-0.7
JUI6	Juive	2.26	54	S	Sn	10 09 08.7	-1.0
RETU	Refugio	2.26	55	P	Pn	10 08 43.2	+0.1
ULBA	Ulba	2.29	55	P	Pn	10 08 43.3	0.0
RUN5	Runtun	2.30	54	S	Sn	10 09 10.8	+0.1
RUN5	Runtun	2.30	54	P	Pn	10 08 43.3	-0.1
JAMA	Jama	2.49	2	P	Pn	10 08 44.6	-1.2
PISA	Pisayambo	2.55	48	P	Pn	10 08 47.6	+0.5
CAMI	Rancho Maria	2.74	41	P	Pn	10 08 50.2	+0.7
MOV1	Cotopaxi Vol s	2.75	42	⇓P	Pn	10 08 50.1	+0.3
NAS2	Nasa	2.78	41	⇓S	Sn	10 09 25.7	+2.8
NAS2	Nasa	2.78	41	⇓P	Pn	10 08 51.4	+1.2
VC1	Cotopaxi 1	2.83	42	⇓P	Pn	10 08 51.8	+1.0
COV1	Cotopaxi Volc	2.85	43	⇓P	Pn	10 08 51.3	0.0
PITA	Cotopaxi Volc	2.87	40	P	Pn	10 08 52.2	+0.8
JUA2	San Juan 2	3.04	34	P	Pn	10 08 54.0	+0.3
TERV	Terraza Guagua	3.08	33	P	Pn	10 08 54.5	+0.2
GGP	Refugio Guagua	3.08	33	P	Pn	10 08 54.3	0.0
PINO	Pino	3.09	33	P	Pn	10 08 54.4	-0.1
ANTI	Antisana	3.13	43	⇓P	Pn	10 08 55.4	+0.3
YANA	Yana	3.14	33	P	Pn	10 08 55.2	+0.1
GOLV	Golondrinas	3.17	21	P	Pn	10 08 52.7	-2.4
GOLV	Golondrinas	3.17	21	S	Sn	10 09 28.2	-3.5
OTAV	Otavalo	3.50	32	⇓P	Pn	10 08 59.7	-0.4
OTAV	Otavalo	3.50	32	ePn	Pn	10 08 59.6	-0.4
OTAV				eSn	Sn	10 09 42.8	+2.3
CAYA	Cayambe	3.64	39	⇓P	Pn	10 09 02.5	+0.5
COTA	Cotacachi	3.65	32	⇑P	Pn	10 09 02.1	+0.1
LITE	Lita	4.04	29	S	Sn	10 09 52.3	-0.9
LITE	Lita	4.04	29	P	Pn	10 09 06.0	-1.1
ATAH	Atahualpa	4.74	157	P	Pn	10 09 19.6	+2.7
ATAH				S	Sn	10 10 14.3	+3.5
ATAH	Atahualpa	4.74	157	P	Pn	10 09 19.6	+2.7
	6.6nm,0.3s,baz=6.2,slow=8.5,SNR=28						
ATAH				S	Sn	10 10 14.3	+3.5
	9.3nm,0.3s,baz=171,slow=19,SNR=3.7						
NNA	Nana	9.78	160	ePn	Pn	10 10 26.3	+0.5
NNA				S	Sn	10 12 12.0	-2.3
NNA	Nana	9.78	160	P	Pn	10 10 26.1	+0.4
	10nm,0.3s,baz=319,slow=10,SNR=18						
NNA				S	Sn	10 12 12.0	-2.3
	23nm,0.3s,baz=226,slow=20,SNR=31						
BCIP	Isla Barro Col	11.86	2	Pn	Pn	10 10 55.3	+1.2
JTS	JuntasAbangare	13.77	340	ePn	Pn	10 11 22.7	+2.4
LPAZ	La Paz	18.00	139	P	P	10 12 13.0	-1.7
LPAZ	La Paz	18.00	139	P	P	10 12 13.0	-1.7
	baz=333,slow=11						
SAML	Samuel	18.09	111	eP	P	10 12 10.5	-4.7
	28nm,0.8s						
SAML				eSn	Sn	10 15 20.2	-16
SIV	San Ignacio	23.04	126	P	P	10 13 07.4	-1.2
SIV	San Ignacio	23.04	126	P	P	10 13 07.4	-1.2
	1.1nm,0.5s,baz=317,slow=19,SNR=3.7						
TEIG	Tepich	24.15	341	eP	P	10 13 19.5	+0.6
	20nm,1.2s						
PLCA	Paso Flores	38.81	168	P	P	10 15 27.6	+0.1
PLCA	Paso Flores	38.81	168	P	P	10 15 27.6	+0.1
	1.6nm,0.8s,baz=6.0,slow=13,SNR=2.9						
PDAR	Pinedale Array	52.46	333	P	P	10 17 14.8	-0.6
PDAR	Pinedale Array	52.46	333	P	P	10 17 14.8	-0.6
	0.6nm,0.8s,baz=134,slow=6.4,SNR=3.9						
NVAR	Mina Array Bea	53.95	323	P	P	10 17 26.4	0.0
NVAR	Mina Array Bea	53.95	323	P	P	10 17 26.4	0.0
	0.8nm,0.8s,baz=127,slow=8.9,SNR=5.9						
YKA	Yellowknife Ar	70.08	344	P	P	10 19 14.3	+0.5
YKA	Yellowknife Ar	70.08	344	P	P	10 19 14.3	+0.5
	0.2nm,0.6s,baz=142,slow=6.1,SNR=3.7						
ASAR	Alice Springs	137.59	230	PKP	PKPdf	10 27 26.1	-0.5
ASAR	Alice Springs	137.59	230	PKP	PKPdf	10 27 26.1	-0.5
	0.5nm,0.7s,baz=95,slow=1.7,SNR=6.2						
WRA	Warramunga Arr	139.20	235	PKP	PKPdf	10 27 29.1	-0.5
WRA	Warramunga Arr	139.20	235	PKP	PKPdf	10 27 29.1	-0.5
	0.6nm,0.7s,baz=112,slow=2.2,SNR=8.8						

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*ISCJB **06** 10:59:03.6±0.6, 4°.11S±0°.06×142°.00E±0°.08, h109km, mb3.8/10, Error ellipse: s-maj=12.0km s-min=8.2km az=164.3*

*IDC **06** 10:59:04.8±0.7, 4°.20S×142°.08E, h114km±5km, mb3.7/11, mb1 3.9/13, mb1mx3.7/22, mbtmp3.8/13, MS3.2/2, Ms1 3.2/2, ms1mx2.6/27, Error ellipse: s-maj=21.9km s-min=10.5km az=96.0*

*AUST **06** 10:59:04.5, 4°.38S×142°.05E, h60km*

ISC 06 10:59:04.7±0.6**, 4°.15S**±0°.07×**142°.1E**±0°.1**, h109**km**, n33, σ1ˢ.23**/36**, mb3.8**/10**, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.10	320	P	Pn	10 59 39.6	+0.5
	baz=2.3,SNR=11						
PMG	Port Moresby	7.28	136	P	Pn	11 00 48.8	+0.3
	2.7nm,0.3s,baz=330,slow=9.4,SNR=8.8						
COEN	Coen	9.81	174	P	Pn	11 01 24.5	+1.7
	baz=9.6,SNR=6.7						
KDU	Kakadu	12.71	228	P	Pn	11 02 00.2	-1.4
	baz=13,SNR=15						
MTN	Manton Dam	13.82	231	P	Pn	11 02 14.9	-1.2
	baz=14,SNR=32						
CTA	Charters Tower	16.37	166	LR	LR	11 10 08.5	
	comp=Z,99nm,18.1s,baz=74,slow=41						
QIS	Mount Isa	16.48	188	P	Pn	11 02 49.8	+0.2
	baz=16,SNR=8.1						
KNRA	Kununurra	17.38	228	P	Pn	11 03 01.2	+0.7
	baz=17,SNR=25						
WRA	Warramunga Arr	17.41	205	P	P	11 02 59.8	-0.7
	2.3nm,0.3s,baz=28,slow=13,SNR=84						
WRA				S	Sn	11 06 14.1	-0.8
	0.1nm,0.3s,baz=17,slow=35,SNR=5.2						
ASAR	Alice Springs	20.94	201	P	P	11 03 39.0	+0.1
	7.6nm,0.6s,baz=31,slow=9.7,SNR=97						
ASAR				sP	sP	11 04 13.8	+0.6
	20nm,0.8s,baz=28,slow=10.0,SNR=12						
ASAR				S	S	11 07 24.6	-1.8
	1.4nm,0.8s,baz=21,slow=21,SNR=5.2						
FITZ	Fitzroy Crossi	21.22	228	P	P	11 03 42.3	+0.4
	6.7nm,0.6s,baz=33,slow=10,SNR=25						
FITZ				LR	LR	11 13 48.7	
	comp=Z,49nm,18.7s,baz=275,slow=42						
FITZ	Fitzroy Crossi	21.22	228	P	P	11 03 44.8	+2.8
	baz=21,SNR=15						
KAPI	Kappang	22.24	267	P	P	11 03 51.4	-1.4
	2.4nm,0.5s,baz=154,slow=9.1,SNR=3.7						
QLP	Quilpie	22.41	175	P	P	11 03 54.6	+0.2
	baz=22,SNR=22						
EIDS	Eidsvold	22.82	159	P	P	11 03 59.8	+1.3
	baz=23,SNR=4.6						
RMQ	Roma	23.12	165	P	P	11 04 03.5	+2.0
	baz=23,SNR=8.2						
CMSA	Cobar Meteorol	27.46	173	P	P	11 04 42.5	+1.9
	baz=27,SNR=5.8						
STKA	Stephens Creek	27.59	181	P	P	11 04 40.0	-1.7
	1.5nm,0.6s,baz=342,slow=15,SNR=3.5						
MEEK	Meekatharra	31.66	223	P	P	11 05 18.7	+0.8
	baz=32,SNR=3.8						
MORW	Morawa	34.97	222	P	P	11 05 47.5	+0.9
	baz=35,SNR=5.7						
PMBI	Palembang	37.22	271	S	S	11 11 59.6	+14
	baz=37,SNR=4.3						
GSI	Gunungsitoli	44.77	276	P	P	11 07 22.9	+15
	baz=45,SNR=8.3						
MKAR	Makanchi Array	72.96	322	P	P	11 10 22.6	+0.2
	1.5nm,0.8s,baz=112,slow=8.0,SNR=11						
MKAR				pP	pP	11 10 51.9	+2.0
	0.4nm,0.5s,baz=120,slow=7.1,SNR=3.0						
VNDA	Vanda	74.08	176	P	P	11 10 27.8	-0.6
	1.0nm,0.6s,baz=321,slow=5.6,SNR=11						
ZALV	Zalesovo Beam	74.86	329	P	P	11 10 32.8	-0.4
	0.3nm,0.3s,baz=119,slow=5.4,SNR=3.7						
ZALV				pP	pP	11 11 02.7	+1.8
	0.7nm,0.6s,baz=108,slow=4.7,SNR=2.4						
KURBB	Kurchatov Arra	76.82	324	P	P	11 10 44.2	-0.3
	0.4nm,0.7s,baz=91,slow=3.7,SNR=3.4						
MAW	Mawson	82.06	202	P	P	11 11 12.8	+0.2
	2.7nm,0.6s,baz=89,slow=8.6,SNR=4.0						
BVAR	Borovoye Array	82.39	325	P	P	11 11 15.5	+0.8
	1.1nm,0.6s,baz=122,slow=5.4,SNR=5.5						
BVAR				pP	pP	11 11 43.5	+0.8
	1.3nm,0.8s,baz=97,slow=11,SNR=3.0						
ILAR	Eielson Array	85.77	24	P	P	11 11 30.1	-1.3
	1.0nm,0.8s,baz=268,slow=4.9,SNR=6.1						
ILAR				pP	pP	11 11 58.8	-1.0
	1.0nm,0.7s,baz=258,slow=4.3,SNR=5.3						
TORD	Torodi Ar. Bea	139.85	285	PKhKP	PKPpre	11 18 11.8	
	0.1nm,0.3s,baz=96,slow=2.5,SNR=4.1						
TORD				PKP	PKPdf	11 18 20.2	-0.9
	0.4nm,0.6s,baz=100,slow=4.9,SNR=3.0						
LPAZ	La Paz	143.91	125	PKP	PKPdf	11 18 28.7	-0.4
	3.2nm,0.6s,baz=262,slow=4.0,SNR=16						
CPUP	Villa Florida	144.36	149	PKP	PKPbc	11 18 27.8	+0.3
	0.4nm,0.4s,baz=268,slow=18,SNR=3.4						
DBIC	Dimbokro	146.96	276	PKPbc	PKPbc	11 18 34.6	-1.1
	16nm,1.1s,baz=78,slow=1.4,SNR=4.0						

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*ISK **06** 10:59:51.4, 37°.82N×36°.27E, h12km, MD2.6*

*CSEM **06** 10:59:52.1±0.2, 37°.83N×36°.28E, h10km, MD2.6, Error ellipse: s-maj=5.2km s-min=4.8km az=100.0*

*DDA **06** 10:59:52.8, 37°.79N×36°.20E, h7km, MD3.0*

ISC 06 10:59:52.5±1.0**, 37°.80N**±0°.03×**36°.24E**±0°.02**, h15**km±11km**, n21, σ1ˢ.01**/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	Kozan	0.46	226	ePG	Pg	11 00 01.2	-0.4
KOZT				eSG	Sb	11 00 08.9	0.0
KOZT	Kozan	0.46	226	ePg	Pg	11 00 01.2	-0.4
KOZT				eSg	Sb	11 00 08.9	0.0
KMRS	Kahramanmaras	0.60	119	ePG	Pg	11 00 03.0	-1.4
KMRS				eSG	Sg	11 00 12.1	-0.3
KMRS	Kahramanmaras	0.60	119	ePg	Pg	11 00 03.0	-1.4
KMRS				eSg	Sg	11 00 12.1	-0.3
SARI	SarD1z-Kayseri	0.62	13	ePG	Pg	11 00 03.5	-1.3
CEYT	Ceyhan	0.88	206	ePG	Pb	11 00 09.5	0.0
CEYT	Ceyhan	0.88	206	ePg	Pb	11 00 09.5	0.0
PINB	Pinarbasi	0.88	8	i P	Pb	11 00 09.3	-0.4
PINB				i S	Sb	11 00 21.5	0.0
PINB	Pinarbasi	0.88	8	i P	Pb	11 00 09.3	-0.4
PINB				i S	Sb	11 00 21.5	0.0
GAZ	Gaziantep	1.00	129	ePG	Pb	11 00 10.6	-1.0
GAZ	Gaziantep	1.00	129	ePg	Pb	11 00 10.6	-1.0
BNN	Bunyan	1.09	344	ePN	Pb	11 00 12.8	-0.4
BNN	Bunyan	1.09	344	ePn	Pb	11 00 12.8	-0.4
GZT	Gaziantep	1.14	113	i P	Pg	11 00 15.2	+0.6
GZT				i S	Sg	11 00 31.7	+2.1
KUZU	Kuzuini	1.23	147	i P	Pg	11 00 16.3	+0.2
KUZU				i S	Sg	11 00 33.3	+1.2
KUZU	Kuzuini	1.23	147	i P	Pg	11 00 16.3	+0.2
KUZU				i S	Sg	11 00 33.3	+1.2
DARE	Darende-Malaty	1.25	52	ePN	Pn	11 00 14.8	-0.7
GULE	Gulek	1.27	246	i P	Pg	11 00 17.2	+0.2
GULE				i S	Sg	11 00 34.5	+0.9
GULE	Gulek	1.27	246	i P	Pg	11 00 17.2	+0.2
GULE				i S	Sg	11 00 34.5	+0.9
AKCD	Akcadag	1.42	69	i P	Pg	11 00 20.5	+0.7
AKCD				i S	Sg	11 00 41.6	+3.3
AKCD	Akcadag	1.42	69	i P	Pg	11 00 20.5	+0.7

IDC 06 11:16:54.0±2.7**, 17°.95S**×**178°.93W, h614**km±34km**, mb3.2**/10**, mb1 3.5**/11**, mb1mx3.3**/21**, mbtmp3.3**/11**, Error ellipse: s-maj=32.0km s-min=13.6km az=155.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.96	61	P	P	11 18 45.2	-8.5
	4.8nm,0.3s,baz=48,slow=3.2,SNR=7.1						
DZM	Mont Dzumac	14.35	251	P	P	11 19 55.3	-0.5
	0.9nm,0.3s,baz=76,slow=17,SNR=9.5						
CTA	Charters Tower	32.95	261	P	P	11 22 40.1	-0.1
	6.6nm,0.7s,baz=79,slow=9.7,SNR=7.7						
STKA	Stephens Creek	38.18	241	P	P	11 23 23.4	+0.4
	9.9nm,0.5s,baz=91,slow=9.9,SNR=55						
WRA	Warramunga Arr	44.14	260	P	P	11 24 09.8	-0.4
	4.4nm,0.5s,baz=96,slow=6.9,SNR=173						
WRA				PcP	PcP	11 25 41.5	+0.2
	0.5nm,0.4s,baz=90,slow=3.8,SNR=4.6						
ASAR	Alice Springs	44.31	254	P	P	11 24 11.3	-0.1
	48nm,0.6s,baz=89,slow=8.3,SNR=1111						
ASAR				S	S	11 30 01.9	-0.6
	0.4nm,0.7s,baz=94,slow=16,SNR=4.5						
FITZ	Fitzroy Crossi	52.54	261	P	P	11 25 12.3	+0.1
	1.7nm,0.6s,baz=90,slow=1.0,SNR=4.7						
VNDA	Vanda	60.36	185	P	P	11 26 04.2	-0.5
	0.4nm,0.8s,baz=18,slow=3.6,SNR=4.0						
NVAR	Mina Array Bea	79.80	44	P	P	11 28 00.1	-0.1
	1.0nm,0.7s,baz=225,slow=9.5,SNR=11						
ILAR	Eielson Array	86.04	13	P	P	11 28 29.1	-1.3
	0.3nm,0.4s,baz=218,slow=5.3,SNR=9.0						
TXAR	Lajitas Array	86.43	58	P	P	11 28 33.9	+0.7
	1.5nm,0.7s,baz=222,slow=6.2,SNR=20						
PDAR	Pinedale Array	87.72	44	P	P	11 28 38.5	-0.6
	0.7nm,0.6s,baz=228,slow=3.9,SNR=7.4						
CMAR	Chiang Mai Arr	88.44	290	P	P	11 28 44.3	+1.7
	0.6nm,0.3s,baz=119,slow=3.8,SNR=5.0						
BRTR	Keskin Array B	144.46	314	PKP	PKPdf	11 35 21.6	-0.4
	0.9nm,0.8s,baz=188,slow=2.5,SNR=4.2						
GERES	GERESS Array B	147.52	344	PKPbc	PKPbc	11 35 30.1	-0.2
	0.3nm,0.4s,baz=238,slow=5.6,SNR=2.0						

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*ISK **06** 11:17:17.6, 37°.22N×36°.26E, h9km, MD3.2*

*DDA **06** 11:17:17.5, 37°.20N×36°.26E, h11km, MD3.5*

*NSSC **06** 11:17:18.0±1.8, 37°.17N×36°.49E, h0km±7km, MD1.6, ML3.0*

*CSEM **06** 11:17:18.1±0.2, 37°.16N×36°.25E, h10km, MD3.2, Error ellipse: s-maj=4.5km s-min=3.9km az=80.0*

ISC 06 11:17:17.8±1.0**, 37°.18N**±0°.02×**36°.28E**±0°.02**, h8**km±9km**, n70, σ0ˢ.94**/102**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	Kozan	0.47	310	ePG	Pg	11 17 27.0	+0.1
KOZT				eSG	Sg	11 17 32.9	-0.2
KOZT	Kozan	0.47	310	ePg	Pg	11 17 27.0	+0.1
KOZT				eSg	Sg	11 17 32.9	-0.2
AYKD	Aykdinkavak	0.48	61	i P	Pg	11 17 26.9	-0.3
AYKD				i S	Sg	11 17 33.6	+0.1
AYKD	Aykdinkavak	0.48	61	i P	Pg	11 17 26.9	-0.3
AYKD				i S	Sg	11 17 33.6	+0.1
KMRS	Kahramanmaras	0.59	56	ePG	Pg	11 17 29.0	-0.3
KMRS				eSG	Sg	11 17 37.2	+0.1
KMRS	Kahramanmaras	0.59	56	ePg	Pg	11 17 29.0	-0.3
KMRS				eSg	Sg	11 17 37.2	+0.1
DRWC	Darouich	0.64	151	eP	Pg	11 17 28.6	-1.5
DRWC				eS	Sg	11 17 38.2	-0.2
DRWC	Darouich	0.64	151	eP	Pg	11 17 28.6	-1.5
	SNR=91						
DRWC				eS	Sg	11 17 38.2	-0.2
	SNR=59						
COBT	Iskenderun	0.66	182	i P	Pg	11 17 30.9	+0.4
COBT				i S	Sg	11 17 33.1	-6.0
COBT	Iskenderun	0.66	182	i P	Pg	11 17 30.9	+0.4
COBT				i S	Sg	11 17 33.1	-6.0
GAZ	Gaziantep	0.75	90	ePG	Pb	11 17 33.0	-0.2
GAZ	Gaziantep	0.75	90	ePg	Pb	11 17 33.0	-0.2
KUZU	Kuzuini	0.76	122	i P	Pb	11 17 33.2	-0.1
KUZU				i S	Sb	11 17 43.9	+0.1
KUZU	Kuzuini	0.76	122	i P	Pb	11 17 33.2	-0.1
KUZU				i S	Sb	11 17 43.9	+0.1
KRTS	Karatas	0.94	230	ePG	Pb	11 17 36.2	-0.2
KRTS	Karatas	0.94	230	ePg	Pb	11 17 36.2	-0.2
GZT	Gaziantep	1.04	80	i P	Pg	11 17 38.1	+0.3
GZT				i S	Sb	11 17 52.5	+0.4
HTY	Hatay	1.06	186	ePN	Pn	11 17 39.4	+0.4
HTY	Hatay	1.06	186	ePn	Pn	11 17 39.4	+0.4
BTCH	Batrach	1.15	173	eP	Pb	11 17 39.9	-0.1
BTCH				eS	Sg	11 17 54.8	0.0
BTCH				AML	AML	11 17 58.7	
	comp=N,945nm,0.4s						
BTCH				AML	AML	11 17 59.8	
	comp=E,431nm,0.8s						
BTCH	Batrach	1.15	173	eP	Pb	11 17 39.9	-0.1
	SNR=57						
BTCH				eS	Sg	11 17 54.8	0.0
	comp=E,431nm,0.8s,SNR=49						
YAYL	Yayladag	1.15	187	i P	Pn	11 17 40.7	+0.3
YAYL				i S	Sn	11 17 57.0	+0.6
YAYL	Yayladag	1.15	187	i P	Pn	11 17 40.7	+0.3
YAYL				i S	Sn	11 17 57.0	+0.6
GULE	Gulek	1.20	275	i P	Pb	11 17 39.1	-1.9
GULE				i S	Sb	11 17 56.9	+0.1
GULE	Gulek	1.20	275	i P	Pb	11 17 39.1	-1.9
GULE				i S	Sb	11 17 56.9	+0.1
SARI	SarD1z-Kayseri	1.23	5	ePN	Pn	11 17 41.4	-0.2
SARI	SarD1z-Kayseri	1.23	5	ePn	Pn	11 17 41.4	-0.2
ARNB	Al Arnab	1.34	191	eP	Pb	11 17 43.4	+0.2
ARNB				eS	Sg	11 18 02.2	+1.4
ARNB	Al Arnab	1.34	191	eP	Pb	11 17 43.4	+0.2
	SNR=57						
ARNB				eS	Sg	11 18 02.2	+1.4
	SNR=49						
PINB	Pinarbasi	1.50	4	i P	Pb	11 17 46.5	+0.4
PINB				i S	Sg	11 18 06.5	+0.4
PINB	Pinarbasi	1.50	4	i P	Pb	11 17 46.5	+0.4
PINB				i S	Sg	11 18 06.5	+0.4
NIG	Nigde	1.62	306	ePN	Pn	11 17 45.8	-1.1
NIG	Nigde	1.62	306	ePn	Pn	11 17 45.8	-1.1
ATAB	Bozova	1.63	79	i P	Pb	11 17 48.5	+0.2
ATAB				i S	Sg	11 18 11.2	+0.9
ATAB	Bozova	1.63	79	i P	Pb	11 17 48.5	+0.2
ATAB				i S	Sg	11 18 11.2	+0.9
SLMH	Al Salmeh	1.64	125	eP	Pn	11 17 47.0	0.0
SLMH				eS	Sn	11 18 05.6	-2.7
SLMH				AML	AML	11 18 13.7	
	comp=N,217nm,0.3s						
SLMH				AML	AML	11 18 19.8	
	comp=E,427nm,0.5s						
SLMH	Al Salmeh	1.64	125	eP	Pn	11 17 47.0	0.0
	SNR=57						
SLMH				eS	Sn	11 18 05.6	-2.7
	comp=E,427nm,0.5s,SNR=49						
DARE	Darende-Malaty	1.69	34	ePN	Pn	11 17 47.8	+0.1
DARE	Darende-Malaty	1.69	34	ePn	Pn	11 17 47.8	+0.1
BNN	Bunyan	1.71	349	ePN	Pn	11 17 47.7	-0.4
BNN	Bunyan	1.71	349	ePn	Pn	11 17 47.7	-0.4
AKCD	Akcadag	1.72	49	eP	Pn	11 17 48.5	+0.3
AKCD				i S	Sg	11 18 13.2	+0.2
AKCD	Akcadag	1.72	49	eP	Pn	11 17 48.5	+0.3
AKCD				i S	Sg	11 18 13.2	+0.2
URFA	Urfa	2.04	82	ePN	Pn	11 17 53.3	+0.6
URFA	Urfa	2.04	82	ePn	Pn	11 17 53.3	+0.6
MYA	Malataya	2.05	55	ePN	Pn	11 17 53.1	+0.3
MYA	Malataya	2.05	55	ePn	Pn	11 17 53.1	+0.3
JHLN	Al Jahlan	2.30	130	eP	Pn	11 17 54.0	-2.2
JHLN				eS	Sn	11 18 22.5	-2.2
JHLN	Al Jahlan	2.30	130	eP	Pn	11 17 54.0	-2.2
	SNR=45						
JHLN				eS	Sn	11 18 22.5	-2.2
	SNR=40						

YOZ	**Yozgat**	**2.57**	**343**	*e*PN	**Pn**	**11 18 00.1**	**+0.1**
YOZ	**Yozgat**	**2.57**	**343**	*e*Pn	**Pn**	**11 18 00.1**	**+0.1**
HAWK	**Haweek**	**2.65**	**178**	*e*P	**Pn**	**11 18 02.2**	**+1.2**
HAWK				*e*S	**Sn**	**11 18 35.1**	**+1.6**
HAWK				AML	AML	11 18 51.5	
	comp=N,45nm,0.7s						
HAWK				AML	AML	11 18 52.1	
	comp=E,32nm,0.3s						
HAWK	**Haweek**	**2.65**	**178**	*e*P	**Pn**	**11 18 02.2**	**+1.2**
	SNR=45						
HAWK				*e*S	**Sn**	**11 18 35.1**	**+1.6**
	comp=E,32nm,0.3s,SNR=40						
SVRC	**Sivrice-ELAZID**	**2.68**	**63**	*e*PN	**Pn**	**11 18 03.1**	**+1.6**
SVRC	**Sivrice-ELAZID**	**2.68**	**63**	*e*Pn	**Pn**	**11 18 03.1**	**+1.6**
ILIC	**ilic-Erzincan**	**2.90**	**38**	*e*PN	**Pn**	**11 18 04.9**	**+0.5**
ILIC	**ilic-Erzincan**	**2.90**	**38**	*e*Pn	**Pn**	**11 18 04.9**	**+0.5**
PTK	**Pertek**	**3.00**	**54**	*e*PN	**Pn**	**11 18 07.1**	**+1.2**
PTK	**Pertek**	**3.00**	**54**	*e*Pn	**Pn**	**11 18 07.1**	**+1.2**
SFNV	**Sufian**	**3.17**	**103**	*e*P	**Pn**	**11 18 07.4**	**-0.7**
SFNV				AML	AML	11 19 14.9	
	comp=E,210nm,0.5s						
SFNV				AML	AML	11 19 17.0	
	comp=N,86nm,0.3s						
SFNV	**Sufian**	**3.17**	**103**	*e*P	**Pn**	**11 18 07.4**	**-0.7**
	SNR=45						
CORM	**Corum**	**3.26**	**337**	*e*PN	**Pn**	**11 18 09.9**	**+0.5**
CORM	**Corum**	**3.26**	**337**	*e*Pn	**Pn**	**11 18 09.9**	**+0.5**
AFSR	**Af¯ar-Bala (A**	**3.39**	**313**	*e*PN	**Pn**	**11 18 11.8**	**+0.6**
AFSR	**Af¯ar-Bala (A**	**3.39**	**313**	*e*Pn	**Pn**	**11 18 11.8**	**+0.6**
KBSD	**Kabsdagh**	**3.42**	**92**	*e*P	**Pn**	**11 18 10.6**	**-0.8**
KBSD				AML	AML	11 19 11.4	
	comp=N,144nm,0.4s						
KBSD				AML	AML	11 19 13.8	
	comp=E,167nm,0.3s						
KBSD	**Kabsdagh**	**3.42**	**92**	*e*P	**Pn**	**11 18 10.6**	**-0.8**
	SNR=45						
EZC	**Erzincan**	**3.53**	**42**	*e*Pn	**Pn**	**11 18 15.4**	**+2.3**
ERZN	**Erzincan**	**3.62**	**47**	*e*PN	**Pn**	**11 18 15.3**	**+1.0**
BHD	**Baghdad**	**7.69**	**118**	*e*x	**Pn**	**11 19 11.0**	**+0.9**
BHD				*e*x	**Pg**	**11 19 46.0**	**+0.9**
BHD				*e*x	x	11 20 42.0	
BHD				*e*x	x	11 21 33.0	

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*AUST **06** 11:23:25.5±89.0, 32°.97S×175°.67W, h30km±2km, Error ellipse: s-maj=18.0km s-min=2.0km az=291.0*
*IDC **06** 11:23:38.0±0.9, 31°.72S×178°.43W, h0km, mb4.4/7, mb1 4.6/8, mb1mx4.2/22, mbtmp4.4/8, ML4.1/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/27, Error ellipse: s-maj=27.4km s-min=23.9km az=12.0*
*ISCJB **06** 11:23:42.9±0.8, 32°.11S±0°.04×178°.5W±0°.1, h45km, mb4.5/9, Error ellipse: s-maj=16.1km s-min=5.5km az=11.1*
*NEIC **06** 11:23:44.9±1.2, 31°.85S×178°.47W, h51km±10km, mb4.7/4, Error ellipse: s-maj=14.3km s-min=10.7km az=116.0*
ISC 06 11:23:43.6±0.7**, 32°.06S**±0°.06×**178°.3W**±0°.1**, h45**km**, n67, σ2s.26**/67**, mb4.5**/9**, 1C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.82**	**7**	Pn	**Pn**	**11 24 24.9**	**-1.2**
RAO				Sn	**Sn**	**11 24 55.3**	**-3.6**
RAO	**Raoul Island**	**2.82**	**7**	Pn	**Pn**	**11 24 24.9**	**-1.2**
	70nm,0.3s,baz=102,slow=20,SNR=5.7						
RAO				Sn	**Sn**	**11 24 55.3**	**-3.6**
	169nm,0.3s,baz=150,slow=21,SNR=7.5						
MXZ	**Matakaoa Point**	**6.16**	**206**	PN	**Pn**	**11 25 12.7**	**+0.8**
MXZ				SN	**Sn**	**11 26 25.2**	**+4.2**
PUZ	**Puketiti**	**6.63**	**204**	PN	**Pn**	**11 25 18.6**	**+0.2**
PUZ				SN	**Sn**	**11 26 33.2**	**+0.5**
CNGZ	**Carnagh Statio**	**7.01**	**203**	*e*PN	**Pn**	**11 25 24.2**	**+0.5**
MWZ	**Matawai**	**7.13**	**207**	*e*PN	**Pn**	**11 25 23.8**	**-1.5**
MWZ				SN	**Sn**	**11 26 45.8**	**+0.8**
URZ	**Urewera**	**7.23**	**210**	Pn	**Pn**	**11 25 29.1**	**+2.4**
URZ				Sn	**Sn**	**11 26 49.2**	**+1.7**
URZ	**Urewera**	**7.23**	**210**	*e*PN	**Pn**	**11 25 26.8**	**+0.1**
URZ				SN	**Sn**	**11 26 49.3**	**+1.8**
URZ	**Urewera**	**7.23**	**210**	Pn	**Pn**	**11 25 29.1**	**+2.4**
	2.7nm,0.3s,baz=142,slow=13,SNR=42						
URZ				Sn	**Sn**	**11 26 49.2**	**+1.7**
	4.2nm,0.3s,baz=284,slow=23,SNR=9.0						
OUZ	**Omahuta**	**7.45**	**243**	PN	Pn	11 25 35.0	+5.3
NMHZ	**Naumai**	**8.07**	**208**	*e*PN	**Pn**	**11 25 38.2**	**-0.1**
BKZ	**Black Stump Fm**	**8.26**	**209**	*e*PN	**Pn**	**11 25 39.2**	**-1.7**
BKZ				SN	**Sn**	**11 27 12.5**	**-0.3**
MCHZ	**McNeill Hill**	**8.41**	**207**	PN	**Pn**	**11 25 44.0**	**+1.2**
BHHZ	**Black Hill Sta**	**8.71**	**210**	PN	**Pn**	**11 25 45.9**	**-1.0**
PRWZ	**Pori Road**	**9.65**	**207**	SN	**Sn**	**11 27 44.6**	**-2.2**
BFZ	**Birch Farm**	**9.66**	**205**	SN	**Sn**	**11 27 41.9**	**-5.1**
MRZ	**Mangatainoka R**	**9.90**	**208**	*e*PN	Pn	11 25 59.3	-3.9
MRZ				SN	**Sn**	**11 27 47.4**	**-5.4**
HOWZ	**Holdsworth Sta**	**10.12**	**208**	SN	**Sn**	**11 27 52.7**	**-5.7**
OGWZ	**Otaki Gorge**	**10.19**	**209**	PN	**Pn**	**11 26 05.1**	**-2.1**
KIW	**Kapiti Island**	**10.34**	**210**	SN	**Sn**	**11 27 59.0**	**-4.8**
TUWZ	**Tuamarina**	**11.22**	**211**	SN	**Sn**	**11 28 20.6**	**-4.7**
NNZ	**Nelson**	**11.31**	**214**	SN	**Sn**	**11 28 21.8**	**-5.7**
CTZ	**Chatham Island**	**11.73**	**174**	SN	**Sn**	**11 28 32.5**	**-5.2**
LTZ	**Lake Taylor**	**13.05**	**212**	*e*PN	Pn	11 26 42.3	-4.0
OXZ	**Oxford**	**13.59**	**211**	SN	Sn	11 29 10.5	-13
MQZ	**McQueen's Vall**	**13.63**	**209**	SN	Sn	11 29 12.8	-11
ODZ	**Otahua Downs**	**15.56**	**210**	SN	Sn	11 29 59.5	-11
DZM	**Mont Dzumac**	**16.82**	**303**	LR	LR	11 32 15.0	
	comp=Z,153nm,20.9s,baz=169,slow=31						
RAR	**Rarotonga**	**19.75**	**61**	LR	LR	11 34 23.8	
	comp=Z,40nm,19.8s,baz=106,slow=33						
CMSA	**Cobar Meteorol**	**30.52**	**261**	P	**P**	**11 29 54.7**	**+2.1**
	baz=32,SNR=19						
CTA	**Charters Tower**	**33.84**	**282**	P	**P**	**11 30 21.9**	**0.0**
CTA	**Charters Tower**	**33.84**	**282**	P	**P**	**11 30 21.9**	**0.0**
	7.9nm,0.6s,baz=86,slow=11,SNR=11						
CTAO	**Charters Tower**	**33.84**	**282**	*e*P	**P**	**11 30 22.5**	**+0.7**
	7.9nm,0.6s						
STKA	**Stephens Creek**	**33.88**	**259**	P	**P**	**11 30 22.7**	**+0.6**
STKA	**Stephens Creek**	**33.88**	**259**	P	**P**	**11 30 22.7**	**+0.6**
	2.0nm,0.5s,baz=103,slow=13,SNR=7.0						
STKA	**Stephens Creek**	**33.88**	**259**	P	**P**	**11 30 24.8**	**+2.7**
	baz=36,SNR=6.6						
MTSU	**Mount Surprise**	**36.38**	**283**	P	**P**	**11 30 45.3**	**+1.5**
	baz=39,SNR=18						
BBOO	**Buckleboo**	**38.29**	**256**	P	**P**	**11 30 59.9**	**+0.1**
	baz=40,SNR=17						
AS31	**Alice Springs**	**42.78**	**269**	*e*P	**P**	**11 31 36.7**	**-0.4**
ASAR	**Alice Springs**	**42.78**	**269**	P	**P**	**11 31 36.7**	**-0.3**
ASAR	**Alice Springs**	**42.78**	**269**	P	**P**	**11 31 36.7**	**-0.3**
	4.7nm,0.5s,baz=106,slow=7.2,SNR=100						
WRAB	**Tennant Creek**	**43.92**	**274**	*e*P	**P**	**11 31 45.5**	**-0.7**
	7.3nm,0.6s						
WRA	**Warramunga Arr**	**43.92**	**274**	P	**P**	**11 31 45.6**	**-0.6**
WRA	**Warramunga Arr**	**43.92**	**274**	P	**P**	**11 31 45.6**	**-0.6**
	8.3nm,0.4s,baz=112,slow=7.9,SNR=234						
MTN	**Manton Dam**	**50.00**	**281**	P	**P**	**11 32 33.0**	**-0.7**
	baz=52,SNR=4.1						
KNRA	**Kununurra**	**50.59**	**276**	P	**P**	**11 32 38.4**	**+0.3**
	baz=53,SNR=3.3						
FITZ	**Fitzroy Crossi**	**52.11**	**271**	P	**P**	**11 32 48.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**52.11**	**271**	P	**P**	**11 32 48.5**	**-1.0**
	2.2nm,0.6s,baz=157,slow=2.2,SNR=11						
FITZ	**Fitzroy Crossi**	**52.11**	**271**	P	**P**	**11 32 49.4**	**-0.1**
	baz=54,SNR=5.2						
QSPA	**South Pole Qui**	**58.05**	**180**	*e*P	**P**	**11 33 34.1**	**+2.2**
	8.6nm,0.7s						
QSPA	**South Pole Qui**	**58.05**	**180**	P	P	11 33 35.1	+3.2
	1.5nm,0.5s,baz=325,slow=0.7,SNR=23						
SYO	**Syowa Base**	**75.44**	**193**	⇑*e*P	**P**	**11 35 23.0**	**+0.7**
SNAA	**Sanae**	**76.51**	**179**	*e*P	P	11 35 31.4	+2.9
	4.0nm,1.0s						
NVAR	**Mina Array Bea**	**89.63**	**43**	P	**P**	**11 36 38.5**	**+1.8**
NVAR	**Mina Array Bea**	**89.63**	**43**	P	**P**	**11 36 38.5**	**+1.8**
	0.6nm,0.8s,baz=221,slow=11,SNR=4.5						
ARCES	**ARCESS Array B**	**140.15**	**347**	PKP	**PKPdf**	**11 43 04.7**	**-1.6**
ARCES	**ARCESS Array B**	**140.15**	**347**	PKP	**PKPdf**	**11 43 04.7**	**-1.6**
	3.0nm,0.9s,baz=12,slow=4.6,SNR=3.6						
KAF	**Kangasniemi**	**146.01**	**339**	*e*p	**PKPdf**	**11 43 16.3**	**-0.5**
	3.7nm,0.6s						
FINES	**FINESS Array B**	**146.60**	**339**	PKPbc	**PKPbc**	**11 43 18.6**	**-0.8**
FINES	**FINESS Array B**	**146.60**	**339**	PKPbc	**PKPbc**	**11 43 18.6**	**-0.8**
	2.9nm,0.4s,baz=49,slow=4.6,SNR=22						
NB2	**NORSAR Subarra**	**150.34**	**351**	PKP	**PKPbc**	**11 43 29.1**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.34**	**351**	PKPbc	**PKPbc**	**11 43 29.2**	**-0.1**
NOA	**NORSAR Array B**	**150.34**	**351**	PKPbc	**PKPbc**	**11 43 29.2**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=17,slow=4.2,SNR=4.4						
BRTR	**Keskin Array B**	**153.12**	**296**	PKPbc	**PKPbc**	**11 43 35.8**	**-0.7**
BRTR	**Keskin Array B**	**153.12**	**296**	PKPbc	**PKPbc**	**11 43 35.8**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=110,slow=3.4,SNR=3.7						
TORD	**Torodi Ar. Bea**	**161.18**	**180**	PKPab	**PKPab**	**11 44 25.3**	**+2.3**
TORD	**Torodi Ar. Bea**	**161.18**	**180**	PKPab	**PKPab**	**11 44 25.3**	**+2.3**
	comp=Z,1.1nm,0.6s,baz=176,slow=3.1,SNR=8.8						

TAP 06 11:38:55.1, 24°.90N×121°.99E, h5km±1km, ML1.9, 1D, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.11**	**359**	⇓*i*P	Pg	11 38 58.2	+0.8
	baz=3.0						
TWB1				*i* S	Sg	11 39 00.2	+1.3
	baz=3.0						
NWF	**Wu-fen Shan**	**0.26**	**312**	*e*P	Pb	11 39 01.7	-0.7
	baz=312						
NWF				*e*S	Sb	11 39 05.8	-1.4
	baz=312						
TWC	**Suao**	**0.32**	**204**	*e*P	Pb	11 39 02.3	-0.9
	baz=202						
TWC				*e*S	Sb	11 39 08.1	-0.6
	baz=202						
TWE	**Neicheng**	**0.34**	**239**	P	Pb	11 39 02.8	-0.9
	baz=237						
TWE				*e*S	Sb	11 39 08.1	-1.4
	baz=237						
ENTT	**Nioudou**	**0.46**	**236**	P	Pb	11 39 05.1	-0.7
	baz=235						
ENTT				S	Sb	11 39 12.9	0.0
	baz=235						
TWY	**Chenhua**	**0.52**	**317**	*e*P	Pb	11 39 06.6	0.0
	baz=317						
TWS1	**Kuangyinshan**	**0.56**	**291**	*e*P	Pb	11 39 08.3	+1.0
	baz=291						
NSK	**Sanguang**	**0.62**	**249**	*e*P	Pb	11 39 07.8	-0.6
	baz=248						

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*IDC **06** 11:45:26.3±0.8, 7°.22S×155°.60E, h0km, mb4.2/14, mb1 4.3/14, mb1mx4.3/18, mbtmp4.1/14, MS3.6/4, Ms1 3.6/4, ms1mx3.1/27, Error ellipse: s-maj=29.2km s-min=17.4km az=111.0*
*ISCJB **06** 11:45:32.3±0.4, 7°.17S±0°.06×155°.50E±0°.07, h50km, mb4.2/19, MS3.6/4, Error ellipse: s-maj=10.7km s-min=8.3km az=23.1*
*NEIC **06** 11:45:36.7±1.2, 7°.29S×155°.52E, h82km±12km, mb4.5/5, Error ellipse: s-maj=13.1km s-min=9.3km az=157.0*
*AUST **06** 11:45:37.6±0.0, 7°.26S×155°.55E, h90km, Error ellipse: s-maj=2.0km s-min=1.3km az=27.0*
ISC 06 11:45:34.2±0.5**, 7°.13S**±0°.09×**155°.51E**±0°.08**, h50**km**, n63, σ1s.08**/62**, mb4.3**/19**, MS3.5**/4**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.95**	**118**	*e*Pn	**Pn**	**11 46 47.3**	**+1.2**
HNR				Sn	Sn	11 47 53.6	+12
HNR				*e*Sg		11 48 03.8	
HNR	**Honiara**	**4.95**	**118**	Pn	**Pn**	**11 46 46.9**	**+0.9**
	10.0nm,0.3s,baz=263,slow=4.8,SNR=5.5						
HNR				Sn	Sn	11 47 53.6	+12
	43nm,0.3s,baz=158,slow=23,SNR=5.9						
PMG	**Port Moresby**	**8.57**	**254**	Pn	**Pn**	**11 47 38.3**	**+2.6**
PMG	**Port Moresby**	**8.57**	**254**	Pn	**Pn**	**11 47 38.3**	**+2.6**
	1.5nm,0.3s,baz=78,slow=4.1,SNR=6.2						
RMQ	**Roma**	**20.30**	**198**	P	**P**	**11 50 05.1**	**-0.9**
	baz=20,SNR=4.0						
QLP	**Quilpie**	**22.12**	**208**	P	**P**	**11 50 24.0**	**-1.7**
	baz=22,SNR=4.5						
KDU	**Kakadu**	**23.35**	**255**	P	**P**	**11 50 37.7**	**-0.7**
	baz=23,SNR=6.1						
WRA	**Warramunga Arr**	**24.17**	**236**	P	**P**	**11 50 44.4**	**-1.6**
WRA				PcP	**PcP**	**11 54 26.1**	**+0.1**
WRA	**Warramunga Arr**	**24.17**	**236**	P	**P**	**11 50 44.4**	**-1.6**
	2.4nm,0.7s,baz=59,slow=9.4,SNR=23						
WRA				PcP	**PcP**	**11 54 26.1**	**+0.1**
	0.9nm,0.9s,baz=64,slow=2.3,SNR=4.8						
PALU	**Palau**	**25.43**	**304**	P	**P**	**11 50 57.9**	**+0.4**
	baz=26,SNR=3.6						
CMSA	**Cobar Meteorol**	**25.96**	**199**	P	**P**	**11 51 02.0**	**-0.1**
	baz=26,SNR=6.0						
AS31	**Alice Springs**	**26.47**	**229**	P	**P**	**11 51 04.8**	**-2.1**
ASAR	**Alice Springs**	**26.47**	**229**	P	**P**	**11 51 04.9**	**-2.0**
ASAR	**Alice Springs**	**26.47**	**229**	P	**P**	**11 51 04.9**	**-2.0**
	0.7nm,0.8s,baz=62,slow=9.2,SNR=9.0						
STKA	**Stephens Creek**	**27.84**	**206**	P	**P**	**11 51 18.0**	**-1.0**
STKA	**Stephens Creek**	**27.84**	**206**	P	**P**	**11 51 18.0**	**-1.0**
	2.7nm,0.8s,baz=27,slow=14,SNR=6.1						
STKA				LR	LR	12 00 42.3	
	comp=Z,108nm,19.0s,baz=29,slow=33						
STKA	**Stephens Creek**	**27.84**	**206**	P	**P**	**11 51 19.9**	**+0.8**
	baz=28,SNR=4.3						
FITZ	**Fitzroy Crossi**	**31.07**	**247**	LR	LR	12 04 19.9	
	comp=Z,104nm,20.1s,baz=243,slow=36						
FITZ	**Fitzroy Crossi**	**31.07**	**247**	P	**P**	**11 51 48.8**	**+0.9**
	baz=31,SNR=6.0						
KAPI	**Kappang**	**35.62**	**271**	*e*P	**P**	**11 52 26.3**	**-1.2**
	16nm,0.8s						
MJAR	**Matsushiro Arr**	**46.37**	**341**	P	**P**	**11 53 54.4**	**-1.2**
MJAR	**Matsushiro Arr**	**46.37**	**341**	P	**P**	**11 53 54.4**	**-1.2**
	1.3nm,0.7s,baz=164,slow=9.5,SNR=3.4						
KSRS	**Korea Array**	**51.30**	**332**	P	**P**	**11 54 32.2**	**-1.1**
	1.3nm,0.8s,baz=146,slow=7.8,SNR=5.7						
KSAR	**Wonju Array Be**	**51.30**	**332**	P	**P**	**11 54 32.2**	**-1.2**
USRK	**Ussuriysk Arra**	**55.33**	**340**	P	**P**	**11 55 03.1**	**+0.3**
	3.6nm,1.0s,baz=146,slow=6.9,SNR=5.6						
GSI	**Gunungsitoli**	**58.41**	**276**	P	P	11 55 37.8	+12
	baz=58,SNR=4.0						
PETK	**Petropavlovsk-**	**60.03**	**2**	P	**P**	**11 55 36.6**	**+0.8**
PETK	**Petropavlovsk-**	**60.03**	**2**	P	**P**	**11 55 36.6**	**+0.8**
	4.7nm,1.0s,baz=152,slow=8.0,SNR=5.5						
CMAR	**Chiang Mai Arr**	**61.30**	**295**	P	**P**	**11 55 45.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**61.30**	**295**	P	**P**	**11 55 45.9**	**+0.8**
	2.3nm,0.5s,baz=122,slow=5.4,SNR=12						
FX1	**Attu Island--F**	**61.64**	**12**	LR	LR	12 18 34.7	
	comp=Z,31nm,19.6s,baz=154,slow=32						
SONM	**Songino Array**	**69.72**	**327**	P	**P**	**11 56 39.7**	**+0.6**
SONM	**Songino Array**	**69.72**	**327**	P	**P**	**11 56 39.7**	**+0.6**
	2.5nm,0.7s,baz=134,slow=6.5,SNR=16						
TAPN	**Taplejung**	**73.91**	**301**	*e*P	**P**	**11 57 05.0**	**+0.1**
	36nm,0.9s						
ODAN	**Odare**	**74.04**	**300**	*e*P	**P**	**11 57 05.9**	**+0.3**
RAMN	**Ramite**	**74.74**	**300**	*e*P	**P**	**11 57 09.6**	**-0.1**
BILL	**Bilibino**	**75.38**	**4**	*e*P	**P**	**11 57 12.2**	**+0.1**
	12nm,1.1s						
GUN	**Gumba**	**75.62**	**301**	*e*P	**P**	**11 57 15.0**	**+0.2**
	34nm,0.7s						
PKI	**Pulchoki**	**75.93**	**301**	*e*P	**P**	**11 57 16.4**	**-0.2**
PKIN	**Phulchoki**	**75.94**	**301**	*e*P	**P**	**11 57 16.4**	**-0.2**
KKN	**Kakani**	**76.10**	**301**	*e*P	**P**	**11 57 17.5**	**+0.1**
	20nm,0.8s						
DMN	**Daman**	**76.20**	**301**	*e*P	**P**	**11 57 18.2**	**+0.2**
	43nm,0.9s						
KOLN	**Koldanda**	**77.53**	**300**	*e*P	**P**	**11 57 25.4**	**-0.1**
	18nm,0.8s						
DANN	**Dangsing**	**77.55**	**301**	*e*P	**P**	**11 57 25.2**	**-0.4**
	18nm,0.6s						
PYUN	**Piuthan**	**78.14**	**301**	*e*P	**P**	**11 57 28.3**	**-0.5**
	31nm,0.9s						
TIXI	**Tiksi**	**80.56**	**352**	P	**P**	**11 57 41.8**	**+1.0**
	1.3nm,0.6s						
MCK	**McKinley**	**81.99**	**22**	*e*P	**P**	**11 57 47.6**	**-1.0**
	5.7nm,0.9s						
COLA	**College**	**83.02**	**21**	*e*P	**P**	**11 57 52.8**	**-1.1**
	3.9nm,0.8s						
ILAR	**Eielson Array**	**83.31**	**21**	P	**P**	**11 57 54.0**	**-1.4**
ILAR	**Eielson Array**	**83.31**	**21**	P	**P**	**11 57 54.0**	**-1.4**
	0.8nm,0.4s,baz=250,slow=5.0,SNR=22						
ILAR				LR	LR	12 30 23.4	
	comp=Z,49nm,19.0s,baz=120,slow=32						
MK31	**Makanchi Array**	**83.84**	**319**	*e*P	**P**	**11 57 58.1**	**-0.4**
MKAR	**Makanchi Array**	**83.84**	**319**	P	**P**	**11 57 58.6**	**0.0**
MKAR	**Makanchi Array**	**83.84**	**319**	P	**P**	**11 57 58.6**	**0.0**
	3.2nm,0.7s,baz=101,slow=6.3,SNR=33						
ZALV	**Zalesovo Beam**	**84.58**	**326**	P	**P**	**11 58 00.7**	**-1.4**
ZALV	**Zalesovo Beam**	**84.58**	**326**	P	**P**	**11 58 00.7**	**-1.4**
	2.9nm,0.6s,baz=115,slow=6.1,SNR=18						
NVAR	**Mina Array Bea**	**91.40**	**52**	P	**P**	**11 58 36.1**	**+0.6**
NVAR	**Mina Array Bea**	**91.40**	**52**	P	**P**	**11 58 36.1**	**+0.6**
	0.3nm,0.7s,baz=241,slow=4.9,SNR=3.8						
YKA	**Yellowknife Ar**	**96.21**	**28**	P	**P**	**11 58 56.4**	**-0.3**
YKA	**Yellowknife Ar**	**96.21**	**28**	P	**P**	**11 58 56.4**	**-0.3**
	0.5nm,0.5s,baz=266,slow=4.9,SNR=12						
BDFB	**Brasilia**	**147.52**	**134**	PKPbc	**PKPdf**	**12 05 12.0**	**+0.5**
BDFB	**Brasilia**	**147.52**	**134**	PKPbc	**PKPdf**	**12 05 12.0**	**+0.5**
	3.6nm,0.6s,baz=278,slow=6.3,SNR=5.9						
TORD	**Torodi Ar. Bea**	**153.56**	**285**	PKPbc	**PKPbc**	**12 05 27.1**	**-1.3**
TORD	**Torodi Ar. Bea**	**153.56**	**285**	PKPbc	**PKPbc**	**12 05 27.1**	**-1.3**
	0.7nm,0.6s,baz=86,slow=2.1,SNR=9.0						

IDC 06 11:49:15.7±2.9**, 7°.08S**×**155°.68E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/18**, mbtmp3.6**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.6**/27**, Error ellipse: s-maj=106.9km s-min=35.5km az=130.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.33**	**236**	P	P	11 54 35.2	-0.3
	0.6nm,0.8s,baz=59,slow=9.7,SNR=3.6						
DAV	**Davao City (W)**	**33.15**	**294**	LR	LR	12 09 07.8	
	comp=Z,45nm,18.1s,baz=147,slow=36						
ILAR	**Eielson Array**	**83.20**	**21**	P	P	12 01 43.0	-0.6
	0.1nm,0.4s,baz=251,slow=5.1,SNR=5.6						
MKAR	**Makanchi Array**	**83.92**	**319**	P	P	12 01 48.5	+0.9
	0.6nm,0.8s,baz=97,slow=6.0,SNR=5.3						
ZALV	**Zalesovo Beam**	**84.63**	**326**	P	P	12 01 51.1	+0.1
	0.6nm,0.5s,baz=104,slow=4.7,SNR=3.8						

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*ISK **06** 12:02:42.8, 39°.15N×29°.45E, h8km, MD2.7*
*DDA **06** 12:02:43.6, 39°.15N×29°.44E, h14km, MD2.9*
*CSEM **06** 12:02:43.5±0.1, 39°.15N×29°.47E, h8km, MD2.9, Error ellipse: s-maj=2.1km s-min=2.0km az=148.0*
*ISCJB **06** 12:02:43.6±0.4, 39°.15N±0°.03×29°.46E±0°.03, h6km±4km, Error ellipse: s-maj=4.4km s-min=3.6km az=169.3*
ISC 06 12:02:43.7±0.8**, 39°.16N**±0°.02×**29°.46E**±0°.02**, h13**km±5km**, n46, σ0s.36**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.07**	**166**	*i* P	**Pg**	**12 02 46.6**	**+0.1**
GDZ				*i* S	**Sg**	**12 02 48.6**	**+0.2**
GDZ	**Gediz**	**0.07**	**166**	*i* P	**Pg**	**12 02 46.6**	**+0.1**
GDZ				*i* S	**Sg**	**12 02 48.6**	**+0.2**
TVSB	**Tavsanli**	**0.29**	**0**	*e*PG	**Pg**	**12 02 49.3**	**-0.5**
TVSB				*e*SG	**Sg**	**12 02 53.2**	**-0.8**
TVSB	**Tavsanli**	**0.29**	**0**	*e*Pg	**Pg**	**12 02 49.3**	**-0.5**
ALT	**Altintas**	**0.52**	**101**	*e*PG	**Pg**	**12 02 53.4**	**-0.4**
ALT				*e*SG	**Sg**	**12 03 01.1**	**+0.4**
ALT	**Altintas**	**0.52**	**101**	*e*Pg	**Pg**	**12 02 53.4**	**-0.4**
DEMI	**Demirci**	**0.59**	**259**	*i* P	**Pg**	**12 02 55.3**	**0.0**
DEMI				*i* S	**Sg**	**12 03 03.0**	**-0.1**
DEMI	**Demirci**	**0.59**	**259**	*i* P	**Pg**	**12 02 55.3**	**0.0**
DEMI				*i* S	**Sg**	**12 03 03.0**	**-0.1**
KHAL	**Karahalli**	**0.78**	**178**	*i* P	**Pg**	**12 02 59.2**	**+0.3**
KHAL				*i* S	**Sg**	**12 03 09.5**	**+0.3**
KHAL	**Karahalli**	**0.78**	**178**	*i* P	**Pg**	**12 02 59.2**	**+0.3**
KHAL				*i* S	**Sg**	**12 03 09.5**	**+0.3**
KHL	**Karahalli**	**0.83**	**177**	*e*PG	**Pg**	**12 02 59.2**	**-0.6**
KHL	**Karahalli**	**0.83**	**177**	*e*Pg	**Pg**	**12 02 59.2**	**-0.6**
DURS	**Dursunbey**	**0.89**	**301**	*i* P	**Pg**	**12 03 00.7**	**-0.1**
DURS				*i* S	**Sg**	**12 03 12.2**	**-0.2**
DURS	**Dursunbey**	**0.89**	**301**	*i* P	**Pg**	**12 03 00.7**	**-0.1**
DURS				*i* S	**Sg**	**12 03 12.2**	**-0.2**
KULA	**Kula-Manisa**	**0.89**	**225**	*e*PG	**Pg**	**12 03 00.2**	**-0.7**
KULA	**Kula-Manisa**	**0.89**	**225**	*e*Pg	**Pg**	**12 03 00.3**	**-0.7**
ORLT	**Orhaneli**	**0.99**	**334**	*e*PG	**Pb**	**12 03 02.4**	**-0.4**
ORLT	**Orhaneli**	**0.99**	**334**	*e*Pg	**Pb**	**12 03 02.4**	**-0.4**
ULDT	**Uludag**	**1.02**	**346**	*i* P	**Pg**	**12 03 03.6**	**+0.3**
ULDT				*i* S	**Sn**	**12 03 18.3**	**+0.2**
ULDT	**Uludag**	**1.02**	**346**	*i* P	**Pg**	**12 03 03.6**	**+0.3**
ULDT				*i* S	**Sn**	**12 03 18.3**	**+0.2**
SHUT	**Suhut-Afyon**	**1.04**	**125**	*e*PG	**Pb**	**12 03 03.0**	**-0.6**
SHUT	**Suhut-Afyon**	**1.04**	**125**	*e*Pg	**Pb**	**12 03 03.1**	**-0.6**
BORA	**Eskisehir**	**1.06**	**46**	*i* P	**Pb**	**12 03 03.4**	**-0.5**
BORA				*i* S	**Sg**	**12 03 18.2**	**+0.3**
BORA	**Eskisehir**	**1.06**	**46**	*i* P	**Pb**	**12 03 03.4**	**-0.5**
BORA				*i* S	**Sg**	**12 03 18.2**	**+0.3**
CAVI	**Cavuskoy**	**1.09**	**16**	*e*PN	**Pn**	**12 03 05.0**	**+0.3**
CAVI	**Cavuskoy**	**1.09**	**16**	*e*Pn	**Pn**	**12 03 05.0**	**+0.3**
SEYT	**Eskypehyr**	**1.14**	**71**	*i* P	**Pn**	**12 03 05.6**	**+0.1**
SEYT				*i* S	**Sb**	**12 03 20.1**	**0.0**
SEYT	**Eskypehyr**	**1.14**	**71**	*i* P	**Pn**	**12 03 05.6**	**+0.1**
SEYT				*i* S	**Sb**	**12 03 20.1**	**0.0**
IZI	**Iznik**	**1.18**	**0**	*e*PN	**Pn**	**12 03 06.0**	**0.0**
IZI	**Iznik**	**1.18**	**0**	*e*Pn	**Pn**	**12 03 06.0**	**0.0**
ADVT	**Abdulvahap**	**1.29**	**9**	*e*PN	**Pn**	**12 03 07.7**	**+0.2**
ADVT	**Abdulvahap**	**1.29**	**9**	*e*Pn	**Pn**	**12 03 07.7**	**+0.2**
GEMT	**Gemlik**	**1.30**	**351**	*e*PN	**Pb**	**12 03 08.2**	**+0.3**
GEMT	**Gemlik**	**1.30**	**351**	*e*Pn	**Pb**	**12 03 08.2**	**+0.3**
AKHS	**Akhisar**	**1.31**	**258**	*i* P	**Pg**	**12 03 09.2**	**+0.3**
AKHS				*i* S	**Sn**	**12 03 25.6**	**+0.5**
AKHS	**Akhisar**	**1.31**	**258**	*i* P	**Pg**	**12 03 09.2**	**+0.3**
AKHS				*i* S	**Sn**	**12 03 25.6**	**+0.5**
AKS	**Akhisar**	**1.31**	**258**	*e*PN	**Pn**	**12 03 07.7**	**-0.1**
AKS	**Akhisar**	**1.31**	**258**	*e*Pn	**Pn**	**12 03 07.7**	**-0.1**
GULT	**Gulveren**	**1.51**	**32**	*e*PN	**Pb**	**12 03 11.3**	**-0.3**
GULT	**Gulveren**	**1.51**	**32**	*e*Pn	**Pb**	**12 03 11.4**	**-0.3**
BALY	**Balya**	**1.54**	**293**	*i* P	**Pg**	**12 03 13.6**	**+0.3**
BALY				*i* S	**Sg**	**12 03 33.0**	**-0.3**
BALY	**Balya**	**1.54**	**293**	*i* P	**Pg**	**12 03 13.6**	**+0.3**
BALY				*i* S	**Sg**	**12 03 33.0**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.63**	**79**	*e*PN	**Pn**	**12 03 12.7**	**+0.5**
SVRH	**Sivrihisar-ESK**	**1.63**	**79**	*e*Pn	**Pn**	**12 03 12.7**	**+0.5**
GONE	**Gonen-Balikesi**	**1.64**	**304**	*e*PN	**Pn**	**12 03 12.2**	**0.0**
GONE	**Gonen-Balikesi**	**1.64**	**304**	*e*Pn	**Pn**	**12 03 12.2**	**0.0**

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*NIED **06** 12:12:00, 42°.00N×142°.40E, h50km, Mw3.9 Best double couple: $M_0$7.89000×10^{14} NP1:ϕ_s27.00000°, δ69.00000°, λ88.00000°. NP2:ϕ_s211.00000°, δ21.00000°, λ94.00000°.*
*ISCJB **06** 12:12:32.8±0.4, 41°.93N±0°.03×142°.44E±0°.05, h73km±3km, mb3.8/13, Error ellipse: s-maj=6.6km s-min=4.1km az=42.8*
*JMA **06** 12:12:33.4±0.2, 41°.92N×142°.46E, h64km±2km, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s42.00000°, δ81.00000°, λ99.00000°. NP2:ϕ_s176.00000°, δ12.00000°, λ45.00000°. Principal axes: T Plg53.0000°, Azm322.0000°; N Plg9.0000°, Azm220.0000°; P Plg36.0000°, Azm124.0000°;*
JMA Felt I J1.
*IDC **06** 12:12:34.3±1.7, 41°.94N×142°.47E, h72km±14km, mb3.5/13, mb1 3.7/17, mb1mx3.6/29, mbtmp3.5/17, MS2.6/1, Ms1 2.6/1, ms1mx2.0/44 Error ellipse: s-maj=19.5km s-min=11.0km az=113.0*
ISC 06 12:12:33.7±0.8**, 41°.94N**±0°.04×**142°.44E**±0°.04**, h64**km±7km**, n31, σ0s.83**/45**, mb3.9**/13**, 4C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.41**	**35**	⇑P	**Pn**	**12 12 44.6**	**-0.5**
JNBK				*e*S	**Sn**	**12 12 53.5**	**0.0**
JEM	**Erimo**	**0.54**	**82**	⇑P	**Pn**	**12 12 46.1**	**-0.3**
JEM				*e*S	**Sn**	**12 12 56.0**	**+0.3**
JBT2	**Biratori 2**	**0.84**	**356**	⇓P	**Pn**	**12 12 49.7**	**-0.1**
JBT2				*e*S	**Sn**	**12 13 01.8**	**0.0**
JCH	**Churui**	**0.96**	**45**	⇑P	**Pn**	**12 12 51.4**	**0.0**
JCH				*e*S	**Sn**	**12 13 04.9**	**+0.4**
JKB	**Kayabe**	**1.05**	**267**	⇓P	**Pn**	**12 12 52.5**	**0.0**
JKB				*e*S	**Sn**	**12 13 06.5**	**+0.1**
JEW	**Eniwo**	**1.16**	**321**	⇓P	**Pn**	**12 12 54.4**	**+0.5**
JEW				*e*S	**Sn**	**12 13 10.3**	**+1.3**
JNB	**Noboribetsu**	**1.16**	**297**	⇓P	**Pn**	**12 12 53.7**	**-0.3**
JNB				*e*S	**Sn**	**12 13 08.8**	**-0.3**
JOT	**Ohata**	**1.18**	**242**	⇓P	**Pn**	**12 12 54.3**	**+0.1**
JOT				*e*S	**Sn**	**12 13 09.3**	**-0.2**
JFR	**Furan**	**1.23**	**5**	⇓P	**Pn**	**12 12 54.9**	**0.0**
JFR				*e*S	**Sn**	**12 13 10.7**	**0.0**
JOB	**Onbets**	**1.41**	**47**	⇑P	**Pn**	**12 12 58.3**	**+1.0**
JOB				*e*S	**Sn**	**12 13 16.9**	**+1.9**
JTM	**Tenmabayashi**	**1.55**	**222**	P	**Pn**	**12 12 59.6**	**+0.5**
JTM				*e*S	**Sn**	**12 13 19.1**	**+0.9**
JAR	**Ashorobuto**	**1.67**	**36**	P	**Pn**	**12 13 01.1**	**+0.3**
JAR				*e*S	**Sn**	**12 13 21.6**	**+0.3**
JANG	**Nango**	**1.71**	**204**	P	**Pn**	**12 13 01.6**	**+0.2**
JANG				*e*S	**Sn**	**12 13 22.4**	**+0.1**
ASAJ	**Asahikawa**	**2.18**	**3**	P	**Pn**	**12 13 07.5**	**-0.1**
	36nm,0.3s,baz=206,slow=10,SNR=198						
ASAJ				S	**Sn**	**12 13 35.2**	**+1.8**
	baz=307,slow=20						

MJAR Matsushiro Arr 6.31 213 P Pn 12 14 04.8 +0.7
0.5nm,0.3s,baz=33,slow=13,SNR=8.1
USRK Ussuriysk Arra 7.97 290 P Pn 12 14 26.9 +0.2
0.3nm,0.3s,baz=104,slow=15,SNR=7.3
KSRS Korea Array 12.04 253 P Pn 12 15 24.9 +2.5
0.4nm,0.3s,baz=66,slow=14,SNR=8.8
KSRS LR LR 12 19 33.3
comp=Z,28nm,18.5s,baz=110,slow=35
SONM Songino Array 26.04 295 P P 12 18 00.3 -0.5
0.6nm,0.5s,baz=80,slow=8.4,SNR=5.3
ZALV Zalesovo Beam 39.35 308 P P 12 19 57.1 +0.7
1.6nm,0.6s,baz=88,slow=8.2,SNR=11
MKAR Makanchi Array 42.35 298 P P 12 20 21.9 +0.6
1.7nm,0.8s,baz=82,slow=9.3,SNR=18
CMAR Chiang Mai Arr 43.67 251 P P 12 20 30.6 -1.7
0.4nm,0.4s,baz=27,slow=5.0,SNR=3.4
ILAR Eielson Array 44.97 35 P P 12 20 40.1 -2.0
0.4nm,0.4s,baz=262,slow=5.4,SNR=12
RES Resolute Bay 57.66 15 P P 12 22 16.6 -0.1
0.9nm,0.3s,baz=308,slow=4.8,SNR=9.9
YKA Yellowknife Ar 59.20 32 P P 12 22 28.2 +0.6
0.3nm,0.4s,baz=309,slow=6.4,SNR=8.1
WRA Warramunga Arr 62.03 189 P P 12 22 47.1 -0.1
0.5nm,0.4s,baz=7.0,slow=6.9,SNR=21
FINES FINESS Array B 64.86 332 P P 12 23 04.9 -0.6
1.7nm,0.5s,baz=48,slow=8.5,SNR=10
ASAR Alice Springs 65.75 189 P P 12 23 12.4 +0.7
0.7nm,1.0s,baz=2.3,slow=7.6,SNR=5.8
NB2 NORSAR Subarra 69.97 337 P P 12 23 37.8 -0.1
comp=Z,0.9nm,0.5s,baz=35,slow=6.5
NOA NORSAR Array B 69.97 337 P P 12 23 37.9 0.0
comp=Z,1.1nm,0.5s,baz=36,slow=6.3,SNR=4.5
AKASG Malin Array Be 70.92 322 P P 12 23 44.0 +0.3
comp=Z,1.3nm,0.5s,baz=45,slow=5.7,SNR=5.7
BRTR Keskin Array B 76.20 311 P P 12 24 14.9 -0.3
comp=Z,0.4nm,0.4s,baz=29,slow=3.3,SNR=3.1

MAN 06 12:33:11,7.37N×124.35E,h41km,mb4.2,ML3.0,MS2.8, 1C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.18	214⇓	iP	Pn	12 33 20.2	+1.9
CTBH				i S	Sn	12 33 25.5	+2.2
BUKP	Musuan	0.87	55	eP	Pn	12 33 28.3	+1.4
BUKP				eS	Sn	12 33 40.5	+2.1
PAGZ	Pagadian	1.07	296	eP	Pn	12 33 31.1	+1.5
CGP	Cagayan de Oro	1.13	18⇓	eP	Pn	12 33 30.4	0.0
CGP				i S	Sn	12 33 44.5	-0.1
DCPH	Dipolog City	1.56	321⇑	eP	Pn	12 33 28.3	-7.9
DCPH				i S	Sn	12 34 00.3	+5.1

IDC 06 12:34:43.5±1.6,4.07N×126.58E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.7/24,mbtmp3.8/5,1D,Error ellipse: s-maj=94.5km s-min=22.8km az=68.0,Talaud Islands

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
CTBH Cotabato--PC H 3.90 324⇓ iP Pg 12 35 56.3 -1.9
FITZ Fitzroy Crossi 22.05 182 P P 12 39 40.5 +0.5
2.5nm,0.5s,baz=350,slow=7.2,SNR=10
WRA Warramunga Arr 25.05 163 P P 12 40 08.8 -0.9
1.3nm,0.5s,baz=342,slow=10.0,SNR=18
ASAR Alice Springs 28.48 166 P P 12 40 40.6 0.0
0.7nm,0.5s,baz=343,slow=7.2,SNR=16
STKA Stephens Creek 38.50 159 P P 12 42 08.2 +0.5
1.5nm,0.7s,baz=326,slow=10,SNR=4.4
MKAR Makanchi Array 57.19 325 P P 12 44 32.4 -0.1
0.5nm,0.5s,baz=121,slow=8.3,SNR=8.0

PGC 06 12:35:07.9±4.2,47.43N×129.07W,h10km,ML2.9/4, Mw3.5,3D,301km Wsw of Tofino, Bc Off Coast Of Washington,Off coast of Washington

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OZB	Mount Ozzard	2.84	56	⇑Pn	Pn	12 35 51.6	-1.7
BMSB	Bamfield Mari	2.98	60	⇑Pn	Pn	12 35 53.8	-1.4
GDR	Gold River	3.09	39	⇑Pn	Pn	12 35 55.8	-1.0
BTB	Buttle Lake	3.12	48	Pn	Pn	12 35 56.0	-1.3
BTB				⇑Sn	Sn	12 36 30.7	-4.0
WOSB	Woss	3.19	30	Pn	Pn	12 35 57.0	-1.2
MAYB	Maynard	3.22	22	Pn	Pn	12 35 57.2	-1.6
PFB	Port Renfrew	3.31	68	⇓Pn	Pn	12 35 58.2	-1.5
PFB				⇓Sn	Sn	12 36 35.5	-3.6
MGB	Mount Grey	3.32	60	⇓Pn	Pn	12 35 58.5	-1.5

IDC 06 12:43:30.6±0.8,11.34N×57.61E,h0km,mb3.8/17, mb1 4.0/17,mb1mx3.9/29,mbtmp3.8/17,MS3.4/10, Ms1 3.5/10,ms1mx3.2/43,Error ellipse: s-maj=20.7km s-min=17.4km az=3.0,Owen Fracture Zone region

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
KMBO Kilima Mbogo 23.72 240 P P 12 48 46.1 +1.2
5.0nm,0.9s,baz=49,slow=11,SNR=11
KMBO LR LR 12 57 30.4
comp=Z,63nm,20.3s,baz=83,slow=35
EIL Elat 27.89 314 LR LR 12 59 09.5
comp=Z,71nm,20.0s,baz=98,slow=34
ASF Jabal al Asfar 28.18 321 LR LR 12 59 48.5
comp=Z,59nm,21.6s,baz=35,slow=35
MMAI Mount Meron Ar 29.68 320 LR LR 13 00 18.9
comp=Z,46nm,21.1s,baz=105,slow=34
KBZ Khabaz 34.69 341 P P 12 50 23.7 +1.6
4.9nm,0.9s,baz=170,slow=6.4,SNR=7.9
BRTR Keskin Array B 35.37 327 P P 12 50 29.6 +1.4
1.4nm,0.8s,baz=153,slow=12,SNR=7.0
AKTO Aktyubinsk 38.98 0 P P 12 50 58.6 0.0
1.8nm,0.7s,baz=187,slow=8.4,SNR=6.2
CMAR Chiang Mai Arr 40.50 75 P P 12 51 11.7 0.0
1.5nm,0.8s,baz=274,slow=8.4,SNR=9.1
CMAR LR LR 13 08 13.3
comp=Z,54nm,18.1s,baz=64,slow=37
MKAR Makanchi Array 41.05 26 P P 12 51 16.6 +0.7
0.4nm,0.7s,baz=205,slow=9.6,SNR=3.5
PSI Prapat 41.82 99 LR LR 13 04 44.3
comp=Z,86nm,18.9s,baz=254,slow=30
KURBB Kurchatov Arra 42.77 20 P P 12 51 30.4 +0.5
0.8nm,0.7s,baz=215,slow=8.2,SNR=4.4
BVAR Borovoye Array 42.83 11 P P 12 51 29.3 -1.1
0.3nm,0.5s,baz=148,slow=6.5,SNR=2.6
ZALV Zalesovo Beam 47.70 21 P P 12 52 08.8 -0.1
1.3nm,0.6s,baz=216,slow=9.3,SNR=3.9
ZALV LR LR 13 10 43.7
comp=Z,15nm,19.3s,baz=70,slow=34
BOSA Boshof 50.55 218 LR LR 13 15 05.9
comp=Z,67nm,18.4s,baz=63,slow=38
GERES GERESS Array B 52.16 325 P P 12 52 41.6 -1.5
0.2nm,0.3s,baz=160,slow=8.2,SNR=3.5
SONM Songino Array 54.57 38 P P 12 53 00.4 -0.6
0.1nm,0.3s,baz=228,slow=5.6,SNR=2.2
TORD Torodi Ar. Bea 54.58 278 P P 12 52 59.6 -1.7
0.5nm,0.7s,baz=85,slow=7.3,SNR=4.4
FINES FINESS Array B 55.04 342 P P 12 53 02.8 -1.1
1.3nm,0.8s,baz=144,slow=3.1,SNR=2.8
FINES LR LR 13 20 28.6
comp=Z,102nm,18.5s,baz=270,slow=40
NOA NORSAR Array B 60.01 336 LR LR 13 23 45.4
comp=Z,50nm,18.4s,baz=355,slow=40
ESDC Sonseca Array 61.02 309 P P 12 53 46.2 -0.1
1.0nm,0.5s,baz=87,slow=5.7,SNR=7.6
KSRS Korea Array 67.60 54 P P 12 54 28.9 -0.5
0.7nm,0.7s,baz=261,slow=8.4,SNR=4.6
WRA Warramunga Arr 81.63 112 P P 12 55 51.3 +0.1
0.4nm,0.8s,baz=294,slow=4.4,SNR=3.7
ASAR Alice Springs 82.24 116 P P 12 55 54.6 +0.1
0.4nm,0.6s,baz=292,slow=5.1,SNR=6.5

IDC 06 12:51:30.9±6.1,3.10S×101.13E,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.5/24,mbtmp3.7/4,Error ellipse: s-maj=313.0km s-min=22.1km az=52.0,Southern Sumatera

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
WRA Warramunga Arr 36.47 120 P P 12 58 37.5 -0.5
1.0nm,0.4s,baz=303,slow=9.0,SNR=21
ASAR Alice Springs 37.70 126 P P 12 58 48.8 +0.3
0.4nm,0.5s,baz=300,slow=8.3,SNR=12
MKAR Makanchi Array 52.39 344 P P 13 00 44.4 -0.5
0.2nm,0.3s,baz=168,slow=7.4,SNR=3.9
ZALV Zalesovo Beam 58.45 349 P P 13 01 29.0 +0.5
0.4nm,0.4s,baz=160,slow=4.6,SNR=5.8
TXAR Lajitas Array 144.86 40 PKP PKPab 13 11 09.8 0.0
0.2nm,0.5s,baz=270,slow=4.5,SNR=3.4

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*IDC **06** 12:53:56.2±0.5,22.20S×170.76E,h0km,mb4.5/20, mb1 4.7/24,mb1mx4.6/26,mbtmp4.6/24,ML4.3/3,MS4.1/16, Ms1 4.1/16,ms1mx4.0/36,Error ellipse: s-maj=16.2km s-min=14.3km az=155.0*
*DJA **06** 12:53:57.2±8.7,22°S±16°×17°1E±2°3,h19km±58km, M5.0/9,mB5.6/1,mb5.0/9,Mw(mB)5.1/1*
*NOU **06** 12:53:59.2±0.9,20.28S×170.46E,h30km,MD3.5,ML2.9*
*SZGRF **06** 12:53:59.5,22.50S×172.59E,h33km,Southeast of Loyalty Islands*
*MOS **06** 12:54:00.9±1.9,22.38S×170.71E,h33km,mb5.2/11,Error ellipse: s-maj=10.4km s-min=9.2km az=171.1*
*ISCJB **06** 12:54:01.2±1.0,22.37S±0.05×170.69E±0.05,h43km±8km, mb4.8/51,MS4.3/18,Error ellipse: s-maj=9.0km s-min=7.2km az=176.3*
*NEIC **06** 12:54:01.5±0.3,22.32S×170.86E,h35km,mb5.0/19,Error ellipse: s-maj=9.3km s-min=8.3km az=152.0*
*BGS **06** 12:54:02.8±4.5,22.32S×170.86E,h33km,mb5.0(NEIC)*
*GCMT **06** 12:54:04.0±0.3,22.61S×170.78E,h29km,MW5.1, Moment Tensor Solution. s42,c52; s68,c99; Moment tensor: Scale 10^{16}Nm; M_{rr}4.87±.22; $M_{\theta\theta}$-4.24±.16; $M_{\phi\phi}$-0.63±.15; $M_{r\theta}$2.95±.23; $M_{\theta\phi}$1.43±.11; $M_{\phi r}$-0.02±.21; Best double couple: $M_0$5.60000×10^{16} NP1:ϕ_s298.00000°, δ31.00000°,λ106.00000°. NP2:ϕ_s100.00000°,δ61.00000°, λ81.00000°. Principal axes: T 5.7700, Plg73.0000°, Azm348.0000°; N -0.2600, Plg8.0000°, Azm104.0000°; P -5.5000, Plg15.0000°, Azm196.0000°; Data Used: IU II G CN IC.*
*BJI **06** 12:54:08.8,21.93S×170.84E,h93km,mB5.0/20,mb4.7/30*
ISC 06 12:54:05.2±0.6,**22.36S**±0.06×**170.67E**±0.04,**h70**km±5km, **n287**,σ1**.**32/303,**mb4.9**/51,**20C-5D,Southeast of Loyalty Islands**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BAYA Yate Dam 3.51 273 eP Pn 12 54 55.7 -1.6
BAYA eS Sn 12 55 36.2 -1.5
BAYA AMP 12 55 47.3
comp=Z,18nm,0.0s
PLUM Mont Dore 3.73 271 eP Pn 12 54 57.9 -2.4
NORM Noumea 3.88 271 eP Pn 12 54 59.9 -2.4
NORM eS Sn 12 55 44.4 -2.2
NORM AMP 12 55 55.1
comp=Z,205nm,1.6s
DZM Mont Dzumac 3.92 273 ePn Pn 12 55 00.7 -2.3
comp=Z,84nm,0.2s
DZM eSn Sn 12 55 47.4 -0.5
comp=Z,127nm,0.3s
DZM Mont Dzumac 3.92 273 ePn Pn 12 55 00.8 -2.3
DZM eSn Sn 12 55 47.5 -0.4
DZM Mont Dzumac 3.92 273 Pn Pn 12 55 00.7 -2.3
comp=Z,24nm,0.3s,baz=113,slow=20,SNR=465
DZM LR LR 12 55 45.7
comp=Z,322nm,20.5s,baz=230,slow=27
DZM Sn Sn 12 55 47.6 -0.4
comp=Z,28nm,0.3s,baz=109,slow=19,SNR=7.5
NOUC Port Laguerre 4.05 273 eP Pn 12 55 02.1 -2.6
NOUC eS Sn 12 55 49.4 -1.5
NOUC AMP 12 55 54.3
comp=Z,60nm,2.1s
MSVF Nonsavu 8.33 58 eP Pn 12 56 03.6 +0.3
MSVF Nonsavu 8.33 58 ePn Pn 12 56 03.5 +0.3
MSVF Nonsavu 8.33 58 Pn Pn 12 56 05.0 +1.7
comp=Z,1μm,1.2s,SNR=22
OUZ Omahuta 13.07 169 ePn Pn 12 57 00.2 -7.5
FUNA Funafuti 16.02 32 ePn Pn 12 57 45.0 -1.3
HNR Honiara 16.47 320 ePn P 12 57 53.4 0.0
comp=Z,152nm,1.0s
HNR Honiara 16.47 320 Pn Pn 12 57 48.3 -3.5
comp=Z,2.4nm,0.3s,baz=124,slow=3.6,SNR=3.0
HNR LR LR 13 03 10.3
comp=Z,399nm,18.6s,baz=156,slow=34
URZ Urewera 16.79 162 ePn Pn 12 57 55.7 0.0
comp=Z,89nm,1.4s
URZ Urewera 16.79 162 Pn Pn 12 57 55.8 +0.2
comp=Z,0.3nm,0.3s,baz=206,slow=9.7,SNR=3.2
URZ LR LR 13 03 19.9
comp=Z,1μm,18.2s,baz=346,slow=33
AFI Afiamalu 18.67 66 eP P 12 58 14.7 -3.1
comp=Z,53nm,0.9s
AFI Afiamalu 18.67 66 P P 12 58 14.5 -3.3
comp=Z,1.7nm,0.3s,baz=11,slow=14,SNR=6.7
AFI LR LR 13 03 58.7
comp=Z,666nm,18.3s,baz=74,slow=32
ARMA Armidale 18.83 241 eP Pn 12 58 23.3 +2.6
comp=Z,62nm,1.4s
RPZ Rata Peaks 21.30 179 P P 12 58 46.3 +0.2
RPZ Rata Peaks 21.30 179 P P 12 58 46.3 +0.2
comp=Z,24nm,1.0s,baz=340,slow=2.7,SNR=3.8
RPZ LR LR 13 05 30.6
comp=Z,740nm,20.1s,baz=4.8,slow=32
CTA Charters Tower 22.86 271 P P 12 59 03.3 +0.3
CTA Charters Tower 22.86 271 P P 12 59 03.3 +0.3
comp=Z,9.2nm,0.7s,baz=91,slow=8.3,SNR=8.0
CTA LR LR 13 07 25.1
comp=Z,527nm,18.5s,baz=96,slow=35
CTAO Charters Tower 22.86 271 eP P 12 59 05.2 +2.2
CTAO Charters Tower 22.86 271 eP P 12 59 05.2 +2.2
CAN Canberra 22.89 231 eP P 12 59 05.0 +1.8
CAN pmax pmax
comp=Z,41nm,1.3s
CAN Canberra 22.89 231 eP P 12 59 05.0 +1.8
comp=Z,41nm,1.3s
PMG Port Moresby 25.97 296 eP P 12 59 32.9 +1.4
comp=Z,16nm,0.8s
COEN Coen 27.39 283 eP P 12 59 46.6 +2.3
comp=Z,174nm,1.0s
STKA Stephens Creek 27.48 244 eP P 12 59 46.2 +1.3
comp=Z,3.2nm,1.1s
STKA Stephens Creek 27.48 244 P P 12 59 46.2 +1.3
comp=Z,5.2nm,0.8s,baz=85,slow=9.2,SNR=8.0
STKA LR LR 13 09 44.6
comp=Z,408nm,19.9s,baz=250,slow=34
TAU Tasmania Unive 28.23 218 eP P 12 59 52.4 +1.0
TAU Tasmania Unive 28.23 218 eP P 12 59 52.4 +1.0
BBOO Buckleboo 32.26 244 eP P 13 00 29.9 +2.7
comp=Z,426nm,1.0s
AS31 Alice Springs 33.80 261 eP P 13 00 41.2 +0.5
ASAR Alice Springs 33.80 261 P P 13 00 40.6 -0.2
ASAR Alice Springs 33.80 261 P P 13 00 40.6 -0.2
comp=Z,9.5nm,0.8s,baz=84,slow=9.4,SNR=90
ASAR LR LR 13 14 47.0
comp=Z,440nm,20.2s,baz=98,slow=37
WRAB Tennant Creek 33.91 267 eP P 13 00 41.2 -0.5
WRAB pmax pmax
comp=Z,1.0nm,0.5s
WRAB Tennant Creek 33.91 267 eP P 13 00 41.2 -0.5
comp=Z,0.8nm,0.5s
WRA Warramunga Arr 33.91 267 P P 13 00 41.5 -0.3
WRA Warramunga Arr 33.91 267 P P 13 00 41.5 -0.3
comp=Z,0.8nm,0.4s,baz=99,slow=8.5,SNR=18
WRA LR LR 13 14 39.5
comp=Z,699nm,18.1s,baz=95,slow=37
TBI Tubuai 36.68 99 eLR LR 13 10 45.4
comp=Z,277nm,26.0s
PPT2 Papeete2 37.59 90 eS S 13 06 53.6 -4.4
comp=Z,70nm,24.0s
PPT2 eLR LR 13 11 14.1
comp=Z,281nm,25.2s
PPT Papeete 37.60 90 LR LR 13 12 17.0
comp=Z,219nm,21.1s,baz=249,slow=29
FITZ Fitzroy Crossi 42.34 267 P P 13 01 53.0 +0.3
FITZ Fitzroy Crossi 42.34 267 P P 13 01 53.0 +0.3
comp=Z,20nm,0.9s,baz=125,slow=8.3,SNR=16
MBWA Marble Bar 47.14 261 eP P 13 02 31.6 +0.9
comp=Z,13nm,0.9s
NWAO Narrogin (SRO) 48.05 245 eP P 13 02 38.3 +0.6
comp=Z,20nm,1.1s
NWAO Narrogin (SRO) 48.05 245 P P 13 02 37.6 -0.1
comp=Z,20nm,1.0s,baz=75,slow=10,SNR=6.1
RKT Rikitea 49.89 102 eLR LR 13 16 56.4
comp=Z,315nm,26.8s
KAPI Kappang 52.10 281 eP P 13 03 09.9 +1.3
comp=Z,16nm,1.0s
KAPI Kappang 52.10 281 P P 13 03 08.9 +0.3
comp=Z,24nm,1.2s
KAPI Kappang 52.10 281 P P 13 03 07.4 -1.1
comp=Z,14nm,1.0s,baz=129,slow=18,SNR=9.7
VNDA Vanda 55.37 182 P P 13 03 32.1 +0.6
VNDA Vanda 55.37 182 P P 13 03 32.1 +0.6
comp=Z,0.3nm,0.8s,baz=332,slow=6.3,SNR=2.7
VNDA LR LR 13 25 39.9
comp=Z,311nm,18.1s,baz=300,slow=34
SBA Scott Base 55.58 181 eP P 13 03 32.9 -0.1
SBA pmax pmax
comp=Z,234nm,3.0s
SBA Scott Base 55.58 181 eP P 13 03 32.9 -0.1
comp=Z,234nm,3.0s
KKM Kota Kinabalu 60.29 291 eP P 13 04 08.8 +1.8
comp=Z,43nm,1.4s
KKM Kota Kinabalu 60.29 291 P P 13 04 06.7 -0.3
comp=Z,33nm,1.3s
SBUM Sibu 62.10 286 P P 13 04 20.0 +0.8
comp=Z,14nm,1.4s
KSM Kuching 63.38 284 eP P 13 04 29.5 +1.8
comp=Z,40nm,0.9s
KSM Kuching 63.38 284 P P 13 04 25.8 -1.9
comp=Z,45nm,1.0s,comp=Z,512nm
MJAR Matsushiro Arr 66.12 332 P P 13 04 44.1 -0.9
MJAR Matsushiro Arr 66.12 332 P P 13 04 44.1 -0.9
comp=Z,0.6nm,0.5s,baz=134,slow=32,SNR=4.5
QSPA South Pole Qui 67.71 180 eP P 13 04 54.1 -0.9
comp=Z,17nm,1.1s
YUK Yuzh-Kuril'sk 69.88 341⇓ iP P 13 04 59.5 -8.9
YUK pmax pmax
comp=E,254nm,1.6s
YUK pmax pmax
comp=Z,318nm,1.5s
YUK pmax pmax
comp=N,152nm,1.5s
YUK pmax pmax
comp=Z,214nm,1.8s
KSRS Korea Array 71.82 325 P P 13 05 20.3 0.0
comp=Z,1.6nm,0.8s,baz=144,slow=6.0,SNR=9.3
KSAR Wonju Array Be 71.83 325 P P 13 05 20.3 -0.1
IPM Ipoh 73.04 282 eP P 13 05 29.5 +1.3
comp=Z,38nm,1.1s
IPM Ipoh 73.04 282 P P 13 05 28.8 +0.6
YSS Yuzh-Sakhalins 73.45 340 eP P 13 05 34.3 +4.5
PSI Prapat 74.26 280 P P 13 05 34.9 -0.5
PSI Prapat 74.26 280 P P 13 05 34.9 -0.5
comp=Z,16nm,0.9s,baz=114,slow=2.0,SNR=7.0
USRK Ussuriysk Arra 75.11 332 P P 13 05 40.0 +0.5
comp=Z,2.0nm,0.7s,baz=198,slow=3.6,SNR=4.4
PETK Petropavlovsk- 75.99 352 P P 13 05 45.5 +1.1
PETK Petropavlovsk- 75.99 352 P P 13 05 45.5 +1.1
PETK Petropavlovsk- 75.99 352 P P 13 05 45.5 +1.1
comp=Z,9.6nm,0.9s,baz=159,slow=8.9,SNR=8.0
MAW Mawson 76.05 202 P P 13 05 48.2 +3.6
MAW Mawson 76.05 202 P P 13 05 48.2 +3.6
comp=Z,3.1nm,0.8s,baz=99,slow=18,SNR=2.4
MAW LR LR 13 33 53.7
comp=Z,118nm,20.4s,baz=292,slow=31
HABR Khabarovsk 77.38 337 eP P 13 05 52.5 +0.2
HABR 13 06 02.3
HABR e 13 08 48.9
HABR eS S 13 15 37.0 -0.1
HABR e 13 16 02.3
HABR e*SS sS 13 16 21.8 +13
HABR eSS SS 13 20 39.9 +2.3
HABR eSSS SSS 13 24 04.6
HABR pmax pmax
comp=Z,20nm,1.7s
HABR pmax pmax
comp=E,15nm,1.5s
HABR pmax pmax
comp=N,19nm,2.2s
HABR MLR MLR
comp=Z,79nm,20.0s
CN2 Changchun 77.81 328 eP P 13 05 55.5 +0.7
CN2 pmax pmax
comp=Z,10.0nm,1.0s
GYA Guiyang 78.69 305 P P 13 06 03.2 +3.0
GYA pP pP 13 06 28.4 +9.2
GYA sP sP 13 06 38.8 +12
GYA PP PP 13 09 05.4 +6.0
GYA S S 13 15 52.3 -0.1
GYA SKS SKSac 13 16 05.0 -4.7
GYA sS sS 13 16 34.9 +10
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,590nm,18.8s
GYA LR LR
comp=E,520nm,19.2s
GYA LR LR
comp=Z,540nm,19.6s
KLR Kul'dur 79.25 335 eP P 13 06 00.0 -2.6
BJI Beijing 80.19 321 P P 13 06 10.2 +2.3
BJI pmax pmax
comp=Z,7.0nm,0.5s
CMAR Chiang Mai Arr 81.00 294 P P 13 06 15.0 +2.3
CMAR PKKPbc PKKPbc 13 24 50.0 +0.3
CMAR Chiang Mai Arr 81.00 294 P P 13 06 15.0 +2.3
comp=Z,7.4nm,0.8s,baz=133,slow=4.2,SNR=48
CMAR PKKPbc PKKPbc 13 24 50.0 +0.3
comp=Z,1.1nm,0.7s,baz=292,slow=3.3,SNR=8.8
KMI Kunming 81.05 302 P P 13 06 15.8 +2.7
KMI pP pP 13 06 40.8 +8.6
KMI sP sP 13 06 51.5 +12
KMI PP PP 13 09 24.7 +5.5
KMI S S 13 16 17.4 -0.1
KMI sS sS 13 16 59.9 +10
KMI pmax pmax
comp=Z,12nm,1.3s
KMI pmax pmax
comp=Z,150nm,5.8s
KMI LR LR
comp=N,140nm,20.9s
KMI LR LR
comp=E,140nm,18.3s
KMI LR LR
comp=Z,110nm,15.0s
CHTO Chiang Mai 81.16 294 eP P 13 06 16.1 +2.5
CHTO pmax pmax
comp=Z,25nm,1.4s
CHTO Chiang Mai 81.16 294 eP P 13 06 16.1 +2.5
comp=Z,24nm,1.4s
XAN Xi'an 81.19 312 P P 13 06 14.7 +1.2
XAN pmax pmax
comp=Z,3.0nm,1.2s
XAN pmax pmax
comp=Z,26nm,7.7s
SYO Syowa Base 82.31 196⇑ eP P 13 06 15.8 -3.0
CD2 Chengdu 83.18 307 P P 13 06 26.5 +2.5
CD2 pP pP 13 06 47.8 +4.7
CD2 sP sP 13 06 56.6 +5.9
CD2 PP PP 13 09 41.6 +5.2
CD2 SKS S 13 16 37.9 -0.9
CD2 S SKSac 13 16 40.3 +0.2
CD2 sS sS 13 17 17.1 +5.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
HHC Hu-ho-hao-te 83.45 319⇓ iP P 13 06 26.8 +1.6
HHC pP pP 13 06 52.3 +8.0
HHC sP sP 13 07 03.0 +11
HHC PP PP 13 09 43.0 +4.5
HHC SKS S 13 16 36.9 -4.3
HHC S SKSac 13 16 40.4 -1.1
HHC sS sS 13 17 24.8 +11
HHC pmax pmax
comp=Z,44nm,1.1s
HHC pmax pmax
comp=Z,310nm,6.8s
HHC LR LR
comp=N,190nm,15.8s
HHC LR LR
comp=E,190nm,17.8s
HHC LR LR
comp=Z,190nm,18.8s
LZH Lanzhou 85.80 312 eP P 13 06 39.5 +2.3
LZH pP pP 13 07 03.1 +6.7
LZH sP sP 13 07 11.0 +7.0
LZH ePP PP 13 10 02.0 +4.2
LZH eS S 13 17 06.2 +1.3
LZH sS sS 13 17 44.0 +6.5
LZH pmax pmax
comp=Z,17nm,1.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
LZH				pmax	pmax		
	comp=Z,110nm,4.0s						
LZH				LR	LR		
	comp=N,570nm,11.4s						
LZH				LR	LR		
	comp=E,730nm,15.9s						
LZH				LR	LR		
	comp=Z,880nm,17.0s						
SNAA	**Sanae**	**86.11**	**182**	*e*P	**P**	**13 06 36.3**	**-1.8**
SNAA	**Sanae**	**86.11**	**182**	*e*P	**P**	**13 06 36.1**	**-2.0**
	comp=Z,15nm,1.0s						
SNAA				*e*PP	PP	13 10 04.8	+6.3
SEY	**Seymchan**	**86.23**	**352**	*e*P	**P**	**13 06 38.5**	**0.0**
VNA2	**Neumayer--Watz**	**86.96**	**181**	*e*P	**P**	**13 06 41.4**	**-0.8**
	baz=176,slow=1.8						
GAMB	**Gambell**	**86.96**	**8**	*e*P	**P**	**13 06 42.6**	**+0.6**
	comp=Z,4.6nm,1.0s						
CLNS	**Chul'man**	**87.78**	**337**	*e*P	**P**	**13 06 45.4**	**-0.8**
CLNS				pmax	pmax		
	comp=Z,16nm,1.0s						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.9s						
ISA	**Isabella**	**88.42**	**50**	P	**P**	**13 06 49.8**	**+0.1**
	baz=88						
MPMC	**Manual Prospec**	**89.31**	**50**	P	**P**	**13 06 54.5**	**+0.3**
	baz=89						
BELC	**Belle Mtn. Jos**	**89.43**	**53**	P	**P**	**13 06 55.0**	**+0.3**
	baz=89						
LPIG	**La Paz**	**89.58**	**64**	LR	LR	13 37 50.2	
	comp=N,14nm,19.2s,baz=207,slow=30						
NVAR	**Mina Array Bea**	**89.88**	**48**	P	**P**	**13 06 56.5**	**-0.2**
NVAR	**Mina Array Bea**	**89.88**	**48**	P	**P**	**13 06 56.5**	**-0.2**
	comp=N,3.2nm,0.8s,baz=227,slow=8.7,SNR=16						
TUQ	**Turquoise Moun**	**90.14**	**52**	P	**P**	**13 06 57.8**	**-0.2**
	baz=90						
ULN	**Ulaanbaatar**	**90.15**	**323**	*e*P	**P**	**13 06 58.9**	**+1.2**
	comp=N,17nm,1.1s						
BILL	**Bilibino**	**90.19**	**358**	*i* P	**P**	**13 06 58.1**	**+0.9**
BILL				*e*		13 07 08.7	
BILL				*e*SS	SS	13 23 46.9	+0.7
BILL				pmax	pmax		
	comp=Z,11nm,1.3s						
GTA	**Gaotai**	**90.23**	**313**	*e*P	**P**	**13 07 00.2**	**+1.9**
GTA				pP	pP	13 07 26.0	+8.4
GTA				sP	sP	13 07 35.5	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONM	**Songino Array**	**90.50**	**323**	P	**P**	**13 07 00.7**	**+1.4**
SONM	**Songino Array**	**90.50**	**323**	P	**P**	**13 07 00.7**	**+1.4**
	comp=Z,9.2nm,1.0s,baz=138,slow=5.1,SNR=48						
PDMCI	**Parker Dam,Lak**	**90.94**	**53**	P	**P**	**13 07 01.5**	**0.0**
	baz=91						
BBB	**Bella Bella**	**91.36**	**33**	LR	LR	13 38 47.6	
	comp=Z,120nm,19.4s,baz=210,slow=30						
W13A	**Hualapai Mount**	**91.48**	**53**	P	**P**	**13 07 03.7**	**-0.6**
	baz=92						
R11A	**Troy Canyon, C**	**91.72**	**49**	P	**P**	**13 07 04.8**	**-0.5**
	baz=92						
ILAR	**Eielson Array**	**92.81**	**17**	P	**P**	**13 07 07.5**	**-1.9**
ILAR	**Eielson Array**	**92.81**	**17**	P	**P**	**13 07 07.5**	**-1.9**
	comp=Z,0.5nm,0.9s,baz=237,slow=6.5,SNR=6.2						
X16A	**Lo Mia Camp, P**	**93.00**	**54**	P	**P**	**13 07 12.2**	**+0.9**
	baz=93						
U15A	**North Rim**	**93.22**	**52**	P	**P**	**13 07 12.9**	**+0.5**
	baz=93						
WUAZ	**Wupatki**	**93.51**	**53**	P	**P**	**13 07 13.8**	**+0.2**
	baz=94						
ZAK	**Zakamensk**	**93.60**	**324**⇑	*i*P	**P**	**13 07 14.0**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DLBC	**Dease Lake**	**94.20**	**27**	LR	LR	13 42 16.7	
	comp=Z,167nm,19.3s,baz=57,slow=31						
PLCA	**Paso Flores**	**95.33**	**138**	P	**P**	**13 07 23.6**	**+1.8**
PLCA	**Paso Flores**	**95.33**	**138**	P	**P**	**13 07 23.6**	**+1.8**
	comp=Z,1.7nm,0.9s,baz=236,slow=8.4,SNR=3.2						
PLCA				LR	LR	13 39 25.9	
	comp=Z,254nm,20.0s,baz=187,slow=29						
TXAR	**Lajitas Array**	**97.08**	**61**	P	Pdif	13 07 30.4	+0.4
TXAR	**Lajitas Array**	**97.08**	**61**	P	Pdif	13 07 30.4	+0.4
	comp=Z,0.1nm,0.4s,baz=201,slow=6.7,SNR=3.8						
HVS	**Khovu-Aksy**	**99.33**	**322**	*i* P	**Pdif**	**13 07 40.7**	**+1.2**
HVS				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ	**Urumqi**	**100.31**	**313**	*e*P	**Pdif**	**13 07 44.8**	**+0.8**
YKA	**Yellowknife Ar**	**102.82**	**27**	PKiKP	**PKiKP**	**13 12 13.7**	**-1.0**
YKA	**Yellowknife Ar**	**102.82**	**27**	PKiKP	**PKiKP**	**13 12 13.7**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=272,slow=1.1,SNR=4.4						
MKAR	**Makanchi Array**	**104.88**	**315**	P	**Pdif**	**13 08 05.3**	**+1.1**
MKAR	**Makanchi Array**	**104.88**	**315**	Pdif	**Pdif**	**13 08 05.3**	**+1.1**
MKAR				PKiKP	**PKiKP**	**13 12 18.0**	**-1.0**
MKAR				PKKPbc	**PKKPbc**	**13 23 44.7**	**-3.6**
MKAR	**Makanchi Array**	**104.88**	**315**	Pdiff	**Pdif**	**13 08 05.3**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=100,slow=5.7,SNR=5.3						
MKAR				PKiKP	**PKiKP**	**13 12 18.0**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=132,slow=2.1,SNR=3.0						
MKAR				PKKPbc	**PKKPbc**	**13 23 44.7**	**-3.6**
	comp=Z,0.6nm,0.8s,baz=284,slow=4.9,SNR=5.6						
KURK	**Kurchatov**	**108.24**	**318**	PKKPbc	PKKPbc	13 23 35.8	-2.1
KURBB	**Kurchatov Arra**	**108.28**	**318**	PKKPbc	PKKPbc	13 23 35.8	-2.0
	comp=Z,0.2nm,0.2s,baz=271,slow=4.0,SNR=6.2						
ARU	**Arti**	**120.53**	**323**	*i* PKIKP	**PKPdf**	**13 12 47.7**	**-0.7**
SCHQ	**Schefferville**	**126.61**	**37**	PKP	**PKPdf**	**13 12 58.9**	**-1.2**
SCHQ	**Schefferville**	**126.61**	**37**	PKP	**PKPdf**	**13 12 58.9**	**-1.2**
	comp=Z,3.9nm,1.0s,baz=349,slow=2.5,SNR=3.8						
ARCES	**ARCESS Array B**	**128.41**	**345**	PKP	**PKPdf**	**13 13 02.7**	**-0.5**
ARCES	**ARCESS Array B**	**128.41**	**345**	PKP	**PKPdf**	**13 13 02.7**	**-0.5**
	comp=Z,2.2nm,0.6s,baz=62,slow=2.3,SNR=9.7						
OBN	**Obninsk**	**132.82**	**326**	*e*PKIKP	**PKPdf**	**13 13 11.2**	**-0.6**
OBN				*e*		13 15 38.8	
OBN				*e*PS	**PS**	**13 25 56.5**	**+0.9**
OBN				*e*SS	SS	13 33 12.4	-1.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
FINES	**FINESS Array B**	**133.97**	**337**	PKP	**PKPdf**	**13 13 13.8**	**0.0**
FINES	**FINESS Array B**	**133.97**	**337**	PKP	**PKPdf**	**13 13 13.8**	**0.0**
	comp=Z,3.7nm,0.9s,baz=122,slow=14,SNR=5.3						
AKASG	**Malin Array Be**	**138.79**	**323**	PKIKP	**PKPdf**	**13 13 22.6**	**-0.5**
AKASG	**Malin Array Be**	**138.79**	**323**	PKP	**PKPdf**	**13 13 22.6**	**-0.5**
AKASG	**Malin Array Be**	**138.79**	**323**	PKP	**PKPdf**	**13 13 22.6**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=48,slow=4.7,SNR=4.2						
EIL	**Elat**	**139.73**	**290**	PKP	**PKPdf**	**13 13 26.8**	**+1.2**
EIL	**Elat**	**139.73**	**290**	PKP	**PKPdf**	**13 13 26.8**	**+1.2**
	comp=Z,5.7nm,0.7s,baz=90,slow=7.4,SNR=4.5						
CFR	**Carcaliu**	**141.91**	**316**⇑	*i*P	**PKPdf**	**13 13 32.7**	**+3.8**
MLR	**Muntele Rosu**	**143.17**	**317**⇑	*i*P	PKPbc	13 13 29.7	+1.2
KOLS	**Kolonicke sedl**	**143.54**	**324**	*e*PKIKP	**PKPdf**	**13 13 30.8**	**-0.9**
KOLS	**Kolonicke sedl**	**143.54**	**324**	*e*PKP	**PKPdf**	**13 13 30.8**	**-0.9**
UZH	**Uzhgorod**	**143.70**	**324**⇓	*i*PKIKP	**PKPdf**	**13 13 31.7**	**-0.3**
UZH				*e*		13 13 36.9	
UZH				*e*		13 13 42.9	
VOIR		**143.76**	**318**⇑	*i*P	**PKPdf**	**13 13 35.0**	**+2.7**
TRPA	**Tarpa**	**143.85**	**323**⇑	*i*P	**PKPdf**	**13 13 31.9**	**-0.4**
CRVS	**Cervenica-Dubn**	**143.99**	**325**	*e*PKIKP	PKPbc	13 13 31.5	+0.9
CRVS	**Cervenica-Dubn**	**143.99**	**325**	*e*PKP	PKPbc	13 13 31.5	+0.9
ARR	**Arges**	**144.05**	**318**⇑	*i*P	**PKPdf**	**13 13 32.7**	**-0.1**
DRGR		**144.49**	**321**⇑	*i*P	**PKPdf**	**13 13 34.2**	**+0.6**
MDO	**Dochfour**	**144.77**	**355**	*e*P	**PKPab**	**13 13 32.4**	**-0.2**
MDO	**Dochfour**	**144.77**	**355**	P	**PKPab**	**13 13 32.4**	**-0.2**
RUE	**Ruedersdorf**	**145.09**	**335**	*e*PKPbc	**PKPdf**	**13 13 34.9**	**+0.7**
OKC	**Ostrava-Krasne**	**145.09**	**329**	*e*PKIKP	**PKPdf**	**13 13 35.1**	**+0.7**
OKC	**Ostrava-Krasne**	**145.09**	**329**	*e*PKP	**PKPdf**	**13 13 35.1**	**+0.7**
OKC				*e*x	x	13 13 38.4	
DRUM	**Mains of Drumt**	**145.13**	**353**	*e*P	**PKPbc**	**13 13 33.3**	**-0.6**
DRUM	**Mains of Drumt**	**145.13**	**353**	P	**PKPbc**	**13 13 33.3**	**-0.6**
BSEG	**Bad Segeberg**	**145.14**	**340**	*e*PKIKP	**PKPdf**	**13 13 34.9**	**+0.6**
BSEG	**Bad Segeberg**	**145.14**	**340**	*e*PKPbc	**PKPdf**	**13 13 34.9**	**+0.6**
GZR	**Gura Zlata**	**145.18**	**319**⇑	*i*P	**PKPdf**	**13 13 35.1**	**+0.3**
KSP	**Ksiaz**	**145.25**	**331**	*e*PKIKP	**PKPab**	**13 13 35.6**	**+1.0**
KSP	**Ksiaz**	**145.25**	**331**	*e*PKP	**PKPab**	**13 13 35.6**	**+1.0**
MORC	**Moravsky Berou**	**145.42**	**329**	*e*PKIKP	**PKPab**	**13 13 35.7**	**+0.3**
MORC	**Moravsky Berou**	**145.42**	**329**	*e*PKPbc	**PKPab**	**13 13 35.7**	**+0.3**
MORC	**Moravsky Berou**	**145.42**	**329**⇓	*i*P	**PKPab**	**13 13 36.2**	**+0.9**
PSZ	**Piszkesteto**	**145.42**	**325**	*e*PKIKP	**PKPab**	**13 13 36.4**	**+0.9**
PSZ	**Piszkesteto**	**145.42**	**325**	*e*PKPbc	**PKPab**	**13 13 36.4**	**+0.9**
PSZ	**Piszkesteto**	**145.42**	**325**⇓	*i*P	**PKPab**	**13 13 37.0**	**+1.6**
DPC	**Dobruska-Polom**	**145.59**	**331**	*e*PKP2	**PKPab**	**13 13 36.9**	**+0.9**
DPC	**Dobruska-Polom**	**145.59**	**331**	*e*PKP	**PKPab**	**13 13 36.9**	**+0.9**
DPC				*e*x	x	13 13 40.4	
VYHS	**Vyhne**	**145.62**	**326**	*e*PKP2	**PKPab**	**13 13 36.9**	**+0.8**
VYHS	**Vyhne**	**145.62**	**326**	*e*PKP	**PKPab**	**13 13 36.9**	**+0.8**
UPC	**Upice**	**145.62**	**331**	*e*PKP2	**PKPab**	**13 13 36.6**	**+0.6**
UPC	**Upice**	**145.62**	**331**	*e*PKP	**PKPab**	**13 13 36.6**	**+0.6**
UPC				*e*x	x	13 13 40.4	
EAB	**Aberfoyle**	**146.02**	**355**	*e*P	**PKPdf**	**13 13 35.1**	**-0.6**
EAB	**Aberfoyle**	**146.02**	**355**	P	**PKPdf**	**13 13 35.1**	**-0.6**
ESY	**Stoneypath**	**146.12**	**353**	*e*P	**PKPbc**	**13 13 36.8**	**-0.2**
ESY	**Stoneypath**	**146.12**	**353**	P	**PKPbc**	**13 13 36.8**	**-0.2**
VRAC	**Vranov**	**146.19**	**329**⇑	*i*P	**PKPab**	**13 13 39.2**	**+1.0**
VTS	**Vitosha**	**146.24**	**314**⇑	*i*P	**PKPab**	**13 13 38.8**	**0.0**
PVCC	**Panska Ves**	**146.24**	**332**	*e*PKP2	**PKPab**	**13 13 38.6**	**+0.3**
PVCC	**Panska Ves**	**146.24**	**332**	*e*PKP	**PKPab**	**13 13 38.6**	**+0.3**
BRG	**Berggiesshubel**	**146.25**	**333**	*e*PKP	**PKPab**	**13 13 38.4**	**+0.1**
	comp=Z,26nm,1.1s						
BRG				*i*		13 13 41.6	
	comp=Z,22nm,0.9s						
BRG	**Berggiesshubel**	**146.25**	**333**	*e*PKP2	**PKPab**	**13 13 38.4**	**+0.1**
BRG				pmax	pmax		
	comp=Z,27nm,1.1s						
BRG				pmax	pmax		
	comp=Z,22nm,0.9s						
BRG	**Berggiesshubel**	**146.25**	**333**	*e*PKPbc	**PKPab**	**13 13 38.5**	**+0.1**
EAU	**Auchinoon**	**146.28**	**354**	*e*P	**PKPbc**	**13 13 37.7**	**+0.2**
EAU	**Auchinoon**	**146.28**	**354**	P	**PKPbc**	**13 13 37.7**	**+0.2**
CLL	**Collm**	**146.30**	**335**⇑	*e*PKP2	**PKPbc**	**13 13 38.0**	**+0.3**
CLL				pmax	pmax		
	comp=Z,28nm,0.9s						
CLL	**Collm**	**146.30**	**335**	*e*PKPbc	**PKPab**	**13 13 38.2**	**-0.3**
CLL	**Collm**	**146.30**	**335**⇑	*e*PKPbc	**PKPbc**	**13 13 38.0**	**+0.3**
	comp=Z,28nm,0.9s						
CLL				*i* PKiKP	**PKiKP**	**13 13 41.1**	**+0.4**
CLL				*i*		13 13 44.3	
CLL				*e*sPKiKP	sPKiKP	13 13 58.0	-10
EBL	**Broad Law**	**146.31**	**354**	*e*P	**PKPbc**	**13 13 37.1**	**-0.4**
EBL	**Broad Law**	**146.31**	**354**	P	**PKPbc**	**13 13 37.1**	**-0.4**
NRDL	**Niedersach Rie**	**146.41**	**338**	*e*PKPbc	**PKPab**	**13 13 38.7**	**-0.1**
FBE	**Freiberg**	**146.45**	**334**	*e*PKPbc	**PKPab**	**13 13 39.5**	**+0.4**
PRU	**Pruhonice**	**146.65**	**332**	*e*PKP2	**PKPab**	**13 13 39.9**	**0.0**
PRU	**Pruhonice**	**146.65**	**332**	*e*PKP	**PKPab**	**13 13 39.9**	**0.0**
PRU				*e*x	x	13 13 43.2	
ESK	**Eskdalemuir**	**146.77**	**354**	*e*P	**PKPbc**	**13 13 38.5**	**-0.4**
ESK	**Eskdalemuir**	**146.77**	**354**	P	**PKPbc**	**13 13 38.5**	**-0.4**
CLZ	**Clausthal**	**146.86**	**338**	*e*PKP2	**PKPab**	**13 13 40.3**	**-0.5**
CLZ	**Clausthal**	**146.86**	**338**	*e*PKPbc	**PKPab**	**13 13 40.3**	**-0.5**
PKSM	**Moragy**	**147.13**	**323**⇑	*i*P	**PKPbc**	**13 13 41.0**	**+0.8**
TANN	**Tannenbergstha**	**147.21**	**334**	*e*PKPbc	**PKPbc**	**13 13 41.3**	**+0.9**
VAY	**Valandovo**	**147.22**	**313**	*e*PKP	**PKPbc**	**13 13 39.6**	**-1.0**
VAY				*e*PKP	**PKiKP**	**13 13 43.4**	**+0.5**
WERD	**Werda**	**147.24**	**334**	*e*PKPbc	**PKPbc**	**13 13 41.3**	**+0.9**
PLN	**Plauen**	**147.28**	**334**	*e*PKPbc	**PKPbc**	**13 13 41.4**	**+0.9**
GUNZ	**Gunzen**	**147.30**	**334**	*e*PKPbc	**PKPab**	**13 13 41.6**	**-0.9**
IBBN	**Ibbenburen**	**147.34**	**340**	*e*PKPbc	**PKPbc**	**13 13 41.3**	**+0.7**
WERN	**Wernitzgruen**	**147.34**	**334**	*e*PKPbc	**PKPab**	**13 13 41.9**	**-0.8**
NKC	**Novy Kostel**	**147.35**	**334**	*e*PKP2	**PKPab**	**13 13 41.8**	**-0.9**
NKC	**Novy Kostel**	**147.35**	**334**	*e*PKP	**PKPab**	**13 13 41.8**	**-0.9**
NKC				*e*x	x	13 13 44.4	
NKC				*e*x	x	13 13 47.2	
GAL1	**Galloway**	**147.36**	**355**	*e*P	**PKPbc**	**13 13 40.5**	**-0.1**
GAL1	**Galloway**	**147.36**	**355**	P	**PKPbc**	**13 13 40.5**	**-0.1**
MOX	**Moxa**	**147.36**	**335**	*e*PKP2	**PKPbc**	**13 13 41.3**	**+0.6**
MOX	**Moxa**	**147.36**	**335**	*e*PKPbc	**PKPbc**	**13 13 41.3**	**+0.6**
CSNA	**Conrad Observa**	**147.49**	**328**⇑	*i*PKPbc	**PKPbc**	**13 13 42.2**	**+0.9**
	comp=Z,12nm,1.1s						
MANZ	**Manzenberg**	**147.68**	**334**	*e*PKPbc	**PKPbc**	**13 13 42.6**	**+0.9**
SKO	**Skopje**	**147.69**	**314**	*e*PKP	**PKPdf**	**13 13 40.4**	**+1.3**
KHC	**Kasperske Hory**	**147.70**	**331**	*e*PKP2	**PKPbc**	**13 13 42.6**	**+0.8**
KHC	**Kasperske Hory**	**147.70**	**331**	*e*PKPbc	**PKPbc**	**13 13 42.6**	**+0.8**
KHC	**Kasperske Hory**	**147.70**	**331**	*e*PKP	**PKPdf**	**13 13 39.0**	**+0.1**
KHC				*e*x	x	13 13 42.6	
KHC				*e*x	x	13 13 45.9	
ROTZ	**Rotzenmuhle**	**147.81**	**333**	*e*PKPbc	**PKPbc**	**13 13 42.9**	**+0.9**
GEC2	**GERESS Array S**	**147.86**	**331**	*e*PKP2	**PKPbc**	**13 13 42.9**	**+0.6**
GEC2	**GERESS Array S**	**147.86**	**331**	*e*PKPbc	**PKPbc**	**13 13 42.9**	**+0.6**
GERES	**GERESS Array B**	**147.86**	**331**	PKPbc	**PKPbc**	**13 13 43.3**	**+1.0**
GERES	**GERESS Array B**	**147.86**	**331**	PKPbc	**PKPbc**	**13 13 43.3**	**+1.0**
	comp=Z,20nm,1.0s,baz=50,slow=2.1,SNR=20						
WET	**Wettzell**	**148.00**	**332**	*e*PKP2	**PKPbc**	**13 13 43.4**	**+0.9**
WET	**Wettzell**	**148.00**	**332**	*e*PKPbc	**PKPbc**	**13 13 43.4**	**+0.9**
GRF	**Grafenberg Arr**	**148.27**	**334**	*e*PKP2	**PKPbc**	**13 13 44.2**	**+1.0**
GRF	**Grafenberg Arr**	**148.27**	**334**	*e*PKPbc	**PKPbc**	**13 13 44.2**	**+1.0**
PERS	**Pernice**	**148.74**	**327**	*i* PKPdf	**PKPbc**	**13 13 45.0**	**+0.5**
PERS				*i* PKPbc	**PKPab**	**13 13 48.6**	**+0.1**
WME	**Myndd Eilian**	**148.78**	**354**	*e*P	**PKPbc**	**13 13 43.5**	**-0.8**
WME	**Myndd Eilian**	**148.78**	**354**	P	**PKPbc**	**13 13 43.5**	**-0.8**
WPM1	**Penmaenmawr**	**148.88**	**354**	*e*P	**PKPbc**	**13 13 44.5**	**-0.2**
WPM1	**Penmaenmawr**	**148.88**	**354**	P	**PKPbc**	**13 13 44.5**	**-0.2**
TNS	**Taunus Mts**	**148.88**	**338**	*e*PKP2	**PKPbc**	**13 13 45.6**	**+0.8**
TNS	**Taunus Mts**	**148.88**	**338**	*e*PKPbc	**PKPbc**	**13 13 45.6**	**+0.8**
WLF1	**Llynfaes**	**148.89**	**354**	*e*P	**PKPbc**	**13 13 44.5**	**-0.2**
WLF1	**Llynfaes**	**148.89**	**354**	P	**PKPbc**	**13 13 44.5**	**-0.2**
YLL	**Llanberis**	**149.02**	**354**	*e*P	**PKPbc**	**13 13 44.1**	**-0.8**
YLL	**Llanberis**	**149.02**	**354**	P	**PKPbc**	**13 13 44.1**	**-0.8**
RJOB	**Jochberg**	**149.08**	**330**	*e*PKPbc	**PKPbc**	**13 13 45.7**	**+0.3**
FOEL	**Foel Wylfa**	**149.16**	**353**	*e*P	**PKPbc**	**13 13 45.2**	**-0.2**
FOEL	**Foel Wylfa**	**149.16**	**353**	P	**PKPbc**	**13 13 45.2**	**-0.2**
KBA	**Koelnbreinsper**	**149.31**	**329**⇑	*i*PKPbc	**PKPbc**	**13 13 46.0**	**-0.1**
	comp=Z,28nm,1.0s						
MEM	**Membach**	**149.36**	**341**	PKPbc	**PKPbc**	**13 13 46.8**	**+0.9**
MEM				PKPab	**PKPab**	**13 13 50.1**	**-0.6**
BOJS	**Bojanci**	**149.42**	**325**	*i* PKPdf	**PKPdf**	**13 13 42.3**	**+0.5**
BOJS				*i* PKPbc	**PKiKP**	**13 13 47.1**	**-0.2**
LJU	**Ljubljana**	**149.44**	**326**	*i* PKPbc	**PKPbc**	**13 13 47.0**	**+0.8**
LJU				*i*		13 13 50.4	
VISS	**Visnje**	**149.44**	**326**	*i* PKPdf	**PKPbc**	**13 13 45.6**	**-0.6**
VISS				*i* PKPbc	**PKPab**	**13 13 50.7**	**-0.5**
MYKA	**Terra Mystica**	**149.48**	**328**⇑	*i*PKPbc	**PKPbc**	**13 13 46.4**	**-0.1**
	comp=Z,14nm,0.8s						
HLM1	**Long Mynd**	**149.49**	**352**	*e*P	**PKPbc**	**13 13 45.9**	**-0.3**
HLM1	**Long Mynd**	**149.49**	**352**	P	**PKPbc**	**13 13 45.9**	**-0.3**
CRNS	**Crni Vrh**	**149.55**	**327**	*e*PKPdf	**PKPdf**	**13 13 41.7**	**-0.3**
BCLA	**Clavier**	**149.74**	**341**	PKPbc	**PKPbc**	**13 13 47.9**	**+1.1**
BCLA				PKPab	**PKPab**	**13 13 52.2**	**-0.1**
VOY	**Vojsko**	**149.77**	**327**	*e*PKPbc	**PKPbc**	**13 13 47.3**	**+0.1**
VOY				*e*		13 13 50.9	
VOY				*e*		13 13 55.8	
JAVS	**Javornik**	**149.78**	**327**	*i* PKPdf	**PKPdf**	**13 13 42.5**	**0.0**
JAVS				*i* PKPbc	**PKiKP**	**13 13 47.8**	**-0.4**
STU	**Stuttgart**	**149.81**	**335**	*e*PKPbc	**PKPbc**	**13 13 47.8**	**+0.7**
ABTA	**Abfaltersbach**	**149.94**	**329**⇑	*i*PKPdf	**PKPdf**	**13 13 42.8**	**+0.2**
	comp=Z,24nm,1.2s						
SNF	**Seneffe**	**149.95**	**343**	PKPbc	**PKPbc**	**13 13 48.2**	**+0.9**
SNF				PKPab	**PKPab**	**13 13 53.9**	**+0.8**
WTTA	**Wattenberg**	**149.96**	**331**	*i* PKPbc	**PKPbc**	**13 13 48.4**	**+0.6**
	comp=Z,34nm,1.1s,SNR=6.8						
WLF	**Walferdange**	**150.13**	**340**	PKPbc	**PKPbc**	**13 13 49.4**	**+1.6**
WLF				PKPab	**PKPab**	**13 13 52.4**	**-1.6**
WLF	**Walferdange**	**150.13**	**340**	*e*PKIKP	**PKPbc**	**13 13 49.5**	**+1.6**
WLF	**Walferdange**	**150.13**	**340**	*e*PKPbc	**PKPbc**	**13 13 49.5**	**+1.6**
MOTA	**Moosalm**	**150.14**	**332**⇑	*i*PKPbc	**PKPbc**	**13 13 48.4**	**+0.2**
	comp=Z,26nm,0.8s,SNR=13						
LANF	**Langenberg**	**150.15**	**337**	PKP	**PKPbc**	**13 13 48.8**	**+0.9**
DOU	**Dourbes**	**150.23**	**342**	PKPbc	**PKPbc**	**13 13 48.6**	**+0.5**
DOU				PKPab	**PKPab**	**13 13 52.0**	**-2.3**
BFO	**Black Forest**	**150.50**	**336**	*e*PKIKP	**PKPbc**	**13 13 49.0**	**+0.2**
BFO	**Black Forest**	**150.50**	**336**	*e*PKPbc	**PKPbc**	**13 13 49.1**	**+0.2**
BFO	**Black Forest**	**150.50**	**336**	*e*PKPbc	**PKPbc**	**13 13 49.0**	**+0.2**
FETA	**Feichten**	**150.55**	**331**	*i* PKPbc	**PKPbc**	**13 13 49.7**	**+0.6**
	comp=Z,30nm,0.9s,SNR=14						
DAVA	**Damuels**	**150.71**	**333**⇑	*i*PKPbc	**PKPbc**	**13 13 49.8**	**+0.3**
	comp=Z,32nm,1.0s						
FELD	**Feldberg im Sc**	**151.00**	**336**	PKP	**PKPbc**	**13 13 51.0**	**+0.9**
ECH	**Echery**	**151.03**	**337**	PKP	**PKPbc**	**13 13 50.2**	**+0.2**
TUE	**Stuetta**	**151.58**	**332**	*e*PKPbc	**PKPbc**	**13 13 52.1**	**+0.5**
LOMF	**Lomont**	**151.88**	**336**	PKP	**PKPbc**	**13 13 52.6**	**+0.5**
AQU	**L'Aquila**	**152.47**	**322**	*e*PKPbc	**PKPbc**	**13 13 53.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**166.07**	**231**	PKP	**PKPdf**	**13 14 03.1**	**+0.1**
TORD				PKPab	**PKPab**	**13 15 03.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**166.07**	**231**	PKP	**PKPdf**	**13 14 03.1**	**+0.1**
	comp=Z,3.7nm,1.0s,baz=36,slow=1.0,SNR=12						
TORD				PKPab	**PKPab**	**13 15 03.8**	**+0.2**
	comp=Z,4.5nm,1.1s,baz=132,slow=3.6,SNR=6.9						

TAP 06 13:09:09.7, 24°.28N×121°.67E, h41km, ML2.6, 1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.07**	**67**	*e*P	Pn	13 09 16.7	+0.3
	baz=71						
ENA	**Nanau**	**0.16**	**25**	*e*P	Pn	13 09 17.0	+0.1
	baz=26						
ENA				*e*S	Sn	13 09 22.3	+0.4
	baz=26						
TWD	**Chiawan**	**0.21**	**198**	P	Pn	13 09 17.1	-0.1
	baz=207						
TWD				S	Sn	13 09 22.4	0.0
	baz=207						
HWA	**Hwalien**	**0.31**	**191**	*e*P	Pn	13 09 18.0	-0.1
	baz=198						
NNS	**Nan Shan**	**0.31**	**300**	P	Pn	13 09 18.5	+0.1
	baz=300						
NNS				*e*S	Sn	13 09 24.7	+0.2
	baz=300						
TWC	**Suao**	**0.36**	**27**	*i* P	Pn	13 09 19.2	+0.3
	baz=23						
TWC				S	Sn	13 09 25.8	+0.6
	baz=23						
ENTT	**Nioudou**	**0.37**	**345**⇓	*i*P	Pn	13 09 19.0	+0.1
	baz=350						
ENTT				*e*S	Sn	13 09 25.8	+0.4
	baz=350						
WHF	**Hehuan Shan**	**0.39**	**250**	P	Pn	13 09 19.9	+0.2
	baz=251						
WHF				*e*S	Sn	13 09 26.9	+0.2
	baz=251						
TWE	**Neicheng**	**0.44**	**360**	*e*P	Pn	13 09 19.7	0.0
	baz=358						
TWE				*e*S	Sn	13 09 27.2	+0.5
	baz=358						
TWT	**Tachien**	**0.45**	**266**	*e*P	Pn	13 09 20.9	+0.8
	baz=262						
TWT				*e*S	Sn	13 09 28.5	+1.1
	baz=262						
NSK	**Sanguang**	**0.48**	**324**	*e*P	Pn	13 09 20.6	+0.2
	baz=324						
NSK				*e*S	Sn	13 09 27.6	-0.3
	baz=324						
ESL	**Shilin**	**0.51**	**205**	*e*P	Pn	13 09 19.9	-0.8
	baz=204						
ESL				*e*S	Sn	13 09 27.5	-1.0
	baz=204						
NSTT	**Nanjuang**	**0.70**	**300**	*e*P	Pn	13 09 23.9	+0.7
	baz=297						
NSTT				*e*S	Sn	13 09 33.5	+0.6
	baz=297						
TWB1	**Santiao Chiao**	**0.78**	**22**	*e*P	Pn	13 09 25.4	+1.1
	baz=20						
TWB1				S	Sn	13 09 36.2	+1.4
	baz=20						
NWF	**Wu-fen Shan**	**0.79**	**7**	*e*P	Pn	13 09 25.0	+0.4
	baz=357						
NWF				*e*S	Sn	13 09 35.7	+0.4
	baz=357						
SMLT	**Sun Moon Lake**	**0.81**	**241**	*e*P	Pn	13 09 26.4	+1.6
	baz=238						
TWQ1	**Liyutan**	**0.82**	**275**	*e*P	Pn	13 09 26.1	+1.2
	baz=274						
TWQ1				*e*S	Sn	13 09 37.3	+1.5
	baz=274						
TYC	**Yuchr**	**0.83**	**243**	*e*P	Pn	13 09 26.1	+1.2
	baz=242						
TYC				*e*S	Sn	13 09 37.6	+1.6
	baz=242						
EHY	**Hungye**	**0.83**	**202**	*e*P	Pn	13 09 25.5	+0.4
	baz=203						
EHY				*e*S	Sn	13 09 34.5	-1.7
	baz=203						
TWS1	**Kuangyinshan**	**0.85**	**344**	*e*P	Pn	13 09 25.8	+0.6
	baz=344						
TWF1	**Yuli**	**0.99**	**200**	*e*P	Pn	13 09 27.2	+0.1
	baz=203						
TWF1				*e*S	Sn	13 09 40.2	+0.3
	baz=203						
ALS	**Alishan**	**1.10**	**226**	*e*P	Pn	13 09 30.5	+1.5
	baz=214						
ALS				*e*S	Sn	13 09 44.1	+0.7
	baz=214						
CHN5	**Tsauling**	**1.13**	**233**	*e*P	Pn	13 09 30.6	+1.4
	baz=232						
CHN5				*e*S	Sn	13 09 46.1	+2.4
	baz=232						
ELDTW	**Lidau**	**1.24**	**209**	*e*P	Pn	13 09 30.6	-0.2
	baz=204						
ELDTW				*e*S	Sn	13 09 47.0	+0.7
	baz=204						
WTP	**Ta-pu**	**1.41**	**223**	*e*P	Pn	13 09 34.6	+1.6
	baz=211						
WTP				*e*S	Sn	13 09 52.6	+2.1
	baz=211						
CHN1	**Nanshi**	**1.51**	**224**	*e*P	Pn	13 09 36.0	+1.7
	baz=213						
CHN1				*e*S	Sn	13 09 55.0	+2.1
	baz=213						

JMA 06 13:09:50.2±0.1, 24°.62N×123°.41E, h15km±3km, M1.2, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.40**	**247**	P	Pg	13 09 58.1	-0.1
YOJ				*e*S	Sg	13 10 03.4	-0.3
IRIF	**Iriomote-Funau**	**0.41**	**134**	P	Pg	13 09 58.1	-0.3
IRIF				*e*S	Sg	13 10 03.8	-0.2
JKRS	**Kuro-shima**	**0.67**	**125**	P	Pg	13 10 02.9	-0.3
JKRS				*e*S	Sg	13 10 11.6	-0.5
HATJ	**Hateruma jima**	**0.67**	**147**	P	Pg	13 10 02.8	-0.5
HATJ				*e*S	Sg	13 10 11.2	-0.9
JIJ	**Ishigaki jima**	**0.71**	**111**	P	Pg	13 10 03.5	-0.7
JIJ				*e*S	Sg	13 10 12.6	-1.0
JTJ	**Tarama**	**1.18**	**89**	*e*S	Sb	13 10 27.2	-0.1

*MOS **06** 13:33:09.5±0.9, 6°.40S×154°.88E, h33km, mb5.4/43, Error ellipse: s-maj=8.0km s-min=6.6km az=87.7*

*ISCJB **06** 13:33:10.5±0.9, 6°.52S±0°.04×154°.93E±0°.02, h47km±7km, mb5.3/161, MS4.4/43, Error ellipse: s-maj=6.2km s-min=4.0km az=8.0*

*IDC **06** 13:33:10.4±1.9, 6°.50S×154°.99E, h36km±14km, mb4.9/28, mb1 5.0/31, mb1mx5.0/32, mbtmp4.9/31, ML4.7/3, MS4.3/32, Ms1 4.3/32, ms1mx4.3/37, Error ellipse: s-maj=12.5km s-min=9.1km az=98.0*

*NEIC **06** 13:33:11.6±0.1, 6°.53S×154°.95E, mb5.2/73, Error ellipse: s-maj=4.7km s-min=4.2km az=148.0*

*BJI **06** 13:33:11.1, 6°.18S×155°.20E, h51km, mB5.1/37, mb5.1/51, Ms4.9/29, Ms7 4.5/33*

*GCMT **06** 13:33:13.7±0.2, 6°.83S×154°.94E, h39km, MW5.2, Moment Tensor Solution. s73,c104; s70,c103; Moment tensor: Scale 10^{16}Nm; M_{rr}7.06±.20; $M_{\theta\theta}$-4.21±.15; $M_{\phi\phi}$-2.86±.15; $M_{r\theta}$1.22±.16; $M_{\theta\phi}$4.39±.12; $M_{\phi r}$-1.75±.14; Best double couple: $M_0$7.80000×10^{16} NP1:ϕ_s306.00000°, δ38.00000°, λ82.00000°. NP2:ϕ_s135.00000°, δ53.00000°, λ96.00000°. Principal axes: T 7.3800, Plg81.0000°, Azm72.0000°; N 0.8600, Plg5.0000°, Azm312.0000°; P -8.2600, Plg8.0000°, Azm221.0000°; Data Used: II IU IC G CN.*

*DJA **06** 13:33:14.5±0.7, 6°S±4°×15°5E±°, h58km±7km, M5.4/58, mB5.8/20, mb5.5/58, Mw(mB)5.3/20, Mwp6.7/1*

ISC 06 13:33:12.0±0.3, 6°.56S±0°.04×154°.98E±0°.04, h49km±2km, h48km:pP-P, n651, σ1s.22/717, mb5.3/170, MS4.3/43, 109C-80D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.69**	**120**	*e*P	**Pn**	**13 34 36.5**	**+2.6**
	1μm,0.9s						
HNR				Sn	**Sn**	**13 35 41.9**	**+3.9**
HNR	**Honiara**	**5.69**	**120**	Pn	**Pn**	**13 34 36.3**	**+2.4**
	42nm,0.3s,baz=208,slow=1.5,SNR=21						
HNR				Sn	**Sn**	**13 35 41.9**	**+3.9**
	64nm,0.3s,baz=265,slow=6.2,SNR=4.6						
HNR				LR	LR	13 36 26.4	
	comp=Z,2μm,21.8s,baz=288,slow=34						
PMG	**Port Moresby**	**8.24**	**249**	*e*P	**Pn**	**13 35 10.1**	**+1.1**
	276nm,0.8s						
PMG				Sn	**Sn**	**13 36 44.0**	**+3.1**
PMG	**Port Moresby**	**8.24**	**249**	P	**Pn**	**13 35 10.7**	**+1.6**
	349nm,1.0s,4μm						
PMG	**Port Moresby**	**8.24**	**249**	Pn	**Pn**	**13 35 10.2**	**+1.1**
	39nm,0.3s,baz=65,slow=7.9,SNR=38						
PMG				Sn	**Sn**	**13 36 44.0**	**+3.1**
	12nm,0.3s,baz=67,slow=19,SNR=8.3						
PMG				LR	LR	13 38 13.4	
	comp=Z,3μm,21.0s,baz=55,slow=37						
CTA	**Charters Tower**	**15.89**	**211**	Pn	**Pn**	**13 36 53.4**	**+0.9**
CTA	**Charters Tower**	**15.89**	**211**	Pn	**Pn**	**13 36 53.4**	**+0.9**
	1.3nm,0.3s,baz=30,slow=14,SNR=13						
CTA				LR	LR	13 42 34.1	
	comp=Z,2μm,18.4s,baz=25,slow=35						

CTAO Charters Tower 15.89 211 *e*P **Pn** **13 36 53.1 +0.6**
CTAO pmax pmax
comp=Z,68nm,0.9s
CTAO Charters Tower 15.89 211 *e*P **Pn** **13 36 53.1 +0.6**
comp=Z,68nm,0.9s
NOUC Port Laguerre 18.93 146 *e*P **Pn** **13 37 30.0 0.0**
DZM Mont Dzumac 18.98 145 *e*P **Pn** **13 37 31.1 +0.3**
comp=Z,122nm,1.1s
DZM *e*LR LR 13 42 04.8
comp=Z,2µm,26.4s
DZM Mont Dzumac 18.98 145 *e*P **Pn** **13 37 30.7 0.0**
comp=Z,45nm,0.7s
DZM Mont Dzumac 18.98 145 P **Pn** **13 37 31.1 +0.3**
comp=Z,4.8nm,0.3s,baz=310,slow=10,SNR=50
DZM LR LR 13 43 44.9
comp=Z,1µm,20.9s,baz=322,slow=33
TARA Tarawa 19.56 67 *e*P **Pn** **13 37 37.4 -0.2**
comp=Z,230nm,1.1s
GUMO Guam 22.40 333 P **P** **13 38 06.0 -0.5**
GUMO Guam 22.40 333 P **P** **13 38 06.0 -0.5**
comp=Z,40nm,0.6s,baz=217,slow=22,SNR=4.1
GUMO LR LR 13 45 09.7
comp=Z,598nm,20.6s,baz=155,slow=32
FAKI Fak Fak 22.93 278 P **P** **13 38 15.7 +3.4**
WRAB Tennant Creek 24.04 234 *e*P **P** **13 38 23.3 +0.5**
WRAB pmax pmax
comp=Z,55nm,0.8s
WRAB Tennant Creek 24.04 234 *e*P **P** **13 38 23.3 +0.5**
comp=Z,55nm,0.8s
WRAB Tennant Creek 24.04 234 P **P** **13 38 23.8 +1.1**
comp=Z,309nm,0.6s,SNR=31
WRA Warramunga Arr 24.05 234 P **P** **13 38 23.2 +0.3**
WRA PcP **PcP** **13 42 04.4 +0.6**
WRA S **S** **13 42 40.0 +2.9**
WRA ScP **ScP** **13 45 39.9 +1.5**
WRA Warramunga Arr 24.05 234 P **P** **13 38 23.2 +0.3**
comp=Z,30nm,0.7s,baz=57,slow=10.0,SNR=164
WRA PcP **PcP** **13 42 04.4 +0.6**
comp=Z,28nm,0.7s,baz=59,slow=2.3,SNR=27
WRA S **S** **13 42 40.0 +2.9**
comp=Z,16nm,1.2s,baz=57,slow=15,SNR=8.3
WRA ScP **ScP** **13 45 39.9 +1.5**
comp=Z,2.4nm,0.9s,baz=55,slow=2.3,SNR=5.0
FUNA Funafuti 24.09 96 *e*P **P** **13 38 20.7 -2.5**
comp=Z,41nm,0.8s
SWI Sorong 24.33 282 P **P** **13 38 25.6 +0.2**
comp=Z,172nm,1.0s,comp=Z,2µm
MSVF Nonsavu 25.10 118 *e*P **P** **13 38 32.5 -0.1**
MSVF pmax pmax
comp=Z,69nm,1.0s
MSVF Nonsavu 25.10 118 *e*P **P** **13 38 32.5 -0.1**
comp=Z,69nm,1.0s
MSVF Nonsavu 25.10 118 P **P** **13 38 33.0 +0.4**
comp=Z,354nm,0.9s,SNR=5.6
AS31 Alice Springs 26.44 228 *e*P **P** **13 38 44.6 0.0**
AS31 *e* **pP** **13 38 56.2 -0.9**
ASAR Alice Springs 26.45 228 P **P** **13 38 44.8 +0.2**
ASAR PcP **PcP** **13 42 09.8 +0.6**
ASAR ScP **ScP** **13 45 46.9 +1.6**
ASAR Alice Springs 26.45 228 P **P** **13 38 44.8 +0.2**
comp=Z,9.4nm,0.6s,baz=60,slow=9.1,SNR=204
ASAR PcP **PcP** **13 42 09.8 +0.6**
comp=Z,17nm,0.7s,baz=59,slow=2.5,SNR=17
ASAR ScP **ScP** **13 45 46.9 +1.6**
comp=Z,2.4nm,0.9s,baz=50,slow=3.4,SNR=4.9
AAI Ambon 26.82 275 P **P** **13 38 52.3 +4.2**
LBMI Labuha 28.04 281 P **P** **13 39 00.7 +1.7**
comp=Z,228nm,1.0s,comp=Z,2µm
STKA Stephens Creek 28.12 205 *e*P **P** **13 38 58.9 -0.5**
comp=Z,3.8nm,0.9s
STKA PcP **PcP** **13 42 13.1 +0.2**
STKA ScP **ScP** **13 45 51.1 +1.0**
STKA Stephens Creek 28.12 205 P **P** **13 38 59.0 -0.5**
comp=Z,6.1nm,0.6s,baz=19,slow=9.7,SNR=23
STKA PcP **PcP** **13 42 13.1 +0.2**
comp=Z,16nm,0.7s,baz=64,slow=0.9,SNR=8.0
STKA ScP **ScP** **13 45 51.1 +1.0**
comp=Z,4.5nm,0.9s,baz=348,slow=2.9,SNR=4.7
STKA LR LR 13 50 01.7
comp=Z,1µm,20.5s,baz=20,slow=36
TNTI Ternate 28.50 284 P **P** **13 39 03.9 +0.8**
comp=Z,58nm,1.0s,comp=Z,1µm
FITZ Fitzroy Crossi 30.81 245 P **P** **13 39 22.7 -0.8**
FITZ PcP **PcP** **13 42 20.1 +0.1**
FITZ Fitzroy Crossi 30.81 245 P **P** **13 39 22.7 -0.8**
comp=Z,20nm,0.6s,baz=70,slow=8.2,SNR=65
FITZ PcP **PcP** **13 42 20.1 +0.1**
comp=Z,26nm,0.8s,baz=214,slow=1.4,SNR=7.5
MNI Manado 31.12 284 P **P** **13 39 26.2 -0.1**
comp=Z,150nm,1.1s
MATI Mati 31.64 295 *e*P **P** **13 39 30.8 -0.1**
KMSI Cibinong 31.74 282 P **P** **13 39 33.0 +1.3**
comp=Z,517nm,0.9s,comp=Z,6µm
BBSI Bau Bau 32.24 270 P **P** **13 39 34.3 -1.9**
comp=Z,80nm,1.1s
MMRI Maumere 32.51 264 P P 13 39 34.9 -3.6
LUWI Luwuk 32.59 278 P **P** **13 39 37.7 -1.5**
comp=Z,100nm,0.7s
BUKP Musuan 33.10 295 *e*P **P** **13 39 44.4 +0.6**
AFI Afiamalu 33.49 105 LR LR 13 51 30.0
comp=Z,744nm,19.1s,baz=280,slow=33
CTBH Cotabato--PC H 33.58 294⇓*i*P **P** **13 39 49.0 +1.2**
MRSI Marisa 33.70 281 P **P** **13 39 48.2 -0.7**
comp=Z,36nm,0.7s
RAO Raoul Island 34.10 135 LR LR 13 50 27.1
comp=Z,520nm,20.6s,baz=310,slow=30
BSSI Bau Bau, Buton 34.27 269 P **P** **13 39 55.3 +1.4**
comp=Z,225nm,0.9s,comp=Z,9µm
MSLP Maasin 34.28 299 *e*P **P** **13 39 54.6 +0.7**
BKSI Bulukumba 34.69 270 P **P** **13 39 58.3 +0.8**
comp=Z,16nm,0.9s
KAPI Kappang 35.08 271 *e*P **P** **13 40 00.1 -0.7**
comp=Z,34nm,0.9s
KAPI PcP **PcP** **13 42 31.2 -0.8**
KAPI Kappang 35.08 271 P **P** **13 40 00.6 -0.2**
comp=Z,32nm,1.2s,comp=Z,510nm
KAPI Kappang 35.08 271 P **P** **13 39 58.8 -2.0**
comp=Z,8.1nm,0.4s,baz=151,slow=1.6,SNR=7.6
KAPI PcP **PcP** **13 42 31.2 -0.8**
comp=Z,18nm,0.8s,baz=189,slow=2.8,SNR=5.6
SPSI Sidrap Palu 35.15 272 P **P** **13 40 01.3 -0.2**
comp=Z,18nm,1.1s
TTSI Tana Toraja 35.20 274 P **P** **13 40 04.6 +2.7**
comp=Z,16nm,1.4s,comp=Z,1µm
GUIM Jordan 36.49 298 *e*P **P** **13 40 13.5 +0.6**
RCP Roxas 36.78 299⇓*e*P **P** **13 40 16.6 +1.3**
URZ Urewera 37.39 151 *e*P **P** **13 40 20.6 +0.4**
comp=Z,83nm,1.2s
URZ Urewera 37.39 151 P **P** **13 40 19.9 -0.3**
comp=Z,23nm,0.6s,baz=317,slow=5.4,SNR=18
URZ LR LR 13 52 28.2
comp=Z,256nm,20.2s,baz=334,slow=31
QRZ Quartz Range 37.55 158 PN **P** **13 40 22.7 +1.1**
MWZ Matawai 37.65 150 PN **P** **13 40 23.9 +1.4**
BKZ Black Stump Fm 37.82 152 PN **P** **13 40 23.7 -0.2**
CUYO Cuyo Island 37.97 297 *e*P **P** **13 40 27.0 +1.5**
MYLDM Lahad Datu 38.23 287 P **P** **13 40 26.6 -1.1**
MYLDM Lahad Datu 38.23 287 P **P** **13 40 28.7 +1.0**
comp=Z,84nm,1.2s,comp=Z,1µm
TSM Tawau 38.58 285 P **P** **13 40 29.6 -1.1**
SJMP San Jose 38.60 299 *e*P **P** **13 40 32.3 +1.5**
KHKI Kahang-Kahang 39.07 265 P **P** **13 40 33.7 -1.0**
comp=Z,83nm,1.0s
SRBI Singaraja 39.46 265 P P 13 40 41.2 +3.2
comp=Z,71nm,0.9s
RPZ Rata Peaks 39.61 162 P **P** **13 40 38.6 -0.2**
RPZ Rata Peaks 39.61 162 P **P** **13 40 38.6 -0.2**
comp=Z,28nm,0.8s,baz=5.3,slow=7.3,SNR=16
RPZ LR LR 13 55 17.4
comp=Z,742nm,19.4s,baz=326,slow=34
SDKM Sandakan 39.61 287 P **P** **13 40 38.1 -1.2**
BATP Bataraza 40.08 292 *e*P **P** **13 40 44.5 +1.4**
CAUP Cauayan 40.25 306 *e*P **P** **13 40 45.2 +0.8**
KDM Kudat 40.34 289 P **P** **13 40 44.3 -1.0**
KKM Kota Kinabalu 40.66 287 *e*P **P** **13 40 48.2 +0.1**
comp=Z,104nm,1.0s
KKM Kota Kinabalu 40.66 287 P **P** **13 40 46.8 -1.2**
KKM Kota Kinabalu 40.66 287 P **P** **13 40 48.6 +0.5**
comp=Z,115nm,1.0s,comp=Z,825nm
PWJI Pagerwojo 42.84 265 P **P** **13 41 04.6 -1.1**
comp=Z,164nm,1.0s
SJI Sawahan 42.88 266 P **P** **13 41 06.2 0.0**
comp=Z,77nm,1.6s
BTM Bintulu 42.94 282 P **P** **13 41 05.4 -1.2**
PBKI Pangkalan Bun 43.32 273 P **P** **13 41 11.2 +1.5**
comp=Z,125nm,1.0s

PCJI Pacitan 43.45 265 P **P** **13 41 09.9 -0.8**
comp=Z,247nm,1.1s
SBUM Sibu 43.61 280 P **P** **13 41 10.7 -1.3**
SBUM Sibu 43.61 280 P **P** **13 41 13.3 +1.3**
comp=Z,18nm,1.1s
NWAO Narrogin (SRO) 43.77 228 P **P** **13 41 12.8 -0.2**
NWAO Narrogin (SRO) 43.77 228 P **P** **13 41 12.8 -0.2**
comp=Z,6.3nm,0.8s,baz=55,slow=13,SNR=5.7
NWAO LR LR 13 58 43.0
comp=Z,728nm,21.2s,baz=56,slow=35
STKI Sintang 43.90 277 P **P** **13 41 15.2 +0.8**
comp=Z,38nm,0.4s,comp=Z,12µm
SMRI Semarang 44.21 267 P **P** **13 41 17.5 +0.6**
comp=Z,107nm,1.4s
YULB Yu-li 44.38 313 *e*P **P** **13 41 17.5 -0.5**
comp=Z,20nm,0.7s
NACB Ninganchiao 44.65 314 *e*P **P** **13 41 20.5 +0.4**
comp=Z,28nm,0.6s
TPUB Ta-pu 44.80 313 *e*P **P** **13 41 20.9 -0.6**
comp=Z,34nm,0.6s
SSLB Suanglung 44.87 313 *e*P **P** **13 41 21.8 -0.2**
comp=Z,20nm,0.5s
BJII Banjamegara 44.93 266 P **P** **13 41 23.7 +1.0**
comp=Z,102nm,0.8s
YHNB Yeheng 45.11 315 *e*P **P** **13 41 24.5 +0.6**
comp=Z,30nm,0.7s
TATO Taipei 45.23 315 *e*P **P** **13 41 25.0 +0.3**
KSM Kuching 45.30 279 *e*P **P** **13 41 25.6 +0.1**
comp=Z,13nm,0.6s
KSM Kuching 45.30 279 P **P** **13 41 24.1 -1.4**
KSM Kuching 45.30 279 P **P** **13 41 26.0 +0.5**
comp=Z,27nm,0.9s
TGJI Tegal 45.53 267 P **P** **13 41 27.4 +0.1**
comp=Z,46nm,0.9s
JNU Nakatsue 45.63 331 *e*P **P** **13 41 27.5 -0.3**
comp=Z,11nm,0.8s
JNU Nakatsue 45.63 331 P **P** **13 41 27.4 -0.4**
comp=Z,34nm,0.8s,baz=100,slow=3.9,SNR=21
JNU LR LR 13 58 12.1
comp=Z,130nm,20.8s,baz=301,slow=33
MJAR Matsushiro Arr 45.67 341 P **P** **13 41 26.5 -1.6**
MJAR Matsushiro Arr 45.67 341 P **P** **13 41 26.5 -1.6**
comp=Z,3.2nm,0.6s,baz=170,slow=9.4,SNR=14
MJAR LR LR 13 58 00.4
comp=Z,241nm,21.5s,baz=175,slow=33
MAJO Matsushiro 45.67 341 *e*P **P** **13 41 27.0 -1.1**
MAJO pmax pmax
comp=Z,5.0nm,0.6s
MAJO Matsushiro 45.67 341 *e*P **P** **13 41 27.0 -1.1**
comp=Z,4.9nm,0.6s
MAT Matsushiro 45.67 341 P **P** **13 41 27.0 -1.1**
MAT *e*S **S** **13 48 04.2 -3.5**
RAR Rarotonga 46.09 113 LR LR 13 57 36.8
comp=Z,314nm,20.4s,baz=266,slow=32
CISI Cisompet, Garu 46.80 266 P **P** **13 41 36.7 -0.7**
comp=Z,197nm,0.7s
LEM Lembang 47.02 267 P **P** **13 41 40.0 +0.7**
comp=Z,97nm,0.7s
SKJI Sukabumi 48.07 266 P **P** **13 41 45.3 -1.9**
comp=Z,214nm,0.7s
CGJI Cibinong 48.94 267 P **P** **13 41 52.5 -1.4**
comp=Z,170nm,0.9s,comp=Z,2µm
KASI Kota Agung 50.19 268 P **P** **13 42 02.6 -0.9**
comp=Z,96nm,1.0s
KSRS Korea Array 50.55 332 P **P** **13 42 05.4 -0.3**
comp=Z,15nm,0.9s,baz=148,slow=8.4,SNR=77
KSRS LR LR 14 00 36.2
comp=Z,124nm,21.2s,baz=144,slow=33
KSAR Wonju Array Be 50.56 332 P **P** **13 42 05.4 -0.4**
LWLI Liwa 50.67 269 P **P** **13 42 07.7 +0.5**
comp=Z,113nm,1.1s
YUK Yuzh-Kuril'sk 51.03 352⇓*i*P P 13 42 12.3 +3.1
INCN Inchon 51.19 331 *e*P **P** **13 42 10.8 +0.3**
comp=Z,38nm,0.6s
QIZ Qiongzhong 51.23 301 P **P** **13 42 11.2 +0.1**
QIZ pP **pP** **13 42 22.9 -1.6**
QIZ sP **sP** **13 42 28.1 -2.0**
QIZ S **S** **13 49 28.1 +1.5**
QIZ pmax pmax
comp=Z,190nm,5.5s
QIZ LR LR
comp=Z,440nm,22.4s
NJ2 Nanjing 51.57 320 *e*P **P** **13 42 14.5 +1.0**
NJ2 pP **pP** **13 42 24.8 -2.1**
NJ2 sP **sP** **13 42 29.1 -3.4**
NJ2 sS **sS** **13 49 55.5 +2.2**
NJ2 pmax pmax
comp=Z,50nm,1.4s
NJ2 pmax pmax
comp=Z,180nm,5.2s
NJ2 LR LR
comp=N,220nm,19.6s
NJ2 LR LR
comp=E,250nm,23.0s
NJ2 LR LR
comp=Z,230nm,26.0s
ASAJ Asahikawa 51.67 349 *e*P **P** **13 42 14.5 +0.5**
comp=Z,7.0nm,0.6s
ASAJ Asahikawa 51.67 349 LR LR 14 01 37.0
comp=Z,396nm,21.1s,baz=154,slow=33
MYKOM Kota Tinggi 51.70 277 P **P** **13 42 13.5 -1.3**
MYKOM Kota Tinggi 51.70 277 P **P** **13 42 15.5 +0.7**
comp=Z,42nm,0.9s,comp=Z,785nm
KGM Kluang 52.27 278 P **P** **13 42 17.7 -1.3**
KTGM Kuala Trenggan 53.08 282 P **P** **13 42 23.7 -1.3**
WHN Wuhan 53.62 316 P **P** **13 42 29.6 +0.9**
WHN *e*S **S** **13 49 57.6 -1.4**
WHN LR LR
comp=Z,740nm,20.1s
UBPT Khong Chiam 53.64 294 P P 13 42 32.7 +3.7
VLA Vladivostok 53.71 339⇓*i*P **P** **13 42 26.8 -2.3**
VLA 13 43 33.1
VLA S **S** **13 49 56.3 -3.4**
VLA pmax pmax
comp=Z,32nm,1.4s
KIP Kipapa 53.84 58⇑*e*P **P** **13 42 32.1 +1.6**
KIP pmax pmax
comp=Z,111nm,2.5s
FRIM Kepong 54.15 279 P **P** **13 42 31.5 -1.4**
BKNI Bangkinang 54.25 275 P **P** **13 42 34.3 +0.7**
comp=Z,114nm,0.9s
YSS Yuzh-Sakhalins 54.38 350⇑*e*P **P** **13 42 35.0 +1.1**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=Z,300nm,18.0s
USRK Ussuriysk Arra 54.62 340 P **P** **13 42 35.9 +0.2**
comp=Z,13nm,0.8s,baz=162,slow=7.9,SNR=20
USRK LR LR 14 02 08.3
comp=Z,143nm,21.4s,baz=139,slow=32
PPI Padang Panjang 54.78 274 P **P** **13 42 36.6 -0.9**
comp=Z,104nm,0.9s,comp=Z,2µm
IPM Ipoh 54.96 280 *e*P **P** **13 42 38.4 -0.4**
comp=Z,63nm,0.9s
IPM *e*PcP **PcP** **13 43 40.7 +0.5**
IPM Ipoh 54.96 280 P **P** **13 42 37.4 -1.4**
IPM Ipoh 54.96 280 P **P** **13 42 38.7 -0.1**
comp=Z,79nm,0.9s,comp=Z,646nm
PPT Papeete 55.14 107 LR LR 14 02 05.6
comp=Z,466nm,18.2s,baz=176,slow=32
PPT2 Papeete2 55.14 107 *e*P **P** **13 42 40.0 -0.1**
comp=Z,36nm,1.3s
PPT2 *e*S **S** **13 50 19.9 -0.1**
comp=Z,169nm,24.5s
PPT2 *e*LR LR 13 58 52.3
comp=Z,272nm,22.5s,baz=278
TIAR Tiarei 55.35 107 *e*P **P** **13 42 41.5 -0.1**
comp=Z,29nm,0.8s
KULM Kulim 55.49 281 *e*P **P** **13 42 42.3 -0.2**
comp=Z,37nm,0.9s
KULM *e* 13 43 02.1
KULM *e*PcP **PcP** **13 43 43.0 +0.8**
KULM Kulim 55.49 281 P **P** **13 42 41.2 -1.4**
KULM Kulim 55.49 281 P **P** **13 42 42.4 -0.2**
comp=Z,62nm,1.3s,comp=Z,691nm
CHBT CHBT 55.72 290 P **P** **13 42 44.6 +0.4**
comp=Z,48nm,0.6s
TBI Tubuai 55.87 114 *e*S **S** **13 50 30.8 +1.4**
comp=Z,130nm,29.5s
TBI *e*LR LR 13 59 14.5
comp=Z,845nm,25.0s
PMOR Pomariorio Ree 56.61 104 *e*P **P** **13 42 50.5 0.0**
comp=Z,74nm,0.9s
PSI Prapat 56.73 278 P **P** **13 42 50.8 -0.8**
comp=Z,23nm,0.8s
CN2 Changchun 56.80 335 *e*P **P** **13 42 50.6 -0.7**

CN2 pmax pmax
comp=Z,20nm,1.1s
GYA Guiyang 57.18 307⇑*i*P **P** **13 42 56.4 +1.9**
GYA pP **pP** **13 43 10.5 +2.4**
GYA sP **sP** **13 43 15.0 +1.3**
GYA PP **PP** **13 45 06.1 +4.1**
GYA ScP **ScP** **13 47 45.9 +1.2**
GYA S **S** **13 50 45.8 -1.1**
GYA sS **sS** **13 51 08.7 -0.9**
GYA SS **SS** **13 54 38.0 +1.2**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,690nm,19.8s
GYA LR LR
comp=E,550nm,20.2s
GYA LR LR
comp=Z,640nm,18.6s
HABR Khabarovsk 57.53 344*ce*P **P** **13 42 54.2 -2.2**
HABR *e**PP **pP** **13 43 09.9 -0.1**
HABR 13 45 02.0
HABR *e*S **S** **13 50 47.0 -3.5**
HABR *e* 13 51 05.8
HABR *e**SS **sS** **13 51 14.8 +1.6**
HABR *e* 13 52 39.0
HABR pmax pmax
comp=N,12nm,1.1s
HABR pmax pmax
comp=Z,26nm,1.1s
HABR pmax pmax
comp=E,37nm,1.9s
HABR MLR MLR
comp=Z,73nm,21.0s
GSI Gunungsitoli 57.82 276 P **P** **13 42 58.0 -1.2**
comp=Z,98nm,0.8s
BJI Beijing 58.56 326 P **P** **13 43 03.9 +0.2**
BJI pmax pmax
comp=Z,15nm,0.7s
BJI pmax pmax
comp=Z,110nm,5.5s
KLR Kul'dur 59.15 342 *e*P P 13 43 03.8 -3.9
KLR pmax pmax
comp=Z,38nm,1.4s
XAN Xi'an 59.39 316 P **P** **13 43 09.2 -0.5**
XAN sP **sP** **13 43 27.3 -1.6**
XAN pmax pmax
comp=Z,6.0nm,0.9s
XAN pmax pmax
comp=Z,28nm,6.4s
PET Petropavlovsk 59.44 3 *e*P **P** **13 43 09.7 +0.1**
PET *e*S **S** **13 51 17.4 +2.3**
PET pmax pmax
comp=Z,55nm,0.8s
PEA0B Petropavlovsk- 59.49 2 *e*P **P** **13 43 10.8 +0.8**
PETK Petropavlovsk- 59.49 2 P **P** **13 43 10.8 +0.8**
PETK Petropavlovsk- 59.49 2 P **P** **13 43 10.8 +0.8**
PETK Petropavlovsk- 59.49 2 P **P** **13 43 10.8 +0.8**
comp=Z,30nm,0.7s,baz=146,slow=8.0,SNR=52
PETK LR LR 14 04 31.5
comp=Z,258nm,21.6s,baz=182,slow=32
KMI Kunming 59.76 304 P **P** **13 43 14.8 +2.1**
KMI pP **pP** **13 43 24.2 -2.1**
KMI sP **sP** **13 43 31.5 -0.4**
KMI PP **PP** **13 45 27.1 +2.0**
KMI S **S** **13 51 18.7 -2.1**
KMI sS **sS** **13 51 45.3 +1.7**
KMI SS **SS** **13 55 19.4 +1.8**
KMI pmax pmax
comp=Z,60nm,1.1s
KMI pmax pmax
comp=Z,70nm,3.2s
KMI LR LR
comp=N,170nm,19.9s
KMI LR LR
comp=E,200nm,24.6s
KMI LR LR
comp=Z,280nm,22.9s
CM31 Chiang Mai Arr 60.58 295 *e*P **P** **13 43 19.5 +1.4**
comp=Z,100nm,0.7s
CMAR Chiang Mai Arr 60.58 295 P **P** **13 43 19.5 +1.3**
CMAR P'P' 14 12 39.4
CMAR ⇑*e* 14 12 48.4
CMAR Chiang Mai Arr 60.58 295 P **P** **13 43 19.5 +1.3**
comp=Z,105nm,0.8s,baz=117,slow=5.0,SNR=625
CMAR LR LR 14 09 06.8
comp=Z,118nm,20.3s,baz=244,slow=36
CMAR PKPPKP **P'P'df** **14 12 39.4 -0.3**
comp=Z,0.8nm,0.8s,baz=248,slow=4.2,SNR=5.7
CMAR PKP2bc 14 12 48.4
comp=Z,0.6nm,0.4s,baz=288,slow=4.9,SNR=8.2
CMMT Chiang Mai 60.70 296 P **P** **13 43 20.1 +1.2**
comp=Z,105nm,0.9s,comp=Z,817nm,comp=Z,113µm
CHTO Chiang Mai 60.70 296 *e*P **P** **13 43 19.8 +0.8**
CHTO pmax pmax
comp=Z,91nm,0.9s
CHTO Chiang Mai 60.70 296 *e*P **P** **13 43 19.8 +0.8**
comp=Z,91nm,0.9s
CHTO Chiang Mai 60.70 296 P **P** **13 43 19.7 +0.8**
comp=Z,115nm,1.1s,comp=Z,839nm
DRV Dumont d'Urvil 60.89 187 P P 13 43 24.0 +4.7
DRV S S 13 51 17.0 -16
DRV SS SS 13 55 42.0 +8.8
DRV L L 13 58 00.0
DRV R 14 03 00.0
FX1 Attu Island--F 61.20 12 *e*P **P** **13 43 22.5 +0.8**
FX1 Attu Island--F 61.20 12 LR LR 14 05 53.5
comp=Z,557nm,21.2s,baz=194,slow=32
AMKA Amchitka 61.39 17 *e*P **P** **13 43 23.4 +0.5**
comp=Z,42nm,1.1s
CD2 Chengdu 61.52 310 P **P** **13 43 26.1 +1.7**
CD2 pP **pP** **13 43 39.0 +0.9**
CD2 sP **sP** **13 43 44.4 +0.8**
CD2 PcP **PcP** **13 44 07.1 +1.2**
CD2 PP **PP** **13 45 44.2 +3.8**
CD2 PcS **PcS** **13 48 08.7 -0.3**
CD2 S **S** **13 51 43.1 +0.3**
CD2 sS **sS** **13 52 05.0 -0.7**
CD2 ScS **SKKSac** **13 53 09.9 -2.3**
CD2 SS **SS** **13 55 46.3 +1.5**
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,280nm,22.5s
CD2 LR LR
comp=E,350nm,25.0s
CD2 LR LR
comp=Z,370nm,21.6s
HHC Hu-ho-hao-te 61.74 324⇑*e*P **P** **13 43 27.5 +1.8**
HHC pP **pP** **13 43 40.3 +0.9**
HHC sP **sP** **13 43 45.6 +0.7**
HHC PP **PP** **13 45 46.0 +3.8**
HHC PcS **PcS** **13 48 09.6 -0.1**
HHC S **S** **13 51 45.8 +0.5**
HHC sS **sS** **13 52 07.4 -0.8**
HHC ScS **SKKSac** **13 53 11.6 -1.9**
HHC SS **SS** **13 55 49.7 +1.8**
HHC pmax pmax
comp=Z,31nm,1.2s
HHC pmax pmax
comp=Z,210nm,5.6s
HHC LR LR
comp=N,380nm,17.8s
HHC LR LR
comp=E,320nm,16.4s
HHC LR LR
comp=Z,460nm,17.8s
HIA Hailar 63.53 335 *e*P **P** **13 43 36.8 -0.6**
comp=Z,33nm,0.9s
LZH Lanzhou 64.00 315 *e*P **P** **13 43 41.7 +0.8**
LZH pP **pP** **13 43 55.0 +0.4**
LZH sP **sP** **13 43 59.5 -0.7**
LZH *e*S S 13 52 06.2 -7.7
LZH sS **sS** **13 52 37.4 +0.5**
LZH SS **SS** **13 56 23.0 -0.5**
LZH pmax pmax
comp=Z,40nm,1.0s
LZH pmax pmax
comp=Z,190nm,5.4s
LZH LR LR
comp=N,830nm,17.1s
LZH LR LR

comp=E,490nm,16.1s
LZH LR LR
comp=Z,1µm,18.8s
CLNS Chul'man 67.81 343 *e*P **P 13 44 04.6 -0.2**
CLNS pmax pmax
comp=Z,13nm,0.7s
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=N,6.0nm,0.7s
UNV Unalaska Valle 68.34 23 *e*P **P 13 44 07.4 -0.7**
comp=N,14nm,0.7s
GTA Gaotai 68.42 317 *e*P **P 13 44 09.7 +0.6**
GTA pP **pP 13 44 23.2 +0.2**
GTA sP **sP 13 44 29.0 +0.5**
GTA PP **PP 13 46 42.4 +1.7**
GTA S **S 13 53 05.3 -2.1**
GTA sS **sS 13 53 26.6 -4.0**
GTA SS **SS 13 57 29.4 -2.6**
GTA pmax pmax
comp=Z,23nm,1.0s
GTA pmax pmax
comp=Z,170nm,5.7s
GTA LR LR
comp=N,150nm,20.9s
GTA LR LR
comp=E,140nm,25.6s
GTA LR LR
comp=Z,230nm,22.8s
ULN Ulaanbaatar 68.63 328 *e*P **P 13 44 10.3 0.0**
comp=Z,16nm,0.8s
ULN Ulaanbaatar 68.63 328 P **P 13 44 10.6 +0.3**
comp=Z,26nm,0.9s,comp=Z,256nm
SONM Songino Array 68.97 327 P **P 13 44 12.7 +0.3**
SONM ⇑*e* 14 12 23.4
SONM Songino Array 68.97 327 P **P 13 44 12.7 +0.3**
comp=Z,15nm,0.6s,baz=139,slow=5.7,SNR=121
SONM PKP2bc 14 12 23.4
comp=Z,2.3nm,0.9s,baz=307,slow=2.5,SNR=8.4
SHL Shillong 69.06 300 *e*PKP **P 13 44 15.0 +1.5**
SHL eS **S 13 53 17.5 +1.9**
RKT Rikitea 69.12 112 *e*LR LR 14 05 18.4
comp=Z,734nm,28.5s,baz=282
SEY Seymchan 69.33 359⇑*e*P **P 13 44 14.1 0.0**
VNDA Vanda 71.01 178 *e*P **P 13 44 24.4 +0.2**
comp=Z,8.0nm,0.8s
VNDA ScS **SKSac 13 54 24.8 +2.4**
VNDA Vanda 71.01 178 P **P 13 44 24.8 +0.5**
comp=Z,10nm,0.8s,baz=332,slow=6.2,SNR=63
VNDA ScS **SKSac 13 54 24.8 +2.4**
comp=Z,0.4nm,0.6s,baz=24,slow=6.7,SNR=5.9
VNDA LR LR 14 11 03.5
comp=Z,160nm,19.9s,baz=347,slow=32
LSA Lhasa 71.02 304 P **P 13 44 26.5 +0.8**
LSA Lhasa 71.02 304 *e*P **P 13 44 26.2 +0.5**
LSA pmax pmax
comp=Z,43nm,1.1s
LSA Lhasa 71.02 304 *e*P **P 13 44 26.2 +0.5**
comp=Z,43nm,1.1s
YAK Yakutsk 71.14 348 *e*P **P 13 44 24.9 -0.2**
YAK pmax pmax
comp=Z,17nm,0.8s
ZAK Zakamensk 72.12 328⇑*i*P **P 13 44 31.1 -0.4**
ZAK pmax pmax
comp=Z,21nm,0.9s
IRK Irkutsk 72.70 330 *e*P **P 13 44 34.0 -0.8**
IRK pmax pmax
comp=Z,33nm,0.8s
TAPN Taplejung 73.17 301 *e*P **P 13 44 38.7 +0.2**
comp=Z,193nm,1.2s
ODAN Odare 73.30 300 *e*P **P 13 44 39.3 +0.1**
comp=Z,210nm,0.6s
RAMN Ramite 74.00 300 *e*P **P 13 44 43.8 +0.5**
comp=Z,56nm,0.6s
GAMB Gambell 74.51 15 *e*P **P 13 44 45.6 +0.5**
comp=Z,52nm,1.1s
GAMB *e*PcP **PcP 13 45 00.0 +0.6**
BILL Bilibino 74.86 4*c i*P **P 13 44 47.3 +0.2**
BILL *e* 13 45 02.7
BILL *e* 13 47 33.8
BILL pmax pmax
comp=Z,61nm,1.0s
GUN Gumba 74.88 301 *e*P **P 13 44 48.7 +0.2**
comp=Z,153nm,0.6s
PKI Pulchoki 75.19 301 *e*P **P 13 44 50.2 -0.1**
PKIN Phulchoki 75.20 301 *e*P **P 13 44 50.6 +0.3**
comp=Z,53nm,0.7s
PALK Pallekele 75.35 279 *e*P **P 13 44 51.7 +0.6**
comp=Z,44nm,1.0s
PALK Pallekele 75.35 279 P **P 13 44 52.3 +1.2**
comp=Z,50nm,1.3s
KKN Kakani 75.36 301 *e*P **P 13 44 51.1 0.0**
comp=Z,97nm,0.7s
DMN Daman 75.46 301 *e*P **P 13 44 51.8 0.0**
comp=Z,167nm,0.8s
OHAK Old Harbor 76.15 26 *e*P **P 13 44 55.0 +0.3**
comp=Z,42nm,0.8s
KDAK Kodiak Island 76.79 26 P **P 13 44 57.8 -0.5**
KDAK Kodiak Island 76.79 26 P **P 13 44 57.8 -0.5**
comp=Z,33nm,0.8s,baz=199,slow=3.2,SNR=20
KOLN Koldanda 76.79 300 *e*P **P 13 44 58.9 -0.4**
comp=Z,87nm,0.7s
DANN Dangsing 76.80 301 *e*P **P 13 44 58.8 -0.6**
comp=Z,75nm,0.7s
TNA Tin City 76.91 15 P **P 13 44 59.4 +0.6**
comp=Z,27nm,1.0s
TNA *e* **pP 13 45 13.6 +0.7**
PYUN Piuthan 77.40 301 *e*P **P 13 45 01.9 -0.8**
comp=Z,133nm,0.9s
HVS Khovu-Aksy 77.72 326*d i*P **P 13 45 04.2 +0.4**
HVS pmax pmax
comp=Z,164nm,1.1s
WMQ Urumqi 78.50 317 P **P 13 45 09.1 +0.8**
WMQ pP **pP 13 45 22.3 -0.1**
WMQ sP **sP 13 45 27.5 -0.3**
WMQ PP **PP 13 48 09.5 +3.1**
WMQ S **S 13 55 00.5 -0.6**
WMQ sS **sS 13 55 23.8 -1.0**
WMQ pmax pmax
comp=Z,16nm,0.6s
WMQ pmax pmax
comp=Z,170nm,8.0s
WMQ LR LR
comp=N,250nm,5.8s
WMQ LR LR
comp=E,260nm,6.8s
WMQ LR LR
comp=Z,130nm,24.0s
HYB Hyderabad 79.11 289 *i*P **P 13 45 11.0 -1.1**
SEW Seward 79.45 25 *e*P **P 13 45 13.1 +0.1**
comp=Z,35nm,0.8s
PPLA Purkeypile 79.98 22 *e*P **P 13 45 15.5 -0.5**
comp=Z,8.4nm,0.7s
PMR Palmer 80.40 24 *e*P **P 13 45 17.9 -0.2**
PMR pmax pmax
comp=Z,32nm,0.7s
PMR Palmer 80.40 24 *e*P **P 13 45 17.9 -0.2**
comp=Z,32nm,0.7s
SML Sawmill 80.84 24 *e*P **P 13 45 21.2 +0.7**
SML pmax pmax
comp=Z,19nm,0.9s
SML Sawmill 80.84 24 *e*P **P 13 45 21.2 +0.7**
comp=Z,19nm,0.9s
TRF Thorofare Moun 81.01 22 *e*P **P 13 45 20.0 -1.6**
comp=Z,24nm,0.7s
DIV Divide 81.53 25 *e*P **P 13 45 25.1 +0.8**
comp=Z,42nm,0.7s
MCK McKinley 81.67 22 *e*P **P 13 45 24.2 -0.7**
MCK *e* 13 45 38.6
MCK pmax pmax
comp=Z,48nm,0.9s
MCK McKinley 81.67 22 *e*P **P 13 45 24.1 -0.7**
comp=Z,48nm,0.9s
MCK *e* **pP 13 45 38.6 -0.5**
BMRM Bremner River 81.95 25 *e*P **P 13 45 26.6 +0.2**
comp=Z,19nm,0.7s
COLA College 82.69 21 *e*P **P 13 45 29.0 -1.1**
COLA pmax pmax
comp=Z,17nm,0.8s
COLA College 82.69 21 *e*P **P 13 45 29.0 -1.1**
comp=Z,17nm,0.8s
ILAR Eielson Array 82.98 22 P **P 13 45 30.5 -1.2**
ILAR PKKPbc **PKKPbc 14 03 53.3 -3.9**
ILAR Eielson Array 82.98 22 P **P 13 45 30.5 -1.2**
comp=Z,4.6nm,0.5s,baz=241,slow=6.0,SNR=110
ILAR PKKPbc **PKKPbc 14 03 53.3 -3.9**
comp=Z,0.3nm,0.6s,baz=343,slow=2.1,SNR=5.6
ILAR LR LR 14 18 03.1
comp=Z,481nm,21.6s,baz=298,slow=32
MK31 Makanchi Array 83.07 319 *i*P **P 13 45 31.9 -0.7**
MK31 pmax pmax
comp=Z,30nm,1.0s
MK31 Makanchi Array 83.07 319 *e*P **P 13 45 31.8 -0.8**
MKAR Makanchi Array 83.07 319 *i*P **P 13 45 32.0 -0.6**
MKAR pmax pmax
comp=Z,19nm,0.8s
MKAR Makanchi Array 83.07 319 P **P 13 45 32.0 -0.6**
MKAR PKKPbc **PKKPbc 14 03 54.0 -2.2**
MKAR Makanchi Array 83.07 319 P **P 13 45 32.0 -0.6**
comp=Z,19nm,0.8s,baz=103,slow=4.9,SNR=142
MKAR PKKPbc **PKKPbc 14 03 54.0 -2.2**
comp=Z,1.0nm,0.9s,baz=282,slow=2.4,SNR=6.3
MKAR LR LR 14 20 52.7
comp=Z,94nm,19.6s,baz=129,slow=34
COLD Coldfoot 83.21 19 *e*P **P 13 45 33.4 +0.6**
comp=Z,7.9nm,0.9s
MENT Mentasta 83.27 24 *e*P **P 13 45 33.5 +0.3**
QSPA South Pole Qui 83.41 180 P **P 13 45 34.4 +0.3**
QSPA South Pole Qui 83.41 180 P **P 13 45 34.4 +0.3**
comp=Z,64nm,0.8s,baz=346,slow=1.2,SNR=459
DOT Dot Lake 83.48 23 *e*P **P 13 45 34.4 +0.1**
comp=Z,24nm,0.7s
PNL Peninsula 83.67 28 *e*P **P 13 45 35.9 +0.6**
comp=Z,63nm,0.9s
POO Poona 83.71 289 *e*PKP P 13 45 33.0 -3.5
ZAA0 Zalesovo Array 83.81 326 *e*P **P 13 45 34.2 -1.9**
ZALV Zalesovo Beam 83.81 326 P **P 13 45 34.5 -1.7**
ZALV Zalesovo Beam 83.81 326 P **P 13 45 34.5 -1.7**
ZALV Zalesovo Beam 83.81 326 P **P 13 45 34.5 -1.7**
comp=Z,11nm,0.8s,baz=110,slow=5.6,SNR=50
ZALV LR LR 14 24 10.0
comp=Z,107nm,19.4s,baz=249,slow=36
MAW Mawson 84.78 203 *e*P **P 13 45 41.1 +0.2**
comp=Z,4.0nm,0.7s
MAW Mawson 84.78 203 P **P 13 45 41.6 +0.7**
comp=Z,21nm,0.8s,baz=91,slow=6.1,SNR=26
MAW LR LR 14 18 15.6
comp=Z,290nm,20.1s,baz=108,slow=32
NVS Novosibirsk 84.99 327 *e*P **P 13 45 39.6 -2.5**
NVS pmax pmax
comp=N,4.0nm,1.2s
NVS pmax pmax
comp=E,10.0nm,1.2s
NVS pmax pmax
comp=Z,19nm,1.2s
EGAK Eagle 85.13 23 *e*P **P 13 45 42.9 +0.3**
comp=Z,24nm,0.8s
SKAG Skagway 85.50 29 *e*P **P 13 45 45.1 +0.5**
comp=Z,40nm,1.3s
KSH Kashi 85.72 310 P **P 13 45 48.6 +2.3**
KSH *e*pP pP 13 46 06.4 +5.8
KSH *e*PP **PP 13 49 10.7 +4.6**
KSH *e*SKS S 13 56 06.3 -9.2
KSH *e*S **SKKSac 13 56 16.2 +0.9**
KSH *e*sS sS 13 56 45.4 +5.9
KSH *e*SS **SS 14 01 58.7 +5.6**
KSH pmax pmax
comp=Z,23nm,0.8s
KSH pmax pmax
comp=Z,140nm,8.5s
KSH LR LR
comp=N,200nm,6.4s
KSH LR LR
comp=E,240nm,6.3s
KSH LR LR
comp=Z,260nm,12.5s
KURK Kurchatov 86.48 322*c i*P **P 13 45 47.9 -1.7**
KURK pmax pmax
comp=Z,11nm,1.2s
KURK Kurchatov 86.48 322 *e*P **P 13 45 47.8 -1.8**
comp=Z,11nm,0.9s
KURK Kurchatov 86.48 322 P **P 13 45 47.1 -2.5**
comp=Z,73nm,0.6s,SNR=6.7
KURBB Kurchatov Arra 86.52 322 P **P 13 45 48.1 -1.7**
comp=Z,2.3nm,0.7s,baz=103,slow=4.1,SNR=30
KURBB LR LR 14 22 57.7
comp=Z,80nm,21.9s,baz=55,slow=34
TKM2 Tokmak 2 86.71 314 *e*P **P 13 45 50.5 -0.7**
TKM2 pmax pmax
comp=Z,6.0nm,0.6s
TKM2 Tokmak 2 86.71 314 *e*P **P 13 45 50.5 -0.7**
comp=Z,6.0nm,0.6s
AAK Ala-Archa 87.44 313⇑*e*P **P 13 45 54.9 +0.2**
AAK pmax pmax
comp=Z,9.0nm,1.0s
AAK Ala-Archa 87.44 313 *e*P **P 13 45 54.4 -0.4**
comp=Z,3.8nm,0.8s
AAK Alcha 87.44 313 LR LR 14 25 32.1
comp=Z,152nm,21.7s,baz=197,slow=36
DLBC Dease Lake 87.78 31 *e*P **P 13 45 56.8 +1.0**
EKS2 Erkin-Say 87.97 313 *e*P **P 13 45 57.2 0.0**
EKS2 pmax pmax
comp=Z,5.0nm,0.8s
EKS2 Erkin-Say 87.97 313 *e*P **P 13 45 57.2 0.0**
comp=Z,5.0nm,0.8s
INK Inuvik 89.33 21 PKKPbc PKKPbc 14 03 36.8 -5.1
INK Inuvik 89.33 21 PKKPbc PKKPbc 14 03 36.8 -5.1
comp=Z,2.1nm,0.8s,baz=37,slow=5.3,SNR=8.0
BEKR Beckworth 90.08 50 *e*P **P 13 46 07.5 +0.3**
comp=Z,8.0nm,1.2s
KKAR Karatay Array 90.41 313 *e*P **P 13 46 08.0 -0.5**
KKAR Karatay Array 90.41 313 *e*P **P 13 46 08.0 -0.5**
MOD Modoc 90.42 48 *e*P **P 13 46 08.7 0.0**
comp=Z,14nm,1.0s
WCN Washoe City 90.46 51 *e*P **P 13 46 09.9 +0.9**
WCN pmax pmax
comp=Z,12nm,1.0s
WCN Washoe City 90.46 51 *e*P **P 13 46 09.9 +0.9**
comp=Z,12nm,1.0s
VES Vestal, Richgr 90.52 54⇑P **P 13 46 10.4 +1.3**
baz=91
CIS Catalina Islan 90.76 57⇓P **P 13 46 11.4 +1.1**
baz=91
ISA Isabella 90.99 54⇓P **P 13 46 12.8 +1.4**
baz=91
EDW2 Edwards Air Fo 91.28 55⇑P **P 13 46 14.0 +1.2**
baz=91
CWC Cottonwood Cre 91.40 54⇑P **P 13 46 14.4 +1.0**
baz=92
NVAR Mina Array Bea 91.47 52 P **P 13 46 14.0 +0.2**
NVAR PKiKP **PKiKP 13 51 06.2 +0.6**
NVAR PKKPbc **PKKPdf 14 03 33.9 +1.2**
NVAR P'P' 14 11 42.6
NVAR Mina Array Bea 91.47 52 P **P 13 46 14.0 +0.2**
comp=Z,18nm,0.9s,baz=254,slow=6.6,SNR=91
NVAR PKiKP **PKiKP 13 51 06.2 +0.6**
comp=Z,0.5nm,0.6s,baz=253,slow=2.0,SNR=4.2
NVAR PKKPbc **PKKPdf 14 03 33.9 +1.2**
comp=Z,0.6nm,0.7s,baz=112,slow=3.2,SNR=5.3
NVAR PKPPKP **P'P'df 14 11 42.6 -2.0**
comp=Z,0.4nm,0.6s,baz=112,slow=1.6,SNR=3.8
BFSC Mount Baldy Ra 91.48 56⇓P **P 13 46 14.5 +0.8**
baz=92
NV11 Mina Array Sit 91.58 52 *e*P **P 13 46 14.8 +0.5**
LRMC Laurel Mountai 91.60 55⇑P **P 13 46 15.5 +1.2**
baz=92
WVOR Wild Horse Val 91.72 48 *e*P **P 13 46 14.3 -0.4**
WVOR pmax pmax
comp=Z,7.0nm,1.0s
WVOR Wild Horse Val 91.72 48 *e*P **P 13 46 14.3 -0.4**
comp=Z,6.7nm,1.0s
MURC Murrieta 91.78 57⇓P **P 13 46 16.1 +1.0**
baz=92
MPMC Manual Prospec 91.83 54⇑P **P 13 46 16.7 +1.2**
baz=92
BVAR Borovoye Array 91.94 323 P **P 13 46 13.5 -1.8**
BVAR Borovoye Array 91.94 323 P **P 13 46 13.5 -1.8**
BVAR Borovoye Array 91.94 323 P **P 13 46 13.5 -1.8**
comp=Z,3.5nm,0.8s,baz=102,slow=4.9,SNR=18
BVAR LR LR 14 25 30.7
comp=Z,106nm,20.2s,baz=104,slow=34
BRVK Borovoye 92.01 323⇑*e*P **P 13 46 13.5 -2.1**
BRVK pmax pmax
comp=Z,3.0nm,0.9s
BRVK Borovoye 92.01 323 *e*P P 13 46 12.4 -3.3
comp=Z,3.7nm,0.8s
GRAC Grapevine Rang 92.03 53⇓P **P 13 46 17.4 +1.2**
baz=92
RPN Rapa Nui 92.08 117 LR LR 14 18 34.6
comp=Z,433nm,18.5s,baz=82,slow=30
BBRC Big Bear Solar 92.08 56⇑P **P 13 46 17.5 +0.7**
baz=92,SNR=6.1
GSC Goldstone 92.30 55 *e*P **P 13 46 18.2 +0.7**
GSC pmax pmax
comp=Z,6.0nm,0.8s
GSC Goldstone 92.30 55 *e*P **P 13 46 18.2 +0.7**
comp=Z,6.0nm,0.8s
GSC Goldstone 92.30 55⇓P **P 13 46 18.4 +0.9**
baz=92,SNR=5.9
MONP Monument Peak 92.35 57⇑P **P 13 46 18.9 +1.0**
baz=92,SNR=5.9
FURC Furnace Creek, 92.38 54⇑P **P 13 46 19.3 +1.6**
baz=92
PFO Pinyon Flat Ob 92.40 57 *e*P **P 13 46 18.8 +0.8**
comp=Z,8.2nm,0.8s
PFO Pinyon Flat Ob 92.40 57⇑P **P 13 46 19.1 +1.1**
baz=92,SNR=6.3
BMN Battle Mountai 92.54 50 *e*P **P 13 46 19.5 +0.9**
BMN pmax pmax
comp=Z,19nm,0.9s
BMN Battle Mountai 92.54 50 *e*P **P 13 46 19.5 +0.9**
comp=Z,19nm,0.9s
HEC Hector,Ludlow 92.63 55⇑P **P 13 46 20.1 +1.0**
baz=93
SYO Syowa Base 92.72 199⇓*e*P **P 13 46 16.6 -2.0**
SYO Syowa Base 92.72 199⇓*e*X pP 13 46 27.4 -5.6
BELC Belle Mtn. Jos 92.82 56⇓P **P 13 46 21.2 +1.2**
baz=93,SNR=18
SWSC Sam W. Stewart 92.88 57⇑P **P 13 46 21.1 +1.0**
baz=93
BMO Blue Mountains 92.96 45 *e*P **P 13 46 19.7 -0.6**
BMO pmax pmax
comp=Z,6.0nm,0.9s
BMO Blue Mountains 92.96 45 *e*P **P 13 46 19.7 -0.6**
comp=Z,6.2nm,0.9s
TUQ Turquoise Moun 93.03 55⇑P **P 13 46 21.8 +0.9**
baz=93,SNR=6.1
GMRC Granite Mounta 93.17 56⇑P **P 13 46 22.6 +1.0**
baz=93,SNR=15
BC3 Big Chuckawall 93.23 57⇑P **P 13 46 23.0 +1.1**
baz=93,SNR=9.4
NEW Newport 93.45 42 *e*P **P 13 46 21.9 -0.6**
comp=Z,8.2nm,0.9s
NEW Newport 93.45 42⇑P **P 13 46 22.4 -0.1**
baz=94
IRM Iron Mountain 93.53 56⇓P **P 13 46 24.3 +1.1**
baz=94,SNR=12
R11A Troy Canyon, C 93.58 52⇓P **P 13 46 24.5 +1.0**
baz=94
LDFC Landfair 93.65 55 *e*P **P 13 46 25.1 +1.3**
comp=Z,16nm,0.6s
GLA Glamis 93.70 57 *e*P **P 13 46 25.5 +1.5**
GLA pmax pmax
comp=Z,10.0nm,1.0s
GLA Glamis 93.70 57 *e*P **P 13 46 25.5 +1.5**
comp=Z,9.9nm,1.0s
GLA Glamis 93.70 57⇓P **P 13 46 25.5 +1.5**
baz=94
ELK Elko 94.07 50 *e*P **P 13 46 26.2 +0.4**
comp=Z,7.2nm,1.1s
PDMCI Parker Dam,Lak 94.38 56⇑P **P 13 46 28.2 +1.2**
baz=94,SNR=7.5
I12A Atlanta 94.41 47⇑P **P 13 46 29.1 +1.9**
baz=94
F12A Elk City 94.49 45⇓P **P 13 46 28.2 +0.8**
baz=94
W13A Hualapai Mount 94.66 55⇑P **P 13 46 29.7 +1.2**
baz=95
H12A Diamond D Ranc 94.67 46⇑P **P 13 46 28.7 +0.3**
baz=95
HLID Hailey 94.91 47⇓P **P 13 46 29.9 +0.4**
baz=95
BSMT Bassoo Peak 94.97 43 *e*P **P 13 46 29.5 -0.1**
comp=Z,3.9nm,1.0s
J13A Cove Ranch, Pi 95.08 47⇓P **P 13 46 30.1 -0.1**
baz=95
H13A Challis 95.10 46⇑P **P 13 46 30.9 +0.6**
baz=95
C13A Hot Springs 95.11 43⇓P **P 13 46 31.2 +1.1**
baz=95
F13A Darby 95.14 45⇓P **P 13 46 30.9 +0.5**
baz=95
I13A Wildhorse Cree 95.16 47⇓P **P 13 46 30.9 +0.2**
baz=95
G13A Cobalt 95.16 45⇓P **P 13 46 30.6 +0.1**
baz=95
ARUT Antelope Range 95.22 53 *e*P **P 13 46 31.7 +0.7**
ARUT pmax pmax
comp=Z,4.0nm,0.7s
ARUT Antelope Range 95.22 53 *e*P **P 13 46 31.7 +0.7**
comp=Z,4.4nm,0.7s
B13A Whitefish 95.22 42⇓P **P 13 46 31.3 +0.7**
baz=95
CCUT Cedar City 95.27 53 *e*P **P 13 46 32.2 +0.9**
comp=Z,3.1nm,0.7s
Y14A Wickenburg 95.29 57⇓P **P 13 46 31.8 +0.6**
baz=95
J14A Carey 95.55 47⇓P **P 13 46 33.0 +0.6**
baz=96
I14A Mackay 95.64 47⇑P **P 13 46 33.5 +0.7**
baz=96
WALA Waterton Lakes 95.64 41 *e*P **P 13 46 31.9 -0.6**
comp=Z,0.2nm,0.9s
L14A Malta 95.67 48⇓P **P 13 46 33.7 +0.8**
baz=96
H14A Leadore 95.74 46⇓P **P 13 46 33.5 +0.2**
baz=96
K14A Jones Ranch, D 95.75 48⇑P **P 13 46 34.2 +0.9**
baz=96
E14A Clinton 95.76 44⇓P **P 13 46 34.2 +1.0**
baz=96
DUG Dugway 95.87 50⇓P **P 13 46 34.7 +0.8**
baz=96
YKW3 Yellowknife Ar 95.96 28 *e*P **P 13 46 33.3 -0.3**
comp=Z,0.4nm,0.8s
YKA Yellowknife Ar 95.97 28 P **P 13 46 33.7 +0.1**
YKA PKiKP **PKiKP 13 51 11.7 -0.5**
YKA PKKP **PKKPbc 14 03 20.7 -3.7**
YKA Yellowknife Ar 95.97 28 P **P 13 46 33.7 +0.1**
comp=Z,20nm,0.8s,baz=268,slow=4.6,SNR=261
YKA PKiKP **PKiKP 13 51 11.7 -0.5**
comp=Z,0.6nm,0.6s,baz=259,slow=1.3,SNR=11
YKA PKKP **PKKPbc 14 03 20.7 -3.7**
comp=Z,2.4nm,0.7s,baz=85,slow=2.7,SNR=34
HVU Hansel Valley 96.00 49 *e*P **P 13 46 34.9 +0.4**
HVU pmax pmax
comp=Z,8.0nm,0.9s
HVU Hansel Valley 96.00 49 *e*P **P 13 46 34.9 +0.4**
comp=Z,7.7nm,0.9s
U15A North Rim 96.05 54⇑P **P 13 46 36.0 +1.1**
baz=96,SNR=12
MCMT McKenzie Canyo 96.12 46 *e*P **P 13 46 35.5 +0.5**
comp=Z,1.0nm,0.9s
K15A Arbon 96.23 48⇓P **P 13 46 36.0 +0.5**
baz=96
H15A Lima 96.25 46⇓P **P 13 46 36.3 +0.7**
baz=96
I15A Monteview 96.34 47⇓P **P 13 46 37.0 +1.1**
baz=96
J15A Blackfoot 96.34 47⇑P **P 13 46 37.0 +1.0**
baz=96
G15A Dillon 96.39 45⇓P **P 13 46 36.3 +0.1**
baz=96
A15A Johnson Ranch, 96.41 41⇓P **P 13 46 36.2 +0.2**
baz=96
F15A Butte 96.42 45⇑P **P 13 46 36.6 +0.2**
baz=96
C15A Salmond Ranch, 96.44 43⇓P **P 13 46 36.7 +0.5**
baz=96
WUAZ Wupatki 96.73 55 *e*P **P 13 46 38.9 +1.0**
comp=Z,7.1nm,0.9s
K16A Soda Springs 96.93 48⇓P **P 13 46 39.2 +0.5**
baz=97
L16A Fish Haven 97.01 49⇓P **P 13 46 39.6 +0.5**
baz=97
F16A Kennard Place, 97.03 45⇑P **P 13 46 39.4 +0.4**
baz=97
Q16A Castle Valley 97.07 52⇓P Pdif 13 46 40.1 +0.6
baz=97
DAU Daniels Canyon 97.08 50 *e*P Pdif 13 46 39.6 -0.1
DAU pmax pmax
comp=Z,2.0nm,0.6s
DAU Daniels Canyon 97.08 50 *e*P Pdif 13 46 39.6 -0.1
comp=Z,1.9nm,0.6s
D16A Dana Ranch, Ca 97.12 43⇑P Pdif 13 46 40.1 +0.6
baz=97
H16A Russell Place, 97.25 46⇑P Pdif 13 46 40.9 +0.7
baz=97
M17A Scullys Gap (B 97.56 49⇓P Pdif 13 46 41.7 0.0
baz=98

G17A	Pierce Place,	97.63	45	⇑P	Pdif	13 46 42.7	+0.9
	baz=98						
C17A	Wharram Farm,	97.68	43	⇓P	Pdif	13 46 42.0	+0.2
	baz=98						
F17A	Fitzpatrick Pl	97.70	45	⇓P	Pdif	13 46 42.7	+0.5
	baz=98						
D17A	Six Diamond Ra	97.72	43	⇓P	Pdif	13 46 42.4	+0.3
	baz=98						
H17A	Grant Village	97.72	46	⇑P	Pdif	13 46 43.5	+1.1
	baz=98						
P18A	Preston Nutter	97.82	51	⇓P	Pdif	13 46 44.0	+1.1
	baz=98						
M18A	Lyman	98.01	49	⇑P	Pdif	13 46 43.8	+0.1
	baz=98						
L18A	Fontenelle, Gr	98.05	49	⇑P	Pdif	13 46 44.9	+1.1
	baz=98						
J18A	Kendall Valley	98.09	47	⇓P	Pdif	13 46 44.0	0.0
	baz=98						
E18A	Harlowton	98.24	44	⇓P	Pdif	13 46 45.0	+0.6
	baz=98						
I18A	Diamond G Ranc	98.25	47	⇑Pdiff	Pdif	13 46 45.1	+0.3
	baz=98						
EGMT	Eagleton	98.36	43	⇑Pdiff	Pdif	13 46 44.9	0.0
	baz=98						
F18A	Big Timber	98.36	45	⇑Pdiff	Pdif	13 46 45.2	+0.2
	baz=98						
PDAR	Pinedale Array	98.42	48	P	P	13 46 44.9	-0.6
PDAR				PP	PP	13 50 48.4	+2.2
PDAR				PKKPbc	PKKPbc	14 03 15.3	-1.9
PDAR	Pinedale Array	98.42	48	P	P	13 46 44.9	-0.6
	comp=Z,4.4nm,0.9s,baz=240,slow=2.7,SNR=30						
PDAR				PP	PP	13 50 48.4	+2.2
	comp=Z,1.3nm,1.1s,baz=260,slow=8.9,SNR=4.3						
PDAR				PKKPbc	PKKPbc	14 03 15.3	-1.9
	comp=Z,0.5nm,0.6s,baz=83,slow=4.6,SNR=4.5						
PDAR				LR	LR	14 27 25.4	
	comp=Z,242nm,18.5s,baz=284,slow=33						
G18A	Lazy EL Ranch,	98.46	45	⇑Pdiff	Pdif	13 46 45.8	+0.2
	baz=98						
L19A	Farson	98.56	48	⇑Pdiff	Pdif	13 46 46.3	+0.2
	baz=99						
M19A	Rock Springs	98.70	49	⇑Pdiff	Pdif	13 46 46.9	+0.2
	baz=99						
O19A	Miners Draw (B	98.70	50	⇑Pdiff	Pdif	13 46 46.8	+0.1
	baz=99						
P19A	Cripple Cowboy	98.80	51	⇓Pdiff	Pdif	13 46 47.4	+0.2
	baz=99						
J19A	Crowheart	98.80	47	⇑Pdiff	Pdif	13 46 47.6	+0.5
	baz=99						
PV04	Paradox Valley	98.83	52	eP	Pdif	13 46 48.3	+1.0
PV04				e	pP	13 47 00.1	-1.6
F19A	Roth Farm, Mol	98.90	45	⇓Pdiff	Pdif	13 46 47.8	+0.4
	baz=99						
K19A	Absolon Red Bu	98.95	48	⇑Pdiff	Pdif	13 46 47.6	-0.2
	baz=99						
E19A	Rath Farm, Rou	99.01	44	⇓Pdiff	Pdif	13 46 48.1	+0.2
	baz=99						
A19A	Klindworth Far	99.03	42	⇑Pdiff	Pdif	13 46 47.9	+0.1
	baz=99						
PV01	Paradox Valley	99.08	53	eP	Pdif	13 46 49.2	+0.7
	comp=Z,238nm,0.8s						
V20A	Brimhall	99.11	55	⇑Pdiff	Pdif	13 46 49.3	+0.6
	baz=99						
MVCO	Mesa Verde	99.12	53	⇓Pdiff	Pdif	13 46 49.4	+0.7
	baz=99						
R20A	Redvale	99.24	52	⇑Pdiff	Pdif	13 46 49.7	+0.5
	baz=99						
S20A	Disappointment	99.24	53	⇓Pdiff	Pdif	13 46 50.0	+0.7
	baz=99						
Q20A	Ridgley Place,	99.31	52	⇓Pdiff	Pdif	13 46 50.2	+0.7
	baz=99						
L20A	Wamsutter	99.32	49	⇓Pdiff	Pdif	13 46 49.9	+0.5
	baz=99						
M20A	Sweetwater, Wa	99.43	49	⇓Pdiff	Pdif	13 46 50.4	+0.4
	baz=100						
AKTO	Aktyubinsk	99.46	320	LR	LR	14 31 27.8	
	comp=Z,83nm,18.7s,baz=267,slow=35						
F20A	Billings	99.46	45	⇓Pdiff	Pdif	13 46 50.2	+0.3
	baz=100						
C20A	Veseth Ranch,	99.54	43	⇑Pdiff	Pdif	13 46 50.5	+0.4
	baz=100						
S21A	Coal Bank Pass	99.69	53	⇑Pdiff	Pdif	13 46 51.8	+0.5
	baz=100						
Q21A	Lamborn Mesa,	99.88	52	⇑Pdiff	Pdif	13 46 52.7	+0.7
	baz=100						
R21A	Cimarron	99.89	52	⇓Pdiff	Pdif	13 46 52.9	+0.7
	baz=100						
N21A	Black Mountain	99.93	50	⇓Pdiff	Pdif	13 46 52.8	+0.5
	baz=100						
O21A	Pagoda	99.96	50	⇑Pdiff	Pdif	13 46 52.8	+0.4
	baz=100						
J21A	Lysite	99.98	47	⇑Pdiff	Pdif	13 46 52.7	+0.4
	baz=100						
P21A	Newcastle	99.98	51	⇓Pdiff	Pdif	13 46 53.2	+0.8
	baz=100						
L21A	Rawlins	100.04	49	⇑Pdiff	Pdif	13 46 52.4	-0.3
	baz=100						
M21A	Separation Pea	100.05	49	⇓Pdiff	Pdif	13 46 52.5	-0.2
	baz=100						
I21A	Big Trails, Te	100.08	47	⇓Pdiff	Pdif	13 46 53.1	+0.3
	baz=100						
D21A	La Casta Ranch	100.24	43	⇑Pdiff	Pdif	13 46 53.6	+0.4
	baz=100						
SMCO	Snowmass	100.34	51	ePdif	Pdif	13 46 55.2	+0.9
	comp=Z,7.8nm,1.1s						
Q22A	Crested Butte,	100.39	52	⇑Pdiff	Pdif	13 46 55.3	+0.9
	baz=100						
S22A	4UR Ranch, Cre	100.45	53	⇑Pdiff	Pdif	13 46 56.1	+1.4
	baz=100						
P22A	Eagle	100.51	51	⇑Pdiff	Pdif	13 46 56.0	+1.1
	baz=100						
R22A	Saguache, Gunn	100.52	52	⇓Pdiff	Pdif	13 46 55.7	+0.7
	baz=100						
K22A	Casper	100.66	48	⇓Pdiff	Pdif	13 46 55.7	+0.4
	baz=101						
I22A	9 Mile Ranch,	100.67	47	⇓Pdiff	Pdif	13 46 55.5	+0.2
	baz=101						
O22A	Kremmling	100.67	50	⇑Pdiff	Pdif	13 46 55.8	+0.2
	baz=101						
J22A	Midwest	100.68	47	⇑Pdiff	Pdif	13 46 55.8	+0.4
	baz=101						
N22A	Wattenberg Ran	100.74	50	⇑Pdiff	Pdif	13 46 56.6	+0.7
	baz=101						
H22A	Clearmont	100.75	46	⇑Pdiff	Pdif	13 46 56.0	+0.4
	baz=101						
D22A	Cohagen	100.79	43	⇑Pdiff	Pdif	13 46 55.7	0.0
	baz=101						
N23A	Red Feather La	101.12	50	⇑Pdiff	Pdif	13 46 58.3	+0.7
	baz=101						
O23A	Lake Granby, G	101.15	50	⇓Pdiff	Pdif	13 46 58.6	+0.8
	baz=101						
L23A	Garrett	101.28	48	⇓Pdiff	Pdif	13 46 58.1	-0.1
	baz=101						
F23A	Volborg	101.38	45	⇑Pdiff	Pdif	13 46 58.7	+0.3
	baz=101						
ISCO	Idaho Springs	101.39	51	⇑Pdiff	Pdif	13 46 59.1	+0.3
	baz=101						
G23A	Biddle	101.41	45	⇑Pdiff	Pdif	13 46 58.8	+0.3
	baz=101						
C23A	Lambert	101.44	43	⇑Pdiff	Pdif	13 46 58.7	+0.1
	baz=102						
D23A	Lindsay	101.45	43	⇑Pdiff	Pdif	13 46 58.9	+0.2
	baz=102						
Y24A	Capitan	101.58	57	⇑Pdiff	Pdif	13 46 60.0	+0.3
	baz=102						
S24A	Houchin Ranch,	101.74	53	⇑Pdiff	Pdif	13 47 00.8	+0.3
	baz=102						
Q24A	Divide	101.77	52	⇓Pdiff	Pdif	13 47 00.8	+0.2
	baz=102						
T24A	Torres, Weston	101.87	54	⇑Pdiff	Pdif	13 47 01.4	+0.4
	baz=102						
H24A	Dirks Ranch, A	102.03	46	⇑Pdiff	Pdif	13 47 01.4	+0.1
	baz=102						
V25A	Rancho No Teng	102.24	55	⇓Pdiff	Pdif	13 47 03.1	+0.6
	baz=102						
S25A	Robets Cordova	102.36	53	⇑Pdiff	Pdif	13 47 03.9	+0.8
	baz=102						
U25A	Circle Dot Ran	102.40	54	⇑Pdiff	Pdif	13 47 04.2	+0.9
	baz=102						
K25A	Mack Ranch, Ha	102.62	48	⇑Pdiff	Pdif	13 47 04.7	+0.6
	baz=103						
FFC	Flin Flon	102.86	35	i P	Pdif	13 47 07.3	+2.7
TXAR	Lajitas Array	103.07	62	Pdif	Pdif	13 47 11.2	+4.9
TXAR				PP	PP	13 51 23.6	+2.0
TXAR				PKKPbc	PKKPbc	14 03 02.7	-0.5
TXAR	Lajitas Array	103.07	62	Pdiff	Pdif	13 47 11.2	+4.9
	comp=Z,0.2nm,0.5s,baz=270,slow=2.5,SNR=4.1						
TXAR				PP	PP	13 51 23.6	+2.0
	comp=Z,0.2nm,0.4s,baz=289,slow=3.8,SNR=3.9						
TXAR				PKKPbc	PKKPbc	14 03 02.7	-0.5
	comp=Z,1.6nm,0.7s,baz=116,slow=4.3,SNR=10						
S26A	Kim	103.12	53	⇓Pdiff	Pdif	13 47 06.7	+0.3
	baz=103						
S29A	Ulysses	104.99	53	⇑Pdiff		13 51 29.3	
	baz=105						
430A	Baggett Ranch,	105.17	60	⇓Pdiff		13 51 30.0	
	baz=105						
V30A	Spur Ranch, Mi	105.43	55	⇑Pdiff		13 51 29.6	
	baz=106						
R30A	Dighton	105.61	52	⇑Pdiff		13 51 30.2	
	baz=106						
431A	Sonora	105.71	60	⇓Pdiff		13 51 30.9	
	baz=106						
631A	Perdido Creek	105.77	61	⇓Pdiff		13 51 30.9	
	baz=106						
531A	Rocksprings	105.78	61	⇑Pdiff		13 51 31.0	
	baz=106						
Y31A	Rekieta Farm,	105.88	57	⇑Pdiff		13 51 31.1	
	baz=106						
Z31A	Sharp Cattle R	106.00	57	⇑Pdiff		13 51 31.2	
	baz=106						
W31A	Holland Ranch,	106.07	55	⇑Pdiff		13 51 31.7	
	baz=106						
532A	Rocksprings	106.33	61	⇑Pdiff		13 51 31.7	
	baz=106						
JCT	Junction City	106.41	60	ePKiKP	PKiKP	13 51 31.9	-0.3
Z32A	Haskell	106.56	57	⇓Pdiff		13 51 32.4	
	baz=107						
ULM	Lac du Bonnet	107.23	39	PKiKP	PKiKP	13 51 31.4	-1.6
ULM	Lac du Bonnet	107.23	39	PKiKP	PKiKP	13 51 31.4	-1.6
	comp=Z,3.9nm,0.7s,baz=283,slow=1.8,SNR=5.3						
ECSD	EROS Data Cent	107.80	46	ePKiKP	PKiKP	13 51 33.0	-1.3
ARCES	ARCESS Array B	109.17	343	PKiKP	PKiKP	13 51 34.6	-1.5
ARCES				PKKPbc	PKKPbc	14 02 41.7	-3.8
ARCES	ARCESS Array B	109.17	343	PKiKP	PKiKP	13 51 34.6	-1.5
	comp=Z,3.8nm,0.8s,baz=50,slow=1.5,SNR=9.0						
ARCES				PKKPbc	PKKPbc	14 02 41.7	-3.8
	comp=Z,4.4nm,1.0s,baz=273,slow=2.1,SNR=6.0						
SPMN	St. Paul	110.23	44	⇓Pdiff		13 51 38.8	
	baz=110						
KIV	Kislovodsk	110.53	314	i PKIKP	PKiKP	13 51 40.7	+1.2
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,66nm,20.0s						
OBN	Obninsk	111.38	327	ePKIKP	PKiKP	13 51 55.9	+15
OBN				e		13 58 11.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
JFWS	Jewell Farm	112.51	46	ePKIKP	PKiKP	13 51 42.0	-1.2
JFWS	Jewell Farm	112.51	46	ePKiKP	PKiKP	13 51 42.0	-1.2
FINES	FINESS Array B	113.54	336	PKiKP	PKiKP	13 51 44.0	-0.6
FINES				PKKPbc	PKKPbc	14 02 28.1	-2.8
FINES	FINESS Array B	113.54	336	PKiKP	PKiKP	13 51 44.0	-0.6
	comp=Z,3.7nm,1.0s,baz=64,slow=4.4,SNR=4.8						
FINES				PKKPbc	PKKPbc	14 02 28.1	-2.8
	comp=Z,2.9nm,0.6s,baz=203,slow=1.7,SNR=8.2						
OLIL	Olney	115.00	50	ePKiKP	PKiKP	13 51 47.1	-0.9
WCI	Wyandotte Cave	116.49	51	ePKIKP	PKPdf	13 51 50.2	-0.8
WCI	Wyandotte Cave	116.49	51	ePKPdf	PKPdf	13 51 50.2	-0.8
PLCA	Paso Flores	117.07	142	PKP	PKPdf	13 51 50.7	-1.4
PLCA	Paso Flores	117.07	142	PKP	PKPdf	13 51 50.7	-1.4
	comp=Z,0.5nm,0.5s,baz=197,slow=22,SNR=5.5						
AKASG	Malin Array Be	117.18	325	PKIKP	PKPdf	13 51 51.1	-0.8
AKASG	Malin Array Be	117.18	325	PKP	PKPdf	13 51 51.0	-0.8
AKASG				PKKPbc	PKKPbc	14 02 15.7	-2.3
AKASG	Malin Array Be	117.18	325	PKP	PKPdf	13 51 51.0	-0.8
	comp=Z,3.4nm,0.7s,baz=61,slow=2.4,SNR=13						
AKASG				PKKPbc	PKKPbc	14 02 15.7	-2.3
	comp=Z,2.2nm,0.4s,baz=259,slow=4.3,SNR=8.6						
AK02	Malin Array Si	117.21	325	ePKPdf	PKPdf	13 51 50.9	-1.0
KMBO	Kilima Mbogo	117.38	265	PKP	PKPdf	13 51 52.5	-1.2
KMBO	Kilima Mbogo	117.38	265	PKP	PKPdf	13 51 52.5	-1.2
	comp=Z,2.5nm,1.0s,baz=54,slow=6.8,SNR=5.9						
BR131	Keskin Array S	118.09	312	ePKPdf	PKPdf	13 51 53.2	-0.9
BRTR	Keskin Array B	118.09	312	PKP	PKPdf	13 51 53.3	-0.9
BRTR				PKKPbc	PKKPbc	14 02 13.8	-0.8
BRTR	Keskin Array B	118.09	312	PKP	PKPdf	13 51 53.3	-0.9
	comp=Z,2.3nm,0.7s,baz=106,slow=1.8,SNR=13						
BRTR				PKKPbc	PKKPbc	14 02 13.8	-0.8
	comp=Z,0.8nm,0.7s,baz=232,slow=4.4,SNR=4.9						
ACSO	Alum Creek Sta	118.46	48	ePKPdf	PKPdf	13 51 53.7	-1.0
TKL	Tuckaleechee C	119.05	53	ePKPdf	PKPdf	13 51 55.4	-0.6
NB2	NORSAR Subarra	119.29	341	PKPdf	PKPdf	13 51 54.9	-0.8
	comp=Z,1.0nm,0.5s,baz=43,slow=1.8						
NOA	NORSAR Array B	119.29	341	PKP	PKPdf	13 51 54.7	-1.0
NOA				PKKPbc	PKKPab	14 02 08.8	-1.9
NOA	NORSAR Array B	119.29	341	PKP	PKPdf	13 51 54.7	-1.0
	comp=Z,2.1nm,0.8s,baz=48,slow=1.8,SNR=4.9						
NOA				PKKPbc	PKKPab	14 02 08.8	-1.9
	comp=Z,2.3nm,0.8s,baz=42,slow=3.5,SNR=5.0						
CFR	Carcaliu	120.11	319	⇑iP	PKPdf	13 51 57.0	-0.7
TIGA	Tifton	120.12	57	⇑Pdiff	PKPdf	13 51 57.8	-0.3
	baz=120						
BOSA	Boshof	120.27	232	ePKPdf	PKPdf	13 51 58.6	-0.1
BOSA	Boshof	120.27	232	PKP	PKPdf	13 51 58.5	-0.1
	comp=Z,12nm,0.6s,baz=124,slow=1.5,SNR=44						
PLOR	Plostina	120.79	320	⇑iP	PKPdf	13 51 57.4	-1.7
BUR08	Bucovina Ar. S	120.90	323	ePKPdf	PKPdf	13 52 00.2	+0.9
BURAR	Bucovina Array	120.90	323	⇑iP	PKPdf	13 51 57.4	-1.9
BLA	Blacksburg	121.25	50	ePKIKP	PKPdf	13 51 59.4	-0.8
BLA	Blacksburg	121.25	50	ePKPdf	PKPdf	13 51 59.4	-0.8
KWP	Kalwaria Pacla	121.39	326	⇓iP	PKPdf	13 52 00.0	0.0
MLR	Muntele Rosu	121.39	320	⇑iP	PKPdf	13 52 00.0	-0.3
JSC	Jenkinsville	121.39	54	ePKIKP	PKPdf	13 52 00.6	+0.1
JSC	Jenkinsville	121.39	54	ePKPdf	PKPdf	13 52 00.6	+0.1
SCHQ	Schefferville	121.40	27	ePKPdf	PKPdf	13 51 59.3	-0.6
SCHQ				PKP	PKPdf	13 51 59.5	-0.4
SCHQ				PKKPab	PKKPab	14 02 00.5	-1.1
SCHQ	Schefferville	121.40	27	PKP	PKPdf	13 51 59.5	-0.4
	comp=Z,4.9nm,0.7s,baz=8.4,slow=1.7,SNR=15						
SCHQ				PKKPab	PKKPab	14 02 00.5	-1.1
	comp=Z,2.9nm,0.5s,baz=118,slow=5.3,SNR=8.8						
LBTB	Lobatse	121.61	235	ePKPdf	PKPdf	13 52 01.2	-0.1
SSPA	Standing Stone	122.01	46	ePKPdf	PKPdf	13 52 00.9	-0.5
UZH	Uzhgorod	122.13	325	ePKIKP	PKPdf	13 52 08.5	+7.0
UZH				e		13 52 18.9	
LONY	Lake Ozonia	122.67	40	ePKPdf	PKPdf	13 52 01.6	-1.0
LSZ	Lusaka	122.99	247	ePKPdf	PKPdf	13 52 04.3	+0.1
SDMD	Soldier's Deli	123.20	47	ePKPdf	PKPdf	13 52 03.1	-0.8
GZR	Gura Zlata	123.42	321	⇓iP	PKPdf	13 52 02.4	-1.8
MDV	Middlebury	123.84	40	ePKPdf	PKPdf	13 52 04.3	-0.6
BZS	Buzias	124.03	322	⇓iP	PKPdf	13 52 05.1	-0.1
TRY	Troy	124.09	42	ePKPdf	PKPdf	13 52 04.5	-0.9
MORC	Moravsky Berou	124.11	328	⇑iP	PKPdf	13 52 05.3	0.0
VTS	Vitosha	124.42	318	⇓iP	PKPdf	13 52 06.2	-0.1
BRG	Berggiesshubel	125.26	331	eP	PKPdf	13 52 07.6	+0.2
	comp=Z,6.1nm,0.8s						
BRG	Berggiesshubel	125.26	331	ePKIKP	PKPdf	13 52 07.6	+0.2
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRG	Berggiesshubel	125.26	331	ePKPdf	PKPdf	13 52 07.8	+0.4
CLL	Collm	125.43	332	i PKIKP	PKPdf	13 52 07.6	-0.1
CLL				pmax	pmax		
	comp=Z,11nm,0.8s						
CLL				MLR	MLR		
	comp=Z,200nm,18.7s						
CLL	Collm	125.43	332	ePKPdf	PKPdf	13 52 07.8	+0.1
CLL	Collm	125.43	332	i PKPdf	PKPdf	13 52 07.6	-0.1
	comp=Z,11nm,0.8s						
CLL				LmV		14 48 00.0	
	comp=Z,200nm,18.7s						
PKSM	Moragy	125.51	324	⇑iP	PKPdf	13 51 58.1	-10
FBE	Freiberg	125.51	331	ePKPdf	PKPdf	13 52 08.4	+0.5
PLN	Plauen	126.37	331	ePKPdf	PKPdf	13 52 09.8	+0.2
GEC2	GERESS Array S	126.68	329	ePKIKP	PKPdf	13 52 10.5	+0.2
GEC2	GERESS Array S	126.68	329	ePKPdf	PKPdf	13 52 10.5	+0.2
GERES	GERESS Array B	126.68	329	PKP	PKPdf	13 52 10.0	-0.4
GERES	GERESS Array B	126.68	329	PKP	PKPdf	13 52 10.0	-0.4
	comp=Z,1.5nm,0.7s,baz=0.0,slow=0.4,SNR=4.0						
MANZ	Manzenberg	126.73	331	ePKPdf	PKPdf	13 52 10.7	+0.4
WET	Wettzell	126.90	330	ePKIKP	PKPdf	13 52 10.9	+0.2
WET	Wettzell	126.90	330	ePKPdf	PKPdf	13 52 10.9	+0.2
SOKA	Soboth	127.30	326	⇑iPKPdf	PKPdf	13 52 09.8	-1.8
	comp=Z,6.6nm,1.2s						
SOKA	Soboth	127.30	326	⇑iP	PKPdf	13 52 09.8	-1.8
GRF	Grafenberg Arr	127.35	331	ePKIKP	PKPdf	13 52 11.8	+0.3
GRF	Grafenberg Arr	127.35	331	ePKPdf	PKPdf	13 52 11.8	+0.3
WTTA	Wattenberg	128.75	329	⇑iPKIKP	PKPdf	13 52 14.0	-0.5
WTTA	Wattenberg	128.75	329	⇑iPKiKP	PKPdf	13 52 14.0	-0.5
	comp=Z,14nm,1.0s						
WTTA	Wattenberg	128.75	329	⇑iP	PKPdf	13 52 14.0	-0.5
MOTA	Moosalm	128.98	329	⇓iPKIKP	PKPdf	13 52 14.8	-0.1
MOTA	Moosalm	128.98	329	⇓iPKiKP	PKPdf	13 52 14.8	-0.1
	comp=Z,7.0nm,0.7s						
MOTA	Moosalm	128.98	329	⇓iP	PKPdf	13 52 14.8	-0.1
FETA	Feichten	129.38	329	⇑iPKIKP	PKPdf	13 52 16.0	+0.3
	comp=Z,8.4nm,1.0s						
FETA	Feichten	129.38	329	⇑iP	PKPdf	13 52 16.0	+0.3
GIVF	Givet	129.93	335	ePKIKP	PKPdf	13 52 17.0	+0.7
GIVF	Givet	129.93	335	ePKIKP	PKPdf	13 52 17.0	+0.7
GIVF	Givet	129.93	335	ePKPdf	PKPdf	13 52 17.0	+0.7
BAIF	Baives	130.21	336	ePKIKP	PKPdf	13 52 16.7	-0.2
BAIF	Baives	130.21	336	ePKIKP	PKPdf	13 52 16.7	-0.2
BAIF	Baives	130.21	336	ePKPdf	PKPdf	13 52 16.7	-0.2
PAGF	Fort de Pagny	130.71	333	ePKIKP	PKPdf	13 52 18.9	+1.0
	comp=Z,3.3nm,0.6s						
PAGF	Fort de Pagny	130.71	333	ePKPdf	PKPdf	13 52 18.9	+1.0
HINF	Hinteralfeld	130.73	332	ePKIKP	PKPdf	13 52 18.3	+0.3
	comp=Z,15nm,0.9s						
HINF	Hinteralfeld	130.73	332	ePKIKP	PKPdf	13 52 18.3	+0.3
HINF	Hinteralfeld	130.73	332	ePKPdf	PKPdf	13 52 18.3	+0.3
HAU	Haudompre	130.83	332	ePKIKP	PKPdf	13 52 17.7	-0.5
	comp=Z,13nm,0.7s						
HAU				eR			
	comp=Z,238nm,21.2s						
HAU	Haudompre	130.83	332	ePKIKP	PKPdf	13 52 17.7	-0.5
HAU	Haudompre	130.83	332	ePKPdf	PKPdf	13 52 17.7	-0.5
TSUM	Tsumeb	130.84	238	ePKPdf	PKPdf	13 52 19.5	+0.3
LPAZ	La Paz	131.68	119	PKP	PKPdf	13 52 20.3	-1.1
LPAZ	La Paz	131.68	119	PKP	PKPdf	13 52 20.3	-1.1
	comp=Z,3.6nm,0.7s,baz=338,slow=4.2,SNR=11						
CABF	La Chapelle	131.97	331	ePKIKP	PKPdf	13 52 20.4	-0.1
CABF	La Chapelle	131.97	331	ePKIKP	PKPdf	13 52 20.4	-0.1
CABF	La Chapelle	131.97	331	ePKPdf	PKPdf	13 52 20.4	-0.1
LPL	La Plagne	132.43	330	ePKIKP	PKPdf	13 52 21.6	+0.1
	comp=Z,13nm,1.0s						
LPL	La Plagne	132.43	330	ePKIKP	PKPdf	13 52 21.6	+0.1
LPL	La Plagne	132.43	330	ePKPdf	PKPdf	13 52 21.6	+0.1
LPG	La Plagne	132.44	330	ePKIKP	PKPdf	13 52 21.5	-0.1
	comp=Z,8.2nm,0.7s						
LPG	La Plagne	132.44	330	ePKIKP	PKPdf	13 52 21.5	-0.1
LPG	La Plagne	132.44	330	ePKPdf	PKPdf	13 52 21.5	-0.1
LOR	Lormes	132.50	334	ePKIKP	PKPdf	13 52 21.4	0.0
	comp=Z,14nm,1.0s						
LOR				eR			
	comp=Z,135nm,19.2s						
LOR	Lormes	132.50	334	ePKPdf	PKPdf	13 52 21.4	0.0
SSF	Saint Saulge	132.82	334	ePKIKP	PKPdf	13 52 21.9	0.0
	comp=Z,8.3nm,0.8s						
SSF	Saint Saulge	132.82	334	ePKIKP	PKPdf	13 52 21.9	0.0
SSF	Saint Saulge	132.82	334	ePKPdf	PKPdf	13 52 21.9	0.0
MBDF	Montbardon	132.97	329	ePKIKP	PKPdf	13 52 21.9	-0.6
	comp=Z,9.2nm,0.8s						
MBDF	Montbardon	132.97	329	ePKIKP	PKPdf	13 52 21.9	-0.6
MBDF	Montbardon	132.97	329	ePKPdf	PKPdf	13 52 21.9	-0.6
SMF	Signal de Mont	132.98	333	ePKIKP	PKPdf	13 52 21.4	-0.9
	comp=Z,7.0nm,0.7s						
SMF	Signal de Mont	132.98	333	ePKIKP	PKPdf	13 52 21.4	-0.9
SMF	Signal de Mont	132.98	333	ePKPdf	PKPdf	13 52 21.4	-0.9
AVF	Avril sur Loir	133.09	333	ePKIKP	PKPdf	13 52 23.0	+0.6
	comp=Z,7.5nm,0.8s						
AVF	Avril sur Loir	133.09	333	ePKIKP	PKPdf	13 52 23.0	+0.6
AVF	Avril sur Loir	133.09	333	ePKPdf	PKPdf	13 52 23.0	+0.6
SBF	Sospel	133.22	328	ePKIKP	PKPdf	13 52 22.2	-0.7
SBF	Sospel	133.22	328	ePKIKP	PKPdf	13 52 22.2	-0.7
SBF	Sospel	133.22	328	ePKPdf	PKPdf	13 52 22.2	-0.7
PGF	Pioggiola	133.24	325	ePKIKP	PKPdf	13 52 22.8	-0.2
	comp=Z,22nm,0.9s						
PGF	Pioggiola	133.24	325	ePKIKP	PKPdf	13 52 22.8	-0.2
PGF	Pioggiola	133.24	325	ePKPdf	PKPdf	13 52 22.8	-0.2
ORIF	Oris-en-Rattie	133.28	330	ePKIKP	PKPdf	13 52 21.4	-1.6
	comp=Z,12nm,0.7s						
ORIF				eR			
	comp=Z,156nm,22.0s						
ORIF	Oris-en-Rattie	133.28	330	ePKIKP	PKPdf	13 52 21.4	-1.6
ORIF	Oris-en-Rattie	133.28	330	ePKPdf	PKPdf	13 52 21.4	-1.6
SDDR	Presa de Saban	133.37	70	ePKPdf	PKPdf	13 52 24.0	+0.2
FRF	La Foret Royal	133.84	328	ePKIKP	PKPdf	13 52 23.7	-0.3
FRF	La Foret Royal	133.84	328	ePKIKP	PKPdf	13 52 23.7	-0.3
FRF	La Foret Royal	133.84	328	ePKPdf	PKPdf	13 52 23.7	-0.3
VIVF	Saint-Julien-l	133.92	331	ePKIKP	PKPdf	13 52 24.3	+0.2
	comp=Z,17nm,0.9s						
VIVF	Saint-Julien-l	133.92	331	ePKIKP	PKPdf	13 52 24.3	+0.2
VIVF	Saint-Julien-l	133.92	331	ePKPdf	PKPdf	13 52 24.3	+0.2
TCF	Toulx Ste Croi	133.98	334	ePKIKP	PKPdf	13 52 24.3	+0.1
	comp=Z,23nm,1.1s						
TCF	Toulx Ste Croi	133.98	334	ePKIKP	PKPdf	13 52 24.3	+0.1
TCF	Toulx Ste Croi	133.98	334	ePKPdf	PKPdf	13 52 24.3	+0.1
LMR	La Mourre	134.07	328	ePKIKP	PKPdf	13 52 23.6	-0.8
LMR	La Mourre	134.07	328	ePKIKP	PKPdf	13 52 23.6	-0.8
LMR	La Mourre	134.07	328	ePKPdf	PKPdf	13 52 23.6	-0.8
SMRF	Simiane la Rot	134.11	329	ePKIKP	PKPdf	13 52 24.8	+0.3
	comp=Z,20nm,1.1s						
SMRF	Simiane la Rot	134.11	329	ePKPdf	PKPdf	13 52 24.8	+0.3
CPUP	Villa Florida	134.71	138	PKP	PKPdf	13 52 25.3	-0.8
CPUP	Villa Florida	134.71	138	PKP	PKPdf	13 52 25.3	-0.8
	comp=Z,5.7nm,0.8s,baz=276,slow=1.3,SNR=11						
LASF	Ste Croix	134.89	331	ePKIKP	PKPdf	13 52 27.1	+1.2
	comp=Z,16nm,1.0s						
LASF	Ste Croix	134.89	331	ePKPdf	PKPdf	13 52 27.1	+1.2
CRPR	Cabo Rojo, PR	137.44	71	ePKPdf	PKPdf	13 52 32.4	+1.1
LRS	Lares	137.64	70	ePKPdf	PKPdf	13 52 31.5	-0.2
ETSF	Etsaut	137.87	333	ePKIKP	PKPdf	13 52 31.7	+0.1
ETSF	Etsaut	137.87	333	ePKIKP	PKPdf	13 52 31.7	+0.1
ETSF	Etsaut	137.87	333	ePKPdf	PKPdf	13 52 31.7	+0.1
SJPF	Ste Jean	137.99	334	ePKIKP	PKPdf	13 52 32.3	+0.6
SJPF	Ste Jean	137.99	334	ePKIKP	PKPdf	13 52 32.3	+0.6
SJPF	Ste Jean	137.99	334	ePKPdf	PKPdf	13 52 32.3	+0.6
SAML	Samuel	138.96	112	ePKPdf	PKPdf	13 52 34.4	+0.1
ESDC	Sonseca Array	141.98	333	PKP	PKPdf	13 52 38.5	-0.6
ESDC	Sonseca Array	141.98	333	PKP	PKPdf	13 52 38.5	-0.6
	comp=Z,0.3nm,0.3s,baz=38,slow=2.6,SNR=4.3						
EVO	Evora	144.65	337	ePKIKP	PKPbc	13 52 42.7	+0.1
	comp=Z,8.4nm,0.8s						
EVO				eR			
	comp=Z,159nm,22.8s						
EVOP	Sao Brissos	144.69	337	ePKIKP	PKPbc	13 52 42.7	0.0
EVOP	Sao Brissos	144.69	337	ePKPdf	PKPbc	13 52 42.7	0.0
TAM	Tamanrasset	146.45	302	ePKP2	PKPbc	13 52 48.4	-0.5
TAM	Tamanrasset	146.45	302	ePKPbc	PKPbc	13 52 48.4	-0.5
CAM4	Nova Friburgo	146.51	150	⇑iP	PKPbc	13 52 48.6	-0.6
CAM4				i		13 52 50.1	
CAM4				i		13 52 53.1	
CAM4				i		13 52 55.3	
CAM4				i		13 52 59.2	
CAM4				i		13 53 02.7	
CAM4				i		13 53 06.0	
CAM4				i		13 53 15.3	
CAM4				i		13 53 34.1	
CAM4				i		13 53 35.5	
CAM4				i		13 53 38.7	
MDT	Midelt	147.71	327	PKPbc	PKPdf	13 52 49.6	+0.3
MDT	Midelt	147.71	327	PKPbc	PKPdf	13 52 49.6	+0.3
	comp=Z,6.3nm,0.8s,baz=14,slow=2.2,SNR=12						
BDFB	Brasilia	148.29	134	PKP	PKPdf	13 52 50.9	+0.2
BDFB				PKPbc	PKPbc	13 52 54.1	+0.1
BDFB	Brasilia	148.29	134	PKP	PKPdf	13 52 50.9	+0.2
	comp=Z,37nm,0.7s,baz=187,slow=2.1,SNR=20						
BDFB				PKPbc	PKPbc	13 52 54.1	+0.1
	comp=Z,37nm,0.7s,baz=325,slow=0.6,SNR=26						
TOA0	Torodi Ar. Sit	152.89	286	ePKPdf	PKPdf	13 52 56.9	-0.8
TOA0				ePKPbc	PKPbc	13 53 04.0	-1.0
TORD	Torodi Ar. Bea	152.89	286	PKP	PKPdf	13 52 56.9	-0.8
TORD				PKPbc	PKPbc	13 53 04.3	-0.6
TORD				PKPab	PKPab	13 53 14.2	-2.0
TORD	Torodi Ar. Bea	152.89	286	PKP	PKPdf	13 52 56.9	-0.8
	comp=Z,4.3nm,0.9s,baz=27,slow=1.2,SNR=18						
TORD				PKPbc	PKPbc	13 53 04.3	-0.6
	comp=Z,32nm,0.8s,baz=67,slow=2.0,SNR=139						
TORD				PKPab	PKPab	13 53 14.2	-2.0
	comp=Z,12nm,0.6s,baz=87,slow=3.7,SNR=14						
DBIC	Dimbokro	159.97	271	PKPab	PKPab	13 53 46.8	+0.2
DBIC	Dimbokro	159.97	271	PKPab	PKPab	13 53 46.8	+0.2
	comp=Z,35nm,0.9s,baz=65,slow=4.1,SNR=13						
LIC	Lamto	160.13	270	ePKP2	PKPab	13 53 47.2	-0.1
	comp=Z,41nm,0.6s						
LIC	Lamto	160.13	270	ePKPab	PKPab	13 53 47.2	-0.1

*AUST **06** 13:40:35.6, 24.°60S×174.°02W, h0km*

*ISCJB **06** 13:42:03.8±0.7, 24.°64S±0.°08×179.°9E±0.°1, h517km, mb4.0/13, Error ellipse: s-maj=13.2km s-min=10.1km az=170.9*

IDC 06 13:42:05.0±1.7, 24°.66S×179°.83E, h513^{km}±17^{km}, mb3.7/13, mb1 3.8/14, mb1mx3.7/19, mbtmp3.7/14, Error ellipse: s-maj=13.8km s-min=12.8km az=143.0

ISC 06 13:42:04.6±0.6, 24°.71S±0°.09×179°.9E±0°.1, h517^{km}, n55, σ0^{s}.82/54, mb4.0/13, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.66	279	P	P	13 44 49.8	-0.4
	1.4nm,0.3s,baz=92,slow=14,SNR=12						
AFI	Afiamalu	13.28	38	S	S	13 47 06.9	-12
	2.1nm,0.3s,baz=60,slow=21,SNR=4.2						
URZ	Urewera	13.72	189	P	P	13 44 59.1	-1.9
	0.6nm,0.3s,baz=42,slow=23,SNR=4.5						
URZ				S	S	13 47 26.6	+0.2
	0.7nm,0.3s,baz=314,slow=18,SNR=6.2						
ARMA	Armidale	25.69	251	P	P	13 46 55.1	+1.7
	baz=31,SNR=6.5						
EIDS	Eidsvold	26.13	262	P	P	13 46 57.8	+0.7
	baz=32,SNR=4.1						
MGCD	Mangrove Creek	26.54	245	P	P	13 47 02.4	+1.7
	baz=32,SNR=6.4						
RMQ	Roma	28.14	260	P	P	13 47 16.2	+1.4
	baz=34,SNR=5.4						
YNG	Young	28.96	243	P	P	13 47 17.7	-4.2
	baz=34,SNR=5.9						
CMSA	Cobar Meteorol	30.87	249	P	P	13 47 38.8	+0.5
	baz=36,SNR=20						
CTA	Charters Tower	31.42	272	P	P	13 47 43.2	-0.2
	32nm,0.3s,baz=96,slow=10,SNR=85						
QLP	Quilpie	32.17	259	P	P	13 47 49.9	+0.3
	baz=38,SNR=28						
MTSU	Mount Surprise	33.72	274	P	P	13 48 03.7	+0.8
	baz=39,SNR=52						
STKA	Stephens Creek	34.37	249	P	P	13 48 08.7	+0.5
	4.3nm,0.4s,baz=91,slow=9.9,SNR=29						
STKA	Stephens Creek	34.37	249	P	P	13 48 08.7	+0.5
	baz=40,SNR=27						
COEN	Coen	36.19	280	P	P	13 48 24.2	+0.7
	baz=42,SNR=5.4						
QIS	Mount Isa	37.35	268	P	P	13 48 33.0	-0.1
	baz=43,SNR=5.1						
BBOO	Buckleboo	39.08	248	P	P	13 48 46.4	-0.5
	baz=44,SNR=25						
ASAR	Alice Springs	41.85	262	P	P	13 49 09.2	-0.1
	3.3nm,0.3s,baz=95,slow=7.4,SNR=141						
ASAR				S	S	13 54 49.6	-0.1
	0.4nm,0.7s,baz=99,slow=16,SNR=3.8						
WRA	Warramunga Arr	42.29	267	P	P	13 49 12.1	-0.7
	12nm,0.3s,baz=99,slow=7.0,SNR=537						
WRA				S	S	13 54 54.9	-1.2
	1.7nm,1.0s,baz=98,slow=14,SNR=4.4						
FORT	Forrest	45.98	250	P	P	13 49 40.5	-0.6
	baz=51,SNR=17						
KDU	Kakadu	46.30	276	P	P	13 49 43.1	-0.7
	baz=52,SNR=6.1						
MTN	Manton Dam	47.46	275	P	P	13 49 51.8	-0.8
	baz=53,SNR=5.8						
MTN				S	S	13 57 22.0	+73
	baz=53,SNR=4.8						
KNRA	Kununurra	48.62	271	P	P	13 50 01.3	+0.1
	baz=54,SNR=11						
FITZ	Fitzroy Crossi	50.71	266	P	P	13 50 16.7	+0.1
	baz=56,SNR=16						
SWI	Sorong	52.64	289	P	P	13 50 30.4	-0.2
	baz=58,SNR=4.3						
VNDA	Vanda	53.58	185	P	P	13 50 37.2	+1.0
	0.5nm,0.4s,baz=25,slow=3.0,SNR=3.5						
AAI	Ambon	53.94	284	P	P	13 50 54.0	+14
	baz=59,SNR=4.0						
KLBR	Kellerberrin	54.62	248	P	P	13 50 44.0	-0.5
	baz=60,SNR=15						
MEEK	Meekatharra	54.82	254	P	P	13 50 45.1	-0.9
	baz=60,SNR=6.1						
BLDU	Ballidu	55.67	249	P	P	13 50 51.2	-0.6
	baz=61,SNR=12						
MORW	Morawa	56.54	250	P	P	13 50 57.4	-0.5
	baz=62,SNR=10						
QSPA	South Pole Qui	65.38	180	P	P	13 51 56.7	+1.2
	3.7nm,0.7s,baz=46,slow=2.2,SNR=15						
KSM	Kuching	72.18	280	P	P	13 52 37.7	+0.4
	baz=78,SNR=4.3						
MJAR	Matsushiro Arr	72.52	326	P	P	13 52 38.3	-0.4
	4.0nm,0.8s,baz=168,slow=6.9,SNR=11						
MAW	Mawson	76.98	201	P	P	13 53 03.4	+0.1
	2.1nm,0.6s,baz=116,slow=6.4,SNR=7.1						
KSRS	Korea Array	78.82	320	P	P	13 53 14.2	+0.5
	1.9nm,0.6s,baz=134,slow=5.7,SNR=18						
PETK	Petropavlovsk-	79.86	347	P	P	13 53 19.1	+0.3
	3.3nm,0.6s,baz=143,slow=7.2,SNR=18						
USRK	Ussuriysk Arra	81.40	327	P	P	13 53 27.7	+0.7
	1.3nm,0.4s,baz=84,slow=5.9,SNR=6.8						
CMAR	Chiang Mai Arr	89.75	290	P	P	13 54 10.1	+2.0
	3.1nm,0.9s,baz=134,slow=3.1,SNR=20						
ILAR	Eielson Array	92.83	14	P	P	13 54 20.2	-0.9
	0.1nm,0.5s,baz=217,slow=6.0,SNR=4.4						
PDAR	Pinedale Array	93.31	44	PKKPbc	PKKPbc	14 11 32.8	+3.0
	0.6nm,0.9s,baz=114,slow=5.5,SNR=3.7						
MKAR	Makanchi Array	112.65	312	PKiKP	PKiKP	13 59 41.4	-0.6
	0.1nm,0.4s,baz=51,slow=1.9,SNR=6.6						
ARCES	ARCESS Array B	132.66	348	PKP	PKPdf	14 00 18.9	-0.6
	1.6nm,0.6s,baz=60,slow=2.9,SNR=8.9						
FINES	FINESS Array B	139.18	341	PKhKP	PKPpre	14 00 22.7	
	1.1nm,0.6s,baz=48,slow=2.8,SNR=4.1						
FINES				PKP	PKiKP	14 00 33.1	-1.1
	1.4nm,0.6s,baz=15,slow=2.2,SNR=4.3						
FINES				SKPbc	SKPbc	14 03 19.1	+0.9
	3.6nm,0.8s,baz=17,slow=1.5,SNR=4.7						
NB2	NORSAR Subarra	142.86	351	PKP	PKPpre	14 00 35.2	
	comp=Z,2.4nm,1.0s,baz=19,slow=3.1						
NOA	NORSAR Array B	142.86	351	PKhKP	PKPpre	14 00 35.6	
	comp=Z,1.6nm,0.7s,baz=13,slow=2.4,SNR=4.4						
NOA				SKPbc	SKiKP	14 03 28.9	+0.1
	comp=Z,1.2nm,0.7s,baz=26,slow=2.5,SNR=3.3						
NACGM	Naroch	143.90	334	e	PKPbc	14 00 36.0	-3.6
AKASG	Malin Array Be	145.61	327	PKPbc	PKPbc	14 00 44.3	-0.6
	comp=Z,2.8nm,0.5s,baz=44,slow=4.0,SNR=10.0						
ASF	Jabal al Asfar	146.78	291	PKPbc	PKPab	14 00 50.2	-1.6
	comp=Z,2.8nm,0.6s,baz=319,slow=6.3,SNR=4.0						
MMAI	Mount Meron Ar	147.97	293	PKPbc	PKPbc	14 00 52.5	+0.5
	comp=Z,5.4nm,0.4s,baz=75,slow=7.0,SNR=10						
BRTR	Keskin Array B	148.00	306	PKPbc	PKPbc	14 00 51.8	-0.2
	comp=Z,2.7nm,0.7s,baz=144,slow=4.1,SNR=14						
BRTR				PKPab	PKPab	14 00 56.8	+0.2
	comp=Z,3.0nm,0.6s,baz=112,slow=3.8,SNR=14						
EIL	Elat	148.53	287	PKPbc	PKPbc	14 00 53.5	+0.2
	comp=Z,6.7nm,0.8s,baz=352,slow=4.8,SNR=6.0						
EKA	Eskdalemuir Ar	149.32	3	PKPbc	PKPbc	14 00 54.0	-0.5
	comp=Z,0.6nm,0.4s,baz=333,slow=2.4,SNR=4.5						
GERES	GERESS Array B	153.59	339	PKPab	PKPab	14 01 19.8	+0.3
	comp=Z,0.4nm,0.3s,baz=18,slow=4.8,SNR=3.5						
TORD	Torodi Ar. Bea	168.38	189	PKPab	PKPab	14 02 25.0	+0.2
	comp=Z,1.5nm,0.9s,baz=173,slow=3.9,SNR=6.5						

ISCJB 06 13:45:39.7±1.1, 30°.10S±0°.07×178°.0W±0°.2, h35^{km}, mb4.4/5, Error ellipse: s-maj=25.5km s-min=9.3km az=12.0

IDC 06 13:45:41.3±1.8, 29°.90S×177°.67W, h55^{km}±21^{km}, mb4.0/5, mb1 4.2/5, mb1mx3.7/19, mbtmp4.0/5, Error ellipse: s-maj=38.1km s-min=25.4km az=34.0

NEIC 06 13:45:42.3±1.4, 29°.78S×177°.60W, h67^{km}±10^{km}, mb4.8/1, Error ellipse: s-maj=20.3km s-min=16.8km az=99.0

ISC 06 13:45:39.4±1.1, 30°.16S±0°.07×177°.8W±0°.2, h35^{km}, n24, σ1^{s}.56/24, mb4.5/5, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.92	352	eP	Pn	13 45 55.8	-0.1
RAO				eS	Sn	13 46 05.5	-2.3
RAO	Raoul Island	0.92	352	P	Pn	13 45 55.9	+0.1
	429nm,0.3s,baz=90,slow=10,SNR=60						
RAO				S	Sn	13 46 06.7	-1.1
	3μm,0.3s,baz=28,slow=22,SNR=31						
OUZ	Omahuta	8.85	233	eP	Pn	13 47 52.3	+7.5
URZ	Urewera	9.12	206	P	Pn	13 47 45.6	-2.9
URZ				S	Sn	13 49 27.0	-2.9
URZ	Urewera	9.12	206	P	Pn	13 47 45.6	-2.9
	0.6nm,0.3s,baz=143,slow=23,SNR=4.7						
URZ				S	Sn	13 49 27.0	-2.9
	1.5nm,0.3s,baz=191,slow=22,SNR=14						
CTA	Charters Tower	33.96	279	P	P	13 52 21.8	+2.1
CTA	Charters Tower	33.96	279	P	P	13 52 21.8	+2.1
	7.2nm,0.6s,baz=98,slow=12,SNR=6.9						
CTAO	Charters Tower	33.96	279	eP	P	13 52 21.9	+2.1
	11nm,0.8s						
STKA	Stephens Creek	34.73	257	P	P	13 52 27.4	+1.2
STKA	Stephens Creek	34.73	257	P	P	13 52 27.4	+1.2
	2.4nm,0.5s,baz=104,slow=11,SNR=10						
ASAR	Alice Springs	43.32	267	P	P	13 53 37.8	-0.4
ASAR	Alice Springs	43.32	267	P	P	13 53 37.8	-0.4
	0.8nm,0.4s,baz=106,slow=7.1,SNR=12						
WRA	Warramunga Arr	44.29	272	P	P	13 53 45.9	-0.2
WRA	Warramunga Arr	44.29	272	P	P	13 53 45.9	-0.2
	4.1nm,0.5s,baz=110,slow=8.1,SNR=56						
SBA	Scott Base	48.29	184	eP	P	13 54 20.8	+4.2
QSPA	South Pole Qui	59.95	180	P	P	13 55 43.3	+1.4
QSPA	South Pole Qui	59.95	180	P	P	13 55 43.3	+1.4
	4.1nm,0.8s,baz=90,slow=3.0,SNR=14						
FIA1	FINESS Array S	144.99	340	ePKPdf	PKPab	14 05 10.6	-1.0
FINES	FINESS Array B	144.99	340	PKP	PKPab	14 05 10.7	-0.9
FINES	FINESS Array B	144.99	340	PKP	PKPab	14 05 10.7	-0.9
	2.1nm,0.5s,baz=55,slow=3.4,SNR=10						
AKASG	Malin Array Be	151.23	323	PKPbc	PKPbc	14 05 27.2	-1.4
AKASG	Malin Array Be	151.23	323	PKPbc	PKPbc	14 05 27.2	-1.4
	0.7nm,0.4s,baz=48,slow=3.4,SNR=4.1						
TORD	Torodi Ar. Bea	163.06	178	PKPab	PKPab	14 06 28.7	+0.4
TORD	Torodi Ar. Bea	163.06	178	PKPab	PKPab	14 06 28.7	+0.4
	0.4nm,0.6s,baz=166,slow=4.0,SNR=5.9						

CSEM 06 13:51:15.5±0.1, 36°.65N×26°.61E, h15^{km}, ML3.2/2, Error ellipse: s-maj=4.3km s-min=2.8km az=174.0

ISK 06 13:51:15.3, 36°.68N×26°.64E, h11^{km}, MD2.6

ISCJB 06 13:51:15.4±0.6, 36°.67N±0°.04×26°.59E±0°.04, h12^{km}±6^{km}, Error ellipse: s-maj=6.9km s-min=4.7km az=160.8

THE 06 13:51:16.1, 36°.83N×26°.77E, h45^{km}±6^{km}, ML3.2/2, Error ellipse: s-maj=7.3km s-min=1.0km az=50.0

ATH 06 13:51:16.0, 36°.71N×26°.61E, h39^{km}, MD3.2/3

DDA 06 13:51:16.1, 36°.77N×26°.68E, h5^{km}, MD2.8

ISC 06 13:51:15.6±1.1, 36°.70N±0°.04×26°.66E±0°.02, h18^{km}±9^{km}, n36, σ1^{s}.08/52, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS4	Nisyros Isl.	0.38	94	P	Pb	13 51 24.4	+0.5
NIS1	Nisyros Isl.	0.43	103	P	Pb	13 51 25.2	+0.5
NIS1				S	Sb	13 51 32.5	+1.6
NIS1	Nisyros Isl.	0.43	103	P	Pb	13 51 25.2	+0.5
NIS1				S	Sb	13 51 32.5	+1.6
NIS2	Nisyros Isl.	0.44	106	P	Pb	13 51 25.4	+0.5
NIS2				S	Sn	13 51 33.9	-0.7
BODT	Bodrum	0.64	55	ePG	Pg	13 51 28.3	+0.1
BODT				eSG	Sb	13 51 38.3	+1.5
BODT	Bodrum	0.64	55	ePg	Pg	13 51 28.3	+0.1
BODT				eSg	Sb	13 51 38.3	+1.5
DAT	Datca	0.74	88	ePG	Pb	13 51 30.2	+0.1
DAT				eSG	Sb	13 51 41.5	+1.6
DAT	Datca	0.74	88	ePg	Pb	13 51 30.2	+0.1
DAT				eSg	Sb	13 51 41.5	+1.6
APE	Apeiranthos	0.97	292	ePG	Pn	13 51 34.5	0.0
APE	Apeiranthos	0.97	292	P	Pb	13 51 33.5	-0.5
APE				S	Sg	13 51 47.0	-0.4
APE	Apeiranthos	0.97	292	ePN	Pn	13 51 34.8	+0.3
APE				eSN	Sg	13 51 46.8	-0.6
APE	Apeiranthos	0.97	292	P	Pb	13 51 33.5	-0.5
APE	Apeiranthos	0.97	292	ePg	Pn	13 51 34.5	0.0
APE	Apeiranthos	0.97	292	ePn	Pn	13 51 34.8	+0.3
APE				S	Sg	13 51 47.0	-0.4
MLSB	Milas	1.07	56	ePN	Pg	13 51 36.7	+0.2
MLSB	Milas	1.07	56	ePn	Pg	13 51 36.7	+0.2
GCAM	G?zelcaml?	1.10	25	iP	Pn	13 51 36.4	+0.3
GCAM				iS	Sn	13 51 52.2	+1.4
GCAM	G?zelcaml?	1.10	25	iP	Pn	13 51 36.4	+0.3
GCAM				iS	Sn	13 51 52.2	+1.4
KARP	Karpathos	1.22	160	ePB	Pn	13 51 38.0	+0.2
KARP	Karpathos	1.22	160	ePb	Pn	13 51 38.0	+0.2
AYDN	Tasoluk	1.37	45	iP	Pb	13 51 41.1	+0.4
AYDN				iS	Sg	13 51 59.7	-0.2
AYDN	Tasoluk	1.37	45	iP	Pb	13 51 41.1	+0.4
AYDN				iS	Sg	13 51 59.7	-0.2
YER	Yerkesik	1.37	71	ePN	Pb	13 51 41.6	+0.8
TURN	Turunc	1.57	83	iP	Pn	13 51 40.9	-1.7
TURN				iS	Sn	13 51 59.0	-3.5
TURN	Turunc	1.57	83	iP	Pn	13 51 40.9	-1.7
TURN				iS	Sn	13 51 59.0	-3.5
NPS	Neapolis	1.67	211	P	Pn	13 51 44.1	+0.2
NPS	Neapolis	1.67	211	ePB	Pn	13 51 44.2	+0.3
NPS	Neapolis	1.67	211	ePb	Pn	13 51 44.2	+0.3
BLCB	Balcova	1.71	10	ePN	Pb	13 51 46.1	-0.4
BLCB	Balcova	1.71	10	ePn	Pb	13 51 46.1	-0.4
DNZL	Cakiroluk	2.15	62	iP	Pg	13 51 56.2	-0.7
DNZL	Cakiroluk	2.15	62	iP	Pg	13 51 56.2	-0.7
DID	Didima	2.85	287	P	Pn	13 51 59.6	-0.6
DID	Didima	2.85	287	P	Pn	13 51 59.6	-0.6
KYTH	Kithira	2.95	263	P	Pn	13 52 02.2	+0.6
KYTH	Kithira	2.95	263	P	Pn	13 52 02.2	+0.6

SOF 06 14:29:15.8, 41°.84N×22°.02E, h10^{km}, MD3.4

SKO 06 14:29:16.5, 41°.81N×22°.07E, h15^{km}, M2.4, ML2.9

CSEM 06 14:29:17.5±0.1, 41°.85N×22°.15E, h2^{km}, ML2.9, Error ellipse: s-maj=3.7km s-min=2.8km az=40.0

ATH 06 14:29:17.3, 41°.81N×22°.10E, h17^{km}±3^{km}, MD3.4/12

THE 06 14:29:17.4, 41°.82N×22°.07E, h2^{km}±1^{km}, ML3.0/4, Error ellipse: s-maj=1.7km s-min=0.6km az=240.0

PDG 06 14:29:17.4±0.6, 41°.86N×22°.10E, h2^{km}±1^{km}, ML2.8/9, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0

BEO 06 14:29:19.2±0.5, 41°.93N×22°.05E, h2^{km}±2^{km}, ML2.9/1

ISC 06 14:29:16.8±1.1, 41°.85N±0°.02×22°.08E±0°.01, h2^{km}±10^{km}, n123, σ0^{s}.85/171, 17C-11D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKO	Skopje	0.49	285	P	Pg	14 29 26.0	-0.3
SKO				S	Sg	14 29 31.5	-1.1
SKO	Skopje	0.49	285	iPg	Pg	14 29 26.7	+0.4
SKO				eSg	Sg	14 29 33.4	+0.7
SKO				eLg	Lg	14 29 33.6	
	comp=N,443nm,0.4s						
SKO				eLg	Lg	14 29 33.9	
	comp=E,630nm,0.6s						
SKO	Skopje	0.49	285	P	Pg	14 29 26.0	-0.3
SKO	Skopje	0.49	285	iPg	Pg	14 29 27.1	+0.8
SKO				S	Sg	14 29 31.5	-1.1
SKO				eSg	Sb	14 29 33.9	-2.0
SKO				eLg	Lg	14 29 34.4	
	comp=E,630nm,0.6s						
VAY	Valandovo	0.64	145	P	Pg	14 29 28.6	-0.6
VAY				S	Sg	14 29 37.6	+0.1
VAY	Valandovo	0.64	145	iPg	Pg	14 29 28.5	-0.6
VAY				iSg	Sg	14 29 37.5	+0.1
VAY				eLg	Lg	14 29 38.1	
	comp=E,400nm,0.3s						
VAY				eLg	Lg	14 29 38.1	
	comp=N,530nm,0.4s						
VAY	Valandovo	0.64	145	P	Pg	14 29 28.6	-0.6
VAY	Valandovo	0.64	145	iPg	Pg	14 29 29.0	-0.2
VAY				S	Sg	14 29 37.6	+0.1
VAY				iSg	Sb	14 29 38.0	-2.3
VAY				eLg	Lg	14 29 38.6	
	comp=N,530nm,0.4s						
KKB	Krupnik	0.75	88	iP	Pb	14 29 32.5	-0.2
KKB	Krupnik	0.75	88	iP	Pb	14 29 32.5	-0.2
GRG	Griva	0.92	165	P	Pg	14 29 34.0	-0.5
GRG				S	Sg	14 29 47.2	+0.7
GRG	Griva	0.92	165	ePN	Pg	14 29 34.1	-0.5
GRG	Griva	0.92	165	eP	Pg	14 29 34.0	-0.5
GRG	Griva	0.92	165	P	Pg	14 29 34.0	-0.5
GRG				S	Sg	14 29 47.2	+0.7
BARS	Barje	0.99	349	ePg	Pg	14 29 35.1	-0.6
BARS				eSg	Sg	14 29 48.9	+0.4
BIA	Bitola	1.00	215	P	Pg	14 29 35.4	-0.7
BIA	Bitola	1.00	215	iPg	Pg	14 29 35.4	-0.7
BIA				iSg	Sg	14 29 49.5	+0.3
BIA	Bitola	1.00	215	P	Pg	14 29 35.4	-0.7
BIA				iSg	Sg	14 29 49.4	+0.3
VTS	Vitosha	1.12	48	P	Pg	14 29 38.8	+0.4
VTS	Vitosha	1.12	48	⇓iPg	Pg	14 29 38.7	+0.4
VTS				eSg	Sb	14 29 54.3	+0.1
VTS	Vitosha	1.12	48	⇓iP	Pg	14 29 38.7	+0.4
VTS	Vitosha	1.12	48	iP	Pg	14 29 38.8	+0.4
VTS	Vitosha	1.12	48	P	Pg	14 29 38.8	+0.4
VTS				S	Sb	14 29 54.2	+0.1
FNA	Florina	1.19	207	P	Pg	14 29 39.2	-0.4
FNA				S	Sb	14 29 56.2	+0.2
FNA	Florina	1.19	207	ePN	Pg	14 29 39.1	-0.5
FNA	Florina	1.19	207	eP	Pg	14 29 39.0	-0.5
FNA	Florina	1.19	207	P	Pg	14 29 39.2	-0.4
FNA				S	Sb	14 29 56.2	+0.2
PHP	Peshkopia	1.24	263	P	Pg	14 29 39.7	-0.8
PHP	Peshkopia	1.24	263	P	Pg	14 29 39.7	-0.8
MMB	Musomiste	1.26	101	iP	Pb	14 29 41.5	+0.1
MMB	Musomiste	1.26	101	iP	Pb	14 29 41.5	+0.1
SRS	Serrai	1.35	122	P	Pg	14 29 42.2	-0.5
SRS				S	Sn	14 30 01.9	+0.5
SRS	Serrai	1.35	122	P	Pg	14 29 42.2	-0.5
SRS				S	Sn	14 30 01.9	+0.5
SOH	Sokhos	1.41	136	P	Pn	14 29 42.8	-0.8
SOH				S	Sb	14 30 02.4	+0.1
SOH	Sokhos	1.41	136	ePN	Pn	14 29 42.8	-0.8
SOH	Sokhos	1.41	136	eP	Pn	14 29 43.0	-0.6
SOH	Sokhos	1.41	136	P	Pn	14 29 42.8	-0.8
SOH				S	Sb	14 30 02.4	+0.1
NVR	Nevrokopi	1.43	110	P	Pn	14 29 44.0	+0.1
NVR	Nevrokopi	1.43	110	ePN	Pn	14 29 44.0	+0.1
NVR				eSN	Sn	14 30 03.3	0.0
NVR	Nevrokopi	1.43	110	eP	Pn	14 29 43.0	-0.9
NVR	Nevrokopi	1.43	110	P	Pn	14 29 44.0	+0.1
NVR				eSn	Sn	14 30 03.3	0.0
HORT	Hortiatis	1.47	148	P	Pn	14 29 44.2	-0.3
HORT	Hortiatis	1.47	148	P	Pn	14 29 44.2	-0.3
ZAPS	Zavoj	1.48	16	⇑iPg	Pb	14 29 45.2	0.0
ZAPS				eSg	Sb	14 30 04.2	-0.3
SELS	Selova	1.54	333	ePn	Pn	14 29 44.6	-0.8
KZN	Kozani	1.56	189	ePN	Pg	14 29 47.0	+0.3
KZN	Kozani	1.56	189	eP	Pb	14 29 46.5	0.0
KZN	Kozani	1.56	189	ePn	Pg	14 29 47.0	+0.3
TIR	Tirane	1.73	254	ePn	Pg	14 29 50.5	+0.4
TIR				eSn	Sg	14 30 14.4	+1.9
TIR	Tirane	1.73	254	ePn	Pg	14 29 50.5	+0.4
TIR				eSn	Sg	14 30 14.4	+1.9
PVY	Plav	1.74	296	⇓iPn	Pb	14 29 50.2	+0.6
PVY				eSn	Sg	14 30 15.2	+2.4
PVY	Plav	1.74	296	⇓iPn	Pb	14 29 50.2	+0.6
PVY				eSn	Sg	14 30 15.2	+2.4
LIT	Litokhoron	1.77	170	ePB	Pn	14 29 47.9	-0.7
LIT	Litokhoron	1.77	170	eP	Pb	14 29 49.5	-0.6
LIT	Litokhoron	1.77	170	ePb	Pn	14 29 47.9	-0.7
PLG	Polygyros	1.80	145	ePN	Pn	14 29 49.3	+0.3
PLG	Polygyros	1.80	145	eP	Pn	14 29 49.0	0.0
PLG	Polygyros	1.80	145	ePn	Pn	14 29 49.3	+0.3
BEY	Berane	1.92	303	⇑iPn	Pb	14 29 52.1	-0.5
BEY				eSn	Sg	14 30 19.3	+0.9
IVA	Berane	1.92	303	⇑iPn	Pb	14 29 52.1	-0.5
IVA				eSn	Sg	14 30 19.3	+0.9
MPEP	Malo Peshtene	1.94	39	iP	Pg	14 29 53.9	-0.2
PLD	Plovdiv	1.97	82	iP	Pg	14 29 55.0	+0.3
PLD	Plovdiv	1.97	82	iP	Pg	14 29 55.0	+0.3
RZN	Rozhen	1.98	94	iP	Pb	14 29 54.3	+0.6
RZN	Rozhen	1.98	94	iP	Pb	14 29 54.3	+0.6
BOLS	Boljevac	1.98	357	ePn	Pb	14 29 52.7	-0.9
BOLS				eSn	Sn	14 30 16.9	0.0
BOLS	Boljevac	1.98	357	ePn	Pb	14 29 52.7	-0.9
BOLS				eSn	Sn	14 30 16.9	0.0
ULC	Ulcinj	2.12	274	ePn	Pb	14 29 54.9	-1.1
ULC				eSn	Sb	14 30 23.9	+1.1
ULC	Ulcinj	2.12	274	ePn	Pb	14 29 54.9	-1.1
ULC				eSn	Sb	14 30 23.9	+1.1
PDG	Podgorica	2.18	286	ePn	Pb	14 29 57.1	+0.1
PDG				eSn	Sb	14 30 24.0	-0.4
PDG	Podgorica	2.18	286	⇓iPn	Pb	14 29 56.4	-0.6
PDG				eSn	Sb	14 30 24.0	-0.4
TTG	Podgorica	2.18	286	⇓iPn	Pb	14 29 56.4	-0.6
TTG				eSn	Sg	14 30 26.8	0.0
GRUS	Gruza	2.27	334	ePn	Pn	14 29 55.2	-0.2
GRUS	Gruza	2.27	334	ePn	Pn	14 29 55.2	-0.2
THL	Klokotos Trika	2.28	181	ePN	Pn	14 29 56.8	+1.2
THL	Klokotos Trika	2.28	181	eP	Pn	14 29 56.0	+0.4
THL	Klokotos Trika	2.28	181	ePn	Pn	14 29 56.8	+1.2
JAN	Janina	2.38	203	eP	Pn	14 29 56.5	-0.4
BUM	Brajici-Budva	2.41	282	⇑iPn	Pb	14 29 59.6	-1.4
BUM				eSn	Sb	14 30 31.8	+0.5
BUM	Brajici-Budva	2.41	282	⇑iPn	Pb	14 29 59.6	-1.4
BUM				eSn	Sb	14 30 31.8	+0.5
NKY	Niksic	2.48	294	ePn	Pn	14 30 00.4	+2.0
NKY				eSn	Sb	14 30 33.3	0.0
NKY	Niksic	2.48	294	ePn	Pn	14 30 00.4	+2.0
NKY				eSn	Sb	14 30 33.3	0.0
TRUS	Trudelj	2.67	333	ePn	Pn	14 29 59.7	-1.2
NEO	Neokhori	2.69	161	eP	Pn	14 30 02.0	+0.9
UPM	Unac-Piva	2.71	301	⇓iPn	Pn	14 30 03.0	+1.4
UPM				eSn	Sb	14 30 38.9	-1.0
UPM	Unac-Piva	2.71	301	⇓iPn	Pn	14 30 03.0	+1.4
UPM				eSn	Sb	14 30 38.9	-1.0
DIVS	Divibare	2.72	326	P	Pn	14 30 01.7	0.0
DIVS	Divibare	2.72	326	⇓iPn	Pn	14 30 01.6	-0.1
DIVS				eSn	Sn	14 30 35.1	-0.1
DIVS	Divibare	2.72	326	P	Pn	14 30 01.7	0.0
HCY	Herceg Novi	2.73	284	ePn	Pb	14 30 04.5	-1.9
HCY				eSn	Sb	14 30 39.5	-0.9
HCY	Herceg Novi	2.73	284	ePn	Pb	14 30 04.5	-1.9
HCY				eSn	Sb	14 30 39.5	-0.9
BRY	Bratogost	2.83	293	⇑iPn	Pn	14 30 04.7	+1.5
BRY				eSn	Sb	14 30 41.4	-1.8
BRY	Bratogost	2.83	293	⇑iPn	Pn	14 30 04.7	+1.5
BRY				eSn	Sb	14 30 41.4	-1.8
AGG	Agios Georgios	2.83	176	ePN	Pn	14 30 03.0	-0.1
AGG	Agios Georgios	2.83	176	eP	Pn	14 30 03.5	+0.4
AGG	Agios Georgios	2.83	176	ePn	Pn	14 30 03.0	-0.1
SMTH	Samothraki Isl	2.95	117	ePN	Pn	14 30 05.4	+0.7
SMTH	Samothraki Isl	2.95	117	eP	Pn	14 30 05.5	+0.7
SMTH	Samothraki Isl	2.95	117	ePn	Pn	14 30 05.4	+0.7
AOS	Alonnisos	3.01	152	ePN	Pn	14 30 05.2	-0.3
AOS	Alonnisos	3.01	152	eP	Pn	14 30 06.5	+1.0
AOS	Alonnisos	3.01	152	ePn	Pn	14 30 05.2	-0.3
LIA	Limnos Island	3.06	129	eP	Pn	14 30 07.5	+1.3
ALN	Alexandroupoli	3.13	106	P	Pn	14 30 07.1	-0.2
ALN	Alexandroupoli	3.13	106	ePN	Pn	14 30 07.5	+0.2
ALN	Alexandroupoli	3.13	106	eP	Pn	14 30 08.0	+0.7
ALN	Alexandroupoli	3.13	106	P	Pn	14 30 07.1	-0.2
ALN	Alexandroupoli	3.13	106	ePn	Pn	14 30 07.5	+0.2
TEKS	Tekeris	3.28	326	⇓iPn	Pn	14 30 09.2	-0.1
TEKS	Tekeris	3.28	326	⇓iPn	Pn	14 30 09.2	-0.1
GZR	Gura Zlata	3.58	8	⇑iP	Pn	14 30 12.6	-0.9
GZR	Gura Zlata	3.58	8	⇑iP	Pn	14 30 12.6	-0.9
BZS	Buzias	3.78	355	ePn	Pn	14 30 17.6	+1.4
BZS	Buzias	3.78	355	⇑iP	Pn	14 30 15.6	-0.6
BZS	Buzias	3.78	355	⇑iP	Pn	14 30 15.6	-0.6
BZS	Buzias	3.78	355	ePn	Pn	14 30 17.6	+1.4
KLV	Kalavryta, Ach	3.80	179	eP	Pn	14 30 17.5	+1.0
MLR	Muntele Rosu	4.59	36	⇑iP	Pn	14 30 27.1	-0.4
MLR	Muntele Rosu	4.59	36	⇑iP	Pn	14 30 27.1	-0.4
VRI	Vrincioaia	5.24	38	⇑iP	Pn	14 30 34.8	-1.4
VRI	Vrincioaia	5.24	38	⇑iP	Pn	14 30 34.8	-1.4
TIRR	Tirgusor	5.32	59	⇑iP	Pn	14 30 37.6	+0.4
TIRR	Tirgusor	5.32	59	⇑iP	Pn	14 30 37.6	+0.4

KRSC 06 14:32:29.4±0.4, 53°.37N×160°.44E, h40^{km}±29^{km}, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.37	223	iP	Pn	14 32 38.6	+0.1
SPN				iS	Sn	14 32 45.2	+0.4
KII	Karymskiy	0.89	319	iP	Pn	14 32 45.3	-0.3
KII				iS	Sn	14 32 57.1	-0.2
SDLR	Sedlovina	0.94	265	P	Pn	14 32 46.4	+0.1
SDLR				iS	Sn	14 32 58.2	-0.4
UGLR	Uglovaya	0.98	261	iP	Pn	14 32 47.2	+0.3
UGLR				iS	Sn	14 32 59.9	+0.2
SMAR	Somma	0.99	264	P	Pn	14 32 47.1	0.0
SMAR				iS	Sn	14 32 59.7	-0.4
KRER	Koryakskii	1.02	267	P	Pn	14 32 47.8	+0.4
KRER				iS	Sn	14 33 00.8	+0.1
AVH	Avacha	1.03	265	P	Pn	14 32 47.9	+0.5
AVH				iS	Sn	14 33 01.5	+0.8
KOK	Koryaka	1.08	267	P	Pn	14 32 48.5	+0.3
KOK				iS	Sn	14 33 02.0	-0.1
PET	Petropavlovsk	1.13	253	P	Pn	14 32 48.8	+0.1
PET				iS	Sn	14 33 03.0	0.0
MKZ	Mys Kozlova	1.41	32	P	Pn	14 32 51.8	-0.8
MKZ				iS	Sn	14 33 07.8	-2.1
RUS	Russkaya	1.50	232	P	Pn	14 32 53.6	-0.1

RUS				*i* S	Sn	14 33 11.2	-0.8
GNL	**Ganaly**	**1.53**	**283**	P	Pn	14 32 54.9	+0.6
GNL				*i* S	Sn	14 33 13.1	0.0
MTVR	**Mutnovka**	**1.63**	**238**	*e*P	Pn	14 32 56.0	+0.2
MTVR				*i* S	Sn	14 33 15.7	0.0
GRL	**Gorelyy**	**1.65**	**241**	*e*P	Pn	14 32 56.6	+0.6
GRL				*i* S	Sn	14 33 15.9	-0.2
ASAK	**Asacha**	**1.83**	**238**	P	Pn	14 32 59.5	+1.1
ASAK				*i* S	Sn	14 33 21.0	+0.6
TUMR	**Tumrok**	**1.93**	**355**	*i* P	Pn	14 33 00.8	+1.0
TUMR				*i* S	Sn	14 33 23.1	+0.2
APC	**Apacha**	**2.03**	**259**	*e*P	Pn	14 33 02.4	+1.4
APC				*i* S	Sn	14 33 26.9	+1.8
KMNR	**Kamenistaya**	**2.39**	**357**	*e*P	Pn	14 33 08.0	+1.8
KMNR				*e*S	Sn	14 33 35.7	+1.3
MIPR	**Malaya Ipel'ka**	**2.49**	**245**	P	Pn	14 33 08.5	+1.1
BZMR	**Bezymyannaya**	**2.57**	**1**	P	Pn	14 33 10.4	+1.7
BZGR	**Bezymyannyi-Gr**	**2.58**	**3**	*e*P	Pn	14 33 10.4	+1.6
BZGR				*e*S	Sn	14 33 40.2	+1.2
BZWR	**Bezymyannyi-We**	**2.60**	**1**	P	Pn	14 33 10.5	+1.4
KPT	**Kopyto**	**2.60**	**357**	P	Pn	14 33 10.9	+1.8
ZLN	**Zelenaya**	**2.66**	**4**	P	Pn	14 33 11.5	+1.6
ZLN				*i* S	Sn	14 33 42.3	+1.3
KOZ	**Kozyrevsk**	**2.71**	**353**	P	Pn	14 33 11.5	+1.0
ESO	**Esso**	**2.75**	**339**	*e*P	Pn	14 33 11.7	+0.7
KRSR	**Krestovskiy**	**2.85**	**1**	P	Pn	14 33 13.5	+1.0
KRSR				*i* S	Sn	14 33 46.3	+0.6
KLY	**Klyuchi**	**2.95**	**2**	P	Pn	14 33 15.3	+1.6
KLY				*i* S	Sn	14 33 48.7	+0.8
SRDR	**Sredinnyy**	**2.98**	**352**	*e*P	Pn	14 33 14.9	+0.7
KBG	**Krutoberegovo**	**3.17**	**23**	P	Pn	14 33 18.5	+1.8
KBG				*i* S	Sn	14 33 54.3	+1.0
BDR	**Baidarnaya**	**3.24**	**8**	P	Pn	14 33 20.1	+2.4
BDR				*i* S	Sn	14 33 57.2	+2.1
SMKR	**Semkarok**	**3.27**	**10**	P	Pn	14 33 18.9	+0.7
SMKR				*i* S	Sn	14 33 54.6	-1.4
SRKR	**Sorokina**	**3.32**	**7**	*e*P	Pn	14 33 20.9	+2.0
SRKR				*i* S	Sn	14 33 59.1	+2.0
BKI	**Bering**	**3.73**	**58**	P	Pn	14 33 23.7	-0.6
BKI				*i* S	Sn	14 34 02.2	-4.7

*VIE **06** 14:33:55.4±0.2, 47°.57N×13°.59E, h3^{km}±3^{km}, mb1.9/7, ML2.1/10, Error ellipse: s-maj=1.5km s-min=1.1km az=156.0 5 km WNW of Hallstatt*
*CSEM **06** 14:33:55.7±0.1, 47°.59N×13°.59E, h2^{km}, ML2.8/16, Error ellipse: s-maj=3.0km s-min=2.4km az=121.0*
*BGR **06** 14:33:56.8±0.3, 47°.56N×13°.54E, h10^{km}, ML2.2/9, Error ellipse: s-maj=5.6km s-min=3.3km az=84.0*
*PRU **06** 14:33:56.7, 47°.59N×13°.59E, h2^{km}, M2.2*
ISC 06 14:33:56.2±1.0**, 47°.58N**±0°.02×**13°.58E**±0°.02**, h10**^{km}±9^{km}**, n49, σ0^{s}.99**/79**, 14C-7D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBA	**Koelnbreinsper**	**0.53**	**198**	*e*Pg	**Pg**	**14 34 05.7**	**-0.8**
	SNR=9.3						
KBA				*e*Sg	**Sg**	**14 34 13.2**	**-0.2**
KBA	**Koelnbreinsper**	**0.53**	**198**	⇓*e*Pg	**Pg**	**14 34 05.4**	**-1.1**
	7.1nm,0.2s,SNR=14						
KBA				⇑*i*Sg	**Sg**	**14 34 13.1**	**-0.2**
	46nm,0.4s						
KBA	**Koelnbreinsper**	**0.53**	**198**	Pg	**Pg**	**14 34 05.7**	**-0.8**
	SNR=9.3						
KBA				Sg	**Sg**	**14 34 13.1**	**-0.3**
	46nm,0.4s						
MOA	**Molln**	**0.54**	**59**	*e*Pg	**Pg**	**14 34 06.6**	**-0.1**
	SNR=4.9						
MOA	**Molln**	**0.54**	**59**	⇓*e*Pg	**Pg**	**14 34 05.9**	**-0.8**
	2.5nm,0.2s,SNR=6.2						
MOA				⇑*i*Sg	**Sg**	**14 34 13.7**	**-0.1**
	22nm,0.3s						
MOA	**Molln**	**0.54**	**59**	Pg	**Pg**	**14 34 05.9**	**-0.8**
	2.5nm,0.2s,SNR=6.2						
MOA				Sg	**Sg**	**14 34 13.7**	**-0.1**
	22nm,0.3s						
MYKA	**Terra Mystica**	**0.95**	**177**	⇓*i*Pg	**Pg**	**14 34 13.9**	**-0.6**
	1.7nm,0.2s						
MYKA				⇑*i*Sg	**Sb**	**14 34 27.0**	**-0.4**
	5.4nm,0.3s						
MYKA	**Terra Mystica**	**0.95**	**177**	Pg	**Pg**	**14 34 13.9**	**-0.6**
	1.7nm,0.2s						
MYKA				Sg	**Sb**	**14 34 27.0**	**-0.4**
	5.4nm,0.3s						
ABTA	**Abfaltersbach**	**1.10**	**222**	⇓*i*Pg	**Pb**	**14 34 16.9**	**-0.5**
	7.7nm,0.3s						
ABTA				⇑*i*Sg	**Sn**	**14 34 31.8**	**-1.3**
	29nm,0.6s						
ABTA	**Abfaltersbach**	**1.10**	**222**	Pg	**Pb**	**14 34 16.9**	**-0.5**
	7.7nm,0.3s						
ABTA				Sg	**Sn**	**14 34 31.8**	**-1.3**
	29nm,0.6s						
OBKA	**Obir**	**1.26**	**148**	*e*Pg	**Pg**	**14 34 20.3**	**-0.1**
	SNR=3.3						
OBKA	**Obir**	**1.26**	**148**	⇑*i*Pg	**Pn**	**14 34 19.1**	**-0.8**
	3.5nm,0.3s						
OBKA				⇑*i*Sg	**Sb**	**14 34 36.0**	**-0.3**
	18nm,0.5s						
OBKA	**Obir**	**1.26**	**148**	Pg	**Pg**	**14 34 20.3**	**-0.1**
	SNR=3.3						
OBKA				Sg	**Sb**	**14 34 36.0**	**-0.3**
	18nm,0.5s						
GEC2	**GERESS Array S**	**1.27**	**4**	*e*Pg	**Pg**	**14 34 21.2**	**+0.6**
	SNR=44						
GEC2				*e*Sg	**Sg**	**14 34 39.1**	**+2.0**
GEC2	**GERESS Array S**	**1.27**	**4**	Pg	**Pg**	**14 34 21.2**	**+0.6**
	SNR=44						
WTTA	**Wattenberg**	**1.36**	**257**	⇑*i*Pg	**Pg**	**14 34 22.1**	**-0.1**
	4.5nm,0.2s						
WTTA				⇓*i*Sg	**Sg**	**14 34 40.1**	**+0.3**
	43nm,0.5s						
WTTA	**Wattenberg**	**1.36**	**257**	Pg	**Pg**	**14 34 22.1**	**-0.1**
	4.5nm,0.2s						
WTTA				Sg	**Sg**	**14 34 40.1**	**+0.3**
	43nm,0.5s						
ARSA	**Arzberg**	**1.36**	**103**	*e*Sg	**Sg**	**14 34 42.0**	**+2.0**
ARSA	**Arzberg**	**1.36**	**103**	⇑*i*Pg	**Pb**	**14 34 21.9**	**+0.2**
	8.1nm,0.3s						
ARSA				⇓*i*Sg	**Sg**	**14 34 40.8**	**+0.8**
	16nm,0.5s						
ARSA	**Arzberg**	**1.36**	**103**	Pg	**Pb**	**14 34 21.9**	**+0.2**
	8.1nm,0.3s						
ARSA				Sg	**Sg**	**14 34 40.8**	**+0.8**
	16nm,0.5s						
KHC	**Kasperske Hory**	**1.55**	**360**	*e*Pg	**Pb**	**14 34 25.3**	**+0.2**
	SNR=13						
KHC				*e*Sg	**Sg**	**14 34 46.9**	**+0.7**
KHC	**Kasperske Hory**	**1.55**	**360**	*e*PG	**Pb**	**14 34 24.9**	**-0.1**
KHC				*e*SG	**Sb**	**14 34 45.8**	**+1.1**
	comp=Z,38nm,0.4s						
KHC	**Kasperske Hory**	**1.55**	**360**	Pg	**Pb**	**14 34 25.3**	**+0.2**
	SNR=13						
KHC				Sg	**Sg**	**14 34 46.9**	**+0.7**
VOY	**Vojsko**	**1.56**	**172**	*e*Pn	**Pg**	**14 34 26.8**	**+0.6**
VOY				*e*Sn	**Sg**	**14 34 50.6**	**+4.2**
VOY	**Vojsko**	**1.56**	**172**	*e*Pn	**Pg**	**14 34 26.8**	**+0.6**
CONA	**Conrad Observa**	**1.58**	**76**	⇑*e*Pg	**Pb**	**14 34 25.6**	**+0.1**
	3.3nm,0.3s,SNR=7.4						
CONA				⇑*i*Sg	**Sb**	**14 34 46.4**	**+0.8**
	13nm,0.3s						
CONA	**Conrad Observa**	**1.58**	**76**	Pg	**Pb**	**14 34 25.6**	**+0.1**
	3.3nm,0.3s,SNR=7.4						
CONA				Sg	**Sb**	**14 34 46.4**	**+0.8**
	13nm,0.3s						
WET	**Wettzell**	**1.64**	**344**	*e*Pg	**Pg**	**14 34 27.4**	**-0.1**
	SNR=3.2						
WET	**Wettzell**	**1.64**	**344**	Pg	**Pg**	**14 34 27.4**	**-0.1**
	SNR=3.2						
MOTA	**Moosalm**	**1.70**	**263**	⇑*e*Pg	**Pg**	**14 34 28.7**	**0.0**
	4.9nm,0.3s,SNR=11						
MOTA				⇑*i*Sg	**Sg**	**14 34 51.9**	**+1.2**
	44nm,0.7s						
MOTA	**Moosalm**	**1.70**	**263**	Pg	**Pg**	**14 34 28.7**	**0.0**
	4.9nm,0.3s,SNR=11						
MOTA				Sg	**Sg**	**14 34 51.9**	**+1.2**
	44nm,0.7s						
FETA	**Feichten**	**2.02**	**255**	⇑*i*Pn	**Pn**	**14 34 31.0**	**+0.6**
FETA				⇑*i*Pg	**Pg**	**14 34 33.8**	**-1.1**
	2.5nm,0.4s						
FETA				⇓*i*Sg	**Sg**	**14 35 02.7**	**+1.6**
	7.7nm,0.6s						
FETA	**Feichten**	**2.02**	**255**	Pn	**Pn**	**14 34 31.0**	**+0.6**
TREC	**Trest**	**2.14**	**36**	*e*SG	**Sb**	**14 35 03.7**	**+2.2**
	comp=Z,24nm,0.5s						
TREC	**Trest**	**2.14**	**36**	Sg	**Sb**	**14 35 03.7**	**+2.2**
	24nm,0.5s						
ROTZ	**Rotzenmuhle**	**2.37**	**338**	*e*Pg	**Pg**	**14 34 40.5**	**-1.1**
	SNR=1.9						
ROTZ				*e*Sg	**Sg**	**14 35 12.5**	**+0.1**
ROTZ	**Rotzenmuhle**	**2.37**	**338**	Pg	**Pg**	**14 34 40.5**	**-1.1**
	SNR=1.9						
ROTZ				Sg	**Sg**	**14 35 12.5**	**+0.1**
PRU	**Pruhonice**	**2.49**	**14**	*e*PG	**Pb**	**14 34 41.2**	**+0.2**
PRU				*e*SG	**Sg**	**14 35 14.8**	**-1.5**
	comp=Z,8.3nm,0.3s						
PRU	**Pruhonice**	**2.49**	**14**	Pg	**Pb**	**14 34 41.2**	**+0.2**
PRU				Sg	**Sg**	**14 35 14.8**	**-1.5**
	8.3nm,0.3s						
DAVA	**Damuels**	**2.53**	**265**	*e*Pg	**Pg**	**14 34 45.1**	**+0.5**
	SNR=3.3						
DAVA	**Damuels**	**2.53**	**265**	Pg	**Pg**	**14 34 45.1**	**+0.5**
	SNR=3.3						
NKC	**Novy Kostel**	**2.76**	**345**	*e*SG	**Sg**	**14 35 24.2**	**-0.6**
	comp=Z,15nm,0.5s						
NKC	**Novy Kostel**	**2.76**	**345**	Sg	**Sg**	**14 35 24.2**	**-0.6**
	15nm,0.5s						
PVCC	**Panska Ves**	**3.02**	**12**	*e*SG	**Sg**	**14 35 32.4**	**-0.8**
	comp=Z,23nm,0.5s						
PVCC	**Panska Ves**	**3.02**	**12**	Sg	**Sg**	**14 35 32.4**	**-0.8**
	23nm,0.5s						
DPC	**Dobruska-Polom**	**3.31**	**32**	*e*SG	**Sg**	**14 35 41.3**	**-1.2**
	comp=Z,5.9nm,0.6s						
DPC	**Dobruska-Polom**	**3.31**	**32**	Sg	**Sg**	**14 35 41.3**	**-1.2**
	5.9nm,0.6s						
UPC	**Upice**	**3.34**	**28**	*e*SG	**Sg**	**14 35 42.4**	**-1.0**
	comp=Z,6.8nm,0.6s						
UPC	**Upice**	**3.34**	**28**	Sg	**Sg**	**14 35 42.4**	**-1.0**
	6.8nm,0.6s						

*NIED **06** 14:39:00, 32°.10N×129°.90E, h5^{km}, Mw3.7 Best double couple: Mo4.37000×10^{14} NP1:φs291.00000°, δ79.00000°, λ-52.00000°. NP2:φs35.00000°, δ39.00000°, λ-163.00000°.*
JMA 06 14:39:29.3, 32°.06N×129°.84E, h10^{km}±1^{km}**, M3.3, 6C-2D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSJ	**Shimokoshiki**	**0.40**	**196**	⇑P	Pg	14 39 37.1	0.0
JSJ				S	Sg	14 39 42.6	+0.2
JHD	**Hondo**	**0.48**	**32**	⇑P	Pg	14 39 38.7	+0.1
JHD				S	Sg	14 39 45.2	+0.3
NGSJ	**Nagasakinomoza**	**0.57**	**357**	⇑P	Pg	14 39 40.2	-0.2
NGSJ				*e*S	Sg	14 39 48.2	+0.2
JZO	**Okuchi**	**0.65**	**83**	⇓P	Pg	14 39 42.0	+0.1
JZO				S	Sg	14 39 50.5	0.0
JSU	**Suzuyama**	**0.76**	**136**	⇑P	Pg	14 39 43.6	-0.5
JSU				*e*S	Sg	14 39 53.9	-0.1
JIU2	**Izumi 2**	**0.96**	**59**	⇓P	Pg	14 39 46.8	-1.0
JIU2				S	Sg	14 39 59.7	-0.6
JTZ	**Takazaki**	**1.07**	**98**	P	Pb	14 39 50.1	+0.1
JTA	**Tamana**	**1.07**	**33**	⇑P	Pg	14 39 49.1	-0.9
JTA				S	Sg	14 40 03.8	-0.2
JFU	**Fukue jima 2**	**1.10**	**303**	⇑P	Pb	14 39 50.2	-0.2

DDA 06 14:41:11.9, 37°.19N×28°.14E, h7^{km}**, MD2.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.51**	**336**	*i* P	Pg	14 41 22.2	+0.3
AYDN				*i* S	Sg	14 41 29.5	+0.8
DNZL	**Cakiroluk**	**0.88**	**55**	*i* P	Pg	14 41 28.8	-0.3
DNZL				*i* S	Sb	14 41 41.5	-0.4
ULDT	**Uludag**	**3.05**	**15**	*i* P	Sb	14 42 42.3	-2.1

*ISK **06** 14:42:03.4, 40°.55N×29°.27E, h19^{km}, MD2.6*
*ISCJB **06** 14:42:03.6±0.5, 40°.57N±0°.04×29°.24E±0°.04, h13^{km}±5^{km}, Error ellipse: s-maj=6.7km s-min=5.4km az=4.4*
*CSEM **06** 14:42:04.0±0.2, 40°.55N×29°.24E, h15^{km}, MD2.6, Error ellipse: s-maj=4.7km s-min=3.7km az=5.0*
*DDA **06** 14:42:05.2, 40°.54N×29°.24E, h7^{km}, MD2.8*
ISC 06 14:42:04.3±0.9**, 40°.54N**±0°.03×**29°.23E**±0°.03**, h14**^{km}±8^{km}**, n40, σ0^{s}.77**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEMT	**Gemlik**	**0.11**	**195**	*e*PG	**Pg**	**14 42 07.3**	**-0.3**
GEMT	**Gemlik**	**0.11**	**195**	*e*Pg	**Pg**	**14 42 07.3**	**-0.3**
IZI	**Iznik**	**0.28**	**137**	*e*PG	**Pg**	**14 42 10.4**	**+0.2**
IZI				*e*SG	**Sg**	**14 42 14.2**	**0.0**
IZI	**Iznik**	**0.28**	**137**	*e*Pg	**Pg**	**14 42 10.4**	**+0.2**
IZI				*e*Sg	**Sg**	**14 42 14.2**	**0.0**
MDNY	**Mudanya-Bursa**	**0.31**	**237**	*e*PG	**Pb**	**14 42 11.8**	**+0.1**
MDNY				*e*SG	**Sb**	**14 42 17.2**	**+0.6**
MDNY	**Mudanya-Bursa**	**0.31**	**237**	*e*Pg	**Pb**	**14 42 11.8**	**+0.1**
MDNY				*e*Sg	**Sb**	**14 42 17.2**	**+0.6**
ADVT	**Abdulvahap**	**0.41**	**105**	*e*PG	**Pg**	**14 42 12.0**	**-0.4**
ADVT	**Abdulvahap**	**0.41**	**105**	*e*Pg	**Pg**	**14 42 12.0**	**-0.4**
ULDT	**Uludag**	**0.41**	**190**	*i* P	**Pb**	**14 42 13.4**	**0.0**
ULDT	**Uludag**	**0.41**	**190**	*i* P	**Pb**	**14 42 13.4**	**0.0**
HRT	**Hereke**	**0.44**	**50**	*e*PG	**Pg**	**14 42 12.3**	**-0.7**
HRT	**Hereke**	**0.44**	**50**	*e*Pg	**Pg**	**14 42 12.3**	**-0.7**
ISK	**Istanbul-Kandi**	**0.54**	**346**	*e*PG	**Pg**	**14 42 14.1**	**-0.8**
ISK	**Istanbul-Kandi**	**0.54**	**346**	*e*Pg	**Pg**	**14 42 14.1**	**-0.8**
CAVI	**Cavuskoy**	**0.58**	**126**	*e*PG	**Pg**	**14 42 14.7**	**-1.0**
CAVI	**Cavuskoy**	**0.58**	**126**	*e*Pg	**Pg**	**14 42 14.7**	**-1.0**
KCTX	**Karacabey (Bur**	**0.72**	**248**	*e*PG	**Pb**	**14 42 18.7**	**+0.1**
KCTX	**Karacabey (Bur**	**0.72**	**248**	*e*Pg	**Pb**	**14 42 18.7**	**+0.1**
CTKS	**Kestanelik-??a**	**0.88**	**322**	*e*PG	**Pg**	**14 42 21.1**	**-0.3**
CTKS	**Kestanelik-??a**	**0.88**	**322**	*e*Pg	**Pg**	**14 42 21.1**	**-0.3**
GULT	**Gulveren**	**0.99**	**96**	*e*PG	**Pb**	**14 42 22.6**	**-0.7**
GULT	**Gulveren**	**0.99**	**96**	*e*Pg	**Pb**	**14 42 22.6**	**-0.7**
BNT	**Bandirma**	**1.01**	**260**	*e*PG	**Pb**	**14 42 23.3**	**-0.3**
BNT	**Bandirma**	**1.01**	**260**	*e*Pg	**Pb**	**14 42 23.3**	**-0.3**
SLVT	**Silivri**	**1.03**	**312**	*e*PG	**Pg**	**14 42 24.2**	**0.0**
SLVT	**Silivri**	**1.03**	**312**	*e*Pg	**Pg**	**14 42 24.2**	**0.0**
DST	**Dursunbey**	**1.05**	**207**	*e*PG	**Pb**	**14 42 23.5**	**-0.7**
DST	**Dursunbey**	**1.05**	**207**	*e*Pg	**Pb**	**14 42 23.5**	**-0.7**
EDC	**Edincik**	**1.06**	**260**	*e*PN	**Pn**	**14 42 24.5**	**-0.2**
EDC	**Edincik**	**1.06**	**260**	*e*Pn	**Pn**	**14 42 24.5**	**-0.2**
MRMT	**Marmara Adasi**	**1.24**	**273**	*e*PN	**Pn**	**14 42 27.2**	**-0.1**
MRMT	**Marmara Adasi**	**1.24**	**273**	*e*Pn	**Pn**	**14 42 27.2**	**-0.1**
GONE	**Gonen-Balikesi**	**1.28**	**248**	*e*PN	**Pn**	**14 42 27.6**	**-0.1**
GONE	**Gonen-Balikesi**	**1.28**	**248**	*e*Pn	**Pn**	**14 42 27.6**	**-0.1**
HENT	**Hendek**	**1.30**	**77**	*i* P	**Pg**	**14 42 29.7**	**+0.3**
HENT				*i* S	**Sg**	**14 42 49.9**	**+3.6**
HENT	**Hendek**	**1.30**	**77**	*i* P	**Pg**	**14 42 29.7**	**+0.3**
BALB	**Balikesir**	**1.37**	**229**	*e*PN	**Pn**	**14 42 28.6**	**-0.4**
BALB	**Balikesir**	**1.37**	**229**	*e*Pn	**Pn**	**14 42 28.6**	**-0.4**
KRBG	**Karabiga-Canak**	**1.48**	**265**	*e*PN	**Pn**	**14 42 29.3**	**-1.2**
KRBG	**Karabiga-Canak**	**1.48**	**265**	*e*Pn	**Pn**	**14 42 29.3**	**-1.2**

WEL 06 15:03:20.8±0.5**, 38°.41S×175°.92E, h176**^{km}±4^{km}**, ML3.5**/12**, 2C-2D, Error ellipse: s-maj=5.0km s-min=4.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	**0.87**	**150**	⇑PN	Pn	15 03 47.5	+0.3
BKZ				SN	Sn	15 04 07.3	-0.5
TRVZ	**Turoa**	**0.93**	**198**	PN	Pn	15 03 48.0	+0.1
URZ	**Urewera**	**0.95**	**81**	PN	Pn	15 03 47.4	-0.3
URZ				SN	Sn	15 04 07.8	-0.5
WNVZ	**Wahianoa**	**0.95**	**195**	PN	Pn	15 03 48.0	0.0
PKVZ	**Pokaka**	**0.98**	**207**	PN	Pn	15 03 48.0	0.0
MOVZ	**Moawhango**	**1.00**	**188**	PN	Pn	15 03 48.0	-0.2
MTVZ	**Mangateitei**	**1.03**	**200**	PN	Pn	15 03 48.5	+0.1
RAHZ	**Arahi**	**1.04**	**119**	SN	Sn	15 04 11.0	+1.2
BHHZ	**Black Hill Sta**	**1.08**	**174**	PN	Pn	15 03 48.8	0.0
BHHZ				SN	Sn	15 04 09.3	-1.3
MCHZ	**McNeill Hill**	**1.19**	**150**	PN	Pn	15 03 50.9	+1.3
MCHZ				SN	Sn	15 04 13.0	+0.9
MWZ	**Matawai**	**1.26**	**87**	⇓PN	Pn	15 03 50.4	+0.1
MWZ				SN	Sn	15 04 12.7	-0.3
PNHZ	**Pukenui**	**1.51**	**172**	PN	Pn	15 03 52.5	-0.1
WAZ	**Wanganui**	**1.53**	**208**	PN	Pn	15 03 52.1	-0.5
TSZ	**Takapari Road**	**1.64**	**179**	⇑PN	Pn	15 03 53.5	-0.4
WPHZ	**Waipukurau**	**1.70**	**166**	PN	Pn	15 03 54.1	-0.2
DVHZ	**Dannevirke**	**1.89**	**174**	PN	Pn	15 03 55.7	-0.7
MRZ	**Mangatainoka R**	**2.26**	**187**	PN	Pn	15 03 59.0	-1.4
OGWZ	**Otaki Gorge**	**2.47**	**193**	PN	Pn	15 04 01.3	-1.6
HOWZ	**Holdsworth Sta**	**2.50**	**187**	SN	Sn	15 04 32.7	-3.8
KIW	**Kapiti Island**	**2.57**	**197**	PN	Pn	15 04 02.0	-2.0
TMWZ	**Te Maipa**	**2.69**	**181**	SN	Sn	15 04 37.2	-3.2
MTW	**Mount Morrison**	**2.76**	**187**	PN	Pn	15 04 03.8	-2.5
CAW	**Cannon Point**	**2.77**	**193**	PN	Pn	15 04 04.4	-2.0
WEL	**Wellington**	**3.00**	**197**	PN	Pn	15 04 06.8	-2.4
MSWZ	**Moikau Station**	**3.04**	**190**	SN	Sn	15 04 43.3	-4.7
TCW	**Tory Channel**	**3.07**	**204**	PN	Pn	15 04 07.6	-2.4
TCW				SN	Sn	15 04 44.1	-4.4
TUWZ	**Tuamarina**	**3.38**	**206**	PN	Pn	15 04 11.0	-2.8
NNZ	**Nelson**	**3.42**	**214**	PN	Pn	15 04 11.2	-3.1
THZ	**Tophouse**	**4.07**	**214**	*e*PN	Pn	15 04 19.2	-3.4
KHZ	**Kahutara**	**4.39**	**204**	⇓PN	Pn	15 04 23.6	-3.1
LTZ	**Lake Taylor**	**5.17**	**211**	PN	Pn	15 04 32.5	-4.4
CRLZ	**Canterbury Las**	**5.73**	**205**	SN	Sn	15 05 40.8	-8.8
MQZ	**McQueen's Vall**	**5.84**	**204**	SN	Sn	15 05 42.6	-10
ODZ	**Otahua Downs**	**7.71**	**209**	SN	Sn	15 06 27.4	-9.2

*IDC **06** 15:08:29.5±4.7, 24°.51N×141°.54E, h143^{km}±45^{km}, mb3.4/9, mb1 3.5/12, mb1mx3.3/28, mbtmp3.3/12, Error ellipse: s-maj=24.8km s-min=13.4km az=98.0*
*ISCJB **06** 15:08:31.2±0.8, 24°.82N±0°.06×142°.0E±0°.2, h200^{km}, mb3.3/9, Error ellipse: s-maj=23.3km s-min=7.6km az=5.2*
*JMA **06** 15:08:32.2±0.3, 24°.90N×140°.48E, h77^{km}, M4.9*
ISC 06 15:08:33.1±1.0**, 24°.85N**±0°.08×**142°.0E**±0°.2**, h200**^{km}**, n25, σ1^{s}.36**/24**, mb3.5**/9**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.79**	**7**	P	**Pn**	**15 09 08.6**	**-0.8**
JHHJ				*e*S	**Sn**	**15 09 35.9**	**-2.0**
CBIJ	**Chichi jima**	**2.25**	**5**	P	**Pn**	**15 09 13.5**	**-0.7**
CBIJ				*e*S	**Sn**	**15 09 45.4**	**-1.0**
JHJ2	**Mitsune**	**8.44**	**348**	P	**Pn**	**15 10 30.3**	**-1.7**
BSO1	**Boso 1**	**9.81**	**355**	P	**Pn**	**15 10 49.3**	**+0.1**
BSO3	**Boso 3**	**10.00**	**353**	P	**Pn**	**15 10 51.2**	**-0.7**
BSO4	**Boso 4**	**10.20**	**353**	P	**Pn**	**15 10 55.2**	**+0.4**
JOD2	**Odawara 2**	**10.67**	**347**	P	**Pn**	**15 11 00.7**	**-0.2**
JHU	**Hanno**	**11.21**	**349**	P	**Pn**	**15 11 06.2**	**-1.6**
JRY	**Ryogami san**	**11.44**	**347**	P	**Pn**	**15 11 10.1**	**-0.7**
JYT	**Yasato**	**11.44**	**353**	P	**Pn**	**15 11 09.3**	**-1.5**
JAG	**Ashikaga**	**11.74**	**350**	P	**Pn**	**15 11 12.5**	**-2.0**
JHO	**Hitachi**	**11.78**	**355**	P	**Pn**	**15 11 14.2**	**-0.9**
JHO				*e*S	Sn	15 13 18.4	-8.1
MJAR	**Matsushiro Arr**	**12.09**	**345**	P	**Pn**	**15 11 18.1**	**-0.9**
	0.5nm,0.3s,baz=162,slow=11,SNR=6.4						
JMK	**Ichinoseki**	**14.07**	**358**	P	**P**	**15 11 45.1**	**-0.5**
KSRS	**Korea Array**	**17.35**	**320**	P	**Pn**	**15 12 24.1**	**+0.6**
	0.2nm,0.3s,baz=134,slow=12,SNR=12						
ASAJ	**Asahikawa**	**19.23**	**1**	P	**Pn**	**15 12 48.1**	**+2.7**
	0.4nm,0.3s,baz=274,slow=9.4,SNR=5.1						
CMAR	**Chiang Mai Arr**	**40.35**	**270**	P	**P**	**15 15 50.9**	**-0.7**
	0.5nm,0.6s,baz=55,slow=7.3,SNR=7.7						
WRA	**Warramunga Arr**	**45.13**	**190**	P	**P**	**15 16 28.4**	**-1.5**
	1.3nm,0.4s,baz=7.1,slow=8.7,SNR=62						
ASAR	**Alice Springs**	**48.85**	**190**	P	**P**	**15 16 57.5**	**-1.1**
	0.3nm,0.7s,baz=21,slow=9.7,SNR=9.4						
MKAR	**Makanchi Array**	**51.76**	**311**	P	**P**	**15 17 21.7**	**+1.5**
	0.6nm,0.6s,baz=89,slow=9.7,SNR=12						
STKA	**Stephens Creek**	**56.41**	**180**	P	**P**	**15 17 54.0**	**+0.3**
	1.6nm,1.0s,baz=28,slow=15,SNR=4.2						
ILAR	**Eielson Array**	**59.78**	**28**	P	P	15 18 20.8	+4.0
	0.2nm,0.3s,baz=261,slow=5.4,SNR=4.8						
INK	**Inuvik**	**65.16**	**24**	P	P	15 18 59.0	+6.7
	0.7nm,0.8s,baz=225,slow=4.3,SNR=4.0						
YKA	**Yellowknife Ar**	**74.21**	**28**	P	P	15 19 53.9	+6.3
	0.4nm,0.4s,baz=293,slow=5.9,SNR=8.8						
FINES	**FINESS Array B**	**79.86**	**334**	P	**P**	**15 20 21.1**	**+1.9**
	2.1nm,0.8s,baz=62,slow=3.8,SNR=6.4						

KRSC 06 15:20:02.3±1.2**, 49°.86N×156°.87E, h5**^{km}±5^{km}**, ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.95**	**330**	P	Pb	15 20 21.5	+0.2
SKR				*i* S	Sn	15 20 35.7	-0.6
PAU	**Pauzhetka**	**1.61**	**359**	P	Pb	15 20 32.4	-0.1
PAU				*i* S	Sg	15 20 54.4	+0.4
MIPR	**Malaya Ipel'ka**	**2.42**	**358**	P	Pn	15 20 43.2	+0.7
ASAK	**Asacha**	**2.61**	**14**	*e*P	Pn	15 20 47.0	+1.8
MTVR	**Mutnovka**	**2.75**	**17**	P	Pn	15 20 48.0	+0.7
MTVR				*i* S	Sn	15 21 21.5	+0.4
RUS	**Russkaya**	**2.78**	**21**	*e*P	Pn	15 20 48.4	+1.0
RUS				*i* S	Sn	15 21 22.3	+1.1
UGLR	**Uglovaya**	**3.57**	**19**	P	Pn	15 21 01.0	+2.6
SDLR	**Sedlovina**	**3.65**	**19**	P	Pn	15 21 01.4	+1.9
GNL	**Ganaly**	**3.90**	**9**	P	Pn	15 21 05.0	+2.0

IDC 06 15:23:51.6±1.3**, 12°.45N×141°.93E, h29**^{km}±7^{km}**, mb3.6**/5**, mb1 3.9**/5**, mb1mx3.4**/24**, mbtmp3.6**/5**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/40**, Error ellipse: s-maj=37.0km s-min=23.3km az=84.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**24.23**	**353**	LR	LR	15 37 19.2	
	comp=Z,36nm,21.2s,baz=250,slow=33						
WRA	**Warramunga Arr**	**33.04**	**193**	P	P	15 30 24.7	0.0
	0.4nm,0.8s,baz=14,slow=9.8,SNR=5.0						
WRA				pP	pP	15 30 33.1	-0.2
	1.4nm,0.8s,baz=12,slow=9.6,SNR=7.0						
ASAR	**Alice Springs**	**36.74**	**192**	pP	pP	15 31 05.3	0.0
	0.5nm,0.9s,baz=20,slow=10,SNR=4.0						
CMAR	**Chiang Mai Arr**	**41.78**	**284**	P	P	15 31 39.0	+0.1
	0.5nm,0.3s,baz=85,slow=5.9,SNR=6.9						
CMAR				pP	pP	15 31 48.0	+0.3
	1.1nm,0.8s,baz=89,slow=6.0,SNR=4.2						
MKAR	**Makanchi Array**	**60.34**	**317**	P	P	15 33 58.1	+0.1
	0.4nm,0.7s,baz=103,slow=6.5,SNR=4.7						
MKAR				pP	pP	15 34 06.9	-0.1
	0.5nm,0.8s,baz=92,slow=8.5,SNR=5.6						
ILAR	**Eielson Array**	**70.82**	**25**	P	P	15 35 05.5	+0.2
	0.4nm,0.6s,baz=249,slow=6.2,SNR=5.9						
FINES	**FINESS Array B**	**90.97**	**334**	P	P	15 36 51.6	-1.1
	1.7nm,0.8s,baz=86,slow=5.7,SNR=4.2						

MEX 06 15:29:41.8±0.8**, 17°.36N×100°.81W, h27**^{km}±11^{km}**, MD3.9, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.61**	**121**	*e*P	Pb	15 29 51.5	-2.4
CAIG				*i* S	Sb	15 30 00.1	-2.0
ZIIG	**Zihuatanejo**	**0.67**	**292**	*e*P	Pb	15 29 52.2	-2.7
ZIIG				*i* S	Sb	15 30 01.9	-1.9
ACP2	**Acapulco**	**1.01**	**118**	*e*P	Pn	15 29 58.0	-2.3
ACP2				*e*S	Sn	15 30 09.6	-3.9
ARIG	**Puente Sto Nin**	**1.02**	**26**	*i* P	Pn	15 29 57.3	-3.1
ARIG				*i* S	Sn	15 30 10.8	-3.1
ACX	**Acapulco**	**1.04**	**118**	*i* P	Pn	15 29 58.2	-2.4
ACX				*i* S	Sn	15 30 09.0	-5.2
MEIG	**Mezcala**	**1.27**	**64**	*e*P	Pn	15 30 01.6	-2.3
MEIG				*i* S	Sn	15 30 16.5	-3.7
YAIG	**Yautepec**	**2.23**	**48**	*i* P	Pn	15 30 14.9	-2.3
YAIG				*i* S	Sn	15 30 41.1	-3.0
MMIG	**Aquila**	**2.58**	**291**	*i* P	Pn	15 30 20.2	-1.6
MMIG				*i* S	Sn	15 30 49.7	-2.6
PPM	**Popocatepetl**	**2.68**	**50**	*i* P	Pn	15 30 22.4	-1.5
PPM				*i* S	Sn	15 30 53.2	-2.8
PNIG	**Pinotepa**	**2.75**	**110**	*e*P	Pn	15 30 21.9	-2.3
PNIG				*i* S	Sn	15 30 53.2	-3.3
UTMO	**Huajuapan**	**2.91**	**80**	*e*P	Pn	15 30 25.0	-1.6
UTMO				*i* S	Sn	15 30 58.8	-2.1
VHO	**Vista Hermosa**	**3.91**	**94**	*i* P	Pn	15 30 38.3	-2.1
VHO				*i* S	Sn	15 31 22.5	-3.2

*ISK **06** 15:42:18.4, 38°.91N×39°.02E, h25^{km}, MD2.5*
*DDA **06** 15:42:19.6, 38°.93N×38°.99E, h7^{km}, MD2.7*
*CSEM **06** 15:42:19.5±0.2, 38°.93N×38°.99E, h8^{km}, MD2.5, Error ellipse: s-maj=4.2km s-min=2.8km az=75.0*
ISC 06 15:42:19.5±1.1**, 38°.93N**±0°.02×**39°.01E**±0°.03**, h16**^{km}±12^{km}**, n17, σ0^{s}.55**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.30**	**96**	PG	**Pg**	**15 42 25.7**	**-0.3**
PTK				*e*SG	**Sb**	**15 42 31.3**	**-0.1**
PTK	**Pertek**	**0.30**	**96**	*i* Pg	**Pg**	**15 42 25.7**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTK				eSg	Sb	15 42 31.3	-0.1
ELZG	Elazig	0.43	183	iP	Pg	15 42 28.1	-0.2
ELZG				iS	Sb	15 42 35.1	+0.1
ELZG	Elazig	0.43	183	iP	Pg	15 42 28.1	-0.2
ELZG				iS	Sb	15 42 35.1	+0.1
KEMA	Kemaliye	0.53	311	iP	Pg	15 42 29.4	-0.7
KEMA				iS	Sb	15 42 37.7	-0.2
KEMA	Kemaliye	0.53	311	iP	Pg	15 42 29.4	-0.7
KEMA				iS	Sb	15 42 37.7	-0.2
SVRC	Sivrice-ELAZID	0.59	157	ePG	Pg	15 42 31.3	0.0
SVRC				eSG	Sg	15 42 39.2	0.0
SVRC	Sivrice-ELAZID	0.59	157	ePg	Pg	15 42 31.3	0.0
SVRC				eSg	Sg	15 42 39.2	0.0
ILIC	ilic-Erzincan	0.63	327	ePG	Pg	15 42 31.6	-0.3
ILIC	ilic-Erzincan	0.63	327	ePg	Pg	15 42 31.6	-0.3
MYA	Malataya	0.75	218	ePG	Pg	15 42 33.9	-0.3
MYA	Malataya	0.75	218	ePg	Pg	15 42 33.9	-0.3
ERZN	Erzincan	0.86	40	ePG	Pg	15 42 35.0	-1.3
EZC	Erzincan	0.87	18	ePG	Pg	15 42 35.8	-0.6
EZC	Erzincan	0.87	18	ePg	Pg	15 42 35.8	-0.6
KELT	Kelkit	1.23	9	iP	Pg	15 42 43.5	+0.1
KELT				iS	Sg	15 43 00.8	+1.2
KELT	Kelkit	1.23	9	iP	Pg	15 42 43.5	+0.1
KELT				iS	Sg	15 43 00.8	+1.2

PGC 06 15:43:25.6±0.2, 47°.39N×129°.11W, h10km, ML2.9/4, Mw3.5, 4D, 307km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OZB	Mount Ozzard	2.88	56	⇑Pn	Pn	15 44 10.2	-1.4
WOSB	Woss	3.24	30	⇓Pn	Pn	15 44 15.4	-1.2
MAYB	Maynard	3.27	22	⇓Pn	Pn	15 44 15.4	-1.7
PFB	Port Renfrew	3.35	68	⇓Pn	Pn	15 44 16.5	-1.5
PFB				⇑Sn	Sn	15 44 54.2	-3.7
MGB	Mount Grey	3.37	60	⇓Pn	Pn	15 44 16.9	-1.5
MGB				⇑Sn	Sn	15 44 54.9	-3.6

*ISK **06** 15:45:01.8, 38°.94N×39°.03E, h27km, MD2.5*
*CSEM **06** 15:45:02.5±0.2, 38°.96N×39°.05E, h23km±4km, MD2.5, Error ellipse: s-maj=5.1km s-min=3.2km az=76.0*
*DDA **06** 15:45:03.3, 38°.94N×39°.00E, h7km, MD2.7*
ISC 06 15:45:01.9±1.7, 38°.95N±0°.03×39°.03E±0°.04, h9km±16km, n16, σ0s.23/25, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTK	Pertek	0.29	101	PG	Pb	15 45 09.3	-0.1
PTK				eSG	Sb	15 45 14.8	+0.3
PTK	Pertek	0.29	101	iPg	Pb	15 45 09.3	-0.1
PTK				eSg	Sb	15 45 14.8	+0.3
ELZG	Elazig	0.45	184	iP	Pb	15 45 12.3	+0.2
ELZG				iS	Sb	15 45 19.3	+0.3
ELZG	Elazig	0.45	184	iP	Pb	15 45 12.3	+0.2
ELZG				iS	Sb	15 45 19.3	+0.3
KEMA	Kemaliye	0.53	308	iP	Pb	15 45 13.2	-0.2
KEMA				iS	Sb	15 45 21.4	+0.3
KEMA	Kemaliye	0.53	308	iP	Pb	15 45 13.2	-0.2
KEMA				iS	Sb	15 45 21.4	+0.3
SVRC	Sivrice-ELAZID	0.61	159	ePG	Pb	15 45 14.7	-0.1
SVRC				eSG	Sb	15 45 23.5	-0.1
SVRC	Sivrice-ELAZID	0.61	159	ePg	Pb	15 45 14.7	-0.1
SVRC				eSg	Sb	15 45 23.5	-0.1
ILIC	ilic-Erzincan	0.62	325	ePG	Pb	15 45 14.9	-0.1
ILIC	ilic-Erzincan	0.62	325	ePg	Pb	15 45 14.9	-0.1
MYA	Malataya	0.78	217	ePG	Pb	15 45 17.4	-0.2
MYA	Malataya	0.78	217	ePg	Pb	15 45 17.5	-0.2
ERZN	Erzincan	0.84	40	ePG	Pg	15 45 17.6	-0.3
EZC	Erzincan	0.84	17	ePG	Pg	15 45 18.4	+0.3
EZC	Erzincan	0.84	17	ePg	Pg	15 45 18.4	+0.3
AKCD	Akcadag	1.08	233	iP	Pn	15 45 23.2	-0.1
AKCD				iS	Sn	15 45 38.6	-0.1

*CSEM **06** 15:54:35.5, 40°.59N×26°.52E, h2km, MD2.7, After ISK*
ISK 06 15:54:35.5, 40°.59N×26°.52E, h2km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERIK	Erikli-Kesan	0.08	359	PG	Pg	15 54 37.3	+0.2
ERIK				eSG	Sg	15 54 39.2	+1.1
ERIK	Erikli-Kesan	0.08	359	iPg	Pg	15 54 37.3	+0.2
ERIK				eSg	Sg	15 54 39.2	+1.1
GELI	Tayfur-Gelibol	0.20	189	ePG	Pg	15 54 40.2	+0.9
GELI				eSG	Sg	15 54 44.3	+2.4
GELI	Tayfur-Gelibol	0.20	189	ePg	Pg	15 54 40.2	+0.9
GELI				eSg	Sg	15 54 44.3	+2.4
LPK	Lapseki	0.29	140	ePG	Pg	15 54 41.9	+0.8
LPK	Lapseki	0.29	140	ePg	Pg	15 54 41.9	+0.8
KRBG	Karabiga-Canak	0.63	108	ePG	Pg	15 54 48.3	+0.8
KRBG	Karabiga-Canak	0.63	108	ePg	Pg	15 54 48.3	+0.7
MRMT	Marmara Adasi	0.82	89	ePG	Pg	15 54 51.9	+0.5
MRMT	Marmara Adasi	0.82	89	ePg	Pg	15 54 51.9	+0.5
GONE	Gonen-Balikesi	1.05	121	ePG	Pb	15 54 56.3	0.0
GONE	Gonen-Balikesi	1.05	121	ePg	Pb	15 54 56.3	-0.1
EDC	Edincik	1.06	103	ePG	Pb	15 54 56.6	0.0
EDC	Edincik	1.06	103	ePg	Pb	15 54 56.6	+0.1
BNT	Bandirma	1.10	102	ePG	Pb	15 54 57.1	-0.1
BNT	Bandirma	1.10	102	ePg	Pb	15 54 57.1	-0.1
EDRB	Edirne	1.27	8	ePN	Pg	15 54 59.7	-0.1
EDRB	Edirne	1.27	8	ePn	Pg	15 54 59.7	-0.1
SLVT	Silivri	1.43	63	ePN	Pg	15 55 04.0	+1.0
SLVT	Silivri	1.43	63	ePn	Pg	15 55 04.0	+1.0
CTKS	Kestanelik-??a	1.64	66	ePN	Pb	15 55 06.3	-0.1
CTKS	Kestanelik-??a	1.64	66	ePn	Pb	15 55 06.3	-0.1
IZI	Iznik	2.27	96	ePN	Pn	15 55 15.7	+1.5
IZI	Iznik	2.27	96	ePn	Pn	15 55 15.7	+1.5

*ISCJB **06** 15:54:51.9±0.4, 38°.78N±0°.03×110°.13E±0°.07, h10km, mb3.9/11, MS4.1/5, Error ellipse: s-maj=7.7km s-min=5.0km az=179.1*
*IDC **06** 15:54:52.3±0.7, 38°.74N×110°.17E, h0km, mb3.9/11, mb1 4.1/13, mb1mx3.9/29, mbtmp3.9/13, ML3.2/2, MS4.0/5, Ms1 4.0/5, ms1mx3.0/57, Error ellipse: s-maj=22.6km s-min=14.9km az=54.0*
ISC 06 15:54:53.7±0.6, 38°.77N±0°.05×110°.09E±0°.05, h10km, n25, σ1s.72/26, mb4.0/11, MS4.2/5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	Baotou	1.83	358	eP	Pb	15 55 27.0	-0.4
HHC	Hu-ho-hao-te	2.36	28	ePg	Pb	15 55 36.2	-0.3
HHC				Sg	Sg	15 56 09.6	-0.1
HHC				smax	smax		
	comp=N,500nm,0.6s						
HHC				smax	smax		
	comp=E,700nm,0.6s						
XAN	Xi'an	4.82	192	P	Pn	15 56 06.7	+0.4
XAN				pP	Pb	15 56 13.5	-4.7
XAN				pmax	pmax		
	comp=Z,27nm,0.6s						
XAN				pmax	pmax		
	comp=Z,32nm,7.7s						
BJI	Beijing	4.88	73	Pg	Pg	15 56 21.1	-6.0
BJI				Sg	Sg	15 57 27.9	-2.4
BJI				smax	smax		
	comp=N,100nm,1.3s						
BJI				smax	smax		
	comp=E,54nm,0.6s						
LZH	Lanzhou	5.65	244	Pn	Pn	15 56 15.2	-2.7
LZH				Pg	Pb	15 56 33.3	+0.8
LZH				Sn	Pg	15 56 39.0	-2.9
LZH				Sg	Sb	15 57 43.6	+3.3
LZH				smax	smax		
	comp=N,170nm,0.8s						
LZH				smax	smax		
	comp=E,140nm,0.9s						
LZH				LR	LR		
	comp=N,300nm,5.6s						
LZH				LR	LR		
	comp=E,310nm,3.7s						
LZH				LR	LR		
	comp=Z,190nm,6.5s						
TIA	Tai'an	6.15	112	eP	Pb	15 56 35.4	-5.5
GTA	Gaotai	8.02	278	eP	Pn	15 56 50.0	-0.4
GTA				pP	pPn	15 56 53.7	+0.9
GTA				sP		15 56 56.5	
GTA				S	Sn	15 58 17.1	-4.1
GTA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GTA				LR	LR		
	comp=N,100nm,5.2s						
GTA				LR	LR		
	comp=E,82nm,5.7s						
GTA				LR	LR		
	comp=Z,150nm,6.7s						
WHN	Wuhan	8.92	156	eP	Pn	15 57 04.1	+1.4
WHN				S	Sn	15 58 45.8	+2.5
SONM	Songino Array	9.45	345	Pn	Pn	15 57 10.8	+0.8
	comp=Z,0.4nm,0.3s,baz=162,slow=13,SNR=46						
SONM				Sn	Sn	15 58 58.4	+2.1
	comp=Z,0.2nm,0.3s,baz=158,slow=29,SNR=2.7						
SONM				Lg	Lg	15 59 51.0	
	comp=Z,0.3nm,0.3s,baz=166,slow=33,SNR=5.6						
KSRS	Korea Array	14.10	90	Pn	Pn	15 58 14.3	+0.8
	comp=Z,0.1nm,0.3s,baz=279,slow=13,SNR=3.2						
MKAR	Makanchi Array	21.84	301	P	P	15 59 46.8	+0.6
	comp=Z,3.9nm,0.9s,baz=99,slow=11,SNR=29						
CMAR	Chiang Mai Arr	22.45	209	P	P	15 59 52.8	-0.2
	comp=Z,4.4nm,0.8s,baz=12,slow=9.2,SNR=45						
ZALV	Zalesovo Beam	22.95	320	P	P	15 59 58.8	+0.9
	comp=Z,1.5nm,0.8s,baz=111,slow=8.1,SNR=10						
KURBB	Kurchatov Arra	25.17	308	P	P	16 00 19.6	+0.5
	comp=Z,5.6nm,0.8s,baz=106,slow=11,SNR=32						
AAK	Ala-Archa	27.14	290	P	P	16 00 38.8	+1.7
	comp=Z,1.1nm,0.6s,baz=164,slow=12,SNR=5.6						
AKASG	Malin Array Be	55.93	311	P	P	16 04 31.8	+0.1
	comp=Z,2.0nm,0.7s,baz=59,slow=6.3,SNR=6.4						
BRTR	Keskin Array B	57.44	297	P	P	16 04 43.7	+0.9
	comp=Z,3.1nm,0.9s,baz=80,slow=7.3,SNR=17						
BRTR				LR	LR	16 30 32.9	
	comp=Z,314nm,19.9s,baz=205,slow=37						
ASF	Jabal al Asfar	58.52	288	LR	LR	16 32 55.3	
	comp=Z,152nm,18.8s,baz=312,slow=39						
MMAI	Mount Meron Ar	59.23	289	LR	LR	16 31 50.3	
	comp=Z,316nm,18.8s,baz=290,slow=37						
ILAR	Eielson Array	60.79	29	P	P	16 05 05.7	+0.2
	comp=Z,0.2nm,0.7s,baz=305,slow=5.4,SNR=3.4						
WRA	Warramunga Arr	62.67	154	P	P	16 05 18.2	-0.4
	comp=Z,2.8nm,0.8s,baz=348,slow=7.2,SNR=14						
GERES	GERESS Array B	65.75	314	LR	LR	16 39 06.7	
	comp=Z,16nm,20.1s,baz=276,slow=40						
ASAR	Alice Springs	66.00	156	P	P	16 05 40.4	0.0
	comp=Z,3.1nm,0.8s,baz=335,slow=5.7,SNR=24						
DAVOX	Davos/Dischmat	69.03	314	LR	LR	16 36 04.4	
	comp=Z,132nm,19.5s,baz=184,slow=36						
YKA	Yellowknife Ar	72.88	20	P	P	16 06 22.3	-0.1
	comp=Z,0.5nm,0.7s,baz=323,slow=5.7,SNR=7.4						

*NSSC **06** 16:23:47.9±1.6, 35°.09N×26°.78E, h0km±238km, ML3.4*
*IDC **06** 16:23:50.8±0.5, 34°.92N×26°.73E, h0km, mb4.3/23, mb1 4.3/28, mb1mx4.3/33, mbtmp4.2/28, ML3.9/5, MS3.5/4, Ms1 3.5/4, ms1mx3.0/42, Error ellipse: s-maj=13.6km s-min=11.3km az=154.0*
*BJI **06** 16:23:50.4, 34°.60N×26°.34E, h31km, mB5.0/4, mb4.6/11*
*ISCJB **06** 16:23:51.6±0.1, 34°.70N±0°.02×26°.86E±0°.02, h23km, mb4.3/66, MS3.6/5, Error ellipse: s-maj=2.5km s-min=1.5km az=27.6*
*ISK **06** 16:23:51.7, 34°.68N×26°.64E, h85km, ML4.1*
*HLW **06** 16:23:51.8, 35°.00N×26°.94E, h33km±56km, Md3.9, Ml4.0*
*CSEM **06** 16:23:52.7±0.1, 34°.75N×26°.85E, h15km, mb4.2/36, Ms3.2, Mw4.0, Error ellipse: s-maj=3.5km s-min=2.1km az=27.0*
*THE **06** 16:23:53.4, 34°.66N×26°.85E, h9km±3km, ML4.2/2, Error ellipse: s-maj=4.8km s-min=1.5km az=190.0*
*ATH **06** 16:23:53.5, 34°.88N×26°.80E, h17km±1km, MD4.1/37, ML4.0*
*NIC **06** 16:23:53.6±0.3, 34°.47N×26°.86E, h55km, mb4.4, ML3.9, MW3.8*
*NEIC **06** 16:23:54.8±1.5, 34°.84N×26°.76E, h29km±11km, mb4.4/45, Error ellipse: s-maj=6.8km s-min=3.7km az=188.0*
*MOS **06** 16:23:54.6±1.0, 35°.00N×26°.67E, h33km, mb4.6/48, Error ellipse: s-maj=5.9km s-min=4.0km az=117.9*
ISC 06 16:23:53.7±0.3, 34°.80N±0°.03×26°.88E±0°.02, h23km, n764, σ1s.48/811, mb4.4/66, MS3.3/5, 12C-8D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	0.63	301	ePN	Pb	16 24 04.2	-1.8
ZKR				eSN	Sb	16 24 12.0	-2.4
ZKR	Zakros	0.63	301	ePn	Pb	16 24 04.2	-1.8
ZKR				eSn	Sb	16 24 12.0	-2.4
KARP	Karpathos	0.79	17	ePN	Pb	16 24 08.1	-0.6
KARP				eSN	Sb	16 24 17.1	-1.9
KARP	Karpathos	0.79	17	ePn	Pb	16 24 08.1	-0.6
KARP				eSn	Sb	16 24 17.1	-1.9
NPS	Neapolis	1.14	295	P	Pb	16 24 14.8	+0.1
NPS				S	Sb	16 24 28.5	-0.5
NPS	Neapolis	1.14	295	P	Pn	16 24 13.7	-0.5
NPS				S	Sn	16 24 31.7	+2.6
NPS	Neapolis	1.14	295	P	Pb	16 24 14.8	+0.1
NPS				S	Sb	16 24 28.5	-0.5
NPS	Neapolis	1.14	295	ePN	Pn	16 24 13.3	-0.9
NPS				eSN	Sb	16 24 27.3	-1.7
NPS	Neapolis	1.14	295	ePn	Pn	16 24 13.3	-0.9
NPS	Neapolis	1.14	295	P	Pn	16 24 13.7	-0.5
NPS				eSn	Sb	16 24 27.3	-1.7
NPS				S	Sb	16 24 28.5	-0.5
LAST	Lasithi	1.20	288	ePN	Pn	16 24 15.0	-0.2
LAST				eSN	Sb	16 24 31.1	+0.1
LAST	Lasithi	1.20	288	ePn	Pn	16 24 15.0	-0.2
LAST				eSn	Sb	16 24 31.1	+0.1
SIVA	Sivas	1.71	278	P	Pb	16 24 24.4	0.0
SIVA	Sivas	1.71	278	P	Pb	16 24 24.4	0.0
SIVA				S	Sb	16 24 45.7	+0.2
SIVA	Sivas	1.71	278	ePN	Pb	16 24 24.5	0.0
SIVA	Sivas	1.71	278	P	Pb	16 24 24.4	0.0
SIVA				S	Sb	16 24 45.7	+0.2
ARG	Arkhangelos	1.75	35	P	Pb	16 24 25.6	+0.6
ARG				S	Sb	16 24 47.3	+0.8
ARG	Arkhangelos	1.75	35	P	Pb	16 24 25.6	+0.6
ARG	Arkhangelos	1.75	35	P	Pb	16 24 25.6	+0.6
ARG				S	Sb	16 24 47.3	+0.8
ARG	Arkhangelos	1.75	35	ePN	Pb	16 24 25.4	+0.4
ARG				eSB	Sb	16 24 51.2	+4.7
ARG	Arkhangelos	1.75	35	P	Pb	16 24 25.6	+0.6
ARG				S	Sb	16 24 47.3	+0.8
ARG				eSb	Sb	16 24 51.2	+4.7
NIS2	Nisyros Isl.	1.79	8	P	Pb	16 24 26.1	+0.2
NIS1	Nisyros Isl.	1.82	8	ePN	Pn	16 24 25.1	+1.5
NIS1	Nisyros Isl.	1.82	8	ePn	Pn	16 24 25.1	+1.5
DAT	Datca	2.01	16	ePN	Pn	16 24 27.4	+1.1
DAT				eSN	Sb	16 24 54.0	-0.3
DAT	Datca	2.01	16	ePn	Pn	16 24 27.4	+1.1
DAT				eSn	Sb	16 24 54.0	-0.3
VAM	Vamos	2.28	286	P	Pb	16 24 32.3	-1.8
VAM	Vamos	2.28	286	ePN	Pb	16 24 32.6	-1.5
VAM	Vamos	2.28	286	P	Pb	16 24 32.3	-1.8
VAM	Vamos	2.28	286	ePn	Pb	16 24 32.6	-1.5
BODT	Bodrum	2.29	9	ePN	Pn	16 24 31.5	+1.4
BODT	Bodrum	2.29	9	ePn	Pn	16 24 31.5	+1.4
GVD	Gavdhos	2.29	272	ePn	Pb	16 24 32.1	-2.3
GVD	Gavdhos	2.29	272	ePN	Pb	16 24 32.3	-2.1
GVD	Gavdhos	2.29	272	ePn	Pb	16 24 32.1	-2.3
DALY	Dalyan (Mu˜la	2.48	35	ePN	Pn	16 24 34.5	+1.9
DALY	Dalyan (Mu˜la	2.48	35	ePn	Pn	16 24 34.5	+1.9
APE	Apeiranthos	2.52	335	ePN	Pn	16 24 33.2	0.0
APE	Apeiranthos	2.52	335	P	Pn	16 24 33.8	+0.6
APE				S	Sn	16 25 06.6	+3.4
APE	Apeiranthos	2.52	335	ePB	Pn	16 24 34.0	+0.8
APE				eSN	Sn	16 25 05.7	+2.5
APE	Apeiranthos	2.52	335	ePn	Pn	16 24 33.2	0.0
APE	Apeiranthos	2.52	335	P	Pn	16 24 33.8	+0.6
APE	Apeiranthos	2.52	335	ePb	Pn	16 24 34.0	+0.8
APE				eSn	Sn	16 25 05.7	+2.5
APE				S	Sn	16 25 06.6	+3.4
FETY	Fethiye	2.57	44	ePN	Pn	16 24 35.2	+1.3
FETY	Fethiye	2.57	44	ePn	Pn	16 24 35.2	+1.3
KSL	Kastellorizon	2.59	58	ePN	Pn	16 24 36.4	+2.2
YER	Yerkesik	2.60	26	ePN	Pn	16 24 36.2	+1.9
YER	Yerkesik	2.60	26	ePn	Pn	16 24 36.2	+1.9
MLSB	Milas	2.60	16	ePN	Pn	16 24 35.5	+1.2
MLSB	Milas	2.60	16	ePn	Pn	16 24 35.5	+1.2
AKAS	Kas	2.65	56	iP	Pn	16 24 37.0	+1.9
AKAS	Kas	2.65	56	iP	Pn	16 24 37.0	+1.9
GCAM	G?zelcaml?	2.91	6	iP	Pn	16 24 34.4	-4.2
AYDN	Tasoluk	2.97	16	iP	Pn	16 24 41.5	+2.0
AYDN	Tasoluk	2.97	16	iP	Pn	16 24 41.5	+2.0
ANKY	Antikythira Is	3.11	291	ePN	Pn	16 24 42.6	+1.3
ANKY	Antikythira Is	3.11	291	ePn	Pn	16 24 42.6	+1.3
ELL	Elmali	3.14	51	ePN	Pn	16 24 43.9	+2.0
ELL	Elmali	3.14	51	ePn	Pn	16 24 43.9	+2.0
GLHS	Glhisar (BURDU	3.17	41	ePN	Pn	16 24 44.3	+2.0
GLHS	Glhisar (BURDU	3.17	41	ePn	Pn	16 24 44.3	+2.0
GOLH	Golhisar	3.27	41	iP	Pn	16 24 44.0	+0.4
GOLH	Golhisar	3.27	41	iP	Pn	16 24 44.0	+0.4
DNZL	Cakiroluk	3.38	31	iP	Pn	16 24 46.1	+0.9
DNZL	Cakiroluk	3.38	31	iP	Pn	16 24 46.1	+0.9
DENT	Denizli	3.43	30	ePN	Pn	16 24 47.0	+1.3
DENT	Denizli	3.43	30	ePn	Pn	16 24 47.0	+1.3
KYTH	Kithira	3.46	296	P	Pn	16 24 46.7	+0.5
KYTH	Kithira	3.46	296	ePN	Pn	16 24 46.9	+0.7
KYTH	Kithira	3.46	296	P	Pn	16 24 46.7	+0.5
BLCB	Balcova	3.58	2	ePN	Pn	16 24 48.7	+0.9
BLCB	Balcova	3.58	2	ePn	Pn	16 24 48.7	+0.9
IZM	Izmir	3.61	5	ePN	Pn	16 24 48.4	+0.2
IZM	Izmir	3.61	5	ePn	Pn	16 24 48.4	+0.2
CHOS	Chios island	3.64	350	P	Pn	16 24 49.5	+0.8
CHOS	Chios island	3.64	350	ePN	Pn	16 24 50.0	+1.3
CHOS	Chios island	3.64	350	P	Pn	16 24 49.5	+0.8
CHOS	Chios island	3.64	350	ePn	Pn	16 24 50.0	+1.3
LTBQ	Tobruq	3.68	223	iP	Pb	16 24 52.8	-5.3
	SNR=23						
LTBQ				eS	Sn	16 25 35.4	+3.5
	SNR=23						
HMAT	Matruh	3.70	177	P	Pn	16 24 49.0	-0.4
	baz=178						
HMAT				AMP		16 25 00.0	
	comp=E,220µm,0.7s,logA/T=5.5,baz=178						
HMAT	Matruh	3.70	177	P	Pn	16 24 49.0	-0.4
ANTB	Antalya	3.72	55	ePN	Pn	16 24 51.1	+1.4
ANTB	Antalya	3.72	55	ePn	Pn	16 24 51.1	+1.4
VLI	Veliai	3.73	302	P	Pn	16 24 50.3	+0.4
VLI	Veliai	3.73	302	ePN	Pn	16 24 50.6	+0.7
VLI	Veliai	3.73	302	P	Pn	16 24 50.3	+0.4
VLI	Veliai	3.73	302	ePn	Pn	16 24 50.6	+0.7
KULA	Kula-Manisa	3.98	21	ePN	Pn	16 24 54.1	+0.8
KULA	Kula-Manisa	3.98	21	ePn	Pn	16 24 54.1	+0.8
DIDY	Didyma	3.99	313	P	Pn	16 24 54.0	+0.4
DIDY	Didyma	3.99	313	P	Pn	16 24 54.0	+0.4
DID	Didima	4.00	314	P	Pn	16 24 54.3	+0.7
DID				S	Sn	16 25 42.0	+2.3
DID	Didima	4.00	314	ePN	Pn	16 24 54.5	+0.9
DID	Didima	4.00	314	P	Pn	16 24 54.3	+0.7
DID				S	Sn	16 25 42.0	+2.3
BCK	Bucak	4.01	47	ePN	Pn	16 24 55.5	+1.7
BCK	Bucak	4.01	47	ePn	Pn	16 24 55.5	+1.7
ATHU	Athens Univers	4.03	323	P	Pn	16 24 55.3	+1.3
ATHU	Athens Univers	4.03	323	P	Pn	16 24 55.3	+1.3
NAIG	Nisos Aigina	4.03	318	ePN	Pn	16 24 55.0	+1.0
NAIG	Nisos Aigina	4.03	318	ePn	Pn	16 24 55.0	+1.0
PTL	Penteli	4.05	324	P	Pn	16 24 56.2	+1.9
PTL	Penteli	4.05	324	ePN	Pn	16 24 56.0	+1.7
PTL	Penteli	4.05	324	P	Pn	16 24 56.2	+1.9
ATH	Athens Observa	4.07	322	P	Pn	16 24 56.2	+1.8
ATH	Athens Observa	4.07	322	ePN	Pn	16 24 56.3	+1.8
ATH	Athens Observa	4.07	322	P	Pn	16 24 56.2	+1.8
KHL	Karahalli	4.11	30	ePN	Pn	16 24 56.4	+1.2
KHL	Karahalli	4.11	30	ePn	Pn	16 24 56.4	+1.2
AKHS	Akhisar	4.14	10	iP	Pn	16 24 57.2	+1.6
AKHS	Akhisar	4.14	10	iP	Pn	16 24 57.2	+1.6
AKS	Akhisar	4.14	10	ePN	Pn	16 24 56.1	+0.6
AKS	Akhisar	4.14	10	ePn	Pn	16 24 56.1	+0.6
DYR	Agios Nikonas	4.18	299	P	Pn	16 24 58.0	+1.9
DYR	Agios Nikonas	4.18	299	ePN	Pn	16 24 57.9	+1.9
DYR	Agios Nikonas	4.18	299	P	Pn	16 24 58.0	+1.9
ISP	Isparta	4.22	43	ePN	Pn	16 24 58.5	+1.8
ISP	Isparta	4.22	43	eP	Pn	16 24 57.4	+0.7
ISP	Isparta	4.22	43	ePn	Pn	16 24 57.4	+0.7
ISP	Isparta	4.22	43	eP	Pn	16 24 57.4	+0.7
VLX	Vlachokerasia	4.46	306	P	Pn	16 25 00.6	+0.7
VLX	Vlachokerasia	4.46	306	ePN	Pn	16 25 00.9	+1.0
VLX	Vlachokerasia	4.46	306	P	Pn	16 25 00.6	+0.7
VLX	Vlachokerasia	4.46	306	ePn	Pn	16 25 00.9	+1.0
PRK	Paraskevi	4.47	354	ePN	Pn	16 25 02.2	+2.2
PRK	Paraskevi	4.47	354	ePn	Pn	16 25 02.2	+2.2
SIGR	SIGRI	4.48	350	P	Pn	16 25 01.2	+1.0
SIGR	SIGRI	4.48	350	P	Pn	16 25 01.2	+1.0
DEMI	Demirci	4.49	19	iP	Pn	16 25 01.6	+1.2
DEMI	Demirci	4.49	19	iP	Pn	16 25 01.6	+1.2
AKMC	Akamas	4.49	86	P	Pn	16 25 00.8	+0.5
AKMC	Akamas	4.49	86	P	Pn	16 25 00.8	+0.5
PPCY	Paphos	4.50	87	P	Pn	16 25 00.3	-0.1
PPCY	Paphos	4.50	87	P	Pn	16 25 00.3	-0.1
LTK	Loutraki	4.51	317	P	Pn	16 25 01.6	+1.1
LTK	Loutraki	4.51	317	ePN	Pn	16 25 01.8	+1.3
LTK	Loutraki	4.51	317	P	Pn	16 25 01.6	+1.1
ITM	Ithomi	4.67	302	P	Pn	16 25 03.6	+0.8
ITM	Ithomi	4.67	302	ePN	Pn	16 25 03.5	+0.8
ITM	Ithomi	4.67	302	P	Pn	16 25 03.6	+0.8
PYL	PYLOS	4.67	298	ePN	Pn	16 25 04.5	+1.8
PYL	PYLOS	4.67	298	ePn	Pn	16 25 04.5	+1.8
ALFC	Alevga	4.71	84	P	Pn	16 25 04.0	+0.6
	comp=E,14nm,0.8s						
ALFC				S	Sn	16 25 59.1	+1.7
ALFC	Alevga	4.71	84	P	Pn	16 25 04.0	+0.6
	comp=E,14nm,0.8s						
ALFC				S	Sn	16 25 59.1	+1.7
GDZ	Gediz	4.76	25	iP	Pn	16 25 00.0	-4.2
SHUT	Suhut-Afyon	4.77	37	ePN	Pn	16 25 05.9	+1.6
SHUT	Suhut-Afyon	4.77	37	ePn	Pn	16 25 05.9	+1.6
GUR	Goura	4.82	312	P	Pn	16 25 05.5	+0.6
GUR	Goura	4.82	312	ePN	Pn	16 25 05.9	+1.0
GUR	Goura	4.82	312	P	Pn	16 25 05.5	+0.6
GUR	Goura	4.82	312	ePn	Pn	16 25 05.9	+1.0
BALB	Balikesir	4.90	9	ePN	Pn	16 25 06.6	+0.7
BALB	Balikesir	4.90	9	ePn	Pn	16 25 06.6	+0.7
LKR	Lokris	4.95	322	P	Pn	16 25 08.2	+1.6
LKR	Lokris	4.95	322	ePN	Pn	16 25 08.2	+1.6
LKR	Lokris	4.95	322	ePn	Pn	16 25 08.2	+1.6
LEF	Lefka	4.95	85	ePN	Pn	16 25 06.9	+0.3
LEF	Lefka	4.95	85	ePn	Pn	16 25 06.9	+0.3
DURS	Dursunbey	4.96	14	iP	Pn	16 25 08.1	+1.2
DURS	Dursunbey	4.96	14	iP	Pn	16 25 08.1	+1.2
ATAL	Atalanti	4.97	323	P	Pn	16 25 08.4	+1.5
ATAL	Atalanti	4.97	323	P	Pn	16 25 08.4	+1.5
BALY	Balya	4.97	7	iP	Pn	16 25 11.0	+4.0
BALY	Balya	4.97	7	iP	Pn	16 25 11.0	+4.0
ALT	Altintas	4.98	30	ePN	Pn	16 25 07.6	+0.5
ALT	Altintas	4.98	30	ePn	Pn	16 25 07.6	+0.5
AOS	Alonnisos	4.98	332	ePN	Pn	16 25 10.3	+3.3
AOS	Alonnisos	4.98	332	ePn	Pn	16 25 10.3	+3.3
AMT	Artemida-Makis	4.99	305	P	Pn	16 25 08.6	+1.4
AMT	Artemida-Makis	4.99	305	ePN	Pn	16 25 08.6	+1.4
AMT	Artemida-Makis	4.99	305	P	Pn	16 25 08.6	+1.4
DST	Dursunbey	5.00	16	ePN	Pn	16 25 07.3	0.0
DST	Dursunbey	5.00	16	ePn	Pn	16 25 07.3	0.0
KLV	Kalavryta, Ach	5.00	312	ePN	Pn	16 25 08.4	+1.0
KLV	Kalavryta, Ach	5.00	312	ePn	Pn	16 25 08.4	+1.0
EZN	Ezine	5.04	355	ePN	Pn	16 25 07.6	-0.2
TVSB	Tavsanli	5.08	23	ePN	Pn	16 25 09.0	+0.4
TVSB	Tavsanli	5.08	23	ePn	Pn	16 25 09.0	+0.4
MAMC	Mammari	5.22	84	P	Pn	16 25 11.5	+1.2
MAMC	Mammari	5.22	84	P	Pn	16 25 11.5	+1.2
LAKA	Lakka	5.23	312	P	Pn	16 25 11.6	+1.1
LAKA	Lakka	5.23	312	ePN	Pn	16 25 11.6	+1.1
LAKA	Lakka	5.23	312	ePn	Pn	16 25 11.6	+1.1
KALE	Kalithea	5.23	315	P	Pn	16 25 12.5	+2.0
KALE	Kalithea	5.23	315	ePN	Pn	16 25 12.6	+2.0
KALE	Kalithea	5.23	315	P	Pn	16 25 12.5	+2.0
ERMK	Ermenek	5.25	68	iP	Pn	16 25 11.7	+0.8
ERMK	Ermenek	5.25	68	iP	Pn	16 25 11.7	+0.8
LIA	Limnos Island	5.27	346	ePN	Pn	16 25 13.4	+2.4
LIA	Limnos Island	5.27	346	ePn	Pn	16 25 13.4	+2.4
GONE	Gonen-Balikesi	5.28	7	ePN	Pn	16 25 10.7	-0.5
GONE	Gonen-Balikesi	5.28	7	ePn	Pn	16 25 10.7	-0.5
CSS	Prodhromos	5.31	86	P	Pn	16 25 12.5	+0.9
	comp=E,5.4nm,0.6s						
CSS				S	Sn	16 26 14.1	+2.1
CSS	Prodhromos	5.31	86	ePN	Pn	16 25 12.3	+0.7
CSS	Prodhromos	5.31	86	P	Pn	16 25 12.3	+0.7
CSS				S	Sn	16 26 13.3	+1.3
CSS	Prodhromos	5.31	86	ePn	Pn	16 25 11.9	+0.3
	comp=E,32nm,0.6s						
CSS	Prodhromos	5.31	86	ePn	Pn	16 25 11.9	+0.3
	comp=E,32nm,0.6s						
CSS	Prodhromos	5.31	86	P	Pn	16 25 12.3	+0.7

CSS S **Sn** **16 26 13.3 +1.3**
CSS Sn **Sn** **16 26 13.6 +1.6**
NEO Neokhori 5.37 328 *e*PN **Pn** **16 25 14.3 +1.9**
NEO Neokhori 5.37 328 *e*Pn **Pn** **16 25 14.3 +1.9**
EFP Efpalio 5.39 314 *e*PN **Pn** **16 25 15.8 +3.1**
EFP Efpalio 5.39 314 *e*Pn **Pn** **16 25 15.8 +3.1**
XOR Xorichti 5.43 328 P **Pn** **16 25 14.9 +1.7**
XOR Xorichti 5.43 328 P **Pn** **16 25 14.9 +1.7**
RLS Riolos of Patr 5.44 308 *e*PN **Pn** **16 25 14.9 +1.5**
RLS Riolos of Patr 5.44 308 *e*Pn **Pn** **16 25 14.9 +1.5**
LFK Lefkose 5.48 83 *e*PN **Pn** **16 25 14.7 +0.7**
LFK Lefkose 5.48 83 *e*Pn **Pn** **16 25 14.7 +0.7**
LPK Lapseki 5.57 359 *e*PN **Pn** **16 25 15.0 -0.1**
LPK Lapseki 5.57 359 *e*Pn **Pn** **16 25 15.0 -0.1**
AGG Agios Georgios 5.57 321 P **Pn** **16 25 16.8 +1.6**
AGG Agios Georgios 5.57 321 *e*PN **Pn** **16 25 16.6 +1.4**
AGG Agios Georgios 5.57 321 P **Pn** **16 25 16.8 +1.6**
LADK Ladik-KONYA 5.58 51 *e*PN **Pn** **16 25 16.4 +1.1**
LADK Ladik-KONYA 5.58 51 *e*Pn **Pn** **16 25 16.4 +1.1**
KCTX Karacabey (Bur 5.58 12 *e*PN **Pn** **16 25 15.7 +0.3**
KCTX Karacabey (Bur 5.58 12 *e*Pn **Pn** **16 25 15.7 +0.3**
EDC Edincik 5.60 8 *e*PN **Pn** **16 25 15.0 -0.5**
EDC Edincik 5.60 8 *e*Pn **Pn** **16 25 15.0 -0.5**
KRBG Karabiga-Canak 5.60 3 *e*PN **Pn** **16 25 14.7 -0.8**
GELI Tayfur-Gelibol 5.60 357 *e*PN **Pn** **16 25 14.7 -0.8**
GELI Tayfur-Gelibol 5.60 357 *e*Pn **Pn** **16 25 14.7 -0.8**
BNT Bandirma 5.61 8 *e*PN **Pn** **16 25 15.7 0.0**
BNT Bandirma 5.61 8 *e*Pn **Pn** **16 25 15.7 0.0**
SWA2 5.67 193 P **Pn** **16 25 16.8 +0.3**
baz=193
SWA2 AMP 16 26 00.0
comp=E,300µm,0.4s,logA/T=5.8,baz=193
SWA2 S **Sn** **16 26 16.1 -4.7**
baz=193
SWA2 5.67 193 P **Pn** **16 25 16.8 +0.3**
MAKR Makrakomi, Fth 5.67 319 P **Pn** **16 25 18.6 +2.0**
MAKR Makrakomi, Fth 5.67 319 P **Pn** **16 25 18.6 +2.0**
KIZT Kizilcal 5.72 43 *e*PN **Pn** **16 25 18.1 +0.8**
KIZT Kizilcal 5.72 43 *e*Pn **Pn** **16 25 18.1 +0.8**
SMTH Samothraki Isl 5.76 350 *e*PN **Pn** **16 25 19.9 +2.1**
SMTH Samothraki Isl 5.76 350 *e*Pn **Pn** **16 25 19.9 +2.1**
MRMT Marmara Adasi 5.83 5 *e*PN **Pn** **16 25 18.1 -0.6**
ERIK Erikli-Kesan 5.87 357 *e*PN **Pn** **16 25 18.1 -1.2**
ERIK Erikli-Kesan 5.87 357 *e*Pn **Pn** **16 25 18.1 -1.2**
PHNC Paralimni 5.88 86 P **Pn** **16 25 21.5 +2.0**
comp=E,4.1nm,0.7s
PHNC S **Sn** **16 26 28.1 +1.9**
PHNC Paralimni 5.88 86 P **Pn** **16 25 21.5 +2.0**
comp=E,4.1nm,0.7s
PHNC S **Sn** **16 26 28.1 +1.9**
CAVI Cavuskoy 5.89 23 *e*PN **Pn** **16 25 19.4 -0.1**
CAVI Cavuskoy 5.89 23 *e*Pn **Pn** **16 25 19.4 -0.1**
IZI Iznik 5.90 20 *e*PN **Pn** **16 25 19.4 -0.4**
IZI Iznik 5.90 20 *e*Pn **Pn** **16 25 19.4 -0.4**
HMYD Mayadein 5.99 145 P **Pn** **16 25 20.3 -0.7**
baz=146
HMYD Mayadein 5.99 145 P **Pn** **16 25 20.3 -0.7**
EREN Erenkoy 6.02 81 *e*PN **Pn** **16 25 21.8 +0.5**
EREN Erenkoy 6.02 81 *e*Pn **Pn** **16 25 21.8 +0.5**
HNAT Natroun 6.05 147 P **Pn** **16 25 22.2 +0.5**
baz=148
HNAT Natroun 6.05 147 P **Pn** **16 25 22.2 +0.5**
VLS Valsamata 6.08 305 *e*PN **Pn** **16 25 23.0 +0.8**
VLS Valsamata 6.08 305 *e*Pn **Pn** **16 25 23.0 +0.8**
ALN Alexandroupoli 6.13 354 *e*PN **Pn** **16 25 25.5 +2.8**
ALN Alexandroupoli 6.13 354 *e*Pn **Pn** **16 25 25.5 +2.8**
THL Klokotos Trika 6.14 322 P **Pn** **16 25 24.5 +1.6**
THL Klokotos Trika 6.14 322 *e*PN **Pn** **16 25 24.6 +1.6**
THL Klokotos Trika 6.14 322 P **Pn** **16 25 24.5 +1.6**
PLG Polygyros 6.20 335 *e*PN **Pn** **16 25 26.5 +2.7**
PLG Polygyros 6.20 335 *e*Pn **Pn** **16 25 26.5 +2.7**
GULT Gulveren 6.32 26 *e*PN **Pn** **16 25 26.2 +0.6**
GULT Gulveren 6.32 26 *e*Pn **Pn** **16 25 26.2 +0.6**
SULT Sultanhani-AKS 6.33 56 *e*PN **Pn** **16 25 27.1 +1.4**
SULT Sultanhani-AKS 6.33 56 *e*Pn **Pn** **16 25 27.1 +1.4**
LIT Litokhoron 6.34 328 *e*PN **Pn** **16 25 27.5 +1.8**
LIT Litokhoron 6.34 328 *e*Pn **Pn** **16 25 27.5 +1.8**
CRLT Corlu 6.36 6 *e*PN **Pn** **16 25 25.5 -0.5**
CRLT Corlu 6.36 6 *e*Pn **Pn** **16 25 25.5 -0.5**
LKD2 Lefkada island 6.38 310 P **Pn** **16 25 27.2 +0.8**
LKD2 Lefkada island 6.38 310 *e*PN **Pn** **16 25 26.9 +0.6**
LKD2 Lefkada island 6.38 310 *e*Pn **Pn** **16 25 26.9 +0.6**
LKD2 Lefkada island 6.38 310 P **Pn** **16 25 27.2 +0.8**
KOT Kottamia 6.41 138 P **Pn** **16 25 24.5 -2.3**
baz=139
KOT AMP 16 26 00.0
comp=E,110µm,0.6s,logA/T=5.2,baz=139
KOT S Sn 16 26 31.9 -7.3
baz=139
KOT Kottamia 6.41 138 P **Pn** **16 25 24.5 -2.3**
ELBA Catalca 6.46 10 *i* P **Sb** **16 26 58.5 -3.5**
HSAF As Saff 6.51 141 P **Pn** **16 25 27.7 -0.4**
baz=142
HSAF As Saff 6.51 141 P **Pn** **16 25 27.7 -0.4**
HHAG Hagoal 6.54 136 P **Pn** **16 25 26.5 -2.1**
baz=137
HHAG Hagoal 6.54 136 P **Pn** **16 25 26.5 -2.1**
CTKS Kestanelik-??a 6.56 11 *e*PN **Pn** **16 25 27.9 -0.8**
CTKS Kestanelik-??a 6.56 11 *e*Pn **Pn** **16 25 27.9 -0.8**
GLL Jalalah 6.62 140 P **Pn** **16 25 29.5 -0.2**
baz=142
GLL Jalalah 6.62 140 P **Pn** **16 25 29.5 -0.2**
MDUB Mudurnu 6.62 30 *e*PN **Pn** **16 25 29.9 +0.2**
MDUB Mudurnu 6.62 30 *e*Pn **Pn** **16 25 29.9 +0.2**
SOH Sokhos 6.63 336 *e*PN **Pn** **16 25 32.2 +2.5**
SOH Sokhos 6.63 336 *e*Pn **Pn** **16 25 32.2 +2.5**
AMAG Maghara 6.75 126 P **Pn** **16 25 30.0 -1.5**
baz=127
AMAG Maghara 6.75 126 P **Pn** **16 25 30.0 -1.5**
LJBD Adjabya 6.82 237 *i* P **Pn** **16 25 33.5 +1.1**
SNR=22
KZN Kozani 6.83 325 *e*PN **Pn** **16 25 30.7 -1.8**
GULE Gulek 6.87 67 *i* P **Pn** **16 25 32.0 -1.1**
GULE Gulek 6.87 67 *i* P **Pn** **16 25 32.0 -1.1**
NVR Nevrokopi 6.96 341 *e*PN **Pn** **16 25 36.6 +2.3**
NVR Nevrokopi 6.96 341 *e*Pn **Pn** **16 25 36.6 +2.3**
EDRB Edirne 7.04 359 *e*PN **Pn** **16 25 34.3 -1.0**
EDRB Edirne 7.04 359 *e*Pn **Pn** **16 25 34.3 -1.0**
NIG Nigde 7.05 60 *e*PN **Pn** **16 25 36.3 +0.5**
NIG Nigde 7.05 60 *e*Pn **Pn** **16 25 36.3 +0.5**
SUZ 7.06 133 P **Pn** **16 25 35.5 -0.1**
baz=134
SUZ 7.06 133 P **Pn** **16 25 35.5 -0.1**
GRG Griva 7.09 331 *e*PN **Pn** **16 25 38.2 +2.1**
GRG Griva 7.09 331 *e*Pn **Pn** **16 25 38.2 +2.1**
KAMT Kaman 7.12 48 *e*PN **Pn** **16 25 36.6 +0.1**
KAMT Kaman 7.12 48 *e*Pn **Pn** **16 25 36.6 +0.1**
BR131 Keskin Array S 7.30 46 *e*P **Pn** **16 25 40.8 +1.8**
comp=E,4.7nm,0.8s
BRTR Keskin Array B 7.30 46 Pn **Pn** **16 25 40.1 +1.1**
BRTR Sn **Sn** **16 27 01.2 +0.1**
BRTR Keskin Array B 7.30 46 Pn **Pn** **16 25 40.1 +1.1**
comp=E,0.5nm,0.3s,baz=221,slow=11,SNR=16
BRTR Sn **Sn** **16 27 01.2 +0.1**
comp=E,0.4nm,0.3s,baz=213,slow=25,SNR=6.0
BRTR Keskin Array B 7.30 46 S **Sn** **16 27 01.3 +0.1**
ZAF 7.31 137 P **Pn** **16 25 38.4 -0.6**
baz=138
ZAF 7.31 137 P **Pn** **16 25 38.4 -0.6**
MMA0 Mount Meron ar 7.31 102 Pn **Pn** **16 25 39.9 +0.8**
MMA0 Sn **Sn** **16 26 59.6 -1.8**
MMAI Mount Meron Ar 7.31 102 Pn **Pn** **16 25 39.0 -0.1**
MMAI Sn **Sn** **16 27 02.1 +0.8**
MMAI Mount Meron Ar 7.31 102 Pn **Pn** **16 25 39.0 -0.1**
comp=E,5.4nm,0.3s,baz=288,slow=11,SNR=14
MMAI Sn **Sn** **16 27 02.2 +0.8**
comp=E,9.5nm,0.3s,baz=284,slow=24,SNR=7.7
MMAI Mount Meron Ar 7.31 102 Pn **Pn** **16 25 39.0 -0.1**
MMAI Sn **Sn** **16 27 02.2 +0.8**
VAY Valandovo 7.34 334 *e*Pn Pn **16 25 46.3 +6.8**
FNA Florina 7.39 326 *e*PN **Pn** **16 25 42.8 +2.6**
FNA Florina 7.39 326 *e*Pn **Pn** **16 25 42.8 +2.6**
KZIT Kziot 7.42 119 Pn **Pn** **16 25 39.3 -1.3**
KSDI Kefar Szold 7.47 100 Pn **Pn** **16 25 41.8 +0.6**
KSDI Sn **Sn** **16 27 03.1 -2.1**
KEK Kerkira 7.48 313 *e*PN **Pn** **16 25 42.5 +1.2**
KEK Kerkira 7.48 313 *e*Pn **Pn** **16 25 42.5 +1.2**
MMLI Mount Malkishu 7.51 106 Pn **Pn** **16 25 41.5 -0.3**
MMLI Sn **Sn** **16 27 04.1 -2.1**
ARNB Al Arnab 7.51 79 *e*P **Pn** **16 25 40.6 -1.3**
ARNB *e*S **Sn** **16 27 01.8 -4.6**
ARNB AML AML 16 27 10.2
comp=Z,58nm,0.6s
ARNB AML AML 16 27 18.6
comp=N,30nm,0.7s
ARNB AML AML 16 27 29.4
comp=E,39nm,0.7s
ARNB Al Arnab 7.51 79 *e*P **Pn** **16 25 40.6 -1.3**
ARNB *e*S Sn 16 27 00.3 -6.1
ARNB Al Arnab 7.51 79 *e*P **Pn** **16 25 40.6 -1.3**
SNR=45
ARNB *e*S **Sn** **16 27 01.8 -4.6**
comp=E,39nm,0.7s,SNR=40
CEYT Ceyhan 7.53 70 *e*PN **Pn** **16 25 41.7 -0.3**
CEYT Ceyhan 7.53 70 *e*Pn **Pn** **16 25 41.7 -0.3**
RTMI Retamim 7.55 117 Pn **Pn** **16 25 41.6 -0.8**
BRBR Barbar 7.65 98 *e*P **Pn** **16 25 43.4 -0.5**
BRBR *e*S **Sn** **16 27 07.4 -2.7**
BRBR AML AML 16 27 10.8
comp=Z,60nm,0.5s
BRBR AML AML 16 27 15.0
comp=N,60nm,0.8s
BRBR AML AML 16 27 17.9
comp=E,27nm,0.4s
BRBR Barbar 7.65 98 *e*P **Pn** **16 25 43.5 -0.5**
BRBR *e*S Sn 16 27 04.3 -5.8
BRBR Barbar 7.65 98 *e*P **Pn** **16 25 43.4 -0.5**
SNR=45
BRBR *e*S **Sn** **16 27 07.4 -2.7**
comp=E,27nm,0.4s,SNR=40
HMDT Nahal Hemdat 7.66 107 Pn **Pn** **16 25 44.0 +0.2**
HMDT Sn **Sn** **16 27 07.9 -1.9**
YTIR Yattir 7.71 114 Pn **Pn** **16 25 45.1 +0.4**
KOZT Kozan 7.72 67 *e*PN **Pn** **16 25 45.1 +0.4**
KOZT Kozan 7.72 67 *e*Pn **Pn** **16 25 45.1 +0.4**
HFRF Wahat Farafira 7.72 170 P **Pn** **16 25 45.5 +0.8**
baz=171
HFRF AMP 16 27 00.0
comp=E,60µm,0.8s,logA/T=4.9,baz=171
HFRF S Sn 16 27 04.7 -6.8
baz=171
HFRF Wahat Farafira 7.72 170 P **Pn** **16 25 45.5 +0.8**
HNKL Nakhl 7.72 127 P **Pn** **16 25 44.7 -0.1**
baz=128
HNKL Nakhl 7.72 127 P **Pn** **16 25 44.7 -0.1**
DSI Dead Sea 7.82 112 Pn **Pn** **16 25 45.6 -0.5**
DSI Sn **Sn** **16 27 11.6 -2.3**
COBT Iskenderun 7.83 75 *i* P **Pn** **16 25 49.0 +2.7**
COBT Iskenderun 7.83 75 *i* P **Pn** **16 25 49.0 +2.7**
HAWK Haweek 7.86 89 *e*P **Pn** **16 25 45.8 -0.8**
HAWK *e*S **Sn** **16 27 10.2 -4.8**
HAWK Haweek 7.86 89 *e*P **Pn** **16 25 45.2 -1.4**
HAWK *e*S **Sn** **16 27 10.8 -4.1**
HAWK Haweek 7.86 89 *e*P **Pn** **16 25 45.8 -0.8**
SNR=45
HAWK *e*S **Sn** **16 27 10.1 -4.8**
SNR=40
BTCH Batrach 7.92 78 *e*P **Pn** **16 25 45.7 -1.8**
BTCH *e*S **Sn** **16 27 11.9 -4.5**
BTCH AML AML 16 27 20.8
comp=N,79nm,0.5s
BTCH AML AML 16 27 22.0
comp=E,38nm,0.7s
BTCH AML AML 16 27 22.4
comp=Z,78nm,0.6s
BTCH Batrach 7.92 78 *e*P **Pn** **16 25 46.5 -1.0**
BTCH *e*S Sn 16 27 10.9 -5.5
BTCH Batrach 7.92 78 *e*P **Pn** **16 25 45.7 -1.8**
SNR=45
BTCH *e*S **Sn** **16 27 11.9 -4.5**
comp=Z,78nm,0.6s,SNR=40
KRMI Paran Flat 8.11 123 Pn **Pn** **16 25 49.8 -0.2**
KFRA Kufra 8.15 84 *e*P **Pn** **16 25 49.1 -1.6**
KFRA *e*S Sn 16 27 16.2 -5.9
KFRA AML AML 16 27 23.9
comp=E,202nm,0.4s
KFRA AML AML 16 27 26.3
comp=Z,92nm,0.9s
KFRA AML AML 16 27 36.3
comp=N,133nm,0.7s
KFRA Kufra 8.15 84 *e*P **Pn** **16 25 49.1 -1.6**
SNR=45
KFRA *e*S Sn 16 27 16.2 -5.9
comp=N,133nm,0.7s,SNR=40
PRNI Paran 8.16 121 Pn **Pn** **16 25 50.0 -0.8**
CORM Corum 8.17 47 *e*PN **Pn** **16 25 51.2 +0.2**
CORM Corum 8.17 47 *e*Pn **Pn** **16 25 51.2 +0.2**
GRB Gharib 8.23 141 P **Pn** **16 25 50.7 -1.0**
baz=141
GRB Gharib 8.23 141 P **Pn** **16 25 50.7 -1.0**
VTS Vitosha 8.29 341 *i*/P **Pn** **16 25 55.1 +2.4**
VTS Vitosha 8.29 341 *i*/P **Pn** **16 25 55.1 +2.4**
HRFI Mount Harif 8.37 122 Pn **Pn** **16 25 53.5 -0.2**
MBRI Mt Berech 8.43 124 Pn **Pn** **16 25 54.8 +0.2**
SALA Sala 8.47 101 *e*P **Pn** **16 25 54.5 -0.6**
SALA *e*S **Sn** **16 27 27.6 -2.5**
SALA AML AML 16 27 35.6
comp=N,19nm,0.6s
SALA AML AML 16 27 39.4
comp=E,2.4nm,0.5s
SALA AML AML 16 27 47.0
comp=Z,22nm,0.7s
SALA Sala 8.47 101 *e*P **Pn** **16 25 54.5 -0.6**
SNR=45
SALA *e*S **Sn** **16 27 27.5 -2.5**
comp=Z,22nm,0.7s,SNR=40
EIL Elat 8.54 125 Pn **Pn** **16 25 55.5 -0.4**
EIL Sn Sn 16 27 25.6 -5.9
EIL Elat 8.54 125 Pn **Pn** **16 25 55.5 -0.4**
comp=Z,1.5nm,0.3s,baz=332,slow=12,SNR=21
EIL Sn Sn 16 27 25.6 -5.9
comp=Z,3.3nm,0.3s,baz=290,slow=21,SNR=7.1
EIL LR LR 16 31 17.6
comp=Z,136nm,19.7s,baz=299,slow=51
EIL Elat 8.54 125 Pn **Pn** **16 25 55.5 -0.4**
HKAT Jabal Katrina 8.71 134 P **Pn** **16 25 58.2 -0.3**
baz=135
HKAT Jabal Katrina 8.71 134 P **Pn** **16 25 58.2 -0.3**
ASF Jabal al Asfar 8.77 105 Pn **Pn** **16 25 59.2 0.0**
ASF Sn **Sn** **16 27 32.8 -4.5**
ASF Jabal al Asfar 8.77 105 Pn **Pn** **16 25 59.2 0.0**
comp=Z,0.6nm,0.3s,baz=268,slow=5.7,SNR=5.8
ASF Sn **Sn** **16 27 32.8 -4.5**
comp=Z,0.5nm,0.3s,baz=24,slow=20,SNR=2.1
ZALF Zalf 8.90 99 *e*P **Pn** **16 26 01.8 +0.9**
ZALF *e*S **Sn** **16 27 37.6 -2.8**
ZALF AML AML 16 27 56.2
comp=E,8.3nm,0.6s
ZALF AML AML 16 28 01.8
comp=Z,14nm,0.7s
ZALF AML AML 16 28 14.8
comp=N,12nm,0.6s
ZALF Zalf 8.90 99 *e*P **Pn** **16 26 01.8 +0.9**
SNR=45
ZALF *e*S **Sn** **16 27 37.6 -2.8**
comp=N,12nm,0.6s,SNR=40
HDHB Dhahab 8.95 130 P **Pn** **16 26 01.1 -0.4**
baz=131
HDHB Dhahab 8.95 130 P **Pn** **16 26 01.1 -0.4**
TIP Timpagrande 9.20 301 *e*P **Pn** **16 26 02.8 -2.2**
comp=N,11nm,0.4s
CEL Celeste 9.49 295 *e*P **Pn** **16 26 07.7 -1.3**
comp=N,24nm,0.8s
CEL Celeste 9.49 295 *e*P **Pn** **16 26 07.7 -1.3**
comp=N,24nm,0.8s
TIRR Tirgusor 9.72 7 *e*P **Pn** **16 26 13.1 +1.0**
TIRR pmax pmax
comp=Z,18nm,1.1s
TIRR Tirgusor 9.72 7 *e*P **Pn** **16 26 13.1 +1.0**
comp=Z,18nm,1.1s
TIRR Tirgusor 9.72 7 *i*/P **Pn** **16 26 10.2 -1.9**
TIRR Tirgusor 9.72 7 *e*P **Pn** **16 26 13.1 +1.0**
comp=Z,18nm,1.1s
AKRG Al Kharijah 9.78 160 P **Pn** **16 26 13.3 +0.4**
baz=161
CUC Castrocucco 10.21 304 *e*P **Pn** **16 26 17.1 -1.8**
comp=Z,20nm,0.6s
GRUS Gruza 10.25 334 *e*Pn Pn **16 26 22.7 +3.3**
CFR Carcaliu 10.41 5 *i*/P **Pn** **16 26 24.1 +2.6**
CFR Carcaliu 10.41 5 *i*/P **Pn** **16 26 24.1 +2.6**
MLR Muntele Rosu 10.71 356 Pn Pn **16 26 29.7 +4.1**
MLR Muntele Rosu 10.71 356 *i*/P Pn **16 26 29.7 +4.1**
MLR Muntele Rosu 10.71 356 Pn Pn **16 26 29.7 +4.1**
comp=Z,0.1nm,0.3s,baz=242,slow=8.1,SNR=8.4
PLOR Plostina 11.04 359 *i*/P Pn **16 26 40.8 +11**
VRI Vrincioaia 11.06 359 *i*/P Pn **16 26 37.7 +7.3**
ANN Anapa 12.86 36 *e*P P **16 27 09.5 +3.9**
ANN pmax pmax
comp=E,54nm,1.1s
KEST Kesra 14.36 279 Pn **P** **16 27 21.1 -1.3**
KEST Kesra 14.36 279 Pn **P** **16 27 21.1 -1.3**
comp=Z,0.2nm,0.3s,baz=83,slow=0.7,SNR=11
AKH Akhalkalaki 14.64 58 P **Pn** **16 27 18.2 -1.3**
ONI Oni 15.09 54 P **Pn** **16 27 26.9 +1.5**
GNI Garni 15.15 64 Pn **Pn** **16 27 27.5 +1.1**
GNI Garni 15.15 64 Pn **Pn** **16 27 27.5 +1.1**
comp=Z,0.6nm,0.3s,baz=203,slow=13,SNR=2.8
GNI Garni 15.15 64 Pn **Pn** **16 27 27.5 +1.1**
GNI Garni 15.15 64 *i* P **Pn** **16 27 28.8 +2.4**
comp=Z,9.0nm,1.3s
KIV Kislovodsk 15.25 48 *e*P **P** **16 27 30.5 -1.8**
KIV pmax pmax
comp=Z,34nm,0.9s
KIV MLR MLR
comp=Z,72nm,12.0s
KBZ Khabaz 15.26 49 P **P** **16 27 32.0 -0.3**
KBZ Khabaz 15.26 49 Pn **P** **16 27 31.9 -0.3**
KBZ Khabaz 15.26 49 Pn **P** **16 27 31.9 -0.3**
comp=Z,0.2nm,0.3s,baz=252,slow=6.2,SNR=24
ZEI Tsey 15.46 54 *e*P **P** **16 27 33.2 -1.6**
ZEI pmax pmax
comp=Z,13nm,1.1s
ZEI Tsey 15.46 54 *e*P **P** **16 27 33.2 -1.6**
comp=Z,13nm,1.1s
GUDG Gudauri 15.72 56 P **P** **16 27 37.4 -0.3**
GUDG Gudauri 15.72 56 P **P** **16 27 37.4 -0.3**
AK02 Malin Array Si 15.94 5 *e*P **P** **16 27 39.0 -0.8**
AK02 Malin Array Si 15.94 5 *e*P **P** **16 27 39.0 -0.8**
PGF Pioggiola 15.95 304 *e*P **Pn** **16 27 35.0 -1.6**
comp=Z,8.6nm,0.6s
PGF Pioggiola 15.95 304 *e*P **Pn** **16 27 35.0 -1.6**
PGF pmax pmax
comp=Z,9.0nm,0.6s
PGF Pioggiola 15.95 304 *e*P **Pn** **16 27 35.0 -1.6**
comp=Z,8.6nm,0.6s
KIEV Kiev 15.98 5 *e*P **P** **16 27 39.1 -1.1**
KIEV pmax pmax
comp=Z,9.0nm,0.8s
KIEV Kiev 15.98 5 *e*P **P** **16 27 39.1 -1.1**
comp=Z,8.9nm,0.8s
KIEV Kiev 15.98 5 *e*P **P** **16 27 39.1 -1.1**
comp=Z,8.9nm,0.8s
AKASG Malin Array Be 15.99 5*c*e**P** **P** **16 27 40.4 +0.1**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 15.99 5 Pn **P** **16 27 39.1 -1.2**
AKASG Malin Array Be 15.99 5 Pn **P** **16 27 39.1 -1.2**
comp=Z,2.6nm,0.3s,baz=193,slow=11,SNR=12
AKASG Malin Array Be 15.99 5 Pn **P** **16 27 39.1 -1.2**
AKASG Malin Array Be 15.99 5 *e*P **P** **16 27 40.4 +0.1**
comp=Z,4.0nm,0.6s
ABTA Abfaltersbach 16.12 322 ⇓ *i* Pn **Pn** **16 27 36.8 -2.0**
comp=Z,6.4nm,0.7s
ABTA Abfaltersbach 16.12 322 ⇓ *i* P **Pn** **16 27 36.8 -2.0**
comp=Z,6.4nm,0.7s
VRAC Vranov 16.36 336 Pn **Pn** **16 27 43.3 +1.5**
VRAC Vranov 16.36 336 Pn **Pn** **16 27 43.3 +1.5**
comp=Z,0.4nm,0.3s,baz=134,slow=12,SNR=2.6
VRAC Vranov 16.36 336 P **Pn** **16 27 43.3 +1.5**
GERES GERESS Array B 17.09 329 Pn **Pn** **16 27 50.0 -1.1**
GERES GERESS Array B 17.09 329 Pn **Pn** **16 27 50.0 -1.1**
comp=Z,0.2nm,0.3s,baz=156,slow=13,SNR=6.5
GERES GERESS Array B 17.09 329 Pn **Pn** **16 27 50.0 -1.1**
FETA Feichten 17.22 320 ⇑ *i* Pn **P** **16 27 54.2 -0.1**
comp=Z,3.8nm,0.7s
FETA Feichten 17.22 320 ⇑ *i* P **P** **16 27 54.1 -0.1**
comp=Z,3.8nm,0.7s
FETA Feichten 17.22 320 ⇑ *i* P **P** **16 27 54.2 -0.1**
comp=Z,3.8nm,0.7s
DPC Dobruska-Polom 17.35 337 *e*P **P** **16 27 55.6 +0.1**
DPC Dobruska-Polom 17.35 337 *e*P **P** **16 27 55.6 +0.1**
DPC Dobruska-Polom 17.35 337 *e*P **P** **16 27 55.6 +0.1**
KHC Kasperske Hory 17.37 330 *e*P **Pn** **16 27 51.3 -3.2**
KHC Kasperske Hory 17.37 330 *e*P **Pn** **16 27 51.3 -3.2**
SBF Sospel 17.52 307 *e*P **Pn** **16 27 56.1 -0.4**
comp=Z,45nm,0.8s
SBF Sospel 17.52 307 *e*P **Pn** **16 27 56.1 -0.4**
SBF pmax pmax
comp=Z,45nm,0.8s
SBF Sospel 17.52 307 *e*P **Pn** **16 27 56.1 -0.4**
comp=Z,45nm,0.8s
SBF Sospel 17.52 307 *e*P **Pn** **16 27 56.1 -0.4**
comp=Z,22nm,0.8s
DAVOX Davos/Dischmat 17.53 318 P **P** **16 27 59.8 +2.1**
DAVOX Davos/Dischmat 17.53 318 P **P** **16 27 59.8 +2.1**
comp=Z,0.3nm,0.3s,baz=152,slow=12,SNR=3.7
DAVOX Davos/Dischmat 17.53 318 P **P** **16 27 59.8 +2.1**
UPC Upice 17.59 337 *e*P **Pn** **16 27 57.7 +0.6**
UPC Upice 17.59 337 *e*P **Pn** **16 27 57.7 +0.6**
UPC Upice 17.59 337 *e*P **Pn** **16 27 57.7 +0.6**
PRU Pruhonice 17.67 333 *e*P **Pn** **16 27 55.6 -2.5**
PRU Pruhonice 17.67 333 *e*P **Pn** **16 27 55.6 -2.5**
RST Umm Al-Ruwaisa 17.83 102 *e*P **P** **16 28 03.2 +2.4**
RST AMb AMB 16 28 05.1
comp=Z,3.7nm,1.0s
FRF La Foret Royal 17.93 305 *e*P **Pn** **16 28 00.5 -0.9**
comp=Z,9.4nm,0.6s
FRF La Foret Royal 17.93 305 *e*P **Pn** **16 28 00.5 -0.9**
FRF pmax pmax
comp=Z,9.0nm,0.6s
FRF La Foret Royal 17.93 305 *e*P **Pn** **16 28 00.5 -0.9**
comp=Z,9.4nm,0.6s
FRF La Foret Royal 17.93 305 *e*P **Pn** **16 28 00.5 -0.9**
comp=Z,4.7nm,0.6s
LMR La Mourre 17.93 304 *e*P **Pn** **16 28 00.4 -1.1**
comp=Z,51nm,1.4s
LMR La Mourre 17.93 304 *e*P **Pn** **16 28 00.4 -1.1**
LMR pmax pmax
comp=Z,51nm,1.4s
LMR La Mourre 17.93 304 *e*P **Pn** **16 28 00.4 -1.1**
comp=Z,51nm,1.4s
LMR La Mourre 17.93 304 *e*P **Pn** **16 28 00.4 -1.1**
comp=Z,26nm,1.4s
MIB Mutribah 17.99 100 *e*P **P** **16 28 05.0 +2.4**
MIB AMb AMB 16 28 06.1
comp=Z,30nm,0.7s
NAY Al-Naaiem 18.12 102 *e*P **P** **16 28 05.6 +1.5**
NAY AMb AMB 16 28 08.0
comp=Z,15nm,0.7s
NAY Al-Naaiem 18.12 102 *e*P **P** **16 28 05.6 +1.5**
comp=Z,15nm,0.7s
MBDF Montbardon 18.32 309 *e*P **P** **16 28 04.2 -2.2**
comp=Z,15nm,0.6s
MBDF Montbardon 18.32 309 *e*P **P** **16 28 04.2 -2.2**
MBDF pmax pmax
comp=Z,15nm,0.6s
MBDF Montbardon 18.32 309 *e*P **P** **16 28 04.2 -2.2**
comp=Z,15nm,0.6s
MBDF Montbardon 18.32 309 *e*P **P** **16 28 04.2 -2.2**
comp=Z,7.6nm,0.6s
UMR Umm Al-Rimmam 18.39 101 *e*P **Pn** **16 28 09.0 +1.8**
UMR Umm Al-Rimmam 18.39 101 *e*P **Pn** **16 28 09.0 +1.8**
BRG Berggiesshubel 18.61 334 *e*(P) **P** **16 28 08.5 -0.8**
comp=Z,4.6nm,0.8s
BRG Berggiesshubel 18.61 334 *e*P **P** **16 28 08.5 -0.8**
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG Berggiesshubel 18.61 334 *e*P **P** **16 28 08.5 -0.8**
comp=Z,5.0nm,0.9s
VSR Storozhevoye 18.67 25 *e*P **Pn** **16 28 11.3 +1.0**
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.6s
VSR pmax pmax
comp=Z,5.0nm,0.6s
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,6.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 18.67 25 *e*P **Pn** **16 28 11.3 +1.0**
LPG La Plagne 18.68 311 *e*P **P** **16 28 09.8 -0.7**
comp=Z,15nm,0.7s
LPG La Plagne 18.68 311 *e*P **P** **16 28 09.8 -0.7**
LPG pmax pmax
comp=Z,15nm,0.7s
LPG La Plagne 18.68 311 *e*P **P** **16 28 09.8 -0.7**
comp=Z,15nm,0.7s
LPG La Plagne 18.68 311 *e*P **P** **16 28 09.8 -0.7**
comp=Z,7.7nm,0.7s
LPL La Plagne 18.70 311 *e*P **P** **16 28 09.5 -1.1**

comp=Z,14nm,0.6s
LPL La Plagne 18.70 311 *e*P **P** **16 28 09.5 -1.1**
LPL pmax pmax
comp=Z,14nm,0.6s
LPL La Plagne 18.70 311 *e*P **P** **16 28 09.5 -1.1**
comp=Z,14nm,0.6s
LPL La Plagne 18.70 311 *e*P **P** **16 28 09.5 -1.1**
comp=Z,7.2nm,0.6s
SMRF Simiane la Rot 18.80 306 *e*P **P** **16 28 10.5 -1.0**
comp=Z,11nm,0.8s
SMRF Simiane la Rot 18.80 306 *e*P **P** **16 28 10.5 -1.0**
comp=Z,11nm,0.8s
SMRF Simiane la Rot 18.80 306 *e*P **P** **16 28 10.5 -1.0**
comp=Z,5.7nm,0.8s
RSL Roselend 18.85 311 *e*P **P** **16 28 11.9 -0.3**
RSL Roselend 18.85 311 *e*P **P** **16 28 11.9 -0.3**
RSL Roselend 18.85 311 *e*P **P** **16 28 11.9 -0.3**
RSL Roselend 18.85 311 *e*P **P** **16 28 11.9 -0.3**
ORIF Oris-en-Rattie 18.98 308 *e*P **P** **16 28 12.7 -0.8**
comp=Z,11nm,0.8s
ORIF *e*R
comp=Z,230nm,22.2s
ORIF Oris-en-Rattie 18.98 308 *e*P **P** **16 28 12.7 -0.8**
ORIF pmax pmax
comp=Z,11nm,0.8s
ORIF Oris-en-Rattie 18.98 308 *e*P **P** **16 28 12.7 -0.8**
comp=Z,11nm,0.8s
ORIF Oris-en-Rattie 18.98 308 *e*P **P** **16 28 12.7 -0.8**
comp=Z,5.6nm,0.8s
FELD Feldberg im Sc 19.21 319 *e*P **P** **16 28 15.6 -0.5**
FELD Feldberg im Sc 19.21 319 *e*P **P** **16 28 15.6 -0.5**
FELD Feldberg im Sc 19.21 319 *e*P **P** **16 28 15.6 -0.5**
CLL Collm 19.31 333 *e*P **P** **16 28 16.0 -1.0**
CLL pmax pmax
comp=Z,5.0nm,0.8s
CLL Collm 19.31 333 *e*P **P** **16 28 16.0 -1.0**
comp=Z,5.0nm,0.8s
CLL Collm 19.31 333 *e*P **P** **16 28 16.0 -1.0**
comp=Z,5.0nm,0.8s
VRHR Novokhopersk 19.48 29 *e*P **Pn** **16 28 20.7 +0.6**
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR Novokhopersk 19.48 29 *e*P **Pn** **16 28 20.7 +0.6**
CABF La Chapelle 19.62 313 *e*P **P** **16 28 18.2 -2.4**
comp=Z,33nm,0.9s
CABF La Chapelle 19.62 313 *e*P **P** **16 28 18.2 -2.4**
CABF pmax pmax
comp=Z,33nm,0.9s
CABF La Chapelle 19.62 313 *e*P **P** **16 28 18.2 -2.4**
comp=Z,33nm,0.9s
CABF La Chapelle 19.62 313 *e*P **P** **16 28 18.2 -2.4**
comp=Z,16nm,0.9s
VIVF Saint-Julien-l 19.74 307 *e*P **P** **16 28 20.2 -1.5**
VIVF Saint-Julien-l 19.74 307 *e*P **P** **16 28 20.2 -1.5**
VIVF Saint-Julien-l 19.74 307 *e*P **P** **16 28 20.2 -1.5**
VIVF Saint-Julien-l 19.74 307 *e*P **P** **16 28 20.2 -1.5**
HINF Hinteralfeld 19.81 317 *e*P **P** **16 28 19.8 -2.8**
comp=Z,9.2nm,0.8s
HINF Hinteralfeld 19.81 317 *e*P **P** **16 28 19.8 -2.8**
HINF pmax pmax
comp=Z,9.0nm,0.8s
HINF Hinteralfeld 19.81 317 *e*P **P** **16 28 19.8 -2.8**
comp=Z,9.2nm,0.8s
ECH Echery 19.87 318 *e*P **P** **16 28 22.7 -0.5**
ECH Echery 19.87 318 *e*P **P** **16 28 22.7 -0.5**
ECH Echery 19.87 318 *e*P **P** **16 28 22.7 -0.5**
ECH Echery 19.87 318 *e*P **P** **16 28 22.7 -0.5**
CDF Champ du Feu 19.92 319 *e*P **P** **16 28 22.8 -1.0**
comp=Z,16nm,0.8s
CDF Champ du Feu 19.92 319 *e*P **P** **16 28 22.8 -1.0**
CDF pmax pmax
comp=Z,16nm,0.8s
CDF Champ du Feu 19.92 319 *e*P **P** **16 28 22.8 -1.0**
comp=Z,16nm,0.8s
CDF Champ du Feu 19.92 319 *e*P **P** **16 28 22.8 -1.0**
comp=Z,7.9nm,0.8s
LANF Langenberg 19.98 321 *e*P **P** **16 28 25.2 +0.8**
LANF Langenberg 19.98 321 *e*P **P** **16 28 25.2 +0.8**
LANF Langenberg 19.98 321 *e*P **P** **16 28 25.2 +0.8**
LANF Langenberg 19.98 321 *e*P **P** **16 28 25.2 +0.8**
LASF Ste Croix 20.00 304 *e*P **P** **16 28 25.3 +0.7**
LASF Ste Croix 20.00 304 *e*P **P** **16 28 25.3 +0.7**
LASF Ste Croix 20.00 304 *e*P **P** **16 28 25.3 +0.7**
HAU Haudompre 20.20 317 *e*P **P** **16 28 25.0 -1.8**
comp=Z,12nm,0.7s
HAU *e*R
comp=Z,90nm,17.2s
HAU Haudompre 20.20 317 *e*P **P** **16 28 25.0 -1.8**
HAU pmax pmax
comp=Z,12nm,0.7s
HAU Haudompre 20.20 317 *e*P **P** **16 28 25.0 -1.8**
comp=Z,12nm,0.7s
HAU Haudompre 20.20 317 *e*P **P** **16 28 25.0 -1.8**
comp=Z,5.8nm,0.7s
THEF They Montfort 20.52 317 *e*P **P** **16 28 29.2 -1.1**
THEF They Montfort 20.52 317 *e*P **P** **16 28 29.2 -1.1**
THEF They Montfort 20.52 317 *e*P **P** **16 28 29.2 -1.1**
THEF They Montfort 20.52 317 *e*P **P** **16 28 29.2 -1.1**
RUP Ruppelstein 20.81 322 *e*P **P** **16 28 32.0 -1.4**
RUP Ruppelstein 20.81 322 *e*P **P** **16 28 32.0 -1.4**
RUP Ruppelstein 20.81 322 *e*P **P** **16 28 32.0 -1.4**
MTLF Montolieu 20.90 301 *e*P **P** **16 28 34.4 0.0**
comp=Z,7.0nm,0.8s
MTLF Montolieu 20.90 301 *e*P **P** **16 28 34.4 0.0**
MTLF pmax pmax
comp=Z,7.0nm,0.8s
MTLF Montolieu 20.90 301 *e*P **P** **16 28 34.4 0.0**
comp=Z,7.0nm,0.8s
MTLF Montolieu 20.90 301 *e*P **P** **16 28 34.4 0.0**
comp=Z,3.5nm,0.8s
SMF Signal de Mont 21.01 311 *e*P **P** **16 28 33.8 -1.7**
comp=Z,25nm,0.9s
SMF Signal de Mont 21.01 311 *e*P **P** **16 28 33.8 -1.7**
SMF pmax pmax
comp=Z,25nm,0.9s
SMF Signal de Mont 21.01 311 *e*P **P** **16 28 33.8 -1.7**
comp=Z,25nm,0.9s
SMF Signal de Mont 21.01 311 *e*P **P** **16 28 33.8 -1.7**
comp=Z,12nm,0.9s
SFTF Sexfontaines 21.05 316 *e*P **P** **16 28 35.0 -0.9**
SFTF Sexfontaines 21.05 316 *e*P **P** **16 28 35.0 -0.9**
SFTF Sexfontaines 21.05 316 *e*P **P** **16 28 35.0 -0.9**
PYM Petit Puy Mans 21.17 308 *e*P **P** **16 28 39.0 +1.7**
PYM Petit Puy Mans 21.17 308 *e*P **P** **16 28 39.0 +1.7**
PYM Petit Puy Mans 21.17 308 *e*P **P** **16 28 39.0 +1.7**
PYM Petit Puy Mans 21.17 308 *e*P **P** **16 28 39.0 +1.7**
MEZF Maizieres J'vi 21.20 317 *e*P **P** **16 28 35.6 -1.9**
comp=Z,15nm,0.5s
MEZF Maizieres J'vi 21.20 317 *e*P **P** **16 28 35.6 -1.9**
comp=Z,15nm,0.5s
MEZF Maizieres J'vi 21.20 317 *e*P **P** **16 28 35.6 -1.9**
comp=Z,7.3nm,0.5s
LOR Lormes 21.28 313 *e*P **P** **16 28 36.2 -2.2**
comp=Z,14nm,0.7s
LOR *e*R
comp=Z,178nm,19.8s
LOR Lormes 21.28 313 *e*P **P** **16 28 36.2 -2.2**
comp=Z,14nm,0.7s
LOR Lormes 21.28 313 *e*P **P** **16 28 36.2 -2.2**
comp=Z,7.2nm,0.7s
AVF Avril sur Loir 21.37 311 *e*P **P** **16 28 36.9 -2.5**
comp=Z,35nm,1.0s
AVF Avril sur Loir 21.37 311 *e*P **P** **16 28 36.9 -2.5**
AVF pmax pmax
comp=Z,35nm,1.0s
AVF Avril sur Loir 21.37 311 *e*P **P** **16 28 36.9 -2.5**
comp=Z,35nm,1.0s
SSF Saint Saulge 21.40 312 *e*P **P** **16 28 38.3 -1.4**
comp=Z,47nm,1.0s
SSF Saint Saulge 21.40 312 *e*P **P** **16 28 38.3 -1.4**
SSF pmax pmax
comp=Z,47nm,1.0s
SSF Saint Saulge 21.40 312 *e*P **P** **16 28 38.3 -1.4**
comp=Z,47nm,1.0s
SSF Saint Saulge 21.40 312 *e*P **P** **16 28 38.3 -1.4**
comp=Z,24nm,1.0s
OBN Obninsk 21.40 15 *i*P **P** **16 28 44.1 +4.5**
OBN *e* 16 29 01.6
OBN *e* 16 29 15.2
OBN *e* 16 32 36.8
OBN *e*SS SS 16 33 12.4
OBN pmax pmax
comp=Z,14nm,1.0s
OBN MLR MLR
comp=Z,100nm,15.0s
OBN Obninsk 21.40 15 *e*S **S** **16 32 36.8 +0.9**
comp=Z,100nm,15.0s
CAF Calviac 21.49 306 *e*P **P** **16 28 39.5 -1.2**
CAF Calviac 21.49 306 *e*P **P** **16 28 39.5 -1.2**
CAF Calviac 21.49 306 *e*P **P** **16 28 39.5 -1.2**
CAF Calviac 21.49 306 *e*P **P** **16 28 39.5 -1.2**
BGF Bois d'Agland 21.59 310 *e*P **P** **16 28 40.9 -0.9**
comp=Z,7.6nm,0.5s
BGF Bois d'Agland 21.59 310 *e*P **P** **16 28 40.9 -0.9**
BGF pmax pmax
comp=Z,8.0nm,0.5s
BGF Bois d'Agland 21.59 310 *e*P **P** **16 28 40.9 -0.9**
comp=Z,7.6nm,0.5s
BGF Bois d'Agland 21.59 310 *e*P **P** **16 28 40.9 -0.9**
comp=Z,3.8nm,0.5s
TCF Toulx Ste Croi 21.89 309 *e*P **P** **16 28 43.5 -1.5**
comp=Z,8.9nm,0.8s
TCF Toulx Ste Croi 21.89 309 *e*P **P** **16 28 43.5 -1.5**
TCF pmax pmax
comp=Z,9.0nm,0.8s
TCF Toulx Ste Croi 21.89 309 *e*P **P** **16 28 43.5 -1.5**
comp=Z,8.9nm,0.8s
TCF Toulx Ste Croi 21.89 309 *e*P **P** **16 28 43.5 -1.5**
comp=Z,4.4nm,0.8s
RJF Les Rejaudoux 21.98 306 *e*P **P** **16 28 43.9 -2.1**
comp=Z,20nm,0.8s
RJF *e*R
comp=Z,105nm,22.0s
RJF Les Rejaudoux 21.98 306 *e*P **P** **16 28 43.9 -2.1**
RJF pmax pmax
comp=Z,20nm,0.8s
RJF Les Rejaudoux 21.98 306 *e*P **P** **16 28 43.9 -2.1**
comp=Z,20nm,0.8s
RJF Les Rejaudoux 21.98 306 *e*P **P** **16 28 43.9 -2.1**
comp=Z,10nm,0.8s
TAM Tamanrasset 22.16 243 *e*P **P** **16 28 49.3 +1.1**
TAM pmax pmax
comp=Z,20nm,1.4s
TAM Tamanrasset 22.16 243 *e*P **P** **16 28 49.3 +1.1**
comp=Z,20nm,1.4s
TAM Tamanrasset 22.16 243 *e*P **P** **16 28 49.3 +1.1**
comp=Z,20nm,1.4s
EPF Esparros 22.16 300 *e*P **P** **16 28 48.1 +0.2**
comp=Z,3.0nm,0.5s
EPF Esparros 22.16 300 *e*P **P** **16 28 48.1 +0.2**
EPF pmax pmax
comp=Z,3.0nm,0.5s
EPF Esparros 22.16 300 *e*P **P** **16 28 48.1 +0.2**
comp=Z,3.0nm,0.5s
EPF Esparros 22.16 300 *e*P **P** **16 28 48.1 +0.2**
comp=Z,1.5nm,0.5s
GIVF Givet 22.21 320 *e*P **P** **16 28 45.8 -2.6**
comp=Z,12nm,0.6s
GIVF Givet 22.21 320 *e*P **P** **16 28 45.8 -2.6**
GIVF pmax pmax
comp=Z,12nm,0.6s
GIVF Givet 22.21 320 *e*P **P** **16 28 45.8 -2.6**
comp=Z,12nm,0.6s
MOS Moscow 22.21 16 *e*P P 16 28 53.2 +4.9
MOS pmax pmax
comp=Z,41nm,0.8s
LFF La Frestale 22.39 305 *e*P **P** **16 28 49.3 -1.0**
LFF La Frestale 22.39 305 *e*P **P** **16 28 49.3 -1.0**
LFF La Frestale 22.39 305 *e*P **P** **16 28 49.3 -1.0**
LFF La Frestale 22.39 305 *e*P **P** **16 28 49.3 -1.0**
BAIF Baives 22.51 320 *e*P **P** **16 28 49.5 -2.1**
comp=Z,13nm,0.5s
BAIF Baives 22.51 320 *e*P **P** **16 28 49.5 -2.1**
BAIF pmax pmax
comp=Z,13nm,0.5s
BAIF Baives 22.51 320 *e*P **P** **16 28 49.5 -2.1**
comp=Z,13nm,0.5s
BAIF Baives 22.51 320 *e*P **P** **16 28 49.5 -2.1**
comp=Z,6.6nm,0.5s
ETSF Etsaut 22.77 299 *e*P **P** **16 28 54.5 0.0**
comp=Z,6.6nm,0.6s
ETSF Etsaut 22.77 299 *e*P **P** **16 28 54.5 0.0**
ETSF pmax pmax
comp=Z,7.0nm,0.6s
ETSF Etsaut 22.77 299 *e*P **P** **16 28 54.5 0.0**
comp=Z,6.6nm,0.6s
ETSF Etsaut 22.77 299 *e*P **P** **16 28 54.5 0.0**
comp=Z,3.3nm,0.6s
SJPF Ste Jean 23.30 299 *e*P **P** **16 28 58.4 -1.4**
comp=Z,24nm,0.8s
SJPF Ste Jean 23.30 299 *e*P **P** **16 28 58.4 -1.4**
SJPF pmax pmax
comp=Z,24nm,0.8s
SJPF Ste Jean 23.30 299 *e*P **P** **16 28 58.4 -1.4**
comp=Z,24nm,0.8s
SJPF Ste Jean 23.30 299 *e*P **P** **16 28 58.4 -1.4**
comp=Z,12nm,0.8s
MFF Saint Martin d 23.52 308 *e*P **P** **16 29 01.7 -0.2**
comp=Z,15nm,0.8s
MFF Saint Martin d 23.52 308 *e*P **P** **16 29 01.7 -0.2**
MFF pmax pmax
comp=Z,15nm,0.8s
MFF Saint Martin d 23.52 308 *e*P **P** **16 29 01.7 -0.2**
comp=Z,15nm,0.8s
MFF Saint Martin d 23.52 308 *e*P **P** **16 29 01.7 -0.2**
comp=Z,7.5nm,0.8s
LDF La Druitiere 24.27 313 *e*P **P** **16 29 07.5 -1.5**
comp=Z,15nm,0.7s
LDF La Druitiere 24.27 313 *e*P **P** **16 29 07.5 -1.5**
LDF pmax pmax
comp=Z,15nm,0.7s
LDF La Druitiere 24.27 313 *e*P **P** **16 29 07.5 -1.5**
comp=Z,15nm,0.7s
LDF La Druitiere 24.27 313 *e*P **P** **16 29 07.5 -1.5**
comp=Z,7.3nm,0.7s
FLN La Foliniere 24.55 313 *e*P **P** **16 29 09.8 -1.8**
comp=Z,38nm,1.1s
FLN *e*R
comp=Z,158nm,19.2s
FLN La Foliniere 24.55 313 *e*P **P** **16 29 09.8 -1.8**
FLN pmax pmax
comp=Z,38nm,1.1s
FLN La Foliniere 24.55 313 *e*P **P** **16 29 09.8 -1.8**
comp=Z,38nm,1.1s
FLN La Foliniere 24.55 313 *e*P **P** **16 29 09.8 -1.8**
comp=Z,19nm,1.1s
GRR Gorron 24.63 312 *e*P **P** **16 29 10.9 -1.4**
GRR Gorron 24.63 312 *e*P **P** **16 29 10.9 -1.4**
GRR Gorron 24.63 312 *e*P **P** **16 29 10.9 -1.4**
GRR Gorron 24.63 312 *e*P **P** **16 29 10.9 -1.4**
ESDC Sonseca Array 24.96 290 P **P** **16 29 14.2 -1.2**
ESDC Sonseca Array 24.96 290 P **P** **16 29 14.2 -1.2**
comp=Z,1.7nm,0.5s,baz=81,slow=9.3,SNR=11
ESDC LR LR 16 40 15.3
comp=Z,66nm,19.3s,baz=185,slow=40
ESDC Sonseca Array 24.96 290 P **P** **16 29 14.2 -1.2**
SGMF Saint Gilles 25.63 311 *e*P **P** **16 29 20.6 -0.7**
SGMF Saint Gilles 25.63 311 *e*P **P** **16 29 20.6 -0.7**
SGMF Saint Gilles 25.63 311 *e*P **P** **16 29 20.6 -0.7**
SGMF Saint Gilles 25.63 311 *e*P **P** **16 29 20.6 -0.7**
QUIF Quistinic 25.90 310 *e*P **P** **16 29 23.1 -0.7**
QUIF Quistinic 25.90 310 *e*P **P** **16 29 23.1 -0.7**
QUIF Quistinic 25.90 310 *e*P **P** **16 29 23.1 -0.7**
QUIF Quistinic 25.90 310 *e*P **P** **16 29 23.1 -0.7**
ROSF Rostrenen 26.11 310 *e*P **P** **16 29 23.4 -2.3**
comp=Z,26nm,0.9s
ROSF Rostrenen 26.11 310 *e*P **P** **16 29 23.4 -2.3**
ROSF pmax pmax
comp=Z,27nm,0.9s
ROSF Rostrenen 26.11 310 *e*P **P** **16 29 23.4 -2.3**
comp=Z,26nm,0.9s
ROSF Rostrenen 26.11 310 *e*P **P** **16 29 23.4 -2.3**
comp=Z,13nm,0.9s
MDT Midelt 26.19 275 P **P** **16 29 27.0 +0.3**
MDT Midelt 26.19 275 P **P** **16 29 27.0 +0.3**
comp=Z,3.6nm,0.9s,baz=88,slow=11,SNR=10
MDT Midelt 26.19 275 P **P** **16 29 27.0 +0.3**
FINES FINESS Array B 26.67 359 P **P** **16 29 30.0 -0.6**
FINES FINESS Array B 26.67 359 P **P** **16 29 30.0 -0.6**
comp=Z,1.2nm,0.4s,baz=155,slow=10,SNR=11
FINES FINESS Array B 26.67 359 P **P** **16 29 30.0 -0.6**
comp=Z,1.0nm,0.4s
HFS Hagfors 26.77 345 P **P** **16 29 30.6 -0.9**
HFS Hagfors 26.77 345 P **P** **16 29 30.6 -0.9**
comp=Z,2.7nm,0.7s,baz=128,slow=9.6,SNR=7.5
HFS Hagfors 26.77 345 P **P** **16 29 30.6 -0.9**
comp=Z,3.0nm,0.7s
KAF Kangasniemi 27.34 359 *e*P **P** **16 29 36.6 0.0**
KAF pmax pmax
comp=Z,1.0nm,0.5s
KAF Kangasniemi 27.34 359 *e*p **P** **16 29 36.6 0.0**
comp=Z,1.4nm,0.5s
KAF Kangasniemi 27.34 359 *e*P **P** **16 29 36.6 0.0**
comp=Z,1.0nm,0.5s
AKTK Aktyubinsk 27.48 46 P **P** **16 29 38.3 +0.3**
comp=Z,6.0nm,0.7s
AKTO Aktyubinsk 27.48 46 P **P** **16 29 38.3 +0.2**
AKTO pmax pmax
comp=Z,6.0nm,0.7s
AKTO Aktyubinsk 27.48 46 P **P** **16 29 38.2 +0.2**
AKTO Aktyubinsk 27.48 46 P **P** **16 29 38.2 +0.2**
comp=Z,5.7nm,0.7s,baz=258,slow=9.3,SNR=23
AKTO Aktyubinsk 27.48 46 P **P** **16 29 38.2 +0.2**
NOA NORSAR Array B 28.12 344 P **P** **16 29 42.5 -1.2**
NOA NORSAR Array B 28.12 344 P **P** **16 29 42.5 -1.2**
comp=Z,0.4nm,0.4s,baz=150,slow=7.8,SNR=3.3
NOA NORSAR Array B 28.12 344 P **P** **16 29 42.5 -1.2**
AB31 Akbulak array 28.23 49 *i*P **P** **16 29 45.4 +0.7**
AB31 pmax pmax
comp=Z,1.0nm,0.4s
AB31 Akbulak array 28.23 49 *i*P **P** **16 29 45.4 +0.7**
comp=Z,1.0nm,0.4s
ABKAR Akbulak array 28.23 49 P **P** **16 29 45.2 +0.5**
comp=Z,1.3nm,0.5s
ABKAR Akbulak array 28.23 49 P **P** **16 29 45.2 +0.5**
comp=Z,1.3nm,0.5s
JOF Joensuu 28.28 4 *e*P **P** **16 29 42.7 -2.3**
JOF pmax pmax
comp=Z,1.0nm,0.5s
JOF Joensuu 28.28 4 *e*p **P** **16 29 42.7 -2.3**
comp=Z,1.4nm,0.5s
EKA Eskdalemuir Ar 29.16 324 P **P** **16 29 51.5 -1.3**
EKA Eskdalemuir Ar 29.16 324 P **P** **16 29 51.5 -1.3**
comp=Z,1.1nm,0.4s,baz=121,slow=11,SNR=6.5
EKA Eskdalemuir Ar 29.16 324 P **P** **16 29 51.5 -1.3**
comp=Z,1.0nm,0.4s
ARU Arti 30.53 35 *d*i P **P** **16 30 05.4 +0.4**
ARU 16 31 04.2
ARU S **S** **16 35 10.1 +5.0**
ARU SS **SnSn** **16 36 40.7 -1.3**
ARU pmax pmax
comp=Z,8.0nm,1.7s
ARU Arti 30.53 35 *i*P **P** **16 30 05.4 +0.4**
comp=Z,8.0nm,1.7s
TOA0 Torodi Ar. Sit 31.36 233 *e*P **P** **16 30 13.4 +0.6**
TOA0 Torodi Ar. Sit 31.36 233 *e*P **P** **16 30 13.4 +0.6**
TORD Torodi Ar. Bea 31.36 233 P **P** **16 30 13.6 +0.8**
TORD Torodi Ar. Bea 31.36 233 P **P** **16 30 13.6 +0.8**
comp=Z,5.0nm,0.8s,baz=32,slow=8.2,SNR=36
TORD Torodi Ar. Bea 31.36 233 P **P** **16 30 13.6 +0.8**
SVE Sverdlovsk 31.72 36 *e*P P 16 30 10.3 -5.2
KK31 Karatay Array 34.61 63 *i*P **P** **16 30 42.7 +1.8**
KK31 pmax pmax
comp=Z,4.0nm,0.6s
KK31 Karatay Array 34.61 63 *i*P **P** **16 30 42.7 +1.8**
comp=Z,4.0nm,0.6s
KKAR Karatay Array 34.61 63 *e*P **P** **16 30 42.9 +1.9**
KKAR pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 34.61 63 *e*P **P** **16 30 42.9 +1.9**
comp=Z,6.5nm,0.8s
KKAR Karatay Array 34.61 63 *e*P **P** **16 30 42.9 +1.9**
comp=Z,6.5nm,0.8s
ARCES ARCESS Array B 34.80 359 P **P** **16 30 40.8 -1.4**
ARCES ARCESS Array B 34.80 359 P **P** **16 30 40.8 -1.4**
comp=Z,2.0nm,0.6s,baz=178,slow=9.5,SNR=15
ARCES ARCESS Array B 34.80 359 P **P** **16 30 40.8 -1.4**
comp=Z,2.0nm,0.6s
KEV Kevo 35.01 0 *e*P **P** **16 30 43.5 -0.5**
KEV Kevo 35.01 0 *e*p **P** **16 30 43.5 -0.5**
comp=Z,0.3nm,0.3s
KEV Kevo 35.01 0 *e*P **P** **16 30 43.5 -0.5**
BRVK Borovoye 35.53 46 *e*P **P** **16 30 49.9 +1.2**
BRVK pmax pmax
comp=Z,11nm,1.7s
BRVK Borovoye 35.53 46 *e*P **P** **16 30 49.5 +0.8**
comp=Z,5.3nm,0.9s
BRVK Borovoye 35.53 46 *e*P **P** **16 30 49.5 +0.8**
comp=Z,5.3nm,0.9s
BVA0 Borovoye Array 35.59 46 *i*P **P** **16 30 50.5 +1.3**
BVA0 pmax pmax
comp=Z,1.0nm,1.4s
BVA0 Borovoye Array 35.59 46 *i*P **P** **16 30 50.5 +1.3**
comp=Z,1.0nm,1.4s
EKS2 Erkin-Say 37.03 63 *e*P **P** **16 31 03.8 +2.0**
EKS2 pmax pmax
comp=Z,6.0nm,1.1s
EKS2 Erkin-Say 37.03 63 *e*P **P** **16 31 03.8 +2.0**
comp=Z,6.4nm,1.1s
EKS2 Erkin-Say 37.03 63 *e*P **P** **16 31 03.8 +2.0**
comp=Z,6.4nm,1.1s
AAK Ala-Archa 37.56 63 *c*i P **P** **16 31 08.5 +2.2**
AAK pmax pmax
comp=Z,23nm,1.7s
AAK MLR MLR
comp=Z,112nm,17.0s
AAK Ala-Archa 37.56 63 P **P** **16 31 08.6 +2.2**
AAK Ala-Archa 37.56 63 P **P** **16 31 08.6 +2.2**
comp=Z,2.2nm,0.5s,baz=236,slow=6.0,SNR=15
TKM2 Tokmak 2 38.34 63 *e*P **P** **16 31 14.0 +0.9**
TKM2 pmax pmax
comp=Z,4.0nm,0.9s
TKM2 Tokmak 2 38.34 63 *e*P **P** **16 31 14.0 +0.9**
comp=Z,3.8nm,0.9s
TKM2 Tokmak 2 38.34 63 *e*P **P** **16 31 14.0 +0.9**
comp=Z,3.8nm,0.9s
KURK Kurchatov 40.32 50 *c*i P **P** **16 31 30.5 +1.4**
KURK pmax pmax
comp=Z,17nm,1.7s
KURK Kurchatov 40.32 50 *e*P **P** **16 31 30.3 +1.2**
comp=Z,9.3nm,0.8s
KURK Kurchatov 40.32 50 *e*P **P** **16 31 30.3 +1.2**
comp=Z,9.3nm,0.8s
DBIC Dimbokro 40.46 234 P **P** **16 31 31.2 +0.6**
DBIC Dimbokro 40.46 234 P **P** **16 31 31.2 +0.6**
comp=Z,7.4nm,1.0s,baz=39,slow=6.5,SNR=3.2
DBIC Dimbokro 40.46 234 P **P** **16 31 31.2 +0.6**
MK31 Makanchi Array 42.80 56 *i*P **P** **16 31 50.9 +1.3**
MK31 pmax pmax
comp=Z,4.0nm,0.5s
MK31 Makanchi Array 42.80 56 *e*P **P** **16 31 51.0 +1.5**
MK31 Makanchi Array 42.80 56 *i*P **P** **16 31 50.9 +1.3**
comp=Z,4.0nm,0.5s
MKAR Makanchi Array 42.80 56 P **P** **16 31 51.1 +1.5**
MKAR pmax pmax
comp=Z,8.0nm,0.8s
MKAR MLR MLR
comp=Z,35nm,20.7s
MKAR Makanchi Array 42.80 56 P **P** **16 31 51.1 +1.5**
MKAR Makanchi Array 42.80 56 P **P** **16 31 51.1 +1.5**
comp=Z,7.9nm,0.8s,baz=276,slow=7.2,SNR=61
MKAR LR LR 16 49 47.4
comp=Z,35nm,20.7s,baz=59,slow=36
MKAR Makanchi Array 42.80 56 P **P** **16 31 51.1 +1.5**
comp=Z,35nm,20.7s
NVS Novosibirsk 43.35 45 *e*P **P** **16 31 53.7 -0.2**
NVS *e*S **S** **16 38 16.6 -3.5**
NVS pmax pmax
comp=N,3.0nm,0.8s
NVS pmax pmax
comp=E,6.0nm,0.8s
NVS pmax pmax
comp=Z,11nm,0.8s
NVS smax smax
comp=N,3.0nm,1.2s
NVS Novosibirsk 43.35 45 *e*P **P** **16 31 53.7 -0.2**
ZAA0 Zalesovo Array 44.24 46 *e*P **P** **16 32 01.5 +0.5**
ZAA0 Zalesovo Array 44.24 46 *e*P **P** **16 32 01.5 +0.5**
ZALV Zalesovo Beam 44.24 46 P **P** **16 32 01.8 +0.8**
ZALV pmax pmax
comp=Z,6.0nm,0.6s
ZALV Zalesovo Beam 44.24 46 P **P** **16 32 01.8 +0.8**
ZALV Zalesovo Beam 44.24 46 P **P** **16 32 01.8 +0.8**
comp=Z,5.9nm,0.6s,baz=269,slow=9.0,SNR=39
ZALV Zalesovo Beam 44.24 46 P **P** **16 32 01.8 +0.8**
comp=Z,6.0nm,0.6s
PYUN Piuthan 47.81 82 *e*P **P** **16 32 31.6 +1.8**
comp=Z,26nm,0.7s
DANN Dangsing 48.34 81 *e*P **P** **16 32 36.0 +2.0**
comp=Z,55nm,0.7s
KOLN Koldanda 48.44 82 *e*P **P** **16 32 36.0 +1.4**
comp=Z,14nm,0.8s
DMN Daman 49.73 81 *e*P **P** **16 32 46.1 +1.5**

KKN	Kakani	49.80	81	eP	P	16 32 45.6	+0.5
	comp=Z,16nm,0.7s						
HVS	Khovu-Aksy	49.82	49⇑	eP	P	16 32 46.3	+1.6
HVS				pmax	pmax		
	comp=Z,24nm,0.9s						
HVS	Khovu-Aksy	49.82	49	eP	P	16 32 46.3	+1.6
	comp=Z,24nm,0.9s						
PKIN	Phulchoki	49.98	81	eP	P	16 32 47.3	+0.8
	comp=Z,14nm,0.7s						
PKI	Pulchoki	49.99	81	eP	P	16 32 47.8	+1.1
GUN	Gumba	50.24	81	eP	P	16 32 49.8	+1.2
	comp=Z,21nm,0.8s						
RAMN	Ramite	51.21	81	eP	P	16 32 55.0	-0.8
ODAN	Odare	51.89	81	eP	P	16 32 59.4	-1.5
TAPN	Taplejung	51.95	81	eP	P	16 33 02.3	+0.9
MOY	Mondy	54.22	48	eP	P	16 33 20.3	+2.8
TSUM	Tsumeb	54.42	191	P	P	16 33 20.5	+1.2
TSUM	Tsumeb	54.42	191	P	P	16 33 20.5	+1.2
	comp=Z,0.9nm,0.3s,baz=14,slow=10.0,SNR=3.1						
ZAK	Zakamensk	55.93	49⇑	iP	P	16 33 31.6	+1.7
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA	Gaotai	56.89	62	eP	P	16 33 38.4	+1.5
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SONM	Songino Array	58.62	51	P	P	16 33 50.4	+1.4
SONM	Songino Array	58.62	51	P	P	16 33 50.4	+1.4
	comp=Z,2.9nm,0.8s,baz=285,slow=8.2,SNR=29						
ULN	Ulaanbaatar	59.03	51	eP	P	16 33 53.2	+1.4
	comp=Z,4.9nm,1.1s						
BOSA	Boshof	63.09	182	P	P	16 34 21.2	+1.9
BOSA	Boshof	63.09	182	P	P	16 34 21.2	+1.9
	comp=Z,1.6nm,0.3s,baz=338,slow=11,SNR=12						
SCHQ	Schefferville	64.37	320	eP	P	16 34 26.9	-0.6
	comp=Z,5.3nm,0.6s						
SCHQ	Schefferville	64.37	320	P	P	16 34 27.0	-0.5
	comp=Z,5.0nm,0.5s,baz=66,slow=4.8,SNR=26						
CHTO	Chiang Mai	65.03	84	eP	P	16 34 33.5	+1.1
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHTO	Chiang Mai	65.03	84	eP	P	16 34 33.5	+1.1
	comp=Z,3.1nm,0.9s						
CM31	Chiang Mai Arr	65.21	84	eP	P	16 34 34.2	+0.7
	comp=Z,4.1nm,0.8s						
CMAR	Chiang Mai Arr	65.21	84	P	P	16 34 34.4	+0.8
CMAR	Chiang Mai Arr	65.21	84	P	P	16 34 34.4	+0.8
	comp=Z,2.1nm,0.8s,baz=295,slow=8.3,SNR=24						
BILL	Bilibino	73.06	15	eP	P	16 35 24.0	+2.6
BILL				e		16 35 36.7	
BILL				e		16 38 04.6	
BILL				eSS	SS	16 49 27.6	+0.6
BILL				pmax	pmax		
	comp=Z,6.0nm,1.4s						
USRK	Ussuriysk Arra	76.10	46	P	P	16 35 40.1	+0.6
	comp=Z,3.0nm,0.6s,baz=277,slow=6.4,SNR=9.2						
KSAR	Wonju Array Be	77.36	53	P	P	16 35 47.9	+1.2
KSRS	Korea Array	77.38	53	P	P	16 35 47.9	+1.1
	comp=Z,2.9nm,0.9s,baz=301,slow=5.0,SNR=13						
YKA	Yellowknife Ar	78.22	343	P	P	16 35 50.8	-0.2
YKA	Yellowknife Ar	78.22	343	P	P	16 35 50.8	-0.2
	comp=Z,0.6nm,0.4s,baz=33,slow=5.4,SNR=14						
ILAR	Eielson Array	80.64	357	P	P	16 36 04.8	+0.6
ILAR	Eielson Array	80.64	357	P	P	16 36 04.8	+0.6
	comp=Z,0.2nm,0.4s,baz=350,slow=5.0,SNR=4.1						
MJAR	Matsushiro Arr	84.51	49	P	P	16 36 26.2	+1.3
MJAR	Matsushiro Arr	84.51	49	P	P	16 36 26.2	+1.3
	comp=Z,3.9nm,1.0s,baz=305,slow=4.8,SNR=6.3						
BDFB	Brasilia	86.88	249	LR	LR	17 16 21.4	
	comp=Z,146nm,18.6s,baz=40,slow=36						
WRA	Warramunga Arr	115.15	98	PKP	PKPdf	16 42 33.7	+0.3
WRA	Warramunga Arr	115.15	98	PKP	PKPdf	16 42 33.7	+0.3
	comp=Z,0.2nm,0.7s,baz=303,slow=1.4,SNR=5.2						
ASAR	Alice Springs	116.60	101	PKP	PKPdf	16 42 36.5	+0.3
ASAR	Alice Springs	116.60	101	PKP	PKPdf	16 42 36.5	+0.3
	comp=Z,0.3nm,0.8s,baz=294,slow=1.6,SNR=7.2						
ASAR	Alice Springs	116.60	101	PKIKP	PKPdf	16 42 36.5	+0.3

IDC 06 16:35:39.5±52.0, 19°.38S×178°.81W, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.6/18, mbtmp3.8/3, Error ellipse: s-maj=946.1km s-min=170.8km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.61	243	P	P	16 42 56.0	-0.2
	2.2nm,0.9s,baz=82,slow=15,SNR=3.1						
WRA	Warramunga Arr	44.02	261	P	P	16 43 49.4	+0.2
	0.2nm,0.4s,baz=98,slow=7.5,SNR=7.8						
ASAR	Alice Springs	44.05	256	P	P	16 43 49.1	-0.4
	0.8nm,0.5s,baz=86,slow=8.6,SNR=22						

IDC 06 16:36:29.1±2.0, 2°.38N×127°.99E, h0^{km}, mb3.2/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.2/3, Error ellipse: s-maj=140.1km s-min=24.5km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.04	165	P	P	16 41 36.6	+0.4
	0.3nm,0.3s,baz=344,slow=11,SNR=15						
ASAR	Alice Springs	26.52	168	P	P	16 42 08.2	-0.5
	0.2nm,0.4s,baz=353,slow=7.7,SNR=10						
MKAR	Makanchi Array	59.38	325	P	P	16 46 33.4	+0.1
	0.1nm,0.5s,baz=119,slow=9.5,SNR=2.4						

IDC 06 17:17:55.1±0.9, 20°.83N×146°.69E, h41^{km}±8^{km}, mb3.3/7, mb1 3.5/7, mb1mx3.3/26, mbtmp3.3/7, Error ellipse: s-maj=32.3km s-min=17.9km az=89.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	7.41	194	P	Pn	17 19 45.1	+4.3
	3.3nm,0.3s,baz=30,slow=20,SNR=2.0						
GUMO				S	Sn	17 21 07.0	+3.3
	3.8nm,0.3s,baz=180,slow=20,SNR=2.2						
KSRS	Korea Array	23.23	320	P	P	17 22 59.4	+0.7
	0.4nm,0.4s,baz=153,slow=8.5,SNR=4.3						
WRA	Warramunga Arr	42.29	197	P	P	17 25 45.0	+0.1
	1.2nm,0.9s,baz=18,slow=8.8,SNR=7.3						
WRA				pP	pP	17 25 56.0	-0.5
	0.6nm,0.7s,baz=13,slow=8.8,SNR=2.8						
ASAR	Alice Springs	45.95	196	P	P	17 26 13.7	-0.6
	0.2nm,0.4s,baz=14,slow=7.9,SNR=3.9						
ZALV	Zalesovo Beam	56.92	322	P	P	17 27 35.6	-0.4
	0.6nm,0.4s,baz=101,slow=8.4,SNR=4.6						
ZALV				pP	pP	17 27 48.7	+0.8
	0.5nm,0.5s,baz=102,slow=7.8,SNR=2.8						
MKAR	Makanchi Array	57.69	313	P	P	17 27 41.5	0.0
	0.1nm,0.4s,baz=81,slow=8.9,SNR=3.7						
YKA	Yellowknife Ar	75.68	28	P	P	17 29 35.4	-0.5
	0.1nm,0.4s,baz=210,slow=8.0,SNR=3.8						
YKA				pP	pP	17 29 48.0	-0.2
	0.4nm,0.7s,baz=291,slow=5.2,SNR=4.1						
FINES	FINESS Array B	85.35	335	P	P	17 30 26.9	-0.9
	0.6nm,0.4s,baz=53,slow=5.6,SNR=5.4						
LPAZ	La Paz	146.72	88	PKPbc	PKPab	17 37 35.2	-0.3
	1.1nm,0.6s,baz=225,slow=2.9,SNR=4.0						

*IDC **06** 17:19:23.2±0.6, 12°.61N×124°.97E, h0^{km}, mb4.0/19, mb1 4.1/19, mb1mx4.1/26, mbtmp4.0/19, MS3.5/14, Ms1 3.5/14, ms1mx3.3/32, Error ellipse: s-maj=24.8km s-min=12.3km az=73.0*
*MAN **06** 17:19:27, 12°.79N×125°.00E, h21^{km}, mb4.9, ML3.9, MS3.9*
*NEIC **06** 17:19:28.6±0.6, 12°.72N×125°.25E, h35^{km}, mb4.6/4, Error ellipse: s-maj=22.1km s-min=11.1km az=73.0*
*ISCJB **06** 17:19:29.0±0.6, 12°.74N±0°.03×125°.01E±0°.05, h55^{km}±6^{km}, mb4.0/22, MS3.4/12, Error ellipse: s-maj=9.1km s-min=4.6km az=154.0*
ISC 06 17:19:29.5±1.1, 12°.73N±0°.04×124°.97E±0°.06, h43^{km}±11^{km}, n85, σ1s.54/83, mb4.0/22, MS3.4/12, 4C-4D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.38	234	eP	Pn	17 19 37.7	-1.2
BESP	Borongan	1.21	158	eP	Pn	17 19 49.4	-0.7
BESP				eS	Sn	17 20 07.7	+2.4
MMPH	Masbate	1.37	254⇑	eP	Pn	17 19 52.6	+0.5
MMPH				iS	Sn	17 20 10.6	+1.5
PLP	Palo	1.56	180⇓	iP	Pn	17 19 55.0	+0.2
PLP				eS	Sn	17 20 13.8	-0.1
OCLP	Ormoc	1.71	192	eP	Pn	17 19 57.5	+0.6
AUQP	San Andres	2.31	285	eP	Pn	17 20 08.5	+3.3
RCP	Roxas	2.47	242⇓	iP	Pn	17 20 08.3	+0.9
RCP				iS	Sn	17 20 39.5	+3.2
MSLP	Maasin	2.59	182	eP	Pn	17 20 10.6	+1.6
LLP	Lapu-Lapu	2.60	202⇑	iP	Pn	17 20 09.0	-0.1
LLP				eS	Sn	17 20 34.8	-4.7
GQP	Guinayangan	2.72	296⇓	eP	Pn	17 20 12.4	+1.7
OTRP	Odiongan	2.91	263	eP	Pn	17 20 14.8	+1.4
GUIM	Jordan	3.14	228	eP	Pn	17 20 17.2	+0.7
TBP	Tagbilaran	3.21	200	eP	Pn	17 20 18.4	+0.8
SJMP	San Jose	3.77	266	eP	Pn	17 20 27.8	+2.5
BUTP	Butuan	3.79	170	eP	Pn	17 20 28.0	+2.4
TGY	Tagaytay City	4.16	290	Pn	Pn	17 20 37.2	+6.6
TGY				Sn	Sn	17 21 15.5	-2.5
TGY	Tagaytay City	4.16	290	Pn	Pn	17 20 37.2	+6.6
	73nm,0.3s,baz=163,slow=10.0,SNR=8.9						
TGY				Sn	Sn	17 21 15.5	-2.5
	63nm,0.3s,baz=287,slow=2.2,SNR=3.6						
CGP	Cagayan de Oro	4.26	184	eP	Pn	17 20 32.1	+0.1
CUYO	Cuyo Island	4.30	245	eP	Pn	17 20 33.3	+0.8
DCPH	Dipolog City	4.42	201⇑	eP	Pn	17 20 34.4	+0.2
BALP	Baler	4.45	313	eP	Pn	17 20 36.5	+2.0
PCPH	Palayan	4.70	307⇑	eP	Pn	17 20 37.7	-0.2
PCPH				eS	Sn	17 21 28.2	-2.9
BUKP	Musuan	4.83	179	eP	Pn	17 20 42.3	+2.5
PALP	Palanan	4.96	331⇓	iP	Pn	17 20 42.5	+0.9
PALP				eS	Sn	17 21 33.0	-4.6
PAGZ	Pagadian	5.10	198	eP	Pn	17 20 45.4	+1.8
CAUP	Cauayan	5.18	324	eP	Pn	17 20 46.3	+1.8
DAV	Davao City (W)	5.66	174	Pn	Pn	17 20 55.1	+3.9
DAV	Davao City (W)	5.66	174	Pn	Pn	17 20 55.1	+3.9
	17nm,0.3s,baz=12,slow=20,SNR=2.4						
MATI	Mati	5.89	167	eP	Pn	17 20 56.4	+2.1
SGCP	Mt. Cagua	6.16	333	eP	Pn	17 20 58.1	0.0
APYP	Conner	6.24	325	eP	Pn	17 21 00.1	+1.0
ABRA	Dolores	6.39	320	eP	Pn	17 21 01.8	+0.6
KAPI	Kappang	18.38	197	eP	P	17 23 40.8	-0.1
	11nm,1.0s						
KAPI	Kappang	18.38	197	Pn	Pn	17 23 43.1	+1.8
	0.4nm,0.3s,baz=87,slow=19,SNR=4.5						
KAPI				LR	LR	17 30 28.3	
	comp=Z,99nm,20.4s,baz=134,slow=36						
GUMO	Guam	19.39	85	LR	LR	17 29 31.1	
	comp=Z,135nm,20.2s,baz=261,slow=31						
JNU	Nakatsue	21.00	14	LR	LR	17 31 11.4	
	comp=Z,120nm,18.9s,baz=69,slow=34						
KSAR	Wonju Array Be	24.74	6	P	P	17 24 47.9	+0.9
KSRS	Korea Array	24.76	6	P	P	17 24 47.9	+0.8
	4.2nm,1.0s,baz=182,slow=10,SNR=21						
KSRS				LR	LR	17 34 01.1	
	comp=Z,114nm,19.6s,baz=43,slow=35						
CMAR	Chiang Mai Arr	25.69	286	P	P	17 24 56.8	+0.9
CMAR	Chiang Mai Arr	25.69	286	P	P	17 24 56.8	+0.9
	0.7nm,0.9s,baz=102,slow=6.9,SNR=5.6						
CMAR				LR	LR	17 34 09.0	
	comp=Z,64nm,21.0s,baz=212,slow=34						
MJAR	Matsushiro Arr	26.52	24	LR	LR	17 33 26.9	
	comp=Z,141nm,20.3s,baz=215,slow=32						
PSI	Prapat	27.60	251	LR	LR	17 36 12.5	
	comp=Z,127nm,19.3s,baz=195,slow=37						
FITZ	Fitzroy Crossi	30.65	179	P	P	17 25 38.4	-1.6
FITZ	Fitzroy Crossi	30.65	179	P	P	17 25 38.4	-1.6
	1.2nm,0.5s,baz=16,slow=11,SNR=12						
USRK	Ussuriysk Arra	31.93	10	P	P	17 25 51.4	+0.3
	1.3nm,0.6s,baz=188,slow=5.5,SNR=4.3						
USRK				LR	LR	17 38 06.5	
	comp=Z,68nm,20.2s,baz=265,slow=35						
WRA	Warramunga Arr	33.75	164	P	P	17 26 05.0	-2.3
WRA	Warramunga Arr	33.75	164	P	P	17 26 05.0	-2.3
	0.5nm,0.4s,baz=345,slow=8.7,SNR=12						
ASAJ	Asahikawa	34.74	22	LR	LR	17 40 41.8	
	comp=Z,67nm,19.1s,baz=218,slow=37						
AS31	Alice Springs	37.22	166	eP	P	17 26 34.1	-2.9
ASAR	Alice Springs	37.22	166	P	P	17 26 35.6	-1.4
ASAR	Alice Springs	37.22	166	P	P	17 26 35.6	-1.4
	1.1nm,0.5s,baz=343,slow=6.9,SNR=26						
SONM	Songino Array	38.28	340	P	P	17 26 47.0	+1.1
SONM				PcP	PcP	17 28 59.3	0.0
SONM	Songino Array	38.28	340	P	P	17 26 47.0	+1.1
	1.8nm,1.0s,baz=145,slow=5.3,SNR=9.6						
SONM				PcP	PcP	17 28 59.3	0.0
	0.2nm,0.3s,baz=174,slow=1.4,SNR=2.7						
SONM				LR	LR	17 41 56.8	
	comp=Z,65nm,19.3s,baz=78,slow=35						
CTA	Charters Tower	38.76	147	LR	LR	17 42 52.8	
	comp=Z,90nm,18.9s,baz=44,slow=36						
STKA	Stephens Creek	47.13	161	P	P	17 27 56.5	-1.1
STKA	Stephens Creek	47.13	161	P	P	17 27 56.5	-1.1
	0.8nm,0.3s,baz=357,slow=9.2,SNR=5.6						
PETK	Petropavlovsk-	47.96	26	P	P	17 28 04.8	+0.9
PETK	Petropavlovsk-	47.96	26	P	P	17 28 04.8	+0.9
	5.1nm,0.9s,baz=209,slow=3.4,SNR=9.1						
PETK				LR	LR	17 48 46.2	
	comp=Z,35nm,18.9s,baz=356,slow=37						
MK31	Makanchi Array	49.31	322	eP	P	17 28 15.5	+1.1
MKAR	Makanchi Array	49.31	322	P	P	17 28 15.7	+1.2
MKAR	Makanchi Array	49.31	322	P	P	17 28 15.7	+1.2
	1.5nm,0.8s,baz=119,slow=8.1,SNR=13						
ZALV	Zalesovo Beam	51.87	331	P	P	17 28 33.8	+0.3
ZALV	Zalesovo Beam	51.87	331	P	P	17 28 33.8	+0.3
	0.6nm,0.3s,baz=135,slow=7.4,SNR=7.3						
KURK	Kurchatov	53.33	325	eP	P	17 28 45.0	+0.6
	11nm,1.0s						
DZM	Mont Dzumac	53.39	130	P	P	17 28 45.4	+0.1
DZM	Mont Dzumac	53.39	130	P	P	17 28 45.4	+0.1
	2.2nm,0.5s,baz=323,slow=20,SNR=3.3						
TIXI	Tiksi	58.93	1	eP	P	17 29 24.0	+0.1
	4.7nm,0.9s						
BRVK	Borovoye	59.00	325	eP	P	17 29 24.9	+0.1
	3.3nm,0.8s						
KBZ	Khabaz	75.62	312	P	P	17 31 10.6	+0.4
KBZ	Khabaz	75.62	312	P	P	17 31 10.6	+0.4
	3.3nm,1.0s,baz=37,slow=5.1,SNR=4.3						
ILAR	Eielson Array	77.79	26	P	P	17 31 22.0	-0.1
ILAR	Eielson Array	77.79	26	P	P	17 31 22.0	-0.1
	0.3nm,0.7s,baz=254,slow=5.5,SNR=3.6						
ARCES	ARCESS Array B	81.46	339	P	P	17 31 42.1	+0.3
ARCES	ARCESS Array B	81.46	339	P	P	17 31 42.2	+0.3
	6.4nm,1.0s,baz=62,slow=6.3,SNR=4.3						
BRTR	Keskin Array B	83.00	309	P	P	17 31 50.3	-0.4
BRTR	Keskin Array B	83.00	309	P	P	17 31 50.3	-0.4
	0.5nm,0.5s,baz=123,slow=5.3,SNR=3.2						
FINES	FINESS Array B	83.13	331	P	P	17 31 50.8	+0.1
FINES	FINESS Array B	83.13	331	P	P	17 31 50.8	+0.1
	0.7nm,0.4s,baz=64,slow=6.3,SNR=7.0						
AKASG	Malin Array Be	83.86	320	P	P	17 31 54.1	-0.6
AKASG	Malin Array Be	83.86	320	P	P	17 31 54.1	-0.6
	0.3nm,0.4s,baz=67,slow=5.3,SNR=4.4						
PPT	Papeete	89.53	108	LR	LR	18 03 56.2	
	comp=Z,10nm,20.0s,baz=216,slow=30						
NOA	NORSAR Array B	90.00	334	LR	LR	18 14 46.1	
	comp=Z,51nm,19.2s,baz=160,slow=37						
YKA	Yellowknife Ar	92.03	24	P	P	17 32 34.4	+0.7
YKA	Yellowknife Ar	92.03	24	P	P	17 32 34.4	+0.7
	0.1nm,0.3s,baz=302,slow=4.8,SNR=6.5						
VNDA	Vanda	92.52	172	P	P	17 32 32.9	-2.7

IDC 06 17:22:29.6±5.7, 4°.99S×151°.03E, h138^{km}±41^{km}, mb3.7/3, mb1 3.8/4, mb1mx3.2/19, mbtmp3.6/4, Error ellipse: s-maj=98.7km s-min=40.9km az=129.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.83	221	P	Pn	17 23 54.5	+0.5
	2.8nm,0.3s,baz=61,slow=9.6,SNR=9.8						
PMG				S	Sn	17 25 00.8	+0.9
	5.8nm,0.3s,baz=161,slow=19,SNR=11						
WRA	Warramunga Arr	22.02	226	P	P	17 27 12.6	-0.7
	2.6nm,0.6s,baz=52,slow=10.0,SNR=11						
ASAR	Alice Springs	24.85	220	P	P	17 27 39.5	-0.1
	2.0nm,0.5s,baz=53,slow=8.8,SNR=14						
FITZ	Fitzroy Crossi	28.03	240	P	P	17 28 08.6	+0.5
	1.0nm,0.3s,baz=60,slow=7.6,SNR=6.5						
TORD	Torodi Ar. Bea	148.68	287	PKPbc	PKPbc	17 42 01.0	-0.7
	0.2nm,0.4s,baz=95,slow=2.6,SNR=4.9						

DDA 06 17:51:54.2, 40°.17N×29°.44E, h7^{km}, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	Uludag	0.23	264	iP	Pg	17 51 59.0	-0.1
ULDT				iS	Sg	17 52 03.4	+1.0
BORA	Eskisehir	0.83	110	iP	Pg	17 52 09.6	-0.6
BORA				iS	Sb	17 52 22.2	-0.3
DURS	Dursunbey	0.93	233	iP	Pb	17 52 12.7	-0.1
DURS				iS	Sb	17 52 25.7	+0.2

AUST 06 18:29:17.3±3.5, 4°.00S×139°.64E, h25^{km}, Error ellipse: s-maj=1.1km s-min=0.8km az=284.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.82	36	P	Pn	18 29 47.2	0.0
	baz=1.8,SNR=41						
JAY				S	Sn	18 30 07.2	-2.3
	baz=1.8,SNR=8.1						
MMPI	Merauke	4.50	171	P	Pn	18 30 27.4	+3.5
	baz=4.5,SNR=10						
MMPI				S	Sn	18 31 20.0	+4.5
	baz=4.5,SNR=5.4						
FAKI	Fak Fak	7.45	278	P	Pn	18 31 07.0	+2.4
	baz=7.5,SNR=5.9						
COEN	Coen	10.49	161	P	Pn	18 31 47.6	+1.3
	baz=11,SNR=18						
KDU	Kakadu	11.16	219	P	Pn	18 31 55.2	-0.3
	baz=11,SNR=30						
KDU				S	Sn	18 33 54.6	-5.0
	baz=11,SNR=9.4						
MTN	Manton Dam	12.16	223	P	Pn	18 32 08.5	-0.7
	baz=12,SNR=32						
MTN				S	Sn	18 34 16.7	-7.3
	baz=12,SNR=4.2						
MTSU	Mount Surprise	14.78	162	P	Pn	18 32 46.6	+1.7
	baz=15,SNR=6.5						
KNRA	Kununurra	15.78	222	P	Pn	18 32 56.8	-1.3
	baz=16,SNR=18						
QIS	Mount Isa	16.46	180	P	Pn	18 33 04.6	-2.2
	baz=17,SNR=14						
FITZ	Fitzroy Crossi	19.60	223	P	P	18 33 43.0	-1.0
	baz=20,SNR=5.6						
FITZ				S	S	18 37 10.7	-13
	baz=20,SNR=7.3						
PMBI	Palembang	34.81	271	S	S	18 41 11.1	-25
	baz=35,SNR=3.2						
PPI	Padang Panjang	39.36	274	P	P	18 36 46.0	+0.8
	baz=39,SNR=6.3						

IDC 06 18:41:50.1±28.0, 22°.53S×174°.19W, h0^{km}, mb3.9/4, mb1 4.1/4, mb1mx3.7/21, mbtmp3.9/4, Error ellipse: s-maj=515.0km s-min=143.4km az=78.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.86	266	P	P	18 49 01.5	+0.9
	4.0nm,0.4s,baz=94,slow=13,SNR=4.7						
STKA	Stephens Creek	40.19	247	P	P	18 49 27.4	-1.0
	1.2nm,0.8s,baz=82,slow=12,SNR=3.2						
ASAR	Alice Springs	47.54	258	P	P	18 50 27.4	-0.4
	0.3nm,0.5s,baz=98,slow=7.5,SNR=8.0						
WRA	Warramunga Arr	47.86	263	P	P	18 50 30.1	-0.1
	0.5nm,0.5s,baz=97,slow=8.5,SNR=17						

JMA 06 18:49:25.4±0.1, 27°.03N×140°.81E, h110^{km}, M3.9, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.23	87	P	Pn	18 49 49.2	+0.2
CBIJ				eS	Sn	18 50 06.9	0.0
JHHJ	Haha-jima-NKT	1.29	108	P	Pn	18 49 49.8	+0.1
JHHJ				eS	Sn	18 50 08.4	+0.3
BSO1	Boso 1	7.60	1	P	Pn	18 51 09.8	-2.9
BSO3	Boso 3	7.75	358	P	Pn	18 51 14.0	-1.1
BSO4	Boso 4	7.95	357	P	Pn	18 51 17.4	-0.5
JOD2	Odawara 2	8.34	350	P	Pn	18 51 23.5	0.0
JHU	Hanno	8.89	352	P	Pn	18 51 29.5	-1.4
JRY	Ryogami san	9.11	350	P	Pn	18 51 33.0	-0.9
JYT	Yasato	9.19	357	P	Pn	18 51 32.6	-2.3
JAG	Ashikaga	9.44	353	P	Pn	18 51 35.3	-3.0
JAG				eS	Sn	18 53 13.5	-9.1
JHO	Hitachi	9.55	359	P	Pn	18 51 37.0	-2.9
JHO				eS	Sn	18 53 14.3	-11

IDC 06 18:50:01.0±1.3, 3°.80N×127°.32E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, Error ellipse: s-maj=91.3km s-min=18.0km az=72.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.82	184	P	P	18 54 55.6	+0.5
	1.9nm,0.9s,baz=0.0,slow=5.1,SNR=2.6						
WRA	Warramunga Arr	24.58	164	P	P	18 55 22.3	-0.7
	1.8nm,0.8s,baz=343,slow=10,SNR=10						
ASAR	Alice Springs	28.04	167	P	P	18 55 57.0	+2.7
	0.1nm,0.3s,baz=345,slow=12,SNR=4.5						
STKA	Stephens Creek	37.99	160	P	P	18 57 21.1	+0.3
	1.1nm,0.8s,baz=332,slow=12,SNR=2.9						
SONM	Songino Array	47.42	341	P	P	18 58 36.6	-0.8
	0.2nm,0.5s,baz=149,slow=5.9,SNR=2.5						
MKAR	Makanchi Array	57.84	325	P	P	18 59 54.4	-0.1
	0.4nm,0.6s,baz=122,slow=8.1,SNR=7.1						
KURBB	Kurchatov Arra	62.00	327	P	P	19 00 23.4	+0.4
	0.4nm,0.5s,baz=132,slow=6.2,SNR=15						

CASC 06 19:04:49.6±1.2, 14°.04N×89°.79W, h4^{km}±3^{km}, MD3.5, 2D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RBDL	Robledal	0.13	54	eP	Pg	19 04 53.2	+0.8
RTR	El Retiro	0.20	135⇓	iP	Pg	19 04 55.0	+1.2
RTR				eS	Sg	19 04 58.3	+1.7
SNJE	San Jose	0.25	133⇓	iP	Pg	19 04 55.8	+1.1
SNJE				eS	Sg	19 05 00.1	+2.0
SBLS	San Blas	0.26	140	eP	Pg	19 04 55.9	+0.9
SBLS				eS	Sb	19 05 01.0	-1.1
BOQS	Boqueron	0.58	121	eP	Pb	19 05 01.9	-0.7
BOQS				eS	Sb	19 05 10.8	-0.6
IXG	Ixpaco	0.66	282	eP	Pg	19 05 02.4	-0.1
IXG				eS	Sb	19 05 12.9	-0.6
LFU	La Fuente	0.72	114	eP	Pb	19 05 04.2	-0.6
NBG	Las Nubes	0.77	316	eP	Pg	19 05 05.0	+0.3
MRL	Marmol	1.03	5	eP	Pg	19 05 09.6	0.0
MRL				eS	Sg	19 05 23.4	+0.3
FUG	Fuego 3	1.10	292	eP	Pg	19 05 09.6	-1.4
FUG				eS	Sb	19 05 26.9	+0.7

IDC 06 19:10:34.4±1.4, 2°.79S×101°.88E, h0^{km}, mb3.6/7, mb1 3.7/7, mb1mx3.5/24, mbtmp3.6/7, Error ellipse: s-maj=70.0km s-min=17.3km az=50.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	27.82	125	P	P	19 16 26.1	+0.4
	2.4nm,1.0s,baz=344,slow=7.4,SNR=3.1						
WRA	Warramunga Arr	35.97	121	P	P	19 17 36.7	-0.6
	0.2nm,0.3s,baz=300,slow=10,SNR=13						
ASAR	Alice Springs	37.27	127	P	P	19 17 48.4	0.0
	0.4nm,0.6s,baz=303,slow=7.8,SNR=13						
SONM	Songino Array	50.57	4	P	P	19 19 35.5	+0.6
	0.6nm,0.6s,baz=185,slow=7.9,SNR=7.5						
MKAR	Makanchi Array	52.31	343	P	P	19 19 47.8	-0.1
	0.2nm,0.4s,baz=148,slow=8.0,SNR=6.9						
ZALV	Zalesovo Beam	58.30	348	P	P	19 20 30.1	-0.9
	0.3nm,0.3s,baz=175,slow=5.4,SNR=2.8						
BRTR	Keskin Array B	75.24	312	P	P	19 22 19.8	+0.2
	0.4nm,0.5s,baz=155,slow=7.6,SNR=2.8						

*CSEM **06** 19:27:10.5±0.2, 29°.08N×15°.76W, h40^{km}, mb3.9/4, Error ellipse: s-maj=6.0km s-min=5.2km az=99.0*
MDD 06 19:27:12.3±0.1, 29°.01N×15°.77W, h48^{km}±4^{km}, mb3.9/4, 2C-3D, Error ellipse: s-maj=2.5km s-min=0.8km az=176.0, PRXIMO TT-MODEL: Canary, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBAJ	Bajamar	0.69	227	⇑P	Pn	19 27 25.3	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	1.8nm,0.2s,SNR=18						
EBAJ				S	Sn	19 27 33.9	-1.8
	55nm,0.3s,SNR=17						
EBAJ	Bajamar	0.69	227	P	Pn	19 27 25.3	-0.6
	1.8nm,0.2s,SNR=18						
EBAJ				S	Sn	19 27 33.9	-1.8
	55nm,0.3s,SNR=17						
EOSO	Osorio	0.96	169	⇑P	Pn	19 27 29.3	-0.2
	132nm,0.1s,SNR=18						
EOSO				S	Sn	19 27 40.4	-1.8
	114nm,0.2s,SNR=8.5						
EOSO	Osorio	0.96	169	P	Pn	19 27 29.3	-0.2
	132nm,0.1s,SNR=18						
EOSO				S	Sn	19 27 40.4	-1.7
	114nm,0.2s,SNR=8.5						
CRAJ	Montana Rajada	1.04	225	P	Pn	19 27 30.2	-0.8
	0.4nm,0.0s,SNR=5.6						
CRAJ				S	Sn	19 27 42.5	-2.3
	117nm,0.3s,SNR=15						
CRAJ	Montana Rajada	1.04	225	P	Pn	19 27 30.2	-0.8
	0.4nm,0.0s,SNR=5.6						
CRAJ				S	Sn	19 27 42.5	-2.3
	117nm,0.3s,SNR=15						
CCAN	Las Canadas	1.08	223	P	Pn	19 27 30.5	-0.9
	3.9nm,0.1s,SNR=38						
CCAN				S	Sn	19 27 42.7	-2.8
	16nm,0.1s,SNR=17						
CCAN	Las Canadas	1.08	223	P	Pn	19 27 30.5	-0.9
	3.9nm,0.1s,SNR=38						
CCAN				S	Sn	19 27 42.7	-2.9
	16nm,0.1s,SNR=17						
EGOM	La Gomera	1.53	237	⇓P	Pn	19 27 35.8	-1.4
	8.8nm,0.1s,SNR=18						
EGOM				S	Sn	19 27 52.1	-3.7
	30nm,0.3s,SNR=17						
EGOM	La Gomera	1.53	237	P	Pn	19 27 35.8	-1.4
	8.8nm,0.1s,SNR=18						
CFTV	Fuerteventura	1.59	112	⇓P	Pn	19 27 36.9	-1.2
	3.1nm,0.1s,SNR=18						
CFTV				S	Sn	19 27 53.8	-3.8
	31nm,0.2s,SNR=48						
CFTV	Fuerteventura	1.59	112	P	Pn	19 27 36.9	-1.2
	3.1nm,0.1s,SNR=18						
CFTV				S	Sn	19 27 53.8	-3.8
	31nm,0.2s,SNR=48						
CFUE	Fuerteventura	1.65	102	⇓P	Pn	19 27 37.4	-1.4
	3.1nm,0.0s,SNR=18						
CFUE				S	Sn	19 27 55.1	-3.7
	38nm,0.0s,SNR=7.9						
CFUE	Fuerteventura	1.65	102	P	Pn	19 27 37.4	-1.4
	3.1nm,0.0s,SNR=18						
CFUE				S	Sn	19 27 55.1	-3.7
	38nm,0.0s,SNR=7.9						
EHIG	Higuera	1.85	256	S	Sn	19 28 00.6	-3.3
	35nm,0.1s,SNR=6.3						
EHIG	Higuera	1.85	256	S	Sn	19 28 00.6	-3.3
	35nm,0.1s,SNR=6.3						
PMAR	Madeira	3.83	345	eP	Pn	19 28 06.5	-2.4
PMAR				eS	Sn	19 28 47.3	-5.5
PMAR				A	A	19 28 52.1	
	13nm,0.5s						
PMAR	Madeira	3.83	345	P	Pn	19 28 06.5	-2.4
PMAR				S	Sn	19 28 47.3	-5.5
	6.7nm,0.5s						
PMAR	Madeira	3.83	345	P	Pn	19 28 06.5	-2.4
PMAR				S	Sn	19 28 47.3	-5.5
	6.7nm,0.5s						
PMOZ	Porto Moniz, M	3.99	342	eP	Pn	19 28 09.0	-2.1
PMOZ				eS	Sn	19 28 51.9	-4.8
PMOZ				A	A	19 29 02.5	
	28nm,0.7s						
PMOZ	Porto Moniz, M	3.99	342	eP	Pn	19 28 09.0	-2.1
PMOZ				eS	Sn	19 28 51.9	-4.8
	28nm,0.7s						
PMPS	Porto Santo	4.06	353	eP	Pn	19 28 09.1	-2.8
PMPS	Porto Santo	4.06	353	P	Pn	19 28 09.1	-2.8
PMPS	Porto Santo	4.06	353	P	Pn	19 28 09.1	-2.8

MAN 06 19:45:58,7.90N×125.83E,h30km,mb4.1,ML3.0,MS2.7, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.76	269	eP	Pb	19 46 13.6	+0.8
BUKP				eS	Sn	19 46 24.2	+1.0
MATI	Mati	1.04	156	eP	Pb	19 46 17.3	-0.1
MATI				eS	Sn	19 46 26.6	-3.4
CGP	Cagayan de Oro	1.25	296	⇓eP	Pn	19 46 19.1	-0.4
CGP				iS	Sb	19 46 36.8	0.0

IDC 06 19:53:36.2±2.9,30.44S×68.77W,h0km,mb3.7/1,ML4.1/1, Error ellipse: s-maj=115.8km s-min=69.1km az=75.0, San Juan Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	14.10	2	Pn	Pn	19 56 58.0	-0.1
	0.3nm,0.3s,baz=154,slow=8.5,SNR=30						
TORD	Torodi Ar. Bea	80.36	69	P	P	20 05 49.8	0.0
	0.3nm,0.5s,baz=230,slow=7.3,SNR=5.5						
KURBB	Kurchatov Arra	148.38	41	PKPbc	PKPbc	20 13 24.1	-0.2
	0.2nm,0.6s,baz=308,slow=3.3,SNR=4.5						
ZALV	Zalesovo Beam	149.75	31	PKPbc	PKPbc	20 13 26.3	-1.3
	0.6nm,0.5s,baz=310,slow=3.4,SNR=3.9						
MKAR	Makanchi Array	152.32	46	PKPbc	PKPbc	20 13 34.1	+0.2
	0.3nm,0.4s,baz=306,slow=3.0,SNR=5.5						

NIC 06 20:02:56.8±0.3,33.63N×32.74E,h25km,ML3.2,MW3.3
HLW 06 20:02:56.2,34.04N×32.95E,h33km±25km,Md3.1,Ml3.3
ISCJB 06 20:02:58.1±0.6,33.79N±0.04×32.77E±0.04,h62km±34km, Error ellipse: s-maj=7.3km s-min=5.0km az=8.5
CSEM 06 20:02:59.2±0.1,33.83N×32.78E,h40km,Mw3.3,Error ellipse: s-maj=3.4km s-min=2.0km az=83.0
NSSC 06 20:03:03.2±1.7,34.08N×33.16E,h37km±999km,ML2.3
ISC 06 20:02:59.4±1.4,33.81N±0.04×32.80E±0.04,h51km±56km, n60,σ0.96/79,4C,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SZAC	Souni-Zanaja	0.95	4	P	Pn	20 03 15.5	-1.0
SZAC	Souni-Zanaja	0.95	4	P	Pn	20 03 15.5	-1.0
PPCY	Paphos	1.14	341	⇑P	Pn	20 03 17.6	-1.4
PPCY	Paphos	1.14	341	⇑P	Pn	20 03 17.6	-1.4
CSS	Prodhromos	1.23	21	P	Pn	20 03 18.6	-1.7
	4.3nm,0.3s						
CSS				S	Sn	20 03 37.0	+1.2
CSS	Prodhromos	1.23	21	ePG	Pn	20 03 19.5	-0.8
CSS				eSG	Sn	20 03 36.9	+1.2
CSS	Prodhromos	1.23	21	P	Pn	20 03 18.6	-1.7
	4.3nm,0.3s						
CSS	Prodhromos	1.23	21	Pg	Pn	20 03 19.8	-0.5
CSS				S	Sn	20 03 37.0	+1.2
AKMC	Akamas	1.28	342	P	Pn	20 03 19.9	-1.0
AKMC	Akamas	1.28	342	P	Pn	20 03 19.9	-1.0
ALFC	Alevga	1.35	353	P	Pn	20 03 21.1	-0.9
	8.1nm,0.2s						
ALFC				S	Sn	20 03 39.9	+1.0
ALFC	Alevga	1.35	353	P	Pn	20 03 21.1	-0.9
	8.1nm,0.2s						
ALFC				S	Sn	20 03 39.9	+1.0
MAMC	Mammari	1.40	14	P	Pn	20 03 22.2	-0.4
MAMC	Mammari	1.40	14	P	Pn	20 03 22.2	-0.4
PHNC	Paralimni	1.57	40	⇑P	Pn	20 03 24.2	-0.6
	1.5nm,0.3s						
PHNC				S	Sn	20 03 45.2	+1.3
PHNC	Paralimni	1.57	40	⇑P	Pn	20 03 24.2	-0.6
	1.5nm,0.3s						
PHNC				S	Sn	20 03 45.2	+1.3
EREN	Erenkoy	2.05	33	ePN	Pn	20 03 32.6	+1.1
HNTI	Hanita	2.11	109	Pn	Pn	20 03 32.3	+0.1
HNTI				Sn	Sn	20 03 56.9	-0.4
BLGI	Bet Lehem HaGe	2.27	118	Pn	Pn	20 03 34.4	0.0
BLGI				Sn	Sn	20 04 00.7	-0.5
MMA0	Mount Meron ar	2.31	109	Pn	Pn	20 03 35.0	-0.1
MMA0				Sn	Sn	20 04 02.5	+0.1
BHL	Bhannes	2.37	87	eP	Pn	20 03 35.3	-0.6
KSDI	Kefar Szold	2.46	104	Pn	Pn	20 03 37.1	0.0
KSDI				Sn	Sn	20 04 06.1	+0.1
RCY	Rachaya	2.55	96	eP	Pn	20 03 38.1	-0.3
MMLI	Mount Malkishu	2.59	121	Pn	Pn	20 03 39.0	+0.2
MMLI				Sn	Sn	20 04 09.2	+0.1
HWQ	Hawqa	2.65	79	eP	Pn	20 03 39.4	-0.4
HWQ	Hawqa	2.65	79	eP	Pn	20 03 39.4	-0.4
BRBR	Barbar	2.66	98	eP	Pn	20 03 39.9	0.0
BRBR				eS	Sn	20 04 08.1	-2.9
BRBR				AML	AML	20 04 13.2	
	comp=E,41nm,0.4s						
BRBR				AML	AML	20 04 13.5	
	comp=Z,82nm,0.3s						
BRBR				AML	AML	20 04 13.7	
	comp=N,70nm,0.2s						
HMDT	Nahal Hemdat	2.76	123	Pn	Pn	20 03 42.1	+0.9
HMDT				Sn	Sn	20 04 14.2	+0.9
DSI	Dead Sea	3.12	135	Pn	Pn	20 03 46.5	+0.5
YTIR	Yattir	3.12	141	Sn	Sn	20 04 23.3	+1.0
AMAG	Maghara	3.17	174	P	Pn	20 03 47.0	+0.1
RTMI	Retamim	3.18	149	Sn	Sn	20 04 24.0	+0.5
KZIT	Kziot	3.19	155	Sn	Sn	20 04 23.7	-0.2
ARNB	Al Arnab	3.31	51	eP	Pn	20 03 48.8	0.0
ARNB				eS	Sn	20 04 18.8	-8.2
ARNB				AML	AML	20 04 29.2	
	comp=Z,56nm,0.2s						
ARNB				AML	AML	20 04 29.7	
	comp=N,21nm,0.1s						
ARNB				AML	AML	20 04 29.8	
	comp=E,50nm,0.2s						
ARNB	Al Arnab	3.31	51	eP	Pn	20 03 48.8	0.0
	SNR=57						
SALA	Sala	3.47	107	eP	Pn	20 03 52.5	+1.5
SALA				eS	Sn	20 04 28.9	-2.1
SALA				AML	AML	20 04 35.6	
	comp=N,31nm,0.3s						
SALA				AML	AML	20 04 36.6	
	comp=Z,32nm,0.4s						
SALA				AML	AML	20 04 39.0	
	comp=E,2.3nm,0.6s						
ZFRI	Zfri	3.82	148	Sn	Sn	20 04 39.9	+0.6
HHAG	Hagoal	3.89	189	P	Pn	20 03 57.1	+0.4
	baz=191						
HHAG	Hagoal	3.89	189	P	Pn	20 03 57.1	+0.4
ZALF	Zalf	3.89	102	eP	Pn	20 03 58.3	+1.6
ZALF				eS	Sn	20 04 38.2	-3.0
ZALF				AML	AML	20 04 48.8	
	comp=N,7.7nm,0.4s						
ZALF				AML	AML	20 04 54.8	
	comp=E,8.7nm,0.5s						
ZALF				AML	AML	20 05 03.4	
	comp=Z,6.9nm,0.4s						
ZALF	Zalf	3.89	102	eP	Pn	20 03 58.3	+1.6
	SNR=57						
ZALF				eS	Sn	20 04 38.2	-3.0
	comp=Z,6.9nm,0.4s,SNR=58						
PRNI	Paran	3.92	151	Sn	Sn	20 04 42.2	+0.3
KOT	Kottamia	3.96	192	P	Pn	20 03 57.7	+0.1
	baz=194						
KOT				S	Sn	20 04 41.5	-1.3
	baz=194						
KOT	Kottamia	3.96	192	P	Pn	20 03 57.7	+0.1
KOT				S	Sn	20 04 41.5	-1.3
HNKL	Nakhl	4.00	165	P	Pn	20 03 58.2	+0.1
	baz=167						
HNKL	Nakhl	4.00	165	P	Pn	20 03 58.2	+0.1
KRMI	Paran Flat	4.03	156	Pn	Pn	20 03 58.7	+0.1
KRMI				Sn	Sn	20 04 44.6	+0.1
HBRG	Burj al ‘Arab	4.09	219	S	Sn	20 04 45.1	-0.8
	baz=219						
HBRG				AMP		20 04 00.0	
	comp=N,70µm,0.2s,logA/T=5.5,baz=219						
HBRG	Burj al ‘Arab	4.09	219	S	Sn	20 04 45.1	-0.8
HRFI	Mount Harif	4.21	153	Pn	Pn	20 04 01.3	+0.2
HRFI				Sn	Sn	20 04 49.4	+0.3
MBRI	Mt Berech	4.39	155	Pn	Pn	20 04 03.9	+0.3
MBRI				Sn	Sn	20 04 54.0	+0.6
ZNM		4.42	179	P	Pn	20 04 04.0	+0.1
	baz=181						
ZNM		4.42	179	P	Pn	20 04 04.0	+0.1
EIL	Elat	4.51	156	Pn	Pn	20 04 05.8	+0.6
EIL				Sn	Sn	20 04 56.6	+0.2
HNAT	Natroun	4.56	205	P	Pn	20 04 06.9	+1.0
	baz=205						
HNAT	Natroun	4.56	205	P	Pn	20 04 06.9	+1.0
HDHB	Dhahab	5.30	162	P	Pn	20 04 16.3	+0.3
	baz=164						
HDHB	Dhahab	5.30	162	P	Pn	20 04 16.3	+0.3
HKAT	Jabal Katrina	5.37	169	P	Pn	20 04 17.2	+0.1
	baz=170						
HKAT	Jabal Katrina	5.37	169	P	Pn	20 04 17.2	+0.1

ISK 06 20:09:21.9,40.71N×36.54E,h9km,MD3.0
DDA 06 20:09:22.6,40.68N×36.52E,h7km,MD2.8
CSEM 06 20:09:22.6±0.1,40.70N×36.54E,h8km,MD2.8,Error ellipse: s-maj=3.1km s-min=1.8km az=32.0
ISCJB 06 20:09:22.5±0.5,40.70N±0.04×36.53E±0.04,h9km±5km, Error ellipse: s-maj=7.1km s-min=4.4km az=36.2
ISC 06 20:09:22.7±0.9,40.70N±0.03×36.54E±0.03,h14km±7km, n32,σ0.60/42,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ERBA	Erbaa	0.16	97	iP	Pg	20 09 26.6	-0.1
ERBA				iS	Sg	20 09 29.7	+0.3
ERBA	Erbaa	0.16	97	iP	Pg	20 09 26.6	-0.1
ERBA				iS	Sg	20 09 29.7	+0.3
TOKA	Tokat	0.38	187	iP	Pg	20 09 29.9	-0.5
TOKA				iS	Sg	20 09 35.3	-0.3
TOKA	Tokat	0.38	187	iP	Pg	20 09 29.9	-0.5
TOKA				iS	Sg	20 09 35.3	-0.3
KVT	Kavak	0.53	315	ePG	Pg	20 09 32.8	-0.4
KVT				eSG	Sg	20 09 40.4	+0.1
KVT	Kavak	0.53	315	ePg	Pg	20 09 32.8	-0.4
KVT				eSg	Sg	20 09 40.4	+0.1
RSDY	Resadiye-TOKAT	0.67	117	ePG	Pg	20 09 35.4	-0.4
RSDY				eSG	Sb	20 09 45.0	-0.3
RSDY	Resadiye-TOKAT	0.67	117	ePg	Pg	20 09 35.4	-0.4
RSDY				eSg	Sb	20 09 45.0	-0.3
HAVZ	Havza	0.73	301	iP	Pg	20 09 36.1	-0.7
HAVZ				iS	Sg	20 09 47.3	+0.8
HAVZ	Havza	0.73	301	iP	Pg	20 09 36.1	-0.7
HAVZ				iS	Sg	20 09 47.3	+0.8
DIKM	Dikmen	1.35	315	ePN	Pn	20 09 47.6	+0.4
YOZ	Yozgat	1.42	222	ePN	Pn	20 09 48.6	+0.5
YOZ	Yozgat	1.42	222	ePn	Pn	20 09 48.6	+0.5
BYBT	Boyabat	1.54	300	ePN	Pn	20 09 50.0	+0.2
BYBT	Boyabat	1.54	300	ePn	Pn	20 09 50.0	+0.2
CORM	Corum	1.55	251	ePN	Pn	20 09 50.5	+0.6
ESPY	Espiye-Giresun	1.67	82	ePN	Pb	20 09 52.8	-0.4
ESPY	Espiye-Giresun	1.67	82	ePn	Pb	20 09 52.8	-0.4
BNN	Bunyan	1.92	196	ePN	Pn	20 09 56.0	+1.0
BNN	Bunyan	1.92	196	ePn	Pn	20 09 56.1	+1.0
ILIC	ilic-Erzincan	1.99	128	ePN	Pn	20 09 56.9	+0.8
ILIC	ilic-Erzincan	1.99	128	ePn	Pn	20 09 56.9	+0.8
DARE	Darende-Malaty	2.00	150	ePN	Pg	20 10 00.6	-0.5
DARE	Darende-Malaty	2.00	150	ePn	Pg	20 10 00.6	-0.5
GUMT	Gumushane	2.25	95	ePN	Pn	20 10 00.0	+0.4
GUMT	Gumushane	2.25	95	ePn	Pn	20 10 00.0	+0.4
BZK	Bozkurt	2.29	304	ePN	Pn	20 10 00.6	+0.6
BZK	Bozkurt	2.29	304	ePn	Pn	20 10 00.6	+0.6
PTK	Pertek	2.84	129	ePN	Pn	20 10 08.5	+0.7
PTK	Pertek	2.84	129	ePn	Pn	20 10 08.5	+0.7
AFSR	Af¯ar-Bala (A	2.94	246	ePN	Pn	20 10 10.1	+1.0
AFSR	Af¯ar-Bala (A	2.94	246	ePn	Pn	20 10 10.1	+1.0

IDC 06 20:21:23.2±7.7,8.22S×119.59E,h124km±80km,mb3.1/3, mb1 3.2/5,mb1mx3.0/23,mbtmp3.1/5,MS3.4/1,Ms1 3.4/1, ms1mx2.5/10,Error ellipse: s-maj=158.7km s-min=30.0km az=52.0,Flores region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.45	150	P	Pn	20 24 03.1	0.0
	0.1nm,0.3s,baz=331,slow=13,SNR=5.0						
FITZ				S	Sn	20 26 01.7	-7.6
	0.2nm,0.3s,baz=187,slow=19,SNR=2.3						
WRA	Warramunga Arr	18.43	131	P	P	20 25 28.6	-0.6
	0.2nm,0.3s,baz=302,slow=12,SNR=9.3						
WRA				S	S	20 28 44.8	-8.7
	0.1nm,0.3s,baz=305,slow=25,SNR=0.9						
ASAR	Alice Springs	20.60	140	P	P	20 25 52.8	+0.2
	0.7nm,0.3s,baz=317,slow=9.0,SNR=20						
ASAR				LR	LR	20 36 04.1	
	comp=Z,99nm,19.8s,baz=281,slow=43						
STKA	Stephens Creek	31.20	142	P	P	20 27 30.8	0.0
	2.1nm,1.1s,baz=321,slow=9.4,SNR=5.9						
MKAR	Makanchi Array	64.03	332	P	P	20 31 43.6	0.0
	0.1nm,0.5s,baz=157,slow=6.3,SNR=3.5						

NSSC 06 20:48:42.6±1.1,33.30N×35.41E,h10km±5km,ML1.7
CSEM 06 20:48:42.1±0.2,33.33N×35.39E,h12km,ML3.0,Error ellipse: s-maj=3.5km s-min=2.3km az=75.0
ISCJB 06 20:48:42.3±1.1,33.33N±0.06×35.40E±0.06,h11km±5km, Error ellipse: s-maj=9.2km s-min=5.7km az=161.6
GRAL 06 20:48:43.2±0.3,33.32N×35.43E,h6km±2km,MD3.0
ISC 06 20:48:42.0±1.5,33.33N±0.04×35.39E±0.07,h13km±11km, n17,σ0.40/32,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATL	Matarih	0.17	342	eP	Pb	20 48 46.8	-0.3
MATL	Matarih	0.17	342	eP	Pb	20 48 46.8	-0.3
RCY	Rachaya	0.41	65	eP	Pg	20 48 50.2	0.0
RCY				eS	Sg	20 48 55.5	-0.3
BRBR	Barbar	0.47	80	eP	Pg	20 48 51.5	+0.1
BRBR				eS	Sb	20 48 59.0	-0.4
BRBR				AMP		20 48 59.9	
BRBR				AML	AML	20 49 00.5	
	comp=Z,76nm,0.2s						
BRBR				AML	AML	20 49 02.5	
BRBR				AML	AML	20 49 03.1	
BRBR				AMP		20 49 09.8	
BRBR	Barbar	0.47	80	eP	Pg	20 48 51.5	+0.1
	SNR=94						
BRBR				eS	Sb	20 48 59.0	-0.4
	comp=Z,76nm,0.2s,SNR=100						
BHL	Bhannes	0.62	21	eP	Pg	20 48 54.2	+0.1
BHL				eS	Sg	20 49 02.5	+0.2
BHL	Bhannes	0.62	21	eP	Pg	20 48 54.2	+0.1
BHL				eS	Sg	20 49 02.5	+0.2
QASN	Qassioun	0.77	74	eP	Pg	20 48 57.1	+0.2
QASN				eS	Sb	20 49 07.8	0.0
QASN				AML	AML	20 49 09.7	
	comp=Z,56nm,0.3s						
QASN				AML	AML	20 49 10.4	
	comp=E,188nm,0.4s						
QASN				AML	AML	20 49 10.5	
	comp=N,127nm,0.5s						
QASN	Qassioun	0.77	74	eP	Pg	20 48 57.1	+0.2
	SNR=92						
QASN				eS	Sb	20 49 07.8	0.0
	comp=N,127nm,0.5s,SNR=62						
TCHB	Talchebab	0.81	143	eP	Pb	20 48 58.3	+0.2
TCHB				eS	Sg	20 49 08.3	-0.2
TCHB				AML	AML	20 49 14.2	
	comp=E,23nm,0.6s						
TCHB				AML	AML	20 49 14.4	
	comp=N,65nm,0.3s						
TCHB				AML	AML	20 49 17.3	
	comp=Z,69nm,0.5s						
TCHB	Talchebab	0.81	143	eP	Pb	20 48 58.3	+0.2
	SNR=92						
TCHB				eS	Sg	20 49 08.3	-0.2
	comp=Z,69nm,0.5s,SNR=62						
HWQ	Hawqa	1.06	26	eP	Pb	20 49 02.1	-0.2
HWQ				eS	Sb	20 49 15.8	-0.3
HWQ	Hawqa	1.06	26	eP	Pb	20 49 02.1	-0.2
HWQ				eS	Sb	20 49 15.8	-0.3
SALA	Sala	1.28	118	eP	Pb	20 49 06.0	-0.2
SALA				eS	Sb	20 49 21.6	-1.0
SALA				AML	AML	20 49 24.7	
	comp=Z,37nm,0.6s						
SALA				AML	AML	20 49 26.0	
	comp=E,2.5nm,0.3s						
SALA				AML	AML	20 49 28.0	
	comp=N,28nm,0.4s						
SALA	Sala	1.28	118	eP	Pb	20 49 06.0	-0.2
	SNR=66						
SALA				eS	Sb	20 49 21.6	-1.0
	comp=N,28nm,0.4s,SNR=62						
ZALF	Zalf	1.68	103	eP	Pn	20 49 11.8	+0.6
ZALF				eS	Sb	20 49 33.6	-0.3
ZALF				AML	AML	20 49 36.0	
	comp=Z,6.8nm,0.3s						
ZALF				AML	AML	20 49 36.9	
	comp=N,5.1nm,0.6s						
ZALF				AML	AML	20 50 00.7	
	comp=E,4.0nm,0.6s						
ZALF	Zalf	1.68	103	eP	Pn	20 49 11.8	+0.6
	SNR=51						
ZALF				eS	Sb	20 49 33.6	-0.3
	comp=E,4.0nm,0.6s,SNR=49						

ISK 06 20:53:33.2,39.19N×41.75E,h10km,MD2.9
CSEM 06 20:53:34.8±0.2,39.24N×41.66E,h10km,MD2.9,Error ellipse: s-maj=4.7km s-min=3.8km az=56.0
ISCJB 06 20:53:34.9±0.7,39.26N±0.02×41.65E±0.04,h5km±5km, Error ellipse: s-maj=5.4km s-min=3.8km az=10.3
DDA 06 20:53:35.3,39.26N×41.63E,h3km,MD2.9
ISC 06 20:53:34.9±0.9,39.25N±0.02×41.67E±0.03,h11km±7km, n37,σ0.58/52,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VRTB	Varto-Mus	0.19	240	ePG	Pg	20 53 38.8	-0.3
VRTB				eSG	Sg	20 53 42.6	+0.6
VRTB	Varto-Mus	0.19	240	ePg	Pg	20 53 38.8	-0.3
VRTB				eSg	Sg	20 53 42.6	+0.6
BNGL	BINGOL	0.50	233	iP	Pg	20 53 44.3	-0.5
BNGL				iS	Sb	20 53 52.3	-1.0
ERZM	Erzurum	0.69	340	iP	Pg	20 53 48.3	0.0
ERZM				iS	Sg	20 53 56.1	-1.4
ERZM	Erzurum	0.69	340	iP	Pg	20 53 48.3	0.0
ERZM				iS	Sg	20 53 56.1	-1.4
EZM	Erzurum	0.69	340	ePG	Pg	20 53 48.3	-0.1
EZM				eSG	Sb	20 53 59.9	+1.1
BNGB	Bingˆ¶l	0.81	251	ePG	Pg	20 53 49.4	-1.2
HOMI	Horasan	0.81	13	iP	Pb	20 53 51.4	+0.2
HOMI				iS	Sn	20 54 04.9	+0.3
TATV	Tatvan	0.88	148	iP	Pg	20 53 51.3	-0.6
TATV				iS	Sb	20 54 04.6	+0.5
TATV	Tatvan	0.88	148	iP	Pg	20 53 51.3	-0.6
TATV				iS	Sb	20 54 04.6	+0.5
TUTA	Tutak	0.90	80	iP	Pb	20 53 53.0	+0.3
TUTA				iS	Sn	20 54 06.6	-0.3
TUTA	Tutak	0.90	80	iP	Pb	20 53 53.0	+0.3
TUTA				iS	Sn	20 54 06.6	-0.3
BTMT	Batman	1.07	188	ePN	Pg	20 53 55.3	-0.2
BTMT	Batman	1.07	188	ePn	Pg	20 53 55.3	-0.2
KOPT	Kop Dagi	1.18	311	iP	Pb	20 53 57.2	-0.3
KOPT				iS	Sn	20 54 14.4	+0.5
KOPT	Kop Dagi	1.18	311	iP	Pb	20 53 57.2	-0.3
KOPT				iS	Sn	20 54 14.4	+0.5
BEST	Besiri	1.40	193	iP	Pb	20 54 01.3	+0.3
BEST				iS	Sg	20 54 21.1	+1.2
ERZN	Erzincan	1.54	283	ePN	Pn	20 54 02.3	-0.1
BAYT	Ayd˜–ntepe-Bay	1.64	315	ePN	Pn	20 54 03.6	-0.1
BAYT	Ayd˜–ntepe-Bay	1.64	315	ePn	Pn	20 54 03.7	-0.1
DDEM	Demirkent	1.64	2	iP	Pb	20 54 05.4	+0.2
DDEM	Demirkent	1.64	2	iP	Pb	20 54 05.4	+0.2
PTK	Pertek	1.81	259	ePN	Pn	20 54 06.4	+0.2
PTK	Pertek	1.81	259	ePn	Pn	20 54 06.4	+0.2
EZC	Erzincan	1.86	286	ePN	Pn	20 54 06.9	+0.1
EZC	Erzincan	1.86	286	ePn	Pn	20 54 06.9	+0.1
SVRC	Sivrice-ELAZID	2.04	245	ePN	Pn	20 54 09.0	-0.3
SVRC	Sivrice-ELAZID	2.04	245	ePn	Pn	20 54 09.0	-0.3
MARD	Mardin	2.06	200	iP	Pb	20 54 12.5	+0.1
MARD				iS	Sg	20 54 40.3	-0.8
GUMT	Gumushane	2.07	306	ePN	Pn	20 54 10.7	+1.0
GUMT	Gumushane	2.07	306	ePn	Pn	20 54 10.7	+1.0
BCA	Borcka	2.19	359	ePN	Pn	20 54 11.5	+0.2
BCA	Borcka	2.19	359	ePn	Pn	20 54 11.5	+0.2
ILIC	ilic-Erzincan	2.41	276	ePN	Pn	20 54 14.7	+0.3
ILIC	ilic-Erzincan	2.41	276	ePn	Pn	20 54 14.7	+0.3
GNI	Garni	2.54	68	ePN	Pn	20 54 15.8	-0.3
GNI	Garni	2.54	68	ePn	Pn	20 54 15.8	-0.3

DDA 06 21:08:16.4,39.26N×41.60E,h7km,MD2.7
CSEM 06 21:08:17.1±0.9,39.29N×41.64E,h2km,MD2.7,Error ellipse: s-maj=20.3km s-min=10.1km az=110.0
ISK 06 21:08:17.2,39.30N×41.38E,h9km,MD2.4
ISC 06 21:08:16.9±1.1,39.27N±0.04×41.58E±0.05,h15km±7km, n14,σ0.58/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRTB	Varto-Mus	0.14	223	PG	Pg	21 08 20.6	-0.3
VRTB				SG	Sg	21 08 23.7	+0.2
VRTB	Varto-Mus	0.14	223	*i* Pg	Pg	21 08 20.6	-0.3
VRTB				*i* Sg	Sg	21 08 23.7	+0.2
EZM	Erzurum	0.66	345	PG	Pg	21 08 29.4	-0.5
BNGB	Bingˆ¶l	0.75	249	*e*PG	Pg	21 08 29.9	-1.8
HOMI	Horasan	0.82	18	*i* P	Pg	21 08 32.3	-0.6
KOPT	Kop Dagi	1.13	312	*i* P	Pg	21 08 39.0	+0.3
KOPT				*i* S	Sn	21 08 53.9	+0.1
KOPT	Kop Dagi	1.13	312	*i* P	Pg	21 08 39.0	+0.3
KOPT				*i* S	Sn	21 08 53.9	+0.1
BEST	Besiri	1.39	190	*i* P	Pn	21 08 42.5	+0.6
BEST				*i* S	Sg	21 09 02.0	+0.1
DDEM	Demirkent	1.63	4	*i* P	Pb	21 08 46.9	+0.1
DDEM				*i* S	Sg	21 09 09.2	-0.3
DDEM	Demirkent	1.63	4	*i* P	Pb	21 08 46.9	+0.1
DDEM				*i* S	Sg	21 09 09.2	-0.3
PTK	Pertek	1.75	258	*e*PN	Pn	21 08 46.4	-0.4
PTK	Pertek	1.75	258	*e*Pn	Pn	21 08 46.4	-0.4
KELT	Kelkit	2.00	297	*i* P	Pb	21 08 53.9	+0.8
KELT				*i* S	Sg	21 09 21.2	-0.1
KELT	Kelkit	2.00	297	*i* P	Pb	21 08 53.9	+0.8
KELT				*i* S	Sg	21 09 21.2	-0.1

WEL 06 21:23:34.4±0.5, 38.42S×175.81E, h171km±3km, ML3.6/14, 8C-3D, Error ellipse: s-maj=4.0km s-min=4.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	Taurewa	0.71	204	PN	Pn	21 23 59.3	0.0
TWVZ				SN	Sn	21 24 18.8	+0.1
WTVZ	West Tongariro	0.72	194	PN	Pn	21 23 59.5	+0.1
NGZ	Ngauruhoe	0.78	192	PN	Pn	21 23 59.8	0.0
WPVZ	Whakapapa	0.81	194	PN	Pn	21 24 00.1	+0.1
TUVZ	Tukino	0.86	188	⇑PN	Pn	21 24 00.4	+0.1
TUVZ				SN	Sn	21 24 19.7	-0.8
FWVZ	Far West T-bar	0.86	193	⇓PN	Pn	21 24 00.3	-0.2
BKZ	Black Stump Fm	0.92	145	⇑PN	Pn	21 24 00.6	-0.1
BKZ				SN	Sn	21 24 19.1	-1.9
WNVZ	Wahianoa	0.93	190	PN	Pn	21 24 00.8	0.0
PKVZ	Pokaka	0.94	202	PN	Pn	21 24 00.7	-0.1
MOVZ	Moawhango	0.99	182	⇑PN	Pn	21 24 00.8	-0.4
MOVZ				SN	Sn	21 24 20.0	-2.0
MTVZ	Mangateitei	1.00	195	PN	Pn	21 24 01.2	-0.1
NMHZ	Naumai	1.04	131	PN	Pn	21 24 02.4	+0.8
NMHZ				SN	Sn	21 24 23.2	+0.7
URZ	Urewera	1.04	82	⇑PN	Pn	21 24 01.1	-0.3
URZ				SN	Sn	21 24 20.8	-1.5
BHHZ	Black Hill Sta	1.09	169	PN	Pn	21 24 01.6	-0.3
RAHZ	Arahi	1.12	117	PN	Pn	21 24 02.6	+0.5
MCHZ	McNeill Hill	1.24	146	PN	Pn	21 24 03.9	+0.7
MWZ	Matawai	1.36	87	⇓PN	Pn	21 24 04.2	-0.1
MWZ				SN	Sn	21 24 25.6	-1.7
WAZ	Wanganui	1.48	205	PN	Pn	21 24 05.0	-0.4
PNHZ	Pukenui	1.53	169	PN	Pn	21 24 05.4	-0.5
KAHZ	Kahuranaki	1.61	149	PN	Pn	21 24 06.8	+0.1
TSZ	Takapari Road	1.65	176	⇑PN	Pn	21 24 06.4	-0.6
WPHZ	Waipukurau	1.72	164	PN	Pn	21 24 07.3	-0.5
MHGZ	Mahia Peninsul	1.80	115	PN	Pn	21 24 08.9	+0.3
PXZ	Pawanui	1.81	153	⇑PN	Pn	21 24 08.2	-0.5
DVHZ	Dannevirke	1.90	172	PN	Pn	21 24 08.6	-1.1
PRHZ	Porangahau	1.96	161	⇑PN	Pn	21 24 09.6	-0.7
MRZ	Mangatainoka R	2.25	184	⇑PN	Pn	21 24 11.9	-1.8
TIWZ	Tintock	2.36	179	PN	Pn	21 24 13.2	-1.7
OGWZ	Otaki Gorge	2.45	191	PN	Pn	21 24 14.2	-1.7
HOWZ	Holdsworth Sta	2.49	185	PN	Pn	21 24 14.3	-2.1
KIW	Kapiti Island	2.54	196	PN	Pn	21 24 14.8	-2.2
TMWZ	Te Maipa	2.69	179	PN	Pn	21 24 16.6	-2.2
CAW	Cannon Point	2.75	192	PN	Pn	21 24 17.2	-2.3
MTW	Mount Morrison	2.75	185	PN	Pn	21 24 16.9	-2.6
DUWZ	D'Urville Isla	2.79	211	PN	Pn	21 24 17.5	-2.5
PAWZ	Paruwai Farm	2.98	186	SN	Sn	21 24 54.1	-5.6
TRWZ	Traveller	2.98	182	PN	Pn	21 24 19.9	-2.4
MSWZ	Moikau Station	3.03	188	PN	Pn	21 24 20.0	-2.9
TCW	Tory Channel	3.03	202	⇓PN	Pn	21 24 20.4	-2.5
PLWZ	Palliser	3.18	187	PN	Pn	21 24 21.6	-3.2
TUWZ	Tuamarina	3.33	205	PN	Pn	21 24 23.6	-3.1
NNZ	Nelson	3.37	213	SN	Sn	21 25 03.9	-4.3
QRZ	Quartz Range	3.49	225	PN	Pn	21 24 24.8	-3.9
BSWZ	Blackbirch Sta	3.61	204	*e*PN	Pn	21 24 27.1	-3.1
THZ	Tophouse	4.02	213	PN	Pn	21 24 31.7	-3.7
LTZ	Lake Taylor	5.12	211	PN	Pn	21 24 45.2	-4.5
MQZ	McQueen's Vall	5.80	203	SN	Sn	21 25 54.2	-10

*IDC **06** 21:28:36.9±3.5, 19.85N×69.80W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/24, mbtmp3.6/4, MS3.2/1, Ms1 3.2/1, ms1mx2.6/25, Error ellipse: s-maj=133.6km s-min=30.4km az=24.0*
*NEIC **06** 21:28:37.7±0.5, 19.30N×70.22W, h10km, ML4.2, Error ellipse: s-maj=17.0km s-min=6.0km az=17.0*
NEIC Felt at Baitoa, Jamao al Norte and Nagua.
ISC 06 21:28:41.6±1.1, 19.30N±0.08×70.26W±0.04, h46km±15km, n23, σ1§99/37, mb3.6/4, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDDR	Presa de Saban	1.02	252	*e*Pn	Pn	21 28 58.4	-1.2
SDDR				Sn	Sn	21 29 13.5	+0.6
GRTK	Grand Turk	2.35	340	*e*Pn	Pn	21 29 16.6	-1.1
GRTK				*e*Sn	Sn	21 29 47.1	+1.8
AGP	Aguadilla	3.08	106	*e*Pn	Pn	21 29 26.0	-1.9
AGP				*e*Sn	Sn	21 30 02.4	-1.1
AGPR	Aguadilla, PR	3.10	105	*e*Pn	Pn	21 29 25.3	-2.7
AGPR				*e*Sn	Sn	21 30 09.0	+5.2
MPR	Mayaguez	3.15	110	*e*Pn	Pn	21 29 25.9	-2.8
MPR				*e*Sn	Sn	21 30 07.6	+2.5
LSP	Las Mesas	3.21	110	*e*Pn	Pn	21 29 28.1	-1.5
LSP				*e*Sn	Sn	21 30 07.3	+0.7
CRPR	Cabo Rojo, PR	3.25	113	*e*Pn	Pn	21 29 29.6	-0.6
CRPR				*e*Sn	Sn	21 30 09.2	+1.5
LRS	Lares	3.39	107	*e*Pn	Pn	21 29 30.3	-1.8
LRS				*e*Sn	Sn	21 30 13.0	+1.9
AOPR	Arecibo Observ	3.45	105	*e*Pn	Pn	21 29 32.1	-0.9
AOPR				*e*Sn	Sn	21 30 14.1	+1.4
OBIP	Obispado Ponce	3.68	109	*e*Pn	Pn	21 29 34.7	-1.4
OBIP				*e*Sn	Sn	21 30 21.4	+3.1
CELP	Cerrillos	3.70	109	*e*Pn	Pn	21 29 35.1	-1.2
CELP				*e*Sn	Sn	21 30 22.8	+4.2
SJG	San Juan	4.07	106	*e*Pn	Pn	21 29 39.2	-2.2
SJG				*e*Sn	Sn	21 30 29.5	+1.7
CBYP	Canovanas	4.30	103	*e*Pn	Pn	21 29 41.0	-3.6
CBYP				*e*Sn	Sn	21 30 33.2	-0.2
HUMP	Col San Antoni	4.34	105	*e*Pn	Pn	21 29 42.5	-2.6
HUMP				*e*Sn	Sn	21 30 34.5	+0.1
GTBY	Guantanamo Bay	4.61	279	*e*Pn	Pn	21 29 48.1	-0.7
GTBY				Sn	Sn	21 30 40.0	-1.2
STVI	Saint Thomas	5.11	100	*e*Pn	Pn	21 29 51.6	-4.2
STVI				*e*Sn	Sn	21 30 52.1	-1.4
CDVI	St. Croix	5.44	106	Pn	Pn	21 30 00.1	-0.1
CDVI				Sn	Sn	21 31 01.6	+0.1
MTDJ	Mount Denham	6.97	262	*e*Pn	Pn	21 30 22.5	+1.1
TXAR	Lajitas Array	31.94	295	LR	LR	21 51 03.0	
	comp=Z,43nm,18.4s,baz=180,slow=42						
NVAR	Mina Array Bea	45.63	305	P	P	21 36 59.9	+2.0
	0.7nm,0.7s,baz=111,slow=8.1,SNR=4.6						
YKA	Yellowknife Ar	52.80	336	P	P	21 37 51.3	-0.7
	0.5nm,0.7s,baz=115,slow=7.2,SNR=9.1						
ILAR	Eielson Array	67.02	333	P	P	21 39 29.4	-0.2
	0.6nm,0.8s,baz=90,slow=4.3,SNR=5.9						
TORD	Torodi Ar. Bea	68.95	83	P	P	21 39 41.5	-1.1
	0.2nm,0.6s,baz=276,slow=8.3,SNR=3.2						

*BJI **06** 21:38:52.7, 3.18N×126.84E, h74km, mB4.9/29, mb4.6/35, Ms4.5/21, Ms7 4.2/22*
*IDC **06** 21:38:55.5±2.2, 3.78N×126.44E, h39km±18km, mb4.1/26, mb1 4.2/26, mb1mx4.2/30, mbtmp4.1/26, MS4.0/21, Ms1 4.0/21, ms1mx3.7/40, Error ellipse: s-maj=22.5km s-min=9.0km az=78.0*
*ISCJB **06** 21:38:56.9±0.5, 3.83N±0.03×126.73E±0.03, h69km±4km, mb4.5/65, Error ellipse: s-maj=6.0km s-min=3.7km az=155.3*
*DJA **06** 21:38:56.1±1.7, 4°N±5°×12°7E±°, h21km±13km, M4.8/29, mB5.2/15, mb4.9/29, MLv5.2/9, Mw(mB)4.7/15*
*AUST **06** 21:38:59.6±0.3, 3.77N×126.85E, h78km, Error ellipse: s-maj=1.0km s-min=0.7km az=43.0*
*NEIC **06** 21:39:01.8±1.2, 3.80N×126.61E, h97km±11km, mb4.6/18, Error ellipse: s-maj=11.2km s-min=6.7km az=78.0*
NEIC Felt [II] in the Kepulauan Talaud.
ISC 06 21:39:00.9±0.4, 3.77N±0.03×126.66E±0.05, h84km±2km, n192, σ1§94/225, mb4.5/64, 3C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	1.14	266	P	Pn	21 39 31.2	+9.4
GAMI	Galela, Maluku	2.22	150	P	Pn	21 39 31.4	-4.6
MNI	Manado	2.94	218	P	Pn	21 39 43.7	-1.9
TNTI	Ternate	3.06	167	P	Pn	21 39 44.6	-2.6
MATI	Mati	3.18	353	*e*P	Pn	21 39 45.0	-3.9
DAV	Davao City (W)	3.45	342	Pn	Pn	21 39 54.2	+1.7
DAV				Sn	Sn	21 40 20.3	-12
DAV	Davao City (W)	3.45	342	P	Sn	21 40 21.1	-11
DAV	Davao City (W)	3.45	342	Pn	Pn	21 39 54.2	+1.7
	37nm,0.3s,baz=41,slow=13,SNR=5.4						
DAV				Sn	Sn	21 40 20.3	-12
	53nm,0.3s,baz=34,slow=22,SNR=6.8						
DAV				LR	LR	21 41 21.2	
	comp=Z,1μm,20.1s,baz=231,slow=43						
KMSI	Cibinong	4.16	220	P	Pn	21 40 01.9	-0.1
CTBH	Cotabato--PC H	4.19	325	⇑*i*P	Pn	21 40 02.0	-0.5
BUKP	Musuan	4.38	339	*e*P	Pn	21 40 01.9	-3.3
LBMI	Labuha	4.46	169	P	Pn	21 40 04.1	-2.1
CGP	Cagayan de Oro	5.05	337	*e*P	Pn	21 40 10.2	-4.0
PAGZ	Pagadian	5.20	321	*e*P	Pn	21 40 13.2	-3.1
MRSI	Marisa	5.74	235	P	Pn	21 40 22.2	-1.5
	222nm,0.8s,5μm2.0nm						
MRSI				S	Sn	21 41 25.1	-3.1
	222nm,0.8s,5μm2.0nm						
LUWI	Luwuk	6.16	219	P	Pn	21 40 30.4	+1.0
	680nm,1.1s,6μm2.0nm						
LUWI	Luwuk	6.16	219	P	Pn	21 40 31.9	+2.5
	baz=6.3,SNR=57						
SWI	Sorong	6.50	135	P	Pn	21 40 31.8	-2.3
	120nm,0.8s,1μm0.4nm						
SWI	Sorong	6.50	135	P	Pn	21 40 32.0	-2.1
	baz=6.4,SNR=7.5						
SWI				S	Sn	21 41 44.6	-2.2
	baz=6.4,SNR=4.4						
MSLP	Maasin	6.57	344	*e*P	Pn	21 40 35.8	+0.8
GUIM	Jordan	7.92	330	*e*P	Pn	21 40 47.2	-6.2
SKSI	Soroako, Sulaw	8.22	220	P	Pn	21 40 58.5	+1.0
	123nm,0.8s,980nm0.4nm						
MYLDM	Lahad Datu	8.26	280	P	Pn	21 40 56.9	-1.1
	110nm,0.8s,2μm						
PALU	Palau	8.54	65	P	Pn	21 40 58.0	-3.9
	baz=8.4,SNR=9.9						
FAKI	Fak Fak	8.68	140	P	Pn	21 41 01.4	-2.4
	67nm,1.3s						
FAKI	Fak Fak	8.68	140	P	Pn	21 41 01.7	-2.1
	baz=8.6,SNR=17						
FAKI				S	Sn	21 42 39.1	-0.9
	baz=8.6,SNR=3.3						
TTSI	Tana Toraja	9.62	225	P	Pn	21 41 16.2	-0.5
	90nm,1.4s,906nm						
BAKI	Biak	10.65	117	P	Pn	21 41 32.7	+2.1
KKM	Kota Kinabalu	10.65	283	*e*Pn	Pn	21 41 30.2	-0.6
KKM	Kota Kinabalu	10.65	283	P	Pn	21 41 30.2	-0.6
	baz=11,SNR=9.2						
KAPI	Kappang	11.13	218	*e*Pn	Pn	21 41 38.6	+1.5
KAPI				Sn	Sn	21 43 40.5	+0.7
KAPI	Kappang	11.13	218	P	Pn	21 41 40.7	+3.5
	19nm,0.8s,409nm						
KAPI	Kappang	11.13	218	Pn	Pn	21 41 36.1	-1.0
	0.8nm,0.3s,baz=39,slow=12,SNR=8.0						
KAPI				Sn	Sn	21 43 40.5	+0.7
	0.2nm,0.3s,baz=231,slow=20,SNR=1.1						
KAPI				LR	LR	21 46 24.4	
	comp=Z,824nm,19.6s,baz=212,slow=41						
BKSI	Bulukumba	11.15	216	P	Pn	21 41 40.2	+2.8
	16nm,1.3s						
KBKI	Kotabaru	12.62	236	P	Pn	21 42 01.6	+4.2
	33nm,1.2s,447nm						
MMRI	Maumere	13.09	200	P	P	21 42 18.7	+8.0
BBKI	Banjar Baru	13.83	239	P	P	21 42 17.2	-1.7
	68nm,1.8s,2μm						
SBUM	Sibu	14.48	265	P	Pn	21 42 24.1	+2.2
	28nm,2.0s,825nm						
JAY	Jayapura	15.36	114	P	P	21 42 39.0	+3.0
JAY	Jayapura	15.36	114	P	P	21 42 36.4	+0.4
	baz=15,SNR=6.0						
JAY				S	Sn	21 45 09.4	-13
	baz=15,SNR=4.1						
STKI	Sintang	15.62	257	P	P	21 42 42.1	+3.3
	32nm,1.3s,6μm						
KSM	Kuching	16.50	262	*e*Pn	Pn	21 42 47.1	-0.2
	37nm,1.0s						
KSM	Kuching	16.50	262	P	P	21 42 51.8	+3.2
	27nm,1.4s,456nm						
KSM	Kuching	16.50	262	P	P	21 42 50.6	+2.0
	baz=17,SNR=6.4						
MTN	Manton Dam	17.09	165	P	Pn	21 42 54.1	-0.5
	baz=17,SNR=6.7						
KDU	Kakadu	17.34	161	P	Pn	21 42 55.4	-2.3
	baz=17,SNR=24						
BLJI	Banyuglugur	17.35	229	P	P	21 43 10.1	+12
KNRA	Kununurra	19.43	174	P	P	21 43 19.5	-1.3
	baz=20,SNR=22						
GUMO	Guam	20.45	60	LR	LR	21 49 48.4	
	comp=Z,509nm,20.2s,baz=235,slow=32						
SSLB	Suanglung	20.65	345	*e*P	P	21 43 31.5	-2.5
	56nm,1.5s						
PPBI	Pangkal Pinang	21.35	254	P	P	21 43 47.9	+6.4
	14nm,1.3s						
FITZ	Fitzroy Crossi	21.76	183	P	P	21 43 44.3	-1.5
FITZ	Fitzroy Crossi	21.76	183	P	P	21 43 44.3	-1.5
	5.4nm,0.5s,baz=32,slow=8.8,SNR=18						
FITZ	Fitzroy Crossi	21.76	183	P	P	21 43 45.5	-0.3
	baz=22,SNR=5.2						
TNG	Tangerang	22.30	244	P	P	21 43 55.2	+3.5
	1μm,0.4s						
TNG	Tangerang	22.30	244	P	P	21 43 55.2	+3.5
	859nm,0.4s						
QIZ	Qiongzhong	22.36	314	P	P	21 43 51.8	-0.6
QIZ				pP	pP	21 44 08.4	-0.9
QIZ				sP	sP	21 44 18.8	-0.9
QIZ				S	S	21 47 52.9	+0.1
QIZ				pmax	pmax		
	comp=Z,28nm,1.7s						
QIZ				LR	LR		
	comp=Z,320nm,29.1s						
UBPT	Khong Chiam	23.79	300	P	P	21 44 06.2	0.0
	comp=Z,61nm,1.1s						
COEN	Coen	24.05	137	S	S	21 47 53.6	-26
	baz=24,SNR=7.9						
WRAB	Tennant Creek	24.74	162	*e*P	P	21 44 13.5	-1.2
	comp=Z,31nm,0.8s						
WRA	Warramunga Arr	24.74	163	P	P	21 44 13.1	-1.7
WRA				S	S	21 48 32.7	+1.6
WRA	Warramunga Arr	24.74	163	P	P	21 44 13.1	-1.7
	comp=Z,15nm,0.5s,baz=335,slow=11,SNR=67						
WRA				S	S	21 48 32.7	+1.6
	comp=Z,0.6nm,0.8s,baz=2.0,slow=34,SNR=2.3						
IPM	Ipoh	25.58	272	*e*P	P	21 44 23.2	+0.7
	comp=Z,24nm,1.0s						
IPM	Ipoh	25.58	272	P	P	21 44 27.2	+4.7
	comp=Z,28nm,1.1s,comp=Z,503nm						
KULM	Kulim	25.98	274	*e*P	P	21 44 26.2	+0.1
	comp=Z,19nm,1.1s						
KULM	Kulim	25.98	274	P	P	21 44 31.5	+5.4
	comp=Z,16nm,1.7s,comp=Z,613nm						
MNSI	Mandailing Nat	27.22	264	P	P	21 44 43.8	+6.5
	comp=Z,37nm,1.1s						
QIS	Mount Isa	27.31	153	P	P	21 44 40.1	+2.2
	baz=27,SNR=6.2						
PSI	Prapat	27.71	269	P	P	21 44 42.0	+0.2
PSI	Prapat	27.71	269	P	P	21 44 42.0	+0.2
	comp=Z,2.8nm,0.5s,baz=123,slow=14,SNR=4.6						
PSI				LR	LR	21 56 19.5	
	comp=Z,387nm,21.3s,baz=249,slow=38						
AS31	Alice Springs	28.17	166	*e*P	P	21 44 45.4	-0.2
ASAR	Alice Springs	28.17	166	P	P	21 44 44.8	-0.9
ASAR				S	S	21 49 39.6	+14
ASAR	Alice Springs	28.17	166	P	P	21 44 44.8	-0.9
	comp=Z,1.6nm,0.5s,baz=350,slow=7.8,SNR=28						
ASAR				S	S	21 49 39.6	+14
	comp=Z,0.4nm,0.9s,baz=223,slow=15,SNR=3.9						
NJ2	Nanjing	29.07	346	*e*P	P	21 44 52.8	-0.7
NJ2				pP	pP	21 45 07.3	-5.5
NJ2				S	S	21 49 39.5	+0.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,230nm,5.4s						
NJ2				LR	LR		
	comp=N,210nm,12.2s						
NJ2				LR	LR		
	comp=E,260nm,18.4s						
NJ2				LR	LR		
	comp=Z,260nm,15.3s						
JNU	Nakatsue	29.46	7	P	P	21 44 55.9	-1.1
JNU	Nakatsue	29.46	7	P	P	21 44 55.9	-1.1
	comp=Z,15nm,1.2s,baz=214,slow=3.6,SNR=3.3						
GYA	Guiyang	29.60	322	*e*P	P	21 45 00.8	+2.4
GYA				pP	pP	21 45 18.5	+0.8
GYA				sP	sP	21 45 29.6	+2.1
GYA				PP	PnPn	21 45 58.9	+1.9
GYA				PcP	PcP	21 48 02.4	+0.9
GYA				S	S	21 49 47.8	0.0
GYA				sS	sS	21 50 21.2	0.0
GYA				ScP	ScP	21 51 35.6	-0.5
GYA				ScS	ScS	21 55 29.0	-2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	30.79	300	P	P	21 45 07.9	-1.0
CMAR				PcP	PcP	21 48 08.8	+4.2
CMAR				ScP	ScP	21 51 44.6	+4.6
CMAR	Chiang Mai Arr	30.79	300	P	P	21 45 07.9	-1.0
	comp=Z,1.2nm,0.6s,baz=121,slow=7.9,SNR=9.0						
CMAR				PcP	PcP	21 48 08.8	+4.2
	comp=Z,0.5nm,1.0s,baz=109,slow=2.2,SNR=2.8						
CMAR				ScP	ScP	21 51 44.6	+4.6
	comp=Z,0.9nm,0.9s,baz=150,slow=2.6,SNR=6.2						
CMAR				LR	LR	21 57 14.0	
	comp=Z,148nm,18.8s,baz=134,slow=36						
CMMT	Chiang Mai	30.94	301	P	P	21 45 11.2	+1.0
	comp=Z,6.3nm,0.7s,comp=Z,417nm						
CHTO	Chiang Mai	30.95	301	*e*P	P	21 45 08.7	-1.6
	comp=Z,4.2nm,0.9s						
CHTO	Chiang Mai	30.95	301	P	P	21 45 10.7	+0.4
	comp=Z,7.5nm,1.3s						
MEEK	Meekatharra	31.22	194	P	P	21 45 11.9	-0.7
	baz=31,SNR=17						
KMI	Kunming	31.30	315	P	P	21 45 14.4	+0.8
KMI				pP	pP	21 45 31.2	-1.8
KMI				sP	sP	21 45 43.6	+0.8
KMI				PP	PnPn	21 46 21.8	+2.6
KMI				S	S	21 50 14.9	+0.1
KMI				sS	sS	21 50 45.7	-2.6
KMI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,74nm,5.4s						
KMI				LR	LR		
	comp=N,110nm,28.3s						
KMI				LR	LR		
	comp=E,190nm,24.7s						
KSAR	Wonju Array Be	33.53	2	P	P	21 45 31.5	-1.1
KSAR				PcP	PcP	21 48 13.2	+1.6
KSRS	Korea Array	33.54	2	P	P	21 45 31.5	-1.2
	comp=E,2.2nm,0.7s,baz=182,slow=10,SNR=12						
KSRS				PcP	PcP	21 48 13.2	+1.5
	comp=E,0.5nm,0.5s,baz=194,slow=2.5,SNR=2.9						
MORW	Morawa	34.21	197	P	P	21 45 39.0	+0.4
	baz=34,SNR=7.3						
MORW				S	S	21 50 41.1	-18
	baz=34,SNR=3.4						
MJAR	Matsushiro Arr	34.30	17	P	P	21 45 37.1	-2.3
MJAR	Matsushiro Arr	34.30	17	P	P	21 45 37.1	-2.3
	comp=E,1.8nm,1.1s,baz=157,slow=8.6,SNR=3.0						
MJAR				LR	LR	21 57 48.1	
	comp=E,149nm,21.0s,baz=195,slow=33						
XAN	Xi'an	34.35	333	P	P	21 45 37.5	-2.4
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,23nm,6.5s						
CD2	Chengdu	34.57	324	P	P	21 45 42.6	+0.8
CD2				pP	pP	21 46 02.5	+1.1
CD2				sP	sP	21 46 12.7	+1.6
CD2				PP	PP	21 47 01.4	-0.3
CD2				PcP	PcP	21 48 15.6	+0.7
CD2				S	S	21 51 04.7	-0.3
CD2				sS	sS	21 51 39.0	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,80nm,5.2s						
QLP	Quilpie	34.63	152	P	P	21 45 42.4	+0.1
	baz=35,SNR=4.9						
KMBL	Kambalda	35.24	187	P	P	21 45 46.9	-0.5
	baz=36,SNR=5.2						
BLDU	Ballidu	35.49	195	P	P	21 45 48.9	-0.7
	baz=36,SNR=14						
KLBR	Kellerberrin	36.17	193	P	P	21 45 55.0	-0.4
	baz=36,SNR=11						
BJT	Baijiatuau	37.31	347	*e*P	P	21 46 03.2	-1.8
	comp=Z,31nm,0.6s						
BJI	Beijing	37.33	347	P	P	21 46 04.0	-1.2
BJI				S	S	21 51 52.8	+6.0
BJI				pmax	pmax		
	comp=Z,42nm,0.7s						
BJI				pmax	pmax		
	comp=Z,110nm,5.8s						
BJI				LR	LR		
	comp=N,110nm,17.0s						
BJI				LR	LR		
	comp=E,100nm,24.4s						
EIDS	Eidsvold	37.42	142	P	P	21 46 06.1	-0.1
	baz=37,SNR=4.4						
BBOO	Buckleboo	37.45	167	P	P	21 46 05.9	-0.5
	baz=38,SNR=11						
NWAO	Narrogin (SRO)	37.58	193	P	P	21 46 06.5	-0.8
NWAO	Narrogin (SRO)	37.58	193	P	P	21 46 06.5	-0.8
	comp=E,5.9nm,0.5s,baz=25,slow=10,SNR=14						
SNY	Shenyang	37.99	356	⇑P	P	21 46 11.9	+1.2
SNY				sP	sP	21 46 33.7	-6.5
SNY				S	S	21 51 56.3	-0.4
SNY				pmax	pmax		
	comp=Z,13nm,0.6s						
SNY				pmax	pmax		
	comp=Z,150nm,6.0s						
SNY				LR	LR		
	comp=N,130nm,12.9s						
SNY				LR	LR		
	comp=E,190nm,18.2s						
SNY				LR	LR		
	comp=Z,120nm,9.3s						
STKA	Stephens Creek	38.19	159	*e*P	P	21 46 12.6	0.0
	comp=Z,2.6nm,0.7s						
STKA	Stephens Creek	38.19	159	P	P	21 46 12.7	+0.2
	comp=Z,8.1nm,0.5s,baz=330,slow=8.4,SNR=54						
STKA	Stephens Creek	38.19	159	P	P	21 46 12.6	0.0
	baz=38,SNR=42						
LZH	Lanzhou	38.44	330	*e*P	P	21 46 12.5	-2.3
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,51nm,5.2s						
LZH				LR	LR		
	comp=N,160nm,4.7s						
LZH				LR	LR		
	comp=E,200nm,5.0s						
LZH				LR	LR		
	comp=Z,250nm,7.8s						
HHC	Hu-ho-hao-te	39.34	342	⇑*i*P	P	21 46 23.9	+1.7
HHC				pP	pP	21 46 42.2	+0.1
HHC				sP	sP	21 46 51.3	-0.4
HHC				PP	PnPn	21 47 59.8	+2.2
HHC				S	S	21 52 19.7	+2.3
HHC				sS	sS	21 52 51.2	-0.3
HHC				ScS	ScS	21 56 22.7	+0.1
HHC				pmax	pmax		
	comp=Z,37nm,0.4s						
HHC				pmax	pmax		
	comp=Z,220nm,5.9s						
HHC				LR	LR		
	comp=N,160nm,18.4s						
HHC				LR	LR		
	comp=E,230nm,17.0s						
HHC				LR	LR		
	comp=Z,230nm,18.4s						
CMSA	Cobar Meteorol	39.51	154	P	P	21 46 24.5	+0.9
	baz=40,SNR=9.3						
SHL	Shillong	39.80	306	*e*PKP	P	21 46 26.5	+0.2
USRK	Ussuriysk Arra	40.54	6	P	P	21 46 31.7	-0.2

	comp=Z,2.5nm,0.8s,baz=179,slow=5.6,SNR=5.7						
MDJ	Mudanjiang	40.76	3	P	P	21 46 33.9	+0.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,76nm,5.6s						
ARMA	Armidale	41.54	147	eP	P	21 46 41.4	+1.0
	comp=Z,52nm,1.6s						
ARMA	Armidale	41.54	147	P	P	21 46 41.4	+1.0
	baz=42,SNR=9.8						
LSA	Lhasa	42.36	311	P	P	21 46 47.1	-0.6
LSA	Lhasa	42.36	311	eP	P	21 46 46.5	-1.2
	comp=Z,5.0nm,0.6s						
ASAJ	Asahikawa	42.57	17	P	P	21 46 48.6	0.0
ASAJ	Asahikawa	42.57	17	P	P	21 46 48.6	0.0
	comp=Z,7.8nm,0.9s,baz=240,slow=20,SNR=2.5						
ARPS	Mount Arapiles	42.74	162	P	P	21 46 50.9	+0.9
	baz=43,SNR=8.8						
GTA	Gaotai	43.03	329	eP	P	21 46 52.9	+0.4
GTA				pP	pP	21 47 06.4	-6.2
GTA				S	S	21 53 15.1	+3.0
GTA				SS	SS	21 56 21.4	-5.9
GTA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GTA				LR	LR		
	comp=N,130nm,21.9s						
GTA				LR	LR		
	comp=E,220nm,19.0s						
GTA				LR	LR		
	comp=Z,270nm,20.9s						
YNG	Young	43.05	153	P	P	21 46 53.7	+1.1
	baz=43,SNR=8.1						
TAPN	Taplejung	43.94	306	eP	P	21 46 58.4	-1.8
	comp=Z,5.9nm,0.5s						
ODAN	Odare	43.99	305	eP	P	21 46 58.7	-1.9
	comp=Z,9.7nm,0.5s						
RAMN	Ramite	44.67	305	eP	P	21 47 04.4	-1.6
GUN	Gumba	45.65	306	eP	P	21 47 11.4	-2.4
	comp=Z,11nm,0.4s						
PKI	Pulchoki	45.89	305	eP	P	21 47 13.2	-2.5
PKIN	Phulchoki	45.91	305	eP	P	21 47 13.0	-2.8
	comp=Z,2.6nm,0.4s						
KKN	Kakani	46.08	306	eP	P	21 47 14.8	-2.3
DMN	Daman	46.15	305	eP	P	21 47 16.3	-1.4
DZM	Mont Dzumac	46.61	125	LR	LR	22 06 01.4	
	comp=Z,256nm,20.2s,baz=198,slow=35						
ULN	Ulaanbaatar	47.06	342	eP	P	21 47 23.6	-0.8
	comp=Z,5.8nm,1.0s						
ULN	Ulaanbaatar	47.06	342	P	P	21 47 25.1	+0.8
	comp=Z,6.3nm,0.8s						
SONM	Songino Array	47.24	341	P	P	21 47 25.8	+0.1
SONM				PcP	PcP	21 49 00.6	+4.8
SONM	Songino Array	47.24	341	P	P	21 47 25.8	+0.1
	comp=Z,2.4nm,0.6s,baz=156,slow=8.6,SNR=17						
SONM				PcP	PcP	21 49 00.6	+4.8
	comp=Z,1.3nm,0.7s,baz=156,slow=5.2,SNR=2.7						
SONM				LR	LR	22 08 12.8	
	comp=Z,142nm,21.9s,baz=333,slow=37						
KOLN	Koldanda	47.45	305	eP	P	21 47 25.5	-2.2
	comp=Z,17nm,0.5s						
DANN	Dangsing	47.54	306	eP	P	21 47 26.0	-2.6
	comp=Z,24nm,0.4s						
PYUN	Piuthan	48.07	305	eP	P	21 47 30.5	-2.1
WMQ	Urumqi	52.65	325	eP	P	21 48 07.3	+0.6
WMQ				LR	LR		
	comp=N,250nm,7.2s						
WMQ				LR	LR		
	comp=E,240nm,5.6s						
WMQ				LR	LR		
	comp=Z,140nm,23.0s						
PETK	Petropavlovsk-	55.42	22	P	P	21 48 26.8	+0.2
PETK	Petropavlovsk-	55.42	22	P	P	21 48 26.8	+0.2
	comp=Z,4.9nm,0.8s,baz=166,slow=7.6,SNR=5.7						
PETK				LR	LR	22 11 45.9	
	comp=Z,38nm,19.9s,baz=231,slow=36						
MK31	Makanchi Array	57.48	325	eP	P	21 48 39.7	-1.7
MKAR	Makanchi Array	57.48	325	eP	P	21 48 39.5	-1.9
MKAR				ScP	ScP	21 53 32.2	+5.5
MKAR	Makanchi Array	57.48	325	P	P	21 48 39.0	-2.4
	comp=Z,2.5nm,0.4s,baz=119,slow=7.6,SNR=74						
MKAR				ScP	ScP	21 53 32.2	+5.5
	comp=Z,0.5nm,0.7s,baz=112,slow=5.4,SNR=3.8						
MKAR				LR	LR	22 13 45.2	
	comp=Z,126nm,20.4s,baz=121,slow=36						
KSH	Kashi	57.97	315	eP	P	21 48 45.1	0.0
KSH				epP	pP	21 49 08.9	+2.7
KSH				ePcP	PcP	21 49 37.0	+0.6
KSH				eScP	ScP	21 53 26.1	-3.1
KSH				ePcS	PcS	21 53 36.7	-1.2
KSH				eS	S	21 56 34.0	-5.2
KSH				esS	sS	21 57 15.3	+0.1
KSH				eScS	ScS	21 58 21.3	-5.9
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,160nm,3.4s						
KSH				LR	LR		
	comp=Z,190nm,4.1s						
TKM2	Tokmak 2	59.67	319	eP	P	21 48 55.8	-1.1
	comp=Z,2.9nm,0.8s						
AAK	Ala-Archa	60.28	318	eP	P	21 49 02.5	+1.4
AAK	Ala-Archa	60.28	318	P	P	21 48 58.4	-2.7
	comp=Z,1.2nm,0.6s,baz=184,slow=3.6,SNR=4.3						
ZAA0	Zalesovo Array	60.52	333	eP	P	21 48 60.0	-2.2
ZALV	Zalesovo Beam	60.52	333	P	P	21 48 59.4	-2.8
ZALV	Zalesovo Beam	60.52	333	P	P	21 48 59.4	-2.8
	comp=Z,1.0nm,0.3s,baz=118,slow=6.9,SNR=6.6						
ZALV				LR	LR	22 18 54.5	
	comp=Z,67nm,18.7s,baz=76,slow=40						
EKS2	Erkin-Say	60.77	318	eP	P	21 49 04.3	0.0
	comp=Z,3.6nm,0.8s						
KBL	Kabul	61.45	307	eP	P	21 49 08.2	-1.0
	comp=Z,4.2nm,0.7s						
KURBB	Kurchatov Arra	61.67	327	P	P	21 49 07.9	-2.1
	comp=Z,4.4nm,0.6s,baz=130,slow=6.3,SNR=32						
KURK	Kurchatov	61.67	328	eP	P	21 49 09.3	-0.8
URZ	Urewera	62.62	137	LR	LR	22 16 04.1	
	comp=Z,223nm,19.1s,baz=250,slow=36						
KKAR	Karatay Array	63.16	317	eP	P	21 49 19.7	-0.5
AFI	Afiamalu	63.52	107	LR	LR	22 11 16.9	
	comp=Z,120nm,20.2s,baz=65,slow=30						
BVAR	Borovoye Array	67.25	327	P	P	21 49 45.2	-1.3
BVAR	Borovoye Array	67.25	327	P	P	21 49 45.2	-1.3
	comp=Z,2.3nm,0.6s,baz=151,slow=8.7,SNR=16						
BVAR				LR	LR	22 19 29.1	
	comp=Z,78nm,20.2s,baz=360,slow=36						
BRVK	Borovoye	67.32	327	eP	P	21 49 47.1	+0.3
	comp=Z,8.1nm,0.8s						
ABKAR	Akbulak array	72.08	321	eP	P	21 50 14.2	-2.0
AKTO	Aktyubinsk	73.59	322	LR	LR	22 25 06.8	
	comp=Z,103nm,20.2s,baz=286,slow=38						
MIB	Mutribah	78.88	299	eP	P	21 50 53.6	-1.9
MIB				AMb	AMB	21 50 56.4	
	comp=Z,16nm,0.8s						
NAY	Al-Naaiem	78.94	299	eP	P	21 50 53.8	-2.1
NAY				AMb	AMB	21 50 58.9	
	comp=Z,5.6nm,0.9s						
RST	Umm Al-Ruwaisa	79.16	299	eP	P	21 50 55.0	-2.1
RST				AMb	AMB	21 50 57.7	
	comp=Z,1.7nm,0.7s						
VNDA	Vanda	83.47	173	P	P	21 51 19.5	+0.6
VNDA	Vanda	83.47	173	P	P	21 51 19.5	+0.6
	comp=Z,0.9nm,0.5s,baz=317,slow=5.0,SNR=8.9						
TRF	Thorofare Moun	83.53	27	eP	P	21 51 21.9	+2.2
	comp=Z,13nm,1.3s						
MAW	Mawson	83.77	200	LR	LR	22 28 19.8	
	comp=Z,117nm,19.5s,baz=259,slow=35						
COLD	Coldfoot	83.88	23	eP	P	21 51 20.4	-0.8
	comp=Z,7.4nm,1.0s						
SML	Sawmill	84.33	28	eP	P	21 51 25.4	+1.8
	comp=Z,2.3nm,0.9s						
ILAR	Eielson Array	85.09	25	P	P	21 51 27.5	+0.2
ILAR	Eielson Array	85.09	25	P	P	21 51 27.5	+0.2
	comp=Z,0.6nm,0.8s,baz=237,slow=5.8,SNR=6.9						
JOF	Joensuu	89.11	333	ep	P	21 51 45.8	-1.0
	comp=Z,4.7nm,0.6s						
KMBO	Kilima Mbogo	89.49	269	LR	LR	22 26 57.8	
	comp=Z,86nm,20.6s,baz=92,slow=32						
BRTR	Keskin Array B	89.94	310	P	P	21 51 48.5	-2.9
BRTR	Keskin Array B	89.94	310	P	P	21 51 48.5	-2.9
	comp=Z,0.7nm,0.8s,baz=123,slow=6.2,SNR=5.3						
BRTR				LR	LR	22 34 17.8	
	comp=Z,36nm,18.1s,baz=268,slow=37						
ARCES	ARCESS Array B	90.39	340	P	P	21 51 50.0	-2.6
ARCES	ARCESS Array B	90.39	340	P	P	21 51 50.0	-2.6
	comp=Z,1.9nm,0.6s,baz=77,slow=5.6,SNR=13						
ARCES				LR	LR	22 33 15.7	
	comp=Z,80nm,18.7s,baz=214,slow=36						
KAF	Kangasniemi	91.53	332	ep	P	21 51 55.8	-2.2
	comp=Z,1.7nm,0.5s						
FINES	FINESS Array B	91.77	332	P	P	21 51 57.8	-1.3
FINES	FINESS Array B	91.77	332	P	P	21 51 57.8	-1.3
	comp=Z,1.3nm,0.6s,baz=56,slow=4.8,SNR=11						
FINES				LR	LR	22 34 41.6	
	comp=Z,109nm,20.0s,baz=270,slow=36						
AKASG	Malin Array Be	91.82	321	P	P	21 51 58.2	-1.4
AKASG	Malin Array Be	91.82	321	P	P	21 51 58.2	-1.4
	comp=Z,1.3nm,0.6s,baz=67,slow=5.2,SNR=3.8						
BUR08	Bucovina Ar. S	94.93	318	eP	P	21 52 12.9	-1.3
NOA	NORSAR Array B	98.72	334	P	P	21 52 30.5	-0.5
NOA	NORSAR Array B	98.72	334	P	P	21 52 30.5	-0.5
	comp=Z,1.0nm,0.8s,baz=112,slow=19,SNR=3.2						
NOA				LR	LR	22 45 26.5	
	comp=Z,63nm,18.1s,baz=75,slow=40						
YKA	Yellowknife Ar	99.49	24	P	Pdif	21 52 35.6	+1.3
YKA	Yellowknife Ar	99.49	24	P	Pdif	21 52 35.6	+1.3
	comp=Z,0.2nm,0.6s,baz=290,slow=4.1,SNR=3.3						
TORD	Torodi Ar. Bea	122.84	288	PKP	PKPdf	21 57 47.7	-0.7
TORD	Torodi Ar. Bea	122.84	288	PKP	PKPdf	21 57 47.7	-0.7
	comp=Z,0.6nm,0.9s,baz=70,slow=1.9,SNR=6.4						
CPUP	Villa Florida	157.24	171	PKPab	PKPab	21 59 20.1	+1.2
CPUP	Villa Florida	157.24	171	PKPab	PKPab	21 59 20.1	+1.2
	comp=Z,1.1nm,0.6s,baz=266,slow=20,SNR=3.5						

IDC 06 21:54:49.9±1.5, 31°.68N×82°.76E, h0km, mb3.3/5, mb1 3.4/8, mb1mx3.2/30, mbtmp3.3/8, ML3.4/2, Error ellipse: s-maj=73.4km s-min=17.6km az=61.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	15.10	359	Pn	Pn	21 58 24.4	0.0
	0.0nm,0.3s,baz=185,slow=13,SNR=3.2						
KURBB	Kurchatov Arra	19.18	352	P	P	21 59 14.9	-0.1
	baz=172,slow=9.8,SNR=4.6						
CMAR	Chiang Mai Arr	19.67	128	P	P	21 59 20.9	+0.3
	0.1nm,0.3s,baz=305,slow=9.9,SNR=5.9						
ZALV	Zalesovo Beam	22.30	3	P	P	21 59 47.9	-0.8
	0.7nm,0.6s,baz=185,slow=8.8,SNR=5.6						
BVAR	Borovoye Array	23.14	341	P	P	21 59 58.0	+0.4
	0.2nm,0.4s,baz=159,slow=11,SNR=2.0						
FINES	FINESS Array B	46.89	327	P	P	22 03 21.4	-0.2
	0.9nm,0.8s,baz=100,slow=7.6,SNR=3.3						
WRA	Warramunga Arr	71.26	129	P	P	22 06 11.2	-0.1
	0.2nm,0.5s,baz=328,slow=5.8,SNR=3.8						
ASAR	Alice Springs	73.63	132	P	P	22 06 25.4	+0.1
	0.3nm,0.8s,baz=318,slow=5.4,SNR=3.9						

KRSC 06 22:11:56.2±1.2, 50°.02N×156°.95E, h99km±100km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.85	322	eP	Pn	22 12 17.6	+2.7
SKR				i S	Sn	22 12 33.7	+4.7
MIPR	Malaya Ipel'ka	2.26	357	eP	Pn	22 12 32.2	+0.1
ASAK	Asacha	2.44	14	eP	Pn	22 12 37.3	+2.7
ASAK				eS	Sn	22 13 06.9	+2.9
MTVR	Mutnovka	2.58	17	eP	Pn	22 12 39.2	+2.7
MTVR				i S	Sn	22 13 10.6	+3.1
RUS	Russkaya	2.61	22	eP	Pn	22 12 39.6	+3.0
RUS				i S	Sn	22 13 11.2	+3.5
UGLR	Uglovaya	3.40	19	eP	Pn	22 12 49.7	+2.3
KOK	Koryaka	3.44	17	i P	Pn	22 12 50.8	+2.9
KOK				i S	Sn	22 13 31.1	+3.2
SMAR	Somma	3.45	19	eP	Pn	22 12 51.0	+2.9
KRER	Koryakskii	3.47	18	eP	Pn	22 12 50.9	+2.4
KRER				i S	Sn	22 13 31.5	+2.6
SDLR	Sedlovina	3.48	20	eP	Pn	22 12 50.8	+2.4
SDLR				eS	Sn	22 13 31.4	+2.6
SPN	Mys Shipunski	3.63	31	eP	Pn	22 12 52.8	+2.5
SPN				eS	Sn	22 13 34.8	+2.6
GNL	Ganaly	3.73	9	eP	Pn	22 12 53.1	+1.3
TUMR	Tumrok	5.62	19	P	Pn	22 13 20.3	+3.0

*IDC **06** 22:15:00.4±7.9, 61°.80N×152°.30W, h75km±70km, mb3.1/3, mb1 3.2/5, mb1mx3.0/27, mbtmp3.1/5, ML3.1/2, Error ellipse: s-maj=57.6km s-min=51.5km az=10.0*
*ISCJB **06** 22:15:02.3±0.3, 61°.81N±0°.03×152°.00W±0°.07, h120km±3km, mb3.5/3, Error ellipse: s-maj=5.5km s-min=4.2km az=27.8*
*NEIC **06** 22:15:04.1, 61°.80N×152°.01W, h112km, MG3.0(AEIC), After AEIC.*
ISC 06 22:15:03.6±0.8, 61°.81N±0°.04×152°.02W±0°.04, h115km±6km, n60, σ0s.83/70, mb3.6/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKT	Skwentna	0.29	53	P	Pn	22 15 19.7	-0.2
SKT				S	Sn	22 15 31.6	-0.6
STLK	Strandline Lak	0.32	164	P	Pn	22 15 19.7	-0.4
BGL	Barrier Glacie	0.57	198	P	Pn	22 15 21.4	-0.2
SPU	Mount Spurr	0.63	182	P	Pn	22 15 21.3	-0.6
SPU				eSn	Sn	22 15 35.1	-0.5
CKL	Chakachamna La	0.63	194	P	Pn	22 15 21.6	-0.4
CKL				S	Sn	22 15 36.0	+0.2
CUT	Chulitna	1.02	53	P	Pn	22 15 25.5	+0.2
PPLA	Purkeypile	1.10	356	P	Pn	22 15 26.2	-0.1
PPLA				S	Sn	22 15 42.9	-0.6
NKA	Nikishka	1.13	160	P	Pn	22 15 27.5	+1.0
DFR	Drift River	1.26	195	P	Pn	22 15 27.9	-0.1
PMR	Palmer	1.39	98	P	Pn	22 15 28.6	-0.8
PMR				S	Sn	22 15 48.6	-0.3
RSO	Redoubt South	1.40	195	ePn	Pn	22 15 29.9	+0.3
SLKM	Skilak Lake	1.57	145	P	Pn	22 15 31.6	+0.1
SML	Sawmill	1.75	88	P	Pn	22 15 33.3	-0.3
SML				S	Sn	22 15 56.9	+0.3
TRF	Thorofare Moun	1.83	25	P	Pn	22 15 34.3	-0.5
TRF				S	Sn	22 15 58.6	-0.1
SVW2	Sparrevohn	1.85	249	P	Pn	22 15 34.3	-0.6
SVW2				eSn	Sn	22 15 56.9	-1.9
CHUM	Lake Minchumin	2.09	356	P	Pn	22 15 37.7	-0.1
SEW	Seward	2.12	143	P	Pn	22 15 37.7	-0.5
BRLK	Bradley Lake	2.12	164	P	Pn	22 15 37.4	-0.9
TT01	Tatalina	2.17	302	P	Pn	22 15 38.0	-0.8
OPT	Oil Point	2.24	196	P	Pn	22 15 40.3	+0.5
MCK	McKinley	2.40	35	P	Pn	22 15 42.1	+0.3
DHY	Denali Highway	2.51	57	P	Pn	22 15 43.1	-0.3
AUW	Augustine West	2.55	197	P	Pn	22 15 44.1	+0.4
VLZ	Valdez	2.81	101	P	Pn	22 15 46.0	-1.1
KLU	Klutina	2.93	93	P	Pn	22 15 47.9	-0.9
DIV	Divide	3.07	100	P	Pn	22 15 49.5	-1.2
NEA	Nenana	3.08	24	P	Pn	22 15 51.0	+0.2
WRH	Wood River Hil	3.21	32	P	Pn	22 15 52.0	-0.5
HARP	HAARP	3.28	76	P	Pn	22 15 53.7	+0.3
MLY	Manley	3.29	10	P	Pn	22 15 53.1	-0.4
CCB	Clear Creek Bu	3.43	32	P	Pn	22 15 54.7	-0.6
DDM	Donnelly Dome	3.46	52	P	Pn	22 15 56.8	+1.1
HDA	Harding Lake	3.48	39	P	Pn	22 15 55.6	-0.3
MDM	Murphy Dome	3.59	27	P	Pn	22 15 57.4	-0.2
COLA	College	3.61	30	P	Pn	22 15 57.9	+0.3
BMRM	Bremner River	3.67	100	ePn	Pn	22 15 57.0	-1.5
ILAR	Eielson Array	3.77	36	P	Pn	22 15 59.0	-0.8
ILAR				S	Sn	22 16 41.3	-2.2
ILAR	Eielson Array	3.77	36	P	Pn	22 15 59.0	-0.8
	4.1nm,0.3s,baz=225,slow=13,SNR=132						
ILAR				S	Sn	22 16 41.3	-2.2
	3.2nm,0.3s,baz=145,slow=47,SNR=5.7						
IL1	Eielson Array	3.77	36	P	Pn	22 15 59.3	-0.5
KVTA	Katmai Vly 10	3.81	207	P	Pn	22 16 00.8	+0.4
KDAK	Kodiak Island	4.05	184	P	Pn	22 16 01.7	-1.8
DOT	Dot Lake	4.10	60	ePn	Pn	22 16 04.5	+0.2
VRDI	Verde Repeater	4.14	94	P	Pn	22 16 03.8	-1.2
IM3	Indian Mountai	4.26	350	P	Pn	22 16 06.2	-0.2
OHAK	Old Harbor	4.64	189	P	Pn	22 16 09.6	-2.0
BALM	Baldy	4.71	95	P	Pn	22 16 12.5	0.0
KIAG	Kiagna River	4.73	97	P	Pn	22 16 11.7	-1.2
BARN	Barnard Glacie	5.03	94	P	Pn	22 16 17.2	+0.3
COLD	Coldfoot	5.50	7	ePn	Pn	22 16 24.0	+1.0
EGAK	Eagle	5.73	54	ePn	Pn	22 16 26.1	-0.1
BM3	Burnt Mountain	6.47	26	P	Pn	22 16 35.4	-0.8
PNL	Peninsula	6.55	104	ePn	Pn	22 16 37.7	+0.4
YKA	Yellowknife Ar	17.34	71	P	Pn	22 18 58.6	+0.6
YKA	Yellowknife Ar	17.34	71	P	Pn	22 18 58.6	+0.6
	0.0nm,0.3s,baz=281,slow=12,SNR=4.3						
SONM	Songino Array	54.12	305	P	P	22 24 17.4	+1.1
	0.4nm,0.5s,baz=20,slow=4.7,SNR=3.9						
ZALV	Zalesovo Beam	56.20	323	P	P	22 24 30.8	-0.2
ZALV	Zalesovo Beam	56.20	323	P	P	22 24 30.8	-0.2
	0.3nm,0.4s,baz=14,slow=8.9,SNR=2.6						
KURK	Kurchatov	60.80	326	P	P	22 25 03.8	+0.8
KURBB	Kurchatov Arra	60.91	326	P	P	22 25 03.8	+0.1
	0.1nm,0.4s,baz=39,slow=5.6,SNR=3.3						

*ROM **06** 22:21:01.0±0.4, 39°.93N×15°.70E, h280km±5km, Ml2.8/22, Error ellipse: s-maj=6.5km s-min=3.8km az=81.0*
*CSEM **06** 22:21:01.0, 39°.93N×15°.70E, h280km, After ROM*
*ISCJB **06** 22:21:02.1±0.5, 39°.96N±0°.07×15°.7E±0°.1, h276km±4km, mb3.2/5, Error ellipse: s-maj=13.4km s-min=11.3km az=20.4*
*IDC **06** 22:21:06.8±4.9, 40°.02N×15°.65E, h316km±57km, mb3.0/5, mb1 2.9/8, mb1mx2.7/29, mbtmp2.8/8, Error ellipse: s-maj=24.4km s-min=16.0km az=143.0*
ISC 06 22:21:02.9±0.7, 39°.94N±0°.07×15°.68E±0°.08, h269km±6km, n56, σ0s.56/60, mb3.1/5, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUC	Castrocucco	0.12	63	Pg	Pn	22 21 37.3	-0.1
CUC				Sg	S	22 22 04.2	-0.5
	24nm,0.8s						
CUC	Castrocucco	0.12	63	Pg	Pn	22 21 37.3	-0.1
CUC				Sg	S	22 22 04.2	-0.5
	24nm,0.8s						
BULG	Bulgheria - Ca	0.27	301	Pg	Pn	22 21 38.2	+0.6
	35nm,0.4s						
BULG	Bulgheria - Ca	0.27	301	Pg	Pn	22 21 38.2	+0.6
	35nm,0.4s						
SIRI	Monte Sirino -	0.28	30	Pg	Pn	22 21 37.7	0.0
	31nm,0.2s						
SIRI	Monte Sirino -	0.28	30	Pg	Pn	22 21 37.7	0.0
	31nm,0.2s						
SCHR	S. Chirico Rap	0.40	49	Pg	Pn	22 21 38.2	+0.3
	14nm,0.5s						
SCHR	S. Chirico Rap	0.40	49	Pg	Pn	22 21 38.2	+0.3
	14nm,0.5s						
CMPR	Campora	0.48	323	Pg	Pn	22 21 38.2	+0.2
	21nm,1.1s						
CMPR	Campora	0.48	323	Pg	Pn	22 21 38.2	+0.2
	21nm,1.1s						
TDS	Terranova Siba	0.58	119	Pg	Pn	22 21 39.1	+0.8
	33nm,0.4s						
TDS	Terranova Siba	0.58	119	Pg	Pn	22 21 39.1	+0.8
	33nm,0.4s						
CDRU	Civita di Ruta	0.62	332	Pg	Pn	22 21 38.8	+0.3
	9.0nm,0.3s						
CDRU	Civita di Ruta	0.62	332	Pg	Pn	22 21 38.8	+0.3
	9.0nm,0.3s						
CRAC	Craco	0.72	53	Pg	Pn	22 21 38.9	+0.2
	58nm,0.9s						
CRAC	Craco	0.72	53	Pg	Pn	22 21 38.9	+0.2
	58nm,0.9s						
CARO	Carolei	0.80	149	Pg	Pn	22 21 38.9	-0.3
	104nm,0.5s						
CARO	Carolei	0.80	149	Pg	Pn	22 21 38.9	-0.3
	104nm,0.5s						
MRLC	Muro Lucano	0.83	350	Pg	Pn	22 21 39.5	+0.3
	21nm,1.1s						
MRLC	Muro Lucano	0.83	350	Pg	Pn	22 21 39.5	+0.3
	21nm,1.1s						
MCRV	Calabrutti - M	0.93	335	Pg	Pn	22 21 40.2	+0.4
	9.0nm,0.4s						
MCRV	Calabrutti - M	0.93	335	Pg	Pn	22 21 40.2	+0.4
	9.0nm,0.4s						
PIPA	Pietrapaola	0.98	117	Pg	Pn	22 21 40.3	+0.3
	127nm,0.2s						
PIPA	Pietrapaola	0.98	117	Pg	Pn	22 21 40.3	+0.3
	127nm,0.2s						
MATE	Matera	1.05	47	Pg	Pn	22 21 40.1	-0.1
	50nm,0.7s						
MATE	Matera	1.05	47	Pg	Pn	22 21 40.1	-0.1
	50nm,0.7s						
TIP	Timpagrande	1.13	132	Pg	Pn	22 21 41.3	+0.5
TIP				Sg	S	22 22 09.9	-0.9
	30nm,0.4s						
TIP	Timpagrande	1.13	132	Pg	Pn	22 21 41.3	+0.5
TIP				Sg	S	22 22 09.9	-0.9
	30nm,0.4s						
SERS	Sersale	1.19	139	Pg	Pn	22 21 41.7	+0.4
	37nm,0.3s						
SERS	Sersale	1.19	139	Pg	Pn	22 21 41.7	+0.4
	37nm,0.3s						
AMUR	Altamura	1.20	36	Pg	Pn	22 21 41.1	0.0
	18nm,0.2s						
AMUR	Altamura	1.20	36	Pg	Pn	22 21 41.1	0.0
	18nm,0.2s						
GRI	Girifalco	1.25	153	Pg	Pn	22 21 42.2	+0.6
	121nm,0.4s						
GRI	Girifalco	1.25	153	Pg	Pn	22 21 42.2	+0.6
	121nm,0.4s						
JOPP	Joppolo	1.34	173	Pg	Pn	22 21 41.8	-0.3
	89nm,0.6s						
JOPP	Joppolo	1.34	173	Pg	Pn	22 21 41.8	-0.3
	89nm,0.6s						
NOCI	Noci	1.35	51	Pg	Pn	22 21 42.0	-0.1
	34nm,0.2s						
NOCI	Noci	1.35	51	Pg	Pn	22 21 42.0	-0.1
	34nm,0.2s						
PLAC	Placanica	1.60	158	Pg	Pn	22 21 43.9	0.0
	114nm,0.6s						
PLAC	Placanica	1.60	158	Pg	Pn	22 21 43.9	0.0
	114nm,0.6s						
CEL	Celeste	1.69	174	Pg	Pn	22 21 44.1	-0.5
	48nm,0.6s						
CEL	Celeste	1.69	174	Pg	Pn	22 21 44.1	-0.5
	48nm,0.6s						
SOI	Samo	1.89	171	Pg	Pn	22 21 46.2	0.0
	23nm,0.5s						
SOI	Samo	1.89	171	Pg	Pn	22 21 46.2	0.0
	23nm,0.5s						
MPAZ	Palizzi	2.00	173	Pg	Pn	22 21 47.2	+0.1
MPAZ	Palizzi	2.00	173	Pg	Pn	22 21 47.2	+0.1
SCTE	Santa Cesarea	2.14	86	Pg	Pn	22 21 48.5	+0.3
	148nm,1.7s						
SCTE	Santa Cesarea	2.14	86	Pg	Pn	22 21 48.5	+0.3
	148nm,1.7s						
BRTR	Keskin Array B	13.81	85	P	P	22 24 10.2	+1.7
	0.1nm,0.3s,baz=267,slow=11,SNR=5.5						
AKASG	Malin Array Be	14.35	37	P	P	22 24 13.8	-0.3
	1.0nm,0.3s,baz=230,slow=11,SNR=4.6						
ESDC	Sonseca Array	15.11	275	P	Pn	22 24 25.5	+1.9
	0.2nm,0.3s,baz=80,slow=12,SNR=3.3						
FINES	FINESS Array B	22.46	13	P	P	22 25 38.3	-0.8
	2.9nm,1.0s,baz=194,slow=20,SNR=3.0						
TORD	Torodi Ar. Bea	29.39	209	P	P	22 26 41.8	+0.2
	0.1nm,0.4s,baz=18,slow=8.6,SNR=4.0						
ZALV	Zalesovo Beam	47.34	49	P	P	22 29 09.1	-0.6
	0.4nm,0.4s,baz=298,slow=6.0,SNR=3.2						
MKAR	Makanchi Array	47.60	59	P	P	22 29 11.7	-0.1
	0.3nm,0.4s,baz=282,slow=7.2,SNR=9.2						
SCHQ	Schefferville	54.59	315	P	P	22 30 02.1	-1.3
	0.7nm,0.3s,baz=85,slow=18,SNR=8.0						

*CSEM **06** 22:36:03.4±0.2, 37°.72N×36°.05E, h8km, MD2.5, Error ellipse: s-maj=5.4km s-min=4.5km az=120.0*
*DDA **06** 22:36:03.3, 37°.69N×36°.08E, h7km, MD2.9*
*ISK **06** 22:36:03.6, 37°.69N×36°.05E, h8km, MD2.5*
*ISCJB **06** 22:36:03.5±0.7, 37°.69N±0°.03×36°.07E±0°.03, h0km±7km, Error ellipse: s-maj=5.1km s-min=4.4km az=146.3*
ISC 06 22:36:04.0±0.9, 37°.70N±0°.03×36°.05E±0°.03, h12km±8km, n22, σ0s.73/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	Kozan	0.28	219	ePG	Pg	22 36 09.7	0.0
KOZT				eSG	Sg	22 36 14.5	+0.9
KOZT	Kozan	0.28	219	ePg	Pg	22 36 09.7	0.0
KOZT				eSg	Sg	22 36 14.5	+0.9
AYKD	Aykdinkavak	0.67	115	i P	Pg	22 36 16.2	-0.7
AYKD				i S	Sg	22 36 24.2	-1.4
CEYT	Ceyhan	0.73	199	ePG	Pg	22 36 17.6	-0.4
CEYT	Ceyhan	0.73	199	ePg	Pg	22 36 17.6	-0.4
SARI	SarD1z-Kayseri	0.77	22	ePG	Pg	22 36 18.4	-0.5
SARI				eSG	Sb	22 36 30.7	+0.9
PINB	Pinarbasi	1.02	16	i P	Pb	22 36 22.4	-1.3
PINB				i S	Sg	22 36 37.6	+0.7
PINB	Pinarbasi	1.02	16	i P	Pb	22 36 22.4	-1.3
PINB				i S	Sg	22 36 37.6	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GAZ	Gaziantep	1.06	119	ePG	Pb	22 36 24.1	-0.2
GAZ	Gaziantep	1.06	119	ePg	Pb	22 36 24.1	-0.2
GULE	Gulek	1.09	248	i P	Pb	22 36 24.1	-0.8
GULE				i S	Sn	22 36 41.1	+0.8
GULE	Gulek	1.09	248	i P	Pb	22 36 24.1	-0.8
GULE				i S	Sn	22 36 41.1	+0.8
BNN	Bunyan	1.16	352	ePN	Pn	22 36 25.4	-0.7
BNN	Bunyan	1.16	352	ePn	Pn	22 36 25.5	-0.7
NIG	Nigde	1.21	290	ePN	Pn	22 36 26.8	-0.2
NIG	Nigde	1.21	290	ePn	Pn	22 36 26.8	-0.2
KUZU	Kuzuini	1.23	138	i P	Pn	22 36 26.7	-0.4
KUZU				i S	Sb	22 36 43.4	+0.3
KUZU	Kuzuini	1.23	138	i P	Pn	22 36 26.7	-0.4
KUZU				i S	Sb	22 36 43.4	+0.3
GZT	Gaziantep	1.25	105	i P	Pn	22 36 27.6	+0.2
GZT				i S	Sb	22 36 44.0	+0.2
DARE	Darende-Malaty	1.43	52	ePN	Pb	22 36 30.7	+0.1
AKCD	Akcadag	1.60	67	eP	Pg	22 36 35.1	+0.5
AKCD				i S	Sb	22 36 54.6	+0.9
AKCD	Akcadag	1.60	67	eP	Pg	22 36 35.1	+0.5
AKCD				i S	Sb	22 36 54.6	+0.9

*VIE **06** 22:45:18.2±0.3, 48.79N×14.05E, h8km±5km, mb1.8/4, ML2.4/5, Error ellipse: s-maj=2.8km s-min=1.8km az=40.0 17 km NNE of Aigen im Muehlkreis*
*CSEM **06** 22:45:18.7±0.1, 48.81N×14.03E, h2km, ML3.0/6, Error ellipse: s-maj=2.4km s-min=1.9km az=52.0*
*BGR **06** 22:45:19.2±0.3, 48.82N×14.03E, h10km, ML2.2/16, Error ellipse: s-maj=3.3km s-min=2.2km az=87.0*
*IPEC **06** 22:45:19.4±0.1, 48.80N×14.03E, h0km, ML1.8/7, Error ellipse: s-maj=0.6km s-min=0.4km az=177.0*
*PRU **06** 22:45:20.0, 48.81N×14.07E, h0km, Tectonic Event Near Lipno-felt In Horni Plana, Manava, Pernek*
ISC 06 22:45:19.1±1.0, **48.82N**±0.02×**14.05E**±0.02, **h7**km±9km, **n53**, σ**0.65**/92, **5C-4D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEC2	GERESS Array S	0.23	276	ePg	Pg	22 45 23.6	-0.1
	SNR=39						
GEC2				eSg	Sg	22 45 26.5	-0.3
GEC2	GERESS Array S	0.23	276	Pg	Pg	22 45 23.6	-0.1
	SNR=39						
GEC2				Sg	Sg	22 45 26.5	-0.3
KHC	Kasperske Hory	0.44	315	ePg	Pg	22 45 27.9	+0.3
	SNR=16						
KHC				eSg	Sg	22 45 33.8	+0.4
KHC	Kasperske Hory	0.44	315	ePG	Pg	22 45 27.9	+0.3
KHC				eSG	Sg	22 45 33.8	+0.4
	comp=Z,25nm,0.2s						
KHC	Kasperske Hory	0.44	315	Pg	Pg	22 45 27.9	+0.3
	SNR=16						
KHC				Sg	Sg	22 45 33.8	+0.4
WET	Wettzell	0.84	293	ePg	Pg	22 45 34.9	-0.2
	SNR=9.1						
WET				eSg	Sg	22 45 45.7	-0.3
WET	Wettzell	0.84	293	Pg	Pg	22 45 34.9	-0.2
	SNR=9.1						
WET				Sg	Sg	22 45 45.7	-0.3
MOA	Molln	0.98	171	ePg	Pg	22 45 37.5	-0.3
	SNR=6.3						
MOA				eSg	Sg	22 45 50.5	-0.2
MOA	Molln	0.98	171	⇓iPg	Pg	22 45 37.6	-0.3
MOA				⇑iSg	Sg	22 45 50.4	-0.2
	6.9nm,0.1s						
MOA	Molln	0.98	171	Pg	Pg	22 45 37.5	-0.3
	SNR=6.3						
MOA				Sg	Sg	22 45 50.4	-0.2
	6.9nm,0.1s						
TREC	Trest	1.06	63	eSG	Sb	22 45 53.8	0.0
	comp=Z,26nm,0.2s						
PRU	Pruhonice	1.21	15	ePg	Pg	22 45 42.5	+0.2
	SNR=14						
PRU				eSg	Sn	22 45 58.9	-0.3
PRU	Pruhonice	1.21	15	ePG	Pn	22 45 42.1	-0.4
PRU				eSG	Sn	22 45 58.9	-0.3
PRU	Pruhonice	1.21	15	Pg	Pg	22 45 42.5	+0.2
	SNR=14						
PRU				Sg	Sn	22 45 58.9	-0.3
RJOB	Jochberg	1.37	218	ePg	Pg	22 45 45.4	+0.1
	SNR=29						
RJOB				eSg	Sg	22 46 04.1	+1.1
RJOB	Jochberg	1.37	218	Pg	Pg	22 45 45.4	+0.1
	SNR=29						
RJOB				Sg	Sg	22 46 04.1	+1.1
CONA	Conrad Observa	1.50	126	⇓iPg	Pb	22 45 47.1	-0.2
CONA				⇓iSg	Sb	22 46 06.8	+0.2
	11nm,0.3s						
CONA	Conrad Observa	1.50	126	Pg	Pb	22 45 47.1	-0.2
CONA				Sg	Sb	22 46 06.8	+0.2
	11nm,0.3s						
ROTZ	Rotzenmuhle	1.53	309	ePg	Pg	22 45 48.3	-0.1
	SNR=4.6						
ROTZ				eSg	Sg	22 46 08.0	-0.4
ROTZ	Rotzenmuhle	1.53	309	Pg	Pg	22 45 48.3	-0.1
	SNR=4.6						
ROTZ				Sg	Sg	22 46 08.0	-0.4
KRUC	Moravsky	1.57	80	ePn	Pb	22 45 48.5	+0.1
	baz=261						
KRUC				eSg	Sg	22 46 09.1	-0.3
	18nm,0.2s,baz=261						
MANZ	Manzenberg	1.72	313	eSg	Sg	22 46 13.7	-0.7
MANZ	Manzenberg	1.72	313	Sg	Sg	22 46 13.7	-0.7
PVCC	Panska Ves	1.74	11	ePG	Pb	22 45 51.6	+0.2
PVCC				eSG	Sg	22 46 15.8	+0.7
	comp=Z,27nm,0.2s						
VRAC	Vranov	1.74	73	ePn	Pb	22 45 50.7	-0.7
	baz=254						
VRAC				eSg	Sb	22 46 14.4	+0.9
	17nm,0.2s,baz=254						
NKC	Novy Kostel	1.76	324	ePG	Pb	22 45 51.7	0.0
NKC				eSG	Sg	22 46 15.6	+0.1
	comp=Z,6.3nm,0.2s						
KBA	Koelnbreinsper	1.81	195	ePg	Pb	22 45 52.2	-0.4
	SNR=7.0						
KBA				eSg	Sg	22 46 16.3	-0.8
KBA	Koelnbreinsper	1.81	195	⇑iPg	Pb	22 45 52.4	-0.1
KBA				⇑iSn	Sn	22 46 13.2	-0.8
KBA				⇓iSg	Sg	22 46 16.5	-0.6
	4.6nm,0.1s						
KBA	Koelnbreinsper	1.81	195	Pg	Pb	22 45 52.4	-0.1
KBA				Sn	Sn	22 46 13.2	-0.8
KBA				Sg	Sg	22 46 16.5	-0.6
	4.6nm,0.1s						
ARSA	Arzberg	1.86	147	⇑iPg	Pb	22 45 53.9	+0.5
ARSA				⇑iSg	Sg	22 46 17.7	-1.0
	1.7nm,0.2s						
ARSA	Arzberg	1.86	147	Pg	Pb	22 45 53.9	+0.5
ARSA				Sg	Sg	22 46 17.7	-1.0
	1.7nm,0.2s						
TANN	Tannenbergstha	1.90	328	ePg	Pg	22 45 55.3	-0.2
	SNR=8.1						
TANN	Tannenbergstha	1.90	328	Pg	Pg	22 45 55.3	-0.2
	SNR=8.1						
GUNZ	Gunzen	1.91	325	ePg	Pb	22 45 53.7	-0.5
	SNR=3.2						
GUNZ	Gunzen	1.91	325	Pg	Pb	22 45 53.7	-0.5
	SNR=3.2						
FUR	Furstenfeldbru	1.96	251	ePg	Pb	22 45 55.4	+0.4
	SNR=4.0						
FUR				eSg	Sg	22 46 21.5	-0.4
FUR	Furstenfeldbru	1.96	251	Pg	Pb	22 45 55.4	+0.4
	SNR=4.0						
FUR				Sg	Sg	22 46 21.5	-0.4
GRA1	Grafenberg Arr	2.05	296	Pg	Pg	22 45 57.7	-0.6
	SNR=2.1						
GRF	Grafenberg Arr	2.05	296	ePg	Pg	22 45 57.7	-0.6
	SNR=2.1						
BRG	Berggiesshubel	2.06	358	PG	Pg	22 45 57.8	-0.7
BRG				SG	Sg	22 46 24.5	-0.6
	8.9nm,0.3s						
BRG	Berggiesshubel	2.06	358	ePg	Pg	22 45 57.9	-0.6
	SNR=2.2						
BRG	Berggiesshubel	2.06	358	Pg	Pg	22 45 57.9	-0.6
	SNR=2.2						
UPC	Upice	2.12	36	ePG	Pb	22 45 58.2	+0.4
UPC				eSG	Sg	22 46 26.7	-0.3
DPC	Dobruska-Polom	2.13	43	ePG	Pb	22 45 58.4	+0.4
DPC				eSG	Sg	22 46 27.0	-0.5
	comp=Z,3.2nm,0.2s						
WTTA	Wattenberg	2.25	227	eSg	Sg	22 46 30.0	-1.2
WTTA	Wattenberg	2.25	227	Sg	Sg	22 46 30.0	-1.2
MOX	Moxa	2.41	320	eSg	Sg	22 46 35.1	-1.4
MOX	Moxa	2.41	320	Sg	Sg	22 46 35.2	-1.4
MORC	Moravsky Berou	2.48	66	ePn	Pn	22 46 01.4	+1.5
	baz=248						
CLL	Collm	2.58	345	eSg	Sg	22 46 41.0	-0.9
CLL	Collm	2.58	345	i Pn	Pn	22 46 02.2	+0.9
CLL				ePg	Pg	22 46 08.0	-0.5
CLL				i Sn	Sn	22 46 32.8	-0.1
CLL				i Sg	Sg	22 46 40.6	-1.3
	comp=Z,19nm,1.3s						
CLL	Collm	2.58	345	Sg	Sg	22 46 41.0	-0.9
OKC	Ostrava-Krasne	2.87	68	ePN	Pn	22 46 07.1	+1.9
OKC				eSG	Sg	22 46 49.3	-1.8

AUST 06 22:59:37.4±0.8, **30.29S**×**117.75E**, **h4**km, **Error ellipse: s-maj=1.3km s-min=0.9km az=246.0, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLDU	Ballidu	0.96	250	P	Pb	22 59 56.4	-0.2
	baz=1.0,SNR=93						
BLDU				S	Sg	23 00 08.6	+0.3
	baz=1.0,SNR=22						
KLBR	Kellerberrin	1.30	180	P	Pb	23 00 03.1	+0.7
	baz=1.3,SNR=220						
KLBR				S	Sn	23 00 20.1	-0.1
	baz=1.3,SNR=36						
MORW	Morawa	1.92	309	P	Pn	23 00 11.1	+0.2
	baz=1.9,SNR=22						
MORW				S	Sn	23 00 35.0	-0.6
	baz=1.9,SNR=14						
KMBL	Kambalda	3.71	108	P	Pg	23 00 46.3	-2.2
	baz=3.7,SNR=5.2						
MEEK	Meekatharra	3.72	12	P	Pn	23 00 36.2	+0.5
	baz=3.7,SNR=6.4						

*ATH **06** 23:11:48.5, 37.22N×20.68E, h13km±1km, MD3.5/18*
*CSEM **06** 23:11:49.6±0.5, 37.28N×20.77E, h2km, ML2.4/3, Error ellipse: s-maj=8.9km s-min=4.1km az=54.0*
*THE **06** 23:11:50.0, 37.31N×20.79E, h5km, ML2.4/3, Error ellipse: s-maj=1.3km s-min=0.4km az=233.0*
ISC 06 23:11:49.5±1.4, **37.27N**±0.04×**20.74E**±0.04, **h5**km±10km, **n68**, σ**1.00**/97, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMT	Artemida-Makis	0.81	71	P	Pg	23 12 04.3	-0.8
AMT	Artemida-Makis	0.81	71	ePB	Pg	23 12 05.2	+0.1
AMT	Artemida-Makis	0.81	71	P	Pg	23 12 04.3	-0.8
AMT	Artemida-Makis	0.81	71	ePb	Pg	23 12 05.2	+0.1
KFL	Anninata	0.84	2	P	Pg	23 12 04.8	-0.8
KFL				S	Sg	23 12 16.6	+0.1
KFL	Anninata	0.84	2	P	Pg	23 12 04.8	-0.8
KFL				S	Sg	23 12 16.6	+0.1
PYL	PYLOS	0.88	115	P	Pg	23 12 06.3	-0.1
PYL				S	Sb	23 12 19.1	-0.3
PYL	PYLOS	0.88	115	ePB	Pg	23 12 06.0	-0.4
PYL				eSB	Sb	23 12 18.4	-1.0
PYL	PYLOS	0.88	115	ePb	Pg	23 12 06.0	-0.4
PYL	PYLOS	0.88	115	P	Pg	23 12 06.3	-0.1
PYL				eSb	Sb	23 12 18.4	-1.0
PYL				S	Sb	23 12 19.1	-0.3
VLS	Valsamata	0.91	352	P	Pg	23 12 06.5	-0.5
VLS				S	Sb	23 12 19.7	-0.6
VLS	Valsamata	0.91	352	P	Pg	23 12 06.5	-0.5
VLS				S	Sb	23 12 19.7	-0.6
ITM	Ithomi	0.95	95	P	Pg	23 12 07.0	-0.7
ITM				S	Sb	23 12 20.9	-0.4
ITM	Ithomi	0.95	95	ePN	Pb	23 12 07.8	-0.6
ITM				eSB	Sb	23 12 21.0	-0.4
ITM	Ithomi	0.95	95	P	Pg	23 12 07.0	-0.7
ITM	Ithomi	0.95	95	ePn	Pb	23 12 07.8	-0.6
ITM				S	Sb	23 12 20.9	-0.4
RLS	Riolos of Patr	0.97	36	P	Pg	23 12 06.8	-1.4
RLS	Riolos of Patr	0.97	36	P	Pg	23 12 06.8	-1.4
UPR	University Cam	1.30	39	ePG	Pn	23 12 13.9	-0.5
UPR	University Cam	1.30	39	ePg	Pn	23 12 13.9	-0.5
VLX	Vlachokerasia	1.31	85	P	Pn	23 12 13.3	-1.2
VLX	Vlachokerasia	1.31	85	ePG	Pn	23 12 13.5	-1.0
VLX				eSB	Sn	23 12 33.4	+1.0
VLX	Vlachokerasia	1.31	85	P	Pn	23 12 13.3	-1.2
VLX				eSb	Sn	23 12 33.4	+1.0
KLV	Kalavryta, Ach	1.36	55	ePN	Pn	23 12 14.0	-1.2
KLV	Kalavryta, Ach	1.36	55	ePb	Pn	23 12 14.0	-1.2
DYR	Agios Nikonas	1.37	111	P	Pn	23 12 15.0	-0.3
DYR	Agios Nikonas	1.37	111	ePB	Pn	23 12 15.1	-0.3
DYR				eSB	Sn	23 12 34.6	+0.8
DYR	Agios Nikonas	1.37	111	P	Pn	23 12 15.0	-0.3
DYR				eSb	Sn	23 12 34.6	+0.8
LAKA	Lakka	1.38	45	ePG	Pb	23 12 15.4	-0.3
LAKA				eSB	Sn	23 12 35.5	+1.5
LAKA	Lakka	1.38	45	ePg	Pb	23 12 15.4	-0.3
LAKA				eSb	Sn	23 12 35.5	+1.5
GUR	Goura	1.43	62	P	Pn	23 12 14.9	-1.3
GUR				S	Sn	23 12 34.9	-0.6
GUR	Goura	1.43	62	ePG	Pn	23 12 16.1	-0.1
GUR	Goura	1.43	62	P	Pn	23 12 14.9	-1.3
GUR	Goura	1.43	62	ePg	Pn	23 12 16.1	-0.1
GUR				S	Sn	23 12 34.9	-0.6
EFP	Efpalio	1.48	38	P	Pn	23 12 15.5	-1.2
EFP				S	Sb	23 12 35.5	-0.9
EFP	Efpalio	1.48	38	ePG	Pb	23 12 17.2	-0.2
EFP				eSB	Sg	23 12 39.1	+2.2
EFP	Efpalio	1.48	38	P	Pn	23 12 15.5	-1.2
EFP	Efpalio	1.48	38	ePg	Pb	23 12 17.2	-0.2
EFP				S	Sb	23 12 35.5	-0.9
EFP				eSb	Sg	23 12 39.1	+2.2
LKD2	Lefkada island	1.52	357	P	Pn	23 12 16.7	-0.6
LKD2				S	Sn	23 12 36.8	-0.7
LKD2	Lefkada island	1.52	357	ePB	Pb	23 12 18.1	0.0
LKD2				eSB	Sg	23 12 39.8	+1.5
LKD2	Lefkada island	1.52	357	P	Pn	23 12 16.7	-0.6
LKD2	Lefkada island	1.52	357	ePb	Pb	23 12 18.1	0.0
LKD2				S	Sn	23 12 36.8	-0.7
LKD2				eSb	Sg	23 12 39.8	+1.5
KALE	Kalithea	1.57	44	ePG	Pb	23 12 18.6	-0.5
KALE				eSB	Sg	23 12 41.5	+1.5
KALE	Kalithea	1.57	44	ePg	Pb	23 12 18.6	-0.5
KALE				eSb	Sg	23 12 41.5	+1.5
VLI	Veliai	1.84	107	ePN	Pb	23 12 22.8	-0.8
VLI	Veliai	1.84	107	ePn	Pb	23 12 22.8	-0.8
LTK	Loutraki	1.92	66	ePN	Pb	23 12 23.9	-1.1
LTK	Loutraki	1.92	66	ePn	Pb	23 12 23.9	-1.1
DID	Didima	2.00	83	ePN	Pb	23 12 25.0	-1.4
DID	Didima	2.00	83	ePn	Pb	23 12 25.0	-1.4
KYTH	Kithira	2.09	118	ePN	Pn	23 12 25.8	+0.6
KYTH	Kithira	2.09	118	ePn	Pn	23 12 25.8	+0.6
AGG	Agios Georgios	2.15	35	ePN	Pb	23 12 27.8	-1.1
AGG	Agios Georgios	2.15	35	ePn	Pb	23 12 27.8	-1.1
NAIG	Nisos Aigina	2.24	77	ePN	Pn	23 12 28.5	+1.3
NAIG	Nisos Aigina	2.24	77	ePn	Pn	23 12 28.5	+1.3
LKR	Lokris	2.25	52	ePN	Pn	23 12 28.6	+1.2
LKR	Lokris	2.25	52	ePn	Pn	23 12 28.6	+1.2
JAN	Janina	2.38	2	ePN	Pn	23 12 30.2	+1.0
JAN	Janina	2.38	2	ePn	Pn	23 12 30.2	+1.0
KEK	Kerkira	2.55	343	ePN	Pn	23 12 32.5	+1.0
KEK	Kerkira	2.55	343	ePn	Pn	23 12 32.5	+1.0
PTL	Penteli	2.59	72	ePB	Pn	23 12 33.4	+1.2
PTL	Penteli	2.59	72	ePb	Pn	23 12 33.4	+1.2
NEO	Neokhori	2.82	43	ePN	Pn	23 12 36.8	+1.6
NEO	Neokhori	2.82	43	ePn	Pn	23 12 36.8	+1.6
AOS	Alonnisos	3.11	52	ePN	Pn	23 12 41.0	+1.8
AOS	Alonnisos	3.11	52	ePn	Pn	23 12 41.0	+1.8

*ISK **06** 23:20:24.4, 39.13N×40.50E, h7km, MD2.6*
*CSEM **06** 23:20:25.2±0.2, 39.06N×40.50E, h10km, MD2.6, Error ellipse: s-maj=8.7km s-min=5.2km az=134.0*
*DDA **06** 23:20:26.9, 39.10N×40.49E, h7km, MD2.5*
ISC 06 23:20:24.8±1.3, **39.12N**±0.04×**40.47E**±0.03, **h2**km±12km, **n14**, σ**0.43**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGB	Bingˆ¶l	0.21	129	ePG	Pg	23 20 29.3	+0.5
BNGB				eSG	Sg	23 20 32.1	+0.6
BINT	Bingol	0.25	177	ePg	Pg	23 20 29.3	-0.2
BINT				eSg	Sg	23 20 32.1	-0.6
BNGL	BINGOL	0.55	108	eP	Pb	23 20 37.4	0.0
BNGL				i S	Sb	23 20 45.5	-0.3
ERZN	Erzincan	0.74	309	ePG	Pg	23 20 39.4	+0.3
PTK	Pertek	0.87	255	ePG	Pg	23 20 42.0	+0.5
PTK				eSG	Sb	23 20 55.0	0.0
PTK	Pertek	0.87	255	ePg	Pg	23 20 42.0	+0.5
PTK				eSg	Sb	23 20 55.0	0.0
EZM	Erzurum	1.04	41	ePG	Pg	23 20 44.2	-0.6
ERZM	Erzurum	1.04	41	eP	Pn	23 20 47.0	+0.3
ERZM	Erzurum	1.04	41	eP	Pn	23 20 47.0	+0.3
SVRC	Sivrice-ELAZID	1.18	231	ePN	Pb	23 20 47.6	-0.3
SVRC	Sivrice-ELAZID	1.18	231	ePn	Pb	23 20 47.6	-0.3
BEST	Besiri	1.38	153	i P	Pb	23 20 50.9	-0.4
BEST				i S	Sn	23 21 10.4	+0.4
ILIC	ilic-Erzincan	1.52	283	ePN	Pn	23 20 52.9	-0.1
ILIC	ilic-Erzincan	1.52	283	ePn	Pn	23 20 52.9	-0.1

IDC 06 23:32:39.1±1.5, **13.72N**×**120.69E**, **h0**km, **mb3.6**/5, **mb1 3.6**/5, **mb1mx3.4**/26, **mbtmp3.6**/5, **Error ellipse: s-maj=159.4km s-min=23.5km az=67.0, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	36.04	344	P	P	23 39 42.5	+0.2
	0.3nm,0.5s,baz=158,slow=10,SNR=2.5						
ASAR	Alice Springs	39.34	161	P	P	23 40 10.2	-0.1
	0.1nm,0.3s,baz=344,slow=9.6,SNR=3.0						
MKAR	Makanchi Array	46.02	324	P	P	23 41 04.6	+0.2
	0.3nm,0.4s,baz=128,slow=7.9,SNR=4.8						
ZALV	Zalesovo Beam	49.04	333	P	P	23 41 26.6	-1.1
	0.5nm,0.3s,baz=118,slow=5.8,SNR=4.1						
KURBB	Kurchatov Arra	50.17	326	P	P	23 41 36.4	0.0
	1.0nm,0.5s,baz=134,slow=7.3,SNR=9.8						

IDC 06 23:44:58.1±3.6, **12.54S**×**166.72E**, **h69**km±29km, **mb3.6**/6, **mb1 4.0**/8, **mb1mx3.6**/21, **mbtmp3.9**/8, **ML4.7**/2, **MS3.2**/1, **Ms1 3.2**/1, **ms1mx2.7**/25, **Error ellipse: s-maj=32.1km s-min=19.8km az=60.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.33	294	P	Pn	23 46 44.1	+1.6
	24nm,0.3s,baz=162,slow=7.3,SNR=6.5						
HNR				S	Sn	23 48 02.8	-1.5
	37nm,0.3s,baz=152,slow=22,SNR=8.6						
DZM	Mont Dzumac	9.49	182	P	Pn	23 47 13.6	+1.5
	4.2nm,0.3s,baz=30,slow=19,SNR=22						
DZM				S	Sn	23 48 55.3	-2.0
	0.7nm,0.3s,baz=116,slow=22,SNR=1.5						
CTA	Charters Tower	21.02	246	LR	LR	23 56 24.6	
	comp=Z,57nm,19.1s,baz=50,slow=33						
WRA	Warramunga Arr	31.91	252	P	P	23 51 17.0	-0.3
	0.5nm,0.8s,baz=83,slow=8.9,SNR=2.7						
ASAR	Alice Springs	33.02	246	P	P	23 51 26.4	-0.6
	0.3nm,0.3s,baz=75,slow=9.8,SNR=4.1						
CMAR	Chiang Mai Arr	73.58	294	P	P	23 56 25.7	+1.3
	1.5nm,0.7s,baz=129,slow=5.3,SNR=6.0						
SONM	Songino Array	80.43	324	P	P	23 57 02.3	-0.1
	0.3nm,0.4s,baz=123,slow=5.5,SNR=3.6						
ILAR	Eielson Array	84.62	18	P	P	23 57 22.4	-1.2
	0.2nm,0.5s,baz=252,slow=4.6,SNR=5.4						
MKAR	Makanchi Array	95.26	317	P	P	23 58 14.4	+0.1
	0.9nm,0.6s,baz=92,slow=6.4,SNR=12						
MKAR				pP	pP	23 58 33.5	-0.1
	0.8nm,0.7s,baz=99,slow=6.3,SNR=7.3						
ARCES	ARCESS Array B	118.01	346	PKP	PKPdf	00 03 35.5	-0.9
	2.2nm,0.9s,baz=60,slow=1.9,SNR=10						
KEST	Kesra	149.17	322	PKPbc	PKPbc	00 04 39.1	-0.1
	1.1nm,0.6s,baz=290,slow=6.3,SNR=8.4						
TORD	Torodi Ar. Bea	165.39	274	PKPab	PKPab	00 05 53.8	-0.2
	1.3nm,0.9s,baz=82,slow=4.6,SNR=6.6						

*IDC **06** 23:57:32.9±1.8, 39.72N×75.73E, h0km, mb3.6/3, mb1 3.6/7, mb1mx3.3/31, mbtmp3.5/7, ML3.3/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/40, Error ellipse: s-maj=28.4km s-min=20.7km az=107.0*
*NNC **06** 23:57:36.0±6.0, 39.94N×75.68E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=67.3km s-min=37.7km az=162.0*
ISC 06 23:57:36.5±1.6, **40.0N**±0.1×**75.90E**±0.09, **h19**km, **n23**, σ**1.49**/19, **mb3.4**/3, **3C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	Kyzart	2.15	347	P	Pb	23 58 15.3	+0.2
	SNR=116						
ULHL	Ulahol	2.27	6	P	Pb	23 58 18.0	+0.9
	SNR=38						
UCH	Uchtor	2.47	335	P	Pb	23 58 19.9	-0.7
	SNR=17						
AML	Almayashu	2.71	323	P	Pb	23 58 23.0	-1.7
	SNR=63						
KBK	Karagaybulak	2.76	345	P	Pb	23 58 24.4	-0.9
	SNR=86						
AAK	Ala-Archa	2.85	339	P	Pb	23 58 25.4	-1.4
	SNR=71						
AAK	Ala-Archa	2.85	339	Pn	Pb	23 58 25.6	-1.3
	12nm,0.3s,baz=130,slow=6.0,SNR=101						
AAK				Sn	Sb	23 59 02.2	+0.8
	7.2nm,0.3s,baz=21,slow=16,SNR=4.2						
AAK				Lg	Lg	23 59 05.5	
	15nm,0.3s,baz=308,slow=18,SNR=20						
TKM2	Tokmak 2	2.94	356	⇓Pn	Pb	23 58 27.1	-1.3
	21nm,0.5s						
TKM2				⇑Lg	Lg	23 59 08.8	
	167nm,0.6s						
TKM2	Tokmak 2	2.94	356	P	Pb	23 58 27.3	-1.2
	SNR=38						
EKS2	Erkin-Say	3.11	330	P	Pb	23 58 29.0	-2.4
	SNR=15						
CHMS	Chumysh	3.13	344	P	Pb	23 58 29.3	-2.3
	SNR=14						
KNDC	Almaty	3.33	14	⇓Pn	Pb	23 58 33.3	-1.7
	26nm,0.3s						
KNDC				⇑Lg	Lg	23 59 23.0	
	161nm,0.8s						
USP	Ospenovka	3.44	343	P	Pb	23 58 33.2	-3.7
	SNR=35						
KK31	Karatay Array	5.10	309	Pn	Pn	23 58 54.4	+2.5
	0.7nm,0.5s,baz=124,slow=12,SNR=10						
KK31				⇑Pg	Pb	23 59 06.8	+1.6
	0.9nm,0.3s,baz=136,slow=14,SNR=5.7						
MK31	Makanchi Array	8.24	32	⇓Pn	Pn	23 59 39.6	+4.6
	0.7nm,0.6s,baz=211,slow=13,SNR=12						
MKAR	Makanchi Array	8.24	32	Pn	Pn	23 59 39.6	+4.6
	0.2nm,0.3s,baz=209,slow=15,SNR=12						
MKAR				Lg	Lg	00 02 01.9	
	0.1nm,0.3s,baz=215,slow=27,SNR=2.9						
KURBB	Kurchatov Arra	10.80	9	Lg	Lg	00 03 15.1	
	0.0nm,0.3s,baz=205,slow=30,SNR=8.6						
BVAR	Borovoye Array	13.58	346	Pn	Pn	00 00 48.8	+0.9
	0.1nm,0.3s,baz=148,slow=16,SNR=3.3						
BVAR				Lg	Lg	00 04 40.8	
	0.1nm,0.3s,baz=156,slow=25,SNR=4.1						
ZALV	Zalesovo Beam	15.22	20	Pn	Pn	00 01 12.3	+2.1
	0.1nm,0.3s,baz=204,slow=9.8,SNR=2.0						
SONM	Songino Array	23.21	60	LR	LR	00 13 41.2	
	comp=Z,31nm,18.0s,baz=235,slow=41						
FINES	FINESS Array B	36.92	322	P	P	00 04 44.1	+0.4
	2.3nm,1.0s,baz=107,slow=10,SNR=4.1						
TORD	Torodi Ar. Bea	69.61	270	P	P	00 08 43.6	-1.1
	0.3nm,0.9s,baz=50,slow=5.8,SNR=4.7						
YKA	Yellowknife Ar	77.52	5	P	P	00 09 30.4	-0.1
	0.2nm,0.5s,baz=347,slow=5.8,SNR=6.1						

*AUST **07** 00:11:22.4, 6.48S×130.03E, h100km*
*IDC **07** 00:11:22.2±8.2, 6.56S×129.70E, h97km±60km, mb3.8/4, mb1 4.1/7, mb1mx3.8/21, mbtmp4.0/7, ML4.7/3, Error ellipse: s-maj=57.1km s-min=36.5km az=178.0*
ISC 07 00:11:27.2±0.8, **6.87S**±0.07×**129.84E**±0.09, **h104**km, **n32**, σ**1.97**/30, **mb3.8**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	4.52	323	P	Pn	00 12 32.6	-0.9
FAKI	Fak Fak	4.60	32	P	Pn	00 12 24.8	-10
FAKI	Fak Fak	4.60	32	S	Sn	00 13 08.6	-18
	baz=4.2,SNR=6.7						
MTN	Manton Dam	6.07	168	P	Pn	00 12 57.3	+2.7
	baz=6.5,SNR=190						
MTN				S	Sn	00 14 05.7	+3.0
	baz=6.5,SNR=11						
SWI	Sorong	6.13	13	P	Pn	00 12 46.0	-9.4
	55nm,0.6s,10µm1.9nm						

SWI				S	Sn	00 13 45.1	-19
	55nm,0.6s,10µm1.9nm						
SWI	Sorong	6.13	13	P	Pn	00 12 46.6	-8.8
	baz=5.7,SNR=13						
SWI				S	Sn	00 13 45.6	-19
	baz=5.7,SNR=21						
KDU	Kakadu	6.34	156	P	Pn	00 12 59.7	+1.6
	baz=6.7,SNR=261						
KDU				S	Sn	00 14 10.6	+1.5
	baz=6.7,SNR=7.2						
LBMI	Labuha	6.61	339	P	Pn	00 12 57.3	-4.7
	150nm,0.9s,2µm0.8nm						
RKPI	Ransiki, Papua	6.86	39	P	Pn	00 12 57.5	-7.8
RKPI				S	Sn	00 14 02.6	-19
BAKI	Biak	8.42	48	P	Pn	00 13 19.7	-6.8
	64nm,0.8s,0.5nm						
KNRA	Kununurra	8.82	187	P	Pn	00 13 34.3	+2.5
	baz=9.3,SNR=18						
KNRA				S	Sn	00 15 10.3	+0.8
	baz=9.3,SNR=16						
LUWI	Luwuk	9.12	309	P	Pn	00 13 38.8	+2.8
	baz=9.1,SNR=5.4						
JAY	Jayapura	11.66	69	P	Pn	00 14 00.2	-10
	baz=11,SNR=3.5						
JAY				S	Sn	00 15 56.6	-22
	baz=11,SNR=6.6						
FITZ	Fitzroy Crossi	11.89	200	P	Pn	00 14 13.6	+0.1
	2.5nm,0.3s,baz=28,slow=12,SNR=60						
FITZ				S	Sn	00 16 21.7	-2.6
	5.0nm,0.3s,baz=90,slow=20,SNR=12						
FITZ	Fitzroy Crossi	11.89	200	P	Pn	00 14 14.6	+1.1
	baz=12,SNR=38						
FITZ				S	Sn	00 16 22.9	-1.4
	baz=12,SNR=5.3						
WRA	Warramunga Arr	13.71	162	P	Pn	00 14 35.0	-2.4
	4.2nm,0.3s,baz=340,slow=13,SNR=21						
WRA				S	Sn	00 17 01.6	-6.8
	3.6nm,0.3s,baz=341,slow=21,SNR=9.5						
COEN	Coen	14.88	119	P	Pn	00 14 52.1	-0.3
	baz=15,SNR=7.6						
COEN				S	Sn	00 17 26.0	-11
	baz=15,SNR=4.3						
ASAR	Alice Springs	17.15	167	P	Pn	00 15 20.5	-0.1
	2.1nm,0.3s,baz=346,slow=14,SNR=61						
ASAR				S	Sn	00 18 29.1	-2.4
	0.8nm,0.3s,baz=349,slow=24,SNR=6.3						
MTSU	Mount Surprise	18.02	130	P	P	00 15 29.8	-0.4
	baz=18,SNR=4.0						
CTA	Charters Tower	20.65	131	P	P	00 15 57.7	-1.1
	4.4nm,0.7s,baz=287,slow=10,SNR=3.6						
MEEK	Meekatharra	22.37	207	P	P	00 16 17.3	+0.2
	baz=23,SNR=6.1						
MEEK				S	Sn	00 20 36.4	-0.2
	baz=23,SNR=4.0						
KMBL	Kambalda	25.48	196	P	P	00 16 45.9	0.0
	baz=26,SNR=6.2						
KLBR	Kellerberrin	27.06	203	P	P	00 16 60.0	-0.1
	baz=28,SNR=5.9						
STKA	Stephens Creek	27.20	158	P	P	00 16 59.9	-1.3
	1.3nm,0.4s,baz=330,slow=9.9,SNR=6.4						
STKA	Stephens Creek	27.20	158	P	P	00 16 59.9	-1.3
	baz=28,SNR=6.3						
CMSA	Cobar Meteorol	28.67	151	P	P	00 17 13.3	-1.1
	baz=29,SNR=8.0						
MGCD	Mangrove Creek	32.81	146	P	P	00 17 53.0	+2.2
	baz=33,SNR=20						
VNDA	Vanda	72.60	173	P	P	00 22 40.4	-2.4
	0.6nm,0.5s,baz=322,slow=6.1,SNR=8.2						
MAW	Mawson	75.01	201	P	P	00 22 54.7	-2.3
	2.6nm,0.7s,baz=84,slow=9.2,SNR=8.1						
TORD	Torodi Ar. Bea	128.62	281	PKP	PKPdf	00 30 17.8	-5.4
	0.3nm,0.5s,baz=82,slow=1.8,SNR=7.9						
CPUP	Villa Florida	146.27	168	PKPbc	PKPdf	00 30 52.4	-2.9
	1.0nm,0.5s,baz=81,slow=20,SNR=4.7						
LPAZ	La Paz	150.92	142	PKPbc	PKPdf	00 31 05.5	+1.7
	0.5nm,0.4s,baz=93,slow=5.2,SNR=4.7						
LPAZ				PKPab	PKiKP	00 31 14.0	+3.8
	1.1nm,0.6s,baz=270,slow=2.0,SNR=6.7						

*DJA **07** 00:11:29.3±1.2, 5°N±12°×13°1E±°, h127km±19km, M5.0/9, mB5.4/6, mb4.9/9, MLv5.1/4, Mw(mB)4.9/6*
*BJI **07** 00:12:07.6, 2°.88N×126°.65E, h42km, mB4.8/19, mb4.6/24, Ms4.6/13, Ms7 4.2/15*
*IDC **07** 00:12:08.9±1.0, 3°.68N×126°.18E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.1/24, mbtmp4.1/14, MS3.7/14, Ms1 3.7/14, ms1mx3.4/40, Error ellipse: s-maj=41.2km s-min=23.8km az=67.0*
*NEIC **07** 00:12:13.9±1.2, 3°.52N×126°.51E, h45km±10km, mb4.6/7, Error ellipse: s-maj=11.5km s-min=8.5km az=82.0*
*ISCJB **07** 00:12:13.4±0.5, 3°.47N±0°.06×126°.41E±0°.07, h53km, mb4.4/32, MS3.8/16, Error ellipse: s-maj=10.5km s-min=8.1km az=162.7*
ISC 07 00:12:15.3±0.5, **3°.54N**±0°.06×**126°.48E**±0°.09, **h53**km, **n93**, σ1s**.60**/111, **mb4.4**/31, **MS3.8**/17, **1C-1D**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGSI	Sangihe	0.96	279	P	Pn	00 12 52.0	+19
GAMI	Galela, Maluku	2.14	142	P	Pn	00 12 51.0	+2.3
MNI	Manado	2.65	218	P	Pn	00 13 03.7	+8.1
TNTI	Ternate	2.89	162	P	Pn	00 12 47.7	-11
	190nm,0.9s,4µm1.1nm						
DAV	Davao City (W)	3.62	346	ePn	Pn	00 13 07.8	-1.2
DAV				Sn	Sn	00 13 51.4	+0.9
DAV	Davao City (W)	3.62	346	P	Pn	00 13 16.7	+7.8
DAV	Davao City (W)	3.62	346	Pn	Pn	00 13 10.8	+1.9
	51nm,0.3s,baz=176,slow=13,SNR=2.8						
DAV				Sn	Sn	00 14 00.2	+10
	51nm,0.3s,baz=260,slow=24,SNR=5.9						
DAV				LR	LR	00 14 36.7	
	comp=Z,569nm,18.1s,baz=206,slow=43						
KMSI	Cibinong	3.86	220	P	Pn	00 13 25.6	+13
	376nm,0.8s,10µm						
CTBH	Cotabato--PC H	4.28	329⇑	iP	Pn	00 13 19.0	+1.1
CGP	Cagayan de Oro	5.19	340⇓	eP	Pn	00 13 29.2	-1.3
MRSI	Marisa	5.46	236	P	Pn	00 13 41.4	+7.2
LUWI	Luwuk	5.87	219	P	Pn	00 13 50.6	+11
	308nm,1.2s,3µm						
SKSI	Soroako, Sulaw	7.92	221	P	Pn	00 14 16.5	+8.5
	54nm,0.9s,476nm						
MYLDM	Lahad Datu	8.12	282	P	Pn	00 14 18.3	+7.6
	76nm,1.1s						
PALU	Palau	8.81	64	P	Pn	00 14 25.4	+5.2
	baz=14,SNR=3.4						
TTSI	Tana Toraja	9.33	226	P	Pn	00 14 36.8	+10
KAPI	Kappang	10.83	218	ePn	Pn	00 14 46.4	-1.5
	9.5nm,0.9s						
KAPI	Kappang	10.83	218	P	Pn	00 14 58.3	+10
KSM	Kuching	16.28	263	Pn	Pn	00 16 00.7	0.0
GUMO	Guam	20.73	60	LR	LR	00 24 09.3	
	comp=Z,126nm,19.0s,baz=257,slow=34						
QIZ	Qiongzhong	22.39	315	P	P	00 17 10.1	+0.6
QIZ				S	S	00 21 13.6	+1.3
QIZ				LR	LR		
	comp=Z,280nm,24.5s						
COEN	Coen	24.01	137	eP	P	00 17 23.6	-1.8
	comp=Z,283nm,1.0s						
KULM	Kulim	25.81	275	eP	P	00 17 42.4	+0.5
WHN	Wuhan	29.20	338	eP	P	00 18 16.3	+4.3
WHN				S	S	00 23 00.7	-0.2
WHN				LR	LR		
	comp=Z,600nm,20.1s						
NJ2	Nanjing	29.25	347	eP	P	00 18 13.4	+1.0
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
GYA	Guiyang	29.66	322	eP	P	00 18 18.4	+2.1
GYA				pP	pP	00 18 30.0	+0.2
GYA				sP	sP	00 18 36.4	+0.3
GYA				PP	PnPn	00 19 17.0	+3.6
GYA				PcP	PcP	00 21 21.2	+1.4
GYA				S	S	00 23 11.0	+2.5
GYA				sS	sS	00 23 31.0	-0.3
GYA				ScP	ScP	00 24 57.8	+0.3
GYA				ScS	ScS	00 28 51.7	-1.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
CMAR	Chiang Mai Arr	30.75	301	P	P	00 18 26.3	+0.4
CMAR	Chiang Mai Arr	30.75	301	P	P	00 18 26.3	+0.4
	comp=Z,0.6nm,0.3s,baz=116,slow=8.1,SNR=5.3						
CMAR				LR	LR	00 31 17.5	
	comp=Z,84nm,18.0s,baz=132,slow=38						
KMI	Kunming	31.34	315	P	P	00 18 34.3	+3.1
KMI				pP	pP	00 18 44.8	0.0
KMI				sP	sP	00 18 49.5	-1.5
KMI				PP	PnPn	00 19 38.0	+2.7
KMI				S	S	00 23 38.1	+3.1
KMI				SS	SnSn	00 25 29.3	+6.7
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,93nm,3.7s						
KMI				LR	LR		
	comp=N,170nm,16.3s						
KMI				LR	LR		
	comp=E,140nm,28.0s						
KMI				LR	LR		
	comp=Z,220nm,25.6s						
KSAR	Wonju Array Be	33.76	2	P	P	00 18 52.3	+0.3
KSRS	Korea Array	33.78	2	P	P	00 18 52.3	+0.2
	comp=Z,1.7nm,0.6s,baz=182,slow=12,SNR=7.3						
XAN	Xi'an	34.47	334	P	P	00 18 55.6	-2.7
XAN				pP	pP	00 19 07.3	-4.6
XAN				pmax	pmax		
	comp=Z,29nm,5.5s						
MJAR	Matsushiro Arr	34.58	17	LR	LR	00 30 45.3	
	comp=Z,99nm,20.4s,baz=190,slow=32						
CD2	Chengdu	34.65	324	P	P	00 19 01.8	+1.9
CD2				pP	pP	00 19 13.5	0.0
CD2				sP	sP	00 19 18.6	-1.2
CD2				PP	PP	00 20 20.1	+0.8
CD2				PcP	PcP	00 21 34.5	+1.2
CD2				S	S	00 24 28.7	+2.7
CD2				sS	sS	00 24 48.3	-0.7
CD2				SS	SnSn	00 26 43.9	+1.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,90nm,5.2s						
HNR	Honiara	35.76	111	LR	LR	00 31 55.1	
	comp=Z,144nm,21.8s,baz=318,slow=33						
BJI	Beijing	37.51	347	P	P	00 19 24.3	+0.2
STKA	Stephens Creek	38.04	159	eP	P	00 19 27.9	-0.8
	comp=Z,1.7nm,0.8s						
STKA	Stephens Creek	38.04	159	P	P	00 19 31.6	+2.8
	comp=Z,5.5nm,0.8s,baz=340,slow=7.8,SNR=5.0						
LZH	Lanzhou	38.54	330	eP	P	00 19 33.5	+0.4
LZH				pP	pP	00 19 47.5	+0.6
LZH				sP	sP	00 19 52.5	-0.6
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC	Hu-ho-hao-te	39.50	342	eP	P	00 19 40.7	-0.3
HHC				sP	sP	00 19 58.0	-3.0
HHC				PP	PnPn	00 21 17.0	+1.2
HHC				PcP	PcP	00 21 47.5	-0.4
HHC				ScP	ScP	00 25 30.7	-1.6
HHC				PcS	PcS	00 25 36.4	-1.5
HHC				S	S	00 25 41.0	+1.4
HHC				sS	sS	00 26 01.4	-1.5
HHC				ScS	ScS	00 29 42.4	-2.2
HHC				pmax	pmax		
	comp=Z,43nm,0.7s						
HHC				pmax	pmax		
	comp=Z,210nm,6.0s						
HHC				LR	LR		
	comp=N,180nm,14.5s						
HHC				LR	LR		
	comp=E,320nm,14.3s						
HHC				LR	LR		
	comp=Z,330nm,15.0s						
CN2	Changchun	40.10	359	eP	P	00 19 48.1	+2.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Arra	40.78	6	P	P	00 19 53.7	+2.3
	comp=Z,1.4nm,0.6s,baz=232,slow=12,SNR=3.7						
MDJ	Mudanjiang	41.00	3	P	P	00 19 54.4	+1.2
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,46nm,5.0s						
TAPN	Taplejung	43.92	307	eP	P	00 20 17.4	-0.2
ODAN	Odare	43.97	306	eP	P	00 20 18.5	+0.6
RAMN	Ramite	44.65	305	eP	P	00 20 24.1	+0.7
	comp=Z,8.8nm,0.6s						
GUN	Gumba	45.63	306	eP	P	00 20 29.8	-1.5
PKI	Pulchoki	45.87	306	eP	P	00 20 31.4	-1.8
	comp=Z,3.3nm,0.4s						
PKIN	Phulchoki	45.88	306	eP	P	00 20 31.0	-2.2
	comp=Z,5.3nm,0.6s						
KKN	Kakani	46.07	306	eP	P	00 20 31.6	-2.9
	comp=Z,3.7nm,0.4s						
DZM	Mont Dzumac	46.63	125	LR	LR	00 36 39.2	
	comp=Z,258nm,21.2s,baz=204,slow=31						
ULN	Ulaanbaatar	47.22	342	eP	P	00 20 43.5	+0.4
	comp=Z,10nm,1.3s						
SONM	Songino Array	47.40	342	P	P	00 20 43.0	-1.5
SONM	Songino Array	47.40	342	P	P	00 20 43.0	-1.5
	comp=Z,0.5nm,0.4s,baz=157,slow=7.6,SNR=5.1						
SONM				LR	LR	00 40 42.6	
	comp=Z,137nm,20.0s,baz=144,slow=36						
KOLN	Koldanda	47.42	305	eP	P	00 20 43.1	-2.0
	comp=Z,6.0nm,0.3s						
DANN	Dangsing	47.52	306	eP	P	00 20 42.2	-3.8
	comp=Z,12nm,0.6s						
PYUN	Piuthan	48.05	305	eP	P	00 20 46.1	-3.9
	comp=Z,43nm,1.2s						
WMQ	Urumqi	52.73	325	eP	P	00 21 25.9	+0.9
WMQ				LR	LR		
	comp=N,220nm,5.8s						
WMQ				LR	LR		
	comp=E,170nm,5.4s						
WMQ				LR	LR		
	comp=Z,220nm,4.4s						
PETK	Petropavlovsk-	55.70	22	P	P	00 21 46.4	+0.2
PETK	Petropavlovsk-	55.70	22	P	P	00 21 46.4	+0.2
	comp=Z,2.6nm,0.7s,baz=187,slow=8.3,SNR=3.4						
PETK				LR	LR	00 41 22.4	
	comp=Z,36nm,20.8s,baz=92,slow=32						
MK31	Makanchi Array	57.57	325	eP	P	00 21 58.9	-0.8
MKAR	Makanchi Array	57.57	325	eP	P	00 21 58.7	-1.0
MKAR	Makanchi Array	57.57	325	P	P	00 21 58.8	-1.0
	comp=Z,0.5nm,0.3s,baz=121,slow=7.3,SNR=19						
MKAR				LR	LR	00 48 28.4	
	comp=Z,66nm,18.6s,baz=255,slow=38						
KSH	Kashi	58.00	315	eP	P	00 22 03.9	+0.9
KSH				epP	pP	00 22 16.8	-0.7
KSH				esP	sP	00 22 22.1	-1.4
KSH				ePcP	PcP	00 22 55.9	+1.3
KSH				ePP	PP	00 24 13.7	+1.7
KSH				eScP	ScP	00 26 51.2	+0.7
KSH				ePcS	PcS	00 26 56.3	+0.2
KSH				eS	S	00 29 57.7	-2.2
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,250nm,5.3s						
KSH				LR	LR		
	comp=N,230nm,6.2s						
KSH				LR	LR		
	comp=E,150nm,6.5s						
KSH				LR	LR		
	comp=Z,160nm,6.8s						
TKM2	Tokmak 2	59.72	319	eP	P	00 22 15.0	0.0
	comp=Z,2.4nm,1.0s						
AAK	Ala-Archa	60.33	318	eP	P	00 22 18.3	-0.8
AAK	Ala-Archa	60.33	318	P	P	00 22 18.1	-0.9
	comp=Z,0.8nm,0.7s,baz=180,slow=5.1,SNR=4.1						
ZALV	Zalesovo Beam	60.64	333	P	P	00 22 18.7	-2.0
ZALV	Zalesovo Beam	60.64	333	P	P	00 22 18.7	-2.0
	comp=Z,0.5nm,0.4s,baz=139,slow=7.9,SNR=4.5						
ZALV				LR	LR	00 48 30.7	
	comp=Z,44nm,18.3s,baz=67,slow=36						
EKS2	Erkin-Say	60.82	318	eP	P	00 22 22.8	+0.4
	comp=Z,23nm,2.0s						
KURBB	Kurchatov Arra	61.76	328	P	P	00 22 28.6	+0.2
	comp=Z,1.7nm,0.6s,baz=126,slow=6.3,SNR=20						
KURK	Kurchatov	61.76	328	eP	P	00 22 28.3	-0.2
	comp=Z,6.0nm,0.7s						
URZ	Urewera	62.58	137	LR	LR	00 49 14.6	
	comp=Z,192nm,18.1s,baz=253,slow=35						
KKAR	Karatay Array	63.20	317	eP	P	00 22 38.1	-0.1
BVAR	Borovoye Array	67.34	327	P	P	00 23 03.8	-1.0
BVAR	Borovoye Array	67.34	327	P	P	00 23 03.8	-1.0
	comp=Z,2.0nm,0.8s,baz=124,slow=7.9,SNR=13						
BRVK	Borovoye	67.41	327	eP	P	00 23 05.0	-0.2
	comp=Z,8.2nm,0.9s						
ABKAR	Akbulak array	72.14	321	eP	P	00 23 33.2	-1.1
KBZ	Khabaz	82.92	313	LR	LR	01 04 22.1	
	comp=Z,42nm,20.8s,baz=305,slow=38						
COLD	Coldfoot	84.16	23	eP	P	00 24 39.9	-0.7
	comp=Z,4.2nm,1.0s						
ILAR	Eielson Array	85.38	25	P	P	00 24 47.7	+0.9
ILAR	Eielson Array	85.38	25	P	P	00 24 47.7	+0.9
	comp=Z,0.4nm,0.8s,baz=224,slow=6.2,SNR=3.9						
BRTR	Keskin Array B	89.95	310	P	P	00 25 08.6	-0.9
BRTR	Keskin Array B	89.95	310	P	P	00 25 08.6	-0.9
	comp=Z,0.9nm,0.9s,baz=90,slow=4.3,SNR=4.4						
ARCES	ARCESS Array B	90.54	340	P	P	00 25 10.2	-1.2
ARCES	ARCESS Array B	90.54	340	P	P	00 25 10.2	-1.2
	comp=Z,2.1nm,0.8s,baz=72,slow=7.8,SNR=3.6						
ARCES				LR	LR	01 08 47.9	
	comp=Z,47nm,19.1s,baz=223,slow=38						
FINES	FINESS Array B	91.88	332	P	P	00 25 17.4	-0.3
FINES	FINESS Array B	91.88	332	P	P	00 25 17.4	-0.3
	comp=Z,1.1nm,0.7s,baz=53,slow=5.4,SNR=4.5						
NOA	NORSAR Array B	98.84	334	LR	LR	01 10 23.1	
	comp=Z,38nm,21.9s,baz=65,slow=35						
YKA	Yellowknife Ar	99.77	24	P	Pdif	00 25 55.0	+1.4
YKA	Yellowknife Ar	99.77	24	P	Pdif	00 25 55.0	+1.4
	comp=Z,0.1nm,0.5s,baz=296,slow=4.1,SNR=2.5						
TORD	Torodi Ar. Bea	122.74	288	PKP	PKPdf	00 31 06.7	+0.3
TORD	Torodi Ar. Bea	122.74	288	PKP	PKPdf	00 31 06.7	+0.3
	comp=Z,0.4nm,0.7s,baz=70,slow=1.8,SNR=3.5						

*IDC **07** 00:25:55.1±5.5, 9°.45S×118°.80E, h74km±46km, mb3.5/5, mb1 3.7/8, mb1mx3.5/23, mbtmp3.6/8, ML3.9/3, Error ellipse: s-maj=103.2km s-min=16.8km az=64.0*
*DJA **07** 00:26:03.5±1.6, 9°S±9°×11°9E±°, h62km±27km, M4.4/3, MLv4.4/3*
*AUST **07** 00:26:10.4±0.0, 10°.45S×119°.97E, h41km, Error ellipse: s-maj=1.0km s-min=0.9km az=266.0*
ISC 07 00:25:57.2±1.1, **9°.36S**±0°.05×**119°.22E**±0°.10, **h95**km±11km, **n28**, σ1s**.73**/34, **mb3.8**/4, **Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	Waingapu	1.10	106	P	Pn	00 26 23.5	+5.1
WSI				S	Sn	00 26 35.1	+0.7
WSI	Waingapu	1.10	106	P	Pn	00 26 27.9	+10
	baz=0.9,SNR=15						
WSI				S	Sn	00 26 35.3	+0.9
	baz=0.9,SNR=7.6						
BASI	Baing, Sumba	1.58	123	P	Pn	00 26 25.6	+1.3
BASI				S	Sn	00 26 46.3	+1.5
MMRI	Maumere	3.07	77	P	Pn	00 26 44.7	+0.9
MMRI				S	Sn	00 27 19.0	-0.6
MMRI	Maumere	3.07	77	P	Pn	00 26 45.3	+1.5
MMRI				S	Sn	00 27 19.3	-0.3
BSSI	Bau Bau, Buton	3.44	22	P	Pn	00 26 49.4	+0.6
BSSI	Bau Bau, Buton	3.44	22	P	Pn	00 26 50.1	+1.3
BSSI				S	Sn	00 27 29.2	+0.6
KHKI	Kahang-Kahang	3.71	285	P	Pn	00 27 02.2	+10
KHKI				S	Sn	00 27 46.1	+11
BKSI	Bulukumba	4.11	13	P	Pn	00 26 58.8	+0.9
BKSI				S	Sn	00 27 44.5	-0.4
BKSI	Bulukumba	4.11	13	P	Pn	00 26 59.0	+1.1
KAPI	Kappang	4.35	7	P	Pn	00 27 01.9	+0.8
KAPI	Kappang	4.35	7	P	Pn	00 27 02.4	+1.3
KAPI				S	Sn	00 27 49.5	-1.2
KAPI	Kappang	4.35	7	P	Pn	00 27 01.5	+0.4
	8.2nm,0.3s,baz=198,slow=12,SNR=40						
KAPI				S	Sn	00 27 48.6	-2.1
	63nm,0.3s,baz=239,slow=19,SNR=31						
FITZ	Fitzroy Crossi	10.69	145	P	Pn	00 28 26.4	-1.0
	0.8nm,0.3s,baz=332,slow=15,SNR=45						
FITZ				S	Sn	00 30 20.1	-5.1
	1.8nm,0.3s,baz=176,slow=21,SNR=12						
FITZ	Fitzroy Crossi	10.69	145	P	Pn	00 28 26.5	-1.0
	baz=9.4,SNR=12						
FITZ				S	Sn	00 30 20.2	-5.0
	baz=9.4,SNR=5.2						
KNRA	Kununurra	11.23	125	P	Pn	00 28 34.5	-0.3
	baz=10.0,SNR=3.2						
MTN	Manton Dam	12.19	108	P	Pn	00 28 47.5	-0.1
	baz=11,SNR=4.8						
MTN				S	Sn	00 30 49.5	-12
	baz=11,SNR=5.4						
KDU	Kakadu	13.42	105	P	Pn	00 29 04.4	+0.5
	baz=12,SNR=3.3						
KDU				S	Sn	00 31 23.2	-8.3
	baz=12,SNR=3.7						
MEEK	Meekatharra	17.19	182	P	Pn	00 29 53.7	+2.2
	baz=16,SNR=9.6						
MEEK				S	Sn	00 32 48.7	-14
	baz=16,SNR=5.6						
WRA	Warramunga Arr	18.00	127	P	Pn	00 30 02.4	+1.0
	0.4nm,0.3s,baz=298,slow=14,SNR=6.0						
WRA				S	S	00 33 12.7	-9.3
	0.3nm,0.3s,baz=304,slow=25,SNR=3.0						
MORW	Morawa	19.83	188	P	Pn	00 30 28.6	+5.7
	baz=19,SNR=4.2						
MORW				S	S	00 33 49.4	-9.4
	baz=19,SNR=9.2						
ASAR	Alice Springs	19.98	137	P	Pn	00 30 24.6	-0.2
	1.9nm,0.4s,baz=310,slow=9.7,SNR=21						
ASAR				S	S	00 34 01.8	-0.2
	0.6nm,0.6s,baz=311,slow=22,SNR=4.3						
MMPI	Merauke	20.93	89	P	P	00 30 26.5	-5.9
	baz=20,SNR=4.5						
STKA	Stephens Creek	30.54	140	P	P	00 32 04.1	+2.3
	1.8nm,0.7s,baz=309,slow=12,SNR=5.3						
PATS	Pohnpei	42.15	69	P	P	00 33 56.8	+16
	baz=42,SNR=5.1						
SONM	Songino Array	58.07	350	P	P	00 35 40.4	-0.2
	0.5nm,0.4s,baz=174,slow=5.8,SNR=5.1						
MKAR	Makanchi Array	64.88	333	P	P	00 36 27.1	+0.8
	0.4nm,0.5s,baz=139,slow=6.8,SNR=6.0						
ZALV	Zalesovo Beam	69.45	339	P	P	00 36 53.6	-1.5
	0.4nm,0.3s,baz=139,slow=5.3,SNR=3.1						

*DDA **07** 00:32:00.2, 34°.23N×26°.25E, h26km, MD3.6*
*IDC **07** 00:32:01.4±1.1, 34°.53N×26°.35E, h0km, mb3.8/9, mb1 3.8/14, mb1mx3.7/29, mbtmp3.7/14, ML3.7/4, MS3.1/2, Ms1 3.1/2, ms1mx2.4/38, Error ellipse: s-maj=23.9km s-min=18.1km az=172.0*
*HLW **07** 00:32:05.3, 34°.27N×26°.55E, h10km±31km, Md3.7, Ml3.4*
*CSEM **07** 00:32:05.4±0.2, 34°.37N×26°.49E, h20km, Mw4.1, Error ellipse: s-maj=4.3km s-min=3.6km az=48.0*
*THE **07** 00:32:08.4, 34°.58N×26°.37E, h9km±1km, ML3.1/2, Error ellipse: s-maj=1.8km s-min=0.9km az=82.0*
*ATH **07** 00:32:09.8, 34°.77N×26°.35E, h68km±2km, ML3.2*
ISC 07 00:32:04.9±1.2, **34°.42N**±0°.04×**26°.50E**±0°.03, **h30**km±10km, **n146**, σ1s**.92**/175, **mb3.9**/12, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	Zakros	0.73	341	P	Pn	00 32 18.8	-0.4
ZKR				S	Sb	00 32 27.8	-1.1
ZKR	Zakros	0.73	341	P	Pn	00 32 18.8	-0.4
ZKR				S	Sb	00 32 27.8	-1.1
NPS	Neapolis	1.11	319	P	Pn	00 32 25.3	+0.8
NPS				S	Sn	00 32 38.9	0.0
NPS	Neapolis	1.11	319	eP	Pn	00 32 25.5	+1.0
NPS				eS	Sn	00 32 37.4	-1.5
NPS	Neapolis	1.11	319	P	Pn	00 32 25.3	+0.8
NPS				S	Sn	00 32 38.9	0.0
LAST	Lasithi	1.12	311	P	Pn	00 32 25.3	+0.6
LAST				S	Sn	00 32 39.5	+0.4
LAST	Lasithi	1.12	311	P	Pn	00 32 25.3	+0.6
LAST				S	Sn	00 32 39.5	+0.4
KARP	Karpathos	1.25	26	eP	Pb	00 32 29.6	+1.7
KARP	Karpathos	1.25	26	eP	Pb	00 32 29.6	+1.7
SIVA	Sivas	1.52	294	P	Pb	00 32 32.1	-0.3
SIVA				S	Sn	00 32 50.3	+1.6
SIVA	Sivas	1.52	294	P	Pb	00 32 32.1	-0.3
SIVA				S	Sn	00 32 50.3	+1.6
GVD	Gavdhos	2.03	282	eP	Pb	00 32 40.8	-0.4
GVD	Gavdhos	2.03	282	eP	Pb	00 32 40.8	-0.4
VAM	Vamos	2.13	298	P	Pn	00 32 40.7	+2.2
VAM				S	Sn	00 33 05.0	+1.0
VAM	Vamos	2.13	298	eP	Pn	00 32 40.5	+2.0
VAM				eS	Sn	00 33 04.3	+0.3
VAM	Vamos	2.13	298	eP	Pn	00 32 40.5	+2.0
VAM				S	Sn	00 33 05.0	+1.0
ARG	Arkhangelos	2.23	36	P	Pb	00 32 43.5	-1.1
ARG	Arkhangelos	2.23	36	eP	Pb	00 32 43.4	-1.1
ARG	Arkhangelos	2.23	36	P	Pb	00 32 43.5	-1.1
NIS1	Nisyros Isl.	2.25	14	eP	Pn	00 32 41.4	+1.3

NIS1	Nisyros Isl.	2.25	14	eP	Pn	00 32 41.4	+1.3
APE	Apeiranthos	2.76	344	P	Pn	00 32 48.8	+1.7
APE				S	Sn	00 33 20.1	+0.6
APE	Apeiranthos	2.76	344	eP	Pn	00 32 48.5	+1.4
APE	Apeiranthos	2.76	344	P	Pn	00 32 48.8	+1.7
APE				S	Sn	00 33 20.1	+0.6
TURN	Turunc	2.98	34	i P	Pn	00 32 49.3	-0.9
TURN				i S	Sn	00 33 21.9	-3.0
ANKY	Antikythira Is	2.99	300	eP	Pn	00 32 52.7	+2.4
ANKY	Antikythira Is	2.99	300	eP	Pn	00 32 52.7	+2.4
AKAS	Kas	3.12	54	i P	Pn	00 32 54.5	+2.4
AKAS				eS	Sn	00 33 25.8	-2.7
AKAS	Kas	3.12	54	i P	Pn	00 32 54.5	+2.4
AKAS				eS	Sn	00 33 25.7	-2.7
LTBQ	Tobruq	3.20	223	i P	Pn	00 32 54.2	+1.0
	SNR=46						
LTBQ				eS	Sn	00 33 25.8	-4.5
	40nm,0.7s,SNR=46						
HMAT	Matruh	3.36	171	AMP		00 33 00.0	
	comp=E,50µm,0.4s,logA/T=5.1,baz=171						
HMAT	Matruh	3.36	171	S	Sn	00 33 30.2	-4.0
KYTH	Kithira	3.39	304	P	Pn	00 32 57.4	+1.6
KYTH	Kithira	3.39	304	eP	Pn	00 32 58.1	+2.3
KYTH	Kithira	3.39	304	P	Pn	00 32 57.4	+1.6
AYDN	Tasoluk	3.42	19	eP	Pn	00 32 58.4	+2.2
AYDN				eS	Sn	00 33 31.2	-4.6
AYDN	Tasoluk	3.42	19	eP	Pn	00 32 58.4	+2.2
VLI	Veliai	3.70	309	P	Pn	00 33 01.4	+1.3
VLI				S	Sn	00 33 43.2	+0.5
VLI	Veliai	3.70	309	eP	Pn	00 33 02.1	+2.0
VLI				eS	Sn	00 33 40.8	-1.9
VLI	Veliai	3.70	309	P	Pn	00 33 01.4	+1.3
VLI				S	Sn	00 33 43.2	+0.5
GOLH	Golhisar	3.75	41	i P	Pn	00 33 04.0	+3.1
GOLH				eS	Sn	00 33 40.7	-3.4
GOLH	Golhisar	3.75	41	i P	Pn	00 33 04.0	+3.1
CHOS	Chios island	3.97	355	eP	Pn	00 33 05.3	+1.4
CHOS	Chios island	3.97	355	eP	Pn	00 33 05.3	+1.4
KORT	Korkueli	4.05	49	i P	Pn	00 33 07.8	+2.8
KORT				i S	Sn	00 33 54.9	+3.3
DID	Didima	4.06	320	P	Pn	00 33 06.4	+1.4
DID				S	Sn	00 33 52.1	+0.5
DID	Didima	4.06	320	eP	Pn	00 33 06.5	+1.4
DID				eS	Sn	00 33 48.2	-3.4
DID	Didima	4.06	320	P	Pn	00 33 06.4	+1.4
DID				S	Sn	00 33 52.1	+0.5
DYR	Agios Nikonas	4.12	306	eP	Pn	00 33 08.4	+2.5
DYR	Agios Nikonas	4.12	306	eP	Pn	00 33 08.4	+2.5
NAIG	Nisos Aigina	4.13	325	eP	Pn	00 33 08.1	+2.2
NAIG	Nisos Aigina	4.13	325	eP	Pn	00 33 08.1	+2.2
ATH	Athens Observa	4.20	328	eP	Pn	00 33 08.5	+1.6
ATH	Athens Observa	4.20	328	eP	Pn	00 33 08.5	+1.6
PTL	Penteli	4.20	330	eP	Pn	00 33 08.6	+1.6
PTL	Penteli	4.20	330	eP	Pn	00 33 08.6	+1.6
VLX	Vlachokerasia	4.46	313	eP	Pn	00 33 13.1	+2.6
VLX	Vlachokerasia	4.46	313	eP	Pn	00 33 13.1	+2.6
LTK	Loutraki	4.59	323	eP	Pn	00 33 14.4	+2.1
LTK	Loutraki	4.59	323	eP	Pn	00 33 14.4	+2.1
PYL	PYLOS	4.59	304	eP	Pn	00 33 14.6	+2.3
PYL	PYLOS	4.59	304	eP	Pn	00 33 14.6	+2.3
KHAL	Karahalli	4.62	31	i P	Pn	00 33 13.8	+1.0
KHAL				eS	Sn	00 34 03.5	-2.0
KHAL	Karahalli	4.62	31	i P	Pn	00 33 13.8	+1.0
KHAL				eS	Sn	00 34 03.5	-2.0
ITM	Ithomi	4.63	308	eP	Pn	00 33 15.7	+2.9
ITM	Ithomi	4.63	308	eP	Pn	00 33 15.7	+2.9
PRK	Paraskevi	4.82	358	eP	Pn	00 33 17.7	+2.3
PRK	Paraskevi	4.82	358	eP	Pn	00 33 17.7	+2.3
GUR	Goura	4.86	317	eP	Pn	00 33 17.6	+1.5
GUR	Goura	4.86	317	eP	Pn	00 33 17.6	+1.5
KLV	Kalavryta, Ach	5.04	317	eP	Pn	00 33 21.4	+2.8
KLV	Kalavryta, Ach	5.04	317	eP	Pn	00 33 21.4	+2.8
LKR	Lokris	5.08	327	eP	Pn	00 33 20.8	+1.9
LKR	Lokris	5.08	327	eP	Pn	00 33 20.8	+1.9
SWA2		5.24	190	P	Pn	00 33 21.6	+0.4
	baz=191						
LAKA	Lakka	5.28	318	eP	Pn	00 33 23.9	+2.1
LAKA	Lakka	5.28	318	eP	Pn	00 33 23.9	+2.1
KALE	Kalithea	5.30	320	eP	Pn	00 33 24.6	+2.5
KALE	Kalithea	5.30	320	eP	Pn	00 33 24.6	+2.5
EFP	Efpalio	5.45	318	eP	Pn	00 33 26.0	+1.9
EFP	Efpalio	5.45	318	eP	Pn	00 33 26.0	+1.9
RLS	Riolos of Patr	5.45	313	eP	Pn	00 33 27.0	+2.9
RLS	Riolos of Patr	5.45	313	eP	Pn	00 33 27.0	+2.9
NEO	Neokhori	5.54	333	eP	Pn	00 33 27.4	+2.1
NEO	Neokhori	5.54	333	eP	Pn	00 33 27.4	+2.1
AGG	Agios Georgios	5.68	325	eP	Pn	00 33 29.7	+2.4
AGG	Agios Georgios	5.68	325	eP	Pn	00 33 29.7	+2.4
HNAT	Natroun	5.92	143	P	Pn	00 33 30.7	+0.2
	baz=142						
HNAT	Natroun	5.92	143	P	Pn	00 33 30.7	+0.2
VLS	Valsamata	6.07	310	eP	Pn	00 33 35.5	+2.9
VLS	Valsamata	6.07	310	eP	Pn	00 33 35.5	+2.9
KDHN	Kadinhani	6.10	46	i P	Pn	00 33 35.3	+2.2
KDHN				eS	Sn	00 34 38.2	-3.7
KDHN	Kadinhani	6.10	46	i P	Pn	00 33 35.3	+2.2
THL	Klokotos Trika	6.26	326	eP	Pn	00 33 36.9	+1.6
THL	Klokotos Trika	6.26	326	eP	Pn	00 33 36.9	+1.6
LJBD	Adjabya	6.36	238	i P	Pn	00 33 37.8	+1.2
	SNR=43						
LKD2	Lefkada island	6.41	315	eP	Pn	00 33 39.6	+2.3
LKD2	Lefkada island	6.41	315	eP	Pn	00 33 39.6	+2.3
PLG	Polygyros	6.42	339	eP	Pn	00 33 38.6	+1.2
PLG	Polygyros	6.42	339	eP	Pn	00 33 38.6	+1.2
GLL	Jalalah	6.55	136	P	Pn	00 33 39.9	+0.7
	baz=135						
GLL	Jalalah	6.55	136	P	Pn	00 33 39.9	+0.7
AMAG	Maghara	6.80	122	P	Pn	00 33 43.9	+1.2
	baz=120						
AMAG	Maghara	6.80	122	P	Pn	00 33 43.9	+1.2
SOH	Sokhos	6.86	340	eP	Pn	00 33 45.5	+2.0
SOH	Sokhos	6.86	340	eP	Pn	00 33 45.5	+2.0
LUJL	Ujela	6.89	221	i P	Pn	00 33 43.0	-1.0
	SNR=43						
SUZ		7.05	129	P	Pn	00 33 47.1	+1.0
	baz=127						
SUZ		7.05	129	P	Pn	00 33 47.1	+1.0
NVR	Nevrokopi	7.22	344	eP	Pn	00 33 50.7	+2.2
NVR	Nevrokopi	7.22	344	eP	Pn	00 33 50.7	+2.2
GRG	Griva	7.29	335	eP	Pn	00 33 50.6	+1.2
GRG	Griva	7.29	335	eP	Pn	00 33 50.6	+1.2
HFRF	Wahat Farafira	7.42	167	P	Pn	00 33 51.2	+0.1
	baz=167						
HFRF	Wahat Farafira	7.42	167	P	Pn	00 33 51.2	+0.1
KEK	Kerkira	7.52	317	eP	Pn	00 33 55.1	+2.6
KEK	Kerkira	7.52	317	eP	Pn	00 33 55.1	+2.6
FNA	Florina	7.54	329	eP	Pn	00 33 54.5	+1.6
FNA	Florina	7.54	329	eP	Pn	00 33 54.5	+1.6
MMAI	Mount Meron Ar	7.55	98	Pn	Pn	00 33 53.1	+0.1
	comp=E,0.9nm,0.3s,baz=278,slow=12,SNR=6.9						
MMAI				Sn	Sn	00 35 18.1	+0.6
	comp=E,3.0nm,0.3s,baz=266,slow=22,SNR=7.9						
BRTR	Keskin Array B	7.78	45	Pn	Pn	00 33 57.0	+0.8
	comp=E,0.1nm,0.3s,baz=221,slow=14,SNR=6.1						
EIL	Elat	8.59	121	Pn	Pn	00 34 07.8	+0.5
	comp=E,0.5nm,0.3s,baz=358,slow=14,SNR=1.9						
EIL				Sn	Sn	00 35 36.2	-7.0
	comp=E,0.7nm,0.3s,baz=0.0,slow=0.0,SNR=3.2						
ASF	Jabal al Asfar	8.99	102	Sn	Sn	00 35 49.3	-3.7
	comp=E,0.3nm,0.3s,baz=338,slow=19,SNR=3.2						
HDK1	Dakhla	9.20	163	P	Pn	00 34 16.5	+0.9
	baz=163						
LZLA	Zalla	9.61	235	i P	Pn	00 34 20.3	-1.0
	SNR=43						
KBZ	Khabaz	15.74	49	Pn	P	00 35 47.0	-1.0
	comp=E,0.1nm,0.3s,baz=246,slow=18,SNR=2.5						
PGF	Pioggiola	15.91	306	eP	Pn	00 35 42.6	-4.1
	comp=E,22nm,1.2s						
AKASG	Malin Array Be	16.39	6	Pn	P	00 35 56.3	+1.1
	comp=E,1.0nm,0.3s,baz=190,slow=9.8,SNR=5.7						
VRAC	Vranov	16.58	337	LR	LR	00 42 35.9	
	comp=E,55nm,18.5s,baz=194,slow=39						
GERES	GERESS Array B	17.26	330	P	Pn	00 36 03.6	-0.1
	comp=E,0.2nm,0.3s,baz=149,slow=11,SNR=11						
FRF	La Foret Royal	17.90	307	eP	Pn	00 36 08.1	-3.4
MBDF	Montbardon	18.32	310	eP	P	00 36 15.3	-1.5
	comp=E,8.8nm,0.8s						
CDF	Champ du Feu	20.00	320	eP	P	00 36 34.4	-0.7
	comp=E,12nm,1.0s						
HAU	Haudompre	20.27	318	eP	P	00 36 37.8	-0.1
SFTF	Sexfontaines	21.11	317	eP	P	00 36 46.1	-0.9
	comp=E,28nm,1.1s						
SSF	Saint Saulge	21.42	313	eP	P	00 36 49.9	-0.5
	comp=E,13nm,1.1s						
BAIF	Baives	22.60	320	eP	P	00 37 02.6	-0.3
	comp=E,15nm,0.9s						
ESDC	Sonseca Array	24.81	291	P	P	00 37 24.1	-0.3
	comp=E,0.1nm,0.3s,baz=83,slow=10.0,SNR=3.3						
FINES	FINESS Array B	27.04	360	P	P	00 37 43.5	-0.8
	comp=E,0.5nm,0.3s,baz=158,slow=10,SNR=10						
FINES				LR	LR	00 49 23.9	
	comp=E,48nm,18.1s,baz=90,slow=39						
HFS	Hagfors	27.05	346	P	P	00 37 45.0	+0.6
	comp=E,2.1nm,0.9s,baz=158,slow=12,SNR=5.1						
TORD	Torodi Ar. Bea	30.89	233	P	P	00 38 20.0	+1.1
	comp=E,0.6nm,0.8s,baz=30,slow=9.5,SNR=8.8						
ARCES	ARCESS Array B	35.17	359	P	P	00 38 54.9	-0.9
	comp=E,2.2nm,1.0s,baz=179,slow=10,SNR=7.5						
MKAR	Makanchi Array	43.26	56	P	P	00 40 05.7	+2.1
	comp=E,1.5nm,0.8s,baz=280,slow=6.5,SNR=12						
ZALV	Zalesovo Beam	44.72	46	P	P	00 40 16.6	+1.5
	comp=E,0.9nm,0.5s,baz=272,slow=8.4,SNR=6.9						
SONM	Songino Array	59.10	51	P	P	00 42 04.5	+1.9
	comp=E,0.6nm,0.7s,baz=284,slow=7.3,SNR=4.6						
SCHQ	Schefferville	64.46	320	P	P	00 42 36.5	-1.8
	comp=E,1.4nm,0.8s,baz=58,slow=9.5,SNR=2.9						

*DDA **07** 00:45:13.8, 37°.89N×43°.00E, h7km, MD2.8*
*CSEM **07** 00:45:14.6±0.3, 37°.89N×43°.03E, h10km, MD2.8, Error ellipse: s-maj=9.5km s-min=5.5km az=58.0*
*ISK **07** 00:45:15.0, 37°.85N×43°.05E, h26km, MD2.6*
ISC 07 00:45:14.8±1.1**, 37°.90N**±0°.03×**43°.04E**±0°.03**, h8**km±11km**, n17, σ0s.76**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GEVA	Gevas	0.41	2	i P	Pg	00 45 22.6	-0.3
GEVA				i S	Sg	00 45 28.7	+0.4
GEVA	Gevas	0.41	2	i P	Pg	00 45 22.6	-0.3
GEVA				i S	Sg	00 45 28.7	+0.4
HAKT	HAKKARI	0.63	123	i P	Pg	00 45 26.7	-0.3
HAKT				i S	Sg	00 45 35.9	+0.7
HAKT	HAKKARI	0.63	123	i P	Pg	00 45 26.7	-0.3
HAKT				i S	Sg	00 45 35.9	+0.7
SIRN	S˜–rnak	0.64	231	eP	Pn	00 45 34.2	+4.0
SIRN				eS	Sn	00 45 42.6	+2.0
VANB	Van	0.74	21	ePG	Pb	00 45 30.5	+0.4
VANB	Van	0.74	21	ePg	Pb	00 45 30.5	+0.4
CUKT	Cukurca	0.79	145	ePG	Pg	00 45 30.1	0.0
CUKT				eSG	Sb	00 45 41.1	-0.7
CUKT	Cukurca	0.79	145	ePg	Pg	00 45 30.1	0.0
CUKT				eSg	Sb	00 45 41.1	-0.7
BTMT	Batman	1.26	284	ePN	Pg	00 45 39.3	+0.3
BTMT	Batman	1.26	284	ePn	Pg	00 45 39.3	+0.3
BEST	Besiri	1.40	270	i P	Pn	00 45 39.1	-1.6
BEST				i S	Sg	00 45 59.6	-0.3
CLDR	Caldiran	1.42	29	ePN	Pn	00 45 40.5	-0.6
CLDR	Caldiran	1.42	29	ePn	Pn	00 45 40.5	-0.6
MARD	Mardin	1.89	253	eP	Pb	00 45 50.0	+0.3
MARD				eS	Sb	00 46 13.2	-0.3
BNGB	Bingˆ¶l	2.15	301	ePN	Pn	00 45 50.8	-0.2
BINT	Bingol	2.23	297	ePn	Pn	00 45 50.8	-1.4

*NEIC **07** 00:54:43.6, 19°.12N×64°.13W, h6km, MD3.5(RSPR), After RSPR.*
RSPR 07 00:54:43.6, 19°.12N×64°.13W, h6km±14km**, MD3.5**/6**, 15C-14D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.83	214	⇓eP	Pg	00 54 59.0	-0.7
TBVI				eS	Sg	00 55 09.7	-0.7
TBVI	Tortola	0.83	214	⇓eP	Pg	00 54 59.0	-0.7
TBVI				eS	Sg	00 55 09.7	-0.7
TBVI	Tortola	0.83	214	⇓eP	Pg	00 54 59.0	-0.7
TBVI				eS	Sg	00 55 09.7	-0.7
STVI	Saint Thomas	1.09	226	eS	Sg	00 55 17.1	-1.6
STVI	Saint Thomas	1.09	226	⇓eP	Pg	00 55 02.0	-2.5
STVI	Saint Thomas	1.09	226	⇓eP	Pg	00 55 02.0	-2.5
STVI				eS	Sg	00 55 17.1	-1.6
STVI	Saint Thomas	1.09	226	⇓eP	Pg	00 55 02.3	-2.2
STVI				eS	Sg	00 55 17.9	-0.8
CDVI	St. Croix	1.48	204	ePn	Pn	00 55 11.0	+0.2
CDVI				eSn	Sg	00 55 32.8	+1.5
MTP	Monte Pirata	1.69	233	ePn	Pn	00 55 11.2	-2.5
MTP				eSn	Sn	00 55 34.2	-1.4
CBYP	Canovanas	1.84	243	⇓eP	Pn	00 55 12.6	-3.2
CBYP	Canovanas	1.84	243	eS	Sn	00 55 35.7	-3.8
CBYP	Canovanas	1.84	243	⇓eP	Pn	00 55 12.6	-3.2
CBYP				eS	Sn	00 55 35.7	-3.8
CBYP	Canovanas	1.84	243	⇓eP	Pn	00 55 12.6	-3.2
CBYP				eS	Sn	00 55 35.7	-3.8
HUMP	Col San Antoni	1.90	240	⇑eP	Pn	00 55 13.6	-2.9
HUMP	Col San Antoni	1.90	240	eS	Sn	00 55 36.5	-4.2
HUMP	Col San Antoni	1.90	240	⇑eP	Pn	00 55 13.6	-2.9
HUMP				eS	Sn	00 55 36.5	-4.2
HUMP	Col San Antoni	1.90	240	⇑eP	Pn	00 55 13.6	-2.9
HUMP				eS	Sn	00 55 36.5	-4.2
CPD	Cerro la Pandu	2.01	238	⇑eP	Pn	00 55 15.7	-2.3
CPD	Cerro la Pandu	2.01	238	⇑eP	Pn	00 55 15.7	-2.3
CPD	Cerro la Pandu	2.01	238	⇑eP	Pn	00 55 15.7	-2.3
SJG	San Juan	2.16	243	⇓eP	Pn	00 55 17.1	-3.1
SJG	San Juan	2.16	243	eS	Sn	00 55 43.5	-3.7
SJG	San Juan	2.16	243	⇑eP	Pn	00 55 17.2	-2.9
SJG	San Juan	2.16	243	⇑eP	Pn	00 55 17.2	-2.9
SJG				eS	Sn	00 55 43.5	-3.7
SJG	San Juan	2.16	243	⇑eP	Pn	00 55 17.2	-2.9
SJG	San Juan	2.16	243	⇓eP	Pn	00 55 17.5	-2.6
SJG				eS	Sn	00 55 43.5	-3.7
CELP	Cerrillos	2.54	246	⇓eP	Pn	00 55 22.4	-3.0
CELP	Cerrillos	2.54	246	⇓eP	Pn	00 55 22.4	-3.0
CELP	Cerrillos	2.54	246	⇓eP	Pn	00 55 22.4	-3.0
OBIP	Obispado Ponce	2.58	246	ePn	Pn	00 55 22.9	-3.1
OBIP				eSn	Sn	00 55 53.9	-3.7
AOPR	Arecibo Observ	2.60	253	⇑eP	Pn	00 55 22.5	-3.7
AOPR	Arecibo Observ	2.60	253	⇑eP	Pn	00 55 22.5	-3.7
AOPR	Arecibo Observ	2.60	253	⇑eP	Pn	00 55 22.5	-3.7
CRPR	Cabo Rojo, PR	3.04	249	⇑eP	Pn	00 55 29.6	-2.6
CRPR	Cabo Rojo, PR	3.04	249	⇑eP	Pn	00 55 29.6	-2.6
CRPR	Cabo Rojo, PR	3.04	249	⇑eP	Pn	00 55 29.6	-2.6
SDDR	Presa de Saban	6.77	270	ePn	Pn	00 56 20.2	-3.5
	12nm,0.4s						

*VIE **07** 01:00:39.3, 18°.38S×177°.97W, h425km, mb3.7 382 km E of Suva*
*ISCJB **07** 01:00:52.8±0.9, 17°.9S±0°.2×178°.5W±0°.2, h579km, mb4.0/12, Error ellipse: s-maj=32.2km s-min=11.4km az=149.3*
*IDC **07** 01:00:57.7±4.0, 17°.91S×178°.61W, h627km±49km, mb3.4/12, mb1 3.7/13, mb1mx3.5/21, mbtmp3.4/13, Error ellipse: s-maj=35.7km s-min=21.3km az=149.0*
*AUST **07** 01:01:08.5±99.0, 18°.39S×173°.32E, h3km, Error ellipse: s-maj=4.9km s-min=2.0km az=275.0*
ISC 07 01:00:53.4±1.0**, 17°.9S**±0°.2×**178°.4W**±0°.2**, h579**km**, n31, σ0s.92**/30**, mb3.9**/12**, 1C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.84	251	P	P	01 04 01.8	+1.1
	0.4nm,0.3s,baz=77,slow=18,SNR=3.9						
PMG	Port Moresby	34.46	280	P	P	01 06 54.8	+0.5
	18nm,0.8s,baz=84,slow=9.2,SNR=4.0						
CMSA	Cobar Meteorol	35.16	240	P	P	01 06 59.7	-0.2
	baz=28,SNR=5.2						
QLP	Quilpie	35.55	249	P	P	01 07 02.7	-0.4
	baz=28,SNR=12						
COEN	Coen	37.11	270	P	P	01 07 16.8	+0.7
	baz=29,SNR=8.7						
STKA	Stephens Creek	38.64	241	P	P	01 07 28.5	+0.2
	6.1nm,0.8s,baz=60,slow=7.5,SNR=14						
STKA	Stephens Creek	38.64	241	P	P	01 07 28.4	0.0
	baz=32,SNR=8.6						
MMPI	Merauke	41.12	278	P	P	01 07 50.2	+1.8
	baz=34,SNR=6.9						
WRA	Warramunga Arr	44.64	260	P	P	01 08 14.8	-0.9
	2.3nm,0.5s,baz=96,slow=7.2,SNR=17						
ASAR	Alice Springs	44.80	254	P	P	01 08 16.4	-0.6
	11nm,0.5s,baz=87,slow=8.7,SNR=115						
KDU	Kakadu	47.56	269	P	P	01 08 37.5	-0.3
	baz=40,SNR=3.2						
PALU	Palau	52.85	294	S	S	01 16 24.1	+21
	baz=46,SNR=4.7						
MJAR	Matsushiro Arr	67.90	323	P	P	01 10 55.2	+0.1
	1.5nm,0.5s,baz=147,slow=6.2,SNR=4.6						
PETK	Petropavlovsk-	73.67	345	P	P	01 11 29.1	+0.6
	3.6nm,0.6s,baz=145,slow=5.3,SNR=3.6						
NVAR	Mina Array Bea	79.41	44	P	P	01 12 01.7	+1.1
	1.9nm,0.7s,baz=231,slow=8.0,SNR=10						
ILAR	Eielson Array	85.87	13	P	P	01 12 31.4	-0.7
	1.0nm,0.4s,baz=220,slow=5.0,SNR=33						
TXAR	Lajitas Array	85.98	58	P	P	01 12 35.2	+1.6
	2.5nm,0.8s,baz=218,slow=5.8,SNR=31						
PDAR	Pinedale Array	87.33	43	P	P	01 12 40.3	+0.5
	1.3nm,0.6s,baz=225,slow=3.7,SNR=7.0						
SONM	Songino Array	93.54	319	P	P	01 13 07.8	-0.4
	0.2nm,0.3s,baz=126,slow=2.5,SNR=2.9						
YKA	Yellowknife Ar	94.31	25	P	P	01 13 10.9	-0.3
	0.3nm,0.5s,baz=240,slow=4.4,SNR=13						
BVAR	Borovoye Array	116.84	321	PKP	PKPdf	01 18 30.3	-2.2
	0.4nm,0.4s,baz=96,slow=2.9,SNR=2.7						
ARCES	ARCESS Array B	126.30	350	PKP	PKPdf	01 18 49.3	-1.0
	3.1nm,0.9s,baz=29,slow=2.1,SNR=5.3						
FINES	FINESS Array B	133.17	344	PKP	PKPdf	01 19 01.8	-1.7
	0.5nm,0.6s,baz=46,slow=4.0,SNR=3.6						
BRTR	Keskin Array B	144.78	315	PKP	PKPdf	01 19 25.4	0.0
	0.8nm,0.6s,baz=101,slow=2.4,SNR=9.4						
CLL	Collm	145.45	347	⇓iPKP	PKPbc	01 19 27.4	+0.1
	comp=Z,9.0nm,0.7s						
BRG	Berggiesshubel	145.65	346	eP	PKPbc	01 19 27.9	0.0
	comp=Z,4.0nm,0.7s						
KHC	Kasperske Hory	147.36	345	eP	PKPbc	01 19 32.0	-0.7
GERES	GERESS Array B	147.60	345	PKPbc	PKPbc	01 19 33.3	-0.1
	comp=Z,1.8nm,0.6s,baz=31,slow=3.2,SNR=22						
WTTA	Wattenberg	149.56	346	⇑iPKPbc	PKPbc	01 19 38.3	-0.1
	comp=Z,4.0nm,0.5s						
ABTA	Abfaltersbach	149.84	345	⇓iPKPbc	PKPbc	01 19 38.1	-0.8
	comp=Z,4.7nm,0.6s						
FETA	Feichten	149.99	347	⇓iPKPbc	PKPbc	01 19 38.5	-0.9
	comp=Z,4.1nm,1.2s						

*IDC **07** 01:09:42.6±0.8, 34°.70N×73°.15E, h0km, mb3.9/10, mb1 3.9/15, mb1mx3.7/32, mbtmp3.8/15, ML3.6/5, Error ellipse: s-maj=20.9km s-min=16.2km az=78.0*
*ISCJB **07** 01:09:44.7±0.4, 34°.80N±0°.03×73°.30E±0°.06, h21km, mb3.7/9, Error ellipse: s-maj=7.5km s-min=3.7km az=162.5*
*NNC **07** 01:09:48.9±4.3, 35°.11N×72°.81E, h0km, mb3.5, mpv3.8, Error ellipse: s-maj=44.5km s-min=37.4km az=133.0*
ISC 07 01:09:46.4±0.5**, 34°.77N**±0°.05×**73°.27E**±0°.06**, h21**km**, n43, σ1s.85**/50**, mb3.7**/9**, 5C-9D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.11	180	⇓P	Pn	01 10 06.0	-0.7
CEP	Cherat	1.47	230	⇑P	Pn	01 10 10.3	-1.5
THW	Thamme Wali	2.34	213	P	Pn	01 10 25.5	+1.8
THW				S	Sb	01 10 59.0	+2.6
SARP	Sargodha	2.88	190	P	Pb	01 10 51.9	+15
DLH	Dalhousie	3.16	134	ePKP	Pn	01 10 37.0	+1.8
DLH				eS	Sb	01 11 20.0	-0.2
DHRM	DHARAMSHALA	3.57	134	ePKP	Pn	01 10 43.0	+2.3
DHRM				eS	Sn	01 11 26.9	+4.6
DHRM				AML	AML	01 11 40.6	
	comp=N,357nm,0.3s						
DHRM				AML	AML	01 11 41.8	
	comp=E,360nm,0.4s						
SDNR	Sundarnagar	4.50	135	ePKP	Pn	01 10 56.0	+2.6
SDNR				ex	Sb	01 12 05.6	+7.0
SMLA	Simla	4.89	137	i P	Pn	01 11 01.0	+2.3
SMLA				i S	Sn	01 11 57.3	+2.7
SMLA				AML	AML	01 12 20.5	
	comp=N,161nm,1.0s						
SMLA				AML	AML	01 12 20.6	
	comp=E,224nm,0.0s						
DDI	Dehra Dun	6.00	136	eS	Sn	01 12 23.8	+1.7
DDI				AML	AML	01 12 30.6	
	comp=N,342nm,0.2s						
DDI				AML	AML	01 12 31.2	
	comp=E,430nm,0.3s						
AAK	Ala-Archa	7.91	7	Pn	Pn	01 11 43.0	+2.6
	comp=E,0.5nm,0.3s,baz=170,slow=12,SNR=5.1						
AAK				Sn	Sn	01 13 10.6	+1.3
	comp=E,0.4nm,0.3s,baz=184,slow=19,SNR=2.6						
TKM2	Tokmak 2	8.34	12	⇓Pn	Pn	01 11 49.2	+2.9
	comp=E,0.9nm,0.3s						
TKM2				⇑Sn	Sn	01 13 19.6	-0.4
	comp=E,2.7nm,0.7s						
KK31	Karatay Array	8.60	346	⇓Pn	Pn	01 11 51.3	+1.7
	comp=E,3.8nm,0.3s,baz=171,slow=13,SNR=151						
KK31				⇓Sn	Sn	01 13 23.8	-2.1
	comp=E,1.9nm,0.3s,baz=172,slow=22,SNR=4.1						
PYUN	Piuthan	10.63	126	eP	Pn	01 12 17.0	-0.7
	comp=E,17nm,0.4s						
PYUN				eS	Sn	01 14 11.8	-4.5
	comp=E,21nm,0.4s						
DANN	Dangsing	11.00	123	eP	Pn	01 12 21.0	-1.8
	comp=E,16nm,0.4s						
KOLN	Koldanda	11.25	125	eP	Pn	01 12 24.6	-1.6
	comp=E,9.7nm,0.5s						
DMN	Daman	12.39	122	eP	Pn	01 12 39.2	-2.6
KKN	Kakani	12.40	121	eP	Pn	01 12 39.1	-2.8
PKIN	Phulchoki	12.61	121	eP	Pn	01 12 43.1	-1.8
	comp=E,7.2nm,0.3s						
GUN	Gumba	12.76	119	eP	Pn	01 12 44.6	-2.3
	comp=E,13nm,0.4s						
MK31	Makanchi Array	13.81	27	⇑P	Pn	01 13 02.2	+1.3
	comp=E,0.5nm,0.5s,baz=201,slow=11,SNR=5.0						
MKAR	Makanchi Array	13.81	27	Pn	Pn	01 13 02.1	+1.2
	comp=E,0.1nm,0.3s,baz=210,slow=15,SNR=6.6						
RAMN	Ramite	13.84	121	eP	Pn	01 12 58.8	-2.8
RAMN				eS	Sn	01 15 26.8	-8.0
KUR17	Kurchatov Arra	16.30	12	⇓P	Pn	01 13 32.8	-1.1
KURBB	Kurchatov Arra	16.30	12	Pn	Pn	01 13 31.6	-2.3
	comp=E,0.1nm,0.3s,baz=201,slow=11,SNR=9.4						
KURK	Kurchatov	16.41	12	⇑P	Pn	01 13 35.8	+0.5
	comp=E,1.0nm,0.7s						
AB31	Akbulak array	17.50	330	⇓P	Pn	01 13 48.1	-0.9
	comp=E,0.4nm,0.3s,baz=145,slow=11,SNR=10						
VOSK	Vostochnaya	18.02	355	⇑P	P	01 13 55.9	+0.1
	comp=E,0.9nm,0.7s						
BVA0	Borovoye Array	18.37	354	⇓P	Pn	01 13 59.8	+0.2
	comp=E,0.2nm,0.6s,baz=0.0,slow=0.1,SNR=8.1						
BVAR	Borovoye Array	18.37	354	P	Pn	01 13 59.8	+0.1
	comp=E,0.3nm,0.3s,baz=161,slow=10,SNR=8.0						
ZRNK	Zerenda	18.43	352	⇓P	Pn	01 14 00.6	+0.2
	comp=E,1.4nm,0.6s						
AKTO	Aktyubinsk	19.21	329	⇓P	P	01 14 09.2	+0.3
	comp=E,0.7nm,0.8s						
AKTO	Aktyubinsk	19.21	329	P	P	01 14 08.2	-0.6
	comp=E,0.3nm,0.3s,baz=141,slow=7.9,SNR=12						
ZALV	Zalesovo Beam	20.83	19	P	P	01 14 25.9	-0.6
	comp=E,5.5nm,0.4s,baz=212,slow=11,SNR=42						
SONM	Songino Array	27.87	52	P	P	01 15 35.5	+0.7
	comp=E,0.2nm,0.3s,baz=265,slow=10,SNR=3.7						
CMAR	Chiang Mai Arr	28.00	119	P	P	01 15 36.0	+0.1
	comp=E,0.6nm,0.4s,baz=306,slow=9.7,SNR=7.0						
JOF	Joensuu	38.29	330	ep	P	01 17 04.9	-0.1
FINES	FINESS Array B	39.95	327	P	P	01 17 18.3	-0.5
	comp=E,1.5nm,1.0s,baz=108,slow=9.2,SNR=6.8						
ARCES	ARCESS Array B	43.45	338	P	P	01 17 47.6	+0.2
	comp=E,1.0nm,0.4s,baz=114,slow=7.6,SNR=17						
TORD	Torodi Ar. Bea	67.56	271	P	P	01 20 40.2	-1.4
	comp=E,0.9nm,0.5s,baz=43,slow=5.2,SNR=17						
BOSA	Boshof	77.66	222	P	P	01 21 40.5	-0.9
	comp=E,1.8nm,0.8s,baz=9.0,slow=4.6,SNR=3.2						
WRA	Warramunga Arr	79.50	123	P	P	01 21 51.5	-0.2
	comp=E,0.3nm,0.4s,baz=323,slow=4.4,SNR=2.4						
ASAR	Alice Springs	81.75	126	P	P	01 22 03.5	-0.2
	comp=E,0.4nm,0.6s,baz=312,slow=5.4,SNR=5.2						
YKA	Yellowknife Ar	82.87	4	P	P	01 22 08.7	-0.3
	comp=E,0.3nm,0.5s,baz=348,slow=5.4,SNR=9.1						

*IDC **07** 01:49:08.2±11.0, 36°.14N×70°.13E, h130km±106km, mb3.3/5, mb1 3.4/6, mb1mx3.0/28, mbtmp3.3/6, ML3.9/1, Error ellipse: s-maj=50.4km s-min=31.8km az=179.0*
*ISCJB **07** 01:49:16.4±0.8, 36°.57N±0°.07×70°.2E±0°.1, h213km, mb3.3/4, Error ellipse: s-maj=14.8km s-min=8.0km az=156.7*
ISC 07 01:49:17.7±1.1**, 36°.6N**±0°.1×**70°.2E**±0°.1**, h213**km**, n19, σ0s.88**/18**, mb3.5**/4**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	Almayashu	6.18	25	P	Pn	01 50 46.5	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	SNR=37						
UCH	**Uchtor**	**6.56**	**29**	P	S	01 52 03.8	-4.7
	SNR=22						
EKS2	**Erkin-Say**	**6.68**	**23**	P	**Pn**	**01 50 53.4**	**-0.6**
	SNR=6.2						
AAK	**Ala-Archa**	**6.91**	**27**	P	**Pn**	**01 50 56.4**	**-0.4**
	SNR=8.5						
ULHL	**Ulahol**	**7.35**	**38**	P	**Pn**	**01 51 01.7**	**-0.9**
	SNR=5.4						
TKM2	**Tokmak 2**	**7.58**	**32**	P	**Pn**	**01 51 04.7**	**-1.0**
	SNR=12						
MKAR	**Makanchi Array**	**13.62**	**38**	P	**Pn**	**01 52 21.7**	**-0.7**
	0.6nm,0.3s,baz=222,slow=14,SNR=15						
DMN	**Daman**	**15.45**	**121**	*e*P	**Pn**	**01 52 44.8**	**-0.4**
	4.7nm,0.4s						
KKN	**Kakani**	**15.46**	**120**	*e*P	**P**	**01 52 44.4**	**-0.7**
	7.7nm,0.4s						
PKIN	**Phulchoki**	**15.67**	**121**	*e*P	**Pn**	**01 52 48.4**	**+0.6**
	16nm,0.5s						
PKI	**Pulchoki**	**15.69**	**121**	*e*P	**Pn**	**01 52 48.6**	**+0.5**
	23nm,0.5s						
GUN	**Gumba**	**15.81**	**119**	*e*P	**Pn**	**01 52 49.7**	**+0.2**
	15nm,0.6s						
RAMN	**Ramite**	**16.90**	**120**	*e*P	**P**	**01 53 01.2**	**+0.2**
	15nm,0.6s						
ODAN	**Odare**	**17.51**	**119**	*e*P	**P**	**01 53 08.0**	**+0.4**
	11nm,0.6s						
ZALV	**Zalesovo Beam**	**20.13**	**26**	P	**P**	**01 53 35.0**	**-0.3**
	1.9nm,0.4s,baz=215,slow=11,SNR=11						
SONM	**Songino Array**	**28.83**	**56**	P	**P**	**01 54 57.0**	**+0.8**
	0.2nm,0.4s,baz=262,slow=8.6,SNR=2.9						
FINES	**FINESS Array B**	**37.07**	**326**	P	**P**	**01 56 08.2**	**+1.1**
	0.7nm,0.6s,baz=127,slow=11,SNR=6.6						
ARCES	**ARCESS Array B**	**40.84**	**338**	P	**P**	**01 56 39.6**	**+1.5**
	1.3nm,0.6s,baz=109,slow=7.7,SNR=6.5						
TORD	**Torodi Ar. Bea**	**65.08**	**268**	P	**P**	**01 59 34.5**	**-1.3**
	0.4nm,0.5s,baz=49,slow=5.9,SNR=11						

*CSEM **07** 01:51:15.0, 42.39N×12.91E, h9km, After ROM*
ROM 07 01:51:15.0±0.1**, 42.39N×12.91E, h9**km±1km**, Ml1.6**/5**, Error ellipse: s-maj=1.6km s-min=1.2km az=100.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNS	**Montasola**	**0.17**	**268**	Pg	Pg	01 51 19.2	+0.5
MNS				Sg	Sg	01 51 22.3	+1.1
	279nm,0.4s						
MNS	**Montasola**	**0.17**	**268**	Pg	Pg	01 51 19.2	+0.5
MNS				Sg	Sg	01 51 22.5	+1.3
MNS	**Montasola**	**0.17**	**268**	Pg	Pg	01 51 19.2	+0.5
MNS				Sg	Sg	01 51 22.5	+1.3
FIAM	**Fiamignano**	**0.20**	**129**	Pg	Pg	01 51 19.2	0.0
FIAM				Sg	Sg	01 51 22.6	+0.5
	155nm,0.6s						
LNSS	**Leonessa**	**0.23**	**24**	Pg	Pg	01 51 20.2	+0.3
LNSS				Sg	Sg	01 51 24.6	+1.4
	151nm,0.3s						
LNSS	**Leonessa**	**0.23**	**24**	Pg	Pg	01 51 20.2	+0.3
LNSS				Sg	Sg	01 51 24.6	+1.4
	151nm,0.3s						
CESX	**Cesi**	**0.33**	**312**	Pg	Pg	01 51 22.3	+0.7
CESX				Sg	Sb	01 51 27.4	-1.1
	33nm,0.4s						
CESX	**Cesi**	**0.33**	**312**	Pg	Pg	01 51 22.3	+0.7
CESX				Sg	Sb	01 51 27.4	-1.1
	33nm,0.4s						
AQU	**L'Aquila**	**0.37**	**96**	Pg	Pg	01 51 22.7	+0.4
AQU				Sg	Sg	01 51 27.7	+0.5
	60nm,0.9s						
MTCE	**Montecelio**	**0.39**	**199**	Pg	Pg	01 51 23.0	+0.3
MTCE				Sg	Sg	01 51 28.9	+1.0
	22nm,0.5s						
CERT	**Cerreto**	**0.45**	**173**	Pg	Pg	01 51 23.7	-0.1
CERT				Sg	Sb	01 51 31.4	-0.6
	85nm,0.6s						
CERT	**Cerreto**	**0.45**	**173**	Pg	Pg	01 51 23.7	-0.1
CERT				Sg	Sb	01 51 31.4	-0.6
	85nm,0.6s						
NRCA	**Norcia**	**0.47**	**19**	Pg	Pg	01 51 24.4	+0.2
NRCA				Sg	Sb	01 51 31.9	-0.7
	5.0nm,0.2s						
NRCA	**Norcia**	**0.47**	**19**	Pg	Pg	01 51 24.3	+0.1
NRCA				Sg	Sb	01 51 31.9	-0.7
	27nm,0.1s						
NRCA	**Norcia**	**0.47**	**19**	Pg	Pg	01 51 24.3	+0.1
NRCA				Sg	Sb	01 51 31.9	-0.7
	27nm,0.1s						
FAGN	**Fagnano**	**0.52**	**104**	Pg	Pb	01 51 26.1	-0.2
FAGN	**Fagnano**	**0.52**	**104**	Pg	Pb	01 51 26.1	-0.2
PTQR	**Pietraquaria**	**0.52**	**135**	Pg	Pg	01 51 25.7	+0.5
	1.0nm,0.2s						
PTQR	**Pietraquaria**	**0.52**	**135**	Pg	Pg	01 51 25.7	+0.5
	1.0nm,0.2s						
TERO	**Teramo**	**0.56**	**66**	Pg	Pg	01 51 25.8	-0.2
TERO				Sg	Sg	01 51 34.3	+0.8
CESI	**CESI - Serrava**	**0.61**	**360**	Pg	Pg	01 51 27.2	+0.2
CESI				Sg	Sb	01 51 36.6	-0.2
	7.0nm,0.3s						
CESI	**CESI - Serrava**	**0.61**	**360**	Pg	Pg	01 51 27.1	+0.1
CESI				Sg	Sb	01 51 36.8	0.0
CESI	**CESI - Serrava**	**0.61**	**360**	Pg	Pg	01 51 27.1	+0.1
CESI				Sg	Sb	01 51 36.8	0.0
FDMO	**Fiordimonte**	**0.66**	**11**	Pg	Pg	01 51 27.8	0.0
FDMO				Sg	Sb	01 51 37.3	-0.7
	13nm,0.3s						
FDMO	**Fiordimonte**	**0.66**	**11**	Pg	Pg	01 51 27.8	0.0
FDMO				Sg	Sb	01 51 37.3	-0.7
	13nm,0.3s						

*CSEM **07** 01:54:13.1, 42.13N×13.50E, h18km, MD1.7/4, After ROM*
ROM 07 01:54:13.1±0.4**, 42.13N×13.50E, h18**km±3km**, Md1.7**/4**, Ml1.2**/2**, Error ellipse: s-maj=4.1km s-min=1.9km az=104.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTQR	**Pietraquaria**	**0.13**	**214**	Pg	Pg	01 54 17.6	+0.4
PTQR				Sg	Sg	01 54 20.2	+0.2
	5.0nm,0.2s						
PTQR	**Pietraquaria**	**0.13**	**214**	Pg	Pg	01 54 17.6	+0.4
PTQR				Sg	Sg	01 54 20.2	+0.2
	5.0nm,0.2s						
FAGN	**Fagnano**	**0.15**	**25**	Pg	Pg	01 54 17.8	+0.3
FAGN				Sg	Sg	01 54 20.6	+0.1
	50nm,0.4s						
FAGN	**Fagnano**	**0.15**	**25**	Pg	Pg	01 54 17.8	+0.3
FAGN				Sg	Sg	01 54 20.6	+0.1
	50nm,0.4s						
AQU	**L'Aquila**	**0.24**	**342**	Pg	Pg	01 54 18.6	-0.1
AQU				Sg	Sg	01 54 23.5	+0.9
	23nm,0.4s						
AQU	**L'Aquila**	**0.24**	**342**	Pg	Pg	01 54 18.6	-0.1
AQU				Sg	Sg	01 54 23.5	+0.9
	23nm,0.4s						
CERT	**Cerreto**	**0.42**	**245**	Pg	Pg	01 54 21.9	0.0
CERT				Sg	Sb	01 54 28.2	-0.2
CERT	**Cerreto**	**0.42**	**245**	Pg	Pg	01 54 21.9	0.0
CERT				Sg	Sb	01 54 28.2	-0.2

*SZGRF **07** 02:06:38.6, 16.95S×177.95W, h33km, Fiji Islands region*
*BJI **07** 02:07:33.4, 17.71S×177.90W, h574km, mB4.9/2, mb4.5/8*
*IDC **07** 02:07:34.4±1.4, 17.70S×178.66W, h536km±14km, mb4.0/10, mb1 4.3/12, mb1mx4.0/19, mbtmp4.1/12, Error ellipse: s-maj=21.0km s-min=11.1km az=140.0*
*ISCJB **07** 02:07:34.5±0.3, 17.70S±0.09×178.74W±0.07, h547km, mb4.3/54, Error ellipse: s-maj=14.1km s-min=4.6km az=148.4*
*NEIC **07** 02:07:36.2±0.6, 17.72S×178.69W, h558km±6km, mb4.3/40, Error ellipse: s-maj=14.8km s-min=5.6km az=150.0*
*AUST **07** 02:07:37.6, 17.55S×178.50W, h600km*
ISC 07 02:07:34.9±0.4**, 17.7S**±0.1×**178.64W**±0.08**, h547**km**, n444,** σ1.05/457**, mb4.3**/54**, 140C-143D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.15**	**269**	*e*P	P	02 08 55.0	+4.3
MSVF				*e*S	S	02 10 01.1	+8.7
AFI	**Afiamalu**	**7.62**	**61**	P	**P**	**02 09 28.0**	**-0.9**
AFI	**Afiamalu**	**7.62**	**61**	P	**P**	**02 09 28.0**	**-0.9**
	31nm,0.3s,baz=260,slow=6.1,SNR=14						
DZM	**Mont Dzumac**	**14.67**	**250**	*e*P	**P**	**02 10 40.7**	**-0.4**
DZM	**Mont Dzumac**	**14.67**	**250**	P	**P**	**02 10 41.3**	**+0.1**
DZM	**Mont Dzumac**	**14.67**	**250**	P	**P**	**02 10 41.3**	**+0.1**
	4.4nm,0.3s,baz=76,slow=17,SNR=29						
EIDS	**Eidsvold**	**29.12**	**250**	P	**P**	**02 12 52.0**	**+0.1**
	baz=29,SNR=11						
ARMA	**Armidale**	**29.84**	**239**	P	**P**	**02 12 59.4**	**+1.2**
	baz=30,SNR=29						
ARMA				S	S	02 16 58.7	-18
	baz=30,SNR=32						
MGCD	**Mangrove Creek**	**31.21**	**235**	P	**P**	**02 13 11.1**	**+1.2**
	baz=31,SNR=13						
RMQ	**Roma**	**31.36**	**248**	P	**P**	**02 13 12.2**	**+1.0**
	baz=32,SNR=19						
CTAO	**Charters Tower**	**33.26**	**260**	*e*P	**P**	**02 13 27.6**	**+0.1**
	13nm,0.6s						
CNB	**Canberra Magne**	**33.36**	**232**	P	**P**	**02 13 29.2**	**+1.0**
	baz=34,SNR=31						
YNG	**Young**	**33.71**	**234**	P	**P**	**02 13 32.1**	**+1.0**
	baz=34,SNR=5.7						
PMG	**Port Moresby**	**34.21**	**279**	*e*P	**P**	**02 13 36.8**	**+1.3**
	48nm,0.8s						
CMSA	**Cobar Meteorol**	**35.04**	**240**	P	**P**	**02 13 42.8**	**+0.6**
	baz=35,SNR=58						
MTSU	**Mount Surprise**	**35.21**	**264**	P	**P**	**02 13 44.0**	**+0.2**
	baz=35,SNR=28						
QLP	**Quilpie**	**35.39**	**249**	P	**P**	**02 13 45.4**	**+0.2**
	baz=36,SNR=75						
COEN	**Coen**	**36.88**	**270**	P	**P**	**02 13 58.7**	**+1.0**
	baz=37,SNR=41						
TOO	**Toolangi**	**37.11**	**230**	P	**P**	**02 14 00.1**	**+0.8**
	baz=37,SNR=22						
STKA	**Stephens Creek**	**38.52**	**241**	*e*P	**P**	**02 14 11.8**	**+1.0**
	8.4nm,0.5s						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**02 14 11.8**	**+1.0**
	38nm,0.5s,baz=92,slow=9.5,SNR=169						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**02 14 11.8**	**+1.0**
	baz=39,SNR=142						
ARPS	**Mount Arapiles**	**39.58**	**233**	P	**P**	**02 14 19.8**	**+0.5**
	baz=40,SNR=5.2						
JAY	**Jayapura**	**42.64**	**286**	P	**P**	**02 14 45.1**	**+1.1**
	baz=43,SNR=23						
BBOO	**Buckleboo**	**43.30**	**241**	P	**P**	**02 14 49.1**	**+0.4**
	baz=44,SNR=251						
WRAB	**Tennant Creek**	**44.44**	**259**	*e*P	**P**	**02 14 57.1**	**-0.7**
	16nm,0.5s						
WRA	**Warramunga Arr**	**44.45**	**259**	P	**P**	**02 14 57.2**	**-0.6**
WRA				PcP	**PcP**	**02 16 29.6**	**+0.1**
WRA				ScP	**ScP**	**02 19 31.2**	**+1.4**
WRA	**Warramunga Arr**	**44.45**	**259**	P	**P**	**02 14 57.2**	**-0.6**
	18nm,0.5s,baz=92,slow=7.0,SNR=94						
WRA				PcP	**PcP**	**02 16 29.6**	**+0.1**
	1.7nm,0.4s,baz=97,slow=3.5,SNR=4.8						
WRA				ScP	**ScP**	**02 19 31.2**	**+1.4**
	0.7nm,0.5s,baz=97,slow=3.6,SNR=5.0						
AS31	**Alice Springs**	**44.62**	**254**	*e*P	**P**	**02 14 59.3**	**+0.1**
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**02 14 59.4**	**+0.2**
ASAR				PcP	**PcP**	**02 16 29.9**	**-0.3**
ASAR				ScP	**ScP**	**02 19 31.8**	**+1.3**
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**02 14 59.4**	**+0.2**
	203nm,0.5s,baz=89,slow=8.2,SNR=2259						
ASAR				PcP	**PcP**	**02 16 29.9**	**-0.3**
	2.8nm,0.4s,baz=100,slow=3.3,SNR=3.9						
ASAR				ScP	**ScP**	**02 19 31.8**	**+1.3**
	1.9nm,0.9s,baz=96,slow=3.9,SNR=5.9						
KDU	**Kakadu**	**47.34**	**269**	P	**P**	**02 15 20.0**	**+0.2**
	baz=48,SNR=29						
MTN	**Manton Dam**	**48.58**	**268**	P	**P**	**02 15 28.9**	**-0.2**
	baz=49,SNR=18						
FORT	**Forrest**	**49.88**	**244**	P	**P**	**02 15 38.0**	**-0.6**
	baz=50,SNR=18						
KNRA	**Kununurra**	**50.28**	**264**	P	**P**	**02 15 42.0**	**+0.4**
	baz=50,SNR=3.7						
KNRA				S	**S**	**02 22 11.0**	**-3.1**
	baz=50,SNR=3.4						
PALU	**Palau**	**52.58**	**294**	P	P	02 15 52.6	-5.6
	baz=53,SNR=3.4						
FITZ	**Fitzroy Crossi**	**52.84**	**260**	P	**P**	**02 16 00.4**	**+0.4**
	baz=53,SNR=31						
KMBL	**Kambalda**	**55.19**	**244**	P	**P**	**02 16 15.7**	**-0.7**
	baz=55,SNR=7.7						
MBWA	**Marble Bar**	**57.90**	**256**	*e*P	**P**	**02 16 34.7**	**-0.5**
	15nm,0.3s						
MEEK	**Meekatharra**	**58.29**	**249**	P	**P**	**02 16 37.1**	**-0.7**
	baz=58,SNR=8.9						
KLBR	**Kellerberrin**	**58.71**	**243**	P	**P**	**02 16 40.0**	**-0.5**
	baz=59,SNR=18						
NWAO	**Narrogin (SRO)**	**59.10**	**242**	*e*P	**P**	**02 16 43.0**	**-0.1**
	16nm,1.1s						
BLDU	**Ballidu**	**59.66**	**245**	P	**P**	**02 16 46.4**	**-0.5**
	baz=60,SNR=13						
VNDA	**Vanda**	**60.60**	**185**	P	**P**	**02 16 53.1**	**+0.8**
VNDA	**Vanda**	**60.60**	**185**	P	**P**	**02 16 53.1**	**+0.8**
	1.1nm,0.8s,baz=5.7,slow=5.6,SNR=8.0						
GIRL	**Giralia**	**62.73**	**253**	P	**P**	**02 17 08.3**	**+1.2**
	baz=63,SNR=4.0						
KKM	**Kota Kinabalu**	**68.48**	**284**	*e*P	**P**	**02 17 43.5**	**+0.2**
	13nm,0.4s						
UGM	**Wanagama**	**69.43**	**268**	P	**P**	**02 17 48.8**	**-0.2**
	baz=70,SNR=4.5						
KSM	**Kuching**	**72.44**	**277**	*e*P	**P**	**02 18 07.7**	**+1.1**
	23nm,0.9s						
PETK	**Petropavlovsk-**	**73.45**	**345**	P	**P**	**02 18 11.6**	**+0.1**
PETK	**Petropavlovsk-**	**73.45**	**345**	P	**P**	**02 18 11.6**	**+0.1**
	6.5nm,0.6s,baz=139,slow=8.9,SNR=8.9						
SMMC	**Simmler**	**76.62**	**46**	⇓P	**P**	**02 18 31.8**	**+2.2**
	baz=77						
ARVC	**Arvin**	**77.32**	**47**	⇑P	**P**	**02 18 34.6**	**+1.2**
	baz=78						
VES	**Vestal, Richgr**	**77.53**	**46**	⇓P	**P**	**02 18 35.6**	**+1.1**
	baz=78						
MURC	**Murrieta**	**77.67**	**49**	⇑P	**P**	**02 18 36.8**	**+1.3**
	baz=78						
BFSC	**Mount Baldy Ra**	**77.67**	**48**	⇓P	**P**	**02 18 36.4**	**+0.8**
	baz=78						
RCTC	**Rector, Farmer**	**77.68**	**45**	⇓P	**P**	**02 18 36.4**	**+1.1**
	baz=78						
EDW2	**Edwards Air Fo**	**77.78**	**47**	⇓P	**P**	**02 18 37.3**	**+1.3**
	baz=78						
ISA	**Isabella**	**77.86**	**46**	*e*P	**P**	**02 18 37.6**	**+1.3**
	13nm,0.9s						
ISA	**Isabella**	**77.86**	**46**	⇑P	**P**	**02 18 37.7**	**+1.3**
	baz=78						
CMB	**Columbia Colle**	**77.86**	**43**	*e*P	**P**	**02 18 37.2**	**+0.8**
	9.7nm,0.9s						
MONP	**Monument Peak**	**77.87**	**50**	⇓P	**P**	**02 18 38.1**	**+1.3**
	baz=78						
WDC	**Whiskeytown Da**	**77.95**	**40**	*e*P	**P**	**02 18 38.2**	**+1.5**
	6.8nm,1.1s						
DVTC	**Desert V Tower**	**77.99**	**50**	⇑P	**P**	**02 18 38.9**	**+1.7**
	baz=78						
PFO	**Pinyon Flat Ob**	**78.21**	**49**	⇑P	**P**	**02 18 39.6**	**+1.1**
	baz=78						
LRMC	**Laurel Mountai**	**78.30**	**47**	⇓P	**P**	**02 18 40.3**	**+1.4**
	baz=78						
SWSC	**Sam W. Stewart**	**78.35**	**50**	⇓P	**P**	**02 18 40.5**	**+1.4**
	baz=78						
YBH	**Yreka Blue Hor**	**78.53**	**39**	*e*P	**P**	**02 18 41.1**	**+1.1**
	5.9nm,0.8s						
CWC	**Cottonwood Cre**	**78.54**	**46**	⇓P	**P**	**02 18 41.5**	**+1.3**
	baz=79						
BELC	**Belle Mtn. Jos**	**78.73**	**49**	⇑P	**P**	**02 18 42.5**	**+1.3**
	baz=79						
MPMC	**Manual Prospec**	**78.74**	**46**	⇓P	**P**	**02 18 42.5**	**+1.1**
	baz=79						
GSC	**Goldstone**	**78.83**	**47**	⇑P	**P**	**02 18 43.0**	**+1.4**
	baz=79						
HEC	**Hector,Ludlow**	**78.92**	**48**	⇓P	**P**	**02 18 43.1**	**+1.0**
	baz=79						
BC3	**Big Chuckawall**	**78.95**	**49**	⇓P	**P**	**02 18 43.7**	**+1.3**
	baz=79						
GLA	**Glamis**	**79.11**	**50**	⇑P	**P**	**02 18 44.5**	**+1.3**
	baz=79						
GRAC	**Grapevine Rang**	**79.32**	**46**	⇓P	**P**	**02 18 45.7**	**+1.6**
	baz=80						
GMRC	**Granite Mounta**	**79.37**	**48**	⇑P	**P**	**02 18 45.7**	**+1.1**
	baz=80						
FURC	**Furnace Creek,**	**79.39**	**46**	⇑P	**P**	**02 18 45.6**	**+1.1**
	baz=80						
IRM	**Iron Mountain**	**79.42**	**49**	⇓P	**P**	**02 18 46.0**	**+1.3**
	baz=80						
NVAR	**Mina Array Bea**	**79.45**	**44**	P	**P**	**02 18 46.1**	**+1.1**
NVAR	**Mina Array Bea**	**79.45**	**44**	P	**P**	**02 18 46.1**	**+1.1**
	7.4nm,0.7s,baz=230,slow=8.1,SNR=40						
SHOC	**Shoshone**	**79.50**	**47**	⇑P	**P**	**02 18 46.6**	**+1.4**
	baz=80						
TUQ	**Turquoise Moun**	**79.51**	**48**	⇑P	**P**	**02 18 46.6**	**+1.3**
	baz=80						
Y12C	**Blythe**	**79.67**	**50**	⇓P	**P**	**02 18 47.8**	**+1.8**
	baz=80						
214A	**Organ Pipe Nat**	**80.08**	**52**	⇑P	**P**	**02 18 50.0**	**+1.8**
	baz=80						
MOD	**Modoc**	**80.09**	**40**	*e*P	**P**	**02 18 49.1**	**+0.8**
	12nm,0.6s						
PDMCI	**Parker Dam,Lak**	**80.22**	**49**	⇑P	**P**	**02 18 50.3**	**+1.4**
	baz=80						
Z14A	**Wintersburg**	**80.64**	**51**	⇓P	**P**	**02 18 52.7**	**+1.6**
	baz=81						
W13A	**Hualapai Mount**	**80.79**	**49**	⇑P	**P**	**02 18 53.2**	**+1.1**
	baz=81						
Y14A	**Wickenburg**	**80.87**	**50**	⇑P	**P**	**02 18 53.5**	**+1.1**
	baz=81						
R11A	**Troy Canyon, C**	**81.23**	**45**	⇑P	**P**	**02 18 55.1**	**+0.8**
	baz=81						
WVOR	**Wild Horse Val**	**81.42**	**40**	*e*P	**P**	**02 18 55.9**	**+0.8**
	15nm,1.0s						
TUC	**Tucson**	**81.77**	**52**	*e*P	**P**	**02 18 58.6**	**+1.5**
	3.0nm,1.3s						
X16A	**Lo Mia Camp, P**	**82.24**	**50**	⇑P	**P**	**02 19 01.1**	**+1.5**
	baz=82						
CCUT	**Cedar City**	**82.35**	**47**	*e*P	**P**	**02 19 01.1**	**+1.0**
	8.5nm,1.1s						
PMR	**Palmer**	**82.48**	**14**	*e*P	**P**	**02 18 59.6**	**-0.2**
	6.6nm,0.5s						
319A	**Douglas**	**82.50**	**54**	⇑P	**P**	**02 19 02.6**	**+1.8**
	baz=83						
U15A	**North Rim**	**82.57**	**48**	⇓P	**P**	**02 19 03.0**	**+1.7**
	baz=83						
ELK	**Elko**	**82.68**	**43**	*e*P	**P**	**02 19 02.4**	**+0.8**
WUAZ	**Wupatki**	**82.80**	**49**	*e*P	**P**	**02 19 03.6**	**+1.4**
	11nm,1.0s						
WUAZ	**Wupatki**	**82.80**	**49**	⇓P	**P**	**02 19 03.9**	**+1.6**
	baz=83						
TBM	**Table Mountain**	**82.94**	**36**	P	**P**	**02 19 03.1**	**+0.5**
BMRM	**Bremner River**	**83.05**	**16**	*e*P	**P**	**02 19 02.7**	**-0.1**
	6.5nm,0.4s						
320A	**Kipp Ranch, An**	**83.06**	**54**	⇑P	**P**	**02 19 05.9**	**+2.2**
	baz=83						
GBB	**Gable Butte**	**83.17**	**37**	P	**P**	**02 19 04.7**	**+1.1**
220A	**Playas Peak, P**	**83.31**	**54**	⇑P	**P**	**02 19 06.5**	**+1.6**
	baz=84						
X18A	**Snowflake**	**83.39**	**51**	⇑P	**P**	**02 19 06.5**	**+1.2**
	baz=84						
120A	**U Bar Ranch, L**	**83.50**	**53**	⇓P	**P**	**02 19 07.3**	**+1.5**
	baz=84						
BMO	**Blue Mountains**	**83.55**	**39**	*e*P	**P**	**02 19 06.2**	**+0.5**
	2.0nm,0.7s						
WTV	**Waterville**	**83.61**	**36**	P	**P**	**02 19 06.5**	**+0.6**
MSU	**Marysvale**	**83.64**	**46**	*e*P	**P**	**02 19 07.9**	**+1.5**
	11nm,1.3s						
MFID	**Camas Ranch**	**83.69**	**41**	*e*P	**P**	**02 19 07.2**	**+0.8**
	12nm,1.2s						
MFID	**Camas Ranch**	**83.69**	**41**	⇑P	**P**	**02 19 07.2**	**+0.8**
	baz=84,SNR=6.9						
Z20A	**Nine Sixteen R**	**83.78**	**53**	⇑P	**P**	**02 19 08.8**	**+1.6**
	baz=84						
TRF	**Thorofare Moun**	**83.89**	**12**	*e*P	**P**	**02 19 05.6**	**-1.4**
	17nm,0.7s						
221A	**Mesquite Ranch**	**83.93**	**54**	⇓P	**P**	**02 19 09.6**	**+1.6**
	baz=84						
MAW	**Mawson**	**83.95**	**200**	*e*P	**P**	**02 19 07.4**	**+0.3**
	0.6nm,0.4s						
MAW	**Mawson**	**83.95**	**200**	P	**P**	**02 19 06.9**	**-0.3**
	3.1nm,0.5s,baz=125,slow=5.1,SNR=12						
MAW	**Mawson**	**83.95**	**200**	P	**P**	**02 19 07.5**	**+0.3**
	baz=84,SNR=8.2						
DUG	**Dugway**	**84.01**	**45**	⇑P	**P**	**02 19 09.3**	**+1.2**
	baz=84						
121A	**Cookes Peak, D**	**84.15**	**53**	⇑P	**P**	**02 19 10.5**	**+1.4**
	baz=84						
Y20A	**Horse Springs,**	**84.29**	**52**	⇓P	**P**	**02 19 11.3**	**+1.5**
	baz=84						
I12A	**Atlanta**	**84.31**	**41**	⇓P	**P**	**02 19 10.7**	**+1.0**
	baz=84						
MCK	**McKinley**	**84.42**	**13**	*e*P	**P**	**02 19 09.0**	**-0.5**
	14nm,0.9s						
X20A	**Quemado**	**84.47**	**51**	⇑P	**P**	**02 19 12.0**	**+1.3**
	baz=85						
Z21A	**St. Cloud Mine**	**84.56**	**53**	⇓P	**P**	**02 19 12.6**	**+1.5**
	baz=85						
HLID	**Hailey**	**84.64**	**41**	*e*P	**P**	**02 19 12.2**	**+1.0**
	7.3nm,1.0s						
HLID	**Hailey**	**84.64**	**41**	⇓P	**P**	**02 19 12.3**	**+1.0**
	baz=85,SNR=11						
J13A	**Cove Ranch, Pi**	**84.71**	**41**	⇓P	**P**	**02 19 12.6**	**+1.1**
	baz=85,SNR=9.3						
W20A	**Ramah**	**84.72**	**51**	⇓P	**P**	**02 19 13.2**	**+1.3**
	baz=85						
GYA	**Guiyang**	**84.76**	**300**	*e*P	**P**	**02 19 12.0**	**-0.1**
GYA				pP	pP	02 21 16.8	+6.2
GYA				sP	sP	02 22 12.4	+6.3
GYA				SKS	**SKSac**	**02 28 40.3**	**-4.4**
GYA				S	**SKKSac**	**02 28 51.2**	**-1.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
Y21A	**Point of Rocks**	**84.86**	**52**	⇓P	**P**	**02 19 13.6**	**+1.0**
	baz=85						
H12A	**Diamond D Ranc**	**84.87**	**40**	⇓P	**P**	**02 19 13.0**	**+0.7**
	baz=85,SNR=11						
G12A	**Big Creek, Yel**	**84.89**	**39**	⇑P	**P**	**02 19 13.2**	**+0.8**
	baz=85						
K14A	**Jones Ranch, D**	**84.92**	**42**	⇑P	**P**	**02 19 13.4**	**+0.8**
	baz=85,SNR=6.0						
X21A	**Alamocita Cree**	**84.96**	**52**	⇓P	**P**	**02 19 15.3**	**+2.2**
	baz=85						
I13A	**Wildhorse Cree**	**85.01**	**41**	⇓P	**P**	**02 19 13.9**	**+0.8**
	baz=85						
V20A	**Brimhall**	**85.04**	**50**	⇑P	**P**	**02 19 14.2**	**+0.8**
	baz=85						
Z22A	**Elephant Butte**	**85.08**	**53**	⇑P	**P**	**02 19 14.6**	**+1.0**
	baz=85						
J14A	**Carey**	**85.09**	**42**	⇓P	**P**	**02 19 14.8**	**+1.4**
	baz=85,SNR=9.2						
H13A	**Challis**	**85.25**	**40**	⇑P	**P**	**02 19 14.9**	**+0.8**
	baz=86						
F12A	**Elk City**	**85.25**	**39**	⇑P	**P**	**02 19 14.3**	**+0.2**
	baz=86,SNR=24						
Y22A	**Socorro**	**85.36**	**52**	⇑P	**P**	**02 19 15.8**	**+0.9**
	baz=86						
K15A	**Arbon**	**85.41**	**43**	⇑P	**P**	**02 19 16.1**	**+1.1**
	baz=86						
I14A	**Mackay**	**85.43**	**41**	⇑P	**P**	**02 19 15.9**	**+0.8**
	baz=86,SNR=7.4						
DOT	**Dot Lake**	**85.45**	**15**	*e*P	**P**	**02 19 14.1**	**-0.4**
	comp=Z,3.7nm,0.5s						
324A	**Moseley Ranch,**	**85.48**	**55**	⇓P	**P**	**02 19 16.1**	**+0.6**
	baz=86,SNR=6.2						
NEW	**Newport**	**85.50**	**36**	*e*P	**P**	**02 19 15.2**	**0.0**
	comp=Z,2.5nm,0.6s						
NEW	**Newport**	**85.50**	**36**	⇑P	**P**	**02 19 15.1**	**0.0**
	baz=86,SNR=5.2						
G13A	**Cobalt**	**85.53**	**40**	⇑P	**P**	**02 19 16.1**	**+0.7**
	baz=86						
425A	**Indio Mountain**	**85.61**	**56**	⇓P	**P**	**02 19 16.9**	**+0.7**
	baz=86,SNR=7.5						
MVCO	**Mesa Verde**	**85.63**	**49**	⇑P	**P**	**02 19 17.9**	**+1.6**
	baz=86						
Z23A	**Rita Site, Whi**	**85.64**	**53**	⇑P	**P**	**02 19 17.5**	**+1.3**
	baz=86						
V21A	**Milan**	**85.65**	**50**	⇓P	**P**	**02 19 17.3**	**+1.0**
	baz=86						
COLA	**College**	**85.65**	**13**	*e*P	**P**	**02 19 14.6**	**-0.7**
	comp=Z,4.5nm,0.6s						
MNTX	**Cornudas Mount**	**85.66**	**55**	*e*P	**P**	**02 19 17.4**	**+1.2**
	comp=Z,2.6nm,1.0s						
224A	**Cornudas Mount**	**85.70**	**55**	⇓P	**P**	**02 19 17.6**	**+1.0**
	baz=86,SNR=7.3						
C11A	**Tepee Creek (N**	**85.76**	**37**	⇑P	**P**	**02 19 17.0**	**+0.6**
	baz=86,SNR=25						
ILAR	**Eielson Array**	**85.77**	**13**	P	**P**	**02 19 15.2**	**-0.8**
ILAR	**Eielson Array**	**85.77**	**13**	P	**P**	**02 19 15.2**	**-0.8**
	comp=Z,3.2nm,0.4s,baz=222,slow=5.2,SNR=96						
626A	**Big Bend Ranch**	**85.80**	**57**	⇓P	**P**	**02 19 18.5**	**+1.5**
	baz=86,SNR=14						
J15A	**Blackfoot**	**85.81**	**42**	⇓P	**P**	**02 19 18.6**	**+1.7**
	baz=86						
F13A	**Darby**	**85.82**	**39**	⇑P	**P**	**02 19 16.9**	**+0.1**
	baz=86,SNR=12						
H14A	**Leadore**	**85.83**	**41**	⇓P	**P**	**02 19 17.9**	**+1.0**
	baz=86,SNR=6.4						
325A	**Bean Ranch, Si**	**85.85**	**55**	⇑P	**P**	**02 19 18.4**	**+1.0**
	baz=86						
D12A	**Red Ives Fores**	**85.87**	**38**	⇓P	**P**	**02 19 17.7**	**+0.8**
	baz=86						
U21A	**Nageezi**	**85.90**	**50**	⇑P	**P**	**02 19 18.2**	**+0.6**
	baz=86,SNR=10						

S20A	Disappointment	86.00	48	⇓P	P	02 19 18.9	+0.8
	baz=86						
124A	Stringfield Ra	86.00	54	⇓P	P	02 19 19.1	+1.0
	baz=86						
526A	Mary Lane Ranc	86.03	57	⇓P	P	02 19 19.4	+1.2
	baz=86,SNR=5.9						
Y23A	Lovelace Mesa,	86.05	53	⇑P	P	02 19 19.0	+0.7
	baz=86						
I15A	Monteview	86.07	41	⇓P	P	02 19 19.3	+1.3
	baz=86						
G14A	Jackson	86.08	40	⇑P	P	02 19 19.0	+0.8
	baz=86						
K16A	Soda Springs	86.08	43	⇑P	P	02 19 19.5	+1.3
	baz=86						
TXAR	Lajitas Array	86.09	58	P	P	02 19 20.1	+1.7
TXAR	Lajitas Array	86.09	58	P	P	02 19 20.1	+1.7
	comp=Z,6.5nm,0.7s,baz=218,slow=6.1,SNR=92						
C12B	Naegeli Ranch,	86.14	37	⇓P	P	02 19 19.0	+0.8
	baz=86						
ANMO	Albuquerque	86.16	52	*e*P	P	02 19 19.4	+0.7
	comp=Z,4.0nm,1.0s						
X23A	Hourglass Bar	86.21	52	⇑P	P	02 19 20.1	+1.1
	baz=86						
V22A	San Miguel Ran	86.23	51	⇑P	P	02 19 20.1	+0.9
	baz=86						
T21A	Navajo Lake	86.23	49	⇓P	P	02 19 19.6	+0.5
	baz=86						
E13A	Victor	86.24	39	⇓P	P	02 19 19.1	+0.3
	baz=86						
MCMT	McKenzie Canyo	86.25	41	*e*P	P	02 19 20.1	+1.0
	comp=Z,7.1nm,1.2s						
225A	Deer Hill, Car	86.26	55	⇓P	P	02 19 20.2	+0.9
	baz=86,SNR=6.9						
H15A	Lima	86.28	41	⇓P	P	02 19 20.1	+1.1
	baz=86,SNR=9.6						
426A	McDonald Obser	86.32	56	⇓P	P	02 19 20.6	+1.0
	baz=86,SNR=7.2						
Z24A	Sheeppen Canyo	86.33	53	⇑P	P	02 19 20.5	+0.9
	baz=86						
S21A	Coal Bank Pass	86.33	49	⇑P	P	02 19 20.7	+1.0
	baz=86						
D13A	Huson	86.41	38	⇓P	P	02 19 19.6	0.0
	baz=87,SNR=6.6						
M18A	Lyman	86.43	45	⇑P	P	02 19 20.6	+0.7
	baz=87						
K17A	Gardner Place,	86.48	43	⇓P	P	02 19 21.2	+1.1
	baz=87						
W23A	Werner Place,	86.48	52	⇓P	P	02 19 21.5	+1.2
	baz=87						
Y24A	Capitan	86.51	53	⇑P	P	02 19 21.4	+0.9
	baz=87,SNR=12						
Q20A	Ridgley Place,	86.54	47	⇑P	P	02 19 21.4	+1.0
	baz=87						
O19A	Miners Draw (B	86.56	46	⇑P	P	02 19 21.1	+0.6
	baz=87						
MSO	Missoula	86.58	38	⇓P	P	02 19 20.7	+0.3
	baz=87,SNR=5.3						
125A	Gardner Draw,	86.61	54	⇓P	P	02 19 22.1	+1.2
	baz=87						
BSMT	Bassoo Peak	86.61	37	*e*P	P	02 19 20.6	0.0
	comp=Z,4.3nm,0.8s						
G15A	Dillon	86.64	40	⇓P	P	02 19 21.5	+0.7
	baz=87,SNR=13						
E14A	Clinton	86.64	39	⇓P	P	02 19 20.9	+0.1
	baz=87,SNR=6.3						
I16A	Newdale	86.65	42	⇓P	P	02 19 22.3	+1.4
	baz=87						
C13A	Hot Springs	86.65	37	⇓P	P	02 19 20.9	+0.3
	baz=87						
V23A	Ortiz Mt. (NFS	86.70	51	⇑P	P	02 19 22.5	+1.2
	baz=87						
T22A	Edith	86.70	50	⇓P	P	02 19 22.5	+1.2
	baz=87						
226B	Tecolote Peak,	86.76	55	⇑P	P	02 19 22.3	+0.8
	baz=87,SNR=7.0						
628A	Black Gap, Mar	86.78	58	⇑P	P	02 19 22.9	+1.3
	baz=87,SNR=11						
Z25A	Roswell	86.81	54	⇓P	P	02 19 22.8	+1.0
	baz=87						
R21A	Cimarron	86.81	48	⇓P	P	02 19 22.9	+1.1
	baz=87						
427A	Hayter Ranch,	86.88	56	⇓P	P	02 19 23.3	+1.1
	baz=87,SNR=8.2						
J17A	Brown Place, J	86.90	43	⇑P	P	02 19 23.1	+1.0
	baz=87						
SNOW	Snow King Moun	86.92	42	*e*P	P	02 19 23.5	+1.3
	comp=Z,11nm,0.9s						
F15A	Butte	86.97	40	⇓P	P	02 19 23.5	+1.2
	baz=87						
D14A	Greenough	86.97	38	⇑P	P	02 19 22.2	-0.1
	baz=87						
HHC	Hu-ho-hao-te	86.99	315	*e*P	P	02 19 22.9	+0.5
HHC				pP	pP	02 21 30.5	+8.7
HHC				sP	sP	02 22 24.2	+7.2
HHC				PP	PP	02 22 59.1	+3.0
HHC				SKS	SKSac	02 28 52.4	-5.3
HHC				S	SKKSac	02 29 11.1	+2.5
HHC				pmax	pmax		
	comp=Z,24nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,7.1s						
Q21A	Lamborn Mesa,	86.99	48	⇑P	P	02 19 23.4	+0.8
	baz=87						
K18A	Toltan Ranch,	87.00	43	⇓P	P	02 19 23.4	+0.8
	baz=87,SNR=7.1						
IMW	Indian Meadow	87.00	42	*e*P	P	02 19 22.8	+0.1
	comp=Z,11nm,0.8s						
CHMT	Chamberlain Mo	87.04	39	*e*P	P	02 19 22.8	+0.1
	comp=Z,2.1nm,0.7s						
W24A	Lazy 6 Ranch,	87.06	52	⇑P	P	02 19 23.8	+0.8
	baz=87						
MOOW	Moose Ponds	87.06	42	*e*P	P	02 19 23.9	+1.1
	comp=Z,3.4nm,0.9s						
S22A	4UR Ranch, Cre	87.06	49	⇑P	P	02 19 23.7	+0.6
	baz=87,SNR=5.8						
B13A	Whitefish	87.06	37	⇑P	P	02 19 23.0	+0.4
	baz=87						
M19A	Rock Springs	87.08	45	⇓P	P	02 19 23.7	+0.7
	baz=87						
LOHW	Long Hollow	87.09	42	*e*P	P	02 19 23.8	+0.8
	comp=Z,2.5nm,0.6s						
G16A	Moss Hill, Enn	87.09	41	⇓P	P	02 19 23.9	+1.0
	baz=87						
528A	Cox Ranch, San	87.11	57	⇑P	P	02 19 24.3	+1.1
	baz=87						
QLMT	Earthquake Lak	87.14	41	*e*P	P	02 19 24.7	+1.5
	comp=Z,0.7nm,0.6s						
E15A	Deer Lodge	87.16	39	⇓P	P	02 19 23.7	+0.5
	baz=87						
C14A	Swan Lake	87.17	38	⇓P	P	02 19 23.7	+0.6
	baz=87						
H16A	Russell Place,	87.19	41	⇓P	P	02 19 25.1	+1.6
	baz=87,SNR=16						
L19A	Farson	87.21	44	⇓P	P	02 19 24.3	+0.7
	baz=87,SNR=11						
I17A	Pilgrim Ck.	87.25	42	⇑P	P	02 19 24.8	+1.1
	baz=87						
J18A	Kendall Valley	87.28	43	⇓P	P	02 19 24.5	+0.6
	baz=88,SNR=30						
R22A	Saguache, Gunn	87.32	49	⇑P	P	02 19 25.0	+0.7
	baz=88						
V24A	Rampart Ranch,	87.37	51	⇓P	P	02 19 25.5	+1.0
	baz=88						
Z26A	Caprock	87.37	54	⇓P	P	02 19 24.8	+0.4
	baz=88,SNR=8.3						
BW06	Boulder Array	87.38	44	*e*P	P	02 19 24.4	0.0
	comp=Z,3.2nm,0.5s						
PDAR	Pinedale Array	87.38	44	P	P	02 19 24.6	+0.3
PDAR				PP	PP	02 22 57.2	-2.1
PDAR	Pinedale Array	87.38	44	P	P	02 19 24.6	+0.3
	comp=Z,4.8nm,0.5s,baz=212,slow=3.3,SNR=53						
PDAR				PP	PP	02 22 57.2	-2.1
	comp=Z,0.8nm,0.9s,baz=246,slow=6.7,SNR=5.4						
A13A	Flathead Natio	87.38	36	⇑P	P	02 19 25.1	+1.0
	baz=88						
N20A	Spence Gulch,	87.38	46	⇑P	P	02 19 25.0	+0.5
	baz=88						
428A	Kincaid Ranch,	87.41	57	⇓P	P	02 19 25.6	+1.0
	baz=88						
F16A	Kennard Place,	87.47	40	⇓P	P	02 19 25.6	+1.0
	baz=88						
H17A	Grant Village	87.47	42	⇑P	P	02 19 26.6	+1.8
	baz=88,SNR=6.6						
Q22A	Crested Butte,	87.47	48	⇑P	P	02 19 26.3	+1.2
	baz=88						
D15A	Lincoln	87.53	39	⇑P	P	02 19 25.5	+0.6
	baz=88						
529A	Stev Forest Ra	87.55	57	⇓P	P	02 19 26.1	+0.9
	baz=88,SNR=7.0						
KMI	Kunming	87.55	297	P	P	02 19 25.3	-0.3
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
328A	Wristen Ranch,	87.56	56	⇓P	P	02 19 26.1	+0.9
	baz=88						
127A	Arkansas Junct	87.62	55	⇓P	P	02 19 26.3	+0.7
	baz=88						
I18A	Diamond G Ranc	87.63	43	⇓P	P	02 19 26.4	+0.8
	baz=88						
M20A	Sweetwater, Wa	87.72	45	⇑P	P	02 19 26.9	+0.9
	baz=88						
WALA	Waterton Lakes	87.73	37	*e*P	P	02 19 26.0	+0.3
	comp=Z,0.1nm,0.7s						
Y26A	Elida	87.74	53	⇓P	P	02 19 26.6	+0.5
	baz=88						
B14A	Marquette Ranc	87.75	37	⇑P	P	02 19 25.6	-0.2
	baz=88,SNR=12						
W25A	X Bar L Ranch,	87.77	52	⇑P	P	02 19 26.6	+0.4
	baz=88						
G17A	Pierce Place,	87.80	41	⇓P	P	02 19 27.5	+1.3
	baz=88						
C15A	Salmond Ranch,	87.84	38	⇑P	P	02 19 26.2	-0.1
	baz=88,SNR=5.8						
L20A	Wamsutter	87.85	45	⇑P	P	02 19 27.5	+0.9
	baz=88,SNR=8.2						
N21A	Black Mountain	87.86	46	⇓P	P	02 19 27.8	+1.1
	baz=88						
K19A	Absolon Red Bu	87.87	44	⇑P	P	02 19 27.0	+0.4
	baz=88						
P22A	Eagle	87.89	47	⇑P	P	02 19 27.5	+0.6
	baz=88						
V25A	Rancho No Teng	87.90	51	⇓P	P	02 19 27.6	+0.7
	baz=88						
J19A	Crowheart	87.93	43	⇑P	P	02 19 27.1	+0.3
	baz=88,SNR=7.1						
A14A	Double T Ranch	87.97	37	⇑P	P	02 19 27.5	+0.7
	baz=88						
Z27A	Tatum	87.98	54	⇓P	P	02 19 27.7	+0.5
	baz=88						
429A	Davenport Ranc	88.00	57	⇓P	P	02 19 28.0	+0.6
	baz=88,SNR=17						
228A	UT Block 9, Go	88.01	55	⇓P	P	02 19 28.6	+1.2
	baz=88						
T24A	Torres, Weston	88.07	50	⇓P	P	02 19 29.3	+1.5
	baz=88						
F17A	Fitzpatrick Pl	88.12	40	⇑P	P	02 19 28.9	+1.2
	baz=88						
K20A	Yellowstone Ra	88.13	44	⇑P	P	02 19 27.7	-0.1
	baz=88,SNR=5.7						
B15A	Bradely Ranch,	88.13	38	⇓P	P	02 19 27.6	0.0
	baz=88						
S24A	Houchin Ranch,	88.18	50	⇑P	P	02 19 28.9	+0.6
	baz=88						
Y27A	Causey	88.23	54	⇑P	P	02 19 29.2	+0.7
	baz=88						
329A	Wagon Wheel Ra	88.25	56	⇓P	P	02 19 29.4	+0.9
	baz=88						
530A	J-C Ranch, Com	88.27	58	⇑P	P	02 19 29.0	+0.4
	baz=88						
O22A	Kremmling	88.28	47	⇓P	P	02 19 29.4	+0.6
	baz=88,SNR=6.5						
U25A	Circle Dot Ran	88.28	51	⇑P	P	02 19 29.5	+0.8
	baz=88						
128A	Castleberry Fa	88.28	55	⇑P	P	02 19 29.4	+0.7
	baz=88						
I19A	Meeteetse	88.32	43	⇑P	P	02 19 29.5	+0.9
	baz=88						
M21A	Separation Pea	88.33	45	⇑P	P	02 19 29.5	+0.6
	baz=88						
A15A	Johnson Ranch,	88.36	37	⇑P	P	02 19 29.0	+0.3
	baz=89						
C16A	Fuhringer Ranc	88.36	38	⇑P	P	02 19 29.1	+0.4
	baz=89						
L21A	Rawlins	88.48	45	⇓P	P	02 19 30.2	+0.7
	baz=89						
G18A	Lazy EL Ranch,	88.53	41	⇓P	P	02 19 30.5	+0.9
	baz=89						
229A	Bryant Ranch,	88.56	56	⇓P	P	02 19 30.3	+0.4
	baz=89						
MSTX	Muleshoe	88.57	54	⇑P	P	02 19 30.1	+0.1
	baz=89,SNR=5.9						
T25A	Trinidad	88.57	50	⇓P	P	02 19 30.8	+0.8
	baz=89						
430A	Baggett Ranch,	88.59	57	⇑P	P	02 19 30.7	+0.6
	baz=89						
H19A	Powell	88.61	42	⇑P	P	02 19 31.3	+1.3
	baz=89						
J20A	Shoshoni	88.61	43	⇓P	P	02 19 31.0	+1.0
	baz=89						
N22A	Wattenberg Ran	88.61	46	⇓P	P	02 19 30.9	+0.7
	baz=89,SNR=5.7						
CMAR	Chiang Mai Arr	88.62	290	P	P	02 19 31.6	+1.3
CMAR	Chiang Mai Arr	88.62	290	P	P	02 19 31.6	+1.3
	comp=Z,1.4nm,0.4s,baz=106,slow=2.4,SNR=14						
631A	Perdido Creek	88.62	59	⇓P	P	02 19 31.5	+1.3
	baz=89						
B16A	M & M Farms, S	88.68	38	⇑P	P	02 19 30.2	+0.1
	baz=89						
O23A	Lake Granby, G	88.73	47	⇑P	P	02 19 31.6	+0.8
	baz=89						
S25A	Robets Cordova	88.76	50	⇑P	P	02 19 31.5	+0.6
	baz=89						
M22A	Cedar Creek Ra	88.77	46	⇓P	P	02 19 31.8	+0.8
	baz=89						
Q24A	Divide	88.77	48	⇓P	P	02 19 31.9	+0.8
	baz=89						
129A	Stewart Farms,	88.77	55	⇑P	P	02 19 31.6	+0.7
	baz=89						
U26A	Atchley Ranch,	88.77	51	⇑P	P	02 19 32.0	+1.0
	baz=89						
ISCO	Idaho Springs	88.78	47	⇑P	P	02 19 31.7	+0.6
	baz=89						
I20A	Worland	88.84	43	⇓P	P	02 19 31.5	+0.4
	baz=89,SNR=5.1						
K21A	Alcova	88.84	44	⇓P	P	02 19 31.7	+0.6
	baz=89						
330A	Mertzon	88.86	57	⇑P	P	02 19 31.8	+0.5
	baz=89						
C17A	Wharram Farm,	88.87	39	⇑P	P	02 19 31.7	+0.7
	baz=89						
732A	Laxson Ranch,	88.87	59	⇑P	P	02 19 32.9	+1.5
	baz=89						
E18A	Harlowton	88.89	40	⇓P	P	02 19 32.4	+1.2
	baz=89						
531A	Rocksprings	88.92	58	⇓P	P	02 19 32.6	+1.0
	baz=89						
Y28A	McKinney Farm,	88.95	54	⇑P	P	02 19 32.5	+0.7
	baz=89						
N23A	Red Feather La	89.00	46	⇓P	P	02 19 33.0	+0.9
	baz=89						
A16A	West Butte Ran	89.00	37	⇓P	P	02 19 32.6	+0.9
	baz=89						
J21A	Lysite	89.02	44	⇓P	P	02 19 32.9	+0.9
	baz=89						
431A	Sonora	89.05	57	⇓P	P	02 19 33.0	+0.7
	baz=89						
230A	Sterling City	89.09	56	⇓P	P	02 19 33.2	+0.9
	baz=89						
L22A	Ellis Ranch, M	89.14	45	⇑P	P	02 19 33.7	+1.1
	baz=89						
B17A	L&G Farms, Che	89.16	38	⇑P	P	02 19 33.3	+1.0
	baz=89						
H20A	Greybull	89.16	42	⇑P	P	02 19 33.3	+0.8
	baz=89						
P24A	Kohler Place,	89.16	48	⇑P	P	02 19 33.5	+0.7
	baz=89						
F19A	Roth Farm, Mol	89.16	41	⇑P	P	02 19 33.2	+0.7
	baz=89						
I21A	Big Trails, Te	89.32	43	⇑P	P	02 19 33.3	0.0
	baz=90,SNR=7.4						
Y29A	Porterfield Fa	89.38	54	⇑P	P	02 19 34.6	+0.9
	baz=90						
532A	Rocksprings	89.42	58	⇓P	P	02 19 34.8	+0.8
	baz=90						
331A	San Angelo	89.42	57	⇓P	P	02 19 35.0	+1.1
	baz=90						
S26A	Kim	89.45	50	⇑P	P	02 19 35.5	+1.5
	baz=90						
130A	Snyder	89.46	56	⇓P	P	02 19 34.7	+0.6
	baz=90						
A17A	Triple J Farms	89.52	38	⇑P	P	02 19 35.0	+1.0
	baz=90						
E19A	Rath Farm, Rou	89.53	40	⇓P	P	02 19 34.9	+0.8
	baz=90						
JCT	Junction City	89.63	58	⇓P	P	02 19 35.4	+0.5
	baz=90						
L23A	Garrett	89.67	45	⇑P	P	02 19 36.0	+1.0
	baz=90						
P25A	Willow Gulch B	89.68	48	⇓P	P	02 19 36.5	+1.4
	baz=90						
J22A	Midwest	89.69	44	⇓P	P	02 19 35.8	+0.7
	baz=90						
R26A	Arlington	89.73	50	⇓P	P	02 19 36.6	+1.3
	baz=90						
231A	Bronte	89.73	56	⇓P	P	02 19 35.7	+0.4
	baz=90						
432A	Menard	89.78	58	⇓P	P	02 19 36.3	+0.7
	baz=90						
T27A	Campo	89.78	51	⇑P	P	02 19 36.2	+0.6
	baz=90						
D19A	Cripps Ranch,	89.79	40	⇓P	P	02 19 36.6	+1.3
	baz=90						
B18A	Beardsley Farm	89.81	38	⇑P	P	02 19 36.4	+1.1
	baz=90						
I22A	9 Mile Ranch,	89.89	43	⇓P	P	02 19 36.9	+1.0
	baz=90						
131A	Roby	89.94	56	⇑P	P	02 19 36.9	+0.6
	baz=90						
C19A	Slack Wire Ran	89.94	39	⇓P	P	02 19 37.3	+1.3
	baz=90						
332A	Millersview	90.00	57	⇑P	P	02 19 37.2	+0.6
	baz=90						
M24A	Cheyenne	90.00	46	⇓P	P	02 19 37.7	+1.1
	baz=90						
D20A	Manuel Ranch,	90.21	40	⇑P	P	02 19 38.5	+1.3
	baz=90						
232A	Coleman	90.25	57	⇓P	P	02 19 38.4	+0.6
	baz=90						
B19A	Brinkman Farms	90.33	39	⇓P	P	02 19 38.9	+1.2
	baz=90						
Z31A	Sharp Cattle R	90.37	55	⇑P	P	02 19 39.0	+0.8
	baz=90						
Y31A	Rekieta Farm,	90.50	55	⇓P	P	02 19 39.6	+0.8
	baz=91						
ABTX	Abilene, Hawle	90.51	56	⇓P	P	02 19 39.6	+0.6
	baz=91						
M25A	Palm-Egli Farm	90.52	46	⇓P	P	02 19 40.2	+1.3
	baz=91						
C20A	Veseth Ranch,	90.57	40	⇓P	P	02 19 40.1	+1.3
	baz=91						
S28A	Manter	90.59	51	⇑P	P	02 19 40.5	+1.3
	baz=91						
SNAA	Sanae	90.78	179	*e*P	P	02 19 38.6	-0.9
Z32A	Haskell	90.88	55	⇑P	P	02 19 41.3	+0.7
	baz=91						
D21A	La Casta Ranch	90.91	40	⇓P	P	02 19 41.6	+1.1
	baz=91						
R28A	Tribune	90.93	50	⇑P	P	02 19 42.2	+1.4
	baz=91						
X31A	McDonald Ranch	90.96	54	⇓P	P	02 19 41.6	+0.7
	baz=91						
G23A	Biddle	91.14	43	⇑P	P	02 19 42.5	+0.9
	baz=91						
Y32A	R-V Farms, Ver	91.16	55	⇓P	P	02 19 42.6	+0.8
	baz=91						
C21A	Desert Coulee	91.17	40	⇓P	P	02 19 42.6	+1.0
	baz=91						
F23A	Volborg	91.34	42	⇑P	P	02 19 43.5	+1.0
	baz=92						
VNA2	Neumayer--Watz	91.36	177	*e*P	P	02 19 47.1	+5.0
D22A	Cohagen	91.44	41	⇑P	P	02 19 44.2	+1.3
	baz=92						
V31A	Spring Creek L	91.47	53	⇑P	P	02 19 44.8	+1.5
	baz=92						
H24A	Dirks Ranch, A	91.50	43	⇓P	P	02 19 43.9	+0.7
	baz=92						
K26A	Motz Farm, Whi	91.62	46	⇓P	P	02 19 44.7	+0.9
	baz=92						
S30A	Montezuma	91.67	51	⇑P	P	02 19 45.0	+0.8
	baz=92						
C22A	Vida	91.88	40	⇓P	P	02 19 45.5	+0.6
	baz=92						
D23A	Lindsay	92.06	41	⇓P	P	02 19 47.2	+1.5
	baz=92						
T31A	Randall Ranch,	92.06	52	⇑P	P	02 19 46.8	+0.8
	baz=92						
C23A	Lambert	92.33	40	⇑P	P	02 19 48.3	+1.4
	baz=92						
D24A	Glendive	92.59	41	⇓P	P	02 19 49.6	+1.5
	baz=93						
B23A	Brockton	92.72	40	⇓P	P	02 19 49.8	+1.1
	baz=93						
A24A	Westby	93.50	40	⇓P	P	02 19 53.6	+1.3
	baz=94						
YKA	Yellowknife Ar	94.27	25	P	P	02 19 55.0	-0.3
YKA	Yellowknife Ar	94.27	25	P	P	02 19 55.0	-0.3
	comp=Z,0.9nm,0.5s,baz=238,slow=4.5,SNR=34						
KSH	Kashi	112.80	306	*e*PKP	PKiKP	02 25 08.0	-2.0
KSH				*e*PKS	PKSdf	02 28 43.6	-3.2
KSH				*e*SKS	SKSdf	02 31 29.2	-1.4
ARCES	ARCESS Array B	126.10	350	PKP	PKPdf	02 25 34.0	-0.6
ARCES	ARCESS Array B	126.10	350	PKP	PKPdf	02 25 34.0	-0.6
	comp=Z,2.0nm,0.8s,baz=17,slow=1.6,SNR=7.2						
FINES	FINESS Array B	132.96	344	PKP	PKPdf	02 25 46.8	-0.9
FINES				SKPbc	SKPbc	02 28 24.9	+0.4
FINES	FINESS Array B	132.96	344	PKP	PKPdf	02 25 46.8	-0.9
	comp=Z,0.6nm,0.7s,baz=22,slow=4.5,SNR=3.4						
FINES				SKPbc	SKPbc	02 28 24.9	+0.4
	comp=Z,2.4nm,0.9s,baz=74,slow=4.9,SNR=3.5						
RGN	Rugen	142.12	349	*e*PKPbc	PKPdf	02 26 00.6	-4.1
EKA	Eskdalemuir Ar	142.31	4	PKPpre	PKPpre	02 26 01.0	
EKA	Eskdalemuir Ar	142.31	4	PKhKP	PKPpre	02 26 01.0	
	comp=Z,3.0nm,0.8s,baz=343,slow=2.3,SNR=3.8						
BSEG	Bad Segeberg	143.21	351	*e*PKPbc	PKPab	02 26 05.1	+0.6
BUR08	Bucovina Ar. S	144.34	332	*e*PKPdf	PKPdf	02 26 09.7	+0.6
BR131	Keskin Array S	144.50	315	*e*PKPdf	PKPdf	02 26 09.9	+0.3
BRTR	Keskin Array B	144.50	315	PKP	PKPdf	02 26 09.8	+0.3
BRTR	Keskin Array B	144.50	315	PKP	PKPdf	02 26 09.8	+0.3
	comp=Z,1.1nm,0.5s,baz=63,slow=1.2,SNR=12						
KOLS	Kolonicke sedl	144.55	336	*e*PKP	PKPab	02 26 10.3	+0.4
NIE	Niedzica	144.88	338	*e*PKP	PKPbc	02 26 11.2	+0.8
CRVS	Cervenica-Dubn	144.89	337	*e*PKP	PKPdf	02 26 10.6	+0.8
CLZ	Clausthal	145.23	350	*e*PKPbc	PKPbc	02 26 12.0	+0.7
OKC	Ostrava-Krasne	145.23	341	*e*PKP	PKPbc	02 26 11.5	+0.2
CLL	Collm	145.24	347	*e*PKPbc	PKPbc	02 26 11.8	+0.5
CLL	Collm	145.24	347	⇑*i*PKPbc	PKPbc	02 26 11.5	+0.2
	comp=Z,10.0nm,0.9s						
UPC	Upice	145.26	344	*e*PKP	PKPbc	02 26 12.0	+0.6
UPC				*e*x	x	02 26 13.5	
DPC	Dobruska-Polom	145.32	343	*e*PKP	PKPbc	02 26 12.4	+0.8
DPC				*e*x	x	02 26 14.1	
BRG	Berggiesshubel	145.44	346	*e*PKP	PKPbc	02 26 12.2	+0.3
	comp=Z,9.0nm,1.1s						
BRG	Berggiesshubel	145.44	346	*e*PKPbc	PKPbc	02 26 12.6	+0.7
FBE	Freiberg	145.53	347	*e*PKPbc	PKPbc	02 26 13.2	+1.0
PVCC	Panska Ves	145.61	345	*e*PKP	PKPab	02 26 13.8	-0.1
PRU	Pruhonice	146.12	345	*e*PKP	PKPbc	02 26 14.2	+0.3
PRU				*e*x	x	02 26 16.9	
MOX	Moxa	146.15	348	*e*PKPbc	PKPbc	02 26 14.5	+0.5
PLN	Plauen	146.20	348	*e*PKPbc	PKPbc	02 26 14.7	+0.6
TANN	Tannenbergstha	146.20	347	*e*PKPbc	PKPbc	02 26 14.8	+0.6
WERD	Werda	146.20	347	*e*PKPbc	PKPbc	02 26 14.8	+0.7
UBBA	Unterbreizbach	146.28	350	*e*PKPbc	PKPbc	02 26 15.1	+1.0
GUNZ	Gunzen	146.28	347	*e*PKPbc	PKPbc	02 26 15.1	+0.7
NKC	Novy Kostel	146.38	347	*e*PKP	PKPab	02 26 18.2	+1.2
ROTZ	Rotzenmuhle	146.87	347	*e*PKPbc	PKPbc	02 26 16.3	+0.4
ZST	Bratislava	147.01	341	*e*PKP	PKPbc	02 26 15.7	-0.6
TNS	Taunus Mts	147.09	352	*e*PKPbc	PKPbc	02 26 17.2	+0.6
KHC	Kasperske Hory	147.15	345	*e*PKP	PKPbc	02 26 17.0	+0.2
KHC				*e*x	x	02 26 21.4	
GEC2	GERESS Array S	147.38	345	*e*PKPbc	PKPbc	02 26 17.9	+0.5
GERES	GERESS Array B	147.38	345	PKPbc	PKPbc	02 26 17.6	+0.2
GERES	GERESS Array B	147.38	345	PKPbc	PKPbc	02 26 17.6	+0.2
	comp=Z,2.9nm,0.5s,baz=21,slow=2.9,SNR=38						
CSNA	Conrad Observa	147.63	342	⇑*i*PKiKP	PKPbc	02 26 18.6	+0.5
	comp=Z,2.2nm,0.5s						
CSNA	Conrad Observa	147.63	342	⇑*i*P	PKPbc	02 26 18.6	+0.5
WLF	Walferdange	147.91	354	*e*PKPbc	PKPbc	02 26 19.8	+1.2
RJOB	Jochberg	148.64	345	*e*PKPbc	PKPbc	02 26 20.8	+0.2
BFO	Black Forest	148.96	351	*e*PKPbc	PKPbc	02 26 21.7	+0.4
BFO	Black Forest	148.96	351	*e*PKPbc	PKPbc	02 26 21.6	+0.4
KBA	Koelnbreinsper	149.11	344	⇓*i*PKPbc	PKPbc	02 26 21.3	-0.6
	comp=Z,3.2nm,0.4s						
KBA	Koelnbreinsper	149.11	344	⇓*i*P	PKPbc	02 26 21.3	-0.6
WTTA	Wattenberg	149.36	346	⇑*i*PKiKP	PKPbc	02 26 22.6	0.0
	comp=Z,6.2nm,0.5s						
WTTA	Wattenberg	149.36	346	⇑*i*P	PKPbc	02 26 22.6	0.0
MOTA	Moosalm	149.40	347	⇑*i*PKPbc	PKPbc	02 26 22.3	-0.3
	comp=Z,1.3nm,0.4s						
MOTA	Moosalm	149.40	347	⇑*i*P	PKPbc	02 26 22.3	-0.3
ABTA	Abfaltersbach	149.63	345	⇓*i*PKPbc	PKPbc	02 26 22.1	-1.0
	comp=Z,4.1nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ABTA	Abfaltersbach	149.63	345	⇓iP	PKPbc	02 26 22.1	-1.0
LJU	Ljubljana	149.72	342	i PKPbc	PKPbc	02 26 23.7	+0.6
CRNS	Crni Vrh	149.77	342	i PKPbc	PKPbc	02 26 22.9	-0.5
FETA	Feichten	149.78	347	⇑iPKiKP	PKPbc	02 26 23.6	+0.1
	comp=Z,4.6nm,1.0s						
FETA	Feichten	149.78	347	⇑iP	PKPbc	02 26 23.6	+0.1
VOJS	Vojsko	149.92	342	i PKPbc	PKPbc	02 26 23.1	-0.6
BOJS	Bojanci	149.98	340	i PKPbc	PKPbc	02 26 24.1	+0.3
DAVOX	Davos/Dischmat	150.19	348	PKPbc	PKPbc	02 26 24.9	+0.4
DAVOX	Davos/Dischmat	150.19	348	PKPbc	PKPbc	02 26 24.9	+0.4
	comp=Z,8.3nm,0.6s,baz=244,slow=3.0,SNR=17						
ESDC	Sonseca Array	157.65	11	PKPab	PKPab	02 27 04.5	-0.3
ESDC	Sonseca Array	157.65	11	PKPab	PKPab	02 27 04.5	-0.3
	comp=Z,0.5nm,0.5s,baz=336,slow=4.2,SNR=7.4						
TORD	Torodi Ar. Bea	175.43	184	PKPab	PKPab	02 28 22.7	-1.0
TORD	Torodi Ar. Bea	175.43	184	PKPab	PKPab	02 28 22.7	-1.0
	comp=Z,0.5nm,0.9s,baz=171,slow=3.4,SNR=5.6						

*IDC **07** 02:44:07.7±7.0, 25°.42N×129°.28E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/24, mbtmp3.6/3, Error ellipse: s-maj=350.6km s-min=28.1km az=63.0*
*JMA **07** 02:44:16.3±0.4, 24°.63N×127°.39E, h83km, M3.0*
ISC 07 02:44:13.1±1.5**, 24°.37N**±0°.08×**127°.54E**±0°.05**, h47km, n17, σ1.76**/22**, mb3.6**/3**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	Tamagusuku 2	1.77	6	eS	Sn	02 45 02.0	-0.7
JOGS	Gusukube	1.98	282	P	Pn	02 44 46.6	+2.4
JOGS				eS	Sn	02 45 08.1	+0.2
JKE	Kume jima 2	2.06	341	P	Pn	02 44 45.8	+0.4
JKE				eS	Sn	02 45 08.1	-1.8
JAGN	Aguni-jima	2.23	353	P	Pn	02 44 48.5	+0.9
JAGN				eS	Sn	02 45 12.0	-1.9
JOW	Kunigami	2.54	15	P	Pn	02 44 52.9	+1.0
JOW				eS	Sn	02 45 21.8	+0.2
JTJ	Tarama	2.60	277	P	Pn	02 44 54.2	+1.5
JTJ				eS	Sn	02 45 22.3	-0.8
JIH	Iheya	2.68	8	eS	Sn	02 45 23.4	-1.7
JIJ	Ishigaki jima	3.10	271	P	Pn	02 45 00.4	+0.8
JIJ				eS	Sn	02 45 32.7	-2.7
JKRS	Kuro-shima	3.23	268	eS	Sn	02 45 35.8	-2.7
HATJ	Hateruma jima	3.43	266	eS	Sn	02 45 41.7	-1.7
JTK	Tokunoshima	3.63	20	P	Pn	02 45 08.9	+2.1
JMZ	Minamidaito 2	3.63	66	P	Pn	02 45 07.5	+0.6
JMZ				eS	Sn	02 45 46.7	-1.8
JAMN	Amaminishikomi	4.13	20	P	Pn	02 45 15.8	+2.2
JAMN				eS	Sn	02 45 58.3	-2.3
JAM	Amami Oshima	4.43	24	P	Pn	02 45 19.3	+1.5
MKAR	Makanchi Array	42.33	314	P	P	02 52 06.9	+4.4
	0.5nm,0.5s,baz=100,slow=7.6,SNR=9.5						
WRA	Warramunga Arr	44.54	171	P	P	02 52 26.9	+6.5
	1.1nm,0.5s,baz=353,slow=8.6,SNR=4.0						
ASAR	Alice Springs	48.15	172	P	P	02 52 57.0	+8.2
	0.3nm,0.5s,baz=358,slow=13,SNR=5.8						

MAN 07 03:15:21, 15°.13N×120°.28E, h21km, mb4.3, ML3.1, MS3.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.73	331	eP	Pn	03 15 36.1	0.0
SCZP				eS	Sn	03 15 49.3	+2.6
PCPH	Palayan	0.90	61	eP	Pb	03 15 37.8	-0.1
BOLP	Bolinao	1.29	344	eP	Pn	03 15 43.5	-0.3
BALP	Baler	1.39	64	eP	Pn	03 15 45.8	+0.5
CAUP	Cauayan	2.34	39	eP	Pn	03 15 59.5	+1.3
APYP	Conner	2.87	19	eP	Pn	03 16 01.7	-3.9

*BJI **07** 03:32:21.6, 1°.23S×130°.63E, h13km, mB4.9/5, mb4.5/10*
*IDC **07** 03:32:26.4±0.8, 0°.59S×130°.46E, h0km, mb4.2/10, mb1 4.4/13, mb1mx4.2/23, mbtmp4.2/13, ML4.1/3, MS3.5/12, Ms1 3.5/12, ms1mx3.3/30, Error ellipse: s-maj=32.3km s-min=13.7km az=80.0*
*ISCJB **07** 03:32:29.3±0.4, 0°.71S±0°.04×130°.39E±0°.07, h33km, mb4.3/16, MS3.5/11, Error ellipse: s-maj=9.6km s-min=5.5km az=175.3*
*NEIC **07** 03:32:30.2±4.8, 0°.62S×130°.42E, h26km±35km, mb4.7/4, Error ellipse: s-maj=17.0km s-min=6.6km az=61.0*
*AUST **07** 03:32:32.9, 0°.99S×130°.50E, h35km*
*DJA **07** 03:32:33.7±4.0, 1°S±5°×13°0E±°, h35km±47km, M4.5/8, MLv4.5/8*
ISC 07 03:32:30.9±0.5**, 0°.75S**±0°.05×**130°.30E**±0°.07**, h35km, n62, σ1.96**/53**, mb4.4**/16**, MS3.4**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LBMI	Labuha	2.80	272	P	Pn	03 33 15.0	+1.7
FAKI	Fak Fak	2.91	138	P	Pn	03 33 16.7	+2.0
FAKI				S	Sn	03 33 56.6	+8.1
FAKI	Fak Fak	2.91	138	P	Pn	03 33 16.4	+1.6
	baz=2.6,SNR=167						
TNTI	Ternate	3.30	297	P	Pn	03 33 20.5	+0.4
GAMI	Galela, Maluku	3.59	316	P	Pn	03 33 25.4	+1.2
AAI	Ambon	3.60	216	P	Pn	03 33 28.3	+4.0
AAI	Ambon	3.60	216	P	Pn	03 33 28.4	+4.0
	baz=3.5,SNR=6.1						
RKPI	Ransiki, Papua	3.95	101	P	Pn	03 33 35.9	+6.8
NLAI	Namlea	4.05	232	P	Pn	03 33 32.4	+2.0
LUWI	Luwuk	7.54	268	P	Pn	03 34 35.9	+18
MRSI	Marisa	8.45	278	P	Pn	03 34 46.0	+15
PALU	Palau	9.05	27	P	Pn	03 34 40.6	+1.4
	baz=9.2,SNR=4.2						
PALU				S	Sn	03 36 10.5	-9.4
	baz=9.2,SNR=3.5						
KAPI	Kappang	11.36	248	ePn	Pn	03 35 13.3	+2.5
	24nm,0.9s						
KAPI	Kappang	11.36	248	Pn	Pn	03 35 14.3	+3.5
	1.2nm,0.3s,baz=58,slow=9.3,SNR=7.7						
MTN	Manton Dam	12.05	176	P	Pn	03 35 19.7	-0.5
	baz=12,SNR=5.2						
MTN				S	Sn	03 37 28.4	-5.1
	baz=12,SNR=5.3						
KDU	Kakadu	12.06	170	P	Pn	03 35 17.3	-3.0
	baz=12,SNR=23						
KDU				S	Sn	03 37 28.7	-4.9
	baz=12,SNR=4.9						
WSI	Waingapu	13.33	228	S	Sn	03 37 43.2	-22
	baz=13,SNR=3.8						
KNRA	Kununurra	14.91	186	S	Sn	03 38 38.3	-5.1
	baz=15,SNR=9.8						
FITZ	Fitzroy Crossi	17.84	195	P	P	03 36 37.8	+0.8
FITZ				S	Sn	03 39 51.0	-3.7
FITZ	Fitzroy Crossi	17.84	195	P	P	03 36 37.8	+0.8
	0.2nm,0.3s,baz=15,slow=13,SNR=6.0						
FITZ				S	Sn	03 39 51.0	-3.7
	0.2nm,0.3s,baz=66,slow=20,SNR=2.2						
FITZ				LR	LR	03 44 08.7	
	comp=Z,73nm,19.2s,baz=25,slow=39						
FITZ	Fitzroy Crossi	17.84	195	P	P	03 36 38.2	+1.2
	baz=18,SNR=4.9						
WRAB	Tennant Creek	19.48	169	eP	Pn	03 36 56.4	0.0
	6.4nm,0.6s						
WRA	Warramunga Arr	19.48	169	P	Pn	03 36 56.2	-0.2
WRA				S	S	03 40 21.5	-12
WRA	Warramunga Arr	19.48	169	P	Pn	03 36 56.2	-0.2
	1.0nm,0.3s,baz=348,slow=12,SNR=13						
WRA				S	S	03 40 21.5	-12
	0.6nm,0.3s,baz=358,slow=23,SNR=4.1						
GUMO	Guam	20.28	45	LR	LR	03 43 24.6	
	comp=Z,157nm,19.5s,baz=270,slow=33						
QIS	Mount Isa	21.69	156	P	P	03 37 21.4	+2.5
	baz=22,SNR=6.5						
AS31	Alice Springs	23.05	172	eP	P	03 37 35.4	+2.0
ASAR	Alice Springs	23.05	172	P	P	03 37 34.8	+1.4
ASAR				S	S	03 41 41.8	-0.2
ASAR	Alice Springs	23.05	172	P	P	03 37 34.8	+1.4
	9.3nm,1.0s,baz=347,slow=10,SNR=39						
ASAR				S	S	03 41 41.8	-0.2
	1.1nm,1.0s,baz=351,slow=22,SNR=2.5						
CTA	Charters Tower	24.76	142	LR	LR	03 46 28.2	
	comp=Z,114nm,19.6s,baz=235,slow=34						
MEEK	Meekatharra	28.09	203	P	P	03 38 24.3	+4.7
	baz=28,SNR=3.2						
STKA	Stephens Creek	32.75	162	P	P	03 39 02.9	+2.3
STKA	Stephens Creek	32.75	162	P	P	03 39 02.9	+2.3
	2.6nm,0.7s,baz=337,slow=7.4,SNR=5.8						
GSI	Gunungsitoli	32.79	274	S	S	03 43 58.0	-18
	baz=33,SNR=8.8						
JNU	Nakatsue	33.69	1	LR	LR	03 51 16.4	
	comp=Z,49nm,19.4s,baz=240,slow=34						
CMAR	Chiang Mai Arr	36.25	303	P	P	03 39 32.6	+1.5
CMAR	Chiang Mai Arr	36.25	303	P	P	03 39 32.6	+1.5
	5.5nm,0.9s,baz=124,slow=7.3,SNR=23						
CHTO	Chiang Mai	36.42	304	eP	P	03 39 33.6	+1.0
	17nm,1.1s						
MJAR	Matsushiro Arr	37.82	10	P	P	03 39 43.1	-1.0
MJAR	Matsushiro Arr	37.82	10	P	P	03 39 43.1	-1.0
	3.4nm,0.9s,baz=193,slow=11,SNR=7.9						
MJAR				LR	LR	03 53 24.9	
	comp=Z,58nm,18.6s,baz=200,slow=33						
KSAR	Wonju Array Be	38.06	357	P	P	03 39 46.2	0.0
KSRS	Korea Array	38.07	357	P	P	03 39 46.2	0.0
	1.0nm,0.6s,baz=176,slow=11,SNR=5.6						
KSRS				LR	LR	03 52 49.0	
	comp=Z,64nm,20.5s,baz=304,slow=32						
XAN	Xi'an	40.01	332	P	P	03 40 02.7	+0.1
XAN				pP	pP	03 40 08.9	-3.9
XAN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,15nm,4.4s						
LZH	Lanzhou	44.15	329	eP	P	03 40 37.5	+1.0
LZH				pP	pP	03 40 41.5	-5.4
LZH				sP	sP	03 40 44.0	-7.0
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
USRK	Ussuriysk Arra	44.77	2	P	P	03 40 40.8	-0.3
	comp=Z,4.7nm,0.9s,baz=181,slow=5.8,SNR=8.6						
GTA	Gaotai	48.75	328	eP	P	03 41 13.8	+1.3
GTA				pP	pP	03 41 19.2	-3.8
GTA				sP	sP	03 41 22.6	-4.5
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SONM	Songino Array	52.67	340	P	P	03 41 42.0	0.0
SONM	Songino Array	52.67	340	P	P	03 41 42.0	0.0
	comp=Z,2.2nm,1.0s,baz=155,slow=8.0,SNR=12						
SONM				LR	LR	04 02 54.1	
	comp=Z,44nm,18.9s,baz=144,slow=35						
PETK	Petropavlovsk-	58.34	19	LR	LR	04 03 49.5	
	comp=Z,19nm,20.3s,baz=4.3,slow=32						
MK31	Makanchi Array	63.24	325	eP	P	03 42 56.1	+0.2
MKAR	Makanchi Array	63.24	325	P	P	03 42 56.0	+0.1
MKAR	Makanchi Array	63.24	325	P	P	03 42 56.0	+0.1
	comp=Z,2.3nm,0.7s,baz=120,slow=7.7,SNR=28						
ZAA0	Zalesovo Array	66.17	333	eP	P	03 43 15.0	+0.1
ZALV	Zalesovo Beam	66.17	333	P	P	03 43 14.3	-0.6
ZALV	Zalesovo Beam	66.17	333	P	P	03 43 14.3	-0.6
	comp=Z,5.8nm,0.9s,baz=120,slow=5.8,SNR=22						
ZALV				LR	LR	04 17 33.7	
	comp=Z,23nm,19.0s,baz=48,slow=41						
KURK	Kurchatov	67.41	327	eP	P	03 43 22.7	-0.1
	comp=Z,12nm,0.8s						
BVAR	Borovoye Array	72.99	327	LR	LR	04 21 37.5	
	comp=Z,42nm,18.2s,baz=72,slow=40						
BRVK	Borovoye	73.06	327	eP	P	03 43 57.7	+0.3
	comp=Z,3.9nm,0.8s						
VNDA	Vanda	78.58	173	P	P	03 44 29.7	+1.2
VNDA	Vanda	78.58	173	P	P	03 44 29.7	+1.2
	comp=Z,0.7nm,0.8s,baz=324,slow=7.1,SNR=4.3						
AKTO	Aktyubinsk	79.36	322	LR	LR	04 20 38.9	
	comp=Z,31nm,20.9s,baz=308,slow=36						
SPITS	Spitsbergen Ar	95.53	349	LR	LR	04 29 10.4	
	comp=Z,58nm,20.4s,baz=130,slow=36						

*SKO **07** 03:33:08.8, 41°.11N×22°.83E, h15km, M2.1, ML2.3*
*THE **07** 03:33:09.7, 41°.15N×22°.84E, h2km±1km, ML2.4/11, Error ellipse: s-maj=1.2km s-min=0.3km az=6.0*
*ATH **07** 03:33:09.1, 41°.15N×22°.81E, h21km±1km, MD3.0/12*
*CSEM **07** 03:33:09.8±0.1, 41°.12N×22°.82E, h5km, ML2.3, Error ellipse: s-maj=2.9km s-min=2.5km az=19.0*
*ISCJB **07** 03:33:09.1±0.4, 41°.14N±0°.02×22°.82E±0°.02, h4km±3km, Error ellipse: s-maj=3.3km s-min=2.8km az=21.6*
*BEO **07** 03:33:11.1±1.6, 41°.15N×22°.99E, h6km±2km, ML2.0/3*
ISC 07 03:33:09.7±0.9**, 41°.15N**±0°.02×**22°.83E**±0°.02**, h8km**±8km**, n56, σ0.61**/97**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.26	312	P	Pg	03 33 14.6	-0.4
VAY	Valandovo	0.26	312	i Pg	Pg	03 33 14.3	-0.7
VAY				i Sg	Sg	03 33 18.6	+0.1
VAY				eLg	Lg	03 33 18.7	
	comp=E,500nm,0.3s						
VAY				eLg	Lg	03 33 18.8	
	comp=N,577nm,0.2s						
VAY	Valandovo	0.26	312	i Pg	Pg	03 33 14.8	-0.2
VAY				i Sg	Sg	03 33 19.0	+0.5
VAY				eLg	Lg	03 33 19.3	
	comp=N,577nm,0.2s						
GRG	Griva	0.38	240	P	Pg	03 33 17.0	-0.1
GRG				S	Sg	03 33 22.6	+0.6
GRG	Griva	0.38	240	ePB	Pg	03 33 16.8	-0.3
GRG				eSB	Sg	03 33 22.3	+0.3
GRG	Griva	0.38	240	P	Pg	03 33 17.0	-0.1
GRG				eSb	Sg	03 33 22.3	+0.3
GRG				S	Sg	03 33 22.6	+0.6
SOH	Sokhos	0.51	129	P	Pg	03 33 19.3	-0.4
SOH				S	Sg	03 33 26.5	+0.1
SOH	Sokhos	0.51	129	P	Pg	03 33 19.3	-0.4
SOH				S	Sg	03 33 26.5	+0.1
THE	Thessaloniki	0.52	169	P	Pg	03 33 19.5	-0.4
THE				S	Sg	03 33 27.1	+0.4
THE	Thessaloniki	0.52	169	P	Pg	03 33 19.5	-0.4
THE				S	Sg	03 33 27.1	+0.4
SRS	Serrai	0.58	93	P	Pg	03 33 20.6	-0.3
SRS				S	Sg	03 33 28.6	+0.1
SRS	Serrai	0.58	93	P	Pg	03 33 20.6	-0.3
SRS				S	Sg	03 33 28.6	+0.1
HORT	Hortiatis	0.58	159	P	Pg	03 33 20.8	-0.2
HORT				S	Sg	03 33 29.2	+0.5
HORT	Hortiatis	0.58	159	P	Pg	03 33 20.8	-0.2
HORT				S	Sg	03 33 29.2	+0.5
NVR	Nevrokopi	0.81	75	P	Pg	03 33 24.9	-0.3
NVR				S	Sb	03 33 36.2	-0.8
NVR	Nevrokopi	0.81	75	ePN	Pg	03 33 24.8	-0.4
NVR	Nevrokopi	0.81	75	P	Pg	03 33 24.9	-0.3
NVR				S	Sb	03 33 36.2	-0.8
PLG	Polygyros	0.90	149	P	Pg	03 33 26.2	-0.9
PLG				S	Sb	03 33 39.9	+0.1
PLG	Polygyros	0.90	149	ePN	Pg	03 33 26.1	-1.0
PLG				eSN	Sb	03 33 39.3	-0.5
PLG	Polygyros	0.90	149	P	Pg	03 33 26.2	-0.9
PLG				eSn	Sb	03 33 39.3	-0.5
PLG				S	Sb	03 33 39.9	+0.1
LIT	Litokhoron	1.07	194	P	Pg	03 33 30.1	-0.3
LIT				S	Sb	03 33 45.5	+0.8
LIT	Litokhoron	1.07	194	P	Pg	03 33 30.1	-0.3
LIT				S	Sb	03 33 45.5	+0.8
BIA	Bitola	1.15	264	ePg	Pg	03 33 30.7	-1.0
BIA				eSg	Sg	03 33 46.3	-0.3
BIA	Bitola	1.15	264	ePg	Pg	03 33 30.7	-1.0
BIA				eSg	Sg	03 33 46.3	-0.3
FNA	Florina	1.16	252	P	Pg	03 33 31.6	-0.4
FNA				S	Sn	03 33 48.2	-0.1
FNA	Florina	1.16	252	ePN	Pg	03 33 31.6	-0.4
FNA				eSN	Sb	03 33 47.0	-0.2
FNA	Florina	1.16	252	P	Pg	03 33 31.6	-0.4
FNA				eSn	Sb	03 33 47.0	-0.2
FNA				S	Sn	03 33 48.2	-0.1
KZN	Kozani	1.16	224	ePB	Pg	03 33 30.2	-1.8
KZN				eSN	Sg	03 33 47.0	-0.1
KZN	Kozani	1.16	224	ePb	Pg	03 33 30.2	-1.8
KZN				eSn	Sg	03 33 47.0	-0.1
OUR	Ouranopolis	1.19	132	P	Pg	03 33 32.2	-0.4
OUR				S	Sn	03 33 49.1	+0.1
OUR	Ouranopolis	1.19	132	P	Pg	03 33 32.2	-0.4
OUR				S	Sn	03 33 49.1	+0.1
KAVA	Kavala	1.28	96	P	Pn	03 33 33.7	-0.2
KAVA				S	Sn	03 33 51.9	+0.7
KAVA	Kavala	1.28	96	P	Pn	03 33 33.7	-0.2
KAVA				S	Sn	03 33 51.9	+0.7
VTS	Vitosha	1.47	11	eSg	Sg	03 33 56.6	-0.5
VTS	Vitosha	1.47	11	eSg	Sg	03 33 56.6	-0.5
THL	Klokotos Trika	1.70	202	ePN	Pn	03 33 40.2	+0.6
THL	Klokotos Trika	1.70	202	ePn	Pn	03 33 40.2	+0.6
XOR	Xorichti	1.80	171	P	Pn	03 33 41.2	+0.2
XOR				S	Sb	03 34 05.2	-0.4
XOR	Xorichti	1.80	171	P	Pn	03 33 41.2	+0.2
XOR				S	Sb	03 34 05.2	-0.4
BARS	Barje	1.83	336	ePn	Pb	03 33 43.6	+0.1
BARS				eSn	Sg	03 34 07.9	-0.7
BARS	Barje	1.83	336	ePn	Pb	03 33 43.6	+0.1
BARS				eSn	Sg	03 34 07.9	-0.7
NEO	Neokhori	1.86	171	ePB	Pn	03 33 41.2	-0.7
NEO				eSN	Sn	03 34 05.8	+0.2
NEO	Neokhori	1.86	171	ePb	Pn	03 33 41.2	-0.7
NEO				eSn	Sn	03 34 05.8	+0.2
AOS	Alonnisos	2.13	157	ePN	Pn	03 33 46.4	+0.8
AOS	Alonnisos	2.13	157	ePn	Pn	03 33 46.4	+0.8
ZAPS	Zavoj	2.13	356	ePn	Pb	03 33 48.1	-0.5
ZAPS				eSg	Sg	03 34 19.7	+1.5
AGG	Agios Georgios	2.15	190	ePB	Pn	03 33 45.9	0.0
AGG	Agios Georgios	2.15	190	ePb	Pn	03 33 45.9	0.0
SMTH	Samothraki Isl	2.16	107	ePN	Pn	03 33 46.8	+0.8
SMTH	Samothraki Isl	2.16	107	ePn	Pn	03 33 46.8	+0.8
LIA	Limnos Island	2.19	124	ePB	Pn	03 33 46.8	+0.5
LIA	Limnos Island	2.19	124	ePb	Pn	03 33 46.8	+0.5
ALN	Alexandroupoli	2.45	95	ePN	Pn	03 33 49.8	-0.1
ALN	Alexandroupoli	2.45	95	ePn	Pn	03 33 49.8	-0.1
GRUS	Gruza	3.15	331	ePn	Pn	03 34 01.2	+1.6
GRUS	Gruza	3.15	331	ePn	Pn	03 34 01.2	+1.6

*ATH **07** 04:05:21.3, 37°.26N×21°.58E, h14km±2km, MD3.5/17*
*CSEM **07** 04:05:21.7±0.2, 37°.25N×21°.59E, h5km, ML2.9, Error ellipse: s-maj=5.5km s-min=3.0km az=64.0*
*ISCJB **07** 04:05:21.2±0.6, 37°.22N±0°.02×21°.56E±0°.04, h3km±4km, Error ellipse: s-maj=5.3km s-min=3.1km az=155.1*
*THE **07** 04:05:22.2, 37°.24N×21°.60E, h0km±1km, ML3.0/10, Error ellipse: s-maj=1.3km s-min=0.4km az=241.0*
ISC 07 04:05:21.8±1.1**, 37°.26N**±0°.02×**21°.59E**±0°.03**, h4km**±9km**, n71, σ0.66**/115**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ITM	Ithomi	0.28	106	P	Pg	04 05 27.6	+0.3
ITM				S	Sg	04 05 31.5	+0.6
ITM	Ithomi	0.28	106	ePG	Pg	04 05 27.6	+0.3
ITM				eSG	Sg	04 05 31.6	+0.6
ITM	Ithomi	0.28	106	P	Pg	04 05 27.4	+0.1
ITM				S	Sg	04 05 31.5	+0.6
PYL	PYLOS	0.38	161	P	Pg	04 05 29.3	+0.1
PYL				S	Sg	04 05 34.8	+0.6
PYL	PYLOS	0.38	161	ePB	Pg	04 05 29.3	+0.1
PYL				eSB	Sg	04 05 34.7	+0.6
PYL	PYLOS	0.38	161	P	Pg	04 05 29.2	+0.1
PYL				S	Sg	04 05 34.4	+0.3
PYL				eSb	Sg	04 05 34.7	+0.6
VLX	Vlachokerasia	0.64	80	P	Pg	04 05 34.0	-0.1
VLX				S	Sg	04 05 43.6	+1.2
VLX	Vlachokerasia	0.64	80	ePB	Pg	04 05 34.1	-0.1
VLX				eSB	Sg	04 05 42.4	0.0
VLX	Vlachokerasia	0.64	80	P	Pg	04 05 34.0	-0.1
VLX				eSn	Sg	04 05 42.4	0.0
DYR	Agios Nikonas	0.77	129	P	Pg	04 05 36.2	-0.5
DYR				S	Sg	04 05 47.6	+0.9
DYR	Agios Nikonas	0.77	129	ePG	Pg	04 05 36.1	-0.6
DYR				eSB	Sg	04 05 46.1	-0.6
DYR	Agios Nikonas	0.77	129	P	Pg	04 05 36.2	-0.5
DYR				eSn	Sg	04 05 46.1	-0.6
DYR				S	Sb	04 05 46.8	-1.9
RLS	Riolos of Patr	0.81	353	P	Pg	04 05 37.7	+0.4
RLS				S	Sb	04 05 50.0	+0.4
RLS	Riolos of Patr	0.81	353	ePB	Pg	04 05 37.7	+0.4
RLS				eSB	Sb	04 05 49.3	-0.3
RLS	Riolos of Patr	0.81	353	P	Pg	04 05 37.5	+0.2
RLS				S	Sb	04 05 49.3	-0.3
KLV	Kalavryta, Ach	0.90	29	ePG	Pg	04 05 38.1	-1.1
KLV				eSB	Sg	04 05 50.5	-0.4
KLV	Kalavryta, Ach	0.90	29	ePn	Pg	04 05 38.1	-1.1
KLV				eSn	Sg	04 05 50.5	-0.4
GUR	Goura	0.90	41	P	Pg	04 05 38.9	-0.3
GUR				S	Sb	04 05 52.8	+0.2
GUR	Goura	0.90	41	ePG	Pg	04 05 38.2	-1.0
GUR				eSB	Sb	04 05 52.0	-0.6
GUR	Goura	0.90	41	ePb	Pg	04 05 38.2	-1.0
GUR	Goura	0.90	41	P	Pg	04 05 38.9	-0.3
GUR				S	Sg	04 05 51.4	+0.5
GUR				eSn	Sb	04 05 52.0	-0.6
LAKA	Lakka	1.03	17	P	Pg	04 05 41.4	-0.2
LAKA				S	Sb	04 05 56.8	+0.7
LAKA	Lakka	1.03	17	ePN	Pg	04 05 41.2	-0.4
LAKA	Lakka	1.03	17	P	Pg	04 05 41.4	-0.2
LAKA				S	Sg	04 05 55.5	+0.6
UPR	University Cam	1.04	9	ePN	Pg	04 05 41.7	0.0
UPR	University Cam	1.04	9	ePn	Pg	04 05 41.7	0.0
KFL	Anninata	1.06	323	P	Pg	04 05 42.1	-0.1
KFL				S	Sn	04 05 58.8	+0.1
KFL	Anninata	1.06	323	P	Pg	04 05 42.1	-0.1
KFL				S	Sn	04 05 58.8	+0.1
EFP	Efpalio	1.19	12	P	Pg	04 05 44.5	-0.2
EFP				S	Sn	04 06 02.7	+0.7
EFP	Efpalio	1.19	12	ePB	Pg	04 05 44.5	-0.2
EFP	Efpalio	1.19	12	P	Pg	04 05 44.5	-0.2
EFP				S	Sb	04 06 00.9	+0.1
VLI	Veliai	1.21	116	P	Pg	04 05 44.4	-0.5
VLI				S	Sn	04 06 02.1	-0.1
VLI	Veliai	1.21	116	ePB	Pg	04 05 44.4	-0.5
VLI				eSB	Sb	04 06 01.0	-0.1
VLI	Veliai	1.21	116	P	Pg	04 05 44.4	-0.5
VLI				eSn	Sb	04 06 01.0	-0.1
VLI				S	Sn	04 06 02.1	-0.1
KALE	Kalithea	1.21	21	P	Pg	04 05 44.7	-0.4
KALE				S	Sn	04 06 03.0	+0.4
KALE	Kalithea	1.21	21	ePG	Pg	04 05 43.9	-1.2
KALE	Kalithea	1.21	21	ePn	Pg	04 05 43.9	-1.2
KALE	Kalithea	1.21	21	P	Pg	04 05 44.7	-0.4
KALE				S	Sn	04 06 02.3	-0.3
VLS	Valsamata	1.21	319	P	Pg	04 05 45.1	0.0
VLS	Valsamata	1.21	319	ePB	Pg	04 05 44.2	-0.9
VLS	Valsamata	1.21	319	ePn	Pg	04 05 44.2	-0.9
VLS	Valsamata	1.21	319	P	Pg	04 05 45.1	0.0
LTK	Loutraki	1.33	55	P	Pb	04 05 47.5	+0.1
LTK				S	Sn	04 06 06.6	+1.1
LTK	Loutraki	1.33	55	ePG	Pg	04 05 46.2	-1.2
LTK	Loutraki	1.33	55	ePn	Pg	04 05 46.2	-1.2
LTK	Loutraki	1.33	55	P	Pb	04 05 47.5	+0.1
LTK				S	Sn	04 06 06.6	+1.1
DID	Didima	1.33	79	P	Pg	04 05 46.7	-0.7
DID				S	Sn	04 06 06.5	+1.0
DID	Didima	1.33	79	ePB	Pg	04 05 46.8	-0.7
DID	Didima	1.33	79	P	Pg	04 05 46.7	-0.7
DID				S	Sn	04 06 06.5	+1.0
DSF	Desfina	1.37	33	P	Pn	04 05 47.6	-0.2
DSF				S	Sn	04 06 08.0	+1.6
DSF	Desfina	1.37	33	P	Pn	04 05 47.6	-0.2
DSF				S	Sn	04 06 08.0	+1.6
KYTH	Kithira	1.52	130	P	Pn	04 05 49.9	+0.1
KYTH	Kithira	1.52	130	ePB	Pb	04 05 50.2	-0.3
KYTH	Kithira	1.52	130	P	Pn	04 05 49.9	+0.1
KYTH	Kithira	1.52	130	ePn	Pb	04 05 50.2	-0.3
NAIG	Nisos Aigina	1.59	71	ePG	Pn	04 05 50.9	+0.1
NAIG	Nisos Aigina	1.59	71	ePn	Pn	04 05 50.9	+0.1
LKR	Lokris	1.78	38	P	Pn	04 05 53.8	+0.4
LKR				S	Sb	04 06 18.0	+0.2
LKR	Lokris	1.78	38	ePG	Pn	04 05 54.3	+0.9
LKR	Lokris	1.78	38	P	Pn	04 05 53.8	+0.4
LKR	Lokris	1.78	38	ePn	Pn	04 05 54.3	+0.9
LKR				S	Sb	04 06 18.0	+0.2
ATAL	Atalanti	1.83	38	P	Pn	04 05 54.3	+0.3
ATAL				S	Sb	04 06 19.0	0.0
ATAL	Atalanti	1.83	38	P	Pn	04 05 54.3	+0.3
SMIA	Simia	2.06	38	P	Pn	04 05 57.3	0.0
SMIA	Simia	2.06	38	P	Pn	04 05 57.3	0.0
THL	Klokotos Trika	2.33	8	ePN	Pb	04 06 02.9	-1.4
THL	Klokotos Trika	2.33	8	ePn	Pb	04 06 02.9	-1.4
NEO	Neokhori	2.42	32	ePN	Pn	04 06 03.2	+1.0
NEO	Neokhori	2.42	32	ePn	Pn	04 06 03.2	+1.0
XOR	Xorichti	2.45	30	P	Pn	04 06 03.4	+0.7
XOR	Xorichti	2.45	30	P	Pn	04 06 03.4	+0.7

IDC 07 04:09:31.7±23.0**, 7°.37N×87°.50W, h0km, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/21**, mbtmp3.6**/4**, Error ellipse: s-maj=480.6km s-min=71.7km az=3.0, Off coast of central America**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	26.63	327	P	P	04 15 11.3	-1.0
	0.9nm,0.5s,baz=144,slow=9.5,SNR=25						
PDAR	Pinedale Array	40.26	335	P	P	04 17 11.7	+1.0
	0.2nm,0.5s,baz=146,slow=12,SNR=4.0						
SCHQ	Schefferville	50.14	15	P	P	04 18 28.4	-0.4
	2.5nm,0.9s,baz=234,slow=8.7,SNR=2.5						
YKA	Yellowknife Ar	58.48	346	P	P	04 19 29.5	+0.2
	0.1nm,0.5s,baz=145,slow=6.8,SNR=5.4						

*ISCJB **07** 04:10:18.4±0.6, 50°.32N±0°.04×18°.71E±0°.03, h0km, Error ellipse: s-maj=6.2km s-min=2.9km az=9.8*
*CSEM **07** 04:10:19.2±0.2, 50°.33N×18°.75E, h2km, ML2.6/10*
*IPEC **07** 04:10:19.4±0.2, 50°.34N×18°.78E, h1km±1km, ML1.8/3, Error ellipse: s-maj=2.4km s-min=1.1km az=169.0*
*PRU **07** 04:10:20.2, 50°.26N×18°.74E, h0km*
ISC 07 04:10:19.6±0.9**, 50°.28N**±0°.04×**18°.74E**±0°.02**, h0**km**, n26, σ0s64**/41**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.59	221	ePG	Pg	04 10 30.9	+0.1
OKC				eSG	Sg	04 10 38.7	+0.3
	comp=Z,12nm,0.4s						
OKC	Ostrava-Krasne	0.59	221	Pg	Pg	04 10 30.9	+0.1
OKC				Sg	Sg	04 10 38.7	+0.3
	12nm,0.4s						
OJC	Ojcow	0.68	95	ePg	Pg	04 10 32.2	-0.4
OJC				eSg	Sg	04 10 42.0	+0.6
OJC	Ojcow	0.68	95	ePg	Pg	04 10 32.2	-0.4
OJC				eSg	Sg	04 10 42.0	+0.6
MORC	Moravsky Berou	0.92	238	ePg	Pg	04 10 38.0	+0.7
	baz=54						
MORC				eSg	Sg	04 10 50.1	+0.8
KRLC	Kraliky	1.28	262	ePG	Pg	04 10 43.7	-0.4
KRLC				eSG	Sb	04 11 01.4	-0.2
KRLC	Kraliky	1.28	262	Pg	Pg	04 10 43.7	-0.4
KRLC				Sg	Sb	04 11 01.4	-0.2
NIE	Niedzica	1.33	130	ePg	Pg	04 10 44.6	-0.5
NIE				eSg	Sg	04 11 03.3	+1.0
DPC	Dobruska-Polom	1.55	274	ePG	Pn	04 10 48.4	-0.2
DPC				eSG	Sg	04 11 10.1	+0.6
	comp=Z,9.6nm,0.5s						
DPC	Dobruska-Polom	1.55	274	Pg	Pn	04 10 48.4	-0.2
DPC				Sg	Sg	04 11 10.1	+0.6
	9.6nm,0.5s						
KSP	Ksiaz	1.66	291	ePg	Pg	04 10 51.6	+0.1
KSP				eSg	Sg	04 11 14.7	+1.7
VRAC	Vranov	1.70	236	ePn	Pn	04 10 50.5	0.0
VRAC				eSg	Sb	04 11 14.3	+0.7
	6.5nm,0.3s,baz=53						
UPC	Upice	1.76	279	ePG	Pb	04 10 52.6	-0.2
UPC				eSG	Sg	04 11 17.4	+1.1
	comp=Z,2.1nm,0.2s						
UPC	Upice	1.76	279	Pg	Pb	04 10 52.6	-0.2
UPC				Sg	Sg	04 11 17.4	+1.1
	2.1nm,0.2s						
KRUC	Moravsky	1.95	232	ePn	Pn	04 10 54.5	+0.5
	baz=50						
KRUC				eSn	Sb	04 11 21.2	+0.3
	5.4nm,0.4s,baz=50						
TREC	Trest	2.33	246	eSG	Sg	04 11 33.5	-0.9
	comp=Z,7.2nm,0.7s						
TREC	Trest	2.33	246	Sg	Sg	04 11 33.5	-0.9
	7.2nm,0.7s						
PVCC	Panska Ves	2.68	277	eSG	Sg	04 11 45.9	+0.1
	comp=Z,5.9nm,0.4s						
PVCC	Panska Ves	2.68	277	Sg	Sg	04 11 45.9	+0.1
	5.9nm,0.4s						
PRU	Pruhonice	2.72	265	eSG	Sg	04 11 46.9	-0.1
	comp=Z,3.2nm,0.4s						
PRU	Pruhonice	2.72	265	Sg	Sg	04 11 46.9	-0.1
	3.2nm,0.4s						
BRG	Berggiesshubel	3.12	283	SG	Sg	04 11 58.8	-0.9
	3.3nm,0.7s						
KHC	Kasperske Hory	3.54	253	eSG	Sg	04 12 12.5	-0.9
	comp=Z,4.4nm,0.5s						
KHC	Kasperske Hory	3.54	253	Sg	Sg	04 12 12.5	-0.9
	4.4nm,0.5s						
NKC	Novy Kostel	4.04	272	eSG	Sg	04 12 29.3	-0.1
	comp=Z,2.8nm,0.5s						
NKC	Novy Kostel	4.04	272	Sg	Sg	04 12 29.3	-0.1
	2.8nm,0.5s						

*HLW **07** 05:03:00.2, 35°.48N×23°.24E, h10km±31km, Md3.4, Ml3.2*
*ATH **07** 05:03:07.3, 35°.08N×23°.15E, h40km±5km, MD3.5/19*
*ISCJB **07** 05:03:07.4±0.5, 35°.01N±0°.04×23°.15E±0°.05, h66km±6km, mb3.3/5, Error ellipse: s-maj=7.8km s-min=4.1km az=140.9*
*THE **07** 05:03:08.5, 35°.16N×23°.22E, h11km, ML3.6/2, Error ellipse: s-maj=1.5km s-min=0.4km az=210.0*
*CSEM **07** 05:03:08.5±0.2, 35°.06N×23°.17E, h30km, ML3.6/2, Error ellipse: s-maj=6.7km s-min=3.1km az=42.0*
*IDC **07** 05:03:09.2±3.5, 35°.02N×23°.39E, h62km±36km, mb3.3/5, mb1 3.4/9, mb1mx3.2/31, mbtmp3.3/9, ML3.7/4, MS2.8/5, Ms1 2.8/5, ms1mx2.5/28, Error ellipse: s-maj=29.6km s-min=24.2km az=128.0*
ISC 07 05:03:08.2±1.0**, 35°.05N**±0°.04×**23°.16E**±0°.04**, h53**km±11km**, n76, σ1s10**/90**, mb3.4**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.79	105	P	Pn	05 03 22.9	-0.3
GVD				S	Sn	05 03 35.1	+1.0
GVD	Gavdhos	0.79	105	eP	Pn	05 03 22.8	-0.4
GVD				eS	Sn	05 03 35.7	+1.6
GVD	Gavdhos	0.79	105	P	Pn	05 03 22.9	-0.3
GVD				S	Sn	05 03 35.1	+1.0
VAM	Vamos	0.92	67	P	Pn	05 03 24.3	-0.7
VAM				S	Sn	05 03 36.4	-0.9
VAM	Vamos	0.92	67	eP	Pn	05 03 24.3	-0.7
VAM				eS	Sn	05 03 38.6	+1.3
VAM	Vamos	0.92	67	P	Pn	05 03 24.3	-0.7
VAM				eS	Sn	05 03 38.6	+1.3
KYTH	Kithira	1.23	355	P	Pn	05 03 29.2	0.0
KYTH	Kithira	1.23	355	eP	Pn	05 03 29.1	-0.1
KYTH	Kithira	1.23	355	P	Pn	05 03 29.2	0.0
SIVA	Sivas	1.35	91	P	Pn	05 03 31.4	+0.7
SIVA				S	Sn	05 03 49.6	+2.0
SIVA	Sivas	1.35	91	eP	Pn	05 03 31.2	+0.5
SIVA	Sivas	1.35	91	eP	Pn	05 03 31.2	+0.5
SIVA				S	Sn	05 03 49.6	+2.0
VLI	Veliai	1.68	354	P	Pn	05 03 35.4	+0.2
VLI				S	Sn	05 03 56.2	+0.7
VLI	Veliai	1.68	354	eP	Pn	05 03 36.2	+1.0
VLI	Veliai	1.68	354	P	Pn	05 03 35.4	+0.2
VLI				S	Sn	05 03 56.2	+0.7
DYR	Agios Nikonas	1.84	339	P	Pn	05 03 38.1	+0.7
DYR				S	Sn	05 04 00.6	+1.1
DYR	Agios Nikonas	1.84	339	eP	Pn	05 03 39.0	+1.6
DYR	Agios Nikonas	1.84	339	P	Pn	05 03 38.1	+0.7
DYR				S	Sn	05 04 00.6	+1.1
LAST	Lasithi	1.90	86	P	Pn	05 03 38.8	+0.5
LAST				S	Sn	05 04 03.6	+2.4
LAST	Lasithi	1.90	86	eP	Pn	05 03 39.1	+0.8
LAST	Lasithi	1.90	86	P	Pn	05 03 38.8	+0.5
LAST				S	Sn	05 04 03.6	+2.4
NPS	Neapolis	2.02	83	P	Pn	05 03 40.6	+0.7
NPS				S	Sn	05 04 06.0	+2.1
NPS	Neapolis	2.02	83	eP	Pn	05 03 40.5	+0.7
NPS	Neapolis	2.02	83	eP	Pn	05 03 40.5	+0.7
NPS				S	Sn	05 04 06.0	+2.1
XRY	Khrisi	2.09	94	eP	Pn	05 03 42.2	+1.5
XRY	Khrisi	2.09	94	eP	Pn	05 03 42.2	+1.5
PYL	PYLOS	2.17	328	P	Pn	05 03 42.7	+0.7
PYL				S	Sn	05 04 09.3	+1.6
PYL	PYLOS	2.17	328	P	Pn	05 03 42.7	+0.7
PYL				S	Sn	05 04 09.3	+1.6
ITM	Ithomi	2.35	335	eP	Pn	05 03 45.8	+1.4
ITM	Ithomi	2.35	335	eP	Pn	05 03 45.8	+1.4
DID	Didima	2.45	1	P	Pn	05 03 45.9	+0.1
DID				S	Sn	05 04 15.0	+0.4
DID	Didima	2.45	1	eP	Pn	05 03 45.7	-0.1
DID	Didima	2.45	1	P	Pn	05 03 45.9	+0.1
DID				S	Sn	05 04 15.0	+0.4
ZKR	Zakros	2.50	88	eP	Pn	05 03 47.1	+0.6
ZKR	Zakros	2.50	88	eP	Pn	05 03 47.1	+0.6
NAIG	Nisos Aigina	2.72	5	eP	Pn	05 03 49.3	-0.1
NAIG	Nisos Aigina	2.72	5	eP	Pn	05 03 49.3	-0.1
APE	Apeiranthos	2.78	43	eP	Pn	05 03 50.9	+0.6
APE	Apeiranthos	2.78	43	eP	Pn	05 03 50.9	+0.6
GUR	Goura	2.96	347	eP	Pn	05 03 52.9	+0.1
GUR	Goura	2.96	347	eP	Pn	05 03 52.9	+0.1
LTK	Loutraki	2.97	357	P	Pn	05 03 53.7	+0.8
LTK	Loutraki	2.97	357	eP	Pn	05 03 53.0	+0.1
LTK	Loutraki	2.97	357	P	Pn	05 03 53.7	+0.8
LTBQ	Tobruq	3.05	168	i P	Pn	05 03 56.0	+2.0
	SNR=37						
LTBQ				eS	Sn	05 04 28.0	-1.3
	18nm,0.4s,SNR=37						
KLV	Kalavryta, Ach	3.10	345	eP	Pn	05 03 55.0	+0.3
KLV	Kalavryta, Ach	3.10	345	eP	Pn	05 03 55.0	+0.3
RLS	Riolos of Patr	3.30	336	eP	Pn	05 03 58.3	+0.9
RLS	Riolos of Patr	3.30	336	eP	Pn	05 03 58.3	+0.9
KARP	Karpathos	3.31	80	eP	Pn	05 03 57.2	-0.3
KARP	Karpathos	3.31	80	eP	Pn	05 03 57.2	-0.3
LAKA	Lakka	3.33	344	eP	Pn	05 03 58.7	+0.9
LAKA	Lakka	3.33	344	eP	Pn	05 03 58.7	+0.9
HMAT	Matruh	5.14	139	AMP		05 05 00.0	
	comp=N,20μm,0.5s,logA/T=4.6,baz=142						
HMAT	Matruh	5.14	139	S	Sn	05 05 18.0	-2.7
SWA2		6.11	161	P	Pn	05 04 35.9	0.0
	baz=162						
SWA2		6.11	161	P	Pn	05 04 35.9	0.0
GLL	Jalalah	9.05	125	P	Pn	05 05 14.5	-1.8
	baz=127						
GLL	Jalalah	9.05	125	P	Pn	05 05 14.5	-1.8
BRTR	Keskin Array B	9.55	58	P	Pn	05 05 23.4	+0.2
	comp=N,0.1nm,0.3s,baz=228,slow=15,SNR=5.6						
SUZ		9.68	120	P	Pn	05 05 23.1	-1.7
	baz=122						
SUZ		9.68	120	P	Pn	05 05 23.1	-1.7
MMAI	Mount Meron Ar	10.36	98	P	Pn	05 05 35.2	+1.0
	comp=N,1.9nm,0.3s,baz=283,slow=13,SNR=2.9						
MMAI				S	Sn	05 07 18.3	-11
	comp=N,1.5nm,0.3s,baz=293,slow=20,SNR=2.4						
KEST	Kesra	11.30	277	LR	LR	05 11 15.6	
	comp=N,40nm,19.3s,baz=68,slow=42						
EIL	Elat	11.31	115	P	Pn	05 05 43.6	-3.6
	comp=N,0.9nm,0.3s,baz=83,slow=8.9,SNR=5.1						
EIL				S	Sn	05 07 45.0	-7.1
	comp=N,1.9nm,0.3s,baz=145,slow=21,SNR=4.3						
ASF	Jabal al Asfar	11.80	100	LR	LR	05 10 42.7	
	comp=N,33nm,21.0s,baz=34,slow=39						
GERES	GERESS Array B	15.46	336	P	P	05 06 46.4	0.0
	comp=N,0.2nm,0.3s,baz=145,slow=14,SNR=4.1						
AKASG	Malin Array Be	16.25	14	P	P	05 06 54.3	-0.8
	comp=N,0.5nm,0.3s,baz=208,slow=9.6,SNR=2.9						
KBZ	Khabaz	17.51	54	LR	LR	05 13 59.4	
	comp=N,32nm,18.7s,baz=7.6,slow=37						
GNI	Garni	17.83	67	LR	LR	05 15 18.7	
	comp=N,33nm,19.3s,baz=61,slow=41						
HFS	Hagfors	25.84	349	P	P	05 08 33.3	-1.2
	comp=N,1.2nm,0.6s,baz=147,slow=8.1,SNR=6.0						
NOA	NORSAR Array B	27.12	347	LR	LR	05 19 32.7	
	comp=N,19nm,20.3s,baz=255,slow=36						
TORD	Torodi Ar. Bea	29.19	227	P	P	05 09 06.4	+1.5
	comp=N,0.6nm,0.6s,baz=35,slow=8.7,SNR=4.6						
KURBB	Kurchatov Arra	42.46	51	P	P	05 10 57.6	-0.2
	comp=N,0.3nm,0.5s,baz=274,slow=8.8,SNR=2.3						
MKAR	Makanchi Array	45.20	56	P	P	05 11 18.7	-1.3
	comp=N,0.2nm,0.3s,baz=265,slow=6.6,SNR=5.4						
YKA	Yellowknife Ar	77.04	341	P	P	05 14 56.0	+0.8
	comp=N,0.1nm,0.5s,baz=35,slow=5.4,SNR=4.6						

*NSSC **07** 05:11:32.2±1.7, 31°.73N×35°.12E, h71km±50km, ML1.9*
CSEM 07 05:11:30.3±0.6**, 31°.74N**×**35°.15E, h8**km**, ML3.9, Error ellipse: s-maj=16.9km s-min=5.3km az=98.0, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TCHB	Talchebab	1.16	37	eP	Pn	05 11 53.0	+0.1
TCHB				eS	Sn	05 12 08.9	0.0
TCHB				AML	AML	05 12 12.6	
	comp=Z,54nm,0.4s						
TCHB				AML	AML	05 12 14.5	
	comp=E,30nm,0.9s						
TCHB				AML	AML	05 12 15.5	
	comp=N,51nm,0.4s						
TCHB	Talchebab	1.16	37	eP	Pn	05 11 53.0	+0.2
	SNR=111						
TCHB				eS	Sn	05 12 08.9	0.0
	comp=N,51nm,0.4s,SNR=111						
SALA	Sala	1.65	54	eP	Pn	05 11 59.3	-0.6
SALA				eS	Sn	05 12 19.5	-2.0
SALA				AML	AML	05 12 25.4	
	comp=E,1.6nm,0.6s						
SALA				AML	AML	05 12 28.3	
	comp=N,25nm,0.5s						
SALA				AML	AML	05 12 31.2	
	comp=Z,31nm,0.6s						
SALA	Sala	1.65	54	eP	Pn	05 11 59.3	-0.6
	SNR=104						
SALA				eS	Sn	05 12 19.5	-2.0
	comp=Z,31nm,0.6s,SNR=104						
BRBR	Barbar	1.80	22	eP	Pn	05 12 02.5	+0.6
BRBR				eS	Sn	05 12 22.6	-2.4
BRBR	Barbar	1.80	22	eP	Pn	05 12 02.5	+0.6
	SNR=103						
BRBR				eS	Sn	05 12 22.6	-2.5
	SNR=102						
ZALF	Zalf	2.19	57	eP	Pn	05 12 08.0	+0.9
ZALF				eS	Sn	05 12 33.1	-1.3
ZALF				AML	AML	05 12 42.9	
	comp=Z,21nm,0.7s						
ZALF				AML	AML	05 12 47.0	
	comp=E,19nm,0.7s						
ZALF				AML	AML	05 12 48.7	
	comp=N,12nm,0.6s						
ZALF	Zalf	2.19	57	eP	Pn	05 12 08.0	+0.9
	SNR=100						
ZALF				eS	Sn	05 12 33.1	-1.3
	comp=N,12nm,0.6s,SNR=100						

IDC 07 05:13:05.3±4.2**, 14°.73S**×**167°.41E, h143**km±36km**, mb3.7**/9**, mb1 3.8**/10**, mb1mx3.7**/21**, mbtmp3.7**/10**, Error ellipse: s-maj=28.2km s-min=24.5km az=66.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.36	187	P	Pn	05 14 51.7	+1.5
	1.7nm,0.3s,baz=180,slow=20,SNR=13						
DZM				S	Sn	05 16 11.1	-1.5
	2.0nm,0.3s,baz=325,slow=23,SNR=7.9						
STKA	Stephens Creek	29.09	230	P	P	05 18 53.8	+1.2
	4.0nm,0.4s,baz=60,slow=9.5,SNR=21						
WRA	Warramunga Arr	31.95	256	P	P	05 19 16.6	-1.3
	0.7nm,0.5s,baz=85,slow=9.3,SNR=3.4						
ASAR	Alice Springs	32.80	249	P	P	05 19 24.3	-1.0
	1.8nm,0.5s,baz=77,slow=8.9,SNR=14						
VNDA	Vanda	62.86	181	P	P	05 23 15.4	-0.2
	1.0nm,0.5s,baz=344,slow=5.6,SNR=16						
PSI	Prapat	69.99	279	P	P	05 24 01.7	-0.4
	3.4nm,0.4s,baz=225,slow=16,SNR=3.8						
MAW	Mawson	81.93	202	P	P	05 25 08.8	+0.2
	1.8nm,0.8s,baz=66,slow=6.7,SNR=4.0						
SONM	Songino Array	82.58	324	P	P	05 25 13.4	+1.0
	0.3nm,0.5s,baz=128,slow=6.6,SNR=3.5						
ILAR	Eielson Array	86.49	18	P	P	05 25 30.5	-1.1
	0.3nm,0.8s,baz=235,slow=5.6,SNR=5.1						
MKAR	Makanchi Array	97.30	316	P	Pdif	05 26 23.0	+0.8
	0.3nm,0.6s,baz=112,slow=5.8,SNR=3.6						
ARCES	ARCESS Array B	120.29	345	PKP	PKPdf	05 31 38.4	-0.5
	3.8nm,1.0s,baz=84,slow=3.7,SNR=4.2						
TORD	Torodi Ar. Bea	166.04	265	PKPab	PKPab	05 33 55.4	0.0
	0.8nm,0.8s,baz=95,slow=4.1,SNR=4.5						

IDC 07 05:14:11.8±2.7**, 7°.12S**×**126°.47E, h420**km±30km**, mb3.0**/3**, mb1 3.3**/7**, mb1mx3.1**/21**, mbtmp3.2**/7**, Error ellipse: s-maj=64.3km s-min=12.1km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	7.00	287	P	P	05 15 56.0	-0.3
	0.9nm,0.3s,baz=121,slow=14,SNR=5.7						
FITZ	Fitzroy Crossi	10.95	184	P	P	05 16 40.0	+0.4
	0.6nm,0.3s,baz=19,slow=8.6,SNR=23						
WRA	Warramunga Arr	14.86	150	P	P	05 17 21.7	-0.6
	2.9nm,0.3s,baz=324,slow=11,SNR=49						
WRA				S	S	05 20 08.7	+8.9
	0.4nm,0.3s,baz=332,slow=17,SNR=4.8						
ASAR	Alice Springs	17.94	157	P	P	05 17 55.0	-0.2
	2.2nm,0.3s,baz=342,slow=14,SNR=55						
ASAR				S	S	05 21 00.0	+0.7
	0.1nm,0.3s,baz=347,slow=24,SNR=12						
SONM	Songino Array	57.52	344	P	P	05 23 20.2	+0.7
	0.3nm,0.6s,baz=174,slow=5.3,SNR=4.1						
MKAR	Makanchi Array	66.45	329	P	P	05 24 18.1	+0.1
	0.3nm,0.5s,baz=125,slow=9.1,SNR=3.5						
ZALV	Zalesovo Beam	70.18	335	P	P	05 24 40.0	-0.6
	1.8nm,0.6s,baz=146,slow=5.4,SNR=6.6						
TORD	Torodi Ar. Bea	125.39	281	PKP	PKPdf	05 32 24.8	-0.2
	0.5nm,0.8s,baz=100,slow=2.3,SNR=2.6						

IDC 07 05:25:17.1±4.1**, 7°.01S**×**154°.72E, h0**km**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.6**/19**, mbtmp3.7**/4**, ML3.1**/1**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx3.0**/17**, Error ellipse: s-maj=104.2km s-min=35.4km az=116.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.85	252	Pn	Pn	05 27 10.9	-1.8
	1.5nm,0.3s,baz=98,slow=7.1,SNR=2.7						
GUMO	Guam	22.68	334	LR	LR	05 37 39.2	
	comp=Z,167nm,18.4s,baz=188,slow=33						
WRA	Warramunga Arr	23.58	235	P	P	05 30 30.6	+0.8
	0.4nm,0.3s,baz=64,slow=9.4,SNR=3.5						
ASAR	Alice Springs	25.96	228	P	P	05 30 51.4	-0.3
	0.2nm,0.4s,baz=60,slow=9.5,SNR=4.8						
SONM	Songino Array	69.20	327	P	P	05 36 26.0	+0.2
	1.0nm,0.5s,baz=143,slow=6.7,SNR=3.7						

*NIED **07** 05:28:00, 27°.40N×143°.00E, h5km, Mw4.1 Best double couple: M0 1.54000×10^15 NP1:φs211.00000°, δ49.00000°, λ-80.00000°. NP2:φs16.00000°, δ42.00000°, λ-101.00000°.*
*IDC **07** 05:28:40.3±0.5, 27°.36N×142°.98E, h0km, mb4.4/22, mb1 4.5/26, mb1mx4.5/29, mbtmp4.3/26, ML3.7/4, MS3.2/7, Ms1 3.2/7, ms1mx3.0/38, Error ellipse: s-maj=16.5km s-min=13.7km az=85.0*
*ISCJB **07** 05:28:42.4±0.9, 27°.56N±0°.03×142°.89E±0°.04, h16km±6km, mb4.5/78, MS3.7/8, Error ellipse: s-maj=6.7km s-min=5.3km az=167.0*
*JMA **07** 05:28:43.3±0.3, 27°.40N×142°.96E, h80km, M4.1*
*MOS **07** 05:28:43.9±1.0, 27°.39N×142°.85E, h33km, mb4.8/45, Error ellipse: s-maj=11.2km s-min=5.9km az=112.4*
*BJI **07** 05:28:45.2, 27°.38N×142°.78E, h37km, mB4.7/16, mb4.5/28, Ms4.5/13, Ms7 4.2/13*
*NEIC **07** 05:28:46.8±0.2, 27°.41N×142°.89E, mb4.5/32, MW4.1(NIED), Error ellipse: s-maj=6.2km s-min=5.1km az=189.0*
ISC 07 05:28:46.7±0.4**, 27°.46N**±0°.04×**142°.93E**±0°.05**, h44**km±2km**, h44**km**:pP-P, n381, σ1s14**/439**, mb4.5**/78**, MS3.8**/8**, 117C-99D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	0.76	242	P	Pn	05 28 59.5	-1.5
CBIJ				eS	Sn	05 29 12.4	+1.0
CBIJ	Chichi jima	0.76	242	LR	LR	05 29 06.7	
	comp=Z,81μm,20.4s,baz=0.0,slow=35						
JHHJ	Haha-jima-NKT	1.06	219	P	Pn	05 29 03.1	-2.1
JHHJ				eS	Sn	05 29 16.4	-2.4
JHJ	Hachijo jima 2	6.26	335	Pn	Pn	05 30 16.8	+0.3
	7.8nm,0.3s,baz=68,slow=17,SNR=2.7						
JHJ				Sn	Sn	05 31 26.4	-0.5
	12nm,0.3s,baz=333,slow=9.0,SNR=2.7						
BSO1	Boso 1	7.37	347	P	Pn	05 30 28.7	-2.5
BSO3	Boso 3	7.61	345	P	Pn	05 30 33.5	-1.2
BSO4	Boso 4	7.83	344	P	Pn	05 30 37.6	-0.3
JOD2	Odawara 2	8.45	338	P	Pn	05 30 46.4	-0.1
JHU	Hanno	8.93	341	P	Pn	05 30 52.0	-1.1
JHU				eS	Sn	05 32 29.6	-2.7
JRY	Ryogami san	9.20	339	P	Pn	05 30 56.5	-0.3
JRY				eS	Sn	05 32 38.7	-0.2
JHO	Hitachi	9.34	348	P	Pn	05 30 56.0	-2.8
JHO				eS	Sn	05 32 37.7	-4.8
JAG	Ashikaga	9.41	343	P	Pn	05 30 57.7	-2.0
JAG				eS	Sn	05 32 39.8	-4.4
MJAR	Matsushiro Arr	9.90	337	Pn	Pn	05 31 05.3	-1.1
MJAR	Matsushiro Arr	9.90	337	Pn	Pn	05 31 05.3	-1.1
	2.0nm,0.3s,baz=156,slow=10,SNR=11						
MJAR				LR	LR	05 34 42.6	
	comp=Z,138nm,20.9s,baz=180,slow=36						
MAJO	Matsushiro	9.90	337	eP	Pn	05 31 05.6	-0.8
MAJO	Matsushiro	9.90	337	ePn	Pn	05 31 05.6	-0.8
JNU	Nakatsue	11.85	301	ePn	Pn	05 31 34.0	+0.9
JNU	Nakatsue	11.85	301	Pn	Pn	05 31 34.8	+1.7
	0.3nm,0.3s,baz=49,slow=19,SNR=2.2						
JNU				LR	LR	05 35 37.7	
	comp=Z,123nm,21.5s,baz=57,slow=35						
ERM	Erimo	14.52	1	i P	Pn	05 32 09.4	0.0
KSRS	Korea Array	16.10	312	Pn	Pn	05 32 27.5	-2.4
	0.3nm,0.3s,baz=123,slow=12,SNR=3.5						
KSRS				LR	LR	05 38 18.8	
	comp=Z,59nm,18.1s,baz=152,slow=36						
KSAR	Wonju Array Be	16.12	312	Pn	Pn	05 32 27.4	-2.7
ASAJ	Asahikawa	16.63	359	ePn	Pn	05 32 36.0	-0.5
	64nm,1.8s						
ASAJ	Asahikawa	16.63	359	LR	LR	05 39 32.0	
	comp=Z,83nm,19.2s,baz=65,slow=39						
VLA	Vladivostok	18.02	333	i P	P	05 32 55.8	+2.1
VLA				pmax	pmax		
	comp=Z,41nm,0.7s						
USRK	Ussuriysk Arra	18.89	335	P	P	05 33 02.1	-1.3
	comp=Z,0.5nm,0.3s,baz=142,slow=9.6,SNR=7.0						
USRK				LR	LR	05 39 37.9	
	comp=Z,67nm,19.4s,baz=242,slow=35						
NACB	Ninganchiao	19.48	265	eP	P	05 33 10.8	+0.7
	comp=Z,20nm,0.8s						
MDJ	Mudanjiang	20.19	331	P	P	05 33 18.4	+0.8
MDJ				pP	pP	05 33 28.2	0.0
MDJ				sP	sP	05 33 33.4	-0.4
MDJ				S	S	05 37 04.4	+2.7
MDJ				PcP	PcP	05 37 27.5	-3.1
MDJ				ScP	ScP	05 41 00.5	-2.9
MDJ				PcS	PcS	05 41 05.7	-2.3
MDJ				ScS	ScS	05 44 43.9	-2.1
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,41nm,4.7s						
CN2	Changchun	21.56	324	eP	P	05 33 34.3	+2.0
CN2				esP	sP	05 33 49.3	+0.7
CN2				eS	S	05 37 25.8	-3.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s						
CN2				LR	LR		
	comp=E,400nm,13.0s						
CN2				LR	LR		
	comp=Z,600nm,14.0s						
HABR	Khabarovsk	21.86	346	eP	P	05 33 34.6	-0.8
HABR				e*SP	sP	05 33 48.0	-3.7
HABR				eS	S	05 37 34.9	+0.4
HABR				e*SS	sS	05 37 49.7	-2.0
HABR				eSSS	SSS	05 38 16.5	
HABR						05 44 52.6	
HABR				pmax	pmax		
	comp=E,96nm,2.0s						
HABR				pmax	pmax		
	comp=N,130nm,3.0s						
HABR				pmax	pmax		
	comp=Z,131nm,2.0s						
HABR				MLR	MLR		
	comp=Z,411nm,18.0s						
BJI	Beijing	25.44	306	P	P	05 34 09.8	-0.5
BJI				S	S	05 38 34.0	-0.2
BJI				LR	LR		
	comp=N,150nm,14.0s						
BJI				LR	LR		
	comp=E,140nm,14.8s						
BJI				LR	LR		
	comp=Z,77nm,15.9s						
HHC	Hu-ho-hao-te	29.02	306	eP	P	05 34 44.0	+1.4
HHC				sP	sP	05 35 01.8	+2.1
HHC				PP	PnPn	05 35 38.5	+2.4
HHC				PcP	PcP	05 37 51.4	+1.2
HHC				S	S	05 39 30.6	-0.4

HHC sS **sS** 05 39 50.6 -0.1
HHC SS **SnSn** 05 41 01.5 +4.3
HHC ScP **ScP** 05 41 28.3 +0.1
HHC PcS **PcS** 05 41 33.3 +0.3
HHC ScS **ScS** 05 45 20.0 -2.2
HHC pmax pmax
comp=Z,28nm,0.5s
HHC pmax pmax
comp=Z,140nm,5.3s
HHC LR LR
comp=N,250nm,10.1s
HHC LR LR
comp=E,260nm,13.3s
HHC LR LR
comp=Z,320nm,11.4s
GYA Guiyang 32.27 277 *e*P **P** 05 35 12.7 +1.2
GYA pmax pmax
comp=Z,10.0nm,0.8s
LZH Lanzhou 34.14 294 *e*P P 05 35 33.0 +5.3
LZH pmax pmax
comp=Z,16nm,1.0s
ULN Ulaanbaatar 34.52 316 *e*P **P** 05 35 31.5 +0.7
comp=Z,2.8nm,0.7s
SONM Songino Array 34.92 316 P **P** 05 35 34.4 +0.1
SONM Songino Array 34.92 316 P **P** 05 35 34.4 +0.1
comp=Z,2.0nm,0.5s,baz=128,slow=9.0,SNR=15
SONM LR LR 05 50 18.4
comp=Z,32nm,20.3s,baz=112,slow=37
KMI Kunming 36.01 276 P **P** 05 35 43.6 -0.4
KMI pP **pP** 05 35 57.3 +1.4
KMI sP **sP** 05 36 01.9 +0.8
KMI pmax pmax
comp=Z,9.0nm,0.8s
SEY Seymchan 36.02 7⇓ *e*P **P** 05 35 44.5 +1.2
GTA Gaotai 37.58 300 *e*P **P** 05 35 56.8 -0.3
GTA pP **pP** 05 36 08.8 -0.3
GTA sP **sP** 05 36 13.7 -0.6
GTA pmax pmax
comp=Z,2.0nm,0.9s
ZAK Zakamensk 37.78 318 *e*P **P** 05 35 59.2 +0.6
ZAK pmax pmax
comp=Z,5.0nm,1.0s
CMAR Chiang Mai Arr 41.31 267 P **P** 05 36 28.1 -0.2
CMAR Chiang Mai Arr 41.31 267 P **P** 05 36 28.1 -0.2
comp=Z,0.7nm,0.4s,baz=108,slow=3.8,SNR=4.0
CMAR LR LR 05 52 41.3
comp=Z,27nm,18.8s,baz=110,slow=35
BILL Bilibino 42.96 13⇑ *e*P **P** 05 36 40.7 -0.3
BILL *e* 05 38 18.8
BILL *e*S **S** 05 42 59.8 -3.0
BILL pmax pmax
comp=Z,2.0nm,1.7s
BILL MLR MLR
comp=Z,100nm,18.0s
HVS Khovu-Aksy 43.80 316⇑ *e*P **P** 05 36 49.6 +1.4
HVS pmax pmax
comp=Z,40nm,1.0s
WMQ Urumqi 46.91 305 *e*P **P** 05 37 14.8 +1.9
WRAB Tennant Creek 47.84 191 *e*P **P** 05 37 18.9 -1.3
WRAB pmax pmax
comp=Z,14nm,0.8s
WRAB Tennant Creek 47.84 191 *e*P **P** 05 37 18.9 -1.3
comp=Z,14nm,0.8s
WRA Warramunga Arr 47.85 191 P **P** 05 37 18.8 -1.5
WRA Warramunga Arr 47.85 191 P **P** 05 37 18.8 -1.5
comp=Z,11nm,0.7s,baz=11,slow=8.4,SNR=10
PSI Prapat 48.65 248 P **P** 05 37 27.0 +0.2
PSI Prapat 48.65 248 P **P** 05 37 27.0 +0.2
comp=Z,5.1nm,0.7s,baz=72,slow=4.6,SNR=3.9
ZAA0 Zalesovo Array 49.65 319 *e*P **P** 05 37 34.4 +0.7
ZAA0 *ep*P **pP** 05 37 46.1 0.0
ZAA0 *es*P **sP** 05 37 51.7 +0.4
ZAA0 *ePc*P **PcP** 05 38 55.3 +0.7
ZALV Zalesovo Beam 49.65 319 P **P** 05 37 34.8 +1.0
ZALV 05 38 55.0
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 49.65 319 P **P** 05 37 34.8 +1.0
ZALV PcP **PcP** 05 38 55.0 +0.4
ZALV Zalesovo Beam 49.65 319 P **P** 05 37 34.8 +1.0
comp=Z,3.2nm,0.6s,baz=102,slow=6.5,SNR=20
ZALV PcP **PcP** 05 38 55.0 +0.4
comp=Z,1.2nm,0.5s,baz=90,slow=4.3,SNR=3.5
NVS Novosibirsk 50.69 320 *e*P **P** 05 37 41.1 -0.5
NVS pmax pmax
comp=N,9.0nm,2.0s
NVS pmax pmax
comp=E,19nm,2.0s
NVS pmax pmax
comp=Z,22nm,2.0s
MK31 Makanchi Array 50.76 309 *i* P **P** 05 37 42.7 +0.4
MK31 pmax pmax
comp=Z,1.0nm,0.3s
MK31 Makanchi Array 50.76 309 P **P** 05 37 41.1 -1.2
MKAR Makanchi Array 50.76 309 P **P** 05 37 42.5 +0.2
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 50.76 309 P **P** 05 37 42.5 +0.2
MKAR Makanchi Array 50.76 309 P **P** 05 37 42.5 +0.2
comp=Z,0.7nm,0.4s,baz=87,slow=9.4,SNR=11
ASAR Alice Springs 51.57 191 P **P** 05 37 47.0 -1.5
ASAR PcP **PcP** 05 39 02.7 +0.6
ASAR Alice Springs 51.57 191 P **P** 05 37 47.0 -1.5
comp=Z,0.6nm,0.4s,baz=8.0,slow=5.6,SNR=8.7
ASAR PcP **PcP** 05 39 02.7 +0.6
comp=Z,0.8nm,0.8s,baz=12,slow=4.8,SNR=3.5
KURK Kurchatov 53.21 314 *e*P **P** 05 38 00.9 +0.5
KURK pmax pmax
comp=Z,11nm,1.0s
KURK Kurchatov 53.21 314 *e*P **P** 05 38 00.9 +0.5
comp=Z,10nm,1.0s
KDAK Kodiak Island 53.67 37 P **P** 05 38 03.0 -0.7
KDAK Kodiak Island 53.67 37 P **P** 05 38 03.0 -0.7
comp=Z,6.9nm,0.7s,baz=276,slow=10,SNR=8.4
TRF Thorofare Moun 55.45 30 *e*P **P** 05 38 16.4 -0.3
comp=Z,6.5nm,1.0s
TKM2 Tokmak 2 55.76 305 *e*P **P** 05 38 20.3 +1.0
TKM2 pmax pmax
comp=Z,35nm,2.6s
TKM2 Tokmak 2 55.76 305 *e*P **P** 05 38 20.3 +1.0
comp=Z,35nm,2.6s
KSH Kashi 55.97 301 *e*P **P** 05 38 18.9 -1.9
KSH *ep*P **pP** 05 38 31.5 -1.8
KSH *es*P **sP** 05 38 37.0 -1.4
KSH *ePc*P **PcP** 05 39 18.8 -0.1
KSH *eP*P **PP** 05 40 23.7 -2.0
KSH *eS*cP **ScP** 05 43 12.1 -2.4
KSH *ePc*S **PcS** 05 43 17.3 -2.1
KSH *e*S S 05 45 57.6 -8.3
KSH *es*S sS 05 46 19.0 -7.8
KSH *eS*cS **ScS** 05 48 00.6 -6.0
KSH Kashi 55.97 301 *es*S SS 05 49 43.2 -8.9
KSH pmax pmax
comp=Z,160nm,4.0s
KSH pmax pmax
comp=Z,4.0nm,1.0s
KSH LR LR
comp=N,140nm,5.5s
KSH LR LR
comp=E,130nm,5.1s
KSH LR LR
comp=Z,80nm,2.7s
COLD Coldfoot 56.05 26 *e*P **P** 05 38 21.6 +0.8
comp=Z,4.9nm,0.9s
COLD *ep*P **pP** 05 38 35.2 +1.9
AAK Ala-Archa 56.60 305⇑ *e*P **P** 05 38 26.2 +0.9
AAK pmax pmax
comp=Z,7.0nm,1.7s
ILAR Eielson Array 57.08 29 P **P** 05 38 27.6 -0.6
ILAR Eielson Array 57.08 29 P **P** 05 38 27.6 -0.6
comp=Z,3.9nm,0.9s,baz=262,slow=6.0,SNR=41
PAX Paxson 57.58 31 *e*P **P** 05 38 32.5 +0.7
PAX pmax pmax
comp=Z,14nm,1.5s
PAX Paxson 57.58 31 *e*P **P** 05 38 32.5 +0.7
comp=Z,14nm,1.5s
VOSK Vostochnaya 57.89 317 P **P** 05 38 34.5 +0.4
VOSK pmax pmax
comp=Z,9.0nm,0.9s
BVA0 Borovoye Array 58.23 317 *i* P **P** 05 38 37.4 +1.0
BVA0 pmax pmax
comp=Z,2.0nm,0.5s
BRVK Borovoye 58.29 317⇑ *e*P **P** 05 38 38.5 +1.7
BRVK pmax pmax
comp=Z,11nm,1.0s
BRVK Borovoye 58.29 317 *e*P **P** 05 38 38.3 +1.4
comp=Z,9.4nm,0.9s
BRVK *ep*P **pP** 05 38 50.4 +1.0
STKA Stephens Creek 59.02 181 P **P** 05 38 40.6 -1.4
STKA Stephens Creek 59.02 181 P **P** 05 38 40.6 -1.4
comp=Z,2.2nm,0.4s,baz=352,slow=8.9,SNR=11
ZRNK Zerenda 59.07 317 P **P** 05 38 43.3 +1.1
ZRNK pmax pmax
comp=Z,13nm,1.3s
KK31 Karatay Array 59.41 306 *i* P **P** 05 38 45.5 +0.7
KK31 pmax pmax
comp=Z,3.0nm,0.7s
KKAR Karatay Array 59.41 306 *e*P **P** 05 38 45.7 +0.8
KKAR Karatay Array 59.41 306 *e*P **P** 05 38 45.6 +0.8
HYB Hyderabad 59.78 275 *i* P **P** 05 38 47.0 -0.7
ARU Arti 64.55 322 *d i*P **P** 05 39 20.3 +1.3
ARU 05 41 39.7
ARU S **S** 05 47 58.9 +3.9
ARU SS **SS** 05 52 08.2 +2.7
ARU pmax pmax
comp=Z,9.0nm,1.0s
AB31 Akbulak array 65.32 314 *i* P **P** 05 39 24.9 +0.7
AB31 pmax pmax
comp=Z,5.0nm,0.5s
ABKAR Akbulak array 65.32 314 *e*P **P** 05 39 25.1 +0.9
YKA Yellowknife Ar 71.51 29 P **P** 05 40 02.9 +0.3
YKA Yellowknife Ar 71.51 29 P **P** 05 40 02.8 +0.3
comp=Z,2.8nm,0.7s,baz=294,slow=5.8,SNR=41
RES Resolute Bay 71.55 14 *e*P **P** 05 40 03.3 +0.6
comp=Z,4.1nm,1.3s
RES *ep*P **pP** 05 40 15.6 0.0
ARCES ARCESS Array B 73.42 341 P **P** 05 40 15.1 +1.2
ARCES ARCESS Array B 73.42 341 P **P** 05 40 15.1 +1.2
comp=Z,1.3nm,0.6s,baz=73,slow=6.8,SNR=6.3
JOF Joensuu 75.05 334 *e*P **P** 05 40 23.3 -0.1
JOF pmax pmax
comp=Z,5.0nm,0.6s
JOF Joensuu 75.05 334 *ep* **P** 05 40 23.3 -0.1
comp=Z,4.5nm,0.6s
NEW Newport 76.19 43 *e*P **P** 05 40 31.0 +0.7
comp=Z,4.6nm,0.9s
NEW Newport 76.19 43 ⇓P **P** 05 40 31.2 +0.9
baz=76
OBN Obninsk 76.61 325⇑ *e*P **P** 05 40 33.7 +1.2
OBN *e* 05 43 24.3
OBN *eS* S 05 50 09.5 -5.9
OBN *eSS* SS 05 55 19.2 +8.7
OBN pmax pmax
comp=Z,10.0nm,0.5s
KAF Kangasniemi 77.44 334 *e*P **P** 05 40 36.8 -0.2
KAF pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 77.44 334 *ep* **P** 05 40 36.8 -0.2
comp=Z,3.4nm,0.5s
A13A Flathead Natio 77.50 41 ⇓P **P** 05 40 38.8 +1.0
baz=77
B13A Whitefish 77.73 42 ⇑P **P** 05 40 40.2 +1.2
baz=78
D12A Red Ives Fores 77.80 43 ⇑P **P** 05 40 40.7 +1.2
baz=78
FINES FINESS Array B 77.92 334 P **P** 05 40 40.4 +0.8
FINES FINESS Array B 77.92 334 P **P** 05 40 40.4 +0.8
comp=Z,2.4nm,0.4s,baz=72,slow=6.0,SNR=28
C13A Hot Springs 77.98 42 ⇓P **P** 05 40 41.4 +0.9
baz=78
ZEI Tsey 78.01 312 *e*P **P** 05 40 40.9 0.0
ZEI pmax pmax
comp=Z,4.0nm,0.9s
A14A Double T Ranch 78.06 41 ⇓P **P** 05 40 42.0 +1.0
baz=78
JTMT Jette 78.13 42 *e*P **P** 05 40 42.4 +1.0
KBZ Khabaz 78.25 313 P **P** 05 40 43.8 +1.9
KBZ pmax pmax
comp=Z,7.0nm,0.8s
KBZ Khabaz 78.25 313 P **P** 05 40 43.8 +1.9
KBZ Khabaz 78.25 313 P **P** 05 40 43.8 +1.9
comp=Z,7.1nm,0.8s,baz=94,slow=3.9,SNR=17
KIV Kislovodsk 78.28 313 *e*P **P** 05 40 44.8 +2.6
KIV pmax pmax
comp=Z,10.0nm,1.0s
KIV MLR MLR
comp=Z,85nm,19.0s
D13A Huson 78.32 43 ⇓P **P** 05 40 43.0 +0.6
baz=78
SWMT Swartz Lake 78.41 42 *e*P **P** 05 40 43.6 +0.7
C14A Swan Lake 78.44 42 ⇑P **P** 05 40 43.6 +0.6
baz=78
B14A Marquette Ranc 78.44 41 ⇑P **P** 05 40 44.4 +1.3
baz=78
A15A Johnson Ranch, 78.46 41 ⇑P **P** 05 40 43.7 +0.6
baz=78
CMB Columbia Colle 78.47 53 *e*P **P** 05 40 43.9 +0.6
CMB pmax pmax
comp=Z,8.0nm,1.1s
CMB Columbia Colle 78.47 53 *e*P **P** 05 40 43.9 +0.6
comp=Z,8.2nm,1.1s
G12A Big Creek, Yel 78.70 45 ⇓P **P** 05 40 45.3 +0.7
baz=79
MSO Missoula 78.76 43 ⇓P **P** 05 40 45.4 +0.6
baz=79
SLMT Seeley Lake 78.84 42 *e*P **P** 05 40 45.5 +0.2
B15A Bradely Ranch, 78.88 41 ⇓P **P** 05 40 46.2 +0.8
baz=79,SNR=6.6
D14A Greenough 78.90 43 ⇑P **P** 05 40 46.4 +0.8
baz=79
F13A Darby 79.01 44 ⇑P **P** 05 40 46.8 +0.5
baz=79
C15A Salmond Ranch, 79.11 42 ⇑P **P** 05 40 47.5 +0.7
baz=79
A16A West Butte Ran 79.13 40 ⇑P **P** 05 40 47.4 +0.6
baz=79,SNR=6.7
MFID Camas Ranch 79.17 47 *e*P **P** 05 40 47.6 +0.5
comp=Z,6.1nm,0.9s
MFID Camas Ranch 79.17 47 ⇓P **P** 05 40 48.1 +1.0
baz=79,SNR=8.2
E14A Clinton 79.23 43 ⇑P **P** 05 40 47.9 +0.4
baz=79
H12A Diamond D Ranc 79.26 45 ⇓P **P** 05 40 48.3 +0.6
baz=79
B16A M & M Farms, S 79.33 41 ⇓P **P** 05 40 48.6 +0.8
baz=79,SNR=7.0
VSU Vasula 79.40 331 *i* P **P** 05 40 49.0 +1.1
VSU pmax pmax
comp=Z,13nm,0.9s
G13A Cobalt 79.40 45 ⇑P **P** 05 40 48.7 +0.3
baz=79,SNR=7.7
I12A Atlanta 79.44 46 ⇑P **P** 05 40 49.2 +0.5
baz=79
C16A Fuhringer Ranc 79.60 41 ⇓P **P** 05 40 50.1 +0.7
baz=80,SNR=10
H13A Challis 79.64 45 ⇑P **P** 05 40 50.9 +1.2
baz=80,SNR=5.2
A17A Triple J Farms 79.64 40 ⇓P **P** 05 40 50.3 +0.8
baz=80
E15A Deer Lodge 79.74 43 ⇓P **P** 05 40 50.8 +0.5
baz=80,SNR=5.6
NVAR Mina Array Bea 79.77 52 P **P** 05 40 51.7 +1.0
NVAR Mina Array Bea 79.77 52 P **P** 05 40 51.7 +1.0
comp=Z,3.0nm,0.8s,baz=289,slow=5.6,SNR=18
B17A L&G Farms, Che 79.91 41 ⇑P **P** 05 40 52.0 +1.0
baz=80,SNR=12
HLID Hailey 80.01 46 *e*P **P** 05 40 51.5 -0.3
comp=Z,2.6nm,0.9s
HLID Hailey 80.01 46 ⇑P **P** 05 40 52.7 +0.9
baz=80
I13A Wildhorse Cree 80.03 46 ⇑P **P** 05 40 52.9 +1.0
baz=80
HRY Holter Researc 80.09 42 *e*P **P** 05 40 52.9 +0.8
comp=Z,1.9nm,0.4s
HRY *ep*P **pP** 05 41 05.8 +0.6
D16A Dana Ranch, Ca 80.10 42 ⇓P **P** 05 40 53.0 +0.8
baz=80
F15A Butte 80.11 43 ⇓P **P** 05 40 53.0 +0.6
baz=80,SNR=12
A18A Metzger Ranch, 80.14 40 ⇑P **P** 05 40 53.0 +0.8
baz=80,SNR=5.5
LRM Limekiln Ridge 80.15 43 *e*P **P** 05 40 53.2 +0.7
LRM *ep*P **pP** 05 41 05.8 +0.2
H14A Leadore 80.17 45 ⇑P **P** 05 40 53.4 +0.7
baz=80
J13A Cove Ranch, Pi 80.24 46 ⇑P **P** 05 40 53.8 +0.8
baz=80
C17A Wharram Farm, 80.26 41 ⇓P **P** 05 40 53.8 +0.8
baz=80
E16A East Helena 80.27 42 ⇑P **P** 05 40 54.0 +0.9
baz=80,SNR=6.0
DLMT Dillon 80.28 44 *e*P **P** 05 40 54.8 +1.6
comp=Z,3.4nm,0.9s
VES Vestal, Richgr 80.38 55 ⇓P **P** 05 40 54.3 +0.6
baz=80
I14A Mackay 80.45 45 ⇑P **P** 05 40 55.5 +1.4
baz=80,SNR=10
G15A Dillon 80.45 44 ⇑P **P** 05 40 55.0 +0.9
baz=80
D17A Six Diamond Ra 80.55 42 ⇑P **P** 05 40 55.3 +0.8
baz=80,SNR=8.9
EGMT Eagleton 80.65 41 ⇓P **P** 05 40 55.7 +0.7
baz=80
F16A Kennard Place, 80.67 43 ⇑P **P** 05 40 56.1 +0.9
baz=80,SNR=6.7
J14A Carey 80.70 46 ⇑P **P** 05 40 56.8 +1.4
baz=81,SNR=5.4
BOZ Bozeman (W) 80.74 43 *e*P **P** 05 40 56.2 +0.6
BOZ pmax pmax
comp=Z,2.0nm,0.8s
BOZ Bozeman (W) 80.74 43 *e*P **P** 05 40 56.2 +0.6
comp=Z,1.8nm,0.8s
A19A Klindworth Far 80.76 39 ⇑P **P** 05 40 56.5 +1.0
baz=81,SNR=9.0
E17A Martinsdale 80.80 42 ⇓P **P** 05 40 57.0 +1.0
baz=81,SNR=6.3
G16A Moss Hill, Enn 80.84 44 ⇑P **P** 05 40 56.8 +0.6
baz=81,SNR=7.2
B19A Brinkman Farms 80.89 40 ⇓P **P** 05 40 57.1 +0.9
baz=81,SNR=9.3
ISA Isabella 80.90 55 ⇓P **P** 05 40 57.5 +0.9
baz=81
I15A Monteview 81.02 45 ⇓P **P** 05 40 58.3 +1.2
baz=81
D18A Linhart Farms, 81.05 41 ⇑P **P** 05 40 58.3 +1.2
baz=81
FFC Flin Flon 81.08 32 *e*P **P** 05 40 57.8 +0.7
FFC pmax pmax
comp=Z,6.0nm,0.9s
FFC Flin Flon 81.08 32 *e*P **P** 05 40 57.8 +0.7
comp=Z,6.4nm,0.9s
GRAC Grapevine Rang 81.08 53 ⇑P **P** 05 40 58.5 +1.1
baz=81
F17A Fitzpatrick Pl 81.19 43 ⇑P **P** 05 40 59.0 +1.0
baz=81
C19A Slack Wire Ran 81.21 41 ⇓P **P** 05 40 59.0 +1.0
baz=81,SNR=8.4
K14A Jones Ranch, D 81.30 47 ⇑P **P** 05 40 59.6 +1.0
baz=81
E18A Harlowton 81.30 42 ⇓P **P** 05 40 59.7 +1.1
baz=81,SNR=9.6
J15A Blackfoot 81.35 46 ⇑P **P** 05 41 00.2 +1.3
baz=81
MPMC Manual Prospec 81.43 54 ⇓P **P** 05 41 00.5 +1.0
baz=81
G17A Pierce Place, 81.44 43 ⇑P **P** 05 41 00.8 +1.4
baz=81
H16A Russell Place, 81.44 44 ⇑P **P** 05 41 00.6 +1.2
baz=81
LRMC Laurel Mountai 81.56 54 ⇑P **P** 05 41 01.1 +1.0
baz=81
D19A Cripps Ranch, 81.60 41 ⇑P **P** 05 41 01.0 +0.9
baz=81,SNR=5.9
FURC Furnace Creek, 81.69 53 ⇑P **P** 05 41 01.8 +1.2
baz=82
R11A Troy Canyon, C 81.70 51 ⇑P **P** 05 41 01.8 +0.8
baz=82
I16A Newdale 81.71 45 ⇑P **P** 05 41 02.2 +1.3
baz=82
F18A Big Timber 81.76 42 ⇑P **P** 05 41 02.1 +1.1
baz=82
C20A Veseth Ranch, 81.82 40 ⇑P **P** 05 41 02.2 +1.1
baz=82,SNR=5.8
E19A Rath Farm, Rou 82.03 42 ⇑P **P** 05 41 03.1 +0.7
baz=82,SNR=11
IMW Indian Meadow 82.04 45 *e*P **P** 05 41 03.7 +1.0
comp=Z,4.6nm,1.0s
D20A Manuel Ranch, 82.07 41 ⇑P **P** 05 41 03.6 +1.1
baz=82,SNR=7.3
K16A Soda Springs 82.17 46 ⇓P **P** 05 41 04.8 +1.5
baz=82
MOOW Moose Ponds 82.24 45 *e*P **P** 05 41 04.2 +0.5
comp=Z,2.6nm,1.0s
F19A Roth Farm, Mol 82.25 42 ⇑P **P** 05 41 04.1 +0.5
baz=82
C21A Desert Coulee 82.28 40 ⇓P **P** 05 41 04.6 +1.0
baz=82,SNR=9.3
A22A Carney Farms, 82.30 38 ⇓P **P** 05 41 04.1 +0.4
baz=82,SNR=8.2
SHOC Shoshone 82.37 54 ⇑P **P** 05 41 04.7 +0.4
baz=82
E20A Meyer Farm, Mu 82.39 41 ⇑P **P** 05 41 05.1 +0.9
baz=82
DUG Dugway 82.69 48 *e*P **P** 05 41 06.9 +0.9
DUG pmax pmax
comp=Z,5.0nm,0.9s
DUG Dugway 82.69 48 *e*P **P** 05 41 06.8 +0.9
comp=Z,5.5nm,0.9s
DUG Dugway 82.69 48 ⇓P **P** 05 41 06.7 +0.7
baz=82
AKASG Malin Array Be 82.72 324 P **P** 05 41 05.7 0.0
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 82.72 324 P **P** 05 41 05.7 0.0
AKASG Malin Array Be 82.72 324 P **P** 05 41 05.7 0.0
comp=Z,0.6nm,0.4s,baz=48,slow=6.1,SNR=5.0
MURC Murrieta 82.79 56 ⇑P **P** 05 41 07.1 +0.6
baz=83
HWUT Hardware Ranch 82.80 47 *e*P **P** 05 41 07.3 +0.7
comp=Z,6.8nm,1.2s
HWUT *ePc*P **PcP** 05 41 12.3 +0.9
HWUT *ep*P **pP** 05 41 20.4 +0.7
H19A Powell 82.84 43 ⇑P **P** 05 41 08.0 +1.3
baz=83
J18A Kendall Valley 82.97 45 ⇓P **P** 05 41 08.4 +0.9
baz=83,SNR=6.5
C22A Vida 83.01 39 ⇑P **P** 05 41 07.8 +0.4
baz=83
G20A Bridger 83.02 42 ⇓P **P** 05 41 07.9 +0.3
baz=83
B23A Brockton 83.11 38 ⇓P **P** 05 41 08.4 +0.6
baz=83,SNR=9.3
I19A Meeteetse 83.17 44 ⇑P **P** 05 41 09.6 +1.1
baz=83
PFO Pinyon Flat Ob 83.33 56 ⇑P **P** 05 41 09.6 +0.2
baz=83
GMRC Granite Mounta 83.35 54 ⇓P **P** 05 41 10.1 +0.6
baz=83
C23A Lambert 83.37 39 ⇓P **P** 05 41 09.4 +0.2
baz=83
JLU Jordanelle 83.39 48 *e*P **P** 05 41 10.3 +0.6
comp=Z,4.8nm,1.0s
A24A Westby 83.39 38 ⇓P **P** 05 41 09.7 +0.5
baz=83
M17A Scullys Gap (B 83.45 47 ⇑P **P** 05 41 10.6 +0.6
baz=83
ARUT Antelope Range 83.45 51 *e*P **P** 05 41 11.0 +0.9
ARUT *e*PP **pP** 05 41 23.6 +0.4
ARUT pmax pmax
comp=Z,2.0nm,0.5s
ARUT Antelope Range 83.45 51 *e*P **P** 05 41 11.0 +0.9
comp=Z,1.6nm,0.5s
ARUT *ep*P **pP** 05 41 23.6 +0.4
BELC Belle Mtn. Jos 83.48 55 ⇑P **P** 05 41 10.5 +0.3
baz=83
PDAR Pinedale Array 83.49 45 P **P** 05 41 10.4 +0.3
PDAR Pinedale Array 83.49 45 P **P** 05 41 10.4 +0.3
comp=Z,1.9nm,1.0s,baz=281,slow=3.2,SNR=11
NB2 NORSAR Subarra 83.52 339 P **P** 05 41 09.3 -0.4
comp=Z,2.8nm,0.8s,baz=40,slow=4.8
NOA NORSAR Array B 83.52 339 P **P** 05 41 10.3 +0.6
NOA NORSAR Array B 83.52 339 P **P** 05 41 10.3 +0.6
comp=Z,2.3nm,0.9s,baz=41,slow=4.9,SNR=17
DGMT Dagmar 83.54 38 ⇑P **P** 05 41 10.0 -0.1
baz=83
J19A Crowheart 83.54 44 ⇑P **P** 05 41 11.5 +1.1
baz=83
G21A Lodge Grass 83.62 42 ⇓P **P** 05 41 11.4 +0.8
baz=84
CCUT Cedar City 83.62 51 *e*P **P** 05 41 11.8 +0.8
comp=Z,4.0nm,1.2s
MONP Monument Peak 83.70 56 ⇓P **P** 05 41 12.1 +0.7
baz=84
I20A Worland 83.75 43 ⇓P **P** 05 41 12.7 +1.3
baz=84
K19A Absolon Red Bu 83.90 45 ⇑P **P** 05 41 12.9 +0.7
baz=84

MVU	Marysvale	83.94	50	*e*P	P	05 41 13.1	+0.5
	comp=Z,28nm,2.6s						
MSU	Marysvale	83.96	50	*e*P	P	05 41 13.5	+0.8
MSU				*e*		05 41 18.5	
MSU				*e**PP	pP	05 41 26.3	+0.5
MSU				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MSU	Marysvale	83.96	50	*e*P	P	05 41 13.4	+0.8
	comp=Z,1.1nm,0.9s						
MSU				*e*PcP	PcP	05 41 18.5	+1.9
MSU				*e*pP	pP	05 41 26.3	+0.5
L19A	Farson	83.96	45	⇑P	P	05 41 13.4	+0.8
	baz=84						
IRM	Iron Mountain	84.02	55	⇑P	P	05 41 13.6	+0.8
	baz=84						
E23A	Ismay	84.03	40	⇑P	P	05 41 13.5	+0.8
	baz=84						
H21A	Big Horn, Sher	84.04	42	⇑P	P	05 41 13.7	+0.9
	baz=84						
BC3	Big Chuckawall	84.04	55	⇑P	P	05 41 13.7	+0.6
	baz=84						
K20A	Yellowstone Ra	84.31	45	⇑P	P	05 41 14.8	+0.5
	baz=84						
I21A	Big Trails, Te	84.33	43	⇑P	P	05 41 15.1	+0.7
	baz=84						
F23A	Volborg	84.40	41	⇑P	P	05 41 15.1	+0.5
	baz=84						
Q16A	Castle Valley	84.43	49	⇑P	P	05 41 15.8	+0.8
	baz=84						
P17A	Butcher Ranch,	84.43	48	⇓P	P	05 41 15.9	+1.0
	baz=84						
W13A	Hualapai Mount	84.47	53	⇑P	P	05 41 15.7	+0.3
	baz=84						
J21A	Lysite	84.49	44	⇑P	P	05 41 15.7	+0.5
	baz=84						
L20A	Wamsutter	84.65	45	⇓P	P	05 41 16.7	+0.6
	baz=84						
Y12C	Blythe	84.67	55	⇓P	P	05 41 16.7	+0.6
	baz=85						
P18A	Preston Nutter	84.68	48	⇑P	P	05 41 17.0	+0.6
	baz=84						
PDMCI	Parker Dam,Lak	84.68	54	⇑P	P	05 41 16.4	+0.4
	baz=85						
G23A	Biddle	84.70	41	⇓P	P	05 41 16.8	+0.6
	baz=84						
I22A	9 Mile Ranch,	84.78	43	⇑P	P	05 41 17.3	+0.7
	baz=85						
GLA	Glamis	84.79	56	⇑P	P	05 41 17.6	+0.9
	baz=85						
F24A	Ekalaka	84.89	40	⇓P	P	05 41 17.8	+0.8
	baz=85						
U15A	North Rim	84.93	52	⇑P	P	05 41 18.4	+0.7
	baz=85						
K21A	Alcova	85.00	44	⇓P	P	05 41 18.7	+0.9
	baz=85						
M20A	Sweetwater, Wa	85.03	46	⇓P	P	05 41 18.6	+0.6
	baz=85						
J22A	Midwest	85.04	43	⇑P	P	05 41 18.5	+0.5
	baz=85						
O19A	Miners Draw (B	85.06	47	⇑P	P	05 41 18.2	+0.1
	baz=85						
L21A	Rawlins	85.29	45	⇑P	P	05 41 19.5	+0.2
	baz=85						
N20A	Spence Gulch,	85.33	46	⇑P	P	05 41 20.1	+0.6
	baz=85						
K22A	Casper	85.44	44	⇑P	P	05 41 20.5	+0.5
	baz=85						
H24A	Dirks Ranch, A	85.45	41	⇑P	P	05 41 20.1	+0.2
	baz=85						
M21A	Separation Pea	85.48	45	⇓P	P	05 41 21.0	+0.7
	baz=85						
P19A	Cripple Cowboy	85.50	47	⇓P	P	05 41 21.2	+0.7
	baz=85						
Y14A	Wickenburg	85.68	54	⇓P	P	05 41 22.0	+0.8
	baz=86						
O20A	White River Ci	85.72	47	⇓P	P	05 41 22.1	+0.6
	baz=86						
N21A	Black Mountain	85.84	46	⇓P	P	05 41 22.7	+0.6
	baz=86						
S18A	Hurst Farm, Bl	85.85	49	⇑P	P	05 41 22.8	+0.5
	baz=86						
K23A	Bowen Ranch, D	85.93	43	⇓P	P	05 41 22.8	+0.4
	baz=86						
Z14A	Wintersburg	86.01	54	⇑P	P	05 41 23.5	+0.8
	baz=86						
WUAZ	Wupatki	86.03	52	⇑P	P	05 41 23.9	+0.8
	baz=86						
M22A	Cedar Creek Ra	86.08	45	⇓P	P	05 41 24.0	+0.7
	baz=86						
J24A	Dixon Ranch, L	86.19	43	⇑P	P	05 41 24.2	+0.6
	baz=86						
L23A	Garrett	86.24	44	⇑P	P	05 41 24.3	+0.3
	baz=86						
BR131	Keskin Array S	86.24	313	*e*P	P	05 41 24.9	+0.9
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	86.24	313	P	P	05 41 24.4	+0.5
BRTR	Keskin Array B	86.24	313	P	P	05 41 24.4	+0.5
	comp=Z,2.7nm,0.9s,baz=90,slow=3.8,SNR=13						
Q20A	Ridgley Place,	86.32	48	⇓P	P	05 41 25.2	+0.8
	baz=86						
X16A	Lo Mia Camp, P	86.55	53	⇓P	P	05 41 26.6	+0.9
	baz=86						
P21A	Newcastle	86.56	47	⇓P	P	05 41 26.5	+0.9
	baz=86						
PV01	Paradox Valley	86.58	49	*e*P	P	05 41 26.0	+0.2
	comp=Z,206nm,0.8s						
M23A	Laramie	86.59	45	⇓P	P	05 41 26.2	+0.4
	baz=86						
R20A	Redvale	86.67	48	⇓P	P	05 41 27.0	+0.7
	baz=86						
N23A	Red Feather La	86.77	45	⇓P	P	05 41 27.5	+0.8
	baz=87						
ULM	Lac du Bonnet	86.78	33	P	P	05 41 25.9	-0.3
ULM	Lac du Bonnet	86.78	33	P	P	05 41 25.9	-0.3
	comp=Z,1.1nm,0.5s,baz=315,slow=4.3,SNR=3.7						
O22A	Kremmling	86.79	46	⇓P	P	05 41 27.2	+0.3
	baz=87						
214A	Organ Pipe Nat	86.81	56	⇓P	P	05 41 27.5	+0.7
	baz=87						
S20A	Disappointment	86.88	49	⇑P	P	05 41 27.5	+0.2
	baz=87						
P22A	Eagle	86.97	47	⇓P	P	05 41 28.1	+0.4
	baz=87						
SMCO	Snowmass	87.06	47	*e*P	P	05 41 28.9	+0.6
	comp=Z,5.8nm,1.4s						
R21A	Cimarron	87.12	48	⇓P	P	05 41 29.4	+1.0
	baz=87						
O23A	Lake Granby, G	87.17	46	⇓P	P	05 41 29.7	+1.0
	baz=87						
Q22A	Crested Butte,	87.27	47	⇑P	P	05 41 30.0	+0.7
	baz=87						
V20A	Brimhall	87.90	50	⇓P	P	05 41 32.8	+0.6
	baz=88						
S22A	4UR Ranch, Cre	87.94	48	⇓P	P	05 41 32.9	+0.5
	baz=88						
AGMN	Agassiz Nation	88.05	35	*e*P	P	05 41 32.5	+0.1
TUC	Tucson	88.11	54	*e*P	P	05 41 34.3	+1.2
TUC	Tucson	88.11	54	*e*P	P	05 41 34.2	+1.2
W20A	Ramah	88.23	51	⇑P	P	05 41 34.1	+0.3
	baz=88						
T22A	Edith	88.30	49	⇑P	P	05 41 34.5	+0.4
	baz=88						
X20A	Quemado	88.55	52	⇑P	P	05 41 36.0	+0.7
	baz=88						
R24A	Sanders Place,	88.80	47	⇑P	P	05 41 37.4	+1.0
	baz=89						
Y20A	Horse Springs,	88.98	52	⇓P	P	05 41 38.7	+1.4
	baz=89						
Z20A	Nine Sixteen R	89.25	53	⇑P	P	05 41 39.8	+1.2
	baz=89						
VYHS	Vyhne	89.36	327	*e*P	P	05 41 39.6	+1.0
VYHS	Vyhne	89.36	327	*e*P	P	05 41 39.6	+1.0
ANMO	Albuquerque	89.74	50	*e*P	P	05 41 42.0	+1.2
	comp=Z,8.2nm,1.6s						
220A	Playas Peak, P	89.95	54	⇓P	P	05 41 42.6	+0.8
	baz=90						
121A	Cookes Peak, D	90.14	53	⇑P	P	05 41 43.9	+1.2
	baz=90						
320A	Kipp Ranch, An	90.25	54	⇓P	P	05 41 43.7	+0.5
	baz=90						
T26A	Comanche Natio	90.39	47	⇑P	P	05 41 44.2	+0.4
	baz=90						
Y23A	Lovelace Mesa,	90.58	51	⇓P	P	05 41 45.3	+0.6
	baz=90						
ECSD	EROS Data Cent	90.60	39	*e*P	P	05 41 45.0	+0.6
	comp=Z,9.3nm,1.4s						
T28A	Walsh	91.38	46	⇓P	P	05 41 48.9	+0.6
	baz=91						
GERES	GERESS Array B	91.54	329	P	P	05 41 48.6	-0.2
GERES	GERESS Array B	91.54	329	P	P	05 41 48.6	-0.2
	comp=Z,0.4nm,0.5s,baz=66,slow=3.3,SNR=4.5						
SPMN	St. Paul	91.67	36	⇑P	P	05 41 49.9	+0.6
	baz=92						
124A	Stringfield Ra	91.68	52	⇓P	P	05 41 50.6	+0.6
	baz=92						
U28A	Mallet	91.74	47	⇓P	P	05 41 50.8	+0.8
	baz=92						
Z25A	Roswell	91.87	51	⇓P	P	05 41 51.6	+0.9
	baz=92						
W27A	Bowe Ranch, En	91.96	49	⇑P	P	05 41 52.0	+0.9
	baz=92						
224A	Cornudas Mount	91.98	52	⇓P	P	05 41 52.0	+0.7
	baz=92						
125A	Gardner Draw,	92.26	51	⇑P	P	05 41 53.4	+0.9
	baz=92						
324A	Moseley Ranch,	92.37	53	⇑P	P	05 41 53.9	+0.9
	baz=92						
Z26A	Caprock	92.38	50	⇓P	P	05 41 53.6	+0.6
	baz=92						
Y27A	Causey	92.58	50	⇑P	P	05 41 54.6	+0.6
	baz=92						
325A	Bean Ranch, Si	92.77	53	⇓P	P	05 41 55.5	+0.5
	baz=93						
Z27A	Tatum	92.88	50	⇑P	P	05 41 55.9	+0.6
	baz=93						
226B	Tecolote Peak,	92.93	52	⇑P	P	05 41 56.1	+0.5
	baz=93						
425A	Indio Mountain	93.09	53	⇓P	P	05 41 57.3	+0.9
	baz=93						
Y28A	McKinney Farm,	93.18	49	⇑P	P	05 41 57.3	+0.6
	baz=93						
X29A	Tulia	93.23	48	⇑P	P	05 41 58.0	+1.0
	baz=93						
U31A	Nine Bar Ranch	93.28	46	⇓P	P	05 41 58.0	+0.9
	baz=93						
Z28A	Tucker Farm, M	93.45	50	⇓P	P	05 41 58.7	+0.8
	baz=93						
326A	Caldwell Ranch	93.50	52	⇓P	P	05 41 58.7	+0.5
	baz=93						
Y29A	Porterfield Fa	93.60	49	⇓P	P	05 41 59.5	+0.9
	baz=93						
V31A	Spring Creek L	93.65	46	⇑P	P	05 41 59.8	+1.1
	baz=94						
X30A	Coker Ranch, T	93.78	48	⇓P	P	05 42 00.3	+0.9
	baz=94						
426A	McDonald Obser	93.83	53	⇓P	P	05 42 00.8	+0.9
	baz=94						
Z29A	Hungry Hill Ra	93.93	49	⇑P	P	05 42 01.5	+1.3
	baz=94						
W31A	Holland Ranch,	93.94	47	⇓P	P	05 42 01.0	+0.9
	baz=94						
526A	Mary Lane Ranc	94.14	53	⇓P	P	05 42 02.2	+1.0
	baz=94						
427A	Hayter Ranch,	94.17	52	⇓P	P	05 42 02.2	+0.9
	baz=94						
X31A	McDonald Ranch	94.25	47	⇓P	P	05 42 02.2	+0.7
	baz=94						
328A	Wristen Ranch,	94.28	51	⇑P	P	05 42 02.4	+0.6
	baz=94						
Z30A	Sanderson Ranc	94.30	49	⇓P	P	05 42 02.4	+0.6
	baz=94						
527A	Woodward Ranch	94.43	53	⇑P	P	05 42 03.0	+0.4
	baz=94						
Y31A	Rekieta Farm,	94.47	48	⇑P	P	05 42 03.2	+0.7
	baz=94						
428A	Kincaid Ranch,	94.74	52	⇑P	P	05 42 04.8	+0.9
	baz=95						
329A	Wagon Wheel Ra	94.79	51	⇓P	P	05 42 04.8	+0.8
	baz=95						
TXAR	Lajitas Array	94.85	54	P	P	05 42 05.4	+1.0
TXAR	Lajitas Array	94.85	54	P	P	05 42 05.4	+1.0
	comp=Z,1.6nm,0.8s,baz=316,slow=2.5,SNR=19						
627A	Terlingua Ranc	94.98	53	⇓P	P	05 42 05.6	+0.6
	baz=95						
Y32A	R-V Farms, Ver	94.99	48	⇑P	P	05 42 05.5	+0.7
	baz=95						
528A	Cox Ranch, San	95.00	52	⇑P	P	05 42 05.8	+0.7
	baz=95						
628A	Black Gap, Mar	95.32	53	⇑P	P	05 42 07.0	+0.5
	baz=95						
429A	Davenport Ranc	95.36	52	⇓P	P	05 42 07.4	+0.8
	baz=95						
330A	Mertzon	95.39	51	⇑P	P	05 42 07.0	+0.2
	baz=95						
Z32A	Haskell	95.39	48	⇑P	P	05 42 07.1	+0.4
	baz=95						
529A	Stev Forest Ra	95.42	52	⇓P	P	05 42 07.5	+0.5
	baz=95						
331A	San Angelo	95.96	50	⇓P	P	05 42 09.0	-0.4
	baz=96						
530A	J-C Ranch, Com	96.02	52	⇓P	P	05 42 10.2	+0.5
	baz=96						
531A	Rocksprings	96.56	51	⇓P	P	05 42 12.5	+0.3
	baz=96						
532A	Rocksprings	97.03	51	⇓P	P	05 42 14.6	+0.3
	baz=97						
QSPA	South Pole Qui	117.23	180	*e*PKPdf	PKPdf	05 47 26.2	-0.2
TORD	Torodi Ar. Bea	124.84	312	PKP	PKPdf	05 47 42.6	+0.1
TORD	Torodi Ar. Bea	124.84	312	PKP	PKPdf	05 47 42.6	+0.1
	comp=Z,0.6nm,1.0s,baz=28,slow=1.7,SNR=4.7						
LPAZ	La Paz	149.19	75	PKPbc	PKPbc	05 48 32.5	+0.7
LPAZ	La Paz	149.19	75	PKPbc	PKPbc	05 48 32.5	+0.7
	comp=Z,3.8nm,0.7s,baz=328,slow=2.3,SNR=16						
PLCA	Paso Flores	149.47	124	PKPbc	PKPbc	05 48 31.8	+0.6
PLCA	Paso Flores	149.47	124	PKPbc	PKPbc	05 48 31.8	+0.6
	comp=Z,2.2nm,0.8s,baz=292,slow=5.0,SNR=4.7						

*NAO **07** 05:52:04.7±0.9, 77°.08N×18°.47E, ML3.5*
*IDC **07** 05:52:05.4±0.8, 77°.07N×18°.00E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=17.6km s-min=6.5km az=73.0*
*CSEM **07** 05:52:05.1±0.3, 77°.20N×18°.86E, h5km, ML3.5, Error ellipse: s-maj=17.4km s-min=5.4km az=58.0*
*ISCJB **07** 05:52:05.9±0.5, 76°.93N±0°.06×18°.3E±0°.2, h16km, mb3.4/4, Error ellipse: s-maj=9.1km s-min=5.0km az=35.3*
*BER **07** 05:52:09.2, 77°.22N×18°.84E, h12km, MD2.4, ML3.5, ML3.5(NAO)*
ISC 07 05:52:05.9±0.6**, 77°.03N**±0°.04×**18°.54E**±0°.04**, h16**km**, n29, σ2s.05**/41**, mb3.4**/4**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSP	Hornsund	0.68	270	*e*P	Pg	05 52 18.2	-0.9
HSP				*e*S	Sg	05 52 26.7	-1.4
SPA0	Spitsbergen Ar	1.25	339	Pg	Pn	05 52 27.5	-1.1
	baz=154,slow=22						
SPA0				Lg	Lg	05 52 42.9	
	baz=156,slow=28						
SPA0	Spitsbergen Ar	1.25	339	Pg	Pn	05 52 27.5	-1.1
	baz=154,slow=22						
SPA0				Lg	Lg	05 52 42.9	
	baz=156,slow=28						
SPA0	Spitsbergen Ar	1.25	339	Pg	Pn	05 52 27.5	-1.1
	baz=154,slow=21,SNR=90						
SPA0				Lg	Lg	05 52 42.9	
	baz=156,slow=26						
SPITS	Spitsbergen Ar	1.25	339	Pg	Pn	05 52 27.6	-1.1
	baz=160,slow=23,SNR=1643						
SPITS				Lg	Lg	05 52 42.8	
	baz=161,slow=30,SNR=22						
HOPEN	Hopen	1.58	106	*e*P	Pb	05 52 34.0	-0.6
HOPEN				*e*S	Sg	05 52 55.7	-1.0
HOPEN	Hopen	1.58	106	*e*P	Pb	05 52 34.0	-0.6
	SNR=55						
HOPEN				*e*S	Sg	05 52 55.7	-1.0
	SNR=55						
KBS	Kingsbay	2.35	327	Pn	Pn	05 52 42.8	-1.0
KBS				Pg	Pb	05 52 47.7	-0.1
KBS				Lg	Lg	05 53 15.6	
KBS	Kingsbay	2.35	327	*e*P	Pn	05 52 42.9	-1.0
KBS				*e*Pg	Pb	05 52 47.7	-0.1
KBS				*e*Sg	Sb	05 53 17.4	+0.8
KBS				AML	AML	05 53 24.3	
	comp=Z,749nm,0.3s						
KBS	Kingsbay	2.35	327	Pn	Pn	05 52 42.8	-1.0
KBS	Kingsbay	2.35	327	*e*Pg	Pb	05 52 47.7	-0.1
	SNR=90						
KBS				Lg	Lg	05 53 15.6	
KBS				*e*Sg	Sb	05 53 17.4	+0.8
	comp=Z,749nm,0.3s,SNR=90						
BJO	Bjornoya	2.54	176	*e*P	Pb	05 52 51.2	+0.1
BJO				*e*S	Sb	05 53 24.9	+2.8
BJO				AML	AML	05 53 28.8	
	comp=Z,292nm,0.6s						
BJO	Bjornoya	2.54	176	*e*P	Pb	05 52 51.2	+0.1
	SNR=55						
BJO				*e*S	Sb	05 53 24.9	+2.8
	comp=Z,292nm,0.6s,SNR=55						
KEV	Kevo	7.69	157	*e*p	Pn	05 53 59.1	+2.1
KEV	Kevo	7.69	157	*e*P	Pn	05 53 59.1	+2.1
ARA0	ARCESS Array S	7.79	162	Pn	Pn	05 53 59.9	+1.5
	baz=356,slow=11						
ARA0				Sn	Sn	05 55 21.9	-4.2
	baz=2.5,slow=22						
ARA0	ARCESS Array S	7.79	162	P	Pn	05 53 59.9	+1.5
	baz=356,slow=11						
ARA0				S	Sn	05 55 21.9	-4.2
	baz=2.5,slow=22						
ARA0	ARCESS Array S	7.79	162	P	Pn	05 53 59.9	+1.5
	baz=356,slow=10,SNR=51						
ARCES	ARCESS Array B	7.79	162	Pn	Pn	05 54 00.3	+1.9
	comp=Z,0.7nm,0.3s,baz=351,slow=11,SNR=21						
ARCES				Sn	Sn	05 55 22.8	-3.3
	comp=Z,2.9nm,0.3s,baz=352,slow=24,SNR=6.9						
KTK1	Kautokeino	8.18	168	*e*P	Pn	05 54 07.3	+3.6
KTK1				*e*S	Sn	05 55 32.4	-3.2
KTK1	Kautokeino	8.18	168	*e*P	Pn	05 54 07.3	+3.6
	SNR=51						
APA0	Apatity Array	10.39	148	Pn	Pn	05 54 33.9	-0.1
	baz=324,slow=9.3						
APA0	Apatity Array	10.39	148	P	Pn	05 54 33.9	-0.1
	baz=324,slow=9.3						
APA0	Apatity Array	10.39	148	P	Pn	05 54 33.8	-0.1
	baz=324,slow=8.8,SNR=51						
FINES	FINESS Array B	15.86	167	Pn	Pn	05 55 49.3	+1.2
	comp=Z,0.1nm,0.3s,baz=337,slow=24,SNR=2.6						
FINES				Sn	Sn	05 58 36.9	-6.4
	comp=Z,0.2nm,0.3s,baz=358,slow=24,SNR=3.9						
ILAR	Eielson Array	38.14	350	P	P	05 59 25.1	+1.4
	comp=Z,0.4nm,0.7s,baz=357,slow=6.7,SNR=6.2						
MKAR	Makanchi Array	39.06	102	P	P	05 59 34.4	+2.8
	comp=Z,0.5nm,0.7s,baz=355,slow=7.2,SNR=5.1						
TORD	Torodi Ar. Bea	64.48	198	P	P	06 02 42.7	+1.3
	comp=Z,0.5nm,0.6s,baz=3.1,slow=5.8,SNR=7.2						
TXAR	Lajitas Array	68.30	307	P	P	06 03 05.9	0.0
	comp=Z,0.2nm,0.5s,baz=46,slow=5.2,SNR=4.3						

JMA 07 06:05:32.3±0.2**, 43°.93N**×**147°.79E, h0**km**, M3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.59	250	P	Pn	06 06 01.9	+0.2
NEM2				*e*S	Sb	06 06 23.1	0.0
JRA	Rausu	1.93	271	P	Pn	06 06 07.0	+0.7
JNK	Nakash	2.25	262	P	Pn	06 06 11.6	+0.8
JNK				*e*S	Sn	06 06 40.0	+0.7
JAK	Akkeshi	2.44	249	P	Pn	06 06 14.1	+0.8
JAK				*e*S	Sn	06 06 44.6	+0.8
JAR	Ashorobuto	2.99	259	P	Pn	06 06 22.4	+1.5
JAR				*e*S	Sn	06 06 59.1	+1.7
JOB	Onbets	3.06	252	P	Pn	06 06 23.3	+1.4
JOB				*e*S	Sn	06 07 00.9	+1.7
JCH	Churui	3.49	249	P	Pn	06 06 28.9	+1.1
JCH				*e*S	Sn	06 07 09.9	+0.1
JNBK	Urakawa-nobuka	4.04	248	P	Pn	06 06 37.3	+1.9
JNBK				*e*S	Sn	06 07 26.3	+2.9

IGQ 07 06:07:08.3, 1°.53S×**77°.79W, h12**km±23km**, Mb4.3, Ms4.1, 27C-22D, Error ellipse: s-maj=1.2km s-min=0.8km az=1.7, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULBA	Ulba	0.62	277	⇓P	Pg	06 07 20.9	0.0
BULB	Ulba Tungurahu	0.63	278	⇓S	Sg	06 07 29.2	-0.5
BULB	Ulba Tungurahu	0.63	278	⇓P	Pg	06 07 20.9	-0.1
BRUN	Tungurahua Vol	0.63	280	⇓P	Pg	06 07 21.2	+0.2
BRUN	Tungurahua Vol	0.63	280	⇓S	Sg	06 07 29.9	+0.2
BPAT	Tungurahua Vol	0.64	272	⇓S	Sb	06 07 31.1	-0.4
BPAT	Tungurahua Vol	0.64	272	⇓P	Pg	06 07 21.4	-0.1
RUN5	Runtun	0.64	280	⇓P	Pg	06 07 21.3	0.0
PAT1	Patacocha	0.65	272	⇓P	Pg	06 07 21.3	-0.2
RETU	Refugio	0.66	277	⇓P	Pg	06 07 21.6	-0.3
ARRY	Arrayan	0.67	272	⇓P	Pg	06 07 21.4	-0.3
JUI6	Juive	0.69	279	⇓P	Pg	06 07 21.7	-0.4
BMAS	Trigal station	0.69	272	⇓P	Pg	06 07 21.9	-0.3
BMAS	Trigal station	0.69	272	⇓S	Sg	06 07 30.9	-0.8
BBIL	Ulba Tungurahu	0.70	276	⇓S	Sg	06 07 29.9	-2.0
BBIL	Ulba Tungurahu	0.70	276	⇓P	Pg	06 07 22.1	-0.3
BIL2	Estacion Bilba	0.72	276	⇓P	Pg	06 07 22.4	-0.2
PISA	Pisayambo	0.76	308	⇓P	Pg	06 07 23.7	+0.1
MACE	Macas	0.83	210	⇑S	Sg	06 07 35.0	-0.6
MACE	Macas	0.83	210	⇑P	Pg	06 07 24.4	-0.3
IGUA	Igualata	0.85	273	⇓P	Pg	06 07 25.4	-0.1
RIOE	Riobamba	0.87	255	⇓S	Sg	06 07 35.6	-1.7
RIOE	Riobamba	0.87	255	⇓P	Pg	06 07 24.9	-0.6
BMOR	Cotopaxi Volca	1.04	320	⇑S	Sb	06 07 43.0	0.0
BMOR	Cotopaxi Volca	1.04	320	⇑P	Pb	06 07 28.7	-0.2
MOV1	Cotopaxi Vol s	1.04	321	⇑P	Pb	06 07 28.5	-0.5
BTAM	Cotopaxi Volca	1.04	324	⇑P	Pb	06 07 28.9	-0.1
BTAM	Cotopaxi Volca	1.04	324	⇑S	Sg	06 07 43.9	+0.6
BVC2	Cotopaxi Volca	1.07	324	⇑S	Sb	06 07 43.2	-0.7
BVC2	Cotopaxi Volca	1.07	324	⇑P	Pb	06 07 29.4	-0.1
BREF	Cotopaxi Volca	1.07	323	⇑P	Pb	06 07 29.6	0.0
BREF	Cotopaxi Volca	1.07	323	⇑S	Sg	06 07 44.9	+0.5
VC1	Cotopaxi 1	1.07	325	⇑P	Pb	06 07 29.6	+0.1
BNAS	Cotopaxi Volca	1.10	321	⇑S	Sn	06 07 46.2	+0.5
BNAS	Cotopaxi Volca	1.10	321	⇑P	Pb	06 07 29.9	0.0
CAMI	Rancho Maria	1.11	320	⇑P	Pb	06 07 28.6	-1.5
NAS2	Nasa	1.11	322	P	Pn	06 07 30.3	0.0
ANTI	Antisana	1.14	341	⇑P	Pb	06 07 30.0	-0.7
PITA	Cotopaxi Volc	1.16	326	⇑P	Pn	06 07 30.9	0.0
LAV4	Lava4-Reventad	1.44	6	⇑P	Pb	06 07 35.1	-0.3
CHAR	Charly	1.44	5	⇑P	Pb	06 07 35.5	-0.1
CONE	Cono NE Rev Vo	1.46	6	⇑P	Pb	06 07 35.6	-0.2
JUA2	San Juan 2	1.54	328	⇑P	Pb	06 07 37.7	+0.3
CAYR	Refugio Cayamb	1.55	352	⇑P	Pb	06 07 37.6	-0.2
GGP	Refugio Guagua	1.57	329	⇑P	Pb	06 07 38.2	+0.2
TERV	Terraza Guagua	1.57	329	P	Pb	06 07 38.5	+0.4
PINO	Pino	1.59	329	⇑P	Pb	06 07 38.6	+0.2
CAYA	Cayambe	1.60	353	⇑P	Pb	06 07 38.3	-0.3
YANA	Yana	1.60	331	P	Pb	06 07 38.8	+0.3
OTAV	Otavalo	1.88	339	⇑S	Sb	06 08 07.1	+0.2
OTAV	Otavalo	1.88	339	⇑P	Pb	06 07 43.2	+0.1
COTA	Cotacachi	1.93	344	⇓P	Pb	06 07 45.0	+0.9
GOLV	Golondrinas	2.19	322	P	Pb	06 07 47.7	-0.2

*CSEM **07** 06:07:51.8±0.1, 37°.81N×42°.83E, h10km, MD2.8, Error ellipse: s-maj=3.0km s-min=1.8km az=55.0*
*ISK **07** 06:07:53.2, 37°.85N×43°.13E, h5km, MD2.8*
*DDA **07** 06:07:54.5, 37°.91N×43°.04E, h7km, MD2.9*
ISC 07 06:07:53.9±1.1**, 37°.85N**±0°.03×**43°.08E**±0°.04**, h10**km±11km**, n12, σ0s.78**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEVA	Gevas	0.46	358	*i* P	Pg	06 08 02.3	-0.7
GEVA				*i* S	Sg	06 08 09.3	+0.3
GEVA	Gevas	0.46	358	*i* P	Pg	06 08 02.3	-0.7
GEVA				*i* S	Sg	06 08 09.3	+0.3
HAKT	HAKKARI	0.58	120	*i* P	Pb	06 08 06.1	-0.1
HAKT				*i* S	Sn	06 08 16.9	-1.1
HAKT	HAKKARI	0.58	120	*i* P	Pb	06 08 06.1	-0.1
HAKT				*i* S	Sn	06 08 16.9	-1.1
CUKT	Cukurca	0.74	145	*e*PG	Pg	06 08 08.1	0.0
CUKT				*e*SG	Sb	06 08 19.0	0.0
CUKT	Cukurca	0.74	145	*e*Pg	Pg	06 08 08.1	0.0
CUKT				*e*Sg	Sb	06 08 19.0	0.0
VANB	Van	0.78	18	*e*PG	Pb	06 08 09.2	-0.4
VANB				*e*SG	Sb	06 08 21.2	+0.9
VANB	Van	0.78	18	*e*Pg	Pb	06 08 09.2	-0.4
VANB				*e*Sg	Sb	06 08 21.2	+0.9
BEST	Besiri	1.43	272	*i* P	Pg	06 08 20.7	-0.7
BEST				*i* S	Sg	06 08 41.5	+1.5
MARD	Mardin	1.91	254	*i* P	Pg	06 08 30.3	-0.2
MARD				*i* S	Sg	06 08 54.7	-0.5
BNGB	Bingˆ¶l	2.20	302	*e*PG	Pb	06 08 32.9	-0.9
BINT	Bingol	2.28	297	*e*Pg	Pn	06 08 32.9	+1.3

IDC 07 06:09:12.2±3.6**, 43°.07S**×**72°.70W, h0**km**, mb3.7**/2,

mb1 4.2/3, mb1mx3.8/16, mbtmp3.8/3, ML4.1/1, Error ellipse: s-maj=86.1km s-min=36.8km az=146.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.83	35	Pn	Pn	06 09 58.8	0.0
	6.4nm,0.3s,baz=214,slow=15,SNR=87						
PLCA				Sn	Sn	06 10 34.8	+1.0
	18nm,0.3s,baz=137,slow=17,SNR=16						
TXAR	Lajitas Array	77.46	333	P	P	06 21 09.3	-0.1
	0.5nm,0.9s,baz=153,slow=8.6,SNR=5.4						
PDAR	Pinedale Array	91.63	334	P	P	06 22 21.1	+0.1
	0.3nm,0.7s,baz=134,slow=6.4,SNR=4.3						

IDC 07 06:13:30.1±1.5, 71°.94N×0°.30W, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.3/27, mbtmp3.6/3, ML3.0/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/35, Error ellipse: s-maj=36.0km s-min=29.0km az=46.0, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCES	ARCESS Array B	8.82	93	Pn	Pn	06 15 38.3	-0.3
	0.2nm,0.3s,baz=300,slow=12,SNR=12						
ARCES				LR	LR	06 18 27.7	
	comp=Z,80nm,19.3s,baz=18,slow=34						
GERES	GERESS Array B	24.05	157	LR	LR	06 26 54.2	
	comp=Z,102nm,18.2s,baz=271,slow=33						
KBZ	Khabaz	34.98	120	LR	LR	06 35 29.7	
	comp=Z,39nm,18.7s,baz=123,slow=38						
ILAR	Eielson Array	41.68	339	P	P	06 21 19.6	-0.1
	0.4nm,0.7s,baz=14,slow=7.0,SNR=5.6						
TORD	Torodi Ar. Bea	58.77	178	P	P	06 23 29.6	-0.1
	1.8nm,0.8s,baz=356,slow=6.2,SNR=9.4						

IDC 07 06:47:07.0±1.4, 2°.23S×136°.41E, h0km, mb3.4/3, mb1 3.9/4, mb1mx3.6/18, mbtmp3.6/4, ML4.3/1, Error ellipse: s-maj=63.6km s-min=26.0km az=89.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.72	186	P	Pn	06 51 15.3	-0.1
	1.0nm,0.3s,baz=9.4,slow=12,SNR=12						
ASAR	Alice Springs	21.44	186	P	P	06 51 56.8	-0.3
	2.3nm,0.4s,baz=15,slow=11,SNR=30						
MKAR	Makanchi Array	68.02	323	P	P	06 58 08.0	-0.4
	0.1nm,0.4s,baz=106,slow=7.8,SNR=2.3						
ILAR	Eielson Array	86.36	25	P	P	06 59 51.6	+0.7
	0.1nm,0.6s,baz=246,slow=6.8,SNR=3.5						

IDC 07 06:48:06.3±4.0, 18°.94S×168°.91E, h93km±34km, mb4.1/9, mb1 4.3/10, mb1mx4.0/21, mbtmp4.1/10, MS3.8/2, Ms1 3.8/2, ms1mx2.9/27, Error ellipse: s-maj=27.2km s-min=20.6km az=21.0
NEIC 07 06:48:07.4±2.5, 18°.93S×168°.99E, h106km±20km, mb4.5/4, Error ellipse: s-maj=21.1km s-min=12.6km az=206.0
NOU 07 06:48:08.0±0.7, 18°.85S×168°.81E, h30km, MD3.2, ML3.7
ISCJB 07 06:48:08.1±2.1, 19°.1S±0°.1×168°.8E±0°.1, h118km±16km, mb4.3/12, Error ellipse: s-maj=20.8km s-min=16.8km az=20.3
ISC 07 06:48:07.2±2.7, 19°.0S±0°.1×169°.0E±0°.1, h101km±23km, n36, σ1.18/41, mb4.3/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	3.68	212	eP	Pn	06 49 02.7	+0.6
BAYA				eS	Sn	06 49 42.7	-1.8
DZM	Mont Dzumac	3.85	217	eP	Pn	06 49 04.5	+0.1
DZM				eS	Sn	06 49 47.4	-1.4
DZM				AMP		06 49 56.0	
	comp=Z,2μm,3.4s						
DZM	Mont Dzumac	3.85	217	P	Pn	06 49 05.1	+0.7
DZM				eSn	Sn	06 49 46.5	-2.3
DZM				S		06 49 48.1	
DZM	Mont Dzumac	3.85	217	P	Pn	06 49 05.1	+0.7
	comp=Z,57nm,0.3s,baz=53,slow=15,SNR=1144						
DZM				S	Sn	06 49 48.1	-0.6
	comp=Z,39nm,0.3s,baz=105,slow=22,SNR=12						
PLUM	Mont Dore	3.90	213	eP	Pn	06 49 05.9	+0.8
PLUM				eS	Sn	06 49 48.6	-1.3
NOUC	Port Laguerre	3.95	219	eP	Pn	06 49 06.6	+0.9
NOUC				eS	Sn	06 49 49.6	-1.5
NOUC				AMP		06 49 53.1	
	comp=Z,100nm,3.1s						
URZ	Urewera	20.45	161	P	P	06 52 37.8	+1.2
URZ	Urewera	20.45	161	P	P	06 52 37.8	+1.2
	comp=Z,17nm,0.9s,baz=304,slow=7.9,SNR=5.9						
CTA	Charters Tower	21.42	263	P	P	06 52 49.2	+1.9
CTA	Charters Tower	21.42	263	P	P	06 52 49.2	+1.9
	comp=Z,8.3nm,0.4s,baz=89,slow=12,SNR=14						
CTAO	Charters Tower	21.42	263	eP	P	06 52 49.1	+1.9
	comp=Z,10nm,0.5s						
RPZ	Rata Peaks	24.69	176	P	P	06 53 19.9	+1.2
RPZ	Rata Peaks	24.69	176	P	P	06 53 20.0	+1.2
	comp=Z,7.7nm,0.7s,baz=315,slow=7.1,SNR=6.0						
STKA	Stephens Creek	27.74	237	P	P	06 53 46.9	+0.5
STKA	Stephens Creek	27.74	237	P	P	06 53 46.9	+0.5
	comp=Z,5.9nm,0.6s,baz=80,slow=11,SNR=30						
WRAB	Tennant Creek	32.61	263	eP	P	06 54 28.4	-1.1
	comp=Z,2.2nm,0.6s						
WRA	Warramunga Arr	32.62	263	P	P	06 54 28.7	-0.9
WRA	Warramunga Arr	32.62	263	P	P	06 54 28.7	-0.9
	comp=Z,1.4nm,0.5s,baz=96,slow=7.8,SNR=7.4						
AS31	Alice Springs	32.92	256	eP	P	06 54 31.7	-0.6
ASAR	Alice Springs	32.92	256	P	P	06 54 31.8	-0.5
ASAR	Alice Springs	32.92	256	P	P	06 54 31.8	-0.5
	comp=Z,14nm,0.4s,baz=83,slow=8.7,SNR=176						
ASAR				LR	LR	07 07 19.3	
	comp=Z,74nm,19.0s,baz=320,slow=35						
FITZ	Fitzroy Crossi	41.00	264	P	P	06 55 41.2	+0.5
FITZ	Fitzroy Crossi	41.00	264	P	P	06 55 41.2	+0.5
	comp=Z,13nm,0.7s,baz=91,slow=8.7,SNR=20						
MBWA	Marble Bar	46.14	259	eP	P	06 56 22.1	+0.2
	comp=Z,5.7nm,0.5s						
VNDA	Vanda	58.65	182	P	P	06 57 53.4	0.0
VNDA	Vanda	58.65	182	P	P	06 57 53.4	0.0
	comp=Z,0.9nm,0.5s,baz=345,slow=7.8,SNR=5.1						
QSPA	South Pole Qui	71.04	180	eP	P	06 59 13.8	-0.4
	comp=Z,14nm,0.9s						
SONM	Songino Array	86.88	323	LR	LR	07 37 31.2	
	comp=Z,108nm,19.5s,baz=244,slow=34						
NVAR	Mina Array Bea	88.85	49	P	P	07 00 50.9	+0.4
NVAR	Mina Array Bea	88.85	49	P	P	07 00 50.9	+0.4
	comp=Z,0.3nm,0.5s,baz=231,slow=6.9,SNR=4.4						
ILAR	Eielson Array	90.10	17	P	P	07 00 53.7	-1.7
ILAR	Eielson Array	90.10	17	P	P	07 00 53.7	-1.7
	comp=Z,0.2nm,0.4s,baz=235,slow=5.3,SNR=4.8						
YKA	Yellowknife Ar	100.59	27	P	Pdif	07 01 44.4	+1.2
YKA	Yellowknife Ar	100.59	27	P	Pdif	07 01 44.4	+1.2
	comp=Z,0.2nm,0.8s,baz=260,slow=4.5,SNR=10						
ARCES	ARCESS Array B	124.78	345	PKP	PKPdf	07 06 53.1	-1.5
ARCES	ARCESS Array B	124.78	345	PKP	PKPdf	07 06 53.1	-1.5
	comp=Z,1.6nm,0.6s,baz=64,slow=2.1,SNR=9.6						

IDC 07 06:50:19.2±1.2, 2°.84S×119°.57E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/23, mbtmp3.6/5, ML3.3/1, MS3.3/5, Ms1 3.3/5, ms1mx2.9/32, Error ellipse: s-maj=79.2km s-min=18.8km az=73.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	2.17	175	Pn	Pn	06 50 56.8	+0.3
	9.8nm,0.3s,baz=358,slow=10,SNR=20						
KAPI				Sn	Sb	06 51 25.9	-0.9
	14nm,0.3s,baz=246,slow=20,SNR=7.0						
KAPI				LR	LR	06 51 53.5	
	comp=Z,351nm,18.2s,baz=5.7,slow=44						
FITZ	Fitzroy Crossi	16.29	159	LR	LR	07 00 48.0	
	comp=Z,90nm,18.5s,baz=87,slow=39						
PSI	Prapat	21.38	285	LR	LR	07 03 18.2	
	comp=Z,52nm,18.0s,baz=176,slow=36						
WRA	Warramunga Arr	22.29	141	P	P	06 55 17.8	-0.6
	0.8nm,0.8s,baz=314,slow=11,SNR=3.2						
CTA	Charters Tower	31.18	125	LR	LR	07 09 03.9	
	comp=Z,83nm,18.6s,baz=48,slow=36						
STKA	Stephens Creek	35.55	147	LR	LR	07 11 23.9	
	comp=Z,71nm,21.3s,baz=209,slow=36						
SONM	Songino Array	51.77	349	P	P	06 59 28.9	+0.1
	0.7nm,0.7s,baz=168,slow=9.0,SNR=5.4						
MKAR	Makanchi Array	59.32	331	P	P	07 00 22.9	-0.1
	1.2nm,0.8s,baz=146,slow=7.3,SNR=9.6						
ZALV	Zalesovo Beam	63.55	338	P	P	07 00 51.3	-0.1
	0.4nm,0.4s,baz=165,slow=6.0,SNR=2.3						

MOS 07 07:03:32.1±0.9, 7°.86S×109°.15E, h63km, mb4.9/18, Error ellipse: s-maj=13.4km s-min=7.3km az=112.6
IDC 07 07:03:33.2±2.4, 7°.92S×109°.08E, h56km±21km, mb4.2/23, mb1 4.3/24, mb1mx4.3/26, mbtmp4.2/24, ML3.8/1, Error ellipse: s-maj=15.5km s-min=10.6km az=63.0
DJA 07 07:03:34.3±0.6, 8°S±3°×10°9E±°, h25km±5km, M5.1/29, mb4.8/28, mB5.7/14, MLv4.9/29, Mw(mB)5.2/14, Mwp6.3/1
BJI 07 07:03:34.2, 8°.10S×109°.00E, h79km, mB5.1/14, mb4.8/25, Ms4.5/5, Ms7 4.2/8
ISCJB 07 07:03:35.2±0.3, 8°.06S±0°.04×109°.11E±0°.03, h95km±2km, mb4.5/59, Error ellipse: s-maj=7.7km s-min=3.6km az=22.9
NEIC 07 07:03:37.5±1.1, 7°.99S×109°.04E, h96km±9km, mb4.4/12, Error ellipse: s-maj=9.2km s-min=5.3km az=54.0
NEIC Felt [III] at Cilacap.
ISC 07 07:03:36.1±0.4, 8°.06S±0°.05×109°.08E±0°.04, h83km±2km, n230, σ1.44/260, mb4.6/59, 2C-4D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLJI	Cilicap	0.34	350	P	Pn	07 03 48.2	-0.7
CLJI				S	Sn	07 03 57.3	-1.1
BJII	Banjamegara	0.95	41	P	Pn	07 03 55.7	+0.9
BJII				S	Sn	07 04 10.8	+2.0
TGJI	Tegal	1.18	2	P	Pn	07 03 57.7	+0.2
YOGI	Yogyakarta	1.23	79	P	Pn	07 03 57.2	-0.9
YOGI				S	Sn	07 04 13.7	-1.0
CISI	Cisompet, Garu	1.34	292	P	Pn	07 03 57.9	-1.7
CISI				S	Sn	07 04 14.9	-2.4
UGM	Wanagama	1.44	84	P	Pn	07 03 59.9	-0.9
UGM				S	Sn	07 04 18.1	-1.3
SMRI	Semarang	1.68	54	P	Pn	07 04 05.9	+2.0
WOJI	Wonogiri, Jawa	1.84	83	P	Pn	07 04 04.6	-1.4
LEM	Lembang	1.89	310	P	Pn	07 04 08.7	+1.9
PCJI	Pacitan	2.08	94	P	Pn	07 04 08.4	-0.8
SJI	Sawahan	2.69	83	P	Pn	07 04 18.5	+1.2
PWJI	Pagerwojo	2.70	89	P	Pn	07 04 16.9	-0.5
SKJI	Sukabumi	2.71	292	P	Pn	07 04 16.6	-0.9
DBJI	Dramaga	2.75	303	P	Pn	07 04 19.9	+1.8
KRKI	Karangkates	3.34	92	P	Pn	07 04 26.0	-0.1
SBJI	Serang	3.50	303	P	Pn	07 04 40.7	+12
CGJI	Cibinong	3.65	293	P	Pn	07 04 29.2	-1.1
GMJI	Gumukmas	4.33	93	P	Pn	07 04 40.3	+0.8
BLJI	Banyuglugur	4.49	86	P	Pn	07 04 42.2	+0.5
BLSI	Bandar Lampung	4.65	305	P	Pn	07 04 56.4	+12
KMMI	Kalianget	4.95	79	P	Pn	07 04 48.5	+0.5
	58nm,0.8s,3μm0.5nm						
KASI	Kota Agung	5.20	299	P	Pn	07 04 53.9	+2.5
	134nm,1.1s,3μm0.8nm						
BYJI	Banyuwangi	5.23	92	P	Pn	07 04 51.1	-0.7
	204nm,0.7s,16μm1.5nm						
TPI	Tanjungpandan	5.45	345	P	Pn	07 04 56.9	+2.0
	69nm,0.9s,748nm0.3nm						
LWLI	Liwa	5.83	301	P	Pn	07 05 01.8	+1.7
	244nm,0.7s,10μm1.4nm						
PBKI	Pangkalan Bun	5.91	26	P	Pn	07 05 05.9	+4.8
	290nm,0.9s,6μm1.2nm						
MDSI	Maura Dua	6.02	306	P	Pn	07 05 04.9	+2.3
IGBI	Denpasar	6.05	98	P	Pn	07 05 01.9	-1.1
	38nm,0.9s,0.7nm						
SRBI	Singaraja	6.08	91	P	Pn	07 05 05.3	+1.9
	80nm,0.8s,2μm0.5nm						
DNP	Denpasar	6.10	96	P	Pn	07 05 02.7	-1.0
KHKI	Kahang-Kahang	6.47	93	P	Pn	07 05 09.6	+0.8
	42nm,0.8s,0.3nm						
PPBI	Pangkal Pinang	6.55	333	P	Pn	07 05 13.1	+3.3
	104nm,0.8s,13μm1.6nm						
PMBI	Palembang	6.66	320	P	Pn	07 05 14.6	+3.3
LHSI	Lahat	6.94	307	P	Pn	07 05 17.5	+2.4
	10nm,0.8s,0.0nm						
MNAI	Manna	7.11	301	P	Pn	07 05 18.2	+0.8
EGSI	Enggano, Bengk	7.27	291	P	Pn	07 05 20.7	+1.1
BBKI	Banjar Baru	7.33	52	P	Pn	07 05 23.5	+3.0
PLKI	Palangkaraya	7.55	40	P	Pn	07 05 27.2	+3.7
TWSI	Taliwang, Sumb	7.75	96	P	Pn	07 05 25.0	-1.3
KSI	Kapahiang	7.79	304	P	Pn	07 05 28.7	+1.8
MASI	Maura Aman, Be	8.37	305	P	Pn	07 05 37.6	+2.8
	151nm,1.0s,7μm						
KSM	Kuching	9.54	7	ePn	Pn	07 05 52.3	+1.6
KSM	Kuching	9.54	7	P	Pn	07 05 56.2	+5.5
	26nm,0.6s						
TPRI	Tanjung Pinang	10.00	333	P	Pn	07 06 01.2	+4.2
	13nm,0.8s,43μm163μm						
WBSI	Waikabubak, Su	10.31	100	P	Pn	07 05 59.7	-1.6
	44nm,1.2s						
SBUM	Sibu	10.90	17	P	Pn	07 06 18.3	+9.1
	13nm,1.9s						
BKSI	Bulukumba	11.30	77	P	Pn	07 06 19.7	+5.0
	19nm,1.1s,560nm						
SPSI	Sidrap Palu	11.38	70	P	Pn	07 06 24.9	+9.1
	12nm,0.9s						
TTSI	Tana Toraja	11.79	66	P	Pn	07 06 29.0	+7.7
	27nm,1.0s,2μm						
IPM	Ipoh	14.82	327	ePn	Pn	07 07 02.1	+0.8
MRSI	Marisa	15.37	57	P	P	07 07 14.0	+2.7
	19nm,1.4s						
KULM	Kulim	15.70	327	ePn	Pn	07 07 12.1	-0.4
KKM	Kota Kinabalu	15.71	27	Pn	P	07 07 14.6	-0.6
	21nm,0.8s						
KKM	Kota Kinabalu	15.71	27	P	P	07 07 20.1	+4.9
	30nm,1.0s						
MBWA	Marble Bar	16.60	143	ePn	Pn	07 07 21.0	-2.8
MBWA				eSn	Sn	07 10 09.3	-18
FITZ	Fitzroy Crossi	18.96	123	P	Pn	07 07 52.3	0.0
FITZ				S	S	07 11 07.0	-15
FITZ	Fitzroy Crossi	18.96	123	P	Pn	07 07 52.3	0.0
	0.2nm,0.3s,baz=319,slow=9.6,SNR=5.4						
FITZ				S	S	07 11 07.0	-15
	0.1nm,0.3s,baz=126,slow=17,SNR=3.4						
AAI	Ambon	19.50	78	P	Pn	07 07 58.9	0.0
	164nm,0.8s,2μm						
TNTI	Ternate	20.23	65	P	Pn	07 08 10.1	+2.7
	133nm,0.9s						
GAMI	Galela, Maluku	21.09	63	P	P	07 08 17.6	+3.6
	446nm,0.8s,14μm						
NWAO	Narrogin (SRO)	25.88	164	P	P	07 09 00.3	+0.1
NWAO	Narrogin (SRO)	25.88	164	P	P	07 09 00.3	+0.1
	4.7nm,0.7s,baz=329,slow=6.6,SNR=3.6						
WRA	Warramunga Arr	27.16	118	P	P	07 09 12.0	0.0
WRA				PcP	PcP	07 12 30.9	+0.2
WRA	Warramunga Arr	27.16	118	P	P	07 09 12.0	0.0
	8.2nm,0.8s,baz=290,slow=11,SNR=26						
WRA				PcP	PcP	07 12 30.9	+0.2
	2.4nm,0.7s,baz=299,slow=1.8,SNR=8.1						
WRAB	Tennant Creek	27.17	118	eP	P	07 09 12.3	+0.3
WRAB				e		07 12 31.0	
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WRAB	Tennant Creek	27.17	118	eP	P	07 09 12.3	+0.3
	comp=Z,7.0nm,0.8s						
WRAB				ePcP	PcP	07 12 31.0	+0.3
CM31	Chiang Mai Arr	28.18	339	eP	P	07 09 20.7	-0.3
	comp=Z,4.4nm,0.6s						
CMAR	Chiang Mai Arr	28.18	339	P	P	07 09 19.6	-1.3
CMAR				PcP	PcP	07 12 34.5	+1.3
CMAR	Chiang Mai Arr	28.18	339	P	P	07 09 19.6	-1.3
	comp=Z,1.8nm,0.4s,baz=177,slow=8.5,SNR=13						
CMAR				PcP	PcP	07 12 34.5	+1.3
	comp=Z,1.0nm,0.4s,baz=194,slow=2.3,SNR=4.6						
AS31	Alice Springs	28.41	126	eP	P	07 09 23.2	+0.1
ASAR	Alice Springs	28.41	126	P	P	07 09 22.8	-0.2
ASAR				PcP	PcP	07 12 34.0	+0.3
ASAR				ScP	ScP	07 16 08.1	+0.4
ASAR	Alice Springs	28.41	126	P	P	07 09 22.8	-0.2
	comp=Z,3.9nm,0.8s,baz=303,slow=9.2,SNR=36						
ASAR				PcP	PcP	07 12 34.0	+0.3
	comp=Z,3.2nm,0.8s,baz=306,slow=1.8,SNR=20						
ASAR				ScP	ScP	07 16 08.1	+0.4
	comp=Z,0.9nm,0.7s,baz=304,slow=2.8,SNR=5.9						
CHTO	Chiang Mai	28.51	340	eP	P	07 09 23.7	-0.2
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CHTO	Chiang Mai	28.51	340	eP	P	07 09 23.7	-0.2
	comp=Z,1.6nm,0.3s						
KMI	Kunming	33.55	350	P	P	07 10 09.7	+1.3
KMI				pP	pP	07 10 31.0	+3.2
KMI				sP	sP	07 10 39.4	+2.0
KMI				PP	PP	07 11 27.0	+1.1
KMI				S	S	07 15 29.0	+4.1
KMI				sS	sS	07 15 59.8	+1.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,90nm,4.8s						
KMI				LR	LR		
	comp=N,160nm,19.4s						
KMI				LR	LR		
	comp=E,140nm,22.0s						
KMI				LR	LR		
	comp=Z,190nm,15.8s						
GYA	Guiyang	34.39	356	eP	P	07 10 17.8	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTA	Charters Tower	37.90	112	P	P	07 10 46.3	+0.7
CTA	Charters Tower	37.90	112	P	P	07 10 46.3	+0.7
	comp=Z,5.5nm,0.7s,baz=280,slow=10,SNR=3.8						
STKA	Stephens Creek	38.41	133	P	P	07 10 49.9	+0.1
	comp=Z,15nm,0.7s						
STKA				PcP	PcP	07 13 02.0	+0.4
STKA	Stephens Creek	38.41	133	P	P	07 10 49.9	+0.1
	comp=Z,6.2nm,0.6s,baz=311,slow=9.0,SNR=24						
STKA				PcP	PcP	07 13 02.0	+0.4
	comp=Z,6.7nm,0.7s,baz=310,slow=4.0,SNR=6.6						
ODAN	Odare	40.58	330	eP	P	07 11 06.0	-2.0
TAPN	Taplejung	40.83	330	eP	P	07 11 08.6	-1.5
NJ2	Nanjing	40.96	13	eP	P	07 11 13.3	+2.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
RAMN	Ramite	41.06	329	eP	P	07 11 10.2	-1.8
PKI	Pulchoki	42.18	328	eP	P	07 11 18.8	-2.4
PKIN	Phulchoki	42.19	328	eP	P	07 11 19.4	-1.8
GUN	Gumba	42.21	329	eP	P	07 11 19.2	-2.3
DMN	Daman	42.37	328	eP	P	07 11 20.6	-2.1
KKN	Kakani	42.42	328	eP	P	07 11 21.6	-1.5
KOLN	Koldanda	43.31	326	eP	P	07 11 28.1	-2.1
	comp=Z,10nm,0.7s						
DANN	Dangsing	43.68	327	eP	P	07 11 31.0	-2.3
	comp=Z,7.6nm,0.4s						
PYUN	Piuthan	43.91	326	eP	P	07 11 31.3	-3.7
	comp=Z,83nm,1.2s						
LZH	Lanzhou	44.18	354	eP	P	07 11 40.5	+3.5
LZH				pP	pP	07 12 01.5	+4.5
LZH				sP	sP	07 12 09.0	+2.6
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
GTA	Gaotai	48.00	350	eP	P	07 12 07.5	+0.6
GTA				pP	pP	07 12 27.3	+0.1
GTA				sP	sP	07 12 35.5	-1.0
GTA				PcP	PcP	07 13 34.6	+0.8
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BJI	Beijing	48.30	7	P	P	07 12 11.6	+2.6
BJI				pmax	pmax		
	comp=Z,15nm,0.5s						
KSAR	Wonju Array Be	48.56	20	P	P	07 12 10.2	-0.9
KSAR				PcP	PcP	07 13 36.2	+0.5
KSRS	Korea Array	48.59	20	P	P	07 12 10.2	-1.1
	comp=Z,1.0nm,0.5s,baz=201,slow=8.8,SNR=6.0						
KSRS				PcP	PcP	07 13 36.2	+0.4
	comp=Z,1.9nm,0.7s,baz=200,slow=3.3,SNR=7.3						
HHC	Hu-ho-hao-te	48.72	3	eP	P	07 12 13.8	+1.4
HHC				sP	sP	07 12 41.4	-0.6
HHC				PcP	PcP	07 13 36.9	+0.5
HHC				PP	PP	07 14 08.3	+2.0
HHC				ScP	ScP	07 17 24.6	+0.6
HHC				PcS	PcS	07 17 32.1	-0.5
HHC				S	S	07 19 10.8	+1.9
HHC				ScS	ScS	07 21 55.6	-1.4
HHC				SS	SS	07 22 38.1	-2.4
HHC				pmax	pmax		
	comp=Z,44nm,0.7s						
HHC				pmax	pmax		
	comp=Z,160nm,6.5s						
HHC				LR	LR		
	comp=N,310nm,15.7s						
HHC				LR	LR		
	comp=E,290nm,16.4s						
HHC				LR	LR		
	comp=Z,240nm,15.6s						
MAT	Matsushiro	52.12	30	P	P	07 12 36.1	-1.9
MJAR	Matsushiro Arr	52.12	30	P	P	07 12 36.3	-1.7
MJAR				PcP	PcP	07 13 50.0	+1.1
MJAR	Matsushiro Arr	52.12	30	P	P	07 12 36.3	-1.7
	comp=Z,5.7nm,0.6s,baz=210,slow=8.7,SNR=16						
MJAR				PcP	PcP	07 13 50.0	+1.1
	comp=Z,0.6nm,0.3s,baz=208,slow=4.8,SNR=5.1						
CN2	Changchun	53.71	15	eP	P	07 12 54.1	+4.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WMQ	Urumqi	55.15	341	eP	P	07 13 02.3	+2.2
SONM	Songino Array	55.70	358	P	P	07 13 03.8	-0.2
SONM				PcP	PcP	07 14 02.4	-0.1
SONM				ScP	ScP	07 17 56.9	+2.7
SONM	Songino Array	55.70	358	P	P	07 13 03.8	-0.2
	comp=Z,1.3nm,0.6s,baz=176,slow=8.2,SNR=11						
SONM				PcP	PcP	07 14 02.4	-0.1
	comp=Z,2.7nm,0.7s,baz=176,slow=3.8,SNR=7.6						
SONM				ScP	ScP	07 17 56.9	+2.7
	comp=Z,0.7nm,0.6s,baz=176,slow=3.8,SNR=4.7						
USRK	Ussuriysk Arra	55.99	20	P	P	07 13 04.3	-1.6
	comp=Z,1.4nm,0.6s,baz=212,slow=6.9,SNR=3.9						
KSH	Kashi	56.40	330	P	P	07 13 07.6	-1.6
KSH				epP	pP	07 13 26.2	-3.7
KSH				ePcP	PcP	07 14 05.7	+0.3
KSH				ePP	PP	07 15 14.2	-1.5
KSH				eScP	ScP	07 17 56.2	-1.2
KSH				ePcS	PcS	07 18 04.1	-2.0
KSH				eS	S	07 20 46.6	-7.2
KSH				eScS	ScS	07 22 46.1	-4.8
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,51nm,3.7s						
TKM2	Tokmak 2	59.19	332	eP	P	07 13 27.0	-1.7
TKM2				pmax	pmax		
	comp=Z,12nm,0.6s						
TKM2	Tokmak 2	59.19	332	eP	P	07 13 27.0	-1.7
	comp=Z,12nm,0.6s						
AAK	Ala-Archa	59.49	331	eP	P	07 13 30.4	-0.4
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	59.59	339	eP	P	07 13 29.8	-1.4
MK31				e		07 14 17.7	
MK31	Makanchi Array	59.59	339	eP	P	07 13 29.8	-1.4
MK31				e		07 14 17.7	
MKAR	Makanchi Array	59.59	339	eP	P	07 13 30.0	-1.2
MKAR						07 14 18.1	
MKAR	Makanchi Array	59.59	339	eP	P	07 13 29.9	-1.2
MKAR				PcP	PcP	07 14 18.1	+0.4
MKAR	Makanchi Array	59.59	339	P	P	07 13 29.7	-1.5
	comp=Z,2.9nm,0.4s,baz=151,slow=6.5,SNR=44						
MKAR				PcP	PcP	07 14 18.1	+0.4
	comp=Z,4.2nm,0.8s,baz=144,slow=6.3,SNR=8.3						
EKS2	Erkin-Say	59.86	330	eP	P	07 13 32.9	-0.4
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
EKS2	Erkin-Say	59.86	330	eP	P	07 13 32.9	-0.4
	comp=Z,4.6nm,0.6s						
KLR	Kul'dur	60.41	17	eP	P	07 13 31.0	-5.7
HABR	Khabarovsk	60.76	20	P	P	07 13 35.4	-3.7
HABR				*PP	pP	07 13 55.5	-4.6
HABR				S	S	07 21 43.9	-5.8
HABR				e		07 22 07.4	
HABR				e*SS	sS	07 22 19.3	-6.3
HABR				e		07 23 18.3	
HABR				eSS	SS	07 25 43.8	-6.3
HABR				eSSS	SSS	07 28 30.1	
HABR				MLR	MLR		
	comp=Z,339nm,18.0s						
OPO	Ambohidratompo	60.88	253	P	P	07 13 41.0	+0.3
OPO	Ambohidratompo	60.88	253	P	P	07 13 41.0	+0.3
	comp=Z,1.8nm,0.7s,baz=96,slow=6.6,SNR=6.3						
KK31	Karatay Array	61.81	329	P	P	07 13 44.0	-2.4
KKAR	Karatay Array	61.81	329	eP	P	07 13 45.1	-1.3
KKAR	Karatay Array	61.81	329	eP	P	07 13 45.1	-1.3
	comp=Z,0.4nm,0.4s						
KURK	Kurchatov	64.20	339c	iP	P	07 14 01.6	-0.4
KURK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ZAA0	Zalesovo Array	65.08	344	eP	P	07 14 05.9	-1.7
ZALV	Zalesovo Beam	65.08	344	P	P	07 14 05.8	-1.9
ZALV	Zalesovo Beam	65.08	344	P	P	07 14 05.8	-1.9

ZALV	**Zalesovo Beam**	**65.08**	**344**	P	**P**	**07 14 05.8**	**-1.9**
	comp=Z,2.0nm,0.3s,baz=145,slow=3.5,SNR=11						
MAW	**Mawson**	**66.97**	**197**	P	**P**	**07 14 20.1**	**+0.5**
MAW	**Mawson**	**66.97**	**197**	P	**P**	**07 14 20.1**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=45,slow=11,SNR=6.6						
VOSK	**Vostochnaya**	**68.68**	**336**	P	**P**	**07 14 28.3**	**-2.3**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVA0	**Borovoye Array**	**69.15**	**336**	*i* P	**P**	**07 14 32.3**	**-1.2**
BVA0				pmax	pmax		
	comp=Z,10.0nm,0.1s						
BRVK	**Borovoye**	**69.21**	**336***d*	*i*P	**P**	**07 14 33.8**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ZRNK	**Zerenda**	**69.65**	**335**	P	**P**	**07 14 34.7**	**-1.9**
ZRNK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AB31	**Akbulak array**	**71.38**	**328**	*e*P	**P**	**07 14 45.9**	**-1.2**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ABKAR	**Akbulak array**	**71.38**	**328**	*e*P	**P**	**07 14 46.0**	**-1.2**
	comp=Z,5.3nm,0.5s						
YAK	**Yakutsk**	**71.69**	**10**	*e*P	**P**	**07 14 47.0**	**-1.7**
YAK				pmax	pmax		
	comp=Z,31nm,0.9s						
YAK				pmax	pmax		
	comp=N,13nm,1.5s						
KMBO	**Kilima Mbogo**	**71.85**	**271**	*e*P	**P**	**07 14 52.0**	**+1.0**
	comp=N,5.3nm,1.0s						
KMBO	**Kilima Mbogo**	**71.85**	**271**	P	**P**	**07 14 52.2**	**+1.2**
	comp=N,4.2nm,0.2s,baz=42,slow=23,SNR=8.4						
AKTO	**Aktyubinsk**	**73.08**	**329**	P	**P**	**07 14 55.8**	**-1.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PETK	**Petropavlovsk-**	**73.53**	**28**	P	**P**	**07 14 59.4**	**-0.5**
PETK	**Petropavlovsk-**	**73.53**	**28**	P	**P**	**07 14 59.4**	**-0.5**
PETK	**Petropavlovsk-**	**73.53**	**28**	P	**P**	**07 14 59.4**	**-0.5**
	comp=Z,3.8nm,0.7s,baz=192,slow=6.3,SNR=3.5						
VNDA	**Vanda**	**74.56**	**170**	P	**P**	**07 15 05.7**	**+0.2**
VNDA	**Vanda**	**74.56**	**170**	P	**P**	**07 15 05.7**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=306,slow=7.2,SNR=4.8						
DGRG	**David-gareji**	**76.23**	**316**	P	**P**	**07 15 17.0**	**+1.2**
ARU	**Arti**	**76.46**	**334***c*	*i*P	**P**	**07 15 15.8**	**-0.9**
ARU						07 18 05.3	
ARU				S	**S**	**07 24 54.0**	**-1.5**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SEAG	**Tbilisi Sea**	**76.75**	**316**	P	**P**	**07 15 18.8**	**+0.1**
TBLG	**Delisi**	**76.78**	**316**	*e*P	**P**	**07 15 19.4**	**+0.5**
TBLG	**Delisi**	**76.78**	**316**	P	**P**	**07 15 19.4**	**+0.5**
KZR	**Kazreti**	**76.86**	**316**	P	**P**	**07 15 19.2**	**-0.2**
GUDG	**Gudauri**	**77.25**	**317**	P	**P**	**07 15 21.8**	**+0.1**
GOR	**Gori**	**77.31**	**316**	P	P	07 15 17.7	-4.2
AKH	**Akhalkalaki**	**77.52**	**315**	P	**P**	**07 15 23.9**	**+0.7**
ZEI	**Tsey**	**77.76**	**317**	*e*P	**P**	**07 15 24.1**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ONI	**Oni**	**78.00**	**317**	P	P	07 15 18.9	-6.8
SEY	**Seymchan**	**78.12**	**19***d*	*i*P	**P**	**07 15 25.6**	**-0.2**
KBZ	**Khabaz**	**78.81**	**317**	P	**P**	**07 15 29.9**	**-0.1**
KBZ	**Khabaz**	**78.81**	**317**	P	**P**	**07 15 29.9**	**-0.1**
KBZ	**Khabaz**	**78.81**	**317**	P	**P**	**07 15 29.9**	**-0.1**
	comp=Z,12nm,0.9s,baz=95,slow=4.1,SNR=22						
KIV	**Kislovodsk**	**79.04**	**318**	*e*P	**P**	**07 15 31.4**	**0.0**
KIV				pmax	pmax		
	comp=Z,12nm,0.9s						
LSZ	**Lusaka**	**79.17**	**256**	*e*P	**P**	**07 15 33.3**	**+0.6**
	comp=Z,10nm,1.3s						
BOSA	**Boshof**	**80.79**	**242**	P	**P**	**07 15 42.0**	**+0.7**
BOSA	**Boshof**	**80.79**	**242**	P	**P**	**07 15 42.0**	**+0.7**
	comp=Z,3.6nm,0.7s,baz=82,slow=5.2,SNR=8.9						
VRHR	**Novokhopersk**	**82.45**	**324**	*e*P	**P**	**07 15 48.3**	**-1.0**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRHR				pmax	pmax		
	comp=N,7.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,30nm,0.9s						
ANN	**Anapa**	**82.86**	**317**	*e*P	P	07 15 54.9	+3.3
ANN				pmax	pmax		
	comp=Z,66nm,1.2s						
VORD	**Divnogorie**	**83.77**	**323**	*e*P	**P**	**07 15 55.2**	**-0.9**
VORD				pmax	pmax		
	comp=N,10.0nm,0.8s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VORD				pmax	pmax		
	comp=E,3.0nm,0.4s						
VSR	**Storozhevoye**	**83.93**	**324**	*e*P	**P**	**07 15 56.3**	**-0.6**
VSR				pmax	pmax		
	comp=N,9.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
BR131	**Keskin Array S**	**84.06**	**311**	*e*P	**P**	**07 15 57.6**	**-0.5**
	comp=Z,9.5nm,0.8s						
BR131				*e*PcP	**PcP**	**07 16 01.2**	**-0.7**
BRTR	**Keskin Array B**	**84.06**	**311**	P	**P**	**07 15 57.6**	**-0.5**
BRTR	**Keskin Array B**	**84.06**	**311**	P	**P**	**07 15 57.6**	**-0.5**
	comp=Z,10nm,0.8s,baz=138,slow=6.4,SNR=55						
BILL	**Bilibino**	**85.82**	**18**⇓	*e*P	**P**	**07 16 05.4**	**-0.7**
BILL				*e*		07 19 20.6	
BILL				*e*S	S	07 26 22.8	-9.3
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,100nm,21.0s						
OBN	**Obninsk**	**86.73**	**327**⇓	*i*P	**P**	**07 16 09.5**	**-1.2**
OBN				*e*		07 19 32.1	
OBN				*e*S	S	07 26 28.1	-13
OBN				pmax	pmax		
	comp=Z,32nm,1.3s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
SNAA	**Sanae**	**89.13**	**197**	*e*P	**P**	**07 16 23.5**	**+1.4**
AKASG	**Malin Array Be**	**89.80**	**321**	P	**P**	**07 16 24.3**	**-1.1**
AKASG	**Malin Array Be**	**89.80**	**321**	P	**P**	**07 16 24.3**	**-1.1**
AKASG	**Malin Array Be**	**89.80**	**321**	P	**P**	**07 16 24.3**	**-1.1**
	comp=Z,2.5nm,0.7s,baz=88,slow=4.7,SNR=7.0						
VNA2	**Neumayer--Watz**	**90.78**	**197**	*e*P	P	07 16 22.4	-7.3
JOF	**Joensuu**	**91.59**	**333**	*e*P	**P**	**07 16 32.6**	**-0.9**
JOF	**Joensuu**	**91.59**	**333**	*e*p	**P**	**07 16 32.6**	**-0.9**
BUR08	**Bucovina Ar. S**	**91.78**	**318**	*e*P	**P**	**07 16 34.9**	**0.0**
FINES	**FINESS Array B**	**93.67**	**331**	P	**P**	**07 16 41.7**	**-1.4**
FINES	**FINESS Array B**	**93.67**	**331**	P	**P**	**07 16 41.7**	**-1.4**
	comp=Z,3.5nm,0.8s,baz=103,slow=5.0,SNR=9.4						
ARCES	**ARCESS Array B**	**95.24**	**339**	P	**P**	**07 16 48.7**	**-1.5**
ARCES	**ARCESS Array B**	**95.24**	**339**	P	**P**	**07 16 48.7**	**-1.5**
	comp=Z,2.0nm,0.9s,baz=123,slow=6.7,SNR=4.9						
TORD	**Torodi Ar. Bea**	**108.64**	**281**	PKiKP	**PKiKP**	**07 21 55.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**108.64**	**281**	PKiKP	**PKiKP**	**07 21 55.8**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=90,slow=1.2,SNR=3.1						
YKA	**Yellowknife Ar**	**117.12**	**21**	PKP	**PKPdf**	**07 22 10.8**	**-0.4**
YKA	**Yellowknife Ar**	**117.12**	**21**	PKP	**PKPdf**	**07 22 10.8**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=334,slow=1.5,SNR=31						
NVAR	**Mina Array Bea**	**127.79**	**47**	PKP	**PKPdf**	**07 22 34.8**	**+2.0**
NVAR	**Mina Array Bea**	**127.79**	**47**	PKP	**PKPdf**	**07 22 34.8**	**+2.0**
	comp=Z,0.6nm,0.7s,baz=276,slow=2.4,SNR=6.6						
PDAR	**Pinedale Array**	**131.59**	**38**	PKP	**PKPdf**	**07 22 39.2**	**-0.7**
PDAR				SKPab	**SKPab**	**07 25 58.7**	**-0.1**
PDAR	**Pinedale Array**	**131.59**	**38**	PKP	**PKPdf**	**07 22 39.2**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=236,slow=1.0,SNR=3.5						
PDAR				SKPab	**SKPab**	**07 25 58.7**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=191,slow=1.8,SNR=4.2						
ULM	**Lac du Bonnet**	**133.09**	**22**	PKP	**PKPdf**	**07 22 43.0**	**+0.8**
ULM	**Lac du Bonnet**	**133.09**	**22**	PKP	**PKPdf**	**07 22 43.0**	**+0.8**
	comp=Z,1.3nm,0.4s,baz=288,slow=3.2,SNR=2.7						
SCHQ	**Schefferville**	**133.24**	**357**	PKP	**PKPdf**	**07 22 43.4**	**+1.0**
SCHQ				SKPab	**SKPab**	**07 26 07.6**	**+2.5**
SCHQ	**Schefferville**	**133.24**	**357**	PKP	**PKPdf**	**07 22 43.4**	**+1.0**
	comp=Z,2.3nm,0.9s,baz=14,slow=4.2,SNR=4.2						
SCHQ				SKPab	**SKPab**	**07 26 07.6**	**+2.5**
	comp=Z,2.0nm,0.8s,baz=288,slow=6.4,SNR=3.9						
TXAR	**Lajitas Array**	**142.67**	**51**	PKPpre	PKPpre	07 22 55.9	
TXAR				SKPbc	**SKiKP**	**07 26 33.0**	**+0.3**
TXAR	**Lajitas Array**	**142.67**	**51**	PKhKP	PKPpre	07 22 55.9	
	comp=Z,1.2nm,0.7s,baz=211,slow=6.9,SNR=11						
TXAR				SKPbc	**SKiKP**	**07 26 33.0**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=228,slow=1.1,SNR=4.0						
CPUP	**Villa Florida**	**143.36**	**201**	PKP	PKPbc	07 22 59.6	+0.7
CPUP	**Villa Florida**	**143.36**	**201**	PKP	PKPbc	07 22 59.6	+0.7
	comp=Z,1.0nm,0.6s,baz=104,slow=8.3,SNR=3.6						
MDV	**Middlebury**	**144.14**	**3**	*e*PKPdf	PKPbc	07 23 00.7	0.0
SLM	**Saint Louis**	**144.93**	**27**	*e*PKIKP	PKPbc	07 23 03.4	0.0
SLM	**Saint Louis**	**144.93**	**27**	*e*PKPdf	PKPbc	07 23 03.4	0.0
BINY	**Binghamton**	**145.70**	**7**	*e*PKPbc	**PKPbc**	**07 23 05.6**	**-0.1**
OLIL	**Olney**	**145.76**	**24**	*e*PKPbc	**PKPab**	**07 23 06.4**	**-0.1**
BLO	**Bloomington**	**145.99**	**22**	*e*PKP2	**PKPab**	**07 23 07.1**	**-0.3**
BLO	**Bloomington**	**145.99**	**22**	*e*PKPbc	**PKPab**	**07 23 07.1**	**-0.3**
MIAR	**Mount Ida**	**146.40**	**35**	*e*PKP2	**PKPab**	**07 23 08.8**	**-0.3**
MIAR	**Mount Ida**	**146.40**	**35**	*e*PKPbc	**PKPab**	**07 23 08.8**	**-0.3**
WCI	**Wyandotte Cave**	**146.91**	**22**	*e*PKP2	**PKPbc**	**07 23 09.7**	**+0.2**
WCI	**Wyandotte Cave**	**146.91**	**22**	*e*PKPbc	**PKPbc**	**07 23 09.7**	**+0.2**
UALR	**University of**	**146.92**	**33**	*e*PKPbc	**PKPbc**	**07 23 10.0**	**+0.5**
SSPA	**Standing Stone**	**146.97**	**10**	*e*PKPbc	**PKPbc**	**07 23 09.7**	**+0.1**
BDFB	**Brasilia**	**147.30**	**224**	PKPbc	**PKPbc**	**07 23 12.0**	**+0.8**
BDFB	**Brasilia**	**147.30**	**224**	PKPbc	**PKPbc**	**07 23 12.0**	**+0.8**
	comp=Z,4.9nm,0.7s,baz=146,slow=2.8,SNR=10						
WVT	**Waverly**	**148.08**	**26**	*e*PKP2	**PKPbc**	**07 23 13.1**	**+0.4**
WVT	**Waverly**	**148.08**	**26**	*e*PKPbc	**PKPbc**	**07 23 13.1**	**+0.4**
OXF	**Oxford**	**148.66**	**30**	*e*PKP2	**PKPbc**	**07 23 14.5**	**+0.3**
OXF	**Oxford**	**148.66**	**30**	*e*PKPbc	**PKPbc**	**07 23 14.5**	**+0.3**
OXF				*e*PKPab	**PKPab**	**07 23 18.4**	**+0.5**
TZTN	**Tazewell**	**149.40**	**20**	*e*PKPbc	**PKPbc**	**07 23 16.3**	**+0.2**
SWET	**Sewanee**	**149.66**	**25**	*e*PKPbc	**PKPbc**	**07 23 16.5**	**-0.3**
CPCT	**Cooper Cave**	**150.02**	**23**	*e*PKPbc	**PKPbc**	**07 23 18.2**	**+0.5**
CPCT				*e*PKPab	**PKPab**	**07 23 23.6**	**+0.1**
TKL	**Tuckaleechee C**	**150.12**	**21**	*e*PKPbc	**PKPbc**	**07 23 18.1**	**+0.3**
LRAL	**Lakeview Retre**	**151.03**	**29**	*e*PKPbc	**PKPbc**	**07 23 20.1**	**0.0**
JSC	**Jenkinsville**	**152.22**	**19**	*e*PKIKP	**PKPbc**	**07 23 23.1**	**+0.4**
JSC	**Jenkinsville**	**152.22**	**19**	*e*PKPbc	**PKPbc**	**07 23 23.1**	**+0.4**
LPAZ	**La Paz**	**155.66**	**187**	PKPab	**PKPab**	**07 23 49.1**	**+0.8**
LPAZ	**La Paz**	**155.66**	**187**	PKPab	**PKPab**	**07 23 49.1**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=137,slow=8.7,SNR=4.4						

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*ISK **07** 07:07:26.5, 39°.99N×42°.10E, h14km, MD3.0*
*CSEM **07** 07:07:26.7±0.2, 39°.99N×42°.06E, h8km, MD3.0, Error ellipse: s-maj=4.3km s-min=3.3km az=133.0*
*ISCJB **07** 07:07:26.2±0.8, 39°.97N±0°.03×42°.12E±0°.05, h4km±6km, Error ellipse: s-maj=6.0km s-min=4.9km az=18.9*
*DDA **07** 07:07:28.0, 40°.05N×41°.99E, h8km, MD3.0*
ISC 07 07:07:26.5±1.1**, 39°.98N**±0°.03×**42°.07E**±0°.03**, h8**km±8km**, n33, σ0s.77**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.14**	**299**	*i* P	**Pg**	**07 07 30.1**	**+0.5**
HOMI				*i* S	**Sg**	**07 07 31.8**	**-0.1**
ERZM	**Erzurum**	**0.54**	**263**	*i* P	**Pg**	**07 07 37.8**	**+0.7**
ERZM				*i* S	**Sg**	**07 07 43.0**	**-1.2**
ERZM	**Erzurum**	**0.54**	**263**	*i* P	**Pg**	**07 07 37.8**	**+0.7**
ERZM				*i* S	**Sg**	**07 07 43.0**	**-1.2**
EZM	**Erzurum**	**0.55**	**263**	*e*PG	**Pb**	**07 07 38.0**	**-0.6**
EZM				*e*SG	**Sb**	**07 07 47.2**	**+0.6**
VRTB	**Varto-Mus**	**0.94**	**210**	*e*PG	**Pb**	**07 07 45.6**	**+0.4**
VRTB				*e*SG	**Sn**	**07 07 59.5**	**-0.5**
VRTB	**Varto-Mus**	**0.94**	**210**	*e*Pg	**Pb**	**07 07 45.6**	**+0.4**
VRTB				*e*Sg	**Sn**	**07 07 59.5**	**-0.5**
DDEM	**Demirkent**	**0.95**	**345**	*i* P	**Pg**	**07 07 44.7**	**0.0**
DDEM				*i* S	**Sb**	**07 07 58.3**	**+0.3**
DDEM	**Demirkent**	**0.95**	**345**	*i* P	**Pg**	**07 07 44.7**	**0.0**
DDEM				*i* S	**Sb**	**07 07 58.3**	**+0.3**
KARS	**Kars**	**1.01**	**50**	*e*PG	**Pg**	**07 07 45.8**	**-0.2**
KARS	**Kars**	**1.01**	**50**	*e*Pg	**Pg**	**07 07 45.8**	**-0.2**
DAGI	**Agillar**	**1.11**	**354**	*i* P	**Pg**	**07 07 47.7**	**0.0**
DAGI				*i* S	**Sg**	**07 08 02.1**	**0.0**
KOPT	**Kop Dagi**	**1.21**	**272**	*i* P	**Pn**	**07 07 50.0**	**0.0**
KOPT				*i* S	**Sn**	**07 08 08.3**	**+1.6**
KOPT	**Kop Dagi**	**1.21**	**272**	*i* P	**Pn**	**07 07 50.0**	**0.0**
ARTV	**Artvin**	**1.21**	**355**	*i* P	**Pb**	**07 07 49.5**	**-0.4**
ARTV				*i* S	**Sb**	**07 08 05.9**	**+0.1**
ARTV	**Artvin**	**1.21**	**355**	*i* P	**Pb**	**07 07 49.5**	**-0.4**
ARTV				*i* S	**Sb**	**07 08 05.9**	**+0.1**
DBOC	**Borcka**	**1.40**	**348**	*i* P	**Pb**	**07 07 52.8**	**-0.2**
DBOC				*i* S	**Sg**	**07 08 11.8**	**+0.2**
DBOC	**Borcka**	**1.40**	**348**	*i* P	**Pb**	**07 07 52.8**	**-0.2**
DBOC				*i* S	**Sg**	**07 08 11.8**	**+0.2**
BNGB	**Bingˆ¶l**	**1.46**	**228**	*e*PN	**Pn**	**07 07 53.4**	**+0.2**
BCA	**Borcka**	**1.50**	**347**	*e*PN	**Pn**	**07 07 53.5**	**-0.3**
BCA	**Borcka**	**1.50**	**347**	*e*Pn	**Pn**	**07 07 53.6**	**-0.3**
BAYT	**Ayd˜–ntepe-Bay**	**1.53**	**286**	*e*PN	**Pn**	**07 07 54.4**	**0.0**
BAYT	**Ayd˜–ntepe-Bay**	**1.53**	**286**	*e*Pn	**Pn**	**07 07 54.4**	**0.0**
BINT	**Bingol**	**1.64**	**229**	*e*Pn	**Pn**	**07 07 53.4**	**-2.5**
CLDR	**Caldiran**	**1.66**	**120**	*e*PN	**Pn**	**07 07 56.1**	**0.0**
CLDR	**Caldiran**	**1.66**	**120**	*e*Pn	**Pn**	**07 07 56.1**	**0.0**
ERZN	**Erzincan**	**1.85**	**259**	*e*PN	**Pn**	**07 07 59.1**	**+0.5**
GUMT	**Gumushane**	**2.04**	**285**	*e*PN	**Pn**	**07 08 01.4**	**+0.1**
GUMT	**Gumushane**	**2.04**	**285**	*e*Pn	**Pn**	**07 08 01.4**	**+0.1**
GNI	**Garni**	**2.06**	**84**	*e*PN	**Pn**	**07 08 02.1**	**+0.5**
GNI	**Garni**	**2.06**	**84**	*e*Pn	**Pn**	**07 08 02.1**	**+0.5**
EZC	**Erzincan**	**2.10**	**265**	*e*Pn	**Pn**	**07 07 59.1**	**-3.1**
PTK	**Pertek**	**2.34**	**243**	*e*PN	**Pn**	**07 08 06.0**	**+0.5**
PTK	**Pertek**	**2.34**	**243**	*e*Pn	**Pn**	**07 08 06.0**	**+0.5**

IDC 07 07:29:25.3±55.0**, 19°.11S**×**176°.79W, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/19**, mbtmp4.1**/3**, Error ellipse: s-maj=1019.0km s-min=174.1km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.42**	**243**	P	P	07 36 57.2	0.0
	2.0nm,0.9s,baz=101,slow=10,SNR=3.0						
WRA	**Warramunga Arr**	**45.94**	**260**	P	P	07 37 49.6	-0.8
	1.2nm,0.4s,baz=97,slow=8.4,SNR=8.3						
ASAR	**Alice Springs**	**45.96**	**255**	P	P	07 37 50.9	+0.3
	1.2nm,0.3s,baz=89,slow=8.1,SNR=36						

DDA 07 08:48:47.6, 40°.38N×36°.55E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOKA	**Tokat**	**0.08**	**225**	*i* P	Pg	08 48 49.8	+0.1
TOKA				*i* S	Sg	08 48 51.6	+0.5
ERBA	**Erbaa**	**0.34**	**27**	*i* P	Pg	08 48 54.9	+0.5
ERBA				*i* S	Sg	08 48 59.5	+0.7
SUSE	**Susehri**	**1.27**	**97**	*i* P	Pn	08 49 10.5	-1.7
SUSE				*i* S	Sn	08 49 29.9	+0.3

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*DDA **07** 08:50:26.5, 37°.26N×28°.32E, h7km, MD2.9*
*ISK **07** 08:50:26.8, 37°.27N×28°.21E, h7km, MD2.5*
*ISCJB **07** 08:50:26.9±0.5, 37°.25N±0°.05×28°.22E±0°.06, h13km±7km, Error ellipse: s-maj=11.3km s-min=4.6km az=39.0*
*CSEM **07** 08:50:27.3±0.1, 37°.25N×28°.21E, h10km, MD2.5, Error ellipse: s-maj=4.2km s-min=2.4km az=37.0*
ISC 07 08:50:27.1±1.0**, 37°.28N**±0°.05×**28°.22E**±0°.03**, h7**km±12km**, n24, σ1s.31**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.15**	**160**	*e*PG	**Pg**	**08 50 30.3**	**0.0**
YER				*e*SG	**Sg**	**08 50 32.6**	**+0.2**
YER	**Yerkesik**	**0.15**	**160**	*e*Pg	**Pg**	**08 50 30.3**	**0.0**
YER				*e*Sg	**Sg**	**08 50 32.6**	**+0.2**
MLSB	**Milas**	**0.35**	**273**	*e*PG	**Pg**	**08 50 33.9**	**-0.1**
MLSB				*e*SG	**Sg**	**08 50 39.6**	**+0.9**
MLSB	**Milas**	**0.35**	**273**	*e*Pg	**Pg**	**08 50 33.9**	**-0.1**
MLSB				*e*Sg	**Sg**	**08 50 39.6**	**+0.9**
AYDN	**Tasoluk**	**0.47**	**325**	*i* P	**Pb**	**08 50 37.4**	**-0.3**
AYDN				*i* S	**Sg**	**08 50 43.7**	**+1.4**
AYDN	**Tasoluk**	**0.47**	**325**	*i* P	**Pb**	**08 50 37.4**	**-0.3**
AYDN				*i* S	**Sg**	**08 50 43.7**	**+1.4**
TURN	**Turunc**	**0.51**	**143**	*i* P	**Pg**	**08 50 36.3**	**-0.6**
TURN				*i* S	**Sg**	**08 50 43.7**	**+0.1**
TURN	**Turunc**	**0.51**	**143**	*i* P	**Pg**	**08 50 36.3**	**-0.6**
TURN				*i* S	**Sg**	**08 50 43.7**	**+0.1**
DALY	**Dalyan (Mu˜la**	**0.58**	**143**	*e*PG	**Pb**	**08 50 38.7**	**-0.8**
DALY	**Dalyan (Mu˜la**	**0.58**	**143**	*e*Pg	**Pb**	**08 50 38.7**	**-0.8**
DAT	**Datca**	**0.75**	**223**	*e*PG	**Pg**	**08 50 41.4**	**-0.2**
DAT	**Datca**	**0.75**	**223**	*e*Pg	**Pg**	**08 50 41.4**	**-0.2**
BODT	**Bodrum**	**0.76**	**254**	*e*PG	**Pg**	**08 50 41.6**	**-0.1**
BODT	**Bodrum**	**0.76**	**254**	*e*Pg	**Pg**	**08 50 41.6**	**-0.1**
FETY	**Fethiye**	**0.94**	**133**	*e*PG	**Pg**	**08 50 45.3**	**+0.1**
FETY	**Fethiye**	**0.94**	**133**	*e*Pg	**Pg**	**08 50 45.3**	**+0.1**
GOLH	**Golhisar**	**1.07**	**92**	*i* P	**Pb**	**08 50 45.0**	**-3.0**
GOLH	**Golhisar**	**1.07**	**92**	*i* P	**Pb**	**08 50 45.0**	**-3.0**
KULA	**Kula-Manisa**	**1.28**	**16**	*e*PN	**Pn**	**08 50 51.2**	**-0.3**
KULA	**Kula-Manisa**	**1.28**	**16**	*e*Pn	**Pn**	**08 50 51.2**	**-0.3**
ELL	**Elmali**	**1.45**	**111**	*e*PN	**Pb**	**08 50 54.4**	**-0.2**
ELL	**Elmali**	**1.45**	**111**	*e*Pn	**Pb**	**08 50 54.4**	**-0.2**
AKAS	**Kas**	**1.52**	**133**	*i* P	**Pg**	**08 50 58.3**	**+1.9**
AKAS				*i* S	**Sg**	**08 51 19.1**	**+3.0**
AKAS	**Kas**	**1.52**	**133**	*i* P	**Pg**	**08 50 58.3**	**+1.9**
AKAS				*i* S	**Sg**	**08 51 19.1**	**+3.0**

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*ISK **07** 08:56:57.3, 39°.09N×27°.56E, h10km, MD2.7*
*CSEM **07** 08:56:57.7±0.2, 39°.11N×27°.55E, h1km, MD2.7, Error ellipse: s-maj=4.6km s-min=3.7km az=89.0*
*ISCJB **07** 08:56:57.6±0.4, 39°.11N±0°.02×27°.53E±0°.03, h0km, Error ellipse: s-maj=3.8km s-min=3.3km az=178.7*
*DDA **07** 08:56:58.2, 39°.11N×27°.58E, h7km, MD2.5*
ISC 07 08:56:56.8±0.8**, 39°.09N**±0°.02×**27°.56E**±0°.02**, h0**km**, n46, σ0s.90**/64**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.29**	**137**	*e*PG	**Pg**	**08 57 03.6**	**+1.2**
AKS				*e*SG	**Sb**	**08 57 09.2**	**-1.2**
AKS	**Akhisar**	**0.29**	**137**	*e*Pg	**Pg**	**08 57 03.6**	**+1.2**
AKS				*e*Sg	**Sb**	**08 57 09.2**	**-1.2**
AKHS	**Akhisar**	**0.29**	**137**	*i* P	**Pg**	**08 57 04.3**	**+1.9**
AKHS				*i* S	**Sb**	**08 57 10.0**	**-0.4**
AKHS	**Akhisar**	**0.29**	**137**	*i* P	**Pg**	**08 57 04.3**	**+1.9**
AKHS				*i* S	**Sb**	**08 57 10.0**	**-0.4**
BALB	**Balikesir**	**0.60**	**25**	*e*PG	**Pg**	**08 57 09.6**	**+1.2**
BALB				*e*SG	**Sb**	**08 57 18.6**	**-0.6**
BALB	**Balikesir**	**0.60**	**25**	*e*Pg	**Pg**	**08 57 09.6**	**+1.2**
BALB				*e*Sg	**Sb**	**08 57 18.6**	**-0.6**
BALY	**Balya**	**0.65**	**4**	*i* P	**Pb**	**08 57 10.5**	**-0.5**
BALY				*i* S	**Sb**	**08 57 20.9**	**+0.2**
BALY	**Balya**	**0.65**	**4**	*i* P	**Pb**	**08 57 10.5**	**-0.5**
BALY				*i* S	**Sb**	**08 57 20.9**	**+0.2**
AYVA	**Ayvalik**	**0.71**	**288**	*i* P	**Pb**	**08 57 12.5**	**+0.5**
AYVA	**Ayvalik**	**0.71**	**288**	*i* P	**Pb**	**08 57 12.5**	**+0.5**
IZM	**Izmir**	**0.73**	**198**	*e*PG	**Pg**	**08 57 11.8**	**+1.0**
IZM	**Izmir**	**0.73**	**198**	*e*Pg	**Pg**	**08 57 11.8**	**+1.0**
BLCB	**Balcova**	**0.81**	**210**	*e*PG	**Pg**	**08 57 13.3**	**+0.9**
BLCB	**Balcova**	**0.81**	**210**	*e*Pg	**Pg**	**08 57 13.3**	**+0.9**
DURS	**Dursunbey**	**0.87**	**54**	*i* P	**Pb**	**08 57 14.8**	**-0.1**
DURS				*i* S	**Sb**	**08 57 27.8**	**+0.6**
DURS	**Dursunbey**	**0.87**	**54**	*i* P	**Pb**	**08 57 14.8**	**-0.1**
DURS				*i* S	**Sb**	**08 57 27.8**	**+0.6**
DEMI	**Demirci**	**0.91**	**93**	*i* P	**Pb**	**08 57 15.5**	**+0.1**
DEMI				*i* S	**Sb**	**08 57 28.2**	**+0.2**
DEMI	**Demirci**	**0.91**	**93**	*i* P	**Pb**	**08 57 15.5**	**+0.1**
DEMI				*i* S	**Sb**	**08 57 28.3**	**+0.2**
GONE	**Gonen-Balikesi**	**0.96**	**6**	*e*PG	**Pg**	**08 57 15.7**	**+0.5**
GONE	**Gonen-Balikesi**	**0.96**	**6**	*e*Pg	**Pg**	**08 57 15.7**	**+0.5**
KULA	**Kula-Manisa**	**1.04**	**123**	*e*PG	**Pg**	**08 57 17.0**	**+0.3**
KULA	**Kula-Manisa**	**1.04**	**123**	*e*Pg	**Pg**	**08 57 17.0**	**+0.3**
URLA	**Izmir**	**1.05**	**226**	*i* P	**Pn**	**08 57 19.0**	**+0.2**
URLA				*i* S	**Sn**	**08 57 34.5**	**+0.4**
URLA	**Izmir**	**1.05**	**226**	*i* P	**Pn**	**08 57 19.0**	**+0.2**
URLA				*i* S	**Sn**	**08 57 34.5**	**+0.4**
EDC	**Edincik**	**1.27**	**11**	*e*PN	**Pg**	**08 57 21.7**	**+0.5**
EDC	**Edincik**	**1.27**	**11**	*e*Pn	**Pg**	**08 57 21.7**	**+0.5**
KRBG	**Karabiga-Canak**	**1.31**	**351**	*e*PN	**Pb**	**08 57 22.6**	**+0.3**
KRBG	**Karabiga-Canak**	**1.31**	**351**	*e*Pn	**Pb**	**08 57 22.6**	**+0.3**
KCTX	**Karacabey (Bur**	**1.32**	**28**	*e*PN	**Pg**	**08 57 22.2**	**0.0**
KCTX	**Karacabey (Bur**	**1.32**	**28**	*e*Pn	**Pg**	**08 57 22.2**	**0.0**
ORLT	**Orhaneli**	**1.41**	**47**	*e*PN	**Pn**	**08 57 23.1**	**-0.7**
ORLT	**Orhaneli**	**1.41**	**47**	*e*Pn	**Pn**	**08 57 23.1**	**-0.7**
LPK	**Lapseki**	**1.42**	**335**	*e*PN	**Pg**	**08 57 24.4**	**+0.4**
LPK	**Lapseki**	**1.42**	**335**	*e*Pn	**Pg**	**08 57 24.4**	**+0.4**
AYDN	**Tasoluk**	**1.45**	**170**	*i* P	**Pn**	**08 57 24.5**	**+0.1**
AYDN				*i* S	**Sg**	**08 57 40.7**	**-2.8**
AYDN	**Tasoluk**	**1.45**	**170**	*i* P	**Pn**	**08 57 24.5**	**+0.1**
AYDN				*i* S	**Sg**	**08 57 40.7**	**-2.8**
GDZ	**Gediz**	**1.50**	**90**	*i* P	**Pg**	**08 57 26.9**	**+1.4**
GDZ				*i* S	**Sn**	**08 57 46.8**	**+1.4**
GDZ	**Gediz**	**1.50**	**90**	*i* P	**Pg**	**08 57 26.9**	**+1.4**
GDZ				*i* S	**Sn**	**08 57 46.8**	**+1.4**
MRMT	**Marmara Adasi**	**1.51**	**1**	*e*PN	**Pn**	**08 57 25.2**	**0.0**
MRMT	**Marmara Adasi**	**1.51**	**1**	*e*Pn	**Pn**	**08 57 25.2**	**0.0**
TVSB	**Tavsanli**	**1.52**	**76**	*e*PN	**Pn**	**08 57 25.2**	**-0.2**
TVSB	**Tavsanli**	**1.52**	**76**	*e*Pn	**Pn**	**08 57 25.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.55**	**328**	*e*PN	**Pn**	**08 57 25.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.55**	**328**	*e*Pn	**Pn**	**08 57 25.9**	**+0.3**
IZI	**Iznik**	**1.93**	**49**	*e*PN	**Pn**	**08 57 30.9**	**-0.1**
IZI	**Iznik**	**1.93**	**49**	*e*Pn	**Pn**	**08 57 30.9**	**-0.1**

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*NSSP **07** 08:58:19.5, 41°.07N×45°.62E, h8km, Ms2.8*
*TIF **07** 08:58:19.5, 41°.07N×45°.76E, h15km±1km*
*ISCJB **07** 08:58:20.9±1.1, 41°.05N±0°.03×45°.71E±0°.05, h6km±7km, Error ellipse: s-maj=6.3km s-min=4.3km az=152.0*
*CSEM **07** 08:58:21.8±0.4, 41°.02N×45°.71E, h20km, ML2.8, Error ellipse: s-maj=8.8km s-min=5.4km az=68.0*
ISC 07 08:58:20.5±1.2**, 41°.07N**±0°.02×**45°.68E**±0°.03**, h18**km±4km**, n31, σ0s.92**/59**, 9C-17D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**0.44**	**329**	P	**Pn**	**08 58 32.0**	**0.0**
DGRG				S	**Sn**	**08 58 41.1**	**+1.5**
DGRG	**David-gareji**	**0.44**	**329**	P	**Pn**	**08 58 32.0**	**0.0**
DGRG				S	**Sn**	**08 58 41.1**	**+1.5**
CKLZ	**Chkalov**	**0.79**	**260**	⇑*i*P	**Pn**	**08 58 37.1**	**+0.2**
CKLZ				⇑*i*S	**Sn**	**08 58 48.8**	**+0.4**
CKLZ	**Chkalov**	**0.79**	**260**	⇑P	**Pn**	**08 58 37.1**	**+0.2**
CKLZ				S	**Sn**	**08 58 48.8**	**+0.4**
LMTZ	**Lermontov**	**0.85**	**248**	⇓*i*P	**Pn**	**08 58 38.2**	**+0.5**
LMTZ				⇓*i*S	**Sn**	**08 58 50.0**	**+0.2**
LMTZ	**Lermontov**	**0.85**	**248**	⇓P	**Pn**	**08 58 38.2**	**+0.5**
LMTZ				S	**Sn**	**08 58 50.0**	**+0.2**
VADZ	**Vardenis**	**0.90**	**177**	⇓*i*P	**Pb**	**08 58 38.0**	**+0.2**
VADZ				⇓*i*S	**Sg**	**08 58 51.0**	**+0.9**
VADZ	**Vardenis**	**0.90**	**177**	⇓P	**Pb**	**08 58 38.0**	**+0.2**
VADZ				S	**Sg**	**08 58 51.0**	**+0.9**
SEAG	**Tbilisi Sea**	**0.95**	**317**	P	**Pn**	**08 58 39.2**	**+0.2**
SEAG				S	**Sn**	**08 58 53.3**	**+1.0**
TBLG	**Delisi**	**0.97**	**313**	P	**Pg**	**08 58 39.1**	**-0.2**
TBLG				S	**Sn**	**08 58 53.2**	**+0.7**
TBLG	**Delisi**	**0.97**	**313**	P	**Pg**	**08 58 39.1**	**-0.2**
TBLG				S	**Sn**	**08 58 53.2**	**+0.7**
STEZ	**Stepenevan**	**0.97**	**266**	⇑*i*P	**Pn**	**08 58 40.2**	**+0.8**
STEZ				⇓*i*S	**Sn**	**08 58 54.0**	**+1.2**
STEZ	**Stepenevan**	**0.97**	**266**	⇓*e*P	**Pb**	**08 58 38.4**	**-0.5**
STEZ				⇓S	**Sg**	**08 58 52.0**	**-0.3**
STE	**Stepanavan**	**0.99**	**266**	⇑P	**Pn**	**08 58 40.2**	**+0.5**
STE				S	**Sn**	**08 58 54.0**	**+0.7**
KZR	**Kazreti**	**1.00**	**288**	P	**Pg**	**08 58 39.6**	**-0.4**
KZR				S	**Sn**	**08 58 53.4**	**0.0**
KZR	**Kazreti**	**1.00**	**288**	P	**Pg**	**08 58 39.6**	**-0.4**
KZR				S	**Sn**	**08 58 53.4**	**0.0**
SPIZ	**Spitak**	**1.10**	**257**	⇑*i*P	**Pb**	**08 58 40.9**	**-0.2**
SPIZ				⇑*i*S	**Sb**	**08 58 54.9**	**-0.2**
SPIZ	**Spitak**	**1.10**	**257**	⇑P	**Pb**	**08 58 40.9**	**-0.2**
SPIZ				S	**Sb**	**08 58 54.9**	**-0.2**
GNI	**Garni**	**1.17**	**218**	⇓*i*P	**Pg**	**08 58 43.0**	**-0.2**
GNI				⇓*i*S	**Sg**	**08 58 59.5**	**+1.0**
GNI	**Garni**	**1.17**	**218**	⇓P	**Pg**	**08 58 43.0**	**-0.2**
GNI				S	**Sg**	**08 58 59.5**	**+1.0**
MTKZ	**Martakert**	**1.23**	**135**	⇓*i*P	Pn	08 58 38.4	-4.4
MTKZ				⇓*i*S	**Sb**	**08 58 58.9**	**+0.1**
GOR	**Gori**	**1.49**	**308**	P	**Pb**	**08 58 48.1**	**+0.4**
GOR				S	**Sg**	**08 59 09.6**	**+0.9**
GOR	**Gori**	**1.49**	**308**	P	**Pb**	**08 58 48.1**	**+0.4**
GOR				S	**Sg**	**08 59 09.6**	**+0.9**
STKZ		**1.50**	**147**	⇓*i*P	Pg	08 58 54.6	+5.2
STKZ				⇑*i*S	**Sg**	**08 59 12.3**	**+3.3**
GRS	**Goris**	**1.65**	**162**	⇓*i*P	**Pn**	**08 58 46.0**	**-2.7**
GRS				⇓*i*S	**Sn**	**08 59 07.0**	**-2.5**
GUDG	**Gudauri**	**1.66**	**327**	P	**Pb**	**08 58 50.8**	**+0.1**
GUDG				S	**Sg**	**08 59 13.5**	**-0.5**
GUDG	**Gudauri**	**1.66**	**327**	P	**Pb**	**08 58 50.8**	**+0.1**
GUDG				S	**Sg**	**08 59 13.5**	**-0.5**
AKH	**Akhalkalaki**	**1.68**	**282**	P	**Pg**	**08 58 52.0**	**-1.0**
AKH				S	**Sg**	**08 59 14.4**	**-0.5**
AKH	**Akhalkalaki**	**1.68**	**282**	P	**Pg**	**08 58 52.0**	**-1.0**
AKH				S	**Sg**	**08 59 14.4**	**-0.5**
ONI	**Oni**	**2.25**	**313**	P	**Pb**	**08 59 00.5**	**-0.2**
ONI				S	**Sg**	**08 59 31.4**	**-1.6**
ONI	**Oni**	**2.25**	**313**	P	**Pb**	**08 59 00.5**	**-0.2**

IDC 07 09:16:58.4±1.9**, 15°.62S**×**174°.85W, h158**km±31km**,**

mb3.2/4, mb1 3.6/5, mb1mx3.3/20, mbtmp3.3/5, Error ellipse: s-maj=148.6km s-min=18.4km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.42**	**61**	P	Pn	09 17 53.5	+1.9
	19nm,0.3s,baz=36,slow=1.7,SNR=81						
AFI				S	Sn	09 18 32.6	-0.2
	46nm,0.3s,baz=30,slow=22,SNR=14						
WRA	**Warramunga Arr**	**48.43**	**257**	P	P	09 25 25.1	-0.1
	0.3nm,0.6s,baz=91,slow=7.8,SNR=10.0						
ASAR	**Alice Springs**	**48.71**	**252**	P	P	09 25 26.8	-0.5
	1.2nm,0.5s,baz=90,slow=7.6,SNR=35						
NVAR	**Mina Array Bea**	**75.43**	**43**	P	P	09 28 25.0	-0.4
	0.4nm,0.5s,baz=224,slow=8.9,SNR=4.6						
ILAR	**Eielson Array**	**82.93**	**12**	P	P	09 29 05.2	+0.1
	0.3nm,0.5s,baz=226,slow=6.0,SNR=7.6						
BRTR	**Keskin Array B**	**145.43**	**320**	PKPbc	PKPab	09 36 18.7	-0.1
	0.5nm,0.6s,baz=90,slow=2.5,SNR=4.1						

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*MOS **07** 09:26:48.6±1.3, 49.°75N×156.°21E, h93km, mb3.7/6, Error ellipse: s-maj=15.4km s-min=8.3km az=67.2*
*KRSC **07** 09:26:49.4±1.1, 49.°79N×156.°92E, h10km±10km, ML4.1*
*ISCJB **07** 09:26:49.4±0.7, 49.°77N±0.°06×156.°14E±0.°08, h97km±6km, mb3.8/16, Error ellipse: s-maj=12.0km s-min=5.6km az=140.3*
*IDC **07** 09:26:50.4±0.8, 49.°75N×156.°10E, h87km±7km, mb3.5/13, mb1 3.6/17, mb1mx3.6/30, mbtmp3.5/17, Error ellipse: s-maj=20.9km s-min=12.2km az=155.0*
ISC 07 09:26:49.9±0.7**, 49.°74N**±0.°07×**156.°22E**±0.°06**, h88**km±5km**, n53,** σ**1.°30**/72**, mb3.9**/16**, 1C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.94**	**356**	*i* PN	**Pn**	**09 27 09.2**	**+0.5**
SKR				*i* S	**Sn**	**09 27 23.8**	**+1.0**
SKR				smax	smax		
	comp=N,4μm,0.2s						
SKR	**Severo-Kuril's**	**0.94**	**356**	*i* P	**Pn**	**09 27 09.1**	**+0.4**
SKR				*i* S	**Sn**	**09 27 23.6**	**+0.8**
MIPR	**Malaya Ipel'ka**	**2.56**	**7**	P	**Pn**	**09 27 30.8**	**+1.4**
MIPR				*i* S	**Sn**	**09 28 01.1**	**+1.4**
ASAK	**Asacha**	**2.85**	**21**	*e*P	**Pn**	**09 27 34.0**	**+0.7**
ASAK				*i* S	**Sn**	**09 28 06.1**	**-0.7**
MTVR	**Mutnovka**	**3.01**	**24**	*e*P	**Pn**	**09 27 36.1**	**+0.5**
MTVR				*i* S	**Sn**	**09 28 10.3**	**-0.4**
GRL	**Gorelyy**	**3.05**	**22**	P	**Pn**	**09 27 36.8**	**+0.8**
RUS	**Russkaya**	**3.06**	**27**	PN	**Pn**	**09 27 35.5**	**-0.5**
RUS				S	**Sn**	**09 28 09.7**	**-1.9**
RUS	**Russkaya**	**3.06**	**27**	*e*P	**Pn**	**09 27 35.5**	**-0.5**
RUS				*i* S	**Sn**	**09 28 09.7**	**-1.9**
APC	**Apacha**	**3.24**	**10**	*e*P	**Pn**	**09 27 39.8**	**+1.3**
APC				*e*S	**Sn**	**09 28 17.2**	**+1.1**
PETK	**Petropavlovsk-**	**3.50**	**15**	PN	**Pn**	**09 27 43.6**	**+1.6**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.50**	**15**	P	**Pn**	**09 27 43.6**	**+1.6**
	comp=Z,2.2nm,0.3s,baz=187,slow=13,SNR=39						
PET	**Petropavlovsk**	**3.62**	**24**	*e*PN	**Pn**	**09 27 44.2**	**+0.6**
PET				*e*S	**Sn**	**09 28 24.9**	**-0.4**
PET				smax	smax		
	comp=E,48nm,0.5s						
PET				smax	smax		
	comp=N,50nm,0.4s						
PET	**Petropavlovsk**	**3.62**	**24**	P	**Pn**	**09 27 44.3**	**+0.6**
PET				*i* S	**Sn**	**09 28 24.8**	**-0.5**
UGLR	**Uglovaya**	**3.83**	**24**	*e*P	**Pn**	**09 27 48.0**	**+1.4**
KOK	**Koryaka**	**3.86**	**22**	P	**Pn**	**09 27 48.8**	**+1.8**
AVH	**Avacha**	**3.86**	**23**	P	**Pn**	**09 27 48.7**	**+1.7**
SMAR	**Somma**	**3.88**	**24**	P	**Pn**	**09 27 48.7**	**+1.4**
KRER	**Koryakskii**	**3.90**	**23**	P	**Pn**	**09 27 49.0**	**+1.4**
KRER				*i* S	**Sn**	**09 28 32.0**	**-0.4**
SDLR	**Sedlovina**	**3.91**	**24**	*e*P	**Pn**	**09 27 48.0**	**+0.3**
GNL	**Ganaly**	**4.10**	**14**	*e*P	**Pn**	**09 27 52.5**	**+2.2**
SPN	**Mys Shipunski**	**4.12**	**34**	PN	**Pn**	**09 27 49.6**	**-0.8**
SPN				S	**Sn**	**09 28 33.7**	**-3.6**
SPN	**Mys Shipunski**	**4.12**	**34**	*e*P	**Pn**	**09 27 49.6**	**-0.8**
SPN				*e*S	**Sn**	**09 28 33.7**	**-3.6**
TUMR	**Tumrok**	**6.04**	**22**	P	**Pn**	**09 28 18.2**	**+1.5**
KMNR	**Kamenistaya**	**6.50**	**20**	P	Pn	09 28 26.2	+3.4
ASAJ	**Asahikawa**	**10.88**	**244**	P	**Pn**	**09 29 23.6**	**+1.1**
	comp=N,0.4nm,0.3s,baz=28,slow=15,SNR=3.0						
FX1	**Attu Island--F**	**11.06**	**67**	P	**Pn**	**09 29 22.9**	**-1.9**
	comp=N,1.3nm,0.3s,baz=267,slow=17,SNR=8.0						
FX1				S	Sn	09 31 16.0	-11
	comp=N,6.0nm,0.3s,baz=85,slow=23,SNR=15						
ERM	**Erimo**	**11.93**	**235**	*e*PN	**Pn**	**09 29 36.0**	**-0.6**
HABR	**Khabarovsk**	**13.92**	**273**	*e*P	**Pn**	**09 30 00.8**	**-2.2**
HABR				*e*S	**Sn**	**09 32 33.6**	**-2.4**
HABR				pmax	pmax		
	comp=Z,88nm,1.6s						
HABR				pmax	pmax		
	comp=E,113nm,1.6s						
HABR				pmax	pmax		
	comp=N,75nm,2.4s						
HABR				MLR	MLR		
	comp=Z,106nm,15.0s						
USRK	**Ussuriysk Arra**	**17.40**	**261**	P	**Pn**	**09 30 45.5**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=54,slow=14,SNR=4.7						
MJA0	**Matsu Arr-Jizo**	**18.54**	**231**	*e*P	**P**	**09 31 00.0**	**+0.6**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**18.56**	**231**	P	**P**	**09 31 00.0**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=27,slow=11,SNR=5.5						
BILL	**Bilibino**	**19.02**	**12⇓**	*e*P	**P**	**09 31 04.5**	**+0.1**
BILL				*e*S	**Sn**	**09 34 38.6**	**-0.1**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSRS	**Korea Array**	**23.73**	**250**	P	**P**	**09 31 55.1**	**+1.3**
	comp=Z,2.2nm,0.8s,baz=47,slow=10,SNR=11						
ILAR	**Eielson Array**	**32.92**	**41**	P	**P**	**09 33 15.9**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=254,slow=7.3,SNR=7.3						
ZAK	**Zakamensk**	**33.39**	**292**	*e*P	**P**	**09 33 19.7**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZALV	**Zalesovo Beam**	**42.60**	**304**	*e*P	**P**	**09 34 37.1**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**42.60**	**304**	P	**P**	**09 34 37.0**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=58,slow=8.9,SNR=4.3						
YKA	**Yellowknife Ar**	**47.29**	**39**	P	**P**	**09 35 15.1**	**+1.3**
	comp=Z,0.5nm,1.1s,baz=300,slow=6.4,SNR=3.4						
YKA				pP	**pP**	**09 35 35.6**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=297,slow=8.9,SNR=5.5						
MKAR	**Makanchi Array**	**47.44**	**296**	P	**P**	**09 35 15.2**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**47.44**	**296**	P	**P**	**09 35 15.2**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=44,slow=5.8,SNR=14						
KURK	**Kurchatov**	**47.47**	**303***c*	*i*P	**P**	**09 35 13.8**	**-1.6**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KURBB	**Kurchatov Arra**	**47.56**	**303**	P	**P**	**09 35 16.4**	**+0.2**
	comp=Z,4.5nm,0.5s,baz=65,slow=8.3,SNR=12						
BVAR	**Borovoye Array**	**50.58**	**309**	P	**P**	**09 35 39.3**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**50.58**	**309**	P	**P**	**09 35 39.3**	**+0.1**
	comp=Z,1.0nm,0.4s,baz=71,slow=11,SNR=5.6						
ARU	**Arti**	**54.22**	**317***d*	*i*P	**P**	**09 36 05.3**	**-0.7**
ARU				*PP	**pP**	**09 36 26.1**	**-1.5**
ARU						09 37 07.6	
ARU						09 38 08.6	
ARU				S	**S**	**09 43 37.1**	**+1.0**
ARU				SS	**SS**	**09 47 16.0**	**-2.3**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
NVAR	**Mina Array Bea**	**59.25**	**66**	P	**P**	**09 36 43.5**	**+1.3**
	comp=Z,0.8nm,0.7s,baz=294,slow=7.0,SNR=6.0						
PDAR	**Pinedale Array**	**61.34**	**57**	P	**P**	**09 36 57.4**	**+1.1**
	comp=Z,0.8nm,0.9s,baz=300,slow=2.9,SNR=6.7						
PDAR				pP	**pP**	**09 37 19.4**	**+0.9**
	comp=Z,0.9nm,0.9s,baz=352,slow=3.0,SNR=5.3						
AKASG	**Malin Array Be**	**70.18**	**327**	P	**P**	**09 37 51.2**	**-1.5**
AKASG	**Malin Array Be**	**70.18**	**327**	P	**P**	**09 37 51.2**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=28,slow=6.0,SNR=3.6						
WRA	**Warramunga Arr**	**72.04**	**202**	pP	pP	09 38 25.0	-1.9
	comp=Z,0.8nm,1.1s,baz=13,slow=6.3,SNR=2.4						
TXAR	**Lajitas Array**	**74.25**	**63**	P	**P**	**09 38 18.4**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=294,slow=4.6,SNR=11						
ASAR	**Alice Springs**	**75.73**	**201**	P	**P**	**09 38 25.9**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=18,slow=5.8,SNR=5.7						
ASAR				pP	**pP**	**09 38 48.2**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=16,slow=5.7,SNR=2.3						
BRTR	**Keskin Array B**	**77.58**	**318**	P	**P**	**09 38 36.7**	**+0.4**
	comp=Z,0.8nm,1.0s,baz=49,slow=3.8,SNR=4.1						

DDA 07 09:30:32.2, 37.°84N×29.°64E, h7km, MD2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHAL	**Karahalli**	**0.55**	**347**	*i* P	Pg	09 30 43.1	+0.1
KHAL				*i* S	Sg	09 30 50.9	+0.6
GOLH	**Golhisar**	**0.60**	**186**	*i* P	Pg	09 30 43.4	-0.5
GOLH				*i* S	Sb	09 30 53.4	-0.6

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*IDC **07** 09:42:52.5±2.6, 33.°29N×140.°65E, h48km±19km, mb3.5/5, mb1 3.7/8, mb1mx3.4/27, mbtmp3.6/8, ML3.6/3, MS2.7/2, Ms1 2.7/2, ms1mx2.4/26, Error ellipse: s-maj=45.7km s-min=13.4km az=81.0*
*ISCJB **07** 09:42:52.3±0.7, 33.°34N±0.°03×140.°54E±0.°06, h59km±5km, mb3.7/5, Error ellipse: s-maj=7.9km s-min=5.3km az=12.8*
*JMA **07** 09:42:53.0±0.1, 33.°36N×140.°54E, h49km±4km, M3.8*
JMA Felt II J1.
*NIED **07** 09:43:00, 33.°40N×140.°50E, h41km, Mw3.7 Best double couple: M₀4.18000×10^14 NP1:φs222.00000°, δ83.00000°, λ-28.00000°. NP2:φs316.00000°, δ62.00000°, λ-172.00000°.*
ISC 07 09:42:53.0±1.2**, 33.°31N**±0.°05×**140.°56E**±0.°07**, h50**km±10km**, n28,** σ**0.°97**/43**, mb3.8**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.65**	**252**	P	**Pn**	**09 43 06.4**	**+0.3**
JHJ2				S	**Sn**	**09 43 15.5**	**-0.1**
JHJ	**Hachijo jima 2**	**0.68**	**254**	P	**Pn**	**09 43 06.8**	**+0.3**
	377nm,0.3s,baz=66,slow=14,SNR=110						
JHJ				S	**Sn**	**09 43 15.5**	**-0.7**
	4μm,0.3s,baz=90,slow=20,SNR=140						
JHJ				LR	LR	09 43 17.9	
	comp=Z,8μm,19.6s,baz=0.0,slow=35						
JHCJ	**Hachijojimakas**	**0.68**	**250**	P	**Pn**	**09 43 06.6**	**+0.1**
JHCJ				S	**Sn**	**09 43 15.4**	**-0.9**
JMY	**Miyakejima3**	**1.16**	**311**	P	**Pn**	**09 43 13.0**	**+0.1**
BSO1	**Boso 1**	**1.38**	**15**	P	**Pn**	**09 43 15.3**	**-0.1**
BSO1				S	**Sn**	**09 43 32.2**	**-0.1**
BSO2	**Boso 2**	**1.45**	**6**	S	**Sn**	**09 43 35.0**	**+0.8**
JKO	**Kozu shima**	**1.47**	**307**	P	**Pn**	**09 43 17.3**	**+0.2**
JKO				S	**Sn**	**09 43 34.2**	**-1.0**
JIM2	**Oshima 3**	**1.69**	**327**	P	**Pn**	**09 43 19.9**	**-0.2**
JIM2				S	**Sn**	**09 43 38.4**	**-2.1**
JIZS	**Izushimoda**	**1.98**	**316**	P	**Pn**	**09 43 24.4**	**+0.4**
JIZS				S	**Sn**	**09 43 46.3**	**-1.4**
JOD2	**Odawara 2**	**2.30**	**328**	P	**Pn**	**09 43 28.4**	**0.0**
JOD2				S	**Sn**	**09 43 53.0**	**-2.5**
TK02	**Tokai 2**	**2.42**	**286**	P	**Pn**	**09 43 30.8**	**+0.9**
TK02				S	**Sn**	**09 43 59.2**	**+1.0**
TK04	**Tokai 4**	**2.48**	**296**	P	**Pn**	**09 43 31.9**	**+1.1**
TK04				S	**Sn**	**09 43 59.9**	**+0.2**
JYN	**Shimob**	**2.74**	**323**	P	**Pn**	**09 43 35.8**	**+1.2**
JYN				*e*S	**Sn**	**09 44 07.4**	**+0.8**
JRY	**Ryogami san**	**3.02**	**334**	P	**Pn**	**09 43 39.3**	**+0.9**
JRY				S	**Sn**	**09 44 13.0**	**-0.4**
TTO1	**TONANKAI O.B.S**	**3.17**	**277**	P	**Pn**	**09 43 40.6**	**+0.5**
JAG	**Ashikaga**	**3.24**	**344**	P	**Pn**	**09 43 41.3**	**0.0**
JAG				S	**Sn**	**09 44 17.4**	**-1.2**
JIE	**Ise**	**3.38**	**290**	P	**Pn**	**09 43 43.7**	**+0.4**
JIE				S	**Sn**	**09 44 20.5**	**-1.6**
MJAR	**Matsushiro Arr**	**3.76**	**330**	P	**Pn**	**09 43 49.6**	**+1.2**
	14nm,0.3s,baz=159,slow=13,SNR=82						
MJAR				S	**Sn**	**09 44 32.0**	**+0.6**
	4.8nm,0.3s,baz=153,slow=22,SNR=6.5						
MAT	**Matsushiro**	**3.76**	**330**	P	**Pn**	**09 43 50.4**	**+1.9**
MAT				S	**Sn**	**09 44 32.3**	**+0.9**
ASAJ	**Asahikawa**	**10.91**	**8**	P	**Pn**	**09 45 25.1**	**-1.2**
	0.5nm,0.3s,baz=191,slow=5.2,SNR=4.2						
KSRS	**Korea Array**	**11.11**	**295**	P	**Pn**	**09 45 30.1**	**+1.0**
	0.2nm,0.3s,baz=114,slow=14,SNR=5.4						
KSRS				LR	LR	09 49 34.2	
	comp=Z,25nm,19.2s,baz=110,slow=36						
USRK	**Ussuriysk Arra**	**12.75**	**331**	LR	LR	09 50 05.1	
	comp=Z,49nm,21.0s,baz=350,slow=34						
MKAR	**Makanchi Array**	**45.59**	**305**	P	**P**	**09 51 08.1**	**0.0**
	0.6nm,0.6s,baz=88,slow=9.8,SNR=9.4						
WRA	**Warramunga Arr**	**53.29**	**187**	P	**P**	**09 52 06.7**	**-0.2**
	0.3nm,0.3s,baz=6.3,slow=7.7,SNR=18						
ASAR	**Alice Springs**	**57.01**	**187**	P	**P**	**09 52 33.4**	**-0.3**
	0.4nm,0.6s,baz=1.0,slow=6.0,SNR=8.0						
FINES	**FINESS Array B**	**71.78**	**333**	P	**P**	**09 54 10.3**	**+0.6**
	0.7nm,0.6s,baz=90,slow=5.6,SNR=2.6						
AKASG	**Malin Array Be**	**76.81**	**323**	P	**P**	**09 54 39.2**	**0.0**
	0.5nm,0.4s,baz=50,slow=5.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**119.39**	**313**	PKP	**PKPdf**	**10 01 36.6**	**-0.9**
	0.2nm,0.7s,baz=20,slow=1.1,SNR=3.3						

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*IDC **07** 09:49:51.4±3.1, 28.°34N×139.°79E, h419km±34km, mb3.0/7, mb1 3.2/8, mb1mx2.9/24, mbtmp2.9/8, Error ellipse: s-maj=36.8km s-min=15.6km az=96.0*
*JMA **07** 09:49:52.5±0.1, 28.°64N×140.°56E, h435km, M3.4*
ISC 07 09:49:52.0±0.8**, 28.°49N**±0.°10×**140.°1E**±0.°2**, h421**km**, n15,** σ**1.°67**/18**, mb3.2**/7**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.33**	**126**	P	**P**	**09 50 52.5**	**+0.5**
CBIJ				*e*S	**S**	**09 51 40.0**	**-0.5**
JHHJ	**Haha-jima-NKT**	**2.63**	**134**	P	**P**	**09 50 54.6**	**+0.6**
JHHJ				S	**S**	**09 51 44.8**	**+0.5**
JIE	**Ise**	**6.55**	**335**	P	**P**	**09 51 33.8**	**+2.4**
JHU	**Hanno**	**7.37**	**355**	P	**P**	**09 51 40.3**	**0.0**
JWT	**Wachi**	**7.85**	**331**	P	**P**	**09 51 47.9**	**+2.3**
JAG	**Ashikaga**	**7.93**	**356**	P	**P**	**09 51 46.1**	**-0.3**
JAG				*e*S	**S**	**09 53 16.1**	**-3.8**
MJAR	**Matsushiro Arr**	**8.18**	**349**	P	**P**	**09 51 49.5**	**+0.4**
	0.3nm,0.3s,baz=174,slow=11,SNR=4.3						
WRA	**Warramunga Arr**	**48.47**	**187**	P	**P**	**09 57 52.3**	**-2.3**
	0.6nm,0.4s,baz=5.0,slow=7.5,SNR=7.5						
ASAR	**Alice Springs**	**52.20**	**187**	P	**P**	**09 58 20.6**	**-1.5**
	0.3nm,0.7s,baz=9.7,slow=7.7,SNR=4.6						
ILAR	**Eielson Array**	**57.40**	**29**	P	**P**	**09 58 58.9**	**+0.6**
	0.3nm,0.6s,baz=292,slow=7.3,SNR=5.1						
ARCES	**ARCESS Array B**	**71.61**	**340**	P	**P**	**10 00 29.2**	**+0.3**
	2.0nm,0.8s,baz=69,slow=10.0,SNR=4.0						
YKA	**Yellowknife Ar**	**71.80**	**28**	P	**P**	**10 00 31.5**	**+1.4**
	0.2nm,0.6s,baz=301,slow=5.6,SNR=5.9						
FINES	**FINESS Array B**	**75.87**	**333**	P	**P**	**10 00 52.9**	**-0.4**
	0.9nm,0.3s,baz=61,slow=4.0,SNR=7.1						
NVAR	**Mina Array Bea**	**81.11**	**51**	P	**P**	**10 01 23.9**	**+1.4**
	0.3nm,0.5s,baz=280,slow=4.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**122.26**	**310**	PKP	**PKPdf**	**10 07 57.2**	**-1.4**
	0.2nm,0.6s,baz=29,slow=1.8,SNR=4.1						

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*CSEM **07** 09:51:18.2±0.5, 40.°96N×31.°45E, h18km±3km, MD2.7, Error ellipse: s-maj=11.6km s-min=5.6km az=162.0*
ISK 07 09:51:18.0, 40.°93N×31.°47E, h21km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDUB	**Mudurnu**	**0.51**	**204**	*e*PG	Pb	09 51 29.1	+0.7
MDUB				*e*SG	Sb	09 51 36.4	+1.0
MDUB	**Mudurnu**	**0.51**	**204**	*e*Pg	Pb	09 51 29.1	+0.7
MDUB				*e*Sg	Sb	09 51 36.4	+1.0
GULT	**Gulveren**	**0.88**	**236**	*e*PG	Pn	09 51 35.3	0.0
GULT				*e*SG	Sn	09 51 49.3	+1.7
GULT	**Gulveren**	**0.88**	**236**	*e*Pg	Pn	09 51 35.3	0.0
GULT				*e*Sg	Sn	09 51 49.3	+1.7
SAFT	**Safranbolu**	**0.97**	**71**	*e*PG	Pn	09 51 36.9	+0.5
SAFT	**Safranbolu**	**0.97**	**71**	*e*Pg	Pn	09 51 36.9	+0.5
HRT	**Hereke**	**1.37**	**266**	*e*PN	Pn	09 51 42.2	+0.2
HRT	**Hereke**	**1.37**	**266**	*e*Pn	Pn	09 51 42.2	+0.2
SILT	**Sile**	**1.40**	**280**	*e*PN	Pb	09 51 43.0	-0.4
SILT	**Sile**	**1.40**	**280**	*e*Pn	Pb	09 51 43.0	-0.4
ADVT	**Abdulvahap**	**1.41**	**250**	*e*PN	Pb	09 51 43.1	-0.4
ADVT	**Abdulvahap**	**1.41**	**250**	*e*Pn	Pb	09 51 43.1	-0.5
ANTO	**Ankara**	**1.47**	**136**	*e*PN	Pb	09 51 44.1	-0.5
ANTO	**Ankara**	**1.47**	**136**	*e*Pn	Pb	09 51 44.2	-0.5
SVRH	**Sivrihisar-ESK**	**1.49**	**178**	*e*PN	Pn	09 51 43.4	-0.2
SVRH	**Sivrihisar-ESK**	**1.49**	**178**	*e*Pn	Pn	09 51 43.4	-0.2
ELDT	**Eldivan**	**1.55**	**106**	*i* P	Pb	09 51 47.5	+1.3
ELDT				*i* S	Sb	09 52 10.0	+4.4
ELDT	**Eldivan**	**1.55**	**106**	*i* P	Pb	09 51 47.5	+1.2
BALT	**Daday**	**1.56**	**67**	*i* P	Pn	09 51 44.8	0.0
BALT				*i* S	Sb	09 52 05.7	-0.3
BALT	**Daday**	**1.56**	**67**	*i* P	Pn	09 51 44.8	0.0
BALT				*i* S	Sb	09 52 05.7	-0.3
IZI	**Iznik**	**1.63**	**249**	*e*PN	Pn	09 51 46.3	+0.6
IZI	**Iznik**	**1.63**	**249**	*e*Pn	Pn	09 51 46.3	+0.7

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*IDC **07** 10:15:55.6±2.6, 23.°89S×179.°78W, h484km±29km, mb3.3/9, mb1 3.5/11, mb1mx3.3/21, mbtmp3.4/11, Error ellipse: s-maj=19.4km s-min=17.2km az=80.0*
*ISCJB **07** 10:15:56.4±0.7, 23.°87S±0.°08×179.°8W±0.°1, h512km, mb3.8/9, Error ellipse: s-maj=15.9km s-min=10.8km az=10.3*
*AUST **07** 10:16:09.9±8.4, 21.°39S×179.°80E, h656km, Error ellipse: s-maj=5.9km s-min=1.6km az=12.0*
ISC 07 10:15:57.3±0.7**, 23.°94S**±0.°10×**179.°7W**±0.°1**, h512**km**, n20,** σ**1.°36**/20**, mb3.6**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**10.30**	**64**	P	P	10 18 26.4	+8.4
	baz=9.9,SNR=3.6						
AFI	**Afiamalu**	**12.47**	**38**	P	**P**	**10 18 38.5**	**-2.5**
	2.6nm,0.3s,baz=216,slow=17,SNR=6.6						
AFI				S	S	10 20 47.4	-8.5
	2.0nm,0.3s,baz=233,slow=20,SNR=3.3						
URZ	**Urewera**	**14.54**	**190**	P	**P**	**10 19 00.3**	**-1.9**
	3.1nm,0.3s,baz=290,slow=1.9,SNR=21						
URZ				S	**S**	**10 21 33.4**	**-1.5**
	1.0nm,0.3s,baz=71,slow=22,SNR=11						
RPZ	**Rata Peaks**	**21.14**	**199**	P	**P**	**10 20 04.6**	**-0.9**
	7.8nm,0.6s,baz=23,slow=7.7,SNR=6.9						
CTA	**Charters Tower**	**31.75**	**270**	P	**P**	**10 21 39.5**	**+0.3**
	9.0nm,0.3s,baz=96,slow=11,SNR=20						
MTSU	**Mount Surprise**	**34.01**	**273**	P	**P**	**10 21 58.8**	**+0.4**
	baz=34,SNR=10						
STKA	**Stephens Creek**	**34.96**	**248**	P	**P**	**10 22 06.3**	**+0.1**
	1.2nm,0.6s,baz=90,slow=5.1,SNR=2.8						
ASAR	**Alice Springs**	**42.30**	**261**	P	**P**	**10 23 05.7**	**-0.2**
	1.7nm,0.8s,baz=99,slow=7.1,SNR=17						
WRA	**Warramunga Arr**	**42.68**	**266**	P	**P**	**10 23 08.0**	**-0.9**
	2.0nm,0.3s,baz=96,slow=8.4,SNR=93						
JAY	**Jayapura**	**43.78**	**293**	P	P	10 23 09.4	-8.2
	baz=42,SNR=4.3						
KNRA	**Kununurra**	**48.96**	**270**	P	**P**	**10 23 56.6**	**-0.3**
	baz=48,SNR=8.5						
VNDA	**Vanda**	**54.37**	**185**	P	**P**	**10 24 37.5**	**+2.5**
	0.6nm,0.8s,baz=23,slow=6.3,SNR=4.1						
MORW	**Morawa**	**57.12**	**250**	P	**P**	**10 24 54.6**	**-0.3**
	baz=58,SNR=3.3						
MAW	**Mawson**	**77.81**	**200**	P	**P**	**10 27 01.9**	**+0.9**
	1.2nm,0.5s,baz=124,slow=3.6,SNR=6.4						
PETK	**Petropavlovsk-**	**79.20**	**346**	P	**P**	**10 27 09.5**	**+1.0**
	1.3nm,0.6s,baz=132,slow=6.0,SNR=4.5						
TXAR	**Lajitas Array**	**90.22**	**58**	P	**P**	**10 28 05.5**	**+2.2**
	0.3nm,0.7s,baz=210,slow=7.2,SNR=4.5						
MKAR	**Makanchi Array**	**112.38**	**313**	PKiKP	**PKiKP**	**10 33 33.9**	**-0.9**
	0.3nm,0.7s,baz=117,slow=4.6,SNR=2.8						
AKASG	**Malin Array Be**	**145.15**	**327**	PKPbc	**PKPbc**	**10 34 36.7**	**-0.1**
	0.5nm,0.3s,baz=47,slow=4.0,SNR=4.6						
BRTR	**Keskin Array B**	**147.82**	**307**	PKPbc	**PKPbc**	**10 34 43.2**	**-1.5**
	0.7nm,0.7s,baz=71,slow=5.4,SNR=4.6						
BRTR				PKPab	**PKPab**	**10 34 49.9**	**+0.8**
	0.9nm,0.7s,baz=71,slow=3.9,SNR=5.6						
TORD	**Torodi Ar. Bea**	**169.19**	**187**	PKPab	**PKPab**	**10 36 22.4**	**+0.8**
	0.4nm,0.6s,baz=181,slow=3.7,SNR=2.7						

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*MOS **07** 10:19:51.9±1.4, 48.°92N×156.°20E, h5km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=18.8km az=78.1*
KRSC 07 10:19:51.9±0.7**, 48.°92N×156.°20E, h5**km±5km**, ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.77**	**358**	*e*PN	Pb	10 20 24.5	-0.2
SKR				*e*S	Sb	10 20 46.6	-0.6
SKR				pmax	pmax		
	comp=Z,30nm,0.4s						
SKR				smax	smax		
	comp=N,380nm,0.2s						
SKR				smax	smax		
	comp=E,360nm,0.2s						
SKR	**Severo-Kuril's**	**1.77**	**358**	*e*P	Pn	10 20 23.1	0.0
SKR				*i* S	Sn	10 20 46.2	+0.3
MIPR	**Malaya Ipel'ka**	**3.38**	**6**	P	Pn	10 20 47.1	+1.8
MIPR				*i* S	Sn	10 21 27.6	+1.8
ASAK	**Asacha**	**3.63**	**17**	P	Pn	10 20 52.0	+3.1
ASAK				*i* S	Sn	10 21 34.7	+2.5
RUS	**Russkaya**	**3.81**	**22**	PN	Pn	10 20 54.2	+3.0
RUS				S	Sn	10 21 39.3	+2.9
RUS	**Russkaya**	**3.81**	**22**	*e*P	Pn	10 20 54.2	+3.0
RUS				*i* S	Sn	10 21 39.3	+2.9
PET	**Petropavlovsk**	**4.39**	**20**	PN	Pn	10 21 03.0	+3.8
PET				S	Sn	10 21 55.1	+4.5
PET	**Petropavlovsk**	**4.39**	**20**	P	Pn	10 21 03.0	+3.8
PET				*i* S	Sn	10 21 55.1	+4.5
KOK	**Koryaka**	**4.64**	**18**	P	Pn	10 21 06.8	+4.1
SMAR	**Somma**	**4.65**	**20**	P	Pn	10 21 06.4	+3.4
KRER	**Koryakskii**	**4.67**	**19**	P	Pn	10 21 07.1	+3.8
SDLR	**Sedlovina**	**4.68**	**20**	P	Pn	10 21 06.3	+3.0
SDLR				*i* S	Sn	10 22 01.8	+3.7
SPN	**Mys Shipunski**	**4.83**	**29**	PN	Pn	10 21 09.0	+3.8
SPN				S	Sn	10 22 05.5	+4.0
SPN	**Mys Shipunski**	**4.83**	**29**	*e*P	Pn	10 21 09.0	+3.8
SPN				*i* S	Sn	10 22 05.5	+4.0
GNL	**Ganaly**	**4.91**	**12**	P	Pn	10 21 09.8	+3.4
MKZ	**Mys Kozlova**	**6.61**	**29**	PN	Pn	10 21 31.8	+2.3
MKZ	**Mys Kozlova**	**6.61**	**29**	*e*P	Pn	10 21 31.8	+2.3

IDC 07 10:21:04.6±2.8**, 3.°92S×129.°50E, h0**km**, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.4**/21**, mbtmp3.4**/3**, ML2.6**/1**, Error ellipse: s-maj=201.1km s-min=30.4km az=69.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.61**	**164**	Pn	Pn	10 24 56.9	-2.2
	0.0nm,0.3s,baz=346,slow=14,SNR=2.7						
ASAR	**Alice Springs**	**20.09**	**168**	P	P	10 25 40.8	+0.9
	1.0nm,0.7s,baz=350,slow=11,SNR=15						
MKAR	**Makanchi Array**	**65.40**	**326**	P	P	10 31 49.1	-0.1
	0.4nm,0.6s,baz=145,slow=5.3,SNR=3.7						

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*DDA **07** 11:09:28.0, 38.°61N×27.°00E, h7km, MD2.9*
*ISK **07** 11:09:28.8, 38.°59N×27.°06E, h12km, MD2.7*
*CSEM **07** 11:09:28.7±0.2, 38.°60N×27.°01E, h5km, MD2.7, Error ellipse: s-maj=5.1km s-min=3.3km az=85.0*
*ISCJB **07** 11:09:28.5±0.5, 38.°60N±0.°03×27.°00E±0.°04, h12km±5km, Error ellipse: s-maj=6.1km s-min=5.1km az=145.0*
ISC 07 11:09:28.3±0.9**, 38.°62N**±0.°03×**27.°00E**±0.°03**, h16**km±8km**, n26,** σ**0.°47**/38**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.23**	**171**	*e*PG	**Pg**	**11 09 33.6**	**0.0**
BLCB				*e*SG	**Sg**	**11 09 37.1**	**0.0**
BLCB	**Balcova**	**0.23**	**171**	*e*Pg	**Pg**	**11 09 33.6**	**0.0**
BLCB				*e*Sg	**Sg**	**11 09 37.1**	**0.0**
IZM	**Izmir**	**0.30**	**136**	*e*PG	**Pg**	**11 09 34.5**	**-0.3**
IZM				*e*SG	**Sg**	**11 09 39.1**	**0.0**
IZM	**Izmir**	**0.30**	**136**	*e*Pg	**Pg**	**11 09 34.5**	**-0.3**
IZM				*e*Sg	**Sg**	**11 09 39.1**	**0.0**
URLA	**Izmir**	**0.40**	**231**	*e*P	**Pg**	**11 09 36.4**	**-0.1**
URLA				*e*S	**Sg**	**11 09 41.8**	**-0.3**
URLA	**Izmir**	**0.40**	**231**	*e*P	**Pg**	**11 09 36.4**	**-0.1**
URLA				*e*S	**Sg**	**11 09 41.8**	**-0.3**
AKS	**Akhisar**	**0.69**	**67**	*e*PG	**Pg**	**11 09 41.9**	**0.0**
AKS	**Akhisar**	**0.69**	**67**	*e*Pg	**Pg**	**11 09 41.9**	**0.0**
AKHS	**Akhisar**	**0.69**	**67**	*e*P	**Pg**	**11 09 41.5**	**-0.4**
AKHS				*e*S	**Sg**	**11 09 51.1**	**+0.1**
AYVA	**Ayvalik**	**0.73**	**341**	*e*P	**Pg**	**11 09 42.4**	**-0.2**
AYVA				*e*S	**Sg**	**11 09 51.7**	**-0.6**
AYVA	**Ayvalik**	**0.73**	**341**	*e*P	**Pg**	**11 09 42.4**	**-0.2**
AYVA				*e*S	**Sg**	**11 09 51.7**	**-0.6**
GCAM	**G?zelcaml?**	**0.93**	**168**	*e*P	**Pg**	**11 09 46.1**	**-0.3**
GCAM				*e*S	**Sg**	**11 09 57.4**	**-1.3**
GCAM	**G?zelcaml?**	**0.93**	**168**	*e*P	**Pg**	**11 09 46.1**	**-0.3**
GCAM				*e*S	**Sg**	**11 09 57.4**	**-1.3**
KULA	**Kula-Manisa**	**1.31**	**94**	*e*PN	**Pn**	**11 09 52.1**	**0.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KULA	**Kula-Manisa**	**1.31**	**94**	*e*Pn	**Pn**	**11 09 52.1**	**0.0**
BOZC	**Bozcaada**	**1.43**	**329**	*e*P	**Pb**	**11 09 55.2**	**+0.6**
BOZC				*e*S	**Sb**	**11 10 12.2**	**-0.3**
GONE	**Gonen-Balikesi**	**1.53**	**20**	*e*PN	**Pb**	**11 09 56.7**	**+0.4**
GONE	**Gonen-Balikesi**	**1.53**	**20**	*e*Pn	**Pb**	**11 09 56.7**	**+0.4**
BODT	**Bodrum**	**1.57**	**171**	*e*PN	**Pn**	**11 09 56.3**	**+0.7**
BODT	**Bodrum**	**1.57**	**171**	*e*Pn	**Pn**	**11 09 56.3**	**+0.7**
LPK	**Lapseki**	**1.76**	**354**	*e*PN	**Pb**	**11 10 00.9**	**+0.5**
LPK	**Lapseki**	**1.76**	**354**	*e*Pn	**Pb**	**11 10 00.9**	**+0.5**
KRBG	**Karabiga-Canak**	**1.79**	**7**	*e*PN	**Pb**	**11 10 00.8**	**0.0**
KRBG	**Karabiga-Canak**	**1.79**	**7**	*e*Pn	**Pb**	**11 10 00.8**	**0.0**
GELI	**Tayfur-Gelibol**	**1.82**	**347**	*e*PN	**Pb**	**11 10 01.7**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.82**	**347**	*e*Pn	**Pb**	**11 10 01.7**	**+0.3**

IDC 07 11:11:36.7±29.0**, 18.°11S×166.°93E, h0**km**, mb3.9**/3**, mb1 4.0**/4**, mb1mx3.7**/19**, mbtmp3.8**/4**, ML3.4**/1**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.8**/25**, Error ellipse: s-maj=509.1km s-min=47.3km az=60.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.97**	**186**	*e*P	Pn	11 12 38.5	-0.5
DZM				*e*S	Sn	11 13 23.4	-2.9
DZM	**Mont Dzumac**	**3.97**	**186**	Pn	Pn	11 12 38.6	-0.3
	2.6nm,0.3s,baz=66,slow=19,SNR=32						
DZM				Sn	Sn	11 13 22.5	-3.8
	6.3nm,0.3s,baz=119,slow=21,SNR=8.2						
CTA	**Charters Tower**	**19.63**	**261**	LR	LR	11 21 47.0	
	comp=Z,45nm,21.1s,baz=230,slow=31						
STKA	**Stephens Creek**	**26.66**	**234**	P	P	11 17 18.6	+1.3
	2.6nm,0.8s,baz=69,slow=8.5,SNR=4.7						
WRA	**Warramunga Arr**	**30.84**	**261**	P	P	11 17 53.9	-0.8
	0.4nm,0.5s,baz=96,slow=9.3,SNR=5.4						
ASAR	**Alice Springs**	**31.30**	**254**	P	P	11 17 58.5	-0.3
	0.9nm,0.4s,baz=82,slow=8.3,SNR=54						
GUMO	**Guam**	**38.28**	**324**	LR	LR	11 33 20.4	
	comp=Z,38nm,18.1s,baz=47,slow=34						

*IDC **07** 11:25:45.7±4.4, 19.°84S×169.°46E, h91km±37km, mb3.7/9, mb1 3.9/10, mb1mx3.7/19, mbtmp3.7/10, MS2.9/1, Ms1 2.9/1, ms1mx2.5/28, Error ellipse: s-maj=30.4km s-min=24.5km az=101.0*
*ISCJB **07** 11:25:46.9±2.0, 20.°0S±0.°2×169.°3E±0.°2, h113km±16km, mb3.9/9, Error ellipse: s-maj=32.6km s-min=20.2km az=44.5*
*NOU **07** 11:25:47.6±0.8, 19.°58S×169.°12E, h30km, MD2.6, ML3.6*
ISC 07 11:25:45.9±3.1**, 19.°9S**±0.°2×**169.°4E**±0.°2**, h93**km±26km**, n16, σ1.s32**/21**, mb3.8**/9**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.27**	**226**	*e*P	**Pn**	**11 26 36.1**	**+1.0**
BAYA				*e*S	**Sn**	**11 27 11.5**	**-1.6**
BAYA				AMP		11 27 14.7	
	comp=Z,67nm,2.1s						
PLUM	**Mont Dore**	**3.52**	**227**	*e*P	**Pn**	**11 26 39.6**	**+1.2**
PLUM				*e*S	**Sn**	**11 27 18.4**	**-0.6**
PLUM				AMP		11 27 22.7	
	comp=Z,1µm,0.3s						
DZM	**Mont Dzumac**	**3.53**	**232**	P	**Pn**	**11 26 39.5**	**+0.8**
	comp=Z,59nm,0.3s,baz=59,slow=18,SNR=656						
DZM				S	**Sn**	**11 27 17.6**	**-1.9**
	comp=Z,253nm,0.3s,baz=109,slow=22,SNR=29						
DZM				LR	LR	11 27 28.5	
	comp=Z,168nm,19.3s,baz=20,slow=29						
NORM	**Noumea**	**3.60**	**229**	*e*P	**Pn**	**11 26 40.4**	**+0.9**
NORM				*e*S	**Sn**	**11 27 19.5**	**-1.5**
NORM				AMP		11 27 21.6	
	comp=Z,758nm,0.6s						
NOUC	**Port Laguerre**	**3.65**	**232**	*e*P	**Pn**	**11 26 41.4**	**+1.1**
NOUC				*e*S	**Sn**	**11 27 21.3**	**-1.1**
NOUC				AMP		11 27 22.4	
	comp=Z,266nm,1.7s						
CTA	**Charters Tower**	**21.77**	**266**	P	**P**	**11 30 31.9**	**+1.6**
	comp=Z,2.1nm,0.5s,baz=88,slow=13,SNR=4.3						
STKA	**Stephens Creek**	**27.65**	**239**	P	**P**	**11 31 25.7**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=70,slow=9.3,SNR=8.2						
WRA	**Warramunga Arr**	**32.95**	**264**	P	**P**	**11 32 10.8**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=90,slow=8.5,SNR=23						
ASAR	**Alice Springs**	**33.14**	**257**	P	**P**	**11 32 13.1**	**-0.6**
	comp=Z,6.9nm,0.6s,baz=87,slow=9.1,SNR=152						
VNDA	**Vanda**	**57.79**	**182**	P	**P**	**11 35 27.5**	**+0.5**
	comp=Z,0.2nm,0.4s,baz=7.9,slow=5.1,SNR=7.8						
MJAR	**Matsushiro Arr**	**63.41**	**332**	P	**P**	**11 36 04.7**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=153,slow=5.4,SNR=5.0						
PETK	**Petropavlovsk-**	**73.40**	**353**	P	**P**	**11 37 08.6**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=146,slow=8.3,SNR=4.4						
CMAR	**Chiang Mai Arr**	**78.93**	**294**	P	**P**	**11 37 41.5**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=123,slow=3.3,SNR=3.8						
ILAR	**Eielson Array**	**90.80**	**17**	P	**P**	**11 38 36.2**	**-2.1**
	comp=Z,0.3nm,0.7s,baz=224,slow=3.8,SNR=2.4						
ARCES	**ARCESS Array B**	**125.74**	**345**	PKP	**PKPdf**	**11 44 35.5**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=57,slow=4.5,SNR=9.8						
GERES	**GERESS Array B**	**145.14**	**332**	PKPbc	**PKPbc**	**11 45 12.2**	**-0.1**
	comp=Z,3.0nm,0.6s,baz=30,slow=4.6,SNR=19						

OTT 07 11:25:50.2±0.3**, 74.°22N×78.°78W, h18**km**, MN3.6**/24**, 115km east from Dundas Harbour, Nu Eastern Arctic Background Seismic Zone., Baffin Bay**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GIFN	**Gifford Fjord,**	**4.34**	**193**	PN	Pn	11 26 55.5	+0.4
GIFN				SN	Sn	11 27 42.5	-2.6
GIFN				LG	Lg	11 28 04.9	
GIFN				Trac		11 28 11.3	
	comp=Z,36nm,0.2s						
RES	**Resolute Bay**	**4.36**	**284**	PN	Pn	11 26 54.9	-0.4
RES				SN	Sn	11 27 43.4	-2.1
RES				LG	Lg	11 28 05.7	
RES				Trac		11 28 27.7	
	comp=Z,31nm,0.4s						
ILON	**Igloolik, Nuna**	**4.97**	**193**	PN	Pn	11 27 03.6	-0.1
ILON				SN	Sn	11 27 57.8	-2.7
ILON				LG	Lg	11 28 25.1	
ILON				Trac		11 28 32.1	
	comp=Z,53nm,0.3s						
AP3N	**Apex site 3 Nu**	**5.10**	**203**	PN	Pn	11 27 05.2	-0.3
AP3N				SN	Sn	11 28 00.3	-3.7
AP3N				LG	Lg	11 28 29.1	
AP3N				Trac		11 28 32.0	
	comp=Z,53nm,0.2s						
LAIN	**Lailor River,**	**5.35**	**199**	PN	Pn	11 27 08.7	-0.3
LAIN				SN	Sn	11 28 07.3	-2.7
LAIN				LG	Lg	11 28 36.1	
LAIN				Trac		11 28 40.4	
	comp=Z,45nm,0.2s						
SRLN	**Sarcpa Lake, N**	**5.88**	**197**	PN	Pn	11 27 15.2	-1.0
SRLN				SN	Sn	11 28 19.8	-3.3
SRLN				LG	Lg	11 28 51.5	
SRLN				Trac		11 28 58.1	
	comp=Z,76nm,0.6s						
EUNU	**Eureka**	**6.10**	**347**	PN	Pn	11 27 18.5	-0.8
EUNU				SN	Sn	11 28 23.9	-4.6
KUGN	**Kugaaruk Camp,**	**7.14**	**216**	PN	Pn	11 27 32.4	-1.1
KUGN				SN	Sn	11 28 48.4	-5.7
KUGN				LG	Lg	11 29 30.8	
KUGN				Trac		11 29 36.9	
	comp=Z,80nm,0.7s						
QILN	**Qililugaq Expl**	**8.01**	**202**	PN	Pn	11 27 43.5	-1.9
QILN				SN	Sn	11 29 08.2	-7.2
QILN				LG	Lg	11 29 58.0	
QILN				Trac		11 30 04.7	
	comp=Z,26nm,0.3s						
STLN	**Stellar Camp,**	**8.34**	**221**	PN	Pn	11 27 48.7	-1.3
STLN				SN	Sn	11 29 15.0	-8.6
STLN				LG	Lg	11 30 06.0	
STLN				Trac		11 30 15.8	
	comp=Z,44nm,0.6s						
WAGN	**Wager Bay**	**9.12**	**209**	PN	Pn	11 28 00.5	0.0
WAGN				SN	Sn	11 29 35.3	-7.1
WAGN				LG	Lg	11 30 30.8	
WAGN				Trac		11 30 38.5	
	comp=Z,23nm,0.3s						
BULN	**Bullion Camp,**	**9.19**	**219**	PN	Pn	11 28 00.9	-0.7
BULN				SN	Sn	11 29 38.5	-5.9
BULN				LG	Lg	11 30 32.7	
BULN				Trac		11 30 52.0	
	comp=Z,24nm,0.7s						
NUNN	**Nunuq Camp, NU**	**9.97**	**211**	PN	Pn	11 28 10.9	-1.3
NUNN				SN	Sn	11 29 54.2	-9.3
NUNN				LG	Lg	11 30 54.2	
NUNN				Trac		11 31 09.2	
	comp=Z,18nm,0.4s						
FRB	**Frobisher Bay**	**11.12**	**156**	PN	Pn	11 28 25.4	-2.5
FRB				SN	Sn	11 30 22.2	-9.2
FRB				LG	Lg	11 31 27.5	
FRB				Trac		11 31 46.6	
	comp=Z,14nm,0.5s						
YBKN	**Baker Lake, Hu**	**11.59**	**220**	PN	Pn	11 28 32.5	-1.9
YBKN				SN	Sn	11 30 34.9	-8.2
YBKN				LG	Lg	11 31 44.0	
YBKN				Trac		11 32 05.6	
	comp=Z,30nm,0.6s						
SEDN	**First Sedna Si**	**11.86**	**208**	PN	Pn	11 28 35.6	-2.5
SEDN				SN	Sn	11 30 37.3	-12
SEDN				LG	Lg	11 31 53.5	
SEDN				Trac		11 32 08.0	
	comp=Z,20nm,0.7s						
IVKQ	**Ivujivik**	**11.86**	**178**	LG	Lg	11 31 56.8	
IVKQ				Trac		11 32 10.9	
	comp=Z,12nm,0.5s						
JOSN	**Second Sedna S**	**11.99**	**209**	PN	Pn	11 28 39.5	-0.4
JOSN				SN	Sn	11 30 40.4	-13
JOSN				LG	Lg	11 31 57.5	
JOSN				Trac		11 32 08.9	
	comp=Z,17nm,0.6s						
AKVQ	**Akulivik**	**13.48**	**179**	PN	Pn	11 28 55.9	-4.2
AKVQ				SN	Sn	11 31 13.8	-15
AKVQ				LG	Lg	11 32 40.2	
AKVQ				Trac		11 32 58.0	
	comp=Z,15nm,0.8s						
JERN	**Jeri Cho Mine,**	**13.60**	**250**	PN	Pn	11 28 57.7	-4.1
JERN				SN	Sn	11 31 20.9	-11
JERN				LG	Lg	11 32 46.4	
JERN				Trac		11 33 05.8	
	comp=Z,32nm,1.6s						
ARVN	**Arviat, NU**	**14.33**	**211**	PN	Pn	11 29 14.9	+3.2
ARVN				SN	Sn	11 31 38.5	-11
ARVN				LG	Lg	11 33 08.6	
ARVN				Trac		11 33 26.3	
	comp=Z,23nm,0.8s						
COKN	**Cook Lake**	**15.19**	**240**	PN	Pn	11 29 21.5	-1.9
COKN				SN	Sn	11 31 56.3	-15
COKN				LG	Lg	11 33 32.5	
COKN				Trac		11 33 46.5	
	comp=Z,18nm,0.9s						
WHFN	**White Fish Lak**	**15.42**	**236**	PN	Pn	11 29 22.2	-4.2
WHFN				SN	Sn	11 32 04.0	-12
WHFN				LG	Lg	11 33 40.4	
WHFN				Trac		11 33 51.5	
	comp=Z,45nm,1.4s						
GDLN	**Gardenia Lake,**	**15.65**	**233**	PN	Pn	11 29 26.2	-3.2
GDLN				SN	Sn	11 32 09.5	-13
GDLN				LG	Lg	11 33 54.7	
GDLN				Trac		11 34 09.5	
	comp=Z,7.0nm,0.5s						
INUQ	**Inukjuak**	**15.84**	**179**	LG	Lg	11 33 54.4	
ILKN	**Indian Lake**	**15.97**	**250**	PN	Pn	11 29 30.7	-2.8
ILKN				SN	Sn	11 32 17.8	-12
CTLN	**Castor Lake**	**16.04**	**252**	PN	Pn	11 29 30.4	-4.1
CTLN				SN	Sn	11 32 17.0	-15
CTLN				LG	Lg	11 34 06.0	
FCC	**Fort Churchill**	**16.58**	**209**	PN	Pn	11 29 40.6	-0.6
FCC				SN	Sn	11 32 28.9	-16
FCC				LG	Lg	11 34 20.7	
FCC				Trac		11 34 27.7	
	comp=Z,21nm,1.1s						
KUQ	**Kuujjuuaa**	**16.66**	**161**	LG	Lg	11 34 16.1	
KUQ				Trac		11 34 27.8	
	comp=Z,6.5nm,0.5s						
YKW3	**Yellowknife Ar**	**17.22**	**246**	PN	Pn	11 29 44.8	-4.5
YKW3				SN	Sn	11 32 44.4	-16
YKW3				LG	Lg	11 34 36.3	
YKW3				Trac		11 34 58.6	
	comp=Z,6.9nm,0.7s						

*CSEM **07** 11:29:24.9, 34.°41N×36.°53E, h60km, ML1.6, After NSSC*
NSSC 07 11:29:24.9±2.1**, 34.°41N×36.°53E, h60**km±13km**, ML1.6, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HAWK	**Haweek**	**0.15**	**318**	*e*P	Pn	11 29 35.2	+0.9
HAWK				*e*S	Sn	11 29 40.5	-0.5
HAWK				AML	AML	11 29 43.1	
	comp=E,251nm,0.2s						
HAWK				AML	AML	11 29 43.2	
	comp=Z,470nm,0.3s						
HAWK				AML	AML	11 29 44.0	
	comp=N,341nm,0.3s						
HAWK	**Haweek**	**0.15**	**318**	*e*P	Pn	11 29 35.2	+0.9
	SNR=162						
HAWK				*e*S	Sn	11 29 40.5	-0.5
	comp=N,341nm,0.3s,SNR=162						
ROOS	**tl_alroos**	**0.67**	**110**	*e*P	Pn	11 29 40.3	+1.4
ROOS				*e*S	Sn	11 29 48.4	-0.7
ROOS				AML	AML	11 29 51.0	
	comp=Z,0.7nm,0.4s						
ROOS				AML	AML	11 29 55.5	
	comp=N,0.5nm,0.3s						
ROOS				AML	AML	11 29 56.2	
	comp=E,0.6nm,0.3s						
ROOS	**tl_alroos**	**0.67**	**110**	*e*P	Pn	11 29 40.3	+1.4
	SNR=120						
ROOS				*e*S	Sn	11 29 48.4	-0.7
	comp=E,0.6nm,0.3s,SNR=120						
BRBR	**Barbar**	**1.10**	**206**	*e*P	Pn	11 29 44.0	-0.6
BRBR				*e*S	Sn	11 29 59.2	0.0
BRBR				AML	AML	11 30 08.6	
	comp=Z,18nm,0.4s						
BRBR				AML	AML	11 30 09.8	
	comp=E,13nm,0.4s						
BRBR				AML	AML	11 30 12.0	
	comp=N,23nm,0.5s						
BRBR	**Barbar**	**1.10**	**206**	*e*P	Pn	11 29 44.0	-0.6
	SNR=106						
BRBR				*e*S	Sn	11 29 59.2	0.0
	comp=N,23nm,0.5s,SNR=106						
ARNB	**Al Arnab**	**1.52**	**343**	*e*P	Pn	11 29 48.7	-1.3
ARNB				*e*S	Sn	11 30 09.1	+0.2
ARNB				AML	AML	11 30 13.5	
	comp=Z,38nm,0.5s						
ARNB				AML	AML	11 30 15.5	
	comp=E,47nm,0.3s						
ARNB				AML	AML	11 30 15.6	
	comp=N,20nm,0.3s						
ARNB	**Al Arnab**	**1.52**	**343**	*e*P	Pn	11 29 48.7	-1.3
	SNR=100						
ARNB				*e*S	Sn	11 30 09.1	+0.2
	comp=N,20nm,0.3s,SNR=100						

*ISK **07** 11:30:22.5, 38.°70N×38.°15E, h4km, MD2.8*
*CSEM **07** 11:30:23.7±0.2, 38.°68N×38.°20E, h5km, MD2.8, Error ellipse: s-maj=5.8km s-min=5.2km az=122.0*
*DDA **07** 11:30:23.1, 38.°72N×38.°14E, h7km, MD3.1*
*ISCJB **07** 11:30:23.2±0.6, 38.°72N±0.°03×38.°16E±0.°04, h0km±7km, Error ellipse: s-maj=6.1km s-min=4.1km az=42.0*
ISC 07 11:30:23.6±1.0**, 38.°71N**±0.°03×**38.°15E**±0.°03**, h11**km±11km**, n27, σ0.s83**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.44**	**150**	*e*PG	**Pg**	**11 30 31.9**	**-0.5**
MYA	**Malataya**	**0.44**	**150**	*e*Pg	**Pg**	**11 30 31.9**	**-0.5**
AKCD	**Akcadag**	**0.45**	**203**	*e*P	**Pg**	**11 30 32.1**	**-0.5**
AKCD				*e*S	**Sb**	**11 30 39.4**	**-1.1**
AKCD	**Akcadag**	**0.45**	**203**	*e*P	**Pg**	**11 30 32.1**	**-0.5**
AKCD				*e*S	**Sb**	**11 30 39.4**	**-1.1**
DARE	**Darende-Malaty**	**0.54**	**255**	*e*PG	**Pg**	**11 30 33.7**	**-0.5**
DARE				*e*SG	**Sg**	**11 30 41.4**	**+0.1**
DARE	**Darende-Malaty**	**0.54**	**255**	*e*Pg	**Pg**	**11 30 33.7**	**-0.5**
DARE				*e*Sg	**Sg**	**11 30 41.4**	**+0.1**
KEMA	**Kemaliye**	**0.62**	**26**	*e*P	**Pg**	**11 30 35.0**	**-0.7**
KEMA				*e*S	**Sg**	**11 30 44.8**	**+1.0**
ELZG	**Elazig**	**0.69**	**108**	*e*P	**Pg**	**11 30 36.5**	**-0.6**
ELZG				*e*S	**Sg**	**11 30 46.7**	**+0.6**
ELZG	**Elazig**	**0.69**	**108**	*e*P	**Pg**	**11 30 36.5**	**-0.6**
ELZG				*e*S	**Sg**	**11 30 46.7**	**+0.6**
ILIC	**ilic-Erzincan**	**0.81**	**24**	*e*PG	**Pg**	**11 30 38.7**	**-0.6**
ILIC				*e*SG	**Sb**	**11 30 51.3**	**+0.5**
ILIC	**ilic-Erzincan**	**0.81**	**24**	*e*Pg	**Pg**	**11 30 38.7**	**-0.6**
ILIC				*e*Sg	**Sb**	**11 30 51.3**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.97**	**110**	*e*PG	**Pg**	**11 30 41.5**	**-0.8**
SVRC	**Sivrice-ELAZID**	**0.97**	**110**	*e*Pg	**Pg**	**11 30 41.5**	**-0.8**
PTK	**Pertek**	**0.99**	**79**	*e*PG	**Pg**	**11 30 41.9**	**-0.8**
PTK	**Pertek**	**0.99**	**79**	*e*Pg	**Pg**	**11 30 41.9**	**-0.8**
URFA	**Urfa**	**1.38**	**157**	*e*PN	**Pb**	**11 30 49.3**	**-0.2**
URFA	**Urfa**	**1.38**	**157**	*e*Pn	**Pb**	**11 30 49.3**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.39**	**258**	*e*PN	**Pn**	**11 30 49.1**	**0.0**
EZC	**Erzincan**	**1.40**	**42**	*e*PN	**Pn**	**11 30 49.5**	**+0.2**
EZC	**Erzincan**	**1.40**	**42**	*e*Pn	**Pn**	**11 30 49.5**	**+0.2**
GZT	**Gaziantep**	**1.43**	**199**	*e*P	**Pg**	**11 30 50.5**	**-0.6**
GZT				*e*S	**Sg**	**11 31 12.8**	**+3.1**
ERZN	**Erzincan**	**1.50**	**54**	*e*PN	**Pn**	**11 30 51.1**	**+0.4**
KMRS	**Kahramanmaras**	**1.56**	**220**	*e*PN	**Pn**	**11 30 51.8**	**+0.5**
KMRS	**Kahramanmaras**	**1.56**	**220**	*e*Pn	**Pn**	**11 30 51.8**	**+0.5**
AYKD	**Aykdinkavak**	**1.67**	**220**	*e*P	**Pb**	**11 30 53.7**	**-0.8**
AYKD				*e*S	**Sg**	**11 31 18.5**	**+1.1**
BNN	**Bunyan**	**1.80**	**275**	*e*PN	**Pn**	**11 30 55.3**	**+0.5**
BNN	**Bunyan**	**1.80**	**275**	*e*Pn	**Pn**	**11 30 55.3**	**+0.5**

IDC 07 11:52:47.8±9.1**, 21.°65N×143.°09E, h303**km±92km**, mb2.8**/6**, mb1 2.9**/6**, mb1mx2.7**/28**, mbtmp2.8**/6**, Error ellipse: s-maj=45.4km s-min=16.4km az=82.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.50**	**324**	P	P	11 57 03.8	+0.2
	0.7nm,0.6s,baz=147,slow=8.7,SNR=5.6						
WRA	**Warramunga Arr**	**42.21**	**192**	P	P	12 00 11.7	-0.2
	0.3nm,0.3s,baz=15,slow=9.0,SNR=8.4						
ASAR	**Alice Springs**	**45.92**	**192**	P	P	12 00 41.2	+0.1
	0.1nm,0.7s,baz=8.9,slow=6.4,SNR=3.4						
KURBB	**Kurchatov Arra**	**57.50**	**317**	P	P	12 02 05.2	-0.6
	0.5nm,0.4s,baz=92,slow=7.1,SNR=7.2						
BVAR	**Borovoye Array**	**62.65**	**320**	P	P	12 02 41.1	+0.5
	0.9nm,0.3s,baz=100,slow=9.1,SNR=5.2						
YKA	**Yellowknife Ar**	**76.54**	**28**	P	P	12 04 04.7	+0.1
	0.1nm,0.4s,baz=288,slow=5.7,SNR=3.1						

IDC 07 11:56:56.5±1.6**, 4.°28N×126.°75E, h0**km**, mb3.5**/5**, mb1 3.6**/5**, mb1mx3.5**/24**, mbtmp3.5**/5**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.1**/24**, Error ellipse: s-maj=158.4km s-min=20.2km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.20**	**163**	P	P	12 02 23.5	-0.5
	1.3nm,0.6s,baz=343,slow=11,SNR=10						
ASAR	**Alice Springs**	**28.64**	**166**	P	P	12 02 54.9	-0.1
	0.2nm,0.6s,baz=354,slow=7.5,SNR=3.1						
KSRS	**Korea Array**	**33.03**	**2**	LR	LR	12 18 39.2	
	comp=Z,20nm,18.1s,baz=280,slow=39						
STKA	**Stephens Creek**	**38.63**	**160**	P	P	12 04 22.3	+0.6
	1.1nm,0.7s,baz=326,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**57.12**	**325**	P	P	12 06 44.4	-0.5
	0.5nm,0.7s,baz=118,slow=8.8,SNR=3.9						
KURBB	**Kurchatov Arra**	**61.29**	**327**	P	P	12 07 14.2	+0.5
	0.5nm,0.6s,baz=123,slow=6.7,SNR=5.5						

*CSEM **07** 12:03:19.7±0.3, 40.°54N×40.°73E, h2km, MD2.5, Error ellipse: s-maj=10.6km s-min=5.8km az=175.0*
*ISK **07** 12:03:19.6, 40.°45N×40.°70E, h2km, MD2.5*
ISC 07 12:03:18.6±1.3**, 40.°48N**±0.°06×**40.°70E**±0.°03**, h1**km±19km**, n12, σ0.s82**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYT	**Ayd˜–ntepe-Bay**	**0.44**	**258**	*e*PG	**Pb**	**12 03 29.1**	**-0.1**
BAYT				*e*SG	**Sb**	**12 03 35.6**	**-0.7**
BAYT	**Ayd˜–ntepe-Bay**	**0.44**	**258**	*e*Pg	**Pb**	**12 03 29.1**	**-0.1**
BAYT				*e*Sg	**Sb**	**12 03 35.6**	**-0.7**
EZM	**Erzurum**	**0.77**	**138**	*e*PG	**Pg**	**12 03 33.8**	**+0.5**
EZM				*e*SG	**Sb**	**12 03 46.2**	**+0.3**
DDEM	**Demirkent**	**0.90**	**63**	*i* P	**Pg**	**12 03 36.0**	**+0.2**
DDEM				*i* S	**Sg**	**12 03 47.5**	**+0.1**
DDEM	**Demirkent**	**0.90**	**63**	*i* P	**Pg**	**12 03 36.0**	**+0.2**
DDEM				*i* S	**Sg**	**12 03 47.5**	**+0.1**
GUMT	**Gumushane**	**0.93**	**269**	*e*PG	**Pb**	**12 03 38.4**	**+0.8**
GUMT	**Gumushane**	**0.93**	**269**	*e*Pg	**Pb**	**12 03 38.4**	**+0.8**
DAGI	**Agillar**	**1.10**	**57**	*i* P	**Pg**	**12 03 39.5**	**-0.1**
DAGI				*i* S	**Sg**	**12 03 52.3**	**-1.6**
KELT	**Kelkit**	**1.15**	**254**	*i* P	**Pb**	**12 03 41.8**	**+0.3**
KELT				*i* S	**Sg**	**12 03 54.4**	**-1.3**
KELT	**Kelkit**	**1.15**	**254**	*i* P	**Pb**	**12 03 41.8**	**+0.3**
KELT				*i* S	**Sg**	**12 03 54.4**	**-1.3**
ESPY	**Espiye-Giresun**	**1.56**	**287**	*e*PN	**Pg**	**12 03 49.5**	**+1.0**
ESPY	**Espiye-Giresun**	**1.56**	**287**	*e*Pn	**Pg**	**12 03 49.5**	**+1.0**

*TAP **07** 12:08:50.9, 23.°92N×122.°47E, h9km±1km, ML3.0, D*
*ISCJB **07** 12:08:51.0±0.4, 23.°90N±0.°03×122.°54E±0.°02, h15km±6km, Error ellipse: s-maj=4.9km s-min=2.9km az=171.5*
*JMA **07** 12:08:52.7±0.2, 24.°18N×122.°48E, h45km*
ISC 07 12:08:51.4±0.9**, 23.°92N**±0.°03×**122.°52E**±0.°02**, h22**km±10km**, n32, σ0.s75**/53**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.70**	**40**	P	**Pb**	**12 09 04.4**	**-0.7**
YOJ				*e*S	**Sb**	**12 09 12.8**	**-1.6**
TWD	**Chiawan**	**0.86**	**281**	*e*P	**Pb**	**12 09 07.0**	**-0.6**
	baz=281						
TWD				*e*S	**Sb**	**12 09 18.8**	**+0.1**
	baz=281						
ENA	**Nanau**	**0.87**	**306**	P	**Pb**	**12 09 07.6**	**-0.3**
	baz=307						
ENA				*e*S	**Sb**	**12 09 19.7**	**+0.6**
	baz=307						
TWC	**Suao**	**0.92**	**319**	*i* P	**Pb**	**12 09 07.8**	**-0.8**
	baz=321						
TWC				S	**Sb**	**12 09 19.3**	**-1.1**
	baz=321						
ESL	**Shilin**	**1.00**	**264**	*e*P	**Pn**	**12 09 08.3**	**-1.8**
	baz=263						
TWE	**Neicheng**	**1.11**	**316**	P	**Pn**	**12 09 11.7**	**0.0**
	baz=318						
TWE				S	**Sn**	**12 09 27.1**	**+0.7**
	baz=318						
ENTT	**Nioudou**	**1.12**	**310**	P	**Pn**	**12 09 11.8**	**-0.1**
	baz=311						
ENTT				*e*S	**Sb**	**12 09 27.5**	**+1.0**
	baz=311						
NNS	**Nan Shan**	**1.17**	**297**	*e*P	**Pn**	**12 09 12.6**	**0.0**
	baz=297						
NNS				*e*S	**Sb**	**12 09 28.3**	**+0.6**
	baz=297						
WHF	**Hehuan Shan**	**1.17**	**281**	*i* P	**Pn**	**12 09 12.5**	**-0.3**
	baz=281						
WHF				*e*S	**Sn**	**12 09 28.0**	**-0.3**
	baz=281						
EHY	**Hungye**	**1.17**	**250**	*e*P	**Pn**	**12 09 12.2**	**-0.2**
	baz=248						
EHY				*e*S	**Sb**	**12 09 27.9**	**+0.2**
	baz=248						
IRIF	**Iriomote-Funau**	**1.18**	**69**	P	**Pn**	**12 09 12.9**	**+0.2**
IRIF				*e*S	**Sb**	**12 09 28.4**	**+0.3**
TWB1	**Santiao Chiao**	**1.19**	**336**	*e*P	**Pn**	**12 09 13.1**	**+0.4**
	baz=338						
TWB1				*e*S	**Sb**	**12 09 29.8**	**+1.6**
	baz=338						
HATJ	**Hateruma jima**	**1.19**	**83**	P	**Pb**	**12 09 13.7**	**+0.4**
HATJ				*e*S	**Sb**	**12 09 28.8**	**+0.6**
TWF1	**Yuli**	**1.25**	**243**	*e*P	**Pn**	**12 09 13.4**	**-0.2**
	baz=241						
TWF1				*e*S	**Sb**	**12 09 30.2**	**+0.1**
	baz=241						
TWT	**Tachien**	**1.27**	**285**	*e*P	**Pb**	**12 09 15.2**	**+0.4**
	baz=285						
NSK	**Sanguang**	**1.30**	**306**	*e*P	**Pn**	**12 09 14.2**	**-0.1**
	baz=306						
NWF	**Wu-fen Shan**	**1.33**	**330**	*e*P	**Pb**	**12 09 15.4**	**-0.3**
	baz=331						
NWF				S	**Sb**	**12 09 33.3**	**+0.9**
	baz=331						
CHKT	**Chengkung**	**1.33**	**233**	*e*P	**Pn**	**12 09 15.1**	**+0.3**
	baz=230						
CHKT				*e*S	**Sn**	**12 09 30.2**	**-1.6**
	baz=230						
JKRS	**Kuro-shima**	**1.40**	**77**	P	**Pn**	**12 09 16.2**	**+0.5**
JKRS				*e*S	**Sn**	**12 09 32.9**	**-0.6**

SMLT	**Sun Moon Lake**	**1.48**	**269**	eP	**Pb**	**12 09 18.9**	**+0.5**
	baz=268						
TYC	**Yuchr**	**1.52**	**270**	eP	**Pn**	**12 09 17.8**	**+0.5**
	baz=269						
JIJ	**Ishigaki jima**	**1.55**	**73**	P	**Pn**	**12 09 17.8**	**+0.1**
JIJ				eS	**Sn**	**12 09 36.7**	**-0.5**
NSTT	**Nanjuang**	**1.55**	**297**	eP	**Pb**	**12 09 18.8**	**-0.8**
	baz=297						
NSTT				eS	**Sn**	**12 09 37.8**	**+0.6**
	baz=297						
ELDTW	**Lidau**	**1.56**	**242**	eP	**Pn**	**12 09 18.3**	**+0.4**
	baz=241						
ALS	**Alishan**	**1.62**	**256**	eP	**Pn**	**12 09 18.6**	**-0.3**
	baz=254						
ALS				eS	**Sn**	**12 09 39.6**	**+0.3**
	baz=254						
TWQ1	**Liyutan**	**1.65**	**285**	eP	**Pn**	**12 09 19.6**	**+0.5**
	baz=285						
CHN5	**Tsauling**	**1.71**	**260**	eP	**Pb**	**12 09 21.8**	**-0.5**
	baz=258						
CHN4	**Tsaushan**	**1.85**	**253**	eP	**Pb**	**12 09 24.4**	**-0.2**
	baz=251						
CHN4				eS	**Sb**	**12 09 48.2**	**+0.9**
	baz=251						
WTP	**Ta-pu**	**1.87**	**249**	eP	**Pb**	**12 09 23.9**	**-1.1**
	baz=248						
CHN1	**Nanshi**	**1.96**	**249**	P	**Pb**	**12 09 25.7**	**-0.9**
	baz=247						
CHN1				eS	**Sb**	**12 09 51.0**	**+0.3**
	baz=247						
SSD	**Sandimen**	**2.09**	**236**	eP	**Pn**	**12 09 26.3**	**+1.2**
	baz=235						
EAST	**Anshuo**	**2.17**	**225**	eP	**Pn**	**12 09 27.4**	**+1.2**
	baz=223						

*CSEM **07** 12:09:25.9±0.5, 37°.07N×21°.62E, h12km, MD2.9, Error ellipse: s-maj=11.2km s-min=6.1km az=70.0*
*ATH **07** 12:09:26.5, 37°.06N×21°.71E, h22km±1km, MD2.9/9*
*ISCJB **07** 12:09:26.9±0.8, 37°.07N±0°.03×21°.63E±0°.06, h13km±4km, Error ellipse: s-maj=7.8km s-min=4.5km az=173.0*
*THE **07** 12:09:27.2, 37°.10N×21°.66E, h9km±1km, ML1.9/5, Error ellipse: s-maj=1.9km s-min=1.0km az=97.0*
ISC 07 12:09:27.2±1.0, **37°.07N**±0°.02×**21°.69E**±0°.04, **h17**km±6km, **n40**, σ0.76/68, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.18**	**166**	P	**Pg**	**12 09 31.6**	**-0.2**
PYL				S	**Sb**	**12 09 35.5**	**+0.2**
PYL	**PYLOS**	**0.18**	**166**	ePB	**Pg**	**12 09 31.7**	**-0.1**
PYL				eSB	**Sb**	**12 09 35.7**	**+0.4**
PYL	**PYLOS**	**0.18**	**166**	P	**Pg**	**12 09 31.6**	**-0.2**
PYL				S	**Sb**	**12 09 35.5**	**+0.2**
ITM	**Ithomi**	**0.22**	**61**	P	**Pg**	**12 09 32.1**	**-0.3**
ITM				S	**Sg**	**12 09 36.4**	**+0.5**
ITM	**Ithomi**	**0.22**	**61**	ePB	**Pg**	**12 09 32.1**	**-0.3**
ITM				eSB	**Sg**	**12 09 36.1**	**+0.2**
ITM	**Ithomi**	**0.22**	**61**	ePb	**Pg**	**12 09 32.1**	**-0.3**
ITM				eSb	**Sg**	**12 09 36.1**	**+0.2**
ITM				S	**Sg**	**12 09 36.4**	**+0.5**
DYR	**Agios Nikonas**	**0.60**	**121**	P	**Pb**	**12 09 39.3**	**0.0**
DYR				S	**Sg**	**12 09 46.9**	**-0.3**
DYR	**Agios Nikonas**	**0.60**	**121**	ePN	**Pg**	**12 09 37.4**	**-1.7**
DYR				eSN	**Sg**	**12 09 46.2**	**-1.0**
DYR	**Agios Nikonas**	**0.60**	**121**	ePn	**Pg**	**12 09 37.4**	**-1.7**
DYR	**Agios Nikonas**	**0.60**	**121**	P	**Pb**	**12 09 39.3**	**0.0**
DYR				eSn	**Sg**	**12 09 46.2**	**-1.0**
DYR				S	**Sg**	**12 09 46.9**	**-0.3**
VLX	**Vlachokerasia**	**0.63**	**62**	P	**Pg**	**12 09 39.2**	**-0.4**
VLX				S	**Sg**	**12 09 47.8**	**-0.3**
VLX	**Vlachokerasia**	**0.63**	**62**	ePN	**Pg**	**12 09 39.2**	**-0.4**
VLX				eSN	**Sg**	**12 09 47.7**	**-0.3**
VLX	**Vlachokerasia**	**0.63**	**62**	ePn	**Pg**	**12 09 39.2**	**-0.4**
VLX				eSn	**Sg**	**12 09 47.7**	**-0.3**
GUR	**Goura**	**1.01**	**31**	P	**Pb**	**12 09 45.2**	**-1.0**
GUR				S	**Sg**	**12 10 00.0**	**0.0**
GUR	**Goura**	**1.01**	**31**	ePB	**Pb**	**12 09 44.7**	**-1.5**
GUR	**Goura**	**1.01**	**31**	ePb	**Pb**	**12 09 44.7**	**-1.5**
GUR	**Goura**	**1.01**	**31**	P	**Pb**	**12 09 45.2**	**-1.0**
GUR				S	**Sg**	**12 10 00.0**	**0.0**
VLI	**Veliai**	**1.06**	**109**	P	**Pb**	**12 09 46.9**	**-0.2**
VLI				S	**Sg**	**12 10 04.0**	**+2.3**
VLI	**Veliai**	**1.06**	**109**	ePB	**Pb**	**12 09 45.8**	**-1.3**
VLI				eSN	**Sn**	**12 10 01.8**	**+0.2**
VLI	**Veliai**	**1.06**	**109**	ePb	**Pb**	**12 09 45.8**	**-1.3**
VLI	**Veliai**	**1.06**	**109**	P	**Pb**	**12 09 46.9**	**-0.2**
VLI				eSn	**Sn**	**12 10 01.8**	**+0.2**
VLI				S	**Sg**	**12 10 04.0**	**+2.3**
LAKA	**Lakka**	**1.19**	**11**	P	**Pn**	**12 09 48.4**	**-0.6**
LAKA				S	**Sg**	**12 10 06.4**	**+0.7**
LAKA	**Lakka**	**1.19**	**11**	ePN	**Pn**	**12 09 48.9**	**-0.1**
LAKA				eSN	**Sg**	**12 10 06.5**	**+0.7**
LAKA	**Lakka**	**1.19**	**11**	P	**Pn**	**12 09 48.4**	**-0.6**
LAKA	**Lakka**	**1.19**	**11**	ePn	**Pn**	**12 09 48.9**	**-0.1**
LAKA				S	**Sg**	**12 10 06.4**	**+0.7**
DIDY	**Didyma**	**1.28**	**71**	P	**Pb**	**12 09 51.1**	**+0.2**
DIDY				S	**Sb**	**12 10 08.3**	**+1.2**
DIDY	**Didyma**	**1.28**	**71**	P	**Pb**	**12 09 51.1**	**+0.2**
DIDY				S	**Sb**	**12 10 08.3**	**+1.2**
DID	**Didima**	**1.31**	**70**	P	**Pn**	**12 09 51.0**	**+0.3**
DID				S	**Sg**	**12 10 09.8**	**+0.2**
DID	**Didima**	**1.31**	**70**	ePN	**Pn**	**12 09 50.8**	**+0.1**
DID				eSN	**Sg**	**12 10 09.9**	**+0.3**
DID	**Didima**	**1.31**	**70**	P	**Pn**	**12 09 51.0**	**+0.3**
DID				S	**Sg**	**12 10 09.8**	**+0.2**
KYTH	**Kithira**	**1.34**	**126**	P	**Pn**	**12 09 51.3**	**+0.2**
KYTH	**Kithira**	**1.34**	**126**	ePN	**Pb**	**12 09 52.2**	**+0.3**
KYTH	**Kithira**	**1.34**	**126**	P	**Pn**	**12 09 51.3**	**+0.2**
KYTH	**Kithira**	**1.34**	**126**	ePn	**Pb**	**12 09 52.2**	**+0.3**
KALE	**Kalithea**	**1.36**	**15**	ePN	**Pb**	**12 09 52.6**	**+0.3**
KALE	**Kalithea**	**1.36**	**15**	ePn	**Pb**	**12 09 52.6**	**+0.3**
LTK	**Loutraki**	**1.39**	**47**	ePN	**Pb**	**12 09 52.9**	**+0.2**
LTK	**Loutraki**	**1.39**	**47**	ePn	**Pb**	**12 09 52.9**	**+0.2**
AGG	**Agios Georgios**	**2.01**	**14**	ePB	**Pn**	**12 10 00.3**	**0.0**
AGG	**Agios Georgios**	**2.01**	**14**	ePb	**Pn**	**12 10 00.3**	**0.0**

*CSEM **07** 12:10:59.6, 38°.37N×22°.36E, h16km, ML1.4/3, After THE*
THE 07 12:10:59.6, 38°.37N×22°.36E, h16km±1km, **ML1.4**/3, **Error ellipse: s-maj=2.0km s-min=0.4km az=163.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSF	**Desfina**	**0.14**	**73**	P	Pg	12 11 03.2	-0.3
DSF				S	Sg	12 11 06.0	-0.1
DSF	**Desfina**	**0.14**	**73**	P	Pg	12 11 03.2	-0.3
DSF				S	Sg	12 11 06.0	-0.1
KALE	**Kalithea**	**0.17**	**276**	P	Pg	12 11 03.8	-0.2
KALE				S	Sg	12 11 07.4	+0.4
KALE	**Kalithea**	**0.17**	**276**	P	Pg	12 11 03.8	-0.2
KALE				S	Sg	12 11 07.4	+0.4
TRIZ	**Trizonia**	**0.23**	**268**	P	Pg	12 11 04.8	+0.1
TRIZ				S	Sg	12 11 08.2	0.0
TRIZ	**Trizonia**	**0.23**	**268**	P	Pg	12 11 04.8	+0.1
TRIZ				S	Sg	12 11 08.2	0.0
EFP	**Efpalio**	**0.36**	**279**	P	Pg	12 11 07.0	0.0
EFP				S	Sg	12 11 12.3	+0.2
EFP	**Efpalio**	**0.36**	**279**	P	Pg	12 11 07.0	0.0
EFP				S	Sg	12 11 12.3	+0.2
AXAR	**Agios Charalam**	**0.46**	**31**	P	Pg	12 11 08.3	-0.5
AXAR				S	Sb	12 11 15.7	-0.3
AXAR	**Agios Charalam**	**0.46**	**31**	P	Pg	12 11 08.3	-0.5
AXAR				S	Sb	12 11 15.7	-0.3

*STR **07** 12:10:56.0±8.2, 44°.66N×17°.97E, h5km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ISCJB **07** 12:11:05.7±0.3, 45°.05N±0°.01×16°.96E±0°.02, h8km±2km, mb3.7/4, Error ellipse: s-maj=3.0km s-min=1.6km az=139.4*
*SZGRF **07** 12:11:06.2, 44°.85N×17°.31E, h10km, mb4.1, Northwestern Balkan Peninsula*
*IDC **07** 12:11:06.5±1.0, 45°.02N×16°.69E, h0km, mb3.7/5, mb1 4.0/9, mb1mx3.7/28, mbtmp3.9/9, ML4.0/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/45, Error ellipse: s-maj=17.5km s-min=11.5km az=82.0*
*PDG **07** 12:11:06.7±0.5, 45°.02N×16°.96E, h9km±1km, ML3.8/9, Error ellipse: s-maj=0.5km s-min=0.8km az=0.0*
*PRU **07** 12:11:07.3, 45°.06N×17°.03E, h0km*
*BEO **07** 12:11:07.1±0.3, 44°.95N×16°.93E, h12km±2km, ML3.7/1*
*CSEM **07** 12:11:07.3±0.1, 45°.04N×16°.96E, h10km, ML4.1/13, Error ellipse: s-maj=4.1km s-min=2.0km az=40.0*
*LDG **07** 12:11:07.1±0.1, 45°.02N×16°.92E, h10km, Ml3.8/11, Error ellipse: s-maj=2.4km s-min=1.8km az=59.0*
ISC 07 12:11:06.9±1.0, **45°.02N**±0°.02×**16°.97E**±0°.02, **h9**km±7km, **n271**, σ1.42/353, **mb3.7**/4, **42C-30D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.31**	**150**	⇓iPg	**Pg**	**12 11 12.1**	**-0.9**
BLY				eSg	**Sg**	**12 11 16.9**	**-0.1**
BLY	**Banja Luka**	**0.31**	**150**	⇓iPg	**Pg**	**12 11 12.1**	**-0.9**
BLY				eSg	**Sg**	**12 11 16.9**	**-0.1**
SISC	**Sisak**	**0.62**	**317**	i Pg	**Pg**	**12 11 19.3**	**+0.4**
SISC				Sg	**Sb**	**12 11 28.4**	**-0.4**
SISC	**Sisak**	**0.62**	**317**	i Pg	**Pg**	**12 11 19.3**	**+0.4**
SISC				Sg	**Sb**	**12 11 28.3**	**-0.4**
GCIS	**Gornji Cirnik**	**1.27**	**313**	i Pg	**Pn**	**12 11 30.4**	**-0.4**
GCIS				eSg	**Sn**	**12 11 50.0**	**+2.0**
GCIS							
	comp=Z,723nm,0.3s						
GCIS	**Gornji Cirnik**	**1.27**	**313**	eSg	**Sn**	**12 11 50.0**	**+2.0**
	comp=Z,723nm,0.3s						
BOJS	**Bojanci**	**1.31**	**293**	i Pg	**Pn**	**12 11 30.6**	**-0.7**
BOJS				i Sg	**Sn**	**12 11 49.9**	**+1.0**
BOJS							
	comp=Z,2μm,0.5s						
BOJS	**Bojanci**	**1.31**	**293**	ePg	**Pn**	**12 11 31.0**	**-0.3**
BOJS				eSg	**Sn**	**12 11 49.2**	**+0.3**
BOJS	**Bojanci**	**1.31**	**293**	ePg	**Pn**	**12 11 31.0**	**-0.3**
BOJS				eSg	**Sn**	**12 11 49.2**	**+0.3**
CRES	**Cresnjev**	**1.34**	**308**	⇓iPg	**Pn**	**12 11 31.2**	**-0.6**
CRES				eSg	**Sg**	**12 11 51.5**	**+1.6**
CRES							
	comp=Z,419nm,0.3s						
GOLS	**Golise**	**1.37**	**317**	i Pg	**Pn**	**12 11 31.9**	**-0.4**
BEHE	**Becsehely**	**1.46**	**355**	⇑ePn	**Pn**	**12 11 33.8**	**+0.4**
BEHE				eSn	**Sg**	**12 11 57.7**	**+3.8**
LEGS	**Legarje**	**1.49**	**309**	i Pg	**Pn**	**12 11 33.4**	**-0.5**
KOGS	**Kog**	**1.52**	**341**	i Pg	**Pn**	**12 11 34.0**	**-0.2**
KOGS							
	comp=Z,839nm,0.4s						
DOBS	**Dobrina**	**1.55**	**318**	i Pg	**Pn**	**12 11 34.4**	**-0.3**
GBRS	**Gornja Briga**	**1.61**	**289**	i Pg	**Pn**	**12 11 35.7**	**+0.2**
PKSM	**Moragy**	**1.68**	**44**	ePn	**Pn**	**12 11 36.8**	**+0.4**
PKSM	**Moragy**	**1.68**	**44**	⇑iP	**Pn**	**12 11 36.5**	**+0.1**
PKSM	**Moragy**	**1.68**	**44**	⇑ePn	**Pn**	**12 11 35.9**	**-0.5**
PKSM				eSn	**Sg**	**12 12 00.7**	**-0.1**
PKSM	**Moragy**	**1.68**	**44**	⇑iP	**Pn**	**12 11 36.5**	**+0.1**
PKSM	**Moragy**	**1.68**	**44**	ePn	**Pn**	**12 11 36.8**	**+0.4**
PKSM				S	**Sg**	**12 12 01.8**	**+1.0**
VISS	**Visnje**	**1.69**	**298**	i Pn	**Pn**	**12 11 36.4**	**-0.3**
VISS				eSn	**Sg**	**12 12 00.5**	**-0.9**
VISS							
	comp=Z,402nm,0.4s						
VISS	**Visnje**	**1.69**	**298**	i Pn	**Pn**	**12 11 36.4**	**-0.3**
VISS				eSn	**Sg**	**12 12 00.4**	**-0.9**
	comp=Z,402nm,0.4s						
PDKS	**Podkum**	**1.74**	**308**	i Pn	**Pn**	**12 11 36.9**	**-0.3**
PKS9	**Tamasi**	**1.82**	**30**	⇑ePn	**Pn**	**12 11 39.4**	**+1.1**
TEKS	**Tekeris**	**1.88**	**103**	eSn	**Sn**	**12 12 02.4**	**-0.7**
TEKS				eSg	**Sg**	**12 12 07.5**	**+0.2**
TEKS	**Tekeris**	**1.88**	**103**	eSn	**Sn**	**12 12 02.4**	**-0.7**
TEKS				eSg	**Sg**	**12 12 07.5**	**+0.2**
KNDS	**Knezji Dol**	**1.90**	**287**	i Pn	**Pb**	**12 11 42.0**	**+0.3**
KNDS				i Sn	**Sg**	**12 12 07.2**	**-0.7**
	comp=Z,326nm,0.3s						
CEY	**Cerknica**	**1.93**	**293**	i Pn	**Pn**	**12 11 40.0**	**+0.1**
CEY				i Sn	**Sg**	**12 12 07.7**	**-1.3**
CEY							
	comp=Z,378nm,0.3s						
CEY	**Cerknica**	**1.93**	**293**	i Pn	**Pn**	**12 11 40.0**	**+0.1**
CEY				i Sn	**Sg**	**12 12 07.7**	**-1.3**
	comp=Z,378nm,0.3s						
LJU	**Ljubljana**	**2.00**	**302**	ePn	**Pn**	**12 11 41.0**	**+0.1**
LJU				e		12 11 42.0	
LJU				i		12 11 44.5	
LJU				eSn	**Sg**	**12 12 11.1**	**-0.1**
FRGS	**Fruska Gora**	**2.02**	**85**	ePn	**Pn**	**12 11 41.5**	**+0.4**
FGSL	**Fruska Gora**	**2.02**	**85**	ePn	**Pn**	**12 11 41.5**	**+0.4**
BBLS	**Lazići**	**2.09**	**123**	ePn	**Pn**	**12 11 41.9**	**-0.2**
BBLS	**Lazići**	**2.09**	**123**	ePn	**Pn**	**12 11 41.9**	**-0.2**
SOKA	**Soboth**	**2.15**	**322**	⇑ePn	**Pn**	**12 11 42.8**	**-0.1**
SOKA				⇑iSn	**Sn**	**12 12 08.6**	**-1.1**
	comp=Z,56nm,0.3s						
SOKA	**Soboth**	**2.15**	**322**	Pn	**Pn**	**12 11 42.8**	**-0.1**
SOKA				Sn	**Sn**	**12 12 08.6**	**-1.1**
	comp=Z,56nm,0.3s						
PKS2	**Kecel**	**2.16**	**46**	ePn	**Pg**	**12 11 49.6**	**+1.4**
PKS2				eSn	**Sg**	**12 12 18.2**	**+2.1**
STON	**Ston**	**2.21**	**166**	i Pn	**Pn**	**12 11 45.0**	**+1.4**
STON				Sn	**Sn**	**12 12 11.5**	**+0.5**
STON	**Ston**	**2.21**	**166**	i Pn	**Pn**	**12 11 45.0**	**+1.4**
STON				Sn	**Sn**	**12 12 11.5**	**+0.5**
JAVS	**Javornik**	**2.23**	**294**	i Pn	**Pn**	**12 11 44.0**	**0.0**
JAVS				eSn	**Sb**	**12 12 14.8**	**-0.2**
JAVS	**Javornik**	**2.23**	**294**	i Pn	**Pn**	**12 11 44.0**	**0.0**
JAVS				eSn	**Sb**	**12 12 14.8**	**-0.2**
OBKA	**Obir**	**2.26**	**312**	⇑ePn	**Pn**	**12 11 44.7**	**+0.2**
	SNR=64						
OBKA				⇓iPg	**Pg**	**12 11 50.4**	**+0.2**
	comp=Z,126nm,0.4s						
OBKA				⇑eSg	**Sg**	**12 12 20.0**	**+0.5**
	comp=Z,282nm,0.3s						
OBKA	**Obir**	**2.26**	**312**	Pn	**Pn**	**12 11 44.7**	**+0.2**
	SNR=64						
OBKA	**Obir**	**2.26**	**312**	Pg	**Pg**	**12 11 50.4**	**+0.2**
	comp=Z,126nm,0.4s						
OBKA				Sg	**Sg**	**12 12 20.0**	**+0.5**
	comp=Z,282nm,0.3s						
UPM	**Unac-Piva**	**2.29**	**142**	⇓iPn	**Pn**	**12 11 45.4**	**+0.5**
UPM				eSn	**Sb**	**12 12 16.4**	**-0.4**
UPM	**Unac-Piva**	**2.29**	**142**	⇓iPn	**Pn**	**12 11 45.4**	**+0.5**
UPM				eSn	**Sb**	**12 12 16.4**	**-0.4**
DIVS	**Divibare**	**2.35**	**112**	P	**Pn**	**12 11 46.5**	**+0.8**
DIVS	**Divibare**	**2.35**	**112**	ePn	**Pn**	**12 11 45.6**	**-0.1**
DIVS				eSn	**Sn**	**12 12 15.9**	**+1.3**
DIVS	**Divibare**	**2.35**	**112**	ePn	**Pn**	**12 11 45.6**	**-0.1**
DIVS	**Divibare**	**2.35**	**112**	P	**Pn**	**12 11 46.5**	**+0.8**
DIVS				eSn	**Sn**	**12 12 15.9**	**+1.3**
PKST	**T˜'s**	**2.36**	**18**	⇑ePn	**Pn**	**12 11 45.7**	**-0.1**
PKST				eSn	**Sg**	**12 12 25.5**	**+2.7**
VOY	**Vojsko**	**2.39**	**296**	ePn	**Pn**	**12 11 46.0**	**-0.3**
VOY	**Vojsko**	**2.39**	**296**	ePn	**Pn**	**12 11 46.0**	**-0.3**
BRY	**Bratogost**	**2.40**	**151**	⇓iPn	**Pn**	**12 11 47.6**	**+1.2**
BRY				eSn	**Sb**	**12 12 19.0**	**-1.0**
BRY	**Bratogost**	**2.40**	**151**	⇓iPn	**Pn**	**12 11 47.6**	**+1.2**
BRY				eSn	**Sb**	**12 12 19.0**	**-1.0**
PKS6	**Bocsa**	**2.41**	**48**	eSn	**Sg**	**12 12 26.3**	**+2.0**
ARSA	**Arzberg**	**2.45**	**336**	⇓ePn	**Pn**	**12 11 47.2**	**+0.2**
	SNR=41						
ARSA				⇓iSg	**Sg**	**12 12 27.1**	**+1.5**
	comp=Z,86nm,0.4s						
ARSA	**Arzberg**	**2.45**	**336**	ePn	**Pn**	**12 11 47.3**	**+0.2**
ARSA	**Arzberg**	**2.45**	**336**	ePn	**Pn**	**12 11 47.3**	**+0.2**
ARSA				Sg	**Sg**	**12 12 27.1**	**+1.5**
	comp=Z,86nm,0.4s						
PKS7	**Kunszentmiklos**	**2.54**	**36**	ePn	**Pg**	**12 11 56.2**	**+0.6**
PKS7				eSn	**Sg**	**12 12 32.6**	**+4.1**
PKSG		**2.57**	**22**	⇑ePn	**Pn**	**12 11 48.7**	**0.0**
PKSG				eSn	**Sg**	**12 12 30.3**	**+0.8**
NKY	**Niksic**	**2.64**	**146**	⇑iPn	**Pn**	**12 11 51.4**	**+1.6**
NKY				eSn	**Sn**	**12 12 25.1**	**+3.1**
NKY	**Niksic**	**2.64**	**146**	⇑iPn	**Pn**	**12 11 51.4**	**+1.6**
NKY				eSn	**Sn**	**12 12 25.1**	**+3.1**
SOP	**Sopron**	**2.69**	**354**	⇑ePn	**Pn**	**12 11 50.7**	**+0.5**
HCY	**Herceg Novi**	**2.79**	**156**	⇑iPn	**Pn**	**12 11 53.4**	**+1.7**
HCY				eSn	**Sb**	**12 12 29.0**	**-2.3**
HCY	**Herceg Novi**	**2.79**	**156**	⇑iPn	**Pn**	**12 11 53.4**	**+1.7**
HCY				eSn	**Sb**	**12 12 29.0**	**-2.3**
MYKA	**Terra Mystica**	**2.83**	**306**	⇓Pn	**Pn**	**12 11 54.3**	**+2.0**
MYKA				⇓iSg	**Sg**	**12 12 38.9**	**+1.1**
	comp=Z,95nm,0.5s						
MYKA	**Terra Mystica**	**2.83**	**306**	Pn	**Pn**	**12 11 54.3**	**+2.0**
MYKA				Sg	**Sg**	**12 12 38.9**	**+1.1**
	comp=Z,95nm,0.5s						
BUD	**Budapest**	**2.85**	**29**	⇑ePn	**Pg**	**12 12 03.8**	**+2.3**
BUD				eSn	**Sg**	**12 12 38.7**	**+0.3**
GRUS	**Gruza**	**2.91**	**111**	ePn	**Pn**	**12 11 53.5**	**+0.2**
GRUS				eSn	**Sn**	**12 12 29.1**	**+0.7**
GRUS	**Gruza**	**2.91**	**111**	ePn	**Pn**	**12 11 53.5**	**+0.2**
GRUS				eSn	**Sn**	**12 12 29.1**	**+0.7**
BEY	**Berane**	**3.01**	**134**	⇑iPn	**Pn**	**12 11 55.9**	**+1.1**
BEY				eSn	**Sn**	**12 12 33.5**	**+2.5**
IVA	**Berane**	**3.01**	**134**	⇑iPn	**Pn**	**12 11 55.9**	**+1.1**
IVA				eSn	**Sn**	**12 12 33.5**	**+2.5**
CONA	**Conrad Observa**	**3.01**	**346**	⇓ePn	**Pn**	**12 11 55.2**	**+0.3**
	SNR=270						
CONA				⇓iSn	**Sn**	**12 12 30.6**	**-0.5**
	comp=Z,157nm,0.6s						
CONA	**Conrad Observa**	**3.01**	**346**	Pn	**Pn**	**12 11 55.2**	**+0.3**
	SNR=270						
CONA				Sn	**Sn**	**12 12 30.6**	**-0.5**
	comp=Z,157nm,0.6s						
BUM	**Brajici-Budva**	**3.05**	**152**	⇑iPn	**Pn**	**12 11 56.6**	**+1.3**
BUM				eSn	**Sn**	**12 12 34.6**	**+2.6**
PDG	**Podgorica**	**3.07**	**147**	eSn	**Sn**	**12 12 35.1**	**+2.8**
TTG	**Podgorica**	**3.07**	**147**	⇓iPn	**Pn**	**12 11 57.4**	**+1.9**
TTG				eSn	**Sn**	**12 12 35.1**	**+2.8**
ZST	**Bratislava**	**3.18**	**2**	ePN	**Pn**	**12 11 56.0**	**-1.1**
ZST				eSN	**Sn**	**12 12 32.6**	**-2.5**
PVY	**Plav**	**3.25**	**137**	⇓iPn	**Pn**	**12 11 59.2**	**+1.1**
PVY				eSn	**Sn**	**12 12 40.0**	**+3.1**
PVY	**Plav**	**3.25**	**137**	⇓iPn	**Pn**	**12 11 59.2**	**+1.1**
PVY				eSn	**Sn**	**12 12 40.0**	**+3.1**
KBA	**Koelnbreinsper**	**3.26**	**311**	⇑ePn	**Pn**	**12 11 59.1**	**+0.8**
	comp=Z,4.8nm,0.2s,SNR=16						
KBA				⇓iPg	**Pg**	**12 12 08.0**	**-1.3**
	comp=Z,27nm,0.3s						
KBA				⇑iSn	**Sn**	**12 12 36.9**	**-0.4**
	comp=Z,48nm,0.5s						
KBA				⇓iSg	**Sg**	**12 12 51.9**	**+0.3**
	comp=Z,59nm,0.5s						
KBA	**Koelnbreinsper**	**3.26**	**311**	Pn	**Pn**	**12 11 59.1**	**+0.8**
	comp=Z,4.8nm,0.2s,SNR=16						
BZS	**Buzias**	**3.33**	**78**	ePn	**Pn**	**12 12 00.7**	**+1.6**
BZS	**Buzias**	**3.33**	**78**	⇑iP	**Pb**	**12 12 07.3**	**+1.2**
BZS	**Buzias**	**3.33**	**78**	S	**Sg**	**12 12 54.3**	**+0.4**
BZS	**Buzias**	**3.33**	**78**	ePn	**Pn**	**12 12 00.7**	**+1.6**
MOA	**Molln**	**3.40**	**328**	⇓iPn	**Pn**	**12 12 01.1**	**+1.1**
	SNR=32						
MOA				⇑iSn	**Sn**	**12 12 41.3**	**+0.8**
	comp=Z,101nm,0.3s						
MOA	**Molln**	**3.40**	**328**	Pn	**Pn**	**12 12 01.1**	**+1.1**
	SNR=32						
MOA				Sn	**Sn**	**12 12 41.3**	**+0.8**
	comp=Z,101nm,0.3s						
ULC	**Ulcinj**	**3.47**	**151**	⇑iPn	**Pn**	**12 12 02.4**	**+1.3**
ULC				eSn	**Sn**	**12 12 45.0**	**+2.7**
ULC	**Ulcinj**	**3.47**	**151**	⇑iPn	**Pn**	**12 12 02.4**	**+1.3**
ULC				eSn	**Sn**	**12 12 45.0**	**+2.7**
BCI	**Bajram Curri**	**3.47**	**139**	ePN	Sn	12 12 36.0	-6.3
SELS	**Selova**	**3.49**	**120**	ePn	**Pn**	**12 12 00.8**	**-0.5**
SELS	**Selova**	**3.49**	**120**	ePn	**Pn**	**12 12 00.8**	**-0.5**
SMOL	**Smolenice**	**3.52**	**5**	ePN	**Pn**	**12 12 01.4**	**-0.3**
SMOL				eSN	**Sn**	**12 12 39.8**	**-3.5**
PSZ	**Piszkesteto**	**3.54**	**34**	⇓iP	**Pn**	**12 12 01.4**	**-0.6**
PSZ	**Piszkesteto**	**3.54**	**34**	⇑ePn	**Pn**	**12 12 00.8**	**-1.2**
PSZ				eSn	**Sn**	**12 12 41.5**	**-2.5**
PSZ	**Piszkesteto**	**3.54**	**34**	⇓iP	**Pn**	**12 12 01.4**	**-0.6**
ABTA	**Abfaltersbach**	**3.56**	**301**	⇑ePn	Pn	12 12 05.8	+3.4
	SNR=12						
ABTA				⇓iSg	**Sg**	**12 13 03.9**	**+2.7**
	comp=Z,148nm,0.9s						
ABTA	**Abfaltersbach**	**3.56**	**301**	Pn	Pn	12 12 05.8	+3.4
	SNR=12						
ABTA				Sg	**Sg**	**12 13 03.9**	**+2.7**
	comp=Z,148nm,0.9s						
PUK	**Puka**	**3.65**	**143**	ePN	**Sb**	**12 12 56.0**	**0.0**
VYHS	**Vyhne**	**3.71**	**20**	ePN	**Pn**	**12 12 04.5**	**+0.2**
VYHS				eSN	**Sn**	**12 12 47.0**	**-1.1**
VYHS				eSG	**Sg**	**12 13 09.7**	**+3.8**
BOLS	**Boljevac**	**3.76**	**107**	⇑iPn	**Pn**	**12 12 03.4**	**-1.6**
BOLS	**Boljevac**	**3.76**	**107**	⇑iPn	**Pn**	**12 12 03.4**	**-1.6**
RJOB	**Jochberg**	**3.97**	**315**	ePn	**Pn**	**12 12 09.4**	**+1.4**
BARS	**Barje**	**4.13**	**120**	⇑iPn	**Pn**	**12 12 10.4**	**+0.2**
BARS				eSn	**Sn**	**12 12 55.6**	**-3.0**
BARS	**Barje**	**4.13**	**120**	⇑iPn	**Pn**	**12 12 10.4**	**+0.2**
BARS				eSn	**Sn**	**12 12 55.6**	**-3.0**
PHP	**Peshkopia**	**4.18**	**142**	ePN	**Pn**	**12 12 13.8**	**+2.9**
PHP	**Peshkopia**	**4.18**	**142**	P	**Pn**	**12 12 13.2**	**+2.3**
PHP	**Peshkopia**	**4.18**	**142**	P	**Pn**	**12 12 13.2**	**+2.3**
PHP	**Peshkopia**	**4.18**	**142**	ePn	**Pn**	**12 12 13.8**	**+2.9**
PE1	**Pezze di Greco**	**4.22**	**175**	ePn	**Pn**	**12 12 11.3**	**0.0**
VRAC	**Vranov**	**4.30**	**357**	⇑iP	**Pn**	**12 12 12.2**	**-0.3**
VRAC	**Vranov**	**4.30**	**357**	S	**Sn**	**12 13 00.6**	**-2.2**
VRAC	**Vranov**	**4.30**	**357**	Pn	**Pn**	**12 12 12.5**	**0.0**
	comp=Z,16nm,0.3s,baz=191,slow=14,SNR=39						
VRAC				Sn	**Sn**	**12 13 02.2**	**-0.6**
	comp=Z,5.2nm,0.3s,baz=125,slow=16,SNR=5.5						
VRAC	**Vranov**	**4.30**	**357**	eSn	**Sn**	**12 13 00.2**	**-2.6**
VRAC				S	Sb	12 13 00.6	-14
WTTA	**Wattenberg**	**4.34**	**303**	⇓iPn	**Pn**	**12 12 15.1**	**+2.0**
	comp=Z,3.3nm,0.2s						
WTTA				i Sn	**Sn**	**12 13 04.5**	**+0.6**
	comp=Z,48nm,0.5s						
WTTA	**Wattenberg**	**4.34**	**303**	Pn	**Pn**	**12 12 15.1**	**+2.0**
	comp=Z,3.3nm,0.2s						
WTTA				Sn	**Sn**	**12 13 04.5**	**+0.6**
	comp=Z,48nm,0.5s						
DRGR		**4.38**	**64**	⇑iP	**Pn**	**12 12 14.6**	**+0.9**
DRGR		**4.38**	**64**	S	**Sg**	**12 13 23.2**	**-4.4**
DRGR		**4.38**	**64**	⇑iP	**Pn**	**12 12 14.6**	**+0.9**
TREC	**Trest**	**4.40**	**347**	ePN	**Pn**	**12 12 15.4**	**+1.6**
TREC				eSN	**Sn**	**12 13 04.7**	**-0.5**
WATA	**Walderalm**	**4.41**	**304**	⇑iPn	**Pn**	**12 12 15.8**	**+1.8**
WATA	**Walderalm**	**4.41**	**304**	Pn	**Pn**	**12 12 15.8**	**+1.8**
ZAPS	**Zavoj**	**4.43**	**111**	⇑iPn	**Pn**	**12 12 15.0**	**+0.7**
GEC2	**GERESS Array S**	**4.44**	**331**	ePn	**Pn**	**12 12 15.2**	**+0.8**
GEC2				eSn	**Sn**	**12 13 05.9**	**-0.3**
GERES	**GERESS Array B**	**4.44**	**331**	Pn	**Pn**	**12 12 14.9**	**+0.5**
	comp=Z,14nm,0.3s,baz=151,slow=14,SNR=101						
GERES				Sn	**Sn**	**12 13 05.3**	**-0.9**
	comp=Z,11nm,0.3s,baz=148,slow=25,SNR=9.1						
GERES				LR	LR	12 14 13.3	
	comp=Z,190nm,19.5s,baz=70,slow=43						
MOTA	**Moosalm**	**4.69**	**302**	⇓iPn	**Pn**	**12 12 20.3**	**+2.3**
MOTA	**Moosalm**	**4.69**	**302**	Pn	**Pn**	**12 12 20.3**	**+2.3**
KHC	**Kasperske Hory**	**4.72**	**332**	ePN	**Pn**	**12 12 19.0**	**+0.7**
KHC				eSN	**Sn**	**12 13 12.0**	**-1.2**
KHC				ex	x	12 13 25.0	
KHC	**Kasperske Hory**	**4.72**	**332**	Sn	**Sn**	**12 13 12.0**	**-1.2**
MAIM	**Mastiano**	**4.77**	**259**	P	**Pn**	**12 12 20.0**	**+1.2**
MORC	**Moravsky Berou**	**4.78**	**4**	⇓iP	**Pn**	**12 12 20.2**	**+1.1**
MORC	**Moravsky Berou**	**4.78**	**4**	ePn	**Pn**	**12 12 19.6**	**+0.5**
MORC	**Moravsky Berou**	**4.78**	**4**	⇓iP	**Pn**	**12 12 20.2**	**+1.1**
MORC				eSn	**Sn**	**12 13 12.5**	**-2.1**
MORC				S	Sb	12 13 14.8	-14
FETA	**Feichten**	**4.79**	**297**	⇑iPn	**Pn**	**12 12 22.0**	**+2.7**
	SNR=5.5						
FETA				⇑Sg	**Sg**	**12 13 39.4**	**-1.1**
	comp=Z,50nm,0.7s						
FETA	**Feichten**	**4.79**	**297**	Pn	**Pn**	**12 12 22.0**	**+2.7**
	SNR=5.5						
FETA				Sg	**Sg**	**12 13 39.4**	**-1.1**
	comp=Z,50nm,0.7s						
OKC	**Ostrava-Krasne**	**4.89**	**9**	ePN	**Pn**	**12 12 21.2**	**+0.7**
OKC				eSN	**Sn**	**12 13 16.2**	**-1.0**
OKC	**Ostrava-Krasne**	**4.89**	**9**	Pn	**Pn**	**12 12 21.2**	**+0.7**
OKC				Sn	**Sn**	**12 13 16.2**	**-1.0**
TRPA	**Tarpa**	**4.95**	**49**	⇑iP	**Pb**	**12 12 35.0**	**+1.4**
CRVS	**Cervenica-Dubn**	**4.96**	**37**	ePN	**Pn**	**12 12 22.0**	**+0.5**
CRVS				ePG	Pg	12 12 45.1	+3.3
CRVS				eSG	Sg	12 13 56.5	+11
VTS	**Vitosha**	**5.12**	**116**	P	**Pn**	**12 12 24.1**	**+0.2**
VTS	**Vitosha**	**5.12**	**116**	⇑iP	**Pn**	**12 12 25.3**	**+1.4**
VTS	**Vitosha**	**5.12**	**116**	i P	**Pn**	**12 12 25.1**	**+1.2**
VTS	**Vitosha**	**5.12**	**116**	P	**Pn**	**12 12 24.1**	**+0.2**
VTS				S	**Sn**	**12 13 19.7**	**-3.5**
MPEP	**Malo Peshtene**	**5.14**	**106**	i P	**Pn**	**12 12 24.6**	**+0.6**
PRU	**Pruhonice**	**5.24**	**343**	ePN	**Pn**	**12 12 26.9**	**+1.6**
PRU				eSN	**Sn**	**12 13 25.0**	**-0.8**
DAVOX	**Davos/Dischmat**	**5.25**	**292**	Pn	**Pn**	**12 12 28.4**	**+2.7**
	comp=Z,1.0nm,0.3s,baz=120,slow=12,SNR=4.9						
DAVOX				Pg	**Pg**	**12 12 45.9**	**-1.6**
	comp=Z,4.8nm,0.3s,baz=66,slow=20,SNR=8.8						
DAVOX				Sn	**Sn**	**12 13 28.3**	**+1.9**
	comp=Z,3.1nm,0.3s,baz=318,slow=19,SNR=6.6						
DAVOX				Lg	Lg	12 13 57.8	
	comp=Z,2.8nm,0.3s,baz=319,slow=22,SNR=3.9						
FNA	**Florina**	**5.32**	**141**	eP	**Pn**	**12 12 28.0**	**+1.4**
KOLS	**Kolonicke sedl**	**5.34**	**41**	e	Pb	12 12 34.5	-5.8

KOLS	Kolonicke sedl	5.34	41	ePG	Pg	12 12 53.1	+4.0
KOLS				eSG	Sg	12 14 15.2	+17
DPC	Dobruska-Polom	5.36	356	ePN	Pn	12 12 27.5	+0.5
DPC				eSN	Sn	12 13 27.6	-1.2
DPC	Dobruska-Polom	5.36	356	Sn	Sn	12 13 27.6	-1.2
DAVA	Damuels	5.42	297	⇓iPn	Pn	12 12 31.2	+3.2
DAVA	Damuels	5.42	297	Pn	Pn	12 12 31.2	+3.2
KKB	Krupnik	5.45	123	i P	Pn	12 12 29.3	+1.0
KKB	Krupnik	5.45	123	i P	Pn	12 12 29.3	+1.0
NEST	Nestorio	5.49	145	P	Pn	12 12 30.4	+1.5
NEST	Nestorio	5.49	145	P	Pn	12 12 30.4	+1.5
VAY	Valandovo	5.51	130	ePn	Pn	12 12 30.2	+1.1
UPC	Upice	5.53	354	ePN	Pn	12 12 29.9	+0.5
UPC				eSN	Sn	12 13 31.6	-1.5
GRG	Griva	5.68	134	P	Pn	12 12 32.1	+0.6
GRG	Griva	5.68	134	eP	Pn	12 12 32.0	+0.6
GRG	Griva	5.68	134	P	Pn	12 12 32.1	+0.6
KEK	Kerkira	5.70	157	P	Pn	12 12 31.6	0.0
KEK	Kerkira	5.70	157	P	Pn	12 12 31.6	0.0
PVCC	Panska Ves	5.75	345	eSN	Sn	12 13 36.9	-1.5
PVCC	Panska Ves	5.75	345	Sn	Sn	12 13 36.9	-1.5
ROTZ	Rotzenmuhle	5.75	327	ePn	Pn	12 12 32.4	+0.1
ROTZ				eSn	Sn	12 13 36.5	-1.9
KSP	Ksiaz	5.85	356	eSn	Sn	12 13 40.3	-0.5
KZN	Kozani	5.89	141	eP	Pn	12 12 35.9	+1.6
MMB	Musomiste	6.00	122	i P	Pn	12 12 38.0	+2.1
MMB	Musomiste	6.00	122	i P	Pn	12 12 38.0	+2.1
PCP	Piancastagn	6.02	268	P	Pn	12 12 36.7	+0.6
NKC	Novy Kostel	6.05	331	ePN	Pn	12 12 37.1	+0.6
GRF	Grafenberg Arr	6.09	322	eSn	Sn	12 13 44.7	-2.2
WERN	Wernitzgruen	6.12	331	ePn	Pn	12 12 38.1	+0.7
GUNZ	Gunzen	6.20	331	ePn	Pn	12 12 39.0	+0.5
BRG	Berggiesshubel	6.20	342	PN	Pn	12 12 38.8	+0.2
BRG				i		12 14 02.1	
BRG	Berggiesshubel	6.20	342	SG	Sg	12 14 26.8	+0.9
	comp=Z,28nm,0.8s						
SRS	Serrai	6.22	126	P	Pn	12 12 40.0	+1.2
SRS	Serrai	6.22	126	P	Pn	12 12 40.0	+1.2
NVR	Nevrokopi	6.23	124	eP	Pn	12 12 39.1	+0.1
PGF	Pioggiola	6.27	250	ePn	Pn	12 12 39.5	-0.1
PGF				eSn	Sn	12 13 44.3	-7.2
	comp=Z,11nm,0.6s						
PGF	Pioggiola	6.27	250	ePn	Pn	12 12 39.5	-0.1
BURAR	Bucovina Array	6.28	63	⇓iP	Pb	12 12 54.8	-1.5
WERD	Werda	6.28	332	ePn	Pn	12 12 40.6	+1.0
SOH	Sokhos	6.29	130	P	Pn	12 12 41.4	+1.6
SOH	Sokhos	6.29	130	eP	Pn	12 12 41.3	+1.5
SOH	Sokhos	6.29	130	P	Pn	12 12 41.4	+1.6
HORT	Hortiatis	6.31	132	P	Pn	12 12 41.4	+1.3
HORT	Hortiatis	6.31	132	P	Pn	12 12 41.4	+1.3
MLR	Muntele Rosu	6.36	83	⇓iP	Pb	12 12 50.7	-7.0
MLR	Muntele Rosu	6.36	83	Pn	Pb	12 12 50.4	-7.2
	comp=Z,0.1nm,0.3s,baz=297,slow=14,SNR=3.9						
MLR				Sn	Sn	12 13 45.7	-7.8
	comp=Z,0.1nm,0.3s,baz=152,slow=9.3,SNR=3.4						
MLR				Lg	Lg	12 14 37.5	
	comp=Z,0.1nm,0.3s,baz=167,slow=19,SNR=5.1						
PLN	Plauen	6.36	331	ePn	Pn	12 12 41.7	+1.0
LIT	Litokhoron	6.38	138	P	Pn	12 12 39.8	-1.2
LIT	Litokhoron	6.38	138	eP	Pn	12 12 39.8	-1.2
LIT	Litokhoron	6.38	138	P	Pn	12 12 39.8	-1.2
RZN	Rozhen	6.55	118	i P	Pn	12 12 43.8	+0.2
RZN	Rozhen	6.55	118	i P	Pn	12 12 43.8	+0.2
THL	Klokotos Trika	6.61	144	eP	Pn	12 12 44.8	+0.7
PLG	Polygyros	6.65	132	P	Pn	12 12 45.5	+0.7
PLG	Polygyros	6.65	132	eP	Pn	12 12 46.0	+1.2
PLG	Polygyros	6.65	132	P	Pn	12 12 45.5	+0.7
SZH	Strazhica	6.68	102	i P	Pn	12 12 44.8	-0.4
SZH	Strazhica	6.68	102	i P	Pn	12 12 44.8	-0.4
MOX	Moxa	6.69	329	ePn	Pn	12 12 46.2	+1.0
LKD2	Lefkada island	6.80	155	P	Pn	12 12 46.0	-0.8
LKD2	Lefkada island	6.80	155	eP	Pn	12 12 46.0	-0.8
LKD2	Lefkada island	6.80	155	P	Pn	12 12 46.0	-0.8
FELD	Feldberg im Sc	6.82	298	P	Pn	12 12 47.1	-0.1
FELD	Feldberg im Sc	6.82	298	P	Pn	12 12 47.1	-0.1
CLL	Collm	6.83	339	e(Pn)	Pn	12 12 49.0	+1.8
CLL				eSn	Sn	12 14 00.0	-5.0
CLL				e		12 14 33.0	
CLL				eSg	Sg	12 14 43.0	-3.0
VRI	Vrincioaia	6.92	79	⇑iP	Pb	12 13 06.2	-1.0
SBF	Sospel	6.92	264	ePn	Pn	12 12 47.6	-0.9
SBF				eSn	Sn	12 13 59.7	-7.7
	comp=Z,49nm,0.7s						
SBF	Sospel	6.92	264	ePn	Pn	12 12 47.6	-0.9
BBS	Basel-Blauen	7.00	294	P	Pn	12 12 49.7	+0.1
PAIG	Paliouri	7.10	133	eP	Pn	12 12 52.8	+1.9
AGG	Agios Georgios	7.20	144	P	Pn	12 12 52.4	+0.2
AGG	Agios Georgios	7.20	144	eP	Pn	12 12 52.2	0.0
AGG	Agios Georgios	7.20	144	P	Pn	12 12 52.4	+0.2
LPG	La Plagne	7.23	277	eP	Pn	12 12 54.9	+2.0
LPG	La Plagne	7.23	277	eP	Pn	12 12 54.9	+2.0
LPL	La Plagne	7.24	278	eP	Pn	12 12 54.6	+1.6
LPL				eSn	Sn	12 14 07.7	-7.8
	comp=Z,17nm,0.4s						
LPL	La Plagne	7.24	278	eP	Pn	12 12 54.6	+1.6
MBDF	Montbardon	7.25	271	ePn	Pn	12 12 51.1	-2.0
MBDF				eSn	Sn	12 14 07.1	-8.5
	comp=Z,25nm,0.7s						
MBDF	Montbardon	7.25	271	ePn	Pn	12 12 51.1	-2.0
MOF	Molkenrain	7.36	296	P	Pn	12 12 54.7	+0.1
MOF	Molkenrain	7.36	296	P	Pn	12 12 54.7	+0.1
LANF	Langenberg	7.41	306	P	Pn	12 12 55.3	+0.1
LANF	Langenberg	7.41	306	P	Pn	12 12 55.3	+0.1
LOMF	Lomont	7.42	292	P	Pn	12 12 55.3	0.0
LOMF	Lomont	7.42	292	P	Pn	12 12 55.3	0.0
KFL	Anninata	7.47	156	P	Pn	12 12 55.7	-0.3
KFL	Anninata	7.47	156	P	Pn	12 12 55.7	-0.3
CDF	Champ du Feu	7.48	300	ePn	Pn	12 12 54.5	-1.6
CDF	Champ du Feu	7.48	300	ePn	Pn	12 12 54.5	-1.6
HINF	Hinteralfeld	7.53	295	ePn	Pn	12 12 54.0	-2.8
HINF				eSn	Sn	12 14 13.4	-8.9
	comp=Z,17nm,0.5s						
EFP	Efpalio	7.54	149	eP	Pn	12 12 54.1	-2.9
FRF	La Foret Royal	7.55	263	ePn	Pn	12 12 55.7	-1.3
FRF				eSn	Sn	12 14 14.4	-8.3
	comp=Z,13nm,0.4s						
FRF	La Foret Royal	7.55	263	ePn	Pn	12 12 55.7	-1.3
TRIZ	Trizonia	7.66	148	eP	Pn	12 12 59.1	+0.5
KALE	Kalithea	7.66	148	eP	Pn	12 12 59.4	+0.7
LMR	La Mourre	7.71	261	ePn	Pn	12 12 57.8	-1.4
LMR				eSn	Sn	12 14 18.3	-8.2
	comp=Z,11nm,0.5s						
LMR	La Mourre	7.71	261	ePn	Pn	12 12 57.8	-1.4
LAKA	Lakka	7.74	149	eP	Pn	12 12 59.5	-0.2
TNS	Taunus Mts	7.76	315	ePn	Pn	12 13 01.0	+1.0
CABF	La Chapelle	7.77	286	ePn	Pn	12 12 56.7	-3.5
CABF				eSn	Sn	12 14 19.9	-8.4
	comp=Z,13nm,0.5s						
LKR	Lokris	7.79	143	eP	Pn	12 12 58.4	-1.9
ALN	Alexandroupoli	7.83	119	eP	Pn	12 13 00.6	-0.2
ORIF	Oris-en-Rattie	7.87	273	eP	Pn	12 13 02.5	+1.0
ORIF				eSn	Sn	12 14 23.1	-7.6
	comp=Z,23nm,0.5s						
ORIF	Oris-en-Rattie	7.87	273	eP	Pn	12 13 02.5	+1.0
HAU	Haudompre	7.91	296	ePn	Pn	12 12 59.2	-2.9
HAU				eSn	Sn	12 14 22.8	-8.9
	comp=Z,19nm,0.6s						
GUR	Goura	8.14	148	eP	Pn	12 13 04.1	-1.2
SMRF	Simiane la Rot	8.21	267	ePn	Pn	12 13 04.8	-1.4
SMRF	Simiane la Rot	8.21	267	ePn	Pn	12 13 04.8	-1.4
LTK	Loutraki	8.31	145	eP	Pn	12 13 05.1	-2.4
VIVF	Saint-Julien-l	8.73	273	ePn	Pn	12 13 11.5	-1.7
VIVF				eSn	Sn	12 14 42.8	-8.9
	comp=Z,12nm,0.7s						
VIVF	Saint-Julien-l	8.73	273	ePn	Pn	12 13 11.5	-1.7
DID	Didima	8.86	146	eP	Pn	12 13 11.6	-3.5
LASF	Ste Croix	9.41	269	ePn	Pn	12 13 19.8	-2.8
AKASG	Malin Array Be	10.00	51	Pn	Pn	12 13 33.2	+2.6
	comp=Z,0.5nm,0.3s,baz=234,slow=14,SNR=2.9						
ESDC	Sonseca Array	16.36	258	Pn	P	12 14 59.3	-0.2
	comp=Z,0.4nm,0.3s,baz=60,slow=12,SNR=7.9						
NOA	NORSAR Array B	16.41	350	Pn	P	12 15 00.8	+0.8
	comp=Z,0.2nm,0.3s,baz=163,slow=8.8,SNR=3.4						
FINES	FINESS Array B	17.31	15	P	Pn	12 15 09.2	+0.7
	comp=Z,0.2nm,0.3s,baz=188,slow=12,SNR=5.7						
ASF	Jabal al Asfar	20.11	123	P	Pn	12 15 44.1	+1.3
	comp=Z,1.6nm,0.5s,baz=333,slow=6.8,SNR=3.5						
TORD	Torodi Ar. Bea	34.33	207	P	P	12 17 53.1	-0.6
	comp=Z,0.4nm,0.5s,baz=12,slow=9.4,SNR=6.2						
DBIC	Dimbokro	42.66	213	P	P	12 19 03.6	-0.2
	comp=Z,2.2nm,0.6s,baz=10,slow=11,SNR=3.5						
YKA	Yellowknife Ar	66.06	338	P	P	12 21 54.3	+0.8
	comp=Z,0.2nm,0.7s,baz=31,slow=6.5,SNR=4.7						
TXAR	Lajitas Array	88.40	311	P	P	12 24 00.4	+1.0
	comp=Z,0.5nm,0.9s,baz=87,slow=5.1,SNR=5.0						

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*IDC **07** 12:21:05.7±0.7, 0°.01S×125°.96E, h0km, mb4.2/9, mb1 4.4/11, mb1mx4.1/25, mbtmp4.2/11, ML3.7/2, Error ellipse: s-maj=33.9km s-min=14.7km az=76.0*
*NEIC **07** 12:21:07.2±0.3, 0°.01N×126°.02E, h10km, mb4.6/2, Error ellipse: s-maj=13.2km s-min=6.2km az=77.0*
*ISCJB **07** 12:21:10.3±0.3, 0°.02S±0°.04×125°.87E±0°.04, h44km, mb4.3/11, Error ellipse: s-maj=6.4km s-min=5.7km az=153.0*
*DJA **07** 12:21:11.2±0.3, 0°N±4°×12°6E±°, h23km, M4.2/13, mb4.3/4, mB4.7/1, MLv4.1/13, Mw(mB)3.9/1*
*AUST **07** 12:21:12.3±2.9, 0°.07S×126°.06E, h50km, Error ellipse: s-maj=2.8km s-min=1.2km az=43.0*
ISC 07 12:21:12.0±0.5, **0°.00N**±0°.06×**125°.87E**±0°.06, **h44**km, **n52**, σ**0s.96**/53, **mb4.2**/11, **1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.68	63	P	Pn	12 21 38.5	-0.4
LBMI	Labuha	1.75	111	P	Pn	12 21 39.8	-0.1
MNI	Manado	1.76	324	P	Pn	12 21 38.6	-1.5
KMSI	Cibinong	1.97	287	P	Pn	12 21 42.0	-0.9
GAMI	Galela, Maluku	2.65	46	P	Pn	12 21 52.3	+0.1
LUWI	Luwuk	3.27	251	P	Pn	12 22 01.0	+0.3
MRSI	Marisa	3.96	277	P	Pn	12 22 10.0	-0.2
AAI	Ambon	4.34	148	P	Pn	12 22 17.6	+2.1
SWI	Sorong	5.46	99	P	Pn	12 22 31.9	+1.1
	32nm,0.9s,0.1nm						
BBSI	Bau Bau	6.37	211	P	Pn	12 22 45.4	+2.0
	44nm,1.0s,0.1nm						
SPSI	Sidrap Palu	7.26	237	P	Pn	12 22 57.1	+1.6
	18nm,0.9s,446nm0.1nm						
CTBH	Cotabato--PC H	7.35	347	⇑iP	Pn	12 22 59.4	+2.6
BKSI	Bulukumba	7.80	227	P	Pn	12 23 04.2	+1.2
KAPI	Kappang	7.88	231	Pn	Pn	12 23 04.3	+0.2
KAPI	Kappang	7.88	231	Pn	Pn	12 23 04.3	+0.2
	1.0nm,0.3s,baz=66,slow=9.4,SNR=6.3						
MTN	Manton Dam	13.79	158	P	Pn	12 24 24.1	-0.9
	baz=14,SNR=3.7						
KSM	Kuching	15.63	275	P	P	12 24 53.4	+0.5
	baz=16,SNR=5.1						
FITZ	Fitzroy Crossi	17.99	181	P	Pn	12 25 18.1	-0.8
FITZ	Fitzroy Crossi	17.99	181	P	Pn	12 25 18.1	-0.8
	0.2nm,0.3s,baz=335,slow=5.9,SNR=6.4						
FITZ	Fitzroy Crossi	17.99	181	P	Pn	12 25 18.2	-0.7
	baz=18,SNR=5.0						
WRAB	Tennant Creek	21.48	158	eP	P	12 25 55.4	-1.7
	25nm,1.1s						
WRA	Warramunga Arr	21.49	158	P	P	12 25 55.5	-1.7
WRA	Warramunga Arr	21.49	158	P	P	12 25 55.5	-1.7
	12nm,1.0s,baz=337,slow=11,SNR=73						
XMIS	Christmas Isla	22.64	242	P	P	12 26 25.7	+16
	baz=23,SNR=3.5						
QIS	Mount Isa	24.46	147	P	P	12 26 26.5	-0.4
	baz=24,SNR=9.2						
AS31	Alice Springs	24.79	162	eP	P	12 26 29.2	-0.8
ASAR	Alice Springs	24.79	162	P	P	12 26 29.2	-0.8
ASAR				PcP	PcP	12 30 05.9	+0.1
ASAR	Alice Springs	24.79	162	P	P	12 26 29.2	-0.8
	2.3nm,0.4s,baz=350,slow=13,SNR=94						
ASAR				PcP	PcP	12 30 05.9	+0.1
	0.5nm,0.8s,baz=344,slow=1.9,SNR=4.1						
BBOO	Buckleboo	34.02	165	P	P	12 27 51.4	-0.5
	baz=34,SNR=7.8						
STKA	Stephens Creek	35.03	156	P	P	12 27 59.5	-1.1
STKA	Stephens Creek	35.03	156	P	P	12 27 59.5	-1.1
	5.8nm,0.8s,baz=330,slow=9.7,SNR=9.2						
STKA	Stephens Creek	35.03	156	P	P	12 28 00.0	-0.5
	baz=35,SNR=5.9						
KSAR	Wonju Array Be	37.30	3	P	P	12 28 20.2	+0.3
KSRS	Korea Array	37.31	3	P	P	12 28 20.2	+0.2
	1.8nm,0.7s,baz=178,slow=10.0,SNR=12						
ARPS	Mount Arapiles	39.47	160	P	P	12 28 38.8	+0.6
	baz=40,SNR=7.2						
PETK	Petropavlovsk-	59.19	22	P	P	12 31 08.6	+0.2
PETK	Petropavlovsk-	59.19	22	P	P	12 31 08.6	+0.2
	4.2nm,0.9s,baz=196,slow=3.7,SNR=7.4						
MKAR	Makanchi Array	60.15	327	P	P	12 31 15.9	+0.8
MKAR	Makanchi Array	60.15	327	P	P	12 31 15.9	+0.8
	1.6nm,0.6s,baz=123,slow=8.8,SNR=13						
ZAA0	Zalesovo Array	63.52	334	eP	P	12 31 38.5	+0.8
ZALV	Zalesovo Beam	63.52	334	P	P	12 31 38.2	+0.5
ZALV	Zalesovo Beam	63.52	334	P	P	12 31 38.2	+0.5
	1.1nm,0.5s,baz=131,slow=6.8,SNR=5.2						
KURK	Kurchatov	64.43	329	eP	P	12 31 43.3	-0.4
	4.0nm,0.7s						
ABKAR	Akbulak array	74.50	322	eP	P	12 32 45.9	0.0
AKTO	Aktyubinsk	76.05	322	P	P	12 32 54.0	-0.8
AKTO	Aktyubinsk	76.05	322	P	P	12 32 54.0	-0.8
	2.5nm,0.8s,baz=97,slow=6.5,SNR=9.4						
KBZ	Khabaz	84.91	314	P	P	12 33 43.4	+0.9
KBZ	Khabaz	84.91	314	P	P	12 33 43.4	+0.9
	1.0nm,0.5s,baz=122,slow=4.6,SNR=3.9						
TORD	Torodi Ar. Bea	123.17	286	PKP	PKPdf	12 40 05.2	+0.2
TORD	Torodi Ar. Bea	123.17	286	PKP	PKPdf	12 40 05.1	+0.2
	0.4nm,0.7s,baz=64,slow=2.9,SNR=3.3						
TXAR	Lajitas Array	124.52	54	PKP	PKPdf	12 40 07.7	+0.3
TXAR	Lajitas Array	124.52	54	PKP	PKPdf	12 40 07.7	+0.3
	0.7nm,0.9s,baz=180,slow=1.3,SNR=6.4						

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*TAP **07** 12:30:42.5, 22°.81N×121°.99E, h41km, ML3.1, D*
*JMA **07** 12:30:42.7±0.3, 22°.93N×122°.13E, h87km*
ISC 07 12:30:38.5±1.3, **22°.82N**±0°.03×**122°.11E**±0°.03, **h5**km±10km, **n33**, σ**1s.12**/59, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.74	292	⇑iP	Pb	12 30 54.2	+0.3
	baz=297						
CHKT				i S	Sg	12 31 02.8	+0.4
	baz=297						
TWF1	Yuli	0.92	306	i P	Pg	12 30 57.1	+0.9
	baz=311						
TWF1				eS	Sg	12 31 08.3	+0.2
	baz=311						
LAY	Lan-yu	0.93	214	P	Pg	12 30 56.7	+0.4
	baz=207						
LAY				eS	Sg	12 31 07.7	-0.8
	baz=207						
EHY	Hungye	1.00	314	P	Pg	12 30 58.3	+0.6
	baz=316						
EHY				eS	Sg	12 31 09.8	-0.9
	baz=316						
ELDTW	Lidau	1.07	290	i P	Pg	12 30 59.3	+0.1
	baz=293						
ELDTW				eS	Sg	12 31 12.0	-1.1
	baz=293						
ECL	Taimali	1.09	259	i P	Pg	12 30 59.3	-0.1
	baz=268						
ECL				S	Sg	12 31 11.7	-1.9
	baz=268						
ESL	Shilin	1.17	328	eP	Pg	12 31 01.3	+0.3
	baz=341						
ESL				eS	Sg	12 31 14.7	-1.5
	baz=341						
EAST	Anshuo	1.25	250	eP	Pg	12 31 01.8	-0.5
	baz=258						
EAST				eS	Sg	12 31 16.1	-2.4
	baz=258						
TWD	Chiawan	1.34	339	eP	Pn	12 31 03.9	-0.1
	baz=352						
TWD				eS	Sg	12 31 19.5	-2.2
	baz=352						
SSD	Sandimen	1.37	267	P	Pn	12 31 04.2	0.0
	baz=262						
ALS	Alishan	1.39	300	i P	Pn	12 31 05.4	+0.6
	baz=298						
ALS				eS	Sb	12 31 22.0	-1.3
	baz=298						
WTP	Ta-pu	1.45	288	P	Pn	12 31 06.4	+1.0
	baz=289						
WTP				eS	Sb	12 31 24.8	+0.1
	baz=289						
SCZT	Fangliau	1.45	253	eP	Pg	12 31 06.8	+0.6
	baz=250						
CHN4	Tsaushan	1.50	291	P	Pb	12 31 07.6	+0.7
	baz=293						
CHN4				eS	Sn	12 31 27.0	+1.0
	baz=293						
CHN1	Nanshi	1.50	284	P	Pb	12 31 07.5	+0.6
	baz=285						
CHN1				eS	Sn	12 31 24.6	-1.6
	baz=285						
CHN5	Tsauling	1.53	301	P	Pb	12 31 08.0	+0.6
	baz=294						
CHN5				eS	Sn	12 31 27.9	+0.9
	baz=294						
WHF	Hehuan Shan	1.54	330	eP	Pn	12 31 07.1	+0.1
	baz=334						
WHF				eS	Sn	12 31 25.1	-2.4
	baz=334						
SMLT	Sun Moon Lake	1.54	314	P	Pn	12 31 07.6	+0.9
	baz=324						
SMLT				eS	Sn	12 31 27.3	0.0
	baz=324						
TWM1	Shoushan	1.56	271	eP	Pg	12 31 10.9	+2.5
	baz=268						
TWK	Hsinying	1.56	287	eP	Pb	12 31 08.4	+0.5
	baz=288						
TWK				eS	Sn	12 31 28.0	+0.3
	baz=288						
TYC	Yuchr	1.58	313	P	Pn	12 31 08.2	+0.9
	baz=323						
TYC				eS	Sn	12 31 27.9	-0.2
	baz=323						
ENA	Nanau	1.64	348	eP	Pn	12 31 09.2	+1.2
	baz=352						
TWT	Tachien	1.67	329	eP	Pb	12 31 10.3	+0.5
	baz=339						
NNS	Nan Shan	1.75	337	eS	Sn	12 31 30.6	-1.9
	baz=341						
YOJ	Yonaguni jima	1.83	27	P	Pn	12 31 11.6	+0.9
YOJ				eS	Sn	12 31 33.9	-0.5
ENTT	Nioudou	1.88	345	P	Pn	12 31 12.9	+1.4
	baz=349						
ENTT				eS	Sn	12 31 34.6	-1.0
	baz=349						
TWQ1	Liyutan	1.96	321	eP	Pb	12 31 14.9	+0.2
	baz=335						
TWQ1				eS	Sn	12 31 38.3	+0.8
	baz=335						
NSK	Sanguang	1.98	340	eP	Pn	12 31 14.1	+1.4
	baz=343						
NSK				eS	Sn	12 31 36.9	-1.1
	baz=343						
HATJ	Hateruma jima	1.99	51	eS	Sn	12 31 37.3	-0.8
IRIF	Iriomote-Funau	2.12	44	P	Pn	12 31 15.8	+1.2
IRIF				eS	Sn	12 31 40.8	-0.6
JKRS	Kuro-shima	2.24	51	P	Pn	12 31 17.8	+1.5
JKRS				eS	Sn	12 31 43.9	-0.6
JIJ	Ishigaki jima	2.42	50	P	Pn	12 31 19.5	+0.8
JIJ				eS	Sn	12 31 46.9	-1.9
JTJ	Tarama	2.99	52	P	Pn	12 31 28.0	+1.4
JTJ				eS	Sn	12 32 02.0	-0.9

IDC 07 12:55:53.5±1.6, **17°.94S**×**179°.39W**, **h613**km±19km, **mb3.3**/7, **mb1 3.6**/9, **mb1mx3.3**/20, **mbtmp3.4**/9, **Error ellipse: s-maj=23.7km s-min=15.6km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.35	62	P	P	12 57 55.5	-1.4
	7.5nm,0.3s,baz=101,slow=3.9,SNR=16						
DZM	Mont Dzumac	13.93	251	P	P	12 58 49.6	-1.8
	0.7nm,0.3s,baz=97,slow=13,SNR=5.6						
STKA	Stephens Creek	37.79	241	P	P	13 02 20.6	+1.1
	14nm,0.5s,baz=86,slow=9.5,SNR=46						
WRA	Warramunga Arr	43.70	260	P	P	13 03 05.9	-0.5
	6.4nm,0.5s,baz=94,slow=7.1,SNR=95						
WRA				S	S	13 08 49.8	-3.9
	0.4nm,0.8s,baz=106,slow=14,SNR=2.7						
ASAR	Alice Springs	43.88	254	P	P	13 03 08.1	+0.3
	72nm,0.6s,baz=88,slow=8.3,SNR=500						
ASAR				ScP	ScP	13 07 34.9	+0.7
	0.9nm,0.8s,baz=88,slow=4.7,SNR=4.7						
ASAR				S	S	13 08 54.5	-1.6
	2.4nm,1.0s,baz=86,slow=17,SNR=9.7						
VNDA	Vanda	60.33	185	P	P	13 05 04.0	0.0
	0.7nm,0.8s,baz=352,slow=8.7,SNR=6.2						
MJAR	Matsushiro Arr	67.38	324	P	P	13 05 49.8	+0.5
	1.1nm,0.5s,baz=101,slow=16,SNR=4.3						
MAW	Mawson	83.51	200	P	P	13 07 17.6	-0.2
	3.0nm,0.6s,baz=157,slow=9.4,SNR=11						
ILAR	Eielson Array	86.13	13	P	P	13 07 30.1	-0.4
	0.3nm,0.6s,baz=229,slow=4.9,SNR=4.2						
CMAR	Chiang Mai Arr	88.01	290	P	P	13 07 41.5	+1.3
	0.3nm,0.3s,baz=77,slow=3.9,SNR=4.5						
ARCES	ARCESS Array B	126.18	349	PKP	PKPdf	13 13 45.4	-1.4
	3.7nm,0.9s,baz=0.0,slow=7.3,SNR=4.2						
BRTR	Keskin Array B	144.14	314	PKP	PKPbc	13 14 20.4	-0.4
	1.1nm,0.8s,baz=117,slow=4.3,SNR=5.8						

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*IDC **07** 13:11:10.5±1.0, 0°.05N×125°.97E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/23, mbtmp3.8/6, Error ellipse: s-maj=75.6km s-min=17.8km az=70.0*
*DJA **07** 13:11:11.7±3.8, 0°S±16°×12°6E±°, h155km±66km, M3.5/5, MLv3.5/5*
*ISCJB **07** 13:11:14.9±0.7, 0°.03S±0°.09×125°.84E±0°.08, h44km, mb3.8/6, Error ellipse: s-maj=13.3km s-min=11.3km az=34.5*
ISC 07 13:11:16.5±0.9, **0°.00S**±0°.10×**125°.88E**±0°.07, **h44**km, **n11**, σ**0s.67**/10, **mb3.8**/6, **Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.68	63	P	Pn	13 11 43.6	+0.2
LBMI	Labuha	1.74	111	P	Pn	13 11 44.5	+0.2
MNI	Manado	1.77	324	P	Pn	13 11 48.7	+4.0
KMSI	Cibinong	1.98	287	P	Pn	13 11 47.7	+0.2
GAMI	Galela, Maluku	2.65	46	P	Pn	13 11 56.8	+0.1
WRA	Warramunga Arr	21.48	158	P	P	13 16 00.4	-1.1
	1.3nm,0.5s,baz=337,slow=11,SNR=20						
ASAR	Alice Springs	24.78	162	P	P	13 16 34.6	+0.2
	0.7nm,0.5s,baz=346,slow=8.5,SNR=10						
STKA	Stephens Creek	35.02	156	P	P	13 18 05.3	+0.3
	5.1nm,1.3s,baz=326,slow=7.3,SNR=3.2						
KSRS	Korea Array	37.32	3	P	P	13 18 23.9	-0.6
	0.5nm,0.5s,baz=181,slow=8.5,SNR=4.4						
MKAR	Makanchi Array	60.16	327	P	P	13 21 19.4	-0.3
	0.6nm,0.5s,baz=118,slow=8.3,SNR=10						
KURBB	Kurchatov Arra	64.44	329	P	P	13 21 49.3	+1.1
	0.5nm,0.5s,baz=138,slow=6.8,SNR=5.0						

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*ISK **07** 13:20:10.5, 38°.34N×25°.32E, h5km, MD3.2*
*ATH **07** 13:20:14.7, 38°.38N×25°.68E, h39km±2km, MD3.2/6*
*THE **07** 13:20:15.4, 38°.34N×25°.62E, h32km±13km, ML2.8/4, Error ellipse: s-maj=13.5km s-min=1.5km az=119.0*
*ISCJB **07** 13:20:15.0±0.4, 38°.40N±0°.03×25°.55E±0°.03, h26km±5km, Error ellipse: s-maj=5.3km s-min=3.8km az=142.9*
*CSEM **07** 13:20:15.3±0.1, 38°.43N×25°.54E, h19km, MD3.2, Error ellipse: s-maj=2.7km s-min=1.9km az=159.0*
*DDA **07** 13:20:20.1, 38°.84N×26°.27E, h7km, MD2.9*
ISC 07 13:20:14.9±1.0, **38°.39N**±0°.02×**25°.54E**±0°.02, **h24**km±11km, **n60**, σ**1s.08**/84, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	Chios island	0.41	90	P	Pb	13 20 23.8	+0.2
CHOS				S	Sb	13 20 29.4	-0.1
CHOS	Chios island	0.41	90	ePB	Pb	13 20 23.8	+0.2
CHOS				eSB	Sb	13 20 29.1	-0.4
CHOS	Chios island	0.41	90	P	Pb	13 20 23.8	+0.2
CHOS				eSb	Sb	13 20 29.1	-0.4
CHOS				S	Sb	13 20 29.4	-0.1
URLA	Izmir	0.83	92	i P	Pn	13 20 31.2	0.0
URLA				i S	Sb	13 20 41.8	+0.3
URLA	Izmir	0.83	92	i P	Pn	13 20 31.2	0.0
URLA				i S	Sb	13 20 41.8	+0.3
SIGR	SIGRI	0.86	17	P	Pb	13 20 30.4	-0.8
SIGR				S	Sb	13 20 42.4	+0.1
SIGR	SIGRI	0.86	17	P	Pb	13 20 30.4	-0.8
SIGR				S	Sb	13 20 42.4	+0.1
MRMA	Marmari	0.97	250	P	Pn	13 20 33.5	+0.5
MRMA				S	Sn	13 20 45.7	-0.3
MRMA	Marmari	0.97	250	P	Pn	13 20 33.5	+0.5
MRMA				S	Sn	13 20 45.7	-0.3
PRK	Paraskevi	1.03	34	P	Pb	13 20 33.5	-0.6
PRK				S	Sb	13 20 46.3	-0.9
PRK	Paraskevi	1.03	34	ePN	Pb	13 20 33.5	-0.6

PRK				eSN	Sn	13 20 47.3	-0.3
PRK	Paraskevi	1.03	34	P	Pb	13 20 33.5	-0.6
PRK				S	Sb	13 20 46.3	-0.9
PRK				eSn	Sn	13 20 47.3	-0.3
BLCB	Balcova	1.18	90	ePN	Pb	13 20 37.3	+0.6
BLCB	Balcova	1.18	90	ePn	Pb	13 20 37.3	+0.6
APE	Apeiranthos	1.32	180	ePN	Pn	13 20 36.1	-1.8
APE				eSN	Sn	13 20 53.3	-1.4
APE	Apeiranthos	1.32	180	P	Pn	13 20 35.0	-2.8
APE	Apeiranthos	1.32	180	ePB	Pn	13 20 38.0	+0.2
APE				eSN	Sb	13 20 56.1	+0.7
APE	Apeiranthos	1.32	180	P	Pn	13 20 35.0	-2.8
APE	Apeiranthos	1.32	180	ePn	Pn	13 20 36.1	-1.8
APE				eSn	Sb	13 20 56.1	+0.7
IZM	Izmir	1.36	89	ePN	Pb	13 20 38.9	-0.8
IZM				eSN	Sb	13 21 00.3	+3.7
IZM	Izmir	1.36	89	ePn	Pb	13 20 38.9	-0.8
IZM				eSn	Sb	13 21 00.3	+3.7
BOZC	Bozcaada	1.51	15	iP	Pn	13 20 39.5	-0.9
AOS	Alonnisos	1.51	302	P	Pn	13 20 41.0	+0.5
AOS	Alonnisos	1.51	302	ePB	Pb	13 20 43.5	+1.2
AOS				eSN	Sb	13 21 03.3	+2.2
AOS	Alonnisos	1.51	302	P	Pn	13 20 41.0	+0.5
AOS	Alonnisos	1.51	302	ePb	Pb	13 20 43.5	+1.2
LIA	Limnos Island	1.53	350	P	Pn	13 20 40.3	-0.5
LIA				S	Sb	13 21 01.1	-0.5
LIA	Limnos Island	1.53	350	ePN	Pn	13 20 40.9	+0.1
LIA				eSN	Sb	13 21 00.8	-0.8
LIA	Limnos Island	1.53	350	P	Pn	13 20 40.3	-0.5
LIA	Limnos Island	1.53	350	ePn	Pn	13 20 40.9	+0.1
LIA				eSn	Sb	13 21 00.8	-0.8
LIA				S	Sb	13 21 01.1	-0.5
MRKA	Markates	1.56	282	P	Pb	13 20 42.2	-0.9
MRKA				S	Sn	13 21 00.2	-0.5
MRKA	Markates	1.56	282	P	Pb	13 20 42.2	-0.9
MRKA				S	Sn	13 21 00.2	-0.5
NAIG	Nisos Aigina	1.73	249	ePN	Pb	13 20 45.0	-1.1
NAIG	Nisos Aigina	1.73	249	ePn	Pb	13 20 45.0	-1.1
SKIA	Skiathos	1.80	296	P	Pn	13 20 44.8	+0.4
SKIA	Skiathos	1.80	296	P	Pn	13 20 44.8	+0.4
DID	Didima	2.02	245	P	Pn	13 20 48.7	+1.2
DID	Didima	2.02	245	P	Pn	13 20 48.7	+1.2
GELI	Tayfur-Gelibol	2.13	20	ePN	Pn	13 20 49.6	+0.5
GELI	Tayfur-Gelibol	2.13	20	ePn	Pn	13 20 49.6	+0.5
LPK	Lapseki	2.20	25	ePN	Pn	13 20 50.4	+0.5
LPK	Lapseki	2.20	25	ePn	Pn	13 20 50.4	+0.5
BALB	Balikesir	2.21	55	ePN	Pn	13 20 50.6	+0.5
BALB	Balikesir	2.21	55	ePn	Pn	13 20 50.6	+0.5
GONE	Gonen-Balikesi	2.35	45	ePN	Pn	13 20 53.0	+1.0
GONE	Gonen-Balikesi	2.35	45	ePn	Pn	13 20 53.0	+1.0
ERIK	Erikli-Kesan	2.40	18	ePN	Pn	13 20 53.3	+0.6
ERIK	Erikli-Kesan	2.40	18	ePn	Pn	13 20 53.3	+0.6
KRBG	Karabiga-Canak	2.42	34	ePN	Pn	13 20 53.0	0.0
KRBG	Karabiga-Canak	2.42	34	ePn	Pn	13 20 53.0	0.0
YER	Yerkesik	2.51	119	ePG	Pb	13 21 04.8	+5.5
YER	Yerkesik	2.51	119	ePg	Pb	13 21 04.8	+5.5
ALN	Alexandroupoli	2.54	9	ePN	Pn	13 20 54.2	-0.4
ALN	Alexandroupoli	2.54	9	ePn	Pn	13 20 54.2	-0.4
VLI	Veliai	2.65	232	ePN	Pn	13 20 57.9	+1.7
VLI	Veliai	2.65	232	ePn	Pn	13 20 57.9	+1.7
EDC	Edincik	2.66	42	ePN	Pn	13 20 57.4	+1.1
EDC	Edincik	2.66	42	ePn	Pn	13 20 57.4	+1.1
KYTH	Kithira	2.90	224	ePN	Pn	13 21 00.3	+0.7
KYTH	Kithira	2.90	224	ePn	Pn	13 21 00.3	+0.7

*ISK **07** 13:20:46.8, 37°.86N×27°.57E, h16km, MD2.8*
*DDA **07** 13:20:46.9, 37°.83N×27°.54E, h11km, MD2.7*
*CSEM **07** 13:20:46.9±0.3, 37°.84N×27°.60E, h1km, MD2.7, Error ellipse: s-maj=6.3km s-min=4.7km az=94.0*
*ISCJB **07** 13:20:46.6±0.5, 37°.85N±0°.03×27°.57E±0°.04, h0km, Error ellipse: s-maj=4.6km s-min=3.9km az=15.0*
ISC 07 13:20:46.4±0.8**, 37°.83N**±0°.02×**27°.59E**±0°.03**, h0km, n26, σ0s.68**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYDN	Tasoluk	0.28	126	iP	Pb	13 20 53.9	-0.5
AYDN				iS	Sg	13 20 57.7	+2.2
AYDN	Tasoluk	0.28	126	iP	Pb	13 20 53.9	-0.5
AYDN				iS	Sg	13 20 57.7	+2.2
GCAM	G?zelcaml?	0.31	246	iP	Pg	13 20 52.8	+0.4
GCAM				iS	Sg	13 20 56.4	0.0
GCAM	G?zelcaml?	0.31	246	iP	Pg	13 20 52.8	+0.4
GCAM				iS	Sg	13 20 56.4	0.0
MLSB	Milas	0.55	164	ePG	Pb	13 20 58.8	-0.2
MLSB	Milas	0.55	164	ePg	Pb	13 20 58.8	-0.2
IZM	Izmir	0.62	336	ePG	Pg	13 20 58.7	+0.3
IZM	Izmir	0.62	336	ePg	Pg	13 20 58.7	+0.3
BODT	Bodrum	0.80	196	ePG	Pb	13 21 03.1	0.0
BODT				eSG	Sb	13 21 15.1	+0.6
BODT	Bodrum	0.80	196	ePg	Pb	13 21 03.2	0.0
BODT				eSg	Sb	13 21 15.1	+0.6
AKHS	Akhisar	1.06	9	iP	Pb	13 21 07.7	0.0
AKHS				iS	Sb	13 21 21.7	-0.5
AKHS	Akhisar	1.06	9	iP	Pb	13 21 07.7	0.0
AKHS				iS	Sb	13 21 21.7	-0.5
AKS	Akhisar	1.06	9	PG	Pg	13 21 07.2	+0.4
AKS	Akhisar	1.06	9	iPg	Pg	13 21 07.2	+0.4
KULA	Kula-Manisa	1.09	51	ePG	Pg	13 21 07.8	+0.6
KULA	Kula-Manisa	1.09	51	ePg	Pg	13 21 07.8	+0.6
DAT	Datca	1.10	181	ePN	Pb	13 21 08.5	+0.2
DAT	Datca	1.10	181	ePn	Pb	13 21 08.5	+0.2
DENT	Denizli	1.15	93	ePN	Pb	13 21 09.0	-0.1
DENT	Denizli	1.15	93	ePn	Pb	13 21 09.0	-0.1
DNZL	Cakiroluk	1.16	96	iP	Pb	13 21 09.7	+0.2
DNZL				iS	Sn	13 21 27.1	+0.3
DNZL	Cakiroluk	1.16	96	iP	Pb	13 21 09.7	+0.2
TURN	Turunc	1.25	139	iP	Pg	13 21 09.8	-0.6
TURN				iS	Sg	13 21 26.3	-0.2
TURN	Turunc	1.25	139	iP	Pg	13 21 09.8	-0.6
TURN				iS	Sg	13 21 26.3	-0.2
KHL	Karahalli	1.60	71	ePN	Pn	13 21 15.1	-1.0
KHL	Karahalli	1.60	71	ePn	Pn	13 21 15.1	-1.0

*CSEM **07** 13:22:20.9±0.2, 40°.73N×21°.43E, h5km, ML1.6/2, Error ellipse: s-maj=4.3km s-min=3.8km az=80.0*
THE 07 13:22:21.1, 40°.72N×21°.45E, h7km±3km, ML1.6/2, Error ellipse: s-maj=3.7km s-min=0.9km az=319.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.08	321	P	Pg	13 22 22.7	-0.6
FNA				S	Sg	13 22 24.9	+0.1
FNA	Florina	0.08	321	P	Pg	13 22 22.7	-0.6
FNA				S	Sg	13 22 24.9	+0.1
BIA	Bitola	0.32	343	P	Pg	13 22 26.8	-0.6
BIA	Bitola	0.32	343	P	Pg	13 22 26.8	-0.6
NEST	Nestorio	0.43	225	P	Pg	13 22 29.1	-0.5
NEST				S	Sg	13 22 36.1	+0.8
NEST	Nestorio	0.43	225	P	Pg	13 22 29.1	-0.5
NEST				S	Sg	13 22 36.1	+0.8
KZN	Kozani	0.48	149	P	Pg	13 22 30.2	-0.3
KZN				S	Sg	13 22 37.3	+0.4
KZN	Kozani	0.48	149	P	Pg	13 22 30.2	-0.3
KZN				S	Sg	13 22 37.3	+0.4
GRG	Griva	0.76	71	P	Pg	13 22 36.2	+0.3
GRG	Griva	0.76	71	P	Pg	13 22 36.2	+0.3
PHP	Peshkopia	1.23	322	ePG	Sg	13 22 56.1	-4.7
PHP				iSG	Sb	13 22 59.8	-1.0
PHP	Peshkopia	1.23	322	iSg	Sg	13 22 59.8	-1.0

*ISK **07** 13:30:41.1, 37°.87N×27°.51E, h5km, MD3.1*
*DDA **07** 13:30:41.8, 37°.85N×27°.53E, h7km, MD2.5*
*ISCJB **07** 13:30:41.9±0.3, 37°.86N±0°.02×27°.54E±0°.03, h0km, Error ellipse: s-maj=3.7km s-min=3.0km az=160.6*
*CSEM **07** 13:30:42.3±0.1, 37°.83N×27°.52E, h2km, MD2.5, Error ellipse: s-maj=4.1km s-min=2.7km az=68.0*
ISC 07 13:30:42.1±0.8**, 37°.84N**±0°.02×**27°.55E**±0°.02**, h0km, n56, σ0s.72**/72**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.28	241	iP	Pg	13 30 47.9	+0.3
GCAM				iS	Sg	13 30 51.5	+0.3
GCAM	G?zelcaml?	0.28	241	iP	Pg	13 30 47.9	+0.3
GCAM				iS	Sg	13 30 51.5	+0.3
AYDN	Tasoluk	0.32	124	iP	Pg	13 30 48.9	+0.7
AYDN				iS	Sg	13 30 52.9	+0.6
AYDN	Tasoluk	0.32	124	iP	Pg	13 30 48.9	+0.7
AYDN				iS	Sg	13 30 52.9	+0.6
MLSB	Milas	0.57	161	ePG	Pg	13 30 53.3	+0.2
MLSB	Milas	0.57	161	ePg	Pg	13 30 53.3	+0.2
IZM	Izmir	0.60	338	ePG	Pg	13 30 53.3	-0.3
IZM	Izmir	0.60	338	ePg	Pg	13 30 53.3	-0.3
BLCB	Balcova	0.67	324	ePG	Pg	13 30 54.9	-0.2
BLCB				eSG	Sg	13 31 03.7	-0.1
BLCB	Balcova	0.67	324	ePg	Pg	13 30 54.9	-0.2
BLCB				eSg	Sg	13 31 03.7	-0.1
BODT	Bodrum	0.80	194	ePG	Pg	13 30 57.6	+0.3
BODT				eSG	Sb	13 31 11.0	+0.8
BODT	Bodrum	0.80	194	ePg	Pg	13 30 57.7	+0.3
BODT				eSg	Sb	13 31 11.0	+0.8
YER	Yerkesik	0.92	140	ePG	Pb	13 31 00.7	-0.2
YER	Yerkesik	0.92	140	ePg	Pb	13 31 00.7	-0.2
AKHS	Akhisar	1.06	11	iP	Pg	13 31 02.5	+0.1
AKHS				iS	Sg	13 31 16.9	+0.8
AKHS	Akhisar	1.06	11	iP	Pg	13 31 02.5	+0.1
AKHS				iS	Sg	13 31 16.9	+0.8
AKS	Akhisar	1.06	11	ePG	Pg	13 31 02.5	+0.1
AKS	Akhisar	1.06	11	ePg	Pg	13 31 02.5	+0.1
DAT	Datca	1.11	179	ePN	Pg	13 31 03.9	+0.6
DAT	Datca	1.11	179	ePn	Pg	13 31 03.9	+0.6
DNZL	Cakiroluk	1.20	97	iP	Pb	13 31 06.1	+0.3
DNZL				iS	Sb	13 31 22.3	+0.4
DNZL	Cakiroluk	1.20	97	iP	Pb	13 31 06.1	+0.3
DNZL				iS	Sb	13 31 22.3	+0.4
TURN	Turunc	1.28	139	iP	Pg	13 31 04.6	-2.1
TURN				iS	Sg	13 31 21.7	-1.6
TURN	Turunc	1.28	139	iP	Pg	13 31 04.6	-2.1
TURN				iS	Sg	13 31 21.7	-1.6
DALY	Dalyan (Mu˜la	1.35	139	ePN	Pb	13 31 08.6	+0.3
DALY	Dalyan (Mu˜la	1.35	139	ePn	Pb	13 31 08.6	+0.3
KHAL	Karahalli	1.62	70	iP	Pg	13 31 14.2	+1.0
KHAL				iS	Sn	13 31 31.9	-1.9
KHAL	Karahalli	1.62	70	iP	Pg	13 31 14.2	+1.0
KHAL				iS	Sn	13 31 31.9	-1.9
KHL	Karahalli	1.63	72	ePN	Pn	13 31 12.2	0.0
KHL	Karahalli	1.63	72	ePn	Pn	13 31 12.2	0.0
APE	Apeiranthos	1.78	245	ePN	Pn	13 31 14.1	-0.1
APE	Apeiranthos	1.78	245	ePn	Pn	13 31 14.1	-0.1
BALB	Balikesir	1.82	8	ePN	Pn	13 31 14.6	0.0
BALB	Balikesir	1.82	8	ePn	Pn	13 31 14.6	0.0
ELL	Elmali	2.18	119	ePN	Pn	13 31 21.0	+1.3
ELL	Elmali	2.18	119	ePn	Pn	13 31 21.0	+1.3
TVSB	Tavsanli	2.20	42	ePN	Pn	13 31 20.2	+0.2
TVSB	Tavsanli	2.20	42	ePn	Pn	13 31 20.2	+0.2
EZN	Ezine	2.20	335	ePN	Pn	13 31 19.9	0.0
EZN	Ezine	2.20	335	ePn	Pn	13 31 19.9	0.0
GONE	Gonen-Balikesi	2.21	3	ePN	Pn	13 31 19.7	-0.3
GONE	Gonen-Balikesi	2.21	3	ePn	Pn	13 31 19.7	-0.3
ALT	Altintas	2.35	58	ePN	Pn	13 31 22.4	+0.3
ALT	Altintas	2.35	58	ePn	Pn	13 31 22.4	+0.3
KRBG	Karabiga-Canak	2.56	356	ePN	Pn	13 31 25.2	+0.4
KRBG	Karabiga-Canak	2.56	356	ePn	Pn	13 31 25.2	+0.4
LPK	Lapseki	2.60	347	ePN	Pn	13 31 25.5	+0.1
LPK	Lapseki	2.60	347	ePn	Pn	13 31 25.5	+0.1
GELI	Tayfur-Gelibol	2.69	342	ePN	Pn	13 31 26.5	-0.1
GELI	Tayfur-Gelibol	2.69	342	ePn	Pn	13 31 26.5	-0.1
MRMT	Marmara Adasi	2.76	1	ePN	Pn	13 31 27.7	0.0
MRMT	Marmara Adasi	2.76	1	ePn	Pn	13 31 27.7	0.0
IZI	Iznik	2.91	30	ePN	Pn	13 31 30.8	+1.0
IZI	Iznik	2.91	30	ePn	Pn	13 31 30.8	+1.0
CAVI	Cavuskoy	2.96	36	ePN	Pn	13 31 30.8	+0.4
CAVI	Cavuskoy	2.96	36	ePn	Pn	13 31 30.8	+0.4

*ISCJB **07** 13:37:14.8±0.4, 47°.34N±0°.06×145°.35E±0°.10, h461km±6km, mb3.6/20, Error ellipse: s-maj=12.1km s-min=7.7km az=43.3*
*IDC **07** 13:37:15.9±0.8, 47°.61N×145°.19E, h447km±10km, mb3.3/20, mb1 3.4/26, mb1mx3.3/34, mbtmp3.2/26, Error ellipse: s-maj=11.8km s-min=9.1km az=139.0*
*JMA **07** 13:37:15.5±0.4, 47°.12N×145°.47E, h479km, M3.9*
ISC 07 13:37:15.9±0.7**, 47°.26N**±0°.08×**145°.39E**±0°.08**, h462km**±8km**, n52, σ1s.68**/66**, mb3.6**/20**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	3.02	221	P	P	13 38 24.7	+0.7
JWK2	Keihoku	3.11	233	P	P	13 38 25.9	+1.3
JWK2				eS	S	13 39 21.6	+1.1
JRA	Rausu	3.33	183	P	P	13 38 27.5	+1.2
JTKR	Abashiri--Toko	3.45	198	P	P	13 38 28.3	+1.0
JTKR				eS	S	13 39 25.4	+0.1
ASAJ	Asahikawa	3.71	213	P	P	13 38 30.8	+1.4
	5.4nm,0.3s,baz=20,slow=5.6,SNR=52						
ASAJ				S	S	13 39 30.4	+1.3
	0.5nm,0.3s,baz=177,slow=29,SNR=1.9						
NEM2	Nemuro 2	3.90	176	P	P	13 38 30.0	-1.0
NEM2				eS	S	13 39 29.0	-3.1
JAR	Ashorobuto	4.13	197	P	P	13 38 33.6	+0.7
JAR				eS	S	13 39 35.8	+0.2
JAK	Akkeshi	4.29	187	P	P	13 38 34.0	-0.4
JAK				eS	S	13 39 35.1	-3.1
JFR	Furan	4.55	207	P	P	13 38 37.9	+1.2
JCH	Churui	4.86	198	P	P	13 38 39.2	-0.4
JCH				eS	S	13 39 43.9	-3.9
JEW	Eniwo	5.23	214	eS	S	13 39 53.2	-0.9
JNBK	Urakawa-nobuka	5.32	202	P	P	13 38 43.5	-0.5
JNBK				eS	S	13 39 51.9	-3.9
JKB	Kayabe	6.21	212	P	P	13 38 52.3	-0.5
JKB				eS	S	13 40 07.7	-4.2
JOT	Ohata	6.65	209	P	P	13 38 57.0	-0.3
JOT				eS	S	13 40 16.1	-4.2
JOSM	Okushiri--Mats	6.68	221	P	P	13 38 57.9	+0.4
JANG	Nango	7.43	204	P	P	13 39 05.7	+0.2
JANG				eS	S	13 40 33.2	-2.1
JOM	Ohasama	8.34	202	P	P	13 39 16.8	+1.7
JOM				eS	S	13 40 49.9	-3.0
JMK	Ichinoseki	8.85	202	P	P	13 39 22.8	+2.3
JMK				eS	S	13 41 02.2	-0.8
PETK	Petropavlovsk-	9.82	49	P	P	13 39 30.6	-0.3
	0.2nm,0.3s,baz=208,slow=9.1,SNR=7.2						
USRK	Ussuriysk Arra	9.85	257	P	P	13 39 30.9	-0.4
	0.8nm,0.3s,baz=63,slow=12,SNR=12						
MJAR	Matsushiro Arr	11.97	209	P	P	13 39 57.3	+3.0
	0.6nm,0.3s,baz=12,slow=12,SNR=7.5						
KSRS	Korea Array	16.18	239	P	P	13 40 41.6	+2.4
	0.2nm,0.3s,baz=45,slow=11,SNR=7.2						
JNU	Nakatsue	17.91	223	P	P	13 41 00.3	+3.1
	0.3nm,0.3s,baz=59,slow=18,SNR=4.3						
KDAK	Kodiak Island	37.87	50	P	P	13 43 51.3	-0.2
	4.6nm,0.7s,baz=302,slow=9.5,SNR=5.8						
ZALV	Zalesovo Beam	37.97	303	P	P	13 43 50.7	-1.7
	0.3nm,0.4s,baz=75,slow=6.1,SNR=2.2						
ZALV				PcP	PcP	13 45 56.8	+0.4
	1.1nm,0.7s,baz=64,slow=3.4,SNR=5.5						
ILAR	Eielson Array	39.45	39	P	P	13 44 03.9	-0.5
	1.5nm,0.8s,baz=274,slow=6.9,SNR=21						
MKAR	Makanchi Array	41.95	294	P	P	13 44 23.7	-1.0
	1.5nm,0.5s,baz=70,slow=7.2,SNR=20						
MKAR				PcP	PcP	13 46 09.9	+0.4
	0.4nm,0.6s,baz=81,slow=4.3,SNR=3.3						
KURBB	Kurchatov Arra	42.70	300	P	P	13 44 29.1	-1.4
	2.6nm,0.6s,baz=70,slow=8.6,SNR=17						
KURBB				PcP	PcP	13 46 12.2	+0.3
	1.1nm,0.6s,baz=74,slow=3.4,SNR=12						
INK	Inuvik	44.03	32	P	P	13 44 39.7	-0.9
	1.0nm,0.5s,baz=301,slow=8.1,SNR=7.9						
CMAR	Chiang Mai Arr	47.48	249	P	P	13 45 09.1	+1.2
	0.8nm,0.4s,baz=37,slow=7.3,SNR=5.2						
GUN	Gumba	49.70	269	eP	P	13 45 25.1	+0.3
	3.2nm,0.3s						
RAMN	Ramite	49.83	268	eP	P	13 45 25.8	+0.2
	18nm,0.5s						
KKN	Kakani	50.19	269	eP	P	13 45 28.9	+0.7
	3.0nm,0.3s						
PKI	Pulchoki	50.24	269	eP	P	13 45 29.0	+0.3
DMN	Daman	50.42	269	eP	P	13 45 29.4	-0.6
	9.9nm,0.3s						
DANN	Dangsing	50.87	271	eP	P	13 45 33.8	+0.5
	12nm,0.5s						
KOLN	Koldanda	51.35	271	eP	P	13 45 36.9	+0.3
PYUN	Piuthan	51.55	271	eP	P	13 45 38.5	+0.4
YKA	Yellowknife Ar	53.59	35	P	P	13 45 51.0	-0.9
	0.5nm,0.6s,baz=305,slow=7.1,SNR=11						
ARCES	ARCESS Array B	55.53	338	P	P	13 46 04.5	-1.1
	4.3nm,0.9s,baz=30,slow=7.3,SNR=3.8						
FINES	FINESS Array B	61.19	331	P	P	13 46 42.3	-1.8
	2.7nm,0.5s,baz=46,slow=7.3,SNR=14						
NB2	NORSAR Subarra	65.89	338	P	P	13 47 12.7	-1.6
	comp=Z,1.2nm,0.5s,baz=31,slow=6.5						
NOA	NORSAR Array B	65.89	338	P	P	13 47 12.9	-1.4
	comp=Z,1.7nm,0.4s,baz=31,slow=6.4,SNR=6.9						
HFS	Hagfors	65.98	336	P	P	13 47 13.3	-1.6
	comp=Z,2.8nm,0.5s,baz=23,slow=4.8,SNR=12						
KBZ	Khabaz	66.58	310	P	P	13 47 19.1	+0.2
	comp=Z,3.5nm,0.7s,baz=36,slow=6.0,SNR=7.4						
NVAR	Mina Array Bea	66.77	58	P	P	13 47 22.4	+2.0
	comp=Z,0.6nm,0.6s,baz=295,slow=5.9,SNR=7.0						
WRA	Warramunga Arr	67.63	191	P	P	13 47 27.9	+2.4
	comp=Z,0.9nm,0.5s,baz=6.9,slow=6.6,SNR=20						
AKASG	Malin Array Be	68.04	322	P	P	13 47 26.3	-1.5
	comp=Z,1.2nm,0.4s,baz=38,slow=6.4,SNR=5.2						
PDAR	Pinedale Array	68.58	50	P	P	13 47 32.1	+0.5
	comp=Z,0.8nm,0.5s,baz=301,slow=2.0,SNR=8.3						
ASAR	Alice Springs	71.35	191	P	P	13 47 51.2	+3.3
	comp=Z,0.8nm,0.5s,baz=0.1,slow=5.2,SNR=17						
BRTR	Keskin Array B	74.25	312	P	P	13 48 04.7	-0.2
	comp=Z,0.7nm,0.4s,baz=101,slow=4.0,SNR=5.0						
TXAR	Lajitas Array	81.70	56	P	P	13 48 46.9	+1.7
	comp=Z,0.4nm,0.5s,baz=301,slow=3.9,SNR=4.5						

*ISK **07** 13:42:50.7, 37°.85N×27°.58E, h10km, MD3.3*
*IDC **07** 13:42:50.6±1.5, 37°.68N×27°.61E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/27, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=53.3km s-min=23.7km az=149.0*
*ATH **07** 13:42:50.8, 37°.82N×27°.60E, h9km±2km, MD3.5/9*
*DDA **07** 13:42:51.1, 37°.86N×27°.55E, h20km, MD3.3*
*CSEM **07** 13:42:51.2±0.1, 37°.83N×27°.63E, h2km, MD3.3, Error ellipse: s-maj=3.3km s-min=2.7km az=71.0*
*THE **07** 13:42:54.8, 37°.75N×27°.59E, h19km±6km, ML3.6/2, Error ellipse: s-maj=6.6km s-min=1.4km az=74.0*
ISC 07 13:42:51.4±1.0**, 37°.83N**±0°.02×**27°.59E**±0°.02**, h5km**±8km**, n135, σ0s.90**/168**, mb3.6**/3**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.31	245	iP	Pg	13 42 57.1	-0.4
GCAM				iS	Sg	13 43 00.2	-1.4
MLSB	Milas	0.56	165	ePG	Pg	13 43 02.5	+0.4
MLSB				eSG	Sg	13 43 10.6	+1.3
MLSB	Milas	0.56	165	ePg	Pg	13 43 02.5	+0.4
MLSB				eSg	Sg	13 43 10.6	+1.3
IZM	Izmir	0.62	335	ePG	Pg	13 43 03.0	-0.3
IZM				eSG	Sg	13 43 11.0	-0.4
IZM	Izmir	0.62	335	ePg	Pg	13 43 03.0	-0.3
IZM				eSg	Sg	13 43 11.0	-0.4
BLCB	Balcova	0.70	322	ePG	Pg	13 43 04.6	-0.2
BLCB	Balcova	0.70	322	ePg	Pg	13 43 04.6	-0.2
BODT	Bodrum	0.80	196	ePG	Pg	13 43 06.0	-0.8
BODT	Bodrum	0.80	196	ePg	Pg	13 43 06.0	-0.8
YER	Yerkesik	0.89	142	ePG	Pg	13 43 08.9	+0.5
YER	Yerkesik	0.89	142	ePg	Pg	13 43 08.9	+0.5
URLA	Izmir	0.95	304	iP	Pg	13 43 09.1	-0.4
URLA				iS	Sg	13 43 21.1	-0.7
AKHS	Akhisar	1.06	9	iP	Pg	13 43 11.3	-0.4
AKHS				iS	Sg	13 43 25.7	+0.3
AKHS	Akhisar	1.06	9	iP	Pg	13 43 11.3	-0.4
AKHS				iS	Sg	13 43 25.7	+0.3
AKS	Akhisar	1.06	9	ePG	Pg	13 43 11.7	0.0
AKS	Akhisar	1.06	9	ePg	Pg	13 43 11.7	0.0
KULA	Kula-Manisa	1.08	51	ePN	Pg	13 43 12.2	+0.1
KULA	Kula-Manisa	1.08	51	ePn	Pg	13 43 12.2	+0.1
DAT	Datca	1.10	181	ePN	Pg	13 43 12.4	-0.1
DAT	Datca	1.10	181	ePn	Pg	13 43 12.4	-0.1
DENT	Denizli	1.14	94	ePN	Pg	13 43 12.9	-0.4
DENT	Denizli	1.14	94	ePn	Pg	13 43 12.9	-0.4
DNZL	Cakiroluk	1.16	97	iP	Pb	13 43 14.2	+0.2
DNZL				iS	Sn	13 43 31.3	+0.5
DNZL	Cakiroluk	1.16	97	iP	Pb	13 43 14.2	+0.2
NIS4	Nisyros Isl.	1.22	198	P	Pb	13 43 14.9	+0.1
TURN	Turunc	1.25	140	iP	Pg	13 43 13.8	-1.5
TURN				iS	Sg	13 43 31.0	-0.6
TURN	Turunc	1.25	140	iP	Pg	13 43 13.8	-1.5
TURN				iS	Sg	13 43 31.0	-0.6
NIS1	Nisyros Isl.	1.27	195	P	Pn	13 43 15.3	-0.6
NIS1	Nisyros Isl.	1.27	195	ePB	Pn	13 43 15.2	-0.6
NIS1	Nisyros Isl.	1.27	195	P	Pn	13 43 15.3	-0.6
NIS2	Nisyros Isl.	1.29	195	P	Pn	13 43 15.5	-0.6
DALY	Dalyan (Mu˜la	1.32	140	ePN	Pn	13 43 16.4	-0.1
DALY	Dalyan (Mu˜la	1.32	140	ePn	Pn	13 43 16.4	-0.1
CHOS	Chios island	1.33	295	P	Pn	13 43 16.0	-0.7
CHOS				S	Sn	13 43 35.5	+0.6
CHOS	Chios island	1.33	295	ePB	Pn	13 43 16.1	-0.7
CHOS				eSB	Sb	13 43 34.3	0.0
CHOS	Chios island	1.33	295	P	Pn	13 43 16.0	-0.7
CHOS				eSb	Sb	13 43 34.3	0.0
CHOS				S	Sn	13 43 35.5	+0.6
DEMI	Demirci	1.50	36	iP	Pb	13 43 19.6	-0.1
DEMI	Demirci	1.50	36	iP	Pb	13 43 19.6	-0.1
KHAL	Karahalli	1.59	70	iP	Pn	13 43 20.0	-0.3
KHAL				iS	Sn	13 43 41.0	-0.3
KHAL	Karahalli	1.59	70	iP	Pn	13 43 20.0	-0.3
KHAL				iS	Sn	13 43 41.0	-0.3
KHL	Karahalli	1.60	72	ePN	Pn	13 43 19.6	-0.8
KHL	Karahalli	1.60	72	ePn	Pn	13 43 19.6	-0.8
AYVA	Ayvalik	1.63	335	iP	Pb	13 43 21.5	-0.5
AYVA				iS	Sn	13 43 41.4	-0.8
AYVA	Ayvalik	1.63	335	iP	Pb	13 43 21.5	-0.5
AYVA				iS	Sn	13 43 41.4	-0.8
GLHS	Glhisar (BURDU	1.66	113	ePN	Pn	13 43 20.6	-0.6
GLHS	Glhisar (BURDU	1.66	113	ePn	Pn	13 43 20.6	-0.6
ARG	Arkhangelos	1.67	165	P	Pn	13 43 21.2	-0.1
ARG				S	Sn	13 43 40.2	-2.9
ARG	Arkhangelos	1.67	165	ePG	Pn	13 43 21.2	-0.1
ARG				eSB	Sg	13 43 44.9	-0.1
ARG	Arkhangelos	1.67	165	P	Pn	13 43 21.2	-0.1
ARG				S	Sn	13 43 40.2	-2.9
ARG				eSb	Sg	13 43 44.9	-0.1
FETY	Fethiye	1.69	135	ePN	Pn	13 43 21.7	+0.2
FETY	Fethiye	1.69	135	ePn	Pn	13 43 21.7	+0.2
PRK	Paraskevi	1.75	324	P	Pb	13 43 23.3	-0.7
PRK				S	Sb	13 43 46.9	+0.7
PRK	Paraskevi	1.75	324	ePN	Pb	13 43 24.1	+0.1
PRK				eSN	Sg	13 43 47.2	-0.4
PRK	Paraskevi	1.75	324	P	Pb	13 43 23.3	-0.7
PRK	Paraskevi	1.75	324	ePn	Pb	13 43 24.1	+0.1
PRK				S	Sb	13 43 46.9	+0.7
PRK				eSn	Sg	13 43 47.2	-0.4
APE	Apeiranthos	1.81	246	ePN	Pn	13 43 23.4	+0.2
APE	Apeiranthos	1.81	246	P	Pn	13 43 23.4	+0.2
APE				S	Sn	13 43 46.0	-0.6
APE	Apeiranthos	1.81	246	ePG	Pb	13 43 24.5	-0.5
APE				eSN	Sb	13 43 48.9	+0.9
APE	Apeiranthos	1.81	246	P	Pn	13 43 23.4	+0.2
APE	Apeiranthos	1.81	246	ePg	Pb	13 43 24.5	-0.5
APE				S	Sn	13 43 46.0	-0.6
APE				eSn	Sb	13 43 48.9	+0.9
BALB	Balikesir	1.82	7	ePN	Pn	13 43 22.2	-1.1
BALB	Balikesir	1.82	7	ePn	Pn	13 43 22.2	-1.1
BALY	Balya	1.90	1	iP	Pn	13 43 23.4	-1.2
BALY	Balya	1.90	1	iP	Pn	13 43 23.4	-1.2
SIGR	SIGRI	1.94	316	P	Pb	13 43 27.5	+0.4
SIGR	SIGRI	1.94	316	P	Pb	13 43 27.5	+0.4
DST	Dursunbey	1.94	24	ePN	Pn	13 43 24.6	-0.5
DST	Dursunbey	1.94	24	ePn	Pn	13 43 24.6	-0.5
TVSB	Tavsanli	2.18	42	ePN	Pn	13 43 28.7	+0.3
TVSB	Tavsanli	2.18	42	ePn	Pn	13 43 28.7	+0.3
GONE	Gonen-Balikesi	2.21	2	ePN	Pn	13 43 28.1	-0.6
GONE	Gonen-Balikesi	2.21	2	ePn	Pn	13 43 28.1	-0.6
AKAS	Kas	2.27	134	iP	Pn	13 43 31.0	+1.4
AKAS	Kas	2.27	134	iP	Pn	13 43 31.0	+1.4
KARP	Karpathos	2.31	189	ePB	Pn	13 43 30.0	-0.1
KARP	Karpathos	2.31	189	ePb	Pn	13 43 30.0	-0.1
ISP	Isparta	2.32	89	ePN	Pn	13 43 29.8	-0.5
ISP	Isparta	2.32	89	P	Pn	13 43 31.1	+0.8
ISP	Isparta	2.32	89	ePn	Pn	13 43 29.8	-0.5
ISP	Isparta	2.32	89	P	Pn	13 43 31.1	+0.8
ALT	Altintas	2.32	58	ePN	Pn	13 43 29.7	-0.7
ALT	Altintas	2.32	58	ePn	Pn	13 43 29.7	-0.7
BOZC	Bozcaada	2.34	330	eP	Pn	13 43 32.1	+1.6
BOZC				iS	Sb	13 44 03.8	+0.7
SHUT	Suhut-Afyon	2.44	72	ePN	Pn	13 43 31.3	-0.7
SHUT	Suhut-Afyon	2.44	72	ePn	Pn	13 43 31.3	-0.7
KCTX	Karacabey (Bur	2.50	14	ePN	Pn	13 43 32.6	-0.1
KCTX	Karacabey (Bur	2.50	14	ePn	Pn	13 43 32.6	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EDC	Edincik	2.52	5	ePN	Pn	13 43 32.6	-0.4
EDC	Edincik	2.52	5	ePn	Pn	13 43 32.6	-0.4
KRBG	Karabiga-Canak	2.57	355	ePN	Pn	13 43 33.5	-0.1
KRBG	Karabiga-Canak	2.57	355	ePn	Pn	13 43 33.5	-0.1
LPK	Lapseki	2.62	346	ePN	Pn	13 43 33.4	-0.9
LPK	Lapseki	2.62	346	ePn	Pn	13 43 33.4	-0.9
GELI	Tayfur-Gelibol	2.71	342	ePN	Pn	13 43 35.3	-0.2
GELI	Tayfur-Gelibol	2.71	342	ePn	Pn	13 43 35.3	-0.2
MDNY	Mudanya-Bursa	2.72	21	ePN	Pn	13 43 35.9	+0.2
MDNY	Mudanya-Bursa	2.72	21	ePn	Pn	13 43 35.9	+0.2
LIA	Limnos Island	2.79	318	P	Pn	13 43 38.4	+1.7
LIA	Limnos Island	2.79	318	ePN	Pn	13 43 38.3	+1.6
LIA	Limnos Island	2.79	318	ePn	Pn	13 43 38.3	+1.6
GEMT	Gemlik	2.88	25	ePN	Pn	13 43 38.2	+0.3
GEMT	Gemlik	2.88	25	ePn	Pn	13 43 38.2	+0.3
IZI	Iznik	2.90	30	ePN	Pn	13 43 38.5	+0.3
IZI	Iznik	2.90	30	ePn	Pn	13 43 38.5	+0.3
ZKR	Zakros	2.93	203	ePN	Pn	13 43 39.2	+0.6
ZKR	Zakros	2.93	203	ePn	Pn	13 43 39.2	+0.6
CAVI	Cavuskoy	2.94	36	ePN	Pn	13 43 39.0	+0.2
CAVI	Cavuskoy	2.94	36	ePn	Pn	13 43 39.0	+0.2
NPS	Neapolis	3.02	212	ePB	Pn	13 43 41.9	+2.0
NPS	Neapolis	3.02	212	ePb	Pn	13 43 41.9	+2.0
ADVT	Abdulvahap	3.09	32	ePN	Pn	13 43 41.1	+0.4
ADVT	Abdulvahap	3.09	32	ePn	Pn	13 43 41.1	+0.4
LAST	Lasithi	3.16	213	ePB	Pn	13 43 43.8	+1.9
LAST	Lasithi	3.16	213	ePb	Pn	13 43 43.8	+1.9
ALN	Alexandroupoli	3.29	339	P	Pn	13 43 44.5	+1.0
ALN	Alexandroupoli	3.29	339	ePN	Pn	13 43 45.4	+1.9
ALN	Alexandroupoli	3.29	339	P	Pn	13 43 44.5	+1.0
ALN	Alexandroupoli	3.29	339	ePn	Pn	13 43 45.4	+1.9
CTKS	Kestanelik-??a	3.47	11	ePN	Pn	13 43 46.6	+0.6
CTKS	Kestanelik-??a	3.47	11	ePn	Pn	13 43 46.6	+0.6
DID	Didima	3.47	266	ePN	Pn	13 43 46.8	+0.7
DID	Didima	3.47	266	ePn	Pn	13 43 46.8	+0.7
SVRH	Sivrihisar-ESK	3.47	61	ePN	Pn	13 43 47.4	+1.2
SVRH	Sivrihisar-ESK	3.47	61	ePn	Pn	13 43 47.4	+1.2
KIZT	Kizilcal	3.53	71	ePN	Pn	13 43 47.4	+0.4
KIZT	Kizilcal	3.53	71	ePn	Pn	13 43 47.4	+0.4
VLI	Veliai	3.88	255	ePN	Pn	13 43 53.8	+2.2
VLI	Veliai	3.88	255	ePn	Pn	13 43 53.8	+2.2
KYTH	Kithira	3.96	248	ePN	Pn	13 43 55.3	+2.5
KYTH	Kithira	3.96	248	ePn	Pn	13 43 55.3	+2.5
BRTR	Keskin Array B	5.09	66	Pn	Pn	13 44 09.8	+1.3
	1.2nm,0.3s,baz=242,slow=15,SNR=18						
BRTR				Pg	Pg	13 44 30.1	+1.2
	0.3nm,0.3s,baz=244,slow=19,SNR=7.3						
BRTR				Lg	Lg	13 45 41.4	
	baz=264,slow=26,SNR=2.1						
MMAI	Mount Meron Ar	7.98	125	Pn	Pn	13 44 46.8	-1.4
	4.1nm,0.3s,baz=306,slow=12,SNR=9.0						
TORD	Torodi Ar. Bea	33.71	230	P	P	13 49 33.0	-0.6
	0.3nm,0.4s,baz=34,slow=9.0,SNR=11						
KURBB	Kurchatov Arra	37.94	54	P	P	13 50 09.9	+0.3
	0.2nm,0.5s,baz=278,slow=9.0,SNR=3.3						
CMAR	Chiang Mai Arr	64.37	86	P	P	13 53 28.5	0.0
	0.6nm,0.6s,baz=305,slow=7.6,SNR=4.1						

*MDD **07** 13:50:15.9±4.8, 37°.14N×13°.11W, h0km, mb3.5/2, Error ellipse: s-maj=44.2km s-min=36.5km az=177.0, PRXIMO SIN SOLUCIN*

*CSEM **07** 13:50:18.1±0.4, 37°.14N×12°.90W, h10km, ML2.8/7, Error ellipse: s-maj=7.8km s-min=5.8km az=160.0*

ISC 07 13:50:18.0±4.4, **37°.1N**±0°.1×**12°.9W**±0°.2, **h10**km, **n34**, σ**0s.52**/39, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.25	89	ePn	Pn	13 51 09.1	0.0
PFVI				eSn	Sn	13 51 47.9	-0.1
PFVI	Vila Bisbo	3.25	89	P	Pn	13 51 09.4	+0.3
	0.2nm,0.1s,SNR=7.9						
PFVI				S	Sn	13 51 47.8	-0.1
	7.5nm,0.1s,SNR=6.4						
PFVI	Vila Bisbo	3.25	89	ePn	Pn	13 51 09.1	0.0
PFVI	Vila Bisbo	3.25	89	P	Pn	13 51 09.4	+0.3
	0.2nm,0.1s,SNR=7.9						
PFVI				S	Sn	13 51 47.8	-0.1
	7.5nm,0.1s,SNR=6.4						
PTEO	Sao Teotonio	3.35	82	eSn	Sn	13 51 50.5	+0.2
PTEO	Sao Teotonio	3.35	82	eSn	Sn	13 51 50.5	+0.2
PMAFR	Mafra	3.39	56	P	Pn	13 51 10.8	-0.1
	2.5nm,0.2s,SNR=4.0						
PMAFR				S	Sn	13 51 50.2	-0.9
	12nm,0.3s,SNR=7.9						
PMAFR	Mafra	3.39	56	P	Pn	13 51 10.8	-0.1
	2.5nm,0.2s,SNR=4.0						
PMAFR				S	Sn	13 51 50.2	-0.9
	12nm,0.3s,SNR=7.9						
MORF	Marmelete	3.40	86	eSn	Sn	13 51 51.4	-0.1
MORF				A	A	13 51 58.7	
	4.8nm,0.1s						
MORF	Marmelete	3.40	86	eSn	Sn	13 51 51.4	-0.1
	4.8nm,0.1s						
PNCL	Nicolau / Gran	3.60	73	eSn	Sn	13 51 56.6	+0.1
PNCL				A	A	13 52 01.7	
	2.4nm,0.5s						
PNCL	Nicolau / Gran	3.60	73	eSn	Sn	13 51 56.6	+0.1
	2.4nm,0.5s						
MOE	Montemor	3.86	68	eSn	Sn	13 52 03.3	+0.5
MOE	Montemor	3.86	68	eSn	Sn	13 52 03.3	+0.5
PCVE	Castro Verde	3.90	81	eSn	Sn	13 52 03.7	-0.2
PCVE				A	A	13 52 12.6	
	1.9nm,0.3s						
PCVE	Castro Verde	3.90	81	eSn	Sn	13 52 03.7	-0.2
	1.9nm,0.3s						
PBDV	Barranco-do-Ve	3.97	87	eSn	Sn	13 52 06.4	+0.8
PBDV				A	A	13 52 09.1	
	4.1nm,0.7s						
PBDV	Barranco-do-Ve	3.97	87	eSn	Sn	13 52 06.4	+0.8
	4.1nm,0.7s						
PVAQ	Vaqueiros	4.14	85	eSn	Sn	13 52 09.5	-0.3
PVAQ				A	A	13 52 14.3	
	3.4nm,0.6s						
PVAQ	Vaqueiros	4.14	85	eSn	Sn	13 52 09.5	-0.3
	3.4nm,0.6s						
PMTG	Montargil	4.16	61	eSn	Sn	13 52 11.3	+1.0
PMTG	Montargil	4.16	61	eSn	Sn	13 52 11.3	+1.0
EGRO	El Granado	4.34	83	S	Sn	13 52 13.9	-0.6
	2.5nm,0.1s,SNR=7.9						
EGRO	El Granado	4.34	83	S	Sn	13 52 13.9	-0.6
	2.5nm,0.1s,SNR=7.9						
PESTR	Estremoz	4.54	66	eSn	Sn	13 52 19.7	+0.2
PESTR				A	A	13 52 23.8	
	2.9nm,0.4s						
PESTR	Estremoz	4.54	66	eSn	Sn	13 52 19.7	+0.2
	2.9nm,0.4s						
PMRV	Marv??o	4.90	60	eSn	Sn	13 52 28.4	-0.1
PMRV				A	A	13 52 30.1	
	1.3nm,0.4s						
PMRV	Marv??o	4.90	60	eSn	Sn	13 52 28.4	-0.1
	1.3nm,0.4s						
EBAD	Badajoz	4.93	69	S	Sn	13 52 29.9	+0.8
	0.7nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.93	69	S	Sn	13 52 29.9	+0.8
	0.7nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.00	81	S	Sn	13 52 30.2	-0.6
	0.6nm,0.1s,SNR=5.7						
EMIN	Mina Concepcio	5.00	81	S	Sn	13 52 30.2	-0.6
	0.6nm,0.1s,SNR=5.7						
EADA	Adamuz	6.68	79	S	Sn	13 53 11.9	-0.6
	2.0nm,0.3s,SNR=4.0						
EADA	Adamuz	6.68	79	S	Sn	13 53 11.9	-0.6
	2.0nm,0.3s,SNR=4.0						

*IDC **07** 13:54:14.9±1.4, 7°.41N×93°.95E, h0km, mb3.8/7, mb1 3.8/8, mb1mx3.6/28, mbtmp3.7/8, ML3.7/1, MS3.6/2, Ms1 3.7/2, ms1mx2.8/42, Error ellipse: s-maj=43.8km s-min=25.6km az=55.0*

*ISCJB **07** 13:54:16.2±1.2, 7°.4N±0°.1×94°.1E±0°.2, h20km, mb3.8/7, MS4.1/1, Error ellipse: s-maj=26.6km s-min=17.3km az=143.4*

ISC 07 13:54:18.0±1.4, **7°.4N**±0°.2×**93°.9E**±0°.2, **h20**km, **n20**, σ**1s.25**/16, **mb3.7**/7, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	6.72	132	LR	LR	13 59 05.1	
	comp=Z,191nm,18.1s,baz=172,slow=43						
CMAR	Chiang Mai Arr	12.05	23	Pn	Pn	13 57 09.2	+0.5
	0.1nm,0.3s,baz=227,slow=27,SNR=3.5						
ODAN	Odare	20.37	343	eP	Pn	13 58 58.3	+2.4
	8.3nm,0.6s						
RAMN	Ramite	20.69	341	eP	Pn	13 59 01.7	+2.0
	37nm,0.7s						
TAPN	Taplejung	20.74	344	eP	P	13 58 57.7	-0.1
	5.1nm,0.4s						
PKI	Pulchoki	21.67	339	eP	P	13 59 09.7	+1.9
PKIN	Phulchoki	21.68	339	eP	P	13 59 09.3	+1.4
DMN	Daman	21.81	338	eP	P	13 59 11.1	+1.8
	18nm,0.9s						
GUN	Gumba	21.82	340	eP	P	13 59 08.3	-1.2
	20nm,0.7s						
KKN	Kakani	21.91	339	eP	P	13 59 10.6	+0.2
	12nm,0.7s						
KOLN	Koldanda	22.54	335	eP	P	13 59 18.4	+1.3
	10nm,0.5s						
DANN	Dangsing	22.99	336	eP	P	13 59 19.6	-2.3
	13nm,0.6s						
MKAR	Makanchi Array	40.54	348	P	P	14 01 54.4	-1.5
	1.3nm,0.8s,baz=122,slow=4.4,SNR=8.6						
SONM	Songino Array	41.70	13	P	P	14 02 05.1	-0.5
	0.3nm,0.3s,baz=159,slow=4.3,SNR=2.6						
KURBB	Kurchatov Arra	44.99	346	P	P	14 02 31.6	-0.3
	1.3nm,0.6s,baz=168,slow=7.1,SNR=14						
ZALV	Zalesovo Beam	47.03	353	P	P	14 02 47.7	-0.3
	1.3nm,0.3s,baz=182,slow=6.7,SNR=7.6						
WRA	Warramunga Arr	48.13	125	P	P	14 02 57.1	+0.1
	0.2nm,0.6s,baz=289,slow=6.9,SNR=3.4						
BRTR	Keskin Array B	62.61	311	P	P	14 04 41.6	+0.3
	0.2nm,0.3s,baz=145,slow=6.0,SNR=2.3						
FINES	FINESS Array B	73.07	332	P	P	14 05 46.8	+0.3
	2.1nm,0.9s,baz=94,slow=7.5,SNR=2.9						
DBIC	Dimbokro	97.82	278	LR	LR	14 49 35.0	
	comp=Z,66nm,19.0s,baz=40,slow=34						

IDC 07 14:08:07.5±3.0, **4°.51N**×**93°.77E**, **h0**km, **mb3.5**/3, **mb1 3.7**/4, **mb1mx3.4**/27, **mbtmp3.5**/4, **Error ellipse: s-maj=112.2km s-min=26.6km az=62.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.76	20	Pn	Pn	14 11 38.5	+0.8
	baz=209,slow=12,SNR=4.2						
MKAR	Makanchi Array	43.28	348	P	P	14 16 10.7	-0.3
	0.3nm,0.5s,baz=166,slow=7.3,SNR=3.1						
WRA	Warramunga Arr	46.69	123	P	P	14 16 38.1	-0.4
	1.0nm,0.6s,baz=302,slow=9.1,SNR=8.2						
ASAR	Alice Springs	48.12	127	P	P	14 16 49.7	+0.1
	0.2nm,0.6s,baz=303,slow=7.8,SNR=6.5						

IDC 07 14:17:06.9±9.5, **7°.02S**×**153°.30E**, **h84**km±68km, **mb3.3**/3, **mb1 3.6**/4, **mb1mx3.2**/19, **mbtmp3.4**/4, **ML3.3**/1, **Error ellipse: s-maj=149.6km s-min=63.8km az=170.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.52	248	P	Pn	14 18 40.4	+0.2
	4.2nm,0.3s,baz=92,slow=7.5,SNR=15						
PMG				S	Sn	14 19 54.5	+1.3
	2.2nm,0.3s,baz=80,slow=15,SNR=4.4						
WRA	Warramunga Arr	22.43	233	P	P	14 21 57.6	-1.5
	0.9nm,0.8s,baz=64,slow=11,SNR=5.0						
ASAR	Alice Springs	24.92	226	P	P	14 22 22.6	+0.2
	1.0nm,0.7s,baz=59,slow=10,SNR=14						
STKA	Stephens Creek	27.03	202	P	P	14 22 42.1	+0.7
	1.1nm,0.6s,baz=17,slow=10,SNR=3.3						

IDC 07 14:35:48.0±1.6, **16°.92S**×**177°.82W**, **h0**km, **mb3.9**/7, **mb1 4.2**/7, **mb1mx3.9**/19, **mbtmp3.9**/7, **Error ellipse: s-maj=104.4km s-min=21.5km az=147.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.60	240	P	P	14 43 21.4	-0.1
	1.9nm,0.5s,baz=107,slow=10,SNR=7.1						
WRA	Warramunga Arr	45.38	258	P	P	14 44 08.9	+0.3
	0.5nm,0.5s,baz=97,slow=6.9,SNR=4.7						
ASAR	Alice Springs	45.61	253	P	P	14 44 10.0	-0.5
	3.2nm,0.6s,baz=89,slow=8.5,SNR=29						
ILAR	Eielson Array	84.80	13	P	P	14 48 24.0	+0.1
	0.3nm,0.4s,baz=217,slow=5.0,SNR=9.5						
TXAR	Lajitas Array	84.99	57	P	P	14 48 25.8	0.0
	0.4nm,0.6s,baz=204,slow=5.5,SNR=5.8						
PDAR	Pinedale Array	86.25	43	P	P	14 48 32.2	+0.3
	0.4nm,0.6s,baz=185,slow=4.5,SNR=3.9						
YKA	Yellowknife Ar	93.20	25	P	P	14 49 03.4	-0.5
	0.1nm,0.5s,baz=250,slow=4.3,SNR=3.6						

*IDC **07** 14:52:22.5±0.6, 32°.47N×105°.30E, h0km, mb3.9/14, mb1 4.0/17, mb1mx3.9/31, mbtmp3.9/17, ML3.7/2, MS3.2/2, Ms1 3.2/2, ms1mx2.6/45, Error ellipse: s-maj=26.3km s-min=13.5km az=54.0*

*ISCJB **07** 14:52:22.1±0.3, 32°.45N±0°.04×105°.47E±0°.04, h11km, mb3.9/14, MS3.9/1, Error ellipse: s-maj=5.8km s-min=3.8km az=151.9*

*BJI **07** 14:52:25.9, 32°.49N×105°.18E, h21km, mb3.9/5, ML4.1/18, Ms4.0/5, Ms7 3.5/5*

ISC 07 14:52:23.8±0.5, **32°.41N**±0°.04×**105°.38E**±0°.04, **h11**km, **n36**, σ**1s.34**/47, **mb3.9**/14, **Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	2.04	223	Pn	Pn	14 52 59.1	+0.9
CD2				Pg	Pg	14 53 03.4	+0.4
CD2				Sn	Sn	14 53 25.0	+1.3
CD2				Sg	Sg	14 53 29.0	-0.4
CD2				smax	smax		
	comp=N,5µm,0.5s						
CD2				smax	smax		
	comp=E,3µm,0.6s						
XAN	Xi'an	3.38	60	Pn	Pn	14 53 19.2	+2.6
XAN				Pg	Pg	14 53 29.0	+0.4
XAN				Sn	Sn	14 53 55.9	-0.8
XAN				Sg	Sg	14 54 10.0	-2.4
XAN				smax	smax		
	comp=N,500nm,0.7s						
XAN				smax	smax		
	comp=E,280nm,0.7s						
XAN				LR	LR		
	comp=N,180nm,7.5s						
XAN				LR	LR		
	comp=E,180nm,9.3s						
LZH	Lanzhou	3.88	341	Pn	Pn	14 53 25.9	+2.3
LZH				Pg	Pg	14 53 35.8	-2.4
LZH				Sn	Sn	14 54 08.8	-0.4
LZH				Sg	Sb	14 54 23.1	+3.7
LZH				smax	smax		
	comp=N,940nm,1.0s						
LZH				smax	smax		
	comp=E,2µm,0.6s						
LZH				LR	LR		
	comp=N,1µm,7.7s						
LZH				LR	LR		
	comp=E,1µm,5.2s						
GYA	Guiyang	6.04	169	Pn	Pn	14 53 58.1	+4.9
GYA				Pg	Pg	14 54 18.9	-0.6
GYA				smax	smax		
	comp=N,160nm,0.6s						
GYA				smax	smax		
	comp=E,120nm,0.6s						
KMI	Kunming	7.62	198	Pn	Pn	14 54 09.3	-5.8
KMI				Sn	Sn	14 55 39.7	-1.9
KMI				smax	smax		
	comp=N,28nm,0.9s						
KMI				smax	smax		
	comp=E,30nm,0.9s						
KMI				LR	LR		
	comp=N,190nm,5.9s						
KMI				LR	LR		
	comp=E,140nm,8.5s						
KMI				LR	LR		
	comp=Z,170nm,10.8s						
WHN	Wuhan	7.88	101	P	Pn	14 54 17.3	-1.0
WHN				S	Sn	14 55 46.6	-0.9
WHN				LR	LR		
	comp=Z,710nm,4.6s						
GTA	Gaotai	8.31	329	eP	Pn	14 54 24.0	-0.4
GTA				pP	pP	14 54 27.4	
GTA				sP		14 54 30.9	
GTA				S	Sn	14 55 55.0	-3.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GTA				LR	LR		
	comp=N,340nm,10.4s						
GTA				LR	LR		
	comp=E,260nm,10.0s						
GTA				LR	LR		
	comp=Z,270nm,10.9s						
CMAR	Chiang Mai Arr	15.06	204	Pn	Pn	14 55 57.7	+1.0
	baz=16,slow=13,SNR=4.9						
SONM	Songino Array	15.42	3	Pn	Pn	14 56 01.8	+0.4
	comp=Z,0.2nm,0.3s,baz=182,slow=13,SNR=8.2						
SONM				Lg	Lg	15 00 27.4	
	comp=Z,0.2nm,0.3s,baz=191,slow=29,SNR=3.6						
TAPN	Taplejung	16.13	256	eP	P	14 56 14.4	+0.2
	comp=Z,13nm,0.8s						
ODAN	Odare	16.59	255	eP	P	14 56 19.0	-0.2
	comp=Z,14nm,0.6s						
RAMN	Ramite	17.20	256	eP	P	14 56 26.1	+0.1
GUN	Gumba	17.45	260	eP	P	14 56 31.0	+2.2
	comp=Z,19nm,0.8s						
PKI	Pulchoki	17.96	260	eP	P	14 56 34.6	+0.2
PKIN	Phulchoki	17.97	260	eP	Pn	14 56 34.3	+0.4
	comp=Z,7.8nm,0.6s						
KKN	Kakani	17.99	260	eP	P	14 56 35.4	+0.8
	comp=Z,12nm,0.7s						
DMN	Daman	18.20	260	eP	P	14 56 37.4	+0.4
DANN	Dangsing	19.09	263	eP	Pn	14 56 48.3	+0.7
	comp=Z,11nm,0.6s						
KSRS	Korea Array	19.14	69	P	Pn	14 56 49.4	+1.6
	comp=Z,0.3nm,0.3s,baz=252,slow=10,SNR=15						
KSRS				LR	LR	15 03 30.9	
	comp=Z,19nm,20.2s,baz=225,slow=35						
KOLN	Koldanda	19.40	262	eP	P	14 56 49.0	-1.1
	comp=Z,20nm,0.9s						
PYUN	Piuthan	19.81	263	eP	P	14 56 54.6	0.0
	comp=Z,27nm,0.9s						
MKAR	Makanchi Array	22.75	316	P	P	14 57 26.0	0.0
	comp=Z,3.2nm,0.8s,baz=116,slow=13,SNR=19						
ZALV	Zalesovo Beam	26.05	332	P	P	14 57 56.5	-0.5
	comp=Z,1.3nm,0.5s,baz=132,slow=9.1,SNR=6.5						
AAK	Ala-Archa	26.41	302	P	P	14 58 01.3	+0.7
	comp=Z,0.5nm,0.3s,baz=143,slow=5.1,SNR=2.7						
KURBB	Kurchatov Arra	26.89	320	P	P	14 58 04.7	+0.2
	comp=Z,1.1nm,0.6s,baz=128,slow=10,SNR=21						
KURBB				PcP	PcP	15 01 26.1	-0.5
	comp=Z,0.5nm,0.5s,baz=119,slow=2.3,SNR=5.9						
ARCES	ARCESS Array B	56.52	335	P	P	15 02 04.0	-1.7
	comp=Z,1.9nm,0.8s,baz=70,slow=8.0,SNR=5.3						
BRTR	Keskin Array B	57.05	299	P	P	15 02 09.7	-0.4
	comp=Z,0.9nm,0.7s,baz=102,slow=6.7,SNR=6.8						
FINES	FINESS Array B	57.09	326	P	P	15 02 09.4	-0.4
	comp=Z,0.9nm,0.7s,baz=95,slow=8.4,SNR=4.3						
AKASG	Malin Array Be	57.29	313	P	P	15 02 10.6	-0.8
	comp=Z,1.1nm,0.6s,baz=68,slow=6.3,SNR=5.2						
WRA	Warramunga Arr	58.98	148	P	P	15 02 24.7	+1.2
	comp=Z,3.1nm,0.7s,baz=340,slow=7.9,SNR=33						
ASAR	Alice Springs	62.06	150	P	P	15 02 45.8	+1.2
	comp=Z,0.8nm,0.4s,baz=331,slow=6.8,SNR=11						
GERES	GERESS Array B	67.41	314	P	P	15 03 19.9	+0.5
	comp=Z,0.4nm,0.6s,baz=36,slow=14,SNR=2.7						
STKA	Stephens Creek	72.53	148	P	P	15 03 50.8	+0.1
	comp=Z,1.2nm,0.8s,baz=308,slow=6.0,SNR=4.8						
YKA	Yellowknife Ar	80.12	18	P	P	15 04 33.8	+0.4
	comp=Z,0.7nm,0.6s,baz=331,slow=5.3,SNR=11						
TORD	Torodi Ar. Bea	94.27	288	P	P	15 05 43.5	-0.2
	comp=Z,0.2nm,0.5s,baz=42,slow=5.4,SNR=2.8						
LBTB	Lobatse	95.06	244	LR	LR	15 48 40.6	
	comp=Z,40nm,19.1s,baz=109,slow=36						

IDC 07 15:19:56.3±4.1, **23°.77S**×**177°.44W**, **h115**km±44km, **mb3.6**/3, **mb1 3.9**/5, **mb1mx3.5**/19, **mbtmp3.8**/5, **Error ellipse: s-maj=60.8km s-min=30.0km az=130.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	11.18	30	P	Pn	15 22 33.3	+0.4
	4.3nm,0.3s,baz=203,slow=7.7,SNR=13						
AFI				S	Sn	15 24 31.4	-4.6
	7.6nm,0.3s,baz=94,slow=20,SNR=6.6						
URZ	Urewera	15.17	197	P	Pn	15 23 22.8	-1.6
	1.0nm,0.3s,baz=135,slow=3.6,SNR=7.9						
URZ				S	Sn	15 25 53.7	-19
	0.9nm,0.3s,baz=263,slow=18,SNR=6.8						
STKA	Stephens Creek	36.95	248	P	P	15 26 55.2	+0.9
	0.7nm,0.3s,baz=92,slow=11,SNR=8.5						
ASAR	Alice Springs	44.37	260	P	P	15 27 55.3	-0.2
	0.6nm,0.4s,baz=97,slow=6.7,SNR=34						
ASAR				PcP	PcP	15 29 36.9	-0.7
	0.5nm,0.8s,baz=111,slow=4.0,SNR=4.5						
WRA	Warramunga Arr	44.76	265	P	P	15 27 57.9	-0.8
	0.8nm,0.3s,baz=100,slow=6.8,SNR=29						
WRA				PcP	PcP	15 29 38.9	0.0
	0.4nm,0.8s,baz=100,slow=3.2,SNR=2.5						

*ISK **07** 15:23:02.6, 40°.06N×38°.63E, h12km, MD2.9*

*DDA **07** 15:23:03.6, 40°.03N×38°.66E, h7km, ML3.3*

*CSEM **07** 15:23:03.5±0.2, 40°.06N×38°.64E, h10km, ML3.3, Error ellipse: s-maj=4.4km s-min=3.7km az=107.0*

*ISCJB **07** 15:23:03.2±0.5, 40°.06N±0°.02×38°.64E±0°.03, h7km±5km, Error ellipse: s-maj=4.4km s-min=3.7km az=21.3*

ISC 07 15:23:03.6±1.0, **40°.07N**±0°.02×**38°.64E**±0°.02, **h14**km±10km, **n43**, σ**0s.66**/61, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUSE	Susehri	0.36	293	i P	Pg	15 23 11.8	+0.8
SUSE				i S	Sb	15 23 17.6	0.0
SUSE	Susehri	0.36	293	i P	Pg	15 23 11.8	+0.8
SUSE				i S	Sb	15 23 17.6	0.0
KELT	Kelkit	0.48	80	i P	Pg	15 23 13.0	-0.2
KELT				i S	Sg	15 23 19.1	-0.6
KELT	Kelkit	0.48	80	i P	Pg	15 23 13.0	-0.2
KELT				i S	Sg	15 23 19.1	-0.6
ILIC	ilic-Erzincan	0.62	185	ePG	Pg	15 23 15.2	-0.5
ILIC	ilic-Erzincan	0.62	185	ePg	Pg	15 23 15.2	-0.5
GUMT	Gumushane	0.76	58	ePG	Pg	15 23 17.9	-0.4
GUMT				eSG	Sg	15 23 28.3	0.0
GUMT	Gumushane	0.76	58	ePg	Pg	15 23 17.9	-0.4
GUMT				eSg	Sg	15 23 28.3	0.0
KEMA	Kemaliye	0.81	188	i P	Pg	15 23 18.5	-0.8
KEMA				i S	Sb	15 23 30.5	+0.3
KEMA	Kemaliye	0.81	188	i P	Pg	15 23 18.5	-0.8
KEMA				i S	Sb	15 23 30.5	+0.3
ESPY	Espiye-Giresun	0.85	5	ePG	Pg	15 23 20.4	+0.3
ESPY				eSG	Sb	15 23 32.0	+0.5
ESPY	Espiye-Giresun	0.85	5	ePg	Pg	15 23 20.4	+0.3
ESPY				eSg	Sb	15 23 32.0	+0.5
GRSN	GIRESUNGRSN	0.90	342	eP	Pg	15 23 21.1	0.0
GRSN				eS	Sg	15 23 32.6	-0.3
GRSN	GIRESUNGRSN	0.90	342	eP	Pg	15 23 21.1	0.0
GRSN				eS	Sg	15 23 32.6	-0.3
ERZN	Erzincan	0.96	120	ePG	Pg	15 23 21.4	-0.9
RSDY	Resadiye-TOKAT	1.05	289	ePG	Pb	15 23 22.7	-1.0
RSDY	Resadiye-TOKAT	1.05	289	ePg	Pb	15 23 22.7	-1.0
BAYT	Ayd˜–ntepe-Bay	1.20	74	ePN	Pn	15 23 25.7	-0.4
BAYT	Ayd˜–ntepe-Bay	1.20	74	ePn	Pn	15 23 25.7	-0.4
MACK	Trabzon	1.23	44	eP	Pb	15 23 27.2	+0.6
MACK				eS	Sb	15 23 42.1	-0.3
MACK	Trabzon	1.23	44	eP	Pb	15 23 27.2	+0.6
MACK				eS	Sb	15 23 42.1	-0.3
DARE	Darende-Malaty	1.29	210	ePN	Pg	15 23 33.3	+4.9
PTK	Pertek	1.31	153	ePN	Pn	15 23 27.1	-0.7
PTK	Pertek	1.31	153	ePn	Pn	15 23 27.1	-0.7
KOPT	Kop Dagi	1.43	91	eP	Pb	15 23 30.9	+0.7
KOPT				eS	Sg	15 23 51.3	+1.5
KOPT	Kop Dagi	1.43	91	eP	Pb	15 23 30.9	+0.7
ELZG	Elazig	1.59	170	eP	Pn	15 23 32.3	+0.7
ELZG				eS	Sb	15 23 53.9	+0.9
ELZG	Elazig	1.59	170	eP	Pn	15 23 32.3	+0.7
ELZG				eS	Sb	15 23 53.9	+0.9
MYA	Malataya	1.75	185	ePN	Pn	15 23 32.8	-0.8
MYA	Malataya	1.75	185	ePn	Pn	15 23 32.8	-0.8
MALT	Malatya	1.76	185	ePN	Pn	15 23 34.3	+0.5
MALT	Malatya	1.76	185	ePn	Pn	15 23 34.3	+0.5
SVRC	Sivrice-ELAZID	1.77	163	ePN	Pn	15 23 34.7	+0.7
SVRC	Sivrice-ELAZID	1.77	163	ePn	Pn	15 23 34.7	+0.7
AKCD	Akcadag	1.85	198	eP	Pb	15 23 37.9	+0.5
AKCD				eS	Sg	15 24 03.6	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKCD	Akcadag	1.85	198	eP	Pb	15 23 37.9	+0.5
BINT	Bingol	1.86	129	ePn	Pn	15 23 35.8	+0.5
BNGB	Bingˆ¶l	1.91	124	ePN	Pn	15 23 35.8	-0.1
BNN	Bunyan	2.48	242	ePN	Pn	15 23 42.9	-0.8
BNN	Bunyan	2.48	242	ePn	Pn	15 23 42.9	-0.8
DDEM	Demirkent	2.51	70	eP	Pb	15 23 49.0	+0.4
DDEM				eS	Sg	15 24 22.7	-1.7
YOZ	Yozgat	2.59	262	ePN	Pn	15 23 45.5	+0.3
YOZ	Yozgat	2.59	262	ePn	Pn	15 23 45.5	+0.3

*JMA **07** 15:29:13.6±0.1, 35.°39N×140.°45E, h54km±2km, M3.1*
*ISCJB **07** 15:29:13.2±0.5, 35.°33N±0.°03×140.°43E±0.°05, h62km±4km, mb3.4/5, Error ellipse: s-maj=7.1km s-min=4.8km az=149.8*
*IDC **07** 15:29:14.4±2.7, 35.°23N×140.°39E, h54km±23km, mb3.1/5, mb1 3.3/7, mb1mx3.2/26, mbtmp3.2/7, ML3.5/2, MS2.5/1, Ms1 2.5/1, ms1mx2.1/9, Error ellipse: s-maj=33.4km s-min=7.1km az=71.0*
ISC 07 15:29:14.3±0.9, **35.°34N**±0.°04×**140.°42E**±0.°05, **h56**km±7km, **n21**, σ1§**13**/32, **mb3.4**/5, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.20	294	P	Pn	15 29 22.9	-0.4
KTR	Katsuura	0.21	204	P	Pn	15 29 22.8	-0.6
KTR				S	Sn	15 29 29.5	-0.3
BSO4	Boso 4	0.35	191	P	Pn	15 29 24.2	-0.2
BSO4				S	Sn	15 29 33.0	+1.4
CHOJ	Chosi	0.51	44	P	Pn	15 29 25.0	-1.1
CHOJ				S	Sn	15 29 33.5	-1.1
BSO3	Boso 3	0.54	172	P	Pn	15 29 25.8	-0.4
BSO3				eS	Sn	15 29 36.2	+1.5
BSO2	Boso 2	0.65	155	S	Sn	15 29 39.1	+2.2
BSO1	Boso 1	0.82	146	P	Pn	15 29 28.7	-0.7
BSO1				eS	Sn	15 29 41.0	+0.5
JYT	Yasato	0.91	348	P	Pn	15 29 29.7	-1.3
JIM2	Oshima 3	1.02	233	P	Pn	15 29 31.5	-1.0
JIM2				S	Sn	15 29 44.6	-1.4
JOD2	Odawara 2	1.09	266	P	Pn	15 29 32.9	-0.6
JOD2				S	Sn	15 29 47.0	-0.6
JAG	Ashikaga	1.34	324	P	Pn	15 29 36.2	-0.6
JAG				eS	Sn	15 29 53.3	-0.2
JRY	Ryogami san	1.41	299	P	Pn	15 29 37.5	-0.2
JRY				eS	Sn	15 29 54.0	-1.3
MJAR	Matsushiro Arr	2.16	304	P	Pn	15 29 48.7	+0.8
	11nm,0.3s,baz=104,slow=14,SNR=93						
MJAR				S	Sn	15 30 14.7	+1.1
	12nm,0.3s,baz=42,slow=42,SNR=8.2						
MAT	Matsushiro	2.16	304	P	Pn	15 29 48.4	+0.5
MAT				S	Sn	15 30 15.9	+2.3
JHJ	Hachijo jima 2	2.28	194	P	Pn	15 29 48.8	-0.7
	48nm,0.3s,baz=58,slow=8.3,SNR=13						
JHJ				S	Sn	15 30 14.0	-2.4
	49nm,0.3s,baz=327,slow=22,SNR=9.9						
KSRS	Korea Array	10.29	285	P	Pn	15 31 43.5	+4.2
	0.1nm,0.3s,baz=99,slow=15,SNR=5.1						
KSRS				LR	LR	15 35 23.1	
	comp=Z,30nm,21.5s,baz=150,slow=36						
ZALV	Zalesovo Beam	42.48	314	P	P	15 37 03.4	-0.4
	0.5nm,0.5s,baz=108,slow=9.4,SNR=2.8						
MKAR	Makanchi Array	44.36	303	P	P	15 37 19.3	+0.3
	0.3nm,0.6s,baz=88,slow=10,SNR=3.4						
ILAR	Eielson Array	51.35	32	P	P	15 38 13.4	+0.6
	0.3nm,0.8s,baz=268,slow=6.3,SNR=5.2						
WRA	Warramunga Arr	55.28	187	P	P	15 38 41.4	-0.7
	0.6nm,0.7s,baz=1.4,slow=7.5,SNR=5.3						
ASAR	Alice Springs	59.01	187	P	P	15 39 09.2	+0.9
	0.2nm,0.8s,baz=15,slow=14,SNR=3.5						

*IDC **07** 15:31:41.6±0.6, 37.°24N×21.°80E, h0km, mb4.1/18, mb1 4.1/24, mb1mx4.0/36, mbtmp4.0/24, ML3.5/6, MS3.4/5, Ms1 3.4/5, ms1mx2.9/52, Error ellipse: s-maj=13.6km s-min=12.9km az=124.0*
*PDG **07** 15:31:44.9±1.0, 37.°25N×21.°54E, h11km±1km, ML4.0/10, Error ellipse: s-maj=1.2km s-min=1.1km az=90.0*
*THE **07** 15:31:45.8, 37.°24N×21.°65E, h0km±1km, ML4.2/11, Error ellipse: s-maj=2.0km s-min=0.7km az=224.0*
*HLW **07** 15:31:45.5, 36.°92N×21.°96E, h24km±15km, Md4.0, Ml4.0*
*MOS **07** 15:31:45.8±1.5, 37.°26N×21.°74E, h33km, mb4.5/22, Error ellipse: s-maj=6.1km s-min=4.0km az=109.9*
*CSEM **07** 15:31:45.1±0.1, 37.°17N×21.°57E, h20km, mb4.4/36, Ms3.2, Mw4.2, Error ellipse: s-maj=3.6km s-min=2.9km az=36.0*
*ATH **07** 15:31:45.0, 37.°27N×21.°60E, h11km±1km, MD3.5/33, ML3.9*
*NEIC **07** 15:31:48.6±0.7, 37.°30N×21.°69E, h50km±7km, mb4.2/29, Error ellipse: s-maj=8.5km s-min=5.4km az=192.0*
*BJI **07** 15:31:50.8, 37.°88N×22.°17E, h66km, mB4.8/1, mb4.5/7*
ISC 07 15:31:44.8±0.3, **37.°21N**±0.°02×**21.°63E**±0.°02, **h22**km±1km, **n528**, σ1§**48**/551, **mb4.3**/43, **MS3.3**/4, **16C-20D**, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.24	98	P	Pb	15 31 50.9	0.0
ITM				S	Sb	15 31 54.4	-0.7
ITM	Ithomi	0.24	98	ePG	Pb	15 31 50.9	0.0
ITM	Ithomi	0.24	98	P	Pb	15 31 50.9	0.0
ITM				S	Sb	15 31 54.4	-0.7
PYL	PYLOS	0.33	164	P	Pb	15 31 52.7	+0.8
PYL				S	Sb	15 31 58.2	+1.4
PYL	PYLOS	0.33	164	ePB	Pb	15 31 52.7	+0.8
PYL				eSB	Sb	15 31 58.8	+2.0
PYL	PYLOS	0.33	164	P	Pb	15 31 52.7	+0.8
PYL				S	Sb	15 31 57.4	+0.6
PYL				eSb	Sb	15 31 58.8	+2.0
VLX	Vlachokerasia	0.62	75	P	Pb	15 31 57.4	+0.4
VLX				S	Sb	15 32 05.8	+0.4
VLX	Vlachokerasia	0.62	75	ePB	Pb	15 31 57.5	+0.4
VLX	Vlachokerasia	0.62	75	ePb	Pb	15 31 57.5	+0.4
VLX				S	Sb	15 32 05.8	+0.4
DYR	Agios Nikonas	0.72	128	P	Pb	15 31 59.1	+0.4
DYR				S	Sn	15 32 11.1	+1.0
DYR	Agios Nikonas	0.72	128	ePG	Pn	15 31 59.5	-0.2
DYR	Agios Nikonas	0.72	128	P	Pb	15 31 59.1	+0.4
DYR	Agios Nikonas	0.72	128	ePg	Pn	15 31 59.5	-0.2
DYR				S	Sn	15 32 09.0	-1.1
RLS	Riolos of Patr	0.85	351	P	Pb	15 32 00.8	-0.1
RLS				S	Sn	15 32 13.0	-0.4
RLS	Riolos of Patr	0.85	351	ePB	Pb	15 32 01.0	+0.1
RLS	Riolos of Patr	0.85	351	ePb	Pb	15 32 01.0	+0.1
RLS				S	Sn	15 32 13.0	-0.4
GUR	Goura	0.92	38	P	Pb	15 32 01.5	-0.6
GUR				S	Sn	15 32 16.3	+1.2
GUR	Goura	0.92	38	ePG	Pb	15 32 01.7	-0.4
GUR	Goura	0.92	38	ePg	Pb	15 32 01.7	-0.4
GUR				S	Sn	15 32 15.3	+0.2
KLV	Kalavryta, Ach	0.93	26	ePB	Pb	15 32 01.7	-0.5
KLV	Kalavryta, Ach	0.93	26	ePb	Pb	15 32 01.7	-0.5
LAKA	Lakka	1.06	15	ePB	Pb	15 32 04.4	-0.1
LAKA	Lakka	1.06	15	P	Pb	15 32 04.3	-0.2
LAKA				S	Sn	15 32 19.3	+0.7
UPR	University Cam	1.08	7	P	Pb	15 32 05.2	+0.5
UPR				S	Sn	15 32 21.9	+3.0
UPR	University Cam	1.08	7	ePN	Pb	15 32 05.0	+0.3
UPR	University Cam	1.08	7	ePn	Pb	15 32 05.0	+0.3
UPR	University Cam	1.08	7	P	Pb	15 32 05.4	+0.7
UPR				S	Sn	15 32 19.8	+0.9
KFL	Anninata	1.12	323	P	Pn	15 32 05.4	+0.2
KFL				S	Sn	15 32 23.5	+3.6
KFL	Anninata	1.12	323	P	Pn	15 32 05.4	+0.2
KFL				S	Sn	15 32 21.9	+2.0
VLI	Veliai	1.16	115	P	Pb	15 32 06.8	+0.7
VLI				S	Sn	15 32 25.5	+4.7
VLI	Veliai	1.16	115	ePB	Pb	15 32 08.0	+1.9
VLI	Veliai	1.16	115	P	Pb	15 32 06.8	+0.7
VLI	Veliai	1.16	115	ePb	Pb	15 32 08.0	+1.9
VLI				S	Sn	15 32 24.0	+3.2
TRIZ	Trizonia	1.20	17	P	Pb	15 32 06.7	-0.1
TRIZ				S	Sn	15 32 25.5	+3.5
TRIZ	Trizonia	1.20	17	ePB	Pb	15 32 06.8	-0.1
TRIZ	Trizonia	1.20	17	ePn	Pb	15 32 06.8	-0.1
TRIZ				S	Sn	15 32 25.5	+3.5
EFP	Efpalio	1.23	10	P	Pb	15 32 07.7	+0.3
EFP				S	Sn	15 32 26.6	+3.9
EFP	Efpalio	1.23	10	ePB	Pb	15 32 07.7	+0.3
EFP	Efpalio	1.23	10	P	Pb	15 32 07.7	+0.3
EFP				S	Sn	15 32 25.2	+2.5
KALE	Kalithea	1.24	19	ePN	Pn	15 32 07.2	+0.2
KALE	Kalithea	1.24	19	ePn	Pn	15 32 07.2	+0.2
KALE				S	Sb	15 32 24.9	+1.7
VLS	Valsamata	1.27	320	P	Pn	15 32 07.8	+0.5
VLS				S	Sb	15 32 27.3	+3.4
VLS	Valsamata	1.27	320	ePG	Pn	15 32 07.6	+0.3
VLS	Valsamata	1.27	320	P	Pn	15 32 07.8	+0.5
VLS				S	Sb	15 32 25.0	+1.1
DID	Didima	1.31	77	P	Pb	15 32 09.2	+0.4
DID				S	Sb	15 32 28.7	+3.5
DID	Didima	1.31	77	ePB	Pb	15 32 09.9	+1.1
DID	Didima	1.31	77	P	Pb	15 32 09.2	+0.4
DID	Didima	1.31	77	ePb	Pb	15 32 09.9	+1.1
DID				S	Sb	15 32 26.8	+1.6
LTK	Loutraki	1.33	52	P	Pb	15 32 09.4	+0.3
LTK				S	Sb	15 32 28.3	+2.5
LTK	Loutraki	1.33	52	ePB	Pb	15 32 10.2	+1.1
LTK	Loutraki	1.33	52	P	Pb	15 32 09.4	+0.3
LTK	Loutraki	1.33	52	ePb	Pb	15 32 10.2	+1.1
LTK				S	Sb	15 32 28.3	+2.5
DSF	Desfina	1.39	30	P	Pb	15 32 10.4	+0.3
DSF	Desfina	1.39	30	P	Pb	15 32 10.3	+0.2
DSF				S	Sb	15 32 30.3	+2.8
KYTH	Kithira	1.46	129	P	Pb	15 32 13.0	+1.7
KYTH	Kithira	1.46	129	ePG	Pb	15 32 13.0	+1.7
KYTH	Kithira	1.46	129	P	Pb	15 32 13.0	+1.7
NAIG	Nisos Aigina	1.57	69	ePG	Pb	15 32 14.4	+1.2
NAIG	Nisos Aigina	1.57	69	ePg	Pb	15 32 14.4	+1.2
AXAR	Agios Charalam	1.75	27	P	Pb	15 32 17.2	+1.0
AXAR	Agios Charalam	1.75	27	P	Pb	15 32 17.2	+1.0
LKD2	Lefkada island	1.75	334	P	Pb	15 32 16.4	+0.2
LKD2				S	Sb	15 32 42.0	+4.2
LKD2	Lefkada island	1.75	334	ePG	Pb	15 32 16.3	+0.1
LKD2	Lefkada island	1.75	334	ePb	Pb	15 32 16.3	+0.1
LKR	Lokris	1.80	37	P	Pb	15 32 17.3	+0.3
LKR				S	Sb	15 32 41.0	+1.9
LKR	Lokris	1.80	37	ePG	Pb	15 32 18.2	+1.2
LKR	Lokris	1.80	37	P	Pb	15 32 17.3	+0.3
LKR	Lokris	1.80	37	ePg	Pb	15 32 18.2	+1.2
ATH	Athens Observa	1.82	65	P	Pb	15 32 17.3	-0.2
ATH	Athens Observa	1.82	65	ePN	Pb	15 32 17.2	-0.2
ATH	Athens Observa	1.82	65	ePn	Pb	15 32 17.2	-0.2
ATAL	Atalanti	1.84	36	P	Pb	15 32 18.2	+0.4
ATAL				S	Sb	15 32 41.8	+1.4
ATAL	Atalanti	1.84	36	P	Pb	15 32 18.2	+0.4
ATAL				S	Sb	15 32 41.8	+1.4
AGG	Agios Georgios	1.89	17	P	Pb	15 32 19.4	+0.8
AGG				S	Sb	15 32 42.2	+0.4
AGG	Agios Georgios	1.89	17	ePG	Pb	15 32 19.1	+0.5
AGG	Agios Georgios	1.89	17	ePg	Pb	15 32 19.1	+0.5
AGG	Agios Georgios	1.89	17	P	Pb	15 32 19.4	+0.8
AGG				S	Sb	15 32 42.2	+0.4
ANKY	Antikythira Is	1.90	134	ePN	Pb	15 32 19.8	+1.0
ANKY	Antikythira Is	1.90	134	ePn	Pb	15 32 19.8	+1.0
PTL	Penteli	1.96	64	P	Pb	15 32 19.0	-0.8
PTL	Penteli	1.96	64	ePB	Pb	15 32 19.1	-0.8
PTL	Penteli	1.96	64	P	Pb	15 32 19.0	-0.8
SMIA	Simia	2.08	36	P	Pb	15 32 21.6	-0.2
SMIA	Simia	2.08	36	P	Pb	15 32 21.6	-0.2
MRMA	Marmari	2.34	68	P	Pb	15 32 24.2	-2.0
MRMA	Marmari	2.34	68	P	Pb	15 32 24.2	-2.0
THL	Klokotos Trika	2.37	7	P	Pb	15 32 25.9	-0.8
THL	Klokotos Trika	2.37	7	ePN	Pb	15 32 26.4	-0.3
THL	Klokotos Trika	2.37	7	P	Pb	15 32 25.9	-0.8
THL	Klokotos Trika	2.37	7	ePn	Pb	15 32 26.4	-0.3
SKIA	Skiathos	2.43	36	P	Pb	15 32 26.3	-1.5
SKIA				S	Sb	15 32 56.5	-0.7
SKIA	Skiathos	2.43	36	P	Pb	15 32 26.3	-1.5
NEO	Neokhori	2.44	30	ePN	Pb	15 32 26.4	-1.5
NEO	Neokhori	2.44	30	ePn	Pb	15 32 26.4	-1.5
XOR	Xorichti	2.48	29	P	Pb	15 32 26.8	-1.8
XOR				S	Sb	15 32 59.1	+0.5
XOR	Xorichti	2.48	29	P	Pb	15 32 26.8	-1.8
JAN	Janina	2.52	346	P	Pb	15 32 28.1	-1.2
AOS	Alonnisos	2.64	42	P	Pn	15 32 27.9	+1.8
AOS				S	Sb	15 33 01.2	-2.1
AOS	Alonnisos	2.64	42	ePB	Pn	15 32 28.5	+2.4
AOS	Alonnisos	2.64	42	P	Pn	15 32 27.9	+1.8
AOS	Alonnisos	2.64	42	ePb	Pn	15 32 28.5	+2.4
AOS				S	Sb	15 33 01.2	-2.1
VAM	Vamos	2.75	130	P	Pn	15 32 30.4	+2.8
VAM				S	Sb	15 33 06.3	-0.1
VAM	Vamos	2.75	130	ePN	Pb	15 32 30.7	-2.5
VAM	Vamos	2.75	130	P	Pn	15 32 30.4	+2.8
VAM	Vamos	2.75	130	ePn	Pb	15 32 30.7	-2.5
KEK	Kerkira	2.88	331	P	Pn	15 32 31.5	+2.1
KEK				S	Sb	15 33 08.7	-1.6
KEK	Kerkira	2.88	331	ePN	Pn	15 32 31.8	+2.4
KEK				eSN	Sb	15 33 07.8	-2.5
KEK	Kerkira	2.88	331	P	Pn	15 32 31.5	+2.1
KEK	Kerkira	2.88	331	ePn	Pn	15 32 31.8	+2.4
KEK				eSn	Sb	15 33 07.8	-2.5
LIT	Litokhoron	2.96	13	P	Pn	15 32 33.7	+3.2
LIT	Litokhoron	2.96	13	ePB	Pb	15 32 34.3	-2.6
LIT	Litokhoron	2.96	13	P	Pn	15 32 33.7	+3.2
LIT	Litokhoron	2.96	13	ePb	Pb	15 32 34.3	-2.6
GVD	Gavdhos	3.09	139	Pn	Pb	15 32 37.4	-1.7
GVD	Gavdhos	3.09	139	Pn	Pb	15 32 37.4	-1.7
APE	Apeiranthos	3.12	91	P	Pn	15 32 34.8	+2.1
APE	Apeiranthos	3.12	91	ePN	Pn	15 32 35.0	+2.2
APE	Apeiranthos	3.12	91	⇑iP	Pn	15 32 34.9	+2.2
APE	Apeiranthos	3.12	91	P	Pn	15 32 34.8	+2.1
PAIG	Paliouri	3.15	30	P	Pn	15 32 35.9	+2.8
PAIG				S	Sb	15 33 15.6	-2.4
PAIG	Paliouri	3.15	30	P	Pn	15 32 35.9	+2.8
NEST	Nestorio	3.23	352	P	Pb	15 32 38.2	-3.3
PLG	Polygyros	3.46	24	ePN	Pn	15 32 41.3	+3.9
PLG	Polygyros	3.46	24	ePn	Pn	15 32 41.3	+3.9
KBN	Korca	3.47	349	i PN	Pn	15 32 41.2	+3.6
KBN	Korca	3.47	349	i Pn	Pn	15 32 41.2	+3.6
FNA	Florina	3.57	357	P	Pn	15 32 41.6	+2.6
FNA	Florina	3.57	357	ePN	Pn	15 32 42.3	+3.3
FNA	Florina	3.57	357	P	Pn	15 32 41.6	+2.6
FNA	Florina	3.57	357	ePn	Pn	15 32 42.3	+3.3
CHOS	Chios island	3.69	70	P	Pn	15 32 44.0	+3.3
CHOS	Chios island	3.69	70	ePN	Pn	15 32 43.2	+2.5
CHOS	Chios island	3.69	70	ePn	Pn	15 32 43.2	+2.5
CHOS	Chios island	3.69	70	P	Pn	15 32 44.0	+3.3
LAST	Lasithi	3.73	122	ePN	Pn	15 32 43.8	+2.7
LAST	Lasithi	3.73	122	ePn	Pn	15 32 43.8	+2.7
BIA	Bitola	3.81	356	ePn	Pn	15 32 44.8	+2.6
BIA	Bitola	3.81	356	ePn	Pn	15 32 44.8	+2.6
LIA	Limnos Island	3.87	45	P	Pn	15 32 46.5	+3.6
LIA	Limnos Island	3.87	45	P	Pn	15 32 46.5	+3.6
SIGR	SIGRI	3.88	58	P	Pn	15 32 45.3	+2.2
SIGR	SIGRI	3.88	58	P	Pn	15 32 45.3	+2.2
VAY	Valandovo	4.17	10	ePn	Pn	15 32 49.6	+2.6
VAY	Valandovo	4.17	10	ePn	Pn	15 32 50.1	+3.0
PRK	Paraskevi	4.18	60	ePN	Pb	15 32 52.9	-4.7
PRK	Paraskevi	4.18	60	ePn	Pb	15 32 52.9	-4.7
TIP	Timpagrande	4.31	299	ePn	Pn	15 32 49.6	+0.5
TIP	Timpagrande	4.31	299	ePn	Pn	15 32 49.6	+0.5
TIR	Tirane	4.35	342	eP	Pn	15 32 51.2	+1.6
TIR	Tirane	4.35	342	ePn	Pn	15 32 51.2	+1.6
TIR	Tirane	4.35	342	eP	Pn	15 32 51.2	+1.6
NVR	Nevrokopi	4.48	22	P	Pn	15 32 54.9	+3.5
NVR	Nevrokopi	4.48	22	P	Pn	15 32 54.9	+3.5
PHP	Peshkopia	4.56	349	i PN	Pn	15 32 54.7	+2.2
PHP	Peshkopia	4.56	349	i Pn	Pn	15 32 54.7	+2.2
CEL	Celeste	4.67	285	ePn	Pn	15 32 54.9	+0.9
CEL				eSn	Sn	15 33 46.5	-1.0
CEL	Celeste	4.67	285	ePn	Pn	15 32 54.9	+0.9
CEL				eSn	Sn	15 33 46.5	-1.0
TAR1	Taranto	4.74	316	ePn	Pn	15 32 56.1	+1.2
SKO	Skopje	4.76	358	ePn	Pn	15 32 58.0	+2.9
SKO	Skopje	4.76	358	ePn	Pn	15 32 58.5	+3.3
PE1	Pezze di Greco	4.86	319	ePn	Pn	15 32 57.7	+1.1
PUK	Puka	5.01	345	i PN	Pn	15 32 59.8	+1.1
PUK	Puka	5.01	345	i Pn	Pn	15 32 59.8	+1.1
ALN	Alexandroupoli	5.03	42	P	Pn	15 33 01.0	+2.0
ALN	Alexandroupoli	5.03	42	P	Pn	15 33 01.0	+2.0
ULC	Ulcinj	5.09	340	⇑iPn	Pn	15 33 01.0	+1.2
ULC				eSn	Sn	15 33 59.4	+1.5
ULC	Ulcinj	5.09	340	⇑iPn	Pn	15 33 01.0	+1.2
ULC				eSn	Sn	15 33 59.4	+1.5
BCI	Bajram Curri	5.29	347	i PN	Pn	15 33 04.5	+2.0
BCI	Bajram Curri	5.29	347	i Pn	Pn	15 33 04.5	+2.0
CUC	Castrocucco	5.33	303	ePn	Pn	15 33 04.9	+1.7
	78nm,0.6s						
CUC				eSn	Sn	15 34 04.5	+0.5
CUC	Castrocucco	5.33	303	ePn	Pn	15 33 04.9	+1.7
	78nm,0.6s						
CUC				eSn	Sn	15 34 04.5	+0.5
LTBQ	Tobruq	5.48	159	i P	Pn	15 33 07.2	+2.1
	SNR=23						
LTBQ				eS	Sn	15 34 07.4	-0.1
	SNR=23						
BUM	Brajici-Budva	5.50	338	⇓iPn	Pn	15 33 06.7	+1.2
BUM				eSn	Sn	15 34 10.0	+1.9
BUM	Brajici-Budva	5.50	338	⇓iPn	Pn	15 33 06.7	+1.2
BUM				eSn	Sn	15 34 10.0	+1.9
VTS	Vitosha	5.51	12	⇓iP	Pn	15 33 09.4	+3.8
TTG	Podgorica	5.52	341	⇑iPn	Pn	15 33 06.1	+0.5
TTG				eSn	Sn	15 34 10.4	+2.0
PDG	Podgorica	5.52	341	⇑iPn	Pn	15 33 06.1	+0.4
PDG				eSn	Sn	15 34 10.4	+1.9
PVY	Plav	5.53	347	⇓iPn	Pn	15 33 08.0	+2.1
PVY				eSn	Sn	15 34 11.0	+2.2
PVY	Plav	5.53	347	⇓iPn	Pn	15 33 08.0	+2.1
PVY				eSn	Sn	15 34 11.0	+2.2
HCY	Herceg Novi	5.76	336	⇑iPn	Pn	15 33 09.3	+0.4
HCY				eSn	Sn	15 34 15.6	+1.3
HCY	Herceg Novi	5.76	336	⇑iPn	Pn	15 33 09.3	+0.4
HCY				eSn	Sn	15 34 15.6	+1.3
IVA	Berane	5.81	347	⇓iPn	Pn	15 33 11.6	+1.9
IVA				eSn	Sn	15 34 16.9	+1.3
BEY	Berane	5.81	347	⇓iPn	Pn	15 33 11.6	+1.9
BEY				eSn	Sn	15 34 16.9	+1.2
WDD	Wield Dalam	5.88	259	ePn	Pn	15 33 10.9	+0.3
	66nm,0.4s						
WDD				eSn	Sn	15 34 15.3	-2.0
WDD	Wield Dalam	5.88	259	ePn	Pn	15 33 10.9	+0.3
	66nm,0.4s						
WDD				eSn	Sn	15 34 15.3	-2.0
NKY	Niksic	5.95	341	⇓iPn	Pn	15 33 11.9	+0.2
NKY				eSn	Sn	15 34 21.1	+1.9
NKY	Niksic	5.95	341	⇓iPn	Pn	15 33 11.9	+0.2
NKY				eSn	Sn	15 34 21.1	+1.9
BRY	Bratogost	6.16	338	⇓iPn	Pn	15 33 15.6	+1.1
BRY				eSn	Sn	15 34 25.0	+0.7
BRY	Bratogost	6.16	338	⇓iPn	Pn	15 33 15.6	+1.1
BRY				eSn	Sn	15 34 25.0	+0.7
UPM	Unac-Piva	6.34	342	⇓iPn	Pn	15 33 19.0	+1.9
UPM				eSn	Sn	15 34 29.5	+0.7
UPM	Unac-Piva	6.34	342	⇓iPn	Pn	15 33 19.0	+1.9
UPM				eSn	Sn	15 34 29.5	+0.7
PLE	Pljevlja	6.35	345	⇓iPn	Pn	15 33 18.6	+1.5
PLE				eSn	Sn	15 34 30.5	+1.5
PLE	Pljevlja	6.35	345	⇓iPn	Pn	15 33 18.6	+1.5
PLE				eSn	Sn	15 34 30.5	+1.5
LJBD	Adjabya	6.39	191	i P	Pn	15 33 19.6	+1.9
	SNR=22						
LJBD				eS	Sn	15 34 28.0	-2.1
	SNR=22						
BOLS	Boljevac	6.61	2	ePn	Pn	15 33 20.6	-0.1
GRUS	Gruza	6.71	354	ePn	Pn	15 33 22.7	+0.8
BBLS	Lazići	6.86	346	ePn	Pn	15 33 24.9	+0.8
DIVS	Divibare	6.99	350	⇑iPn	Pn	15 33 26.0	+0.1
TRUS	Trudelj	7.07	353	ePn	Pn	15 33 25.7	-1.2
ISP	Isparta	7.09	82	P	Pn	15 33 30.6	+3.2
ISP	Isparta	7.09	82	P	Pn	15 33 30.6	+3.2
ISP	Isparta	7.09	82	P	Pn	15 33 30.6	+3.2
LSRT	Sirt	7.37	215	eS	Sn	15 34 52.2	-2.0
	SNR=22						
HMAT	Matruh	7.60	142	AMP		15 35 00.0	
	comp=E,60μm,0.9s,logA/T=4.8,baz=142						
FGSL	Fruska Gora	8.05	351	ePn	Pn	15 33 39.8	-0.7
SWA2		8.57	157	P	Pn	15 33 43.3	-4.2
	baz=158						
SWA2				AMP		15 35 00.0	
	comp=E,120μm,0.3s,logA/T=5.6,baz=158						
SWA2				S	Sn	15 35 06.2	-17
	baz=158						
SWA2		8.57	157	P	Pn	15 33 43.3	-4.2
SWA2				S	Sn	15 35 06.2	-17
TIRR	Tirgusor	8.87	33	⇓iP	Pn	15 34 04.5	+13
MLR	Muntele Rosu	8.88	20	Pn	Pn	15 33 52.1	+0.2
MLR	Muntele Rosu	8.88	20	Pn	Pn	15 33 52.1	+0.2
	comp=E,0.0nm,0.3s,baz=147,slow=15,SNR=2.9						
MLR	Muntele Rosu	8.88	20	P	Pn	15 33 52.1	+0.2
LJFR	Jufra	9.44	213	i P	Pn	15 33 58.1	-1.5
	SNR=22						
CSS	Prodhromos	9.73	100	P	Pn	15 34 07.9	+4.4
	comp=E,21nm,1.0s						
BRTR	Keskin Array B	9.74	71	Pn	Pn	15 34 05.8	+2.0
BRTR	Keskin Array B	9.74	71	Pn	Pn	15 34 05.8	+2.0
	comp=E,0.2nm,0.3s,baz=264,slow=11,SNR=11						
BRTR	Keskin Array B	9.74	71	Pn	Pn	15 34 05.8	+2.0
VSL	Villasalto	9.89	287	ePn	Pn	15 34 04.3	-1.4
	comp=E,12nm,1.0s						
VSL				eSn	Sn	15 35 56.2	+0.2
VSL	Villasalto	9.89	287	ePn	Pn	15 34 04.3	-1.4
	comp=E,12nm,1.0s						
VSL				eSn	Sn	15 35 56.2	+0.2
KEST	Kesra	10.01	265	Pn	Pn	15 34 08.7	+1.4
KEST				Sn	Sn	15 35 56.9	-2.0
KEST	Kesra	10.01	265	Pn	Pn	15 34 08.7	+1.4
	comp=E,0.2nm,0.3s,baz=30,slow=5.3,SNR=6.1						
KEST				Sn	Sn	15 35 56.9	-2.0
	comp=E,0.1nm,0.3s,baz=24,slow=16,SNR=3.1						
KEST	Kesra	10.01	265	Pn	Pn	15 34 08.7	+1.4
KEST				Sn	Sn	15 35 56.9	-2.0
VOY	Vojsko	10.54	329	ePn	Pn	15 34 14.2	-0.4
VOY				e		15 34 27.8	
VOY				e		15 34 39.6	
VOY				e		15 34 57.7	
VOY	Vojsko	10.54	329	Pn	Pn	15 34 14.2	-0.4
SOKA	Soboth	10.65	335	⇑iPn	Pn	15 34 15.5	-0.6
SOKA	Soboth	10.65	335	⇑iPn	Pn	15 34 15.5	-0.6
SOKA	Soboth	10.65	335	⇑iPn	Pn	15 34 15.5	-0.6
OBKA	Obir	10.68	333	⇑iPn	Pn	15 34 18.0	+1.5
OBKA	Obir	10.68	333	⇑iPn	Pn	15 34 17.5	+1.0
OBKA	Obir	10.68	333	⇑iPn	Pn	15 34 17.5	+1.0
PSZ	Piszkesteto	10.78	354	P	Pn	15 34 17.8	0.0
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PSZ	Piszkesteto	10.78	354	Pn	Pn	15 34 17.8	0.0
	comp=Z,5.1nm,0.8s						
PSZ	Piszkesteto	10.78	354	⇓iP	Pn	15 34 19.1	+1.3
PSZ	Piszkesteto	10.78	354	P	Pn	15 34 17.8	0.0
	comp=Z,5.0nm,0.8s						
PGF	Pioggiola	11.07	303	eP	Pn	15 34 23.3	+1.4
	comp=Z,18nm,0.9s						
PGF	Pioggiola	11.07	303	eP	Pn	15 34 23.3	+1.4
PGF				pmax	pmax		
	comp=Z,18nm,0.9s						
PGF	Pioggiola	11.07	303	eP	Pn	15 34 23.3	+1.4
	comp=Z,18nm,0.9s						
PGF	Pioggiola	11.07	303	eP	Pn	15 34 23.3	+1.4
	comp=Z,9.1nm,0.9s						
VYHS	Vyhne	11.46	351	eP	Pn	15 34 27.4	+0.3
VYHS	Vyhne	11.46	351	ePN	Pn	15 34 27.4	+0.3
VYHS	Vyhne	11.46	351	eP	Pn	15 34 27.4	+0.3
HFRF	Wahat Farafira	11.52	149	P	Pn	15 34 24.7	-3.2
	baz=149						
HFRF	Wahat Farafira	11.52	149	P	Pn	15 34 24.7	-3.2
AMAG	Maghara	11.63	121	P	Pn	15 34 26.7	-2.8
	baz=120						
AMAG	Maghara	11.63	121	P	Pn	15 34 26.7	-2.8
CRVS	Cervenica-Dubn	11.69	359	eP	Pn	15 34 33.3	+3.1
CRVS	Cervenica-Dubn	11.69	359	ePN	Pn	15 34 33.2	+3.1
CRVS	Cervenica-Dubn	11.69	359	eP	Pn	15 34 33.3	+3.1
KOLS	Kolonicke sedl	11.72	2	eP	Pn	15 34 34.8	+4.1
KOLS	Kolonicke sedl	11.72	2	ePN	Pn	15 34 34.8	+4.1
MMAI	Mount Meron Ar	12.03	106	Pn	Pn	15 34 31.4	-3.6
MMAI				Sn	Sn	15 36 45.0	-3.5
MMAI	Mount Meron Ar	12.03	106	Pn	Pn	15 34 31.4	-3.6
	comp=Z,2.5nm,0.3s,baz=310,slow=11,SNR=8.5						
MMAI				Sn	Sn	15 36 45.0	-3.5
	comp=Z,1.3nm,0.3s,baz=279,slow=11,SNR=3.1						
SBF	Sospel	12.67	306	eP	Pn	15 34 48.5	+4.8
	comp=Z,15nm,0.7s						
SBF	Sospel	12.67	306	eP	Pn	15 34 48.5	+4.8
SBF				pmax	pmax		
	comp=Z,15nm,0.7s						
SBF	Sospel	12.67	306	eP	Pn	15 34 48.5	+4.8
	comp=Z,15nm,0.7s						
TREC	Trest	12.87	342	AMS	AMS	15 40 30.0	
	comp=Z,400nm,8.5s						
MORC	Moravsky Berou	12.90	348	eP	Pn	15 34 47.1	+0.3

MORC pmax pmax
comp=Z,3.0nm,0.8s
MORC Moravsky Berou 12.90 348 *e*P **Pn 15 34 47.1 +0.3**
comp=Z,3.0nm,0.8s
MORC Moravsky Berou 12.90 348 *e*P **Pn 15 34 47.1 +0.3**
comp=Z,3.0nm,0.8s
DAVOX Davos/Dischmat 12.94 321 Pn **Pn 15 34 49.5 +2.0**
DAVOX Sn **Sn 15 37 13.9 +3.1**
DAVOX Davos/Dischmat 12.94 321 Pn **Pn 15 34 49.5 +2.0**
comp=Z,0.3nm,0.3s,baz=154,slow=18,SNR=2.4
DAVOX Sn **Sn 15 37 13.9 +3.1**
comp=Z,0.4nm,0.3s,baz=352,slow=16,SNR=3.0
DAVOX LR LR 15 40 10.2
comp=Z,99nm,20.4s,baz=82,slow=39
DAVOX Davos/Dischmat 12.94 321 P **Pn 15 34 49.5 +2.0**
comp=Z,99nm,20.4s
DAVOX Sn **Sn 15 37 13.9 +3.1**
GERES GERESS Array B 12.98 336 Pn **Pn 15 34 45.6 -2.4**
GERES GERESS Array B 12.98 336 Pn **Pn 15 34 45.6 -2.4**
comp=Z,0.4nm,0.3s,baz=144,slow=16,SNR=19
LMR La Mourre 13.06 303 *e*P P 15 34 55.2 -3.9
LMR La Mourre 13.06 303 *e*P P 15 34 55.2 -3.9
LMR La Mourre 13.06 303 *e*P P 15 34 55.2 -3.9
KHC Kasperske Hory 13.27 336 *e*P **Pn 15 34 54.0 +2.1**
KHC Kasperske Hory 13.27 336 *e*P **Pn 15 34 54.0 +2.1**
KHC Kasperske Hory 13.27 336 *e*P **Pn 15 34 54.0 +2.1**
HDK1 Dakhla 13.39 148 P Pn 15 34 51.0 -2.5
baz=148
HDK1 Dakhla 13.39 148 P Pn 15 34 51.0 -2.5
EIL Elat 13.42 120 Pn **Pn 15 34 51.8 -2.1**
EIL Sn Sn 15 37 14.3 -8.1
EIL Elat 13.42 120 Pn **Pn 15 34 51.8 -2.1**
comp=Z,0.7nm,0.3s,baz=19,slow=1.2,SNR=7.0
EIL Sn Sn 15 37 14.3 -8.1
comp=Z,0.6nm,0.3s,baz=298,slow=20,SNR=4.5
MBDF Montbardon 13.49 308 *e*P Pn 15 34 59.5 +4.5
comp=Z,8.9nm,0.7s
MBDF Montbardon 13.49 308 *e*P Pn 15 34 59.5 +4.5
MBDF pmax pmax
comp=Z,9.0nm,0.7s
MBDF Montbardon 13.49 308 *e*P Pn 15 34 59.5 +4.5
comp=Z,8.9nm,0.7s
DPC Dobruska-Polom 13.68 345 *e*P **P 15 35 08.2 +2.2**
DPC MLR MLR
comp=Z,600nm,9.4s
DPC Dobruska-Polom 13.68 345 *e*P **P 15 35 08.2 +2.2**
DPC AMS AMS 15 41 10.0
comp=Z,600nm,9.4s
PRU Pruhonice 13.76 340 *e*P **P 15 35 08.5 +1.7**
PRU MLR MLR
comp=Z,500nm,10.5s
PRU Pruhonice 13.76 340 *e*P **P 15 35 08.5 +1.7**
PRU AMS AMS 15 41 30.0
comp=Z,500nm,10.5s
UPC Upice 13.89 345 *e*P **P 15 35 10.4 +2.1**
UPC Upice 13.89 345 *e*P **P 15 35 10.4 +2.1**
LPG La Plagne 13.89 311 *e*P Pn 15 35 04.8 +4.2
LPG La Plagne 13.89 311 *e*P Pn 15 35 04.8 +4.2
LPG La Plagne 13.89 311 *e*P Pn 15 35 04.8 +4.2
LPG La Plagne 13.89 311 *e*P Pn 15 35 04.8 +4.2
LPL La Plagne 13.91 311 *e*P P 15 35 05.7 -3.1
LPL La Plagne 13.91 311 *e*P P 15 35 05.7 -3.1
LPL La Plagne 13.91 311 *e*P P 15 35 05.7 -3.1
LPL La Plagne 13.91 311 *e*P P 15 35 05.7 -3.1
AKASG Malin Array Be 14.54 20 P **Pn 15 35 09.0 -0.1**
AKASG Malin Array Be 14.54 20 Pn **Pn 15 35 09.0 -0.1**
AKASG Malin Array Be 14.54 20 Pn **Pn 15 35 09.0 -0.1**
comp=Z,0.4nm,0.3s,baz=206,slow=13,SNR=3.5
AKASG Malin Array Be 14.54 20 Pn **Pn 15 35 09.0 -0.1**
CABF La Chapelle 14.88 314 *e*P **Pn 15 35 16.5 +2.6**
comp=Z,11nm,0.8s
CABF La Chapelle 14.88 314 *e*P **Pn 15 35 16.5 +2.6**
CABF pmax pmax
comp=Z,11nm,0.8s
CABF La Chapelle 14.88 314 *e*P **Pn 15 35 16.5 +2.6**
comp=Z,11nm,0.8s
HINF Hinteralfeld 15.17 319 *e*P **Pn 15 35 19.8 +2.1**
comp=Z,9.2nm,0.5s
HINF Hinteralfeld 15.17 319 *e*P **Pn 15 35 19.8 +2.1**
HINF pmax pmax
comp=Z,9.0nm,0.5s
HINF Hinteralfeld 15.17 319 *e*P **Pn 15 35 19.8 +2.1**
comp=Z,9.2nm,0.5s
CDF Champ du Feu 15.34 321 *e*P **Pn 15 35 21.8 +1.8**
comp=Z,7.1nm,0.7s
CDF Champ du Feu 15.34 321 *e*P **Pn 15 35 21.8 +1.8**
CDF pmax pmax
comp=Z,7.0nm,0.7s
CDF Champ du Feu 15.34 321 *e*P **Pn 15 35 21.8 +1.8**
comp=Z,7.1nm,0.7s
CLL Collm 15.37 339 *e*P **P 15 35 27.0 +2.3**
CLL pmax pmax
comp=Z,12nm,1.3s
CLL MLR MLR
comp=Z,200nm,19.3s
CLL Collm 15.37 339 *e*(PP) 15 35 27.0
comp=Z,12nm,1.3s
CLL Lm MLR 15 42 00.0
comp=Z,200nm,19.3s
CLL Collm 15.37 339 *e*P **P 15 35 27.0 +2.3**
comp=Z,200nm,19.3s
HAU Haudompre 15.56 319 *e*P **Pn 15 35 25.1 +2.4**
comp=Z,32nm,0.9s
HAU *e*R
comp=Z,176nm,17.2s
HAU Haudompre 15.56 319 *e*P **Pn 15 35 25.1 +2.4**
HAU pmax pmax
comp=Z,32nm,0.9s
HAU Haudompre 15.56 319 *e*P **Pn 15 35 25.1 +2.4**
comp=Z,32nm,0.9s
HAU Haudompre 15.56 319 *e*P **Pn 15 35 25.1 +2.4**
comp=Z,16nm,0.9s
SMF Signal de Mont 16.22 311 *e*P **P 15 35 34.9 +0.7**
comp=Z,4.6nm,0.4s
SMF Signal de Mont 16.22 311 *e*P **P 15 35 34.9 +0.7**
SMF pmax pmax
comp=Z,5.0nm,0.4s
SMF Signal de Mont 16.22 311 *e*P **P 15 35 34.9 +0.7**
comp=Z,4.6nm,0.4s
SMF Signal de Mont 16.22 311 *e*P **P 15 35 34.9 +0.7**
comp=Z,2.3nm,0.4s
LOR Lormes 16.52 313 *e*P **P 15 35 37.9 +0.3**
comp=Z,9.4nm,0.6s
LOR *e*R
comp=Z,191nm,17.0s
LOR Lormes 16.52 313 *e*P **P 15 35 37.9 +0.3**
comp=Z,9.4nm,0.6s
LOR Lormes 16.52 313 *e*P **P 15 35 37.9 +0.3**
comp=Z,4.7nm,0.6s
MEZF Maizieres J'vi 16.55 318 *e*P **P 15 35 37.8 0.0**
comp=Z,15nm,0.7s
MEZF Maizieres J'vi 16.55 318 *e*P **P 15 35 37.8 0.0**
comp=Z,15nm,0.7s
MEZF Maizieres J'vi 16.55 318 *e*P **P 15 35 37.8 0.0**
comp=Z,7.6nm,0.7s
AVF Avril sur Loir 16.58 311 *e*P **P 15 35 39.1 +0.9**
AVF Avril sur Loir 16.58 311 *e*P **P 15 35 39.1 +0.9**
AVF Avril sur Loir 16.58 311 *e*P **P 15 35 39.1 +0.9**
AVF Avril sur Loir 16.58 311 *e*P **P 15 35 39.1 +0.9**
CAF Calviac 16.62 304 *e*P **Pn 15 35 36.7 +0.3**
CAF Calviac 16.62 304 *e*P **Pn 15 35 36.7 +0.3**
CAF Calviac 16.62 304 *e*P **Pn 15 35 36.7 +0.3**
SSF Saint Saulge 16.62 312 *e*P **P 15 35 39.7 +1.0**
comp=Z,14nm,0.8s
SSF Saint Saulge 16.62 312 *e*P **P 15 35 39.7 +1.0**
SSF pmax pmax
comp=Z,15nm,0.8s
SSF Saint Saulge 16.62 312 *e*P **P 15 35 39.7 +1.0**
comp=Z,14nm,0.8s
SSF Saint Saulge 16.62 312 *e*P **P 15 35 39.7 +1.0**
comp=Z,7.2nm,0.8s
WLF Walferdange 16.73 323 P **P 15 35 42.3 +2.5**
WLF pmax pmax
comp=Z,11nm,0.8s
WLF Walferdange 16.73 323 P **P 15 35 42.3 +2.5**
comp=Z,11nm,0.8s
WLF Walferdange 16.73 323 P **P 15 35 42.3 +2.5**
comp=Z,11nm,0.8s
SUW Suwalki 16.84 3 *e*P **Pn 15 35 39.1 +0.1**
SUW pmax pmax
comp=Z,42nm,0.8s
SUW Suwalki 16.84 3 *e*Pn **Pn 15 35 39.1 +0.1**
comp=Z,42nm,0.8s
SUW Suwalki 16.84 3 *e*Pn **Pn 15 35 39.1 +0.1**
comp=Z,42nm,0.8s
KIV Kislovodsk 17.33 61 *e*P **P 15 35 47.8 +1.2**

KIV pmax pmax
comp=Z,6.0nm,1.0s
KIV Kislovodsk 17.33 61 *e*P **P 15 35 47.8 +1.2**
comp=Z,6.0nm,1.0s
KBZ Khabaz 17.42 61 P **P 15 35 49.7 +2.3**
KBZ Khabaz 17.42 61 P **P 15 35 49.7 +2.3**
KBZ Khabaz 17.42 61 P **P 15 35 49.7 +2.3**
comp=Z,0.1nm,0.3s,baz=276,slow=6.5,SNR=9.1
KBZ Khabaz 17.42 61 P **P 15 35 49.7 +2.3**
GIVF Givet 17.66 322 *e*P **P 15 35 52.0 +1.9**
comp=Z,24nm,0.8s
GIVF Givet 17.66 322 *e*P **P 15 35 52.0 +1.9**
GIVF pmax pmax
comp=Z,24nm,0.8s
GIVF Givet 17.66 322 *e*P **P 15 35 52.0 +1.9**
comp=Z,24nm,0.8s
GIVF Givet 17.66 322 *e*P **P 15 35 52.0 +1.9**
comp=Z,12nm,0.8s
ETSF Etsaut 17.89 295 *e*P **P 15 35 56.4 +3.6**
ETSF Etsaut 17.89 295 *e*P **P 15 35 56.4 +3.6**
ETSF Etsaut 17.89 295 *e*P **P 15 35 56.4 +3.6**
ZEI Tsey 17.92 65 *e*P **P 15 35 55.8 +2.5**
ZEI pmax pmax
comp=Z,2.0nm,0.4s
ZEI Tsey 17.92 65 *e*P **P 15 35 55.8 +2.5**
comp=Z,2.0nm,0.4s
BAIF Baives 17.94 321 *e*P **P 15 35 54.8 +1.6**
comp=Z,12nm,0.8s
BAIF Baives 17.94 321 *e*P **P 15 35 54.8 +1.6**
BAIF pmax pmax
comp=Z,12nm,0.8s
BAIF Baives 17.94 321 *e*P **P 15 35 54.8 +1.6**
comp=Z,12nm,0.8s
BAIF Baives 17.94 321 *e*P **P 15 35 54.8 +1.6**
comp=Z,5.8nm,0.8s
GNI Garni 18.27 74 P **P 15 35 58.6 +1.5**
comp=Z,5.6nm,0.8s
GNI Garni 18.27 74 LR LR 15 43 23.7
comp=Z,64nm,20.5s,baz=269,slow=39
GNI Garni 18.27 74 P **P 15 35 58.6 +1.5**
comp=Z,5.6nm,0.8s
SJPF Ste Jean 18.41 296 *e*P **Pn 15 36 01.0 +2.4**
comp=Z,14nm,0.8s
SJPF Ste Jean 18.41 296 *e*P **Pn 15 36 01.0 +2.4**
SJPF pmax pmax
comp=Z,15nm,0.8s
SJPF Ste Jean 18.41 296 *e*P **Pn 15 36 01.0 +2.4**
comp=Z,14nm,0.8s
SJPF Ste Jean 18.41 296 *e*P **Pn 15 36 01.0 +2.4**
comp=Z,7.2nm,0.8s
VORD Divnogorie 18.64 37 *e*P **Pn 15 36 01.4 +0.2**
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,8.0nm,0.5s
VORD pmax pmax
comp=Z,9.0nm,0.5s
VORD Divnogorie 18.64 37 *e*P **Pn 15 36 01.4 +0.2**
MFF Saint Martin d 18.68 307 *e*P **Pn 15 36 02.8 +1.0**
comp=Z,5.6nm,0.4s
MFF Saint Martin d 18.68 307 *e*P **Pn 15 36 02.8 +1.0**
MFF pmax pmax
comp=Z,6.0nm,0.4s
MFF Saint Martin d 18.68 307 *e*P **Pn 15 36 02.8 +1.0**
comp=Z,5.6nm,0.4s
MFF Saint Martin d 18.68 307 *e*P **Pn 15 36 02.8 +1.0**
comp=Z,2.8nm,0.4s
VSR Storozhevoye 18.74 36 *e*P Pn 15 36 08.5 +6.0
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,2.0nm,0.6s
VSR pmax pmax
comp=Z,6.0nm,0.6s
LDF La Druitiere 19.50 313 *e*P **Pn 15 36 12.0 +0.3**
comp=Z,13nm,0.6s
LDF La Druitiere 19.50 313 *e*P **Pn 15 36 12.0 +0.3**
LDF pmax pmax
comp=Z,13nm,0.6s
LDF La Druitiere 19.50 313 *e*P **Pn 15 36 12.0 +0.3**
comp=Z,13nm,0.6s
LDF La Druitiere 19.50 313 *e*P **Pn 15 36 12.0 +0.3**
comp=Z,6.3nm,0.6s
FLN La Foliniere 19.79 313 *e*P **P 15 36 14.5 +1.0**
comp=Z,24nm,0.8s
FLN *e*R
comp=Z,160nm,17.2s
FLN La Foliniere 19.79 313 *e*P **P 15 36 14.5 +1.0**
FLN pmax pmax
comp=Z,24nm,0.8s
FLN La Foliniere 19.79 313 *e*P **P 15 36 14.5 +1.0**
comp=Z,24nm,0.8s
FLN La Foliniere 19.79 313 *e*P **P 15 36 14.5 +1.0**
comp=Z,12nm,0.8s
VRHR Novokhopersk 19.87 39 *e*P **Pn 15 36 16.3 +0.3**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR Novokhopersk 19.87 39 *e*P **Pn 15 36 16.3 +0.3**
ESDC Sonseca Array 20.18 285 P **P 15 36 19.3 +1.4**
ESDC Sonseca Array 20.18 285 P **P 15 36 19.3 +1.4**
comp=Z,2.8nm,0.7s,baz=80,slow=12,SNR=12
ESDC Sonseca Array 20.18 285 P **P 15 36 19.3 +1.4**
OBN Obninsk 20.60 25‖ *e*P **P 15 36 22.7 +0.5**
OBN *e* 15 36 43.4
OBN *e*S **S 15 40 06.9 -4.4**
OBN pmax pmax
comp=Z,13nm,1.0s
OBN MLR MLR
comp=Z,100nm,17.0s
OBN Obninsk 20.60 25 *e*P **P 15 36 22.7 +0.5**
comp=Z,13nm,1.0s
SGMF Saint Gilles 20.83 310 *e*P **P 15 36 25.1 +0.4**
comp=Z,29nm,1.0s
SGMF Saint Gilles 20.83 310 *e*P **P 15 36 25.1 +0.4**
SGMF pmax pmax
comp=Z,29nm,1.0s
SGMF Saint Gilles 20.83 310 *e*P **P 15 36 25.1 +0.4**
comp=Z,29nm,1.0s
SGMF Saint Gilles 20.83 310 *e*P **P 15 36 25.1 +0.4**
comp=Z,14nm,1.0s
QUIF Quistinic 21.08 308 *e*P **P 15 36 27.6 +0.2**
comp=Z,24nm,0.8s
QUIF Quistinic 21.08 308 *e*P **P 15 36 27.6 +0.2**
QUIF pmax pmax
comp=Z,24nm,0.8s
QUIF Quistinic 21.08 308 *e*P **P 15 36 27.6 +0.2**
comp=Z,24nm,0.8s
QUIF Quistinic 21.08 308 *e*P **P 15 36 27.6 +0.2**
comp=Z,12nm,0.8s
ROSF Rostrenen 21.30 309 *e*P **P 15 36 30.6 +0.8**
comp=Z,40nm,0.7s
ROSF Rostrenen 21.30 309 *e*P **P 15 36 30.6 +0.8**
ROSF pmax pmax
comp=Z,40nm,0.7s
ROSF Rostrenen 21.30 309 *e*P **P 15 36 30.6 +0.8**
comp=Z,40nm,0.7s
ROSF Rostrenen 21.30 309 *e*P **P 15 36 30.6 +0.8**
comp=Z,20nm,0.7s
VSU Vasula 21.52 7 *e*P **P 15 36 32.4 +0.3**
VSU pmax pmax
comp=Z,14nm,0.7s
VSU Vasula 21.52 7 *e*P **P 15 36 32.4 +0.3**
comp=Z,14nm,0.7s
MDT Midelt 21.91 266 P **P 15 36 37.6 +0.9**
MDT Midelt 21.91 266 P **P 15 36 37.6 +0.9**
comp=Z,2.6nm,0.9s,baz=83,slow=12,SNR=7.9
MDT LR LR 15 46 08.0
comp=Z,72nm,18.1s,baz=29,slow=39
MDT Midelt 21.91 266 P **P 15 36 37.6 +0.9**
PBRG Braganca 22.32 291 *e*P **P 15 36 41.8 +0.9**
comp=Z,17nm,1.5s
PBRG Braganca 22.32 291 *e*P **P 15 36 41.8 +0.9**
comp=Z,17nm,1.5s
RST Umm Al-Ruwaisa 22.50 103 *e*P **P 15 36 41.6 -1.3**
RST AMb AMB 15 36 45.9
comp=Z,3.3nm,0.7s
RST Umm Al-Ruwaisa 22.50 103 *e*P **P 15 36 41.6 -1.3**
comp=Z,3.3nm,0.7s
MVO Moncorvo 22.52 289 *e*P **P 15 36 44.2 +1.1**
comp=Z,17nm,1.8s
MVO Moncorvo 22.52 289 *e*P **P 15 36 44.2 +1.1**
comp=Z,17nm,1.8s
MIB Mutribah 22.63 102 *e*P **P 15 36 43.4 -0.9**

MIB AMb AMB 15 36 46.3
comp=Z,38nm,0.7s
MIB Mutribah 22.63 102 *e*P **P 15 36 43.4 -0.9**
comp=Z,38nm,0.7s
NAY Al-Naaiem 22.80 103 *e*P **P 15 36 45.0 -1.1**
NAY AMb AMB 15 36 47.1
comp=Z,17nm,0.5s
NAY Al-Naaiem 22.80 103 *e*P **P 15 36 45.0 -1.1**
comp=Z,17nm,0.5s
PMRV Marv??o 22.84 284 *e*P **P 15 36 47.0 +0.6**
comp=Z,14nm,1.5s
PMRV Marv??o 22.84 284 *e*P **P 15 36 47.0 +0.6**
comp=Z,14nm,1.5s
HFS Hagfors 23.50 350 P **P 15 36 51.8 -1.0**
HFS Hagfors 23.50 350 P **P 15 36 51.8 -1.0**
comp=Z,4.5nm,0.4s,baz=163,slow=11,SNR=26
HFS Hagfors 23.50 350 P **P 15 36 51.8 -1.0**
comp=Z,5.0nm,0.4s
PMTG Montargil 23.51 284 *e*P **P 15 36 53.2 0.0**
comp=Z,18nm,1.6s
PMTG Montargil 23.51 284 *e*P **P 15 36 53.2 0.0**
comp=Z,18nm,1.6s
FINES FINESS Array B 24.41 5 P **P 15 37 01.2 -0.2**
FINES FINESS Array B 24.41 5 P **P 15 37 01.2 -0.2**
comp=Z,2.3nm,0.5s,baz=183,slow=7.4,SNR=10.0
FINES LR LR 15 47 45.9
comp=Z,142nm,18.0s,baz=90,slow=40
FINES FINESS Array B 24.41 5 P **P 15 37 01.2 -0.2**
comp=Z,142nm,18.0s
EKA Eskdalemuir Ar 24.72 325 P **P 15 37 04.6 +0.3**
EKA Eskdalemuir Ar 24.72 325 P **P 15 37 04.6 +0.3**
comp=Z,13nm,0.6s,baz=126,slow=9.5,SNR=24
EKA Eskdalemuir Ar 24.72 325 P **P 15 37 04.6 +0.3**
comp=Z,13nm,0.6s
ESK Eskdalemuir 24.73 325 *e*P **P 15 37 04.9 +0.5**
ESK pmax pmax
comp=Z,25nm,0.7s
ESK Eskdalemuir 24.73 325 *e*P **P 15 37 04.9 +0.5**
comp=Z,25nm,0.7s
ESK Eskdalemuir 24.73 325 *e*P **P 15 37 04.9 +0.5**
comp=Z,25nm,0.7s
NB2 NORSAR Subarra 24.74 348 P **P 15 37 03.9 -0.6**
comp=Z,2.8nm,0.6s,baz=155,slow=9.3
NB2 NORSAR Subarra 24.74 348 P **P 15 37 03.9 -0.6**
comp=Z,2.8nm,0.6s,SNR=1.7
NOA NORSAR Array B 24.74 348 P **P 15 37 04.2 -0.3**
NOA NORSAR Array B 24.74 348 P **P 15 37 04.2 -0.3**
comp=Z,3.4nm,0.6s,baz=156,slow=9.0,SNR=13
NOA LR LR 15 48 34.7
comp=Z,112nm,18.7s,baz=165,slow=41
NOA NORSAR Array B 24.74 348 P **P 15 37 04.2 -0.3**
comp=Z,112nm,18.7s
KAF Kangasniemi 25.09 5 *e*P **P 15 37 06.0 -1.6**
KAF Kangasniemi 25.09 5 *e*p **P 15 37 06.0 -1.6**
JOF Joensuu 26.41 10 *e*P **P 15 37 18.9 -0.6**
JOF Joensuu 26.41 10 *e*p **P 15 37 18.9 -0.6**
JOF Joensuu 26.41 10 *e*P **P 15 37 18.9 -0.6**
AKTK Aktyubinsk 29.08 51 P **P 15 37 43.0 -0.5**
comp=Z,1.0nm,0.6s
AKTO Aktyubinsk 29.08 51 P **P 15 37 43.0 -0.5**
AKTO pmax pmax
comp=Z,1.0nm,0.6s
AKTO Aktyubinsk 29.08 51 P **P 15 37 43.0 -0.5**
AKTO Aktyubinsk 29.08 51 P **P 15 37 43.0 -0.5**
comp=Z,1.4nm,0.6s,baz=235,slow=11,SNR=4.5
AKTO Aktyubinsk 29.08 51 P **P 15 37 43.0 -0.5**
TORD Torodi Ar. Bea 29.87 222 P **P 15 37 52.0 +1.2**
TORD Torodi Ar. Bea 29.87 222 P **P 15 37 52.0 +1.2**
comp=Z,1.8nm,0.7s,baz=30,slow=9.0,SNR=12
TORD Torodi Ar. Bea 29.87 222 P **P 15 37 52.0 +1.2**
ABKAR Akbulak array 30.08 54 *e*P **P 15 37 51.3 -1.0**
comp=Z,1.1nm,0.6s
ABKAR Akbulak array 30.08 54 *e*P **P 15 37 51.3 -1.0**
comp=Z,1.1nm,0.6s
ARU Arti 31.21 40*d i*P P 15 38 06.0 +3.7
ARU 15 39 05.0
ARU SS SS 15 44 57.8 -23
ARU pmax pmax
comp=Z,9.0nm,2.5s
ARU Arti 31.21 40 *i* P P 15 38 06.0 +3.7
comp=Z,9.0nm,2.5s
ARCES ARCESS Array B 32.45 3 P **P 15 38 12.9 -0.2**
ARCES ARCESS Array B 32.45 3 P **P 15 38 12.9 -0.2**
comp=Z,1.2nm,0.4s,baz=188,slow=10,SNR=14
ARCES ARCESS Array B 32.45 3 P **P 15 38 12.9 -0.2**
comp=Z,1.0nm,0.4s
BRVK Borovoye 37.02 49*c i*P **P 15 38 52.9 +0.2**
BRVK pmax pmax
comp=Z,4.0nm,0.7s
BRVK Borovoye 37.02 49 *e*P **P 15 38 52.5 -0.1**
comp=Z,4.0nm,0.8s
BRVK Borovoye 37.02 49 *i* P **P 15 38 52.9 +0.2**
comp=Z,4.0nm,0.7s
KKAR Karatay Array 37.39 65 *e*P **P 15 38 55.1 -0.9**
KKAR pmax pmax
comp=Z,1.0nm,0.6s
KKAR Karatay Array 37.39 65 *e*P **P 15 38 55.1 -0.9**
comp=Z,1.4nm,0.6s
KKAR Karatay Array 37.39 65 *e*P **P 15 38 55.1 -0.9**
comp=Z,1.4nm,0.6s
EKS2 Erkin-Say 39.83 65 *e*P **P 15 39 16.0 -0.6**
EKS2 pmax pmax
comp=Z,3.0nm,0.8s
EKS2 Erkin-Say 39.83 65 *e*P **P 15 39 16.0 -0.6**
comp=Z,3.2nm,0.8s
EKS2 Erkin-Say 39.83 65 *e*P **P 15 39 16.0 -0.6**
comp=Z,3.2nm,0.8s
AAK Ala-Archa 40.35 65*d i*P **P 15 39 21.6 +0.6**
AAK pmax pmax
comp=Z,5.0nm,1.0s
AAK Ala-Archa 40.35 65 P **P 15 39 20.0 -1.1**
comp=Z,3.3nm,1.0s
AAK Ala-Archa 40.35 65 *i* P **P 15 39 21.6 +0.6**
comp=Z,5.0nm,1.0s
TKM2 Tokmak 2 41.10 65 P **P 15 39 26.1 -1.1**
TKM2 pmax pmax
comp=Z,1.0nm,0.7s
TKM2 Tokmak 2 41.10 65 P **P 15 39 26.1 -1.1**
comp=Z,1.0nm,0.7s
TKM2 Tokmak 2 41.10 65 P **P 15 39 26.1 -1.1**
comp=Z,1.0nm,0.7s
KURK Kurchatov 42.15 53*c i*P **P 15 39 35.0 -0.5**
KURK pmax pmax
comp=Z,5.0nm,0.7s
KURK Kurchatov 42.15 53 *e*P **P 15 39 34.4 -1.1**
comp=Z,6.0nm,0.9s
KURK Kurchatov 42.15 53 *i* P **P 15 39 35.0 -0.5**
comp=Z,5.0nm,0.7s
NVS Novosibirsk 44.70 46 *e*P **P 15 39 54.8 -1.1**
NVS pmax pmax
comp=Z,13nm,0.7s
NVS pmax pmax
comp=E,5.0nm,0.7s
NVS Novosibirsk 44.70 46 *e*P **P 15 39 54.8 -1.1**
comp=E,13nm,0.7s
MKAR Makanchi Array 45.06 58 P **P 15 39 58.2 -0.8**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 45.06 58 P **P 15 39 58.1 -0.8**
MKAR Makanchi Array 45.06 58 P **P 15 39 58.1 -0.8**
comp=Z,3.2nm,0.6s,baz=274,slow=7.3,SNR=34
MKAR Makanchi Array 45.06 58 P **P 15 39 58.2 -0.8**
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 45.69 48 P **P 15 40 03.0 -0.8**
ZALV pmax pmax
comp=Z,7.0nm,0.5s
ZALV Zalesovo Beam 45.69 48 P **P 15 40 03.0 -0.8**
ZALV Zalesovo Beam 45.69 48 P **P 15 40 03.0 -0.8**
comp=Z,6.8nm,0.5s,baz=274,slow=8.6,SNR=38
ZALV Zalesovo Beam 45.69 48 P **P 15 40 03.0 -0.8**
comp=Z,7.0nm,0.5s
WMQ Urumqi 49.46 61 *e*P **P 15 40 32.7 -0.7**
PYUN Piuthan 51.67 81 *e*P **P 15 40 49.8 -0.6**
comp=Z,25nm,0.6s
DANN Dangsing 52.16 81 *e*P **P 15 40 53.7 -0.5**
comp=Z,39nm,0.7s
KOLN Koldanda 52.30 81 *e*P **P 15 40 54.1 -1.0**
comp=Z,6.4nm,0.5s
LSZ Lusaka 52.57 172 P **P 15 40 57.4 +0.4**
LSZ Lusaka 52.57 172 P **P 15 40 57.3 +0.4**
comp=Z,2.3nm,0.5s,baz=356,slow=8.9,SNR=5.8
LSZ Lusaka 52.57 172 P **P 15 40 57.4 +0.4**
DMN Daman 53.56 81 *e*P **P 15 41 03.8 -0.7**
comp=Z,18nm,0.6s
KKN Kakani 53.61 80 *e*P **P 15 41 03.8 -1.0**
comp=Z,8.1nm,0.5s

PKI	**Pulchoki**	**53.81**	**81**	*e*P	**P**	**15 41 05.3**	**-1.1**
	comp=Z,3.5nm,0.3s						
GUN	**Gumba**	**54.03**	**80**	*e*P	**P**	**15 41 07.1**	**-0.9**
	comp=Z,9.5nm,0.4s						
RAMN	**Ramite**	**55.04**	**81**	*e*P	**P**	**15 41 14.0**	**-1.3**
	comp=Z,23nm,0.7s						
ODAN	**Odare**	**55.70**	**80**	*e*P	**P**	**15 41 18.4**	**-1.6**
	comp=Z,4.0nm,0.4s						
TAPN	**Taplejung**	**55.73**	**80**	*e*P	**P**	**15 41 19.1**	**-1.2**
	comp=Z,5.3nm,0.4s						
LSA	**Lhasa**	**57.32**	**76**	*e*P	**P**	**15 41 30.6**	**-1.2**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.5s						
LSA	**Lhasa**	**57.32**	**76**	*e*P	**P**	**15 41 30.6**	**-1.2**
	comp=Z,4.1nm,0.5s						
LSA	**Lhasa**	**57.32**	**76**	*e*P	**P**	**15 41 30.6**	**-1.2**
	comp=Z,4.0nm,0.5s						
SCHQ	**Schefferville**	**59.77**	**318**	P	**P**	**15 41 47.5**	**-0.4**
SCHQ	**Schefferville**	**59.77**	**318**	P	**P**	**15 41 47.5**	**-0.4**
	comp=Z,2.9nm,1.0s,baz=71,slow=7.8,SNR=3.6						
SCHQ	**Schefferville**	**59.77**	**318**	P	**P**	**15 41 47.5**	**-0.4**
SONM	**Songino Array**	**60.39**	**51**	P	**P**	**15 41 51.1**	**-1.3**
SONM	**Songino Array**	**60.39**	**51**	P	**P**	**15 41 51.1**	**-1.3**
	comp=Z,1.5nm,0.6s,baz=298,slow=9.4,SNR=5.0						
SONM	**Songino Array**	**60.39**	**51**	P	**P**	**15 41 51.1**	**-1.3**
	comp=Z,2.0nm,0.6s						
ULN	**Ulaanbaatar**	**60.78**	**50**	*e*P	**P**	**15 41 54.2**	**-0.9**
	comp=Z,1.5nm,0.8s						
ULN	**Ulaanbaatar**	**60.78**	**50**	*e*P	**P**	**15 41 54.2**	**-0.9**
	comp=Z,1.5nm,0.8s						
BOSA	**Boshof**	**65.57**	**176**	P	**P**	**15 42 27.9**	**+1.0**
BOSA	**Boshof**	**65.57**	**176**	P	**P**	**15 42 27.9**	**+1.0**
	comp=Z,2.4nm,0.9s,baz=14,slow=8.0,SNR=4.6						
BOSA	**Boshof**	**65.57**	**176**	P	**P**	**15 42 27.9**	**+1.0**
	comp=Z,2.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**66.85**	**56**	*e*P	P	15 42 31.0	-4.2
HHC				sP	sP	15 42 59.9	+15
HHC				PP	**PP**	**15 45 00.3**	**-1.9**
HHC				ScP		15 46 54.3	
HHC				PcS		15 47 02.8	
HHC				S	S	15 51 15.5	-11
HHC				sS	sS	15 51 49.3	+11
HHC				ScS	SKSac	15 52 17.2	-14
HHC				SS	SS	15 55 35.5	-8.9
HHC				pmax	pmax		
	comp=Z,20nm,0.7s						
KMI	**Kunming**	**68.52**	**74**	P	**P**	**15 42 45.4**	**-0.7**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YKA	**Yellowknife Ar**	**74.59**	**341**	P	**P**	**15 43 22.9**	**+1.1**
YKA	**Yellowknife Ar**	**74.59**	**341**	P	**P**	**15 43 22.8**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=34,slow=5.6,SNR=3.3						
YKA	**Yellowknife Ar**	**74.59**	**341**	P	**P**	**15 43 22.9**	**+1.1**
KSAR	**Wonju Array Be**	**79.24**	**51**	P	**P**	**15 43 48.4**	**0.0**
KSAR	**Wonju Array Be**	**79.24**	**51**	P	**P**	**15 43 48.4**	**0.0**
KSRS	**Korea Array**	**79.25**	**51**	P	**P**	**15 43 48.4**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=312,slow=4.8,SNR=12						
KSRS	**Korea Array**	**79.25**	**51**	P	**P**	**15 43 48.4**	**-0.1**
	comp=Z,2.0nm,0.6s						
TKL	**Tuckaleechee C**	**79.82**	**307**	P	**P**	**15 43 52.5**	**+0.9**
TKL	**Tuckaleechee C**	**79.82**	**307**	P	**P**	**15 43 52.5**	**+0.9**
	comp=Z,10nm,0.9s,baz=56,slow=23,SNR=12						
TKL	**Tuckaleechee C**	**79.82**	**307**	P	**P**	**15 43 52.5**	**+0.9**
	comp=Z,11nm,0.9s						
MJAR	**Matsushiro Arr**	**86.02**	**46**	P	**P**	**15 44 23.8**	**+0.1**
MJAR	**Matsushiro Arr**	**86.02**	**46**	P	**P**	**15 44 23.8**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=348,slow=18,SNR=4.1						
MJAR	**Matsushiro Arr**	**86.02**	**46**	P	**P**	**15 44 23.8**	**+0.1**
	comp=Z,2.0nm,0.8s						
WRA	**Warramunga Arr**	**119.61**	**93**	PKP	**PKPdf**	**15 50 32.7**	**-0.6**
WRA	**Warramunga Arr**	**119.61**	**93**	PKP	**PKPdf**	**15 50 32.7**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=316,slow=1.8,SNR=3.2						
ASAR	**Alice Springs**	**121.19**	**97**	PKP	**PKPdf**	**15 50 36.0**	**-0.3**
ASAR	**Alice Springs**	**121.19**	**97**	PKP	**PKPdf**	**15 50 36.0**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=310,slow=1.9,SNR=7.5						

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*IDC **07** 15:43:53.6±3.8, 61°.07S×22°.10W, h0km, mb4.1/2, mb1 4.1/3, mb1mx3.7/16, mbtmp4.0/3, ML4.0/1, Error ellipse: s-maj=204.3km s-min=37.4km az=84.0*

ISC 07 15:44:00.1±2.2**, 60°.8S**±0°.2×**18°.0W**±0°.7**, h10**km**, n10,** σ1^s**94**/10**, East of South Sandwich Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**10.66**	**162**	*e*Pn	**Pn**	**15 46 35.1**	**+2.4**
VNA1	**Neumayer--Stat**	**10.66**	**162**	*e*Sn	**Sn**	**15 48 31.8**	**-0.1**
VNA2	**Neumayer--Watz**	**11.04**	**162**	*e*Pn	**Pn**	**15 46 39.2**	**+1.3**
	baz=319,slow=12						
VNA2	**Neumayer--Watz**	**11.04**	**162**	*e*Sn	**Sn**	**15 48 40.7**	**-0.5**
	baz=319,slow=12						
SNAA	**Sanae**	**12.46**	**157**	*e*Pn	Pn	15 47 00.3	+3.0
SNAA	**Sanae**	**12.46**	**157**	*e*Sn	**Sn**	**15 49 14.3**	**-1.7**
SNAA	**Sanae**	**12.46**	**157**	Pn	**Pn**	**15 46 59.8**	**+2.5**
	0.8nm,0.3s,baz=327,slow=17,SNR=19						
SNAA				Sn	**Sn**	**15 49 14.7**	**-1.3**
	0.4nm,0.3s,baz=333,slow=19,SNR=4.0						
TORD	**Torodi Ar. Bea**	**75.35**	**20**	P	**P**	**15 55 44.2**	**+0.8**
	1.8nm,0.8s,baz=197,slow=6.6,SNR=8.6						
ASAR	**Alice Springs**	**92.81**	**154**	P	**P**	**15 57 10.2**	**-2.6**
	0.4nm,0.8s,baz=192,slow=4.9,SNR=5.8						
SONM	**Songino Array**	**146.17**	**87**	PKPbc	**PKPab**	**16 03 40.2**	**-0.1**
	1.5nm,0.6s,baz=286,slow=3.4,SNR=4.7						

MAN 07 15:46:19, 19°.35N×121°.16E, h4km**, mb4.6, ML3.4, MS3.3, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**1.14**	**207**	⇓*i*P	Pg	15 46 40.3	-0.5
PIP				*e*S	Sg	15 46 52.4	-3.2
APYP	**Conner**	**1.48**	**177**	*e*P	Pn	15 46 46.0	-0.4
APYP				*e*S	Sn	15 46 57.3	-8.9
ABRA	**Dolores**	**1.74**	**194**	*e*P	Pn	15 46 50.1	0.0
ABRA				*e*S	Sn	15 46 59.2	-13

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*IDC **07** 15:54:48.8±0.8, 53°.05N×173°.16E, h0km, mb3.7/11, mb1 4.0/12, mb1mx3.8/29, mbtmp3.7/12, ML3.8/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/42, Error ellipse: s-maj=29.8km s-min=14.3km az=164.0*

*NEIC **07** 15:54:50.0±1.0, 52°.97N×173°.16E, h8km±7km, mb4.1/8, ML3.8(AEIC), Error ellipse: s-maj=11.1km s-min=6.3km az=180.0*

*ISCJB **07** 15:54:49.1±0.8, 52°.92N±0°.07×173°.10E±0°.06, h16km±6km, mb3.8/17, MS2.9/2, Error ellipse: s-maj=12.7km s-min=5.8km az=10.7*

ISC 07 15:54:49.5±1.8**, 53°.02N**±0°.10×**173°.18E**±0°.04**, h5**km±12km**, n47,** σ0^s**95**/51**, mb3.9**/17**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**0.14**	**185**	P	**Pg**	**15 54 51.9**	**-0.4**
FX1				Pn		15 54 52.0	
FX1				Sn	**Sg**	**15 54 53.9**	**-0.2**
FX1	**Attu Island--F**	**0.14**	**185**	Pn	**Pg**	**15 54 52.0**	**-0.2**
	9μm,0.3s,baz=343,slow=11						
FX1				Sn	**Sg**	**15 54 53.9**	**-0.2**
	11μm,0.3s,baz=322,slow=14,SNR=348						
SMY	**Shemya**	**0.63**	**117**	P	**Pg**	**15 55 01.2**	**-0.3**
SMY				S	**Sg**	**15 55 09.6**	**0.0**
LSNW	**Little Sitkin**	**3.42**	**106**	P	**Pn**	**15 55 44.3**	**+0.9**
LSSA	**Little Sitkin**	**3.43**	**106**	P	**Pn**	**15 55 44.1**	**+0.5**
LSSE	**Little Sitkin**	**3.47**	**106**	P	**Pn**	**15 55 44.5**	**+0.4**
CETU	**Semis' Tuman**	**4.00**	**103**	P	**Pn**	**15 55 52.4**	**+1.1**
AMKA	**Amchitka**	**4.11**	**111**	P	**Pn**	**15 55 52.5**	**-0.4**
AMKA				S	**Sn**	**15 56 40.6**	**-0.7**
PETK	**Petropavlovsk-**	**9.33**	**277**	Pn	**Pn**	**15 57 06.2**	**+1.7**
PETK				Sn	**Sn**	**15 58 49.2**	**-0.5**
PETK	**Petropavlovsk-**	**9.33**	**277**	Pn	**Pn**	**15 57 06.2**	**+1.7**
	1.0nm,0.3s,baz=94,slow=19,SNR=22						
PETK				Sn	**Sn**	**15 58 49.2**	**-0.5**
	1.8nm,0.3s,baz=93,slow=21,SNR=8.8						
UNV	**Unalaska Valle**	**12.14**	**78**	*e*Pn	Pn	15 57 39.6	-3.3
BILL	**Bilibino**	**15.43**	**350**	*e*Pn	**P**	**15 58 30.3**	**-1.9**
	3.1nm,1.1s						
KDAK	**Kodiak Island**	**19.87**	**62**	*e*P	**P**	**15 59 20.6**	**-0.5**
	6.3nm,0.5s						
RSO	**Redoubt South**	**19.92**	**55**	*e*P	**P**	**15 59 22.2**	**+0.2**
ASAJ	**Asahikawa**	**21.97**	**258**	LR	LR	16 06 25.2	
	comp=Z,51nm,21.1s,baz=285,slow=32						
SML	**Sawmill**	**22.20**	**51**	*e*P	**P**	**15 59 48.0**	**+1.6**
	2.8nm,0.6s						
MCK	**McKinley**	**22.21**	**46**	P	**P**	**15 59 48.0**	**+1.6**
	6.0nm,0.6s						
COLA	**College**	**22.90**	**44**	*e*P	**P**	**15 59 54.2**	**+0.5**
	4.3nm,0.8s						
ILAR	**Eielson Array**	**23.29**	**44**	P	**P**	**15 59 57.2**	**-0.5**
ILAR	**Eielson Array**	**23.29**	**44**	P	**P**	**15 59 57.2**	**-0.5**
	2.0nm,0.7s,baz=251,slow=8.8,SNR=26						
ILAR				LR	LR	16 08 20.7	
	comp=Z,42nm,18.8s,baz=305,slow=35						
PAX	**Paxson**	**23.64**	**49**	*e*P	**P**	**16 00 00.8**	**-0.6**
	3.0nm,0.7s						
MENT	**Mentasta**	**24.44**	**49**	*e*P	**P**	**16 00 09.9**	**+1.1**
EGAK	**Eagle**	**25.71**	**45**	*e*P	**P**	**16 00 18.8**	**-1.5**
	2.7nm,0.2s						
INK	**Inuvik**	**29.07**	**38**	P	**P**	**16 00 50.4**	**+0.1**
INK	**Inuvik**	**29.07**	**38**	P	**P**	**16 00 50.4**	**+0.1**
	0.5nm,0.4s,baz=346,slow=24,SNR=4.0						
DLBC	**Dease Lake**	**31.59**	**57**	*e*P	**P**	**16 01 13.7**	**+0.9**
YKA	**Yellowknife Ar**	**37.67**	**46**	P	**P**	**16 02 05.5**	**+0.4**
YKA	**Yellowknife Ar**	**37.67**	**46**	P	**P**	**16 02 05.5**	**+0.4**
	0.8nm,0.7s,baz=287,slow=8.0,SNR=9.4						
SONM	**Songino Array**	**41.47**	**291**	P	**P**	**16 02 37.7**	**+0.5**
SONM	**Songino Array**	**41.47**	**291**	P	**P**	**16 02 37.7**	**+0.5**
	1.0nm,0.7s,baz=64,slow=8.5,SNR=2.2						
NVAR	**Mina Array Bea**	**48.16**	**79**	P	**P**	**16 03 32.2**	**+1.6**
NVAR	**Mina Array Bea**	**48.16**	**79**	P	**P**	**16 03 32.2**	**+1.6**
	0.4nm,0.7s,baz=294,slow=9.4,SNR=3.0						
PDAR	**Pinedale Array**	**50.41**	**69**	P	**P**	**16 03 47.4**	**-0.5**
PDAR	**Pinedale Array**	**50.41**	**69**	P	**P**	**16 03 47.4**	**-0.5**
	0.9nm,0.8s,baz=291,slow=3.8,SNR=6.5						
MKAR	**Makanchi Array**	**55.07**	**303**	P	**P**	**16 04 20.8**	**-1.3**
MKAR	**Makanchi Array**	**55.07**	**303**	P	**P**	**16 04 20.8**	**-1.3**
	0.5nm,0.4s,baz=46,slow=6.3,SNR=12						
TKM2	**Tokmak 2**	**61.17**	**304**	P	**P**	**16 05 02.5**	**-2.6**
AAK	**Ala-Archa**	**61.94**	**304**	P	**P**	**16 05 09.4**	**-0.7**
EKS2	**Erkin-Say**	**62.27**	**305**	P	**P**	**16 05 12.0**	**-0.4**
	1.3nm,0.8s						
TXAR	**Lajitas Array**	**63.17**	**76**	P	**P**	**16 05 17.8**	**-0.6**
TXAR	**Lajitas Array**	**63.17**	**76**	P	**P**	**16 05 17.8**	**-0.6**
	0.4nm,0.4s,baz=293,slow=6.5,SNR=6.5						
CMAR	**Chiang Mai Arr**	**66.01**	**269**	P	**P**	**16 05 37.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**66.01**	**269**	P	**P**	**16 05 37.4**	**+0.3**
	0.5nm,0.5s,baz=27,slow=6.1,SNR=3.7						
WRA	**Warramunga Arr**	**80.07**	**217**	P	**P**	**16 06 59.9**	**-0.2**
WRA	**Warramunga Arr**	**80.07**	**217**	P	**P**	**16 06 59.9**	**-0.2**
	0.5nm,0.8s,baz=28,slow=5.9,SNR=3.0						
ASAR	**Alice Springs**	**83.65**	**216**	P	**P**	**16 07 19.1**	**+0.3**
ASAR	**Alice Springs**	**83.65**	**216**	P	**P**	**16 07 19.1**	**+0.3**
	0.3nm,0.7s,baz=25,slow=5.5,SNR=8.4						

IDC 07 16:10:48.2±2.3**, 13°.04S×70°.03W, h0**km**, mb3.6**/2**, mb1 3.8**/3**, mb1mx3.6**/20**, mbtmp3.6**/3**, ML3.6**/1**, Error ellipse: s-maj=86.4km s-min=36.1km az=59.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.71**	**151**	Pn	Pn	16 11 47.4	-0.2
	3.3nm,0.3s,baz=319,slow=7.4,SNR=122						
TORD	**Torodi Ar. Bea**	**75.70**	**73**	P	P	16 22 36.2	0.0
	0.1nm,0.3s,baz=250,slow=4.8,SNR=6.0						
YKA	**Yellowknife Ar**	**82.89**	**341**	P	P	16 23 14.4	0.0
	0.3nm,0.6s,baz=134,slow=5.2,SNR=6.1						

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*BJI **07** 16:11:33.4, 21°.96S×178°.74W, h608km, mB4.8/10, mb4.5/22*

*ISCJB **07** 16:11:36.0±0.3, 21°.52S±0°.06×179°.25W±0°.06, h602km, mb4.3/33, Error ellipse: s-maj=8.4km s-min=6.4km az=43.3*

*NEIC **07** 16:11:36.2±2.0, 21°.67S×178°.98W, h616km±15km, mb4.5/13, Error ellipse: s-maj=40.8km s-min=18.1km az=139.0*

*IDC **07** 16:11:37.1±1.2, 21°.59S×179°.19W, h606km±15km, mb3.7/16, mb1 3.8/19, mb1mx3.7/25, mbtmp3.7/19, Error ellipse: s-maj=18.0km s-min=11.4km az=155.0*

*AUST **07** 16:11:38.2, 21°.60S×179°.25W, h600km*

ISC 07 16:11:36.6±0.4**, 21°.60S**±0°.07×**179°.14W**±0°.06**, h602**km**, n99,** σ1^s**45**/120**, mb4.5**/33**, 7C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.67**	**325**	*e*P	**P**	**16 13 09.1**	**+1.8**
RAO	**Raoul Island**	**7.70**	**172**	P	**P**	**16 13 34.1**	**+1.1**
	127nm,0.3s,baz=93,slow=23,SNR=4.5						
RAO				S	**S**	**16 15 08.4**	**0.0**
	74nm,0.3s,baz=90,slow=20,SNR=5.9						
NIUE	**Niue**	**9.00**	**75**	S	S	16 15 41.9	+10
	baz=9.1,SNR=4.0						
AFI	**Afiamalu**	**10.38**	**44**	*e*P	P	16 13 52.8	-6.5
AFI				*e*S	**S**	**16 15 53.0**	**-3.4**
AFI	**Afiamalu**	**10.38**	**44**	P	**P**	**16 13 59.8**	**+0.5**
	1.4nm,0.3s,baz=246,slow=19,SNR=3.2						
AFI				S	**S**	**16 15 50.7**	**-5.7**
	1.0nm,0.3s,baz=218,slow=19,SNR=4.5						
DZM	**Mont Dzumac**	**13.40**	**265**	P	**P**	**16 14 29.0**	**-0.6**
	1.4nm,0.3s,baz=80,slow=19,SNR=11						
URZ	**Urewera**	**16.91**	**190**	P	**P**	**16 15 02.0**	**0.0**
	1.2nm,0.3s,baz=338,slow=12,SNR=8.7						
URZ				S	**S**	**16 17 45.9**	**-3.2**
	0.4nm,0.3s,baz=266,slow=13,SNR=3.3						
HNR	**Honiara**	**23.47**	**298**	*e*P	**P**	**16 16 00.3**	**-1.1**
EIDS	**Eidsvold**	**27.54**	**256**	P	**P**	**16 16 37.2**	**+0.2**
	baz=27,SNR=6.9						
ARMA	**Armidale**	**27.64**	**245**	P	**P**	**16 16 39.6**	**+1.6**
	baz=28,SNR=8.2						
PPT	**Papeete**	**28.12**	**87**	P	**P**	**16 16 44.4**	**+2.2**
	7.0nm,0.5s,baz=253,slow=20,SNR=2.0						
MGCD	**Mangrove Creek**	**28.73**	**240**	P	**P**	**16 16 49.0**	**+1.8**
	baz=29,SNR=5.6						
RMQ	**Roma**	**29.67**	**254**	P	**P**	**16 16 57.0**	**+1.5**
	baz=30,SNR=17						
CNB	**Canberra Magne**	**30.73**	**237**	P	**P**	**16 17 06.2**	**+1.7**
	baz=31,SNR=9.4						
CTA	**Charters Tower**	**32.34**	**266**	P	**P**	**16 17 18.7**	**+0.4**
	15nm,0.4s,baz=89,slow=11,SNR=14						
CTAO	**Charters Tower**	**32.34**	**266**	*e*P	**P**	**16 17 18.2**	**-0.1**
	16nm,0.4s						
CMSA	**Cobar Meteorol**	**32.85**	**245**	P	**P**	**16 17 23.2**	**+0.8**
	baz=33,SNR=44						
QLP	**Quilpie**	**33.73**	**254**	P	**P**	**16 17 30.2**	**+0.4**
	baz=34,SNR=32						
MTSU	**Mount Surprise**	**34.49**	**269**	P	**P**	**16 17 36.7**	**+0.3**
	baz=34,SNR=26						
PMG	**Port Moresby**	**34.58**	**285**	*e*P	**P**	**16 17 36.6**	**-0.4**
	32nm,0.8s						
PMG	**Port Moresby**	**34.58**	**285**	P	**P**	**16 17 36.7**	**-0.4**
	28nm,0.7s,baz=92,slow=5.3,SNR=8.8						
STKA	**Stephens Creek**	**36.36**	**245**	*e*P	**P**	**16 17 51.8**	**+0.3**
	1.8nm,0.8s						
STKA	**Stephens Creek**	**36.36**	**245**	P	**P**	**16 17 52.5**	**+0.9**
	5.0nm,0.4s,baz=89,slow=9.7,SNR=33						
STKA	**Stephens Creek**	**36.36**	**245**	P	**P**	**16 17 52.5**	**+0.9**
	baz=36,SNR=33						
COEN	**Coen**	**36.61**	**276**	P	**P**	**16 17 54.3**	**+0.5**
	baz=36,SNR=22						
QIS	**Mount Isa**	**38.43**	**264**	P	**P**	**16 18 08.2**	**-0.3**
	baz=38,SNR=12						
BBOO	**Buckleboo**	**41.11**	**244**	P	**P**	**16 18 29.9**	**+0.2**
	baz=41,SNR=8.8						
ASAR	**Alice Springs**	**43.24**	**258**	P	**P**	**16 18 46.5**	**0.0**
	19nm,0.5s,baz=92,slow=7.9,SNR=542						
ASAR				PcP	**PcP**	**16 20 22.2**	**+0.4**
	2.7nm,0.5s,baz=94,slow=4.1,SNR=8.2						
ASAR				ScP	**ScP**	**16 23 17.9**	**+1.4**
	1.2nm,0.7s,baz=108,slow=4.4,SNR=7.0						
ASAR				S	**S**	**16 24 27.3**	**-4.1**
	4.4nm,1.0s,baz=94,slow=16,SNR=14						
WRAB	**Tennant Creek**	**43.40**	**263**	*e*P	**P**	**16 18 46.8**	**-1.0**
	16nm,0.8s						
JAY	**Jayapura**	**43.41**	**290**	P	**P**	**16 18 47.9**	**-0.1**
	baz=43,SNR=14						
WRA	**Warramunga Arr**	**43.41**	**263**	P	**P**	**16 18 47.2**	**-0.7**
	9.4nm,0.3s,baz=96,slow=7.6,SNR=101						
WRA				S	S	16 24 26.8	-7.0
	0.9nm,0.7s,baz=99,slow=14,SNR=5.1						
KDU	**Kakadu**	**46.92**	**273**	P	**P**	**16 19 14.0**	**-0.6**
	baz=47,SNR=14						
FORT	**Forrest**	**47.89**	**248**	P	**P**	**16 19 21.4**	**-0.2**
	baz=48,SNR=18						
MTN	**Manton Dam**	**48.12**	**272**	P	**P**	**16 19 22.9**	**-0.7**
	baz=48,SNR=9.1						
KNRA	**Kununurra**	**49.54**	**267**	P	**P**	**16 19 33.8**	**-0.2**
	baz=49,SNR=8.0						
FITZ	**Fitzroy Crossi**	**51.84**	**264**	P	**P**	**16 19 50.6**	**0.0**
	6.1nm,0.3s,baz=128,slow=7.9,SNR=63						
FITZ	**Fitzroy Crossi**	**51.84**	**264**	P	**P**	**16 19 50.7**	**+0.1**
	baz=52,SNR=32						
SWI	**Sorong**	**52.52**	**286**	P	**P**	**16 19 55.4**	**-0.2**
	baz=52,SNR=15						
MEEK	**Meekatharra**	**56.56**	**252**	P	**P**	**16 20 23.1**	**-0.5**
	baz=56,SNR=6.0						
MBWA	**Marble Bar**	**56.58**	**258**	*e*P	**P**	**16 20 23.1**	**-0.7**
	20nm,0.4s						
KLBR	**Kellerberrin**	**56.63**	**246**	P	**P**	**16 20 24.0**	**0.0**
	baz=56,SNR=8.8						
NWAO	**Narrogin (SRO)**	**56.93**	**244**	P	**P**	**16 20 25.5**	**-0.5**
	12nm,1.1s						
NWAO	**Narrogin (SRO)**	**56.93**	**244**	P	**P**	**16 20 25.8**	**-0.2**
	3.3nm,0.5s,baz=111,slow=8.6,SNR=4.9						
BLDU	**Ballidu**	**57.64**	**247**	P	**P**	**16 20 30.7**	**-0.1**
	baz=58,SNR=7.1						
MORW	**Morawa**	**58.43**	**248**	P	**P**	**16 20 36.1**	**-0.1**
	baz=58,SNR=3.2						
GIRL	**Giralia**	**61.24**	**255**	P	**P**	**16 20 56.1**	**+1.2**
	baz=61,SNR=3.1						
UGM	**Wanagama**	**68.89**	**270**	P	**P**	**16 21 42.6**	**-0.3**
	baz=69,SNR=5.1						
KKM	**Kota Kinabalu**	**69.02**	**286**	*e*P	**P**	**16 21 43.5**	**-0.3**
	6.4nm,0.4s						
MJAR	**Matsushiro Arr**	**70.48**	**325**	P	**P**	**16 21 51.5**	**-0.3**
	5.0nm,0.5s,baz=158,slow=6.1,SNR=18						
MAJO	**Matsushiro**	**70.48**	**325**	*e*P	**P**	**16 21 51.5**	**-0.3**
	5.9nm,0.5s						
MAT	**Matsushiro**	**70.48**	**325**	P	**P**	**16 21 51.6**	**-0.2**
KSM	**Kuching**	**72.52**	**279**	*e*P	**P**	**16 22 03.9**	**-0.3**
	15nm,0.8s						
KSRS	**Korea Array**	**77.02**	**319**	P	**P**	**16 22 29.4**	**+0.8**
	0.8nm,0.5s,baz=137,slow=5.4,SNR=7.0						
PETK	**Petropavlovsk-**	**77.07**	**346**	P	**P**	**16 22 29.0**	**+0.4**
	6.9nm,0.7s,baz=155,slow=7.6,SNR=21						
USRK	**Ussuriysk Arra**	**79.28**	**327**	P	**P**	**16 22 42.3**	**+1.7**
	3.5nm,0.7s,baz=116,slow=4.5,SNR=5.9						
NJ2	**Nanjing**	**79.77**	**310**	*e*P	**P**	**16 22 44.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
IPM	**Ipoh**	**82.22**	**278**	⇓*i*P	**P**	**16 22 56.6**	**+0.1**
	comp=Z,14nm,0.8s						
CN2	**Changchun**	**82.53**	**323**	*e*P	**P**	**16 22 59.5**	**+2.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NVAR	**Mina Array Bea**	**82.55**	**44**	P	**P**	**16 22 59.1**	**+1.3**
	comp=Z,0.9nm,0.9s,baz=230,slow=7.0,SNR=3.8						
PSI	**Prapat**	**83.53**	**276**	P	**P**	**16 23 02.3**	**-0.9**
	comp=Z,6.8nm,0.7s,baz=120,slow=8.1,SNR=5.4						
GSI	**Gunungsitoli**	**84.23**	**274**	P	**P**	**16 23 07.8**	**+1.2**
	baz=84,SNR=4.5						
ENH	**Enshi**	**85.78**	**305**	*e*P	**P**	**16 23 13.9**	**+0.3**
	comp=Z,9.0nm,0.7s						
GYA	**Guiyang**	**86.28**	**300**	*e*P	**P**	**16 23 15.6**	**-0.5**
GYA				pP	**pP**	**16 25 27.4**	**+2.5**
GYA				sP	**sP**	**16 26 27.5**	**+2.3**
GYA				SKS	**SKSac**	**16 32 43.0**	**-3.0**
GYA				S	**S**	**16 33 01.4**	**-1.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TRF	**Thorofare Moun**	**87.75**	**13**	*e*P	**P**	**16 23 21.0**	**-1.2**
	comp=Z,6.5nm,0.7s						
XAN	**Xi'an**	**87.96**	**308**	P	**P**	**16 23 24.6**	**+0.8**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,29nm,10.1s						
MCK	**McKinley**	**88.28**	**13**	P	**P**	**16 23 23.5**	**-1.1**
TXAR	**Lajitas Array**	**88.54**	**58**	P	**P**	**16 23 29.2**	**+2.6**
	comp=Z,0.6nm,0.5s,baz=239,slow=5.1,SNR=5.1						
KMI	**Kunming**	**88.91**	**297**	P	**P**	**16 23 27.5**	**-1.1**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**89.37**	**315**	*e*P	**P**	**16 23 30.2**	**0.0**
HHC				pP	**pP**	**16 25 39.4**	**-0.7**
HHC				sP	**sP**	**16 26 39.6**	**-0.4**
HHC				PP	**PP**	**16 27 16.1**	**+3.1**
HHC				SKS	**SKSac**	**16 33 03.6**	**0.0**
HHC				S	**S**	**16 33 30.1**	**-0.2**
HHC				sS	**sS**	**16 37 20.4**	**-1.6**
HHC				SS	**SS**	**16 39 49.8**	**+4.9**
HHC				pmax	pmax		
	comp=Z,36nm,0.7s						
HHC				pmax	pmax		
	comp=Z,180nm,6.7s						
CHTO	**Chiang Mai**	**89.62**	**290**	⇓*i*P	**P**	**16 23 32.9**	**+1.1**
	comp=Z,6.1nm,0.9s						
ILAR	**Eielson Array**	**89.62**	**13**	P	**P**	**16 23 30.1**	**-0.6**
	comp=Z,0.7nm,0.4s,baz=217,slow=5.1,SNR=14						
LZH	**Lanzhou**	**92.60**	**308**	*e*P	**P**	**16 23 42.5**	**-2.8**
LZH				pP	**pP**	**16 25 53.0**	**-2.6**
LZH				sP	**sP**	**16 26 53.6**	**-1.7**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
INK	**Inuvik**	**95.61**	**15**	P	**P**	**16 23 56.4**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=213,slow=5.3,SNR=3.1						
MKAR	**Makanchi Array**	**111.18**	**313**	PKiKP	**PKiKP**	**16 29 01.8**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=101,slow=1.5,SNR=10						
KURBB	**Kurchatov Arra**	**114.13**	**317**	PKP	**PKiKP**	**16 29 07.0**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=112,slow=1.7,SNR=11						
KURBB				PP	**PP**	**16 30 16.1**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=89,slow=7.2,SNR=5.4						
KSH	**Kashi**	**114.64**	**305**	*e*PKP	PKPdf	16 29 08.1	-1.7
KSH				*e*sPKP		16 32 23.8	
KSH				*e*PKS	**PKSdf**	**16 32 43.8**	**-2.7**
KSH				*e*SKS	**SKSdf**	**16 35 24.1**	**-1.5**
BVAR	**Borovoye Array**	**119.23**	**320**	PKP	**PKPdf**	**16 29 17.2**	**-0.8**
	comp=Z,2.1nm,0.3s,baz=116,slow=2.0,SNR=15						
ARCES	**ARCESS Array B**	**129.80**	**349**	PKP	**PKPdf**	**16 29 38.1**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=48,slow=1.3,SNR=16						
JOF	**Joensuu**	**133.84**	**341**	*e*p	**PKPdf**	**16 29 45.5**	**0.0**
KAF	**Kangasniemi**	**135.90**	**343**	*e*p	**PKPdf**	**16 29 48.7**	**-0.7**
FINES	**FINESS Array B**	**136.51**	**343**	PKhKP	PKPpre	16 29 40.3	
	comp=Z,2.6nm,0.9s,baz=24,slow=5.2,SNR=4.4						
FINES				PKP	**PKPdf**	**16 29 49.2**	**-1.3**
	comp=Z,1.1nm,0.4s,baz=64,slow=3.2,SNR=5.2						
NB2	**NORSAR Subarra**	**139.93**	**352**	PKP	PKPpre	16 29 49.9	
	comp=Z,1.7nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**139.93**	**352**	PKhKP	PKPpre	16 29 49.5	
	comp=Z,0.6nm,0.5s,baz=29,slow=2.5,SNR=3.9						
AKASG	**Malin Array Be**	**143.44**	**330**	PKP	PKPab	16 30 01.3	-0.7
	comp=Z,6.1nm,0.4s,baz=42,slow=4.2,SNR=66						
KIEV	**Kiev**	**143.45**	**330**	*e*PKPdf	PKPab	16 30 01.0	-1.1
BRTR	**Keskin Array B**	**146.77**	**310**	PKPbc	**PKPbc**	**16 30 12.2**	**-0.3**
	comp=Z,3.6nm,0.6s,baz=134,slow=4.2,SNR=25						
KWP	**Kalwaria Pacla**	**147.11**	**334**	*e*PKP	**PKPbc**	**16 30 13.2**	**+0.3**
BUR08	**Bucovina Ar. S**	**147.46**	**329**	*e*PKPdf	**PKPdf**	**16 30 06.5**	**-3.9**
BUR08				*e*PKPbc	**PKPbc**	**16 30 14.3**	**+0.3**
UPC	**Upice**	**148.79**	**341**	*e*PKPAB	**PKPab**	**16 30 24.4**	**+1.0**
UPC				*e*x	x	16 30 30.3	
DPC	**Dobruska-Polom**	**148.83**	**341**	⇑*e*PKP	**PKPbc**	**16 30 18.1**	**+0.9**
DPC				*e*PKPAB	**PKPab**	**16 30 24.7**	**+1.1**
CLL	**Collm**	**148.87**	**345**	⇓*i*PKPbc	**PKPbc**	**16 30 17.6**	**+0.4**
	comp=Z,8.0nm,0.6s						
CLL				*i* PKPab	**PKPab**	**16 30 23.7**	**0.0**
	comp=Z,5.0nm,0.9s						
KRLC	**Kraliky**	**148.93**	**340**	⇑*e*PKP	**PKPbc**	**16 30 18.1**	**+0.6**
KRLC				*e*PKPAB	**PKPab**	**16 30 24.8**	**+0.8**
BRG	**Berggiesshubel**	**149.04**	**344**	*e*PKP	**PKPbc**	**16 30 17.9**	**+0.3**
	comp=Z,4.8nm,0.7s						
PVCC	**Panska Ves**	**149.18**	**343**	⇑*e*PKP	**PKPbc**	**16 30 18.5**	**+0.5**
PVCC				*e*PKPAB	**PKPab**	**16 30 25.9**	**+0.9**
PRU	**Pruhonice**	**149.68**	**342**	⇑*e*PKP	**PKPbc**	**16 30 19.5**	**+0.3**
TREC	**Trest**	**150.02**	**341**	⇑*e*PKP	**PKPbc**	**16 30 20.0**	**0.0**
KHC	**Kasperske Hory**	**150.72**	**343**	⇑*e*PKP	**PKPbc**	**16 30 22.0**	**+0.3**
GERES	**GERESS Array B**	**150.95**	**342**	PKPbc	**PKPbc**	**16 30 22.4**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=46,slow=2.8,SNR=18						
CONA	**Conrad Observa**	**151.09**	**339**	⇑*i*PKiKP	**PKiKP**	**16 30 23.2**	**+0.2**
	comp=Z,4.0nm,0.7s						

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*ISK **07** 16:12:37.8, 40°.58N×30°.31E, h14km, MD2.5*

*CSEM **07** 16:12:38.4±0.1, 40°.59N×30°.30E, h10km, MD2.5, Error ellipse: s-maj=3.6km s-min=2.7km az=14.0*

*ISCJB **07** 16:12:38.2±0.5, 40°.60N±0°.04×30°.29E±0°.04, h11km±5km, Error ellipse: s-maj=7.3km s-min=5.3km az=19.3*

*DDA **07** 16:12:40.4, 40°.62N×30°.42E, h7km, MD2.6*

ISC 07 16:12:39.1±1.0**, 40°.60N**±0°.03×**30°.32E**±0°.02**, h9**km±6km**, n32,** σ1^s**13**/41**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPNC	**Sapanca-Adapaz**	**0.09**	**356**	*e*PG	**Pg**	**16 12 41.3**	**-0.2**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
SPNC				eSG	Sg	16 12 44.0	+0.8
SPNC	Sapanca-Adapaz	0.09	356	ePg	Pg	16 12 41.3	-0.2
SPNC				eSg	Sg	16 12 44.0	+0.8
GULT	Gulveren	0.23	138	ePG	Pg	16 12 43.1	-0.7
GULT				eSG	Sg	16 12 46.7	-0.2
GULT	Gulveren	0.23	138	ePg	Pg	16 12 43.1	-0.7
GULT				eSg	Sg	16 12 46.7	-0.2
ADVT	Abdulvahap	0.47	250	ePG	Pg	16 12 47.6	-0.7
ADVT	Abdulvahap	0.47	250	ePg	Pg	16 12 47.6	-0.7
HENT	Hendek	0.50	63	iP	Pg	16 12 48.4	-0.4
HENT				iS	Sg	16 12 55.6	+0.3
HENT	Hendek	0.50	63	iP	Pg	16 12 48.4	-0.4
HENT				iS	Sg	16 12 55.6	+0.3
CAVI	Cavuskoy	0.54	223	ePG	Pg	16 12 48.4	-1.2
CAVI	Cavuskoy	0.54	223	ePg	Pg	16 12 48.4	-1.2
HRT	Hereke	0.54	294	ePG	Pg	16 12 48.9	-0.8
HRT	Hereke	0.54	294	ePg	Pg	16 12 48.9	-0.8
MDUB	Mudurnu	0.68	101	ePG	Pg	16 12 51.5	-0.8
MDUB	Mudurnu	0.68	101	ePg	Pg	16 12 51.5	-0.8
IZI	Iznik	0.69	248	ePG	Pg	16 12 51.8	-0.8
IZI	Iznik	0.69	248	ePg	Pg	16 12 51.8	-0.8
SILT	Sile	0.75	317	ePG	Pg	16 12 53.1	-0.5
SILT	Sile	0.75	317	ePg	Pg	16 12 53.1	-0.5
ULDT	Uludag	1.01	244	iP	Pn	16 13 00.6	+1.0
ULDT				iS	Sn	16 13 17.5	+3.5
ULDT	Uludag	1.01	244	iP	Pn	16 13 00.6	+1.0
ISK	Istanbul-Kandi	1.06	296	ePG	Pg	16 12 58.1	-1.4
ISK	Istanbul-Kandi	1.06	296	ePg	Pg	16 12 58.1	-1.4
SEYT	Eskypehyr	1.15	159	iP	Pg	16 13 01.8	+0.5
SEYT				iS	Sn	16 13 18.9	+1.5
SEYT	Eskypehyr	1.15	159	iP	Pg	16 13 01.8	+0.5
SEYT				iS	Sn	16 13 18.9	+1.5
TVSB	Tavsanli	1.32	210	ePN	Pn	16 13 02.6	-1.2
TVSB	Tavsanli	1.32	210	ePn	Pn	16 13 02.6	-1.2
SVRH	Sivrihisar-ESK	1.48	141	ePN	Pn	16 13 04.5	-1.5
SVRH	Sivrihisar-ESK	1.48	141	ePn	Pn	16 13 04.5	-1.5
CTKS	Kestanelik-??a	1.51	295	ePN	Pn	16 13 05.3	-1.0
CTKS	Kestanelik-??a	1.51	295	ePn	Pn	16 13 05.3	-1.0
KCTX	Karacabey (Bur	1.53	258	ePN	Pn	16 13 05.3	-1.4
KCTX	Karacabey (Bur	1.53	258	ePn	Pn	16 13 05.3	-1.4

ISCJB ***07*** *16:14:32.2±0.4, 1°.31N±0°.06×121°.75E±0°.09, h500^{km}, mb3.6/10, Error ellipse: s-maj=12.2km s-min=7.3km az=166.4*
IDC ***07*** *16:14:33.0±1.5, 1°.27N×121°.78E, h498^{km}±21^{km}, mb3.2/10, mb1 3.4/12, mb1mx3.2/24, mbtmp3.2/12, Error ellipse: s-maj=30.2km s-min=9.7km az=77.0*
AUST ***07*** *16:14:33.5±0.0, 1°.06N×121°.63E, h491^{km}, Error ellipse: s-maj=2.6km s-min=1.5km az=39.0*
DJA ***07*** *16:14:35.6±1.1, 1°N±12°×12°2E±1°2, h483^{km}±9^{km}, M4.1/6, mb4.7/2, mB4.6/2, MLv3.9/6, Mw(mB)3.8/2*
ISC 07 16:14:33.2±0.6, **1°.26N**±0°.08×**121°.8E**±0°.1, **h500^{km}, n32, $\sigma 1^{s}04$/35, mb3.6**/10, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
MRSI	Marisa	0.79	169	P	P	16 15 33.9	-0.1
MRSI				S	S	16 16 21.0	-2.3
KMSI	Cibinong	2.29	107	P	P	16 15 40.2	+0.4
LUWI	Luwuk	2.49	157	P	P	16 15 40.7	-0.3
LUWI				S	S	16 16 33.0	-3.0
LUWI	Luwuk	2.49	157	P	P	16 15 40.7	-0.3
	baz=2.4,SNR=5.0						
LUWI				S	S	16 16 34.2	-1.8
	baz=2.4,SNR=14						
SKSI	Soroako, Sulaw	3.79	187	P	P	16 15 51.2	+1.1
TTSI	Tana Toraja	4.71	205	P	P	16 15 58.9	+1.3
SPSI	Sidrap Palu	5.57	201	P	P	16 16 05.1	-0.4
	84nm,0.8s,678nm0.3nm						
KAPI	Kappang	6.56	198	P	P	16 16 14.5	-0.5
	6.4nm,0.3s,baz=191,slow=16,SNR=14						
KKM	Kota Kinabalu	7.32	311	P	P	16 16 23.2	+0.5
	baz=7.4,SNR=4.0						
FAKI	Fak Fak	11.25	112	P	P	16 17 05.1	+1.2
	baz=11,SNR=7.5						
KMMI	Kalianget	11.37	223	P	P	16 17 05.4	+0.3
MTN	Manton Dam	16.80	147	P	P	16 18 01.4	-0.8
	baz=17,SNR=8.3						
KDU	Kakadu	17.45	143	P	P	16 18 07.7	-0.8
	baz=18,SNR=6.3						
KNRA	Kununurra	18.19	158	P	P	16 18 15.0	-0.3
	baz=18,SNR=4.9						
FITZ	Fitzroy Crossi	19.61	169	P	P	16 18 28.3	0.0
	0.3nm,0.3s,baz=341,slow=8.1,SNR=7.2						
FITZ	Fitzroy Crossi	19.61	169	P	P	16 18 29.2	+0.9
	baz=20,SNR=3.8						
WRA	Warramunga Arr	24.40	150	P	P	16 19 10.7	-0.8
	3.0nm,0.4s,baz=332,slow=9.5,SNR=8.7						
ASAR	Alice Springs	27.43	155	P	P	16 19 38.3	0.0
	2.3nm,0.6s,baz=336,slow=8.5,SNR=8.9						
ASAR				ScP	ScP	16 25 33.6	-0.6
	0.4nm,0.4s,baz=341,slow=2.9,SNR=5.8						
MEEK	Meekatharra	27.91	186	P	P	16 19 42.4	0.0
	baz=28,SNR=7.5						
MORW	Morawa	30.66	190	P	P	16 20 06.4	+0.2
	baz=31,SNR=4.4						
QLP	Quilpie	35.14	144	P	P	16 20 45.8	+1.4
	baz=35,SNR=8.9						
KSRS	Korea Array	36.45	8	P	P	16 20 55.2	+0.1
	1.4nm,0.6s,baz=188,slow=10,SNR=9.7						
STKA	Stephens Creek	37.93	152	P	P	16 21 08.4	+1.1
	8.9nm,0.6s,baz=330,slow=9.0,SNR=17						
STKA	Stephens Creek	37.93	152	P	P	16 21 08.3	+1.1
	baz=38,SNR=14						
MJAR	Matsushiro Arr	38.25	22	P	P	16 21 08.9	-1.0
	0.9nm,0.5s,baz=198,slow=9.0,SNR=5.0						
CMSA	Cobar Meteorol	39.73	147	P	P	16 21 23.6	+1.7
	baz=40,SNR=12						
ARMA	Armidale	42.43	140	P	P	16 21 46.4	+2.8
	baz=42,SNR=12						
USRK	Ussuriysk Arra	43.70	11	P	P	16 21 53.1	0.0
	3.3nm,0.6s,baz=199,slow=6.2,SNR=8.8						
SONM	Songino Array	48.27	346	P	P	16 22 28.3	+0.1
	1.3nm,0.6s,baz=170,slow=9.4,SNR=4.4						
MKAR	Makanchi Array	56.91	329	P	P	16 23 30.2	+0.1
	0.7nm,0.5s,baz=128,slow=8.5,SNR=18						
ZALV	Zalesovo Beam	60.67	336	P	P	16 23 54.3	-0.9
	0.5nm,0.4s,baz=144,slow=6.4,SNR=3.7						
VNDA	Vanda	81.66	172	P	P	16 25 57.8	-0.3
	0.4nm,0.6s,baz=330,slow=6.3,SNR=4.0						

IDC ***07*** *16:19:53.9±2.1, 23°.33N×121°.71E, h0^{km}, mb3.5/6, mb1 3.6/6, mb1mx3.5/25, mbtmp3.5/6, MS2.9/1, Ms1 2.9/1, ms1mx2.5/30, Error ellipse: s-maj=189.5km s-min=18.8km az=63.0*
ISCJB ***07*** *16:19:59.3±0.3, 23°.29N±0°.02×121°.59E±0°.02, h29^{km}±2^{km}, mb3.5/6, Error ellipse: s-maj=3.2km s-min=2.2km az=151.0*
TAP ***07*** *16:20:00.2, 23°.33N×121°.49E, h31^{km}, ML4.1, B*
NIED ***07*** *16:20:00, 23°.30N×121°.60E, h32^{km}, Mw3.7 Best double couple: $M_0$4.36000×10^{14} NP1:ϕ_s215.00000°, δ89.00000°, λ-96.00000°. NP2:ϕ_s112.00000°, δ6.00000°, λ-13.00000°.*
JMA ***07*** *16:20:00.7±0.2, 23°.33N×121°.62E, h75^{km}, M3.7*
ISC 07 16:19:59.6±0.8, **23°.31N**±0°.02×**121°.55E**±0°.02, **h31**^{km}±6^{km}, **n80, $\sigma 0^{s}98$**/125, **mb3.5**/6, **24C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
TWF1	Yuli	0.24	279	⇑iP	Pb	16 20 06.4	0.0
	baz=278						
CHKT	Chengkung	0.28	219	⇓iP	Pb	16 20 07.1	+0.3
	baz=200						
CHKT				eS	Sb	16 20 12.1	+0.4
	baz=200						
EHY	Hungye	0.29	312	⇑iP	Pb	16 20 06.9	-0.1
	baz=308						
EHY				eS	Sb	16 20 11.7	-0.3
	baz=308						
TEGC	Jichi Village	0.39	358	eP	Pb	16 20 08.9	+0.5
	baz=14						
TEGC				S	Sn	16 20 16.4	+0.8
	baz=14						
ELDTW	Lidau	0.51	256	⇑iP	Pb	16 20 09.4	-0.9
	baz=246						
ELDTW				S	Sb	16 20 15.5	-2.1
	baz=246						
ESL	Shilin	0.51	347	⇑iP	Pb	16 20 09.8	-0.5
	baz=344						
ESF	Shoufeng Towns	0.56	356	eP	Pb	16 20 11.1	+0.2
	baz=350						
HWA	Hwalien	0.66	4	⇑eP	Pb	16 20 12.9	+0.2
	baz=21						
TTN	Taitung	0.67	214	eP	Pb	16 20 12.7	-0.2
	baz=209						
ALS	Alishan	0.72	286	⇑iP	Pb	16 20 13.7	-0.1
	baz=286						
ALS				eS	Sb	16 20 22.7	-0.8
	baz=286						
TWD	Chiawan	0.76	3	⇑P	Pb	16 20 13.8	-0.6
	baz=353						
TWD				eS	Sb	16 20 23.6	-0.9
	baz=353						
SMLT	Sun Moon Lake	0.83	314	⇑iP	Pb	16 20 15.2	-0.4
	baz=319						
SMLT				eS	Sb	16 20 25.9	-0.5
	baz=319						
CHN5	Tsauling	0.85	290	⇑iP	Pb	16 20 16.0	0.0
	baz=289						
CHN5				S	Sn	16 20 27.8	+0.8
	baz=289						
WTP	Ta-pu	0.87	266	⇑iP	Pn	16 20 16.0	+0.3
	baz=264						
WTP				eS	Sb	16 20 27.3	-0.2
	baz=264						
TYC	Yuchr	0.87	313	⇑iP	Pb	16 20 15.8	-0.4
	baz=320						
TYC				eS	Sn	16 20 28.1	+0.8
	baz=320						
WHF	Hehuan Shan	0.87	342	⇑iP	Pb	16 20 15.4	-1.0
	baz=345						
WHF				eS	Sb	16 20 26.9	-1.1
	baz=345						
CHN4	Tsaushan	0.88	273	⇑iP	Pn	16 20 16.4	+0.5
	baz=272						
CHN4				eS	Sn	16 20 28.6	+0.9
	baz=272						
ECL	Taimali	0.90	218	⇓P	Pn	16 20 14.5	-1.6
	baz=215						
SGST	Jiashian	0.92	256	⇑eP	Pn	16 20 16.9	+0.5
	baz=254						
CHN1	Nanshi	0.95	263	⇑iP	Pn	16 20 17.6	+0.8
	baz=261						
CHN1				S	Sn	16 20 30.8	+1.4
	baz=261						
WNT	Mingjian	0.98	305	P	Pb	16 20 18.3	+0.3
	baz=306						
WNT				S	Sn	16 20 31.1	+1.2
	baz=306						
TWK	Hsinying	0.98	268	⇑iP	Pn	16 20 17.9	+0.6
	baz=266						
TWK				S	Sb	16 20 31.1	+0.3
	baz=266						
WGK	Gukeng	0.98	292	⇑P	Pb	16 20 18.2	+0.1
	baz=292						
WGK				eS	Sn	16 20 31.4	+1.3
	baz=292						
TWT	Tachien	1.00	340	P	Pn	16 20 18.0	+0.3
	baz=340						
TWT				eS	Sb	16 20 29.9	-1.5
	baz=340						
CHN2	Minshiung	1.01	283	eP	Pb	16 20 18.9	+0.3
	baz=293						
CHN2				eS	Sb	16 20 32.8	+1.2
	baz=293						
SSD	Sandimen	1.02	237	eP	Pn	16 20 17.3	-0.5
	baz=231						
CHY	Chiayi	1.05	280	⇑P	Pb	16 20 19.4	+0.1
	baz=279						
CHY				eS	Sn	16 20 32.5	+0.7
	baz=279						
CHN3	Shinhua	1.12	258	eP	Pb	16 20 21.4	+1.1
	baz=269						
CHN3				eS	Sb	16 20 36.9	+2.3
	baz=269						
ENA	Nanau	1.12	9	P	Pn	16 20 19.0	-0.1
	baz=21						
TAW	Tawu	1.13	213	eP	Pn	16 20 18.3	-0.9
	baz=211						
EAST	Anshuo	1.13	215	eP	Pn	16 20 18.3	-1.0
	baz=214						
NNS	Nan Shan	1.13	352	eP	Pn	16 20 19.5	+0.1
	baz=4.0						
SGLT	Jiouru	1.14	239	eP	Pb	16 20 21.1	+0.4
	baz=228						
SGLT				eS	Sb	16 20 38.5	+3.3
	baz=228						
TWM1	Shoushan	1.15	245	eP	Pb	16 20 21.8	+0.9
	baz=244						
TCU	Taichung	1.16	316	⇑P	Pb	16 20 21.2	+0.2
	baz=316						
CHN8	Yiju	1.23	272	eP	Pn	16 20 21.6	+0.9
	baz=271						
CHN8				eS	Sb	16 20 38.0	+0.1
	baz=271						
TAI1	Yung-k'ang	1.25	258	eP	Pb	16 20 23.5	+1.0
	baz=256						
TAI1				eS	Sb	16 20 39.4	+1.1
	baz=256						
TWQ1	Liyutan	1.25	325	⇑iP	Pb	16 20 22.9	+0.2
	baz=325						
TWQ1				eS	Sb	16 20 39.3	+0.8
	baz=325						
SCLT	Jiali	1.26	264	eP	Pn	16 20 22.1	+1.1
	baz=262						
SCLT				eS	Sb	16 20 39.0	+0.4
	baz=262						
WSF	Szhu	1.27	285	⇑P	Pn	16 20 21.8	+0.7
	baz=284						
WSF				eS	Sn	16 20 36.9	-0.1
	baz=284						
LAY	Lan-yu	1.27	180	eP	Pn	16 20 19.9	-1.2
	baz=172						
SCZT	Fangliau	1.27	223	eP	Pn	16 20 21.3	+0.1
	baz=212						
WTCT	Ta-ch'eng	1.29	295	eP	Pn	16 20 22.2	+0.8
	baz=295						
WTCT				eS	Sn	16 20 38.5	+0.8
	baz=295						
NSY	Sanyi	1.32	327	⇑P	Pb	16 20 23.8	0.0
	baz=326						
NSY				S	Sb	16 20 41.6	+1.3
	baz=326						
TWC	Suao	1.32	12	eP	Pn	16 20 22.5	+0.6
	baz=24						
TWC				eS	Sb	16 20 40.5	+0.3
	baz=24						
ENTT	Nioudou	1.32	0	eP	Pn	16 20 22.0	+0.1
KAU	Kaohsiung	1.37	237	eP	Pb	16 20 26.2	+1.7
	baz=238						
NSK	Sanguang	1.37	353	eP	Pn	16 20 23.3	+0.7
	baz=4.0						
NSK				eS	Sn	16 20 40.1	+0.3
	baz=4.0						
TWE	Neicheng	1.41	4	eP	Pn	16 20 23.4	+0.4
	baz=6.0						
NSTT	Nanjuang	1.41	339	⇑iP	Pb	16 20 24.8	-0.4
	baz=339						
NSTT				eS	Sn	16 20 41.9	+1.3
	baz=339						
TWP	Hsiaoliuchiu	1.46	229	eP	Pn	16 20 24.8	+0.9
	baz=232						
HEN	Hengchun	1.50	210	eP	Pn	16 20 25.6	+1.2
	baz=200						
TSEB	Hengchuen, Pin	1.53	203	eP	Pn	16 20 25.7	+0.9
	baz=207						
TSEB				eS	Sn	16 20 44.0	+0.3
	baz=207						
NCU	National Centr	1.68	349	eP	Pb	16 20 28.9	-1.1
	baz=347						
NCU				eS	Sb	16 20 50.5	-0.3
	baz=347						
TAP1	Taipei	1.72	359	eP	Pn	16 20 29.1	+1.7
	baz=355						
TAP	Taipei	1.72	359	eP	Pn	16 20 28.8	+1.5
	baz=355						
TWB1	Santiao Chiao	1.73	13	eP	Pn	16 20 28.3	+0.8
	baz=358						
WDGT	Dungji	1.74	269	⇑P	Pn	16 20 27.8	+0.2
	baz=267						
WDGT				eS	Sn	16 20 47.8	-1.1
	baz=267						
YOJ	Yonaguni jima	1.76	49	⇓iP	Pn	16 20 29.0	+1.1
	baz=49						
YOJ				eS	Sn	16 20 49.8	+0.6
	baz=49						
YOJ	Yonaguni jima	1.76	49	P	Pn	16 20 29.0	+1.1
YOJ				eS	Sn	16 20 49.6	+0.4
NWF	Wu-fen Shan	1.76	7	eP	Pn	16 20 29.1	+1.0
	baz=4.0						
TWS1	Kuangyinshan	1.78	356	eP	Pn	16 20 29.5	+1.2
	baz=9.0						
TWS1				eS	Sn	16 20 51.9	+2.0
	baz=9.0						
PNG	Penghu	1.85	278	eP	Pn	16 20 29.3	+0.1
	baz=276						
PNG				eS	Sn	16 20 50.6	-0.9
	baz=276						
TWY	Chenhua	1.95	1	eP	Pn	16 20 32.7	+2.1
	baz=358						
HATJ	Hateruma jima	2.19	70	P	Pn	16 20 34.6	+0.7
HATJ				eS	Sn	16 21 00.6	+0.7
IRIF	Iriomote-Funau	2.24	63	P	Pn	16 20 35.7	+1.2
IRIF				eS	Sn	16 21 02.6	+1.6
JKRS	Kuro-shima	2.43	67	P	Pn	16 20 38.2	+1.1
JKRS				eS	Sn	16 21 06.9	+1.1
JIJ	Ishigaki jima	2.59	66	P	Pn	16 20 40.2	+0.8
JIJ				eS	Sn	16 21 09.8	0.0
KNM	Kinmen	3.06	292	eP	Pn	16 20 47.1	+1.2
	baz=290						
QZH	Quanzhou	3.15	302	⇓iPn	Pn	16 20 48.2	+1.1
QZH				Sn	Sn	16 21 22.6	-1.1
QZH				smax	smax		
	comp=N,160nm,0.4s						
QZH				smax	smax		
	comp=E,140nm,0.4s						
JTJ	Tarama	3.17	65	P	Pn	16 20 48.2	+0.9
JTJ				eS	Sn	16 21 24.8	+0.8
JMJ	Miyako jima 2	3.73	66	P	Pn	16 20 56.4	+1.4
JMJ				eS	Sn	16 21 38.5	+0.6
JOGS	Gusukube	3.81	67	P	Pn	16 20 57.3	+1.2
JOGS				eS	Sn	16 21 41.3	+1.5
KSRS	Korea Array	15.12	20	LR	LR	16 30 25.9	
	comp=E,40nm,19.3s,baz=165,slow=42						
MKAR	Makanchi Array	39.20	317	P	P	16 27 25.3	+0.5
	comp=E,0.5nm,0.7s,baz=101,slow=9.2,SNR=4.6						
ZALV	Zalesovo Beam	41.16	328	P	P	16 27 40.6	-0.3
	comp=E,0.6nm,0.5s,baz=124,slow=7.6,SNR=3.0						
KURBB	Kurchatov Arra	42.99	320	P	P	16 27 54.3	-1.6
	comp=E,0.3nm,0.5s,baz=112,slow=8.6,SNR=4.4						
WRA	Warramunga Arr	44.77	163	P	P	16 28 08.5	-2.0
	comp=E,0.2nm,0.5s,baz=344,slow=8.6,SNR=3.7						
ASAR	Alice Springs	48.22	165	P	P	16 28 36.9	-0.6
	comp=E,0.2nm,0.4s,baz=336,slow=6.8,SNR=16						
FINES	FINESS Array B	72.36	330	P	P	16 31 21.8	-0.5
	comp=E,1.0nm,0.7s,baz=60,slow=8.2,SNR=3.4						

IDC ***07*** *16:43:56.9±1.5, 15°.99S×174°.07W, h105^{km}±13^{km}, mb4.2/14, mb1 4.4/17, mb1mx4.2/25, mbtmp4.2/17, Error ellipse: s-maj=20.0km s-min=10.0km az=135.0*
ISCJB ***07*** *16:43:56.7±0.2, 15°.96S±0°.06×174°.15W±0°.05, h115^{km}, mb4.5/59, Error ellipse: s-maj=9.6km s-min=5.0km az=146.7*
NEIC ***07*** *16:43:57.4±0.8, 15°.91S×174°.20W, h109^{km}±6^{km}, mb4.5/40, Error ellipse: s-maj=7.8km s-min=4.7km az=146.0*
AUST ***07*** *16:44:01.2±0.0, 15°.91S×173°.57W, h174^{km}, Error ellipse: s-maj=1.5km s-min=1.4km az=249.0*
BJI ***07*** *16:44:20.3, 15°.22S×174°.21W, h293^{km}, mB4.5/2, mb4.5/8*
ISC 07 16:43:58.2±0.4, **16°.01S**±0°.06×**174°.03W**±0°.06, **h115**^{km}, **n355, $\sigma 0^{s}76$**/357, **mb4.5**/59, **121C-120D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
AFI	Afiamalu	3.01	46	P	Pn	16 44 45.2	+0.6
AFI				S	Sn	16 45 19.0	-1.4
AFI	Afiamalu	3.01	46	P	Pn	16 44 45.2	+0.6
	77nm,0.3s,baz=37,slow=1.1,SNR=129						
AFI				S	Sn	16 45 19.0	-1.4
	507nm,0.3s,baz=68,slow=19,SNR=17						
NIUE	Niue	4.96	129	P	Pn	16 45 11.8	+1.3
	baz=4.7,SNR=28						
NIUE				S	Sn	16 46 04.9	-1.9
	baz=4.7,SNR=12						
MSVF	Nonsavu	7.78	256	ePn	Pn	16 45 56.7	+7.9
FUNA	Funafuti	9.96	318	Pn	Pn	16 46 13.6	-4.6
RAR	Rarotonga	14.46	113	P	Pn	16 47 18.4	+0.9
RAR	Rarotonga	14.46	113	P	Pn	16 47 18.3	+0.9
	baz=270,slow=9.1,SNR=5.2						
DZM	Mont Dzumac	19.41	249	eP	Pn	16 48 19.3	+1.4
DZM	Mont Dzumac	19.41	249	P	P	16 48 16.3	+0.7
DZM	Mont Dzumac	19.41	249	P	P	16 48 16.3	+0.7
	0.3nm,0.3s,baz=74,slow=17,SNR=3.5						
URZ	Urewera	23.50	198	eP	P	16 48 56.6	-1.0
	21nm,1.0s						
URZ	Urewera	23.50	198	P	P	16 48 56.7	-0.9
	7.5nm,0.3s,baz=45,slow=11,SNR=23						
RMQ	Roma	36.10	247	P	P	16 50 49.0	-0.2
	baz=36,SNR=4.4						
CMSA	Cobar Meteorol	39.73	240	P	P	16 51 18.7	-0.8
	baz=40,SNR=8.8						
MTSU	Mount Surprise	39.82	261	P	P	16 51 21.4	+0.8
	baz=40,SNR=5.2						
QLP	Quilpie	40.13	248	P	P	16 51 22.6	-0.3
	baz=41,SNR=4.3						
COEN	Coen	41.34	267	P	P	16 51 34.2	+1.2
	baz=42,SNR=4.1						
STKA	Stephens Creek	43.21	240	P	P	16 51 47.3	-0.7
STKA	Stephens Creek	43.21	240	P	P	16 51 47.3	-0.7
	9.4nm,0.9s,baz=81,slow=9.8,SNR=18						
STKA	Stephens Creek	43.21	240	P	P	16 51 47.9	-0.1
	baz=44,SNR=13						
BBOO	Buckleboo	47.99	240	P	P	16 52 25.1	-0.5
	baz=48,SNR=7.4						
WRAB	Tennant Creek	49.11	257	eP	P	16 52 33.1	-1.3
	5.7nm,0.7s						
WRA	Warramunga Arr	49.12	257	P	P	16 52 33.5	-1.0
WRA	Warramunga Arr	49.12	257	P	P	16 52 33.5	-1.0
	4.9nm,0.9s,baz=93,slow=8.0,SNR=20						
AS31	Alice Springs	49.35	252	eP	P	16 52 35.0	-1.3
ASAR	Alice Springs	49.35	252	P	P	16 52 35.0	-1.2
ASAR	Alice Springs	49.35	252	P	P	16 52 35.0	-1.2
	13nm,0.7s,baz=89,slow=7.7,SNR=252						
KNRA	Kununurra	54.88	262	P	P	16 53 17.0	-0.2
	baz=55,SNR=6.3						
FITZ	Fitzroy Crossi	57.50	259	P	P	16 53 35.4	-0.4
FITZ	Fitzroy Crossi	57.50	259	P	P	16 53 35.4	-0.4
	2.1nm,0.6s,baz=114,slow=5.6,SNR=9.0						
FITZ	Fitzroy Crossi	57.50	259	P	P	16 53 36.0	+0.2
	baz=58,SNR=4.3						
SBA	Scott Base	62.60	185	eP	P	16 54 11.2	+1.6
	3.6nm,0.9s						
MBWA	Marble Bar	62.62	254	eP	P	16 54 10.0	-0.7
	12nm,0.7s						
VNDA	Vanda	62.71	186	P	P	16 54 11.2	+0.7
VNDA	Vanda	62.71	186	P	P	16 54 11.2	+0.7
	1.6nm,1.0s,baz=13,slow=7.5,SNR=5.7						
MEEK	Meekatharra	63.03	248	P	P	16 54 12.6	-0.8
	baz=63,SNR=4.4						
KLBR	Kellerberrin	63.42	242	P	P	16 54 15.7	-0.3
	baz=64,SNR=8.0						
NWAO	Narrogin (SRO)	63.80	241	P	P	16 54 17.8	-0.6
	19nm,1.3s						
KKM	Kota Kinabalu	72.41	282	P	P	16 55 09.8	-2.8
	63nm,1.2s						
PETK	Petropavlovsk-	73.03	343	P	P	16 55 16.8	+1.6
PETK	Petropavlovsk-	73.03	343	P	P	16 55 16.8	+1.6
	1.1nm,0.6s,baz=142,slow=4.6,SNR=4.0						
VES	Vestal, Richgr	73.20	44	⇑P	P	16 55 17.5	+0.9
	baz=73						
MURC	Murrieta	73.25	47	⇓P	P	16 55 18.0	+0.9
	baz=74						
BFSC	Mount Baldy Ra	73.28	46	⇑P	P	16 55 17.4	+0.1
	baz=74						
EDW2	Edwards Air Fo	73.40	45	⇓P	P	16 55 18.7	+0.8
	baz=74						
MONP	Monument Peak	73.42	48	⇓P	P	16 55 19.2	+0.9
	baz=74						
ISA	Isabella	73.51	44	eP	P	16 55 19.2	+0.6
	6.3nm,0.8s						
ISA	Isabella	73.51	44	⇑P	P	16 55 19.6	+1.0
	baz=74						
CMB	Columbia Colle	73.62	42	eP	P	16 55 19.2	+0.1
	2.5nm,0.7s						
SWSC	Sam W. Stewart	73.89	48	⇑P	P	16 55 21.7	+0.9
	baz=74						
LRMC	Laurel Mountai	73.94	45	⇓P	P	16 55 22.1	+0.9
	baz=74						
QSPA	South Pole Qui	74.04	180	P	P	16 55 21.4	+0.1
QSPA	South Pole Qui	74.04	180	P	P	16 55 21.4	+0.1
	4.5nm,0.9s,baz=35,slow=0.9						
BELC	Belle Mtn. Jos	74.31	47	⇓P	P	16 55 23.7	+0.3
	baz=74						
MPMC	Manual Prospec	74.39	45	⇓P	P	16 55 24.4	+0.5

	baz=75						
GSC	Goldstone	74.44	46	⇓P	P	16 55 24.7	+0.7
	baz=75						
BC3	Big Chuckawall	74.51	48	⇓P	P	16 55 25.3	+0.8
	baz=75						
HEC	Hector,Ludlow	74.52	46	⇑P	P	16 55 24.9	+0.4
	baz=75						
GLA	Glamis	74.64	48	⇓P	P	16 55 26.0	+0.8
	baz=75						
BEKR	Beckworth	74.72	40	eP	P	16 55 26.1	+0.5
	4.0nm,1.0s						
GMRC	Granite Mounta	74.96	47	⇓P	P	16 55 27.6	+0.5
	baz=75						
IRM	Iron Mountain	74.99	47	⇑P	P	16 55 27.9	+0.8
	baz=75						
GRAC	Grapevine Rang	74.99	44	⇑P	P	16 55 27.8	+0.7
	baz=75						
FURC	Furnace Creek,	75.04	45	⇑P	P	16 55 28.0	+0.6
	baz=75						
TUQ	Turquoise Moun	75.12	46	⇑P	P	16 55 28.7	+0.7
	baz=75						
NVAR	Mina Array Bea	75.18	42	P	P	16 55 28.8	+0.4
NVAR	Mina Array Bea	75.18	42	P	P	16 55 28.8	+0.4
	10nm,0.9s,baz=228,slow=7.9,SNR=40						
Y12C	Blythe	75.22	48	⇑P	P	16 55 29.4	+0.9
	baz=75						
NV11	Mina Array Sit	75.28	42	eP	P	16 55 29.3	+0.4
LDFC	Landfair	75.50	47	eP	P	16 55 30.8	+0.7
	6.4nm,0.8s						
214A	Organ Pipe Nat	75.56	50	⇓P	P	16 55 31.3	+0.8
	baz=76						
KDAK	Kodiak Island	75.64	12	P	P	16 55 30.5	+0.3
KDAK	Kodiak Island	75.64	12	P	P	16 55 30.5	+0.3
	baz=140,slow=7.9						
PDMCI	Parker Dam,Lak	75.78	48	⇑P	P	16 55 32.3	+0.7
	baz=76						
MOD	Modoc	75.97	38	eP	P	16 55 33.2	+0.4
	16nm,1.1s						
Z14A	Wintersburg	76.16	49	⇑P	P	16 55 34.6	+0.8
	baz=76						
W13A	Hualapai Mount	76.37	47	⇑P	P	16 55 35.6	+0.4
	baz=77						
Y14A	Wickenburg	76.41	48	⇓P	P	16 55 35.8	+0.5
	baz=77						
R11A	Troy Canyon, C	76.91	43	⇑P	P	16 55 38.5	+0.3
	baz=77						
TUC	Tucson	77.24	51	eP	P	16 55 40.8	+0.8
	0.8nm,0.9s						
WVOR	Wild Horse Val	77.28	39	eP	P	16 55 40.6	+0.5
	8.0nm,1.0s						
X16A	Lo Mia Camp, P	77.77	49	⇑P	P	16 55 44.0	+0.9
	baz=78						
319A	Douglas	77.94	52	⇓P	P	16 55 44.8	+0.8
	baz=78						
CCUT	Cedar City	77.99	45	eP	P	16 55 45.3	+1.0
	8.9nm,1.1s						
U15A	North Rim	78.16	47	⇑P	P	16 55 46.2	+0.9
	baz=78						
WUAZ	Wupatki	78.35	48	eP	P	16 55 46.5	+0.3
	14nm,1.3s						
WUAZ	Wupatki	78.35	48	⇓P	P	16 55 46.8	+0.6
	baz=79						
320A	Kipp Ranch, An	78.50	53	⇓P	P	16 55 48.3	+1.2
	baz=79						
220A	Playas Peak, P	78.75	52	⇑P	P	16 55 49.8	+1.3
	baz=79						
X18A	Snowflake	78.90	49	⇓P	P	16 55 50.2	+0.9
	baz=79						
120A	U Bar Ranch, L	78.96	51	⇓P	P	16 55 50.4	+0.8
	baz=79						
Z20A	Nine Sixteen R	79.25	51	⇓P	P	16 55 51.9	+0.7
	baz=80						
MSU	Marysvale	79.28	45	eP	P	16 55 51.9	+0.6
	7.8nm,1.1s						
221A	Mesquite Ranch	79.37	52	⇓P	P	16 55 52.9	+1.0
	baz=80						
MFID	Camas Ranch	79.54	39	⇑P	P	16 55 53.1	+0.6
	baz=80						
121A	Cookes Peak, D	79.59	52	⇓P	P	16 55 54.2	+1.1
	baz=80						
DUG	Dugway	79.72	43	⇑P	P	16 55 54.1	+0.5
	baz=80						
Y20A	Horse Springs,	79.77	50	⇑P	P	16 55 55.3	+1.2
	baz=80						
PMR	Palmer	79.84	12	P	P	16 55 53.1	-0.3
	5.4nm,0.5s						
222A	Williams Famil	79.92	52	⇓P	P	16 55 55.5	+0.6
	baz=80						
X20A	Quemado	79.97	50	⇑P	P	16 55 55.8	+0.7
	baz=80						
Z21A	St. Cloud Mine	80.03	51	⇓P	P	16 55 56.9	+1.5
	baz=80						
Q16A	Castle Valley	80.17	45	⇑P	P	16 55 56.5	+0.5
	baz=80						
I12A	Atlanta	80.17	39	⇓P	P	16 55 56.4	+0.5
	baz=80,SNR=8.3						
W20A	Ramah	80.24	49	⇑P	P	16 55 57.5	+0.9
	baz=80						
Y21A	Point of Rocks	80.34	51	⇑P	P	16 55 58.1	+0.9
	baz=80						
S18A	Hurst Farm, Bl	80.38	46	⇓P	P	16 55 57.2	-0.1
	baz=81						
L14A	Malta	80.40	41	⇓P	P	16 55 57.2	+0.1
	baz=81						
X21A	Alamocita Cree	80.45	50	⇑P	P	16 55 58.5	+0.7
	baz=81,SNR=5.3						
HLID	Hailey	80.48	39	⇑P	P	16 55 57.9	+0.3
	baz=81,SNR=10						
Z22A	Elephant Butte	80.53	51	⇑P	P	16 55 58.8	+0.7
	baz=81,SNR=9.6						
J13A	Cove Ranch, Pi	80.54	40	⇑P	P	16 55 58.3	+0.4
	baz=81,SNR=5.1						
HVU	Hansel Valley	80.56	42	eP	P	16 55 57.8	-0.2
	4.0nm,0.8s						
V20A	Brimhall	80.57	49	⇑P	P	16 55 59.0	+0.7
	baz=81						
H12A	Diamond D Ranc	80.75	38	⇓P	P	16 55 58.8	-0.2
	baz=81,SNR=5.5						
U20A	Newcomb	80.80	48	⇓P	P	16 56 00.5	+1.0
	baz=81						
Y22A	Socorro	80.83	51	⇑P	P	16 56 00.5	+0.8
	baz=81						
I13A	Wildhorse Cree	80.85	39	⇓P	P	16 56 00.0	+0.4
	baz=81						
324A	Moseley Ranch,	80.89	54	⇓P	P	16 56 00.3	+0.2
	baz=81,SNR=8.4						
J14A	Carey	80.90	40	⇑P	P	16 56 00.8	+1.0
	baz=81						
425A	Indio Mountain	81.00	54	⇓P	P	16 56 01.3	+0.7
	baz=81,SNR=26						
X22A	Bernardo	81.05	50	⇓P	P	16 56 01.7	+0.8
	baz=81						
MNTX	Cornudas Mount	81.07	53	eP	P	16 56 01.0	+0.1
	8.9nm,1.2s						
Z23A	Rita Site, Whi	81.09	52	⇑P	P	16 56 01.8	+0.8
	baz=81						
H13A	Challis	81.12	39	⇑P	P	16 56 01.0	+0.1
	baz=81						
224A	Cornudas Mount	81.12	53	⇑P	P	16 56 01.8	+0.6
	baz=81,SNR=10						
626A	Big Bend Ranch	81.17	56	⇓P	P	16 56 02.2	+0.7
	baz=81,SNR=9.7						
CN2	Changchun	81.17	320	eP	P	16 56 01.8	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
V21A	Milan	81.17	49	⇓P	P	16 56 02.1	+0.6
	baz=81						
BNM	Barren Site	81.18	51	eP	P	16 56 02.1	+0.5
	comp=Z,3.7nm,0.8s						
K15A	Arbon	81.18	41	⇓P	P	16 56 01.6	+0.3
	baz=81						
325A	Bean Ranch, Si	81.25	54	⇓P	P	16 56 02.2	+0.2
	baz=82,SNR=20						
TRF	Thorofare Moun	81.33	11	eP	P	16 55 59.9	-1.7
	comp=Z,5.7nm,0.8s						
PV10	Paradox Valley	81.36	46	eP	P	16 56 02.6	0.0
	comp=Z,103nm,0.7s						
526A	Mary Lane Ranc	81.41	55	⇓P	P	16 56 03.3	+0.5
	baz=82,SNR=13						
G13A	Cobalt	81.42	38	⇑P	P	16 56 02.4	-0.1
	baz=82						
124A	Stringfield Ra	81.44	53	⇓P	P	16 56 03.9	+0.9
	baz=82						
U21A	Nageezi	81.44	48	⇑P	P	16 56 03.5	+0.6
	baz=82,SNR=17						
TXAR	Lajitas Array	81.45	56	P	P	16 56 03.6	+0.6
TXAR	Lajitas Array	81.45	56	P	P	16 56 03.6	+0.6
	comp=Z,4.6nm,1.0s,baz=221,slow=7.9,SNR=27						

PV04	Paradox Valley	81.47	46	eP	P	16 56 03.4	+0.5
Y23A	Lovelace Mesa,	81.51	51	⇓P	P	16 56 03.7	+0.4
	baz=82						
NEW	Newport	81.55	34	⇓P	P	16 56 04.3	+1.3
	baz=82						
PV01	Paradox Valley	81.58	46	eP	P	16 56 03.3	-0.3
	comp=Z,206nm,0.5s						
S20A	Disappointment	81.58	47	⇑P	P	16 56 04.1	+0.4
	baz=82,SNR=8.2						
J15A	Blackfoot	81.61	40	⇓P	P	16 56 04.4	+0.8
	baz=82						
ANMO	Albuquerque	81.65	50	eP	P	16 56 04.2	+0.2
	comp=Z,12nm,1.3s						
225A	Deer Hill, Car	81.67	53	⇑P	P	16 56 04.8	+0.5
	baz=82,SNR=11						
H14A	Leadore	81.68	39	⇑P	P	16 56 04.5	+0.5
	baz=82						
426A	McDonald Obser	81.70	55	⇑P	P	16 56 04.9	+0.5
	baz=82,SNR=16						
627A	Terlingua Ranc	81.72	56	⇑P	P	16 56 05.2	+0.7
	baz=82,SNR=13						
R20A	Redvale	81.73	47	⇑P	P	16 56 04.7	+0.3
	baz=82						
F13A	Darby	81.74	38	⇓P	P	16 56 03.8	-0.4
	baz=82,SNR=5.1						
V22A	San Miguel Ran	81.75	49	⇑P	P	16 56 05.4	+0.8
	baz=82						
Z24A	Sheeppen Canyo	81.77	52	⇓P	P	16 56 05.2	+0.5
	baz=82						
C11A	Tepee Creek (N	81.78	35	⇑P	P	16 56 04.1	-0.2
	baz=82,SNR=5.7						
T21A	Navajo Lake	81.78	48	⇓P	P	16 56 05.5	+0.8
	baz=82						
527A	Woodward Ranch	81.82	56	⇓P	P	16 56 05.3	+0.3
	baz=82,SNR=11						
MCK	McKinley	81.83	11	eP	P	16 56 03.1	-1.0
	comp=Z,21nm,0.8s						
D12A	Red Ives Fores	81.84	36	⇓P	P	16 56 04.5	-0.1
	baz=82						
K16A	Soda Springs	81.86	41	⇑P	P	16 56 05.3	+0.4
	baz=82						
S21A	Coal Bank Pass	81.91	47	⇑P	P	16 56 05.9	+0.5
	baz=82,SNR=8.5						
G14A	Jackson	81.96	38	⇑P	P	16 56 05.5	0.0
	baz=82						
W23A	Werner Place,	81.97	50	⇑P	P	16 56 06.2	+0.4
	baz=82						
Y24A	Capitan	81.97	51	⇑P	P	16 56 06.2	+0.4
	baz=82,SNR=6.3						
U22A	Llaves	81.99	49	⇓P	P	16 56 06.4	+0.5
	baz=82						
P19A	Cripple Cowboy	82.00	45	⇓P	P	16 56 06.1	+0.3
	baz=82,SNR=5.5						
125A	Gardner Draw,	82.03	53	⇓P	P	16 56 06.7	+0.7
	baz=82						
GDL2	Guadalupe Moun	82.07	53	eP	P	16 56 06.7	+0.5
	comp=Z,6.9nm,0.9s						
H15A	Lima	82.12	39	⇑P	P	16 56 07.1	+0.8
	baz=82						
628A	Black Gap, Mar	82.13	56	⇓P	P	16 56 07.1	+0.6
	baz=82,SNR=6.8						
M18A	Lyman	82.14	43	⇑P	P	16 56 06.9	+0.4
	baz=82						
Q20A	Ridgley Place,	82.15	46	⇑P	P	16 56 06.8	+0.2
	baz=82,SNR=5.0						
226B	Tecolote Peak,	82.17	54	⇓P	P	16 56 07.2	+0.5
	baz=82,SNR=9.9						
E13A	Victor	82.17	37	⇓P	P	16 56 06.2	-0.2
	baz=82						
MENT	Mentasta	82.18	13	eP	P	16 56 06.4	+0.4
V23A	Ortiz Mt. (NFS	82.20	50	⇓P	P	16 56 08.0	+1.1
	baz=82,SNR=6.7						
O19A	Miners Draw (B	82.22	44	⇑P	P	16 56 07.4	+0.6
	baz=82						
K17A	Gardner Place,	82.24	42	⇑P	P	16 56 07.5	+0.6
	baz=82						
T22A	Edith	82.24	48	⇑P	P	16 56 07.5	+0.3
	baz=82,SNR=5.9						
Z25A	Roswell	82.24	52	⇑P	P	16 56 07.9	+0.8
	baz=82						
427A	Hayter Ranch,	82.27	55	⇑P	P	16 56 07.9	+0.7
	baz=82,SNR=10						
P20A	De Beque	82.34	45	⇑P	P	16 56 08.0	+0.5
	baz=82						
D13A	Huson	82.38	36	⇑P	P	16 56 06.7	-0.7
	baz=83,SNR=8.7						
R21A	Cimarron	82.40	47	⇓P	P	16 56 08.7	+0.7
	baz=83,SNR=7.5						
528A	Cox Ranch, San	82.48	56	⇑P	P	16 56 09.0	+0.6
	baz=83,SNR=6.5						
G15A	Dillon	82.50	39	⇓P	P	16 56 08.3	+0.1
	baz=83,SNR=5.3						
126A	Clayton Basin,	82.51	53	⇓P	P	16 56 09.1	+0.6
	baz=83						
MSO	Missoula	82.53	37	⇑P	P	16 56 08.2	0.0
	baz=83						
W24A	Lazy 6 Ranch,	82.54	50	⇓P	P	16 56 08.8	+0.1
	baz=83,SNR=7.6						
E14A	Clinton	82.57	37	⇓P	P	16 56 08.1	-0.4
	baz=83,SNR=14						
TPAW	Teton Pass	82.59	41	eP	P	16 56 09.1	+0.3
	comp=Z,6.3nm,0.6s						
Q21A	Lamborn Mesa,	82.59	46	⇓P	P	16 56 09.6	+0.7
	baz=83						
S22A	4UR Ranch, Cre	82.62	47	⇓P	P	16 56 09.9	+0.7
	baz=83,SNR=13						
C13A	Hot Springs	82.63	36	⇑P	P	16 56 08.5	-0.2
	baz=83						
J17A	Brown Place, J	82.68	41	⇑P	P	16 56 09.5	+0.3
	baz=83						
DOT	Dot Lake	82.73	13	eP	P	16 56 08.8	+0.1
	comp=Z,11nm,1.1s						
O20A	White River Ci	82.74	45	⇑P	P	16 56 09.9	+0.3
	baz=83						
K18A	Toltan Ranch,	82.74	42	⇑P	P	16 56 09.9	+0.3
	baz=83,SNR=5.3						
M19A	Rock Springs	82.77	43	⇑P	P	16 56 10.0	+0.2
	baz=83						
428A	Kincaid Ranch,	82.78	55	⇓P	P	16 56 10.5	+0.6
	baz=83						
IMW	Indian Meadow	82.80	41	eP	P	16 56 10.4	+0.4
	comp=Z,8.2nm,0.6s						
Z26A	Caprock	82.80	53	⇑P	P	16 56 10.2	+0.2
	baz=83,SNR=16						
X25A	Clemmons Ranch	82.81	51	⇑P	P	16 56 10.0	0.0
	baz=83						
227A	Bennet, Jal	82.82	54	⇑P	P	16 56 10.7	+0.6
	baz=83						
MOOW	Moose Ponds	82.85	41	eP	P	16 56 10.2	0.0
	comp=Z,1.9nm,0.8s						
F15A	Butte	82.85	38	⇓P	P	16 56 10.0	0.0
	baz=83						
V24A	Rampart Ranch,	82.86	50	⇓P	P	16 56 10.8	+0.4
	baz=83,SNR=7.8						
LRM	Limekiln Ridge	82.87	38	eP	P	16 56 10.1	-0.1
	comp=Z,28nm,0.9s						
R22A	Saguache, Gunn	82.89	47	⇓P	P	16 56 11.4	+0.8
	baz=83,SNR=5.7						
D14A	Greenough	82.92	37	⇑P	P	16 56 09.8	-0.4
	baz=83						
529A	Stev Forest Ra	82.92	56	⇑P	P	16 56 10.9	+0.3
	baz=83						
L19A	Farson	82.93	43	⇓P	P	16 56 10.4	-0.1
	baz=83,SNR=5.1						
328A	Wristen Ranch,	82.94	55	⇑P	P	16 56 11.1	+0.4
	baz=83						
G16A	Moss Hill, Enn	82.95	39	⇑P	P	16 56 10.6	0.0
	baz=83,SNR=5.1						
QLMT	Earthquake Lak	82.97	40	eP	P	16 56 11.2	+0.5
	comp=Z,1.6nm,0.2s						
CHMT	Chamberlain Mo	82.97	37	eP	P	16 56 09.8	-0.8
	comp=Z,3.2nm,0.8s						
P21A	Newcastle	83.00	46	⇓P	P	16 56 11.6	+0.6
	baz=83						
H16A	Russell Place,	83.02	40	⇓P	P	16 56 11.9	+0.9
	baz=83,SNR=24						
127A	Arkansas Junct	83.04	53	⇓P	P	16 56 11.9	+0.7
	baz=83						
J18A	Kendall Valley	83.04	41	⇓P	P	16 56 11.2	0.0
	baz=83,SNR=23						
N20A	Spence Gulch,	83.05	44	⇑P	P	16 56 11.2	-0.1
	baz=83,SNR=9.4						
Q22A	Crested Butte,	83.07	46	⇓P	P	16 56 11.7	+0.2
	baz=83,SNR=5.1						
E15A	Deer Lodge	83.07	38	⇓P	P	16 56 11.8	+0.7
	baz=83						
COLA	College	83.07	11	eP	P	16 56 10.2	-0.2
	comp=Z,15nm,0.9s						

B13A	Whitefish	83.07	35	⇑P	P	16 56 10.9	0.0
	baz=83						
BW06	Boulder Array	83.12	42	eP	P	16 56 11.2	-0.4
	comp=Z,8.0nm,0.7s						
PDAR	Pinedale Array	83.12	42	P	P	16 56 11.2	-0.3
PDAR	Pinedale Array	83.12	42	P	P	16 56 11.2	-0.3
	comp=Z,9.0nm,0.7s,baz=211,slow=3.2,SNR=86						
ILAR	Eielson Array	83.16	11	P	P	16 56 10.5	-0.4
ILAR	Eielson Array	83.16	11	P	P	16 56 10.5	-0.4
	comp=Z,2.6nm,0.8s,baz=235,slow=6.4,SNR=30						
SMCO	Snowmass	83.17	46	eP	P	16 56 12.4	+0.3
	comp=Z,7.2nm,0.7s						
Y26A	Elida	83.19	52	⇑P	P	16 56 12.0	0.0
	baz=83,SNR=6.3						
W25A	X Bar L Ranch,	83.25	51	⇓P	P	16 56 12.0	-0.3
	baz=84,SNR=8.7						
BOZ	Bozeman (W)	83.27	39	eP	P	16 56 12.2	0.0
	comp=Z,3.5nm,0.8s						
H17A	Grant Village	83.28	40	⇑P	P	16 56 13.6	+1.2
	baz=84,SNR=10						
O21A	Pagoda	83.30	45	⇓P	P	16 56 12.7	+0.2
	baz=84						
F16A	Kennard Place,	83.34	39	⇑P	P	16 56 12.8	+0.3
	baz=84						
429A	Davenport Ranc	83.37	56	⇓P	P	16 56 12.9	0.0
	baz=84,SNR=5.7						
V25A	Rancho No Teng	83.39	50	⇓P	P	16 56 13.3	+0.2
	baz=84,SNR=8.2						
Z27A	Tatum	83.41	53	⇑P	P	16 56 12.9	-0.2
	baz=84,SNR=7.4						
228A	UT Block 9, Go	83.41	54	⇓P	P	16 56 13.8	+0.7
	baz=84						
M20A	Sweetwater, Wa	83.41	44	⇑P	P	16 56 13.2	+0.2
	baz=84						
I18A	Diamond G Ranc	83.41	41	⇓P	P	16 56 13.0	0.0
	baz=84						
X26A	CR and CF Fran	83.46	51	⇑P	P	16 56 14.0	+0.7
	baz=84						
D15A	Lincoln	83.46	37	⇓P	P	16 56 12.8	-0.3
	baz=84,SNR=6.5						
P22A	Eagle	83.50	46	⇑P	P	16 56 13.8	+0.2
	baz=84						
N21A	Black Mountain	83.51	45	⇓P	P	16 56 13.8	+0.1
	baz=84,SNR=7.6						
R23A	Moffat	83.53	47	⇑P	P	16 56 14.2	+0.4
	baz=84						
L20A	Wamsutter	83.55	43	⇓P	P	16 56 13.8	+0.1
	baz=84,SNR=6.7						
SDCO	Great Sand Dun	83.57	48	eP	P	16 56 13.7	-0.3
	comp=Z,4.6nm,1.0s						
T24A	Torres, Weston	83.60	49	⇑P	P	16 56 15.0	+0.8
	baz=84						
K19A	Absolon Red Bu	83.61	42	⇓P	P	16 56 13.7	-0.3
	baz=84						
530A	J-C Ranch, Com	83.63	56	⇑P	P	16 56 14.3	+0.1
	baz=84						
329A	Wagon Wheel Ra	83.64	55	⇓P	P	16 56 14.7	+0.4
	baz=84						
G17A	Pierce Place,	83.64	39	⇓P	P	16 56 14.8	+0.8
	baz=84						
Y27A	Causey	83.67	52	⇓P	P	16 56 14.3	-0.2
	baz=84,SNR=8.5						
J19A	Crowheart	83.68	42	⇓P	P	16 56 14.6	+0.3
	baz=84						
128A	Castleberry Fa	83.69	54	⇑P	P	16 56 14.7	+0.1
	baz=84,SNR=5.8						
E16A	East Helena	83.69	38	⇑P	P	16 56 14.0	-0.2
	baz=84,SNR=6.4						
HRY	Holter Researc	83.70	38	eP	P	16 56 14.1	-0.2
	comp=Z,14nm,0.7s						
S24A	Houchin Ranch,	83.73	48	⇑P	P	16 56 15.3	+0.4
	baz=84						
WALA	Waterton Lakes	83.75	35	P	P	16 56 13.6	-0.9
U25A	Circle Dot Ran	83.78	50	⇓P	P	16 56 14.9	-0.2
	baz=84,SNR=5.5						
C15A	Salmond Ranch,	83.80	37	⇑P	P	16 56 14.9	+0.1
	baz=84						
Q23A	Hartsel	83.84	47	⇓P	P	16 56 15.8	+0.3
	baz=84						
K20A	Yellowstone Ra	83.85	43	⇑P	P	16 56 14.7	-0.5
	baz=84,SNR=5.6						
O22A	Kremmling	83.90	45	⇑P	P	16 56 15.7	0.0
	baz=84,SNR=9.2						
631A	Perdido Creek	83.97	57	⇓P	P	16 56 16.2	+0.3
	baz=84						
A14A	Double T Ranch	83.98	35	⇑P	P	16 56 15.6	-0.1
	baz=84						
F17A	Fitzpatrick Pl	83.98	39	⇓P	P	16 56 16.2	+0.4
	baz=84,SNR=6.6						
H18A	Shoshone NF, C	83.98	40	⇓P	P	16 56 16.3	+0.4
	baz=84						
V26A	Tequesquite Ra	83.99	50	⇓P	P	16 56 16.2	+0.1
	baz=84						
MSTX	Muleshoe	84.01	52	⇑P	P	16 56 16.0	-0.1
	baz=84,SNR=9.1						
M21A	Separation Pea	84.01	44	⇑P	P	16 56 15.7	-0.4
	baz=84,SNR=5.8						
D16A	Dana Ranch, Ca	84.03	38	⇓P	P	16 56 16.2	+0.2
	baz=84						
Z28A	Tucker Farm, M	84.03	53	⇓P	P	16 56 16.5	+0.2
	baz=84						
X27A	F and S Farms,	84.03	52	⇑P	P	16 56 16.9	+0.6
	baz=84						
R24A	Sanders Place,	84.06	48	⇓P	P	16 56 16.6	+0.2
	baz=84						
I19A	Meeteetse	84.09	41	⇑P	P	16 56 16.6	+0.2
	baz=84,SNR=5.4						
T25A	Trinidad	84.09	49	⇑P	P	16 56 17.1	+0.5
	baz=84						
B15A	Bradely Ranch,	84.11	36	⇑P	P	16 56 15.7	-0.6
	baz=84						
L21A	Rawlins	84.17	43	⇓P	P	16 56 16.8	-0.1
	baz=84						
W27A	Bowe Ranch, En	84.23	51	⇑P	P	16 56 16.8	-0.4
	baz=84,SNR=6.7						
N22A	Wattenberg Ran	84.25	45	⇑P	P	16 56 17.5	+0.1
	baz=84,SNR=7.0						
S25A	Robets Cordova	84.30	48	⇓P	P	16 56 17.8	+0.2
	baz=84						
C16A	Fuhringer Ranc	84.31	37	⇓P	P	16 56 17.2	-0.1
	baz=84						
Q24A	Divide	84.34	47	⇑P	P	16 56 18.0	0.0
	baz=84						
J20A	Shoshoni	84.35	42	⇓P	P	16 56 17.7	0.0
	baz=84,SNR=5.1						
EGAK	Eagle	84.35	14	eP	P	16 56 17.1	+0.1
	comp=Z,7.1nm,1.1s						
O23A	Lake Granby, G	84.36	46	⇑P	P	16 56 18.4	+0.4
	baz=85						
G18A	Lazy EL Ranch,	84.36	40	⇑P	P	16 56 17.7	0.0
	baz=85,SNR=7.0						
A15A	Johnson Ranch,	84.37	35	⇑P	P	16 56 17.4	-0.2
	baz=85						
Y28A	McKinney Farm,	84.38	53	⇓P	P	16 56 18.4	+0.4
	baz=85						
H19A	Powell	84.40	41	⇓P	P	16 56 18.4	+0.5
	baz=85						
M22A	Cedar Creek Ra	84.43	44	⇓P	P	16 56 18.6	+0.3
	baz=85						
Z29A	Hungry Hill Ra	84.54	53	⇑P	P	16 56 19.0	+0.2
	baz=85						
F18A	Big Timber	84.55	39	⇓P	P	16 56 18.9	+0.3
	baz=85						
K21A	Alcova	84.55	43	⇑P	P	16 56 18.7	-0.2
	baz=85						
D17A	Six Diamond Ra	84.59	38	⇓P	P	16 56 18.7	-0.1
	baz=85,SNR=8.4						
I20A	Worland	84.60	41	⇑P	P	16 56 19.1	+0.2
	baz=85						
R25A	Fountain Ranch	84.61	48	⇑P	P	16 56 19.8	+0.6
	baz=85						
N23A	Red Feather La	84.64	45	⇓P	P	16 56 19.7	+0.3
	baz=85						
B16A	M & M Farms, S	84.65	36	⇑P	P	16 56 18.8	-0.1
	baz=85						
J21A	Lysite	84.76	42	⇓P	P	16 56 19.7	-0.1
	baz=85,SNR=12						
E18A	Harlowton	84.76	39	⇑P	P	16 56 19.9	+0.2
	baz=85						
C17A	Wharram Farm,	84.79	37	⇑P	P	16 56 19.8	+0.1
	baz=85						
COLD	Coldfoot	84.84	9	eP	P	16 56 20.1	+0.7
	comp=Z,8.8nm,1.1s						
A16A	West Butte Ran	84.99	36	⇓P	P	16 56 20.7	0.0
	baz=85						
Z30A	Sanderson Ranc	85.00	53	⇑P	P	16 56 18.9	-2.2
	baz=85						
F19A	Roth Farm, Mol	85.00	40	⇑P	P	16 56 21.0	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=85						
BILL	**Bilibino**	**85.03**	**353**	*e*P	**P**	**16 56 18.3**	**-2.1**
	comp=Z,4.1nm,1.1s						
M23A	**Laramie**	**85.05**	**44**	⇑P	**P**	**16 56 20.9**	**-0.4**
	baz=85						
I21A	**Big Trails, Te**	**85.07**	**42**	⇓P	**P**	**16 56 20.6**	**-0.7**
	baz=85,SNR=8.1						
B17A	**L&G Farms, Che**	**85.11**	**37**	⇓P	**P**	**16 56 21.0**	**-0.3**
	baz=85						
231A	**Bronte**	**85.12**	**55**	⇑P	**P**	**16 56 21.9**	**+0.2**
	baz=85						
P25A	**Willow Gulch B**	**85.27**	**47**	⇓P	**P**	**16 56 22.8**	**+0.4**
	baz=86						
R26A	**Arlington**	**85.27**	**48**	⇑P	**P**	**16 56 22.7**	**+0.2**
	baz=86						
T27A	**Campo**	**85.29**	**49**	⇓P	**P**	**16 56 22.8**	**+0.3**
	baz=86						
E19A	**Rath Farm, Rou**	**85.39**	**39**	⇑P	**P**	**16 56 23.2**	**+0.5**
	baz=86						
J22A	**Midwest**	**85.41**	**43**	⇓P	**P**	**16 56 23.2**	**+0.2**
	baz=86						
I22A	**9 Mile Ranch,**	**85.63**	**42**	⇑P	**P**	**16 56 23.8**	**-0.3**
	baz=86						
B18A	**Beardsley Farm**	**85.75**	**37**	⇑P	**P**	**16 56 24.0**	**-0.4**
	baz=86						
C19A	**Slack Wire Ran**	**85.85**	**38**	⇓P	**P**	**16 56 25.5**	**+0.6**
	baz=86						
A18A	**Metzger Ranch,**	**85.97**	**37**	⇓P	**P**	**16 56 25.4**	**-0.1**
	baz=86						
D20A	**Manuel Ranch,**	**86.08**	**39**	⇑P	**P**	**16 56 26.6**	**+0.4**
	baz=86						
Z32A	**Haskell**	**86.29**	**54**	⇓P	**P**	**16 56 28.3**	**+0.9**
	baz=86						
Y32A	**R-V Farms, Ver**	**86.57**	**53**	⇓P	**P**	**16 56 29.3**	**+0.5**
	baz=87						
T30A	**Plains**	**86.90**	**50**	⇓P	**P**	**16 56 30.4**	**+0.1**
	baz=87						
G23A	**Biddle**	**86.91**	**41**	⇓P	**P**	**16 56 30.1**	**-0.1**
	baz=87						
V31A	**Spring Creek L**	**86.92**	**52**	⇓P	**P**	**16 56 30.9**	**+0.4**
	baz=87						
D22A	**Cohagen**	**87.29**	**39**	⇓P	**P**	**16 56 32.3**	**+0.3**
	baz=88						
R30A	**Dighton**	**87.55**	**49**	⇑P	**P**	**16 56 33.8**	**+0.4**
	baz=88						
GYA	**Guiyang**	**87.80**	**298**	*e*P	**P**	**16 56 37.0**	**+2.0**
GYA				pP	pP	16 57 48.3	+44
GYA				sP	sP	16 58 19.4	+62
GYA				SKS	SKSac	17 06 33.0	-20
GYA				S	SKKSac	17 06 51.9	-11
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
B22A	**Reddig Ranch S**	**87.92**	**38**	⇓P	**P**	**16 56 34.9**	**-0.1**
	baz=88						
C23A	**Lambert**	**88.19**	**39**	⇓P	**P**	**16 56 36.4**	**+0.2**
	baz=88						
HHC	**Hu-ho-hao-te**	**89.00**	**313**	*e*P	**P**	**16 56 40.1**	**-0.2**
HHC				pP	pP	16 57 48.8	+39
HHC				sP	sP	16 58 21.6	+59
HHC				PP	**PP**	**17 00 16.8**	**+5.0**
HHC				SKS	SKSac	17 06 40.0	-20
HHC				S	SKKSac	17 07 00.8	-11
HHC				sS	sS	17 09 02.7	+52
HHC				SS	SS	17 13 03.0	-12
HHC				pmax	pmax		
	comp=Z,32nm,0.7s						
HHC				pmax	pmax		
	comp=Z,200nm,6.5s						
KMI	**Kunming**	**90.75**	**296**	P	**P**	**16 56 48.1**	**-0.9**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YKA	**Yellowknife Ar**	**90.89**	**24**	P	**P**	**16 56 46.8**	**-1.6**
YKA	**Yellowknife Ar**	**90.89**	**24**	P	**P**	**16 56 46.8**	**-1.6**
	comp=Z,2.2nm,1.1s,baz=237,slow=4.9,SNR=14						
CMAR	**Chiang Mai Arr**	**92.23**	**288**	P	**P**	**16 56 53.5**	**-2.3**
CMAR	**Chiang Mai Arr**	**92.23**	**288**	P	**P**	**16 56 53.5**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=40,slow=4.7,SNR=3.0						
ARCES	**ARCESS Array B**	**125.12**	**352**	PKP	**PKPdf**	**17 02 43.1**	**-1.4**
ARCES	**ARCESS Array B**	**125.12**	**352**	PKP	**PKPdf**	**17 02 43.1**	**-1.4**
	comp=Z,3.4nm,0.8s,baz=27,slow=1.0,SNR=8.3						
KOLS	**Kolonicke sedl**	**144.56**	**341**	*e*PKP	**PKPdf**	**17 03 24.0**	**+2.9**
CRVS	**Cervenica-Dubn**	**144.84**	**342**	*e*PKP	**PKPab**	**17 03 20.1**	**-0.8**
VYHS	**Vyhne**	**145.93**	**345**	*e*PKP	**PKPab**	**17 03 26.1**	**+1.1**
BRTR	**Keskin Array B**	**146.24**	**320**	PKPbc	**PKPbc**	**17 03 25.8**	**0.0**
BRTR	**Keskin Array B**	**146.24**	**320**	PKPbc	**PKPbc**	**17 03 25.8**	**0.0**
	comp=Z,1.8nm,0.9s,baz=85,slow=1.6,SNR=7.6						
GERES	**GERESS Array B**	**146.65**	**351**	PKPbc	**PKPbc**	**17 03 26.1**	**-0.4**
GERES	**GERESS Array B**	**146.65**	**351**	PKPbc	**PKPbc**	**17 03 26.1**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=3.8,slow=2.9,SNR=8.7						
ESDC	**Sonseca Array**	**154.88**	**18**	PKPab	**PKPab**	**17 04 02.2**	**+0.3**
ESDC	**Sonseca Array**	**154.88**	**18**	PKPab	**PKPab**	**17 04 02.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=328,slow=1.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**174.97**	**124**	PKPab	**PKPab**	**17 05 29.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**174.97**	**124**	PKPab	**PKPab**	**17 05 29.9**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=214,slow=4.9,SNR=3.1						

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*CSEM **07** 16:45:26.3, 46°.33N×7°.42E, h1km, ML0.8/4, After ZUR*
ZUR 07 16:45:26.3, 46°.33N×7°.42E, h1km±2km, ML0.8/4, 2C, Switzerland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SENIN	**Lac Senin/Sane**	**0.09**	**293**	*i* Pg	Pg	16 45 28.4	0.0
	120nm,0.2s						
SENIN				*i* Sg	Sg	16 45 29.9	0.0
	120nm,0.2s						
SENIN	**Lac Senin/Sane**	**0.09**	**293**	*i* Pg	Pg	16 45 28.4	0.0
	120nm,0.2s						
SENIN				*i* Sg	Sg	16 45 29.9	0.0
	120nm,0.2s						
LKBD	**Leukerbad**	**0.15**	**67**	*e*Pg	Pg	16 45 29.7	+0.2
LKBD				*e*Sg	Sg	16 45 32.0	+0.3
LKBD	**Leukerbad**	**0.15**	**67**	*e*Pg	Pg	16 45 29.7	+0.2
LKBD				*e*Sg	Sg	16 45 32.0	+0.3
LKBD2	**Leukerbad 2**	**0.16**	**73**	*i* Pg	Pg	16 45 29.9	+0.1
	8.0nm,0.1s						
LKBD2				*i* Sg	Sg	16 45 32.4	+0.3
	8.0nm,0.1s						
LKBD2	**Leukerbad 2**	**0.16**	**73**	*i* Pg	Pg	16 45 29.9	+0.1
	8.0nm,0.1s						
LKBD2				*i* Sg	Sg	16 45 32.4	+0.3
	8.0nm,0.1s						
GRYON	**Gryon**	**0.23**	**251**	*e*Pg	Pg	16 45 30.9	0.0
	13nm,0.2s						
GRYON				*e*Sg	Sg	16 45 34.3	+0.3
	13nm,0.2s						
GRYON	**Gryon**	**0.23**	**251**	*e*Pg	Pg	16 45 30.9	0.0
	13nm,0.2s						
GRYON				*e*Sg	Sg	16 45 34.3	+0.3
	13nm,0.2s						
DIX	**Grande Dixence**	**0.25**	**182**	⇑*i*Pg	Pg	16 45 31.7	+0.3
	22nm,0.3s						
DIX				*i* Sg	Sg	16 45 35.0	+0.1
	22nm,0.3s						
DIX	**Grande Dixence**	**0.25**	**182**	⇑*i*Pg	Pg	16 45 31.7	+0.3
	22nm,0.3s						
DIX				*i* Sg	Sg	16 45 35.0	+0.1
	22nm,0.3s						

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*TAP **07** 16:54:31.8, 24°.19N×121°.77E, h11km, ML3.7, B*
*JMA **07** 16:54:31.4±0.3, 24°.03N×121°.66E, h51km, M2.9*
*ISCJB **07** 16:54:31.4±0.4, 24°.18N±0°.01×121°.83E±0°.02, h4km±2km, Error ellipse: s-maj=2.9km s-min=1.9km az=30.4*
ISC 07 16:54:31.9±0.9, 24°.19N±0°.02×121°.79E±0°.02, h11km±6km, n59, σ0^{s}52/108, 10C-2D, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**339**	*i* P	**Pg**	**16 54 35.0**	**-0.1**
	baz=351						
EHP				*i* S	**Sg**	**16 54 37.5**	**+0.2**
	baz=351						
TWD	**Chiawan**	**0.21**	**240**	⇑*i*P	**Pg**	**16 54 36.1**	**-0.1**
	baz=242						
TWD				*i* S	**Sg**	**16 54 39.4**	**+0.2**
	baz=242						
ENA	**Nanau**	**0.25**	**349**	⇑*i*P	**Pg**	**16 54 37.0**	**0.0**
	baz=355						
ENA				*e*S	**Sg**	**16 54 40.6**	**+0.3**
	baz=355						
HWA	**Hwalien**	**0.27**	**220**	*e*P	**Pb**	**16 54 38.1**	**-0.6**
	baz=226						
ESF	**Shoufeng Towns**	**0.41**	**220**	*e*P	**Pb**	**16 54 41.0**	**-0.1**
	baz=229						
TWC	**Suao**	**0.43**	**7**	⇑*i*P	**Pg**	**16 54 40.4**	**+0.1**
	baz=4.0						
TWC				S	**Sg**	**16 54 46.4**	**+0.5**
	baz=4.0						
NNS	**Nan Shan**	**0.46**	**304**	⇑*i*P	**Pg**	**16 54 40.8**	**-0.1**
	baz=306						
NNS				*i* S	**Sg**	**16 54 46.8**	**-0.2**
	baz=306						
WHF	**Hehuan Shan**	**0.48**	**265**	⇑*i*P	**Pg**	**16 54 41.2**	**-0.2**
	baz=266						
WHF				S	**Sg**	**16 54 47.9**	**0.0**
	baz=266						
ESL	**Shilin**	**0.49**	**222**	⇑P	**Pg**	**16 54 41.4**	**-0.2**
	baz=229						
ESL				*e*S	**Sg**	**16 54 48.2**	**+0.2**
	baz=229						
ENTT	**Nioudou**	**0.50**	**336**	⇑*i*P	**Pg**	**16 54 41.7**	**+0.1**
	baz=338						
ENTT				S	**Sg**	**16 54 48.6**	**+0.3**
	baz=338						
TWE	**Neicheng**	**0.55**	**348**	⇑*i*P	**Pg**	**16 54 42.7**	**+0.2**
	baz=351						
TWE				S	**Sg**	**16 54 50.0**	**+0.3**
	baz=351						
TWT	**Tachien**	**0.57**	**277**	⇑P	**Pg**	**16 54 43.3**	**+0.4**
	baz=278						
TWT				S	**Sg**	**16 54 50.7**	**+0.2**
	baz=278						
ILA	**Ilan**	**0.58**	**356**	P	**Pb**	**16 54 43.6**	**-0.5**
	baz=353						
ILA				S	**Sb**	**16 54 51.7**	**-0.6**
	baz=353						
NSK	**Sanguang**	**0.63**	**321**	⇑*i*P	**Pg**	**16 54 44.2**	**+0.1**
	baz=323						
NSK				*i* S	**Sg**	**16 54 52.6**	**+0.2**
	baz=323						
EHY	**Hungye**	**0.80**	**213**	*e*P	**Pg**	**16 54 46.9**	**-0.4**
	baz=222						
EHY				*e*S	**Sb**	**16 54 58.9**	**+0.2**
	baz=222						
TWB1	**Santiao Chiao**	**0.84**	**12**	P	**Pg**	**16 54 47.9**	**-0.2**
	baz=14						
TWB1				S	**Sg**	**16 54 59.2**	**+0.1**
	baz=14						
NSTT	**Nanjuang**	**0.85**	**302**	*e*P	**Pb**	**16 54 48.4**	**-0.2**
	baz=303						
NSTT				*e*S	**Sg**	**16 54 59.4**	**+0.1**
	baz=303						
SMLT	**Sun Moon Lake**	**0.87**	**250**	*e*P	**Pg**	**16 54 48.4**	**-0.2**
	baz=250						
SMLT				S	**Sg**	**16 55 00.1**	**+0.1**
	baz=250						
NWF	**Wu-fen Shan**	**0.88**	**359**	*i* P	**Pb**	**16 54 49.3**	**0.0**
	baz=353						
NWF				*e*S	**Sg**	**16 55 00.8**	**+0.3**
	baz=353						
TAP1	**Taipei**	**0.89**	**344**	*e*P	**Pb**	**16 54 49.3**	**0.0**
	baz=344						
TAP1				*e*S	**Sb**	**16 55 01.2**	**+0.1**
	baz=344						
TAP	**Taipei**	**0.89**	**343**	*e*P	**Pb**	**16 54 49.4**	**+0.1**
	baz=344						
TAP				*e*S	**Sg**	**16 55 00.7**	**0.0**
	baz=344						
TYC	**Yuchr**	**0.90**	**252**	P	**Pg**	**16 54 49.0**	**-0.2**
	baz=246						
TYC				*e*S	**Sg**	**16 54 60.0**	**-0.9**
	baz=246						
TWQ1	**Liyutan**	**0.94**	**280**	*e*P	**Pn**	**16 54 50.8**	**-0.3**
	baz=281						
TWQ1				*e*S	**Sg**	**16 55 02.3**	**0.0**
	baz=281						
TWF1	**Yuli**	**0.94**	**209**	*e*P	**Pg**	**16 54 49.4**	**-0.7**
	baz=220						
TWF1				*e*S	**Sb**	**16 55 03.2**	**+0.4**
	baz=220						
NCU	**National Centr**	**0.96**	**325**	*e*P	**Pn**	**16 54 51.4**	**+0.1**
	baz=326						
NCU				*e*S	**Sn**	**16 55 04.2**	**-0.7**
	baz=326						
HSN	**Hsinchu**	**0.97**	**310**	*e*P	**Pn**	**16 54 51.4**	**-0.1**
	baz=304						
HSN				*e*S	**Sn**	**16 55 04.4**	**-0.9**
	baz=304						
NSY	**Sanyi**	**0.97**	**284**	*e*P	**Pn**	**16 54 51.2**	**-0.3**
	baz=285						
NSY				*e*S	**Sb**	**16 55 04.0**	**+0.4**
	baz=285						
TWS1	**Kuangyinshan**	**0.97**	**340**	*e*P	**Pn**	**16 54 51.1**	**-0.4**
	baz=349						
TWS1				*e*S	**Sn**	**16 55 05.2**	**-0.1**
	baz=349						
TCU	**Taichung**	**1.02**	**268**	*e*P	**Pn**	**16 54 52.0**	**-0.1**
	baz=269						
TCU				*e*S	**Sn**	**16 55 06.1**	**-0.4**
	baz=269						
WNT	**Mingjian**	**1.06**	**253**	P	**Pn**	**16 54 53.0**	**+0.3**
	baz=250						
WNT				*e*S	**Sn**	**16 55 08.3**	**+0.8**
	baz=250						
TWY	**Chenhua**	**1.10**	**351**	*e*P	**Pn**	**16 54 53.4**	**+0.1**
	baz=345						
TWY				*e*S	**Sn**	**16 55 08.2**	**-0.3**
	baz=345						
ALS	**Alishan**	**1.13**	**234**	⇓P	**Pb**	**16 54 53.2**	**-0.3**
	baz=235						
ALS				*e*S	**Sb**	**16 55 08.6**	**+0.3**
	baz=235						
YOJ	**Yonaguni jima**	**1.15**	**76**	⇓*e*P	**Pb**	**16 54 53.6**	**-0.1**
	baz=62						
YOJ	**Yonaguni jima**	**1.15**	**76**	P	**Pb**	**16 54 53.6**	**-0.1**
YOJ				*e*S	**Sn**	**16 55 10.2**	**+0.6**
CHKT	**Chengkung**	**1.15**	**200**	*e*P	**Pb**	**16 54 53.0**	**-0.8**
	baz=201						
CHKT				*e*S	**Sn**	**16 55 10.3**	**+0.7**
	baz=201						
CHN5	**Tsauling**	**1.18**	**240**	*e*P	**Pg**	**16 54 54.6**	**+0.1**
	baz=242						
CHN5				*e*S	**Sn**	**16 55 11.3**	**+0.8**
	baz=242						
ELDTW	**Lidau**	**1.22**	**216**	*e*P	**Pn**	**16 54 53.3**	**-1.7**
	baz=218						
WGK	**Gukeng**	**1.23**	**246**	*e*P	**Pg**	**16 54 55.6**	**+0.1**
	baz=248						
WGK				*e*S	**Sn**	**16 55 13.2**	**+1.6**
	baz=248						
CHN2	**Minshiung**	**1.37**	**242**	*e*P	**Pg**	**16 54 57.8**	**-0.4**
	baz=244						
CHN2				*e*S	**Sg**	**16 55 16.7**	**+0.7**
	baz=244						
CHN4	**Tsaushan**	**1.38**	**233**	*e*P	**Pb**	**16 54 57.9**	**+0.2**
	baz=236						
CHN4				*e*S	**Sg**	**16 55 17.0**	**+0.8**
	baz=236						
WTCT	**Ta-ch'eng**	**1.42**	**257**	*e*P	**Pb**	**16 54 58.5**	**+0.2**
	baz=259						
WTCT				*e*S	**Sg**	**16 55 18.2**	**+0.7**
	baz=259						
CHY	**Chiayi**	**1.43**	**242**	*e*P	**Pg**	**16 54 59.2**	**-0.1**
	baz=244						
CHY				*e*S	**Sg**	**16 55 18.9**	**+1.1**
	baz=244						
WTP	**Ta-pu**	**1.43**	**229**	P	**Pb**	**16 54 58.6**	**0.0**
	baz=232						
WTP				*e*S	**Sg**	**16 55 17.9**	**+0.1**
	baz=232						
TWK	**Hsinying**	**1.50**	**233**	*e*P	**Pb**	**16 54 59.6**	**-0.2**
	baz=235						
TWK				*e*S	**Sg**	**16 55 20.0**	**-0.3**
	baz=235						
CHN1	**Nanshi**	**1.53**	**230**	*e*P	**Pb**	**16 55 00.3**	**0.0**
	baz=222						
CHN1				*e*S	**Sg**	**16 55 21.7**	**+0.7**
	baz=222						
WSF	**Szhu**	**1.54**	**250**	*e*P	**Pb**	**16 54 59.7**	**-0.7**
	baz=263						
WSF				*e*S	**Sg**	**16 55 21.7**	**+0.4**
	baz=263						
ECL	**Taimali**	**1.76**	**206**	*e*P	**Pn**	**16 55 02.4**	**+0.1**
	baz=194						
IRIF	**Iriomote-Funau**	**1.77**	**85**	P	**Pn**	**16 55 02.2**	**-0.3**
IRIF				*e*S	**Sn**	**16 55 24.9**	**-0.2**
SSD	**Sandimen**	**1.79**	**217**	*e*P	**Pn**	**16 55 03.2**	**+0.6**
	baz=232						
SSD				*e*S	**Sb**	**16 55 27.3**	**+0.3**
	baz=232						
TWM1	**Shoushan**	**1.85**	**223**	*e*P	**Pb**	**16 55 05.9**	**+0.2**
	baz=224						
SGLT	**Jiouru**	**1.88**	**220**	*e*P	**Pn**	**16 55 04.0**	**0.0**
	baz=212						
EAST	**Anshuo**	**1.99**	**206**	*e*P	**Pn**	**16 55 05.9**	**+0.3**
	baz=196						
JKRS	**Kuro-shima**	**2.02**	**88**	P	**Pn**	**16 55 06.1**	**+0.1**
SCZT	**Fangliau**	**2.10**	**211**	*e*P	**Pn**	**16 55 08.2**	**+1.2**
	baz=213						
SCZT				*e*S	**Sb**	**16 55 34.9**	**-1.3**
	baz=213						
PNG	**Penghu**	**2.14**	**254**	*e*P	**Pn**	**16 55 08.4**	**+0.9**
	baz=264						
PNG				*e*S	**Sb**	**16 55 35.5**	**-1.7**
	baz=264						
JIJ	**Ishigaki jima**	**2.15**	**85**	P	**Pn**	**16 55 07.4**	**-0.3**
JIJ				*e*S	**Sn**	**16 55 34.4**	**-0.1**
WDGT	**Dungji**	**2.16**	**245**	*e*P	**Pn**	**16 55 07.7**	**-0.1**
	baz=249						
JTJ	**Tarama**	**2.69**	**80**	P	**Pn**	**16 55 15.8**	**+0.7**
JTJ				*e*S	**Sn**	**16 55 48.0**	**+0.3**
QZH	**Quanzhou**	**3.01**	**285**	Pn	**Pn**	**16 55 20.2**	**+0.7**
QZH				Sn	**Sn**	**16 55 55.3**	**-0.3**
QZH				smax	smax		
	comp=N,160nm,0.7s						
QZH				smax	smax		
	comp=E,190nm,1.3s						

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*GEN **07** 16:57:32.6, 44°.68N×9°.40E, h10km, ML2.3*
*ROM **07** 16:57:32.5±0.1, 44°.63N×9°.42E, h2km±1km, Md2.4/6, Ml2.2/7, Error ellipse: s-maj=1.3km s-min=1.3km az=77.0*
*CSEM **07** 16:57:33.4±0.2, 44°.59N×9°.43E, h8km, ML2.8/14, Error ellipse: s-maj=5.3km s-min=2.7km az=14.0*
*ISCJB **07** 16:57:33.3±0.4, 44°.58N±0°.03×9°.43E±0°.03, h11km±3km, Error ellipse: s-maj=4.8km s-min=2.9km az=13.2*
*LDG **07** 16:57:34.9±0.4, 44°.46N×9°.47E, h2km, Ml2.5/9, Error ellipse: s-maj=9.7km s-min=5.0km az=65.0*
ISC 07 16:57:32.9±0.9, 44°.60N±0°.02×9°.42E±0°.02, h6km±8km, n46, σ1^{s}05/85, Northern Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOB	**Bobbio (Coli)**	**0.16**	**6**	Pg	**Pg**	**16 57 35.6**	**-0.7**
BOB				Sg	**Sg**	**16 57 37.7**	**-0.9**
BOB	**Bobbio (Coli)**	**0.16**	**6**	Pg	**Pg**	**16 57 35.6**	**-0.7**
BOB				Sg	**Sg**	**16 57 37.7**	**-0.9**
MSSA	**Maissana**	**0.30**	**167**	Pg	**Pg**	**16 57 39.7**	**+0.9**
MSSA				Sg	**Sb**	**16 57 45.3**	**-0.5**
	311nm,0.2s						
MSSA	**Maissana**	**0.30**	**167**	Pg	**Pg**	**16 57 39.7**	**+0.9**
MSSA				Sg	**Sb**	**16 57 45.3**	**-0.5**
	311nm,0.2s						
CODM	**Codolo**	**0.37**	**125**	P	**Pg**	**16 57 40.6**	**+0.4**
CODM				S	**Sg**	**16 57 46.5**	**+1.4**
GENL	**Genova Univers**	**0.38**	**239**	P	**Pg**	**16 57 40.8**	**+0.5**
GENL				S	**Sg**	**16 57 46.3**	**+1.0**
GRAM	**Graiana**	**0.47**	**104**	P	**Pg**	**16 57 42.2**	**+0.1**
GRAM				S	**Sg**	**16 57 49.1**	**+0.8**
PCP	**Piancastagn**	**0.63**	**265**	Pg	**Pg**	**16 57 45.4**	**+0.3**
PCP				Sg	**Sb**	**16 57 56.1**	**+0.6**
	57nm,0.3s						
PCP	**Piancastagn**	**0.63**	**265**	P	**Pg**	**16 57 45.1**	**0.0**
PCP	**Piancastagn**	**0.63**	**265**	Pg	**Pg**	**16 57 45.4**	**+0.3**
PCP				S	**Sg**	**16 57 53.2**	**-0.1**
PCP				Sg	**Sb**	**16 57 56.1**	**+0.6**
	57nm,0.3s						
ERBM	**Eremo**	**0.73**	**104**	Pg	**Pb**	**16 57 48.0**	**-0.1**
ERBM				Sg	**Sb**	**16 57 59.4**	**+1.0**
	376nm,2.7s						
ERBM	**Eremo**	**0.73**	**104**	Pg	**Pb**	**16 57 48.0**	**-0.1**
QLNO	**Quiliano**	**0.82**	**250**	Pg	**Pg**	**16 57 49.3**	**+0.6**
QLNO				Sg	**Sb**	**16 58 01.5**	**+0.6**
QLNO	**Quiliano**	**0.82**	**250**	Pg	**Pg**	**16 57 49.3**	**+0.6**
QLNO				Sg	**Sb**	**16 58 01.5**	**+0.6**
GSCL	**Gusciola**	**0.87**	**107**	Pg	**Pb**	**16 57 50.7**	**+0.2**
	1.0nm,0.3s						
GSCL	**Gusciola**	**0.87**	**107**	Pg	**Pb**	**16 57 50.7**	**+0.2**
	1.0nm,0.3s						
FINB	**Finale Ligure**	**0.90**	**242**	Pg	**Pb**	**16 57 50.8**	**0.0**
FINB				Sg	**Sb**	**16 58 03.9**	**+0.9**
	119nm,0.3s						
FINB	**Finale Ligure**	**0.90**	**242**	Pg	**Pb**	**16 57 50.8**	**0.0**
FINB				Sg	**Sb**	**16 58 03.9**	**+0.9**
	119nm,0.3s						
CRDM	**Cardoso**	**0.95**	**127**	P	**Pg**	**16 57 51.1**	**-0.1**
BDI	**Bagni Di Lucca**	**1.00**	**122**	Pg	**Pb**	**16 57 52.7**	**0.0**
BDI				Sg	**Sb**	**16 58 06.8**	**+0.7**
	136nm,0.8s						
BDI	**Bagni Di Lucca**	**1.00**	**122**	Pg	**Pb**	**16 57 52.7**	**0.0**
BDI				Sg	**Sb**	**16 58 06.8**	**+0.7**
	136nm,0.8s						
MAIM	**Mastiano**	**1.03**	**132**	Pg	**Pg**	**16 57 52.3**	**-0.4**
MAIM				Sg	**Sb**	**16 58 07.7**	**+0.8**
	53nm,0.4s						
MAIM	**Mastiano**	**1.03**	**132**	Pg	**Pg**	**16 57 52.3**	**-0.4**
MAIM				Sg	**Sb**	**16 58 07.7**	**+0.8**
	53nm,0.4s						
RORO	**Rocca Rossa**	**1.09**	**244**	P	**Pg**	**16 57 52.6**	**-1.3**
PII	**Pisa**	**1.19**	**138**	Pg	**Pn**	**16 57 56.2**	**+0.2**
	21nm,0.2s						
PII	**Pisa**	**1.19**	**138**	Pg	**Pn**	**16 57 56.2**	**+0.2**
	21nm,0.2s						
GROG	**Isola di Gorgo**	**1.23**	**164**	Pg	**Pb**	**16 57 56.4**	**0.0**
GROG				Sg	**Sb**	**16 58 13.2**	**+0.7**
	48nm,0.5s						
GROG	**Isola di Gorgo**	**1.23**	**164**	Pg	**Pb**	**16 57 56.4**	**0.0**
GROG				Sg	**Sb**	**16 58 13.2**	**+0.7**
	48nm,0.5s						
SBF	**Sospel**	**1.61**	**243**	*e*Pn	**Pn**	**16 58 01.8**	**-0.1**
SBF				*e*Sn	**Sn**	**16 58 22.4**	**-0.6**
	18nm,0.3s						
SBF	**Sospel**	**1.61**	**243**	*e*Pn	**Pn**	**16 58 01.8**	**-0.1**
SBF				*e*Sn	**Sn**	**16 58 22.4**	**-0.6**
	9.0nm,0.3s						
MBDF	**Montbardon**	**1.90**	**275**	*e*Pn	**Pb**	**16 58 07.6**	**-0.4**
MBDF				*e*Sn	**Sn**	**16 58 30.8**	**+0.6**
	17nm,0.5s						
MBDF	**Montbardon**	**1.90**	**275**	*e*Pn	**Pb**	**16 58 07.6**	**-0.4**
MBDF				*e*Sn	**Sn**	**16 58 30.8**	**+0.6**
	8.5nm,0.5s						
PGF	**Pioggiola**	**2.08**	**189**	*e*Pn	**Pn**	**16 58 07.3**	**-1.1**
PGF				*e*Sn	**Sn**	**16 58 31.3**	**-3.3**
	5.7nm,0.3s						
PGF	**Pioggiola**	**2.08**	**189**	*e*Pn	**Pn**	**16 58 07.3**	**-1.1**
PGF				*e*Sn	**Sn**	**16 58 31.3**	**-3.3**
	2.8nm,0.3s						
LPG	**La Plagne**	**2.10**	**296**	*e*Pn	**Pn**	**16 58 10.0**	**+1.2**
LPG				*e*Sn	**Sb**	**16 58 36.8**	**-1.0**
	7.9nm,0.5s						
LPG	**La Plagne**	**2.10**	**296**	*e*Pn	**Pn**	**16 58 10.0**	**+1.2**
LPG				*e*Sn	**Sb**	**16 58 36.8**	**-1.0**
	4.0nm,0.5s						
LPL	**La Plagne**	**2.11**	**296**	*e*Pn	**Pb**	**16 58 11.6**	**-0.2**
LPL				*e*Sn	**Sb**	**16 58 37.1**	**-1.2**
	8.5nm,0.4s						
LPL	**La Plagne**	**2.11**	**296**	*e*Pn	**Pb**	**16 58 11.6**	**-0.2**
LPL				*e*Sn	**Sb**	**16 58 37.1**	**-1.2**
	4.2nm,0.4s						
FRF	**La Foret Royal**	**2.26**	**243**	*e*Pn	**Pn**	**16 58 09.8**	**-0.9**
FRF				*e*Sn	**Sn**	**16 58 37.5**	**-1.4**
	7.8nm,0.3s						
FRF	**La Foret Royal**	**2.26**	**243**	*e*Pn	**Pn**	**16 58 09.8**	**-0.9**
FRF				*e*Sn	**Sn**	**16 58 37.5**	**-1.4**
	3.9nm,0.3s						
LMR	**La Mourre**	**2.46**	**240**	*e*Pn	**Pn**	**16 58 12.7**	**-0.8**
LMR				*e*Sn	**Sn**	**16 58 41.8**	**-2.0**
	2.4nm,0.3s						
LMR	**La Mourre**	**2.46**	**240**	*e*Pn	**Pn**	**16 58 12.7**	**-0.8**
LMR				*e*Sn	**Sn**	**16 58 41.8**	**-2.0**
	1.2nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.54**	**278**	*e*Pn	**Pn**	**16 58 16.9**	**+2.1**
ORIF				*e*Sn	**Sn**	**16 58 47.0**	**+0.9**
	5.5nm,0.4s						
ORIF	**Oris-en-Rattie**	**2.54**	**278**	*e*Pn	**Pn**	**16 58 16.9**	**+2.1**
ORIF				*e*Sn	**Sn**	**16 58 47.0**	**+0.9**
	2.8nm,0.4s						
VIVF	**Saint-Julien-l**	**3.40**	**276**	*e*Pn	**Pn**	**16 58 27.6**	**+1.2**
VIVF				*e*Sn	**Sn**	**16 59 08.9**	**+1.9**
	2.0nm,0.4s						
VIVF	**Saint-Julien-l**	**3.40**	**276**	*e*Pn	**Pn**	**16 58 27.6**	**+1.2**
VIVF				*e*Sn	**Sn**	**16 59 08.9**	**+1.9**
	1.0nm,0.4s						

ISK ***07*** *17:02:35.6, 39°.95N×27°.27E, h21km, MD2.8*
CSEM ***07*** *17:02:36.4±0.1, 39°.97N×27°.28E, h20km, MD2.8, Error ellipse: s-maj=3.0km s-min=1.9km az=28.0*
DDA ***07*** *17:02:37.5, 39°.94N×27°.35E, h4km, MD2.7*
ISCJB ***07*** *17:02:37.5±0.4, 40°.06N±0°.03×27°.35E±0°.04, h25km±5km, Error ellipse: s-maj=5.9km s-min=4.8km az=18.7*
ISC 07 17:02:37.2±1.1**, 39°.98N**±0°.03×**27°.34E**±0°.02**, h14**km±9km**, n47,** σ1§**19**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GONE	**Gonen-Balikesi**	**0.28**	**77**	*e*PG	**Pb**	**17 02 43.6**	**-0.4**
GONE				*e*SG	**Sb**	**17 02 48.5**	**0.0**
GONE	**Gonen-Balikesi**	**0.28**	**77**	*e*Pg	**Pb**	**17 02 43.6**	**-0.4**
GONE				*e*Sg	**Sb**	**17 02 48.5**	**0.0**
KRBG	**Karabiga-Canak**	**0.41**	**356**	*e*PG	**Pg**	**17 02 44.9**	**-0.6**
KRBG				*e*SG	**Sg**	**17 02 52.9**	**+1.9**
KRBG	**Karabiga-Canak**	**0.41**	**356**	*e*Pg	**Pg**	**17 02 44.9**	**-0.6**
KRBG				*e*Sg	**Sg**	**17 02 52.9**	**+1.9**
BALB	**Balikesir**	**0.54**	**129**	*e*PG	**Pg**	**17 02 47.4**	**-0.5**
BALB	**Balikesir**	**0.54**	**129**	*e*Pg	**Pg**	**17 02 47.4**	**-0.5**
EDC	**Edincik**	**0.54**	**48**	*e*PG	**Pg**	**17 02 47.8**	**-0.1**
EDC	**Edincik**	**0.54**	**48**	*e*Pg	**Pg**	**17 02 47.8**	**-0.1**
BNT	**Bandirma**	**0.58**	**50**	*e*PG	**Pg**	**17 02 48.4**	**-0.3**
BNT	**Bandirma**	**0.58**	**50**	*e*Pg	**Pg**	**17 02 48.4**	**-0.3**
LPK	**Lapseki**	**0.59**	**312**	*e*PG	**Pg**	**17 02 47.6**	**-1.1**
LPK	**Lapseki**	**0.59**	**312**	*e*Pg	**Pg**	**17 02 47.7**	**-1.1**
MRMT	**Marmara Adasi**	**0.65**	**18**	*e*PG	**Pg**	**17 02 49.4**	**-0.6**
MRMT	**Marmara Adasi**	**0.65**	**18**	*e*Pg	**Pg**	**17 02 49.4**	**-0.6**
GELI	**Tayfur-Gelibol**	**0.78**	**302**	*e*PG	**Pg**	**17 02 50.7**	**-1.7**
GELI	**Tayfur-Gelibol**	**0.78**	**302**	*e*Pg	**Pg**	**17 02 50.7**	**-1.7**
EZN	**Ezine**	**0.79**	**259**	*e*PG	**Pg**	**17 02 50.7**	**-1.9**
EZN	**Ezine**	**0.79**	**259**	*e*Pg	**Pg**	**17 02 50.7**	**-1.9**
KCTX	**Karacabey (Bur**	**0.83**	**70**	*e*PG	**Pg**	**17 02 53.3**	**0.0**
KCTX	**Karacabey (Bur**	**0.83**	**70**	*e*Pg	**Pg**	**17 02 53.3**	**0.0**
AYVA	**Ayvalik**	**0.84**	**217**	*i* P	**Pn**	**17 02 54.9**	**+0.3**
AYVA				*i* S	**Sn**	**17 03 07.8**	**+1.1**
AYVA	**Ayvalik**	**0.84**	**217**	*i* P	**Pn**	**17 02 54.9**	**+0.3**
ERIK	**Erikli-Kesan**	**0.93**	**318**	*e*PG	**Pg**	**17 02 53.6**	**-1.6**
ERIK	**Erikli-Kesan**	**0.93**	**318**	*e*Pg	**Pg**	**17 02 53.6**	**-1.6**
DURS	**Dursunbey**	**0.96**	**113**	*i* P	**Pb**	**17 02 55.7**	**+0.1**
DURS				*i* S	**Sb**	**17 03 08.4**	**+0.2**
DURS	**Dursunbey**	**0.96**	**113**	*i* P	**Pb**	**17 02 55.7**	**+0.1**
DURS				*i* S	**Sb**	**17 03 08.4**	**+0.2**
BOZC	**Bozcaada**	**1.00**	**262**	*i* P	**Pn**	**17 02 57.7**	**+0.9**
BOZC				*i* S	**Sn**	**17 03 13.0**	**+2.3**
DST	**Dursunbey**	**1.06**	**111**	*e*PN	**Pg**	**17 02 56.5**	**-1.1**
DST	**Dursunbey**	**1.06**	**111**	*e*Pn	**Pg**	**17 02 56.5**	**-1.1**
ORLT	**Orhaneli**	**1.20**	**86**	*e*PN	**Pg**	**17 02 58.4**	**-1.9**
ORLT	**Orhaneli**	**1.20**	**86**	*e*Pn	**Pg**	**17 02 58.4**	**-1.9**
MDNY	**Mudanya-Bursa**	**1.25**	**71**	*e*PN	**Pg**	**17 02 59.5**	**-1.7**
MDNY	**Mudanya-Bursa**	**1.25**	**71**	*e*Pn	**Pg**	**17 02 59.5**	**-1.7**
DEMI	**Demirci**	**1.42**	**131**	*i* P	**Pg**	**17 03 03.6**	**-0.9**
DEMI				*i* S	**Sn**	**17 03 23.0**	**+1.7**
DEMI	**Demirci**	**1.42**	**131**	*i* P	**Pg**	**17 03 03.6**	**-0.9**
DEMI				*i* S	**Sn**	**17 03 23.0**	**+1.7**
GEMT	**Gemlik**	**1.49**	**72**	*e*PN	**Pn**	**17 03 02.6**	**-1.0**
GEMT	**Gemlik**	**1.49**	**72**	*e*Pn	**Pn**	**17 03 02.6**	**-1.0**
CTKS	**Kestanelik-??a**	**1.54**	**35**	*e*PN	**Pn**	**17 03 03.1**	**-1.1**
CTKS	**Kestanelik-??a**	**1.54**	**35**	*e*Pn	**Pn**	**17 03 03.2**	**-1.1**
IZI	**Iznik**	**1.68**	**77**	*e*PN	**Pn**	**17 03 05.0**	**-1.2**
IZI	**Iznik**	**1.68**	**77**	*e*Pn	**Pn**	**17 03 05.0**	**-1.2**
TVSB	**Tavsanli**	**1.72**	**107**	*e*PN	**Pn**	**17 03 05.8**	**-1.1**
TVSB	**Tavsanli**	**1.72**	**107**	*e*Pn	**Pn**	**17 03 05.8**	**-1.1**
KULA	**Kula-Manisa**	**1.79**	**145**	*e*PN	**Pn**	**17 03 06.8**	**-1.1**
KULA	**Kula-Manisa**	**1.79**	**145**	*e*Pn	**Pn**	**17 03 06.8**	**-1.1**
EDRB	**Edirne**	**1.92**	**347**	*e*PN	**Pn**	**17 03 08.4**	**-1.1**
EDRB	**Edirne**	**1.92**	**347**	*e*Pn	**Pn**	**17 03 08.4**	**-1.1**

ISCJB ***07*** *17:06:14.6±0.5, 29°.22S±0°.03×69°.54W±0°.09, h117km±8km, mb4.1/3, Error ellipse: s-maj=13.4km s-min=5.2km az=179.6*
GUC ***07*** *17:06:15.5±0.8, 29°.25S×69°.49W, h105km±50km, MD3.4, ML4.4*
IDC ***07*** *17:06:17.5±2.5, 29°.25S×69°.28W, h122km±18km, mb3.9/3, mb1 3.8/6, mb1mx3.5/18, mbtmp3.7/6, Error ellipse: s-maj=39.7km s-min=17.2km az=96.0*
ISC 07 17:06:15.4±0.8**, 29°.22S**±0°.04×**69°.51W**±0°.08**, h110**km±9km**, n19,** σ1§**16**/26**, mb4.1**/3**, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**2.00**	**338**	⇑*i*P	**Pn**	**17 06 47.6**	**-0.8**
CPCH				*i* S	**Sn**	**17 07 12.7**	**-0.9**
CPCH				AML	AML	17 07 15.3	
	comp=E,10µm,0.1s						
CMCH	**Combarbala**	**2.34**	**213**	⇑*i*P	**Pn**	**17 06 53.0**	**+0.2**
CMCH				*i* S	**Sn**	**17 07 21.7**	**+0.1**
CMCH				AML	AML	17 07 22.3	
	comp=N,5µm,0.6s						
CDCH	**Caldera**	**2.43**	**331**	*e*P	**Pn**	**17 06 55.5**	**+1.5**
CDCH				*e*S	**Sn**	**17 07 24.3**	**+0.7**
CDCH				AML	AML	17 07 29.0	
	comp=E,673nm,0.7s						
CFAA	**Coronel Fontan**	**2.62**	**156**	P	**Pn**	**17 06 58.7**	**+2.2**
	comp=E,0.7nm,0.3s,baz=343,slow=12,SNR=59						
CFAA				S	**Sn**	**17 07 29.1**	**+1.0**
	comp=E,5.1nm,0.3s,baz=330,slow=20,SNR=19						
CHNG	**Los Chungos**	**3.16**	**212**	⇑*i*P	**Pn**	**17 07 03.6**	**+0.1**
CHNG				*i* S	**Sn**	**17 07 40.1**	**-0.6**
CHNG				AML	AML	17 07 48.4	
	comp=E,233nm,0.5s						
PEL	**Peldehue**	**4.04**	**194**	⇓*i*P	**Pn**	**17 07 15.3**	**0.0**
PEL				*i* S	**Sn**	**17 08 01.2**	**-0.6**
PCH	**Pirque**	**4.47**	**191**	*e*P	**Pn**	**17 07 21.4**	**+0.2**
PCH				*i* S	**Sn**	**17 08 11.9**	**-0.4**
CPUP	**Villa Florida**	**11.16**	**78**	P	**Pn**	**17 08 49.1**	**-2.7**
	comp=E,1.1nm,0.3s,baz=242,slow=15,SNR=6.7						
LPAZ	**La Paz**	**12.93**	**6**	P	**Pn**	**17 09 18.4**	**+2.7**
	comp=E,0.4nm,0.3s,baz=183,slow=7.8,SNR=8.7						
SIV	**San Ignacio**	**15.29**	**32**	P	**Pn**	**17 09 44.1**	**-1.3**
	comp=E,0.1nm,0.3s,baz=219,slow=13,SNR=2.9						
MAW	**Mawson**	**77.13**	**163**	P	**P**	**17 17 56.9**	**+0.6**
	comp=E,1.3nm,0.6s,baz=253,slow=11,SNR=5.1						
BOSA	**Boshof**	**80.36**	**117**	P	**P**	**17 18 14.8**	**-0.2**
	comp=E,1.4nm,0.4s,baz=258,slow=5.3,SNR=6.8						
TORD	**Torodi Ar. Bea**	**80.53**	**69**	P	**P**	**17 18 16.0**	**+0.2**
	comp=E,2.3nm,0.6s,baz=224,slow=4.0,SNR=32						
ASAR	**Alice Springs**	**122.80**	**206**	PKP	**PKPdf**	**17 24 58.0**	**-1.0**
	comp=E,0.3nm,0.9s,baz=133,slow=1.3,SNR=5.3						
WRA	**Warramunga Arr**	**125.98**	**208**	PKP	**PKPdf**	**17 25 04.7**	**-0.5**
	comp=E,0.4nm,0.5s,baz=162,slow=1.5,SNR=3.4						
KURBB	**Kurchatov Arra**	**147.86**	**39**	PKPbc	**PKPbc**	**17 25 47.6**	**+0.4**
	comp=E,1.1nm,0.5s,baz=303,slow=3.3,SNR=9.9						
AAK	**Ala-Archa**	**148.17**	**55**	PKPbc	**PKPbc**	**17 25 49.2**	**+0.6**
	comp=E,1.3nm,0.6s,baz=202,slow=6.3,SNR=7.9						
ZALV	**Zalesovo Beam**	**149.03**	**30**	PKPbc	**PKPbc**	**17 25 50.5**	**+0.4**
	comp=E,3.2nm,0.5s,baz=318,slow=3.9,SNR=15						
MKAR	**Makanchi Array**	**151.91**	**44**	PKPbc	**PKPbc**	**17 25 56.9**	**-0.3**
	comp=E,0.9nm,0.6s,baz=328,slow=2.0,SNR=10						

NNC 07 17:17:08.0±8.7**, 37°.82N**×**72°.16E, h0**km**, mb3.7, mpv3.2, 4C, Error ellipse: s-maj=69.1km s-min=49.1km az=174.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.43**	**347**	⇑Pn	Pn	17 18 31.7	+1.5
	1.5nm,0.5s,baz=163,slow=12,SNR=17						
KK31				⇑Sn	Sn	17 19 34.4	+1.0
	3.0nm,0.3s,baz=162,slow=22,SNR=3.8						
TKM2	**Tokmak 2**	**5.73**	**26**	⇑Pn	Pn	17 18 35.1	+0.4
	1.9nm,0.6s						
TKM2				⇑Sn	Sn	17 19 42.5	+1.1
	1.0nm,0.6s						
AB31	**Akbulak array**	**14.44**	**326**	P	Pn	17 20 26.9	-6.7
	0.7nm,0.6s,baz=140,slow=12,SNR=11						

MEX 07 17:44:18.5±1.0**, 15°.89N**×**94°.55W, h68**km±24km**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.30**	**98**	*e*P	Pn	17 44 39.7	-1.1
PCIG				*i* S	Sn	17 44 56.1	-1.3
HUIG	**Huatulco**	**1.50**	**265**	*i* P	Pn	17 44 41.6	-1.8
HUIG				*i* S	Sn	17 45 00.0	-2.2
TGIG		**1.63**	**57**	*e*P	Pn	17 44 42.9	-2.3
TGIG				*i* S	Sn	17 45 03.5	-2.0
CCIG	**Comitan**	**2.35**	**80**	*i* P	Pn	17 44 53.9	-1.3
CCIG				*i* S	Sn	17 45 21.6	-1.6
VHO	**Vista Hermosa**	**2.40**	**300**	*i* P	Pn	17 44 55.4	-0.4
VHO				*i* S	Sn	17 45 23.2	-1.1
THIG		**2.42**	**114**	*i* P	Pn	17 44 55.1	-0.6
THIG				*i* S	Sn	17 45 22.9	-1.3
PNIG	**Pinotepa**	**3.47**	**279**	*e*P	Pn	17 45 09.0	-1.2
PNIG				*i* S	Sn	17 45 48.5	-1.6
TPIG	**Tehuac#an**	**3.68**	**313**	*i* P	Pn	17 45 12.0	-1.2
TPIG				*i* S	Sn	17 45 53.3	-2.2

GUC 07 18:07:13.3±0.6**, 23°.80S**×**67°.08W, h228**km±21km**, ML4.0, 2C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.05**	**305**	⇓*i*P	Pn	18 07 56.0	+1.2
LVC				*i* S	S	18 08 29.3	+2.1
PB04	**Plate Boundary**	**2.69**	**304**	⇑*i*P	Pn	18 08 08.4	+7.4
PB04				*i* S	S	18 08 49.6	+11
PB04				AML	AML	18 08 55.4	
	comp=N,140nm,0.2s						
PB09	**Plate Boundary**	**2.82**	**315**	⇑*i*P	Pn	18 08 04.7	+2.0
PB09				*i* S	S	18 08 43.6	+2.3
PB09				AML	AML	18 08 48.8	
	comp=E,263nm,0.5s						
CEN1	**Los Morros**	**2.89**	**277**	⇓*i*P	Pn	18 08 06.9	+3.5
CEN1				*e*S	S	18 08 46.5	+4.0
CEN1				AML	AML	18 08 50.0	
	comp=N,192nm,0.5s						
ANCH	**Antofagasta**	**3.05**	**271**	*e*P	Pn	18 08 06.6	+1.6
ANCH				*i* S	S	18 08 47.4	+1.9

MOS ***07*** *18:17:12.9±0.9, 37°.77N×72°.08E, h108km, mb4.4/29, Error ellipse: s-maj=7.2km s-min=4.6km az=102.6*
ISCJB ***07*** *18:17:12.6±0.2, 37°.73N±0°.02×72°.38E±0°.03, h119km, mb4.2/46, Error ellipse: s-maj=3.8km s-min=2.7km az=156.1*
IDC ***07*** *18:17:13.1±2.6, 37°.77N×72°.06E, h97km±22km, mb3.8/21, mb1 4.0/26, mb1mx3.9/37, mbtmp3.9/26, Error ellipse: s-maj=16.7km s-min=11.9km az=179.0*
NEIC ***07*** *18:17:14.2±1.1, 37°.81N×72°.13E, h106km±9km, mb4.6/22, Error ellipse: s-maj=10.1km s-min=5.9km az=191.0*
BJI ***07*** *18:17:14.3, 37°.83N×72°.27E, h108km, mb4.4/3*
NNC ***07*** *18:17:18.1±3.9, 38°.15N×71°.95E, h145km±39km, mb3.7, mpv4.4, Error ellipse: s-maj=34.3km s-min=17.1km az=3.0*
ISC 07 18:17:14.4±0.4**, 37°.78N**±0°.04×**72°.35E**±0°.05**, h119**km**, n239,** σ1§**44**/238**, mb4.2**/46**, 11C-12D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.32**	**57**	P	**Pn**	**18 18 03.4**	**-1.5**
KSH				S	**Sn**	**18 18 38.4**	**-5.6**
KSH				smax	smax		
	comp=N,4µm,0.7s						
KSH				smax	smax		
	comp=E,2µm,0.3s						
CEP	**Cherat**	**3.96**	**185**	P	**Pn**	**18 18 13.8**	**+0.2**
CEP				S	**Sn**	**18 18 59.0**	**-0.4**
CHCP	**Chirah Chowk**	**4.18**	**170**	P	**Pn**	**18 18 18.2**	**+1.9**
AML	**Almayashu**	**4.46**	**13**	*i* PN	**Pn**	**18 18 21.1**	**+0.7**
AML	**Almayashu**	**4.46**	**13**	P	**Pn**	**18 18 21.1**	**+0.7**
	SNR=191						
UCH	**Uchtor**	**4.74**	**20**	P	Pn	18 18 28.8	+4.6
	SNR=5.4						
KZA	**Kyzart**	**4.83**	**27**	*i* PN	**Pn**	**18 18 26.6**	**+1.2**
KZA	**Kyzart**	**4.83**	**27**	P	**Pn**	**18 18 26.6**	**+1.2**
	SNR=46						
EKS2	**Erkin-Say**	**5.00**	**12**	*e*PN	**Pn**	**18 18 28.2**	**+1.0**
EKS2				pmax	pmax		
	comp=Z,109nm,0.9s						
EKS2	**Erkin-Say**	**5.00**	**12**	*e*P	**Pn**	**18 18 28.2**	**+1.0**
	comp=Z,109nm,0.9s						
EKS2	**Erkin-Say**	**5.00**	**12**	P	**Pn**	**18 18 28.3**	**+1.0**
	SNR=88						
THW	**Thamme Wali**	**5.00**	**186**	P	**Pn**	**18 18 26.6**	**-0.7**
AAK	**Ala-Archa**	**5.12**	**18**	*d i*PN	**Pn**	**18 18 30.4**	**+1.4**
AAK	**Ala-Archa**	**5.12**	**18**	P	**Pn**	**18 18 30.1**	**+1.1**
AAK				S	**Sn**	**18 19 27.2**	**+0.2**
AAK	**Ala-Archa**	**5.12**	**18**	P	**Pn**	**18 18 31.0**	**+2.1**
	SNR=49						
AAK	**Ala-Archa**	**5.12**	**18**	P	**Pn**	**18 18 30.1**	**+1.1**
	comp=Z,15nm,0.3s,baz=185,slow=10,SNR=288						
AAK				S	**Sn**	**18 19 27.2**	**+0.2**
	comp=Z,13nm,0.3s,baz=330,slow=20,SNR=15						
KBK	**Karagaybulak**	**5.26**	**21**	*i* PN	**Pn**	**18 18 32.6**	**+1.7**
KBK	**Karagaybulak**	**5.26**	**21**	P	**Pn**	**18 18 32.6**	**+1.7**
	SNR=29						
FRU	**Bishkek**	**5.33**	**18**	*e*PN	**Pn**	**18 18 33.0**	**+1.2**
FRU				pmax	pmax		
	comp=Z,30nm,1.6s						
ULHL	**Ulahol**	**5.37**	**33**	*i* PN	**Pn**	**18 18 33.9**	**+1.6**
ULHL	**Ulahol**	**5.37**	**33**	P	**Pn**	**18 18 34.0**	**+1.6**
	SNR=37						
KK31	**Karatay Array**	**5.50**	**346**	⇑P	**Pn**	**18 18 33.2**	**-0.8**
	comp=Z,24nm,0.2s,baz=168,slow=12,SNR=7.2						
KK31				⇓S	**Sn**	**18 19 30.3**	**-5.7**
	comp=Z,60nm,0.3s,baz=172,slow=19,SNR=14						
KKAR	**Karatay Array**	**5.50**	**346**	*e*PN	**Pn**	**18 18 32.7**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,205nm,0.3s						
KKAR	**Karatay Array**	**5.50**	**346**	*e*P	**Pn**	**18 18 32.7**	**-1.3**
	comp=Z,205nm,0.3s						
CHMS	**Chumysh**	**5.52**	**19**	*i* PN	**Pn**	**18 18 35.7**	**+1.4**
CHMS	**Chumysh**	**5.52**	**19**	P	**Pn**	**18 18 35.7**	**+1.4**
	SNR=47						
TKM2	**Tokmak 2**	**5.70**	**25**	⇑P	**Pn**	**18 18 38.2**	**+1.3**
	comp=Z,12nm,0.4s						
TKM2				⇑S	**Sn**	**18 19 41.8**	**+0.7**
	comp=Z,13nm,0.5s						
TKM2	**Tokmak 2**	**5.70**	**25**	*i* PN	**Pn**	**18 18 38.3**	**+1.5**
TKM2	**Tokmak 2**	**5.70**	**25**	*e*P	**Pn**	**18 18 38.0**	**+1.2**
	comp=Z,21nm,0.5s						
TKM2	**Tokmak 2**	**5.70**	**25**	P	**Pn**	**18 18 38.4**	**+1.5**
	SNR=39						
USP	**Ospenovka**	**5.72**	**16**	*i* PN	**Pn**	**18 18 37.8**	**+0.9**
USP	**Ospenovka**	**5.72**	**16**	P	**Pn**	**18 18 37.8**	**+0.9**
	SNR=5.2						
DLH	**Dalhousie**	**6.01**	**149**	*e*PKP	**Pn**	**18 18 40.0**	**-1.1**
DLH				*e*S	**Sn**	**18 19 45.0**	**-3.7**
DHRM	**DHARAMSHALA**	**6.40**	**148**	*e*PKP	**Pn**	**18 18 46.7**	**+0.4**
DHRM				*e*S	**Sn**	**18 19 53.8**	**-4.4**
DHRM				AML	AML	18 19 58.3	
	comp=E,584nm,0.3s						
DHRM				AML	AML	18 19 58.5	
	comp=N,615nm,0.4s						
SDNR	**Sundarnagar**	**7.33**	**147**	*e*PKP	**Pn**	**18 18 59.0**	**+0.2**
SDNR				*e*S	**Sn**	**18 20 16.0**	**-4.5**
SMLA	**Simla**	**7.73**	**148**	*i* P	**Pn**	**18 19 03.4**	**-0.8**
SMLA				*e*S	**Sn**	**18 20 24.3**	**-5.9**
SMLA				AML	AML	18 20 28.1	
	comp=E,958nm,0.5s						
SMLA				AML	AML	18 20 30.2	
	comp=N,580nm,0.8s						
DDI	**Dehra Dun**	**8.81**	**146**	*e*PKP	**Pn**	**18 19 18.0**	**-0.9**
DDI				*e*x	x	18 20 50.3	
MK31	**Makanchi Array**	**11.62**	**36**	⇓P	**Pn**	**18 19 57.2**	**+0.7**
	comp=N,4.0nm,0.7s,baz=221,slow=14,SNR=38						
MKAR	**Makanchi Array**	**11.62**	**36**	*e*P	**Pn**	**18 19 57.8**	**+1.3**
MKAR	**Makanchi Array**	**11.62**	**36**	P	**Pn**	**18 19 57.0**	**+0.5**
MKAR	**Makanchi Array**	**11.62**	**36**	P	**Pn**	**18 19 57.0**	**+0.5**
	comp=N,0.4nm,0.3s,baz=224,slow=14,SNR=51						
PYUN	**Piuthan**	**13.14**	**134**	*e*P	Pn	18 20 13.0	-3.7
	comp=N,66nm,0.4s						
DANN	**Dangsing**	**13.40**	**131**	*e*P	Pn	18 20 16.2	-3.9
	comp=N,51nm,0.4s						
DANN				*e*S	Sn	18 22 36.4	-12
KUR17	**Kurchatov Arra**	**13.57**	**17**	⇑P	**Pn**	**18 20 19.7**	**-2.0**
	comp=N,0.7nm,0.8s						
KURBB	**Kurchatov Arra**	**13.57**	**17**	P	**Pn**	**18 20 19.3**	**-2.6**
	comp=N,0.1nm,0.3s,baz=208,slow=12,SNR=16						
KURK	**Kurchatov**	**13.68**	**17**	⇓P	**Pn**	**18 20 20.3**	**-2.9**
	comp=N,12nm,0.7s						
KURK	**Kurchatov**	**13.68**	**17**	*e*P	**Pn**	**18 20 20.2**	**-3.0**
KURK	**Kurchatov**	**13.68**	**17**	P	Pn	18 20 19.3	-3.9
KOLN	**Koldanda**	**13.74**	**133**	*e*P	**Pn**	**18 20 21.6**	**-2.8**
	comp=N,41nm,0.5s						
AB31	**Akbulak array**	**14.56**	**326**	⇓P	Pn	18 20 30.5	-4.0
	comp=N,4.2nm,0.5s,baz=133,slow=12,SNR=22						
ABKAR	**Akbulak array**	**14.56**	**326**	*e*P	Pn	18 20 29.9	-4.6
	comp=N,6.9nm,0.4s						
KKN	**Kakani**	**14.73**	**129**	*e*P	Pn	18 20 33.5	-3.5
	comp=N,77nm,0.5s						
DMN	**Daman**	**14.76**	**130**	*e*P	**Pn**	**18 20 34.3**	**-3.1**
	comp=N,90nm,0.8s						
PKIN	**Phulchoki**	**14.96**	**129**	*e*P	Pn	18 20 36.4	-3.5
	comp=N,42nm,0.5s						
PKI	**Pulchoki**	**14.97**	**129**	*e*P	Pn	18 20 36.9	-3.2
	comp=N,48nm,0.6s						
VOSK	**Vostochnaya**	**14.97**	**357**	⇑P	**Pn**	**18 20 37.6**	**-2.0**
	comp=N,12nm,0.6s						
GUN	**Gumba**	**15.02**	**127**	*e*P	**Pn**	**18 20 37.4**	**-3.4**
	comp=N,52nm,0.4s						
BHPL	**Bhopal**	**15.13**	**162**	*e*PKP	**Pn**	**18 20 41.7**	**-0.2**
BHPL				*e*x	x	18 23 14.5	
BVA0	**Borovoye Array**	**15.31**	**356**	⇑P	**Pn**	**18 20 42.2**	**-1.6**
	comp=N,3.3nm,0.7s,baz=166,slow=11,SNR=7.8						
BVAR	**Borovoye Array**	**15.31**	**356**	P	**Pn**	**18 20 42.0**	**-1.9**
BVAR				S	Sn	18 23 25.6	-7.5
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
BVAR				smax	smax		
	comp=N,1.0nm,0.3s						
BVAR	**Borovoye Array**	**15.31**	**356**	P	**Pn**	**18 20 42.0**	**-1.9**
BVAR				S	Sn	18 23 25.6	-7.5
BVAR	**Borovoye Array**	**15.31**	**356**	P	**Pn**	**18 20 42.0**	**-1.9**
	comp=N,5.8nm,0.3s,baz=161,slow=14,SNR=34						
BVAR				S	Sn	18 23 25.6	-7.5
	comp=N,0.7nm,0.3s,baz=165,slow=25,SNR=6.2						
BRVK	**Borovoye**	**15.35**	**355**	*e*P	**Pn**	**18 20 43.1**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BRVK	**Borovoye**	**15.35**	**355**	*e*P	**Pn**	**18 20 42.4**	**-1.9**
	comp=Z,23nm,0.8s						
ZRNK	**Zerenda**	**15.35**	**352**	⇑P	**Pn**	**18 20 43.5**	**-0.8**
	comp=Z,20nm,0.6s						
RAMN	**Ramite**	**16.15**	**128**	*e*P	**Pn**	**18 20 52.1**	**-2.7**
	comp=Z,85nm,0.6s						
AKTO	**Aktyubinsk**	**16.27**	**326**	⇓P	**Pn**	**18 20 54.8**	**-1.0**
	comp=Z,1.9nm,0.6s						
AKTO	**Aktyubinsk**	**16.27**	**326**	P	**Pn**	**18 20 52.8**	**-3.0**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.27**	**326**	P	**Pn**	**18 20 52.8**	**-3.0**
AKTO				S	Sn	18 23 38.3	-18
AKTO	**Aktyubinsk**	**16.27**	**326**	P	**Pn**	**18 20 52.8**	**-3.0**
	comp=Z,2.8nm,0.3s,baz=122,slow=10,SNR=25						
AKTO				S	Sn	18 23 38.3	-18
	comp=Z,1.2nm,0.3s,baz=324,slow=19,SNR=6.9						
TAPN	**Taplejung**	**16.58**	**124**	*e*P	**Pn**	**18 20 57.3**	**-2.8**
	comp=Z,48nm,0.4s						
ODAN	**Odare**	**16.71**	**126**	*e*P	**Pn**	**18 20 59.2**	**-2.4**
	comp=Z,50nm,0.5s						
AKL	**Akola**	**17.49**	**165**	*e*PKP	**Pn**	**18 21 11.0**	**+0.1**
LSA	**Lhasa**	**17.57**	**112**	P	**Pn**	**18 21 12.9**	**+0.7**
LSA	**Lhasa**	**17.57**	**112**	*e*P	**Pn**	**18 21 13.1**	**+0.9**
LSA				pmax	pmax		
	comp=Z,16nm,0.7s						
LSA	**Lhasa**	**17.57**	**112**	*e*P	**Pn**	**18 21 13.1**	**+0.9**
	comp=Z,16nm,0.7s						
ZALV	**Zalesovo Beam**	**18.30**	**24**	*e*P	**Pn**	**18 21 19.9**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	**Zalesovo Beam**	**18.30**	**24**	P	**Pn**	**18 21 19.6**	**-0.7**
ZALV	**Zalesovo Beam**	**18.30**	**24**	P	**Pn**	**18 21 19.6**	**-0.7**
	comp=Z,1.9nm,0.3s,baz=214,slow=9.4,SNR=35						
NVS	**Novosibirsk**	**18.61**	**20**	*i* P	**P**	**18 21 21.9**	**-0.3**
NVS				*e*S	**S**	**18 24 43.0**	**-4.9**
NVS				pmax	pmax		
	comp=N,6.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NVS				smax	smax		
	comp=N,12nm,2.1s						
NVS				smax	smax		
	comp=E,11nm,1.9s						
HVS	**Khovu-Aksy**	**20.16**	**42**	*e*P	Pn	18 21 44.1	+1.8
HVS				pmax	pmax		
	comp=Z,21nm,1.0s						
SHL	**Shillong**	**20.56**	**121**	*e*PKP	**P**	**18 21 44.0**	**+0.2**
SVE	**Sverdlovsk**	**20.59**	**341**	*e*P	**P**	**18 21 43.7**	**+0.1**
SVE				pmax	pmax		
	comp=Z,13nm,0.5s						
ARU	**Arti**	**20.81**	**338**	*d i*P	**P**	**18 21 45.5**	**-0.5**
ARU						18 22 07.2	
ARU				S	**S**	**18 25 31.3**	**-0.1**
ARU				SS	SS	18 26 08.9	
ARU				pmax	pmax		
	comp=Z,26nm,1.2s						
DGRG	**David-gareji**	**21.07**	**288**	P	**P**	**18 21 49.1**	**0.0**
GTA	**Gaotai**	**21.50**	**77**	*e*P	P	18 21 59.2	+5.5
TBLG	**Delisi**	**21.55**	**289**	P	**P**	**18 21 55.0**	**+0.8**
GNI	**Garni**	**21.57**	**285**	*e*P	**P**	**18 21 55.4**	**+0.9**
	comp=Z,8.7nm,0.9s						
GNI	**Garni**	**21.57**	**285**	P	**P**	**18 21 55.2**	**+0.7**
	comp=Z,4.3nm,0.5s,baz=191,slow=20,SNR=7.4						
GUDG	**Gudauri**	**21.78**	**291**	P	**P**	**18 21 57.1**	**+0.3**
ZEI	**Tsey**	**22.22**	**292**	*e*P	**P**	**18 22 00.2**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ONI	**Oni**	**22.54**	**291**	P	**P**	**18 22 05.7**	**+1.3**
KBZ	**Khabaz**	**23.02**	**294**	P	**P**	**18 22 06.9**	**-2.0**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**23.02**	**294**	P	**P**	**18 22 06.9**	**-2.0**
KBZ	**Khabaz**	**23.02**	**294**	P	**P**	**18 22 06.9**	**-2.0**
	comp=Z,2.5nm,0.7s,baz=119,slow=8.7,SNR=8.0						
KIV	**Kislovodsk**	**23.19**	**295**	*e*P	**P**	**18 22 09.0**	**-1.7**
KIV				*e**PP	**pP**	**18 22 32.3**	**-1.7**
KIV				*e**SP	**sP**	**18 22 47.7**	**-1.1**
KIV				*e*S	**S**	**18 26 10.0**	**-3.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ZAK	**Zakamensk**	**25.34**	**50**	*e*P	**P**	**18 22 32.1**	**+2.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VRHR	**Novokhopersk**	**25.45**	**311**	*e*P	**P**	**18 22 30.0**	**-0.9**
VRHR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VRHR				pmax	pmax		
	comp=N,5.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,9.0nm,0.7s						
VSR	**Storozhevoye**	**26.96**	**311**	*e*P	**P**	**18 22 43.9**	**-0.6**
VSR				pmax	pmax		
	comp=N,2.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,7.0nm,0.8s						
VSR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRTR	**Keskin Array B**	**30.10**	**286**	P	**P**	**18 23 12.4**	**-0.2**
BRTR	**Keskin Array B**	**30.10**	**286**	P	**P**	**18 23 12.4**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=94,slow=7.7,SNR=11						
CMAR	**Chiang Mai Arr**	**30.17**	**122**	P	**P**	**18 23 16.0**	**+2.7**
CMAR	**Chiang Mai Arr**	**30.17**	**122**	P	**P**	**18 23 16.0**	**+2.7**
	comp=Z,0.3nm,0.4s,baz=304,slow=8.6,SNR=4.2						
AKASG	**Malin Array Be**	**33.01**	**307**	*e*P	**P**	**18 23 38.4**	**+0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**33.01**	**307**	P	**P**	**18 23 36.1**	**-1.8**
AKASG	**Malin Array Be**	**33.01**	**307**	P	**P**	**18 23 36.1**	**-1.8**
	comp=Z,1.0nm,0.3s,baz=113,slow=8.7,SNR=4.9						
CFR	**Carcaliu**	**33.60**	**297**	⇓*i*P	**P**	**18 23 43.4**	**+0.3**
VRI	**Vrincioaia**	**34.55**	**298**	⇓*i*P	**P**	**18 23 52.4**	**+1.1**
PLOR	**Plostina**	**34.61**	**298**	⇓*i*P	**P**	**18 23 53.3**	**+1.5**
MLR	**Muntele Rosu**	**35.12**	**298**	⇑*i*P	**P**	**18 23 58.4**	**+2.0**
JOF	**Joensuu**	**35.32**	**329**	*e*P	**P**	**18 23 57.2**	**-0.4**
JOF				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JOF	**Joensuu**	**35.32**	**329**	*e*p	**P**	**18 23 57.2**	**-0.4**
	comp=Z,7.5nm,0.5s						
DOPR	**Dopca**	**35.48**	**299**	⇑*i*P	**P**	**18 24 00.6**	**+1.3**
BURAR	**Bucovina Array**	**35.52**	**301**	⇑*i*P	**P**	**18 24 00.2**	**+0.5**
LOT	**Lotru**	**36.65**	**298**	⇓*i*P	**P**	**18 24 10.6**	**+1.2**
APE	**Apeiranthos**	**36.89**	**284**	⇓*i*P	**P**	**18 24 11.2**	**-0.2**
FINES	**FINESS Array B**	**37.04**	**325**	P	**P**	**18 24 12.3**	**0.0**
FINES	**FINESS Array B**	**37.04**	**325**	P	**P**	**18 24 12.3**	**0.0**
	comp=Z,5.3nm,0.3s,baz=114,slow=9.3,SNR=71						
KAF	**Kangasniemi**	**37.16**	**326**	*e*P	**P**	**18 24 13.0**	**-0.3**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	**Kangasniemi**	**37.16**	**326**	*e*p	**P**	**18 24 13.0**	**-0.3**
	comp=Z,2.2nm,0.5s,baz=109,slow=8.6						
KOLS	**Kolonicke sedl**	**37.45**	**304**	*e*P	**P**	**18 24 16.4**	**+0.5**
KOLS	**Kolonicke sedl**	**37.45**	**304**	*e*P	**P**	**18 24 16.4**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CRVS	Cervenica-Dubn	37.98	304	eP	P	18 24 20.0	-0.5
CRVS	Cervenica-Dubn	37.98	304	eP	P	18 24 20.0	-0.5
KEV	Kevo	40.02	337	eP	P	18 24 37.2	+0.1
KEV	Kevo	40.02	337	ep	P	18 24 37.2	+0.1
ARCES	ARCESS Array B	40.39	337	P	P	18 24 40.8	+0.6
ARCES	ARCESS Array B	40.39	337	P	P	18 24 40.8	+0.6
	comp=Z,7.2nm,0.6s,baz=112,slow=8.8,SNR=49						
DPC	Dobruska-Polom	41.23	306	eP	P	18 24 47.7	+0.3
DPC	Dobruska-Polom	41.23	306	eP	P	18 24 47.7	+0.3
UPC	Upice	41.42	307	eP	P	18 24 49.4	+0.6
UPC	Upice	41.42	307	eP	P	18 24 49.4	+0.6
TREC	Trest	41.87	305	eP	P	18 24 45.4	-7.2
BRG	Berggiesshubel	42.70	307	i P	P	18 24 59.9	+0.7
	comp=Z,6.1nm,0.6s						
BRG	Berggiesshubel	42.70	307	i P	P	18 24 59.9	+0.7
BRG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GERES	GERESS Array B	43.09	304	P	P	18 25 02.8	+0.3
GERES	GERESS Array B	43.09	304	P	P	18 25 02.8	+0.3
	comp=Z,0.5nm,0.4s,baz=89,slow=7.2,SNR=6.6						
KHC	Kasperske Hory	43.13	305	eP	P	18 25 03.5	+0.7
KHC	Kasperske Hory	43.13	305	eP	P	18 25 03.5	+0.7
CLL	Collm	43.24	308	i P	P	18 25 03.7	+0.1
CLL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CLL	Collm	43.24	308	i P	P	18 25 03.7	+0.1
	comp=Z,4.0nm,0.8s						
KSAR	Wonju Array Be	43.43	73	P	P	18 25 09.4	+4.1
CUC	Castrocucco	43.43	291	eP	P	18 25 05.6	+0.2
	comp=Z,11nm,0.7s						
KSRS	Korea Array	43.45	73	P	P	18 25 09.4	+3.9
	comp=Z,0.5nm,0.4s,baz=283,slow=6.2,SNR=4.7						
NB2	NORSAR Subarra	44.02	322	P	P	18 25 09.4	-0.4
	comp=Z,4.0nm,0.5s,baz=92,slow=7.9						
NOA	NORSAR Array B	44.02	322	P	P	18 25 09.3	-0.5
NOA	NORSAR Array B	44.02	322	P	P	18 25 09.3	-0.5
	comp=Z,5.4nm,0.7s,baz=94,slow=7.7,SNR=14						
DAVOX	Davos/Dischmat	45.99	302	P	P	18 25 24.9	-0.8
DAVOX	Davos/Dischmat	45.99	302	P	P	18 25 24.9	-0.8
	comp=Z,5.0nm,0.6s,baz=120,slow=8.1,SNR=8.5						
SPITS	Spitsbergen Ar	46.50	346	P	P	18 25 30.5	+1.4
SPITS	Spitsbergen Ar	46.50	346	P	P	18 25 30.5	+1.4
	comp=Z,9.6nm,1.0s,baz=133,slow=8.3,SNR=7.9						
JNU	Nakatsue	47.24	77	P	P	18 25 38.7	+3.2
JNU	Nakatsue	47.24	77	P	P	18 25 38.7	+3.2
	comp=Z,2.7nm,0.7s,baz=182,slow=15,SNR=4.1						
PGF	Pioggiola	47.65	297	eP	P	18 25 38.2	-0.4
	comp=Z,6.3nm,0.7s						
PGF	Pioggiola	47.65	297	eP	P	18 25 38.2	-0.4
PGF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PGF	Pioggiola	47.65	297	eP	P	18 25 38.2	-0.4
	comp=Z,6.3nm,0.7s						
HINF	Hinteralfeld	47.77	304	eP	P	18 25 39.1	-0.2
	comp=Z,2.9nm,0.5s						
HINF	Hinteralfeld	47.77	304	eP	P	18 25 39.1	-0.2
HINF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HINF	Hinteralfeld	47.77	304	eP	P	18 25 39.1	-0.2
	comp=Z,2.9nm,0.5s						
SBF	Sospel	48.38	299	eP	P	18 25 43.8	-0.3
SBF	Sospel	48.38	299	eP	P	18 25 43.8	-0.3
SBF	Sospel	48.38	299	eP	P	18 25 43.8	-0.3
LPG	La Plagne	48.40	301	eP	P	18 25 44.6	0.0
	comp=Z,4.1nm,0.4s						
LPG	La Plagne	48.40	301	eP	P	18 25 44.6	0.0
LPG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
LPG	La Plagne	48.40	301	eP	P	18 25 44.6	0.0
	comp=Z,4.1nm,0.4s						
LPL	La Plagne	48.41	301	eP	P	18 25 44.6	0.0
	comp=Z,8.2nm,0.4s						
LPL	La Plagne	48.41	301	eP	P	18 25 44.6	0.0
LPL				pmax	pmax		
	comp=Z,8.0nm,0.4s						
LPL	La Plagne	48.41	301	eP	P	18 25 44.6	0.0
	comp=Z,8.2nm,0.4s						
MBDF	Montbardon	48.60	300	eP	P	18 25 45.5	-0.4
MBDF	Montbardon	48.60	300	eP	P	18 25 45.5	-0.4
MBDF	Montbardon	48.60	300	eP	P	18 25 45.5	-0.4
SFTF	Sexfontaines	48.86	305	eP	P	18 25 48.4	+0.7
SFTF	Sexfontaines	48.86	305	eP	P	18 25 48.4	+0.7
BAIF	Baives	48.96	308	eP	P	18 25 48.9	+0.5
	comp=Z,6.1nm,0.6s						
BAIF	Baives	48.96	308	eP	P	18 25 48.9	+0.5
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BAIF	Baives	48.96	308	eP	P	18 25 48.9	+0.5
	comp=Z,6.1nm,0.6s						
FRF	La Foret Royal	49.01	299	eP	P	18 25 48.7	-0.2
	comp=Z,24nm,1.0s						
FRF	La Foret Royal	49.01	299	eP	P	18 25 48.7	-0.2
FRF				pmax	pmax		
	comp=Z,24nm,1.0s						
FRF	La Foret Royal	49.01	299	eP	P	18 25 48.7	-0.2
	comp=Z,24nm,1.0s						
LMR	La Mourre	49.17	298	eP	P	18 25 49.5	-0.6
LMR	La Mourre	49.17	298	eP	P	18 25 49.5	-0.6
LMR	La Mourre	49.17	298	eP	P	18 25 49.5	-0.6
KEST	Kesra	49.66	288	P	P	18 25 54.2	+0.2
KEST	Kesra	49.66	288	P	P	18 25 54.2	+0.2
	comp=Z,1.5nm,0.5s,baz=2.7,slow=2.9,SNR=8.3						
VIVF	Saint-Julien-l	49.99	301	eP	P	18 25 56.3	-0.1
	comp=Z,4.9nm,0.6s						
VIVF	Saint-Julien-l	49.99	301	eP	P	18 25 56.3	-0.1
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
VIVF	Saint-Julien-l	49.99	301	eP	P	18 25 56.3	-0.1
	comp=Z,4.9nm,0.6s						
SMF	Signal de Mont	50.05	303	eP	P	18 25 56.4	-0.3
	comp=Z,2.7nm,0.4s						
SMF	Signal de Mont	50.05	303	eP	P	18 25 56.4	-0.3
SMF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SMF	Signal de Mont	50.05	303	eP	P	18 25 56.4	-0.3
	comp=Z,2.7nm,0.4s						
SSF	Saint Saulge	50.16	304	eP	P	18 25 57.9	+0.4
SSF	Saint Saulge	50.16	304	eP	P	18 25 57.9	+0.4
SSF	Saint Saulge	50.16	304	eP	P	18 25 57.9	+0.4
AVF	Avril sur Loir	50.33	304	eP	P	18 25 58.6	-0.2
	comp=Z,6.4nm,0.5s						
AVF	Avril sur Loir	50.33	304	eP	P	18 25 58.6	-0.2
AVF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AVF	Avril sur Loir	50.33	304	eP	P	18 25 58.6	-0.2
	comp=Z,6.4nm,0.5s						
KMBO	Kilima Mbogo	50.49	228	P	P	18 26 00.6	0.0
KMBO	Kilima Mbogo	50.49	228	P	P	18 26 00.6	0.0
	comp=Z,1.0nm,0.5s,baz=25,slow=23,SNR=6.1						
LASF	Ste Croix	50.78	300	eP	P	18 26 02.6	+0.3
	comp=Z,7.7nm,0.8s						
LASF	Ste Croix	50.78	300	eP	P	18 26 02.6	+0.3
	comp=Z,7.7nm,0.8s						
TCF	Toulx Ste Croi	51.23	303	eP	P	18 26 05.7	+0.1
	comp=Z,5.6nm,0.6s						
TCF	Toulx Ste Croi	51.23	303	eP	P	18 26 05.7	+0.1
TCF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TCF	Toulx Ste Croi	51.23	303	eP	P	18 26 05.7	+0.1
	comp=Z,5.6nm,0.6s						
RJF	Les Rejaudoux	51.99	302	eP	P	18 26 12.4	+1.1
RJF	Les Rejaudoux	51.99	302	eP	P	18 26 12.4	+1.1
RJF	Les Rejaudoux	51.99	302	eP	P	18 26 12.4	+1.1
LDF	La Druitiere	52.08	307	eP	P	18 26 12.2	+0.4
LDF	La Druitiere	52.08	307	eP	P	18 26 12.2	+0.4
LDF	La Druitiere	52.08	307	eP	P	18 26 12.2	+0.4
MTLF	Montolieu	52.15	300	eP	P	18 26 12.5	+0.1
MTLF	Montolieu	52.15	300	eP	P	18 26 12.5	+0.1
MTLF	Montolieu	52.15	300	eP	P	18 26 12.5	+0.1
MFF	Saint Martin d	52.69	304	eP	P	18 26 16.6	+0.2
	comp=Z,15nm,0.9s						
MFF	Saint Martin d	52.69	304	eP	P	18 26 16.6	+0.2
MFF				pmax	pmax		
	comp=Z,15nm,0.9s						
MFF	Saint Martin d	52.69	304	eP	P	18 26 16.6	+0.2
	comp=Z,15nm,0.9s						
SGMF	Saint Gilles	53.72	307	eP	P	18 26 23.8	-0.1
SGMF	Saint Gilles	53.72	307	eP	P	18 26 23.8	-0.1
SGMF	Saint Gilles	53.72	307	eP	P	18 26 23.8	-0.1
ROSF	Rostrenen	54.15	307	eP	P	18 26 27.2	+0.2
ROSF	Rostrenen	54.15	307	eP	P	18 26 27.2	+0.2
ROSF	Rostrenen	54.15	307	eP	P	18 26 27.2	+0.2
ESDC	Sonseca Array	57.82	298	P	P	18 26 53.2	-0.1
ESDC	Sonseca Array	57.82	298	P	P	18 26 53.2	-0.1
	comp=Z,1.6nm,0.6s,baz=58,slow=7.1,SNR=11						
TORD	Torodi Ar. Bea	66.83	269	P	P	18 27 52.0	-1.7
TORD	Torodi Ar. Bea	66.83	269	P	P	18 27 52.0	-1.7
	comp=Z,1.3nm,0.4s,baz=49,slow=5.9,SNR=32						
RES	Resolute Bay	67.50	356	eP	P	18 27 58.0	+1.1
	comp=Z,0.8nm,0.5s						
RES	Resolute Bay	67.50	356	P	P	18 27 58.0	+1.1
	comp=Z,0.4nm,0.5s,baz=358,slow=7.1,SNR=6.0						
COLD	Coldfoot	70.44	16	eP	P	18 28 16.8	+1.6
	comp=Z,2.1nm,0.9s						
INK	Inuvik	72.47	10	P	P	18 28 29.0	+1.7
INK	Inuvik	72.47	10	P	P	18 28 29.0	+1.7
	comp=Z,3.6nm,0.5s,baz=1.7,slow=5.9,SNR=18						
COLA	College	72.94	17	eP	P	18 28 32.0	+1.8
COLA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
COLA	College	72.94	17	eP	P	18 28 32.0	+1.8
	comp=Z,3.6nm,0.6s						
ILAR	Eielson Array	73.25	16	P	P	18 28 32.9	+0.8
ILAR	Eielson Array	73.25	16	P	P	18 28 32.9	+0.8
	comp=Z,0.9nm,0.8s,baz=322,slow=4.9,SNR=13						
YKA	Yellowknife Ar	79.91	3	P	P	18 29 10.5	+0.9
YKA	Yellowknife Ar	79.91	3	P	P	18 29 10.5	+0.9
	comp=Z,2.0nm,0.5s,baz=350,slow=5.5,SNR=47						
WRA	Warramunga Arr	81.76	123	P	P	18 29 20.6	+0.6
WRA	Warramunga Arr	81.76	123	P	P	18 29 20.6	+0.6
	comp=Z,0.4nm,0.3s,baz=330,slow=4.8,SNR=3.7						
FFC	Flin Flon	87.73	357	ceP	P	18 29 51.3	+1.8

TAP ***07*** *18:32:25.1,24°.08N×122°.19E,h8km±1km,ML2.8,D*
ISCJB ***07*** *18:32:25.5±0.7,24°.04N±0°.02×122°.20E±0°.02,h7km±4km, Error ellipse: s-maj=4.0km s-min=2.7km az=157.3*
JMA ***07*** *18:32:27.3±0.3,25°.11N×122°.44E,h17km,M2.0*
ISC 07 18:32:25.7±1.1,24°.07N±0°.03×122°.22E±0°.02,h14km±9km, n33,σ0s.76/64,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	Nanau	0.56	310	⇑iP	Pg	18 32 36.4	-0.4
	baz=310						
HWA	Hwalien	0.57	261	eP	Pg	18 32 37.1	+0.2
	baz=259						
HWA				eS	Sg	18 32 44.5	0.0
	baz=259						
TWD	Chiawan	0.57	271	eP	Pg	18 32 36.9	0.0
	baz=270						
TWD				S	Sg	18 32 45.4	+1.0
	baz=270						
TWC	Suao	0.64	328	P	Pg	18 32 37.5	-0.6
	baz=329						
TWC				eS	Sg	18 32 47.0	+0.4
	baz=329						
ESL	Shilin	0.76	251	eP	Pb	18 32 40.1	-0.7
	baz=248						
ESL				S	Sb	18 32 50.7	-0.2
	baz=248						
ILA	Ilan	0.82	328	eP	Pb	18 32 41.4	-0.3
	baz=329						
ILA				eS	Sg	18 32 53.1	+0.8
	baz=329						
TWE	Neicheng	0.82	322	P	Pb	18 32 40.7	-1.0
	baz=323						
TWE				eS	Sb	18 32 53.2	+0.5
	baz=323						
ENTT	Nioudou	0.82	314	P	Pb	18 32 41.4	-0.5
	baz=314						
ENTT				eS	Sb	18 32 53.3	+0.5
	baz=314						
YOJ	Yonaguni jima	0.82	61	P	Pn	18 32 42.8	-0.1
YOJ				S	Sn	18 32 53.6	-1.2
NNS	Nan Shan	0.85	296	eP	Pb	18 32 41.7	-0.8
	baz=295						
NNS				eS	Sb	18 32 54.2	+0.5
	baz=295						
WHF	Hehuan Shan	0.87	275	P	Pb	18 32 42.2	-0.7
	baz=274						
WHF				S	Sb	18 32 53.7	-0.9
	baz=274						
TWB1	Santiao Chiao	0.96	347	eP	Pb	18 32 43.5	-0.6
	baz=349						
TWT	Tachien	0.97	281	eP	Pb	18 32 43.9	-0.5
	baz=280						
TWT				eS	Sb	18 32 57.1	0.0
	baz=280						
NSK	Sanguang	0.99	308	eP	Pb	18 32 44.5	-0.1
	baz=308						
NSK				eS	Sb	18 32 58.5	+0.9
	baz=308						
EHY	Hungye	0.99	236	eP	Pb	18 32 44.7	0.0
	baz=234						
EHY				eS	Sb	18 32 55.7	-1.9
	baz=234						
NWF	Wu-fen Shan	1.07	338	eP	Pb	18 32 45.7	-0.5
	baz=339						
NWF				eS	Sn	18 33 00.7	-0.4
	baz=339						
TWF1	Yuli	1.10	230	eP	Pn	18 32 46.0	-0.8
	baz=228						
TWF1				eS	Sb	18 32 59.7	-1.1
	baz=228						
SMLT	Sun Moon Lake	1.22	262	eP	Pn	18 32 48.3	-0.2
	baz=260						
SMLT				eS	Sb	18 33 04.0	-0.2
	baz=260						
NSTT	Nanjuang	1.24	297	P	Pn	18 32 49.0	+0.4
	baz=296						
NSTT				eS	Sb	18 33 05.3	+0.5
	baz=296						
TYC	Yuchr	1.25	263	eP	Pn	18 32 48.3	-0.5
	baz=261						
TYC				eS	Sn	18 33 06.2	+0.7
	baz=261						
TWQ1	Liyutan	1.35	282	eP	Pn	18 32 50.5	+0.3
	baz=281						
TWQ1				eS	Sn	18 33 07.2	-0.6
	baz=281						
IRIF	Iriomote-Funau	1.41	79	P	Pb	18 32 51.9	+0.2
IRIF				eS	Sg	18 33 11.3	+0.2
ALS	Alishan	1.41	247	eP	Pn	18 32 51.1	-0.1
	baz=245						
ALS				eS	Sn	18 33 07.5	-2.2
	baz=245						
WNT	Mingjian	1.42	263	eP	Pn	18 32 51.6	+0.6
	baz=261						
WNT				eS	Sn	18 33 09.4	0.0
	baz=261						
CHN5	Tsauling	1.48	252	eP	Pn	18 32 52.6	+0.5
	baz=250						
CHN5				eS	Sn	18 33 11.4	+0.1
	baz=250						
WGK	Gukeng	1.56	256	eP	Pn	18 32 54.1	+1.1
	baz=255						
WGK				eS	Sn	18 33 14.1	+1.0
	baz=255						
JKRS	Kuro-shima	1.65	84	P	Pb	18 32 56.4	+0.6
JKRS				eS	Sg	18 33 18.1	-0.7
CHN4	Tsaushan	1.65	245	eP	Pn	18 32 55.0	+0.7
	baz=243						
CHN4				eS	Sn	18 33 16.8	+1.5
	baz=243						
WTP	Ta-pu	1.68	241	eP	Pn	18 32 55.1	+0.4
	baz=240						
WTP				eS	Sn	18 33 16.9	+0.8
	baz=240						
TWK	Hsinying	1.77	244	eP	Pn	18 32 56.8	+0.8
	baz=242						
TWK				eS	Sn	18 33 19.0	+0.6
	baz=242						
CHN1	Nanshi	1.78	241	eP	Pn	18 32 55.2	-0.8
	baz=239						
CHN1				eS	Sn	18 33 18.7	+0.2
	baz=239						
JIJ	Ishigaki jima	1.78	80	P	Pn	18 32 56.9	+0.8
JIJ				eS	Sn	18 33 18.6	+0.1
SSD	Sandimen	1.96	228	eP	Pn	18 32 59.5	+1.0
	baz=227						
SSD				eS	Sn	18 33 24.4	+1.4
	baz=227						

IDC 07 18:52:40.6±3.0,3°.54N×128°.90E,h0km,mb3.6/4, mb1 3.8/5,mb1mx3.6/25,mbtmp3.7/5,ML4.1/1,MS3.5/2, Ms1 3.5/2,ms1mx2.7/29,Error ellipse: s-maj=56.2km s-min=51.6km az=108.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	12.47	227	Pn	Pn	18 55 40.2	+0.6
	1.0nm,0.3s,baz=31,slow=8.0,SNR=4.4						
FITZ	Fitzroy Crossi	21.74	188	P	P	18 57 33.1	-0.6
	2.1nm,0.9s,baz=2.9,slow=10,SNR=8.6						
WRA	Warramunga Arr	23.94	167	P	P	18 57 56.8	+0.2
	1.5nm,0.8s,baz=347,slow=10,SNR=4.5						
ASAR	Alice Springs	27.48	170	P	P	18 58 28.6	-0.2
	0.2nm,0.7s,baz=350,slow=7.9,SNR=7.6						
ASAR				PcP	PcP	19 01 47.3	-0.2
	0.2nm,0.4s,baz=0.0,slow=2.1,SNR=8.1						
STKA	Stephens Creek	37.23	162	P	P	18 59 53.9	-0.1
	1.4nm,0.4s,baz=332,slow=10,SNR=9.7						
USRK	Ussuriysk Arra	40.59	3	LR	LR	19 16 50.9	
	comp=Z,37nm,18.7s,baz=91,slow=36						
AAK	Ala-Archa	61.96	317	LR	LR	19 30 52.8	
	comp=Z,57nm,18.3s,baz=304,slow=37						

IDC ***07*** *18:53:25.6±0.8,2°.45N×94°.36E,h0km,mb4.2/12, mb1 4.3/14,mb1mx4.1/28,mbtmp4.2/14,ML4.2/2,MS3.2/2, Ms1 3.3/2,ms1mx2.6/43,Error ellipse: s-maj=30.9km s-min=15.6km az=48.0*
DJA ***07*** *18:53:26.0±2.0,3°N±6°×9°4E±1°8,h10km,M4.5/6,mb5.0/2, mB4.7/1,MLv4.3/6,Mw(mB)3.9/1*
ISCJB ***07*** *18:53:27.6±0.6,2°.51N±0°.09×94°.44E±0°.07,h21km, mb4.2/12,MS3.5/1,Error ellipse: s-maj=15.1km s-min=6.4km az=37.5*
ISC 07 18:53:29.9±0.7,2°.68N±0°.07×94°.47E±0°.10,h21km,n40, σ1s.29/38,mb4.2/12,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	Banda Aceh	2.91	16	P	Pn	18 54 13.3	-1.8
BSI				S	Sn	18 54 45.9	-3.6
GSI	Gunungsitoli	3.39	114	P	Pn	18 54 20.3	-1.4
TSI	Tuntungan	4.17	79	P	Pn	18 54 33.6	+1.3
PSI	Prapat	4.45	88	P	Pn	18 54 36.4	0.0
PSI	Prapat	4.45	88	Pn	Pn	18 54 36.3	0.0
	3.8nm,0.3s,baz=283,slow=14,SNR=32						
PPI	Padang Panjang	6.70	118	P	Pn	18 55 06.5	-0.6
IPM	Ipoh	6.78	75	P	Pn	18 55 08.5	+0.2
	46nm,0.7s,515nm0.1nm						
KSM	Kuching	15.88	94	P	P	18 57 17.4	+1.6
CMAR	Chiang Mai Arr	16.28	15	Pn	Pn	18 57 18.4	+1.1
	0.7nm,0.3s,baz=208,slow=11,SNR=18						
CMAR				LR	LR	19 02 56.1	
	comp=Z,51nm,20.6s,baz=200,slow=34						
CHTO	Chiang Mai	16.62	15	P	P	18 57 33.2	+9.1
CMMT	Chiang Mai	16.62	15	P	P	18 57 33.7	+10
BBKI	Banjar Baru	21.26	107	P	P	18 58 15.6	+0.6
SHL	Shillong	22.89	354	ePKP	P	18 58 32.0	-0.5
MYLDM	Lahad Datu	24.10	83	P	P	18 58 46.2	+1.8
ODAN	Odare	24.98	345	eP	P	18 58 53.7	+1.2
	10nm,0.5s						
RAMN	Ramite	25.28	343	eP	P	18 58 57.3	+2.1
	19nm,0.5s						
TAPN	Taplejung	25.37	346	eP	P	18 58 56.8	+0.8
	18nm,0.8s						
PKI	Pulchoki	26.22	342	eP	P	18 59 04.9	+1.1
PKIN	Phulchoki	26.23	342	eP	P	18 59 04.8	+0.9
DMN	Daman	26.35	341	eP	P	18 59 06.7	+1.8
GUN	Gumba	26.39	343	eP	P	18 59 06.8	+1.4
	17nm,0.7s						
KKN	Kakani	26.47	341	eP	P	18 59 06.8	+0.9
	11nm,0.9s						
KOLN	Koldanda	27.02	338	eP	P	18 59 12.2	+1.3
	9.4nm,0.6s						
DANN	Dangsing	27.49	339	eP	P	18 59 16.6	+1.4
	14nm,0.7s						
PYUN	Piuthan	27.55	338	eP	P	18 59 16.8	+1.1
	125nm,1.4s						
WRA	Warramunga Arr	45.13	122	P	P	19 01 44.2	-1.1
	1.7nm,0.7s,baz=299,slow=9.1,SNR=6.1						
MKAR	Makanchi Array	45.20	348	P	P	19 01 46.4	+1.0
	7.0nm,0.4s,baz=165,slow=7.9,SNR=26						
SONM	Songino Array	46.14	11	P	P	19 01 53.7	+0.7
	3.3nm,0.5s,baz=190,slow=9.3,SNR=7.2						
KSRS	Korea Array	46.26	37	P	P	19 01 54.0	+0.1
	1.5nm,0.8s,baz=227,slow=8.5,SNR=8.1						
ASAR	Alice Springs	46.46	127	P	P	19 01 54.5	-1.2
	0.8nm,0.7s,baz=303,slow=7.9,SNR=9.2						
ASAR				PcP	PcP	19 03 30.2	-0.1
	0.5nm,0.7s,baz=308,slow=4.6,SNR=3.3						
ZALV	Zalesovo Beam	51.71	353	P	P	19 02 36.7	+1.3
	6.8nm,0.5s,baz=177,slow=7.4,SNR=47						
STKA	Stephens Creek	56.37	132	P	P	19 03 07.6	-2.3
	2.8nm,0.9s,baz=290,slow=9.9,SNR=5.0						
ASAJ	Asahikawa	59.17	39	LR	LR	19 30 15.3	
	comp=Z,31nm,18.3s,baz=152,slow=37						
KBZ	Khabaz	61.17	320	P	P	19 03 42.3	-0.7
	2.4nm,0.9s,baz=143,slow=5.9,SNR=6.2						
BRTR	Keskin Array B	66.10	313	P	P	19 04 15.5	-0.4
	1.2nm,0.8s,baz=127,slow=7.5,SNR=7.6						
FINES	FINESS Array B	77.44	333	P	P	19 05 23.0	-0.4
	2.6nm,1.0s,baz=101,slow=7.2,SNR=5.0						
ARCES	ARCESS Array B	80.23	341	P	P	19 05 39.0	+0.4
	2.6nm,0.9s,baz=102,slow=4.2,SNR=3.0						
GERES	GERESS Array B	81.91	319	P	P	19 05 48.3	+0.3
	0.5nm,0.6s,baz=104,slow=4.1,SNR=4.5						
TXAR	Lajitas Array	143.73	27	PKP	PKPab	19 13 01.6	+0.5
	0.2nm,0.2s,baz=220,slow=3.5,SNR=4.5						
CPUP	Villa Florida	144.15	226	PKP	PKPab	19 13 02.9	+0.3
	1.4nm,0.5s,baz=82,slow=4.2,SNR=7.9						

ISCJB ***07*** *19:13:55.0±0.5,54°.47N±0°.04×153°.36W±0°.05,h33km, mb3.8/16,MS3.0/3,Error ellipse: s-maj=6.8km s-min=3.8km az=153.5*
NEIC ***07*** *19:13:56.8,54°.51N×153°.51W,h10km,ML3.9(AEIC),After AEIC.*
IDC ***07*** *19:13:58.4±5.2,54°.36N×153°.23W,h40km±42km,mb3.7/14, mb1 3.9/16,mb1mx3.7/31,mbtmp3.8/16,ML4.0/2,MS3.0/5, Ms1 3.0/5,ms1mx2.7/38,Error ellipse: s-maj=39.6km s-min=20.5km az=177.0*
ISC 07 19:13:57.6±0.7,54°.46N±0°.08×153°.30W±0°.06,h35km,n90, σ1s.47/94,mb3.9/16,MS2.9/3,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	2.77	0	P	Pn	19 14 38.8	-0.7
OHAK				S	Sn	19 15 11.9	+0.2
KDAK	Kodiak Island	3.36	7	Pn	Pn	19 14 46.4	-1.2
KDAK				Sn	Sn	19 15 23.6	-2.5
KDAK	Kodiak Island	3.36	7	Pn	Pn	19 14 46.4	-1.2
	56nm,0.3s,baz=192,slow=9.7,SNR=806						
KDAK				Sn	Sn	19 15 23.6	-2.5
	50nm,0.3s,baz=28,slow=18,SNR=18						
CHGN	Chignik	3.46	304	eP	Pn	19 14 44.3	-4.5
ANPK	Aniakchak Peak	3.63	313	P	Pn	19 14 50.9	-0.4
ANNE	Aniakchak Nort	3.65	314	P	Pn	19 14 51.0	-0.6
VNSG	Veniaminof 6	3.71	299	P	Pn	19 14 51.3	-1.1
AZAC	Aniakchak	3.71	313	P	Pn	19 14 51.9	-0.5
ANNW	Aniakchak Nort	3.75	314	P	Pn	19 14 52.1	-0.9
VNHG	Veniaminof 1	3.79	300	P	Pn	19 14 53.0	-0.5
KABR	Katmai Barrier	3.80	347	P	Pn	19 14 53.3	-0.3
KCE	Katmai Mt Cerb	3.94	345	P	Pn	19 14 56.0	+0.4
VNWF	Veniaminof 8	3.96	298	P	Pn	19 14 54.5	-1.4
KAKN	Katmai Knife C	3.97	346	P	Pn	19 14 56.1	0.0
KAWH	Katmai	4.03	349	P	Pn	19 14 56.5	-0.2
KAPH	Katmai Pasha	4.19	352	P	Pn	19 14 59.6	+0.6
KAPH				S	Sn	19 15 47.6	+0.8
SDPT	Sand Point	4.24	285	P	Pn	19 14 57.1	-2.5
SDPT				S	Sn	19 15 45.3	-2.4
FONW	Fourpeaked Sta	4.41	356	P	Pn	19 15 02.5	+0.6
DOL	Dolgoi Island	5.00	281	P	Pn	19 15 07.5	-2.6
PS4A	Pavlof South-4	5.02	284	P	Pn	19 15 07.6	-2.7
OPT	Oil Point	5.21	0	P	Pn	19 15 12.9	-0.1
DRIA	Deer Island	5.22	279	P	Pn	19 15 10.2	-2.9
DT1	Dutton Round H	5.24	281	P	Pn	19 15 10.6	-2.7
BRLK	Bradley Lake	5.48	13	P	Pn	19 15 15.3	-1.4
BRLK				S	Sn	19 16 16.6	-1.9
FALS	False Pass	5.89	278	P	Pn	19 15 20.1	-2.1
SEW	Seward	6.04	19	P	Pn	19 15 22.6	-1.7
DFR	Drift River	6.16	3	P	Pn	19 15 26.0	-0.1
SSLW	Shishaldin Wes	6.30	277	P	Pn	19 15 25.8	-2.1
SVW2	Sparrevohn	6.77	351	P	Pn	19 15 33.7	-0.6
CKL	Chakachamna La	6.78	4	P	Pn	19 15 34.1	-0.5
BGL	Barrier Glacie	6.85	4	P	Pn	19 15 35.5	+0.1
RC01	Rabbit Creek A	6.92	15	eP	Pn	19 15 36.3	0.0
	19nm,0.2s						
STLK	Strandline Lak	7.11	6	P	Pn	19 15 38.2	-0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
EYAK	**Cordova Ski Ar**	**7.34**	**31**	P	**Pn**	**19 15 41.3**	**-0.8**
VLZ	**Valdez**	**7.66**	**26**	P	**Pn**	**19 15 45.7**	**-0.7**
GOAT	**Goat Mountain**	**7.68**	**33**	P	**Pn**	**19 15 45.9**	**-0.9**
UNV	**Unalaska Valle**	**7.78**	**271**	P	**Pn**	**19 15 45.8**	**-2.4**
DIV	**Divide**	**7.80**	**28**	*e*P	**Pn**	**19 15 48.2**	**-0.3**
	19nm,0.5s						
SML	**Sawmill**	**7.83**	**18**	P	**Pn**	**19 15 48.2**	**-0.7**
MTBL	**Makushin Table**	**7.86**	**272**	P	**Pn**	**19 15 46.8**	**-2.6**
PPLA	**Purkeypile**	**8.49**	**3**	*e*P	**Pn**	**19 15 59.5**	**+1.5**
	7.1nm,0.8s						
VRDI	**Verde Repeater**	**8.58**	**34**	P	**Pn**	**19 15 58.0**	**-1.3**
TT01	**Tatalina**	**8.59**	**352**	P	**Pn**	**19 15 59.3**	**0.0**
KIAG	**Kiagna River**	**8.73**	**38**	P	**Pn**	**19 15 59.7**	**-1.7**
BALM	**Baldy**	**8.81**	**37**	P	**Pn**	**19 16 01.7**	**-0.8**
SAMH	**Samovar Hills**	**8.84**	**45**	P	**Pn**	**19 16 01.9**	**-0.9**
PNL	**Peninsula**	**9.19**	**50**	*e*P	**Pn**	**19 16 06.5**	**-1.1**
	45nm,0.3s						
PAX	**Paxson**	**9.45**	**22**	*e*P	**Pn**	**19 16 11.7**	**+0.5**
	3.6nm,0.4s						
MCK	**McKinley**	**9.57**	**12**	*e*P	**Pn**	**19 16 11.3**	**-1.4**
	4.6nm,0.6s						
DOT	**Dot Lake**	**10.36**	**23**	*e*P	**Pn**	**19 16 25.4**	**+1.8**
	4.2nm,0.6s						
ILAR	**Eielson Array**	**10.84**	**15**	Pn	**Pn**	**19 16 30.6**	**+0.6**
ILAR				Sn	**Sn**	**19 18 24.6**	**-5.2**
ILAR	**Eielson Array**	**10.84**	**15**	Pn	**Pn**	**19 16 30.6**	**+0.6**
	1.1nm,0.3s,baz=207,slow=13,SNR=39						
ILAR				Sn	**Sn**	**19 18 24.6**	**-5.2**
	0.6nm,0.3s,baz=205,slow=21,SNR=7.4						
ILAR				LR	LR	19 21 00.6	
	comp=Z,62nm,19.9s,baz=37,slow=39						
EGAK	**Eagle**	**12.01**	**26**	*e*P	**Pn**	**19 16 47.4**	**+1.4**
COLD	**Coldfoot**	**12.90**	**5**	*e*P	**Pn**	**19 16 57.3**	**-0.9**
	1.3nm,0.4s						
DLBC	**Dease Lake**	**13.45**	**63**	*e*P	**Pn**	**19 17 07.0**	**+1.2**
INK	**Inuvik**	**16.68**	**26**	Pn	**P**	**19 17 49.3**	**-1.0**
INK	**Inuvik**	**16.68**	**26**	Pn	**P**	**19 17 49.3**	**-1.0**
	0.2nm,0.3s,baz=224,slow=12,SNR=9.5						
INK				LR	LR	19 24 30.1	
	comp=Z,40nm,20.5s,baz=129,slow=38						
YKA	**Yellowknife Ar**	**21.47**	**52**	P	**P**	**19 18 42.9**	**+0.3**
YKA	**Yellowknife Ar**	**21.47**	**52**	P	**P**	**19 18 42.9**	**+0.3**
	2.8nm,0.7s,baz=265,slow=9.5,SNR=41						
YKW3	**Yellowknife Ar**	**21.47**	**52**	*e*P	**P**	**19 18 43.1**	**+0.5**
	0.1nm,0.7s						
BILL	**Bilibino**	**23.16**	**322**	*e*P	**P**	**19 19 00.7**	**+0.1**
	12nm,1.1s						
YBH	**Yreka Blue Hor**	**23.85**	**110**	LR	LR	19 26 10.8	
	comp=Z,43nm,20.3s,baz=324,slow=31						
PETK	**Petropavlovsk-**	**28.52**	**288**	P	**P**	**19 19 49.5**	**+0.1**
PETK	**Petropavlovsk-**	**28.52**	**288**	P	**P**	**19 19 49.5**	**+0.1**
	2.3nm,0.7s,baz=70,slow=11,SNR=3.8						
RES	**Resolute Bay**	**30.24**	**27**	P	**P**	**19 20 05.3**	**+0.9**
RES	**Resolute Bay**	**30.24**	**27**	P	**P**	**19 20 05.3**	**+0.9**
	0.5nm,0.6s,baz=263,slow=11,SNR=3.7						
PDAR	**Pinedale Array**	**30.70**	**94**	P	**P**	**19 20 09.3**	**+0.3**
PDAR	**Pinedale Array**	**30.70**	**94**	P	**P**	**19 20 09.3**	**+0.3**
	0.3nm,0.6s,baz=301,slow=8.0,SNR=3.4						
TXAR	**Lajitas Array**	**43.46**	**105**	LR	LR	19 40 18.1	
	comp=Z,47nm,18.9s,baz=0.0,slow=36						
LPIG	**La Paz**	**43.95**	**116**	LR	LR	19 37 28.1	
	comp=Z,6.9nm,21.4s,baz=169,slow=32						
KSRS	**Korea Array**	**54.41**	**286**	P	**P**	**19 23 22.1**	**+1.2**
	0.9nm,0.8s,baz=47,slow=6.6,SNR=3.3						
KSAR	**Wonju Array Be**	**54.44**	**286**	P	**P**	**19 23 22.1**	**+1.0**
ARCES	**ARCESS Array B**	**56.32**	**1**	P	**P**	**19 23 33.9**	**-0.3**
ARCES	**ARCESS Array B**	**56.32**	**1**	P	**P**	**19 23 33.9**	**-0.3**
	4.1nm,1.0s,baz=15,slow=7.5,SNR=3.8						
SONM	**Songino Array**	**58.03**	**309**	P	**P**	**19 23 47.9**	**+1.2**
SONM	**Songino Array**	**58.03**	**309**	P	**P**	**19 23 47.9**	**+1.2**
	1.0nm,0.6s,baz=29,slow=6.8,SNR=3.6						
ZALV	**Zalesovo Beam**	**61.80**	**325**	P	**P**	**19 24 13.6**	**+1.3**
ZALV	**Zalesovo Beam**	**61.80**	**325**	P	**P**	**19 24 13.6**	**+1.3**
	1.9nm,0.7s,baz=43,slow=6.5,SNR=10						
NOA	**NORSAR Array B**	**64.20**	**8**	P	**P**	**19 24 29.5**	**+1.3**
NOA	**NORSAR Array B**	**64.20**	**8**	P	**P**	**19 24 29.5**	**+1.3**
	0.5nm,0.6s,baz=327,slow=5.9,SNR=1.9						
FINES	**FINESS Array B**	**64.44**	**0**	P	**P**	**19 24 30.4**	**+0.7**
FINES	**FINESS Array B**	**64.44**	**0**	P	**P**	**19 24 30.4**	**+0.7**
	1.5nm,0.9s,baz=339,slow=7.4,SNR=3.6						
KURK	**Kurchatov**	**66.56**	**327**	P	**P**	**19 24 45.3**	**+1.7**
KURBB	**Kurchatov Arra**	**66.67**	**327**	P	**P**	**19 24 45.3**	**+1.0**
	2.3nm,1.0s,baz=33,slow=7.1,SNR=15						
BVAR	**Borovoye Array**	**66.93**	**333**	P	**P**	**19 24 47.4**	**+1.5**
BVAR	**Borovoye Array**	**66.93**	**333**	P	**P**	**19 24 47.4**	**+1.5**
	0.3nm,0.3s,baz=62,slow=8.5,SNR=4.3						
MKAR	**Makanchi Array**	**68.71**	**323**	P	**P**	**19 24 58.0**	**+0.8**
MKAR	**Makanchi Array**	**68.71**	**323**	P	**P**	**19 24 58.0**	**+0.8**
	1.5nm,0.8s,baz=41,slow=6.3,SNR=8.2						
CMAR	**Chiang Mai Arr**	**85.04**	**295**	P	**P**	**19 26 29.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**85.04**	**295**	P	**P**	**19 26 29.6**	**+0.1**
	0.6nm,0.8s,baz=10,slow=5.5,SNR=4.9						

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*IDC **07** 19:17:30.9±1.3, 0.°83N×126.°09E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.6/24, mbtmp3.7/6, ML3.5/1, MS3.6/1, Ms1 3.6/1, ms1mx2.3/30, Error ellipse: s-maj=113.1km s-min=18.5km az=67.0*

*ISCJB **07** 19:17:36.6±0.7, 0.°70N±0.°07×126.°33E±0.°05, h39km, mb3.8/5, MS3.6/1, Error ellipse: s-maj=10.1km s-min=7.3km az=171.7*

*DJA **07** 19:17:38.4±1.1, 1°N±6°×12°6E±°, h57km±18km, M3.5/4, MLv3.5/4*

ISC 07 19:17:37.3±0.9**, 0.°86N**±0.°08×**126.°35E**±0.°05**, h39**km**, n11, σ1.s68**/13**, mb3.8**/5**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
TNTI	**Ternate**	**1.02**	**95**	P	**Pn**	**19 17 56.4**	**+1.2**
TNTI				S	**Sn**	**19 18 10.1**	**+1.8**
MNI	**Manado**	**1.61**	**291**	P	**Pn**	**19 18 04.1**	**+0.8**
MNI				S	**Sn**	**19 18 26.2**	**+3.3**
GAMI	**Galela, Maluku**	**1.74**	**56**	P	**Pn**	**19 18 05.7**	**+0.7**
GAMI				S	**Sn**	**19 18 27.4**	**+1.4**
LBMI	**Labuha**	**1.88**	**142**	P	**Pn**	**19 18 08.7**	**+1.7**
FITZ	**Fitzroy Crossi**	**18.85**	**182**	P	**P**	**19 21 53.5**	**-0.7**
	0.1nm,0.3s,baz=10,slow=12,SNR=4.2						
WRA	**Warramunga Arr**	**22.11**	**160**	P	**P**	**19 22 28.4**	**-1.0**
	3.7nm,0.8s,baz=336,slow=11,SNR=7.5						
ASAR	**Alice Springs**	**25.46**	**164**	P	**P**	**19 23 01.6**	**-0.3**
	1.3nm,0.3s,baz=333,slow=8.7,SNR=53						
STKA	**Stephens Creek**	**35.62**	**157**	P	**P**	**19 24 30.4**	**-1.1**
	1.8nm,0.7s,baz=332,slow=9.4,SNR=5.7						
SONM	**Songino Array**	**49.89**	**343**	LR	LR	19 50 36.0	
	comp=Z,54nm,18.0s,baz=212,slow=40						
MKAR	**Makanchi Array**	**59.70**	**326**	P	**P**	**19 27 36.5**	**-1.5**
	0.4nm,0.7s,baz=120,slow=7.7,SNR=5.3						
KURBB	**Kurchatov Arra**	**63.95**	**328**	P	**P**	**19 28 05.1**	**-1.3**
	0.4nm,0.6s,baz=129,slow=6.4,SNR=8.3						

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*ISK **07** 20:06:09.8, 39.°06N×29.°36E, h7km, MD2.6*

*DDA **07** 20:06:10.4, 39.°03N×29.°33E, h7km, MD2.8*

*CSEM **07** 20:06:10.3±0.1, 39.°05N×29.°36E, h5km, MD2.8, Error ellipse: s-maj=1.8km s-min=1.7km az=179.0*

*ISCJB **07** 20:06:10.1±0.5, 39.°05N±0.°03×29.°36E±0.°03, h2km±5km, Error ellipse: s-maj=4.6km s-min=3.4km az=170.3*

ISC 07 20:06:10.3±0.9**, 39.°05N**±0.°02×**29.°36E**±0.°02**, h7**km±7km**, n40, σ0.s24**/62**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
GDZ	**Gediz**	**0.10**	**68**	*i* P	**Pg**	**20 06 12.7**	**0.0**
GDZ				*i* S	**Sg**	**20 06 14.3**	**-0.1**
GDZ	**Gediz**	**0.10**	**68**	*i* P	**Pg**	**20 06 12.7**	**0.0**
GDZ				*i* S	**Sg**	**20 06 14.3**	**-0.1**
TVSB	**Tavsanli**	**0.41**	**11**	*e*PG	**Pg**	**20 06 18.2**	**0.0**
TVSB				*e*SG	**Sg**	**20 06 24.0**	**+0.5**
TVSB	**Tavsanli**	**0.41**	**11**	*e*Pg	**Pg**	**20 06 18.2**	**0.0**
TVSB				*e*Sg	**Sg**	**20 06 24.0**	**+0.5**
DEMI	**Demirci**	**0.50**	**269**	*i* P	**Pg**	**20 06 20.1**	**+0.1**
DEMI				*i* S	**Sg**	**20 06 26.6**	**+0.1**
DEMI	**Demirci**	**0.50**	**269**	*i* P	**Pg**	**20 06 20.1**	**+0.1**
DEMI				*i* S	**Sg**	**20 06 26.6**	**+0.1**
ALT	**Altintas**	**0.58**	**89**	*e*PG	**Pg**	**20 06 21.8**	**+0.3**
ALT				*e*SG	**Sg**	**20 06 29.1**	**0.0**
ALT	**Altintas**	**0.58**	**89**	*e*Pg	**Pg**	**20 06 21.8**	**+0.3**
ALT				*e*Sg	**Sg**	**20 06 29.1**	**0.0**
KHAL	**Karahalli**	**0.69**	**171**	*i* P	**Pg**	**20 06 23.6**	**+0.1**
KHAL				*e*S	**Sg**	**20 06 33.0**	**+0.6**
KHAL	**Karahalli**	**0.69**	**171**	*i* P	**Pg**	**20 06 23.6**	**+0.1**
KHAL				*e*S	**Sg**	**20 06 33.0**	**+0.6**
KHL	**Karahalli**	**0.74**	**170**	*e*PG	**Pb**	**20 06 25.3**	**-0.1**
KHL	**Karahalli**	**0.74**	**170**	*e*Pg	**Pb**	**20 06 25.3**	**-0.1**
KULA	**Kula-Manisa**	**0.77**	**226**	*e*PG	**Pg**	**20 06 24.6**	**-0.4**
KULA	**Kula-Manisa**	**0.77**	**226**	*e*Pg	**Pg**	**20 06 24.6**	**-0.4**
DURS	**Dursunbey**	**0.88**	**309**	*i* P	**Pg**	**20 06 27.3**	**+0.1**
DURS				*i* S	**Sg**	**20 06 39.0**	**+0.3**
DURS	**Dursunbey**	**0.88**	**309**	*i* P	**Pg**	**20 06 27.3**	**+0.1**
DURS				*i* S	**Sg**	**20 06 39.0**	**+0.3**
SHUT	**Suhut-Afyon**	**1.05**	**118**	*e*PG	**Pb**	**20 06 30.8**	**-0.1**
SHUT	**Suhut-Afyon**	**1.05**	**118**	*e*Pg	**Pb**	**20 06 30.8**	**-0.1**
ULDT	**Uludag**	**1.10**	**351**	*i* P	**Pn**	**20 06 32.5**	**+0.2**
ULDT				*i* S	**Sn**	**20 06 47.8**	**-0.1**
ULDT	**Uludag**	**1.10**	**351**	*i* P	**Pn**	**20 06 32.5**	**+0.2**
ULDT				*i* S	**Sn**	**20 06 47.8**	**-0.1**
BORA	**Eskisehir**	**1.18**	**45**	*i* P	**Pb**	**20 06 33.2**	**+0.1**
BORA				*i* S	**Sg**	**20 06 48.2**	**-0.1**
BORA	**Eskisehir**	**1.18**	**45**	*i* P	**Pb**	**20 06 33.2**	**+0.1**
BORA				*i* S	**Sg**	**20 06 48.2**	**-0.1**
AKHS	**Akhisar**	**1.22**	**262**	*i* P	**Pb**	**20 06 33.6**	**0.0**
AKHS				*i* S	**Sn**	**20 06 50.4**	**0.0**
AKHS	**Akhisar**	**1.22**	**262**	*i* P	**Pb**	**20 06 33.6**	**0.0**
AKHS				*i* S	**Sn**	**20 06 50.4**	**0.0**
SEYT	**Eskypehyr**	**1.25**	**67**	*i* P	**Pg**	**20 06 34.5**	**+0.3**
SEYT				*i* S	**Sb**	**20 06 50.1**	**-0.4**
SEYT	**Eskypehyr**	**1.25**	**67**	*i* P	**Pg**	**20 06 34.5**	**+0.3**
SEYT				*i* S	**Sb**	**20 06 50.1**	**-0.4**
IZI	**Iznik**	**1.29**	**4**	*e*PN	**Pg**	**20 06 35.1**	**+0.2**
IZI	**Iznik**	**1.29**	**4**	*e*Pn	**Pg**	**20 06 35.1**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.37**	**345**	*e*PN	**Pn**	**20 06 35.7**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.37**	**345**	*e*Pn	**Pn**	**20 06 35.7**	**-0.1**
GEMT	**Gemlik**	**1.39**	**355**	*e*PN	**Pn**	**20 06 35.9**	**-0.1**
GEMT	**Gemlik**	**1.39**	**355**	*e*Pn	**Pn**	**20 06 35.9**	**-0.1**
KCTX	**Karacabey (Bur**	**1.44**	**328**	*e*PN	**Pn**	**20 06 36.5**	**-0.3**
KCTX	**Karacabey (Bur**	**1.44**	**328**	*e*Pn	**Pn**	**20 06 36.5**	**-0.3**
BALY	**Balya**	**1.52**	**298**	*i* P	**Pb**	**20 06 38.5**	**-0.2**
BALY				*i* S	**Sb**	**20 06 58.3**	**+0.2**
BALY	**Balya**	**1.52**	**298**	*i* P	**Pb**	**20 06 38.5**	**-0.2**
BALY				*i* S	**Sb**	**20 06 58.3**	**+0.2**
GONE	**Gonen-Balikesi**	**1.63**	**308**	*e*PN	**Pn**	**20 06 39.6**	**+0.2**
GONE	**Gonen-Balikesi**	**1.63**	**308**	*e*Pn	**Pn**	**20 06 39.6**	**+0.2**
GULT	**Gulveren**	**1.64**	**32**	*e*PN	**Pb**	**20 06 40.5**	**-0.4**
GULT	**Gulveren**	**1.64**	**32**	*e*Pn	**Pb**	**20 06 40.5**	**-0.4**

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*CSEM **07** 20:15:23.3±0.2, 37.°38N×27.°52E, h10km, MD2.2, Error ellipse: s-maj=3.8km s-min=3.5km az=37.0*

*ISK **07** 20:15:23.6, 37.°28N×27.°56E, h5km, MD2.2*

*DDA **07** 20:15:24.6, 37.°48N×27.°55E, h7km, MD2.5*

ISC 07 20:15:22.8±1.0**, 37.°37N**±0.°04×**27.°51E**±0.°03**, h15**km±9km**, n10, σ0.s55**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
MLSB	**Milas**	**0.22**	**109**	*e*PG	**Pg**	**20 15 27.6**	**-0.2**
MLSB				*e*SG	**Sg**	**20 15 31.7**	**+0.5**
MLSB	**Milas**	**0.22**	**109**	*e*Pg	**Pg**	**20 15 27.6**	**-0.2**
MLSB				*e*Sg	**Sg**	**20 15 31.7**	**+0.5**
BODT	**Bodrum**	**0.34**	**208**	*e*PG	**Pb**	**20 15 29.9**	**-0.7**
BODT				*e*SG	**Sb**	**20 15 36.3**	**+0.4**
BODT	**Bodrum**	**0.34**	**208**	*e*Pg	**Pb**	**20 15 29.9**	**-0.7**
BODT				*e*Sg	**Sb**	**20 15 36.3**	**+0.4**
GCAM	**G?zelcaml?**	**0.40**	**326**	*i* P	**Pg**	**20 15 31.4**	**+0.5**
GCAM				*i* S	**Sg**	**20 15 36.2**	**-0.2**
GCAM	**G?zelcaml?**	**0.40**	**326**	*i* P	**Pg**	**20 15 31.4**	**+0.5**
GCAM				*i* S	**Sg**	**20 15 36.2**	**-0.2**
AYDN	**Tasoluk**	**0.41**	**45**	*i* P	**Pg**	**20 15 31.0**	**-0.1**
AYDN				*i* S	**Sg**	**20 15 35.9**	**-0.9**
AYDN	**Tasoluk**	**0.41**	**45**	*i* P	**Pg**	**20 15 31.0**	**-0.1**
AYDN				*i* S	**Sg**	**20 15 35.9**	**-0.9**
YER	**Yerkesik**	**0.66**	**110**	*e*PG	**Pb**	**20 15 36.3**	**+0.4**
YER				*e*SG	**Sb**	**20 15 45.0**	**+0.2**
YER	**Yerkesik**	**0.66**	**110**	*e*Pg	**Pb**	**20 15 36.3**	**+0.4**
YER				*e*Sg	**Sb**	**20 15 45.1**	**+0.2**

WEL 07 20:17:59.5±0.2**, 38.°66S**×**175.°46E, h177**km±1km**, ML4.3**/13**, 2C-8D, Error ellipse: s-maj=1.6km s-min=1.2km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
RATZ	**Rangitukua**	**0.32**	**130**	PN	Pn	20 18 23.3	-0.1
TWVZ	**Taurewa**	**0.41**	**182**	PN	Pn	20 18 23.4	-0.3
KRVZ	**Karewarewa**	**0.46**	**162**	PN	Pn	20 18 23.9	0.0
KRVZ				SN	Sn	20 18 42.2	-0.7
WTVZ	**West Tongariro**	**0.47**	**167**	PN	Pn	20 18 23.8	-0.1
WTVZ				SN	Sn	20 18 42.6	-0.3
HIZ	**Hauiti**	**0.49**	**287**	PN	Pn	20 18 23.5	-0.4
HIZ				SN	Sn	20 18 42.5	-0.1
WPVZ	**Whakapapa**	**0.55**	**173**	PN	Pn	20 18 24.2	-0.1
FWVZ	**Far West T-bar**	**0.60**	**173**	PN	Pn	20 18 24.5	-0.2
FWVZ				SN	Sn	20 18 43.8	-0.4
TRVZ	**Turoa**	**0.64**	**174**	PN	Pn	20 18 25.0	+0.1
TRVZ				SN	Sn	20 18 44.1	-0.6
WNVZ	**Wahianoa**	**0.68**	**171**	PN	Pn	20 18 25.1	+0.1
VRZ	**Vera Road**	**0.72**	**229**	PN	Pn	20 18 24.7	-0.3
VRZ				SN	Sn	20 18 45.1	+0.4
MTVZ	**Mangateitei**	**0.73**	**179**	PN	Pn	20 18 25.2	+0.1
MTVZ				SN	Sn	20 18 44.2	-0.9
MOVZ	**Moawhango**	**0.78**	**163**	⇓PN	Pn	20 18 25.3	-0.2
BHHZ	**Black Hill Sta**	**0.95**	**150**	PN	Pn	20 18 26.5	-0.1
BKZ	**Black Stump Fm**	**0.95**	**122**	PN	Pn	20 18 26.5	-0.1
BKZ				SN	Sn	20 18 46.4	-1.2
RAEZ	**Rainy Point**	**1.04**	**232**	PN	Pn	20 18 27.1	-0.1
DREZ	**Durham Road**	**1.11**	**241**	PN	Pn	20 18 27.6	-0.2
NMHZ	**Naumai**	**1.14**	**113**	PN	Pn	20 18 29.0	+0.9
WAZ	**Wanganui**	**1.15**	**198**	PN	Pn	20 18 28.1	0.0
NEZ	**North Egmont**	**1.22**	**240**	PN	Pn	20 18 28.9	+0.1
MCHZ	**McNeill Hill**	**1.24**	**129**	⇓PN	Pn	20 18 29.8	+0.9
DFE	**Dawson Falls**	**1.25**	**237**	PN	Pn	20 18 29.0	0.0
PKE	**Pukeiti**	**1.26**	**245**	⇑PN	Pn	20 18 28.9	-0.2
RAHZ	**Arahi**	**1.30**	**102**	PN	Pn	20 18 29.9	+0.6
NRZ	**Ngariki Road**	**1.36**	**240**	PN	Pn	20 18 29.7	-0.3
PNHZ	**Pukenui**	**1.38**	**155**	⇓PN	Pn	20 18 30.1	0.0
NWEZ	**Newall Road**	**1.38**	**243**	PN	Pn	20 18 29.9	-0.1
TSZ	**Takapari Road**	**1.45**	**164**	⇓PN	Pn	20 18 30.7	-0.1
KAHZ	**Kahuranaki**	**1.58**	**136**	⇓PN	Pn	20 18 32.5	+0.4
WPHZ	**Waipukurau**	**1.60**	**152**	⇓PN	Pn	20 18 32.2	0.0
CKHZ	**Cape Kidnapper**	**1.61**	**129**	PN	Pn	20 18 32.8	+0.6
MWZ	**Matawai**	**1.66**	**79**	PN	Pn	20 18 32.1	-0.7
DVHZ	**Dannevirke**	**1.73**	**162**	PN	Pn	20 18 32.9	-0.5
POWZ	**Post Office Ro**	**1.75**	**172**	PN	Pn	20 18 33.1	-0.5
PXZ	**Pawanui**	**1.75**	**142**	⇓PN	Pn	20 18 33.7	+0.1
KNZ	**Kokohu**	**1.77**	**102**	PN	Pn	20 18 33.9	0.0
PRHZ	**Porangahau**	**1.85**	**151**	⇓PN	Pn	20 18 34.6	-0.1
PRGZ	**Paritu Road**	**1.92**	**99**	PN	Pn	20 18 35.5	0.0
MHGZ	**Mahia Peninsul**	**1.98**	**105**	PN	Pn	20 18 36.3	+0.3
MRZ	**Mangatainoka R**	**2.00**	**177**	PN	Pn	20 18 35.5	-0.9
BFZ	**Birch Farm**	**2.11**	**163**	⇑PN	Pn	20 18 36.8	-0.7
TIWZ	**Tintock**	**2.14**	**171**	PN	Pn	20 18 37.1	-0.8
CNGZ	**Carnagh Statio**	**2.16**	**86**	PN	Pn	20 18 38.2	0.0
OGWZ	**Otaki Gorge**	**2.17**	**186**	PN	Pn	20 18 37.2	-0.9
HOWZ	**Holdsworth Sta**	**2.24**	**179**	PN	Pn	20 18 37.7	-1.2
KIW	**Kapiti Island**	**2.24**	**191**	PN	Pn	20 18 37.6	-1.4
PUZ	**Puketiti**	**2.28**	**76**	PN	Pn	20 18 38.6	-0.9
DUWZ	**D'Urville Isla**	**2.45**	**208**	PN	Pn	20 18 39.4	-2.0
TMWZ	**Te Maipa**	**2.47**	**172**	PN	Pn	20 18 40.3	-1.3
MTW	**Mount Morrison**	**2.50**	**179**	PN	Pn	20 18 40.4	-1.5
MXZ	**Matakaoa Point**	**2.50**	**65**	PN	Pn	20 18 41.3	-0.7
WEL	**Wellington**	**2.68**	**191**	PN	Pn	20 18 42.4	-1.7
TCW	**Tory Channel**	**2.71**	**199**	PN	Pn	20 18 42.5	-1.9
PAWZ	**Paruwai Farm**	**2.72**	**180**	PN	Pn	20 18 43.0	-1.6
TRWZ	**Traveller**	**2.74**	**176**	PN	Pn	20 18 43.3	-1.6
MSWZ	**Moikau Station**	**2.76**	**183**	PN	Pn	20 18 43.3	-1.8
BHW	**Baring Head**	**2.78**	**189**	PN	Pn	20 18 43.4	-1.8
PLWZ	**Palliser**	**2.91**	**183**	PN	Pn	20 18 44.9	-2.0
TUWZ	**Tuamarina**	**3.00**	**202**	PN	Pn	20 18 45.9	-2.0
NNZ	**Nelson**	**3.01**	**211**	PN	Pn	20 18 45.4	-2.6
QRZ	**Quartz Range**	**3.13**	**225**	PN	Pn	20 18 46.5	-3.0
BSWZ	**Blackbirch Sta**	**3.28**	**201**	PN	Pn	20 18 49.5	-1.9
THZ	**Tophouse**	**3.66**	**211**	PN	Pn	20 18 53.0	-3.3
KHZ	**Kahutara**	**4.03**	**201**	PN	Pn	20 18 58.3	-2.5
LTZ	**Lake Taylor**	**4.78**	**209**	PN	Pn	20 19 06.2	-4.3
MQZ	**McQueen's Vall**	**5.47**	**202**	PN	Pn	20 19 14.8	-4.5
WVZ	**Waitaha Valley**	**5.68**	**218**	PN	Pn	20 19 19.1	-3.1
RPZ	**Rata Peaks**	**6.04**	**212**	PN	Pn	20 19 23.1	-3.9
LBZ	**Lake Benmore**	**6.95**	**213**	PN	Pn	20 19 34.5	-4.4
TUZ	**Tuapeka**	**8.47**	**209**	PN	Pn	20 19 55.1	-3.8

IDC 07 20:21:54.0±1.3**, 3.°44N**×**126.°58E, h0**km**, mb3.5**/6**, mb1 3.7**/6**, mb1mx3.5**/24**, mbtmp3.6**/6**, Error ellipse: s-maj=104.8km s-min=19.2km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
FITZ	**Fitzroy Crossi**	**21.43**	**182**	P	P	20 26 45.5	+1.7
	2.2nm,0.9s,baz=355,slow=11,SNR=3.3						
WRA	**Warramunga Arr**	**24.46**	**162**	P	P	20 27 14.3	-0.6
	0.9nm,0.4s,baz=340,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**27.87**	**166**	P	P	20 27 45.1	-0.6
	0.2nm,0.5s,baz=346,slow=7.2,SNR=3.5						
STKA	**Stephens Creek**	**37.91**	**159**	P	P	20 29 13.2	0.0
	0.7nm,0.4s,baz=337,slow=10.0,SNR=7.5						
SONM	**Songino Array**	**47.52**	**342**	P	P	20 30 32.0	+0.9
	0.4nm,0.5s,baz=162,slow=7.9,SNR=3.8						
MKAR	**Makanchi Array**	**57.71**	**325**	P	P	20 31 45.7	-0.9
	0.4nm,0.5s,baz=120,slow=8.3,SNR=9.6						

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*ISCJB **07** 20:29:23.2±0.5, 1.°80S±0.°05×99.°95E±0.°06, h33km, mb4.0/13, MS3.5/2, Error ellipse: s-maj=9.1km s-min=6.8km az=176.8*

*IDC **07** 20:29:25.9±0.9, 1.°63S×100.°31E, h51km±8km, mb3.6/14, mb1 3.7/14, mb1mx3.6/26, mbtmp3.6/14, MS3.6/2, Ms1 3.6/2, ms1mx3.0/37, Error ellipse: s-maj=32.4km s-min=14.0km az=59.0*

*DJA **07** 20:29:28.1±1.1, 2°S±3°×10°0E±°, h28km±13km, M4.4/9, mb4.7/2, mB5.2/1, MLv4.3/9, Mw(mB)4.6/1*

ISC 07 20:29:24.7±0.6**, 1.°70S**±0.°05×**100.°06E**±0.°08**, h33**km**, n33, σ1.s82**/31**, mb4.0**/13**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
PPI	**Padang Panjang**	**1.28**	**15**	P	**Pb**	**20 29 48.4**	**+0.1**
PPI				S	**Sn**	**20 30 04.8**	**+2.5**
SDSI	**Sungai Dareh**	**1.56**	**61**	P	**Pn**	**20 29 52.2**	**+2.0**
SDSI				S	**Sn**	**20 30 08.4**	**-0.9**
BKNI	**Bangkinang**	**2.24**	**26**	P	**Pn**	**20 30 02.0**	**+2.5**
MNSI	**Mandailing Nat**	**2.52**	**349**	P	**Pb**	**20 30 07.3**	**-2.1**
KSI	**Kapahiang**	**3.19**	**128**	P	**Pn**	**20 30 15.3**	**+2.7**
GSI	**Gunungsitoli**	**3.88**	**320**	P	**Pn**	**20 30 25.3**	**+3.1**
MNAI	**Manna**	**3.92**	**133**	P	**Pn**	**20 30 24.3**	**+1.7**
PSI	**Prapat**	**4.61**	**346**	P	Pn	20 30 37.9	+5.6
PSI	**Prapat**	**4.61**	**346**	P	Pn	20 30 36.1	+3.8
	2.6nm,0.3s,baz=162,slow=10.0,SNR=20						
KGM	**Kluang**	**4.92**	**41**	P	**Pn**	**20 30 37.6**	**+1.2**
MYKOM	**Kota Tinggi**	**5.13**	**48**	P	**Pn**	**20 30 39.9**	**+0.6**
MYKOM	**Kota Tinggi**	**5.13**	**48**	P	**Pn**	**20 30 40.1**	**+0.8**
FRIM	**Kepong**	**5.14**	**18**	P	**Pn**	**20 30 42.5**	**+3.0**
LWLI	**Liwa**	**5.17**	**130**	P	**Pn**	**20 30 42.1**	**+2.1**
	135nm,0.7s,2μm0.8nm						
IPM	**Ipoh**	**6.21**	**9**	P	Pn	20 30 58.6	+4.4
IPM	**Ipoh**	**6.21**	**9**	P	Pn	20 30 58.2	+4.0
KTGM	**Kuala Trenggan**	**7.62**	**24**	P	Pn	20 31 17.8	+4.2
CMAR	**Chiang Mai Arr**	**20.06**	**357**	P	**P**	**20 33 55.6**	**+0.2**
	1.4nm,0.8s,baz=188,slow=10,SNR=11						
CMAR				LR	LR	20 43 46.0	
	comp=Z,34nm,18.5s,baz=130,slow=43						
WRA	**Warramunga Arr**	**38.09**	**121**	P	P	20 36 37.4	-3.4
	0.4nm,0.3s,baz=304,slow=9.2,SNR=3.0						
ASAR	**Alice Springs**	**39.38**	**126**	P	**P**	**20 36 49.3**	**-2.3**
	0.5nm,0.5s,baz=302,slow=8.2,SNR=7.9						
ASAR				pP	**pP**	**20 37 02.5**	**+1.2**
	1.3nm,0.5s,baz=304,slow=8.0,SNR=8.6						
STKA	**Stephens Creek**	**49.30**	**132**	P	**P**	**20 38 10.5**	**-0.3**
	1.2nm,0.8s,baz=302,slow=11,SNR=3.7						
STKA				pP	**pP**	**20 38 23.1**	**+2.3**
	1.8nm,0.6s,baz=309,slow=6.5,SNR=3.2						
SONM	**Songino Array**	**49.64**	**6**	P	**P**	**20 38 11.9**	**-1.4**
	0.5nm,0.4s,baz=194,slow=8.7,SNR=5.9						
MKAR	**Makanchi Array**	**50.76**	**344**	P	**P**	**20 38 20.9**	**-0.7**
	1.0nm,0.3s,baz=160,slow=8.8,SNR=33						
KURBB	**Kurchatov Arra**	**55.28**	**343**	P	**P**	**20 38 53.7**	**-1.2**
	1.0nm,0.7s,baz=162,slow=7.3,SNR=11						
ZALV	**Zalesovo Beam**	**56.89**	**349**	P	**P**	**20 39 05.0**	**-1.2**
	1.6nm,0.6s,baz=178,slow=5.4,SNR=12						
DZM	**Mont Dzumac**	**67.51**	**113**	LR	LR	21 14 39.3	
	comp=Z,171nm,18.4s,baz=181,slow=40						
KBZ	**Khabaz**	**68.12**	**319**	P	**P**	**20 40 21.7**	**+0.2**
	1.5nm,0.7s,baz=140,slow=7.2,SNR=5.1						
BRTR	**Keskin Array B**	**73.17**	**312**	P	**P**	**20 40 51.4**	**-1.2**
	0.3nm,0.4s,baz=108,slow=6.8,SNR=3.1						
BOSA	**Boshof**	**75.86**	**241**	P	**P**	**20 41 09.2**	**+0.8**
	2.1nm,0.9s,baz=81,slow=6.2,SNR=3.6						
FINES	**FINESS Array B**	**83.88**	**332**	P	**P**	**20 41 50.1**	**-0.9**
	1.6nm,0.9s,baz=98,slow=3.9,SNR=6.1						
ARCES	**ARCESS Array B**	**86.21**	**340**	P	**P**	**20 42 01.7**	**-0.9**
	1.2nm,0.7s,baz=95,slow=6.4,SNR=3.2						
ARCES				pP	**pP**	**20 42 16.6**	**+3.6**
	1.9nm,0.9s,baz=97,slow=6.2,SNR=1.3						
QSPA	**South Pole Qui**	**88.26**	**180**	P	**P**	**20 42 12.3**	**-0.3**
	0.6nm,0.7s,baz=315,slow=4.3,SNR=2.8						
TXAR	**Lajitas Array**	**144.43**	**37**	PKP	**PKPab**	**20 48 55.4**	**-1.3**
	0.4nm,0.6s,baz=338,slow=1.9,SNR=4.3						

MEX 07 20:47:40.0±0.5**, 18.°15N**×**101.°71W, h56**km±8km**, MD3.9, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
ZIIG	**Zihuatanejo**	**0.59**	**157**	*e*P	Pn	20 47 51.0	-1.7
ZIIG				*i* S	Sn	20 48 00.4	-1.6
ARIG	**Puente Sto Nin**	**1.30**	**84**	*e*P	Pn	20 48 00.3	-1.7
ARIG				*i* S	Sn	20 48 16.5	-1.9
MMIG	**Aquila**	**1.56**	**275**	*i* P	Pn	20 48 04.8	-0.6
MMIG				*i* S	Sn	20 48 23.4	-1.1
CAIG	**El Cayaco**	**1.76**	**128**	*i* P	Pn	20 48 06.8	-1.3
CAIG				*i* S	Sn	20 48 27.3	-2.2
MEIG	**Mezcala**	**2.00**	**96**	*i* P	Pn	20 48 10.7	-0.9
MEIG				*i* S	Sn	20 48 34.5	-1.1
YAIG	**Yautepec**	**2.61**	**74**	*i* P	Pn	20 48 18.3	-1.7
YAIG				*i* S	Sn	20 48 49.4	-1.2
PPM	**Popocatepetl**	**3.06**	**72**	*i* P	Pn	20 48 25.5	-1.1
PPM				*i* S	Sn	20 49 00.2	-2.3
PNIG	**Pinotepa**	**3.85**	**117**	*e*P	Pn	20 48 36.2	-0.6

GUC 07 20:59:04.1±0.6**, 23.°58S**×**67.°56W, h211**km±9km**, ML3.5, 1C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
LVC	**Limon Verde**	**1.57**	**308**	*e*P	Pn	20 59 40.5	+0.7
LVC				*i* S	S	21 00 09.3	+2.0
PB04	**Plate Boundary**	**2.20**	**306**	⇓*i*P	Pn	20 59 53.0	+7.4
PB04				*i* S	S	21 00 29.8	+12
PB04				AML	AML	21 00 35.0	
	comp=N,97nm,0.3s						
CEN1	**Los Morros**	**2.43**	**274**	⇑*i*P	Pn	20 59 51.0	+2.9
CEN1				*i* S	S	21 00 26.0	+4.0
CEN1				AML	AML	21 00 27.7	
	comp=N,27nm,0.3s						
PB07	**Plate Boundary**	**2.83**	**310**	⇓*i*P	Pn	20 59 54.8	+2.2
PB07				*i* S	S	21 00 32.5	+2.4
PB07				AML	AML	21 00 33.6	
	comp=E,117nm,0.3s						
HMBC	**Humberstone**	**3.93**	**326**	*i* S	S	21 00 56.2	+2.5
HMBC				AML	AML	21 01 03.4	
	comp=E,40nm,0.2s						
MNMC	**Minimini**	**4.81**	**336**	*e*P	Pn	21 00 19.7	+2.8

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*DDA **07** 21:09:00.1, 37.°07N×43.°23E, h7km, MD3.1*

*CSEM **07** 21:09:00.0±0.2, 37.°03N×43.°27E, h2km, MD3.1, Error ellipse: s-maj=5.6km s-min=4.1km az=74.0*

ISC 07 21:09:00.2±1.3**, 37.°05N**±0.°04×**43.°25E**±0.°04**, h6**km±11km**, n12, σ0.s34**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
HAKT	**HAKKARI**	**0.62**	**36**	*i* P	**Pg**	**21 09 12.4**	**+0.1**
HAKT				*i* S	**Sg**	**21 09 20.5**	**0.0**
HAKT	**HAKKARI**	**0.62**	**36**	*i* P	**Pg**	**21 09 12.4**	**+0.1**
HAKT				*i* S	**Sg**	**21 09 20.5**	**0.0**
SIRN	**S˜–rnak**	**0.80**	**304**	*i* P	**Pg**	**21 09 15.9**	**+0.3**
SIRN				*i* S	**Sg**	**21 09 25.9**	**-0.2**
SIRN	**S˜–rnak**	**0.80**	**304**	*i* P	**Pg**	**21 09 15.9**	**+0.3**
SIRN				*i* S	**Sg**	**21 09 25.9**	**-0.2**
GEVA	**Gevas**	**1.27**	**353**	*i* P	**Pn**	**21 09 24.2**	**-0.5**
GEVA				*e*S	**Sn**	**21 09 42.4**	**+0.2**
GEVA	**Gevas**	**1.27**	**353**	*i* P	**Pn**	**21 09 24.2**	**-0.5**
GEVA				*e*S	**Sn**	**21 09 42.4**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TATV	**Tatvan**	**1.65**	**332**	*e*P	**Pb**	**21 09 31.2**	**0.0**
TATV				*i* S	**Sg**	**21 09 53.5**	**+0.2**
TATV	**Tatvan**	**1.65**	**332**	*e*P	**Pb**	**21 09 31.2**	**0.0**
TATV				*i* S	**Sg**	**21 09 53.5**	**+0.2**
BEST	**Besiri**	**1.78**	**299**	*i* P	**Pb**	**21 09 33.5**	**+0.1**
BEST				*i* S	**Sg**	**21 09 57.3**	**-0.2**
MARD	**Mardin**	**1.99**	**278**	*i* P	**Pb**	**21 09 36.6**	**-0.4**
MARD				*i* S	**Sb**	**21 10 02.2**	**+0.2**
BHD	**Baghdad**	**3.88**	**166**	*e*x	**Pn**	**21 10 00.0**	**-0.5**
BHD				*e*x	x	21 10 14.0	
BHD				*e*x	**Sn**	**21 10 47.0**	**+0.6**
BHD				*e*x	x	21 11 09.0	
BHD	**Baghdad**	**3.88**	**166**	*e*Pn	**Pn**	**21 10 00.0**	**-0.5**
BHD				*e*Sn	**Sn**	**21 10 47.0**	**+0.6**

ISCJB ***07*** *21:24:17.7±0.4, 51°.44N±0°.02×6°.51E±0°.05, h0km, Error ellipse: s-maj=5.2km s-min=2.4km az=31.1*
CSEM ***07*** *21:24:18.8±0.2, 51°.47N×6°.55E, h2km, ML2.6/9, Error ellipse: s-maj=5.4km s-min=3.1km az=122.0*
BNS ***07*** *21:24:18.7±0.4, 51°.54N×6°.58E, h1km, ML2.0*
BUG ***07*** *21:24:18.3, 51°.42N×6°.55E, h1km, ML1.8*
BGR ***07*** *21:24:19.8±0.4, 51°.48N×6°.60E, h1km, ML2.4/5, Error ellipse: s-maj=6.7km s-min=3.3km az=122.0*
LDG ***07*** *21:24:19.4±0.1, 51°.48N×6°.58E, h1km, Ml2.6/9, Error ellipse: s-maj=2.1km s-min=1.2km az=125.0, Suspected Mining induced.*
ISC 07 21:24:18.3±0.8**, 51°.47N**±0°.02×**6°.57E**±0°.02**, h0**km**, n58,** σ1^s**16**/92**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRHE	**Rheinberg**	**0.04**	**3**	Pg	**Pg**	**21 24 19.2**	**+0.1**
BRHE				Sg	**Sg**	**21 24 20.0**	**+0.3**
BRHE	**Rheinberg**	**0.04**	**3**	Pg	**Pg**	**21 24 19.2**	**+0.1**
BRHE				Sg	**Sg**	**21 24 20.0**	**+0.3**
LAUG	**Laupendahl**	**0.27**	**117**	*e*Pg	**Pg**	**21 24 24.2**	**+0.9**
LAUG	**Laupendahl**	**0.27**	**117**	Pg	**Pg**	**21 24 24.2**	**+0.9**
RODG	**Roetgen-Dahlhe**	**0.41**	**217**	*e*Pg	**Pg**	**21 24 27.6**	**+1.6**
RODG	**Roetgen-Dahlhe**	**0.41**	**217**	Pg	**Pg**	**21 24 27.6**	**+1.6**
BUG	**Bochum--Univer**	**0.44**	**94**	*e*Pg	**Pg**	**21 24 27.5**	**+0.8**
	SNR=12						
BUG				*e*Sg	**Sg**	**21 24 33.8**	**+1.4**
WTSB	**Winterswijk**	**0.52**	**16**	*e*Pg	**Pg**	**21 24 28.7**	**+0.5**
	SNR=13						
WTSB				*e*Sg	**Sg**	**21 24 35.5**	**+0.6**
WTSB	**Winterswijk**	**0.52**	**16**	*e*Pg	**Pg**	**21 24 28.7**	**+0.5**
	9.0nm,0.3s						
WTSB				*e*Sg	**Sg**	**21 24 35.5**	**+0.6**
WTSB	**Winterswijk**	**0.52**	**16**	Pg	**Pg**	**21 24 28.7**	**+0.5**
	SNR=13						
WTSB				Sg	**Sg**	**21 24 35.5**	**+0.6**
BNS	**Bensberg**	**0.64**	**143**	*e*Pg	**Pb**	**21 24 31.9**	**-0.3**
BNS	**Bensberg**	**0.64**	**143**	Pg	**Pb**	**21 24 31.9**	**-0.3**
HOBG	**Hohbusch**	**0.69**	**135**	*e*Pg	**Pg**	**21 24 32.5**	**+1.1**
HOBG	**Hohbusch**	**0.69**	**135**	Pg	**Pg**	**21 24 32.5**	**+1.1**
HGN	**Heimansgroeve**	**0.81**	**210**	*e*Pg	**Pg**	**21 24 34.9**	**+1.1**
	SNR=41						
HGN				*e*Sg	**Sg**	**21 24 46.4**	**+2.0**
HGN	**Heimansgroeve**	**0.81**	**210**	*e*Pn	**Pg**	**21 24 34.9**	**+1.1**
	4.9nm,0.4s						
HGN				*e*Pg	**Pb**	**21 24 36.5**	**+1.2**
	53nm,0.3s						
HGN				*e*Sn	**Sg**	**21 24 46.1**	**+1.8**
HGN				*e*Sg	**Sb**	**21 24 48.2**	**+1.4**
HGN	**Heimansgroeve**	**0.81**	**210**	Pg	**Pg**	**21 24 34.9**	**+1.1**
	SNR=41						
HGN				*e*Sn	**Sg**	**21 24 46.1**	**+1.8**
HGN				Sg	**Sg**	**21 24 46.4**	**+2.0**
KLL	**Kalltalsperre**	**0.84**	**191**	*e*Pg	**Pg**	**21 24 35.6**	**+1.3**
KLL	**Kalltalsperre**	**0.84**	**191**	Pg	**Pg**	**21 24 35.7**	**+1.3**
STB	**Steinbach**	**0.90**	**169**	*e*Pg	**Pb**	**21 24 36.9**	**+0.2**
STB				*e*Sg	**Sb**	**21 24 50.1**	**+1.0**
	45nm,0.8s						
STB	**Steinbach**	**0.90**	**169**	Pg	**Pb**	**21 24 36.9**	**+0.2**
STB				Sg	**Sb**	**21 24 50.1**	**+1.0**
	45nm,0.8s						
MEM	**Membach**	**0.93**	**203**	P	**Pg**	**21 24 36.9**	**+0.8**
MEM	**Membach**	**0.93**	**203**	P	**Pg**	**21 24 36.9**	**+0.8**
IBBN	**Ibbenburen**	**1.12**	**41**	*e*Pg	**Pg**	**21 24 40.2**	**+0.5**
	SNR=2.2						
IBBN				*e*Sg	**Sb**	**21 24 55.3**	**-0.2**
IBBN	**Ibbenburen**	**1.12**	**41**	Pg	**Pg**	**21 24 40.2**	**+0.5**
	SNR=2.2						
IBBN				Sg	**Sb**	**21 24 55.3**	**-0.2**
KOE	**Koeppel**	**1.28**	**144**	*e*Pg	**Pg**	**21 24 42.9**	**+0.1**
KOE	**Koeppel**	**1.28**	**144**	Pg	**Pg**	**21 24 42.9**	**+0.1**
BCLA	**Clavier**	**1.32**	**218**	P	**Pg**	**21 24 43.9**	**+0.2**
BCLA	**Clavier**	**1.32**	**218**	P	**Pg**	**21 24 43.8**	**+0.2**
TNS	**Taunus Mts**	**1.73**	**136**	*e*Pn	**Pn**	**21 24 50.7**	**+1.1**
	SNR=2.7						
TNS	**Taunus Mts**	**1.73**	**136**	Pn	**Pn**	**21 24 50.7**	**+1.1**
	SNR=2.7						
GIVF	**Givet**	**1.76**	**220**	*e*P	**Pn**	**21 24 51.3**	**+1.3**
GIVF				*e*Sg	**Sb**	**21 25 15.3**	**+1.2**
	26nm,0.4s						
GIVF	**Givet**	**1.76**	**220**	*e*P	**Pn**	**21 24 51.3**	**+1.3**
GIVF				*e*Sg	**Sb**	**21 25 15.3**	**+1.2**
	13nm,0.4s						
WLF	**Walferdange**	**1.83**	**188**	P	**Pb**	**21 24 53.5**	**+1.0**
WLF	**Walferdange**	**1.83**	**188**	*e*Pn	**Pb**	**21 24 53.5**	**+1.0**
	SNR=3.8						
WLF				*e*Sg	**Sb**	**21 25 16.8**	**+0.8**
WLF	**Walferdange**	**1.83**	**188**	P	**Pb**	**21 24 53.5**	**+1.0**
WLF				Sg	**Sb**	**21 25 16.8**	**+0.8**
DOU	**Dourbes**	**1.86**	**223**	P	**Pn**	**21 24 52.5**	**+1.1**
DOU	**Dourbes**	**1.86**	**223**	P	**Pn**	**21 24 52.4**	**+1.1**
BAIF	**Baives**	**2.06**	**228**	*e*Pg	**Pg**	**21 24 58.0**	**+0.3**
BAIF				*e*Sn	**Sn**	**21 25 19.1**	**-1.4**
	10nm,0.5s						
BAIF	**Baives**	**2.06**	**228**	*e*Pg	**Pg**	**21 24 58.0**	**+0.3**
BAIF				*e*Sn	**Sn**	**21 25 19.1**	**-1.4**
	5.2nm,0.5s						
CLZ	**Clausthal**	**2.40**	**80**	*e*Sg	**Sb**	**21 25 34.1**	**+1.6**
CLZ	**Clausthal**	**2.40**	**80**	Sg	**Sb**	**21 25 34.1**	**+1.6**
PAGF	**Fort de Pagny**	**2.97**	**191**	*e*Pg	**Pg**	**21 25 14.6**	**-0.5**
	baz=7.4						
PAGF				*e*Sg	**Sg**	**21 25 52.7**	**-0.9**
	2.0nm,0.5s						
PAGF	**Fort de Pagny**	**2.97**	**191**	*e*Pg	**Pg**	**21 25 14.6**	**-0.5**
	baz=7.4						
PAGF				*e*Sg	**Sg**	**21 25 52.7**	**-0.9**
	1.0nm,0.5s						
CDF	**Champ du Feu**	**3.10**	**171**	*e*Pn	**Pn**	**21 25 08.3**	**-0.2**
CDF				*e*Sg	**Sg**	**21 25 57.2**	**-0.5**
	5.1nm,0.6s						
CDF	**Champ du Feu**	**3.10**	**171**	*e*Pn	**Pn**	**21 25 08.3**	**-0.2**
CDF				*e*Sg	**Sg**	**21 25 57.2**	**-0.5**
	2.5nm,0.6s						
MEZF	**Maizieres J'vi**	**3.13**	**199**	*e*Pn	**Pn**	**21 25 07.6**	**-1.2**
	baz=12						
MEZF				*e*Sg	**Sg**	**21 25 57.7**	**-1.0**
	8.9nm,0.5s						
MEZF	**Maizieres J'vi**	**3.13**	**199**	*e*Pn	**Pn**	**21 25 07.6**	**-1.2**
	baz=12						
MEZF				*e*Sg	**Sg**	**21 25 57.7**	**-1.0**
	4.4nm,0.5s						
BFO	**Black Forest**	**3.34**	**159**	*e*Pn	**Pn**	**21 25 12.0**	**+0.2**
	SNR=2.9						
BFO	**Black Forest**	**3.34**	**159**	Pn	**Pn**	**21 25 12.0**	**+0.2**
	SNR=2.9						
SFTF	**Sexfontaines**	**3.42**	**197**	*e*Pg	**Pg**	**21 25 23.2**	**-0.5**
	baz=19						
SFTF				*e*Sg	**Sg**	**21 26 07.2**	**-0.7**
	5.9nm,0.4s						
SFTF	**Sexfontaines**	**3.42**	**197**	*e*Pg	**Pg**	**21 25 23.2**	**-0.5**
	baz=19						
SFTF				*e*Sg	**Sg**	**21 26 07.2**	**-0.7**
	3.0nm,0.4s						
HAU	**Haudompre**	**3.47**	**182**	*e*Sg	**Sg**	**21 26 09.4**	**-0.3**
	5.0nm,0.4s						
HAU	**Haudompre**	**3.47**	**182**	*e*Sg	**Sg**	**21 26 09.4**	**-0.3**
	2.5nm,0.4s						
LOR	**Lormes**	**4.56**	**204**	*e*Pn	**Pn**	**21 25 28.2**	**-0.3**
	baz=20						
LOR				*e*Sn	**Sn**	**21 26 18.0**	**-4.3**
LOR				*e*Sg	**Sg**	**21 26 43.2**	**-1.6**
	3.0nm,0.4s						
LOR	**Lormes**	**4.56**	**204**	*e*Pn	**Pn**	**21 25 28.2**	**-0.3**
	baz=20						
LOR				*e*Sn	**Sn**	**21 26 18.0**	**-4.3**
LOR				*e*Sg	**Sg**	**21 26 43.2**	**-1.6**
	1.5nm,0.4s						
SSF	**Saint Saulge**	**4.85**	**206**	*e*Pn	**Pn**	**21 25 31.5**	**-0.9**
SSF	**Saint Saulge**	**4.85**	**206**	*e*Pn	**Pn**	**21 25 31.5**	**-0.9**

BJI ***07*** *21:27:08.8, 47°.45N×14°.73E, h10km, mB4.8/2, mb4.5/7, Ms4.5/2, Ms7 4.2/2*
BEO ***07*** *21:27:11.5±0.9, 47°.77N×15°.68E, h1km±6km, ML4.2/1*
MOS ***07*** *21:27:12.4±1.0, 47°.57N×15°.65E, h10km, mb4.4/16, Error ellipse: s-maj=3.7km s-min=3.2km az=144.9*
LDG ***07*** *21:27:12.6±0.1, 47°.56N×15°.84E, h2km, Md4.5/4, Ml4.5/23, Error ellipse: s-maj=3.0km s-min=2.2km az=9.0*
VIE ***07*** *21:27:12.8±0.3, 47°.58N×15°.69E, h12km, mb3.7/8, ML4.3/8, Error ellipse: s-maj=3.5km s-min=1.9km az=123.0 4 km SSE of Mrzzuschlag felt 6 ems98 at Mrzzuschlag / STYRIA*
NEIC ***07*** *21:27:12.6, 47°.57N×15°.68E, h12km, mb4.1/9, ML4.5(STR), ML4.3(VIE), MW4.2(USGS), After VIE.*
NEIC Felt [II] at Vienna. Also felt at Bruck an der Mur, Gleisdorf, Graz, Kindberg, Murzzuschlag and Weiz.
IPEC ***07*** *21:27:13.4±0.1, 47°.60N×15°.74E, h6km, ML4.3/2, Error ellipse: s-maj=0.8km s-min=0.6km az=128.0*
PRU ***07*** *21:27:13.4, 47°.62N×15°.76E, h0km, M4.1, Felt In Bystrice N. Pernstejnem*
PDG ***07*** *21:27:13.2±0.6, 47°.59N×15°.76E, h10km±1km, ML4.0/8, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
IDC ***07*** *21:27:13.4±0.6, 47°.54N×15°.68E, h0km, mb4.0/14, mb1 4.1/24, mb1mx4.0/37, mbtmp3.9/24, ML3.6/10, MS3.4/14, Ms1 3.3/14, ms1mx3.2/43, Error ellipse: s-maj=10.4km s-min=7.5km az=22.0*
CSEM ***07*** *21:27:13.5±0.1, 47°.60N×15°.71E, h2km, mb4.1/19, ML4.8/13, Mw4.2, Error ellipse: s-maj=1.5km s-min=1.3km az=171.0*
BGR ***07*** *21:27:15.7±0.3, 47°.59N×15°.65E, h10km, ML4.6/22, Error ellipse: s-maj=5.6km s-min=4.4km az=99.0*
BGR Slight damage of buildings in Muerzzuschlag and Spital, e.g. cracks in walls, plaster fell off.
BNS ***07*** *21:27:16.7±0.4, 47°.86N×15°.85E, h10km, ML4.5*
STR ***07*** *21:27:23.9±0.6, 47°.54N×14°.59E, h5km, Ml4.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 07 21:27:14.9±0.6**, 47°.61N**±0°.01×**15°.64E**±0°.01**, h14**km±3km**, n876,** σ1^s**48**/1116**, mb4.2**/29**, MS3.5**/12**, 87C-74D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.35**	**25**	⇓*i*Pg	**Pg**	**21 27 19.9**	**-2.2**
	1µm,0.3s,SNR=5005						
CONA				⇓*i*Sg	**Sg**	**21 27 25.7**	**-1.2**
	10µm,0.4s						
CONA	**Conrad Observa**	**0.35**	**25**	*e*Pg	**Pg**	**21 27 19.9**	**-2.2**
CONA				*i* Sg	**Sg**	**21 27 25.8**	**-1.2**
CONA	**Conrad Observa**	**0.35**	**25**	Pg	**Pg**	**21 27 19.9**	**-2.2**
	1µm,0.3s,SNR=1000						
CONA				Sg	**Sg**	**21 27 25.7**	**-1.2**
	10µm,0.4s						
ARSA	**Arzberg**	**0.37**	**193**	*e*Pg	**Pg**	**21 27 19.9**	**-2.4**
	SNR=2674						
ARSA				*e*Sg	**Sg**	**21 27 25.2**	**-2.0**
ARSA	**Arzberg**	**0.37**	**193**	⇑*i*Pg	**Pg**	**21 27 20.4**	**-1.8**
	724nm,0.1s,SNR=3644						
ARSA				⇓*i*Sg	**Sg**	**21 27 25.3**	**-2.0**
	3µm,0.1s						
ARSA	**Arzberg**	**0.37**	**193**	*e*Pg	**Pg**	**21 27 20.5**	**-1.8**
ARSA				*i* Sg	**Sg**	**21 27 24.7**	**-2.6**
ARSA	**Arzberg**	**0.37**	**193**	*e*Pg	**Pg**	**21 27 20.5**	**-1.8**
ARSA				Sg	**Sg**	**21 27 25.3**	**-2.0**
	3µm,0.1s						
SOP	**Sopron**	**0.62**	**83**	⇑*e*Pb	**Pg**	**21 27 24.7**	**-2.3**
MOA	**Molln**	**0.96**	**285**	*e*Pg	**Pg**	**21 27 32.6**	**-0.8**
	SNR=849						
MOA				*e*Sg	**Sn**	**21 27 47.4**	**-0.1**
MOA	**Molln**	**0.96**	**285**	⇑*e*Pg	**Pg**	**21 27 32.3**	**-1.1**
	19nm,0.1s,SNR=512						
MOA				⇑*e*Sg	**Sn**	**21 27 47.4**	**-0.1**
	3µm,0.3s						
MOA	**Molln**	**0.96**	**285**	⇑*e*Pg	**Pg**	**21 27 32.3**	**-1.1**
MOA				*i* Sg	**Sb**	**21 27 45.7**	**-0.3**
MOA	**Molln**	**0.96**	**285**	Pg	**Pg**	**21 27 32.6**	**-0.8**
	SNR=849						
MOA				*i* Sg	**Sb**	**21 27 45.7**	**-0.3**
SOKA	**Soboth**	**1.02**	**204**	⇓*e*Pg	**Pg**	**21 27 32.1**	**-2.4**
	783nm,0.5s						
SOKA				⇓*i*Sg	**Sg**	**21 27 45.8**	**-2.0**
	818nm,0.3s						
SOKA	**Soboth**	**1.02**	**204**	⇓*i*Pg	**Pg**	**21 27 32.1**	**-2.4**
SOKA				*i* Sg	**Sg**	**21 27 45.8**	**-2.0**
SOKA	**Soboth**	**1.02**	**204**	Pg	**Pg**	**21 27 32.1**	**-2.4**
	783nm,0.5s						
SOKA				Sg	**Sg**	**21 27 45.8**	**-2.0**
	818nm,0.3s						
PERS	**Pernice**	**1.04**	**201**	*i* Pg	**Pg**	**21 27 32.3**	**-2.6**
PERS	**Pernice**	**1.04**	**201**	*i* Pg	**Pg**	**21 27 32.3**	**-2.6**
ZST	**Bratislava**	**1.14**	**59**	*e*P	Pb	21 27 32.8	-3.6
ZST				*e*		21 27 49.9	
ZST				pmax	pmax		
	comp=N,7µm,0.7s						
ZST	**Bratislava**	**1.14**	**59**	*e*PG	Pb	21 27 32.8	-3.6
ZST				*e*SG	**Sg**	**21 27 49.9**	**-1.9**
ZST	**Bratislava**	**1.14**	**59**	*e*P	Pb	21 27 32.8	-3.6
	comp=N,7µm,0.7s						
GROS	**Grobnik**	**1.15**	**185**	*i* Pg	**Pb**	**21 27 34.0**	**-2.6**
GROS							
	comp=Z,2µm,0.5s						
GROS	**Grobnik**	**1.15**	**185**	*i* Pg	**Pb**	**21 27 34.0**	**-2.6**
	comp=Z,2µm,0.5s						
KOGS	**Kog**	**1.23**	**160**	*i* Pg	**Pn**	**21 27 36.1**	**-1.6**
KOGS				*e*Sg	**Sb**	**21 27 53.1**	**-0.6**
KOGS							
	comp=Z,4µm,0.5s						
KOGS	**Kog**	**1.23**	**160**	*i* Pg	**Pn**	**21 27 36.1**	**-1.6**
KOGS				*e*Sg	**Sb**	**21 27 53.1**	**-0.6**
	comp=Z,4µm,0.5s						
OBKA	**Obir**	**1.33**	**215**	*e*Pn	**Pn**	**21 27 38.1**	**-1.0**
	SNR=399						
OBKA				*e*Sg	**Sn**	**21 27 57.0**	**+0.3**
OBKA	**Obir**	**1.33**	**215**	*e*Pg	**Pn**	**21 27 38.2**	**-0.9**
	comp=Z,643nm,0.3s,SNR=1959						
OBKA				⇑*e*Sg	**Sb**	**21 27 56.7**	**+0.1**
	comp=Z,3µm,0.7s						
OBKA	**Obir**	**1.33**	**215**	*e*Pg	**Pn**	**21 27 38.2**	**-0.9**
OBKA				*i* Sg	**Sb**	**21 27 56.3**	**-0.3**
OBKA	**Obir**	**1.33**	**215**	Pg	**Pn**	**21 27 38.2**	**-0.9**
	comp=Z,642nm,0.2s,SNR=1000						
OBKA				Sg	**Sn**	**21 27 57.0**	**+0.3**
BEHE	**Becsehely**	**1.38**	**145**	⇓*e*Pn	**Pn**	**21 27 39.4**	**-0.3**
BEHE				*e*Pb	**Pg**	**21 27 40.9**	**-0.4**
BEHE				*e*Sn	**Sg**	**21 27 59.7**	**+0.5**
DOBS	**Dobrina**	**1.46**	**185**	*e*Pg	**Pn**	**21 27 39.9**	**-1.0**
DOBS	**Dobrina**	**1.46**	**185**	*e*Pg	**Pn**	**21 27 39.9**	**-1.0**
SMOL	**Smolenice**	**1.50**	**52**	*e*P	**Pn**	**21 27 41.1**	**-0.3**
SMOL				*e*		21 28 01.2	
SMOL	**Smolenice**	**1.50**	**52**	*e*PG	**Pn**	**21 27 41.1**	**-0.3**
SMOL				*e*SG	**Sb**	**21 28 01.2**	**-0.3**
SMOL	**Smolenice**	**1.50**	**52**	*e*P	**Pn**	**21 27 41.1**	**-0.3**
SMOL				*e*S	**Sb**	**21 28 01.2**	**-0.3**
KRUC	**Moravsky**	**1.54**	**19**	*e*Pn	**Pn**	**21 27 41.2**	**-0.7**
	baz=197						
KRUC				*e*Sg	**Sn**	**21 28 01.6**	**-0.1**
	comp=Z,4µm,0.6s,baz=197						
MOZS	**Mozjanca**	**1.55**	**212**	*i* Pg	**Pn**	**21 27 41.9**	**-0.2**
MOZS	**Mozjanca**	**1.55**	**212**	*i* Pg	**Pn**	**21 27 41.9**	**-0.2**
GOLS	**Golise**	**1.60**	**180**	*i* Pg	**Pn**	**21 27 42.6**	**-0.2**
GOLS				*i* Sg	**Sn**	**21 28 02.3**	**-0.9**
GOLS							
	comp=Z,4µm,1.2s						
GOLS	**Golise**	**1.60**	**180**	*i* Pg	**Pn**	**21 27 42.6**	**-0.2**
GOLS				*i* Sg	**Sn**	**21 28 02.3**	**-0.9**
	comp=Z,4µm,1.2s						
PDKS	**Podkum**	**1.61**	**196**	*i* Pn	**Pn**	**21 27 43.0**	**+0.1**
PDKS	**Podkum**	**1.61**	**196**	*i* Pn	**Pn**	**21 27 43.0**	**+0.1**
CESS	**Cesta pri Krsk**	**1.64**	**184**	*i* Pn	**Pn**	**21 27 43.2**	**-0.1**
CESS				*i* Sn	**Sg**	**21 28 06.7**	**-0.9**
CESS							
	comp=Z,7µm,2.5s						
CESS	**Cesta pri Krsk**	**1.64**	**184**	*i* Pn	**Pn**	**21 27 43.2**	**-0.1**
CESS				*i* Sn	**Sg**	**21 28 06.7**	**-0.9**
	comp=Z,7µm,2.5s						
VNDS	**Vrh nad Dolski**	**1.64**	**204**	*i* Pn	**Pn**	**21 27 43.6**	**+0.3**
KBA	**Koelnbreinsper**	**1.65**	**252**	*e*Pn	**Pn**	**21 27 44.0**	**+0.4**
	SNR=274						
KBA				*e*Sg	**Sg**	**21 28 08.1**	**+0.1**
KBA	**Koelnbreinsper**	**1.65**	**252**	*e*P	**Pb**	**21 27 44.5**	**-0.7**
KBA				*i*		21 28 07.8	
KBA	**Koelnbreinsper**	**1.65**	**252**	⇓*e*Pg	**Pb**	**21 27 44.4**	**-0.7**
	comp=Z,300nm,0.3s,SNR=744						
KBA				⇑*e*Sg	**Sg**	**21 28 08.6**	**+0.6**
	comp=Z,2µm,0.6s						
KBA	**Koelnbreinsper**	**1.65**	**252**	*e*Pg	**Pb**	**21 27 44.5**	**-0.7**
KBA				*i* Sg	**Sg**	**21 28 07.8**	**-0.2**
KBA	**Koelnbreinsper**	**1.65**	**252**	Pn	**Pn**	**21 27 44.0**	**+0.4**
	SNR=274						
KBA	**Koelnbreinsper**	**1.65**	**252**	*e*P	**Pb**	**21 27 44.5**	**-0.7**
KBA				*i* S	**Sg**	**21 28 07.8**	**-0.2**
KBA				Sg	**Sg**	**21 28 08.1**	**+0.1**
PKST	**T^'s**	**1.66**	**101**	⇑*e*Pn	**Pn**	**21 27 42.4**	**-1.2**
PKST				*e*Pb	**Pb**	**21 27 45.2**	**0.0**
PKST				*e*Sn	**Sn**	**21 28 03.9**	**-0.8**
LEGS	**Legarje**	**1.68**	**188**	*e*Sn	**Sg**	**21 28 08.2**	**-0.5**
LEGS	**Legarje**	**1.68**	**188**	*e*Sn	**Sg**	**21 28 08.2**	**-0.5**
MYKA	**Terra Mystica**	**1.68**	**235**	⇓*i*Pg	**Pb**	**21 27 44.6**	**-1.0**
	comp=Z,890nm,0.8s						
MYKA				⇑*e*Sg	**Sg**	**21 28 08.8**	**-0.2**
	comp=Z,832nm,0.8s						
MYKA	**Terra Mystica**	**1.68**	**235**	⇓*i*Pg	**Pb**	**21 27 45.0**	**-0.6**
MYKA	**Terra Mystica**	**1.68**	**235**	⇓*i*Pg	**Pb**	**21 27 45.0**	**-0.6**
MYKA				Sg	**Sg**	**21 28 08.8**	**-0.2**
	comp=Z,832nm,0.8s						
TREC	**Trest**	**1.69**	**357**	*e*P	**Pn**	**21 27 43.7**	**-0.4**
TREC				*e*		21 28 06.6	
TREC				smax	smax		
	comp=N,3µm,0.5s						
TREC	**Trest**	**1.69**	**357**	*e*PG	**Pn**	**21 27 43.7**	**-0.4**
TREC				*e*SG	**Sb**	**21 28 06.6**	**-0.4**
	comp=N,3µm,0.5s						
TREC	**Trest**	**1.69**	**357**	Pg	**Pn**	**21 27 43.7**	**-0.4**
TREC				Sg	**Sb**	**21 28 06.6**	**-0.4**
	comp=N,3µm,0.5s						
GORS	**Gorjuse**	**1.72**	**222**	*i* Pn	**Pn**	**21 27 45.0**	**+0.5**
GORS							
	comp=Z,11µm,2.5s						
GORS	**Gorjuse**	**1.72**	**222**	*i* Pn	**Pn**	**21 27 45.0**	**+0.5**
GORS				*e*Sn	**Sg**	**21 28 10.1**	**0.0**
	comp=Z,11µm,2.5s						
LJU	**Ljubljana**	**1.74**	**207**	*i* Pn	**Pn**	**21 27 45.4**	**+0.7**
LJU							
	comp=Z,3µm,1.6s						
LJU	**Ljubljana**	**1.74**	**207**	*i* Pn	**Pn**	**21 27 45.4**	**+0.7**
LJU				*i* Sn	**Sg**	**21 28 09.7**	**-1.2**
	comp=Z,3µm,1.6s						
CRES	**Cresnjev**	**1.79**	**184**	*i* Pn	**Pn**	**21 27 45.1**	**-0.3**
CRES				*i* Sn	**Sg**	**21 28 11.4**	**-0.9**
CRES							
	comp=Z,1µm,0.8s						
CRES	**Cresnjev**	**1.79**	**184**	*i* Pn	**Pn**	**21 27 45.1**	**-0.3**
CRES				*i* Sn	**Sg**	**21 28 11.4**	**-0.9**
	comp=Z,1µm,0.8s						
I26DE	**FREYUNG INFRAS**	**1.79**	**315**	Sn	**Sb**	**21 28 10.7**	**+0.7**
I26DE				*i*		21 39 24.0	
	baz=132,slow=325,SNR=0.4						
GEC2	**GERESS Array S**	**1.79**	**314**	*e*Pn	**Pb**	**21 27 46.3**	**-1.3**
	SNR=364						
GEC2				*e*Sg	**Sg**	**21 28 11.5**	**-1.1**
GEC2	**GERESS Array S**	**1.79**	**314**	*e*P	**Pb**	**21 27 46.3**	**-1.3**
GEC2				*e*		21 28 11.5	
GEC2	**GERESS Array S**	**1.79**	**314**	*e*Pn	**Pb**	**21 27 46.4**	**-1.3**
GEC2				*e*Sn	**Sb**	**21 28 09.8**	**-0.2**
GEC2	**GERESS Array S**	**1.79**	**314**	*e*Pn	**Pb**	**21 27 46.4**	**-1.2**
GEC2				*e*Sn	**Sb**	**21 28 09.8**	**-0.2**
GEC2				Sg	**Sg**	**21 28 11.5**	**-1.1**
GERES	**GERESS Array B**	**1.79**	**314**	Pn	**Pb**	**21 27 46.2**	**-1.3**
GERES				Sn	**Sb**	**21 28 10.7**	**+0.7**
GERES	**GERESS Array B**	**1.79**	**314**	Pn	**Pb**	**21 27 46.2**	**-1.3**
	comp=Z,74nm,0.3s,baz=123,slow=14,SNR=413						
GERES				Sn	**Sb**	**21 28 10.7**	**+0.7**
	comp=Z,391nm,0.3s,baz=130,slow=26,SNR=33						
GERES	**GERESS Array B**	**1.79**	**314**	P	**Pb**	**21 27 46.2**	**-1.3**
	comp=Z,74nm,0.3s						
GERES				S	**Sb**	**21 28 10.7**	**+0.7**
	comp=Z,391nm,0.3s						
CRNS	**Crni Vrh**	**1.80**	**212**	*i* Pn	**Pn**	**21 27 46.3**	**+0.8**
ACOM	**Acomizza, Ital**	**1.80**	**235**	⇓*e*Pn	**Pn**	**21 27 45.9**	**+0.2**
ACOM				*e*Sn	**Sg**	**21 28 12.6**	**-0.2**
ACOM	**Acomizza, Ital**	**1.80**	**235**	*e*Pn	**Pn**	**21 27 45.9**	**+0.2**
ACOM				*e*Sn	**Sg**	**21 28 12.6**	**-0.2**
VRAC	**Vranov**	**1.81**	**20**	Pn	**Pn**	**21 27 45.1**	**-0.7**
VRAC				Sn	**Sn**	**21 28 07.5**	**-1.1**
VRAC	**Vranov**	**1.81**	**20**	⇓*i*P	**Pn**	**21 27 45.5**	**-0.2**
VRAC	**Vranov**	**1.81**	**20**	Pn	**Pn**	**21 27 45.1**	**-0.7**
	comp=Z,113nm,0.3s,baz=201,slow=13,SNR=406						
VRAC				Sn	**Sn**	**21 28 07.5**	**-1.1**
	comp=Z,455nm,0.3s,baz=108,slow=20,SNR=25						
VRAC				LR	LR	21 28 38.7	
	comp=Z,508nm,18.7s,baz=299,slow=46						
VRAC	**Vranov**	**1.81**	**20**	P	**Pn**	**21 27 45.1**	**-0.7**
	comp=Z,113nm,0.3s						
VRAC				S	**Sn**	**21 28 07.5**	**-1.1**
	comp=Z,509nm,18.7s						
VRAC				*e*Sn	**Sb**	**21 28 08.3**	**-2.2**
	comp=Z,2µm,0.4s,baz=199						
VRAC				*e*Sg	**Sg**	**21 28 09.0**	**-4.2**
LSR	**Lussari**	**1.84**	**233**	⇓*e*Pn	**Pn**	**21 27 47.0**	**+0.8**
LSR				*e*Sn	**Sg**	**21 28 13.7**	**-0.3**
LSR	**Lussari**	**1.84**	**233**	*e*Pn	**Pn**	**21 27 47.0**	**+0.8**
LSR				*e*Sn	**Sg**	**21 28 13.7**	**-0.3**
PKSG		**1.88**	**96**	⇑*e*Pn	**Pn**	**21 27 45.3**	**-1.2**
PKSG				*e*Sn	**Sn**	**21 28 05.3**	**-4.7**
VISS	**Visnje**	**1.89**	**197**	*i* Pn	**Pn**	**21 27 46.8**	**+0.1**
VISS	**Visnje**	**1.89**	**197**	*i* Pn	**Pn**	**21 27 46.8**	**+0.1**
CADS	**Cadrg**	**1.90**	**224**	*i* Pn	**Pn**	**21 27 47.6**	**+0.6**
CADS				*i* Sn	**Sg**	**21 28 15.1**	**-0.9**
CADS							
	comp=Z,7µm,2.0s						
CADS	**Cadrg**	**1.90**	**224**	*i* Pn	**Pn**	**21 27 47.6**	**+0.6**
CADS				*i* Sn	**Sg**	**21 28 15.1**	**-0.9**
	comp=Z,7µm,2.0s						
RJOB	**Jochberg**	**1.93**	**275**	*e*Pn	**Pb**	**21 27 48.5**	**-1.4**
	SNR=170						
RJOB				*e*Sg	**Sg**	**21 28 17.0**	**+0.1**
RJOB	**Jochberg**	**1.93**	**275**	Pn	**Pb**	**21 27 48.5**	**-1.4**
	SNR=170						
RJOB				Sg	**Sg**	**21 28 17.0**	**+0.1**
VOY	**Vojsko**	**1.98**	**218**	*e*Sn	**Sg**	**21 28 18.5**	**-0.1**
DRE	**Drenchia**	**1.98**	**224**	⇓*e*Pn	**Pn**	**21 27 48.9**	**+0.8**
DRE	**Drenchia**	**1.98**	**224**	*e*Pn	**Pn**	**21 27 48.9**	**+0.8**
VOJS	**Vojsko**	**1.99**	**218**	*i* Pn	**Pn**	**21 27 48.4**	**+0.2**
VOJS	**Vojsko**	**1.99**	**218**	*i* Pn	**Pn**	**21 27 48.4**	**+0.2**
ROBS	**Robic**	**2.00**	**228**	*e*Sn	**Sg**	**21 28 19.9**	**+0.8**
ROBS							
	comp=Z,6µm,2.9s						
PLRO	**Paularo**	**2.01**	**239**	⇓*e*Pn	**Pb**	**21 27 49.8**	**-1.4**
PLRO	**Paularo**	**2.01**	**239**	*e*Pn	**Pb**	**21 27 49.8**	**-1.4**
JAVS	**Javornik**	**2.03**	**213**	*i* Pn	**Pn**	**21 27 48.8**	**+0.1**
JAVS	**Javornik**	**2.03**	**213**	*i* Pn	**Pn**	**21 27 48.8**	**+0.1**
CEY	**Cerknica**	**2.05**	**205**	*i* Pn	**Pn**	**21 27 49.3**	**+0.4**
CEY	**Cerknica**	**2.05**	**205**	*i* Pn	**Pn**	**21 27 49.3**	**+0.4**
KHC	**Kasperske Hory**	**2.05**	**319**	*e*P	**Pn**	**21 27 50.0**	**+0.9**
KHC	**Kasperske Hory**	**2.05**	**319**	*e*PN	**Pn**	**21 27 50.0**	**+0.9**
KHC	**Kasperske Hory**	**2.05**	**319**	Pn	**Pn**	**21 27 50.0**	**+0.9**
PKS9	**Tamasi**	**2.07**	**119**	⇑*e*Pn	**Pn**	**21 27 48.4**	**-0.8**
PKS9				*e*Sn	**Sg**	**21 28 24.2**	**+2.8**
ZOU	**Zoufplan**	**2.11**	**241**	⇑*e*Pn	**Pn**	**21 27 50.9**	**+1.0**
ZOU				*e*Sn	**Sg**	**21 28 22.1**	**-0.5**
VINO	**Villanova**	**2.11**	**231**	⇑*e*Pn	**Pn**	**21 27 50.4**	**+0.6**
VINO	**Villanova**	**2.11**	**231**	*e*Pn	**Pn**	**21 27 50.4**	**+0.6**
VINO				*e*Sn	**Sg**	**21 28 22.0**	**-0.6**
BOJS	**Bojanci**	**2.12**	**187**	*i* Pn	**Pn**	**21 27 49.8**	**-0.1**
BOJS	**Bojanci**	**2.12**	**187**	⇓*i*Pn	**Pn**	**21 27 49.8**	**-0.1**
BOJS				*e*Sg	**Sg**	**21 28 24.4**	**+1.4**
BOJS	**Bojanci**	**2.12**	**187**	⇓*i*Pn	**Pn**	**21 27 49.8**	**-0.1**
BOJS				*e*Sg	**Sg**	**21 28 24.4**	**+1.4**
BAD	**Bernadia**	**2.14**	**231**	⇓*e*Pn	**Pn**	**21 27 51.1**	**+0.8**
BAD	**Bernadia**	**2.14**	**231**	*e*Pn	**Pn**	**21 27 51.1**	**+0.8**
COLI	**Coloredo**	**2.14**	**227**	⇓*e*Pn	**Pn**	**21 27 51.1**	**+0.9**
COLI	**Coloredo**	**2.14**	**227**	*e*Pn	**Pn**	**21 27 51.1**	**+0.9**
SABO	**M.te Sabotino**	**2.15**	**222**	⇑*e*Pn	**Pn**	**21 27 50.1**	**-0.2**
SABO	**M.te Sabotino**	**2.15**	**222**	*e*Pn	**Pn**	**21 27 50.2**	**-0.2**
BOO	**Bordano**	**2.17**	**234**	⇓*e*Pn	**Pn**	**21 27 51.5**	**+0.9**
BOO	**Bordano**	**2.17**	**234**	*e*Pn	**Pn**	**21 27 51.5**	**+0.9**
FUSE	**Fusea**	**2.17**	**238**	⇑*e*Pn	**Pn**	**21 27 51.4**	**+0.8**
FUSE	**Fusea**	**2.17**	**238**	*e*Pn	**Pn**	**21 27 51.4**	**+0.8**
SISC	**Sisak**	**2.20**	**167**	*i* Pn	**Pn**	**21 27 50.9**	**0.0**
SISC	**Sisak**	**2.20**	**167**	*i* Pn	**Pn**	**21 27 50.9**	**0.0**
BUA	**Buia**	**2.22**	**232**	Pn	**Pb**	**21 27 52.7**	**-2.0**

BUA	**Buia**	**2.22 232**	Pn	**Pb**	**21 27 52.7 -2.0**
MPRI	**Monte Prat**	**2.28 234**	⇓*e*Pn	**Pn**	**21 27 53.1 +1.0**
MPRI	**Monte Prat**	**2.28 234**	*e*Pn	**Pn**	**21 27 53.1 +1.0**
BUD	**Budapest**	**2.29 92**	⇑*e*Pn	**Pn**	**21 27 51.1 -1.2**
BUD			*e*Pb	**Pb**	**21 27 56.2 +0.2**
BUD			*e*Sb	**Sb**	**21 28 25.9 +1.7**
TRI	**Trieste**	**2.30 215**	*e*P	**Pn**	**21 27 52.5 +0.2**
TRI			*e*		21 28 20.3
TRI	**Trieste**	**2.30 215**	*e*Pn	**Pn**	**21 27 52.5 +0.2**
TRI			*e*Pg	**Pg**	**21 27 59.2 +0.3**
TRI			*e*Sn	**Sn**	**21 28 20.2 -0.2**
TRI	**Trieste**	**2.30 215**	*e*P	**Pn**	**21 27 52.5 +0.2**
TRI	**Trieste**	**2.30 215**	*e*Pg	**Pg**	**21 27 59.2 +0.3**
TRI			*e*S	**Sn**	**21 28 20.3 -0.2**
ABTA	**Abfaltersbach**	**2.30 249**	⇓*e*Pn	**Pn**	**21 27 53.3 +0.8**
	SNR=183				
ABTA			⇓*i*Sg	**Sg**	**21 28 28.1 -0.8**
	comp=Z,700nm,0.7s				
ABTA	**Abfaltersbach**	**2.30 249**	*e*Pn	**Pn**	**21 27 53.3 +0.8**
ABTA			*i* Sg	**Sg**	**21 28 28.1 -0.8**
ABTA	**Abfaltersbach**	**2.30 249**	Pn	**Pn**	**21 27 53.3 +0.8**
	SNR=183				
ABTA			Sg	**Sg**	**21 28 28.1 -0.8**
	comp=Z,700nm,0.7s				
VYHS	**Vyhne**	**2.32 66**	*e*P	**Pn**	**21 27 50.8 -1.8**
VYHS			*e*		21 28 19.7
VYHS			pmax	pmax	
	comp=N,938nm,1.0s				
VYHS	**Vyhne**	**2.32 66**	*e*PN	**Pn**	**21 27 50.8 -1.8**
VYHS			*e*SN	**Sn**	**21 28 19.7 -1.3**
VYHS			*e*SG	**Sg**	**21 28 27.9 -1.4**
VYHS	**Vyhne**	**2.32 66**	*e*P	**Pn**	**21 27 50.8 -1.8**
VYHS			*e*S	**Sn**	**21 28 19.7 -1.3**
	comp=N,938nm,1.0s				
CSMI	**Casera Mimoias**	**2.32 243**	⇑*e*Pn	**Pn**	**21 27 54.3 +1.5**
CSMI	**Casera Mimoias**	**2.32 243**	*e*Pn	**Pn**	**21 27 54.3 +1.5**
WET	**Wettzell**	**2.40 311**	*e*Pn	**Pn**	**21 27 54.4 +0.6**
	SNR=73				
WET	**Wettzell**	**2.40 311**	*e*P	**Pn**	**21 27 54.4 +0.6**
WET	**Wettzell**	**2.40 311**	Pn	**Pn**	**21 27 54.4 +0.6**
	SNR=73				
TLI	**Talmassons**	**2.43 227**	⇓*e*Pn	**Pn**	**21 27 55.4 +1.3**
TLI	**Talmassons**	**2.43 227**	*e*Pn	**Pn**	**21 27 55.4 +1.3**
PKS7	**Kunszentmiklos**	**2.46 102**	⇑*e*Pn	**Pn**	**21 27 53.5 -1.0**
PKS7			*e*Pg	**Pg**	**21 28 00.0 -1.9**
PKSM	**Moragy**	**2.48 123**	*i* Pn	**Pn**	**21 27 53.5 -1.3**
PKSM	**Moragy**	**2.48 123**	⇑*i*P	**Pn**	**21 27 53.8 -1.1**
PKSM	**Moragy**	**2.48 123**	⇑*e*Pn	**Pn**	**21 27 53.6 -1.3**
PKSM			⇑*e*Pn	**Pn**	**21 27 53.6 -1.3**
PKSM	**Moragy**	**2.48 123**	*i* Pn	**Pn**	**21 27 53.5 -1.3**
PKSM	**Moragy**	**2.48 123**	⇑*i*P	**Pn**	**21 27 53.8 -1.1**
PRU	**Pruhonice**	**2.49 343**	*e*Pn	**Pn**	**21 27 55.5 +0.5**
	SNR=24				
PRU	**Pruhonice**	**2.49 343**	*e*P	**Pn**	**21 27 55.5 +0.5**
PRU			*e*		21 28 31.9
PRU			smax	smax	
	comp=N,891nm,0.6s				
PRU	**Pruhonice**	**2.49 343**	*e*PN	**Pn**	**21 27 55.5 +0.5**
PRU			*e*PG	**Pb**	**21 27 58.8 -0.6**
PRU			*e*SG	**Sg**	**21 28 31.9 -3.0**
	comp=N,891nm,0.6s				
PRU	**Pruhonice**	**2.49 343**	*e*P	**Pn**	**21 27 55.5 +0.5**
PRU	**Pruhonice**	**2.49 343**	Pg	**Pb**	**21 27 58.8 -0.6**
PRU			Sg	**Sg**	**21 28 31.9 -3.0**
	comp=N,891nm,0.6s				
MORC	**Moravsky Berou**	**2.51 29**	*e*Pn	**Pn**	**21 27 54.2 -1.1**
	SNR=188				
MORC			*e*Sn	**Sn**	**21 28 24.5 -1.2**
MORC	**Moravsky Berou**	**2.51 29**	*e*P	**Pn**	**21 27 53.9 -1.4**
MORC			*e*		21 28 24.1
MORC	**Moravsky Berou**	**2.51 29**	*e*Pn	**Pn**	**21 27 53.9 -1.4**
MORC			*e*Pg	**Pg**	**21 28 01.8 -1.1**
MORC			*e*Sn	**Sn**	**21 28 24.1 -1.6**
MORC	**Moravsky Berou**	**2.51 29**	⇑*i*P	**Pn**	**21 27 54.7 -0.6**
MORC	**Moravsky Berou**	**2.51 29**	*e*P	**Pn**	**21 27 53.9 -1.4**
MORC	**Moravsky Berou**	**2.51 29**	*e*Pn	**Pn**	**21 27 54.7 -0.6**
	baz=209				
MORC	**Moravsky Berou**	**2.51 29**	*e*Pg	**Pg**	**21 28 01.8 -1.1**
MORC			*e*S	**Sn**	**21 28 24.1 -1.6**
MORC			*e*Sg	**Sb**	**21 28 31.3 +0.8**
	baz=209				
RISI	**Rein**	**2.52 256**	⇓*e*Pn	**Pn**	**21 27 57.0 +1.5**
MLNI	**Malnisio**	**2.54 236**	⇓*e*Pn	**Pn**	**21 27 56.9 +1.2**
MLNI	**Malnisio**	**2.54 236**	*e*Pn	**Pn**	**21 27 56.9 +1.2**
KRLC	**Kraliky**	**2.58 17**	*e*P	**Pn**	**21 27 56.1 -0.2**
KRLC			*e*		21 28 28.1
KRLC	**Kraliky**	**2.58 17**	*e*PN	**Pn**	**21 27 56.1 -0.2**
KRLC			*e*PG	**Pb**	**21 27 58.8 -2.2**
KRLC			*e*SN	**Sn**	**21 28 28.1 +0.6**
KRLC			*e*SG	**Sb**	**21 28 34.5 +1.9**
KRLC	**Kraliky**	**2.58 17**	Pn	**Pn**	**21 27 56.1 -0.2**
KRLC	**Kraliky**	**2.58 17**	Pg	**Pb**	**21 27 58.8 -2.2**
KRLC			Sn	**Sn**	**21 28 28.1 +0.6**
AFL	**Alpe Faloria**	**2.60 247**	⇓*e*Pn	**Pn**	**21 27 58.6 +1.8**
AFL	**Alpe Faloria**	**2.60 247**	*e*Pn	**Pn**	**21 27 58.6 +1.8**
CSO	**Casso**	**2.64 241**	⇓*e*Pn	**Pn**	**21 27 58.4 +1.3**
CSO	**Casso**	**2.64 241**	*e*Pn	**Pn**	**21 27 58.4 +1.3**
PKS2	**Kecel**	**2.68 113**	⇑*e*Pn	**Pn**	**21 27 56.6 -1.0**
PKS2			*e*Pg	**Pg**	**21 28 04.6 -1.7**
CAE	**Caneva**	**2.72 235**	⇑*e*Pn	**Pn**	**21 27 58.9 +0.6**
CAE	**Caneva**	**2.72 235**	*e*Pn	**Pn**	**21 27 58.9 +0.6**
WTTA	**Wattenberg**	**2.74 264**	*e*Pn	**Pn**	**21 28 00.4 +1.7**
	SNR=66				
WTTA	**Wattenberg**	**2.74 264**	*e*P	**Pn**	**21 28 00.3 +1.7**
WTTA	**Wattenberg**	**2.74 264**	⇓*e*Pn	**Pn**	**21 28 00.4 +1.7**
	SNR=134				
WTTA			⇑*i*Sg	**Sg**	**21 28 43.3 +0.4**
	comp=N,1μm,0.8s				
WTTA	**Wattenberg**	**2.74 264**	*e*Pn	**Pn**	**21 28 00.3 +1.7**
WTTA			*i* Sg	**Sg**	**21 28 43.3 +0.4**
WTTA	**Wattenberg**	**2.74 264**	*e*P	**Pn**	**21 28 00.3 +1.7**
WTTA			Sg	**Sg**	**21 28 43.3 +0.4**
	comp=N,1μm,0.8s				
WATA	**Walderalm**	**2.77 266**	⇓*e*P	**Pn**	**21 27 59.9 +0.9**
WATA	**Walderalm**	**2.77 266**	⇓*e*Pn	**Pn**	**21 27 59.9 +0.9**
	SNR=200				
WATA	**Walderalm**	**2.77 266**	⇓*e*Pn	**Pn**	**21 27 59.9 +0.9**
WATA	**Walderalm**	**2.77 266**	Pn	**Pn**	**21 27 59.9 +0.9**
	SNR=200				
OKC	**Ostrava-Krasne**	**2.78 36**	*e*Pn	**Pn**	**21 27 58.4 -0.6**
	SNR=74				
OKC	**Ostrava-Krasne**	**2.78 36**	*e*P	**Pn**	**21 27 58.4 -0.6**
OKC			*e*		21 28 32.1
OKC			smax	smax	
	comp=N,975nm,0.8s				
OKC	**Ostrava-Krasne**	**2.78 36**	*e*PN	**Pn**	**21 27 58.4 -0.6**
OKC			*e*SN	**Sn**	**21 28 32.1 -0.2**
OKC			*e*SG	**Sb**	**21 28 39.9 +1.7**
	comp=N,974nm,0.8s				
OKC	**Ostrava-Krasne**	**2.78 36**	*e*P	**Pn**	**21 27 58.4 -0.6**
OKC			Sn	**Sn**	**21 28 32.1 -0.2**
OKC			Sg	**Sb**	**21 28 39.9 +1.7**
	comp=N,974nm,0.8s				
DPC	**Dobruska-Polom**	**2.78 9**	*e*Pn	**Pn**	**21 27 59.3 +0.3**
	SNR=26				
DPC	**Dobruska-Polom**	**2.78 9**	*e*P	**Pn**	**21 27 58.8 -0.2**
DPC			*e*		21 28 40.0
DPC			smax	smax	
	comp=N,2μm,0.7s				
DPC	**Dobruska-Polom**	**2.78 9**	*e*Pn	**Pn**	**21 27 59.9 +0.8**
DPC			*e*Pg	**Pg**	**21 28 06.9 -1.2**
DPC			*e*Sn	**Sn**	**21 28 31.1 -1.3**
DPC			*e*Sg	**Sg**	**21 28 43.5 -0.7**
DPC	**Dobruska-Polom**	**2.78 9**	*e*PN	**Pn**	**21 27 58.8 -0.2**
DPC			*e*PG	**Pb**	**21 28 02.8 -1.6**
DPC			*e*SG	**Sb**	**21 28 40.0 +1.7**
	comp=N,2μm,0.7s				
DPC	**Dobruska-Polom**	**2.78 9**	Pn	**Pn**	**21 27 59.3 +0.3**
	SNR=26				
AGOR	**Agordo**	**2.80 243**	⇑*e*Pn	**Pn**	**21 28 00.5 +1.3**
PKS6	**Bocsa**	**2.86 109**	⇑*e*Pn	**Pn**	**21 27 58.8 -1.3**
PKS6			*e*Sb	**Sn**	**21 28 34.8 +0.5**
FAU	**Forcella Aurin**	**2.86 243**	⇓*e*Pn	**Pn**	**21 28 01.7 +1.4**
FAU	**Forcella Aurin**	**2.86 243**	*e*Pn	**Pn**	**21 28 01.7 +1.4**
PSZ	**Piszkesteto**	**2.88 82**	*e*P	**Pn**	**21 27 59.1 -1.4**
PSZ	**Piszkesteto**	**2.88 82**	*e*Pn	**Pn**	**21 27 59.1 -1.4**
PSZ	**Piszkesteto**	**2.88 82**	⇑*i*P	**Pn**	**21 27 59.4 -1.1**
PSZ	**Piszkesteto**	**2.88 82**	*e*P	**Pn**	**21 27 59.1 -1.4**
UPC	**Upice**	**2.91 5**	*e*P	**Pn**	**21 28 00.5 -0.3**
UPC			*e*		21 28 45.3
UPC			smax	smax	
	comp=N,2μm,0.9s				
UPC	**Upice**	**2.91 5**	*e*PN	**Pn**	**21 28 00.5 -0.3**
UPC			*e*SG	**Sg**	**21 28 45.3 -3.1**
	comp=N,2μm,0.9s				
UPC	**Upice**	**2.91 5**	Pn	**Pn**	**21 28 00.5 -0.3**
VARN	**Col Varnada, M**	**2.92 238**	⇓*e*Pn	**Pn**	**21 28 01.5 +0.6**
VARN	**Col Varnada, M**	**2.92 238**	*e*Pn	**Pn**	**21 28 01.5 +0.6**
ROSI	**Rosskopf**	**2.96 258**	⇑*e*Pn	**Pn**	**21 28 03.7 +2.0**
FUR	**Furstenfeldbru**	**2.99 282**	*e*Pn	**Pn**	**21 28 03.2 +1.3**
	SNR=23				
FUR			*e*Sg	**Sg**	**21 28 50.2 -0.7**
FUR	**Furstenfeldbru**	**2.99 282**	*e*P	**Pn**	**21 28 03.2 +1.3**
FUR	**Furstenfeldbru**	**2.99 282**	Pn	**Pn**	**21 28 03.2 +1.3**
	SNR=23				
FUR			Sg	**Sg**	**21 28 50.2 -0.7**
PVCC	**Panska Ves**	**3.01 347**	*e*P	**Pn**	**21 28 02.2 +0.1**
PVCC			*e*		21 28 48.8
PVCC			smax	smax	
	comp=N,2μm,0.7s				
PVCC	**Panska Ves**	**3.01 347**	*e*PN	**Pn**	**21 28 02.2 +0.1**
PVCC			*e*SG	**Sg**	**21 28 48.8 -2.6**
	comp=N,2μm,0.7s				
PVCC	**Panska Ves**	**3.01 347**	Pn	**Pn**	**21 28 02.2 +0.1**
PVCC			Sg	**Sg**	**21 28 48.8 -2.6**
	comp=N,2μm,0.7s				
MTLO	**Montello**	**3.03 235**	⇓*e*Pn	**Pn**	**21 28 03.4 +1.0**
MTLO	**Montello**	**3.03 235**	*e*Pn	**Pn**	**21 28 03.4 +1.0**
SQTA	**Sankt Quirin**	**3.04 264**	⇑*i*Pn	**Pn**	**21 28 04.5 +1.9**
	comp=N,52nm,0.4s				
SQTA			⇑*i*Sg	**Sg**	**21 28 52.5 +0.1**
	comp=N,597nm,0.5s				
SQTA	**Sankt Quirin**	**3.04 264**	Pn	**Pn**	**21 28 04.5 +1.9**
	comp=N,52nm,0.4s				
SQTA			Sg	**Sg**	**21 28 52.5 +0.1**
	comp=N,597nm,0.5s				
BLY	**Banja Luka**	**3.05 159**	*e*Sg	**Sg**	**21 28 51.8 -1.1**
BLY	**Banja Luka**	**3.05 159**	*e*Sg	**Sg**	**21 28 51.8 -1.1**
ABSI	**Aberstueckl**	**3.08 255**	⇑*e*Pn	**Pn**	**21 28 05.3 +2.1**
MOTA	**Moosalm**	**3.09 267**	⇑*i*P	**Pn**	**21 28 04.4 +1.0**
MOTA	**Moosalm**	**3.09 267**	⇑*e*Pn	**Pn**	**21 28 04.7 +1.3**
	comp=N,28nm,0.2s,SNR=158				
MOTA			⇓*e*Sg	**Sg**	**21 28 52.7 -1.4**
	comp=N,878nm,0.6s				
MOTA	**Moosalm**	**3.09 267**	⇑*i*Pn	**Pn**	**21 28 04.4 +1.0**
MOTA	**Moosalm**	**3.09 267**	*i* P	**Pn**	**21 28 04.4 +1.0**
MOTA			Sg	**Sg**	**21 28 52.7 -1.4**
	comp=N,878nm,0.6s				
KOSI	**Kohlern**	**3.13 250**	⇓*e*Pn	**Pn**	**21 28 05.4 +1.4**
ROTZ	**Rotzenmuhle**	**3.14 315**	*e*Pn	**Pn**	**21 28 04.7 +0.8**
	SNR=30				
ROTZ			*e*Sg	**Sg**	**21 28 54.0 -1.6**
ROTZ	**Rotzenmuhle**	**3.14 315**	Pn	**Pn**	**21 28 04.7 +0.8**
	SNR=30				
KSP	**Ksiaz**	**3.27 7**	*e*P	**Pn**	**21 28 06.4 +0.7**
KSP			*e*		21 28 46.3
KSP	**Ksiaz**	**3.27 7**	*e*Pn	**Pn**	**21 28 06.2 +0.5**
KSP			*e*Pb	**Pb**	**21 28 14.1 +1.5**
KSP			*e*Pg	**Pg**	**21 28 18.5 +1.1**
KSP			*e*Sn	**Sb**	**21 28 49.6 -2.6**
KSP			*e*Sb	**Sb**	**21 28 55.3 +3.1**
KSP			*e*SS	**Sg**	**21 28 59.9 +0.2**
KSP			*e*Sg	**Sg**	**21 29 02.8 +3.1**
KSP	**Ksiaz**	**3.27 7**	*e*P	**Pn**	**21 28 06.4 +0.7**
KSP	**Ksiaz**	**3.27 7**	*i* Pg	**Pb**	**21 28 13.2 +0.6**
KSP			*e*S	**Sn**	**21 28 46.3 +2.0**
MANZ	**Manzenberg**	**3.34 317**	*e*Pn	**Pn**	**21 28 07.5 +0.9**
	SNR=12				
MANZ	**Manzenberg**	**3.34 317**	Pn	**Pn**	**21 28 07.5 +0.9**
	SNR=12				
PANI	**Panarotta**	**3.36 244**	*e*Pn	**Pn**	**21 28 08.3 +1.2**
PANI	**Panarotta**	**3.36 244**	*e*Pn	**Pn**	**21 28 08.3 +1.2**
NKC	**Novy Kostel**	**3.37 322**	*e*Pn	**Pn**	**21 28 07.9 +0.8**
	SNR=17				
NKC			*e*Sg	**Sg**	**21 29 01.4 -1.6**
NKC	**Novy Kostel**	**3.37 322**	*e*P	**Pn**	**21 28 07.8 +0.8**
NKC	**Novy Kostel**	**3.37 322**	*e*PN	**Pn**	**21 28 07.8 +0.8**
NKC			*e*SG	**Sg**	**21 29 01.6 -1.4**
	comp=N,1μm,0.8s				
NKC	**Novy Kostel**	**3.37 322**	Pn	**Pn**	**21 28 07.9 +0.8**
	SNR=17				
NKC			Sg	**Sg**	**21 29 01.6 -1.4**
	comp=N,1μm,0.8s				
FETA	**Feichten**	**3.40 262**	⇑*e*Pn	**Pn**	**21 28 09.5 +1.9**
	comp=N,52nm,0.3s,SNR=86				
FETA			⇑*e*Sg	**Sg**	**21 29 02.4 -1.5**
	comp=N,346nm,0.5s				
FETA	**Feichten**	**3.40 262**	⇑*i*Pn	**Pn**	**21 28 09.1 +1.5**
FETA	**Feichten**	**3.40 262**	⇑*i*Pn	**Pn**	**21 28 09.1 +1.5**
FETA			Sg	**Sg**	**21 29 02.4 -1.5**
	comp=N,346nm,0.5s				
WERN	**Wernitzgruen**	**3.44 322**	*e*Pn	**Pn**	**21 28 08.9 +0.8**
	SNR=31				
WERN			*e*Sg	**Sg**	**21 29 02.2 -3.1**
WERN	**Wernitzgruen**	**3.44 322**	Pn	**Pn**	**21 28 08.9 +0.8**
	SNR=31				
BRG	**Berggiesshubel**	**3.45 342**	PN	**Pn**	**21 28 10.7 +2.5**
BRG			PG	**Pg**	**21 28 18.0 -3.0**
BRG			SG	**Sg**	**21 29 01.4 -4.3**
	comp=N,608nm,0.9s				
BRG					
	comp=N,3μm,5.4s				
BRG					
	comp=E,4μm,3.9s				
BRG					
	comp=Z,4μm,4.5s				
BRG	**Berggiesshubel**	**3.45 342**	P	**Pn**	**21 28 10.7 +2.5**
BRG			MLR	MLR	
	comp=N,3μm,5.4s				
BRG			MLR	MLR	
	comp=E,4μm,3.9s				
BRG			MLR	MLR	
	comp=Z,4μm,4.6s				
BRG	**Berggiesshubel**	**3.45 342**	P	**Pn**	**21 28 10.7 +2.5**
	comp=Z,4μm,4.6s				
TANN	**Tannenbergstha**	**3.50 324**	*e*Pn	**Pn**	**21 28 09.5 +0.5**
	SNR=40				
TANN	**Tannenbergstha**	**3.50 324**	Pn	**Pn**	**21 28 09.5 +0.5**
	SNR=40				
DDS	**Dosso del Somm**	**3.52 242**	⇓*e*Pn	**Pn**	**21 28 10.1 +0.8**
DDS	**Dosso del Somm**	**3.52 242**	*e*Pn	**Pn**	**21 28 10.1 +0.8**
TEOL	**Teolo**	**3.55 232**	⇓*e*Pn	**Pn**	**21 28 10.0 +0.4**
TEOL	**Teolo**	**3.55 232**	*e*Pn	**Pn**	**21 28 10.0 +0.4**
NIE	**Niedzica**	**3.59 58**	*e*P	**Pn**	**21 28 09.8 -0.4**
NIE			*e*		21 28 50.5
NIE	**Niedzica**	**3.59 58**	*e*Pn	**Pn**	**21 28 09.8 -0.4**
NIE			*e*Sn	**Sn**	**21 28 50.5 -2.0**
NIE			*e*Sg	**Sb**	**21 29 04.9 +3.2**
NIE	**Niedzica**	**3.59 58**	*e*P	**Pn**	**21 28 09.8 -0.4**
NIE			*e*S	**Sn**	**21 28 50.5 -2.0**
NIE			*e*Sg	**Sb**	**21 29 04.9 +3.2**
ADRI	**Adria, Italy**	**3.59 226**	⇓*e*Pn	**Pn**	**21 28 10.8 +0.7**
ADRI	**Adria, Italy**	**3.59 226**	*e*Pn	**Pn**	**21 28 10.8 +0.7**
GRFO	**Grafenberg**	**3.60 307**	*e*P	**Pn**	**21 28 11.8 +1.6**
GRFO	**Grafenberg**	**3.60 307**	*e*Pn	**Pn**	**21 28 11.8 +1.6**
GRFO			*e*Pg	**Pg**	**21 28 21.9 -1.8**
GRFO			*e*Sg	**Sg**	**21 29 10.2 -0.1**
GRFO	**Grafenberg**	**3.60 307**	*e*P	**Pn**	**21 28 11.8 +1.6**
MOSI	**Grossmontoni**	**3.62 256**	⇑*e*Pn	**Pn**	**21 28 12.9 +2.2**
FBE	**Freiberg**	**3.64 337**	*e*Pn	**Pn**	**21 28 12.5 +1.7**
	SNR=6.6				
FBE	**Freiberg**	**3.64 337**	Pn	**Pn**	**21 28 12.5 +1.7**
	SNR=6.6				
FRGS	**Fruska Gora**	**3.78 129**	⇓*i*Pn	**Pn**	**21 28 11.7 -1.1**
FRGS			*e*Sn	**Sn**	**21 28 56.4 -0.7**
FGSL	**Fruska Gora**	**3.79 129**	⇓*i*Pn	**Pn**	**21 28 11.7 -1.1**
OJC	**Ojcow**	**3.79 45**	*e*P	**Pn**	**21 28 11.9 -0.9**
OJC			*e*		21 28 55.5
OJC	**Ojcow**	**3.79 45**	*e*Pn	**Pn**	**21 28 11.8 -0.9**
OJC	**Ojcow**	**3.79 45**	*e*Pn	**Pn**	**21 28 11.9 -0.9**
OJC			*e*PP	**PnPn**	**21 28 19.9 -0.2**
OJC			*e*Sn	**Sn**	**21 28 55.5 -1.7**
OJC			*e*Sg	**Sb**	**21 29 11.1 +3.9**
OJC	**Ojcow**	**3.79 45**	*e*P	**Pn**	**21 28 11.9 -0.9**
OJC			*e*S	**Sn**	**21 28 55.5 -1.7**
OJC			*e*Sg	**Sb**	**21 29 11.1 +3.9**
RNI	**Roncone**	**3.80 246**	*e*Pn	**Pn**	**21 28 14.8 +1.7**
RNI	**Roncone**	**3.80 246**	*e*Pn	**Pn**	**21 28 14.8 +1.7**
FUORN	**Ofenpass-Fuorn**	**3.80 257**	*e*Pn	**Pn**	**21 28 15.7 +2.4**
FUORN	**Ofenpass-Fuorn**	**3.80 257**	*e*Pn	**Pn**	**21 28 15.7 +2.4**
DAVA	**Damuels**	**3.92 267**	*e*Pn	**Pn**	**21 28 16.3 +1.4**
	SNR=137				
DAVA	**Damuels**	**3.92 267**	⇓*i*Pn	**Pn**	**21 28 16.2 +1.4**
	comp=Z,173nm,0.4s,SNR=185				
DAVA			⇓*i*Sg	**Sg**	**21 29 20.4 -0.4**
	comp=Z,1μm,0.8s				
DAVA	**Damuels**	**3.92 267**	*i* Pn	**Pn**	**21 28 16.3 +1.4**
DAVA			*i* Sg	**Sg**	**21 29 20.4 -0.4**
DAVA	**Damuels**	**3.92 267**	Pn	**Pn**	**21 28 16.2 +1.3**
	comp=Z,173nm,0.4s,SNR=185				
DAVA			Sg	**Sg**	**21 29 20.4 -0.4**
	comp=Z,1μm,0.8s				
DAVOX	**Davos/Dischmat**	**4.02 260**	Pn	**Pn**	**21 28 18.4 +2.2**
DAVOX			Sn	**Sn**	**21 29 05.3 +2.2**
DAVOX			Lg	Lg	21 29 23.5
DAVOX	**Davos/Dischmat**	**4.02 260**	Pn	**Pn**	**21 28 18.4 +2.2**
	comp=Z,18nm,0.3s,baz=81,slow=12,SNR=193				
DAVOX			Sn	**Sn**	**21 29 05.3 +2.2**
	comp=Z,27nm,0.3s,baz=349,slow=18,SNR=7.3				
DAVOX			Lg	Lg	21 29 23.5
	comp=Z,20nm,0.3s,baz=307,slow=20,SNR=5.4				
DAVOX			LR	LR	21 29 46.6
	comp=Z,193nm,20.6s,baz=83,slow=38				
DAVOX	**Davos/Dischmat**	**4.02 260**	P	**Pn**	**21 28 18.4 +2.2**
	comp=Z,18nm,0.3s				
DAVOX			S	**Sn**	**21 29 05.3 +2.2**
	comp=Z,193nm,20.6s				
TEKS	**Tekeris**	**4.08 137**	*e*Pn	**Pn**	**21 28 15.8 -1.1**
TEKS	**Tekeris**	**4.08 137**	*e*Pn	**Pn**	**21 28 15.8 -1.1**
CLL	**Collm**	**4.08 336**	*e*P	**Pn**	**21 28 18.0 +1.1**
CLL	**Collm**	**4.08 336**	*e*Pn	**Pn**	**21 28 18.0 +1.1**
CLL			*e*		21 28 20.0
CLL			*e*Pg	**Pg**	**21 28 31.0 -2.0**
CLL			*e*Sn	Sn	21 28 52.0 -12
CLL			*e*Sg	**Sg**	**21 29 23.0 -2.9**
	comp=Z,1μm,1.1s				
CLL			*e*Sglp		21 29 25.0
	comp=N,800nm,17.5s				
CLL			*e*Sglp		21 29 25.0
	comp=E,2μm,14.9s				
CLL	**Collm**	**4.08 336**	*e*P	**Pn**	**21 28 18.0 +1.1**
CRVS	**Cervenica-Dubn**	**4.10 69**	*e*P	**Pn**	**21 28 15.1 -2.0**
CRVS			pmax	pmax	
	comp=N,326nm,1.1s				
CRVS	**Cervenica-Dubn**	**4.10 69**	*e*PN	**Pn**	**21 28 15.1 -2.0**
CRVS			*e*SG	**Sg**	**21 29 24.6 -1.7**
CRVS	**Cervenica-Dubn**	**4.10 69**	*e*P	**Pn**	**21 28 15.1 -2.0**
	comp=N,326nm,1.1s				
TUE	**Stuetta**	**4.45 258**	*e*Pn	**Pn**	**21 28 24.1 +1.9**
TUE			*e*Sg	**Sg**	**21 29 38.4 +0.6**
TUE	**Stuetta**	**4.45 258**	*e*Pn	**Pn**	**21 28 24.0 +1.9**
TUE			*e*Sg	**Sg**	**21 29 38.4 +0.6**
STU	**Stuttgart**	**4.47 287**	*e*Pn	**Pn**	**21 28 23.0 +0.9**
	SNR=12				
STU			*e*Sn	**Sn**	**21 29 12.3 -1.6**
STU	**Stuttgart**	**4.47 287**	*e*P	**Pn**	**21 28 23.0 +0.9**
STU			*e*		21 29 12.3
STU	**Stuttgart**	**4.47 287**	*e*Pn	**Pn**	**21 28 23.1 +0.9**
STU			*e*Sg	**Sg**	**21 29 39.9 +1.6**
STU	**Stuttgart**	**4.47 287**	*e*Pn	**Pn**	**21 28 23.1 +0.9**
STU			Sn	**Sn**	**21 29 12.3 -1.6**
STU			*e*Sg	**Sg**	**21 29 39.9 +1.6**
UZH	**Uzhgorod**	**4.57 75**	*e*P	**Pn**	**21 28 21.7 -1.8**
UZH			*e*S	**Sn**	**21 29 13.5 -2.9**
UZH			MLR	MLR	
	comp=N,2μm,7.0s				
UZH			MLR	MLR	
	comp=E,3μm,7.0s				
UZH			MLR	MLR	
	comp=Z,2μm,7.0s				
UZH	**Uzhgorod**	**4.57 75**	*e*P	**Pn**	**21 28 21.7 -1.8**
UZH			*e*S	**Sn**	**21 29 13.5 -2.9**
BZS	**Buzias**	**4.57 114**	⇑*i*Pn	**Pn**	**21 28 22.5 -1.1**
BZS	**Buzias**	**4.57 114**	⇑*i*P	**Pn**	**21 28 22.9 -0.7**
BZS	**Buzias**	**4.57 114**	⇑*i*Pn	**Pn**	**21 28 22.5 -1.1**
BZS	**Buzias**	**4.57 114**	⇑*i*P	**Pn**	**21 28 22.9 -0.7**
BBLS	**Lazići**	**4.58 144**	⇑*i*Pn	**Pn**	**21 28 23.3 -0.4**
BBLS			*e*Sn	**Sn**	**21 29 17.1 +0.4**
BBLS	**Lazići**	**4.58 144**	⇑*i*Pn	**Pn**	**21 28 23.3 -0.4**
BBLS			*e*Sn	**Sn**	**21 29 17.1 +0.4**
KOLS	**Kolonicke sedl**	**4.62 71**	*e*P	**Pn**	**21 28 23.0 -1.3**
KOLS			pmax	pmax	
	comp=N,236nm,1.1s				
KOLS	**Kolonicke sedl**	**4.62 71**	*e*PN	**Pn**	**21 28 23.0 -1.3**
KOLS	**Kolonicke sedl**	**4.62 71**	*e*P	**Pn**	**21 28 23.0 -1.3**
	comp=N,236nm,1.1s				
DIVS	**Divibare**	**4.64 138**	*e*Sn	**Sn**	**21 29 17.9 -0.5**
SPAK	**Spaichingen-Ko**	**4.64 279**	P	**Pn**	**21 28 25.7 +1.0**
SPAK	**Spaichingen-Ko**	**4.64 279**	P	**Pn**	**21 28 25.7 +1.0**
TRPA	**Tarpa**	**4.67 81**	⇑*i*P	**Pn**	**21 28 22.9 -2.0**
TRPA	**Tarpa**	**4.67 81**	⇑*e*Pn	**Pn**	**21 28 23.0 -2.0**
TRPA			*e*sPb	**Pg**	**21 28 46.3 +2.0**
TRPA	**Tarpa**	**4.67 81**	⇑*i*P	**Pn**	**21 28 22.9 -2.0**
TRUS	**Trudelj**	**4.74 134**	⇑*i*Pn	**Pn**	**21 28 23.9 -2.1**
TRUS	**Trudelj**	**4.74 134**	⇑*i*Pn	**Pn**	**21 28 23.9 -2.1**
DRGR		**4.89 97**	⇓*i*P	**Pn**	**21 28 27.1 -0.9**
DRGR		**4.89 97**	⇓*i*P	**Pn**	**21 28 27.1 -0.9**
STON	**Ston**	**4.95 162**	*i* Pn	**Pn**	**21 28 29.7 +0.9**
STON			Sn	**Sn**	**21 29 26.6 +0.7**
STON	**Ston**	**4.95 162**	*i* Pn	**Pn**	**21 28 29.7 +0.9**
STON			Sn	**Sn**	**21 29 26.6 +0.7**
TOD	**Tromm**	**4.96 296**	P	**Pn**	**21 28 30.0 +1.1**
TOD			S	**Sn**	**21 29 24.1 -2.0**
TOD	**Tromm**	**4.96 296**	P	**Pn**	**21 28 30.0 +1.1**
TOD			S	**Sn**	**21 29 24.1 -2.0**
TOD	**Tromm**	**4.96 296**	P	**Pn**	**21 28 30.0 +1.1**
TOD			S	**Sn**	**21 29 24.1 -2.0**
BFO	**Black Forest**	**4.97 281**	*e*Pn	**Pn**	**21 28 29.4 +0.4**
	SNR=83				
BFO	**Black Forest**	**4.97 281**	*e*P	**Pn**	**21 28 29.2 +0.2**
BFO	**Black Forest**	**4.97 281**	*e*Pn	**Pn**	**21 28 29.2 +0.2**
BFO			*e*Sg	**Sg**	**21 29 51.9 -2.3**
BFO	**Black Forest**	**4.97 281**	Pn	**Pn**	**21 28 29.4 +0.4**
	SNR=83				
UPM	**Unac-Piva**	**4.97 151**	⇑*i*Pn	**Pn**	**21 28 29.7 +0.5**
UPM			*e*Sn	**Sn**	**21 29 25.8 -0.7**
UPM	**Unac-Piva**	**4.97 151**	⇑*i*Pn	**Pn**	**21 28 29.7 +0.5**
UPM			*e*Sn	**Sn**	**21 29 25.8 -0.7**
GRAM	**Graiana**	**4.98 233**	P	**Pn**	**21 28 28.5 -0.8**
PLE	**Pljevlja**	**5.02 147**	⇓*i*Pn	**Pn**	**21 28 30.2 +0.3**
PLE			*e*Sn	**Sn**	**21 29 27.1 -0.7**
PLE	**Pljevlja**	**5.02 147**	⇓*i*Pn	**Pn**	**21 28 30.2 +0.3**
PLE			*e*Sn	**Sn**	**21 29 27.1 -0.7**
RUE	**Ruedersdorf**	**5.02 347**	*e*Pn	**Pn**	**21 28 31.6 +1.8**
RUE			*e*Sg	**Sg**	**21 29 55.7 -0.3**
RUE	**Ruedersdorf**	**5.02 347**	*e*Pn	**Pn**	**21 28 31.6 +1.8**
RUE			*e*Sg	**Sg**	**21 29 55.7 -0.3**
VLC	**Villacollemand**	**5.04 229**	*e*Pn	**Pn**	**21 28 31.0 +1.0**
VLC	**Villacollemand**	**5.04 229**	*e*Pn	**Pn**	**21 28 31.0 +1.0**
CRDM	**Cardoso**	**5.08 227**	P	**Pn**	**21 28 29.2 -1.4**
KWP	**Kalwaria Pacla**	**5.10 64**	*e*P	**Pn**	**21 28 30.9 0.0**
KWP	**Kalwaria Pacla**	**5.10 64**	*e*Pn	**Pn**	**21 28 30.9 0.0**
KWP	**Kalwaria Pacla**	**5.10 64**	⇓*i*P	**Pn**	**21 28 31.3 +0.4**
KWP	**Kalwaria Pacla**	**5.10 64**	*e*Pn	**Pn**	**21 28 31.0 0.0**
KWP			*e*Pg	Pg	21 28 49.0 -3.5
KWP	**Kalwaria Pacla**	**5.10 64**	*e*P	**Pn**	**21 28 30.9 0.0**
SVIS	**Svilajnac**	**5.12 129**	*e*Pn	**Pn**	**21 28 30.2 -1.0**
BRY	**Bratogost**	**5.13 155**	⇓*i*Pn	**Pn**	**21 28 31.9 +0.5**
BRY			*e*Sn	**Sn**	**21 29 29.4 -1.1**
BRY	**Bratogost**	**5.13 155**	⇓*i*Pn	**Pn**	**21 28 31.9 +0.5**
BRY			*e*Sn	**Sn**	**21 29 29.4 -1.1**
GRUS	**Gruza**	**5.14 134**	⇑*i*Pn	**Pn**	**21 28 30.8 -0.6**
GRUS			*e*Sn	**Sn**	**21 29 30.2 -0.3**
GRUS	**Gruza**	**5.14 134**	⇑*i*Pn	**Pn**	**21 28 30.8 -0.6**
CODM	**Codolo**	**5.16 234**	P	**Pn**	**21 28 31.8 +0.1**
FELD	**Feldberg im Sc**	**5.16 276**	P	**Pn**	**21 28 31.9 +0.1**
FELD			S	**Sn**	**21 29 28.0 -3.2**
FELD	**Feldberg im Sc**	**5.16 276**	P	**Pn**	**21 28 31.9 +0.1**
FELD			S	**Sn**	**21 29 28.0 -3.2**
FELD	**Feldberg im Sc**	**5.16 276**	P	**Pn**	**21 28 31.9 +0.1**
MAIM	**Mastiano**	**5.16 226**	P	**Pn**	**21 28 31.4 -0.3**
BMR	**Baia Mare**	**5.31 86**	⇑*i*P	**Pn**	**21 28 32.2 -1.5**
BMR	**Baia Mare**	**5.31 86**	⇑*i*P	**Pn**	**21 28 32.2 -1.5**
SJES	**Sjenica**	**5.31 143**	*e*Pn	**Pn**	**21 28 31.9 -1.9**
KTD	**Kalmit**	**5.31 292**	P	**Pn**	**21 28 35.0 +1.2**
KTD	**Kalmit**	**5.31 292**	P	**Pn**	**21 28 35.0 +1.2**
KTD	**Kalmit**	**5.31 292**	P	**Pn**	**21 28 35.0 +1.2**
BEL	**Belsk**	**5.39 36**	*e*Pn	**Pn**	**21 28 35.8 +1.0**
BEL			*e*Pb	Pb	21 28 43.2 -5.6
BEL			*e*Pg	Pg	21 28 52.6 -5.4
BEL			*e*Sg	**Sg**	**21 30 05.7 -2.1**
BEL	**Belsk**	**5.39 36**	*e*Pn	**Pn**	**21 28 35.9 +1.1**
LANF	**Langenberg**	**5.41 288**	P	**Pn**	**21 28 35.6 +0.5**
LANF	**Langenberg**	**5.41 288**	P	**Pn**	**21 28 35.6 +0.5**
LANF	**Langenberg**	**5.41 288**	P	**Pn**	**21 28 35.6 +0.5**
LANF	**Langenberg**	**5.41 288**	P	**Pn**	**21 28 35.6 +0.5**
TNS	**Taunus Mts**	**5.42 302**	*e*Pn	**Pn**	**21 28 36.6 +1.3**
	SNR=27				

TNS	Taunus Mts	5.42 302	eP	Pn	21 28 36.6	+1.3
TNS	Taunus Mts	5.42 302	Pn	Pn	21 28 36.6	+1.3
	SNR=27					
LIBD	Limburg	5.44 279	P	Pn	21 28 36.3	+0.8
LIBD	Limburg	5.44 279	P	Pn	21 28 36.3	+0.8
LIBD	Limburg	5.44 279	P	Pn	21 28 36.3	+0.8
AQU	L'Aquila	5.49 198	ePn	Pn	21 28 36.4	+0.2
AQU			eSn	Sn	21 29 43.9	+4.7
AQU	L'Aquila	5.49 198⇑	iP	Pn	21 28 36.7	+0.4
AQU	L'Aquila	5.49 198	eP	Pn	21 28 36.4	+0.2
BBS	Basel-Blauen	5.51 272	P	Pn	21 28 36.5	0.0
BBS	Basel-Blauen	5.51 272	P	Pn	21 28 36.5	0.0
BBS	Basel-Blauen	5.51 272	P	Pn	21 28 36.5	0.0
HCY	Herceg Novi	5.54 158⇓	iPn	Pn	21 28 37.2	+0.3
HCY			eSn	Sn	21 29 39.6	-0.8
HCY	Herceg Novi	5.54 158⇓	iPn	Pn	21 28 37.2	+0.3
HCY			eSn	Sn	21 29 39.6	-0.8
BEY	Berane	5.61 146⇓	iPn	Pn	21 28 38.2	+0.3
BEY			eSn	Sn	21 29 41.0	-1.1
IVA	Berane	5.61 146⇓	iPn	Pn	21 28 38.2	+0.3
IVA			eSn	Sn	21 29 41.0	-1.1
CDF	Champ du Feu	5.67 281	ePn	Pn	21 28 38.6	-0.2
CDF	Champ du Feu	5.67 281	ePg	Pg	21 28 59.0	-4.4
CDF			eSg	Sg	21 30 13.0	-3.9
	comp=N,848nm,1.0s					
CDF	Champ du Feu	5.67 281	eP	Pn	21 28 38.6	-0.2
CDF	Champ du Feu	5.67 281	ePn	Pn	21 28 38.6	-0.2
CDF			ePg	Pg	21 28 59.0	-4.4
CDF			eSg	Sg	21 30 13.0	-3.9
CDF	Champ du Feu	5.67 281	ePn	Pn	21 28 38.6	-0.2
RMGR	Halanga-Turnu	5.71 118⇑	iP	Pn	21 28 39.9	+0.6
RMGR	Halanga-Turnu	5.71 118⇑	iP	Pn	21 28 39.9	+0.6
ECH	Echery	5.74 279	eP	Pn	21 28 39.7	+0.1
ECH	Echery	5.74 279	ePn	Pn	21 28 39.7	+0.1
ECH			ePg	Pg	21 29 04.1	-0.6
ECH			eSg	Sg	21 30 15.1	-3.8
ECH	Echery	5.74 279	P	Pn	21 28 40.2	+0.6
ECH			S	Sn	21 29 42.9	-2.4
ECH	Echery	5.74 279	ePn	Pn	21 28 39.7	+0.1
ECH	Echery	5.74 279	P	Pn	21 28 40.2	+0.6
MOF	Molkenrain	5.75 276	P	Pn	21 28 40.0	+0.2
MOF	Molkenrain	5.75 276	P	Pn	21 28 40.0	+0.2
MOF	Molkenrain	5.75 276	P	Pn	21 28 40.0	+0.2
MOF	Molkenrain	5.75 276	P	Pn	21 28 40.0	+0.2
PDG	Podgorica	5.78 152	ePn	Pn	21 28 40.7	+0.6
PDG	Podgorica	5.78 152⇓	iPn	Pn	21 28 40.6	+0.5
PDG			eSn	Sn	21 29 45.2	-0.9
TTG	Podgorica	5.78 152⇓	iPn	Pn	21 28 40.6	+0.5
TTG			eSn	Sn	21 29 45.2	-0.9
BUM	Brajici-Budva	5.79 155⇑	iPn	Pn	21 28 40.5	+0.2
BUM			eSn	Sn	21 29 44.9	-1.6
BUM	Brajici-Budva	5.79 155⇑	iPn	Pn	21 28 40.5	+0.2
BUM			eSn	Sn	21 29 44.9	-1.6
BOLS	Boljevac	5.81 128⇑	iPn	Pn	21 28 38.4	-2.2
BOLS	Boljevac	5.81 128⇑	iPn	Pn	21 28 38.4	-2.2
PCP	Piancastagn	5.81 241	P	Pn	21 28 42.0	+1.3
ABH	Alteburg	5.82 296	P	Pn	21 28 41.7	+1.0
ABH	Alteburg	5.82 296	P	Pn	21 28 41.7	+1.0
SENIN	Lac Senin/Sane	5.84 261	ePn	Pn	21 28 42.1	+0.8
SENIN	Lac Senin/Sane	5.84 261	ePn	Pn	21 28 42.1	+0.8
PVY	Plav	5.87 147⇓	iPn	Pn	21 28 41.4	-0.1
PVY			eSn	Sn	21 29 47.0	-1.7
PVY	Plav	5.87 147⇓	iPn	Pn	21 28 41.4	-0.1
PVY			eSn	Sn	21 29 47.0	-1.7
KOE	Koeppel	5.92 301	ePn	Pn	21 28 43.3	+1.2
KOE	Koeppel	5.92 301	Pn	Pn	21 28 43.3	+1.2
HINF	Hinteralfeld	5.94 275	ePn	Pn	21 28 41.9	-0.5
	SNR=1.0					
HINF			eSg	Sg	21 30 19.9	-5.4
	comp=N,384nm,0.8s,SNR=1.0					
HINF	Hinteralfeld	5.94 275	eP	Pn	21 28 41.9	-0.5
HINF	Hinteralfeld	5.94 275	ePn	Pn	21 28 41.9	-0.5
HINF			eSg	Sg	21 30 19.9	-5.4
HINF	Hinteralfeld	5.94 275	ePn	Pn	21 28 41.9	-0.5
	SNR=1.0					
LVV	L'vov	5.97 65	eP	Pn	21 28 42.7	-0.2
LVV			eS	Sn	21 29 52.9	+1.8
LVV			MLR	MLR		
	comp=Z,700nm,9.0s					
LVV			MLR	MLR		
	comp=N,500nm,8.0s					
LVV			MLR	MLR		
	comp=E,600nm,8.0s					
LVV	L'vov	5.97 65	eP	Pn	21 28 42.7	-0.2
	comp=E,700nm,9.0s					
LVV			eS	Sn	21 29 52.9	+1.8
LOMF	Lomont	5.98 271	P	Pn	21 28 43.0	-0.1
LOMF	Lomont	5.98 271	P	Pn	21 28 43.0	-0.1
LOMF	Lomont	5.98 271	P	Pn	21 28 43.0	-0.1
LOMF	Lomont	5.98 271	P	Pn	21 28 43.0	-0.1
LOT	Lotru	6.01 108⇑	iP	Pn	21 28 43.4	0.0
LOT	Lotru	6.01 108⇑	iP	Pn	21 28 43.4	0.0
BGG	Burgeitz	6.06 298	ePn	Pn	21 28 45.7	+1.7
BGG	Burgeitz	6.06 298	Pn	Pn	21 28 45.7	+1.7
RUP	Ruppelstein	6.06 293	P	Pn	21 28 46.2	+2.1
RUP	Ruppelstein	6.06 293	P	Pn	21 28 46.2	+2.1
RUP	Ruppelstein	6.06 293	P	Pn	21 28 46.2	+2.1
MDB	Medias	6.17 101⇑	iP	Pn	21 28 46.8	+1.3
MDB	Medias	6.17 101⇑	iP	Pn	21 28 46.8	+1.3
ULC	Ulcinj	6.20 154	ePn	Pn	21 28 46.2	+0.2
ULC			eSn	Sn	21 29 55.3	-1.3
ULC	Ulcinj	6.20 154	ePn	Pn	21 28 46.2	+0.2
ULC			eSn	Sn	21 29 55.3	-1.3
OG01	Vacheresse	6.26 262	P	Pn	21 28 47.3	+0.4
OG01	Vacheresse	6.26 262	P	Pn	21 28 47.3	+0.4
OG01	Vacheresse	6.26 262	P	Pn	21 28 47.3	+0.4
HAU	Haudompre	6.28 277	ePn	Pn	21 28 46.8	-0.2
	SNR=1.0					
HAU			eSg	Sg	21 30 30.5	-5.6
	comp=E,199nm,0.5s,SNR=1.0					
HAU	Haudompre	6.28 277	eP	Pn	21 28 46.8	-0.2
HAU	Haudompre	6.28 277	ePn	Pn	21 28 46.8	-0.2
HAU			eSg	Sg	21 30 30.5	-5.6
HAU	Haudompre	6.28 277	ePn	Pn	21 28 46.8	-0.2
	SNR=1.0					
HOBG	Hohbusch	6.40 305	ePn	Pn	21 28 50.5	+1.8
HOBG	Hohbusch	6.40 305	Pn	Pn	21 28 50.5	+1.8
BURAR	Bucovina Array	6.47 86⇓	iP	Pn	21 28 49.4	-0.4
BURAR	Bucovina Array	6.47 86⇓	iP	Pn	21 28 49.4	-0.4
BARS	Barje	6.48 135⇑	iPn	Pn	21 28 48.8	-1.0
BARS	Barje	6.48 135⇑	iPn	Pn	21 28 48.8	-1.0
LPG	La Plagne	6.49 254	eP	Pn	21 28 52.0	+1.9
	SNR=1.0					
LPG			eSn	Sn	21 30 00.3	-3.8
	comp=E,114nm,0.9s					
LPG	La Plagne	6.49 254	eP	Pn	21 28 52.0	+1.9
LPG			e		21 30 00.3	
LPG	La Plagne	6.49 254	eP	Pn	21 28 52.0	+1.9
LPG			eSn	Sn	21 30 00.3	-3.8
LPG	La Plagne	6.49 254	eP	Pn	21 28 52.0	+1.9
	SNR=1.0					
HILG	Hillesheim	6.49 298	ePn	Pn	21 28 51.1	+1.2
HILG	Hillesheim	6.49 298	Pn	Pn	21 28 51.1	+1.2
LPL	La Plagne	6.49 254	eP	Pn	21 28 52.2	+2.0
LPL			eSn	Sn	21 29 59.4	-4.7
	comp=E,37nm,0.5s					
LPL	La Plagne	6.49 254	eP	Pn	21 28 52.2	+2.0
LPL			e		21 29 59.4	
LPL	La Plagne	6.49 254	eP	Pn	21 28 52.2	+2.0
LPL			eSn	Sn	21 29 59.4	-4.7
LPL	La Plagne	6.49 254	eP	Pn	21 28 52.2	+2.0
RSL	Roselend	6.50 256	P	Pn	21 28 52.5	+2.3
RSL	Roselend	6.50 256	P	Pn	21 28 52.5	+2.3
RSL	Roselend	6.50 256	P	Pn	21 28 52.5	+2.3
RSL	Roselend	6.50 256	P	Pn	21 28 52.5	+2.3
STB	Steinbach	6.51 301	ePn	Pn	21 28 51.3	+1.2
STB			i Sn	Sn	21 30 03.1	-1.0
	comp=E,99nm,0.8s					
STB	Steinbach	6.51 301	Pn	Pn	21 28 51.3	+1.2
THEF	They Montfort	6.52 279	P	Pn	21 28 50.8	+0.4
THEF	They Montfort	6.52 279	P	Pn	21 28 50.8	+0.4
THEF	They Montfort	6.52 279	P	Pn	21 28 50.8	+0.4
THEF	They Montfort	6.52 279	P	Pn	21 28 50.8	+0.4
ZAPS	Zavoj	6.55 129⇑	iPn	Pn	21 28 50.3	-0.6
ARR	Arges	6.60 107⇑	iP	Pn	21 28 52.2	+0.7
ARR	Arges	6.60 107⇑	iP	Pn	21 28 52.2	+0.7
CABF	La Chapelle	6.60 265	ePn	Pn	21 28 51.4	-0.1
	SNR=1.0					
CABF	La Chapelle	6.60 265	eP	Pn	21 28 51.4	-0.1
CABF	La Chapelle	6.60 265	ePn	Pn	21 28 51.4	-0.1
CABF	La Chapelle	6.60 265	ePn	Pn	21 28 51.4	-0.1
	SNR=1.0					
WLF	Walferdange	6.62 292	P	Pn	21 28 53.1	+1.4
WLF	Walferdange	6.62 292	eP	Pn	21 28 52.5	+0.8
WLF	Walferdange	6.62 292	ePn	Pn	21 28 52.5	+0.8
WLF	Walferdange	6.62 292	eP	Pn	21 28 52.5	+0.8
OG22	Abries	6.65 248	P	Pn	21 28 52.7	+0.4
OG22	Abries	6.65 248	P	Pn	21 28 52.7	+0.4
OG22	Abries	6.65 248	P	Pn	21 28 52.7	+0.4
PAGF	Fort de Pagny	6.71 282	ePn	Pn	21 28 53.9	+0.9
	baz=107					
PAGF	Fort de Pagny	6.71 282	ePg	Pg	21 29 17.6	-5.7
PAGF			eSg	Sg	21 30 47.0	-3.2
	comp=E,126nm,0.8s					
PAGF	Fort de Pagny	6.71 282	ePn	Pn	21 28 53.9	+0.9
PAGF			ePg	Pg	21 29 17.6	-5.7
PAGF			eSg	Sg	21 30 47.0	-3.2
PAGF	Fort de Pagny	6.71 282	ePn	Pn	21 28 53.9	+0.9
	baz=107					
SAOF	Saorge	6.71 240	P	Pn	21 28 53.8	+0.8
SAOF	Saorge	6.71 240	P	Pn	21 28 53.8	+0.8
SAOF	Saorge	6.71 240	P	Pn	21 28 53.8	+0.8
SAOF	Saorge	6.71 240	P	Pn	21 28 53.8	+0.8
MBDF	Montbardon	6.80 248	ePn	Pn	21 28 54.1	-0.3
	SNR=1.0					
MBDF			eSn	Sn	21 30 06.9	-4.7
	comp=E,68nm,0.6s					
MBDF	Montbardon	6.80 248	eP	Pn	21 28 54.1	-0.3
MBDF			e		21 30 06.9	
MBDF	Montbardon	6.80 248	ePn	Pn	21 28 54.1	-0.3
MBDF			eSn	Sn	21 30 06.9	-4.7
MBDF	Montbardon	6.80 248	ePn	Pn	21 28 54.1	-0.3
	SNR=1.0					
KLL	Kalltalsperre	6.84 300	ePn	Pn	21 28 55.7	+1.0
KLL	Kalltalsperre	6.84 300	Pn	Pn	21 28 55.7	+1.0
VOIR		6.84 105⇑	iP	Pn	21 28 55.9	+1.0
VOIR		6.84 105⇑	iP	Pn	21 28 55.9	+1.0
SBF	Sospel	6.86 240	ePn	Pn	21 28 55.2	+0.2
	SNR=1.0					
SBF	Sospel	6.86 240	eP	Pn	21 28 55.2	+0.2
SBF	Sospel	6.86 240	ePn	Pn	21 28 55.2	+0.2
SBF	Sospel	6.86 240	ePn	Pn	21 28 55.2	+0.2
	SNR=1.0					
TOUF	Mont Tournerai	6.88 242	P	Pn	21 28 55.3	-0.2
TOUF	Mont Tournerai	6.88 242	P	Pn	21 28 55.3	-0.2
TOUF	Mont Tournerai	6.88 242	P	Pn	21 28 55.3	-0.2
TOUF	Mont Tournerai	6.88 242	P	Pn	21 28 55.3	-0.2
PGF	Pioggiola	6.91 225	ePn	Pn	21 28 55.4	-0.4
	SNR=1.0					
PGF			eSn	Sn	21 30 08.3	-5.9
	comp=E,35nm,0.9s					
PGF	Pioggiola	6.91 225	eP	Pn	21 28 55.4	-0.4
PGF			e		21 30 08.3	
PGF	Pioggiola	6.91 225	ePn	Pn	21 28 55.4	-0.4
PGF			eSn	Sn	21 30 08.3	-5.9
PGF	Pioggiola	6.91 225	ePn	Pn	21 28 55.4	-0.4
	SNR=1.0					
TIR	Tirane	6.95 153	eP	Pn	21 28 57.8	+1.6
TIR			e		21 30 17.7	
TIR	Tirane	6.95 153	ePn	Pn	21 28 57.8	+1.6
TIR			eSn	Sn	21 30 17.7	+2.6
TIR	Tirane	6.95 153	eP	Pn	21 28 57.8	+1.6
REVF	Revere	6.97 239	P	Pn	21 28 56.6	0.0
REVF	Revere	6.97 239	P	Pn	21 28 56.6	0.0
REVF	Revere	6.97 239	P	Pn	21 28 56.6	0.0
REVF	Revere	6.97 239	P	Pn	21 28 58.1	+1.5
REVF	Revere	6.97 239	P	Pn	21 28 56.6	0.0
SKO	Skopje	6.98 142	ePn	Pn	21 28 57.2	+0.5
SKO	Skopje	6.98 142	ePn	Pn	21 28 57.6	+0.9
MVIF	Mont Vial	7.00 241	P	Pn	21 28 57.5	+0.4
MVIF	Mont Vial	7.00 241	P	Pn	21 28 57.5	+0.4
MVIF	Mont Vial	7.00 241	P	Pn	21 28 57.5	+0.4
MVIF	Mont Vial	7.00 241	P	Pn	21 28 57.5	+0.4
HGN	Heimansgroeve	7.11 300	ePn	Pn	21 28 58.4	+0.1
	comp=E,7.4nm,0.9s					
HGN			eSn	Sn	21 30 19.0	+0.2
HGN	Heimansgroeve	7.11 300	ePn	Pn	21 28 58.4	+0.1
	comp=E,7.4nm,0.9s					
HGN			eSn	Sn	21 30 19.0	+0.2
SFTF	Sexfontaines	7.16 279	ePn	Pn	21 28 58.8	-0.3
	baz=96					
SFTF			eSg	Sg	21 31 00.1	-4.2
	comp=E,313nm,1.0s					
SFTF	Sexfontaines	7.16 279	ePn	Pn	21 28 58.8	-0.3
SFTF			eSg	Sg	21 31 00.1	-4.2
SFTF	Sexfontaines	7.16 279	ePn	Pn	21 28 58.8	-0.3
	baz=96					
MEZF	Maizieres J'vi	7.16 281	ePn	Pn	21 28 59.6	+0.5
	baz=92,SNR=1.0					
MEZF			eSn	Sn	21 30 15.9	-4.2
	SNR=1.0					
MEZF			eSg	Sg	21 30 58.6	-5.8
	comp=E,112nm,0.6s,SNR=1.0					
MEZF	Maizieres J'vi	7.16 281	ePn	Pn	21 28 59.6	+0.5
MEZF			eSn	Sn	21 30 15.9	-4.2
MEZF			eSg	Sg	21 30 58.6	-5.8
MEZF	Maizieres J'vi	7.16 281	ePn	Pn	21 28 59.6	+0.5
	baz=92,SNR=1.0					
PRAR	RASCA	7.18 88⇑	iP	Pn	21 28 58.9	-0.5
PRAR	RASCA	7.18 88⇑	iP	Pn	21 28 58.9	-0.5
WTSB	Winterswijk	7.20 311	ePn	Pn	21 29 08.8	+9.2
WTSB			eSn	Sn	21 30 24.9	+3.9
CALN	Calern	7.24 241	P	Pn	21 29 00.5	+0.1
CALN	Calern	7.24 241	P	Pn	21 29 00.5	+0.1
CALN	Calern	7.24 241	P	Pn	21 29 00.5	+0.1
CALN	Calern	7.24 241	P	Pn	21 29 00.5	+0.1
ORIF	Oris-en-Rattie	7.28 252	ePn	Pn	21 29 01.8	+0.9
	SNR=1.0					
ORIF	Oris-en-Rattie	7.28 252	eP	Pn	21 29 01.8	+0.9
ORIF	Oris-en-Rattie	7.28 252	ePn	Pn	21 29 01.8	+0.9
ORIF	Oris-en-Rattie	7.28 252	ePn	Pn	21 29 01.8	+0.9
	SNR=1.0					
VTS	Vitosha	7.33 130	ePn	Pn	21 29 00.4	-1.3
VTS	Vitosha	7.33 130⇓	iP	Pn	21 29 01.0	-0.7
VTS	Vitosha	7.33 130	ePn	Pn	21 29 00.4	-1.3
VTS	Vitosha	7.33 130⇓	iP	Pn	21 29 01.0	-0.7
BCLA	Clavier	7.36 296	P	Pn	21 29 03.6	+1.7
BCLA	Clavier	7.36 296	P	Pn	21 29 03.5	+1.7
OG25	Le Caire	7.41 248	P	Pn	21 29 04.9	+2.2
OG25	Le Caire	7.41 248	P	Pn	21 29 04.9	+2.2
OG25	Le Caire	7.41 248	P	Pn	21 29 04.9	+2.2
MLR	Muntele Rosu	7.41 103	Pn	Pn	21 29 04.4	+1.7
MLR			Sn	Sn	21 30 26.3	-0.3
MLR	Muntele Rosu	7.41 103⇓	iP	Pn	21 29 03.1	+0.4
MLR	Muntele Rosu	7.41 103	Pn	Pn	21 29 04.4	+1.7
	comp=E,0.1nm,0.3s,baz=313,slow=11,SNR=9.0					
MLR			Sn	Sn	21 30 26.3	-0.3
	comp=E,0.2nm,0.3s,baz=285,slow=20,SNR=2.0					
MLR	Muntele Rosu	7.41 103	P	Pn	21 29 04.4	+1.7
MLR			Sn	Sn	21 30 26.3	-0.3
FRF	La Foret Royal	7.50 241	ePn	Pn	21 29 03.5	-0.3
	SNR=1.0					
FRF	La Foret Royal	7.50 241	eP	Pn	21 29 03.5	-0.3
FRF	La Foret Royal	7.50 241	ePn	Pn	21 29 03.5	-0.3
FRF	La Foret Royal	7.50 241	ePn	Pn	21 29 03.5	-0.3
	SNR=1.0					
GIVF	Givet	7.56 293	ePn	Pn	21 29 06.5	+1.9
	SNR=1.0					
GIVF			eSg	Sg	21 31 13.3	-4.0
	comp=E,443nm,1.0s					
GIVF	Givet	7.56 293	eP	Pn	21 29 06.5	+1.9
GIVF	Givet	7.56 293	ePn	Pn	21 29 06.5	+1.9
GIVF			eSg	Sg	21 31 13.3	-4.0
GIVF	Givet	7.56 293	ePn	Pn	21 29 06.5	+1.9
	SNR=1.0					
TESR	Tescani	7.60 94⇓	iP	Pn	21 29 05.4	+0.3
TESR	Tescani	7.60 94⇓	iP	Pn	21 29 05.4	+0.3
CUC	Castrocucco	7.61 179	ePn	Pn	21 29 04.5	-0.9
CUC	Castrocucco	7.61 179	ePn	Pn	21 29 04.5	-0.9
DOU	Dourbes	7.70 293	P	Pn	21 29 08.3	+1.7
DOU	Dourbes	7.70 293	P	Pn	21 29 08.2	+1.7
LMR	La Mourre	7.71 240	ePn	Pn	21 29 06.0	-0.7
	SNR=1.0					
LMR	La Mourre	7.71 240	eP	Pn	21 29 06.0	-0.7
LMR	La Mourre	7.71 240	ePn	Pn	21 29 06.0	-0.7
LMR	La Mourre	7.71 240	ePn	Pn	21 29 06.0	-0.7
	SNR=1.0					
PLOR	Plostina	7.76 99⇑	iP	Pn	21 29 07.4	-0.1
PLOR	Plostina	7.76 99⇑	iP	Pn	21 29 07.4	-0.1
OCF	Saint Nazaire	7.80 251	P	Pn	21 29 08.7	+0.7
OCF	Saint Nazaire	7.80 251	P	Pn	21 29 08.7	+0.7
OG26	St.-Nazaire-De	7.80 251	P	Pn	21 29 08.7	+0.7
OG26	St.-Nazaire-De	7.80 251	P	Pn	21 29 08.7	+0.7
VRI	Vrincioaia	7.81 99⇓	iP	Pn	21 29 08.4	+0.3
VRI	Vrincioaia	7.81 99⇓	iP	Pn	21 29 08.4	+0.3
ZIMR		7.87 117⇑	iP	Pn	21 29 08.4	-0.5
SMRF	Simiane la Rot	7.92 246	ePn	Pn	21 29 09.6	0.0
	SNR=1.0					
SMRF	Simiane la Rot	7.92 246	ePn	Pn	21 29 09.6	0.0
SMRF	Simiane la Rot	7.92 246	ePn	Pn	21 29 09.6	0.0
	SNR=1.0					
BAIF	Baives	7.94 292	ePn	Pn	21 29 11.7	+2.0
	SNR=1.0					
BAIF			eSn	Sn	21 30 33.7	-5.6
	SNR=1.0					
BAIF			eSg	Sg	21 31 25.2	-4.1
	comp=E,116nm,0.7s,SNR=1.0					
BAIF	Baives	7.94 292	eP	Pn	21 29 11.7	+2.0
BAIF			e		21 30 33.7	
BAIF	Baives	7.94 292	ePn	Pn	21 29 11.7	+2.0
BAIF			eSn	Sn	21 30 33.7	-5.6
BAIF			eSg	Sg	21 31 25.2	-4.1
BAIF	Baives	7.94 292	ePn	Pn	21 29 11.7	+2.0
	SNR=1.0					
SUW	Suwalki	7.99 34	eP	Pn	21 29 10.7	+0.2
SUW	Suwalki	7.99 34	ePn	Pn	21 29 10.7	+0.2
SUW	Suwalki	7.99 34	ePn	Pn	21 29 10.7	+0.2
SUW	Suwalki	7.99 34	eP	Pn	21 29 10.7	+0.2
LOR	Lormes	8.00 272	ePn	Pn	21 29 11.1	+0.4
	baz=91,SNR=1.0					
LOR			eSg	Sg	21 31 27.0	-4.4
	comp=E,249nm,1.0s					
LOR	Lormes	8.00 272	ePn	Pn	21 29 11.1	+0.4
LOR			eSg	Sg	21 31 27.0	-4.4
LOR	Lormes	8.00 272	ePn	Pn	21 29 11.1	+0.4
	baz=91,SNR=1.0					
VAY	Valandovo	8.00 139	ePn	Pn	21 29 10.5	-0.2
VAY	Valandovo	8.00 139	ePn	Pn	21 29 10.9	+0.2
SNF	Seneffe	8.01 295	P	Pn	21 29 13.0	+2.2
SNF	Seneffe	8.01 295	P	Pn	21 29 12.9	+2.2
SSB	Saint Sauveur	8.02 257	eP	Pn	21 29 10.4	-0.5
SSB			e		21 30 34.8	
SSB	Saint Sauveur	8.02 257	ePn	Pn	21 29 10.3	-0.5
SSB			eSn	Sn	21 30 34.8	-6.6
SSB	Saint Sauveur	8.02 257	P	Pn	21 29 10.4	-0.5
SSB	Saint Sauveur	8.02 257	P	Pn	21 29 10.4	-0.5
VIVF	Saint-Julien-l	8.09 254	ePn	Pn	21 29 11.4	-0.5
	SNR=1.0					
VIVF			eSn	Sn	21 30 36.5	-6.7
	comp=E,26nm,0.4s,SNR=1.0					
VIVF	Saint-Julien-l	8.09 254	eP	Pn	21 29 11.4	-0.5
VIVF			e		21 30 36.5	
VIVF	Saint-Julien-l	8.09 254	ePn	Pn	21 29 11.4	-0.5
VIVF			eSn	Sn	21 30 36.5	-6.7
VIVF	Saint-Julien-l	8.09 254	ePn	Pn	21 29 11.4	-0.5
	SNR=1.0					
SMF	Signal de Mont	8.11 268	ePn	Pn	21 29 11.5	-0.7
	SNR=1.0					
SMF			eSn	Sn	21 30 36.7	-6.9
SMF			eSg	Sg	21 31 30.2	-4.7
	comp=E,274nm,1.2s					
SMF	Signal de Mont	8.11 268	eP	Pn	21 29 11.5	-0.7
SMF			e		21 30 36.7	
SMF	Signal de Mont	8.11 268	ePn	Pn	21 29 11.5	-0.7
SMF			eSn	Sn	21 30 36.7	-6.9
SMF			eSg	Sg	21 31 30.2	-4.7
SMF	Signal de Mont	8.11 268	ePn	Pn	21 29 11.5	-0.7
	SNR=1.0					
GHRR		8.21 97⇓	iP	Pn	21 29 14.2	+0.6
GHRR		8.21 97⇓	iP	Pn	21 29 14.2	+0.6
SSF	Saint Saulge	8.27 271	ePn	Pn	21 29 14.2	-0.1
	SNR=1.0					
SSF			eSg	Sg	21 31 35.6	-4.3
	comp=E,120nm,0.8s					
SSF	Saint Saulge	8.27 271	eP	Pn	21 29 14.2	-0.1
SSF	Saint Saulge	8.27 271	ePn	Pn	21 29 14.2	-0.1
SSF			eSg	Sg	21 31 35.6	-4.3
SSF	Saint Saulge	8.27 271	ePn	Pn	21 29 14.2	-0.1
	SNR=1.0					
AVF	Avril sur Loir	8.41 269	ePn	Pn	21 29 15.7	-0.6
	SNR=1.0					
AVF	Avril sur Loir	8.41 269	eP	Pn	21 29 15.7	-0.6
AVF	Avril sur Loir	8.41 269	ePn	Pn	21 29 15.7	-0.6
AVF	Avril sur Loir	8.41 269	ePn	Pn	21 29 15.7	-0.6
	SNR=1.0					
TIP	Timpagrande	8.46 174	ePn	Pn	21 29 17.5	+0.4
TIP	Timpagrande	8.46 174	ePn	Pn	21 29 17.5	+0.4
LEOM	Leova	8.68 93⇑	iP	Pn	21 29 19.3	-0.7
LEOM	Leova	8.68 93⇑	iP	Pn	21 29 19.3	-0.7
AGO	Saint Agoulin	8.72 264	P	Pn	21 29 19.7	-0.9
AGO	Saint Agoulin	8.72 264	P	Pn	21 29 19.7	-0.9
AGO	Saint Agoulin	8.72 264	P	Pn	21 29 19.7	-0.9
BGF	Bois d'Agland	8.80 268	ePn	Pn	21 29 20.8	-0.8
	SNR=1.0					
BGF			eSn	Sn	21 30 54.1	-6.4
	comp=E,35nm,0.3s,SNR=1.0					
BGF	Bois d'Agland	8.80 268	eP	Pn	21 29 20.8	-0.8
BGF			e		21 30 54.1	
BGF	Bois d'Agland	8.80 268	ePn	Pn	21 29 20.8	-0.8
BGF			eSn	Sn	21 30 54.1	-6.4
BGF	Bois d'Agland	8.80 268	ePn	Pn	21 29 20.8	-0.8
	SNR=1.0					
PYM	Petit Puy Mans	8.89 263	P	Pn	21 29 22.9	0.0
PYM	Petit Puy Mans	8.89 263	P	Pn	21 29 22.9	0.0
PYM	Petit Puy Mans	8.89 263	P	Pn	21 29 22.9	0.0
PYM	Petit Puy Mans	8.89 263	P	Pn	21 29 22.9	0.0
LBL	Lubilhac	8.89 259	P	Pn	21 29 22.4	-0.5
LBL	Lubilhac	8.89 259	P	Pn	21 29 22.4	-0.5
LBL	Lubilhac	8.89 259	P	Pn	21 29 22.4	-0.5
LBL	Lubilhac	8.89 259	P	Pn	21 29 22.4	-0.5
LASF	Ste Croix	8.95 251	ePn	Pn	21 29 23.1	-0.7
	SNR=1.0					
LASF			eSn	Sn	21 30 59.1	-5.3
	comp=E,72nm,0.6s					
LASF	Ste Croix	8.95 251	ePn	Pn	21 29 23.1	-0.7
LASF			eSn	Sn	21 30 59.1	-5.3
LASF	Ste Croix	8.95 251	ePn	Pn	21 29 23.1	-0.7
	SNR=1.0					
KIS	Kishinev	8.98 89	eP	Pg	21 30 08.0	+1.5
CLF	Chambon-Foret	9.02 278	eP	Pn	21 29 26.2	+1.7
CLF	Chambon-Foret	9.02 278	eP	Pn	21 29 26.2	+1.7
TCF	Toulx Ste Croi	9.29 267	ePn	Pn	21 29 27.3	-1.0
	SNR=1.0					
TCF	Toulx Ste Croi	9.29 267	eP	Pn	21 29 27.3	-1.0
TCF	Toulx Ste Croi	9.29 267	ePn	Pn	21 29 27.3	-1.0
TCF	Toulx Ste Croi	9.29 267	ePn	Pn	21 29 27.3	-1.0
	SNR=1.0					
FRNF	Fournols	9.29 261	P	Pn	21 29 28.7	+0.3
FRNF	Fournols	9.29 261	P	Pn	21 29 28.7	+0.3
FRNF	Fournols	9.29 261	P	Pn	21 29 28.7	+0.3
VSL	Villasalto	9.29 212	ePn	Pn	21 29 29.7	+1.3
VSL	Villasalto	9.29 212	ePn	Pn	21 29 29.7	+1.3
CEL	Celeste	9.35 179	ePn	Pn	21 29 29.4	+0.2
CEL	Celeste	9.35 179	ePn	Pn	21 29 29.4	+0.2
AKASG	Malin Array Be	9.42 66	P	Pn	21 29 29.2	-0.9
AKASG			pmax	pmax		
	comp=Z,1.0nm,0.3s					
AKASG	Malin Array Be	9.42 66	Pn	Pn	21 29 29.2	-0.9
AKASG	Malin Array Be	9.42 66	Pn	Pn	21 29 29.2	-0.9
	comp=Z,0.5nm,0.3s,baz=250,slow=13,SNR=4.6					
AKASG	Malin Array Be	9.42 66	P	Pn	21 29 29.2	-0.9
	comp=Z,1.0nm,0.3s					
TIRR	Tirgusor	9.42 105⇑	iP	Pn	21 29 30.8	+0.7
TIRR	Tirgusor	9.42 105⇑	iP	Pn	21 29 30.8	+0.7
MUD	Monsted U'grnd	9.71 338	eP	Pn	21 29 40.6	+6.6
MUD	Monsted U'grnd	9.71 338	i P	Pn	21 29 40.6	+6.6
CAF	Calviac	9.78 259	ePn	Pn	21 29 34.7	-0.4
	SNR=1.0					
CAF	Calviac	9.78 259	eP	Pn	21 29 34.7	-0.4
CAF	Calviac	9.78 259	ePn	Pn	21 29 34.7	-0.4
CAF	Calviac	9.78 259	ePn	Pn	21 29 34.7	-0.4
	SNR=1.0					
RJF	Les Rejaudoux	10.02 262	ePn	Pn	21 29 38.3	0.0
RJF			eSn	Sn	21 31 23.6	-6.9
	comp=Z,11nm,0.4s					
RJF	Les Rejaudoux	10.02 262	eP	Pn	21 29 38.3	0.0
RJF			e		21 31 23.6	
RJF	Les Rejaudoux	10.02 262	ePn	Pn	21 29 38.3	0.0
RJF			eSn	Sn	21 31 23.6	-6.9
RJF	Les Rejaudoux	10.02 262	ePn	Pn	21 29 38.3	0.0
NACGM	Naroch	10.09 40	eP	Pn	21 29 35.0	-4.2
MNK	Minsk	10.31 43⇓	eP	Pn	21 29 40.0	-2.2
MNK			pmax	pmax		
	comp=Z,80nm,1.0s					
MNK	Minsk	10.31 43	eP	Pn	21 29 40.0	-2.2
	comp=Z,80nm,1.0s					
MICGM	Minsk	10.33 44⇓	eP	Pn	21 29 40.0	-2.5

MTLF Montolieu 10.35 251 *e*Pn **Pn** **21 29 42.3 -0.5**
SNR=1.0
MTLF *e*Sn Sn 21 31 32.5 -6.1
comp=Z,10.0nm,0.6s
MTLF Montolieu 10.35 251 *e*P **Pn** **21 29 42.3 -0.5**
MTLF *e* 21 31 32.5
MTLF Montolieu 10.35 251 *e*Pn **Pn** **21 29 42.3 -0.5**
MTLF *e*Sn Sn 21 31 32.5 -6.1
MTLF Montolieu 10.35 251 *e*Pn **Pn** **21 29 42.3 -0.5**
SNR=1.0
LDF La Druitiere 10.60 281 *e*Pn **Pn** **21 29 46.0 -0.2**
SNR=1.0
LDF La Druitiere 10.60 281 *e*P **Pn** **21 29 46.0 -0.2**
LDF La Druitiere 10.60 281 *e*Pn **Pn** **21 29 46.0 -0.2**
LDF La Druitiere 10.60 281 *e*Pn **Pn** **21 29 46.0 -0.2**
SNR=1.0
LFF La Frestale 10.66 261 *e*Pn **Pn** **21 29 46.8 -0.3**
SNR=1.0
LFF La Frestale 10.66 261 *e*P **Pn** **21 29 46.8 -0.3**
LFF La Frestale 10.66 261 *e*Pn **Pn** **21 29 46.8 -0.3**
LFF La Frestale 10.66 261 *e*Pn **Pn** **21 29 46.8 -0.3**
SNR=1.0
MFF Saint Martin d 10.81 270 *e*Pn **Pn** **21 29 48.7 -0.5**
SNR=1.0
MFF Saint Martin d 10.81 270 *e*P **Pn** **21 29 48.7 -0.5**
MFF Saint Martin d 10.81 270 *e*Pn **Pn** **21 29 48.7 -0.5**
MFF Saint Martin d 10.81 270 *e*Pn **Pn** **21 29 48.7 -0.5**
SNR=1.0
FLN La Foliniere 10.83 282 *e*Pn **Pn** **21 29 49.2 -0.2**
baz=98,SNR=1.0
FLN La Foliniere 10.83 282 *e*P **Pn** **21 29 49.2 -0.2**
FLN La Foliniere 10.83 282 *e*Pn **Pn** **21 29 49.2 -0.2**
FLN La Foliniere 10.83 282 *e*Pn **Pn** **21 29 49.2 -0.2**
baz=98,SNR=1.0
GRR Gorron 11.09 280 *e*Pn **Pn** **21 29 52.8 -0.1**
SNR=1.0
GRR *e*Sn **Sn** **21 31 51.2 -5.5**
comp=Z,8.3nm,0.6s,SNR=1.0
GRR Gorron 11.09 280 *e*P **Pn** **21 29 52.8 -0.1**
GRR *e* 21 31 51.2
GRR Gorron 11.09 280 *e*Pn **Pn** **21 29 52.8 -0.1**
GRR *e*Sn **Sn** **21 31 51.2 -5.5**
GRR Gorron 11.09 280 *e*Pn **Pn** **21 29 52.8 -0.1**
SNR=1.0
EPF Esparros 11.70 253 *e*Pn **Pn** **21 30 01.1 -0.3**
SNR=1.0
EPF Esparros 11.70 253 *e*P **Pn** **21 30 01.1 -0.3**
EPF Esparros 11.70 253 *e*Pn **Pn** **21 30 01.1 -0.3**
EPF Esparros 11.70 253 *e*Pn **Pn** **21 30 01.1 -0.3**
SNR=1.0
SGMF Saint Gilles 12.23 280 *e*Pn **Pn** **21 30 07.1 -1.4**
SNR=1.0
SGMF Saint Gilles 12.23 280 *e*P **Pn** **21 30 07.1 -1.4**
SGMF Saint Gilles 12.23 280 *e*Pn **Pn** **21 30 07.1 -1.4**
SGMF Saint Gilles 12.23 280 *e*Pn **Pn** **21 30 07.1 -1.4**
SNR=1.0
ETSF Etsaut 12.35 254 *e*P **Pn** **21 30 12.7 +2.5**
ETSF Etsaut 12.35 254 *e*P **Pn** **21 30 12.7 +2.5**
ETSF Etsaut 12.35 254 *e*P **Pn** **21 30 12.7 +2.5**
ETSF Etsaut 12.35 254 *e*P **Pn** **21 30 12.7 +2.5**
HFS Hagfors 12.60 356 Pn **Pn** **21 30 14.7 +1.1**
HFS Hagfors 12.60 356 Pn **Pn** **21 30 14.7 +1.1**
comp=Z,0.3nm,0.3s,baz=156,slow=11,SNR=7.6
HFS LR LR 21 35 26.5
comp=Z,190nm,19.9s,baz=245,slow=39
HFS Hagfors 12.60 356 P **Pn** **21 30 14.7 +1.1**
comp=Z,191nm,19.9s
QUIF Quistinic 12.66 278 *e*Pn **Pn** **21 30 13.6 -0.8**
SNR=1.0
QUIF *e*Sn Sn 21 32 28.9 -6.2
comp=Z,9.7nm,0.6s,SNR=1.0
QUIF Quistinic 12.66 278 *e*P **Pn** **21 30 13.6 -0.8**
QUIF *e* 21 32 28.9
QUIF Quistinic 12.66 278 *e*Pn **Pn** **21 30 13.6 -0.8**
QUIF *e*Sn Sn 21 32 28.9 -6.2
QUIF Quistinic 12.66 278 *e*Pn **Pn** **21 30 13.6 -0.8**
SNR=1.0
SJPF Ste Jean 12.68 255 *e*Pn **Pn** **21 30 14.2 -0.6**
SNR=1.0
SJPF Ste Jean 12.68 255 *e*P **Pn** **21 30 14.2 -0.6**
SJPF Ste Jean 12.68 255 *e*Pn **Pn** **21 30 14.2 -0.6**
SJPF Ste Jean 12.68 255 *e*Pn **Pn** **21 30 14.2 -0.6**
SNR=1.0
ROSF Rostrenen 12.70 280 *e*Pn **Pn** **21 30 14.7 -0.3**
ROSF Rostrenen 12.70 280 *e*P **Pn** **21 30 14.7 -0.3**
ROSF Rostrenen 12.70 280 *e*Pn **Pn** **21 30 14.7 -0.3**
ROSF Rostrenen 12.70 280 *e*Pn **Pn** **21 30 14.7 -0.3**
VSU Vasula 12.73 27 *i*P **Pn** **21 30 16.3 +1.0**
VSU pmax pmax
comp=Z,14nm,0.6s
VSU Vasula 12.73 27 *i*P **Pn** **21 30 16.3 +1.0**
comp=Z,14nm,0.6s
KEST Kesra 12.76 204 *e*Pn **Pn** **21 30 18.7 +2.8**
KEST Kesra 12.76 204 Pn **Pn** **21 30 18.4 +2.5**
comp=Z,0.1nm,0.3s,baz=25,slow=0.5,SNR=9.6
KEST LR LR 21 35 48.0
comp=Z,84nm,18.1s,baz=208,slow=40
KEST Kesra 12.76 204 *e*Pn **Pn** **21 30 18.7 +2.8**
NB2 NORSAR Subarra 13.70 351 P **Pn** **21 30 29.9 +1.3**
comp=Z,4.4nm,1.1s,baz=173,slow=11
NB2 NORSAR Subarra 13.70 351 P **Pn** **21 30 29.9 +1.3**
comp=Z,4.4nm,1.1s,SNR=4.5
NOA NORSAR Array B 13.70 351 Pn **Pn** **21 30 29.0 +0.4**
NOA NORSAR Array B 13.70 351 Pn **Pn** **21 30 29.0 +0.4**
comp=Z,0.2nm,0.3s,baz=169,slow=13,SNR=4.6
NOA NORSAR Array B 13.70 351 P **Pn** **21 30 29.0 +0.4**
EKA Eskdalemuir Ar 14.01 310 Pn **Pn** **21 30 33.8 +1.1**
EKA Eskdalemuir Ar 14.01 310 Pn **Pn** **21 30 33.8 +1.1**
baz=123,slow=14,SNR=3.4
EKA Eskdalemuir Ar 14.01 310 P **Pn** **21 30 33.8 +1.1**
FINES FINESS Array B 15.10 20 Pn **Pn** **21 30 45.0 -2.5**
FINES FINESS Array B 15.10 20 Pn **Pn** **21 30 45.0 -2.5**
comp=Z,0.2nm,0.3s,baz=203,slow=10,SNR=10.0
BRTR Keskin Array B 15.20 115 Pn **Pn** **21 30 48.8 -0.3**
BRTR Keskin Array B 15.20 115 Pn **Pn** **21 30 48.8 -0.3**
comp=Z,0.1nm,0.3s,baz=320,slow=8.1,SNR=4.7
BRTR Keskin Array B 15.20 115 Pn **Pn** **21 30 48.8 -0.3**
VSR Storozhevoye 15.71 68 *e*P **Pn** **21 30 54.5 -1.1**
VSR pmax pmax
comp=N,4.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR pmax pmax
comp=Z,6.0nm,1.1s
KAF Kangasniemi 15.74 19 *e*P **Pn** **21 30 53.9 -2.1**
KAF Kangasniemi 15.74 19 *e*p **Pn** **21 30 53.9 -2.1**
VORD Divnogorie 15.77 69 *e*P **Pn** **21 30 55.7 -0.7**
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,9.0nm,0.6s
VORD pmax pmax
comp=Z,4.0nm,0.6s
ESDC Sonseca Array 16.23 248 Pn **Pn** **21 31 01.6 -0.8**
ESDC Sonseca Array 16.23 248 Pn **Pn** **21 31 01.6 -0.8**
comp=Z,0.2nm,0.3s,baz=59,slow=14,SNR=23
ESDC Sonseca Array 16.23 248 Pn **Pn** **21 31 01.6 -0.8**
PAB San Pablo 16.55 248 *e*P **Pn** **21 31 05.3 -1.2**
PAB pmax pmax
comp=Z,7.0nm,0.8s
PAB San Pablo 16.55 248 *e*Pn **Pn** **21 31 05.3 -1.2**
comp=Z,7.3nm,0.8s
PAB San Pablo 16.55 248 *e*Pn **Pn** **21 31 05.3 -1.2**
comp=Z,7.3nm,0.8s
PBRG Braganca 16.91 258 *e*P **P** **21 31 13.4 +0.4**
comp=Z,22nm,1.9s
PBRG Braganca 16.91 258 *e*P **P** **21 31 13.4 +0.4**
comp=Z,22nm,1.9s
VRHR Novokhopersk 17.25 69 *e*P **Pn** **21 31 13.2 -2.0**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,8.0nm,0.8s
MVO Moncorvo 17.41 257 *e*P **P** **21 31 20.1 +1.6**
comp=Z,14nm,2.0s
MVO Moncorvo 17.41 257 *e*P **P** **21 31 20.1 +1.6**
comp=Z,14nm,2.0s
JOF Joensuu 17.67 24 *e*P **Pn** **21 31 16.4 -3.9**
JOF Joensuu 17.67 24 *e*p **Pn** **21 31 16.4 -3.9**
PVRL Vila Real 17.81 258 *e*P **P** **21 31 24.9 +2.0**
comp=Z,23nm,1.5s
PVRL Vila Real 17.81 258 *e*P **P** **21 31 24.9 +2.0**
comp=Z,23nm,1.5s

POLO Lamas de Olo 17.81 258 *e*P **P** **21 31 23.3 +0.3**
comp=Z,9.0nm,2.3s
POLO Lamas de Olo 17.81 258 *e*P **P** **21 31 23.3 +0.3**
comp=Z,9.0nm,2.3s
PGAV Gavieira, Arco 17.86 260 *e*P **Pn** **21 31 22.6 -0.3**
comp=Z,27nm,1.6s
PGAV Gavieira, Arco 17.86 260 *e*P **Pn** **21 31 22.6 -0.3**
comp=Z,27nm,1.6s
PVIS Viseu 18.20 256 *e*P **Pn** **21 31 26.7 -0.4**
comp=Z,16nm,2.5s
PVIS Viseu 18.20 256 *e*P **Pn** **21 31 26.7 -0.4**
comp=Z,16nm,2.5s
PCBR Castelo Branco 18.38 253 *e*P **P** **21 31 30.0 +0.8**
comp=Z,18nm,2.7s
PCBR Castelo Branco 18.38 253 *e*P **P** **21 31 30.0 +0.8**
comp=Z,18nm,2.7s
PMRV Marv??o 18.55 252 *e*P **Pn** **21 31 31.7 +0.4**
comp=Z,16nm,0.8s
PMRV Marv??o 18.55 252 *e*P **Pn** **21 31 31.7 +0.4**
comp=Z,16nm,0.8s
PESTR Estremoz 18.99 251 *e*P **Pn** **21 31 37.7 +1.0**
comp=Z,18nm,2.4s
PESTR Estremoz 18.99 251 *e*P **Pn** **21 31 37.7 +1.0**
comp=Z,18nm,2.4s
KIV Kislovodsk 19.17 91 *e*P **P** **21 31 37.6 -0.4**
KIV pmax pmax
comp=Z,10.0nm,1.1s
KIV MLR MLR
comp=Z,98nm,14.0s
KIV Kislovodsk 19.17 91 *e*P **P** **21 31 37.6 -0.4**
comp=Z,98nm,14.0s
PMTG Montargil 19.29 252 *e*P **P** **21 31 39.5 +0.3**
comp=Z,14nm,1.5s
PMTG Montargil 19.29 252 *e*P **P** **21 31 39.5 +0.3**
comp=Z,14nm,1.5s
KBZ Khabaz 19.39 91 P **Pn** **21 31 41.9 +0.4**
KBZ MLR MLR
comp=Z,124nm,18.1s
KBZ Khabaz 19.39 91 P **Pn** **21 31 41.9 +0.4**
KBZ Khabaz 19.39 91 P **Pn** **21 31 41.9 +0.4**
comp=Z,0.1nm,0.3s,baz=305,slow=12,SNR=8.4
KBZ LR LR 21 40 26.1
comp=Z,124nm,18.1s,baz=326,slow=41
KBZ Khabaz 19.39 91 P **Pn** **21 31 41.8 +0.4**
EVO Evora 19.46 251 *e*P **Pn** **21 31 42.2 0.0**
comp=Z,19nm,2.1s
EVO Evora 19.46 251 *e*P **Pn** **21 31 42.2 0.0**
comp=Z,19nm,2.1s
PVAQ Vaqueiros 19.94 248 *e*P **Pn** **21 31 47.3 -0.7**
comp=Z,35nm,1.6s
PVAQ Vaqueiros 19.94 248 *e*P **Pn** **21 31 47.3 -0.7**
comp=Z,35nm,1.6s
PCVE Castro Verde 20.01 249 *e*P Pn 21 31 48.4 -0.4
comp=Z,24nm,1.7s
PCVE Castro Verde 20.01 249 *e*P Pn 21 31 48.4 -0.4
comp=Z,24nm,1.7s
PBDV Barranco-do-Ve 20.18 248 *e*P Pn 21 31 51.4 +0.6
comp=Z,55nm,1.7s
PBDV Barranco-do-Ve 20.18 248 *e*P Pn 21 31 51.4 +0.6
comp=Z,55nm,1.7s
ZEI Tsey 20.43 93 *e*P Pn 21 31 56.3 +2.2
ZEI pmax pmax
comp=Z,22nm,2.0s
MDT Midelt 21.30 233 P **P** **21 32 01.0 -0.2**
MDT Midelt 21.30 233 P **P** **21 32 01.0 -0.2**
comp=Z,4.3nm,0.8s,baz=58,slow=14,SNR=13
MDT LR LR 21 40 48.4
comp=Z,77nm,19.1s,baz=7.6,slow=38
MDT Midelt 21.30 233 P **P** **21 32 01.0 -0.2**
GNI Garni 22.17 99 *e*P **P** **21 32 11.3 +0.8**
comp=Z,8.8nm,0.9s
GNI Garni 22.17 99 P **P** **21 32 10.5 0.0**
comp=Z,6.3nm,0.8s,baz=317,slow=3.8,SNR=9.5
GNI LR LR 21 41 10.5
comp=Z,37nm,21.5s,baz=233,slow=38
GNI Garni 22.17 99 P **P** **21 32 10.5 0.0**
comp=Z,37nm,21.5s
ASF Jabal al Asfar 22.33 126 LR LR 21 41 13.8
comp=Z,46nm,21.0s,baz=216,slow=38
ARCES ARCESS Array B 22.52 9 P **P** **21 32 14.8 +1.0**
ARCES ARCESS Array B 22.52 9 P **P** **21 32 14.8 +1.0**
comp=Z,10nm,1.2s,baz=202,slow=11,SNR=6.0
ARCES LR LR 21 41 03.9
comp=Z,37nm,19.7s,baz=22,slow=37
ARCES ARCESS Array B 22.52 9 P **P** **21 32 14.9 +1.0**
comp=Z,37nm,19.7s
EIL Elat 23.30 133 P **P** **21 32 20.4 -1.9**
EIL Elat 23.30 133 P **P** **21 32 20.4 -1.9**
comp=Z,4.6nm,0.9s,baz=336,slow=9.9,SNR=3.7
EIL Elat 23.30 133 P **P** **21 32 20.5 -1.9**
TAM Tamanrasset 26.06 202 *e*P **P** **21 32 48.7 +0.7**
TAM pmax pmax
comp=Z,1.0nm,0.5s
TAM Tamanrasset 26.06 202 *e*P **P** **21 32 48.6 +0.7**
comp=Z,1.3nm,0.5s
TAM Tamanrasset 26.06 202 *e*P **P** **21 32 48.7 +0.7**
comp=Z,1.0nm,0.5s
ARU Arti 27.44 55*d* *i*P **P** **21 33 00.7 +0.7**
ARU 21 33 42.1
ARU S **S** **21 37 38.1 -1.7**
ARU pmax pmax
comp=Z,5.0nm,1.0s
ARU Arti 27.44 55 *i*P **P** **21 33 00.7 +0.7**
comp=Z,5.0nm,1.0s
AKTK Aktyubinsk 27.66 68 P **P** **21 33 02.5 +0.5**
comp=Z,70nm,19.3s
AKTO Aktyubinsk 27.66 68 P **P** **21 33 02.5 +0.5**
AKTO pmax pmax
comp=Z,4.0nm,0.7s
AKTO MLR MLR
comp=Z,70nm,19.3s
AKTO Aktyubinsk 27.66 68 P **P** **21 33 02.5 +0.5**
AKTO Aktyubinsk 27.66 68 P **P** **21 33 02.5 +0.5**
comp=Z,4.0nm,0.7s,baz=275,slow=10,SNR=23
AKTO LR LR 21 43 42.9
comp=Z,70nm,19.3s,baz=131,slow=36
AKTO Aktyubinsk 27.66 68 P **P** **21 33 02.5 +0.5**
SVE Sverdlovsk 28.58 54[1] *e*P **P** **21 33 11.5 +1.3**
SVE *e*S S 21 37 49.9 -7.9
SVE pmax pmax
comp=Z,18nm,1.3s
SVE MLR MLR
comp=Z,288nm,12.0s
SVE Sverdlovsk 28.58 54 *e*P **P** **21 33 11.5 +1.3**
comp=Z,18nm,1.3s
ABKAR Akbulak array 29.13 70 *e*P **P** **21 33 15.8 +0.7**
comp=Z,1.0nm,0.6s
ABKAR Akbulak array 29.13 70 *e*P **P** **21 33 15.8 +0.7**
comp=Z,1.0nm,0.6s
RAYN Ar Rayn 33.81 125 *e*P **P** **21 33 57.6 +1.1**
comp=Z,4.1nm,1.0s
RAYN Ar Rayn 33.81 125 *e*P **P** **21 33 57.7 +1.1**
comp=Z,4.1nm,1.0s
BRVK Borovoye 34.57 60 *e*P **P** **21 34 04.7 +1.8**
BRVK pmax pmax
comp=Z,9.0nm,0.8s
BRVK Borovoye 34.57 60 *e*P **P** **21 34 05.2 +2.3**
comp=Z,7.2nm,0.6s
BRVK Borovoye 34.57 60 *e*P **P** **21 34 04.7 +1.8**
comp=Z,9.0nm,0.8s
TORD Torodi Ar. Bea 36.28 203 P **P** **21 34 18.1 +0.2**
TORD Torodi Ar. Bea 36.28 203 P **P** **21 34 18.1 +0.2**
comp=Z,3.1nm,0.7s,baz=14,slow=8.5,SNR=20
TORD Torodi Ar. Bea 36.28 203 P **P** **21 34 18.1 +0.2**
KURK Kurchatov 40.20 61*c* *i*P **P** **21 34 50.7 +0.2**
KURK pmax pmax
comp=Z,9.0nm,0.7s
KURK Kurchatov 40.20 61 *e*P **P** **21 34 51.5 +0.9**
comp=Z,9.4nm,0.8s
KURK Kurchatov 40.20 61 *i*P **P** **21 34 50.7 +0.2**
comp=Z,9.0nm,0.7s
EKS2 Erkin-Say 40.48 75 *e*P **P** **21 34 54.5 +1.4**
EKS2 pmax pmax
comp=Z,5.0nm,0.8s
EKS2 Erkin-Say 40.48 75 *e*P **P** **21 34 54.5 +1.4**
comp=Z,4.8nm,0.8s
EKS2 Erkin-Say 40.48 75 *e*P **P** **21 34 54.5 +1.4**
comp=Z,5.0nm,0.8s
AAK Ala-Archa 40.96 74 *e*P **P** **21 34 58.4 +1.2**
AAK pmax pmax
comp=Z,3.0nm,0.8s
AAK Ala-Archa 40.96 74 *e*P **P** **21 34 58.4 +1.2**
comp=Z,2.8nm,0.8s
AAK Ala-Archa 40.96 74 *e*P **P** **21 34 58.4 +1.2**
comp=Z,3.0nm,0.8s
NVS Novosibirsk 41.42 54 *e*P **P** **21 35 01.4 +0.8**
NVS pmax pmax
comp=Z,5.0nm,0.8s
NVS pmax pmax
comp=E,2.0nm,0.6s
NVS Novosibirsk 41.42 54 *e*P **P** **21 35 01.4 +0.8**
comp=E,5.0nm,0.8s
ZALV Zalesovo Beam 42.60 55 P **P** **21 35 11.0 +0.8**
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV MLR MLR
comp=Z,53nm,19.0s
ZALV Zalesovo Beam 42.60 55 P **P** **21 35 11.0 +0.8**
ZALV Zalesovo Beam 42.60 55 P **P** **21 35 11.0 +0.8**
comp=Z,1.0nm,0.6s,baz=275,slow=8.1,SNR=6.2
ZALV LR LR 21 54 06.1
comp=Z,53nm,19.0s,baz=248,slow=38
ZALV Zalesovo Beam 42.60 55 P **P** **21 35 11.0 +0.8**
comp=Z,53nm,19.0s
KSH Kashi 43.47 78 *e*P **P** **21 35 18.4 +0.8**
KSH *e*pP **pP** **21 35 22.5 +0.6**
KSH *e*sP **sP** **21 35 25.3 +1.7**
KSH *e*PP **PP** **21 37 00.7 +2.2**
KSH *e*ScP **ScP** **21 40 58.9 +2.5**
KSH *e*S **S** **21 41 41.5 -4.2**
KSH *e*ScS **ScS** **21 45 16.5 -0.5**
KSH pmax pmax
comp=Z,3.0nm,0.4s
KSH LR LR
comp=N,110nm,6.7s
KSH LR LR
comp=E,82nm,6.2s
KSH LR LR
comp=Z,88nm,7.0s
MKAR Makanchi Array 44.01 65 P **P** **21 35 22.5 +0.8**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 44.01 65 *e*P **P** **21 35 22.7 +1.0**
MKAR Makanchi Array 44.01 65 P **P** **21 35 22.5 +0.8**
comp=Z,1.9nm,0.8s,baz=300,slow=5.2,SNR=11
MKAR Makanchi Array 44.01 65 P **P** **21 35 22.5 +0.8**
comp=Z,2.0nm,0.9s
DBIC Dimbokro 44.40 210 P **P** **21 35 24.5 -0.5**
DBIC Dimbokro 44.40 210 P **P** **21 35 24.5 -0.5**
comp=Z,3.6nm,0.8s,baz=353,slow=16,SNR=3.2
DBIC Dimbokro 44.40 210 P **P** **21 35 24.5 -0.5**
comp=Z,4.0nm,0.8s
WMQ Urumqi 48.78 66 *e*P **P** **21 36 02.3 +3.0**
SCHQ Schefferville 49.32 311 LR LR 21 55 13.9
comp=Z,84nm,18.7s,baz=256,slow=34
ZAK Zakamensk 54.30 52 *e*P **P** **21 36 40.5 -0.1**
ZAK pmax pmax
comp=Z,2.0nm,1.3s
ZAK Zakamensk 54.30 52 *e*P **P** **21 36 40.5 -0.1**
comp=Z,2.0nm,1.3s
SONM Songino Array 57.45 53 P **P** **21 37 04.1 +1.0**
SONM Songino Array 57.45 53 P **P** **21 37 04.1 +1.0**
comp=Z,2.7nm,0.8s,baz=295,slow=7.9,SNR=17
SONM LR LR 22 02 12.1
comp=Z,44nm,19.7s,baz=61,slow=36
SONM Songino Array 57.45 53 P **P** **21 37 04.1 +1.0**
comp=Z,44nm,19.7s
YKA Yellowknife Ar 63.31 337 P **P** **21 37 44.0 +1.2**
YKA Yellowknife Ar 63.31 337 P **P** **21 37 44.0 +1.2**
comp=Z,0.4nm,0.7s,baz=37,slow=6.4,SNR=8.7
YKA Yellowknife Ar 63.31 337 P **P** **21 37 44.0 +1.2**
HHC Hu-ho-hao-te 64.74 57 *e*P **P** **21 37 53.5 +0.8**
HHC PcP **PcP** **21 38 27.3 +1.1**
HHC PP **PP** **21 40 17.2 +2.5**
HHC ScP 21 42 28.5
HHC PcS 21 42 29.6
HHC S **S** **21 46 31.1 -1.6**
HHC ScS **SKSac** **21 47 44.4 -2.5**
HHC SS SS 21 50 52.5 +9.5
HHC pmax pmax
comp=Z,20nm,0.7s
HHC pmax pmax
comp=Z,150nm,6.6s
HHC LR LR
comp=N,140nm,17.8s
HHC LR LR
comp=E,170nm,17.4s
HHC LR LR
comp=Z,140nm,17.4s
KMI Kunming 70.00 74 P **P** **21 38 28.7 +2.3**
KMI pmax pmax
comp=Z,5.0nm,1.5s
GYA Guiyang 71.61 71 *e*P **P** **21 38 37.0 +1.0**
GYA pmax pmax
comp=Z,10.0nm,1.0s
CMAR Chiang Mai Arr 72.14 82 P **P** **21 38 39.0 -0.1**
CMAR Chiang Mai Arr 72.14 82 P **P** **21 38 39.0 -0.1**
comp=Z,0.5nm,0.8s,baz=303,slow=6.3,SNR=4.1
CMAR Chiang Mai Arr 72.14 82 P **P** **21 38 39.1 -0.1**
comp=Z,1.0nm,0.8s
KSRS Korea Array 76.01 49 LR LR 22 16 08.3
comp=Z,45nm,20.1s,baz=325,slow=39
PDAR Pinedale Array 77.83 322 LR LR 22 14 25.8
comp=Z,52nm,18.9s,baz=243,slow=36
NVAR Mina Array Bea 85.01 325 P **P** **21 39 52.1 +2.1**
NVAR Mina Array Bea 85.01 325 P **P** **21 39 52.1 +2.1**
comp=Z,0.9nm,0.7s,baz=32,slow=2.9,SNR=3.9
NVAR Mina Array Bea 85.01 325 P **P** **21 39 52.2 +2.1**
TXAR Lajitas Array 86.01 310 P **P** **21 39 56.0 +1.0**
TXAR Lajitas Array 86.01 310 P **P** **21 39 56.0 +1.0**
comp=Z,1.0nm,0.8s,baz=79,slow=4.7,SNR=6.2
TXAR Lajitas Array 86.01 310 P **P** **21 39 56.0 +1.0**

IDC 07 21:33:50.5±4.5, **17°59S**×**73°98W**, **h0**km, **mb3.7**/2, **mb1 3.8**/4, **mb1mx3.6**/19, **mbtmpg3.6**/4, **ML3.4**/2, **Error ellipse: s-maj=179.1km s-min=35.1km az=10.0, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**5.75**	**78**	Pn		Pn	Pn	21 35 19.0	+1.1
	0.3nm,0.3s,baz=265,slow=11,SNR=11								
SIV	**San Ignacio**	**12.46**	**85**	Pn		Pn	Pn	21 36 48.9	-0.5
	0.2nm,0.3s,baz=293,slow=15,SNR=3.8								
TORD	**Torodi Ar. Bea**	**80.68**	**73**	P		P	P	21 46 05.0	-1.0
	0.6nm,0.9s,baz=243,slow=6.3,SNR=3.1								
YKA	**Yellowknife Ar**	**85.97**	**342**	P		P	P	21 46 31.8	-0.4
	0.6nm,0.7s,baz=138,slow=5.0,SNR=14								
SONM	**Songino Array**	**149.83**	**359**	PKPbc		PKPbc	PKPbc	21 53 43.6	+0.8
	1.0nm,0.9s,baz=340,slow=2.1,SNR=4.3								

ROM ***07*** *21:43:40.6±0.1, 41°.67N×14°.82E, h20km±1km, Ml3.0/33, Error ellipse: s-maj=1.1km s-min=0.9km az=22.0*
CSEM ***07*** *21:43:40.9±0.1, 41°.66N×14°.78E, h20km, ML3.5/13, Error ellipse: s-maj=2.7km s-min=2.1km az=15.0*
ISCJB ***07*** *21:43:40.9±0.2, 41°.67N±0°.02×14°.81E±0°.02, h23km±3km, Error ellipse: s-maj=3.6km s-min=2.8km az=35.5*

ISC 07 21:43:41.2±0.9, **41°.66N**±0°.02×**14°.80E**±0°.02, **h19**km±2km, **n101**, **s088**/134, **1C-1D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CIGN	**Sant'Elia a Pi**	**0.08**	**95**	Pg		Pg	**Pg**	**21 43 44.3**	**-0.5**
CIGN				Sg		Sg	**Sg**	**21 43 47.2**	**-0.1**
CIGN	**Sant'Elia a Pi**	**0.08**	**95**	Pg		**Pg**	**Pg**	**21 43 44.3**	**-0.5**
CIGN				Sg		**Sg**	**Sg**	**21 43 47.2**	**-0.1**
BSSO	**Busso**	**0.19**	**234**	Pg		**Pg**	**Pg**	**21 43 46.3**	**+0.1**
BSSO				Sg		**Sg**	**Sg**	**21 43 50.6**	**+1.0**
	3μm,0.3s								
BSSO	**Busso**	**0.19**	**234**	Pg		**Pg**	**Pg**	**21 43 46.3**	**+0.1**
BSSO				Sg		**Sg**	**Sg**	**21 43 50.6**	**+1.0**
	3μm,0.3s								
TRIV	**Trivento**	**0.21**	**300**	Pg		Pg	**Pg**	**21 43 46.5**	**0.0**
TRIV				Sg		Sg	**Sg**	**21 43 50.1**	**0.0**
	1μm,0.4s								
TRIV	**Trivento**	**0.21**	**300**	Pg		**Pg**	**Pg**	**21 43 46.5**	**0.0**
TRIV				Sg		Sg	**Sg**	**21 43 50.1**	**0.0**
	1μm,0.4s								
MELA	**Melanico ??? S**	**0.25**	**79**	Pg		Pg	**Pg**	**21 43 46.4**	**-0.6**
MELA				Sg		Sg	**Sg**	**21 43 50.8**	**-0.1**
	3μm,0.5s								
MELA	**Melanico ??? S**	**0.25**	**79**	Pg		Pg	**Pg**	**21 43 46.4**	**-0.6**
MELA				Sg		Sg	**Sg**	**21 43 50.8**	**-0.1**
	3μm,0.5s								
SACR	**S. Croce Del S**	**0.27**	**195**	Pg		Pg	**Pg**	**21 43 47.2**	**-0.2**
SACR				Sg		Sg	**Sb**	**21 43 52.1**	**+0.6**
	2μm,0.4s								
SACR	**S. Croce Del S**	**0.27**	**195**	Pg		Pg	**Pg**	**21 43 47.2**	**-0.2**
SACR				Sg		Sg	**Sb**	**21 43 52.1**	**+0.6**
	2μm,0.4s								

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FRES	**Fresagrandinar**	**0.33**	**343**	Pg	**Pg**	**21 43 48.0**	**-0.3**
FRES				Sg	**Sb**	**21 43 53.5**	**+0.1**
	3μm,0.2s						
FRES	**Fresagrandinar**	**0.33**	**343**	Pg	**Pg**	**21 43 48.0**	**-0.3**
FRES				Sg	**Sb**	**21 43 53.5**	**+0.1**
	3μm,0.2s						
PTRJ	**Pietraroja**	**0.36**	**215**	Pg	**Pg**	**21 43 48.1**	**-0.8**
PTRJ				Sg	**Sb**	**21 43 54.5**	**+0.1**
	2μm,0.4s						
PTRJ	**Pietraroja**	**0.36**	**215**	Pg	**Pg**	**21 43 48.1**	**-0.8**
PTRJ				Sg	**Sb**	**21 43 54.5**	**+0.1**
	2μm,0.4s						
MOCO	**Biccari - m.te**	**0.40**	**137**	Pg	**Pg**	**21 43 49.4**	**-0.1**
	327nm,0.4s						
MIDA	**Miranda**	**0.41**	**268**	Pg	**Pg**	**21 43 49.2**	**-0.5**
MIDA				Sg	**Sb**	**21 43 55.8**	**-0.1**
	1μm,0.2s						
MIDA	**Miranda**	**0.41**	**268**	Pg	**Pg**	**21 43 49.2**	**-0.5**
MIDA				Sg	**Sb**	**21 43 55.8**	**-0.1**
	1μm,0.2s						
SGG	**Gregorio Mates**	**0.42**	**229**	Pg	**Pg**	**21 43 49.3**	**-0.6**
SGG				Sg	**Sb**	**21 43 55.9**	**-0.2**
	605nm,0.5s						
SGG	**Gregorio Mates**	**0.42**	**229**	Pg	**Pg**	**21 43 49.3**	**-0.6**
SGG				Sg	**Sb**	**21 43 55.9**	**-0.2**
	605nm,0.5s						
IPES	**Pescosannita**	**0.43**	**177**	Pg	**Pg**	**21 43 49.5**	**-0.5**
PSB1	**Pescosannita**	**0.44**	**179**	Pg	**Pg**	**21 43 49.7**	**-0.5**
PSB1				Sg	**Sb**	**21 43 56.5**	**-0.1**
	700nm,0.8s						
PSB1	**Pescosannita**	**0.44**	**179**	Pg	**Pg**	**21 43 49.7**	**-0.5**
PSB1				Sg	**Sb**	**21 43 56.5**	**-0.1**
	700nm,0.8s						
RNI2	**Rionero Sannit**	**0.49**	**275**	Pg	**Pg**	**21 43 50.7**	**-0.4**
RNI2				Sg	**Sb**	**21 43 58.8**	**+0.8**
	866nm,0.1s						
RNI2	**Rionero Sannit**	**0.49**	**275**	Pg	**Pg**	**21 43 50.7**	**-0.4**
RNI2				Sg	**Sb**	**21 43 58.8**	**+0.8**
	866nm,0.1s						
VAGA	**Valle Agricola**	**0.49**	**240**	Pg	**Pg**	**21 43 50.6**	**-0.6**
	876nm,0.3s						
VAGA	**Valle Agricola**	**0.49**	**240**	Pg	**Pg**	**21 43 50.6**	**-0.6**
	876nm,0.3s						
MRB1	**Monte Rocchett**	**0.55**	**166**	Pg	**Pg**	**21 43 51.8**	**-0.4**
	1μm,0.6s						
MRB1	**Monte Rocchett**	**0.55**	**166**	Pg	**Pg**	**21 43 51.8**	**-0.4**
	1μm,0.6s						
CERA	**Filignano**	**0.59**	**264**	Pg	**Pg**	**21 43 51.9**	**-1.1**
	878nm,0.5s						
CERA	**Filignano**	**0.59**	**264**	Pg	**Pg**	**21 43 51.9**	**-1.1**
	878nm,0.5s						
LPEL	**Lama dei Pelig**	**0.60**	**310**	Pg	**Pb**	**21 43 52.2**	**-0.8**
LPEL				Sg	**Sb**	**21 44 02.2**	**+1.1**
	890nm,0.2s						
LPEL	**Lama dei Pelig**	**0.60**	**310**	Pg	**Pb**	**21 43 52.2**	**-0.8**
LPEL				Sg	**Sb**	**21 44 02.2**	**+1.1**
	890nm,0.2s						
CAFR	**Castel Frentan**	**0.66**	**329**	Pg	**Pb**	**21 43 53.4**	**-0.6**
CAFR				Sg	**Sg**	**21 44 03.8**	**+0.7**
	1μm,0.2s						
CAFR	**Castel Frentan**	**0.66**	**329**	Pg	**Pb**	**21 43 53.4**	**-0.6**
CAFR				Sg	**Sg**	**21 44 03.8**	**+0.7**
	1μm,0.2s						
SGTA	**Sant Agata di**	**0.68**	**141**	Pg	**Pb**	**21 43 53.4**	**-0.9**
	391nm,0.5s						
SGTA	**Sant Agata di**	**0.68**	**141**	Pg	**Pb**	**21 43 53.4**	**-0.9**
	391nm,0.5s						
CAFE	**Carife**	**0.71**	**152**	Pg	**Pb**	**21 43 54.1**	**-0.9**
	164nm,0.3s						
CAFE	**Carife**	**0.71**	**152**	Pg	**Pb**	**21 43 54.1**	**-0.9**
	164nm,0.3s						
SGRT	**San Giovanni R**	**0.71**	**82**	Pg	**Pb**	**21 43 54.0**	**-1.0**
	767nm,0.3s						
SGRT	**San Giovanni R**	**0.71**	**82**	Pg	**Pb**	**21 43 54.0**	**-1.0**
	767nm,0.3s						
SDI	**San Donato**	**0.74**	**274**	Pg	**Pb**	**21 43 54.3**	**-1.2**
	241nm,0.3s						
SDI	**San Donato**	**0.74**	**274**	Pg	**Pb**	**21 43 54.3**	**-1.2**
	241nm,0.3s						
INTR	**Introdacqua**	**0.76**	**298**	Pg	**Pb**	**21 43 54.6**	**-1.2**
INTR				Sg	**Sg**	**21 44 06.0**	**-0.1**
	611nm,0.5s						
INTR	**Introdacqua**	**0.76**	**298**	Pg	**Pb**	**21 43 54.6**	**-1.2**
INTR				Sg	**Sg**	**21 44 06.0**	**-0.1**
	611nm,0.5s						
MSC	**Monte Massico**	**0.78**	**233**	Pg	**Pb**	**21 43 56.1**	**0.0**
MSC	**Monte Massico**	**0.78**	**233**	Pg	**Pb**	**21 43 56.1**	**0.0**
SNAL	**S. Angelo Dei**	**0.80**	**157**	Pg	**Pb**	**21 43 55.1**	**-1.3**
	757nm,0.9s						
SNAL	**S. Angelo Dei**	**0.80**	**157**	Pg	**Pb**	**21 43 55.1**	**-1.3**
	757nm,0.9s						
CSSN	**Cassano Irpino**	**0.82**	**168**	Pg	**Pb**	**21 43 56.4**	**-0.4**
	182nm,0.4s						
CSSN	**Cassano Irpino**	**0.82**	**168**	Pg	**Pb**	**21 43 56.4**	**-0.4**
	182nm,0.4s						
POFI	**Posta Fibreno**	**0.82**	**274**	Pg	**Pb**	**21 43 55.6**	**-1.2**
	384nm,0.6s						
POFI	**Posta Fibreno**	**0.82**	**274**	Pg	**Pb**	**21 43 55.6**	**-1.2**
	384nm,0.6s						
MSAG	**Monte S. Angel**	**0.83**	**86**	Pg	**Pb**	**21 43 56.1**	**-1.0**
	2μm,0.4s						
MSAG	**Monte S. Angel**	**0.83**	**86**	Pg	**Pb**	**21 43 56.1**	**-1.0**
	2μm,0.4s						
MS1	**Monte Sant'Ang**	**0.86**	**87**	*e*Pg	**Pg**	**21 43 58.1**	**+0.2**
MS1				*e*Sg	**Sn**	**21 44 11.0**	**+0.7**
MODR	**Mondragone**	**0.86**	**234**	Pg	**Pb**	**21 43 57.3**	**-0.2**
	114nm,0.8s						
MODR	**Mondragone**	**0.86**	**234**	Pg	**Pb**	**21 43 57.3**	**-0.2**
	114nm,0.8s						
VVLD	**Villa Vallelon**	**0.91**	**284**	Pg	**Pb**	**21 43 56.8**	**-1.5**
	596nm,0.7s						
VVLD	**Villa Vallelon**	**0.91**	**284**	Pg	**Pb**	**21 43 56.8**	**-1.5**
	596nm,0.7s						
MCRV	**Calabrutti - M**	**0.92**	**162**	Pg	**Pb**	**21 43 58.4**	**-0.2**
	589nm,0.7s						
MCRV	**Calabrutti - M**	**0.92**	**162**	Pg	**Pb**	**21 43 58.4**	**-0.2**
	589nm,0.7s						
VULT	**Monte Vulture**	**0.94**	**139**	Pg	**Pb**	**21 43 57.4**	**-1.4**
	608nm,0.3s						
VULT	**Monte Vulture**	**0.94**	**139**	Pg	**Pb**	**21 43 57.4**	**-1.4**
	608nm,0.3s						
MRLC	**Muro Lucano**	**1.04**	**150**	Pg	**Pb**	**21 44 00.1**	**-0.5**
	157nm,0.4s						
MRLC	**Muro Lucano**	**1.04**	**150**	Pg	**Pb**	**21 44 00.1**	**-0.5**
	157nm,0.4s						
PALZ	**Palazzo San Ge**	**1.13**	**129**	Pg	**Pn**	**21 44 02.0**	**0.0**
	498nm,0.5s						
PALZ	**Palazzo San Ge**	**1.13**	**129**	Pg	**Pn**	**21 44 02.0**	**0.0**
	498nm,0.5s						
MRVN	**Minervino Murg**	**1.21**	**119**	Pg	**Pn**	**21 44 02.8**	**-0.3**
	116nm,0.3s						
MRVN	**Minervino Murg**	**1.21**	**119**	Pg	**Pn**	**21 44 02.8**	**-0.3**
	116nm,0.3s						
CDRU	**Civita di Ruta**	**1.23**	**162**	Pg	**Pb**	**21 44 04.1**	**+0.2**
	155nm,0.3s						
CDRU	**Civita di Ruta**	**1.23**	**162**	Pg	**Pb**	**21 44 04.1**	**+0.2**
	155nm,0.3s						
CDT	**Castel del Mon**	**1.25**	**117**	*e*Pg	**Pb**	**21 44 04.7**	**+0.5**
CDT				*e*Sg	**Sg**	**21 44 21.0**	**-0.7**
CMPR	**Campora**	**1.39**	**164**	Pg	**Pb**	**21 44 06.3**	**-0.3**
	146nm,0.6s						
CMPR	**Campora**	**1.39**	**164**	Pg	**Pb**	**21 44 06.3**	**-0.3**
	146nm,0.6s						
AMUR	**Altamura**	**1.55**	**118**	Pg	**Pn**	**21 44 07.7**	**-0.1**
	153nm,0.4s						
AMUR	**Altamura**	**1.55**	**118**	Pg	**Pn**	**21 44 07.7**	**-0.1**
	153nm,0.4s						
BAI	**Bari**	**1.66**	**109**	*e*Pn	**Pn**	**21 44 09.4**	**+0.2**
PE1	**Pezze di Greco**	**2.15**	**113**	*e*Pn	**Pn**	**21 44 16.2**	**+0.2**
TAR1	**Taranto**	**2.19**	**120**	*e*Pn	**Pn**	**21 44 18.4**	**+1.8**
STON	**Ston**	**2.47**	**60**	*e*Pn	**Pn**	**21 44 20.4**	**+0.1**
STON				Sn	**Sn**	**21 44 50.6**	**+0.6**
STON	**Ston**	**2.47**	**60**	*e*Pn	**Pn**	**21 44 20.4**	**+0.1**
STON				Sn	**Sn**	**21 44 50.5**	**+0.6**
PUK	**Puka**	**3.82**	**83**	*i* PN	**Pn**	**21 44 40.5**	**+1.4**
PUK	**Puka**	**3.82**	**83**	*i* Pn	**Pn**	**21 44 40.5**	**+1.4**
BCI	**Bajram Curri**	**3.99**	**78**	*i* PN	**Pn**	**21 44 43.7**	**+2.4**
BCI	**Bajram Curri**	**3.99**	**78**	*i* Pn	**Pn**	**21 44 43.7**	**+2.4**
BBLS	**Lazići**	**4.04**	**55**	*e*Pn	**Pn**	**21 44 44.1**	**+2.0**
PHP	**Peshkopia**	**4.22**	**88**	*e*PN	**Pn**	**21 44 46.0**	**+1.4**
PHP	**Peshkopia**	**4.22**	**88**	*e*Pn	**Pn**	**21 44 46.0**	**+1.4**
VOY	**Vojsko**	**4.42**	**352**	*e*Pn	**Pn**	**21 44 50.3**	**+3.0**
VOY				*e*Sn	**Sn**	**21 45 37.7**	**-0.5**
VOY	**Vojsko**	**4.42**	**352**	Pn	**Pn**	**21 44 50.3**	**+3.0**
VOY				*e*Sn	**Sn**	**21 45 37.7**	**-0.5**
DIVS	**Divibare**	**4.53**	**56**	*e*Pn	**Pn**	**21 44 48.2**	**-0.5**
OBKA	**Obir**	**4.85**	**358**	⇓*i*Pn	**Pn**	**21 44 52.4**	**-0.8**
OBKA	**Obir**	**4.85**	**358**	Pn	**Pn**	**21 44 52.4**	**-0.8**
GRUS	**Gruza**	**4.89**	**61**	*e*Pn	**Pn**	**21 44 52.7**	**-0.9**
SELS	**Selova**	**4.93**	**69**	*e*Pn	**Pn**	**21 44 53.5**	**-0.7**
BIA	**Bitola**	**4.95**	**95**	*e*Pn	**Pn**	**21 44 54.1**	**-0.5**
BIA	**Bitola**	**4.95**	**95**	*e*Pn	**Pn**	**21 44 54.1**	**-0.5**
SKO	**Skopje**	**4.97**	**84**	*e*Pn	Pn	21 44 44.8	-10
BARS	**Barje**	**5.33**	**75**	*e*Pn	**Pn**	**21 45 01.1**	**+1.3**
ABTA	**Abfaltersbach**	**5.34**	**343**	⇑*i*Pn	**Pn**	**21 44 59.9**	**-0.1**
ABTA	**Abfaltersbach**	**5.34**	**343**	Pn	**Pn**	**21 44 59.9**	**-0.1**

*IDC **07** 21:50:53.6±1.6, 5°.40S×141°.06E, h0km, mb3.8/7, mb1 4.0/10, mb1mx3.9/18, mbtmp3.8/10, ML4.2/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/25, Error ellipse: s-maj=51.2km s-min=22.6km az=105.0*

*ISCJB **07** 21:50:58.0±0.6, 5°.44S±0°.05×140°.75E±0°.08, h33km, mb3.8/8, Error ellipse: s-maj=11.3km s-min=6.2km az=16.5*

*AUST **07** 21:50:59.9±0.0, 5°.24S×140°.96E, h133km, Error ellipse: s-maj=1.2km s-min=1.1km az=255.0*

ISC 07 21:50:59.9±0.8**, 5°.46S**±0°.07×**140°.7E**±0°.1**, h35km, n22, σ2.31s**/21**, mb3.8**/8**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.93**	**0**	P	**Pn**	**21 51 43.2**	**-0.9**
	baz=2.7,SNR=47						
COEN	**Coen**	**8.79**	**164**	P	**Pn**	**21 53 05.2**	**+0.6**
	baz=9.0,SNR=19						
FAKI	**Fak Fak**	**8.80**	**286**	P	Pn	21 53 08.1	+3.3
	baz=9.0,SNR=10						
KDU	**Kakadu**	**10.84**	**228**	P	**Pn**	**21 53 34.7**	**+2.0**
	baz=11,SNR=21						
KDU				S	**Sn**	**21 55 35.3**	**+2.5**
	baz=11,SNR=4.4						
MTN	**Manton Dam**	**11.96**	**232**	P	Pn	21 53 52.3	+4.3
	baz=12,SNR=5.8						
MTSU	**Mount Surprise**	**13.08**	**165**	P	**Pn**	**21 54 05.0**	**+1.6**
	baz=13,SNR=8.0						
QIS	**Mount Isa**	**15.04**	**184**	P	P	21 54 44.5	+9.5
	baz=15,SNR=24						
CTA	**Charters Tower**	**15.51**	**160**	LR	LR	22 00 02.2	
	comp=Z,86nm,21.6s,baz=94,slow=36						
KNRA	**Kununurra**	**15.51**	**228**	P	**Pn**	**21 54 36.6**	**+0.5**
	baz=16,SNR=9.4						
WRA	**Warramunga Arr**	**15.67**	**203**	Pn	**Pn**	**21 54 38.0**	**-0.3**
	0.8nm,0.3s,baz=19,slow=13,SNR=7.9						
WRA				Sn	**Sn**	**21 57 27.5**	**-3.3**
	0.5nm,0.3s,baz=28,slow=22,SNR=4.4						
ASAR	**Alice Springs**	**19.25**	**199**	P	**Pn**	**21 55 23.1**	**+0.5**
	0.9nm,0.3s,baz=28,slow=9.2,SNR=28						
ASAR				S	**Sn**	**21 58 53.8**	**-3.7**
	0.1nm,0.3s,baz=16,slow=28,SNR=4.5						
FITZ	**Fitzroy Crossi**	**19.35**	**228**	P	**Pn**	**21 55 23.9**	**0.0**
	0.7nm,0.3s,baz=28,slow=10,SNR=16						
FITZ				S	**S**	**21 58 54.1**	**-5.6**
	0.4nm,0.3s,baz=124,slow=15,SNR=4.0						
FITZ	**Fitzroy Crossi**	**19.35**	**228**	P	**Pn**	**21 55 26.7**	**+2.8**
	baz=20,SNR=8.8						
STKA	**Stephens Creek**	**26.29**	**178**	P	**P**	**21 56 34.4**	**+2.1**
	0.4nm,0.3s,baz=352,slow=8.5,SNR=5.4						
PPI	**Padang Panjang**	**40.55**	**276**	P	P	21 58 25.9	-10
	baz=41,SNR=3.2						
CMAR	**Chiang Mai Arr**	**47.54**	**301**	P	**P**	**21 59 33.1**	**+0.8**
	0.7nm,0.7s,baz=120,slow=6.5,SNR=6.5						
USRK	**Ussuriysk Arra**	**50.05**	**352**	P	**P**	**21 59 51.2**	**0.0**
	1.8nm,0.8s,baz=179,slow=9.2,SNR=4.7						
SONM	**Songino Array**	**61.04**	**334**	P	**P**	**22 01 11.5**	**+1.2**
	0.4nm,0.5s,baz=134,slow=4.2,SNR=4.8						
MKAR	**Makanchi Array**	**73.17**	**322**	P	**P**	**22 02 28.0**	**+0.8**
	0.7nm,0.8s,baz=102,slow=8.8,SNR=7.7						
KURBB	**Kurchatov Arra**	**77.11**	**325**	P	**P**	**22 02 48.0**	**-1.7**
	0.4nm,0.7s,baz=118,slow=5.5,SNR=4.2						
BVAR	**Borovoye Array**	**82.69**	**325**	P	**P**	**22 03 18.6**	**-1.4**
	0.6nm,0.4s,baz=112,slow=6.4,SNR=5.9						
ILAR	**Eielson Array**	**87.51**	**24**	P	**P**	**22 03 41.5**	**-2.4**
	0.9nm,1.0s,baz=256,slow=5.5,SNR=7.3						

*NEIC **07** 21:51:14.7, 35°.62S×71°.40W, h88km, mb4.3/3, After GUC.*
NEIC Felt [III] at Talca, [II] at Linares and Parral.
*GUC **07** 21:51:14.7±0.5, 35°.62S×71°.40W, h88km±3km, ML4.4*
*ISCJB **07** 21:51:14.0±0.3, 35°.65S±0°.03×71°.35W±0°.08, h96km±4km, mb4.1/12, Error ellipse: s-maj=11.0km s-min=3.6km az=22.8*
*IDC **07** 21:51:15.4±0.8, 35°.54S×71°.24W, h93km±6km, mb3.9/11, mb1 4.1/14, mb1mx4.0/19, mbtmp3.9/14, MS3.1/1, Ms1 3.1/1, ms1mx2.4/23, Error ellipse: s-maj=19.7km s-min=10.9km az=106.0*

ISC 07 21:51:14.9±0.5**, 35°.61S**±0°.03×**71°.40W**±0°.06**, h92**km±5km**, n59, σ0.72s**/90**, mb4.2**/12**, 7C-4D, Central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.28**	**318**	*i* P	**Pn**	**21 51 28.1**	**-0.3**
TALC				*i* S	**Sn**	**21 51 37.8**	**-0.7**
TALC	**Talca**	**0.28**	**318**	*i* P	**Pn**	**21 51 28.1**	**-0.3**
TALC				*i* S	**Sn**	**21 51 37.8**	**-0.7**
TALC				AML	AML	21 51 38.8	
	comp=E,101μm,0.1s						
CCHI	**Chillan**	**1.13**	**209**	⇑*i*P	**Pn**	**21 51 36.7**	**+0.5**
CCHI				*i* S	**Sn**	**21 51 52.7**	**+0.4**
CCHI	**Chillan**	**1.13**	**209**	⇑*i*P	**Pn**	**21 51 36.7**	**+0.5**
CCHI				*i* S	**Sn**	**21 51 52.7**	**+0.4**
CCHI				AML	AML	21 51 54.3	
	comp=E,9μm,0.5s						
COCH	**Cobquecura**	**1.24**	**245**	⇓*i*P	**Pn**	**21 51 37.2**	**-0.3**
COCH				*i* S	**Sn**	**21 51 54.3**	**-0.3**
COCH	**Cobquecura**	**1.24**	**245**	⇓*i*P	**Pn**	**21 51 37.2**	**-0.3**
COCH				*i* S	**Sn**	**21 51 54.3**	**-0.3**
COCH				AML	AML	21 51 57.7	
	comp=E,4μm,0.3s						
TACH	**Talagante**	**1.99**	**11**	⇑*i*P	**Pn**	**21 51 47.1**	**0.0**
TACH				*i* S	**Sn**	**21 52 11.9**	**+0.4**
TACH	**Talagante**	**1.99**	**11**	⇑*i*P	**Pn**	**21 51 47.1**	**0.0**
TACH				*i* S	**Sn**	**21 52 11.9**	**+0.4**
LMEL	**Las Melosas**	**2.01**	**30**	⇑*i*P	**Pn**	**21 51 48.6**	**+1.0**
LMEL				*i* S	**Sn**	**21 52 13.9**	**+1.6**
LMEL	**Las Melosas**	**2.01**	**30**	⇑*i*P	**Pn**	**21 51 48.6**	**+1.0**
LMEL				*i* S	**Sn**	**21 52 13.9**	**+1.6**
LMEL				AML	AML	21 52 16.6	
	comp=N,3μm,0.5s						
PCH	**Pirque**	**2.11**	**20**	*e*P	**Pn**	**21 51 49.1**	**+0.3**
PCH				*i* S	**Sn**	**21 52 15.1**	**+0.5**
PCH	**Pirque**	**2.11**	**20**	*e*P	**Pn**	**21 51 49.1**	**+0.3**
PCH				*i* S	**Sn**	**21 52 15.1**	**+0.5**
ANTU	**Antumapu**	**2.13**	**17**	*i* P	**Pn**	**21 51 49.3**	**+0.3**
ANTU				*i* S	**Sn**	**21 52 15.4**	**+0.5**
ANTU	**Antumapu**	**2.13**	**17**	*i* P	**Pn**	**21 51 49.3**	**+0.3**
ANTU				*i* S	**Sn**	**21 52 15.4**	**+0.5**
ANTU				AML	AML	21 52 17.8	
	comp=E,3μm,0.4s						
SJCH	**San Jose de Ma**	**2.15**	**24**	*i* P	**Pn**	**21 51 49.4**	**+0.2**
SJCH				*i* S	**Sn**	**21 52 15.8**	**+0.5**
SJCH	**San Jose de Ma**	**2.15**	**24**	*i* P	**Pn**	**21 51 49.4**	**+0.2**
SJCH				*i* S	**Sn**	**21 52 15.8**	**+0.5**
SJCH				AML	AML	21 52 18.1	
	comp=N,1μm,0.4s						
SAN	**Santiago**	**2.23**	**16**	*i* P	**Pn**	**21 51 50.7**	**+0.3**
SAN				*i* S	**Sn**	**21 52 17.9**	**+0.5**
SAN	**Santiago**	**2.23**	**16**	*i* P	**Pn**	**21 51 50.7**	**+0.3**
SAN				*i* S	**Sn**	**21 52 17.9**	**+0.5**
SAN				AML	AML	21 52 44.7	
	comp=N,1μm,0.5s						
CLCH	**Cerro Calan**	**2.32**	**18**	⇑*i*P	**Pn**	**21 51 51.8**	**+0.4**
CLCH				*i* S	**Sn**	**21 52 19.8**	**+0.4**
CLCH				AML	AML	21 52 20.6	
	comp=N,3μm,0.6s						
PEL	**Peldehue**	**2.53**	**14**	⇓*i*P	**Pn**	**21 51 54.5**	**+0.3**
PEL				*i* S	**Sn**	**21 52 25.3**	**+1.0**
PEL				AML	AML	21 52 26.9	
	comp=N,3μm,0.3s						
ROCH	**El Roble**	**2.65**	**7**	⇓*i*P	**Pn**	**21 51 56.0**	**0.0**
ROCH				*i* S	**Sn**	**21 52 27.8**	**+0.3**
ROCH				AML	AML	21 52 50.4	
	comp=N,2μm,0.5s						
TMU	**Temuco**	**3.26**	**197**	*e*P	**Pn**	**21 52 03.9**	**0.0**
TMU				*i* S	**Sn**	**21 52 41.5**	**-0.3**
TMU	**Temuco**	**3.26**	**197**	*e*P	**Pn**	**21 52 03.9**	**0.0**
TMU				*i* S	**Sn**	**21 52 41.5**	**-0.3**
CFAA	**Coronel Fontan**	**4.79**	**34**	P	**Pn**	**21 52 23.9**	**-0.8**
CFAA				S	**Sn**	**21 53 18.3**	**-0.7**
CFAA	**Coronel Fontan**	**4.79**	**34**	P	**Pn**	**21 52 23.9**	**-0.8**
	comp=N,3.4nm,0.3s,baz=207,slow=12,SNR=111						
CFAA				S	**Sn**	**21 53 18.3**	**-0.7**
	comp=N,1.9nm,0.3s,baz=206,slow=12,SNR=3.9						
PLCA	**Paso Flores**	**5.16**	**173**	*e*Pn	**Pn**	**21 52 30.6**	**+0.9**
	comp=N,13nm,0.6s						
PLCA	**Paso Flores**	**5.16**	**173**	P	**Pn**	**21 52 30.7**	**+1.0**
	comp=N,4.7nm,0.3s,baz=335,slow=11,SNR=61						
TRQA	**Tornquist**	**7.94**	**111**	*e*Pn	**Pn**	**21 53 07.2**	**-0.4**
	comp=N,17nm,0.9s						
CPUP	**Villa Florida**	**15.19**	**56**	P	**Pn**	**21 54 43.5**	**-0.9**
CPUP	**Villa Florida**	**15.19**	**56**	P	**Pn**	**21 54 43.5**	**-0.9**
	comp=N,1.0nm,0.3s,baz=212,slow=8.4,SNR=6.0						
CPUP				LR	LR	22 00 07.9	
	comp=N,75nm,20.1s,baz=266,slow=35						
LPAZ	**La Paz**	**19.46**	**9**	*e*Pn	**Pn**	**21 55 36.5**	**-0.6**
	comp=N,2.7nm,0.8s						
LPAZ	**La Paz**	**19.46**	**9**	P	**Pn**	**21 55 37.4**	**+0.3**
	comp=N,0.3nm,0.3s,baz=168,slow=4.5,SNR=7.0						
SIV	**San Ignacio**	**21.61**	**28**	P	**P**	**21 55 56.7**	**-0.8**
SIV	**San Ignacio**	**21.61**	**28**	P	**P**	**21 55 56.7**	**-0.8**
	comp=N,7.9nm,0.8s,baz=204,slow=11,SNR=27						
BDFB	**Brasilia**	**28.85**	**52**	P	**P**	**21 57 03.1**	**-1.8**
BDFB	**Brasilia**	**28.85**	**52**	P	**P**	**21 57 03.1**	**-1.8**
	comp=N,3.7nm,0.5s,baz=223,slow=7.0,SNR=6.9						
SNAA	**Sanae**	**49.90**	**157**	*e*P	**P**	**21 59 58.4**	**-0.3**
	comp=N,3.2nm,0.4s						
SNAA	**Sanae**	**49.90**	**157**	P	**P**	**22 00 00.1**	**+1.4**
	comp=N,1.2nm,0.4s,baz=274,slow=6.3,SNR=17						
QSPA	**South Pole Qui**	**54.63**	**180**	*e*P	**P**	**22 00 34.8**	**+1.0**
QSPA				pP	**pP**	**22 00 57.2**	**+0.8**
QSPA	**South Pole Qui**	**54.63**	**180**	P	**P**	**22 00 34.9**	**+1.0**
	comp=N,1.3nm,0.5s,baz=134,slow=2.9,SNR=11						
QSPA				pP	**pP**	**22 00 57.2**	**+0.8**
	comp=N,7.6nm,1.0s,baz=145,slow=8.8,SNR=8.3						
VNDA	**Vanda**	**62.63**	**191**	P	**P**	**22 01 30.5**	**+1.6**
VNDA	**Vanda**	**62.63**	**191**	P	**P**	**22 01 30.5**	**+1.6**
	comp=N,0.6nm,0.8s,baz=138,slow=6.4,SNR=3.4						
TXAR	**Lajitas Array**	**71.39**	**331**	P	**P**	**22 02 26.2**	**+1.1**
TXAR				pP	**pP**	**22 02 49.3**	**+0.6**
TXAR	**Lajitas Array**	**71.39**	**331**	P	**P**	**22 02 26.2**	**+1.1**
	comp=N,1.2nm,0.5s,baz=153,slow=8.9,SNR=16						
TXAR				pP	**pP**	**22 02 49.3**	**+0.6**
	comp=N,0.5nm,0.5s,baz=153,slow=8.1,SNR=3.3						
DBIC	**Dimbokro**	**75.21**	**70**	*e*P	**P**	**22 02 47.2**	**-0.7**
DBIC	**Dimbokro**	**75.21**	**70**	P	**P**	**22 02 47.1**	**-0.7**
	comp=N,4.1nm,0.5s,baz=206,slow=6.8,SNR=6.5						
BOSA	**Boshof**	**78.86**	**117**	*e*P	**P**	**22 03 07.7**	**-0.7**
BOSA	**Boshof**	**78.86**	**117**	P	**P**	**22 03 07.7**	**-0.7**
	comp=N,6.2nm,0.5s,baz=247,slow=4.8,SNR=22						
TORD	**Torodi Ar. Bea**	**84.27**	**70**	P	**P**	**22 03 36.4**	**-0.4**
TORD				pP	**pP**	**22 04 00.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**84.27**	**70**	P	**P**	**22 03 36.4**	**-0.4**
	comp=N,2.6nm,0.7s,baz=250,slow=4.2,SNR=13						
TORD				pP	**pP**	**22 04 00.6**	**-0.4**
	comp=N,1.3nm,0.6s,baz=224,slow=4.0,SNR=4.7						
HWUT	**Hardware Ranch**	**85.21**	**331**	*e*P	**P**	**22 03 41.8**	**+0.7**
	comp=N,2.8nm,0.8s						
PDAR	**Pinedale Array**	**85.43**	**333**	P	**P**	**22 03 42.0**	**-0.3**
PDAR	**Pinedale Array**	**85.43**	**333**	P	**P**	**22 03 42.0**	**-0.3**
	comp=N,1.0nm,0.8s,baz=134,slow=4.3,SNR=5.2						
NVAR	**Mina Array Bea**	**85.50**	**325**	P	**P**	**22 03 42.6**	**-0.1**
NVAR	**Mina Array Bea**	**85.50**	**325**	P	**P**	**22 03 42.6**	**-0.1**
	comp=N,0.3nm,0.4s,baz=160,slow=4.7,SNR=3.7						
WRA	**Warramunga Arr**	**119.60**	**208**	PKP	**PKPdf**	**22 09 54.0**	**-0.5**
WRA	**Warramunga Arr**	**119.60**	**208**	PKP	**PKPdf**	**22 09 54.0**	**-0.5**
	comp=N,0.4nm,0.3s,baz=150,slow=1.6,SNR=2.7						
MKAR	**Makanchi Array**	**157.38**	**52**	PKPab	**PKPab**	**22 11 31.8**	**+0.1**
MKAR	**Makanchi Array**	**157.38**	**52**	PKPab	**PKPab**	**22 11 31.8**	**+0.1**
	comp=N,0.3nm,0.7s,baz=301,slow=2.5,SNR=5.0						

*IDC **07** 21:52:03.0±1.4, 41°.32N×48°.68E, h0km, mb3.0/3, mb1 3.2/6, mb1mx3.1/29, mbtmp3.2/6, ML3.0/1, Error ellipse: s-maj=23.5km s-min=12.7km az=160.0*
*TIF **07** 21:52:05.7, 41°.55N×48°.45E, h26km±1km*

ISC 07 21:52:07.9±1.3**, 41°.5N**±0°.1×**48°.97E**±0°.07**, h35km, n16, σ2.95s**/18**, mb2.5**/3**, 2C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DGRG	**David-gareji**	**2.70**	**271**	P	Pn	21 52 45.6	-3.3
DGRG				S	**Sn**	**21 53 18.9**	**-1.5**
SEAG	**Tbilisi Sea**	**3.13**	**277**	P	**Sn**	**21 53 34.3**	**+3.2**
TBLG	**Delisi**	**3.18**	**276**	P	Pn	21 52 51.3	-4.1
TBLG				S	**Sn**	**21 53 27.8**	**-4.5**
KZR	**Kazreti**	**3.42**	**270**	P	**Sn**	**21 53 35.4**	**-2.8**
GNI	**Garni**	**3.47**	**249**	Pn	**Pn**	**21 52 58.2**	**-1.4**
	2.8nm,0.3s,baz=50,slow=7.1,SNR=16						
GNI				Sn	**Sn**	**21 53 42.5**	**+2.9**
	3.3nm,0.3s,baz=53,slow=20,SNR=5.0						
GUDG	**Gudauri**	**3.49**	**288**	P	**Pn**	**21 53 01.5**	**+1.6**
GUDG				S	**Sn**	**21 53 44.8**	**+4.7**
GOR	**Gori**	**3.67**	**280**	P	Sn	21 53 53.8	+10
AKH	**Akhalkalaki**	**4.12**	**271**	P	**Sn**	**21 53 52.9**	**-2.5**
ONI	**Oni**	**4.26**	**287**	P	Pn	21 53 34.3	+24
KBZ	**Khabaz**	**5.01**	**299**	Pn	**Pn**	**21 53 20.7**	**+0.1**
	0.2nm,0.3s,baz=120,slow=8.1,SNR=3.2						
KBZ				Sn	**Sn**	**21 54 18.9**	**+1.7**
	0.4nm,0.3s,baz=257,slow=14,SNR=3.1						
AKTO	**Aktyubinsk**	**10.94**	**32**	⇑Pn	**Pn**	**21 54 39.4**	**-2.4**
	0.3nm,0.9s						
AKTO				⇓Lg	Lg	21 56 38.6	
	0.3nm,0.6s						
AKTO	**Aktyubinsk**	**10.94**	**32**	Pn	**Pn**	**21 54 42.5**	**+0.7**
	0.4nm,0.3s,baz=200,slow=11,SNR=5.1						
AKTO				Sn	**Sn**	**21 56 39.3**	**-3.6**
	0.2nm,0.3s,baz=196,slow=18,SNR=3.5						
AB31	**Akbulak array**	**10.95**	**41**	⇓Pn	**Pn**	**21 54 41.2**	**-0.8**
	0.2nm,0.3s,baz=244,slow=12,SNR=5.5						
AB31				⇑Lg	Lg	21 56 42.4	
	0.5nm,0.3s,baz=249,slow=28,SNR=6.4						
KURBB	**Kurchatov Arra**	**22.34**	**56**	P	**P**	**21 57 05.5**	**+3.0**
	0.1nm,0.6s,baz=261,slow=10,SNR=2.9						
FINES	**FINESS Array B**	**24.32**	**333**	P	**P**	**21 57 20.6**	**-1.3**
	1.2nm,0.8s,baz=139,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**24.38**	**66**	P	**P**	**21 57 26.6**	**+3.8**
	0.1nm,0.6s,baz=262,slow=9.9,SNR=2.6						

*CSEM **07** 22:13:07.1±0.6, 32°.65N×34°.79E, h20km, ML2.5, Error ellipse: s-maj=13.0km s-min=7.3km az=112.0*
*NSSC **07** 22:13:07.5±1.1, 33°.03N×35°.02E, h132km±18km, ML1.5*

ISC 07 22:13:07.6±3.7**, 32°.6N**±0°.1×**35°.0E**±0°.2**, h11km, n8, σ0.74s**/16**, Dead Sea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRBR	**Barbar**	**1.14**	**46**	*e*P	**Pg**	**22 13 29.5**	**0.0**
BRBR				*e*S	**Sn**	**22 13 46.4**	**+0.9**
BRBR				AML	AML	22 13 48.1	
	comp=N,11nm,0.5s						
BRBR				AML	AML	22 13 50.1	
	comp=Z,11nm,0.5s						
BRBR				AML	AML	22 13 53.1	
	comp=E,7.2nm,0.3s						
BRBR	**Barbar**	**1.14**	**46**	*e*P	**Pg**	**22 13 29.5**	**0.0**
	SNR=142						
BRBR				*e*S	**Sn**	**22 13 46.4**	**+0.9**
	comp=E,7.2nm,0.3s,SNR=142						
TOTH	**TOTAH**	**1.43**	**59**	*e*P	**Pn**	**22 13 33.6**	**0.0**
TOTH				*e*S	**Sn**	**22 13 50.9**	**-1.5**
TOTH				AML	AML	22 13 55.1	
	comp=Z,17nm,0.4s						
TOTH				AML	AML	22 13 59.0	
	comp=N,12nm,0.6s						
TOTH				AML	AML	22 14 03.4	
	comp=E,8.3nm,0.5s						
TOTH	**TOTAH**	**1.43**	**59**	*e*P	**Pn**	**22 13 33.6**	**0.0**
	SNR=131						
TOTH				*e*S	**Sn**	**22 13 50.9**	**-1.5**
	comp=E,8.3nm,0.5s,SNR=131						
SALA	**Sala**	**1.49**	**86**	*e*P	**Pg**	**22 13 36.5**	**+0.3**
SALA				*e*S	**Sg**	**22 13 56.0**	**+0.4**
SALA				AML	AML	22 13 59.9	
	comp=Z,22nm,0.4s						
SALA				AML	AML	22 14 03.6	
	comp=N,15nm,0.2s						
SALA				AML	AML	22 14 05.3	
	comp=E,1.4nm,0.6s						
SALA	**Sala**	**1.49**	**86**	*e*P	**Pg**	**22 13 36.5**	**+0.3**
	SNR=126						
SALA				*e*S	**Sg**	**22 13 56.0**	**+0.4**
	comp=E,1.4nm,0.6s,SNR=126						
ZALF	**Zalf**	**2.02**	**81**	*e*P	**Pn**	**22 13 41.4**	**-0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALF				eS	Sn	22 14 06.5	-0.3
ZALF				AML	AML	22 14 20.6	
	comp=N,4.4nm,0.6s						
ZALF				AML	AML	22 14 22.1	
	comp=E,7.1nm,0.4s						
ZALF				AML	AML	22 14 22.2	
	comp=Z,6.5nm,0.4s						
ZALF	Zalf	2.02	81	eP	Pn	22 13 41.4	-0.2
	SNR=118						
ZALF				eS	Sn	22 14 06.5	-0.3
	comp=Z,6.5nm,0.4s,SNR=118						

*NEIC **07** 22:21:27.4, 36°.12S×177°.27E, h270^{km}, MG4.5(WEL), After WEL.*

WEL 07 22:21:27.4±0.3**, 36°.12S×177°.27E, h270**^{km}±4^{km}**, ML4.5**/14**, Error ellipse: s-maj=5.9km s-min=5.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.66	150	PN	Pn	22 22 08.9	+0.2
MXZ				SN	S	22 22 41.1	-0.4
MXZ	Matakaoa Point	1.66	150	Pn	Pn	22 22 08.9	+0.2
MXZ				Sn	S	22 22 41.1	-0.4
PUZ	Puketiti	2.10	158	PN	Pn	22 22 12.3	0.0
PUZ				SN	S	22 22 46.3	-1.8
PUZ	Puketiti	2.10	158	Pn	Pn	22 22 12.3	0.0
PUZ				Sn	S	22 22 46.3	-1.8
URZ	Urewera	2.14	183	PN	Pn	22 22 12.8	+0.2
URZ				SN	S	22 22 48.2	-0.5
URZ	Urewera	2.14	183	ePn	Pn	22 22 12.8	+0.2
URZ				eSn	S	22 22 44.9	-3.7
MWZ	Matawai	2.22	175	PN	Pn	22 22 13.8	+0.4
MWZ				SN	S	22 22 49.6	-0.4
MWZ	Matawai	2.22	175	Pn	Pn	22 22 13.8	+0.4
MWZ				Sn	S	22 22 49.6	-0.4
CNGZ	Carnagh Statio	2.47	163	PN	Pn	22 22 16.2	+0.4
CNGZ	Carnagh Statio	2.47	163	Pn	Pn	22 22 16.2	+0.4
RAHZ	Arahi	2.79	183	PN	Pn	22 22 19.4	+0.4
RAHZ				SN	S	22 22 58.5	-1.5
RAHZ	Arahi	2.79	183	Pn	Pn	22 22 19.4	+0.4
RAHZ				Sn	S	22 22 58.5	-1.5
PRGZ	Paritu Road	2.84	170	PN	Pn	22 22 20.1	+0.6
PRGZ	Paritu Road	2.84	170	Pn	Pn	22 22 20.1	+0.6
KNZ	Kokohu	2.91	174	PN	Pn	22 22 19.6	-0.4
KNZ	Kokohu	2.91	174	Pn	Pn	22 22 19.6	-0.4
NMHZ	Naumai	2.99	187	PN	Pn	22 22 21.5	+0.4
NMHZ	Naumai	2.99	187	Pn	Pn	22 22 21.5	+0.4
MHGZ	Mahia Peninsul	3.07	171	PN	Pn	22 22 21.9	+0.2
MHGZ	Mahia Peninsul	3.07	171	Pn	Pn	22 22 21.9	+0.2
BKZ	Black Stump Fm	3.10	191	PN	Pn	22 22 21.7	-0.5
BKZ				SN	S	22 23 05.4	-0.4
BKZ	Black Stump Fm	3.10	191	Pn	Pn	22 22 21.7	-0.5
BKZ				Sn	S	22 23 05.4	-0.4
OTVZ	Oturere	3.29	202	PN	Pn	22 22 25.1	+0.7
OTVZ	Oturere	3.29	202	Pn	Pn	22 22 25.1	+0.7
MCHZ	McNeill Hill	3.35	188	PN	Pn	22 22 24.7	0.0
MCHZ				SN	S	22 23 10.2	-0.3
MCHZ	McNeill Hill	3.35	188	Pn	Pn	22 22 24.7	0.0
MCHZ				Sn	S	22 23 10.2	-0.3
WPVZ	Whakapapa	3.37	203	PN	Pn	22 22 25.6	+0.5
WPVZ	Whakapapa	3.37	203	Pn	Pn	22 22 25.6	+0.5
FWVZ	Far West T-bar	3.41	203	PN	Pn	22 22 25.8	+0.1
FWVZ				SN	S	22 23 11.4	-0.8
FWVZ	Far West T-bar	3.41	203	Pn	Pn	22 22 25.8	+0.1
FWVZ				Sn	S	22 23 11.4	-0.8
WNVZ	Wahianoa	3.46	202	PN	Pn	22 22 26.2	0.0
WNVZ	Wahianoa	3.46	202	Pn	Pn	22 22 26.2	0.0
BHHZ	Black Hill Sta	3.49	196	PN	Pn	22 22 25.7	-0.8
BHHZ	Black Hill Sta	3.49	196	Pn	Pn	22 22 25.7	-0.7
MOVZ	Moawhango	3.49	200	PN	Pn	22 22 26.0	-0.5
MOVZ	Moawhango	3.49	200	Pn	Pn	22 22 26.0	-0.5
CKHZ	Cape Kidnapper	3.53	182	PN	Pn	22 22 26.5	-0.2
CKHZ	Cape Kidnapper	3.53	182	Pn	Pn	22 22 26.6	-0.2
KAHZ	Kahuranaki	3.68	185	PN	Pn	22 22 28.0	-0.5
KAHZ	Kahuranaki	3.68	185	Pn	Pn	22 22 28.0	-0.5
PNHZ	Pukenui	3.88	192	PN	Pn	22 22 29.3	-1.4
PNHZ	Pukenui	3.88	192	Pn	Pn	22 22 29.3	-1.4
PXZ	Pawanui	3.92	185	PN	Pn	22 22 29.9	-1.1
PXZ	Pawanui	3.92	185	Pn	Pn	22 22 29.9	-1.1
WPHZ	Waipukurau	3.99	189	PN	Pn	22 22 30.8	-1.1
WPHZ	Waipukurau	3.99	189	Pn	Pn	22 22 30.8	-1.1
WAZ	Wanganui	4.05	206	PN	Pn	22 22 32.5	-0.1
WAZ	Wanganui	4.05	206	Pn	Pn	22 22 32.5	-0.1
TSZ	Takapari Road	4.06	194	PN	Pn	22 22 31.5	-1.3
TSZ	Takapari Road	4.06	194	Pn	Pn	22 22 31.5	-1.3
PRHZ	Porangahau	4.17	187	PN	Pn	22 22 32.8	-1.2
PRHZ	Porangahau	4.17	187	Pn	Pn	22 22 32.8	-1.2
DVHZ	Dannevirke	4.26	191	PN	Pn	22 22 33.5	-1.6
DVHZ	Dannevirke	4.26	191	Pn	Pn	22 22 33.5	-1.6
POWZ	Post Office Ro	4.42	195	PN	Pn	22 22 35.5	-1.5
POWZ	Post Office Ro	4.42	195	Pn	Pn	22 22 35.5	-1.5
BFZ	Birch Farm	4.62	190	PN	Pn	22 22 37.5	-1.7
BFZ	Birch Farm	4.62	190	Pn	Pn	22 22 37.5	-1.7
MRZ	Mangatainoka R	4.72	196	PN	Pn	22 22 38.3	-2.1
MRZ	Mangatainoka R	4.72	196	Pn	Pn	22 22 38.3	-2.1
TIWZ	Tintock	4.77	193	PN	Pn	22 22 39.3	-1.8
TIWZ	Tintock	4.77	193	Pn	Pn	22 22 39.3	-1.8
HOWZ	Holdsworth Sta	4.96	196	PN	Pn	22 22 41.0	-2.3
HOWZ	Holdsworth Sta	4.96	196	Pn	Pn	22 22 41.0	-2.3
OGWZ	Otaki Gorge	4.97	199	PN	Pn	22 22 41.2	-2.2
OGWZ	Otaki Gorge	4.97	199	Pn	Pn	22 22 41.2	-2.2
KIW	Kapiti Island	5.08	201	PN	Pn	22 22 42.5	-2.2
KIW	Kapiti Island	5.08	201	Pn	Pn	22 22 42.5	-2.2
TMWZ	Te Maipa	5.09	192	PN	Pn	22 22 43.0	-1.9
TMWZ	Te Maipa	5.09	192	Pn	Pn	22 22 43.0	-1.9
MTW	Mount Morrison	5.21	195	PN	Pn	22 22 43.8	-2.5
MTW	Mount Morrison	5.21	195	Pn	Pn	22 22 43.8	-2.5
CAW	Cannon Point	5.27	198	PN	Pn	22 22 44.5	-2.4
CAW	Cannon Point	5.27	198	Pn	Pn	22 22 44.5	-2.4
DUWZ	D'Urville Isla	5.36	208	PN	Pn	22 22 46.0	-2.1
DUWZ	D'Urville Isla	5.36	208	Pn	Pn	22 22 46.0	-2.1
TRWZ	Traveller	5.41	193	PN	Pn	22 22 46.4	-2.3
TRWZ	Traveller	5.41	193	Pn	Pn	22 22 46.5	-2.3
PAWZ	Paruwai Farm	5.45	195	PN	Pn	22 22 46.5	-2.6
PAWZ	Paruwai Farm	5.45	195	Pn	Pn	22 22 46.5	-2.6
TCW	Tory Channel	5.60	204	PN	Pn	22 22 48.5	-2.5
TCW	Tory Channel	5.60	204	Pn	Pn	22 22 48.5	-2.5
BHW	Baring Head	5.60	199	PN	Pn	22 22 48.2	-2.7
BHW	Baring Head	5.60	199	Pn	Pn	22 22 48.2	-2.7
PLWZ	Palliser	5.66	196	PN	Pn	22 22 48.9	-2.9
PLWZ	Palliser	5.66	196	Pn	Pn	22 22 49.0	-2.8
NNZ	Nelson	5.93	210	PN	Pn	22 22 52.7	-2.3
NNZ	Nelson	5.93	210	Pn	Pn	22 22 52.7	-2.3
QRZ	Quartz Range	5.99	217	PN	Pn	22 22 54.0	-1.8
QRZ	Quartz Range	5.99	217	Pn	Pn	22 22 54.0	-1.8
BSWZ	Blackbirch Sta	6.18	204	ePN	Pn	22 22 56.5	-1.6
BSWZ	Blackbirch Sta	6.18	204	ePn	Pn	22 22 56.5	-1.6
THZ	Tophouse	6.58	210	PN	Pn	22 23 00.5	-2.6
THZ	Tophouse	6.58	210	Pn	Pn	22 23 00.5	-2.6
KHZ	Kahutara	6.92	204	PN	Pn	22 23 04.5	-2.7
KHZ	Kahutara	6.92	204	Pn	Pn	22 23 04.5	-2.7
LTZ	Lake Taylor	7.69	209	PN	Pn	22 23 13.8	-3.1
LTZ	Lake Taylor	7.69	209	Pn	Pn	22 23 13.8	-3.1
MQZ	McQueen's Vall	8.36	204	PN	Pn	22 23 21.5	-3.6
MQZ	McQueen's Vall	8.36	204	Pn	Pn	22 23 21.5	-3.6
RPZ	Rata Peaks	8.96	210	PN	Pn	22 23 29.1	-3.6
RPZ	Rata Peaks	8.96	210	ePn	Pn	22 23 29.1	-3.6
RPZ				eSn	S	22 25 03.5	-11
FOZ	Fox Glacier	9.44	216	PN	Pn	22 23 34.1	-4.5
FOZ	Fox Glacier	9.44	216	Pn	Pn	22 23 34.1	-4.5
LBZ	Lake Benmore	9.87	211	PN	Pn	22 23 40.1	-3.9
LBZ	Lake Benmore	9.87	211	Pn	Pn	22 23 40.1	-3.9
ODZ	Otahua Downs	10.23	207	PN	Pn	22 23 46.2	-2.3
ODZ	Otahua Downs	10.23	207	Pn	Pn	22 23 46.2	-2.3

IDC 07 22:21:55.3±1.9**, 1°.60N×128°.24E, h0**^{km}**, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.5**/21**, mbtmp3.8**/4**, Error ellipse: s-maj=194.2km s-min=29.8km az=70.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.23	165	P	P	22 26 54.8	+0.9
	1.5nm,0.6s,baz=345,slow=11,SNR=6.5						
ASAR	Alice Springs	25.71	168	P	P	22 27 26.8	-0.8
	0.2nm,0.5s,baz=348,slow=7.7,SNR=2.8						
STKA	Stephens Creek	35.62	160	P	P	22 28 54.9	-0.1
	0.8nm,0.4s,baz=333,slow=6.8,SNR=5.6						
FINES	FINESS Array B	94.41	332	P	P	22 35 17.0	0.0

1.1nm,0.5s,baz=72,slow=6.0,SNR=9.5

*IDC **07** 22:28:51.0±0.6, 55°.66S×124°.64W, h0^{km}, mb4.0/12, mb1 4.2/12, mb1mx4.2/16, mbtmp4.0/12, MS4.7/28, Ms1 4.7/28, ms1mx4.6/34, Error ellipse: s-maj=25.1km s-min=16.8km az=157.0*

*ISCJB **07** 22:28:51.0±0.5, 55°.7S±0°.1×124°.5W±0°.2, h10^{km}, mb4.3/17, MS4.7/29, Error ellipse: s-maj=15.3km s-min=12.0km az=156.3*

*NEIC **07** 22:28:52.6±0.4, 55°.71S×124°.58W, h10^{km}, mb4.7/8, Error ellipse: s-maj=15.2km s-min=12.0km az=153.0*

*GCMT **07** 22:28:57.7±0.1, 55°.62S×124°.84W, h22^{km}, MW5.5, Moment Tensor Solution. s85,c161; s99,c176; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.24±.03; $M_{\theta\theta}$1.49±.04; $M_{\phi\phi}$-1.25±.03; $M_{r\theta}$0.10±.05; $M_{\theta\phi}$1.96±.03; $M_{\phi r}$0.11±.05; Best double couple: $M_0$2.40000×10^{17} NP1:ϕ_s108.00000°, δ87.00000°, λ1.00000°. NP2:ϕ_s17.00000°, δ89.00000°, λ177.00000°. Principal axes: T 2.5200, Plg3.0000°, Azm332.0000°; N -0.2500, Plg87.0000°, Azm178.0000°; P -2.2700, Plg1.0000°, Azm63.0000°; Data Used: II IU IC G CN. Surface waves from 103 sta.*

ISC 07 22:28:52.5±0.4**, 55°.6S**±0°.1×**124°.63W**±0°.09**, h10**^{km}**, n85, σ1°.10**/63**, mb4.4**/17**, MS4.8**/29**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	Palmer Station	30.28	132	eP	P	22 35 01.4	-1.9
	52nm,1.1s						
PMSA	Palmer Station	30.28	132	LR	LR	22 44 35.1	
	comp=Z,599nm,20.4s,baz=262,slow=31						
USHA	Ushuaia	31.31	112	LR	LR	22 44 34.5	
	comp=Z,946nm,18.4s,baz=142,slow=30						
VNDA	Vanda	32.97	203	P	P	22 35 27.3	+0.5
VNDA	Vanda	32.97	203	P	P	22 35 27.3	+0.5
	0.8nm,0.7s,baz=141,slow=6.5,SNR=1.5						
RKT	Rikitea	33.37	343	eLQ	LQ	22 42 46.2	
	1μm,37.2s						
RKT				eLR	LR	22 44 13.6	
	5μm,28.8s,baz=169						
QSPA	South Pole Qui	34.54	180	eP	P	22 35 41.1	+0.2
	7.8nm,1.2s						
QSPA	South Pole Qui	34.54	180	P	P	22 35 41.2	+0.4
	1.9nm,0.8s,baz=104,slow=8.3,SNR=11						
QSPA				LR	LR	22 47 30.4	
	comp=Z,1μm,19.3s,baz=87,slow=32						
TBI	Tubuai	37.10	320	eS	S	22 41 46.1	-2.8
	425nm,25.8s						
TBI				eLQ	LQ	22 44 28.9	
	2μm,24.0s						
TBI				eLR	LR	22 45 47.2	
	4μm,29.2s,baz=163						
PLCA	Paso Flores	37.98	90	LR	LR	22 47 49.6	
	comp=Z,938nm,19.3s,baz=227,slow=30						
RPZ	Rata Peaks	41.80	259	LR	LR	22 49 29.4	
	comp=Z,745nm,18.9s,baz=247,slow=30						
PPT2	Papeete2	42.46	323	eS	S	22 43 15.8	+6.4
	866nm,26.0s						
PPT2				eLQ	LQ	22 46 24.4	
	4μm,26.0s						
PPT2				eLR	LR	22 48 31.5	
	5μm,26.0s,baz=162						
PPT	Papeete	42.48	323	LR	LR	22 49 44.5	
	comp=Z,2μm,18.9s,baz=38,slow=30						
RAR	Rarotonga	43.20	308	LR	LR	22 49 12.7	
	comp=Z,1μm,21.0s,baz=81,slow=28						
CFAA	Coronel Fontan	45.79	83	P	P	22 37 13.6	-0.7
CFAA	Coronel Fontan	45.79	83	P	P	22 37 13.6	-0.7
	0.4nm,0.7s,baz=234,slow=10,SNR=4.9						
CFAA				LR	LR	22 52 11.4	
	comp=Z,68nm,19.9s,baz=230,slow=31						
RAO	Raoul Island	45.84	282	LR	LR	22 51 51.0	
	comp=Z,282nm,19.4s,baz=222,slow=30						
VNA1	Neumayer--Stat	46.16	156	eP	P	22 37 18.1	+1.5
VNA2	Neumayer--Watz	46.16	156	eP	P	22 37 19.4	+2.7
SNAA	Sanae	46.62	158	eP	P	22 37 18.8	-1.5
SNAA	Sanae	46.62	158	eP	P	22 37 18.4	-1.8
	27nm,1.4s						
SNAA	Sanae	46.62	158	P	P	22 37 18.5	-1.8
	3.4nm,1.0s,baz=226,slow=8.2,SNR=5.0						
CPUP	Villa Florida	55.96	88	P	P	22 38 31.3	+0.5
CPUP	Villa Florida	55.96	88	P	P	22 38 31.3	+0.5
	0.4nm,0.3s,baz=267,slow=14,SNR=4.5						
CPUP				LR	LR	22 59 18.5	
	comp=Z,832nm,18.6s,baz=210,slow=33						
MAW	Mawson	56.95	183	P	P	22 38 36.8	-0.4
MAW	Mawson	56.95	183	P	P	22 38 36.8	-0.4
	4.3nm,0.8s,baz=186,slow=7.9,SNR=5.0						
MAW				LR	LR	23 00 46.5	
	comp=Z,1μm,21.4s,baz=165,slow=34						
NNA	Nana	57.13	60	LR	LR	22 58 26.7	
	comp=Z,135nm,19.4s,baz=159,slow=31						
LPAZ	La Paz	57.99	71	eP	P	22 38 46.9	+0.9
	8.8nm,1.2s						
LPAZ	La Paz	57.99	71	P	P	22 38 46.8	+0.9
	1.4nm,0.8s,baz=220,slow=2.3,SNR=7.3						
LPAZ				LR	LR	22 57 50.1	
	comp=Z,394nm,21.1s,baz=207,slow=30						
DZM	Mont Dzumac	60.21	274	eS	S	22 47 16.3	+1.8
	303nm,23.8s						
DZM				eLQ	LQ	22 54 11.7	
	4μm,31.0s						
DZM				eLR	LR	22 56 50.5	
	2μm,25.6s						
ATAH	Atahualpa	60.61	55	LR	LR	22 59 06.7	
	comp=Z,456nm,20.8s,baz=207,slow=30						
SIV	San Ignacio	62.07	77	LR	LR	23 02 27.8	
	comp=Z,174nm,18.9s,slow=32						
STKA	Stephens Creek	66.35	248	eP	P	22 39 41.6	+0.4
	1.5nm,1.1s						
STKA	Stephens Creek	66.35	248	P	P	22 39 41.8	+0.6
	3.5nm,0.8s,baz=157,slow=7.7,SNR=6.3						
STKA				LR	LR	23 02 15.2	
	comp=Z,631nm,21.9s,baz=304,slow=30						
SAML	Samuel	66.73	71	eP	P	22 39 43.7	-0.1
	11nm,1.4s						
BDFB	Brasilia	69.69	88	P	P	22 40 03.0	+0.4
BDFB	Brasilia	69.69	88	P	P	22 40 03.0	+0.4
	0.6nm,0.3s,baz=162,slow=8.2,SNR=3.1						
BDFB				LR	LR	23 07 44.8	
	comp=Z,1μm,20.4s,baz=207,slow=34						
CTA	Charters Tower	73.17	259	LR	LR	23 07 53.4	
	comp=Z,302nm,18.3s,baz=51,slow=32						
ASAR	Alice Springs	76.97	247	P	P	22 40 45.4	+0.1
ASAR	Alice Springs	76.97	247	P	P	22 40 45.4	+0.1
	3.3nm,0.9s,baz=144,slow=5.3,SNR=19						
ASAR				LR	LR	23 08 48.6	
	comp=Z,780nm,21.5s,baz=133,slow=31						
WRA	Warramunga Arr	79.79	250	P	P	22 41 00.8	-0.1
WRA	Warramunga Arr	79.79	250	P	P	22 41 00.8	-0.1
	6.2nm,0.9s,baz=144,slow=5.0,SNR=24						
WRA				LR	LR	23 12 32.7	
	comp=Z,637nm,18.0s,baz=180,slow=33						
WRAB	Tennant Creek	79.79	250	eP	P	22 41 00.5	-0.4
	6.0nm,0.8s						
PMG	Port Moresby	81.30	266	LR	LR	23 12 41.6	
	comp=Z,546nm,20.0s,baz=192,slow=32						
FITZ	Fitzroy Crossi	85.85	244	LR	LR	23 13 33.3	
	comp=Z,464nm,21.0s,baz=236,slow=31						
TXAR	Lajitas Array	86.51	18	P	P	22 41 35.0	-0.3
TXAR	Lajitas Array	86.51	18	P	P	22 41 35.0	-0.3
	0.5nm,0.8s,baz=199,slow=9.6,SNR=3.6						
PFO	Pinyon Flat Ob	89.17	7	LR	LR	23 12 18.1	
	comp=Z,510nm,21.4s,baz=346,slow=29						
ANMO	Albuquerque	91.56	15	eP	P	22 41 57.4	-1.7
	4.7nm,1.1s						
ANMO	Albuquerque	91.56	15	LR	LR	23 16 02.7	
	comp=Z,216nm,18.3s,baz=201,slow=31						
BOSA	Boshof	92.22	154	LR	LR	23 20 32.8	
	comp=Z,351nm,19.3s,baz=158,slow=34						
NVAR	Mina Array Bea	93.86	5	P	P	22 42 12.7	+3.0
NVAR	Mina Array Bea	93.86	5	P	P	22 42 12.7	+3.0
	0.1nm,0.3s,baz=198,slow=8.5,SNR=1.9						
NVAR				LR	LR	23 15 11.8	
	comp=Z,454nm,20.0s,baz=172,slow=30						
ELK	Elko	96.35	7	LR	LR	23 16 35.4	
	comp=Z,287nm,18.7s,baz=193,slow=30						
YBH	Yreka Blue Hor	97.01	1	LR	LR	23 17 10.8	
	comp=Z,594nm,18.8s,baz=190,slow=30						
PDAR	Pinedale Array	98.87	11	LR	LR	23 19 02.5	
	comp=Z,387nm,19.9s,baz=207,slow=30						
DIB	Dawson Inlet,	108.67	355	T	T	00 44 54.6	
ILAR	Eielson Array	121.29	349	PKP	PKPdf	22 47 43.0	-1.2
ILAR	Eielson Array	121.29	349	PKP	PKPdf	22 47 43.0	-1.2
	0.5nm,0.9s,baz=170,slow=2.7,SNR=4.4						
EVO	Evora	135.26	85	ePKIKP	PKPdf	22 48 10.8	-0.8
	3.5nm,0.5s						
PKI	Pulchoki	144.58	230	eP	PKPab	22 48 27.8	0.0
	19nm,0.8s						
PKIN	Phulchoki	144.59	230	eP	PKPab	22 48 27.8	0.0
GUN	Gumba	144.67	231	eP	PKPab	22 48 27.7	-0.5
	42nm,0.8s						
DMN	Daman	144.75	230	eP	PKPbc	22 48 28.7	+0.2
	80nm,1.0s						
KKN	Kakani	144.83	230	eP	PKPbc	22 48 28.9	+0.2
	44nm,0.8s						
RJF	Les Rejaudoux	145.05	84	ePKIKP	PKPdf	22 48 29.3	+0.2
CAF	Calviac	145.13	85	ePKIKP	PKPbc	22 48 28.9	0.0
	36nm,1.3s						
KOLN	Koldanda	145.53	228	eP	PKPdf	22 48 29.7	-1.1
	35nm,0.8s						
FLN	La Foliniere	145.92	78	ePKIKP	PKPbc	22 48 31.2	0.0
	128nm,1.6s						
DANN	Dangsing	145.97	228	eP	PKPdf	22 48 31.0	-0.6
	44nm,0.9s						
PYUN	Piuthan	146.07	227	eP	PKPdf	22 48 30.5	-1.2
	123nm,1.4s						
ORIF	Oris-en-Rattie	147.28	88	ePKIKP	PKPdf	22 48 33.2	+0.2
LOR	Lormes	147.51	83	ePKIKP	PKPdf	22 48 33.0	-0.2
	7.0nm,0.8s						
ULN	Ulaanbaatar	147.75	278	ePKPbc	PKPbc	22 48 37.2	+0.5
SONM	Songino Array	148.10	278	PKPbc	PKPbc	22 48 37.2	-0.4
SONM	Songino Array	148.10	278	PKPbc	PKPbc	22 48 37.2	-0.4
	1.0nm,0.7s,baz=142,slow=7.4,SNR=5.5						
LPG	La Plagne	148.12	88	ePKIKP	PKPdf	22 48 34.9	+0.2
	10.0nm,0.9s						
LPL	La Plagne	148.12	88	ePKIKP	PKPdf	22 48 34.6	0.0
	15nm,1.1s						
TIP	Timpagrande	149.62	106	ePKPdf	PKPdf	22 48 39.0	+2.0
GERES	GERESS Array B	153.92	88	PKP	PKPdf	22 48 42.4	-0.8
GERES				PKPbc	PKiKP	22 48 51.5	+0.2
GERES	GERESS Array B	153.92	88	PKP	PKPdf	22 48 42.4	-0.8
	0.1nm,0.3s,baz=318,slow=4.0,SNR=2.9						
GERES				PKPbc	PKiKP	22 48 51.5	+0.2
	0.3nm,0.6s,baz=242,slow=2.1,SNR=3.5						
MKAR	Makanchi Array	161.06	253	PKPab	PKPab	22 49 35.0	-0.4
MKAR	Makanchi Array	161.06	253	PKPab	PKPab	22 49 35.0	-0.4
	1.2nm,0.8s,baz=111,slow=6.6,SNR=7.4						
ZALV	Zalesovo Beam	162.99	277	PKPab	PKPab	22 49 43.5	-0.1
ZALV	Zalesovo Beam	162.99	277	PKPab	PKPab	22 49 43.5	-0.1
	1.0nm,0.6s,baz=89,slow=5.9,SNR=6.6						

*CSEM **07** 22:33:37.4, 36°.09N×27°.24E, h39^{km}, MD3.2, After ATH*

ATH 07 22:33:37.4, 36°.09N×27°.24E, h39^{km}±9^{km}**, MD3.2**/4**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.55	187	ePN	Pn	22 33 49.0	+0.2
KARP				eSN	Sn	22 33 58.0	+1.2
KARP	Karpathos	0.55	187	ePn	Pn	22 33 49.0	+0.2
KARP				eSn	Sn	22 33 58.0	+1.2
ARG	Arkhangelos	0.73	80	ePN	Pn	22 33 52.3	+1.1
ARG				eSN	Sn	22 34 03.2	+2.1
ARG	Arkhangelos	0.73	80	ePn	Pn	22 33 52.3	+1.1
ARG				eSn	Sn	22 34 03.2	+2.1
ZKR	Zakros	1.28	221	ePB	Pn	22 34 00.0	+1.2
ZKR	Zakros	1.28	221	ePb	Pn	22 34 00.0	+1.2
LAST	Lasithi	1.71	238	ePB	Pn	22 34 07.0	+2.2
LAST	Lasithi	1.71	238	ePb	Pn	22 34 07.0	+2.2

WEL 07 22:39:52.6±0.1**, 41°.27S×174°.83E, h29**^{km}**, ML3.7**/31**, 7C-11D, Error ellipse: s-maj=0.7km s-min=0.6km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WEL	Wellington	0.05	254	⇓P*	Pb	22 39 57.5	0.0
WEL				S*	Sb	22 40 00.9	-0.1
BHW	Baring Head	0.14	168	⇑P*	Pb	22 39 57.9	-0.2
BHW				S*	Sb	22 40 01.3	-0.6
CAW	Cannon Point	0.24	48	⇑P*	Pb	22 39 59.4	+0.1
CAW				S*	Sb	22 40 04.3	+0.6
MSWZ	Moikau Station	0.34	115	⇑P*	Pb	22 40 00.9	+0.2
MSWZ				S*	Sb	22 40 06.6	+0.5
KIW	Kapiti Island	0.41	8	⇓P*	Pb	22 40 01.9	+0.2
KIW				S*	Sb	22 40 08.4	+0.5
TCW	Tory Channel	0.42	278	⇓P*	Pb	22 40 01.8	0.0
PLWZ	Palliser	0.44	133	⇑P*	Pb	22 40 02.1	0.0
PLWZ				S*	Sn	22 40 09.3	-0.7
PAWZ	Paruwai Farm	0.46	104	⇓P*	Pb	22 40 02.6	+0.1
PAWZ				S*	Sn	22 40 10.0	-0.6
MTW	Mount Morrison	0.52	78	⇓P*	Pb	22 40 03.5	+0.2
OGWZ	Otaki Gorge	0.52	30	⇑P*	Pb	22 40 03.4	0.0
OGWZ				S*	Sb	22 40 11.1	+0.4
HOWZ	Holdsworth Sta	0.64	54	⇓P*	Pb	22 40 05.3	0.0
TRWZ	Traveller	0.66	101	⇓P*	Pb	22 40 05.3	-0.3
CMWZ	Cape Campbell	0.67	224	P*	Pn	22 40 06.6	+0.4
TUWZ	Tuamarina	0.69	256	P*	Pb	22 40 05.4	-0.7
TMWZ	Te Maipa	0.81	79	⇓P*	Pn	22 40 07.7	-0.6
MRZ	Mangatainoka R	0.83	43	⇓P*	Pn	22 40 08.4	0.0
DUWZ	D'Urville Isla	0.83	304	⇑P*	Pb	22 40 08.6	0.0
BSWZ	Blackbirch Sta	0.84	238	P*	Pn	22 40 08.7	+0.1
TIWZ	Tintock	0.94	59	P*	Pn	22 40 09.5	-0.4
NNZ	Nelson	1.10	272	⇓PN	Pn	22 40 12.3	+0.2
POWZ	Post Office Ro	1.13	39	P*	Pn	22 40 12.6	+0.1
BFZ	Birch Farm	1.22	62	⇑P*	Pn	22 40 12.8	-1.0
DVHZ	Dannevirke	1.40	47	PN	Pn	22 40 15.5	-0.8
TSZ	Takapari Road	1.48	36	PN	Pn	22 40 17.3	-0.1
KHZ	Kahutara	1.50	220	⇓PN	Pn	22 40 16.8	-0.8
THZ	Tophouse	1.53	251	PN	Pn	22 40 18.0	-0.1
PNHZ	Pukenui	1.71	38	PN	Pn	22 40 20.1	-0.4
WPHZ	Waipukurau	1.72	46	PN	Pn	22 40 20.2	-0.4
QRZ	Quartz Range	1.80	284	PN	Pn	22 40 22.6	+1.0
MOVZ	Moawhango	1.99	21	PN	Pn	22 40 24.9	+0.5
WNVZ	Wahianoa	2.03	17	PN	Pn	22 40 25.7	+0.6
FWVZ	Far West T-bar	2.09	16	PN	Pn	22 40 26.9	+0.9
TUVZ	Tukino	2.10	18	PN	Pn	22 40 27.1	+1.1
VRZ	Vera Road	2.14	358	PN	Pn	22 40 28.4	+2.0
PKE	Pukeiti	2.17	342	PN	Pb	22 40 29.3	-2.0
WTVZ	West Tongariro	2.23	15	PN	Pn	22 40 29.0	+1.2
KRVZ	Karewarewa	2.26	16	PN	Pn	22 40 29.6	+1.4
LTZ	Lake Taylor	2.43	231	PN	Pn	22 40 29.5	-1.0

CASC 07 22:40:29.0±1.7**, 13°.44N×90°.79W, h37**^{km}±4^{km}**, MD3.6, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCG	Pacaya	0.97	11	eP	Pn	22 40 46.4	0.0
PCG				eS	Sn	22 40 59.6	+0.5
FUG	Fuego 3	1.00	357	eP	Pn	22 40 46.4	-0.4
JAT	Jato	1.20	317	eP	Pn	22 40 49.6	+0.4
JAT				eS	Sn	22 41 05.0	+0.7
SBLS	San Blas	1.21	71	eP	Pn	22 40 49.2	-0.5
SBLS				eS	Sn	22 41 04.9	-0.1
SNJE	San Jose	1.23	70	eP	Pn	22 40 49.6	-0.3
SNJE				eS	Sn	22 41 05.4	-0.1
RBDL	Robledal	1.27	58	eP	Pn	22 40 50.6	+0.2
RBDL				eS	Sn	22 41 08.1	+1.8
BOQS	Boqueron	1.50	78	eP	Pn	22 40 54.0	+0.3
BOQS				eS	Sn	22 41 13.4	+1.2
MTO2	Montecristo 2	1.69	55	eP	Pn	22 40 56.7	+0.4
MTO2				eS	Sn	22 41 18.8	+1.9
LFRS	El Faro	1.69	84	eP	Pn	22 40 56.8	+0.6
LFRS				eS	Sn	22 41 17.6	+0.8
LBRS	Las Brisas	1.73	80	eP	Pn	22 40 57.8	+1.2
LBRS				eS	Sn	22 41 17.6	+0.1
SNVI	San Vicente	1.91	85	eP	Pn	22 40 59.9	+0.7
SNVI				eS	Sn	22 41 22.7	+0.5
MRL	Marmol	1.94	33	eP	Pn	22 41 00.7	+1.1
MRL				eS	Sn	22 41 25.0	+2.1
CNCH	Conchagua	2.88	93	eP	Pn	22 41 13.1	+0.6
CNCH				eS	Sn	22 41 47.0	+0.8

*BJI **07** 22:43:57.7, 25°.52N×56°.64E, h20^{km}, mB5.1/32, mb5.0/49, Ms4.7/44, Ms7 4.4/46*

*IDC **07** 22:43:58.3±0.4, 25°.30N×57°.11E, h0^{km}, mb5.0/38, mb1 5.1/40, mb1mx5.1/41, mbtmp5.0/40, MS4.3/14, Ms1 4.3/14, ms1mx3.9/49, Error ellipse: s-maj=11.5km s-min=8.2km az=29.0*

ISCJB **07** *22:44:00.5±0.5, 25.41N±0.02×57.07E±0.02, h24km±3km, mb5.2/271, MS4.4/38, Error ellipse: s-maj=3.0km s-min=2.3km az=10.9*
OMAN **07** *22:44:00.4±46.0, 25.39N×57.08E, h6km±5km, Error ellipse: s-maj=8.0km s-min=4.4km az=253.0*
DJA **07** *22:44:00.4±0.3, 25°N±6°×5°7E±°, h10km, M5.0/13, mB5.5/6, mb5.0/13, Mw(mB)5.0/6*
GCMT **07** *22:44:01.5±0.3, 25.16N×57.03E, h25km±1km, MW5.0, Moment Tensor Solution. s30,c37; s69,c98; Moment tensor: Scale 10^16Nm; Mrr2.80±.22; Mθθ-2.25±.17; Mφφ-0.55±.15; Mrθ2.41±.38; Mθφ-3.14±.12; Mφr1.66±.38; Best double couple: M0 4.70000×10^16 NP1:φs227.00000°, δ26.00000°, λ82.00000°. NP2:φs56.00000°, δ64.00000°, λ94.00000°. Principal axes: T 3.8200, Plg71.0000°, Azm335.0000°; N 1.8500, Plg4.0000°, Azm234.0000°; P -5.6600, Plg19.0000°, Azm143.0000°; Data Used: II IU CN G IC.*
MOS **07** *22:44:02.1±0.8, 25.45N×57.02E, h33km, mb5.5/126, MS4.1/17 Error ellipse: s-maj=5.4km s-min=3.0km az=120.9*
BGS **07** *22:44:04.7±1.9, 25.61N×57.22E, h40km, mb5.4*
NEIC **07** *22:44:04.4±0.5, 25.45N×57.03E, h39km±4km, mb5.4/110, Error ellipse: s-maj=3.8km s-min=2.7km az=182.0*
NEIC Felt [IV] at Al Fujayrah and [II] at Dubai and Khawr Fakkan, United Arab Emirates. Also felt at Abu Dhabi. Felt at Khasab, Oman.
CSEM **07** *22:44:04.3±0.1, 25.42N×57.09E, h40km, mb5.3/99, Ms4.2, Mw5.0, Error ellipse: s-maj=3.0km s-min=2.6km az=6.0*
THR **07** *22:44:04.0±0.8, 25.73N×56.98E, h14km±8km, ML4.9*
TEH **07** *22:44:06.8, 25.69N×57.05E, h21km, ML4.8*
SZGRF **07** *22:44:13.9, 25.06N×54.64E, h33km, mb5.3, Persian Gulf*
NSSC **07** *22:44:15.6±2.8, 26.28N×55.89E, h5km±999km*
ISC 07 22:44:02.6±0.3**, 25.41N**±0.03×**57.06E**±0.02**, h29**km±1km**, h28**km**:pP-P, n1442, σ1.14**/1553**, mb5.3**/280**, MS4.4**/39**, 200C-50D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	Banah	0.85	307	⇓P	Pn	22 44 18.0	-0.8
BANOM				⇓S	Sb	22 44 29.0	-1.1
BANOM	Banah	0.85	307	P	Pn	22 44 17.8	-1.0
	SNR=1000						
BANOM				S	Sb	22 44 29.1	-0.9
HATD	Hatta, Dubai	1.02	235	P	Pn	22 44 20.4	-0.7
	SNR=518						
HATD				⇑S	Sn	22 44 33.7	-0.8
HATD	Hatta, Dubai	1.02	235	P	Pn	22 44 20.4	-0.7
HATD				S	Sn	22 44 33.7	-0.8
ASHO	Ashiyiah	1.16	231	⇑P	Pn	22 44 23.0	0.0
	SNR=1535						
ASHO	Ashiyiah	1.16	231	P	Pn	22 44 22.9	-0.1
	SNR=1000						
NAZ	Nazwa, Dubai	1.33	252	P	Pb	22 44 26.3	-0.7
	SNR=58						
NAZ	Nazwa, Dubai	1.33	252	P	Pn	22 44 25.8	+0.4
FAQ	Al Faqa, Dubai	1.49	244	P	Pn	22 44 28.4	+0.9
ASUD	Al Ashush, Dub	1.75	244	P	Pb	22 44 33.6	-0.6
HOQ	Hoqain	1.84	173	P	Pn	22 44 31.4	-0.9
	SNR=335						
HOQ	Hoqain	1.84	173	P	Pn	22 44 31.4	-0.9
	SNR=335						
IBND	Bandar-abas	2.08	347	ePn	Pn	22 44 37.0	+1.3
IBND				eSg	Sb	22 45 03.7	-1.4
IBND				e		22 45 31.4	
	comp=Z,69µm,0.3s						
IBND	Bandar-abas	2.08	347	Pn	Pn	22 44 36.9	+1.3
IBND	Bandar-abas	2.08	347	Pn	Pn	22 44 36.9	+1.3
IBND				eSg	Sb	22 45 03.7	-1.4
BNDS	Bandar-Abbas	2.13	338	ePg	Pn	22 44 36.8	+0.3
BNDS				eSg	Sn	22 45 01.7	-0.5
BNDS				AML	AML	22 45 18.5	
	comp=N,6µm,0.4s						
BNDS	Bandar-Abbas	2.13	338	eP	Pn	22 44 36.0	-0.5
BNDS				eSg	Sn	22 45 01.0	-1.1
BNDS	Bandar-Abbas	2.13	338	eP	Pn	22 44 36.0	-0.5
BNDS	Bandar-Abbas	2.13	338	ePg	Pn	22 44 36.8	+0.3
BNDS				eSg	Sn	22 45 01.0	-1.1
SMDO	Samad	2.51	159	P	Pn	22 44 41.5	-0.2
	SNR=191						
SMDO	Samad	2.51	159	P	Pn	22 44 41.5	-0.2
	SNR=191						
BSY	Bisya	2.66	177	⇓P	Pn	22 44 45.9	+2.2
	SNR=483						
BSYO	Bisya	2.68	176	P	Pn	22 44 45.9	+2.0
	SNR=483						
JMDO	Jabal Madar	3.18	162	P	Pn	22 44 52.0	+1.3
	SNR=139						
JMDO	Jabal Madar	3.18	162	P	Pn	22 44 52.0	+1.3
	SNR=139						
WBK	Wadi Bani Khal	3.29	148	P	Pn	22 44 52.4	0.0
	SNR=534						
WBK	Wadi Bani Khal	3.29	148	P	Pn	22 44 52.4	0.0
	SNR=534						
KRBR	Kerman	4.56	357	ePn	Pn	22 45 10.8	+0.8
KRBR				AML	AML	22 46 08.3	
	comp=E,976nm,0.6s						
KRBR				AML	AML	22 46 30.4	
	comp=N,865nm,0.8s						
KRBR	Kerman	4.56	357	eP	Pn	22 45 10.0	0.0
KRBR	Kerman	4.56	357	eP	Pn	22 45 10.0	0.0
KRBR	Kerman	4.56	357	ePn	Pn	22 45 10.8	+0.8
GHIR	Ghir-Karzin	4.63	309	ePn	Pn	22 45 12.6	+1.8
GHIR				Sn	Sn	22 46 02.0	-1.7
GHIR				AML	AML	22 46 09.8	
	comp=E,2µm,0.8s						
GHIR				AML	AML	22 46 15.1	
	comp=N,2µm,0.5s						
GHIR	Ghir-Karzin	4.63	309	eP	Pn	22 45 11.0	+0.2
GHIR	Ghir-Karzin	4.63	309	eP	Pn	22 45 11.0	+0.2
GHIR	Ghir-Karzin	4.63	309	ePn	Pn	22 45 12.6	+1.8
ZHSF	Zahedan	5.33	37	ePn	Pn	22 45 22.7	+2.2
ZHSF	Zahedan	5.33	37	eP	Pn	22 45 22.0	+1.6
ZHSF	Zahedan	5.33	37	eP	Pn	22 45 22.0	+1.6
ZHSF	Zahedan	5.33	37	ePn	Pn	22 45 22.7	+2.2
SHI	Shiraz	5.83	317	P	Pn	22 45 29.1	+1.7
SHI						22 46 29.5	
SHI	Shiraz	5.83	317	ePn	Pn	22 45 29.2	+1.8
SHI				eSn	Sn	22 46 29.5	-3.9
SHI				e		22 46 40.1	
	comp=Z,13µm,0.4s						
SHI	Shiraz	5.83	317	Pn	Pn	22 45 29.1	+1.7
SHI				Sn	Sn	22 46 29.5	-3.9
SHI	Shiraz	5.83	317	Pn	Pn	22 45 29.1	+1.7
SHI				S	Sn	22 46 29.5	-3.9
IBAF	Bafgh	6.29	348	ePn	Pn	22 45 34.2	+0.5
IBAF				e		22 47 54.4	
	comp=Z,3µm,0.4s						
IMEH	Mehriz	6.33	341	ePn	Pn	22 45 34.9	+0.6
IMEH				e		22 46 54.4	
	comp=Z,4µm,0.2s						
IMEH	Mehriz	6.33	341	Pn	Pn	22 45 34.9	+0.6
IKOO	Kooshah	7.19	13	ePn	Pn	22 45 46.0	-0.1
IKOO				e		22 48 10.4	
	comp=Z,3µm,0.5s						
ICHK	Chekchek	7.19	342	ePn	Pn	22 45 46.7	+0.6
ICHK				e		22 47 50.7	
	comp=Z,3µm,0.4s						
ITEG	Tejag	7.60	11	ePn	Pn	22 45 51.6	-0.1
ITEG				e		22 48 05.9	
	comp=Z,3µm,0.6s						
IDAH	Dahanechah	7.70	18	ePn	Pn	22 45 53.2	+0.1
IDAH				e		22 48 34.8	
	comp=Z,5µm,0.7s						
IGAR	Gharneh	8.23	329	ePn	Pn	22 46 00.6	+0.2
IGAR				e		22 47 37.0	
	comp=Z,4µm,0.2s						
IZEF	Zefreh	8.52	332	e		22 46 25.0	
	comp=Z,2µm,0.4s						
IZEF				ePn	Pn	22 46 03.3	-1.1
QRN	Al-Qurain	8.79	294	eP	Pn	22 46 08.4	+0.5
QRN				AML	AML	22 47 41.0	
	comp=Z,339nm,0.5s						
KBD	Kabd	9.13	296	eP	Pn	22 46 12.2	-0.3
KBD				AML	AML	22 47 48.5	
	comp=Z,94nm,0.3s						
KBD	Kabd	9.13	296	eP	Pn	22 46 12.2	-0.3
IKLH	Kolahrood	9.21	330	ePn	Pn	22 46 13.5	-0.4
IKLH				e		22 48 00.3	
	comp=Z,3µm,0.4s						
UMR	Umm Al-Rimmam	9.26	299	eP	Pn	22 46 14.4	+0.1
UMR				AML	AML	22 47 52.8	
	comp=Z,206nm,0.4s						
UMR	Umm Al-Rimmam	9.26	299	eP	Pn	22 46 14.4	+0.1
NAY	Al-Naaiem	9.53	296	eP	Pn	22 46 18.6	+0.6
NAY				AML	AML	22 47 59.0	
	comp=Z,137nm,0.5s						
NAY	Al-Naaiem	9.53	296	eP	Pn	22 46 18.5	+0.6
MIB	Mutribah	9.66	299	eP	Pn	22 46 20.1	+0.3
MIB				AML	AML	22 48 06.1	
	comp=Z,568nm,0.7s						
MIB	Mutribah	9.66	299	eP	Pn	22 46 20.1	+0.3
QUE	Quetta	9.96	59	⇓iP	Pn	22 46 31.0	+6.9
QUE				eS	Sn	22 48 27.0	+12
QUE	Quetta	9.96	59	⇓iP	Pn	22 46 31.0	+6.9
QUE				eS	Sn	22 48 27.0	+12
QUE	Quetta	9.96	59	iP	Pn	22 46 31.0	+6.9
QUE				eS	Sn	22 48 27.0	+12
IANJ	Anjilo	10.38	346	ePn	Pn	22 46 29.8	0.0
IANJ				e		22 46 34.3	
	comp=Z,900nm,0.4s						
IVRN	Varamin	10.60	336	ePn	Pn	22 46 32.8	+0.1
RAYN	Ar Rayn	10.69	262	Pn	Pn	22 46 32.0	-2.0
	comp=Z,3µm,0.7s						
RAYN	Ar Rayn	10.69	262	ePn	Pn	22 46 32.4	-1.6
RAYN	Ar Rayn	10.69	262	ePn	Pn	22 46 32.4	-1.6
IFIR	Firoozkooh	10.85	341	ePn	Pn	22 46 36.0	-0.2
IFIR				e		22 47 18.8	
	comp=Z,250nm,0.1s						
ISHM	Shahmirzad	10.85	344	ePn	Pn	22 46 36.2	-0.2
ISHM				e		22 46 54.5	
	comp=Z,781nm,0.2s						
ISRO	Mashad	11.06	10	ePn	Pn	22 46 38.7	-0.3
ISRO				eSg		22 49 42.9	
IPAY	Payeh	11.13	8	ePn	Pn	22 46 39.9	-0.1
IPAY				e		22 46 51.8	
	comp=Z,3µm,0.7s						
IKIA	Kiasar	11.14	346	ePn	Pn	22 46 40.1	-0.2
IKIA				e		22 46 54.4	
	comp=Z,841nm,0.5s						
IMYA	Miami	11.20	13	ePn	Pn	22 46 40.9	-0.1
IMYA				e		22 47 16.7	
	comp=Z,740nm,0.5s						
IAKL	Akhelmad	11.25	7	ePn	Pn	22 46 41.6	-0.1
IAKL				e		22 46 52.4	
	comp=Z,735nm,0.5s						
IR5	Iran Long-Peri	11.25	332	ePn	Pn	22 46 42.4	+0.7
IR3	Iran Long-Peri	11.30	334	ePn	Pn	22 46 42.0	-0.2
IKRD	Kardeh	11.39	6	ePn	Pn	22 46 45.3	+1.6
IPRN	Peran	11.53	341	ePn	Pn	22 46 45.4	0.0
ISFR	Sfrayin	11.63	4	ePn	Pn	22 46 46.7	-0.3
IRAZ	Razeghan	11.70	330	ePn	Pn	22 46 46.9	-1.0
IRAZ				e		22 49 31.6	
	comp=Z,1µm,0.4s						
THKV	Tehran--Karaj	11.74	335	ePn	Pn	22 46 49.9	+1.6
THKV	Tehran--Karaj	11.74	335	eP	Pn	22 46 49.0	+0.6
THKV	Tehran--Karaj	11.74	335	eP	Pn	22 46 49.0	+0.6
IGZV	Ghazvin	12.41	333	ePn	Pn	22 46 57.4	-0.2
ABKT	Ailbek	12.51	4	Pn	Pn	22 46 59.6	+0.8
	comp=Z,216nm,1.0s,SNR=15						
MUKL	Al Mukalla	13.23	216	eP	Pn	22 47 06.4	-2.3
BHD	Baghdad	13.54	308	ex	Pn	22 47 13.0	+0.2
BHD				ex	Sn	22 49 43.0	+0.7
BHD				ex	x	22 52 37.0	
KBL	Kabul	13.80	46	eP	Pn	22 47 16.6	+0.1
KBL	Kabul	13.80	46	ePn	Pn	22 47 16.6	+0.1
KBL	Kabul	13.80	46	ePn	Pn	22 47 16.6	+0.1
THW	Thamme Wali	14.79	57	P	Pn	22 47 26.8	-3.0
LKRN	Lenkeran, Azer	14.99	334	P	Pn	22 47 32.3	-0.1
	SNR=10						
LKRN	Lenkeran, Azer	14.99	334	Pn	Pn	22 47 32.3	-0.1
	SNR=10						
SARP	Sargodha	15.15	61	P	Pn	22 47 32.3	-2.4
CEP	Cherat	15.38	54	P	Pn	22 47 35.8	-2.1
GLBA	Clilabad	15.60	334	P	Pn	22 47 40.5	0.0
	SNR=19						
GLBA	Clilabad	15.60	334	Pn	Pn	22 47 40.5	0.0
	SNR=19						
BDHA	Al Bayda'	15.69	226	eP	Pn	22 47 39.4	-2.6
BDHA	Al Bayda'	15.69	226	eP	Pn	22 47 39.4	-2.6
HAJJ	Hajjah	15.87	235	eP	Pn	22 47 41.7	-2.6
HAJJ				AMb	AMB	22 47 42.0	
	comp=Z,139nm,0.4s						
LBOS		15.97	226	eP	Pn	22 47 43.1	-2.6
LBOS				iS	Sn	22 50 40.0	-2.1
GALA	Gala	16.03	341	P	P	22 47 51.0	+1.8
	SNR=5.6						
GALA	Gala	16.03	341	Pn	P	22 47 51.0	+1.8
	SNR=5.6						
DHBB	Dhamar BB	16.05	230	eP	Pn	22 47 44.2	-2.5
GOBA	Gobu	16.15	340	P	P	22 47 50.9	+0.3
	SNR=8.7						
GOBA	Gobu	16.15	340	Pn	P	22 47 50.9	+0.3
	SNR=8.7						
CUKT	Cukurca	16.45	319	eP	Pn	22 47 48.3	-3.2
NAX	Nakhchivan	16.82	327	P	P	22 47 57.3	-0.8
	SNR=17						
NAX	Nakhchivan	16.82	327	Pn	P	22 47 57.3	-0.8
	SNR=17						
PQL	Pirkuli	16.88	337	P	Pn	22 47 57.5	+0.5
	SNR=31						
PQL	Pirkuli	16.88	337	Pn	Pn	22 47 57.5	+0.5
	SNR=31						
KHET	Khetri	16.96	77	ePKP	Pn	22 47 56.6	-1.3
BRDA	Brd	16.96	333	P	P	22 47 59.2	-0.3
	SNR=30						
BRDA	Brd	16.96	333	Pn	P	22 47 59.2	-0.3
	SNR=30						
POO	Poona	17.01	110	⇑iP	Pn	22 47 58.0	-0.6
	comp=Z,90nm,1.0s						
IML	Ismayilli	17.03	336	P	Pn	22 47 58.2	-0.5
	SNR=26						
IML	Ismayilli	17.03	336	Pn	Pn	22 47 58.2	-0.5
	SNR=26						
SIZA	Siyzn	17.03	339	P	P	22 48 01.2	+0.8
	SNR=14						
SIZA	Siyzn	17.03	339	Pn	P	22 48 01.2	+0.8
	SNR=14						
TRBA	At Turbah	17.19	228	eP	Pn	22 47 58.4	-2.6
TRBA				AMb	AMB	22 48 00.0	
	comp=Z,82nm,2.9s						
QUBA	Quba, Azerbaij	17.42	338	P	P	22 48 06.3	+1.7
	SNR=33						
QUBA	Quba, Azerbaij	17.42	338	Pn	P	22 48 06.3	+1.7
	SNR=33						
GEVA	Gevas	17.49	321	iP	Pn	22 48 03.2	-1.4
VANB	Van	17.50	322	eP	Pn	22 48 04.0	-0.6
MZRK	Al-Mazaregh	17.50	310	eP	Pn	22 47 59.6	-5.0
MZRK	Al-Mazaregh	17.50	310	eP	Pn	22 47 59.6	-5.0
	SNR=42						
KUDL	Kundal	17.56	77	ePKP	Pn	22 48 04.0	-1.4
RTK	Rohtak	17.59	74	ex	Pn	22 47 59.8	-5.9
RTK				AMB	AMB	22 48 03.5	
	comp=Z,85nm,0.7s						
CLDR	Caldiran	17.60	324	eP	Pn	22 48 06.0	0.0
GANJ	Ganja	17.63	332	P	Pn	22 48 06.6	+0.3
	SNR=34						
GANJ	Ganja	17.63	332	Pn	Pn	22 48 06.6	+0.3
	SNR=34						
SEKA	Sheki	17.76	335	P	Pn	22 48 07.8	0.0
	SNR=52						
SEKA	Sheki	17.76	335	Pn	Pn	22 48 07.8	0.0
	SNR=52						
GNI	Garni	17.95	328	eP	P	22 48 13.6	+3.0
GNI	Garni	17.95	328	P	P	22 48 11.8	+1.2
	comp=Z,9.0nm,0.9s						
GNI				S	S	22 51 36.7	+1.3
GNI	Garni	17.95	328	P	P	22 48 11.8	+1.2
	comp=Z,1.4nm,0.3s,baz=302,slow=1.4,SNR=19						
GNI				S	S	22 51 36.7	+1.3
	comp=Z,0.1nm,0.3s,baz=303,slow=17,SNR=2.0						
GNI	Garni	17.95	328	P	P	22 48 11.3	+0.7
	SNR=35						
GNI				S	S	22 51 36.7	+1.3
KKR	Kurukshetra	18.07	71	ePKP	P	22 48 13.4	+1.5
AYAN	Aya Nagar	18.15	76	ePKP	Pn	22 48 11.1	-1.6
SFNV	Sufian	18.18	311	eP	Pn	22 48 13.0	-0.1
SFNV	Sufian	18.18	311	eP	Pn	22 48 13.0	-0.1
	SNR=41						
KBSD	Kabsdagh	18.22	313	eP	Pn	22 48 06.9	-6.5
KBSD	Kabsdagh	18.22	313	eP	Pn	22 48 06.9	-6.5
	SNR=41						
MARD	Mardin	18.24	314	iP	Pn	22 48 11.9	-2.0
BTMT	Batman	18.34	318	eP	P	22 48 14.3	-0.5
TUTA	Tutak	18.38	323	iP	Pn	22 48 16.6	+0.9
TUTA	Tutak	18.38	323	iP	Pn	22 48 16.6	+0.9
SDNR	Sundarnagar	18.52	66	ePKP	P	22 48 17.0	+0.2
SDNR				ex	x	22 51 28.0	
SMLA	Simla	18.60	68	iP	P	22 48 17.0	-0.6
SMLA				ix	x	22 51 24.6	
DGRG	David-gareji	18.70	332	P	Pn	22 48 21.3	+2.0
ASOR	Ausora	18.74	75	ePKP	P	22 48 18.9	-0.3
ASOR				AMB	AMB	22 48 20.9	
	comp=Z,49nm,0.3s						
ZALF	Zalf	18.76	298	eP	P	22 48 19.8	+0.3
ZALF	Zalf	18.76	298	eP	P	22 48 19.8	+0.3
	SNR=41						
AGRA	Agra	18.81	80	ePKP	Pn	22 48 20.6	-0.1
ASF	Jabal al Asfar	18.90	296	P	P	22 48 21.0	0.0
ASF				S	Sn	22 51 41.4	-11
ASF	Jabal al Asfar	18.90	296	P	P	22 48 21.0	0.0
	comp=Z,0.9nm,0.3s,baz=333,slow=5.1,SNR=32						
ASF				S	Sn	22 51 41.4	-11
	comp=Z,1.3nm,0.3s,baz=177,slow=8.0,SNR=3.3						
ASF				LR	LR	22 56 35.9	
	comp=Z,186nm,18.5s,baz=339,slow=40						
DIY	Diyarbakir	18.94	315	eP	Pn	22 48 23.3	+1.0
VRTB	Varto-Mus	18.98	320	eP	Pn	22 48 27.3	+4.5
DIYA	Diyarbakir	19.02	315	iP	Pn	22 48 24.4	+1.1
DIYA	Diyarbakir	19.02	315	iP	Pn	22 48 24.4	+1.1
BNGL	BINGOL	19.03	319	iP	Pn	22 48 24.9	+1.4
KZR	Kazreti	19.07	330	P	Pn	22 48 32.8	+9.0
MAK	Makhachkala	19.18	338	eP	P	22 48 23.3	-0.6
MAK				eS	Sn	22 51 59.0	-0.1
MAK				pmax	pmax		
	comp=Z,151nm,1.0s						
MAK				MLR	MLR		
	comp=Z,538nm,14.0s						
MAK	Makhachkala	19.18	338	eP	P	22 48 23.3	-0.6
	comp=Z,151nm,1.0s						
MAK				eS	Sn	22 51 59.0	-0.1
	comp=Z,538nm,14.0s						
SALA	Sala	19.18	297	eP	Pn	22 48 25.0	-0.3
SALA	Sala	19.18	297	eP	Pn	22 48 25.0	-0.3
	SNR=40						
DDI	Dehra Dun	19.19	70	ePKP	P	22 48 24.0	-0.3
DDI				eS	S	22 52 04.0	+3.9
SEAG	Tbilisi Sea	19.20	331	P	Pn	22 48 32.6	+7.2
TBLG	Delisi	19.21	331	P	Pn	22 48 25.2	-0.2
TBLG	Delisi	19.21	331	P	Pn	22 48 25.2	-0.2
TBLG	Delisi	19.21	331	P	Pn	22 48 25.2	-0.2
ATD	Arta Tunnel	19.27	227	P	Pn	22 48 27.8	+1.4
ATD				S	Sn	22 52 00.2	-1.5
ATD	Arta Tunnel	19.27	227	P	Pn	22 48 27.8	+1.4
	comp=Z,2.2nm,0.3s,baz=19,slow=4.7,SNR=54						
ATD				S	Sn	22 52 00.2	-1.5
	comp=Z,0.4nm,0.3s,baz=320,slow=17,SNR=1.5						
ATD	Arta Tunnel	19.27	227	P	Pn	22 48 27.8	+1.4
ATD				S	Sn	22 52 00.2	-1.5
BNGB	Bing˜¶l	19.33	318	eP	Pn	22 48 27.2	+0.2
AKH	Akhalkalaki	19.52	328	P	Pn	22 48 30.1	+0.8
ERZM	Erzurum	19.54	322	iP	Pn	22 48 31.2	+1.6
ERZM	Erzurum	19.54	322	iP	Pn	22 48 31.2	+1.6
EZM	Erzurum	19.54	322	eP	Pn	22 48 30.9	+1.2
URFA	Urfa	19.61	312	eP	Pn	22 48 29.6	-0.6
GOR	Gori	19.69	330	P	P	22 48 29.5	-0.1
TCHB	Talchebab	19.79	296	eP	Pn	22 48 34.4	+2.0
TCHB	Talchebab	19.79	296	eP	Pn	22 48 34.4	+2.0
	SNR=35						
SVRC	Sivrice-ELAZID	19.81	315	eP	Pn	22 48 32.5	-0.3
GUDG	Gudauri	19.91	332	P	Pn	22 48 34.8	+0.7
ATAB	Bozova	19.98	311	iP	Pn	22 48 35.2	+0.6
ATAB	Bozova	19.98	311	iP	Pn	22 48 35.2	+0.6
DDEM	Demirkent	20.02	324	iP	Pn	22 48 35.0	-0.1
DDEM	Demirkent	20.02	324	iP	Pn	22 48 35.0	-0.1
BRBR	Barbar	20.02	298	eP	P	22 48 34.0	+0.6
BRBR	Barbar	20.02	298	eP	P	22 48 34.0	+0.6
	SNR=35						
HAWK	Haweek	20.03	302	eP	Pn	22 48 36.1	+0.8
HAWK	Haweek	20.03	302	eP	Pn	22 48 36.2	+0.8
	SNR=35						
EIL	Elat	20.05	287	P	Pn	22 48 35.2	-0.2
EIL				S	Sn	22 52 20.9	+0.7
EIL	Elat	20.05	287	P	Pn	22 48 35.2	-0.3
	comp=Z,94nm,1.1s,baz=117,slow=3.7,SNR=41						
EIL				S	Sn	22 52 20.9	+0.7
	comp=Z,28nm,0.9s,baz=100,slow=18,SNR=2.3						
EIL	Elat	20.05	287	P	Pn	22 48 35.2	-0.3
EIL				S	Sn	22 52 21.0	+0.7
PTK	Pertek	20.06	316	eP	Pn	22 48 34.9	-0.9
DAGI	Agillar	20.06	325	iP	Pn	22 48 34.8	-0.9
KOPT	Kop Dagi	20.11	320	iP	Pn	22 48 36.5	+0.1
KOPT	Kop Dagi	20.11	320	iP	Pn	22 48 36.5	+0.1
ARTV	Artvin	20.13	325	iP	P	22 48 35.2	+0.5
ARTV	Artvin	20.13	325	iP	P	22 48 35.2	+0.5
RCY	Rachaya	20.14	299	eP	Pn	22 48 36.5	-0.2
HWQ	Hawqa	20.30	301	eP	Pn	22 48 38.1	-0.5
MMAI	Mount Meron Ar	20.34	297	P	Pn	22 48 39.2	+0.3
MMAI				S	S	22 52 17.0	-6.5
MMAI	Mount Meron Ar	20.34	297	P	Pn	22 48 39.2	+0.3
	comp=Z,67nm,1.0s,baz=98,slow=13,SNR=48						
MMAI				S	S	22 52 17.0	-6.5
	comp=Z,12nm,0.7s,baz=111,slow=32,SNR=6.1						
MMAI	Mount Meron Ar	20.34	297	P	Pn	22 48 39.2	+0.2
MYA	Malataya	20.35	314	eP	Pn	22 48 38.9	-0.2
DBOC	Borcka	20.39	325	iP	Pn	22 48 38.8	-0.6
DBOC	Borcka	20.39	325	iP	Pn	22 48 38.8	-0.6
BHL	Bhannes	20.41	299	eP	Pn	22 48 39.5	-0.2
GZT	Gaziantep	20.42	310	iP	Pn	22 48 39.9	0.0
ZEI	Tsey	20.43	331	eP	Pn	22 48 39.5	-0.6
ZEI				e*PP	pP	22 48 48.1	+2.6
ZEI				eS	S	22 52 25.3	+0.1
ZEI				e		22 52 38.4	
ZEI				e		22 52 59.0	
ZEI				pmax	pmax		
	comp=Z,78nm,1.5s						
ZEI				MLR	MLR		
	comp=Z,774nm,14.0s						
ZEI	Tsey	20.43	331	eP	Pn	22 48 39.5	-0.6
	comp=Z,78nm,1.5s						
ZEI				eS	S	22 52 25.3	+0.1
ONI	Oni	20.47	330	P	Pn	22 48 39.4	-1.0
KUZU	Kuzuini	20.48	308	iP	Pn	22 48 39.8	-0.7
KUZU	Kuzuini	20.48	308	iP	Pn	22 48 39.8	-0.7
BCA	Borcka	20.48	325	eP	Pn	22 48 39.6	-0.8
BAYT	Ayd˜–ntepe-Bay	20.56	321	eP	Pn	22 48 41.2	-0.3
GAZ	Gaziantep	20.57	309	eP	Pn	22 48 41.6	0.0
EZC	Erzincan	20.61	318	eP	Pn	22 48 42.9	+0.7
AKCD	Akcadag	20.66	313	iP	Pn	22 48 43.2	+0.4
AKCD	Akcadag	20.66	313	iP	Pn	22 48 43.2	+0.4
PZAR	Pazar-Rize	20.67	323	eP	Pn	22 48 42.5	-0.2
DRWC	Darouich	20.70	308	eP	P	22 48 41.4	+0.7
DRWC	Darouich	20.70	308	eP	P	22 48 41.3	+0.7
	SNR=35						
KK31	Karatay Array	20.81	29	ceP	P	22 48 40.6	-1.1
KK31				pmax	pmax		
	comp=Z,44nm,0.7s						
KK31	Karatay Array	20.81	29	eP	P	22 48 40.6	-1.1
	comp=Z,44nm,0.7s						
KEMA	Kemaliye	20.85	316	iP	Pn	22 48 45.2	+0.3
KEMA	Kemaliye	20.85	316	iP	Pn	22 48 45.2	+0.3
YAYL	Yayladag	20.85	305	iP	Pn	22 48 44.1	-0.9
YAYL	Yayladag	20.85	305	iP	Pn	22 48 44.1	-0.9
HTY	Hatay	20.86	306	eP	Pn	22 48 44.5	-0.5
ARNB	Al Arnab	20.88	305	eP	Pn	22 48 44.6	-0.7
ARNB	Al Arnab	20.88	305	eP	Pn	22 48 44.6	-0.6
	SNR=35						
ILIC	ilic-Erzincan	20.91	317	eP	Pn	22 48 44.5	-1.1
KELT	Kelkit	20.92	319	iP	Pn	22 48 44.7	-1.1
KELT	Kelkit	20.92	319	iP	Pn	22 48 44.7	-1.1
KMRS	Kahramanmaras	20.95	310	eP	Pn	22 48 44.9	-1.1
AYKD	Aykdinkavak	20.97	310	iP	Pn	22 48 45.6	-0.6
GUMT	Gumushane	20.98	320	eP	Pn	22 48 45.7	-0.8
DARE	Darende-Malaty	21.10	313	eP	P	22 48 47.3	+2.2
KSH	Kashi	21.21	44	P	P	22 48 39.4	-6.8
KSH				pP	pP	22 48 45.9	-8.1
KSH				sP	sP	22 48 49.2	-8.4
KSH				PP	PP	22 49 00.0	
KSH				S	S	22 52 19.9	-21
KSH				ePcP	PcP	22 52 51.0	+0.1
KSH				pmax	pmax		
	comp=Z,31nm,0.6s						
KSH				pmax	pmax		
	comp=Z,170nm,3.0s						
KSH				LR	LR		
	comp=N,930nm,10.4s						
KSH				LR	LR		

comp=E,1µm,12.4s
KSH LR LR
comp=Z,1µm,11.2s
HYB Hyderabad 21.52 107 *i* P **P 22 48 49.0 -0.5**
HYB *eS* **S 22 52 44.0 -2.8**
CEYT Ceyhan 21.53 308 *eP* **P 22 48 52.1 +2.6**
SUSE Susehri 21.59 318 *i* P **P 22 48 52.6 +2.3**
SUSE Susehri 21.59 318 *i* P **P 22 48 52.6 +2.3**
AML Almayashu 21.60 35 *i* P **P 22 48 50.3 -0.3**
AML Almayashu 21.60 35 P **P 22 48 50.3 -0.3**
SNR=207
AML Almayashu 21.60 35 P **P 22 48 50.3 -0.3**
SNR=209
KRTS Karatas 21.61 306 *eP* **P 22 48 53.3 +2.9**
KBZ Khabaz 21.62 331 P **P 22 48 51.9 +1.6**
KBZ S Sn 22 52 54.6 -3.1
KBZ pmax pmax
comp=Z,27nm,0.9s
KBZ Khabaz 21.62 331 P **P 22 48 51.9 +1.6**
KBZ S Sn 22 52 54.6 -3.1
KBZ Khabaz 21.62 331 P **P 22 48 51.9 +1.6**
comp=Z,27nm,0.9s,baz=130,slow=7.2,SNR=24
KBZ S Sn 22 52 54.6 -3.1
comp=Z,1.9nm,0.6s,baz=120,slow=20,SNR=2.1
KBZ Khabaz 21.62 331 P **P 22 48 51.9 +1.6**
KBZ Khabaz 21.62 331 PcP **PcP 22 52 54.6 +3.2**
KBZ *S* **PcP 22 52 54.6 +3.2**
KOZT Kozan 21.69 309 *eP* **P 22 48 54.1 +2.8**
SARI SarD1z-Kayseri 21.73 312 *eP* **P 22 48 54.1 +2.2**
PINB Pinarbasi 21.88 312 *i* P **P 22 48 55.8 +2.3**
PINB Pinarbasi 21.88 312 *i* P **P 22 48 55.8 +2.3**
KIV Kislovodsk 21.89 331 *c i* P **P 22 48 55.0 +1.6**
KIV *eS* **S 22 52 55.3 +1.5**
KIV pmax pmax
comp=Z,189nm,6.2s
KIV pmax pmax
comp=Z,237nm,1.0s
KIV MLR MLR
comp=Z,202nm,14.0s
KIV Kislovodsk 21.89 331 P **P 22 48 55.7 +2.3**
comp=Z,1µm,1.0s,SNR=52
KIV Kislovodsk 21.89 331 *i* P **P 22 48 55.0 +1.6**
comp=Z,202nm,14.0s
KIV *eS* **S 22 52 55.3 +1.5**
GRSN GIRESUNGRSN 21.99 319 *i* P **P 22 48 55.9 +1.4**
GRSN GIRESUNGRSN 21.99 319 *i* P **P 22 48 55.9 +1.4**
EKS2 Erkin-Say 22.02 34 *eP* **P 22 48 55.1 +0.2**
EKS2 pmax pmax
comp=Z,152nm,0.8s
EKS2 Erkin-Say 22.02 34 *eP* **P 22 48 55.1 +0.2**
comp=Z,152nm,0.8s
EKS2 Erkin-Say 22.02 34 P **P 22 48 55.1 +0.2**
SNR=168
EKS2 Erkin-Say 22.02 34 *eP* **P 22 48 55.1 +0.2**
comp=Z,152nm,0.8s
PHNC Paralimni 22.03 301 P **P 22 48 56.9 +2.0**
comp=Z,2.3nm,0.9s
EREN Erenkoy 22.11 303 *eP* **P 22 48 57.3 +1.5**
RSDY Resadiye-TOKAT 22.23 317 *eP* **P 22 48 59.7 +2.6**
BNN Bunyan 22.34 312 *eP* **P 22 48 59.7 +1.3**
GULE Gulek 22.35 307 *i* P **P 22 49 00.7 +2.2**
GULE Gulek 22.35 307 *i* P **P 22 49 00.7 +2.2**
AAK Ala-Archa 22.37 36 *c i* P **P 22 48 58.8 +0.1**
AAK pmax pmax
comp=Z,273nm,1.0s
AAK Ala-Archa 22.37 36 P **P 22 48 59.0 +0.3**
comp=Z,5.5nm,1.1s
AAK PcP **PcP 22 52 54.7 +1.5**
AAK Ala-Archa 22.37 36 P **P 22 48 58.9 +0.1**
SNR=181
AAK Ala-Archa 22.37 36 P **P 22 48 59.0 +0.3**
comp=Z,998nm,1.1s,SNR=98
AAK Ala-Archa 22.37 36 P **P 22 48 59.0 +0.3**
comp=Z,132nm,0.9s,baz=210,slow=9.9,SNR=94
AAK PcP **PcP 22 52 54.7 +1.5**
comp=Z,8.9nm,0.9s,baz=208,slow=4.9,SNR=5.5
AAK Ala-Archa 22.37 36 P **P 22 48 59.0 +0.3**
comp=Z,5.5nm,1.1s
KZA Kyzart 22.40 38 *i* P **P 22 48 59.1 -0.1**
KZA Kyzart 22.40 38 P **P 22 48 59.1 -0.1**
SNR=197
KZA Kyzart 22.40 38 *i* P **P 22 48 59.1 -0.1**
LFK Lefkose 22.51 301 *eP* **P 22 49 04.5 +4.3**
CSS Prodhromos 22.56 301 P **P 22 49 01.8 +1.1**
comp=Z,3.0nm,1.3s
CSS Prodhromos 22.56 301 *eP* **P 22 49 01.6 +0.9**
CSS Prodhromos 22.56 301 *eP* **P 22 49 02.0 +1.4**
comp=Z,110nm,1.1s
CSS Prodhromos 22.56 301 *eP* **P 22 49 02.0 +1.4**
comp=Z,110nm,1.1s
FRU Bishkek 22.58 35 *eP* **P 22 49 01.0 +0.3**
FRU *i* 22 49 16.5
FRU *e* 22 53 10.0
FRU pmax pmax
comp=Z,240nm,1.8s
FRU Bishkek 22.58 35 *eP* **P 22 49 01.0 +0.3**
comp=Z,240nm,1.8s
FRU *eS* **S 22 53 10.0 +3.5**
KBK Karagaybulak 22.63 36 *i* P **P 22 49 01.7 +0.3**
KBK Karagaybulak 22.63 36 P **P 22 49 01.7 +0.3**
SNR=56
KBK Karagaybulak 22.63 36 *i* P **P 22 49 01.7 +0.3**
MAMC Mammari 22.72 301 P **P 22 49 04.3 +2.0**
TOKA Tokat 22.72 316 *i* P **P 22 49 04.3 +2.0**
TOKA Tokat 22.72 316 *i* P **P 22 49 04.3 +2.0**
ERBA Erbaa 22.75 317 *i* P **P 22 49 03.6 +1.0**
ERBA Erbaa 22.75 317 *i* P **P 22 49 03.6 +1.0**
CHMS Chumysh 22.76 35 *i* P **P 22 49 02.5 -0.2**
CHMS Chumysh 22.76 35 P **P 22 49 02.5 -0.2**
SNR=30
CHMS Chumysh 22.76 35 *i* P **P 22 49 02.5 -0.2**
USP Ospenovka 22.82 34 *i* P **P 22 49 03.1 -0.3**
USP Ospenovka 22.82 34 P **P 22 49 03.1 -0.3**
SNR=19
USP Ospenovka 22.82 34 *i* P **P 22 49 03.1 -0.3**
NIG Nigde 22.83 309 *eP* **P 22 49 06.1 +2.3**
AVNT Avonos 22.98 311 *i* P **P 22 49 06.7 +1.6**
AVNT Avonos 22.98 311 *i* P **P 22 49 06.7 +1.6**
SOC Sochi 23.00 326 *d i* P **P 22 49 05.1 0.0**
SOC *e**PP **pP 22 49 15.2 +2.3**
SOC *eS* **S 22 53 14.3 +0.5**
SOC *e*SS **SnSn 22 53 45.1 -1.9**
SOC pmax pmax
comp=Z,98nm,1.2s
SOC MLR MLR
comp=Z,517nm,15.0s
SOC Sochi 23.00 326 *i* P **P 22 49 05.1 0.0**
comp=Z,98nm,1.2s
SOC *eS* **S 22 53 14.3 +0.5**
comp=Z,517nm,15.0s
ULHL Ulahol 23.06 39 *i* P **P 22 49 06.6 +0.6**
ULHL Ulahol 23.06 39 P **P 22 49 06.6 +0.6**
SNR=67
ULHL Ulahol 23.06 39 *i* P **P 22 49 06.6 +0.6**
YOZ Yozgat 23.10 313 *eP* **P 22 49 07.3 +1.0**
TKM2 Tokmak 2 23.16 36 *eP* **P 22 49 06.5 -0.5**
TKM2 pmax pmax
comp=Z,44nm,0.9s
TKM2 Tokmak 2 23.16 36 *eP* **P 22 49 06.5 -0.5**
comp=Z,44nm,0.9s
TKM2 Tokmak 2 23.16 36 P **P 22 49 06.5 -0.5**
SNR=71
TKM2 Tokmak 2 23.16 36 *eP* **P 22 49 06.5 -0.5**
comp=Z,44nm,0.9s
ALFC Alevga 23.20 301 P **P 22 49 08.6 +1.4**
comp=Z,1.3nm,0.5s
PYUN Piuthan 23.30 78 *eP* **P 22 49 10.6 +2.1**
comp=Z,317nm,1.2s
PPCY Paphos 23.31 300 P **P 22 49 11.8 +3.5**
AKMC Akamas 23.36 300 P **P 22 49 10.5 +1.6**
KVT Kavak 23.42 317 *eP* **P 22 49 10.9 +1.5**
ERMK Ermenek 23.46 304 *i* P **P 22 49 12.3 +2.3**
ERMK Ermenek 23.46 304 *i* P **P 22 49 12.3 +2.3**
SULT Sultanhani-AKS 23.64 308 *eP* **P 22 49 14.0 +2.4**
GAZI Gazipasa 23.76 303 *i* P **P 22 49 12.2 -0.5**
GAZI Gazipasa 23.76 303 *i* P **P 22 49 12.2 -0.5**
CORM Corum 23.83 314 *eP* **P 22 49 14.5 +1.0**
KOLN Koldanda 23.84 78 *eP* **P 22 49 15.3 +1.6**
comp=Z,89nm,0.8s
AB31 Akbulak array 23.91 5 *ceP* **P 22 49 13.4 -0.5**
AB31 pmax pmax
comp=Z,206nm,1.4s
AB31 Akbulak array 23.91 5 *eP* **P 22 49 13.4 -0.5**
comp=Z,206nm,1.4s
ABKAR Akbulak array 23.91 5 *eP* **P 22 49 13.9 0.0**
ABKAR *e*PcP **PcP 22 52 55.7 -0.3**
ABKAR Akbulak array 23.91 5 *eP* **P 22 49 13.9 0.0**
DANN Dangsing 23.98 77 *eP* **P 22 49 16.9 +1.7**
comp=Z,245nm,0.9s
KAMT Kaman 24.04 311 *eP* **P 22 49 16.1 +0.7**
DIKM Dikmen 24.24 317 *eP* **P 22 49 17.7 +0.6**
BRTR Keskin Array B 24.26 312 P **P 22 49 18.8 +1.3**
BRTR PcP **PcP 22 52 58.2 +1.1**
BRTR S **S 22 53 39.9 +5.3**
BRTR Keskin Array B 24.26 312 P **P 22 49 18.8 +1.3**
comp=Z,100nm,0.9s,baz=134,slow=11,SNR=340
BRTR PcP **PcP 22 52 58.3 +1.1**
comp=Z,2.2nm,0.8s,baz=148,slow=4.6,SNR=3.3
BRTR S **S 22 53 39.9 +5.3**
comp=Z,0.9nm,0.9s,baz=123,slow=17,SNR=2.1
BRTR Keskin Array B 24.26 312 *eP* **P 22 49 18.7 +1.3**
comp=Z,100nm,0.9s
BRTR Keskin Array B 24.26 312 PcP **PcP 22 52 58.2 +1.1**
BYBT Boyabat 24.44 316 *eP* **P 22 49 19.3 +0.4**
TOS Tosya 24.67 315 *eP* **P 22 49 21.1 -0.1**
CANT Cankiri 24.71 314 *eP* **P 22 49 22.9 +1.4**
KDHN Kadinhani 24.78 308 *i* P **P 22 49 23.9 +1.7**
KDHN Kadinhani 24.78 308 *i* P **P 22 49 23.9 +1.7**
ANTO Ankara 24.90 311 *eP* **P 22 49 24.9 +1.7**
ANTO pmax pmax
comp=Z,135nm,1.0s
ANTO Ankara 24.90 311 *eP* **P 22 49 24.9 +1.7**
comp=Z,136nm,1.0s
ANTO Ankara 24.90 311 *eP* **P 22 49 24.9 +1.7**
comp=Z,136nm,1.0s
AKTK Aktyubinsk 24.99 1 P **P 22 49 24.3 +0.5**
comp=Z,81nm,1.0s
AKTK Aktyubinsk 24.99 1 PcP **PcP 22 52 58.9 +0.5**
comp=Z,854nm,18.2s
AKTO Aktyubinsk 24.99 1 P **P 22 49 24.3 +0.5**
AKTO 22 52 58.9
AKTO pmax pmax
comp=Z,81nm,1.0s
AKTO MLR MLR
comp=Z,854nm,18.2s
AKTO Aktyubinsk 24.99 1 P **P 22 49 24.3 +0.5**
AKTO PcP **PcP 22 52 58.9 +0.6**
AKTO Aktyubinsk 24.99 1 P **P 22 49 24.3 +0.5**
comp=Z,81nm,1.0s,baz=180,slow=8.5,SNR=143
AKTO PcP **PcP 22 52 58.9 +0.6**
comp=Z,8.3nm,0.8s,baz=304,slow=3.6,SNR=4.5
AKTO LR LR 23 01 25.5
comp=Z,854nm,18.2s,baz=175,slow=42
AKTO Aktyubinsk 24.99 1 P **P 22 49 24.3 +0.5**
AKTO Aktyubinsk 24.99 1 PcP **PcP 22 52 58.9 +0.6**
ANN Anapa 25.02 326 *eP* **P 22 49 24.7 +0.6**
ANN *e**PP **pP 22 49 35.8 +3.4**
ANN *eS* **S 22 53 45.9 -0.5**
ANN pmax pmax
comp=Z,105nm,1.0s
ANN Anapa 25.02 326 *eP* **P 22 49 24.7 +0.6**
comp=Z,105nm,1.0s
ANN *eS* **S 22 53 45.9 -0.5**
DMN Daman 25.17 79 *eP* **P 22 49 27.0 +1.0**
comp=Z,126nm,1.2s
BZK Bozkurt 25.19 317 *eP* **P 22 49 26.7 +1.1**
KKN Kakani 25.32 78 *eP* **P 22 49 28.5 +1.2**
comp=Z,132nm,1.0s
BALT Daday 25.34 315 *i* P **P 22 49 28.2 +0.9**
BALT Daday 25.34 315 *i* P **P 22 49 28.2 +0.9**
PKIN Phulchoki 25.43 79 *eP* **P 22 49 29.4 +1.0**
comp=Z,82nm,1.0s
PKI Pulchoki 25.44 79 *eP* **P 22 49 29.5 +1.0**
comp=Z,156nm,1.0s
KORT Korkueli 25.51 303 *i* P **P 22 49 30.2 +1.4**
KORT Korkueli 25.51 303 *i* P **P 22 49 30.2 +1.4**
ISP Isparta 25.67 305 *eP* **P 22 49 31.6 +1.4**
ISP pmax pmax
comp=Z,54nm,0.9s
ISP Isparta 25.67 305 *eP* **P 22 49 31.6 +1.4**
comp=Z,54nm,0.9s
ISP Isparta 25.67 305 *eP* **P 22 49 31.6 +1.4**
comp=Z,54nm,0.9s
BOLV Bolvadin 25.69 307 *i* P P 22 49 39.7 +9.2
AKAS Kas 25.84 301 *i* P **P 22 49 33.2 +1.3**
AKAS Kas 25.84 301 *i* P **P 22 49 33.2 +1.3**
GUN Gumba 25.85 78 *eP* **P 22 49 33.5 +1.2**
comp=Z,133nm,1.0s
SEYT Eskypehyr 26.09 309 *i* P **P 22 49 35.3 +1.3**
SEYT Eskypehyr 26.09 309 *i* P **P 22 49 35.3 +1.3**
GOLH Golhisar 26.18 303 *i* P **P 22 49 36.3 +1.4**
GOLH Golhisar 26.18 303 *i* P **P 22 49 36.3 +1.4**
RAMN Ramite 26.53 80 *eP* **P 22 49 39.0 +0.7**
comp=Z,92nm,1.0s
KHAL Kahalli 26.62 306 *i* P **P 22 49 38.2 -0.6**
KHAL Karahalli 26.62 306 *i* P **P 22 49 38.2 -0.6**
HENT Hendek 26.63 312 *i* P **P 22 49 39.9 +1.1**
HENT Hendek 26.63 312 *i* P **P 22 49 39.9 +1.1**
TURN Turunc 26.80 302 *i* P **P 22 49 43.7 +3.4**
TURN Turunc 26.80 302 *i* P **P 22 49 43.7 +3.4**
SIM Simferopol' 26.89 322 *eP* **P 22 49 41.7 +0.7**
SIM pmax pmax
comp=Z,43nm,1.1s
SIM MLR MLR
comp=Z,300nm,16.0s
SIM Simferopol' 26.89 322 *eP* **P 22 49 41.7 +0.7**
comp=Z,300nm,16.0s
GDZ Gediz 26.89 307 *i* P **P 22 49 41.2 -0.1**
GDZ Gediz 26.89 307 *i* P **P 22 49 41.2 -0.1**
ODAN Odare 27.24 80 *eP* **P 22 49 45.3 +0.6**
MANT Manisa 27.35 305 *i* P **P 22 49 46.2 +0.6**
MANT Manisa 27.35 305 *i* P **P 22 49 46.2 +0.6**
DEMI Demirci 27.43 307 *i* P **P 22 49 46.9 +0.8**
DEMI Demirci 27.43 307 *i* P **P 22 49 46.9 +0.8**
TAPN Taplejung 27.50 79 *eP* **P 22 49 47.3 +0.3**
comp=Z,107nm,1.4s
AYDN Tasoluk 27.59 303 *i* P **P 22 49 48.6 +1.1**
AYDN Tasoluk 27.59 303 *i* P **P 22 49 48.6 +1.1**
AKHS Akhisar 28.03 306 *i* P **P 22 49 52.2 +0.8**
AKHS Akhisar 28.03 306 *i* P **P 22 49 52.2 +0.8**
VRHR Novokhopersk 28.24 339 *eP* **P 22 49 54.0 +0.9**
VRHR pmax pmax
comp=N,110nm,1.3s
VRHR pmax pmax
comp=E,70nm,1.3s
VRHR pmax pmax
comp=Z,90nm,1.3s
VRHR Novokhopersk 28.24 339 *eP* **P 22 49 54.0 +0.9**
BALY Balya 28.47 307 *i* P **P 22 49 52.6 -2.8**
PALK Pallekele 28.89 125 *eP* **P 22 50 00.6 +1.3**
comp=Z,14nm,1.0s
PALK Pallekele 28.89 125 *eP* **P 22 50 00.6 +1.3**
comp=Z,14nm,1.0s
VORD Divnogorie 28.93 336 *eP* **P 22 49 59.5 +0.3**
VORD pmax pmax
comp=N,10.0nm,0.5s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s
VORD Divnogorie 28.93 336 *eP* **P 22 49 59.5 +0.3**
CHOS Chios island 29.18 304 P **P 22 50 02.9 +1.2**
VSR Storozhevoye 29.18 337 *eP* **P 22 50 01.5 +0.1**
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,20nm,0.9s
VSR Storozhevoye 29.18 337 *eP* **P 22 50 01.5 +0.1**
APE Apeiranthos 29.22 301 P **P 22 50 03.0 +1.0**
APE Apeiranthos 29.22 301 ǁ *iP* **P 22 50 03.0 +1.0**
APE Apeiranthos 29.22 301 ǁ *iP* **P 22 50 03.0 +1.0**
PRK Paraskevi 29.28 306 P **P 22 50 04.0 +1.5**
MK31 Makanchi Array 29.29 37 *ceP* **P 22 50 02.0 -0.5**
MK31 pmax pmax
comp=Z,22nm,0.8s
MK31 Makanchi Array 29.29 37 *eP* **P 22 50 02.8 +0.3**
MK31 Makanchi Array 29.29 37 *eP* **P 22 50 02.8 +0.3**
MKAR Makanchi Array 29.29 37 *ceP* **P 22 50 02.7 +0.3**
MKAR pmax pmax
comp=Z,8.0nm,0.8s
MKAR Makanchi Array 29.29 37 *eP* **P 22 50 02.9 +0.4**
MKAR PcP **PcP 22 53 08.7 0.0**
MKAR Makanchi Array 29.29 37 P **P 22 50 02.8 +0.3**
comp=Z,8.1nm,0.8s,baz=225,slow=6.6,SNR=31
MKAR PcP **PcP 22 53 08.7 0.0**
comp=Z,3.5nm,0.9s,baz=274,slow=3.5,SNR=3.8
MKAR Makanchi Array 29.29 37 *eP* **P 22 50 02.9 +0.4**
MKAR Makanchi Array 29.29 37 PcP **PcP 22 53 08.7 0.0**
BVAR Borovoye Array 29.34 17 P **P 22 50 03.4 +0.5**
BVAR 22 53 09.9
BVAR pmax pmax
comp=Z,20nm,0.8s
BVAR MLR MLR
comp=Z,699nm,18.2s
BVAR Borovoye Array 29.34 17 P **P 22 50 03.4 +0.5**
BVAR PcP **PcP 22 53 09.9 +1.2**
BVAR Borovoye Array 29.34 17 P **P 22 50 03.4 +0.5**
comp=Z,20nm,0.8s,baz=190,slow=7.5,SNR=71
BVAR PcP **PcP 22 53 09.9 +1.2**
comp=Z,13nm,0.9s,baz=209,slow=2.7,SNR=10
BVAR LR LR 23 04 29.3
comp=Z,699nm,18.2s,baz=205,slow=42
BVAR Borovoye Array 29.34 17 P **P 22 50 03.4 +0.5**
BVAR Borovoye Array 29.34 17 PcP **PcP 22 53 09.9 +1.2**
BRVK Borovoye 29.35 16 *eP* **P 22 50 03.5 +0.6**
BRVK *e* 22 53 09.6
BRVK pmax pmax
comp=Z,18nm,0.9s
BRVK Borovoye 29.35 16 *eP* **P 22 50 03.5 +0.6**
comp=Z,18nm,0.9s
BRVK *e*PcP **PcP 22 53 09.6 +0.9**
BRVK Borovoye 29.35 16 *eP* **P 22 50 03.5 +0.6**
comp=Z,18nm,0.9s
VOR Voronezh 29.59 337 P **P 22 50 05.0 -0.1**
VOR pmax pmax
comp=Z,250nm,1.2s
VOR Voronezh 29.59 337 P **P 22 50 05.0 -0.1**
comp=Z,250nm,1.2s
TIRR Tirgusor 29.97 317 *eP* **P 22 50 08.3 -0.2**
TIRR pmax pmax
comp=Z,46nm,1.0s
TIRR Tirgusor 29.97 317 *eP* **P 22 50 08.3 -0.2**
comp=Z,46nm,1.0s
TIRR Tirgusor 29.97 317 ⇑ *iP* **P 22 50 08.9 +0.4**
TIRR Tirgusor 29.97 317 *eP* **P 22 50 08.3 -0.2**
comp=Z,46nm,1.0s
ALN Alexandroupoli 30.01 309 P **P 22 50 10.0 +1.0**
ALN Alexandroupoli 30.01 309 *eP* **P 22 50 09.9 +1.0**
PRD Provadia 30.03 314 *i* P **P 22 50 09.7 +0.7**
KURK Kurchatov 30.22 28 *c i* P **P 22 50 11.3 +0.7**
KURK pmax pmax
comp=Z,39nm,0.8s
KURK Kurchatov 30.22 28 *eP* **P 22 50 11.4 +0.8**
comp=Z,54nm,1.0s
KURK Kurchatov 30.22 28 P **P 22 50 11.7 +1.1**
comp=Z,299nm,1.1s,SNR=19
KURK Kurchatov 30.22 28 *i* P **P 22 50 11.3 +0.7**
comp=Z,39nm,0.8s
SMTH Samothraki Isl 30.23 308 *eP* **P 22 50 11.3 +0.4**
LIA Limnos Island 30.29 306 P **P 22 50 13.0 +1.6**
LIA Limnos Island 30.29 306 *eP* **P 22 50 12.8 +1.4**
LSA Lhasa 30.46 74 P **P 22 50 14.5 +0.9**
CFR Carcaliu 30.51 318 ⇑ *iP* **P 22 50 13.5 +0.3**
ANKY Antikythira Is 30.72 298 *eP* **P 22 50 16.6 +1.4**
PTL Penteli 30.75 302 P **P 22 50 16.5 +1.0**
PTL Penteli 30.75 302 *eP* **P 22 50 16.3 +0.8**
WMQ Urumqi 30.94 46 P **P 22 50 18.7 +1.5**
WMQ pP **pP 22 50 25.9 +0.3**
WMQ sP **sP 22 50 29.3 +0.2**
WMQ PP **PnPn 22 51 20.9 +2.6**
WMQ PcP **PcP 22 53 14.4 +1.3**
WMQ S **S 22 55 20.8 +0.9**
WMQ sS **sS 22 55 32.9 -0.8**
WMQ ScP **ScP 22 56 54.4 +0.4**
WMQ SS **SnSn 22 57 05.4 +4.5**
WMQ ScS **ScS 23 00 49.9 -0.9**
WMQ pmax pmax
comp=Z,28nm,0.7s
WMQ pmax pmax
comp=Z,170nm,3.4s
WMQ LR LR
comp=N,670nm,14.2s
WMQ LR LR
comp=E,480nm,18.0s
WMQ LR LR
comp=Z,240nm,21.0s
KYTH Kithira 31.01 299 *eP* **P 22 50 18.7 +0.9**
SZH Strazhica 31.02 313 *i* P **P 22 50 17.8 0.0**
KIS Kishinev 31.08 321 *eP* **P 22 50 18.0 -0.2**
KIS *e* 22 50 34.0
KIS Kishinev 31.08 321 *eP* **P 22 50 18.0 -0.2**
KIS Kishinev 31.08 321 *eP* **P 22 50 18.0 -0.2**
DID Didima 31.10 301 P **P 22 50 18.4 -0.2**
LEOM Leova 31.12 320 ǁ *iP* **P 22 50 19.6 +1.0**
VLI Veliai 31.17 299 *eP* **P 22 50 18.2 -1.0**
RZN Rozhen 31.23 309 *i* P **P 22 50 20.9 +1.0**
GRER 31.32 317 ⇑ *iP* **P 22 50 23.2 +2.8**
SHL Shillong 31.38 82 *eP* KP **P 22 50 22.0 +0.6**
PLD Plovdiv 31.39 310 P **P 22 50 22.1 +1.0**
PLD Plovdiv 31.39 310 *i* P **P 22 50 21.7 +0.6**
PLD Plovdiv 31.39 310 P **P 22 50 22.1 +1.0**
GHRR 31.40 319 ⇑ *iP* **P 22 50 23.0 +1.9**
ISR Istrita 31.46 316 ǁ *iP* **P 22 50 23.8 +2.1**
SVE Sverdlovsk 31.49 4 ǁ *eP* **P 22 50 22.0 +0.2**
SVE *e* 22 51 48.9
SVE *e* 23 00 49.3
SVE pmax pmax
comp=Z,23nm,1.1s
SVE MLR MLR
comp=Z,793nm,18.0s
SVE Sverdlovsk 31.49 4 *eP* **P 22 50 22.0 +0.2**
comp=Z,23nm,1.1s
LKR Lokris 31.56 303 *eP* **P 22 50 22.6 0.0**
PLG Polygyros 31.70 306 P **P 22 50 25.3 +1.4**
VRI Vrincioaia 31.71 318 ⇑ *iP* **P 22 50 25.3 +1.4**
NVR Nevrokopi 31.72 308 P **P 22 50 25.5 +1.5**
NVR Nevrokopi 31.72 308 *eP* **P 22 50 24.9 +0.9**
PLOR Plostina 31.75 318 ⇑ *iP* **P 22 50 25.7 +1.5**
SRS Serrai 31.83 308 P **P 22 50 25.7 +0.7**
AXAR Agios Charalam 31.84 303 P **P 22 50 25.9 +0.8**
GUR Goura 31.89 302 P **P 22 50 26.1 +0.4**
MMB Musomiste 31.89 309 *i* P **P 22 50 26.4 +0.8**
SOH Sokhos 31.91 307 P **P 22 50 27.7 +2.0**
SOH Sokhos 31.91 307 *eP* **P 22 50 27.3 +1.6**
PGB Panagyurishte 31.93 311 *i* P **P 22 50 26.4 +0.5**
MLR Muntele Rosu 32.01 317 ⇑ *iP* **P 22 50 29.5 +2.9**
ITM Ithomi 32.05 300 *eP* **P 22 50 26.2 -0.8**
KLV Kalavryta, Ach 32.06 302 *eP* **P 22 50 26.4 -0.7**
TESR Tescani 32.08 319 ⇑ *iP* **P 22 50 28.0 +0.9**
KALE Kalithea 32.15 302 *eP* **P 22 50 28.7 +0.8**
AGG Agios Georgios 32.16 304 P **P 22 50 28.4 +0.5**
AGG Agios Georgios 32.16 304 *eP* **P 22 50 27.9 0.0**
TRIZ Trizonia 32.19 302 *eP* **P 22 50 28.5 +0.3**
LAKA Lakka 32.24 302 *eP* **P 22 50 28.7 +0.1**
KNT Kendrikon 32.34 308 P **P 22 50 30.6 +1.1**
KKB Krupnik 32.44 309 *i* P **P 22 50 30.6 +0.3**
MPEP Malo Peshtene 32.52 312 *i* P **P 22 50 32.1 +1.1**
EVR Evrytania 32.52 303 *eP* **P 22 50 30.4 -0.8**
THL Klokotos Trika 32.53 304 *eP* **P 22 50 29.7 -1.4**
VOIR 32.54 316 ǁ *iP* **P 22 50 32.9 +1.7**
RLS Riolos of Patr 32.59 301 *eP* **P 22 50 31.3 -0.4**
VTS Vitosha 32.60 310 P **P 22 50 32.9 +1.0**
VTS Vitosha 32.60 310 ǁ *iP* **P 22 50 33.3 +1.4**
VTS Vitosha 32.60 310 *i* P **P 22 50 32.4 +0.5**
VTS Vitosha 32.60 310 P **P 22 50 32.9 +1.0**
KMBO Kilima Mbogo 32.61 219 ⇑ *iP* **P 22 50 34.8 +2.5**
KMBO Kilima Mbogo 32.61 219 P **P 22 50 34.8 +2.5**
comp=Z,2.8nm,1.0s
KMBO Kilima Mbogo 32.61 219 P **P 22 50 34.8 +2.5**
comp=Z,32nm,0.9s,baz=30,slow=11,SNR=105
KMBO Kilima Mbogo 32.61 219 P **P 22 50 34.8 +2.5**
comp=Z,32nm,0.9s
VAY Valandovo 32.63 308 *i* P **P 22 50 32.1 +0.2**
GRG Griva 32.64 307 *eP* **P 22 50 32.5 +0.4**
PRAR RASCA 32.76 320 ⇑ *iP* **P 22 50 33.5 +0.4**
ARR Arges 32.77 316 ⇑ *iP* **P 22 50 34.5 +1.3**
AK02 Malin Array Si 33.06 327 *eP* **P 22 50 35.5 -0.1**
AK02 Malin Array Si 33.06 327 *eP* **P 22 50 35.5 -0.1**
AK01 Malin Array Si 33.08 327 *eP* **P 22 50 35.5 -0.2**
AK01 Malin Array Si 33.08 327 *eP* **P 22 50 35.5 -0.2**
AKASG Malin Array Be 33.08 327 P **P 22 50 35.7 0.0**
AKASG 22 53 19.2
AKASG pmax pmax
comp=Z,33nm,0.9s
AKASG Malin Array Be 33.08 327 P **P 22 50 35.7 0.0**
AKASG PcP **PcP 22 53 19.2 +0.5**
AKASG Malin Array Be 33.08 327 P **P 22 50 35.7 0.0**
comp=Z,33nm,0.9s,baz=129,slow=7.7,SNR=73

AKASG PcP **PcP** **22 53 19.2 +0.5**
comp=Z,2.9nm,0.7s,baz=100,slow=2.5,SNR=5.0
AKASG Malin Array Be 33.08 327 P **P** **22 50 35.7 0.0**
AKASG Malin Array Be 33.08 327 PcP **PcP** **22 53 19.2 +0.5**
KIEV Kiev 33.08 327 *e*P **P** **22 50 35.5 -0.3**
KIEV pmax pmax
comp=Z,62nm,0.9s
KIEV Kiev 33.08 327 *e*P **P** **22 50 35.5 -0.3**
comp=Z,62nm,0.9s
KIEV Kiev 33.08 327 *e*P **P** **22 50 35.5 -0.3**
comp=Z,62nm,0.9s
OBN Obninsk 33.28 338⇓ *i*P **P** **22 50 37.6 +0.2**
OBN *e* 22 51 47.3
OBN *e*S **S** **22 55 51.2 -4.5**
OBN pmax pmax
comp=Z,103nm,1.2s
OBN MLR MLR
comp=Z,200nm,18.0s
OBN Obninsk 33.28 338 P **P** **22 50 38.6 +1.2**
comp=Z,688nm,1.2s,SNR=8.9
OBN Obninsk 33.28 338 *i* P **P** **22 50 37.6 +0.2**
comp=Z,103nm,1.2s
OBN *e*S **S** **22 55 51.2 -4.5**
comp=Z,200nm,18.0s
MDB Medias 33.28 317⇓ *i*P **P** **22 50 40.0 +2.4**
FNA Florina 33.33 306 P **P** **22 50 39.0 +0.8**
FNA Florina 33.33 306 *e*P **P** **22 50 38.5 +0.3**
LKD2 Lefkada island 33.37 303 P **P** **22 50 38.5 0.0**
LKD2 Lefkada island 33.37 303 *e*P **P** **22 50 38.5 0.0**
BIA Bitola 33.44 307 *e*P **P** **22 50 38.1 -1.0**
MOS Moscow 33.46 340 *e*P **P** **22 50 39.3 +0.3**
MOS *e* 22 50 49.0
MOS *e* 22 51 49.3
MOS *e*PPP PPP 22 52 04.0
MOS pmax pmax
comp=Z,400nm,1.8s
MOS pmax pmax
comp=Z,171nm,1.4s
MOS pmax pmax
comp=N,102nm,1.0s
MOS Moscow 33.46 340 *e*P **P** **22 50 39.3 +0.3**
comp=N,102nm,1.0s
BURAR Bucovina Array 33.48 320⇑ *i*P **P** **22 50 40.6 +1.1**
SKO Skopje 33.64 308 *i* P **P** **22 50 40.9 +0.2**
PHP Peshkopia 34.26 307 *e*PN **P** **22 50 46.8 +0.5**
PHP Peshkopia 34.26 307 P **P** **22 50 46.3 0.0**
PHP Peshkopia 34.26 307 *e*Pn **P** **22 50 46.8 +0.5**
TIR Tirane 34.59 307 *e*P **P** **22 50 49.7 +0.7**
TIR pmax pmax
comp=Z,40nm,1.0s
TIR Tirane 34.59 307 *e*P **P** **22 50 49.7 +0.7**
comp=Z,40nm,1.0s
TIR Tirane 34.59 307 *e*P **P** **22 50 49.7 +0.7**
comp=Z,40nm,1.0s
DRGR 34.60 317⇓ *i*P **P** **22 50 50.3 +1.1**
BCI Bajram Curri 34.73 308 *e*PN P 22 50 42.0 -8.2
PUK Puka 34.76 308 *e*PN **P** **22 50 49.1 -1.5**
PUK Puka 34.76 308 *e*Pn **P** **22 50 49.1 -1.5**
BZS Buzias 34.80 315⇑ *i*P **P** **22 50 51.7 +0.9**
NVS Novosibirsk 35.15 26⇑ *i*P **P** **22 50 53.2 -0.5**
NVS *e* 22 51 02.1
NVS *e*S **S** **22 56 22.5 -2.3**
NVS pmax pmax
comp=Z,159nm,1.1s
NVS pmax pmax
comp=N,97nm,1.3s
NVS smax smax
comp=E,23nm,1.9s
NVS Novosibirsk 35.15 26 *i* P **P** **22 50 53.2 -0.5**
comp=E,97nm,1.3s
NVS *e*S **S** **22 56 22.5 -2.3**
ZAA0 Zalesovo Array 35.19 29 *e*P **P** **22 50 53.8 -0.2**
ZAA0 Zalesovo Array 35.19 29 *e*P **P** **22 50 53.8 -0.2**
ZALV Zalesovo Beam 35.19 29 P **P** **22 50 54.1 +0.1**
ZALV 22 53 24.4
ZALV pmax pmax
comp=Z,87nm,0.7s
ZALV MLR MLR
comp=Z,134nm,19.7s
ZALV Zalesovo Beam 35.19 29 P **P** **22 50 54.1 +0.1**
ZALV PcP **PcP** **22 53 24.4 -0.3**
ZALV Zalesovo Beam 35.19 29 P **P** **22 50 54.1 +0.1**
comp=Z,87nm,0.7s,baz=238,slow=8.5,SNR=172
ZALV PcP **PcP** **22 53 24.4 -0.3**
comp=Z,4.2nm,0.6s,baz=240,slow=4.2,SNR=4.6
ZALV LR LR 23 05 37.4
comp=Z,134nm,19.7s,baz=69,slow=37
ZALV Zalesovo Beam 35.19 29 P **P** **22 50 54.1 +0.1**
LVV L'vov 35.28 322 *e*P **P** **22 50 54.9 0.0**
LVV L'vov 35.28 322 *e*P **P** **22 50 54.9 0.0**
TRPA Tarpa 35.31 319⇓ *i*P **P** **22 50 56.0 +0.9**
DIVS Divibare 35.33 311 P **P** **22 50 55.6 +0.1**
DIVS Divibare 35.33 311⇑ *i*P **P** **22 50 55.7 +0.2**
UZH Uzhgorod 35.69 320⇓ *i*P **P** **22 50 58.9 +0.5**
UZH *e* 22 52 19.5
UZH Uzhgorod 35.69 320 *i* P **P** **22 50 58.9 +0.5**
KOLS Kolonicke sedl 35.84 320 *e*P **P** **22 51 01.7 +2.0**
KOLS pmax pmax
comp=Z,246nm,1.1s
KOLS Kolonicke sedl 35.84 320 *e*P **P** **22 51 01.7 +2.0**
KOLS Kolonicke sedl 35.84 320 *e*P **P** **22 51 01.7 +2.0**
comp=Z,246nm,1.1s
KWP Kalwaria Pacla 35.93 321 *e*P **P** **22 51 01.3 +0.8**
KWP pmax pmax
comp=Z,119nm,1.1s
KWP Kalwaria Pacla 35.93 321 *e*P **P** **22 51 01.3 +0.8**
comp=Z,119nm,1.1s
KWP Kalwaria Pacla 35.93 321⇓ *i*P **P** **22 51 01.3 +0.8**
KWP Kalwaria Pacla 35.93 321 *e*P **P** **22 51 01.4 +0.9**
KWP Kalwaria Pacla 35.93 321 *e*P **P** **22 51 01.3 +0.8**
comp=Z,119nm,1.1s
MICGM Minsk 36.17 331⇓ *e*P **P** **22 51 02.0 -0.4**
MNK Minsk 36.19 331⇓ *e*P **P** **22 51 02.0 -0.6**
MNK pmax pmax
comp=Z,170nm,1.0s
MNK Minsk 36.19 331 *e*P **P** **22 51 02.0 -0.6**
comp=Z,170nm,1.0s
CRVS Cervenica-Dubn 36.30 320 *e*P **P** **22 51 03.8 +0.1**
CRVS pmax pmax
comp=Z,66nm,1.1s
CRVS Cervenica-Dubn 36.30 320 *e*P **P** **22 51 03.8 +0.1**
CRVS Cervenica-Dubn 36.30 320 *e*P **P** **22 51 03.8 +0.1**
comp=Z,66nm,1.1s
TIP Timpagrande 36.43 302 *e*P **P** **22 51 04.7 -0.2**
comp=Z,42nm,0.9s
TIP Timpagrande 36.43 302 *e*P **P** **22 51 04.7 -0.2**
comp=Z,42nm,0.9s
STON Ston 36.55 308 P **P** **22 51 04.9 -0.8**
PSZ Piszkesteto 36.81 317 *e*P **P** **22 51 08.9 +0.8**
PSZ pmax pmax
comp=Z,37nm,1.0s
PSZ Piszkesteto 36.81 317 *e*P **P** **22 51 08.9 +0.8**
comp=Z,36nm,1.0s
PSZ Piszkesteto 36.81 317⇑ *i*P **P** **22 51 08.3 +0.2**
PSZ Piszkesteto 36.81 317 *e*P **P** **22 51 08.9 +0.8**
comp=Z,36nm,1.0s
NACGM Naroch 36.92 331 *e* **P** **22 51 07.0 -1.8**
PKSM Moragy 36.95 314⇑ *i*P **P** **22 51 10.0 +0.8**
CEL Celeste 36.95 300 *e*P **P** **22 51 10.8 +1.4**
comp=Z,24nm,1.0s
CEL Celeste 36.95 300 *e*P **P** **22 51 10.8 +1.4**
comp=Z,24nm,1.0s
IDID Didziasalis 37.21 331 *e*P **P** **22 51 12.3 +1.1**
IDID AMB AMB 22 51 14.1
comp=Z,29nm,1.1s
IDID Didziasalis 37.21 331 *e*P **P** **22 51 12.3 +1.1**
comp=Z,29nm,1.1s,SNR=27
NIE Niedzica 37.21 320 *e*P **P** **22 51 12.7 +1.3**
NIE Niedzica 37.21 320 *e*P **P** **22 51 12.7 +1.3**
NIE Niedzica 37.21 320 *e*P **P** **22 51 12.7 +1.3**
CUC Castrocucco 37.28 303 *e*P **P** **22 51 13.2 +1.0**
comp=Z,73nm,0.8s
CUC Castrocucco 37.28 303 *e*P **P** **22 51 13.2 +1.0**
comp=Z,73nm,0.8s
IIGN Ignalina 37.45 331 *e*P **P** **22 51 14.4 +1.1**
IIGN AMB AMB 22 51 16.3
comp=Z,37nm,1.1s
IIGN Ignalina 37.45 331 *e*P **P** **22 51 14.4 +1.1**
comp=Z,37nm,1.1s,SNR=27
ISAL Salakas 37.64 331 *e*P **P** **22 51 16.0 +1.1**
ISAL AMB AMB 22 51 17.8
comp=Z,29nm,1.2s
ISAL Salakas 37.64 331 *e*P **P** **22 51 16.0 +1.1**
comp=Z,29nm,1.2s,SNR=26
VYHS Vyhne 37.69 318 *e*P **P** **22 51 16.1 +0.6**
VYHS pmax pmax
comp=Z,15nm,1.0s
VYHS Vyhne 37.69 318 *e*P **P** **22 51 16.1 +0.6**
VYHS Vyhne 37.69 318 *e*P **P** **22 51 16.1 +0.6**
comp=Z,15nm,1.0s
IZAR Zarasai 37.70 332 *e*P **P** **22 51 16.6 +1.1**
IZAR AMB AMB 22 51 18.3
comp=Z,29nm,1.1s
IZAR Zarasai 37.70 332 *e*P **P** **22 51 16.5 +1.1**
comp=Z,29nm,1.1s,SNR=26
OJC Ojcow 37.87 321⇑ *e*P **P** **22 51 17.8 +0.9**
OJC Ojcow 37.87 321 *e*P **P** **22 51 17.8 +0.9**
comp=Z,173nm,1.1s
OJC Ojcow 37.87 321 *e*P **P** **22 51 17.8 +0.9**
OJC Ojcow 37.87 321 *e*P **P** **22 51 17.8 +0.9**
comp=Z,173nm,1.1s
HVS Khovu-Aksy 37.95 38*c* *i*P **P** **22 51 18.5 +0.8**
HVS pmax pmax
comp=Z,83nm,1.0s
HVS Khovu-Aksy 37.95 38 *i* P **P** **22 51 18.5 +0.8**
comp=Z,83nm,1.0s
SUW Suwalki 38.03 328 *e*P **P** **22 51 18.5 +0.2**
SUW pmax pmax
comp=Z,76nm,1.1s
SUW Suwalki 38.03 328 *e*P **P** **22 51 18.5 +0.2**
comp=Z,76nm,1.1s
SUW Suwalki 38.03 328 *e*P **P** **22 51 18.4 +0.2**
SUW Suwalki 38.03 328 *e*P **P** **22 51 18.5 +0.2**
comp=Z,76nm,1.1s
BEL Belsk 38.08 323 *e*P **P** **22 51 20.2 +1.5**
GTA Gaotai 38.34 58 *e*P **P** **22 51 23.3 +2.0**
GTA pP **pP** **22 51 31.0 +1.2**
GTA sP **sP** **22 51 34.5 +1.3**
GTA PcP **PcP** **22 53 37.4 +2.7**
GTA S **S** **22 57 16.1 +1.9**
GTA sS **sS** **22 57 28.0 -0.2**
GTA SS **SnSn** **22 59 53.4 -7.1**
GTA ScS **ScS** **23 01 30.4 -0.3**
GTA pmax pmax
comp=Z,8.0nm,0.6s
GTA pmax pmax
comp=Z,190nm,5.7s
GTA LR LR
comp=N,260nm,20.9s
GTA LR LR
comp=E,360nm,19.0s
GTA LR LR
comp=Z,490nm,19.0s
SMOL Smolenice 38.56 317 *e*P **P** **22 51 23.9 +1.1**
SMOL Smolenice 38.56 317 *e*P **P** **22 51 23.9 +1.1**
SMOL Smolenice 38.56 317 *e*P **P** **22 51 23.9 +1.1**
KOGS Kog 38.59 314 *i* P **P** **22 51 23.8 +0.8**
ZST Bratislava 38.65 317 *e*P **P** **22 51 22.9 -0.6**
ZST pmax pmax
comp=Z,34nm,1.1s
ZST Bratislava 38.65 317 *e*P **P** **22 51 22.9 -0.6**
ZST Bratislava 38.65 317 *e*P **P** **22 51 22.9 -0.6**
comp=Z,34nm,1.1s
OKC Ostrava-Krasne 38.66 319⇑ *i*P **P** **22 51 24.1 +0.5**
OKC *e* 22 51 31.5
OKC *e* 22 51 40.4
OKC Ostrava-Krasne 38.66 319⇑ *i*P **P** **22 51 24.1 +0.5**
OKC *e*pP **pP** **22 51 31.5 -0.6**
OKC *e*sP **sP** **22 51 40.4 +4.9**
OKC Ostrava-Krasne 38.66 319 *i* P **P** **22 51 24.1 +0.5**
BOJS Bojanci 38.97 312 *i* P **P** **22 51 27.1 +0.9**
MORC Moravsky Berou 38.99 319 *e*P **P** **22 51 26.2 -0.2**
MORC pmax pmax
comp=Z,71nm,1.1s
MORC Moravsky Berou 38.99 319 *e*P **P** **22 51 26.2 -0.2**
comp=Z,71nm,1.1s
MORC Moravsky Berou 38.99 319⇓ *i*P **P** **22 51 27.0 +0.6**
MORC Moravsky Berou 38.99 319 *e*P **P** **22 51 26.2 -0.2**
comp=Z,71nm,1.1s
CHTO Chiang Mai 39.24 91 *e*P **P** **22 51 30.0 +1.2**
CHTO pmax pmax
comp=Z,53nm,1.8s
CHTO Chiang Mai 39.24 91 *e*P **P** **22 51 30.0 +1.2**
comp=Z,54nm,1.8s
CHTO Chiang Mai 39.24 91 P **P** **22 51 26.0 -2.8**
comp=Z,16nm,1.8s
CHTO Chiang Mai 39.24 91 *e*P **P** **22 51 30.0 +1.2**
comp=Z,53nm,1.8s
CMMT Chiang Mai 39.24 91 P **P** **22 51 26.7 -2.2**
ARSA Arzberg 39.32 315⇑ *i*P **P** **22 51 29.7 +0.5**
comp=Z,44nm,1.1s,SNR=19
ARSA Arzberg 39.32 315⇑ *i*P **P** **22 51 29.7 +0.5**
comp=Z,44nm,1.1s
ARSA Arzberg 39.32 315 P **P** **22 51 29.7 +0.5**
comp=Z,44nm,1.1s,SNR=19
CONA Conrad Observa 39.33 316⇑ *i*P **P** **22 51 29.7 +0.3**
comp=Z,48nm,1.2s,SNR=21
CONA Conrad Observa 39.33 316⇑ *i*P **P** **22 51 29.7 +0.3**
comp=Z,48nm,1.2s
CONA Conrad Observa 39.33 316 P **P** **22 51 29.7 +0.3**
comp=Z,48nm,1.2s,SNR=21
VSU Vasula 39.34 335*c* *i*P **P** **22 51 29.5 +0.4**
VSU pmax pmax
comp=Z,75nm,1.2s
VSU Vasula 39.34 335 *i* P **P** **22 51 29.5 +0.4**
comp=Z,75nm,1.2s
CMAR Chiang Mai Arr 39.34 92 P **P** **22 51 30.2 +0.5**
CMAR PcP **PcP** **22 53 39.2 +1.2**
CMAR Chiang Mai Arr 39.34 92 P **P** **22 51 30.2 +0.5**
comp=Z,1.1nm,0.4s,baz=279,slow=9.5,SNR=8.0
CMAR PcP **PcP** **22 53 39.2 +1.2**
comp=Z,4.9nm,0.9s,baz=289,slow=5.0,SNR=7.6
CMAR Chiang Mai Arr 39.34 92 P **P** **22 51 30.2 +0.5**
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 39.34 92 PcP **PcP** **22 53 39.2 +1.2**
VRAC Vranov 39.38 318⇓ *i*P **P** **22 51 30.9 +1.3**
PERS Pernice 39.39 313 *i* P **P** **22 51 30.4 +0.5**
SOKA Soboth 39.46 314⇑ *i*P **P** **22 51 31.0 +0.5**
comp=Z,32nm,1.0s
SOKA Soboth 39.46 314⇑ *i*P **P** **22 51 31.0 +0.5**
comp=Z,32nm,1.0s
SOKA Soboth 39.46 314 P **P** **22 51 31.0 +0.5**
comp=Z,32nm,1.0s
LJU Ljubljana 39.61 312 *i* P **P** **22 51 32.7 +1.1**
OBKA Obir 39.73 313⇑ *i*P **P** **22 51 33.3 +0.6**
comp=Z,57nm,1.4s,SNR=23
OBKA Obir 39.73 313⇑ *i*P **P** **22 51 33.3 +0.6**
comp=Z,57nm,1.4s
OBKA Obir 39.73 313 P **P** **22 51 33.3 +0.6**
comp=Z,57nm,1.4s,SNR=23
DPC Dobruska-Polom 39.94 319⇑ *i*P **P** **22 51 34.8 +0.4**
DPC *e* 22 51 41.7
DPC *e* 22 51 53.6
DPC MLR MLR
comp=Z,500nm,12.4s
DPC Dobruska-Polom 39.94 319 *e*P **P** **22 51 34.7 +0.4**
DPC Dobruska-Polom 39.94 319⇑ *i*P **P** **22 51 34.8 +0.4**
DPC *e*pP **pP** **22 51 41.7 -1.2**
DPC *e*sP sP 22 51 53.6 +7.3
DPC AMS AMS 23 14 00.0
comp=Z,500nm,12.4s
DPC Dobruska-Polom 39.94 319 *e*P **P** **22 51 34.7 +0.4**
TRI Trieste 40.03 312 *e*P **P** **22 51 35.1 0.0**
TRI pmax pmax
comp=Z,59nm,1.0s
TRI Trieste 40.03 312 *e*P **P** **22 51 35.1 0.0**
comp=Z,59nm,1.0s
TRI Trieste 40.03 312 *e*P **P** **22 51 35.1 0.0**
comp=Z,59nm,1.0s
VOY Vojsko 40.03 312⇑ *e*P **P** **22 51 35.6 +0.4**
VOY *e* 22 51 42.0
VOY *e* 22 52 18.3
TREC Trest 40.04 318 *e*P **P** **22 51 35.8 +0.6**
TREC *e* 22 51 43.4
TREC *e* 22 51 53.9
TREC Trest 40.04 318⇑ *e*P **P** **22 51 35.8 +0.6**
TREC *e*pP **pP** **22 51 43.4 -0.3**
TREC *e*sP sP 22 51 53.9 +6.7
TREC Trest 40.04 318 *e*P **P** **22 51 35.8 +0.6**
KSP Ksiaz 40.15 320⇑ *e*P **P** **22 51 36.8 +0.7**
KSP Ksiaz 40.15 320 *e*P **P** **22 51 36.8 +0.7**
KSP Ksiaz 40.15 320 *e*P **P** **22 51 36.8 +0.7**
UPC Upice 40.19 319⇑ *i*P **P** **22 51 36.8 +0.5**
UPC *e* 22 51 45.1
UPC Upice 40.19 319⇑ *i*P **P** **22 51 36.8 +0.5**
UPC *e*pP **pP** **22 51 45.1 +0.3**
UPC Upice 40.19 319 *i* P **P** **22 51 36.8 +0.5**
CADS Cadrg 40.19 312 *i* P **P** **22 51 36.7 +0.3**
MOA Molln 40.32 315 *i* P **P** **22 51 38.0 +0.5**
comp=Z,63nm,1.0s,SNR=41
MOA Molln 40.32 315 *i* P **P** **22 51 38.0 +0.5**
comp=Z,63nm,1.0s
MOA Molln 40.32 315 P **P** **22 51 38.0 +0.5**
comp=Z,63nm,1.0s,SNR=41
MYKA Terra Mystica 40.36 313⇑ *i*P **P** **22 51 38.6 +0.7**
comp=Z,36nm,1.3s
MYKA Terra Mystica 40.36 313⇑ *i*P **P** **22 51 38.6 +0.7**
comp=Z,36nm,1.3s
MYKA Terra Mystica 40.36 313 P **P** **22 51 38.6 +0.7**
comp=Z,36nm,1.3s
GKP Gorka Klasztor 40.67 324 *e*P **P** **22 51 41.2 +0.9**
KBA Koelnbreinsper 40.68 314 *i* P **P** **22 51 41.3 +0.5**
KBA pmax pmax
comp=Z,95nm,1.1s
KBA Koelnbreinsper 40.68 314 *i* P **P** **22 51 41.3 +0.5**
comp=Z,95nm,1.1s,SNR=41
KBA Koelnbreinsper 40.68 314 *i* P **P** **22 51 41.2 +0.5**
comp=Z,95nm,1.1s
KBA Koelnbreinsper 40.68 314 *i* P **P** **22 51 41.2 +0.5**
comp=Z,95nm,1.1s
PRU Pruhonice 40.87 318 *e*P **P** **22 51 42.0 +0.1**
PRU *e* 22 51 50.2
PRU Pruhonice 40.87 318⇑ *e*P **P** **22 51 42.0 +0.1**
PRU *e*pP **pP** **22 51 50.2 -0.3**
PRU *ex* x 22 52 06.0
PRU Pruhonice 40.87 318 *e*P **P** **22 51 42.0 +0.1**
GEC2 GERESS Array S 40.99 316 *e*P **P** **22 51 43.3 +0.1**
GEC2 *e**PP **pP** **22 51 51.9 +0.2**
GEC2 pmax pmax
comp=Z,27nm,1.1s
GEC2 GERESS Array S 40.99 316 *e*P **P** **22 51 43.3 +0.1**
comp=Z,27nm,1.1s
GEC2 *e*pP **pP** **22 51 51.9 +0.2**
GEC2 GERESS Array S 40.99 316 *e*P **P** **22 51 43.3 +0.1**
comp=Z,27nm,1.1s
GERES GERESS Array B 40.99 316 P **P** **22 51 43.2 +0.1**
GERES GERESS Array B 40.99 316 P **P** **22 51 43.2 +0.1**
comp=Z,12nm,0.9s,baz=115,slow=9.0,SNR=76
GERES LR LR 23 09 51.5
comp=Z,140nm,19.6s,baz=297,slow=38
GERES GERESS Array B 40.99 316 P **P** **22 51 43.2 +0.1**
PVCC Panska Ves 41.05 319⇑ *i*P **P** **22 51 43.7 +0.3**
PVCC Panska Ves 41.05 319⇑ *i*P **P** **22 51 43.7 +0.3**
PVCC *ex* x 22 52 05.1
PVCC Panska Ves 41.05 319 *i* P **P** **22 51 43.7 +0.3**
ABTA Abfaltersbach 41.14 313 *i* P **P** **22 51 44.8 +0.4**
comp=Z,86nm,1.0s,SNR=51
ABTA Abfaltersbach 41.14 313 *i* P **P** **22 51 44.8 +0.4**
comp=Z,86nm,1.0s
ABTA Abfaltersbach 41.14 313 P **P** **22 51 44.8 +0.4**
comp=Z,86nm,1.0s,SNR=51
KMI Kunming 41.15 80 P **P** **22 51 45.1 +0.2**
KMI pP **pP** **22 51 54.5 +1.0**
KMI sP **sP** **22 51 58.8 +1.9**
KMI PP **PnPn** **22 53 26.3 +1.6**
KMI S **S** **22 57 57.1 +0.3**
KMI sS **sS** **22 58 10.9 +0.1**
KMI SS **SS** **23 00 54.7 -5.4**
KMI pmax pmax
comp=Z,21nm,1.3s
KMI pmax pmax
comp=Z,130nm,3.1s
KMI LR LR
comp=N,230nm,17.3s
KMI LR LR
comp=E,320nm,17.8s
KMI LR LR
comp=Z,370nm,17.8s
KHC Kasperske Hory 41.16 317 *e*P **P** **22 51 44.5 0.0**
KHC Kasperske Hory 41.16 317⇑ *e*P **P** **22 51 44.5 0.0**
KHC Kasperske Hory 41.16 317 *e*P **P** **22 51 44.5 0.0**
JOF Joensuu 41.21 342 *e*P **P** **22 51 43.6 -1.0**
JOF pmax pmax
comp=Z,81nm,1.0s
JOF Joensuu 41.21 342 *e*p **P** **22 51 43.6 -1.0**
comp=Z,81nm,1.0s
JOF Joensuu 41.21 342 *e*P **P** **22 51 43.6 -1.0**
comp=Z,81nm,1.0s
RJOB Jochberg 41.23 314 *e*P **P** **22 51 45.3 +0.2**
comp=Z,44nm,1.1s
LZH Lanzhou 41.25 64 *e*P **P** **22 51 46.5 +1.0**
LZH pP **pP** **22 51 53.0 -1.0**
LZH sP **sP** **22 51 57.2 -0.3**
LZH *e*PP **PnPn** **22 53 25.6 +0.1**
LZH *e*S **S** **22 57 59.0 +1.2**
LZH sS **sS** **22 58 10.2 -1.7**
LZH *e*SS **SS** **23 00 56.2 -5.3**
LZH pmax pmax
comp=Z,32nm,1.0s
LZH pmax pmax
comp=Z,150nm,4.0s
LZH LR LR
comp=N,550nm,14.3s
LZH LR LR
comp=E,340nm,16.1s
LZH LR LR
comp=Z,700nm,17.5s
CD2 Chengdu 41.30 71 P **P** **22 51 46.5 +0.6**
CD2 pP **pP** **22 51 53.7 -0.7**
CD2 sP **sP** **22 51 57.0 -0.9**
CD2 PP **PnPn** **22 53 25.3 -0.8**
CD2 PcP **PcP** **22 53 45.7 +1.5**
CD2 PcS **PcS** **22 57 35.6 +0.1**
CD2 S **S** **22 57 58.8 +0.3**
CD2 sS **sS** **22 58 10.7 -1.9**
CD2 SS **SS** **23 00 57.7 -4.8**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,220nm,5.2s
CD2 LR LR
comp=N,910nm,22.5s
CD2 LR LR
comp=Z,370nm,15.2s
BRG Berggiesshubel 41.54 319 *e*P **P** **22 51 48.1 +0.6**
comp=Z,56nm,1.1s
BRG Berggiesshubel 41.54 319 *e*P **P** **22 51 48.1 +0.6**
BRG pmax pmax
comp=Z,56nm,1.1s
BRG Berggiesshubel 41.54 319 *e*P **P** **22 51 48.0 +0.6**
comp=Z,56nm,1.1s
BRG Berggiesshubel 41.54 319 *e*P **P** **22 51 48.1 +0.6**
comp=Z,56nm,1.1s
WET Wettzell 41.60 316 *e*P **P** **22 51 48.0 -0.1**
WET *e**PP **pP** **22 51 56.6 0.0**
WET pmax pmax
comp=Z,34nm,1.2s
WET Wettzell 41.60 316 *e*P **P** **22 51 48.0 -0.1**
comp=Z,34nm,1.2s
WET *e*pP **pP** **22 51 56.6 0.0**
WET Wettzell 41.60 316 *e*P **P** **22 51 48.0 -0.1**
comp=Z,34nm,1.2s
FIA1 FINESS Array S 41.68 338 *e*P **P** **22 51 48.6 +0.2**
FIA1 FINESS Array S 41.68 338 *e*P **P** **22 51 48.6 +0.2**
FINES FINESS Array B 41.68 338 P **P** **22 51 49.0 +0.5**
FINES FINESS Array B 41.68 338 P **P** **22 51 49.0 +0.5**
comp=Z,36nm,0.7s,baz=132,slow=9.4,SNR=167
FINES FINESS Array B 41.68 338 P **P** **22 51 49.0 +0.5**
WTTA Wattenberg 41.86 313 *i* P **P** **22 51 50.4 0.0**
WTTA pmax pmax
comp=Z,189nm,1.2s
WTTA Wattenberg 41.86 313 *i* P **P** **22 51 50.4 0.0**
comp=Z,189nm,1.2s,SNR=42
WTTA Wattenberg 41.86 313 *i* P **P** **22 51 50.4 0.0**
comp=Z,189nm,1.2s
WTTA Wattenberg 41.86 313 P **P** **22 51 50.4 0.0**
comp=Z,189nm,1.2s,SNR=42
FBE Freiberg 41.91 319 *e*P **P** **22 51 51.1 +0.6**
comp=Z,48nm,1.3s
FBE *e*pP **pP** **22 52 00.0 +1.0**
WATA Walderalm 41.91 313⇑ *i*P **P** **22 51 50.6 -0.2**
WATA pmax pmax
comp=Z,140nm,1.2s
WATA Walderalm 41.91 313⇑ *i*P **P** **22 51 50.6 -0.2**
comp=Z,140nm,1.2s,SNR=26
WATA Walderalm 41.91 313⇑ *i*P **P** **22 51 50.6 -0.2**
comp=Z,140nm,1.2s
WATA Walderalm 41.91 313 P **P** **22 51 50.6 -0.2**
comp=Z,140nm,1.2s,SNR=26
KEST Kesra 41.99 296 *e*P **P** **22 51 53.7 +2.2**
KEST Kesra 41.99 296 P **P** **22 51 53.2 +1.7**
comp=Z,4.0nm,0.9s,baz=175,slow=1.8,SNR=14
KEST Kesra 41.99 296 *e*P **P** **22 51 53.7 +2.2**
VLC Villacollemand 42.02 309 *e*P **P** **22 51 51.2 -0.3**

comp=Z,26nm,1.1s
VLC Villacollemand 42.02 309 *e*P **P 22 51 51.2 -0.3**
comp=Z,26nm,1.1s
KAF Kangasniemi 42.09 339 *e*P **P 22 51 52.1 +0.3**
KAF Kangasniemi 42.09 339 *e*p **P 22 51 52.1 +0.3**
baz=135,slow=8.6
KAF Kangasniemi 42.09 339 *e*P **P 22 51 52.1 +0.3**
VSL Villasalto 42.14 301 *e*P **P 22 51 53.3 +0.7**
comp=Z,44nm,0.8s
VSL Villasalto 42.14 301 *e*P **P 22 51 53.3 +0.7**
comp=Z,44nm,0.8s
ROTZ Rotzenmuhle 42.21 317 *e*P **P 22 51 53.9 +0.9**
comp=Z,69nm,1.1s
ROTZ *e*pP **pP 22 52 02.7 +1.1**
NKC Novy Kostel 42.22 318⇑ *i*P **P 22 51 53.6 +0.5**
NKC *e* 22 52 02.2
NKC *e* 22 52 12.3
NKC MLR MLR
comp=Z,600nm,17.3s
NKC Novy Kostel 42.22 318⇑ *i*P **P 22 51 53.6 +0.5**
NKC *e*pP **pP 22 52 02.2 +0.6**
NKC *es*P sP 22 52 12.3 +7.2
NKC AMS AMS 23 15 20.0
comp=Z,600nm,17.3s
NKC Novy Kostel 42.22 318 *i*P **P 22 51 53.6 +0.5**
MOTA Moosalm 42.23 313⇑ *i*P **P 22 51 52.8 -0.6**
MOTA pmax pmax
comp=Z,96nm,0.9s
MOTA Moosalm 42.23 313⇑ *i*P **P 22 51 52.8 -0.6**
comp=Z,96nm,0.9s,SNR=72
MOTA Moosalm 42.23 313⇑ *i*P **P 22 51 52.8 -0.6**
comp=Z,96nm,0.9s
MOTA Moosalm 42.23 313 P **P 22 51 52.8 -0.6**
comp=Z,96nm,0.9s,SNR=72
RUE Ruedersdorf 42.24 321 *e*P **P 22 51 53.9 +0.8**
comp=Z,77nm,1.1s
RUE Ruedersdorf 42.24 321 *e*P **P 22 51 53.3 +0.2**
comp=Z,40nm,0.9s
RUE Ruedersdorf 42.24 321 *e*P **P 22 51 53.3 +0.2**
comp=Z,40nm,0.9s
CLL Collm 42.25 320⇑ *i*P **P 22 51 54.1 +0.8**
CLL *i* 22 52 02.7
CLL *i* 22 53 41.6
CLL pmax pmax
comp=Z,95nm,1.3s
CLL Collm 42.25 320 *e*P **P 22 51 54.2 +0.9**
comp=Z,82nm,1.2s
CLL *e*pP **pP 22 52 03.1 +1.3**
CLL Collm 42.25 320⇑ *i*P **P 22 51 54.1 +0.8**
comp=Z,95nm,1.3s
CLL *i* pP **pP 22 52 02.7 +0.9**
CLL *e*PP **PP 22 53 34.0 +2.7**
CLL *e*pPP 22 53 41.0
CLL *e*(S) S 22 58 36.0 +24
CLL Collm 42.25 320 *i*P **P 22 51 54.1 +0.8**
comp=Z,95nm,1.3s
TANN Tannenbergstha 42.27 318 *e*P **P 22 51 53.8 +0.3**
comp=Z,28nm,0.1s
WERN Wernitzgruen 42.28 318 *e*P **P 22 51 54.3 +0.7**
comp=Z,46nm,1.3s
WERN *e*pP **pP 22 52 03.2 +1.1**
MOY Mondy 42.31 40 *e*P **P 22 51 55.4 +1.5**
MOY pmax pmax
comp=Z,30nm,1.8s
MOY Mondy 42.31 40 *e*P **P 22 51 55.4 +1.5**
comp=Z,30nm,1.8s
GUNZ Gunzen 42.33 318 *e*P **P 22 51 54.4 +0.4**
comp=Z,37nm,1.7s
FUR Furstenfeldbru 42.33 315 *e*P **P 22 51 54.1 +0.1**
FUR *e**PP **pP 22 52 02.6 0.0**
FUR pmax pmax
comp=Z,162nm,1.3s
FUR Furstenfeldbru 42.33 315 *e*P **P 22 51 54.1 +0.1**
comp=Z,162nm,1.3s
FUR *e*pP **pP 22 52 02.6 0.0**
FUR Furstenfeldbru 42.33 315 *e*P **P 22 51 54.1 +0.1**
comp=Z,162nm,1.3s
MANZ Manzenberg 42.34 317 *e*P **P 22 51 54.8 +0.7**
comp=Z,34nm,1.2s
MANZ *e*pP **pP 22 52 03.4 +0.7**
WERD Werda 42.37 318 *e*P **P 22 51 54.6 +0.3**
comp=Z,17nm,1.2s
WERD *e*pP **pP 22 52 03.5 +0.6**
FETA Feichten 42.39 313 *i*P **P 22 51 54.7 0.0**
comp=Z,136nm,1.2s,SNR=76
FETA Feichten 42.39 313 *i*P **P 22 51 54.8 0.0**
comp=Z,136nm,1.2s
FETA Feichten 42.39 313 *i*P **P 22 51 54.8 0.0**
comp=Z,136nm,1.2s
PLN Plauen 42.48 318 *e*P **P 22 51 55.4 +0.3**
comp=Z,68nm,1.3s
RETA Reutte 42.49 313⇑ *i*P **P 22 51 54.8 -0.5**
comp=Z,34nm,0.7s,SNR=23
RETA Reutte 42.49 313⇑ *i*P **P 22 51 54.9 -0.5**
comp=Z,34nm,0.7s
RETA Reutte 42.49 313 P **P 22 51 54.8 -0.5**
comp=Z,34nm,0.7s,SNR=23
FUORN Ofenpass-Fuorn 42.61 312 *e*P **P 22 51 57.2 +0.6**
comp=Z,27nm,0.9s
FUORN Ofenpass-Fuorn 42.61 312 *e*P **P 22 51 57.2 +0.6**
comp=Z,27nm,0.9s
BSD Bornholm Skovb 42.73 325 *i*P **P 22 51 55.5 -1.6**
BSD pmax pmax
comp=Z,26nm,0.9s
BSD Bornholm Skovb 42.73 325 *i*P **P 22 51 55.5 -1.6**
comp=Z,26nm,0.9s
BSD Bornholm Skovb 42.73 325 *i*P **P 22 51 55.5 -1.6**
comp=Z,26nm,0.9s
PGF Pioggiola 42.76 306⇑ *i*P **P 22 51 57.3 -0.4**
comp=Z,23nm,0.9s
PGF Pioggiola 42.76 306⇑ *i*P **P 22 51 57.3 -0.4**
PGF pmax pmax
comp=Z,23nm,0.9s
PGF Pioggiola 42.76 306⇑ *i*P **P 22 51 57.3 -0.4**
comp=Z,23nm,0.9s
PGF Pioggiola 42.76 306 *i*P **P 22 51 57.3 -0.4**
comp=Z,23nm,0.9s
GRA1 Grafenberg Arr 42.80 317 *e*P **P 22 51 58.5 +0.7**
comp=Z,135nm,1.1s
GRF Grafenberg Arr 42.80 317 *e*P **P 22 51 58.5 +0.7**
GRF *e**PP **pP 22 52 07.0 +0.6**
GRF pmax pmax
comp=Z,135nm,1.1s
GRF Grafenberg Arr 42.80 317 *e*P **P 22 51 58.5 +0.7**
comp=Z,135nm,1.1s
GRF *e*pP **pP 22 52 07.0 +0.6**
GRFO Grafenberg 42.80 317 *e*P **P 22 51 58.4 +0.6**
GRFO pmax pmax
comp=Z,93nm,1.0s
GRFO Grafenberg 42.80 317 *e*P **P 22 51 58.4 +0.6**
comp=Z,93nm,1.0s
GRFO Grafenberg 42.80 317 *e*P **P 22 51 58.4 +0.6**
comp=Z,93nm,1.0s
MOX Moxa 42.85 318 *e*P **P 22 51 58.8 +0.6**
MOX pmax pmax
comp=Z,38nm,1.4s
MOX Moxa 42.85 318 *e*P **P 22 51 58.8 +0.6**
comp=Z,38nm,1.4s
MOX Moxa 42.85 318 *e*P **P 22 51 58.8 +0.6**
comp=Z,38nm,1.4s
NEUB Neuenburg 42.94 319 *e*P **P 22 51 59.7 +0.8**
comp=Z,76nm,1.1s
NEUB *e*pP **pP 22 52 08.4 +1.0**
DAVA Damuels 43.02 313 *e*P **P 22 51 59.5 -0.3**
comp=Z,192nm,1.3s,SNR=59
DAVA Damuels 43.02 313 *e*P **P 22 51 59.5 -0.3**
comp=Z,192nm,1.3s
DAVA Damuels 43.02 313 P **P 22 51 59.5 -0.3**
comp=Z,192nm,1.3s,SNR=59
TUE Stuetta 43.20 312 *e*P **P 22 52 00.8 -0.5**
comp=Z,20nm,1.1s
TUE Stuetta 43.20 312 *e*P **P 22 52 00.8 -0.5**
comp=Z,20nm,1.1s
ZAK Zakamensk 43.24 42 *e*P **P 22 52 01.7 +0.2**
ZAK *e* 22 53 43.7
ZAK pmax pmax
comp=Z,6.0nm,1.3s
ZAK Zakamensk 43.24 42 *e*P **P 22 52 01.7 +0.2**
comp=Z,6.0nm,1.3s
RGN Rugen 43.32 324 *e*P **P 22 52 03.2 +1.4**
comp=Z,157nm,1.3s
STU Stuttgart 43.83 315 *e*P **P 22 52 05.8 -0.3**
STU pmax pmax
comp=Z,36nm,1.2s
STU Stuttgart 43.83 315 *e*P **P 22 52 05.5 -0.6**
comp=Z,41nm,1.3s
STU *e*pP **pP 22 52 14.2 -0.5**
STU Stuttgart 43.83 315 *e*P **P 22 52 05.8 -0.3**
comp=Z,36nm,1.2s
STU Stuttgart 43.83 315 *e*P **P 22 52 05.8 -0.3**
comp=Z,36nm,1.2s
UBBA Unterbreizbach 43.88 318 *e*P **P 22 52 07.4 +1.0**
comp=Z,56nm,1.5s
UBBA *e*pP **pP 22 52 15.8 +0.9**
CLZ Clausthal 43.98 319 *e*P **P 22 52 08.7 +1.4**
CLZ *e**PP **pP 22 52 17.4 +1.5**
CLZ pmax pmax
comp=Z,137nm,1.1s
CLZ Clausthal 43.98 319 *e*P **P 22 52 08.7 +1.4**
comp=Z,137nm,1.1s
CLZ *e*pP **pP 22 52 17.4 +1.5**
CLZ Clausthal 43.98 319 *e*P **P 22 52 08.7 +1.4**
comp=Z,137nm,1.1s
SAOF Saorge 44.00 308 *e*P **P 22 52 07.6 0.0**
SAOF Saorge 44.00 308 *e*P **P 22 52 07.6 0.0**
SAOF Saorge 44.00 308 *e*P **P 22 52 07.6 0.0**
SAOF Saorge 44.00 308 *e*P **P 22 52 07.6 0.0**
SBF Sospel 44.07 308⇑ *i*P **P 22 52 08.0 -0.2**
comp=Z,148nm,1.1s
SBF Sospel 44.07 308⇑ *i*P **P 22 52 08.0 -0.2**
SBF pmax pmax
comp=Z,148nm,1.1s
SBF Sospel 44.07 308⇑ *i*P **P 22 52 08.0 -0.2**
comp=Z,148nm,1.1s
SBF Sospel 44.07 308 *i*P **P 22 52 08.0 -0.2**
comp=Z,148nm,1.1s
REVF Revere 44.10 307 *e*P **P 22 52 08.1 -0.3**
REVF Revere 44.10 307 *e*P **P 22 52 08.1 -0.3**
REVF Revere 44.10 307 *e*P **P 22 52 08.1 -0.3**
REVF Revere 44.10 307 *e*P **P 22 52 08.1 -0.3**
LLD Lille Linde 44.22 325 *e*P **P 22 52 11.8 +2.7**
LLD pmax pmax
comp=Z,6.0nm,0.9s
LLD Lille Linde 44.22 325 *i*P **P 22 52 11.8 +2.7**
comp=Z,5.9nm,0.8s
LLD Lille Linde 44.22 325 *e*P **P 22 52 11.8 +2.7**
comp=Z,6.0nm,0.9s
TOUF Mont Tournerai 44.23 308 *e*P **P 22 52 09.6 0.0**
TOUF Mont Tournerai 44.23 308 *e*P **P 22 52 09.6 0.0**
TOUF Mont Tournerai 44.23 308 *e*P **P 22 52 09.6 0.0**
TOUF Mont Tournerai 44.23 308 *e*P **P 22 52 09.6 0.0**
COP Copenhagen 44.25 325 *i*P **P 22 52 10.6 +1.3**
COP pmax pmax
comp=Z,17nm,1.0s
COP Copenhagen 44.25 325 *i*P **P 22 52 10.6 +1.3**
comp=Z,17nm,1.0s
COP Copenhagen 44.25 325 *i*P **P 22 52 10.6 +1.3**
comp=Z,17nm,1.0s
BFO Black Forest 44.28 314 *e*P **P 22 52 09.3 -0.5**
BFO pmax pmax
comp=Z,15nm,0.9s
BFO Black Forest 44.28 314 *e*P **P 22 52 09.3 -0.5**
comp=Z,15nm,0.9s
BFO Black Forest 44.28 314 P **P 22 52 09.1 -0.6**
comp=Z,102nm,1.5s,SNR=6.2
BFO Black Forest 44.28 314 *e*P **P 22 52 09.3 -0.5**
comp=Z,15nm,0.9s
MVIF Mont Vial 44.28 308 *e*P **P 22 52 10.0 0.0**
MVIF Mont Vial 44.28 308 *e*P **P 22 52 10.0 0.0**
MVIF Mont Vial 44.28 308 *e*P **P 22 52 10.0 0.0**
MVIF Mont Vial 44.28 308 *e*P **P 22 52 10.0 0.0**
TOD Tromm 44.29 316 *e*P **P 22 52 09.6 -0.2**
TOD Tromm 44.29 316 *e*P **P 22 52 09.6 -0.2**
TOD Tromm 44.29 316 *e*P **P 22 52 09.6 -0.2**
NRDL Niedersach Rie 44.34 320 *e*P **P 22 52 11.7 +1.7**
comp=Z,127nm,1.1s
NRDL *e*pP **pP 22 52 20.4 +1.8**
FELD Feldberg im Sc 44.39 313 *e*P **P 22 52 10.2 -0.6**
FELD Feldberg im Sc 44.39 313 *e*P **P 22 52 10.2 -0.6**
FELD Feldberg im Sc 44.39 313 *e*P **P 22 52 10.2 -0.6**
GYA Guiyang 44.40 77 P **P 22 52 11.8 +0.7**
GYA pP **pP 22 52 19.6 -0.1**
GYA PP **PP 22 53 56.9 +2.0**
GYA ScP **ScP 22 57 45.0 +0.1**
GYA S **S 22 58 44.8 +0.6**
GYA SS SS 23 01 54.9 -8.8
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,790nm,20.8s
GYA LR LR
comp=E,650nm,21.2s
GYA LR LR
comp=Z,840nm,20.6s
CALN Calern 44.45 307 *e*P **P 22 52 11.1 -0.2**
CALN Calern 44.45 307 *e*P **P 22 52 11.1 -0.2**
CALN Calern 44.45 307 *e*P **P 22 52 11.1 -0.2**
CALN Calern 44.45 307 *e*P **P 22 52 11.1 -0.2**
SENIN Lac Senin/Sane 44.56 311 *e*P **P 22 52 12.6 +0.3**
comp=Z,12nm,0.8s
SENIN Lac Senin/Sane 44.56 311 *e*P **P 22 52 12.6 +0.3**
comp=Z,12nm,0.8s
SONM Songino Array 44.57 47 P **P 22 52 13.8 +1.6**
SONM Songino Array 44.57 47 P **P 22 52 13.8 +1.6**
comp=Z,11nm,0.9s,baz=255,slow=8.7,SNR=46
SONM LR LR 23 13 15.7
comp=Z,673nm,20.9s,baz=1.6,slow=39
SONM Songino Array 44.57 47 P **P 22 52 13.8 +1.6**
FRF La Foret Royal 44.60 307⇑ *i*P **P 22 52 12.0 -0.3**
comp=Z,33nm,1.1s
FRF La Foret Royal 44.60 307⇑ *i*P **P 22 52 12.0 -0.3**
FRF pmax pmax
comp=Z,33nm,1.1s
FRF La Foret Royal 44.60 307⇑ *i*P **P 22 52 12.0 -0.3**
comp=Z,33nm,1.1s
FRF La Foret Royal 44.60 307 *i*P **P 22 52 12.0 -0.3**
comp=Z,33nm,1.1s
APA Apatity 44.60 347⇓ *i*P **P 22 52 12.8 +0.8**
APA *i* 22 53 55.0
APA *i* 22 54 05.0
APA *i*S **S 22 58 46.0 +0.2**
APA pmax pmax
comp=Z,156nm,1.4s
APA MLR MLR
comp=Z,900nm,11.0s
APA Apatity 44.60 347 *i*P **P 22 52 12.8 +0.8**
comp=Z,156nm,1.4s
APA Apatity 44.60 347 *i*PcP **PcP 22 53 55.0 +0.6**
APA *i*S **S 22 58 46.0 +0.2**
comp=Z,900nm,11.0s
BBS Basel-Blauen 44.63 313 *e*P **P 22 52 12.2 -0.4**
BBS Basel-Blauen 44.63 313 *e*P **P 22 52 12.2 -0.4**
BBS Basel-Blauen 44.63 313 *e*P **P 22 52 12.2 -0.4**
MBDF Montbardon 44.66 309⇑ *i*P **P 22 52 12.3 -0.7**
comp=Z,47nm,1.0s
MBDF Montbardon 44.66 309⇑ *i*P **P 22 52 12.3 -0.7**
MBDF pmax pmax
comp=Z,47nm,1.0s
MBDF Montbardon 44.66 309⇑ *i*P **P 22 52 12.3 -0.7**
comp=Z,47nm,1.0s
MBDF Montbardon 44.66 309 *i*P **P 22 52 12.3 -0.7**
comp=Z,47nm,1.0s
TNS Taunus Mts 44.67 317 *e*P **P 22 52 13.7 +0.8**
TNS *e**PP **pP 22 52 22.2 +0.7**
TNS pmax pmax
comp=Z,79nm,1.2s
TNS Taunus Mts 44.67 317 *e*P **P 22 52 13.7 +0.8**
comp=Z,79nm,1.2s
TNS *e*pP **pP 22 52 22.2 +0.7**
TNS Taunus Mts 44.67 317 *e*P **P 22 52 13.7 +0.8**
comp=Z,79nm,1.2s
LMR La Mourre 44.67 307 *e*P **P 22 52 12.5 -0.4**
comp=Z,20nm,1.1s
LMR La Mourre 44.67 307 *e*P **P 22 52 12.5 -0.4**
LMR pmax pmax
comp=Z,21nm,1.1s
LMR La Mourre 44.67 307 *e*P **P 22 52 12.5 -0.4**
comp=Z,20nm,1.1s
LMR La Mourre 44.67 307 *e*P **P 22 52 12.5 -0.4**
comp=Z,21nm,1.1s
BSEG Bad Segeberg 44.71 322 *e*P **P 22 52 14.1 +1.1**
BSEG *e**PP **pP 22 52 23.0 +1.4**
BSEG pmax pmax
comp=Z,89nm,1.3s
BSEG Bad Segeberg 44.71 322 *e*P **P 22 52 14.1 +1.1**
comp=Z,89nm,1.3s
BSEG *e*pP **pP 22 52 23.0 +1.4**
BSEG Bad Segeberg 44.71 322 *e*P **P 22 52 14.1 +1.1**
comp=Z,89nm,1.3s
LANF Langenberg 44.77 315 *e*P **P 22 52 12.8 -0.8**
LANF Langenberg 44.77 315 *e*P **P 22 52 12.8 -0.8**
LANF Langenberg 44.77 315 *e*P **P 22 52 12.8 -0.8**
LANF Langenberg 44.77 315 *e*P **P 22 52 12.8 -0.8**
LPG La Plagne 44.80 310⇑ *i*P **P 22 52 13.4 -0.8**
comp=Z,47nm,0.8s
LPG La Plagne 44.80 310⇑ *i*P **P 22 52 13.4 -0.8**
LPG pmax pmax
comp=Z,47nm,0.8s
LPG La Plagne 44.80 310⇑ *i*P **P 22 52 13.4 -0.8**
comp=Z,47nm,0.8s
LPG La Plagne 44.80 310 *i*P **P 22 52 13.4 -0.8**
comp=Z,47nm,0.8s
LPL La Plagne 44.81 310⇑ *i*P **P 22 52 13.4 -0.9**
comp=Z,42nm,0.8s
LPL La Plagne 44.81 310⇑ *i*P **P 22 52 13.4 -0.9**
LPL pmax pmax
comp=Z,42nm,0.8s
LPL La Plagne 44.81 310⇑ *i*P **P 22 52 13.4 -0.9**
comp=Z,42nm,0.8s
LPL La Plagne 44.81 310 *i*P **P 22 52 13.4 -0.9**
comp=Z,42nm,0.8s
MOF Molkenrain 44.96 313 *e*P **P 22 52 14.8 -0.5**
MOF Molkenrain 44.96 313 *e*P **P 22 52 14.8 -0.5**
MOF Molkenrain 44.96 313 *e*P **P 22 52 14.8 -0.5**
MOF Molkenrain 44.96 313 *e*P **P 22 52 14.8 -0.5**
CDF Champ du Feu 44.98 314⇑ *i*P **P 22 52 14.7 -0.7**
comp=Z,65nm,1.2s
CDF Champ du Feu 44.98 314⇑ *i*P **P 22 52 14.7 -0.7**
CDF pmax pmax
comp=Z,65nm,1.2s
CDF Champ du Feu 44.98 314⇑ *i*P **P 22 52 14.7 -0.7**
comp=Z,65nm,1.2s
CDF Champ du Feu 44.98 314 *i*P **P 22 52 14.7 -0.7**
comp=Z,65nm,1.2s
ULN Ulaanbaatar 45.01 47 *e*P **P 22 52 17.0 +1.3**
comp=Z,8.9nm,0.8s
ULN Ulaanbaatar 45.01 47 P **P 22 52 15.4 -0.3**
comp=Z,15nm,1.8s,comp=Z,267nm
ULN Ulaanbaatar 45.01 47 *e*P **P 22 52 17.0 +1.3**
comp=Z,8.9nm,0.8s
ECH Echery 45.02 314 *e*P **P 22 52 15.2 -0.4**
ECH pmax pmax
comp=Z,70nm,1.1s
ECH Echery 45.02 314 *e*P **P 22 52 15.2 -0.4**
comp=Z,70nm,1.1s
ECH Echery 45.02 314 *e*P **P 22 52 15.2 -0.4**
ECH Echery 45.02 314 *e*P **P 22 52 15.2 -0.4**
LOMF Lomont 45.06 312 *e*P **P 22 52 15.9 -0.2**
LOMF Lomont 45.06 312 *e*P **P 22 52 15.9 -0.2**
LOMF Lomont 45.06 312 *e*P **P 22 52 15.9 -0.2**
LOMF Lomont 45.06 312 *e*P **P 22 52 15.9 -0.2**
HINF Hinteralfeld 45.14 313⇑ *i*P **P 22 52 16.0 -0.6**
comp=Z,50nm,0.9s
HINF Hinteralfeld 45.14 313⇑ *i*P **P 22 52 16.0 -0.6**
HINF pmax pmax
comp=Z,50nm,0.9s
HINF Hinteralfeld 45.14 313⇑ *i*P **P 22 52 16.0 -0.6**
comp=Z,50nm,0.9s
HINF Hinteralfeld 45.14 313 *i*P **P 22 52 16.0 -0.6**
comp=Z,50nm,0.9s
ORIF Oris-en-Rattie 45.32 309 *e*P **P 22 52 16.5 -1.7**
comp=Z,29nm,1.1s
ORIF *e*R
comp=Z,226nm,20.0s
ORIF Oris-en-Rattie 45.32 309 *e*P **P 22 52 16.5 -1.7**
ORIF pmax pmax
comp=Z,29nm,1.1s
ORIF Oris-en-Rattie 45.32 309 *e*P **P 22 52 16.5 -1.7**
comp=Z,29nm,1.1s
ORIF Oris-en-Rattie 45.32 309 *e*P **P 22 52 16.5 -1.7**
comp=Z,29nm,1.1s
RUP Ruppelstein 45.41 316 *e*P **P 22 52 18.7 0.0**
RUP Ruppelstein 45.41 316 *e*P **P 22 52 18.7 0.0**
RUP Ruppelstein 45.41 316 *e*P **P 22 52 18.7 0.0**
SMRF Simiane la Rot 45.42 308⇑ *i*P **P 22 52 18.8 -0.1**
comp=Z,42nm,1.1s
SMRF Simiane la Rot 45.42 308⇑ *i*P **P 22 52 18.8 -0.1**
comp=Z,42nm,1.1s
SMRF Simiane la Rot 45.42 308⇑ *i*P **P 22 52 18.8 -0.1**
comp=Z,21nm,1.1s
CABF La Chapelle 45.43 311⇑ *i*P **P 22 52 18.9 -0.1**
comp=Z,200nm,1.4s
CABF La Chapelle 45.43 311⇑ *i*P **P 22 52 18.9 -0.1**
CABF pmax pmax
comp=Z,200nm,1.4s
CABF La Chapelle 45.43 311⇑ *i*P **P 22 52 18.9 -0.1**
comp=Z,200nm,1.4s
CABF La Chapelle 45.43 311 *i*P **P 22 52 18.9 -0.1**
comp=Z,200nm,1.4s
MRIV Mauritius Mete 45.44 179 *e*P **P 22 52 19.3 +0.1**
MRIV Mauritius Mete 45.44 179 *e*P **P 22 52 19.3 +0.1**
XAN Xi'an 45.45 66 P **P 22 52 20.2 +0.9**
XAN pP **pP 22 52 28.3 +0.4**
XAN pmax pmax
comp=Z,5.0nm,1.2s
HAU Haudompre 45.51 313⇑ *i*P **P 22 52 18.8 -0.7**
comp=Z,43nm,1.0s
HAU *e*R
comp=Z,259nm,17.0s
HAU Haudompre 45.51 313⇑ *i*P **P 22 52 18.8 -0.7**
HAU pmax pmax
comp=Z,43nm,1.0s
HAU Haudompre 45.51 313⇑ *i*P **P 22 52 18.8 -0.7**
comp=Z,43nm,1.0s
HAU Haudompre 45.51 313 *i*P **P 22 52 18.8 -0.7**
comp=Z,43nm,1.0s
IBBN Ibbenburen 45.66 319 *e*P **P 22 52 22.0 +1.4**
comp=Z,129nm,1.3s
IBBN *e*pP **pP 22 52 30.9 +1.7**
BUG Bochum--Univer 45.71 318 *e*P **P 22 52 22.4 +1.4**
comp=Z,122nm,1.2s
BUG *e*pP **pP 22 52 31.2 +1.6**
WLF Walferdange 45.97 315 P **P 22 52 23.1 -0.1**
comp=Z,45nm,1.2s
WLF AP **pP 22 52 32.2 +0.5**
WLF Walferdange 45.97 315 *e*P **P 22 52 23.6 +0.4**
WLF pmax pmax
comp=Z,55nm,0.9s
WLF Walferdange 45.97 315 *e*P **P 22 52 23.7 +0.6**
WLF *e*pP **pP 22 52 32.3 +0.5**
WLF Walferdange 45.97 315 *e*P **P 22 52 23.6 +0.4**
comp=Z,55nm,0.9s
WLF Walferdange 45.97 315 *e*P **P 22 52 23.6 +0.4**
comp=Z,55nm,0.9s
PAGF Fort de Pagny 46.02 314⇑ *i*P **P 22 52 23.6 0.0**
comp=Z,40nm,1.2s
PAGF Fort de Pagny 46.02 314⇑ *i*P **P 22 52 23.6 0.0**
comp=Z,40nm,1.2s
PAGF Fort de Pagny 46.02 314⇑ *i*P **P 22 52 23.6 0.0**
comp=Z,20nm,1.2s
PSI Prapat 46.10 112 P **P 22 52 22.7 -2.0**
comp=Z,14nm,1.5s,comp=Z,400nm
WTSB Winterswijk 46.13 319 *e*P **P 22 52 25.7 +1.4**
comp=Z,113nm,1.2s
WTSB *e*pP **pP 22 52 33.9 +1.0**
VIVF Saint-Julien-l 46.16 309⇑ *i*P **P 22 52 24.1 -0.7**
comp=Z,83nm,1.0s
VIVF Saint-Julien-l 46.16 309⇑ *i*P **P 22 52 24.1 -0.7**
VIVF pmax pmax
comp=Z,83nm,1.0s
VIVF Saint-Julien-l 46.16 309⇑ *i*P **P 22 52 24.1 -0.7**
comp=Z,83nm,1.0s
VIVF Saint-Julien-l 46.16 309 *i*P **P 22 52 24.1 -0.7**
comp=Z,83nm,1.0s
MUD Monsted U'grnd 46.24 325 *i*P **P 22 52 26.5 +1.4**
MUD pmax pmax
comp=Z,23nm,1.1s
MUD Monsted U'grnd 46.24 325 *i*P **P 22 52 26.5 +1.4**
comp=Z,23nm,1.1s
MUD Monsted U'grnd 46.24 325 *i*P **P 22 52 26.5 +1.4**
comp=Z,23nm,1.1s
KULM Kulim 46.27 108 P **P 22 52 24.6 -1.3**
comp=Z,22nm,1.4s
MEM Membach 46.28 317 P **P 22 52 26.7 +1.2**
comp=Z,36nm,1.5s
MEM AP **pP 22 52 34.8 +0.6**
UBPT Khong Chiam 46.28 93 P **P 22 52 24.4 -1.6**
SSB Saint Sauveur 46.31 309 *e*P **P 22 52 25.1 -0.8**
SSB pmax pmax
comp=Z,20nm,0.8s
SSB Saint Sauveur 46.31 309 *e*P **P 22 52 25.1 -0.8**
comp=Z,20nm,0.8s
SSB Saint Sauveur 46.31 309 *e*P **P 22 52 25.1 -0.8**
comp=Z,20nm,0.8s
HGN Heimansgroeve 46.36 317 *i*P **P 22 52 27.4 +1.2**

comp=Z,76nm,1.0s
HGN ep P **pP** **22 52 35.6 +0.8**
SFTF **Sexfontaines** **46.41 313** ⇑ *i* P **P** **22 52 26.5 -0.1**
comp=Z,257nm,1.2s
SFTF **Sexfontaines** **46.41 313** ⇑ *i* P **P** **22 52 26.5 -0.1**
comp=Z,257nm,1.2s
SFTF **Sexfontaines** **46.41 313** ⇑ *i* P **P** **22 52 26.5 -0.1**
comp=Z,129nm,1.2s
MEZF **Maizieres J'vi** **46.45 314** ⇑ *i* P **P** **22 52 27.1 +0.2**
comp=Z,317nm,1.2s
MEZF **Maizieres J'vi** **46.45 314** ⇑ *i* P **P** **22 52 27.1 +0.2**
comp=Z,317nm,1.2s
MEZF **Maizieres J'vi** **46.45 314** ⇑ *i* P **P** **22 52 27.1 +0.2**
comp=Z,159nm,1.2s
BEBN **Eben Emael** **46.52 317** P **P** **22 52 28.7 +1.3**
comp=Z,23nm,1.7s
LASF **Ste Croix** **46.66 307** ⇑ *i* P **P** **22 52 28.5 -0.2**
comp=Z,82nm,1.1s
LASF **Ste Croix** **46.66 307** ⇑ *i* P **P** **22 52 28.5 -0.2**
comp=Z,82nm,1.1s
LASF **Ste Croix** **46.66 307** ⇑ *i* P **P** **22 52 28.5 -0.2**
comp=Z,41nm,1.1s
BCLA **Clavier** **46.67 316** P **P** **22 52 29.8 +1.2**
comp=Z,42nm,1.3s
BCLA AP **pP** **22 52 38.2 +1.0**
TAM **Tamanrasset** **46.88 278** *e*P **P** **22 52 31.3 +0.5**
TAM pmax pmax
comp=Z,25nm,1.0s
TAM **Tamanrasset** **46.88 278** *e*P **P** **22 52 31.3 +0.5**
comp=Z,25nm,1.0s
TAM **Tamanrasset** **46.88 278** *e*P **P** **22 52 31.3 +0.5**
comp=Z,25nm,1.0s
GIVF **Givet** **46.91 316** ⇑ *i* P **P** **22 52 31.4 +0.9**
comp=Z,248nm,1.1s
GIVF **Givet** **46.91 316** ⇑ *i* P **P** **22 52 31.4 +0.9**
GIVF pmax pmax
comp=Z,248nm,1.1s
GIVF **Givet** **46.91 316** ⇑ *i* P **P** **22 52 31.4 +0.9**
comp=Z,248nm,1.1s
GIVF **Givet** **46.91 316** *i* P **P** **22 52 31.4 +0.9**
comp=Z,248nm,1.1s
SMF **Signal de Mont** **46.97 311** ⇑ *i* P **P** **22 52 30.6 -0.4**
comp=Z,158nm,1.0s
SMF **Signal de Mont** **46.97 311** ⇑ *i* P **P** **22 52 30.6 -0.4**
SMF pmax pmax
comp=Z,158nm,1.0s
SMF **Signal de Mont** **46.97 311** ⇑ *i* P **P** **22 52 30.6 -0.4**
comp=Z,158nm,1.0s
SMF **Signal de Mont** **46.97 311** *i* P **P** **22 52 30.6 -0.4**
comp=Z,158nm,1.0s
IPM **Ipoh** **47.00 109** *e*P **P** **22 52 31.6 0.0**
comp=Z,25nm,1.1s
IPM **Ipoh** **47.00 109** P P 22 52 28.2 -3.4
comp=Z,25nm,1.2s
IPM **Ipoh** **47.00 109** *e*P **P** **22 52 31.6 0.0**
comp=Z,25nm,1.1s
LOR **Lormes** **47.04 312** ⇑ *i* P **P** **22 52 31.0 -0.6**
comp=Z,57nm,0.9s
LOR *e*R
comp=Z,252nm,21.5s
LOR **Lormes** **47.04 312** ⇑ *i* P **P** **22 52 31.0 -0.6**
comp=Z,57nm,0.9s
LOR **Lormes** **47.04 312** *i* P **P** **22 52 31.0 -0.6**
comp=Z,57nm,0.9s
DOU **Dourbes** **47.05 316** P **P** **22 52 32.6 +1.0**
comp=Z,46nm,1.4s
DOU AP **pP** **22 52 40.9 +0.7**
NB2 **NORSAR Subarra** **47.20 332** P **P** **22 52 32.1 -0.5**
comp=Z,58nm,1.4s,baz=116,slow=7.9
NB2 **NORSAR Subarra** **47.20 332** P **P** **22 52 32.1 -0.5**
baz=116,slow=7.9
NB2 **NORSAR Subarra** **47.20 332** P **P** **22 52 32.1 -0.5**
comp=Z,58nm,1.4s,SNR=4.0
NOA **NORSAR Array B** **47.20 332** P **P** **22 52 32.7 +0.1**
NOA **NORSAR Array B** **47.20 332** P **P** **22 52 32.7 +0.1**
comp=Z,14nm,0.9s,baz=116,slow=7.9,SNR=24
NOA LR LR 23 16 34.4
comp=Z,146nm,19.1s,baz=290,slow=41
NOA **NORSAR Array B** **47.20 332** P **P** **22 52 32.7 +0.1**
LBL **Lubilhac** **47.21 309** *e*P **P** **22 52 33.2 +0.2**
LBL **Lubilhac** **47.21 309** *e*P **P** **22 52 33.2 +0.2**
LBL **Lubilhac** **47.21 309** *e*P **P** **22 52 33.2 +0.2**
LBL **Lubilhac** **47.21 309** *e*P **P** **22 52 33.2 +0.2**
SSF **Saint Saulge** **47.25 312** ⇑ *i* P **P** **22 52 32.8 -0.4**
comp=Z,86nm,0.8s
SSF **Saint Saulge** **47.25 312** ⇑ *i* P **P** **22 52 32.8 -0.4**
SSF pmax pmax
comp=Z,86nm,0.8s
SSF **Saint Saulge** **47.25 312** ⇑ *i* P **P** **22 52 32.8 -0.4**
comp=Z,86nm,0.8s
SSF **Saint Saulge** **47.25 312** *i* P **P** **22 52 32.8 -0.4**
comp=Z,86nm,0.8s
BAIF **Baives** **47.29 316** ⇑ *i* P **P** **22 52 34.4 +1.0**
comp=Z,189nm,1.1s
BAIF **Baives** **47.29 316** ⇑ *i* P **P** **22 52 34.4 +1.0**
BAIF pmax pmax
comp=Z,189nm,1.1s
BAIF **Baives** **47.29 316** ⇑ *i* P **P** **22 52 34.4 +1.0**
comp=Z,189nm,1.1s
BAIF **Baives** **47.29 316** *i* P **P** **22 52 34.4 +1.0**
comp=Z,189nm,1.1s
AVF **Avril sur Loir** **47.32 311** ⇑ *i* P **P** **22 52 33.0 -0.7**
comp=Z,49nm,1.0s
AVF **Avril sur Loir** **47.32 311** ⇑ *i* P **P** **22 52 33.0 -0.7**
AVF pmax pmax
comp=Z,49nm,1.0s
AVF **Avril sur Loir** **47.32 311** ⇑ *i* P **P** **22 52 33.0 -0.7**
comp=Z,49nm,1.0s
AVF **Avril sur Loir** **47.32 311** *i* P **P** **22 52 33.0 -0.7**
comp=Z,49nm,1.0s
SNF **Seneffe** **47.33 316** P **P** **22 52 34.8 +1.1**
comp=Z,36nm,1.5s
SNF AP **pP** **22 52 42.1 -0.3**
UCC **Uccle** **47.34 317** P **P** **22 52 35.0 +1.2**
AGO **Saint Agoulin** **47.38 310** *e*P **P** **22 52 34.2 -0.1**
AGO **Saint Agoulin** **47.38 310** *e*P **P** **22 52 34.2 -0.1**
AGO **Saint Agoulin** **47.38 310** *e*P **P** **22 52 34.2 -0.1**
PYM **Petit Puy Mans** **47.43 310** *e*P **P** **22 52 34.6 -0.1**
PYM **Petit Puy Mans** **47.43 310** *e*P **P** **22 52 34.6 -0.1**
PYM **Petit Puy Mans** **47.43 310** *e*P **P** **22 52 34.6 -0.1**
PYM **Petit Puy Mans** **47.43 310** *e*P **P** **22 52 34.6 -0.1**
HHC **Hu-ho-hao-te** **47.44 57** *e*P **P** **22 52 36.7 +1.8**
HHC PcP **PcP** **22 54 06.9 +1.8**
HHC PP **PP** **22 54 27.4 +1.1**
HHC ScP **ScP** **22 57 58.0 +0.8**
HHC PcS **PcS** **22 58 01.1 +0.6**
HHC S **S** **22 59 28.3 +0.7**
HHC sS **sS** **22 59 40.9 -0.9**
HHC ScS **ScS** **23 02 26.5 -0.5**
HHC SS **SS** **23 02 49.8 -5.5**
HHC pmax pmax
comp=Z,57nm,0.7s
HHC pmax pmax
comp=Z,260nm,6.2s
HHC LR LR
comp=N,550nm,15.7s
HHC LR LR
comp=E,560nm,15.4s
HHC LR LR
comp=Z,610nm,15.4s
BGF **Bois d'Agland** **47.64 311** ⇑ *i* P **P** **22 52 35.9 -0.3**
comp=Z,52nm,0.8s
BGF **Bois d'Agland** **47.64 311** ⇑ *i* P **P** **22 52 35.9 -0.3**
BGF pmax pmax
comp=Z,52nm,0.8s
BGF **Bois d'Agland** **47.64 311** ⇑ *i* P **P** **22 52 35.9 -0.3**
comp=Z,52nm,0.8s
BGF **Bois d'Agland** **47.64 311** *i* P **P** **22 52 35.9 -0.3**
comp=Z,52nm,0.8s
KEV **Kevo** **47.73 346** *e*P **P** **22 52 36.5 -0.1**
KEV pmax pmax
comp=Z,73nm,1.0s
KEV **Kevo** **47.73 346** *e*p **P** **22 52 36.5 -0.1**
comp=Z,73nm,1.0s
KEV **Kevo** **47.73 346** *e*P **P** **22 52 37.0 +0.4**
comp=Z,84nm,1.0s
KEV **Kevo** **47.73 346** *e*P **P** **22 52 37.0 +0.4**
comp=Z,84nm,1.0s
MTLF **Montolieu** **47.79 306** ⇑ *i* P **P** **22 52 37.9 +0.4**
comp=Z,115nm,1.2s
MTLF **Montolieu** **47.79 306** ⇑ *i* P **P** **22 52 37.9 +0.4**
MTLF pmax pmax
comp=Z,115nm,1.2s
MTLF **Montolieu** **47.79 306** ⇑ *i* P **P** **22 52 37.9 +0.4**
comp=Z,115nm,1.2s
MTLF **Montolieu** **47.79 306** *i* P **P** **22 52 37.9 +0.4**
comp=Z,115nm,1.2s
HYF **Humbligny** **47.86 312** ⇑ *i* P **P** **22 52 38.2 +0.2**
HYF **Humbligny** **47.86 312** ⇑ *i* P **P** **22 52 38.2 +0.2**
HYF **Humbligny** **47.86 312** ⇑ *i* P **P** **22 52 38.2 +0.2**
ARE0 **ARCESS Array S** **47.89 346** *e*P **P** **22 52 39.0 +1.1**
ARE0 **ARCESS Array S** **47.89 346** *e*P **P** **22 52 38.4 +0.6**
ARE0 **ARCESS Array S** **47.89 346** *e*P **P** **22 52 38.4 +0.6**
ARCES **ARCESS Array B** **47.89 346** P **P** **22 52 38.6 +0.8**
ARCES PcP **PcP** **22 54 06.2 +0.2**
ARCES **ARCESS Array B** **47.89 346** P **P** **22 52 38.6 +0.8**
comp=Z,24nm,0.8s,baz=149,slow=5.2,SNR=40
ARCES PcP **PcP** **22 54 06.2 +0.2**
comp=Z,17nm,0.8s,baz=169,slow=1.2,SNR=8.0
ARCES **ARCESS Array B** **47.89 346** P **P** **22 52 38.7 +0.8**
ARCES **ARCESS Array B** **47.89 346** PcP **PcP** **22 54 06.2 +0.2**
CAF **Calviac** **48.02 308** ⇑ *i* P **P** **22 52 39.3 +0.1**
comp=Z,85nm,1.1s
CAF **Calviac** **48.02 308** ⇑ *i* P **P** **22 52 39.3 +0.1**
CAF pmax pmax
comp=Z,85nm,1.1s
CAF **Calviac** **48.02 308** ⇑ *i* P **P** **22 52 39.3 +0.1**
comp=Z,85nm,1.1s
CAF **Calviac** **48.02 308** *i* P **P** **22 52 39.3 +0.1**
comp=Z,85nm,1.1s
KTK1 **Kautokeino** **48.02 344** *e*P **P** **22 52 38.2 -0.7**
KTK1 **Kautokeino** **48.02 344** *e*P **P** **22 52 38.2 -0.7**
SNR=34
TCF **Toulx Ste Croi** **48.04 310** ⇑ *i* P **P** **22 52 39.1 -0.3**
comp=Z,24nm,0.7s
TCF **Toulx Ste Croi** **48.04 310** ⇑ *i* P **P** **22 52 39.1 -0.3**
TCF pmax pmax
comp=Z,24nm,0.7s
TCF **Toulx Ste Croi** **48.04 310** ⇑ *i* P **P** **22 52 39.1 -0.3**
comp=Z,24nm,0.7s
TCF **Toulx Ste Croi** **48.04 310** *i* P **P** **22 52 39.1 -0.3**
comp=Z,24nm,0.7s
RJF **Les Rejaudoux** **48.43 309** ⇑ *i* P **P** **22 52 42.7 +0.3**
comp=Z,94nm,1.1s
RJF *e*R
comp=Z,204nm,19.8s
RJF **Les Rejaudoux** **48.43 309** ⇑ *i* P **P** **22 52 42.7 +0.3**
RJF pmax pmax
comp=Z,94nm,1.1s
RJF **Les Rejaudoux** **48.43 309** ⇑ *i* P **P** **22 52 42.7 +0.3**
comp=Z,94nm,1.1s
RJF **Les Rejaudoux** **48.43 309** *i* P **P** **22 52 42.7 +0.3**
comp=Z,94nm,1.1s
LFF **La Frestale** **48.95 308** ⇑ *i* P **P** **22 52 46.6 +0.2**
comp=Z,76nm,0.9s
LFF **La Frestale** **48.95 308** ⇑ *i* P **P** **22 52 46.6 +0.2**
LFF pmax pmax
comp=Z,76nm,0.9s
LFF **La Frestale** **48.95 308** ⇑ *i* P **P** **22 52 46.6 +0.2**
comp=Z,76nm,0.9s
LFF **La Frestale** **48.95 308** *i* P **P** **22 52 46.6 +0.2**
comp=Z,76nm,0.9s
QIZ **Qiongzhong** **49.02 86** P **P** **22 52 47.0 -0.3**
QIZ S **S** **22 59 52.0 +1.7**
QIZ pmax pmax
comp=Z,120nm,4.5s
QIZ LR LR
comp=Z,240nm,27.9s
FLOS **Flostrand** **49.12 338** *e*P **P** **22 52 47.7 +0.4**
EPF **Esparros** **49.15 306** *e*P **P** **22 52 48.7 +0.7**
EPF **Esparros** **49.15 306** *e*P **P** **22 52 48.7 +0.7**
EPF **Esparros** **49.15 306** *e*P **P** **22 52 48.7 +0.7**
EPF **Esparros** **49.15 306** *e*P **P** **22 52 48.7 +0.7**
STOK **Stokkvaagen** **49.24 338** *e*P **P** **22 52 50.2 +2.0**
LSZ **Lusaka** **49.26 218** *e*P **P** **22 52 49.8 +0.6**
LSZ **Lusaka** **49.26 218** *e*P **P** **22 52 50.0 +0.9**
comp=Z,10nm,0.9s
LSZ **Lusaka** **49.26 218** *e*P **P** **22 52 50.0 +0.9**
comp=Z,10nm,0.9s
KONS **Konsvik** **49.30 338** *e*P P 22 52 44.1 -4.5
STEI **Steigen** **49.47 341** *e*P **P** **22 52 51.9 +1.9**
TRO **Tromso** **49.55 343** *e*P **P** **22 52 51.4 +0.9**
TRO AMB AMB 22 52 52.5
comp=Z,136nm,0.7s
TRO **Tromso** **49.55 343** *e*P **P** **22 52 51.4 +0.9**
comp=Z,136nm,0.7s,SNR=33
MFF **Saint Martin d** **49.69 311** ⇑ *i* P **P** **22 52 51.4 -0.6**
comp=Z,39nm,1.1s
MFF **Saint Martin d** **49.69 311** ⇑ *i* P **P** **22 52 51.4 -0.6**
MFF pmax pmax
comp=Z,39nm,1.1s
MFF **Saint Martin d** **49.69 311** ⇑ *i* P **P** **22 52 51.4 -0.6**
comp=Z,39nm,1.1s
MFF **Saint Martin d** **49.69 311** *i* P **P** **22 52 51.4 -0.6**
comp=Z,39nm,1.1s
ETSF **Etsaut** **49.80 306** *e*P **P** **22 52 53.5 +0.5**
comp=Z,44nm,0.9s
ETSF **Etsaut** **49.80 306** *e*P **P** **22 52 53.5 +0.5**
ETSF pmax pmax
comp=Z,44nm,0.9s
ETSF **Etsaut** **49.80 306** *e*P **P** **22 52 53.5 +0.5**
comp=Z,44nm,0.9s
ETSF **Etsaut** **49.80 306** *e*P **P** **22 52 53.5 +0.5**
comp=Z,44nm,0.9s
LDF **La Druitiere** **49.87 313** ⇑ *i* P **P** **22 52 52.6 -0.7**
comp=Z,86nm,1.1s
LDF **La Druitiere** **49.87 313** ⇑ *i* P **P** **22 52 52.6 -0.7**
LDF pmax pmax
comp=Z,86nm,1.1s
LDF **La Druitiere** **49.87 313** ⇑ *i* P **P** **22 52 52.6 -0.7**
comp=Z,86nm,1.1s
LDF **La Druitiere** **49.87 313** *i* P **P** **22 52 52.6 -0.7**
comp=Z,86nm,1.1s
FLN **La Foliniere** **50.12 313** ⇑ *i* P **P** **22 52 54.7 -0.5**
comp=Z,122nm,0.9s
FLN *e*R
comp=Z,208nm,20.5s
FLN **La Foliniere** **50.12 313** ⇑ *i* P **P** **22 52 54.7 -0.5**
FLN pmax pmax
comp=Z,122nm,0.9s
FLN **La Foliniere** **50.12 313** ⇑ *i* P **P** **22 52 54.7 -0.5**
comp=Z,122nm,0.9s
FLN **La Foliniere** **50.12 313** *i* P **P** **22 52 54.7 -0.5**
comp=Z,122nm,0.9s
SJPF **Ste Jean** **50.30 306** *e*P **P** **22 52 57.1 +0.4**
comp=Z,86nm,1.2s
SJPF **Ste Jean** **50.30 306** *e*P **P** **22 52 57.1 +0.4**
SJPF pmax pmax
comp=Z,86nm,1.2s
SJPF **Ste Jean** **50.30 306** *e*P **P** **22 52 57.1 +0.4**
comp=Z,86nm,1.2s
SJPF **Ste Jean** **50.30 306** *e*P **P** **22 52 57.1 +0.4**
comp=Z,86nm,1.2s
GRR **Gorron** **50.33 313** ⇑ *i* P **P** **22 52 56.4 -0.4**
GRR **Gorron** **50.33 313** ⇑ *i* P **P** **22 52 56.4 -0.4**
GRR **Gorron** **50.33 313** ⇑ *i* P **P** **22 52 56.4 -0.4**
GRR **Gorron** **50.33 313** *i* P **P** **22 52 56.4 -0.4**
WHN **Wuhan** **50.40 70** ⇓ P **P** **22 52 59.6 +2.0**
WHN LR LR
comp=Z,710nm,22.8s
WOL **Wolverton** **50.90 317** *e*P **P** **22 53 01.4 +0.4**
WOL AMB AMB 22 53 02.7
comp=Z,152nm,1.4s
WOL **Wolverton** **50.90 317** P **P** **22 53 01.4 +0.4**
WOL AMB AMB 22 53 02.7
comp=Z,152nm,1.4s
WOL **Wolverton** **50.90 317** *e*P **P** **22 53 01.4 +0.4**
BJI **Beijing** **50.96 58** P **P** **22 53 03.2 +1.5**
BJI PP **PP** **22 54 57.3 -0.9**
BJI SS **SS** **23 03 52.5 +0.8**
BJI LR LR
comp=N,400nm,25.0s
BJI LR LR
comp=E,200nm,21.7s
BJI LR LR
comp=Z,150nm,28.4s
SGMF **Saint Gilles** **51.45 313** ⇑ *i* P **P** **22 53 05.0 -0.2**
comp=Z,122nm,1.1s
SGMF **Saint Gilles** **51.45 313** ⇑ *i* P **P** **22 53 05.0 -0.2**
SGMF pmax pmax
comp=Z,122nm,1.1s
SGMF **Saint Gilles** **51.45 313** ⇑ *i* P **P** **22 53 05.0 -0.2**
comp=Z,122nm,1.1s
SGMF **Saint Gilles** **51.45 313** *i* P **P** **22 53 05.0 -0.2**
comp=Z,122nm,1.1s
QUIF **Quistinic** **51.84 312** ⇑ *i* P **P** **22 53 07.6 -0.5**
comp=Z,148nm,1.3s
QUIF **Quistinic** **51.84 312** ⇑ *i* P **P** **22 53 07.6 -0.5**
QUIF pmax pmax
comp=Z,148nm,1.3s
QUIF **Quistinic** **51.84 312** ⇑ *i* P **P** **22 53 07.6 -0.5**
comp=Z,148nm,1.3s
QUIF **Quistinic** **51.84 312** *i* P **P** **22 53 07.6 -0.5**
comp=Z,148nm,1.3s
ROSF **Rostrenen** **51.93 313** ⇑ *i* P **P** **22 53 08.5 -0.4**
comp=Z,62nm,1.1s
ROSF **Rostrenen** **51.93 313** ⇑ *i* P **P** **22 53 08.5 -0.4**
ROSF pmax pmax
comp=Z,63nm,1.1s
ROSF **Rostrenen** **51.93 313** ⇑ *i* P **P** **22 53 08.5 -0.4**
comp=Z,62nm,1.1s
ROSF **Rostrenen** **51.93 313** *i* P **P** **22 53 08.5 -0.4**
comp=Z,63nm,1.1s
HLM1 **Long Mynd** **52.07 318** *e*P **P** **22 53 09.9 +0.1**
HLM1 AMB AMB 22 53 10.6
comp=Z,82nm,1.1s
HLM1 **Long Mynd** **52.07 318** P **P** **22 53 09.9 +0.1**
HLM1 AMB AMB 22 53 10.6
comp=Z,82nm,1.1s
HLM1 **Long Mynd** **52.07 318** *e*P **P** **22 53 09.9 +0.1**
MCH1 **Michaelchurch** **52.08 317** *e*P **P** **22 53 09.9 0.0**
MCH1 AMB AMB 22 53 10.4
comp=Z,98nm,0.9s
MCH1 **Michaelchurch** **52.08 317** P **P** **22 53 09.9 0.0**
MCH1 AMB AMB 22 53 10.4
comp=Z,98nm,0.9s
MCH1 **Michaelchurch** **52.08 317** *e*P **P** **22 53 09.9 0.0**
FOEL **Foel Wylfa** **52.31 318** *e*P **P** **22 53 12.2 +0.6**
FOEL AMB AMB 22 53 14.1
comp=Z,83nm,1.3s
FOEL **Foel Wylfa** **52.31 318** P **P** **22 53 12.2 +0.6**
FOEL AMB AMB 22 53 14.1
comp=Z,83nm,1.3s
FOEL **Foel Wylfa** **52.31 318** *e*P **P** **22 53 12.2 +0.6**
ESY **Stoneypath** **52.42 322** *e*P **P** **22 53 12.8 +0.4**
ESY **Stoneypath** **52.42 322** P **P** **22 53 12.8 +0.4**
ESY **Stoneypath** **52.42 322** *e*P **P** **22 53 12.8 +0.4**
ESDC **Sonseca Array** **52.44 302** P **P** **22 53 12.7 -0.2**
ESDC **Sonseca Array** **52.44 302** P **P** **22 53 12.7 -0.2**
comp=Z,5.8nm,0.8s,baz=78,slow=6.8,SNR=35
ESDC **Sonseca Array** **52.44 302** P **P** **22 53 12.6 -0.2**
ECK **Cauldkaine Hil** **52.59 321** *e*P **P** **22 53 13.0 -0.6**
ECK **Cauldkaine Hil** **52.59 321** P **P** **22 53 13.0 -0.6**
ECK **Cauldkaine Hil** **52.59 321** *e*P **P** **22 53 13.0 -0.6**
EBL **Broad Law** **52.64 322** *e*P **P** **22 53 14.4 +0.4**
EBL **Broad Law** **52.64 322** P **P** **22 53 14.4 +0.4**
EBL **Broad Law** **52.64 322** *e*P **P** **22 53 14.4 +0.4**
ESK **Eskdalemuir** **52.66 321** *e*P **P** **22 53 14.8 +0.7**
ESK pmax pmax
comp=Z,90nm,1.4s
ESK **Eskdalemuir** **52.66 321** *e*P **P** **22 53 14.8 +0.7**
comp=Z,90nm,1.4s
ESK **Eskdalemuir** **52.66 321** *e*P **P** **22 53 14.8 +0.7**
comp=Z,90nm,1.4s
PAB **San Pablo** **52.75 301** *e*P **P** **22 53 15.2 0.0**
PAB pmax pmax
comp=Z,41nm,1.4s
PAB **San Pablo** **52.75 301** *e*P **P** **22 53 15.2 0.0**
comp=Z,41nm,1.4s
PAB **San Pablo** **52.75 301** *e*P **P** **22 53 15.2 0.0**
comp=Z,41nm,1.4s
WPM1 **Penmaenmawr** **52.78 319** *e*P **P** **22 53 15.3 +0.2**
WPM1 **Penmaenmawr** **52.78 319** P **P** **22 53 15.3 +0.2**
WPM1 **Penmaenmawr** **52.78 319** *e*P **P** **22 53 15.3 +0.2**
MME1 **Meikle Cairn** **52.87 324** *e*P **P** **22 53 16.0 +0.4**
MME1 **Meikle Cairn** **52.87 324** P **P** **22 53 16.0 +0.4**
MME1 **Meikle Cairn** **52.87 324** *e*P **P** **22 53 16.0 +0.4**
YRC **Rhoscolyn** **53.18 319** *e*P **P** **22 53 18.4 +0.4**
YRC **Rhoscolyn** **53.18 319** P **P** **22 53 18.4 +0.4**
YRC **Rhoscolyn** **53.18 319** *e*P **P** **22 53 18.4 +0.4**
TOA0 **Torodi Ar. Sit** **53.33 268** *e*P **P** **22 53 19.3 -0.4**
TOA0 **Torodi Ar. Sit** **53.33 268** *e*P **P** **22 53 19.3 -0.4**
TORD **Torodi Ar. Bea** **53.33 268** P **P** **22 53 19.4 -0.3**
TORD **Torodi Ar. Bea** **53.33 268** P **P** **22 53 19.4 -0.3**
comp=Z,50nm,0.7s,baz=62,slow=6.7,SNR=273
TORD **Torodi Ar. Bea** **53.33 268** P **P** **22 53 19.4 -0.3**
EAB **Aberfoyle** **53.42 322** *e*P **P** **22 53 19.1 -0.6**
EAB **Aberfoyle** **53.42 322** P **P** **22 53 19.1 -0.6**
EAB **Aberfoyle** **53.42 322** *e*P **P** **22 53 19.1 -0.6**
GAL1 **Galloway** **53.45 321** *e*P **P** **22 53 20.4 +0.5**
GAL1 AMB AMB 22 53 21.1
comp=Z,102nm,1.2s
GAL1 **Galloway** **53.45 321** P **P** **22 53 20.4 +0.5**
GAL1 AMB AMB 22 53 21.1
comp=Z,102nm,1.2s
GAL1 **Galloway** **53.45 321** *e*P **P** **22 53 20.4 +0.5**
MDO **Dochfour** **53.63 324** *e*P **P** **22 53 21.2 -0.1**
MDO **Dochfour** **53.63 324** P **P** **22 53 21.2 -0.1**
MDO **Dochfour** **53.63 324** *e*P **P** **22 53 21.2 -0.1**
NJ2 **Nanjing** **53.96 68** *e*P **P** **22 53 25.3 +1.2**
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 **Nanjing** **53.96 68** *e*P **P** **22 53 24.1 0.0**
NJ2 pP **pP** **22 53 30.2 -2.6**
NJ2 sP **sP** **22 53 33.1 -3.1**
NJ2 PP **PP** **22 55 25.1 -0.3**
NJ2 S **S** **23 00 58.5 +0.4**
NJ2 sS **sS** **23 01 10.5 -2.0**
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 pmax pmax
comp=Z,130nm,5.2s
NJ2 LR LR
comp=N,290nm,19.9s
NJ2 LR LR
comp=E,280nm,24.6s
NJ2 LR LR
comp=Z,330nm,22.3s
KAC **Achnashellach** **54.14 324** *e*P **P** **22 53 24.8 -0.2**
KAC **Achnashellach** **54.14 324** P **P** **22 53 24.8 -0.2**
KAC **Achnashellach** **54.14 324** *e*P **P** **22 53 24.8 -0.2**
MSNA **Messina** **54.24 211** *e*P **P** **22 53 26.7 +0.6**
MSNA AMB AMB 22 53 28.6
comp=Z,15nm,1.8s
KPL **Plockton** **54.31 324** *e*P **P** **22 53 26.6 +0.5**
KPL AMB AMB 22 53 26.7
comp=Z,166nm,1.3s
KPL **Plockton** **54.31 324** P **P** **22 53 26.6 +0.5**
KPL AMB AMB 22 53 26.7
comp=Z,166nm,1.3s
KPL **Plockton** **54.31 324** *e*P **P** **22 53 26.6 +0.5**
PBRG **Braganca** **54.41 304** *e*P **P** **22 53 27.7 +0.4**
comp=Z,37nm,1.7s
PBRG **Braganca** **54.41 304** *e*P **P** **22 53 27.7 +0.4**
comp=Z,37nm,1.7s
MVO **Moncorvo** **54.67 304** *e*P **P** **22 53 29.8 +0.6**
comp=Z,32nm,1.1s
MVO **Moncorvo** **54.67 304** *e*P **P** **22 53 29.8 +0.6**
comp=Z,32nm,1.1s
PMRV **Marv??o** **55.10 302** *e*P **P** **22 53 32.0 -0.3**
comp=Z,29nm,2.0s
PMRV **Marv??o** **55.10 302** *e*P **P** **22 53 32.0 -0.3**
comp=Z,29nm,2.0s
MTE **Manteigas** **55.13 303** *e*P **P** **22 53 32.1 -0.4**
comp=Z,40nm,1.5s
MTE **Manteigas** **55.13 303** *e*P **P** **22 53 32.1 -0.4**
comp=Z,40nm,1.5s
PCBR **Castelo Branco** **55.13 302** *e*P **P** **22 53 33.6 +1.2**
comp=Z,35nm,1.0s
PCBR **Castelo Branco** **55.13 302** *e*P **P** **22 53 33.6 +1.2**
comp=Z,35nm,1.0s
PVRL **Vila Real** **55.18 304** *e*P **P** **22 53 33.1 +0.2**
comp=Z,50nm,1.5s
PVRL **Vila Real** **55.18 304** *e*P **P** **22 53 33.1 +0.2**
comp=Z,50nm,1.5s
POLO **Lamas de Olo** **55.23 304** *e*P **P** **22 53 34.0 +0.7**
comp=Z,22nm,1.2s
POLO **Lamas de Olo** **55.23 304** *e*P **P** **22 53 34.0 +0.7**
comp=Z,22nm,1.2s
DL2 **Dalian** **55.25 59** P **P** **22 53 34.9 +1.6**
DL2 *e*S **S** **23 01 19.0 +3.7**
DL2 pmax pmax
comp=Z,26nm,0.6s
DL2 LR LR
comp=N,150nm,15.2s
DL2 LR LR
comp=E,180nm,16.7s
DL2 LR LR
comp=Z,140nm,18.1s
PESTR **Estremoz** **55.32 301** *e*P **P** **22 53 33.6 -0.3**
comp=Z,22nm,1.6s
PESTR **Estremoz** **55.32 301** *e*P **P** **22 53 33.6 -0.3**
comp=Z,22nm,1.6s
PVIS **Viseu** **55.36 303** *e*P **P** **22 53 35.0 +0.8**
comp=Z,38nm,1.4s
PVIS **Viseu** **55.36 303** *e*P **P** **22 53 35.0 +0.8**
comp=Z,38nm,1.4s

PCAB **Cabril** 55.38 304 *e*P P 22 53 35.4 +1.1
comp=Z,58nm,1.1s
PCAB **Cabril** 55.38 304 *e*P P 22 53 35.4 +1.1
comp=Z,58nm,1.1s
RTC **Rabat Centre** 55.40 295 *e*P P 22 53 36.1 +1.7
comp=Z,52nm,0.5s
RTC **Rabat Centre** 55.40 295 *e*P P 22 53 36.1 +1.7
comp=Z,52nm,0.5s
PGAV **Gavieira, Arco** 55.54 305 *e*P P 22 53 35.6 +0.1
comp=Z,69nm,1.8s
PGAV **Gavieira, Arco** 55.54 305 *e*P P 22 53 35.6 +0.1
comp=Z,69nm,1.8s
PVAQ **Vaqueiros** 55.59 299 *e*P P 22 53 35.7 -0.1
comp=Z,51nm,1.9s
PVAQ **Vaqueiros** 55.59 299 *e*P P 22 53 35.7 -0.1
comp=Z,51nm,1.9s
PBEJ **Beja** 55.63 300 *e*P P 22 53 35.4 -0.7
comp=Z,23nm,1.9s
PBEJ **Beja** 55.63 300 *e*P P 22 53 35.4 -0.7
comp=Z,23nm,1.9s
EVO **Evora** 55.69 301⇑*i*P P 22 53 37.1 +0.6
comp=Z,53nm,1.2s
EVO **Evora** 55.69 301 *e*P P 22 53 36.4 -0.1
comp=Z,35nm,1.4s
EVO **Evora** 55.69 301 *e*P P 22 53 36.4 -0.1
comp=Z,35nm,1.4s
EVOP **Sao Brissos** 55.77 301⇑*i*P P 22 53 37.1 0.0
EVOP pmax pmax
comp=Z,53nm,1.2s
EVOP **Sao Brissos** 55.77 301⇑*i*P P 22 53 37.1 0.0
comp=Z,53nm,1.2s
EVOP **Sao Brissos** 55.77 301 *i* P P 22 53 37.1 0.0
comp=Z,53nm,1.2s
PBDV **Barranco-do-Ve** 55.78 299 *e*P P 22 53 37.1 -0.1
comp=Z,45nm,2.0s
PBDV **Barranco-do-Ve** 55.78 299 *e*P P 22 53 37.1 -0.1
comp=Z,45nm,2.0s
PCVE **Castro Verde** 55.82 299 *e*P P 22 53 37.3 -0.1
comp=Z,38nm,1.7s
PCVE **Castro Verde** 55.82 299 *e*P P 22 53 37.3 -0.1
comp=Z,38nm,1.7s
PTOM **Tomar** 55.87 302 *e*P P 22 53 38.5 +0.7
comp=Z,46nm,1.3s
PTOM **Tomar** 55.87 302 *e*P P 22 53 38.5 +0.7
comp=Z,46nm,1.3s
SPA0 **Spitsbergen Ar** 56.01 351 *e*P P 22 53 38.6 +0.3
SPA0 **Spitsbergen Ar** 56.01 351 *e*P P 22 53 38.6 +0.3
SNR=31
SPITS **Spitsbergen Ar** 56.01 351 P P 22 53 38.5 +0.3
SPITS **Spitsbergen Ar** 56.01 351 P P 22 53 38.5 +0.3
comp=Z,24nm,0.8s,baz=128,slow=13,SNR=4.4
SPITS **Spitsbergen Ar** 56.01 351 P P 22 53 38.5 +0.3
PNCL **Nicolau / Gran** 56.14 300 *e*P P 22 53 39.8 +0.1
comp=Z,23nm,1.8s
PNCL **Nicolau / Gran** 56.14 300 *e*P P 22 53 39.8 +0.1
comp=Z,23nm,1.8s
MORF **Marmelete** 56.34 299 *e*P P 22 53 41.1 -0.2
comp=Z,55nm,2.1s
MORF **Marmelete** 56.34 299 *e*P P 22 53 41.1 -0.2
comp=Z,55nm,2.1s
PFVI **Vila Bisbo** 56.51 299 *e*P P 22 53 42.9 +0.5
comp=Z,34nm,1.9s
PFVI **Vila Bisbo** 56.51 299 *e*P P 22 53 42.9 +0.5
comp=Z,34nm,1.9s
KSM **Kuching** 56.51 106 P P 22 53 40.8 -1.9
comp=Z,9.8nm,1.0s
PMAFR **Mafra** 56.62 301 *e*P P 22 53 43.8 +0.7
comp=Z,77nm,1.3s
PMAFR **Mafra** 56.62 301 *e*P P 22 53 43.8 +0.7
comp=Z,77nm,1.3s
CLNS **Chul'man** 57.04 37 *e*P P 22 53 45.8 -0.1
CLNS pmax pmax
comp=Z,12nm,0.9s
CLNS pmax pmax
comp=E,10.0nm,1.3s
CLNS MLR MLR
comp=Z,327nm,19.0s
CLNS MLR MLR
comp=N,188nm,16.0s
CLNS MLR MLR
comp=E,235nm,18.0s
CLNS **Chul'man** 57.04 37 *e*P P 22 53 45.8 -0.1
comp=E,188nm,16.0s
KBS **Kingsbay** 57.17 351 *e*P P 22 53 47.0 +0.6
KBS **Kingsbay** 57.17 351 *e*P P 22 53 47.1 +0.6
KBS pmax pmax
comp=Z,28nm,0.9s
KBS **Kingsbay** 57.17 351 *e*P P 22 53 47.1 +0.6
comp=Z,28nm,0.9s
KBS **Kingsbay** 57.17 351 *e*P P 22 53 47.0 +0.6
SNR=31
YHNB **Yeheng** 57.74 76 *e*P P 22 53 52.5 +1.1
comp=Z,55nm,1.2s
YHNB **Yeheng** 57.74 76 *e*P P 22 53 52.5 +1.1
comp=Z,55nm,1.2s
ERPM **east rand prop** 58.49 210⇑*i*P P 22 53 56.2 -0.3
ERPM AMB AMB 22 53 56.8
comp=Z,23nm,1.1s
LBTB **Lobatse** 58.64 214 *e*P P 22 53 58.0 +0.5
LBTB AMB AMB 22 53 59.9
comp=Z,19nm,1.0s
LBTB **Lobatse** 58.64 214 *e*P P 22 53 57.8 +0.3
comp=Z,21nm,1.0s
LBTB **Lobatse** 58.64 214 *e*P P 22 53 57.8 +0.3
comp=Z,21nm,1.0s
TSUM **Tsumeb** 58.66 225 *e*P P 22 53 55.3 -2.4
TSUM **Tsumeb** 58.66 225 *e*P P 22 53 58.2 +0.4
comp=Z,9.2nm,1.0s
TSUM **Tsumeb** 58.66 225 *e*P P 22 53 58.2 +0.4
comp=Z,9.2nm,1.0s
INCN **Inchon** 59.36 60 *e*P P 22 54 03.2 +0.8
INCN **Inchon** 59.36 60 *e*P P 22 54 03.2 +0.8
PRYS **Parys** 59.40 211 *e*P P 22 54 01.6 -1.1
PRYS AMB AMB 22 54 03.2
comp=Z,17nm,4.7s
YAK **Yakutsk** 59.75 31 *e*P P 22 54 03.0 -1.6
YAK *e* 22 54 12.3
YAK pmax pmax
comp=Z,34nm,0.9s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,17nm,1.4s
YAK MLR MLR
comp=Z,334nm,18.0s
YAK MLR MLR
comp=E,172nm,18.0s
YAK MLR MLR
comp=N,200nm,18.0s
YAK **Yakutsk** 59.75 31 *e*P P 22 54 03.0 -1.6
comp=N,3.0nm,1.0s
KSAR **Wonju Array Be** 60.34 60 P P 22 54 09.8 +0.7
KSAR **Wonju Array Be** 60.34 60 P P 22 54 09.8 +0.7
KSRS **Korea Array** 60.37 60 P P 22 54 09.8 +0.5
comp=N,14nm,0.9s,baz=274,slow=7.1,SNR=44
KSRS LR LR 23 24 43.5
comp=N,257nm,19.9s,baz=270,slow=40
KSRS **Korea Array** 60.37 60 P P 22 54 09.8 +0.5
comp=N,257nm,19.9s
SEK **Senekal** 60.47 210⇑*i*P P 22 54 10.1 0.0
SEK AMB AMB 22 54 11.1
comp=Z,40nm,0.9s
MDJ **Mudanjiang** 60.49 52 P P 22 54 09.6 -0.4
MDJ pP **pP** 22 54 15.9 -3.0
MDJ sP **sP** 22 54 18.5 -3.7
MDJ PcP **PcP** 22 54 54.4 -0.1
MDJ PP **PP** 22 56 21.2 -2.1
MDJ ScP **ScP** 22 58 54.3 +0.4
MDJ PcS **PcS** 22 58 56.7 -0.2
MDJ S **S** 23 02 21.9 -1.8
MDJ ScS **ScS** 23 03 59.3 +0.4
MDJ pmax pmax
comp=Z,9.0nm,1.2s
MDJ pmax pmax
comp=Z,58nm,6.2s
MDJ LR LR
comp=N,270nm,24.6s
MDJ LR LR
comp=E,150nm,28.4s
MDJ LR LR
comp=Z,190nm,19.9s
SWZ **Schweizer** 60.58 213⇑*i*P P 22 54 10.3 -0.5
SWZ AMB AMB 22 54 11.8
comp=Z,33nm,0.9s
KLR **Kul'dur** 61.39 46 *e*P P 22 54 12.1 -4.0
KLR *e* 22 54 22.1
KLR pmax pmax
comp=E,20nm,1.2s
KLR pmax pmax
comp=Z,32nm,1.2s
BOSA **Boshof** 61.81 212⇑*i*P P 22 54 18.7 -0.5
BOSA AMB AMB 22 54 22.2
comp=Z,31nm,3.5s
BOSA **Boshof** 61.81 212 P P 22 54 19.0 -0.2
comp=Z,10nm,0.8s
BOSA **Boshof** 61.81 212 P P 22 54 19.0 -0.2
comp=Z,18nm,0.9s,baz=31,slow=7.3,SNR=27
BOSA **Boshof** 61.81 212 P P 22 54 19.0 -0.2
comp=Z,19nm,0.9s
DBIC **Dimbokro** 61.83 264 *e*P P 22 54 19.0 -0.5
DBIC **Dimbokro** 61.83 264 P P 22 54 19.6 +0.1
comp=Z,13nm,0.8s
DBIC **Dimbokro** 61.83 264 P P 22 54 19.6 +0.1
comp=Z,21nm,0.7s,baz=58,slow=7.5,SNR=19
DBIC **Dimbokro** 61.83 264 P P 22 54 19.6 +0.1
comp=Z,21nm,0.7s
MYLDM **Lahad Datu** 62.04 98 P P 22 54 21.4 +0.5
comp=Z,34nm,1.3s
LIC **Lamto** 62.17 263 *e*P P 22 54 21.9 +0.1
comp=Z,39nm,0.7s
LIC **Lamto** 62.17 263 *e*P P 22 54 21.9 +0.1
comp=Z,39nm,0.7s
LIC **Lamto** 62.17 263 *e*P P 22 54 21.9 +0.1
comp=Z,20nm,0.7s
DAG **Danmarks Havn** 62.18 345 *i* P P 22 54 21.3 +0.4
DAG pmax pmax
comp=Z,25nm,1.0s
DAG **Danmarks Havn** 62.18 345 *i* P P 22 54 21.3 +0.4
comp=Z,25nm,1.0s
USRK **Ussuriysk Arra** 62.25 52 P P 22 54 22.2 +0.3
comp=Z,4.5nm,0.8s,baz=272,slow=5.8,SNR=8.8
SCO **Scoresbysund** 62.62 338 *i* P P 22 54 25.5 +1.6
SCO pmax pmax
comp=Z,14nm,0.9s
SCO **Scoresbysund** 62.62 338 *i* P P 22 54 25.5 +1.6
comp=Z,14nm,0.9s
SCO **Scoresbysund** 62.62 338 *i* P P 22 54 25.5 +1.6
comp=Z,14nm,0.9s
HABR **Khabarovsk** 63.66 47 *e*P P 22 54 29.2 -2.0
HABR *e**PP **pP** 22 54 43.3 +3.2
HABR *e* 22 55 05.2
HABR *e* 22 56 49.4
HABR S **S** 23 02 59.3 -4.2
HABR *e* 23 03 16.6
HABR 23 04 17.7
HABR *e*SS **SS** 23 07 08.6 -2.3
HABR pmax pmax
comp=Z,35nm,0.8s
HABR pmax pmax
comp=N,26nm,0.8s
HABR pmax pmax
comp=E,80nm,1.5s
HABR MLR MLR
comp=Z,391nm,21.0s
HABR **Khabarovsk** 63.66 47 *e*P P 22 54 29.2 -2.0
comp=Z,26nm,0.8s
HABR **Khabarovsk** 63.66 47 *e*PcP **PcP** 22 55 05.2 -2.1
JNU **Nakatsue** 63.67 64 *e*P P 22 54 32.2 +0.6
comp=Z,12nm,1.2s
JNU **Nakatsue** 63.67 64 *e*P P 22 54 32.2 +0.6
comp=Z,12nm,1.2s
PMAR **Madeira** 63.89 296 *e*P P 22 54 34.0 +0.8
comp=Z,118nm,1.7s
PMAR **Madeira** 63.89 296 *e*P P 22 54 34.0 +0.8
comp=Z,118nm,1.7s
SUR **Sutherland** 67.07 213 *e*P P 22 54 53.6 +0.1
comp=Z,20nm,1.0s
SUR **Sutherland** 67.07 213 *e*P P 22 54 53.7 +0.1
comp=Z,20nm,1.0s
SUMG **Summit** 67.62 341⇑*i*P P 22 54 58.1 +1.3
SUMG pmax pmax
comp=Z,57nm,1.0s
SUMG **Summit** 67.62 341 *e*P P 22 54 57.3 +0.5
comp=Z,92nm,1.1s
SUMG **Summit** 67.62 341⇑*i*P P 22 54 58.1 +1.3
comp=Z,57nm,1.0s
SUMG **Summit** 67.62 341⇑*i*P P 22 54 58.1 +1.3
comp=Z,57nm,1.0s,SNR=19
KAPI **Kappang** 67.90 107 *e*P P 22 54 58.0 -1.0
comp=Z,95nm,1.6s
KAPI **Kappang** 67.90 107 P P 22 54 57.4 -1.6
comp=Z,36nm,1.5s,comp=Z,620nm
KAPI **Kappang** 67.90 107 *e*P P 22 54 58.0 -1.0
comp=Z,95nm,1.6s
MAJO **Matsushiro** 68.59 59 *e*P P 22 55 03.7 +0.6
MAJO pmax pmax
comp=Z,78nm,2.0s
MAJO **Matsushiro** 68.59 59 *e*P P 22 55 03.7 +0.6
comp=Z,78nm,2.0s
MAJO **Matsushiro** 68.59 59 *e*P P 22 55 03.7 +0.6
comp=Z,78nm,2.0s
MJAR **Matsushiro Arr** 68.59 59 P P 22 55 03.3 +0.2
MJAR **Matsushiro Arr** 68.59 59 P P 22 55 03.3 +0.2
comp=Z,5.6nm,1.1s,baz=273,slow=7.6,SNR=12
MJAR **Matsushiro Arr** 68.59 59 P P 22 55 03.3 +0.2
ALE **Alert** 68.61 353 P P 22 55 03.0 +0.6
comp=Z,228nm,1.0s,SNR=32
YSS **Yuzh-Sakhalins** 69.06 47 *e*P P 22 55 06.1 +0.3
YSS pmax pmax
comp=Z,40nm,1.0s
YSS **Yuzh-Sakhalins** 69.06 47 *e*P P 22 55 06.1 +0.3
comp=Z,40nm,1.0s
ASAJ **Asahikawa** 69.71 50 LR LR 23 29 47.5
comp=Z,304nm,20.3s,baz=131,slow=39
SEY **Seymchan** 70.05 29*c* *i*P P 22 55 12.4 +0.8
SEY **Seymchan** 70.05 29 *i* P P 22 55 12.4 +0.8
JHJ **Hachijo jima 2** 70.84 62 LR LR 23 32 02.5
comp=Z,187nm,19.6s,baz=4.5,slow=41
SFJD **Kangerlussuaq** 73.47 337 P P 22 55 32.6 +0.5
SFJD **Kangerlussuaq** 73.47 337 *i* P P 22 55 32.1 0.0
comp=Z,7.8nm,1.0s
SFJD **Kangerlussuaq** 73.47 337 P P 22 55 32.6 +0.5
comp=Z,8.1nm,0.8s,baz=76,slow=7.9,SNR=6.9
SFJD **Kangerlussuaq** 73.47 337 P P 22 55 32.6 +0.5
BILL **Bilibino** 73.53 22⇑*i*P P 22 55 32.9 +0.4
BILL *e* 22 58 13.2
BILL *e*S **S** 23 04 56.7 -3.5
BILL pmax pmax
comp=Z,51nm,1.8s
BILL **Bilibino** 73.53 22 *i* P P 22 55 32.9 +0.4
comp=Z,51nm,1.8s
SACV **Santiago Islan** 75.44 280 *e*P P 22 55 43.3 -1.2
SACV **Santiago Islan** 75.44 280 *e*P P 22 55 43.3 -1.2
PETK **Petropavlovsk-** 76.12 38 P P 22 55 46.8 -1.0
PETK pmax pmax
comp=Z,13nm,1.1s
PETK MLR MLR
comp=Z,312nm,19.2s
PETK **Petropavlovsk-** 76.12 38 P P 22 55 46.8 -1.0
PETK **Petropavlovsk-** 76.12 38 P P 22 55 46.8 -1.0
comp=Z,13nm,1.1s,baz=347,slow=2.0,SNR=5.0
PETK LR LR 23 35 08.6
comp=Z,312nm,19.2s,baz=56,slow=40
PETK **Petropavlovsk-** 76.12 38 P P 22 55 46.8 -1.0
RES **Resolute Bay** 78.50 353 P P 22 56 00.9 +0.3
comp=Z,2.1nm,1.1s
RES **Resolute Bay** 78.50 353 P P 22 56 00.9 +0.3
comp=Z,4.5nm,0.8s,baz=34,slow=10,SNR=17
RES **Resolute Bay** 78.50 353 P P 22 56 00.9 +0.3
comp=Z,2.1nm,1.1s
FRB **Frobisher Bay** 81.48 339 P P 22 56 17.1 +0.2
FRB **Frobisher Bay** 81.48 339 P P 22 56 17.1 +0.2
comp=Z,40nm,0.9s,baz=46,slow=5.1,SNR=43
FRB **Frobisher Bay** 81.48 339 P P 22 56 17.1 +0.2
ATTU **Attu Island--F** 84.36 33 *e*P P 22 56 31.7 -0.4
FX1 **Attu Island--F** 84.36 33 *e*P P 22 56 31.7 -0.4
FX1 **Attu Island--F** 84.36 33 *e*P P 22 56 31.7 -0.4
COLD **Coldfoot** 85.40 10 *e*P P 22 56 37.8 +0.7
COLD **Coldfoot** 85.40 10 *e*P P 22 56 37.8 +0.7
INK **Inuvik** 86.23 4 P P 22 56 41.5 +0.4
INK **Inuvik** 86.23 4 P P 22 56 41.5 +0.4
comp=Z,27nm,1.0s,baz=8.6,slow=7.9,SNR=78
INK **Inuvik** 86.23 4 P P 22 56 41.5 +0.4
SCHQ **Schefferville** 86.77 331 P P 22 56 43.8 -0.3
SCHQ **Schefferville** 86.77 331 P P 22 56 43.8 -0.3
comp=Z,6.4nm,0.8s,baz=50,slow=5.9,SNR=15
SCHQ LR LR 23 33 27.3
comp=Z,206nm,19.5s,baz=44,slow=34
SCHQ **Schefferville** 86.77 331 P P 22 56 43.8 -0.3
WRA **Warramunga Arr** 87.56 113 P P 22 56 48.9 +0.5
WRA **Warramunga Arr** 87.56 113 P P 22 56 48.9 +0.5
comp=Z,18nm,1.0s,baz=310,slow=4.3,SNR=52
WRA **Warramunga Arr** 87.56 113 P P 22 56 48.9 +0.5
comp=Z,18nm,1.0s
WRAB **Tennant Creek** 87.56 113 *e*P P 22 56 48.8 +0.4
WRAB pmax pmax
comp=Z,45nm,1.3s
WRAB **Tennant Creek** 87.56 113 *e*P P 22 56 48.8 +0.4
comp=Z,45nm,1.3s
WRAB **Tennant Creek** 87.56 113 P P 22 56 49.9 +1.5
comp=Z,141nm,0.8s,SNR=7.0
WRAB **Tennant Creek** 87.56 113 *e*P P 22 56 48.8 +0.4
comp=Z,45nm,1.3s
ILAR **Eielson Array** 88.20 10 P P 22 56 50.0 -0.8
ILAR PP PP 23 00 14.4 -2.7
ILAR **Eielson Array** 88.20 10 P P 22 56 50.0 -0.8
comp=Z,4.0nm,0.9s,baz=328,slow=3.8,SNR=34
ILAR PP PP 23 00 14.4 -2.7
comp=Z,0.8nm,1.0s,baz=328,slow=6.2,SNR=4.1
ILAR **Eielson Array** 88.20 10 P P 22 56 50.0 -0.8
MCK **McKinley** 88.82 11 *e*P P 22 56 53.9 +0.2
MCK **McKinley** 88.82 11 *e*P P 22 56 53.9 +0.2
MCK **McKinley** 88.82 11 *e*P P 22 56 53.9 +0.2
TRF **Thorofare Moun** 88.84 12 *e*P P 22 56 53.6 -0.4
comp=Z,12nm,1.1s
TRF **Thorofare Moun** 88.84 12 *e*P P 22 56 53.6 -0.4
comp=Z,12nm,1.1s
ASAR **Alice Springs** 88.95 117 P P 22 56 56.0 +1.0
ASAR **Alice Springs** 88.95 117 P P 22 56 56.0 +1.0
comp=Z,9.8nm,0.9s,baz=300,slow=4.6,SNR=47
ASAR **Alice Springs** 88.95 117 P P 22 56 56.0 +1.0
comp=Z,10.0nm,0.9s
PPLA **Purkeypile** 88.97 13 *e*P P 22 56 54.7 +0.1
PPLA **Purkeypile** 88.97 13 *e*P P 22 56 54.7 +0.1
EGAK **Eagle** 88.99 8 *e*P P 22 56 55.2 +0.7
comp=Z,25nm,1.1s
EGAK **Eagle** 88.99 8 *e*P P 22 56 55.2 +0.7
comp=Z,25nm,1.1s
DOT **Dot Lake** 89.69 9 *e*P P 22 56 58.4 +0.6
DOT **Dot Lake** 89.69 9 *e*P P 22 56 58.4 +0.6
SML **Sawmill** 90.71 12 *e*P P 22 57 03.4 +0.8
SML **Sawmill** 90.71 12 *e*P P 22 57 03.4 +0.8
SML **Sawmill** 90.71 12 *e*P P 22 57 03.4 +0.8
YKA **Yellowknife Ar** 92.14 356 P P 22 57 09.7 +0.6
YKA **Yellowknife Ar** 92.14 356 P P 22 57 09.7 +0.6
comp=Z,13nm,0.9s,baz=359,slow=4.7,SNR=154
YKA **Yellowknife Ar** 92.14 356 P P 22 57 09.7 +0.6
MAW **Mawson** 92.83 178 P P 22 57 13.1 +1.2
MAW **Mawson** 92.83 178 P P 22 57 13.1 +1.2
comp=Z,6.6nm,0.9s,baz=4.3,slow=6.7,SNR=8.0
MAW **Mawson** 92.83 178 P P 22 57 13.1 +1.2
comp=Z,7.0nm,0.9s
KDAK **Kodiak Island** 93.48 15 P P 22 57 15.6 +0.2
KDAK **Kodiak Island** 93.48 15 P P 22 57 15.6 +0.2
comp=Z,15nm,1.1s,baz=358,slow=11,SNR=3.5
KDAK **Kodiak Island** 93.48 15 P P 22 57 15.6 +0.2
SYO **Syowa Base** 95.01 186⇓*eX* P 22 57 19.9 -2.0
DLBC **Dease Lake** 96.26 4 *e*P P 22 57 29.0 +0.7
DLBC **Dease Lake** 96.26 4 P P 22 57 28.9 +0.7
comp=Z,6.9nm,1.0s,baz=322,slow=4.5,SNR=9.8
DLBC **Dease Lake** 96.26 4 *e*P P 22 57 29.0 +0.7
LONY **Lake Ozonia** 97.49 327 *e*P Pdif 22 57 34.9 +0.8
comp=Z,19nm,1.2s
LONY **Lake Ozonia** 97.49 327 *e*P Pdif 22 57 34.9 +0.8
comp=Z,19nm,1.2s
CTA **Charters Tower** 97.69 108 LR LR 23 41 53.2
comp=Z,153nm,19.2s,baz=230,slow=36
STKA **Stephens Creek** 98.69 121 LR LR 23 38 44.5
comp=Z,241nm,19.8s,baz=319,slow=33
PDAR **Pinedale Array** 111.05 349 PKiKP **PKiKP** 23 02 33.9 0.0
PDAR PKKPab **PKKPab** 23 13 39.2 -4.5
PDAR **Pinedale Array** 111.05 349 PKiKP **PKiKP** 23 02 33.9 0.0
comp=Z,1.0nm,0.8s,baz=8.1,slow=3.1,SNR=4.3
PDAR PKKPab **PKKPab** 23 13 39.2 -4.5
comp=Z,1.3nm,0.8s,baz=195,slow=4.9,SNR=8.8
PDAR **Pinedale Array** 111.05 349 PKiKP **PKiKP** 23 02 33.8 0.0
N20A **Spence Gulch,** 112.69 348 ⇓PKiKP **PKiKP** 23 02 37.0 0.0
baz=112
S18A **Hurst Farm, Bl** 116.06 349 ⇑PKiKP **PKiKP** 23 02 43.3 -0.3
baz=116
U25A **Circle Dot Ran** 116.08 343 ⇓PKiKP **PKiKP** 23 02 43.5 -0.1
baz=116
NVAR **Mina Array Bea** 116.34 356 PKP **PKPdf** 23 02 45.6 +1.5
NVAR **Mina Array Bea** 116.34 356 PKP **PKPdf** 23 02 45.6 +1.5
comp=Z,3.8nm,0.8s,baz=298,slow=0.5,SNR=16
NVAR **Mina Array Bea** 116.34 356 PKiKP **PKPdf** 23 02 45.6 +1.5
V25A **Rancho No Teng** 116.66 343 ⇓PKiKP **PKPdf** 23 02 44.6 -0.1
baz=116
U21A **Nageezi** 116.82 346 ⇑PKiKP **PKiKP** 23 02 45.3 +0.2
baz=116
X26A **CR and CF Fran** 117.66 342 ⇓PKiKP **PKiKP** 23 02 46.6 0.0
baz=117
VNDA **Vanda** 117.83 166 PKKPab PKKPab 23 13 08.6 +0.9
VNDA **Vanda** 117.83 166 PKKPab PKKPab 23 13 08.6 +0.9
comp=Z,2.4nm,0.9s,baz=94,slow=2.7,SNR=11
ANMO **Albuquerque** 117.97 345 PKKPab PKKPab 23 13 09.9 -3.1
ANMO **Albuquerque** 117.97 345 PKKPab PKKPab 23 13 09.9 -3.1
comp=Z,0.4nm,0.4s,baz=178,slow=4.8,SNR=3.5
Y27A **Causey** 118.11 341 ⇓PKiKP **PKPdf** 23 02 47.4 -0.1
baz=118
Z26A **Caprock** 118.91 342 ⇓PKiKP **PKPdf** 23 02 48.3 -0.7
baz=119
Z25A **Roswell** 119.11 343 ⇓PKiKP **PKPdf** 23 02 48.8 -0.6
baz=119
Z24A **Sheeppen Canyo** 119.23 343 ⇓PKiKP **PKPdf** 23 02 49.4 -0.3
baz=119
GSC **Goldstone** 119.34 354 ⇑PKiKP **PKiKP** 23 02 49.8 0.0
baz=119
Z22A **Elephant Butte** 119.70 345 ⇓PKiKP **PKiKP** 23 02 51.0 +0.4
baz=119
Z21A **St. Cloud Mine** 119.82 345 ⇓PKiKP **PKiKP** 23 02 51.5 +0.5
baz=120
124A **Stringfield Ra** 119.85 343 ⇑PKiKP **PKiKP** 23 02 51.5 +0.4
baz=120
Z20A **Nine Sixteen R** 120.22 346 ⇑PKiKP **PKiKP** 23 02 52.4 +0.7
baz=120
Y14A **Wickenburg** 120.22 350 ⇓PKiKP **PKiKP** 23 02 52.0 +0.5
baz=120
IRM **Iron Mountain** 120.29 353 ⇑PKiKP **PKiKP** 23 02 52.3 +0.6
baz=120
BELC **Belle Mtn. Jos** 120.55 353 ⇑PKiKP **PKiKP** 23 02 53.1 +0.8
baz=120
121A **Cookes Peak, D** 120.59 345 ⇓PKiKP **PKiKP** 23 02 52.9 +0.4
baz=120
Y12C **Blythe** 120.62 352 ⇓PKiKP **PKiKP** 23 02 52.9 +0.7
baz=120
531A **Rocksprings** 120.71 337 ⇓PKiKP **PKiKP** 23 02 52.8 +0.2
baz=120
120A **U Bar Ranch, L** 120.77 346 ⇓PKiKP **PKiKP** 23 02 53.2 +0.4
baz=120
BC3 **Big Chuckawall** 120.83 353 ⇓PKiKP **PKiKP** 23 02 53.0 +0.3
baz=120
222A **Williams Famil** 120.84 344 ⇑PKiKP **PKiKP** 23 02 53.3 +0.4
baz=120
428A **Kincaid Ranch,** 120.90 340 ⇓PKiKP **PKiKP** 23 02 53.1 +0.1
baz=121
325A **Bean Ranch, Si** 120.98 342 ⇑PKiKP **PKiKP** 23 02 53.5 +0.3
baz=121
PFO **Pinyon Flat Ob** 120.98 354 ⇑PKiKP **PKiKP** 23 02 53.6 +0.5
baz=121
530A **J-C Ranch, Com** 121.00 338 ⇑PKiKP **PKiKP** 23 02 53.3 +0.2
baz=121
427A **Hayter Ranch,** 121.01 340 ⇓PKiKP **PKPdf** 23 02 52.9 -0.1
baz=121
324A **Moseley Ranch,** 121.05 343 ⇓PKiKP **PKiKP** 23 02 53.4 0.0
baz=121
GLA **Glamis** 121.35 352 ⇓PKiKP **PKiKP** 23 02 54.4 +0.7
baz=121
426A **McDonald Obser** 121.37 341 ⇓PKiKP **PKPdf** 23 02 53.9 -0.1
baz=121
425A **Indio Mountain** 121.53 342 ⇑PKiKP **PKPdf** 23 02 54.2 0.0
baz=121
527A **Woodward Ranch** 121.73 340 ⇓PKiKP **PKPdf** 23 02 54.2 -0.4
baz=121
SCI **San Clemente I** 121.78 356 ⇓PKiKP **PKPdf** 23 02 54.1 -0.2
baz=121
SIV **San Ignacio** 121.80 266 PKPpre PKPpre 23 02 45.2
SIV PKP **PKPdf** 23 02 54.2 -0.6
SIV **San Ignacio** 121.80 266 PKhKP PKPpre 23 02 45.2
comp=Z,0.7nm,0.4s,baz=62,slow=1.5,SNR=3.8
SIV PKP **PKPdf** 23 02 54.2 -0.6
comp=Z,0.6nm,0.7s,baz=317,slow=0.6,SNR=4.4
320A **Kipp Ranch, An** 121.91 345 ⇓PKiKP **PKiKP** 23 02 55.1 +0.1
baz=122
526A **Mary Lane Ranc** 121.95 341 ⇑PKiKP **PKiKP** 23 02 55.2 +0.1
baz=122
319A **Douglas** 122.04 346 ⇑PKiKP **PKiKP** 23 02 55.5 +0.3
baz=122
214A **Organ Pipe Nat** 122.14 350 ⇑PKiKP **PKiKP** 23 02 55.6 +0.2
baz=122

626A	Big Bend Ranch	122.44	341	⇑PKiKP	PKPdf	23 02 55.3	-0.5
	baz=122						
TXAR	Lajitas Array	122.50	340	PP	PP	23 04 31.9	+0.6
TXAR	Lajitas Array	122.50	340	PP	PP	23 04 31.9	+0.6
	comp=Z,1.3nm,1.1s,baz=20,slow=4.0,SNR=4.0						
TXAR	Lajitas Array	122.50	340	PP	PP	23 04 31.9	+0.6
LPAZ	La Paz	128.28	269	PKP	PKPdf	23 03 08.2	+0.3
LPAZ	La Paz	128.28	269	PKP	PKPdf	23 03 08.2	+0.3
	comp=Z,2.2nm,0.8s,baz=82,slow=4.7,SNR=6.5						
LPAZ	La Paz	128.28	269	PKIKP	PKPdf	23 03 08.2	+0.3
CFAA	Coronel Fontan	131.94	249	PKP	PKPdf	23 03 14.4	+0.7
CFAA	Coronel Fontan	131.94	249	PKP	PKPdf	23 03 14.4	+0.7
	comp=Z,0.2nm,0.5s,baz=240,slow=3.2,SNR=3.9						
CFAA	Coronel Fontan	131.94	249	PKIKP	PKPdf	23 03 14.4	+0.7

*IDC **07** 22:56:43.5±0.9, 7.°83N×82.°07W, h0km, mb4.1/15, mb1 4.4/15, mb1mx4.2/26, mbtmp4.1/15, MS4.0/3, Ms1 4.0/3, ms1mx3.4/39, Error ellipse: s-maj=40.2km s-min=15.8km az=48.0*

*ISCJB **07** 22:56:44.2±0.4, 7.°59N±0.°05×82.°31W±0.°04, h18km, mb4.4/44, MS4.0/3, Error ellipse: s-maj=8.1km s-min=4.7km az=22.2*

*CASC **07** 22:56:45.1±1.4, 7.°64N×82.°54W, h0km±25km, MD4.3, mb4.7(NEIC)*

*NEIC **07** 22:56:46.6±2.6, 7.°65N×82.°25W, h21km±18km, mb4.7/29, MW4.7(UPA), Error ellipse: s-maj=11.8km s-min=7.3km az=212.0*

*BJI **07** 22:56:51.1, 7.°50N×81.°90W, h82km*

ISC 07 22:56:45.9±0.6, **7.°74N**±0.°07×**82.°11W**±0.°06, **h18km, n247, σ1ˢ10**/243, **mb4.4**/44, **MS3.9**/3, **74C-71D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	Cerro Adams	1.39	311	⇑iP	Pn	22 57 07.4	-3.1
BUS	Buena Vista	2.44	318	⇑eP	Pn	22 57 23.8	-1.4
BUS				eS	Sn	22 57 55.8	+1.0
QCR	Quepos	2.64	310	⇑iP	Pn	22 57 25.0	-2.6
BCIP	Isla Barro Col	2.66	58	ePn	Pb	22 57 31.5	-1.5
BCIP				eSb	Sg	22 58 11.2	-0.1
LAJ	Bijagual	2.90	317	⇑eP	Pn	22 57 31.5	+0.1
SJS	Escuela Geolog	2.91	319	⇓eP	Pn	22 57 31.2	-0.3
CGA2	Cerro Gallo 2	3.25	314	eP	Pn	22 57 34.2	-1.9
FORC	Fortuna	3.71	317	eP	Pn	22 57 41.5	-0.8
JTS	JuntasAbangare	3.79	312	ePn	Pn	22 57 40.7	-2.7
AMAS	Alto Masis	4.03	315	i P	Pn	22 57 45.2	-1.8
PTEN	Parque Tenorio	4.10	316	i P	Pn	22 57 46.8	-1.0
PTEN				i S	Sb	22 58 48.2	+1.2
VCR	Vista de Mar	4.21	305	⇑eP	Pn	22 57 46.7	-2.7
LIM1	Limonal	4.28	314	i P	Pn	22 57 49.3	-0.9
NY14	Universidad de	4.45	311	i P	Pn	22 57 51.4	-1.1
LAPC	Finca la Perla	4.46	313	i P	Pn	22 57 51.5	-1.1
TGUH	Tegucigalpa,Un	8.07	322	ePn	Pn	22 58 49.7	+7.4
OTAV	Otavalo	8.29	154	ePn	Pn	22 58 45.1	-0.7
	6.6nm,0.6s						
MTDJ	Mount Denham	11.34	23	ePn	Pn	22 59 31.4	+4.3
GTBY	Guantanamo Bay	13.88	29	ePn	Pn	23 00 05.9	+4.0
SDDR	Presa de Saban	15.34	42	ePn	Pn	23 00 23.7	+2.0
	17nm,0.6s						
COW	Cow Castle Cre	25.55	3	eP	P	23 02 05.9	-7.9
732A	Laxson Ranch,	26.83	323	⇑P	P	23 02 24.4	-1.0
	baz=27,SNR=7.0						
632A	Uvalde	27.30	325	⇑P	P	23 02 28.6	-1.1
	baz=27						
LPAZ	La Paz	27.59	150	P	P	23 02 33.3	+0.3
LPAZ	La Paz	27.59	150	P	P	23 02 33.3	+0.3
	1.2nm,0.8s,baz=251,slow=4.1,SNR=5.2						
LPAZ				LR	LR	23 14 11.9	
	comp=Z,135nm,19.2s,baz=140,slow=38						
631A	Perdido Creek	27.69	323	⇑P	P	23 02 32.3	-0.8
	baz=28						
532A	Rocksprings	27.84	325	⇓P	P	23 02 33.5	-1.0
	baz=28,SNR=6.8						
JCT	Junction City	28.05	326	eP	P	23 02 35.1	-1.3
	12nm,1.4s						
JCT	Junction City	28.05	326	⇓P	P	23 02 35.3	-1.1
	baz=28						
531A	Rocksprings	28.23	325	⇓P	P	23 02 37.2	-0.8
	baz=28						
432A	Menard	28.35	327	⇑P	P	23 02 38.3	-0.8
	baz=28						
431A	Sonora	28.65	325	⇓P	P	23 02 41.3	-0.5
	baz=29						
530A	J-C Ranch, Com	28.68	324	⇑P	P	23 02 41.6	-0.4
	baz=29,SNR=6.2						
332A	Millersview	28.71	327	⇓P	P	23 02 41.4	-0.8
	baz=29						
331A	San Angelo	29.02	326	⇑P	P	23 02 44.4	-0.7
	baz=29						
232A	Coleman	29.06	328	⇑P	P	23 02 44.4	-0.9
	baz=29						
628A	Black Gap, Mar	29.15	321	⇑P	P	23 02 46.3	+0.1
	baz=29						
529A	Stev Forest Ra	29.19	322	⇓P	P	23 02 46.3	-0.2
	baz=29						
429A	Davenport Ranc	29.35	323	⇑P	P	23 02 47.4	-0.6
	baz=29,SNR=8.0						
627A	Terlingua Ranc	29.45	320	⇓P	P	23 02 49.2	+0.3
	baz=30,SNR=6.8						
330A	Mertzon	29.52	325	⇓P	P	23 02 48.8	-0.7
	baz=30						
TXAR	Lajitas Array	29.54	319	P	P	23 02 49.7	-0.1
TXAR	Lajitas Array	29.54	319	P	P	23 02 49.7	-0.1
	2.1nm,0.9s,baz=135,slow=9.0,SNR=20						
528A	Cox Ranch, San	29.56	322	⇓P	P	23 02 49.6	-0.3
	baz=30,SNR=6.8						
ABTX	Abilene, Hawle	29.64	329	⇑P	P	23 02 50.1	-0.4
	baz=30						
329A	Wagon Wheel Ra	30.03	325	⇓P	P	23 02 53.0	-1.0
	baz=30						
Z32A	Haskell	30.10	330	⇓P	P	23 02 54.2	-0.3
	baz=30						
328A	Wristen Ranch,	30.44	323	⇓P	P	23 02 57.2	-0.4
	baz=30						
129A	Stewart Farms,	30.82	326	⇑P	P	23 03 00.2	-0.8
	baz=31						
Z30A	Sanderson Ranc	30.93	328	⇑P	P	23 03 00.6	-1.3
	baz=31						
326A	Caldwell Ranch	31.10	322	⇑P	P	23 03 02.9	-0.6
	baz=31						
128A	Castleberry Fa	31.16	325	⇓P	P	23 03 03.6	-0.4
	baz=31						
Z29A	Hungry Hill Ra	31.21	327	⇑P	P	23 03 03.6	-0.8
	baz=31						
Y30A	Stafford Cattl	31.27	329	⇓P	P	23 03 04.4	-0.5
	baz=31						
425A	Indio Mountain	31.36	320	⇑P	P	23 03 05.6	-0.3
	baz=31						
SIV	San Ignacio	31.46	139	P	P	23 03 06.9	+0.2
SIV	San Ignacio	31.46	139	P	P	23 03 06.9	+0.2
	3.1nm,0.9s,baz=325,slow=10.0,SNR=7.7						
X30A	Coker Ranch, T	31.70	330	⇓P	P	23 03 08.5	-0.3
	baz=32						
226B	Tecolote Peak,	31.74	323	⇑P	P	23 03 09.4	+0.3
	baz=32						
325A	Bean Ranch, Si	31.75	321	⇓P	P	23 03 09.7	+0.4
	baz=32						
GDL2	Guadalupe Moun	31.95	323	eP	P	23 03 10.5	-0.5
Z27A	Tatum	32.08	325	⇓P	P	23 03 12.5	+0.3
	baz=32						
324A	Moseley Ranch,	32.12	320	⇑P	P	23 03 12.5	-0.1
	baz=32						
225A	Deer Hill, Car	32.16	322	⇓P	P	23 03 13.0	0.0
	baz=32						
MSTX	Muleshoe	32.33	327	⇑P	P	23 03 14.7	+0.4
	baz=32						
125A	Gardner Draw,	32.45	323	⇑P	P	23 03 15.7	+0.3
	baz=32,SNR=6.4						
Y27A	Causey	32.48	326	⇓P	P	23 03 15.2	-0.5
	baz=33						
Z26A	Caprock	32.49	324	⇑P	P	23 03 15.8	+0.1
	baz=33						
224A	Cornudas Mount	32.57	321	⇑P	P	23 03 16.4	-0.1
	baz=33						
Z25A	Roswell	32.92	324	⇑P	P	23 03 19.9	+0.3
	baz=33						
124A	Stringfield Ra	32.96	322	⇓P	P	23 03 20.2	+0.3
	baz=33,SNR=5.3						
X26A	CR and CF Fran	33.33	326	⇑P	P	23 03 23.2	+0.1
	baz=33						
Z24A	Sheeppen Canyo	33.34	323	⇑P	P	23 03 23.2	-0.1
	baz=33						
222A	Williams Famil	33.59	320	⇑P	P	23 03 26.0	+0.6
	baz=34						
X25A	Clemmons Ranch	33.79	325	⇓P	P	23 03 27.0	-0.1
	baz=34						
Y24A	Capitan	33.80	324	⇓P	P	23 03 27.4	+0.1
	baz=34						
Z23A	Rita Site, Whi	33.82	322	⇓P	P	23 03 28.0	+0.7
	baz=34						
221A	Mesquite Ranch	33.97	319	⇓P	P	23 03 29.8	+1.2
	baz=34						
320A	Kipp Ranch, An	34.04	317	⇑P	P	23 03 31.0	+1.7
	baz=34,SNR=6.9						
Y23A	Lovelace Mesa,	34.17	323	⇓P	P	23 03 30.8	+0.3
	baz=34						
Z22A	Elephant Butte	34.26	321	⇓P	P	23 03 31.9	+0.6
	baz=34,SNR=5.3						
121A	Cookes Peak, D	34.31	320	⇓P	P	23 03 33.2	+1.6
	baz=34,SNR=7.9						
220A	Playas Peak, P	34.39	318	⇓P	P	23 03 34.2	+1.8
	baz=34,SNR=8.3						
319A	Douglas	34.58	317	⇓P	P	23 03 35.6	+1.6
	baz=35,SNR=6.6						
U26A	Atchley Ranch,	34.69	328	⇓P	P	23 03 34.8	-0.1
	baz=35						
W24A	Lazy 6 Ranch,	34.71	325	⇑P	P	23 03 36.0	+0.9
	baz=35						
Y22A	Socorro	34.72	322	⇑P	P	23 03 36.3	+1.1
	baz=35,SNR=8.7						
V25A	Rancho No Teng	34.73	327	⇓P	P	23 03 35.3	0.0
	baz=35						
Z21A	St. Cloud Mine	34.74	321	⇑P	P	23 03 36.5	+1.0
	baz=35						
120A	U Bar Ranch, L	34.87	319	⇓P	P	23 03 38.2	+1.7
	baz=35						
W23A	Werner Place,	35.09	325	⇑P	P	23 03 38.6	+0.1
	baz=35						
ANMO	Albuquerque	35.12	324	eP	P	23 03 38.9	+0.3
	3.7nm,0.8s						
Z20A	Nine Sixteen R	35.20	320	⇑P	P	23 03 40.6	+1.3
	baz=35,SNR=7.0						
Y21A	Point of Rocks	35.21	322	⇓P	P	23 03 40.6	+1.1
	baz=35,SNR=8.1						
S26A	Kim	35.50	330	⇓P	P	23 03 41.9	0.0
	baz=36						
V23A	Ortiz Mt. (NFS	35.53	325	⇓P	P	23 03 42.6	+0.3
	baz=36						
X21A	Alamocita Cree	35.57	322	⇑P	P	23 03 43.7	+1.1
	baz=36,SNR=8.2						
Y20A	Horse Springs,	35.58	321	⇑P	P	23 03 43.8	+1.1
	baz=36						
T25A	Trinidad	35.60	329	⇓P	P	23 03 43.4	+0.6
	baz=36						
W21A	San Fidel	35.94	323	⇓P	P	23 03 46.0	+0.2
	baz=36						
U23A	El Rito	35.95	326	⇑P	P	23 03 46.5	+0.6
	baz=36						
TUC	Tucson	36.16	316	eP	P	23 03 48.5	+1.0
	1.8nm,1.1s						
S24A	Houchin Ranch,	36.40	328	⇓P	P	23 03 50.5	+0.7
	baz=36						
V21A	Milan	36.41	324	⇑P	P	23 03 50.6	+0.8
	baz=36						
W20A	Ramah	36.46	322	⇓P	P	23 03 51.3	+1.0
	baz=36,SNR=5.2						
V20A	Brimhall	36.89	323	⇓P	P	23 03 54.5	+0.6
	baz=37						
T21A	Navajo Lake	37.18	325	⇑P	P	23 03 57.1	+0.8
	baz=37						
W18A	Petrified Fore	37.22	321	⇓P	P	23 03 58.0	+1.4
	baz=37						
LONY	Lake Ozonia	37.32	9	eP	P	23 03 57.0	-0.2
	52nm,2.0s						
P25A	Willow Gulch B	37.32	331	⇓P	P	23 03 58.4	+0.9
	baz=37						
S22A	4UR Ranch, Cre	37.33	327	⇓P	P	23 03 58.5	+0.8
	baz=37						
214A	Organ Pipe Nat	37.37	314	⇑P	P	23 03 59.3	+1.5
	baz=37,SNR=8.3						
X16A	Lo Mia Camp, P	37.86	319	⇓P	P	23 04 03.5	+1.4
	baz=38						
MVCO	Mesa Verde	37.88	325	⇑P	P	23 04 03.1	+0.8
	baz=38						
P23A	Jefferson	38.03	330	⇑P	P	23 04 04.4	+0.8
	baz=38						
Q22A	Crested Butte,	38.20	328	⇓P	P	23 04 05.4	+0.4
	baz=38						
Z14A	Wintersburg	38.25	316	⇑P	P	23 04 06.1	+1.0
	baz=38						
SMCO	Snowmass	38.46	328	eP	P	23 04 06.7	-0.7
	2.7nm,0.9s						
WUAZ	Wupatki	38.50	320	eP	P	23 04 08.7	+1.3
	5.8nm,1.0s						
Y14A	Wickenburg	38.62	317	⇑P	P	23 04 09.4	+1.0
	baz=39,SNR=8.9						
PV04	Paradox Valley	38.94	326	eP	P	23 04 11.7	+0.6
PV10	Paradox Valley	39.00	326	eP	P	23 04 10.4	-1.3
GLA	Glamis	39.39	314	eP	P	23 04 16.6	+1.8
	9.6nm,0.8s						
GLA	Glamis	39.39	314	⇓P	P	23 04 16.4	+1.6
	baz=39,SNR=5.1						
P20A	De Beque	39.45	327	⇑P	P	23 04 15.9	+0.6
	baz=40						
Y12C	Blythe	39.56	315	⇓P	P	23 04 18.2	+2.1
	baz=40						
PDMCI	Parker Dam,Lak	39.60	316	⇑P	P	23 04 18.2	+1.8
	baz=40,SNR=9.7						
W13A	Hualapai Mount	39.88	318	⇓P	P	23 04 20.7	+1.6
	baz=40,SNR=8.2						
N21A	Black Mountain	39.92	329	⇓P	P	23 04 20.1	+0.8
	baz=40						
BC3	Big Chuckawall	40.16	315	⇓P	P	23 04 22.6	+1.3
	baz=40						
IRM	Iron Mountain	40.22	316	⇓P	P	23 04 23.5	+1.9
	baz=40						
K23A	Bowen Ranch, D	40.56	333	⇓P	P	23 04 24.8	+0.3
	baz=41						
LDFC	Landfair	40.70	317	eP	P	23 04 28.1	+2.4
	13nm,0.6s						
P17A	Butcher Ranch,	40.72	325	⇑P	P	23 04 26.5	+0.6
	baz=41						
BELC	Belle Mtn. Jos	40.72	315	⇑P	P	23 04 26.8	+0.9
	baz=41						
PFO	Pinyon Flat Ob	40.84	314	⇓P	P	23 04 28.0	+1.0
	baz=41						
GMRC	Granite Mounta	40.91	316	⇑P	P	23 04 28.3	+0.8
	baz=41,SNR=5.5						
MSU	Marysvale	40.91	323	eP	P	23 04 27.8	+0.3
MVU	Marysvale	40.92	323	eP	P	23 04 28.5	+0.9
	46nm,2.5s						
BDFB	Brasilia	40.99	125	LR	LR	23 21 57.5	
	comp=Z,142nm,18.7s,baz=328,slow=37						
CCUT	Cedar City	41.02	321	eP	P	23 04 29.6	+1.1
	11nm,1.8s						
ARUT	Antelope Range	41.21	321	eP	P	23 04 30.9	+1.0
HEC	Hector,Ludlow	41.40	316	⇑P	P	23 04 33.5	+2.1
	baz=41,SNR=6.7						
TUQ	Turquoise Moun	41.45	317	⇑P	P	23 04 33.5	+1.5
	baz=42,SNR=7.7						
J22A	Midwest	41.46	333	⇓P	P	23 04 32.5	+0.6
	baz=42						
MPU	Maple Canyon	41.59	325	eP	P	23 04 33.0	-0.1
	5.6nm,1.0s						
DAU	Daniels Canyon	41.65	326	eP	P	23 04 33.8	+0.1
SHOC	Shoshone	41.95	317	⇑P	P	23 04 37.1	+1.2
	baz=42						
GSC	Goldstone	41.98	316	eP	P	23 04 38.1	+1.9
	14nm,1.0s						
GSC	Goldstone	41.98	316	⇑P	P	23 04 37.9	+1.7
	baz=42,SNR=5.8						
M17A	Scullys Gap (B	42.07	328	⇓P	P	23 04 37.1	+0.1
	baz=42						
AGMN	Agassiz Nation	42.07	346	eP	P	23 04 35.0	-1.6
	12nm,1.6s						
DUG	Dugway	42.38	325	eP	P	23 04 40.0	+0.5
	2.5nm,0.9s						
DUG	Dugway	42.38	325	⇓P	P	23 04 40.0	+0.5
	baz=42						
PDAR	Pinedale Array	42.43	330	P	P	23 04 41.5	+1.5
PDAR	Pinedale Array	42.43	330	P	P	23 04 41.5	+1.5
	0.3nm,0.3s,baz=134,slow=4.3,SNR=4.5						
K18A	Toltan Ranch,	42.58	329	⇓P	P	23 04 41.1	0.0
	baz=43						
I20A	Worland	42.63	332	⇑P	P	23 04 41.8	+0.4
	baz=43						
FURC	Furnace Creek,	42.65	317	⇑P	P	23 04 43.3	+1.8
	baz=43,SNR=7.5						
LRMC	Laurel Mountai	42.68	316	⇓P	P	23 04 43.0	+1.0
	baz=43						
MPMC	Manual Prospec	42.86	316	⇓P	P	23 04 44.8	+1.3
	baz=43,SNR=7.4						
R11A	Troy Canyon, C	42.90	320	⇓P	P	23 04 45.4	+1.7
	baz=43,SNR=8.6						
J18A	Kendall Valley	42.99	330	⇑P	P	23 04 44.4	-0.1
	baz=43						
GRAC	Grapevine Rang	43.28	318	⇑P	P	23 04 48.5	+1.7
	baz=43						
CWC	Cottonwood Cre	43.46	316	⇓P	P	23 04 49.7	+1.4
	baz=44						
VES	Vestal, Richgr	43.84	315	⇓P	P	23 04 52.6	+1.4
	baz=44						
L14A	Malta	43.85	326	⇑P	P	23 04 51.6	+0.3
	baz=44						
ULM	Lac du Bonnet	43.91	347	P	P	23 04 49.5	-2.0
ULM	Lac du Bonnet	43.91	347	P	P	23 04 49.5	-2.0
	8.5nm,0.6s,baz=161,slow=8.2,SNR=8.8						
F20A	Billings	44.07	334	⇑P	P	23 04 53.4	+0.4
	baz=44						
ELK	Elko	44.15	323	P	P	23 04 54.5	+0.7
ELK	Elko	44.15	323	P	P	23 04 54.5	+0.7
	2.7nm,0.9s,baz=117,slow=7.1,SNR=6.2						
D22A	Cohagen	44.33	337	⇑P	P	23 04 56.3	+1.4
	baz=44						
YMR	Madison River	44.52	331	eP	P	23 04 54.5	-2.2
	61nm,1.5s						
E20A	Meyer Farm, Mu	44.62	334	⇑P	P	23 04 57.8	+0.5
	baz=45						
NVAR	Mina Array Bea	44.69	319	P	P	23 04 60.0	+1.7
NVAR	Mina Array Bea	44.69	319	P	P	23 04 60.0	+1.7
	8.8nm,0.7s,baz=127,slow=6.8,SNR=35						
B23A	Brockton	44.97	339	⇑P	P	23 05 01.3	+1.3
	baz=45						
BMN	Battle Mountai	45.16	322	eP	P	23 05 02.8	+1.0
	16nm,0.9s						
F17A	Fitzpatrick Pl	45.29	332	⇑P	P	23 05 03.0	+0.2
	baz=45						
H15A	Lima	45.31	329	⇑P	P	23 05 03.3	+0.3
	baz=45						
G16A	Moss Hill, Enn	45.34	331	⇑P	P	23 05 03.7	+0.5
	baz=45						
HLID	Hailey	45.52	327	eP	P	23 05 04.5	-0.2
	3.0nm,0.8s						
HLID	Hailey	45.52	327	⇑P	P	23 05 06.1	+1.5
	baz=46						
G15A	Dillon	45.63	330	⇓P	P	23 05 06.5	+1.0
	baz=46						
A22A	Carney Farms,	45.75	338	⇓P	P	23 05 06.9	+0.6
	baz=46						
E17A	Martinsdale	45.79	332	⇓P	P	23 05 07.3	+0.6
	baz=46						
I12A	Atlanta	46.06	327	⇑P	P	23 05 09.0	+0.1
	baz=46						
LRM	Limekiln Ridge	46.08	331	eP	P	23 05 09.1	0.0
WCN	Washoe City	46.12	319	eP	P	23 05 11.0	+1.5
	6.2nm,0.9s						
D17A	Six Diamond Ra	46.23	333	⇑P	P	23 05 10.3	+0.1
	baz=46						
H12A	Diamond D Ranc	46.41	328	⇓P	P	23 05 12.0	+0.3
	baz=46						
G13A	Cobalt	46.46	329	⇑P	P	23 05 12.0	0.0
	baz=46						
EGMT	Eagleton	46.49	335	eP	P	23 05 13.3	+1.1
	22nm,1.0s						
BEKR	Beckworth	46.81	319	eP	P	23 05 15.9	+1.0
	3.6nm,0.9s						
F13A	Darby	46.99	329	⇑P	P	23 05 16.9	+0.8
	baz=47						
G12A	Big Creek, Yel	47.05	328	⇓P	P	23 05 17.1	+0.4
	baz=47						
WVOR	Wild Horse Val	47.20	323	eP	P	23 05 18.6	+0.8
	20nm,1.1s						
F12A	Elk City	47.44	329	⇑P	P	23 05 19.6	0.0
	baz=48						
C15A	Salmond Ranch,	47.57	332	⇓P	P	23 05 20.9	+0.3
	baz=48						
MOD	Modoc	47.90	322	eP	P	23 05 23.6	+0.3
	11nm,1.3s						
D13A	Huson	47.96	331	⇓P	P	23 05 24.1	+0.5
	baz=48						
D12A	Red Ives Fores	48.37	330	⇓P	P	23 05 26.9	+0.1
	baz=48						
YBH	Yreka Blue Hor	49.32	320	P	P	23 05 32.7	-1.5
YBH	Yreka Blue Hor	49.32	320	P	P	23 05 32.7	-1.5
	4.0nm,0.8s,baz=59,slow=5.3,SNR=6.1						
C11A	Tepee Creek (N	49.36	330	⇑P	P	23 05 35.4	+1.1
	baz=49						
YKA	Yellowknife Ar	59.57	343	P	P	23 06 47.1	-1.1
YKA	Yellowknife Ar	59.57	343	P	P	23 06 47.1	-1.1
	1.3nm,0.8s,baz=134,slow=7.5,SNR=17						
RES	Resolute Bay	67.31	356	P	P	23 07 38.2	-1.0
RES	Resolute Bay	67.31	356	P	P	23 07 38.2	-1.0
	0.9nm,0.7s,baz=194,slow=8.0,SNR=5.0						
RES				LR	LR	23 35 17.5	
	comp=Z,306nm,21.3s,baz=199,slow=34						
INK	Inuvik	69.27	342	P	P	23 07 51.4	-0.2
INK	Inuvik	69.27	342	P	P	23 07 51.4	-0.2
	1.5nm,0.6s,baz=128,slow=4.8,SNR=9.8						
DOT	Dot Lake	70.88	335	eP	P	23 08 02.0	+0.4
	5.6nm,0.7s						
ILAR	Eielson Array	72.43	336	P	P	23 08 11.0	+0.1
ILAR	Eielson Array	72.43	336	P	P	23 08 11.0	+0.1
	2.3nm,0.6s,baz=107,slow=4.8,SNR=19						
EVO	Evora	72.78	52	eP	P	23 08 14.8	+1.3
	13nm,1.0s						
ESDC	Sonseca Array	75.98	51	P	P	23 08 33.5	+1.2
ESDC	Sonseca Array	75.98	51	P	P	23 08 33.5	+1.2
	0.9nm,0.5s,baz=274,slow=5.5,SNR=9.7						
SJPF	Ste Jean	78.11	48	eP	P	23 08 44.3	+0.2
	34nm,1.3s						
SJPF	Ste Jean	78.11	48	eP	P	23 08 44.3	+0.2
	34nm,1.3s						
GRR	Gorron	78.45	42	eP	P	23 08 47.4	+1.6
	29nm,1.1s						
GRR	Gorron	78.45	42	eP	P	23 08 47.4	+1.6
	29nm,1.1s						
LDF	La Druitiere	78.94	42	eP	P	23 08 50.1	+1.6
	41nm,1.4s						
LDF	La Druitiere	78.94	42	eP	P	23 08 50.1	+1.6
	41nm,1.4s						
EPF	Esparros	79.25	48	eP	P	23 08 52.3	+1.9
	18nm,1.2s						
EPF	Esparros	79.25	48	eP	P	23 08 52.3	+1.9
	18nm,1.2s						
TCF	Toulx Ste Croi	80.54	44	eP	P	23 08 58.4	+1.1
TCF	Toulx Ste Croi	80.54	44	eP	P	23 08 58.4	+1.1
MTLF	Montolieu	80.62	47	eP	P	23 08 59.2	+1.4
MTLF	Montolieu	80.62	47	eP	P	23 08 59.2	+1.4
SSF	Saint Saulge	81.41	44	eP	P	23 09 03.4	+1.5
SSF	Saint Saulge	81.41	44	eP	P	23 09 03.4	+1.5
LASF	Ste Croix	81.78	47	eP	P	23 09 05.2	+1.3
LASF	Ste Croix	81.78	47	eP	P	23 09 05.2	+1.3
TORD	Torodi Ar. Bea	82.27	78	P	P	23 09 07.9	+0.9
TORD	Torodi Ar. Bea	82.27	78	P	P	23 09 07.9	+0.9
	0.6nm,0.7s,baz=257,slow=3.7,SNR=3.9						
VIVF	Saint-Julien-l	82.32	46	eP	P	23 09 08.8	+2.0
	18nm,1.1s						
VIVF	Saint-Julien-l	82.32	46	eP	P	23 09 08.8	+2.0
	18nm,1.1s						
MBDF	Montbardon	83.82	46	eP	P	23 09 14.7	0.0
MBDF	Montbardon	83.82	46	eP	P	23 09 14.7	0.0
GERES	GERESS Array B	88.04	41	P	P	23 09 36.0	+0.6
GERES	GERESS Array B	88.04	41	P	P	23 09 36.0	+0.6
	0.2nm,0.4s,baz=62,slow=9.3,SNR=4.0						
WMQ	Urumqi	127.86	9	ePKP	PKPdf	23 15 48.2	-2.8
KSH	Kashi	128.78	22	eSS	SS	23 35 33.7	+19
KSH				AMB	AMB		
	comp=Z,200nm,4.9s						
KSH				LR	LR		
	comp=N,140nm,6.5s						
KSH				LR	LR		
	comp=E,140nm,9.8s						
KSH				LR	LR		
	comp=Z,210nm,7.7s						
HHC	Hu-ho-hao-te	130.04	346	ePKP	PKPdf	23 15 50.3	-5.0
HHC				sPKP		23 16 26.7	
HHC				PP	PP	23 18 06.7	+0.6
HHC				PKS	PKSdf	23 19 25.9	-6.0
HHC				SKS	SKSdf	23 22 50.2	-16
WRA	Warramunga Arr	142.69	247	PKP	PKPdf	23 16 21.3	+2.2
WRA	Warramunga Arr	142.69	247	PKP	PKPdf	23 16 21.3	+2.2
	comp=Z,0.9nm,0.7s,baz=101,slow=2.5,SNR=4.4						

*IDC **07** 22:59:04.9±7.0, 36.°73N×71.°12E, h175km±59km, mb3.2/1, mb1 3.2/5, mb1mx2.9/30, mbtmp3.2/5, MS3.6/1, Ms1 3.6/1, ms1mx3.0/27, Error ellipse: s-maj=95.5km s-min=42.4km*

az=139.0

ISC 07 22:59:05.7±3.9, 36°.8N±0°.2×71°.3E±0°.2, h106km, n13, σ2s15/14, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.67	18	P	Pn	23 00 29.8	+1.9
	SNR=54						
UCH	Uchtor	6.00	23	P	Sn	23 01 40.3	+0.5
	SNR=6.4						
EKS2	Erkin-Say	6.19	17	P	Pn	23 00 36.8	+2.1
	SNR=8.3						
AAK	Ala-Archa	6.36	22	P	Pn	23 00 39.3	+2.3
	SNR=17						
AAK	Ala-Archa	6.36	22	P	Pn	23 00 38.8	+1.8
	5.3nm,0.3s,baz=158,slow=4.7,SNR=78						
AAK				S	Sn	23 01 49.9	+1.7
	1.1nm,0.3s,baz=111,slow=23,SNR=16						
AAK				LR	LR	23 03 21.5	
	comp=Z,467nm,18.3s,baz=353,slow=40						
KK31	Karatay Array	6.37	355	⇑Pn	Pn	23 00 38.2	+1.2
	1.4nm,0.3s,baz=174,slow=12,SNR=87						
KK31				⇓Sn	Sn	23 01 47.0	-1.2
	6.4nm,0.5s,baz=178,slow=22,SNR=7.4						
KBK	Karagaybulak	6.52	24	P	Pn	23 00 41.5	+2.3
	SNR=12						
TKM2	Tokmak 2	6.98	27	⇑Pn	Pn	23 00 46.9	+1.4
	5.5nm,0.6s						
TKM2				⇓Sn	Sn	23 02 00.9	-2.5
	2.0nm,0.6s						
TKM2	Tokmak 2	6.98	27	P	Pn	23 00 47.4	+1.9
	SNR=7.6						
MKAR	Makanchi Array	12.93	36	P	Pn	23 02 03.6	-1.8
	0.3nm,0.3s,baz=214,slow=12,SNR=7.4						
BVAR	Borovoye Array	16.28	358	P	Pn	23 02 45.1	-2.9
	0.2nm,0.3s,baz=163,slow=11,SNR=4.2						
ZALV	Zalesovo Beam	19.57	24	P	P	23 03 20.4	-4.7
	0.6nm,0.3s,baz=220,slow=11,SNR=9.3						
TORD	Torodi Ar. Bea	65.98	269	P	P	23 09 31.4	-10
	0.2nm,0.5s,baz=50,slow=5.0,SNR=5.6						

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*AUST **07** 23:06:09.9±99.0, 4°.60S×134°.42E, h0km±3km, Error ellipse: s-maj=4.1km s-min=1.1km az=252.0*
*IDC **07** 23:06:14.6±3.1, 4°.87S×133°.53E, h0km, mb3.7/1, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, ML3.5/3, Error ellipse: s-maj=129.3km s-min=30.3km az=81.0*
ISC 07 23:06:15.2±1.7, 4°.80S±0°.08×134°.2E±0°.2, h28km, n10, σ2s70/13, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.70	314	P	Pn	23 06 54.6	-2.1
	baz=2.7,SNR=19						
SWI	Sorong	4.89	323	P	Pn	23 07 25.2	-1.7
	baz=4.9,SNR=3.2						
MTN	Manton Dam	8.54	201	P	Pn	23 08 19.2	+2.2
	baz=8.9,SNR=3.3						
MTN				S	Sn	23 09 53.5	+0.9
	baz=8.9,SNR=5.3						
LUWI	Luwuk	12.00	288	P	Pn	23 09 04.3	-0.2
	baz=12,SNR=4.5						
KNRA	Kununurra	12.05	206	P	Pn	23 09 06.8	+1.6
	baz=12,SNR=4.0						
WRA	Warramunga Arr	15.05	179	Pn	Pn	23 09 46.6	+0.6
	0.2nm,0.3s,baz=353,slow=14,SNR=2.7						
WRA				Sn	Sn	23 12 26.4	-5.5
	0.2nm,0.3s,baz=359,slow=24,SNR=2.8						
FITZ	Fitzroy Crossi	15.64	212	Pn	Pn	23 09 51.6	-2.2
	0.2nm,0.3s,baz=22,slow=13,SNR=11						
FITZ				Sn	Sn	23 12 35.1	-11
	0.1nm,0.3s,baz=174,slow=18,SNR=2.8						
FITZ	Fitzroy Crossi	15.64	212	P	P	23 09 57.6	-0.1
	baz=16,SNR=3.4						
ASAR	Alice Springs	18.75	181	P	Pn	23 10 35.0	+2.2
	0.3nm,0.3s,baz=6.7,slow=12,SNR=16						
ASAR				S	Sn	23 13 58.2	-3.7
	0.0nm,0.3s,baz=353,slow=28,SNR=2.9						
MKAR	Makanchi Array	68.78	325	P	P	23 17 18.5	+1.8
	0.7nm,0.8s,baz=131,slow=5.5,SNR=4.6						

IDC 07 23:11:08.8±1.8, 39°.44N×110°.65E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.3/27, mbtmp3.4/5, ML3.0/1, MS4.3/2, Ms1 4.3/2, ms1mx3.0/31, Error ellipse: s-maj=40.7km s-min=24.7km az=90.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	8.94	341	Pn	Pn	23 13 19.3	0.0
	0.2nm,0.3s,baz=165,slow=13,SNR=9.9						
SONM				Sn	Sn	23 14 55.6	-5.2
	0.2nm,0.3s,baz=156,slow=22,SNR=2.2						
SONM				Lg	Lg	23 15 53.1	
	0.2nm,0.3s,baz=148,slow=29,SNR=4.0						
MKAR	Makanchi Array	21.88	299	P	P	23 16 04.0	+0.7
	0.8nm,0.8s,baz=109,slow=8.3,SNR=5.3						
CMAR	Chiang Mai Arr	23.24	209	P	P	23 16 17.8	0.0
	1.0nm,0.3s,baz=14,slow=8.7,SNR=6.5						
KURBB	Kurchatov Arra	25.11	307	P	P	23 16 34.5	-0.6
	1.1nm,0.9s,baz=110,slow=9.5,SNR=3.8						
MMAI	Mount Meron Ar	59.41	289	LR	LR	23 53 25.3	
	comp=Z,237nm,19.3s,baz=215,slow=43						
VRAC	Vranov	63.73	313	LR	LR	23 53 50.4	
	comp=Z,180nm,18.7s,baz=168,slow=40						
YKA	Yellowknife Ar	72.10	20	P	P	23 22 34.7	+0.1
	0.3nm,0.8s,baz=325,slow=5.9,SNR=4.9						

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*CSEM **07** 23:32:49.2, 46°.02N×15°.41E, h0km, ML0.4, After LJU*
LJU 07 23:32:49.2, 46°.02N×15°.41E, h10km, ML0.4, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESS	Cesta pri Krsk	0.06	141	*i* Pg	Pg	23 32 51.5	+0.1
CESS				*i* Sg	Sg	23 32 52.9	-0.1
CESS							
	comp=Z,22nm,0.1s						
LEGS	Legarje	0.10	221	⇓*i*Pg	Pg	23 32 52.1	+0.3
LEGS				*i* Sg	Sg	23 32 53.9	+0.2
DOBS	Dobrina	0.14	19	*i* Pg	Pg	23 32 52.3	-0.1
DOBS				*i* Sg	Sg	23 32 54.5	-0.2
DOBS							
	comp=Z,6.0nm,0.1s						
GOLS	Golise	0.15	94	⇑*i*Pg	Pg	23 32 52.8	+0.1
GOLS				*i* Sg	Sg	23 32 55.5	+0.4
GOLS							
	comp=Z,2.0nm,0.1s						
CRES	Cresnjev	0.20	170	*i* Pg	Pg	23 32 53.5	+0.1
GCIS	Gornji Cirnik	0.22	135	*i* Sg	Sg	23 32 56.9	+0.1
GCIS							
	comp=Z,2.0nm,0.1s						
PDKS	Podkum	0.29	278	*i* Pg	Pg	23 32 55.5	+0.3
PDKS				*i* Sg	Sg	23 32 59.5	+0.5
PDKS							
	comp=Z,1.0nm,0.1s						
VISS	Visnje	0.45	241	*i* Sg	Sg	23 33 03.9	-0.2

IDC 07 23:36:27.9±10.0, 14°.48S×167°.16E, h180km±95km, mb3.3/2, mb1 3.4/3, mb1mx3.1/20, mbtmp3.3/3, Error ellipse: s-maj=92.6km s-min=45.6km az=158.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.58	185	P	Pn	23 38 16.3	+0.6
	0.1nm,0.3s,baz=323,slow=20,SNR=3.2						
DZM				S	Sn	23 39 40.4	-0.6
	0.2nm,0.3s,baz=0.0,slow=20,SNR=2.7						
STKA	Stephens Creek	29.07	229	P	P	23 42 12.2	+0.6
	1.0nm,0.4s,baz=51,slow=11,SNR=6.8						
ASAR	Alice Springs	32.66	249	P	P	23 42 42.6	-0.7
	0.3nm,0.4s,baz=80,slow=9.2,SNR=5.0						
ARCES	ARCESS Array B	119.99	345	PKP	PKPdf	23 54 56.1	-0.4
	3.2nm,1.1s,baz=33,slow=2.2,SNR=7.6						

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*NEIC **07** 23:39:04.7±0.6, 16°.03S×73°.65W, mb4.4/1, Error ellipse: s-maj=17.0km s-min=12.6km az=223.0*
NEIC Felt [II] at Chala and Ocona.
*IDC **07** 23:39:05.2±0.6, 16°.03S×73°.54W, h55km±4km, mb3.8/7, mb1 4.0/10, mb1mx3.8/21, mbtmp3.8/10, MS3.5/4, Ms1 3.5/4, ms1mx3.1/33, Error ellipse: s-maj=24.8km s-min=17.3km az=50.0*
ISC 07 23:39:04.5±0.5, 16°.41S±0°.07×73°.92W±0°.08, h52km±4km, h52km:pP-P, n42, σ1s50/58, mb4.0/7, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	5.23	327	*e*Pn	Pn	23 40 17.8	-2.5
	184nm,0.6s						
NNA	Nana	5.23	327	P	Pn	23 40 20.9	+0.6
	36nm,0.3s,baz=144,slow=9.6,SNR=30						
NNA				S	Sn	23 41 29.0	+10
	106nm,0.3s,baz=237,slow=18,SNR=18						
LPAZ	La Paz	5.56	90	*e*Pn	Pn	23 40 26.4	+1.1
	44nm,0.7s						
LPAZ				S	Sn	23 41 29.7	+1.5
LPAZ	La Paz	5.56	90	P	Pn	23 40 26.8	+1.5
	9.1nm,0.3s,baz=271,slow=9.9,SNR=145						
LPAZ				S	Sn	23 41 29.7	+1.5
	1.1nm,0.3s,baz=210,slow=22,SNR=4.7						
LPAZ				LR	LR	23 42 37.5	
	comp=Z,197nm,20.8s,baz=238,slow=41						
LVC	Limon Verde	7.77	143	*e*Pn	Pn	23 40 56.9	+1.6
	31nm,0.6s						
LVC				*e*Sn	Sn	23 42 19.5	-2.5
ATAH	Atahualpa	10.21	334	P	Pn	23 41 34.0	+5.3
ATAH				S	Sn	23 43 25.9	+3.9
ATAH	Atahualpa	10.21	334	P	Pn	23 41 34.0	+5.3
	2.6nm,0.3s,baz=155,slow=8.3,SNR=11						
ATAH				S	Sn	23 43 25.9	+3.9
	0.9nm,0.3s,baz=105,slow=16,SNR=2.3						
SIV	San Ignacio	12.35	90	P	Pn	23 41 52.2	-5.6
SIV	San Ignacio	12.35	90	P	Pn	23 41 52.2	-5.6
	0.9nm,0.3s,baz=285,slow=9.1,SNR=17						
SIV				LR	LR	23 47 24.7	
	comp=Z,123nm,20.9s,slow=42						
SAML	Samuel	12.83	56	*e*Pn	Pn	23 41 55.7	-8.6
	13nm,0.6s						
CFAA	Coronel Fontan	15.98	162	P	P	23 42 49.6	+0.9
CFAA	Coronel Fontan	15.98	162	P	P	23 42 49.6	+0.9
	0.1nm,0.3s,baz=336,slow=12,SNR=16						
BDFB	Brasilia	24.91	92	LR	LR	23 54 41.0	
	comp=Z,66nm,20.5s,baz=10,slow=38						
TXAR	Lajitas Array	53.79	328	P	P	23 48 21.1	-1.0
TXAR				pP	pP	23 48 35.8	-0.5
TXAR				sP	sP	23 48 42.2	-0.1
TXAR	Lajitas Array	53.79	328	P	P	23 48 21.1	-1.0
	0.6nm,0.5s,baz=155,slow=8.6,SNR=13						
TXAR				pP	pP	23 48 35.8	-0.5
	0.7nm,0.6s,baz=148,slow=7.8,SNR=6.7						
TXAR				sP	sP	23 48 42.2	-0.1
	0.7nm,0.6s,baz=163,slow=8.9,SNR=3.7						
QSPA	South Pole Qui	73.75	180	*e*P	P	23 50 33.4	+0.4
	6.0nm,1.2s						
QSPA	South Pole Qui	73.75	180	P	P	23 50 35.9	+2.9
	3.2nm,0.7s,baz=132,slow=2.8,SNR=10						
TORD	Torodi Ar. Bea	80.28	73	P	P	23 51 08.1	-2.3
TORD				pP	pP	23 51 23.5	-1.9
TORD	Torodi Ar. Bea	80.28	73	P	P	23 51 08.1	-2.3
	3.5nm,0.6s,baz=264,slow=5.3,SNR=46						
TORD				pP	pP	23 51 23.5	-1.9
	8.3nm,0.9s,baz=253,slow=5.4,SNR=20						
VNDA	Vanda	80.99	190	P	P	23 51 15.9	+2.8
VNDA	Vanda	80.99	190	P	P	23 51 15.9	+2.8
	1.1nm,0.8s,baz=122,slow=8.5,SNR=4.8						
YKA	Yellowknife Ar	84.88	342	P	P	23 51 31.6	-1.6
YKA	Yellowknife Ar	84.88	342	P	P	23 51 31.6	-1.6
	1.3nm,0.7s,baz=136,slow=4.8,SNR=37						
ESDC	Sonseca Array	85.68	47	P	P	23 51 36.8	-1.1
ESDC				pP	pP	23 51 52.1	-0.9
ESDC	Sonseca Array	85.68	47	P	P	23 51 36.8	-1.1
	0.2nm,0.3s,baz=256,slow=5.6,SNR=4.4						
ESDC				pP	pP	23 51 52.1	-0.9
	2.1nm,0.7s,baz=254,slow=5.3,SNR=4.1						
ILAR	Eielson Array	97.66	336	P	P	23 52 32.2	-0.9
ILAR	Eielson Array	97.66	336	P	P	23 52 32.2	-0.9
	0.3nm,0.7s,baz=138,slow=1.6,SNR=4.9						
ILAR				LR	LR	00 44 50.0	
	comp=Z,140nm,19.0s,baz=11,slow=40						
ASAR	Alice Springs	131.77	215	PKP	PKPdf	23 58 12.7	0.0
ASAR	Alice Springs	131.77	215	PKP	PKPdf	23 58 12.7	0.0
	0.8nm,0.6s,baz=131,slow=1.8,SNR=7.5						
WRA	Warramunga Arr	134.44	219	PKP	PKPdf	23 58 17.7	0.0
WRA	Warramunga Arr	134.44	219	PKP	PKPdf	23 58 17.7	0.0
	2.0nm,0.7s,baz=156,slow=1.3,SNR=7.7						
ZALV	Zalesovo Beam	139.04	19	PKP	PKPdf	23 58 25.1	0.0
ZALV				pPKP	pPKPdf	23 58 41.7	+0.8
ZALV	Zalesovo Beam	139.04	19	PKP	PKPdf	23 58 25.1	0.0
	0.5nm,0.3s,baz=336,slow=3.2,SNR=3.6						
ZALV				pPKP	pPKPdf	23 58 41.7	+0.8
	0.6nm,0.3s,baz=302,slow=2.8,SNR=2.9						
KURK	Kurchatov	139.30	27	PKP	PKPdf	23 58 26.4	+0.7
KURK				pPKP	pPKPdf	23 58 43.1	+1.6
KURBB	Kurchatov Arra	139.33	27	PKP	PKPdf	23 58 26.4	+0.6
	0.3nm,0.5s,baz=304,slow=2.2,SNR=3.4						
KURBB				pPKP	pPKPdf	23 58 43.1	+1.6
	0.8nm,0.9s,baz=312,slow=2.8,SNR=3.1						
USRK	Ussuriysk Arra	144.68	327	PKP	PKPab	23 58 33.9	-0.3
	2.1nm,0.8s,baz=48,slow=5.8,SNR=4.5						
USRK				pPKP	pPKPdf	23 58 50.2	-1.1
	2.4nm,0.7s,baz=18,slow=2.8,SNR=3.8						
MJAR	Matsushiro Arr	145.19	311	PKPbc	PKPbc	23 58 36.2	-0.2
MJAR	Matsushiro Arr	145.19	311	PKPbc	PKPbc	23 58 36.2	-0.2
	2.4nm,0.8s,baz=116,slow=1.2,SNR=5.3						
SONM	Songino Array	148.66	360	PKPbc	PKPbc	23 58 45.5	-0.6
SONM				pPKPbc	pPKPbc	23 59 01.5	-0.2
SONM	Songino Array	148.66	360	PKPbc	PKPbc	23 58 45.5	-0.6
	0.8nm,0.8s,baz=0.0,slow=3.3,SNR=4.4						
SONM				pPKPbc	pPKPbc	23 59 01.5	-0.2
	2.1nm,0.9s,baz=163,slow=1.5,SNR=4.5						
KSRS	Korea Array	151.52	322	PKPbc	PKPbc	23 58 53.7	+0.6
	2.3nm,0.7s,baz=9.3,slow=1.4,SNR=8.3						
KSRS				pPKPbc	pPKPbc	23 59 09.6	+0.8
	2.0nm,0.8s,baz=354,slow=2.0,SNR=3.2						
KSAR	Wonju Array Be	151.55	322	PKPbc	PKPbc	23 58 53.7	+0.5
KSAR				pPKPbc	pPKPbc	23 59 09.6	+0.7

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*IDC **07** 23:40:56.1±3.1, 9°.56S×112°.67E, h0km, mb4.0/4, mb1 4.0/5, mb1mx3.7/22, mbtmp4.0/5, ML3.6/1, Error ellipse: s-maj=169.0km s-min=24.0km az=51.0*
*ISCJB **07** 23:41:01.0±0.8, 9°.68S±0°.07×112°.85E±0°.06, h33km, mb4.0/4, Error ellipse: s-maj=10.8km s-min=7.2km az=36.0*
*DJA **07** 23:41:04.7±2.2, 9°S±14°×11°3E±°, h21km±17km, M3.8/7, MLv3.8/7*
ISC 07 23:41:01.9±1.0, 9°.64S±0°.09×112°.84E±0°.06, h35km, n14, σ1s36/17, mb4.2/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.48	24	P	Pn	23 41 25.4	-0.7
GMJI				S	Sn	23 41 43.8	-0.5
KRKI	Karangkates	1.52	345	P	Pn	23 41 27.3	+0.7
PWJI	Pagerwojo	1.91	327	P	Pn	23 41 32.4	+0.5
PWJI				S	Sn	23 41 55.1	+0.5
BLJI	Banyuglugur	2.03	22	P	Pn	23 41 35.5	+1.9
SJI	Sawahan	2.17	331	P	Pn	23 41 36.7	+1.1
PCJI	Pacitan	2.18	311	P	Pn	23 41 36.3	+0.6
PCJI				S	Sn	23 42 01.9	+0.5
WOJI	Wonogiri, Jawa	2.60	313	P	Pn	23 41 42.8	+1.3
KMMI	Kalianget	2.81	24	P	Pn	23 41 47.1	+2.8
UGM	Wanagama	2.86	307	P	Pn	23 41 46.7	+1.6
FITZ	Fitzroy Crossi	15.00	125	Pn	Pn	23 44 31.3	-0.1
	0.2nm,0.3s,baz=319,slow=11,SNR=5.6						
FITZ				Sn	Sn	23 47 05.9	-11
	0.1nm,0.3s,baz=308,slow=17,SNR=3.1						
ASAR	Alice Springs	24.48	127	P	P	23 46 19.1	+1.2
	1.0nm,0.7s,baz=304,slow=8.8,SNR=10.0						
SONM	Songino Array	57.51	355	P	P	23 50 46.7	-1.0
	1.2nm,0.5s,baz=165,slow=7.8,SNR=5.6						
MKAR	Makanchi Array	62.45	337	P	P	23 51 20.4	-1.1
	1.3nm,0.4s,baz=148,slow=7.4,SNR=31						
ZALV	Zalesovo Beam	67.64	343	P	P	23 51 53.4	-1.6
	1.0nm,0.4s,baz=157,slow=5.0,SNR=6.5						

MEX 07 23:42:50.7±0.4, 15°.81N×98°.21W, h15km±13km, MD3.9, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.58	8	*e*P	Pg	23 42 57.3	-5.0
PNIG				*i* S	Sg	23 43 04.2	-5.9
VHO	Vista Hermosa	1.89	48	*e*P	Pn	23 43 19.2	-3.5
VHO				*i* S	Sn	23 43 42.1	-4.5
ACX	Acapulco	1.90	304	*i* P	Pn	23 43 20.1	-2.5
ACX				*i* S	Sn	23 43 43.1	-3.3
UTMO	Huajuapan	2.05	11	*e*P	Pn	23 43 21.4	-3.6
UTMO				*i* S	Sn	23 43 46.3	-4.1
CAIG	El Cayaco	2.33	302	*i* P	Pn	23 43 25.5	-3.0
CAIG				*i* S	Sn	23 43 53.0	-3.8
YAIG	Yautepec	3.14	345	*e*P	Pn	23 43 37.7	-2.2
YAIG				*i* S	Sn	23 44 13.4	-4.0
ARIG	Puente Sto Nin	3.20	321	*i* P	Pn	23 43 37.1	-3.4
ARIG				*i* S	Sn	23 44 13.6	-4.8
PPM	Popocatepetl	3.26	353	*i* P	Pn	23 43 40.0	-2.1
PPM				*i* S	Sn	23 44 16.7	-4.4
ZIIG	Zihuatanejo	3.59	300	*i* P	Pn	23 43 42.5	-3.5
ZIIG				*i* S	Sn	23 44 23.7	-4.4

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*ATH **07** 23:46:40.6, 39°.33N×28°.08E, h12km±3km, ML4.0*
*ISK **07** 23:46:42.9, 39°.29N×27°.93E, h6km, ML4.1*
*IDC **07** 23:46:42.7±1.0, 39°.26N×27°.90E, h0km, mb3.6/6, mb1 3.8/13, mb1mx3.7/32, mbtmp3.7/13, ML3.5/6, MS3.9/2, Ms1 3.8/2, ms1mx2.9/51, Error ellipse: s-maj=17.2km s-min=12.3km az=50.0*
*DDA **07** 23:46:42.7, 39°.29N×27°.93E, h28km, ML4.1*
*ISCJB **07** 23:46:43.1±0.3, 39°.30N±0°.01×27°.94E±0°.01, h7km±2km, mb3.5/6, MS4.3/1, Error ellipse: s-maj=2.0km s-min=1.7km az=137.9*
*CSEM **07** 23:46:43.4±0.1, 39°.29N×27°.94E, h2km, ML4.1, Error ellipse: s-maj=1.7km s-min=1.5km az=39.0*
*THE **07** 23:46:43.9, 39°.29N×27°.98E, h3km±2km, ML4.3/5, Error ellipse: s-maj=2.3km s-min=1.2km az=85.0*
*BEO **07** 23:46:43.9±1.1, 39°.68N×28°.42E, h0km±5km, ML4.2/9*
ISC 07 23:46:43.5±1.0, 39°.28N±0°.02×27°.94E±0°.01, h5km±7km, n402, σ0s94/463, mb3.5/6, 25C-19D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.36	353	*e*PG	Pg	23 46 50.6	+0.1
BALB				*e*SG	Sg	23 46 56.1	+0.9
BALB	Balikesir	0.36	353	*e*Pg	Pg	23 46 50.6	+0.1
BALB				*e*Sg	Sg	23 46 56.1	+0.9
AKHS	Akhisar	0.41	194	*i* P	Pg	23 46 51.7	+0.2
AKHS				*i* S	Sb	23 46 58.8	-1.2
AKS	Akhisar	0.41	194	*e*PG	Pg	23 46 51.8	+0.2
AKS				*e*SG	Sb	23 46 58.8	-1.2
AKS	Akhisar	0.41	194	*e*Pg	Pg	23 46 51.8	+0.2
AKS				*e*Sg	Sb	23 46 58.8	-1.2
BALY	Balya	0.52	332	*i* P	Pg	23 46 53.3	-0.3
BALY				*i* S	Sg	23 47 00.8	+0.5
BALY	Balya	0.52	332	*i* P	Pg	23 46 53.3	-0.3
BALY				*i* S	Sg	23 47 00.8	+0.5
DURS	Dursunbey	0.52	52	*i* P	Pg	23 46 53.3	-0.3
DURS	Dursunbey	0.52	52	*i* P	Pg	23 46 53.3	-0.3
DST	Dursunbey	0.62	58	*e*PG	Pg	23 46 55.1	-0.3
DST	Dursunbey	0.62	58	*e*Pg	Pg	23 46 55.1	-0.3
DEMI	Demirci	0.65	111	*i* P	Pg	23 46 56.2	+0.2
DEMI				*i* S	Sb	23 47 05.9	-0.9
DEMI	Demirci	0.65	111	*i* P	Pg	23 46 56.2	+0.2
DEMI				*i* S	Sb	23 47 05.9	-0.9
GONE	Gonen-Balikesi	0.79	346	*e*PG	Pg	23 46 58.1	-0.6
GONE	Gonen-Balikesi	0.79	346	*e*Pg	Pg	23 46 58.1	-0.6
MANT	Manisa	0.93	148	*i* P	Pg	23 47 01.1	-0.2
MANT				*i* S	Sg	23 47 13.3	0.0
KULA	Kula-Manisa	0.95	144	*e*PG	Pg	23 47 01.7	-0.1
KULA	Kula-Manisa	0.95	144	*e*Pg	Pg	23 47 01.7	-0.1
AYVA	Ayvalik	0.97	272	*i* P	Pg	23 47 01.7	-0.5
AYVA				*i* S	Sb	23 47 15.9	-0.1
AYVA	Ayvalik	0.97	272	*i* P	Pg	23 47 01.7	-0.5
AYVA				*i* S	Sb	23 47 15.9	-0.1
IZM	Izmir	1.03	211	*e*PG	Pg	23 47 02.8	-0.5
IZM	Izmir	1.03	211	*e*Pg	Pg	23 47 02.8	-0.5
ORLT	Orhaneli	1.06	44	*e*PG	Pg	23 47 03.3	-0.6
ORLT	Orhaneli	1.06	44	*e*Pg	Pg	23 47 03.3	-0.6
EDC	Edincik	1.06	357	*e*PG	Pg	23 47 03.5	-0.5
EDC	Edincik	1.06	357	*e*Pg	Pg	23 47 03.5	-0.5
BNT	Bandirma	1.07	359	*e*PG	Pg	23 47 03.4	-0.7
BNT	Bandirma	1.07	359	*e*Pg	Pg	23 47 03.4	-0.7
BLCB	Balcova	1.14	218	*e*PN	Pg	23 47 05.1	-0.2
BLCB	Balcova	1.14	218	*e*Pn	Pg	23 47 05.1	-0.2
TVSB	Tavsanli	1.19	81	*e*PN	Pg	23 47 06.2	-0.2
TVSB	Tavsanli	1.19	81	*e*Pn	Pg	23 47 06.2	-0.2
GDZ	Gediz	1.21	99	*i* P	Pg	23 47 06.5	-0.3
GDZ				*i* S	Sb	23 47 23.4	+0.3
KRBG	Karabiga-Canak	1.21	336	*e*PN	Pg	23 47 05.7	-1.1
KRBG	Karabiga-Canak	1.21	336	*e*Pn	Pg	23 47 05.7	-1.1
ULDT	Uludag	1.26	47	*i* P	Pg	23 47 06.5	-1.2
ULDT				*i* S	Sg	23 47 22.0	-2.1
ULDT	Uludag	1.26	47	*i* P	Pg	23 47 06.5	-1.2
ULDT				*i* S	Sg	23 47 22.0	-2.1
PRK	Paraskevi	1.29	269	P	Pg	23 47 07.8	-0.6
PRK				S	Sn	23 47 26.2	+0.2
PRK	Paraskevi	1.29	269	*e*PB	Pg	23 47 07.9	-0.5
PRK				*e*SB	Sn	23 47 26.6	+0.6
PRK	Paraskevi	1.29	269	*e*Pb	Pg	23 47 07.9	-0.5
PRK				S	Sn	23 47 26.2	+0.2
PRK				*e*Sb	Sn	23 47 26.6	+0.6
MDNY	Mudanya-Bursa	1.31	34	*e*PN	Pg	23 47 08.0	-0.6
MDNY	Mudanya-Bursa	1.31	34	*e*Pn	Pg	23 47 08.0	-0.6
MRMT	Marmara Adasi	1.34	349	*e*PN	Pn	23 47 08.7	-0.4
MRMT	Marmara Adasi	1.34	349	*e*Pn	Pn	23 47 08.7	-0.4
EZN	Ezine	1.36	294	*e*PN	Pn	23 47 08.6	-0.6
EZN	Ezine	1.36	294	*e*Pn	Pn	23 47 08.6	-0.6
URLA	Izmir	1.40	229	*i* P	Pn	23 47 08.6	-1.1
URLA				*i* S	Sg	23 47 27.2	-1.2
URLA	Izmir	1.40	229	*i* P	Pn	23 47 08.6	-1.1
URLA				*i* S	Sg	23 47 27.2	-1.2
LPK	Lapseki	1.42	321	*e*PN	Pn	23 47 09.5	-0.5
LPK	Lapseki	1.42	321	*e*Pn	Pn	23 47 09.5	-0.5
GEMT	Gemlik	1.50	39	*e*PN	Pn	23 47 10.7	-0.5
GEMT	Gemlik	1.50	39	*e*Pn	Pn	23 47 10.7	-0.5
KHAL	Karahalli	1.52	126	*i* P	Pn	23 47 11.4	0.0
KHAL				*i* S	Sn	23 47 31.2	-0.5
SART	Tekirdag	1.52	338	*i* P	Pn	23 47 10.8	-0.7
SART				*i* S	Sn	23 47 30.4	-1.4
SART	Tekirdag	1.52	338	*i* P	Pn	23 47 10.8	-0.7
SART				*i* S	Sn	23 47 30.4	-1.4
BOZC	Bozcaada	1.56	292	*i* P	Pn	23 47 11.5	-0.5
BOZC				*i* S	Sn	23 47 32.2	-0.5
KHL	Karahalli	1.56	127	*e*PN	Pn	23 47 12.3	+0.2
KHL	Karahalli	1.56	127	*e*Pn	Pn	23 47 12.3	+0.2
IZI	Iznik	1.58	48	*e*PN	Pn	23 47 12.1	-0.3
IZI	Iznik	1.58	48	*e*Pn	Pn	23 47 12.1	-0.3
GELI	Tayfur-Gelibol	1.59	315	*e*PN	Pn	23 47 12.2	-0.1
GELI	Tayfur-Gelibol	1.59	315	*e*Pn	Pn	23 47 12.2	-0.1
AYDN	Tasoluk	1.62	182	*i* P	Pn	23 47 12.0	-0.9
AYDN				*i* S	Sn	23 47 33.4	-0.7
AYDN	Tasoluk	1.62	182	*i* P	Pn	23 47 12.0	-0.9
AYDN				*i* S	Sn	23 47 33.4	-0.7
SIGR	SIGRI	1.62	268	P	Pn	23 47 12.1	-0.7
SIGR				S	Sg	23 47 36.2	+0.6
SIGR	SIGRI	1.62	268	P	Pn	23 47 12.1	-0.7
SIGR				S	Sg	23 47 36.2	+0.6
GCAM	G?zelcaml?	1.67	200	*i* P	Pn	23 47 12.2	-1.3
GCAM				*i* S	Sn	23 47 33.3	-2.1
GCAM	G?zelcaml?	1.67	200	*i* P	Pn	23 47 12.2	-1.3
GCAM				*i* S	Sn	23 47 33.3	-2.1
ALT	Altintas	1.70	97	*e*PN	Pn	23 47 14.0	0.0
ALT	Altintas	1.70	97	*e*P	Pg	23 47 15.8	-0.4
ALT				*i* S	Sg	23 47 39.8	+1.6
ALT	Altintas	1.70	97	*e*Pn	Pn	23 47 14.0	0.0
CHOS	Chios island	1.72	239	P	Pn	23 47 13.3	-1.0
CHOS				S	Sg	23 47 38.1	-0.8
CHOS	Chios island	1.72	239	*e*PN	Pn	23 47 13.4	-0.9
CHOS				*e*SN	Sg	23 47 39.3	+0.4
CHOS	Chios island	1.72	239	*e*Pn	Pn	23 47 13.4	-0.9
CHOS				S	Sg	23 47 38.1	-0.8
CHOS				*e*Sn	Sg	23 47 39.3	+0.4
CAVI	Cavuskoy	1.73	57	*e*PN	Pn	23 47 14.7	+0.4
CAVI	Cavuskoy	1.73	57	*e*Pn	Pn	23 47 14.7	+0.4
TKR	Tekirdag	1.73	350	*e*PN	Pn	23 47 14.5	+0.1
TKR	Tekirdag	1.73	350	*e*Pn	Pn	23 47 14.5	+0.1
DENT	Denizli	1.75	150	*e*PN	Pn	23 47 14.6	0.0
DENT	Denizli	1.75	150	*e*Pn	Pn	23 47 14.6	0.0
ERIK	Erikli-Kesan	1.77	322	*e*PN	Pn	23 47 14.6	-0.2
ERIK	Erikli-Kesan	1.77	322	*e*Pn	Pn	23 47 14.6	-0.2
ADVT	Abdulvahap	1.80	50	*e*PN	Pn	23 47 14.9	-0.4
ADVT	Abdulvahap	1.80	50	*e*Pn	Pn	23 47 14.9	-0.4
BUY	Buyukada	1.81	30	*e*PN	Pn	23 47 15.0	-0.4
BUY	Buyukada	1.81	30	*i* P	Pn	23 47 14.3	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BUY				iS	Sn	23 47 38.7	0.0
BUY	Buyukada	1.81	30	iP	Pn	23 47 14.3	-1.1
BUY	Buyukada	1.81	30	ePn	Pn	23 47 15.0	-0.4
BUY				iS	Sn	23 47 38.7	0.0
DNZL	Cakiroluk	1.81	151	iP	Pn	23 47 15.3	-0.3
DNZL				iS	Sn	23 47 38.9	-0.2
DNZL	Cakiroluk	1.81	151	iP	Pn	23 47 15.3	-0.3
DNZL				iS	Sn	23 47 38.9	-0.2
CRLT	Corlu	1.85	355	ePN	Pn	23 47 16.0	0.0
CRLT	Corlu	1.85	355	ePn	Pn	23 47 16.0	0.0
SLVT	Silivri	1.96	6	ePN	Pn	23 47 18.0	+0.6
SLVT	Silivri	1.96	6	ePn	Pn	23 47 18.0	+0.6
ISK	Istanbul-Kandi	1.98	25	ePN	Pn	23 47 17.4	-0.3
ISK	Istanbul-Kandi	1.98	25	P	Pn	23 47 16.3	-1.4
ISK				S	Sn	23 47 42.7	-0.2
ISK	Istanbul-Kandi	1.98	25	P	Pn	23 47 16.3	-1.4
ISK	Istanbul-Kandi	1.98	25	ePn	Pn	23 47 17.4	-0.3
ISK				S	Sn	23 47 42.7	-0.2
MLSB	Milas	1.99	184	ePN	Pn	23 47 17.7	-0.2
MLSB	Milas	1.99	184	ePn	Pn	23 47 17.7	-0.2
CTKS	Kestanelik-??a	2.00	12	ePN	Pn	23 47 17.8	-0.2
CTKS	Kestanelik-??a	2.00	12	ePn	Pn	23 47 17.8	-0.2
BGKT	Bogazkoy	2.00	18	ePN	Pn	23 47 18.0	0.0
BGKT	Bogazkoy	2.00	18	ePn	Pn	23 47 18.0	0.0
HRT	Hereke	2.03	40	ePN	Pn	23 47 18.5	0.0
HRT	Hereke	2.03	40	ePn	Pn	23 47 18.5	0.0
BORA	Eskisehir	2.03	72	iP	Pn	23 47 18.3	-0.3
BORA				iS	Sg	23 47 49.4	+0.6
BORA	Eskisehir	2.03	72	iP	Pn	23 47 18.3	-0.3
GPA	Golpazari	2.08	60	ePN	Pn	23 47 19.1	-0.1
GPA	Golpazari	2.08	60	ePn	Pn	23 47 19.1	-0.1
YER	Yerkesik	2.16	173	ePN	Pn	23 47 20.1	-0.2
YER	Yerkesik	2.16	173	ePn	Pn	23 47 20.1	-0.2
SHUT	Suhut-Afyon	2.16	109	ePN	Pn	23 47 20.4	0.0
SHUT	Suhut-Afyon	2.16	109	ePn	Pn	23 47 20.4	0.0
ALN	Alexandroupoli	2.17	319	P	Pn	23 47 20.0	-0.3
ALN				S	Sn	23 47 47.3	-0.3
ALN	Alexandroupoli	2.17	319	ePN	Pn	23 47 20.1	-0.3
ALN				eSN	Sn	23 47 48.5	+0.9
ALN	Alexandroupoli	2.17	319	ePn	Pn	23 47 20.1	-0.3
ALN				S	Sn	23 47 47.3	-0.3
ALN				eSn	Sn	23 47 48.5	+0.9
SMTH	Samothraki Isl	2.20	303	ePN	Pn	23 47 20.3	-0.5
SMTH				eSN	Sn	23 47 48.7	+0.3
SMTH	Samothraki Isl	2.20	303	ePn	Pn	23 47 20.3	-0.5
SMTH				eSn	Sn	23 47 48.7	+0.3
CTYL	Yal??k??y-??at	2.21	7	ePN	Pn	23 47 20.7	-0.2
CTYL	Yal??k??y-??at	2.21	7	ePn	Pn	23 47 20.7	-0.2
LIA	Limnos Island	2.22	287	P	Pn	23 47 20.7	-0.2
LIA				S	Sn	23 47 49.0	+0.2
LIA	Limnos Island	2.22	287	ePN	Pn	23 47 20.8	-0.2
LIA				eSN	Sn	23 47 49.2	+0.4
LIA	Limnos Island	2.22	287	ePn	Pn	23 47 20.8	-0.2
ESKT	Eskisehir	2.27	83	ePN	Pn	23 47 22.0	+0.2
ESKT	Eskisehir	2.27	83	ePn	Pn	23 47 22.0	+0.2
SEYT	Eskypehyr	2.27	83	iP	Pn	23 47 21.8	0.0
BODT	Bodrum	2.27	193	ePN	Pn	23 47 22.3	+0.5
BODT	Bodrum	2.27	193	ePn	Pn	23 47 22.3	+0.5
SILT	Sile	2.28	34	ePN	Pn	23 47 21.3	-0.5
SILT	Sile	2.28	34	ePn	Pn	23 47 21.3	-0.5
GULT	Gulveren	2.29	59	ePN	Pn	23 47 22.1	0.0
GULT	Gulveren	2.29	59	ePn	Pn	23 47 22.1	0.0
SPNC	Sapanca-Adapaz	2.30	52	ePN	Pn	23 47 22.3	+0.2
SPNC	Sapanca-Adapaz	2.30	52	ePn	Pn	23 47 22.3	+0.2
GOLH	Golhisar	2.41	147	iP	Pn	23 47 24.3	+0.5
GOLH				iS	Sb	23 47 56.4	-1.1
GOLH	Golhisar	2.41	147	iP	Pn	23 47 24.3	+0.5
GOLH				iS	Sb	23 47 56.4	-1.1
GLHS	Glhisar (BURDU	2.45	149	ePN	Pn	23 47 24.7	+0.4
GLHS	Glhisar (BURDU	2.45	149	ePn	Pn	23 47 24.7	+0.4
TURN	Turunc	2.46	168	iP	Pn	23 47 24.5	+0.1
TURN	Turunc	2.46	168	iP	Pn	23 47 24.5	+0.1
ISP	Isparta	2.50	125	ePN	Pn	23 47 24.8	-0.1
ISP	Isparta	2.50	125	P	Pn	23 47 24.6	-0.3
ISP	Isparta	2.50	125	ePn	Pn	23 47 24.8	-0.1
DALY	Dalyan (Mu˜la	2.52	167	ePN	Pn	23 47 25.5	+0.3
DALY	Dalyan (Mu˜la	2.52	167	ePn	Pn	23 47 25.5	+0.3
DAT	Datca	2.56	187	ePN	Pn	23 47 26.3	+0.4
DAT	Datca	2.56	187	ePn	Pn	23 47 26.3	+0.4
NIS4	Nisyros Isl.	2.68	194	P	Pn	23 47 27.3	-0.1
EDRB	Edirne	2.72	341	ePN	Pn	23 47 27.9	0.0
EDRB	Edirne	2.72	341	ePn	Pn	23 47 27.9	0.0
HENT	Hendek	2.74	55	iP	Pn	23 47 28.0	-0.3
HENT	Hendek	2.74	55	iP	Pn	23 47 28.0	-0.3
BCK	Bucak	2.77	130	ePN	Pn	23 47 29.3	+0.7
BCK	Bucak	2.77	130	ePn	Pn	23 47 29.3	+0.7
NIS2	Nisyros Isl.	2.77	193	P	Pb	23 47 31.7	-1.8
MDUB	Mudurnu	2.77	64	ePN	Pn	23 47 29.3	+0.5
MDUB	Mudurnu	2.77	64	ePn	Pn	23 47 29.3	+0.5
SVRH	Sivrihisar-ESK	2.78	85	ePN	Pn	23 47 29.3	+0.4
SVRH	Sivrihisar-ESK	2.78	85	ePn	Pn	23 47 29.3	+0.4
FETY	Fethiye	2.79	161	ePN	Pn	23 47 29.4	+0.4
FETY	Fethiye	2.79	161	ePn	Pn	23 47 29.4	+0.4
APE	Apeiranthos	2.91	221	ePN	Pn	23 47 31.7	+1.1
APE	Apeiranthos	2.91	221	P	Pn	23 47 29.5	-1.1
APE	Apeiranthos	2.91	221	ePN	Pn	23 47 29.2	-1.4
APE	Apeiranthos	2.91	221	⇓iP	Pn	23 47 29.2	-1.4
APE	Apeiranthos	2.91	221	P	Pn	23 47 29.5	-1.1
APE	Apeiranthos	2.91	221	ePn	Pn	23 47 31.7	+1.1
KORT	Korkueli	2.97	139	iP	Pn	23 47 32.3	+0.8
KORT				eS	Sn	23 48 10.2	+2.7
KORT	Korkueli	2.97	139	iP	Pn	23 47 32.3	+0.8
KORT				eS	Sn	23 48 10.2	+2.7
ELL	Elmali	2.97	148	ePN	Pn	23 47 32.5	+1.0
ELL	Elmali	2.97	148	ePn	Pn	23 47 32.5	+1.0
MRMA	Marmari	3.04	247	P	Pn	23 47 31.5	-0.9
MRMA	Marmari	3.04	247	P	Pn	23 47 31.5	-0.9
ARG	Arkhangelos	3.06	177	P	Pn	23 47 32.0	-0.7
ARG				S	Sn	23 48 09.2	-0.5
ARG	Arkhangelos	3.06	177	P	Pn	23 47 32.0	-0.7
ARG				S	Sn	23 48 09.2	-0.5
KIZT	Kizilcal	3.09	96	ePN	Pn	23 47 34.1	+0.9
KIZT	Kizilcal	3.09	96	ePn	Pn	23 47 34.1	+0.9
KAVA	Kavala	3.13	304	P	Pn	23 47 33.1	-0.5
KAVA	Kavala	3.13	304	P	Pn	23 47 33.1	-0.5
AOS	Alonnisos	3.15	269	ePN	Pn	23 47 33.8	-0.1
AOS	Alonnisos	3.15	269	ePn	Pn	23 47 33.8	-0.1
ANTB	Antalya	3.20	137	ePN	Pn	23 47 35.9	+1.4
ANTB	Antalya	3.20	137	ePn	Pn	23 47 35.9	+1.4
OUR	Ouranopolis	3.22	290	P	Pn	23 47 34.4	-0.4
OUR	Ouranopolis	3.22	290	P	Pn	23 47 34.4	-0.4
AKAS	Kas	3.32	156	eP	Pn	23 47 37.9	+1.7
AKAS	Kas	3.32	156	eP	Pn	23 47 37.9	+1.7
JMB	Yambol	3.34	343	P	Pn	23 47 37.1	+0.6
JMB	Yambol	3.34	343	P	Pn	23 47 37.1	+0.6
PAIG	Paliouri	3.35	282	P	Pn	23 47 36.2	-0.4
PAIG	Paliouri	3.35	282	P	Pn	23 47 36.2	-0.4
PTL	Penteli	3.42	250	P	Pn	23 47 37.2	-0.4
PTL	Penteli	3.42	250	ePN	Pn	23 47 37.9	+0.3
PTL	Penteli	3.42	250	P	Pn	23 47 37.2	-0.4
PTL	Penteli	3.42	250	ePn	Pn	23 47 37.9	+0.3
MRKA	Markates	3.44	262	P	Pn	23 47 37.0	-0.8
MRKA	Markates	3.44	262	P	Pn	23 47 37.0	-0.8
SANT	Santorini	3.51	215	P	Pn	23 47 39.1	+0.3
SANT	Santorini	3.51	215	P	Pn	23 47 39.1	+0.3
ATH	Athens Observa	3.56	250	ePN	Pn	23 47 41.0	+1.6
ATH	Athens Observa	3.56	250	ePn	Pn	23 47 41.0	+1.6
LADK	Ladik-KONYA	3.62	106	ePN	Pn	23 47 41.1	+0.7
LADK	Ladik-KONYA	3.62	106	ePn	Pn	23 47 41.2	+0.7
PLG	Polygyros	3.63	289	P	Pn	23 47 40.5	+0.1
PLG	Polygyros	3.63	289	ePN	Pn	23 47 40.3	-0.1
PLG	Polygyros	3.63	289	ePn	Pn	23 47 40.3	-0.1
NEO	Neokhori	3.66	272	ePN	Pn	23 47 41.0	+0.1
NEO	Neokhori	3.66	272	ePn	Pn	23 47 41.0	+0.1
XOR	Xorichti	3.68	273	P	Pn	23 47 41.2	0.0
XOR	Xorichti	3.68	273	P	Pn	23 47 41.2	0.0
SMIA	Simia	3.70	265	P	Pn	23 47 42.0	+0.5
SMIA	Simia	3.70	265	P	Pn	23 47 42.0	+0.5
KONT	Konya--Tatoy	3.71	110	ePN	Pn	23 47 42.8	+1.2
KONT	Konya--Tatoy	3.71	110	ePn	Pn	23 47 42.8	+1.2
NVR	Nevrokopi	3.74	305	P	Pn	23 47 41.9	-0.1
NVR	Nevrokopi	3.74	305	ePN	Pn	23 47 41.8	-0.2
NVR	Nevrokopi	3.74	305	ePn	Pn	23 47 41.8	-0.2
PLD	Plovdiv	3.74	320	P	Pn	23 47 42.2	+0.2
PLD	Plovdiv	3.74	320	P	Pn	23 47 42.2	+0.2
KARP	Karpathos	3.78	190	ePN	Pn	23 47 42.4	-0.1
KARP				eSN	Sn	23 48 28.8	+1.4
KARP	Karpathos	3.78	190	ePn	Pn	23 47 42.4	-0.1
KARP				eSn	Sn	23 48 28.8	+1.4
SRS	Serrai	3.80	300	P	Pn	23 47 42.4	-0.4
SRS	Serrai	3.80	300	P	Pn	23 47 42.4	-0.4
LKR	Lokris	3.90	262	ePN	Pn	23 47 43.9	-0.3
LKR	Lokris	3.90	262	ePn	Pn	23 47 43.9	-0.3
AFSR	Af¯ar-Bala (A	3.98	86	ePN	Pn	23 47 46.8	+1.5
AFSR	Af¯ar-Bala (A	3.98	86	ePn	Pn	23 47 46.8	+1.5
DID	Didima	4.10	246	P	Pn	23 47 46.6	-0.3
DID	Didima	4.10	246	P	Pn	23 47 46.6	-0.3
SAFT	Safranbolu	4.12	60	ePN	Pn	23 47 48.4	+1.2
SAFT	Safranbolu	4.12	60	ePn	Pn	23 47 48.4	+1.2
LIT	Litokhoron	4.28	283	P	Pn	23 47 49.3	-0.1
LIT	Litokhoron	4.28	283	P	Pn	23 47 49.3	-0.1
KNT	Kendrikon	4.29	298	P	Pn	23 47 49.9	+0.4
KNT	Kendrikon	4.29	298	P	Pn	23 47 49.9	+0.4
AGG	Agios Georgios	4.37	268	ePN	Pn	23 47 51.3	+0.7
AGG	Agios Georgios	4.37	268	ePn	Pn	23 47 51.3	+0.7
ZKR	Zakros	4.38	199	P	Pn	23 47 52.3	+1.5
ZKR	Zakros	4.38	199	P	Pn	23 47 52.3	+1.5
NPS	Neapolis	4.42	206	ePN	Pn	23 47 47.8	-3.5
NPS	Neapolis	4.42	206	ePn	Pn	23 47 47.8	-3.5
BRTR	Keskin Array B	4.43	82	Pn	Pn	23 47 52.0	+0.5
	1.4nm,0.3s,baz=258,slow=12,SNR=42						
BRTR				Pg	Pg	23 48 08.2	-0.3
	5.9nm,0.3s,baz=264,slow=13,SNR=32						
BRTR				Sn	Sn	23 48 43.0	-0.7
	2.6nm,0.3s,baz=315,slow=19,SNR=5.6						
BRTR				Lg	Lg	23 49 06.2	
	3.6nm,0.3s,baz=266,slow=29,SNR=7.0						
KAMT	Kaman	4.48	87	ePN	Pn	23 47 53.5	+1.4
KAMT	Kaman	4.48	87	ePn	Pn	23 47 53.6	+1.4
SULT	Sultanhani-AKS	4.49	102	ePN	Pn	23 47 53.3	+0.9
SULT	Sultanhani-AKS	4.49	102	ePn	Pn	23 47 53.3	+0.9
LAST	Lasithi	4.56	206	ePB	Pn	23 47 57.5	+4.2
CANT	Cankiri	4.56	71	ePN	Pn	23 47 54.9	+1.6
VAY	Valandovo	4.58	298	ePn	Pn	23 47 54.4	+0.9
VAY	Valandovo	4.58	298	ePn	Pn	23 47 54.9	+1.4
GUR	Goura	4.59	255	P	Pn	23 47 54.4	+0.7
GUR	Goura	4.59	255	P	Pn	23 47 54.4	+0.7
THL	Klokotos Trika	4.60	275	P	Pn	23 47 54.2	+0.5
THL	Klokotos Trika	4.60	275	ePN	Pn	23 47 54.1	+0.4
THL	Klokotos Trika	4.60	275	ePn	Pn	23 47 54.1	+0.4
KALE	Kalithea	4.62	261	ePN	Pn	23 47 55.2	+1.2
KALE	Kalithea	4.62	261	ePn	Pn	23 47 55.2	+1.2
VLI	Veliai	4.71	239	ePN	Pn	23 47 54.4	-0.8
VLI	Veliai	4.71	239	ePn	Pn	23 47 54.4	-0.8
BALT	Daday	4.73	60	eP	Pn	23 47 56.0	+0.3
BALT	Daday	4.73	60	eP	Pn	23 47 56.0	+0.3
ERMK	Ermenek	4.73	122	eP	Pn	23 47 57.7	+1.9
ERMK	Ermenek	4.73	122	eP	Pn	23 47 57.7	+1.9
ILGA	Ilgaz	4.76	66	iP	Pg	23 48 14.0	-0.9
LAKA	Lakka	4.77	259	ePN	Pn	23 47 56.9	+0.7
LAKA	Lakka	4.77	259	ePn	Pn	23 47 56.9	+0.7
EVR	Evrytania	4.78	268	P	Pn	23 47 57.2	+0.8
EVR	Evrytania	4.78	268	P	Pn	23 47 57.2	+0.8
VTS	Vitosha	4.88	314	P	Pn	23 47 58.2	+0.5
VTS	Vitosha	4.88	314	ePn	Pn	23 47 58.0	+0.3
VTS				eSn	Sn	23 48 54.5	-0.1
VTS	Vitosha	4.88	314	⇓iP	Pn	23 47 58.2	+0.5
VTS	Vitosha	4.88	314	ePn	Pn	23 47 58.0	+0.3
VTS				eSn	Sn	23 48 54.5	-0.1
SIVA	Sivas	4.94	211	ePN	Pn	23 48 00.7	+2.3
SIVA	Sivas	4.94	211	ePn	Pn	23 48 00.7	+2.3
TIRR	Tirgusor	5.18	4	⇑iP	Pn	23 48 01.1	-0.6
TIRR	Tirgusor	5.18	4	⇑iP	Pn	23 48 01.1	-0.6
FNA	Florina	5.26	289	P	Pn	23 48 03.8	+1.0
FNA	Florina	5.26	289	ePN	Pn	23 48 03.8	+1.0
FNA	Florina	5.26	289	ePn	Pn	23 48 03.8	+1.0
BIA	Bitola	5.36	291	P	Pn	23 48 04.8	+0.6
BIA	Bitola	5.36	291	ePn	Pn	23 48 04.9	+0.7
BIA	Bitola	5.36	291	P	Pn	23 48 04.8	+0.6
NEST	Nestorio	5.42	284	P	Pn	23 48 06.5	+1.3
NEST	Nestorio	5.42	284	P	Pn	23 48 06.5	+1.3
JAN	Janina	5.50	276	P	Pn	23 48 10.3	+4.2
SKO	Skopje	5.63	301	ePn	Pn	23 48 06.3	-1.6
ZAPS	Zavoj	5.64	317	⇓iPn	Pn	23 48 09.2	+1.0
KBN	Korca	5.66	286	ePN	Pn	23 48 12.6	+4.2
PGOR	Pogoanele	5.67	353	⇑iP	Pn	23 48 09.3	+0.9
PGOR	Pogoanele	5.67	353	⇑iP	Pn	23 48 09.3	+0.9
BARS	Barje	5.82	309	⇓iPn	Pn	23 48 11.1	+0.5
BARS				eSg	Sg	23 49 49.9	-0.5
BARS	Barje	5.82	309	⇓iPn	Pn	23 48 11.1	+0.5
BARS				eSg	Sg	23 49 49.9	-0.5
CFR	Carcaliu	5.89	1	⇓iP	Pn	23 48 11.6	+0.1
CFR	Carcaliu	5.89	1	⇓iP	Pn	23 48 11.6	+0.1
ISR	Istrita	5.92	350	⇓iP	Pn	23 48 12.7	+0.7
ISR	Istrita	5.92	350	⇓iP	Pn	23 48 12.7	+0.7
TLCR		5.94	6	⇓iP	Pn	23 48 12.7	+0.6
TLCR		5.94	6	⇓iP	Pn	23 48 12.7	+0.6
CSS	Prodhromos	6.09	133	P	Pn	23 48 13.6	-0.7
GRER		6.13	354	⇓iP	Pn	23 48 17.1	+2.3
GRER		6.13	354	⇓iP	Pn	23 48 17.1	+2.3
PHP	Peshkopia	6.20	295	ePN	Pn	23 48 16.7	+0.9
PHP	Peshkopia	6.20	295	P	Pn	23 48 17.0	+1.2
PHP	Peshkopia	6.20	295	ePn	Pn	23 48 16.7	+0.9
PHP	Peshkopia	6.20	295	P	Pn	23 48 17.0	+1.2
MLR	Muntele Rosu	6.38	347	⇑iP	Pn	23 48 19.9	+1.6
MLR	Muntele Rosu	6.38	347	Pn	Pn	23 48 19.5	+1.2
	0.5nm,0.3s,baz=151,slow=4.3,SNR=31						
MLR				Sn	Sn	23 49 31.8	+0.2
	0.1nm,0.3s,baz=163,slow=19,SNR=2.1						
MLR				Lg	Lg	23 50 14.6	
	0.2nm,0.3s,baz=239,slow=9.3,SNR=4.3						
MLR	Muntele Rosu	6.38	347	⇑iP	Pn	23 48 19.9	+1.6
BOLS	Boljevac	6.39	317	ePn	Pn	23 48 17.3	-1.0
BOLS	Boljevac	6.39	317	ePn	Pn	23 48 17.3	-1.0
SELS	Selova	6.47	310	ePn	Pn	23 48 19.3	-0.2
SELS				eSg	Sg	23 50 10.9	-0.4
SELS	Selova	6.47	310	ePn	Pn	23 48 19.3	-0.2
SELS				eSg	Sg	23 50 10.9	-0.4
TIR	Tirane	6.51	291	ePn	Pn	23 48 23.0	+3.0
TIR				eSn	Sn	23 49 38.7	+4.1
VOIR		6.51	342	⇑iP	Pn	23 48 24.0	+3.9
PLOR	Plostina	6.63	352	⇑iP	Pn	23 48 22.7	+1.0
PLOR	Plostina	6.63	352	⇑iP	Pn	23 48 22.7	+1.0
VRI	Vrincioaia	6.64	353	⇑iP	Pn	23 48 22.2	+0.4
VRI	Vrincioaia	6.64	353	⇑iP	Pn	23 48 22.2	+0.4
PUK	Puka	6.71	297	ePN	Pn	23 48 24.7	+1.9
PUK	Puka	6.71	297	ePn	Pn	23 48 24.7	+1.9
BCI	Bajram Curri	6.72	300	ePN	Pn	23 48 24.6	+1.7
BCI	Bajram Curri	6.72	300	ePn	Pn	23 48 24.6	+1.7
GHRR		6.79	357	⇓iP	Pn	23 48 24.5	+0.7
GHRR		6.79	357	⇓iP	Pn	23 48 24.5	+0.7
LOT	Lotru	6.89	335	⇑iP	Pn	23 48 25.0	-0.3
LOT	Lotru	6.89	335	⇑iP	Pn	23 48 25.0	-0.3
DOPR	Dopca	6.94	345	⇓iP	Pn	23 48 27.0	+1.1
DOPR	Dopca	6.94	345	⇓iP	Pn	23 48 27.0	+1.1
GRUS	Gruza	7.11	313	ePn	Pn	23 48 28.3	+0.1
GRUS	Gruza	7.11	313	ePn	Pn	23 48 28.3	+0.1
TESR	Tescani	7.29	353	⇑iP	Pn	23 48 31.0	+0.3
TESR	Tescani	7.29	353	⇑iP	Pn	23 48 31.0	+0.3
PDG	Podgorica	7.29	298	ePn	Pn	23 48 33.6	+2.9
TRUS	Trudelj	7.49	314	⇑iPn	Pn	23 48 32.2	-1.2
TRUS	Trudelj	7.49	314	⇑iPn	Pn	23 48 32.2	-1.2
DIVS	Divibare	7.65	312	P	Pn	23 48 35.6	-0.1
DIVS	Divibare	7.65	312	⇑iPn	Pn	23 48 35.6	-0.1
DIVS				eSn	Sn	23 49 59.3	-3.5
DIVS	Divibare	7.65	312	⇑iPn	Pn	23 48 35.6	-0.1
BBLS	Lazići	7.87	308	ePn	Pn	23 48 40.3	+1.6
BBLS	Lazići	7.87	308	ePn	Pn	23 48 40.3	+1.6
BZS	Buzias	7.87	326	ePn	Pn	23 48 38.6	0.0
BZS	Buzias	7.87	326	⇑iP	Pn	23 48 39.6	+1.0
BZS	Buzias	7.87	326	ePn	Pn	23 48 38.6	0.0
BZS	Buzias	7.87	326	⇑iP	Pn	23 48 39.6	+1.0
PRAR	RASCA	8.17	352	⇑iP	Pn	23 48 45.2	+2.4
PRAR	RASCA	8.17	352	⇑iP	Pn	23 48 45.2	+2.4
BURAR	Bucovina Array	8.56	348	⇓iP	Pn	23 48 50.2	+2.0
BURAR	Bucovina Array	8.56	348	⇓iP	Pn	23 48 50.2	+2.0
MMAI	Mount Meron Ar	8.69	134	Pn	Pn	23 48 49.3	-0.7
	8.2nm,0.3s,baz=320,slow=12,SNR=65						
MMAI				Sn	Sn	23 50 24.6	-3.8
	1.0nm,0.3s,baz=315,slow=28,SNR=4.6						
PKSM	Moragy	9.73	318	⇑iP	Pn	23 49 03.8	-0.3
PKSM	Moragy	9.73	318	⇑iP	Pn	23 49 03.8	-0.3
ASF	Jabal al Asfar	10.16	132	Pn	Pn	23 49 11.6	+1.4
	0.3nm,0.3s,baz=310,slow=7.9,SNR=4.1						
ASF				Sn	Sn	23 51 06.5	+1.9
	0.1nm,0.3s,baz=301,slow=12,SNR=1.8						
KOLS	Kolonicke sedl	10.47	339	e	Pn	23 49 14.1	-0.2
EIL	Elat	11.19	147	Pn	Pn	23 49 22.2	-2.1
	0.4nm,0.3s,baz=347,slow=15,SNR=3.9						
VYHS	Vyhne	11.30	328	e	Pn	23 49 29.0	+3.3
AKASG	Malin Array Be	11.45	4	Pn	Pn	23 49 26.0	-1.7
	0.6nm,0.3s,baz=187,slow=13,SNR=2.7						
AKASG				Sn	Sn	23 51 43.9	+7.9
	0.2nm,0.3s,baz=191,slow=24,SNR=3.9						
ZST	Bratislava	11.86	322	e	Pn	23 49 40.5	+7.3
GERES	GERESS Array B	13.98	318	Pn	Pn	23 50 03.5	+1.1
	0.1nm,0.3s,baz=118,slow=12,SNR=6.9						
GERES				LR	LR	23 55 26.3	
	comp=Z,227nm,20.9s,baz=161,slow=38						
PGF	Pioggiola	14.69	289	eP	Pn	23 50 14.5	+2.5
	27nm,1.4s						
DAVOX	Davos/Dischmat	15.16	305	Pn	P	23 50 24.2	+0.4
	0.3nm,0.3s,baz=163,slow=19,SNR=5.0						
KEST	Kesra	15.18	262	Pn	P	23 50 25.8	+1.9
	0.1nm,0.3s,baz=40,slow=3.3,SNR=9.7						
SBF	Sospel	16.00	293	eP	P	23 50 31.9	-1.1
	18nm,0.8s						
SBF	Sospel	16.00	293	eP	P	23 50 31.9	-1.1
	8.9nm,0.8s						
FRF	La Foret Royal	16.52	292	eP	P	23 50 39.5	+0.8
	32nm,1.2s						
FRF	La Foret Royal	16.52	292	eP	P	23 50 39.5	+0.8
	16nm,1.2s						
LMR	La Mourre	16.59	291	eP	P	23 50 39.3	-0.1
	22nm,1.2s						
LMR	La Mourre	16.59	291	eP	P	23 50 39.3	-0.1
	11nm,1.2s						
MBDF	Montbardon	16.63	296	eP	P	23 50 39.8	-0.2
	33nm,1.0s						
MBDF	Montbardon	16.63	296	eP	P	23 50 39.8	-0.2
	17nm,1.0s						
LPG	La Plagne	16.82	299	eP	P	23 50 42.0	-0.2
	17nm,1.0s						
LPL	La Plagne	16.84	299	eP	P	23 50 42.9	+0.5
ORIF	Oris-en-Rattie	17.29	296	eP	P	23 50 48.1	+0.8
	11nm,0.8s						
ORIF	Oris-en-Rattie	17.29	296	eP	P	23 50 48.1	+0.8
	5.7nm,0.8s						
CDF	Champ du Feu	17.43	308	eP	P	23 50 50.4	+1.6
	8.9nm,0.8s						
CDF	Champ du Feu	17.43	308	eP	P	23 50 50.4	+1.6
	4.4nm,0.8s						
CABF	La Chapelle	17.56	302	eP	P	23 50 51.4	+1.2
	63nm,1.6s						
CABF	La Chapelle	17.56	302	eP	P	23 50 51.4	+1.2
	31nm,1.6s						
VIVF	Saint-Julien-l	18.12	295	eP	P	23 50 59.2	+2.8
	19nm,1.2s						
MIB	Mutribah	18.54	115	eP	P	23 51 01.1	+0.1
MIB				AMb	AMB	23 51 05.9	
	comp=Z,12nm,0.8s						
MIB	Mutribah	18.54	115	eP	P	23 51 01.1	+0.1
	comp=Z,12nm,0.8s						
NAY	Al-Naaiem	18.80	116	eP	P	23 51 03.9	0.0
NAY				AMb	AMB	23 51 10.5	
	comp=Z,5.4nm,0.9s						
NAY	Al-Naaiem	18.80	116	eP	P	23 51 03.9	0.0
	comp=Z,5.4nm,0.9s						
UMR	Umm Al-Rimmam	18.95	115	eP	P	23 51 05.7	+0.2
UMR				AMb	AMB	23 51 10.0	
	comp=Z,22nm,1.0s						
UMR	Umm Al-Rimmam	18.95	115	eP	P	23 51 05.7	+0.2
	comp=Z,22nm,1.0s						
SMF	Signal de Mont	19.06	301	eP	Pn	23 51 08.1	+0.7
	comp=Z,14nm,1.1s						
LOR	Lormes	19.21	302	eP	Pn	23 51 10.2	+1.0
	comp=Z,23nm,1.1s						
SSF	Saint Saulge	19.39	302	eP	Pn	23 51 11.6	+0.3
	comp=Z,16nm,1.1s						
AVF	Avril sur Loir	19.42	301	eP	Pn	23 51 12.2	+0.5
	comp=Z,18nm,1.1s						
BGF	Bois d'Agland	19.71	300	eP	Pn	23 51 15.1	-0.1
BGF	Bois d'Agland	19.71	300	eP	Pn	23 51 15.1	-0.1
TCF	Toulx Ste Croi	20.09	299	eP	Pn	23 51 19.1	-0.6
	comp=Z,16nm,1.1s						
TCF	Toulx Ste Croi	20.09	299	eP	Pn	23 51 19.1	-0.6
	comp=Z,8.1nm,1.1s						
FINES	FINESS Array B	22.22	358	P	P	23 51 39.5	-1.1
	comp=Z,4.3nm,1.0s,baz=180,slow=8.3,SNR=3.0						
GRR	Gorron	22.57	303	eP	P	23 51 46.1	+1.5
GRR	Gorron	22.57	303	eP	P	23 51 46.1	+1.5
AKTO	Aktyubinsk	23.89	52	P	P	23 51 59.1	+1.0
	comp=Z,0.7nm,0.5s,baz=258,slow=9.3,SNR=3.2						
TORD	Torodi Ar. Bea	34.85	229	P	P	23 53 35.6	-0.2
	comp=Z,0.8nm,0.6s,baz=35,slow=8.8,SNR=9.0						
MKAR	Makanchi Array	39.74	61	P	P	23 54 17.1	0.0
	comp=Z,0.2nm,0.4s,baz=270,slow=8.1,SNR=6.7						
ZALV	Zalesovo Beam	40.60	50	P	P	23 54 24.2	+0.2
	comp=Z,0.4nm,0.4s,baz=274,slow=8.5,SNR=3.2						
YKA	Yellowknife Ar	74.19	343	P	P	23 58 20.4	-0.5
	comp=Z,0.4nm,0.8s,baz=36,slow=5.4,SNR=7.3						
ULM	Lac du Bonnet	78.10	327	LR	LR	00 35 30.7	
	comp=Z,120nm,18.3s,baz=43,slow=38						

LJU 07 23:49:25.8, 46°.18N×14°.35E, h10km, ML0.3, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRNS	Crni Vrh	0.11	212	⇓iPg	Pg	23 49 28.9	+0.1
CRNS				iSg	Sg	23 49 30.9	+0.1
CRNS							
	comp=Z,4.0nm,0.1s						
MOZS	Mozjanca	0.14	29	iPg	Pg	23 49 29.3	+0.2
MOZS				iSg	Sg	23 49 31.6	+0.3
MOZS							
	comp=Z,4.0nm,0.1s						
MOZS	Mozjanca	0.14	29	Pg	Pg	23 49 29.3	+0.2
MOZS				iSg	Sg	23 49 31.6	+0.3
	comp=Z,4.0nm,0.1s						
LJU	Ljubljana	0.18	137	iPg	Pg	23 49 29.0	-0.8
LJU	Ljubljana	0.18	137	iPg	Pg	23 49 29.0	-0.8
VNDS	Vrh nad Dolski	0.26	107	iPg	Pg	23 49 31.4	+0.3
VNDS				iSg	Sg	23 49 34.8	+0.1
VNDS							
	comp=Z,1.0nm,0.1s						
GORS	Gorjuse	0.28	300	iPg	Pg	23 49 31.6	-0.1
GORS				iSg	Sg	23 49 35.5	-0.1
GORS							
	comp=Z,1.0nm,0.1s						
GORS	Gorjuse	0.28	300	iPg	Pg	23 49 31.5	-0.2
GORS				iSg	Sg	23 49 35.5	-0.1
	comp=Z,1.0nm,0.1s						
JAVS	Javornik	0.35	215	iSg	Sg	23 49 38.1	+0.5
JAVS	Javornik	0.35	215	iSg	Sg	23 49 38.1	+0.5
VOJS	Vojsko	0.35	246	iPg	Pg	23 49 32.9	-0.1
VOJS				iSg	Sg	23 49 38.2	+0.3
VOJS							
	comp=Z,1.0nm,0.1s						
VOJS	Vojsko	0.35	246	iPg	Pg	23 49 32.9	-0.1
VOJS				iSg	Sg	23 49 38.2	+0.4
CEY	Cerknica	0.44	173	iPg	Pg	23 49 34.8	+0.3
CEY	Cerknica	0.44	173	iPg	Pg	23 49 34.8	+0.3
DPC	Dobruska-Polom	4.38	17	eP	Pg	23 50 49.3	-0.5

MAN 07 23:52:31, 14°.35N×119°.71E, h26km, mb4.5, ML3.4, MS3.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.21	101	⇑iP	Pb	23 53 02.3	+8.9
TGY				eS	Sb	23 53 18.8	+10
SCZP	Santa Cruz	1.43	8	eP	Pn	23 52 54.9	-0.4
SCZP				eS	Sn	23 53 05.3	-8.0
BOLP	Bolinao	2.03	5	eP	Pn	23 53 04.5	+0.9
BOLP				eS	Sn	23 53 22.6	-5.5
BALP	Baler	2.27	52	eP	Pb	23 53 10.0	-1.3
OTRP	Odiongan	2.99	131	eP	Pn	23 53 17.9	+1.1
CAUP	Cauayan	3.29	38	eP	Pb	23 53 24.8	-3.9

CSEM 07 23:57:26.3±0.5, 34°.99N×28°.55E, h2km, MD3.6, Error ellipse: s-maj=13.1km s-min=6.4km az=152.0
ISK 07 23:57:28.1, 34°.92N×28°.69E, h31km, MD3.5
ATH 07 23:57:31.5, 35°.22N×28°.26E, h59km±6km, MD3.6/8
ISC 07 23:57:24.0±1.8, 34°.93N±0°.06×28°.54E±0°.04, h1km±12km, n40, σ1s79/48, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	1.28	299	eP	Pg	23 57 49.5	+0.9
KARP				eS	Sg	23 58 03.0	-2.2
KARP	Karpathos	1.28	299	eP	Pg	23 57 49.5	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARG	**Arkhangelos**	**1.32**	**346**	*e*P	**Pg**	**23 57 50.5**	**+1.1**
ARG				*e*S	**Sg**	**23 58 04.4**	**-2.1**
ARG	**Arkhangelos**	**1.32**	**346**	*e*P	**Pg**	**23 57 50.5**	**+1.1**
ARG				*e*S	**Sg**	**23 58 04.4**	**-2.1**
FETY	**Fethiye**	**1.76**	**15**	*e*PN	**Pn**	**23 57 56.3**	**+0.6**
FETY				*e*SN	**Sn**	**23 58 18.1**	**-0.6**
FETY	**Fethiye**	**1.76**	**15**	*e*Pn	**Pn**	**23 57 56.3**	**+0.6**
FETY				*e*Sn	**Sn**	**23 58 18.1**	**-0.6**
ZKR	**Zakros**	**1.91**	**276**	*e*P	**Pn**	**23 57 59.7**	**+1.9**
ZKR				*e*S	**Sn**	**23 58 20.4**	**-2.1**
ZKR	**Zakros**	**1.91**	**276**	*e*P	**Pn**	**23 57 59.7**	**+1.9**
DAT	**Datca**	**1.95**	**337**	*e*PN	**Pn**	**23 58 00.3**	**+1.9**
DAT				*e*SN	**Sn**	**23 58 24.5**	**+0.8**
DAT	**Datca**	**1.95**	**337**	*e*Pn	**Pn**	**23 58 00.3**	**+1.9**
DAT				*e*Sn	**Sn**	**23 58 24.5**	**+0.8**
ELL	**Elmali**	**2.13**	**31**	*e*PN	**Pn**	**23 58 01.8**	**+1.0**
ELL	**Elmali**	**2.13**	**31**	*e*Pn	**Pn**	**23 58 01.8**	**+1.0**
YER	**Yerkesik**	**2.21**	**355**	*e*PN	**Pn**	**23 58 04.3**	**+2.4**
YER	**Yerkesik**	**2.21**	**355**	*e*Pn	**Pn**	**23 58 04.3**	**+2.4**
BODT	**Bodrum**	**2.35**	**335**	*e*PN	**Pn**	**23 58 06.2**	**+2.5**
BODT	**Bodrum**	**2.35**	**335**	*e*Pn	**Pn**	**23 58 06.2**	**+2.5**
NPS	**Neapolis**	**2.42**	**279**	*e*P	**Pn**	**23 58 06.4**	**+1.7**
NPS				*e*S	**Sn**	**23 58 32.0**	**-3.0**
NPS	**Neapolis**	**2.42**	**279**	*e*P	**Pn**	**23 58 06.4**	**+1.7**
MLSB	**Milas**	**2.44**	**346**	*e*PN	**Pb**	**23 58 08.1**	**-0.6**
MLSB	**Milas**	**2.44**	**346**	*e*Pn	**Pb**	**23 58 08.1**	**-0.6**
LAST	**Lasithi**	**2.52**	**276**	*e*P	**Pn**	**23 58 08.4**	**+2.2**
LAST				*e*S	**Sn**	**23 58 34.5**	**-3.1**
LAST	**Lasithi**	**2.52**	**276**	*e*P	**Pn**	**23 58 08.4**	**+2.2**
ANTB	**Antalya**	**2.61**	**41**	*e*PN	**Pn**	**23 58 08.8**	**+1.5**
ANTB	**Antalya**	**2.61**	**41**	*e*Pn	**Pn**	**23 58 08.8**	**+1.5**
BCK	**Bucak**	**3.02**	**33**	*e*PN	**Pn**	**23 58 14.3**	**+1.2**
BCK	**Bucak**	**3.02**	**33**	*e*Pn	**Pn**	**23 58 14.3**	**+1.2**
SIVA	**Sivas**	**3.06**	**273**	*e*P	**Pn**	**23 58 16.1**	**+2.6**
SIVA	**Sivas**	**3.06**	**273**	*e*P	**Pn**	**23 58 16.1**	**+2.6**
APE	**Apeiranthos**	**3.24**	**312**	*e*PN	Pn	23 58 20.0	+4.0
APE	**Apeiranthos**	**3.24**	**312**	*e*P	**Pn**	**23 58 16.5**	**+0.5**
APE	**Apeiranthos**	**3.24**	**312**	*e*P	**Pn**	**23 58 16.5**	**+0.5**
APE	**Apeiranthos**	**3.24**	**312**	*e*Pn	Pn	23 58 20.0	+4.0
VAM	**Vamos**	**3.58**	**279**	*e*P	**Pn**	**23 58 23.2**	**+2.5**
VAM	**Vamos**	**3.58**	**279**	*e*P	**Pn**	**23 58 23.2**	**+2.5**
CSS	**Prodhromos**	**3.94**	**88**	*e*PN	**Pn**	**23 58 26.6**	**+1.0**
LFK	**Lefkose**	**4.11**	**84**	*e*PN	**Pn**	**23 58 28.7**	**+0.7**
KONT	**Konya--Tatoy**	**4.31**	**45**	*e*PN	**Pn**	**23 58 31.9**	**+1.2**
KONT	**Konya--Tatoy**	**4.31**	**45**	*e*Pn	**Pn**	**23 58 31.9**	**+1.2**
KYTH	**Kithira**	**4.68**	**288**	*e*P	**Pn**	**23 58 37.1**	**+1.3**
KYTH	**Kithira**	**4.68**	**288**	*e*P	**Pn**	**23 58 37.1**	**+1.3**

*KISR **07** 23:58:22.6±0.8, 28.°76N×55.°88E, h34km±999km, ML3.2*
*ISCJB **07** 23:58:24.5±0.9, 28.°23N±0.°06×56.°02E±0.°07, h16km, Error ellipse: s-maj=10.6km s-min=4.9km az=136.3*
*CSEM **07** 23:58:25.3±0.5, 28.°17N×56.°23E, h20km, ML3.2, Error ellipse: s-maj=12.4km s-min=9.5km az=63.0*
*OMAN **07** 23:58:54.8±0.8, 26.°17N×56.°03E, h29km±168km, Error ellipse: s-maj=51.3km s-min=27.9km az=230.0*
ISC 07 23:58:24.3±1.3**, 28.°24N**±0.°06×**56.°18E**±0.°07**, h16**km**, n20,** σ**1^{s}17**/31**, 2C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.84**	**180**	*e*Pg	**Pb**	**23 58 39.4**	**-1.2**
BNDS				*e*Sg	**Sb**	**23 58 51.1**	**-0.5**
KRBR	**Kerman**	**1.81**	**16**	*e*Pn	**Pn**	**23 58 56.1**	**+1.0**
BANOM	**Banah**	**2.31**	**177**	P	**Pn**	**23 59 02.8**	**+1.0**
	SNR=14						
BANOM				⇑S	**Pg**	**23 59 08.6**	**-0.1**
BANOM	**Banah**	**2.31**	**177**	P	**Pn**	**23 59 02.8**	**+1.0**
	SNR=14						
BANOM	**Banah**	**2.31**	**177**	P	**Pn**	**23 59 02.8**	**+1.0**
	SNR=14						
BANOM				S	**Pg**	**23 59 08.6**	**-0.1**
BANOM				S	S	23 59 08.6	
GHIR	**Ghir-Karzin**	**2.81**	**272**	*e*Pn	**Pb**	**23 59 11.8**	**-2.5**
NAZ	**Nazwa, Dubai**	**3.27**	**188**	⇓P	**Pn**	**23 59 15.9**	**+1.0**
NAZ	**Nazwa, Dubai**	**3.27**	**188**	P	**Pn**	**23 59 15.9**	**+1.0**
ASHO	**Ashiyiah**	**3.54**	**182**	⇑P	**Pn**	**23 59 19.5**	**+0.8**
	SNR=12						
ASHO	**Ashiyiah**	**3.54**	**182**	P	**Pn**	**23 59 19.5**	**+0.8**
	SNR=12						
ASUD	**Al Ashush, Dub**	**3.68**	**192**	P	**Pn**	**23 59 22.0**	**+1.5**
	SNR=13						
ASUD	**Al Ashush, Dub**	**3.68**	**192**	P	**Pn**	**23 59 22.0**	**+1.5**
	SNR=13						
UMR	**Umm Al-Rimmam**	**7.53**	**282**	*e*P	**Pn**	**00 00 14.9**	**+1.4**
UMR				*e*S	**Sn**	**00 01 38.5**	**0.0**
UMR				AML	AML	00 01 41.9	
	comp=Z,3.8nm,0.4s						
UMR	**Umm Al-Rimmam**	**7.53**	**282**	*e*P	**Pn**	**00 00 14.9**	**+1.4**
UMR				*e*S	**Sn**	**00 01 38.5**	**0.0**
	comp=Z,3.8nm,0.4s						
RDF	**Al-Radifah**	**7.62**	**277**	*e*P	**Pn**	**00 00 16.2**	**+1.6**
RDF				*e*S	**Sn**	**00 01 42.1**	**+1.5**
RDF				AML	AML	00 01 44.7	
	comp=Z,3.8nm,0.4s						
RDF	**Al-Radifah**	**7.62**	**277**	*e*P	**Pn**	**00 00 16.2**	**+1.6**
RDF				*e*S	**Sn**	**00 01 42.2**	**+1.5**
MIB	**Mutribah**	**7.89**	**284**	*e*P	**Pn**	**00 00 19.4**	**+1.0**
MIB				*e*S	**Sn**	**00 01 47.3**	**-0.1**
MIB				AML	AML	00 01 52.5	
	comp=Z,4.6nm,0.7s						
MIB	**Mutribah**	**7.89**	**284**	*e*P	**Pn**	**00 00 19.5**	**+1.0**
MIB				*e*S	**Sn**	**00 01 47.3**	**-0.1**
	comp=Z,4.6nm,0.7s						
NAY	**Al-Naaiem**	**7.91**	**279**	*e*P	**Pn**	**00 00 19.9**	**+1.3**
NAY				*e*S	**Sn**	**00 01 47.8**	**0.0**
NAY				AML	AML	00 01 47.9	
	comp=Z,1.4nm,0.5s						
NAY	**Al-Naaiem**	**7.91**	**279**	*e*P	**Pn**	**00 00 19.9**	**+1.3**
NAY				*e*S	**Sn**	**00 01 47.8**	**0.0**

*BUC **07** 23:58:31.9±0.7, 44.°36N×26.°38E, h5km, MD2.9/4, Error ellipse: s-maj=6.4km s-min=3.8km az=325.0*
*SOF **07** 23:58:31.8, 44.°46N×26.°41E, h4km, MD2.7*
*ISCJB **07** 23:58:32.8±0.7, 44.°37N±0.°03×26.°40E±0.°05, h1km±7km, Error ellipse: s-maj=5.9km s-min=5.1km az=175.0*
ISC 07 23:58:33.4±1.2**, 44.°43N**±0.°03×**26.°43E**±0.°03**, h7**km±12km**, n25,** σ**0^{s}87**/31**, 12C-4D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMRR	**Amara**	**0.67**	**75**	*i* S	**Sb**	**23 58 57.2**	**+0.2**
AMRR	**Amara**	**0.67**	**75**	S	**Sb**	**23 58 57.2**	**+0.2**
ISR	**Istrita**	**0.69**	**7**	⇑*i*P	**Pb**	**23 58 46.9**	**-0.9**
ISR				*i* S	**Sb**	**23 58 58.7**	**+1.1**
ISR	**Istrita**	**0.69**	**7**	⇑*i*P	**Pb**	**23 58 46.9**	**-0.9**
HUMR	**Humele**	**1.04**	**276**	⇑*i*P	**Pg**	**23 58 52.2**	**-1.1**
HUMR	**Humele**	**1.04**	**276**	⇑*i*P	**Pg**	**23 58 52.2**	**-1.1**
MLR	**Muntele Rosu**	**1.11**	**342**	⇑*i*P	**Pn**	**23 58 55.0**	**-0.5**
MLR				*i* S	**Sn**	**23 59 11.4**	**+0.3**
MLR	**Muntele Rosu**	**1.11**	**342**	⇑*i*P	**Pn**	**23 58 55.0**	**-0.5**
SZH	**Strazhica**	**1.22**	**197**	*i* Pg	**Pg**	**23 58 56.1**	**-0.7**
PRD	**Provadia**	**1.42**	**150**	*i* Pg	**Pg**	**23 59 00.8**	**+0.2**
TIRR	**Tirgusor**	**1.42**	**88**	⇓*i*P	**Pb**	**23 58 59.5**	**-0.7**
TIRR				*i* S	**Sg**	**23 59 18.6**	**-0.5**
TIRR	**Tirgusor**	**1.42**	**88**	⇓*i*P	**Pb**	**23 58 59.5**	**-0.7**
PLOR	**Plostina**	**1.43**	**6**	⇓*i*P	**Pg**	**23 59 00.4**	**-0.3**
PLOR				*i* S	**Sg**	**23 59 21.7**	**+2.5**
PLOR	**Plostina**	**1.43**	**6**	⇓*i*P	**Pg**	**23 59 00.4**	**-0.3**
CFR	**Carcaliu**	**1.43**	**58**	⇑*i*P	**Pb**	**23 58 59.7**	**-0.6**
CFR	**Carcaliu**	**1.43**	**58**	⇑*i*P	**Pb**	**23 58 59.7**	**-0.6**
VRI	**Vrincioaia**	**1.45**	**8**	⇑*i*P	**Pg**	**23 59 00.6**	**-0.6**
VRI				*i* S	**Sg**	**23 59 21.6**	**+1.7**
VRI	**Vrincioaia**	**1.45**	**8**	⇑*i*P	**Pg**	**23 59 00.6**	**-0.6**
PVL	**Pavlikeni**	**1.45**	**213**	*i* P	**Pg**	**23 59 02.1**	**+0.9**
PSN	**Preselentsi**	**1.47**	**120**	*i* P	**Pg**	**23 59 00.8**	**-0.8**
ROIA	**ROIAK**	**1.51**	**152**	*i* Pg	**Pg**	**23 59 02.2**	**-0.1**
TLCR		**1.86**	**65**	⇑*i*P	**Pn**	**23 59 05.9**	**+0.3**
TLCR				*i* S	**Sb**	**23 59 31.5**	**+0.4**
TLCR		**1.86**	**65**	⇑*i*P	**Pn**	**23 59 05.9**	**+0.3**
MPEP	**Malo Peshtene**	**2.22**	**242**	*i* P	**Pb**	**23 59 13.7**	**-0.1**
KKB	**Krupnik**	**3.54**	**225**	*i* Pg	**Pg**	**23 59 40.9**	**-0.4**

*ISCJB **08** 00:10:09.2±0.9, 16.°03N±0.°04×98.°18W±0.°03, h26km±5km, mb4.6/89, MS4.0/18, Error ellipse: s-maj=6.9km s-min=3.7km az=23.7*
*IDC **08** 00:10:10.5±0.7, 16.°47N×98.°01W, h0km, mb4.3/13, mb1 4.5/16, mb1mx4.4/26, mbtmp4.3/16, ML3.7/2, MS4.0/20, Ms1 4.0/20, ms1mx3.8/43, Error ellipse: s-maj=23.9km s-min=12.9km az=65.0*
*MEX **08** 00:10:11.0±0.6, 16.°04N×98.°22W, h5km, MD4.6*
*BJI **08** 00:10:11.4, 16.°30N×98.°10W, h12km*
*NEIC **08** 00:10:12.8±0.9, 16.°32N×98.°06W, h22km±5km, mb4.7/80, MD4.5(MEX), Error ellipse: s-maj=6.4km s-min=4.1km az=212.0*
ISC 08 00:10:11.6±0.4**, 16.°14N**±0.°04×**98.°15W**±0.°03**, h21**km±1km**, n534,** σ**1^{s}07**/549**, mb4.7**/89**, MS4.0**/18**, 166C-159D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.25**	**6**	*i* P	**Pb**	**00 10 16.9**	**-0.9**
PNIG				*i* S	**Sb**	**00 10 23.6**	**+1.6**
PNIG	**Pinotepa**	**0.25**	**6**	*i* P	**Pb**	**00 10 16.9**	**-0.9**
PNIG				*i* S	**Sb**	**00 10 23.6**	**+1.6**
VHO	**Vista Hermosa**	**1.64**	**56**	*i* P	**Pn**	**00 10 39.0**	**-0.5**
VHO				*i* S	**Sb**	**00 11 01.3**	**-0.4**
VHO	**Vista Hermosa**	**1.64**	**56**	*i* P	**Pn**	**00 10 39.0**	**-0.5**
VHO				*i* S	**Sb**	**00 11 01.3**	**-0.4**
HUIG	**Huatulco**	**2.00**	**100**	*e*P	**Pn**	**00 10 42.8**	**-1.4**
HUIG				*i* S	**Sn**	**00 11 07.9**	**-0.8**
HUIG	**Huatulco**	**2.00**	**100**	*e*P	**Pn**	**00 10 42.8**	**-1.4**
HUIG				*i* S	**Sn**	**00 11 07.9**	**-0.8**
CAIG	**El Cayaco**	**2.22**	**294**	*i* P	**Pn**	**00 10 45.6**	**-1.6**
CAIG				*i* S	**Sn**	**00 11 12.0**	**-2.0**
CAIG	**El Cayaco**	**2.22**	**294**	*i* P	**Pn**	**00 10 45.6**	**-1.6**
CAIG				*i* S	**Sn**	**00 11 12.0**	**-2.0**
MEIG	**Mezcala**	**2.26**	**322**	*i* P	**Pn**	**00 10 47.0**	**-0.8**
MEIG				*i* S	**Sn**	**00 11 15.1**	**-0.1**
MEIG	**Mezcala**	**2.26**	**322**	*i* P	**Pn**	**00 10 47.0**	**-0.8**
MEIG				*i* S	**Sn**	**00 11 15.1**	**-0.1**
TPIG	**Tehuac#an**	**2.39**	**18**	*e*P	**Pn**	**00 10 49.7**	**0.0**
TPIG				*i* S	**Sn**	**00 11 20.2**	**+1.8**
TPIG	**Tehuac#an**	**2.39**	**18**	*e*P	**Pn**	**00 10 49.7**	**0.0**
TPIG				*i* S	**Sn**	**00 11 20.2**	**+1.8**
TPIG				⇑*e*		00 11 49.5	
YAIG	**Yautepec**	**2.84**	**342**	*i* P	**Pn**	**00 10 56.5**	**+0.6**
YAIG				*i* S	**Sn**	**00 11 30.4**	**+0.8**
YAIG	**Yautepec**	**2.84**	**342**	*i* P	**Pn**	**00 10 56.5**	**+0.6**
YAIG				*i* S	**Sn**	**00 11 30.4**	**+0.8**
PPM	**Popocatepetl**	**2.94**	**351**	*e*P	**Pn**	**00 10 56.9**	**-0.7**
PPM				*i* S	**Sn**	**00 11 33.3**	**+0.7**
PPM	**Popocatepetl**	**2.94**	**351**	*e*P	**Pn**	**00 10 56.9**	**-0.7**
PPM				*i* S	**Sn**	**00 11 33.3**	**+0.7**
ARIG	**Puente Sto Nin**	**2.99**	**316**	*e*P	**Pn**	**00 10 57.3**	**-0.5**
ARIG				*i* S	**Sn**	**00 11 33.0**	**-0.1**
UNM	**Universidad Na**	**3.31**	**343**	*i* P	**Pn**	**00 11 02.9**	**+0.3**
UNM				*i* S	**Sn**	**00 11 42.3**	**+0.8**
UNM	**Universidad Na**	**3.31**	**343**	*i* P	**Pn**	**00 11 02.9**	**+0.3**
UNM				*i* S	**Sn**	**00 11 42.3**	**+0.8**
ZIIG	**Zihuatanejo**	**3.49**	**295**	*i* P	**Pn**	**00 11 02.3**	**-2.4**
ZIIG				*e*S	**Sn**	**00 11 44.6**	**-0.8**
ZIIG	**Zihuatanejo**	**3.49**	**295**	*i* P	**Pn**	**00 11 02.3**	**-2.4**
ZIIG				*e*S	**Sn**	**00 11 44.6**	**-0.8**
DEIG	**Demacu**	**4.22**	**349**	*i* P	**Pn**	**00 11 14.4**	**-0.6**
DEIG				*e*S	**Sn**	**00 12 05.7**	**+1.9**
DEIG	**Demacu**	**4.22**	**349**	*i* P	**Pn**	**00 11 14.4**	**-0.6**
DEIG				*e*S	**Sn**	**00 12 05.7**	**+1.9**
PCIG		**4.77**	**95**	*i* P	**Pn**	**00 11 21.9**	**-0.3**
PCIG				*i* S	**Sn**	**00 12 16.9**	**0.0**
PCIG		**4.77**	**95**	*i* P	**Pn**	**00 11 21.9**	**-0.3**
PCIG				*i* S	**Sn**	**00 12 16.9**	**0.0**
TEIG	**Tepich**	**10.23**	**65**	*e*Pn	Pn	00 12 33.9	-3.3
TEIG				*e*Sn	**Sn**	**00 14 25.8**	**-5.5**
TEIG	**Tepich**	**10.23**	**65**	Pn	**Pn**	**00 12 36.3**	**-0.9**
	3.1nm,0.3s,baz=252,slow=16,SNR=13						
TEIG				Sn	**Sn**	**00 14 28.7**	**-2.6**
	2.6nm,0.3s,baz=311,slow=19,SNR=3.4						
TEIG				LR	LR	00 16 46.7	
	comp=Z,498nm,20.2s,baz=254,slow=40						
TGUH	**Tegucigalpa,Un**	**10.71**	**100**	*e*Pn	**Pn**	**00 12 43.2**	**-0.7**
732A	**Laxson Ranch,**	**12.64**	**353**	⇓P	**Pn**	**00 13 09.9**	**-0.4**
	baz=12,SNR=7.6						
631A	**Perdido Creek**	**13.39**	**351**	⇑P	**Pn**	**00 13 20.4**	**-0.1**
	baz=13						
HKT	**Hockley**	**13.91**	**8**	*e*Pn	**Pn**	**00 13 25.6**	**-1.9**
628A	**Black Gap, Mar**	**13.98**	**343**	⇓P	**Pn**	**00 13 28.6**	**0.0**
	baz=14						
532A	**Rocksprings**	**14.01**	**354**	⇑P	**Pn**	**00 13 28.7**	**-0.4**
	baz=14						
TXAR	**Lajitas Array**	**14.07**	**340**	Pn	**Pn**	**00 13 29.9**	**0.0**
TXAR	**Lajitas Array**	**14.07**	**340**	Pn	**Pn**	**00 13 29.9**	**0.0**
	0.0nm,0.3s,baz=159,slow=14,SNR=17						
TXAR				LR	LR	00 19 33.7	
	comp=Z,550nm,20.6s,baz=180,slow=41						
627A	**Terlingua Ranc**	**14.10**	**341**	⇓P	**Pn**	**00 13 29.7**	**-0.6**
	baz=14						
531A	**Rocksprings**	**14.13**	**351**	⇓P	**Pn**	**00 13 30.3**	**-0.3**
	baz=14						
530A	**J-C Ranch, Com**	**14.24**	**349**	⇓P	**Pn**	**00 13 32.2**	**0.0**
	baz=14,SNR=5.6						
JCT	**Junction City**	**14.35**	**354**	*e*Pn	**Pn**	**00 13 33.1**	**-0.5**
JCT	**Junction City**	**14.35**	**354**	⇓P	**Pn**	**00 13 33.2**	**-0.5**
	baz=14						
529A	**Stev Forest Ra**	**14.41**	**346**	⇓P	**Pn**	**00 13 34.4**	**-0.1**
	baz=14,SNR=7.9						
626A	**Big Bend Ranch**	**14.44**	**339**	⇓P	**Pn**	**00 13 34.8**	**-0.1**
	baz=14						
528A	**Cox Ranch, San**	**14.59**	**344**	⇑P	**Pn**	**00 13 37.0**	**+0.1**
	baz=14,SNR=7.1						
431A	**Sonora**	**14.65**	**352**	⇑P	**Pn**	**00 13 37.7**	**0.0**
	baz=15,SNR=9.7						
432A	**Menard**	**14.74**	**354**	⇑P	**Pn**	**00 13 38.8**	**-0.2**
	baz=15						
527A	**Woodward Ranch**	**14.81**	**341**	⇑P	**Pn**	**00 13 39.7**	**-0.3**
	baz=15						
429A	**Davenport Ranc**	**14.82**	**347**	⇑P	**Pn**	**00 13 39.5**	**-0.5**
	baz=15						
430A	**Baggett Ranch,**	**14.85**	**350**	⇑P	**Pn**	**00 13 39.5**	**-0.9**
	baz=15						
526A	**Mary Lane Ranc**	**14.88**	**340**	⇑P	**Pn**	**00 13 40.9**	**-0.1**
	baz=15,SNR=7.6						
428A	**Kincaid Ranch,**	**15.10**	**345**	⇑P	**Pn**	**00 13 43.8**	**0.0**
	baz=15,SNR=37						
331A	**San Angelo**	**15.24**	**353**	⇑P	**Pn**	**00 13 45.3**	**-0.4**
	baz=15,SNR=12						
332A	**Millersview**	**15.24**	**355**	⇑P	**Pn**	**00 13 45.3**	**-0.3**
	baz=15						
427A	**Hayter Ranch,**	**15.41**	**343**	⇑P	**Pn**	**00 13 48.0**	**+0.1**
	baz=15,SNR=5.6						
426A	**McDonald Obser**	**15.43**	**341**	⇑P	**Pn**	**00 13 48.2**	**-0.1**
	baz=15,SNR=10						
330A	**Mertzon**	**15.44**	**350**	⇑P	**Pn**	**00 13 48.3**	**0.0**
	baz=15,SNR=22						
329A	**Wagon Wheel Ra**	**15.67**	**348**	⇓P	**Pn**	**00 13 51.1**	**-0.2**
	baz=16						
232A	**Coleman**	**15.73**	**355**	⇑P	**Pn**	**00 13 51.9**	**-0.1**
	baz=16,SNR=22						
328A	**Wristen Ranch,**	**15.75**	**345**	⇓P	**Pn**	**00 13 52.1**	**-0.2**
	baz=16,SNR=21						
WHTX	**Lake Whitney**	**15.79**	**2**	⇓P	**Pn**	**00 13 52.7**	**-0.1**
	baz=16,SNR=7.5						
231A	**Bronte**	**15.85**	**353**	⇓P	**Pn**	**00 13 52.7**	**-0.8**
	baz=16,SNR=17						
425A	**Indio Mountain**	**15.86**	**338**	⇑P	**Pn**	**00 13 53.4**	**-0.4**
	baz=16,SNR=15						
NATX	**Nacogdoches**	**15.87**	**11**	*e*P	**P**	**00 13 56.6**	**-0.7**
	37nm,0.9s						
230A	**Sterling City**	**15.90**	**351**	⇓P	**Pn**	**00 13 54.0**	**-0.3**
	baz=16,SNR=18						
326A	**Caldwell Ranch**	**16.01**	**342**	⇓P	**Pn**	**00 13 55.2**	**-0.5**
	baz=16,SNR=7.4						
229A	**Bryant Ranch,**	**16.10**	**349**	⇓P	**Pn**	**00 13 56.2**	**-0.6**
	baz=16						
325A	**Bean Ranch, Si**	**16.39**	**339**	⇑P	**Pn**	**00 14 00.1**	**-0.5**
	baz=16,SNR=15						
228A	**UT Block 9, Go**	**16.41**	**347**	⇓P	**Pn**	**00 14 00.3**	**-0.4**
	baz=16						
ABTX	**Abilene, Hawle**	**16.46**	**356**	⇑P	**Pn**	**00 14 01.4**	**0.0**
	baz=16,SNR=18						
227A	**Bennet, Jal**	**16.48**	**344**	⇓P	**Pn**	**00 14 01.9**	**+0.3**
	baz=16,SNR=12						
130A	**Snyder**	**16.58**	**352**	⇑P	**Pn**	**00 14 02.4**	**-0.5**
	baz=16,SNR=13						
131A	**Roby**	**16.58**	**353**	⇓P	**Pn**	**00 14 01.6**	**-1.4**
	baz=16,SNR=14						
324A	**Moseley Ranch,**	**16.63**	**338**	⇓P	**Pn**	**00 14 03.0**	**-0.7**
	baz=17,SNR=16						
129A	**Stewart Farms,**	**16.76**	**349**	⇓P	**Pn**	**00 14 04.3**	**-0.8**
	baz=17,SNR=6.6						
226B	**Tecolote Peak,**	**16.78**	**342**	⇑P	**Pn**	**00 14 04.4**	**-1.1**
	baz=17,SNR=7.8						
MNTX	**Cornudas Mount**	**16.83**	**338**	*e*Pn	**Pn**	**00 14 04.6**	**-1.5**
	9.4nm,1.1s						
RFTA	**Plano**	**16.85**	**4**	*e*Pn	**Pn**	**00 14 05.7**	**-0.6**
128A	**Castleberry Fa**	**16.87**	**347**	⇑P	**Pn**	**00 14 05.5**	**-1.1**
	baz=17						
CLNB	**Carlsbad**	**16.87**	**343**	*e*Pn	**P**	**00 14 07.6**	**-1.0**
GDL2	**Guadalupe Moun**	**16.95**	**342**	*e*Pn	**P**	**00 14 08.5**	**-1.1**
127A	**Arkansas Junct**	**17.12**	**345**	⇑P	**Pn**	**00 14 08.8**	**-1.0**
	baz=17						
Z32A	**Haskell**	**17.13**	**356**	⇑P	**Pn**	**00 14 08.7**	**-1.1**
	baz=17,SNR=8.8						
Z31A	**Sharp Cattle R**	**17.20**	**354**	⇓P	**Pn**	**00 14 09.0**	**-1.6**
	baz=17						
224A	**Cornudas Mount**	**17.22**	**338**	⇑P	**Pn**	**00 14 09.7**	**-1.3**
	baz=17,SNR=9.9						
126A	**Clayton Basin,**	**17.27**	**343**	⇑P	**Pn**	**00 14 10.2**	**-1.5**
	baz=17						
Z30A	**Sanderson Ranc**	**17.28**	**352**	⇓P	**Pn**	**00 14 10.3**	**-1.4**
	baz=17,SNR=15						
Z29A	**Hungry Hill Ra**	**17.34**	**350**	⇓P	**Pn**	**00 14 10.8**	**-1.7**
	baz=17,SNR=11						
VBMS	**Vicksburg**	**17.44**	**22**	*e*P	**Pn**	**00 14 13.6**	**-0.1**
125A	**Gardner Draw,**	**17.47**	**341**	⇑P	**Pn**	**00 14 12.5**	**-1.7**
	baz=17,SNR=9.9						
Z28A	**Tucker Farm, M**	**17.50**	**348**	⇑P	**Pn**	**00 14 13.9**	**-0.6**
	baz=17						
Z27A	**Tatum**	**17.70**	**346**	⇓P	**Pn**	**00 14 16.1**	**-0.9**
	baz=18,SNR=22						
124A	**Stringfield Ra**	**17.76**	**339**	⇑P	**Pn**	**00 14 17.2**	**-0.7**
	baz=18,SNR=16						
Y32A	**R-V Farms, Ver**	**17.82**	**356**	⇓P	**Pn**	**00 14 17.8**	**-0.6**
	baz=18						
320A	**Kipp Ranch, An**	**17.84**	**330**	⇑P	**Pn**	**00 14 17.5**	**-1.3**
	baz=18,SNR=14						
Y31A	**Rekieta Farm,**	**17.84**	**354**	⇑P	**Pn**	**00 14 17.1**	**-1.6**
	baz=18						
Z26A	**Caprock**	**17.85**	**344**	⇑P	**Pn**	**00 14 17.5**	**-1.4**
	baz=18,SNR=19						
222A	**Williams Famil**	**17.85**	**334**	⇑P	**Pn**	**00 14 17.9**	**-1.0**
	baz=18,SNR=16						
Y29A	**Porterfield Fa**	**17.92**	**350**	⇓P	**Pn**	**00 14 18.4**	**-1.4**
	baz=18						
123A	**Bell Site, Whi**	**17.99**	**337**	⇓P	**Pn**	**00 14 19.2**	**-1.4**
	baz=18						
221A	**Mesquite Ranch**	**18.06**	**333**	⇑P	**P**	**00 14 21.3**	**-0.4**
	baz=18						
Z25A	**Roswell**	**18.07**	**342**	⇓P	**Pn**	**00 14 20.8**	**-0.7**
	baz=18,SNR=16						
Y28A	**McKinney Farm,**	**18.07**	**349**	⇓P	**Pn**	**00 14 20.4**	**-1.1**
	baz=18						
MSTX	**Muleshoe**	**18.23**	**348**	⇓P	**Pn**	**00 14 22.4**	**-1.1**
	baz=18,SNR=14						
Y27A	**Causey**	**18.23**	**347**	⇑P	**Pn**	**00 14 22.5**	**-1.0**
	baz=18,SNR=11						
319A	**Douglas**	**18.25**	**328**	⇓P	**Pn**	**00 14 23.4**	**-0.4**
	baz=18,SNR=6.7						
220A	**Playas Peak, P**	**18.31**	**331**	⇓P	**P**	**00 14 24.0**	**-0.6**
	baz=18,SNR=21						
Z24A	**Sheeppen Canyo**	**18.31**	**340**	⇓P	**P**	**00 14 23.6**	**-1.0**
	baz=18,SNR=35						
122A	**Conniff Cattle**	**18.33**	**336**	⇓P	**P**	**00 14 24.1**	**-0.6**
	baz=18						
X30A	**Coker Ranch, T**	**18.39**	**353**	⇓P	**P**	**00 14 23.7**	**-1.6**
	baz=18,SNR=13						
Y26A	**Elida**	**18.43**	**345**	⇑P	**P**	**00 14 24.6**	**-1.2**
	baz=18,SNR=13						
X31A	**McDonald Ranch**	**18.48**	**355**	⇑P	**P**	**00 14 25.0**	**-1.4**
	baz=18						
X29A	**Tulia**	**18.50**	**351**	⇓P	**P**	**00 14 26.1**	**-0.5**
	baz=18,SNR=7.3						
121A	**Cookes Peak, D**	**18.51**	**334**	⇑P	**Pn**	**00 14 26.6**	**-0.4**
	baz=18,SNR=20						
WMOK	**Wichita Mounta**	**18.52**	**358**	*e*P	**P**	**00 14 25.0**	**-1.8**
	7.5nm,0.8s						
Z23A	**Rita Site, Whi**	**18.54**	**338**	⇑P	**P**	**00 14 26.7**	**-0.4**
	baz=18,SNR=14						
X28A	**Dimmitt**	**18.66**	**350**	⇑P	**P**	**00 14 27.4**	**-0.9**
	baz=19						
MIAR	**Mount Ida**	**18.78**	**12**	*e*P	**P**	**00 14 28.6**	**-0.9**
	17nm,0.9s						
Z22A	**Elephant Butte**	**18.81**	**337**	⇓P	**P**	**00 14 29.8**	**-0.2**
	baz=19,SNR=13						
Y24A	**Capitan**	**18.88**	**341**	⇑P	**P**	**00 14 30.7**	**-0.2**
	baz=19,SNR=16						
120A	**U Bar Ranch, L**	**18.90**	**332**	⇓P	**Pn**	**00 14 31.2**	**-0.4**
	baz=19,SNR=21						
AMTX	**Amarillo**	**18.93**	**351**	*e*P	**P**	**00 14 30.0**	**-1.3**
	24nm,0.8s						
X27A	**F and S Farms,**	**18.95**	**347**	⇓P	**P**	**00 14 31.0**	**-0.6**
	baz=19						
X26A	**CR and CF Fran**	**19.02**	**346**	⇑P	**P**	**00 14 31.4**	**-0.9**
	baz=19,SNR=16						
W31A	**Holland Ranch,**	**19.03**	**355**	⇓P	**P**	**00 14 31.3**	**-1.1**
	baz=19						
W30A	**Crocket Farms**	**19.08**	**354**	⇓P	**P**	**00 14 32.0**	**-0.9**
	baz=19						
Y23A	**Lovelace Mesa,**	**19.09**	**340**	⇑P	**Pn**	**00 14 33.3**	**-0.8**
	baz=19,SNR=21						
Z21A	**St. Cloud Mine**	**19.13**	**335**	⇑P	**Pn**	**00 14 34.2**	**-0.4**
	baz=19,SNR=41						
W29A	**Amraillo**	**19.16**	**351**	⇑P	**P**	**00 14 33.3**	**-0.5**
	baz=19						
X25A	**Clemmons Ranch**	**19.22**	**343**	⇓P	**P**	**00 14 34.0**	**-0.6**
	baz=19						
W27A	**Bowe Ranch, En**	**19.35**	**348**	⇓P	**P**	**00 14 35.3**	**-0.6**
	baz=19,SNR=10.0						
Z20A	**Nine Sixteen R**	**19.36**	**333**	⇑P	**P**	**00 14 35.7**	**-0.4**
	baz=19,SNR=28						
W28A	**Vega**	**19.38**	**350**	⇓P	**P**	**00 14 35.4**	**-0.9**
	baz=19						
X24A	**Lazy VL Ranch,**	**19.48**	**342**	⇑P	**P**	**00 14 37.4**	**0.0**
	baz=19,SNR=6.5						
BNM	**Barren Site**	**19.49**	**339**	*e*P	**Pn**	**00 14 38.4**	**-0.5**
	24nm,0.9s						
W26A	**Owens Ranch, T**	**19.53**	**346**	⇓P	**P**	**00 14 37.5**	**-0.4**
	baz=20						
V31A	**Spring Creek L**	**19.61**	**356**	⇓P	**P**	**00 14 38.2**	**-0.5**
	baz=20						
LRAL	**Lakeview Retre**	**19.61**	**29**	*e*P	**P**	**00 14 37.8**	**-0.9**
	11nm,0.9s						
LRAL				*e*Sn	**S**	**00 18 18.2**	**-0.9**
LENM	**Lemitar**	**19.62**	**338**	*e*Pn	**Pn**	**00 14 41.0**	**+0.5**
LPM	**Los Pinos Moun**	**19.63**	**339**	*e*P	**P**	**00 14 39.0**	**-0.1**
V30A	**Spur Ranch, Mi**	**19.67**	**354**	⇑P	**P**	**00 14 38.9**	**-0.5**
	baz=20						
X23A	**Hourglass Bar**	**19.73**	**340**	⇓P	**Pn**	**00 14 40.6**	**-1.1**
	baz=20,SNR=38						
Y21A	**Point of Rocks**	**19.75**	**336**	⇑P	**Pn**	**00 14 41.1**	**-0.9**
	baz=20,SNR=15						
TUC	**Tucson**	**19.76**	**327**	*e*P	**P**	**00 14 37.4**	**-3.0**
	1.5nm,1.0s						
TUL1	**Tulsa**	**19.80**	**6**	⇓P	**P**	**00 14 39.9**	**-0.8**
	baz=20						
W25A	**X Bar L Ranch,**	**19.82**	**345**	⇑P	**P**	**00 14 40.3**	**-0.7**
	baz=20,SNR=14						
V28A	**Channing**	**19.86**	**350**	⇑P	**P**	**00 14 40.4**	**-1.1**
	baz=20						
V29A	**Stinnett**	**19.88**	**352**	⇑P	**P**	**00 14 40.9**	**-0.8**
	baz=20						
LAZ	**Ladron**	**19.89**	**338**	*e*P	**P**	**00 14 40.1**	**-1.9**
OXF	**Oxford**	**19.91**	**22**	*e*P	**P**	**00 14 41.2**	**-0.7**
	31nm,0.9s						
X22A	**Bernardo**	**19.94**	**338**	⇓P	**P**	**00 14 41.2**	**-1.3**
	baz=20						
Y20A	**Horse Springs,**	**19.94**	**334**	⇑P	**P**	**00 14 41.1**	**-1.5**
	baz=20,SNR=15						
V27A	**Dan Oppiter Fa**	**19.98**	**349**	⇑P	**P**	**00 14 42.0**	**-0.7**
	baz=20						
W24A	**Lazy 6 Ranch,**	**20.07**	**342**	⇓P	**P**	**00 14 43.5**	**-0.4**
	baz=20,SNR=22						
ANMO	**Albuquerque**	**20.15**	**340**	*e*P	**P**	**00 14 44.4**	**-0.3**
	20nm,0.9s						
ANMO	**Albuquerque**	**20.15**	**340**	P	**P**	**00 14 44.7**	**0.0**
	0.4nm,0.3s,baz=154,slow=12,SNR=43						
ANMO				LR	LR	00 23 10.6	
	comp=Z,934nm,18.5s,baz=159,slow=39						
X21A	**Alamocita Cree**	**20.18**	**336**	⇓P	**P**	**00 14 45.4**	**+0.3**
	baz=20						
TIGA	**Tifton**	**20.20**	**38**	⇓P	**P**	**00 14 43.9**	**-1.1**
	baz=20						
U31A	**Nine Bar Ranch**	**20.20**	**356**	⇑P	**P**	**00 14 44.8**	**-0.3**
	baz=20						
V26A	**Tequesquite Ra**	**20.21**	**347**	⇓P	**P**	**00 14 45.3**	**-0.1**
	baz=20,SNR=26						
W23A	**Werner Place,**	**20.25**	**341**	⇑P	**P**	**00 14 46.0**	**+0.2**
	baz=20,SNR=12						
W22A	**Albuquerque**	**20.40**	**339**	⇑P	**P**	**00 14 47.9**	**+0.4**
	baz=20						

U29A	Oasis Ranch, S baz=20	20.42	353	⇓P	P	00 14 48.2	+0.7
U30A	WK&E Inc. Balk baz=20	20.43	354	⇓P	P	00 14 47.5	-0.1
V25A	Rancho No Teng baz=20,SNR=22	20.45	345	⇓P	P	00 14 47.2	-0.8
HBAR	Harrisburg	20.46	18	eP	P	00 14 47.0	-0.9
U28A	Mallet baz=20	20.48	351	⇑P	P	00 14 48.4	+0.2
V24A	Rampart Ranch, baz=20	20.51	343	⇑P	P	00 14 48.2	-0.5
X20A	Quemado baz=20,SNR=11	20.54	335	⇓P	P	00 14 49.4	+0.4
U27A	Thompson Grove baz=20,SNR=16	20.62	349	⇑P	P	00 14 49.8	0.0
214A	Organ Pipe Nat baz=21	20.63	322	⇑P	P	00 14 49.8	+0.1
W21A	San Fidel baz=21	20.72	338	⇑P	P	00 14 51.1	+0.2
U26A	Atchley Ranch, baz=21	20.77	347	⇓P	P	00 14 51.7	+0.2
V23A	Ortiz Mt. (NFS baz=21	20.80	341	⇑P	P	00 14 51.6	-0.2
PLAL	Pickwick Lake 37nm,1.1s	20.82	24	eP	P	00 14 50.8	-1.0
T31A	Randall Ranch, baz=21	20.91	357	⇑P	P	00 14 52.3	-0.6
U25A	Circle Dot Ran baz=21	20.93	346	⇑P	P	00 14 52.9	-0.3
T30A	Plains baz=21	20.93	355	⇑P	P	00 14 52.6	-0.5
GNAR	Gosnell 964nm,1.3s	21.03	19	ePn	P	00 14 55.0	+1.0
W20A	Ramah baz=21	21.05	336	⇓P	P	00 14 55.1	+0.5
T29A	Hugoton baz=21	21.11	353	⇓P	P	00 14 54.7	-0.4
X18A	Snowflake baz=21	21.15	332	⇓P	P	00 14 56.0	+0.4
U24A	Moreno Valley baz=21	21.16	344	⇑P	P	00 14 56.1	+0.3
V22A	San Miguel Ran baz=21	21.18	340	⇑P	P	00 14 55.7	-0.2
HALT	Halls	21.20	20	ePn	P	00 14 58.0	+2.2
T27A	Campo baz=21	21.23	350	⇓P	P	00 14 56.3	0.0
V21A	Milan baz=21	21.33	338	⇑P	P	00 14 57.6	0.0
U23A	El Rito baz=21	21.34	342	⇑P	P	00 14 57.8	+0.2
T26A	Comanche Natio baz=21	21.50	348	⇑P	P	00 14 59.2	0.0
S30A	Montezuma baz=21	21.51	355	⇓P	P	00 14 59.1	-0.2
GLAT	Glass	21.54	20	eP	P	00 15 02.0	+2.5
S29A	Ulysses baz=22	21.55	354	⇓P	P	00 14 59.3	-0.5
W18A	Petrified Fore baz=22	21.56	333	⇓P	P	00 15 00.2	+0.2
U22A	Llaves baz=22	21.59	341	⇑P	P	00 15 00.1	-0.2
S28A	Manter baz=22	21.62	352	⇑P	P	00 14 59.8	-0.6
V20A	Brimhall baz=22	21.63	337	⇓P	P	00 15 00.6	-0.2
T25A	Trinidad baz=22	21.64	346	⇓P	P	00 15 01.3	+0.6
GOGA	Godfrey	21.71	35	eP	P	00 15 00.3	-1.1
T24A	Torres, Weston baz=22	21.73	345	⇓P	P	00 15 01.8	0.0
Z14A	Wintersburg baz=22	21.74	325	⇓P	P	00 15 01.5	-0.2
UTMT	University of 90nm,0.9s	21.75	21	eP	P	00 15 00.9	-0.8
PARMO	Parma	21.76	18	eP	P	00 15 00.8	-1.0
X16A	Lo Mia Camp, P baz=22	21.77	329	⇑P	P	00 15 02.7	+0.5
S27A	Las Animas baz=22	21.86	350	⇑P	P	00 15 03.3	+0.2
U21A	Nageezi baz=22	21.90	339	⇑P	P	00 15 03.7	0.0
S26A	Kim baz=22,SNR=15	21.91	349	⇓P	P	00 15 03.1	-0.5
SWET	Sewanee 37nm,1.0s	21.92	28	eP	P	00 15 02.5	-1.2
WVT	Waverly 34nm,0.9s	21.93	23	eP	P	00 15 02.0	-1.7
T23A	Casias Ranch, baz=22	21.95	343	⇓P	P	00 15 04.2	0.0
R30A	Dighton baz=22	22.14	356	⇓P	P	00 15 06.3	+0.3
S25A	Robets Cordova baz=22,SNR=34	22.14	347	⇑P	P	00 15 05.8	-0.4
U20A	Newcomb baz=22	22.16	337	⇓P	P	00 15 06.1	-0.3
T22A	Edith baz=22	22.19	341	⇓P	P	00 15 06.6	-0.1
Y14A	Wickenburg baz=22,SNR=10	22.20	326	⇑P	P	00 15 06.6	-0.2
GTBY	Guantanamo Bay 72nm,1.0s	22.23	77	eP	P	00 15 08.0	+0.9
S24A	Houchin Ranch, baz=22	22.30	345	⇑P	P	00 15 07.7	-0.3
R28A	Tribune baz=22	22.35	352	⇑P	P	00 15 08.0	-0.3
R29A	Marienthal baz=22	22.35	354	⇓P	P	00 15 07.8	-0.5
T21A	Navajo Lake baz=22	22.37	340	⇓P	P	00 15 08.3	-0.4
R27A	Eads baz=22	22.43	350	⇑P	P	00 15 08.8	-0.5
SDCO	Great Sand Dun 23nm,1.0s	22.48	345	eP	P	00 15 09.5	-0.4
R26A	Arlington baz=22	22.56	349	⇓P	P	00 15 10.2	-0.4
R25A	Fountain Ranch baz=22	22.57	347	⇓P	P	00 15 10.3	-0.5
GLA	Glamis 11nm,1.0s	22.60	321	eP	P	00 15 09.8	-1.2
GLA	Glamis baz=23	22.60	321	⇑P	P	00 15 10.2	-0.8
WUAZ	Wupatki 25nm,0.9s	22.62	331	eP	P	00 15 10.7	-0.7
WUAZ	Wupatki baz=23	22.62	331	⇓P	P	00 15 10.6	-0.7
CPCT	Cooper Cave	22.76	30	eP	P	00 15 11.1	-1.5
R24A	Sanders Place, baz=23,SNR=8.1	22.84	346	⇑P	P	00 15 13.4	-0.3
S22A	4UR Ranch, Cre baz=23,SNR=12	22.84	342	⇑P	P	00 15 13.4	-0.3
SIUC	Southern Illin 60nm,1.0s	22.89	18	eP	P	00 15 13.3	-0.7
KSU1	Kansas State U 23nm,1.0s	22.91	3	eP	P	00 15 13.5	-0.6
Y12C	Blythe baz=23	22.91	323	⇓P	P	00 15 13.8	-0.4
R23A	Moffat baz=23,SNR=11	22.98	344	⇑P	P	00 15 14.8	-0.4
S21A	Coal Bank Pass baz=23	23.07	340	⇑P	P	00 15 15.2	-0.9
PDMCI	Parker Dam,Lak baz=23,SNR=5.4	23.10	324	⇓P	P	00 15 15.3	-0.8
KSCO	Kaye Shedlock' baz=23	23.12	351	⇓P	P	00 15 15.7	-0.8
SWSC	Sam W. Stewart baz=23	23.12	320	⇓P	P	00 15 16.2	-0.2
Q26A	Hugo baz=23	23.18	349	⇑P	P	00 15 17.5	+0.5
R22A	Saguache, Gunn baz=23	23.27	343	⇓P	P	00 15 17.8	-0.3
TKL	Tuckaleechee C	23.29	31	eP	P	00 15 17.2	-0.8
TKL	Tuckaleechee C 9.2nm,0.9s,baz=203,slow=11,SNR=8.6	23.29	31	P	P	00 15 17.9	-0.1
COW	Cow Castle Cre	23.30	39	eP	P	00 15 16.6	-1.6
Q25A	Bedland, Calha baz=23,SNR=13	23.31	348	⇑P	P	00 15 17.4	-1.0
BC3	Big Chuckawall baz=23	23.40	321	⇓P	P	00 15 18.7	-0.6
S20A	Disappointment baz=23,SNR=13	23.41	339	⇑P	P	00 15 19.1	-0.4
NHSC	New Hope 130nm,1.0s	23.44	41	eP	P	00 15 19.5	0.0
SLM	Saint Louis 34nm,1.1s	23.46	16	eP	P	00 15 17.8	-1.9
MONP	Monument Peak baz=24	23.48	319	⇑P	P	00 15 19.5	-0.7
Q24A	Divide baz=24	23.55	346	⇑P	P	00 15 20.0	-1.0
W13A	Hualapai Mount baz=24,SNR=6.0	23.55	326	⇓P	P	00 15 20.7	-0.2
IRM	Iron Mountain baz=24,SNR=6.8	23.57	323	⇓P	P	00 15 19.9	-1.0
JSC	Jenkinsville	23.60	37	eP	P	00 15 20.4	-0.7
USIN	University of 80nm,1.0s	23.62	21	eP	P	00 15 21.0	-0.3
R21A	Cimarron baz=24,SNR=6.6	23.63	341	⇑P	P	00 15 21.1	-0.6
P27A	Ficken Ranch, baz=24	23.64	351	⇓P	P	00 15 21.0	-0.6
Q23A	Hartsel baz=24	23.66	345	⇓P	P	00 15 20.8	-1.2
R20A	Redvale baz=24	23.74	340	⇑P	P	00 15 22.1	-0.6
PV01	Paradox Valley	23.75	339	eP	P	00 15 22.0	-0.8
P26A	Davis Ranch, A baz=24	23.77	350	⇑P	P	00 15 22.2	-0.7
U15A	North Rim baz=24,SNR=19	23.80	331	⇓P	P	00 15 22.7	-0.6
P25A	Willow Gulch B baz=24,SNR=7.8	23.87	348	⇑P	P	00 15 23.2	-0.6
S18A	Hurst Farm, Bl baz=24,SNR=16	23.88	336	⇑P	P	00 15 23.3	-0.7
Q22A	Crested Butte, baz=24,SNR=8.2	23.90	343	⇑P	P	00 15 24.0	-0.3
BELC	Belle Mtn. Jos baz=24	23.96	321	⇑P	P	00 15 24.5	-0.3
PFO	Pinyon Flat Ob baz=24	23.98	320	⇓P	P	00 15 24.7	-0.2
P24A	Kohler Place, baz=24	24.02	347	⇓P	P	00 15 25.3	0.0
Q21A	Lamborn Mesa, baz=24,SNR=20	24.07	342	⇑P	P	00 15 26.0	+0.3
PV04	Paradox Valley	24.10	339	eP	P	00 15 25.4	-0.7
P23A	Jefferson baz=24,SNR=18	24.10	345	⇑P	P	00 15 26.4	+0.2
TZTN	Tazewell 125nm,2.1s	24.11	30	eP	P	00 15 25.2	-0.7
PV10	Paradox Valley	24.13	339	eP	P	00 15 25.6	-0.8
OLIL	Olney 40nm,1.0s	24.17	19	eP	P	00 15 26.7	+0.3
KMSC	Kings Mountain baz=24,SNR=7.6	24.18	35	⇑P	P	00 15 26.2	-0.4
LDFC	Landfair 11nm,0.8s	24.21	324	eP	P	00 15 27.8	+0.8
SMCO	Snowmass 25nm,0.9s	24.21	343	eP	P	00 15 28.2	+0.9
O27A	Beecher Island baz=24	24.25	352	⇓P	P	00 15 27.2	-0.2
GMRC	Granite Mounta baz=24	24.31	323	⇓P	P	00 15 27.2	-0.7
WCI	Wyandotte Cave 155nm,2.0s	24.35	23	eP	P	00 15 26.9	-1.3
Q20A	Ridgley Place, baz=24	24.40	341	⇓P	P	00 15 28.7	-0.2
O26A	Horse Wrangler baz=24	24.43	350	⇓P	P	00 15 28.9	-0.1
O25A	Wiggins baz=24	24.44	349	⇓P	P	00 15 28.8	-0.3
ISCO	Idaho Springs 30nm,0.9s	24.45	346	eP	P	00 15 29.8	+0.3
ISCO	Idaho Springs baz=24,SNR=40	24.45	346	⇑P	P	00 15 29.7	+0.3
O24A	Longmont baz=25	24.64	347	⇓P	P	00 15 31.3	+0.4
BBRC	Big Bear Solar baz=25	24.70	320	⇑P	P	00 15 32.0	+0.3
HEC	Hector,Ludlow baz=25,SNR=6.4	24.73	322	⇓P	P	00 15 32.1	+0.3
N27A	Anderson Farm, baz=25	24.87	352	⇑P	P	00 15 32.9	0.0
O23A	Lake Granby, G baz=25,SNR=24	24.91	346	⇓P	P	00 15 34.1	+0.5
TUQ	Turquoise Moun baz=25,SNR=10	24.93	324	⇑P	P	00 15 33.8	+0.2
P20A	De Beque baz=25,SNR=9.9	24.93	341	⇓P	P	00 15 33.5	-0.1
OGNE	Ogallala 58nm,1.1s	24.94	353	eP	P	00 15 34.3	+0.7
OGNE	Ogallala baz=25	24.94	353	⇓P	P	00 15 33.8	+0.3
N26A	Koester Ranch, baz=25	24.99	351	⇓P	P	00 15 34.1	+0.1
O22A	Kremmling baz=25,SNR=30	25.02	345	⇑P	P	00 15 34.4	-0.2
OTAV	Otavalo 8.1nm,1.2s	25.05	127	eP	P	00 15 37.7	+2.5
BLO	Bloomington 162nm,2.2s	25.10	22	eP	P	00 15 35.3	+0.4
CCUT	Cedar City 5.3nm,1.0s	25.21	331	eP	P	00 15 37.5	+1.3
P19A	Cripple Cowboy baz=25,SNR=16	25.24	340	⇓P	P	00 15 36.7	+0.2
N24A	Carr baz=25,SNR=6.0	25.28	348	⇑P	P	00 15 37.1	+0.3
O21A	Pagoda baz=25,SNR=18	25.32	343	⇓P	P	00 15 37.3	+0.1
GSC	Goldstone 9.8nm,1.1s	25.34	322	eP	P	00 15 36.4	-0.9
GSC	Goldstone baz=25	25.34	322	⇑P	P	00 15 37.4	+0.1
Q16A	Castle Valley baz=25,SNR=8.0	25.40	336	⇑P	P	00 15 37.9	+0.1
ARUT	Antelope Range	25.43	331	eP	P	00 15 38.7	+0.5
MSU	Marysvale	25.47	334	eP	P	00 15 40.4	+1.9
O20A	White River Ci baz=25,SNR=6.0	25.47	342	⇓P	P	00 15 39.1	+0.7
MVU	Marysvale 8.3nm,1.0s	25.47	334	eP	P	00 15 41.2	+2.6
HDIL	Hopedale 32nm,0.9s	25.51	16	eP	P	00 15 37.6	-1.0
N23A	Red Feather La baz=26,SNR=14	25.57	346	⇑P	P	00 15 40.0	+0.6
N22A	Wattenberg Ran baz=26	25.60	345	⇓P	P	00 15 40.1	+0.3
M25A	Palm-Egli Farm baz=26	25.71	350	⇓P	P	00 15 41.3	+0.7
P17A	Butcher Ranch, baz=26	25.72	337	⇑P	P	00 15 40.7	0.0
SDDR	Presa de Saban 84nm,2.0s	25.76	80	eP	P	00 15 43.7	+2.5
N21A	Black Mountain baz=26,SNR=13	25.84	344	⇓P	P	00 15 42.9	+1.0
PHWY	Pilot Hill 14nm,0.8s	25.85	347	eP	P	00 15 50.1	+8.0
M24A	Cheyenne baz=26,SNR=8.0	25.89	348	⇓P	P	00 15 42.8	+0.6
LRMC	Laurel Mountai baz=26	25.99	321	⇑P	P	00 15 43.1	-0.1
SCIA	State Center 64nm,1.0s	26.02	8	eP	P	00 15 43.2	-0.1
M23A	Laramie baz=26,SNR=7.3	26.07	347	⇓P	P	00 15 44.4	+0.5
N20A	Spence Gulch, baz=26	26.12	342	⇓P	P	00 15 44.2	-0.2
BLA	Blacksburg 20nm,1.0s	26.20	33	eP	P	00 15 44.3	-0.7
M22A	Cedar Creek Ra baz=26	26.21	346	⇓P	P	00 15 45.7	+0.5
CNNC	Cliffs of the 44nm,1.0s	26.27	40	eP	P	00 15 46.6	+1.1
MPMC	Manual Prospec baz=26	26.27	323	⇑P	P	00 15 45.2	-0.5
L25A	Engebretsen Ra baz=26	26.40	350	⇑P	P	00 15 47.1	+0.3
ARVC	Arvin baz=26	26.45	319	⇓P	P	00 15 46.5	-0.7
VWCC	Virginia Weste	26.47	34	eP	P	00 15 46.9	-0.5
MPU	Maple Canyon 14nm,0.9s	26.53	336	eP	P	00 15 48.0	-0.1
M21A	Separation Pea baz=26	26.59	344	⇓P	P	00 15 48.8	+0.1
L23A	Garrett baz=27	26.68	347	⇑P	P	00 15 49.4	-0.1
DAU	Daniels Canyon	26.73	337	eP	P	00 15 49.7	-0.3
L22A	Ellis Ranch, M baz=27	26.77	346	⇑P	P	00 15 49.5	-0.7
K25A	Mack Ranch, Ha baz=27	26.83	351	⇓P	P	00 15 50.2	-0.5
CWC	Cottonwood Cre baz=27	26.88	323	⇑P	P	00 15 51.4	+0.1
R11A	Troy Canyon, C baz=27,SNR=6.1	26.91	329	⇑P	P	00 15 50.9	-0.7
L21A	Rawlins baz=27	26.93	345	⇑P	P	00 15 51.8	+0.1
DUG	Dugway 12nm,1.0s	27.15	335	eP	P	00 15 54.5	+0.9
DUG	Dugway baz=27,SNR=11	27.15	335	⇑P	P	00 15 52.5	-1.1
M18A	Lyman baz=27	27.22	340	⇓P	P	00 15 53.6	-0.7
K23A	Bowen Ranch, D baz=27	27.28	348	⇓P	P	00 15 54.1	-0.7
ACSO	Alum Creek Sta 25nm,1.0s	27.39	26	eP	P	00 15 54.3	-1.3
M17A	Scullys Gap (B baz=27	27.46	339	⇑P	P	00 15 56.5	+0.1
JFWS	Jewell Farm 14nm,0.9s	27.52	13	eP	P	00 15 56.3	-0.5
ECSD	EROS Data Cent 6.9nm,0.9s	27.53	2	eP	P	00 15 56.2	-0.7
L18A	Fontenelle, Gr baz=28	27.65	341	⇑P	P	00 15 58.1	-0.1
J24A	Dixon Ranch, L baz=28	27.66	350	⇑P	P	00 15 58.3	+0.1
SDV	Santo Domingo 12nm,0.4s	27.79	102	eP	P	00 15 55.1	-4.6
K20A	Yellowstone Ra baz=28	27.83	344	⇑P	P	00 15 59.0	-0.8
HWUT	Hardware Ranch 6.4nm,0.9s	27.89	338	eP	P	00 15 59.5	-0.8
JSRW	J. Sargeant Re	27.95	36	eP	P	00 16 00.8	+0.2
J22A	Midwest baz=28	28.09	347	⇓P	P	00 16 01.2	-0.8
BW06	Boulder Array 7.2nm,0.9s	28.27	342	eP	P	00 16 03.2	-0.5
PDAR	Pinedale Array	28.27	342	P	P	00 16 03.5	-0.2
PDAR	Pinedale Array 4.0nm,0.9s,baz=130,slow=9.6,SNR=24	28.27	342	P	P	00 16 03.5	-0.2
PDAR				LR	LR	00 28 04.0	
RSSD	comp=Z,378nm,18.7s,baz=345,slow=38 Black Hills 3.7nm,0.9s	28.33	351	eP	P	00 16 05.0	+0.7
NVAR	Mina Array Bea	28.40	325	P	P	00 16 05.5	+0.6
NVAR	Mina Array Bea 3.3nm,0.8s,baz=157,slow=10.0,SNR=15	28.40	325	P	P	00 16 05.5	+0.6
NVAR				LR	LR	00 27 34.3	
HVU	comp=Z,85nm,21.8s,baz=38,slow=37 Hansel Valley 11nm,0.9s	28.48	337	eP	P	00 16 06.5	+1.0
I22A	9 Mile Ranch, baz=28	28.55	347	⇑P	P	00 16 05.2	-0.9
CBN	Corbin 16nm,0.8s	28.59	36	eP	P	00 16 06.0	-0.3
J19A	Crowheart baz=28	28.59	343	⇑P	P	00 16 05.1	-1.4
ELK	Elko 5.1nm,1.2s	28.64	332	eP	P	00 16 07.7	+0.7
ELK	Elko 2.2nm,1.0s,baz=113,slow=5.1,SNR=5.6	28.64	332	P	P	00 16 07.8	+0.8
ELK				LR	LR	00 27 28.7	
I21A	comp=Z,230nm,19.4s,baz=340,slow=36 Big Trails, Te baz=29,SNR=10	28.65	346	⇑P	P	00 16 06.7	-0.3
J18A	Kendall Valley baz=29,SNR=14	28.82	342	⇓P	P	00 16 08.0	-0.7
L14A	Malta baz=29,SNR=5.4	28.88	336	⇑P	P	00 16 08.8	-0.2
I20A	Worland baz=29	28.98	345	⇑P	P	00 16 09.6	-0.4
H23A	Clabaugh Cattl baz=29	28.98	349	⇑P	P	00 16 09.8	-0.1
H24A	Dirks Ranch, A baz=29	29.02	351	⇑P	P	00 16 09.9	-0.3
J17A	Brown Place, J baz=29	29.17	341	⇓P	P	00 16 11.3	-0.4
H22A	Clearmont baz=29	29.20	348	⇓P	P	00 16 11.3	-0.5
SNOW	Snow King Moun 12nm,0.9s	29.27	341	eP	P	00 16 13.4	+0.7
LOHW	Long Hollow 9.0nm,0.9s	29.36	341	eP	P	00 16 14.4	+1.0
H21A	Big Horn, Sher baz=29	29.37	347	⇓P	P	00 16 12.5	-0.8
MOOW	Moose Ponds 4.4nm,0.9s	29.53	341	eP	P	00 16 14.0	-0.8
G23A	Biddle baz=30	29.60	350	⇑P	P	00 16 14.6	-0.8
I17A	Pilgrim Ck. baz=30	29.63	342	⇓P	P	00 16 15.0	-0.8
G22A	Birney baz=30	29.79	348	⇓P	P	00 16 16.5	-0.4
H19A	Powell baz=30	29.87	344	⇑P	P	00 16 17.0	-0.8
G21A	Lodge Grass baz=30	29.98	347	⇑P	P	00 16 18.4	-0.3
H18A	Shoshone NF, C baz=30	30.06	343	⇑P	P	00 16 19.0	-0.6
BEKR	Beckworth 3.0nm,1.0s	30.54	325	eP	P	00 16 23.8	-0.1
H16A	Russell Place, baz=30	30.54	341	⇓P	P	00 16 23.4	-0.5
G18A	Lazy EL Ranch, baz=31	30.63	344	⇑P	P	00 16 24.0	-0.5
HLID	Hailey 6.2nm,1.3s	30.64	336	eP	P	00 16 23.1	-1.5
HLID	Hailey baz=31	30.64	336	⇑P	P	00 16 24.0	-0.6
F20A	Billings baz=31	30.73	346	⇓P	P	00 16 24.9	-0.5
I13A	Wildhorse Cree baz=31	30.82	337	⇑P	P	00 16 25.7	-0.6
E23A	Ismay baz=31	30.85	350	⇓P	P	00 16 25.2	-1.1
E22A	Miles City baz=31	30.90	349	⇑P	P	00 16 25.6	-1.1
F19A	Roth Farm, Mol baz=31	30.97	345	⇑P	P	00 16 27.0	-0.5
MFID	Camas Ranch 4.6nm,1.0s	31.07	335	eP	P	00 16 28.6	+0.2
MFID	Camas Ranch baz=31	31.07	335	⇓P	P	00 16 28.3	-0.2
GCMT	Greycliff	31.09	344	eP	P	00 16 28.7	+0.1
I12A	Atlanta baz=31	31.11	336	⇓P	P	00 16 28.5	-0.3
G16A	Moss Hill, Enn baz=31	31.19	341	⇓P	P	00 16 29.2	-0.3
F18A	Big Timber baz=31,SNR=9.0	31.21	344	⇓P	P	00 16 29.3	-0.3
G15A	Dillon baz=31,SNR=7.1	31.35	340	⇓P	P	00 16 30.8	-0.1
H13A	Challis baz=31	31.43	338	⇓P	P	00 16 31.5	-0.1
F17A	Fitzpatrick Pl baz=31	31.47	343	⇓P	P	00 16 31.5	-0.4
E19A	Rath Farm, Rou baz=31	31.50	346	⇓P	P	00 16 31.6	-0.6
WVOR	Wild Horse Val 11nm,1.2s	31.54	330	eP	P	00 16 32.7	+0.1
DLMT	Dillon 13nm,0.9s	31.56	340	eP	P	00 16 33.3	+0.6
D22A	Cohagen baz=32	31.63	350	⇑P	P	00 16 32.9	-0.2
F16A	Kennard Place, baz=32,SNR=5.9	31.64	342	⇓P	P	00 16 33.8	+0.5
MDND	Maddock baz=32,SNR=8.5	31.64	358	⇓P	P	00 16 32.7	-0.5
H12A	Diamond D Ranc baz=32	31.64	337	⇓P	P	00 16 33.3	-0.2
D21A	La Casta Ranch baz=32	31.70	348	⇓P	P	00 16 33.5	-0.3
C24A	Savage baz=32	31.73	352	⇑P	P	00 16 33.9	-0.1
G14A	Jackson baz=32	31.74	339	⇓P	P	00 16 34.0	-0.4
E18A	Harlowton baz=32	31.88	345	⇓P	P	00 16 34.8	-0.6
G13A	Cobalt baz=32	31.88	338	⇓P	P	00 16 35.1	-0.4
LRM	Limekiln Ridge	31.92	341	eP	P	00 16 35.2	-0.8
F15A	Butte baz=32,SNR=11	31.95	341	⇑P	P	00 16 36.0	-0.3
MOD	Modoc 10nm,1.0s	31.97	328	eP	P	00 16 36.0	-0.4
E17A	Martinsdale baz=32	32.03	343	⇑P	P	00 16 36.7	-0.2
C23A	Lambert baz=32,SNR=14	32.10	351	⇑P	P	00 16 37.4	+0.1
C22A	Vida baz=32	32.15	350	⇓P	P	00 16 37.4	-0.4
D19A	Cripps Ranch, baz=32,SNR=7.2	32.19	346	⇑P	P	00 16 37.5	-0.6
G12A	Big Creek, Yel baz=32,SNR=10	32.31	337	⇑P	P	00 16 38.7	-0.7
E16A	East Helena	32.33	342	⇓P	P	00 16 38.7	-0.8

	baz=32						
D18A	Linhart Farms,	32.44	345	⇓P	P	00 16 39.7	-0.6
	baz=32						
C21A	Desert Coulee	32.45	349	⇓P	P	00 16 39.6	-0.8
	baz=32						
C20A	Veseth Ranch,	32.52	348	⇑P	P	00 16 39.7	-1.3
	baz=32						
F13A	Darby	32.52	339	⇑P	P	00 16 40.4	-0.7
	baz=32,SNR=5.5						
E15A	Deer Lodge	32.52	341	⇓P	P	00 16 40.1	-1.0
	baz=32						
DGMT	Dagmar	32.62	353	eP	P	00 16 41.6	-0.2
	15nm,0.8s						
D17A	Six Diamond Ra	32.62	344	⇑P	P	00 16 41.1	-0.9
	baz=33,SNR=12						
B23A	Brockton	32.72	352	⇑P	P	00 16 41.7	-1.0
	baz=33						
SADO	Sadowa	32.73	25	LR	LR	00 33 51.7	
	comp=Z,111nm,19.2s,baz=255,slow=44						
D16A	Dana Ranch, Ca	32.74	343	⇓P	P	00 16 42.1	-1.0
	baz=33						
C19A	Slack Wire Ran	32.76	346	⇑P	P	00 16 42.7	-0.4
	baz=33						
F12A	Elk City	32.82	338	⇑P	P	00 16 43.2	-0.5
	baz=33,SNR=12						
E13A	Victor	33.03	339	⇑P	P	00 16 44.7	-0.9
	baz=33						
D15A	Lincoln	33.04	342	⇓P	P	00 16 45.2	-0.4
	baz=33						
A24A	Westby	33.04	353	⇑P	P	00 16 45.2	-0.3
	baz=33						
C17A	Wharram Farm,	33.08	344	⇓P	P	00 16 45.4	-0.6
	baz=33,SNR=6.6						
CHMT	Chamberlain Mo	33.15	341	eP	P	00 16 46.3	-0.4
EGMT	Eagleton	33.20	346	⇓P	P	00 16 45.9	-1.1
	baz=33						
B20A	Solberg Farm,	33.21	348	⇓P	P	00 16 46.6	-0.4
	baz=33						
MSO	Missoula	33.29	340	eP	P	00 16 47.1	-0.8
	3.8nm,1.0s						
MSO	Missoula	33.29	340	⇑P	P	00 16 47.6	-0.3
	baz=33						
A22A	Carney Farms,	33.37	351	⇑P	P	00 16 47.9	-0.6
	baz=33						
D14A	Greenough	33.38	341	⇑P	P	00 16 48.0	-0.6
	baz=33,SNR=6.8						
B19A	Brinkman Farms	33.42	347	⇓P	P	00 16 48.3	-0.6
	baz=33,SNR=8.0						
C16A	Fuhringer Ranc	33.50	343	⇑P	P	00 16 49.5	-0.1
	baz=33						
SLMT	Seeley Lake	33.51	341	eP	P	00 16 48.5	-1.3
B18A	Beardsley Farm	33.55	346	⇑P	P	00 16 49.9	-0.1
	baz=34						
D13A	Huson	33.70	340	⇓P	P	00 16 50.6	-0.7
	baz=34,SNR=9.7						
B17A	L&G Farms, Che	33.70	345	⇑P	P	00 16 50.8	-0.6
	baz=34						
C15A	Salmond Ranch,	33.72	342	⇑P	P	00 16 50.9	-0.7
	baz=34						
ULM	Lac du Bonnet	34.07	3	P	P	00 16 53.3	-1.1
ULM	Lac du Bonnet	34.07	3	P	P	00 16 53.3	-1.1
	4.4nm,0.7s,baz=185,slow=6.5,SNR=3.6						
B15A	Bradely Ranch,	34.20	343	⇓P	P	00 16 55.0	-0.6
	baz=34						
A17A	Triple J Farms	34.28	345	⇑P	P	00 16 55.9	-0.5
	baz=34						
B14A	Marquette Ranc	34.45	342	⇓P	P	00 16 57.3	-0.6
	baz=34						
B13A	Whitefish	34.82	341	⇑P	P	00 17 00.5	-0.5
	baz=35,SNR=5.2						
A14A	Double T Ranch	35.04	342	⇓P	P	00 17 02.4	-0.6
	baz=35						
WALA	Waterton Lakes	35.26	342	eP	P	00 17 04.5	-0.4
	0.2nm,0.9s						
A13A	Flathead Natio	35.30	341	⇑P	P	00 17 04.9	-0.3
	baz=35						
NEW	Newport	35.62	338	LR	LR	00 33 12.5	
	comp=Z,214nm,19.6s,baz=274,slow=39						
NEW	Newport	35.62	338	⇓P	P	00 17 07.6	-0.4
	baz=36						
LON	Longmire	36.30	332	eP	P	00 17 13.4	-0.4
	8.0nm,1.1s						
BBB	Bella Bella	43.08	333	LR	LR	00 35 51.2	
	comp=Z,117nm,18.1s,baz=44,slow=36						
LPAZ	La Paz	43.77	136	P	P	00 18 19.2	+2.5
LPAZ	La Paz	43.77	136	P	P	00 18 19.2	+2.5
	10nm,0.3s,baz=283,slow=4.6,SNR=112						
LPAZ				LR	LR	00 34 07.3	
	comp=Z,86nm,18.4s,baz=50,slow=33						
SCHQ	Schefferville	45.54	25	P	P	00 18 29.1	-0.7
SCHQ	Schefferville	45.54	25	P	P	00 18 29.1	-0.7
	14nm,0.9s,baz=232,slow=5.9,SNR=15						
SCHQ				LR	LR	00 40 23.6	
	comp=Z,179nm,19.9s,baz=79,slow=40						
YKA	Yellowknife Ar	47.73	350	P	P	00 18 45.2	-1.4
YKA	Yellowknife Ar	47.73	350	P	P	00 18 45.2	-1.4
	3.4nm,0.9s,baz=158,slow=7.4,SNR=41						
DLBC	Dease Lake	48.37	338	eP	P	00 18 52.7	+0.8
DLBC	Dease Lake	48.37	338	LR	LR	00 38 58.1	
	comp=Z,389nm,18.1s,baz=295,slow=36						
SIV	San Ignacio	48.56	129	P	P	00 18 56.8	+2.9
SIV				PcP	PcP	00 20 23.9	+4.4
SIV	San Ignacio	48.56	129	P	P	00 18 56.8	+2.9
	1.2nm,0.7s,baz=309,slow=5.0,SNR=4.5						
SIV				PcP	PcP	00 20 23.9	+4.4
	1.4nm,0.9s,baz=328,slow=3.4,SNR=4.1						
FRB	Frobisher Bay	51.75	16	LR	LR	00 44 04.9	
	comp=Z,103nm,18.7s,baz=212,slow=40						
CFAA	Coronel Fontan	55.48	149	P	P	00 19 47.9	+2.8
CFAA	Coronel Fontan	55.48	149	P	P	00 19 47.9	+2.8
	0.5nm,1.0s,baz=306,slow=6.6,SNR=6.1						
DIV	Divide	56.22	334	eP	P	00 19 51.2	+1.1
	9.6nm,1.0s						
MENT	Mentasta	56.40	337	eP	P	00 19 51.0	-0.3
DOT	Dot Lake	56.93	338	eP	P	00 19 55.3	+0.2
	13nm,1.1s						
SML	Sawmill	57.63	334	eP	P	00 20 00.8	+0.8
	3.4nm,1.1s						
ILAR	Eielson Array	58.58	338	P	P	00 20 05.6	-1.0
ILAR	Eielson Array	58.58	338	P	P	00 20 05.6	-1.0
	4.5nm,1.0s,baz=134,slow=4.6,SNR=31						
BDFB	Brasilia	58.71	120	P	P	00 20 08.1	-0.3
BDFB	Brasilia	58.71	120	P	P	00 20 08.1	-0.3
	2.0nm,0.5s,baz=272,slow=0.9,SNR=5.1						
MCK	McKinley	58.81	336	eP	P	00 20 08.2	-0.1
	11nm,0.9s						
SPU	Mount Spurr	58.93	333	eP	P	00 20 08.6	-0.5
RSO	Redoubt South	58.95	332	eP	P	00 20 08.8	-0.7
TRF	Thorofare Moun	59.21	336	eP	P	00 20 10.1	-1.1
	24nm,0.9s						
SFJD	Kangerlussuaq	59.39	20	iP	P	00 20 12.6	+0.4
	6.4nm,1.0s						
PPLA	Purkeypile	59.73	335	eP	P	00 20 14.8	+0.1
	15nm,1.2s						
PPT	Papeete	60.74	239	LR	LR	00 38 17.6	
	comp=Z,128nm,21.4s,baz=151,slow=28						
COLD	Coldfoot	61.01	339	eP	P	00 20 23.3	0.0
	11nm,1.4s						
PLCA	Paso Flores	62.12	157	P	P	00 20 34.9	+3.7
PLCA	Paso Flores	62.12	157	P	P	00 20 34.9	+3.7
	3.6nm,0.9s,baz=327,slow=6.6,SNR=4.9						
PLCA				LR	LR	00 42 03.1	
	comp=Z,215nm,19.3s,baz=191,slow=31						
SUMG	Summit	65.82	17	eP	P	00 20 55.3	-0.2
	14nm,1.0s						
SUMG	Summit	65.82	17	iP	P	00 20 56.1	+0.6
	11nm,0.9s						
DAG	Danmarks Havn	71.99	14	iP	P	00 21 37.5	+4.2
	4.8nm,0.9s						
AFI	Afiamalu	78.63	252	LR	LR	00 46 59.1	
	comp=Z,82nm,21.1s,baz=37,slow=28						
EVOP	Sao Brissos	80.15	53	eP	P	00 22 17.5	-3.0
	35nm,1.3s						
EVO	Evora	80.23	53	eP	P	00 22 17.5	-3.5
	35nm,1.3s						
GRR	Gorron	82.84	42	eP	P	00 22 32.8	-1.8
	95nm,1.5s						
GRR	Gorron	82.84	42	eP	P	00 22 32.8	-1.8
	95nm,1.5s						
ESDC	Sonseca Array	83.02	51	P	P	00 22 34.6	-1.2
ESDC	Sonseca Array	83.02	51	P	P	00 22 34.6	-1.2
	1.6nm,0.9s,baz=300,slow=5.5,SNR=7.1						
NOA	NORSAR Array B	85.05	27	LR	LR	01 00 44.1	
	comp=Z,156nm,19.3s,baz=305,slow=36						
EPF	Esparros	85.19	47	eP	P	00 22 45.3	-1.5
	16nm,1.1s						
EPF	Esparros	85.19	47	eP	P	00 22 45.3	-1.5
	16nm,1.1s						
TCF	Toulx Ste Croi	85.46	43	eP	P	00 22 45.9	-2.1
	15nm,1.0s						
TCF	Toulx Ste Croi	85.46	43	eP	P	00 22 45.9	-2.1
	15nm,1.0s						
BGF	Bois d'Agland	85.79	43	eP	P	00 22 47.5	-2.1
	23nm,1.1s						
BGF	Bois d'Agland	85.79	43	eP	P	00 22 47.5	-2.1
	23nm,1.1s						
ARCES	ARCESS Array B	85.91	17	LR	LR	01 09 10.7	
	comp=Z,125nm,18.7s,baz=47,slow=41						
SSF	Saint Saulge	86.05	42	eP	P	00 22 48.8	-2.1
	14nm,1.2s						
SSF	Saint Saulge	86.05	42	eP	P	00 22 48.8	-2.1
	14nm,1.2s						
LOR	Lormes	86.21	42	eP	P	00 22 49.7	-2.0
	22nm,1.0s						
LOR	Lormes	86.21	42	eP	P	00 22 49.7	-2.0
	22nm,1.0s						
MTLF	Montolieu	86.40	46	eP	P	00 22 50.8	-1.9
	16nm,1.1s						
MTLF	Montolieu	86.40	46	eP	P	00 22 50.8	-1.9
	16nm,1.1s						
GERES	GERESS Array B	91.66	38	P	P	00 23 19.6	+2.0
GERES	GERESS Array B	91.66	38	P	P	00 23 19.6	+2.0
	0.3nm,0.6s,baz=310,slow=8.3,SNR=3.9						
GERES				LR	LR	01 08 06.8	
	comp=Z,142nm,19.0s,baz=200,slow=38						
VYHS	Vyhne	94.81	37	eP	P	00 23 32.2	+0.2
AKASG	Malin Array Be	99.08	31	LR	LR	01 15 57.8	
	comp=Z,104nm,18.1s,baz=320,slow=40						
HHC	Hu-ho-hao-te	116.95	335	ePKP	PKPdf	00 28 51.7	-3.6
HHC				sPKP		00 29 05.9	
HHC				PP	PP	00 30 03.9	+0.6
HHC				PKS	PKSdf	00 32 26.6	-5.5
WMQ	Urumqi	120.09	355	ePKP	PKPdf	00 29 01.8	+0.6
STKA	Stephens Creek	123.86	242	PKP	PKPdf	00 29 12.5	+3.9
STKA	Stephens Creek	123.86	242	PKP	PKPdf	00 29 12.5	+3.9
	2.1nm,0.7s,baz=49,slow=6.4,SNR=4.7						
LZH	Lanzhou	124.04	339	ePKP	PKPdf	00 29 09.1	-0.1
WRA	Warramunga Arr	130.11	257	PKP	PKPdf	00 29 24.3	+3.4
WRA	Warramunga Arr	130.11	257	PKP	PKPdf	00 29 24.3	+3.4
	1.6nm,0.8s,baz=75,slow=1.7,SNR=6.7						
ASAR	Alice Springs	130.70	253	PKP	PKPdf	00 29 24.6	+2.6
ASAR	Alice Springs	130.70	253	PKP	PKPdf	00 29 24.6	+2.6
	1.5nm,0.9s,baz=90,slow=2.2,SNR=9.4						
KMI	Kunming	134.21	333	PKP	PKPdf	00 29 28.2	-0.7
HYB	Hyderabad	146.49	6	iPKP	PKPdf	00 29 50.0	-0.9
ABPO	Ambohimpanom	146.90	100	ePKPdf	PKPbc	00 29 52.5	-1.1

IDC 08 00:17:35.7±2.2, 6°.12S×126°.56E, h0^{km}, mb3.3/1, mb1 3.6/3, mb1mx3.4/21, mbtmp3.4/3, ML3.7/2, Error ellipse: s-maj=334.1km s-min=29.7km az=63.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.69	152	Pn	Pn	00 21 18.1	-0.1
	0.4nm,0.3s,baz=331,slow=12,SNR=4.9						
ASAR	Alice Springs	18.83	159	P	P	00 21 57.2	-0.1
	0.1nm,0.3s,baz=332,slow=9.7,SNR=6.3						
MKAR	Makanchi Array	65.65	328	P	P	00 28 21.9	0.0
	0.1nm,0.4s,baz=120,slow=5.6,SNR=3.0						

*ISK **08** 00:27:28.8, 40°.68N×36°.51E, h5^{km}, MD3.0*
*DDA **08** 00:27:29.4, 40°.66N×36°.57E, h16^{km}, MD2.8*
*CSEM **08** 00:27:29.6±0.1, 40°.69N×36°.54E, h8^{km}, MD2.8, Error ellipse: s-maj=3.1km s-min=1.9km az=20.0*
*ISCJB **08** 00:27:29.5±0.5, 40°.69N±0°.04×36°.51E±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=6.2km s-min=3.9km az=19.0*
ISC 08 00:27:29.7±0.9, 40°.70N±0°.03×36°.55E±0°.02, h13^{km}±6^{km}, n37, σ0^s.53/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERBA	Erbaa	0.16	96	iP	Pg	00 27 33.6	+0.1
ERBA				iS	Sg	00 27 36.4	+0.2
ERBA	Erbaa	0.16	96	iP	Pg	00 27 33.6	+0.1
ERBA				iS	Sg	00 27 36.4	+0.2
TOKA	Tokat	0.38	188	iP	Pg	00 27 37.0	-0.3
TOKA				iS	Sg	00 27 42.0	-0.4
TOKA	Tokat	0.38	188	iP	Pg	00 27 37.0	-0.3
TOKA				iS	Sg	00 27 42.0	-0.4
KVT	Kavak	0.54	316	PG	Pg	00 27 39.8	-0.5
KVT				SG	Sg	00 27 47.3	-0.2
KVT	Kavak	0.54	316	iPg	Pg	00 27 39.8	-0.5
KVT				iSg	Sg	00 27 47.3	-0.2
RSDY	Resadiye-TOKAT	0.67	116	ePG	Pg	00 27 42.2	-0.5
RSDY				eSG	Sb	00 27 52.4	0.0
RSDY	Resadiye-TOKAT	0.67	116	ePg	Pg	00 27 42.2	-0.5
RSDY				eSg	Sb	00 27 52.4	0.0
GRSN	GIRESUNGRSN	1.33	80	iP	Pb	00 27 54.2	-0.3
GRSN				iS	Sn	00 28 11.9	+0.3
GRSN	GIRESUNGRSN	1.33	80	iP	Pb	00 27 54.2	-0.3
GRSN				iS	Sn	00 28 11.9	+0.3
SUSE	Susehri	1.36	111	iP	Pn	00 27 54.3	-0.2
SUSE				iS	Sg	00 28 13.2	-0.2
SUSE	Susehri	1.36	111	iP	Pn	00 27 54.3	-0.2
SUSE				iS	Sg	00 28 13.2	-0.2
DIKM	Dikmen	1.36	315	ePN	Pb	00 27 55.0	-0.1
DIKM	Dikmen	1.36	315	ePn	Pb	00 27 55.0	-0.1
YOZ	Yozgat	1.41	222	ePN	Pn	00 27 55.1	-0.2
YOZ	Yozgat	1.41	222	ePn	Pn	00 27 55.1	-0.2
BYBT	Boyabat	1.55	300	ePN	Pn	00 27 57.3	+0.3
BYBT	Boyabat	1.55	300	ePn	Pn	00 27 57.3	+0.3
CORM	Corum	1.55	251	ePN	Pn	00 27 57.2	0.0
CORM	Corum	1.55	251	ePn	Pn	00 27 57.2	0.0
ESPY	Espiye-Giresun	1.67	82	ePN	Pb	00 27 60.0	-0.4
ESPY	Espiye-Giresun	1.67	82	ePn	Pb	00 28 00.0	-0.4
BNN	Bunyan	1.92	197	ePN	Pn	00 28 03.1	+0.9
BNN	Bunyan	1.92	197	ePn	Pn	00 28 03.1	+0.9
TOS	Tosya	1.94	281	ePN	Pn	00 28 02.9	+0.4
TOS	Tosya	1.94	281	ePn	Pn	00 28 02.9	+0.4
ILIC	ilic-Erzincan	1.99	128	ePN	Pn	00 28 03.9	+0.7
ILIC	ilic-Erzincan	1.99	128	ePn	Pn	00 28 03.9	+0.7
KELT	Kelkit	2.14	104	iP	Pn	00 28 05.7	+0.4
KELT	Kelkit	2.14	104	iP	Pn	00 28 05.7	+0.4
ILGA	Ilgaz	2.17	280	iP	Pn	00 28 06.6	+0.8
ILGA	Ilgaz	2.17	280	iP	Pn	00 28 06.6	+0.8
DARE	Darende-Malaty	2.24	161	ePN	Pn	00 28 07.9	+1.2
DARE	Darende-Malaty	2.24	161	ePn	Pn	00 28 07.9	+1.2
MACK	Trabzon	2.46	83	iP	Pb	00 28 13.2	-0.6
BALT	Daday	2.53	290	iP	Pn	00 28 11.7	+1.0
BALT	Daday	2.53	290	iP	Pn	00 28 11.7	+1.0

*NEIC **08** 00:34:38.1, 43°.15S×170°.96E, h5^{km}, ML4.0(WEL), After WEL.*
NEIC Felt at Hokitika.
WEL 08 00:34:38.1±0.1, 43°.15S×170°.96E, h5^{km}, ML4.0/19, 6C-2D, Error ellipse: s-maj=0.6km s-min=0.5km az=0.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WVZ	Waitaha Valley	0.18	295	⇑PG	Pg	00 34 41.8	+0.1
WVZ				SG	Sg	00 34 44.0	-0.1
WVZ	Waitaha Valley	0.18	295	⇑Pg	Pg	00 34 41.8	+0.1
WVZ				Sg	Sg	00 34 44.0	-0.1
RPZ	Rata Peaks	0.57	173	PG	Pg	00 34 49.3	+0.2
RPZ				SG	Sg	00 34 57.3	+0.7
RPZ	Rata Peaks	0.57	173	Pg	Pg	00 34 49.3	+0.2
RPZ				Sg	Sg	00 34 57.3	+0.7
FOZ	Fox Glacier	1.01	246	P*	Pg	00 34 55.6	-1.9
FOZ				S*	Sg	00 35 08.6	-2.2
FOZ	Fox Glacier	1.01	246	P*	Pg	00 34 55.6	-1.9
FOZ				S*	Sg	00 35 08.6	-2.2
LTZ	Lake Taylor	1.03	69	⇑P*	Pg	00 34 57.7	-0.2
LTZ				eS*	Sg	00 35 11.0	-0.4
LTZ	Lake Taylor	1.03	69	⇑P*	Pg	00 34 57.7	-0.2
LTZ				eS*	Sg	00 35 11.0	-0.4
CRLZ	Canterbury Las	1.28	110	P*	Pn	00 35 02.2	-0.5
CRLZ				S*	Sg	00 35 19.1	-0.2
CRLZ	Canterbury Las	1.28	110	P*	Pn	00 35 02.2	-0.5
CRLZ				S*	Sg	00 35 19.1	-0.2
MQZ	McQueen's Vall	1.35	115	⇓PN	Pn	00 35 02.8	-0.8
MQZ	McQueen's Vall	1.35	115	⇓Pn	Pn	00 35 02.8	-0.8
LBZ	Lake Benmore	1.36	204	⇑PN	Pn	00 35 03.3	-0.5
LBZ	Lake Benmore	1.36	204	⇑Pn	Pn	00 35 03.3	-0.5
ODZ	Otahua Downs	1.91	187	PN	Pn	00 35 11.2	-0.1
ODZ	Otahua Downs	1.91	187	Pn	Pn	00 35 11.2	-0.1
THZ	Tophouse	2.00	47	PN	Pn	00 35 12.4	-0.2
THZ	Tophouse	2.00	47	Pn	Pn	00 35 12.4	-0.2
KHZ	Kahutara	2.04	70	PN	Pn	00 35 12.8	-0.2
KHZ	Kahutara	2.04	70	Pn	Pn	00 35 12.8	-0.2
WKZ	Wanaka	2.19	219	PN	Pn	00 35 14.6	-0.5
WKZ	Wanaka	2.19	219	Pn	Pn	00 35 14.6	-0.5
EAZ	Earnscleugh	2.40	209	PN	Pn	00 35 16.7	-1.3
EAZ	Earnscleugh	2.40	209	Pn	Pn	00 35 16.7	-1.3
QRZ	Quartz Range	2.60	27	PN	Pn	00 35 19.9	-0.9
QRZ	Quartz Range	2.60	27	Pn	Pn	00 35 19.9	-0.9
NNZ	Nelson	2.64	44	PN	Pn	00 35 21.8	+0.5
NNZ	Nelson	2.64	44	Pn	Pn	00 35 21.8	+0.5
TUZ	Tuapeka	2.96	198	PN	Pn	00 35 24.9	-0.8
TUZ	Tuapeka	2.96	198	Pn	Pn	00 35 24.9	-0.8
MLZ	Mavora Lakes	2.97	221	ePN	Pn	00 35 25.9	-0.1
MLZ	Mavora Lakes	2.97	221	ePn	Pn	00 35 25.9	-0.1
OGWZ	Otaki Gorge	3.91	55	PN	Pn	00 35 37.4	-1.4
OGWZ	Otaki Gorge	3.91	55	Pn	Pn	00 35 37.4	-1.4

*ISK **08** 00:49:02.8, 39°.29N×27°.94E, h5^{km}, MD3.1*
*ATH **08** 00:49:03.2, 39°.35N×27°.96E, h11^{km}±1^{km}, MD3.6/5*
*DDA **08** 00:49:03.4, 39°.30N×27°.93E, h23^{km}, MD3.3*
*CSEM **08** 00:49:03.8±0.1, 39°.27N×27°.94E, h2^{km}, MD3.1, Error ellipse: s-maj=2.0km s-min=1.8km az=99.0*
*ISCJB **08** 00:49:03.9±0.4, 39°.29N±0°.01×27°.95E±0°.02, h4^{km}±3^{km}, Error ellipse: s-maj=2.7km s-min=2.4km az=13.7*
*THE **08** 00:49:04.9, 39°.21N×28°.06E, h14^{km}±4^{km}, ML2.4/3, Error ellipse: s-maj=5.1km s-min=1.1km az=143.0*
ISC 08 00:49:03.7±1.0, 39°.29N±0°.01×27°.94E±0°.01, h11^{km}±8^{km}, n135, σ0^s.80/183, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.35	352	PG	Pg	00 49 11.1	+0.4
BALB				SG	Sb	00 49 17.5	0.0
BALB	Balikesir	0.35	352	iPg	Pg	00 49 11.1	+0.4
BALB				iSg	Sb	00 49 17.5	0.0
AKHS	Akhisar	0.43	194	iP	Pg	00 49 12.1	0.0
AKHS				iS	Sb	00 49 19.6	-0.2
AKHS	Akhisar	0.43	194	iP	Pg	00 49 12.1	0.0
AKHS				iS	Sb	00 49 19.6	-0.2
AKS	Akhisar	0.43	194	ePG	Pg	00 49 12.1	0.0
AKS				SG	Sb	00 49 19.4	-0.4
AKS	Akhisar	0.43	194	ePg	Pg	00 49 12.1	0.0
BALY	Balya	0.51	331	iP	Pg	00 49 13.9	+0.2
BALY				iS	Sg	00 49 20.6	+0.2
BALY	Balya	0.51	331	iP	Pg	00 49 13.9	+0.2
BALY				iS	Sg	00 49 20.6	+0.2
DURS	Dursunbey	0.51	53	iP	Pg	00 49 14.0	+0.2
DURS				iS	Sb	00 49 22.0	-0.3
DURS	Dursunbey	0.51	53	iP	Pg	00 49 14.0	+0.2
DURS				iS	Sb	00 49 22.0	-0.3
DST	Dursunbey	0.61	59	ePG	Pg	00 49 15.6	+0.1
DST				SG	Sb	00 49 25.4	+0.4
DST	Dursunbey	0.61	59	ePg	Pg	00 49 15.6	+0.1
DST				iSg	Sb	00 49 25.4	+0.4
DEMI	Demirci	0.65	112	iP	Pg	00 49 16.5	+0.1
DEMI				iS	Sb	00 49 26.6	+0.3
DEMI	Demirci	0.65	112	iP	Pg	00 49 16.5	+0.1
DEMI				iS	Sb	00 49 26.6	+0.3
GONE	Gonen-Balikesi	0.78	345	ePG	Pg	00 49 18.7	0.0
GONE	Gonen-Balikesi	0.78	345	ePg	Pg	00 49 18.7	0.0
MANT	Manisa	0.94	149	iP	Pb	00 49 21.8	-0.3
MANT				iS	Sg	00 49 33.3	-0.6
MANT	Manisa	0.94	149	iP	Pb	00 49 21.8	-0.3
MANT				iS	Sg	00 49 33.3	-0.6
KULA	Kula-Manisa	0.96	144	ePG	Pb	00 49 22.3	-0.1
KULA	Kula-Manisa	0.96	144	ePg	Pb	00 49 22.3	-0.1
AYVA	Ayvalik	0.97	271	iP	Pn	00 49 23.8	+0.5
AYVA				iS	Sn	00 49 37.3	+0.2
AYVA	Ayvalik	0.97	271	iP	Pn	00 49 23.8	+0.5
AYVA				iS	Sn	00 49 37.3	+0.2
KCTX	Karacabey (Bur	1.02	18	ePG	Pg	00 49 23.3	-0.1
KCTX	Karacabey (Bur	1.02	18	ePg	Pg	00 49 23.3	-0.1
IZM	Izmir	1.04	211	ePG	Pb	00 49 23.6	-0.2
IZM	Izmir	1.04	211	ePg	Pb	00 49 23.6	-0.2
ORLT	Orhaneli	1.05	44	ePG	Pn	00 49 24.4	-0.1
ORLT	Orhaneli	1.05	44	ePg	Pn	00 49 24.4	-0.1
EDC	Edincik	1.05	357	ePG	Pn	00 49 24.7	+0.3
EDC	Edincik	1.05	357	ePg	Pn	00 49 24.7	+0.3
BNT	Bandirma	1.06	359	ePG	Pg	00 49 24.1	+0.1
BNT	Bandirma	1.06	359	ePg	Pg	00 49 24.2	+0.1
BLCB	Balcova	1.15	218	ePN	Pg	00 49 25.8	0.0
BLCB	Balcova	1.15	218	ePn	Pg	00 49 25.8	0.0
TVSB	Tavsanli	1.19	82	ePN	Pb	00 49 26.3	0.0
TVSB	Tavsanli	1.19	82	ePn	Pb	00 49 26.3	0.0
KRBG	Karabiga-Canak	1.20	336	ePN	Pn	00 49 26.3	-0.2
KRBG	Karabiga-Canak	1.20	336	ePn	Pn	00 49 26.3	-0.2
GDZ	Gediz	1.21	99	iP	Pg	00 49 27.0	0.0
GDZ				iS	Sn	00 49 44.2	+0.9
GDZ	Gediz	1.21	99	iP	Pg	00 49 27.0	0.0
GDZ				iS	Sn	00 49 44.2	+0.9
MDNY	Mudanya-Bursa	1.29	34	ePN	Pb	00 49 28.2	+0.1
MDNY	Mudanya-Bursa	1.29	34	ePn	Pb	00 49 28.2	+0.1
PRK	Paraskevi	1.30	268	P	Pg	00 49 28.4	-0.2
PRK				S	Sg	00 49 46.8	+1.4
PRK	Paraskevi	1.30	268	ePB	Pg	00 49 28.3	-0.3
PRK				eSB	Sg	00 49 45.9	+0.5
PRK	Paraskevi	1.30	268	ePb	Pg	00 49 28.3	-0.3
PRK				eSb	Sg	00 49 45.9	+0.5
PRK				S	Sg	00 49 46.8	+1.4
MRMT	Marmara Adasi	1.33	349	ePN	Pg	00 49 29.6	+0.3
MRMT	Marmara Adasi	1.33	349	ePn	Pg	00 49 29.6	+0.3
EZN	Ezine	1.36	294	ePN	Pg	00 49 29.8	0.0
EZN	Ezine	1.36	294	ePn	Pg	00 49 29.8	0.0
URLA	Izmir	1.41	229	iP	Pb	00 49 29.6	-0.4
URLA				iS	Sg	00 49 50.8	+1.9
URLA	Izmir	1.41	229	iP	Pb	00 49 29.6	-0.4
URLA				iS	Sg	00 49 50.8	+1.9
LPK	Lapseki	1.41	320	ePN	Pb	00 49 30.1	+0.1
LPK	Lapseki	1.41	320	ePn	Pb	00 49 30.1	+0.1
GEMT	Gemlik	1.49	40	ePN	Pg	00 49 32.1	-0.2
GEMT	Gemlik	1.49	40	ePn	Pg	00 49 32.1	-0.2
SART	Tekirdag	1.51	337	iP	Pb	00 49 31.9	+0.1
SART				iS	Sg	00 49 52.4	+0.1
SART	Tekirdag	1.51	337	iP	Pb	00 49 31.9	+0.1
SART				iS	Sg	00 49 52.4	+0.1
KHAL	Karahalli	1.52	127	iP	Pb	00 49 31.4	-0.6
KHAL	Karahalli	1.52	127	iP	Pb	00 49 31.4	-0.6
BOZC	Bozcaada	1.56	291	iP	Pn	00 49 31.7	+0.3
BOZC				iS	Sb	00 49 52.1	-0.3
KHL	Karahalli	1.57	128	ePN	Pb	00 49 33.0	+0.2
KHL	Karahalli	1.57	128	ePn	Pb	00 49 33.1	+0.2
IZI	Iznik	1.57	48	ePN	Pg	00 49 33.5	-0.4
IZI	Iznik	1.57	48	ePn	Pg	00 49 33.5	-0.4
GELI	Tayfur-Gelibol	1.58	315	ePN	Pb	00 49 32.7	-0.2
GELI	Tayfur-Gelibol	1.58	315	ePn	Pb	00 49 32.7	-0.2
SIGR	SIGRI	1.62	268	P	Pb	00 49 32.8	-0.9
SIGR				S	Sg	00 49 55.0	-0.9
SIGR	SIGRI	1.62	268	P	Pb	00 49 32.8	-0.9
SIGR				S	Sg	00 49 55.0	-0.9
AYDN	Tasoluk	1.63	182	iP	Pn	00 49 32.5	0.0
AYDN				iS	Sb	00 49 53.8	-0.7
AYDN	Tasoluk	1.63	182	iP	Pn	00 49 32.5	0.0
AYDN				iS	Sb	00 49 53.8	-0.7
GCAM	G?zelcaml?	1.69	199	iP	Pn	00 49 33.6	+0.5
GCAM				iS	Sb	00 49 56.5	+0.5
GCAM	G?zelcaml?	1.69	199	iP	Pn	00 49 33.6	+0.5
GCAM				iS	Sb	00 49 56.5	+0.5
ALT	Altintas	1.70	97	ePN	Pb	00 49 34.4	-0.7
ALT	Altintas	1.70	97	ePn	Pb	00 49 34.4	-0.7
TKR	Tekirdag	1.72	350	ePN	Pb	00 49 35.4	0.0
TKR	Tekirdag	1.72	350	ePn	Pb	00 49 35.4	0.0
CAVI	Cavuskoy	1.72	58	ePN	Pb	00 49 35.6	+0.2
CAVI	Cavuskoy	1.72	58	ePn	Pb	00 49 35.6	+0.2
CHOS	Chios island	1.73	239	P	Pn	00 49 34.2	+0.4
CHOS	Chios island	1.73	239	ePN	Pb	00 49 35.9	+0.4
CHOS				eSN	Sg	00 49 59.8	+0.5
CHOS	Chios island	1.73	239	P	Pn	00 49 34.2	+0.4
CHOS	Chios island	1.73	239	ePn	Pb	00 49 35.9	+0.4
ERIK	Erikli-Kesan	1.76	322	ePN	Pb	00 49 35.1	-0.9
ERIK	Erikli-Kesan	1.76	322	ePn	Pb	00 49 35.1	-0.9
BUY	Buyukada	1.80	30	ePN	Pb	00 49 36.8	+0.1
BUY	Buyukada	1.80	30	iP	Pb	00 49 36.3	-0.4
BUY				iS	Sn	00 49 58.3	+0.7
BUY	Buyukada	1.80	30	iP	Pb	00 49 36.3	-0.4
BUY	Buyukada	1.80	30	ePn	Pb	00 49 36.8	+0.1
BUY				iS	Sn	00 49 58.3	+0.7

DNZL	**Cakiroluk**	**1.82**	**151**	*i* P	**Pn**	**00 49 34.8**	**-0.4**
DNZL	**Cakiroluk**	**1.82**	**151**	*i* P	**Pn**	**00 49 34.8**	**-0.4**
CRLT	**Corlu**	**1.84**	**355**	*e*PN	**Pb**	**00 49 37.0**	**-0.4**
CRLT	**Corlu**	**1.84**	**355**	*e*Pn	**Pb**	**00 49 37.0**	**-0.4**
SLVT	**Silivri**	**1.94**	**6**	*e*PN	**Pb**	**00 49 38.7**	**-0.5**
SLVT	**Silivri**	**1.94**	**6**	*e*Pn	**Pb**	**00 49 38.7**	**-0.5**
ISK	**Istanbul-Kandi**	**1.96**	**25**	*e*PN	**Pb**	**00 49 38.9**	**-0.6**
ISK	**Istanbul-Kandi**	**1.96**	**25**	P	**Pn**	**00 49 37.4**	**+0.4**
ISK				S	**Sn**	**00 50 02.3**	**+0.7**
ISK	**Istanbul-Kandi**	**1.96**	**25**	P	**Pn**	**00 49 37.4**	**+0.4**
ISK	**Istanbul-Kandi**	**1.96**	**25**	*e*Pn	**Pb**	**00 49 38.9**	**-0.6**
ISK				S	**Sn**	**00 50 02.3**	**+0.7**
CTKS	**Kestanelik-??a**	**1.99**	**12**	*e*PN	**Pb**	**00 49 39.4**	**-0.5**
CTKS	**Kestanelik-??a**	**1.99**	**12**	*e*Pn	**Pb**	**00 49 39.4**	**-0.5**
BGKT	**Bogazkoy**	**1.99**	**18**	*e*PN	**Pb**	**00 49 39.3**	**-0.6**
BGKT	**Bogazkoy**	**1.99**	**18**	*e*Pn	**Pb**	**00 49 39.3**	**-0.6**
MLSB	**Milas**	**2.00**	**184**	*e*PN	**Pb**	**00 49 39.0**	**-1.1**
MLSB	**Milas**	**2.00**	**184**	*e*Pn	**Pb**	**00 49 39.1**	**-1.1**
HRT	**Hereke**	**2.02**	**40**	*e*PN	**Pb**	**00 49 39.7**	**-0.8**
HRT	**Hereke**	**2.02**	**40**	*e*Pn	**Pb**	**00 49 39.7**	**-0.8**
BORA	**Eskisehir**	**2.03**	**72**	*i* P	**Pn**	**00 49 38.6**	**+0.7**
BORA	**Eskisehir**	**2.03**	**72**	*i* P	**Pn**	**00 49 38.6**	**+0.7**
GPA	**Golpazari**	**2.08**	**61**	*e*PN	**Pb**	**00 49 40.7**	**-0.7**
GPA	**Golpazari**	**2.08**	**61**	*e*Pn	**Pb**	**00 49 40.7**	**-0.7**
ALN	**Alexandroupoli**	**2.16**	**318**	P	**Pn**	**00 49 40.8**	**+1.1**
ALN				S	**Sb**	**00 50 09.0**	**-0.7**
ALN	**Alexandroupoli**	**2.16**	**318**	*e*PN	**Pn**	**00 49 40.7**	**+1.1**
ALN				*e*SN	**Sb**	**00 50 08.7**	**-1.0**
ALN	**Alexandroupoli**	**2.16**	**318**	P	**Pn**	**00 49 40.8**	**+1.1**
ALN				*e*Sn	**Sb**	**00 50 08.7**	**-1.0**
ALN				S	**Sb**	**00 50 09.0**	**-0.7**
CTYL	**Yal??k??y-??at**	**2.19**	**7**	*e*PN	**Pb**	**00 49 42.6**	**-0.8**
CTYL	**Yal??k??y-??at**	**2.19**	**7**	*e*Pn	**Pb**	**00 49 42.6**	**-0.8**
SMTH	**Samothraki Isl**	**2.20**	**303**	*e*PN	**Pn**	**00 49 41.2**	**+1.0**
SMTH				*e*SN	**Sb**	**00 50 09.4**	**-1.3**
SMTH	**Samothraki Isl**	**2.20**	**303**	*e*Pn	**Pn**	**00 49 41.2**	**+1.0**
SMTH				*e*Sn	**Sb**	**00 50 09.4**	**-1.3**
LIA	**Limnos Island**	**2.21**	**287**	P	**Pb**	**00 49 42.0**	**-1.8**
LIA				S	**Sb**	**00 50 11.3**	**+0.1**
LIA	**Limnos Island**	**2.21**	**287**	*e*PN	**Pn**	**00 49 41.7**	**+1.3**
LIA	**Limnos Island**	**2.21**	**287**	*e*Pn	**Pn**	**00 49 41.7**	**+1.3**
LIA	**Limnos Island**	**2.21**	**287**	P	**Pb**	**00 49 42.0**	**-1.8**
LIA				S	**Sb**	**00 50 11.3**	**+0.1**
ESKT	**Eskisehir**	**2.26**	**83**	*e*PN	**Pb**	**00 49 42.9**	**-1.8**
ESKT	**Eskisehir**	**2.26**	**83**	*e*Pn	**Pb**	**00 49 42.9**	**-1.8**
SEYT	**Eskypehyr**	**2.26**	**83**	*i* P	**Pb**	**00 49 45.0**	**+0.3**
SEYT				*i* S	**Sg**	**00 50 17.8**	**+1.3**
SEYT	**Eskypehyr**	**2.26**	**83**	*i* P	**Pb**	**00 49 45.0**	**+0.3**
SILT	**Sile**	**2.27**	**35**	*e*PN	**Pb**	**00 49 43.1**	**-1.6**
SILT	**Sile**	**2.27**	**35**	*e*Pn	**Pb**	**00 49 43.1**	**-1.6**
GULT	**Gulveren**	**2.28**	**59**	*e*PN	**Pb**	**00 49 43.1**	**-1.8**
GULT	**Gulveren**	**2.28**	**59**	*e*Pn	**Pb**	**00 49 43.2**	**-1.8**
BODT	**Bodrum**	**2.28**	**193**	*e*PN	**Pb**	**00 49 43.1**	**-1.8**
BODT	**Bodrum**	**2.28**	**193**	*e*Pn	**Pb**	**00 49 43.1**	**-1.8**
EDRB	**Edirne**	**2.71**	**341**	*e*PN	**Pb**	**00 49 49.6**	**-2.6**
EDRB	**Edirne**	**2.71**	**341**	*e*Pn	**Pb**	**00 49 49.6**	**-2.6**
SVRH	**Sivrihisar-ESK**	**2.78**	**86**	*e*PN	**Pb**	**00 49 50.9**	**-2.6**
SVRH	**Sivrihisar-ESK**	**2.78**	**86**	*e*Pn	**Pb**	**00 49 50.9**	**-2.6**

CASC 08 00:49:43.5±1.2**, 13.°07N×89.°94W, h19**km±6km**, MD3.5, 2C-1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.82**	**22**	*e*P	Pb	00 49 58.9	-0.7
SBLS				*e*S	Sg	00 50 11.3	+0.1
SNJE	**San Jose**	**0.86**	**22**	*e*P	Pb	00 49 59.3	-0.8
RTR	**El Retiro**	**0.87**	**19**	*e*P	Pb	00 49 59.8	-0.5
RTR				*e*S	Sg	00 50 12.5	0.0
BOQS	**Boqueron**	**0.92**	**44**	*e*P	Pb	00 50 00.6	-0.6
BOQS				*e*S	Sg	00 50 14.2	0.0
LFRS	**El Faro**	**1.01**	**57**	⇓*e*P	Pb	00 50 01.8	-0.9
LFRS				*e*S	Sb	00 50 15.9	+0.2
RBDL	**Robledal**	**1.07**	**13**	*e*P	Pb	00 50 02.9	-0.7
LBRS	**Las Brisas**	**1.09**	**52**	⇑*i*P	Pn	00 50 03.5	-0.5
LBRS				*e*S	Sn	00 50 18.4	-0.3
SNVI	**San Vicente**	**1.20**	**63**	⇑*e*P	Pn	00 50 04.7	-0.8
NBG	**Las Nubes**	**1.56**	**345**	*e*P	Pn	00 50 11.4	+0.8
NBG				*e*S	Sn	00 50 30.9	+0.3
FUG	**Fuego 3**	**1.63**	**327**	*e*P	Pn	00 50 10.5	-0.9

CASC 08 00:52:01.7±2.6**, 8.°87N×83.°39W, h6**km±17km**, MD3.6, 3D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.31**	**135**	*e*P	Pg	00 52 07.5	-0.3
ACR				*e*S	Sg	00 52 12.8	+0.9
TBS2		**0.73**	**96**	⇓*i*P	Pb	00 52 17.1	+0.1
TBS2				*e*S	Sb	00 52 28.2	+0.9
BUS	**Buena Vista**	**0.77**	**332**	*e*P	Pg	00 52 16.6	-0.6
BRU	**Baru**	**0.82**	**94**	⇓*i*P	Pg	00 52 18.1	+0.1
LAJ	**Bijagual**	**1.22**	**324**	*e*P	Pn	00 52 27.0	+1.4
CGA2	**Cerro Gallo 2**	**1.56**	**317**	*e*P	Pn	00 52 28.6	-1.6
CGA2				*e*S	Sn	00 52 50.2	-0.6
FORC	**Fortuna**	**2.03**	**322**	⇓*e*P	Pn	00 52 37.4	+0.9

*BEO **08** 01:02:46.2±1.3, 42.°15N×13.°30E, h0km, ML3.5/7*
*ISCJB **08** 01:02:47.6±0.2, 42.°26N±0.°01×13.°56E±0.°02, h8km±2km, Error ellipse: s-maj=2.9km s-min=2.2km az=144.2*
*ROM **08** 01:02:47.4±0.1, 42.°26N×13.°58E, h9km, Ml3.3/36, Error ellipse: s-maj=0.8km s-min=0.6km az=38.0*
*CSEM **08** 01:02:48.0±0.1, 42.°25N×13.°54E, h2km, ML3.7/14, Error ellipse: s-maj=3.2km s-min=2.4km az=51.0*
*LDG **08** 01:02:48.0±0.1, 42.°23N×13.°57E, h2km, Ml2.9/5, Error ellipse: s-maj=4.4km s-min=2.8km az=42.0*
*PRU **08** 01:02:51.1, 42.°33N×13.°51E, h0km*
ISC 08 01:02:47.9±0.7**, 42.°26N**±0.°01×**13.°55E**±0.°02**, h7**km±3km**, n132, σ1.°47**/180**, 1C, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.03**	**73**	Pg	**Pg**	**01 02 48.6**	**-0.7**
FAGN				Sg	**Sg**	**01 02 50.1**	**-0.3**
FAGN	**Fagnano**	**0.03**	**73**	Pg	**Pg**	**01 02 48.6**	**-0.7**
FAGN				Sg	**Sg**	**01 02 50.1**	**-0.3**
AQU	**L'Aquila**	**0.14**	**311**	Pg	**Pg**	**01 02 51.7**	**+0.8**
AQU				Sg	**Sg**	**01 02 54.4**	**+1.4**
	28µm,1.2s						
AQU	**L'Aquila**	**0.14**	**311**	Pg	**Pg**	**01 02 51.7**	**+0.8**
AQU				Sg	**Sg**	**01 02 54.4**	**+1.4**
	28µm,1.2s						
VCEL	**Villa Celiera**	**0.26**	**58**	Pg	**Pg**	**01 02 53.2**	**+0.2**
VCEL				Sg	**Sg**	**01 02 57.0**	**+0.6**
	13µm,0.7s						
VCEL	**Villa Celiera**	**0.26**	**58**	Pg	**Pg**	**01 02 53.2**	**+0.2**
VCEL				Sg	**Sg**	**01 02 57.0**	**+0.6**
	13µm,0.7s						
PTQR	**Pietraquaria**	**0.26**	**205**	Pg	**Pg**	**01 02 53.7**	**+0.7**
PTQR				Sg	**Sg**	**01 02 58.6**	**+2.1**
PTQR	**Pietraquaria**	**0.26**	**205**	Pg	**Pg**	**01 02 53.7**	**+0.7**
CAMP	**Campotosto**	**0.30**	**340**	Pg	**Pg**	**01 02 54.0**	**+0.3**
CAMP				Sg	**Sg**	**01 02 58.9**	**+1.2**
CAMP	**Campotosto**	**0.30**	**340**	Pg	**Pg**	**01 02 54.0**	**+0.3**
CAMP				Sg	**Sg**	**01 02 58.9**	**+1.2**
FIAM	**Fiamignano**	**0.32**	**272**	Pg	**Pg**	**01 02 54.8**	**+0.6**
FIAM				Sg	**Sb**	**01 03 00.1**	**-1.3**
	7µm,1.1s						
FIAM	**Fiamignano**	**0.32**	**272**	Pg	**Pg**	**01 02 54.8**	**+0.6**
FIAM				Sg	**Sb**	**01 03 00.1**	**-1.3**
	7µm,1.1s						
INTR	**Introdacqua**	**0.36**	**133**	Pg	**Pg**	**01 02 55.2**	**+0.3**
INTR				Sg	**Sg**	**01 03 00.8**	**+1.1**
	14µm,1.0s						
INTR	**Introdacqua**	**0.36**	**133**	Pg	**Pg**	**01 02 55.2**	**+0.3**
INTR				Sg	**Sg**	**01 03 00.8**	**+1.1**
	14µm,1.0s						
TERO	**Teramo**	**0.37**	**6**	Pg	**Pg**	**01 02 54.8**	**-0.2**
TERO				Sg	**Sg**	**01 03 00.1**	**+0.2**
	4µm,1.1s						
TERO	**Teramo**	**0.37**	**6**	Pg	**Pg**	**01 02 54.8**	**-0.2**
TERO				Sg	**Sg**	**01 03 00.1**	**+0.2**
	4µm,1.1s						
VVLD	**Villa Vallelon**	**0.39**	**172**	Pg	**Pg**	**01 02 55.8**	**+0.3**
VVLD				Sg	**Sg**	**01 03 02.3**	**+1.7**
	4µm,0.7s						
VVLD	**Villa Vallelon**	**0.39**	**172**	Pg	**Pg**	**01 02 55.8**	**+0.3**
VVLD				Sg	**Sg**	**01 03 02.3**	**+1.7**
	4µm,0.7s						
GUAR	**Guarcino**	**0.50**	**201**	Pg	**Pg**	**01 02 57.7**	**+0.3**
	285nm,0.3s						
GUAR	**Guarcino**	**0.50**	**201**	Pg	**Pg**	**01 02 57.7**	**+0.3**
	285nm,0.3s						
LNSS	**Leonessa**	**0.51**	**313**	Pg	**Pg**	**01 02 57.9**	**+0.2**
LNSS				Sg	**Sb**	**01 03 06.7**	**-0.2**
	6µm,1.2s						
LNSS	**Leonessa**	**0.51**	**313**	Pg	**Pg**	**01 02 57.9**	**+0.2**
LNSS				Sg	**Sb**	**01 03 06.7**	**-0.2**
	6µm,1.2s						
LPEL	**Lama dei Pelig**	**0.52**	**114**	Pg	**Pg**	**01 02 57.6**	**-0.2**
LPEL				Sg	**Sg**	**01 03 05.3**	**+0.7**
	5µm,0.8s						
LPEL	**Lama dei Pelig**	**0.52**	**114**	Pg	**Pg**	**01 02 57.6**	**-0.2**
LPEL				Sg	**Sg**	**01 03 05.3**	**+0.7**
	5µm,0.8s						
CERT	**Cerreto**	**0.52**	**234**	Pg	**Pg**	**01 02 58.1**	**+0.1**
CERT				Sg	**Sb**	**01 03 06.3**	**-0.8**
	3µm,1.0s						
CERT	**Cerreto**	**0.52**	**234**	Pg	**Pg**	**01 02 58.1**	**+0.1**
CERT				Sg	**Sb**	**01 03 06.3**	**-0.8**
	3µm,1.0s						
POFI	**Posta Fibreno**	**0.55**	**167**	Pg	**Pg**	**01 02 58.8**	**+0.3**
POFI				Sg	**Sb**	**01 03 07.4**	**-0.7**
	1µm,0.7s						
POFI	**Posta Fibreno**	**0.55**	**167**	Pg	**Pg**	**01 02 58.8**	**+0.3**
POFI				Sg	**Sb**	**01 03 07.4**	**-0.7**
	1µm,0.7s						
SDI	**San Donato**	**0.58**	**160**	Pg	**Pg**	**01 02 59.0**	**-0.1**
SDI	**San Donato**	**0.58**	**160**	Pg	**Pg**	**01 02 59.0**	**-0.1**
CAFR	**Castel Frentan**	**0.59**	**93**	Pg	**Pg**	**01 02 59.6**	**+0.3**
	5µm,0.9s						
CAFR	**Castel Frentan**	**0.59**	**93**	Pg	**Pg**	**01 02 59.6**	**+0.3**
	5µm,0.9s						
MTCE	**Montecelio**	**0.64**	**249**	Pg	**Pg**	**01 03 00.2**	**-0.1**
	2µm,1.4s						
MTCE	**Montecelio**	**0.64**	**249**	Pg	**Pg**	**01 03 00.2**	**-0.1**
	2µm,1.4s						
MNS	**Montasola**	**0.66**	**281**	Pg	**Pg**	**01 03 00.4**	**-0.1**
	1µm,0.7s						
MNS	**Montasola**	**0.66**	**281**	Pg	**Pg**	**01 03 00.4**	**-0.1**
	1µm,0.7s						
NRCA	**Norcia**	**0.66**	**331**	Pg	**Pg**	**01 03 00.2**	**-0.4**
NRCA				Sg	**Sg**	**01 03 10.3**	**+1.1**
	526nm,0.5s						
NRCA	**Norcia**	**0.66**	**331**	Pg	**Pg**	**01 03 00.2**	**-0.4**
NRCA				Sg	**Sg**	**01 03 10.3**	**+1.1**
	526nm,0.5s						
OFFI	**Offida**	**0.68**	**8**	Pg	**Pg**	**01 03 01.6**	**+0.6**
	3µm,0.7s						
OFFI	**Offida**	**0.68**	**8**	Pg	**Pg**	**01 03 01.6**	**+0.6**
	3µm,0.7s						
RNI2	**Rionero Sannit**	**0.71**	**141**	Pg	**Pg**	**01 03 01.5**	**-0.1**
	2µm,0.7s						
RNI2	**Rionero Sannit**	**0.71**	**141**	Pg	**Pg**	**01 03 01.5**	**-0.1**
	2µm,0.7s						
GIUL	**Giuliano Di Ro**	**0.73**	**198**	Pg	**Pg**	**01 03 01.8**	**-0.1**
GIUL				Sg	**Sb**	**01 03 13.1**	**-0.1**
	1µm,1.0s						
GIUL	**Giuliano Di Ro**	**0.73**	**198**	Pg	**Pg**	**01 03 01.8**	**-0.1**
GIUL				Sg	**Sb**	**01 03 13.1**	**-0.1**
	1µm,1.0s						
CERA	**Filignano**	**0.75**	**152**	Pg	**Pg**	**01 03 01.7**	**-0.5**
CERA				Sg	**Sg**	**01 03 12.2**	**+0.3**
	2µm,0.7s						
CERA	**Filignano**	**0.75**	**152**	Pg	**Pg**	**01 03 01.7**	**-0.5**
CERA				Sg	**Sg**	**01 03 12.2**	**+0.3**
	2µm,0.7s						
RMP	**Rome, Mte Porz**	**0.77**	**235**	Pg	**Pg**	**01 03 02.2**	**-0.5**
	952nm,0.8s						
RMP	**Rome, Mte Porz**	**0.77**	**235**	Pg	**Pg**	**01 03 02.2**	**-0.5**
	952nm,0.8s						
CESX	**Cesi**	**0.80**	**296**	Pg	**Pg**	**01 03 02.9**	**-0.3**
	1µm,1.1s						
CESX	**Cesi**	**0.80**	**296**	Pg	**Pg**	**01 03 02.9**	**-0.3**
	1µm,1.1s						
MIDA	**Miranda**	**0.81**	**139**	Pg	**Pg**	**01 03 02.6**	**-0.8**
MIDA				Sg	**Sg**	**01 03 13.8**	**-0.1**
	1µm,0.7s						
MIDA	**Miranda**	**0.81**	**139**	Pg	**Pg**	**01 03 02.6**	**-0.8**
MIDA				Sg	**Sg**	**01 03 13.8**	**-0.1**
	1µm,0.7s						
FDMO	**Fiordimonte**	**0.85**	**337**	Pg	**Pg**	**01 03 03.3**	**-0.9**
	562nm,1.0s						
FDMO	**Fiordimonte**	**0.85**	**337**	Pg	**Pg**	**01 03 03.3**	**-0.9**
	562nm,1.0s						
GUMA	**Gualdo di Mace**	**0.85**	**19**	Pg	**Pg**	**01 03 03.2**	**-1.1**
	2µm,0.5s						
GUMA	**Gualdo di Mace**	**0.85**	**19**	Pg	**Pg**	**01 03 03.2**	**-1.1**
	2µm,0.5s						
CESI	**CESI - Serrava**	**0.89**	**328**	Pg	**Pg**	**01 03 04.1**	**-0.8**
	188nm,0.5s						
CESI	**CESI - Serrava**	**0.89**	**328**	Pg	**Pg**	**01 03 04.1**	**-0.8**
	188nm,0.5s						
TRIV	**Trivento**	**0.89**	**123**	Pg	**Pg**	**01 03 04.3**	**-0.7**
	1µm,1.0s						
TRIV	**Trivento**	**0.89**	**123**	Pg	**Pg**	**01 03 04.3**	**-0.7**
	1µm,1.0s						
VAGA	**Valle Agricola**	**0.99**	**148**	Pg	**Pg**	**01 03 05.8**	**-1.0**
	576nm,0.6s						
VAGA	**Valle Agricola**	**0.99**	**148**	Pg	**Pg**	**01 03 05.8**	**-1.0**
	576nm,0.6s						
BSSO	**Busso**	**1.06**	**132**	Pg	**Pg**	**01 03 07.3**	**-0.8**
	1µm,1.0s						
BSSO	**Busso**	**1.06**	**132**	Pg	**Pg**	**01 03 07.3**	**-0.8**
	1µm,1.0s						
SGG	**Gregorio Mates**	**1.07**	**144**	Pg	**Pg**	**01 03 07.2**	**-1.2**
	1µm,0.9s						
SGG	**Gregorio Mates**	**1.07**	**144**	Pg	**Pg**	**01 03 07.2**	**-1.2**
	1µm,0.9s						
CING	**Cingoli**	**1.15**	**347**	Pg	**Pg**	**01 03 08.7**	**-1.2**
	398nm,0.7s						
CING	**Cingoli**	**1.15**	**347**	Pg	**Pg**	**01 03 08.7**	**-1.2**
	398nm,0.7s						
TOLF	**Tolfa**	**1.17**	**261**	Pg	**Pg**	**01 03 09.7**	**-0.5**
	172nm,0.5s						
TOLF	**Tolfa**	**1.17**	**261**	Pg	**Pg**	**01 03 09.7**	**-0.5**
	172nm,0.5s						
SACR	**S. Croce Del S**	**1.22**	**134**	Pg	**Pg**	**01 03 10.3**	**-0.9**
	556nm,1.0s						
SACR	**S. Croce Del S**	**1.22**	**134**	Pg	**Pg**	**01 03 10.3**	**-0.9**
	556nm,1.0s						
MGAB	**Montegabbione**	**1.25**	**302**	Pn	**Pg**	**01 03 11.1**	**-0.7**
	571nm,0.8s						
MGAB	**Montegabbione**	**1.25**	**302**	Pn	**Pg**	**01 03 11.1**	**-0.7**
	571nm,0.8s						
ARVD	**Arcevia**	**1.32**	**340**	Pn	**Pg**	**01 03 11.9**	**-1.2**
	499nm,1.0s						
ARVD	**Arcevia**	**1.32**	**340**	Pn	**Pg**	**01 03 11.9**	**-1.2**
	499nm,1.0s						
PIEI	**Pieia**	**1.48**	**330**	Pn	**Pn**	**01 03 15.0**	**+0.1**
	347nm,1.1s						
PIEI	**Pieia**	**1.48**	**330**	Pn	**Pn**	**01 03 15.0**	**+0.1**
	347nm,1.1s						
MAIM	**Mastiano**	**2.79**	**308**	P	**Pn**	**01 03 34.8**	**+2.0**
STON	**Ston**	**3.13**	**77**	*e*Pn	**Pn**	**01 03 37.2**	**-0.3**
STON				Sn	**Sn**	**01 04 15.2**	**+0.2**
STON	**Ston**	**3.13**	**77**	*e*Pn	**Pn**	**01 03 37.2**	**-0.3**
STON				Sn	**Sn**	**01 04 15.2**	**+0.2**
PE1	**Pezze di Greco**	**3.25**	**115**	*e*Pn	**Pn**	**01 03 40.8**	**+1.6**
SKDS	**Skadanscina**	**3.31**	**6**	*i* Pn	**Pn**	**01 03 40.9**	**+0.9**
SKDS				*i* Sn	**Sn**	**01 04 21.5**	**+2.0**
SKDS	**Skadanscina**	**3.31**	**6**	*i* Pn	**Pn**	**01 03 40.9**	**+0.9**
SKDS				*i* Sn	**Sn**	**01 04 21.5**	**+2.0**
PGF	**Pioggiola**	**3.38**	**276**	*e*Pn	**Pn**	**01 03 42.8**	**+1.7**
PGF				*e*Sn	**Sn**	**01 04 18.8**	**-2.7**
	4.3nm,0.5s						
PGF	**Pioggiola**	**3.38**	**276**	*e*Pn	**Pn**	**01 03 42.8**	**+1.7**
PGF				*e*Sn	**Sn**	**01 04 18.8**	**-2.7**
	2.2nm,0.5s						
GBRS	**Gornja Briga**	**3.40**	**15**	*e*Pn	**Pn**	**01 03 42.8**	**+1.5**
GBRS				*e*Sn	**Sn**	**01 04 23.5**	**+1.7**
BOJS	**Bojanci**	**3.47**	**20**	*i* Pn	**Pn**	**01 03 43.8**	**+1.6**
BOJS				*i* Sn	**Sn**	**01 04 27.4**	**+3.8**
BOJS	**Bojanci**	**3.47**	**20**	*i* Pn	**Pn**	**01 03 43.8**	**+1.6**
BOJS				*i* Sn	**Sn**	**01 04 27.4**	**+3.8**
CEY	**Cerknica**	**3.54**	**10**	*i* Pn	Pn	01 03 46.5	+3.3
CEY				*i* Sn	**Sn**	**01 04 27.1**	**+1.8**
CEY	**Cerknica**	**3.54**	**10**	*i* Pn	Pn	01 03 46.5	+3.3
CEY				*i* Sn	**Sn**	**01 04 27.1**	**+1.8**
BLY	**Banja Luka**	**3.63**	**45**	*e*Pn	**Pn**	**01 03 47.6**	**+3.1**
BLY	**Banja Luka**	**3.63**	**45**	*e*Pn	**Pn**	**01 03 47.6**	**+3.1**
VOY	**Vojsko**	**3.78**	**4**	*e*Pn	Pn	01 03 49.9	+3.3
VOY				*e*Sn	**Sn**	**01 04 28.3**	**-3.1**
PDG	**Podgorica**	**4.23**	**86**	*e*Pn	**Pn**	**01 03 54.8**	**+2.1**
PDG	**Podgorica**	**4.23**	**86**	*e*Pn	**Pn**	**01 03 54.8**	**+2.1**
ABTA	**Abfaltersbach**	**4.55**	**351**	⇑*i*Pn	**Pn**	**01 03 58.2**	**+1.0**
ABTA	**Abfaltersbach**	**4.55**	**351**	Pn	**Pn**	**01 03 58.2**	**+1.0**
BBLS	**Lazići**	**4.58**	**67**	*e*Pn	**Pn**	**01 04 00.2**	**+2.6**
BBLS				*e*Sn	**Sn**	**01 04 54.0**	**+2.9**
BBLS	**Lazići**	**4.58**	**67**	*e*Pn	**Pn**	**01 04 00.2**	**+2.6**
BBLS				*e*Sn	**Sn**	**01 04 54.0**	**+2.9**
PUK	**Puka**	**4.72**	**90**	*e*PN	**Pn**	**01 04 02.5**	**+3.0**
PUK	**Puka**	**4.72**	**90**	*e*Pn	**Pn**	**01 04 02.5**	**+3.0**
SBF	**Sospel**	**4.76**	**292**	*e*Pn	**Pn**	**01 04 00.2**	**+0.2**
SBF				*e*Sn	**Sn**	**01 04 51.2**	**-4.2**
	25nm,1.0s						
SBF	**Sospel**	**4.76**	**292**	*e*Pn	**Pn**	**01 04 00.2**	**+0.2**
SBF				*e*Sn	**Sn**	**01 04 51.2**	**-4.2**
	13nm,1.0s						
TIR	**Tirane**	**4.81**	**99**	*e*Pn	**Pn**	**01 04 01.8**	**+1.2**
BCI	**Bajram Curri**	**4.83**	**87**	*e*PN	**Pn**	**01 04 03.6**	**+2.6**
BCI	**Bajram Curri**	**4.83**	**87**	*e*Pn	**Pn**	**01 04 03.6**	**+2.6**
DIVS	**Divibare**	**5.06**	**67**	*e*Pn	**Pn**	**01 04 06.3**	**+2.2**
DIVS	**Divibare**	**5.06**	**67**	*e*Pn	**Pn**	**01 04 06.3**	**+2.2**
PHP	**Peshkopia**	**5.17**	**94**	*e*PN	**Pn**	**01 04 07.8**	**+2.1**
PHP	**Peshkopia**	**5.17**	**94**	*e*Pn	**Pn**	**01 04 07.8**	**+2.1**
FRF	**La Foret Royal**	**5.23**	**287**	*e*Pn	**Pn**	**01 04 05.0**	**-1.5**
FRF				*e*Sn	**Sn**	**01 05 02.8**	**-4.2**
	2.1nm,0.6s						
FRF	**La Foret Royal**	**5.23**	**287**	*e*Pn	**Pn**	**01 04 05.0**	**-1.5**
FRF				*e*Sn	**Sn**	**01 05 02.8**	**-4.2**
	1.0nm,0.6s						
LMR	**La Mourre**	**5.29**	**284**	*e*Pn	**Pn**	**01 04 07.6**	**+0.4**
LMR	**La Mourre**	**5.29**	**284**	*e*Pn	**Pn**	**01 04 07.6**	**+0.4**
TRUS	**Trudelj**	**5.38**	**66**	*e*Pn	**Pn**	**01 04 08.5**	**0.0**
TRUS	**Trudelj**	**5.38**	**66**	*e*Pn	**Pn**	**01 04 08.5**	**0.0**
GRUS	**Gruza**	**5.50**	**70**	*e*Pn	**Pn**	**01 04 10.1**	**0.0**
MBDF	**Montbardon**	**5.51**	**299**	*e*P	**Pn**	**01 04 13.5**	**+3.1**
MBDF	**Montbardon**	**5.51**	**299**	*e*P	**Pn**	**01 04 13.5**	**+3.1**
SMRF	**Simiane la Rot**	**6.08**	**289**	*e*P	**Pn**	**01 04 20.9**	**+2.7**
SMRF	**Simiane la Rot**	**6.08**	**289**	*e*P	**Pn**	**01 04 20.9**	**+2.7**
ZAPS	**Zavoj**	**6.76**	**78**	*e*Pn	**Pn**	**01 04 27.4**	**-0.1**
KHC	**Kasperske Hory**	**6.87**	**0**	*e*SN	**Sn**	**01 05 46.5**	**-1.0**
KHC	**Kasperske Hory**	**6.87**	**0**	Sn	**Sn**	**01 05 46.5**	**-1.0**
HINF	**Hinteralfeld**	**7.30**	**322**	*e*Pn	**Pn**	**01 04 34.8**	**-0.1**
HINF				*e*Sn	Sn	01 05 52.4	-5.7
	3.8nm,0.6s						
HINF	**Hinteralfeld**	**7.30**	**322**	*e*Pn	**Pn**	**01 04 34.8**	**-0.1**
CDF	**Champ du Feu**	**7.57**	**326**	*e*Pn	**Pn**	**01 04 38.8**	**+0.1**
CDF				*e*Sn	Sn	01 05 59.3	-5.5
	1.6nm,0.5s						
CDF	**Champ du Feu**	**7.57**	**326**	*e*Pn	**Pn**	**01 04 38.8**	**+0.1**
HAU	**Haudompre**	**7.67**	**321**	*e*Pn	**Pn**	**01 04 39.3**	**-0.7**
HAU	**Haudompre**	**7.67**	**321**	*e*Pn	**Pn**	**01 04 39.3**	**-0.7**
PRU	**Pruhonice**	**7.76**	**5**	*e*SN	**Sn**	**01 06 07.4**	**-1.8**

DDA 08 01:15:45.4, 39.°27N×27.°91E, h7km**, MD2.7, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.52**	**335**	*i* P	Pg	01 15 55.8	+0.3
BALY				*i* S	Sg	01 16 02.5	+0.1
DEMI	**Demirci**	**0.67**	**110**	*i* P	Pg	01 15 57.5	-0.9
GDZ	**Gediz**	**1.24**	**98**	*i* P	Pb	01 16 08.7	-0.6
GDZ				*i* S	Sn	01 16 27.0	+0.6

MEX 08 01:26:57.6±1.2**, 17.°25N×95.°28W, h128**km±22km**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.40**	**263**	*e*P	Pn	01 27 23.6	-1.1
VHO				*i* S	Sn	01 27 44.2	-1.1
HUIG	**Huatulco**	**1.67**	**209**	*i* P	Pn	01 27 25.3	-2.3
HUIG				*i* S	Sn	01 27 48.3	-2.0
TGIG		**2.12**	**102**	*i* P	Pn	01 27 31.9	-1.1
TGIG				*i* S	Sn	01 27 57.5	-2.6
TPIG	**Tehuac#an**	**2.30**	**301**	*i* P	Pn	01 27 34.7	-0.7
TPIG				*i* S	Sn	01 28 01.7	-2.8
UTMO	**Huajuapan**	**2.48**	**284**	*i* P	Pn	01 27 36.9	-0.8
UTMO				*i* S	Sn	01 28 06.5	-2.0
PCIG		**2.50**	**127**	*i* P	Pn	01 27 37.2	-0.5
PCIG				*i* S	Sn	01 28 07.6	-0.9
YAIG	**Yautepec**	**3.94**	**295**	*i* P	Pn	01 27 56.2	-0.6
YAIG				*i* S	Sn	01 28 39.8	-2.8

IDC 08 01:36:12.1±12.0**, 1.°35N×124.°82E, h300**km±140km**, mb3.3**/5**, mb1 3.3**/6**, mb1mx3.1**/23**, mbtmp3.2**/6**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.2**/19**, Error ellipse: s-maj=104.2km s-min=20.9km az=59.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.35**	**178**	P	P	01 40 16.3	0.0
	0.2nm,0.3s,baz=358,slow=9.2,SNR=17						
WRA	**Warramunga Arr**	**23.13**	**157**	P	P	01 40 52.2	-0.3
	2.9nm,0.4s,baz=336,slow=9.8,SNR=10						
ASAR	**Alice Springs**	**26.39**	**161**	P	P	01 41 21.4	-0.4
	0.4nm,0.3s,baz=339,slow=7.6,SNR=9.0						
KSRS	**Korea Array**	**36.04**	**4**	LR	LR	01 59 16.4	
	comp=Z,31nm,18.5s,baz=194,slow=38						
STKA	**Stephens Creek**	**36.67**	**156**	P	P	01 42 51.8	+0.8
	1.1nm,0.4s,baz=333,slow=2.3,SNR=2.9						
SONM	**Songino Array**	**48.98**	**344**	P	P	01 44 29.0	+0.1
	0.9nm,0.7s,baz=153,slow=7.9,SNR=5.3						
MKAR	**Makanchi Array**	**58.45**	**327**	P	P	01 45 36.9	-0.2
	0.7nm,0.5s,baz=124,slow=7.7,SNR=12						

*ISK **08** 01:53:22.7, 39.°31N×27.°91E, h5km, MD3.5*
*THE **08** 01:53:23.8, 39.°20N×27.°95E, h0km±2km, ML2.9/2, Error ellipse: s-maj=4.6km s-min=1.4km az=146.0*
*DDA **08** 01:53:23.4, 39.°30N×27.°94E, h24km, MD3.3*
*CSEM **08** 01:53:23.9±0.1, 39.°30N×27.°92E, h2km, MD3.5, Error ellipse: s-maj=2.1km s-min=1.9km az=100.0*
*ISCJB **08** 01:53:23.9±0.3, 39.°30N±0.°01×27.°93E±0.°02, h5km±3km, Error ellipse: s-maj=2.4km s-min=2.4km az=178.5*
*ATH **08** 01:53:26.1, 39.°65N×27.°72E, h6km±2km, MD3.7/5*
ISC 08 01:53:24.2±0.9**, 39.°31N**±0.°01×**27.°93E**±0.°01**, h13**km±8km**, n155, σ0.°97**/207**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.33**	**354**	PG	**Pg**	**01 53 30.9**	**+0.1**
BALB				SG	**Sb**	**01 53 36.5**	**-0.7**
BALB	**Balikesir**	**0.33**	**354**	*i* Pg	**Pg**	**01 53 31.0**	**+0.1**
BALB				*i* Sg	**Sb**	**01 53 36.5**	**-0.7**
AKHS	**Akhisar**	**0.44**	**192**	*i* P	**Pg**	**01 53 32.2**	**-0.7**
AKHS				*i* S	**Sg**	**01 53 39.6**	**+0.8**
AKHS	**Akhisar**	**0.44**	**192**	*i* P	**Pg**	**01 53 32.2**	**-0.7**
AKHS				*i* S	**Sg**	**01 53 39.6**	**+0.8**
AKS	**Akhisar**	**0.44**	**192**	PG	**Pg**	**01 53 32.1**	**-0.8**
AKS				SG	**Sb**	**01 53 39.7**	**-0.7**
AKS	**Akhisar**	**0.44**	**192**	*i* Pg	**Pg**	**01 53 32.1**	**-0.8**
BALY	**Balya**	**0.49**	**331**	*i* P	**Pg**	**01 53 33.6**	**-0.2**
BALY				*i* S	**Sb**	**01 53 41.6**	**-0.3**
BALY	**Balya**	**0.49**	**331**	*i* P	**Pg**	**01 53 33.6**	**-0.2**
BALY				*i* S	**Sb**	**01 53 41.6**	**-0.3**
DURS	**Dursunbey**	**0.51**	**55**	*i* P	**Pg**	**01 53 33.9**	**-0.4**
DURS				*i* S	**Sg**	**01 53 41.5**	**+0.4**
DURS	**Dursunbey**	**0.51**	**55**	*i* P	**Pg**	**01 53 33.9**	**-0.4**
DURS				*i* S	**Sg**	**01 53 41.5**	**+0.4**
DST	**Dursunbey**	**0.61**	**61**	PG	**Pg**	**01 53 35.5**	**-0.6**
DST				SG	**Sb**	**01 53 45.3**	**0.0**
DST	**Dursunbey**	**0.61**	**61**	*i* Pg	**Pg**	**01 53 35.5**	**-0.6**
DST				*i* Sg	**Sb**	**01 53 45.3**	**0.0**
DEMI	**Demirci**	**0.67**	**113**	*i* P	**Pg**	**01 53 36.6**	**-0.6**
DEMI				*i* S	**Sg**	**01 53 45.3**	**-0.7**
DEMI	**Demirci**	**0.67**	**113**	*i* P	**Pg**	**01 53 36.6**	**-0.6**
DEMI				*i* S	**Sg**	**01 53 45.3**	**-0.7**
GONE	**Gonen-Balikesi**	**0.76**	**346**	PG	**Pg**	**01 53 38.5**	**-0.4**
GONE				SG	**Sb**	**01 53 49.5**	**0.0**
GONE	**Gonen-Balikesi**	**0.76**	**346**	*i* Pg	**Pg**	**01 53 38.5**	**-0.4**
GONE				*i* Sg	**Sb**	**01 53 49.5**	**0.0**
MANT	**Manisa**	**0.95**	**149**	*i* P	**Pg**	**01 53 42.0**	**-0.6**
MANT				*i* S	**Sg**	**01 53 54.2**	**-0.9**
MANT	**Manisa**	**0.95**	**149**	*i* P	**Pg**	**01 53 42.0**	**-0.6**
MANT				*i* S	**Sg**	**01 53 54.2**	**-0.9**
AYVA	**Ayvalik**	**0.96**	**270**	*i* P	**Pg**	**01 53 42.6**	**-0.1**
AYVA				*i* S	**Sn**	**01 53 57.2**	**+0.3**
AYVA	**Ayvalik**	**0.96**	**270**	*i* P	**Pg**	**01 53 42.6**	**-0.1**
AYVA				*i* S	**Sn**	**01 53 57.2**	**+0.3**
KULA	**Kula-Manisa**	**0.98**	**144**	*e*PG	**Pg**	**01 53 42.2**	**-0.9**

KULA	**Kula-Manisa**	**0.98**	**144**	*e*Pg	**Pg**	**01 53 42.2**	**-0.9**
KCTX	**Karacabey (Bur**	**1.01**	**19**	*e*PG	**Pb**	**01 53 43.0**	**-0.5**
KCTX	**Karacabey (Bur**	**1.01**	**19**	*e*Pg	**Pb**	**01 53 43.0**	**-0.5**
EDC	**Edincik**	**1.04**	**357**	*e*PG	**Pn**	**01 53 44.5**	**+0.1**
EDC	**Edincik**	**1.04**	**357**	*e*Pg	**Pn**	**01 53 44.5**	**+0.1**
BNT	**Bandirma**	**1.04**	**360**	*e*PG	**Pb**	**01 53 43.7**	**-0.4**
BNT	**Bandirma**	**1.04**	**360**	*e*Pg	**Pb**	**01 53 43.7**	**-0.4**
ORLT	**Orhaneli**	**1.05**	**45**	*e*PG	**Pb**	**01 53 44.5**	**+0.3**
ORLT	**Orhaneli**	**1.05**	**45**	*e*Pg	**Pb**	**01 53 44.5**	**+0.3**
IZM	**Izmir**	**1.05**	**210**	*e*PG	**Pb**	**01 53 43.7**	**-0.5**
IZM	**Izmir**	**1.05**	**210**	*e*Pg	**Pb**	**01 53 43.7**	**-0.5**
BLCB	**Balcova**	**1.16**	**217**	*e*PN	**Pb**	**01 53 45.8**	**-0.2**
BLCB	**Balcova**	**1.16**	**217**	*e*Pn	**Pb**	**01 53 45.8**	**-0.2**
KRBG	**Karabiga-Canak**	**1.19**	**336**	*e*PN	**Pn**	**01 53 46.4**	**-0.1**
KRBG	**Karabiga-Canak**	**1.19**	**336**	*e*Pn	**Pn**	**01 53 46.4**	**-0.1**
TVSB	**Tavsanli**	**1.20**	**83**	*e*PN	**Pn**	**01 53 46.6**	**-0.1**
TVSB	**Tavsanli**	**1.20**	**83**	*e*Pn	**Pn**	**01 53 46.6**	**-0.1**
GDZ	**Gediz**	**1.23**	**100**	*i* P	**Pn**	**01 53 47.2**	**0.0**
GDZ				*i* S	**Sb**	**01 54 03.6**	**+0.5**
GDZ	**Gediz**	**1.23**	**100**	*i* P	**Pn**	**01 53 47.2**	**0.0**
GDZ				*i* S	**Sb**	**01 54 03.6**	**+0.5**
ULDT	**Uludag**	**1.25**	**48**	*i* P	**Pn**	**01 53 47.8**	**+0.3**
ULDT				*i* S	**Sb**	**01 54 04.4**	**+0.6**
ULDT	**Uludag**	**1.25**	**48**	*i* P	**Pn**	**01 53 47.8**	**+0.3**
ULDT				*i* S	**Sb**	**01 54 04.4**	**+0.6**
PRK	**Paraskevi**	**1.29**	**268**	P	**Pn**	**01 53 48.2**	**+0.3**
PRK				S	**Sg**	**01 54 06.4**	**+0.7**
PRK	**Paraskevi**	**1.29**	**268**	*e*PN	**Pn**	**01 53 48.1**	**+0.2**
PRK				*e*SB	**Sb**	**01 54 05.0**	**+0.3**
PRK	**Paraskevi**	**1.29**	**268**	P	**Pn**	**01 53 48.2**	**+0.3**
PRK				*e*Sb	**Sb**	**01 54 05.0**	**+0.3**
PRK				S	**Sg**	**01 54 06.4**	**+0.7**
MDNY	**Mudanya-Bursa**	**1.29**	**35**	*e*PN	**Pn**	**01 53 48.1**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.29**	**35**	*e*Pn	**Pn**	**01 53 48.1**	**+0.2**
MRMT	**Marmara Adasi**	**1.32**	**349**	*e*PN	**Pb**	**01 53 48.9**	**+0.1**
MRMT	**Marmara Adasi**	**1.32**	**349**	*e*Pn	**Pb**	**01 53 48.9**	**+0.1**
EZN	**Ezine**	**1.34**	**293**	*e*PN	**Pn**	**01 53 48.7**	**+0.1**
EZN	**Ezine**	**1.34**	**293**	*e*Pn	**Pn**	**01 53 48.7**	**+0.1**
LPK	**Lapseki**	**1.39**	**320**	*e*PN	**Pb**	**01 53 50.0**	**0.0**
LPK	**Lapseki**	**1.39**	**320**	*e*Pn	**Pb**	**01 53 50.0**	**0.0**
URLA	**Izmir**	**1.41**	**228**	*i* P	**Pn**	**01 53 49.3**	**-0.3**
URLA				*i* S	**Sg**	**01 54 09.1**	**-0.4**
URLA	**Izmir**	**1.41**	**228**	*i* P	**Pn**	**01 53 49.3**	**-0.3**
URLA				*i* S	**Sg**	**01 54 09.1**	**-0.4**
GEMT	**Gemlik**	**1.48**	**40**	*e*PN	**Pn**	**01 53 51.0**	**+0.4**
GEMT	**Gemlik**	**1.48**	**40**	*e*Pn	**Pn**	**01 53 51.0**	**+0.4**
SART	**Tekirdag**	**1.49**	**338**	*i* P	**Pb**	**01 53 51.8**	**0.0**
SART	**Tekirdag**	**1.49**	**338**	*i* P	**Pb**	**01 53 51.8**	**0.0**
KHAL	**Karahalli**	**1.54**	**127**	*i* P	**Pn**	**01 53 51.6**	**+0.1**
KHAL				*i* S	**Sn**	**01 54 11.0**	**-0.4**
KHAL	**Karahalli**	**1.54**	**127**	*i* P	**Pn**	**01 53 51.6**	**+0.1**
KHAL				*i* S	**Sn**	**01 54 11.0**	**-0.4**
BOZC	**Bozcaada**	**1.54**	**291**	*i* P	**Pn**	**01 53 51.8**	**+0.4**
BOZC				*i* S	**Sn**	**01 54 10.9**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.56**	**315**	*e*PN	**Pb**	**01 53 52.7**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.56**	**315**	*e*Pn	**Pb**	**01 53 52.7**	**-0.2**
IZI	**Iznik**	**1.57**	**49**	*e*PN	**Pn**	**01 53 52.4**	**+0.6**
IZI	**Iznik**	**1.57**	**49**	*e*Pn	**Pn**	**01 53 52.4**	**+0.6**
KHL	**Karahalli**	**1.59**	**128**	*e*PN	**Pb**	**01 53 53.4**	**-0.1**
KHL	**Karahalli**	**1.59**	**128**	*e*Pn	**Pb**	**01 53 53.4**	**-0.1**
SIGR	**SIGRI**	**1.61**	**267**	P	**Pn**	**01 53 52.5**	**+0.2**
SIGR				S	**Sb**	**01 54 15.1**	**+1.0**
SIGR	**SIGRI**	**1.61**	**267**	P	**Pn**	**01 53 52.5**	**+0.2**
SIGR				S	**Sb**	**01 54 15.1**	**+1.0**
AYDN	**Tasoluk**	**1.65**	**181**	*i* P	**Pb**	**01 53 54.5**	**+0.1**
AYDN				*i* S	**Sn**	**01 54 14.7**	**+0.7**
AYDN	**Tasoluk**	**1.65**	**181**	*i* P	**Pb**	**01 53 54.5**	**+0.1**
AYDN				*i* S	**Sn**	**01 54 14.7**	**+0.7**
GCAM	**G?zelcaml?**	**1.70**	**199**	*i* P	**Pn**	**01 53 51.5**	**-2.0**
GCAM	**G?zelcaml?**	**1.70**	**199**	*i* P	**Pn**	**01 53 51.5**	**-2.0**
TKR	**Tekirdag**	**1.70**	**350**	*e*PN	**Pn**	**01 53 54.4**	**+0.8**
TKR	**Tekirdag**	**1.70**	**350**	*e*Pn	**Pn**	**01 53 54.4**	**+0.8**
ALT	**Altintas**	**1.71**	**98**	*e*PN	**Pn**	**01 53 54.6**	**+0.8**
ALT	**Altintas**	**1.71**	**98**	*e*Pn	**Pn**	**01 53 54.6**	**+0.8**
CAVI	**Cavuskoy**	**1.72**	**58**	*e*PN	**Pb**	**01 53 55.6**	**-0.1**
CAVI	**Cavuskoy**	**1.72**	**58**	*e*Pn	**Pb**	**01 53 55.6**	**-0.1**
CHOS	**Chios island**	**1.73**	**238**	P	**Pn**	**01 53 54.1**	**+0.1**
CHOS	**Chios island**	**1.73**	**238**	P	**Pn**	**01 53 54.1**	**+0.1**
ERIK	**Erikli-Kesan**	**1.74**	**322**	*e*PN	**Pn**	**01 53 54.9**	**+0.8**
ERIK	**Erikli-Kesan**	**1.74**	**322**	*e*Pn	**Pn**	**01 53 54.9**	**+0.8**
ADVT	**Abdulvahap**	**1.79**	**51**	*e*PN	**Pb**	**01 53 56.5**	**-0.3**
ADVT	**Abdulvahap**	**1.79**	**51**	*e*Pn	**Pb**	**01 53 56.5**	**-0.3**
BUY	**Buyukada**	**1.79**	**30**	*e*PN	**Pb**	**01 53 56.7**	**-0.1**
BUY	**Buyukada**	**1.79**	**30**	*i* P	**Pn**	**01 53 54.9**	**+0.1**
BUY				*i* S	**Sn**	**01 54 15.8**	**-1.6**
BUY	**Buyukada**	**1.79**	**30**	*i* P	**Pn**	**01 53 54.9**	**+0.1**
BUY	**Buyukada**	**1.79**	**30**	*e*Pn	**Pb**	**01 53 56.7**	**-0.1**
BUY				*i* S	**Sn**	**01 54 15.8**	**-1.6**
CRLT	**Corlu**	**1.82**	**355**	*e*PN	**Pb**	**01 53 57.0**	**-0.4**
CRLT	**Corlu**	**1.82**	**355**	*e*Pn	**Pb**	**01 53 57.0**	**-0.4**
DNZL	**Cakiroluk**	**1.84**	**151**	*i* P	**Pn**	**01 53 55.0**	**-0.7**
DNZL				*i* S	**Sn**	**01 54 18.2**	**-0.8**
DNZL	**Cakiroluk**	**1.84**	**151**	*i* P	**Pn**	**01 53 55.0**	**-0.7**
DNZL				*i* S	**Sn**	**01 54 18.2**	**-0.8**
ELBA	**Catalca**	**1.87**	**12**	*i* P	**Pn**	**01 53 57.1**	**+1.1**
ELBA	**Catalca**	**1.87**	**12**	*i* P	**Pn**	**01 53 57.1**	**+1.1**
SLVT	**Silivri**	**1.93**	**6**	*e*PN	**Pb**	**01 53 58.3**	**-0.9**
SLVT	**Silivri**	**1.93**	**6**	*e*Pn	**Pb**	**01 53 58.3**	**-0.9**
ISK	**Istanbul-Kandi**	**1.96**	**26**	*e*PN	**Pb**	**01 53 59.2**	**-0.5**
ISK	**Istanbul-Kandi**	**1.96**	**26**	P	**Pn**	**01 53 57.5**	**+0.4**
ISK				S	**Sg**	**01 54 25.8**	**-1.2**
ISK	**Istanbul-Kandi**	**1.96**	**26**	P	**Pn**	**01 53 57.5**	**+0.4**
ISK	**Istanbul-Kandi**	**1.96**	**26**	*e*Pn	**Pb**	**01 53 59.2**	**-0.5**
ISK				S	**Sg**	**01 54 25.8**	**-1.2**
CTKS	**Kestanelik-??a**	**1.97**	**13**	*e*PN	**Pb**	**01 53 58.9**	**-1.1**
CTKS	**Kestanelik-??a**	**1.97**	**13**	*e*Pn	**Pb**	**01 53 58.9**	**-1.1**
BGKT	**Bogazkoy**	**1.98**	**19**	*e*PN	**Pb**	**01 53 59.1**	**-0.9**
BGKT	**Bogazkoy**	**1.98**	**19**	*e*Pn	**Pb**	**01 53 59.1**	**-0.9**
HRT	**Hereke**	**2.02**	**41**	*e*PN	**Pb**	**01 53 59.6**	**-1.1**
HRT	**Hereke**	**2.02**	**41**	*e*Pn	**Pb**	**01 53 59.6**	**-1.1**
MLSB	**Milas**	**2.02**	**183**	*e*PN	**Pn**	**01 53 59.4**	**+1.5**
MLSB	**Milas**	**2.02**	**183**	*e*Pn	**Pn**	**01 53 59.4**	**+1.5**
BORA	**Eskisehir**	**2.03**	**73**	*i* P	**Pn**	**01 53 59.1**	**+0.9**
BORA				*i* S	**Sn**	**01 54 23.5**	**0.0**
BORA	**Eskisehir**	**2.03**	**73**	*i* P	**Pn**	**01 53 59.1**	**+0.9**
BORA				*i* S	**Sn**	**01 54 23.5**	**0.0**
GPA	**Golpazari**	**2.08**	**61**	*e*PN	**Pb**	**01 54 00.8**	**-1.0**
GPA	**Golpazari**	**2.08**	**61**	*e*Pn	**Pb**	**01 54 00.8**	**-1.0**
ALN	**Alexandroupoli**	**2.14**	**318**	P	**Pn**	**01 54 00.6**	**+0.9**
ALN				S	**Sb**	**01 54 30.5**	**+1.1**
ALN	**Alexandroupoli**	**2.14**	**318**	*e*PN	**Pn**	**01 54 00.1**	**+0.4**
ALN				*e*SN	**Sn**	**01 54 23.9**	**-2.2**
ALN	**Alexandroupoli**	**2.14**	**318**	*e*Pn	**Pn**	**01 54 00.1**	**+0.4**
ALN	**Alexandroupoli**	**2.14**	**318**	P	**Pn**	**01 54 00.6**	**+0.9**
ALN				*e*Sn	**Sn**	**01 54 23.9**	**-2.2**
ALN				S	**Sb**	**01 54 30.5**	**+1.1**
SMTH	**Samothraki Isl**	**2.18**	**303**	*e*PN	**Pn**	**01 54 00.6**	**+0.4**
SMTH				*e*SN	**Sn**	**01 54 25.7**	**-1.3**
SMTH	**Samothraki Isl**	**2.18**	**303**	*e*Pn	**Pn**	**01 54 00.6**	**+0.4**
SMTH				*e*Sn	**Sn**	**01 54 25.7**	**-1.3**
CTYL	**Yal??k??y-??at**	**2.18**	**7**	*e*PN	**Pn**	**01 54 01.9**	**+1.8**
CTYL	**Yal??k??y-??at**	**2.18**	**7**	*e*Pn	**Pn**	**01 54 01.9**	**+1.8**
YER	**Yerkesik**	**2.19**	**173**	*e*PN	**Pn**	**01 54 02.1**	**+1.8**
YER	**Yerkesik**	**2.19**	**173**	*e*Pn	**Pn**	**01 54 02.2**	**+1.8**
LIA	**Limnos Island**	**2.20**	**286**	P	**Pn**	**01 54 01.4**	**+1.0**
LIA	**Limnos Island**	**2.20**	**286**	*e*PN	**Pn**	**01 54 01.4**	**+1.0**
LIA				*e*SN	**Sn**	**01 54 28.2**	**+0.7**
LIA	**Limnos Island**	**2.20**	**286**	P	**Pn**	**01 54 01.4**	**+1.0**
LIA				*e*Sn	**Sn**	**01 54 28.2**	**+0.7**
SILT	**Sile**	**2.26**	**35**	*e*PN	**Pn**	**01 54 03.0**	**+1.7**
SILT	**Sile**	**2.26**	**35**	*e*Pn	**Pn**	**01 54 03.0**	**+1.7**
ESKT	**Eskisehir**	**2.27**	**84**	*e*PN	**Pn**	**01 54 03.1**	**+1.5**
ESKT	**Eskisehir**	**2.27**	**84**	*e*Pn	**Pn**	**01 54 03.1**	**+1.5**
SEYT	**Eskypehyr**	**2.27**	**84**	*i* P	**Pb**	**01 54 05.9**	**+0.7**
SEYT	**Eskypehyr**	**2.27**	**84**	*i* P	**Pb**	**01 54 05.9**	**+0.7**
GULT	**Gulveren**	**2.28**	**60**	*e*PN	**Pn**	**01 54 03.4**	**+1.7**
GULT	**Gulveren**	**2.28**	**60**	*e*Pn	**Pn**	**01 54 03.4**	**+1.7**
DAT	**Datca**	**2.59**	**186**	*e*PN	**Pn**	**01 54 07.3**	**+1.4**
DAT	**Datca**	**2.59**	**186**	*e*Pn	**Pn**	**01 54 07.3**	**+1.4**
EDRB	**Edirne**	**2.69**	**341**	*e*PN	**Pn**	**01 54 09.0**	**+1.9**
EDRB	**Edirne**	**2.69**	**341**	*e*Pn	**Pn**	**01 54 09.0**	**+1.9**
MDUB	**Mudurnu**	**2.77**	**64**	*e*PN	**Pn**	**01 54 10.3**	**+1.9**
MDUB	**Mudurnu**	**2.77**	**64**	*e*Pn	**Pn**	**01 54 10.3**	**+1.9**
SVRH	**Sivrihisar-ESK**	**2.79**	**86**	*e*PN	**Pn**	**01 54 11.0**	**+2.4**
SVRH	**Sivrihisar-ESK**	**2.79**	**86**	*e*Pn	**Pn**	**01 54 11.0**	**+2.4**
FETY	**Fethiye**	**2.82**	**161**	*e*PN	**Pn**	**01 54 11.0**	**+2.0**
FETY	**Fethiye**	**2.82**	**161**	*e*Pn	**Pn**	**01 54 11.0**	**+2.0**
APE	**Apeiranthos**	**2.93**	**221**	*e*PN	**Pn**	**01 54 12.1**	**+1.6**
APE	**Apeiranthos**	**2.93**	**221**	*e*PB	**Pg**	**01 54 18.5**	**-1.8**
APE	**Apeiranthos**	**2.93**	**221**	*e*Pn	**Pn**	**01 54 12.1**	**+1.6**
APE	**Apeiranthos**	**2.93**	**221**	*e*Pb	**Pg**	**01 54 18.5**	**-1.8**
ELL	**Elmali**	**3.00**	**148**	*e*PN	**Pn**	**01 54 13.4**	**+1.9**
ELL	**Elmali**	**3.00**	**148**	*e*Pn	**Pn**	**01 54 13.4**	**+1.9**
PLG	**Polygyros**	**3.61**	**289**	*e*PN	**Pn**	**01 54 21.0**	**+1.1**
PLG	**Polygyros**	**3.61**	**289**	*e*Pn	**Pn**	**01 54 21.0**	**+1.1**
ANTO	**Ankara**	**3.80**	**80**	*e*PN	**Pn**	**01 54 25.4**	**+2.9**
ANTO	**Ankara**	**3.80**	**80**	*e*Pn	**Pn**	**01 54 25.4**	**+2.9**

*NEIC **08** 02:03:17.6, 52°.25N×169°.39W, h3km, ML3.4(AEIC), After AEIC.*

*ISCJB **08** 02:03:18.1±1.9, 52°.02N±0°.09×169°.28W±0°.10, h32km±13km, mb3.9/13, Error ellipse: s-maj=17.6km s-min=5.6km az=149.1*

*IDC **08** 02:03:20.3±5.4, 52°.27N×169°.32W, h29km±37km, mb3.7/13, mb1 3.9/16, mb1mx3.8/31, mbtmp3.7/16, ML3.6/2, Error ellipse: s-maj=36.0km s-min=13.0km az=169.0*

ISC 08 02:03:17.6±3.0**, 52°.2N**±0°.1×**169°.29W**±0°.08**, h13**km±17km**, n33, σ1s.20**/38**, mb3.7**/13**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKSP	**Okmok Steeple**	**1.24**	**29**	P	**Pn**	**02 03 40.8**	**+0.1**
OKSO	**Okmok South**	**1.37**	**30**	P	**Pb**	**02 03 42.8**	**-0.3**
OKSO				S	**Sn**	**02 04 02.0**	**+1.6**
OKCE	**Okmok Cone E**	**1.43**	**28**	P	**Pn**	**02 03 43.4**	**+0.1**
OKFG	**Magazine Ridge**	**1.49**	**34**	P	**Pn**	**02 03 43.9**	**-0.2**
OKFG				S	**Sg**	**02 04 05.5**	**-0.2**
MSOM	**Makushin Julie**	**2.17**	**40**	P	**Pn**	**02 03 53.5**	**+0.1**
MREP	**Makushin Rep't**	**2.25**	**42**	P	**Pn**	**02 03 56.0**	**+1.5**
MCIR	**Makushin Cirqu**	**2.29**	**38**	P	**Pn**	**02 03 56.7**	**+1.5**
UNV	**Unalaska Valle**	**2.37**	**44**	P	**Pn**	**02 03 57.3**	**+1.1**
UNV				S	**Sn**	**02 04 26.9**	**+1.7**
MTBL	**Makushin Table**	**2.39**	**40**	P	**Pn**	**02 03 58.0**	**+1.4**
AKRB	**Akutan Reef Bi**	**2.75**	**44**	P	**Pn**	**02 04 02.9**	**+1.4**
AKGG	**Akutan Green G**	**2.84**	**43**	P	**Pn**	**02 04 04.3**	**+1.7**
AKGG				S	**Sb**	**02 04 41.0**	**-1.6**
AKUT	**Akutan**	**2.89**	**46**	*e*Pn	**Pn**	**02 04 05.2**	**+1.9**
AKUT				*e*Sg	**Sb**	**02 04 46.6**	**+2.5**
KOFP	**Korovin Flat P**	**2.96**	**274**	P	**Pn**	**02 04 06.0**	**+1.7**
KOKV	**Korovin Volcan**	**3.00**	**275**	P	**Pn**	**02 04 06.4**	**+1.5**
ATKA	**Atka Island**	**3.02**	**272**	P	**Pn**	**02 04 05.7**	**+0.7**
FX1	**Attu Island--F**	**10.71**	**281**	Pn	**Pn**	**02 05 52.3**	**+1.7**
	1.4nm,0.3s,baz=33,slow=17,SNR=7.5						
KDAK	**Kodiak Island**	**11.11**	**53**	Pn	**Pn**	**02 05 55.3**	**-0.7**
	0.4nm,0.3s,baz=240,slow=10,SNR=5.5						
ILAR	**Eielson Array**	**17.08**	**34**	Pn	**Pn**	**02 07 14.8**	**-1.1**
	0.1nm,0.3s,baz=224,slow=10,SNR=6.8						
PETK	**Petropavlovsk-**	**19.96**	**286**	P	**P**	**02 07 49.4**	**+0.2**
	1.7nm,0.3s,baz=94,slow=13,SNR=10						
INK	**Inuvik**	**23.48**	**33**	P	**P**	**02 08 25.1**	**-1.5**
	1.5nm,0.6s,baz=241,slow=8.7,SNR=14						
YKA	**Yellowknife Ar**	**30.33**	**49**	P	**P**	**02 09 27.7**	**-0.7**
	0.4nm,0.4s,baz=274,slow=8.1,SNR=15						
ASAJ	**Asahikawa**	**32.57**	**275**	P	**P**	**02 09 47.1**	**-1.3**
	4.7nm,0.4s,baz=54,slow=7.0,SNR=3.0						
PDAR	**Pinedale Array**	**40.39**	**79**	P	**P**	**02 10 56.1**	**+0.7**
	0.7nm,0.6s,baz=310,slow=3.2,SNR=6.8						
KSRS	**Korea Array**	**45.47**	**277**	P	**P**	**02 11 36.8**	**+0.5**
	1.1nm,0.7s,baz=59,slow=7.4,SNR=6.4						
SONM	**Songino Array**	**51.44**	**301**	P	**P**	**02 12 22.1**	**-0.2**
	0.6nm,0.6s,baz=61,slow=7.2,SNR=4.4						
TXAR	**Lajitas Array**	**52.70**	**89**	P	**P**	**02 12 31.9**	**-0.1**
	0.4nm,0.7s,baz=300,slow=5.9,SNR=6.8						
MKAR	**Makanchi Array**	**63.97**	**313**	P	**P**	**02 13 49.2**	**-1.1**
	0.6nm,0.7s,baz=62,slow=8.4,SNR=4.8						
NB2	**NORSAR Subarra**	**67.13**	**360**	P	**P**	**02 14 09.8**	**-0.7**
	comp=Z,29nm,2.0s,baz=6.4,slow=6.2						
NOA	**NORSAR Array B**	**67.13**	**360**	P	**P**	**02 14 10.3**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=1.0,slow=6.2,SNR=4.1						
CMAR	**Chiang Mai Arr**	**76.70**	**283**	P	**P**	**02 15 09.1**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=28,slow=6.3,SNR=5.3						
GERES	**GERESS Array B**	**79.32**	**358**	P	**P**	**02 15 23.2**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=10,slow=6.0,SNR=4.2						
BRTR	**Keskin Array B**	**86.32**	**342**	P	**P**	**02 15 58.9**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=25,slow=3.8,SNR=3.3						
ESDC	**Sonseca Array**	**87.63**	**11**	P	**P**	**02 16 05.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=27,slow=39,SNR=3.9						

*ISCJB **08** 02:19:50.9±0.4, 3°.13S±0°.06×69°.17E±0°.05, h10km, mb4.6/39, MS4.0/20, Error ellipse: s-maj=9.6km s-min=6.3km az=141.3*

*BJI **08** 02:19:51.8, 2°.84S×68°.99E, h11km, mB4.9/15, mb4.8/28, Ms4.8/15, Ms7 4.4/15*

*IDC **08** 02:19:52.0±0.6, 2°.94S×69°.01E, h0km, mb4.4/16, mb1 4.4/16, mb1mx4.2/30, mbtmp4.4/16, MS3.9/14, Ms1 3.9/14, ms1mx3.5/44, Error ellipse: s-maj=19.2km s-min=14.3km az=146.0*

*NEIC **08** 02:19:52.8±0.3, 3°.10S×69°.16E, h10km, mb4.6/18, Error ellipse: s-maj=9.6km s-min=8.5km az=137.0*

*DJA **08** 02:19:57.5±2.4, 3°S±13°×6°9E±1°0, h48km±29km, M4.9/4, mb4.9/4*

ISC 08 02:19:52.9±0.4**, 3°.16S**±0°.06×**69°.20E**±0°.06**, h10**km**, n108, σ1s.77**/139**, mb4.6**/39**, MS4.1**/20**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**5.32**	**143**	*e*Pn	**Pn**	**02 21 11.8**	**-0.6**
DGAR				*e*Sn	**Sn**	**02 22 09.9**	**-3.9**
MSEY	**Mahe Island**	**13.77**	**263**	P	**Pn**	**02 23 11.0**	**+2.6**
PALK	**Pallekele**	**15.46**	**48**	*e*Pn	**Pn**	**02 23 31.0**	**-0.3**
	22nm,1.0s						
HYB	**Hyderabad**	**22.43**	**24**	*i* P	**P**	**02 24 50.0**	**-2.1**
OPO	**Ambohidratompo**	**26.44**	**233**	LR	LR	02 33 28.9	
	comp=Z,196nm,18.3s,baz=132,slow=31						
ATD	**Arta Tunnel**	**30.00**	**300**	LR	LR	02 35 53.5	
	comp=Z,72nm,19.7s,baz=118,slow=32						
PSI	**Prapat**	**30.29**	**79**	LR	LR	02 36 23.3	
	comp=Z,233nm,18.9s,baz=220,slow=33						
KMBO	**Kilima Mbogo**	**31.99**	**273**	*e*P	**P**	**02 26 20.1**	**+0.2**
	6.3nm,0.9s						
KMBO	**Kilima Mbogo**	**31.99**	**273**	P	**P**	**02 26 19.7**	**-0.3**
	5.0nm,0.8s,baz=62,slow=12,SNR=18						
KMBO				LR	LR	02 36 07.4	
	comp=Z,111nm,20.6s,baz=98,slow=31						
KOLN	**Koldanda**	**33.74**	**23**	*e*P	**P**	**02 26 34.7**	**-0.3**
PYUN	**Piuthan**	**33.80**	**22**	*e*P	**P**	**02 26 35.1**	**-0.4**
	43nm,1.1s						
DMN	**Daman**	**34.22**	**26**	*e*P	**P**	**02 26 39.0**	**-0.2**
	41nm,0.9s						
DANN	**Dangsing**	**34.32**	**23**	*e*P	**P**	**02 26 39.7**	**-0.4**
	50nm,1.2s						
PKI	**Pulchoki**	**34.32**	**26**	*e*P	**P**	**02 26 39.5**	**-0.7**
RAMN	**Ramite**	**34.33**	**28**	*e*P	**P**	**02 26 40.3**	**+0.1**
	33nm,1.0s						
KKN	**Kakani**	**34.45**	**26**	*e*P	**P**	**02 26 41.0**	**-0.2**
	23nm,0.6s						
GUN	**Gumba**	**34.82**	**26**	*e*P	**P**	**02 26 44.7**	**+0.2**
	53nm,0.8s						
TAPN	**Taplejung**	**35.20**	**29**	*e*P	**P**	**02 26 47.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**36.32**	**53**	P	**P**	**02 26 57.6**	**+0.4**
CMAR	**Chiang Mai Arr**	**36.32**	**53**	P	**P**	**02 26 57.6**	**+0.4**
	4.7nm,0.8s,baz=243,slow=10,SNR=23						
CMAR				LR	LR	02 40 52.7	
	comp=Z,78nm,18.6s,baz=60,slow=35						
CHTO	**Chiang Mai**	**36.52**	**52**	*e*P	**P**	**02 26 59.2**	**+0.3**
	9.6nm,0.9s						
CHTO	**Chiang Mai**	**36.52**	**52**	P	**P**	**02 26 58.2**	**-0.7**
	14nm,1.0s						
CMMT	**Chiang Mai**	**36.52**	**52**	P	**P**	**02 26 58.0**	**-0.9**
KBL	**Kabul**	**37.50**	**360**	*e*P	**P**	**02 27 08.1**	**+0.8**
	13nm,1.0s						
LSA	**Lhasa**	**38.85**	**31**	*e*P	**P**	**02 27 18.4**	**-0.6**
	8.9nm,0.6s						
LSZ	**Lusaka**	**42.14**	**251**	*e*P	**P**	**02 27 45.6**	**-0.5**
	9.0nm,0.7s						
LSZ	**Lusaka**	**42.14**	**251**	P	**P**	**02 27 45.7**	**-0.5**
	6.9nm,0.7s,baz=66,slow=10,SNR=21						
KSH	**Kashi**	**42.92**	**8**	P	P	02 27 47.8	-4.3
KSH				*e*pP	pP	02 27 52.1	-3.1
KSH				*e*sP	sP	02 27 54.8	-1.6
KSH				*e*PP	**PP**	**02 29 29.1**	**-2.7**
KSH				*e*PcP	**PcP**	**02 29 41.5**	**-1.3**
KSH				*e*ScP	**ScP**	**02 33 30.0**	**-4.1**
KSH				*e*S	S	02 34 08.1	-9.1
KSH				*e*sS	sS	02 34 15.2	-7.1
KSH				*e*SS	SS	02 37 11.6	-17
KSH				*e*ScS	**ScS**	**02 37 46.6**	**-6.9**
KSH				pmax	pmax		
	comp=Z,19nm,0.8s						
KSH				pmax	pmax		
	comp=Z,60nm,3.7s						
KSH				LR	LR		
	comp=N,310nm,11.5s						
KSH				LR	LR		
	comp=E,220nm,10.2s						
KSH				LR	LR		
	comp=Z,250nm,5.0s						
KMI	**Kunming**	**43.00**	**47**	P	**P**	**02 27 54.2**	**+1.1**
KMI				PP	**PP**	**02 29 36.6**	**+3.6**
KMI				S	**S**	**02 34 19.9**	**+0.9**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,65nm,3.1s						
KMI				LR	LR		
	comp=N,180nm,14.8s						
KMI				LR	LR		
	comp=E,310nm,19.1s						
KMI				LR	LR		
	comp=Z,100nm,15.7s						
BHD	**Baghdad**	**43.17**	**329**	*ex*	**P**	**02 27 54.0**	**0.0**
BHD				*ex*	x	02 29 35.0	
BHD				*ex*	**S**	**02 34 22.0**	**+1.3**
BHD				*ex*	x	02 37 37.0	
BHD				*ex*	x	02 38 13.0	
BHD				*ex*	x	02 40 14.0	
AML	**Almayashu**	**45.26**	**5**	P	**P**	**02 28 10.4**	**-0.8**
	SNR=7.4						
KZA	**Kyzart**	**45.36**	**6**	P	**P**	**02 28 11.5**	**-0.4**
	SNR=18						
ULHL	**Ulahol**	**45.64**	**7**	P	**P**	**02 28 14.1**	**+0.2**
	SNR=5.2						
EKS2	**Erkin-Say**	**45.80**	**5**	*e*P	**P**	**02 28 15.2**	**+0.2**
	comp=Z,21nm,1.3s						
EKS2	**Erkin-Say**	**45.80**	**5**	P	**P**	**02 28 15.3**	**+0.2**
	SNR=7.8						
AAK	**Ala-Archa**	**45.83**	**5**	*e*P	**P**	**02 28 15.2**	**-0.1**
	comp=Z,2.4nm,1.0s						
AAK	**Ala-Archa**	**45.83**	**5**	P	**P**	**02 28 15.4**	**0.0**
	comp=Z,8.2nm,0.9s,baz=171,slow=7.1,SNR=18						
KBK	**Karagaybulak**	**45.90**	**6**	P	**P**	**02 28 16.1**	**+0.2**
	SNR=17						
TKM2	**Tokmak 2**	**46.23**	**7**	*e*P	**P**	**02 28 18.0**	**-0.6**
	comp=Z,18nm,0.8s						
TKM2	**Tokmak 2**	**46.23**	**7**	P	**P**	**02 28 18.1**	**-0.6**
	SNR=25						
GYA	**Guiyang**	**46.67**	**49**	*e*P	**P**	**02 28 23.0**	**+0.8**
GYA				PP	**PP**	**02 30 11.2**	**-0.8**
GYA				ScP	**ScP**	**02 33 47.8**	**-2.1**
GYA				S	**S**	**02 35 11.9**	**0.0**
GYA				SS	SS	02 38 31.0	-7.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,5.1s						
GYA				LR	LR		
	comp=N,490nm,17.8s						
GYA				LR	LR		
	comp=E,350nm,18.2s						
GYA				LR	LR		
	comp=Z,440nm,17.6s						
LBTB	**Lobatse**	**47.23**	**238**	*e*P	**P**	**02 28 26.1**	**-0.4**
	comp=Z,6.1nm,1.0s						
LBTB	**Lobatse**	**47.23**	**238**	P	**P**	**02 28 26.2**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=74,slow=12,SNR=4.7						
CD2	**Chengdu**	**47.25**	**42**	P	**P**	**02 28 28.2**	**+1.6**
CD2				pP	**pP**	**02 28 32.7**	**+3.0**
CD2				sP	**sP**	**02 28 35.2**	**+4.3**
CD2				PcP	**PcP**	**02 29 59.2**	**+1.4**
CD2				PP	**PP**	**02 30 18.9**	**+1.2**
CD2				PcS	**PcS**	**02 33 53.1**	**0.0**
CD2				S	**S**	**02 35 21.4**	**+1.4**
CD2				sS	**sS**	**02 35 28.4**	**+3.3**
CD2				SS	**SS**	**02 38 42.4**	**-5.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
BOSA	**Boshof**	**48.84**	**234**	*e*P	**P**	**02 28 38.5**	**-0.6**
	comp=Z,119nm,2.3s						
BOSA	**Boshof**	**48.84**	**234**	P	**P**	**02 28 37.7**	**-1.3**
	comp=Z,7.8nm,0.8s,baz=65,slow=8.8,SNR=13						
BOSA				LR	LR	02 46 09.1	
	comp=Z,88nm,19.8s,baz=258,slow=32						
WMQ	**Urumqi**	**49.64**	**18**	P	**P**	**02 28 45.6**	**+0.8**
WMQ				pP	**pP**	**02 28 50.1**	**+2.2**
WMQ				sP	**sP**	**02 28 52.6**	**+3.4**
WMQ				PcP	**PcP**	**02 30 07.4**	**+1.2**
WMQ				PP	**PP**	**02 30 40.6**	**+1.3**
WMQ				ScP	**ScP**	**02 34 00.9**	**-1.1**
WMQ				S	**S**	**02 35 52.3**	**-1.0**
WMQ				sS	**sS**	**02 35 59.8**	**+1.3**
WMQ				ScS	**ScS**	**02 38 33.9**	**-2.9**
WMQ				SS	**SS**	**02 39 20.5**	**-5.3**
WMQ				pmax	pmax		
	comp=Z,14nm,0.4s						
WMQ				pmax	pmax		
	comp=Z,220nm,3.6s						
WMQ				LR	LR		
	comp=N,280nm,6.2s						
WMQ				LR	LR		
	comp=E,250nm,6.4s						
WMQ				LR	LR		
	comp=Z,190nm,9.0s						
LZH	**Lanzhou**	**50.71**	**37**	*e*P	**P**	**02 28 53.1**	**0.0**
LZH				pP	**pP**	**02 28 57.2**	**+0.9**
LZH				sP	**sP**	**02 28 59.2**	**+1.7**
LZH				*e*S	**S**	**02 36 07.3**	**-1.4**
LZH				sS	**sS**	**02 36 14.4**	**+0.5**
LZH				*e*SS	SS	02 39 35.3	-8.0
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.6s						
LZH				LR	LR		
	comp=N,150nm,11.9s						
LZH				LR	LR		
	comp=E,180nm,12.4s						
LZH				LR	LR		
	comp=Z,260nm,13.5s						
GTA	**Gaotai**	**50.87**	**31**	*e*P	**P**	**02 28 53.5**	**-0.8**
GTA				pP	**pP**	**02 28 57.5**	**+0.1**
GTA				sP	**sP**	**02 29 00.0**	**+1.3**
GTA				PP	**PP**	**02 30 51.3**	**+0.6**
GTA				S	**S**	**02 36 09.1**	**-1.7**
GTA				sS	**sS**	**02 36 14.8**	**-1.2**
GTA				SS	**SS**	**02 39 42.4**	**-3.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,67nm,4.7s						
GTA				LR	LR		
	comp=N,94nm,16.1s						
GTA				LR	LR		
	comp=E,140nm,16.6s						
GTA				LR	LR		
	comp=Z,170nm,17.6s						
MK31	**Makanchi Array**	**51.07**	**12**	*e*P	**P**	**02 28 53.6**	**-1.9**
MKAR	**Makanchi Array**	**51.07**	**12**	*e*P	**P**	**02 28 54.0**	**-1.5**
MKAR	**Makanchi Array**	**51.07**	**12**	P	**P**	**02 28 53.9**	**-1.6**
	comp=Z,3.3nm,0.7s,baz=196,slow=8.2,SNR=26						
KBZ	**Khabaz**	**52.33**	**336**	P	**P**	**02 29 06.2**	**+1.3**
KBZ	**Khabaz**	**52.33**	**336**	P	**P**	**02 29 06.2**	**+1.3**
	comp=Z,3.1nm,0.9s,baz=162,slow=7.6,SNR=8.0						
XAN	**Xi'an**	**52.61**	**42**	P	**P**	**02 29 05.4**	**-1.9**
XAN				pP	**pP**	**02 29 09.2**	**-1.2**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,23nm,11.7s						
ABKAR	**Akbulak array**	**52.82**	**352**	*e*P	**P**	**02 29 07.5**	**-1.0**
TSUM	**Tsumeb**	**52.86**	**248**	*e*P	**P**	**02 29 09.3**	**-0.2**
	comp=Z,3.5nm,0.9s						
BR131	**Keskin Array S**	**53.73**	**326**	*e*P	**P**	**02 29 15.1**	**-0.4**
	comp=Z,2.1nm,0.9s						
BRTR	**Keskin Array B**	**53.73**	**326**	P	**P**	**02 29 14.9**	**-0.6**
BRTR	**Keskin Array B**	**53.73**	**326**	P	**P**	**02 29 14.9**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=135,slow=12,SNR=7.0						
KURBB	**Kurchatov Arra**	**54.17**	**7**	P	**P**	**02 29 16.9**	**-1.4**
	comp=Z,6.6nm,0.8s,baz=202,slow=7.7,SNR=34						
AKTO	**Aktyubinsk**	**54.25**	**351**	P	**P**	**02 29 17.9**	**-1.1**
AKTO	**Aktyubinsk**	**54.25**	**351**	P	**P**	**02 29 17.9**	**-1.1**
	comp=Z,2.6nm,0.8s,baz=162,slow=8.2,SNR=11						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**54.27**	**7**	*e*P	**P**	**02 29 17.1**	**-1.9**
	comp=Z,11nm,0.9s						
BVAR	**Borovoye Array**	**55.99**	**1**	LR	LR	02 52 19.5	
	comp=Z,86nm,18.8s,baz=284,slow=35						
BRVK	**Borovoye**	**56.02**	**1**	*e*P	**P**	**02 29 30.8**	**-0.9**
	comp=Z,2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**58.38**	**11**	P	**P**	**02 29 46.4**	**-2.0**
ZALV	**Zalesovo Beam**	**58.38**	**11**	P	**P**	**02 29 46.4**	**-2.0**
	comp=Z,6.4nm,0.6s,baz=212,slow=7.2,SNR=32						
ZALV				LR	LR	02 54 07.5	
	comp=Z,42nm,21.1s,baz=57,slow=35						
HHC	**Hu-ho-hao-te**	**58.40**	**37**	*e*P	**P**	**02 29 49.8**	**+0.9**
HHC				pP	**pP**	**02 29 54.1**	**+2.0**
HHC				sP	**sP**	**02 29 57.1**	**+3.8**
HHC				PP	**PP**	**02 32 00.9**	**+2.6**
HHC				S	**S**	**02 37 49.5**	**-2.5**
HHC				sS	**sS**	**02 37 59.4**	**+2.1**
HHC				SS	**SS**	**02 41 46.5**	**+2.0**
HHC				pmax	pmax		
	comp=Z,38nm,0.7s						
HHC				pmax	pmax		
	comp=Z,230nm,3.8s						
HHC				LR	LR		
	comp=N,340nm,16.7s						
HHC				LR	LR		
	comp=E,300nm,13.1s						
HHC				LR	LR		
	comp=Z,400nm,15.5s						
NJ2	**Nanjing**	**58.67**	**49**	*e*P	**P**	**02 29 49.9**	**-0.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
SONM	**Songino Array**	**60.30**	**28**	P	**P**	**02 30 01.6**	**-0.3**
SONM	**Songino Array**	**60.30**	**28**	P	**P**	**02 30 01.6**	**-0.3**
	comp=Z,9.4nm,0.8s,baz=219,slow=7.2,SNR=52						
SONM				LR	LR	02 56 16.6	
	comp=Z,143nm,19.4s,baz=110,slow=36						
BJI	**Beijing**	**60.79**	**40**	P	**P**	**02 30 04.9**	**-0.4**
BJI				pmax	pmax		
	comp=Z,20nm,0.5s						
WRA	**Warramunga Arr**	**65.57**	**110**	P	**P**	**02 30 40.3**	**+2.8**
WRA	**Warramunga Arr**	**65.57**	**110**	P	**P**	**02 30 40.3**	**+2.8**
	comp=Z,3.2nm,0.7s,baz=284,slow=6.5,SNR=11						
WRAB	**Tennant Creek**	**65.58**	**110**	*e*P	**P**	**02 30 35.4**	**-2.1**
	comp=Z,5.4nm,0.8s						
ASAR	**Alice Springs**	**65.60**	**114**	P	**P**	**02 30 40.5**	**+2.8**
ASAR	**Alice Springs**	**65.60**	**114**	P	**P**	**02 30 40.5**	**+2.8**
	comp=Z,1.8nm,0.8s,baz=285,slow=6.1,SNR=8.9						
KOLS	**Kolonicke sedl**	**65.89**	**328**	*e*P	P	02 30 43.9	+5.0
CRVS	**Cervenica-Dubn**	**66.30**	**328**	*e*P	P	02 30 46.5	+4.9
TAM	**Tamanrasset**	**67.20**	**296**	*e*P	**P**	**02 30 47.9**	**-0.2**
	comp=Z,1.7nm,0.9s						
VYHS	**Vyhne**	**67.50**	**326**	*e*P	P	02 30 53.9	+4.7
KSRS	**Korea Array**	**67.70**	**47**	LR	LR	03 02 08.1	
	comp=Z,75nm,19.2s,baz=219,slow=38						
KEST	**Kesra**	**67.91**	**311**	*e*P	**P**	**02 30 51.6**	**-0.5**
CN2	**Changchun**	**68.66**	**40**	*e*P	**P**	**02 30 57.7**	**+1.1**
TORD	**Torodi Ar. Bea**	**68.92**	**285**	P	**P**	**02 30 58.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**68.92**	**285**	P	**P**	**02 30 58.3**	**-0.4**
	comp=Z,2.0nm,1.1s,baz=117,slow=3.4,SNR=6.4						
VRAC	**Vranov**	**69.18**	**326**	LR	LR	02 59 16.4	
	comp=Z,112nm,19.5s,baz=329,slow=34						
GERES	**GERESS Array B**	**70.58**	**325**	LR	LR	02 59 17.6	
	comp=Z,124nm,18.4s,baz=105,slow=34						
DAVOX	**Davos/Dischmat**	**71.92**	**322**	LR	LR	03 04 32.3	
	comp=Z,102nm,19.6s,baz=267,slow=37						
SENIN	**Lac Senin/Sane**	**73.37**	**320**	*e*P	**P**	**02 31 24.1**	**-1.3**
	comp=Z,68nm,2.1s						
ESDC	**Sonseca Array**	**79.14**	**311**	P	**P**	**02 31 57.4**	**-0.8**
ESDC	**Sonseca Array**	**79.14**	**311**	P	**P**	**02 31 57.4**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=81,slow=4.6,SNR=7.5						
VNA2	**Neumayer--Watz**	**82.66**	**199**	*e*P	**P**	**02 32 17.2**	**+0.9**
QSPA	**South Pole Qui**	**86.84**	**180**	LR	LR	03 05 10.5	
	comp=Z,261nm,20.6s,baz=247,slow=31						
ILAR	**Eielson Array**	**113.28**	**16**	PP	PP	02 39 16.6	-3.9
ILAR	**Eielson Array**	**113.28**	**16**	PP	PP	02 39 16.6	-3.9
	comp=Z,0.2nm,0.7s,baz=329,slow=4.5,SNR=4.2						
YKA	**Yellowknife Ar**	**120.74**	**2**	PKP	**PKPdf**	**02 38 47.5**	**+2.5**
YKA	**Yellowknife Ar**	**120.74**	**2**	PKP	**PKPdf**	**02 38 47.4**	**+2.5**
	comp=Z,0.3nm,0.8s,baz=341,slow=2.6,SNR=6.2						
LPAZ	**La Paz**	**133.62**	**244**	*e*PKPdf	**PKPdf**	**02 39 11.9**	**+0.3**
WCI	**Wyandotte Cave**	**138.53**	**330**	*e*PKPdf	**PKPdf**	**02 39 19.1**	**-0.4**
WVOR	**Wild Horse Val**	**140.27**	**9**	*e*PKPdf	**PKPdf**	**02 39 21.2**	**-1.5**
MSU	**Marysvale**	**144.79**	**2**	*e*PKPdf	**PKPdf**	**02 39 31.1**	**+0.2**
PV01	**Paradox Valley**	**145.13**	**357**	*e*PKPbc	**PKPbc**	**02 39 30.9**	**0.0**
SDCO	**Great Sand Dun**	**145.24**	**353**	*e*PKPbc	**PKPbc**	**02 39 31.3**	**-0.1**
OTAV	**Otavalo**	**147.54**	**265**	*e*PKPbc	**PKPbc**	**02 39 38.9**	**-0.3**
TUC	**Tucson**	**151.00**	**360**	*e*PKPbc	**PKPbc**	**02 39 46.9**	**0.0**
TUC				*e*PKPab	**PKPab**	**02 39 53.0**	**-1.2**
MNTX	**Cornudas Mount**	**151.16**	**350**	*e*PKPbc	**PKPbc**	**02 39 47.0**	**-0.2**

*AUST **08** 02:20:54.8±0.0, 4°.96S×128°.82E, h104km±1km, Error ellipse: s-maj=4.7km s-min=1.2km az=274.0*
*IDC **08** 02:21:18.5±6.8, 6°.81S×129°.56E, h151km±65km, mb3.4/2, mb1 3.6/5, mb1mx3.3/20, mbtmp3.4/5, Error ellipse: s-maj=65.0km s-min=23.9km az=63.0*
*ISCJB **08** 02:21:18.5±1.1, 6°.82S±0°.07×129°.7E±0°.1, h165km, mb3.6/2, Error ellipse: s-maj=15.6km s-min=10.2km az=7.1*
ISC 08 02:21:20.0±1.3**, 6°.86S**±0°.09×**129°.8E**±0°.1**, h165**km**, n9, σ2ˢ.20**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**6.10**	**167**	P	**Pn**	**02 22 49.7**	**+1.6**
	baz=8.2,SNR=8.2						
MTN				S	**Sn**	**02 23 57.5**	**+0.1**
	baz=8.2,SNR=9.2						
KNRA	**Kununurra**	**8.81**	**186**	P	**Pn**	**02 23 25.6**	**+1.4**
	baz=11,SNR=5.8						
KNRA				S	**Sn**	**02 25 02.8**	**+0.4**
	baz=11,SNR=5.7						
FITZ	**Fitzroy Crossi**	**11.87**	**199**	P	**Pn**	**02 24 04.3**	**+0.1**
	0.5nm,0.3s,baz=40,slow=13,SNR=22						
FITZ				S	**Sn**	**02 26 12.6**	**-3.2**
	1.1nm,0.3s,baz=74,slow=18,SNR=7.3						
WRA	**Warramunga Arr**	**13.74**	**162**	P	**Pn**	**02 24 27.5**	**-0.6**
	0.7nm,0.3s,baz=341,slow=13,SNR=8.0						
WRA				S	**Sn**	**02 26 55.4**	**-5.5**
	1.5nm,0.3s,baz=336,slow=22,SNR=7.0						
COEN	**Coen**	**14.96**	**119**	P	**P**	**02 24 44.2**	**-0.6**
	baz=17,SNR=5.8						
QIS	**Mount Isa**	**16.63**	**146**	P	**Pn**	**02 25 04.9**	**+1.2**
	baz=19,SNR=7.8						
ASAR	**Alice Springs**	**17.18**	**167**	P	**P**	**02 25 09.5**	**+0.2**
	1.0nm,0.3s,baz=346,slow=11,SNR=23						
ASAR				S	**S**	**02 28 21.2**	**+1.2**
	0.3nm,0.3s,baz=355,slow=27,SNR=5.3						
STKA	**Stephens Creek**	**27.23**	**158**	P	**P**	**02 26 50.4**	**+1.8**
	2.1nm,0.9s,baz=345,slow=9.0,SNR=4.0						
MKAR	**Makanchi Array**	**67.97**	**327**	P	**P**	**02 32 00.0**	**-1.2**
	0.4nm,0.5s,baz=115,slow=7.9,SNR=5.1						

IDC 08 02:42:17.9±6.4**, 22°.35S**×**177°.90W, h0**km**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/18**, mbtmp3.8**/3**, Error ellipse: s-maj=181.1km s-min=101.2km az=143.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.10**	**246**	P	P	02 49 30.3	0.0
	0.4nm,0.3s,baz=68,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**44.21**	**259**	P	P	02 50 28.6	-0.6
	0.4nm,0.4s,baz=96,slow=7.1,SNR=7.3						
WRA	**Warramunga Arr**	**44.47**	**264**	P	P	02 50 31.4	+0.1
	0.7nm,0.4s,baz=102,slow=8.5,SNR=3.1						
NOA	**NORSAR Array B**	**140.82**	**353**	PKP	PKPdf	03 01 48.9	-0.5
	1.4nm,0.9s,baz=5.0,slow=3.0,SNR=3.3						

*ISK **08** 02:54:50.3, 34°.70N×32°.56E, h16km, MD3.2*
*ISCJB **08** 02:54:51.8±0.6, 34°.76N±0°.04×32°.58E±0°.04, h25km±3km, Error ellipse: s-maj=7.1km s-min=4.0km az=30.5*
*DDA **08** 02:54:51.7, 34°.90N×32°.55E, h6km, MD3.2*
*NIC **08** 02:54:52.7±0.2, 34°.84N×32°.62E, h12km, ML3.1, MW3.0*
*CSEM **08** 02:54:52.6±0.2, 34°.82N×32°.60E, h15km, Mw3.0, Error ellipse: s-maj=5.9km s-min=3.7km az=24.0*
*NSSC **08** 02:54:53.7±1.2, 34°.81N×32°.54E, h38km±999km, ML2.1*
ISC 08 02:54:52.2±1.1**, 34°.79N**±0°.03×**32°.59E**±0°.02**, h17**km±7km**, n56, σ1ˢ.17**/87**, 6C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPCY	**Paphos**	**0.22**	**294**	P	**Pb**	**02 54 57.7**	**-0.1**
PPCY				S	**Sb**	**02 55 01.9**	**+0.4**
PPCY	**Paphos**	**0.22**	**294**	P	**Pb**	**02 54 57.7**	**-0.1**
PPCY				S	**Sb**	**02 55 01.9**	**+0.4**
SZAC	**Souni-Zanaja**	**0.25**	**99**	⇑P	**Pb**	**02 54 58.2**	**-0.1**
SZAC				S	**Sb**	**02 55 04.0**	**+1.7**
SZAC	**Souni-Zanaja**	**0.25**	**99**	⇑P	**Pb**	**02 54 58.2**	**-0.1**
SZAC				S	**Sb**	**02 55 04.0**	**+1.7**
AKMC	**Akamas**	**0.31**	**318**	⇑P	**Pg**	**02 54 59.0**	**+0.1**
AKMC				S	**Sb**	**02 55 04.5**	**+0.2**
AKMC	**Akamas**	**0.31**	**318**	⇑P	**Pg**	**02 54 59.0**	**+0.1**
AKMC				S	**Sb**	**02 55 04.5**	**+0.2**
ALFC	**Alevga**	**0.36**	**2**	⇓P	**Pg**	**02 54 59.2**	**-0.6**
	28nm,0.2s						
ALFC				S	**Sg**	**02 55 04.3**	**-0.6**
ALFC	**Alevga**	**0.36**	**2**	⇓P	**Pg**	**02 54 59.2**	**-0.6**
	28nm,0.2s						
ALFC				S	**Sg**	**02 55 04.3**	**-0.6**
LEF	**Lefka**	**0.41**	**37**	PG	**Pg**	**02 54 60.0**	**-0.6**
LEF				SG	**Sb**	**02 55 07.4**	**+0.4**
LEF	**Lefka**	**0.41**	**37**	*i* Pg	**Pg**	**02 55 00.0**	**-0.6**
LEF				*i* Sg	**Sb**	**02 55 07.4**	**+0.4**
AKDN	**Akdeniz- K˜–br**	**0.59**	**32**	*e*PG	**Pb**	**02 55 04.6**	**+0.5**
AKDN	**Akdeniz- K˜–br**	**0.59**	**32**	*e*Pg	**Pb**	**02 55 04.6**	**+0.5**
CSS	**Prodhromos**	**0.63**	**74**	⇑P	**Pg**	**02 55 04.3**	**-0.4**
	10.0nm,0.2s						
CSS				S	**Sb**	**02 55 14.0**	**+0.5**
CSS	**Prodhromos**	**0.63**	**74**	*e*PG	**Pg**	**02 55 04.6**	**-0.1**
CSS				*e*SG	**Sb**	**02 55 14.3**	**+0.9**
CSS	**Prodhromos**	**0.63**	**74**	⇑P	**Pg**	**02 55 04.3**	**-0.4**
	10.0nm,0.2s						
CSS	**Prodhromos**	**0.63**	**74**	*e*Pg	**Pg**	**02 55 04.6**	**-0.1**
CSS				S	**Sb**	**02 55 14.0**	**+0.5**
CSS				*e*Sg	**Sb**	**02 55 14.4**	**+0.9**
MAMC	**Mammari**	**0.64**	**54**	P	**Pg**	**02 55 04.7**	**-0.1**
MAMC	**Mammari**	**0.64**	**54**	P	**Pg**	**02 55 04.7**	**-0.1**
AKIN	**Ak˜–nc˜–lar- K**	**0.76**	**73**	*e*PG	**Pb**	**02 55 06.2**	**-0.7**
AKIN	**Ak˜–nc˜–lar- K**	**0.76**	**73**	*e*Pg	**Pb**	**02 55 06.2**	**-0.7**
LFK	**Lefkose**	**0.91**	**58**	*e*PG	**Pb**	**02 55 09.5**	**-0.2**
LFK	**Lefkose**	**0.91**	**58**	*e*Pg	**Pb**	**02 55 09.5**	**-0.2**
PHNC	**Paralimni**	**1.21**	**80**	P	**Pg**	**02 55 15.5**	**0.0**
	5.2nm,0.4s						
PHNC				S	**Sg**	**02 55 33.9**	**+2.6**
PHNC	**Paralimni**	**1.21**	**80**	P	**Pg**	**02 55 15.5**	**0.0**
	5.2nm,0.4s						
GAZI	**Gazipasa**	**1.45**	**351**	*i* P	**Pn**	**02 55 17.2**	**-0.5**
GAZI				*i* S	**Sn**	**02 55 35.8**	**-0.7**
GAZI	**Gazipasa**	**1.45**	**351**	*i* P	**Pn**	**02 55 17.2**	**-0.5**
GAZI				*i* S	**Sn**	**02 55 35.8**	**-0.7**
EREN	**Erenkoy**	**1.49**	**60**	*e*PN	**Pn**	**02 55 17.9**	**-0.3**
EREN	**Erenkoy**	**1.49**	**60**	*e*Pn	**Pn**	**02 55 17.9**	**-0.3**
ERMK	**Ermenek**	**1.86**	**8**	*i* P	**Pb**	**02 55 25.0**	**-0.9**
ERMK				*i* S	**Sb**	**02 55 50.5**	**+1.5**
ERMK	**Ermenek**	**1.86**	**8**	*i* P	**Pb**	**02 55 25.0**	**-0.9**
ERMK				*i* S	**Sb**	**02 55 50.5**	**+1.5**
BHL	**Bhannes**	**2.69**	**108**	*e*P	Pn	02 55 31.0	-3.8
BHL	**Bhannes**	**2.69**	**108**	*e*P	Pn	02 55 31.0	-3.8
HWQ	**Hawqa**	**2.82**	**100**	*e*P	**Pn**	**02 55 36.9**	**+0.3**
HWQ	**Hawqa**	**2.82**	**100**	*e*P	**Pn**	**02 55 36.9**	**+0.3**
ARNB	**Al Arnab**	**2.96**	**68**	*e*P	**Pn**	**02 55 38.2**	**-0.4**
ARNB				*e*S	**Sn**	**02 56 12.3**	**-1.5**
ARNB				AML	AML	02 56 17.0	
	comp=N,7.1nm,0.2s						
ARNB				AML	AML	02 56 18.8	
	comp=Z,17nm,0.2s						
ARNB				AML	AML	02 56 18.9	
	comp=E,29nm,0.2s						
ARNB	**Al Arnab**	**2.96**	**68**	*e*P	**Pn**	**02 55 38.2**	**-0.4**
	SNR=57						
ARNB				*e*S	**Sn**	**02 56 12.3**	**-1.5**
	comp=E,29nm,0.2s,SNR=58						
GULE	**Gulek**	**3.05**	**35**	*i* P	**Pn**	**02 55 42.0**	**+2.1**
GULE				*i* S	**Sb**	**02 56 21.0**	**-2.3**
GULE	**Gulek**	**3.05**	**35**	*i* P	**Pn**	**02 55 42.0**	**+2.1**
GULE				*i* S	**Sb**	**02 56 21.0**	**-2.3**
YAYL	**Yayladag**	**3.13**	**66**	*e*P	**Pn**	**02 55 40.9**	**0.0**
YAYL				*i* S	**Sn**	**02 56 18.2**	**+0.2**
YAYL	**Yayladag**	**3.13**	**66**	*e*P	**Pn**	**02 55 40.9**	**0.0**
YAYL				*i* S	**Sn**	**02 56 18.2**	**+0.2**
KONT	**Konya--Tatoy**	**3.15**	**357**	*e*PN	**Pn**	**02 55 42.3**	**+1.2**
KONT	**Konya--Tatoy**	**3.15**	**357**	*e*Pn	**Pn**	**02 55 42.3**	**+1.2**
FETY	**Fethiye**	**3.39**	**304**	*e*PN	**Pn**	**02 55 44.9**	**+0.5**
FETY	**Fethiye**	**3.39**	**304**	*e*Pn	**Pn**	**02 55 44.9**	**+0.5**
LADK	**Ladik-KONYA**	**3.40**	**357**	*e*PN	**Pn**	**02 55 46.2**	**+1.6**
LADK	**Ladik-KONYA**	**3.40**	**357**	*e*Pn	**Pn**	**02 55 46.2**	**+1.6**
TCHB	**Talchebab**	**3.53**	**126**	*e*P	**Pn**	**02 55 47.4**	**+1.1**
TCHB				*e*S	**Sn**	**02 56 25.4**	**-2.2**
TCHB				AML	AML	02 56 28.6	
	comp=Z,41nm,0.4s						
TCHB				AML	AML	02 56 30.4	
	comp=N,38nm,0.5s						
TCHB				AML	AML	02 56 34.1	
	comp=E,18nm,0.3s						
TCHB	**Talchebab**	**3.53**	**126**	*e*P	**Pn**	**02 55 47.4**	**+1.1**
	SNR=57						
TCHB				*e*S	**Sn**	**02 56 25.4**	**-2.2**
	comp=E,18nm,0.3s,SNR=58						
KOZT	**Kozan**	**3.75**	**43**	*e*PN	**Pn**	**02 55 50.2**	**+0.9**
KOZT	**Kozan**	**3.75**	**43**	*e*Pn	**Pn**	**02 55 50.2**	**+0.9**
SALA	**Sala**	**4.03**	**120**	*e*P	**Pn**	**02 55 54.2**	**+0.9**
SALA				*e*S	**Sn**	**02 56 37.8**	**-2.4**
SALA				AML	AML	02 56 45.7	
	comp=Z,19nm,0.4s						
SALA				AML	AML	02 56 46.4	
	comp=N,14nm,0.4s						
SALA				AML	AML	02 56 47.4	
	comp=E,0.8nm,0.2s						
SALA	**Sala**	**4.03**	**120**	*e*P	**Pn**	**02 55 54.2**	**+0.9**
	SNR=57						
SALA				*e*S	**Sn**	**02 56 37.8**	**-2.4**
	comp=E,0.8nm,0.2s,SNR=58						
AYKD	**Aykdinkavak**	**4.30**	**51**	*i* P	**Pn**	**02 55 57.1**	**+0.2**
AYKD				*i* S	**Sn**	**02 56 48.8**	**+2.1**
KHAL	**Karahalli**	**4.35**	**326**	*e*P	**Pn**	**02 55 58.0**	**+0.3**
KHAL				*i* S	**Sn**	**02 56 48.7**	**+0.6**
ZALF	**Zalf**	**4.37**	**114**	*e*P	**Pn**	**02 56 00.0**	**+2.1**
ZALF				*e*S	**Sn**	**02 56 46.0**	**-2.4**
ZALF				AML	AML	02 56 54.4	
	comp=N,3.9nm,0.6s						
ZALF				AML	AML	02 56 55.3	
	comp=E,3.4nm,0.3s						
ZALF				AML	AML	02 57 10.6	
	comp=Z,3.9nm,0.5s						
ZALF	**Zalf**	**4.37**	**114**	*e*P	**Pn**	**02 56 00.0**	**+2.1**
	SNR=57						
ZALF				*e*S	**Sn**	**02 56 46.0**	**-2.4**
	comp=Z,3.9nm,0.5s,SNR=58						

*CSEM **08** 02:58:55.7±0.3, 34°.32N×24°.59E, h15km, MD3.6, Error ellipse: s-maj=6.4km s-min=4.5km az=40.0*
*ATH **08** 02:58:57.4, 34°.47N×24°.61E, h30km±1km, MD3.6/10*
*THE **08** 02:58:58.0, 34°.44N×24°.56E, h13km±2km, Error ellipse: s-maj=2.8km s-min=1.1km az=340.0*
ISC 08 02:58:55.7±1.0**, 34°.32N**±0°.05×**24°.59E**±0°.03**, h22**km±7km**, n48, σ0ˢ.89**/68**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.67**	**322**	P	**Pb**	**02 59 09.3**	**+0.6**
GVD				S	**Sb**	**02 59 18.0**	**+0.4**
GVD	**Gavdhos**	**0.67**	**322**	*e*PN	**Pb**	**02 59 09.5**	**+0.8**
GVD				*e*SN	**Sb**	**02 59 17.6**	**0.0**
GVD	**Gavdhos**	**0.67**	**322**	*e*Pn	**Pb**	**02 59 09.5**	**+0.8**
GVD				*e*Sn	**Sb**	**02 59 17.6**	**0.0**
GVD				S	**Sb**	**02 59 18.0**	**+0.4**
SIVA	**Sivas**	**0.72**	**14**	P	**Pb**	**02 59 09.6**	**0.0**
SIVA				S	**Sb**	**02 59 18.9**	**-0.2**
SIVA	**Sivas**	**0.72**	**14**	*e*PN	**Pb**	**02 59 09.6**	**0.0**
SIVA				*e*SN	**Sb**	**02 59 18.2**	**-0.9**
SIVA	**Sivas**	**0.72**	**14**	P	**Pb**	**02 59 09.6**	**0.0**
SIVA				*e*Sn	**Sb**	**02 59 18.2**	**-0.9**
SIVA				S	**Sb**	**02 59 18.9**	**-0.2**
LAST	**Lasithi**	**1.11**	**41**	P	**Pb**	**02 59 16.6**	**+0.2**
LAST				S	**Sn**	**02 59 31.4**	**+0.5**
LAST	**Lasithi**	**1.11**	**41**	*e*PN	**Pb**	**02 59 16.6**	**+0.2**
LAST				*e*SN	**Sb**	**02 59 30.0**	**-0.5**
LAST	**Lasithi**	**1.11**	**41**	P	**Pb**	**02 59 16.6**	**+0.2**
LAST				*e*Sn	**Sb**	**02 59 30.0**	**-0.5**
LAST				S	**Sn**	**02 59 31.4**	**+0.5**
VAM	**Vamos**	**1.14**	**344**	P	**Pn**	**02 59 16.6**	**+0.3**
VAM				S	**Sb**	**02 59 30.4**	**-0.6**
VAM	**Vamos**	**1.14**	**344**	*e*PN	**Pn**	**02 59 16.4**	**+0.1**
VAM				*e*SB	**Sb**	**02 59 31.2**	**+0.2**
VAM	**Vamos**	**1.14**	**344**	P	**Pn**	**02 59 16.6**	**+0.3**
VAM				S	**Sb**	**02 59 30.4**	**-0.6**
VAM				*e*Sb	**Sb**	**02 59 31.2**	**+0.2**
NPS	**Neapolis**	**1.26**	**41**	P	**Pb**	**02 59 19.4**	**+0.5**
NPS				S	**Sb**	**02 59 35.8**	**+1.1**
NPS	**Neapolis**	**1.26**	**41**	*e*PN	**Pb**	**02 59 19.0**	**+0.1**
NPS				*e*SN	**Sn**	**02 59 33.9**	**-0.5**
NPS	**Neapolis**	**1.26**	**41**	*e*Pn	**Pb**	**02 59 19.0**	**+0.1**
NPS	**Neapolis**	**1.26**	**41**	P	**Pb**	**02 59 19.4**	**+0.5**
NPS				*e*Sn	**Sn**	**02 59 33.9**	**-0.5**
NPS				S	**Sb**	**02 59 35.8**	**+1.1**
ZKR	**Zakros**	**1.56**	**59**	P	**Pb**	**02 59 23.9**	**0.0**
ZKR				S	**Sb**	**02 59 44.3**	**+1.1**
ZKR	**Zakros**	**1.56**	**59**	*e*PN	**Pb**	**02 59 23.6**	**-0.3**
ZKR	**Zakros**	**1.56**	**59**	*e*Pn	**Pb**	**02 59 23.6**	**-0.3**
ZKR	**Zakros**	**1.56**	**59**	P	**Pb**	**02 59 23.9**	**0.0**
ZKR				S	**Sb**	**02 59 44.3**	**+1.1**
ANKY	**Antikythira Is**	**1.88**	**326**	*e*PN	**Pb**	**02 59 28.3**	**-1.0**
ANKY	**Antikythira Is**	**1.88**	**326**	*e*Pn	**Pb**	**02 59 28.3**	**-1.0**
KYTH	**Kithira**	**2.34**	**327**	P	**Pn**	**02 59 32.6**	**-0.3**
KYTH	**Kithira**	**2.34**	**327**	*e*PN	**Pn**	**02 59 34.8**	**+1.9**
KYTH	**Kithira**	**2.34**	**327**	P	**Pn**	**02 59 32.6**	**-0.3**
KYTH	**Kithira**	**2.34**	**327**	*e*Pn	**Pn**	**02 59 34.8**	**+1.9**
KARP	**Karpathos**	**2.44**	**59**	*e*PN	**Pn**	**02 59 36.0**	**+1.7**
KARP	**Karpathos**	**2.44**	**59**	*e*Pn	**Pn**	**02 59 36.0**	**+1.7**
VLI	**Veliai**	**2.75**	**331**	P	**Pn**	**02 59 38.4**	**-0.1**
VLI	**Veliai**	**2.75**	**331**	*e*PN	**Pn**	**02 59 39.3**	**+0.8**
VLI	**Veliai**	**2.75**	**331**	P	**Pn**	**02 59 38.4**	**-0.1**
VLI	**Veliai**	**2.75**	**331**	*e*Pn	**Pn**	**02 59 39.3**	**+0.8**
APE	**Apeiranthos**	**2.85**	**15**	*e*PN	**Pn**	**02 59 40.0**	**+0.1**
APE	**Apeiranthos**	**2.85**	**15**	P	**Pn**	**02 59 38.5**	**-1.5**
APE	**Apeiranthos**	**2.85**	**15**	P	**Pn**	**02 59 38.5**	**-1.5**
DIDY	**Didyma**	**3.35**	**341**	P	**Pn**	**02 59 48.0**	**+1.2**
DIDY	**Didyma**	**3.35**	**341**	P	**Pn**	**02 59 48.0**	**+1.2**
DAT	**Datca**	**3.42**	**44**	*e*PN	Pn	02 59 43.0	-4.9
ARG	**Arkhangelos**	**3.46**	**56**	P	**Pn**	**02 59 48.9**	**+0.6**
ARG	**Arkhangelos**	**3.46**	**56**	P	**Pn**	**02 59 48.9**	**+0.6**
HMAT	**Matruh**	**3.84**	**146**	S	**Sn**	**03 00 35.8**	**-2.3**
YER	**Yerkesik**	**4.11**	**46**	*e*P	**Pn**	**02 59 57.3**	**0.0**
DALY	**Dalyan (Mu˜la**	**4.15**	**52**	*e*PN	**Pn**	**02 59 56.2**	**-1.5**
FETY	**Fethiye**	**4.33**	**56**	*e*P	**Pn**	**02 59 57.8**	**-2.5**
ELL	**Elmali**	**4.97**	**59**	*e*P	Pn	03 00 06.0	-3.2
GLL	**Jalalah**	**7.67**	**126**	P	**Pn**	**03 00 46.1**	**-0.1**
HFRF	**Wahat Farafira**	**7.83**	**155**	P	**Pn**	**03 00 49.2**	**+0.9**
AMAG	**Maghara**	**8.15**	**114**	P	**Pn**	**03 00 52.5**	**-0.2**

*IDC **08** 03:09:35.0±8.2, 26°.62N×126°.87E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/25, mbtmp3.5/3, Error ellipse: s-maj=211.9km s-min=50.7km az=10.0*
*ISCJB **08** 03:09:51.6±0.5, 27°.1N±0°.1×126°.61E±0°.10, h129km±12km, mb3.2/3, Error ellipse: s-maj=21.6km s-min=4.3km az=140.9*
*JMA **08** 03:09:53.2±0.3, 27°.10N×126°.62E, h130km±4km, M3.5*
ISC 08 03:09:52.8±0.9**, 27°.1N**±0°.1×**126°.63E**±0°.08**, h132**km±12km**, n18, σ1ˢ.16**/29**, mb3.4**/3**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.74**	**132**	P	**Pn**	**03 10 14.2**	**+0.6**
JAGN				S	**Sn**	**03 10 29.1**	**-0.2**
JKE	**Kume jima 2**	**0.77**	**170**	P	**Pn**	**03 10 14.3**	**+0.4**
JIH	**Iheya**	**1.19**	**92**	P	**Pn**	**03 10 18.4**	**+0.7**
JJT2	**Tamagusuku 2**	**1.38**	**133**	P	**Pn**	**03 10 20.5**	**+0.9**
JJT2				*e*S	**Sn**	**03 10 39.9**	**-0.1**
JOW	**Kunigami**	**1.49**	**99**	P	**Pn**	**03 10 21.3**	**+0.5**
JOW				S	**Sn**	**03 10 40.2**	**-2.0**
JTK	**Tokunoshima**	**2.18**	**71**	P	**Pn**	**03 10 29.1**	**+0.1**
JTK				*e*S	**Sn**	**03 10 55.0**	**-1.8**
JAMN	**Amaminishikomi**	**2.53**	**62**	P	**Pn**	**03 10 33.3**	**-0.1**
JAMN				*e*S	**Sn**	**03 11 03.0**	**-1.7**
JMJ	**Miyako jima 2**	**2.56**	**208**	P	**Pn**	**03 10 34.4**	**+0.6**
JMJ				S	**Sn**	**03 11 04.6**	**-0.8**
JOGS	**Gusukube**	**2.56**	**206**	P	**Pn**	**03 10 34.4**	**+0.5**
JOGS				*e*S	**Sn**	**03 11 05.6**	**+0.1**
JAM	**Amami Oshima**	**2.95**	**63**	P	**Pn**	**03 10 38.8**	**+0.1**
JAM				S	**Sn**	**03 11 12.6**	**-1.6**
JTJ	**Tarama**	**2.99**	**216**	P	**Pn**	**03 10 39.4**	**+0.1**
JTJ				*e*S	**Sn**	**03 11 13.7**	**-1.5**
JIJ	**Ishigaki jima**	**3.52**	**220**	P	**Pn**	**03 10 45.7**	**-0.5**
JIJ				S	**Sn**	**03 11 25.0**	**-2.6**
JKRS	**Kuro-shima**	**3.69**	**220**	*e*S	**Sn**	**03 11 30.1**	**-1.6**
IRIF	**Iriomote-Funau**	**3.79**	**224**	P	**Pn**	**03 10 49.0**	**-0.8**
IRIF				*e*S	**Sn**	**03 11 32.4**	**-1.5**
JMZ	**Minamidaito 2**	**4.30**	**106**	P	**Pn**	**03 10 55.6**	**-1.0**
JMZ				S	Sn	03 11 39.9	-6.2
SONM	**Songino Array**	**26.07**	**328**	P	**P**	**03 15 14.8**	**+0.8**
	1.1nm,0.7s,baz=144,slow=11,SNR=7.4						
MKAR	**Makanchi Array**	**39.90**	**312**	P	**P**	**03 17 14.5**	**+0.7**
	0.4nm,0.6s,baz=97,slow=10.0,SNR=5.1						
YKA	**Yellowknife Ar**	**78.35**	**25**	P	**P**	**03 21 38.9**	**+0.8**
	0.2nm,0.7s,baz=302,slow=5.5,SNR=5.9						

*IDC **08** 03:36:31.4±2.1, 22°.36S×68°.89W, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.7/17, mbtmp3.9/5, ML4.1/2, Error ellipse: s-maj=52.9km s-min=40.5km az=12.0*
*GUC **08** 03:36:48.7±0.9, 21°.21S×68°.76W, h126km±9km, ML3.7*
*ISCJB **08** 03:36:48.4±0.6, 21°.11S±0°.04×68°.5W±0°.1, h111km±10km, mb3.5/2, Error ellipse: s-maj=15.9km s-min=6.9km az=171.7*
ISC 08 03:36:49.3±0.9**, 21°.12S**±0°.06×**68°.5W**±0°.1**, h107**km±14km**, n13, σ0ˢ.99**/15**, 5C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**0.95**	**225**	⇑*i*P	**Pn**	**03 37 10.0**	**0.0**
PB09				*i* S	**Sn**	**03 37 25.6**	**0.0**
PB09				AML	AML	03 37 26.2	
	comp=N,11µm,0.3s						
PB04	**Plate Boundary**	**1.45**	**218**	*e*P	Pn	03 37 19.9	+4.5
PB04				*e*S	Sn	03 37 44.0	+8.8
PB04				AML	AML	03 37 45.8	
	comp=N,457nm,0.3s						
LVC	**Limon Verde**	**1.53**	**194**	⇑*i*P	**Pn**	**03 37 16.7**	**+0.1**
LVC				*i* S	**Sn**	**03 37 37.2**	**-0.1**
HMBC	**Humberstone**	**1.54**	**303**	⇑*i*P	**Pn**	**03 37 16.3**	**-0.3**
HMBC				*i* S	**Sn**	**03 37 36.6**	**-0.7**
HMBC				AML	AML	03 37 37.6	
	comp=N,973nm,0.8s						
PSGC	**Pisagua**	**2.14**	**315**	⇑*i*P	**Pn**	**03 37 23.5**	**-0.6**
PSGC				*e*S	**Sn**	**03 37 50.0**	**-0.8**
PSGC				AML	AML	03 37 56.4	
	comp=E,422nm,0.5s						
MNMC	**Minimini**	**2.23**	**333**	⇑*i*P	**Pn**	**03 37 26.4**	**+1.0**
MNMC				*e*S	**Sn**	**03 37 55.5**	**+2.5**
MNMC				AML	AML	03 38 01.0	
	comp=N,678nm,0.4s						
CEN1	**Los Morros**	**2.75**	**214**	*e*P	Pn	03 37 33.0	+1.0
CEN1				AML	AML	03 38 16.3	
	comp=E,152nm,0.4s						
LPAZ	**La Paz**	**4.82**	**4**	Pn	Pn	03 38 04.2	+3.9
	comp=E,1.0nm,0.3s,baz=195,slow=8.6,SNR=22						
LPAZ				Sn	**Sn**	**03 38 55.0**	**-0.4**
	comp=E,0.3nm,0.3s,baz=38,slow=0.9,SNR=2.6						
SIV	**San Ignacio**	**8.71**	**55**	Pn	**Pn**	**03 38 51.4**	**-1.1**
	comp=E,2.7nm,0.3s,baz=242,slow=16,SNR=40						
BDFB	**Brasilia**	**20.20**	**78**	P	**P**	**03 41 15.8**	**0.0**
	comp=E,1.5nm,0.5s,baz=230,slow=10,SNR=4.1						
TORD	**Torodi Ar. Bea**	**76.88**	**70**	P	**P**	**03 48 29.8**	**-0.4**
	comp=E,0.4nm,0.4s,baz=255,slow=5.4,SNR=22						
YKA	**Yellowknife Ar**	**90.96**	**340**	P	P	03 49 40.8	+0.2
	comp=E,0.3nm,0.6s,baz=131,slow=4.4,SNR=9.2						
MKAR	**Makanchi Array**	**145.11**	**36**	PKPbc	**PKPab**	**03 56 14.8**	**+0.8**
	comp=E,0.5nm,0.5s,baz=309,slow=3.3,SNR=4.9						

*ISK **08** 03:43:48.9, 40°.34N×27°.07E, h20km, MD2.7*
*DDA **08** 03:43:49.7, 40°.30N×27°.04E, h7km, MD2.6*
*CSEM **08** 03:43:49.5±0.1, 40°.36N×27°.06E, h20km, MD2.7, Error ellipse: s-maj=3.6km s-min=2.8km az=12.0*
*ISCJB **08** 03:43:49.7±0.4, 40°.36N±0°.03×27°.06E±0°.03, h21km±7km, Error ellipse: s-maj=5.1km s-min=4.1km az=174.5*
ISC 08 03:43:49.5±0.8**, 40°.32N**±0°.03×**27°.06E**±0°.02**, h17**km±6km**, n33, σ0ˢ.68**/50**, Turkey**

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

KRBG	Karabiga-Canak	0.20	68	PG	Pg	03 43 54.1	-0.3
KRBG				SG	Sg	03 43 57.5	-0.2
KRBG	Karabiga-Canak	0.20	68	i Pg	Pg	03 43 54.1	-0.3
KRBG				i Sg	Sg	03 43 57.5	-0.2
LPK	Lapseki	0.23	283	ePG	Pg	03 43 55.2	+0.4
LPK	Lapseki	0.23	283	ePg	Pg	03 43 55.2	+0.4
SART	Tekirdag	0.38	14	i P	Pg	03 43 57.5	0.0
SART				i S	Sg	03 44 03.0	+0.2
SART	Tekirdag	0.38	14	i P	Pg	03 43 57.5	0.0
SART				i S	Sg	03 44 03.0	+0.2
GELI	Tayfur-Gelibol	0.45	280	ePG	Pb	03 43 58.9	0.0
GELI				eSG	Sb	03 44 04.9	-0.4
GELI	Tayfur-Gelibol	0.45	280	ePg	Pb	03 43 58.9	0.0
GELI				eSg	Sb	03 44 04.9	-0.4
MRMT	Marmara Adasi	0.50	55	ePG	Pg	03 43 59.3	-0.3
MRMT				eSG	Sg	03 44 05.9	-0.5
MRMT	Marmara Adasi	0.50	55	ePg	Pg	03 43 59.3	-0.3
MRMT				eSg	Sg	03 44 05.9	-0.5
ERIK	Erikli-Kesan	0.54	311	ePG	Pb	03 44 00.4	-0.1
ERIK	Erikli-Kesan	0.54	311	ePg	Pb	03 44 00.4	-0.1
GONE	Gonen-Balikesi	0.56	119	ePG	Pb	03 44 00.5	-0.2
GONE				eSG	Sb	03 44 08.7	+0.4
GONE	Gonen-Balikesi	0.56	119	ePg	Pb	03 44 00.5	-0.2
GONE				eSg	Sb	03 44 08.7	+0.4
EDC	Edincik	0.62	87	ePG	Pg	03 44 01.1	-0.6
EDC	Edincik	0.62	87	ePg	Pg	03 44 01.1	-0.6
BALY	Balya	0.72	143	i P	Pb	03 44 03.9	+0.3
BALY				i S	Sb	03 44 14.4	+1.2
BALY	Balya	0.72	143	i P	Pb	03 44 03.9	+0.3
BALY				i S	Sb	03 44 14.4	+1.2
EZN	Ezine	0.75	229	ePG	Pb	03 44 04.2	+0.2
EZN	Ezine	0.75	229	ePg	Pb	03 44 04.2	+0.2
BOZC	Bozcaada	0.91	239	i P	Pb	03 44 07.0	+0.3
BOZC				i S	Sb	03 44 19.5	+1.0
KCTX	Karacabey (Bur	1.00	93	ePG	Pg	03 44 08.1	-0.8
KCTX	Karacabey (Bur	1.00	93	ePg	Pg	03 44 08.1	-0.8
AYVA	Ayvalik	1.05	196	i P	Pg	03 44 08.4	-1.4
AYVA				i S	Sn	03 44 24.1	+0.6
AYVA	Ayvalik	1.05	196	i P	Pg	03 44 08.4	-1.4
AYVA				i S	Sn	03 44 24.1	+0.6
DURS	Dursunbey	1.30	123	i P	Pg	03 44 14.6	-0.1
DURS				i S	Sn	03 44 31.8	+1.8
DURS	Dursunbey	1.30	123	i P	Pg	03 44 14.6	-0.1
DURS				i S	Sn	03 44 31.8	+1.8
DST	Dursunbey	1.40	120	ePN	Pn	03 44 13.8	-0.4
DST	Dursunbey	1.40	120	ePn	Pn	03 44 13.8	-0.4
EDRB	Edirne	1.54	351	ePN	Pn	03 44 15.5	-0.7
EDRB	Edirne	1.54	351	ePn	Pn	03 44 15.5	-0.7
IZI	Iznik	1.85	89	ePN	Pn	03 44 19.5	-0.9
IZI	Iznik	1.85	89	ePn	Pn	03 44 19.5	-0.9

IDC 08 03:54:41.3±1.5**, 5°.90N×127°.18E, h0km, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/24**, mbtmp3.5**/4**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.2**/19**, 1C, Error ellipse: s-maj=73.7km s-min=18.4km az=58.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	1.97	306	Pn	Pn	03 55 16.3	+0.3
	48nm,0.3s,baz=222,slow=7.4,SNR=8.5						
DAV				Sn	Sb	03 55 43.6	+0.3
	57nm,0.3s,baz=268,slow=21,SNR=6.6						
CTBH	Cotabato--PC H	3.20	294	⇑ iP	Pn	03 55 33.3	+0.4
WRA	Warramunga Arr	26.62	165	P	P	04 00 21.8	0.0
	0.8nm,0.4s,baz=344,slow=10,SNR=3.0						
ASAR	Alice Springs	30.11	168	P	P	04 00 53.0	+0.2
	0.2nm,0.5s,baz=346,slow=6.6,SNR=5.1						
MJAR	Matsushiro Arr	32.13	17	LR	LR	04 12 06.2	
	comp=Z,22nm,20.2s,baz=325,slow=32						
MKAR	Makanchi Array	56.06	324	P	P	04 04 22.4	+0.2
	0.4nm,0.6s,baz=116,slow=8.0,SNR=4.6						
KURBB	Kurchatov Arra	60.18	327	P	P	04 04 50.3	-0.6
	0.4nm,0.6s,baz=125,slow=6.2,SNR=7.4						

*ATH **08** 04:26:07.3, 39°.18N×28°.34E, h9km±2km, MD3.5/3*
*ISK **08** 04:26:12.0, 39°.29N×27°.94E, h5km, MD3.3*
*DDA **08** 04:26:13.0, 39°.30N×27°.93E, h8km, MD3.1*
*CSEM **08** 04:26:13.4±0.1, 39°.28N×27°.93E, h5km, MD3.3, Error ellipse: s-maj=2.3km s-min=2.0km az=101.0*
*ISCJB **08** 04:26:13.0±0.4, 39°.29N±0°.02×27°.94E±0°.02, h1km±4km, Error ellipse: s-maj=3.2km s-min=3.0km az=6.0*
ISC 08 04:26:13.2±1.0**, 39°.29N**±0°.02×**27°.94E**±0°.02**, h8km**±9km**, n95, σ0s.72**/120**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.35	353	PG	Pb	04 26 20.8	-1.0
BALB				eSG	Sb	04 26 26.7	-0.8
BALB	Balikesir	0.35	353	i Pg	Pb	04 26 20.8	-1.0
BALB				eSg	Sb	04 26 26.7	-0.8
AKHS	Akhisar	0.42	193	i P	Pg	04 26 21.4	0.0
AKHS				i S	Sb	04 26 28.5	-0.9
AKHS	Akhisar	0.42	193	i P	Pg	04 26 21.4	0.0
AKHS				i S	Sb	04 26 28.5	-0.9
AKS	Akhisar	0.42	193	ePG	Pg	04 26 21.3	-0.1
AKS				eSG	Sb	04 26 28.7	-0.8
AKS	Akhisar	0.42	193	ePg	Pg	04 26 21.3	-0.1
AKS				eSg	Sb	04 26 28.7	-0.8
BALY	Balya	0.51	331	i P	Pg	04 26 23.1	-0.1
BALY				i S	Sg	04 26 30.4	+0.4
BALY	Balya	0.51	331	i P	Pg	04 26 23.1	-0.1
BALY				i S	Sg	04 26 30.4	+0.4
DURS	Dursunbey	0.52	53	i P	Pg	04 26 23.1	-0.2
DURS				i S	Sg	04 26 30.9	+0.8
DURS	Dursunbey	0.52	53	i P	Pg	04 26 23.1	-0.2
DURS				i S	Sg	04 26 30.9	+0.8
DST	Dursunbey	0.61	59	ePG	Pg	04 26 25.1	0.0
DST				eSG	Sb	04 26 34.8	-0.3
DST	Dursunbey	0.61	59	ePg	Pg	04 26 25.1	0.0
DST				eSg	Sb	04 26 34.8	-0.3
DEMI	Demirci	0.65	112	i P	Pg	04 26 25.8	0.0
DEMI				i S	Sb	04 26 35.3	-0.9
DEMI	Demirci	0.65	112	i P	Pg	04 26 25.8	0.0
DEMI				i S	Sb	04 26 35.3	-0.9
GONE	Gonen-Balikesi	0.78	346	ePG	Pg	04 26 28.0	-0.3
GONE				eSG	Sb	04 26 39.6	-0.2
GONE	Gonen-Balikesi	0.78	346	ePg	Pg	04 26 28.0	-0.3
GONE				eSg	Sb	04 26 39.6	-0.2
KULA	Kula-Manisa	0.96	144	ePG	Pg	04 26 31.5	-0.1
KULA	Kula-Manisa	0.96	144	ePg	Pg	04 26 31.5	-0.1
AYVA	Ayvalik	0.97	272	eP	Pb	04 26 32.3	+0.1
AYVA				eS	Sn	04 26 47.6	+0.6
AYVA	Ayvalik	0.97	272	eP	Pb	04 26 32.3	+0.1
AYVA				eS	Sn	04 26 47.6	+0.6
KCTX	Karacabey (Bur	1.03	18	ePG	Pg	04 26 32.3	-0.6
KCTX	Karacabey (Bur	1.03	18	ePg	Pg	04 26 32.3	-0.6
IZM	Izmir	1.03	211	ePG	Pg	04 26 32.3	-0.8
IZM	Izmir	1.03	211	ePg	Pg	04 26 32.3	-0.8
ORLT	Orhaneli	1.06	44	ePG	Pg	04 26 33.4	-0.1
ORLT	Orhaneli	1.06	44	ePg	Pg	04 26 33.4	-0.1
EDC	Edincik	1.06	357	ePG	Pg	04 26 33.4	-0.1
EDC	Edincik	1.06	357	ePg	Pg	04 26 33.4	-0.1
BNT	Bandirma	1.07	359	ePG	Pn	04 26 34.0	-0.5
BNT	Bandirma	1.07	359	ePg	Pn	04 26 34.0	-0.5
BLCB	Balcova	1.14	218	ePN	Pb	04 26 34.8	-0.4
BLCB	Balcova	1.14	218	ePn	Pb	04 26 34.8	-0.4
TVSB	Tavsanli	1.19	82	ePN	Pg	04 26 36.1	0.0
TVSB	Tavsanli	1.19	82	ePn	Pg	04 26 36.1	0.0
KRBG	Karabiga-Canak	1.21	336	ePN	Pn	04 26 36.1	-0.3
KRBG	Karabiga-Canak	1.21	336	ePn	Pn	04 26 36.1	-0.3
GDZ	Gediz	1.22	99	eP	Pg	04 26 36.5	-0.1
GDZ				eS	Sn	04 26 53.5	+0.1
GDZ	Gediz	1.22	99	eP	Pg	04 26 36.5	-0.1
GDZ				eS	Sn	04 26 53.5	+0.1
PRK	Paraskevi	1.29	269	ePB	Pb	04 26 37.5	-0.3
PRK	Paraskevi	1.29	269	ePb	Pb	04 26 37.5	-0.3
MDNY	Mudanya-Bursa	1.30	34	ePN	Pb	04 26 37.7	-0.2
MDNY	Mudanya-Bursa	1.30	34	ePn	Pb	04 26 37.7	-0.2
MRMT	Marmara Adasi	1.34	349	ePN	Pg	04 26 38.7	-0.2
MRMT	Marmara Adasi	1.34	349	ePn	Pg	04 26 38.7	-0.2
EZN	Ezine	1.36	294	ePN	Pg	04 26 39.5	+0.3
EZN	Ezine	1.36	294	ePn	Pg	04 26 39.5	+0.3
LPK	Lapseki	1.41	320	ePN	Pg	04 26 40.1	-0.2
LPK	Lapseki	1.41	320	ePn	Pg	04 26 40.1	-0.2
GEMT	Gemlik	1.50	40	ePN	Pb	04 26 41.1	-0.1
GEMT	Gemlik	1.50	40	ePn	Pb	04 26 41.1	-0.1
BOZC	Bozcaada	1.56	291	i P	Pn	04 26 41.2	-0.1
BOZC				i S	Sb	04 27 01.5	-0.7
KHL	Karahalli	1.57	127	ePN	Pb	04 26 42.3	-0.3
KHL	Karahalli	1.57	127	ePn	Pb	04 26 42.3	-0.3
IZI	Iznik	1.58	48	ePN	Pb	04 26 42.5	-0.2
IZI	Iznik	1.58	48	ePn	Pb	04 26 42.5	-0.2
GELI	Tayfur-Gelibol	1.58	315	ePN	Pb	04 26 42.5	-0.2
GELI	Tayfur-Gelibol	1.58	315	ePn	Pb	04 26 42.5	-0.2
ALT	Altintas	1.70	97	ePN	Pb	04 26 44.0	-0.8
ALT	Altintas	1.70	97	ePn	Pb	04 26 44.1	-0.8
CHOS	Chios island	1.73	239	ePN	Pn	04 26 43.1	-0.5
CHOS				eSN	Sg	04 27 08.6	0.0
CHOS	Chios island	1.73	239	ePn	Pn	04 26 43.1	-0.5
CHOS				eSn	Sg	04 27 08.6	0.0
CAVI	Cavuskoy	1.73	58	ePN	Pb	04 26 45.1	-0.1
CAVI	Cavuskoy	1.73	58	ePn	Pb	04 26 45.1	-0.1
ERIK	Erikli-Kesan	1.76	322	ePN	Pb	04 26 45.1	-0.7
ERIK	Erikli-Kesan	1.76	322	ePn	Pb	04 26 45.1	-0.7
ADVT	Abdulvahap	1.80	50	ePN	Pb	04 26 45.4	-1.0
ADVT	Abdulvahap	1.80	50	ePn	Pb	04 26 45.4	-1.0
BUY	Buyukada	1.81	30	ePN	Pb	04 26 45.4	-1.1
BUY	Buyukada	1.81	30	ePn	Pb	04 26 45.4	-1.1
SLVT	Silivri	1.95	6	ePN	Pb	04 26 47.6	-1.3
SLVT	Silivri	1.95	6	ePn	Pb	04 26 47.7	-1.3
ISK	Istanbul-Kandi	1.97	25	ePN	Pn	04 26 47.8	+0.9
ISK	Istanbul-Kandi	1.97	25	ePn	Pn	04 26 47.8	+0.9
CTKS	Kestanelik-??a	1.99	12	ePN	Pn	04 26 48.0	+0.8
CTKS	Kestanelik-??a	1.99	12	ePn	Pn	04 26 48.0	+0.8
BGKT	Bogazkoy	2.00	18	ePN	Pn	04 26 48.0	+0.8
BGKT	Bogazkoy	2.00	18	ePn	Pn	04 26 48.0	+0.8
HRT	Hereke	2.03	40	ePN	Pb	04 26 48.9	-1.4
HRT	Hereke	2.03	40	ePn	Pb	04 26 48.9	-1.4
ALN	Alexandroupoli	2.17	318	ePN	Pn	04 26 49.5	-0.1
ALN				eSN	Sb	04 27 20.9	+1.3
ALN	Alexandroupoli	2.17	318	ePn	Pn	04 26 49.5	-0.1
ALN				eSn	Sb	04 27 20.9	+1.3
CTYL	Yal??k??y-??at	2.20	7	ePN	Pn	04 26 51.2	+1.2
CTYL	Yal??k??y-??at	2.20	7	ePn	Pn	04 26 51.2	+1.2
ESKT	Eskisehir	2.27	83	ePN	Pn	04 26 51.5	+0.4
ESKT	Eskisehir	2.27	83	ePn	Pn	04 26 51.5	+0.4
BODT	Bodrum	2.28	193	ePN	Pn	04 26 52.0	+0.9
BODT	Bodrum	2.28	193	ePn	Pn	04 26 52.0	+0.9
GULT	Gulveren	2.29	59	ePN	Pb	04 26 52.8	-2.0
GULT	Gulveren	2.29	59	ePn	Pb	04 26 52.8	-2.0
DAT	Datca	2.57	186	ePN	Pn	04 26 56.5	+1.2
DAT	Datca	2.57	186	ePn	Pn	04 26 56.5	+1.2
EDRB	Edirne	2.71	341	ePN	Pn	04 26 58.7	+1.6
EDRB	Edirne	2.71	341	ePn	Pn	04 26 58.7	+1.6
SVRH	Sivrihisar-ESK	2.78	86	ePN	Pn	04 26 59.4	+1.2
SVRH	Sivrihisar-ESK	2.78	86	ePn	Pn	04 26 59.4	+1.2

*SOF **08** 04:50:32.8, 41°.85N×22°.03E, h1km, MD2.6*
*SKO **08** 04:50:34.5, 41°.80N×22°.08E, h13km, M1.5, ML1.9*
*CSEM **08** 04:50:34.9±0.1, 41°.83N×22°.08E, h2km, ML2.0, Error ellipse: s-maj=2.9km s-min=2.2km az=54.0*
*THE **08** 04:50:35.8, 41°.81N×22°.13E, h2km±2km, ML2.4/3, Error ellipse: s-maj=2.6km s-min=1.0km az=249.0*
*BEO **08** 04:50:35.6±0.7, 41°.84N×22°.07E, h4km±3km, ML2.0/6*
ISC 08 04:50:34.7±1.1**, 41°.82N**±0°.02×**22°.06E**±0°.02**, h4km**±10km**, n52, σ0s.48**/82**, 1C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKO	Skopje	0.49	289	P	Pb	04 50 45.5	-0.4
SKO				S	Sg	04 50 51.3	+0.9
SKO	Skopje	0.49	289	ePg	Pb	04 50 45.4	-0.5
SKO				eSg	Sg	04 50 51.0	+0.5
SKO				eLg	Lg	04 50 51.4	
	comp=E,68nm,0.6s						
SKO				eLg	Lg	04 50 51.7	
	comp=N,50nm,0.3s						
SKO	Skopje	0.49	289	eSg	Sg	04 50 51.1	+0.7
SKO	Skopje	0.49	289	P	Pb	04 50 45.5	-0.4
SKO	Skopje	0.49	289	ePg	Pb	04 50 45.8	-0.1
SKO				S	Sg	04 50 51.3	+0.9
SKO				eLg	Lg	04 50 52.2	
	comp=N,50nm,0.3s						
VAY	Valandovo	0.63	142	P	Pg	04 50 46.4	-0.4
VAY				S	Sg	04 50 54.8	-0.1
VAY	Valandovo	0.63	142	ePg	Pg	04 50 46.5	-0.2
VAY				eSg	Sg	04 50 55.1	+0.2
VAY				eLg	Lg	04 50 55.3	
	comp=N,43nm,0.4s						
VAY				eLg	Lg	04 50 55.9	
	comp=E,68nm,0.7s						
VAY	Valandovo	0.63	142	P	Pg	04 50 46.4	-0.4
VAY	Valandovo	0.63	142	ePg	Pg	04 50 47.0	+0.2
VAY				S	Sg	04 50 54.8	-0.1
VAY				eSg	Sb	04 50 55.6	-1.8
VAY				eLg	Lg	04 50 56.3	
	comp=E,68nm,0.7s						
KKB	Krupnik	0.77	86	i Pg	Pg	04 50 49.5	+0.1
KKB	Krupnik	0.77	86	i Pg	Pg	04 50 49.5	+0.1
GRG	Griva	0.90	163	P	Pg	04 50 51.8	-0.1
GRG				S	Sb	04 51 05.7	+0.5
GRG	Griva	0.90	163	P	Pg	04 50 51.8	-0.1
GRG				S	Sb	04 51 05.7	+0.5
KNT	Kendrikon	0.91	136	P	Pg	04 50 51.8	-0.4
KNT				S	Sg	04 51 04.3	+0.4
KNT	Kendrikon	0.91	136	P	Pg	04 50 51.8	-0.4
KNT				S	Sg	04 51 04.3	+0.4
BIA	Bitola	0.97	215	ePg	Pg	04 50 52.9	-0.5
BIA				eSg	Sb	04 51 07.0	-0.4
BIA	Bitola	0.97	215	ePg	Pg	04 50 52.8	-0.5
BIA				eSg	Sb	04 51 06.9	-0.4
BARS	Barje	1.01	350	ePg	Pg	04 50 53.7	-0.5
BARS				eSg	Sg	04 51 07.3	0.0
BARS	Barje	1.01	350	ePg	Pg	04 50 53.7	-0.5
BARS				eSg	Sg	04 51 07.3	0.0
VTS	Vitosha	1.15	47	P	Pg	04 50 56.3	-0.6
VTS				S	Sb	04 51 12.3	-0.4
VTS	Vitosha	1.15	47	⇓ iPg	Pg	04 50 56.2	-0.6
VTS				eSg	Sg	04 51 11.7	-0.1
VTS	Vitosha	1.15	47	i Pg	Pg	04 50 56.3	-0.6
VTS	Vitosha	1.15	47	P	Pg	04 50 56.3	-0.6
VTS				eSg	Sg	04 51 11.7	-0.1
VTS				S	Sb	04 51 12.3	-0.4
FNA	Florina	1.15	207	P	Pg	04 50 56.8	-0.1
FNA				S	Sn	04 51 13.8	-0.2
FNA	Florina	1.15	207	P	Pg	04 50 56.8	-0.1
FNA				S	Sn	04 51 13.8	-0.2
MMB	Musomiste	1.27	100	i Pg	Pg	04 50 59.0	-0.1
MMB	Musomiste	1.27	100	i Pg	Pg	04 50 59.0	-0.1
SRS	Serrai	1.35	121	P	Pg	04 51 01.0	+0.4
SRS				S	Sn	04 51 19.0	+0.3
SRS	Serrai	1.35	121	P	Pg	04 51 01.0	+0.4
SRS				S	Sn	04 51 19.0	+0.3
SOH	Sokhos	1.39	135	P	Pn	04 51 00.9	-0.1
SOH	Sokhos	1.39	135	P	Pn	04 51 00.9	-0.1
NVR	Nevrokopi	1.43	108	P	Pn	04 51 01.7	+0.2
NVR				S	Sn	04 51 20.9	+0.1
NVR	Nevrokopi	1.43	108	P	Pn	04 51 01.7	+0.2
NVR				S	Sn	04 51 20.9	+0.1
HORT	Hortiatis	1.45	147	P	Pb	04 51 02.2	-0.1
HORT	Hortiatis	1.45	147	P	Pb	04 51 02.2	-0.1
ZAPS	Zavoj	1.52	16	⇑ iPn	Pn	04 51 02.8	+0.1
ZAPS				eSg	Sn	04 51 22.5	-0.4
SELS	Selova	1.56	334	ePn	Pn	04 51 02.6	-0.7
PGB	Panagyurishte	1.73	64	i P	Pn	04 51 05.7	+0.1
PGB	Panagyurishte	1.73	64	i P	Pn	04 51 05.7	+0.1
MPEP	Malo Peshtene	1.98	38	i P	Pb	04 51 11.7	+0.4
RZN	Rozhen	1.99	93	i P	Pb	04 51 11.4	-0.2
RZN	Rozhen	1.99	93	i P	Pb	04 51 11.4	-0.2
PLD	Plovdiv	1.99	81	eP	Pg	04 51 13.8	+0.9
PLD	Plovdiv	1.99	81	eP	Pg	04 51 13.8	+0.9
GRUS	Gruza	2.29	335	ePn	Pn	04 51 13.8	+0.5
GRUS				eSn	Sn	04 51 42.0	0.0
GRUS	Gruza	2.29	335	ePn	Pn	04 51 13.8	+0.5
GRUS				eSn	Sn	04 51 42.0	0.0
KDZ	Kurdzhali	2.52	93	eP	Pn	04 51 16.4	0.0
KDZ	Kurdzhali	2.52	93	eP	Pn	04 51 16.4	0.0
DIVS	Divibare	2.74	327	ePn	Pn	04 51 19.2	-0.3
DIVS				eSn	Sn	04 51 54.2	+1.1
DIVS	Divibare	2.74	327	ePn	Pn	04 51 19.2	-0.3
DIVS				eSn	Sn	04 51 54.2	+1.1
BBLS	Lazići	2.83	317	ePn	Pn	04 51 21.7	+0.9
BBLS	Lazići	2.83	317	ePn	Pn	04 51 21.7	+0.9

WEL 08 05:02:04.6±0.6**, 36°.98S×176°.61E, h295km**±4km**, ML3.8**/11**, 2C-1D, Error ellipse: s-maj=5.4km s-min=5.0km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	1.34	163	⇑ PN	Pn	05 02 46.2	0.0
URZ				SN	S	05 03 19.0	-0.3
MWZ	Matawai	1.54	152	PN	Pn	05 02 47.7	+0.1
MWZ				eSN	S	05 03 21.0	-0.7
PUZ	Puketiti	1.70	130	PN	Pn	05 02 48.6	-0.1
PUZ				eSN	S	05 03 23.0	-0.7
CNGZ	Carnagh Statio	1.96	140	PN	Pn	05 02 51.2	+0.5
NMHZ	Naumai	2.12	176	PN	Pn	05 02 53.0	+1.0
BKZ	Black Stump Fm	2.19	182	⇑ PN	Pn	05 02 52.6	+0.1
KNZ	Kokohu	2.21	158	PN	Pn	05 02 52.6	+0.1
NGZ	Ngauruhoe	2.34	200	PN	Pn	05 02 54.9	+0.9
MHGZ	Mahia Peninsul	2.40	155	PN	Pn	05 02 54.6	+0.3
FWVZ	Far West T-bar	2.42	200	PN	Pn	05 02 55.4	+0.7
MCHZ	McNeill Hill	2.46	178	PN	Pn	05 02 55.4	+0.5
TRVZ	Turoa	2.46	200	PN	Pn	05 02 55.9	+0.7
WNVZ	Wahianoa	2.48	199	PN	Pn	05 02 55.7	+0.4
MOVZ	Moawhango	2.52	195	PN	Pn	05 02 55.4	0.0
BHHZ	Black Hill Sta	2.54	190	PN	Pn	05 02 55.8	+0.1
MTVZ	Mangateitei	2.57	200	PN	Pn	05 02 56.5	+0.6
KAHZ	Kahuranaki	2.82	176	PN	Pn	05 02 58.5	+0.2
PNHZ	Pukenui	2.95	186	PN	Pn	05 02 59.1	-0.4
WAZ	Wanganui	3.05	204	⇓ PN	Pn	05 03 00.9	+0.4
PXZ	Pawanui	3.06	176	PN	Pn	05 03 00.3	-0.1
TSZ	Takapari Road	3.12	189	PN	Pn	05 03 00.6	-0.6
BFZ	Birch Farm	3.71	184	PN	Pn	05 03 06.6	-0.8
MRZ	Mangatainoka R	3.77	192	PN	Pn	05 03 06.7	-1.3
MRZ				SN	S	05 03 56.8	-1.8
OGWZ	Otaki Gorge	4.00	196	PN	Pn	05 03 09.3	-1.1
HOWZ	Holdsworth Sta	4.01	192	PN	Pn	05 03 09.2	-1.4
KIW	Kapiti Island	4.10	198	PN	Pn	05 03 10.3	-1.3
MTW	Mount Morrison	4.26	191	PN	Pn	05 03 11.7	-1.7
CAW	Cannon Point	4.30	196	PN	Pn	05 03 12.3	-1.5
TCW	Tory Channel	4.60	203	PN	Pn	05 03 15.9	-1.4
TUWZ	Tuamarina	4.91	204	PN	Pn	05 03 19.3	-1.5
NNZ	Nelson	4.92	210	PN	Pn	05 03 19.3	-1.6
QRZ	Quartz Range	4.99	218	PN	Pn	05 03 19.6	-2.1
KHZ	Kahutara	5.93	203	PN	Pn	05 03 31.4	-1.4

IDC 08 05:03:13.0±0.9**, 14°.74N×144°.97E, h0km, mb3.8**/11**, mb1 4.0**/11**, mb1mx3.8**/24**, mbtmp3.8**/11**, MS3.2**/4**, Ms1 3.3**/4**, ms1mx2.9**/27**, Error ellipse: s-maj=34.0km s-min=13.9km az=88.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.15	185	Pn	Pn	05 03 36.9	+0.6
	67nm,0.3s,baz=4.3,slow=17,SNR=24						
GUMO				Sn	Sn	05 03 52.4	-0.4
	182nm,0.3s,baz=6.0,slow=19,SNR=30						
MJAR	Matsushiro Arr	22.53	346	P	P	05 08 13.9	-0.6
	0.9nm,0.4s,baz=178,slow=11,SNR=4.6						
MJAR				LR	LR	05 16 31.5	
	comp=Z,25nm,19.8s,baz=215,slow=36						
KSRS	Korea Array	27.22	329	P	P	05 08 58.7	+0.1
	0.4nm,0.3s,baz=144,slow=8.6,SNR=3.2						
KSRS				LR	LR	05 18 17.2	
	comp=Z,24nm,18.1s,baz=165,slow=33						
WRA	Warramunga Arr	36.02	197	P	P	05 10 15.9	-0.2
	0.4nm,0.4s,baz=15,slow=9.5,SNR=3.8						
ASAR	Alice Springs	39.68	196	P	P	05 10 47.0	0.0
	0.3nm,0.7s,baz=25,slow=9.2,SNR=2.8						
CMAR	Chiang Mai Arr	44.18	281	P	P	05 11 24.1	+0.1
	0.8nm,0.4s,baz=65,slow=7.1,SNR=4.6						
CMAR				LR	LR	05 31 05.2	
	comp=Z,29nm,18.5s,baz=241,slow=38						
SONM	Songino Array	45.85	324	P	P	05 11 38.1	+0.9
	1.1nm,1.0s,baz=133,slow=6.5,SNR=6.5						
SONM				PcP	PcP	05 13 13.2	-1.3
	0.4nm,0.7s,baz=149,slow=3.4,SNR=3.4						
MKAR	Makanchi Array	60.74	316	P	P	05 13 26.6	+0.1
	0.6nm,0.8s,baz=134,slow=3.5,SNR=3.7						
ZALV	Zalesovo Beam	60.75	324	P	P	05 13 26.0	-0.4
	0.7nm,0.6s,baz=142,slow=7.3,SNR=3.0						
PPT	Papeete	72.09	114	LR	LR	05 40 06.2	
	comp=Z,74nm,19.1s,baz=2.3,slow=31						
YKA	Yellowknife Ar	81.80	27	P	P	05 15 33.8	+0.2
	0.6nm,0.9s,baz=284,slow=5.8,SNR=6.3						
ARCES	ARCESS Array B	86.02	342	P	P	05 15 53.9	-1.2
	4.7nm,1.0s,baz=49,slow=9.7,SNR=3.0						
NVAR	Mina Array Bea	86.13	51	P	P	05 15 57.1	+0.5
	0.3nm,0.6s,baz=290,slow=4.4,SNR=3.7						

*MOS **08** 05:05:44.4±0.7, 49°.63N×156°.81E, h6km, mb4.2/1, Error ellipse: s-maj=64.0km s-min=18.5km az=85.8*
KRSC 08 05:05:44.4±1.2**, 49°.63N×156°.81E, h5km**±5km**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.15	337	ePN	Pg	05 06 05.5	-0.8
SKR				eS	Sg	05 06 21.4	+0.2
SKR				pmax	pmax		
	comp=Z,60nm,0.3s						
SKR				smax	smax		
	comp=N,310nm,0.3s						
SKR				smax	smax		
	comp=E,490nm,0.3s						
SKR	Severo-Kuril's	1.15	337	i P	Pg	05 06 06.3	0.0
SKR				i S	Sb	05 06 22.0	+0.2
PAU	Pauzhetka	1.84	0	PN	Pb	05 06 17.6	-0.9
PAU				S	Sb	05 06 41.9	+0.1
PAU	Pauzhetka	1.84	0	P	Pb	05 06 17.6	-0.9
PAU				i S	Sb	05 06 41.9	+0.1
MIPR	Malaya Ipel'ka	2.65	359	eP	Pn	05 06 28.9	+1.1
ASAK	Asacha	2.84	14	eP	Pn	05 06 33.0	+2.5
MTVR	Mutnovka	2.98	16	eP	Pn	05 06 34.8	+2.2
MTVR				i S	Sn	05 07 11.9	+3.0
RUS	Russkaya	3.01	20	PN	Pn	05 06 34.4	+1.8
RUS				S	Sn	05 07 11.4	+2.4
RUS	Russkaya	3.01	20	eP	Pn	05 06 34.4	+1.8
RUS				i S	Sn	05 07 11.4	+2.4
UGLR	Uglovaya	3.80	19	P	Pn	05 06 46.4	+2.7
KRER	Koryakskii	3.87	17	eP	Pn	05 06 47.3	+2.4
SDLR	Sedlovina	3.88	19	P	Pn	05 06 46.4	+1.6
SPN	Mys Shipunski	4.01	29	PN	Pn	05 06 48.7	+2.2
SPN	Mys Shipunski	4.01	29	P	Pn	05 06 48.7	+2.2
GNL	Ganaly	4.13	9	P	Pn	05 06 50.5	+2.2
MKZ	Mys Kozlova	5.79	30	PN	Pn	05 07 11.8	+1.0
MKZ	Mys Kozlova	5.79	30	eP	Pn	05 07 11.8	+1.0

*ISCJB **08** 05:23:07.5±0.5, 53°.40N±0°.03×6°.26E±0°.06, h0km, Error ellipse: s-maj=5.4km s-min=3.7km az=39.8*
*CSEM **08** 05:23:09.5±0.3, 53°.40N×6°.41E, h1km, ML3.2/5, Error ellipse: s-maj=7.7km s-min=5.0km az=139.0*
*LDG **08** 05:23:11.9±0.3, 53°.38N×6°.60E, h4km, Ml3.0/9, Error ellipse: s-maj=6.7km s-min=4.9km az=78.0*
*BGR **08** 05:23:12.6±0.5, 53°.35N×6°.77E, h1km, ML2.8/4, Error ellipse: s-maj=6.7km s-min=3.3km az=112.0*
ISC 08 05:23:09.4±1.0**, 53°.37N**±0°.04×**6°.50E**±0°.04**, h0km, n59, σ1s.59**/91**, The Netherlands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIT	Witteveen	0.57	170	ePg	Pn	05 23 24.6	-0.1
WIT	Witteveen	0.57	170	Pg	Pn	05 23 24.6	-0.1
HLG	Helgoland	1.16	45	ePg	Pn	05 23 33.4	+0.6
HLG				eSg	Sn	05 23 48.6	-0.6
HLG	Helgoland	1.16	45	Pg	Pn	05 23 33.4	+0.6
HLG				Sg	Sn	05 23 48.6	-0.6
IBBN	Ibbenburen	1.31	144	ePg	Pn	05 23 35.7	+0.8
IBBN				eSg	Sn	05 23 53.0	-0.1
IBBN	Ibbenburen	1.31	144	Pg	Pn	05 23 35.7	+0.8
IBBN				Sg	Sn	05 23 53.0	-0.1
WTSB	Winterswijk	1.42	173	ePn	Pb	05 23 37.1	+0.4
WTSB				eSg	Sn	05 23 58.0	+2.2
WTSB	Winterswijk	1.42	173	ePn	Pb	05 23 37.0	+0.3
	23nm,0.2s						
WTSB				i Pg	Pb	05 23 38.5	+1.8
	65nm,0.3s						
WTSB				eSg	Sn	05 23 56.9	+1.1
WTSB	Winterswijk	1.42	173	Pn	Pb	05 23 37.1	+0.4
WTSB	Winterswijk	1.42	173	i Pg	Pb	05 23 38.5	+1.8
	65nm,0.3s						
WTSB				Sg	Sn	05 23 58.0	+2.2
BUG	Bochum--Univer	1.99	166	ePn	Pn	05 23 44.9	+0.6

BUG				*e*Sg	**Sg**	**05 24 15.4**	**+2.2**
NRDL	**Niedersach Rie**	**2.35**	**111**	*e*Pn	**Pn**	**05 23 49.5**	**+0.3**
NRDL				*e*Sn	**Sn**	**05 24 15.5**	**-3.2**
NRDL	**Niedersach Rie**	**2.35**	**111**	Pn	**Pn**	**05 23 49.5**	**+0.3**
NRDL				Sn	**Sn**	**05 24 15.5**	**-3.2**
HGN	**Heimansgroeve**	**2.64**	**188**	*e*Pn	**Pn**	**05 23 54.0**	**+0.9**
HGN				*e*Pg	**Pg**	**05 24 01.8**	**+1.9**
HGN				*e*Sg	**Sg**	**05 24 37.2**	**+3.2**
HGN	**Heimansgroeve**	**2.64**	**188**	*e*Pg	**Pn**	**05 23 54.0**	**+0.9**
	4.0nm,0.3s						
HGN	**Heimansgroeve**	**2.64**	**188**	Pn	**Pn**	**05 23 54.0**	**+0.9**
CLZ	**Clausthal**	**2.81**	**121**	*e*Pn	**Pn**	**05 23 55.5**	**-0.1**
CLZ				*e*Sn	**Sn**	**05 24 25.9**	**-4.4**
CLZ	**Clausthal**	**2.81**	**121**	Pn	**Pn**	**05 23 55.5**	**-0.1**
ASSE	**Asse, Remlinge**	**2.82**	**114**	*e*Pn	**Pn**	**05 23 55.2**	**-0.4**
ASSE	**Asse, Remlinge**	**2.82**	**114**	Pn	**Pn**	**05 23 55.2**	**-0.4**
GIVF	**Givet**	**3.44**	**198**	*e*Pn	**Pn**	**05 24 05.6**	**+1.4**
GIVF	**Givet**	**3.44**	**198**	*e*Pg	**Pg**	**05 24 17.1**	**+1.9**
GIVF				*e*Sn	**Sn**	**05 24 43.7**	**-1.9**
GIVF				*e*Sg	**Sg**	**05 25 00.9**	**+1.1**
	12nm,0.3s						
GIVF	**Givet**	**3.44**	**198**	*e*Pn	**Pn**	**05 24 05.6**	**+1.4**
GIVF	**Givet**	**3.44**	**198**	*e*Pg	**Pg**	**05 24 17.1**	**+1.9**
GIVF				*e*Sn	**Sn**	**05 24 43.7**	**-1.9**
GIVF				*e*Sg	**Sg**	**05 25 00.9**	**+1.1**
	5.8nm,0.3s						
BAIF	**Baives**	**3.61**	**204**	*e*Pn	**Pn**	**05 24 08.5**	**+1.9**
BAIF				*e*Sg	**Sg**	**05 25 06.0**	**+0.6**
	5.2nm,0.3s						
BAIF	**Baives**	**3.61**	**204**	*e*Pn	**Pn**	**05 24 08.5**	**+1.9**
BAIF				*e*Sg	**Sg**	**05 25 06.0**	**+0.6**
	2.6nm,0.3s						
PAGF	**Fort de Pagny**	**4.85**	**186**	*e*Pn	**Pn**	**05 24 23.8**	**+0.2**
PAGF	**Fort de Pagny**	**4.85**	**186**	*e*Pn	**Pn**	**05 24 23.8**	**+0.2**
MEZF	**Maizieres J'vi**	**4.96**	**191**	*e*Pn	**Pn**	**05 24 25.1**	**0.0**
	baz=13						
MEZF				*e*Sg	**Sg**	**05 25 47.4**	**-1.3**
	11nm,0.5s						
MEZF	**Maizieres J'vi**	**4.96**	**191**	*e*Pn	**Pn**	**05 24 25.1**	**0.0**
	baz=13						
MEZF				*e*Sg	**Sg**	**05 25 47.4**	**-1.3**
	5.3nm,0.5s						
CDF	**Champ du Feu**	**4.99**	**174**	*e*Pn	**Pn**	**05 24 25.5**	**-0.1**
CDF				*e*Sg	**Sg**	**05 25 46.9**	**-2.7**
	4.2nm,0.5s						
CDF	**Champ du Feu**	**4.99**	**174**	*e*Pn	**Pn**	**05 24 25.5**	**-0.1**
CDF				*e*Sg	**Sg**	**05 25 46.9**	**-2.7**
	2.1nm,0.5s						
BRG	**Berggiesshubel**	**5.22**	**116**	SG		05 24 28.8	
	3.8nm,0.3s						
BRG				PG		06 38 49.1	
BRG				SG		06 39 09.3	
	14nm,0.4s						
SFTF	**Sexfontaines**	**5.26**	**191**	*e*Pn	**Pn**	**05 24 29.3**	**+0.1**
	baz=16						
SFTF				*e*Sg	**Sg**	**05 25 56.5**	**-1.7**
	2.4nm,0.3s						
SFTF	**Sexfontaines**	**5.26**	**191**	*e*Pn	**Pn**	**05 24 29.3**	**+0.1**
	baz=16						
SFTF				*e*Sg	**Sg**	**05 25 56.5**	**-1.7**
	1.2nm,0.3s						
LOR	**Lormes**	**6.34**	**197**	*e*Pn	**Pn**	**05 24 44.5**	**+0.4**
	baz=19						
LOR				*e*Sn	**Sn**	**05 25 52.6**	**-4.6**
LOR				*e*Sg	**Sg**	**05 26 31.6**	**-1.3**
	3.9nm,0.5s						
LOR	**Lormes**	**6.34**	**197**	*e*Pn	**Pn**	**05 24 44.5**	**+0.4**
	baz=19						
LDF	**La Druitiere**	**6.35**	**224**	*e*Pn	**Pn**	**05 24 44.5**	**+0.3**
LDF	**La Druitiere**	**6.35**	**224**	*e*Pn	**Pn**	**05 24 44.5**	**+0.3**
FLN	**La Foliniere**	**6.38**	**226**	*e*Pn	**Pn**	**05 24 44.9**	**+0.4**
	baz=43						
FLN				*e*Sn	**Sn**	**05 25 55.2**	**-2.8**
	6.3nm,0.5s						
FLN	**La Foliniere**	**6.38**	**226**	*e*Pn	**Pn**	**05 24 44.9**	**+0.4**
	baz=43						
FLN				*e*Sn	**Sn**	**05 25 55.2**	**-2.8**
	3.2nm,0.5s						
SSF	**Saint Saulge**	**6.60**	**198**	*e*Pn	**Pn**	**05 24 47.8**	**+0.1**
SSF				*e*Sn	**Sn**	**05 25 59.4**	**-4.2**
SSF	**Saint Saulge**	**6.60**	**198**	*e*Pn	**Pn**	**05 24 47.8**	**+0.1**
CABF	**La Chapelle**	**6.77**	**182**	*e*Pn	**Pn**	**05 24 49.7**	**-0.4**
CABF	**La Chapelle**	**6.77**	**182**	*e*Pn	**Pn**	**05 24 49.7**	**-0.4**
GRR	**Gorron**	**6.82**	**226**	*e*Pn	**Pn**	**05 24 49.7**	**-1.0**
GRR				*e*Sn	**Sn**	**05 26 06.0**	**-3.0**
	4.4nm,0.3s						
GRR	**Gorron**	**6.82**	**226**	*e*Pn	**Pn**	**05 24 49.7**	**-1.0**
GRR				*e*Sn	**Sn**	**05 26 06.0**	**-3.0**
	2.2nm,0.3s						
SMF	**Signal de Mont**	**6.95**	**195**	*e*Pn	**Pn**	**05 24 50.4**	**-2.0**
SMF	**Signal de Mont**	**6.95**	**195**	*e*Pn	**Pn**	**05 24 50.4**	**-2.0**
BGF	**Bois d'Agland**	**7.22**	**201**	*e*Pn	**Pn**	**05 24 56.3**	**+0.2**
BGF	**Bois d'Agland**	**7.22**	**201**	*e*Pn	**Pn**	**05 24 56.3**	**+0.2**
SGMF	**Saint Gilles**	**7.69**	**232**	*e*Pn	**Pn**	**05 25 01.9**	**-0.7**
SGMF	**Saint Gilles**	**7.69**	**232**	*e*Pn	**Pn**	**05 25 01.9**	**-0.7**
ROSF	**Rostrenen**	**7.98**	**235**	*e*Pn	**Pn**	**05 25 06.0**	**-0.5**
ROSF	**Rostrenen**	**7.98**	**235**	*e*Pn	**Pn**	**05 25 06.0**	**-0.5**
MFF	**Saint Martin d**	**8.02**	**215**	*e*Pn	**Pn**	**05 25 07.2**	**+0.2**
MFF	**Saint Martin d**	**8.02**	**215**	*e*Pn	**Pn**	**05 25 07.2**	**+0.2**
LFF	**La Frestale**	**9.24**	**206**	*e*Pn	**Pn**	**05 25 23.6**	**-0.2**
LFF	**La Frestale**	**9.24**	**206**	*e*Pn	**Pn**	**05 25 23.6**	**-0.2**

*CSEM **08** 05:45:52.6±0.4, 37.°49N×35.°95E, h15km, MD2.5, Error ellipse: s-maj=9.7km s-min=6.7km az=155.0*
*ISK **08** 05:45:53.7, 37.°32N×36.°05E, h3km, MD2.5*
*ISCJB **08** 05:45:53.9±0.9, 37.°37N±0.°05×35.°98E±0.°04, h6km±8km, Error ellipse: s-maj=9.0km s-min=4.9km az=156.9*
*DDA **08** 05:45:54.2, 37.°31N×35.°97E, h7km, MD2.9*
ISC 08 05:45:52.3±2.4**, 37.°5N**±0.°1×**35.°96E**±0.°04**, h16**km±14km**, n11, σ0.56**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.49**	**201**	*e*PG	**Pg**	**05 46 01.6**	**-0.5**
CEYT				*e*SG	**Sg**	**05 46 08.8**	**+0.1**
CEYT	**Ceyhan**	**0.49**	**201**	*e*Pg	**Pg**	**05 46 01.6**	**-0.5**
CEYT				*e*Sg	**Sg**	**05 46 08.8**	**+0.1**
AYKD	**Aykdinkavak**	**0.67**	**94**	*e*P	**Pn**	**05 46 08.2**	**+0.9**
AYKD				*e*S	**Sb**	**05 46 15.2**	**+0.3**
KMRS	**Kahramanmaras**	**0.75**	**87**	*e*PG	**Pn**	**05 46 08.3**	**0.0**
KMRS				*e*SG	**Sn**	**05 46 18.3**	**-1.0**
KMRS	**Kahramanmaras**	**0.75**	**87**	*e*Pg	**Pn**	**05 46 08.3**	**0.0**
KMRS				*e*Sg	**Sn**	**05 46 18.3**	**-1.0**
GULE	**Gulek**	**0.96**	**259**	*e*P	**Pn**	**05 46 11.9**	**+0.6**
GULE				*e*S	**Sn**	**05 46 24.4**	**-0.4**
GULE	**Gulek**	**0.96**	**259**	*e*P	**Pn**	**05 46 11.9**	**+0.6**
GULE				*e*S	**Sn**	**05 46 24.4**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.00**	**21**	*e*PN	Pn	05 46 16.4	+4.5
SARI				*e*SN	Sn	05 46 31.8	+6.0
SARI	**SarD1z-Kayseri**	**1.00**	**21**	*e*Pn	Pn	05 46 16.5	+4.5
SARI				*e*Sn	Sn	05 46 31.8	+6.0
KUZU	**Kuzuini**	**1.13**	**128**	*e*P	**Pg**	**05 46 14.3**	**+0.2**
KUZU				*e*S	**Sb**	**05 46 28.1**	**+0.2**
KUZU	**Kuzuini**	**1.13**	**128**	*e*P	**Pg**	**05 46 14.3**	**+0.2**
KUZU				*e*S	**Sb**	**05 46 28.1**	**+0.2**

IDC 08 06:18:26.0±30.0**, 9.°11N×87.°56W, h0**km**, mb3.4**/3**, mb1 3.8**/3**, mb1mx3.5**/22**, mbtmp3.4**/3**, Error ellipse: s-maj=662.4km s-min=137.6km az=9.0, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**25.16**	**325**	P	P	06 23 53.0	-0.2
	1.8nm,0.8s,baz=136,slow=10,SNR=24						
PDAR	**Pinedale Array**	**38.67**	**334**	P	P	06 25 51.9	0.0
	0.4nm,0.8s,baz=155,slow=11,SNR=3.1						
YKA	**Yellowknife Ar**	**56.79**	**345**	P	P	06 28 11.7	0.0
	0.3nm,0.9s,baz=134,slow=8.3,SNR=5.1						

IDC 08 06:21:49.9±0.8**, 25.°71N×143.°10E, h0**km**, mb3.8**/10**, mb1 4.0**/10**, mb1mx3.8**/26**, mbtmp3.8**/10**, Error ellipse: s-maj=31.2km s-min=20.2km az=93.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**36.28**	**317**	P	P	06 28 55.0	-0.2
	0.2nm,0.5s,baz=128,slow=9.3,SNR=2.6						
WRA	**Warramunga Arr**	**46.17**	**191**	P	P	06 30 16.2	-0.3
	3.1nm,0.3s,baz=14,slow=8.7,SNR=19						
ASAR	**Alice Springs**	**49.88**	**191**	P	P	06 30 45.4	+0.1
	0.4nm,0.5s,baz=18,slow=13,SNR=7.9						
KURBB	**Kurchatov Arra**	**54.60**	**315**	P	P	06 31 20.3	+0.2
	0.3nm,0.4s,baz=91,slow=7.8,SNR=6.7						
ILAR	**Eielson Array**	**58.54**	**28**	P	P	06 31 48.0	0.0
	0.5nm,0.6s,baz=268,slow=5.5,SNR=6.6						
BVAR	**Borovoye Array**	**59.62**	**318**	P	P	06 31 55.1	-0.6
	0.7nm,0.5s,baz=94,slow=5.2,SNR=3.8						
YKA	**Yellowknife Ar**	**72.97**	**28**	P	P	06 33 21.2	+0.2
	0.3nm,0.8s,baz=292,slow=6.1,SNR=5.3						
FINES	**FINESS Array B**	**79.55**	**334**	P	P	06 33 58.6	+0.1
	0.9nm,0.4s,baz=67,slow=5.6,SNR=9.0						
PDAR	**Pinedale Array**	**84.61**	**45**	P	P	06 34 25.0	-0.8
	0.3nm,0.9s,baz=38,slow=4.6,SNR=3.2						
TXAR	**Lajitas Array**	**95.77**	**54**	P	P	06 35 18.8	+0.2
	0.7nm,1.1s,baz=244,slow=3.9,SNR=4.4						

MEX 08 06:25:48.4±0.6**, 17.°29N×99.°81W, h14**km±5km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.42**	**186**	*e*P	Pg	06 25 55.5	-1.2
ACX				*i* S	Sg	06 26 02.0	-0.4
CAIG	**El Cayaco**	**0.49**	**241**	*i* P	Pg	06 25 56.9	-1.2
CAIG				*i* S	Sg	06 26 04.3	-0.5
MEIG	**Mezcala**	**0.66**	**16**	*e*P	Pg	06 25 59.3	-2.2
MEIG				*i* S	Sg	06 26 07.9	-2.5
ARIG	**Puente Sto Nin**	**1.11**	**333**	*e*P	Pb	06 26 06.3	-3.2
ARIG				*i* S	Sb	06 26 18.9	-5.0
ZIIG	**Zihuatanejo**	**1.61**	**282**	*i* P	Pn	06 26 13.0	-3.5
ZIIG				*i* S	Sn	06 26 31.8	-5.2
YAIG	**Yautepec**	**1.72**	**24**	*i* P	Pn	06 26 14.6	-3.6
YAIG				*i* S	Sn	06 26 35.4	-4.8
PNIG	**Pinotepa**	**1.84**	**119**	*i* P	Pn	06 26 16.7	-3.0
PNIG				*i* S	Sn	06 26 37.6	-5.3
UTMO	**Huajuapan**	**1.99**	**74**	*i* P	Pn	06 26 18.7	-3.4
UTMO				*i* S	Sn	06 26 42.4	-4.6
PPM	**Popocatepetl**	**2.10**	**32**	*e*P	Pn	06 26 20.3	-3.6
PPM				*i* S	Sn	06 26 45.0	-5.2
VHO	**Vista Hermosa**	**2.95**	**94**	*i* P	Pn	06 26 31.4	-3.8

*ISK **08** 06:41:39.7, 37.°23N×28.°16E, h5km, MD2.7*
*DDA **08** 06:41:40.7, 37.°23N×28.°14E, h7km, MD2.7*
*CSEM **08** 06:41:41.1±0.2, 37.°21N×28.°17E, h2km, MD2.7, Error ellipse: s-maj=5.1km s-min=3.8km az=25.0*
ISC 08 06:41:41.1±1.1**, 37.°21N**±0.°03×**28.°17E**±0.°02**, h3**km±11km**, n19, σ0.57**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**129**	*e*PG	**Pg**	**06 41 43.0**	**-0.4**
YER				*e*SG	**Sg**	**06 41 45.4**	**+0.4**
YER	**Yerkesik**	**0.12**	**129**	*e*Pg	**Pg**	**06 41 43.0**	**-0.4**
YER				*e*Sg	**Sg**	**06 41 45.4**	**+0.4**
MLSB	**Milas**	**0.33**	**286**	*e*PG	**Pg**	**06 41 47.1**	**-0.3**
MLSB	**Milas**	**0.33**	**286**	*e*Pg	**Pg**	**06 41 47.1**	**-0.3**
TURN	**Turunc**	**0.48**	**134**	*i* P	**Pg**	**06 41 49.2**	**-1.1**
TURN				*i* S	**Sg**	**06 41 57.4**	**+0.8**
TURN	**Turunc**	**0.48**	**134**	*i* P	**Pg**	**06 41 49.2**	**-1.1**
AYDN	**Tasoluk**	**0.51**	**333**	*i* P	**Pg**	**06 41 50.4**	**-0.4**
AYDN				*i* S	**Sg**	**06 41 57.8**	**+0.4**
AYDN	**Tasoluk**	**0.51**	**333**	*i* P	**Pg**	**06 41 50.4**	**-0.4**
AYDN				*i* S	**Sg**	**06 41 57.8**	**+0.4**
DALY	**Dalyan (Mu˜la**	**0.55**	**135**	*e*PG	**Pg**	**06 41 51.8**	**+0.2**
DALY	**Dalyan (Mu˜la**	**0.55**	**135**	*e*Pg	**Pg**	**06 41 51.8**	**+0.2**
DAT	**Datca**	**0.67**	**225**	*e*PG	**Pg**	**06 41 54.8**	**+0.8**
DAT	**Datca**	**0.67**	**225**	*e*Pg	**Pg**	**06 41 54.8**	**+0.8**
BODT	**Bodrum**	**0.70**	**258**	*e*PG	**Pg**	**06 41 54.5**	**0.0**
BODT				*e*SG	**Sb**	**06 42 05.1**	**-0.9**
BODT	**Bodrum**	**0.70**	**258**	*e*Pg	**Pg**	**06 41 54.5**	**0.0**
BODT				*e*Sg	**Sb**	**06 42 05.1**	**-0.9**
DNZL	**Cakiroluk**	**0.85**	**55**	*i* P	**Pg**	**06 41 57.4**	**+0.1**
DNZL				*i* S	**Sb**	**06 42 10.7**	**+0.4**
DNZL	**Cakiroluk**	**0.85**	**55**	*i* P	**Pg**	**06 41 57.4**	**+0.1**
DNZL				*i* S	**Sb**	**06 42 10.7**	**+0.4**
FETY	**Fethiye**	**0.93**	**128**	*e*PG	**Pb**	**06 41 59.6**	**-0.2**
FETY	**Fethiye**	**0.93**	**128**	*e*Pg	**Pb**	**06 41 59.6**	**-0.2**
MANT	**Manisa**	**1.32**	**13**	*i* P	**Pg**	**06 42 06.5**	**+0.1**
MANT				*i* S	**Sn**	**06 42 24.8**	**+0.1**

*IPEC **08** 06:55:50.9±0.3, 51.°61N×16.°21E, h0km, ML2.7/4, Error ellipse: s-maj=2.0km s-min=1.6km az=38.0*
*CSEM **08** 06:55:51.9±0.2, 51.°53N×16.°11E, h2km, ML3.6/9, Error ellipse: s-maj=3.3km s-min=2.3km az=19.0*
*ISCJB **08** 06:55:51.2±0.5, 51.°46N±0.°03×16.°07E±0.°03, h0km, mb3.0/1, Error ellipse: s-maj=4.1km s-min=2.3km az=18.1*
*IDC **08** 06:55:52.9±0.9, 51.°53N×16.°16E, h0km, mb3.1/1, mb1 3.5/6, mb1mx3.3/26, mbtmp3.4/6, ML2.9/5, Error ellipse: s-maj=19.0km s-min=8.4km az=102.0*
*PRU **08** 06:55:52.8, 51.°52N×16.°12E, h0km*
*WAR **08** 06:55:53.0, 51.°53N×16.°08E*
*BGR **08** 06:55:53.2±0.5, 51.°50N×16.°11E, h1km, ML3.0/15, Error ellipse: s-maj=5.6km s-min=2.2km az=18.0*
*VIE **08** 06:55:56.4±0.3, 51.°18N×16.°28E, h0km, mb2.5/4, ML3.0/4, Error ellipse: s-maj=2.5km s-min=2.1km az=100.0 52 km WNW of Wroclaw Suspected Mining induced.*
ISC 08 06:55:50.9±0.7**, 51.°59N**±0.°03×**16.°14E**±0.°02**, h0**km**, n74, σ0.96**/123**, 2C-2D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.75**	**173**	*e*Pg	**Pg**	**06 56 06.1**	**+0.8**
KSP				*e*Sg	**Sg**	**06 56 15.6**	**+0.6**
KSP	**Ksiaz**	**0.75**	**173**	*e*Pg	**Pg**	**06 56 06.0**	**+0.8**
KSP				*e*Sg	**Sg**	**06 56 15.6**	**+0.6**
KSP	**Ksiaz**	**0.75**	**173**	*e*	**Sn**	**06 56 20.1**	**-0.7**
KSP	**Ksiaz**	**0.75**	**173**	Pg	**Pg**	**06 56 06.1**	**+0.8**
KSP				Sg	**Sg**	**06 56 15.6**	**+0.6**
UPC	**Upice**	**1.09**	**184**	*e*PG	**Pg**	**06 56 12.2**	**+0.6**
UPC	**Upice**	**1.09**	**184**	Pg	**Pg**	**06 56 12.2**	**+0.6**
DPC	**Dobruska-Polom**	**1.25**	**175**	*e*Pg	**Pg**	**06 56 14.9**	**+0.2**
DPC				*e*Sg	**Sg**	**06 56 31.0**	**+0.2**
DPC	**Dobruska-Polom**	**1.25**	**175**	*e*PG	**Pg**	**06 56 14.8**	**+0.1**
DPC				*e*SG	**Sg**	**06 56 30.5**	**-0.3**
	comp=Z,49nm,0.5s						
DPC	**Dobruska-Polom**	**1.25**	**175**	Pg	**Pg**	**06 56 14.8**	**+0.1**
DPC				Sg	**Sg**	**06 56 30.5**	**-0.3**
	49nm,0.5s						
PVCC	**Panska Ves**	**1.45**	**224**	*e*PG	**Pn**	**06 56 18.3**	**-0.1**
PVCC				*e*SG	**Sn**	**06 56 38.2**	**+0.1**
	comp=Z,312nm,0.3s						
PVCC	**Panska Ves**	**1.45**	**224**	Pg	**Pn**	**06 56 18.3**	**-0.1**
PVCC				Sg	**Sn**	**06 56 38.2**	**+0.1**
	312nm,0.3s						
BRG	**Berggiesshubel**	**1.56**	**243**	PN	**Pb**	**06 56 20.5**	**0.0**
BRG				PG	**Pg**	**06 56 21.1**	**+0.4**
BRG				SG	**Sg**	**06 56 41.1**	**+0.3**
	148nm,0.4s						
BRG	**Berggiesshubel**	**1.56**	**243**	*e*Pn	**Pg**	**06 56 20.9**	**+0.2**
BRG				*e*Sg	**Sg**	**06 56 41.3**	**+0.5**
BRG	**Berggiesshubel**	**1.56**	**243**	Pn	**Pg**	**06 56 20.9**	**+0.2**
BRG				Sg	**Sg**	**06 56 41.3**	**+0.5**
FBE	**Freiberg**	**1.87**	**250**	*e*Sg	**Sg**	**06 56 51.0**	**0.0**
FBE	**Freiberg**	**1.87**	**250**	Sg	**Sg**	**06 56 51.0**	**0.0**
PRU	**Pruhonice**	**1.90**	**213**	*e*PN	**Pn**	**06 56 24.3**	**-0.2**
PRU				*e*PG	**Pb**	**06 56 26.3**	**0.0**
PRU				*e*SG	**Sb**	**06 56 50.4**	**-0.1**
	comp=Z,46nm,0.4s						
PRU	**Pruhonice**	**1.90**	**213**	Pn	**Pn**	**06 56 24.3**	**-0.2**
PRU	**Pruhonice**	**1.90**	**213**	Pg	**Pb**	**06 56 26.3**	**0.0**
PRU				Sg	**Sb**	**06 56 50.4**	**-0.1**
	46nm,0.4s						
CLL	**Collm**	**1.98**	**263**	*e*Pn	**Pn**	**06 56 25.3**	**-0.4**
CLL				*e*Sg	**Sg**	**06 56 54.4**	**-0.1**
CLL	**Collm**	**1.98**	**263**	*i* Pn	**Pn**	**06 56 25.3**	**-0.4**
	comp=Z,15nm,0.5s						
CLL				*i* Pg	**Pg**	**06 56 29.0**	**+0.2**
CLL				*e*		06 56 33.0	
CLL				*i* Sg	**Sg**	**06 56 54.4**	**-0.1**
	comp=Z,76nm,0.4s						
CLL	**Collm**	**1.98**	**263**	Pn	**Pn**	**06 56 25.3**	**-0.4**
CLL				Sg	**Sg**	**06 56 54.4**	**-0.1**
MORC	**Moravsky Berou**	**2.02**	**153**	*e*Pn	**Pn**	**06 56 25.9**	**-0.3**
MORC				*e*Sg	**Sb**	**06 56 54.0**	**-0.2**
MORC	**Moravsky Berou**	**2.02**	**153**	*e*Pn	**Pn**	**06 56 26.2**	**0.0**
	baz=336						
MORC				*e*Sg	**Sb**	**06 56 54.4**	**+0.2**
	comp=Z,36nm,0.3s,baz=336						
OKC	**Ostrava-Krasne**	**2.17**	**143**	*e*Pn	**Pn**	**06 56 28.3**	**+0.1**
OKC				*e*Sg	**Sb**	**06 56 59.0**	**+0.7**
OKC	**Ostrava-Krasne**	**2.17**	**143**	*e*PG	**Pg**	**06 56 32.1**	**-0.3**
OKC	**Ostrava-Krasne**	**2.17**	**143**	Pn	**Pn**	**06 56 28.3**	**+0.1**
OKC	**Ostrava-Krasne**	**2.17**	**143**	Pg	**Pg**	**06 56 32.1**	**-0.3**
OKC				Sg	**Sb**	**06 56 59.0**	**+0.7**
VRAC	**Vranov**	**2.30**	**173**	Pn	**Pn**	**06 56 31.2**	**+1.2**
	comp=Z,2.2nm,0.3s,baz=347,slow=14,SNR=11						
VRAC				Lg	Lg	06 57 03.5	
	comp=Z,9.3nm,0.3s,baz=323,slow=5.1,SNR=11						
VRAC	**Vranov**	**2.30**	**173**	*e*Pn	**Pn**	**06 56 30.9**	**+0.9**
	baz=354						
VRAC				*e*Sg	**Sb**	**06 57 03.5**	**+1.3**
	comp=Z,28nm,0.3s,baz=354						
TREC	**Trest**	**2.33**	**191**	*e*PN	**Pn**	**06 56 31.0**	**+0.5**
TREC				*e*PG	**Pb**	**06 56 34.5**	**+0.7**
TREC				*e*SG	**Sg**	**06 57 05.2**	**-0.6**
TREC	**Trest**	**2.33**	**191**	Pn	**Pn**	**06 56 31.0**	**+0.5**
KRUC	**Moravsky**	**2.54**	**176**	*e*Pn	**Pn**	**06 56 34.2**	**+1.0**
	baz=357						
KRUC				*e*Sg	**Sg**	**06 57 11.0**	**-1.2**
	comp=Z,22nm,0.3s,baz=357						
TANN	**Tannenbergstha**	**2.60**	**245**	*e*Pn	**Pn**	**06 56 34.5**	**+0.3**
TANN				*e*Sg	**Sg**	**06 57 13.2**	**-1.3**
TANN	**Tannenbergstha**	**2.60**	**245**	Pn	**Pn**	**06 56 34.5**	**+0.3**
TANN				Sg	**Sg**	**06 57 13.2**	**-1.3**
WERD	**Werda**	**2.68**	**246**	*e*Pn	**Pn**	**06 56 35.2**	**0.0**
WERD				*e*Sg	**Sg**	**06 57 16.7**	**-0.1**
WERD	**Werda**	**2.68**	**246**	Pn	**Pn**	**06 56 35.2**	**0.0**
WERD				Sg	**Sg**	**06 57 16.7**	**-0.1**
OJC	**Ojcow**	**2.69**	**119**	*e*Pg	**Pg**	**06 56 43.7**	**+1.3**
OJC				*e*Sg	**Sg**	**06 57 18.8**	**+1.5**
OJC	**Ojcow**	**2.69**	**119**	*e*Pg	**Pg**	**06 56 43.7**	**+1.3**
OJC				Sg	**Sg**	**06 57 18.7**	**+1.5**
NKC	**Novy Kostel**	**2.70**	**241**	*e*PN	**Pn**	**06 56 36.4**	**+0.8**
NKC				*e*PG	**Pg**	**06 56 42.3**	**-0.3**
NKC				*e*SG	**Sg**	**06 57 17.7**	**+0.1**
	comp=Z,95nm,0.4s						
NKC	**Novy Kostel**	**2.70**	**241**	Pn	**Pn**	**06 56 36.4**	**+0.8**
JAVC	**Velka Javorina**	**2.90**	**160**	*e*Sg	**Sg**	**06 57 24.7**	**+0.6**
	comp=Z,41nm,0.9s						
KHC	**Kasperske Hory**	**2.96**	**215**	*e*PN	**Pn**	**06 56 39.0**	**-0.1**
KHC				*e*PG	**Pg**	**06 56 48.0**	**+0.5**
KHC				*e*SN	**Sn**	**06 57 14.5**	**-0.8**
KHC				*e*SG	**Sg**	**06 57 25.0**	**-0.8**
KHC	**Kasperske Hory**	**2.96**	**215**	Pn	**Pn**	**06 56 39.0**	**-0.1**
KHC	**Kasperske Hory**	**2.96**	**215**	Pg	**Pg**	**06 56 48.0**	**+0.5**
KHC				Sn	**Sn**	**06 57 14.5**	**-0.8**
KHC				Sg	**Sg**	**06 57 25.0**	**-0.8**
MOX	**Moxa**	**3.00**	**253**	*e*Sg	**Sg**	**06 57 27.8**	**+0.5**
MOX	**Moxa**	**3.00**	**253**	Sg	**Sg**	**06 57 27.8**	**+0.5**
MANZ	**Manzenberg**	**3.02**	**239**	*e*Pn	**Pn**	**06 56 40.7**	**+0.8**
MANZ				*e*Sg	**Sg**	**06 57 26.9**	**-0.9**
MANZ	**Manzenberg**	**3.02**	**239**	Pn	**Pn**	**06 56 40.7**	**+0.8**
MANZ				Sg	**Sg**	**06 57 26.9**	**-0.9**
ROTZ	**Rotzenmuhle**	**3.10**	**235**	*e*Pn	**Pn**	**06 56 41.5**	**+0.5**
ROTZ	**Rotzenmuhle**	**3.10**	**235**	Pn	**Pn**	**06 56 41.5**	**+0.5**
GEC2	**GERESS Array S**	**3.16**	**211**	*e*Pn	**Pn**	**06 56 43.1**	**+1.1**
GEC2				*e*Sg	**Sb**	**06 57 29.8**	**+2.7**
GEC2	**GERESS Array S**	**3.16**	**211**	Pn	**Pn**	**06 56 43.1**	**+1.1**
GEC2				Sg	**Sb**	**06 57 29.8**	**+2.7**
GERES	**GERESS Array B**	**3.16**	**211**	Pn	**Pn**	**06 56 43.0**	**+1.1**
	comp=Z,2.3nm,0.3s,baz=29,slow=13,SNR=38						
GERES				Pg	**Pg**	**06 56 50.7**	**-0.7**
	comp=Z,3.9nm,0.3s,baz=15,slow=15,SNR=20						
GERES				Lg	Lg	06 57 31.1	
	comp=Z,7.8nm,0.3s,baz=33,slow=29,SNR=14						
SMOL	**Smolenice**	**3.19**	**164**	*e*	**Pb**	**06 56 45.7**	**-2.6**
SMOL	**Smolenice**	**3.19**	**164**	*e*SG	**Sg**	**06 57 33.6**	**+0.4**
ZST	**Bratislava**	**3.45**	**169**	*e*SG	**Sg**	**06 57 39.4**	**-2.3**
VYHS	**Vyhne**	**3.55**	**150**	*e*PN	**Pn**	**06 56 47.5**	**+0.3**
VYHS				*e*		06 57 00.3	
VYHS	**Vyhne**	**3.55**	**150**	*e*SG	**Sg**	**06 57 45.0**	**+0.1**
CLZ	**Clausthal**	**3.60**	**276**	*e*Pn	**Pn**	**06 56 49.0**	**+1.1**
CLZ	**Clausthal**	**3.60**	**276**	Pn	**Pn**	**06 56 49.0**	**+1.1**
GRA1	**Grafenberg Arr**	**3.66**	**241**	Sg	**Sg**	**06 57 47.9**	**-0.5**
GRF	**Grafenberg Arr**	**3.66**	**241**	*e*Sg	**Sg**	**06 57 47.9**	**-0.5**
CONA	**Conrad Observa**	**3.67**	**183**	⇓*i*Pn	**Pn**	**06 56 48.9**	**0.0**
CONA				⇑*i*Sg	**Sb**	**06 57 44.6**	**+3.0**
	comp=Z,20nm,0.4s						
CONA	**Conrad Observa**	**3.67**	**183**	Pn	**Pn**	**06 56 48.9**	**0.0**
CONA				Sg	**Sb**	**06 57 44.6**	**+3.0**
	comp=Z,20nm,0.4s						
MOA	**Molln**	**3.94**	**199**	⇑*i*Pn	**Pn**	**06 56 53.2**	**+0.7**
MOA				⇓*i*Sg	**Sg**	**06 57 55.0**	**-2.2**
	comp=Z,15nm,0.4s						
MOA	**Molln**	**3.94**	**199**	Pn	**Pn**	**06 56 53.2**	**+0.7**
MOA				Sg	**Sg**	**06 57 55.0**	**-2.2**
	comp=Z,15nm,0.4s						
CRVS	**Cervenica-Dubn**	**4.35**	**126**	*e*PN	**Pn**	**06 56 58.4**	**+0.3**
CRVS				*e*		06 57 13.9	
CRVS	**Cervenica-Dubn**	**4.35**	**126**	*e*SG	**Sg**	**06 58 09.0**	**-1.4**
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*SG	**Sg**	**06 58 22.2**	**-1.1**
HFS	**Hagfors**	**8.68**	**352**	Pn	**Pn**	**06 57 57.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=168,slow=15,SNR=2.7						
FINES	**FINESS Array B**	**11.28**	**25**	Pn	**Pn**	**06 58 32.3**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=213,slow=14,SNR=3.9						
ARCES	**ARCESS Array B**	**18.54**	**10**	Pn	**P**	**07 00 06.1**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=187,slow=14,SNR=3.4						
YKA	**Yellowknife Ar**	**59.79**	**336**	P	**P**	**07 05 58.3**	**+1.1**
	comp=Z,0.1nm,0.6s,baz=37,slow=7.1,SNR=3.2						

*IDC **08** 07:56:59.9±2.3, 41.°99N×143.°48E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.3/26, mbtmp3.4/5, ML3.1/2, Error ellipse: s-maj=70.5km s-min=25.3km az=80.0*
*ISCJB **08** 07:57:06.8±0.9, 41.°56N±0.°06×142.°97E±0.°07, h40km±12km, mb3.5/3, Error ellipse: s-maj=10.9km s-min=7.4km az=143.5*
*JMA **08** 07:57:07.0±0.2, 41.°58N×142.°95E, h33km±3km, M3.2*
ISC 08 07:57:08.1±1.2**, 41.°62N**±0.°07×**142.°95E**±0.°07**, h35**km±8km**, n13, σ1.14**/20**, mb3.5**/3**, 2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.43**	**21**	⇓P	**Pn**	**07 57 16.8**	**-0.9**
JEM				*e*S	**Sn**	**07 57 23.4**	**-1.0**
JNBK	**Urakawa-nobuka**	**0.68**	**347**	⇓P	**Pn**	**07 57 20.5**	**-0.7**
JNBK				*e*S	**Sn**	**07 57 30.4**	**-0.2**
JCH	**Churui**	**1.04**	**17**	P	**Pn**	**07 57 26.5**	**+0.3**
JCH				*e*S	**Sn**	**07 57 40.2**	**+0.6**
JBT2	**Biratori 2**	**1.24**	**340**	P	**Pn**	**07 57 29.5**	**+0.6**
JBT2				*e*S	**Sn**	**07 57 46.4**	**+1.9**
JOT	**Ohata**	**1.45**	**261**	P	**Pn**	**07 57 31.4**	**-0.4**
JOT				*e*S	**Sn**	**07 57 49.2**	**-0.4**
JKB	**Kayabe**	**1.46**	**281**	P	**Pn**	**07 57 31.1**	**-0.9**
JKB				*e*S	**Sn**	**07 57 48.4**	**-1.5**
JEW	**Eniwo**	**1.66**	**318**	P	**Pn**	**07 57 35.7**	**+1.1**
JEW				*e*S	**Sn**	**07 57 57.1**	**+2.4**
JNB	**Noboribetsu**	**1.66**	**301**	P	**Pn**	**07 57 34.3**	**-0.4**
JNB				*e*S	**Sn**	**07 57 54.6**	**-0.2**
ASAJ	**Asahikawa**	**2.51**	**354**	Pn	Pn	07 57 37.1	-9.3
	3.1nm,0.3s,baz=112,slow=19,SNR=9.7						
MJAR	**Matsushiro Arr**	**6.27**	**218**	Pn	**Pn**	**07 58 39.7**	**+1.6**
	0.6nm,0.3s,baz=32,slow=12,SNR=6.0						
MKAR	**Makanchi Array**	**42.85**	**298**	P	**P**	**08 05 01.8**	**-0.9**
	0.2nm,0.4s,baz=81,slow=8.9,SNR=3.4						
WRA	**Warramunga Arr**	**61.76**	**189**	P	**P**	**08 07 22.8**	**-0.2**
	0.4nm,0.5s,baz=6.4,slow=6.9,SNR=3.2						
ASAR	**Alice Springs**	**65.49**	**189**	P	**P**	**08 07 47.9**	**+0.3**
	0.3nm,0.8s,baz=10,slow=7.7,SNR=3.0						

GUC 08 08:18:35.4±0.6**, 31.°13S×68.°55W, h150**km**, ML3.5, 4C-1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**2.10**	**268**	⇓*i*P	Pn	08 19 12.4	+0.6
CMCH				*i* S	Sn	08 19 40.4	+0.6
CMCH				AML	AML	08 19 43.2	
	comp=E,532nm,0.8s						
CHNG	**Los Chungos**	**2.63**	**253**	*e*P	Pn	08 19 18.6	+0.6
CHNG				*i* S	Sn	08 19 51.0	+0.1
CHNG				AML	AML	08 19 59.5	
	comp=E,46nm,0.4s						
PEL	**Peldehue**	**2.70**	**221**	⇑*i*P	Pn	08 19 19.9	+0.8
PEL				*i* S	Sn	08 19 53.3	+0.4
PEL				AML	AML	08 19 55.5	
	comp=E,192nm,0.3s						
ROCH	**El Roble**	**2.78**	**228**	⇑*i*P	Pn	08 19 21.0	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROCH				iS	Sn	08 19 55.0	0.0
ROCH				AML	AML	08 19 56.7	
	comp=N,158nm,0.7s						
CLCH	Cerro Calan	2.82	216	⇑iP	Pn	08 19 22.1	+1.5
CLCH				iS	Sn	08 19 57.1	+1.6
CLCH				AML	AML	08 19 58.8	
	comp=N,102nm,0.2s						
ANTU	Antumapu	3.00	215	iS	Sn	08 20 00.3	+0.7
ANTU				AML	AML	08 20 02.7	
	comp=E,131nm,0.3s						
LMEL	Las Melosas	3.05	207	eP	Pn	08 19 24.5	+0.9
LMEL				AML	AML	08 20 13.9	
	comp=N,48nm,0.2s						
TACH	Talagante	3.23	218	⇑iP	Pn	08 19 26.2	+0.5
TACH				iS	Sn	08 20 04.7	+0.1

IDC 08 08:18:47.1±4.0, 18°.91N×146°.59E, h98km±35km, mb3.6/12, mb1 3.7/13, mb1mx3.6/27, mbtmp3.7/13, Error ellipse: s-maj=39.5km s-min=15.2km az=78.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	5.54	198	P	Pn	08 20 07.7	+0.5
	7.1nm,0.3s,baz=351,slow=13,SNR=4.1						
GUMO				S	Sn	08 21 09.9	+0.3
	6.8nm,0.3s,baz=165,slow=20,SNR=2.8						
KSRS	Korea Array	24.66	322	P	P	08 23 58.2	-0.4
	0.6nm,0.4s,baz=145,slow=9.8,SNR=4.9						
WRA	Warramunga Arr	40.44	198	P	P	08 26 16.3	+0.3
	0.7nm,0.6s,baz=17,slow=8.6,SNR=3.1						
SONM	Songino Array	43.51	321	P	P	08 26 41.2	+0.2
	0.6nm,0.4s,baz=133,slow=7.6,SNR=6.9						
ASAR	Alice Springs	44.09	197	P	P	08 26 45.5	-0.2
	0.2nm,0.3s,baz=18,slow=6.7,SNR=5.7						
STKA	Stephens Creek	50.72	185	P	P	08 27 36.4	-0.5
	1.1nm,0.5s,baz=336,slow=10.0,SNR=2.3						
ZALV	Zalesovo Beam	58.37	322	P	P	08 28 31.8	-0.2
	1.9nm,0.6s,baz=114,slow=6.7,SNR=8.0						
MKAR	Makanchi Array	58.93	314	P	P	08 28 36.1	0.0
	0.7nm,0.5s,baz=90,slow=9.1,SNR=7.4						
KURBB	Kurchatov Arra	61.73	318	P	P	08 28 54.7	-0.3
	2.3nm,0.5s,baz=92,slow=7.5,SNR=26						
BVAR	Borovoye Array	66.85	320	P	P	08 29 28.7	+0.2
	4.5nm,0.5s,baz=95,slow=7.3,SNR=24						
YKA	Yellowknife Ar	77.41	28	P	P	08 30 31.1	-0.1
	0.1nm,0.6s,baz=290,slow=5.4,SNR=5.4						
ARCES	ARCESS Array B	82.55	342	P	P	08 31 00.1	+1.3
	2.8nm,0.8s,baz=46,slow=6.9,SNR=5.3						
JOF	Joensuu	84.18	335	ep	P	08 31 07.1	-0.1
	1.9nm,0.4s						
FINES	FINESS Array B	87.05	336	P	P	08 31 20.6	-0.9
	1.4nm,0.3s,baz=59,slow=4.7,SNR=11						

*IDC **08** 08:33:47.7±0.5, 8°.92N×82°.67W, h0km, mb4.2/17, mb1 4.4/17, mb1mx4.3/25, mbtmp4.2/17, MS4.0/20, Ms1 4.0/20, ms1mx3.9/39, Error ellipse: s-maj=29.6km s-min=11.0km az=57.0*

*CASC **08** 08:33:50.0±3.1, 8°.72N×82°.87W, h4km±17km, MD4.5, mb4.7(NEIC)*

*ISCJB **08** 08:33:51.7±0.4, 8°.84N±0°.04×82°.77W±0°.03, h38km±3km, mb4.5/96, MS4.0/19, Error ellipse: s-maj=6.5km s-min=4.2km az=15.1*

*MOS **08** 08:33:52.9±1.1, 9°.09N×82°.80W, h33km, mb4.9/30, Error ellipse: s-maj=15.7km s-min=5.6km az=117.5*

*NEIC **08** 08:33:53.1±0.3, 8°.86N×82°.87W, mb4.7/83, Error ellipse: s-maj=6.8km s-min=4.8km az=201.0*

NEIC Felt [IV] at Boquete and Cerro Punta; [III] at Volcan; [II] at Bocas del Toro and David, Panama. Also felt at Palmira, Pedregal, Potrerillos Abajo and Potrerillos Arriba. Felt [IV] at San Vito, Costa Rica. Also felt at Cahuita, Escazu, Heredia, Mercedes, San Isidro, San Jose and San Pedro.

*BJI **08** 08:33:54.9, 9°.10N×83°.00W, h31km, mB5.1/1, Ms7 4.7/2*

*GCMT **08** 08:33:56.5±0.3, 8°.88N×82°.79W, h28km±1km, MW5.0, Moment Tensor Solution. s22,c27; s60,c85; Moment tensor: Scale 10^{16}Nm; M_{rr}0.56±.15; $M_{\theta\theta}$-0.48±.10; $M_{\phi\phi}$-0.08±.14; $M_{r\theta}$1.20±.17; $M_{\theta\phi}$2.84±.10; $M_{\phi r}$1.78±.22; Best double couple: $M_0$3.50000×10^{16} NP1:ϕ_s93.00000°, δ63.00000°, λ20.00000°. NP2:ϕ_s354.00000°, δ73.00000°, λ151.00000°. Principal axes: T 3.9100, Plg32.0000°, Azm311.0000°; N -0.7500, Plg57.0000°, Azm146.0000°; P -3.1700, Plg7.0000°, Azm45.0000°; Data Used: II IU IC G CN.*

ISC 08 08:33:52.6±0.5, 8°.80N±0°.05×82°.83W±0°.04, h31km±3km, h30km:pP-P, n568, σ1s.00/578, mb4.6/96, MS4.0/19, 186C-153D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBS2		0.17	91	⇑eP	Pb	08 33 57.3	-1.6
TBS2				eS	Sb	08 34 02.0	-1.0
BRU	Baru	0.27	88	⇓iP	Pb	08 33 57.9	-2.2
ACR	Cerro Adams	0.36	247	⇓iP	Pb	08 33 57.4	-3.7
ACR				⇓iP	Pb	08 33 57.4	-3.7
BUS	Buena Vista	1.19	309	eP	Pn	08 34 11.4	-2.1
QCR	Quepos	1.46	295	⇑iP	Pn	08 34 14.7	-2.2
QCR				eS	Sb	08 34 57.0	+20
SJS	Escuela Geolog	1.66	313	⇑iP	Pn	08 34 19.7	0.0
CGA2	Cerro Gallo 2	2.02	307	⇑iP	Pn	08 34 24.0	-0.6
CGA2				⇑eP	Pb	08 34 24.2	-4.5
FORC	Fortuna	2.46	313	eP	Pn	08 34 31.1	+0.5
JTS	JuntasAbangare	2.57	305	Pn	Pn	08 34 32.9	+0.7
JTS	JuntasAbangare	2.57	305	ePn	Pn	08 34 32.9	+0.7
PINA	Piqa, Costa Ab	2.77	80	eP	Pn	08 34 34.4	-0.4
BCIP	Isla Barro Col	2.98	83	ePn	Pn	08 34 36.8	-1.0
BCIP				eSn	Sb	08 35 24.0	+3.0
BCIP	Isla Barro Col	2.98	83	eP	Pn	08 34 36.6	-1.2
BCIP				eS	Sb	08 35 18.2	-2.8
VCR	Vista de Mar	3.06	296	eP	Pn	08 34 38.3	-0.7
UPIG		3.26	86	⇓iP	Pn	08 34 41.0	-0.6
UPIG				eS	Sb	08 35 29.4	+0.3
CNCH	Conchagua	6.63	313	eP	Pn	08 35 29.4	+1.3
TGUH	Tegucigalpa,Un	6.80	321	ePn	Pn	08 35 31.8	+1.5
TGUH	Tegucigalpa,Un	6.80	321	eP	Pn	08 35 31.6	+1.2
VSM	San Miguel	7.05	311	eP	Pn	08 35 35.9	+1.9
CAHU	Cacacuatique	7.23	314	eP	Pn	08 35 38.3	+1.9
SNVI	San Vicente	7.59	310	eP	Pn	08 35 43.5	+2.1
LFRS	El Faro	7.77	309	eP	Pn	08 35 45.7	+2.0
LFU	La Fuente	7.89	309	eP	Pn	08 35 48.1	+2.8
BOQS	Boqueron	8.01	308	eP	Pn	08 35 49.6	+2.5
SBLS	San Blas	8.34	308	eP	Pn	08 35 54.0	+2.3
RTR	El Retiro	8.39	308	eP	Pn	08 35 54.6	+2.3
RBDL	Robledal	8.55	309	eP	Pn	08 35 56.7	+2.2
OTAV	Otavalo	9.56	153	ePn	Pn	08 36 09.8	+1.2
MCJ	Malvern	10.36	28	⇑iP	Pn	08 36 20.4	+1.2
PCJ	Portland Cotta	10.46	31	⇓iP	Pn	08 36 22.1	+1.6
MTDJ	Mount Denham	10.69	28	ePn	Pn	08 36 23.6	-0.2
HOJ	Hope	10.89	32	⇑iP	Pn	08 36 27.2	+0.8
STH	Stony Hill	10.92	32	⇑iP	Pn	08 36 27.3	+0.4
BBJ	Bamboo Saint A	10.95	29	i P	Pn	08 36 28.9	+1.6
GWJ	Greenwich	10.96	32	i P	Pn	08 36 28.0	+0.5
PAYG	Puerto Ayora	11.99	219	ePn	Pn	08 36 44.8	+3.3
SDV	Santo Domingo	12.05	89	ePn	Pn	08 36 42.6	+0.1
SDV				e		08 42 07.6	
TEIG	Tepich	12.52	336	Pn	Pn	08 36 50.9	+2.1
TEIG	Tepich	12.52	336	Pn	Pn	08 36 50.9	+2.1
	1.9nm,0.3s,baz=159,slow=8.6,SNR=3.9						
TEIG				LR	LR	08 41 58.6	
	comp=Z,1μm,18.3s,baz=248,slow=39						
GTBY	Guantanamo Bay	13.35	33	ePn	Pn	08 37 01.1	+1.1
	154nm,1.3s						
SDDR	Presa de Saban	15.09	47	eP	Pn	08 37 22.9	-0.9
SDDR				eSn	Sn	08 40 07.4	-2.6
ATAH	Atahualpa	16.43	164	Pn	P	08 37 45.4	+1.4
ATAH	Atahualpa	16.43	164	Pn	P	08 37 45.4	+1.4
	0.4nm,0.3s,baz=325,slow=13,SNR=2.0						
ATAH				LR	LR	08 43 32.9	
	comp=Z,327nm,20.4s,baz=337,slow=35						
CRPR	Cabo Rojo, PR	17.81	57	eP	Pn	08 37 56.8	-1.4
	102nm,0.8s						
LSP	Las Mesas	17.91	57	eP	P	08 38 01.0	+1.0
AGPR	Aguadilla, PR	18.03	56	eP	P	08 38 04.4	+3.2
	269nm,1.2s						
AOPR	Arecibo Observ	18.27	57	eP	Pn	08 38 08.1	+4.2
	62nm,1.0s						
CELP	Cerrillos	18.28	58	eP	Pn	08 38 06.8	+2.6
SJG	San Juan	18.66	59	eP	Pn	08 38 09.4	+0.7
	71nm,0.9s						
CBYP	Canovanas	18.98	59	eP	Pn	08 38 14.1	+1.4
	71nm,1.0s						
MTP	Monte Pirata	19.16	59	eP	Pn	08 38 16.9	+2.1
	105nm,1.1s						
PTP	Ponta Puerca	19.17	59	⇓iP	x	08 34 00.5	
STVI	Saint Thomas	19.78	59	eP	Pn	08 38 22.7	+0.6
	74nm,0.9s						
NNA	Nana	21.49	164	P	P	08 38 41.5	+2.5
NNA	Nana	21.49	164	P	P	08 38 41.5	+2.5
	17nm,0.9s,baz=324,slow=5.4,SNR=5.3						
TIGA	Tifton	22.54	358	⇓P	P	08 38 50.9	+0.8
	baz=23						
HKT	Hockley	24.31	332	eP	P	08 39 07.7	+0.2
HKT				pmax	pmax		
	comp=Z,196nm,2.5s						
HKT	Hockley	24.31	332	eP	P	08 39 07.7	+0.2
	comp=Z,196nm,2.5s						
VBMS	Vicksburg	24.37	344	eP	P	08 39 08.8	+0.7
	comp=Z,14nm,0.7s						
LRAL	Lakeview Retre	24.43	352	eP	P	08 39 08.9	+0.4
	comp=Z,46nm,1.0s						
JSC	Jenkinsville	25.41	3	eP	P	08 39 18.3	+0.9
JSC	Jenkinsville	25.41	3	eP	P	08 39 18.3	+0.9
732A	Laxson Ranch,	25.56	323	⇓P	P	08 39 17.6	-1.3
	baz=26,SNR=5.8						
KMSC	Kings Mountain	26.26	3	⇓P	P	08 39 25.8	+0.7
	baz=26						
OXF	Oxford	26.30	348	eP	P	08 39 25.5	0.0
OXF				pmax	pmax		
	comp=Z,59nm,1.3s						
OXF	Oxford	26.30	348	eP	P	08 39 25.5	0.0
	comp=Z,59nm,1.3s						
631A	Perdido Creek	26.42	323	⇓P	P	08 39 26.1	-0.5
	baz=26,SNR=5.9						
SWET	Sewanee	26.45	354	eP	P	08 39 27.1	+0.2
	comp=Z,15nm,0.8s						
532A	Rocksprings	26.56	325	⇓P	P	08 39 27.1	-0.9
	baz=27						
CPCT	Cooper Cave	26.57	357	eP	P	08 39 28.8	+0.8
TKL	Tuckaleechee C	26.75	358	LR	LR	08 50 59.2	
	comp=Z,308nm,18.3s,baz=180,slow=39						
JCT	Junction City	26.77	326	eP	P	08 39 28.8	-1.1
JCT				pmax	pmax		
	comp=Z,11nm,0.8s						
JCT	Junction City	26.77	326	eP	P	08 39 28.8	-1.1
	comp=Z,11nm,0.8s						
JCT	Junction City	26.77	326	⇑P	P	08 39 29.5	-0.4
	baz=27						
WHTX	Lake Whitney	26.78	332	⇑P	P	08 39 29.7	-0.2
	baz=27						
531A	Rocksprings	26.96	324	⇑P	P	08 39 31.0	-0.6
	baz=27						
432A	Menard	27.07	327	⇓P	P	08 39 32.2	-0.4
	baz=27						
431A	Sonora	27.38	325	⇓P	P	08 39 34.5	-0.9
	baz=27						
530A	J-C Ranch, Com	27.41	323	⇑P	P	08 39 35.0	-0.6
	baz=27						
332A	Millersview	27.44	327	⇓P	P	08 39 35.8	-0.1
	baz=28,SNR=7.3						
MIAR	Mount Ida	27.46	341	eP	P	08 39 35.7	-0.3
MIAR				pmax	pmax		
	comp=Z,33nm,1.3s						
MIAR	Mount Ida	27.46	341	eP	P	08 39 35.7	-0.3
	comp=Z,33nm,1.3s						
WVT	Waverly	27.59	351	eP	P	08 39 36.6	-0.5
WVT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WVT	Waverly	27.59	351	eP	P	08 39 36.6	-0.5
	comp=Z,9.7nm,1.0s						
331A	San Angelo	27.75	326	⇑P	P	08 39 39.1	+0.4
	baz=28,SNR=5.9						
232A	Coleman	27.79	328	⇓P	P	08 39 38.9	-0.1
	baz=28						
430A	Baggett Ranch,	27.82	324	⇑P	P	08 39 39.1	-0.2
	baz=28						
628A	Black Gap, Mar	27.89	320	⇓P	P	08 39 39.7	-0.2
	baz=28						
529A	Stev Forest Ra	27.92	322	⇓P	P	08 39 40.1	-0.1
	baz=28,SNR=5.6						
429A	Davenport Ranc	28.08	323	⇓P	P	08 39 41.1	-0.6
	baz=28,SNR=11						
627A	Terlingua Ranc	28.18	320	⇑P	P	08 39 42.1	-0.6
	baz=28,SNR=8.5						
330A	Mertzon	28.24	325	⇑P	P	08 39 42.3	-0.8
	baz=28						
TXAR	Lajitas Array	28.28	319	P	P	08 39 43.1	-0.4
TXAR				PcP	PcP	08 42 57.1	+0.7
TXAR	Lajitas Array	28.28	319	P	P	08 39 43.1	-0.4
	comp=Z,0.8nm,0.8s,baz=148,slow=10,SNR=8.7						
TXAR				PcP	PcP	08 42 57.1	+0.7
	comp=Z,0.6nm,0.6s,baz=157,slow=6.5,SNR=6.2						
528A	Cox Ranch, San	28.29	321	⇑P	P	08 39 42.7	-0.9
	baz=28,SNR=7.3						
ABTX	Abilene, Hawle	28.37	329	⇑P	P	08 39 43.6	-0.5
	baz=28						
230A	Sterling City	28.57	326	⇓P	P	08 39 45.3	-0.8
	baz=29						
428A	Kincaid Ranch,	28.63	322	⇑P	P	08 39 46.1	-0.5
	baz=29,SNR=7.0						
626A	Big Bend Ranch	28.73	319	⇓P	P	08 39 46.8	-0.7
	baz=29						
329A	Wagon Wheel Ra	28.76	324	⇑P	P	08 39 46.8	-0.9
	baz=29						
131A	Roby	28.79	328	⇓P	P	08 39 47.6	-0.3
	baz=29						
527A	Woodward Ranch	28.79	320	⇓P	P	08 39 47.4	-0.7
	baz=29,SNR=7.9						
Z32A	Haskell	28.83	330	⇓P	P	08 39 48.1	-0.1
	baz=29,SNR=11						
LPAZ	La Paz	28.86	150	eP	P	08 39 56.3	+7.0
	comp=Z,11nm,1.4s						
LPAZ	La Paz	28.86	150	P	P	08 39 48.6	-0.7
	comp=Z,1.2nm,0.9s,baz=348,slow=9.3,SNR=3.5						
LPAZ				LR	LR	08 53 05.6	
	comp=Z,255nm,19.3s,baz=145,slow=40						
526A	Mary Lane Ranc	29.04	320	⇑P	P	08 39 49.3	-1.0
	baz=29						
328A	Wristen Ranch,	29.17	323	⇑P	P	08 39 50.5	-0.8
	baz=29						
SIUC	Southern Illin	29.36	350	eP	P	08 39 52.1	-0.8
	comp=Z,27nm,1.0s						
SIUC				e	pP	08 40 01.0	-0.8
Y32A	R-V Farms, Ver	29.38	331	⇑P	P	08 39 51.8	-1.3
	baz=29						
426A	McDonald Obser	29.41	321	⇑P	P	08 39 51.9	-1.8
	baz=29						
TUL1	Tulsa	29.47	338	⇑P	P	08 39 52.6	-1.3
	baz=30						
WCI	Wyandotte Cave	29.47	354	eP	P	08 39 54.3	+0.4
WCI				e		08 40 02.0	
WCI				pmax	pmax		
	comp=Z,20nm,1.1s						
WCI	Wyandotte Cave	29.47	354	eP	P	08 39 54.3	+0.4
	comp=Z,20nm,1.1s						
WCI				e	pP	08 40 02.0	-0.9
129A	Stewart Farms,	29.55	326	⇑P	P	08 39 53.2	-1.5
	baz=30						
228A	UT Block 9, Go	29.58	324	⇓P	P	08 39 53.4	-1.5
	baz=30						
Z30A	Sanderson Ranc	29.65	328	⇑P	P	08 39 54.4	-1.2
	baz=30						
WMOK	Wichita Mounta	29.68	333	eP	P	08 39 54.5	-1.3
WMOK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMOK	Wichita Mounta	29.68	333	eP	P	08 39 54.5	-1.3
	comp=Z,9.5nm,1.1s						
Y31A	Rekieta Farm,	29.75	330	⇑P	P	08 39 55.3	-1.1
	baz=30						
326A	Caldwell Ranch	29.83	322	⇓P	P	08 39 56.0	-1.2
	baz=30						
227A	Bennet, Jal	29.91	323	⇑P	P	08 39 56.3	-1.5
	baz=30						
425A	Indio Mountain	30.10	320	⇓P	P	08 39 59.2	-0.4
	baz=30,SNR=7.6						
X31A	McDonald Ranch	30.15	331	⇓P	P	08 39 58.7	-1.2
	baz=30						
OLIL	Olney	30.18	352	eP	P	08 40 00.4	+0.3
	comp=Z,39nm,0.8s						
OLIL				e	pP	08 40 08.8	-0.3
Z28A	Tucker Farm, M	30.33	326	⇑P	P	08 39 59.8	-1.9
	baz=30						
LPIG	La Paz	30.34	303	LR	LR	08 52 39.8	
	comp=Z,18nm,21.2s,baz=194,slow=37						
Y29A	Porterfield Fa	30.38	328	⇓P	P	08 40 01.3	-0.8
	baz=30						
127A	Arkansas Junct	30.43	324	⇓P	P	08 40 01.7	-0.8
	baz=30						
BLO	Bloomington	30.43	354	eP	P	08 40 02.3	0.0
BLO				e		08 40 10.7	
BLO				pmax	pmax		
	comp=Z,25nm,0.8s						
BLO	Bloomington	30.43	354	eP	P	08 40 02.3	0.0
	comp=Z,25nm,0.8s						
BLO				e	pP	08 40 10.7	-0.6
X30A	Coker Ranch, T	30.44	330	⇓P	P	08 40 01.9	-0.6
	baz=30						
SLM	Saint Louis	30.45	349	eP	P	08 40 02.2	-0.3
SLM				pmax	pmax		
	comp=Z,16nm,0.6s						
SLM	Saint Louis	30.45	349	eP	P	08 40 02.2	-0.3
	comp=Z,16nm,0.6s						
226B	Tecolote Peak,	30.47	322	⇓P	P	08 40 01.7	-1.2
	baz=30						
325A	Bean Ranch, Si	30.48	321	⇓P	P	08 40 01.9	-1.2
	baz=30						
Z27A	Tatum	30.81	325	⇓P	P	08 40 04.0	-1.9
	baz=31						
324A	Moseley Ranch,	30.85	320	⇑P	P	08 40 04.8	-1.6
	baz=31,SNR=6.3						
X29A	Tulia	30.85	329	⇓P	P	08 40 04.9	-1.3
	baz=31						
MNTX	Cornudas Mount	30.96	321	eP	P	08 40 06.2	-1.0
	comp=Z,3.8nm,0.9s						
V31A	Spring Creek L	31.02	333	⇓P	P	08 40 06.6	-1.1
	baz=31						
MSTX	Muleshoe	31.06	327	⇓P	P	08 40 06.5	-1.5
	baz=31						
X28A	Dimmitt	31.17	328	⇑P	P	08 40 07.8	-1.2
	baz=31						
125A	Gardner Draw,	31.18	323	⇓P	P	08 40 07.4	-1.7
	baz=31						
Y27A	Causey	31.21	326	⇓P	P	08 40 07.6	-1.8
	baz=31						
Z26A	Caprock	31.22	324	⇓P	P	08 40 07.7	-1.8
	baz=31						
ACSO	Alum Creek Sta	31.30	360	eP	P	08 40 11.7	+1.7
	comp=Z,26nm,1.2s						
224A	Cornudas Mount	31.30	321	⇓P	P	08 40 08.4	-1.9
	baz=31						
U31A	Nine Bar Ranch	31.52	333	⇓P	P	08 40 10.2	-1.8
	baz=32						
SFIN	Scholer Farm	31.68	354	⇓P	P	08 40 13.3	0.0
	baz=32						
124A	Stringfield Ra	31.69	322	⇑P	P	08 40 12.7	-1.1
	baz=32,SNR=6.8						
U30A	WK&E Inc. Balk	32.01	332	⇑P	P	08 40 15.4	-1.0
	baz=32,SNR=6.4						
W27A	Bowe Ranch, En	32.04	328	⇑P	P	08 40 16.0	-0.8
	baz=32						
T31A	Randall Ranch,	32.05	334	⇓P	P	08 40 15.7	-1.0
	baz=32						
HDIL	Hopedale	32.15	351	eP	P	08 40 16.4	-1.0
	comp=Z,35nm,0.7s						
T30A	Plains	32.38	333	⇓P	P	08 40 19.5	-0.2
	baz=32						
S31A	Mullinville	32.41	335	⇑P	P	08 40 19.7	-0.1
	baz=32						
V27A	Dan Oppiter Fa	32.46	329	⇓P	P	08 40 19.6	-0.7
	baz=32						
Y24A	Capitan	32.53	324	⇓P	P	08 40 20.7	-0.4
	baz=32						
Z23A	Rita Site, Whi	32.55	322	⇑P	P	08 40 20.8	-0.4
	baz=33						
KSU1	Kansas State U	32.61	340	eP	P	08 40 21.1	-0.5
	comp=Z,28nm,0.8s						
KSU1				epP	pP	08 40 29.4	-1.1
SIV	San Ignacio	32.72	139	P	P	08 40 20.4	-2.3
SIV	San Ignacio	32.72	139	P	P	08 40 20.4	-2.3
	comp=Z,2.2nm,0.8s,baz=328,slow=11,SNR=6.2						
320A	Kipp Ranch, An	32.78	317	⇑P	P	08 40 23.3	0.0
	baz=33,SNR=7.8						
T29A	Hugoton	32.82	332	⇓P	P	08 40 23.5	0.0
	baz=33						
S30A	Montezuma	32.84	334	⇑P	P	08 40 23.4	-0.3
	baz=33						
Y23A	Lovelace Mesa,	32.90	323	⇑P	P	08 40 24.1	-0.3
	baz=33						
W25A	X Bar L Ranch,	32.91	326	⇑P	P	08 40 24.3	-0.1
	baz=33						
U27A	Thompson Grove	32.97	330	⇑P	P	08 40 24.6	-0.2
	baz=33						
V26A	Tequesquite Ra	32.98	328	⇓P	P	08 40 25.1	+0.1
	baz=33						
Z22A	Elephant Butte	32.99	321	⇑P	P	08 40 25.2	+0.1
	baz=33						
121A	Cookes Peak, D	33.04	319	⇑P	P	08 40 25.6	0.0
	baz=33,SNR=5.4						
S29A	Ulysses	33.12	333	⇑P	P	08 40 26.6	+0.5
	baz=33						
220A	Playas Peak, P	33.13	318	⇑P	P	08 40 26.5	+0.1
	baz=33,SNR=6.9						
T28A	Walsh	33.17	331	⇑P	P	08 40 27.3	+0.7
	baz=33						
R30A	Dighton	33.30	335	⇑P	P	08 40 27.6	0.0
	baz=33,SNR=5.4						
319A	Douglas	33.32	316	⇑P	P	08 40 28.6	+0.6
	baz=33						
U26A	Atchley Ranch,	33.42	328	⇓P	P	08 40 29.0	+0.2
	baz=33						
T27A	Campo	33.42	330	⇑P	P	08 40 29.2	+0.4
	baz=33						
X23A	Hourglass Bar	33.43	324	⇑P	P	08 40 29.0	-0.1
	baz=33						
S28A	Manter	33.45	332	⇑P	P	08 40 29.0	0.0
	baz=34						
Y22A	Socorro	33.45	322	⇑P	P	08 40 29.5	+0.3
	baz=34,SNR=5.5						
V25A	Rancho No Teng	33.46	327	⇓P	P	08 40 29.5	+0.2
	baz=34						
120A	U Bar Ranch, L	33.60	318	⇑P	P	08 40 29.6	-0.9
	baz=34						
V24A	Rampart Ranch,	33.73	326	⇑P	P	08 40 31.2	-0.4
	baz=34						
U25A	Circle Dot Ran	33.77	328	⇓P	P	08 40 31.9	0.0
	baz=34						
W23A	Werner Place,	33.82	324	⇓P	P	08 40 32.6	+0.2
	baz=34						
ANMO	Albuquerque	33.85	324	eP	P	08 40 31.9	-0.7
	comp=Z,2.9nm,0.8s						
ANMO	Albuquerque	33.85	324	P	P	08 40 32.2	-0.4
	comp=Z,2.5nm,0.8s,baz=135,slow=6.4,SNR=16						
ANMO				LR	LR	08 57 07.2	
	comp=Z,211nm,18.2s,baz=275,slow=41						
LAZ	Ladron	33.88	322	eP	P	08 40 33.4	+0.5
	comp=Z,0.8nm,0.9s						
LAZ				epP	pP	08 40 43.0	+1.0
Z20A	Nine Sixteen R	33.94	319	⇑P	P	08 40 33.4	0.0
	baz=34,SNR=8.2						
Y21A	Point of Rocks	33.94	321	⇑P	P	08 40 33.9	+0.5
	baz=34						
T26A	Comanche Natio	33.94	330	⇑P	P	08 40 33.1	-0.3
	baz=34						
R28A	Tribune	34.02	333	⇓P	P	08 40 34.0	0.0
	baz=34,SNR=5.2						
LVC	Limon Verde	34.06	157	eP	P	08 40 42.4	+7.7
	comp=Z,6.3nm,1.1s						
W22A	Albuquerque	34.18	324	⇓P	P	08 40 35.0	-0.4
	baz=34						
SCIA	State Center	34.23	346	eP	P	08 40 34.5	-1.1
	comp=Z,32nm,1.0s						
SCIA				epP	pP	08 40 43.5	-1.1
S26A	Kim	34.23	330	⇓P	P	08 40 35.5	-0.4
	baz=34						
X21A	Alamocita Cree	34.30	322	⇑P	P	08 40 36.8	+0.2
	baz=34						
Y20A	Horse Springs,	34.31	320	⇓P	P	08 40 36.8	+0.1
	baz=34,SNR=5.4						
T25A	Trinidad	34.33	329	⇓P	P	08 40 37.1	+0.3
	baz=34						
R27A	Eads	34.43	332	⇓P	P	08 40 38.1	+0.6
	baz=34						
JFWS	Jewell Farm	34.60	350	eP	P	08 40 37.9	-0.9
JFWS				e*PP	pP	08 40 46.1	-1.7
JFWS				pmax	pmax		
	comp=Z,22nm,0.7s						
JFWS	Jewell Farm	34.60	350	eP	P	08 40 37.9	-0.9
	comp=Z,22nm,0.7s						
JFWS				epP	pP	08 40 46.1	-1.7
T24A	Torres, Weston	34.61	328	⇓P	P	08 40 39.9	+0.5
	baz=35						
U23A	El Rito	34.68	326	⇓P	P	08 40 39.8	-0.1
	baz=35,SNR=9.7						
S25A	Robets Cordova	34.74	329	⇓P	P	08 40 41.0	+0.7
	baz=35						
R26A	Arlington	34.75	331	⇓P	P	08 40 41.1	+0.8

baz=35
V22A San Miguel Ran 34.79 325 ⇓P P 08 40 41.3 +0.5
baz=35
TUC Tucson 34.90 316 eP P 08 40 42.2 +0.5
TUC e*PP pP 08 40 53.4 +2.7
TUC pmax pmax
comp=Z,1.0nm,1.1s
TUC Tucson 34.90 316 eP P 08 40 42.1 +0.5
comp=Z,1.1nm,1.1s
TUC epP pP 08 40 53.4 +2.7
KSCO Kaye Shedlock' 34.94 333 ⇓P P 08 40 42.3 +0.3
baz=35
U22A Llaves 35.09 325 ⇑P P 08 40 43.5 +0.2
baz=35
T23A Casias Ranch, 35.11 327 ⇓P P 08 40 43.9 +0.3
baz=35
S24A Houchin Ranch, 35.12 328 ⇓P P 08 40 44.2 +0.4
baz=35
W20A Ramah 35.19 322 ⇑P P 08 40 44.4 +0.1
baz=35
BGNE Belgrade 35.20 340 ⇑P P 08 40 44.8 +0.8
baz=35
Q26A Hugo 35.28 331 ⇑P P 08 40 45.2 +0.3
baz=35
SDCO Great Sand Dun 35.35 328 eP P 08 40 46.0 +0.3
comp=Z,5.7nm,1.1s
P27A Ficken Ranch, 35.36 333 ⇓P P 08 40 45.3 -0.3
baz=35
R24A Sanders Place, 35.52 329 ⇓P P 08 40 47.2 +0.2
baz=36
U21A Nageezi 35.58 324 ⇑P P 08 40 47.9 +0.3
baz=36
X18A Snowflake 35.71 320 ⇑P P 08 40 48.4 -0.3
baz=36
P26A Davis Ranch, A 35.71 332 ⇓P P 08 40 48.9 +0.3
baz=36
O27A Beecher Island 35.83 334 ⇑P P 08 40 49.9 +0.3
baz=36
R23A Moffat 35.86 328 ⇑P P 08 40 50.2 +0.2
baz=36,SNR=6.8
T21A Navajo Lake 35.91 325 ⇓P P 08 40 50.7 +0.3
baz=36
W18A Petrified Fore 35.95 321 ⇑P P 08 40 51.1 +0.4
baz=36
U20A Newcomb 36.05 324 ⇓P P 08 40 51.8 +0.2
baz=36
P25A Willow Gulch B 36.05 331 ⇑P P 08 40 51.5 -0.1
baz=36,SNR=6.2
S22A 4UR Ranch, Cre 36.06 327 ⇑P P 08 40 51.4 -0.4
baz=36
Q24A Divide 36.10 330 ⇑P P 08 40 51.8 -0.3
baz=36
214A Organ Pipe Nat 36.12 314 ⇑P P 08 40 52.3 +0.2
baz=36,SNR=9.6
OGNE Ogallala 36.27 335 eP P 08 40 53.2 -0.1
comp=Z,97nm,1.4s
OGNE Ogallala 36.27 335 ⇓P P 08 40 53.2 -0.1
baz=36,SNR=11
N27A Anderson Farm, 36.37 334 ⇑P P 08 40 54.2 0.0
baz=36
R22A Saguache, Gunn 36.38 327 ⇑P P 08 40 53.9 -0.6
baz=36
Q23A Hartsel 36.40 329 ⇓P P 08 40 54.6 -0.1
baz=36
P24A Kohler Place, 36.41 331 ⇓P P 08 40 54.9 +0.2
baz=36
O25A Wiggins 36.51 332 ⇓P P 08 40 55.3 -0.1
baz=36
X16A Lo Mia Camp, P 36.60 318 ⇓P P 08 40 56.1 -0.3
baz=37
MVCO Mesa Verde 36.61 325 eP P 08 40 56.4 0.0
comp=Z,6.1nm,0.9s
MVCO Mesa Verde 36.61 325 ⇑P P 08 40 56.0 -0.5
baz=37
P23A Jefferson 36.76 330 ⇓P P 08 40 57.8 0.0
baz=37,SNR=6.0
ECSD EROS Data Cent 36.82 343 eP P 08 40 56.4 -1.5
comp=Z,30nm,1.5s
Q22A Crested Butte, 36.92 328 ⇓P P 08 40 59.4 +0.3
baz=37
O24A Longmont 36.96 331 ⇑P P 08 40 59.7 +0.4
baz=37
S20A Disappointment 36.97 325 ⇑P P 08 40 59.5 0.0
baz=37
ISCO Idaho Springs 36.98 330 eP P 08 40 59.3 -0.3
ISCO pmax pmax
comp=Z,8.0nm,1.4s
ISCO Idaho Springs 36.98 330 eP P 08 40 59.3 -0.3
comp=Z,8.2nm,1.4s
ISCO Idaho Springs 36.98 330 ⇓P P 08 40 59.5 0.0
baz=37
Z14A Wintersburg 37.00 316 ⇓P P 08 40 59.4 -0.1
baz=37
SMCO Snowmass 37.19 328 eP P 08 41 01.9 +0.4
comp=Z,5.5nm,0.9s
R20A Redvale 37.23 326 ⇓P P 08 41 01.5 -0.2
baz=37
WUAZ Wupatki 37.23 320 eP P 08 41 02.8 +1.1
comp=Z,7.1nm,0.8s
WUAZ Wupatki 37.23 320 ⇓P P 08 41 01.6 -0.1
baz=37
Q21A Lamborn Mesa, 37.26 327 ⇑P P 08 41 02.0 +0.1
baz=37
PV01 Paradox Valley 37.30 326 eP P 08 41 03.6 +1.4
SPMN St. Paul 37.30 348 ⇑P P 08 40 59.6 -2.3
baz=37,SNR=9.4
L27A T5 Ranch, Ells 37.34 336 ⇓P P 08 41 02.5 +0.1
baz=37
Y14A Wickenburg 37.36 316 ⇑P P 08 41 03.1 +0.5
baz=37
P22A Eagle 37.39 329 ⇓P P 08 41 03.1 0.0
baz=37,SNR=9.6
N24A Carr 37.43 332 ⇑P P 08 41 03.8 +0.5
baz=38
M25A Palm-Egli Farm 37.54 333 ⇑P P 08 41 03.9 -0.3
baz=38
COWI Conover 37.56 353 eP P 08 41 01.9 -2.2
comp=Z,5.0nm,0.7s
COWI epP pP 08 41 11.3 -1.9
PV04 Paradox Valley 37.67 326 eP P 08 41 05.5 +0.1
P21A Newcastle 37.70 328 ⇑P P 08 41 05.7 +0.1
baz=38
O22A Kremmling 37.71 330 ⇓P P 08 41 05.8 -0.1
baz=38
PV10 Paradox Valley 37.73 325 eP P 08 41 04.8 -1.1
comp=Z,95nm,0.7s
Q20A Ridgley Place, 37.73 327 ⇑P P 08 41 05.9 0.0
baz=38
S18A Hurst Farm, Bl 37.80 324 ⇓P P 08 41 06.6 0.0
baz=38
M24A Cheyenne 37.91 333 ⇑P P 08 41 07.3 -0.1
baz=38
N23A Red Feather La 37.98 331 ⇑P P 08 41 07.9 -0.1
baz=38
GLA Glamis 38.15 314 eP P 08 41 10.6 +1.3
GLA pmax pmax
comp=Z,17nm,0.9s
GLA Glamis 38.15 314 eP P 08 41 10.6 +1.3
comp=Z,17nm,0.9s
GLA Glamis 38.15 314 ⇓P P 08 41 10.2 +0.9
baz=38,SNR=5.7
N22A Wattenberg Ran 38.16 330 ⇑P P 08 41 10.3 +0.8
baz=38
P20A De Beque 38.17 327 ⇓P P 08 41 10.4 +0.8
baz=38
K26A Motz Farm, Whi 38.21 336 ⇑P P 08 41 10.5 +0.8
baz=38
O21A Pagoda 38.22 329 ⇑P P 08 41 10.4 +0.4
baz=38
Y12C Blythe 38.31 315 ⇓P P 08 41 11.6 +1.0
baz=38
M23A Laramie 38.32 332 ⇓P P 08 41 11.0 +0.1
baz=38
PDMCI Parker Dam,Lak 38.34 316 ⇓P P 08 41 11.8 +1.0
baz=38
U15A North Rim 38.38 320 ⇑P P 08 41 12.2 +0.6
baz=38
K25A Mack Ranch, Ha 38.42 335 ⇑P P 08 41 11.7 +0.2
baz=38
O20A White River Ci 38.56 328 ⇓P P 08 41 13.0 +0.2
baz=39
P19A Cripple Cowboy 38.59 327 ⇑P P 08 41 13.7 +0.6
baz=39
W13A Hualapai Mount 38.62 317 ⇓P P 08 41 13.5 0.0
baz=39
N21A Black Mountain 38.65 329 ⇓P P 08 41 14.2 +0.5
baz=39,SNR=5.1
M22A Cedar Creek Ra 38.69 331 ⇑P P 08 41 14.4 +0.4
baz=39
SWSC Sam W. Stewart 38.78 313 ⇑P P 08 41 14.9 +0.4
baz=39
L23A Garrett 38.82 333 ⇑P P 08 41 14.9 -0.1
baz=39,SNR=5.7
IRM Iron Mountain 38.97 315 ⇓P P 08 41 15.7 -0.4
baz=39
N20A Spence Gulch, 39.08 329 ⇑P P 08 41 17.2 -0.1
baz=39
O19A Miners Draw (B 39.14 328 ⇓P P 08 41 17.2 -0.4
baz=39
M21A Separation Pea 39.21 330 ⇑P P 08 41 18.2 -0.2
baz=39
P18A Preston Nutter 39.27 326 ⇑P P 08 41 18.1 -0.9
baz=39
J24A Dixon Ranch, L 39.34 335 ⇑P P 08 41 19.5 +0.3
baz=39
P17A Butcher Ranch, 39.45 325 ⇑P P 08 41 20.0 -0.2
baz=40
BELC Belle Mtn. Jos 39.48 314 ⇓P P 08 41 21.1 +0.6
baz=40,SNR=5.6
L21A Rawlins 39.49 331 ⇓P P 08 41 20.6 0.0
baz=40
PFO Pinyon Flat Ob 39.60 314 P P 08 41 23.3 +1.7
PFO Pinyon Flat Ob 39.60 314 P P 08 41 23.3 +1.7
comp=Z,9.5nm,1.0s,baz=139,slow=4.3,SNR=8.2
PFO LR LR 08 58 37.8
comp=Z,257nm,21.3s,baz=126,slow=38
PFO Pinyon Flat Ob 39.60 314 ⇑P P 08 41 20.7 -0.9
baz=40
K22A Casper 39.62 332 ⇑P P 08 41 21.0 -0.7
baz=40,SNR=5.3
MSU Marysvale 39.64 323 eP P 08 41 23.2 +1.3
MSU Marysvale 39.64 323 eP P 08 41 23.2 +1.3
RSSD Black Hills 39.73 336 eP P
RSSD pmax pmax
comp=Z,19nm,1.5s
RSSD Black Hills 39.73 336 eP P 08 41 22.8 +0.2
comp=Z,20nm,1.5s
I24A Kuemmerle Ranc 39.76 335 ⇑P P 08 41 22.7 0.0
baz=40
J23A Dilts Ranch, B 39.78 334 ⇑P P 08 41 22.8 -0.1
baz=40
K21A Alcova 39.94 332 ⇓P P 08 41 23.8 -0.6
baz=40
L20A Wamsutter 39.99 330 ⇑P P 08 41 23.8 -1.0
baz=40
MURC Murrieta 40.13 313 ⇑P P 08 41 24.9 -0.9
baz=40
TUQ Turquoise Moun 40.19 316 ⇓P P 08 41 25.4 -1.1
baz=40
J22A Midwest 40.20 333 ⇓P P 08 41 25.7 -0.8
baz=40,SNR=12
DAU Daniels Canyon 40.38 326 eP P 08 41 28.7 +0.6
DAU pmax pmax
comp=Z,7.0nm,1.1s
DAU Daniels Canyon 40.38 326 eP P 08 41 28.7 +0.6
comp=Z,6.7nm,1.1s
H24A Dirks Ranch, A 40.46 336 ⇑P P 08 41 27.9 -0.6
baz=40,SNR=8.9
K20A Yellowstone Ra 40.48 331 ⇑P P 08 41 28.1 -0.7
baz=40,SNR=5.1
L19A Farson 40.57 329 ⇓P P 08 41 28.9 -0.7
baz=41
I22A 9 Mile Ranch, 40.58 334 ⇑P P 08 41 28.9 -0.6
baz=41
L18A Fontenelle, Gr 40.79 329 ⇓P P 08 41 30.8 -0.6
baz=41,SNR=5.7
M17A Scullys Gap (B 40.80 328 ⇑P P 08 41 30.6 -0.8
baz=41
K19A Absolon Red Bu 40.85 330 ⇑P P 08 41 31.4 -0.5
baz=41,SNR=9.5
I21A Big Trails, Te 40.88 333 ⇓P P 08 41 31.8 -0.3
baz=41
AGMN Agassiz Nation 40.88 347 eP P 08 41 29.8 -1.9
comp=Z,20nm,1.3s
G24A Alzada 40.88 337 ⇓P P 08 41 31.5 -0.5
baz=41
J20A Shoshoni 40.89 332 ⇓P P 08 41 32.3 +0.2
baz=41
DUG Dugway 41.11 324 eP P 08 41 34.6 +0.6
DUG pmax pmax
comp=Z,8.0nm,1.3s
DUG Dugway 41.11 324 eP P 08 41 34.6 +0.6
comp=Z,8.2nm,1.3s
DUG Dugway 41.11 324 ⇑P P 08 41 33.4 -0.6
baz=41
BW06 Boulder Array 41.16 330 eP P 08 41 33.3 -1.2
comp=Z,7.3nm,1.1s
PDAR Pinedale Array 41.16 330 P P 08 41 33.5 -0.9
PDAR PcP PcP 08 43 33.1 -0.3
PDAR Pinedale Array 41.16 330 P P 08 41 33.5 -0.9
comp=Z,2.2nm,0.8s,baz=141,slow=9.6,SNR=14
PDAR PcP PcP 08 43 33.1 -0.3
comp=Z,0.5nm,0.5s,baz=129,slow=6.1,SNR=5.0
PDAR LR LR 09 03 22.0
comp=Z,197nm,19.9s,baz=132,slow=43
G23A Biddle 41.17 336 ⇑P P 08 41 33.6 -0.7
baz=41
J19A Crowheart 41.28 331 ⇓P P 08 41 34.4 -1.0
baz=41
K18A Toltan Ranch, 41.31 329 ⇑P P 08 41 35.9 +0.2
baz=41,SNR=18
F24A Ekalaka 41.33 337 ⇑P P 08 41 35.4 -0.2
baz=41,SNR=5.5
EDW2 Edwards Air Fo 41.34 314 ⇓P P 08 41 34.6 -1.3
baz=41
I20A Worland 41.37 332 ⇓P P 08 41 35.6 -0.4
baz=41,SNR=13
HWUT Hardware Ranch 41.37 327 eP P 08 41 35.6 -0.6
comp=Z,32nm,1.4s
FURC Furnace Creek, 41.39 317 ⇓P P 08 41 35.9 -0.2
baz=41
H21A Big Horn, Sher 41.41 334 ⇑P P 08 41 35.3 -1.1
baz=41
LRMC Laurel Mountai 41.43 315 ⇑P P 08 41 36.3 -0.4
baz=41
MDND Maddock 41.43 343 ⇑P P 08 41 35.4 -0.9
baz=42
F23A Volborg 41.60 336 ⇑P P 08 41 37.2 -0.7
baz=42,SNR=11
MPMC Maud Prospec 41.60 316 ⇓P P 08 41 37.0 -1.2
baz=42
R11A Troy Canyon, C 41.63 320 ⇓P P 08 41 37.8 -0.6
baz=42
J18A Kendall Valley 41.72 330 ⇑P P 08 41 38.6 -0.4
baz=42,SNR=15
H20A Greybull 41.72 333 ⇑P P 08 41 38.3 -0.6
baz=42,SNR=9.5
I19A Meeteetse 41.84 332 ⇑P P 08 41 39.5 -0.5
baz=42
K17A Gardner Place, 41.84 329 ⇑P P 08 41 39.5 -0.5
baz=42
E24A Baker 41.87 338 ⇓P P 08 41 39.7 -0.4
baz=42
G21A Lodge Grass 41.95 334 ⇑P P 08 41 39.8 -0.9
baz=42
I18A Diamond G Ranc 41.98 331 ⇑P P 08 41 40.4 -0.8
baz=42,SNR=5.7
F22A Rosebud 41.99 335 ⇓P P 08 41 40.2 -0.8
baz=42,SNR=7.0
ISA Isabella 42.08 315 eP P 08 41 43.6 +1.7
ISA pmax pmax
comp=Z,7.0nm,1.1s
ISA Isabella 42.08 315 eP P 08 41 43.6 +1.7
comp=Z,7.5nm,1.1s
HVU Hansel Valley 42.15 326 eP P 08 41 41.0 -1.5
HVU pmax pmax
comp=Z,8.0nm,1.0s
HVU Hansel Valley 42.15 326 eP P 08 41 41.0 -1.5
comp=Z,7.6nm,1.0s
J17A Brown Place, J 42.17 329 ⇑P P 08 41 42.2 -0.5
baz=42,SNR=13
BDFB Brasilia 42.18 125 P P 08 41 41.5 -1.4
BDFB Brasilia 42.18 125 P P 08 41 41.5 -1.4
comp=Z,1.5nm,0.5s,baz=295,slow=14,SNR=4.7
BDFB LR LR 08 59 51.5
comp=Z,477nm,18.0s,baz=111,slow=37
E23A Ismay 42.20 337 ⇑P P 08 41 41.8 -0.9
baz=42,SNR=6.7
K16A Soda Springs 42.24 328 ⇑P P 08 41 42.9 -0.4
baz=42
SNOW Snow King Moun 42.27 330 eP P 08 41 43.1 -0.5
comp=Z,8.2nm,0.8s
LOHW Long Hollow 42.30 330 eP P 08 41 43.7 -0.1
comp=Z,28nm,1.8s
D24A Glendive 42.35 338 ⇑P P 08 41 43.5 -0.3
baz=42
TPAW Teton Pass 42.39 329 eP P 08 41 44.5 0.0
comp=Z,7.9nm,0.9s
G20A Bridger 42.39 333 ⇑P P 08 41 43.4 -1.0
baz=42,SNR=10
E22A Miles City 42.41 336 ⇓P P 08 41 43.9 -0.5
baz=42,SNR=23
MOOW Moose Ponds 42.47 330 eP P 08 41 44.0 -1.2
comp=Z,5.3nm,1.1s
I17A Pilgrim Ck. 42.51 330 ⇓P P 08 41 45.5 0.0
baz=42
CFAA Coronel Fontan 42.53 161 P P 08 41 46.5 +1.0
CFAA Coronel Fontan 42.53 161 P P 08 41 46.5 +1.0
comp=Z,0.2nm,0.9s,baz=114,slow=2.8,SNR=3.3
L14A Malta 42.58 326 ⇑P P 08 41 45.7 -0.3
baz=43
H18A Shoshone NF, C 42.63 332 ⇑P P 08 41 45.5 -1.0
baz=43
IMW Indian Meadow 42.67 330 eP P 08 41 46.5 -0.4
comp=Z,5.7nm,0.8s
ULM Lac du Bonnet 42.72 348 eP P 08 41 44.1 -2.7
comp=Z,20nm,0.9s
ULM Lac du Bonnet 42.72 348 P P 08 41 45.1 -1.7
comp=Z,13nm,0.7s,baz=162,slow=8.1,SNR=13
ULM LR LR 09 02 42.8
comp=Z,224nm,18.9s,baz=360,slow=41
D23A Lindsay 42.73 337 ⇑P P 08 41 46.7 -0.3
baz=43,SNR=37
C24A Savage 42.73 338 ⇑P P 08 41 46.8 -0.2
baz=43,SNR=8.2
F20A Billings 42.81 334 ⇑P P 08 41 47.2 -0.5
baz=43,SNR=12
CPUP Villa Florida 42.81 145 eP P 08 41 52.7 +4.9
CPUP Villa Florida 42.81 145 P P 08 41 48.5 +0.7
comp=Z,3.2nm,0.8s,baz=316,slow=8.6,SNR=10.0
CPUP LR LR 09 01 54.3
comp=Z,110nm,18.8s,baz=304,slow=39
H17A Grant Village 42.86 331 ⇑P P 08 41 48.1 -0.3
baz=43
ELK Elko 42.88 323 eP P 08 41 48.5 0.0
comp=Z,98nm,1.1s
ELK epP pP 08 41 57.5 -0.2
ELK Elko 42.88 323 LR LR 09 02 32.8
comp=Z,161nm,21.6s,baz=123,slow=40
I16A Newdale 42.93 329 ⇓P P 08 41 48.1 -0.7
baz=43
RCTC Rector, Farmer 42.94 315 ⇑P P 08 41 48.4 -0.4
baz=43
E21A Keefer Ranch, 42.95 335 ⇑P P 08 41 47.8 -0.9
baz=43
G18A Lazy EL Ranch, 43.07 332 ⇓P P 08 41 49.2 -0.8
baz=43,SNR=12
D22A Cohagen 43.08 337 ⇑P P 08 41 49.8 0.0
baz=43,SNR=16
J15A Blackfoot 43.08 328 ⇑P P 08 41 49.4 -0.6
baz=43
F19A Roth Farm, Mol 43.20 333 ⇓P P 08 41 50.1 -0.8
baz=43,SNR=13
C23A Lambert 43.24 338 ⇑P P 08 41 51.2 0.0
baz=43,SNR=15
D21A La Casta Ranch 43.34 336 ⇓P P 08 41 51.6 -0.3
baz=43,SNR=6.2
E20A Meyer Farm, Mu 43.36 335 ⇑P P 08 41 51.9 -0.2
baz=43,SNR=20
H16A Russell Place, 43.41 330 ⇓P P 08 41 52.5 -0.2
baz=43,SNR=6.2
NVAR Mina Array Bea 43.43 318 P P 08 41 52.7 -0.3
NVAR PcP PcP 08 43 41.8 +0.8
NVAR Mina Array Bea 43.43 318 P P 08 41 52.7 -0.3
comp=Z,4.2nm,0.7s,baz=128,slow=6.9,SNR=17
NVAR PcP PcP 08 43 41.8 +0.8
comp=Z,1.4nm,0.6s,baz=132,slow=3.6,SNR=3.8
DGMT Dagmar 43.45 339 eP P 08 41 52.8 0.0
comp=Z,35nm,1.0s
DGMT Dagmar 43.45 339 ⇑P P 08 41 52.4 -0.4
baz=44,SNR=5.4
C22A Vida 43.46 337 ⇑P P 08 41 52.5 -0.4
baz=44,SNR=8.2
F18A Big Timber 43.59 333 ⇓P P 08 41 53.6 -0.4
baz=44,SNR=18
QLMT Earthquake Lak 43.59 330 eP P 08 41 55.2 +1.0
J14A Carey 43.60 327 ⇑P P 08 41 53.9 -0.4
baz=44,SNR=11
E19A Rath Farm, Rou 43.60 334 ⇑P P 08 41 53.6 -0.5
baz=44,SNR=8.4
G17A Pierce Place, 43.62 331 ⇑P P 08 41 55.1 +0.7
baz=44,SNR=5.8
B23A Brockton 43.73 339 ⇑P P 08 41 55.1 +0.1
baz=44,SNR=17
A24A Westby 43.77 340 ⇓P P 08 41 55.6 +0.2
baz=44,SNR=8.1
D20A Manuel Ranch, 43.82 335 ⇓P P 08 41 55.8 -0.1
baz=44,SNR=9.2
BMN Battle Mountai 43.89 322 eP P 08 41 57.0 +0.4
BMN pmax pmax
comp=Z,21nm,1.0s
BMN Battle Mountai 43.89 322 eP P 08 41 57.0 +0.4
comp=Z,20nm,1.0s
B22A Reddig Ranch S 43.96 338 ⇓P P 08 41 56.9 0.0
baz=44
I14A Mackay 43.98 328 ⇓P P 08 41 57.4 +0.1
baz=44,SNR=8.0
C21A Desert Coulee 43.99 337 ⇓P P 08 41 57.2 0.0
baz=44
J13A Cove Ranch, Pi 44.00 327 ⇓P P 08 41 57.1 -0.4
baz=44,SNR=9.4
F17A Fitzpatrick Pl 44.02 332 ⇑P P 08 41 57.6 0.0
baz=44,SNR=11
H15A Lima 44.05 329 ⇓P P 08 41 58.6 +0.7
baz=44,SNR=39
G16A Moss Hill, Enn 44.07 331 ⇑P P 08 41 58.0 +0.1
baz=44,SNR=12
E18A Harlowton 44.18 333 ⇑P P 08 41 58.5 -0.3
baz=44
D19A Cripps Ranch, 44.20 335 ⇑P P 08 41 58.4 -0.5
baz=44,SNR=9.5
HLID Hailey 44.24 327 eP P 08 41 59.3 -0.2
comp=Z,4.9nm,0.8s
HLID Hailey 44.24 327 ⇑P P 08 41 59.3 -0.2
baz=44,SNR=9.3
C20A Veseth Ranch, 44.26 336 ⇓P P 08 41 59.2 -0.1
baz=44,SNR=5.6
BOZ Bozeman (W) 44.29 331 eP P 08 41 59.1 -0.6
BOZ pmax pmax
comp=Z,4.0nm,0.8s
BOZ Bozeman (W) 44.29 331 eP P 08 41 59.1 -0.6
comp=Z,4.4nm,0.8s
MCMT McKenzie Canyo 44.30 329 eP P 08 42 00.3 +0.4
I13A Wildhorse Cree 44.32 328 ⇓P P 08 41 59.9 -0.2
baz=44,SNR=15
G15A Dillon 44.36 330 ⇑P P 08 42 00.3 0.0
baz=44,SNR=13
F16A Kennard Place, 44.39 331 ⇑P P 08 42 00.1 -0.4
baz=44,SNR=8.4
H14A Leadore 44.41 329 ⇑P P 08 42 01.1 +0.4
baz=44,SNR=16
B21A Ellsworth Farm 44.45 337 ⇑P P 08 42 01.1 +0.3
baz=44
A22A Carney Farms, 44.50 338 ⇓P P 08 42 01.3 0.0
baz=44,SNR=18
E17A Martinsdale 44.53 332 ⇑P P 08 42 01.5 -0.1
baz=45,SNR=8.9
DLMT Dillon 44.55 330 eP P 08 42 02.2 +0.4
comp=Z,11nm,1.0s
D18A Linhart Farms, 44.62 334 ⇑P P 08 42 02.1 -0.1
baz=45,SNR=9.7
C19A Slack Wire Ran 44.71 335 ⇓P P 08 42 02.8 -0.2
baz=45,SNR=12
I12A Atlanta 44.79 327 ⇑P P 08 42 03.5 -0.3
baz=45,SNR=9.7
LRM Limekiln Ridge 44.81 331 eP P 08 42 03.9 -0.1
H13A Challis 44.84 328 ⇓P P 08 42 03.9 -0.2
baz=45,SNR=9.1
F15A Butte 44.84 331 ⇑P P 08 42 04.1 -0.1
baz=45,SNR=11
B20A Solberg Farm, 44.85 336 ⇓P P 08 42 03.9 -0.1
baz=45,SNR=12
G14A Jackson 44.90 329 ⇓P P 08 42 04.3 -0.4
baz=45
MFID Camas Ranch 44.92 326 eP P 08 42 05.0 +0.2
comp=Z,9.5nm,1.1s
MFID Camas Ranch 44.92 326 ⇓P P 08 42 04.6 -0.1
baz=45,SNR=7.9
E16A East Helena 44.96 332 ⇑P P 08 42 04.8 -0.2
baz=45
D17A Six Diamond Ra 44.97 333 ⇓P P 08 42 04.9 -0.2
baz=45,SNR=13
H12A Diamond D Ranc 45.14 328 ⇓P P 08 42 06.1 -0.5
baz=45,SNR=13

HRY Holter Researc 45.16 332 eP P 08 42 06.8 +0.1
A20A Cobblestone Ra 45.17 337 ⇓P P 08 42 06.4 -0.1
baz=45
G13A Cobalt 45.19 329 ⇑P P 08 42 06.2 -0.7
baz=45,SNR=5.7
EGMT Eagleton 45.24 335 eP P 08 42 07.2 0.0
comp=Z,40nm,1.6s
EGMT Eagleton 45.24 335 ⇓P P 08 42 06.6 -0.6
baz=45,SNR=5.2
B19A Brinkman Farms 45.24 336 ⇑P P 08 42 06.7 -0.4
baz=45,SNR=13
F14A Wisdom 45.25 330 ⇓P P 08 42 06.9 -0.6
baz=45
D16A Dana Ranch, Ca 45.27 332 ⇓P P 08 42 07.2 -0.3
baz=45,SNR=16
E15A Deer Lodge 45.34 331 ⇑P P 08 42 07.5 -0.5
baz=45,SNR=15
C17A Wharram Farm, 45.37 334 ⇓P P 08 42 07.6 -0.6
baz=45,SNR=13
A19A Klindworth Far 45.53 336 ⇑P P 08 42 09.2 -0.3
baz=46,SNR=9.8
B18A Beardsley Farm 45.53 335 ⇑P P 08 42 09.0 -0.4
baz=46,SNR=10
BEKR Beckworth 45.55 319 eP P 08 42 11.0 +1.1
comp=Z,3.4nm,0.9s
F13A Darby 45.72 329 ⇓P P 08 42 10.2 -0.9
baz=46,SNR=12
D15A Lincoln 45.73 332 ⇑P P 08 42 10.8 -0.4
baz=46,SNR=12
E14A Clinton 45.74 330 ⇓P P 08 42 10.4 -0.9
baz=46,SNR=9.1
G12A Big Creek, Yel 45.78 328 ⇑P P 08 42 10.5 -1.1
baz=46
B17A L&G Farms, Che 45.89 334 ⇑P P 08 42 11.5 -0.8
baz=46
WVOR Wild Horse Val 45.93 323 eP P 08 42 12.3 -0.5
WVOR pmax pmax
comp=Z,20nm,1.0s
WVOR Wild Horse Val 45.93 323 eP P 08 42 12.3 -0.5
comp=Z,20nm,1.0s
C16A Fuhringer Ranc 45.93 333 ⇑P P 08 42 11.9 -0.8
baz=46
A18A Metzger Ranch, 45.97 335 ⇑P P 08 42 12.5 -0.4
baz=46,SNR=14
E13A Victor 46.10 330 ⇑P P 08 42 13.4 -0.6
baz=46,SNR=15
F12A Elk City 46.16 329 ⇑P P 08 42 14.0 -0.5
baz=46,SNR=19
D14A Greenough 46.22 331 ⇑P P 08 42 14.0 -1.0
baz=46
MSO Missoula 46.25 331 eP P 08 42 15.0 -0.2
comp=Z,4.8nm,0.9s
MSO Missoula 46.25 331 ⇑P P 08 42 14.1 -1.1
baz=46,SNR=6.5
C15A Salmond Ranch, 46.30 332 ⇓P P 08 42 15.3 -0.3
baz=46,SNR=14
SLMT Seeley Lake 46.33 331 eP P 08 42 15.1 -0.8
A17A Triple J Farms 46.35 335 ⇓P P 08 42 15.3 -0.6
baz=46,SNR=9.1
B16A M & M Farms, S 46.38 334 ⇓P P 08 42 15.2 -1.0
baz=46,SNR=5.7
BMO Blue Mountains 46.66 326 eP P 08 42 16.9 -1.5
comp=Z,6.7nm,1.0s
B15A Bradely Ranch, 46.68 333 ⇑P P 08 42 18.0 -0.5
baz=47,SNR=10
D13A Huson 46.69 330 ⇓P P 08 42 17.7 -0.9
baz=47
SWMT Swartz Lake 46.76 331 eP P 08 42 17.9 -1.3
C14A Swan Lake 46.83 332 ⇓P P 08 42 19.1 -0.7
baz=47
B14A Marquette Ranc 47.04 332 ⇑P P 08 42 21.1 -0.3
baz=47
D12A Red Ives Fores 47.10 330 ⇑P P 08 42 21.2 -0.7
baz=47,SNR=16
C13A Hot Springs 47.16 331 ⇑P P 08 42 21.6 -0.6
baz=47,SNR=5.5
A15A Johnson Ranch, 47.25 333 ⇓P P 08 42 22.6 -0.4
baz=47,SNR=10
BSMT Bassoo Peak 47.38 331 eP P 08 42 23.8 -0.3
A14A Double T Ranch 47.55 333 ⇑P P 08 42 24.7 -0.7
baz=48,SNR=10
B13A Whitefish 47.60 332 ⇑P P 08 42 25.6 -0.1
baz=48,SNR=9.1
C12B Naegeli Ranch, 47.61 330 ⇑P P 08 42 25.3 -0.5
baz=48,SNR=6.3
SCHQ Schefferville 47.65 12 eP P 08 42 25.6 -0.2
comp=Z,9.9nm,1.1s
SCHQ epP pP 08 42 36.8 +1.6
SCHQ Schefferville 47.65 12 P P 08 42 23.8 -2.1
comp=Z,4.1nm,0.9s,baz=187,slow=4.1,SNR=5.8
SCHQ LR LR 09 02 41.9
comp=Z,237nm,19.7s,baz=178,slow=36
WALA Waterton Lakes 47.84 333 eP P 08 42 27.5 -0.1
comp=Z,0.2nm,0.9s
A13A Flathead Natio 47.98 332 ⇑P P 08 42 28.5 -0.1
baz=48
YBH Yreka Blue Hor 48.05 320 P P 08 42 28.6 -0.7
YBH Yreka Blue Hor 48.05 320 P P 08 42 28.6 -0.7
comp=Z,2.8nm,0.9s,baz=40,slow=10,SNR=3.7
B12A Libby 48.20 331 ⇓P P 08 42 29.8 -0.5
baz=48,SNR=6.4
NEW Newport 48.80 330 eP P 08 42 34.3 -0.7
comp=Z,7.6nm,1.0s
NEW Newport 48.80 330 ⇑P P 08 42 33.7 -1.3
baz=49,SNR=7.3
HAWA Hanford 48.84 327 eP P 08 42 34.7 -0.5
LON Longmire 50.31 326 eP P 08 42 46.0 -0.5
LON pmax pmax
comp=Z,3.0nm,0.9s
LON Longmire 50.31 326 eP P 08 42 46.0 -0.5
comp=Z,2.7nm,0.9s
PLCA Paso Flores 50.57 168 eP P 08 42 54.5 +6.1
PLCA Paso Flores 50.57 168 P P 08 42 48.4 0.0
comp=Z,1.9nm,0.5s,baz=312,slow=4.5,SNR=10
YKA Yellowknife Ar 58.35 343 P P 08 43 43.4 -1.2
YKA PcP PcP 08 44 33.8 -1.5
YKA Yellowknife Ar 58.35 343 P P 08 43 43.4 -1.2
comp=Z,10nm,0.8s,baz=138,slow=7.0,SNR=185
YKA PcP PcP 08 44 33.8 -1.5
comp=Z,0.8nm,0.5s,baz=137,slow=3.6,SNR=7.5
RKT Rikitea 60.06 237 eLR LR 09 01 43.1
comp=Z,290nm,27.2s
DLBC Dease Lake 61.15 334 eP P 08 44 04.2 +0.1
RES Resolute Bay 66.21 357 eP P 08 44 35.2 -1.8
comp=Z,2.6nm,0.8s
EGAK Eagle 68.92 337 eP P 08 44 54.1 -0.2
comp=Z,7.5nm,1.1s
SUMG Summit 69.04 13 eP P 08 44 56.8 +1.4
SUMG e*PP pP 08 45 03.8 -1.3
SUMG pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 69.04 13 eP P 08 44 56.8 +1.4
comp=Z,5.8nm,0.8s
SUMG epP pP 08 45 03.8 -1.3
SUMG Summit 69.04 13 i P P 08 45 03.4 +8.0
comp=Z,5.0nm,0.8s
MENT Mentasta 69.20 335 eP P 08 44 56.1 -0.1
DOT Dot Lake 69.62 335 eP P 08 44 58.9 +0.2
comp=Z,7.9nm,0.7s
DOT epP pP 08 45 08.0 -0.4
PAX Paxson 69.96 334 eP P 08 45 00.6 -0.3
PAX pmax pmax
comp=Z,18nm,1.6s
PAX Paxson 69.96 334 eP P 08 45 00.6 -0.3
comp=Z,18nm,1.6s
SML Sawmill 70.83 333 eP P 08 45 06.2 0.0
SML pmax pmax
comp=Z,4.0nm,1.1s
SML Sawmill 70.83 333 eP P 08 45 06.2 0.0
comp=Z,3.7nm,1.1s
PPT Papeete 70.93 248 LR LR 09 10 40.7
comp=Z,20nm,19.1s,baz=21,slow=31
PPT2 Papeete2 70.94 248 eLR LR 09 06 45.2
comp=Z,77nm,21.2s
PMR Palmer 71.13 332 eP P 08 45 08.4 +0.5
PMR pmax pmax
comp=Z,6.0nm,1.1s
PMR Palmer 71.13 332 eP P 08 45 08.4 +0.5
comp=Z,5.6nm,1.1s
ILAR Eielson Array 71.18 336 P P 08 45 07.8 -0.4
ILAR PP PP 08 47 45.0 -1.1
ILAR Eielson Array 71.18 336 P P 08 45 07.8 -0.4
comp=Z,4.3nm,0.6s,baz=112,slow=4.4,SNR=94
ILAR PP PP 08 47 45.0 -1.1
comp=Z,1.0nm,0.9s,baz=120,slow=6.3,SNR=4.0
ILAR LR LR 09 21 10.9
comp=Z,98nm,19.6s,baz=123,slow=40

COLA College 71.60 336 eP P 08 45 10.2 -0.5
COLA pmax pmax
comp=Z,3.0nm,0.6s
COLA College 71.60 336 eP P 08 45 10.2 -0.5
comp=Z,3.1nm,0.6s
MCK McKinley 71.69 335 eP P 08 45 11.1 -0.2
MCK pmax pmax
comp=Z,16nm,1.2s
MCK McKinley 71.69 335 eP P 08 45 11.1 -0.2
comp=Z,16nm,1.2s
KDAK Kodiak Island 71.85 328 LR LR 09 20 38.4
comp=Z,86nm,18.9s,baz=124,slow=39
TRF Thorofare Moun 72.18 334 eP P 08 45 12.9 -1.6
comp=Z,5.1nm,0.8s
TBI Tubuai 72.52 242 eLR LR 09 07 29.1
comp=Z,132nm,27.0s
PPLA Purkeypile 72.86 333 eP P 08 45 18.0 -0.5
comp=Z,6.3nm,0.7s
COLD Coldfoot 73.26 338 eP P 08 45 21.1 +0.5
comp=Z,11nm,1.1s
COLD epP pP 08 45 30.0 -0.3
CHGN Chignik 74.73 326 eP P 08 45 29.1 -0.3
ESDC Sonseca Array 75.88 51 P P 08 45 36.3 -0.1
ESDC Sonseca Array 75.88 51 P P 08 45 36.3 -0.1
comp=Z,0.2nm,0.3s,baz=259,slow=6.6,SNR=3.6
UNV Unalaska Valle 79.23 323 eP P 08 45 55.3 +0.6
comp=Z,7.4nm,0.6s
TNA Tin City 80.02 335 eP P 08 45 59.4 +0.6
comp=Z,5.1nm,0.7s
TORD Torodi Ar. Bea 82.75 78 P P 08 46 14.8 +0.6
TORD Torodi Ar. Bea 82.75 78 P P 08 46 14.9 +0.6
comp=Z,0.8nm,1.0s,baz=305,slow=5.1,SNR=2.8
TORD LR LR 09 22 34.7
comp=Z,138nm,19.3s,baz=175,slow=35
GERES GERESS Array B 87.72 41 LR LR 09 20 44.2
comp=Z,209nm,19.5s,baz=267,slow=32
ARCES ARCESS Array B 88.12 20 P P 08 46 36.2 -3.8
ARCES ARCESS Array B 88.12 20 P P 08 46 36.2 -3.8
comp=Z,5.4nm,1.0s,baz=311,slow=8.2,SNR=3.3
BILL Bilibino 89.53 339c iP P 08 46 46.7 0.0
BILL pmax pmax
comp=Z,18nm,1.3s
FINES FINESS Array B 91.18 27 LR LR 09 22 50.6
comp=Z,174nm,19.6s,baz=270,slow=32
FX1 Attu Island--F 91.38 324 LR LR 09 28 08.2
comp=Z,22nm,20.2s,baz=55,slow=36
PETK Petropavlovsk- 99.90 328 LR LR 09 34 11.5
comp=Z,44nm,19.0s,baz=62,slow=36
CN2 Changchun 121.70 336 ePKP PKPdf 08 52 44.8 +1.1
KSRS Korea Array 125.73 330 PKP PKPdf 08 52 49.6 -2.0
comp=Z,0.7nm,0.5s,baz=5.5,slow=1.8,SNR=4.6
KSAR Wonju Array Be 125.76 330 PKP PKPdf 08 52 49.6 -2.1
KSH Kashi 128.06 21 eSS SS 09 12 56.4 +47
KSH AMB AMB
comp=Z,310nm,4.3s
KSH LR LR
comp=N,140nm,4.3s
KSH LR LR
comp=E,140nm,8.3s
KSH LR LR
comp=Z,130nm,5.4s
HHC Hu-ho-hao-te 128.85 346 ePKP PKPdf 08 52 57.1 -0.6
HHC sPKP 08 53 11.2
HHC PP PP 08 55 07.3 +4.1
HHC SKS SKSdf 09 00 03.8 -3.7
HHC SKKS SKKSac 09 01 54.2 -5.5
HHC SS SS 09 12 18.0 -0.9
STKA Stephens Creek 132.87 234 PKPpre PKPpre 08 53 00.8
STKA Stephens Creek 132.87 234 PKhKP PKPpre 08 53 00.8
comp=Z,0.5nm,0.4s,baz=254,slow=18,SNR=3.0
LZH Lanzhou 134.92 352 ePKP PKPdf 08 53 11.0 +1.6
LZH sPKP 08 53 25.7
ASAR Alice Springs 141.90 243 PKPpre PKPpre 08 53 16.9
ASAR Alice Springs 141.90 243 PKhKP PKPpre 08 53 16.9
comp=Z,1.8nm,0.7s,baz=116,slow=2.8,SNR=14
WRA Warramunga Arr 142.42 249 PKPpre PKPpre 08 53 19.2
WRA Warramunga Arr 142.42 249 PKhKP PKPpre 08 53 19.2
comp=Z,1.8nm,0.6s,baz=99,slow=2.7,SNR=15
GYA Guiyang 143.76 346 ePKP PKPdf 08 53 25.8 +0.1
GYA PP PP 08 56 39.8 +3.0
GYA AMB AMB
comp=Z,90nm,7.8s
KMI Kunming 145.85 351 PKPbc PKPbc 08 53 29.6 -0.3
CMAR Chiang Mai Arr 152.86 356 PKP PKPdf 08 53 41.3 +0.8
CMAR PKPbc PKPbc 08 53 46.5 -1.1
CMAR Chiang Mai Arr 152.86 356 PKP PKPdf 08 53 41.3 +0.8
comp=Z,1.2nm,0.4s,baz=313,slow=2.1,SNR=4.7
CMAR PKPbc PKPbc 08 53 46.6 -1.1
comp=Z,1.0nm,0.3s,baz=333,slow=2.7,SNR=5.5

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*MDD **08** 08:40:41.9±1.9, 36°.77N×12°.46W, h0km, mb4.3/8, Error ellipse: s-maj=17.0km s-min=16.7km az=169.0, PRXIMO*
*IGIL **08** 08:40:41.6, 36°.78N×12°.56W, h0km, ML2.3*
*INMG **08** 08:40:43.1±0.8, 36°.63N×12°.87W, h10km, ML2.5, Error ellipse: s-maj=6.3km s-min=4.6km az=142.0*
*CSEM **08** 08:40:44.6±0.4, 36°.93N×12°.26W, h10km, ML3.4/17, Error ellipse: s-maj=6.7km s-min=6.4km az=73.0*
ISC 08 08:40:41.9±3.5**, 36°.9N**±0°.1×**12°.4W**±0°.2**, h10km, n64, σ1§16**/114**, Azores-Cape St. Vincent Ridge**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
PFVI Vila Bisbo 2.90 84 ePn Pn 08 41 28.3 +0.2
PFVI eSn Sn 08 42 02.6 -0.4
PFVI Vila Bisbo 2.90 84 Pn Pn 08 41 28.2 +0.2
7.5nm,0.1s,SNR=26
PFVI Sn Sn 08 42 02.5 -0.4
12nm,0.2s,SNR=5.7
PFVI Vila Bisbo 2.90 84 ePn Pn 08 41 28.3 +0.2
PFVI eSn Sn 08 42 02.6 -0.4
PTEO Sao Teotonio 3.03 76 ePn Pn 08 41 30.6 +0.7
PTEO eSn Sn 08 42 06.2 -0.1
PTEO Sao Teotonio 3.03 76 Pn Pn 08 41 30.6 +0.7
PTEO Sn Sn 08 42 06.2 -0.1
PTEO Sao Teotonio 3.03 76 Pn Pn 08 41 30.6 +0.7
PTEO Sn Sn 08 42 06.2 -0.1
MORF Marmelete 3.05 81 ePn Pn 08 41 30.9 +0.6
MORF eSn Sn 08 42 06.6 -0.3
MORF A A 08 42 14.2
11nm,0.1s
MORF Marmelete 3.05 81 Pn Pn 08 41 30.7 +0.4
MORF Pn Pn 08 41 30.9 +0.6
MORF Sn Sn 08 42 06.6 -0.3
11nm,0.1s
MORF Marmelete 3.05 81 Pn Pn 08 41 30.9 +0.6
MORF eSn Sn 08 42 06.6 -0.3
11nm,0.1s
PMAFR Mafra 3.23 49 ePn Pn 08 41 34.0 +1.3
PMAFR eSn Sn 08 42 12.5 +1.1
PMAFR A A 08 42 14.1
55nm,0.3s
PMAFR Mafra 3.23 49 Pn Pn 08 41 34.0 +1.3
6.6nm,0.1s,SNR=7.9
PMAFR Sn Sn 08 42 12.4 +1.1
175nm,0.3s,SNR=12
PMAFR Mafra 3.23 49 Pn Pn 08 41 34.0 +1.3
6.6nm,0.1s,SNR=7.9
PMAFR Sn Sn 08 42 12.4 +1.1
175nm,0.3s,SNR=12
PNCL Nicolau / Gran 3.34 67 ePn Pn 08 41 34.9 +0.8
PNCL eSn Sn 08 42 14.1 +0.3
PNCL A A 08 42 17.9
3.1nm,0.2s
PNCL Nicolau / Gran 3.34 67 ePn Pn 08 41 34.9 +0.8
PNCL eSn Sn 08 42 14.1 +0.3
3.1nm,0.2s
MESJ Messejana 3.49 73 eP Pn 08 41 36.8 +0.6
MESJ eS Sn 08 42 17.7 +0.2
MESJ AML AML 08 42 26.0
comp=E,5.9nm,0.4s
MESJ Messejana 3.49 73 eP Pn 08 41 36.8 +0.6
MESJ eS Sn 08 42 17.7 +0.2
MESJ Messejana 3.49 73 Pn Pn 08 41 36.8 +0.6
MESJ Sn Sn 08 42 17.7 +0.2
MESJ Messejana 3.49 73 eP Pn 08 41 36.8 +0.6
MESJ eS Sn 08 42 17.7 +0.2
PCVE Castro Verde 3.58 77 ePn Pn 08 41 38.7 +1.2
PCVE eSn Sn 08 42 20.0 +0.1
PCVE A A 08 42 25.2
comp=E,2.5nm,0.2s
PCVE Castro Verde 3.58 77 Pn Pn 08 41 38.7 +1.2
PCVE Sn Sn 08 42 20.0 +0.1
comp=E,2.5nm,0.2s
PCVE Castro Verde 3.58 77 Pn Pn 08 41 38.7 +1.2
PCVE eSn Sn 08 42 20.0 +0.1
comp=E,2.5nm,0.2s
PBDV Barranco-do-Ve 3.62 83 ePn Pn 08 41 38.9 +0.9
PBDV Barranco-do-Ve 3.62 83 Pn Pn 08 41 38.9 +0.9
PBDV Barranco-do-Ve 3.62 83 Pn Pn 08 41 38.9 +0.9
PVAQ Vaqueiros 3.80 81 ePn Pn 08 41 41.1 +0.6
PVAQ eSn Sn 08 42 25.2 -0.1
PVAQ Vaqueiros 3.80 81 Pn Pn 08 41 41.1 +0.6
PVAQ Sn Sn 08 42 25.2 -0.1
PVAQ Vaqueiros 3.80 81 Pn Pn 08 41 41.1 +0.6
PVAQ Sn Sn 08 42 25.2 -0.1
PBEJ Beja 3.81 71 ePn Pn 08 41 41.7 +1.1
PBEJ Beja 3.81 71 Pn Pn 08 41 41.7 +1.1
PBEJ Beja 3.81 71 Pn Pn 08 41 41.7 +1.1
PMTG Montargil 3.97 56 ePn Pn 08 41 43.6 +0.7
PMTG eSn Sn 08 42 29.6 +0.1
PMTG A A 08 42 34.6
comp=E,5.3nm,0.1s
PMTG Montargil 3.97 56 ePn Pn 08 41 43.6 +0.7
PMTG eSn Sn 08 42 29.6 +0.1
comp=E,5.3nm,0.1s
EGRO El Granado 4.00 79 Pn Pn 08 41 43.9 +0.6
comp=E,1.1nm,0.1s,SNR=11
EGRO Sn Sn 08 42 29.5 -0.7
comp=E,2.2nm,0.1s,SNR=4.7
EGRO El Granado 4.00 79 Pn Pn 08 41 43.9 +0.6
comp=E,1.1nm,0.1s,SNR=11
EGRO Sn Sn 08 42 29.5 -0.7
comp=E,2.2nm,0.1s,SNR=4.7
PTOM Tomar 4.18 48 ePn Pn 08 41 47.4 +1.7
PTOM eSn Sn 08 42 35.6 +1.1
PTOM A A 08 42 39.5
comp=E,14nm,0.1s
PTOM Tomar 4.18 48 Pn Pn 08 41 47.4 +1.7
PTOM Sn Sn 08 42 35.6 +1.1
comp=E,7.1nm,0.1s
PTOM Tomar 4.18 48 Pn Pn 08 41 47.4 +1.7
PTOM Sn Sn 08 42 35.6 +1.1
comp=E,7.1nm,0.1s
PESTR Estremoz 4.31 61 ePn Pn 08 41 48.4 +0.9
PESTR eSn Sn 08 42 37.6 -0.3
PESTR A A 08 42 55.0
comp=E,5.2nm,0.6s
PESTR Estremoz 4.31 61 Pn Pn 08 41 48.4 +0.9
PESTR Sn Sn 08 42 37.6 -0.3
comp=E,2.6nm,0.6s
PESTR Estremoz 4.31 61 Pn Pn 08 41 48.4 +0.9
PESTR eSn Sn 08 42 37.6 -0.3
comp=E,5.2nm,0.6s
EMIN Mina Concepcio 4.67 77 Pn Pn 08 41 52.8 +0.3
comp=E,1.7nm,0.2s,SNR=16
EMIN Sn Sn 08 42 45.4 -1.4
comp=E,0.9nm,0.1s,SNR=7.9
EMIN Mina Concepcio 4.67 77 Pn Pn 08 41 52.8 +0.3
comp=E,1.7nm,0.2s,SNR=16
EMIN Sn Sn 08 42 45.4 -1.4
comp=E,0.9nm,0.1s,SNR=7.9
EBAD Badajoz 4.68 65 Pn Pn 08 41 53.1 +0.6
comp=E,2.0nm,0.1s,SNR=8.4
EBAD Sn Sn 08 42 46.0 -0.9
comp=E,4.4nm,0.2s,SNR=7.9
EBAD Badajoz 4.68 65 Pn Pn 08 41 53.2 +0.6
comp=E,2.0nm,0.1s,SNR=8.4
EBAD Sn Sn 08 42 46.0 -0.9
comp=E,4.4nm,0.2s,SNR=7.9
PMRV Marv??o 4.71 56 ePn Pn 08 41 53.8 +0.7
PMRV eSn Sn 08 42 47.4 -0.4
PMRV A A 08 42 50.2
comp=E,6.7nm,0.6s
PMRV Marv??o 4.71 56 Pn Pn 08 41 53.8 +0.7
PMRV Sn Sn 08 42 47.4 -0.4
comp=E,6.7nm,0.6s
PMRV Marv??o 4.71 56 Pn Pn 08 41 53.8 +0.7
PMRV eSn Sn 08 42 47.4 -0.4
comp=E,6.7nm,0.6s
ESPR Espera 5.27 88 Pn Pn 08 42 01.1 +0.4
comp=E,0.7nm,0.1s,SNR=4.0
ESPR Sn Sn 08 43 00.6 -0.9
comp=E,5.3nm,0.2s,SNR=7.9
ESPR Espera 5.27 88 Pn Pn 08 42 01.1 +0.4
comp=E,0.7nm,0.1s,SNR=4.0
ESPR Sn Sn 08 43 00.6 -0.9
comp=E,5.3nm,0.2s,SNR=7.9
EPLA Plasencia 5.91 56 Pn Pn 08 42 10.4 +0.9
comp=E,1.1nm,0.1s,SNR=7.1
EPLA Sn Sn 08 43 16.1 -1.2
comp=E,1.5nm,0.2s,SNR=7.9
EPLA Plasencia 5.91 56 Pn Pn 08 42 10.4 +0.9
comp=E,1.1nm,0.1s,SNR=7.1
EPLA Sn Sn 08 43 16.0 -1.2
comp=E,1.5nm,0.2s,SNR=7.9
MVO Moncorvo 5.99 43 Pn Pn 08 42 11.9 +1.2
comp=E,1.9nm,0.1s,SNR=4.0
MVO Sn Sn 08 43 13.0 -6.4
comp=E,13nm,0.2s,SNR=7.8
MVO Moncorvo 5.99 43 Pn Pn 08 42 11.9 +1.2
comp=E,1.9nm,0.1s,SNR=4.0
ELOB Lobios 6.02 33 Pn Pn 08 42 13.5 +2.5
comp=E,0.3nm,0.1s,SNR=4.0
ELOB Sn Sn 08 43 17.7 -2.3
comp=E,2.5nm,0.1s,SNR=5.0
ELOB Lobios 6.02 33 Pn Pn 08 42 13.5 +2.5
comp=E,0.3nm,0.1s,SNR=4.0
ELOB Sn Sn 08 43 17.7 -2.3
comp=E,2.5nm,0.1s,SNR=5.0
EADA Adamuz 6.37 76 Pn Pn 08 42 16.2 +0.3
comp=E,1.1nm,0.1s,SNR=7.9
EADA Sn Sn 08 43 27.1 -1.6
comp=E,1.2nm,0.2s,SNR=7.9
EADA Adamuz 6.37 76 Pn Pn 08 42 16.2 +0.3
comp=E,1.1nm,0.1s,SNR=7.9
EADA Sn Sn 08 43 27.1 -1.6
comp=E,1.2nm,0.2s,SNR=7.9
EMAZ Mazaricos 6.61 23 Sn Sn 08 43 29.3 -5.2
comp=E,5.9nm,0.1s,SNR=7.5
ECAL Calabor 6.70 39 Sn Sn 08 43 34.3 -2.5
comp=E,9.8nm,0.3s,SNR=7.9
ECAL Calabor 6.70 39 Sn Sn 08 43 34.3 -2.5
comp=E,9.8nm,0.3s,SNR=7.9
GUD Guadarrama 7.48 57 Sn Sn 08 43 53.8 -2.2
comp=E,1.0nm,0.3s,SNR=7.9
GUD Guadarrama 7.48 57 Sn Sn 08 43 53.8 -2.2
comp=E,1.0nm,0.3s,SNR=7.9
EARI Arriondas 8.46 39 Sn Sn 08 44 17.9 -2.2
comp=E,0.7nm,0.3s,SNR=7.9
EARI Arriondas 8.46 39 Sn Sn 08 44 17.9 -2.2
comp=E,0.7nm,0.3s,SNR=7.9

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*ISCJB **08** 08:45:47.9±0.9, 59°.39N±0°.04×27°.1E±0°.1, h0km, Error ellipse: s-maj=9.2km s-min=4.8km az=16.0*
*NAO **08** 08:45:49.2±1.1, 59°.31N×26°.97E, ML2.2*
*BER **08** 08:45:49.5±3.1, 59°.34N×27°.12E, h0km, ML2.2(NAO), Suspected explosion*
*IDC **08** 08:45:49.7±2.1, 59°.33N×26°.95E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.1/4, ML2.7/3, Error ellipse: s-maj=19.8km s-min=10.7km az=130.0*
*CSEM **08** 08:45:49.2±0.3, 59°.36N×27°.08E, h2km, ML2.0, Error ellipse: s-maj=8.5km s-min=4.5km az=100.0, Mining explosion.*
*HEL **08** 08:45:49.6±0.2, 59°.30N×27°.10E, h0km, ML1.9, Explosion*
ISC 08 08:45:48.6±0.9**, 59°.37N**±0°.02×**27°.08E**±0°.04**, h0km, n47, σ1§56**/70**, Baltic States - Belarus - Northwestern Russia**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
VSU Vasula 0.93 191 Pg Pg 08 46 06.6 +0.3
VSU Lg Lg 08 46 16.6
VSU Vasula 0.93 191 Pg Pg 08 46 06.6 +0.3
VSU Lg Lg 08 46 16.6
VSU Vasula 0.93 191 Pg Pg 08 46 06.6 +0.3
SNR=90
VSU Lg Lg 08 46 16.6
VJF Virojoki 1.20 11 eP Pg 08 46 12.0 +0.4
VJF eS Sb 08 46 28.3 +0.1
VJF MSG 08 46 28.3
comp=Z,15nm,0.4s
VJF eRG Rg 08 46 33.1
VJF Virojoki 1.20 11 eP Pg 08 46 12.0 +0.4
VJF MSG Sb 08 46 28.3 +0.1
comp=Z,15nm,0.4s
VJF eS Sb 08 46 28.3 +0.1
VJF eRG Rg 08 46 33.1

VJF	Virojoki	1.20	11	eP	Pg	08 46 12.0	+0.4
	SNR=47						
VJF				eS	Sb	08 46 28.3	+0.1
	comp=Z,15nm,0.4s,SNR=47						
PVF	Pernaja	1.33	333	ePG	Pn	08 46 14.9	+0.5
PVF				MSG	Sn	08 46 32.6	-0.2
	comp=Z,5.7nm,0.4s						
PVF				eS	Sn	08 46 32.6	-0.2
PVF	Pernaja	1.33	333	ePG	Pn	08 46 14.9	+0.5
PVF				MSG	Sn	08 46 32.6	-0.2
	comp=Z,5.7nm,0.4s						
PVF				eS	Sn	08 46 32.6	-0.2
PVF	Pernaja	1.33	333	ePg	Pn	08 46 14.9	+0.5
	comp=Z,5.7nm,0.4s,SNR=90						
PVF				eS	Sn	08 46 32.6	-0.2
	SNR=47						
MEF	Metsahovi	1.60	303	ePN	Pg	08 46 19.7	+0.5
MEF				eSN	Sg	08 46 41.3	+1.3
MEF				MSG		08 46 41.3	
	comp=Z,10nm,0.1s						
MEF	Metsahovi	1.60	303	ePN	Pg	08 46 19.7	+0.5
MEF				MSG	Sg	08 46 41.3	+1.3
	comp=Z,10nm,0.1s						
MEF				eSN	Sg	08 46 41.3	+1.3
MEF	Metsahovi	1.60	303	ePn	Pg	08 46 19.7	+0.5
	SNR=46						
MEF				eSn	Sg	08 46 41.3	+1.3
	comp=Z,10nm,0.1s,SNR=48						
MTSE	Matsula	1.81	250	eP	Pn	08 46 21.4	+0.4
MTSE				eS	Sn	08 46 44.4	-0.2
MTSE	Matsula	1.81	250	eP	Pn	08 46 21.4	+0.4
MTSE				eS	Sn	08 46 44.4	-0.2
MTSE	Matsula	1.81	250	eP	Pn	08 46 21.4	+0.4
	SNR=47						
MTSE				eS	Sn	08 46 44.4	-0.2
	SNR=47						
FIA0	FINESS Array S	2.14	347	Pn	Pn	08 46 26.6	+1.0
	baz=164,slow=16						
FIA0				Lg	Lg	08 46 58.1	
	baz=164,slow=28						
FIA0	FINESS Array S	2.14	347	Pn	Pn	08 46 26.6	+1.0
	baz=164,slow=16						
FIA0				Lg	Lg	08 46 58.1	
	baz=164,slow=28						
FIA0	FINESS Array S	2.14	347	MSG	Sg	08 46 57.2	-0.1
	comp=Z,7.6nm,0.3s						
FIA0				eSG	Sg	08 46 57.2	-0.1
FIA0				eRG	Rg	08 47 09.5	
FIA0	FINESS Array S	2.14	347	eSG	Sg	08 46 57.2	-0.1
FIA0				MSG		08 46 57.2	
	comp=Z,7.6nm,0.3s						
FIA0				eRG	Rg	08 47 09.5	
FIA0	FINESS Array S	2.14	347	Pn	Pn	08 46 26.6	+1.0
	baz=164,slow=16,SNR=50						
FIA0				eSg	Sg	08 46 57.2	-0.1
	SNR=90						
FIA0				Lg	Lg	08 46 58.1	
	baz=164,slow=25,SNR=115						
FINES	FINESS Array B	2.14	347	Pn	Pn	08 46 26.9	+1.3
	comp=Z,1.4nm,0.3s,baz=163,slow=16,SNR=26						
FINES				Pg	Pb	08 46 28.2	0.0
	comp=Z,1.4nm,0.3s,baz=163,slow=16,SNR=26						
FINES				Sn	Sn	08 46 52.9	+0.1
	comp=Z,1.1nm,0.3s,baz=169,slow=14,SNR=4.0						
FINES				Lg	Lg	08 46 57.4	
	comp=Z,6.2nm,0.3s,baz=169,slow=27,SNR=36						
FINES				Rg	Rg	08 47 10.4	
	comp=Z,46nm,1.1s,baz=163,slow=27,SNR=6.0						
KAF	Kangasniemi	2.78	353	eP	Pn	08 46 36.7	+2.4
KAF				MSG		08 47 11.7	
	comp=Z,2.1nm,0.2s						
KAF	Kangasniemi	2.78	353	eP	Pn	08 46 36.7	+2.4
KAF				MSG		08 47 11.7	
	comp=Z,2.1nm,0.2s						
KAF	Kangasniemi	2.78	353	eP	Pn	08 46 36.7	+2.4
	comp=Z,2.1nm,0.2s,SNR=33						
KEF	Keuruu	3.01	340	MSG	Sg	08 47 23.9	-1.3
	comp=Z,1.9nm,0.2s						
KEF				eSG	Sg	08 47 23.9	-1.3
KEF	Keuruu	3.01	340	MSG	Sg	08 47 23.9	-1.3
	comp=Z,1.9nm,0.2s						
KEF				eSG	Sg	08 47 23.9	-1.3
KEF	Keuruu	3.01	340	eSg	Sg	08 47 24.0	-1.3
	SNR=90						
RAF	Rauma	3.13	304	eSB	Sb	08 47 24.8	+1.1
RAF				MSG		08 47 24.8	
	comp=Z,3.5nm,0.4s						
RAF	Rauma	3.13	304	MSG	Sb	08 47 24.8	+1.1
	comp=Z,3.5nm,0.4s						
RAF				eSB	Sb	08 47 24.8	+1.1
RAF	Rauma	3.13	304	Sb	Sb	08 47 24.8	+1.1
SUF	Sumiainen	3.39	353	eSG	Sb	08 47 34.5	+3.2
SUF				MSG		08 47 34.5	
	comp=Z,5.8nm,0.4s						
SUF	Sumiainen	3.39	353	eSG	Sb	08 47 34.5	+3.2
SUF				MSG		08 47 34.5	
	comp=Z,5.8nm,0.4s						
SUF	Sumiainen	3.39	353	Sg	Sb	08 47 34.5	+3.2
ISAL	Salakas	3.84	188	AML	AML	08 47 43.1	
	comp=Z,2.2nm,0.4s						
ISAL				eS	Sb	08 47 47.7	+3.5
IIGN	Ignalina	4.05	187	AML	AML	08 47 42.4	
	comp=Z,3.7nm,0.4s						
IIGN				eS	Sb	08 47 48.9	-1.4
HFS	Hagfors	6.81	282	Sn	Sn	08 48 43.7	-4.1
	baz=90,slow=28						
HFS				Lg	Lg	08 49 18.5	
	baz=90,slow=37						
HFS	Hagfors	6.81	282	Sn	Sn	08 48 43.7	-4.1
	baz=90,slow=28						
HFS				Lg	Lg	08 49 18.5	
	baz=90,slow=37						
HFS	Hagfors	6.81	282	Pn	Pn	08 47 28.7	-0.9
	comp=Z,0.1nm,0.3s,baz=222,slow=44,SNR=2.3						
HFS				Sn	Sn	08 48 43.6	-4.1
	comp=Z,0.2nm,0.3s,baz=125,slow=25,SNR=2.7						
HFS				Lg	Lg	08 49 19.7	
	comp=Z,0.9nm,0.3s,baz=95,slow=31,SNR=7.6						
HFS	Hagfors	6.81	282	Lg	Lg	08 49 18.5	
	baz=90,slow=33,SNR=4.7						
NB2	NORSAR Subarra	8.08	289	Pn	Pn	08 47 46.2	-0.8
NB2				Lg	Lg	08 50 00.5	
	baz=88,slow=37						
NB2	NORSAR Subarra	8.08	289	Pn	Pn	08 47 46.2	-0.8
NB2				Lg	Lg	08 50 00.5	
	baz=88,slow=37						
NB2	NORSAR Subarra	8.08	289	Pn	Pn	08 47 46.2	-0.8
	SNR=50						
NB2				Lg	Lg	08 50 00.5	
	baz=88,slow=36,SNR=3.0						
NOA	NORSAR Array B	8.08	289	Pn	Pn	08 47 42.9	-4.2
	comp=Z,0.1nm,0.3s,baz=125,slow=23,SNR=2.3						
NOA				Lg	Lg	08 49 56.3	
	comp=Z,0.4nm,0.3s,baz=198,slow=19,SNR=2.8						
ARA0	ARCESS Array S	10.23	357	Pn	Pn	08 48 16.0	-0.5
	baz=175,slow=14						
ARA0				Sn	Sn	08 50 03.2	-8.6
	baz=158,slow=22						
ARA0	ARCESS Array S	10.23	357	Pn	Pn	08 48 16.0	-0.5
	baz=175,slow=14						
ARA0				Sn	Sn	08 50 03.2	-8.6
	baz=158,slow=22						
ARA0	ARCESS Array S	10.23	357	Pn	Pn	08 48 16.0	-0.5
	baz=175,slow=13,SNR=50						
ARCES	ARCESS Array B	10.23	357	Pn	Pn	08 48 16.0	-0.5
	comp=Z,0.1nm,0.3s,baz=174,slow=14,SNR=7.2						
ARCES				Sn	Sn	08 50 07.3	-4.5
	comp=Z,0.2nm,0.3s,baz=177,slow=22,SNR=3.8						
ARCES				Lg	Lg	08 51 04.5	
	comp=Z,0.4nm,0.3s,baz=157,slow=31,SNR=5.3						

IDC 08 08:49:02.2±7.5, 17°.84N×102°.71W, h0^{km}, mb3.2/4, mb1 3.6/5, mb1mx3.5/22, mbtmp3.1/5, ML3.1/1, Error ellipse: s-maj=150.2km s-min=95.7km az=118.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	11.48	356	Pn	Pn	08 51 49.3	+1.6
	0.0nm,0.3s,baz=201,slow=12,SNR=3.0						
NVAR	Mina Array Bea	24.63	330	P	P	08 54 25.2	+0.4
	0.4nm,0.5s,baz=168,slow=9.2,SNR=3.0						
PDAR	Pinedale Array	25.52	348	P	P	08 54 32.3	-0.5
	0.2nm,0.5s,baz=166,slow=5.3,SNR=2.5						
YKA	Yellowknife Ar	45.38	352	P	P	08 57 22.7	+0.5
	0.2nm,0.7s,baz=168,slow=7.1,SNR=6.9						
ILAR	Eielson Array	55.40	339	P	P	08 58 37.4	-0.7
	0.5nm,0.9s,baz=134,slow=4.3,SNR=4.2						

IDC 08 08:57:06.6±3.7, 6°.28S×149°.35E, h0^{km}, mb3.1/1, mb1 3.7/3, mb1mx3.4/18, mbtmp3.6/3, ML2.8/1, Error ellipse: s-maj=133.1km s-min=41.3km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.79	215	Pn	Pn	08 58 08.6	+2.2
	5.8nm,0.3s,baz=0.1,slow=5.7,SNR=11						
PMG				Sn	Sn	08 58 50.9	-0.8
	6.0nm,0.3s,baz=96,slow=11,SNR=4.7						
WRA	Warramunga Arr	19.93	226	P	P	09 01 39.3	-1.0
	0.3nm,0.3s,baz=52,slow=11,SNR=11						
ASAR	Alice Springs	22.79	219	P	P	09 02 10.4	-0.7
	0.4nm,0.4s,baz=54,slow=9.0,SNR=14						
TORD	Torodi Ar. Bea	147.42	285	PKPbc	PKPbc	09 16 53.2	-0.5
	0.1nm,0.3s,baz=83,slow=4.6,SNR=3.3						

IDC 08 09:04:49.2±7.5, 5°.08S×151°.59E, h112^{km}±52^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.3/20, mbtmp3.6/5, Error ellipse: s-maj=63.4km s-min=49.1km az=108.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.14	225	P	Pn	09 06 17.5	-0.1
	6.0nm,0.3s,baz=27,slow=9.5,SNR=11						
PMG				S	Sn	09 07 26.9	+0.4
	1.4nm,0.3s,baz=12,slow=20,SNR=2.8						
WRA	Warramunga Arr	22.36	227	P	P	09 09 38.2	-0.1
	1.1nm,0.5s,baz=53,slow=9.9,SNR=14						
ASAR	Alice Springs	25.14	221	P	P	09 10 04.7	+0.6
	0.7nm,0.5s,baz=54,slow=9.7,SNR=13						
STKA	Stephens Creek	28.25	198	P	P	09 10 31.7	-0.2
	1.2nm,0.3s,baz=342,slow=9.6,SNR=3.5						
FITZ	Fitzroy Crossi	28.47	241	P	P	09 10 33.8	-0.2
	3.1nm,1.0s,baz=22,slow=5.4,SNR=4.0						
TORD	Torodi Ar. Bea	149.24	287	PKPbc	PKPbc	09 24 25.3	-0.6
	0.3nm,0.7s,baz=64,slow=2.0,SNR=2.9						

ISK 08 09:06:02.4, 37°.33N×28°.27E, h12^{km}, MD2.8
ISCJB 08 09:06:02.8±0.4, 37°.31N±0°.03×28°.29E±0°.04, h0^{km}, Error ellipse: s-maj=5.5km s-min=3.8km az=35.9
CSEM 08 09:06:03.0±0.3, 37°.31N×28°.27E, h1^{km}, MD2.8, Error ellipse: s-maj=7.3km s-min=5.9km az=28.0
DDA 08 09:06:04.0, 37°.24N×28°.14E, h7^{km}, MD2.8
ISC 08 09:06:03.2±0.8, 37°.35N±0°.03×28°.25E±0°.02, h0^{km}, n36, σ1.^{s}17/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.22	173	ePG	Pg	09 06 07.0	-0.3
YER	Yerkesik	0.22	173	ePg	Pg	09 06 07.0	-0.3
MLSB	Milas	0.38	262	ePG	Pg	09 06 11.0	+0.5
MLSB				eSG	Sg	09 06 16.7	+1.3
MLSB	Milas	0.38	262	ePg	Pg	09 06 11.0	+0.5
MLSB				eSg	Sg	09 06 16.7	+1.3
AYDN	Tasoluk	0.43	317	iP	Pb	09 06 13.7	+0.1
AYDN				iS	Sb	09 06 20.6	-0.1
AYDN	Tasoluk	0.43	317	iP	Pb	09 06 13.7	+0.1
AYDN				iS	Sb	09 06 20.6	-0.1
TURN	Turunc	0.56	149	iP	Pg	09 06 12.9	-0.9
TURN				iS	Sg	09 06 20.4	-0.6
TURN	Turunc	0.56	149	iP	Pg	09 06 12.9	-0.9
TURN				iS	Sg	09 06 20.4	-0.6
DALY	Dalyan (Mu˜la	0.62	149	ePG	Pg	09 06 14.5	-0.6
DALY	Dalyan (Mu˜la	0.62	149	ePg	Pg	09 06 14.5	-0.6
DNZL	Cakiroluk	0.72	62	iP	Pn	09 06 20.0	-0.8
DNZL				eS	Sn	09 06 32.3	-0.3
DNZL	Cakiroluk	0.72	62	iP	Pn	09 06 20.0	-0.8
DNZL				eS	Sn	09 06 32.3	-0.3
BODT	Bodrum	0.80	249	ePG	Pg	09 06 18.1	-0.5
BODT	Bodrum	0.80	249	ePg	Pg	09 06 18.1	-0.5
DAT	Datca	0.82	221	ePG	Pg	09 06 18.6	-0.3
DAT	Datca	0.82	221	ePg	Pg	09 06 18.6	-0.3
FETY	Fethiye	0.98	137	ePG	Pg	09 06 21.1	-0.8
FETY	Fethiye	0.98	137	ePg	Pg	09 06 21.1	-0.8
GOLH	Golhisar	1.05	96	eP	Pg	09 06 23.2	-0.1
GOLH				iS	Sn	09 06 44.9	+4.1
GOLH	Golhisar	1.05	96	eP	Pg	09 06 23.2	-0.1
KULA	Kula-Manisa	1.21	16	ePN	Pg	09 06 26.7	+0.4
KULA	Kula-Manisa	1.21	16	ePn	Pg	09 06 26.7	+0.4
IZM	Izmir	1.30	324	ePN	Pg	09 06 27.3	-0.9
IZM	Izmir	1.30	324	ePn	Pg	09 06 27.3	-0.9
KHL	Karahalli	1.40	46	ePN	Pn	09 06 28.5	-1.6
KHL	Karahalli	1.40	46	ePn	Pn	09 06 28.5	-1.6
ELL	Elmali	1.46	114	ePN	Pn	09 06 29.3	-1.6
ELL	Elmali	1.46	114	ePn	Pn	09 06 29.3	-1.6
AKAS	Kas	1.56	135	iP	Pg	09 06 34.6	+1.5
AKAS				iS	Sg	09 06 56.2	+2.9
AKAS	Kas	1.56	135	iP	Pg	09 06 34.6	+1.5
URLA	Izmir	1.65	308	eP	Pb	09 06 34.5	0.0
URLA	Izmir	1.65	308	eP	Pb	09 06 34.5	0.0
APE	Apeiranthos	2.19	263	ePN	Pn	09 06 39.9	-1.0
APE	Apeiranthos	2.19	263	ePn	Pn	09 06 39.9	-1.0
ALT	Altintas	2.25	40	ePN	Pn	09 06 40.4	-1.3
ALT	Altintas	2.25	40	ePn	Pn	09 06 40.4	-1.3

IDC 08 09:18:47.4±8.0, 56°.19S×27°.65W, h132^{km}±74^{km}, mb3.9/2, mb1 3.7/3, mb1mx3.4/16, mbtmp3.6/3, Error ellipse: s-maj=42.3km s-min=27.1km az=37.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	18.72	156	P	P	09 22 55.4	0.0
	0.2nm,0.3s,baz=324,slow=13,SNR=9.4						
LPAZ	La Paz	50.25	306	P	P	09 27 30.6	-0.1
	1.4nm,0.4s,baz=125,slow=5.5,SNR=17						
TORD	Torodi Ar. Bea	73.30	30	P	P	09 30 04.2	+0.1
	1.9nm,0.6s,baz=199,slow=6.5,SNR=21						
YKA	Yellowknife Ar	136.10	318	PKP	PKPdf	09 37 53.1	+1.9
	0.1nm,0.5s,baz=131,slow=2.2,SNR=4.9						
ILAR	Eielson Array	150.01	312	PKPbc	PKPbc	09 38 19.4	-1.1
	0.6nm,0.8s,baz=134,slow=1.0,SNR=7.8						
SONM	Songino Array	150.99	87	PKPbc	PKPbc	09 38 23.3	-0.3
	0.5nm,0.4s,baz=210,slow=3.9,SNR=5.5						

CSEM 08 09:23:10.1, 45°.97N×15°.46E, h0^{km}, ML0.3, 2C, Mining explosion. After LJU, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESS	Cesta pri Krsk	0.00	33	⇑iPg	Pg	09 23 09.8	-0.4
CESS				iSg	Sg	09 23 10.0	-0.3
CESS							
	comp=Z,990nm,0.1s						
CESS	Cesta pri Krsk	0.00	33	⇑iPg	Pg	09 23 09.8	-0.5
CESS				iSg	Sg	09 23 10.0	-0.4
	comp=Z,990nm,0.1s						
LEGS	Legarje	0.10	258	iPg	Pg	09 23 12.2	+0.1
LEGS	Legarje	0.10	258	iPg	Pg	09 23 12.2	+0.1
GOLS	Golise	0.12	70	iPg	Pg	09 23 12.3	-0.2
GOLS				iSg	Sg	09 23 14.8	+0.6
GOLS							
	comp=Z,7.0nm,0.1s						
GOLS	Golise	0.12	70	iPg	Pg	09 23 12.3	-0.2
GOLS				iSg	Sg	09 23 14.8	+0.6
	comp=Z,7.0nm,0.1s						
CRES	Cresnjev	0.14	181	iPg	Pg	09 23 12.6	-0.3
CRES				iSg	Sg	09 23 15.7	+0.9
CRES							
	comp=Z,5.0nm,0.1s						
CRES	Cresnjev	0.14	181	iPg	Pg	09 23 12.6	-0.3
CRES				iSg	Sg	09 23 15.7	+0.9
	comp=Z,5.0nm,0.1s						
DOBS	Dobrina	0.18	2	iSg	Sg	09 23 16.3	+0.3
DOBS	Dobrina	0.18	2	iSg	Sg	09 23 16.3	+0.3

ISCJB 08 09:29:15.9±0.5, 51°.45N±0°.03×16°.15E±0°.03, h0^{km}, mb3.3/2, Error ellipse: s-maj=4.0km s-min=2.3km az=13.2
IPEC 08 09:29:16.0±0.3, 51°.57N×16°.24E, h0^{km}, ML2.7/4, Error ellipse: s-maj=2.0km s-min=1.5km az=35.0
WAR 08 09:29:17.1, 51°.54N×16°.09E
CSEM 08 09:29:17.3±0.3, 51°.48N×16°.15E, h2^{km}, ML3.5/8, Error ellipse: s-maj=5.1km s-min=2.7km az=16.0
PRU 08 09:29:17.9, 51°.48N×16°.16E, h0^{km}
IDC 08 09:29:17.9±0.8, 51°.51N×15°.95E, h0^{km}, mb3.3/2, mb1 3.4/7, mb1mx3.3/26, mbtmp3.3/7, ML2.8/5, Error ellipse: s-maj=14.8km s-min=7.4km az=113.0
BGR 08 09:29:18.0±0.5, 51°.52N×16°.17E, h1^{km}, ML3.0/14, Error ellipse: s-maj=6.7km s-min=2.2km az=18.0
VIE 08 09:29:21.2±0.6, 51°.16N×16°.21E, h0^{km}, mb2.5/4, ML2.9/4, Error ellipse: s-maj=4.4km s-min=3.8km az=102.0 56 km W of Wroclaw Suspected Mining induced.
ISC 08 09:29:16.4±0.7, 51°.55N±0°.03×16°.17E±0°.02, h0^{km}, n72, σ0.^{s}84/118, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	174	ePg	Pg	09 29 30.3	+0.4
KSP				eSg	Sg	09 29 40.0	+0.9
KSP	Ksiaz	0.71	174	ePg	Pg	09 29 30.5	+0.5
KSP				eSg	Sg	09 29 40.2	+1.1
KSP	Ksiaz	0.71	174	e	Pn	09 29 37.9	+4.2
KSP				e		09 29 44.0	
KSP	Ksiaz	0.71	174	Pg	Pg	09 29 30.3	+0.4
KSP				Sg	Sg	09 29 40.0	+0.9
UPC	Upice	1.04	186	ePG	Pg	09 29 36.5	+0.1
UPC	Upice	1.04	186	Pg	Pg	09 29 36.5	+0.1
DPC	Dobruska-Polom	1.20	175	ePg	Pg	09 29 39.3	-0.1
DPC				eSg	Sg	09 29 55.0	+0.1
DPC	Dobruska-Polom	1.20	175	ePG	Pg	09 29 39.0	-0.4
DPC				eSG	Sg	09 29 53.1	-1.8
	comp=Z,45nm,0.4s						
DPC	Dobruska-Polom	1.20	175	Pg	Pg	09 29 39.0	-0.4
DPC				Sg	Sg	09 29 55.0	+0.1
PVCC	Panska Ves	1.44	225	ePG	Pn	09 29 43.4	-0.3
PVCC				eSG	Sg	09 30 01.8	-0.7
	comp=Z,128nm,0.3s						
PVCC	Panska Ves	1.44	225	Pg	Pn	09 29 43.4	-0.3
PVCC				Sg	Sg	09 30 01.8	-0.7
	128nm,0.3s						
BRG	Berggiesshubel	1.56	245	PN	Pn	09 29 44.5	-0.8
BRG				PG	Pb	09 29 46.2	+0.1
BRG				SG	Sg	09 30 06.5	+0.1
	86nm,0.6s						
BRG	Berggiesshubel	1.56	245	ePn	Pn	09 29 45.4	0.0
BRG				eSg	Sg	09 30 06.7	+0.3
BRG	Berggiesshubel	1.56	245	Pn	Pn	09 29 45.4	0.0
BRG				Sg	Sg	09 30 06.7	+0.3
PRU	Pruhonice	1.87	214	ePN	Pn	09 29 49.1	-0.6
PRU				ePG	Pb	09 29 50.7	-0.8
PRU				eSG	Sg	09 30 16.3	-0.2
	comp=Z,71nm,0.7s						
PRU	Pruhonice	1.87	214	Pn	Pn	09 29 49.1	-0.6
PRU	Pruhonice	1.87	214	Pg	Pb	09 29 50.7	-0.8
PRU				Sg	Sg	09 30 16.3	-0.2
	71nm,0.7s						
FBE	Freiberg	1.88	252	ePn	Pb	09 29 51.9	+0.3
FBE				eSg	Sg	09 30 16.7	-0.1
FBE	Freiberg	1.88	252	Pn	Pb	09 29 51.9	+0.3
FBE				Sg	Sg	09 30 16.7	-0.1
MORC	Moravsky Berou	1.97	153	ePn	Pn	09 29 50.5	-0.6
MORC				eSg	Sg	09 30 19.9	+0.1
MORC	Moravsky Berou	1.97	153	ePn	Pn	09 29 50.7	-0.4
	baz=336						
MORC				eSg	Sb	09 30 18.3	-0.1
	42nm,0.4s,baz=336						
CLL	Collm	2.00	264	ePn	Pn	09 29 51.0	-0.4
CLL	Collm	2.00	264	iPn	Pn	09 29 50.8	-0.6
CLL				iPg	Pb	09 29 53.6	0.0
CLL				i		09 29 57.3	
CLL				eSg	Sg	09 30 21.0	+0.4
	comp=Z,67nm,0.7s						
CLL	Collm	2.00	264	Pn	Pn	09 29 51.0	-0.4
OKC	Ostrava-Krasne	2.12	143	ePn	Pn	09 29 53.0	-0.2
OKC	Ostrava-Krasne	2.12	143	ePN	Pn	09 29 52.9	-0.2
OKC				ePG	Pg	09 29 56.6	-0.4
OKC				eSG	Sb	09 30 22.7	+0.1
OKC	Ostrava-Krasne	2.12	143	Pn	Pn	09 29 52.9	-0.2
VRAC	Vranov	2.26	173	Pn	Pn	09 29 55.8	+0.8
	comp=Z,1.2nm,0.3s,baz=335,slow=16,SNR=12						
VRAC				Pg	Pg	09 29 59.8	+0.2
	comp=Z,3.9nm,0.3s,baz=354,slow=16,SNR=13						
VRAC				Lg	Lg	09 30 27.4	
	comp=Z,5.6nm,0.3s,baz=260,slow=22,SNR=8.9						
VRAC	Vranov	2.26	173	ePn	Pn	09 29 55.4	+0.4
VRAC				eSg	Sb	09 30 27.0	+0.5
	comp=Z,34nm,0.4s,baz=354						
TREC	Trest	2.30	191	ePN	Pn	09 29 55.8	+0.3
TREC				ePG	Pb	09 29 59.3	+0.6
TREC	Trest	2.30	191	Pn	Pn	09 29 55.8	+0.3
TREC	Trest	2.30	191	Pg	Pb	09 29 59.3	+0.6
KRUC	Moravsky	2.49	177	ePn	Pn	09 29 58.3	+0.1
	baz=358						
KRUC				eSg	Sb	09 30 34.7	+1.5
	comp=Z,31nm,0.6s,baz=358						
TANN	Tannenbergstha	2.60	246	ePn	Pn	09 30 00.1	+0.3
TANN				eSg	Sg	09 30 40.7	+0.6
TANN	Tannenbergstha	2.60	246	Pn	Pn	09 30 00.1	+0.3
TANN				Sg	Sg	09 30 40.7	+0.6
OJC	Ojcow	2.65	119	ePg	Pg	09 30 07.5	+0.3
OJC				eSg	Sg	09 30 42.5	+0.9
OJC	Ojcow	2.65	119	ePg	Pg	09 30 07.5	+0.3
OJC				Sg	Sg	09 30 42.3	+0.7
WERD	Werda	2.68	247	ePn	Pn	09 30 01.1	+0.3
WERD	Werda	2.68	247	Pn	Pn	09 30 01.1	+0.3
NKC	Novy Kostel	2.70	242	ePN	Pn	09 30 01.2	+0.1
NKC				ePG	Pg	09 30 08.0	-0.1
NKC				eSG	Sg	09 30 43.3	+0.2
	comp=Z,79nm,0.8s						
NKC	Novy Kostel	2.70	242	Pn	Pn	09 30 01.2	+0.1
NKC	Novy Kostel	2.70	242	Pg	Pg	09 30 08.0	-0.1
NKC				Sg	Sg	09 30 43.3	+0.2
	comp=Z,79nm,0.8s						
JAVC	Velka Javorina	2.86	160	eSg	Sg	09 30 48.7	+0.6
	comp=Z,29nm,0.9s						
KHC	Kasperske Hory	2.93	216	ePN	Pn	09 30 04.0	-0.3
KHC				ePG	Pb	09 30 10.5	+0.9
KHC				eSN	Sn	09 30 39.5	-0.8
KHC				eSG	Sg	09 30 50.0	-0.6
KHC	Kasperske Hory	2.93	216	Pn	Pn	09 30 04.0	-0.3
MOX	Moxa	3.01	254	ePg	Pg	09 30 13.6	-0.5
MOX				eSg	Sg	09 30 53.7	+0.6
MOX	Moxa	3.01	254	Pg	Pg	09 30 13.6	-0.5
MOX				Sg	Sg	09 30 53.7	+0.6
MANZ	Manzenberg	3.02	240	ePn	Pn	09 30 06.1	+0.6
MANZ				eSg	Sg	09 30 53.8	+0.5
MANZ	Manzenberg	3.02	240	Pn	Pn	09 30 06.1	+0.6
MANZ				Sg	Sg	09 30 53.8	+0.5
GEC2	GERESS Array S	3.14	211	ePn	Pn	09 30 08.1	+1.0
GEC2	GERESS Array S	3.14	211	Pn	Pn	09 30 08.1	+1.0
GERES	GERESS Array B	3.14	211	Pn	Pn	09 30 06.7	-0.4
	comp=Z,1.0nm,0.3s,baz=32,slow=12,SNR=14						
GERES				Pg	Pb	09 30 14.1	+1.0
	comp=Z,2.6nm,0.3s,baz=30,slow=16,SNR=34						
GERES				Sn	Sn	09 30 44.2	-1.1
	comp=Z,1.6nm,0.3s,baz=37,slow=27,SNR=3.5						
GERES				Lg	Lg	09 30 54.3	
	comp=Z,4.9nm,0.3s,baz=32,slow=27,SNR=7.7						
SMOL	Smolenice	3.14	165	ePN	Pn	09 30 07.5	+0.4
SMOL				e		09 30 18.7	
SMOL	Smolenice	3.14	165	eSG	Sg	09 30 56.9	-0.4
ZST	Bratislava	3.41	169	eSG	Sg	09 31 03.5	-2.3
VYHS	Vyhne	3.50	150	ePN	Pn	09 30 12.1	0.0
VYHS				e		09 30 24.3	
VYHS	Vyhne	3.50	150	eSG	Sg	09 31 06.7	-2.2
CONA	Conrad Observa	3.63	183	⇑iPn	Pn	09 30 14.4	+0.5
CONA				⇓iSg	Sb	09 31 08.1	+2.1
	comp=Z,16nm,0.4s						
CONA	Conrad Observa	3.63	183	Pn	Pn	09 30 14.4	+0.5
CONA				Sg	Sb	09 31 08.1	+2.1
	comp=Z,16nm,0.4s						
GRA1	Grafenberg Arr	3.66	241	Sg	Sg	09 31 13.5	-0.4
GRF	Grafenberg Arr	3.66	241	eSg	Sg	09 31 13.5	-0.4
MOA	Molln	3.90	199	⇑iPn	Pn	09 30 17.3	-0.3
MOA				⇓iSg	Sg	09 31 18.8	-2.9
	comp=Z,31nm,0.6s						
MOA	Molln	3.90	199	Pn	Pn	09 30 17.3	-0.3
MOA				Sg	Sg	09 31 18.8	-2.9
	comp=Z,31nm,0.6s						
CRVS	Cervenica-Dubn	4.30	126	ePN	Pn	09 30 23.0	-0.1
CRVS				e		09 30 38.2	
CRVS	Cervenica-Dubn	4.30	126	eSG	Sg	09 31 34.4	-0.2
KOLS	Kolonicke sedl	4.71	121	e	Pb	09 30 39.8	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KOLS	Kolonicke sedl	4.71	121	eSG	Sg	09 31 48.1	+0.6
AKASG	Malin Array Be	8.26	91	Pn	Pn	09 31 18.3	+1.0
	comp=Z,0.6nm,0.3s,baz=280,slow=12,SNR=5.3						
FINES	FINESS Array B	11.31	25	Pn	Pn	09 31 57.0	-2.1
	comp=Z,0.1nm,0.3s,baz=217,slow=11,SNR=2.7						
ARCES	ARCESS Array B	18.58	10	Pn	P	09 33 32.2	-2.4
	comp=Z,0.1nm,0.3s,baz=186,slow=14,SNR=3.5						
MKAR	Makanchi Array	42.16	69	P	P	09 37 12.1	+1.7
	comp=Z,0.3nm,0.5s,baz=313,slow=7.1,SNR=3.4						
YKA	Yellowknife Ar	59.84	336	P	P	09 39 23.7	+0.6
	comp=Z,0.2nm,0.7s,baz=28,slow=6.9,SNR=5.3						

WEL 08 09:33:55.2±0.4**,36°.94S×176°.96E,h241**km±4km**,ML4.1**/14**, 7C-4D,Error ellipse: s-maj=4.5km s-min=4.3km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.96	199	PN	Pn	09 34 29.4	+0.5
URZ	Urewera	1.32	175	⇑PN	Pn	09 34 31.0	-0.2
URZ				eSN	S	09 34 59.3	-0.4
MWZ	Matawai	1.46	162	PN	Pn	09 34 32.4	0.0
MWZ				SN	S	09 35 01.4	-0.2
PUZ	Puketiti	1.53	138	⇑PN	Pn	09 34 32.8	0.0
PUZ				eSN	S	09 35 01.3	-1.2
CNGZ	Carnagh Statio	1.83	148	PN	Pn	09 34 35.7	+0.4
RAHZ	Arahi	1.98	177	PN	Pn	09 34 37.1	+0.5
PRGZ	Paritu Road	2.11	160	PN	Pn	09 34 38.0	+0.1
KNZ	Kokohu	2.15	165	⇑PN	Pn	09 34 38.0	-0.2
KNZ				SN	S	09 35 11.6	-0.6
NMHZ	Naumai	2.16	183	PN	Pn	09 34 39.0	+0.6
BKZ	Black Stump Fm	2.25	189	⇑PN	Pn	09 34 38.8	-0.5
BKZ				eSN	S	09 35 13.3	-0.8
MHGZ	Mahia Peninsul	2.33	162	PN	Pn	09 34 40.0	0.0
OTVZ	Oturere	2.44	204	PN	Pn	09 34 41.8	+0.4
NGZ	Ngauruhoe	2.48	205	PN	Pn	09 34 42.2	+0.5
MCHZ	McNeill Hill	2.51	185	PN	Pn	09 34 42.2	+0.4
WPVZ	Whakapapa	2.52	206	PN	Pn	09 34 42.4	+0.4
TUVZ	Tukino	2.54	203	PN	Pn	09 34 42.5	+0.2
FWVZ	Far West T-bar	2.56	205	PN	Pn	09 34 42.6	0.0
TRVZ	Turoa	2.60	205	PN	Pn	09 34 43.0	-0.1
WNVZ	Wahianoa	2.61	204	PN	Pn	09 34 43.0	-0.1
BHHZ	Black Hill Sta	2.64	195	PN	Pn	09 34 42.7	-0.5
MOVZ	Moawhango	2.64	201	PN	Pn	09 34 42.7	-0.5
PKVZ	Pokaka	2.67	208	⇓PN	Pn	09 34 44.0	+0.4
MTVZ	Mangateitei	2.71	205	PN	Pn	09 34 44.1	+0.1
VRZ	Vera Road	2.79	218	⇑PN	Pn	09 34 45.9	+1.2
KAHZ	Kahuranaki	2.85	181	PN	Pn	09 34 45.3	-0.2
PNHZ	Pukenui	3.03	191	⇓PN	Pn	09 34 46.6	-0.8
PXZ	Pawanui	3.09	181	⇓PN	Pn	09 34 47.2	-0.7
PXZ				eSN	S	09 35 28.5	-1.2
WPHZ	Waipukurau	3.15	187	PN	Pn	09 34 47.8	-0.9
WAZ	Wanganui	3.21	208	⇑PN	Pn	09 34 49.4	0.0
TSZ	Takapari Road	3.21	194	⇑PN	Pn	09 34 48.3	-1.1
TSZ				SN	S	09 35 32.3	-0.1
DVHZ	Dannevirke	3.41	190	PN	Pn	09 34 50.1	-1.5
POWZ	Post Office Ro	3.57	195	ePN	Pn	09 34 52.1	-1.3
MRZ	Mangatainoka R	3.87	196	PN	Pn	09 34 55.0	-2.0
MRZ				eSN	S	09 35 43.7	-2.2
HOWZ	Holdsworth Sta	4.11	195	PN	Pn	09 34 57.7	-2.1
OGWZ	Otaki Gorge	4.12	199	⇓PN	Pn	09 34 58.0	-1.9
KIW	Kapiti Island	4.23	202	PN	Pn	09 34 59.4	-1.9
MTW	Mount Morrison	4.36	195	PN	Pn	09 35 00.4	-2.4
CAW	Cannon Point	4.42	199	PN	Pn	09 35 01.0	-2.4
DUWZ	D'Urville Isla	4.53	211	PN	Pn	09 35 02.6	-2.3
TRWZ	Traveller	4.56	192	PN	Pn	09 35 03.3	-1.9
PAWZ	Paruwai Farm	4.59	195	PN	Pn	09 35 03.2	-2.4
MSWZ	Moikau Station	4.66	196	PN	Pn	09 35 04.3	-2.2
TCW	Tory Channel	4.75	205	PN	Pn	09 35 05.5	-2.0
PLWZ	Palliser	4.81	195	PN	Pn	09 35 05.7	-2.6
TUWZ	Tuamarina	5.06	207	PN	Pn	09 35 08.6	-2.7
NNZ	Nelson	5.10	212	PN	Pn	09 35 09.1	-2.6
QRZ	Quartz Range	5.20	220	PN	Pn	09 35 09.9	-3.1
BSWZ	Blackbirch Sta	5.33	206	PN	Pn	09 35 12.3	-2.4
THZ	Tophouse	5.75	212	PN	Pn	09 35 17.1	-2.8
KHZ	Kahutara	6.07	205	PN	Pn	09 35 21.1	-2.8
LTZ	Lake Taylor	6.86	210	PN	Pn	09 35 30.4	-3.5
MQZ	McQueen's Vall	7.52	205	PN	Pn	09 35 38.0	-4.1
WVZ	Waitaha Valley	7.77	216	PN	Pn	09 35 41.6	-3.7
RPZ	Rata Peaks	8.13	212	PN	Pn	09 35 46.1	-3.9
FOZ	Fox Glacier	8.64	218	PN	Pn	09 35 51.2	-5.2
ODZ	Otahua Downs	9.39	209	PN	Pn	09 36 03.2	-2.8
JCZ	Jackson Bay	9.47	219	PN	Pn	09 36 03.0	-4.1

*ISCJB **08** 09:35:35.6±0.6,43°.54N±0°.04×45°.74E±0°.03,h8km±3km, Error ellipse: s-maj=7.0km s-min=2.7km az=21.2*
*MOS **08** 09:35:36.2±0.6,43°.54N×45°.68E,h13km,mb4.0/1,Error ellipse: s-maj=8.0km s-min=7.3km az=29.7*
*CSEM **08** 09:35:36.2±0.3,43°.54N×45°.73E,h10km,mb4.0,Error ellipse: s-maj=8.0km s-min=2.9km az=22.0*
ISC 08 09:35:37.9±1.1**,43°.54N**±0°.04×**45°.70E**±0°.03**,h25**km±7km**, n52,σ1s.27**/90**,6C-6D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRO	Groznyy	0.22	171	⇓iPG	Pb	09 35 43.2	-0.7
GRO				i S	Sb	09 35 49.1	+1.2
GRO	Groznyy	0.22	171	i Pg	Pb	09 35 43.2	-0.7
GRO				i Sg	Sb	09 35 49.1	+1.2
TRKR	Terskaya	0.73	285	⇑iPG	Pb	09 35 51.0	-1.0
TRKR				i S	Sn	09 36 02.5	-0.4
TRKR	Terskaya	0.73	285	i Pg	Pb	09 35 51.0	-1.0
TRKR				i Sg	Sn	09 36 02.5	-0.4
SNJR	Sundja	0.80	235	ePG	Pb	09 35 51.9	-1.4
SNJR				eS	Sn	09 36 04.3	-0.5
SNJR	Sundja	0.80	235	ePg	Pb	09 35 51.9	-1.4
SNJR				eSg	Sn	09 36 04.3	-0.5
BTKR	Batakoyurt	0.86	259	ePG	Pn	09 35 53.2	-1.3
BTKR				eS	Sn	09 36 06.4	+0.1
BTKR	Batakoyurt	0.86	259	ePg	Pn	09 35 53.2	-1.3
BTKR				eSg	Sn	09 36 06.4	+0.1
VLKR	Vladikavkaz	0.90	237	ePG	Pn	09 35 53.3	-1.7
VLKR				eS	Sn	09 36 07.0	-0.1
VLKR	Vladikavkaz	0.90	237	ePg	Pn	09 35 53.3	-1.7
VLKR				eSg	Sn	09 36 07.0	-0.1
BTLR	Botlikh	0.95	156	ePG	Pn	09 35 53.8	-2.0
BTLR				i S	Sb	09 36 06.0	-2.1
BTLR				pmax	pmax		
	comp=Z,73nm,0.3s						
BTLR	Botlikh	0.95	156	ePg	Pn	09 35 53.8	-2.0
	comp=Z,73nm,0.3s						
BTLR				i Sg	Sb	09 36 06.0	-2.1
DBC	Dubki	0.97	122	i PG	Pn	09 35 54.9	-1.1
DBC				i S	Sn	09 36 08.3	-0.7
DBC	Dubki	0.97	122	i Pg	Pn	09 35 54.9	-1.1
DBC				i Sg	Sn	09 36 08.3	-0.7
PRTR	Priterechnaya	1.05	282	⇑iPG	Pn	09 35 56.7	-0.4
PRTR				i S	Sb	09 36 12.3	+1.4
PRTR	Priterechnaya	1.05	282	i Pg	Pn	09 35 56.7	-0.4
PRTR				i Sg	Sb	09 36 12.3	+1.4
ARNR	Ardon	1.10	252	⇑iPG	Pn	09 35 56.7	-1.0
ARNR				eS	Sb	09 36 13.0	+0.9
ARNR	Ardon	1.10	252	i Pg	Pn	09 35 56.7	-1.0
ARNR				eSg	Sb	09 36 13.0	+0.9
KRNR	Karanay	1.13	129	⇓iPG	Pn	09 35 58.0	-0.2
KRNR				i S	Sb	09 36 13.5	+0.3
KRNR				pmax	pmax		
	comp=Z,46nm,0.2s						
KRNR	Karanay	1.13	129	i Pg	Pn	09 35 58.0	-0.2
	comp=Z,46nm,0.2s						
KRNR				i Sg	Sb	09 36 13.5	+0.3
UNCR	Uncukul	1.15	136	⇓iPG	Pn	09 35 57.5	-0.9
UNCR				pmax	pmax		
	comp=Z,61nm,0.5s						
UNCR	Uncukul	1.15	136	i Pg	Pn	09 35 57.5	-0.9
	comp=Z,61nm,0.5s						
XNZR	Khunzakh	1.24	143	ePG	Pn	09 35 59.5	-0.3
XNZR				eS	Sb	09 36 16.0	-0.3
XNZR				pmax	pmax		
	comp=Z,55nm,0.2s						
XNZR	Khunzakh	1.24	143	ePg	Pn	09 35 59.5	-0.3
	comp=Z,55nm,0.2s						
XNZR				eSg	Sb	09 36 16.0	-0.3
KORR	Kora	1.28	250	⇑iPG	Pn	09 36 00.0	-0.2
KORR				i S	Sb	09 36 18.5	+1.2
KORR	Kora	1.28	250	i Pg	Pn	09 36 00.0	-0.2
KORR				i Sg	Sb	09 36 18.5	+1.2
LSNR	Lesken	1.40	260	ePG	Pn	09 36 02.1	+0.2
LSNR				eS	Sb	09 36 22.1	+1.2
LSNR	Lesken	1.40	260	ePg	Pn	09 36 02.1	+0.2
LSNR				eSg	Sb	09 36 22.1	+1.2
ZEI	Tsey	1.53	240	⇓iPG	Pn	09 36 02.3	-1.5
ZEI				i S	Sn	09 36 22.4	-0.6
ZEI	Tsey	1.53	240	i Pg	Pn	09 36 02.3	-1.5
ZEI				i Sg	Sn	09 36 22.4	-0.6
DIGR	Digorskoe uzhe	1.68	248	⇑iPN	Pn	09 36 04.9	-1.0
DIGR				i S	Sb	09 36 27.8	-1.2
DIGR	Digorskoe uzhe	1.68	248	i Pn	Pn	09 36 04.9	-1.0
DIGR				i Sg	Sb	09 36 27.8	-1.2
KMKR	Kumukh	1.74	143	ePN	Pn	09 36 07.5	+0.8
KMKR				S	Sb	09 36 32.5	+1.7
KMKR				pmax	pmax		
	comp=Z,71nm,0.1s						
KMKR	Kumukh	1.74	143	ePn	Pn	09 36 07.5	+0.8
	comp=Z,71nm,0.1s						
KMKR				Sg	Sb	09 36 32.5	+1.7
SEAG	Tbilisi Sea	1.89	201	P	Sn	09 36 35.1	+3.4
ONI	Oni	1.90	241	P	Pn	09 36 09.1	+0.3
ONI				S	Sb	09 36 34.2	-1.1
TBLG	Delisi	1.94	202	ePN	Pn	09 36 09.8	+0.5
TBLG	Delisi	1.94	202	P	Pn	09 36 08.9	-0.4
TBLG				S	Sb	09 36 34.4	-2.0
TBLG	Delisi	1.94	202	P	Pn	09 36 08.9	-0.4
TBLG	Delisi	1.94	202	ePn	Pn	09 36 09.8	+0.5
GOR	Gori	1.95	218	P	Sn	09 36 33.7	+0.7
DGRG	David-gareji	2.10	187	P	Sn	09 36 41.6	+4.8
BEYR	Belyy Ugol+	2.14	284	⇑ePN	Pn	09 36 12.0	-0.1
BEYR				eS	Sb	09 36 41.8	-0.5
BEYR	Belyy Ugol+	2.14	284	ePn	Pn	09 36 12.0	-0.1
BEYR				eSb	Sb	09 36 41.8	-0.5
SHAR	Shatzhatmas	2.21	276	⇓ePN	Pn	09 36 12.4	-0.8
SHAR				eS	Sb	09 36 42.8	-1.6
SHAR	Shatzhatmas	2.21	276	ePn	Pn	09 36 12.4	-0.8
SHAR				eSn	Sb	09 36 42.8	-1.6
KIV	Kislovodsk	2.23	282	⇓ePN	Pn	09 36 13.9	+0.6
KIV				i		09 36 20.5	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KIV	Kislovodsk	2.23	282	ePn	Pn	09 36 13.9	+0.6
	comp=Z,6.0nm,0.5s						
KIV	Kislovodsk	2.23	282	i Pg	Pb	09 36 20.5	+3.0
KZR	Kazreti	2.36	204	P	Pn	09 36 16.5	+1.5
KZR				S	Sn	09 36 34.2	-9.0
KZR	Kazreti	2.36	204	P	Pn	09 36 16.5	+1.5
AKH	Akhalkalaki	2.68	218	P	Sn	09 36 53.8	+2.4

*ISK **08** 09:56:58.4,39°.22N×29°.36E,h7km,MD3.0*
*DDA **08** 09:56:59.0,39°.22N×29°.33E,h7km,MD2.8*
*ISCJB **08** 09:56:58.9±0.4,39°.22N±0°.02×29°.36E±0°.03,h8km±4km, Error ellipse: s-maj=3.6km s-min=3.3km az=143.8*
*CSEM **08** 09:56:59.1±0.1,39°.22N×29°.38E,h10km,MD2.8,Error ellipse: s-maj=2.1km s-min=1.9km az=132.0*
ISC 08 09:56:59.1±0.8**,39°.22N**±0°.02×**29°.37E**±0°.02**,h14**km±6km**, n52,σ0s.53**/76**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.16	146	i P	Pg	09 57 03.4	+0.2
GDZ				i S	Sg	09 57 05.7	-0.2
GDZ	Gediz	0.16	146	i P	Pg	09 57 03.4	+0.2
GDZ				i S	Sg	09 57 05.7	-0.2
TVSB	Tavsanli	0.24	18	ePG	Pg	09 57 04.6	+0.2
TVSB				eSG	Sg	09 57 07.9	-0.2
TVSB	Tavsanli	0.24	18	ePg	Pg	09 57 04.6	+0.2
TVSB				eSg	Sg	09 57 07.9	-0.2
DEMI	Demirci	0.54	251	i P	Pg	09 57 10.0	+0.2
DEMI				i S	Sg	09 57 16.9	0.0
DEMI	Demirci	0.54	251	i P	Pg	09 57 10.0	+0.2
DEMI				i S	Sg	09 57 16.9	0.0
ALT	Altintas	0.60	106	ePG	Pg	09 57 10.6	-0.4
ALT				eSG	Sg	09 57 19.1	+0.2
ALT	Altintas	0.60	106	ePg	Pg	09 57 10.6	-0.4
ALT				eSg	Sg	09 57 19.1	+0.2
DST	Dursunbey	0.69	304	ePG	Pg	09 57 12.2	-0.5
DST				eSG	Sg	09 57 21.4	-0.5
DST	Dursunbey	0.69	304	ePg	Pg	09 57 12.2	-0.5
DST				eSg	Sg	09 57 21.4	-0.5
DURS	Dursunbey	0.79	299	i P	Pb	09 57 15.5	+0.8
DURS	Dursunbey	0.79	299	i P	Pb	09 57 15.5	+0.8
KHAL	Karahalli	0.85	173	i P	Pg	09 57 15.8	+0.1
KHAL				i S	Sg	09 57 26.1	-0.8
KHAL	Karahalli	0.85	173	i P	Pg	09 57 15.8	+0.1
KHAL				i S	Sg	09 57 26.1	-0.8
KULA	Kula-Manisa	0.90	218	ePG	Pb	09 57 16.4	-0.1
KULA				eSG	Sg	09 57 28.1	-0.1
KULA	Kula-Manisa	0.90	218	ePg	Pb	09 57 16.4	-0.1
KULA				eSg	Sg	09 57 28.2	-0.1
ORLT	Orhaneli	0.90	336	ePG	Pb	09 57 15.8	-0.7
ORLT	Orhaneli	0.90	336	ePg	Pb	09 57 15.9	-0.7
KHL	Karahalli	0.90	172	ePG	Pb	09 57 16.8	+0.2
KHL	Karahalli	0.90	172	ePg	Pb	09 57 16.8	+0.2
ULDT	Uludag	0.94	349	i P	Pb	09 57 17.4	+0.1
ULDT				i S	Sb	09 57 28.2	-1.4
ULDT	Uludag	0.94	349	i P	Pb	09 57 17.4	+0.1
ULDT				i S	Sb	09 57 28.2	-1.4
MANT	Manisa	0.96	221	i P	Pb	09 57 17.7	0.0
MANT				i S	Sb	09 57 29.3	-1.1
MANT	Manisa	0.96	221	i P	Pb	09 57 17.7	0.0
MANT				i S	Sb	09 57 29.3	-1.1
CAVI	Cavuskoy	1.05	20	ePG	Pb	09 57 18.2	-0.8
CAVI	Cavuskoy	1.05	20	ePg	Pb	09 57 18.2	-0.8
BORA	Eskisehir	1.07	52	i P	Pb	09 57 19.6	+0.2
BORA				i S	Sg	09 57 33.9	+0.2
BORA	Eskisehir	1.07	52	i P	Pb	09 57 19.6	+0.2
BORA				i S	Sg	09 57 33.9	+0.2
IZI	Iznik	1.12	4	ePN	Pb	09 57 20.4	+0.1
IZI	Iznik	1.12	4	ePn	Pb	09 57 20.4	+0.1
SHUT	Suhut-Afyon	1.14	125	ePN	Pb	09 57 20.5	-0.1
SHUT	Suhut-Afyon	1.14	125	ePn	Pb	09 57 20.5	-0.1
ESKT	Eskisehir	1.19	75	ePN	Pn	09 57 21.3	-0.1
ESKT	Eskisehir	1.19	75	ePn	Pn	09 57 21.3	-0.1
SEYT	Eskypehyr	1.19	75	i P	Pg	09 57 22.9	+0.9
SEYT				i S	Sb	09 57 36.7	0.0
SEYT	Eskypehyr	1.19	75	i P	Pg	09 57 22.9	+0.9
SEYT				i S	Sb	09 57 36.7	0.0
MDNY	Mudanya-Bursa	1.21	342	ePN	Pb	09 57 21.9	+0.2
MDNY	Mudanya-Bursa	1.21	342	ePn	Pb	09 57 21.9	+0.2
GEMT	Gemlik	1.22	354	ePN	Pb	09 57 22.2	+0.2
GEMT	Gemlik	1.22	354	ePn	Pb	09 57 22.2	+0.2
BALB	Balikesir	1.23	290	ePN	Pb	09 57 22.4	+0.4
BALB	Balikesir	1.23	290	ePn	Pb	09 57 22.5	+0.4
AKHS	Akhisar	1.26	255	i P	Pb	09 57 23.2	+0.6
AKHS				i S	Sg	09 57 40.2	+0.5
AKHS	Akhisar	1.26	255	i P	Pb	09 57 23.2	+0.6
AKHS				i S	Sg	09 57 40.2	+0.5
KCTX	Karacabey (Bur	1.30	324	ePN	Pg	09 57 24.1	-0.1
KCTX	Karacabey (Bur	1.30	324	ePn	Pg	09 57 24.1	-0.1
GULT	Gulveren	1.50	36	ePN	Pn	09 57 26.4	+0.7
GULT	Gulveren	1.50	36	ePn	Pn	09 57 26.4	+0.7
GONE	Gonen-Balikesi	1.54	303	ePN	Pn	09 57 26.9	+0.9
GONE	Gonen-Balikesi	1.54	303	ePn	Pn	09 57 27.0	+0.9
SVRH	Sivrihisar-ESK	1.69	82	ePN	Pn	09 57 28.7	+0.5
SVRH	Sivrihisar-ESK	1.69	82	ePn	Pn	09 57 28.7	+0.5

*IDC **08** 09:57:15.5±1.1,2°.78S×119°.86E,h0km,mb3.7/5, mb1 3.9/6,mb1mx3.6/24,mbtmp3.8/6,ML3.8/1,MS3.2/2, Ms1 3.2/2,ms1mx2.4/27,Error ellipse: s-maj=38.4km s-min=17.5km az=66.0*
*ISCJB **08** 09:57:16.4±0.6,2°.79S±0°.04×119°.68E±0°.06,h10km, mb3.7/5,Error ellipse: s-maj=8.4km s-min=6.0km az=10.1*
*DJA **08** 09:57:17.6±0.5,3°S±3°×12°0E±°,h10km,M3.9/5,MLv3.9/5*
ISC 08 09:57:17.4±0.8**,2°.88S**±0°.05×**119°.77E**±0°.06**,h10**km**,n17, σ1s.18**/19**,mb3.9**/5**,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTSI	Tana Toraja	0.17	165	P	Pg	09 57 21.1	0.0
SPSI	Sidrap Palu	1.08	180	P	Pb	09 57 37.3	-0.9
SPSI				S	Sn	09 57 55.0	+1.3
SKSI	Soroako, Sulaw	1.60	78	P	Pn	09 57 43.6	-2.2
SKSI				S	Sg	09 58 09.9	+1.1
KAPI	Kappang	2.12	181	P	Pn	09 57 53.6	+0.6
KAPI				S	Sb	09 58 22.3	-0.1
KAPI	Kappang	2.12	181	Pn	Pn	09 57 53.5	+0.5
	27nm,0.3s,baz=4.0,slow=9.4,SNR=87						
KAPI				Sn	Sb	09 58 22.2	-0.3
	72nm,0.3s,baz=217,slow=15,SNR=13						
KAPI				LR	LR	09 58 50.5	
	comp=Z,323nm,19.4s,baz=0.9,slow=43						
BKSI	Bulukumba	2.46	172	P	Pn	09 57 59.0	+1.5
SGKI	Sangatta, Kali	3.18	317	S	Sg	09 59 07.4	+7.7
BSSI	Bau Bau, Buton	3.32	168	P	Pb	09 58 16.0	-0.5
LUWI	Luwuk	3.51	59	P	Pn	09 58 13.5	+1.5
KBKI	Kotabaru	3.62	263	P	Pn	09 58 13.9	+0.3
MRSI	Marisa	3.97	33	P	Pn	09 58 20.6	+2.2
FITZ	Fitzroy Crossi	16.19	160	LR	LR	10 08 38.7	
	comp=Z,110nm,18.1s,baz=223,slow=42						
PSI	Prapat	21.59	285	P	P	10 02 08.3	+0.6
	2.0nm,0.3s,baz=94,slow=13,SNR=7.1						
WRA	Warramunga Arr	22.14	141	P	P	10 02 14.1	+0.7
	1.2nm,0.8s,baz=312,slow=13,SNR=8.4						
ASAR	Alice Springs	24.78	148	P	P	10 02 39.2	-0.4
	0.3nm,0.6s,baz=312,slow=8.4,SNR=7.0						
SONM	Songino Array	51.84	349	P	P	10 06 24.4	-1.4
	1.5nm,0.9s,baz=169,slow=7.4,SNR=7.7						
MKAR	Makanchi Array	59.45	331	P	P	10 07 19.9	-0.5
	2.1nm,0.8s,baz=140,slow=7.7,SNR=4.0						

*ISK **08** 10:09:26.7,39°.21N×29°.37E,h10km,MD2.9*
*CSEM **08** 10:09:27.2±0.1,39°.21N×29°.38E,h10km,MD2.9,Error ellipse: s-maj=1.3km s-min=1.1km az=121.0*
*DDA **08** 10:09:27.6,39°.22N×29°.35E,h7km,MD2.9*
*ISCJB **08** 10:09:27.2±0.4,39°.22N±0°.02×29°.37E±0°.03,h8km±4km, Error ellipse: s-maj=3.9km s-min=3.3km az=44.2*
ISC 08 10:09:27.4±0.8**,39°.22N**±0°.02×**29°.37E**±0°.02**,h14**km±6km**, n48,σ0s.34**/70**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.15	146	i P	Pg	10 09 31.4	+0.1
GDZ				i S	Sg	10 09 34.1	+0.2
GDZ	Gediz	0.15	146	i P	Pg	10 09 31.4	+0.1
GDZ				i S	Sg	10 09 34.1	+0.2
TVSB	Tavsanli	0.24	17	ePG	Pg	10 09 32.7	0.0
TVSB				eSG	Sg	10 09 36.1	-0.2
TVSB	Tavsanli	0.24	17	ePg	Pg	10 09 32.7	0.0
TVSB				eSg	Sg	10 09 36.1	-0.2
DEMI	Demirci	0.54	252	i P	Pg	10 09 38.1	+0.1
DEMI				i S	Sg	10 09 45.2	0.0
DEMI	Demirci	0.54	252	i P	Pg	10 09 38.1	+0.1
DEMI				i S	Sg	10 09 45.2	0.0
ALT	Altintas	0.60	105	ePG	Pg	10 09 38.6	-0.5
ALT				eSG	Sg	10 09 47.0	0.0
ALT	Altintas	0.60	105	ePg	Pg	10 09 38.6	-0.5
DST	Dursunbey	0.70	304	ePG	Pg	10 09 40.8	-0.2
DST	Dursunbey	0.70	304	ePg	Pg	10 09 40.8	-0.2
DURS	Dursunbey	0.80	299	i P	Pg	10 09 42.8	0.0
DURS				i S	Sn	10 09 56.8	+0.7
DURS	Dursunbey	0.80	299	i P	Pg	10 09 42.8	0.0
KHAL	Karahalli	0.85	174	i P	Pg	10 09 44.1	+0.2
KHAL				i S	Sg	10 09 54.8	-0.2
KHAL	Karahalli	0.85	174	i P	Pg	10 09 44.1	+0.2
KHAL				i S	Sg	10 09 54.8	-0.2
KULA	Kula-Manisa	0.89	219	ePG	Pb	10 09 44.3	-0.4
KULA				eSG	Sg	10 09 56.4	0.0
KULA	Kula-Manisa	0.89	219	ePg	Pb	10 09 44.3	-0.4
KULA				eSg	Sg	10 09 56.4	0.0
KHL	Karahalli	0.90	172	ePG	Pb	10 09 44.5	-0.3
KHL	Karahalli	0.90	172	ePg	Pb	10 09 44.5	-0.3
ORLT	Orhaneli	0.91	336	ePG	Pb	10 09 44.6	-0.3
ORLT	Orhaneli	0.91	336	ePg	Pb	10 09 44.7	-0.3
ULDT	Uludag	0.94	349	i P	Pb	10 09 45.5	-0.2
ULDT				i S	Sb	10 09 57.0	-1.1
ULDT	Uludag	0.94	349	i P	Pb	10 09 45.5	-0.2
ULDT				i S	Sb	10 09 57.0	-1.1
MANT	Manisa	0.96	222	i P	Pb	10 09 45.8	-0.2
MANT				i S	Sb	10 09 58.1	-0.6
MANT	Manisa	0.96	222	i P	Pb	10 09 45.8	-0.2
MANT				i S	Sb	10 09 58.1	-0.6
CAVI	Cavuskoy	1.05	20	ePG	Pb	10 09 47.3	-0.1
CAVI	Cavuskoy	1.05	20	ePg	Pb	10 09 47.3	-0.1
BORA	Eskisehir	1.07	51	i P	Pb	10 09 47.5	-0.2
BORA				i S	Sb	10 10 01.9	+0.3
BORA	Eskisehir	1.07	51	i P	Pb	10 09 47.5	-0.2
BORA				i S	Sb	10 10 01.9	+0.3
IZI	Iznik	1.12	4	ePN	Pn	10 09 49.0	+0.2
IZI	Iznik	1.12	4	ePn	Pn	10 09 49.0	+0.2
SHUT	Suhut-Afyon	1.13	125	ePN	Pg	10 09 49.3	+0.1
SHUT	Suhut-Afyon	1.13	125	ePn	Pg	10 09 49.3	+0.1
SEYT	Eskypehyr	1.19	75	i P	Pg	10 09 50.4	+0.2
SEYT				i S	Sb	10 10 04.6	-0.4
SEYT	Eskypehyr	1.19	75	i P	Pg	10 09 50.4	+0.2
SEYT				i S	Sb	10 10 04.6	-0.4
ADVT	Abdulvahap	1.25	13	ePN	Pb	10 09 50.8	+0.1
ADVT	Abdulvahap	1.25	13	ePn	Pb	10 09 50.8	+0.1
AKHS	Akhisar	1.26	255	i P	Pg	10 09 51.6	0.0
AKHS				i S	Sg	10 10 08.3	+0.3
AKHS	Akhisar	1.26	255	i P	Pg	10 09 51.6	0.0
AKHS				i S	Sg	10 10 08.3	+0.3
KCTX	Karacabey (Bur	1.31	324	ePN	Pb	10 09 51.8	0.0
KCTX	Karacabey (Bur	1.31	324	ePn	Pb	10 09 51.8	0.0
GULT	Gulveren	1.50	36	ePN	Pb	10 09 54.7	-0.4
GULT	Gulveren	1.50	36	ePn	Pb	10 09 54.7	-0.4
GONE	Gonen-Balikesi	1.54	303	ePN	Pn	10 09 54.7	+0.2
GONE	Gonen-Balikesi	1.54	303	ePn	Pn	10 09 54.7	+0.2
HRT	Hereke	1.62	8	ePN	Pn	10 09 56.3	+0.7
HRT	Hereke	1.62	8	ePn	Pn	10 09 56.3	+0.7
SVRH	Sivrihisar-ESK	1.68	81	ePN	Pn	10 09 56.7	+0.2
SVRH	Sivrihisar-ESK	1.68	81	ePn	Pn	10 09 56.7	+0.2

*ISK **08** 10:11:33.6,39°.21N×29°.38E,h9km,MD2.9*
*DDA **08** 10:11:34.3,39°.22N×29°.37E,h12km,MD2.8*
*CSEM **08** 10:11:34.1±0.1,39°.21N×29°.38E,h10km,MD2.8,Error ellipse: s-maj=1.8km s-min=1.5km az=143.0*
*ISCJB **08** 10:11:34.1±0.4,39°.22N±0°.02×29°.37E±0°.03,h9km±4km, Error ellipse: s-maj=4.2km s-min=3.3km az=137.0*
ISC 08 10:11:34.1±0.8**,39°.22N**±0°.02×**29°.38E**±0°.02**,h15**km±6km**, n37,σ0s.33**/59**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.15	147	i P	Pg	10 11 38.3	+0.1
GDZ				i S	Sg	10 11 40.9	0.0
GDZ	Gediz	0.15	147	i P	Pg	10 11 38.3	+0.1
GDZ				i S	Sg	10 11 40.9	0.0
TVSB	Tavsanli	0.24	16	ePG	Pg	10 11 39.6	+0.1
TVSB				eSG	Sg	10 11 42.8	-0.4
TVSB	Tavsanli	0.24	16	ePg	Pg	10 11 39.6	+0.1
TVSB				eSg	Sg	10 11 42.8	-0.4
DEMI	Demirci	0.54	251	i P	Pg	10 11 45.0	+0.2
DEMI				i S	Sg	10 11 51.9	-0.2
DEMI	Demirci	0.54	251	i P	Pg	10 11 45.0	+0.2
DEMI				i S	Sg	10 11 51.9	-0.2
ALT	Altintas	0.59	106	ePG	Pg	10 11 45.6	-0.2
ALT				eSG	Sg	10 11 53.9	+0.1
ALT	Altintas	0.59	106	ePg	Pg	10 11 45.6	-0.2
ALT				eSg	Sg	10 11 53.9	+0.1
DURS	Dursunbey	0.80	299	i P	Pg	10 11 49.5	-0.1
DURS	Dursunbey	0.80	299	i P	Pg	10 11 49.5	-0.1
KHAL	Karahalli	0.85	174	i P	Pb	10 11 51.0	+0.4
KHAL				i S	Sg	10 12 01.5	-0.3
KHAL	Karahalli	0.85	174	i P	Pb	10 11 51.0	+0.4
KHAL				i S	Sg	10 12 01.5	-0.3
KULA	Kula-Manisa	0.90	219	ePG	Pb	10 11 51.3	-0.1
KULA				eSG	Sg	10 12 03.7	+0.4
KULA	Kula-Manisa	0.90	219	ePg	Pb	10 11 51.3	-0.1
KULA				eSg	Sg	10 12 03.7	+0.4
ORLT	Orhaneli	0.91	336	ePG	Pb	10 11 50.6	-0.9
ULDT	Uludag	0.94	349	i P	Pb	10 11 52.6	+0.4
ULDT				i S	Sb	10 12 04.3	-0.3
ULDT	Uludag	0.94	349	i P	Pb	10 11 52.6	+0.4
ULDT				i S	Sb	10 12 04.3	-0.3
MANT	Manisa	0.97	222	i P	Pb	10 11 52.5	-0.2
MANT				i S	Sb	10 12 04.7	-0.6
MANT	Manisa	0.97	222	i P	Pb	10 11 52.5	-0.2
MANT				i S	Sb	10 12 04.7	-0.6
CAVI	Cavuskoy	1.05	20	ePG	Pn	10 11 54.4	+0.1
BORA	Eskisehir	1.06	51	i P	Pb	10 11 54.4	+0.1
BORA				i S	Sg	10 12 08.9	+0.3
BORA	Eskisehir	1.06	51	i P	Pb	10 11 54.4	+0.1
BORA				i S	Sg	10 12 08.9	+0.3
IZI	Iznik	1.12	4	ePN	Pg	10 11 55.9	+0.1
IZI	Iznik	1.12	4	ePn	Pg	10 11 55.9	+0.1
SHUT	Suhut-Afyon	1.13	126	ePN	Pb	10 11 55.6	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHUT	Suhut-Afyon	1.13	126	ePn	Pb	10 11 55.6	+0.2
SEYT	Eskypehyr	1.18	75	i P	Pb	10 11 56.7	+0.4
SEYT				i S	Sb	10 12 10.8	-0.7
SEYT	Eskypehyr	1.18	75	i P	Pb	10 11 56.7	+0.4
SEYT				i S	Sb	10 12 10.8	-0.7
AKHS	Akhisar	1.26	255	i P	Pb	10 11 57.9	+0.3
AKHS				i S	Sn	10 12 14.1	+0.2
AKHS	Akhisar	1.26	255	i P	Pb	10 11 57.9	+0.3
AKHS				i S	Sn	10 12 14.1	+0.2
KCTX	Karacabey (Bur	1.31	323	ePN	Pb	10 11 58.8	+0.4
KCTX	Karacabey (Bur	1.31	323	ePn	Pb	10 11 58.8	+0.4
GULT	Gulveren	1.50	36	ePN	Pn	10 12 00.8	+0.3
GONE	Gonen-Balikesi	1.54	303	ePN	Pb	10 12 02.4	0.0
GONE	Gonen-Balikesi	1.54	303	ePn	Pb	10 12 02.4	0.0
SVRH	Sivrihisar-ESK	1.68	81	ePN	Pb	10 12 04.5	-0.3
SVRH	Sivrihisar-ESK	1.68	81	ePn	Pb	10 12 04.5	-0.3

*TIF **08** 10:15:49.4, 43°.38N×46°.26E, h20km±7km*
*CSEM **08** 10:15:50.5±0.2, 43°.31N×46°.23E, h2km, mb4.2, Error ellipse: s-maj=6.4km s-min=3.0km az=23.0*
*MOS **08** 10:15:51.3±1.8, 43°.27N×46°.21E, h19km, mb4.2/1, Error ellipse: s-maj=9.7km s-min=6.4km az=31.0*
ISC 08 10:15:52.0±1.0**, 43°.25N**±0°.03×**46°.22E**±0°.02**, h21**km±3km**,** **n63,** σ**1s.70**/111**, 12C-8D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GRO	Groznyy	0.35	282	⇑iPG	Pb	10 15 57.2	-2.3
GRO	Groznyy	0.35	282	i Pg	Pb	10 15 57.2	-2.3
DBC	Dubki	0.50	117	i PG	Pb	10 16 01.2	-1.0
DBC				i S	Sb	10 16 09.1	0.0
DBC	Dubki	0.50	117	i Pg	Pb	10 16 01.2	-1.0
DBC				i Sg	Sb	10 16 09.1	0.0
BTLR	Botlikh	0.59	180	ePG	Pb	10 16 01.4	-2.4
BTLR				eS	Sb	10 16 10.0	-1.7
BTLR				pmax	pmax		
	comp=Z,343nm,0.3s						
BTLR	Botlikh	0.59	180	ePg	Pb	10 16 01.4	-2.4
	comp=Z,343nm,0.3s						
BTLR				eSg	Sb	10 16 10.0	-1.7
KRNR	Karanay	0.66	130	ePG	Pb	10 16 04.0	-0.9
KRNR				i S	Sb	10 16 13.0	-0.7
KRNR				pmax	pmax		
	comp=Z,86nm,0.2s						
KRNR	Karanay	0.66	130	ePg	Pb	10 16 04.0	-0.9
	comp=Z,86nm,0.2s						
KRNR				i Sg	Sb	10 16 13.0	-0.7
UNCR	Uncukul	0.68	142	⇑iPG	Pb	10 16 03.8	-1.5
UNCR				eS	Sb	10 16 12.8	-1.5
UNCR				pmax	pmax		
	comp=Z,184nm,0.5s						
UNCR	Uncukul	0.68	142	i Pg	Pb	10 16 03.8	-1.5
	comp=Z,184nm,0.5s						
UNCR				eSg	Sb	10 16 12.8	-1.5
XNZR	Khunzakh	0.79	153	ePG	Pb	10 16 06.0	-1.2
XNZR				eS	Sn	10 16 18.8	-0.6
XNZR				pmax	pmax		
	comp=Z,165nm,0.2s						
XNZR	Khunzakh	0.79	153	ePg	Pb	10 16 06.0	-1.2
	comp=Z,165nm,0.2s						
XNZR				eSg	Sn	10 16 18.8	-0.6
SNJR	Sundja	1.05	260	⇓iPG	Pn	10 16 11.6	+0.1
SNJR				eS	Sn	10 16 26.8	+1.3
SNJR	Sundja	1.05	260	i Pg	Pn	10 16 11.6	+0.1
SNJR				eSg	Sn	10 16 26.8	+1.3
VLKR	Vladikavkaz	1.15	260	⇓iPG	Pb	10 16 13.2	0.0
VLKR				eS	Sn	10 16 29.6	+1.6
VLKR	Vladikavkaz	1.15	260	i Pg	Pb	10 16 13.2	0.0
VLKR				eSg	Sn	10 16 29.6	+1.6
TRKR	Terskaya	1.18	294	⇓iPG	Pb	10 16 14.0	+0.2
TRKR				i S	Sn	10 16 31.1	+2.3
TRKR	Terskaya	1.18	294	i Pg	Pb	10 16 14.0	+0.2
TRKR				i Sg	Sn	10 16 31.1	+2.3
MNSR	Manas	1.23	116	⇑iPG	Pb	10 16 16.2	+1.7
MNSR				i S	Sb	10 16 32.0	+2.1
MNSR				pmax	pmax		
	comp=Z,144nm,0.3s						
MNSR	Manas	1.23	116	i Pg	Pb	10 16 16.2	+1.7
	comp=Z,144nm,0.3s						
MNSR				i Sg	Sb	10 16 32.0	+2.1
BTKR	Batakoyurt	1.23	276	⇑iPG	Pb	10 16 14.7	+0.1
BTKR				eS	Sb	10 16 32.4	+2.3
BTKR	Batakoyurt	1.23	276	i Pg	Pb	10 16 14.7	+0.1
BTKR				eSg	Sb	10 16 32.4	+2.3
KMKR	Kumukh	1.29	150	⇓iPG	Pn	10 16 15.5	+0.5
KMKR				eS	Sb	10 16 34.0	+2.0
KMKR				pmax	pmax		
	comp=Z,332nm,0.1s						
KMKR	Kumukh	1.29	150	i Pg	Pn	10 16 15.5	+0.5
	comp=Z,332nm,0.1s						
KMKR				eSg	Sb	10 16 34.0	+2.0
ARNR	Ardon	1.42	268	⇑iPG	Pn	10 16 17.2	+0.6
ARNR				eS	Sb	10 16 37.1	+1.6
ARNR	Ardon	1.42	268	i Pg	Pn	10 16 17.2	+0.6
ARNR				eSg	Sb	10 16 37.1	+1.6
PRTR	Priterechnaya	1.50	290	⇑iPG	Pb	10 16 18.6	-0.5
PRTR				eS	Sb	10 16 39.6	+1.9
PRTR	Priterechnaya	1.50	290	i Pg	Pb	10 16 18.6	-0.5
PRTR				eSg	Sb	10 16 39.6	+1.9
URKR	Urkarakh	1.50	136	i PG	Pb	10 16 19.0	-0.3
URKR				i S	Sb	10 16 41.5	+3.6
URKR				pmax	pmax		
	comp=Z,67nm,0.2s						
URKR	Urkarakh	1.50	136	i Pg	Pb	10 16 19.0	-0.3
	comp=Z,67nm,0.2s						
URKR				i Sg	Sb	10 16 41.5	+3.6
KORR	Kora	1.58	265	⇑iPG	Pn	10 16 19.7	+0.8
KORR				i S	Sb	10 16 41.6	+1.4
KORR	Kora	1.58	265	i Pg	Pn	10 16 19.7	+0.8
KORR				i Sg	Sb	10 16 41.6	+1.4
LSNR	Lesken	1.76	272	⇓iPN	Pn	10 16 22.3	+1.0
LSNR				eS	Sb	10 16 46.2	+1.0
LSNR	Lesken	1.76	272	i Pn	Pn	10 16 22.3	+1.0
LSNR				eSg	Sb	10 16 46.2	+1.0
ZEI	Tsey	1.77	255	⇑iPN	Pn	10 16 21.5	-0.1
ZEI	Tsey	1.77	255	i Pn	Pn	10 16 21.5	-0.1
SEAG	Tbilisi Sea	1.82	216	P	Pb	10 16 23.9	-0.7
SEAG				S	Sb	10 16 49.0	+2.1
TBLG	Delisi	1.87	216	PN	Pb	10 16 24.4	-1.2
TBLG	Delisi	1.87	216	P	Pb	10 16 24.4	-1.2
TBLG				S	Sb	10 16 49.5	+1.0
TBLG	Delisi	1.87	216	P	Pb	10 16 24.4	-1.2
TBLG				S	Sb	10 16 49.5	+1.0
DGRG	David-gareji	1.91	200	P	Pb	10 16 26.3	+0.2
DGRG				S	Sb	10 16 53.6	+4.1
DGRG	David-gareji	1.91	200	P	Pb	10 16 26.3	+0.2
DGRG				S	Sb	10 16 53.6	+4.1
DIGR	Digorskoe uzhe	1.97	261	⇓iPN	Pn	10 16 24.4	+0.1
DIGR	Digorskoe uzhe	1.97	261	i Pn	Pn	10 16 24.4	+0.1
GOR	Gori	2.01	232	P	Pb	10 16 27.2	-0.6
GOR				S	Sb	10 16 53.3	+0.9
GOR	Gori	2.01	232	P	Pb	10 16 27.2	-0.6
GOR				S	Sb	10 16 53.3	+0.9
ONI	Oni	2.14	253	P	Pn	10 16 27.1	+0.6
ONI				S	Sb	10 16 55.4	-0.8
ONI	Oni	2.14	253	P	Pn	10 16 27.1	+0.6
ONI				S	Sb	10 16 55.4	-0.8
KSMR	Kasumkent	2.17	139	i PN	Pb	10 16 31.0	+0.4
KSMR				i S	Sb	10 17 01.5	+4.4
KSMR	Kasumkent	2.17	139	i Sb	Sb	10 17 01.5	+4.4
KZR	Kazreti	2.30	216	P	Pn	10 16 30.1	+1.4
KZR				S	Sb	10 17 01.4	+0.6
KZR	Kazreti	2.30	216	P	Pn	10 16 30.1	+1.4
KZR				S	Sb	10 17 01.4	+0.6
BEYR	Belyy Ugol+	2.59	288	ePN	Pn	10 16 31.3	-1.4
BEYR	Belyy Ugol+	2.59	288	ePn	Pn	10 16 31.3	-1.4
SHAR	Shatzhatmas	2.63	282	⇑iPN	Pn	10 16 32.1	-1.4
SHAR	Shatzhatmas	2.63	282	i Pn	Pn	10 16 32.1	-1.4
KIV	Kislovodsk	2.66	287	⇑ePN	Pn	10 16 32.1	-1.7
AKH	Akhalkalaki	2.73	229	P	Pb	10 16 38.3	-2.1
AKH				S	Sb	10 17 13.8	+0.3
AKH	Akhalkalaki	2.73	229	P	Pb	10 16 38.3	-2.1
AKH				S	Sb	10 17 13.8	+0.3
AKTO	Aktyubinsk	10.80	44	⇓Pn	Pn	10 18 26.3	+1.0
	comp=Z,0.4nm,0.7s						
AKTO				⇑Sn	Sn	10 20 20.5	-5.0
	comp=Z,0.3nm,0.6s						
AKTO	Aktyubinsk	10.80	44	Pn	Pn	10 18 26.3	+1.0
	comp=Z,0.4nm,0.7s						
AKTO				Sn	Sn	10 20 20.5	-5.0
	comp=Z,0.3nm,0.6s						
AB31	Akbulak array	11.23	53	⇑Pn	Pn	10 18 31.5	+0.3
	comp=Z,0.3nm,0.5s,baz=240,slow=11,SNR=9.7						
AB31				⇓Sn	Sn	10 20 28.3	-7.6
	comp=Z,0.5nm,0.3s,baz=240,slow=23,SNR=8.7						
AB31	Akbulak array	11.23	53	Pn	Pn	10 18 31.5	+0.3
	comp=Z,0.3nm,0.5s,baz=240,SNR=9.7						
AB31				Sn	Sn	10 20 28.3	-7.6
	comp=Z,0.5nm,0.3s,SNR=8.7						

*ISK **08** 10:24:31.0, 39°.21N×29°.36E, h6km, MD2.9*
*CSEM **08** 10:24:31.9±0.1, 39°.21N×29°.40E, h10km, MD2.9, Error ellipse: s-maj=3.0km s-min=2.3km az=145.0*
*ISCJB **08** 10:24:31.8±0.5, 39°.23N±0°.03×29°.36E±0°.03, h5km±4km, Error ellipse: s-maj=4.6km s-min=3.4km az=142.5*
ISC 08 10:24:31.9±0.9**, 39°.22N**±0°.02×**29°.39E**±0°.02**, h12**km±6km**,** **n60,** σ**0s.59**/78**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.15	152	i P	Pb	10 24 36.7	0.0
GDZ				i S	Sg	10 24 38.7	+0.5
GDZ	Gediz	0.15	152	i P	Pb	10 24 36.7	0.0
GDZ				i S	Sg	10 24 38.7	+0.5
TVSB	Tavsanli	0.23	14	ePG	Pg	10 24 37.1	+0.2
TVSB				eSG	Sg	10 24 40.0	-0.4
TVSB	Tavsanli	0.23	14	ePg	Pg	10 24 37.1	+0.2
TVSB				eSg	Sg	10 24 40.0	-0.4
DEMI	Demirci	0.55	251	i P	Pb	10 24 43.6	+0.1
DEMI				i S	Sg	10 24 49.8	-0.3
DEMI	Demirci	0.55	251	i P	Pb	10 24 43.6	+0.1
DEMI				i S	Sg	10 24 49.8	-0.3
DST	Dursunbey	0.71	303	ePG	Pg	10 24 45.3	-0.4
DST	Dursunbey	0.71	303	ePg	Pg	10 24 45.3	-0.4
DURS	Dursunbey	0.81	298	i P	Pg	10 24 47.9	+0.5
DURS				i S	Sn	10 25 02.2	+1.2
DURS	Dursunbey	0.81	298	i P	Pg	10 24 47.9	+0.5
DURS				i S	Sn	10 25 02.2	+1.2
KHL	Karahalli	0.90	173	ePG	Pb	10 24 48.6	-0.9
KHL	Karahalli	0.90	173	ePg	Pb	10 24 48.6	-0.9
KULA	Kula-Manisa	0.91	219	ePG	Pb	10 24 48.8	-0.8
KULA				eSG	Sb	10 25 00.5	-1.1
KULA	Kula-Manisa	0.91	219	ePg	Pb	10 24 48.8	-0.8
KULA				eSg	Sb	10 25 00.5	-1.1
ORLT	Orhaneli	0.91	335	ePG	Pb	10 24 48.9	-0.7
ORLT	Orhaneli	0.91	335	ePg	Pb	10 24 48.9	-0.7
MANT	Manisa	0.98	222	i P	Pb	10 24 50.3	-0.5
MANT				i S	Sg	10 25 04.4	+0.9
MANT	Manisa	0.98	222	i P	Pb	10 24 50.3	-0.5
MANT				i S	Sg	10 25 04.4	+0.9
CAVI	Cavuskoy	1.04	19	ePG	Pb	10 24 51.7	-0.1
CAVI	Cavuskoy	1.04	19	ePg	Pb	10 24 51.7	-0.1
BORA	Eskisehir	1.05	51	i P	Pn	10 24 52.2	-0.3
BORA				i S	Sn	10 25 07.2	+0.1
BORA	Eskisehir	1.05	51	i P	Pn	10 24 52.2	-0.3
BORA				i S	Sn	10 25 07.2	+0.1
IZI	Iznik	1.12	3	ePN	Pb	10 24 53.0	-0.1
IZI	Iznik	1.12	3	ePn	Pb	10 24 53.0	-0.1
SHUT	Suhut-Afyon	1.12	126	ePN	Pn	10 24 53.3	-0.2
SHUT	Suhut-Afyon	1.12	126	ePn	Pn	10 24 53.3	-0.2
ESKT	Eskisehir	1.17	75	ePN	Pb	10 24 54.0	-0.1
ESKT	Eskisehir	1.17	75	ePn	Pb	10 24 54.0	-0.1
SEYT	Eskypehyr	1.17	75	i P	Pg	10 24 54.5	+0.1
SEYT				i S	Sg	10 25 10.2	+0.6
SEYT	Eskypehyr	1.17	75	i P	Pg	10 24 54.5	+0.1
SEYT				i S	Sg	10 25 10.2	+0.6
GEMT	Gemlik	1.22	353	ePN	Pb	10 24 54.8	-0.1
GEMT	Gemlik	1.22	353	ePn	Pb	10 24 54.8	-0.1
ADVT	Abdulvahap	1.24	12	ePN	Pb	10 24 55.2	0.0
ADVT	Abdulvahap	1.24	12	ePn	Pb	10 24 55.2	0.0
BALB	Balikesir	1.24	290	ePN	Pb	10 24 55.0	-0.2
BALB	Balikesir	1.24	290	ePn	Pb	10 24 55.0	-0.2
AKHS	Akhisar	1.27	255	i P	Pb	10 24 55.9	+0.1
AKHS				i S	Sg	10 25 13.1	+0.2
AKHS	Akhisar	1.27	255	i P	Pb	10 24 55.9	+0.1
AKHS				i S	Sg	10 25 13.1	+0.2
GPA	Golpazari	1.28	33	ePN	Pb	10 24 56.2	+0.3
GPA	Golpazari	1.28	33	ePn	Pb	10 24 56.2	+0.3
KCTX	Karacabey (Bur	1.31	323	ePN	Pb	10 24 56.1	-0.4
KCTX	Karacabey (Bur	1.31	323	ePn	Pb	10 24 56.1	-0.4
GULT	Gulveren	1.49	35	ePN	Pb	10 24 59.4	-0.1
GULT	Gulveren	1.49	35	ePn	Pb	10 24 59.4	-0.1
GONE	Gonen-Balikesi	1.55	303	ePN	Pb	10 24 59.9	-0.6
GONE	Gonen-Balikesi	1.55	303	ePn	Pb	10 24 59.9	-0.6
HRT	Hereke	1.61	7	ePN	Pb	10 25 00.8	-0.8
HRT	Hereke	1.61	7	ePn	Pb	10 25 00.8	-0.8
EDC	Edincik	1.63	314	ePN	Pb	10 25 01.0	-0.8
EDC	Edincik	1.63	314	ePn	Pb	10 25 01.0	-0.8
BUY	Buyukada	1.64	353	ePN	Pb	10 25 01.3	-0.7
BUY	Buyukada	1.64	353	ePn	Pb	10 25 01.3	-0.7
SVRH	Sivrihisar-ESK	1.67	82	ePN	Pb	10 25 02.1	-0.4
SVRH	Sivrihisar-ESK	1.67	82	ePn	Pb	10 25 02.1	-0.4
MRMT	Marmara Adasi	1.95	316	ePN	Pn	10 25 05.3	+0.5
MRMT	Marmara Adasi	1.95	316	ePn	Pn	10 25 05.3	+0.5
KRBG	Karabiga-Canak	1.99	307	ePN	Pb	10 25 06.6	-1.4
KRBG	Karabiga-Canak	1.99	307	ePn	Pb	10 25 06.6	-1.4
GELI	Tayfur-Gelibol	2.54	299	ePN	Pn	10 25 13.7	+0.9
GELI	Tayfur-Gelibol	2.54	299	ePn	Pn	10 25 13.7	+0.9

*IDC **08** 10:27:34.2±1.1, 52°.81N×165°.12W, h0km, mb4.0/13, mb1 4.2/15, mb1mx4.0/29, mbtmp4.0/15, ML3.8/2, MS3.2/3, Ms1 3.2/3, ms1mx2.8/43, Error ellipse: s-maj=30.6km s-min=14.7km az=172.0*
*ISCJB **08** 10:27:34.3±1.2, 52°.57N±0°.04×164°.96W±0°.05, h15km±8km, mb4.0/18, MS3.0/2, Error ellipse: s-maj=6.8km s-min=4.8km az=166.0*
*NEIC **08** 10:27:36.9, 52°.59N×164°.99W, h20km, mb4.0/5, ML3.7(AEIC), After AEIC.*
ISC 08 10:27:34.6±2.9**, 52°.67N**±0°.06×**165°.03W**±0°.04**, h7**km±17km**,** **n75,** σ**1s.11**/84**, mb4.2**/18**, South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	1.48	324	P	Pn	10 28 01.5	-0.1
UNV				S	Sb	10 28 20.9	-0.5
AKSA	Akutan Strait	1.53	345	P	Pn	10 28 02.3	0.0
AKSA				S	Sb	10 28 22.8	0.0
AKUT	Akutan	1.54	343	P	Pn	10 28 02.7	+0.2
AKUT				S	Sb	10 28 23.0	-0.1
ZRO	Akutan Zero	1.54	339	P	Pn	10 28 02.7	+0.2
MREP	Makushin Rep't	1.54	319	P	Pn	10 28 03.1	+0.5
MGOD	Makushin Gods	1.58	316	P	Pn	10 28 03.2	0.0
AKRB	Akutan Reef Bi	1.59	337	P	Pn	10 28 03.5	+0.2
AKRB				S	Sg	10 28 26.1	+0.3
AKLV	Akutan Long Va	1.60	340	P	Pn	10 28 03.2	-0.1
MSW	Makushin Switc	1.64	321	P	Pn	10 28 04.0	+0.2
MSW				S	Sn	10 28 24.7	-0.5
MTBL	Makushin Table	1.64	323	P	Pn	10 28 04.4	+0.5
AKGG	Akutan Green G	1.64	340	P	Pn	10 28 04.2	+0.3
MCIR	Makushin Cirqu	1.71	320	P	Pn	10 28 05.4	+0.5
OKFG	Magazine Ridge	1.89	294	P	Pn	10 28 07.2	-0.2
OKSO	Okmok South	2.02	291	P	Pn	10 28 08.7	-0.4
OKSO				S	Sn	10 28 33.3	-1.2
OKCE	Okmok Cone E	2.04	293	P	Pn	10 28 09.7	+0.2
OKSP	Okmok Steeple	2.06	288	P	Pn	10 28 09.9	+0.2
SSLS	Shishaldin Sou	2.14	16	P	Pn	10 28 11.1	+0.2
SSLS				S	Sb	10 28 38.8	-1.7
SSLW	Shishaldin Wes	2.18	14	P	Pn	10 28 11.8	+0.5
SSLN	Shishaldin Nor	2.24	16	P	Pn	10 28 12.6	+0.4
FALS	False Pass	2.40	23	P	Pn	10 28 14.2	-0.1
FALS				S	Sn	10 28 44.0	+0.2
DRIA	Deer Island	2.83	34	P	Pn	10 28 20.0	-0.2
DT1	Dutton Round H	2.94	33	P	Pn	10 28 21.8	+0.1
PS4A	Pavlof South-4	3.27	34	P	Pn	10 28 27.4	+1.1
SDPT	Sand Point	3.80	43	P	Pn	10 28 33.9	+0.4
SDPT				S	Sn	10 29 17.1	-1.4
VNHG	Veniaminof 1	4.94	42	P	Pn	10 28 49.7	+0.4
CHGN	Chignik	5.30	44	ePn	Pn	10 28 54.5	+0.3
CHGN				eSn	Sn	10 29 53.7	-1.8
KOFP	Korovin Flat P	5.56	270	P	Pn	10 28 58.3	+0.5
ANNW	Aniakchak Nort	5.84	40	P	Pn	10 29 01.7	+0.1
KABR	Katmai Barrier	7.92	42	P	Pn	10 29 29.3	-0.8
KDAK	Kodiak Island	8.76	49	Pn	Pn	10 29 40.6	-1.0
KDAK				Sn	Sn	10 31 13.5	-7.0
KDAK	Kodiak Island	8.76	49	Pn	Pn	10 29 40.6	-1.0
	2.0nm,0.3s,baz=216,slow=5.5,SNR=30						
KDAK				Sn	Sn	10 31 13.5	-7.0
	0.4nm,0.3s,baz=55,slow=7.4,SNR=4.1						
AMKA	Amchitka	9.75	269	P	Pn	10 29 53.8	-1.4
PPLA	Purkeypile	12.30	29	Pn	Pn	10 30 29.0	-1.2
	3.6nm,0.8s						
FX1	Attu Island--F	13.20	280	Pn	Pn	10 30 43.8	+1.5
FX1	Attu Island--F	13.20	280	Pn	Pn	10 30 43.8	+1.5
	5.6nm,0.3s,baz=210,slow=6.2,SNR=47						
ILAR	Eielson Array	15.28	30	Pn	Pn	10 31 07.2	-3.3
ILAR	Eielson Array	15.28	30	Pn	Pn	10 31 07.2	-3.3
	0.1nm,0.3s,baz=224,slow=11,SNR=6.8						
ILAR				LR	LR	10 38 05.5	
	comp=Z,71nm,18.6s,baz=314,slow=42						
COLD	Coldfoot	16.31	21	eP	P	10 31 27.4	+0.5
	9.4nm,0.8s						
EGAK	Eagle	17.20	36	ePn	P	10 31 36.6	-0.1
	4.0nm,0.8s						
DLBC	Dease Lake	20.45	60	LR	LR	10 40 29.5	
	comp=Z,52nm,18.6s,baz=297,slow=38						
INK	Inuvik	21.67	32	P	P	10 32 24.2	-1.2
INK	Inuvik	21.67	32	P	P	10 32 24.2	-1.2
	9.7nm,0.8s,baz=238,slow=12,SNR=47						
INK				LR	LR	10 42 41.6	
	comp=Z,70nm,18.4s,baz=30,slow=42						
PETK	Petropavlovsk-	22.34	286	P	P	10 32 31.9	-0.9
PETK	Petropavlovsk-	22.34	286	P	P	10 32 31.9	-0.9
	7.1nm,0.6s,baz=88,slow=15,SNR=21						
YKA	Yellowknife Ar	28.04	50	P	P	10 33 27.0	+0.9
YKA	Yellowknife Ar	28.04	50	P	P	10 33 27.0	+0.9
	0.3nm,0.5s,baz=270,slow=8.2,SNR=11						
PDAR	Pinedale Array	37.74	82	P	P	10 34 52.5	+1.4
PDAR	Pinedale Array	37.74	82	P	P	10 34 52.5	+1.4
	0.7nm,0.6s,baz=304,slow=3.9,SNR=7.5						
KSRS	Korea Array	47.99	280	P	P	10 36 12.3	-1.6
	1.0nm,0.4s,baz=54,slow=7.3,SNR=8.2						
KSAR	Wonju Array Be	48.02	280	P	P	10 36 12.3	-1.9
DAG	Danmarks Havn	49.08	10	i P	P	10 36 22.5	+0.7
	2.7nm,0.7s						
SUMG	Summit	49.69	18	eP	P	10 36 28.6	+1.6
	8.6nm,0.7s						
SUMG	Summit	49.69	18	i P	P	10 36 28.8	+1.8
	6.5nm,0.9s						
SUMG				i		10 36 39.9	
TXAR	Lajitas Array	50.10	93	P	P	10 36 31.1	+0.7
TXAR	Lajitas Array	50.10	93	P	P	10 36 31.1	+0.7
	0.5nm,0.5s,baz=302,slow=5.5,SNR=16						
SONM	Songino Array	53.40	303	P	P	10 36 55.1	+0.3
SONM	Songino Array	53.40	303	P	P	10 36 55.1	+0.3
	3.2nm,1.1s,baz=65,slow=6.2,SNR=8.9						
ARCES	ARCESS Array B	57.87	356	P	P	10 37 26.7	+0.3
ARCES	ARCESS Array B	57.87	356	P	P	10 37 26.7	+0.3
	3.7nm,0.9s,baz=10,slow=7.4,SNR=5.9						
MKAR	Makanchi Array	65.48	316	eP	P	10 38 18.1	0.0
MKAR	Makanchi Array	65.48	316	P	P	10 38 17.9	-0.3
	1.5nm,0.6s,baz=45,slow=6.5,SNR=15						
FINES	FINESS Array B	65.89	354	P	P	10 38 20.7	+0.2
FINES	FINESS Array B	65.89	354	P	P	10 38 20.7	+0.2
	2.1nm,0.5s,baz=21,slow=8.1,SNR=7.8						
TKM2	Tokmak 2	71.42	318	eP	P	10 38 56.3	+0.7
	1.9nm,0.6s						
ABKAR	Akbulak array	71.53	331	eP	P	10 38 56.9	+1.1
AAK	Ala-Archa	72.11	318	eP	P	10 39 01.0	+1.3
	0.5nm,0.8s						
KKAR	Karatay Array	73.28	321	eP	P	10 39 07.2	+0.8
CMAR	Chiang Mai Arr	79.11	286	P	P	10 39 39.8	-0.2
CMAR	Chiang Mai Arr	79.11	286	P	P	10 39 39.8	-0.2
	0.7nm,0.5s,baz=30,slow=5.2,SNR=5.3						
KBZ	Khabaz	81.01	340	P	P	10 39 51.4	+1.6
KBZ	Khabaz	81.01	340	P	P	10 39 51.4	+1.6
	1.0nm,0.5s,baz=24,slow=2.8,SNR=3.7						
BRTR	Keskin Array B	86.57	346	P	P	10 40 19.3	+0.8
BRTR	Keskin Array B	86.57	346	P	P	10 40 19.3	+0.8
	0.9nm,0.6s,baz=327,slow=3.0,SNR=4.7						
WRA	Warramunga Arr	89.31	235	P	P	10 40 28.6	-3.0
WRA	Warramunga Arr	89.31	235	P	P	10 40 28.6	-3.0
	0.3nm,0.7s,baz=41,slow=5.8,SNR=3.9						

IDC 08 10:59:25.4±7.8**, 6°.76S**×**148°.99E, h64**km±59km**, mb3.3**/2**, mb1 3.6**/4**, mb1mx3.2**/19**, mbtmp3.5**/4**, ML3.3**/2**, Error ellipse: s-maj=94.3km s-min=53.1km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.19	214	P	Pn	11 00 13.5	+0.3
	8.9nm,0.3s,baz=22,slow=8.0,SNR=26						
PMG				S	Sn	11 00 50.9	+0.8
	4.6nm,0.3s,baz=154,slow=18,SNR=3.3						
WRA	Warramunga Arr	19.34	226	P	P	11 03 45.0	-0.7
	0.2nm,0.3s,baz=52,slow=11,SNR=16						
ASAR	Alice Springs	22.20	219	P	P	11 04 16.0	-0.6
	0.8nm,0.8s,baz=42,slow=9.5,SNR=7.9						
FITZ	Fitzroy Crossi	25.40	242	P	P	11 04 47.2	+0.1
	1.6nm,0.6s,baz=47,slow=8.8,SNR=4.8						
TORD	Torodi Ar. Bea	147.19	284	PKPbc	PKPbc	11 19 02.2	-0.3
	0.5nm,0.6s,baz=74,slow=3.6,SNR=4.6						

IDC 08 11:18:48.8±48.0**, 16°.59S**×**176°.25W, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.6**/19**, mbtmp4.1**/3**, Error ellipse: s-maj=897.8km s-min=160.5km az=78.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.07	240	P	P	11 26 34.5	+0.1
	1.2nm,0.4s,baz=100,slow=10,SNR=6.0						
WRA	Warramunga Arr	46.91	258	P	P	11 27 21.2	-0.3
	0.4nm,0.4s,baz=94,slow=7.3,SNR=22						
ASAR	Alice Springs	47.14	253	P	P	11 27 23.2	-0.1
	3.2nm,0.4s,baz=88,slow=8.4,SNR=73						

*ISK **08** 11:30:13.0, 39°.40N×28°.10E, h15km, MD2.7*
*CSEM **08** 11:30:13.9±0.2, 39°.44N×28°.13E, h12km, MD2.7, Error ellipse: s-maj=5.2km s-min=2.9km az=33.0*
*ISCJB **08** 11:30:13.6±0.6, 39°.41N±0°.03×28°.10E±0°.04, h7km±5km, Error ellipse: s-maj=6.6km s-min=3.7km az=35.1*
*DDA **08** 11:30:14.8, 39°.46N×28°.14E, h7km, MD2.8*
ISC 08 11:30:13.5±1.1**, 39°.43N**±0°.03×**28°.10E**±0°.03**, h8**km±9km**,** **n34,** σ**0s.49**/52**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.27	321	ePG	Pb	11 30 20.1	-0.4
BALB				eSG	Sb	11 30 25.1	-0.2
BALB	Balikesir	0.27	321	ePg	Pb	11 30 20.1	-0.4
BALB				eSg	Sb	11 30 25.1	-0.2
DURS	Dursunbey	0.34	60	i P	Pg	11 30 19.9	-0.2
DURS				i S	Sg	11 30 25.4	+0.8
DURS	Dursunbey	0.34	60	i P	Pg	11 30 19.9	-0.2
DURS				i S	Sg	11 30 25.4	+0.8
DST	Dursunbey	0.44	67	ePG	Pg	11 30 21.9	0.0
DST	Dursunbey	0.44	67	ePg	Pg	11 30 22.0	0.0
BALY	Balya	0.48	310	i P	Pb	11 30 23.8	-0.4
BALY				i S	Sb	11 30 32.2	+0.7
BALY	Balya	0.48	310	i P	Pb	11 30 23.8	-0.4
BALY				i S	Sb	11 30 32.2	+0.7
GONE	Gonen-Balikesi	0.69	333	ePG	Pg	11 30 26.9	+0.1
GONE				eSG	Sb	11 30 37.0	-0.5
GONE	Gonen-Balikesi	0.69	333	ePg	Pg	11 30 26.9	+0.1
GONE				eSg	Sb	11 30 37.0	-0.5
MANT	Manisa	1.01	159	i P	Pn	11 30 34.2	+0.1
MANT				i S	Sn	11 30 49.3	+0.7
MANT	Manisa	1.01	159	i P	Pn	11 30 34.2	+0.1
MANT				i S	Sn	11 30 49.3	+0.7
KULA	Kula-Manisa	1.02	154	ePG	Pg	11 30 32.9	-0.1
KULA				eSG	Sg	11 30 46.0	-0.2
KULA	Kula-Manisa	1.02	154	ePg	Pg	11 30 32.9	-0.1
KULA				eSg	Sg	11 30 46.0	-0.2
TVSB	Tavsanli	1.05	89	ePG	Pb	11 30 33.8	-0.2
TVSB				eSG	Sn	11 30 49.0	-0.6
TVSB	Tavsanli	1.05	89	ePg	Pb	11 30 33.8	-0.2
TVSB				eSg	Sn	11 30 49.0	-0.6
ULDT	Uludag	1.07	48	i P	Pn	11 30 34.8	-0.1
ULDT				i S	Sn	11 30 51.3	+1.3
ULDT	Uludag	1.07	48	i P	Pn	11 30 34.8	-0.1
ULDT				i S	Sn	11 30 51.3	+1.3
GDZ	Gediz	1.13	107	i P	Pn	11 30 36.1	+0.4
GDZ				i S	Sn	11 30 51.3	-0.1
GDZ	Gediz	1.13	107	i P	Pn	11 30 36.1	+0.4
GDZ				i S	Sn	11 30 51.3	-0.1
KRBG	Karabiga-Canak	1.14	328	ePN	Pg	11 30 35.0	-0.4
KRBG	Karabiga-Canak	1.14	328	ePn	Pg	11 30 35.0	-0.4

MRMT	Marmara Adasi	1.23	342	ePN	Pb	11 30 36.9	-0.1
MRMT	Marmara Adasi	1.23	342	ePn	Pb	11 30 36.9	-0.1
IZI	Iznik	1.39	49	ePN	Pn	11 30 38.7	-0.6
IZI	Iznik	1.39	49	ePn	Pn	11 30 38.7	-0.6
LPK	Lapseki	1.39	313	ePN	Pn	11 30 39.5	+0.3
LPK	Lapseki	1.39	313	ePn	Pn	11 30 39.5	+0.3
CAVI	Cavuskoy	1.55	60	ePN	Pn	11 30 40.7	-0.6
CAVI	Cavuskoy	1.55	60	ePn	Pn	11 30 40.7	-0.6
GELI	Tayfur-Gelibol	1.58	308	ePN	Pn	11 30 41.5	-0.2
GELI	Tayfur-Gelibol	1.58	308	ePn	Pn	11 30 41.5	-0.2
ERIK	Erikli-Kesan	1.73	316	ePN	Pn	11 30 43.8	-0.1
ERIK	Erikli-Kesan	1.73	316	ePn	Pn	11 30 43.8	-0.1

GUC 08 11:31:40.0±0.8, 35°.04S×70°.33W, h25km±6km, MD3.7, ML3.0, 5C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	Las Melosas	1.20	5	⇑iP	Pn	11 32 01.0	-0.3
LMEL				iS	Sb	11 32 17.2	-0.2
LMEL				AML	AML	11 32 18.2	
	comp=E,217nm,0.5s						
PCH	Pirque	1.43	354	⇑iP	Pn	11 32 04.5	+0.1
PCH				iS	Sb	11 32 23.5	-0.4
TACH	Talagante	1.47	340	⇑iP	Pn	11 32 04.3	-0.7
TACH				iS	Sn	11 32 22.7	-0.8
ANTU	Antumapu	1.49	350	iS	Sb	11 32 25.0	-0.6
ANTU				AML	AML	11 32 26.3	
	comp=E,368nm,0.3s						
CLCH	Cerro Calan	1.65	354	⇑iP	Pn	11 32 08.4	+0.9
CLCH				iS	Sb	11 32 29.8	-0.5
CLCH				AML	AML	11 32 34.5	
	comp=N,193nm,0.7s						
PEL	Peldehue	1.92	351	⇑iP	Pn	11 32 12.5	+1.4
PEL				iS	Sb	11 32 37.1	-0.8
PEL				AML	AML	11 32 44.0	
	comp=E,358nm,0.6s						
ROCH	El Roble	2.14	344	⇓iP	Pn	11 32 15.6	+1.2
ROCH				iS	Sb	11 32 43.1	-1.6
ROCH				AML	AML	11 32 46.4	
	comp=E,315nm,0.4s						

*ATH **08** 11:33:02.7, 40°.23N×21°.06E, h15km±4km, MD3.1/10*
*CSEM **08** 11:33:03.8±0.3, 40°.17N×21°.04E, h10km, ML2.4/6, Error ellipse: s-maj=7.3km s-min=4.6km az=115.0*
*THE **08** 11:33:04.1, 40°.13N×21°.02E, h0km±2km, ML2.4/6, Error ellipse: s-maj=2.7km s-min=0.8km az=321.0*
*ISCJB **08** 11:33:04.1±0.6, 40°.14N±0°.03×21°.04E±0°.04, h10km±5km, Error ellipse: s-maj=5.6km s-min=4.2km az=24.1*
ISC 08 11:33:04.0±0.9, 40°.18N±0°.02×21°.05E±0°.03, h14km±7km, n43, σ1^{s}23/62, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	Nestorio	0.24	0	P	Pg	11 33 09.1	-0.1
NEST				S	Sg	11 33 14.8	+2.0
NEST	Nestorio	0.24	0	P	Pg	11 33 09.1	-0.1
NEST				S	Sg	11 33 14.8	+2.0
JAN	Janina	0.54	196	P	Pg	11 33 14.1	-0.6
JAN				S	Sg	11 33 20.5	-1.4
JAN	Janina	0.54	196	ePN	Pg	11 33 13.6	-1.1
JAN	Janina	0.54	196	ePn	Pg	11 33 13.6	-1.1
JAN	Janina	0.54	196	P	Pg	11 33 14.1	-0.6
JAN				S	Sg	11 33 20.5	-1.4
KZN	Kozani	0.57	77	P	Pb	11 33 16.1	+0.3
KZN	Kozani	0.57	77	ePN	Pg	11 33 13.5	-1.7
KZN	Kozani	0.57	77	ePn	Pg	11 33 13.5	-1.7
KZN	Kozani	0.57	77	P	Pb	11 33 16.1	+0.3
FNA	Florina	0.66	22	P	Pg	11 33 17.2	+0.4
FNA				S	Sb	11 33 27.1	+0.8
FNA	Florina	0.66	22	ePB	Pg	11 33 13.9	-2.9
FNA				eSN	Sg	11 33 23.5	-2.0
FNA	Florina	0.66	22	ePb	Pg	11 33 13.9	-2.9
FNA	Florina	0.66	22	P	Pg	11 33 17.2	+0.4
FNA				eSn	Sg	11 33 23.5	-2.0
FNA				S	Sb	11 33 27.1	+0.8
BIA	Bitola	0.87	14	ePg	Pn	11 33 22.1	+0.3
BIA				eSg	Sn	11 33 36.0	+1.6
BIA	Bitola	0.87	14	ePg	Pn	11 33 22.1	+0.3
THL	Klokotos Trika	0.96	129	P	Pg	11 33 21.4	-1.1
THL				S	Sn	11 33 37.7	+1.2
THL	Klokotos Trika	0.96	129	ePN	Pg	11 33 21.5	-1.1
THL				eSN	Sb	11 33 35.9	+0.9
THL	Klokotos Trika	0.96	129	ePn	Pg	11 33 21.5	-1.1
THL				eSn	Sb	11 33 35.9	+0.9
KEK	Kerkira	1.07	245	P	Pg	11 33 23.4	-1.2
KEK				S	Sn	11 33 38.9	-0.2
KEK	Kerkira	1.07	245	ePN	Pg	11 33 23.4	-1.2
KEK				eSN	Sn	11 33 39.1	0.0
KEK	Kerkira	1.07	245	P	Pg	11 33 23.4	-1.2
KEK				eSn	Sn	11 33 39.1	0.0
LIT	Litokhoron	1.11	93	P	Pb	11 33 25.1	+0.2
LIT				S	Sn	11 33 42.5	+2.3
LIT	Litokhoron	1.11	93	ePB	Pb	11 33 22.8	-2.1
LIT	Litokhoron	1.11	93	ePb	Pb	11 33 22.8	-2.1
LIT	Litokhoron	1.11	93	P	Pb	11 33 25.1	+0.2
LIT				S	Sn	11 33 42.5	+2.3
GRG	Griva	1.29	52	ePN	Pn	11 33 26.3	-1.4
GRG	Griva	1.29	52	ePn	Pn	11 33 26.3	-1.4
EVR	Evrytania	1.39	155	ePN	Pn	11 33 29.5	+0.4
EVR	Evrytania	1.39	155	ePn	Pn	11 33 29.5	+0.4
LKD2	Lefkada island	1.42	192	P	Pg	11 33 30.7	-0.6
LKD2	Lefkada island	1.42	192	ePN	Pb	11 33 30.3	+0.1
LKD2	Lefkada island	1.42	192	ePn	Pb	11 33 30.3	+0.1
LKD2	Lefkada island	1.42	192	P	Pg	11 33 30.7	-0.6
MAKR	Makrakomi, Fth	1.43	144	P	Pn	11 33 30.0	+0.4
MAKR	Makrakomi, Fth	1.43	144	P	Pn	11 33 30.0	+0.4
AGG	Agios Georgios	1.52	139	P	Pb	11 33 32.1	+0.1
AGG				S	Sg	11 33 52.9	-0.1
AGG	Agios Georgios	1.52	139	ePN	Pb	11 33 32.2	+0.2
AGG	Agios Georgios	1.52	139	ePn	Pb	11 33 32.2	+0.2
AGG				S	Sg	11 33 52.9	-0.1
XOR	Xorichti	1.84	115	P	Pn	11 33 35.8	+0.6
XOR	Xorichti	1.84	115	P	Pn	11 33 35.8	+0.6
EFP	Efpalio	1.87	159	P	Pn	11 33 36.1	+0.5
EFP	Efpalio	1.87	159	P	Pn	11 33 36.1	+0.5

*CSEM **08** 11:34:48.8, 38°.95N×35°.00E, h4km, MD2.8, After ISK*
ISK 08 11:34:48.8, 38°.95N×35°.00E, h4km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	Yozgat	0.73	19	ePG	Pg	11 35 03.5	+0.4
YOZ				eSG	Sb	11 35 14.4	-0.5
YOZ	Yozgat	0.73	19	ePg	Pg	11 35 03.5	+0.4
YOZ				eSg	Sb	11 35 14.4	-0.5
CORM	Corum	1.26	347	ePN	Pn	11 35 13.6	+0.2
CORM				eSN	Sn	11 35 31.3	+0.3
CORM	Corum	1.26	347	ePn	Pn	11 35 13.6	+0.2
CORM				eSn	Sn	11 35 31.3	+0.3
SULT	Sultanhani-AKS	1.39	238	ePN	Pn	11 35 15.2	+0.1
SULT	Sultanhani-AKS	1.39	238	ePn	Pn	11 35 15.2	+0.1
AFSR	Af¯ar-Bala (A	1.58	289	ePN	Pg	11 35 19.2	-0.1
AFSR	Af¯ar-Bala (A	1.58	289	ePn	Pg	11 35 19.2	-0.1

IDC 08 11:47:49.2±3.6, 6°.44S×148°.67E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.4/19, mbtmp3.6/4, ML2.7/1, Error ellipse: s-maj=104.2km s-min=34.7km az=109.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.31	207	Pn	Pn	11 48 43.9	+1.5
	6.7nm,0.3s,baz=53,slow=7.1,SNR=20						
PMG				Sn	Sn	11 49 24.2	+1.7
	9.4nm,0.3s,baz=47,slow=7.3,SNR=7.9						
WRA	Warramunga Arr	19.34	225	P	P	11 52 15.8	-0.7
	0.2nm,0.3s,baz=50,slow=11,SNR=15						
ASAR	Alice Springs	22.25	218	P	P	11 52 46.8	-1.2
	0.6nm,0.7s,baz=54,slow=8.8,SNR=6.2						
FITZ	Fitzroy Crossi	25.28	241	P	P	11 53 17.7	+0.2
	1.5nm,0.6s,baz=65,slow=12,SNR=8.1						
TORD	Torodi Ar. Bea	146.81	284	PKPbc	PKPbc	12 07 33.9	-0.5
	0.3nm,0.7s,baz=98,slow=1.7,SNR=2.4						

*ISCJB **08** 12:05:36.2±0.8, 6°.08S±0°.04×130°.4E±0°.1, h124km, mb3.5/2, Error ellipse: s-maj=19.2km s-min=5.5km az=6.1*
*AUST **08** 12:05:37.3, 5°.98S×130°.53E, h100km*
*IDC **08** 12:05:43.0±5.2, 6°.40S×130°.13E, h170km±49km, mb3.3/2, mb1 3.4/5, mb1mx3.1/20, mbtmp3.2/5, Error ellipse: s-maj=60.4km s-min=20.5km az=70.0*
ISC 08 12:05:37.3±1.0, 6°.14S±0°.06×130°.4E±0°.1, h124km, n11, σ2^{s}13/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.67	30	S	Sn	12 07 14.0	-1.5
	baz=3.5,SNR=4.4						
SWI	Sorong	5.30	9	S	Sn	12 07 53.0	-1.5
	baz=5.2,SNR=5.4						
MTN	Manton Dam	6.70	174	P	Pn	12 07 17.3	+4.0
	baz=6.9,SNR=7.8						
MTN				S	Sn	12 08 28.6	+0.3
	baz=6.9,SNR=6.4						
KDU	Kakadu	6.81	163	P	Pn	12 07 17.0	+2.2
	baz=7.0,SNR=16						
KDU				S	Sn	12 08 29.1	-1.9
	baz=7.0,SNR=8.3						
KNRA	Kununurra	9.62	190	P	Pn	12 07 55.1	+2.4
	baz=9.9,SNR=7.7						
KNRA				S	Sn	12 09 36.0	-3.0
	baz=9.9,SNR=5.4						
FITZ	Fitzroy Crossi	12.78	201	P	Pn	12 08 34.8	+0.2
	0.1nm,0.3s,baz=35,slow=13,SNR=11						
FITZ				S	Sn	12 10 49.2	-6.3
	0.2nm,0.3s,baz=218,slow=18,SNR=5.0						
WRA	Warramunga Arr	14.24	165	P	Pn	12 08 54.0	+0.6
	0.5nm,0.3s,baz=351,slow=12,SNR=46						
WRA				S	Sn	12 11 21.9	-8.9
	0.5nm,0.3s,baz=343,slow=22,SNR=8.7						
COEN	Coen	14.75	123	P	P	12 09 03.1	+0.4
	baz=15,SNR=4.3						
ASAR	Alice Springs	17.75	170	P	P	12 09 36.9	+1.1
	0.4nm,0.3s,baz=347,slow=8.8,SNR=16						
ASAR				S	S	12 12 49.6	-4.3
	0.1nm,0.3s,baz=356,slow=26,SNR=3.8						
STKA	Stephens Creek	27.65	159	P	P	12 11 14.6	+1.0
	0.7nm,0.4s,baz=335,slow=9.5,SNR=7.1						
MKAR	Makanchi Array	67.75	326	P	P	12 16 22.2	+0.6
	0.5nm,0.7s,baz=118,slow=8.3,SNR=3.7						

IDC 08 12:30:12.4±0.9, 10°.25S×161°.40E, h88km±6km, mb3.6/6, mb1 3.9/7, mb1mx3.6/19, mbtmp3.7/7, Error ellipse: s-maj=18.2km s-min=11.1km az=33.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	1.65	299	P	Pn	12 30 39.8	-0.2
	100nm,0.3s,baz=143,slow=2.4,SNR=39						
HNR				S	Sn	12 31 00.9	0.0
	494nm,0.3s,baz=210,slow=20,SNR=26						
DZM	Mont Dzumac	12.71	158	P	Pn	12 33 11.1	+1.0
	1.9nm,0.3s,baz=128,slow=17,SNR=40						
DZM				S	Sn	12 35 28.2	-1.8
	1.0nm,0.3s,baz=183,slow=23,SNR=5.8						
WRA	Warramunga Arr	27.81	247	P	P	12 35 53.0	-0.6
	2.3nm,0.7s,baz=76,slow=9.1,SNR=22						
WRA				pP	pP	12 36 15.0	+1.3
	1.5nm,0.6s,baz=76,slow=9.4,SNR=4.5						
ASAR	Alice Springs	29.42	240	P	P	12 36 07.0	-0.8
	0.4nm,0.5s,baz=62,slow=10,SNR=11						
ASAR				pP	pP	12 36 29.4	+1.3
	0.7nm,0.8s,baz=60,slow=9.9,SNR=3.4						
CMAR	Chiang Mai Arr	67.89	295	pP	pP	12 41 25.0	+0.3
	0.6nm,0.7s,baz=128,slow=5.8,SNR=1.7						
SONM	Songino Array	75.54	325	P	P	12 41 48.2	+0.7
	0.7nm,0.5s,baz=135,slow=5.1,SNR=7.2						
SONM				pP	pP	12 42 09.3	-1.3
	0.6nm,0.6s,baz=140,slow=6.7,SNR=4.0						
ILAR	Eielson Array	84.16	20	P	P	12 42 33.4	-0.1
	0.3nm,0.4s,baz=247,slow=5.0,SNR=6.6						
ILAR				pP	pP	12 42 56.5	-0.4
	0.4nm,0.8s,baz=247,slow=4.6,SNR=3.4						
MKAR	Makanchi Array	90.04	318	P	P	12 43 03.2	+0.8
	0.3nm,0.8s,baz=95,slow=7.2,SNR=2.7						
MKAR				pP	pP	12 43 26.4	+0.3
	0.4nm,0.7s,baz=110,slow=7.1,SNR=2.8						
YKA	Yellowknife Ar	96.24	28	P	P	12 43 30.1	-0.4
	0.3nm,0.5s,baz=262,slow=4.7,SNR=13						

*IDC **08** 12:31:38.0±2.4, 39°.02N×140°.90E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/25, mbtmp3.3/4, ML2.1/2, MS3.0/1, Ms1 3.0/1, ms1mx2.0/22, Error ellipse: s-maj=56.2km s-min=29.8km az=56.0*
*JMA **08** 12:31:39.8, 39°.09N×140°.90E, h8km±1km, M3.1*
JMA Felt I J1.
*ISCJB **08** 12:31:39.1±0.5, 39°.08N±0°.03×140°.91E±0°.05, h24km±5km, mb3.4/3, MS2.9/1, Error ellipse: s-maj=6.7km s-min=5.7km az=166.0*
ISC 08 12:31:39.6±1.0, 39°.06N±0°.04×140°.92E±0°.04, h13km±8km, n12, σ0^{s}57/17, mb3.6/3, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMK	Ichinoseki	0.26	115	P	Pg	12 31 45.2	+0.1
JMK				eS	Sg	12 31 49.1	+0.4
JRG	Rokugo	0.40	327	P	Pg	12 31 47.3	-0.3
JRG				eS	Sg	12 31 53.0	+0.1
JYK	Kaneyama	0.46	252	P	Pg	12 31 48.7	0.0
JYK				S	Sg	12 31 54.7	-0.1
JOM	Ohasama	0.50	35	P	Pg	12 31 49.2	-0.3
JOM				eS	Sg	12 31 56.1	-0.1
JIO	Ouri	0.70	151	P	Pg	12 31 53.2	+0.1
JIO				eS	Sb	12 32 02.9	-0.2
JOU	Okura	0.72	196	P	Pb	12 31 54.0	-0.1
JOU				eS	Sb	12 32 03.8	-0.2
MJAR	Matsushiro Arr	3.31	221	Pn	Pn	12 32 29.8	-1.4
	0.0nm,0.3s,baz=26,slow=14,SNR=3.0						
KSRS	Korea Array	10.35	265	Pn	Pn	12 34 09.1	+1.3
	0.2nm,0.3s,baz=76,slow=14,SNR=6.0						
GUMO	Guam	25.61	171	LR	LR	12 46 35.2	
	comp=Z,35nm,20.4s,baz=270,slow=35						
MKAR	Makanchi Array	42.73	300	P	P	12 39 36.7	+0.2
	0.2nm,0.6s,baz=77,slow=6.2,SNR=3.1						
WRA	Warramunga Arr	59.02	187	P	P	12 41 39.3	+0.1
	0.2nm,0.4s,baz=4.6,slow=7.2,SNR=8.7						
ASAR	Alice Springs	62.74	187	P	P	12 42 04.8	+0.2
	0.6nm,1.1s,baz=3.0,slow=7.4,SNR=3.6						

MAN 08 12:41:19, 17°.28N×120°.25E, h27km, mb4.4, ML3.3, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABRA	Dolores	0.58	50	eP	Pn	12 41 32.0	+0.5
ABRA				eS	Sn	12 41 41.8	+1.7
PIP	Pasuquin	1.10	19	⇑iP	Pb	12 41 40.3	+0.9
SCZP	Santa Cruz	1.53	192	eP	Pn	12 41 44.7	+0.1
CAUP	Cauayan	1.54	102	eP	Pb	12 41 48.8	+1.9
BALP	Baler	1.99	140	eP	Pb	12 41 52.9	-1.7

*IDC **08** 12:46:18.1±2.1, 21°.50S×179°.50W, h618km±23km, mb3.4/10, mb1 3.6/11, mb1mx3.4/21, mbtmp3.4/11, Error ellipse: s-maj=36.6km s-min=12.6km az=155.0*
*AUST **08** 12:46:32.4±99.0, 21°.84S×178°.63E, h600km±8km, Error ellipse: s-maj=26.9km s-min=4.5km az=254.0*
ISC 08 12:46:17.0±0.7, 21°.7S±0°.2×179°.5W±0°.1, h604km, n35, σ1^{s}43/34, mb3.8/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	10.62	45	P	P	12 48 37.3	-4.9
	1.9nm,0.3s,baz=253,slow=15,SNR=5.8						
AFI				S	S	12 50 33.9	-7.4
	1.6nm,0.3s,baz=353,slow=19,SNR=4.6						
DZM	Mont Dzumac	13.09	266	P	P	12 49 05.7	-1.0
	1.2nm,0.3s,baz=97,slow=20,SNR=12						
URZ	Urewera	16.82	189	P	P	12 49 39.0	-2.4
	0.6nm,0.3s,baz=43,slow=22,SNR=8.2						
EIDS	Eidsvold	27.23	256	P	P	12 51 16.3	+1.7
	baz=25,SNR=3.5						
CNB	Canberra Magne	30.45	237	P	P	12 51 44.4	+2.1
	baz=29,SNR=7.9						
CTA	Charters Tower	32.03	266	P	P	12 51 56.1	+0.2
	9.6nm,0.6s,baz=99,slow=10,SNR=13						
CMSA	Cobar Meteorol	32.55	245	P	P	12 52 01.5	+1.3
	baz=31,SNR=14						
QLP	Quilpie	33.42	254	P	P	12 52 08.6	+1.1
	baz=32,SNR=6.5						
MTSU	Mount Surprise	34.18	269	P	P	12 52 15.2	+1.2
	baz=32,SNR=11						
STKA	Stephens Creek	36.06	245	P	P	12 52 30.8	+1.4
	3.2nm,0.5s,baz=98,slow=9.0,SNR=16						
STKA	Stephens Creek	36.06	245	P	P	12 52 30.8	+1.4
	baz=34,SNR=12						
QIS	Mount Isa	38.12	264	P	P	12 52 46.8	+0.5
	baz=36,SNR=6.4						
MMPI	Merauke	40.79	282	S	S	12 58 27.1	-9.5
	baz=39,SNR=3.9						
BBOO	Buckleboo	40.81	245	P	P	12 53 08.3	+0.6
	baz=39,SNR=8.8						
ASAR	Alice Springs	42.93	258	P	P	12 53 25.0	+0.6
	7.6nm,0.5s,baz=92,slow=8.1,SNR=212						
ASAR				ScP	ScP	12 57 56.0	+0.6
	0.7nm,0.7s,baz=111,slow=4.6,SNR=6.4						
ASAR				S	S	12 59 06.5	-0.7
	0.7nm,0.8s,baz=95,slow=16,SNR=5.7						
WRA	Warramunga Arr	43.09	264	P	P	12 53 25.7	0.0
	3.5nm,0.3s,baz=95,slow=7.7,SNR=134						
KDU	Kakadu	46.62	273	P	P	12 53 52.9	+0.3
	baz=45,SNR=5.8						
KDU				S	S	12 59 54.8	-4.1
	baz=45,SNR=3.1						
MTN	Manton Dam	47.82	272	P	P	12 54 01.8	+0.2
	baz=46,SNR=5.0						
KNRA	Kununurra	49.23	268	P	P	12 54 12.4	+0.4
	baz=47,SNR=9.0						
FAKI	Fak Fak	50.44	285	S	S	13 00 24.8	-26
	baz=49,SNR=4.1						
FITZ	Fitzroy Crossi	51.52	264	P	P	12 54 29.5	+0.9
	baz=50,SNR=6.3						
SMRI	Semarang	68.95	271	P	P	12 56 33.5	+10
	baz=67,SNR=3.2						
YBH	Yreka Blue Hor	82.04	39	P	P	12 57 35.5	+0.2
	1.9nm,0.7s,baz=207,slow=9.0,SNR=3.9						
NVAR	Mina Array Bea	82.80	44	P	P	12 57 38.8	-0.6
	1.3nm,0.7s,baz=216,slow=4.8,SNR=6.7						
TXAR	Lajitas Array	88.83	58	P	P	12 58 08.7	+0.5
	1.1nm,0.8s,baz=224,slow=5.2,SNR=12						
CMAR	Chiang Mai Arr	89.21	290	P	P	12 58 10.7	+0.6
	0.3nm,0.4s,baz=150,slow=3.8,SNR=3.2						
ILAR	Eielson Array	89.74	13	P	P	12 58 10.2	-1.2
	0.3nm,0.4s,baz=219,slow=5.2,SNR=9.0						
PDAR	Pinedale Array	90.73	44	P	P	12 58 16.4	-0.5
	0.5nm,0.5s,baz=224,slow=4.1,SNR=4.4						
BVAR	Borovoye Array	119.06	320	PKP	PKPdf	13 03 56.9	-1.0
	0.7nm,0.4s,baz=111,slow=3.9,SNR=4.3						
ARCES	ARCESS Array B	129.78	349	PKP	PKPdf	13 04 16.8	-1.1
	1.2nm,0.7s,baz=90,slow=1.2,SNR=6.9						
FINES	FINESS Array B	136.47	342	PKP	PKPdf	13 04 30.9	+0.3
	0.5nm,0.4s,baz=85,slow=1.7,SNR=3.8						
AKASG	Malin Array Be	143.32	329	PKP	PKPab	13 04 40.8	-1.0
	0.8nm,0.3s,baz=47,slow=4.3,SNR=8.2						
BRTR	Keskin Array B	146.56	310	PKPbc	PKPbc	13 04 51.8	-0.3
	0.3nm,0.4s,baz=140,slow=3.1,SNR=5.1						
GERES	GERESS Array B	150.90	342	PKPbc	PKPdf	13 04 59.8	+3.8
	0.6nm,0.4s,baz=270,slow=0.3,SNR=6.0						
TORD	Torodi Ar. Bea	171.47	188	PKP	PKPdf	13 05 16.6	-1.3
	0.6nm,0.9s,baz=294,slow=1.4,SNR=2.9						
TORD				PKPab	PKPab	13 06 42.4	-0.6
	0.4nm,0.9s,baz=169,slow=1.5,SNR=2.9						

*DDA **08** 12:46:36.7, 37°.29N×32°.02E, h11km, MD3.0*
*CSEM **08** 12:46:36.7±0.3, 37°.25N×31°.91E, h12km, MD3.0, Error ellipse: s-maj=10.1km s-min=5.2km az=95.0*
*ISK **08** 12:46:37.1, 37°.37N×32°.97E, h7km, MD2.8*
*ISCJB **08** 12:46:37.2±1.3, 37°.27N±0°.04×32°.02E±0°.08, h4km±13km, Error ellipse: s-maj=10.4km s-min=6.4km az=175.4*
ISC 08 12:46:37.2±1.2, 37°.29N±0°.03×31°.99E±0°.05, h14km±11km, n14, σ1^{s}29/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONT	Konya--Tatoy	0.71	24	ePG	Pb	12 46 51.9	+0.4
KONT				eSG	Sn	12 47 02.7	-1.1
KONT	Konya--Tatoy	0.71	24	ePg	Pb	12 46 51.9	+0.4
KONT				eSg	Sn	12 47 02.7	-1.1
LADK	Ladik-KONYA	0.95	18	ePG	Pn	12 46 56.2	-0.1
LADK				eSG	Sn	12 47 09.9	+0.1
LADK	Ladik-KONYA	0.95	18	ePg	Pn	12 46 56.2	-0.1
LADK				eSg	Sn	12 47 09.9	+0.1
ERMK	Ermenek	0.99	131	iP	Pg	12 46 54.9	-1.5
ERMK				iS	Sn	12 47 13.3	+2.5
ERMK	Ermenek	0.99	131	iP	Pg	12 46 54.9	-1.5
ERMK				iS	Sn	12 47 13.3	+2.5
GAZI	Gazipasa	1.09	166	iP	Pg	12 46 57.6	-0.7
GAZI				iS	Sn	12 47 12.8	-0.2
GAZI	Gazipasa	1.09	166	iP	Pg	12 46 57.6	-0.7
GAZI				iS	Sn	12 47 12.8	-0.2
KDHN	Kadinhani	1.23	5	iP	Pg	12 47 00.5	-0.5
KDHN				iS	Sn	12 47 17.2	+0.6
KDHN	Kadinhani	1.23	5	iP	Pg	12 47 00.5	-0.5
KDHN				iS	Sn	12 47 17.2	+0.6
KORT	Korkueli	1.34	258	iP	Pn	12 47 00.2	-1.4
KORT				iS	Sg	12 47 22.3	+1.8
KORT	Korkueli	1.34	258	iP	Pn	12 47 00.2	-1.4
KORT				iS	Sg	12 47 22.3	+1.8
SULT	Sultanhani-AKS	1.51	53	ePG	Pn	12 46 55.4	-8.6
SULT	Sultanhani-AKS	1.51	53	ePg	Pn	12 46 55.4	-8.6

*ISK **08** 12:52:38.2, 40°.40N×39°.70E, h16km, MD2.6*
*DDA **08** 12:52:39.0, 40°.40N×39°.69E, h7km, MD2.8*
*CSEM **08** 12:52:39.3±0.1, 40°.41N×39°.70E, h8km, MD2.6, Error ellipse: s-maj=3.5km s-min=2.7km az=7.0*
ISC 08 12:52:39.4±1.0, 40°.40N±0°.03×39°.69E±0°.02, h10km±10km, n16, σ0^{s}36/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMT	Gumushane	0.17	291	ePG	Pg	12 52 43.1	-0.1
GUMT	Gumushane	0.17	291	ePg	Pg	12 52 43.1	-0.1
BAYT	Ayd˜–ntepe-Bay	0.34	91	ePG	Pg	12 52 45.9	-0.4
BAYT				eSG	Sg	12 52 50.8	-0.1
BAYT	Ayd˜–ntepe-Bay	0.34	91	ePg	Pg	12 52 45.9	-0.4
BAYT				eSg	Sg	12 52 50.8	-0.1
KELT	Kelkit	0.41	233	iP	Pg	12 52 47.5	-0.2
KELT				iS	Sg	12 52 53.4	+0.3
KELT	Kelkit	0.41	233	iP	Pg	12 52 47.5	-0.2
KELT				iS	Sg	12 52 53.4	+0.3
MACK	Trabzon	0.55	6	iP	Pg	12 52 50.2	+0.1
MACK				iS	Sg	12 52 57.4	+0.1
MACK	Trabzon	0.55	6	iP	Pg	12 52 50.2	+0.1
MACK				iS	Sg	12 52 57.4	+0.1
EZC	Erzincan	0.69	202	ePg	Pb	12 52 54.2	+0.5
KOPT	Kop Dagi	0.72	121	iP	Pg	12 52 53.2	-0.3
KOPT				iS	Sg	12 53 03.7	+0.7
KOPT	Kop Dagi	0.72	121	iP	Pg	12 52 53.2	-0.3
KOPT				iS	Sg	12 53 03.7	+0.7
ERZN	Erzincan	0.81	178	ePG	Pg	12 52 54.2	-0.9
ERZN				eSG	Sg	12 53 06.0	+0.4
ESPY	Espiye-Giresun	0.90	306	ePG	Pg	12 52 56.4	-0.3
ESPY				eSG	Sg	12 53 08.2	-0.2
ESPY	Espiye-Giresun	0.90	306	ePg	Pg	12 52 56.4	-0.3
ESPY				eSg	Sg	12 53 08.2	-0.2
SUSE	Susehri	1.15	261	iP	Pb	12 53 01.4	-0.1
SUSE				iS	Sn	12 53 17.8	+0.1
SUSE	Susehri	1.15	261	iP	Pb	12 53 01.4	-0.1
SUSE				iS	Sn	12 53 17.8	+0.1

*ISK **08** 13:16:17.6, 39°.26N×27°.86E, h8km, MD2.8*
*DDA **08** 13:16:18.4, 39°.30N×27°.97E, h7km, MD2.8*
*CSEM **08** 13:16:18.4±0.2, 39°.27N×27°.91E, h10km, MD2.8, Error ellipse: s-maj=4.5km s-min=3.2km az=78.0*
*ISCJB **08** 13:16:18.4±0.5, 39°.27N±0°.02×27°.95E±0°.03, h7km±4km, Error ellipse: s-maj=4.7km s-min=3.5km az=156.3*
ISC 08 13:16:18.1±1.0, 39°.27N±0°.02×27°.90E±0°.02, h10km±11km, n41, σ0^{s}45/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.37	357	ePG	Pg	13 16 26.1	+0.6
BALB				eSG	Sb	13 16 31.9	-0.6
BALB	Balikesir	0.37	357	ePg	Pg	13 16 26.1	+0.6
BALB				eSg	Sb	13 16 31.9	-0.6
AKHS	Akhisar	0.40	190	iP	Pb	13 16 27.0	-0.2
AKHS				iS	Sb	13 16 34.3	+0.9

AKHS	**Akhisar**	**0.40**	**190**	*i* P	**Pb**	**13 16 27.0**	**-0.2**
AKHS				*i* S	**Sb**	**13 16 34.3**	**+0.9**
BALY	**Balya**	**0.52**	**335**	*e*P	**Pg**	**13 16 28.5**	**+0.2**
BALY				*i* S	**Sb**	**13 16 36.8**	**-0.1**
BALY	**Balya**	**0.52**	**335**	*e*P	**Pg**	**13 16 28.5**	**+0.2**
BALY				*i* S	**Sb**	**13 16 36.8**	**-0.1**
DURS	**Dursunbey**	**0.55**	**53**	*i* P	**Pg**	**13 16 28.3**	**-0.6**
DURS				*i* S	**Sg**	**13 16 36.0**	**-0.1**
DURS	**Dursunbey**	**0.55**	**53**	*i* P	**Pg**	**13 16 28.3**	**-0.6**
DURS				*i* S	**Sg**	**13 16 36.0**	**-0.1**
DST	**Dursunbey**	**0.65**	**59**	*e*PG	**Pg**	**13 16 30.4**	**-0.2**
DST	**Dursunbey**	**0.65**	**59**	*e*Pg	**Pg**	**13 16 30.4**	**-0.2**
DEMI	**Demirci**	**0.67**	**110**	*i* P	**Pg**	**13 16 31.4**	**+0.2**
DEMI				*i* S	**Sg**	**13 16 39.7**	**-0.3**
DEMI	**Demirci**	**0.67**	**110**	*i* P	**Pg**	**13 16 31.4**	**+0.2**
DEMI				*i* S	**Sg**	**13 16 39.7**	**-0.3**
GONE	**Gonen-Balikesi**	**0.79**	**348**	*e*PG	**Pg**	**13 16 33.2**	**-0.3**
GONE				*e*SG	**Sb**	**13 16 44.8**	**+0.1**
GONE	**Gonen-Balikesi**	**0.79**	**348**	*e*Pg	**Pg**	**13 16 33.2**	**-0.3**
GONE				*e*Sg	**Sb**	**13 16 44.8**	**+0.1**
MANT	**Manisa**	**0.93**	**147**	*i* P	**Pb**	**13 16 37.0**	**+0.5**
MANT				*i* S	**Sg**	**13 16 48.1**	**-0.2**
MANT	**Manisa**	**0.93**	**147**	*i* P	**Pb**	**13 16 37.0**	**+0.5**
MANT				*i* S	**Sg**	**13 16 48.1**	**-0.2**
KULA	**Kula-Manisa**	**0.96**	**142**	*e*PG	**Pb**	**13 16 37.0**	**+0.2**
KULA	**Kula-Manisa**	**0.96**	**142**	*e*Pg	**Pb**	**13 16 37.1**	**+0.2**
IZM	**Izmir**	**1.01**	**210**	*e*PG	**Pg**	**13 16 36.9**	**-0.6**
IZM	**Izmir**	**1.01**	**210**	*e*Pg	**Pg**	**13 16 36.9**	**-0.6**
EDC	**Edincik**	**1.07**	**358**	*e*PN	**Pb**	**13 16 38.6**	**-0.1**
EDC	**Edincik**	**1.07**	**358**	*e*Pn	**Pb**	**13 16 38.7**	**-0.1**
ORLT	**Orhaneli**	**1.09**	**44**	*e*PN	**Pg**	**13 16 39.2**	**+0.1**
ORLT	**Orhaneli**	**1.09**	**44**	*e*Pn	**Pg**	**13 16 39.2**	**+0.1**
BLCB	**Balcova**	**1.11**	**218**	*e*PN	**Pb**	**13 16 38.7**	**-0.7**
BLCB	**Balcova**	**1.11**	**218**	*e*Pn	**Pb**	**13 16 38.7**	**-0.7**
KRBG	**Karabiga-Canak**	**1.21**	**338**	*e*PN	**Pn**	**13 16 40.9**	**-0.2**
KRBG	**Karabiga-Canak**	**1.21**	**338**	*e*Pn	**Pn**	**13 16 40.9**	**-0.2**
TVSB	**Tavsanli**	**1.22**	**81**	*e*PN	**Pg**	**13 16 42.1**	**+0.5**
TVSB	**Tavsanli**	**1.22**	**81**	*e*Pn	**Pg**	**13 16 42.1**	**+0.5**
ULDT	**Uludag**	**1.29**	**47**	*i* P	**Pg**	**13 16 43.6**	**+0.7**
ULDT				*i* S	**Sb**	**13 16 58.6**	**-0.6**
ULDT	**Uludag**	**1.29**	**47**	*i* P	**Pg**	**13 16 43.6**	**+0.7**
ULDT				*i* S	**Sb**	**13 16 58.6**	**-0.6**
MRMT	**Marmara Adasi**	**1.35**	**350**	*e*PN	**Pn**	**13 16 43.4**	**+0.3**
MRMT	**Marmara Adasi**	**1.35**	**350**	*e*Pn	**Pn**	**13 16 43.4**	**+0.3**
SART	**Tekirdag**	**1.52**	**339**	*i* P	**Pg**	**13 16 47.5**	**+0.2**
SART				*i* S	**Sg**	**13 17 06.9**	**-0.2**
SART	**Tekirdag**	**1.52**	**339**	*i* P	**Pg**	**13 16 47.5**	**+0.2**
SART				*i* S	**Sg**	**13 17 06.9**	**-0.2**
BOZC	**Bozcaada**	**1.54**	**292**	*e*P	**Pb**	**13 16 47.2**	**+0.4**
BOZC				*i* S	**Sg**	**13 17 08.8**	**+1.1**
GELI	**Tayfur-Gelibol**	**1.57**	**316**	*e*PN	**Pn**	**13 16 46.2**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.57**	**316**	*e*Pn	**Pn**	**13 16 46.2**	**+0.1**
IZI	**Iznik**	**1.61**	**48**	*e*PN	**Pb**	**13 16 47.8**	**-0.2**
IZI	**Iznik**	**1.61**	**48**	*e*Pn	**Pb**	**13 16 47.8**	**-0.2**

BJI ***08*** *13:18:57.7, 3.°06N×97.°39E, h29km, mB4.9/40, mb4.8/48, Ms5.3/57, Ms7 4.8/54*

IDC ***08*** *13:19:01.4±1.2, 3.°48N×97.°69E, h22km±7km, mb4.7/36, mb1 4.7/36, mb1mx4.7/38, mbtmp4.6/36, MS4.5/36, Ms1 4.5/36, ms1mx4.4/55, Error ellipse: s-maj=10.9km s-min=8.3km az=49.0*

ISCJB ***08*** *13:19:01.9±0.4, 3.°35N±0.°02×97.°54E±0.°02, h40km±4km, mb5.1/175, MS4.8/178, Error ellipse: s-maj=4.5km s-min=3.0km az=39.4*

MOS ***08*** *13:19:01.1±1.1, 3.°48N×97.°77E, h33km, mb5.5/65, MS4.7/28, Error ellipse: s-maj=9.5km s-min=4.3km az=120.2*

NEIC ***08*** *13:19:01.2±0.2, 3.°36N×97.°65E, mb5.3/66, MS4.8/116, Error ellipse: s-maj=6.7km s-min=4.7km az=43.0*

NEIC Felt [III] at Kutacane, Medan, Meulaboh and Tuntungan. Also felt at Sibolga. Felt [II] at Kampung Gelugor, Malaysia. Also felt at Ayer Itam, Butterworth, Kampung Tanjung Bongor, Kuah, Lumut, Sungai Ara and Tanjong Tokong.

TEH ***08*** *13:19:03.0, 3.°40N×97.°71E, h35km, ML5.3*

GCMT ***08*** *13:19:04.0±0.2, 3.°18N×97.°53E, h20km±1km, MW5.2, Moment Tensor Solution. s50,c70; s80,c136; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.89±.20; $M_{\theta\theta}$-6.37±.18; $M_{\phi\phi}$7.25±.21; $M_{r\theta}$-2.25±.36; $M_{\theta\phi}$-3.32±.16; $M_{\phi r}$-3.28±.43; Best double couple: $M_0$8.60000×10^{16} NP1:ϕ_s123.00000°, δ62.00000°, λ-175.00000°. NP2:ϕ_s31.00000°, δ86.00000°, λ-28.00000°. Principal axes: T 8.8100, Plg16.0000°, Azm80.0000°; N -0.4600, Plg62.0000°, Azm203.0000°; P -8.3600, Plg23.0000°, Azm343.0000°; Data Used: II IU IC G CN.*

DJA ***08*** *13:19:04.5±0.6, 3.°N±2.°×9.°7E±.°, h26km±5km, M5.2/61, mb5.4/61, mB5.6/36, MLv5.9/13, Mw(mB)5.1/36, Mwp6.1/2*

AUST ***08*** *13:19:06.2±0.0, 3.°23N×97.°67E, h62km, Error ellipse: s-maj=1.1km s-min=0.6km az=43.0*

SZGRF ***08*** *13:19:11.3, 3.°76N×96.°20E, h46km, mb5.1, Northern Sumatera, Indonesia*

ISC 08 13:19:02.1±0.2**, 3.°33N**±0.°03×**97.°53E**±0.°03**, h29**km±1km**, h29**km**:pP-P, n955,** σ1.49/867**, mb5.2**/182**, MS4.8**/179**, 136C-99D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSI	**Tuntungan**	**1.05**	**81**	P	**Pb**	**13 19 22.3**	**+0.7**
PSI	**Prapat**	**1.49**	**111**	Pg	**Pn**	**13 19 27.6**	**+0.6**
PSI				Lg	Lg	13 19 48.5	
PSI	**Prapat**	**1.49**	**111**	P	**Pn**	**13 19 27.6**	**+0.6**
PSI	**Prapat**	**1.49**	**111**	Pg	**Pn**	**13 19 27.6**	**+0.6**
	492nm,0.3s,baz=305,slow=12,SNR=1269						
PSI				Lg	Lg	13 19 48.5	
	2μm,0.3s,baz=199,slow=18,SNR=22						
PSI	**Prapat**	**1.49**	**111**	P	**Pn**	**13 19 27.7**	**+0.6**
	baz=1.4,SNR=1000						
PSI				S	**Sb**	**13 19 50.9**	**+3.1**
	baz=1.4,SNR=7.3						
LHMI	**Lhok Sumawe**	**1.97**	**343**	P	**Pb**	**13 19 37.3**	**-0.1**
LHMI				S	Sb	13 20 08.5	+7.0
LHMI	**Lhok Sumawe**	**1.97**	**343**	P	**Pb**	**13 19 37.7**	**+0.3**
	baz=2.1,SNR=569						
GSI	**Gunungsitoli**	**2.01**	**179**	P	**Pn**	**13 19 32.9**	**-1.2**
GSI				S	**Sn**	**13 19 55.9**	**-2.5**
GSI	**Gunungsitoli**	**2.01**	**179**	P	**Pn**	**13 19 33.2**	**-0.9**
	baz=1.9,SNR=381						
BSI	**Banda Aceh**	**3.10**	**314**	P	**Pn**	**13 19 51.8**	**+2.7**
BSI				S	**Sb**	**13 20 34.6**	**+0.8**
MNSI	**Mandailing Nat**	**3.25**	**141**	P	**Pn**	**13 19 49.9**	**-1.2**
IPM	**Ipoh**	**3.67**	**72**	*e*Pn	**Pn**	**13 19 58.2**	**+1.2**
IPM	**Ipoh**	**3.67**	**72**	P	**Pn**	**13 19 59.3**	**+2.3**
IPM	**Ipoh**	**3.67**	**72**	P	**Pn**	**13 19 58.9**	**+1.9**
FRIM	**Kepong**	**4.09**	**91**	P	**Pn**	**13 20 03.6**	**+0.8**
BKNI	**Bangkinang**	**4.61**	**130**	P	**Pn**	**13 20 09.7**	**-0.1**
BKNI				S	**Sb**	**13 21 22.9**	**+5.6**
BKNI	**Bangkinang**	**4.61**	**130**	P	**Pn**	**13 20 11.3**	**+1.4**
	baz=4.5,SNR=8.7						
PPI	**Padang Panjang**	**4.73**	**143**	P	**Pn**	**13 20 11.1**	**-0.4**
PPI				S	Sb	13 21 28.6	+7.7
PPI	**Padang Panjang**	**4.73**	**143**	P	**Pn**	**13 20 11.7**	**+0.2**
	baz=4.6,SNR=16						
CMBY	**CAMPBELL BAY**	**5.12**	**316**	*e*PKP	**Pn**	**13 20 19.9**	**+3.0**
CMBY				AMB	AMB	13 20 31.6	
	comp=Z,852nm,1.9s						
CMBY				*e*S	**Sn**	**13 21 18.7**	**+3.6**
CMBY				*e*S	Sb	13 21 23.8	-8.4
SDSI	**Sungai Dareh**	**5.76**	**137**	S	Sb	13 21 56.5	+6.1
KGM	**Kluang**	**5.93**	**103**	P	**Pn**	**13 20 30.0**	**+1.9**
KTGM	**Kuala Trenggan**	**5.93**	**70**	P	**Pn**	**13 20 30.1**	**+2.0**
RGRI	**Rengat**	**6.04**	**127**	P	Pb	13 20 38.5	-8.1
RGRI				S	Sb	13 22 07.8	+9.4
MYKOM	**Kota Tinggi**	**6.50**	**103**	P	**Pn**	**13 20 36.9**	**+1.0**
MYKOM	**Kota Tinggi**	**6.50**	**103**	P	**Pn**	**13 20 35.8**	**-0.1**
	comp=Z,187nm,0.9s,comp=Z,3μmcomp=Z,4.6nm						
BTDF	**Bukit Timah Da**	**6.54**	**107**	P	**Pn**	**13 20 37.7**	**+1.3**
	comp=Z,173nm,1.0s,comp=Z,2μmcomp=Z,2.9nm						
TPRI	**Tanjung Pinang**	**7.39**	**109**	P	**Pn**	**13 20 46.6**	**-1.5**
	comp=Z,2μm,1.0s,comp=Z,58μmcomp=Z,338μmcomp=Z,9.7nm						
MASI	**Maura Aman, Be**	**7.97**	**144**	P	**Pn**	**13 20 55.4**	**-0.7**
	comp=Z,580nm,1.1s,comp=Z,7μmcomp=Z,14nm						
KSI	**Kapahiang**	**8.59**	**144**	P	**Pn**	**13 21 06.0**	**+1.4**
	comp=Z,213nm,0.7s,comp=Z,1.3nm						
PBA	**Port Blair**	**9.53**	**330**	*e*PKP	Pn	13 21 19.4	+1.8
PBA				AMB	AMB	13 21 43.5	
	comp=Z,303nm,2.5s						
PHET	**Kaeng Krachan**	**9.74**	**12**	P	Pn	13 21 26.5	+6.1
	comp=Z,288nm,0.9s,comp=Z,4μm						
PPBI	**Pangkal Pinang**	**10.19**	**122**	P	Pn	13 21 30.4	+3.9
	comp=Z,51nm,1.0s,comp=Z,6μm						
CHBT	**CHBT**	**10.50**	**27**	P	Pn	13 21 35.9	+5.2
	comp=Z,128nm,0.5s,comp=Z,2μm						
LWLI	**Liwa**	**10.55**	**142**	P	Pn	13 21 34.9	+3.3
	comp=Z,218nm,0.8s,comp=Z,4μmcomp=Z,19μm						
DGPR	**DIGLIPUR**	**10.79**	**335**	*e*PKP	**Pn**	**13 21 37.5**	**+2.8**
DGPR				AMB	AMB	13 21 50.4	
	comp=Z,211nm,2.7s						
KASI	**Kota Agung**	**11.22**	**142**	P	**Pn**	**13 21 40.0**	**-0.6**
	comp=Z,101nm,1.1s,comp=Z,1μm						
TPI	**Tanjungpandan**	**11.79**	**121**	P	Pn	13 21 52.4	+4.0
	comp=Z,42nm,1.4s,comp=Z,829nm						
KSM	**Kuching**	**12.90**	**98**	*e*Pn	**Pn**	**13 22 05.9**	**+2.2**
KSM	**Kuching**	**12.90**	**98**	P	**Pn**	**13 22 06.6**	**+2.9**
KSM	**Kuching**	**12.90**	**98**	P	**Pn**	**13 22 05.6**	**+1.9**
	comp=Z,70nm,1.0s,comp=Z,1μm						
KSM	**Kuching**	**12.90**	**98**	P	**Pn**	**13 22 06.3**	**+2.7**
	baz=13,SNR=20						
UBPT	**Khong Chiam**	**14.22**	**33**	P	P	13 22 32.2	+3.5
STKI	**Sintang**	**14.31**	**103**	P	**P**	**13 22 26.7**	**-3.1**
	comp=Z,76nm,0.5s,comp=Z,11μm						
SBUM	**Sibu**	**14.70**	**93**	P	**Pn**	**13 22 31.0**	**+2.7**
SBUM	**Sibu**	**14.70**	**93**	P	**P**	**13 22 32.5**	**-1.6**
	comp=Z,87nm,2.2s,comp=Z,2μm						
CISI	**Cisompet, Garu**	**14.91**	**137**	P	**Pn**	**13 22 33.4**	**+2.3**
	baz=15,SNR=4.2						
CMAR	**Chiang Mai Arr**	**15.10**	**5**	Pn	**Pn**	**13 22 34.9**	**+1.4**
CMAR				ScP	**ScP**	**13 31 14.6**	**+1.9**
CMAR	**Chiang Mai Arr**	**15.10**	**5**	Pn	**Pn**	**13 22 34.9**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=194,slow=12,SNR=68						
CMAR				LR	LR	13 28 48.9	
	comp=Z,2μm,20.1s,baz=184,slow=39						
CMAR				ScP	**ScP**	**13 31 14.6**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=218,slow=2.6,SNR=15						
PBKI	**Pangkalan Bun**	**15.35**	**113**	P	**P**	**13 22 42.7**	**+1.4**
	comp=Z,340nm,1.1s,comp=Z,3μm						
COCO	**West Island**	**15.43**	**183**	*e*P	**Pn**	**13 22 35.1**	**-2.8**
COCO				pmax	pmax		
	comp=Z,139nm,1.0s						
COCO	**West Island**	**15.43**	**183**	*e*Pn	**Pn**	**13 22 35.0**	**-2.8**
	comp=Z,139nm,1.0s						
CMMT	**Chiang Mai**	**15.45**	**5**	P	**P**	**13 22 43.2**	**+0.8**
	comp=Z,60nm,1.1s,comp=Z,840nm						
CHTO	**Chiang Mai**	**15.45**	**5**	*e*P	**P**	**13 22 41.1**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,41nm,0.8s						
CHTO	**Chiang Mai**	**15.45**	**5**	*e*Pn	**P**	**13 22 41.1**	**-1.3**
	comp=Z,41nm,0.8s						
CHTO	**Chiang Mai**	**15.45**	**5**	P	**P**	**13 22 43.4**	**+1.0**
	SNR=22						
CHTO	**Chiang Mai**	**15.45**	**5**	P	**P**	**13 22 45.4**	**+3.0**
	comp=Z,68nm,1.1s,comp=Z,886nm						
BTM	**Bintulu**	**15.53**	**90**	P	**P**	**13 22 45.1**	**+1.8**
BJII	**Banjamegara**	**16.12**	**131**	P	P	13 22 59.1	+9.1
SMRI	**Semarang**	**16.50**	**129**	P	**P**	**13 22 55.8**	**+1.7**
	comp=Z,109nm,1.0s						
UGM	**Wanagama**	**17.11**	**131**	P	**Pn**	**13 22 57.9**	**-1.5**
	baz=17,SNR=6.0						
PALK	**Pallekele**	**17.20**	**284**	*e*Pn	**P**	**13 23 04.1**	**+2.2**
	comp=Z,107nm,1.0s						
PALK	**Pallekele**	**17.20**	**284**	P	P	13 23 09.2	+7.2
	SNR=6.5						
PALK	**Pallekele**	**17.20**	**284**	Pn	P	13 23 07.1	+5.2
	comp=Z,512nm,0.9s,SNR=7.3						
PALK	**Pallekele**	**17.20**	**284**	P	P	13 23 09.4	+7.5
SJI	**Sawahan**	**17.96**	**128**	P	**P**	**13 23 13.5**	**+3.2**
	comp=Z,59nm,0.8s						
BBKI	**Banjar Baru**	**18.57**	**111**	P	**Pn**	**13 23 18.0**	**+0.6**
	comp=Z,262nm,0.8s						
KKM	**Kota Kinabalu**	**18.82**	**81**	*e*P	**P**	**13 23 18.3**	**-1.5**
	comp=Z,111nm,0.9s						
KKM	**Kota Kinabalu**	**18.82**	**81**	P	**Pn**	**13 23 22.1**	**+1.7**
KKM	**Kota Kinabalu**	**18.82**	**81**	P	**Pn**	**13 23 22.5**	**+2.1**
	comp=Z,156nm,1.0s,comp=Z,2μm						
KKM	**Kota Kinabalu**	**18.82**	**81**	P	**Pn**	**13 23 21.6**	**+1.2**
	baz=19,SNR=22						
KMMI	**Kalianget**	**19.38**	**122**	P	**Pn**	**13 23 31.5**	**+4.4**
	comp=Z,238nm,0.9s,comp=Z,3μm						
BLJI	**Banyuglugur**	**19.44**	**125**	P	Pn	13 23 33.1	+5.3
	comp=Z,151nm,1.0s						
KDM	**Kudat**	**19.55**	**79**	P	**Pn**	**13 23 31.0**	**+1.8**
GMJI	**Gumukmas**	**19.62**	**126**	P	Pn	13 23 35.4	+5.5
	comp=Z,75nm,1.7s						
QIZ	**Qiongzhong**	**19.71**	**37**	P	**P**	**13 23 28.4**	**-1.0**
QIZ				pP	**pP**	**13 23 36.1**	**-1.1**
QIZ				S	**S**	**13 27 08.2**	**-2.1**
QIZ				sS	**sS**	**13 27 21.3**	**-1.4**
QIZ				pmax	pmax		
	comp=Z,140nm,3.4s						
QIZ				LR	LR		
	comp=N,4μm,18.7s						
QIZ				LR	LR		
	comp=E,2μm,19.2s						
QIZ				LR	LR		
	comp=Z,2μm,17.8s						
QIZ	**Qiongzhong**	**19.71**	**37**	*e*P	**P**	**13 23 27.9**	**-1.5**
	comp=Z,115nm,1.4s						
SDKM	**Sandakan**	**19.74**	**83**	P	**Pn**	**13 23 31.8**	**+0.3**
KBKI	**Kotabaru**	**19.76**	**109**	P	**Pn**	**13 23 34.0**	**+2.4**
	comp=Z,83nm,1.2s,comp=Z,2μm						
VIS	**Vishakhapatnam**	**19.96**	**317**	*e*PKP	**P**	**13 23 32.9**	**+0.8**
TSM	**Tawau**	**20.32**	**87**	P	**P**	**13 23 36.9**	**+0.8**
SRBI	**Singaraja**	**20.97**	**123**	P	Pn	13 23 46.0	+0.2
	comp=Z,372nm,1.3s,comp=Z,3μm						
MYLDM	**Lahad Datu**	**21.00**	**84**	P	Pn	13 23 46.0	-0.1
MYLDM	**Lahad Datu**	**21.00**	**84**	P	Pn	13 23 45.2	-0.9
	comp=Z,133nm,1.0s,comp=Z,3μm						
TRD	**Trivandrum**	**21.09**	**285**	*e*x	P	13 23 38.8	-5.6
KHKI	**Kahang-Kahang**	**21.45**	**123**	P	**P**	**13 23 52.1**	**+3.8**
	comp=Z,175nm,1.4s,comp=Z,2μm						
KMI	**Kunming**	**22.24**	**13**	P	**P**	**13 24 00.3**	**+3.3**
KMI				pP	pP	13 24 10.4	+5.6
KMI				sP	sP	13 24 14.8	+6.4
KMI				PP	**PnPn**	**13 24 27.1**	**+7.1**
KMI				S	**S**	**13 27 56.8**	**-3.7**
KMI				sS	Sn	13 28 12.7	-0.2
KMI				SS	SnSn	13 28 39.6	+11
KMI				pmax	pmax		
	comp=Z,29nm,1.2s						
KMI				pmax	pmax		
	comp=Z,120nm,3.1s						
KMI				LR	LR		
	comp=N,2μm,11.7s						
KMI				LR	LR		
	comp=E,6μm,13.3s						
KMI				LR	LR		
	comp=Z,2μm,14.5s						
SHL	**Shillong**	**22.77**	**347**	*e*PKP	**P**	**13 24 02.0**	**-0.5**
SHL				*e*x	x	13 28 06.0	
SHL				*e*x	x	13 35 16.0	
TTSI	**Tana Toraja**	**23.16**	**106**	P	**P**	**13 24 07.8**	**+1.3**
	comp=Z,83nm,1.4s,comp=Z,1μm						
BOK	**Bokaro**	**23.25**	**332**	*e*PKP	**P**	**13 24 06.6**	**-0.7**
HYB	**Hyderabad**	**23.29**	**308**	*i* P	**P**	**13 24 09.0**	**+1.2**
	comp=Z,130nm,1.0s						
HYB				*e*S	**S**	**13 28 20.0**	**+1.4**
HYB	**Hyderabad**	**23.29**	**308**	*e*PKP	**P**	**13 24 08.9**	**+1.1**
HYB				AMB	AMB	13 24 10.6	
	comp=Z,91nm,1.5s						
SPSI	**Sidrap Palu**	**23.38**	**108**	P	**P**	**13 24 07.9**	**-0.7**
	comp=Z,105nm,0.9s,comp=Z,1μm						
KAPI	**Kappang**	**23.70**	**110**	*e*P	**P**	**13 24 08.8**	**-3.0**
	comp=Z,313nm,1.3s						
KAPI	**Kappang**	**23.70**	**110**	P	**P**	**13 24 10.4**	**-1.4**
	SNR=38						
KAPI	**Kappang**	**23.70**	**110**	P	**P**	**13 24 10.9**	**-0.9**
	comp=Z,962nm,1.3s,SNR=26						
KAPI	**Kappang**	**23.70**	**110**	P	**P**	**13 24 10.3**	**-1.4**
	comp=Z,186nm,1.3s,comp=Z,2μm						
KAPI	**Kappang**	**23.70**	**110**	P	**P**	**13 24 10.2**	**-1.6**
	comp=Z,124nm,0.9s,baz=278,slow=8.2,SNR=39						
KAPI				LR	LR	13 32 20.0	
	comp=Z,2μm,21.2s,baz=114,slow=34						
BKSI	**Bulukumba**	**24.15**	**111**	P	**P**	**13 24 15.6**	**-0.4**
	comp=Z,295nm,1.0s,comp=Z,3μm						
SKSI	**Soroako, Sulaw**	**24.50**	**103**	P	**P**	**13 24 19.9**	**+0.6**
	comp=Z,39nm,0.9s,comp=Z,560nm						
MRSI	**Marisa**	**24.56**	**96**	P	**P**	**13 24 18.9**	**-0.9**
	comp=Z,76nm,1.0s,comp=Z,858nm						
GYA	**Guiyang**	**24.61**	**20**	P	**P**	**13 24 22.9**	**+2.7**
GYA				pP	**pP**	**13 24 32.2**	**+3.6**
GYA				PP	PnPn	13 25 00.0	+7.7
GYA				PcP	**PcP**	**13 27 59.9**	**+2.2**
GYA				S	**S**	**13 28 40.2**	**+0.4**
GYA				sS	**sS**	**13 28 54.1**	**+0.5**
GYA				SS	SnSn	13 29 38.5	+12
GYA				ScP	**ScP**	**13 31 36.1**	**+1.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=N,2μm,12.1s						
GYA				LR	LR		
	comp=E,2μm,15.5s						
GYA				LR	LR		
	comp=Z,3μm,12.4s						
BSSI	**Bau Bau, Buton**	**24.79**	**112**	P	**P**	**13 24 23.6**	**+1.8**
	comp=Z,281nm,0.9s,comp=Z,2μm						
NGP	**Nagpur**	**25.24**	**316**	*e*PKP	**P**	**13 24 25.7**	**-0.1**
NGP				*e*S	**S**	**13 28 50.5**	**+0.7**
WBSI	**Waikabubak, Su**	**25.31**	**121**	P	**P**	**13 24 25.6**	**-1.0**
	comp=Z,236nm,1.1s,comp=Z,2μm						
ODAN	**Odare**	**25.33**	**338**	*e*P	**P**	**13 24 26.2**	**-0.6**
	comp=Z,72nm,0.8s						
LUWI	**Luwuk**	**25.60**	**99**	P	**P**	**13 24 29.8**	**+0.6**
	comp=Z,104nm,1.1s,comp=Z,2μm						
TAPN	**Taplejung**	**25.66**	**340**	*e*P	**P**	**13 24 29.7**	**-0.2**
	comp=Z,115nm,0.8s						
RAMN	**Ramite**	**25.71**	**337**	*e*P	**P**	**13 24 30.2**	**-0.1**
	comp=Z,71nm,0.6s						
AKL	**Akola**	**26.41**	**312**	*e*PKP	**P**	**13 24 36.0**	**-0.4**
BBSI	**Bau Bau**	**26.50**	**109**	P	**P**	**13 24 38.1**	**+0.7**
	comp=Z,202nm,1.1s,comp=Z,2μm						
KMSI	**Cibinong**	**26.58**	**95**	P	P	13 24 43.6	+5.6
	comp=Z,244nm,1.1s						
PKI	**Pulchoki**	**26.74**	**336**	*e*P	**P**	**13 24 38.8**	**-0.9**
GUN	**Gumba**	**26.85**	**337**	*e*P	**P**	**13 24 40.4**	**-0.3**
	comp=Z,113nm,0.7s						
DMN	**Daman**	**26.90**	**335**	*e*P	**P**	**13 24 40.2**	**-0.9**
	comp=Z,74nm,1.1s						
LSA	**Lhasa**	**26.92**	**348**	*e*P	**P**	**13 24 39.9**	**-1.5**
LSA				*e**SP	**sP**	**13 24 50.4**	**-2.9**
LSA				pmax	pmax		
	comp=Z,119nm,1.2s						
LSA				MLR	MLR		
	comp=Z,1μm,19.0s						
LSA	**Lhasa**	**26.92**	**348**	*e*P	**P**	**13 24 39.9**	**-1.5**
	comp=Z,119nm,1.2s						
LSA				*e*pP	**pP**	**13 24 45.8**	**-4.1**
LSA				*e*sP	**sP**	**13 24 50.4**	**-2.9**
LSA				LR	LR		
	comp=Z,1μm,19.0s						
KKN	**Kakani**	**26.99**	**336**	*e*P	**P**	**13 24 40.9**	**-0.9**
DGAR	**Diego Garcia**	**27.20**	**247**	PFAKE		13 25 00.0	+16
DGAR				LR	LR		
	comp=Z,644nm,19.0s						
MNI	**Manado**	**27.35**	**93**	P	P	13 24 54.5	+9.5
POO	**Poona**	**27.66**	**305**	*e*PKP	**P**	**13 24 46.1**	**-1.7**
POO				AMB	AMB	13 24 52.8	
	comp=Z,27nm,0.8s						
KOLN	**Koldanda**	**27.70**	**333**	*e*P	**P**	**13 24 47.5**	**-0.7**
	comp=Z,56nm,0.7s						
BHPL	**Bhopal**	**27.75**	**317**	*e*PKP	**P**	**13 24 48.1**	**-0.4**
CD2	**Chengdu**	**28.06**	**11**	P	**P**	**13 24 51.6**	**+0.4**
CD2				pP	**pP**	**13 25 01.4**	**+1.8**
CD2				sP	**sP**	**13 25 05.6**	**+2.5**
CD2				PP	**PnPn**	**13 25 42.2**	**+3.0**
CD2				PcP	**PcP**	**13 28 05.6**	**+0.1**
CD2				S	**S**	**13 29 32.5**	**-1.7**
CD2				sS	**sS**	**13 29 49.0**	**+0.9**
CD2				SS	**SnSn**	**13 30 56.1**	**+5.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,140nm,4.3s						
CD2				LR	LR		
	comp=N,2μm,11.4s						
CD2				LR	LR		
	comp=E,7μm,17.6s						
CD2				LR	LR		
	comp=Z,2μm,13.7s						
DANN	**Dangsing**	**28.13**	**334**	*e*P	**P**	**13 24 51.1**	**-1.0**
	comp=Z,45nm,0.7s						
DAV	**Davao City (W)**	**28.18**	**81**	PFAKE		13 25 00.0	+7.6
DAV				LR	LR		
	comp=Z,1μm,20.0s						
PYUN	**Piuthan**	**28.27**	**332**	*e*P	**P**	**13 24 52.6**	**-0.7**
	comp=Z,178nm,1.1s						
ENH	**Enshi**	**29.09**	**22**	*e*P	**P**	**13 24 58.1**	**-2.2**
	comp=Z,29nm,0.8s						
ENH				LR	LR		
	comp=Z,1μm,19.0s						
LBMI	**Labuha**	**30.22**	**97**	P	P	13 25 13.9	+3.4
	comp=Z,61nm,1.1s,comp=Z,906nm						
YHNB	**Yeheng**	**31.28**	**45**	PFAKE		13 25 30.0	+10
YHNB				LR	LR		
	comp=Z,906nm,20.0s						
WHN	**Wuhan**	**31.39**	**29**	*e*P	P	13 25 24.0	+3.3
WHN				S	**S**	**13 30 26.1**	**-0.4**
WHN				LR	LR		
	comp=N,3μm,10.7s						
WHN				LR	LR		
	comp=E,3μm,12.6s						
WHN				LR	LR		
	comp=Z,3μm,10.8s						
TATO	**Taipei**	**31.55**	**45**	PFAKE		13 25 30.0	+7.9
TATO				LR	LR		
	comp=Z,918nm,20.0s						
XAN	**Xi'an**	**32.35**	**18**	P	**P**	**13 25 28.6**	**-0.5**
XAN				pP	**pP**	**13 25 37.9**	**+0.4**
XAN				sP	**sP**	**13 25 41.9**	**+0.8**
XAN				PP	**PnPn**	**13 26 35.5**	**-0.8**
XAN				PcP	**PcP**	**13 28 18.1**	**+1.5**
XAN				S	**S**	**13 30 36.5**	**-4.9**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,21nm,7.6s						
XAN				LR	LR		
	comp=N,2μm,14.9s						
XAN				LR	LR		
	comp=E,800nm,13.8s						
XAN				LR	LR		
	comp=Z,550nm,17.0s						
DDI	**Dehra Dun**	**32.56**	**328**	*e*PKP	**P**	**13 25 28.0**	**-3.0**
DDI				*e*S	**S**	**13 30 45.0**	**+0.2**
MBWA	**Marble Bar**	**32.64**	**139**	*e*P	**P**	**13 25 31.4**	**-0.3**
MBWA				*e*pP	**pP**	**13 25 38.8**	**-1.5**
MBWA				*e*sP	**sP**	**13 25 41.2**	**-2.6**
MBWA				LR	LR		
	comp=Z,1μm,20.0s						
LZH	**Lanzhou**	**33.12**	**9**	⇑P	**P**	**13 25 36.0**	**+0.1**
LZH				pP	**pP**	**13 25 45.1**	**+0.7**
LZH				sP	**sP**	**13 25 49.4**	**+1.5**
LZH				PP	**PnPn**	**13 26 47.0**	**+0.9**
LZH				PcP	**PcP**	**13 28 18.0**	**-0.8**
LZH				*e*S	**S**	**13 30 51.0**	**-2.5**
LZH				sS	**sS**	**13 31 07.0**	**-0.5**
LZH				ScS	**ScS**	**13 36 02.2**	**+0.4**
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZH				pmax	pmax		
	comp=Z,80nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,11.9s						
LZH				LR	LR		
	comp=E,1μm,13.6s						
LZH				LR	LR		
	comp=Z,1μm,15.2s						
SMLA	**Simla**	**33.66**	**327**	*e*PKP	**P**	**13 25 39.1**	**-1.4**
SWI	**Sorong**	**33.97**	**96**	P	**P**	**13 25 45.5**	**+2.0**
	comp=Z,56nm,0.8s,comp=Z,544nm						
NJ2	**Nanjing**	**34.90**	**33**	*e*P	**P**	**13 25 50.8**	**-0.4**
NJ2				pP	**pP**	**13 26 00.8**	**+1.1**
NJ2				sP	**sP**	**13 26 04.2**	**+0.9**
NJ2				PP	**PnPn**	**13 27 08.2**	**-0.2**
NJ2				S	**S**	**13 31 17.0**	**-3.9**
NJ2				sS	**sS**	**13 31 35.5**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.4s						
NJ2				LR	LR		
	comp=N,2μm,19.7s						
NJ2				LR	LR		
	comp=E,3μm,20.0s						
NJ2				LR	LR		

comp=Z,820nm,24.7s
FITZ Fitzroy Crossi 34.95 129 P **P** **13 25 49.2 -2.6**
FITZ Fitzroy Crossi 34.95 129 P **P** **13 25 49.2 -2.6**
comp=Z,23nm,0.8s,baz=300,slow=4.0,SNR=36
FITZ Fitzroy Crossi 34.95 129 P **P** **13 25 49.1 -2.6**
baz=35,SNR=37
DHRM DHARAMSHALA 35.00 328 *e*PKP **P** **13 25 51.3 -1.1**
DHRM AMB AMB 13 26 02.3
comp=Z,70nm,0.4s
THN Thein Dam 35.45 327 *e*PKP **P** **13 25 53.7 -2.3**
THN *e*S **S** **13 31 28.5 -0.9**
SSE Sheshan 35.51 36 *e*P **P** **13 25 57.9 +1.4**
SSE S **S** **13 31 29.6 -0.6**
SSE pmax pmax
comp=Z,27nm,0.8s
SSE pmax pmax
comp=Z,73nm,5.4s
SSE LR LR
comp=N,3μm,19.8s
SSE LR LR
comp=E,3μm,19.9s
SSE LR LR
comp=Z,1μm,17.7s
GTA Gaotai 35.98 3 ⇑P **P** **13 26 00.6 0.0**
GTA pP **pP** **13 26 10.9 +1.8**
GTA sP **sP** **13 26 15.1 +2.5**
GTA PP **PnPn** **13 27 22.0 +0.2**
GTA PcP **PcP** **13 28 28.2 +1.2**
GTA S **S** **13 31 35.7 -1.8**
GTA sS **sS** **13 31 52.3 +0.7**
GTA ScP **ScP** **13 32 12.8 +1.4**
GTA SS **SnSn** **13 34 00.1 -2.9**
GTA ScS **ScS** **13 36 15.4 -1.5**
GTA pmax pmax
comp=Z,10.0nm,1.0s
GTA pmax pmax
comp=Z,77nm,4.8s
GTA LR LR
comp=N,900nm,15.7s
GTA LR LR
comp=E,1μm,13.8s
GTA LR LR
comp=Z,1μm,12.4s
MEEK Meekatharra 36.10 147 P **P** **13 26 01.5 -0.2**
baz=36,SNR=10.0
KNRA Kununurra 36.22 122 P **P** **13 25 59.8 -2.9**
baz=36,SNR=18
KNRA S S 13 31 33.0 -8.5
baz=36,SNR=7.7
MORW Morawa 36.79 152 P **P** **13 26 08.1 +0.6**
baz=37,SNR=19
PALU Palau 36.99 82 P **P** **13 26 08.6 -0.8**
baz=37,SNR=3.6
MTN Manton Dam 37.04 116 P **P** **13 26 07.2 -2.6**
baz=37,SNR=7.5
KDU Kakadu 38.19 115 P **P** **13 26 16.9 -2.6**
baz=38,SNR=4.3
BLDU Ballidu 38.40 153 P **P** **13 26 22.0 +0.8**
baz=38,SNR=17
HHC Hu-ho-hao-te 39.44 17 *e*P **P** **13 26 31.0 +1.2**
HHC pP **pP** **13 26 40.8 +2.4**
HHC sP **sP** **13 26 44.8 +2.9**
HHC PP **PnPn** **13 28 06.0 +2.4**
HHC S **S** **13 32 30.1 +0.1**
HHC sS **sS** **13 32 47.5 +3.4**
HHC SS **SS** **13 35 20.2 -4.7**
HHC ScS **ScS** **13 36 34.8 -1.7**
HHC pmax pmax
comp=Z,34nm,0.7s
HHC pmax pmax
comp=Z,220nm,5.7s
HHC LR LR
comp=N,3μm,12.0s
HHC LR LR
comp=E,1μm,12.9s
HHC LR LR
comp=Z,2μm,10.1s
KLBR Kellerberrin 39.71 152 P **P** **13 26 32.4 +0.4**
baz=40,SNR=36
BJT Baijiatuau 40.23 22 PFAKE 13 26 50.0 +14
BJT LR LR
comp=Z,748nm,20.0s
BJI Beijing 40.26 22 P **P** **13 26 37.4 +0.9**
BJI pP **pP** **13 26 45.5 +0.4**
BJI sP **sP** **13 26 49.9 +1.4**
BJI S **S** **13 32 46.3 +4.3**
BJI pmax pmax
comp=Z,40nm,0.5s
BJI pmax pmax
comp=Z,150nm,4.0s
BJI LR LR
comp=N,1μm,15.6s
BJI LR LR
comp=E,1μm,14.5s
BJI LR LR
comp=Z,500nm,19.3s
NWAO Narrogin (SRO) 40.60 154 *e*P **P** **13 26 37.2 -2.2**
comp=Z,181nm,1.7s
NWAO LR LR
comp=Z,633nm,20.0s
NWAO Narrogin (SRO) 40.60 154 P **P** **13 26 38.5 -0.9**
comp=Z,35nm,0.8s,baz=317,slow=10,SNR=14
KBL Kabul 40.81 323 *e*P **P** **13 26 40.2 -1.2**
KBL pmax pmax
comp=Z,11nm,0.8s
KBL Kabul 40.81 323 *e*P **P** **13 26 40.2 -1.2**
comp=Z,11nm,0.8s
KSH Kashi 40.99 334 P **P** **13 26 40.5 -2.2**
KSH *ep*P **pP** **13 26 49.9 -1.5**
KSH *es*P **sP** **13 26 53.9 -0.9**
KSH *e*PP **PP** **13 28 17.9 +0.3**
KSH *e*PcP **PcP** **13 28 43.5 +0.9**
KSH *e*ScP **ScP** **13 32 29.0 -1.5**
KSH *e*PcS **PcS** **13 32 32.8 -0.8**
KSH *e*S S 13 32 46.3 -7.0
KSH *es*S **sS** **13 33 06.5 -1.0**
KSH *e*ScS **ScS** **13 36 41.4 -4.4**
KSH pmax pmax
comp=Z,11nm,0.7s
KSH pmax pmax
comp=Z,77nm,4.3s
KSH LR LR
comp=N,1μm,10.1s
KSH LR LR
comp=E,2μm,9.5s
KSH LR LR
comp=Z,800nm,8.0s
WMQ Urumqi 41.25 349 P **P** **13 26 46.7 +2.0**
WMQ pP **pP** **13 26 56.5 +3.1**
WMQ sP **sP** **13 27 00.5 +3.7**
WMQ PP **PnPn** **13 28 25.5 +0.5**
WMQ PcP **PcP** **13 28 46.0 +2.7**
WMQ ScP **ScP** **13 32 32.0 +0.6**
WMQ S **S** **13 32 57.9 +1.0**
WMQ sS **sS** **13 33 14.1 +3.0**
WMQ SS **SS** **13 35 56.9 -4.1**
WMQ ScS **ScS** **13 36 46.2 -0.9**
WMQ pmax pmax
comp=Z,17nm,1.0s
WMQ pmax pmax
comp=Z,170nm,6.6s
WMQ LR LR
comp=Z,330nm,18.2s
KMBL Kambalda 41.57 148 P **P** **13 26 47.4 -0.1**
baz=42,SNR=22
DL2 Dalian 41.66 29 *e*P P 13 26 51.8 +3.8
DL2 *e*S S 13 33 11.5 +8.6
DL2 pmax pmax
comp=Z,25nm,0.9s
DL2 pmax pmax
comp=Z,40nm,3.0s
DL2 LR LR
comp=E,910nm,18.4s
DL2 LR LR
comp=Z,570nm,14.7s
WBK Wadi Bani Khal 41.97 301 P **P** **13 26 53.6 +2.6**
SNR=10
JMDO Jabal Madar 42.64 300 P **P** **13 26 59.0 +2.7**
SNR=7.0
MSEY Mahe Island 42.76 260 PFAKE 13 27 10.0 +13
MSEY LR LR
comp=Z,373nm,19.0s
WRA Warramunga Arr 42.91 124 P **P** **13 26 56.5 -2.1**
WRA ScP **ScP** **13 32 38.6 +0.1**
WRA S S 13 33 15.3 -6.7

WRA Warramunga Arr 42.91 124 P **P** **13 26 56.5 -2.1**
comp=Z,74nm,1.1s,baz=302,slow=9.2,SNR=157
WRA ScP **ScP** **13 32 38.6 +0.1**
comp=Z,2.8nm,0.8s,baz=315,slow=3.3,SNR=6.0
WRA S S 13 33 15.3 -6.7
comp=Z,12nm,1.0s,baz=294,slow=16,SNR=18
WRA LR LR 13 46 49.1
comp=Z,802nm,19.5s,baz=285,slow=39
WRAB Tennant Creek 42.92 124 *e*P P 13 26 55.3 -3.3
WRAB pmax pmax
comp=Z,118nm,1.2s
WRAB MLR MLR
comp=Z,1μm,21.0s
WRAB Tennant Creek 42.92 124 *e*P P 13 26 55.3 -3.3
comp=Z,118nm,1.2s
WRAB LR LR
comp=Z,1μm,21.0s
WRAB Tennant Creek 42.92 124 P **P** **13 26 57.3 -1.3**
comp=Z,432nm,1.2s,SNR=41
SMDO Samad 42.93 301 P **P** **13 27 01.6 +2.8**
SNR=10
ULHL Ulahol 43.17 337 *i* P **P** **13 26 59.3 -1.3**
ULHL Ulahol 43.17 337 P **P** **13 26 59.3 -1.3**
SNR=20
INCN Inchon 43.21 34 PFAKE 13 27 10.0 +9.2
INCN LR LR
comp=Z,828nm,20.0s
KZA Kyzart 43.42 336 *i* P **P** **13 27 03.0 +0.1**
KZA Kyzart 43.42 336 P **P** **13 27 03.0 +0.1**
SNR=20
JAY Jayapura 43.55 97 P pP 13 27 15.4 +2.9
JAY Jayapura 43.55 97 P P 13 27 13.7 +10
baz=43,SNR=3.5
BSY Bisya 43.55 300 P **P** **13 27 06.3 +2.5**
SNR=16
HOQ Hoqain 43.75 301 P **P** **13 27 08.1 +2.7**
SNR=18
UCH Uchtor 43.85 335 P **P** **13 27 06.7 +0.3**
SNR=9.5
KSAR Wonju Array Be 43.90 35 P **P** **13 27 04.4 -1.8**
KSAR ScP **ScP** **13 32 42.6 +0.5**
KSRS Korea Array 43.93 35 P **P** **13 27 04.4 -2.1**
comp=Z,2.4nm,0.6s,baz=230,slow=8.3,SNR=19
KSRS ScP **ScP** **13 32 42.6 +0.4**
comp=Z,4.0nm,0.9s,baz=183,slow=4.9,SNR=11
KSRS LR LR 13 47 36.6
comp=Z,929nm,18.2s,baz=219,slow=39
TKM2 Tokmak 2 43.99 337 *e*P **P** **13 27 06.7 -0.5**
TKM2 MLR MLR
comp=Z,563nm,19.0s
TKM2 Tokmak 2 43.99 337 *e*P **P** **13 27 06.7 -0.5**
TKM2 LR LR
comp=Z,563nm,19.0s
TKM2 Tokmak 2 43.99 337 P **P** **13 27 06.3 -0.9**
SNR=28
KBK Karagaybulak 44.03 336 *i* P **P** **13 27 07.8 +0.3**
KBK Karagaybulak 44.03 336 P **P** **13 27 07.8 +0.3**
SNR=51
AML Almayashu 44.12 334 *i* P **P** **13 27 08.5 0.0**
AML Almayashu 44.12 334 P **P** **13 27 08.5 0.0**
SNR=83
AAK Ala-Archa 44.20 336*c i*P **P** **13 27 09.0 +0.2**
AAK pmax pmax
comp=Z,93nm,1.7s
AAK Ala-Archa 44.20 336 *e*P **P** **13 27 08.9 +0.2**
comp=Z,6.8nm,1.0s
AAK ScP **ScP** **13 32 45.5 +2.0**
AAK Ala-Archa 44.20 336 P **P** **13 27 09.7 +0.9**
SNR=18
AAK Ala-Archa 44.20 336 P **P** **13 27 09.8 +1.0**
comp=Z,179nm,1.1s,SNR=16
AAK Ala-Archa 44.20 336 P **P** **13 27 08.5 -0.3**
comp=Z,14nm,1.0s,baz=160,slow=5.1,SNR=22
AAK ScP **ScP** **13 32 45.5 +2.0**
comp=Z,7.0nm,0.7s,baz=150,slow=3.4,SNR=8.0
AAK LR LR 13 48 20.2
comp=Z,1μm,18.5s,baz=146,slow=40
FRU Bishkek 44.31 336 *i* P **P** **13 27 10.3 +0.7**
FRU *i* 13 27 22.0
FRU *e*S **S** **13 33 45.0 +3.1**
FRU pmax pmax
comp=Z,40nm,1.4s
FRU MLR MLR
comp=Z,1μm,19.0s
ARQ Araqi 44.34 300 P **P** **13 27 12.8 +2.7**
SNR=14
CHMS Chumysh 44.40 336 *i* P **P** **13 27 09.9 -0.3**
CHMS Chumysh 44.40 336 P **P** **13 27 09.9 -0.3**
SNR=9.3
ASAR Alice Springs 44.44 129 P **P** **13 27 09.1 -1.8**
ASAR ScP **ScP** **13 32 44.4 -0.3**
ASAR S S 13 33 38.0 -6.3
ASAR Alice Springs 44.44 129 P **P** **13 27 09.1 -1.8**
comp=Z,15nm,0.9s,baz=299,slow=7.7,SNR=38
ASAR ScP **ScP** **13 32 44.4 -0.3**
comp=Z,1.6nm,0.7s,baz=305,slow=3.9,SNR=4.9
ASAR S S 13 33 38.0 -6.3
comp=Z,2.4nm,0.8s,baz=296,slow=14,SNR=7.4
ASAR LR LR 13 47 48.2
comp=Z,624nm,18.5s,baz=298,slow=39
AS31 Alice Springs 44.44 129 *e*P **P** **13 27 08.8 -2.1**
EKS2 Erkin-Say 44.52 335 *e*P **P** **13 27 11.5 +0.2**
EKS2 MLR MLR
comp=Z,762nm,21.0s
EKS2 Erkin-Say 44.52 335 *e*P **P** **13 27 11.5 +0.2**
EKS2 LR LR
comp=Z,762nm,21.0s
EKS2 Erkin-Say 44.52 335 P **P** **13 27 11.5 +0.2**
SNR=28
FORT Forrest 44.71 142 *e*P **P** **13 27 11.3 -1.5**
comp=Z,75nm,0.6s
FORT Forrest 44.71 142 P **P** **13 27 12.1 -0.7**
baz=45,SNR=23
USP Ospenovka 44.72 336 *i* P **P** **13 27 12.3 -0.5**
USP Ospenovka 44.72 336 P **P** **13 27 12.3 -0.5**
SNR=35
SONM Songino Array 44.99 8 P **P** **13 27 14.1 -0.9**
SONM PcP **PcP** **13 28 56.1 +0.3**
SONM ScP **ScP** **13 32 46.8 +0.3**
SONM Songino Array 44.99 8 P **P** **13 27 14.1 -0.9**
comp=Z,4.9nm,0.5s,baz=190,slow=9.1,SNR=42
SONM PcP **PcP** **13 28 56.1 +0.3**
comp=Z,6.5nm,0.8s,baz=194,slow=4.3,SNR=5.1
SONM ScP **ScP** **13 32 46.8 +0.3**
comp=Z,12nm,0.8s,baz=196,slow=4.3,SNR=24
SONM LR LR 13 47 23.8
comp=Z,1μm,20.0s,baz=184,slow=38
ULN Ulaanbaatar 45.12 9 *e*P **P** **13 27 15.9 -0.2**
comp=Z,8.6nm,0.9s
ULN LR LR
comp=Z,948nm,20.0s
ULN Ulaanbaatar 45.12 9 P **P** **13 27 16.3 +0.2**
comp=Z,13nm,0.8s
HATD Hatta, Dubai 45.20 302 P **P** **13 27 19.5 +2.6**
SNR=11
ASHO Ashiyiah 45.21 302 P **P** **13 27 19.5 +2.5**
SNR=6.9
MK31 Makanchi Array 45.27 345 *i* P **P** **13 27 16.1 -1.0**
MK31 pmax pmax
comp=Z,6.0nm,0.4s
MK31 Makanchi Array 45.27 345 *e*P **P** **13 27 16.1 -1.0**
MK31 *ep*P **pP** **13 27 22.7 -3.1**
MK31 *es*P **sP** **13 27 25.9 -3.4**
MKAR Makanchi Array 45.27 345 *e*P **P** **13 27 16.3 -0.8**
MKAR Makanchi Array 45.27 345 *e*P **P** **13 27 16.3 -0.8**
MKAR ScP **ScP** **13 32 48.9 +1.3**
MKAR Makanchi Array 45.27 345 P **P** **13 27 16.3 -0.8**
comp=Z,9.6nm,0.4s,baz=158,slow=7.9,SNR=79
MKAR ScP **ScP** **13 32 48.9 +1.3**
comp=Z,3.5nm,0.9s,baz=123,slow=4.5,SNR=5.9
MKAR LR LR 13 50 01.8
comp=Z,436nm,18.9s,baz=165,slow=41
IDAH Dahanechah 45.80 314 *e*P **P** **13 27 22.9 +1.1**
ASUD Al Ashush, Dub 45.81 302 P **P** **13 27 24.3 +2.6**
SNR=14
KK31 Karatay Array 46.32 333 *i* P **P** **13 27 24.9 -0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.4s
KKAR Karatay Array 46.32 333 *e*P **P** **13 27 25.4 0.0**
KKAR Karatay Array 46.32 333 *e*P **P** **13 27 25.4 0.0**
ZAK Zakamensk 47.14 5 *e*P **P** **13 27 30.9 -0.9**
ZAK *e* 13 29 01.2
ZAK pmax pmax
comp=Z,4.0nm,1.3s
CN2 Changchun 47.27 27 *e*P **P** **13 27 33.5 +0.6**
CN2 *ep*P **pP** **13 27 43.4 +1.8**

CN2 *es*P **sP** **13 27 47.4 +2.4**
CN2 *e*S **S** **13 34 24.6 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,20.0s
CN2 LR LR
comp=E,600nm,20.0s
CN2 LR LR
comp=Z,600nm,20.0s
QIS Mount Isa 47.60 122 P **P** **13 27 34.7 -1.1**
baz=48,SNR=26
HVS Khovu-Aksy 47.75 357⇑ *e*P **P** **13 27 35.7 -0.9**
HVS pmax pmax
comp=Z,33nm,1.0s
GUMO Guam 47.84 75 LR LR 13 47 42.1
comp=Z,222nm,19.2s,baz=252,slow=36
MOY Mondy 48.26 3 *e*P **P** **13 27 41.4 +0.9**
COEN Coen 48.41 112 *e*P **P** **13 27 41.2 -0.9**
comp=Z,191nm,1.0s
COEN Coen 48.41 112 P **P** **13 27 41.1 -1.1**
baz=48,SNR=10
IBAF Bafgh 48.42 310 *e*P **P** **13 27 42.1 -0.1**
IMEH Mehriz 49.07 310 *e*P **P** **13 27 46.3 -1.0**
ISRV Sarvestan 49.42 306 *e*P **P** **13 27 50.4 +0.3**
HIA Hailar 49.53 19 PFAKE 13 28 00.0 +10
HIA LR LR
comp=Z,1μm,19.0s
ICHK Chekchek 49.60 310 *e*P **P** **13 27 51.2 -0.1**
KURBB Kurchatov Arra 49.78 344 P **P** **13 27 51.4 -0.6**
comp=Z,4.7nm,0.4s,baz=165,slow=6.9,SNR=41
KURBB PcP **PcP** **13 29 13.4 +0.8**
comp=Z,3.2nm,0.6s,baz=152,slow=3.5,SNR=4.6
KURBB ScP **ScP** **13 33 08.7 +2.3**
comp=Z,7.4nm,1.0s,baz=159,slow=3.5,SNR=9.4
KURBB LR LR 13 52 14.9
comp=Z,347nm,19.1s,baz=150,slow=40
ABKT Ailbek 49.81 319 P **P** **13 27 53.6 +1.0**
comp=Z,1μm,0.8s,SNR=42
KURK Kurchatov 49.84 344*d i*P **P** **13 27 51.5 -1.0**
KURK pmax pmax
comp=Z,19nm,1.7s
KURK Kurchatov 49.84 344 *e*P **P** **13 27 51.6 -0.9**
comp=Z,29nm,1.2s
KURK PcP **PcP** **13 29 13.4 +0.6**
KURK ScP **ScP** **13 33 08.7 +2.1**
KURK Kurchatov 49.84 344 P **P** **13 27 51.3 -1.2**
comp=Z,94nm,0.7s,SNR=9.5
MDJ Mudanjiang 49.86 30 P **P** **13 27 53.1 +0.3**
MDJ pP **pP** **13 28 02.1 +0.5**
MDJ sP **sP** **13 28 05.9 +0.9**
MDJ PP **PP** **13 29 44.5 -3.3**
MDJ S **S** **13 35 01.5 +0.6**
MDJ sS **sS** **13 35 16.7 +1.3**
MDJ pmax pmax
comp=Z,7.0nm,0.9s
MDJ pmax pmax
comp=Z,30nm,4.6s
MDJ LR LR
comp=N,1μm,20.2s
MDJ LR LR
comp=E,850nm,16.9s
MDJ LR LR
comp=Z,700nm,16.9s
MDJ Mudanjiang 49.86 30 PFAKE 13 28 00.0 +7.2
MDJ LR LR
comp=Z,650nm,19.0s
MAJO Matsushiro 49.92 43 PFAKE 13 28 00.0 +6.6
MAJO LR LR
comp=Z,385nm,19.0s
MAT Matsushiro 49.92 43 P **P** **13 27 51.2 -2.2**
MJAR Matsushiro Arr 49.92 43 P **P** **13 27 53.0 -0.4**
MJAR PcP **PcP** **13 29 14.2 +0.7**
MJAR ScP **ScP** **13 33 08.2 +0.8**
MJAR Matsushiro Arr 49.92 43 P **P** **13 27 53.0 -0.4**
comp=Z,1.5nm,0.8s,baz=209,slow=6.3,SNR=6.5
MJAR PcP **PcP** **13 29 14.2 +0.7**
comp=Z,6.9nm,0.8s,baz=237,slow=4.6,SNR=9.9
MJAR ScP **ScP** **13 33 08.2 +0.8**
comp=Z,2.3nm,0.7s,baz=229,slow=5.4,SNR=6.1
MJAR LR LR 13 49 25.2
comp=Z,436nm,18.4s,baz=250,slow=37
MTSU Mount Surprise 50.79 117 P **P** **13 28 00.7 +0.4**
baz=51,SNR=8.6
USRK Ussuriysk Arra 50.79 32 P **P** **13 27 58.8 -1.0**
comp=Z,1.8nm,0.6s,baz=233,slow=10.0,SNR=6.1
USRK ScP **ScP** **13 33 12.6 +1.7**
comp=Z,2.0nm,0.7s,baz=222,slow=6.7,SNR=5.7
USRK LR LR 13 50 25.1
comp=Z,554nm,18.0s,baz=210,slow=37
PMG Port Moresby 51.05 105 *e*P **P** **13 28 01.5 -0.7**
comp=Z,61nm,0.8s
PMG LR LR
comp=Z,772nm,21.0s
PMG Port Moresby 51.05 105 P **P** **13 28 03.7 +1.5**
comp=Z,81nm,0.8s
BBOO Buckleboo 51.20 138 *e*P **P** **13 28 02.7 -0.5**
comp=Z,372nm,0.8s
BBOO Buckleboo 51.20 138 P **P** **13 28 01.6 -1.5**
baz=51,SNR=20
ZAA0 Zalesovo Array 51.52 350 *e*P **P** **13 28 03.5 -1.6**
ZAA0 *ep*P **pP** **13 28 11.8 -2.1**
ZAA0 *es*P **sP** **13 28 14.1 -3.3**
ZALV Zalesovo Beam 51.52 350 P **P** **13 28 04.5 -0.6**
ZALV S **S** **13 35 22.6 -1.0**
ZALV Zalesovo Beam 51.52 350 P **P** **13 28 04.5 -0.6**
ZALV ScP **ScP** **13 33 14.8 +1.0**
ZALV S **S** **13 35 22.6 -1.0**
ZALV Zalesovo Beam 51.52 350 P **P** **13 28 04.5 -0.6**
comp=Z,19nm,0.5s,baz=176,slow=7.1,SNR=90
ZALV ScP **ScP** **13 33 14.8 +1.0**
comp=Z,8.2nm,0.7s,baz=167,slow=3.3,SNR=9.4
ZALV S **S** **13 35 22.6 -1.0**
comp=Z,3.8nm,0.7s,baz=193,slow=4.6,SNR=8.4
ZALV LR LR 13 55 19.3
comp=Z,440nm,18.4s,baz=246,slow=42
ILAS Lasjerd 52.09 313 *e*P **P** **13 28 09.8 -0.2**
IPIR Pirpir 52.48 309 *e*P **P** **13 28 13.8 +0.8**
IALA Alasht 52.52 314 *e*P **P** **13 28 12.3 -1.0**
NVS Novosibirsk 52.65 350⇓ *i*P **P** **13 28 13.3 -0.2**
NVS *e*S **S** **13 35 36.9 -2.2**
NVS *e* 13 37 55.3
NVS pmax pmax
comp=N,7.0nm,1.1s
NVS pmax pmax
comp=E,10.0nm,1.1s
NVS pmax pmax
comp=Z,14nm,1.1s
NVS smax smax
comp=N,12nm,1.3s
NVS smax smax
comp=E,22nm,1.3s
IVRN Varamin 52.82 312 *e*P **P** **13 28 15.4 +0.2**
IDMV Damavand 52.85 313 *e*P **P** **13 28 15.3 -0.4**
IPRN Peran 52.93 314 *e*P **P** **13 28 15.6 -0.5**
CTAO Charters Tower 53.18 118 PFAKE 13 28 30.0 +12
CTAO LR LR
comp=Z,570nm,20.0s
QRN Al-Qurain 53.44 304 *e*P **P** **13 28 20.4 +0.6**
QRN AMb AMB 13 28 21.6
comp=Z,130nm,1.0s
IR3 Iran Long-Peri 53.55 313 *e*P **P** **13 28 20.4 -0.2**
TRBA At Turbah 53.66 284⇑ *e*P P 13 28 25.3 +3.4
IR5 Iran Long-Peri 53.76 312 *e*P **P** **13 28 22.3 +0.1**
KBD Kabd 53.76 304 *e*P **P** **13 28 22.7 +0.5**
KBD AMb AMB 13 28 24.1
comp=Z,68nm,0.9s
RDF Al-Radifah 53.80 304 *e*P **P** **13 28 23.2 +0.7**
RDF AMb AMB 13 28 25.2
comp=Z,208nm,0.9s
VOSK Vostochnaya 53.91 340 P **P** **13 28 21.6 -1.3**
VOSK pmax pmax
comp=Z,14nm,0.6s
QLP Quilpie 54.03 126 P **P** **13 28 23.8 -0.3**
baz=54,SNR=32
RAYN Ar Rayn 54.07 297 P **P** **13 28 26.0 +1.4**
comp=Z,290nm,0.8s,SNR=25
OPO Ambohidratompo 54.12 244 P **P** **13 28 26.1 +1.0**
OPO Ambohidratompo 54.12 244 P **P** **13 28 26.1 +1.0**
comp=Z,8.2nm,1.0s,baz=58,slow=9.9,SNR=8.5
OPO LR LR 13 46 16.9
comp=Z,256nm,21.0s,baz=348,slow=30
NAY Al-Naaiem 54.16 304 *e*P **P** **13 28 25.3 +0.2**

NAY AMb AMB 13 28 26.8
comp=Z,127nm,0.8s
KLR Kul'dur 54.22 27 *e*P P 13 28 21.1 -4.0
KLR MLR MLR
comp=Z,2µm,12.0s
ABPO Ambohimpanom 54.22 244 *e*P **P 13 28 27.5 +1.6**
ABPO *e**SP **sP 13 28 37.2 -1.0**
ABPO pmax pmax
comp=Z,18nm,1.1s
ABPO MLR MLR
comp=Z,291nm,20.0s
ABPO Ambohimpanom 54.22 244 *e*P **P 13 28 27.5 +1.6**
comp=Z,18nm,1.1s
ABPO *e*pP **pP 13 28 33.6 -1.1**
ABPO *e*sP **sP 13 28 37.2 -1.0**
ABPO LR LR
comp=Z,291nm,20.0s
IRAZ Razeghan 54.32 312 *e*P **P 13 28 26.4 0.0**
BVA0 Borovoye Array 54.37 340 *i*P **P 13 28 24.9 -1.2**
BVA0 pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 54.37 340 P **P 13 28 24.9 -1.2**
BVAR S **S 13 36 00.9 -1.6**
BVAR Borovoye Array 54.37 340 P **P 13 28 24.9 -1.2**
BVAR S **S 13 36 00.9 -1.6**
BVAR Borovoye Array 54.37 340 P **P 13 28 24.9 -1.2**
comp=Z,17nm,0.6s,baz=142,slow=8.8,SNR=94
BVAR S **S 13 36 00.9 -1.6**
comp=Z,2.0nm,0.7s,baz=134,slow=13,SNR=6.7
BVAR LR LR 13 54 59.2
comp=Z,628nm,20.2s,baz=340,slow=40
BRVK Borovoye 54.43 340⇓ *e*P **P 13 28 25.9 -0.7**
BRVK pmax pmax
comp=Z,13nm,0.6s
BRVK Borovoye 54.43 340 *e*P **P 13 28 25.3 -1.3**
comp=Z,18nm,0.6s
BRVK LR LR
comp=Z,823nm,20.0s
BRVK Borovoye 54.43 340 P **P 13 28 26.3 -0.2**
SNR=8.0
BRVK Borovoye 54.43 340 P **P 13 28 25.7 -0.9**
comp=Z,190nm,0.6s,SNR=10
STKA Stephens Creek 54.55 133 *e*P **P 13 28 26.1 -1.7**
STKA Stephens Creek 54.55 133 P **P 13 28 26.6 -1.3**
comp=Z,26nm,0.6s,baz=304,slow=7.4,SNR=41
STKA LR LR 13 51 04.9
comp=Z,628nm,20.8s,baz=84,slow=35
STKA Stephens Creek 54.55 133 P **P 13 28 26.6 -1.3**
baz=54,SNR=61
ATD Arta Tunnel 54.75 282 P **P 13 28 29.6 0.0**
ATD Arta Tunnel 54.75 282 P **P 13 28 29.6 0.0**
comp=Z,4.3nm,0.3s,baz=246,slow=19,SNR=2.7
ATD LR LR 13 48 40.1
comp=Z,178nm,19.8s,baz=63,slow=32
ZRNK Zerenda 54.78 339 P **P 13 28 28.0 -1.2**
ZRNK pmax pmax
comp=Z,14nm,0.8s
HABR Khabarovsk 55.25 30 P P 13 28 28.5 -4.1
HABR *e**PP pP 13 28 40.6 -0.9
HABR *e* 13 29 29.2
HABR 13 30 33.0
HABR *e*S **S 13 36 10.3 -4.2**
HABR *e**SS sS 13 36 30.0 +1.0
HABR *e* 13 38 14.4
HABR *e*SS **SS 13 39 56.3 -2.8**
HABR pmax pmax
comp=Z,22nm,1.8s
HABR pmax pmax
comp=N,19nm,1.7s
HABR pmax pmax
comp=E,23nm,2.2s
HABR MLR MLR
comp=Z,627nm,18.0s
AB31 Akbulak array 55.81 331 *i*P **P 13 28 35.8 -0.8**
AB31 pmax pmax
comp=Z,29nm,0.8s
ABKAR Akbulak array 55.81 331 *e*P **P 13 28 36.0 -0.7**
ERM Erimo 56.03 40 PFAKE 13 28 50.0 +12
ERM LR LR
comp=Z,508nm,19.0s
ARPS Mount Arapiles 57.37 138 P **P 13 28 49.8 +1.9**
baz=57,SNR=5.7
CMSA Cobar Meteorol 57.42 131 P **P 13 28 47.8 -0.6**
baz=57,SNR=90
AKTO Aktyubinsk 57.53 331 P **P 13 28 47.6 -1.2**
AKTO pmax pmax
comp=Z,4.0nm,0.9s
AKTO Aktyubinsk 57.53 331 LR LR 13 55 31.2
comp=Z,266nm,20.1s,baz=320,slow=38
IHRS Heris 57.64 314 *e*P **P 13 28 49.3 -0.8**
RMQ Roma 57.68 124 P **P 13 28 50.9 +0.6**
baz=58,SNR=28
IAZR Azarshahr 58.15 313 *e*P **P 13 28 53.4 -0.4**
YSS Yuzh-Sakhalins 58.42 35 *e*P **P 13 28 52.3 -2.8**
YSS MLR MLR
comp=N,400nm,17.0s
YSS MLR MLR
comp=E,400nm,17.0s
YSS MLR MLR
comp=Z,400nm,17.0s
ISHB Shabestar 58.65 314 *e*P **P 13 28 57.0 -0.2**
IMRD Marand 58.76 314 *e*P **P 13 28 57.8 -0.1**
EIDS Eidsvold 59.21 122 *e*P **P 13 29 00.5 -0.5**
comp=Z,23nm,0.8s
EIDS Eidsvold 59.21 122 P **P 13 29 00.4 -0.6**
baz=59,SNR=19
GNI Garni 60.01 315 *e*P **P 13 29 05.2 -1.3**
comp=Z,67nm,1.3s
GNI *e*pP **pP 13 29 12.9 -2.5**
GNI Garni 60.01 315 P **P 13 29 07.5 +0.9**
SNR=7.8
GNI Garni 60.01 315 LR LR 13 58 45.0
comp=Z,231nm,19.0s,baz=272,slow=40
DGRG David-gareji 60.10 317 P **P 13 29 07.8 +0.8**
TOO Toolangi 60.26 137 P **P 13 29 10.4 +2.3**
baz=60,SNR=3.9
KMBO Kilima Mbogo 60.41 267 P **P 13 29 11.8 +2.0**
KMBO Kilima Mbogo 60.41 267 P **P 13 29 11.8 +2.0**
comp=Z,5.6nm,0.8s,baz=55,slow=12,SNR=8.2
KMBO LR LR 13 51 17.0
comp=Z,314nm,19.4s,baz=278,slow=32
TBLG Delisi 60.65 317 *e*P **P 13 29 10.8 +0.1**
TBLG Delisi 60.65 317 P **P 13 29 10.8 +0.1**
SVE Sverdlovsk 60.85 338⇓ *i*P **P 13 29 11.3 -0.4**
SVE *e*PPP PPP 13 32 59.2
SVE pmax pmax
comp=Z,52nm,0.8s
SVE MLR MLR
comp=Z,850nm,19.0s
ARU Arti 61.37 337 *d i*P **P 13 29 14.6 -0.6**
ARU 13 29 54.6
ARU 13 31 27.9
ARU S **S 13 37 35.9 +1.9**
ARU pmax pmax
comp=Z,29nm,1.0s
ARU MLR MLR
comp=Z,809nm,21.0s
ARU Arti 61.37 337 P **P 13 29 14.1 -1.1**
comp=Z,171nm,0.7s,SNR=12
AKH Akhalkalaki 61.38 316 P **P 13 29 16.3 +0.4**
ARMA Armidale 61.54 127 *e*P **P 13 29 20.1 +3.1**
CAN Canberra 61.62 133 *e*P **P 13 29 17.2 -0.2**
CAN pmax pmax
comp=Z,16nm,0.8s
CAN MLR MLR
comp=Z,833nm,20.0s
CAN Canberra 61.62 133 *e*P **P 13 29 17.1 -0.2**
comp=Z,16nm,0.8s
CAN LR LR
comp=Z,833nm,20.0s
ZEI Tsey 61.65 318 *e*P **P 13 29 17.2 -0.5**
ZEI pmax pmax
comp=Z,26nm,0.5s
ONI Oni 61.87 317 P **P 13 29 19.4 +0.4**
KBZ Khabaz 62.70 318 P **P 13 29 24.7 +0.3**
KBZ Khabaz 62.70 318 P **P 13 29 24.7 +0.3**
KBZ PKKP **PKKPdf 13 50 11.9 +1.6**
KBZ Khabaz 62.70 318 P **P 13 29 24.7 +0.3**
comp=Z,34nm,0.9s,baz=111,slow=4.4,SNR=20
KBZ PKKP **PKKPdf 13 50 11.9 +1.6**
comp=Z,0.5nm,0.4s,baz=221,slow=9.1,SNR=3.5
KBZ LR LR 14 01 56.6
comp=Z,195nm,19.9s,baz=248,slow=41
CHVG Ch'k'valeri 62.85 317 P **P 13 29 26.0 +0.5**
KIV Kislovodsk 62.93 318 *d i*P **P 13 29 25.7 -0.4**
KIV *i* 13 29 33.2
KIV pmax pmax
comp=Z,76nm,1.0s
KIV MLR MLR
comp=Z,300nm,18.0s
KIV Kislovodsk 62.93 318 P **P 13 29 26.1 0.0**
comp=Z,396nm,1.4s,SNR=12
YAK Yakutsk 63.30 16 *e*P **P 13 29 28.7 +0.7**
YAK *e**PP **pP 13 29 37.2 +0.2**
YAK *e* 13 30 05.9
YAK *e* 13 31 42.4
YAK *e*PPP PPP 13 33 18.0
YAK *e*S **S 13 37 55.5 -2.6**
YAK *e**SS **sS 13 38 13.0 +0.1**
YAK *e* 13 39 13.4
YAK pmax pmax
comp=Z,9.0nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.1s
YAK pmax pmax
comp=Z,50nm,2.5s
YAK pmax pmax
comp=E,43nm,3.3s
YAK smax smax
comp=E,139nm,3.5s
YAK smax smax
comp=N,118nm,3.8s
YAK MLR MLR
comp=Z,800nm,16.0s
YAK MLR MLR
comp=E,448nm,18.0s
YAK MLR MLR
comp=N,393nm,19.0s
ASF Jabal al Asfar 63.52 304 LR LR 13 59 25.8
comp=N,391nm,18.1s,baz=155,slow=38
EIL Elat 64.62 301 LR LR 13 58 40.5
comp=N,419nm,18.4s,baz=275,slow=37
EIL Elat 64.62 301 P **P 13 29 39.0 +1.6**
baz=65,SNR=15
SOC Sochi 64.78 317 *e*P P 13 29 34.8 -3.3
SOC *e**SP sP 13 29 49.8 -0.7
SOC *e* 13 30 08.3
SOC *e*S **S 13 38 11.3 -5.8**
SOC *e*SS **SS 13 42 28.0 -0.7**
SOC *e*SSS SSS 13 45 25.8
SOC pmax pmax
comp=Z,46nm,0.6s
SOC MLR MLR
comp=Z,258nm,16.0s
MMAI Mount Meron Ar 64.95 305 LR LR 14 02 01.7
comp=Z,293nm,19.9s,baz=130,slow=40
MBAR Mbarara 66.87 268 PFAKE 13 30 10.0 +18
MBAR LR LR
comp=Z,616nm,21.0s
CSS Prodhromos 67.06 307 *e*P **P 13 29 53.9 +0.9**
CSS LR LR
comp=Z,280nm,19.0s
VORD Divnogorie 67.85 325 *e*P **P 13 29 56.3 -1.3**
VORD *e*S **S 13 38 49.3 -4.8**
VORD pmax pmax
comp=N,9.0nm,0.8s
VORD pmax pmax
comp=E,30nm,0.8s
VORD pmax pmax
comp=Z,20nm,0.8s
VORD smax smax
comp=E,40nm,0.9s
VORD smax smax
comp=Z,9.0nm,0.4s
VORD smax smax
comp=N,10.0nm,0.9s
BRTR Keskin Array B 67.94 312 P **P 13 29 58.0 -0.7**
BRTR Keskin Array B 67.94 312 P **P 13 29 58.0 -0.7**
comp=N,22nm,0.7s,baz=128,slow=7.1,SNR=109
BRTR LR LR 14 00 01.8
comp=N,178nm,21.5s,baz=273,slow=36
VSR Storozhevoye 68.02 325 *e*P **P 13 29 57.2 -1.5**
VSR *e*S **S 13 38 51.5 -4.7**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,30nm,0.8s
VSR smax smax
comp=N,40nm,1.4s
VSR smax smax
comp=E,60nm,1.4s
VSR smax smax
comp=Z,70nm,1.4s
ANTO Ankara 68.61 312 *e*P **P 13 30 00.1 -2.7**
ANTO pmax pmax
comp=Z,20nm,0.7s
ANTO MLR MLR
comp=Z,249nm,21.0s
ANTO Ankara 68.61 312 *e*P **P 13 30 00.1 -2.7**
comp=Z,20nm,0.7s
ANTO LR LR
comp=Z,249nm,21.0s
ANTO Ankara 68.61 312 P **P 13 30 03.2 +0.4**
SNR=6.7
SIM Simferopol' 69.03 317 P **P 13 30 05.4 +0.2**
SIM pmax pmax
comp=Z,32nm,0.9s
PETK Petropavlovsk- 69.79 34 P **P 13 30 08.6 -1.1**
PETK Petropavlovsk- 69.79 34 P **P 13 30 08.6 -1.1**
PETK Petropavlovsk- 69.79 34 P **P 13 30 08.6 -1.1**
comp=Z,1.9nm,0.7s,baz=183,slow=11,SNR=3.9
PETK LR LR 14 02 31.8
comp=Z,388nm,18.8s,baz=98,slow=38
ISP Isparta 69.88 309 PFAKE 13 30 20.0 +9.3
ISP LR LR
comp=Z,237nm,20.0s
MOS Moscow 70.69 329 *e*P **P 13 30 14.1 -1.0**
MOS *e* 13 30 33.5
MOS *e* 13 32 54.9
MOS pmax pmax
comp=Z,89nm,0.7s
MOS pmax pmax
comp=E,47nm,0.6s
MOS pmax pmax
comp=N,37nm,0.6s
MOS pmax pmax
comp=Z,100nm,0.9s
OBN Obninsk 71.00 328⇓ *i*P **P 13 30 14.9 -2.1**
OBN *i* 13 30 23.8
OBN *e* 13 30 35.5
OBN *e* 13 32 54.2
OBN pmax pmax
comp=Z,67nm,1.2s
OBN MLR MLR
comp=Z,400nm,19.0s
LSZ Lusaka 71.04 253 *e*P **P 13 30 20.4 +2.2**
comp=Z,21nm,1.3s
LSZ *e*pP **pP 13 30 26.4 -0.9**
LSZ *e*sP **sP 13 30 29.3 -1.4**
LSZ LR LR
comp=Z,417nm,20.0s
LSZ Lusaka 71.04 253 P **P 13 30 20.7 +2.5**
comp=Z,3.8nm,0.6s,baz=51,slow=7.9,SNR=9.7
TIXI Tiksi 71.05 10 *e*P **P 13 30 15.5 -1.5**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
TIXI MLR MLR
comp=Z,697nm,21.0s
TIXI Tiksi 71.05 10 *e*P **P 13 30 15.5 -1.5**
comp=Z,6.9nm,0.8s
TIXI LR LR
comp=Z,697nm,21.0s
SEY Seymchan 71.69 23⇓ *e*P **P 13 30 20.0 -1.0**
DZM Mont Dzumac 71.85 114 LR LR 14 02 50.0
comp=Z,448nm,18.4s,baz=245,slow=37
KARP Karpathos 72.12 306 *e*P **P 13 30 25.1 +0.8**
TIRR Tirgusor 72.83 316 *e*P **P 13 30 25.8 -2.5**
TIRR *e* 13 30 45.6
TIRR pmax pmax
comp=Z,19nm,0.6s
TIRR Tirgusor 72.83 316 *e*P **P 13 30 25.8 -2.5**
comp=Z,19nm,0.6s
TIRR *e*PcP **PcP 13 30 45.6 +0.2**
TIRR Tirgusor 72.83 316⇓ *i*P **P 13 30 28.1 -0.2**
CFR Carcaliu 73.18 316⇓ *i*P **P 13 30 30.7 +0.4**
XRY Khrisi 73.22 305 *e*P **P 13 30 30.8 +0.1**
NPS Neapolis 73.33 306 *e*P **P 13 30 32.8 +1.3**
PRK Paraskevi 73.41 310 *e*P **P 13 30 33.4 +1.6**
LAST Lasithi 73.43 306 *e*P **P 13 30 32.3 +0.2**
CHOS Chios island 73.44 309 *e*P **P 13 30 32.5 +0.4**
SANT Santorini 73.61 307 *e*P **P 13 30 30.5 -2.6**
comp=Z,37nm,0.9s
SANT *e*pP **pP 13 30 39.4 -2.8**
SANT *e*sP **sP 13 30 42.3 -3.3**
SANT LR LR
comp=Z,189nm,19.0s
AKASG Malin Array Be 73.79 322 P **P 13 30 32.7 -1.0**
AKASG S **SKiKP 13 40 00.4 -1.0**
AKASG Malin Array Be 73.79 322 P **P 13 30 32.7 -1.0**
AKASG S **SKiKP 13 40 00.4 -1.0**
AKASG Malin Array Be 73.79 322 P **P 13 30 32.7 -1.0**
comp=Z,13nm,0.6s,baz=92,slow=5.3,SNR=40
AKASG S **SKiKP 13 40 00.4 -1.0**
comp=Z,0.5nm,0.4s,baz=98,slow=11,SNR=4.3
AKASG LR LR 14 09 02.5
comp=Z,290nm,19.3s,baz=100,slow=41
KIEV Kiev 73.79 322 *e*P **P 13 30 30.9 -2.9**
KIEV pmax pmax
comp=Z,21nm,0.8s
KIEV MLR MLR
comp=Z,404nm,19.0s
KIEV Kiev 73.79 322 *e*P **P 13 30 30.9 -2.9**
comp=Z,21nm,0.8s
KIEV LR LR
comp=Z,404nm,19.0s
ALN Alexandroupoli 73.86 312 *e*P **P 13 30 34.1 -0.3**
SIVA Sivas 73.95 305 *e*P **P 13 30 35.6 +0.5**
SMTH Samothraki Isl 74.17 311 *e*P **P 13 30 36.0 -0.3**
VRI Vrincioaia 74.30 317⇓ *i*P **P 13 30 37.5 +0.6**
PLOR Plostina 74.34 317⇑ *i*P **P 13 30 38.2 +1.0**
LIA Limnos Island 74.35 310 *e*P **P 13 30 37.0 -0.3**
TESR Tescani 74.48 317⇓ *i*P **P 13 30 38.2 +0.3**
VAM Vamos 74.50 306 *e*P **P 13 30 41.2 +2.9**
MLR Muntele Rosu 74.76 316⇑ *i*P **P 13 30 40.3 +0.6**
MAW Mawson 74.85 193 *e*P **P 13 30 39.9 +0.4**
comp=Z,5.0nm,1.4s
MAW *e*PcP **PcP 13 30 55.6 +2.3**
MAW Mawson 74.85 193 P **P 13 30 40.9 +1.4**
comp=Z,3.6nm,0.6s,baz=32,slow=7.1,SNR=6.9
LBTB Lobatse 75.13 243 *e*P **P 13 30 42.0 -0.2**
comp=Z,10nm,0.8s
LBTB Lobatse 75.13 243 P **P 13 30 44.2 +2.0**
comp=Z,9.3nm,0.7s,baz=107,slow=6.3,SNR=12
AOS Alonnisos 75.24 310 *e*P **P 13 30 43.5 +1.0**
ANKY Antikythira Is 75.28 306 *e*P **P 13 30 43.1 +0.3**
TARA Tarawa 75.34 89 PFAKE 13 30 50.0 +6.4
TARA LR LR
comp=Z,1µm,20.0s
VOIR 75.37 316⇓ *i*P **P 13 30 43.2 0.0**
PAIG Paliouri 75.50 310 *e*P **P 13 30 43.3 -0.6**
DID Didima 75.53 308 *e*P **P 13 30 42.3 -1.9**
KYTH Kithira 75.54 306 *e*P **P 13 30 43.3 -1.0**
NVR Nevrokopi 75.56 312 *e*P **P 13 30 44.0 -0.3**
ARR Arges 75.64 316⇑ *i*P **P 13 30 44.8 0.0**
BURAR Bucovina Array 75.66 318⇓ *i*P **P 13 30 45.7 +0.9**
VLI Veliai 75.67 307 *e*P **P 13 30 45.1 +0.1**
BUR08 Bucovina Ar. S 75.67 318 *e*P **P 13 30 44.9 0.0**
PLG Polygyros 75.73 311 *e*P **P 13 30 44.8 -0.5**
LTK Loutraki 75.80 308 *e*P **P 13 30 43.8 -2.0**
BOSA Boshof 76.12 240 P **P 13 30 49.4 +1.5**
BOSA Boshof 76.12 240 P **P 13 30 49.4 +1.5**
comp=Z,7.7nm,0.8s,baz=95,slow=7.6,SNR=9.1
DYR Agios Nikonas 76.16 307 *e*P **P 13 30 47.6 -0.2**
VLX Vlachokerasia 76.19 308 *e*P **P 13 30 47.4 -0.7**
VTS Vitosha 76.22 313⇓ *i*P **P 13 30 47.9 -0.3**
NACGM Naroch 76.28 326 *e* P 13 30 43.0 -5.0
GUR Goura 76.28 308 *e*P **P 13 30 48.3 -0.3**
JOF Joensuu 76.37 334 *e*P **P 13 30 46.5 -1.9**
JOF pmax pmax
comp=Z,16nm,0.6s
JOF Joensuu 76.37 334 *ep* **P 13 30 46.5 -1.9**
comp=Z,16nm,0.6s
AGG Agios Georgios 76.42 309 *e*P **P 13 30 47.6 -1.7**
LIT Litokhoron 76.42 310 *e*P **P 13 30 47.6 -1.7**
KLV Kalavryta, Ach 76.44 308 *e*P **P 13 30 48.1 -1.4**
KALE Kalithea 76.49 309 *e*P **P 13 30 48.1 -1.6**
ITM Ithomi 76.53 307 *e*P **P 13 30 49.4 -0.5**
TRIZ Trizonia 76.54 309 *e*P **P 13 30 48.7 -1.2**
GRG Griva 76.60 311 *e*P **P 13 30 49.4 -0.8**
LAKA Lakka 76.60 308 *e*P **P 13 30 49.4 -0.9**
PYL PYLOS 76.64 307 *e*P **P 13 30 49.4 -1.1**
EFP Efpalio 76.68 309 *e*P P 13 30 44.4 -6.3
THL Klokotos Trika 76.72 310 *e*P **P 13 30 50.0 -0.9**
EVR Evrytania 76.81 309 *e*P **P 13 30 50.5 -1.1**
LVV L'vov 76.84 320 *e*P P 13 31 00.7 +9.3
RLS Riolos of Patr 76.98 308 *e*P **P 13 30 53.0 +0.6**
VSU Vasula 77.19 329 *d i*P **P 13 30 52.4 -0.7**
VSU pmax pmax
comp=Z,22nm,1.0s
DRGR 77.20 317⇑ *i*P **P 13 30 54.4 +0.8**
APA Apatity 77.26 339⇑ *i*P **P 13 30 53.6 +0.2**
APA pmax pmax
comp=Z,2.0nm,0.8s
APA MLR MLR
comp=Z,1µm,15.0s
FNA Florina 77.35 311 *e*P **P 13 30 53.5 -1.0**
TRPA Tarpa 77.52 318⇓ *i*P **P 13 30 55.8 +0.6**
TRPA Tarpa 77.52 318⇓ *e* **P 13 30 55.7 +0.6**
JAN Janina 77.63 310 *e*P **P 13 30 56.0 -0.1**
KWP Kalwaria Pacla 77.65 320 *e*P **P 13 30 54.3 -1.7**
KWP *e* 13 31 06.9
KWP pmax pmax
comp=Z,36nm,0.9s
KWP Kalwaria Pacla 77.65 320 *e*P **P 13 30 54.3 -1.7**
comp=Z,36nm,0.9s
KWP *e*PcP **PcP 13 31 06.9 +0.8**
KWP Kalwaria Pacla 77.65 320⇑ *i*P **P 13 30 56.7 +0.7**
KWP Kalwaria Pacla 77.65 320 *e*P **P 13 30 56.3 +0.3**
VLS Valsamata 77.68 308 *e*P **P 13 30 55.8 -0.6**
LKD2 Lefkada island 77.69 309 *e*P **P 13 30 55.8 -0.6**
UZH Uzhgorod 77.76 319 *e*P **P 13 30 57.8 +1.3**
UZH *e* 13 31 09.6
KOLS Kolonicke sedl 77.82 319 *e*P **P 13 30 58.0 +1.1**
KOLS pmax pmax
comp=Z,22nm,1.1s
KOLS Kolonicke sedl 77.82 319 *e*P **P 13 30 58.0 +1.1**
SUW Suwalki 78.14 324 *e*P **P 13 30 58.3 -0.2**
FIA1 FINESS Array S 78.28 332 *e*P **P 13 30 56.3 -2.8**
FIA1 *e*PcP **PcP 13 31 08.9 +0.5**
FINES FINESS Array B 78.28 332 P **P 13 30 58.9 -0.2**
FINES FINESS Array B 78.28 332 P **P 13 30 58.9 -0.2**
comp=Z,11nm,0.6s,baz=99,slow=5.6,SNR=31
FINES LR LR 14 10 08.0
comp=Z,337nm,20.6s,baz=90,slow=39
KAF Kangasniemi 78.34 333 *e*P **P 13 30 58.5 -1.0**
KAF pmax pmax
comp=Z,16nm,0.7s
KAF Kangasniemi 78.34 333 *ep* **P 13 30 58.5 -1.0**
comp=Z,16nm,0.7s
CRVS Cervenica-Dubn 78.35 319 *e*P **P 13 30 59.6 -0.2**
CRVS pmax pmax
comp=Z,32nm,1.5s
CRVS Cervenica-Dubn 78.35 319 *e*P **P 13 30 59.6 -0.2**
TIR Tirane 78.55 311 PFAKE 13 31 10.0 +8.9
TIR LR LR
comp=Z,267nm,21.0s
FX1 Attu Island--F 78.70 37 *e*P **P 13 31 01.7 +0.1**
FX1 *e*PcP **pP 13 31 10.7 -0.2**
BILL Bilibino 79.07 21⇑ *e*P **P 13 31 03.2 -0.2**
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL MLR MLR
comp=Z,600nm,18.0s
BILL Bilibino 79.07 21 PFAKE 13 31 10.0 +6.6
BILL LR LR
comp=Z,497nm,19.0s
PSZ Piszkesteto 79.25 318 *e*P **P 13 31 03.2 -1.7**
PSZ pmax pmax
comp=Z,20nm,1.0s
PSZ MLR MLR
comp=Z,208nm,20.0s
PSZ Piszkesteto 79.25 318 *e*P **P 13 31 03.2 -1.7**
comp=Z,20nm,1.0s
PSZ LR LR
comp=Z,208nm,20.0s
PSZ Piszkesteto 79.25 318⇑ *i*P **P 13 31 04.4 -0.5**
PSZ Piszkesteto 79.25 318⇓ *e* **P 13 31 05.0 +0.1**
VYHS Vyhne 80.02 319 *e*P **P 13 31 09.4 +0.4**
VYHS pmax pmax
comp=Z,43nm,2.5s
VYHS Vyhne 80.02 319 *e*P **P 13 31 09.4 +0.4**
KEV Kevo 80.21 341 *e*P **P 13 31 08.5 -1.0**

KEV MLR MLR
comp=Z,732nm,19.0s
KEV Kevo 80.21 341 *ep* **P 13 31 08.2 -1.3**
comp=Z,7.7nm,0.7s
KEV Kevo 80.21 341 *eP* **P 13 31 08.5 -1.0**
KEV LR LR
comp=Z,732nm,19.0s
RPZ Rata Peaks 80.47 135 P **P 13 31 11.7 +0.2**
RPZ Rata Peaks 80.47 135 P **P 13 31 11.7 +0.2**
comp=Z,13nm,0.6s,baz=280,slow=7.9,SNR=8.4
SUR Sutherland 80.60 237 P **P 13 31 15.0 +2.3**
SUR LR LR
comp=Z,401nm,20.0s
SUR Sutherland 80.60 237 P **P 13 31 15.0 +2.3**
comp=Z,8.0nm,0.8s,baz=56,slow=5.9,SNR=6.4
OKC Ostrava-Krasne 80.61 320 *eP* **P 13 31 12.7 +0.6**
OKC *e* 13 31 20.7
OKC Ostrava-Krasne 80.61 320 *eP* **P 13 31 12.7 +0.6**
OKC *epP* **pP 13 31 20.7 -0.6**
ARCES ARCESS Array B 80.66 340 P **P 13 31 11.9 0.0**
ARCES ARCESS Array B 80.66 340 P **P 13 31 11.9 0.0**
comp=Z,2.7nm,0.4s,baz=97,slow=6.4,SNR=48
ARCES LR LR 14 09 32.4
comp=Z,518nm,19.8s,baz=114,slow=38
ARE0 ARCESS Array S 80.66 340 *eP* **P 13 31 10.1 -1.9**
TIP Timpagrande 80.75 309 *eP* **P 13 31 12.0 -1.2**
comp=Z,19nm,0.9s
TIP *ePcP* **PcP 13 31 20.9 +1.0**
TIP LR LR
comp=Z,266nm,21.0s
MORC Moravsky Berou 81.00 320 *eP* **P 13 31 12.0 -2.2**
MORC *e**PP **PcP 13 31 22.0 +1.4**
MORC *e**SP **sP 13 31 24.9 -1.9**
MORC pmax pmax
comp=Z,24nm,1.3s
MORC Moravsky Berou 81.00 320 *eP* **P 13 31 12.0 -2.2**
comp=Z,24nm,1.3s
MORC *epP* **PcP 13 31 22.0 +1.4**
MORC *esP* **sP 13 31 24.9 -1.9**
MORC Moravsky Berou 81.00 320⇑ *iP* **P 13 31 14.9 +0.7**
ZST Bratislava 81.14 318 *eP* **P 13 31 14.2 -0.8**
ZST pmax pmax
comp=Z,13nm,0.9s
ZST Bratislava 81.14 318 *eP* **P 13 31 14.2 -0.8**
BEHE Becsehly 81.22 316⇑ *eP* **P 13 31 16.8 +1.3**
CEL Celeste 81.38 308 *eP* **P 13 31 16.6 +0.1**
comp=Z,26nm,0.8s
CEL LR LR
comp=Z,169nm,20.0s
CUC Castrocucco 81.52 310 *eP* **P 13 31 15.9 -1.3**
comp=Z,17nm,0.8s
CUC *ePcP* **PcP 13 31 23.3 +0.2**
CUC LR LR
comp=Z,216nm,22.0s
TSUM Tsumeb 81.61 250 *eP* **P 13 31 18.9 +0.6**
comp=Z,17nm,1.1s
TSUM LR LR
comp=Z,268nm,19.0s
TSUM Tsumeb 81.61 250 P **P 13 31 20.5 +2.3**
comp=Z,6.6nm,0.9s,baz=96,slow=8.6,SNR=7.1
DPC Dobruska-Polom 81.83 320 *eP* **P 13 31 19.5 +0.8**
DPC *e* 13 31 24.7
DPC Dobruska-Polom 81.83 320 *eP* **P 13 31 19.5 +0.8**
DPC *epP* **PcP 13 31 24.7 +0.4**
KSP Ksiaz 81.89 321 *eP* **P 13 31 19.5 +0.6**
KSP Ksiaz 81.89 321 *eP* **P 13 31 18.0 -0.9**
UPC Upice 82.04 320 *eP* **P 13 31 20.2 +0.5**
UPC *e* 13 31 25.3
UPC Upice 82.04 320 *eP* **P 13 31 20.2 +0.5**
UPC *epP* **PcP 13 31 25.3 +0.1**
SYO Syowa Base 82.12 198‖ *eP* **P 13 31 20.2 +0.6**
BOJS Bojanci 82.22 315 *iP* **P 13 31 21.1 +0.4**
FUNA Funafuti 82.27 99 PFAKE 13 31 30.0 +8.4
FUNA LR LR
comp=Z,11μm,19.0s
TREC Trest 82.29 319 *eP* **P 13 31 21.5 +0.4**
TREC Trest 82.29 319 *eP* **P 13 31 21.5 +0.4**
PERS Pernice 82.38 316 *iP* **P 13 31 22.3 +0.7**
WDD Wield Dalam 82.39 306 PFAKE 13 31 30.0 +8.2
WDD LR LR
comp=Z,229nm,21.0s
SOKA Soboth 82.44 316⇓ *iP* **P 13 31 22.6 +0.6**
comp=Z,15nm,0.9s
VISS Visnje 82.52 316 *iP* **P 13 31 22.8 +0.5**
LJU Ljubljana 82.75 316 *eP* **P 13 31 24.0 +0.5**
PRU Pruhonice 82.95 320 *eP* **P 13 31 24.7 +0.3**
PRU Pruhonice 82.95 320 *eP* **P 13 31 24.7 +0.3**
PVCC Panska Ves 82.96 320 *eP* **P 13 31 25.1 +0.6**
PVCC Panska Ves 82.96 320 *eP* **P 13 31 25.1 +0.6**
JAVS Javornik 83.07 316 *iP* **P 13 31 25.5 +0.2**
VOY Vojsko 83.19 316 *eP* **P 13 31 26.2 +0.3**
VOY *e* 13 31 32.7
VOY *e* 13 31 53.1
BRG Berggiesshubel 83.38 321 *eP* **P 13 31 27.1 +0.5**
comp=Z,6.4nm,0.8s
BRG Berggiesshubel 83.38 321 *eP* **P 13 31 27.1 +0.5**
BRG pmax pmax
comp=Z,6.0nm,0.8s
BRG Berggiesshubel 83.38 321 *eP* **P 13 31 27.1 +0.5**
comp=Z,6.0nm,0.8s
AQU L'Aquila 83.43 312 *eP* **P 13 31 27.8 +0.6**
comp=Z,45nm,1.1s
AQU LR LR
comp=Z,290nm,20.0s
GEC2 GERESS Array S 83.44 319 *eP* **P 13 31 27.2 +0.1**
GEC2 pmax pmax
comp=Z,79nm,2.1s
GEC2 GERESS Array S 83.44 319 *eP* **P 13 31 27.2 +0.1**
comp=Z,79nm,2.1s
GERES GERESS Array B 83.44 319 P **P 13 31 27.7 +0.5**
GERES GERESS Array B 83.44 319 P **P 13 31 27.7 +0.5**
comp=Z,1.3nm,0.4s,baz=76,slow=5.6,SNR=16
KHC Kasperske Hory 83.53 319 *eP* **P 13 31 28.0 +0.5**
KHC Kasperske Hory 83.53 319 *eP* **P 13 31 28.0 +0.5**
URZ Urewera 83.89 129 LR LR 14 09 00.7
comp=Z,747nm,18.8s,baz=287,slow=36
CLL Collm 83.99 321 *eP* **P 13 31 30.0 +0.3**
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 83.99 321 *eP* **P 13 31 30.0 +0.3**
comp=Z,6.0nm,0.9s
CLL LV 14 20 00.0
comp=Z,200nm,18.4s
WET Wettzell 83.99 319 *eP* **P 13 31 30.1 +0.2**
WET pmax pmax
comp=Z,6.0nm,0.9s
WET Wettzell 83.99 319 *eP* **P 13 31 30.1 +0.2**
comp=Z,6.0nm,0.9s
MSKU Masuku 84.02 268 PFAKE 13 31 40.0 +9.3
MSKU LR LR
comp=Z,1.0nm,19.0s
MIDW Midway 84.13 62 PFAKE 13 31 40.0 +9.1
MIDW LR LR
comp=Z,517nm,19.0s
ROTZ Rotzenmuhle 84.45 320 *eP* **P 13 31 33.0 +0.9**
comp=Z,7.0nm,0.7s
MOX Moxa 84.85 320 *eP* **P 13 31 34.6 +0.5**
MOX pmax pmax
comp=Z,5.0nm,0.9s
MOX Moxa 84.85 320 *eP* **P 13 31 34.6 +0.5**
comp=Z,5.0nm,0.9s
SPITS Spitsbergen Ar 84.95 348 LR LR 14 15 23.5
comp=Z,313nm,19.1s,baz=105,slow=40
GRF Grafenberg Arr 85.09 319 *eP* **P 13 31 36.4 +1.0**
GRF pmax pmax
comp=Z,18nm,1.2s
GRF Grafenberg Arr 85.09 319 *eP* **P 13 31 36.4 +1.0**
comp=Z,18nm,1.2s
NB2 NORSAR Subarra 85.32 331 P **P 13 31 35.7 -0.6**
comp=Z,8.6nm,0.8s,baz=93,slow=4.8
NOA NORSAR Array B 85.32 331 P **P 13 31 36.2 -0.1**
NOA NORSAR Array B 85.32 331 P **P 13 31 36.2 -0.1**
comp=Z,7.3nm,0.9s,baz=93,slow=4.8,SNR=12
NOA LR LR 14 15 30.6
comp=Z,268nm,20.1s,baz=95,slow=40
FETA Feichten 85.40 317⇑ *iP* **P 13 31 37.5 +0.3**
comp=Z,5.6nm,0.7s
CLZ Clausthal 85.64 322 *eP* **P 13 31 38.9 +0.8**
CLZ pmax pmax
comp=Z,18nm,0.7s
CLZ Clausthal 85.64 322 *eP* **P 13 31 38.9 +0.8**
comp=Z,18nm,0.7s
VLC Villacollemand 85.65 314 PFAKE 13 31 50.0 +12
VLC LR LR
comp=Z,264nm,20.0s
NRDL Niedersach Rie 85.81 322 *eP* **P 13 31 39.8 +1.1**
comp=Z,9.0nm,0.9s
KBS Kingsbay 85.90 349 PFAKE 13 31 50.0 +11
KBS LR LR
comp=Z,616nm,22.0s
TUE Stuetta 86.35 316 PFAKE 13 31 50.0 +8.0
TUE LR LR
comp=Z,388nm,19.0s
KEST Kesra 86.60 305 *eP* **P 13 31 44.0 +0.8**
KEST Kesra 86.60 305 LR LR 14 10 31.4
comp=Z,114nm,21.4s,baz=303,slow=36
PGF Pioggiola 86.69 312⇑ *iP* **P 13 31 44.0 +0.4**
comp=Z,26nm,1.1s
PGF Pioggiola 86.69 312⇑ *iP* **P 13 31 44.0 +0.4**
PGF pmax pmax
comp=Z,26nm,1.1s
PGF Pioggiola 86.69 312⇑ *iP* **P 13 31 44.0 +0.4**
comp=Z,26nm,1.1s
TNS Taunus Mts 86.88 320 *eP* **P 13 31 45.4 +1.1**
TNS pmax pmax
comp=Z,8.0nm,0.7s
TNS Taunus Mts 86.88 320 *eP* **P 13 31 45.4 +1.1**
comp=Z,8.0nm,0.7s
IBBN Ibbenburen 87.25 322 *eP* **P 13 31 47.0 +1.1**
comp=Z,23nm,0.7s
BUG Bochum--Univer 87.58 321 *eP* **P 13 31 48.0 +0.5**
comp=Z,18nm,0.6s
CDF Champ du Feu 87.70 318 *eP* **P 13 31 49.2 +0.9**
CDF Champ du Feu 87.70 318 *eP* **P 13 31 49.2 +0.9**
CDF Champ du Feu 87.70 318 *eP* **P 13 31 49.2 +0.9**
SBF Sospel 87.78 314⇑ *iP* **P 13 31 49.2 +0.4**
comp=Z,35nm,0.7s
SBF Sospel 87.78 314⇑ *iP* **P 13 31 49.2 +0.4**
SBF pmax pmax
comp=Z,35nm,0.7s
SBF Sospel 87.78 314⇑ *iP* **P 13 31 49.2 +0.4**
comp=Z,35nm,0.7s
ECH Echery 87.79 318 *eP* **P 13 31 48.3 -0.4**
ECH Echery 87.79 318 *eP* **P 13 31 48.3 -0.4**
VNDA Vanda 87.83 169 P **P 13 31 48.7 +0.5**
VNDA Vanda 87.83 169 P **P 13 31 48.7 +0.5**
comp=Z,3.5nm,0.8s,baz=298,slow=3.6,SNR=13
HINF Hinteralfeld 88.01 318 *eP* **P 13 31 49.8 0.0**
comp=Z,9.0nm,0.9s
HINF Hinteralfeld 88.01 318 *eP* **P 13 31 49.8 0.0**
HINF pmax pmax
comp=Z,9.0nm,0.9s
HINF Hinteralfeld 88.01 318 *eP* **P 13 31 49.8 0.0**
comp=Z,9.0nm,0.9s
ABSA Djebel Ababsia 88.09 306 P **P 13 31 52.4 +1.9**
CMAH Djebel Manchou 88.12 306 P **P 13 31 52.7 +2.1**
LPG La Plagne 88.19 315⇑ *iP* **P 13 31 51.6 +0.6**
comp=Z,25nm,0.8s
LPG La Plagne 88.19 315⇑ *iP* **P 13 31 51.6 +0.6**
LPG pmax pmax
comp=Z,25nm,0.8s
LPG La Plagne 88.19 315⇑ *iP* **P 13 31 51.6 +0.6**
comp=Z,25nm,0.8s
LPL La Plagne 88.21 315⇑ *iP* **P 13 31 51.6 +0.6**
comp=Z,34nm,0.8s
LPL La Plagne 88.21 315⇑ *iP* **P 13 31 51.6 +0.6**
LPL pmax pmax
comp=Z,34nm,0.8s
LPL La Plagne 88.21 315⇑ *iP* **P 13 31 51.6 +0.6**
comp=Z,34nm,0.8s
MBDF Montbardon 88.22 315 *eP* **P 13 31 51.7 +0.7**
comp=Z,16nm,0.9s
MBDF Montbardon 88.22 315 *eP* **P 13 31 51.7 +0.7**
MBDF pmax pmax
comp=Z,17nm,0.9s
MBDF Montbardon 88.22 315 *eP* **P 13 31 51.7 +0.7**
comp=Z,16nm,0.9s
HAU Haudompre 88.34 318⇑ *iP* **P 13 31 51.5 +0.2**
comp=Z,18nm,0.7s
HAU *eR*
comp=Z,260nm,18.5s
HAU Haudompre 88.34 318⇑ *iP* **P 13 31 51.5 +0.2**
HAU pmax pmax
comp=Z,19nm,0.7s
HAU Haudompre 88.34 318⇑ *iP* **P 13 31 51.5 +0.2**
comp=Z,18nm,0.7s
FRF La Foret Royal 88.37 313⇑ *iP* **P 13 31 51.5 0.0**
comp=Z,25nm,0.7s
FRF La Foret Royal 88.37 313⇑ *iP* **P 13 31 51.5 0.0**
FRF pmax pmax
comp=Z,25nm,0.7s
FRF La Foret Royal 88.37 313⇑ *iP* **P 13 31 51.5 0.0**
comp=Z,25nm,0.7s
LMR La Mourre 88.48 313 *eP* **P 13 31 52.7 +0.7**
comp=Z,44nm,1.2s
LMR La Mourre 88.48 313 *eP* **P 13 31 52.7 +0.7**
LMR pmax pmax
comp=Z,44nm,1.2s
LMR La Mourre 88.48 313 *eP* **P 13 31 52.7 +0.7**
comp=Z,44nm,1.2s
CAEH 'Ain El Ouahch 88.57 307 P P 13 31 56.1 +3.5
CABF La Chapelle 88.60 316 *eP* **P 13 31 53.3 +0.7**
comp=Z,27nm,1.0s
CABF La Chapelle 88.60 316 *eP* **P 13 31 53.3 +0.7**
CABF pmax pmax
comp=Z,27nm,1.0s
CABF La Chapelle 88.60 316 *eP* **P 13 31 53.3 +0.7**
comp=Z,27nm,1.0s
PAGF Fort de Pagny 88.72 318 *eP* **P 13 31 53.5 +0.4**
PAGF Fort de Pagny 88.72 318 *eP* **P 13 31 53.5 +0.4**
ORIF Oris-en-Rattie 88.84 315 *eP* **P 13 31 54.6 +0.8**
comp=Z,9.4nm,0.7s
ORIF *eR*
comp=Z,246nm,18.2s
ORIF Oris-en-Rattie 88.84 315 *eP* **P 13 31 54.6 +0.8**
ORIF pmax pmax
comp=Z,9.0nm,0.7s
ORIF Oris-en-Rattie 88.84 315 *eP* **P 13 31 54.6 +0.8**
comp=Z,9.4nm,0.7s
SMRF Simiane la Rot 89.12 314 *eP* **P 13 31 55.6 +0.5**
comp=Z,26nm,1.0s
SMRF Simiane la Rot 89.12 314 *eP* **P 13 31 55.6 +0.5**
comp=Z,26nm,1.0s
MEZF Maizieres J'vi 89.17 318 *eP* **P 13 31 55.9 +0.7**
comp=Z,9.4nm,0.7s
MEZF Maizieres J'vi 89.17 318 *eP* **P 13 31 55.9 +0.7**
comp=Z,9.4nm,0.7s
GIVF Givet 89.21 320⇑ *iP* **P 13 31 56.1 +0.8**
GIVF Givet 89.21 320⇑ *iP* **P 13 31 56.1 +0.8**
GIVF Givet 89.21 320⇑ *iP* **P 13 31 56.1 +0.8**
BAIF Baives 89.61 320⇑ *iP* **P 13 31 58.3 +1.1**
comp=Z,37nm,0.8s
BAIF Baives 89.61 320⇑ *iP* **P 13 31 58.3 +1.1**
BAIF pmax pmax
comp=Z,37nm,0.8s
BAIF Baives 89.61 320⇑ *iP* **P 13 31 58.3 +1.1**
comp=Z,37nm,0.8s
VIVF Saint-Julien-l 89.70 315⇑ *iP* **P 13 31 58.2 +0.4**
comp=Z,27nm,1.1s
VIVF Saint-Julien-l 89.70 315⇑ *iP* **P 13 31 58.2 +0.4**
VIVF pmax pmax
comp=Z,27nm,1.1s
VIVF Saint-Julien-l 89.70 315⇑ *iP* **P 13 31 58.2 +0.4**
comp=Z,27nm,1.1s
SSB Saint Sauveur 89.76 315 PFAKE 13 32 10.0 +12
SSB LR LR
comp=Z,332nm,20.0s
SET Setif 89.77 306 P P 13 32 03.0 +4.6
LOR Lormes 90.07 317⇑ *iP* **P 13 32 00.1 +0.7**
comp=Z,18nm,0.8s
LOR *eR*
comp=Z,247nm,19.2s
LOR Lormes 90.07 317⇑ *iP* **P 13 32 00.1 +0.7**
comp=Z,18nm,0.8s
SMF Signal de Mont 90.14 317⇑ *iP* **P 13 32 00.3 +0.5**
comp=Z,15nm,0.7s
SMF Signal de Mont 90.14 317⇑ *iP* **P 13 32 00.3 +0.5**
SMF pmax pmax
comp=Z,15nm,0.7s
SMF Signal de Mont 90.14 317⇑ *iP* **P 13 32 00.3 +0.5**
comp=Z,15nm,0.7s
SSF Saint Saulge 90.33 317 *eP* **P 13 32 01.7 +1.1**
SSF Saint Saulge 90.33 317 *eP* **P 13 32 01.7 +1.1**
SSF Saint Saulge 90.33 317 *eP* **P 13 32 01.7 +1.1**
AVF Avril sur Loir 90.46 317 *eP* **P 13 32 02.0 +0.8**
AVF Avril sur Loir 90.46 317 *eP* **P 13 32 02.0 +0.8**
AVF Avril sur Loir 90.46 317 *eP* **P 13 32 02.0 +0.8**
TAM Tamanrasset 90.57 293 *eP* **P 13 32 03.3 +0.8**
TAM pmax pmax
comp=Z,11nm,1.1s
TAM MLR MLR
comp=Z,302nm,20.0s
TAM Tamanrasset 90.57 293 *eP* **P 13 32 03.2 +0.8**
comp=Z,11nm,1.1s
TAM LR LR
comp=Z,302nm,20.0s
BGF Bois d'Agland 90.83 317⇑ *iP* **P 13 32 04.1 +1.1**
comp=Z,12nm,0.6s
BGF Bois d'Agland 90.83 317⇑ *iP* **P 13 32 04.1 +1.1**
BGF pmax pmax
comp=Z,12nm,0.6s
BGF Bois d'Agland 90.83 317⇑ *iP* **P 13 32 04.1 +1.1**
comp=Z,12nm,0.6s
TCF Toulx Ste Croi 91.29 316 *eP* **P 13 32 05.4 +0.2**
comp=Z,15nm,1.0s
TCF Toulx Ste Croi 91.29 316 *eP* **P 13 32 05.4 +0.2**
TCF pmax pmax
comp=Z,15nm,1.0s
TCF Toulx Ste Croi 91.29 316 *eP* **P 13 32 05.4 +0.2**
comp=Z,15nm,1.0s
CAF Calviac 91.54 315⇑ *iP* **P 13 32 07.6 +1.2**
comp=Z,17nm,0.9s
CAF Calviac 91.54 315⇑ *iP* **P 13 32 07.6 +1.2**
CAF pmax pmax
comp=Z,17nm,0.9s
CAF Calviac 91.54 315⇑ *iP* **P 13 32 07.6 +1.2**
comp=Z,17nm,0.9s
MTLF Montolieu 91.60 313⇑ *iP* **P 13 32 07.8 +1.2**
comp=Z,17nm,1.0s
MTLF Montolieu 91.60 313⇑ *iP* **P 13 32 07.8 +1.2**
MTLF pmax pmax
comp=Z,17nm,1.0s
MTLF Montolieu 91.60 313⇑ *iP* **P 13 32 07.8 +1.2**
comp=Z,17nm,1.0s
RJF Les Rejaudoux 91.89 315 *eP* **P 13 32 08.5 +0.6**
comp=Z,38nm,1.2s
RJF *eR*
comp=Z,276nm,21.8s
RJF Les Rejaudoux 91.89 315 *eP* **P 13 32 08.5 +0.6**
RJF pmax pmax
comp=Z,38nm,1.2s
RJF Les Rejaudoux 91.89 315 *eP* **P 13 32 08.5 +0.6**
comp=Z,38nm,1.2s
JMIC Jan Mayen 92.06 342 LR LR 14 15 43.8
comp=Z,383nm,20.9s,baz=72,slow=37
LFF La Frestale 92.47 315 *eP* **P 13 32 11.3 +0.7**
comp=Z,21nm,0.9s
LFF La Frestale 92.47 315 *eP* **P 13 32 11.3 +0.7**
LFF pmax pmax
comp=Z,21nm,0.9s
LFF La Frestale 92.47 315 *eP* **P 13 32 11.3 +0.7**
comp=Z,21nm,0.9s
LDF La Druitiere 92.58 319⇑ *iP* **P 13 32 11.7 +0.7**
comp=Z,68nm,1.2s
LDF La Druitiere 92.58 319⇑ *iP* **P 13 32 11.7 +0.7**
LDF pmax pmax
comp=Z,68nm,1.2s
LDF La Druitiere 92.58 319⇑ *iP* **P 13 32 11.7 +0.7**
comp=Z,68nm,1.2s
FLN La Foliniere 92.80 319 *eP* **P 13 32 12.6 +0.6**
FLN *eR*
comp=Z,333nm,18.5s
FLN La Foliniere 92.80 319 *eP* **P 13 32 12.6 +0.6**
FLN La Foliniere 92.80 319 *eP* **P 13 32 12.6 +0.6**
MFF Saint Martin d 92.87 317 *eP* **P 13 32 13.3 +0.9**
MFF Saint Martin d 92.87 317 *eP* **P 13 32 13.3 +0.9**
MFF Saint Martin d 92.87 317 *eP* **P 13 32 13.3 +0.9**
EPF Esparros 93.00 313 *eP* **P 13 32 13.6 +0.4**
EPF Esparros 93.00 313 *eP* **P 13 32 13.6 +0.4**
EPF Esparros 93.00 313 *eP* **P 13 32 13.6 +0.4**
QSPA South Pole Qui 93.26 180 *eP* **P 13 32 13.6 -0.3**
comp=Z,13nm,1.2s
QSPA LR LR
comp=Z,548nm,19.0s
SDPT Sand Point 94.08 34 *eP* **P 13 32 16.3 -1.4**
comp=Z,10.0nm,0.6s
SJPF Ste Jean 94.13 313⇑ *iP* **P 13 32 19.6 +1.3**
comp=Z,42nm,1.3s
SJPF Ste Jean 94.13 313⇑ *iP* **P 13 32 19.6 +1.3**
SJPF pmax pmax
comp=Z,42nm,1.3s
SJPF Ste Jean 94.13 313⇑ *iP* **P 13 32 19.6 +1.3**
comp=Z,42nm,1.3s
TORD Torodi Ar. Bea 94.92 283 P **P 13 32 23.5 +1.0**
TORD PP PP 13 36 20.6 +8.8
TORD PKKPbc **PKKPbc 13 49 17.9 -0.3**
TORD Torodi Ar. Bea 94.92 283 P **P 13 32 23.5 +1.0**
comp=Z,3.4nm,1.0s,baz=88,slow=3.4,SNR=6.8
TORD PP PP 13 36 20.6 +8.8
comp=Z,1.2nm,1.0s,baz=70,slow=6.9,SNR=3.6
TORD PKKPbc **PKKPbc 13 49 17.9 -0.3**
comp=Z,0.6nm,0.6s,baz=308,slow=2.7,SNR=6.0
COLA College 97.20 23 PFAKE 13 32 40.0 +8.2
COLA LR LR
comp=Z,268nm,20.0s
ILAR Eielson Array 97.62 23 P **P 13 32 32.9 -0.9**
ILAR PKKPbc **PKKPbc 13 49 12.8 +0.3**
ILAR Eielson Array 97.62 23 P **P 13 32 32.9 -0.9**
comp=Z,0.2nm,0.6s,baz=304,slow=4.4,SNR=4.9
ILAR PKKPbc **PKKPbc 13 49 12.8 +0.3**
comp=Z,0.8nm,0.9s,baz=138,slow=2.1,SNR=7.8
ILAR LR LR 14 19 31.9
comp=Z,218nm,21.1s,baz=306,slow=37
KDAK Kodiak Island 97.66 31 P Pdif 13 32 34.6 +0.6
KDAK LR LR
comp=Z,348nm,20.0s
KDAK Kodiak Island 97.66 31 P Pdif 13 32 34.6 +0.6
comp=Z,3.0nm,0.7s,baz=356,slow=1.4,SNR=5.9
EGAK Eagle 99.80 22 PFAKE 13 32 50.0 +6.6
EGAK LR LR
comp=Z,446nm,21.0s
RTC Rabat Centre 100.02 305 PFAKE 13 33 00.0 +15
RTC LR LR
comp=Z,235nm,21.0s
SFJD Kangerlussuaq 106.27 348 PFAKE 13 37 30.0
SFJD LR LR
comp=Z,391nm,19.0s
WRAK Wrangell Islan 108.03 27 PFAKE 13 37 40.0
WRAK LR LR
comp=Z,298nm,21.0s
YKA Yellowknife Ar 109.96 15 PKiKP **PKiKP 13 37 31.3 +0.8**
YKA PKKPbc **PKKPbc 13 48 32.4 -3.1**
YKA Yellowknife Ar 109.96 15 PKiKP **PKiKP 13 37 31.3 +0.8**
comp=Z,0.2nm,0.7s,baz=344,slow=2.0,SNR=5.8
YKA PKKPbc **PKKPbc 13 48 32.3 -3.1**
comp=Z,0.4nm,0.7s,baz=144,slow=2.9,SNR=8.6
NLWA Neilton Lookou 117.81 31 PFAKE 13 38 00.0 +14
NLWA LR LR
comp=Z,253nm,20.0s
SACV Santiago Islan 118.95 289 PFAKE 13 38 00.0 +11
SACV LR LR
comp=Z,452nm,20.0s
NEW Newport 120.39 26 PFAKE 13 38 00.0 +9.0
NEW LR LR
comp=Z,264nm,19.0s
SCHQ Schefferville 120.61 350 PKP **PKPdf 13 37 51.8 +0.6**
SCHQ Schefferville 120.61 350 PKP **PKPdf 13 37 51.8 +0.6**
comp=Z,2.4nm,0.5s,baz=324,slow=3.8,SNR=12
HAWA Hanford 120.65 29 *e*PKPdf **PKPdf 13 37 52.3 +0.8**
HAWA LR LR
comp=Z,269nm,19.0s
A13A Flathead Natio 121.02 24 P **PKPdf 13 37 52.4 +0.2**
baz=121
B13A Whitefish 121.44 24 P **PKPdf 13 37 53.3 +0.3**
baz=121
BSMT Bassoo Peak 121.71 25 *e*PKPdf **PKPdf 13 37 53.6 -0.2**
D12A Red Ives Fores 122.09 26 P **PKPdf 13 37 54.0 -0.4**
baz=122
C14A Swan Lake 122.21 24 P **PKPdf 13 37 54.6 +0.1**
baz=122
B15A Bradely Ranch, 122.25 23 P **PKPdf 13 37 54.1 -0.5**
baz=122
SWMT Swartz Lake 122.31 25 *e*PKPdf **PKPdf 13 37 54.9 +0.1**
C15A Salmond Ranch, 122.67 24 P **PKPdf 13 37 55.2 -0.3**
baz=122
SLMT Seeley Lake 122.73 25 *e*PKPdf **PKPdf 13 37 55.1 -0.6**
BMO Blue Mountains 122.84 29 PFAKE 13 38 10.0 +14
BMO LR LR
comp=Z,220nm,21.0s
D14A Greenough 122.85 25 P **PKPdf 13 37 55.5 -0.4**
baz=123
MSO Missoula 122.87 25 *e*PKPdf **PKPdf 13 37 55.1 -0.8**
MSO LR LR
comp=Z,181nm,21.0s
MSO Missoula 122.87 25 P **PKPdf 13 37 55.2 -0.6**
baz=123
E13A Victor 123.07 26 P **PKPdf 13 37 56.1 -0.2**

baz=123
CHMT Chamberlain Mo 123.09 25 *e*PKPdf **PKPdf 13 37 56.8 +0.4**
D15A Lincoln 123.29 24 P **PKPdf 13 37 56.5 -0.3**
baz=123
MOD Modoc 123.38 33 *e*PKPdf **PKPdf 13 37 56.2 -0.9**
EGMT Eagleton 123.56 22 *e*PKPdf **PKPdf 13 37 56.5 -0.7**
EGMT LR LR
comp=Z,258nm,20.0s
D16A Dana Ranch, Ca 123.69 24 P **PKPdf 13 37 56.8 -0.7**
baz=123
WVOR Wild Horse Val 123.91 32 *e*PKIKP **PKPdf 13 37 58.6 +0.6**
WVOR MLR MLR
comp=Z,197nm,20.0s
WVOR Wild Horse Val 123.91 32 *e*PKPdf **PKPdf 13 37 58.6 +0.6**
WVOR LR LR
comp=Z,197nm,20.0s
A22A Carney Farms, 124.05 18 P **PKPdf 13 37 58.1 +0.1**
baz=124
C20A Veseth Ranch, 124.46 21 P **PKPdf 13 37 59.1 +0.3**
baz=124
H13A Challis 124.49 27 P **PKPdf 13 37 59.2 +0.1**
baz=124
DLMT Dillon 124.60 25 *e*PKPdf **PKPdf 13 37 58.8 -0.5**
MFID Camas Ranch 124.62 29 *e*PKPdf **PKPdf 13 37 60.0 +0.6**
I12A Atlanta 124.67 28 P **PKPdf 13 37 59.8 +0.2**
baz=124
BOZ Bozeman (W) 124.78 25 *e*PKIKP **PKPdf 13 37 59.3 -0.3**
BOZ MLR MLR
comp=Z,246nm,21.0s
BOZ Bozeman (W) 124.78 25 *e*PKPdf **PKPdf 13 37 59.3 -0.3**
BOZ LR LR
comp=Z,246nm,21.0s
G15A Dillon 124.80 26 P **PKPdf 13 38 00.2 +0.5**
baz=124
MCMT McKenzie Canyo 124.92 26 *e*PKPdf **PKPdf 13 37 58.9 -1.1**
F17A Fitzpatrick Pl 124.97 24 P **PKPdf 13 37 59.4 -0.6**
baz=125
DGMT Dagmar 125.04 18 PFAKE 13 38 10.0 +10
DGMT LR LR
comp=Z,349nm,20.0s
G16A Moss Hill, Enn 125.05 25 P **PKPdf 13 38 00.3 +0.1**
baz=125
HLID Hailey 125.19 28 *e*PKPdf **PKPdf 13 38 01.0 +0.5**
HLID LR LR
comp=Z,243nm,20.0s
HLID Hailey 125.19 28 P **PKPdf 13 38 00.7 +0.2**
baz=125
ULM Lac du Bonnet 125.40 11 PKP **PKPdf 13 38 00.9 +0.4**
ULM Lac du Bonnet 125.40 11 PKP **PKPdf 13 38 00.9 +0.4**
comp=Z,5.3nm,0.6s,baz=16,slow=0.9,SNR=7.3
J13A Cove Ranch, Pi 125.42 28 P **PKPdf 13 38 01.9 +1.0**
baz=125
D22A Cohagen 125.57 20 P **PKPdf 13 38 01.1 +0.1**
baz=125
YMR Madison River 125.85 25 *e*PKPdf **PKPdf 13 38 01.1 -0.7**
BMN Battle Mountai 126.08 33 PFAKE 13 38 10.0 +7.7
BMN LR LR
comp=Z,243nm,19.0s
RLMT Red Lodge 126.17 23 PFAKE 13 38 10.0 +7.6
RLMT LR LR
comp=Z,614nm,22.0s
G20A Bridger 126.50 22 P **PKPdf 13 38 03.2 +0.3**
baz=126
TPAW Teton Pass 126.81 26 *e*PKPdf **PKPdf 13 38 02.9 -0.8**
LOHW Long Hollow 126.86 25 *e*PKPdf **PKPdf 13 38 04.2 +0.5**
NVAR Mina Array Bea 126.87 35 PKP **PKPdf 13 38 05.2 +1.2**
NVAR SKPbc SKiKP 13 41 21.6 -17
NVAR Mina Array Bea 126.87 35 PKP **PKPdf 13 38 05.2 +1.2**
comp=Z,2.4nm,0.8s,baz=293,slow=2.1,SNR=13
NVAR SKPbc SKiKP 13 41 21.6 -17
comp=Z,0.8nm,0.6s,baz=290,slow=3.7,SNR=5.7
SNOW Snow King Moun 126.91 26 *e*PKPdf **PKPdf 13 38 04.6 +0.7**
AGMN Agassiz Nation 127.27 11 PFAKE 13 38 20.0 +16
AGMN LR LR
comp=Z,324nm,21.0s
AHID Auburn Hatcher 127.32 26 PFAKE 13 38 20.0 +15
AHID LR LR
comp=Z,253nm,20.0s
TPH Tonopah 127.73 35 PFAKE 13 38 20.0 +14
TPH LR LR
comp=Z,149nm,21.0s
BW06 Boulder Array 127.99 25 *e*PKPdf **PKPdf 13 38 05.3 -0.7**
BW06 LR LR
comp=Z,234nm,21.0s
PDAR Pinedale Array 127.99 25 PKP **PKPdf 13 38 06.5 +0.5**
PDAR SKPbc SKiKP 13 41 22.6 -18
PDAR Pinedale Array 127.99 25 PKP **PKPdf 13 38 06.5 +0.5**
comp=Z,1.3nm,0.5s,baz=131,slow=1.3,SNR=14
PDAR SKPbc SKiKP 13 41 22.6 -18
comp=Z,1.1nm,0.6s,baz=36,slow=1.1,SNR=5.8
HWUT Hardware Ranch 128.03 28 PFAKE 13 38 20.0 +14
HWUT LR LR
comp=Z,232nm,21.0s
I21A Big Trails, Te 128.04 23 P **PKPdf 13 38 05.9 -0.1**
baz=128
H24A Dirks Ranch, A 128.22 20 P **PKPdf 13 38 06.3 +0.1**
baz=128
K19A Absolon Red Bu 128.24 25 P **PKPdf 13 38 06.8 +0.4**
baz=128
EYMN Ely 128.33 8 *e*PKPdf **PKPdf 13 38 05.7 -0.4**
EYMN LR LR
comp=Z,334nm,20.0s
R11A Troy Canyon, C 128.45 33 P **PKPdf 13 38 07.1 +0.2**
baz=128
DUG Dugway 128.53 30 *e*PKIKP **PKPdf 13 38 06.0 -1.0**
DUG MLR MLR
comp=Z,274nm,19.0s
DUG Dugway 128.53 30 *e*PKPdf **PKPdf 13 38 06.0 -1.0**
DUG LR LR
comp=Z,274nm,19.0s
J22A Midwest 128.69 22 P **PKPdf 13 38 07.4 +0.2**
baz=128
DAC Darwin (Calif) 128.75 37 PFAKE 13 38 20.0 +12
DAC LR LR
comp=Z,376nm,20.0s
RSSD Black Hills 128.95 20 *e*PKIKP **PKPdf 13 38 07.2 -0.5**
RSSD Black Hills 128.95 20 *e*PKPdf **PKPdf 13 38 07.2 -0.5**
MPMC Manual Prospec 128.95 37 P **PKPdf 13 38 08.5 +0.6**
baz=129
L21A Rawlins 129.56 24 P **PKPdf 13 38 09.3 +0.3**
baz=129
M21A Separation Pea 129.87 24 P **PKPdf 13 38 10.1 +0.5**
baz=130
MVU Marysvale 130.12 31 PFAKE 13 38 20.0 +10
MVU LR LR
comp=Z,228nm,19.0s
P18A Preston Nutter 130.21 28 ⇑SKP 13 41 32.4
baz=130,SNR=12
TUQ Turquoise Moun 130.31 36 ⇑SKP 13 41 32.7
baz=130
COWI Conover 130.43 6 *e*PKPdf **PKPdf 13 38 10.6 +0.3**
HEC Hector,Ludlow 130.48 37 ⇑SKP 13 41 33.4
baz=130,SNR=6.9
N21A Black Mountain 130.50 25 P **PKPdf 13 38 10.5 -0.3**
baz=130
O20A White River Ci 130.71 26 P **PKPdf 13 38 11.3 +0.2**
baz=130
O20A ⇓SKP 13 41 34.0
baz=130
O20A ⇓SKP 13 41 34.0
baz=130
MURC Murrieta 130.77 39 ⇑SKP 13 41 34.1
baz=130
P19A Cripple Cowboy 130.79 27 P **PKPdf 13 38 11.7 +0.3**
baz=130
P19A ⇑SKP 13 41 34.5
baz=130,SNR=12
P19A ⇑SKP 13 41 34.5
baz=130,SNR=12
N22A Wattenberg Ran 130.91 24 ⇓SKP 13 41 35.3
baz=131,SNR=8.7
GMRC Granite Mounta 130.92 37 P **PKPdf 13 38 11.8 +0.2**
baz=131
GMRC ⇑SKP 13 41 34.8
baz=131,SNR=11
GMRC ⇑SKP 13 41 34.8
baz=131,SNR=11
O21A Pagoda 130.98 25 ⇑SKP 13 41 34.7
baz=131,SNR=7.9
M24A Cheyenne 130.98 22 ⇑SKP 13 41 35.1
baz=131,SNR=6.6
N23A Red Feather La 131.04 24 ⇑SKP 13 41 35.5
baz=131,SNR=15
P20A De Beque 131.16 27 ⇑SKP 13 41 35.6
baz=131,SNR=11
PFO Pinyon Flat Ob 131.23 38 SKPbc **SKPab 13 41 36.4 +0.8**
comp=Z,8.9nm,0.6s,baz=314,slow=3.7,SNR=5.2
BELC Belle Mtn. Jos 131.25 38 ⇓SKP 13 41 36.3
baz=131
M25A Palm-Egli Farm 131.30 22 ⇑SKP 13 41 35.3
baz=131
O22A Kremmling 131.41 25 ⇓SKP 13 41 36.6
baz=131,SNR=20
ECSD EROS Data Cent 131.45 14 *e*PKPdf **PKPdf 13 38 09.9 -2.3**
ECSD LR LR
comp=Z,395nm,21.0s
P21A Newcastle 131.56 26 ⇓SKP 13 41 37.3
baz=131,SNR=11
O23A Lake Granby, G 131.63 24 P **PKPdf 13 38 13.2 +0.1**
baz=131
U15A North Rim 131.64 32 P **PKPdf 13 38 14.4 +1.2**
baz=131
U15A ⇑SKP 13 41 38.8
baz=131
U15A ⇑SKP 13 41 38.8
baz=131
IRM Iron Mountain 131.65 37 ⇑SKP 13 41 38.0
baz=131,SNR=25
Q20A Ridgley Place, 131.65 27 ⇓SKP 13 41 37.5
baz=131,SNR=12
LBNH Lisbon 131.71 350 PFAKE 13 38 20.0 +7.3
LBNH LR LR
comp=Z,354nm,19.0s
W13A Hualapai Mount 131.73 35 ⇓SKP 13 41 38.9
baz=132,SNR=16
MONP Monument Peak 131.73 39 ⇑SKP 13 41 38.5
baz=132
LONY Lake Ozonia 131.75 352 PFAKE 13 38 20.0 +7.2
LONY LR LR
comp=Z,218nm,21.0s
P22A Eagle 131.80 25 ⇑SKP 13 41 38.2
baz=132,SNR=12
M27A Reverse DX Ran 131.81 20 ⇓SKP 13 41 37.8
baz=132
BC3 Big Chuckawall 131.81 38 ⇑SKP 13 41 38.7
baz=132,SNR=17
S18A Hurst Farm, Bl 131.85 29 ⇓SKP 13 41 38.7
baz=132
Q21A Lamborn Mesa, 132.07 27 ⇓SKP 13 41 39.5
baz=132,SNR=11
DVTC Desert V Tower 132.08 39 ⇓SKP 13 41 40.1
baz=132,SNR=5.5
SWSC Sam W. Stewart 132.09 38 ⇓SKP 13 41 39.3
baz=132
ISCO Idaho Springs 132.10 24 PFAKE 13 38 30.0 +16
ISCO LR LR
comp=Z,250nm,19.0s
ISCO Idaho Springs 132.10 24 ⇓SKP 13 41 39.3
baz=132,SNR=26
PDMCI Parker Dam,Lak 132.15 36 ⇑SKP 13 41 39.6
baz=132,SNR=13
R20A Redvale 132.23 28 ⇓SKP 13 41 39.8
baz=132,SNR=34
Y12C Blythe 132.31 37 ⇓SKP 13 41 40.7
baz=132,SNR=14
NCB Newcomb 132.33 352 PFAKE 13 38 30.0 +16
NCB LR LR
comp=Z,251nm,20.0s
Q22A Crested Butte, 132.34 26 ⇑SKP 13 41 40.6
baz=132,SNR=22
P23A Jefferson 132.37 25 ⇓SKP 13 41 40.8
baz=132,SNR=13
N27A Anderson Farm, 132.40 21 ⇑SKP 13 41 39.5
baz=132
O25A Wiggins 132.42 23 ⇑SKP 13 41 38.7
baz=132
OGNE Ogallala 132.45 20 PFAKE 13 38 30.0 +16
OGNE LR LR
comp=Z,336nm,19.0s
R21A Cimarron 132.46 27 ⇑SKP 13 41 41.0
baz=132,SNR=19
S20A Disappointment 132.53 28 ⇑SKP 13 41 40.9
baz=132,SNR=17
GLA Glamis 132.61 38 ⇑SKP 13 41 42.2
baz=132,SNR=11
O26A Horse Wrangler 132.62 22 ⇑SKP 13 41 40.5
baz=132
Q23A Hartsel 132.77 25 ⇑SKP 13 41 41.6
baz=132
WUAZ Wupatki 132.81 33 PFAKE 13 38 30.0 +15
WUAZ LR LR
comp=Z,223nm,22.0s
WUAZ Wupatki 132.81 33 ⇓SKP 13 41 42.3
baz=133,SNR=19
P25A Willow Gulch B 132.92 23 ⇑SKP 13 41 41.9
baz=133
S21A Coal Bank Pass 132.93 28 ⇓SKP 13 41 42.6
baz=133,SNR=11
R22A Saguache, Gunn 132.93 26 ⇑SKP 13 41 42.9
baz=133,SNR=5.5
MVCO Mesa Verde 132.96 29 *e*PKPdf **PKPdf 13 38 15.9 +0.3**
MVCO LR LR
comp=Z,309nm,20.0s
MVCO Mesa Verde 132.96 29 ⇓SKP 13 41 42.3
baz=133,SNR=6.8
Q24A Divide 133.00 24 ⇑SKP 13 41 42.1
baz=133,SNR=7.3
Y14A Wickenburg 133.07 35 ⇓SKP 13 41 42.6
baz=133,SNR=6.1
P26A Davis Ranch, A 133.20 22 ⇑SKP 13 41 42.8
baz=133
BGNE Belgrade 133.24 16 ⇓SKP 13 41 42.5
baz=133,SNR=6.6
S22A 4UR Ranch, Cre 133.30 27 ⇓SKP 13 41 44.1
baz=133,SNR=15
R23A Moffat 133.37 25 ⇑SKP 13 41 44.1
baz=133,SNR=13
Q25A Bedland, Calha 133.41 23 ⇑SKP 13 41 43.6
baz=133
JFWS Jewell Farm 133.44 8 PFAKE 13 38 30.0 +14
JFWS LR LR
comp=Z,282nm,21.0s
Z14A Wintersburg 133.51 36 ⇓SKP 13 41 45.0
baz=133
T21A Navajo Lake 133.59 28 ⇓SKP 13 41 44.8
baz=133
X16A Lo Mia Camp, P 133.60 34 ⇑SKP 13 41 45.2
baz=133,SNR=26
U20A Newcomb 133.61 29 ⇑SKP 13 41 45.2
baz=133,SNR=8.5
R24A Sanders Place, 133.64 25 ⇑SKP 13 41 44.0
baz=133,SNR=10.0
Q26A Hugo 133.69 23 ⇑SKP 13 41 44.4
baz=133
T22A Edith 133.87 27 ⇓SKP 13 41 45.5
baz=134,SNR=12
SDCO Great Sand Dun 133.88 25 PFAKE 13 38 30.0 +13
SDCO LR LR
comp=Z,238nm,20.0s
SCIA State Center 133.93 11 PFAKE 13 38 30.0 +13
SCIA LR LR
comp=Z,341nm,19.0s
KSCO Kaye Shedlock' 133.95 22 ⇑SKP 13 41 45.5
baz=134
W18A Petrified Fore 133.99 31 ⇑SKP 13 41 46.0
baz=134,SNR=6.2
U21A Nagezi 133.99 28 ⇑SKP 13 41 46.3
baz=134,SNR=36
R25A Fountain Ranch 134.05 24 ⇑SKP 13 41 44.8
baz=134,SNR=5.2
S24A Houchin Ranch, 134.09 25 ⇓SKP 13 41 46.0
baz=134
V20A Brimhall 134.10 30 ⇓SKP 13 41 46.7
baz=134,SNR=8.6
T23A Casias Ranch, 134.24 27 ⇓SKP 13 41 46.7
baz=134
R26A Arlington 134.25 23 ⇑SKP 13 41 46.5
baz=134,SNR=13
BINY Binghamton 134.30 353 PFAKE 13 38 30.0 +12
BINY LR LR
comp=Z,241nm,19.0s
X18A Snowflake 134.32 32 ⇑SKP 13 41 47.2
baz=134,SNR=5.6
S25A Robets Cordova 134.40 25 ⇓SKP 13 41 46.8
baz=134
U22A Llaves 134.41 28 ⇓SKP 13 41 47.9
baz=134,SNR=12
V21A Milan 134.50 29 ⇓SKP 13 41 47.9
baz=134,SNR=9.8
R27A Eads 134.52 23 ⇓SKP 13 41 47.0
baz=134,SNR=14
214A Organ Pipe Nat 134.59 37 ⇑SKP 13 41 48.4
baz=134
W20A Ramah 134.61 30 ⇓SKP 13 41 48.3
baz=134,SNR=11
T24A Torres, Weston 134.64 26 ⇓SKP 13 41 47.9
baz=134,SNR=6.7
ERPA Erie 134.71 357 PFAKE 13 38 30.0 +12
ERPA LR LR
comp=Z,407nm,20.0s
V22A San Miguel Ran 134.76 28 ⇓SKP 13 41 48.8
baz=134,SNR=6.9
S26A Kim 134.83 24 ⇑SKP 13 41 47.6
baz=135,SNR=11
R28A Tribune 134.84 22 ⇓SKP 13 41 48.0
baz=135,SNR=5.9
T25A Trinidad 134.86 25 ⇓SKP 13 41 48.1
baz=135,SNR=17
R29A Marienthal 135.01 21 ⇓SKP 13 41 48.3
baz=135,SNR=8.3
W21A San Fidel 135.04 30 ⇑SKP 13 41 49.5
baz=135
X20A Quemado 135.07 31 ⇓SKP 13 41 50.1
baz=135,SNR=14
T26A Comanche Natio 135.16 24 ⇓SKP 13 41 49.2
baz=135,SNR=13
R30A Dighton 135.43 20 ⇓SKP 13 41 50.2
baz=135
U25A Circle Dot Ran 135.48 25 ⇓SKP 13 41 50.5
baz=135
X21A Alamocita Cree 135.51 30 ⇓SKP 13 41 51.7
baz=135,SNR=10
TUC Tucson 135.53 35 PFAKE 13 38 30.0 +10
TUC LR LR
comp=Z,151nm,21.0s
T27A Campo 135.61 23 ⇑SKP 13 41 50.5
baz=135,SNR=5.2
Y20A Horse Springs, 135.63 31 ⇓SKP 13 41 51.9
baz=135,SNR=9.6
ANMO Albuquerque 135.76 29 *e*PKPdf **PKPdf 13 38 18.8 -2.1**
ANMO SKPbc **SKPbc 13 41 52.0 +1.5**
ANMO LR LR
comp=Z,277nm,20.0s
ANMO Albuquerque 135.76 29 SKPbc **SKPbc 13 41 52.0 +1.5**
comp=Z,14nm,0.9s,baz=294,slow=1.7,SNR=28
U26A Atchley Ranch, 135.77 25 ⇓SKP 13 41 51.7
baz=136
T28A Walsh 135.80 23 ⇓SKP 13 41 51.0
baz=136
KSU1 Kansas State U 135.81 16 PFAKE 13 38 30.0 +9.5
KSU1 LR LR
comp=Z,236nm,19.0s
V25A Rancho No Teng 135.87 26 ⇓SKP 13 41 51.7
baz=136
Y21A Point of Rocks 135.91 31 ⇓SKP 13 41 53.3
baz=136,SNR=14
W24A Lazy 6 Ranch, 136.03 27 ⇑SKP 13 41 52.8
baz=136
T29A Hugoton 136.08 22 ⇓SKP 13 41 52.2
baz=136
U27A Thompson Grove 136.13 24 ⇑SKP 13 41 52.6
baz=136
Z20A Nine Sixteen R 136.13 32 ⇑SKP 13 41 53.5
baz=136,SNR=7.3
SFIN Scholer Farm 136.30 5 ⇓SKP 13 41 52.9
baz=136
Y22A Socorro 136.32 30 ⇓SKP 13 41 53.9
baz=136,SNR=9.2
W25A X Bar L Ranch, 136.46 26 ⇑SKP 13 41 54.2
baz=136
Z21A St. Cloud Mine 136.46 31 ⇓SKP 13 41 54.8
baz=136,SNR=7.3
120A U Bar Ranch, L 136.55 33 ⇓SKP 13 41 54.4
baz=136,SNR=7.0
X24A Lazy VL Ranch, 136.55 28 ⇓SKP 13 41 54.5
baz=136
ACSO Alum Creek Sta 136.65 1 PFAKE 13 38 30.0 +7.9
ACSO LR LR
comp=Z,278nm,20.0s
V27A Dan Oppiter Fa 136.69 24 ⇓SKP 13 41 54.5
baz=136
Y23A Lovelace Mesa, 136.78 29 ⇑SKP 13 41 54.8
baz=136,SNR=15
Z22A Elephant Butte 136.87 31 ⇑SKP 13 41 55.5
baz=137,SNR=6.1
U30A WK&E Inc. Balk 136.87 22 ⇓SKP 13 41 54.9
baz=137
121A Cookes Peak, D 137.01 32 ⇓SKP 13 41 55.7
baz=137,SNR=8.0
319A Douglas 137.07 34 ⇓SKP 13 41 56.0
baz=137,SNR=5.0
Y24A Capitan 137.08 28 ⇓SKP 13 41 55.7
baz=137,SNR=14
220A Playas Peak, P 137.09 33 ⇑SKP 13 41 56.5
baz=137,SNR=7.0
W27A Bowe Ranch, En 137.19 25 ⇓SKP 13 41 55.3
baz=137
X26A CR and CF Fran 137.31 26 P **PKPdf 13 38 23.8 +0.2**
baz=137
X26A ⇓SKP 13 41 56.1
baz=137
X26A ⇓SKP 13 41 56.1
baz=137
320A Kipp Ranch, An 137.53 34 ⇑SKP 13 41 57.7
baz=137,SNR=6.7
222A Williams Famil 137.70 32 ⇓SKP 13 41 58.4
baz=138
W29A Amraillo 137.73 24 ⇑SKP 13 41 57.5
baz=138
Y26A Elida 137.83 27 ⇑SKP 13 41 58.0
baz=138
V31A Spring Creek L 137.84 21 ⇑SKP 13 41 58.4
baz=138
AMTX Amarillo 137.92 24 PFAKE 13 38 40.0 +15
AMTX LR LR
comp=Z,343nm,19.0s
Z25A Roswell 137.95 28 ⇓SKP 13 41 58.4
baz=138,SNR=9.8
Y27A Causey 138.15 26 ⇓SKP 13 41 58.4
baz=138
MSTX Muleshoe 138.25 26 ⇓SKP 13 41 58.8
baz=138
X29A Tulia 138.29 24 ⇑SKP 13 41 58.5
baz=138
Z26A Caprock 138.30 27 ⇑SKP 13 41 58.9
baz=138,SNR=9.8
W31A Holland Ranch, 138.32 22 ⇑SKP 13 41 59.0
baz=138
CBN Corbin 138.41 354 PFAKE 13 38 40.0 +15
CBN LR LR
comp=Z,229nm,20.0s
125A Gardner Draw, 138.49 29 ⇓SKP 13 41 59.6
baz=138,SNR=13
224A Cornudas Mount 138.54 30 P **PKPdf 13 38 21.9 -4.1**
baz=138
224A ⇓SKP 13 41 59.7
baz=138
224A ⇓SKP 13 41 59.7
baz=138
Z27A Tatum 138.61 27 ⇑SKP 13 41 59.9
baz=138
X30A Coker Ranch, T 138.62 23 P **PKPdf 13 38 21.7 -4.2**
baz=138
126A Clayton Basin, 138.80 28 ⇓SKP 13 42 00.2
baz=138
X31A McDonald Ranch 138.81 22 P **PKPdf 13 38 21.4 -4.9**
baz=138
X31A ⇓SKP 13 41 59.8
baz=138
X31A ⇓SKP 13 41 59.8
baz=138
Y29A Porterfield Fa 138.81 25 ⇑SKP 13 42 00.3
baz=139
MNTX Cornudas Mount 138.91 30 *e*PKPdf **PKPdf 13 38 26.5 0.0**
MNTX LR LR
comp=Z,231nm,19.0s
Z28A Tucker Farm, M 139.00 26 ⇑SKP 13 42 00.7
baz=139
324A Moseley Ranch, 139.06 31 ⇑SKP 13 42 01.0
baz=139
127A Arkansas Junct 139.08 27 ⇓SKP 13 42 01.0
baz=139
Y30A Stafford Cattl 139.11 24 ⇑SKP 13 42 00.9
baz=139
WMOK Wichita Mounta 139.15 21 PFAKE 13 38 40.0 +13
WMOK LR LR
comp=Z,380nm,19.0s
226B Tecolote Peak, 139.20 29 ⇑SKP 13 42 01.2
baz=139,SNR=9.3
Y31A Rekieta Farm, 139.29 23 ⇑SKP 13 42 01.2
baz=139

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
Z29A	Hungry Hill Ra	139.31	25	⇑SKP		13 42 01.4	
	baz=139						
325A	Bean Ranch, Si	139.38	30	⇑SKP		13 42 02.3	
	baz=139,SNR=7.5						
BLA	Blacksburg	139.62	357	PFAKE		13 38 40.0	+12
BLA				LR	LR		
	comp=Z,415nm,20.0s						
425A	Indio Mountain	139.84	31	⇓SKP		13 42 02.7	
	baz=140,SNR=5.6						
426A	McDonald Obser	140.42	30	⇑SKP		13 42 04.7	
	baz=140,SNR=6.9						
230A	Sterling City	140.75	25	P	PKPdf	13 38 26.1	-3.8
	baz=140						
MIAR	Mount Ida	140.90	15	PFAKE		13 38 40.0	+10
MIAR				LR	LR		
	comp=Z,329nm,20.0s						
527A	Woodward Ranch	141.06	30	P	PKPdf	13 38 27.2	-3.4
	baz=141						
527A				⇓SKP		13 42 06.6	
	baz=141,SNR=9.4						
527A				⇓SKP		13 42 06.6	
	baz=141,SNR=9.4						
626A	Big Bend Ranch	141.27	31	⇑SKP		13 42 07.0	
	baz=141,SNR=5.0						
CNNC	Cliffs of the	141.39	354	PFAKE		13 38 40.0	+9.2
CNNC				LR	LR		
	comp=Z,354nm,20.0s						
PLAL	Pickwick Lake	141.53	7	PFAKE		13 38 40.0	+8.9
PLAL				LR	LR		
	comp=Z,309nm,22.0s						
331A	San Angelo	141.54	25	P	PKPdf	13 38 26.1	-5.2
	baz=141						
TXAR	Lajitas Array	141.69	31	PKPpre	PKPpre	13 38 26.7	
TXAR	Lajitas Array	141.69	31	PKhKP	PKPpre	13 38 26.7	
	comp=Z,1.2nm,0.6s,baz=272,slow=2.0,SNR=7.6						
TXAR				SKPbc	SKiKP	13 42 08.8	-0.1
	comp=Z,1.8nm,0.5s,baz=275,slow=0.4,SNR=11						
627A	Terlingua Ranc	141.73	30	⇓SKP		13 42 08.4	
	baz=142,SNR=8.7						
529A	Stev Forest Ra	141.75	28	P	PKPdf	13 38 26.4	-5.3
	baz=142						
OXF	Oxford	141.80	9	PFAKE		13 38 40.0	+8.4
OXF				LR	LR		
	comp=Z,500nm,20.0s						
530A	J-C Ranch, Com	142.13	27	P	PKPdf	13 38 28.0	-4.4
	baz=142						
531A	Rocksprings	142.48	26	P	PKPdf	13 38 28.2	-4.9
	baz=142						
JCT	Junction City	142.53	25	PFAKE		13 38 40.0	+6.9
JCT				LR	LR		
	comp=Z,370nm,19.0s						
631A	Perdido Creek	143.11	27	P	PKPdf	13 38 36.2	+2.1
	baz=143						
NATX	Nacogdoches	143.23	17	PFAKE		13 38 50.0	+16
NATX				LR	LR		
	comp=Z,474nm,22.0s						
LRAL	Lakeview Retre	143.58	6	PFAKE		13 38 50.0	+15
LRAL				LR	LR		
	comp=Z,231nm,19.0s						
NHSC	New Hope	143.70	357	PFAKE		13 38 50.0	+15
NHSC				LR	LR		
	comp=Z,245nm,20.0s						
VBMS	Vicksburg	143.83	12	PFAKE		13 38 50.0	+15
VBMS				LR	LR		
	comp=Z,334nm,19.0s						
BDFB	Brasilia	143.95	248	PKP	PKPdf	13 38 36.1	+0.1
BDFB	Brasilia	143.95	248	PKP	PKPdf	13 38 36.1	+0.1
	comp=Z,5.4nm,0.9s,baz=168,slow=3.1,SNR=5.6						
BRAL	Brewton	145.57	7	PFAKE		13 38 50.0	+11
BRAL				LR	LR		
	comp=Z,390nm,22.0s						
CPUP	Villa Florida	146.77	224	PKPbc	PKPab	13 38 42.9	-0.5
CPUP	Villa Florida	146.77	224	PKPbc	PKPab	13 38 42.9	-0.5
	comp=Z,9.7nm,0.8s,baz=100,slow=2.3,SNR=21						
SJG	San Juan	153.30	323	PFAKE		13 39 00.0	+1.6
SJG				LR	LR		
	comp=Z,218nm,19.0s						
SDDR	Presa de Saban	155.25	334	PFAKE		13 39 00.0	+6.3
SDDR				LR	LR		
	comp=Z,224nm,20.0s						
GTBY	Guantanamo Bay	155.78	343	PFAKE		13 39 10.0	-11
GTBY				LR	LR		
	comp=Z,214nm,19.0s						
TEIG	Tepich	155.91	13	PFAKE		13 39 10.0	-11
TEIG				LR	LR		
	comp=Z,216nm,19.0s						
MTDJ	Mount Denham	158.03	347	PFAKE		13 39 10.0	+13
MTDJ				LR	LR		
	comp=Z,203nm,21.0s						
SAML	Samuel	160.03	253	PFAKE		13 39 10.0	+10
SAML				LR	LR		
	comp=Z,220nm,19.0s						
LPAZ	La Paz	160.90	227	ePKPdf	PKPdf	13 39 01.9	+0.5
LPAZ				PKP	PKPdf	13 39 02.1	+0.7
LPAZ	La Paz	160.90	227	PKP	PKPdf	13 39 02.1	+0.7
	comp=Z,1.4nm,0.7s,baz=28,slow=2.4,SNR=6.3						
TGUH	Tegucigalpa,Un	162.08	15	PFAKE		13 39 10.0	+8.2
TGUH				LR	LR		
	comp=Z,549nm,19.0s						
OTAV	Otavalo	174.64	311	PFAKE		13 39 20.0	+9.1
OTAV				LR	LR		
	comp=Z,301nm,19.0s						

JMA ***08*** *13:20:18.3±0.1, 24°.87N×122°.32E, h40km, M2.3*
ISCJB ***08*** *13:20:18.9±0.5, 24°.28N±0°.03×122°.29E±0°.02, h21km±6km, Error ellipse: s-maj=5.7km s-min=3.1km az=169.0*
TAP ***08*** *13:20:19.6, 24°.30N×122°.24E, h9km±1km, ML3.0, D*
ISC 08 13:20:18.1±1.1**, 24°.28N**±0°.03×**122°.30E**±0°.03**, h16**km±9km**, n27, σ0^{s}65**/50**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	Suao	0.52	309	i P	Pg	13 20 28.5	-0.1
	baz=311						
TWC				S	Sg	13 20 34.9	-0.7
	baz=311						
ENA	Nanau	0.53	286	⇓iP	Pg	13 20 28.5	-0.2
	baz=285						
ENA				i S	Sg	13 20 35.3	-0.4
	baz=285						
TWD	Chiawan	0.67	253	P	Pb	13 20 31.8	+0.4
	baz=249						
TWD				eS	Sb	13 20 40.6	+0.1
	baz=249						
YOJ	Yonaguni jima	0.68	74	P	Pn	13 20 32.4	-0.6
YOJ				eS	Sn	13 20 42.5	-0.7
TWE	Neicheng	0.72	307	P	Pg	13 20 32.3	0.0
	baz=309						
TWE				S	Sg	13 20 41.0	-0.8
	baz=309						
ENTT	Nioudou	0.76	298	i P	Pb	13 20 32.6	-0.3
	baz=299						
ENTT				eS	Sg	13 20 42.3	-0.6
	baz=299						
NNS	Nan Shan	0.86	281	P	Pb	13 20 34.7	0.0
	baz=279						
NNS				eS	Sb	13 20 45.4	-0.6
	baz=279						
ESL	Shilin	0.92	240	eP	Pb	13 20 35.2	-0.4
	baz=236						
ESL				eS	Sb	13 20 46.0	-1.6
	baz=236						
NWF	Wu-fen Shan	0.92	329	eP	Pn	13 20 36.7	+0.3
	baz=331						
NWF				eS	Sb	13 20 48.2	+0.5
	baz=331						
NSK	Sanguang	0.94	295	i P	Pb	13 20 36.4	+0.3
	baz=295						
NSK				S	Sb	13 20 47.4	-1.0
	baz=295						
WHF	Hehuan Shan	0.95	262	P	Pb	13 20 36.3	-0.2
	baz=260						
WHF				eS	Sb	13 20 49.1	0.0
	baz=260						
TWT	Tachien	1.02	269	eP	Pb	13 20 37.5	-0.1
	baz=267						
TWT				eS	Sb	13 20 51.5	+0.6
	baz=267						
TWS1	Kuangyinshan	1.14	316	P	Pg	13 20 41.0	+0.8
	baz=317						
TWS1				eS	Sg	13 20 55.8	+0.6
	baz=317						
TWY	Chenhua	1.18	327	eP	Pg	13 20 41.5	+0.6
	baz=329						
TWY				eS	Sb	13 20 55.5	+0.4
	baz=329						
EHY	Hungye	1.18	229	eP	Pg	13 20 42.6	+1.7
	baz=226						
NSTT	Nanjuang	1.23	287	eP	Pb	13 20 41.2	+0.2
	baz=286						
NSTT				eS	Sb	13 20 56.9	+0.2
	baz=286						
TWF1	Yuli	1.30	225	eP	Pn	13 20 40.6	-1.0
	baz=222						
IRIF	Iriomote-Funau	1.31	87	P	Pn	13 20 41.6	-0.1
IRIF				eS	Sb	13 20 59.5	+0.7
SMLT	Sun Moon Lake	1.34	253	eP	Pn	13 20 41.7	-0.5
	baz=251						
TYC	Yuchr	1.37	254	eP	Pn	13 20 42.2	-0.4
	baz=252						
TYC				eS	Sn	13 21 00.4	0.0
	baz=252						
TWQ1	Liyutan	1.39	273	eP	Pb	13 20 44.4	+0.6
	baz=272						
TWQ1				eS	Sb	13 21 01.4	+0.1
	baz=272						
JKRS	Kuro-shima	1.56	91	P	Pn	13 20 45.9	+0.7
JKRS				eS	Sb	13 21 05.8	-0.4
ELDTW	Lidau	1.60	227	eP	Pb	13 20 47.0	-0.4
	baz=225						
CHN5	Tsauling	1.63	246	eP	Pn	13 20 46.9	+0.6
	baz=243						
CHN5				eS	Sb	13 21 07.9	-0.4
	baz=243						
JIJ	Ishigaki jima	1.69	87	P	Pn	13 20 46.9	0.0
JIJ				eS	Sn	13 21 07.6	-0.6
CHN4	Tsaushan	1.81	240	eP	Pn	13 20 49.5	+0.8
	baz=237						
CHN4				eS	Sn	13 21 11.3	-0.1
	baz=237						
CHN1	Nanshi	1.96	236	eP	Pn	13 20 51.8	+1.2
	baz=234						
CHN1				eS	Sb	13 21 16.6	-0.9
	baz=234						

IDC 08 13:26:07.4±29.0**, 19°.42S×178°.22W, h0**km**, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.8**/20**, mbtmp4.0**/4**, Error ellipse: s-maj=549.7km s-min=134.6km az=87.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.08	243	P	P	13 33 26.7	-1.3
	1.1nm,0.6s,baz=73,slow=13,SNR=2.6						
WRA	Warramunga Arr	44.55	261	P	P	13 34 22.4	+1.0
	0.7nm,0.3s,baz=93,slow=7.7,SNR=37						
ASAR	Alice Springs	44.57	256	P	P	13 34 21.4	-0.1
	1.4nm,0.4s,baz=89,slow=8.4,SNR=19						
FITZ	Fitzroy Crossi	52.97	262	P	P	13 35 25.8	-0.3
	2.9nm,0.9s,baz=86,slow=14,SNR=3.0						

JMA ***08*** *13:27:29.2±0.5, 24°.77N×122°.86E, h22km, M3.1*
ISCJB ***08*** *13:27:29.0±1.1, 24°.80N±0°.05×122°.92E±0°.03, h8km±8km, Error ellipse: s-maj=8.5km s-min=3.6km az=15.7*
TAP ***08*** *13:27:30.1, 24°.75N×122°.83E, h1km±1km, ML3.3, D*
ISC 08 13:27:29.2±1.2**, 24°.77N**±0°.04×**122°.91E**±0°.03**, h14**km±9km**, n32, σ1^{s}02**/39**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.32	164	⇑iP	Pg	13 27 36.2	+0.4
	baz=150						
YOJ				eS	Sg	13 27 40.3	-0.1
	baz=150						
YOJ	Yonaguni jima	0.32	164	P	Pg	13 27 36.2	+0.4
YOJ				eS	Sb	13 27 41.2	-0.5
IRIF	Iriomote-Funau	0.86	120	P	Pb	13 27 46.1	+0.2
IRIF				eS	Sb	13 27 57.9	+0.6
TWB1	Santiao Chiao	0.87	286	P	Pg	13 27 45.3	-0.9
	baz=288						
TWC	Suao	0.98	261	eP	Pb	13 27 47.3	-0.7
	baz=261						
TWC				eS	Sb	13 28 00.1	-0.7
	baz=261						
NWF	Wu-fen Shan	1.07	286	eP	Pb	13 27 49.0	-0.6
	baz=288						
HATJ	Hateruma jima	1.08	131	P	Pg	13 27 50.2	+0.1
HATJ				eS	Sb	13 28 02.3	-1.3
ENA	Nanau	1.12	253	eP	Pb	13 27 49.8	-0.6
	baz=252						
ENA				eS	Sb	13 28 04.6	-0.1
	baz=252						
JKRS	Kuro-shima	1.13	118	P	Pb	13 27 49.6	-0.9
JKRS				eS	Sn	13 28 06.0	+0.1
TWE	Neicheng	1.13	268	P	Pb	13 27 49.9	-0.7
	baz=268						
PCYT	Pengchaiyu	1.15	318	eP	Pb	13 27 50.3	-0.5
	baz=322						
JIJ	Ishigaki jima	1.19	110	P	Pn	13 27 49.8	-1.6
ENTT	Nioudou	1.23	264	P	Pn	13 27 51.9	-0.1
	baz=264						
TWY	Chenhua	1.29	293	eP	Pg	13 27 54.5	+0.3
	baz=295						
TWS1	Kuangyinshan	1.40	284	eP	Pb	13 27 54.8	-0.3
	baz=285						
NSK	Sanguang	1.42	267	P	Pn	13 27 54.6	0.0
	baz=266						
NNS	Nan Shan	1.44	257	eP	Pb	13 27 55.7	-0.2
	baz=256						
WHF	Hehuan Shan	1.63	248	eP	Pn	13 27 58.4	+0.6
	baz=247						
JTJ	Tarama	1.63	94	P	Pn	13 27 56.9	-0.6
ESL	Shilin	1.65	235	eP	Pb	13 28 00.0	+0.6
	baz=233						
TWT	Tachien	1.66	252	eP	Pb	13 28 00.4	+0.6
	baz=251						
NSTT	Nanjuang	1.75	266	eP	Pb	13 28 00.9	-0.1
	baz=265						
NSY	Sanyi	1.99	260	eP	Pn	13 28 03.3	+0.9
	baz=259						
TWQ1	Liyutan	1.99	258	eP	Pn	13 28 03.6	+1.1
	baz=257						
TWF1	Yuli	2.04	227	eP	Pn	13 28 03.8	+0.6
	baz=225						
TYC	Yuchr	2.06	246	eP	Pn	13 28 04.4	+0.9
	baz=244						
ALS	Alishan	2.30	237	eP	Pb	13 28 10.0	-0.7
	baz=236						
CHN5	Tsauling	2.35	241	eP	Pb	13 28 09.9	-1.5
	baz=239						
CHN4	Tsaushan	2.55	237	eP	Pn	13 28 11.0	+0.8
	baz=235						
CHN1	Nanshi	2.69	235	eP	Pb	13 28 15.3	-1.9
	baz=233						
SSD	Sandimen	2.90	227	eP	Pn	13 28 17.7	+2.7
	baz=225						
JKE	Kume jima 2	3.83	65	P	Pn	13 28 30.5	+2.8

DDA ***08*** *13:42:16.0, 39°.54N×27°.21E, h7km, MD2.7*
CSEM ***08*** *13:42:15.6±0.3, 39°.52N×27°.22E, h12km, MD2.7, Error ellipse: s-maj=6.6km s-min=3.5km az=16.0*
ISK ***08*** *13:42:15.5, 39°.55N×27°.23E, h8km, MD2.7*
ISCJB ***08*** *13:42:15.2±1.0, 39°.51N±0°.06×27°.22E±0°.04, h7km±6km, Error ellipse: s-maj=9.4km s-min=5.3km az=2.4*
ISC 08 13:42:15.7±1.5**, 39°.54N**±0°.05×**27°.23E**±0°.03**, h10**km±11km**, n23, σ0^{s}34**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALY	Balya	0.36	56	i P	Pg	13 42 23.3	+0.4
BALY				i S	Sb	13 42 29.7	-0.4
BALY	Balya	0.36	56	i P	Pg	13 42 23.3	+0.4
BALY				i S	Sb	13 42 29.7	-0.4
BALB	Balikesir	0.51	78	ePG	Pg	13 42 25.7	0.0
BALB	Balikesir	0.51	78	ePg	Pg	13 42 25.7	0.0
GONE	Gonen-Balikesi	0.62	34	ePG	Pg	13 42 27.8	+0.1
GONE				eSG	Sb	13 42 37.4	0.0
GONE	Gonen-Balikesi	0.62	34	ePg	Pg	13 42 27.8	+0.1
GONE				eSg	Sb	13 42 37.4	0.0
EZN	Ezine	0.76	293	ePG	Pb	13 42 30.5	-0.5
EZN	Ezine	0.76	293	ePg	Pb	13 42 30.5	-0.5
KRBG	Karabiga-Canak	0.86	3	ePG	Pg	13 42 31.9	-0.3
KRBG	Karabiga-Canak	0.86	3	ePg	Pg	13 42 31.9	-0.3
BOZC	Bozcaada	0.96	289	i P	Pb	13 42 34.3	-0.1
BOZC				i S	Sb	13 42 47.5	+0.4
DURS	Dursunbey	0.96	86	eP	Pg	13 42 33.7	-0.6
DURS				i S	Sb	13 42 47.3	-0.1
DURS	Dursunbey	0.96	86	eP	Pg	13 42 33.7	-0.6
DURS				i S	Sb	13 42 47.3	-0.1
GELI	Tayfur-Gelibol	1.04	326	ePG	Pb	13 42 35.7	-0.1
GELI	Tayfur-Gelibol	1.04	326	ePg	Pb	13 42 35.7	-0.1
MRMT	Marmara Adasi	1.10	15	ePN	Pb	13 42 36.6	-0.3
MRMT				eSN	Sn	13 42 52.2	-0.4
MRMT	Marmara Adasi	1.10	15	ePn	Pb	13 42 36.6	-0.3
MRMT				eSn	Sn	13 42 52.2	-0.4
SART	Tekirdag	1.15	358	i P	Pb	13 42 37.6	-0.2
SART				i S	Sn	13 42 54.1	+0.3
SART	Tekirdag	1.15	358	i P	Pb	13 42 37.6	-0.2
SART				i S	Sn	13 42 54.1	+0.3
ERIK	Erikli-Kesan	1.26	334	ePN	Pg	13 42 39.7	-0.2
ERIK	Erikli-Kesan	1.26	334	ePn	Pg	13 42 39.7	-0.2
TVSB	Tavsanli	1.73	92	ePN	Pn	13 42 46.5	+0.6
TVSB	Tavsanli	1.73	92	ePn	Pn	13 42 46.5	+0.6

ISCJB ***08*** *13:44:51.0±0.3, 31°.92S±0°.03×69°.60W±0°.03, h96km±3km, mb5.6/181, Error ellipse: s-maj=4.9km s-min=4.6km az=156.0*
BJI ***08*** *13:44:51.0, 31°.90S×69°.40W, h87km, mB5.1/24, Ms5.4/16, Ms7 5.0/20*
MOS ***08*** *13:44:51.3±1.1, 31°.92S×69°.65W, h97km, mb5.6/47, Error ellipse: s-maj=11.1km s-min=5.8km az=94.0*
GUC ***08*** *13:44:52.5±0.6, 32°.04S×69°.93W, h127km±10km, ML5.5*
NEIC ***08*** *13:44:53.5±0.1, 32°.06S×69°.68W, mb5.6/143, MW5.4, MD5.6(SJA), Error ellipse: s-maj=5.7km s-min=3.6km az=89.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.93; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$1.08; $M_{r\theta}$-0.65; $M_{\theta\phi}$0.29; $M_{\phi r}$-0.88; Best double couple: $M_0$1.50000×10^{17} NP1:ϕ_s172.00000°, δ26.00000°, λ-126.00000°. NP2: ϕ_s31.00000°, δ69.00000°, λ-74.00000°. Principal axes: T 1.5700, Plg22.0000°, Azm108.0000°; N -0.0900, Plg14.0000°, Azm204.0000°; P -1.4700, Plg62.0000°, Azm325.0000°;*
NEIC Felt [V] at Barreal and Uspallata; [IV] at Mendoza and San Juan. Felt [III] at Combarbala, Ovalle, Rancagua, San Antonio, San Felipe, Santiago and Valparaiso; [II] at Hijuelas, Hurtado, Illapel, La Calera and Quillota, Chile. Also felt at Copiapo, Limache and Vina del Mar.
IDC ***08*** *13:44:54.0±0.3, 32°.02S×69°.68W, h111km±2km, mb5.1/24, mb1 5.2/27, mb1mx5.2/27, mbtmp5.1/27, MS4.4/6, Ms1 4.4/6, ms1mx3.9/27 Error ellipse: s-maj=8.5km s-min=6.8km az=158.0*
GCMT ***08*** *13:44:57.1±0.2, 32°.02S×69°.68W, h110km±1km, MW5.4, Moment Tensor Solution. s82,c122; s5,c7; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.15±.02; $M_{\theta\theta}$0.02±.02; $M_{\phi\phi}$1.13±.03; $M_{r\theta}$-0.39±.02; $M_{\theta\phi}$0.70±.02; $M_{\phi r}$0.15±.02; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s185.00000°, δ48.00000°, λ-121.00000°. NP2:ϕ_s47.00000°, δ50.00000°, λ-60.00000°. Principal axes: T 1.4700, Plg1.0000°, Azm116.0000°; N -0.1500, Plg22.0000°, Azm206.0000°; P -1.3200, Plg68.0000°, Azm24.0000°; Data Used: II IU IC G CN. Surface waves: sta= 82, comp=147, per= 50.*
ISC 08 13:44:53.8±0.2**, 32°.03S**±0°.03×**69°.70W**±0°.04**, h113**km±1km**, h113**km**:pP-P, n1000, σ1^{s}15**/1166**, mb5.6**/182**, 236C-235D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	Jahuel	0.99	229	⇓iP	Pn	13 45 13.9	-1.3
JACH	Jahuel	0.99	229	⇓iP	Pn	13 45 13.9	-1.3
CFAA	Coronel Fontan	1.32	71	P	Pn	13 45 17.7	-1.0
	625nm,0.3s,baz=246,slow=9.8						
CFAA				S	Sn	13 45 37.4	-0.2
	2μm,0.3s,baz=129,slow=18,SNR=61						
ROCH	El Roble	1.45	229	⇑iP	Pn	13 45 18.5	-1.9
ROCH				i S	Sn	13 45 38.2	-2.3
ROCH				AML	AML	13 45 40.2	
	comp=N,196μm,0.4s						
CLCH	Cerro Calan	1.53	207	⇓iP	Pn	13 45 20.4	-0.8
CLCH				i S	Sn	13 45 41.4	-0.6
CHNG	Los Chungos	1.53	275	⇓iP	Pn	13 45 19.0	-2.2
CHNG				eS	Sn	13 45 38.8	-3.1
CHNG	Los Chungos	1.53	275	⇓iP	Pn	13 45 19.0	-2.2
CHNG				eS	Sn	13 45 38.8	-3.1
CHNG				AML	AML	13 45 48.5	
	comp=N,57μm,0.7s						
SAN	Santiago	1.63	209	⇑iP	Pn	13 45 21.4	-1.0
SAN				i S	Sn	13 45 42.9	-1.3
SAN	Santiago	1.63	209	⇑iP	Pn	13 45 21.4	-1.0
SAN				i S	Sn	13 45 42.9	-1.3
SAN	Santiago	1.63	209	⇑iP	Pn	13 45 21.4	-1.0
SAN				i S	Sn	13 45 42.9	-1.3
SAN				AML	AML	13 45 53.2	
	comp=E,23μm,0.4s						
ANTU	Antumapu	1.72	207	⇓iP	Pn	13 45 22.5	-1.0
ANTU				i S	Sn	13 45 45.1	-1.0
ANTU	Antumapu	1.72	207	⇓iP	Pn	13 45 22.5	-1.0
ANTU				i S	Sn	13 45 45.1	-1.0
ANTU				AML	AML	13 45 48.2	
	comp=E,86μm,0.5s						
PCH	Pirque	1.72	203	⇑iP	Pn	13 45 22.7	-0.9
PCH	Pirque	1.72	203	⇑iP	Pn	13 45 22.7	-0.9
RCDM	Rinconada Maip	1.72	212	⇓iP	Pn	13 45 22.3	-1.2
RCDM				eS	Sn	13 45 44.9	-1.3
RCDM	Rinconada Maip	1.72	212	⇓iP	Pn	13 45 22.3	-1.2
RCDM				eS	Sn	13 45 44.9	-1.3
RCDM				AML	AML	13 45 45.5	
	comp=E,84μm,0.5s						
LMEL	Las Melosas	1.86	193	⇓iP	Pn	13 45 24.8	-0.4
LMEL				i S	Sn	13 45 49.5	+0.2
LMEL	Las Melosas	1.86	193	⇓iP	Pn	13 45 24.8	-0.4
LMEL				i S	Sn	13 45 49.5	+0.2
LMEL				AML	AML	13 46 01.6	
	comp=N,19μm,0.7s						
IHA	Instituto Hidr	1.91	238	⇑iP	Pn	13 45 23.3	-2.5
IHA	Instituto Hidr	1.91	238	⇑iP	Pn	13 45 23.3	-2.5
TACH	Talagante	1.92	212	⇓iP	Pn	13 45 24.4	-1.5
TACH	Talagante	1.92	212	⇓iP	Pn	13 45 24.4	-1.5
LCCH	Las Cruces	2.13	227	⇓iP	Pn	13 45 26.8	-1.8
LCCH	Las Cruces	2.13	227	⇓iP	Pn	13 45 26.8	-1.8
LCO	Las Campanas	3.13	344	ePn	Pn	13 45 40.0	-1.9
PLCA	Paso Flores	8.71	184	ePn	Pn	13 46 54.9	-1.9
PLCA	Paso Flores	8.71	184	P	Pn	13 46 55.4	-1.5
	comp=N,2.6nm,0.3s,baz=359,slow=13,SNR=60						
TRQA	Tornquist	8.73	136	ePn	Pn	13 46 55.0	-2.1
LVC	Limon Verde	9.41	4	ePn	Pn	13 47 02.2	-4.4
LPA	La Plata	10.24	109	eP	Pn	13 47 15.0	-2.5
LPA				S	Sn	13 49 08.0	-2.4
LPA				PCP	PcP	13 53 11.0	-4.1
CPUP	Villa Florida	12.21	65	P	Pn	13 47 39.8	-4.1
	comp=N,24nm,0.3s,baz=223,slow=12,SNR=93						
CPUP				S	Sn	13 49 55.8	-2.4
	comp=N,23nm,0.3s,baz=195,slow=13,SNR=3.6						
ARE	Arequipa	15.59	354	⇑iP	Pn	13 48 26.7	-0.9
ARE	Arequipa	15.59	354	⇑iP	Pn	13 48 26.7	-0.9
LPAZ	La Paz	15.74	6	P	Pn	13 48 28.6	-1.2
	comp=N,3.6nm,0.3s,baz=174,slow=8.4,SNR=136						
SIV	San Ignacio	17.80	28	P	P	13 48 52.7	-0.8
	comp=N,14nm,0.3s,baz=224,slow=13,SNR=226						
NNA	Nana	21.01	340	eP	P	13 49 28.5	+0.1
	comp=N,100nm,0.8s						
NNA	Nana	21.01	340	P	P	13 49 29.0	+0.7
	comp=N,60nm,0.7s,baz=173,slow=12,SNR=16						
SPB	Sao Paulo	21.39	72	eP	P	13 49 32.9	+0.5
	comp=N,101nm,0.9s						
EFI	East Falkland	21.41	160c	iP	P	13 49 30.4	-1.9
EFI				pmax	pmax		
	comp=Z,466nm,1.0s						
EFI	East Falkland	21.41	160	eP	P	13 49 30.7	-1.6
	comp=Z,341nm,0.7s						
USHA	Ushuaia	22.81	178	P	P	13 49 47.9	+1.2
	comp=Z,136nm,0.7s,baz=340,slow=7.4,SNR=63						
SAML	Samuel	23.75	16	eP	P	13 49 55.2	-0.6
	comp=Z,379nm,0.9s						
BDFB	Brasilia	25.61	55	P	P	13 50 12.5	-0.3
	comp=Z,94nm,0.9s,baz=223,slow=7.7,SNR=83						
CAM4	Nova Friburgo	25.93	75	⇓iP	P	13 50 15.7	-0.1
CAM4				i		13 50 18.4	
CAM4				i		13 50 22.7	
CAM4				i		13 50 31.1	
CAM4				i		13 50 34.5	
CAM4				i		13 50 40.5	
CAM4				i		13 50 53.7	
CAM4				i		13 50 59.7	
CAM4				i		13 51 07.7	

CAM4 *i* 13 51 19.4
ATAH Atahualpa 26.06 340 P **P** **13 50 18.1 +0.9**
comp=Z,25nm,0.9s,baz=168,slow=7.6,SNR=9.4
ATAH PcP **PcP** **13 53 44.4 +2.1**
comp=Z,22nm,0.7s,baz=184,slow=4.8,SNR=5.4
PMSA Palmer Station 32.95 176 P **P** **13 51 18.3 +1.1**
comp=Z,30nm,0.9s,baz=5.2,slow=11,SNR=3.5
OTAV Otavalo 33.15 344 *e*P **P** **13 51 21.5 +1.6**
comp=Z,11nm,0.9s
PAYG Puerto Ayora 36.75 324 *e*P **P** **13 51 49.8 -0.6**
comp=Z,98nm,1.1s
PAYG *es*P **sP** **13 52 29.5 +0.8**
SDV Santo Domingo 40.70 359 *e*P **P** **13 52 22.4 -1.1**
comp=Z,74nm,0.9s
SDV *e*PcP **PcP** **13 54 23.4 +0.3**
RCBR Riachuelo 40.94 58 *e*P **P** **13 52 25.1 -0.3**
comp=Z,117nm,1.3s
RCBR *e* 13 52 53.1
BCIP Isla Barro Col 42.10 345 *e*P **P** **13 52 35.5 +0.8**
comp=Z,132nm,0.8s
GRGR Grenville 44.59 11 *e*P **P** **13 52 53.9 -0.8**
comp=Z,656nm,0.9s
FDF Fort de France 47.22 11 *e*P P 13 53 11.9 -3.5
FDF pmax pmax
comp=Z,154nm,0.8s
FDF Fort de France 47.22 11 *e*P P 13 53 11.8 -3.5
comp=Z,154nm,0.8s
FDF Fort de France 47.22 11 *e*P **P** **13 53 14.3 -1.1**
TGUH Tegucigalpa,Un 48.82 337 *e*P **P** **13 53 28.1 +0.5**
comp=Z,156nm,1.1s
CRPR Cabo Rojo, PR 49.82 3 *e*P **P** **13 53 34.8 -0.4**
comp=Z,1µm,0.8s
CRPR *ep*P **pP** **13 54 02.1 +0.3**
OBIP Obispado Ponce 49.88 4 *e*P **P** **13 53 35.0 -0.7**
comp=Z,387nm,0.7s
CELP Cerrillos 49.91 4 *e*P **P** **13 53 35.1 -0.8**
SJG San Juan 49.98 4 *e*P **P** **13 53 35.4 -1.0**
comp=Z,227nm,0.8s
LSP Las Mesas 49.98 3 *e*P **P** **13 53 35.5 -1.0**
MTP Monte Pirata 50.00 5 *e*P **P** **13 53 34.9 -1.7**
comp=Z,140nm,1.2s
MTP *e*PP **PP** **13 55 30.8 -2.1**
HUMP Col San Antoni 50.02 5 *e*P **P** **13 53 35.2 -1.6**
comp=Z,157nm,1.2s
LRS Lares 50.11 4 *e*P **P** **13 53 36.7 -0.8**
CBYP Canovanas 50.15 5 *e*P **P** **13 53 36.7 -1.1**
comp=Z,660nm,1.3s
AOPR Arecibo Observ 50.17 4 *e*P **P** **13 53 36.4 -1.5**
comp=Z,393nm,1.4s
STVI Saint Thomas 50.30 6 *e*P **P** **13 53 37.7 -1.1**
comp=Z,99nm,0.7s
STVI *e*PcP **PcP** **13 54 55.7 -0.4**
MTDJ Mount Denham 50.53 350 *e*P **P** **13 53 39.4 -1.4**
comp=Z,170nm,1.1s
VNA1 Neumayer--Stat 50.73 158 *e*P **P** **13 53 43.4 +1.9**
VNA1 Neumayer--Stat 50.73 158 *e*PcP **PcP** **13 54 58.2 +1.2**
SDDR Presa de Saban 50.75 358 *e*P **P** **13 53 41.1 -1.1**
comp=Z,53nm,0.8s
SDDR *e*PcP **PcP** **13 54 56.8 -1.0**
SDDR LR LR
comp=Z,494nm,21.0s
VNA2 Neumayer--Watz 51.08 158 *e*P **P** **13 53 45.4 +1.2**
VNA2 Neumayer--Watz 51.08 158 *es*P sP 13 54 12.0 -12
VNA2 Neumayer--Watz 51.08 158 *e*PcP **PcP** **13 54 59.0 +0.7**
GTBY Guantanamo Bay 51.92 354 *e*P **P** **13 53 49.1 -1.9**
comp=Z,343nm,1.2s
SNAA Sanae 52.68 159 *e*P **P** **13 53 56.8 +0.7**
SNAA Sanae 52.68 159 *es*P sP 13 54 23.2 -12
SNAA Sanae 52.68 159 *e*PKiKP PKiKP 14 01 58.9 +16
SNAA Sanae 52.68 159 *e*P **P** **13 53 56.2 +0.2**
comp=Z,85nm,1.0s
SNAA Sanae 52.68 159 P **P** **13 53 56.8 +0.7**
comp=Z,12nm,0.8s,baz=289,slow=6.4,SNR=53
GRTK Grand Turk 53.26 358 *e*P **P** **13 53 59.8 -0.9**
comp=Z,302nm,0.9s
TEIG Tepich 54.92 339 *e*P **P** **13 54 12.7 -0.2**
comp=Z,144nm,0.7s
TEIG *e* **pP** **13 54 40.5 +0.5**
MAIT Maitri 57.32 157 *e*P P 13 54 20.2 -9.1
MAIT *e* 13 54 47.1
QSPA South Pole Qui 58.20 180 *e*P **P** **13 54 36.6 +0.8**
comp=Z,105nm,0.9s
QSPA LR LR
comp=Z,548nm,19.0s
QSPA South Pole Qui 58.20 180 PKP2bc 14 24 23.8
comp=Z,30nm,1.1s,baz=292,slow=3.3,SNR=12
TIGA Tifton 64.48 347 ⇑P **P** **13 55 18.3 +0.1**
baz=65
BRAL Brewton 64.82 344 *e*P P 13 55 17.2 -3.2
comp=Z,608nm,1.4s
SBA Scott Base 65.39 191 *e*P **P** **13 55 24.4 +0.8**
SBA *e* 13 55 53.7
SBA pmax pmax
comp=Z,378nm,2.8s
SBA Scott Base 65.39 191 *e*P **P** **13 55 24.4 +0.8**
comp=Z,378nm,2.8s
SBA *e*PcP **PcP** **13 55 53.7 -1.0**
NHSC New Hope 65.54 350 *e*P **P** **13 55 22.9 -2.1**
comp=Z,620nm,1.2s
NHSC LR LR
comp=Z,202nm,20.0s
GOGA Godfrey 66.38 347 *e*P **P** **13 55 30.5 +0.1**
GOGA pmax pmax
comp=Z,125nm,0.8s
GOGA Godfrey 66.38 347 *e*P **P** **13 55 30.5 +0.1**
comp=Z,125nm,0.8s
VNDA Vanda 66.40 191 *e*P **P** **13 55 31.9 +1.9**
comp=Z,14nm,0.8s
VNDA Vanda 66.40 191 P **P** **13 55 31.8 +1.7**
comp=Z,12nm,0.8s,baz=131,slow=5.4,SNR=56
VNDA pP **PcP** **13 55 58.6 -0.3**
comp=Z,7.3nm,0.7s,baz=162,slow=4.9,SNR=5.1
VNDA PKP2bc 14 24 00.5
comp=Z,8.9nm,1.0s,baz=293,slow=4.4,SNR=19
HKT Hockley 66.45 335 *e*P **P** **13 55 29.8 -1.0**
HKT *e* 13 55 59.9
HKT pmax pmax
comp=Z,188nm,1.6s
HKT Hockley 66.45 335 *e*P **P** **13 55 29.8 -1.0**
comp=Z,188nm,1.6s
HKT *e*PcP **PcP** **13 55 59.9 +0.3**
LRAL Lakeview Retre 66.75 344 *e*P **P** **13 55 31.1 -1.6**
comp=Z,111nm,1.0s
JSC Jenkinsville 66.85 350 *e*P **P** **13 55 33.5 +0.1**
JSC Jenkinsville 66.85 350 *e*P **P** **13 55 33.5 +0.1**
VBMS Vicksburg 66.87 341 *e*P **P** **13 55 32.8 -0.7**
comp=Z,664nm,1.1s
732A Laxson Ranch, 66.93 331 ⇑P **P** **13 55 35.3 +1.3**
baz=67,SNR=146
732A ⇓S **S** **14 04 20.8 +2.6**
baz=67
732A ⇓S **S** **14 04 20.8 +2.6**
baz=67
SYO Syowa Base 66.97 158 ⇑*i*P **P** **13 55 32.6 -1.1**
CNNC Cliffs of the 67.36 353 *e*P **P** **13 55 36.2 -0.3**
comp=Z,234nm,0.8s
NATX Nacogdoches 67.70 337 *e*P **P** **13 55 38.6 -0.1**
comp=Z,258nm,0.8s
NATX *e*PcP **pP** **13 56 07.5 +0.7**
KMSC Kings Mountain 67.71 350 ⇑P **P** **13 55 38.8 0.0**
baz=68,SNR=42
631A Perdido Creek 67.78 331 ⇑P **P** **13 55 39.9 +0.6**
baz=68,SNR=48
631A ⇓S **S** **14 04 31.2 +2.8**
baz=68
631A ⇓S **S** **14 04 31.2 +2.8**
baz=68
532A Rocksprings 68.14 332 ⇓P **P** **13 55 43.0 +1.3**
baz=68,SNR=153
JCT Junction City 68.41 332 *e*P **P** **13 55 43.8 +0.5**
JCT *e* 13 56 09.2
JCT pmax pmax
comp=Z,184nm,0.9s
JCT MLR MLR
comp=Z,167nm,20.0s
JCT Junction City 68.41 332 *e*P **P** **13 55 43.8 +0.5**
comp=Z,184nm,0.9s
JCT *e*PcP **PcP** **13 56 09.2 +1.2**
JCT LR LR
comp=Z,167nm,20.0s
JCT Junction City 68.41 332 ⇑P **P** **13 55 44.5 +1.1**
baz=69,SNR=75
531A Rocksprings 68.43 331 ⇑P **P** **13 55 44.8 +1.4**
baz=69,SNR=118
CPCT Cooper Cave 68.56 347 *e*P **P** **13 55 44.3 +0.3**
SWET Sewanee 68.61 346 *e*P **P** **13 55 44.9 +0.4**
comp=Z,452nm,0.8s
TKL Tuckaleechee C 68.62 348 *e*P **P** **13 55 44.5 0.0**
TKL Tuckaleechee C 68.62 348 P **P** **13 55 44.5 0.0**
comp=Z,183nm,0.9s,baz=164,slow=7.4,SNR=175
530A J-C Ranch, Com 68.74 331 ⇓P **P** **13 55 46.7 +1.3**
baz=69,SNR=109
OXF Oxford 68.74 343 *e*P **P** **13 55 44.6 -0.6**
OXF pmax pmax
comp=Z,526nm,1.0s
OXF Oxford 68.74 343 *e*P **P** **13 55 44.6 -0.6**
comp=Z,526nm,1.0s
432A Menard 68.76 332 ⇓P **P** **13 55 46.2 +0.7**
baz=69,SNR=40
628A Black Gap, Mar 68.82 329 ⇓P **P** **13 55 47.4 +1.4**
baz=69,SNR=133
PLAL Pickwick Lake 68.86 344 *e*P **P** **13 55 46.0 0.0**
comp=Z,124nm,0.8s
PLAL *e*PcP **PcP** **13 56 10.3 +0.6**
431A Sonora 68.91 332 ⇓P **P** **13 55 47.2 +0.8**
baz=69,SNR=38
627A Terlingua Ranc 69.01 329 ⇑P **P** **13 55 48.1 +0.9**
baz=69,SNR=56
TXAR Lajitas Array 69.03 329 P **P** **13 55 48.3 +1.0**
comp=Z,28nm,0.7s,baz=151,slow=8.5,SNR=248
TXAR PKKP **PKKPdf** **14 15 42.2 -0.9**
comp=Z,0.2nm,0.5s,baz=111,slow=6.9,SNR=3.4
TXAR PKP2bc 14 23 55.5
comp=Z,1.0nm,0.8s,baz=308,slow=6.1,SNR=3.5
529A Stev Forest Ra 69.09 330 ⇑P **P** **13 55 48.9 +1.3**
baz=69,SNR=197
332A Millersview 69.19 333 ⇑P **P** **13 55 48.9 +0.7**
baz=70,SNR=72
430A Baggett Ranch, 69.26 331 ⇓P **P** **13 55 49.6 +1.0**
baz=70,SNR=117
528A Cox Ranch, San 69.36 330 ⇑P **P** **13 55 50.1 +0.8**
baz=70,SNR=137
429A Davport Ranc 69.39 331 ⇑P **P** **13 55 50.5 +1.1**
baz=70,SNR=97
331A San Angelo 69.39 332 ⇓P **P** **13 55 50.2 +0.8**
baz=70,SNR=53
626A Big Bend Ranch 69.43 328 ⇑P **P** **13 55 51.2 +1.5**
baz=70,SNR=147
TZTN Tazewell 69.44 348 *e*P **P** **13 55 48.8 -0.8**
comp=Z,374nm,1.6s
VWCC Virginia Weste 69.59 351 *e*P **P** **13 55 48.4 -2.0**
232A Coleman 69.60 333 ⇑P **P** **13 55 51.5 +0.8**
baz=70,SNR=89
BLA Blacksburg 69.61 351 *e*P **P** **13 55 49.7 -0.9**
BLA pmax pmax
comp=Z,100nm,0.8s
BLA Blacksburg 69.61 351 *e*P **P** **13 55 49.7 -0.9**
comp=Z,100nm,0.8s
527A Woodward Ranch 69.71 329 ⇑P **P** **13 55 52.3 +0.8**
baz=70,SNR=92
TBI Tubuai 69.71 255 *e*P **P** **13 55 52.9 +1.3**
comp=Z,203nm,1.1s
TBI *e*LR LR 14 17 22.5
comp=Z,574nm,31.5s
330A Mertzon 69.78 332 ⇑P **P** **13 55 52.4 +0.6**
baz=70,SNR=66
428A Kincaid Ranch, 69.81 330 ⇓P **P** **13 55 53.1 +1.1**
baz=70,SNR=40
526A Mary Lane Ranc 69.84 329 ⇓P **P** **13 55 53.7 +1.3**
baz=70,SNR=136
231A Bronte 69.90 333 ⇑P **P** **13 55 53.1 +0.6**
baz=70,SNR=77
WVT Waverly 69.90 344 *e*P **P** **13 55 52.5 +0.1**
WVT pmax pmax
comp=Z,679nm,0.8s
WVT Waverly 69.90 344 *e*P **P** **13 55 52.5 +0.1**
comp=Z,679nm,0.8s
MIAR Mount Ida 69.93 339 ⇓*i*P **P** **13 55 52.8 +0.3**
MIAR *e**PP **pP** **13 56 20.9 +0.1**
MIAR pmax pmax
comp=Z,125nm,1.1s
MIAR Mount Ida 69.93 339 ⇓*i*P **P** **13 55 52.8 +0.3**
comp=Z,125nm,1.1s
MIAR *ep*P **pP** **13 56 20.9 +0.1**
MIAR *es*P **sP** **13 56 35.6 +2.6**
HALT Halls 70.05 343 *e*P **P** **13 55 53.1 -0.1**
230A Sterling City 70.17 332 ⇑P **P** **13 55 54.5 +0.3**
baz=70,SNR=19
329A Wagon Wheel Ra 70.18 331 ⇑P **P** **13 55 55.1 +0.9**
baz=70,SNR=48
427A Hayter Ranch, 70.22 330 ⇑P **P** **13 55 55.5 +0.9**
baz=70,SNR=43
ABTX Abilei, Hawle 70.25 333 ⇓P **P** **13 55 55.4 +0.8**
baz=71,SNR=33
GNAR Gosnell 70.27 343 *e*P **P** **13 55 53.8 -0.8**
comp=Z,7µm,1.2s
GNAR *e*PcP **PcP** **13 56 15.0 -0.6**
426A McDonald Obser 70.34 329 ⇓P **P** **13 55 56.6 +1.2**
baz=71,SNR=102
UTMT University of 70.35 344 *e*P **P** **13 55 55.2 +0.2**
comp=Z,2µm,1.0s
UTMT *e*PcP **PcP** **13 56 15.8 0.0**
GLAT Glass 70.38 343 *e*P **P** **13 55 54.0 -1.3**
328A Wristen Ranch, 70.43 330 ⇓P **P** **13 55 56.6 +0.8**
baz=71
229A Bryant Ranch, 70.53 331 ⇑P **P** **13 55 56.8 +0.5**
baz=71,SNR=19
131A Roby 70.58 333 ⇓P **P** **13 55 57.5 +0.8**
baz=71,SNR=43
PVMO Portageville 70.62 343 *e*P **P** **13 55 56.1 -0.6**
comp=Z,2µm,1.1s
130A Snyder 70.74 332 ⇑P **P** **13 55 58.2 +0.6**
baz=71,SNR=35
Z32A Haskell 70.80 334 ⇓P **P** **13 55 58.7 +0.8**
baz=71,SNR=45
425A Indio Mountain 70.86 328 ⇑P **P** **13 55 59.1 +0.6**
baz=71,SNR=60
PARMO Parma 70.87 343 *e*P **P** **13 55 58.7 +0.5**
326A Caldwell Ranch 70.87 329 ⇓P **P** **13 55 59.4 +0.9**
baz=71
228A UT Block 9, Go 70.98 331 ⇑P **P** **13 55 59.7 +0.6**
baz=71,SNR=67
Z31A Sharp Cattle R 71.06 333 ⇑P **P** **13 56 00.4 +0.8**
baz=71,SNR=77
MEH Mehetia 71.08 260 *e*P **P** **13 56 01.7 +1.6**
comp=Z,78nm,1.0s
129A Stewart Farms, 71.13 332 ⇓P **P** **13 56 00.6 +0.6**
baz=72,SNR=25
227A Bennet, Jal 71.18 330 ⇓P **P** **13 56 01.7 +1.4**
baz=72,SNR=63
325A Bean Ranch, Si 71.36 329 ⇑P **P** **13 56 01.9 +0.3**
baz=72,SNR=106
128A Castleberry Fa 71.37 331 ⇓P **P** **13 56 02.1 +0.6**
baz=72
SDMD Soldier's Deli 71.39 354 *e*P **P** **13 56 01.1 -0.2**
comp=Z,146nm,1.0s
Y32A R-V Farms, Ver 71.41 334 ⇓P **P** **13 56 02.2 +0.6**
baz=72,SNR=5.4
Z30A Sanderson Ranc 71.41 333 ⇓P **P** **13 56 01.9 +0.2**
baz=72,SNR=56
WCI Wyandotte Cave 71.59 346 *e*P **P** **13 56 01.0 -1.6**
WCI pmax pmax
comp=Z,155nm,0.8s
WCI Wyandotte Cave 71.59 346 *e*P **P** **13 56 01.0 -1.6**
comp=Z,155nm,0.8s
226B Tecolote Peak, 71.61 330 ⇓P **P** **13 56 04.1 +1.2**
baz=72,SNR=67
Z29A Hungry Hill Ra 71.62 332 ⇑P **P** **13 56 03.1 +0.2**
baz=72,SNR=76
USIN University of 71.63 345 *e*P **P** **13 56 01.7 -1.0**
comp=Z,243nm,0.8s
324A Moseley Ranch, 71.64 328 ⇓P **P** **13 56 03.0 -0.2**
baz=72,SNR=80
Y31A Rekieta Farm, 71.68 334 ⇓P **P** **13 56 03.9 +0.7**
baz=72
SIUC Southern Illin 71.74 344 *e*P **P** **13 56 03.3 -0.2**
comp=Z,205nm,1.0s
SIUC *e*PcP **PcP** **13 56 20.8 -0.9**
127A Arkansas Junct 71.78 331 ⇓P **P** **13 56 04.6 +0.7**
baz=72,SNR=16
MNTX Cornudas Mount 71.82 328 *e*P **P** **13 56 03.9 -0.2**
comp=Z,47nm,0.8s
WMOK Wichita Mounta 71.83 335 *e*P **P** **13 56 03.3 -0.8**
WMOK pmax pmax
comp=Z,57nm,1.1s
WMOK Wichita Mounta 71.83 335 *e*P **P** **13 56 03.3 -0.8**
comp=Z,57nm,1.1s
Y30A Stafford Cattl 71.84 333 ⇑P **P** **13 56 04.7 +0.4**
baz=72,SNR=12
TUL1 Tulsa 71.88 338 ⇓P **P** **13 56 04.5 +0.2**
baz=72,SNR=27
Z28A Tucker Farm, M 71.92 332 ⇓P **P** **13 56 05.0 +0.3**
baz=72,SNR=37
225A Deer Hill, Car 71.92 329 ⇑P **P** **13 56 05.4 +0.5**
baz=72
MVL Millersville 71.94 355 *e*P **P** **13 56 05.8 +1.3**
comp=Z,120nm,1.0s
126A Clayton Basin, 72.03 330 ⇑P **P** **13 56 06.4 +0.9**
baz=72,SNR=20
TVO Taravao 72.12 260 *e*P **P** **13 56 07.9 +1.5**
comp=Z,134nm,1.1s
Y29A Porterfield Fa 72.13 332 ⇑P **P** **13 56 06.6 +0.6**
baz=72,SNR=28
X31A McDonald Ranch 72.17 334 ⇓P **P** **13 56 06.7 +0.6**
baz=72,SNR=37
224A Cornudas Mount 72.20 329 ⇓P **P** **13 56 06.7 +0.2**
baz=72,SNR=67
Z27A Tatum 72.28 331 ⇑P **P** **13 56 07.2 +0.3**
baz=73,SNR=44
LIC Lamto 72.28 71 *e*P **P** **13 56 07.4 +0.1**
comp=Z,86nm,0.6s,baz=243
LIC *ep*P **pP** **13 56 35.2 -0.4**
LIC *e*R
comp=Z,387nm,22.8s
LIC Lamto 72.28 71 *e*P **P** **13 56 07.4 +0.1**
comp=Z,86nm,0.6s
LIC *ep*P **pP** **13 56 35.2 -0.4**
TIAR Tiarei 72.31 260 *e*P **P** **13 56 08.7 +1.3**
comp=Z,58nm,0.9s
125A Gardner Draw, 72.32 330 ⇑P **P** **13 56 07.4 +0.2**
baz=73,SNR=70
X30A Coker Ranch, T 72.34 333 ⇓P **P** **13 56 07.7 +0.5**
baz=73
Y28A McKinney Farm, 72.40 332 ⇑P **P** **13 56 08.1 +0.5**
baz=73
PAE Paea 72.45 260 *e*P **P** **13 56 09.5 +1.3**
comp=Z,24nm,0.9s
PAE *ep*P pP 13 56 42.0 +5.4
comp=Z,14nm,1.0s
OLIL Olney 72.46 345 *e*P **P** **13 56 07.3 -0.4**
comp=Z,224nm,1.1s
OLIL *ep*P **PcP** **13 56 29.7 +4.9**
PPT2 Papeete2 72.48 260 *e*P **P** **13 56 10.1 +1.6**
comp=Z,142nm,1.0s
PPT2 *e*S **S** **14 05 24.4 +0.4**
comp=Z,230nm,24.0s
BRNJ Basking Ridge 72.49 356 *e*P **P** **13 56 06.7 -1.2**
comp=Z,19µm,0.8s
PPT Papeete 72.49 260 P **P** **13 56 10.6 +2.1**
comp=Z,159nm,0.9s,baz=87,slow=3.2,SNR=24
PPT LR LR 14 20 29.3
comp=Z,315nm,19.7s,baz=340,slow=29
223A Chaparral, Ant 72.55 328 ⇑P **P** **13 56 09.5 +1.0**
baz=73
BLO Bloomington 72.55 346 *e*P **P** **13 56 07.6 -0.6**
BLO *e* 13 56 24.3
BLO pmax pmax
comp=Z,173nm,0.8s
BLO Bloomington 72.55 346 *e*P **P** **13 56 07.6 -0.6**
comp=Z,173nm,0.8s
BLO *e*PcP **PcP** **13 56 24.3 -0.9**
Z26A Caprock 72.56 330 ⇑P **P** **13 56 09.4 +0.9**
baz=73,SNR=169
W31A Holland Ranch, 72.65 334 ⇓P **P** **13 56 09.4 +0.4**
baz=73,SNR=17
X29A Tulia 72.66 333 ⇓P **P** **13 56 09.8 +0.7**
baz=73,SNR=30
MSTX Muleshoe 72.67 332 ⇑P **P** **13 56 09.6 +0.4**
baz=73,SNR=90
DBIC Dimbokro 72.68 70 *e*P **P** **13 56 07.6 -2.0**
comp=Z,103nm,1.0s
DBIC Dimbokro 72.68 70 P **P** **13 56 10.1 +0.4**
comp=Z,57nm,0.6s,baz=212,slow=6.4,SNR=67
124A Stringfield Ra 72.70 329 ⇑P **P** **13 56 10.5 +0.9**
baz=73
SSPA Standing Stone 72.70 353 *e*P **P** **13 56 09.2 +0.1**
comp=Z,97nm,1.1s
SSPA *e*PcP **PcP** **13 56 25.5 -0.3**
Y27A Causey 72.75 331 ⇑P **P** **13 56 09.9 +0.2**
baz=73,SNR=21
SLM Saint Louis 72.86 343 *e*P **P** **13 56 10.2 +0.1**
SLM *e**PP **pP** **13 56 34.0 -4.5**
SLM pmax pmax
comp=Z,208nm,1.0s
SLM Saint Louis 72.86 343 *e*P **P** **13 56 10.2 +0.1**
comp=Z,208nm,1.0s
SLM *ep*P **pP** **13 56 34.0 -4.5**
Z25A Roswell 72.88 330 ⇑P **P** **13 56 10.9 +0.4**
baz=73,SNR=35
W30A Crocket Farms 72.88 334 ⇑P **P** **13 56 10.8 +0.5**
baz=73
X28A Dimmitt 72.92 332 ⇑P **P** **13 56 11.4 +0.7**
baz=73
222A Williams Famil 72.94 327 ⇑P **P** **13 56 12.4 +1.6**
baz=73,SNR=17
ACSO Alum Creek Sta 72.95 349 *e*P **P** **13 56 10.5 -0.1**
comp=Z,335nm,0.8s
ACSO *e*PcP **PcP** **13 56 26.4 -0.5**
320A Kipp Ranch, An 72.96 326 ⇑P **P** **13 56 12.7 +1.6**
baz=73,SNR=69
123A Bell Site, Whi 73.00 328 ⇓P **P** **13 56 12.6 +1.4**
baz=73
AMTX Amarillo 73.04 333 *e*P **P** **13 56 11.1 -0.3**
comp=Z,147nm,1.0s
YLE Yale 73.05 357 *e*P **P** **13 56 10.1 -1.0**
comp=Z,382nm,1.1s
Y26A Elida 73.06 331 ⇑P **P** **13 56 12.2 +0.7**
baz=73
V31A Spring Creek L 73.14 335 ⇓P **P** **13 56 13.1 +1.3**
baz=74,SNR=21
221A Mesquite Ranch 73.17 327 ⇑P **P** **13 56 13.8 +1.6**
baz=74,SNR=26
W29A Amraillo 73.23 333 ⇓P **P** **13 56 13.3 +0.8**
baz=74,SNR=32
319A Douglas 73.36 325 ⇓P **P** **13 56 15.0 +1.7**
baz=74,SNR=97
X27A F and S Farms, 73.39 332 ⇓P **P** **13 56 13.9 +0.4**
baz=74
122A Conniff Cattle 73.39 328 ⇑P **P** **13 56 15.4 +1.8**
baz=74,SNR=9.0
220A Playas Peak, P 73.43 326 ⇓P **P** **13 56 15.3 +1.5**
baz=74,SNR=147
V30A Spur Ranch, Mi 73.44 334 ⇓P **P** **13 56 15.1 +1.4**
baz=74,SNR=24
Z23A Rita Site, Whi 73.52 329 ⇑P **P** **13 56 16.0 +1.8**
baz=74,SNR=126
W28A Vega 73.57 333 ⇓P **P** **13 56 15.3 +0.8**
baz=74,SNR=5.8
X26A CR and CF Fran 73.59 331 ⇓P **P** **13 56 15.6 +0.9**
baz=74
121A Cookes Peak, D 73.61 327 ⇑P **P** **13 56 16.6 +1.8**
baz=74,SNR=158
U31A Nine Bar Ranch 73.67 335 ⇓P **P** **13 56 16.0 +1.0**
baz=74
W27A Bowe Ranch, En 73.74 332 ⇑P **P** **13 56 16.3 +0.8**
baz=74,SNR=29
Y24A Capitan 73.74 330 ⇑P **P** **13 56 16.6 +1.0**
baz=74
SFIN Scholer Farm 73.83 346 ⇓P **P** **13 56 15.1 -0.7**
baz=74,SNR=23
Z22A Elephant Butte 73.84 328 ⇑P **P** **13 56 17.7 +1.6**
baz=74
V29A Stinnett 73.85 334 ⇓P **P** **13 56 16.7 +0.7**
baz=74
X25A Clemmons Ranch 73.92 331 ⇑P **P** **13 56 17.1 +0.4**
baz=74
ALLY Alegheny Colle 73.95 352 *e*P **P** **13 56 16.1 -0.4**
comp=Z,125nm,0.8s
V28A Channing 74.01 333 ⇑P **P** **13 56 18.1 +1.1**
baz=74
Y23A Lovelace Mesa, 74.01 329 ⇑P **P** **13 56 18.7 +1.5**
baz=74
120A U Bar Ranch, L 74.01 326 ⇑P **P** **13 56 18.8 +1.6**
baz=74,SNR=56
W26A Owens Ranch, T 74.04 331 ⇑P **P** **13 56 18.5 +1.2**
baz=74
SUR Sutherland 74.05 118 *e*P **P** **13 56 17.4 -0.3**
comp=Z,83nm,1.4s
SUR *ep*P **pP** **13 56 44.8 -1.4**
WES Weston 74.07 359 *e*P **P** **13 56 15.5 -1.6**
WES pmax pmax
comp=Z,136nm,1.2s
WES Weston 74.07 359 *e*P **P** **13 56 15.4 -1.6**
comp=Z,136nm,1.2s
BINY Binghamton 74.09 355 *e*P **P** **13 56 15.8 -1.4**
comp=Z,117nm,1.2s
U30A WK&E Inc. Balk 74.11 334 ⇓P **P** **13 56 18.5 +1.0**
baz=74,SNR=19
Z21A St. Cloud Mine 74.20 328 ⇑P **P** **13 56 20.1 +1.7**
baz=74
V27A Dan Oppiter Fa 74.25 332 ⇑P **P** **13 56 19.6 +1.1**

baz=75,SNR=15
T31A Randall Ranch, 74.26 335 ⇑P P 13 56 18.9 +0.5
baz=75,SNR=5.9
U29A Oasis Ranch, S 74.26 334 ⇑P P 13 56 19.4 +0.9
baz=75
X24A Lazy VL Ranch, 74.28 330 ⇓P P 13 56 20.0 +1.2
baz=75
ERPA Erie 74.39 352 *e*P P 13 56 18.6 -0.3
comp=Z,177nm,0.8s
ERPA *e*pP **pP** 13 56 47.0 -0.5
ERPA *es*P **sP** 13 57 00.4 +0.7
Y22A Socorro 74.42 328 ⇑P P 13 56 20.9 +1.3
baz=75
W25A X Bar L Ranch, 74.44 331 ⇓P P 13 56 20.5 +0.9
baz=75
BNM Barren Site 74.45 329 *e*P P 13 56 19.9 +0.1
comp=Z,31nm,1.0s
BNM *e*pP **pP** 13 56 48.3 0.0
Z20A Nine Sixteen R 74.47 327 ⇓P P 13 56 21.6 +1.8
baz=75
TRY Troy 74.49 357 *e*P P 13 56 20.4 +1.0
comp=Z,557nm,1.3s
TRY *e*pP **pP** 13 56 48.9 +0.8
MAW Mawson 74.49 163 *e*P P 13 56 18.8 -0.5
comp=Z,2.1nm,1.0s
MAW *e*pP **pP** 13 56 48.1 +0.3
MAW Mawson 74.49 163 P P 13 56 20.2 +0.8
comp=Z,52nm,1.0s,baz=210,slow=6.7,SNR=61
MAW LR LR 14 28 06.4
comp=Z,180nm,21.8s,baz=212,slow=35
Y22D IRIS PASSCAL I 74.51 329 ⇓P P 13 56 21.8 +1.8
baz=75
T30A Plains 74.53 335 ⇓P P 13 56 20.9 +0.9
baz=75
U28A Mallet 74.56 333 ⇓P P 13 56 21.0 +0.8
baz=75
LPM Los Pinos Moun 74.58 329 *e*P P 13 56 21.4 +0.9
comp=Z,42nm,0.7s
LPM *e*PcP **PcP** 13 56 35.2 +0.9
LPM *e*pP **pP** 13 56 50.4 +1.3
LENM Lemitar 74.61 329 *e*P P 13 56 22.0 +1.3
LENM *e*PcP **PcP** 13 56 35.4 +1.0
X23A Hourglass Bar 74.62 329 ⇓P P 13 56 22.3 +1.6
baz=75
S31A Mullinville 74.66 336 ⇑P P 13 56 21.7 +1.0
baz=75
V26A Tequesquite Ra 74.66 332 ⇑P P 13 56 21.4 +0.5
baz=75
Y21A Point of Rocks 74.79 328 ⇑P P 13 56 23.8 +2.0
baz=75
W24A Lazy 6 Ranch, 74.82 330 ⇑P P 13 56 23.1 +1.2
baz=75
U27A Thompson Grove 74.83 333 ⇓P P 13 56 22.8 +1.0
baz=75
TUC Tucson 74.85 325 *e*P P 13 56 22.1 +0.1
TUC pmax pmax
comp=Z,26nm,1.9s
TUC MLR MLR
comp=Z,151nm,21.0s
TUC Tucson 74.85 325 *e*P P 13 56 22.1 +0.1
comp=Z,26nm,1.9s
TUC LR LR
comp=Z,151nm,21.0s
LAZ Ladron 74.88 329 *e*P P 13 56 23.7 +1.4
comp=Z,31nm,0.9s
LAZ *e*pP **pP** 13 56 52.3 +1.5
T29A Hugoton 74.90 334 ⇓P P 13 56 22.7 +0.6
baz=75,SNR=10
X22A Bernardo 74.92 329 ⇓P P 13 56 24.4 +2.1
baz=75
S30A Montezuma 75.03 335 ⇓P P 13 56 23.7 +0.9
baz=75
Y20A Horse Springs, 75.03 327 ⇑P P 13 56 24.8 +1.7
baz=75
V25A Rancho No Teng 75.04 331 ⇓P P 13 56 24.1 +1.0
baz=75
ANMO Albuquerque 75.05 329 *e*P P 13 56 24.5 +1.4
comp=Z,139nm,1.4s
ANMO *e*pP **pP** 13 56 52.7 +1.0
ANMO *es*P **sP** 13 57 06.7 +2.8
ANMO Albuquerque 75.05 329 P P 13 56 24.6 +1.4
comp=Z,46nm,1.0s,baz=150,slow=7.7,SNR=97
KSU1 Kansas State U 75.06 339 *e*P P 13 56 22.8 -0.1
comp=Z,80nm,0.8s
W23A Werner Place, 75.10 330 ⇓P P 13 56 25.1 +1.6
baz=75
ACCN Adirondack Com 75.14 357 *e*P P 13 56 23.3 +0.1
comp=Z,44nm,0.8s
U26A Atchley Ranch, 75.17 332 ⇓P P 13 56 24.6 +0.8
baz=76
T28A Walsh 75.17 334 ⇓P P 13 56 24.4 +0.7
baz=76
V24A Rampart Ranch, 75.21 331 ⇓P P 13 56 25.2 +1.1
baz=76
X21A Alamocita Cree 75.21 328 ⇑P P 13 56 26.1 +1.9
baz=76
S29A Ulysses 75.24 335 ⇓P P 13 56 25.3 +1.2
baz=76
W22A Albuquerque 75.33 329 ⇑P P 13 56 26.7 +1.9
baz=76
T27A Campo 75.35 333 ⇓P P 13 56 25.7 +0.9
baz=76
HNH Hanover 75.41 358 *e*P P 13 56 26.3 +1.5
comp=Z,112nm,0.8s
HNH *e*pP **pP** 13 56 54.1 +0.7
HNH *es*P sP 13 57 10.4 +4.9
U25A Circle Dot Ran 75.44 332 ⇓P P 13 56 26.5 +1.1
baz=76
S28A Manter 75.50 334 ⇓P P 13 56 26.3 +0.7
baz=76
R30A Dighton 75.53 336 ⇓P P 13 56 26.5 +0.8
baz=76
214A Organ Pipe Nat 75.58 323 ⇑P P 13 56 27.7 +1.6
baz=76,SNR=53
V23A Ortiz Mt. (NFS 75.61 330 ⇑P P 13 56 28.1 +1.7
baz=76
X20A Quemado 75.61 328 ⇓P P 13 56 28.2 +1.8
baz=76
W21A San Fidel 75.71 329 ⇑P P 13 56 28.8 +1.8
baz=76
MDV Middlebury 75.73 357 *e*P P 13 56 27.5 +0.9
NCB Newcomb 75.75 357 *e*P P 13 56 26.5 -0.2
comp=Z,54nm,0.9s
NCB *e*pP **pP** 13 56 55.4 0.0
NCB *es*P **sP** 13 57 06.4 -1.1
NCB LR LR
comp=Z,251nm,20.0s
T26A Comanche Natio 75.78 333 ⇑P P 13 56 28.5 +1.1
baz=76,SNR=27
U24A Moreno Valley 75.80 331 ⇓P P 13 56 29.3 +1.8
baz=76
LBNH Lisbon 75.94 358 *e*P P 13 56 27.4 -0.4
LBNH pmax pmax
comp=Z,112nm,0.9s
LBNH MLR MLR
comp=Z,354nm,19.0s
LBNH Lisbon 75.94 358 *e*P P 13 56 27.4 -0.4
comp=Z,112nm,0.9s
LBNH LR LR
comp=Z,354nm,19.0s
S27A Las Animas 75.96 333 ⇑P P 13 56 29.1 +0.8
baz=76
R29A Marienthal 75.97 335 ⇓P P 13 56 29.0 +0.8
baz=76,SNR=39
V22A San Miguel Ran 76.06 330 ⇓P P 13 56 31.2 +2.2
baz=76
T25A Trinidad 76.08 332 ⇑P P 13 56 30.8 +1.8
baz=76
W20A Ramah 76.10 328 ⇓P P 13 56 30.9 +1.7
baz=76
U23A El Rito 76.11 330 ⇑P P 13 56 31.1 +1.8
baz=76
S26A Kim 76.13 333 ⇑P P 13 56 30.7 +1.5
baz=76
R28A Tribune 76.14 335 ⇑P P 13 56 30.1 +0.9
baz=76
X18A Snowflake 76.27 327 ⇓P P 13 56 31.8 +1.6
baz=77
T24A Torres, Weston 76.28 332 ⇑P P 13 56 32.1 +1.9
baz=77
V21A Milan 76.29 329 ⇓P P 13 56 31.9 +1.7
baz=77,SNR=16
LONY Lake Ozonia 76.42 356 *e*P P 13 56 31.3 +0.8
comp=Z,80nm,0.9s
LONY LR LR
comp=Z,228nm,22.0s
U22A Llaves 76.43 330 ⇑P P 13 56 33.1 +2.0
baz=77,SNR=61
R27A Eads 76.45 334 ⇓P P 13 56 31.9 +0.9
baz=77
S25A Robets Cordova 76.54 332 ⇓P P 13 56 33.1 +1.5
baz=77
FRNY Flat Rock 76.58 357 *e*P P 13 56 31.5 +0.1
comp=Z,123nm,0.9s
FRNY *e*pP **pP** 13 57 00.5 +0.4
V20A Brimhall 76.64 328 ⇓P P 13 56 33.6 +1.3
baz=77
T23A Casias Ranch, 76.65 331 ⇑P P 13 56 33.9 +1.6
baz=77
W18A Petrified Fore 76.65 327 ⇓P P 13 56 33.8 +1.5
baz=77
SCIA State Center 76.70 342 *e*P P 13 56 32.5 +0.4
comp=Z,205nm,1.2s
SCIA *e*pP **pP** 13 57 00.9 +0.1
R26A Arlington 76.71 333 ⇓P P 13 56 33.6 +1.1
baz=77,SNR=8.2
Z14A Wintersburg 76.77 324 ⇓P P 13 56 34.1 +1.3
baz=77
MSNY Massena 76.81 356 *e*P P 13 56 32.1 -0.5
comp=Z,1μm,0.9s
MSNY *e*pP **pP** 13 57 01.8 +0.4
MSNY *es*P **sP** 13 57 13.1 -0.3
U21A Nageezi 76.82 329 ⇓P P 13 56 34.8 +1.6
baz=77
S24A Houchin Ranch, 76.83 332 ⇑P P 13 56 35.1 +1.7
baz=77,SNR=68
X16A Lo Mia Camp, P 76.88 326 ⇑P P 13 56 35.2 +1.6
baz=77
R25A Fountain Ranch 76.90 333 ⇓P P 13 56 34.6 +1.0
baz=77,SNR=5.4
JFWS Jewell Farm 76.93 345 *e*P P 13 56 33.5 +0.1
JFWS pmax pmax
comp=Z,115nm,0.8s
JFWS Jewell Farm 76.93 345 *e*P P 13 56 33.5 +0.1
comp=Z,115nm,0.8s
T22A Edith 76.99 330 ⇑P P 13 56 36.0 +1.8
baz=77,SNR=41
KSCO Kaye Shedlock' 77.03 334 ⇓P P 13 56 35.6 +1.4
baz=77
SDCO Great Sand Dun 77.04 332 *e*P P 13 56 35.8 +1.3
comp=Z,47nm,0.8s
SDCO *e*pP **pP** 13 57 03.9 +0.7
U20A Newcomb 77.15 329 ⇓P P 13 56 36.3 +1.3
baz=78
S23A Nye Farm, Mont 77.21 331 ⇑P P 13 56 37.0 +1.5
baz=78
T21A Navajo Lake 77.24 330 ⇓P P 13 56 37.1 +1.5
baz=78
Y14A Wickenburg 77.26 324 ⇓P P 13 56 37.0 +1.4
baz=78,SNR=27
Q26A Hugo 77.28 334 ⇑P P 13 56 37.1 +1.5
baz=78
R24A Sanders Place, 77.30 332 ⇑P P 13 56 37.8 +1.9
baz=78
GLA Glamis 77.48 322 *e*P P 13 56 38.2 +1.4
GLA *e* 13 56 47.6
GLA *e**PP **pP** 13 57 06.6 +1.1
GLA pmax pmax
comp=Z,299nm,2.0s
GLA Glamis 77.48 322 *e*P P 13 56 38.2 +1.4
comp=Z,299nm,2.0s
GLA *e*PcP **PcP** 13 56 47.6 +0.9
GLA *e*pP **pP** 13 57 06.6 +1.1
GLA Glamis 77.48 322 ⇑P P 13 56 38.4 +1.6
baz=78
P27A Ficken Ranch, 77.49 335 ⇑P P 13 56 38.1 +1.4
baz=78
R23A Moffat 77.55 332 ⇓P P 13 56 38.8 +1.4
baz=78
Q25A Bedland, Calha 77.55 333 ⇑P P 13 56 38.3 +1.0
baz=78,SNR=9.8
S22A 4UR Ranch, Cre 77.58 331 ⇑P P 13 56 39.0 +1.4
baz=78
BGNE Belgrade 77.65 338 ⇑P P 13 56 38.2 +0.7
baz=78,SNR=5.4
WUAZ Wupatki 77.74 326 *e*P P 13 56 39.8 +1.4
comp=Z,78nm,1.1s
WUAZ LR LR
comp=Z,223nm,22.0s
WUAZ Wupatki 77.74 326 ⇓P P 13 56 40.0 +1.7
baz=78,SNR=39
P26A Davis Ranch, A 77.77 334 ⇑P P 13 56 39.7 +1.3
baz=78
MVCO Mesa Verde 77.84 329 *e*P P 13 56 40.3 +1.3
comp=Z,81nm,0.9s
MVCO Mesa Verde 77.84 329 ⇓P P 13 56 40.3 +1.3
baz=78,SNR=64
DVTC Desert V Tower 77.84 321 ⇓P P 13 56 40.6 +1.7
baz=78,SNR=15
TSUM Tsumeb 77.84 105 *e*P P 13 56 39.9 +0.5
comp=Z,24nm,0.8s
TSUM *e*pP **pP** 13 57 07.8 -0.3
TSUM Tsumeb 77.84 105 P P 13 56 40.3 +0.9
comp=Z,19nm,0.8s,baz=238,slow=6.4,SNR=23
Y12C Blythe 77.87 323 ⇓P P 13 56 40.5 +1.6
baz=78
SWSC Sam W. Stewart 77.90 322 ⇑P P 13 56 40.8 +1.7
baz=78
S21A Coal Bank Pass 77.92 330 ⇑P P 13 56 40.8 +1.3
baz=78,SNR=22
Q24A Divide 77.94 332 ⇑P P 13 56 40.9 +1.3
baz=78,SNR=46
R22A Saguache, Gunn 77.96 331 ⇑P P 13 56 41.1 +1.4
baz=78,SNR=28
O27A Beecher Island 78.01 335 ⇓P P 13 56 41.1 +1.5
baz=78,SNR=18
P25A Willow Gulch B 78.04 333 ⇓P P 13 56 41.6 +1.6
baz=78
PDMCI Parker Dam,Lak 78.11 324 ⇓P P 13 56 41.4 +1.2
baz=78,SNR=14
BAR Barrett 78.16 321 *e*P P 13 56 40.8 +0.2
comp=Z,78nm,0.9s
BAR *e*pP **pP** 13 57 10.6 +1.2
Q23A Hartsel 78.17 332 ⇓P P 13 56 42.0 +1.2
baz=78
MONP Monument Peak 78.19 321 ⇓P P 13 56 42.7 +1.8
baz=78
BC3 Big Chuckawall 78.28 322 ⇓P P 13 56 42.8 +1.5
baz=79,SNR=48
S20A Disappointment 78.30 330 ⇑P P 13 56 43.2 +1.7
baz=79,SNR=44
P24A Kohler Place, 78.33 333 ⇓P P 13 56 43.0 +1.5
baz=79
O26A Horse Wrangler 78.36 334 ⇓P P 13 56 43.1 +1.5
baz=79,SNR=17
R21A Cimarron 78.41 331 ⇑P P 13 56 43.5 +1.5
baz=79,SNR=19
IRM Iron Mountain 78.52 323 ⇑P P 13 56 44.0 +1.5
baz=79
OGNE Ogallala 78.52 336 *e*P P 13 56 40.2 -2.2
comp=Z,22nm,0.6s
OGNE Ogallala 78.52 336 ⇓P P 13 56 43.3 +0.9
baz=79
O25A Wiggins 78.55 334 ⇓P P 13 56 44.2 +1.6
baz=79,SNR=7.7
109C Camp Elliot, M 78.56 321 ⇓P P 13 56 44.3 +1.6
baz=79
Q22A Crested Butte, 78.56 331 ⇓P P 13 56 44.5 +1.5
baz=79,SNR=30
P23A Jefferson 78.57 332 ⇑P P 13 56 44.6 +1.5
baz=79,SNR=13
N27A Anderson Farm, 78.57 335 ⇑P P 13 56 44.0 +1.3
baz=79,SNR=5.8
R20A Redvale 78.61 330 ⇑P P 13 56 44.6 +1.5
baz=79,SNR=39
W13A Hualapai Mount 78.62 324 ⇑P P 13 56 44.8 +1.5
baz=79,SNR=41
PV01 Paradox Valley 78.64 330 *e*P P 13 56 44.0 +0.7
PV01 *e*pP **pP** 13 57 13.2 +1.1
NEE2 Needles Airpor 78.72 324 ⇑P P 13 56 44.9 +1.3
baz=79
PFO Pinyon Flat Ob 78.77 322 *e*P P 13 56 44.5 +0.5
comp=Z,63nm,1.1s
PFO Pinyon Flat Ob 78.77 322 ⇓P P 13 56 45.8 +1.8
baz=79,SNR=26
Q21A Lamborn Mesa, 78.81 331 ⇓P P 13 56 45.7 +1.5
baz=79,SNR=7.2
BELC Belle Mtn. Jos 78.83 322 ⇓P P 13 56 45.8 +1.5
baz=79,SNR=19
N26A Koester Ranch, 78.84 335 ⇑P P 13 56 45.7 +1.5
baz=79,SNR=7.1
ISCO Idaho Springs 78.85 333 *e*P P 13 56 45.7 +1.2
ISCO pmax pmax
comp=Z,52nm,0.9s
ISCO Idaho Springs 78.85 333 *e*P P 13 56 45.7 +1.2
comp=Z,52nm,0.9s
ISCO Idaho Springs 78.85 333 ⇑P P 13 56 45.8 +1.3
baz=79,SNR=38
SMCO Snowmass 78.86 331 *e*P P 13 56 46.2 +1.5
comp=Z,105nm,0.9s
S18A Hurst Farm, Bl 78.90 328 ⇓P P 13 56 46.6 +1.8
baz=79
O24A Longmont 78.92 333 ⇓P P 13 56 45.9 +1.2
baz=79
U15A North Rim 78.92 326 ⇓P P 13 56 46.6 +1.7
baz=79,SNR=71
PV04 Paradox Valley 79.00 330 *e*P P 13 56 45.7 +0.4
DRV Dumont d'Urvil 79.03 192 S S 14 06 26.0 -8.2
DRV SP **SPn** **14 07 11.0 -4.4**
DRV SS SS 14 11 20.0 -21
DRV L L 14 18 00.0
DRV R 14 23 00.0
P22A Eagle 79.13 332 ⇓P P 13 56 47.4 +1.4
baz=80,SNR=19
N25A Grover 79.14 334 ⇑P P 13 56 47.4 +1.4
baz=80
MURC Murrieta 79.15 321 ⇑P P 13 56 47.6 +1.6
baz=80,SNR=18
M27A Reverse DX Ran 79.16 336 ⇑P P 13 56 47.2 +1.3
baz=80,SNR=11
LDFC Landfair 79.22 324 *e*P P 13 56 47.3 +0.9
comp=Z,63nm,0.9s
LDFC *e*PcP **PcP** 13 56 55.3 +1.0
Q20A Ridgley Place, 79.22 330 ⇑P P 13 56 47.4 +1.0
baz=80,SNR=7.7
BOSA Boshof 79.23 117 *e*P P 13 56 46.7 -0.2
comp=Z,48nm,0.9s
BOSA *e*PcP **PcP** 13 56 54.0 -0.7
BOSA Boshof 79.23 117 P P 13 56 47.2 +0.4
comp=Z,40nm,0.9s,baz=246,slow=4.4,SNR=38
BOSA pP **pP** 13 57 14.8 -0.8
comp=Z,35nm,0.9s,baz=242,slow=6.3,SNR=6.4
BOSA LR LR 14 26 38.6
comp=Z,90nm,20.2s,baz=173,slow=32
GMRC Granite Mounta 79.26 323 ⇓P P 13 56 48.3 +1.6
baz=80,SNR=25
ECSD EROS Data Cent 79.32 340 *e*P P 13 56 46.9 +0.3
comp=Z,180nm,0.9s
P21A Newcastle 79.35 331 ⇓P P 13 56 48.7 +1.6
baz=80,SNR=30
M26A McRoberts Ranc 79.37 335 ⇑P P 13 56 48.4 +1.3
baz=80
SCI San Clemente I 79.41 320 ⇓P P 13 56 49.1 +1.8
baz=80
BBRC Big Bear Solar 79.52 322 ⇓P P 13 56 50.1 +2.0
baz=80,SNR=5.0
O22A Kremmling 79.53 332 ⇓P P 13 56 49.3 +1.1
baz=80,SNR=54
HEC Hector,Ludlow 79.65 323 ⇑P P 13 56 50.4 +1.7
baz=80,SNR=18
CIS Catalina Islan 79.65 320 ⇑P P 13 56 50.5 +1.8
baz=80
M25A Palm-Egli Farm 79.67 334 ⇑P P 13 56 50.0 +1.2
baz=80,SNR=7.2
SPMN St. Paul 79.71 344 ⇑P P 13 56 48.4 -0.3
baz=80
P20A De Beque 79.72 331 ⇓P P 13 56 50.6 +1.5
baz=80,SNR=17
COWI Conover 79.73 346 *e*P P 13 56 46.6 -2.2
comp=Z,66nm,1.0s
FMP Fort Macarthur 79.83 321 ⇓P P 13 56 51.4 +1.8
baz=80
BFSC Mount Baldy Ra 79.89 321 ⇓P P 13 56 51.5 +1.4
baz=80,SNR=28
TUQ Turquoise Moun 79.91 323 ⇓P P 13 56 51.8 +1.6
baz=80,SNR=19
N23A Red Feather La 79.92 333 ⇓P P 13 56 51.4 +1.2
baz=80,SNR=15
O21A Pagoda 79.94 332 ⇑P P 13 56 52.0 +1.6
baz=80,SNR=16
M24A Cheyenne 79.99 334 ⇓P P 13 56 52.0 +1.5
baz=80,SNR=28
RRX Edison Barstow 80.03 322 ⇑P P 13 56 52.6 +1.9
baz=80
N22A Wattenberg Ran 80.04 333 ⇑P P 13 56 52.5 +1.6
baz=80,SNR=38
P19A Cripple Cowboy 80.08 330 ⇓P P 13 56 52.5 +1.4
baz=80,SNR=91
MWC Mount Wilson 80.09 321 *e*P P 13 56 51.6 +0.4
MWC pmax pmax
comp=Z,78nm,0.9s
MWC Mount Wilson 80.09 321 *e*P P 13 56 51.6 +0.4
comp=Z,78nm,0.9s
PASC Pasadena Art C 80.11 321 *e*P P 13 56 50.9 -0.2
comp=Z,96nm,1.1s
K27A Flueckinger Fa 80.15 336 ⇑P P 13 56 52.5 +1.3
baz=80
O20A White River Ci 80.19 331 ⇓P P 13 56 52.7 +1.1
baz=80,SNR=16
DECC Green Verdugo 80.25 321 ⇓P P 13 56 53.6 +1.7
baz=81
GSC Goldstone 80.26 323 *e*P P 13 56 53.6 +1.6
GSC pmax pmax
comp=Z,80nm,1.4s
GSC Goldstone 80.26 323 *e*P P 13 56 53.6 +1.6
comp=Z,80nm,1.4s
GSC Goldstone 80.26 323 ⇓P P 13 56 53.5 +1.6
baz=81,SNR=13
L25A Engebretsen Ra 80.27 335 ⇓P P 13 56 53.5 +1.5
baz=81,SNR=7.3
M23A Laramie 80.33 333 ⇑P P 13 56 53.5 +1.2
baz=81,SNR=25
CCUT Cedar City 80.33 326 *e*P P 13 56 53.7 +1.3
comp=Z,70nm,0.9s
N21A Black Mountain 80.42 332 ⇑P P 13 56 54.3 +1.4
baz=81,SNR=22
Q16A Castle Valley 80.43 328 ⇓P P 13 56 54.2 +1.2
baz=81,SNR=41
SHOC Shoshone 80.45 323 ⇑P P 13 56 54.0 +1.1
baz=81
K26A Motz Farm, Whi 80.47 336 ⇓P P 13 56 53.9 +1.0
baz=81,SNR=8.9
L24A Wheatland 80.53 334 ⇑P P 13 56 54.5 +1.2
baz=81,SNR=6.9
BLG Laguna Peak 80.54 320 ⇓P P 13 56 54.8 +1.4
baz=81
EDW2 Edwards Air Fo 80.55 322 ⇓P P 13 56 54.7 +1.2
baz=81,SNR=28
MVU Marysvale 80.56 327 *e*P P 13 56 54.7 +1.0
M22A Cedar Creek Ra 80.61 333 ⇑P P 13 56 55.0 +1.1
baz=81,SNR=18
P18A Preston Nutter 80.61 329 ⇓P P 13 56 55.4 +1.4
baz=81,SNR=72
K25A Mack Ranch, Ha 80.64 335 ⇓P P 13 56 55.4 +1.5
baz=81,SNR=7.0
BRSD Miller 80.65 339 ⇓P P 13 56 53.8 +0.1
baz=81,SNR=11
O19A Miners Draw (B 80.69 331 ⇓P P 13 56 55.3 +1.0
baz=81,SNR=52
P17A Butcher Ranch, 80.70 329 ⇓P P 13 56 55.2 +0.9
baz=81,SNR=16
OSI Osito Adit 80.74 321 *e*P P 13 56 54.0 -0.6
comp=Z,97nm,0.9s
OSI Osito Adit 80.74 321 ⇑P P 13 56 56.0 +1.4
baz=81,SNR=7.8
BSC Santa Cruz Isl 80.77 320 ⇓P P 13 56 56.3 +1.7
baz=81,SNR=6.3
N20A Spence Gulch, 80.79 331 ⇓P P 13 56 55.8 +1.0
baz=81,SNR=14
LRMC Laurel Mountai 80.85 322 ⇑P P 13 56 56.4 +1.2
baz=81,SNR=7.5
K24A Anderson Ranch 81.07 335 ⇓P P 13 56 57.8 +1.6
baz=81,SNR=31
M21A Separation Pea 81.08 332 ⇑P P 13 56 57.4 +1.0
baz=81,SNR=34
L22A Ellis Ranch, M 81.08 333 ⇑P P 13 56 58.0 +1.6
baz=81,SNR=25
SBC Santa Barbara 81.14 320 ⇑P P 13 56 58.1 +1.6
baz=81
ARVC Arvin 81.19 321 ⇑P P 13 56 58.3 +1.5
baz=82
FURC Furnace Creek, 81.19 323 ⇑P P 13 56 58.4 +1.6
baz=82,SNR=14
MPMC Manual Prospec 81.20 323 ⇑P P 13 56 58.2 +1.1
baz=82,SNR=21
M20A Sweetwater, Wa 81.31 332 ⇑P P 13 56 58.6 +1.0
baz=82,SNR=22
LBTB Lobatse 81.33 114 *e*P P 13 56 58.5 +0.3
LBTB Lobatse 81.33 114 P P 13 56 58.4 +0.3
comp=Z,56nm,0.5s,baz=256,slow=6.2,SNR=126
LBTB pP **pP** 13 57 26.3 -0.8
comp=Z,31nm,0.6s,baz=259,slow=6.2,SNR=7.2
L21A Rawlins 81.39 333 ⇑P P 13 56 58.8 +0.8

baz=82,SNR=92
K23A Bowen Ranch, D 81.40 334 ⇑P **P** 13 56 59.1 +1.2
baz=82,SNR=31
ISA Isabella 81.41 322 *e*P **P** 13 56 58.6 +0.5
ISA pmax pmax
comp=Z,55nm,0.9s
ISA Isabella 81.41 322 *e*P **P** 13 56 58.6 +0.5
comp=Z,55nm,0.9s
ISA Isabella 81.41 322 ⇑P **P** 13 56 59.8 +1.7
baz=82,SNR=30
MPU Maple Canyon 81.53 329 *e*P **P** 13 56 57.6 -1.2
comp=Z,58nm,1.1s
PKM Peak Mountain 81.54 320 ⇓P **P** 13 57 00.6 +1.6
baz=82,SNR=20
J24A Dixon Ranch, L 81.55 335 ⇑P **P** 13 57 00.4 +1.7
baz=82,SNR=54
K22A Casper 81.65 333 ⇓P **P** 13 57 00.4 +1.1
baz=82,SNR=27
TOA0 Torodi Ar. Sit 81.69 69 *e*P **P** 13 56 59.7 -0.2
TORD Torodi Ar. Bea 81.69 69 P **P** 13 57 00.1 +0.2
comp=Z,70nm,0.8s,baz=282,slow=7.0,SNR=307
TORD pP **pP** 13 57 28.4 -0.5
comp=Z,53nm,0.9s,baz=247,slow=4.7,SNR=8.8
TORD PKKPbc **PKKPbc** 14 15 28.7 -1.9
comp=Z,1.6nm,1.0s,baz=66,slow=1.5,SNR=4.9
TORD LR LR 14 28 55.0
comp=Z,225nm,20.0s,baz=120,slow=32
DAU Daniels Canyon 81.69 329 *e*P **P** 13 57 00.9 +1.1
DAU Daniels Canyon 81.69 329 *e*P **P** 13 57 00.9 +1.1
M19A Rock Springs 81.72 331 ⇓P **P** 13 57 00.5 +0.7
baz=82,SNR=14
CWC Cottonwood Cre 81.79 322 ⇓P **P** 13 57 01.6 +1.4
baz=82,SNR=17
L20A Wamsutter 81.81 332 ⇑P **P** 13 57 01.1 +0.9
baz=82,SNR=23
GRAC Grapevine Rang 81.86 323 ⇑P **P** 13 57 02.0 +1.7
baz=82,SNR=9.1
VES Vestal, Richgr 81.86 321 ⇓P **P** 13 57 01.7 +1.3
baz=82,SNR=13
K21A Alcova 81.91 333 ⇑P **P** 13 57 01.9 +1.2
baz=82,SNR=77
J23A Dilts Ranch, B 81.93 334 ⇓P **P** 13 57 01.6 +0.9
baz=82
JLU Jordanelle 81.94 329 *e*P **P** 13 57 01.8 +0.8
comp=Z,29nm,0.9s
SMMC Simmler 81.95 321 ⇓P **P** 13 57 02.7 +1.8
baz=82,SNR=6.4
EYMN Ely 81.98 345 *e*P **P** 13 57 00.2 -0.5
comp=Z,70nm,0.9s
I24A Kuemmerle Ranc 81.99 335 ⇓P **P** 13 57 02.1 +1.1
baz=82,SNR=36
CASY Casey 82.00 180 *e*P **P** 13 57 00.7 -0.1
comp=Z,83nm,0.9s
RSSD Black Hills 82.02 336 *e*P **P** 13 57 01.6 +0.4
RSSD pmax pmax
comp=Z,80nm,0.9s
RSSD Black Hills 82.02 336 *e*P **P** 13 57 01.6 +0.4
comp=Z,80nm,0.9s
R11A Troy Canyon, C 82.03 325 ⇑P **P** 13 57 02.9 +1.5
baz=82,SNR=84
M18A Lyman 82.03 331 ⇑P **P** 13 57 01.5 +0.2
baz=82,SNR=9.5
DUG Dugway 82.21 328 *e*P **P** 13 57 03.3 +1.0
DUG pmax pmax
comp=Z,237nm,1.9s
DUG Dugway 82.21 328 *e*P **P** 13 57 03.2 +1.0
comp=Z,237nm,1.9s
DUG Dugway 82.21 328 ⇑P **P** 13 57 03.1 +0.8
baz=82,SNR=31
J22A Midwest 82.28 334 ⇑P **P** 13 57 03.0 +0.4
baz=83,SNR=58
L19A Farson 82.30 331 ⇑P **P** 13 57 03.8 +1.1
baz=83,SNR=40
RCTC Rector, Farmer 82.30 322 ⇑P **P** 13 57 03.4 +0.8
baz=83
M17A Scullys Gap (B 82.32 330 ⇑P **P** 13 57 03.0 +0.2
baz=83,SNR=9.5
TIN Tinemaha 82.34 323 ⇑P **P** 13 57 04.7 +1.8
baz=83,SNR=6.2
K20A Yellowstone Ra 82.36 332 ⇑P **P** 13 57 03.4 +0.4
baz=83,SNR=31
I23A Meade Ranch, G 82.38 335 ⇓P **P** 13 57 03.6 +0.5
baz=83
L18A Fontenelle, Gr 82.43 331 ⇓P **P** 13 57 04.0 +0.6
baz=83,SNR=19
J21A Lysite 82.59 333 ⇑P **P** 13 57 04.8 +0.6
baz=83,SNR=24
I22A 9 Mile Ranch, 82.70 334 ⇓P **P** 13 57 05.3 +0.6
baz=83,SNR=70
K19A Absolon Red Bu 82.70 332 ⇓P **P** 13 57 05.1 +0.4
baz=83,SNR=46
MTUM Tungsten Hills 82.74 323 *e*P **P** 13 57 06.4 +1.3
H24A Dirks Ranch, A 82.74 336 ⇓P **P** 13 57 05.4 +0.6
baz=83,SNR=73
HWUT Hardware Ranch 82.81 330 *e*P **P** 13 57 05.2 -0.2
comp=Z,53nm,0.9s
J20A Shoshoni 82.84 333 ⇓P **P** 13 57 06.6 +1.2
baz=83,SNR=59
H23A Clabaugh Cattl 82.88 335 ⇓P **P** 13 57 05.9 +0.3
baz=83
I21A Big Trails, Te 82.93 334 ⇑P **P** 13 57 06.2 +0.2
baz=83,SNR=54
BW06 Boulder Array 82.93 332 *e*P **P** 13 57 04.7 -1.3
comp=Z,27nm,0.9s
PDAR Pinedale Array 82.93 332 P **P** 13 57 06.2 +0.2
comp=Z,18nm,0.8s,baz=141,slow=5.4,SNR=99
PDAR pP **pP** 13 57 35.3 +0.2
comp=Z,11nm,0.8s,baz=131,slow=6.7,SNR=5.7
PDAR PKKPbc **PKKPbc** 14 15 28.0 -1.9
comp=Z,1.9nm,0.8s,baz=135,slow=0.8,SNR=10.0
PDAR PKPPKP P'P'df 14 23 37.2 +5.5
comp=Z,0.6nm,0.8s,baz=101,slow=3.0,SNR=4.1
K18A Toltan Ranch, 83.02 331 ⇓P **P** 13 57 07.5 +1.0
baz=83,SNR=50
MLAC Mammoth Lakes 83.09 323 ⇑P **P** 13 57 08.6 +1.6
baz=83,SNR=14
J19A Crowheart 83.15 332 ⇓P **P** 13 57 07.5 +0.5
baz=84,SNR=32
G24A Alzada 83.20 336 ⇓P **P** 13 57 07.6 +0.4
baz=84,SNR=8.1
H22A Clearmont 83.25 335 ⇑P **P** 13 57 07.9 +0.4
baz=84,SNR=14
AGMN Agassiz Nation 83.33 343 *e*P **P** 13 57 07.1 -0.5
comp=Z,68nm,0.8s
AGMN *e*pP **pP** 13 57 36.1 -0.7
AGMN *es*P **sP** 13 57 50.3 +1.5
I20A Worland 83.37 333 ⇓P **P** 13 57 08.7 +0.6
baz=84,SNR=49
G23A Biddle 83.43 335 ⇓P **P** 13 57 08.6 +0.2
baz=84,SNR=40
NVAR Mina Array Bea 83.43 324 P **P** 13 57 09.9 +1.2
comp=Z,33nm,0.9s,baz=156,slow=6.1,SNR=151
NVAR pP **pP** 13 57 38.0 +0.2
comp=Z,9.1nm,0.9s,baz=137,slow=4.9,SNR=2.8
NVAR PKKPbc **PKKPbc** 14 15 26.7 -1.6
comp=Z,1.9nm,0.7s,baz=314,slow=2.0,SNR=10
NVAR PKPPKP P'P'df 14 23 38.4 +7.1
comp=Z,1.6nm,0.9s,baz=303,slow=4.9,SNR=5.8
HVU Hansel Valley 83.47 329 *e*P **P** 13 57 09.3 +0.5
HVU *e**PP **pP** 13 57 38.0 +0.2
HVU pmax pmax
comp=Z,53nm,0.8s
HVU Hansel Valley 83.47 329 *e*P **P** 13 57 09.3 +0.5
comp=Z,53nm,0.8s
HVU *ep*P **pP** 13 57 38.0 +0.2
K17A Gardner Place, 83.48 331 ⇑P **P** 13 57 09.2 +0.3
baz=84,SNR=5.6
J18A Kendall Valley 83.49 332 ⇑P **P** 13 57 09.3 +0.4
baz=84,SNR=59
H21A Big Horn, Sher 83.53 334 ⇑P **P** 13 57 09.1 +0.1
baz=84,SNR=16
AHID Auburn Hatcher 83.56 331 *e*P **P** 13 57 09.3 0.0
comp=Z,18nm,0.6s
F24A Ekalaka 83.66 336 ⇑P **P** 13 57 09.9 +0.3
baz=84,SNR=12
ELK Elko 83.75 327 *e*P **P** 13 57 11.0 +0.7
comp=Z,514nm,0.9s
G22A Birney 83.77 335 ⇓P **P** 13 57 10.5 +0.4
baz=84,SNR=19
H20A Greybull 83.77 333 ⇑P **P** 13 57 10.4 +0.3
baz=84,SNR=46
I19A Meeteetse 83.77 333 ⇑P **P** 13 57 10.8 +0.5
baz=84,SNR=16
SAO San Andreas Ge 83.81 321 *e*P **P** 13 57 12.2 +1.7
SAO San Andreas Ge 83.81 321 *e*P **P** 13 57 12.2 +1.7
I18A Diamond G Ranc 83.82 332 ⇓P **P** 13 57 11.3 +0.7
baz=84,SNR=53
K16A Soda Springs 83.82 330 ⇓P **P** 13 57 11.6 +1.0
baz=84,SNR=36
L14A Malta 83.88 329 ⇓P **P** 13 57 11.1 +0.2
baz=84,SNR=44
F23A Volborg 83.89 336 ⇑P **P** 13 57 11.0 +0.3
baz=84,SNR=50
J17A Brown Place, J 83.90 331 ⇑P **P** 13 57 11.6 +0.7
baz=84,SNR=28
MDND Maddock 83.93 340 ⇑P **P** 13 57 11.4 +0.6
baz=84,SNR=18
SNOW Snow King Moun 84.00 331 *e*P **P** 13 57 12.3 +0.8
comp=Z,92nm,1.6s
LOHW Long Hollow 84.06 331 *e*P **P** 13 57 12.3 +0.5
comp=Z,21nm,0.8s
TPAW Teton Pass 84.10 331 *e*P **P** 13 57 12.6 +0.6
comp=Z,41nm,1.1s
G21A Lodge Grass 84.11 334 ⇑P **P** 13 57 12.4 +0.5
baz=84,SNR=17
RRI2 Red Ridge 84.14 331 *e*P **P** 13 57 12.9 +0.7
CMB Columbia Colle 84.20 322 *e*P **P** 13 57 13.4 +1.0
CMB pmax pmax
comp=Z,18nm,0.8s
CMB Columbia Colle 84.20 322 *e*P **P** 13 57 13.4 +1.0
comp=Z,18nm,0.8s
MOOW Moose Ponds 84.23 331 *e*P **P** 13 57 13.0 +0.3
comp=Z,72nm,1.9s
F22A Rosebud 84.24 335 ⇑P **P** 13 57 12.8 +0.3
baz=85,SNR=31
E24A Baker 84.24 337 ⇓P **P** 13 57 13.4 +1.0
baz=85,SNR=18
DCID1 Drake Creek 84.28 331 *e*P **P** 13 57 14.1 +1.2
comp=Z,65nm,1.1s
H19A Powell 84.30 333 ⇓P **P** 13 57 13.4 +0.5
baz=85,SNR=16
I17A Pilgrim Ck. 84.31 332 ⇑P **P** 13 57 14.0 +1.0
baz=85,SNR=16
IMW Indian Meadow 84.43 331 *e*P **P** 13 57 14.3 +0.6
BMN Battle Mountai 84.44 326 *e*P **P** 13 57 13.5 -0.2
BMN pmax pmax
comp=Z,14nm,1.0s
BMN Battle Mountai 84.44 326 *e*P **P** 13 57 13.5 -0.2
comp=Z,14nm,1.0s
G20A Bridger 84.47 334 ⇑P **P** 13 57 13.9 +0.2
baz=85,SNR=74
E23A Ismay 84.53 336 ⇓P **P** 13 57 14.1 +0.3
baz=85,SNR=22
H18A Shoshone NF, C 84.57 333 ⇑P **P** 13 57 14.9 +0.5
baz=85,SNR=67
F21A Absaloka Mine, 84.58 335 ⇓P **P** 13 57 14.7 +0.5
baz=85,SNR=5.2
I16A Newdale 84.64 331 ⇓P **P** 13 57 15.3 +0.7
baz=85,SNR=23
J15A Blackfoot 84.64 330 ⇑P **P** 13 57 15.5 +0.9
baz=85,SNR=38
E22A Miles City 84.70 336 ⇓P **P** 13 57 14.9 +0.2
baz=85
H17A Grant Village 84.70 332 ⇑P **P** 13 57 16.4 +1.3
baz=85,SNR=16
D24A Glendive 84.73 337 ⇑P **P** 13 57 15.7 +0.8
baz=85,SNR=11
RLMT Red Lodge 84.79 333 *e*P **P** 13 57 15.6 +0.1
comp=Z,34nm,0.7s
WCN Washoe City 84.83 323 *e*P **P** 13 57 15.1 -0.6
WCN pmax pmax
comp=Z,38nm,1.6s
WCN Washoe City 84.83 323 *e*P **P** 13 57 15.1 -0.6
comp=Z,36nm,1.6s
F20A Billings 84.94 334 ⇓P **P** 13 57 16.3 +0.3
baz=85,SNR=8.6
J14A Carey 85.04 330 ⇓P **P** 13 57 17.9 +1.2
baz=85,SNR=19
G18A Lazy EL Ranch, 85.07 333 ⇓P **P** 13 57 17.1 +0.4
baz=85,SNR=64
D23A Lindsay 85.08 337 ⇓P **P** 13 57 17.6 +1.0
baz=85,SNR=56
YMR Madison River 85.08 332 *e*P **P** 13 57 17.3 +0.4
comp=Z,129nm,1.0s
C24A Savage 85.13 337 ⇑P **P** 13 57 17.8 +0.9
baz=86,SNR=47
ULM Lac du Bonnet 85.14 343 *e*P **P** 13 57 16.6 -0.1
comp=Z,76nm,0.9s
ULM Lac du Bonnet 85.14 343 P **P** 13 57 16.5 -0.2
comp=Z,64nm,0.8s,baz=162,slow=4.8,SNR=61
ULM pP **pP** 13 57 45.3 -0.7
comp=Z,38nm,0.9s,baz=168,slow=5.2,SNR=5.8
ULM PKKPbc **PKKPbc** 14 15 22.1 -2.6
comp=Z,3.9nm,0.5s,baz=352,slow=2.8,SNR=5.0
I15A Monteview 85.15 331 ⇑P **P** 13 57 18.5 +1.3
baz=86,SNR=37
E21A Keefer Ranch, 85.18 335 ⇓P **P** 13 57 17.7 +0.6
baz=86,SNR=8.7
H16A Russell Place, 85.22 332 ⇓P **P** 13 57 18.6 +1.0
baz=86,SNR=14
F19A Roth Farm, Mol 85.28 334 ⇑P **P** 13 57 18.2 +0.4
baz=86,SNR=16
J13A Cove Ranch, Pi 85.39 329 ⇓P **P** 13 57 19.4 +1.0
baz=86,SNR=110
D22A Cohagen 85.39 336 ⇓P **P** 13 57 18.7 +0.6
baz=86,SNR=26
QLMT Earthquake Lak 85.40 332 *e*P **P** 13 57 19.8 +1.3
I14A Mackay 85.50 330 ⇑P **P** 13 57 20.3 +1.3
baz=86,SNR=50
E20A Meyer Farm, Mu 85.53 334 ⇑P **P** 13 57 19.6 +0.7
baz=86,SNR=57
G17A Pierce Place, 85.53 332 ⇓P **P** 13 57 19.8 +0.8
baz=86,SNR=8.3
BEKR Beckworth 85.56 323 *e*P **P** 13 57 18.9 -0.4
comp=Z,25nm,1.1s
D21A La Casta Ranch 85.60 335 ⇑P **P** 13 57 20.0 +0.7
baz=86,SNR=16
C23A Lambert 85.62 337 ⇑P **P** 13 57 20.0 +0.8
baz=86,SNR=31
F18A Big Timber 85.62 333 ⇑P **P** 13 57 19.8 +0.4
baz=86,SNR=65
HLID Hailey 85.62 329 *e*P **P** 13 57 20.0 +0.5
comp=Z,64nm,1.0s
HLID Hailey 85.62 329 ⇓P **P** 13 57 20.7 +1.1
baz=86,SNR=86
H15A Lima 85.72 331 ⇑P **P** 13 57 21.3 +1.2
baz=86,SNR=34
E19A Rath Farm, Rou 85.74 334 ⇓P **P** 13 57 20.4 +0.5
baz=86,SNR=140
OHCM Honcut 85.74 322 *e*P **P** 13 57 21.1 +1.1
I13A Wildhorse Cree 85.78 330 ⇓P **P** 13 57 21.6 +1.2
baz=86,SNR=136
C22A Vida 85.80 336 ⇓P **P** 13 57 20.4 +0.3
baz=86,SNR=16
DGMT Dagmar 85.88 338 *e*P **P** 13 57 21.4 +0.9
comp=Z,187nm,1.0s
DGMT Dagmar 85.88 338 ⇓P **P** 13 57 21.4 +0.9
baz=86,SNR=18
G16A Moss Hill, Enn 85.88 332 ⇑P **P** 13 57 21.2 +0.4
baz=86,SNR=17
MCMT McKenzie Canyo 85.98 331 P **P** 13 57 22.6 +1.3
F17A Fitzpatrick Pl 85.98 333 ⇓P **P** 13 57 22.0 +0.7
baz=86,SNR=30
H14A Leadore 86.03 330 ⇓P **P** 13 57 22.7 +1.1
baz=86,SNR=62
D20A Manuel Ranch, 86.03 335 ⇑P **P** 13 57 21.8 +0.4
baz=86,SNR=109
I12A Atlanta 86.12 329 ⇓P **P** 13 57 23.0 +0.9
baz=86
B23A Brockton 86.13 337 ⇑P **P** 13 57 22.3 +0.5
baz=86,SNR=18
MFID Camas Ranch 86.13 328 *e*P **P** 13 57 22.8 +0.8
comp=Z,139nm,1.8s
MFID Camas Ranch 86.13 328 ⇑P **P** 13 57 22.7 +0.8
baz=86,SNR=32
BOZ Bozeman (W) 86.15 332 *e*P **P** 13 57 20.6 -1.5
BOZ pmax pmax
comp=Z,19nm,0.9s
BOZ Bozeman (W) 86.15 332 *e*P **P** 13 57 20.6 -1.5
comp=Z,19nm,0.9s
A24A Westby 86.21 338 ⇑P **P** 13 57 22.9 +0.8
baz=87,SNR=16
E18A Harlowton 86.25 333 ⇑P **P** 13 57 23.0 +0.5
baz=87,SNR=21
F16A Kennard Place, 86.27 332 ⇑P **P** 13 57 23.1 +0.5
baz=87,SNR=12
C21A Desert Coulee 86.29 336 ⇑P **P** 13 57 22.9 +0.3
baz=87,SNR=31
DLMT Dillon 86.31 331 *e*P **P** 13 57 23.8 +1.0
comp=Z,96nm,1.4s
B22A Reddig Ranch S 86.32 337 ⇓P **P** 13 57 23.4 +0.7
baz=87,SNR=15
H13A Challis 86.36 330 ⇓P **P** 13 57 24.2 +1.0
baz=87,SNR=179
D19A Cripps Ranch, 86.37 334 ⇑P **P** 13 57 23.2 +0.2
baz=87,SNR=44
RPZ Rata Peaks 86.41 219 P **P** 13 57 25.3 +1.8
comp=Z,66nm,0.9s,baz=106,slow=3.9,SNR=8.4
RPZ LR LR 14 26 57.7
comp=Z,316nm,19.3s,baz=320,slow=29
C20A Veseth Ranch, 86.51 335 ⇑P **P** 13 57 23.8 +0.1
baz=87,SNR=52
E17A Martinsdale 86.52 333 ⇑P **P** 13 57 24.5 +0.6
baz=87,SNR=35
A23A Redstone 86.53 338 ⇑P **P** 13 57 24.3 +0.6
baz=87
SCHQ Schefferville 86.55 2 P **P** 13 57 23.7 +0.1
comp=Z,98nm,1.0s,baz=178,slow=3.6,SNR=86
SCHQ pP **pP** 13 57 52.7 -0.2
comp=Z,21nm,1.0s,baz=180,slow=6.4,SNR=3.0
SCHQ PKKPbc **PKKPbc** 14 15 19.4 -2.2
comp=Z,2.1nm,0.7s,baz=196,slow=2.8,SNR=3.6
H12A Diamond D Ranc 86.60 329 ⇑P **P** 13 57 25.1 +0.7
baz=87,SNR=42
LRM Limekiln Ridge 86.63 332 *e*P **P** 13 57 25.5 +0.9
F15A Butte 86.66 332 ⇑P **P** 13 57 25.4 +0.8
baz=87,SNR=70
WVOR Wild Horse Val 86.66 326 P **P** 13 57 25.5 +0.8
WVOR Wild Horse Val 86.66 326 P **P** 13 57 25.5 +0.8
D18A Linhart Farms, 86.73 334 ⇑P **P** 13 57 25.3 +0.5
baz=87,SNR=43
B21A Ellsworth Farm 86.78 336 ⇓P **P** 13 57 25.4 +0.5
baz=87,SNR=74
A22A Carney Farms, 86.89 337 ⇓P **P** 13 57 26.0 +0.5
baz=87,SNR=88
E16A East Helena 86.90 332 ⇑P **P** 13 57 26.5 +0.8
baz=87,SNR=40
C19A Slack Wire Ran 86.91 335 ⇓P **P** 13 57 25.7 +0.1
baz=87,SNR=47
F14A Wisdom 86.99 331 ⇑P **P** 13 57 27.3 +1.0
baz=87,SNR=9.1
D17A Six Diamond Ra 87.03 333 ⇑P **P** 13 57 27.0 +0.7
baz=87,SNR=168
MOD Modoc 87.06 325 *e*P **P** 13 57 27.6 +1.0
HRY Holter Researc 87.11 332 *e*P **P** 13 57 27.6 +1.0
B20A Solberg Farm, 87.14 336 ⇑P **P** 13 57 27.1 +0.5
baz=88,SNR=35
E15A Deer Lodge 87.19 332 ⇓P **P** 13 57 27.8 +0.7
baz=88,SNR=22
WDC Whiskeytown Da 87.21 323 *e*P **P** 13 57 25.3 -1.8
WDC pmax pmax
comp=Z,19nm,0.7s
WDC Whiskeytown Da 87.21 323 *e*P **P** 13 57 25.3 -1.8
comp=Z,20nm,0.7s
D16A Dana Ranch, Ca 87.26 333 ⇑P **P** 13 57 28.4 +1.0
baz=88,SNR=83
J08A Circle Bar Ran 87.30 327 P **P** 13 57 29.0 +1.4
F13A Darby 87.37 331 ⇓P **P** 13 57 28.8 +0.8
baz=88,SNR=67
EGMT Eagleton 87.41 334 *e*P **P** 13 57 28.0 0.0
comp=Z,78nm,1.0s
EGMT Eagleton 87.41 334 ⇓P **P** 13 57 28.0 0.0
baz=88,SNR=31
C17A Wharram Farm, 87.46 334 ⇑P **P** 13 57 28.5 +0.2
baz=88,SNR=50
A20A Cobblestone Ra 87.48 336 ⇓P **P** 13 57 28.5 +0.2
baz=88,SNR=16
B19A Brinkman Farms 87.48 335 ⇑P **P** 13 57 28.8 +0.5
baz=88,SNR=35
E14A Clinton 87.53 331 ⇓P **P** 13 57 29.8 +1.0
baz=88,SNR=38
D15A Lincoln 87.65 332 ⇓P **P** 13 57 30.2 +0.8
baz=88,SNR=61
B18A Beardsley Farm 87.73 335 ⇓P **P** 13 57 29.8 +0.3
baz=88,SNR=54
A19A Klindworth Far 87.81 335 ⇓P **P** 13 57 30.0 +0.1
baz=88,SNR=42
E13A Victor 87.84 331 ⇑P **P** 13 57 30.9 +0.8
baz=88,SNR=39
CHMT Chamberlain Mo 87.84 332 *e*P **P** 13 57 30.9 +0.6
BMO Blue Mountains 87.92 328 P **P** 13 57 30.9 +0.3
BMO Blue Mountains 87.92 328 P **P** 13 57 30.9 +0.3
C16A Fuhringer Ranc 87.97 333 ⇓P **P** 13 57 31.2 +0.5
baz=88,SNR=71
HOG Hogback Mounta 88.01 324 P **P** 13 57 32.1 +0.9
B17A L&G Farms, Che 88.02 334 ⇑P **P** 13 57 31.0 +0.1
baz=88,SNR=20
KHMM Horse Mountain 88.04 322 *e*P **P** 13 57 32.9 +1.5
comp=Z,57nm,1.0s
MSO Missoula 88.05 331 *e*P **P** 13 57 32.0 +0.9
comp=Z,62nm,1.9s
MSO *ep*P **pP** 13 58 00.7 +0.2
MSO Missoula 88.05 331 ⇓P **P** 13 57 31.8 +0.7
baz=88,SNR=14
D14A Greenough 88.08 332 ⇑P **P** 13 57 31.8 +0.5
baz=88,SNR=43
YBH Yreka Blue Hor 88.14 323 *e*P **P** 13 57 30.3 -1.4
comp=Z,19nm,1.0s
A18A Metzger Ranch, 88.19 335 ⇑P **P** 13 57 31.6 -0.1
baz=88,SNR=28
SLMT Seeley Lake 88.20 332 *e*P **P** 13 57 32.5 +0.6
C15A Salmond Ranch, 88.28 333 ⇑P **P** 13 57 33.1 +0.8
baz=89,SNR=70
B16A M & M Farms, S 88.46 334 ⇑P **P** 13 57 33.0 0.0
baz=89,SNR=22
D13A Huson 88.47 331 ⇓P **P** 13 57 33.8 +0.7
baz=89,SNR=54
A17A Triple J Farms 88.52 334 ⇓P **P** 13 57 33.5 +0.2
baz=89,SNR=52
LSZ Lusaka 88.53 107 *e*P **P** 13 57 35.6 +1.4
comp=Z,33nm,0.9s
LSZ Lusaka 88.53 107 ⇑P **P** 13 57 33.5 -0.8
SNR=12
LSZ mb 13 57 37.3
SNR=23
KRMB Red Mountain 88.60 322 *e*P **P** 13 57 35.7 +1.8
comp=Z,241nm,2.0s
SWMT Swartz Lake 88.62 332 *e*P **P** 13 57 34.4 +0.6
B15A Bradely Ranch, 88.70 333 ⇑P **P** 13 57 34.0 -0.2
baz=89,SNR=54
D12A Red Ives Fores 88.81 331 ⇓P **P** 13 57 35.0 +0.3
baz=89
A16A West Butte Ran 88.86 334 ⇓P **P** 13 57 35.4 +0.4
baz=89
YBMT Yellow Bay 88.91 332 *e*P **P** 13 57 35.2 0.0
comp=Z,21nm,1.1s
JTMT Jette 88.92 332 *e*P **P** 13 57 35.9 +0.6
C13A Hot Springs 88.99 332 ⇓P **P** 13 57 36.1 +0.6
baz=89,SNR=19
B14A Marquette Ranc 89.02 333 ⇑P **P** 13 57 35.7 0.0
baz=89,SNR=7.2
MDT Midelt 89.05 50 P **P** 13 57 37.3 +1.1
comp=Z,11nm,1.1s,baz=222,slow=5.5,SNR=15
MDT pP **pP** 13 58 05.8 +0.2
comp=Z,5.6nm,1.0s,baz=207,slow=5.4,SNR=3.8
BLMT Blacktail Moun 89.17 332 *e*P **P** 13 57 37.1 +0.6
BLMT *ep*P **pP** 13 58 06.5 +0.6
BLMT *es*P **sP** 13 58 20.4 +2.5
VIPM Ingram Point 89.18 326 P **P** 13 57 37.9 +1.3
VIPM Ingram Point 89.18 326 P **P** 13 57 37.9 +1.3
BSMT Bassoo Peak 89.21 332 *e*P **P** 13 57 37.2 +0.5
A15A Johnson Ranch, 89.31 333 ⇑P **P** 13 57 36.6 -0.5
baz=90,SNR=17
C12B Naegeli Ranch, 89.38 331 ⇑P **P** 13 57 37.7 +0.4
baz=90,SNR=8.0
MORF Marmelete 89.47 44 *e*P **P** 13 57 38.7 +0.7
B13A Whitefish 89.50 332 ⇓P **P** 13 57 38.2 +0.3
baz=90,SNR=12
A14A Double T Ranch 89.57 333 ⇑P **P** 13 57 38.4 +0.1
baz=90,SNR=21
PTEO Sao Teotonio 89.59 44 *e*P **P** 13 57 39.6 +1.2
comp=Z,58nm,1.5s
C11A Tepee Creek (N 89.81 331 ⇑P **P** 13 57 39.4 +0.1
baz=90
WALA Waterton Lakes 89.83 333 *e*P **P** 13 57 39.5 0.0
comp=Z,1.5nm,1.0s
WALA *ep*P **pP** 13 58 09.2 +0.3
PBDV Barranco-do-Ve 89.86 45 *e*P **P** 13 57 41.2 +1.4
BROR Big Rock Looko 89.88 325 P **P** 13 57 40.3 +0.7
A13A Flathead Natio 89.93 332 ⇑P **P** 13 57 40.7 +0.8
baz=90
B12A Libby 90.03 331 ⇑P **P** 13 57 41.0 +0.6
baz=90
PCVE Castro Verde 90.05 44 *e*P **P** 13 57 41.4 +0.8
PNCL Nicolau / Gran 90.08 44 *e*P **P** 13 57 41.5 +0.8
comp=Z,19nm,1.4s
PVAQ Vaqueiros 90.09 45 *e*P **P** 13 57 41.6 +0.8
VFP Flag Point 90.18 326 P **P** 13 57 42.5 +1.2
TAM Tamanrasset 90.20 63 *e*P **P** 13 57 42.1 +0.2
TAM pmax pmax
comp=Z,28nm,1.5s
TAM Tamanrasset 90.20 63 *e*P **P** 13 57 42.1 +0.2
comp=Z,28nm,1.5s

SSOR Sweet Springs 90.31 326 P **P** 13 57 42.5 +0.7
SSOR Sweet Springs 90.31 326 P **P** 13 57 42.5 +0.7
PBEJ Beja 90.41 44 *e*P **P** 13 57 43.0 +0.7
A12A Yaak River Ran 90.42 332 ⇑P **P** 13 57 42.3 +0.1
baz=91
TRW Toppenish Ridg 90.48 327 P **P** 13 57 43.8 +1.3
NEW Newport 90.50 331 *e*P **P** 13 57 41.8 -0.7
comp=Z,13nm,1.1s
NEW *e*pP **pP** 13 58 12.3 +0.3
NEW Newport 90.50 331 ⇑P **P** 13 57 42.2 -0.3
baz=91,SNR=9.8
COR Corvallis 90.52 325 *e*P **P** 13 57 44.4 +1.8
COR pmax pmax
comp=Z,38nm,0.9s
COR Corvallis 90.52 325 *e*P **P** 13 57 44.4 +1.8
comp=Z,38nm,0.9s
EVOP Sao Brissos 90.59 44 *e*P **P** 13 57 43.3 +0.2
EVOP pmax pmax
comp=Z,17nm,0.8s
EVOP Sao Brissos 90.59 44 *e*P **P** 13 57 43.3 +0.2
comp=Z,17nm,0.8s
DPW Davenport 90.65 330 P **P** 13 57 43.9 +0.7
DPW Davenport 90.65 330 P **P** 13 57 43.9 +0.7
EVO Evora 90.66 44 *e*P **P** 13 57 43.3 -0.1
comp=Z,17nm,0.8s
EVO *e*R
comp=Z,252nm,22.2s
ASR Mount Adams--S 90.86 327 P **P** 13 57 45.5 +1.2
PMTG Montargil 90.89 43 *e*P **P** 13 57 44.7 +0.2
comp=Z,27nm,1.4s
WTV Waterville 91.28 329 P **P** 13 57 46.9 +0.7
LON Longmire 91.41 327 *e*P **P** 13 57 47.3 +0.5
LON pmax pmax
comp=Z,12nm,0.9s
LON Longmire 91.41 327 *e*P **P** 13 57 47.3 +0.5
comp=Z,12nm,0.9s
AFI Afiamalu 92.66 252 LR LR 14 30 32.8
comp=Z,272nm,18.2s,baz=1.8,slow=30
MVO Moncorvo 92.97 42 *e*P **P** 13 57 54.5 +0.4
comp=Z,25nm,1.4s
PAB San Pablo 93.49 45 *e*P **P** 13 57 56.9 +0.3
PAB pmax pmax
comp=Z,15nm,1.3s
PAB San Pablo 93.49 45 *e*P **P** 13 57 56.9 +0.3
comp=Z,15nm,1.3s
PBRG Braganca 93.55 42 *e*P **P** 13 57 57.1 +0.3
comp=Z,28nm,1.4s
ESDC Sonseca Array 93.80 45 P **P** 13 57 58.5 +0.4
comp=Z,4.9nm,0.8s,baz=250,slow=4.1,SNR=18
SJPF Ste Jean 97.54 43 *e*P **P** 13 58 15.2 +0.3
comp=Z,31nm,1.1s
SJPF Ste Jean 97.54 43 *e*P **P** 13 58 15.2 +0.3
SJPF pmax pmax
comp=Z,31nm,1.1s
SJPF Ste Jean 97.54 43 *e*P **P** 13 58 15.2 +0.3
comp=Z,31nm,1.1s
ETSF Etsaut 97.81 44 *e*P **P** 13 58 16.5 +0.3
comp=Z,7.9nm,0.6s
ETSF Etsaut 97.81 44 *e*P **P** 13 58 16.5 +0.3
ETSF pmax pmax
comp=Z,8.0nm,0.6s
ETSF Etsaut 97.81 44 *e*P **P** 13 58 16.5 +0.3
comp=Z,7.9nm,0.6s
QUIF Quistinic 99.39 39 *e*P **Pdif** 13 58 23.2 +0.2
comp=Z,98nm,1.4s
QUIF Quistinic 99.39 39 *e*P **Pdif** 13 58 23.2 +0.2
QUIF pmax pmax
comp=Z,99nm,1.4s
QUIF Quistinic 99.39 39 *e*P **Pdif** 13 58 23.2 +0.2
comp=Z,98nm,1.4s
LFF La Frestale 99.77 43 *e*P **Pdif** 13 58 24.7 -0.1
comp=Z,29nm,0.8s
LFF La Frestale 99.77 43 *e*P **Pdif** 13 58 24.7 -0.1
LFF pmax pmax
comp=Z,29nm,0.8s
LFF La Frestale 99.77 43 *e*P **Pdif** 13 58 24.7 -0.1
comp=Z,29nm,0.8s
MFF Saint Martin d 100.24 41 *e*P **Pdif** 13 58 26.6 -0.2
MFF Saint Martin d 100.24 41 *e*P **Pdif** 13 58 26.6 -0.2
MFF Saint Martin d 100.24 41 *e*P **Pdif** 13 58 26.6 -0.2
RJF Les Rejaudoux 100.43 43 *e*P **Pdif** 13 58 27.3 -0.4
RJF *e*R
comp=Z,339nm,20.5s
RJF Les Rejaudoux 100.43 43 *e*P **Pdif** 13 58 27.3 -0.4
RJF Les Rejaudoux 100.43 43 *e*P **Pdif** 13 58 27.3 -0.4
CAF Calviac 100.53 43 *e*P **Pdif** 13 58 28.1 -0.1
comp=Z,4nm,0.8s
CAF Calviac 100.53 43 *e*P **Pdif** 13 58 28.1 -0.1
CAF pmax pmax
comp=Z,7.0nm,0.8s
CAF Calviac 100.53 43 *e*P **Pdif** 13 58 28.1 -0.1
comp=Z,7.4nm,0.8s
YKA Yellowknife Ar 100.85 341 P **Pdif** 13 58 28.4 -0.7
comp=Z,2.9nm,0.8s,baz=140,slow=4.4,SNR=59
YKA PP **PP** 14 02 37.8 -1.0
comp=Z,1.6nm,0.9s,baz=140,slow=7.4,SNR=4.3
YKA PKKPbc **PKKPbc** 14 14 40.7 -2.8
comp=Z,0.6nm,0.6s,baz=323,slow=3.1,SNR=9.1
GRR Gorron 100.90 39 *e*P **Pdif** 13 58 30.1 +0.4
comp=Z,27nm,0.9s
GRR Gorron 100.90 39 *e*P **Pdif** 13 58 30.1 +0.4
GRR pmax pmax
comp=Z,27nm,0.9s
GRR Gorron 100.90 39 *e*P **Pdif** 13 58 30.1 +0.4
comp=Z,27nm,0.9s
TCF Toulx Ste Croi 101.39 42 *e*P **Pdif** 13 58 31.5 -0.5
TCF Toulx Ste Croi 101.39 42 *e*P **Pdif** 13 58 31.5 -0.5
TCF Toulx Ste Croi 101.39 42 *e*P **Pdif** 13 58 31.5 -0.5
SMF Signal de Mont 102.52 43 *e*P **Pdif** 13 58 37.1 +0.1
comp=Z,17nm,0.9s
SMF Signal de Mont 102.52 43 *e*P **Pdif** 13 58 37.1 +0.1
SMF pmax pmax
comp=Z,17nm,0.9s
SMF Signal de Mont 102.52 43 *e*P **Pdif** 13 58 37.1 +0.1
comp=Z,17nm,0.9s
SSF Saint Saulge 102.56 42 *e*P **Pdif** 13 58 36.7 -0.5
comp=Z,11nm,0.9s
SSF Saint Saulge 102.56 42 *e*P **Pdif** 13 58 36.7 -0.5
SSF pmax pmax
comp=Z,11nm,0.9s
SSF Saint Saulge 102.56 42 *e*P **Pdif** 13 58 36.7 -0.5
comp=Z,11nm,0.9s
ORIF Oris-en-Rattie 102.78 45 *e*P **Pdif** 13 58 38.9 +0.6
comp=Z,10nm,0.9s
ORIF *e*R
comp=Z,188nm,19.2s
ORIF Oris-en-Rattie 102.78 45 *e*P **Pdif** 13 58 38.9 +0.6
ORIF pmax pmax
comp=Z,10.0nm,0.9s
ORIF Oris-en-Rattie 102.78 45 *e*P **Pdif** 13 58 38.9 +0.6
comp=Z,10nm,0.9s
LOR Lormes 102.88 42 *e*P **Pdif** 13 58 38.0 -0.6
comp=Z,20nm,1.1s
LOR *e*R
comp=Z,181nm,18.8s
LOR Lormes 102.88 42 *e*P **Pdif** 13 58 38.0 -0.6
comp=Z,20nm,1.1s
DLBC Dease Lake 103.17 332 *e*P **Pdif** 13 58 39.6 0.0
DLBC Dease Lake 103.17 332 Pdiff **Pdif** 13 58 40.1 +0.5
comp=Z,5.4nm,0.9s,baz=118,slow=2.4,SNR=11
EKA Eskdalemuir Ar 103.89 33 Pdiff **Pdif** 13 58 43.4 +0.5
comp=Z,5.5nm,0.9s,baz=216,slow=5.1,SNR=3.8
BAIF Baives 104.59 40 *e*P **Pdif** 13 58 45.7 -0.4
BAIF Baives 104.59 40 *e*P **Pdif** 13 58 45.7 -0.4
BAIF Baives 104.59 40 *e*P **Pdif** 13 58 45.7 -0.4
SUMG Summit 106.53 9 *i* P **PP** 14 03 17.6 -3.8
comp=Z,4.8nm,1.1s
RES Resolute Bay 107.74 353 PKKPbc PKKPbc 14 14 20.1 -2.8
comp=Z,1.6nm,0.8s,baz=355,slow=6.9,SNR=5.2
RES PKKP **PKKPab** 14 14 34.3 +2.2
comp=Z,2.2nm,0.9s,baz=334,slow=4.6,SNR=5.8
GERES GERESS Array B 109.38 44 PKiKP **PKiKP** 14 03 08.3 -2.1
comp=Z,1.6nm,0.7s,baz=202,slow=1.4,SNR=9.0
GERES PKKPbc **PKKPbc** 14 14 16.4 -0.6
comp=Z,1.2nm,0.8s,baz=56,slow=3.4,SNR=5.5
GERES PKKP **PKKPab** 14 14 29.1 +3.0
comp=Z,1.8nm,0.8s,baz=56,slow=5.2,SNR=8.3
STKA Stephens Creek 109.88 208 PKiKP **PKiKP** 14 03 11.0 -0.9
comp=Z,1.6nm,0.8s,baz=175,slow=5.8,SNR=3.4
STKA PKKP PKKPdf 14 14 24.7 -4.9
comp=Z,4.2nm,0.7s,baz=333,slow=5.6,SNR=11
CLL Collm 110.07 42 *e*PKiKP **PKiKP** 14 03 12.0 +0.5
comp=Z,7.0nm,1.2s
BRG Berggiesshubel 110.42 42 *e*P **PKiKP** 14 03 13.2 +1.0
comp=Z,4.7nm,0.9s
BRG Berggiesshubel 110.42 42 *e*P **PKKPab** 14 14 25.1 +3.7
comp=Z,8.5nm,1.1s
BRG Berggiesshubel 110.42 42 *e*PKiKP **PKiKP** 14 03 13.1 +1.0
BRG pmax pmax
comp=Z,5.0nm,0.9s
INK Inuvik 110.53 339 PKKPbc PKKPbc 14 14 11.4 -2.3
comp=Z,1.5nm,0.7s,baz=30,slow=2.6,SNR=7.8
VYHS Vyhne 112.32 46 *e*P **Pdif** 13 59 24.6 +4.1
VYHS Vyhne 112.32 46 PDIF **Pdif** 13 59 24.6 +4.1
SML Sawmill 112.64 330 *e*PKiKP **PKiKP** 14 03 16.7 +0.6
SML Sawmill 112.64 330 *e*PKPdf **PKiKP** 14 03 16.7 +0.6
KDAK Kodiak Island 112.91 325 PKiKP **PKiKP** 14 03 16.2 -0.4
comp=Z,2.9nm,0.7s,baz=141,slow=1.6,SNR=6.1
DAG Danmarks Havn 113.00 11 *i* PKiKP **PKiKP** 14 03 16.2 -0.1
DAG pmax pmax
comp=Z,2.0nm,0.8s
DAG Danmarks Havn 113.00 11 *i* P **PKiKP** 14 03 16.2 -0.1
comp=Z,3.1nm,0.8s
NB2 NORSAR Subarra1 113.32 32 PKPdf **PKiKP** 14 03 17.8 +0.4
comp=Z,14nm,1.4s,baz=248,slow=1.9
NB2 NORSAR Subarra1 113.32 32 P **PKKPab** 14 14 09.8 +1.7
comp=Z,1.6nm,0.6s,baz=66,slow=4.6
NB2 NORSAR Subarra1 113.32 32 PKPdf **PKiKP** 14 03 17.8 +0.4
baz=248,slow=1.9
NOA NORSAR Array B 113.32 32 PKiKP **PKiKP** 14 03 17.1 -0.3
comp=Z,1.6nm,0.7s,baz=255,slow=2.1,SNR=4.3
NOA PKKPbc **PKKPab** 14 14 09.0 +0.9
comp=Z,3.6nm,0.9s,baz=66,slow=4.5,SNR=5.5
ILAR Eielson Array 113.34 333 Pdiff **Pdif** 13 59 23.2 -1.4
comp=Z,0.4nm,0.9s,baz=134,slow=2.7,SNR=4.1
ILAR PKiKP **PKiKP** 14 03 17.3 0.0
comp=Z,4.9nm,0.9s,baz=184,slow=0.9,SNR=36
ILAR PP **PP** 14 04 07.7 -2.5
comp=Z,3.4nm,0.9s,baz=104,slow=7.2,SNR=5.7
ILAR PKKPbc **PKKPbc** 14 14 02.1 -2.2
comp=Z,0.8nm,0.7s,baz=312,slow=3.7,SNR=8.1
ILAR PKKP PKKPdf 14 14 31.1 +5.5
comp=Z,0.9nm,0.8s,baz=284,slow=3.2,SNR=5.5
MCK McKinley 113.71 331 *e*PKiKP **PKiKP** 14 03 18.8 +0.7
MCK McKinley 113.71 331 *e*PKPdf **PKiKP** 14 03 18.8 +0.7
COLA College 113.76 333 *e*PKiKP **PKiKP** 14 03 16.5 -1.5
COLA College 113.76 333 *e*PKPdf **PKiKP** 14 03 16.5 -1.5
HFS Hagfors 114.09 33 PKP PKPdf 14 03 17.8 -1.0
comp=Z,2.8nm,0.6s,baz=224,slow=4.1,SNR=6.8
TRF Thorofare Moun 114.15 331 *e*PKPdf PKPdf 14 03 18.7 -0.4
PPLA Purkeypile 114.73 330 *e*PKPdf PKPdf 14 03 19.1 -1.1
KWP Kalwaria Pacla 115.10 46 *e*PKP **PKPdf** 14 03 21.9 +0.7
COLD Coldfoot 115.57 335 *e*PKPdf **PKPdf** 14 03 22.0 +0.4
BUR08 Bucovina Ar. S 115.97 49 *e*PKPdf **PKPdf** 14 03 22.9 -0.1
LVV L'vov 115.97 46 *e*PKiKP **PKPdf** 14 03 22.7 -0.1
SUW Suwalki 116.83 41 *e*PKiKP **PKPdf** 14 03 23.8 -0.5
SUW Suwalki 116.83 41 *e*PKPdf **PKPdf** 14 03 23.8 -0.5
SUW Suwalki 116.83 41 *e*PKP **PKPdf** 14 03 24.8 +0.5
MMAI Mount Meron Ar 118.18 67 PKP **PKPdf** 14 03 27.8 +0.1
comp=Z,2.0nm,0.4s,baz=204,slow=2.5,SNR=4.9
ASF Jabal al Asfar 119.05 68 PKP **PKPdf** 14 03 29.2 -0.2
comp=Z,2.8nm,0.9s,baz=118,slow=1.8,SNR=4.2
BRTR Keskin Array B 119.16 59 PKP **PKPdf** 14 03 29.9 +0.4
comp=Z,6.3nm,0.8s,baz=192,slow=2.9,SNR=30
KIEV Kiev 119.41 46 *e*PKiKP **PKPdf** 14 03 28.6 -0.8
KIEV Kiev 119.41 46 *e*PKPdf **PKPdf** 14 03 28.6 -0.8
AKASG Malin Array Be 119.42 46 PKiKP **PKPdf** 14 03 28.1 -1.3
AKASG pmax pmax
comp=Z,9.0nm,0.7s
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 119.42 46 PKP **PKPdf** 14 03 28.1 -1.3
comp=Z,8.7nm,0.7s,baz=261,slow=2.6,SNR=25
AKASG PKKPbc **PKKPab** 14 13 41.5 -0.4
comp=Z,2.2nm,0.8s,baz=60,slow=4.6,SNR=5.2
VSU Vasula 119.94 37 *d i*PKiKP **PKPdf** 14 03 30.0 -0.1
ASAR Alice Springs 120.19 205 PKP **PKPdf** 14 03 31.0 -1.0
comp=Z,6.4nm,0.7s,baz=139,slow=1.9,SNR=60
ASAR pPKP **pPKPdf** 14 04 01.8 -0.9
comp=Z,7.0nm,0.8s,baz=150,slow=2.2,SNR=9.0
ASAR PKKPbc **PKKPbc** 14 13 39.6 +0.3
comp=Z,8.1nm,0.7s,baz=339,slow=3.3,SNR=95
ASAR SKKPbc SKKPbc 14 17 16.7 +2.8
comp=Z,0.7nm,1.1s,baz=350,slow=4.7,SNR=4.5
ASAR PKPPKP **P'P'df** 14 22 19.7 -4.5
comp=Z,0.3nm,0.6s,baz=355,slow=2.0,SNR=5.8
AS31 Alice Springs 120.19 205 *e*PKPdf **PKPdf** 14 03 29.0 -3.0
FINES FINESS Array B 120.27 34 PKP **PKPdf** 14 03 30.9 +0.3
comp=Z,7.6nm,0.8s,baz=90,slow=0.8,SNR=17
FINES PKKPbc **PKKPbc** 14 13 39.6 +0.1
comp=Z,3.3nm,0.7s,baz=58,slow=7.2,SNR=8.3
SPITS Spitsbergen Ar 120.30 14 PKKPbc PKKPbc 14 13 38.5 -1.3
comp=Z,5.8nm,0.6s,baz=100,slow=3.6,SNR=10
KAF Kangasniemi 120.51 33 *e*PKiKP **PKPdf** 14 03 29.7 -1.4
KAF pmax pmax
comp=Z,15nm,0.6s
KAF Kangasniemi 120.51 33 *e*pkp **PKPdf** 14 03 29.7 -1.4
comp=Z,15nm,0.6s
ARCES ARCESS Array B 121.42 24 PKP **PKPdf** 14 03 33.0 +0.2
comp=Z,6.3nm,0.7s,baz=254,slow=2.9,SNR=21
ARCES PKKPab **PKKPbc** 14 13 34.5 -1.0
comp=Z,6.7nm,0.8s,baz=86,slow=5.0,SNR=15
KEV Kevo 121.96 24 *e*PKiKP **PKPdf** 14 03 31.4 -2.3
KEV Kevo 121.96 24 *e*pkp **PKPdf** 14 03 31.4 -2.3
TNA Tin City 122.04 331 *e*PKPdf **PKPdf** 14 03 32.9 -1.1
JOF Joensuu 122.93 32 *e*PKiKP **PKPdf** 14 03 35.3 -0.5
JOF pmax pmax
comp=Z,21nm,0.7s
JOF Joensuu 122.93 32 *e*pkp **PKPdf** 14 03 35.3 -0.5
comp=Z,21nm,0.7s
WRA Warramunga Arr 123.42 207 PKP **PKPdf** 14 03 37.6 -0.6
comp=Z,17nm,0.7s,baz=163,slow=1.5,SNR=125
WRA pPKP **pPKPdf** 14 04 08.2 -0.7
comp=Z,20nm,0.9s,baz=167,slow=1.5,SNR=12
WRA PKKPbc **PKKPbc** 14 13 27.8 +0.8
comp=Z,7.6nm,0.7s,baz=342,slow=4.3,SNR=57
WRA SKKPbc SKKPbc 14 16 56.1 -7.4
comp=Z,3.4nm,0.8s,baz=351,slow=5.3,SNR=4.6
WRAB Tennant Creek 123.42 207 *e*PKiKP **PKPdf** 14 03 35.5 -2.7
WRAB *e* 14 04 05.1
WRAB Tennant Creek 123.42 207 *e*PKPdf **PKPdf** 14 03 35.5 -2.7
WRAB *e* 14 04 05.1
GAMB Gambell 123.46 329 *e*PKPdf **PKPdf** 14 03 37.2 +0.5
APA Apatity 124.15 27 ⇓ *i*PKiKP **PKPdf** 14 03 38.8 +0.8
APA pmax pmax
comp=Z,3.0nm,0.8s
LVZ Lovozero 124.63 26 *c i*PKiKP **PKPdf** 14 03 39.5 +0.5
LVZ pmax pmax
comp=Z,125nm,2.5s
OBN Obninsk 124.66 42 ⇓ *i*PKiKP **PKPdf** 14 03 37.7 -1.6
OBN *e* 14 16 57.3
OBN pmax pmax
comp=Z,63nm,1.2s
MOS Moscow 125.34 41 *e*PKiKP **PKPdf** 14 03 40.4 -0.2
MOS pmax pmax
comp=Z,67nm,1.0s
VSR Storozhevoye 125.67 47 *e*PKiKP **PKPdf** 14 03 40.8 -0.6
VSR pmax pmax
comp=Z,30nm,1.2s
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,9.0nm,1.2s
VORD Divnogorie 125.71 47 *e*PKiKP **PKPdf** 14 03 41.3 -0.2
VORD pmax pmax
comp=N,10.0nm,1.1s
VORD pmax pmax
comp=E,20nm,1.1s
VORD pmax pmax
comp=Z,20nm,1.1s
NAY Al-Naaiem 126.36 75 *e*P **PKPdf** 14 03 43.5 +0.1
NAY AMb AMB 14 03 44.8
comp=Z,16nm,1.2s
RDF Al-Radifah 126.51 76 *e*P **PKPdf** 14 03 44.4 +0.7
RDF AMb AMB 14 03 46.0
comp=Z,24nm,1.2s
KIV Kislovodsk 126.78 56 *d i*PKiKP **PKPdf** 14 03 44.1 +0.2
KIV *i* 14 04 14.6
KIV pmax pmax
comp=Z,47nm,1.2s
UMR Umm Al-Rimmam 126.86 75 *e*P **PKPdf** 14 03 44.7 +0.4
UMR AMb AMB 14 03 45.6
comp=Z,48nm,0.9s
KBZ Khabaz 126.89 57 PKiKP **PKPdf** 14 03 44.6 +0.6
KBZ pmax pmax
comp=Z,12nm,1.0s
KBZ Khabaz 126.89 57 PKP **PKPdf** 14 03 44.5 +0.6
comp=Z,12nm,1.0s,baz=215,slow=2.0,SNR=14
AMKA Amchitka 127.02 313 *e*PKPdf **PKPdf** 14 03 43.7 -0.2
ZEI Tsey 127.42 58 *i* PKiKP **PKPdf** 14 03 44.6 -0.7
ZEI pmax pmax
comp=Z,18nm,1.2s
GNI Garni 127.47 62 PKP **PKPdf** 14 03 45.9 +0.4
comp=Z,3.0nm,0.3s,baz=109,slow=7.9,SNR=4.6
FITZ Fitzroy Crossi 128.03 199 PKP **PKPdf** 14 03 47.2 +0.2
comp=Z,15nm,0.8s,baz=200,slow=5.5,SNR=21
FITZ pPKP **pPKPdf** 14 04 17.6 -0.2
comp=Z,14nm,0.8s,baz=197,slow=3.2,SNR=6.9
FX1 Attu Island--F 130.89 314 *e*PKPdf **PKPdf** 14 03 51.0 -0.3
FX1 Attu Island--F 130.89 314 PKP **PKPdf** 14 03 51.0 -0.3
comp=Z,12nm,0.6s,baz=188,slow=3.3
FX1 SKPbc **SKPbc** 14 07 04.8 -0.3
comp=Z,18nm,0.9s,baz=6.0,slow=5.3,SNR=5.9
BILL Bilibino 131.90 335 *d i*PKiKP **PKPdf** 14 03 53.3 +0.5
BILL *i* 14 04 23.3
BILL pmax pmax
comp=Z,270nm,1.2s
SMDO Samad 133.20 87 P **PKPdf** 14 03 57.1 +0.4
SNR=5.2
ARU Arti 136.98 40 *i*PKiKP **PKPdf** 14 04 03.4 +0.8
AKTO Aktyubinsk 137.57 49 PKiKP **PKPdf** 14 04 00.0 -3.9
AKTO pmax pmax
comp=Z,3.0nm,1.0s
AKTO Aktyubinsk 137.57 49 PKhKP PKPpre 14 03 54.3
comp=Z,0.7nm,0.2s,baz=40,slow=0.5,SNR=4.5
AKTO PKP **PKPdf** 14 04 03.5 -0.4
comp=Z,9.0nm,0.8s,baz=220,slow=1.6,SNR=7.2
SVE Sverdlovsk 138.00 39 *e*PKiKP **PKPdf** 14 04 05.2 +0.7
SVE pmax pmax
comp=Z,24nm,1.2s
AB31 Akbulak array 138.92 50 PKHKP PKPpre 14 03 58.9
AB31 pmax pmax
comp=Z,16nm,0.7s
ABKAR Akbulak array 138.92 50 *e*PKPdf **PKPdf** 14 04 07.0 +0.6
SEY Seymchan 139.26 332 ⇑ *i*PKiKP **PKPdf** 14 04 08.1 +1.5
PETK Petropavlovsk- 140.15 316 PKHKP PKPpre 14 04 00.0
PETK 14 04 09.8
PETK pmax pmax
comp=Z,9.0nm,0.8s
PETK pmax pmax
comp=Z,27nm,0.8s
PETK Petropavlovsk- 140.15 316 PKhKP PKPpre 14 04 00.0
comp=Z,8.5nm,0.8s,baz=102,slow=6.1,SNR=14
PETK PKP **PKPdf** 14 04 09.8 +1.2
comp=Z,27nm,0.8s,baz=149,slow=3.9,SNR=21
KAPI Kappang 142.07 195 *e*PKPdf **PKPdf** 14 04 14.3 +1.1
KAPI Kappang 142.07 195 PKhKP PKPpre 14 04 07.9
comp=Z,28nm,0.8s,baz=226,slow=3.2,SNR=18
KAPI PKP **PKPdf** 14 04 14.7 +1.5
comp=Z,21nm,0.8s,baz=200,slow=4.8,SNR=9.1
GUMO Guam 143.44 248 PKhKP PKPpre 14 04 12.8
comp=Z,253nm,0.9s,baz=135,slow=4.6,SNR=13
ZRNK Zerenda 143.74 42 PKiKP PKPab 14 04 11.9 -0.2
ZRNK pmax pmax
comp=Z,50nm,1.3s
BRVK Borovoye 144.44 42 *d i*PKiKP **PKPab** 14 04 15.1 +0.4
BRVK Borovoye 144.44 42 *e*PKPdf **PKPdf** 14 04 16.1 -0.1
BRVK Borovoye 144.44 42 P **PKPdf** 14 04 16.3 +0.2
SNR=28
BVA0 Borovoye Array 144.51 42 *i*PKiKP PKPbc 14 04 15.7 +0.5
BVA0 pmax pmax
comp=Z,6.0nm,0.8s
BVAR Borovoye Array 144.51 42 PKiKP **PKPab** 14 04 14.5 -0.5
BVAR pmax pmax
comp=Z,26nm,0.8s
BVAR Borovoye Array 144.51 42 PKP **PKPab** 14 04 14.5 -0.5
comp=Z,26nm,0.8s,baz=279,slow=3.0,SNR=145
POO Poona 144.58 103 ⇑ *i*P **PKPab** 14 04 14.0 -2.3
comp=Z,210nm,1.0s
VOSK Vostochnaya 144.95 42 PKiKP PKPbc 14 04 16.9 +0.3
VOSK pmax pmax
comp=Z,95nm,1.0s
KK31 Karatay Array 146.87 59 *i*PKiKP **PKPdf** 14 04 21.4 +0.7
KK31 pmax pmax
comp=Z,32nm,0.9s
KKAR Karatay Array 146.87 59 *e*PKP2 **PKPdf** 14 04 21.6 +0.9
KKAR Karatay Array 146.87 59 *e*PKPdf **PKPdf** 14 04 21.6 +0.9
YAK Yakutsk 147.48 343 *i*PKiKP **PKPdf** 14 04 21.4 +0.4
YAK *e* 14 07 48.5
YAK pmax pmax
comp=N,28nm,1.0s
YAK pmax pmax
comp=Z,407nm,1.0s
YAK pmax pmax
comp=E,15nm,0.9s
YAK pmax pmax
comp=Z,114nm,1.5s
YAK pmax pmax
comp=E,64nm,2.0s
YAK pmax pmax
comp=N,96nm,1.6s
HYB Hyderabad 147.85 109 *i*PKP **PKPdf** 14 04 23.0 -0.1
comp=N,190nm,1.0s
HYB *e* 14 04 25.5
HYB *e*pPKP **pPKPdf** 14 04 55.0 +1.2
HYB *e*sPKP 14 05 04.5
PSI Prapat 149.01 158 PKP **PKPdf** 14 04 24.3 -1.0
comp=N,103nm,0.7s,baz=221,slow=4.4,SNR=6.3
PSI PKPbc **PKPbc** 14 04 28.9 -0.5
comp=N,103nm,0.7s,baz=173,slow=8.1,SNR=71
PSI pPKPbc **pPKPbc** 14 04 58.4 -1.5
comp=N,100nm,0.8s,baz=187,slow=8.9,SNR=8.1
EKS2 Erkin-Say 149.31 59 *e*PKPdf **PKPdf** 14 04 24.5 -0.3
EKS2 *e*PKPbc **PKPbc** 14 04 29.0 -0.3
EKS2 *e*PKPab **PKPab** 14 04 33.5 -0.8
EKS2 Erkin-Say 149.31 59 P **PKPdf** 14 04 26.3 +1.5
SNR=19
MYKOM Kota Tinggi 149.31 167 P **PKPbc** 14 04 29.2 -0.8
AML Almayashu 149.31 60 P **PKPdf** 14 04 26.3 +1.1
SNR=17
KGM Kluang 149.43 166 P **PKPbc** 14 04 29.6 -0.6
KSM Kuching 149.60 180 *e*PKPdf **PKPdf** 14 04 25.9 -0.2
KSM *e*PKPbc **PKPbc** 14 04 31.0 +0.2
KSM *e*PKPab **PKPab** 14 04 37.1 +1.1
KSM Kuching 149.60 180 P **PKPbc** 14 04 30.9 +0.2
USP Ospenovka 149.74 58 P **PKPdf** 14 04 26.5 +1.1
SNR=40
AAK Ala-Archa 149.83 59 *e*PKPdf **PKPdf** 14 04 26.9 +1.2
AAK *e*PKPbc **PKPbc** 14 04 31.4 +0.8
AAK *e*PKPab **PKPab** 14 04 36.1 -0.4
AAK Ala-Archa 149.83 59 P **PKPdf** 14 04 27.4 +1.6
SNR=88
AAK Ala-Archa 149.83 59 PKP **PKPdf** 14 04 26.3 +0.6
baz=202,slow=5.4
AAK PKPbc **PKiKP** 14 04 31.9 +0.3
baz=200,slow=3.8
AAK PP **PP** 14 08 06.3 +0.6
comp=N,5.6nm,0.9s,baz=178,slow=6.5,SNR=3.8
FRU Bishkek 149.89 59 ⇑ *i*PKiHKP **PKPdf** 14 04 27.0 +1.4
FRU pmax pmax
comp=Z,110nm,2.4s
FRU pmax pmax
comp=Z,380nm,1.8s
UCH Uchtor 149.91 60 P **PKPbc** 14 04 33.1 +1.9
SNR=8.2
CHMS Chumysh 149.96 58 P **PKPbc** 14 04 32.0 +1.2
SNR=26
KURBB Kurchatov Arra 150.10 42 PKP **PKPdf** 14 04 25.9 +0.3
comp=Z,23nm,1.2s,baz=298,slow=2.8,SNR=38
KURBB PKPbc **PKPbc** 14 04 31.3 +0.6
comp=Z,28nm,0.6s,baz=286,slow=19,SNR=236
KURBB pPKPbc **pPKPbc** 14 05 00.7 -0.7
comp=Z,27nm,0.8s,baz=296,slow=3.0,SNR=3.7
KURBB PP **PP** 14 08 08.6 +2.1
comp=Z,13nm,1.1s,baz=289,slow=6.0,SNR=6.7
KURK Kurchatov 150.11 42 *d i*PKP2 **PKPbc** 14 04 31.3 +0.5
KURK Kurchatov 150.11 42 *e*PKPdf **PKPdf** 14 04 26.1 +0.5
KURK *e*PKPbc **PKPbc** 14 04 31.3 +0.5
KURK Kurchatov 150.11 42 P **PKPdf** 14 04 26.9 +1.3
SNR=51
KBK Karagaybulak 150.16 59 P **PKPbc** 14 04 32.9 +1.4
SNR=18
FRIM Kepong 150.22 162 P **PKPbc** 14 04 32.1 -0.1
NVS Novosibirsk 150.24 32 *i*PKiKP **PKPdf** 14 04 25.6 -0.1
NVS *i* 14 05 00.0
NVS pmax pmax
comp=Z,38nm,1.0s
NVS pmax pmax
comp=N,17nm,1.2s
NVS pmax pmax
comp=E,26nm,1.2s
KZA Kyzart 150.47 60 P **PKPdf** 14 04 28.4 +1.4
SNR=7.6
SBUM Sibu 150.52 184 P **PKPdf** 14 04 28.5 +1.0
TKM2 Tokmak 2 150.59 58 *e*PKiKP **PKPdf** 14 04 27.5 +0.5
TKM2 *e* 14 04 39.9
TKM2 Tokmak 2 150.59 58 *e*PKPdf **PKPdf** 14 04 27.5 +0.5
TKM2 *e*PKPbc **PKPbc** 14 04 32.5 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TKM2				*e*PKPab	**PKPab**	**14 04 39.9**	**+0.2**
TKM2	**Tokmak 2**	**150.59**	**58**	P	**PKPdf**	**14 04 27.7**	**+0.8**
	SNR=20						
YSS	**Yuzh-Sakhalins**	**151.10**	**310**	*e*PKIKP	**PKPdf**	**14 04 28.8**	**+1.5**
YSS				*e*		14 05 04.3	
YSS				pmax	pmax		
	comp=Z,180nm,0.8s						
ULHL	**Ulahol**	**151.17**	**60**	P	**PKPdf**	**14 04 29.2**	**+1.4**
	SNR=15						
BTM	**Bintulu**	**151.20**	**186**	P	**PKPbc**	**14 04 34.5**	**0.0**
IPM	**Ipoh**	**151.24**	**160**	*e*PKPdf	**PKPdf**	**14 04 28.7**	**+0.1**
IPM				*e*PKPbc	**PKPbc**	**14 04 34.5**	**-0.1**
IPM	**Ipoh**	**151.24**	**160**	P	**PKPbc**	**14 04 34.6**	**-0.1**
KSH	**Kashi**	**151.30**	**65**	PKPbc	**PKPdf**	**14 04 28.9**	**+0.9**
KSH				PKPab	**PKPab**	**14 04 46.1**	**+3.5**
KSH				*e*PKS	**PKSdf**	**14 08 03.3**	**+0.5**
KSH				*e*SKS	**SKSdf**	**14 11 27.3**	**+2.0**
KSH				AMB	AMB		
	comp=Z,370nm,5.6s						
KSH				LR	LR		
	comp=N,580nm,7.1s						
KSH				LR	LR		
	comp=E,1μm,19.3s						
KSH				LR	LR		
	comp=Z,290nm,5.3s						
TSM	**Tawau**	**151.50**	**196**	P	**PKPbc**	**14 04 35.5**	**+0.3**
ZAA0	**Zalesovo Array**	**151.52**	**32**	*e*PKPdf	**PKPdf**	**14 04 27.6**	**-0.1**
ZAA0				*e*PKPbc	**PKPbc**	**14 04 34.2**	**+0.2**
ZALV	**Zalesovo Beam**	**151.52**	**32**	PKIKP	**PKPdf**	**14 04 27.6**	**-0.1**
ZALV						14 05 04.2	
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV				pmax	pmax		
	comp=Z,252nm,0.7s						
ZALV				pmax	pmax		
	comp=Z,31nm,0.7s						
ZALV				pmax	pmax		
	comp=Z,62nm,0.7s						
ZALV	**Zalesovo Beam**	**151.52**	**32**	PKP	**PKPdf**	**14 04 27.6**	**-0.1**
	comp=Z,10nm,0.8s,baz=275,slow=2.7,SNR=43						
ZALV				PKPbc	**PKPbc**	**14 04 34.1**	**+0.1**
	comp=Z,252nm,0.7s,baz=321,slow=3.0,SNR=299						
ZALV				PKPab	**PKPab**	**14 04 44.1**	**+1.3**
	comp=Z,31nm,0.7s,baz=345,slow=4.6,SNR=5.8						
ZALV				pPKPbc	**pPKPbc**	**14 05 04.2**	**-0.4**
	comp=Z,62nm,0.7s,baz=310,slow=3.1,SNR=4.5						
ASAJ	**Asahikawa**	**152.04**	**305**	*e*PKPdf	**PKPdf**	**14 04 28.9**	**0.0**
ASAJ				*e*PKPbc	**PKPbc**	**14 04 35.8**	**+0.3**
ASAJ				*e*PKPab	**PKPab**	**14 04 46.8**	**+1.4**
ASAJ	**Asahikawa**	**152.04**	**305**	PKP	**PKPdf**	**14 04 27.9**	**-0.9**
	comp=Z,14nm,0.9s,baz=253,slow=11,SNR=9.2						
ASAJ				PKPbc	**PKPbc**	**14 04 35.8**	**+0.3**
	comp=Z,87nm,0.9s,baz=234,slow=5.6,SNR=38						
ERM	**Erimo**	**152.09**	**300***c*	*i*PKIKP	**PKPdf**	**14 04 29.5**	**+0.6**
ERM				pmax	pmax		
	comp=Z,151nm,1.7s						
MYLDM	**Lahad Datu**	**152.20**	**198**	P	**PKPbc**	**14 04 38.4**	**+1.7**
KTGM	**Kuala Trenggan**	**152.60**	**164**	P	**PKPbc**	**14 04 36.5**	**-1.2**
CLNS	**Chul'man**	**153.22**	**342**	*e*PKIKP	**PKPdf**	**14 04 29.7**	**-0.5**
CLNS				pmax	pmax		
	comp=Z,95nm,1.1s						
CLNS				pmax	pmax		
	comp=N,12nm,0.9s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
MK31	**Makanchi Array**	**153.99**	**47**	*e*PKIKP	**PKPdf**	**14 04 31.9**	**+0.3**
MK31				*e*		14 04 53.4	
MK31	**Makanchi Array**	**153.99**	**47**	*e*PKPdf	**PKPdf**	**14 04 31.9**	**+0.3**
MK31				*e*PKPbc	**PKPbc**	**14 04 40.0**	**+0.3**
MK31				*e*PKPab	**PKPab**	**14 04 53.4**	**-0.2**
MKAR	**Makanchi Array**	**153.99**	**47**	PKIKP	**PKPdf**	**14 04 32.0**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,26nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,23nm,0.7s						
MKAR	**Makanchi Array**	**153.99**	**47**	PKP	**PKPdf**	**14 04 32.0**	**+0.4**
	comp=Z,5.3nm,0.9s,baz=299,slow=2.5,SNR=34						
MKAR				PKPbc	**PKPbc**	**14 04 39.5**	**-0.2**
	comp=Z,26nm,0.9s,baz=348,slow=1.3,SNR=50						
MKAR				PKPab	**PKPab**	**14 04 54.1**	**+0.5**
	comp=Z,23nm,0.7s,baz=298,slow=4.4,SNR=20						
KDM	**Kudat**	**154.28**	**195**	P	**PKPab**	**14 04 55.8**	**+0.4**
HABR	**Khabarovsk**	**155.13**	**319***c*	*e*PKIKP	**PKPdf**	**14 04 32.7**	**-0.4**
HABR				*e*		14 04 58.2	
HABR				*e*		14 05 00.0	
HABR						14 08 35.4	
HABR				*e*		14 11 29.9	
HABR				*e*PPP	PPP	14 12 06.8	
HABR				*e*SS	SS	14 28 12.3	+2.7
HABR				*e*SSS	SSS	14 34 05.9	
PYUN	**Piuthan**	**156.07**	**92**	*e*P	**PKPdf**	**14 04 35.7**	**+0.4**
	comp=Z,64nm,1.0s						
KLR	**Kul'dur**	**156.46**	**323**	*e*PKIKP	**PKPdf**	**14 04 30.2**	**-4.6**
KLR				pmax	pmax		
	comp=Z,45nm,1.6s						
KOLN	**Koldanda**	**156.49**	**93**	*e*P	**PKPdf**	**14 04 35.9**	**+0.1**
	comp=Z,19nm,0.7s						
MJAR	**Matsushiro Arr**	**156.54**	**289**	PKP	**PKPdf**	**14 04 35.0**	**-0.4**
	comp=Z,4.2nm,1.1s,baz=225,slow=1.4,SNR=11						
MJAR				PKPab	**PKPab**	**14 05 04.2**	**-0.6**
	comp=Z,36nm,0.8s,baz=109,slow=2.3,SNR=33						
MJAR				pPKPab	**pPKPab**	**14 05 35.1**	**+0.6**
	comp=Z,8.8nm,0.9s,baz=117,slow=2.0,SNR=2.4						
MAJO	**Matsushiro**	**156.54**	**289**	*e*PKIKP	**PKPdf**	**14 04 35.0**	**-0.4**
MAJO				*e*		14 05 06.0	
MAJO	**Matsushiro**	**156.54**	**289**	*e*PKPdf	**PKPdf**	**14 04 35.0**	**-0.4**
MAJO				*e*PKPab	**PKPab**	**14 05 06.0**	**+1.1**
MAT	**Matsushiro**	**156.54**	**289**	PKP	**PKPdf**	**14 04 34.4**	**-1.0**
DANN	**Dangsing**	**156.79**	**92**	*e*P	**PKPdf**	**14 04 37.0**	**+0.7**
	comp=Z,108nm,0.9s						
HVS	**Khovu-Aksy**	**157.33**	**28***d*	*i*PKIKP	**PKPdf**	**14 04 36.0**	**0.0**
DMN	**Daman**	**157.72**	**95**	*e*P	**PKPdf**	**14 04 37.7**	**+0.2**
KKN	**Kakani**	**157.92**	**95**	*e*P	**PKPdf**	**14 04 37.8**	**+0.1**
PKIN	**Phulchoki**	**157.96**	**95**	*e*P	**PKPdf**	**14 04 37.9**	**+0.1**
	comp=Z,8.1nm,0.6s						
PKI	**Pulchoki**	**157.97**	**95**	*e*P	**PKPdf**	**14 04 37.9**	**0.0**
GUN	**Gumba**	**158.47**	**95**	*e*P	**PKPdf**	**14 04 38.7**	**+0.2**
WMQ	**Urumqi**	**158.71**	**50**	PKP	**PKPdf**	**14 04 38.9**	**+1.0**
WMQ				PKS	**PKSdf**	**14 08 11.1**	**-0.4**
WMQ				PP	**PP**	**14 08 57.8**	**+2.7**
WMQ				AMB	AMB		
	comp=Z,66nm,14.4s						
WMQ				LR	LR		
	comp=N,83nm,24.8s						
WMQ				LR	LR		
	comp=E,130nm,22.2s						
WMQ				LR	LR		
	comp=Z,120nm,28.0s						
RAMN	**Ramite**	**158.78**	**98**	*e*P	**PKPdf**	**14 04 39.5**	**+0.7**
	comp=Z,78nm,0.9s						
USRK	**Ussuriysk Arra**	**159.12**	**312**	PKP	**PKPdf**	**14 04 37.0**	**-1.3**
	comp=Z,5.0nm,0.9s,baz=207,slow=3.7,SNR=9.2						
USRK				PKPab	**PKPab**	**14 05 16.4**	**+0.7**
	comp=Z,6.5nm,0.7s,baz=68,slow=5.8,SNR=8.1						
MOY	**Mondy**	**159.23**	**16**	*e*PKIKP	**PKPdf**	**14 04 39.8**	**+1.5**
MOY				*e*		14 05 16.7	
MOY				pmax	pmax		
	comp=Z,42nm,2.3s						
IRK	**Irkutsk**	**159.33**	**11**	*e*PKP2	**PKPab**	**14 05 16.3**	**0.0**
IRK				pmax	pmax		
	comp=Z,124nm,1.2s						
ODAN	**Odare**	**159.41**	**99**	*e*P	**PKPdf**	**14 04 40.2**	**+0.7**
	comp=Z,49nm,0.8s						
TAPN	**Taplejung**	**159.84**	**98**	*e*P	**PKPdf**	**14 04 40.4**	**+0.4**
	comp=Z,102nm,1.4s						
MDJ	**Mudanjiang**	**160.39**	**315**	*e*PKPdf	**PKPdf**	**14 04 39.1**	**-0.6**
MDJ				*e*pPKPdf	**pPKPdf**	**14 05 09.3**	**-1.3**
MDJ				*e*PKPab	**PKPab**	**14 05 21.6**	**+0.4**
ZAK	**Zakamensk**	**160.94**	**14**	*e*PKIKP	**PKPdf**	**14 04 40.5**	**+0.2**
ZAK				*e*		14 05 24.2	
ZAK				*e*		14 09 02.7	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SHL	**Shillong**	**162.63**	**107**	*e*PKP	**PKPdf**	**14 04 44.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**163.04**	**140**	PKP	**PKPdf**	**14 04 43.8**	**+0.5**
	comp=Z,10nm,0.9s,baz=248,slow=2.7,SNR=52						
CMAR				pPKP	**pPKPdf**	**14 05 14.2**	**+0.1**
	comp=Z,7.6nm,0.9s,baz=249,slow=2.7,SNR=6.4						
CMAR				PKPab	**PKPab**	**14 05 32.2**	**-1.2**
	comp=Z,9.4nm,1.0s,baz=235,slow=4.8,SNR=10						
CMAR				pPKPab	**pPKPab**	**14 06 02.9**	**-0.1**
	comp=Z,9.9nm,1.0s,baz=233,slow=5.2,SNR=5.8						
CN2	**Changchun**	**163.27**	**319**	*e*PKP	**PKPdf**	**14 04 41.7**	**-1.0**
CHTO	**Chiang Mai**	**163.33**	**139**	*e*PKIKP	**PKPdf**	**14 04 43.8**	**+0.3**
CHTO				*e*		14 05 34.5	
CHTO	**Chiang Mai**	**163.33**	**139**	*e*PKPdf	**PKPdf**	**14 04 43.8**	**+0.3**
CHTO				*e*PKPab	**PKPab**	**14 05 34.5**	**-0.1**
CHTO	**Chiang Mai**	**163.33**	**139**	P	**PKPdf**	**14 04 44.3**	**+0.8**
	SNR=6.1						
LSA	**Lhasa**	**163.40**	**93**	PKP	**PKPdf**	**14 04 44.4**	**+0.5**
LSA	**Lhasa**	**163.40**	**93**	*e*PKIKP	**PKPdf**	**14 04 44.1**	**+0.2**
LSA	**Lhasa**	**163.40**	**93**	*e*PKPdf	**PKPdf**	**14 04 44.1**	**+0.2**
SONM	**Songino Array**	**163.94**	**10**	PKP	**PKPdf**	**14 04 43.3**	**-0.1**
	comp=Z,4.6nm,1.0s,baz=236,slow=0.1,SNR=19						
SONM				PKPab	**PKPab**	**14 05 37.9**	**+1.2**
	comp=Z,27nm,0.8s,baz=324,slow=4.7,SNR=42						
SONM				pPKPab	**pPKPab**	**14 06 05.8**	**-0.6**
	comp=Z,4.5nm,0.8s,baz=318,slow=3.7,SNR=2.5						
SONM				PP	**PP**	**14 09 24.2**	**+2.1**
	comp=Z,6.1nm,0.9s,baz=354,slow=6.2,SNR=9.0						
ULN	**Ulaanbaatar**	**164.00**	**8**	*e*PKPdf	**PKPdf**	**14 04 43.4**	**-0.1**
ULN				*e*pPKPab	**pPKPab**	**14 06 08.1**	**+1.5**
ULN				*e*PP	**PP**	**14 09 21.3**	**-1.1**
ULN	**Ulaanbaatar**	**164.00**	**8**	P	**PKPdf**	**14 04 43.8**	**+0.4**
	SNR=6.6						
KSRS	**Korea Array**	**164.54**	**295**	PKP	**PKPdf**	**14 04 42.6**	**-1.4**
	comp=Z,6.6nm,0.8s,baz=118,slow=0.7,SNR=47						
KSRS				PKPab	**PKPab**	**14 05 39.8**	**+0.1**
	comp=Z,14nm,1.0s,baz=90,slow=4.5,SNR=23						
KSRS				pPKPab	**pPKPab**	**14 06 10.8**	**+1.5**
	comp=Z,4.1nm,0.9s,baz=100,slow=3.7,SNR=2.9						
GTA	**Gaotai**	**168.75**	**46**	*e*PKP	**PKPdf**	**14 04 48.4**	**+1.0**
GTA				PKPab	**PKPab**	**14 05 59.5**	**+1.2**
GTA				PKS	**PKSdf**	**14 08 20.0**	**0.0**
GTA				PP	**PP**	**14 09 48.2**	**+0.4**
GTA				AMB	AMB		
	comp=Z,190nm,7.6s						
GTA				LR	LR		
	comp=N,180nm,20.0s						
GTA				LR	LR		
	comp=E,210nm,21.4s						
GTA				LR	LR		
	comp=Z,100nm,18.5s						
KMI	**Kunming**	**170.44**	**134**	PKP	**PKPdf**	**14 04 47.5**	**-1.4**
KMI				PP	**PP**	**14 09 58.1**	**+1.8**
KMI				AMB	AMB		
	comp=Z,99nm,4.1s						
KMI				LR	LR		
	comp=Z,140nm,23.0s						
BJI	**Beijing**	**170.70**	**331**	PKP	**PKPdf**	**14 04 48.3**	**0.0**
BJI				PP	**PP**	**14 09 55.9**	**-0.9**
BJI				AMB	AMB		
	comp=Z,220nm,8.8s						
HHC	**Hu-ho-hao-te**	**171.14**	**354**	*e*PKP	**PKPdf**	**14 04 48.8**	**+0.1**
HHC				PKS	**PKSdf**	**14 08 19.8**	**-1.3**
HHC				PP	**PP**	**14 09 57.3**	**-1.5**
HHC				SS	SS	14 30 54.2	+0.6
HHC				AMB	AMB		
	comp=Z,130nm,5.6s						
HHC				LR	LR		
	comp=N,280nm,16.7s						
HHC				LR	LR		
	comp=E,220nm,17.8s						
HHC				LR	LR		
	comp=Z,210nm,15.5s						
NJ2	**Nanjing**	**172.74**	**272**	*e*PKP	**PKPdf**	**14 04 49.1**	**-0.4**
NJ2				PKS	**PKSdf**	**14 08 21.5**	**-0.3**
NJ2				AMB	AMB		
	comp=Z,140nm,5.8s						
NJ2				LR	LR		
	comp=N,210nm,23.5s						
NJ2				LR	LR		
	comp=E,230nm,27.3s						
NJ2				LR	LR		
	comp=Z,110nm,16.0s						
LZH	**Lanzhou**	**173.29**	**51**	⇓PKP	**PKPdf**	**14 04 51.0**	**+1.1**
LZH				PP	**PP**	**14 10 12.4**	**+1.8**
LZH				AMB	AMB		
	comp=Z,160nm,9.0s						
LZH				LR	LR		
	comp=N,230nm,15.3s						
LZH				LR	LR		
	comp=E,180nm,14.7s						
LZH				LR	LR		
	comp=Z,260nm,18.5s						
GYA	**Guiyang**	**173.60**	**149**	PKP	**PKPdf**	**14 04 50.8**	**+0.6**
GYA				PKPab	**PKPab**	**14 06 20.5**	**+0.5**
GYA				PKS	**PKSdf**	**14 08 19.8**	**-2.9**
GYA				PP	**PP**	**14 10 13.2**	**+1.9**
GYA				AMB	AMB		
	comp=Z,140nm,8.3s						
GYA				LR	LR		
	comp=N,210nm,22.1s						
GYA				LR	LR		
	comp=E,180nm,23.5s						
GYA				LR	LR		
	comp=Z,190nm,22.4s						
CD2	**Chengdu**	**174.30**	**100**	PKP	**PKPdf**	**14 04 49.5**	**-0.7**
CD2				PKPab	**PKPab**	**14 06 23.3**	**0.0**
CD2				PKS	**PKSdf**	**14 08 20.3**	**-2.2**
CD2				PP	**PP**	**14 10 16.2**	**+0.1**
CD2				AMB	AMB		
	comp=Z,130nm,8.8s						
CD2				LR	LR		
	comp=E,480nm,20.6s						
CD2				LR	LR		
	comp=Z,250nm,26.9s						
WHN	**Wuhan**	**176.23**	**248**	PKP	**PKPdf**	**14 04 50.1**	**-0.6**
WHN				PKPab	**PKPab**	**14 06 30.4**	**-1.3**
WHN				PP	**PP**	**14 10 23.8**	**-1.1**
XAN	**Xi'an**	**177.69**	**30**	PKP	**PKPdf**	**14 04 51.3**	**+0.4**
XAN				PKPab	PKPab	14 06 38.1	+0.2
XAN				PP	**PP**	**14 10 32.4**	**+1.7**

IDC ***08*** *13:44:52.8±1.1, 30.°49N×66.°22E, h0km, mb3.6/11, mb1 3.8/12, mb1mx3.6/33, mbtmp3.7/12, ML3.8/1, MS4.1/1, Ms1 4.1/1, ms1mx2.8/44, Error ellipse: s-maj=25.1km s-min=22.5km az=117.0*

ISCJB ***08*** *13:44:53.5±0.4, 30.°51N±0.°06×66.°45E±0.°05, h12km, mb3.7/9, MS4.0/1, Error ellipse: s-maj=9.6km s-min=5.6km az=151.6*

ISC 08 13:44:55.9±0.7**, 30.°52N**±0.°10×**66.°52E**±0.°09**, h12**km**, n27,** σ**1.°00**/26**, mb3.8**/9**, 1C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBK	**Wadi Bani Khal**	**10.38**	**222**	⇑P	**Pn**	**13 47 23.1**	**-1.5**
	SNR=5.6						
SMDO	**Samad**	**10.61**	**228**	⇓P	**Pn**	**13 47 26.9**	**-0.9**
	SNR=6.6						
HOQ	**Hoqain**	**10.73**	**232**	P	**Pn**	**13 47 27.9**	**-1.6**
	SNR=8.4						
ASHO	**Ashiyiah**	**10.95**	**240**	P	**Pn**	**13 47 34.5**	**+2.1**
	SNR=7.1						
JMDO	**Jabal Madar**	**11.08**	**225**	P	**Pn**	**13 47 34.3**	**+0.1**
	SNR=8.9						
BSY	**Bisya**	**11.38**	**229**	P	**Pn**	**13 47 38.8**	**+0.5**
	SNR=19						
ARQ	**Araqi**	**11.43**	**234**	P	**Pn**	**13 47 40.0**	**+0.9**
	SNR=10						
AAK	**Ala-Archa**	**13.67**	**26**	Pn	**Pn**	**13 48 09.2**	**-0.4**
	0.5nm,0.3s,baz=140,slow=4.2,SNR=7.3						
PYUN	**Piuthan**	**14.57**	**95**	*e*P	**Pn**	**13 48 22.3**	**+0.2**
PYUN				*e*S	Sn	13 50 53.7	-10
KOLN	**Koldanda**	**15.17**	**96**	*e*P	**Pn**	**13 48 31.1**	**+0.9**
	19nm,0.7s						
DANN	**Dangsing**	**15.18**	**94**	*e*P	**Pn**	**13 48 28.6**	**-1.8**
	36nm,0.7s						
KKN	**Kakani**	**16.61**	**95**	*e*P	**Pn**	**13 48 47.5**	**-1.4**
	13nm,0.5s						
GUN	**Gumba**	**17.10**	**94**	*e*P	**Pn**	**13 48 54.3**	**-0.8**
	71nm,0.8s						
RAMN	**Ramite**	**17.96**	**96**	*e*P	**P**	**13 49 07.0**	**+0.7**
ODAN	**Odare**	**18.66**	**96**	*e*P	**Pn**	**13 49 14.4**	**0.0**
TAPN	**Taplejung**	**18.81**	**94**	*e*P	**P**	**13 49 15.4**	**-0.3**
MKAR	**Makanchi Array**	**20.32**	**33**	P	**P**	**13 49 31.9**	**+0.1**
	1.4nm,0.6s,baz=211,slow=11,SNR=13						
AKTO	**Aktyubinsk**	**20.89**	**345**	P	**P**	**13 49 36.9**	**-0.9**
	1.5nm,0.3s,baz=46,slow=3.3,SNR=6.7						
KURBB	**Kurchatov Arra**	**22.00**	**21**	P	**P**	**13 49 50.8**	**+1.0**
	5.0nm,1.0s,baz=209,slow=12,SNR=9.8						
BVAR	**Borovoye Array**	**22.66**	**6**	P	**P**	**13 49 56.7**	**-0.2**
	2.9nm,0.8s,baz=178,slow=12,SNR=18						
ZALV	**Zalesovo Beam**	**26.89**	**24**	P	**P**	**13 50 35.5**	**-1.0**
	0.6nm,0.5s,baz=213,slow=12,SNR=3.4						
CMAR	**Chiang Mai Arr**	**31.74**	**105**	P	**P**	**13 51 20.9**	**+1.0**
	0.7nm,0.8s,baz=304,slow=6.7,SNR=4.9						
SONM	**Songino Array**	**34.95**	**49**	P	**P**	**13 51 48.7**	**+0.9**
	0.2nm,0.6s,baz=256,slow=10,SNR=2.3						
SONM				LR	LR	14 08 34.3	
	comp=Z,247nm,18.2s,baz=262,slow=40						
TORD	**Torodi Ar. Bea**	**61.85**	**269**	P	P	13 55 11.9	-3.4
	1.8nm,1.0s,baz=45,slow=6.7,SNR=8.8						
ILAR	**Eielson Array**	**81.50**	**14**	P	**P**	**13 57 12.2**	**-0.6**
	0.3nm,0.5s,baz=336,slow=3.5,SNR=5.3						
ASAR	**Alice Springs**	**84.11**	**122**	P	**P**	**13 57 27.3**	**+0.3**
	0.4nm,0.6s,baz=305,slow=5.5,SNR=5.9						
YKA	**Yellowknife Ar**	**87.30**	**1**	P	**P**	**13 57 41.9**	**-0.3**
	0.6nm,0.8s,baz=351,slow=5.3,SNR=10						

CSEM ***08*** *13:47:04.8±0.2, 44.°67N×16.°72E, h8km, ML2.8, Error ellipse: s-maj=7.5km s-min=3.0km az=29.0*

ISCJB ***08*** *13:47:04.5±0.7, 44.°69N±0.°04×16.°76E±0.°04, h10km±4km, Error ellipse: s-maj=7.6km s-min=3.3km az=35.3*

PRU ***08*** *13:47:05.8, 44.°81N×16.°92E, h3km*

BEO ***08*** *13:47:05.1±0.5, 44.°68N×16.°75E, h7km±3km, ML2.8/8*

VIE ***08*** *13:47:05.5±0.4, 44.°77N×16.°84E, h10km, mb2.7/5, ML2.6/5, Error ellipse: s-maj=2.8km s-min=2.5km az=125.0 102 km WSW of Slavonski Brod*

ISC 08 13:47:04.8±1.2**, 44.°68N**±0.°04×**16.°74E**±0.°03**, h10**km±9km**, n48,** σ**0.°75**/80**, 6C-9D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.32**	**77**	⇓*i*Pg	**Pg**	**13 47 10.7**	**-0.5**
BLY				*e*Sg	**Sg**	**13 47 16.3**	**+0.8**
BLY	**Banja Luka**	**0.32**	**77**	⇓*i*Pg	**Pg**	**13 47 10.7**	**-0.5**
BLY				*e*Sg	**Sg**	**13 47 16.3**	**+0.8**
SISC	**Sisak**	**0.84**	**342**	*e*Pg	**Pn**	**13 47 22.2**	**-0.3**
SISC				Sg	**Sn**	**13 47 35.4**	**+0.5**
SISC	**Sisak**	**0.84**	**342**	*e*Pg	**Pn**	**13 47 22.2**	**-0.3**
SISC				Sg	**Sn**	**13 47 35.4**	**+0.5**
BOJS	**Bojanci**	**1.34**	**309**	⇑*i*Pn	**Pb**	**13 47 29.8**	**-0.2**
BOJS				*i* Sn	**Sb**	**13 47 46.7**	**-0.4**
BOJS							
	comp=Z,114nm,0.3s						
BOJS	**Bojanci**	**1.34**	**309**	*e*Pg	**Pn**	**13 47 28.4**	**-1.1**
BOJS				*e*Sg	**Sg**	**13 47 47.7**	**-0.2**
BOJS	**Bojanci**	**1.34**	**309**	*e*Pg	**Pn**	**13 47 28.4**	**-1.1**
BOJS	**Bojanci**	**1.34**	**309**	Pn	**Pb**	**13 47 29.8**	**-0.2**
BOJS				*i* Sn	**Sb**	**13 47 46.7**	**-0.4**
	comp=Z,114nm,0.3s						
BOJS				*e*Sg	**Sg**	**13 47 47.7**	**-0.2**
GCIS	**Gornji Cirnik**	**1.43**	**327**	*i* Pn	**Pn**	**13 47 30.7**	**0.0**
GCIS				*i* Sn	**Sg**	**13 47 51.1**	**+0.4**
GCIS							
	comp=Z,59nm,0.5s						
CRES	**Cresnjev**	**1.47**	**322**	*i* Pn	**Pn**	**13 47 31.3**	**+0.1**
CRES				*i* Sn	**Sg**	**13 47 51.4**	**-0.5**
CRES							
	comp=Z,65nm,0.5s						
CRES	**Cresnjev**	**1.47**	**322**	*i* Pn	**Pn**	**13 47 31.3**	**+0.1**
CRES				*i* Sn	**Sg**	**13 47 51.4**	**-0.5**
	comp=Z,65nm,0.5s						
VISS	**Visnje**	**1.75**	**311**	*i* Pn	**Pn**	**13 47 35.5**	**+0.3**
VISS				*i* Sn	**Sb**	**13 47 59.0**	**-0.1**
VISS							
	comp=Z,408nm,0.0s						
VISS	**Visnje**	**1.75**	**311**	*i* Pn	**Pn**	**13 47 35.5**	**+0.3**
VISS				*i* Sn	**Sb**	**13 47 59.0**	**-0.1**
	comp=Z,408nm,0.0s						
STON	**Ston**	**1.93**	**159**	*e*Pn	**Pn**	**13 47 37.7**	**+0.1**
STON				Sn	**Sn**	**13 48 02.4**	**+0.5**
PKSM	**Moragy**	**2.04**	**40**	*e*Pg	**Pg**	**13 47 43.0**	**-0.8**
PKSM	**Moragy**	**2.04**	**40**	⇓*e*Pn	**Pg**	**13 47 43.5**	**-0.3**
PKSM				*e*Sn	**Sg**	**13 48 11.4**	**+1.3**
PKSM	**Moragy**	**2.04**	**40**	*e*Pg	**Pg**	**13 47 43.0**	**-0.8**
LJU	**Ljubljana**	**2.08**	**312**	*e*Pn	**Pn**	**13 47 40.0**	**+0.4**
LJU				*e*		13 47 43.2	
LJU				*e*Sn	**Sg**	**13 48 12.4**	**+1.0**
LJU				*e*		13 48 14.0	
PKS9	**Tamasi**	**2.19**	**29**	⇓*e*Pn	**Pg**	**13 47 48.5**	**+1.7**
FGSL	**Fruska Gora**	**2.23**	**77**	*e*Pn	**Pb**	**13 47 44.0**	**-1.1**
FRGS	**Fruska Gora**	**2.23**	**76**	*e*Pn	**Pb**	**13 47 44.0**	**-1.1**
SOKA	**Soboth**	**2.33**	**330**	⇑*i*Pn	**Pn**	**13 47 43.4**	**+0.2**
SOKA				⇓*i*Sn	**Sn**	**13 48 12.1**	**+0.1**
SOKA	**Soboth**	**2.33**	**330**	Pn	**Pn**	**13 47 43.4**	**+0.2**
SOKA				Sn	**Sn**	**13 48 12.1**	**+0.1**
OBKA	**Obir**	**2.39**	**321**	⇓*e*Pn	**Pn**	**13 47 44.5**	**+0.4**
	SNR=15						
OBKA				⇑*i*Sn	**Sn**	**13 48 14.8**	**+1.3**
OBKA	**Obir**	**2.39**	**321**	Pn	**Pn**	**13 47 44.5**	**+0.4**
	SNR=15						
OBKA				Sn	**Sn**	**13 48 14.8**	**+1.3**
DIVS	**Divibare**	**2.40**	**103**	*e*Pn	**Pn**	**13 47 44.0**	**-0.1**
DIVS				*e*Sn	**Sn**	**13 48 13.8**	**+0.2**
DIVS	**Divibare**	**2.40**	**103**	*e*Pn	**Pn**	**13 47 44.0**	**-0.1**
DIVS				*e*Sn	**Sn**	**13 48 13.8**	**+0.2**
VOY	**Vojsko**	**2.42**	**305**	*e*Pn	**Pn**	**13 47 44.8**	**+0.3**
VOY				*e*		13 47 47.0	
VOY				*e*Sn	**Sb**	**13 48 19.2**	**+0.8**
VOY	**Vojsko**	**2.42**	**305**	*e*Pn	**Pn**	**13 47 44.8**	**+0.3**
VOY				*e*Sn	**Sb**	**13 48 19.2**	**+0.8**
ARSA	**Arzberg**	**2.71**	**342**	⇑*e*Pn	**Pn**	**13 47 48.6**	**+0.2**
	SNR=6.4						
ARSA				⇓*i*Sn	**Sn**	**13 48 21.0**	**-0.2**
ARSA	**Arzberg**	**2.71**	**342**	Pn	**Pn**	**13 47 48.6**	**+0.2**
	SNR=6.4						
ARSA				Sn	**Sn**	**13 48 21.0**	**-0.2**
GRUS	**Gruza**	**2.96**	**104**	*e*Pn	**Pn**	**13 47 52.2**	**+0.5**
GRUS	**Gruza**	**2.96**	**104**	*e*Pn	**Pn**	**13 47 52.2**	**+0.5**
CONA	**Conrad Observa**	**3.31**	**350**	⇑*i*Pn	**Pn**	**13 47 56.7**	**+0.1**
	SNR=18						
CONA				⇑*i*Sn	**Sn**	**13 48 35.9**	**-0.1**
CONA	**Conrad Observa**	**3.31**	**350**	Pn	**Pn**	**13 47 56.7**	**+0.1**
	SNR=18						
CONA				Sn	**Sn**	**13 48 35.9**	**-0.1**
BZS	**Buzias**	**3.57**	**73**	*e*Pn	**Pn**	**13 48 00.6**	**+0.4**
BZS				*e*Sn	**Sn**	**13 48 41.8**	**-0.6**
BZS	**Buzias**	**3.57**	**73**	*e*Pn	**Pn**	**13 48 00.6**	**+0.4**
BZS				*e*Sn	**Sn**	**13 48 41.8**	**-0.6**
MOA	**Molln**	**3.61**	**332**	⇓*i*Pn	**Pn**	**13 48 01.0**	**+0.3**
	SNR=15						
MOA				⇓*i*Sn	**Sn**	**13 48 43.7**	**+0.4**
MOA	**Molln**	**3.61**	**332**	Pn	**Pn**	**13 48 01.0**	**+0.3**
	SNR=15						
MOA				Sn	**Sn**	**13 48 43.7**	**+0.4**
BARS	**Barje**	**4.12**	**115**	*e*Pn	**Pn**	**13 48 08.1**	**+0.4**
BARS	**Barje**	**4.12**	**115**	*e*Pn	**Pn**	**13 48 08.1**	**+0.4**
ZAPS	**Zavoj**	**4.48**	**106**	*e*Pn	**Pn**	**13 48 13.7**	**+1.1**
VRAC	**Vranov**	**4.63**	**359**	*e*Pn	Pn	13 48 10.9	-3.9
KHC	**Kasperske Hory**	**4.96**	**335**	*e*PN	**Pn**	**13 48 20.0**	**+0.8**
KHC				*e*SN	**Sn**	**13 49 15.0**	**-1.5**
KHC	**Kasperske Hory**	**4.96**	**335**	Pn	**Pn**	**13 48 20.0**	**+0.8**
KHC				Sn	**Sn**	**13 49 15.0**	**-1.5**
MORC	**Moravsky Berou**	**5.13**	**6**	*e*Pn	**Pn**	**13 48 23.4**	**+1.8**
PRU	**Pruhonice**	**5.52**	**345**	*e*SN	**Sn**	**13 49 27.4**	**-3.0**
BRG	**Berggiesshubel**	**6.48**	**344**	SG	Sn	13 50 06.9	+13
	comp=Z,2.0nm,0.5s						

ISCJB ***08*** *13:49:19.1±1.3, 24.°84N±0.°06×122.°95E±0.°03, h4km±9km, Error ellipse: s-maj=11.1km s-min=3.8km az=18.0*

TAP ***08*** *13:49:20.5, 24.°78N×122.°85E, h1km, ML3.1, D*

JMA ***08*** *13:49:20.1±0.3, 24.°71N×122.°86E, h30km, M2.6*

ISC 08 13:49:19.1±1.3**, 24.°83N**±0.°06×**122.°94E**±0.°03**, h12**km±13km**, n27,** σ**1.°06**/33**, 1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**170**	⇑*i*P	**Pg**	**13 49 27.1**	**+0.5**
	baz=156						
YOJ				*e*S	**Sg**	**13 49 31.8**	**+0.2**
	baz=156						
YOJ	**Yonaguni jima**	**0.37**	**170**	P	**Pg**	**13 49 27.1**	**+0.5**
YOJ				*e*S	**Sg**	**13 49 31.8**	**+0.2**
IRIF	**Iriomote-Funau**	**0.87**	**124**	P	**Pg**	**13 49 35.8**	**-0.2**
IRIF				*e*S	**Sg**	**13 49 49.1**	**+1.7**
TWB1	**Santiao Chiao**	**0.88**	**282**	*e*P	**Pg**	**13 49 36.0**	**-0.2**
	baz=286						
TWC	**Suao**	**1.01**	**258**	P	**Pg**	**13 49 38.2**	**-0.5**
	baz=259						
NWF	**Wu-fen Shan**	**1.08**	**283**	*e*P	**Pg**	**13 49 39.7**	**-0.3**
	baz=286						
HATJ	**Hateruma jima**	**1.10**	**134**	P	**Pg**	**13 49 39.0**	**-1.4**
HATJ				*e*S	**Sg**	**13 49 55.1**	**+0.3**
PCYT	**Pengchaiyu**	**1.12**	**316**	*e*P	**Pn**	**13 49 42.4**	**+1.8**
	baz=320						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKRS	Kuro-shima	1.14	121	P	Pg	13 49 40.5	-0.6
JKRS				eS	Sg	13 49 55.8	-0.1
ENA	Nanau	1.16	250	P	Pg	13 49 40.7	-0.8
	baz=250						
TWE	Neicheng	1.16	265	P	Pg	13 49 40.7	-0.8
	baz=266						
JIJ	Ishigaki jima	1.19	113	P	Pg	13 49 40.9	-1.2
JIJ				eS	Sg	13 49 58.4	+0.8
ENTT	Nioudou	1.26	262	P	Pg	13 49 42.6	-0.8
	baz=262						
NSK	Sanguang	1.45	264	eP	Pn	13 49 45.2	0.0
	baz=265						
NNS	Nan Shan	1.48	255	eP	Pn	13 49 46.4	+0.8
	baz=255						
JTJ	Tarama	1.61	96	P	Pn	13 49 48.0	+0.6
WHF	Hehuan Shan	1.67	246	eP	Pn	13 49 49.2	+0.6
	baz=246						
TWT	Tachien	1.71	251	eP	Pg	13 49 51.7	-0.2
	baz=250						
ESL	Shilin	1.71	234	eP	Pn	13 49 48.9	+0.2
	baz=233						
NSTT	Nanjuang	1.77	264	eP	Pn	13 49 51.0	+1.4
	baz=264						
TWQ1	Liyutan	2.03	257	eP	Pn	13 49 54.6	+1.4
	baz=257						
TYC	Yuchr	2.11	245	eP	Pn	13 49 55.5	+1.3
	baz=244						
ALS	Alishan	2.35	236	eP	Pb	13 50 00.5	-1.1
	baz=235						
CHN5	Tsauling	2.40	240	eP	Pb	13 50 01.1	-1.3
	baz=239						
CHN4	Tsaushan	2.60	236	eP	Pb	13 50 04.3	-1.4
	baz=235						
WTP	Ta-pu	2.65	234	eP	Pn	13 50 03.5	+1.8
	baz=233						
CHN1	Nanshi	2.75	234	eP	Pn	13 50 05.0	+2.0
	baz=233						

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*ISK **08** 14:09:10.2, 37°.29N×28°.21E, h2km, MD2.4*
*DDA **08** 14:09:11.4, 37°.17N×28°.00E, h6km, MD2.9*
*CSEM **08** 14:09:11.6±0.3, 37°.24N×28°.21E, h10km, MD2.4, Error ellipse: s-maj=7.3km s-min=3.9km az=34.0*
ISC 08 14:09:11.8±1.0, **37°.25N**±0°.04×**28°.21E**±0°.03, **h8**km±9km, **n16**, σ**0s.60**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.13	152	ePG	Pg	14 09 14.3	-0.3
YER				eSG	Sg	14 09 17.2	+0.5
YER	Yerkesik	0.13	152	ePg	Pg	14 09 14.3	-0.3
YER				eSg	Sg	14 09 17.2	+0.5
MLSB	Milas	0.34	277	ePG	Pg	14 09 17.7	-0.8
MLSB				eSG	Sg	14 09 23.7	+0.6
MLSB	Milas	0.34	277	ePg	Pg	14 09 17.7	-0.8
MLSB				eSg	Sg	14 09 23.7	+0.6
AYDN	Tasoluk	0.48	328	eP	Pg	14 09 21.6	+0.4
AYDN				iS	Sb	14 09 29.4	-0.5
AYDN	Tasoluk	0.48	328	eP	Pg	14 09 21.6	+0.4
AYDN				iS	Sb	14 09 29.4	-0.5
TURN	Turunc	0.49	140	eP	Pg	14 09 20.3	-1.0
TURN				iS	Sb	14 09 30.9	+0.9
TURN	Turunc	0.49	140	eP	Pg	14 09 20.3	-1.0
TURN				iS	Sb	14 09 30.9	+0.9
DALY	Dalyan (Mu˜la	0.56	140	ePG	Pg	14 09 22.4	-0.2
DALY	Dalyan (Mu˜la	0.56	140	ePg	Pg	14 09 22.4	-0.2
DAT	Datca	0.72	224	ePG	Pg	14 09 25.8	+0.1
DAT				eSG	Sb	14 09 37.0	+0.2
DAT	Datca	0.72	224	ePg	Pg	14 09 25.8	+0.1
DAT				eSg	Sb	14 09 37.0	+0.2
BODT	Bodrum	0.74	255	ePG	Pg	14 09 25.6	-0.4
BODT	Bodrum	0.74	255	ePg	Pg	14 09 25.6	-0.4
FETY	Fethiye	0.93	131	ePG	Pb	14 09 29.9	-0.3
FETY	Fethiye	0.93	131	ePg	Pb	14 09 29.9	-0.3

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*ISCJB **08** 14:16:36.2±1.5, 24°.83N±0°.07×122°.94E±0°.03, h7km±9km, Error ellipse: s-maj=11.6km s-min=3.4km az=13.8*
*TAP **08** 14:16:37.3, 24°.79N×122°.86E, h2km±2km, ML3.0, D*
*JMA **08** 14:16:37.8±0.2, 24°.76N×122°.94E, h14km, M2.6*
ISC 08 14:16:36.5±1.3, **24°.78N**±0°.06×**122°.91E**±0°.03, **h13**km±11km, **n29**, σ**0s.70**/37, **1C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.33	163	⇑iP	Pb	14 16 43.9	-0.3
	baz=157						
YOJ				eS	Sb	14 16 48.9	-0.6
	baz=157						
YOJ	Yonaguni jima	0.33	163	P	Pb	14 16 44.0	-0.3
YOJ				eS	Sg	14 16 48.1	+0.4
TWB1	Santiao Chiao	0.86	285	eP	Pg	14 16 53.0	-0.2
	baz=285						
IRIF	Iriomote-Funau	0.87	120	P	Pb	14 16 53.4	-0.1
IRIF				eS	Sb	14 17 04.8	-0.2
TWC	Suao	0.98	260	eP	Pb	14 16 55.3	0.0
	baz=258						
TWC				eS	Sg	14 17 07.8	-0.3
	baz=258						
NWF	Wu-fen Shan	1.06	286	eP	Pn	14 16 58.0	+0.8
	baz=285						
HATJ	Hateruma jima	1.09	131	P	Pn	14 16 57.6	+0.1
HATJ				eS	Sg	14 17 11.8	+0.1
ENA	Nanau	1.12	252	P	Pb	14 16 57.6	-0.1
	baz=250						
TWE	Neicheng	1.13	267	P	Pb	14 16 57.6	-0.3
	baz=266						
JKRS	Kuro-shima	1.14	118	P	Pb	14 16 57.6	-0.4
JKRS				eS	Sb	14 17 12.9	+0.1
JIJ	Ishigaki jima	1.20	110	P	Pb	14 16 59.1	0.0
JIJ				eS	Sb	14 17 14.6	+0.1
ENTT	Nioudou	1.23	264	eP	Pn	14 16 59.3	-0.1
	baz=262						
TWD	Chiawan	1.38	240	eP	Pg	14 17 03.4	+0.3
	baz=238						
NSK	Sanguang	1.41	266	eP	Pn	14 17 02.3	+0.3
	baz=265						
NNS	Nan Shan	1.44	257	eP	Pb	14 17 03.3	+0.1
	baz=255						
WHF	Hehuan Shan	1.62	247	eP	Pb	14 17 06.7	+0.1
	baz=245						
JTJ	Tarama	1.64	94	P	Pn	14 17 05.0	0.0
JTJ				eS	Sn	14 17 25.8	-0.2
ESL	Shilin	1.65	235	eP	Pg	14 17 08.1	-0.1
	baz=232						
TWT	Tachien	1.66	252	eP	Pn	14 17 06.4	+0.9
	baz=250						
NSTT	Nanjuang	1.74	266	eP	Pb	14 17 07.7	-0.6
	baz=264						
TWQ1	Liyutan	1.99	258	eP	Pb	14 17 12.3	-0.3
	baz=256						
SMLT	Sun Moon Lake	2.04	244	eP	Pn	14 17 11.2	+0.5
	baz=243						
TWF1	Yuli	2.05	226	eP	Pn	14 17 11.8	+1.2
	baz=224						
TYC	Yuchr	2.06	245	eP	Pn	14 17 12.3	+1.4
	baz=244						
ALS	Alishan	2.30	237	eP	Pn	14 17 13.9	-0.5
	baz=235						
CHN5	Tsauling	2.35	240	eP	Pb	14 17 17.2	-1.6
	baz=239						
CHN4	Tsaushan	2.55	237	eP	Pb	14 17 22.0	-0.1
	baz=235						
WTP	Ta-pu	2.59	234	eP	Pn	14 17 19.8	+1.6
	baz=233						
CHN1	Nanshi	2.69	234	eP	Pb	14 17 22.6	-2.0
	baz=233						

IDC 08 14:19:51.7±5.5, **21°.57N**×**121°.01E**, **h0**km, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.1**/24, **mbtmp3.2**/3, **MS3.1**/1, **Ms1 3.1**/1, **ms1mx2.3**/21, **Error ellipse: s-maj=441.8km s-min=28.0km az=60.0**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	20.23	51	LR	LR	14 31 47.6	
	comp=Z,53nm,18.1s,baz=14,slow=35						
MKAR	Makanchi Array	40.14	318	P	P	14 27 29.2	-0.1
	0.5nm,1.0s,baz=111,slow=9.2,SNR=4.4						
WRA	Warramunga Arr	43.26	162	P	P	14 27 55.0	-0.2
	0.4nm,0.7s,baz=341,slow=9.0,SNR=3.6						
ASAR	Alice Springs	46.68	164	P	P	14 28 22.3	-0.1
	0.1nm,0.4s,baz=348,slow=6.8,SNR=5.2						

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*DDA **08** 14:21:10.8, 38°.69N×26°.62E, h7km, MD2.9*
*ISK **08** 14:21:10.6, 38°.65N×26°.64E, h8km, MD3.0*
*ISCJB **08** 14:21:10.6±0.5, 38°.70N±0°.03×26°.62E±0°.03, h0km±7km, Error ellipse: s-maj=4.5km s-min=3.9km az=28.8*
*THE **08** 14:21:11.8, 38°.71N×26°.52E, h3km±5km, ML2.1/3, Error ellipse: s-maj=5.6km s-min=0.8km az=281.0*
*CSEM **08** 14:21:11.1±0.2, 38°.68N×26°.62E, h5km, MD2.9, Error ellipse: s-maj=3.4km s-min=3.2km az=61.0*
ISC 08 14:21:11.1±1.0, **38°.68N**±0°.02×**26°.62E**±0°.02, **h6**km±10km, **n34**, σ**0s.66**/52, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.32	183	iP	Pg	14 21 17.5	+0.2
URLA				iS	Sb	14 21 23.9	-0.8
URLA	Izmir	0.32	183	iP	Pg	14 21 17.5	+0.2
URLA				iS	Sb	14 21 23.9	-0.8
BLCB	Balcova	0.45	131	ePG	Pg	14 21 19.7	0.0
BLCB				eSG	Sg	14 21 25.1	-0.4
BLCB	Balcova	0.45	131	ePg	Pg	14 21 19.7	0.0
BLCB				eSg	Sg	14 21 25.1	-0.4
CHOS	Chios island	0.53	236	P	Pg	14 21 21.4	+0.1
CHOS				S	Sg	14 21 28.4	+0.2
CHOS	Chios island	0.53	236	P	Pg	14 21 21.4	+0.1
CHOS				S	Sg	14 21 28.4	+0.2
IZM	Izmir	0.58	119	ePG	Pg	14 21 22.0	-0.2
IZM				eSG	Sg	14 21 30.2	+0.4
IZM	Izmir	0.58	119	ePg	Pg	14 21 22.0	-0.2
IZM				eSg	Sg	14 21 30.2	+0.4
PRK	Paraskevi	0.62	335	P	Pg	14 21 22.8	-0.3
PRK				S	Sg	14 21 31.2	0.0
PRK	Paraskevi	0.62	335	P	Pg	14 21 22.8	-0.3
PRK				S	Sg	14 21 31.2	0.0
SIGR	SIGRI	0.80	312	P	Pg	14 21 26.3	-0.1
SIGR				S	Sg	14 21 36.8	+0.1
SIGR	SIGRI	0.80	312	P	Pg	14 21 26.3	-0.1
SIGR				S	Sg	14 21 36.8	+0.1
AKHS	Akhisar	0.96	78	eP	Pg	14 21 29.2	-0.2
AKHS				iS	Sg	14 21 42.4	+0.6
AKHS	Akhisar	0.96	78	eP	Pg	14 21 29.2	-0.2
AKHS				iS	Sg	14 21 42.4	+0.6
AKS	Akhisar	0.96	78	ePG	Pg	14 21 29.1	-0.3
AKS				eSG	Sg	14 21 42.1	+0.3
AKS	Akhisar	0.96	78	ePg	Pg	14 21 29.1	-0.3
AKS				eSg	Sg	14 21 42.1	+0.3
BALY	Balya	1.31	36	eP	Pn	14 21 34.2	-1.8
BALY				iS	Sn	14 21 54.3	+0.4
BALY	Balya	1.31	36	eP	Pn	14 21 34.2	-1.8
BALY				iS	Sn	14 21 54.3	+0.4
BALB	Balikesir	1.37	45	ePN	Pb	14 21 37.1	0.0
BALB	Balikesir	1.37	45	ePn	Pb	14 21 37.1	0.0
GONE	Gonen-Balikesi	1.60	31	ePN	Pn	14 21 39.0	-0.8
GONE	Gonen-Balikesi	1.60	31	ePn	Pn	14 21 39.0	-0.8
APE	Apeiranthos	1.82	208	ePN	Pn	14 21 42.1	-0.9
APE	Apeiranthos	1.82	208	ePn	Pn	14 21 42.1	-0.9
EDC	Edincik	1.92	30	ePN	Pn	14 21 45.2	+0.8
EDC	Edincik	1.92	30	ePn	Pn	14 21 45.2	+0.8
ERIK	Erikli-Kesan	1.99	358	ePN	Pn	14 21 46.2	+1.0
ERIK	Erikli-Kesan	1.99	358	ePn	Pn	14 21 46.2	+1.0
MRMT	Marmara Adasi	2.06	21	ePN	Pn	14 21 47.1	+0.8
MRMT	Marmara Adasi	2.06	21	ePn	Pn	14 21 47.1	+0.8
KCTX	Karacabey (Bur	2.08	40	ePN	Pn	14 21 46.9	+0.4
KCTX	Karacabey (Bur	2.08	40	ePn	Pn	14 21 46.9	+0.4
ARG	Arkhangelos	2.74	154	P	Pn	14 21 56.6	+1.1
ARG	Arkhangelos	2.74	154	P	Pn	14 21 56.6	+1.1

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*AUST **08** 14:44:33.5±2.5, 33°.64S×178°.48W, h44km, Error ellipse: s-maj=3.6km s-min=1.0km az=292.0*
*ISCJB **08** 14:44:35.9±0.5, 33°.60S±0°.04×179°.15W±0°.08, h55km, mb4.4/14, MS3.9/10, Error ellipse: s-maj=9.6km s-min=4.9km az=17.3*
*NEIC **08** 14:44:36.6±1.3, 33°.22S×179°.17W, h44km±10km, mb4.3/3, Error ellipse: s-maj=14.3km s-min=10.2km az=127.0*
*IDC **08** 14:44:39.2±2.5, 33°.11S×179°.24W, h65km±21km, mb4.2/11, mb1 4.4/12, mb1mx4.2/22, mbtmp4.2/12, MS3.9/13, Ms1 3.9/13, ms1mx3.6/37, Error ellipse: s-maj=20.7km s-min=14.1km az=1.0*
ISC 08 14:44:36.8±0.4, **33°.47S**±0°.04×**178°.97W**±0°.07, **h55**km, **n120**, σ**1s.45**/90, **mb4.6**/12, **MS3.8**/10, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	4.30	12	ePn	Pn	14 45 36.3	-3.4
RAO				eSn	Sn	14 46 23.4	-5.1
RAO	Raoul Island	4.30	12	P	Pn	14 45 37.2	-2.5
	226nm,0.3s,baz=73,slow=22,SNR=10.0						
RAO				S	Sn	14 46 26.0	-2.6
	427nm,0.3s,baz=109,slow=23,SNR=7.2						
MXZ	Matakaoa Point	4.65	208	PN	Pn	14 45 43.9	-0.6
MXZ				eSN	Sn	14 46 40.0	+2.8
PUZ	Puketiti	5.12	205	PN	Pn	14 45 49.7	-1.3
PUZ				eSN	Sn	14 46 46.4	-2.3
KUZ	Kuaotunu	5.44	232	ePN	Pn	14 45 57.1	+1.7
CNGZ	Carnagh Statio	5.50	204	PN	Pn	14 45 55.6	-0.6
MWZ	Matawai	5.63	209	PN	Pn	14 45 56.1	-1.8
MWZ				SN	Sn	14 47 02.6	+1.4
MARZ	Manawahe	5.73	217	ePN	Pn	14 45 60.0	+0.6
URZ	Urewera	5.74	213	ePn	Pn	14 45 58.4	-1.1
	115nm,0.6s						
URZ				eSn	Sn	14 47 05.9	+1.9
URZ	Urewera	5.74	213	ePN	Pn	14 45 58.0	-1.5
URZ				SN	Sn	14 47 02.4	-1.6
URZ	Urewera	5.74	213	P	Pn	14 45 59.3	-0.2
	16nm,0.3s,baz=17,slow=1.1,SNR=82						
URZ				S	Sn	14 47 02.5	-1.6
	11nm,0.3s,baz=176,slow=22,SNR=2.8						
URZ				LR	LR	14 48 14.0	
	comp=Z,534nm,19.9s,baz=35,slow=36						
MKAZ	Moumakai	6.02	231	ePN	Pn	14 46 05.7	+2.5
WCZ	Waipu Caves	6.03	244	PN	Pn	14 46 04.9	+1.4
KNZ	Kokohu	6.17	205	ePN	Pn	14 46 03.5	-1.7
TOZ	Tahuroa Road	6.19	225	ePN	Pn	14 46 07.5	+1.8
RAHZ	Arahi	6.30	209	ePN	Pn	14 46 06.8	-0.4
OUZ	Omahuta	6.39	252	ePn	Pn	14 46 09.2	+0.9
	72nm,0.5s						
OUZ	Omahuta	6.39	252	PN	Pn	14 46 09.1	+0.7
NMHZ	Naumai	6.57	210	ePN	Pn	14 46 11.3	+0.3
BKZ	Black Stump Fm	6.76	211	ePN	Pn	14 46 10.5	-3.0
BKZ				eSN	Sn	14 47 26.5	-2.7
FWVZ	Far West T-bar	7.27	216	ePN	Pn	14 46 19.7	-0.9
PXZ	Pawanui	7.36	206	ePN	Pn	14 46 16.8	-4.7
PNHZ	Pukenui	7.51	210	ePN	Pn	14 46 20.9	-2.9
TSZ	Takapari Road	7.73	210	ePN	Pn	14 46 22.7	-4.1
WAZ	Wanganui	7.94	216	ePN	Pn	14 46 28.0	-1.5
MRZ	Mangatainoka R	8.40	210	ePN	Pn	14 46 32.2	-3.6
MRZ				eSN	Sn	14 48 02.8	-6.4
OGWZ	Otaki Gorge	8.70	211	ePN	Pn	14 46 35.9	-4.0
KIW	Kapiti Island	8.85	212	ePN	Pn	14 46 37.8	-4.2
TCW	Tory Channel	9.41	213	ePN	Pn	14 46 44.5	-5.2
NNZ	Nelson	9.84	216	ePN	Pn	14 46 49.7	-5.9
QRZ	Quartz Range	9.99	220	ePN	Pn	14 46 52.8	-4.9
CTZ	Chatham Island	10.42	171	ePN	Pn	14 47 04.3	+1.0
CTZ				eSN	Sn	14 48 50.6	-7.9
THZ	Tophouse	10.49	216	ePN	Pn	14 46 58.8	-5.7
THZ				eSN	Sn	14 48 52.0	-8.5
KHZ	Kahutara	10.71	211	ePN	Pn	14 47 02.3	-5.1
LTZ	Lake Taylor	11.57	214	ePN	Pn	14 47 11.5	-7.7
OXZ	Oxford	12.10	213	ePN	Pn	14 47 18.5	-7.9
OXZ				eSN	Sn	14 49 26.1	-14
MQZ	McQueen's Vall	12.14	210	SN	Sn	14 49 27.1	-13
RPZ	Rata Peaks	12.86	214	P	Pn	14 47 29.3	-7.4
RPZ	Rata Peaks	12.86	214	P	Pn	14 47 29.3	-7.4
	1.7nm,0.3s,baz=115,slow=24,SNR=7.8						
RPZ				S	Sn	14 49 47.8	-10
	1.7nm,0.3s,baz=2.5,slow=22,SNR=6.8						
RPZ				LR	LR	14 52 09.8	
	comp=Z,564nm,20.9s,baz=40,slow=35						
JCZ	Jackson Bay	14.26	218	ePN	Pn	14 47 51.8	-3.9
MSVF	Nonsavu	15.89	350	ePn	Pn	14 48 13.4	-3.7
	18nm,0.8s						
DZM	Mont Dzumac	17.17	308	eP	P	14 48 34.4	+0.4
	59nm,1.1s						
DZM				eLR	LR	14 52 29.1	
	849nm,24.2s						
DZM	Mont Dzumac	17.17	308	P	Pn	14 48 31.2	-1.9
DZM	Mont Dzumac	17.17	308	P	Pn	14 48 31.2	-1.9
	0.1nm,0.3s,baz=116,slow=16,SNR=5.7						
DZM				LR	LR	14 53 20.0	
	comp=Z,472nm,21.7s,baz=217,slow=31						
RAR	Rarotonga	20.93	59	P	P	14 49 20.5	+5.5
RAR	Rarotonga	20.93	59	P	P	14 49 20.5	+5.5
	18nm,0.9s,baz=270,slow=4.2,SNR=3.6						
RAR				LR	LR	14 54 50.8	
	comp=Z,289nm,19.2s,baz=270,slow=29						
TBI	Tubuai	27.76	76	eLR	LR	14 57 30.3	
	317nm,28.8s						
TBI				eT	T	15 19 06.9	
	49nm,0.3s						
RMQ	Roma	28.73	275	P	P	14 50 32.9	+3.8
	baz=29,SNR=4.1						
PAE	Paea	30.69	66	eT	T	15 22 37.7	
	22nm,0.2s						
PPT2	Papeete2	30.74	66	eLR	LR	14 58 48.4	
	310nm,27.0s						
PPT2				eT	T	15 22 41.9	
	18nm,0.3s						
PPT	Papeete	30.75	66	LR	LR	14 59 31.9	
	comp=Z,190nm,21.2s,baz=339,slow=29						
HNR	Honiara	30.81	316	LR	LR	14 59 52.9	
	comp=Z,135nm,20.7s,baz=282,slow=30						
TVO	Taravao	30.87	67	eT	T	15 22 52.1	
	10nm,0.4s						
TIAR	Tiarei	30.93	67	eT	T	15 22 55.8	
	11nm,0.3s						
MEH	Mehetia	31.74	68	eT	T	15 23 57.7	
	105nm,0.3s						
STKA	Stephens Creek	33.10	262	P	P	14 51 08.1	+0.6
STKA	Stephens Creek	33.10	262	P	P	14 51 08.1	+0.6
	0.5nm,0.4s,baz=110,slow=15,SNR=3.5						
STKA				LR	LR	15 02 54.2	
	comp=Z,230nm,20.1s,baz=288,slow=33						
PMOR	Pomariorio Ree	33.59	64	eT	T	15 26 13.1	
	6.3nm,0.3s						
CTA	Charters Tower	33.62	284	P	P	14 51 11.9	-0.2
CTA	Charters Tower	33.62	284	P	P	14 51 11.9	-0.2
	7.0nm,0.6s,baz=96,slow=12,SNR=7.8						
CTA				LR	LR	15 01 57.8	
	comp=Z,132nm,20.8s,baz=115,slow=31						
MTSU	Mount Surprise	36.19	286	P	P	14 51 35.2	+0.8
	baz=37,SNR=4.1						
COEN	Coen	39.44	290	P	P	14 52 02.0	+0.3
	baz=40,SNR=6.2						
RKT	Rikitea	39.84	87	eT	T	15 34 20.4	
	3.9nm,0.3s						
AS31	Alice Springs	42.22	271	eP	P	14 52 23.4	-1.3
ASAR	Alice Springs	42.22	271	P	P	14 52 23.9	-0.7
ASAR				S	S	14 58 39.1	-2.1
ASAR	Alice Springs	42.22	271	P	P	14 52 23.9	-0.7
	4.3nm,0.5s,baz=108,slow=7.6,SNR=96						
ASAR				S	S	14 58 39.1	-2.1
	0.4nm,0.8s,baz=112,slow=15,SNR=3.2						
ASAR				LR	LR	15 07 35.0	
	comp=Z,110nm,18.9s,baz=113,slow=33						
WRA	Warramunga Arr	43.49	276	P	P	14 52 34.1	-0.8
WRA	Warramunga Arr	43.49	276	P	P	14 52 34.1	-0.8
	4.1nm,0.3s,baz=116,slow=8.2,SNR=166						
VNDA	Vanda	44.97	186	LR	LR	15 07 27.5	
	comp=Z,136nm,20.4s,baz=349,slow=30						
KDU	Kakadu	48.72	283	P	P	14 53 18.4	+2.3
	baz=49,SNR=4.1						
MTN	Manton Dam	49.73	282	P	P	14 53 26.2	+2.4
	baz=50,SNR=3.3						
KNRA	Kununurra	50.20	277	P	P	14 53 26.7	-0.7
	baz=51,SNR=12						
FITZ	Fitzroy Crossi	51.60	273	P	P	14 53 37.2	-0.7
FITZ	Fitzroy Crossi	51.60	273	P	P	14 53 37.2	-0.7
	7.8nm,0.8s,baz=168,slow=8.2,SNR=28						
FITZ				LR	LR	15 14 55.1	
	comp=Z,124nm,18.1s,baz=115,slow=35						
FITZ	Fitzroy Crossi	51.60	273	P	P	14 53 37.1	-0.8
	baz=52,SNR=12						
MEEK	Meekatharra	53.76	260	P	P	14 53 53.4	-0.4
	baz=54,SNR=4.2						
MORW	Morawa	54.92	256	P	P	14 54 00.6	-1.6
	baz=55,SNR=3.3						
QSPA	South Pole Qui	56.65	180	P	P	14 54 18.2	+4.0
QSPA	South Pole Qui	56.65	180	P	P	14 54 18.2	+4.0
	4.0nm,0.7s,baz=16,slow=1.8,SNR=19						
PLCA	Paso Flores	81.02	133	P	P	14 56 49.6	+3.7
PLCA	Paso Flores	81.02	133	P	P	14 56 49.6	+3.7
	3.3nm,0.9s,baz=215,slow=5.5,SNR=5.4						
KSRS	Korea Array	86.16	320	P	P	14 57 10.9	-1.0
	0.8nm,0.7s,baz=147,slow=6.7,SNR=4.8						
KSAR	Wonju Array Be	86.17	320	P	P	14 57 10.9	-1.1
PFO	Pinyon Flat Ob	88.88	48	P	P	14 57 27.1	+1.9
PFO	Pinyon Flat Ob	88.88	48	P	P	14 57 27.1	+1.9
	4.4nm,0.8s,baz=175,slow=4.3,SNR=4.4						
ISA	Isabella	89.05	45	eP	P	14 57 26.0	+0.1
	6.5nm,1.1s						
NVAR	Mina Array Bea	91.04	43	P	P	14 57 35.6	+0.3
NVAR	Mina Array Bea	91.04	43	P	P	14 57 35.6	+0.3
	2.7nm,0.9s,baz=221,slow=7.7,SNR=10						
TUC	Tucson	91.66	52	eP	P	14 57 40.3	+2.1
	0.3nm,0.9s						
TXAR	Lajitas Array	94.72	58	LR	LR	15 33 27.1	
	comp=Z,74nm,19.1s,baz=185,slow=31						
PDAR	Pinedale Array	98.91	44	P	Pdif	14 58 13.1	+1.9
PDAR	Pinedale Array	98.91	44	P	Pdif	14 58 13.1	+1.9
	0.5nm,0.9s,baz=116,slow=2.1,SNR=3.2						
PDAR				LR	LR	15 39 02.5	
	comp=Z,79nm,18.0s,baz=101,slow=33						
ILAR	Eielson Array	101.09	13	P	Pdif	14 58 21.4	+1.3
ILAR	Eielson Array	101.09	13	P	Pdif	14 58 21.4	+1.3
	0.7nm,1.1s,baz=209,slow=6.5,SNR=6.3						
AKTO	Aktyubinsk	135.50	310	PKP	PKPdf	15 03 50.5	+0.3
AKTO	Aktyubinsk	135.50	310	PKP	PKPdf	15 03 50.5	+0.3
	0.6nm,0.4s,baz=32,slow=6.7,SNR=4.4						
ARCES	ARCESS Array B	141.39	346	PKPpre	PKPpre	15 03 54.7	
ARCES	ARCESS Array B	141.39	346	PKhKP	PKPpre	15 03 54.7	
	2.3nm,0.8s,baz=53,slow=2.5,SNR=8.9						
JOF	Joensuu	144.92	336	ep	PKPbc	15 04 05.6	-0.6
	1.9nm,0.5s						
KAF	Kangasniemi	147.12	338	ep	PKPbc	15 04 11.5	-1.4
	5.0nm,0.6s						
FIA1	FINESS Array S	147.70	338	ePKPdf	PKPdf	15 04 11.8	+0.2
FIA1				ePKPbc	PKPbc	15 04 13.9	-0.5
FINES	FINESS Array B	147.70	338	PKPbc	PKPbc	15 04 13.7	-0.8
FINES	FINESS Array B	147.70	338	PKPbc	PKPbc	15 04 13.7	-0.8
	8.2nm,0.5s,baz=38,slow=5.9,SNR=38						
MMAI	Mount Meron Ar	151.32	279	PKPbc	PKPbc	15 04 23.6	-0.9
MMAI				PKPab	PKPab	15 04 33.0	+0.2
MMAI	Mount Meron Ar	151.32	279	PKPbc	PKPbc	15 04 23.6	-0.9
	4.9nm,0.6s,baz=98,slow=4.3,SNR=9.2						
MMAI				PKPab	PKPab	15 04 33.0	+0.2
	1.6nm,0.4s,baz=81,slow=6.1,SNR=6.9						
NB2	NORSAR Subarra	151.63	350	PKP	PKPbc	15 04 24.0	-0.2
	comp=Z,9.1nm,0.7s,baz=16,slow=2.6						
NOA	NORSAR Array B	151.63	350	PKPbc	PKPbc	15 04 24.3	0.0
NOA	NORSAR Array B	151.63	350	PKPbc	PKPbc	15 04 24.3	0.0
	comp=Z,6.4nm,0.8s,baz=20,slow=4.7,SNR=21						
HFS	Hagfors	152.05	346	PKPbc	PKPbc	15 04 24.8	-0.4
HFS	Hagfors	152.05	346	PKPbc	PKPbc	15 04 24.8	-0.4
	comp=Z,13nm,0.8s,baz=101,slow=2.7,SNR=25						
AKASG	Malin Array Be	153.14	318	PKPbc	PKPbc	15 04 27.0	-0.8
AKASG	Malin Array Be	153.14	318	PKPbc	PKPbc	15 04 27.0	-0.8
	comp=Z,0.3nm,0.3s,baz=66,slow=2.4,SNR=4.4						
BRTR	Keskin Array B	153.18	293	PKPbc	PKPbc	15 04 27.2	-1.3
BRTR	Keskin Array B	153.18	293	PKPbc	PKPbc	15 04 27.2	-1.3
	comp=Z,2.3nm,0.8s,baz=124,slow=2.5,SNR=9.2						
TORD	Torodi Ar. Bea	159.76	182	PKP	PKPdf	15 04 31.5	+1.3
TORD				PKPab	PKPab	15 05 10.4	+1.5
TORD	Torodi Ar. Bea	159.76	182	PKP	PKPdf	15 04 31.5	+1.3
	comp=Z,1.7nm,1.1s,baz=345,slow=2.2,SNR=4.9						
TORD				PKPab	PKPab	15 05 10.4	+1.5
	comp=Z,3.4nm,0.9s,baz=171,slow=3.7,SNR=9.5						
ESDC	Sonseca Array	172.62	32	PKP	PKPdf	15 04 41.9	+2.3
ESDC	Sonseca Array	172.62	32	PKP	PKPdf	15 04 41.9	+2.3
	comp=Z,0.4nm,0.2s,baz=326,slow=2.4,SNR=4.5						
MDT	Midelt	175.22	96	PKP	PKPdf	15 04 43.9	+3.1
MDT	Midelt	175.22	96	PKP	PKPdf	15 04 43.9	+3.1
	comp=Z,1.9nm,0.9s,baz=12,slow=3.9,SNR=3.8						

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*HLW **08** 14:53:48.2, 35°.43N×23°.00E, h33km±45km, Md0.0, Ml4.0*
*IDC **08** 14:53:49.1±0.6, 35°.08N×23°.11E, h0km, mb4.2/20, mb1 4.2/25, mb1mx4.2/34, mbtmp4.1/25, ML3.9/4, MS3.5/7, Ms1 3.5/7, ms1mx3.0/54, Error ellipse: s-maj=14.7km s-min=13.5km az=133.0*
*MOS **08** 14:53:52.7±1.6, 35°.02N×23°.17E, h33km, mb4.5/24, Error ellipse: s-maj=9.5km s-min=4.6km az=87.2*
*ISCJB **08** 14:53:52.7±0.3, 34°.90N±0°.02×23°.13E±0°.03, h42km±3km, mb4.3/42, MS3.6/6, Error ellipse: s-maj=4.0km*

s-min=2.7km az=140.6

*BJI **08** 14:53:53.9, 35.11°N×22.72°E, h67km, mB4.8/2, mb4.5/10, Ms4.2/1, Ms7 4.6/1*

*CSEM **08** 14:53:54.5±0.1, 34.91°N×23.07°E, h51km±1km, mb4.4/26, Mw4.7, Error ellipse: s-maj=3.9km s-min=2.2km az=52.0*

*ATH **08** 14:53:55.9, 35.15°N×23.11°E, h80km±2km, ML3.9*

*THE **08** 14:53:57.0, 35.10°N×23.10°E, h74km±6km, ML4.1/2, Error ellipse: s-maj=6.5km s-min=1.2km az=106.0*

ISC 08 14:53:54.3±0.6, **34.97°N**±0.04°×**23.11°E**±0.04°, **h37**km±1km, **n385**, σ1.s**34**/390, **mb4.3**/40, **MS3.6**/6, **9C-1D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.82	99	P	Pn	14 54 12.4	+3.1
GVD	Gavdhos	0.82	99	P	Pn	14 54 12.4	+3.1
ANKY	Antikythira Is	0.91	10	eP	Pn	14 54 11.9	+1.3
ANKY	Antikythira Is	0.91	10	eP	Pn	14 54 11.9	+1.3
VAM	Vamos	1.00	64	P	Pn	14 54 14.4	+2.7
VAM	Vamos	1.00	64	eP	Pn	14 54 14.7	+3.0
VAM	Vamos	1.00	64	P	Pn	14 54 14.4	+2.7
KYTH	Kithira	1.31	358	eP	Pn	14 54 17.7	+1.6
KYTH	Kithira	1.31	358	eP	Pn	14 54 17.7	+1.6
SIVA	Sivas	1.40	88	eP	Pn	14 54 20.8	+3.5
VLI	Veliai	1.75	356	P	Pn	14 54 23.8	+1.7
VLI				S	Sn	14 54 45.0	+1.8
VLI	Veliai	1.75	356	eP	Pn	14 54 24.0	+1.9
VLI	Veliai	1.75	356	P	Pn	14 54 23.8	+1.7
VLI				S	Sn	14 54 45.0	+1.8
DYR	Agios Nikonas	1.90	341	eP	Pn	14 54 25.6	+1.5
DYR	Agios Nikonas	1.90	341	eP	Pn	14 54 25.6	+1.5
LAST	Lasithi	1.96	84	P	Pn	14 54 28.8	+3.8
LAST	Lasithi	1.96	84	P	Pn	14 54 28.8	+3.8
NPS	Neapolis	2.08	81	P	Pn	14 54 30.5	+3.9
NPS	Neapolis	2.08	81	eP	Pn	14 54 30.0	+3.4
NPS	Neapolis	2.08	81	P	Pn	14 54 30.5	+3.9
PYL	PYLOS	2.22	330	eP	Pn	14 54 29.2	+0.7
PYL	PYLOS	2.22	330	eP	Pn	14 54 29.2	+0.7
SANT	Santorini	2.37	53	P	Pn	14 54 32.6	+1.9
SANT	Santorini	2.37	53	P	Pn	14 54 32.6	+1.9
ITM	Ithomi	2.40	337	eP	Pn	14 54 32.0	+0.9
ITM	Ithomi	2.40	337	eP	Pn	14 54 32.0	+0.9
VLX	Vlachokerasia	2.47	346	eP	Pn	14 54 34.2	+2.1
VLX	Vlachokerasia	2.47	346	eP	Pn	14 54 34.2	+2.1
DID	Didima	2.54	2	P	Pn	14 54 34.2	+1.3
DID	Didima	2.54	2	eP	Pn	14 54 34.1	+1.2
DID	Didima	2.54	2	P	Pn	14 54 34.2	+1.3
ZKR	Zakros	2.56	86	P	Pn	14 54 36.9	+3.7
ZKR	Zakros	2.56	86	P	Pn	14 54 36.9	+3.7
NAIG	Nisos Aigina	2.80	6	eP	Pn	14 54 38.4	+1.9
NAIG	Nisos Aigina	2.80	6	eP	Pn	14 54 38.4	+1.9
APE	Apeiranthos	2.87	42	ePN	Pn	14 54 39.7	+2.1
APE	Apeiranthos	2.87	42	P	Pn	14 54 38.7	+1.1
APE				S	Sn	14 55 12.1	+1.2
APE	Apeiranthos	2.87	42	eP	Pn	14 54 38.7	+1.1
APE				eS	Sn	14 55 11.3	+0.4
APE	Apeiranthos	2.87	42	eP	Pn	14 54 38.7	+1.1
APE				S	Sn	14 55 12.1	+1.2
LTBQ	Tobruq	2.98	167	iP	Pn	14 54 43.0	+3.9
	SNR=24						
GUR	Goura	3.02	348	eP	Pn	14 54 41.4	+1.7
GUR	Goura	3.02	348	eP	Pn	14 54 41.4	+1.7
ATH	Athens Observa	3.04	9	P	Pn	14 54 41.7	+1.9
ATH	Athens Observa	3.04	9	eP	Pn	14 54 41.6	+1.8
ATH	Athens Observa	3.04	9	eP	Pn	14 54 41.6	+1.8
LTK	Loutraki	3.05	358	P	Pn	14 54 41.3	+1.3
LTK	Loutraki	3.05	358	eP	Pn	14 54 41.3	+1.3
LTK	Loutraki	3.05	358	eP	Pn	14 54 41.3	+1.3
PTL	Penteli	3.13	11	P	Pn	14 54 42.7	+1.5
PTL	Penteli	3.13	11	eP	Pn	14 54 43.0	+1.8
PTL	Penteli	3.13	11	P	Pn	14 54 42.7	+1.5
KLV	Kalavryta, Ach	3.16	346	eP	Pn	14 54 43.2	+1.6
KLV	Kalavryta, Ach	3.16	346	eP	Pn	14 54 43.2	+1.6
MRMA	Marmari	3.25	18	P	Pn	14 54 44.2	+1.5
MRMA	Marmari	3.25	18	P	Pn	14 54 44.2	+1.5
RLS	Riolos of Patr	3.35	337	P	Pn	14 54 45.6	+1.4
RLS	Riolos of Patr	3.35	337	eP	Pn	14 54 45.5	+1.4
RLS	Riolos of Patr	3.35	337	eP	Pn	14 54 45.5	+1.4
KARP	Karpathos	3.37	79	eP	Pn	14 54 48.1	+3.7
LAKA	Lakka	3.39	345	P	Pn	14 54 46.1	+1.5
LAKA	Lakka	3.39	345	eP	Pn	14 54 46.2	+1.6
LAKA	Lakka	3.39	345	P	Pn	14 54 46.1	+1.5
DSF	Desfina	3.47	352	P	Pn	14 54 46.8	+1.1
DSF	Desfina	3.47	352	P	Pn	14 54 46.8	+1.1
PSA1	Psathopyrgos	3.49	344	eP	Pn	14 54 48.2	+2.2
TRIZ	Trizonia	3.49	347	P	Pn	14 54 47.4	+1.4
TRIZ	Trizonia	3.49	347	eP	Pn	14 54 47.5	+1.4
TRIZ	Trizonia	3.49	347	P	Pn	14 54 47.4	+1.4
KALE	Kalithea	3.50	347	P	Pn	14 54 47.2	+1.0
KALE	Kalithea	3.50	347	eP	Pn	14 54 47.4	+1.2
KALE	Kalithea	3.50	347	eP	Pn	14 54 47.4	+1.2
EFP	Efpalio	3.58	345	P	Pn	14 54 49.0	+1.7
EFP	Efpalio	3.58	345	eP	Pn	14 54 48.9	+1.7
EFP	Efpalio	3.58	345	eP	Pn	14 54 48.9	+1.7
KFL	Anninata	3.65	330	P	Pn	14 54 48.1	-0.1
KFL	Anninata	3.65	330	P	Pn	14 54 48.1	-0.1
LKR	Lokris	3.68	359	P	Pn	14 54 49.5	+0.9
LKR	Lokris	3.68	359	eP	Pn	14 54 49.3	+0.7
LKR				eS	Sn	14 55 29.7	-0.9
LKR	Lokris	3.68	359	P	Pn	14 54 49.5	+0.9
MRKA	Markates	3.75	6	P	Pn	14 54 50.7	+1.1
MRKA	Markates	3.75	6	P	Pn	14 54 50.7	+1.1
VLS	Valsamata	3.79	328	P	Pn	14 54 49.8	-0.4
VLS	Valsamata	3.79	328	eP	Pn	14 54 49.7	-0.4
VLS	Valsamata	3.79	328	P	Pn	14 54 49.8	-0.4
BODT	Bodrum	4.00	57	eP	Pn	14 54 54.5	+1.5
DAT	Datca	4.04	63	eP	Pn	14 54 55.2	+1.6
EVR	Evrytania	4.08	346	P	Pn	14 54 56.1	+2.0
EVR	Evrytania	4.08	346	eP	Pn	14 54 56.9	+2.8
EVR	Evrytania	4.08	346	P	Pn	14 54 56.1	+2.0
AGG	Agios Georgios	4.09	352	P	Pn	14 54 55.3	+1.0
AGG				S	Sn	14 55 41.0	0.0
AGG	Agios Georgios	4.09	352	eP	Pn	14 54 55.6	+1.3
AGG				eS	Sn	14 55 39.5	-1.5
AGG	Agios Georgios	4.09	352	eP	Pn	14 54 55.6	+1.3
AGG				S	Sn	14 55 41.0	0.0
CHOS	Chios island	4.15	34	P	Pn	14 54 56.6	+1.4
CHOS	Chios island	4.15	34	eP	Pn	14 54 56.6	+1.4
CHOS	Chios island	4.15	34	eP	Pn	14 54 56.6	+1.4
AOS	Alonnisos	4.24	8	P	Pn	14 54 57.2	+0.9
AOS	Alonnisos	4.24	8	eP	Pn	14 54 57.2	+0.9
AOS	Alonnisos	4.24	8	eP	Pn	14 54 57.2	+0.9
ARG	Arkhangelos	4.28	72	eP	Pn	14 54 58.9	+2.1
ARG				eS	Sn	14 55 46.8	+1.4
ARG	Arkhangelos	4.28	72	eP	Pn	14 54 58.9	+2.1
ARG				eS	Sn	14 55 46.8	+1.4
LKD2	Lefkada island	4.29	333	eP	Pn	14 54 57.8	+0.8
LKD2				eS	Sn	14 55 44.1	-1.7
LKD2	Lefkada island	4.29	333	eP	Pn	14 54 57.8	+0.8
NEO	Neokhori	4.33	1	eP	Pn	14 54 58.4	+0.8
NEO	Neokhori	4.33	1	eP	Pn	14 54 58.4	+0.8
XOR	Xorichti	4.39	1	P	Pn	14 54 59.7	+1.3
XOR	Xorichti	4.39	1	P	Pn	14 54 59.7	+1.3
MLSB	Milas	4.44	57	eP	Pn	14 54 57.9	-1.2
BLCB	Balcova	4.65	42	eP	Pn	14 55 01.1	-0.8
THL	Klokotos Trika	4.67	350	P	Pn	14 55 02.7	+0.5
THL				S	Sn	14 55 55.6	+0.5
THL	Klokotos Trika	4.67	350	eP	Pn	14 55 02.7	+0.5
THL				eS	Sn	14 55 53.1	-2.0
THL	Klokotos Trika	4.67	350	eP	Pn	14 55 02.7	+0.5
THL				S	Sn	14 55 55.6	+0.5
YER	Yerkesik	4.72	61	eP	Pn	14 55 06.0	+3.1
LJBD	Adjabya	4.72	212	iP	Pn	14 55 02.8	-0.2
	SNR=23						
SIGR	SIGRI	4.77	27	P	Pn	14 55 04.4	+0.8
SIGR	SIGRI	4.77	27	P	Pn	14 55 04.4	+0.8
IZM	Izmir	4.78	43	eP	Pn	14 55 04.8	+1.0
DALY	Dalyan (Mu˜la	4.87	66	eP	Pn	14 55 08.2	+3.3
PRK	Paraskevi	4.96	30	P	Pn	14 55 07.2	+1.0
PRK	Paraskevi	4.96	30	P	Pn	14 55 07.2	+1.0
PAIG	Paliouri	4.97	5	eP	Pn	14 55 07.0	+0.7
PAIG	Paliouri	4.97	5	eP	Pn	14 55 07.0	+0.7
JAN	Janina	5.01	340	P	Pn	14 55 07.7	+0.7
JAN	Janina	5.01	340	P	Pn	14 55 07.7	+0.7
HMAT	Matruh	5.12	138	AMP		14 56 00.0	
	comp=N,110µm,0.2s,logA/T=5.7,baz=140						
HMAT	Matruh	5.12	138	P	Pn	14 55 06.9	-1.5
FETY	Fethiye	5.13	69	eP	Pn	14 55 10.1	+1.4
LIT	Litokhoron	5.15	355	eP	Pn	14 55 08.9	+0.1
LIT				eS	Sn	14 56 04.8	-2.1
LIT	Litokhoron	5.15	355	eP	Pn	14 55 08.9	+0.1
AKS	Akhisar	5.43	43	eP	Pn	14 55 12.0	-0.7
DENT	Denizli	5.53	58	eP	Pn	14 55 16.6	+2.5
GLHS	Glhisar (BURDU	5.62	65	eP	Pn	14 55 17.5	+2.2
KULA	Kula-Manisa	5.69	50	eP	Pn	14 55 19.9	+3.6
ELL	Elmali	5.80	70	eP	Pn	14 55 18.6	+0.7
SOH	Sokhos	5.85	2	eP	Pn	14 55 19.0	+0.6
SOH	Sokhos	5.85	2	eP	Pn	14 55 19.0	+0.6
FNA	Florina	5.96	347	eP	Pn	14 55 20.2	+0.2
FNA	Florina	5.96	347	eP	Pn	14 55 20.2	+0.2
GRG	Griva	6.00	355	eP	Pn	14 55 20.1	-0.5
GRG	Griva	6.00	355	eP	Pn	14 55 20.1	-0.5
LUJL	Ujela	6.03	195	iP	Pn	14 55 20.8	-0.1
	SNR=23						
GELI	Tayfur-Gelibol	6.04	25	eP	Pn	14 55 21.8	+0.8
SWA2		6.05	160	P	Pn	14 55 22.5	+1.3
	baz=160						
SWA2				S	Sn	14 56 28.5	-0.6
	baz=160						
SWA2		6.05	160	P	Pn	14 55 22.5	+1.3
SWA2				S	Sn	14 56 28.5	-0.6
LPK	Lapseki	6.12	27	eP	Pn	14 55 23.4	+1.2
ERIK	Erikli-Kesan	6.30	24	eP	Pn	14 55 24.7	+0.2
SHUT	Suhut-Afyon	6.96	57	eP	Pn	14 55 33.4	-0.5
MDNY	Mudanya-Bursa	7.07	39	eP	Pn	14 55 35.2	0.0
HBRG	Burj al ‘Arab	7.17	126	P	Pn	14 55 36.6	+0.1
	baz=128						
HBRG				S	Sn	14 56 53.2	-3.4
	baz=128						
GEMT	Gemlik	7.28	40	eP	Pn	14 55 37.7	-0.3
IZI	Iznik	7.36	41	eP	Pn	14 55 38.9	-0.4
EDRB	Edirne	7.44	21	eP	Pn	14 55 42.0	+1.8
CTKS	Kestanelik-??a	7.57	33	eP	Pn	14 55 42.4	+0.4
LEF	Lefka	8.03	86	eP	Pn	14 55 51.0	+2.7
KIZT	Kizilcal	8.04	58	eP	Pn	14 55 48.0	-0.6
SVRH	Sivrihisar-ESK	8.07	54	eP	Pn	14 55 48.0	-0.9
HNAT	Natroun	8.29	128	P	Pn	14 55 52.9	+1.0
	baz=129						
HNAT	Natroun	8.29	128	P	Pn	14 55 52.9	+1.0
CSS	Prodhromos	8.39	87	eP	Pn	14 55 56.5	+3.1
CSS	Prodhromos	8.39	87	Pn	Pn	14 55 52.4	-1.0
LJFR	Jufra	8.51	229	iP	Pn	14 55 53.8	-1.2
	SNR=22						
LFK	Lefkose	8.55	85	eP	Pn	14 55 58.3	+2.8
GHAR	Gharyan	8.83	254	iP	Pn	14 55 58.3	-1.1
	SNR=22						
HSAF	As Saff	8.92	124	P	Pn	14 56 00.5	-0.1
	baz=126						
HSAF	As Saff	8.92	124	P	Pn	14 56 00.5	-0.1
KOT	Kottamia	8.92	122	P	Pn	14 56 01.4	+0.8
	baz=124						
KOT				AMP		14 57 00.0	
	comp=N,40µm,0.4s,logA/T=5.0,baz=124						
KOT				S	Sn	14 57 34.8	-5.1
	baz=124						
KOT	Kottamia	8.92	122	P	Pn	14 56 01.4	+0.8
STON	Ston	8.94	334	ePn	Pn	14 55 57.1	-3.7
STON				Sn	Sn	14 57 27.8	-12
LSHF	Shwairf	8.98	239	iP	Pn	14 56 00.5	-0.9
	SNR=22						
HFRF	Wahat Farafira	8.98	149	P	Pn	14 56 02.4	+1.0
	baz=149						
HFRF	Wahat Farafira	8.98	149	P	Pn	14 56 02.4	+1.0
GLL	Jalalah	9.05	124	P	Pn	14 56 02.8	+0.4
	baz=126						
GLL	Jalalah	9.05	124	P	Pn	14 56 02.8	+0.4
HHAG	Hagoal	9.09	121	P	Pn	14 56 03.2	+0.2
	baz=123						
HHAG	Hagoal	9.09	121	P	Pn	14 56 03.2	+0.2
AMAG	Maghara	9.53	114	P	Pn	14 56 07.6	-1.4
	baz=116						
AMAG	Maghara	9.53	114	P	Pn	14 56 07.6	-1.4
BRTR	Keskin Array B	9.63	57	Pn	Pn	14 56 11.9	+1.5
	comp=N,0.6nm,0.3s,baz=232,slow=14,SNR=14						
BRTR	Keskin Array B	9.63	57	P	Pn	14 56 12.0	+1.5
	comp=N,1.0nm,0.3s						
SUZ		9.68	119	P	Pn	14 56 11.7	+0.7
	baz=121						
SUZ		9.68	119	P	Pn	14 56 11.7	+0.7
ZAF		9.81	123	P	Pn	14 56 12.9	+0.2
	baz=124						
ZAF		9.81	123	P	Pn	14 56 12.9	+0.2
KZIT	Kziot	10.31	110	Pn	Pn	14 56 19.4	-0.3
MMC7	Mount Meron ar	10.38	97	Pn	Pn	14 56 20.9	+0.2
MMAI	Mount Meron Ar	10.39	97	Pn	Pn	14 56 20.4	-0.4
	comp=N,5.2nm,0.3s,baz=274,slow=12,SNR=19						
MMAI				Sn	Sn	14 58 09.5	-6.6
	comp=N,3.5nm,0.3s,baz=279,slow=14,SNR=4.8						
HNKL	Nakhl	10.47	116	P	Pn	14 56 21.1	-0.7
	baz=117						
HNKL	Nakhl	10.47	116	P	Pn	14 56 21.1	-0.7
RTMI	Retamim	10.48	109	Pn	Pn	14 56 21.5	-0.5
KSDI	Kefar Szold	10.56	96	Pn	Pn	14 56 22.6	-0.5
HMDT	Nahal Hemdat	10.71	101	Pn	Pn	14 56 24.8	-0.2
MLR	Muntele Rosu	10.73	11	Pn	Pn	14 56 24.0	-1.5
	comp=N,0.1nm,0.3s,baz=170,slow=13,SNR=4.8						
MLR				LR	LR	15 00 32.5	
	comp=N,32nm,20.9s,baz=58,slow=38						
KSHT	Keshet	10.73	97	Pn	Pn	14 56 26.0	+0.5
DSI	Dead Sea	10.82	105	Pn	Pn	14 56 26.2	-0.4
KRMI	Paran Flat	10.93	113	Pn	Pn	14 56 28.1	-0.1
PRNI	Paran	11.03	111	Pn	Pn	14 56 29.0	-0.6
ZFRI	Zfri	11.07	110	Pn	Pn	14 56 29.7	-0.4
HRFI	Mount Harif	11.21	113	Pn	Pn	14 56 31.9	0.0
MBRI	Mt Berech	11.23	114	Pn	Pn	14 56 31.8	-0.6
KEST	Kesra	11.26	278	Sn	Sn	14 58 29.1	-8.3
	comp=N,0.1nm,0.3s,baz=326,slow=22,SNR=6.2						
HKAT	Jabal Katrina	11.27	122	P	Pn	14 56 32.6	-0.4
	baz=123						
HKAT	Jabal Katrina	11.27	122	P	Pn	14 56 32.6	-0.4
EIL	Elat	11.32	115	Pn	Pn	14 56 33.3	-0.2
	comp=N,2.6nm,0.3s,baz=272,slow=4.1,SNR=31						
EIL				Sn	Sn	14 58 32.1	-6.6
	comp=N,1.7nm,0.3s,baz=255,slow=2.6,SNR=5.4						
EIL	Elat	11.32	115	Pn	Pn	14 56 32.6	-0.9
VYHS	Vyhne	13.88	348	eP	Pn	14 57 08.2	-0.2
VYHS	Vyhne	13.88	348	eP	Pn	14 57 08.2	-0.2
VYHS				e		14 57 16.9	
KOLS	Kolonicke sedl	13.97	358	eP	Pn	14 57 09.0	-0.5
KOLS	Kolonicke sedl	13.97	358	eP	Pn	14 57 09.0	-0.5
CRVS	Cervenica-Dubn	13.98	356	eP	Pn	14 57 10.0	+0.3
CRVS	Cervenica-Dubn	13.98	356	eP	Pn	14 57 10.0	+0.3
VRAC	Vranov	15.11	343	Pn	Pn	14 57 27.0	+2.0
	comp=N,0.4nm,0.3s,baz=171,slow=10,SNR=4.9						
OKC	Ostrava-Krasne	15.30	348	eP	P	14 57 32.1	+0.4
OKC	Ostrava-Krasne	15.30	348	eP	P	14 57 32.1	+0.4
OKC				ex	x	14 57 45.5	
OKC	Ostrava-Krasne	15.30	348	eP	P	14 57 32.1	+0.4
OJC	Ojcow	15.43	352	eP	P	14 57 33.4	+0.2
OJC	Ojcow	15.43	352	eP	P	14 57 33.4	+0.2
OJC	Ojcow	15.43	352	eP	P	14 57 33.4	+0.2
DAVOX	Davos/Dischmat	15.44	324	Pn	P	14 57 32.6	-1.0
	comp=N,0.2nm,0.3s,baz=160,slow=12,SNR=3.1						
DAVOX	Davos/Dischmat	15.44	324	P	P	14 57 32.6	-1.0
GEC2	GERESS Array S	15.51	336	eP	P	14 57 34.7	+0.4
GEC2				pmax	pmax		
	comp=Z,12nm,1.4s						
GEC2	GERESS Array S	15.51	336	eP	P	14 57 34.7	+0.4
	comp=Z,12nm,1.4s						
GEC2	GERESS Array S	15.51	336	eP	P	14 57 34.7	+0.4
	comp=Z,12nm,1.4s						
GERES	GERESS Array B	15.51	336	Pn	Pn	14 57 27.3	-3.0
	comp=Z,0.2nm,0.3s,baz=144,slow=12,SNR=5.6						
KHC	Kasperske Hory	15.80	336	eP	P	14 57 38.5	+1.1
KHC	Kasperske Hory	15.80	336	eP	P	14 57 38.5	+1.1
KHC	Kasperske Hory	15.80	336	eP	P	14 57 38.5	+1.1
MBDF	Montbardon	15.86	313	eP	Pn	14 57 26.9	-7.9
	comp=Z,15nm,0.9s						
WET	Wettzell	16.05	335	eP	P	14 57 40.3	+0.2
WET				pmax	pmax		
	comp=Z,16nm,1.1s						
WET	Wettzell	16.05	335	eP	P	14 57 40.3	+0.2
	comp=Z,16nm,1.1s						
WET	Wettzell	16.05	335	eP	P	14 57 40.3	+0.2
	comp=Z,16nm,1.1s						
DPC	Dobruska-Polom	16.15	344	eP	P	14 57 41.0	-0.3
DPC	Dobruska-Polom	16.15	344	eP	P	14 57 41.0	-0.3
DPC	Dobruska-Polom	16.15	344	eP	P	14 57 41.0	-0.3
PRU	Pruhonice	16.27	340	eP	P	14 57 42.5	0.0
PRU	Pruhonice	16.27	340	eP	P	14 57 42.5	0.0
PRU				ex	x	14 58 03.6	
PRU	Pruhonice	16.27	340	eP	P	14 57 42.5	0.0
AKASG	Malin Array Be	16.34	14	ceP	Pn	14 57 41.5	+0.8
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKASG	Malin Array Be	16.34	14	Pn	Pn	14 57 37.9	-2.8
	comp=Z,8.3nm,0.3s,baz=202,slow=9.9,SNR=17						
AKASG	Malin Array Be	16.34	14	eP	Pn	14 57 41.5	+0.8
	comp=Z,4.0nm,0.3s						
UPC	Upice	16.37	344	eP	P	14 57 43.4	-0.2
UPC	Upice	16.37	344	eP	P	14 57 43.4	-0.2
UPC				ex	x	14 57 56.7	
UPC	Upice	16.37	344	eP	P	14 57 43.4	-0.2
ROTZ	Rotzenmuhle	16.81	335	eP	P	14 57 47.4	-1.1
	comp=Z,43nm,2.2s						
GRA1	Grafenberg Arr	17.10	333	eP	P	14 57 52.3	+0.5
	comp=Z,24nm,0.9s						
GRF	Grafenberg Arr	17.10	333	eP	P	14 57 52.3	+0.5
GRF				pmax	pmax		
	comp=Z,24nm,0.9s						
GRF	Grafenberg Arr	17.10	333	eP	P	14 57 52.3	+0.5
	comp=Z,24nm,0.9s						
BRG	Berggiesshubel	17.23	340	eP	P	14 57 53.0	-0.2
	comp=Z,4.8nm,0.9s						
BRG	Berggiesshubel	17.23	340	eP	P	14 57 53.0	-0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG	Berggiesshubel	17.23	340	eP	P	14 57 52.9	-0.2
	comp=Z,9.0nm,1.3s						
BRG	Berggiesshubel	17.23	340	eP	P	14 57 53.0	-0.2
	comp=Z,5.0nm,0.9s						
GUNZ	Gunzen	17.28	336	eP	P	14 57 54.1	+0.4
	comp=Z,24nm,1.9s						
FBE	Freiberg	17.44	339	eP	P	14 57 56.0	+0.5
	comp=Z,15nm,0.9s						
KIV	Kislovodsk	17.55	53⇑	eP	P	14 57 57.6	+0.8
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KIV	Kislovodsk	17.55	53	eP	P	14 57 57.6	+0.8
	comp=Z,8.0nm,1.0s						
KBZ	Khabaz	17.60	54	P	P	14 57 59.8	+2.5
KBZ	Khabaz	17.60	54	P	P	14 57 59.8	+2.5
	comp=Z,0.3nm,0.3s,baz=241,slow=6.4,SNR=6.0						
HINF	Hinteralfeld	17.66	322	eP	Pn	14 57 52.8	-4.5
CDF	Champ du Feu	17.84	324	eP	Pn	14 57 53.4	-6.2
	comp=Z,7.5nm,0.8s						
CLL	Collm	17.89	339	iP	P	14 58 00.0	-0.4
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CLL	Collm	17.89	339	eP	P	14 58 00.6	+0.2
	comp=Z,8.0nm,0.8s						
CLL	Collm	17.89	339	iP	P	14 58 00.0	-0.4
	comp=Z,8.0nm,0.8s						
CLL	Collm	17.89	339	iP	P	14 58 00.0	-0.4
	comp=Z,8.0nm,0.8s						
GNI	Garni	17.90	67	LR	LR	15 06 27.5	
	comp=Z,227nm,18.0s,baz=91,slow=42						
GNI	Garni	17.90	67	eP	P	14 58 02.2	+1.3
	comp=Z,13nm,1.7s						
ZEI	Tsey	17.94	58	eP	P	14 58 01.6	+0.3
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZEI	Tsey	17.94	58	eP	P	14 58 01.6	+0.3
	comp=Z,3.0nm,0.8s						
NEUB	Neuenburg	18.18	337	eP	P	14 58 04.1	+0.5
	comp=Z,25nm,0.9s						
SSF	Saint Saulge	19.04	315	eP	P	14 58 09.6	-3.5
	comp=Z,20nm,1.2s						
CLZ	Clausthal	19.19	335	eP	P	14 58 14.7	0.0
CLZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CLZ	Clausthal	19.19	335	eP	P	14 58 14.7	0.0
	comp=Z,8.0nm,0.8s						
CLZ	Clausthal	19.19	335	eP	P	14 58 14.7	0.0
	comp=Z,8.0nm,0.8s						
VORD	Divnogorie	19.83	31	eP	P	14 58 22.5	+0.9
VORD				pmax	pmax		
	comp=N,10.0nm,0.5s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.5s						
VORD				pmax	pmax		
	comp=Z,6.0nm,0.5s						
VORD	Divnogorie	19.83	31	eP	P	14 58 22.5	+0.9
VSR	Storozhevoye	19.96	31	eP	P	14 58 22.0	-1.1
VSR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.4s						
VSR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VSR	Storozhevoye	19.96	31	eP	P	14 58 22.0	-1.1
NACGM	Naroch	20.09	6	e	P	14 58 20.0	-4.5
IIGN	Ignalina	20.50	5	eP	P	14 58 24.9	-4.0
SJPF	Ste Jean	20.52	301	eP	Pn	14 58 30.5	-1.2
	comp=Z,38nm,1.3s						
SJPF	Ste Jean	20.52	301	eP	Pn	14 58 30.5	-1.2
	comp=Z,37nm,1.3s						
ISAL	Salakas	20.71	5	eP	P	14 58 26.9	-4.3
BSD	Bornholm Skovb	20.93	347	iP	P	14 58 32.1	-1.5
BSD				pmax	pmax		
	comp=Z,5.0nm,0.3s						
BSD	Bornholm Skovb	20.93	347	iP	P	14 58 32.1	-1.5
	comp=Z,5.2nm,0.3s						
BSD	Bornholm Skovb	20.93	347	iP	P	14 58 32.1	-1.5
	comp=Z,5.0nm,0.3s						
BSEG	Bad Segeberg	20.98	339	eP	P	14 58 33.0	-1.1
BSEG				pmax	pmax		
	comp=Z,48nm,0.9s						
BSEG	Bad Segeberg	20.98	339	eP	P	14 58 33.0	-1.1
	comp=Z,48nm,0.9s						
BSEG	Bad Segeberg	20.98	339	eP	P	14 58 33.0	-1.1
	comp=Z,48nm,0.9s						
MIB	Mutribah	21.08	97	eP	P	14 58 36.1	+0.7
MIB				AMb	AMB	14 58 37.4	
	comp=Z,48nm,0.6s						
MIB	Mutribah	21.08	97	eP	P	14 58 36.1	+0.7
	comp=Z,48nm,0.6s						
NAY	Al-Naaiem	21.20	99	eP	P	14 58 37.5	+0.8
NAY				AMb	AMB	14 58 38.5	
	comp=Z,14nm,0.4s						
NAY	Al-Naaiem	21.20	99	eP	P	14 58 37.5	+0.8
	comp=Z,14nm,0.4s						
UMR	Umm Al-Rimmam	21.48	98	eP	P	14 58 40.8	+1.1
UMR				AMb	AMB	14 58 41.9	
	comp=Z,97nm,0.3s						
UMR	Umm Al-Rimmam	21.48	98	eP	P	14 58 40.8	+1.1
	comp=Z,97nm,0.3s						
LDF	La Druitiere	21.92	315	eP	P	14 58 42.8	-1.5
LDF	La Druitiere	21.92	315	eP	P	14 58 42.8	-1.5
ESDC	Sonseca Array	22.00	290	P	P	14 58 45.1	-0.1
	comp=Z,0.3nm,0.3s,baz=89,slow=9.6,SNR=4.6						
OBN	Obninsk	22.20	21⇑	iP	P	14 58 46.2	-1.0
OBN				pmax	pmax		
	comp=Z,23nm,1.0s						
OBN	Obninsk	22.20	21	iP	P	14 58 46.2	-1.0
	comp=Z,23nm,1.0s						
MOS	Moscow	23.05	21	eP	P	14 58 54.5	-1.6
MOS				pmax	pmax		
	comp=Z,36nm,0.7s						
MOS	Moscow	23.05	21	eP	P	14 58 54.5	-1.6
	comp=Z,36nm,0.7s						
MDT	Midelt	23.08	273	P	P	14 58 56.9	+0.1
	comp=Z,2.4nm,0.9s,baz=66,slow=8.0,SNR=3.5						
MDT				LR	LR	15 10 58.6	
	comp=Z,68nm,18.4s,baz=120,slow=45						
VSU	Vasula	23.63	5⇑	eP	P	14 58 59.4	-2.3
VSU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VSU	Vasula	23.63	5	eP	P	14 58 59.4	-2.3
	comp=Z,6.0nm,0.7s						
HFS	Hagfors	25.91	349	P	P	14 59 21.5	-1.1
	comp=Z,5.4nm,0.3s,baz=157,slow=10,SNR=65						
HFS				LR	LR	15 10 12.3	
	comp=Z,112nm,20.2s,baz=156,slow=38						
HFS	Hagfors	25.91	349	P	P	14 59 21.5	-1.1
	comp=Z,112nm,20.2s						
FINES	FINESS Array B	26.56	3	P	P	14 59 26.9	-1.5
	comp=Z,1.6nm,0.2s,baz=166,slow=11,SNR=22						
FINES				LR	LR	15 11 15.4	
	comp=Z,287nm,18.5s,baz=270,slow=40						
FINES	FINESS Array B	26.56	3	P	P	14 59 26.9	-1.5
	comp=Z,287nm,18.5s						
NB2	NORSAR Subarra	27.18	347	P	P	14 59 32.3	-1.9
	comp=Z,1.0nm,0.5s,baz=158,slow=9.3						
NB2	NORSAR Subarra	27.18	347	P	P	14 59 32.3	-1.9
	comp=Z,1.0nm,0.5s,baz=158,slow=9.0,SNR=7.3						
NOA	NORSAR Array B	27.18	347	P	P	14 59 33.2	-0.9
	comp=Z,1.4nm,0.4s,baz=149,slow=11,SNR=17						
NOA	NORSAR Array B	27.18	347	P	P	14 59 33.2	-0.9
	comp=Z,1.0nm,0.4s						
KAF	Kangasniemi	27.24	3	eP	P	14 59 32.5	-2.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KAF	**Kangasniemi**	**27.24**	**3**	*e*p	**P**	**14 59 32.5**	**-2.1**
	comp=Z,3.7nm,0.5s						
KAF	**Kangasniemi**	**27.24**	**3**	*e*P	**P**	**14 59 32.5**	**-2.1**
	comp=Z,4.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**27.25**	**326**	P	**P**	**14 59 34.2**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=127,slow=8.2,SNR=6.6						
EKA	**Eskdalemuir Ar**	**27.25**	**326**	P	**P**	**14 59 34.2**	**-0.5**
	comp=Z,1.0nm,0.3s						
JOF	**Joensuu**	**28.44**	**8**	*e*P	**P**	**14 59 43.3**	**-2.0**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JOF	**Joensuu**	**28.44**	**8**	*e*p	**P**	**14 59 43.3**	**-2.0**
	comp=Z,0.8nm,0.3s						
JOF	**Joensuu**	**28.44**	**8**	*e*P	**P**	**14 59 43.3**	**-2.0**
	comp=Z,1.0nm,0.3s						
TORD	**Torodi Ar. Bea**	**29.10**	**227**	P	**P**	**14 59 52.5**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=29,slow=8.6,SNR=30						
AKTK	**Aktyubinsk**	**29.62**	**48**	P	**P**	**14 59 54.4**	**-1.5**
	comp=Z,72nm,18.7s						
AKTO	**Aktyubinsk**	**29.62**	**48**	P	**P**	**14 59 54.4**	**-1.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,72nm,18.7s						
AKTO	**Aktyubinsk**	**29.62**	**48**	P	**P**	**14 59 54.4**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=222,slow=5.1,SNR=5.3						
AKTO				LR	LR	15 13 24.5	
	comp=Z,72nm,18.7s,baz=295,slow=40						
ARU	**Arti**	**32.22**	**37***c*	*i*P	**P**	**15 00 17.8**	**-0.9**
ARU						15 01 21.7	
ARU				S	**S**	**15 05 30.5**	**+1.3**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
ARU	**Arti**	**32.22**	**37**	*i* P	**P**	**15 00 17.8**	**-0.9**
	comp=Z,9.0nm,1.7s						
ARCES	**ARCESS Array B**	**34.65**	**1**	P	**P**	**15 00 38.1**	**-1.6**
	comp=Z,1.3nm,0.3s,baz=194,slow=9.5,SNR=32						
ARCES				LR	LR	15 15 40.0	
	comp=Z,179nm,20.1s,baz=48,slow=38						
ARCES	**ARCESS Array B**	**34.65**	**1**	P	**P**	**15 00 38.1**	**-1.6**
	comp=Z,179nm,20.1s						
KEV	**Kevo**	**34.91**	**2**	*e*P	**P**	**15 00 40.8**	**-1.1**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	**Kevo**	**34.91**	**2**	*e*p	**P**	**15 00 40.8**	**-1.1**
	comp=Z,1.2nm,0.3s						
KEV	**Kevo**	**34.91**	**2**	*e*P	**P**	**15 00 40.8**	**-1.1**
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**37.64**	**46**⇑	*e*P	**P**	**15 01 05.1**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**37.64**	**46**	*e*P	**P**	**15 01 05.1**	**-0.4**
	comp=Z,4.0nm,0.8s						
DBIC	**Dimbokro**	**38.15**	**229**	P	**P**	**15 01 11.1**	**+0.9**
	comp=Z,3.8nm,0.8s,baz=329,slow=10,SNR=3.7						
LIC	**Lamto**	**38.60**	**229**	*e*P	**P**	**15 01 15.0**	**+1.0**
	comp=Z,11nm,0.6s						
EKS2	**Erkin-Say**	**39.72**	**63**	P	**P**	**15 01 24.6**	**+1.3**
	SNR=7.8						
AAK	**Ala-Archa**	**40.25**	**63***c*	*i*P	**P**	**15 01 28.7**	**+1.0**
AAK				pmax	pmax		
	comp=Z,20nm,0.9s						
AAK	**Ala-Archa**	**40.25**	**63**	P	**P**	**15 01 28.8**	**+1.0**
	SNR=8.6						
AAK	**Ala-Archa**	**40.25**	**63**	*i* P	**P**	**15 01 28.7**	**+1.0**
	comp=Z,20nm,0.9s						
CHMS	**Chumysh**	**40.40**	**63**	P	**P**	**15 01 29.8**	**+1.0**
	SNR=5.0						
KZA	**Kyzart**	**40.88**	**64**	P	**P**	**15 01 34.9**	**+1.7**
	SNR=8.5						
TKM2	**Tokmak 2**	**41.02**	**63**	*i* P	**P**	**15 01 34.8**	**+0.7**
TKM2	**Tokmak 2**	**41.02**	**63**	P	**P**	**15 01 34.9**	**+0.7**
	SNR=8.3						
TKM2	**Tokmak 2**	**41.02**	**63**	*i* P	**P**	**15 01 34.8**	**+0.7**
ULHL	**Ulahol**	**41.58**	**64**	P	**P**	**15 01 40.3**	**+1.5**
	SNR=19						
KSH	**Kashi**	**41.84**	**68**	*e*P	**P**	**15 01 39.1**	**-1.6**
KSH				*e*PP	**PP**	**15 03 18.2**	**+0.5**
KSH				*e*PcP	**PcP**	**15 03 37.4**	**+1.2**
KSH				*e*PcS	**PcS**	**15 07 27.6**	**-0.3**
KSH				*e*S	**S**	**15 07 53.1**	**-3.0**
KSH				*e*SS	SS	15 10 52.2	-11
KSH				pmax	pmax		
	comp=Z,49nm,2.4s						
KSH				LR	LR		
	comp=E,100nm,8.3s						
KSH				LR	LR		
	comp=Z,59nm,3.4s						
KURK	**Kurchatov**	**42.61**	**51***c*	*i*P	**P**	**15 01 45.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	**Kurchatov**	**42.61**	**51**	*i* P	**P**	**15 01 45.9**	**-0.8**
	comp=Z,6.0nm,0.8s						
MKAR	**Makanchi Array**	**45.28**	**56**	P	**P**	**15 02 08.3**	**0.0**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MKAR	**Makanchi Array**	**45.28**	**56**	P	**P**	**15 02 08.3**	**0.0**
	comp=Z,3.5nm,0.3s,baz=267,slow=7.8,SNR=97						
MKAR	**Makanchi Array**	**45.28**	**56**	P	**P**	**15 02 08.3**	**0.0**
	comp=Z,4.0nm,0.3s						
NVS	**Novosibirsk**	**45.41**	**45**⇑	*i*P	**P**	**15 02 08.2**	**-0.9**
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,11nm,0.8s						
NVS	**Novosibirsk**	**45.41**	**45**	*i* P	**P**	**15 02 08.2**	**-0.9**
ZALV	**Zalesovo Beam**	**46.35**	**46**	P	**P**	**15 02 15.7**	**-0.8**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZALV	**Zalesovo Beam**	**46.35**	**46**	P	**P**	**15 02 15.7**	**-0.8**
	comp=Z,10nm,0.4s,baz=268,slow=8.8,SNR=52						
ZALV	**Zalesovo Beam**	**46.35**	**46**	P	**P**	**15 02 15.7**	**-0.8**
	comp=Z,10.0nm,0.4s						
PYUN	**Piuthan**	**50.85**	**80**	*e*P	**P**	**15 02 52.7**	**+0.9**
	comp=Z,14nm,0.5s						
DANN	**Dangsing**	**51.37**	**80**	*e*P	**P**	**15 02 56.8**	**+1.0**
KOLN	**Koldanda**	**51.48**	**80**	*e*P	**P**	**15 02 57.0**	**+0.5**
	comp=Z,7.0nm,0.6s						
HVS	**Khovu-Aksy**	**52.05**	**49***d*	*i*P	**P**	**15 03 00.0**	**-0.3**
HVS				pmax	pmax		
	comp=Z,25nm,0.8s						
HVS	**Khovu-Aksy**	**52.05**	**49**	*i* P	**P**	**15 03 00.0**	**-0.3**
	comp=Z,25nm,0.8s						
DMN	**Daman**	**52.76**	**80**	*e*P	**P**	**15 03 06.6**	**+0.5**
	comp=Z,14nm,0.4s						
KKN	**Kakani**	**52.83**	**80**	*e*P	**P**	**15 03 06.9**	**+0.4**
	comp=Z,8.1nm,0.6s						
PKIN	**Phulchoki**	**53.01**	**80**	*e*P	**P**	**15 03 08.6**	**+0.7**
	comp=Z,5.2nm,0.4s						
PKI	**Pulchoki**	**53.02**	**80**	*e*P	**P**	**15 03 08.4**	**+0.3**
GUN	**Gumba**	**53.26**	**79**	*e*P	**P**	**15 03 10.3**	**+0.4**
	comp=Z,12nm,0.4s						
RAMN	**Ramite**	**54.24**	**80**	*e*P	**P**	**15 03 16.8**	**-0.1**
ODAN	**Odare**	**54.92**	**80**	*e*P	**P**	**15 03 21.2**	**-0.6**
	comp=Z,12nm,0.5s						
TAPN	**Taplejung**	**54.97**	**79**	*e*P	**P**	**15 03 22.4**	**+0.1**
ZAK	**Zakamensk**	**58.13**	**48**	*e*P	**P**	**15 03 44.3**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAK	**Zakamensk**	**58.13**	**48**	*e*P	**P**	**15 03 44.3**	**+0.1**
	comp=Z,2.0nm,1.0s						
GTA	**Gaotai**	**59.53**	**61**	*e*P	**P**	**15 03 55.0**	**+0.9**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**60.91**	**50**	P	**P**	**15 04 03.8**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=286,slow=7.1,SNR=20						
SONM	**Songino Array**	**60.91**	**50**	P	**P**	**15 04 03.8**	**+0.4**
	comp=Z,1.0nm,0.5s						
BOSA	**Boshof**	**63.27**	**178**	P	**P**	**15 04 20.8**	**+1.5**
	comp=Z,3.5nm,1.0s,baz=62,slow=7.9,SNR=3.7						
CMAR	**Chiang Mai Arr**	**68.27**	**82**	P	**P**	**15 04 52.4**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=298,slow=7.5,SNR=6.1						
YKA	**Yellowknife Ar**	**77.10**	**341**	P	**P**	**15 05 44.2**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=39,slow=5.4,SNR=14						
YKA	**Yellowknife Ar**	**77.10**	**341**	P	**P**	**15 05 44.2**	**+0.8**
HABR	**Khabarovsk**	**77.20**	**39**	*e*P	P	15 05 50.2	+6.0
HABR				*e*		15 05 53.9	
HABR				*e*		15 08 37.0	
HABR				*e*PPP	PPP	15 10 24.2	
HABR				*e*S	**S**	**15 15 32.3**	**+1.4**
HABR				*e**SS	sS	15 15 43.4	-6.3
HABR				*e*		15 15 59.7	
HABR				*e*SS	**SS**	**15 20 31.1**	**+3.0**
HABR				pmax	pmax		
	comp=Z,36nm,2.0s						
HABR				pmax	pmax		
	comp=E,33nm,2.0s						
HABR				pmax	pmax		
	comp=N,20nm,2.0s						
HABR				MLR	MLR		
	comp=Z,150nm,18.0s						
HABR	**Khabarovsk**	**77.20**	**39**	*e*PcP	**PcP**	**15 05 53.9**	**-1.0**
	comp=Z,20nm,2.0s						
USRK	**Ussuriysk Arra**	**78.17**	**44**	P	**P**	**15 05 49.6**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=296,slow=3.8,SNR=11						
KSRS	**Korea Array**	**79.73**	**51**	P	**P**	**15 05 58.7**	**+0.3**
	comp=Z,2.3nm,0.5s,baz=308,slow=4.5,SNR=18						
KSRS	**Korea Array**	**79.73**	**51**	P	**P**	**15 05 58.7**	**+0.3**
	comp=Z,2.0nm,0.5s						
ILAR	**Eielson Array**	**80.28**	**356**	P	**P**	**15 06 02.0**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=348,slow=4.0,SNR=6.9						
MJAR	**Matsushiro Arr**	**86.70**	**47**	P	**P**	**15 06 35.0**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=313,slow=5.0,SNR=3.7						
PLCA	**Paso Flores**	**114.25**	**236**	PKP	PKPdf	15 12 28.2	-1.6
	comp=Z,1.7nm,0.7s,baz=271,slow=5.2,SNR=2.9						
WRA	**Warramunga Arr**	**118.25**	**95**	PKP	**PKPdf**	**15 12 37.1**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=321,slow=1.6,SNR=15						
ASAR	**Alice Springs**	**119.68**	**99**	PKP	**PKPdf**	**15 12 40.9**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=311,slow=1.2,SNR=15						

IDC 08 14:54:02.2±1.4**, 1°.85N×127°.08E, h0km, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.5**/22**, mbtmp3.6**/5**, ML3.6**/1**, Error ellipse: s-maj=102.6km s-min=19.3km az=73.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.88**	**184**	P	P	14 58 35.9	+0.8
	0.1nm,0.3s,baz=0.4,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	**22.80**	**162**	P	P	14 59 06.7	-0.1
	1.1nm,0.3s,baz=341,slow=11,SNR=35						
ASAR	**Alice Springs**	**26.22**	**166**	P	P	14 59 38.7	-0.3
	0.3nm,0.3s,baz=344,slow=11,SNR=11						
SONM	**Songino Array**	**49.18**	**342**	P	P	15 02 52.5	+0.3
	0.2nm,0.5s,baz=156,slow=7.5,SNR=3.1						
MKAR	**Makanchi Array**	**59.29**	**326**	P	P	15 04 05.3	-0.5
	1.1nm,0.5s,baz=118,slow=8.0,SNR=6.2						

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*IDC **08** 14:54:41.8±6.2, 18°.23N×104°.26W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.9/24, mbtmp3.8/7, ML3.3/2, MS3.5/1, Ms1 3.4/1, ms1mx2.8/43, Error ellipse: s-maj=116.4km s-min=77.9km az=123.0*

*MEX **08** 14:54:50.1±0.4, 19°.10N×105°.44W, h6km±36km, MD4.2*

*NEIC **08** 14:54:50.1, 19°.10N×105°.44W, h6km, mb4.4/26, MD4.2(MEX), After MEX.*

*ISCJB **08** 14:54:52.2±0.6, 19°.05N±0°.06×105°.18W±0°.05, h27km, mb4.1/27, MS3.4/1, Error ellipse: s-maj=9.3km s-min=5.4km az=37.7*

ISC 08 14:54:53.1±1.0**, 18°.89N**±0°.10×**105°.09W**±0°.07**, h27km, n211,** σ1°.37/211**, mb4.2**/27**, 85C-73D, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.60**	**4**	*i* P	Pb	14 55 00.4	-4.7
CJM				*i* S	Sb	14 55 08.2	-5.1
CJM	**Chamela**	**0.60**	**4**	*i* P	Pb	14 55 00.4	-4.7
CJM				*i* S	Sb	14 55 08.2	-5.1
MMIG	**Aquila**	**1.76**	**110**	*i* P	**Pn**	**14 55 22.9**	**+1.2**
MMIG				*i* S	**Sb**	**14 55 49.0**	**+2.8**
MMIG	**Aquila**	**1.76**	**110**	*i* P	**Pn**	**14 55 22.9**	**+1.2**
MMIG				*i* S	**Sb**	**14 55 49.0**	**+2.8**
SFJM	**Santa Fe**	**2.50**	**50**	*i* P	**Pn**	**14 55 30.8**	**-1.3**
SFJM				*i* S	**Sn**	**14 56 01.7**	**-0.1**
SFJM	**Santa Fe**	**2.50**	**50**	*i* P	**Pn**	**14 55 30.8**	**-1.3**
SFJM				*i* S	**Sn**	**14 56 01.7**	**-0.1**
ZIIG	**Zihuatanejo**	**3.67**	**110**	*i* P	**Pn**	**14 55 49.5**	**+1.4**
ZIIG				*i* S	**Sb**	**14 56 37.7**	**-3.6**
ZIIG	**Zihuatanejo**	**3.67**	**110**	*i* P	**Pn**	**14 55 49.5**	**+1.4**
ZIIG				*i* S	**Sb**	**14 56 37.7**	**-3.6**
ACX	**Acapulco**	**5.37**	**111**	*i* P	**Pn**	**14 56 12.6**	**+1.1**
ACX	**Acapulco**	**5.37**	**111**	*i* P	**Pn**	**14 56 12.6**	**+1.1**
TXAR	**Lajitas Array**	**10.47**	**7**	Pn	**Pn**	**14 57 23.6**	**+2.0**
TXAR				Lg	Lg	15 00 25.0	
TXAR	**Lajitas Array**	**10.47**	**7**	Pn	**Pn**	**14 57 23.6**	**+2.0**
	0.1nm,0.3s,baz=195,slow=13,SNR=16						
TXAR				Lg	Lg	15 00 25.0	
	0.1nm,0.3s,baz=193,slow=33,SNR=4.1						
627A	**Terlingua Ranc**	**10.63**	**8**	⇑P	**Pn**	**14 57 25.4**	**+1.7**
	baz=10,SNR=11						
626A	**Big Bend Ranch**	**10.65**	**4**	⇓P	**Pn**	**14 57 26.1**	**+2.1**
	baz=10						
628A	**Black Gap, Mar**	**10.73**	**10**	⇑P	**Pn**	**14 57 26.7**	**+1.5**
	baz=11						
732A	**Laxson Ranch,**	**10.85**	**25**	⇑P	**Pn**	**14 57 28.1**	**+1.4**
	baz=11						
526A	**Mary Lane Ranc**	**11.16**	**4**	⇑P	**Pn**	**14 57 32.2**	**+1.2**
	baz=11,SNR=6.6						
631A	**Perdido Creek**	**11.25**	**21**	⇓P	**Pn**	**14 57 33.6**	**+1.4**
	baz=11						
527A	**Woodward Ranch**	**11.28**	**7**	⇓P	**Pn**	**14 57 34.9**	**+2.2**
	baz=11						
529A	**Stev Forest Ra**	**11.48**	**13**	⇑P	**Pn**	**14 57 37.8**	**+2.4**
	baz=11						
530A	**J-C Ranch, Com**	**11.71**	**16**	⇑P	**Pn**	**14 57 40.7**	**+2.2**
	baz=12						
425A	**Indio Mountain**	**11.84**	**0**	⇑P	**Pn**	**14 57 42.9**	**+2.5**
	baz=12						
531A	**Rocksprings**	**11.96**	**19**	⇑P	**Pn**	**14 57 43.5**	**+1.6**
	baz=12						
428A	**Kincaid Ranch,**	**11.98**	**10**	⇑P	**Pn**	**14 57 44.5**	**+2.3**
	baz=12						
427A	**Hayter Ranch,**	**12.00**	**7**	⇓P	**Pn**	**14 57 44.7**	**+2.2**
	baz=12						
429A	**Davenport Ranc**	**12.03**	**13**	⇑P	**Pn**	**14 57 44.4**	**+1.5**
	baz=12						
532A	**Rocksprings**	**12.14**	**22**	⇓P	**Pn**	**14 57 45.4**	**+1.1**
	baz=12						
430A	**Baggett Ranch,**	**12.35**	**16**	⇑P	**Pn**	**14 57 49.1**	**+2.0**
	baz=12						
326A	**Caldwell Ranch**	**12.41**	**4**	⇓P	**Pn**	**14 57 51.1**	**+3.0**
	baz=12						
431A	**Sonora**	**12.42**	**18**	⇑P	**Pn**	**14 57 50.1**	**+1.9**
	baz=12						
325A	**Bean Ranch, Si**	**12.43**	**0**	⇑P	**Pn**	**14 57 51.1**	**+2.7**
	baz=12						
328A	**Wristen Ranch,**	**12.61**	**9**	⇑P	**Pn**	**14 57 53.1**	**+2.4**
	baz=12						
330A	**Mertzon**	**12.95**	**15**	⇓P	**Pn**	**14 57 57.5**	**+2.0**
	baz=13						
319A	**Douglas**	**12.99**	**344**	⇑P	Pn	14 57 59.5	+3.4
	baz=13						
331A	**San Angelo**	**13.06**	**18**	⇑P	**Pn**	**14 57 59.0**	**+2.1**
	baz=13						
226B	**Tecolote Peak,**	**13.16**	**3**	⇓P	**Pn**	**14 58 00.6**	**+2.3**
	baz=13						
225A	**Deer Hill, Car**	**13.16**	**1**	⇑P	**Pn**	**14 58 01.1**	**+2.6**
	baz=13						
220A	**Playas Peak, P**	**13.32**	**347**	⇑P	**Pn**	**14 58 03.5**	**+2.9**
	baz=13						
229A	**Bryant Ranch,**	**13.35**	**12**	⇑P	**Pn**	**14 58 03.3**	**+2.4**
	baz=13						
125A	**Gardner Draw,**	**13.71**	**2**	⇓P	**Pn**	**14 58 08.2**	**+2.3**
	baz=14						
124A	**Stringfield Ra**	**13.75**	**359**	⇓P	**Pn**	**14 58 08.8**	**+2.2**
	baz=14						
121A	**Cookes Peak, D**	**13.80**	**350**	⇓P	**Pn**	**14 58 10.3**	**+3.2**
	baz=14						
128A	**Castleberry Fa**	**13.87**	**9**	⇑P	**Pn**	**14 58 10.1**	**+2.1**
	baz=14						
120A	**U Bar Ranch, L**	**13.97**	**347**	⇓P	Pn	14 58 12.9	+3.5
	baz=14						
129A	**Stewart Farms,**	**13.98**	**11**	⇑P	**Pn**	**14 58 11.3**	**+1.7**
	baz=14						
Z23A	**Rita Site, Whi**	**14.35**	**356**	⇓P	**Pn**	**14 58 17.3**	**+2.7**
	baz=14						
Z26A	**Caprock**	**14.36**	**4**	⇓P	**Pn**	**14 58 16.4**	**+1.8**
	baz=14						
Z22A	**Elephant Butte**	**14.40**	**354**	⇑P	**Pn**	**14 58 18.1**	**+2.8**
	baz=14						
Z27A	**Tatum**	**14.46**	**6**	⇑P	**Pn**	**14 58 17.7**	**+1.6**
	baz=14						
Z20A	**Nine Sixteen R**	**14.51**	**348**	⇓P	**Pn**	**14 58 19.8**	**+3.0**
	baz=14						
ABTX	**Abilene, Hawle**	**14.52**	**19**	⇑P	**Pn**	**14 58 18.2**	**+1.3**
	baz=14						
Z28A	**Tucker Farm, M**	**14.54**	**9**	⇓P	**Pn**	**14 58 19.3**	**+2.1**
	baz=14						
Z29A	**Hungry Hill Ra**	**14.62**	**11**	⇑P	**Pn**	**14 58 20.3**	**+2.0**
	baz=15						
214A	**Organ Pipe Nat**	**14.75**	**333**	⇓P	**Pn**	**14 58 22.4**	**+2.4**
	baz=14						
Z30A	**Sanderson Ranc**	**14.77**	**13**	⇓P	**Pn**	**14 58 21.5**	**+1.3**
	baz=15,SNR=10						
Y23A	**Lovelace Mesa,**	**15.00**	**357**	⇓P	**Pn**	**14 58 25.8**	**+2.3**
	baz=15						
Y27A	**Causey**	**15.03**	**6**	⇑P	**Pn**	**14 58 25.8**	**+2.0**
	baz=15,SNR=7.6						
Y22A	**Socorro**	**15.08**	**354**	⇓P	**Pn**	**14 58 26.9**	**+2.4**
	baz=15						
Z32A	**Haskell**	**15.21**	**18**	⇑P	**Pn**	**14 58 27.3**	**+1.3**
	baz=15						
Y29A	**Porterfield Fa**	**15.22**	**11**	⇑P	**P**	**14 58 29.2**	**-1.8**
	baz=15						
Y21A	**Point of Rocks**	**15.23**	**352**	⇓P	**P**	**14 58 30.4**	**-0.9**
	baz=15						
Y20A	**Horse Springs,**	**15.24**	**350**	⇑P	**P**	**14 58 30.3**	**-1.1**
	baz=15						
Y30A	**Stafford Cattl**	**15.38**	**13**	⇓P	**Pn**	**14 58 30.5**	**+2.1**
	baz=15						
X25A	**Clemmons Ranch**	**15.58**	**1**	⇓P	**P**	**14 58 33.9**	**-1.2**
	baz=15						
Y31A	**Rekieta Farm,**	**15.61**	**15**	⇓P	**Pn**	**14 58 33.3**	**+2.0**
	baz=16						
X21A	**Alamocita Cree**	**15.68**	**352**	⇓P	**P**	**14 58 34.8**	**-1.5**
	baz=16						
X20A	**Quemado**	**15.88**	**350**	⇓P	**P**	**14 58 37.5**	**-1.0**
	baz=16						
Z14A	**Wintersburg**	**16.04**	**336**	⇓P	**Pn**	**14 58 38.4**	**+1.6**
	baz=16						
ANMO	**Albuquerque**	**16.04**	**356**	Pn	**Pn**	**14 58 38.4**	**+1.4**
ANMO	**Albuquerque**	**16.04**	**356**	Pn	**Pn**	**14 58 38.4**	**+1.4**
	0.1nm,0.3s,baz=74,slow=4.0,SNR=3.1						
W27A	**Bowe Ranch, En**	**16.21**	**6**	⇑P	**Pn**	**14 58 38.4**	**-0.7**
	baz=16						
W23A	**Werner Place,**	**16.23**	**357**	⇑P	**P**	**14 58 41.4**	**-1.0**
	baz=16						
W24A	**Lazy 6 Ranch,**	**16.26**	**359**	⇑P	**Pn**	**14 58 41.4**	**+1.6**
	baz=16						
W25A	**X Bar L Ranch,**	**16.27**	**2**	⇓P	**Pn**	**14 58 40.0**	**0.0**
	baz=16,SNR=7.9						
X16A	**Lo Mia Camp, P**	**16.47**	**341**	⇑P	**Pn**	**14 58 43.6**	**+1.1**
	baz=16						
GLA	**Glamis**	**16.59**	**330**	⇑P	**Pn**	**14 58 44.7**	**+0.9**
	baz=16						
WMOK	**Wichita Mounta**	**16.75**	**18**	*e*P	**Pn**	**14 58 43.7**	**-2.2**
	19nm,1.3s						
V26A	**Tequesquite Ra**	**16.88**	**4**	⇓P	**Pn**	**14 58 48.7**	**+1.1**
	baz=17						
V25A	**Rancho No Teng**	**16.89**	**1**	⇓P	**Pn**	**14 58 48.6**	**+0.8**
	baz=17						
V20A	**Brimhall**	**17.11**	**351**	⇑P	**P**	**14 58 52.5**	**+0.5**
	baz=17						
BC3	**Big Chuckawall**	**17.38**	**330**	⇓P	**P**	**14 58 54.9**	**-0.1**
	baz=17						
U25A	**Circle Dot Ran**	**17.45**	**2**	⇑P	**Pn**	**14 58 55.0**	**+0.2**
	baz=17,SNR=5.9						
WUAZ	**Wupatki**	**17.47**	**343**	*e*P	**Pn**	**14 58 53.7**	**-1.3**
	20nm,1.1s						
WUAZ	**Wupatki**	**17.47**	**343**	⇓P	**P**	**14 58 57.1**	**+1.0**
	baz=17,SNR=11						
U28A	**Mallet**	**17.60**	**8**	⇑P	**Pn**	**14 58 56.8**	**+0.2**
	baz=18						
U21A	**Nageezi**	**17.61**	**353**	⇑P	**P**	**14 58 58.0**	**+0.3**
	baz=17						
IRM	**Iron Mountain**	**17.65**	**331**	⇓P	**P**	**14 58 58.4**	**+0.5**
	baz=17						
W13A	**Hualapai Mount**	**17.93**	**336**	⇓P	**P**	**14 59 02.0**	**+0.8**
	baz=18						
T24A	**Torres, Weston**	**18.11**	**0**	⇓P	**Pn**	**14 59 03.0**	**-0.1**
	baz=18						
T22A	**Edith**	**18.12**	**355**	⇓P	**P**	**14 59 03.8**	**+0.5**
	baz=18						
T21A	**Navajo Lake**	**18.16**	**354**	⇑P	**P**	**14 59 05.2**	**+1.5**
	baz=18						
T25A	**Trinidad**	**18.19**	**2**	⇑P	**P**	**14 59 04.5**	**+0.5**
	baz=18						
GMRC	**Granite Mounta**	**18.40**	**331**	⇑P	**Pn**	**14 59 07.8**	**+1.3**
	baz=18						
MVCO	**Mesa Verde**	**18.49**	**351**	⇓P	**Pn**	**14 59 08.8**	**+1.2**
	baz=18						
U15A	**North Rim**	**18.59**	**341**	⇑P	**Pn**	**14 59 09.7**	**+0.9**
	baz=18,SNR=5.5						
S24A	**Houchin Ranch,**	**18.68**	**360**	⇑P	**P**	**14 59 09.9**	**+0.4**
	baz=18						
S25A	**Robets Cordova**	**18.71**	**2**	⇓P	**P**	**14 59 09.7**	**0.0**
	baz=19						
S26A	**Kim**	**18.71**	**4**	⇑P	**P**	**14 59 10.3**	**+0.6**
	baz=19						
HEC	**Hector,Ludlow**	**18.75**	**330**	⇑P	**Pn**	**14 59 11.6**	**+0.9**
	baz=18						
TUL1	**Tulsa**	**18.83**	**24**	⇓P	**P**	**14 59 10.1**	**-0.8**
	baz=19						
S22A	**4UR Ranch, Cre**	**18.85**	**356**	⇑P	**P**	**14 59 11.8**	**+0.5**
	baz=19						
S21A	**Coal Bank Pass**	**18.85**	**353**	⇓P	**P**	**14 59 11.9**	**+0.5**
	baz=19						
S20A	**Disappointment**	**19.09**	**352**	⇑P	**Pn**	**14 59 15.2**	**+0.4**
	baz=19						
S18A	**Hurst Farm, Bl**	**19.21**	**348**	⇑P	**Pn**	**14 59 17.3**	**+0.9**
	baz=19						
R23A	**Moffat**	**19.24**	**358**	⇓P	**Pn**	**14 59 16.8**	**+0.1**
	baz=19						
R24A	**Sanders Place,**	**19.27**	**360**	⇑P	**Pn**	**14 59 16.9**	**-0.1**
	baz=19						
R22A	**Saguache, Gunn**	**19.32**	**356**	⇑P	**P**	**14 59 17.4**	**+0.8**
	baz=19						
R26A	**Arlington**	**19.39**	**4**	⇑P	**P**	**14 59 17.2**	**+0.1**
	baz=19,SNR=6.5						
PV04	**Paradox Valley**	**19.71**	**351**	*e*P	**P**	**14 59 20.4**	**-0.3**
R30A	**Dighton**	**19.77**	**11**	⇑P	**P**	**14 59 21.9**	**+0.7**
	baz=20						
Q25A	**Bedland, Calha**	**19.96**	**2**	⇑P	**P**	**14 59 24.0**	**+0.6**
	baz=20						
SMCO	**Snowmass**	**20.28**	**356**	*e*P	**P**	**14 59 26.0**	**-1.1**
	4.4nm,0.9s						
MPMC	**Manual Prospec**	**20.30**	**330**	⇑P	**P**	**14 59 27.9**	**+0.8**
	baz=20						
ISA	**Isabella**	**20.47**	**327**	⇑P	**P**	**14 59 29.6**	**+0.7**
	baz=20						
MVU	**Marysvale**	**20.50**	**344**	*e*P	**P**	**14 59 28.1**	**-1.2**
	15nm,1.1s						
Q16A	**Castle Valley**	**20.64**	**346**	⇓P	**P**	**14 59 31.6**	**+0.8**
	baz=20,SNR=10						
ISCO	**Idaho Springs**	**20.84**	**359**	*e*P	**P**	**14 59 33.2**	**+0.2**
	4.6nm,1.1s						
ISCO	**Idaho Springs**	**20.84**	**359**	⇓P	**P**	**14 59 33.5**	**+0.4**
	baz=21						
P19A	**Cripple Cowboy**	**20.94**	**352**	⇑P	**P**	**14 59 34.5**	**+0.4**
	baz=21						
P17A	**Butcher Ranch,**	**21.09**	**348**	⇓P	**P**	**14 59 36.1**	**+0.5**
	baz=21						
P18A	**Preston Nutter**	**21.14**	**349**	⇓P	**P**	**14 59 37.1**	**+0.8**
	baz=21,SNR=7.1						
O22A	**Kremmling**	**21.23**	**357**	⇓P	**P**	**14 59 37.6**	**+0.3**
	baz=21						
R11A	**Troy Canyon, C**	**21.43**	**337**	⇑P	**P**	**14 59 39.7**	**+0.3**
	baz=21,SNR=16						
KSU1	**Kansas State U**	**21.44**	**18**	*e*P	**P**	**14 59 37.8**	**-1.4**
	27nm,0.8s						
DAU	**Daniels Canyon**	**22.09**	**347**	*e*P	**P**	**14 59 47.0**	**+0.4**
	27nm,1.2s						
DUG	**Dugway**	**22.25**	**344**	*e*P	**P**	**14 59 47.0**	**-1.0**
	42nm,1.7s						
DUG	**Dugway**	**22.25**	**344**	⇓P	**P**	**14 59 48.9**	**+0.9**
	baz=22,SNR=6.5						
NVAR	**Mina Array Bea**	**22.61**	**332**	P	**P**	**14 59 54.7**	**+2.7**
NVAR	**Mina Array Bea**	**22.61**	**332**	P	**P**	**14 59 54.7**	**+2.7**
	2.5nm,1.0s,baz=151,slow=11,SNR=6.8						
M21A	**Separation Pea**	**22.72**	**356**	⇓P	**P**	**14 59 52.1**	**-1.1**
	baz=23						
M18A	**Lyman**	**22.86**	**350**	⇓P	**P**	**14 59 54.2**	**-0.4**
	baz=23						
M17A	**Scullys Gap (B**	**23.01**	**349**	⇑P	**P**	**14 59 56.2**	**+0.1**
	baz=23,SNR=5.9						
L21A	**Rawlins**	**23.08**	**356**	⇓P	**P**	**14 59 56.8**	**0.0**
	baz=23						
HWUT	**Hardware Ranch**	**23.31**	**348**	*e*P	**P**	**14 59 59.0**	**-0.1**
	8.7nm,1.0s						
ELK	**Elko**	**23.46**	**340**	P	**P**	**15 00 00.8**	**+0.1**
ELK	**Elko**	**23.46**	**340**	P	**P**	**15 00 00.8**	**+0.1**
	2.0nm,0.7s,baz=142,slow=8.8,SNR=8.1						
HVU	**Hansel Valley**	**23.74**	**346**	*e*P	**P**	**15 00 03.2**	**-0.1**
	11nm,1.0s						

K21A	**Alcova**	**23.74**	**356**	⇓P	**P**	**15 00 02.4**	**-0.9**
	baz=24						
K19A	**Absolon Red Bu**	**24.07**	**353**	⇑P	**P**	**15 00 06.3**	**-0.1**
	baz=24						
PDAR	**Pinedale Array**	**24.10**	**352**	P	**P**	**15 00 06.2**	**-0.5**
PDAR	**Pinedale Array**	**24.10**	**352**	P	**P**	**15 00 06.2**	**-0.5**
	1.0nm,0.8s,baz=170,slow=9.0,SNR=8.2						
J18A	**Kendall Valley**	**24.60**	**351**	⇑P	**P**	**15 00 10.4**	**-0.9**
	baz=24,SNR=10						
J17A	**Brown Place, J**	**24.85**	**350**	⇓P	**P**	**15 00 13.4**	**-0.1**
	baz=25						
RRI2	**Red Ridge**	**24.94**	**349**	*e*P	**P**	**15 00 13.6**	**-0.9**
	16nm,1.1s						
TPAW	**Teton Pass**	**25.02**	**350**	*e*P	**P**	**15 00 14.1**	**-1.0**
	16nm,1.1s						
LOHW	**Long Hollow**	**25.08**	**351**	*e*P	**P**	**15 00 15.2**	**-0.4**
	15nm,1.1s						
I20A	**Worland**	**25.11**	**355**	⇑P	**P**	**15 00 15.9**	**+0.1**
	baz=25						
J15A	**Blackfoot**	**25.21**	**347**	⇑P	**P**	**15 00 17.1**	**+0.4**
	baz=25						
MOOW	**Moose Ponds**	**25.23**	**350**	*e*P	**P**	**15 00 16.0**	**-1.0**
	8.2nm,1.3s						
J14A	**Carey**	**25.37**	**346**	⇑P	**P**	**15 00 18.8**	**+0.5**
	baz=25,SNR=8.0						
I17A	**Pilgrim Ck.**	**25.38**	**351**	⇑P	**P**	**15 00 18.5**	**+0.2**
	baz=25						
IMW	**Indian Meadow**	**25.41**	**350**	*e*P	**P**	**15 00 17.1**	**-1.6**
	11nm,1.4s						
J13A	**Cove Ranch, Pi**	**25.61**	**345**	⇑P	**P**	**15 00 20.5**	**+0.2**
	baz=25						
HLID	**Hailey**	**25.82**	**344**	*e*P	**P**	**15 00 22.4**	**+0.1**
	7.4nm,1.0s						
HLID	**Hailey**	**25.82**	**344**	⇓P	**P**	**15 00 22.7**	**+0.4**
	baz=26,SNR=10						
I14A	**Mackay**	**25.93**	**346**	⇓P	**P**	**15 00 23.5**	**+0.2**
	baz=26,SNR=7.5						
MFID	**Camas Ranch**	**26.07**	**342**	*e*P	**P**	**15 00 25.1**	**+0.6**
	6.4nm,1.1s						
MFID	**Camas Ranch**	**26.07**	**342**	⇑P	**P**	**15 00 24.5**	**0.0**
	baz=26						
I13A	**Wildhorse Cree**	**26.08**	**345**	⇓P	**P**	**15 00 25.2**	**+0.6**
	baz=26,SNR=19						
H16A	**Russell Place,**	**26.25**	**350**	⇓P	**P**	**15 00 27.0**	**+0.8**
	baz=26,SNR=7.9						
G20A	**Bridger**	**26.38**	**355**	⇑P	**P**	**15 00 26.6**	**-0.7**
	baz=26						
H14A	**Leadore**	**26.57**	**347**	⇓P	**P**	**15 00 29.6**	**+0.6**
	baz=26,SNR=7.0						
G18A	**Lazy EL Ranch,**	**26.61**	**353**	⇑P	**P**	**15 00 30.0**	**+0.6**
	baz=26						
MCMT	**McKenzie Canyo**	**26.66**	**348**	*e*P	**P**	**15 00 28.9**	**-1.0**
	2.0nm,1.0s						
H13A	**Challis**	**26.72**	**345**	⇓P	**P**	**15 00 30.6**	**+0.3**
	baz=26,SNR=5.1						
H12A	**Diamond D Ranc**	**26.86**	**344**	⇑P	**P**	**15 00 32.1**	**+0.5**
	baz=27,SNR=7.9						
JFWS	**Jewell Farm**	**27.04**	**24**	*e*P	**P**	**15 00 33.1**	**+0.1**
	14nm,0.8s						
F18A	**Big Timber**	**27.21**	**353**	⇑P	**P**	**15 00 34.7**	**0.0**
	baz=27						
G13A	**Cobalt**	**27.21**	**346**	⇓P	**P**	**15 00 34.9**	**+0.1**
	baz=27,SNR=7.2						
BOZ	**Bozeman (W)**	**27.23**	**350**	*e*P	**P**	**15 00 34.2**	**-0.7**
	4.0nm,1.2s						
F17A	**Fitzpatrick Pl**	**27.33**	**352**	⇓P	**P**	**15 00 35.9**	**0.0**
	baz=27						
LRM	**Limekiln Ridge**	**27.54**	**349**	*e*P	**P**	**15 00 35.4**	**-2.4**
	84nm,1.3s						
F15A	**Butte**	**27.57**	**349**	⇓P	**P**	**15 00 37.7**	**-0.3**
	baz=27,SNR=11						
E19A	**Rath Farm, Rou**	**27.66**	**354**	⇑P	**P**	**15 00 38.5**	**-0.2**
	baz=28						
F13A	**Darby**	**27.89**	**346**	⇑P	**P**	**15 00 41.0**	**+0.1**
	baz=28,SNR=27						
E17A	**Martinsdale**	**27.90**	**351**	⇑P	**P**	**15 00 40.3**	**-0.8**
	baz=28						
E16A	**East Helena**	**28.10**	**350**	⇑P	**P**	**15 00 42.8**	**+0.2**
	baz=28						
E15A	**Deer Lodge**	**28.16**	**349**	⇑P	**P**	**15 00 43.3**	**0.0**
	baz=28						
D22A	**Cohagen**	**28.20**	**358**	⇓P	**P**	**15 00 43.5**	**0.0**
	baz=28						
E14A	**Clinton**	**28.31**	**348**	⇓P	**P**	**15 00 44.6**	**-0.1**
	baz=28,SNR=8.1						
D19A	**Cripps Ranch,**	**28.37**	**355**	⇓P	**P**	**15 00 44.8**	**-0.3**
	baz=28						
E13A	**Victor**	**28.48**	**347**	⇓P	**P**	**15 00 45.8**	**-0.2**
	baz=28,SNR=9.0						
D18A	**Linhart Farms,**	**28.49**	**353**	⇑P	**P**	**15 00 45.5**	**-0.6**
	baz=28						
D17A	**Six Diamond Ra**	**28.56**	**352**	⇓P	**P**	**15 00 46.5**	**-0.3**
	baz=28						
D16A	**Dana Ranch, Ca**	**28.56**	**351**	⇑P	**P**	**15 00 46.5**	**-0.4**
	baz=28						
D15A	**Lincoln**	**28.73**	**349**	⇓P	**P**	**15 00 47.9**	**-0.5**
	baz=28						
CHMT	**Chamberlain Mo**	**28.74**	**348**	*e*P	**P**	**15 00 47.2**	**-1.3**
	2.6nm,1.0s						
MSO	**Missoula**	**28.80**	**347**	⇑P	**P**	**15 00 48.6**	**-0.3**
	baz=29						
C19A	**Slack Wire Ran**	**28.95**	**354**	⇓P	**P**	**15 00 49.8**	**-0.4**
	baz=29						
D14A	**Greenough**	**28.95**	**348**	⇑P	**P**	**15 00 49.7**	**-0.5**
	baz=29,SNR=6.1						
SLMT	**Seeley Lake**	**29.10**	**348**	*e*P	**P**	**15 00 50.4**	**-1.3**
	6.3nm,1.2s						
D13A	**Huson**	**29.16**	**347**	⇑P	**P**	**15 00 51.7**	**-0.3**
	baz=29,SNR=10.0						
D12A	**Red Ives Fores**	**29.32**	**346**	⇓P	**P**	**15 00 53.6**	**+0.1**
	baz=29						
C16A	**Fuhringer Ranc**	**29.34**	**351**	⇑P	**P**	**15 00 53.0**	**-0.7**
	baz=29						
SWMT	**Swartz Lake**	**29.46**	**348**	*e*P	**P**	**15 00 53.4**	**-1.4**
	5.0nm,1.1s						
B18A	**Beardsley Farm**	**29.67**	**354**	⇑P	**P**	**15 00 56.2**	**-0.4**
	baz=30						
A18A	**Metzger Ranch,**	**30.20**	**354**	⇓P	**P**	**15 01 00.9**	**-0.3**
	baz=30						
B13A	**Whitefish**	**30.38**	**348**	⇑P	**P**	**15 01 02.6**	**-0.3**
	baz=30						
A16A	**West Butte Ran**	**30.44**	**352**	⇓P	**P**	**15 01 02.4**	**-1.0**
	baz=30						
A15A	**Johnson Ranch,**	**30.64**	**350**	⇓P	**P**	**15 01 04.8**	**-0.3**
	baz=30						
A14A	**Double T Ranch**	**30.75**	**349**	⇓P	**P**	**15 01 05.7**	**-0.5**
	baz=31						
NEW	**Newport**	**30.89**	**344**	⇑P	**P**	**15 01 07.2**	**-0.1**
	baz=31						
A13A	**Flathead Natio**	**30.90**	**348**	⇑P	**P**	**15 01 07.5**	**0.0**
	baz=31						
EYMN	**Ely**	**31.02**	**18**	*e*P	P	15 01 05.5	-3.0
	8.4nm,0.8s						
ULM	**Lac du Bonnet**	**32.14**	**11**	LR	LR	15 15 55.5	
	comp=Z,78nm,20.1s,baz=350,slow=39						
YKA	**Yellowknife Ar**	**44.06**	**354**	P	**P**	**15 02 57.0**	**-1.5**
YKA	**Yellowknife Ar**	**44.06**	**354**	P	**P**	**15 02 56.9**	**-1.5**
	2.7nm,0.9s,baz=166,slow=7.4,SNR=36						
YKW3	**Yellowknife Ar**	**44.13**	**354**	*e*P	**P**	**15 02 56.6**	**-2.3**
	0.1nm,0.9s						
ILAR	**Eielson Array**	**53.61**	**339**	P	**P**	**15 04 11.6**	**-0.1**
ILAR	**Eielson Array**	**53.61**	**339**	P	**P**	**15 04 11.6**	**-0.1**
	2.1nm,0.9s,baz=150,slow=6.4,SNR=24						
TRF	**Thorofare Moun**	**54.03**	**337**	*e*P	**P**	**15 04 13.6**	**-1.4**
	8.4nm,1.0s						

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*ISK **08** 15:07:25.2, 38.°20N×38.°63E, h6km, MD3.0*
*DDA **08** 15:07:25.4, 38.°22N×38.°61E, h7km, MD3.3*
*CSEM **08** 15:07:25.6±0.2, 38.°22N×38.°64E, h2km, MD3.0, Error ellipse: s-maj=4.6km s-min=4.0km az=150.0*
ISC 08 15:07:25.9±1.0**, 38.°21N**±0.°02×**38.°64E**±0.°02**, h8**km±8km**, n27,** σ**0.s56**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.20**	**304**	PG	**Pg**	**15 07 29.8**	**-0.4**
MYA				*e*SG	**Sg**	**15 07 33.4**	**+0.4**
MYA	**Malataya**	**0.20**	**304**	*i* Pg	**Pg**	**15 07 29.8**	**-0.4**
MYA				*e*Sg	**Sg**	**15 07 33.4**	**+0.4**
ELZG	**Elazig**	**0.39**	**43**	*i* P	**Pg**	**15 07 33.8**	**0.0**
ELZG				*i* S	**Sg**	**15 07 39.4**	**+0.5**
ELZG	**Elazig**	**0.39**	**43**	*i* P	**Pg**	**15 07 33.8**	**0.0**
ELZG				*i* S	**Sg**	**15 07 39.4**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.55**	**72**	*e*PG	**Pg**	**15 07 36.3**	**-0.3**
SVRC				*e*SG	**Sb**	**15 07 45.3**	**-0.7**
SVRC	**Sivrice-ELAZID**	**0.55**	**72**	*e*Pg	**Pg**	**15 07 36.3**	**-0.3**
SVRC				*e*Sg	**Sb**	**15 07 45.3**	**-0.7**
AKCD	**Akcadag**	**0.57**	**279**	*i* P	**Pg**	**15 07 36.4**	**-0.6**
AKCD				*i* S	**Sg**	**15 07 44.9**	**+0.4**
AKCD	**Akcadag**	**0.57**	**279**	*i* P	**Pg**	**15 07 36.4**	**-0.6**
AKCD				*i* S	**Sg**	**15 07 44.9**	**+0.4**
URFA	**Urfa**	**0.78**	**169**	*e*PG	**Pg**	**15 07 40.7**	**-0.3**
URFA				*e*SG	**Sg**	**15 07 51.7**	**+0.5**
URFA	**Urfa**	**0.78**	**169**	*e*Pg	**Pg**	**15 07 40.7**	**-0.3**
URFA				*e*Sg	**Sg**	**15 07 51.7**	**+0.5**
ATAB	**Bozova**	**0.79**	**200**	*i* P	**Pg**	**15 07 40.6**	**-0.5**
ATAB				*i* S	**Sn**	**15 07 55.0**	**-0.4**
ATAB	**Bozova**	**0.79**	**200**	*i* P	**Pg**	**15 07 40.6**	**-0.5**
ATAB				*i* S	**Sn**	**15 07 55.0**	**-0.4**
PTK	**Pertek**	**0.90**	**41**	*e*PG	**Pg**	**15 07 42.9**	**-0.4**
PTK	**Pertek**	**0.90**	**41**	*e*Pg	**Pg**	**15 07 42.9**	**-0.4**
DARE	**Darende-Malaty**	**0.99**	**319**	*e*PG	**Pg**	**15 07 43.9**	**-1.0**
DARE	**Darende-Malaty**	**0.99**	**319**	*e*Pg	**Pg**	**15 07 43.9**	**-1.0**
KEMA	**Kemaliye**	**1.06**	**354**	*e*P	**Pg**	**15 07 45.5**	**-0.9**
KEMA				*i* S	**Sn**	**15 08 03.2**	**+1.0**
KEMA	**Kemaliye**	**1.06**	**354**	*e*P	**Pg**	**15 07 45.5**	**-0.9**
KEMA				*i* S	**Sn**	**15 08 03.2**	**+1.0**
KMRS	**Kahramanmaras**	**1.55**	**243**	*e*PN	**Pn**	**15 07 53.9**	**+0.1**
KMRS	**Kahramanmaras**	**1.55**	**243**	*e*Pn	**Pn**	**15 07 53.9**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.59**	**288**	*e*PN	**Pg**	**15 07 57.0**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.59**	**288**	*e*Pn	**Pg**	**15 07 57.0**	**+0.4**
ERZN	**Erzincan**	**1.61**	**31**	*e*PN	**Pn**	**15 07 55.0**	**+0.3**
EZC	**Erzincan**	**1.64**	**20**	*e*PN	**Pn**	**15 07 55.2**	**+0.1**
EZC	**Erzincan**	**1.64**	**20**	*e*Pn	**Pn**	**15 07 55.1**	**0.0**
KUZU	**Kuzuini**	**1.90**	**221**	*e*P	**Pg**	**15 08 02.2**	**-0.2**
KUZU				*i* S	**Sg**	**15 08 27.6**	**+0.6**
KUZU	**Kuzuini**	**1.90**	**221**	*e*P	**Pg**	**15 08 02.2**	**-0.2**
KUZU				*i* S	**Sg**	**15 08 27.6**	**+0.6**

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*IDC **08** 15:08:19.9±4.4, 36.°30N×70.°94E, h107km±37km, mb3.5/10, mb1 3.5/15, mb1mx3.3/33, mbtmp3.4/15, Error ellipse: s-maj=28.8km s-min=17.6km az=31.0*
*ISCJB **08** 15:08:25.3±0.4, 36.°46N±0.°04×71.°07E±0.°07, h188km, mb3.5/9, Error ellipse: s-maj=8.5km s-min=3.9km az=152.5*
*NNC **08** 15:08:28.6±3.5, 36.°84N×70.°66E, h167km±38km, mb2.8, mpv3.7, Error ellipse: s-maj=29.7km s-min=17.7km az=29.0*
ISC 08 15:08:25.6±0.7**, 36.°52N**±0.°06×**71.°17E**±0.°08**, h188**km**, n39,** σ**2.s29**/44**, mb3.5**/9**, 3C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.75**	**167**	⇓P	**Pn**	**15 09 10.2**	**-1.7**
CEP				S	**Sn**	**15 09 44.0**	**-3.9**
CHCP	**Chirah Chowk**	**3.33**	**148**	P	**Pn**	**15 09 18.2**	**-0.5**
THW	**Thamme Wali**	**3.74**	**173**	P	**Pn**	**15 09 22.5**	**-1.3**
SARP	**Sargodha**	**4.75**	**164**	P	**Pn**	**15 09 35.0**	**-1.5**
THN	**Thein Dam**	**5.54**	**136**	*e*PKP	**Pn**	**15 09 46.0**	**-0.7**
THN				*e*S	**Sn**	**15 10 48.0**	**-2.5**
DLH	**Dalhousie**	**5.60**	**134**	*e*PKP	**Pn**	**15 09 46.0**	**-1.8**
DLH				*e*S	**Sn**	**15 10 49.0**	**-3.4**
KK31	**Karatay Array**	**6.60**	**356**	P	**Pn**	**15 09 59.1**	**-1.4**
	2.9nm,0.3s,baz=193,slow=17,SNR=55						
KK31				S	**Sn**	**15 11 10.3**	**-5.2**
	12nm,0.7s,baz=164,slow=13,SNR=8.1						
AAK	**Ala-Archa**	**6.63**	**22**	P	**Pn**	**15 10 00.3**	**-0.7**
	2.8nm,0.3s,baz=164,slow=4.8,SNR=27						
AAK				S	**Sn**	**15 11 13.5**	**-2.8**
	2.1nm,0.3s,baz=292,slow=22,SNR=11						
SDNR	**Sundarnagar**	**6.94**	**134**	*e*PKP	**Pn**	**15 10 07.0**	**+1.9**
SDNR				*e*S	**Sn**	**15 11 21.0**	**-2.7**
TKM2	**Tokmak 2**	**7.25**	**27**	⇑P	**Pn**	**15 10 10.2**	**+1.0**
	2.0nm,0.5s						
TKM2				⇓S	**Sn**	**15 11 31.8**	**+0.7**
	6.0nm,0.8s						
SMLA	**Simla**	**7.33**	**135**	*e*S	**Sn**	**15 11 30.4**	**-2.4**
SMLA				AML	AML	15 11 33.4	
	comp=E,75nm,0.2s						
SMLA				AML	AML	15 11 33.9	
	comp=N,73nm,0.5s						
PYUN	**Piuthan**	**13.04**	**127**	*e*P	**Pn**	**15 11 25.0**	**+0.7**
	comp=N,16nm,0.4s						
MK31	**Makanchi Array**	**13.20**	**35**	⇓P	**P**	**15 11 30.2**	**+1.0**
	comp=N,0.9nm,0.6s,baz=213,slow=11,SNR=8.6						
MKAR	**Makanchi Array**	**13.20**	**35**	P	**Pn**	**15 11 27.0**	**+1.1**
	comp=N,0.0nm,0.3s,baz=210,slow=11,SNR=3.8						
DANN	**Dangsing**	**13.38**	**124**	*e*P	**Pn**	**15 11 28.7**	**+0.1**
	comp=N,12nm,0.3s						
DANN				*e*S	Sn	15 13 50.7	-7.1
KOLN	**Koldanda**	**13.66**	**126**	*e*P	**Pn**	**15 11 33.6**	**+1.6**
	comp=N,8.4nm,0.3s						
DMN	**Daman**	**14.77**	**123**	*e*P	**P**	**15 11 47.1**	**+0.1**
	comp=N,12nm,0.4s						
KKN	**Kakani**	**14.77**	**122**	*e*P	**P**	**15 11 48.4**	**+1.4**
	comp=N,11nm,0.4s						
PKIN	**Phulchoki**	**14.98**	**122**	*e*P	**P**	**15 11 51.4**	**+2.0**
	comp=N,18nm,0.5s						
PKI	**Pulchoki**	**14.99**	**122**	*e*P	**P**	**15 11 51.4**	**+1.8**
	comp=N,18nm,0.5s						
KURBB	**Kurchatov Arra**	**15.06**	**18**	P	**P**	**15 11 49.9**	**+0.2**
	comp=N,0.1nm,0.3s,baz=210,slow=10,SNR=11						
GUN	**Gumba**	**15.11**	**120**	*e*P	**P**	**15 11 52.0**	**+1.2**
	comp=N,9.9nm,0.3s						
AB31	**Akbulak array**	**15.14**	**331**	P	**Pn**	**15 11 47.9**	**-1.9**
	comp=N,0.6nm,0.4s,baz=149,slow=12,SNR=17						
AB31				⇓S	S	15 14 29.4	-9.4
	comp=N,2.2nm,0.6s,baz=152,slow=24,SNR=8.4						
RAMN	**Ramite**	**16.20**	**122**	*e*P	**Pn**	**15 12 06.3**	**+3.0**
	comp=N,6.1nm,0.3s						
BVAR	**Borovoye Array**	**16.52**	**358**	P	**Pn**	**15 12 06.6**	**+0.1**
	comp=N,0.2nm,0.3s,baz=168,slow=8.5,SNR=3.7						
TAPN	**Taplejung**	**16.73**	**118**	*e*P	**Pn**	**15 12 13.0**	**+3.4**
	comp=N,8.6nm,0.4s						
TAPN				*e*S	**S**	**15 15 10.9**	**-3.0**
AKTO	**Aktyubinsk**	**16.84**	**330**	⇑P	**P**	**15 12 08.4**	**-0.9**
	comp=N,0.4nm,0.8s						
AKTO				⇑S	**S**	**15 15 10.5**	**-4.6**
	comp=N,0.4nm,0.9s						
AKTO	**Aktyubinsk**	**16.84**	**330**	P	**Pn**	**15 12 10.7**	**+0.3**
	comp=N,0.3nm,0.3s,baz=152,slow=9.2,SNR=8.3						
ZALV	**Zalesovo Beam**	**19.84**	**24**	P	**Pn**	**15 12 45.8**	**-0.1**
	comp=N,5.1nm,0.4s,baz=222,slow=11,SNR=35						
FINES	**FINESS Array B**	**37.55**	**326**	P	**P**	**15 15 24.1**	**+2.8**
	comp=N,0.6nm,0.4s,baz=125,slow=9.6,SNR=6.6						
ARCES	**ARCESS Array B**	**41.18**	**338**	P	**P**	**15 15 54.3**	**+3.0**
	comp=N,1.2nm,0.7s,baz=119,slow=7.1,SNR=7.8						
HFS	**Hagfors**	**43.14**	**322**	P	**P**	**15 16 10.2**	**+3.1**
	comp=N,6.1nm,1.0s,baz=94,slow=8.9,SNR=7.9						
NB2	**NORSAR Subarra**	**44.45**	**323**	P	**P**	**15 16 20.4**	**+2.7**
	comp=Z,0.2nm,0.5s,baz=104,slow=7.9						
NOA	**NORSAR Array B**	**44.45**	**323**	P	**P**	**15 16 20.4**	**+2.7**
	comp=Z,0.5nm,0.5s,baz=97,slow=7.9,SNR=2.5						
TORD	**Torodi Ar. Bea**	**65.86**	**269**	P	**P**	**15 18 52.4**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=47,slow=5.8,SNR=7.3						
ILAR	**Eielson Array**	**74.73**	**16**	P	P	15 19 49.0	+4.7
	comp=Z,0.3nm,0.9s,baz=308,slow=3.2,SNR=4.8						
YKA	**Yellowknife Ar**	**81.22**	**3**	P	P	15 20 24.9	+4.9
	comp=Z,0.3nm,0.4s,baz=351,slow=5.4,SNR=10						
WRA	**Warramunga Arr**	**81.88**	**122**	P	P	15 20 27.9	+3.8
	comp=Z,0.5nm,0.4s,baz=324,slow=5.0,SNR=21						
ASAR	**Alice Springs**	**84.15**	**125**	P	P	15 20 39.4	+3.7
	comp=Z,0.4nm,0.5s,baz=314,slow=4.8,SNR=13						

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*IDC **08** 15:13:45.6±1.6, 11.°05N×86.°12W, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.9/24, mbtmp3.9/9, MS3.7/4, Ms1 3.6/4, ms1mx3.2/36, Error ellipse: s-maj=42.1km s-min=32.5km az=33.0*
*NEIC **08** 15:13:49.3±0.9, 10.°83N×86.°25W, h35km, mb4.5/5, Error ellipse: s-maj=26.1km s-min=17.3km az=74.0*
*CASC **08** 15:13:49.4±4.6, 10.°74N×86.°52W, h16km±29km, MD4.1, mb4.5(NEIC)*
ISC 08 15:13:49.5±0.7**, 10.°84N**±0.°09×**86.°46W**±0.°07**, h31**km**, n52,** σ**1.s45**/55**, mb4.1**/14**, 2C, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**0.93**	**102**	⇑*i*P	**Pb**	**15 14 07.3**	**+0.3**
GBS3	**Finca Las Im˜¡**	**0.98**	**93**	*i* P	**Pb**	**15 14 08.0**	**-0.1**
GBS2	**Las Lilas**	**0.98**	**90**	*i* P	**Pb**	**15 14 08.3**	**+0.2**
LAPC	**Finca la Perla**	**1.01**	**94**	*i* P	**Pb**	**15 14 08.2**	**-0.3**
BUEV	**Buena Vista**	**1.03**	**92**	*i* P	**Pb**	**15 14 08.9**	**0.0**
GB1A	**Borinquen Arri**	**1.04**	**91**	*i* P	**Pb**	**15 14 09.3**	**+0.2**
VCR	**Vista de Mar**	**1.08**	**131**	⇑*e*P	**Pn**	**15 14 06.5**	**-2.1**
GPS1	**Guardaparques**	**1.09**	**93**	*i* P	**Pb**	**15 14 09.6**	**-0.3**
GPS1				*i* S	**Sb**	**15 14 26.5**	**+2.7**
LIM1	**Limonal**	**1.19**	**97**	*i* P	**Pb**	**15 14 10.9**	**-0.6**
LIM1				*i* S	**Sb**	**15 14 28.5**	**+1.8**
COLC	**Colonia**	**1.24**	**98**	*i* P	**Pb**	**15 14 11.8**	**-0.6**
PTEN	**Parque Tenorio**	**1.45**	**95**	*i* P	**Pb**	**15 14 14.8**	**-1.1**
CHPA	**Chiripa**	**1.57**	**104**	*i* P	**Pb**	**15 14 16.8**	**-1.3**
FORC	**Fortuna**	**1.79**	**102**	*e*P	**Pb**	**15 14 20.1**	**-1.7**
CGA2	**Cerro Gallo 2**	**2.12**	**113**	*e*P	**Pn**	**15 14 23.4**	**+0.4**
LAJ	**Bijagual**	**2.49**	**113**	*e*P	Pn	15 14 23.9	-4.3
SJS	**Escuela Geolog**	**2.53**	**111**	*e*P	**Pb**	**15 14 31.4**	**-3.0**
QCR	**Quepos**	**2.66**	**122**	*e*P	**Pb**	**15 14 38.6**	**+2.1**
BUS	**Buena Vista**	**2.95**	**115**	*e*P	**Pn**	**15 14 36.8**	**+2.1**
TGUH	**Tegucigalpa,Un**	**3.30**	**346**	*e*Pn	**Pn**	**15 14 40.0**	**+0.9**
ACR	**Cerro Adams**	**3.90**	**124**	*e*P	**Pn**	**15 14 48.8**	**+1.4**
ACR				*e*S	**Sn**	**15 15 31.6**	**-0.6**
TEIG	**Tepich**	**9.50**	**350**	LR	LR	15 20 22.3	
	comp=Z,212nm,19.4s,baz=285,slow=42						
ATAH	**Atahualpa**	**19.58**	**155**	LR	LR	15 24 52.8	
	comp=Z,237nm,21.8s,baz=174,slow=34						
LRAL	**Lakeview Retre**	**22.10**	**359**	*e*P	**P**	**15 18 43.8**	**+1.5**
	13nm,1.0s						
TXAR	**Lajitas Array**	**24.43**	**321**	P	**P**	**15 19 06.6**	**+0.9**
TXAR				PcP	**PcP**	**15 22 46.4**	**+2.1**
TXAR	**Lajitas Array**	**24.43**	**321**	P	**P**	**15 19 06.6**	**+0.9**
	1.9nm,0.6s,baz=134,slow=11,SNR=22						
TXAR				PcP	**PcP**	**15 22 46.4**	**+2.1**
	0.3nm,0.4s,baz=111,slow=4.3,SNR=3.3						
MIAR	**Mount Ida**	**24.48**	**346**	*e*P	**P**	**15 19 03.8**	**-2.1**
	4.2nm,0.6s						
TKL	**Tuckaleechee C**	**24.83**	**5**	P	**P**	**15 19 09.4**	**+0.3**
TKL	**Tuckaleechee C**	**24.83**	**5**	P	**P**	**15 19 09.4**	**+0.3**
	8.7nm,1.1s,baz=191,slow=10,SNR=4.5						
WMOK	**Wichita Mounta**	**26.31**	**337**	*e*P	**P**	**15 19 21.6**	**-1.0**
	14nm,0.9s						
JFWS	**Jewell Farm**	**32.12**	**355**	*e*P	**P**	**15 20 12.6**	**-1.6**
	15nm,1.0s						
ECSD	**EROS Data Cent**	**33.94**	**347**	*e*P	**P**	**15 20 28.9**	**-1.0**
	7.3nm,1.0s						
PDAR	**Pinedale Array**	**37.64**	**332**	P	**P**	**15 21 01.6**	**-0.4**
PDAR	**Pinedale Array**	**37.64**	**332**	P	**P**	**15 21 01.6**	**-0.4**
	0.8nm,0.6s,baz=136,slow=11,SNR=7.6						
NVAR	**Mina Array Bea**	**39.55**	**319**	P	**P**	**15 21 19.6**	**+1.5**
NVAR				PcP	**PcP**	**15 23 28.4**	**+3.2**
NVAR	**Mina Array Bea**	**39.55**	**319**	P	**P**	**15 21 19.6**	**+1.5**
	0.8nm,0.7s,baz=141,slow=5.0,SNR=4.1						
NVAR				PcP	**PcP**	**15 23 28.4**	**+3.2**
	0.6nm,0.5s,baz=134,slow=4.3,SNR=4.1						
ULM	**Lac du Bonnet**	**40.05**	**351**	P	**P**	**15 21 21.6**	**-0.3**
ULM	**Lac du Bonnet**	**40.05**	**351**	P	**P**	**15 21 21.6**	**-0.3**
	1.4nm,0.4s,baz=56,slow=3.6,SNR=2.3						
BDFB	**Brasilia**	**46.27**	**124**	LR	LR	15 42 13.3	
	comp=Z,127nm,21.2s,baz=103,slow=37						
SCHQ	**Schefferville**	**46.55**	**16**	P	**P**	**15 22 12.7**	**-1.5**
SCHQ	**Schefferville**	**46.55**	**16**	P	**P**	**15 22 12.7**	**-1.5**
	1.2nm,0.5s,baz=243,slow=7.4,SNR=6.6						
SCHQ				LR	LR	15 42 34.9	
	comp=Z,82nm,19.7s,baz=286,slow=37						
YKA	**Yellowknife Ar**	**55.41**	**345**	P	**P**	**15 23 19.9**	**-0.8**
YKA	**Yellowknife Ar**	**55.41**	**345**	P	**P**	**15 23 19.9**	**-0.8**
	0.1nm,0.3s,baz=116,slow=6.3,SNR=5.7						
ILAR	**Eielson Array**	**67.88**	**336**	P	**P**	**15 24 43.4**	**-1.4**
ILAR	**Eielson Array**	**67.88**	**336**	P	**P**	**15 24 43.4**	**-1.4**
	0.3nm,0.4s,baz=119,slow=2.8,SNR=7.0						
MDT	**Midelt**	**77.40**	**59**	P	**P**	**15 25 40.0**	**-2.2**
MDT	**Midelt**	**77.40**	**59**	P	**P**	**15 25 40.0**	**-2.2**
	0.6nm,0.4s,baz=259,slow=10,SNR=4.3						
ASAR	**Alice Springs**	**139.55**	**246**	PKP	**PKPdf**	**15 33 14.4**	**-0.5**
ASAR	**Alice Springs**	**139.55**	**246**	PKP	**PKPdf**	**15 33 14.4**	**-0.5**
	0.3nm,1.0s,baz=109,slow=2.7,SNR=2.9						
WRA	**Warramunga Arr**	**139.73**	**252**	PKP	**PKPdf**	**15 33 15.2**	**-0.1**
WRA	**Warramunga Arr**	**139.73**	**252**	PKP	**PKPdf**	**15 33 15.2**	**-0.1**
	0.5nm,0.9s,baz=92,slow=2.4,SNR=3.4						
CMAR	**Chiang Mai Arr**	**150.41**	**350**	PKPbc	**PKPbc**	**15 33 39.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**150.41**	**350**	PKPbc	**PKPbc**	**15 33 39.5**	**+0.5**
	1.4nm,1.0s,baz=345,slow=2.6,SNR=8.9						

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*IDC **08** 15:15:26.5±0.6, 14.°25S×66.°15E, h0km, mb3.9/23, mb1 4.0/23, mb1mx4.0/32, mbtmp3.9/23, MS4.1/23, Ms1 4.1/23, ms1mx3.8/54, Error ellipse: s-maj=20.4km s-min=15.6km az=40.0*
*ISCJB **08** 15:15:27.1±0.5, 14.°16S±0.°10×66.°19E±0.°09, h15km, mb4.0/26, MS4.1/22, Error ellipse: s-maj=14.2km s-min=12.9km az=10.8*
*NEIC **08** 15:15:28.3±0.3, 14.°18S×66.°16E, h10km, mb4.7/2, Error ellipse: s-maj=11.2km s-min=10.6km az=197.0*
ISC 08 15:15:29.0±0.5**, 14.°2S**±0.°1×**66.°1E**±0.°1**, h15**km**, n92,** σ**0.s89**/87**, mb4.0**/26**, MS4.1**/22**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.68**	**254**	LR	LR	15 25 23.7	
	comp=Z,1µm,18.9s,baz=0.7,slow=32						
KMBO	**Kilima Mbogo**	**31.39**	**292**	P	**P**	**15 21 49.4**	**-0.6**
KMBO	**Kilima Mbogo**	**31.39**	**292**	P	**P**	**15 21 49.4**	**-0.6**
	0.5nm,0.3s,baz=241,slow=22,SNR=4.4						
KMBO				LR	LR	15 32 36.6	
	comp=Z,171nm,18.0s,baz=276,slow=33						
PSI	**Prapat**	**36.64**	**65**	LR	LR	15 35 11.7	
	comp=Z,478nm,18.5s,baz=226,slow=32						
LSZ	**Lusaka**	**36.68**	**263**	*e*P	**P**	**15 22 36.5**	**+0.7**
	25nm,1.6s						
BOSA	**Boshof**	**40.44**	**243**	P	**P**	**15 23 07.4**	**+0.1**
BOSA	**Boshof**	**40.44**	**243**	P	**P**	**15 23 07.4**	**+0.1**
	5.3nm,1.0s,baz=68,slow=12,SNR=4.1						
BOSA				LR	LR	15 36 47.1	
	comp=Z,226nm,19.9s,baz=54,slow=32						
CMAR	**Chiang Mai Arr**	**45.84**	**46**	P	**P**	**15 23 52.4**	**+1.5**
CMAR	**Chiang Mai Arr**	**45.84**	**46**	P	**P**	**15 23 52.4**	**+1.5**
	0.3nm,0.4s,baz=242,slow=7.0,SNR=6.1						
CMAR				LR	LR	15 40 42.6	
	comp=Z,200nm,19.2s,baz=211,slow=33						
NWAO	**Narrogin (SRO)**	**49.88**	**121**	LR	LR	15 40 13.9	
	comp=Z,175nm,20.9s,baz=107,slow=30						
MAW	**Mawson**	**53.36**	**182**	LR	LR	15 41 58.4	
	comp=Z,155nm,18.6s,baz=145,slow=30						
FITZ	**Fitzroy Crossi**	**57.07**	**102**	LR	LR	15 45 40.8	
	comp=Z,302nm,21.3s,baz=269,slow=32						
AAK	**Ala-Archa**	**57.11**	**7**	P	**P**	**15 25 15.4**	**+0.4**
AAK	**Ala-Archa**	**57.11**	**7**	P	**P**	**15 25 15.4**	**+0.4**
	0.4nm,0.3s,baz=178,slow=16,SNR=4.6						
GNI	**Garni**	**57.66**	**341**	P	**P**	**15 25 19.4**	**+0.4**
GNI	**Garni**	**57.66**	**341**	P	**P**	**15 25 19.4**	**+0.4**
	6.6nm,0.5s,baz=90,slow=9.6,SNR=4.3						
KBZ	**Khabaz**	**61.48**	**341**	LR	LR	15 49 15.5	
	comp=Z,61nm,20.1s,baz=188,slow=33						
BRTR	**Keskin Array B**	**61.63**	**332**	P	**P**	**15 25 45.0**	**-1.4**
BRTR	**Keskin Array B**	**61.63**	**332**	P	**P**	**15 25 45.0**	**-1.4**
	1.7nm,1.1s,baz=131,slow=3.4,SNR=5.5						
MK31	**Makanchi Array**	**62.47**	**12**	*e*P	**P**	**15 25 48.6**	**-3.1**
MKAR	**Makanchi Array**	**62.47**	**12**	P	**P**	**15 25 51.4**	**-0.2**
MKAR	**Makanchi Array**	**62.47**	**12**	P	**P**	**15 25 51.4**	**-0.2**
	0.4nm,0.8s,baz=224,slow=5.1,SNR=5.3						
MKAR				LR	LR	15 53 33.0	
	comp=Z,66nm,18.5s,baz=176,slow=37						
DAV	**Davao City (W)**	**62.65**	**74**	LR	LR	15 50 01.2	
	comp=Z,105nm,21.2s,baz=57,slow=33						
ABKAR	**Akbulak array**	**63.45**	**355**	*e*P	**P**	**15 25 57.5**	**-0.7**
	4.2nm,1.0s						
ASAR	**Alice Springs**	**64.28**	**110**	P	**P**	**15 26 03.2**	**-1.1**
ASAR	**Alice Springs**	**64.28**	**110**	P	**P**	**15 26 03.2**	**-1.1**
	1.4nm,0.9s,baz=270,slow=5.8,SNR=26						
ASAR				LR	LR	15 52 33.0	
	comp=Z,253nm,18.6s,baz=300,slow=35						
AKTO	**Aktyubinsk**	**64.79**	**354**	P	**P**	**15 26 06.8**	**-0.1**
AKTO	**Aktyubinsk**	**64.79**	**354**	P	**P**	**15 26 06.8**	**-0.1**
	1.9nm,0.9s,baz=238,slow=3.5,SNR=5.4						
WRA	**Warramunga Arr**	**65.06**	**106**	P	**P**	**15 26 09.6**	**+0.1**
WRA	**Warramunga Arr**	**65.06**	**106**	P	**P**	**15 26 09.6**	**+0.1**
	2.2nm,0.8s,baz=270,slow=5.8,SNR=18						
KURBB	**Kurchatov Arra**	**65.50**	**9**	P	**P**	**15 26 10.5**	**-0.9**
	1.0nm,1.0s,baz=204,slow=6.9,SNR=8.0						
KURK	**Kurchatov**	**65.60**	**9**	P	**P**	**15 26 10.5**	**-1.6**
BVAR	**Borovoye Array**	**67.09**	**3**	P	**P**	**15 26 21.6**	**-0.1**
BVAR	**Borovoye Array**	**67.09**	**3**	P	**P**	**15 26 21.6**	**-0.1**
	0.6nm,0.6s,baz=148,slow=8.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**69.38**	**290**	LR	LR	15 55 35.3	
	comp=Z,92nm,18.7s,baz=195,slow=35						
MLR	**Muntele Rosu**	**69.68**	**331**	P	**P**	**15 26 38.6**	**+0.4**
MLR	**Muntele Rosu**	**69.68**	**331**	P	**P**	**15 26 38.6**	**+0.4**
	0.2nm,0.4s,baz=193,slow=10,SNR=4.1						
ZAA0	**Zalesovo Array**	**69.77**	**12**	*e*P	**P**	**15 26 37.2**	**-1.1**
ZALV	**Zalesovo Beam**	**69.77**	**12**	P	**P**	**15 26 38.0**	**-0.4**
ZALV	**Zalesovo Beam**	**69.77**	**12**	P	**P**	**15 26 38.0**	**-0.4**

	0.6nm,0.6s,baz=249,slow=4.1,SNR=6.7						
ZALV				LR	LR	15 54 15.9	
	comp=Z,71nm,21.3s,baz=239,slow=33						
STKA	Stephens Creek	70.39	119	P	P	15 26 43.1	+0.2
STKA	Stephens Creek	70.39	119	P	P	15 26 43.1	+0.2
	1.9nm,0.9s,baz=240,slow=6.9,SNR=3.5						
STKA				LR	LR	15 52 19.5	
	comp=Z,231nm,18.0s,baz=207,slow=31						
SONM	Songino Array	71.46	27	P	P	15 26 48.8	-0.3
SONM	Songino Array	71.46	27	P	P	15 26 48.8	-0.3
	0.9nm,0.9s,baz=207,slow=4.2,SNR=9.0						
SONM				LR	LR	15 56 35.9	
	comp=Z,117nm,19.0s,baz=284,slow=35						
AKASG	Malin Array Be	72.28	336	P	P	15 26 51.9	-1.8
AKASG	Malin Array Be	72.28	336	P	P	15 26 51.9	-1.8
	0.4nm,0.4s,baz=177,slow=5.4,SNR=4.1						
CTA	Charters Tower	76.12	107	LR	LR	15 56 48.7	
	comp=Z,274nm,20.3s,baz=246,slow=33						
VNDA	Vanda	77.43	167	P	P	15 27 22.5	-0.7
VNDA	Vanda	77.43	167	P	P	15 27 22.5	-0.7
	1.3nm,1.0s,baz=232,slow=7.7,SNR=3.6						
VNDA				LR	LR	15 57 01.0	
	comp=Z,127nm,21.2s,baz=286,slow=32						
KSRS	Korea Array	77.48	46	LR	LR	16 04 22.9	
	comp=Z,59nm,18.2s,baz=63,slow=38						
GERES	GERESS Array B	78.06	328	P	P	15 27 28.6	+1.4
GERES	GERESS Array B	78.06	328	P	P	15 27 28.6	+1.4
	0.2nm,0.4s,baz=133,slow=5.9,SNR=3.9						
BRG	Berggiesshubel	79.20	329	eP	P	15 27 36.5	+3.1
	12nm,1.6s						
MDT	Midelt	82.11	307	P	P	15 27 49.7	+0.2
MDT	Midelt	82.11	307	P	P	15 27 49.7	+0.2
	1.3nm,0.8s,baz=87,slow=7.8,SNR=3.9						
MDT				LR	LR	16 08 28.0	
	comp=Z,84nm,18.4s,baz=158,slow=39						
USRK	Ussuriysk Arra	83.38	41	P	P	15 27 55.5	-0.1
	0.5nm,0.5s,baz=245,slow=3.2,SNR=6.1						
USRK				LR	LR	16 07 11.1	
	comp=Z,68nm,18.8s,baz=158,slow=37						
ESDC	Sonseca Array	84.30	313	P	P	15 28 01.2	+0.6
ESDC	Sonseca Array	84.30	313	P	P	15 28 01.2	+0.6
	0.2nm,0.2s,baz=107,slow=4.0,SNR=6.6						
MJAR	Matsushiro Arr	84.52	50	P	P	15 28 01.9	+0.2
MJAR	Matsushiro Arr	84.52	50	P	P	15 28 01.9	+0.2
	0.7nm,0.5s,baz=238,slow=4.7,SNR=6.3						
MJAR				LR	LR	16 04 34.8	
	comp=Z,46nm,18.9s,baz=205,slow=35						
BBTS	Babate	86.66	286	LR	LR	16 06 01.1	
	comp=Z,149nm,18.5s,baz=59,slow=35						
ILAR	Eielson Array	124.70	17	PKP	PKPdf	15 34 27.1	-0.6
ILAR	Eielson Array	124.70	17	PKP	PKPdf	15 34 27.1	-0.6
	0.5nm,0.9s,baz=310,slow=3.4,SNR=5.6						
YKA	Yellowknife Ar	131.81	0	PKP	PKPdf	15 34 40.3	-1.0
YKA	Yellowknife Ar	131.81	0	PKP	PKPdf	15 34 40.3	-1.0
	0.3nm,0.6s,baz=345,slow=1.9,SNR=6.5						
TZTN	Tazewell	144.99	315	ePKPab	PKPbc	15 35 05.5	0.0
TKL	Tuckaleechee C	145.60	314	PKPbc	PKPbc	15 35 07.3	-0.2
TKL	Tuckaleechee C	145.60	314	PKPbc	PKPbc	15 35 07.3	-0.2
	1.2nm,0.4s,baz=117,slow=5.0,SNR=5.4						
NEW	Newport	145.97	4	ePKPdf	PKPdf	15 35 07.2	-0.3
BSMT	Bassoo Peak	146.48	1	ePKPab	PKPab	15 35 10.8	0.0
SWMT	Swartz Lake	146.83	0	ePKPbc	PKPbc	15 35 11.3	+0.4
SLMT	Seeley Lake	147.10	360	ePKPbc	PKPbc	15 35 12.1	+0.3
ECSD	EROS Data Cent	147.11	337	ePKPab	PKPab	15 35 12.8	-0.4
SWET	Sewanee	147.33	315	ePKPbc	PKPbc	15 35 12.3	-0.3
CHMT	Chamberlain Mo	147.43	359	ePKPbc	PKPbc	15 35 12.4	-0.3
MSO	Missoula	147.51	0	ePKPab	PKPab	15 35 13.8	-1.0
LRM	Limekiln Ridge	148.50	358	ePKPbc	PKPbc	15 35 16.0	+0.3
DLMT	Dillon	148.96	358	ePKPbc	PKPbc	15 35 17.5	+0.8
RSSD	Black Hills	149.06	346	ePKPbc	PKPbc	15 35 17.1	0.0
MCMT	McKenzie Canyo	149.50	359	ePKPbc	PKPbc	15 35 18.1	-0.2
MCMT				ePKPab	PKPab	15 35 23.5	+0.4
MOOW	Moose Ponds	150.47	355	ePKPbc	PKPbc	15 35 20.6	0.0
MOOW				ePKPab	PKPab	15 35 27.1	+0.1
LOHW	Long Hollow	150.60	355	ePKPdf	PKPdf	15 35 15.6	0.0
LOHW				ePKPbc	PKPbc	15 35 21.1	+0.1
HUMO	Hull Mountain	150.67	14	ePKPdf	PKPdf	15 35 15.2	-0.2
HUMO				ePKPbc	PKPbc	15 35 20.8	0.0
HLID	Hailey	150.78	1	ePKPbc	PKPbc	15 35 21.9	+0.6
HLID				ePKPab	PKPab	15 35 28.1	-0.1
MFID	Camas Ranch	150.88	3	ePKPdf	PKPdf	15 35 16.6	+0.7
MFID				ePKPbc	PKPbc	15 35 20.9	-0.6
PDAR	Pinedale Array	151.34	353	PKP	PKPdf	15 35 17.6	+0.9
PDAR				PKPbc	PKiKP	15 35 23.1	-0.1
PDAR	Pinedale Array	151.34	353	PKP	PKPdf	15 35 17.6	+0.9
	0.5nm,0.9s,baz=77,slow=3.3,SNR=3.6						
PDAR				PKPbc	PKiKP	15 35 23.1	-0.1
	3.7nm,0.9s,baz=68,slow=1.7,SNR=20						
HWUT	Hardware Ranch	152.66	356	ePKPbc	PKPbc	15 35 26.0	+0.3
NVAR	Mina Array Bea	155.59	8	PKP	PKPdf	15 35 25.6	+2.7
NVAR	Mina Array Bea	155.59	8	PKP	PKPdf	15 35 25.6	+2.7
	0.1nm,0.3s,baz=222,slow=1.2,SNR=2.1						
TXAR	Lajitas Array	162.26	330	PKP	PKPdf	15 35 32.0	+1.1
TXAR	Lajitas Array	162.26	330	PKP	PKPdf	15 35 32.0	+1.1
	0.1nm,0.3s,baz=35,slow=4.6,SNR=4.0						

*CSEM **08** 15:17:54.6±1.0, 36°.55N×36°.46E, h30km, MD2.5, Error ellipse: s-maj=41.9km s-min=21.6km az=111.0*
*NSSC **08** 15:17:55.6±2.0, 36°.41N×36°.71E, h35km±7km, MD1.2, ML1.8*
*DDA **08** 15:17:57.5, 36°.54N×36°.45E, h6km, MD2.5*
*ISCJB **08** 15:17:57.2±0.6, 36°.44N±0°.03×36°.41E±0°.06, h10km±5km, Error ellipse: s-maj=8.2km s-min=4.9km az=19.0*
ISC 08 15:17:57.4±1.1, **36°.48N**±0°.03×**36°.40E**±0°.03, **h4**km±11km, **n15,** σ1^{s}**60**/24, **Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COBT	Iskenderun	0.12	288	eP	Pg	15 17 58.8	-1.1
COBT				i S	Sg	15 18 02.9	+1.3
COBT	Iskenderun	0.12	288	eP	Pg	15 17 58.8	-1.1
COBT				i S	Sg	15 18 02.9	+1.3
DRWC	Darouich	0.26	57	eP	Pg	15 18 02.8	+0.5
DRWC				eS	Sg	15 18 07.0	+1.4
DRWC				AML	AML	15 18 11.5	
	comp=N,65nm,0.4s						
DRWC				AML	AML	15 18 16.7	
	comp=E,106nm,0.5s						
DRWC	Darouich	0.26	57	eP	Pg	15 18 02.8	+0.5
	SNR=144						
DRWC				eS	Sg	15 18 07.1	+1.4
	comp=E,106nm,0.5s,SNR=143						
BTCH	Batrach	0.45	174	eP	Pg	15 18 05.8	-0.1
BTCH				eS	Sg	15 18 11.8	+0.1
BTCH				AML	AML	15 18 18.5	
	comp=E,35nm,0.4s						
BTCH				AML	AML	15 18 24.9	
	comp=N,46nm,0.4s						
BTCH	Batrach	0.45	174	eP	Pg	15 18 05.8	-0.1
	SNR=122						
BTCH				eS	Sg	15 18 11.8	+0.1
	comp=N,46nm,0.4s,SNR=121						
YAYL	Yayladag	0.51	208	eP	Pg	15 18 07.5	+0.4
YAYL				i S	Sb	15 18 18.9	+2.2
YAYL	Yayladag	0.51	208	eP	Pg	15 18 07.5	+0.4
YAYL				i S	Sb	15 18 18.9	+2.2
ARNB	Al Arnab	0.71	209	eP	Pg	15 18 12.6	+1.6
ARNB				eS	Sg	15 18 21.1	+0.9
ARNB				AML	AML	15 18 27.9	
	comp=E,32nm,0.5s						
ARNB				AML	AML	15 18 29.4	
	comp=N,20nm,0.5s						
ARNB	Al Arnab	0.71	209	eP	Pg	15 18 12.6	+1.6
	SNR=57						
ARNB				eS	Sg	15 18 21.1	+0.9
	comp=N,20nm,0.5s,SNR=58						
WRDH	Warideh	0.97	180	eP	Pg	15 18 12.5	-3.5
WRDH				eS	Sg	15 18 25.4	-3.2
WRDH				AML	AML	15 18 30.2	
	comp=N,32nm,0.4s						
WRDH				AML	AML	15 18 31.3	
	comp=E,10nm,0.4s						
WRDH				AML	AML	15 18 31.7	
	comp=Z,33nm,0.4s						
WRDH	Warideh	0.97	180	eP	Pg	15 18 12.5	-3.5
	SNR=57						
WRDH				eS	Sg	15 18 25.4	-3.2
	comp=Z,33nm,0.4s,SNR=58						
AYKD	Aykdinkavak	0.99	19	eP	Pb	15 18 15.2	-1.9
AYKD				i S	Sn	15 18 32.0	-0.6
BIDA	Albida	1.47	183	eP	Pn	15 18 18.1	-6.6
BIDA				eS	Sn	15 18 36.0	-8.5
BIDA				AML	AML	15 18 41.9	
	comp=E,55nm,0.5s						
BIDA				AML	AML	15 18 42.6	
	comp=N,61nm,0.7s						
BIDA				AML	AML	15 18 42.9	
	comp=Z,31nm,0.7s						
BIDA	Albida	1.47	183	eP	Pn	15 18 18.1	-6.6
	SNR=57						
BIDA				eS	Sn	15 18 36.0	-8.5
	comp=Z,31nm,0.7s,SNR=58						

IDC 08 15:20:38.0±3.0, **21°.25S**×**177°.98W**, **h554**km±23km, **mb3.1**/8, **mb1 3.4**/10, **mb1mx3.1**/22, **mbtmp3.2**/10, **Error ellipse: s-maj=84.8km s-min=14.4km az=149.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.39	40	P	P	15 22 50.7	+0.7
	4.2nm,0.3s,baz=32,slow=15,SNR=8.9						
AFI				S	S	15 24 38.2	-0.1
	3.7nm,0.3s,baz=34,slow=22,SNR=4.9						
DZM	Mont Dzumac	14.51	264	P	P	15 23 41.5	-1.1
	0.4nm,0.3s,baz=41,slow=13,SNR=6.1						
CTA	Charters Tower	33.45	265	P	P	15 26 31.5	-0.3
	7.6nm,1.0s,baz=97,slow=14,SNR=3.6						
STKA	Stephens Creek	37.49	245	P	P	15 27 05.7	+0.6
	0.7nm,0.4s,baz=91,slow=13,SNR=3.5						
ASAR	Alice Springs	44.37	257	P	P	15 27 59.8	-0.2
	0.8nm,0.4s,baz=89,slow=8.5,SNR=35						
ASAR				PcP	PcP	15 29 31.1	-0.6
	0.4nm,0.6s,baz=105,slow=3.6,SNR=5.4						
WRA	Warramunga Arr	44.52	263	P	P	15 28 00.2	-0.8
	0.5nm,0.4s,baz=98,slow=8.1,SNR=22						
FITZ	Fitzroy Crossi	52.95	263	P	P	15 29 03.9	+0.4
	10nm,1.3s,baz=89,slow=3.0,SNR=3.6						
ILAR	Eielson Array	89.04	13	P	P	15 32 33.4	-0.3
	0.3nm,0.5s,baz=222,slow=5.5,SNR=4.3						
PDAR	Pinedale Array	89.49	43	P	P	15 32 36.5	-0.2
	0.4nm,0.6s,baz=224,slow=2.9,SNR=4.3						
CMAR	Chiang Mai Arr	90.39	290	P	P	15 32 42.3	+1.3
	0.6nm,0.7s,baz=132,slow=3.8,SNR=3.9						
MKAR	Makanchi Array	111.73	313	PKiKP	PKiKP	15 38 09.5	-0.5
	0.1nm,0.3s,baz=230,slow=1.6,SNR=4.3						
ARCES	ARCESS Array B	129.66	350	PKP	PKPdf	15 38 44.6	+1.0
	3.1nm,1.1s,baz=228,slow=1.5,SNR=5.2						
AKASG	Malin Array Be	143.68	331	PKP	PKPab	15 39 07.8	-1.1
	2.9nm,0.5s,baz=45,slow=4.4,SNR=10						
MMAI	Mount Meron Ar	148.20	299	PKPbc	PKPbc	15 39 22.1	-0.3
	1.1nm,0.4s,baz=83,slow=6.8,SNR=5.8						
GERES	GERESS Array B	150.92	344	PKPbc	PKPbc	15 39 28.1	-0.3
	0.4nm,0.5s,baz=45,slow=4.0,SNR=5.0						

IDC 08 15:31:33.5±3.9, **56°.28S**×**125°.19W**, **h0**km, **mb3.9**/3, **mb1 4.0**/3, **mb1mx3.8**/14, **mbtmp3.9**/3, **MS4.0**/7, **Ms1 4.0**/7, **ms1mx3.6**/26, **Error ellipse: s-maj=123.8km s-min=51.9km az=58.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKT	Rikitea	33.90	344	eT	T	16 13 15.7	
	3.1nm,0.3s						
TBI	Tubuai	37.40	322	eLR	LR	15 48 10.6	
	185nm,28.0s						
TBI				eT	T	16 17 45.9	
	22nm,0.3s						
RPZ	Rata Peaks	41.38	260	LR	LR	15 50 29.6	
	comp=Z,76nm,21.1s,baz=160,slow=28						
URZ	Urewera	41.72	270	LR	LR	15 52 20.3	
	comp=Z,178nm,19.3s,baz=252,slow=30						
PPT2	Papeete2	42.79	325	eLR	LR	15 50 53.7	
	195nm,25.2s						
PPT	Papeete	42.81	325	LR	LR	15 53 31.1	
	comp=Z,200nm,18.3s,baz=174,slow=31						
PMOR	Pomariorio Ree	44.71	328	eT	T	16 26 51.6	
	4.5nm,0.2s						
MAW	Mawson	56.29	184	P	P	15 41 14.9	-0.1
	2.3nm,1.0s,baz=170,slow=14,SNR=2.6						
NNA	Nana	57.72	60	LR	LR	15 59 17.9	
	comp=Z,504nm,19.7s,slow=29						
DZM	Mont Dzumac	59.95	275	LR	LR	15 59 28.1	
	comp=Z,140nm,21.9s,baz=11,slow=28						
BDFB	Brasilia	70.02	88	LR	LR	16 10 38.5	
	comp=Z,106nm,20.8s,baz=172,slow=34						
ASAR	Alice Springs	76.44	248	P	P	15 43 25.4	+0.5
	0.5nm,0.8s,baz=151,slow=5.9,SNR=5.0						
WRA	Warramunga Arr	79.28	250	P	P	15 43 40.4	-0.3
	1.0nm,0.8s,baz=143,slow=5.4,SNR=5.4						
LPIG	La Paz	81.05	14	LR	LR	16 09 57.6	
	comp=Z,5.6nm,20.8s,baz=252,slow=28						
BOSA	Boshof	91.78	154	LR	LR	16 20 57.1	
	comp=Z,81nm,19.1s,baz=164,slow=32						
SONM	Songino Array	147.87	277	PKPbc	PKPbc	15 51 18.9	-0.7
	0.3nm,0.7s,baz=111,slow=3.2,SNR=3.5						

*THE **08** 15:32:32.9, 39°.52N×26°.08E, h4km±7km, ML1.9/3, Error ellipse: s-maj=7.8km s-min=0.8km az=84.0*
*CSEM **08** 15:32:32.6±0.1, 39°.52N×26°.12E, h12km, MD2.7, Error ellipse: s-maj=3.8km s-min=2.2km az=112.0*
*ISCJB **08** 15:32:32.5±0.5, 39°.54N±0°.03×26°.13E±0°.05, h9km±5km, Error ellipse: s-maj=7.1km s-min=3.7km az=19.0*
*ISK **08** 15:32:33.4, 39°.54N×26°.31E, h7km, MD2.7*
ISC 08 15:32:32.4±0.9, **39°.53N**±0°.02×**26°.13E**±0°.04, **h12**km±9km, **n22,** σ0^{s}**37**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	0.30	159	P	Pb	15 32 39.3	-0.4
PRK				S	Sg	15 32 43.1	+0.4
PRK	Paraskevi	0.30	159	P	Pb	15 32 39.3	-0.4
PRK				S	Sg	15 32 43.1	+0.4
EZN	Ezine	0.33	26	ePG	Pb	15 32 40.0	-0.3
EZN				eSG	Sb	15 32 45.0	-0.5
EZN	Ezine	0.33	26	ePg	Pb	15 32 40.0	-0.3
EZN				eSg	Sb	15 32 45.0	-0.5
SIGR	SIGRI	0.38	214	P	Pg	15 32 40.1	0.0
SIGR				S	Sg	15 32 45.2	0.0
SIGR	SIGRI	0.38	214	P	Pg	15 32 40.1	0.0
SIGR				S	Sg	15 32 45.2	0.0
LIA	Limnos Island	0.82	297	P	Pg	15 32 48.3	0.0
LIA				S	Sg	15 32 59.1	0.0
LIA	Limnos Island	0.82	297	P	Pg	15 32 48.3	0.0
LIA				S	Sg	15 32 59.1	0.0
GELI	Tayfur-Gelibol	0.91	17	ePG	Pb	15 32 50.3	+0.3
GELI				eSG	Sb	15 33 02.7	+0.7
GELI	Tayfur-Gelibol	0.91	17	ePg	Pb	15 32 50.3	+0.3
GELI				eSg	Sb	15 33 02.7	+0.7
LPK	Lapseki	0.97	30	ePG	Pb	15 32 51.3	+0.2
LPK				eSG	Sg	15 33 03.4	-0.4
LPK	Lapseki	0.97	30	ePg	Pb	15 32 51.3	+0.2
LPK				eSg	Sg	15 33 03.4	-0.4
CHOS	Chios island	1.14	183	P	Pb	15 32 53.8	-0.3
CHOS				S	Sn	15 33 10.4	+0.6
CHOS	Chios island	1.14	183	P	Pb	15 32 53.8	-0.3
CHOS				S	Sn	15 33 10.4	+0.6
ERIK	Erikli-Kesan	1.18	14	ePN	Pg	15 32 55.0	0.0
ERIK	Erikli-Kesan	1.18	14	ePn	Pg	15 32 55.1	0.0
KRBG	Karabiga-Canak	1.24	46	ePN	Pn	15 32 55.1	-0.5
KRBG				eSN	Sb	15 33 12.2	+0.5
KRBG	Karabiga-Canak	1.24	46	ePn	Pn	15 32 55.1	-0.5
KRBG				eSn	Sb	15 33 12.2	+0.5
GONE	Gonen-Balikesi	1.30	66	ePN	Pb	15 32 57.0	+0.2
GONE	Gonen-Balikesi	1.30	66	ePn	Pb	15 32 57.0	+0.2
MRMT	Marmara Adasi	1.55	46	ePN	Pb	15 33 00.8	-0.3
MRMT	Marmara Adasi	1.55	46	ePn	Pb	15 33 00.8	-0.3

IDC 08 15:46:15.5±1.0, **14°.08S**×**66°.34E**, **h0**km, **mb3.8**/9, **mb1 3.9**/10, **mb1mx3.7**/28, **mbtmp3.8**/10, **ML3.5**/1, **MS3.4**/3, **Ms1 3.4**/3, **ms1mx3.1**/34, **Error ellipse: s-maj=30.3km s-min=25.0km az=46.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	Ambohidratompo	18.91	254	P	Pn	15 50 39.6	+0.9
	0.2nm,0.3s,baz=84,slow=9.2,SNR=2.8						
KMBO	Kilima Mbogo	31.51	292	LR	LR	16 01 52.8	
	comp=Z,59nm,21.9s,baz=100,slow=30						
CMAR	Chiang Mai Arr	45.59	46	P	P	15 54 38.8	+1.0
	0.4nm,0.8s,baz=224,slow=7.7,SNR=4.8						
CMAR				LR	LR	16 10 36.1	
	comp=Z,47nm,20.0s,baz=151,slow=32						
MKAR	Makanchi Array	62.27	12	P	P	15 56 38.6	-0.7
	0.5nm,0.7s,baz=201,slow=6.4,SNR=4.6						
ASAR	Alice Springs	64.15	110	P	P	15 56 52.0	-0.3
	0.9nm,0.8s,baz=269,slow=6.0,SNR=12						
WRA	Warramunga Arr	64.92	106	P	P	15 56 57.5	0.0
	2.6nm,0.9s,baz=275,slow=5.6,SNR=10						
KURBB	Kurchatov Arra	65.31	9	P	P	15 56 59.4	+0.2
	0.8nm,0.8s,baz=206,slow=6.7,SNR=6.9						
BVAR	Borovoye Array	66.92	3	P	P	15 57 09.5	0.0
	0.6nm,0.6s,baz=168,slow=8.6,SNR=5.4						
ZALV	Zalesovo Beam	69.58	12	P	P	15 57 25.1	-1.1
	0.4nm,0.3s,baz=220,slow=6.7,SNR=4.4						
SONM	Songino Array	71.23	27	P	P	15 57 37.2	+0.6
	1.1nm,0.9s,baz=220,slow=6.5,SNR=6.2						
KSRS	Korea Array	77.23	46	P	P	15 58 12.6	+1.0
	1.2nm,1.0s,baz=250,slow=6.6,SNR=4.0						
KSRS				LR	LR	16 31 12.5	
	comp=Z,19nm,18.1s,baz=240,slow=35						
ILAR	Eielson Array	124.50	17	PKP	PKPdf	16 05 14.7	-1.6
	0.5nm,0.9s,baz=316,slow=4.2,SNR=5.1						
YKA	Yellowknife Ar	131.65	1	PKP	PKPdf	16 05 29.2	-0.8
	0.5nm,0.8s,baz=344,slow=2.8,SNR=7.5						
PDAR	Pinedale Array	151.20	354	PKPbc	PKPbc	16 06 11.2	-0.2
	3.1nm,0.8s,baz=77,slow=2.1,SNR=21						

MEX 08 16:11:12.9±0.3, **16°.48N**×**98°.29W**, **h15**km±3km, **MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	119	i P	Pg	16 11 16.7	-0.6
PNIG				eS	Sg	16 11 19.9	-0.3
UTMO	Huajuapan	1.42	19	i P	Pn	16 11 35.3	-3.3
UTMO				eS	Sn	16 11 52.0	-5.2
ACX	Acapulco	1.55	285	i P	Pn	16 11 37.3	-2.7
ACX				eS	Sn	16 11 56.2	-3.8
VHO	Vista Hermosa	1.61	68	i P	Pn	16 11 37.6	-3.5
VHO				eS	Sn	16 11 57.0	-4.8
OXX	Oaxaca	1.62	68	i P	Pn	16 11 38.1	-3.2
OXX				eS	Sn	16 11 56.1	-6.0
TPIG	Tehuac#an	2.12	25	i P	Pn	16 11 44.8	-3.4
HUIG	Huatulco	2.22	108	i P	Pn	16 11 46.4	-2.9
HUIG				eS	Sn	16 12 12.1	-4.3

*ATH **08** 16:11:27.5, 37°.08N×28°.25E, h23km±4km, MD3.5/7*
*ISK **08** 16:11:28.6, 36°.98N×28°.25E, h7km, MD3.3*
*DDA **08** 16:11:28.7, 37°.00N×28°.23E, h7km, MD3.1*
*CSEM **08** 16:11:28.8±0.1, 36°.96N×28°.25E, h5km, MD3.3, Error ellipse: s-maj=2.8km s-min=2.5km az=179.0*
*ISCJB **08** 16:11:28.4±0.4, 36°.96N±0°.02×28°.23E±0°.02, h5km±3km, Error ellipse: s-maj=3.4km s-min=3.2km az=168.3*
ISC 08 16:11:28.6±1.0, **36°.97N**±0°.02×**28°.24E**±0°.02, **h4**km±9km, **n78,** σ0^{s}**82**/107, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.17	11	ePG	Pg	16 11 32.5	+0.5
YER				eSG	Sg	16 11 35.3	+1.0
YER	Yerkesik	0.17	11	ePg	Pg	16 11 32.5	+0.5
YER				eSg	Sg	16 11 35.3	+1.0
TURN	Turunc	0.30	108	i P	Pg	16 11 33.2	-1.2
TURN				i S	Sg	16 11 36.6	-1.8
TURN	Turunc	0.30	108	i P	Pg	16 11 33.2	-1.2
TURN				i S	Sg	16 11 36.6	-1.8
DALY	Dalyan (Mu˜la	0.36	114	ePG	Pg	16 11 36.0	+0.5
DALY				eSG	Sb	16 11 42.3	-1.2
DALY	Dalyan (Mu˜la	0.36	114	ePg	Pg	16 11 36.0	+0.5
DALY				eSg	Sb	16 11 42.3	-1.2
MLSB	Milas	0.50	312	ePG	Pg	16 11 38.8	+0.6
MLSB	Milas	0.50	312	ePg	Pg	16 11 38.8	+0.6
DAT	Datca	0.58	246	ePG	Pg	16 11 39.8	0.0
DAT				eSG	Sb	16 11 50.0	0.0
DAT	Datca	0.58	246	ePg	Pg	16 11 39.8	0.0
DAT				eSg	Sb	16 11 50.0	0.0
FETY	Fethiye	0.75	116	ePG	Pg	16 11 43.0	0.0
FETY	Fethiye	0.75	116	ePg	Pg	16 11 43.0	0.0
ARG	Arkhangelos	0.75	187	ePB	Pg	16 11 43.5	+0.5
ARG				eSN	Sn	16 11 57.2	-0.5
ARG	Arkhangelos	0.75	187	ePb	Pg	16 11 43.5	+0.5
ARG				eSn	Sn	16 11 57.2	-0.5
AYDN	Tasoluk	0.75	337	i P	Pg	16 11 43.2	+0.2
AYDN				i S	Sg	16 11 52.5	-0.3
AYDN	Tasoluk	0.75	337	i P	Pg	16 11 43.2	+0.2
AYDN				i S	Sg	16 11 52.5	-0.3
BODT	Bodrum	0.75	278	ePG	Pg	16 11 43.4	+0.3
BODT				eSG	Sb	16 11 54.8	-0.1
BODT	Bodrum	0.75	278	ePg	Pg	16 11 43.4	+0.3
BODT				eSg	Sb	16 11 54.8	-0.1
DNZL	Cakiroluk	0.97	41	i P	Pg	16 11 46.0	-1.1
DNZL				i S	Sb	16 12 01.3	+0.1
DNZL	Cakiroluk	0.97	41	i P	Pg	16 11 46.0	-1.1
DNZL				i S	Sb	16 12 01.3	+0.1
DENT	Denizli	1.01	38	ePG	Pg	16 11 47.8	-0.1
DENT	Denizli	1.01	38	ePg	Pg	16 11 47.8	-0.1
GLHS	Glhisar (BURDU	1.02	79	ePG	Pg	16 11 48.4	+0.2
GLHS	Glhisar (BURDU	1.02	79	ePg	Pg	16 11 48.4	+0.2
GOLH	Golhisar	1.09	75	i P	Pn	16 11 50.6	-0.1
GOLH				i S	Sn	16 12 06.1	-0.1
GOLH	Golhisar	1.09	75	i P	Pn	16 11 50.6	-0.1
GOLH				i S	Sn	16 12 06.1	-0.1
GCAM	G?zelcaml?	1.09	313	i P	Pb	16 11 49.8	-0.1
GCAM				i S	Sb	16 12 05.0	+0.5
GCAM	G?zelcaml?	1.09	313	i P	Pb	16 11 49.8	-0.1
GCAM				i S	Sb	16 12 05.0	+0.5
AKAS	Kas	1.32	123	i P	Pg	16 11 54.4	+0.6
AKAS				i S	Sn	16 12 16.1	+4.3
AKAS	Kas	1.32	123	i P	Pg	16 11 54.4	+0.6
ELL	Elmali	1.35	99	ePN	Pb	16 11 54.6	+0.1
ELL	Elmali	1.35	99	ePn	Pb	16 11 54.6	+0.1
MANT	Manisa	1.54	9	i P	Pn	16 11 56.6	-0.5
MANT				i S	Sn	16 12 17.4	-0.2
MANT	Manisa	1.54	9	i P	Pn	16 11 56.6	-0.5
MANT				i S	Sn	16 12 17.4	-0.2
KULA	Kula-Manisa	1.58	12	ePN	Pn	16 11 57.7	+0.3
KULA	Kula-Manisa	1.58	12	ePn	Pn	16 11 57.7	+0.3
IZM	Izmir	1.63	332	ePN	Pn	16 11 58.0	-0.1
IZM	Izmir	1.63	332	ePn	Pn	16 11 58.0	-0.1
KARP	Karpathos	1.66	212	ePN	Pn	16 11 58.7	+0.2
KARP				eSN	Sb	16 12 21.4	+0.3
KARP	Karpathos	1.66	212	ePn	Pn	16 11 58.7	+0.2
KARP				eSn	Sb	16 12 21.4	+0.3
KORT	Korkueli	1.69	88	i P	Pg	16 12 02.3	+1.4
KORT	Korkueli	1.69	88	i P	Pg	16 12 02.3	+1.4
KHL	Karahalli	1.69	36	ePN	Pn	16 11 59.5	+0.5
KHL	Karahalli	1.69	36	ePn	Pn	16 11 59.5	+0.5
BLCB	Balcova	1.71	326	ePN	Pn	16 11 59.1	0.0
BLCB	Balcova	1.71	326	ePn	Pn	16 11 59.1	0.0
KHAL	Karahalli	1.72	35	i P	Pn	16 11 59.6	+0.3
KHAL	Karahalli	1.72	35	i P	Pn	16 11 59.6	+0.3
BCK	Bucak	1.94	74	ePN	Pn	16 12 02.7	+0.4
BCK	Bucak	1.94	74	ePn	Pn	16 12 02.7	+0.4
AKHS	Akhisar	1.94	350	i P	Pn	16 12 01.6	-0.7
AKHS				i S	Sn	16 12 25.5	-1.6
AKHS	Akhisar	1.94	350	i P	Pn	16 12 01.6	-0.7
AKHS				i S	Sn	16 12 25.5	-1.6
AKS	Akhisar	1.94	350	ePN	Pn	16 12 02.5	+0.2
AKS	Akhisar	1.94	350	ePn	Pn	16 12 02.5	+0.2
APE	Apeiranthos	2.17	274	ePN	Pn	16 12 05.9	+0.3
APE	Apeiranthos	2.17	274	ePB	Pn	16 12 05.4	-0.1
APE				eSN	Sn	16 12 31.3	-1.6
APE	Apeiranthos	2.17	274	ePb	Pn	16 12 05.4	-0.1
APE	Apeiranthos	2.17	274	ePn	Pn	16 12 05.9	+0.3
APE				eSn	Sn	16 12 31.3	-1.6
ZKR	Zakros	2.47	222	ePB	Pn	16 12 10.7	+1.1
ZKR	Zakros	2.47	222	ePb	Pn	16 12 10.7	+1.1
ALT	Altintas	2.56	35	ePN	Pn	16 12 11.3	+0.5
ALT	Altintas	2.56	35	ePn	Pn	16 12 11.3	+0.5
TVSB	Tavsanli	2.66	21	ePN	Pn	16 12 13.1	+0.8
TVSB	Tavsanli	2.66	21	ePn	Pn	16 12 13.1	+0.8
NPS	Neapolis	2.73	232	ePN	Pn	16 12 13.8	+0.7
NPS	Neapolis	2.73	232	ePn	Pn	16 12 13.8	+0.7
LAST	Lasithi	2.87	232	ePN	Pn	16 12 15.2	0.0
LAST	Lasithi	2.87	232	ePn	Pn	16 12 15.2	0.0
GONE	Gonen-Balikesi	3.11	352	ePN	Pn	16 12 19.2	+0.9
GONE	Gonen-Balikesi	3.11	352	ePn	Pn	16 12 19.2	+0.9
ORLT	Orhaneli	3.12	9	ePN	Pn	16 12 19.4	+0.8
ORLT	Orhaneli	3.12	9	ePn	Pn	16 12 19.4	+0.8
IZI	Iznik	3.50	16	ePN	Pn	16 12 24.9	+1.1
IZI	Iznik	3.50	16	ePn	Pn	16 12 24.9	+1.1
KRBG	Karabiga-Canak	3.50	348	ePN	Pn	16 12 24.5	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRBG	**Karabiga-Canak**	**3.50**	**348**	*e*Pn	**Pn**	**16 12 24.5**	**+0.7**
KYTH	**Kithira**	**4.24**	**262**	*e*PN	**Pn**	**16 12 33.3**	**-0.7**
KYTH	**Kithira**	**4.24**	**262**	*e*Pn	**Pn**	**16 12 33.3**	**-0.7**

*IDC **08** 16:13:32.4±4.3, 18°.30N×104°.49W, h0^{km}, mb3.2/4, mb1 3.6/5, mb1mx3.6/22, mbtmp3.2/5, ML3.7/1, Error ellipse: s-maj=115.4km s-min=44.4km az=104.0*
*MEX **08** 16:13:39.5±0.3, 19°.05N×105°.52W, h17^{km}±61^{km}, MD4.0*
*ISCJB **08** 16:13:41.5±1.2, 19°.06N±0°.07×105°.27W±0°.08, h33^{km}, mb3.1/4, Error ellipse: s-maj=12.9km s-min=7.4km az=143.8*
ISC 08 16:13:44.5±1.3**, 19°.11N**±0°.09×**105°.2W**±0°.1**, h35**^{km}**, n9,** $\sigma 2^{s}24$/11**, mb3.2**/4**, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**0.40**	**16**	*i* P	Pn	16 13 49.9	-3.9
CJM				*e*S	**Sn**	**16 13 57.7**	**-2.5**
MMIG	**Aquila**	**1.90**	**115**	*i* P	**Pn**	**16 14 11.6**	**-2.9**
MMIG				*e*S	**Sn**	**16 14 37.7**	**+0.5**
SFJM	**Santa Fe**	**2.42**	**55**	*i* P	**Pn**	**16 14 20.3**	**-1.4**
SFJM				*i* S	**Sn**	**16 14 52.5**	**+2.3**
ZIIG	**Zihuatanejo**	**3.81**	**113**	*i* P	**Pn**	**16 14 39.5**	**-1.3**
ZIIG				*i* S	**Sn**	**16 15 26.2**	**+1.8**
TXAR	**Lajitas Array**	**10.27**	**7**	Pn	Pn	16 16 13.5	+4.0
	0.1nm,0.3s,baz=188,slow=17,SNR=2.7						
TXAR				Lg	Lg	16 19 19.6	
	0.3nm,0.3s,baz=166,slow=23,SNR=3.6						
NVAR	**Mina Array Bea**	**22.39**	**332**	P	**P**	**16 18 43.2**	**+3.1**
	0.2nm,0.3s,baz=162,slow=12,SNR=2.5						
PDAR	**Pinedale Array**	**23.88**	**352**	P	**P**	**16 18 56.8**	**+1.8**
	0.2nm,0.5s,baz=182,slow=11,SNR=2.8						
YKA	**Yellowknife Ar**	**43.84**	**354**	P	**P**	**16 21 46.3**	**-0.6**
	0.5nm,0.9s,baz=166,slow=7.2,SNR=7.5						
ILAR	**Eielson Array**	**53.38**	**339**	P	**P**	**16 23 00.5**	**+0.1**
	0.4nm,0.9s,baz=145,slow=6.4,SNR=5.5						

DDA 08 16:17:03.6, 37°.43N×42°.90E, h7^{km}**, MD2.7, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIRN	**S˜–rnak**	**0.39**	**280**	*i* P	Pg	16 17 11.8	+0.3
SIRN				*i* S	Sg	16 17 18.0	+1.2
HAKT	**HAKKARI**	**0.66**	**79**	*i* P	Pg	16 17 16.3	-0.4
HAKT				*i* S	Sg	16 17 26.1	+0.7
BEST	**Besiri**	**1.37**	**290**	*i* P	Pg	16 17 30.3	+0.2
BEST				*i* S	Sg	16 17 50.9	+2.9
MARD	**Mardin**	**1.69**	**267**	*i* P	Pb	16 17 34.6	-0.7
MARD				*i* S	Sg	16 17 58.7	+0.3

MEX 08 16:20:29.6±0.3**, 15°.91N×96°.40W, h16**^{km}±8^{km}**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.31**	**117**	*i* P	Pg	16 20 35.1	-1.0
HUIG				*e*S	Sg	16 20 39.6	-1.1
VHO	**Vista Hermosa**	**1.20**	**344**	*i* P	Pn	16 20 48.4	-3.6
VHO				*e*S	Sb	16 21 02.0	-5.8
OXX	**Oaxaca**	**1.21**	**345**	*i* P	Pn	16 20 48.2	-3.9
OXX				*e*S	Sb	16 21 02.5	-5.5
PNIG	**Pinotepa**	**1.73**	**286**	*i* P	Pn	16 20 55.9	-3.2
PNIG				*e*S	Sn	16 21 15.4	-5.6
UTMO	**Huajuapan**	**2.34**	**325**	*i* P	Pn	16 21 05.2	-2.5
UTMO				*e*S	Sn	16 21 31.6	-4.7
TPIG	**Tehuac#an**	**2.66**	**340**	*e*S	Sn	16 21 40.1	-4.1
PPM	**Popocatepetl**	**3.79**	**326**	*i* P	Pn	16 21 25.3	-2.8
PPM				*e*S	Sn	16 22 09.2	-3.6
CAIG	**El Cayaco**	**3.88**	**287**	*i* P	Pn	16 21 26.1	-2.5
CCIG	**Comitan**	**4.11**	**84**	*i* P	Pn	16 21 29.7	-2.3
CCIG				*i* S	Sn	16 22 15.6	-4.4

*CSEM **08** 16:28:34.8±0.1, 38°.41N×21°.96E, h8^{km}, ML1.8/4, Error ellipse: s-maj=2.5km s-min=1.8km az=94.0*
*ISCJB **08** 16:28:34.9±0.4, 38°.41N±0°.03×21°.96E±0°.04, h11^{km}±3^{km}, Error ellipse: s-maj=5.5km s-min=4.0km az=23.5*
*THE **08** 16:28:35.0, 38°.41N×21°.97E, h12^{km}±1^{km}, ML1.8/4, Error ellipse: s-maj=1.5km s-min=0.4km az=124.0*
*ATH **08** 16:28:35.3, 38°.42N×21°.95E, h9^{km}±2^{km}, MD2.5/7*
ISC 08 16:28:34.9±1.0**, 38°.41N**±0°.02×**21°.97E**±0°.03**, h12**^{km}±5^{km}**, n28,** $\sigma 0^{s}38$/49**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.09**	**117**	P	**Pg**	**16 28 37.6**	**-0.1**
TRIZ				S	**Sg**	**16 28 39.4**	**-0.3**
TRIZ	**Trizonia**	**0.09**	**117**	P	**Pg**	**16 28 37.6**	**-0.1**
TRIZ				S	**Sg**	**16 28 39.4**	**-0.3**
PSA1	**Psathopyrgos**	**0.10**	**219**	*e*PG	**Pg**	**16 28 37.8**	**0.0**
PSA1				*e*SG	**Sg**	**16 28 39.9**	**0.0**
KALE	**Kalithea**	**0.14**	**97**	P	**Pg**	**16 28 38.3**	**-0.1**
KALE				S	**Sg**	**16 28 41.5**	**+0.7**
KALE	**Kalithea**	**0.14**	**97**	P	**Pg**	**16 28 38.3**	**-0.1**
KALE				S	**Sg**	**16 28 41.5**	**+0.7**
LAKA	**Lakka**	**0.17**	**177**	P	**Pg**	**16 28 38.8**	**0.0**
LAKA				S	**Sg**	**16 28 41.7**	**+0.2**
LAKA	**Lakka**	**0.17**	**177**	P	**Pg**	**16 28 38.8**	**0.0**
LAKA				S	**Sg**	**16 28 41.7**	**+0.2**
KLV	**Kalavryta, Ach**	**0.39**	**158**	*e*PG	**Pg**	**16 28 42.7**	**0.0**
KLV				*e*SB	**Sb**	**16 28 49.2**	**-0.6**
KLV	**Kalavryta, Ach**	**0.39**	**158**	*e*Pg	**Pg**	**16 28 42.7**	**0.0**
KLV				*e*Sb	**Sb**	**16 28 49.2**	**-0.6**
DSF	**Desfina**	**0.44**	**89**	P	**Pg**	**16 28 43.2**	**-0.4**
DSF				S	**Sg**	**16 28 49.9**	**+0.4**
DSF	**Desfina**	**0.44**	**89**	P	**Pg**	**16 28 43.2**	**-0.4**
DSF				S	**Sg**	**16 28 49.9**	**+0.4**
EVR	**Evrytania**	**0.52**	**346**	P	**Pg**	**16 28 45.0**	**-0.3**
EVR	**Evrytania**	**0.52**	**346**	*e*PB	**Pg**	**16 28 44.9**	**-0.3**
EVR	**Evrytania**	**0.52**	**346**	P	**Pg**	**16 28 45.0**	**-0.3**
RLS	**Riolos of Patr**	**0.53**	**229**	*e*PB	**Pg**	**16 28 45.5**	**+0.3**
RLS				*e*SB	**Sb**	**16 28 53.2**	**-0.4**
RLS	**Riolos of Patr**	**0.53**	**229**	*e*Pb	**Pg**	**16 28 45.5**	**+0.3**
RLS				*e*Sb	**Sb**	**16 28 53.2**	**-0.4**
GUR	**Goura**	**0.56**	**148**	P	**Pg**	**16 28 45.7**	**-0.1**
GUR				S	**Sb**	**16 28 54.2**	**-0.4**
GUR	**Goura**	**0.56**	**148**	P	**Pg**	**16 28 45.7**	**-0.1**
GUR				S	**Sb**	**16 28 54.2**	**-0.4**
MAKR	**Makrakomi, Fth**	**0.62**	**12**	P	**Pg**	**16 28 46.8**	**-0.2**
MAKR				S	**Sg**	**16 28 55.8**	**+0.6**
MAKR	**Makrakomi, Fth**	**0.62**	**12**	P	**Pg**	**16 28 46.8**	**-0.2**
MAKR				S	**Sg**	**16 28 55.8**	**+0.6**
AGG	**Agios Georgios**	**0.68**	**25**	P	**Pg**	**16 28 47.6**	**-0.5**
AGG				S	**Sg**	**16 28 57.6**	**+0.6**
AGG	**Agios Georgios**	**0.68**	**25**	P	**Pg**	**16 28 47.6**	**-0.5**
AGG				S	**Sg**	**16 28 57.6**	**+0.6**
LKR	**Lokris**	**0.84**	**73**	*e*PB	**Pg**	**16 28 51.6**	**+0.3**
LKR	**Lokris**	**0.84**	**73**	*e*Pb	**Pg**	**16 28 51.6**	**+0.3**
VLS	**Valsamata**	**1.11**	**258**	*e*PN	**Pg**	**16 28 56.1**	**-0.2**
VLS	**Valsamata**	**1.11**	**258**	*e*Pn	**Pg**	**16 28 56.1**	**-0.2**
THL	**Klokotos Trika**	**1.16**	**2**	*e*PB	**Pg**	**16 28 56.9**	**-0.3**
THL				*e*SB	**Sn**	**16 29 13.0**	**+0.4**
THL	**Klokotos Trika**	**1.16**	**2**	*e*Pb	**Pg**	**16 28 56.9**	**-0.3**
THL				*e*Sb	**Sn**	**16 29 13.0**	**+0.4**

IDC 08 16:31:50.4±9.8**, 22°.00S×178°.51W, h0**^{km}**, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.7**/18**, mbtmp4.0**/4**, Error ellipse: s-maj=226.1km s-min=41.2km az=38.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.72**	**246**	P	P	16 38 59.6	+0.1
	0.9nm,0.6s,baz=100,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**43.73**	**258**	P	P	16 39 57.4	-0.3
	1.5nm,0.5s,baz=96,slow=7.6,SNR=50						
WRA	**Warramunga Arr**	**43.94**	**264**	P	P	16 39 59.3	-0.1
	1.5nm,0.3s,baz=101,slow=8.4,SNR=100						
VNDA	**Vanda**	**56.38**	**185**	P	P	16 41 32.9	-0.1
	0.3nm,0.4s,baz=1.8,slow=6.7,SNR=6.9						

*CSEM **08** 16:39:18.6±0.4, 39°.42N×25°.81E, h8^{km}, MD2.8, Error ellipse: s-maj=8.7km s-min=6.9km az=84.0*
*ISK **08** 16:39:19.4, 39°.46N×25°.92E, h11^{km}, MD2.8*
*DDA **08** 16:39:23.4, 39°.61N×26°.19E, h7^{km}, MD2.6*
ISC 08 16:39:20.1±2.9**, 39°.47N**±0°.10×**25°.9E**±0°.1**, h12**^{km}±11^{km}**, n19,** $\sigma 0^{s}33$/28**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.38**	**14**	*i* P	**Pg**	**16 39 27.5**	**-0.2**
BOZC				*i* S	**Sb**	**16 39 34.0**	**-0.7**
EZN	**Ezine**	**0.46**	**40**	*e*PG	**Pg**	**16 39 29.4**	**+0.1**
EZN				*e*SG	**Sb**	**16 39 36.6**	**-0.4**
EZN	**Ezine**	**0.46**	**40**	*e*Pg	**Pg**	**16 39 29.4**	**+0.1**
EZN				*e*Sg	**Sb**	**16 39 36.6**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.01**	**24**	*e*PG	**Pg**	**16 39 39.9**	**+0.2**
GELI				*e*SG	**Sn**	**16 39 54.4**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.01**	**24**	*e*Pg	**Pg**	**16 39 39.9**	**+0.2**
GELI				*e*Sg	**Sn**	**16 39 54.4**	**+0.1**
LPK	**Lapseki**	**1.10**	**35**	*e*PN	**Pb**	**16 39 41.1**	**0.0**
LPK	**Lapseki**	**1.10**	**35**	*e*Pn	**Pb**	**16 39 41.1**	**0.0**
ERIK	**Erikli-Kesan**	**1.28**	**20**	*e*PN	**Pn**	**16 39 43.9**	**+0.2**
ERIK	**Erikli-Kesan**	**1.28**	**20**	*e*Pn	**Pn**	**16 39 43.9**	**+0.2**
BALY	**Balya**	**1.33**	**78**	*i* P	**Pg**	**16 39 45.6**	**-0.1**
BALY				*i* S	**Sg**	**16 40 02.9**	**-0.1**
BALY	**Balya**	**1.33**	**78**	*i* P	**Pg**	**16 39 45.6**	**-0.1**
BALY				*i* S	**Sg**	**16 40 02.9**	**-0.1**
KRBG	**Karabiga-Canak**	**1.39**	**48**	*e*PN	**Pn**	**16 39 45.6**	**+0.3**
KRBG	**Karabiga-Canak**	**1.39**	**48**	*e*Pn	**Pn**	**16 39 45.6**	**+0.3**
GONE	**Gonen-Balikesi**	**1.47**	**66**	*e*PN	**Pn**	**16 39 46.7**	**+0.4**
GONE	**Gonen-Balikesi**	**1.47**	**66**	*e*Pn	**Pn**	**16 39 46.7**	**+0.4**
SART	**Tekirdag**	**1.54**	**38**	*i* P	**Pb**	**16 39 48.2**	**-0.5**
SART				*i* S	**Sg**	**16 40 10.2**	**+0.3**
SART	**Tekirdag**	**1.54**	**38**	*i* P	**Pb**	**16 39 48.2**	**-0.5**
SART				*i* S	**Sg**	**16 40 10.2**	**+0.3**
MRMT	**Marmara Adasi**	**1.70**	**48**	*e*PN	**Pn**	**16 39 50.1**	**+0.4**
MRMT	**Marmara Adasi**	**1.70**	**48**	*e*Pn	**Pn**	**16 39 50.1**	**+0.4**

IDC 08 16:43:16.5±2.5**, 17°.36S×176°.60W, h0**^{km}**, mb4.3**/3**, mb1 4.4**/4**, mb1mx3.8**/20**, mbtmp4.3**/4**, ML2.6**/1**, Error ellipse: s-maj=162.9km s-min=30.7km az=150.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.78**	**54**	Pn	Pn	16 44 43.7	+0.1
	9.0nm,0.3s,baz=232,slow=17,SNR=21						
AFI				Sn	Sn	16 45 36.4	-14
	19nm,0.3s,baz=217,slow=20,SNR=14						
STKA	**Stephens Creek**	**40.40**	**241**	P	P	16 50 57.3	+0.7
	1.6nm,0.5s,baz=72,slow=9.6,SNR=5.5						
WRA	**Warramunga Arr**	**46.43**	**259**	P	P	16 51 44.9	-0.5
	0.6nm,0.5s,baz=97,slow=7.1,SNR=28						
ASAR	**Alice Springs**	**46.60**	**254**	P	P	16 51 46.3	-0.4
	10nm,0.5s,baz=88,slow=8.5,SNR=404						

*ISK **08** 16:58:41.9, 38°.89N×27°.15E, h9^{km}, MD3.1*
*DDA **08** 16:58:41.6, 38°.90N×27°.16E, h29^{km}, MD3.0*
*ISCJB **08** 16:58:42.3±0.4, 38°.90N±0°.02×27°.15E±0°.02, h7^{km}±3^{km}, Error ellipse: s-maj=3.0km s-min=2.6km az=13.0*
*CSEM **08** 16:58:42.4±0.1, 38°.90N×27°.17E, h5^{km}, MD3.1, Error ellipse: s-maj=2.4km s-min=2.3km az=41.0*
*ATH **08** 16:58:42.0, 38°.89N×27°.21E, h17^{km}±3^{km}, MD3.5/5*
*THE **08** 16:58:43.6, 38°.88N×27°.07E, h0^{km}±1^{km}, ML2.6/4, Error ellipse: s-maj=2.3km s-min=1.0km az=112.0*
ISC 08 16:58:42.3±1.0**, 38°.90N**±0°.02×**27°.17E**±0°.01**, h10**^{km}±9^{km}**, n103,** $\sigma 0^{s}75$/144**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKS	**Akhisar**	**0.50**	**92**	*e*PG	**Pg**	**16 58 52.4**	**+0.3**
AKS				*e*SG	**Sb**	**16 59 00.1**	**-0.5**
AKS	**Akhisar**	**0.50**	**92**	*e*Pg	**Pg**	**16 58 52.4**	**+0.3**
AKS				*e*Sg	**Sb**	**16 59 00.1**	**-0.5**
AKHS	**Akhisar**	**0.50**	**92**	*i* P	**Pg**	**16 58 52.5**	**+0.4**
AKHS				*i* S	**Sb**	**16 59 00.2**	**-0.5**
AKHS	**Akhisar**	**0.50**	**92**	*i* P	**Pg**	**16 58 52.5**	**+0.4**
AKHS				*i* S	**Sb**	**16 59 00.2**	**-0.5**
IZM	**Izmir**	**0.51**	**172**	*e*PG	**Pg**	**16 58 52.1**	**-0.1**
IZM	**Izmir**	**0.51**	**172**	*e*Pg	**Pg**	**16 58 52.1**	**-0.1**
BLCB	**Balcova**	**0.52**	**191**	*e*PG	**Pg**	**16 58 52.5**	**0.0**
BLCB				*e*SG	**Sg**	**16 58 59.4**	**0.0**
BLCB	**Balcova**	**0.52**	**191**	*e*Pg	**Pg**	**16 58 52.5**	**0.0**
BLCB				*e*Sg	**Sg**	**16 58 59.4**	**0.0**
AYVA	**Ayvalik**	**0.55**	**318**	*i* P	**Pg**	**16 58 52.8**	**-0.2**
AYVA				*i* S	**Sb**	**16 59 01.5**	**-0.5**
AYVA	**Ayvalik**	**0.55**	**318**	*i* P	**Pg**	**16 58 52.8**	**-0.2**
AYVA				*i* S	**Sb**	**16 59 01.5**	**-0.5**
URLA	**Izmir**	**0.70**	**220**	*i* P	**Pg**	**16 58 55.1**	**-0.8**
URLA				*i* S	**Sb**	**16 59 06.5**	**+0.2**
URLA	**Izmir**	**0.70**	**220**	*i* P	**Pg**	**16 58 55.1**	**-0.8**
URLA				*i* S	**Sb**	**16 59 06.5**	**+0.2**
PRK	**Paraskevi**	**0.78**	**297**	P	**Pb**	**16 58 57.9**	**0.0**
PRK				S	**Sb**	**16 59 09.2**	**+0.7**
PRK	**Paraskevi**	**0.78**	**297**	*e*PN	**Pb**	**16 58 58.0**	**0.0**
PRK				*e*SN	**Sb**	**16 59 08.8**	**+0.3**
PRK	**Paraskevi**	**0.78**	**297**	P	**Pb**	**16 58 57.9**	**0.0**
PRK				*e*Sn	**Sb**	**16 59 08.8**	**+0.3**
PRK				S	**Sb**	**16 59 09.2**	**+0.7**
BALY	**Balya**	**0.91**	**23**	*i* P	**Pg**	**16 58 59.3**	**-0.5**
BALY				*i* S	**Sg**	**16 59 12.2**	**+0.5**
BALY	**Balya**	**0.91**	**23**	*i* P	**Pg**	**16 58 59.3**	**-0.5**
BALY				*i* S	**Sg**	**16 59 12.2**	**+0.5**
BALB	**Balikesir**	**0.92**	**37**	*e*PG	**Pb**	**16 59 00.5**	**+0.1**
BALB	**Balikesir**	**0.92**	**37**	*e*Pg	**Pb**	**16 59 00.5**	**+0.1**
CHOS	**Chios island**	**1.01**	**240**	P	**Pg**	**16 59 01.3**	**-0.5**
CHOS				S	**Sb**	**16 59 15.9**	**+0.6**
CHOS	**Chios island**	**1.01**	**240**	*e*PN	**Pg**	**16 59 01.3**	**-0.5**
CHOS				*e*SN	**Sn**	**16 59 16.4**	**-0.5**
CHOS	**Chios island**	**1.01**	**240**	P	**Pg**	**16 59 01.3**	**-0.5**
CHOS				S	**Sb**	**16 59 15.9**	**+0.6**
CHOS				*e*Sn	**Sn**	**16 59 16.4**	**-0.5**
SIGR	**SIGRI**	**1.07**	**287**	P	**Pb**	**16 59 02.8**	**0.0**
SIGR				S	**Sg**	**16 59 17.0**	**+0.3**
SIGR	**SIGRI**	**1.07**	**287**	P	**Pb**	**16 59 02.8**	**0.0**
SIGR				S	**Sg**	**16 59 17.0**	**+0.3**
EZN	**Ezine**	**1.13**	**325**	*e*PN	**Pg**	**16 59 04.4**	**+0.3**
EZN	**Ezine**	**1.13**	**325**	*e*Pn	**Pg**	**16 59 04.4**	**+0.3**
MANT	**Manisa**	**1.16**	**110**	*i* P	**Pb**	**16 59 04.4**	**-0.2**
MANT				*i* S	**Sb**	**16 59 20.0**	**+0.2**
MANT	**Manisa**	**1.16**	**110**	*i* P	**Pb**	**16 59 04.4**	**-0.2**
MANT				*i* S	**Sb**	**16 59 20.0**	**+0.2**
GONE	**Gonen-Balikesi**	**1.21**	**19**	*e*PN	**Pn**	**16 59 05.2**	**-0.1**
GONE	**Gonen-Balikesi**	**1.21**	**19**	*e*Pn	**Pn**	**16 59 05.2**	**-0.1**
DEMI	**Demirci**	**1.22**	**83**	*i* P	**Pn**	**16 59 05.2**	**-0.2**
DEMI				*i* S	**Sb**	**16 59 21.3**	**+0.1**
DEMI	**Demirci**	**1.22**	**83**	*i* P	**Pn**	**16 59 05.2**	**-0.2**
DEMI				*i* S	**Sb**	**16 59 21.3**	**+0.1**
KULA	**Kula-Manisa**	**1.23**	**108**	*e*PN	**Pn**	**16 59 05.4**	**-0.2**
KULA	**Kula-Manisa**	**1.23**	**108**	*e*Pn	**Pn**	**16 59 05.4**	**-0.2**
DURS	**Dursunbey**	**1.23**	**55**	*i* P	**Pn**	**16 59 05.4**	**-0.2**
DURS				*i* S	**Sb**	**16 59 21.6**	**0.0**
DURS	**Dursunbey**	**1.23**	**55**	*i* P	**Pn**	**16 59 05.4**	**-0.2**
DURS				*i* S	**Sb**	**16 59 21.6**	**0.0**
BOZC	**Bozcaada**	**1.28**	**318**	*i* P	**Pn**	**16 59 06.0**	**-0.2**
BOZC				*i* S	**Sn**	**16 59 23.1**	**-0.3**
DST	**Dursunbey**	**1.33**	**58**	*e*PN	**Pn**	**16 59 06.8**	**-0.1**
DST	**Dursunbey**	**1.33**	**58**	*e*Pn	**Pn**	**16 59 06.8**	**-0.1**
AYDN	**Tasoluk**	**1.36**	**155**	*i* P	**Pb**	**16 59 07.7**	**-0.1**
AYDN				*i* S	**Sb**	**16 59 24.8**	**-0.5**
AYDN	**Tasoluk**	**1.36**	**155**	*i* P	**Pb**	**16 59 07.7**	**-0.1**
AYDN				*i* S	**Sb**	**16 59 24.8**	**-0.5**
KRBG	**Karabiga-Canak**	**1.49**	**4**	*e*PN	**Pn**	**16 59 09.3**	**+0.2**
KRBG	**Karabiga-Canak**	**1.49**	**4**	*e*Pn	**Pn**	**16 59 09.3**	**+0.2**
LPK	**Lapseki**	**1.50**	**348**	*e*PN	**Pn**	**16 59 09.6**	**+0.3**
LPK	**Lapseki**	**1.50**	**348**	*e*Pn	**Pn**	**16 59 09.6**	**+0.3**
EDC	**Edincik**	**1.54**	**20**	*e*PN	**Pb**	**16 59 11.1**	**+0.2**
EDC	**Edincik**	**1.54**	**20**	*e*Pn	**Pb**	**16 59 11.1**	**+0.2**
BNT	**Bandirma**	**1.56**	**22**	*e*PN	**Pn**	**16 59 09.6**	**-0.6**
BNT	**Bandirma**	**1.56**	**22**	*e*Pn	**Pn**	**16 59 09.6**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.59**	**340**	*e*PN	**Pn**	**16 59 10.9**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.59**	**340**	*e*Pn	**Pn**	**16 59 11.0**	**+0.5**
KCTX	**Karacabey (Bur**	**1.64**	**34**	*e*PN	**Pn**	**16 59 11.3**	**+0.1**
KCTX	**Karacabey (Bur**	**1.64**	**34**	*e*Pn	**Pn**	**16 59 11.3**	**+0.1**
MLSB	**Milas**	**1.67**	**163**	*e*PN	**Pn**	**16 59 11.8**	**+0.2**
MLSB	**Milas**	**1.67**	**163**	*e*Pn	**Pn**	**16 59 11.8**	**+0.2**
MRMT	**Marmara Adasi**	**1.73**	**11**	*e*PN	**Pn**	**16 59 12.6**	**+0.1**
MRMT	**Marmara Adasi**	**1.73**	**11**	*e*Pn	**Pn**	**16 59 12.6**	**+0.1**
ORLT	**Orhaneli**	**1.76**	**49**	*e*PN	**Pn**	**16 59 13.4**	**+0.5**
ORLT	**Orhaneli**	**1.76**	**49**	*e*Pn	**Pn**	**16 59 13.4**	**+0.5**
SART	**Tekirdag**	**1.79**	**0**	*i* P	**Pn**	**16 59 12.9**	**-0.3**
SART				*i* S	**Sn**	**16 59 36.3**	**+0.3**
SART	**Tekirdag**	**1.79**	**0**	*i* P	**Pn**	**16 59 12.9**	**-0.3**
SART				*i* S	**Sn**	**16 59 36.3**	**+0.3**
GDZ	**Gediz**	**1.81**	**83**	*i* P	**Pg**	**16 59 16.8**	**-0.3**
GDZ				*i* S	**Sg**	**16 59 40.4**	**-0.2**
GDZ	**Gediz**	**1.81**	**83**	*i* P	**Pg**	**16 59 16.8**	**-0.3**
GDZ				*i* S	**Sg**	**16 59 40.4**	**-0.2**
LIA	**Limnos Island**	**1.83**	**304**	P	**Pn**	**16 59 14.5**	**+0.7**
LIA	**Limnos Island**	**1.83**	**304**	*e*PN	**Pb**	**16 59 15.7**	**-0.2**
LIA	**Limnos Island**	**1.83**	**304**	P	**Pn**	**16 59 14.5**	**+0.7**
LIA	**Limnos Island**	**1.83**	**304**	*e*Pn	**Pb**	**16 59 15.7**	**-0.2**
ERIK	**Erikli-Kesan**	**1.84**	**344**	*e*PN	**Pn**	**16 59 13.8**	**-0.1**
ERIK	**Erikli-Kesan**	**1.84**	**344**	*e*Pn	**Pn**	**16 59 13.8**	**-0.1**
BODT	**Bodrum**	**1.84**	**176**	*e*PN	**Pn**	**16 59 14.8**	**+0.9**
BODT	**Bodrum**	**1.84**	**176**	*e*Pn	**Pn**	**16 59 14.8**	**+0.9**
TVSB	**Tavsanli**	**1.86**	**72**	*e*PN	**Pn**	**16 59 14.6**	**+0.2**
TVSB	**Tavsanli**	**1.86**	**72**	*e*Pn	**Pn**	**16 59 14.6**	**+0.2**
KHL	**Karahalli**	**1.93**	**107**	*e*PN	**Pb**	**16 59 16.6**	**-1.0**
KHL	**Karahalli**	**1.93**	**107**	*e*Pn	**Pb**	**16 59 16.6**	**-1.0**
YER	**Yerkesik**	**1.97**	**153**	*e*PN	**Pb**	**16 59 17.2**	**-1.1**
YER	**Yerkesik**	**1.97**	**153**	*e*Pn	**Pb**	**16 59 17.2**	**-1.1**
SMTH	**Samothraki Isl**	**2.01**	**322**	*e*PN	**Pb**	**16 59 17.8**	**-1.2**
SMTH				*e*SN	**Sb**	**16 59 43.1**	**-1.0**
SMTH	**Samothraki Isl**	**2.01**	**322**	*e*Pn	**Pb**	**16 59 17.8**	**-1.2**
SMTH				*e*Sn	**Sb**	**16 59 43.1**	**-1.0**
ALN	**Alexandroupoli**	**2.17**	**337**	P	**Pn**	**16 59 19.9**	**+1.4**
ALN				S	**Sb**	**16 59 47.8**	**-0.8**
ALN	**Alexandroupoli**	**2.17**	**337**	*e*PN	**Pb**	**16 59 20.5**	**-1.2**
ALN				*e*SN	**Sb**	**16 59 47.5**	**-1.1**
ALN	**Alexandroupoli**	**2.17**	**337**	P	**Pn**	**16 59 19.9**	**+1.4**
ALN	**Alexandroupoli**	**2.17**	**337**	*e*Pn	**Pb**	**16 59 20.5**	**-1.2**
ALN				*e*Sn	**Sb**	**16 59 47.5**	**-1.1**
ALN				S	**Sb**	**16 59 47.8**	**-0.8**
DAT	**Datca**	**2.19**	**171**	*e*PN	**Pn**	**16 59 19.9**	**+1.1**
DAT	**Datca**	**2.19**	**171**	*e*Pn	**Pn**	**16 59 19.9**	**+1.1**
APE	**Apeiranthos**	**2.24**	**216**	*e*PN	**Pn**	**16 59 20.3**	**+0.9**
APE	**Apeiranthos**	**2.24**	**216**	*e*Pn	**Pn**	**16 59 20.3**	**+0.9**
IZI	**Iznik**	**2.29**	**50**	*e*PN	**Pn**	**16 59 20.9**	**+0.8**
IZI	**Iznik**	**2.29**	**50**	*e*Pn	**Pn**	**16 59 20.9**	**+0.8**
ALT	**Altintas**	**2.30**	**85**	*e*PN	**Pn**	**16 59 22.0**	**+1.7**
ALT	**Altintas**	**2.30**	**85**	*e*Pn	**Pn**	**16 59 22.0**	**+1.7**
BUY	**Buyukada**	**2.46**	**37**	*e*PN	**Pn**	**16 59 24.1**	**+1.7**
BUY	**Buyukada**	**2.46**	**37**	*e*Pn	**Pn**	**16 59 24.1**	**+1.7**
SLVT	**Silivri**	**2.46**	**19**	*e*PN	**Pn**	**16 59 24.3**	**+1.9**
SLVT	**Silivri**	**2.46**	**19**	*e*Pn	**Pn**	**16 59 24.3**	**+1.9**
CTKS	**Kestanelik-??a**	**2.55**	**23**	*e*PN	**Pn**	**16 59 25.5**	**+1.9**
CTKS	**Kestanelik-??a**	**2.55**	**23**	*e*Pn	**Pn**	**16 59 25.5**	**+1.9**
ISK	**Istanbul-Kandi**	**2.60**	**33**	*e*PN	**Pn**	**16 59 26.4**	**+2.0**
ISK	**Istanbul-Kandi**	**2.60**	**33**	*e*Pn	**Pn**	**16 59 26.4**	**+2.0**
CTYL	**Yal??k??y-??at**	**2.71**	**18**	*e*PN	**Pn**	**16 59 27.7**	**+1.8**
CTYL	**Yal??k??y-??at**	**2.71**	**18**	*e*Pn	**Pn**	**16 59 27.7**	**+1.8**
EDRB	**Edirne**	**2.96**	**354**	*e*PN	**Pn**	**16 59 29.8**	**+0.5**
EDRB	**Edirne**	**2.96**	**354**	*e*Pn	**Pn**	**16 59 29.8**	**+0.5**

*ROM **08** 17:09:59.3±0.1, 42°.34N×13°.35E, h10^{km}, Ml2.9/33, Error ellipse: s-maj=1.0km s-min=0.8km az=69.0*
*CSEM **08** 17:09:59.2±0.1, 42°.35N×13°.35E, h12^{km}, ML3.6/12, Error ellipse: s-maj=2.9km s-min=2.0km az=64.0*
ISC 08 17:09:59.5±0.8**, 42°.35N**±0°.02×**13°.35E**±0°.02**, h13**^{km}±4^{km}**, n76,** $\sigma 0^{s}71$/104**, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**85**	Pg	**Pg**	**17 10 01.7**	**-0.3**
AQU				Sg	**Sg**	**17 10 03.1**	**-0.6**
	4µm,0.2s						
AQU	**L'Aquila**	**0.04**	**85**	Pg	**Pg**	**17 10 01.7**	**-0.3**
AQU				Sg	**Sg**	**17 10 03.1**	**-0.6**
	4µm,0.2s						
CAMP	**Campotosto**	**0.19**	**13**	Pg	**Pg**	**17 10 03.9**	**0.0**
CAMP				Sg	**Sg**	**17 10 07.2**	**+0.3**
	3µm,0.3s						
CAMP	**Campotosto**	**0.19**	**13**	Pg	**Pg**	**17 10 03.9**	**0.0**
CAMP				Sg	**Sg**	**17 10 07.2**	**+0.3**
	3µm,0.3s						
FIAM	**Fiamignano**	**0.19**	**245**	Pg	**Pg**	**17 10 04.2**	**+0.3**
FIAM				Sg	**Sg**	**17 10 07.4**	**+0.5**
	4µm,0.6s						
FIAM	**Fiamignano**	**0.19**	**245**	Pg	**Pg**	**17 10 04.2**	**+0.3**
FIAM				Sg	**Sg**	**17 10 07.4**	**+0.5**
	4µm,0.6s						
FAGN	**Fagnano**	**0.19**	**116**	Pg	**Pg**	**17 10 04.1**	**+0.2**
FAGN				Sg	**Sg**	**17 10 07.5**	**+0.6**
	16µm,0.4s						
FAGN	**Fagnano**	**0.19**	**116**	Pg	**Pg**	**17 10 04.1**	**+0.2**
FAGN				Sg	**Sg**	**17 10 07.5**	**+0.6**
	16µm,0.4s						
TERO	**Teramo**	**0.33**	**34**	Pg	**Pg**	**17 10 05.9**	**-0.3**
TERO				Sg	**Sb**	**17 10 12.0**	**-0.5**
	2µm,0.3s						
TERO	**Teramo**	**0.33**	**34**	Pg	**Pg**	**17 10 05.9**	**-0.3**
TERO				Sg	**Sb**	**17 10 12.0**	**-0.5**
	2µm,0.3s						
PTQR	**Pietraquaria**	**0.33**	**174**	Pg	**Pg**	**17 10 06.4**	**+0.2**
PTQR				Sg	**Sg**	**17 10 10.9**	**+0.1**
PTQR	**Pietraquaria**	**0.33**	**174**	Pg	**Pg**	**17 10 06.4**	**+0.2**
PTQR				Sg	**Sg**	**17 10 10.9**	**+0.1**
LNSS	**Leonessa**	**0.34**	**318**	Pg	**Pg**	**17 10 06.5**	**0.0**
LNSS				Sg	**Sb**	**17 10 12.9**	**0.0**
	2µm,0.3s						
LNSS	**Leonessa**	**0.34**	**318**	Pg	**Pg**	**17 10 06.5**	**0.0**
LNSS				Sg	**Sb**	**17 10 12.9**	**0.0**
	2µm,0.3s						
VCEL	**Villa Celiera**	**0.37**	**83**	Pg	**Pg**	**17 10 07.1**	**+0.2**
VCEL				Sg	**Sb**	**17 10 13.7**	**+0.1**
	6µm,0.4s						
VCEL	**Villa Celiera**	**0.37**	**83**	Pg	**Pg**	**17 10 07.1**	**+0.2**
VCEL				Sg	**Sb**	**17 10 13.7**	**+0.1**
	6µm,0.4s						
CERT	**Cerreto**	**0.49**	**214**	Pg	**Pg**	**17 10 09.0**	**-0.1**
CERT				Sg	**Sb**	**17 10 16.2**	**-0.8**
	2µm,0.4s						
CERT	**Cerreto**	**0.49**	**214**	Pg	**Pg**	**17 10 09.0**	**-0.1**
CERT				Sg	**Sb**	**17 10 16.2**	**-0.8**
	2µm,0.4s						
MNS	**Montasola**	**0.50**	**274**	Pg	**Pg**	**17 10 09.1**	**-0.2**
	669nm,0.5s						
MNS	**Montasola**	**0.50**	**274**	Pg	**Pg**	**17 10 09.1**	**-0.2**
	669nm,0.5s						
NRCA	**Norcia**	**0.51**	**340**	Pg	**Pg**	**17 10 09.3**	**-0.3**
NRCA				Sg	**Sb**	**17 10 17.7**	**-0.1**
	1µm,0.2s						
NRCA	**Norcia**	**0.51**	**340**	Pg	**Pg**	**17 10 09.3**	**-0.3**
NRCA				Sg	**Sb**	**17 10 17.7**	**-0.1**
	1µm,0.2s						
VVLD	**Villa Vallelon**	**0.52**	**157**	Pg	**Pg**	**17 10 09.3**	**-0.4**
	621nm,0.5s						
VVLD	**Villa Vallelon**	**0.52**	**157**	Pg	**Pg**	**17 10 09.3**	**-0.4**
	621nm,0.5s						
INTR	**Introdacqua**	**0.53**	**129**	Pg	**Pg**	**17 10 09.7**	**-0.3**
INTR				Sg	**Sb**	**17 10 18.5**	**+0.1**
	697nm,0.4s						
INTR	**Introdacqua**	**0.53**	**129**	Pg	**Pg**	**17 10 09.7**	**-0.3**
INTR				Sg	**Sb**	**17 10 18.5**	**+0.1**
	697nm,0.4s						
GUAR	**Guarcino**	**0.56**	**183**	Pg	**Pg**	**17 10 10.0**	**-0.4**
	482nm,0.4s						
GUAR	**Guarcino**	**0.56**	**183**	Pg	**Pg**	**17 10 10.0**	**-0.4**
	482nm,0.4s						
MTCE	**Montecelio**	**0.56**	**234**	Pg	**Pg**	**17 10 10.3**	**-0.1**
	470nm,0.6s						
MTCE	**Montecelio**	**0.56**	**234**	Pg	**Pg**	**17 10 10.3**	**-0.1**
	470nm,0.6s						
TRTR	**Tortoreto Alta**	**0.62**	**42**	Pg	**Pb**	**17 10 12.2**	**+0.1**
	3µm,0.9s						
TRTR	**Tortoreto Alta**	**0.62**	**42**	Pg	**Pb**	**17 10 12.2**	**+0.1**
	3µm,0.9s						
CESX	**Cesi**	**0.63**	**295**	Pg	**Pg**	**17 10 11.7**	**0.0**
	406nm,0.5s						
CESX	**Cesi**	**0.63**	**295**	Pg	**Pg**	**17 10 11.7**	**0.0**
	406nm,0.5s						
OFFI	**Offida**	**0.63**	**23**	Pg	**Pg**	**17 10 11.9**	**0.0**
	2µm,0.5s						
OFFI	**Offida**	**0.63**	**23**	Pg	**Pg**	**17 10 11.9**	**0.0**
	2µm,0.5s						
POFI	**Posta Fibreno**	**0.69**	**157**	Pg	**Pg**	**17 10 12.5**	**-0.4**
	243nm,0.9s						
POFI	**Posta Fibreno**	**0.69**	**157**	Pg	**Pg**	**17 10 12.5**	**-0.4**
	243nm,0.9s						
LPEL	**Lama dei Pelig**	**0.69**	**116**	Pg	**Pg**	**17 10 12.2**	**-0.7**
LPEL				Sg	**Sb**	**17 10 23.0**	**+0.2**
	575nm,0.4s						
LPEL	**Lama dei Pelig**	**0.69**	**116**	Pg	**Pg**	**17 10 12.2**	**-0.7**
LPEL				Sg	**Sb**	**17 10 23.0**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	575nm,0.4s						
FDMO	**Fiordimonte**	**0.71**	**344**	Pg	**Pg**	**17 10 12.7**	**-0.6**
FDMO				Sg	**Sb**	**17 10 23.9**	**+0.4**
	301nm,0.3s						
FDMO	**Fiordimonte**	**0.71**	**344**	Pg	**Pg**	**17 10 12.7**	**-0.6**
FDMO				Sg	**Sb**	**17 10 23.9**	**+0.4**
	301nm,0.3s						
SDI	**San Donato**	**0.73**	**152**	Pg	**Pg**	**17 10 12.9**	**-0.7**
	152nm,0.4s						
SDI	**San Donato**	**0.73**	**152**	Pg	**Pg**	**17 10 12.9**	**-0.7**
	152nm,0.4s						
CESI	**CESI - Serrava**	**0.73**	**333**	Pg	**Pg**	**17 10 13.1**	**-0.6**
	135nm,0.4s						
CESI	**CESI - Serrava**	**0.73**	**333**	Pg	**Pg**	**17 10 13.1**	**-0.6**
	135nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.80**	**185**	Pg	**Pg**	**17 10 14.0**	**-0.9**
	284nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.80**	**185**	Pg	**Pg**	**17 10 14.0**	**-0.9**
	284nm,0.6s						
GUMA	**Gualdo di Mace**	**0.83**	**31**	Pg	**Pb**	**17 10 13.1**	**-2.7**
	1µm,0.5s						
GUMA	**Gualdo di Mace**	**0.83**	**31**	Pg	**Pb**	**17 10 13.1**	**-2.7**
	1µm,0.5s						
RNI2	**Rionero Sannit**	**0.88**	**137**	Pg	**Pb**	**17 10 16.3**	**-0.4**
	254nm,0.5s						
RNI2	**Rionero Sannit**	**0.88**	**137**	Pg	**Pb**	**17 10 16.3**	**-0.4**
	254nm,0.5s						
CERA	**Filignano**	**0.90**	**146**	Pg	**Pb**	**17 10 15.7**	**-1.3**
	300nm,0.7s						
CERA	**Filignano**	**0.90**	**146**	Pg	**Pb**	**17 10 15.7**	**-1.3**
	300nm,0.7s						
SNTG	**Esanatoglia**	**0.95**	**342**	Pg	**Pb**	**17 10 16.9**	**-1.0**
	171nm,0.6s						
SNTG	**Esanatoglia**	**0.95**	**342**	Pg	**Pb**	**17 10 16.9**	**-1.0**
	171nm,0.6s						
MIDA	**Miranda**	**0.98**	**136**	Pg	**Pb**	**17 10 16.9**	**-1.4**
	146nm,0.5s						
MIDA	**Miranda**	**0.98**	**136**	Pg	**Pb**	**17 10 16.9**	**-1.4**
	146nm,0.5s						
CING	**Cingoli**	**1.03**	**354**	Pg	**Pb**	**17 10 18.3**	**-0.9**
	372nm,0.6s						
CING	**Cingoli**	**1.03**	**354**	Pg	**Pb**	**17 10 18.3**	**-0.9**
	372nm,0.6s						
MGAB	**Montegabbione**	**1.07**	**302**	Pg	**Pg**	**17 10 20.2**	**0.0**
	178nm,0.4s						
MGAB	**Montegabbione**	**1.07**	**302**	Pg	**Pg**	**17 10 20.2**	**0.0**
	178nm,0.4s						
MURB	**Monte Urbino**	**1.10**	**327**	Pg	**Pb**	**17 10 20.0**	**-0.3**
	818nm,0.4s						
MURB	**Monte Urbino**	**1.10**	**327**	Pg	**Pb**	**17 10 20.0**	**-0.3**
	818nm,0.4s						
ARVD	**Arcevia**	**1.19**	**345**	Pg	**Pn**	**17 10 21.4**	**-0.4**
	240nm,0.9s						
ARVD	**Arcevia**	**1.19**	**345**	Pg	**Pn**	**17 10 21.4**	**-0.4**
	240nm,0.9s						
AOI	**Ancona**	**1.21**	**9**	Pg	**Pn**	**17 10 21.8**	**-0.4**
	161nm,0.7s						
AOI	**Ancona**	**1.21**	**9**	Pg	**Pn**	**17 10 21.8**	**-0.4**
	161nm,0.7s						
PIEI	**Pieia**	**1.33**	**333**	Pn	**Pb**	**17 10 24.1**	**-0.2**
	97nm,0.4s						
PIEI	**Pieia**	**1.33**	**333**	Pn	**Pb**	**17 10 24.1**	**-0.2**
	97nm,0.4s						
CAFI	**Castiglion Fio**	**1.41**	**314**	Pg	**Pg**	**17 10 26.1**	**-0.5**
	130nm,1.2s						
CAFI	**Castiglion Fio**	**1.41**	**314**	Pg	**Pg**	**17 10 26.1**	**-0.5**
	130nm,1.2s						
BADI	**Badiali**	**1.42**	**325**	Pg	**Pb**	**17 10 26.0**	**+0.3**
	177nm,0.9s						
BADI	**Badiali**	**1.42**	**325**	Pg	**Pb**	**17 10 26.0**	**+0.3**
	177nm,0.9s						
STON	**Ston**	**3.25**	**79**	*i* Pn	**Pn**	**17 10 52.0**	**+1.9**
STON				Sn	**Sn**	**17 11 30.0**	**+1.3**
STON	**Ston**	**3.25**	**79**	*i* Pn	**Pn**	**17 10 52.0**	**+1.9**
STON				Sn	**Sn**	**17 11 29.9**	**+1.3**

ISC 08 17:29:28.7±0.9**, 48°.08N**±0°.08×**23°.17E**±0°.06**, h10**km**, n9, σ0ˢ84**/10**, 2C-1D, Ukraine - Moldova - Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRPA	**Tarpa**	**0.42**	**277**	⇓*i*P	**Pg**	**17 29 37.2**	**+0.2**
TRPA	**Tarpa**	**0.42**	**277**	S	**Sg**	**17 29 43.6**	**+1.0**
BMR	**Baia Mare**	**0.46**	**151**	⇑*i*P	**Pg**	**17 29 37.6**	**-0.1**
BMR	**Baia Mare**	**0.46**	**151**	S	**Sg**	**17 29 44.0**	**+0.2**
KOLS	**Kolonicke sedl**	**1.04**	**326**	*e*PG	**Pb**	**17 29 48.7**	**-0.1**
KOLS				*e*SG	**Sb**	**17 30 03.5**	**+0.9**
DRGR		**1.32**	**194**	S	Sg	17 30 10.4	-0.9
CRVS	**Cervenica-Dubn**	**1.40**	**307**	*e*PG	**Pn**	**17 29 52.7**	**-1.6**
CRVS				*e*SG	**Sn**	**17 30 13.3**	**+0.4**
BURAR	**Bucovina Array**	**1.46**	**108**	⇑*i*P	**Pn**	**17 29 55.1**	**-0.1**
BURAR	**Bucovina Array**	**1.46**	**108**	S	**Sg**	**17 30 15.8**	**+0.3**

IDC 08 17:31:18.9±12.0**, 7°.13S**×**155°.26E, h139**km±80km**, mb3.1**/3**, mb1 3.4**/4**, mb1mx3.0**/19**, mbtmp3.2**/4**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.5**/12**, Error ellipse: s-maj=95.2km s-min=45.4km az=88.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.17**	**117**	S	Sn	17 33 29.8	-3.7
	1.3nm,0.3s,baz=72,slow=19,SNR=2.8						
PMG	**Port Moresby**	**8.33**	**254**	P	Pn	17 33 17.0	+0.1
	0.9nm,0.3s,baz=67,slow=13,SNR=2.6						
PMG				S	Sn	17 34 50.0	+0.6
	0.8nm,0.3s,baz=124,slow=9.2,SNR=3.1						
WRA	**Warramunga Arr**	**23.96**	**236**	P	P	17 36 21.1	+0.4
	0.9nm,0.6s,baz=61,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**26.28**	**229**	P	P	17 36 41.4	-0.3
	0.3nm,0.6s,baz=60,slow=9.5,SNR=6.9						
TGY	**Tagaytay City**	**40.06**	**302**	LR	LR	17 51 55.5	
	comp=Z,14nm,21.3s,baz=271,slow=31						
CMAR	**Chiang Mai Arr**	**61.08**	**296**	P	P	17 41 18.6	-0.1
	0.5nm,0.6s,baz=122,slow=5.7,SNR=4.7						

*DDA **08** 17:51:20.6, 37°.52N×44°.06E, h5km, MD3.2*
*ISK **08** 17:51:23.2, 37°.65N×43°.80E, h5km, MD3.6*
*CSEM **08** 17:51:24.0±0.3, 37°.63N×43°.89E, h2km, MD3.2, Error ellipse: s-maj=8.9km s-min=4.5km az=82.0*
ISC 08 17:51:23.7±1.2**, 37°.65N**±0°.02×**43°.95E**±0°.04**, h4**km±10km**, n32, σ1ˢ12**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.21**	**246**	*i* P	**Pg**	**17 51 27.5**	**-0.4**
HAKT				*i* S	**Sg**	**17 51 31.6**	**+1.0**
HAKT	**HAKKARI**	**0.21**	**246**	*i* P	**Pg**	**17 51 27.5**	**-0.4**
HAKT				*i* S	**Sg**	**17 51 31.6**	**+1.0**
CUKT	**Cukurca**	**0.48**	**215**	*e*PG	**Pg**	**17 51 32.3**	**-0.6**
CUKT				*e*SG	**Sg**	**17 51 39.7**	**+0.5**
CUKT	**Cukurca**	**0.48**	**215**	*e*Pg	**Pg**	**17 51 32.3**	**-0.6**
CUKT				*e*Sg	**Sg**	**17 51 39.7**	**+0.5**
GEVA	**Gevas**	**0.97**	**314**	*e*P	**Pg**	**17 51 41.9**	**-0.4**
GEVA				*e*S	**Sg**	**17 51 53.3**	**-1.6**
GEVA	**Gevas**	**0.97**	**314**	*e*P	**Pg**	**17 51 41.9**	**-0.4**
GEVA				*e*S	**Sg**	**17 51 53.3**	**-1.6**
TVAN	**Van**	**0.98**	**334**	*e*P	**Pg**	**17 51 42.7**	**+0.2**
TVAN				*i* S	**Sn**	**17 51 59.9**	**+0.9**
TVAN	**Van**	**0.98**	**334**	*e*P	**Pg**	**17 51 42.7**	**+0.2**
VANB	**Van**	**1.05**	**335**	*e*PG	**Pg**	**17 51 42.9**	**-0.9**
VANB				*e*SG	**Sg**	**17 51 57.7**	**+0.4**
VANB	**Van**	**1.05**	**335**	*e*Pg	**Pg**	**17 51 42.9**	**-0.9**
VANB				*e*Sg	**Sg**	**17 51 57.7**	**+0.4**
SIRN	**S˜–rnak**	**1.23**	**264**	*e*P	**Pn**	**17 51 46.4**	**-1.4**
SIRN				*i* S	**Sn**	**17 52 04.3**	**-0.7**
SIRN	**S˜–rnak**	**1.23**	**264**	*e*P	**Pn**	**17 51 46.4**	**-1.4**
CLDR	**Caldiran**	**1.50**	**359**	*e*PN	**Pg**	**17 51 52.4**	**+0.1**
CLDR	**Caldiran**	**1.50**	**359**	*e*Pn	**Pg**	**17 51 52.4**	**+0.1**
DYDN	**Diyadin**	**1.91**	**354**	*e*P	**Pg**	**17 52 00.6**	**+0.4**
DYDN				*i* S	**Sg**	**17 52 26.6**	**+1.7**
TUTA	**Tutak**	**1.97**	**333**	*e*P	**Pb**	**17 52 00.9**	**+0.7**
TUTA				*i* S	**Sg**	**17 52 30.0**	**+3.1**
BTMT	**Batman**	**2.02**	**286**	*e*PN	**Pb**	**17 52 00.3**	**-0.7**
BTMT	**Batman**	**2.02**	**286**	*e*Pn	**Pb**	**17 52 00.3**	**-0.7**
BEST	**Besiri**	**2.14**	**277**	*e*P	**Pb**	**17 52 01.6**	**-1.5**
BEST				*i* S	**Sg**	**17 52 34.2**	**+1.9**
MARD	**Mardin**	**2.54**	**263**	*i* P	**Pn**	**17 52 07.1**	**+1.2**
MARD				*i* S	**Sb**	**17 52 42.1**	**+0.4**
BNGL	**BINGOL**	**2.56**	**301**	*e*P	**Pb**	**17 52 10.4**	**0.0**
BNGL				*i* S	Sg	17 52 53.1	+7.1
GNI	**Garni**	**2.58**	**14**	*e*PN	**Pb**	**17 52 08.5**	**-2.1**
GNI	**Garni**	**2.58**	**14**	*e*Pn	**Pb**	**17 52 08.5**	**-2.1**
BNGB	**Bingˆ¶l**	**2.90**	**299**	*e*PN	**Pn**	**17 52 11.1**	**+0.3**
BINT	**Bingol**	**2.99**	**295**	*e*Pn	**Pn**	**17 52 11.1**	**-0.9**
SVRC	**Sivrice-ELAZID**	**3.74**	**283**	*e*PN	**Pn**	**17 52 22.8**	**+0.4**
SVRC	**Sivrice-ELAZID**	**3.74**	**283**	*e*Pn	**Pn**	**17 52 22.8**	**+0.4**
PTK	**Pertek**	**3.80**	**291**	*e*PN	**Pn**	**17 52 24.0**	**+0.8**
PTK	**Pertek**	**3.80**	**291**	*e*Pn	**Pn**	**17 52 24.0**	**+0.8**
DGRG	**David-gareji**	**3.96**	**16**	P	**Pg**	**17 52 38.9**	**-0.5**
BHD	**Baghdad**	**4.38**	**175**	*e*x	**Pn**	**17 52 31.0**	**0.0**
BHD				*e*x	**Pg**	**17 52 47.0**	**-0.6**
BHD				*e*x	**Sn**	**17 53 23.0**	**+0.6**
BHD				*e*x	**Sg**	**17 53 47.0**	**+2.7**
BHD	**Baghdad**	**4.38**	**175**	*e*Pn	**Pn**	**17 52 31.0**	**0.0**

*ISK **08** 18:00:40.8, 39°.59N×29°.04E, h8km, MD2.6*
*ISCJB **08** 18:00:41.0±0.5, 39°.62N±0°.03×29°.03E±0°.03, h5km±6km, Error ellipse: s-maj=5.0km s-min=3.7km az=0.2*
*DDA **08** 18:00:41.1, 39°.65N×29°.02E, h7km, MD2.8*
*CSEM **08** 18:00:41.2±0.1, 39°.61N×29°.03E, h10km, MD2.6, Error ellipse: s-maj=3.4km s-min=2.7km az=176.0*
ISC 08 18:00:41.2±1.0**, 39°.62N**±0°.02×**29°.04E**±0°.02**, h8**km±11km**, n30, σ0ˢ48**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DST	**Dursunbey**	**0.33**	**268**	*e*PG	**Pg**	**18 00 47.8**	**+0.1**
DST				*e*SG	**Sg**	**18 00 52.8**	**+0.8**
DST	**Dursunbey**	**0.33**	**268**	*e*Pg	**Pg**	**18 00 47.8**	**+0.1**
DST				*e*Sg	**Sg**	**18 00 52.8**	**+0.8**
TVSB	**Tavsanli**	**0.36**	**117**	*e*PG	**Pg**	**18 00 48.7**	**+0.3**
TVSB				*e*SG	**Sg**	**18 00 53.4**	**+0.2**
TVSB	**Tavsanli**	**0.36**	**117**	*e*Pg	**Pg**	**18 00 48.7**	**+0.3**
TVSB				*e*Sg	**Sg**	**18 00 53.4**	**+0.2**
DURS	**Dursunbey**	**0.44**	**268**	*i* P	**Pg**	**18 00 49.5**	**-0.3**
DURS				*i* S	**Sg**	**18 00 55.8**	**+0.2**
DURS	**Dursunbey**	**0.44**	**268**	*i* P	**Pg**	**18 00 49.5**	**-0.3**
DURS				*i* S	**Sg**	**18 00 55.8**	**+0.2**
ULDT	**Uludag**	**0.53**	**8**	*i* P	**Pg**	**18 00 50.9**	**-0.6**
ULDT				*i* S	**Sg**	**18 00 57.7**	**-0.8**
ULDT	**Uludag**	**0.53**	**8**	*i* P	**Pg**	**18 00 50.9**	**-0.6**
ULDT				*i* S	**Sg**	**18 00 57.7**	**-0.8**
GDZ	**Gediz**	**0.63**	**147**	*i* P	**Pb**	**18 00 54.2**	**-0.3**
GDZ				*i* S	**Sg**	**18 01 01.3**	**-0.3**
GDZ	**Gediz**	**0.63**	**147**	*i* P	**Pb**	**18 00 54.2**	**-0.3**
GDZ				*i* S	**Sg**	**18 01 01.3**	**-0.3**
MDNY	**Mudanya-Bursa**	**0.76**	**351**	*e*PG	**Pg**	**18 00 56.0**	**+0.2**
MDNY	**Mudanya-Bursa**	**0.76**	**351**	*e*Pg	**Pg**	**18 00 56.0**	**+0.2**
IZI	**Iznik**	**0.79**	**25**	*e*PG	**Pg**	**18 00 56.2**	**-0.2**
IZI	**Iznik**	**0.79**	**25**	*e*Pg	**Pg**	**18 00 56.2**	**-0.2**
KCTX	**Karacabey (Bur**	**0.83**	**321**	*e*PG	**Pb**	**18 00 57.8**	**-0.2**
KCTX	**Karacabey (Bur**	**0.83**	**321**	*e*Pg	**Pb**	**18 00 57.8**	**-0.2**
CAVI	**Cavuskoy**	**0.85**	**46**	*e*PG	**Pg**	**18 00 56.9**	**-0.6**
CAVI				*e*SG	**Sb**	**18 01 10.8**	**+1.1**
CAVI	**Cavuskoy**	**0.85**	**46**	*e*Pg	**Pg**	**18 00 56.9**	**-0.6**
CAVI				*e*Sg	**Sb**	**18 01 10.8**	**+1.1**
ADVT	**Abdulvahap**	**0.97**	**33**	*e*PG	**Pn**	**18 01 01.0**	**-0.2**
ADVT	**Abdulvahap**	**0.97**	**33**	*e*Pg	**Pn**	**18 01 01.0**	**-0.2**
BALY	**Balya**	**1.10**	**277**	*i* P	**Pb**	**18 01 02.3**	**-0.3**
BALY				*i* S	**Sg**	**18 01 16.6**	**-0.2**
BALY	**Balya**	**1.10**	**277**	*i* P	**Pb**	**18 01 02.3**	**-0.3**
BALY				*i* S	**Sg**	**18 01 16.6**	**-0.2**
BORA	**Eskisehir**	**1.12**	**76**	*i* P	**Pb**	**18 01 03.0**	**+0.1**
BORA				*i* S	**Sb**	**18 01 18.1**	**+0.5**
BORA	**Eskisehir**	**1.12**	**76**	*i* P	**Pb**	**18 01 03.0**	**+0.1**
BORA				*i* S	**Sb**	**18 01 18.1**	**+0.5**
GONE	**Gonen-Balikesi**	**1.13**	**293**	*e*PN	**Pg**	**18 01 02.6**	**-0.3**
GONE	**Gonen-Balikesi**	**1.13**	**293**	*e*Pn	**Pg**	**18 01 02.6**	**-0.3**
KULA	**Kula-Manisa**	**1.14**	**195**	*e*PN	**Pg**	**18 01 02.3**	**-0.8**
KULA	**Kula-Manisa**	**1.14**	**195**	*e*Pn	**Pg**	**18 01 02.3**	**-0.8**
GULT	**Gulveren**	**1.39**	**54**	*e*PN	**Pb**	**18 01 07.6**	**+0.1**
GULT	**Gulveren**	**1.39**	**54**	*e*Pn	**Pb**	**18 01 07.6**	**+0.1**

IDC 08 18:19:04.7±0.8**, 8°.38N**×**74°.54W, h46**km±7km**, mb3.5**/7**, mb1 3.9**/8**, mb1mx3.6**/23**, mbtmp3.6**/8**, ML4.0**/1**, MS3.1**/1**, Ms1 3.3**/1**, ms1mx2.7**/32**, Error ellipse: s-maj=29.0km s-min=19.2km az=58.0, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**15.88**	**194**	P	P	18 22 48.5	-0.3
	0.6nm,0.3s,baz=12,slow=9.3,SNR=3.5						
TEIG	**Tepich**	**17.76**	**313**	P	P	18 23 09.5	+0.5
	0.5nm,0.3s,baz=112,slow=19,SNR=2.7						
LPAZ	**La Paz**	**25.31**	**165**	P	P	18 24 29.4	+1.4
	0.9nm,0.8s,baz=340,slow=9.5,SNR=3.1						
LPAZ				LR	LR	18 34 15.5	
	comp=Z,51nm,21.7s,baz=84,slow=36						
SIV	**San Ignacio**	**27.64**	**151**	sP	sP	18 25 07.8	+1.8
	1.1nm,0.6s,baz=318,slow=12,SNR=2.7						
TXAR	**Lajitas Array**	**34.38**	**311**	P	P	18 25 47.9	+0.1
	1.0nm,0.5s,baz=125,slow=8.9,SNR=9.4						
PDAR	**Pinedale Array**	**46.00**	**324**	P	P	18 27 23.9	0.0
	0.8nm,0.8s,baz=121,slow=8.8,SNR=5.7						
PDAR				PcP	PcP	18 28 58.2	-1.8
	0.4nm,0.5s,baz=128,slow=6.9,SNR=3.2						
NVAR	**Mina Array Bea**	**49.40**	**314**	P	P	18 27 51.1	+0.8
	0.3nm,0.5s,baz=133,slow=7.5,SNR=2.5						
YKA	**Yellowknife Ar**	**61.33**	**340**	P	P	18 29 15.4	0.0
	3.3nm,0.4s,baz=132,slow=7.1,SNR=95						
TORD	**Torodi Ar. Bea**	**74.81**	**79**	P	P	18 30 41.5	+0.6
	0.2nm,0.5s,baz=285,slow=6.1,SNR=5.0						
TORD				pP	pP	18 30 53.7	-0.6
	0.2nm,0.5s,baz=282,slow=6.3,SNR=2.0						
ILAR	**Eielson Array**	**74.97**	**335**	P	P	18 30 41.0	+0.1
	0.7nm,0.8s,baz=103,slow=4.1,SNR=6.7						
ASAR	**Alice Springs**	**148.81**	**237**	PKPbc	PKPbc	18 38 47.0	-1.2
	1.3nm,0.6s,baz=116,slow=3.7,SNR=25						
ASAR				PKPab	PKiKP	18 38 50.8	+1.2
	0.6nm,0.4s,baz=119,slow=3.7,SNR=14						
ASAR				pPKPbc	pPKPbc	18 39 02.8	+0.4
	0.4nm,0.5s,baz=110,slow=3.2,SNR=2.5						
WRA	**Warramunga Arr**	**149.79**	**245**	PKPbc	PKPbc	18 38 49.6	-1.1
	1.5nm,0.6s,baz=105,slow=2.7,SNR=19						
WRA				PKPab	PKPab	18 38 56.0	-0.1
	1.5nm,0.8s,baz=103,slow=3.7,SNR=10						
WRA				pPKPbc	pPKPbc	18 39 03.6	-1.2
	0.8nm,0.7s,baz=103,slow=3.9,SNR=3.1						

*NIED **08** 18:20:00, 27°.10N×130°.10E, h5km, Mw3.9 Best double couple: M₀6.88000×10^14 NP1:φs230.00000°, δ77.00000°, λ-77.00000°. NP2:φs3.00000°, δ18.00000°, λ-136.00000°.*
JMA 08 18:20:05.1, 27°.12N×**130°.06E, h41**km**, M3.7, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**1.19**	**304**	P	Pn	18 20 25.9	+0.6
JTK				S	Sn	18 20 41.1	+0.9
JZK	**Kikaishima**	**1.19**	**356**	S	Sn	18 20 41.2	+0.9
JAM	**Amami Oshima**	**1.35**	**343**	P	Pn	18 20 28.4	+1.0
JAM				S	Sn	18 20 45.1	+1.0
JAMN	**Amaminishikomi**	**1.37**	**325**	P	Pn	18 20 28.2	+0.5
JAMN				S	Sn	18 20 45.7	+1.1
JOW	**Kunigami**	**1.62**	**260**	P	Pn	18 20 32.3	+1.1
JOW				S	Sn	18 20 51.8	+0.9
JMZ	**Minamidaito 2**	**1.66**	**141**	P	Pn	18 20 32.6	+0.9
JMZ				S	Sn	18 20 52.8	+0.9
JIH	**Iheya**	**1.87**	**268**	P	Pn	18 20 35.7	+1.1
JIH				S	Sn	18 20 59.1	+2.2
JJT2	**Tamagusuku 2**	**2.29**	**245**	P	Pn	18 20 41.6	+1.2
JJT2				S	Sn	18 21 09.2	+1.9
JAGN	**Aguni-jima**	**2.57**	**259**	P	Pn	18 20 45.3	+1.1
JAGN				S	Sn	18 21 15.7	+1.4
JNN	**Nakanoshima**	**2.72**	**357**	S	Sn	18 21 18.5	+0.6
JKE	**Kume jima 2**	**3.03**	**256**	P	Pn	18 20 51.4	+0.8
JKE				S	Sn	18 21 27.0	+1.3
JKC	**Kuchinoerabu**	**3.33**	**2**	S	Sn	18 21 32.6	-0.4
JTN	**Tanegashima 3**	**3.61**	**13**	P	Pn	18 20 59.8	+1.2
JTN				S	Sn	18 21 40.7	+0.7

BER 08 18:43:22.3±0.4**, 71°.19N**×**6°.77W, h11**km±2km**, MD2.9, ML3.5, MW3.0, 2C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.54**	**249**	⇑*i*P	Pg	18 43 31.9	-0.8
JNE				*e*S	Sg	18 43 38.8	-1.0
JNE				AML	AML	18 43 41.1	
	comp=Z,4µm,0.2s						
JNW	**Jan Mayen West**	**0.56**	**254**	*e*P	Pg	18 43 32.5	-0.7
JNW				*e*S	Sg	18 43 39.5	-1.1
JNW				AML	AML	18 43 40.8	
	comp=Z,4µm,0.2s						
JMI	**Jan Mayen**	**0.69**	**249**	⇑*i*P	Pg	18 43 34.1	-1.5
JMI				*e*S	Sg	18 43 43.3	-1.4
JMI				AML	AML	18 43 46.9	
	comp=Z,814nm,0.4s						

IDC 08 19:00:55.2±9.1**, 14°.85S**×**167°.31E, h118**km±82km**, mb3.5**/2**, mb1 3.6**/3**, mb1mx3.2**/20**, mbtmp3.5**/3**, ML4.0**/1**, Error ellipse: s-maj=75.6km s-min=49.1km az=155.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.23**	**186**	P	Pn	19 02 38.3	-0.1
	2.4nm,0.3s,baz=342,slow=20,SNR=50						
DZM				S	Sn	19 03 59.6	+0.5
	2.6nm,0.3s,baz=312,slow=23,SNR=8.0						
STKA	**Stephens Creek**	**28.94**	**230**	P	P	19 06 43.5	+0.1
	3.4nm,1.0s,baz=47,slow=10.0,SNR=4.2						
ASAR	**Alice Springs**	**32.66**	**249**	P	P	19 07 16.2	-0.1
	0.4nm,0.8s,baz=78,slow=9.1,SNR=7.8						
ARCES	**ARCESS Array B**	**120.38**	**345**	PKP	PKPdf	19 19 31.8	-0.2
	1.1nm,0.8s,baz=48,slow=1.3,SNR=5.8						

*PRU **08** 19:11:50.3, 46°.33N×17°.01E, h0km*
*VIE **08** 19:11:51.8±0.7, 46°.53N×16°.78E, h5km, mb1.8/4, ML2.4/4, Error ellipse: s-maj=4.5km s-min=2.2km az=118.0 42 km NE of Varazdin*
*CSEM **08** 19:11:53.6±0.2, 46°.50N×16°.68E, h15km, ML3.3/4, Error ellipse: s-maj=6.5km s-min=3.5km az=14.0*
*ISCJB **08** 19:11:53.5±0.6, 46°.58N±0°.04×16°.69E±0°.05, h5km±6km, Error ellipse: s-maj=7.4km s-min=4.1km az=33.7*
ISC 08 19:11:54.0±0.9**, 46°.51N**±0°.04×**16°.70E**±0°.02**, h14**km±5km**, n25, σ1ˢ14**/42**, 12C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BEHE	**Becsehely**	**0.06**	**122**	⇑*e*Pg	**Pg**	**19 11 56.8**	**0.0**
BEHE				*e*Sg	**Sg**	**19 11 59.0**	**+0.4**
BEHE	**Becsehely**	**0.06**	**122**	⇑*e*Pg	**Pg**	**19 11 56.8**	**0.0**
BEHE				⇑*e*Sg	**Sg**	**19 11 59.0**	**+0.4**
PKS9	**Tamasi**	**1.09**	**85**	*e*Pn	**Pn**	**19 12 15.2**	**+0.2**
PKS9				*e*Sn	**Sn**	**19 12 31.0**	**+1.1**
PKS9	**Tamasi**	**1.09**	**85**	*e*Pn	**Pn**	**19 12 15.2**	**+0.2**
PKS9				*e*Sn	**Sn**	**19 12 31.0**	**+1.1**
ARSA	**Arzberg**	**1.10**	**313**	⇑*i*Pg	**Pb**	**19 12 14.4**	**-0.5**
ARSA				⇑*i*Sg	**Sn**	**19 12 29.5**	**-0.6**
	34nm,0.2s						
ARSA	**Arzberg**	**1.10**	**313**	Pg	**Pb**	**19 12 14.4**	**-0.5**
ARSA				Sg	**Sn**	**19 12 29.5**	**-0.6**
	34nm,0.2s						
SOKA	**Soboth**	**1.16**	**279**	⇑*i*Pg	**Pb**	**19 12 15.1**	**-0.9**
SOKA				⇑*i*Sg	**Sn**	**19 12 31.5**	**-0.2**
	29nm,0.3s						
SOKA	**Soboth**	**1.16**	**279**	Pg	**Pb**	**19 12 15.1**	**-0.9**
SOKA				Sg	**Sn**	**19 12 31.5**	**-0.2**
	29nm,0.3s						
SOP	**Sopron**	**1.18**	**355**	⇑*e*Pn	**Pg**	**19 12 16.0**	**-0.8**
SOP				*e*Sn	**Sg**	**19 12 31.6**	**-0.6**
SOP	**Sopron**	**1.18**	**355**	⇑*e*Pn	**Pg**	**19 12 16.0**	**-0.8**
SOP				⇑*e*Sn	**Sg**	**19 12 31.6**	**-0.6**
PKST	**Tˆ's**	**1.19**	**50**	⇓*e*Pn	**Pb**	**19 12 15.7**	**-0.7**
PKST				*e*Sn	**Sn**	**19 12 35.0**	**+2.7**
PKST	**Tˆ's**	**1.19**	**50**	⇓*e*Pn	**Pb**	**19 12 15.7**	**-0.7**
PKSM	**Moragy**	**1.38**	**102**	⇓*e*Pn	**Pn**	**19 12 17.3**	**-1.6**
PKSM				*e*Sn	**Sg**	**19 12 38.4**	**0.0**
PKSM	**Moragy**	**1.38**	**102**	⇓*e*Pn	**Pn**	**19 12 17.3**	**-1.6**
PKSM				⇓*e*Sn	**Sg**	**19 12 38.4**	**0.0**
OBKA	**Obir**	**1.48**	**271**	⇓*i*Pg	**Pn**	**19 12 19.6**	**-0.8**
OBKA				⇑*i*Sg	**Sg**	**19 12 42.8**	**+1.0**
	60nm,0.4s						
OBKA	**Obir**	**1.48**	**271**	Pn	**Pn**	**19 12 19.6**	**-0.8**
OBKA				Sg	**Sg**	**19 12 42.8**	**+1.0**
	60nm,0.4s						
CONA	**Conrad Observa**	**1.53**	**339**	⇑*i*Pg	**Pn**	**19 12 21.1**	**0.0**
CONA				⇓*i*Sg	**Sg**	**19 12 42.4**	**-1.1**
	44nm,0.5s						
CONA	**Conrad Observa**	**1.53**	**339**	Pn	**Pn**	**19 12 21.1**	**0.0**
CONA				Sg	**Sg**	**19 12 42.4**	**-1.1**
	44nm,0.5s						
ZST	**Bratislava**	**1.71**	**9**	*e*PN	**Pg**	**19 12 29.2**	**+2.3**
VOY	**Vojsko**	**2.00**	**257**	*e*	**Pb**	**19 12 30.3**	**0.0**
VOY				*e*		19 13 02.6	
VOY				*e*		19 13 20.7	
VYHS	**Vyhne**	**2.46**	**35**	*e*PN	**Pn**	**19 12 32.7**	**-1.1**
VYHS	**Vyhne**	**2.46**	**35**	*e*Pn	**Pn**	**19 12 32.7**	**-1.1**
VRAC	**Vranov**	**2.81**	**359**	*e*Pn	**Pn**	**19 12 38.0**	**-0.5**
KHC	**Kasperske Hory**	**3.37**	**322**	*e*PN	**Pn**	**19 12 49.0**	**+2.8**
KHC	**Kasperske Hory**	**3.37**	**322**	Pn	**Pn**	**19 12 49.0**	**+2.8**

*CSEM **08** 19:12:13.8±0.3, 46°.51N×16°.71E, h10km, ML3.6/1, Error ellipse: s-maj=14.6km s-min=5.8km az=162.0*
*PRU **08** 19:12:18.9, 46°.72N×15°.90E, h0km*
ISC 08 19:12:13.3±1.0**, 46°.57N**±0°.06×**16°.67E**±0°.03**, h12**km±8km**, n13, σ1ˢ55**/23**, 7C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BEHE	**Becsehely**	**0.13**	**146**	⇑*e*Pg	**Pg**	**19 12 15.6**	**-0.9**
BEHE				*e*Sg	**Sg**	**19 12 18.0**	**-0.7**
KOGS	**Kog**	**0.32**	**247**	*e*Pg	**Pg**	**19 12 19.8**	**0.0**
KOGS				*e*Sg	**Sg**	**19 12 25.1**	**+1.1**
KOGS	**Kog**	**0.32**	**247**	*e*Pg	**Pg**	**19 12 19.7**	**0.0**
KOGS				*e*Sg	**Sg**	**19 12 25.1**	**+1.1**
GOLS	**Golise**	**0.92**	**233**	*e*Sg	**Sb**	**19 12 43.1**	**-0.3**
GOLS	**Golise**	**0.92**	**233**	*e*Sg	**Sb**	**19 12 43.1**	**-0.3**
DOBS	**Dobrina**	**0.94**	**243**	*e*Sg	**Sb**	**19 12 44.2**	**+0.3**
DOBS	**Dobrina**	**0.94**	**243**	*e*Sg	**Sb**	**19 12 44.2**	**+0.3**
PKS2	**Kecel**	**1.75**	**92**	⇑*e*Pn	**Pn**	**19 12 43.6**	**+0.1**
PKS2				*e*Sn	**Sg**	**19 13 10.8**	**+1.1**
PKS2	**Kecel**	**1.75**	**92**	⇑*e*Pn	**Pn**	**19 12 43.6**	**+0.1**
PKS2				⇑*e*Sn	**Sg**	**19 13 10.8**	**+1.1**
PSZ	**Piszkesteto**	**2.57**	**57**	⇑*e*Pn	**Pn**	**19 12 57.1**	**+2.2**
PSZ				*e*Sn	**Sn**	**19 13 25.4**	**-0.7**
PSZ	**Piszkesteto**	**2.57**	**57**	⇑*e*Pn	**Pn**	**19 12 57.1**	**+2.2**
PSZ				⇑*e*Sn	**Sn**	**19 13 25.4**	**-0.7**
KHC	**Kasperske Hory**	**3.30**	**322**	*e*PN	**Pn**	**19 13 06.5**	**+1.7**
KHC				*e*SN	**Sn**	**19 13 40.7**	**-3.3**
KHC				*e*SG	**Sb**	**19 13 50.9**	**-1.0**
	comp=Z,6.1nm,0.5s						
KHC	**Kasperske Hory**	**3.30**	**322**	*e*Pn	**Pn**	**19 13 06.5**	**+1.7**
KHC				Sn	**Sn**	**19 13 40.7**	**-3.3**

*JMA **08** 19:23:04.8±0.2, 24°.65N×122°.91E, h77km±2km, M2.0*
*TAP **08** 19:23:05.7, 24°.60N×122°.79E, h92km±1km, ML2.9, C*
*ISCJB **08** 19:23:05.6±0.6, 24°.54N±0°.05×122°.89E±0°.02, h71km±8km, Error ellipse: s-maj=8.6km s-min=3.5km az=0.3*
ISC 08 19:23:06.0±1.5**, 24°.53N**±0°.06×**122°.90E**±0°.03**, h70**km±11km**, n31, σ0ˢ98**/53**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.12**	**123**	P	**Pn**	**19 23 16.3**	**0.0**
YOJ				*e*S	**Sn**	**19 23 24.6**	**+0.8**
IRIF	**Iriomote-Funau**	**0.78**	**104**	P	**Pn**	**19 23 21.4**	**-0.4**
IRIF				*e*S	**Sn**	**19 23 34.6**	**+1.1**
HATJ	**Hateruma jima**	**0.95**	**119**	P	**Pn**	**19 23 23.9**	**0.0**
HATJ				*e*S	**Sn**	**19 23 38.0**	**+0.8**
TWB1	**Santiao Chiao**	**0.96**	**300**	*e*P	**Pn**	**19 23 24.0**	**+0.1**
	baz=296						
TWC	**Suao**	**0.96**	**275**	*e*P	**Pn**	**19 23 23.6**	**-0.4**
	baz=274						
TWC				*e*S	**Sn**	**19 23 36.2**	**-1.1**
	baz=274						
JKRS	**Kuro-shima**	**1.05**	**106**	P	**Pn**	**19 23 25.0**	**-0.1**
JKRS				*e*S	**Sn**	**19 23 40.3**	**+0.9**
ENA	**Nanau**	**1.06**	**265**	P	**Pn**	**19 23 25.5**	**+0.3**
	baz=259						
ENA				*e*S	**Sn**	**19 23 39.6**	**+0.1**
	baz=259						
TWE	**Neicheng**	**1.14**	**280**	P	**Pn**	**19 23 26.2**	**0.0**
	baz=271						
TWE				*e*S	**Sn**	**19 23 40.8**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=271						
JIJ	Ishigaki jima	1.15	98	P	Pn	19 23 25.6	-0.7
JIJ				eS	Sn	19 23 40.8	-0.7
NWF	Wu-fen Shan	1.15	298	eP	Pn	19 23 26.3	-0.2
	baz=290						
ENTT	Nioudou	1.22	276	P	Pn	19 23 27.6	+0.3
	baz=272						
NNS	Nan Shan	1.39	267	eP	Pn	19 23 29.5	-0.2
	baz=254						
NNS				eS	Sn	19 23 46.5	-1.0
	baz=254						
NSK	Sanguang	1.41	276	P	Pn	19 23 30.0	+0.2
	baz=266						
NSK				eS	Sn	19 23 47.6	-0.1
	baz=266						
TWS1	Kuangyinshan	1.46	293	eP	Pn	19 23 30.7	+0.2
	baz=284						
ESL	Shilin	1.52	242	eP	Pn	19 23 30.6	-0.6
	baz=237						
ESL				eS	Sn	19 23 49.1	-1.1
	baz=237						
WHF	Hehuan Shan	1.54	256	eP	Pn	19 23 31.2	-0.6
	baz=251						
WHF				eS	Sn	19 23 50.7	-0.7
	baz=251						
TWT	Tachien	1.59	260	eP	Pn	19 23 33.2	+0.9
	baz=253						
JTJ	Tarama	1.65	86	P	Pn	19 23 32.5	-0.4
JTJ				eS	Sn	19 23 53.1	-0.1
NSTT	Nanjuang	1.73	274	eP	Pn	19 23 34.5	+0.4
	baz=270						
NSTT				eS	Sn	19 23 54.4	-0.9
	baz=270						
EHY	Hungye	1.76	235	eP	Pn	19 23 34.6	+0.1
	baz=238						
EHY				eS	Sn	19 23 54.8	-1.3
	baz=238						
TWF1	Yuli	1.88	232	eP	Pn	19 23 35.4	-0.6
	baz=236						
TWF1				eS	Sn	19 23 57.7	-1.1
	baz=236						
SMLT	Sun Moon Lake	1.93	251	eP	Pn	19 23 38.2	+1.4
	baz=241						
SMLT				eS	Sn	19 23 59.9	-0.5
	baz=241						
TYC	Yuchr	1.96	252	eP	Pn	19 23 38.1	+1.0
	baz=243						
ALS	Alishan	2.17	243	eP	Pn	19 23 41.3	+1.2
	baz=232						
ALS				eS	Sn	19 24 07.5	+1.3
	baz=232						
ELDTW	Lidau	2.18	233	eP	Pn	19 23 39.5	-0.7
	baz=231						
ELDTW				eS	Sn	19 24 03.7	-2.5
	baz=231						
CHN5	Tsauling	2.23	246	eP	Pn	19 23 42.0	+1.1
	baz=242						
CHN5				eS	Sn	19 24 08.7	+1.2
	baz=242						
CHN4	Tsaushan	2.41	241	eP	Pn	19 23 45.1	+1.9
	baz=244						
CHN4				eS	Sn	19 24 13.2	+1.5
	baz=244						
WTP	Ta-pu	2.45	239	eP	Pn	19 23 44.6	+0.9
	baz=229						
CHN1	Nanshi	2.55	239	eP	Pn	19 23 46.4	+1.3
	baz=244						
CHN1				eS	Sn	19 24 16.5	+1.4
	baz=244						
SSD	Sandimen	2.73	230	eP	Pn	19 23 49.1	+1.5
	baz=226						
EAST	Anshuo	2.85	222	eP	Pn	19 23 47.1	-2.0
	baz=218						

*BER **08** 19:45:45.3±3.9, 71°.96N×0°.47E, h15km±318km, ML2.7(NAO)*
*IDC **08** 19:45:47.3±1.4, 72°.12N×1°.32E, h0km, mb3.4/5, mb1 3.6/9, mb1mx3.4/31, mbtmp3.5/9, ML3.0/4, MS3.3/8, Ms1 3.3/8, ms1mx3.0/47, Error ellipse: s-maj=24.7km s-min=19.3km az=68.0*
*ISCJB **08** 19:45:47.4±0.8, 72°.29N±0°.07×2°.2E±0°.2, h10km, mb3.3/5, MS3.3/5, Error ellipse: s-maj=10.9km s-min=9.0km az=136.7*
*NAO **08** 19:45:49.9±8.6, 72°.28N×2°.07E, ML2.7*
ISC 08 19:45:48.6±1.0**, 72°.22N**±0°.09×**1°.81E**±0°.10**, h10km, n19, σ1s.20**/18**, mb3.6**/5**, MS3.3**/5**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPA0	Spitsbergen Ar	7.02	25	Pn	Pn	19 47 32.3	+1.0
	baz=215,slow=16						
SPA0	Spitsbergen Ar	7.02	25	Pn	Pn	19 47 32.3	+1.0
	baz=215,slow=16						
SPITS	Spitsbergen Ar	7.02	25	Pn	Pn	19 47 32.3	+1.0
	baz=212,slow=21,SNR=40						
KBS	Kingsbay	7.18	16	Pn	Pn	19 47 32.2	-1.2
KBS	Kingsbay	7.18	16	Pn	Pn	19 47 32.2	-1.2
ARA0	ARCESS Array S	8.20	98	Pn	Pn	19 47 48.5	+1.1
	baz=293,slow=12						
ARA0				Sn	Sn	19 49 17.7	-2.2
	baz=281,slow=22						
ARA0	ARCESS Array S	8.20	98	Pn	Pn	19 47 48.5	+1.1
	baz=293,slow=12						
ARA0				Sn	Sn	19 49 17.7	-2.2
	baz=281,slow=22						
ARCES	ARCESS Array B	8.20	98	Pn	Pn	19 47 48.4	+1.0
	0.4nm,0.3s,baz=300,slow=12,SNR=26						
ARCES				Sn	Sn	19 49 20.2	+0.3
	0.2nm,0.3s,baz=291,slow=20,SNR=2.9						
NOA	NORSAR Array B	11.81	157	LR	LR	19 51 59.5	
	comp=Z,61nm,19.1s,baz=350,slow=32						
HFS	Hagfors	13.01	153	Pn	Pn	19 48 53.1	-0.1
	0.1nm,0.3s,baz=12,slow=7.6,SNR=5.1						
HFS				Sn	Sn	19 51 05.9	-12
	0.1nm,0.3s,baz=331,slow=26,SNR=2.7						
HFS				LR	LR	19 53 21.3	
	comp=Z,120nm,19.4s,baz=165,slow=35						
FINES	FINESS Array B	14.27	127	Pn	Pn	19 49 10.6	+0.3
	0.1nm,0.3s,baz=337,slow=12,SNR=4.0						
FINES				LR	LR	19 53 53.2	
	comp=Z,125nm,18.1s,baz=270,slow=34						
VRAC	Vranov	23.95	156	P	P	19 51 03.4	+0.8
	1.1nm,0.5s,baz=350,slow=11,SNR=2.8						
VRAC				LR	LR	20 00 24.0	
	comp=Z,100nm,18.6s,baz=140,slow=37						
GERES	GERESS Array B	24.07	161	P	P	19 51 04.4	+0.6
	0.9nm,0.7s,baz=340,slow=8.5,SNR=5.3						
GERES				LR	LR	19 59 30.1	
	comp=Z,97nm,19.0s,baz=90,slow=34						
AKASG	Malin Array Be	24.79	136	P	P	19 51 10.6	+0.5
	1.5nm,0.6s,baz=342,slow=9.9,SNR=3.8						
DAVOX	Davos/Dischmat	25.79	167	LR	LR	20 01 40.6	
	comp=Z,146nm,19.1s,baz=44,slow=37						
MLR	Muntele Rosu	29.12	144	LR	LR	20 03 43.8	
	comp=Z,28nm,20.2s,baz=170,slow=37						
ILAR	Eielson Array	41.64	340	P	P	19 53 36.3	0.0
	0.1nm,0.6s,baz=13,slow=8.4,SNR=3.6						
DLBC	Dease Lake	45.45	327	LR	LR	20 14 24.0	
	comp=Z,63nm,18.0s,baz=285,slow=38						
TORD	Torodi Ar. Bea	59.04	180	P	P	19 55 47.5	-0.9
	0.2nm,0.4s,baz=355,slow=6.1,SNR=2.8						

*ISK **08** 19:56:42.9, 39°.29N×27°.92E, h8km, MD3.4*
*ISCJB **08** 19:56:42.9±0.4, 39°.28N±0°.01×27°.91E±0°.02, h1km±3km, Error ellipse: s-maj=2.6km s-min=2.2km az=167.7*
*CSEM **08** 19:56:43.6±0.1, 39°.28N×27°.95E, h5km, MD3.4, Error ellipse: s-maj=1.9km s-min=1.6km az=75.0*
*DDA **08** 19:56:43.5, 39°.28N×27°.94E, h25km, MD3.4*
*ATH **08** 19:56:43.3, 39°.21N×28°.04E, h32km±6km, MD3.7/11*
*SOF **08** 19:56:44.4, 39°.41N×27°.85E, h8km, MD3.1*
ISC 08 19:56:44.0±1.0**, 39°.28N**±0°.01×**27°.94E**±0°.02**, h5km**±9km**, n191, σ0s.83**/230**, 1C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.36	353	ePG	Pg	19 56 50.2	-0.8
BALB				eSG	Sg	19 56 55.9	0.0
BALB	Balikesir	0.36	353	ePg	Pg	19 56 50.3	-0.8
BALB				eSg	Sg	19 56 55.9	0.0
AKHS	Akhisar	0.41	194	i P	Pg	19 56 51.8	-0.2
AKHS				i S	Sb	19 56 59.2	-1.2
AKHS	Akhisar	0.41	194	i P	Pg	19 56 51.8	-0.2
AKHS				i S	Sb	19 56 59.2	-1.2
AKS	Akhisar	0.41	194	ePG	Pg	19 56 51.4	-0.6
AKS	Akhisar	0.41	194	ePg	Pg	19 56 51.4	-0.6
BALY	Balya	0.52	332	eP	Pg	19 56 53.6	-0.5
BALY				i S	Sg	19 57 01.9	+1.0
BALY	Balya	0.52	332	eP	Pg	19 56 53.6	-0.5
BALY				i S	Sg	19 57 01.9	+1.0
DURS	Dursunbey	0.53	52	i P	Pg	19 56 53.5	-0.7
DURS				i S	Sg	19 57 01.6	+0.6
DURS	Dursunbey	0.53	52	i P	Pg	19 56 53.5	-0.7
DURS				i S	Sg	19 57 01.6	+0.6
DST	Dursunbey	0.62	58	ePG	Pg	19 56 55.8	-0.2
DST				eSG	Sg	19 57 04.8	+0.8
DST	Dursunbey	0.62	58	ePg	Pg	19 56 55.8	-0.2
DST				eSg	Sg	19 57 04.8	+0.8
DEMI	Demirci	0.65	111	i P	Pg	19 56 56.2	-0.3
DEMI				i S	Sb	19 57 06.7	-0.6
DEMI	Demirci	0.65	111	i P	Pg	19 56 56.2	-0.3
DEMI				i S	Sb	19 57 06.7	-0.6
GONE	Gonen-Balikesi	0.79	346	ePG	Pg	19 56 58.5	-0.8
GONE	Gonen-Balikesi	0.79	346	ePg	Pg	19 56 58.5	-0.8
KULA	Kula-Manisa	0.95	143	ePG	Pg	19 57 01.5	-0.8
KULA				eSG	Sg	19 57 15.5	+0.9
KULA	Kula-Manisa	0.95	143	ePg	Pg	19 57 01.5	-0.8
KULA				eSg	Sg	19 57 15.5	+0.9
AYVA	Ayvalik	0.97	272	eP	Pb	19 57 03.3	0.0
AYVA				i S	Sn	19 57 19.3	+0.8
AYVA	Ayvalik	0.97	272	eP	Pb	19 57 03.3	0.0
IZM	Izmir	1.03	211	ePG	Pg	19 57 03.1	-0.6
IZM	Izmir	1.03	211	ePg	Pg	19 57 03.1	-0.6
KCTX	Karacabey (Bur	1.04	18	ePG	Pg	19 57 02.9	-1.0
KCTX	Karacabey (Bur	1.04	18	ePg	Pg	19 57 02.9	-1.0
ORLT	Orhaneli	1.06	44	ePG	Pg	19 57 03.8	-0.7
ORLT	Orhaneli	1.06	44	ePg	Pg	19 57 03.8	-0.7
EDC	Edincik	1.07	357	ePG	Pg	19 57 03.7	-0.9
EDC	Edincik	1.07	357	ePg	Pg	19 57 03.7	-0.9
BNT	Bandirma	1.08	359	ePG	Pg	19 57 03.6	-1.1
BNT	Bandirma	1.08	359	ePg	Pg	19 57 03.6	-1.1
BLCB	Balcova	1.13	218	ePN	Pg	19 57 04.8	-1.0
BLCB	Balcova	1.13	218	ePn	Pg	19 57 04.8	-1.0
TVSB	Tavsanli	1.19	81	ePN	Pg	19 57 06.4	-0.6
TVSB	Tavsanli	1.19	81	ePn	Pg	19 57 06.4	-0.6
GDZ	Gediz	1.21	99	i P	Pb	19 57 06.7	-0.9
GDZ				i S	Sn	19 57 25.1	+0.4
GDZ	Gediz	1.21	99	i P	Pb	19 57 06.7	-0.9
GDZ				i S	Sn	19 57 25.1	+0.4
KRBG	Karabiga-Canak	1.22	336	ePN	Pg	19 57 06.0	-1.4
KRBG	Karabiga-Canak	1.22	336	ePn	Pg	19 57 06.0	-1.4
ULDT	Uludag	1.26	47	i P	Pn	19 57 07.6	-1.0
ULDT				i S	Sg	19 57 25.3	+0.6
ULDT	Uludag	1.26	47	i P	Pn	19 57 07.6	-1.0
PRK	Paraskevi	1.29	269	ePN	Pn	19 57 08.2	-0.6
PRK				eSN	Sn	19 57 26.9	+0.4
PRK	Paraskevi	1.29	269	ePn	Pn	19 57 08.2	-0.6
PRK				eSn	Sn	19 57 26.9	+0.4
MDNY	Mudanya-Bursa	1.31	33	ePN	Pn	19 57 07.9	-1.1
MDNY	Mudanya-Bursa	1.31	33	ePn	Pn	19 57 07.9	-1.1
MRMT	Marmara Adasi	1.35	349	ePN	Pn	19 57 08.6	-1.0
MRMT	Marmara Adasi	1.35	349	ePn	Pn	19 57 08.6	-1.0
EZN	Ezine	1.36	294	ePN	Pn	19 57 08.3	-1.4
EZN	Ezine	1.36	294	ePn	Pn	19 57 08.3	-1.4
URLA	Izmir	1.39	229	i P	Pn	19 57 09.0	-1.2
URLA				i S	Sg	19 57 29.6	+0.8
URLA	Izmir	1.39	229	i P	Pn	19 57 09.0	-1.2
URLA				i S	Sg	19 57 29.6	+0.8
LPK	Lapseki	1.42	321	ePN	Pn	19 57 09.5	-1.0
LPK	Lapseki	1.42	321	ePn	Pn	19 57 09.5	-1.0
GEMT	Gemlik	1.50	39	ePN	Pn	19 57 11.1	-0.6
GEMT	Gemlik	1.50	39	ePn	Pn	19 57 11.1	-0.6
KHAL	Karahalli	1.52	126	i P	Pn	19 57 11.6	-0.3
KHAL				i S	Sg	19 57 37.9	+5.1
KHAL	Karahalli	1.52	126	i P	Pn	19 57 11.6	-0.3
SART	Tekirdag	1.52	338	eP	Pn	19 57 11.4	-0.6
SART				i S	Sb	19 57 32.4	-0.1
SART	Tekirdag	1.52	338	eP	Pn	19 57 11.4	-0.6
SART				i S	Sb	19 57 32.4	-0.1
BOZC	Bozcaada	1.56	292	i P	Pn	19 57 12.1	-0.4
BOZC				i S	Sb	19 57 33.5	0.0
KHL	Karahalli	1.56	127	ePN	Pn	19 57 11.9	-0.6
KHL	Karahalli	1.56	127	ePn	Pn	19 57 12.0	-0.6
IZI	Iznik	1.58	48	ePN	Pn	19 57 12.3	-0.6
IZI	Iznik	1.58	48	ePn	Pn	19 57 12.3	-0.6
GELI	Tayfur-Gelibol	1.59	315	ePN	Pn	19 57 11.9	-0.9
GELI	Tayfur-Gelibol	1.59	315	ePn	Pn	19 57 11.9	-0.9
AYDN	Tasoluk	1.62	182	i P	Pn	19 57 11.9	-1.4
AYDN				i S	Sb	19 57 35.7	+0.6
AYDN	Tasoluk	1.62	182	i P	Pn	19 57 11.9	-1.4
AYDN				i S	Sb	19 57 35.7	+0.6
GCAM	G?zelcaml?	1.67	200	i P	Pn	19 57 14.1	+0.2
GCAM				i S	Sg	19 57 37.5	-0.2
GCAM	G?zelcaml?	1.67	200	i P	Pn	19 57 14.1	+0.2
GCAM				i S	Sg	19 57 37.5	-0.2
ALT	Altintas	1.70	97	ePN	Pn	19 57 14.0	-0.5
ALT	Altintas	1.70	97	ePn	Pn	19 57 14.0	-0.5
CHOS	Chios island	1.72	239	ePB	Pn	19 57 13.7	-1.0
CHOS				eSN	Sn	19 57 35.0	-2.1
CHOS	Chios island	1.72	239	ePb	Pn	19 57 13.7	-1.0
CAVI	Cavuskoy	1.73	57	ePN	Pn	19 57 14.4	-0.5
CAVI	Cavuskoy	1.73	57	ePn	Pn	19 57 14.4	-0.5
TKR	Tekirdag	1.74	350	ePN	Pn	19 57 13.9	-1.0
TKR	Tekirdag	1.74	350	ePn	Pn	19 57 13.9	-1.0
DENT	Denizli	1.75	150	ePN	Pn	19 57 14.4	-0.7
DENT	Denizli	1.75	150	ePn	Pn	19 57 14.4	-0.7
ERIK	Erikli-Kesan	1.77	322	ePN	Pn	19 57 14.4	-0.9
ERIK	Erikli-Kesan	1.77	322	ePn	Pn	19 57 14.4	-0.9
ADVT	Abdulvahap	1.80	50	ePN	Pn	19 57 15.3	-0.5
ADVT	Abdulvahap	1.80	50	ePn	Pn	19 57 15.3	-0.5
DNZL	Cakiroluk	1.81	151	i P	Pn	19 57 15.4	-0.6
DNZL				i S	Sb	19 57 40.2	-0.6
DNZL	Cakiroluk	1.81	151	i P	Pn	19 57 15.4	-0.6
DNZL				i S	Sb	19 57 40.2	-0.6
BUY	Buyukada	1.81	30	ePN	Pn	19 57 14.9	-1.0
BUY	Buyukada	1.81	30	i P	Pn	19 57 15.1	-0.8
BUY				i S	Sg	19 57 41.7	-0.6
BUY	Buyukada	1.81	30	ePn	Pn	19 57 14.9	-1.0
BUY	Buyukada	1.81	30	i P	Pn	19 57 15.1	-0.8
BUY				i S	Sg	19 57 41.7	-0.6
CRLT	Corlu	1.85	355	ePN	Pn	19 57 15.7	-0.8
CRLT	Corlu	1.85	355	ePn	Pn	19 57 15.7	-0.8
ELBA	Catalca	1.90	11	i P	Pb	19 57 19.1	-0.2
ELBA				i S	Sb	19 57 43.4	0.0
ELBA	Catalca	1.90	11	i P	Pb	19 57 19.1	-0.2
ELBA				i S	Sb	19 57 43.4	0.0
SLVT	Silivri	1.96	6	ePN	Pn	19 57 17.2	-0.7
SLVT	Silivri	1.96	6	ePn	Pn	19 57 17.2	-0.7
ISK	Istanbul-Kandi	1.98	25	ePN	Pn	19 57 17.6	-0.6
ISK	Istanbul-Kandi	1.98	25	ePn	Pn	19 57 17.6	-0.6
MLSB	Milas	1.98	184	ePN	Pn	19 57 18.0	-0.3
MLSB	Milas	1.98	184	ePn	Pn	19 57 18.0	-0.3
CTKS	Kestanelik-??a	2.00	12	ePN	Pn	19 57 18.1	-0.4
CTKS	Kestanelik-??a	2.00	12	ePn	Pn	19 57 18.1	-0.4
BGKT	Bogazkoy	2.00	18	ePN	Pn	19 57 17.9	-0.7
BGKT	Bogazkoy	2.00	18	ePn	Pn	19 57 17.9	-0.7
HRT	Hereke	2.03	40	ePN	Pn	19 57 18.5	-0.5
HRT	Hereke	2.03	40	ePn	Pn	19 57 18.5	-0.5
GPA	Golpazari	2.09	60	ePN	Pn	19 57 19.4	-0.3
GPA	Golpazari	2.09	60	ePn	Pn	19 57 19.4	-0.3
YER	Yerkesik	2.16	173	ePN	Pn	19 57 20.1	-0.6
YER	Yerkesik	2.16	173	ePn	Pn	19 57 20.2	-0.6
SHUT	Suhut-Afyon	2.16	109	ePN	Pn	19 57 20.8	-0.1
SHUT	Suhut-Afyon	2.16	109	ePn	Pn	19 57 20.8	-0.1
ALN	Alexandroupoli	2.17	319	ePN	Pn	19 57 20.3	-0.6
ALN	Alexandroupoli	2.17	319	ePn	Pn	19 57 20.3	-0.6
CTYL	Yal??k??y-??at	2.21	7	ePN	Pn	19 57 20.4	-1.0
CTYL	Yal??k??y-??at	2.21	7	ePn	Pn	19 57 20.4	-1.0
LIA	Limnos Island	2.22	287	ePN	Pn	19 57 21.2	-0.3
LIA				eSN	Sn	19 57 49.6	+0.4
LIA	Limnos Island	2.22	287	ePn	Pn	19 57 21.2	-0.3
LIA				eSn	Sn	19 57 49.6	+0.4
BODT	Bodrum	2.27	193	ePN	Pn	19 57 22.0	-0.2
BODT	Bodrum	2.27	193	ePn	Pn	19 57 22.0	-0.2
ESKT	Eskisehir	2.27	83	ePN	Pn	19 57 22.3	0.0
ESKT	Eskisehir	2.27	83	ePn	Pn	19 57 22.3	0.0
SILT	Sile	2.28	34	ePN	Pn	19 57 21.6	-0.8
SILT	Sile	2.28	34	ePn	Pn	19 57 21.6	-0.8
GULT	Gulveren	2.29	59	ePN	Pn	19 57 22.0	-0.6
GULT	Gulveren	2.29	59	ePn	Pn	19 57 22.0	-0.6
SPNC	Sapanca-Adapaz	2.30	52	ePN	Pn	19 57 22.2	-0.4
SPNC	Sapanca-Adapaz	2.30	52	ePn	Pn	19 57 22.2	-0.4
GLHS	Glhisar (BURDU	2.45	149	ePN	Pn	19 57 24.5	-0.3
GLHS	Glhisar (BURDU	2.45	149	ePn	Pn	19 57 24.5	-0.3
ISP	Isparta	2.49	125	ePN	Pn	19 57 24.9	-0.5
ISP	Isparta	2.49	125	ePn	Pn	19 57 24.9	-0.5
DALY	Dalyan (Mu˜la	2.52	167	ePN	Pn	19 57 25.5	-0.2
DALY	Dalyan (Mu˜la	2.52	167	ePn	Pn	19 57 25.5	-0.2
DAT	Datca	2.56	186	ePN	Pn	19 57 26.0	-0.3
DAT	Datca	2.56	186	ePn	Pn	19 57 26.0	-0.3
EDRB	Edirne	2.72	341	ePN	Pn	19 57 28.1	-0.3
EDRB	Edirne	2.72	341	ePn	Pn	19 57 28.2	-0.3
BCK	Bucak	2.76	130	ePN	Pn	19 57 28.9	-0.2
BCK	Bucak	2.76	130	ePn	Pn	19 57 28.9	-0.2
MDUB	Mudurnu	2.78	64	ePN	Pn	19 57 29.1	-0.1
MDUB	Mudurnu	2.78	64	ePn	Pn	19 57 29.2	-0.1
SVRH	Sivrihisar-ESK	2.78	85	ePN	Pn	19 57 29.4	0.0
SVRH	Sivrihisar-ESK	2.78	85	ePn	Pn	19 57 29.4	0.0
FETY	Fethiye	2.79	161	ePN	Pn	19 57 29.1	-0.3
FETY	Fethiye	2.79	161	ePn	Pn	19 57 29.1	-0.3
APE	Apeiranthos	2.91	221	ePN	Pn	19 57 31.0	0.0
APE	Apeiranthos	2.91	221	ePN	Pn	19 57 29.7	-1.4
APE	Apeiranthos	2.91	221	ePn	Pn	19 57 31.0	0.0
ELL	Elmali	2.97	148	ePN	Pn	19 57 31.9	0.0
ELL	Elmali	2.97	148	ePn	Pn	19 57 31.9	0.0
ARG	Arkhangelos	3.06	177	ePN	Pn	19 57 30.9	-2.2
ARG	Arkhangelos	3.06	177	ePn	Pn	19 57 30.9	-2.2
KIZT	Kizilcal	3.09	96	ePN	Pn	19 57 33.8	+0.2
KIZT	Kizilcal	3.09	96	ePn	Pn	19 57 33.8	+0.2
AOS	Alonnisos	3.15	269	ePN	Pn	19 57 34.1	-0.3
AOS	Alonnisos	3.15	269	ePn	Pn	19 57 34.1	-0.3
DIM	Dimitrovgrad	3.32	327	eP	Pn	19 57 35.8	-0.8
DIM	Dimitrovgrad	3.32	327	eP	Pn	19 57 35.8	-0.8
JMB	Yambol	3.35	343	i Pg	Pg	19 57 49.1	+0.9
JMB	Yambol	3.35	343	i Pg	Pg	19 57 49.1	+0.9
PAIG	Paliouri	3.35	282	ePN	Pn	19 57 37.3	+0.2
PAIG	Paliouri	3.35	282	ePn	Pn	19 57 37.3	+0.2
RZN	Rozhen	3.44	315	i Pg	Pg	19 57 50.1	+0.2
RZN	Rozhen	3.44	315	i Pg	Pg	19 57 50.1	+0.2
PLG	Polygyros	3.63	289	ePN	Pn	19 57 41.3	+0.4
PLG	Polygyros	3.63	289	ePn	Pn	19 57 41.3	+0.4
NVR	Nevrokopi	3.74	305	ePN	Pn	19 57 42.1	-0.4
NVR	Nevrokopi	3.74	305	ePn	Pn	19 57 42.1	-0.4
PLD	Plovdiv	3.74	320	i P	Pn	19 57 42.1	-0.4
PLD	Plovdiv	3.74	320	i P	Pn	19 57 42.1	-0.4
KARP	Karpathos	3.78	190	ePN	Pn	19 57 41.5	-1.5
KARP	Karpathos	3.78	190	ePn	Pn	19 57 41.5	-1.5
PRD	Provadia	3.94	354	eP	Pn	19 57 44.6	-0.5
PRD	Provadia	3.94	354	eP	Pn	19 57 44.6	-0.5
MMB	Musomiste	3.96	307	i P	Pn	19 57 45.0	-0.4
MMB	Musomiste	3.96	307	i P	Pn	19 57 45.0	-0.4
SZH	Strazhica	4.26	340	eP	Pn	19 57 49.5	-0.1
SZH	Strazhica	4.26	340	eP	Pn	19 57 49.5	-0.1
AGG	Agios Georgios	4.37	268	ePN	Pn	19 57 51.9	+0.8
AGG	Agios Georgios	4.37	268	ePn	Pn	19 57 51.9	+0.8
GRG	Griva	4.56	293	ePN	Pn	19 57 54.0	+0.2
GRG	Griva	4.56	293	ePn	Pn	19 57 54.0	+0.2
VTS	Vitosha	4.88	314	⇓iP	Pn	19 57 59.7	+1.5
VTS	Vitosha	4.88	314	i P	Pg	19 58 18.9	+1.4
VTS	Vitosha	4.88	314	⇓iP	Pn	19 57 59.7	+1.5
MPEP	Malo Peshtene	5.16	324	i P	Pn	19 58 02.0	+0.1
TIRR	Tirgusor	5.19	4	⇓iP	Pn	19 58 03.9	+1.6
TIRR	Tirgusor	5.19	4	⇓iP	Pn	19 58 03.9	+1.6
BARS	Barje	5.82	309	ePn	Pn	19 58 12.1	+1.0
MLR	Muntele Rosu	6.38	347	⇑iP	Pn	19 58 20.9	+2.1
GRUS	Gruza	7.11	313	ePn	Pn	19 58 29.0	+0.3

IDC 08 20:00:37.6±3.3**, 2°.51S**×**101°.74E, h0km, mb3.8**/6**, mb1 3.9**/6**, mb1mx3.6**/23**, mbtmp3.8**/6**, Error ellipse: s-maj=152.5km s-min=19.5km az=58.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	36.24	121	P	P	20 07 42.0	-0.8
	0.3nm,0.3s,baz=302,slow=10.0,SNR=7.2						
ASAR	Alice Springs	37.55	127	P	P	20 07 54.5	+0.5
	1.3nm,0.5s,baz=303,slow=7.8,SNR=49						
STKA	Stephens Creek	47.52	132	P	P	20 09 14.8	-0.2
	2.9nm,1.1s,baz=318,slow=8.7,SNR=6.8						
SONM	Songino Array	50.30	4	P	P	20 09 36.3	+0.2
	0.8nm,0.6s,baz=188,slow=8.7,SNR=7.4						
MKAR	Makanchi Array	52.00	343	P	P	20 09 49.0	+0.1
	0.3nm,0.7s,baz=155,slow=7.9,SNR=4.3						
ZALV	Zalesovo Beam	58.00	348	P	P	20 10 31.4	-0.6
	0.5nm,0.5s,baz=158,slow=7.5,SNR=4.3						

*ISK **08** 20:00:53.4, 39°.29N×27°.94E, h5km, MD3.2*
*ATH **08** 20:00:53.5, 39°.31N×28°.01E, h15km±1km, MD3.5/5*
*DDA **08** 20:00:54.3, 39°.29N×27°.94E, h22km, MD3.2*
*CSEM **08** 20:00:54.6±0.1, 39°.29N×27°.95E, h2km, MD3.2, Error ellipse: s-maj=1.6km s-min=1.4km az=103.0*
*ISCJB **08** 20:00:54.4±0.4, 39°.29N±0°.01×27°.94E±0°.02, h2km±3km, Error ellipse: s-maj=2.8km s-min=2.4km az=17.2*
ISC 08 20:00:55.2±1.0**, 39°.29N**±0°.01×**27°.96E**±0°.02**, h7km**±8km**, n140, σ0s.51**/180**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.36	351	ePG	Pg	20 01 01.9	-0.3
BALB				eSG	Sg	20 01 07.5	+0.6
BALB	Balikesir	0.36	351	ePg	Pg	20 01 01.9	-0.3
BALB				eSg	Sg	20 01 07.5	+0.6
AKHS	Akhisar	0.42	195	i P	Pg	20 01 02.8	-0.5
AKHS				i S	Sg	20 01 10.0	+1.2
AKHS	Akhisar	0.42	195	i P	Pg	20 01 02.8	-0.5
AKHS				i S	Sg	20 01 10.0	+1.2
AKS	Akhisar	0.42	195	ePG	Pg	20 01 02.8	-0.5
AKS				eSG	Sg	20 01 09.7	+0.9
AKS	Akhisar	0.42	195	ePg	Pg	20 01 02.8	-0.5
AKS				eSg	Sg	20 01 09.7	+0.9
DURS	Dursunbey	0.51	52	i P	Pg	20 01 04.5	-0.5
DURS				i S	Sg	20 01 12.3	+0.6
DURS	Dursunbey	0.51	52	i P	Pg	20 01 04.5	-0.5
DURS				i S	Sg	20 01 12.3	+0.6
BALY	Balya	0.52	330	i P	Pg	20 01 04.8	-0.5
BALY				i S	Sg	20 01 12.7	+0.6
BALY	Balya	0.52	330	i P	Pg	20 01 04.8	-0.5
BALY				i S	Sg	20 01 12.7	+0.6
DST	Dursunbey	0.60	58	ePG	Pg	20 01 05.9	-0.9
DST	Dursunbey	0.60	58	ePg	Pg	20 01 05.9	-0.9
DEMI	Demirci	0.64	112	i P	Pg	20 01 07.2	-0.3
DEMI	Demirci	0.64	112	i P	Pg	20 01 07.2	-0.3
GONE	Gonen-Balikesi	0.79	345	ePG	Pg	20 01 09.1	-1.2
GONE	Gonen-Balikesi	0.79	345	ePg	Pg	20 01 09.1	-1.2
MANT	Manisa	0.92	149	i P	Pg	20 01 12.7	-0.2
MANT				i S	Sg	20 01 24.3	-0.6
MANT	Manisa	0.92	149	i P	Pg	20 01 12.7	-0.2
MANT				i S	Sg	20 01 24.3	-0.6
KULA	Kula-Manisa	0.95	144	ePG	Pg	20 01 12.7	-0.7
KULA	Kula-Manisa	0.95	144	ePg	Pg	20 01 12.7	-0.7
AYVA	Ayvalik	0.98	272	i P	Pb	20 01 14.5	0.0
AYVA				i S	Sn	20 01 29.3	-0.2
AYVA	Ayvalik	0.98	272	i P	Pb	20 01 14.5	0.0
AYVA				i S	Sn	20 01 29.3	-0.2
KCTX	Karacabey (Bur	1.03	17	ePG	Pg	20 01 14.0	-0.9
KCTX	Karacabey (Bur	1.03	17	ePg	Pg	20 01 14.0	-0.9
IZM	Izmir	1.04	212	ePG	Pg	20 01 14.1	-1.0
IZM	Izmir	1.04	212	ePg	Pg	20 01 14.1	-1.0
ORLT	Orhaneli	1.05	43	ePG	Pg	20 01 15.0	-0.3
ORLT	Orhaneli	1.05	43	ePg	Pg	20 01 15.0	-0.3
EDC	Edincik	1.06	356	ePG	Pg	20 01 15.6	0.0
EDC	Edincik	1.06	356	ePg	Pg	20 01 15.6	0.0
BLCB	Balcova	1.15	219	ePN	Pg	20 01 16.2	-0.9
BLCB	Balcova	1.15	219	ePn	Pg	20 01 16.3	-0.9
TVSB	Tavsanli	1.18	82	ePN	Pg	20 01 17.0	-0.8
TVSB	Tavsanli	1.18	82	ePn	Pg	20 01 17.0	-0.8
GDZ	Gediz	1.20	99	i P	Pb	20 01 17.8	-0.6
GDZ				i S	Sn	20 01 34.8	-0.4
GDZ	Gediz	1.20	99	i P	Pb	20 01 17.8	-0.6
GDZ				i S	Sn	20 01 34.8	-0.4
KRBG	Karabiga-Canak	1.22	336	ePN	Pb	20 01 17.8	-0.7
KRBG	Karabiga-Canak	1.22	336	ePn	Pb	20 01 17.8	-0.7
ULDT	Uludag	1.25	46	i P	Pn	20 01 18.8	-0.5
ULDT				i S	Sg	20 01 35.8	+0.4
ULDT	Uludag	1.25	46	i P	Pn	20 01 18.8	-0.5
ULDT				i S	Sg	20 01 35.8	+0.4
MDNY	Mudanya-Bursa	1.30	33	ePN	Pn	20 01 19.2	-0.5
MDNY	Mudanya-Bursa	1.30	33	ePn	Pn	20 01 19.2	-0.5
PRK	Paraskevi	1.31	269	ePN	Pn	20 01 19.3	-0.5
PRK				eSN	Sn	20 01 37.4	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRK	Paraskevi	1.31	269	ePn	Pn	20 01 19.3	-0.5
PRK				eSn	Sn	20 01 37.4	-0.1
MRMT	Marmara Adasi	1.34	348	ePN	Pn	20 01 20.4	0.0
MRMT	Marmara Adasi	1.34	348	ePn	Pn	20 01 20.4	0.0
EZN	Ezine	1.37	294	ePN	Pn	20 01 20.4	-0.3
EZN	Ezine	1.37	294	ePn	Pn	20 01 20.4	-0.3
URLA	Izmir	1.41	229	i P	Pn	20 01 20.5	-0.7
URLA				i S	Sb	20 01 39.8	-0.2
URLA	Izmir	1.41	229	i P	Pn	20 01 20.5	-0.7
URLA				i S	Sb	20 01 39.8	-0.2
LPK	Lapseki	1.42	320	ePN	Pn	20 01 21.1	-0.4
LPK	Lapseki	1.42	320	ePn	Pn	20 01 21.1	-0.4
GEMT	Gemlik	1.49	39	ePN	Pn	20 01 21.9	-0.5
GEMT	Gemlik	1.49	39	ePn	Pn	20 01 21.9	-0.5
KHAL	Karahalli	1.51	127	i P	Pn	20 01 22.6	-0.1
KHAL	Karahalli	1.51	127	i P	Pn	20 01 22.6	-0.1
SART	Tekirdag	1.52	337	i P	Pn	20 01 22.4	-0.5
SART				i S	Sn	20 01 43.0	0.0
SART	Tekirdag	1.52	337	i P	Pn	20 01 22.4	-0.5
SART				i S	Sn	20 01 43.0	0.0
KHL	Karahalli	1.56	128	ePN	Pn	20 01 23.4	+0.1
KHL	Karahalli	1.56	128	ePn	Pn	20 01 23.5	+0.1
IZI	Iznik	1.57	48	ePN	Pn	20 01 23.8	+0.3
IZI	Iznik	1.57	48	ePn	Pn	20 01 23.8	+0.3
BOZC	Bozcaada	1.57	291	i P	Pn	20 01 23.0	-0.5
BOZC				i S	Sn	20 01 43.9	-0.2
GELI	Tayfur-Gelibol	1.59	315	ePN	Pn	20 01 23.4	-0.4
GELI	Tayfur-Gelibol	1.59	315	ePn	Pn	20 01 23.4	-0.4
AYDN	Tasoluk	1.62	182	i P	Pn	20 01 23.4	-0.8
AYDN				i S	Sn	20 01 45.7	+0.3
AYDN	Tasoluk	1.62	182	i P	Pn	20 01 23.4	-0.8
AYDN				i S	Sn	20 01 45.7	+0.3
GCAM	G?zelcaml?	1.68	200	i P	Pb	20 01 26.2	-0.2
GCAM				i S	Sb	20 01 47.9	+0.2
GCAM	G?zelcaml?	1.68	200	i P	Pb	20 01 26.2	-0.2
GCAM				i S	Sb	20 01 47.9	+0.2
ALT	Altintas	1.69	97	ePN	Pn	20 01 25.3	+0.1
ALT	Altintas	1.69	97	ePn	Pn	20 01 25.3	+0.1
CAVI	Cavuskoy	1.72	57	ePN	Pn	20 01 25.6	+0.1
CAVI	Cavuskoy	1.72	57	ePn	Pn	20 01 25.7	+0.1
TKR	Tekirdag	1.73	349	ePN	Pn	20 01 25.7	0.0
TKR	Tekirdag	1.73	349	ePn	Pn	20 01 25.7	0.0
CHOS	Chios island	1.73	239	ePN	Pn	20 01 25.5	-0.3
CHOS				eSN	Sb	20 01 50.0	+0.6
CHOS	Chios island	1.73	239	ePn	Pn	20 01 25.5	-0.3
CHOS				eSn	Sb	20 01 50.0	+0.6
ERIK	Erikli-Kesan	1.77	322	ePN	Pn	20 01 26.0	-0.2
ERIK	Erikli-Kesan	1.77	322	ePn	Pn	20 01 26.0	-0.2
ADVT	Abdulvahap	1.79	50	ePN	Pn	20 01 26.6	+0.1
ADVT	Abdulvahap	1.79	50	ePn	Pn	20 01 26.6	+0.1
BUY	Buyukada	1.80	29	ePN	Pn	20 01 26.5	-0.2
BUY	Buyukada	1.80	29	i P	Pn	20 01 26.6	0.0
BUY				i S	Sn	20 01 50.0	+0.3
BUY	Buyukada	1.80	29	i P	Pn	20 01 26.6	0.0
BUY				i S	Sn	20 01 50.0	+0.3
CRLT	Corlu	1.85	355	ePN	Pn	20 01 27.1	-0.2
CRLT	Corlu	1.85	355	ePn	Pn	20 01 27.1	-0.2
SLVT	Silivri	1.95	6	ePN	Pn	20 01 28.7	0.0
SLVT	Silivri	1.95	6	ePn	Pn	20 01 28.7	0.0
ISK	Istanbul-Kandi	1.97	25	ePN	Pn	20 01 29.4	+0.4
ISK	Istanbul-Kandi	1.97	25	ePn	Pn	20 01 29.4	+0.4
MLSB	Milas	1.99	184	ePN	Pn	20 01 29.2	0.0
MLSB	Milas	1.99	184	ePn	Pn	20 01 29.3	0.0
CTKS	Kestanelik-??a	1.99	12	ePN	Pn	20 01 29.6	+0.3
CTKS	Kestanelik-??a	1.99	12	ePn	Pn	20 01 29.6	+0.3
BGKT	Bogazkoy	2.00	18	ePN	Pn	20 01 29.6	+0.3
BGKT	Bogazkoy	2.00	18	ePn	Pn	20 01 29.6	+0.3
BORA	Eskisehir	2.02	72	i P	Pb	20 01 32.3	0.0
BORA				i S	Sg	20 01 59.2	-0.9
BORA	Eskisehir	2.02	72	i P	Pb	20 01 32.3	0.0
BORA				i S	Sg	20 01 59.2	-0.9
HRT	Hereke	2.02	40	ePN	Pn	20 01 30.1	+0.4
HRT	Hereke	2.02	40	ePn	Pn	20 01 30.1	+0.4
GPA	Golpazari	2.07	60	ePN	Pn	20 01 30.8	+0.4
GPA	Golpazari	2.07	60	ePn	Pn	20 01 30.8	+0.4
SHUT	Suhut-Afyon	2.15	109	ePN	Pn	20 01 31.8	+0.2
SHUT	Suhut-Afyon	2.15	109	ePn	Pn	20 01 31.8	+0.2
YER	Yerkesik	2.16	173	ePN	Pn	20 01 31.8	+0.1
YER	Yerkesik	2.16	173	ePn	Pn	20 01 31.8	+0.1
ALN	Alexandroupoli	2.18	318	ePN	Pn	20 01 31.6	-0.2
ALN				eSN	Sn	20 01 59.3	+0.3
ALN	Alexandroupoli	2.18	318	ePn	Pn	20 01 31.6	-0.2
ALN				eSn	Sn	20 01 59.3	+0.3
CTYL	Yal??k??y-??at	2.20	7	ePN	Pn	20 01 32.4	+0.3
CTYL	Yal??k??y-??at	2.20	7	ePn	Pn	20 01 32.4	+0.3
LIA	Limnos Island	2.23	287	ePN	Pn	20 01 32.7	+0.2
LIA				eSN	Sn	20 02 00.9	+0.6
LIA	Limnos Island	2.23	287	ePn	Pn	20 01 32.7	+0.2
LIA				eSn	Sn	20 02 00.9	+0.6
ESKT	Eskisehir	2.25	83	ePN	Pn	20 01 33.4	+0.4
ESKT	Eskisehir	2.25	83	ePn	Pn	20 01 33.4	+0.4
SEYT	Eskypehyr	2.25	83	i P	Pb	20 01 36.7	+0.4
SEYT				i S	Sg	20 02 07.6	0.0
SEYT	Eskypehyr	2.25	83	i P	Pb	20 01 36.7	+0.4
SILT	Sile	2.27	34	ePN	Pn	20 01 33.2	+0.1
SILT	Sile	2.27	34	ePn	Pn	20 01 33.2	+0.1
BODT	Bodrum	2.28	193	ePN	Pn	20 01 33.2	0.0
BODT	Bodrum	2.28	193	ePn	Pn	20 01 33.2	0.0
GULT	Gulveren	2.28	59	ePN	Pn	20 01 34.2	+0.9
GULT	Gulveren	2.28	59	ePn	Pn	20 01 34.2	+0.9
DALY	Dalyan (Mu˜la	2.52	167	ePN	Pn	20 01 36.8	+0.3
DALY	Dalyan (Mu˜la	2.52	167	ePn	Pn	20 01 36.8	+0.3
DAT	Datca	2.57	187	ePN	Pn	20 01 37.6	+0.3
DAT	Datca	2.57	187	ePn	Pn	20 01 37.6	+0.3
EDRB	Edirne	2.72	341	ePN	Pn	20 01 39.9	+0.6
EDRB	Edirne	2.72	341	ePn	Pn	20 01 39.9	+0.6
MDUB	Mudurnu	2.76	64	ePN	Pn	20 01 40.5	+0.6
MDUB	Mudurnu	2.76	64	ePn	Pn	20 01 40.6	+0.6
SVRH	Sivrihisar-ESK	2.77	86	ePN	Pn	20 01 40.8	+0.8
SVRH	Sivrihisar-ESK	2.77	86	ePn	Pn	20 01 40.8	+0.8
APE	Apeiranthos	2.92	222	ePN	Pn	20 01 42.8	+0.7
APE	Apeiranthos	2.92	222	ePn	Pn	20 01 42.8	+0.7
PAIG	Paliouri	3.37	282	ePN	Pn	20 01 47.9	-0.2
PAIG	Paliouri	3.37	282	ePn	Pn	20 01 47.9	-0.2
NVR	Nevrokopi	3.75	305	ePN	Pn	20 01 53.5	+0.1
NVR	Nevrokopi	3.75	305	ePn	Pn	20 01 53.5	+0.1
GRG	Griva	4.57	293	ePN	Pn	20 02 06.2	+1.4
GRG	Griva	4.57	293	ePn	Pn	20 02 06.2	+1.4

*BJI **08** 20:27:10.0, 34°.40N×119°.20W, h6km, mb4.7/1, Ms7 4.4/1*
*NEIC **08** 20:27:13.9, 34°.44N×119°.18W, h8km, mb4.1/2, MW4.1(PAS), After PAS.*
NEIC Felt [IV] at Ojai; [III] at Camarillo, Santa Paula and Ventura; [II] at Agoura Hills, Calabasas, Fillmore, Los Angeles, Moorpark, Newbury Park, Oak View, Oxnard, Port Hueneme, Santa Monica, Simi Valley, Thousand Oaks, Westlake Village and Woodland Hills. Felt widely in the Frazier Park-Lancaster-Los Angeles area.
*IDC **08** 20:27:13.8±1.4, 34°.47N×119°.03W, h0km, mb3.9/4, mb1 3.9/11, mb1mx3.7/31, mbtmp3.6/11, ML3.3/7, MS3.1/9, Ms1 3.1/9, ms1mx3.0/55, Error ellipse: s-maj=19.3km s-min=8.9km az=55.0*
ISC 08 20:27:13.3±0.7**, 34°.43N**±0°.02×**119°.16W**±0°.02**, h8**km±4km**, n106,** σ1s.**52**/125**, mb4.1**/6**, MS3.2**/5**, 36C-32D, Southern California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLG	Laguna Peak	0.33	166	P	Pg	20 27 20.2	+0.4
	baz=0.3,SNR=880						
BLG				⇑S	Sg	20 27 25.6	+1.4
	baz=0.3						
OSI	Osito Adit	0.41	63	ePg	Pg	20 27 21.4	+0.1
OSI	Osito Adit	0.41	63	⇓P	Pg	20 27 21.6	+0.3
	baz=0.4,SNR=218						
OSI				⇑S	Sg	20 27 27.7	+1.0
	baz=0.4						
SBC	Santa Barbara	0.46	272	⇑P	Pb	20 27 22.3	-1.3
	baz=0.4,SNR=212						
SBC				⇓S	Sb	20 27 29.2	-1.3
	baz=0.4						
DECC	Green Verdugo	0.71	104	⇓P	Pg	20 27 27.0	-0.1
	baz=0.7,SNR=141						
DECC				⇑S	Sg	20 27 37.1	+0.8
	baz=0.7						
PKM	Peak Mountain	0.71	311	⇑P	Pg	20 27 26.5	-0.6
	baz=0.7,SNR=306						
PKM				⇓S	Sg	20 27 36.5	+0.1
	baz=0.7						
ARVC	Arvin	0.75	21	⇓P	Pg	20 27 27.2	-0.6
	baz=0.7,SNR=165						
ARVC				⇑S	Sg	20 27 37.5	0.0
	baz=0.7						
PASC	Pasadena Art C	0.85	107	ePg	Pg	20 27 28.7	-0.9
MWC	Mount Wilson	0.94	102	ePg	Pg	20 27 30.3	-1.1
FMP	Fort Macarthur	1.01	134	⇑P	Pg	20 27 31.7	-1.1
	baz=1.0,SNR=21						
FMP				⇑S	Sg	20 27 46.0	0.0
	baz=1.0						
EDW2	Edwards Air Fo	1.07	65	⇑P	Pg	20 27 33.1	-0.8
	baz=1.1,SNR=776						
EDW2				⇑S	Sg	20 27 47.8	+0.1
	baz=1.1						
SMMC	Simmler	1.12	322	⇑P	Pg	20 27 34.1	-0.6
	baz=1.1,SNR=123						
SMMC				⇑S	Sb	20 27 49.4	-0.2
	baz=1.1						
CIS	Catalina Islan	1.20	148	⇓P	Pb	20 27 33.9	-2.4
	baz=1.2,SNR=68						
BFSC	Mount Baldy Ra	1.26	98	P	Pn	20 27 35.6	-1.7
	baz=1.3,SNR=295						
BFSC				⇓S	Sb	20 27 53.7	0.0
	baz=1.3						
ISA	Isabella	1.35	24	ePn	Pn	20 27 37.0	-1.6
ISA	Isabella	1.35	24	⇓P	Pn	20 27 37.3	-1.3
	baz=1.4,SNR=263						
ISA				⇓S	Sb	20 27 55.5	-1.0
	baz=1.4						
VES	Vestal, Richgr	1.41	3	⇑P	Pn	20 27 37.9	-1.3
	baz=1.4,SNR=228						
VES				⇑S	Sb	20 27 56.8	-1.2
	baz=1.4						
SCI	San Clemente I	1.53	160	⇓P	Pn	20 27 38.9	-2.1
	baz=1.6,SNR=36						
LRMC	Laurel Mountai	1.60	49	⇑P	Pn	20 27 41.0	-1.0
	baz=1.6,SNR=192						
LRMC				⇑S	Sn	20 28 02.2	-0.7
	baz=1.6						
MURC	Murrieta	1.83	116	⇑P	Pn	20 27 43.5	-1.6
	baz=1.8,SNR=38						
MURC				⇓Sb	Sb	20 28 10.4	+0.3
	baz=1.8						
BBRC	Big Bear Solar	1.86	94	⇓P	Pn	20 27 44.7	-1.0
	baz=1.9,SNR=50						
BBRC				⇑Sb	Sb	20 28 11.1	-0.2
	baz=1.9						
RCTC	Rector, Farmer	1.88	358	⇑P	Pn	20 27 45.1	-0.6
	baz=1.9,SNR=76						
RCTC				⇑S	Sn	20 28 08.9	-0.6
	baz=1.9						
GSC	Goldstone	2.12	65	ePn	Pn	20 27 48.0	-1.2
GSC	Goldstone	2.12	65	⇑P	Pn	20 27 48.1	-1.1
	baz=2.1,SNR=178						
GSC				⇓Sb	Sb	20 28 19.9	+1.2
	baz=2.1						
MPMC	Manual Prospec	2.13	40	⇓P	Pn	20 27 48.3	-1.1
	baz=2.1,SNR=567						
MPMC				⇓Sb	Sb	20 28 19.8	+0.9
	baz=2.1						
CWC	Cottonwood Cre	2.19	23	⇑Pb	Pb	20 27 52.5	-0.9
	baz=2.2						
109C	Camp Elliot, M	2.30	131	⇓P	Pn	20 27 50.4	-1.1
	baz=2.3						
HEC	Hector,Ludlow	2.37	79	⇑P	Pn	20 27 51.3	-1.2
	baz=2.4,SNR=21						
HEC				⇑Sb	Sb	20 28 26.6	+0.8
	baz=2.4						
PFO	Pinyon Flat Ob	2.39	109	ePn	Pn	20 27 51.4	-1.5
PFO				Lg	Lg	20 28 26.6	
PFO	Pinyon Flat Ob	2.39	109	Pn	Pn	20 27 52.0	-0.9
	5.6nm,0.3s,baz=288,slow=13,SNR=49						
PFO				Lg	Lg	20 28 26.6	
	50nm,0.3s,baz=180,slow=20,SNR=13						
PFO	Pinyon Flat Ob	2.39	109	⇑P	Pn	20 27 51.8	-1.1
	baz=2.4,SNR=48						
PFO				⇑Sb	Sb	20 28 26.8	+0.3
	baz=2.4						
BELC	Belle Mtn. Jos	2.66	98	⇑P	Pn	20 27 55.9	-0.7
	baz=2.7,SNR=85						
BAR	Barrett	2.71	129	ePn	Pn	20 27 54.7	-2.6
TIN	Tinemaha	2.73	16	⇓Sb	Sb	20 28 37.1	+1.0
	baz=2.7						
MONP	Monument Peak	2.75	123	⇑P	Pn	20 27 56.4	-1.5
	baz=2.8,SNR=14						
MONP				⇓S	Sn	20 28 29.8	-1.7
	baz=2.8						
FURC	Furnace Creek,	2.77	42	⇓Pn	Pn	20 27 56.5	-1.4
	baz=2.8						
FURC				⇑S	Sn	20 28 31.4	-0.2
	baz=2.8						
SHOC	Shoshone	2.78	57	⇓P	Pn	20 27 56.9	-1.2
	baz=2.8						
SHOC				⇑S	Sn	20 28 31.5	-0.4
	baz=2.8						
TUQ	Turquoise Moun	2.84	68	⇓P	Pn	20 27 57.9	-1.2
	baz=2.9,SNR=18						
GMRC	Granite Mounta	2.91	82	⇓P	Pn	20 27 58.5	-1.6
	baz=2.9						
GRAC	Grapevine Rang	2.95	29	⇓S	Sn	20 28 35.8	-0.3
	baz=3.0						
SAO	San Andreas Ge	2.98	322	ePn	Pn	20 27 59.3	-1.6
BC3	Big Chuckawall	3.17	103	⇓P	Pn	20 28 02.5	-1.2
	baz=3.2						
SWSC	Sam W. Stewart	3.17	117	⇓P	Pn	20 28 02.6	-0.9
	baz=3.2						
SWSC				⇑Sb	Sb	20 28 49.9	+1.1
	baz=3.2						
MLAC	Mammoth Lakes	3.21	5	⇓Pb	Pb	20 28 09.3	-1.3
	baz=3.2						
MLAC				⇓Sb	Sb	20 28 50.0	+0.1
	baz=3.2						
IRM	Iron Mountain	3.33	93	⇑P	Pn	20 28 04.6	-1.2
	baz=3.3						
LDFC	Landfair	3.40	78	ePn	Pn	20 28 04.9	-1.8
CMB	Columbia Colle	3.73	345	ePn	Pn	20 28 11.6	+0.4
NEE2	Needles Airpor	3.76	84	⇑P	Pn	20 28 10.8	-0.8
	baz=3.8						
GLA	Glamis	3.87	110	ePn	Pn	20 28 13.6	+0.6
GLA	Glamis	3.87	110	⇓P	Pn	20 28 13.0	-0.1
	baz=3.9						
Y12C	Blythe	3.91	99	⇓P	Pn	20 28 12.5	-1.1
	baz=3.9,SNR=7.7						
NVAR	Mina Array Bea	4.05	10	Pn	Pn	20 28 18.3	+2.5
NVAR				Pg	Pb	20 28 23.7	-1.4
NVAR				Lg	Lg	20 29 18.9	
NVAR	Mina Array Bea	4.05	10	Pn	Pn	20 28 18.3	+2.5
	1.1nm,0.3s,baz=194,slow=15,SNR=24						
NVAR				Pg	Pb	20 28 23.7	-1.4
	7.2nm,0.3s,baz=195,slow=20,SNR=103						
NVAR				Lg	Lg	20 29 18.9	
	5.6nm,0.3s,baz=194,slow=32,SNR=6.6						
NV11	Mina Array Sit	4.08	11	Pn	Pn	20 28 16.1	0.0
W13A	Hualapai Mount	4.39	80	⇓P	Pn	20 28 19.9	-0.6
	baz=4.4						
MCCM	Marconi Confer	4.77	322	ePn	Pn	20 28 23.1	-2.3
R11A	Troy Canyon, C	4.86	35	⇑P	Pn	20 28 26.7	-0.2
	baz=4.9						
WCN	Washoe City	4.89	355	ePn	Pn	20 28 25.6	-1.6
Y14A	Wickenburg	5.13	94	⇓P	Pn	20 28 29.5	-1.0
	baz=5.1						
Z14A	Wintersburg	5.28	100	⇓P	Pn	20 28 32.0	-0.5
	baz=5.3						
BEKR	Beckworth	5.51	350	ePn	Pn	20 28 33.1	-2.7
HOPS	Hopland	5.53	327	ePn	Pn	20 28 34.4	-1.6
CCUT	Cedar City	5.64	55	ePn	Pn	20 28 38.0	+0.4
ARUT	Antelope Range	5.72	52	ePn	Pn	20 28 35.9	-2.8
214A	Organ Pipe Nat	5.87	113	⇑P	Pn	20 28 39.7	-0.9
	baz=5.9						
U15A	North Rim	5.95	68	⇑P	Pn	20 28 42.5	+0.4
	baz=6.0						
BMN	Battle Mountai	6.19	14	Pn	Pn	20 28 46.9	+1.8
BMN				ePg	Pg	20 29 07.8	-4.1
WUAZ	Wupatki	6.49	78	ePn	Pn	20 28 49.7	+0.5
WDC	Whiskeytown Da	6.70	337	Pn	Pn	20 28 55.3	+3.3
MVU	Marysvale	6.92	52	ePn	Pn	20 28 57.2	+2.0
MSU	Marysvale	6.95	52	ePn	Pn	20 28 55.6	0.0
ELK	Elko	7.03	25	Pn	Pn	20 28 58.3	+1.6
ELK				ePg	Pg	20 29 25.9	-2.1
ELK				eSg	Sg	20 30 53.6	-5.5
ELK				Lg	Lg	20 30 55.8	
ELK	Elko	7.03	25	Pn	Pn	20 28 58.3	+1.6
	0.4nm,0.3s,baz=221,slow=13,SNR=11						
ELK				Lg	Lg	20 30 55.8	
	0.5nm,0.3s,baz=105,slow=20,SNR=5.5						
ELK				LR	LR	20 32 17.0	
	comp=Z,112nm,19.1s,baz=12,slow=44						
TUC	Tucson	7.32	104	ePn	Pn	20 28 57.2	-3.4
MOD	Modoc	7.51	353	Pn	Pn	20 29 02.8	-0.5
YBH	Yreka Blue Hor	7.81	340	Pn	Pn	20 29 07.0	-0.3
YBH	Yreka Blue Hor	7.81	340	Pn	Pn	20 29 12.8	+5.5
	0.1nm,0.3s,baz=155,slow=14,SNR=3.3						
YBH				LR	LR	20 32 08.1	
	comp=Z,124nm,19.9s,baz=168,slow=38						
HUMO	Hull Mountain	8.69	341	Pn	Pn	20 29 20.1	+0.8
PV10	Paradox Valley	9.06	61	ePn	Pn	20 29 23.9	-0.7
MVCO	Mesa Verde	9.10	69	ePn	Pn	20 29 26.5	+1.5
PV01	Paradox Valley	9.32	64	Pn	Pn	20 29 22.4	-5.8
ANMO	Albuquerque	10.48	84	Pn	Pn	20 29 40.6	-3.4
ANMO				Pg		20 30 30.4	
ANMO				Lg	Lg	20 32 43.6	
ANMO	Albuquerque	10.48	84	Pn	Pn	20 29 44.8	+0.9
	0.1nm,0.3s,baz=275,slow=12,SNR=2.8						
ANMO				Pg		20 30 30.4	
	0.1nm,0.3s,baz=277,slow=16,SNR=5.5						
ANMO				Lg	Lg	20 32 43.6	
	0.1nm,0.3s,baz=109,slow=18,SNR=3.1						
ANMO				LR	LR	20 34 01.9	
	comp=Z,116nm,18.6s,baz=224,slow=39						
PDAR	Pinedale Array	11.21	39	Pn	Pn	20 29 58.3	+4.3
PDAR	Pinedale Array	11.21	39	Pn	Pn	20 29 58.3	+4.3
	0.0nm,0.3s,baz=219,slow=9.9,SNR=6.3						
MOOW	Moose Ponds	11.37	33	Pn	Pn	20 29 60.0	+3.8
MCMT	McKenzie Canyo	11.46	23	ePn	Pn	20 29 52.3	-5.2
SDCO	Great Sand Dun	11.54	69	ePn	Pn	20 30 00.7	+2.1
BSMT	Bassoo Peak	13.80	12	ePn	Pn	20 30 27.6	-1.8
NEW	Newport	13.91	6	LR	LR	20 35 24.4	
	comp=Z,62nm,21.2s,baz=261,slow=35						
TXAR	Lajitas Array	14.11	107	Pn	Pn	20 30 37.0	+3.4
TXAR	Lajitas Array	14.11	107	Pn	Pn	20 30 37.0	+3.4
	0.1nm,0.3s,baz=290,slow=10,SNR=8.5						
TXAR				LR	LR	20 36 22.2	
	comp=Z,84nm,20.8s,baz=5.0,slow=39						
MIAR	Mount Ida	21.08	82	ePn	P	20 31 57.2	-0.9
	6.9nm,1.0s						
AGMN	Agassiz Nation	22.20	44	eP	P	20 32 09.5	-0.4
	8.2nm,0.9s						
ULM	Lac du Bonnet	23.23	40	P	P	20 32 22.5	+1.7
ULM	Lac du Bonnet	23.23	40	P	P	20 32 22.5	+1.7
	4.2nm,0.6s,baz=248,slow=9.8,SNR=3.7						
DLBC	Dease Lake	25.09	346	P	P	20 32 40.4	+2.2
DLBC	Dease Lake	25.09	346	P	P	20 32 40.4	+2.2
	1.8nm,0.7s,baz=166,slow=12,SNR=2.8						
DLBC				LR	LR	20 44 11.1	
	comp=Z,69nm,18.7s,baz=180,slow=41						
TKL	Tuckaleechee C	28.91	77	LR	LR	20 45 02.7	
	comp=Z,34nm,19.7s,baz=315,slow=37						
ILAR	Eielson Array	34.71	340	P	P	20 34 04.8	+1.4
ILAR	Eielson Array	34.71	340	P	P	20 34 04.8	+1.4
	0.7nm,0.7s,baz=152,slow=8.4,SNR=12						
ILAR				LR	LR	20 49 15.7	
	comp=Z,31nm,19.9s,baz=308,slow=38						
PETK	Petropavlovsk-	59.43	316	LR	LR	20 59 19.3	
	comp=Z,21nm,19.8s,baz=157,slow=32						
FINES	FINESS Array B	80.37	16	P	P	20 39 27.7	+2.9
FINES	FINESS Array B	80.37	16	P	P	20 39 27.7	+2.9
	2.5nm,0.9s,baz=337,slow=6.8,SNR=3.7						
HHC	Hu-ho-hao-te	91.73	324	eP	P	20 40 19.7	-1.9
HHC				pP	pP	20 40 24.4	0.0
HHC				PP	PP	20 44 00.6	+1.1
HHC				SKS	SKSac	20 50 50.8	-4.1
HHC				S	SKKSac	20 51 16.2	+5.1
HHC				sS	sS	20 51 28.5	+1.2
HHC				LR	LR		
	comp=Z,110nm,14.3s						
WMQ	Urumqi	98.36	341	eP	Pdif	20 40 53.7	+1.9

OTT 08 20:36:44.8±0.1**, 68°.12N**×**59°.17W, h18**km**, ML3.5**/10**, Davis Strait. 215km east from Qikiqtarjuaq, Nu Eastern Arctic Background Seismic Zone., Davis Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	3.47	105	i P	Pn	20 37 37.3	-0.5
SFJD				eS	Sn	20 38 14.8	-3.5
SFJD	Kangerlussuaq	3.47	105	PN	Pn	20 37 37.1	-0.6
SFJD				SN	Sn	20 38 15.6	-2.7
SFJD				Trac		20 38 17.4	
	comp=N,20nm,0.1s						
FRB	Frobisher Bay	5.83	226	SN	Sn	20 39 13.4	-2.9
GIFN	Gifford Fjord,	8.24	293	PN	Pn	20 38 41.9	-1.4
GIFN				SN	Sn	20 40 08.1	-7.7
GIFN				Trac		20 40 10.4	
	comp=Z,1.9nm,0.5s						
ILON	Igloolik, Nuna	8.30	289	SN	Sn	20 40 08.0	-9.3
SRLN	Sarcpa Lake, N	8.92	284	PN	Pn	20 38 51.5	-1.1
SRLN				SN	Sn	20 40 24.8	-7.6
SRLN				Trac		20 40 34.1	
	comp=Z,3.1nm,0.4s						
LAIN	Lailor River,	8.93	288	PN	Pn	20 38 51.5	-1.2
LAIN				SN	Sn	20 40 25.2	-7.5
LAIN				Trac		20 40 31.5	
	comp=Z,2.4nm,0.5s						
QILN	Qililugaq Expl	10.53	275	PN	Pn	20 39 12.8	-1.8
QILN				SN	Sn	20 41 03.2	-8.7
QILN				Trac		20 41 08.1	
	comp=Z,1.4nm,0.2s						
KUGN	Kugaaruk Camp,	11.46	284	PN	Pn	20 39 25.8	-1.5
KUGN				SN	Sn	20 41 22.8	-12
KUGN				Trac		20 41 28.4	
	comp=Z,1.1nm,0.5s						
WAGN	Wager Bay	11.98	273	PN	Pn	20 39 31.5	-2.8
WAGN				SN	Sn	20 41 35.0	-12
WAGN				Trac		20 41 39.5	
	comp=Z,2.5nm,0.3s						
STLN	Stellar Camp,	12.76	282	PN	Pn	20 39 43.3	-1.7
STLN				SN	Sn	20 41 54.3	-12
STLN				Trac		20 41 57.2	
	comp=Z,0.7nm,0.3s						
NUNN	Nunuq Camp, NU	12.88	272	PN	Pn	20 39 43.9	-2.8
NUNN				SN	Sn	20 41 57.7	-12
NUNN				Trac		20 42 09.2	
	comp=Z,3.0nm,0.2s						
BULN	Bullion Camp,	13.14	278	PN	Pn	20 39 47.3	-3.0
BULN				SN	Sn	20 42 02.3	-13
SEDN	First Sedna Si	13.95	265	PN	Pn	20 39 59.2	-1.9
SEDN				SN	Sn	20 42 23.9	-11
SEDN				Trac		20 42 26.3	
	comp=Z,0.6nm,0.5s						

*CSEM **08** 20:42:21.0, 35°.60N×21°.40E, h11km, MD2.6, After ATH*
ATH 08 20:42:21.0, 35°.60N×**21°.40E, h11**km±7km**, MD2.6**/5**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYL	PYLOS	1.32	12	ePG	Pn	20 42 45.6	+0.2
PYL	PYLOS	1.32	12	ePg	Pn	20 42 45.6	+0.2
DYR	Agios Nikonas	1.38	33	ePB	Pb	20 42 47.2	+0.2
DYR	Agios Nikonas	1.38	33	ePb	Pb	20 42 47.2	+0.2
KYTH	Kithira	1.49	62	ePB	Pb	20 42 49.0	+0.2
KYTH	Kithira	1.49	62	ePb	Pb	20 42 49.0	+0.2
ITM	Ithomi	1.63	15	ePB	Pg	20 42 51.9	-0.5
ITM	Ithomi	1.63	15	ePb	Pg	20 42 51.9	-0.5
VLX	Vlachokerasia	1.94	24	ePN	Pb	20 42 56.0	-0.5
VLX	Vlachokerasia	1.94	24	ePn	Pb	20 42 56.0	-0.5

*CSEM **08** 20:49:13.1, 42°.29N×13°.50E, h9km, MD2.2/8, After ROM*
ROM 08 20:49:13.1±0.1**, 42°.29N**×**13°.50E, h9**km**, Md2.2**/8**, Ml1.1**/3**, Error ellipse: s-maj=0.9km s-min=0.8km az=28.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.07	110	Pg	Pg	20 49 15.6	+0.3
FAGN				Sg	Sg	20 49 17.0	+0.1
	406nm,0.5s						
FAGN	Fagnano	0.07	110	Pg	Pg	20 49 15.6	+0.3
FAGN				Sg	Sg	20 49 17.0	+0.1
	406nm,0.5s						
AQU	L'Aquila	0.09	313	Pg	Pg	20 49 16.0	+0.4
AQU				Sg	Sg	20 49 17.9	+0.5
AQU	L'Aquila	0.09	313	Pg	Pg	20 49 16.0	+0.4
AQU				Sg	Sg	20 49 17.9	+0.5
CAMP	Campotosto	0.25	345	Pg	Pg	20 49 18.9	+0.5
CAMP				Sg	Sg	20 49 23.2	+1.2
	22nm,0.7s						

CAMP	**Campotosto**	**0.25**	**345**	Pg	Pg	20 49 18.9	+0.5
CAMP				Sg	Sg	20 49 23.2	+1.2
	22nm,0.7s						
PTQR	**Pietraquaria**	**0.28**	**195**	Pg	Pg	20 49 19.5	+0.7
PTQR				Sg	Sb	20 49 24.2	-1.1
	3.0nm,0.2s						
PTQR	**Pietraquaria**	**0.28**	**195**	Pg	Pg	20 49 19.5	+0.7
PTQR				Sg	Sb	20 49 24.2	-1.1
	3.0nm,0.2s						
VCEL	**Villa Celiera**	**0.28**	**68**	Pg	Pb	20 49 20.1	-0.3
VCEL				Sg	Sb	20 49 24.4	-0.9
	39nm,0.7s						
VCEL	**Villa Celiera**	**0.28**	**68**	Pg	Pb	20 49 20.1	-0.3
VCEL				Sg	Sb	20 49 24.4	-0.9
	39nm,0.7s						
FIAM	**Fiamignano**	**0.28**	**266**	Pg	Pg	20 49 19.5	+0.6
FIAM				Sg	Sg	20 49 24.1	+1.3
FIAM	**Fiamignano**	**0.28**	**266**	Pg	Pg	20 49 19.5	+0.6
FIAM				Sg	Sg	20 49 24.1	+1.3
TERO	**Teramo**	**0.34**	**14**	Pg	Pg	20 49 20.1	+0.1
TERO				Sg	Sb	20 49 26.1	-1.0
	20nm,0.5s						
TERO	**Teramo**	**0.34**	**14**	Pg	Pg	20 49 20.1	+0.1
TERO				Sg	Sb	20 49 26.1	-1.0
	20nm,0.5s						
INTR	**Introdacqua**	**0.41**	**132**	Pg	Pg	20 49 21.9	+0.6
INTR	**Introdacqua**	**0.41**	**132**	Pg	Pg	20 49 21.9	+0.6

*BEO **08** 20:50:44.7±1.5, 41°.92N×25°.57E, h0km, ML2.1/3*
*CSEM **08** 20:50:46.9±0.2, 42°.11N×25°.49E, h2km, MD3.0, Error ellipse: s-maj=7.1km s-min=3.2km az=35.0*
*ISK **08** 20:50:48.2, 42°.04N×25°.64E, h6km, MD3.0*
ISC 08 20:50:46.5±1.6**, 42°.05N**±0°.04×**25°.51E**±0°.03**, h2**km±14km**, n39, σ0s.98**/49**, 5C-3D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDRB	**Edirne**	**0.94**	**102**	*e*PG	**Pg**	**20 51 04.5**	**-0.1**
EDRB				*e*SG	**Sb**	**20 51 17.2**	**-1.3**
EDRB	**Edirne**	**0.94**	**102**	*e*Pg	**Pg**	**20 51 04.5**	**-0.1**
EDRB				*e*Sg	**Sb**	**20 51 17.2**	**-1.3**
ALN	**Alexandroupoli**	**1.22**	**160**	*e*P	**Pn**	**20 51 11.0**	**+0.5**
NVR	**Nevrokopi**	**1.42**	**241**	*e*P	**Pn**	**20 51 13.8**	**+0.5**
ERIK	**Erikli-Kesan**	**1.57**	**151**	*e*PN	**Pn**	**20 51 15.8**	**+0.5**
ERIK				*e*SN	**Sg**	**20 51 37.0**	**+0.1**
ERIK	**Erikli-Kesan**	**1.57**	**151**	*e*Pn	**Pn**	**20 51 15.8**	**+0.5**
ERIK				*e*Sn	**Sg**	**20 51 37.0**	**+0.1**
SMTH	**Samothraki Isl**	**1.57**	**179**	*e*P	**Pn**	**20 51 16.5**	**+1.1**
ZIMR		**1.61**	**356**	⇓*i*P	**Pn**	**20 51 14.9**	**-1.0**
VTS	**Vitosha**	**1.79**	**288**	⇑*i*P	Pn	20 51 17.6	-0.9
VTS				S	**Sn**	**20 51 40.7**	**-1.2**
VTS	**Vitosha**	**1.79**	**288**	⇑*i*P	Pn	20 51 17.6	-0.9
VTS				S	**Sn**	**20 51 40.7**	**-1.2**
VTS				*e*Sn	**Sb**	**20 51 42.0**	**-1.0**
GELI	**Tayfur-Gelibol**	**1.80**	**156**	*e*PN	**Pb**	**20 51 20.5**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.80**	**156**	*e*Pn	**Pb**	**20 51 20.5**	**+0.4**
SART	**Tekirdag**	**1.85**	**137**	*i* P	**Pb**	**20 51 20.8**	**-0.2**
SART				*i* S	**Sg**	**20 51 46.1**	**+0.2**
SART	**Tekirdag**	**1.85**	**137**	*i* P	**Pb**	**20 51 20.8**	**-0.2**
SART				*i* S	**Sg**	**20 51 46.1**	**+0.2**
CRLT	**Corlu**	**1.91**	**118**	*e*PN	**Pb**	**20 51 21.2**	**-0.8**
CRLT	**Corlu**	**1.91**	**118**	*e*Pn	**Pb**	**20 51 21.2**	**-0.8**
LPK	**Lapseki**	**1.92**	**150**	*e*PN	**Pb**	**20 51 22.1**	**-0.1**
LPK	**Lapseki**	**1.92**	**150**	*e*Pn	**Pb**	**20 51 22.1**	**-0.1**
SOH	**Sokhos**	**2.03**	**234**	*e*P	**Pn**	**20 51 22.0**	**+0.3**
KRBG	**Karabiga-Canak**	**2.13**	**140**	*e*PN	**Pn**	**20 51 24.2**	**+1.1**
KRBG	**Karabiga-Canak**	**2.13**	**140**	*e*Pn	**Pn**	**20 51 24.2**	**+1.1**
MRMT	**Marmara Adasi**	**2.13**	**132**	*e*PN	**Pn**	**20 51 23.7**	**+0.6**
MRMT	**Marmara Adasi**	**2.13**	**132**	*e*Pn	**Pn**	**20 51 23.7**	**+0.6**
LIA	**Limnos Island**	**2.16**	**187**	*e*P	**Pn**	**20 51 23.4**	**0.0**
SLVT	**Silivri**	**2.18**	**111**	*e*PN	**Pb**	**20 51 25.4**	**-1.3**
SLVT	**Silivri**	**2.18**	**111**	*e*Pn	**Pb**	**20 51 25.4**	**-1.3**
PLG	**Polygyros**	**2.28**	**224**	*e*P	**Pb**	**20 51 29.0**	**+0.6**
CTKS	**Kestanelik-??a**	**2.39**	**109**	*e*PN	**Pn**	**20 51 27.0**	**+0.4**
CTKS	**Kestanelik-??a**	**2.39**	**109**	*e*Pn	**Pn**	**20 51 27.0**	**+0.4**
ZAPS	**Zavoj**	**2.45**	**301**	*e*Pn	**Pn**	**20 51 27.2**	**-0.3**
ZAPS				*e*Sn	**Sn**	**20 51 59.5**	**+1.5**
PAIG	**Paliouri**	**2.53**	**214**	*e*P	**Pn**	**20 51 28.5**	**0.0**
GRG	**Griva**	**2.58**	**246**	*e*P	**Pb**	**20 51 34.1**	**+0.7**
BARS	**Barje**	**2.84**	**287**	*e*Pn	**Pn**	**20 51 32.7**	**-0.1**
BARS				*e*Sn	**Sn**	**20 52 08.2**	**+0.6**
BARS	**Barje**	**2.84**	**287**	*e*Pn	**Pn**	**20 51 32.7**	**-0.1**
BARS				*e*Sn	**Sn**	**20 52 08.2**	**+0.6**
TIRR	**Tirgusor**	**3.21**	**40**	⇑*i*P	**Pn**	**20 51 40.9**	**+3.0**
MLR	**Muntele Rosu**	**3.46**	**5**	⇓*i*P	**Pn**	**20 51 41.7**	**+0.3**
MLR	**Muntele Rosu**	**3.46**	**5**	⇓*i*P	**Pn**	**20 51 41.7**	**+0.3**
CFR	**Carcaliu**	**3.67**	**30**	⇑*i*P	**Pn**	**20 51 46.5**	**+2.4**
CFR	**Carcaliu**	**3.67**	**30**	⇑*i*P	**Pn**	**20 51 46.5**	**+2.4**

*IDC **08** 20:55:33.9±1.8, 80°.39N×1°.12W, h0km, mb3.1/3, mb1 3.6/4, mb1mx3.2/27, mbtmp3.4/4, ML4.7/1, Error ellipse: s-maj=57.5km s-min=23.2km az=45.0*
*BER **08** 20:55:45.7±3.9, 80°.90N×10°.36E, h10km, MD2.4, ML2.0*
ISC 08 20:55:32.9±1.0**, 80°.3N**±0°.1×**1°.73W**±0°.07**, h10**km**, n10, σ2s.63**/11**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.83**	**112**	*e*P	**Pn**	**20 56 17.7**	**-0.3**
KBS				*e*Sg	**Sn**	**20 56 48.6**	**-3.5**
KBS				AML	AML	20 56 52.4	
	comp=Z,21nm,0.4s						
SPA0	**Spitsbergen Ar**	**3.99**	**113**	*e*Pn	**Pn**	**20 56 34.3**	**+0.4**
SPA0				*e*Pg	Pb	20 56 35.6	-7.5
SPA0				*e*Sg	**Sn**	**20 57 18.3**	**-2.3**
SPITS	**Spitsbergen Ar**	**3.99**	**113**	Pn	**Pn**	**20 56 34.3**	**+0.4**
	baz=329,slow=8.0,SNR=339						
SPITS				Sn	**Sn**	**20 57 17.9**	**-2.8**
	baz=7.7,slow=8.7,SNR=5.2						
DAG	**Danmarks Havn**	**4.87**	**232**	*i* P	**Pn**	**20 56 45.0**	**-1.0**
DAG				*i* S	Sn	20 57 37.3	-4.9
SUMG	**Summit**	**11.28**	**247**	*i* P	Pn	20 58 10.8	-3.3
SUMG				*e*S	Sn	21 00 10.3	-10
ARA0	**ARCESS Array S**	**12.68**	**133**	Pn	**Pn**	**20 58 33.8**	**+0.8**
	baz=353,slow=16						
RES	**Resolute Bay**	**18.64**	**304**	P	**P**	**20 59 46.2**	**-3.9**
	comp=Z,0.1nm,0.3s,baz=30,slow=10.0,SNR=6.1						
FINES	**FINESS Array B**	**20.55**	**140**	P	Pn	21 00 13.7	+0.5
	comp=Z,0.6nm,0.6s,baz=336,slow=13,SNR=2.4						
GERES	**GERESS Array B**	**32.02**	**161**	P	**P**	**21 02 02.0**	**+3.0**
	comp=Z,0.4nm,0.7s,baz=356,slow=11,SNR=3.2						
ILAR	**Eielson Array**	**33.83**	**334**	P	**P**	**21 02 16.6**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=8.5,slow=6.7,SNR=2.8						

*NIED **08** 20:58:00, 31°.00N×139°.00E, h440km, Mw4.2 Best double couple: M₀2.13000×10^15 NP1:φs2.00000°, δ61.00000°, λ-58.00000°. NP2:φs129.00000°, δ42.00000°, λ-135.00000°.*
*JMA **08** 20:58:02.6±0.3, 31°.03N×138°.96E, h425km±4km, M3.6*
*BJI **08** 20:58:02.4, 30°.69N×138°.76E, h419km, mB4.5/8, mb4.2/16*
*MOS **08** 20:58:03.8±0.9, 31°.01N×138°.46E, h396km, mb4.2/22, Error ellipse: s-maj=13.3km s-min=7.1km az=111.1*
*IDC **08** 20:58:04.4±0.6, 31°.03N×138°.50E, h386km±6km, mb3.5/20, mb1 3.5/26, mb1mx3.5/34, mbtmp3.4/26, Error ellipse: s-maj=12.3km s-min=8.7km az=87.0*
*ISCJB **08** 20:58:04.0±0.5, 31°.06N±0°.05×138°.63E±0°.07, h402km±3km, mb4.0/37, Error ellipse: s-maj=9.5km s-min=7.1km az=28.2*
ISC 08 20:58:05.5±0.8**, 31°.12N**±0°.07×**138°.62E**±0°.07**, h400**km±6km**, n92, σ1s.19**/110**, mb4.1**/37**, 3C-7D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.19**	**27**	P	**Pn**	**20 59 02.4**	**-0.2**
JHCJ				*e*S	**S**	**20 59 48.5**	**-0.3**
JHJ	**Hachijo jima 2**	**2.23**	**26**	P	**Pn**	**20 59 02.1**	**-0.7**
	27nm,0.3s,baz=219,slow=11,SNR=64						
JHJ				S	**S**	**20 59 47.1**	**-2.2**
	47nm,0.3s,baz=75,slow=20,SNR=13						
JHJ2	**Mitsune**	**2.24**	**27**	P	**Pn**	**20 59 02.8**	**0.0**
TK02	**Tokai 2**	**2.91**	**346**	P	**Pn**	**20 59 09.0**	**+1.4**
TTO2	**TONANKAI O.B.S**	**2.94**	**333**	P	**Pn**	**20 59 09.3**	**+1.6**
TTO2				*e*S	**S**	**21 00 01.5**	**+3.3**
TTO1	**TONANKAI O.B.S**	**2.94**	**329**	P	**Pn**	**20 59 09.0**	**+1.3**
TTO4	**TONANKAI O.B.S**	**3.02**	**343**	P	**Pn**	**20 59 09.8**	**+1.3**
JIE	**Ise**	**3.64**	**334**	P	**Pn**	**20 59 15.3**	**+1.2**
BSO1	**Boso 1**	**4.05**	**29**	P	**Pn**	**20 59 16.4**	**-0.9**
BSO1				*e*S	**S**	**21 00 13.7**	**-2.0**
JOD2	**Odawara 2**	**4.16**	**5**	P	**Pn**	**20 59 19.0**	**0.0**
JOD2				*e*S	**S**	**21 00 16.9**	**-1.7**
JRY	**Ryogami san**	**4.89**	**3**	P	**Pn**	**20 59 26.2**	**-0.1**
JRY				*e*S	**S**	**21 00 29.3**	**-2.8**
CBIJ	**Chichi jima**	**5.08**	**141**	P	Pn	20 59 23.9	-4.5
CBIJ				*e*S	S	21 00 27.3	-8.4
JTO	**Tosashimizu**	**5.24**	**291**	P	**Pn**	**20 59 29.9**	**0.0**
MJAR	**Matsushiro Arr**	**5.42**	**357**	P	**Pn**	**20 59 31.6**	**-0.2**
	1.9nm,0.3s,baz=203,slow=7.4,SNR=26						
MJAR				S	**S**	**21 00 39.0**	**-3.2**
	0.6nm,0.3s,baz=60,slow=13,SNR=4.1						
MAT	**Matsushiro**	**5.42**	**357**	P	**Pn**	**20 59 31.9**	**+0.1**
MAT				S	**S**	**21 00 41.3**	**-0.9**
MAT	**Matsushiro**	**5.42**	**357**	P	**Pn**	**20 59 31.8**	**0.0**
MAT				*e*S	**S**	**21 00 41.2**	**-0.9**
JNU	**Nakatsue**	**6.86**	**289**	P	**Pn**	**20 59 47.1**	**-0.5**
	0.3nm,0.3s,baz=133,slow=7.1,SNR=8.9						
JMK	**Ichinoseki**	**8.10**	**15**	P	**P**	**21 00 01.6**	**-0.3**
JMK				*e*S	**S**	**21 01 32.4**	**-4.2**
KSRS	**Korea Array**	**10.87**	**308**	P	**P**	**21 00 32.9**	**+0.3**
	0.4nm,0.3s,baz=123,slow=11,SNR=10						
ERM	**Erimo**	**11.47**	**17**	*ce*P	**Pn**	**21 00 42.1**	**+1.7**
ERM				pmax	pmax		
	comp=Z,35nm,1.0s						
ASAJ	**Asahikawa**	**13.35**	**13**	P	**Pn**	**21 01 01.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=228,slow=16,SNR=2.9						
ASAJ				S	**S**	**21 03 23.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=266,slow=16,SNR=2.7						
USRK	**Ussuriysk Arra**	**14.06**	**340**	P	**P**	**21 01 08.4**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=165,slow=10,SNR=4.2						
YSS	**Yuzh-Sakhalins**	**16.14**	**10**	*e*P	**Pn**	**21 01 33.2**	**-0.4**
HABR	**Khabarovsk**	**17.55**	**352**	*e*P	**P**	**21 01 43.9**	**-1.1**
HABR				MLR	MLR		
	comp=Z,218nm,18.0s						
SONM	**Songino Array**	**29.67**	**313**	P	**P**	**21 03 36.5**	**+0.1**
	comp=Z,3.1nm,0.8s,baz=122,slow=8.3,SNR=22						
SONM				PcP	**PcP**	**21 06 29.6**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=126,slow=2.7,SNR=4.1						
GTA	**Gaotai**	**32.55**	**296**	*e*P	**P**	**21 04 01.0**	**-0.4**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ZAK	**Zakamensk**	**32.55**	**317**	*e*P	**P**	**21 04 00.0**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
FX1	**Attu Island--F**	**33.16**	**39**	P	**P**	**21 04 08.2**	**+1.9**
	comp=Z,1.4nm,0.5s,baz=236,slow=3.6,SNR=5.2						
CMAR	**Chiang Mai Arr**	**37.96**	**260**	P	**P**	**21 04 46.2**	**-0.8**
	comp=Z,1.8nm,0.7s,baz=57,slow=7.3,SNR=16						
HVS	**Khovu-Aksy**	**38.56**	**314**	*d i*P	**P**	**21 04 51.9**	**+0.3**
HVS				pmax	pmax		
	comp=Z,45nm,1.0s						
BILL	**Bilibino**	**40.34**	**16**	⇑*i*P	**P**	**21 05 07.6**	**+1.8**
BILL				pmax	pmax		
	comp=Z,32nm,2.1s						
TAPN	**Taplejung**	**44.27**	**279**	*e*P	**P**	**21 05 37.1**	**-0.9**
	comp=Z,4.6nm,0.7s						
ZALV	**Zalesovo Beam**	**44.42**	**317**	P	**P**	**21 05 37.8**	**-0.6**
ZALV						21 07 13.9	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	**Zalesovo Beam**	**44.42**	**317**	P	**P**	**21 05 37.8**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=93,slow=7.8,SNR=17						
ZALV				PcP	**PcP**	**21 07 13.9**	**-0.1**
	comp=Z,3.1nm,0.6s,baz=104,slow=3.1,SNR=17						
ODAN	**Odare**	**44.69**	**278**	*e*P	**P**	**21 05 40.3**	**-0.9**
	comp=Z,6.9nm,0.4s						
RAMN	**Ramite**	**45.33**	**278**	*e*P	**P**	**21 05 45.3**	**-0.9**
	comp=Z,15nm,0.7s						
NVS	**Novosibirsk**	**45.47**	**318**	*e*P	**P**	**21 05 45.4**	**-1.1**
MKAR	**Makanchi Array**	**45.54**	**307**	P	**P**	**21 05 46.9**	**-0.4**
MKAR						21 07 17.9	
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**45.54**	**307**	P	**P**	**21 05 46.9**	**-0.4**
	comp=Z,5.7nm,0.7s,baz=89,slow=9.7,SNR=89						
MKAR				PcP	**PcP**	**21 07 17.9**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=116,slow=3.4,SNR=3.7						
MKAR				ScP	**ScP**	**21 10 32.5**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=110,slow=4.1,SNR=3.7						
GUN	**Gumba**	**45.65**	**280**	*e*P	**P**	**21 05 48.5**	**-0.3**
	comp=Z,22nm,0.7s						
KKN	**Kakani**	**46.19**	**280**	*e*P	**P**	**21 05 52.2**	**-0.6**
DMN	**Daman**	**46.40**	**280**	*e*P	**P**	**21 05 53.6**	**-0.8**
	comp=Z,5.7nm,0.5s						
DANN	**Dangsing**	**47.31**	**281**	*e*P	**P**	**21 06 01.3**	**-0.1**
	comp=Z,15nm,0.5s						
KOLN	**Koldanda**	**47.62**	**281**	*e*P	**P**	**21 06 03.3**	**-0.4**
	comp=Z,19nm,0.7s						
KURK	**Kurchatov**	**47.96**	**312**	⇓*e*P	**P**	**21 06 04.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,11nm,1.2s						
PYUN	**Piuthan**	**48.03**	**281**	*e*P	**P**	**21 06 06.6**	**-0.2**
	comp=Z,42nm,0.5s						
ULHL	**Ulahol**	**50.23**	**301**	*i* P	**P**	**21 06 23.3**	**+0.2**
ULHL	**Ulahol**	**50.23**	**301**	P	**P**	**21 06 23.2**	**+0.2**
	SNR=10.0						
FITZ	**Fitzroy Crossi**	**50.50**	**196**	P	**P**	**21 06 24.3**	**-0.7**
	comp=Z,1.9nm,0.5s,baz=27,slow=7.9						
TKM2	**Tokmak 2**	**50.60**	**302**	*i* P	**P**	**21 06 26.2**	**+0.5**
TKM2	**Tokmak 2**	**50.60**	**302**	P	**P**	**21 06 26.2**	**+0.5**
	SNR=5.7						
KSH	**Kashi**	**50.89**	**298**	⇓*i*P	P	21 06 31.2	+3.3
KSH				*e*pP	pP	21 07 54.2	+5.6
KSH				*e*PP	**PP**	**21 08 32.6**	**+3.7**
KSH				*e*sP	sP	21 08 39.1	+6.1
KSH				*e*S	**S**	**21 13 09.4**	**-3.8**
KSH				ScS	**ScS**	**21 15 35.2**	**-0.4**
KSH				pmax	pmax		
	comp=Z,20nm,0.7s						
KSH				pmax	pmax		
	comp=Z,200nm,4.8s						
KSH				LR	LR		
	comp=N,290nm,3.8s						
KSH				LR	LR		
	comp=E,180nm,10.8s						
KSH				LR	LR		
	comp=Z,260nm,4.7s						
WRA	**Warramunga Arr**	**50.93**	**185**	P	**P**	**21 06 27.0**	**-1.1**
	comp=Z,4.5nm,0.5s,baz=0.1,slow=7.7,SNR=53						
WRA				PcP	**PcP**	**21 07 38.8**	**+0.8**
	comp=Z,1.8nm,1.0s,baz=0.3,slow=4.5,SNR=5.3						
KZA	**Kyzart**	**50.98**	**301**	*i* P	**P**	**21 06 29.9**	**+1.1**
KZA	**Kyzart**	**50.98**	**301**	P	**P**	**21 06 29.9**	**+1.1**
	SNR=8.4						
KBK	**Karagaybulak**	**51.11**	**302**	*i* P	**P**	**21 06 29.8**	**+0.3**
KBK	**Karagaybulak**	**51.11**	**302**	P	**P**	**21 06 29.8**	**+0.3**
	SNR=9.5						
AAK	**Ala-Archa**	**51.44**	**302**	*d i*P	**P**	**21 06 31.6**	**-0.3**
AAK	**Ala-Archa**	**51.44**	**302**	P	**P**	**21 06 32.2**	**+0.3**
	SNR=7.3						
AML	**Almayashu**	**52.11**	**301**	*i* P	**P**	**21 06 37.9**	**+0.8**
AML	**Almayashu**	**52.11**	**301**	P	**P**	**21 06 37.9**	**+0.8**
	SNR=24						
BRVK	**Borovoye**	**53.05**	**315**	*d i*P	**P**	**21 06 43.1**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KDAK	**Kodiak Island**	**53.10**	**39**	P	**P**	**21 06 45.0**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=248,slow=5.4,SNR=6.8						
ASAR	**Alice Springs**	**54.66**	**185**	P	**P**	**21 06 54.2**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=14,slow=12,SNR=39						
ASAR				ScP	**ScP**	**21 11 12.1**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=359,slow=4.6,SNR=4.4						
ILAR	**Eielson Array**	**55.75**	**30**	P	**P**	**21 07 02.9**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=258,slow=5.4,SNR=6.9						
SVE	**Sverdlovsk**	**58.15**	**321**	*e*P	**P**	**21 07 19.5**	**+0.7**
ARU	**Arti**	**59.34**	**320**	*d i*P	**P**	**21 07 26.7**	**-0.3**
ARU						21 09 41.4	
ARU				S	S	21 14 56.3	-7.1
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						
STKA	**Stephens Creek**	**62.71**	**177**	P	**P**	**21 07 49.4**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=345,slow=7.7,SNR=8.5						
ARCES	**ARCESS Array B**	**68.72**	**340**	P	**P**	**21 08 27.7**	**+0.7**
	comp=Z,1.2nm,0.5s,baz=67,slow=7.8,SNR=16						
YKA	**Yellowknife Ar**	**70.09**	**28**	P	**P**	**21 08 36.5**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=297,slow=6.3,SNR=5.3						
JOF	**Joensuu**	**70.09**	**332**	*e*P	**P**	**21 08 34.5**	**-0.9**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JOF	**Joensuu**	**70.09**	**332**	*e*p	**P**	**21 08 34.5**	**-0.9**
	comp=Z,3.2nm,0.5s						
OBN	**Obninsk**	**71.45**	**324**	⇓*i*P	**P**	**21 08 43.1**	**-0.5**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VSR	**Storozhevoye**	**71.87**	**319**	*e*P	**P**	**21 08 45.9**	**-0.3**
VSR				pmax	pmax		
	comp=N,8.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,9.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KAF	**Kangasniemi**	**72.50**	**333**	*e*P	**P**	**21 08 48.6**	**-1.0**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KAF	**Kangasniemi**	**72.50**	**333**	*e*p	**P**	**21 08 48.6**	**-1.0**
	comp=Z,3.2nm,0.7s						
FINES	**FINESS Array B**	**72.96**	**332**	P	**P**	**21 08 52.7**	**+0.4**
	comp=Z,3.1nm,0.5s,baz=55,slow=5.8,SNR=50						
KBZ	**Khabaz**	**73.01**	**311**	P	**P**	**21 08 53.5**	**+0.6**
KBZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KBZ	**Khabaz**	**73.01**	**311**	P	**P**	**21 08 53.5**	**+0.6**
	comp=Z,6.5nm,0.8s,baz=99,slow=3.9,SNR=12						
KIV	**Kislovodsk**	**73.04**	**311**	⇑*e*P	**P**	**21 08 55.3**	**+2.0**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
UMR	**Umm Al-Rimmam**	**76.08**	**296**	*e*P	**P**	**21 09 09.7**	**-1.0**
UMR				AMb	AMB	21 09 10.6	
	comp=Z,12nm,0.5s						
MIB	**Mutribah**	**76.25**	**297**	*e*P	**P**	**21 09 10.6**	**-1.1**
MIB				AMb	AMB	21 09 11.5	
	comp=Z,16nm,0.6s						
RDF	**Al-Radifah**	**76.50**	**296**	*e*P	**P**	**21 09 12.8**	**-0.2**
RDF				AMb	AMB	21 09 13.8	
	comp=Z,16nm,0.6s						
NAY	**Al-Naaiem**	**76.58**	**296**	*e*P	**P**	**21 09 12.7**	**-0.8**
NAY				AMb	AMB	21 09 13.4	
	comp=Z,10nm,0.6s						
AKASG	**Malin Array Be**	**77.54**	**322**	P	**P**	**21 09 18.1**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	**Malin Array Be**	**77.54**	**322**	P	**P**	**21 09 18.1**	**-0.2**
	comp=Z,2.8nm,0.4s,baz=51,slow=5.7,SNR=19						
HFS	**Hagfors**	**78.49**	**335**	P	**P**	**21 09 23.3**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=64,slow=3.4,SNR=7.1						
NOA	**NORSAR Array B**	**78.72**	**337**	P	**P**	**21 09 24.8**	**+0.2**
	comp=Z,1.8nm,0.9s,baz=47,slow=5.2,SNR=3.5						
BRTR	**Keskin Array B**	**81.00**	**311**	P	**P**	**21 09 37.4**	**+0.1**
	comp=Z,1.8nm,0.7s,baz=82,slow=3.4,SNR=9.7						
GERES	**GERESS Array B**	**86.46**	**327**	P	**P**	**21 10 03.1**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=32,slow=5.8,SNR=5.2						
TORD	**Torodi Ar. Bea**	**119.60**	**310**	PKP	**PKPdf**	**21 16 08.6**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=5.8,slow=1.0,SNR=5.7						
LPAZ	**La Paz**	**151.51**	**65**	PKPbc	**PKPbc**	**21 17 15.6**	**+1.2**
	comp=Z,1.0nm,0.9s,baz=242,slow=5.3,SNR=3.9						

*IDC **08** 21:07:09.6±0.7, 3°.57N×126°.92E, h0km, mb3.8/12, mb1 3.9/12, mb1mx3.8/27, mbtmp3.8/12, MS2.7/1, Ms1 2.7/1, ms1mx2.1/42, Error ellipse: s-maj=44.2km s-min=13.8km az=71.0*
*DJA **08** 21:07:10.5±0.8, 4°N±6°×12°7E±°, h52km±9km, M4.7/6, mb4.9/5, mB6.3/2, MLv4.5/6, Mw(mB)6.0/2, Mwp5.9/1*
*NEIC **08** 21:07:15.1±0.6, 3°.53N×126°.90E, h35km, mb4.5/2, Error ellipse: s-maj=35.1km s-min=10.0km az=72.0*
*ISCJB **08** 21:07:15.1±0.4, 3°.61N±0°.04×126°.82E±0°.06, h48km, mb4.1/15, Error ellipse: s-maj=9.3km s-min=5.5km az=164.6*
*AUST **08** 21:07:21.6±0.7, 3°.40N×127°.01E, h102km, Error ellipse: s-maj=1.5km s-min=1.2km az=293.0*
ISC 08 21:07:16.9±0.6**, 3°.58N**±0°.07×**126°.83E**±0°.09**, h48**km**, n50, σ1s.40**/45**, mb3.8**/15**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.98**	**151**	P	**Pn**	**21 07 47.5**	**-0.5**
GAMI				S	Sn	21 08 21.0	+9.4
TNTI	**Ternate**	**2.84**	**169**	P	**Pn**	**21 08 01.0**	**+1.2**
TNTI				S	**Sn**	**21 08 34.4**	**+1.6**
MNI	**Manado**	**2.90**	**223**	P	**Pn**	**21 08 00.9**	**+0.2**
MNI				S	Sn	21 08 41.9	+7.5
KMSI	**Cibinong**	**4.12**	**224**	P	**Pn**	**21 08 19.8**	**+2.4**
LBMI	**Labuha**	**4.24**	**171**	P	**Pn**	**21 08 21.6**	**+2.5**
CTBH	**Cotabato--PC H**	**4.44**	**325**	⇑*i*P	Pn	21 08 25.8	+4.1
MRSI	**Marisa**	**5.77**	**238**	P	**Pn**	**21 08 40.9**	**+0.8**
LUWI	**Luwuk**	**6.12**	**222**	P	**Pn**	**21 08 44.9**	**0.0**
	65nm,0.7s,989nm0.3nm						
LUWI	**Luwuk**	**6.12**	**222**	P	Pn	21 08 49.7	+4.8
	baz=6.1,SNR=4.0						
SWI	**Sorong**	**6.25**	**135**	P	**Pn**	**21 08 47.4**	**+0.7**
	43nm,0.6s,0.2nm						
SWI	**Sorong**	**6.25**	**135**	P	**Pn**	**21 08 47.7**	**+1.0**
	baz=6.0,SNR=8.9						
FAKI	**Fak Fak**	**8.43**	**140**	P	**Pn**	**21 09 18.3**	**+1.8**
	baz=8.2,SNR=9.5						
MYLDM	**Lahad Datu**	**8.45**	**281**	P	Pn	21 09 08.5	-8.3
	12nm,1.4s						
PALU	**Palau**	**8.48**	**64**	P	Pn	21 09 20.7	+3.5
	baz=8.4,SNR=5.0						
TTSI	**Tana Toraja**	**9.61**	**227**	P	**Pn**	**21 09 31.8**	**-0.9**
KAPI	**Kappang**	**11.08**	**220**	LR	LR	21 14 30.9	
	comp=Z,37nm,20.4s,baz=220,slow=40						
MTN	**Manton Dam**	**16.87**	**165**	P	**Pn**	**21 11 07.1**	**-2.6**
	baz=17,SNR=9.8						
MTN				S	Sn	21 13 50.3	-26
	baz=17,SNR=5.8						
KDU	**Kakadu**	**17.11**	**161**	P	**Pn**	**21 11 12.2**	**-0.5**
	baz=17,SNR=6.0						
KNRA	**Kununurra**	**19.23**	**174**	P	**Pn**	**21 11 38.5**	**-0.1**
	baz=19,SNR=9.3						
FITZ	**Fitzroy Crossi**	**21.57**	**183**	P	**P**	**21 12 01.0**	**-1.7**
FITZ	**Fitzroy Crossi**	**21.57**	**183**	P	**P**	**21 12 01.0**	**-1.7**
	1.7nm,0.4s,baz=19,slow=11,SNR=12						
FITZ	**Fitzroy Crossi**	**21.57**	**183**	P	**P**	**21 12 02.9**	**+0.2**
	baz=22,SNR=9.5						
WRAB	**Tennant Creek**	**24.51**	**163**	*e*P	**P**	**21 12 30.5**	**-1.5**
	19nm,1.0s						
WRA	**Warramunga Arr**	**24.51**	**163**	P	**P**	**21 12 30.4**	**-1.7**
WRA	**Warramunga Arr**	**24.51**	**163**	P	**P**	**21 12 30.4**	**-1.7**
	12nm,0.9s,baz=342,slow=10,SNR=37						
RGRI	**Rengat**	**24.79**	**261**	P	P	21 12 25.8	-8.8
	953nm,0.4s,207µm16µm						
AS31	**Alice Springs**	**27.94**	**166**	*e*P	**P**	**21 13 03.0**	**0.0**
ASAR	**Alice Springs**	**27.95**	**166**	P	**P**	**21 13 01.2**	**-1.7**
ASAR	**Alice Springs**	**27.95**	**166**	P	**P**	**21 13 01.2**	**-1.7**
	0.8nm,0.5s,baz=345,slow=9.0,SNR=13						
CMAR	**Chiang Mai Arr**	**31.03**	**301**	P	**P**	**21 13 31.4**	**+0.9**
CMAR	**Chiang Mai Arr**	**31.03**	**301**	P	**P**	**21 13 31.4**	**+0.9**
	0.3nm,0.7s,baz=114,slow=7.5,SNR=2.8						
KSAR	**Wonju Array Be**	**33.72**	**2**	P	**P**	**21 13 53.1**	**-0.5**
KSRS	**Korea Array**	**33.73**	**2**	P	**P**	**21 13 53.1**	**-0.6**
	0.4nm,0.4s,baz=182,slow=10,SNR=2.9						
STKA	**Stephens Creek**	**37.95**	**159**	P	**P**	**21 14 29.2**	**-0.8**
STKA	**Stephens Creek**	**37.95**	**159**	P	**P**	**21 14 29.2**	**-0.8**
	5.4nm,0.8s,baz=335,slow=8.8,SNR=13						
STKA	**Stephens Creek**	**37.95**	**159**	P	**P**	**21 14 30.6**	**+0.5**
	baz=38,SNR=10						
ULN	**Ulaanbaatar**	**47.29**	**342**	P	**P**	**21 15 47.4**	**+1.6**
SONM	**Songino Array**	**47.47**	**341**	P	**P**	**21 15 48.4**	**+1.2**
SONM	**Songino Array**	**47.47**	**341**	P	**P**	**21 15 48.4**	**+1.2**
	0.3nm,0.5s,baz=160,slow=7.3,SNR=3.7						
MK31	**Makanchi Array**	**57.73**	**325**	*e*P	**P**	**21 17 03.5**	**+0.6**
MKAR	**Makanchi Array**	**57.73**	**325**	P	**P**	**21 17 00.9**	**-2.1**
MKAR	**Makanchi Array**	**57.73**	**325**	P	**P**	**21 17 00.9**	**-2.1**
	0.4nm,0.5s,baz=120,slow=8.0,SNR=14						
KURBB	**Kurchatov Arra**	**61.92**	**327**	P	**P**	**21 17 30.4**	**-1.2**
	0.6nm,0.5s,baz=129,slow=6.5,SNR=12						
KURK	**Kurchatov**	**61.92**	**328**	*e*P	**P**	**21 17 28.7**	**-2.9**
	2.0nm,0.6s						
BVAR	**Borovoye Array**	**67.50**	**327**	P	**P**	**21 18 08.3**	**+0.3**
BVAR	**Borovoye Array**	**67.50**	**327**	P	**P**	**21 18 08.3**	**+0.3**
	0.3nm,0.5s,baz=122,slow=5.2,SNR=4.7						
AKTO	**Aktyubinsk**	**73.84**	**322**	P	**P**	**21 18 48.0**	**+1.4**
AKTO	**Aktyubinsk**	**73.84**	**322**	P	**P**	**21 18 48.0**	**+1.4**
	0.6nm,0.4s,baz=118,slow=9.3,SNR=3.8						
ILAR	**Eielson Array**	**85.20**	**25**	P	**P**	**21 19 47.4**	**-0.6**
ILAR	**Eielson Array**	**85.20**	**25**	P	**P**	**21 19 47.4**	**-0.6**
	0.3nm,0.9s,baz=251,slow=5.6,SNR=3.4						

*IDC **08** 21:19:60.0±9.9, 30°.65S×178°.35W, h70km±91km, mb3.8/3, mb1 4.0/4, mb1mx3.6/18, mbtmp3.8/4, ML3.5/1, Error ellipse: s-maj=73.0km s-min=43.3km az=179.0*
*ISCJB **08** 21:19:59.7±1.8, 31°.12S±0°.10×178°.3W±0°.3, h87km,*

mb4.1/3, Error ellipse: s-maj=44.0km s-min=6.2km az=16.7

ISC 08 21:20:00.8±1.7**, 31°.1S**±0°.1×**178°.2W**±0°.3**, h87**km**, n13, σ1s.60**/13**, mb4.2**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.86	8	S	Sn	21 20 53.9	-0.2
	211nm,0.3s,baz=263,slow=21,SNR=4.2						
URZ	Urewera	8.11	207	P	Pn	21 22 00.7	+5.0
	0.6nm,0.3s,baz=102,slow=7.3,SNR=6.3						
URZ				S	Sn	21 23 32.7	+7.0
	2.5nm,0.3s,baz=144,slow=19,SNR=13						
PRWZ	Pori Road	10.54	205	eSN	Sn	21 24 28.3	+3.2
MRZ	Mangatainoka R	10.78	206	ePN	Pn	21 22 31.5	-0.6
MRZ				eSN	Sn	21 24 31.3	+0.4
TCW	Tory Channel	11.77	209	eSN	Sn	21 24 54.2	-0.7
NNZ	Nelson	12.16	212	eSN	Sn	21 25 03.8	-0.6
KHZ	Kahutara	13.08	208	SN	Sn	21 25 23.9	-2.7
STKA	Stephens Creek	34.14	258	P	P	21 26 39.3	+1.8
	1.8nm,0.5s,baz=90,slow=9.0,SNR=18						
ASAR	Alice Springs	42.89	268	P	P	21 27 50.4	-0.5
	0.7nm,0.3s,baz=106,slow=7.3,SNR=15						
WRA	Warramunga Arr	43.94	273	P	P	21 27 58.3	-1.0
	1.7nm,0.3s,baz=111,slow=8.1,SNR=25						
ARCES	ARCESS Array B	139.23	347	PKhKP	PKPpre	21 39 10.2	
	2.6nm,1.0s,baz=46,slow=2.6,SNR=4.0						
ARCES				PKP	PKPdf	21 39 17.4	+0.7
	1.8nm,0.8s,baz=29,slow=2.1,SNR=3.6						
FINES	FINESS Array B	145.73	339	PKPbc	PKPdf	21 39 27.2	-1.2
	1.1nm,0.3s,baz=34,slow=2.9,SNR=25						
AKASG	Malin Array Be	151.74	322	PKPbc	PKPbc	21 39 45.3	+0.5
	0.2nm,0.4s,baz=58,slow=2.1,SNR=4.5						

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*BJI **08** 21:22:28.0, 58°.17N×164°.36E, h17km, mB5.6/47, mb5.3/66, Ms5.4/75, Ms7 5.2/71*

*ISCJB **08** 21:22:29.8±0.6, 58°.06N±0°.02×164°.32E±0°.02, h20km±4km, mb5.5/389, MS4.8/169, Error ellipse: s-maj=3.1km s-min=1.8km az=149.8*

*NEIC **08** 21:22:29.9±1.4, 58°.13N×164°.26E, h9km±9km, mb5.6/244, MS4.7/73, MW5.4, MW5.4, Error ellipse: s-maj=3.1km s-min=1.9km az=166.0, Moment Tensor Solution. s61 Moment tensor: Scale 10^{17}Nm; M_{rr}1.40; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-0.66; $M_{r\theta}$-0.64; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.04; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s244.00000°, δ57.00000°, λ104.00000°. NP2:ϕ_s39.00000°, δ36.00000°, λ69.00000°. Principal axes: T 1.5900, Plg73.0000°, Azm192.0000°; N -0.4200, Plg11.0000°, Azm56.0000°; P -1.1600, Plg10.0000°, Azm323.0000°;*

*IDC **08** 21:22:30.3±3.0, 58°.08N×164°.32E, h12km±19km, mb5.0/43, mb1 5.1/46, mb1mx5.1/47, mbtmp5.0/46, ML4.1/3, MS4.6/48, Ms1 4.6/48, ms1mx4.5/59 Error ellipse: s-maj=9.1km s-min=8.0km az=146.0*

*MOS **08** 21:22:30.3±0.8, 58°.04N×164°.30E, h25km, mb5.8/128, MS4.8/73, Error ellipse: s-maj=6.7km s-min=3.4km az=90.7*

*KRSC **08** 21:22:30.4±0.9, 58°.00N×164°.52E, h23km±18km, ML5.5*

*TEH **08** 21:22:32.5, 58°.25N×164°.13E, h33km, ML5.4*

*GCMT **08** 21:22:34.1±0.1, 58°.10N×164°.59E, h12km, MW5.4, Moment Tensor Solution. s82,c153; s32,c32; Moment tensor: Scale 10^{17}Nm; M_{rr}1.40±.02; $M_{\theta\theta}$-0.50±.02; $M_{\phi\phi}$-0.90±.01; $M_{r\theta}$0.21±.04; $M_{\theta\phi}$-0.63±.01; $M_{\phi r}$0.01±.04; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s210.00000°, δ43.00000°, λ80.00000°. NP2:ϕ_s43.00000°, δ48.00000°, λ99.00000°. Principal axes: T 1.4300, Plg83.0000°, Azm14.0000°; N -0.0500, Plg6.0000°, Azm217.0000°; P -1.3700, Plg3.0000°, Azm126.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=222, per= 50.*

*SZGRF **08** 21:22:37.3, 58°.62N×163°.89E, h28km, mb5.8, MS4.9, Kamchatka Peninsula, Russia*

*DJA **08** 21:22:41.8±4.6, 58°N±9°×16°4E±1°7, h105km±38km, M5.4/21, mB5.8/18, mb5.4/21, Mw(mB)5.4/18*

*NEIC **08** 21:22:54.0±0.0, 58°.66N×163°.77E, h10km, Moment Tensor Solution. s167 Moment tensor: Scale 10^{17}Nm; M_{rr}1.19; $M_{\theta\theta}$-0.55; $M_{\phi\phi}$-0.63; $M_{r\theta}$1.03; $M_{\theta\phi}$-0.67; $M_{\phi r}$-0.20; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s72.00000°, δ64.00000°, λ117.00000°. NP2:ϕ_s202.00000°, δ37.00000°, λ46.00000°. Principal axes: T 1.7600, Plg60.0000°, Azm23.0000°; N -0.3400, Plg24.0000°, Azm239.0000°; P -1.4200, Plg14.0000°, Azm142.0000°;*

ISC 08 21:22:31.0±0.3**, 58°.05N**±0°.03×**164°.35E**±0°.02**, h18**km±1km**, h17**km**:pP-P, n1623, σ1s.16**/1847**, mb5.6**/409**, MS4.8**/169**, 410C-252D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	2.01	207	PN	Pn	21 23 02.6	-1.4
KBG	Krutoberegovo	2.01	207	eP	Pn	21 23 02.6	-1.4
KBG				i S	Sn	21 23 25.8	-2.8
SMKR	Semkarok	2.15	228	i P	Pn	21 23 05.3	-0.6
SRKR	Sorokina	2.22	232	i P	Pn	21 23 06.4	-0.6
BDR	Baidarnaya	2.26	230	i P	Pn	21 23 06.8	-0.7
PALN	Palana	2.52	296	i P	Pn	21 23 10.4	-0.6
PALN				eS	Sn	21 23 39.7	-1.5
TILK	Tilichiki	2.57	20	eP	Pn	21 23 09.8	-1.9
TILK				eS	Sn	21 23 37.9	-4.5
KLY	Klyuchi	2.66	231	PN	Pn	21 23 11.5	-1.4
KLY	Klyuchi	2.66	231	i P	Pn	21 23 11.5	-1.4
KLY				eS	Sn	21 23 41.8	-2.9
CIRR	Tsirk	2.76	227	i P	Pn	21 23 14.8	+0.3
KRSR	Krestovskiy	2.77	230	i P	Pn	21 23 14.0	-0.4
LGNR	Loginova	2.81	227	i P	Pn	21 23 15.4	+0.2
ZLN	Zelenaya	2.81	225	eP	Pn	21 23 15.7	+0.6
BZGR	Bezymyannyi-Gr	2.91	225	i P	Pn	21 23 16.8	+0.3
BZWR	Bezymyannyi-We	2.97	227	i P	Pn	21 23 17.5	+0.2
BKI	Bering	2.99	162	PN	Pn	21 23 14.7	-2.7
BKI	Bering	2.99	162	i P	Pn	21 23 14.7	-2.7
BKI				i S	Sn	21 23 47.6	-5.2
BZMR	Bezymyannaya	2.99	227	i P	Pn	21 23 18.2	+0.6
KIRR	Kirishev	3.04	228	eP	Pn	21 23 18.8	+0.6
SRDR	Sredinnyy	3.06	237	i P	Pn	21 23 18.8	+0.3
KPT	Kopyto	3.08	229	i P	Pn	21 23 19.4	+0.7
KOZR	Kozyr	3.14	233	PN	Pn	21 23 20.6	+1.0
KOZ	Kozyrevsk	3.16	233	i P	Pn	21 23 20.6	+0.8
KMNR	Kamenistaya	3.22	226	eP	Pn	21 23 21.7	+1.0
TUMR	Tumrok	3.62	222	i P	Pn	21 23 28.0	+1.8
ESO	Esso	3.76	238	PN	Pn	21 23 29.2	+1.2
ESO	Esso	3.76	238	i P	Pn	21 23 29.2	+1.2
SPN	Mys Shipunski	5.54	208	PN	Pn	21 23 51.6	-0.8
SPN	Mys Shipunski	5.54	208	eP	Pn	21 23 51.6	-0.8
SPN				i S	Sn	21 24 50.6	-4.9
GNL	Ganaly	5.66	222	eP	Pn	21 23 56.2	+2.0
SDLR	Sedlovina	5.70	215	eP	Pn	21 23 56.0	+1.3
SDLR				i S	Sn	21 24 57.7	-1.9
KRER	Koryakskii	5.72	216	P	Pn	21 23 57.1	+2.0
SMAR	Somma	5.74	216	eP	Pn	21 23 57.0	+1.7
SMAR				eS	Sn	21 24 59.9	-0.8
AVH	Avacha	5.75	216	eP	Pn	21 23 57.8	+2.4
AVH				i S	Sn	21 25 00.8	-0.2
KOK	Koryaka	5.76	217	P	Pn	21 23 58.3	+2.7
UGLR	Uglovaya	5.77	215	eP	Pn	21 23 57.7	+1.9
UGLR				eS	Sn	21 25 00.6	-0.9
INSR	Institute	5.96	216	eP	Pn	21 24 00.6	+2.3
INSR				i S	Sn	21 25 06.6	+0.5
PET	Petropavlovsk	5.99	215c	ePN	Pn	21 23 59.7	+1.1
PET				pmax	pmax		
	comp=Z,257nm,0.5s						
PET				MLR	MLR		
	comp=Z,17µm,11.0s						
PET				MLR	MLR		
	comp=Z,23µm,10.0s						
PET	Petropavlovsk	5.99	215	eP	Pn	21 24 00.5	+1.9
PET				i S	Sn	21 25 06.3	-0.3
PEA0B	Petropavlovsk-	6.22	220	ePn	Pn	21 24 03.0	+1.2
PEA0B				eSn	Sn	21 25 14.8	+2.3
PETK	Petropavlovsk-	6.22	220	PN	Pn	21 24 03.5	+1.6
PETK				pmax	pmax		
	comp=Z,6.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,2µm,20.8s						
PETK	Petropavlovsk-	6.22	220	Pn	Pn	21 24 03.5	+1.6
PETK	Petropavlovsk-	6.22	220	Pn	Pn	21 24 03.5	+1.6
	comp=Z,5.9nm,0.3s,baz=61,slow=14,SNR=85						
PETK				LR	LR	21 26 56.7	
	comp=Z,2µm,20.8s,baz=36,slow=43						
APC	Apacha	6.56	222	eP	Pn	21 24 08.7	+2.2
GRL	Gorelyy	6.57	216	P	Pn	21 24 08.4	+1.7
GRL				i S	Sn	21 25 19.6	-1.6
MTVR	Mutnovka	6.60	215	eP	Pn	21 24 09.4	+2.3
MTVR				i S	Sn	21 25 21.9	0.0
ASAK	Asacha	6.77	216	eP	Pn	21 24 11.8	+2.4
ASAK				i S	Sn	21 25 25.3	-0.8
FX1	Attu Island--F	7.20	132	ePn	Pn	21 24 13.9	-1.3
FX1	Attu Island--F	7.20	132	Pn	Pn	21 24 14.1	-1.2
	comp=Z,28nm,0.3s,baz=356,slow=9.3,SNR=69						
FX1				LR	LR	21 26 30.6	
	comp=Z,10µm,21.5s,baz=302,slow=33						
MIPR	Malaya Ipel'ka	7.24	220	P	Pn	21 24 19.3	+3.6
SEY	Seymchan	7.67	315⇓	ePN	Pn	21 24 20.7	-0.9
SKR	Severo-Kuril's	8.80	217	i P	Pn	21 24 40.0	+2.8
BILL	Bilibino	10.06	4⇑	iPN	Pn	21 24 54.8	+0.4
BILL				pmax	pmax		
	comp=Z,51nm,0.6s						
BILL				MLR	MLR		
	comp=Z,3µm,14.0s						
BILL	Bilibino	10.06	4	eP	Pn	21 24 55.0	+0.6
AMKA	Amchitka	10.91	121	ePn	Pn	21 25 08.3	+2.2
OKH	Okha	12.84	259	ePN	P	21 25 38.0	-5.2
OKH				eS	Sn	21 28 07.8	+13
OKH				smax	smax		
	comp=E,2µm,8.0s						
OKH				MLR	MLR		
	comp=Z,9µm,12.0s						
GAMB	Gambell	12.93	54	ePn	Pn	21 25 31.5	-2.0
ATKA	Atka Island	13.57	106	ePn	Pn	21 25 42.1	-0.1
TNA	Tin City	14.99	48	ePn	Pn	21 26 01.7	+0.1
TNA				ePcP	PcP	21 31 10.7	+1.4
UGL	Uglegorsk	15.93	245	eP	P	21 26 16.0	-1.5
UGL				S	S	21 29 19.0	-4.8
UGL				pmax	pmax		
	comp=N,400nm,4.0s						
UGL				pmax	pmax		
	comp=Z,2µm,4.0s						
UGL				pmax	pmax		
	comp=E,1µm,3.0s						
UGL				smax	smax		
	comp=N,2µm,8.0s						
UGL				smax	smax		
	comp=E,3µm,4.5s						
UGL				MLR	MLR		
	comp=N,5µm,14.0s						
UGL				MLR	MLR		
	comp=E,6µm,15.0s						
UNV	Unalaska Valle	16.78	92	ePn	Pn	21 26 25.1	+0.3
	comp=E,125nm,1.1s						
AKUT	Akutan	17.05	90	ePn	Pn	21 26 28.2	+0.1
	comp=E,360nm,1.4s						
YSS	Yuzh-Sakhalins	17.12	239c	iP	P	21 26 31.2	+0.5
YSS				eS	Sn	21 29 41.0	+2.1
YSS				pmax	pmax		
	comp=N,220nm,1.3s						
YSS				pmax	pmax		
	comp=Z,230nm,1.3s						
YSS				pmax	pmax		
	comp=E,420nm,1.5s						
YSS				pmax	pmax		
	comp=E,1µm,4.0s						
YSS				pmax	pmax		
	comp=Z,1µm,4.0s						
YSS				pmax	pmax		
	comp=N,1µm,5.0s						
YSS				MLR	MLR		
	comp=N,2µm,15.0s						
YSS				MLR	MLR		
	comp=E,1µm,15.0s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
YAK	Yakutsk	17.62	298d	iP	Pn	21 26 35.5	+0.3
YAK				eS	Sn	21 29 52.0	+1.2
YAK				pmax	pmax		
	comp=Z,486nm,1.2s						
YAK				pmax	pmax		
	comp=E,273nm,1.4s						
YAK				pmax	pmax		
	comp=N,79nm,1.3s						
YAK				pmax	pmax		
	comp=Z,502nm,1.2s						
YAK				pmax	pmax		
	comp=E,476nm,1.3s						
YAK				pmax	pmax		
	comp=N,157nm,1.3s						
YAK				smax	smax		
	comp=N,1µm,3.2s						
YAK				smax	smax		
	comp=E,471nm,2.8s						
YAK				MLR	MLR		
	comp=Z,13µm,12.0s						
YAK				MLR	MLR		
	comp=N,2µm,10.0s						
YAK				MLR	MLR		
	comp=E,9µm,10.0s						
YUK	Yuzh-Kuril'sk	18.13	227	i P	Pn	21 26 39.7	-1.9
YUK				i S	Sn	21 30 02.6	-0.7
YUK				pmax	pmax		
	comp=N,25nm,0.8s						
YUK				pmax	pmax		
	comp=E,34nm,0.8s						
YUK				pmax	pmax		
	comp=Z,41nm,0.8s						
YUK				MLR	MLR		
	comp=N,1µm,15.0s						
YUK				MLR	MLR		
	comp=E,1µm,15.0s						
YUK				MLR	MLR		
	comp=Z,3µm,15.0s						
SDPT	Sand Point	19.36	83	eP	P	21 26 54.5	-0.8
	comp=Z,171nm,1.1s						
ASAJ	Asahikawa	19.40	233	eP	Pn	21 26 56.5	-0.5
	comp=Z,76nm,1.6s						
ASAJ				ePcP	PcP	21 31 17.2	+0.5
ASAJ	Asahikawa	19.40	233	P	P	21 26 55.1	-0.7
	comp=Z,0.4nm,0.3s,baz=54,slow=8.7,SNR=6.5						
ASAJ				LR	LR	21 34 37.3	
	comp=Z,3µm,18.4s,baz=34,slow=38						
HABR	Khabarovsk	19.82	254c	iP	Pn	21 27 01.4	-0.6
HABR				eS	S	21 30 42.7	0.0
HABR				pmax	pmax		
	comp=N,201nm,1.5s						
HABR				pmax	pmax		
	comp=Z,628nm,1.5s						
HABR				pmax	pmax		
	comp=E,244nm,1.1s						
HABR				MLR	MLR		
	comp=Z,3µm,16.0s						
CHGN	Chignik	20.09	79	eP	P	21 27 03.5	+0.3
SVW2	Sparrevohn	20.29	64	ePn	Pn	21 27 07.4	0.0
	comp=Z,95nm,1.3s						
ERM	Erimo	20.90	229⇑	eP	P	21 27 11.8	-0.3
ERM	Erimo	20.90	229	eP	P	21 27 11.7	-0.4
	comp=Z,228nm,1.2s						
ERM				ePcP	PcP	21 31 19.8	+0.4
ERM				LR	LR		
	comp=Z,2µm,20.0s						
ERM	Erimo	20.90	229	Pn	P	21 27 13.3	+1.2
	comp=Z,902nm,1.1s,SNR=7.8						
KLR	Kul'dur	21.06	259⇓	iP	P	21 27 10.8	-3.0
KLR				eS	S	21 31 07.0	-0.3
KLR				pmax	pmax		
	comp=E,240nm,2.0s						
KLR				pmax	pmax		
	comp=Z,300nm,2.0s						
KLR				MLR	MLR		
	comp=Z,18µm,12.0s						
CLNS	Chul'man	21.07	284	eP	P	21 27 13.7	-0.1
CLNS				e*PP	pP	21 27 22.6	+3.7
CLNS				eS	S	21 30 59.9	-7.5
CLNS				e		21 31 26.6	
CLNS				eSS	SnSn	21 31 31.2	+2.7
CLNS				pmax	pmax		
	comp=Z,246nm,1.0s						
CLNS				pmax	pmax		
	comp=E,233nm,1.0s						
CLNS				pmax	pmax		
	comp=N,150nm,1.0s						
CLNS				smax	smax		
	comp=N,1µm,11.7s						
CLNS				smax	smax		
	comp=E,962nm,11.2s						
CLNS				MLR	MLR		
	comp=Z,1µm,9.0s						
CLNS				MLR	MLR		
	comp=E,2µm,12.0s						
CLNS				MLR	MLR		
	comp=N,2µm,12.0s						
PPLA	Purkeypile	21.62	59	eP	P	21 27 21.1	+1.2
	comp=N,915nm,1.8s						
PPLA				ePcP	PcP	21 31 21.5	+0.8
RSO	Redoubt South	21.77	65	eP	P	21 27 21.7	+0.1
SPU	Mount Spurr	21.96	63	eP	P	21 27 24.4	+1.0
COLD	Coldfoot	22.28	47	eP	P	21 27 27.0	+0.3
	comp=N,150nm,1.2s						
TRF	Thorofare Moun	22.41	57	eP	P	21 27 28.4	+0.1
	comp=N,464nm,1.8s						
OHAK	Old Harbor	22.42	74	eP	P	21 27 27.2	-1.1
	comp=N,98nm,1.4s						
KDAK	Kodiak Island	22.59	72	eP	P	21 27 31.4	+1.3
	comp=N,40nm,1.1s						
KDAK				PcP	PcP	21 31 23.1	+0.6
KDAK	Kodiak Island	22.59	72	P	P	21 27 30.1	0.0
	comp=N,8.8nm,0.7s,baz=283,slow=7.3,SNR=18						
KDAK				PcP	PcP	21 31 23.1	+0.6
	comp=N,4.9nm,0.9s,baz=220,slow=7.9,SNR=3.2						
KDAK				LR	LR	21 36 35.1	
	comp=N,2µm,19.4s,baz=200,slow=37						
MCK	McKinley	22.97	56	eP	P	21 27 34.3	+0.2
MCK				pmax	pmax		
	comp=Z,478nm,1.8s						
MCK	McKinley	22.97	56	eP	P	21 27 34.3	+0.2
	comp=Z,478nm,1.8s						
PMR	Palmer	23.25	62	eP	P	21 27 38.0	+1.1
PMR				e		21 31 24.6	
PMR				pmax	pmax		
	comp=Z,59nm,1.4s						
PMR	Palmer	23.25	62	eP	P	21 27 38.0	+1.1
	comp=Z,59nm,1.4s						
PMR				ePcP	PcP	21 31 24.6	+0.8
COLA	College	23.31	53	eP	P	21 27 38.0	+0.5
COLA				pmax	pmax		
	comp=Z,260nm,1.5s						
COLA				MLR	MLR		
	comp=Z,475nm,19.0s						
COLA	College	23.31	53	eP	P	21 27 38.0	+0.5
	comp=Z,260nm,1.5s						
COLA				LR	LR		
	comp=Z,475nm,19.0s						
SEW	Seward	23.46	65	eP	P	21 27 38.6	-0.3
	comp=Z,384nm,1.8s						
SEW				ePcP	PcP	21 31 25.0	+0.7
SML	Sawmill	23.58	61	eP	P	21 27 40.0	-0.2
SML				e		21 31 25.3	
SML				pmax	pmax		
	comp=Z,35nm,1.3s						
SML	Sawmill	23.58	61	eP	P	21 27 40.0	-0.2
	comp=Z,35nm,1.3s						
SML				ePcP	PcP	21 31 25.2	+0.6
ILAR	Eielson Array	23.73	53	P	P	21 27 41.6	-0.1
ILAR				e		22 01 03.5	
ILAR	Eielson Array	23.73	53	P	P	21 27 41.6	-0.1
	comp=Z,29nm,0.8s,baz=263,slow=8.8,SNR=272						
ILAR				LR	LR	21 36 42.7	
	comp=Z,268nm,21.8s,baz=292,slow=36						
ILAR				P3KPbc		22 01 03.5	
	comp=Z,1.9nm,1.0s,baz=101,slow=3.8,SNR=16						
USRK	Ussuriysk Arra	24.30	249	P	P	21 27 46.7	-0.4
	comp=Z,164nm,1.2s,baz=37,slow=10,SNR=108						
USRK				PcP	PcP	21 31 26.6	+0.2
	comp=Z,7.0nm,1.0s,baz=343,slow=2.0,SNR=6.4						
USRK				LR	LR	21 38 00.7	
	comp=Z,2µm,18.0s,baz=35,slow=38						
PAX	Paxson	24.64	57	eP	P	21 27 49.4	-0.8
PAX				e		21 31 27.1	
PAX				pmax	pmax		
	comp=Z,74nm,1.3s						
PAX	Paxson	24.64	57	eP	P	21 27 49.4	-0.8
	comp=Z,74nm,1.3s						
PAX				ePcP	PcP	21 31 27.1	+0.2
DIV	Divide	24.93	62	eP	P	21 27 52.6	-0.2
	comp=Z,219nm,1.9s						
DOT	Dot Lake	25.13	55	eP	P	21 27 53.5	-1.0
	comp=Z,139nm,1.0s						
DOT				ePcP	PcP	21 31 28.7	+0.8
VLA	Vladivostok	25.14	248α	iP	P	21 27 52.8	-1.9
VLA				e		21 28 27.7	
VLA				eS	S	21 32 16.5	-2.0
VLA				pmax	pmax		
	comp=Z,148nm,1.3s						
MDJ	Mudanjiang	25.20	253	P	P	21 27 54.6	-0.7
MDJ				pP	pP	21 27 57.6	-3.1
MDJ				S	S	21 32 18.5	-1.1
MDJ				sS	sS	21 32 25.1	-3.4
MDJ				ScP	ScP	21 35 06.2	-0.1
MDJ				pmax	pmax		
	comp=Z,64nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,490nm,4.0s						
MDJ				LR	LR		
	comp=N,3µm,18.6s						
MDJ				LR	LR		
	comp=E,3µm,19.6s						
MDJ				LR	LR		
	comp=Z,3µm,12.0s						
MDJ	Mudanjiang	25.20	253	eP	P	21 27 54.0	-1.3
	comp=Z,116nm,1.1s						
MDJ				ePcP	PcP	21 31 29.2	+0.8
MDJ				LR	LR		
	comp=Z,2µm,19.0s						
MENT	Mentasta	25.43	57	eP	P	21 27 56.6	-0.6
RAGM	Ragged Mountai	25.66	63	eP	P	21 28 00.0	+0.6
	comp=Z,154nm,1.6s						
EGAK	Eagle	26.16	52	eP	P	21 28 02.6	-1.2
	comp=Z,75nm,1.4s						
EGAK				ePcP	PcP	21 31 30.9	+0.7
EGAK				LR	LR		
	comp=Z,617nm,20.0s						
HIA	Hailar	27.39	271	eP	P	21 28 13.8	-1.2
	comp=Z,19nm,1.0s						
HIA				ePcP	PcP	21 31 33.9	+0.5
HIA				LR	LR		
	comp=Z,2µm,20.0s						
MAJO	Matsushiro	27.57	230	eP	P	21 28 17.6	+0.9
MAJO				e		21 31 34.4	
MAJO				pmax	pmax		
	comp=Z,259nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,1µm,19.0s						
MAJO	Matsushiro	27.57	230	eP	P	21 28 17.6	+0.9
	comp=Z,259nm,1.1s						
MAJO				ePcP	PcP	21 31 34.4	+0.3
MAJO				LR	LR		
	comp=Z,1µm,19.0s						
MAT	Matsushiro	27.57	230	P	P	21 28 17.1	+0.4
MAT				S	S	21 33 01.6	+4.6
MJAR	Matsushiro Arr	27.57	230	P	P	21 28 17.9	+1.2
MJAR				PcP	PcP	21 31 33.8	-0.3
MJAR	Matsushiro Arr	27.57	230	P	P	21 28 17.9	+1.2
	comp=Z,140nm,1.1s,baz=14,slow=7.2,SNR=159						
MJAR				PcP	PcP	21 31 33.8	-0.3
	comp=Z,6.9nm,1.1s,baz=304,slow=2.2,SNR=8.6						
MJAR				LR	LR	21 40 41.0	
	comp=Z,726nm,19.0s,baz=45,slow=40						
CN2	Changchun	27.90	256	eP	P	21 28 18.8	-0.8
CN2				epP	pP	21 28 23.2	-1.8
CN2				esP	sP	21 28 25.8	-1.5
CN2				eS	S	21 33 01.2	-0.9
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,5µm,15.0s						
CN2				LR	LR		
	comp=E,2µm,15.0s						
CN2				LR	LR		
	comp=Z,2µm,18.0s						
PNL	Peninsula	28.40	63	eP	P	21 28 23.8	-0.1
	comp=Z,188nm,2.2s						
INK	Inuvik	28.52	43	P	P	21 28 25.2	+0.3
INK				PcP	PcP	21 31 35.6	-0.2
INK	Inuvik	28.52	43	P	P	21 28 25.2	+0.3
	comp=Z,11nm,0.9s,baz=292,slow=7.4,SNR=52						
INK				PcP	PcP	21 31 35.6	-0.2
	comp=Z,18nm,1.2s,baz=299,slow=2.7,SNR=4.7						
INK				LR	LR	21 41 04.8	
	comp=Z,488nm,18.3s,baz=268,slow=39						
CIT	Chita	29.13	280	eP	P	21 28 31.0	+0.5
CIT				e		21 28 37.1	
CIT				e		21 28 43.4	
CIT				e		21 29 34.1	

CIT pmax pmax
comp=Z,205nm,1.8s
JHJ Hachijo jima 2 29.96 224 LR LR 21 41 30.7
comp=Z,339nm,20.6s,baz=81,slow=38
SNY Shenyang 30.27 256 ⇑P **P 21 28 40.7 +0.1**
SNY S **S 21 33 40.4 +1.0**
SNY pmax pmax
comp=Z,62nm,1.3s
SNY pmax pmax
comp=Z,540nm,3.5s
SNY LR LR
comp=N,4μm,15.5s
SNY LR LR
comp=E,3μm,15.5s
SNY LR LR
comp=Z,4μm,12.2s
SKAG Skagway 30.39 61 *e*P **P 21 28 41.5 0.0**
comp=Z,96nm,1.8s
KSRS Korea Array 31.43 245 P **P 21 28 51.0 +0.2**
comp=Z,10nm,0.9s,baz=36,slow=8.8,SNR=31
KSRS PcP **PcP 21 31 44.6 +0.8**
comp=Z,19nm,1.1s,baz=23,slow=1.9,SNR=26
KSRS LR LR 21 43 54.4
comp=Z,832nm,18.5s,baz=53,slow=41
KSAR Wonju Array Be 31.45 245 P **P 21 28 51.0 -0.1**
KSAR PcP **PcP 21 31 44.6 +0.7**
INCN Inchon 32.03 247 *e*P **P 21 28 56.0 -0.2**
comp=Z,88nm,1.8s
INCN LR LR
comp=Z,823nm,20.0s
WRAK Wrangell Islan 33.19 65 *e*P **P 21 29 07.7 +1.6**
comp=Z,22nm,0.9s
WRAK LR LR
comp=Z,783nm,19.0s
CRAG Craig 33.29 67 *e*P **P 21 29 08.1 +1.1**
comp=Z,158nm,2.2s
DLBC Dease Lake 33.31 61 *e*P **P 21 29 08.9 +1.7**
DLBC *e*PcP **PcP 21 31 50.0 +1.3**
DL2 Dalian 33.44 254 *e*P **P 21 29 07.5 -0.9**
DL2 *e*S **S 21 34 28.2 -0.6**
DL2 pmax pmax
comp=Z,80nm,1.1s
DL2 pmax pmax
comp=Z,310nm,3.4s
DL2 LR LR
comp=N,2μm,17.4s
DL2 LR LR
comp=E,2μm,15.9s
DL2 LR LR
comp=Z,2μm,12.8s
JNU Nakatsue 33.61 237 *e*P **P 21 29 10.4 +0.3**
comp=Z,34nm,1.3s
JNU *e*PP **PnPn 21 30 23.7 +1.9**
JNU *e*PcP **PcP 21 31 50.0 0.0**
JNU Nakatsue 33.61 237 P **P 21 29 10.7 +0.6**
comp=Z,21nm,0.9s,baz=46,slow=5.1,SNR=12
JNU PcP **PcP 21 31 50.0 0.0**
comp=Z,15nm,1.1s,baz=108,slow=3.8,SNR=4.1
IRK Irkutsk 33.80 287 *e*P **P 21 29 12.1 +0.5**
IRK *e* 21 31 51.0
IRK pmax pmax
comp=Z,257nm,1.8s
TLY Talaya 34.44 286 P **P 21 29 18.6 +1.5**
comp=Z,283nm,1.4s,SNR=27
ULN Ulaanbaatar 34.96 279 *e*P **P 21 29 21.9 +0.1**
comp=Z,48nm,1.6s
ULN *e*PcP **PcP 21 31 53.9 +0.1**
ULN LR LR
comp=Z,960nm,20.0s
ULN Ulaanbaatar 34.96 279 P **P 21 29 22.5 +0.7**
SNR=14
ULN mb 21 29 23.7
SNR=19
ULN Ulaanbaatar 34.96 279 P **P 21 29 22.1 +0.3**
comp=Z,18nm,2.3s,comp=Z,458nm
SONM Songino Array 35.32 279 P **P 21 29 25.2 +0.3**
SONM PcP **PcP 21 31 54.1 -0.8**
SONM Songino Array 35.32 279 P **P 21 29 25.2 +0.3**
comp=Z,8.3nm,0.7s,baz=62,slow=8.1,SNR=43
SONM PcP **PcP 21 31 54.1 -0.8**
comp=Z,14nm,1.0s,baz=4.5,slow=1.7,SNR=13
SONM LR LR 21 44 54.8
comp=Z,4μm,18.5s,baz=53,slow=38
ZAK Zakamensk 35.39 285⇓*i*P **P 21 29 26.0 +0.6**
ZAK *e* 21 31 55.6
ZAK pmax pmax
comp=Z,60nm,1.3s
BJI Beijing 35.42 261 P **P 21 29 26.3 +0.7**
BJI PP **PP 21 30 45.2 -0.8**
BJI PcP **PcP 21 31 55.2 +0.2**
BJI S **S 21 34 57.0 -2.4**
BJI PcS **PcS 21 35 41.8 -0.2**
BJI pmax pmax
comp=Z,130nm,1.2s
BJI pmax pmax
comp=Z,1μm,3.5s
BJI LR LR
comp=N,5μm,18.3s
BJI LR LR
comp=E,4μm,19.2s
BJI LR LR
comp=Z,1μm,24.7s
BJT Baijiatuau 35.44 261 *e*P **P 21 29 26.4 +0.6**
comp=Z,26nm,0.6s
BJT *e*PcP **PcP 21 31 55.5 +0.4**
BJT LR LR
comp=Z,2μm,20.0s
MOY Mondy 35.80 288 *e*P **P 21 29 30.0 +1.1**
MOY pmax pmax
comp=Z,221nm,2.3s
HHC Hu-ho-hao-te 37.27 266 *e*P **P 21 29 42.2 +0.6**
HHC pP **pP 21 29 46.6 -0.5**
HHC sP **sP 21 29 49.6 +0.3**
HHC PP **PnPn 21 31 09.3 +2.3**
HHC S **S 21 35 25.9 -2.0**
HHC sS **sS 21 35 35.8 -1.2**
HHC SS **SnSn 21 37 58.5 -5.1**
HHC pmax pmax
comp=Z,120nm,0.8s
HHC pmax pmax
comp=Z,1μm,4.3s
HHC LR LR
comp=N,4μm,12.2s
HHC LR LR
comp=E,6μm,12.8s
HHC LR LR
comp=Z,9μm,13.7s
ALE Alert 37.66 9 P **P 21 29 44.0 -0.3**
comp=Z,220nm,1.7s,SNR=10
TIA Tai'an 37.80 256 P **P 21 29 46.1 +0.1**
TIA PP **PnPn 21 31 17.0 +3.6**
TIA LR LR
comp=N,3μm,17.2s
TIA LR LR
comp=E,2μm,16.1s
TIA LR LR
comp=Z,1μm,20.2s
RES Resolute Bay 37.80 25 *e*P **P 21 29 45.2 -0.4**
comp=Z,13nm,0.9s
RES PcP **PcP 21 32 01.4 -0.2**
RES *e*PcP **PcP 21 32 02.0 +0.3**
RES Resolute Bay 37.80 25 P **P 21 29 45.1 -0.4**
comp=Z,2.6nm,0.6s,baz=299,slow=10,SNR=15
RES PcP **PcP 21 32 01.4 -0.2**
comp=Z,8.7nm,0.8s,baz=271,slow=3.2,SNR=7.3
YKW3 Yellowknife Ar 37.91 48 *e*P **P 21 29 46.2 -0.4**
comp=Z,0.2nm,1.1s
YKW3 *e*PcP **PcP 21 32 02.5 +0.3**
YKA Yellowknife Ar 37.95 48 P **P 21 29 46.7 -0.2**
YKA PcP **PcP 21 32 01.9 -0.4**
YKA PKiKP **PKiKP 21 39 16.2 -1.0**
YKA Yellowknife Ar 37.95 48 P **P 21 29 46.7 -0.2**
comp=Z,4.7nm,0.8s,baz=301,slow=8.5,SNR=50
YKA PcP **PcP 21 32 01.9 -0.4**
comp=Z,8.4nm,0.9s,baz=306,slow=3.4,SNR=19
YKA PKiKP **PKiKP 21 39 16.2 -1.0**
comp=Z,0.2nm,0.6s,baz=310,slow=3.8,SNR=3.3
BTO Baotou 38.27 267 *e*P **P 21 29 50.7 +0.7**
TIY Taiyuan 39.11 262 *e*P **P 21 29 58.4 +1.4**
TIY S **S 21 35 57.1 +1.5**
TIY LR LR
comp=N,1μm,9.9s
TIY LR LR
comp=E,2μm,10.0s
TIY LR LR
comp=E,670nm,9.6s
TIY LR LR
comp=Z,2μm,11.8s
HVS Khovu-Aksy 39.76 292*c i*P **P 21 30 02.7 +0.3**
HVS pmax pmax
comp=Z,344nm,1.7s
SSE Sheshan 39.83 246 P **P 21 30 02.8 -0.2**
SSE S S 21 35 58.6 -7.8
SSE pmax pmax
comp=Z,16nm,0.7s
SSE pmax pmax
comp=Z,230nm,5.5s
SSE LR LR
comp=N,330nm,13.6s
SSE LR LR
comp=E,980nm,13.6s
SSE LR LR
comp=Z,850nm,17.7s
JOW Kunigami 40.16 235 *e*P **P 21 30 06.8 +1.0**
comp=Z,185nm,1.4s
JOW *e*PcP **PcP 21 32 10.8 +1.0**
NJ2 Nanjing 40.20 250 *e*P **P 21 30 06.0 -0.1**
NJ2 pP **pP 21 30 16.4 +4.8**
NJ2 PP **PnPn 21 31 43.0 +0.9**
NJ2 S **S 21 36 10.5 -1.5**
NJ2 sS sS 21 36 27.5 +6.4
NJ2 pmax pmax
comp=Z,70nm,1.2s
NJ2 pmax pmax
comp=Z,500nm,4.6s
NJ2 LR LR
comp=N,1μm,23.4s
NJ2 LR LR
comp=E,2μm,17.1s
NJ2 LR LR
comp=Z,1μm,19.0s
PGC Sidney 42.12 70 *e*P **P 21 30 23.2 +1.5**
comp=Z,7.2nm,1.6s
ZAA0 Zalesovo Array 42.25 300 *e*P **P 21 30 22.2 -0.5**
ZAA0 *e*PP **PP 21 31 59.9 -0.5**
ZALV Zalesovo Beam 42.25 300 P **P 21 30 22.2 -0.5**
ZALV pmax pmax
comp=Z,11nm,0.6s
ZALV MLR MLR
comp=Z,1μm,21.6s
ZALV Zalesovo Beam 42.25 300 P **P 21 30 22.2 -0.5**
ZALV Zalesovo Beam 42.25 300 P **P 21 30 22.2 -0.5**
comp=Z,11nm,0.6s,baz=44,slow=7.4,SNR=61
ZALV LR LR 21 50 33.2
comp=Z,1μm,21.6s,baz=57,slow=40
KBS Kingsbay 42.28 352 *e*P **P 21 30 22.9 +0.3**
KBS AMB AMB 21 30 25.7
comp=Z,94nm,1.3s
KBS AMS AMS 21 46 04.6
comp=Z,620nm,16.1s
KBS Kingsbay 42.28 352 *e*P **P 21 30 23.3 +0.6**
KBS *e* 21 32 16.9
KBS pmax pmax
comp=Z,72nm,1.2s
KBS MLR MLR
comp=Z,717nm,21.0s
KBS Kingsbay 42.28 352 *e*P **P 21 30 23.2 +0.6**
comp=Z,72nm,1.2s
KBS *e*PcP **PcP 21 32 16.9 +0.9**
KBS LR LR
comp=Z,717nm,21.0s
NVS Novosibirsk 42.41 302⇑*i*P **P 21 30 23.1 -0.8**
NVS *i* 21 32 01.4
NVS *i* S **S 21 36 44.3 +0.1**
NVS pmax pmax
comp=Z,317nm,2.0s
NVS pmax pmax
comp=N,98nm,1.9s
NVS pmax pmax
comp=E,186nm,2.1s
NVS pmax pmax
comp=N,122nm,2.0s
NVS pmax pmax
comp=E,37nm,1.6s
NVS smax smax
comp=N,38nm,2.0s
NVS smax smax
comp=E,96nm,2.2s
SPA0 Spitsbergen Ar 42.63 351 *e*P **P 21 30 25.1 -0.4**
SPA0 *e*SS SS 21 40 01.7 +5.0
SPITS Spitsbergen Ar 42.63 351 P **P 21 30 25.3 -0.2**
SPITS Spitsbergen Ar 42.63 351 P **P 21 30 25.3 -0.2**
NLWA Neilton Lookou 42.74 72 *e*P **P 21 30 28.1 +1.3**
comp=E,55nm,1.1s
NLWA LR LR
comp=Z,496nm,20.0s
WHN Wuhan 43.69 253 P **P 21 30 33.2 -1.4**
WHN S **S 21 37 01.9 -1.6**
WHN pmax pmax
comp=Z,230nm,1.3s
WHN pmax pmax
comp=Z,1μm,4.8s
WHN LR LR
comp=N,5μm,16.3s
WHN LR LR
comp=E,5μm,17.0s
WHN LR LR
comp=Z,4μm,13.7s
XAN Xi'an 43.75 261 P **P 21 30 35.1 0.0**
XAN sP **sP 21 30 42.4 -0.5**
XAN PP **PcP 21 32 19.5 -2.1**
XAN PcP **PP 21 32 21.7 +4.9**
XAN PcS **PcS 21 36 14.2 -0.4**
XAN S **S 21 37 02.7 -1.7**
XAN SS SS 21 40 08.0 -12
XAN pmax pmax
comp=Z,11nm,1.5s
XAN pmax pmax
comp=Z,110nm,6.0s
XAN LR LR
comp=N,2μm,20.0s
XAN LR LR
comp=E,970nm,20.4s
XAN LR LR
comp=Z,630nm,16.4s
D05A Enumclaw 43.83 71 P **P 21 30 37.1 +1.6**
LMW Ladd Mountain 44.03 72 P **P 21 30 39.3 +2.0**
OBSR Observation Ro 44.11 71 P P 21 30 32.8 -5.3
LON Longmire 44.22 71 *e*P **P 21 30 39.5 +0.8**
LON *e* 21 32 23.7
LON pmax pmax
comp=Z,48nm,1.5s
LON Longmire 44.22 71 *e*P **P 21 30 39.5 +0.8**
comp=Z,48nm,1.5s
LON *e*PcP **PcP 21 32 23.7 +0.7**
VALT Mount Saint He 44.39 72 P **P 21 30 41.9 +1.6**
GTA Gaotai 44.55 274 *e*P **P 21 30 42.0 +0.4**
GTA pP **pP 21 30 46.5 -0.7**
GTA sP **sP 21 30 49.7 +0.3**
GTA PP **PP 21 32 25.2 -0.2**
GTA S **S 21 37 17.2 +1.0**
GTA sS **sS 21 37 27.4 +2.0**
GTA SS **SS 21 40 30.8 -4.9**
GTA pmax pmax
comp=Z,28nm,1.1s
GTA pmax pmax
comp=Z,340nm,5.2s
GTA LR LR
comp=N,3μm,13.3s
GTA LR LR
comp=E,3μm,15.7s
GTA LR LR
comp=Z,5μm,17.1s
TATO Taipei 44.82 241 *e*P **P 21 30 45.5 +1.8**
comp=Z,184nm,1.4s
TATO LR LR
comp=Z,700nm,20.0s
LZH Lanzhou 44.87 268 *e*P **P 21 30 45.4 +1.2**
LZH pP **pP 21 30 49.2 -0.6**
LZH sP **sP 21 30 52.5 +0.5**
LZH S **S 21 37 21.5 +0.5**
LZH sS **sS 21 37 30.1 -0.1**
LZH pmax pmax
comp=Z,47nm,1.0s
LZH pmax pmax
comp=Z,560nm,5.4s
LZH LR LR
comp=N,2μm,11.6s
LZH LR LR
comp=E,3μm,13.8s
LZH LR LR
comp=Z,4μm,14.6s
YHNB Yeheng 45.13 241 *e*P **P 21 30 47.7 +1.4**
comp=Z,82nm,1.4s
YHNB LR LR
comp=Z,565nm,20.0s
TRW Toppenish Ridg 45.17 71 P **P 21 30 47.3 +1.0**
VLL Laurance Lake 45.17 73 P **P 21 30 47.6 +1.2**
OD2 Odessa Site #2 45.33 69 P **P 21 30 47.9 +0.4**
OPA Opana 45.35 127 *e*P **P 21 30 47.3 -0.6**
OPA Opana 45.35 127 *e*P **P 21 30 47.3 -0.6**
DAG Danmarks Havn 45.42 1⇑*i*P **P 21 30 47.8 -0.1**
DAG pmax pmax
comp=Z,24nm,0.8s
DAG MLR MLR
comp=Z,460nm,15.0s
DAG Danmarks Havn 45.42 1⇑*i*P **P 21 30 47.8 -0.1**
comp=Z,32nm,0.8s
DAG
comp=Z,450nm,14.0s
NEW Newport 45.51 67 *e*P **P 21 30 49.5 +0.5**
comp=Z,57nm,1.4s
NEW *e*PcP **PcP 21 32 28.4 +1.0**
NEW Newport 45.51 67 P **P 21 30 49.3 +0.3**
comp=Z,18nm,1.1s,baz=312,slow=7.2,SNR=27
NEW PcP **PcP 21 32 28.5 +1.0**
comp=Z,2.9nm,0.4s,baz=293,slow=4.5,SNR=4.5
NEW LR LR 21 48 12.1
comp=Z,595nm,21.6s,baz=301,slow=34
NEW Newport 45.51 67 ⇑P **P 21 30 49.4 +0.5**
baz=45,SNR=13
NEW ⇓S **S 21 37 31.0 +1.2**
baz=45
NEW ⇓S **S 21 37 31.0 +1.2**
baz=45
NEW ⇓S **S 21 37 31.0 +1.2**
baz=45
HAWA Hanford 45.61 70 *e*P **P 21 30 50.7 +1.0**
comp=Z,76nm,1.4s
HAWA *e*PcP **PcP 21 32 27.3 -0.5**
HAWA LR LR
comp=Z,379nm,20.0s
KEBM Edson Butte 45.62 77 *e*P **P 21 30 51.2 +1.2**
comp=Z,80nm,1.1s
A12A Yaak River Ran 45.77 65 ⇓P **P 21 30 51.9 +0.9**
baz=46
SSLB Suanglung 46.09 241 *e*P **P 21 30 53.5 -0.2**
comp=Z,54nm,1.2s
SSLB *e*PcP **PcP 21 32 29.6 -0.2**
B12A Libby 46.11 65 ⇓P **P 21 30 54.6 +0.9**
baz=46
QZH Quanzhou 46.22 244⇑*i*P **P 21 30 55.3 +0.6**
QZH S **S 21 37 41.6 +1.4**
QZH pmax pmax
comp=Z,560nm,7.0s
QZH LR LR
comp=N,2μm,11.0s
QZH LR LR
comp=E,1μm,14.6s
QZH LR LR
comp=Z,2μm,12.5s
C11A Tepee Creek (N 46.22 66 ⇓P **P 21 30 55.0 +0.3**
baz=46
YULB Yu-li 46.27 240 *e*P **P 21 30 54.6 -0.6**
comp=Z,92nm,1.3s
A13A Flathead Natio 46.36 64 ⇓P **P 21 30 56.5 +0.7**
baz=46
ENH Enshi 46.41 258 *e*P **P 21 30 56.0 -0.2**
comp=Z,468nm,2.0s
ENH *e*PcP **PcP 21 32 31.0 +0.1**
ENH *e*ScP **ScP 21 36 25.0 +1.9**
ENH LR LR
comp=Z,2μm,19.0s
HUMO Hull Mountain 46.52 76 *e*P **P 21 30 58.9 +1.9**
comp=Z,23nm,1.0s
HUMO *e*PcP **PcP 21 32 32.6 +1.5**
TPUB Ta-pu 46.65 241 *e*P **P 21 30 58.0 -0.3**
comp=Z,201nm,1.4s
TPUB *e*PcP **PcP 21 32 32.6 +0.9**
C12B Naegeli Ranch, 46.70 66 ⇓P **P 21 30 58.9 +0.6**
baz=46,SNR=8.2
B13A Whitefish 46.72 65 ⇑P **P 21 30 59.1 +0.5**
baz=46,SNR=13
GUMO Guam 46.75 206 LR LR 21 49 17.4
comp=Z,290nm,18.3s,baz=26,slow=34
A14A Double T Ranch 46.81 64 ⇑P **P 21 30 59.7 +0.4**
baz=47,SNR=7.7
TWG Pinlang 46.86 240 *e*P **P 21 31 00.4 +0.6**
comp=Z,259nm,1.0s
BSMT Bassoo Peak 46.93 66 *e*P **P 21 31 01.2 +0.8**
BLMT Blacktail Moun 47.02 65 *e*P **P 21 31 02.0 +0.9**
BLMT *e*PcP **PcP 21 32 32.4 -0.6**
A15A Johnson Ranch, 47.13 63 ⇑P **P 21 31 01.7 -0.1**
baz=47,SNR=11
C13A Hot Springs 47.15 66 ⇓P **P 21 31 02.7 +0.8**
baz=47,SNR=15
D12A Red Ives Fores 47.21 67 ⇑P **P 21 31 02.6 +0.2**
baz=47
KURK Kurchatov 47.24 300*c i*P **P 21 31 02.5 +0.1**
KURK pmax pmax
comp=Z,483nm,1.2s
KURK Kurchatov 47.24 300 *e*P **P 21 31 02.5 +0.1**
comp=Z,652nm,1.4s
KURK *e*PcP **PcP 21 32 33.7 +0.3**
KURK *e*PP **PP 21 32 49.5 -3.7**
KURK S **S 21 37 56.6 +2.2**
KURK LR LR
comp=Z,2μm,20.0s
KURK Kurchatov 47.24 300 P **P 21 31 02.8 +0.3**
SNR=175
KURK Kurchatov 47.24 300 P **P 21 31 02.7 +0.3**
comp=Z,2μm,1.0s
JTMT Jette 47.25 65 *e*P **P 21 31 03.6 +0.9**
JTMT *e*PcP **PcP 21 32 33.2 -0.5**
YBH Yreka Blue Hor 47.28 77 *e*P **P 21 31 04.7 +1.7**
comp=Z,27nm,1.1s
YBH Yreka Blue Hor 47.28 77 LR LR 21 47 35.3
comp=Z,1μm,21.6s,baz=324,slow=32
YBMT Yellow Bay 47.30 65 *e*P **P 21 31 04.1 +0.9**
YBMT *e*PcP **PcP 21 32 34.2 +0.3**
B14A Marquette Ranc 47.30 64 ⇑P **P 21 31 03.4 +0.2**
baz=47
KURBB Kurchatov Arra 47.35 300 P **P 21 31 03.3 0.0**
comp=Z,172nm,1.1s,baz=50,slow=7.8,SNR=852
KURBB PcP **PcP 21 32 33.0 -0.8**
comp=Z,5.8nm,1.1s,baz=35,slow=3.4,SNR=4.0
KURBB S **S 21 37 56.6 +0.7**
comp=Z,2.2nm,1.2s,baz=38,slow=12,SNR=7.6
KHMM Horse Mountain 47.37 78 *e*P **P 21 31 05.2 +1.3**
comp=Z,116nm,1.4s
KHMM *e*PcP **PcP 21 32 35.6 +1.3**
C14A Swan Lake 47.49 65 ⇑P **P 21 31 05.1 +0.5**
baz=47
SWMT Swartz Lake 47.55 65 *e*P **P 21 31 05.8 +0.8**
SWMT *e*PcP **PcP 21 32 34.2 -0.5**
LHEM Herd Peak 47.61 77 P **P 21 31 07.0 +1.3**
D13A Huson 47.62 66 ⇓P **P 21 31 06.0 +0.4**
baz=47,SNR=7.7
B15A Bradely Ranch, 47.68 64 ⇓P **P 21 31 05.8 -0.2**
baz=48,SNR=11
WMQ Urumqi 47.69 288 P **P 21 31 06.7 +0.6**
WMQ pP **pP 21 31 11.2 -0.6**
WMQ sP **sP 21 31 13.7 -0.3**
WMQ PcP **PcP 21 32 36.7 +1.4**
WMQ PP **PP 21 32 57.6 +0.1**
WMQ ScP **ScP 21 36 29.1 +0.8**
WMQ PcS **PcS 21 36 30.8 +0.1**
WMQ S **S 21 38 00.7 -0.3**
WMQ sS **sS 21 38 08.2 -2.1**
WMQ ScS **ScS 21 40 57.3 -1.2**
WMQ SS **SS 21 41 22.7 -6.1**
WMQ pmax pmax
comp=Z,59nm,1.0s
WMQ pmax pmax
comp=Z,670nm,3.2s
WMQ LR LR
comp=N,3μm,15.0s
WMQ LR LR
comp=E,2μm,15.6s
WMQ LR LR
comp=Z,1μm,24.0s
A16A West Butte Ran 47.69 62 ⇓P **P 21 31 05.9 -0.2**
baz=48
BMO Blue Mountains 47.80 70 *e*P **P 21 31 07.5 +0.5**
comp=Z,51nm,1.3s
BMO LR LR
comp=Z,505nm,20.0s

SLMT **Seeley Lake** 47.98 65 *e*P P 21 31 09.2 +0.7
SLMT *e*PcP PcP 21 32 36.7 +0.4
B16A M & M Farms, S 48.01 63 ⇑P P 21 31 08.4 -0.2
baz=48,SNR=7.5
C15A Salmond Ranch, 48.03 64 ⇓P P 21 31 09.2 +0.4
baz=48,SNR=9.4
MSO Missoula 48.06 66 *e*P P 21 31 09.6 +0.5
comp=Z,44nm,1.4s
MSO *e*PcP PcP 21 32 36.2 -0.3
MSO LR LR
comp=Z,469nm,21.0s
MSO Missoula 48.06 66 ⇓P P 21 31 09.4 +0.4
baz=48,SNR=11
D14A Greenough 48.09 65 ⇓P P 21 31 09.7 +0.4
baz=48,SNR=25
A17A Triple J Farms 48.11 62 ⇓P P 21 31 09.5 +0.1
baz=48,SNR=12
F12A Elk City 48.17 68 ⇑P P 21 31 10.7 +0.7
baz=48,SNR=31
WDC Whiskeytown Da 48.20 78 *e*P P 21 31 11.1 +1.0
WDC *e* 21 32 37.0
WDC pmax pmax
comp=Z,30nm,1.2s
WDC Whiskeytown Da 48.20 78 *e*P P 21 31 11.1 +1.0
comp=Z,30nm,1.2s
WDC *e*PcP PcP 21 32 37.0 -0.1
E13A Victor 48.21 67 ⇓P P 21 31 10.5 +0.3
baz=48,SNR=13
MK31 Makanchi Array 48.26 294 *e*P P 21 31 09.4 -1.1
MK31 21 32 36.6
MK31 Makanchi Array 48.26 294 *e*P P 21 31 09.4 -1.1
MK31 *e*PcP PcP 21 32 36.5 -0.6
MKAR Makanchi Array 48.26 294 P P 21 31 09.6 -0.8
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR MLR MLR
comp=Z,2μm,19.8s
MKAR Makanchi Array 48.26 294 *e*P P 21 31 09.6 -0.8
MKAR Makanchi Array 48.26 294 P P 21 31 09.6 -0.8
comp=Z,5.3nm,0.6s,baz=45,slow=7.1,SNR=64
MKAR LR LR 21 52 24.5
comp=Z,2μm,19.8s,baz=32,slow=37
KIPM Iron Peak 48.28 79 *e*P P 21 31 12.8 +1.9
CHMT Chamberlain Mo 48.33 65 *e*P P 21 31 12.0 +0.7
MOD Modoc 48.40 75 *e*P P 21 31 13.0 +1.2
comp=Z,226nm,1.5s
MOD *e*PcP PcP 21 32 38.7 +0.8
C16A Fuhringer Ranc 48.43 64 ⇑P P 21 31 11.9 0.0
baz=48,SNR=8.3
B17A L&G Farms, Che 48.53 63 ⇓P P 21 31 12.6 +0.1
baz=48,SNR=8.1
A18A Metzger Ranch, 48.53 61 ⇓P P 21 31 12.6 0.0
baz=48
E14A Clinton 48.57 66 ⇑P P 21 31 13.6 +0.6
baz=48,SNR=24
G12A Big Creek, Yel 48.59 69 ⇑P P 21 31 13.6 +0.4
baz=48,SNR=15
D15A Lincoln 48.59 65 ⇓P P 21 31 13.7 +0.5
baz=48,SNR=9.9
F13A Darby 48.60 67 ⇓P P 21 31 13.5 +0.2
baz=48,SNR=10
SUMG Summit 48.71 9⇑*i*P P 21 31 14.4 +0.4
SUMG pmax pmax
comp=Z,500nm,1.1s
SUMG Summit 48.71 9 *e*P P 21 31 14.2 +0.2
comp=Z,246nm,1.4s
SUMG *e*PcP PcP 21 32 39.2 +0.3
SUMG Summit 48.71 9⇑*i*P P 21 31 14.4 +0.4
comp=Z,500nm,1.1s
KEV Kevo 48.87 342 *e*P P 21 31 12.1 -2.7
KEV pmax pmax
comp=Z,4.0nm,0.7s
KEV Kevo 48.87 342 *e*p P 21 31 12.1 -2.7
comp=Z,4.3nm,0.7s
WVOR Wild Horse Val 48.87 73 *e*P P 21 31 16.5 +1.2
WVOR pmax pmax
comp=Z,52nm,1.2s
WVOR MLR MLR
comp=Z,602nm,20.0s
WVOR Wild Horse Val 48.87 73 *e*P P 21 31 16.5 +1.2
comp=Z,52nm,1.2s
WVOR LR LR
comp=Z,602nm,20.0s
CD2 Chengdu 48.91 263⇑*i*P P 21 31 16.5 +0.8
CD2 pP **pP** 21 31 21.0 -0.3
CD2 sP **sP** 21 31 23.5 0.0
CD2 PcP **PcP** 21 32 41.7 +1.9
CD2 PP **PP** 21 33 09.6 +0.7
CD2 PcS **PcS** 21 36 36.5 +0.3
CD2 S **S** 21 38 18.3 -0.2
CD2 sS **sS** 21 38 25.3 -2.4
CD2 ScS **ScS** 21 41 06.3 -0.6
CD2 SS **SS** 21 41 44.0 -4.9
CD2 pmax pmax
comp=Z,200nm,0.8s
CD2 pmax pmax
comp=Z,560nm,5.1s
CD2 LR LR
comp=N,2μm,17.6s
CD2 LR LR
comp=E,2μm,15.8s
CD2 LR LR
comp=Z,2μm,18.1s
B18A Beardsley Farm 48.94 62 ⇓P P 21 31 16.0 +0.3
baz=49,SNR=27
E15A Deer Lodge 48.98 66 ⇓P P 21 31 16.6 +0.4
baz=49,SNR=20
C17A Wharram Farm, 49.01 63 ⇑P P 21 31 16.3 -0.1
baz=49,SNR=12
A19A Klindworth Far 49.04 61 ⇑P P 21 31 16.7 +0.2
baz=49,SNR=11
LVZ Lovozero 49.05 337*c i*P P 21 31 15.2 -1.1
LVZ pmax pmax
comp=Z,73nm,1.7s
F14A Wisdom 49.06 67 ⇓P P 21 31 16.9 +0.1
baz=49
D16A Dana Ranch, Ca 49.07 64 ⇓P P 21 31 17.6 +0.8
baz=49,SNR=26
G13A Cobalt 49.15 68 ⇓P P 21 31 17.8 +0.3
baz=49,SNR=14
HRY Holter Researc 49.16 65 *e*P P 21 31 18.9 +1.4
EGMT Eagleton 49.21 62 *e*P P 21 31 18.5 +0.7
comp=Z,327nm,2.3s
EGMT *e*PcP PcP 21 32 41.2 +0.5
EGMT LR LR
comp=Z,548nm,19.0s
EGMT Eagleton 49.21 62 ⇓P P 21 31 18.0 +0.2
baz=49,SNR=11
H12A Diamond D Ranc 49.24 69 ⇑P P 21 31 18.3 +0.1
baz=49,SNR=10
BVAR Borovoye Array 49.25 307 P P 21 31 17.7 -0.3
BVAR 21 32 40.3
BVAR pmax pmax
comp=Z,22nm,0.6s
BVAR Borovoye Array 49.25 307 P P 21 31 17.7 -0.3
BVAR PcP PcP 21 32 40.3 -0.4
BVAR Borovoye Array 49.25 307 P P 21 31 17.7 -0.3
comp=Z,22nm,0.6s,baz=50,slow=8.0,SNR=145
BVAR PcP PcP 21 32 40.3 -0.4
comp=Z,16nm,1.0s,baz=66,slow=3.5,SNR=4.9
BRVK Borovoye 49.27 307 *e*P P 21 31 18.1 0.0
BRVK *e* 21 32 40.8
BRVK pmax pmax
comp=Z,200nm,1.5s
BRVK MLR MLR
comp=Z,6μm,20.0s
BRVK Borovoye 49.27 307 *e*P P 21 31 18.1 0.0
comp=Z,200nm,1.5s
BRVK *e*PcP PcP 21 32 40.8 0.0
BRVK LR LR
comp=Z,6μm,20.0s
BRVK Borovoye 49.27 307 P P 21 31 18.4 +0.3
SNR=46
BRVK Borovoye 49.27 307 P P 21 31 18.1 0.0
comp=Z,460nm,1.4s,SNR=36
B19A Brinkman Farms 49.28 61 ⇓P P 21 31 18.6 +0.3
baz=49,SNR=15
ARCES ARCESS Array B 49.31 342 P P 21 31 17.7 -0.5
ARCES PcP PcP 21 32 40.8 +0.2
ARCES ARCESS Array B 49.31 342 P P 21 31 17.7 -0.5
comp=Z,15nm,0.8s,baz=17,slow=9.5,SNR=21
ARCES PcP PcP 21 32 40.8 +0.2
comp=Z,11nm,0.9s,baz=46,slow=3.9,SNR=7.6
ARCES LR LR 21 58 02.8
comp=Z,723nm,19.0s,baz=27,slow=43
ARE0 ARCESS Array S 49.31 342 *e*P P 21 31 14.3 -3.9

E16A East Helena 49.36 65 ⇓P P 21 31 19.9 +0.8
baz=49,SNR=25
D17A Six Diamond Ra 49.39 64 ⇓P P 21 31 19.5 +0.1
baz=49,SNR=19
G14A Jackson 49.42 67 ⇑P P 21 31 19.8 +0.2
baz=49
A20A Cobblestone Ra 49.45 60 ⇑P P 21 31 20.1 +0.5
baz=49,SNR=5.1
F15A Butte 49.47 66 ⇑P P 21 31 20.4 +0.4
baz=49,SNR=11
LRM Limekiln Ridge 49.50 66 *e*P P 21 31 20.9 +0.7
LRM *e*PcP PcP 21 32 41.8 -0.2
H13A Challis 49.52 68 ⇑P P 21 31 20.5 +0.1
baz=49,SNR=16
MFID Camas Ranch 49.57 70 *e*P P 21 31 21.4 +0.7
comp=Z,38nm,1.0s
MFID *e*PcP PcP 21 32 42.5 +0.4
MFID Camas Ranch 49.57 70 ⇓P P 21 31 21.3 +0.5
baz=49,SNR=22
APA Apatity 49.58 338⇓*i*P P 21 31 19.6 -0.7
APA *i* 21 32 41.6
APA pmax pmax
comp=Z,65nm,1.4s
APA MLR MLR
comp=Z,2μm,20.0s
I12A Atlanta 49.64 70 ⇓P P 21 31 21.8 +0.5
baz=50
OHCM Honcut 49.67 78 *e*P P 21 31 22.2 +0.9
B20A Solberg Farm, 49.72 61 ⇑P P 21 31 21.8 +0.1
baz=50,SNR=11
C19A Slack Wire Ran 49.75 62 ⇑P P 21 31 22.6 +0.6
baz=50,SNR=28
DLMT Dillon 49.76 66 *e*P P 21 31 23.4 +1.2
comp=Z,47nm,1.3s
D18A Linhart Farms, 49.78 63 ⇓P P 21 31 22.8 +0.6
baz=50,SNR=8.8
E17A Martinsdale 49.81 64 ⇓P P 21 31 23.6 +1.0
baz=50,SNR=29
BEKR Beckorth 49.86 77 *e*P P 21 31 23.8 +0.7
comp=Z,23nm,1.4s
BEKR *e*PcP PcP 21 32 43.6 +0.3
H14A Leadore 49.92 68 ⇓P P 21 31 23.6 +0.1
baz=50,SNR=8.2
F16A Kennard Place, 49.93 65 ⇑P P 21 31 23.9 +0.5
baz=50
G15A Dillon 49.95 67 ⇑P P 21 31 24.2 +0.5
baz=50,SNR=24
BOZ Bozeman (W) 50.02 66 *e*P P 21 31 24.7 +0.6
BOZ pmax pmax
comp=Z,68nm,1.8s
BOZ MLR MLR
comp=Z,635nm,21.0s
BOZ Bozeman (W) 50.02 66 *e*P P 21 31 24.7 +0.6
comp=Z,68nm,1.8s
BOZ LR LR
comp=Z,635nm,21.0s
MCMT McKenzie Canyo 50.02 67 *e*P P 21 31 25.0 +0.7
MCMT *e*PcP PcP 21 32 45.2 +1.2
I13A Wildhorse Cree 50.06 69 ⇑P P 21 31 25.3 +0.7
baz=50,SNR=88
KTK1 Kautokeino 50.14 343 *e*P P 21 31 22.1 -2.4
KTK1 AMB AMB 21 31 23.8
comp=Z,370nm,1.5s
HLID Hailey 50.17 69 *e*P P 21 31 26.1 +0.7
comp=Z,29nm,1.2s
HLID *e*PcP PcP 21 32 45.3 +0.9
HLID LR LR
comp=Z,591nm,19.0s
HLID Hailey 50.17 69 ⇓P P 21 31 26.0 +0.7
baz=50,SNR=18
E18A Harlowton 50.18 64 ⇓P P 21 31 26.3 +1.0
baz=50,SNR=18
B21A Ellsworth Farm 50.20 60 ⇑P P 21 31 25.6 +0.3
baz=50,SNR=5.1
D19A Cripps Ranch, 50.24 62 ⇑P P 21 31 26.1 +0.4
baz=50,SNR=9.7
G16A Moss Hill, Enn 50.24 66 ⇓P P 21 31 26.5 +0.6
baz=50,SNR=13
C20A Veseth Ranch, 50.25 61 ⇓P P 21 31 26.3 +0.6
baz=50,SNR=17
H15A Lima 50.28 67 ⇓P P 21 31 26.5 +0.3
baz=50,SNR=6.2
A22A Carney Farms, 50.29 59 ⇑P P 21 31 26.5 +0.5
baz=50,SNR=7.9
F17A Fitzpatrick Pl 50.30 65 ⇓P P 21 31 27.2 +0.9
baz=50,SNR=9.4
GZH Guangzhou 50.34 248 P P 21 31 22.7 -3.8
GZH S S 21 38 32.0 -6.4
GZH LR LR
comp=Z,2μm,11.5s
SVE Sverdlovsk 50.35 316*d i*P P 21 31 27.0 +0.8
SVE *e* 21 32 45.1
SVE *e* 21 33 30.5
SVE *e*S S 21 38 38.4 +0.5
SVE pmax pmax
comp=Z,96nm,1.5s
SVE MLR MLR
comp=Z,3μm,21.0s
I14A Mackay 50.38 68 ⇓P P 21 31 27.5 +0.6
baz=50,SNR=12
J13A Cove Ranch, Pi 50.41 69 ⇓P P 21 31 27.9 +0.8
baz=50,SNR=13
WCN Washoe City 50.59 77 *e*P P 21 31 29.6 +1.1
WCN pmax pmax
comp=Z,112nm,1.8s
WCN Washoe City 50.59 77 *e*P P 21 31 29.6 +1.1
comp=Z,112nm,1.8s
C21A Desert Coulee 50.59 61 ⇑P P 21 31 28.8 +0.5
baz=50,SNR=5.1
D20A Manuel Ranch, 50.64 62 ⇑P P 21 31 29.5 +0.8
baz=50,SNR=8.8
QLMT Earthquake Lak 50.71 66 *e*P P 21 31 30.4 +1.0
B22A Reddig Ranch S 50.76 60 ⇓P P 21 31 30.0 +0.5
baz=50
F18A Big Timber 50.76 64 ⇑P P 21 31 30.6 +1.0
baz=51,SNR=20
A23A Redstone 50.78 58 ⇑P P 21 31 30.2 +0.4
baz=51
J14A Carey 50.79 69 ⇑P P 21 31 31.0 +1.0
baz=51
E19A Rath Farm, Rou 50.80 63 ⇑P P 21 31 30.5 +0.7
baz=51,SNR=8.0
I15A Monteview 50.81 68 ⇓P P 21 31 30.4 +0.3
baz=51
H16A Russell Place, 50.90 66 ⇑P P 21 31 31.7 +0.9
baz=51,SNR=32
GYA Guiyang 50.94 257⇑*i*P P 21 31 32.1 +0.8
GYA PcP PcP 21 32 46.7 -0.7
GYA PP PP 21 33 28.9 +1.4
GYA S S 21 38 48.3 +1.2
GYA pmax pmax
comp=Z,50nm,1.1s
GYA pmax pmax
comp=Z,420nm,4.2s
GYA LR LR
comp=N,1μm,19.8s
GYA LR LR
comp=E,2μm,18.9s
GYA LR LR
comp=Z,1μm,19.2s
BMN Battle Mountai 51.06 74 *e*P P 21 31 33.5 +1.5
BMN *e* 21 32 49.2
BMN pmax pmax
comp=Z,48nm,1.4s
BMN MLR MLR
comp=Z,502nm,20.0s
BMN Battle Mountai 51.06 74 *e*P P 21 31 33.5 +1.5
comp=Z,48nm,1.4s
BMN *e*PcP PcP 21 32 49.2 +1.5
BMN LR LR
comp=Z,502nm,20.0s
YMR Madison River 51.06 66 *e*P P 21 31 32.7 +0.6
comp=Z,47nm,1.1s
E20A Meyer Farm, Mu 51.07 63 ⇓P P 21 31 32.6 +0.6
baz=51,SNR=9.6
B23A Brockton 51.09 59 ⇓P P 21 31 32.4 +0.4
baz=51,SNR=5.8
F19A Roth Farm, Mol 51.16 64 ⇓P P 21 31 33.5 +0.8
baz=51,SNR=9.1
D21A La Casta Ranch 51.20 61 ⇑P P 21 31 33.6 +0.7
baz=51
A24A Westby 51.21 58 ⇑P P 21 31 33.4 +0.6
baz=51,SNR=9.5
CMB Columbia Colle 51.21 78 *e*P P 21 31 34.7 +1.6
CMB *e* 21 32 48.6
CMB pmax pmax
comp=Z,210nm,2.6s
CMB *e*PcP PcP 21 32 48.6 +0.5
C22A Vida 51.21 60 ⇑P P 21 31 33.3 +0.3
baz=51,SNR=7.7
J15A Blackfoot 51.27 68 ⇓P P 21 31 34.4 +0.8
baz=51,SNR=8.9
I16A Newdale 51.39 67 ⇓P P 21 31 35.8 +1.3
baz=51
ARU Arti 51.41 317*c i*P P 21 31 34.0 -0.2
ARU *e* 21 32 48.3
ARU *e* 21 33 30.4
ARU S S 21 38 51.4 -1.2
ARU 21 41 26.1
ARU SS SS 21 42 21.8 -5.8
ARU pmax pmax
comp=Z,87nm,1.8s
ARU MLR MLR
comp=Z,3μm,16.0s
ARU Arti 51.41 317 P P 21 31 34.5 +0.3
comp=Z,198nm,1.7s,SNR=14
H17A Grant Village 51.45 66 ⇑P P 21 31 37.1 +2.1
baz=51,SNR=30
DGMT Dagmar 51.45 58 *e*P P 21 31 35.3 +0.6
comp=Z,158nm,1.8s
DGMT *e*PcP PcP 21 32 49.6 +0.7
DGMT LR LR
comp=Z,369nm,20.0s
DGMT Dagmar 51.45 58 ⇑P P 21 31 35.1 +0.4
baz=51
C23A Lambert 51.49 59 ⇑P P 21 31 35.9 +0.9
baz=51,SNR=24
D22A Cohagen 51.51 61 ⇓P P 21 31 36.1 +0.8
baz=51,SNR=5.3
E21A Keefer Ranch, 51.54 62 ⇑P P 21 31 36.5 +1.1
baz=51
RLMT Red Lodge 51.55 64 *e*P P 21 31 36.2 +0.5
F20A Billings 51.58 63 ⇓P P 21 31 36.7 +0.9
baz=51,SNR=13
IMW Indian Meadow 51.64 67 *e*P P 21 31 37.6 +1.1
comp=Z,101nm,1.5s
SCO Scoresbysund 51.68 3⇑*i*P P 21 31 36.9 +0.8
SCO pmax pmax
comp=Z,14nm,1.4s
SCO Scoresbysund 51.68 3⇑*i*P P 21 31 36.9 +0.8
comp=Z,14nm,1.4s
H18A Shoshone NF, C 51.68 65 ⇑P P 21 31 37.6 +0.9
baz=52,SNR=10.0
DCID1 Drake Creek 51.74 67 *e*P P 21 31 39.2 +2.0
comp=Z,56nm,0.9s
I17A Pilgrim Ck. 51.80 66 ⇓P P 21 31 39.1 +1.5
baz=52,SNR=6.8
ELK Elko 51.83 72 *e*P P 21 31 39.3 +1.4
comp=Z,468nm,1.1s
ELK Elko 51.83 72 LR LR 21 52 30.7
comp=Z,531nm,19.3s,baz=317,slow=35
MOOW Moose Ponds 51.84 67 *e*P P 21 31 39.0 +1.1
comp=Z,28nm,1.2s
RRI2 Red Ridge 51.86 67 *e*P P 21 31 39.6 +1.5
comp=Z,39nm,1.3s
TPAW Teton Pass 51.93 67 *e*P P 21 31 40.1 +1.4
comp=Z,151nm,1.8s
D23A Lindsay 51.95 60 ⇑P P 21 31 39.3 +0.8
baz=52,SNR=5.4
FRB Frobisher Bay 51.98 27 LR LR 21 57 07.4
comp=Z,546nm,18.3s,baz=141,slow=40
NVAR Mina Array Bea 51.99 77 P P 21 31 40.4 +1.3
NVAR PcP PcP 21 32 52.1 +0.8
NVAR Mina Array Bea 51.99 77 P P 21 31 40.4 +1.3
comp=Z,10nm,0.8s,baz=318,slow=7.9,SNR=59
NVAR PcP PcP 21 32 52.1 +0.8
comp=Z,4.2nm,0.9s,baz=297,slow=4.0,SNR=4.4
NVAR LR LR 21 50 31.2
comp=Z,740nm,21.5s,baz=42,slow=32
LOHW Long Hollow 52.01 67 *e*P P 21 31 40.5 +1.3
comp=Z,64nm,1.4s
H19A Powell 52.01 65 ⇓P P 21 31 40.4 +1.2
baz=52,SNR=14
C24A Savage 52.04 59 ⇓P P 21 31 40.0 +0.9
baz=52
F21A Absaloka Mine, 52.05 62 ⇓P P 21 31 39.9 +0.6
baz=52
SNOW Snow King Moun 52.05 67 *e*P P 21 31 41.6 +2.1
comp=Z,44nm,1.3s
NV11 Mina Array Sit 52.07 76 *e*P P 21 31 39.9 +0.3
REDW Red Top Meadow 52.08 67 *e*P P 21 31 40.6 +0.9
comp=Z,0.9nm,1.4s
LRV Little Rabbit 52.09 80 *e*P P 21 31 40.3 +0.6
K16A Soda Springs 52.11 68 ⇓P P 21 31 41.1 +1.2
baz=52,SNR=9.3
E22A Miles City 52.14 61 ⇓P P 21 31 40.5 +0.6
baz=52
J17A Brown Place, J 52.14 67 ⇓P P 21 31 41.3 +1.1
baz=52,SNR=11
HVU Hansel Valley 52.30 70 *e*P P 21 31 43.0 +1.7
HVU pmax pmax
comp=Z,50nm,1.3s
HVU Hansel Valley 52.30 70 *e*P P 21 31 43.0 +1.7
comp=Z,50nm,1.3s
MLAC Mammoth Lakes 52.32 78 ⇑P P 21 31 43.4 +1.8
baz=52
I18A Diamond G Ranc 52.33 66 ⇑P P 21 31 42.8 +1.2
baz=52,SNR=11
D24A Glendive 52.39 60 ⇑P P 21 31 42.8 +1.0
baz=52
E23A Ismay 52.40 61 ⇑P P 21 31 42.6 +0.8
baz=52
I19A Meeteetse 52.48 65 ⇓P P 21 31 43.3 +0.6
baz=52
F22A Rosebud 52.49 62 ⇑P P 21 31 43.1 +0.6
baz=52,SNR=5.5
K17A Gardner Place, 52.50 68 ⇓P P 21 31 43.4 +0.7
baz=52
SFJD Kangerlussuaq 52.59 16 *e*P P 21 31 42.6 -0.2
comp=Z,197nm,1.7s
SFJD Kangerlussuaq 52.59 16⇑*i*P P 21 31 41.8 -1.0
comp=Z,12nm,0.9s
SFJD Kangerlussuaq 52.59 16 LR LR 21 55 40.6
comp=Z,381nm,18.5s,baz=344,slow=38
J18A Kendall Valley 52.59 67 ⇓P P 21 31 44.4 +0.8
baz=52,SNR=20
H20A Greybull 52.62 64 ⇓P P 21 31 43.7 +0.2
baz=52,SNR=7.7
MTUM Tungsten Hills 52.67 78 *e*P P 21 31 46.2 +2.1
E24A Baker 52.81 60 ⇓P P 21 31 45.4 +0.5
baz=53
G22A Birney 52.89 62 ⇓P P 21 31 46.0 +0.4
baz=53
F23A Volborg 52.93 61 ⇑P P 21 31 46.4 +0.6
baz=53,SNR=14
I20A Worland 52.96 65 ⇑P P 21 31 47.0 +0.9
baz=53,SNR=5.3
H21A Big Horn, Sher 52.97 63 ⇑P P 21 31 46.8 +0.6
baz=53,SNR=10
K18A Toltan Ranch, 53.01 67 ⇑P P 21 31 48.1 +1.5
baz=53,SNR=58
J19A Crowheart 53.02 66 ⇓P P 21 31 47.9 +1.3
baz=53,SNR=18
HWUT Hardware Ranch 53.03 69 *e*P P 21 31 47.4 +0.6
comp=Z,13nm,0.5s
HWUT LR LR
comp=Z,512nm,20.0s
TIN Tinemaha 53.07 78 ⇑P P 21 31 48.9 +1.9
baz=53,SNR=7.9
RCTC Rector, Farmer 53.11 79 ⇓P P 21 31 48.3 +1.2
baz=53
BW06 Boulder Array 53.15 67 *e*P P 21 31 48.1 +0.4
BW06 LR LR
comp=Z,335nm,21.0s
PDAR Pinedale Array 53.15 67 P P 21 31 48.1 +0.5
PDAR Pinedale Array 53.15 67 P P 21 31 48.1 +0.5
comp=Z,20nm,0.7s,baz=321,slow=3.0,SNR=85
PDAR LR LR 21 56 31.3
comp=Z,287nm,18.5s,baz=341,slow=38
F24A Ekalaka 53.28 61 ⇓P P 21 31 48.8 +0.4
baz=53,SNR=5.3
G23A Biddle 53.33 62 ⇑P P 21 31 49.2 +0.5
baz=53,SNR=7.1
H22A Clearmont 53.33 63 ⇓P P 21 31 49.5 +0.7
baz=53,SNR=9.1
AAA Alma-Ata 53.41 295 *i*P P 21 31 49.8 +0.4
AAA *i*S S 21 39 26.1 +5.6
AAA pmax pmax
comp=Z,500nm,1.2s
AAA smax smax
comp=E,400nm,2.3s
AAA MLR MLR

comp=Z,2µm,4.0s
J20A Shoshoni 53.43 65 ⇓P P 21 31 50.6 +1.1
baz=53,SNR=25
K19A Absolon Red Bu 53.45 66 ⇑P P 21 31 49.9 +0.1
baz=53,SNR=11
R11A Troy Canyon, C 53.45 75 ⇓P P 21 31 50.9 +1.0
baz=53,SNR=32
I21A Big Trails, Te 53.47 64 ⇓P P 21 31 50.1 +0.2
baz=53,SNR=10
DUG Dugway 53.47 71 *eP* **P 21 31 51.1 +1.2**
DUG *e* 21 32 57.6
DUG pmax pmax
comp=Z,25nm,1.0s
DUG MLR MLR
comp=Z,521nm,21.0s
DUG Dugway 53.47 71 *eP* **P 21 31 51.1 +1.2**
comp=Z,24nm,1.0s
DUG *e*PcP **PcP 21 32 57.6 +0.8**
DUG LR LR
comp=Z,521nm,21.0s
DUG Dugway 53.47 71 ⇑P P 21 31 51.0 +1.2
baz=53,SNR=20
SMMC Simmler 53.48 80 ⇓P P 21 31 51.6 +1.7
baz=53
L18A Fontenelle, Gr 53.55 68 ⇓P P 21 31 51.3 +0.7
baz=53,SNR=12
VES Vestal, Richgr 53.55 79 ⇓P P 21 31 51.3 +0.9
baz=53,SNR=9.3
GRAC Grapevine Rang 53.56 77 ⇓P P 21 31 52.5 +2.0
baz=53,SNR=6.2
M17A Scullys Gap (B 53.58 68 ⇓P P 21 31 51.6 +0.8
baz=53,SNR=16
CWC Cottonwood Cre 53.62 78 ⇓P P 21 31 52.7 +1.6
baz=54
G24A Alzada 53.69 61 ⇓P P 21 31 51.8 +0.4
baz=54
J21A Lysite 53.74 65 ⇑P P 21 31 52.7 +0.8
baz=54,SNR=17
ULM Lac du Bonnet 53.74 52 *eP* **P 21 31 52.1 +0.5**
comp=Z,89nm,1.6s
ULM PcP **PcP 21 32 56.7 -0.7**
ULM Lac du Bonnet 53.74 52 P **P 21 31 52.0 +0.5**
comp=Z,11nm,0.9s,baz=324,slow=8.5,SNR=16
ULM PcP **PcP 21 32 56.7 -0.7**
comp=Z,7.2nm,0.7s,baz=39,slow=2.8,SNR=3.9
ULM LR LR 21 55 57.6
comp=Z,434nm,19.8s,baz=333,slow=37
L19A Farson 53.75 67 ⇑P P 21 31 52.5 +0.4
baz=54,SNR=8.0
I22A 9 Mile Ranch, 53.79 64 ⇑P P 21 31 53.0 +0.7
baz=54,SNR=13
K20A Yellowstone Ra 53.83 66 ⇓P P 21 31 52.5 -0.1
baz=54,SNR=9.8
JLU Jordanelle 53.84 70 *eP* **P 21 31 53.8 +1.0**
comp=Z,296nm,2.7s
PKM Peak Mountain 53.89 81 ⇓P P 21 31 55.0 +1.9
baz=54,SNR=5.9
M18A Lyman 53.91 68 ⇑P P 21 31 53.8 +0.6
baz=54,SNR=6.4
MDND Maddock 53.97 56 ⇑P P 21 31 54.3 +1.0
baz=54
ISA Isabella 54.01 79 *eP* **P 21 31 54.3 +0.5**
ISA pmax pmax
comp=Z,44nm,1.3s
ISA Isabella 54.01 79 *eP* **P 21 31 54.3 +0.5**
comp=Z,44nm,1.3s
ISA Isabella 54.01 79 ⇑P P 21 31 54.4 +0.6
baz=54,SNR=6.9
H24A Dirks Ranch, A 54.06 62 ⇑P P 21 31 54.4 +0.2
baz=54,SNR=16
JOF Joensuu 54.06 336 *eP* **P 21 31 51.1 -2.6**
JOF pmax pmax
comp=Z,14nm,0.8s
JOF Joensuu 54.06 336 *ep* **P 21 31 51.1 -2.6**
comp=Z,14nm,0.8s
KMI Kunming 54.07 260 ⇑P P 21 31 55.3 +0.7
KMI pP **pP 21 31 58.8 -1.5**
KMI sP **sP 21 31 59.9 -2.6**
KMI PcP **PcP 21 33 02.4 +3.1**
KMI PP **PP 21 33 59.7 +3.7**
KMI ScP **ScP 21 36 58.1 +1.9**
KMI S **S 21 39 29.7 -0.5**
KMI ScS **ScS 21 41 42.3 -0.9**
KMI SS **SS 21 43 10.5 -0.9**
KMI pmax pmax
comp=Z,110nm,1.4s
KMI pmax pmax
comp=Z,750nm,3.1s
KMI LR LR
comp=N,2µm,13.2s
KMI LR LR
comp=E,2µm,15.3s
KMI LR LR
comp=Z,2µm,13.2s
DAU Daniels Canyon 54.09 70 *eP* **P 21 31 56.1 +1.5**
DAU Daniels Canyon 54.09 70 *eP* **P 21 31 56.1 +1.5**
J22A Midwest 54.16 64 ⇓P P 21 31 55.3 +0.4
baz=54,SNR=9.8
MPU Maple Canyon 54.20 70 *eP* **P 21 31 57.1 +1.8**
comp=Z,343nm,2.5s
MPMC Manual Prospec 54.21 78 ⇑P P 21 31 57.0 +1.5
baz=54,SNR=26
FURC Furnace Creek, 54.23 77 ⇑P P 21 31 57.1 +1.8
baz=54,SNR=25
ARVC Arvin 54.23 80 ⇓P P 21 31 56.1 +0.7
baz=54
SBC Santa Barbara 54.30 81 ⇑P P 21 31 57.5 +1.7
baz=54
M19A Rock Springs 54.30 67 ⇓P P 21 31 56.4 +0.4
baz=54,SNR=5.3
L20A Wamsutter 54.32 66 ⇑P P 21 31 56.8 +0.6
baz=54,SNR=9.1
TKM2 Tokmak 2 54.33 295 *eP* **P 21 31 55.9 -0.3**
TKM2 *e* 21 32 59.5
TKM2 pmax pmax
comp=Z,109nm,1.8s
TKM2 MLR MLR
comp=Z,856nm,22.0s
TKM2 Tokmak 2 54.33 295 *eP* **P 21 31 55.9 -0.3**
comp=Z,109nm,1.8s
TKM2 *e*PcP **PcP 21 32 59.5 -0.5**
TKM2 LR LR
comp=Z,856nm,22.0s
TKM2 Tokmak 2 54.33 295 P **P 21 31 56.1 -0.1**
SNR=24
K21A Alcova 54.37 65 ⇓P P 21 31 56.9 +0.3
baz=54,SNR=12
ULHL Ulahol 54.53 294 P **P 21 31 57.8 +0.1**
SNR=44
LRMC Laurel Mountai 54.56 78 ⇑P P 21 31 59.0 +1.1
baz=54,SNR=14
USP Ospenovka 54.59 296 P **P 21 31 58.5 +0.5**
SNR=29
J23A Dilts Ranch, B 54.60 63 ⇓P P 21 31 58.5 +0.3
baz=54
CHMS Chumysh 54.67 296 P **P 21 31 59.1 +0.5**
SNR=46
OSI Osito Adit 54.68 80 ⇓P P 21 32 00.4 +1.6
baz=54
I24A Kuemmerle Ranc 54.70 62 ⇓P P 21 31 59.0 +0.3
baz=54
K22A Casper 54.71 65 ⇑P P 21 31 59.4 +0.4
baz=54,SNR=16
RSSD Black Hills 54.77 62 *eP* **P 21 31 59.3 -0.2**
RSSD *e* 21 33 01.0
RSSD pmax pmax
comp=Z,33nm,0.9s
RSSD Black Hills 54.77 62 *eP* **P 21 31 59.3 -0.2**
comp=Z,33nm,0.9s
RSSD *e*PcP **PcP 21 33 01.0 -0.8**
M20A Sweetwater, Wa 54.78 67 ⇑P P 21 32 00.6 +1.0
baz=55,SNR=8.2
L21A Rawlins 54.82 66 ⇑P P 21 32 00.3 +0.5
baz=55,SNR=12
KBK Karagaybulak 54.84 296 P **P 21 32 00.4 +0.5**
SNR=36
EDW2 Edwards Air Fo 54.86 79 ⇑P P 21 32 01.4 +1.4
baz=55,SNR=23
FRU Bishkek 54.86 296 *i* P **P 21 32 00.5 +0.6**
FRU *i* 21 32 15.0
FRU *e*S **S 21 39 44.0 +3.9**
FRU pmax pmax
comp=Z,360nm,2.0s
FRU MLR MLR
comp=Z,2µm,15.0s
BLG Laguna Peak 54.89 81 ⇑P P 21 32 01.5 +1.3
baz=55

SHOC Shoshone 54.97 77 ⇓P P 21 32 02.3 +1.6
baz=55,SNR=10
ARUT Antelope Range 54.98 73 *eP* **P 21 32 02.4 +1.4**
ARUT pmax pmax
comp=Z,33nm,0.9s
ARUT Antelope Range 54.98 73 *eP* **P 21 32 02.4 +1.4**
comp=Z,33nm,0.9s
MVU Marysvale 55.05 72 *eP* **P 21 32 02.9 +1.3**
comp=Z,62nm,1.4s
MVU LR LR
comp=Z,483nm,19.0s
P17A Butcher Ranch, 55.06 70 ⇓P P 21 32 02.8 +1.2
baz=55,SNR=5.0
K23A Bowen Ranch, D 55.06 64 ⇑P P 21 32 01.5 0.0
baz=55
MSU Marysvale 55.07 72 *eP* **P 21 32 03.4 +1.7**
MSU *e* 21 33 05.5
MSU Marysvale 55.07 72 *eP* **P 21 32 03.4 +1.7**
MSU *e*PcP **PcP 21 33 05.5 +2.5**
AAK Ala-Archa 55.08 296 *c iP* **P 21 32 01.6 0.0**
AAK pmax pmax
comp=Z,287nm,1.7s
AAK Ala-Archa 55.08 296 *eP* **P 21 32 01.8 +0.2**
comp=Z,30nm,1.4s
AAK *e*PcP **PcP 21 33 02.5 -0.4**
AAK LR LR
comp=Z,943nm,21.0s
AAK Ala-Archa 55.08 296 P **P 21 32 02.4 +0.8**
SNR=51
AAK Ala-Archa 55.08 296 P **P 21 32 02.1 +0.5**
SNR=53
AAK Ala-Archa 55.08 296 P **P 21 32 02.9 +1.3**
comp=Z,321nm,1.5s,SNR=32
J24A Dixon Ranch, L 55.08 63 ⇓P P 21 32 01.8 +0.2
baz=55
M21A Separation Pea 55.10 66 ⇓P P 21 32 02.2 +0.3
baz=55,SNR=10
KZA Kyzart 55.13 295 P **P 21 32 03.1 +0.7**
SNR=23
GSC Goldstone 55.15 78 *eP* **P 21 32 03.7 +1.5**
GSC pmax pmax
comp=Z,123nm,1.3s
GSC Goldstone 55.15 78 *eP* **P 21 32 03.7 +1.5**
comp=Z,123nm,1.3s
GSC Goldstone 55.15 78 ⇑P P 21 32 03.6 +1.4
baz=55,SNR=28
DECC Green Verdugo 55.17 80 ⇑P P 21 32 03.4 +1.2
baz=55
P18A Preston Nutter 55.19 70 ⇑P P 21 32 04.0 +1.4
baz=55,SNR=11
CCUT Cedar City 55.20 74 *eP* **P 21 32 04.2 +1.5**
comp=Z,151nm,1.8s
L22A Ellis Ranch, M 55.22 65 ⇓P P 21 32 04.0 +1.2
baz=55,SNR=13
O19A Miners Draw (B 55.23 68 ⇓P P 21 32 03.7 +1.0
baz=55,SNR=9.8
AGMN Agassiz Nation 55.24 53 *eP* **P 21 32 02.9 +0.4**
N20A Spence Gulch, 55.25 67 ⇓P P 21 32 04.3 +1.4
baz=55,SNR=41
Q16A Castle Valley 55.26 71 ⇑P P 21 32 04.5 +1.4
baz=55,SNR=12
PASC Pasadena Art C 55.30 80 *eP* **P 21 32 03.6 +0.5**
comp=Z,179nm,1.8s
MWC Mount Wilson 55.33 80 *eP* **P 21 32 05.3 +1.7**
MWC pmax pmax
comp=Z,112nm,1.3s
MWC Mount Wilson 55.33 80 *eP* **P 21 32 05.3 +1.7**
comp=Z,112nm,1.3s
EKS2 Erkin-Say 55.40 296 *eP* **P 21 32 04.2 +0.3**
EKS2 *e* 21 33 04.1
EKS2 *e* 21 34 07.7
EKS2 pmax pmax
comp=Z,109nm,1.8s
EKS2 MLR MLR
comp=Z,1µm,19.0s
EKS2 Erkin-Say 55.40 296 *eP* **P 21 32 04.2 +0.3**
comp=Z,109nm,1.8s
EKS2 *e*PcP **PcP 21 33 04.1 0.0**
EKS2 *e*PP **PP 21 34 07.7 +0.4**
EKS2 LR LR
comp=Z,1µm,19.0s
EKS2 Erkin-Say 55.40 296 P **P 21 32 04.5 +0.6**
SNR=61
K24A Anderson Ranch 55.47 63 ⇑P P 21 32 03.4 -1.1
baz=55
QIZ Qiongzhong 55.49 249 P **P 21 32 05.1 +0.5**
QIZ PP **PP 21 34 08.2 -0.3**
QIZ S **S 21 39 50.1 +1.3**
QIZ sS **sS 21 39 56.0 -2.2**
QIZ pmax pmax
comp=Z,63nm,1.4s
QIZ pmax pmax
comp=Z,450nm,6.3s
QIZ LR LR
comp=N,810nm,16.9s
QIZ LR LR
comp=Z,1µm,16.3s
TUQ Turquoise Moun 55.51 77 ⇑P P 21 32 06.4 +1.6
baz=55,SNR=16
L23A Garrett 55.51 65 ⇑P P 21 32 05.5 +0.6
baz=55
BFSC Mount Baldy Ra 55.53 79 ⇑P P 21 32 06.4 +1.5
baz=55,SNR=6.5
M22A Cedar Creek Ra 55.62 66 ⇑P P 21 32 05.9 +0.2
baz=55
N21A Black Mountain 55.67 67 ⇓P P 21 32 06.8 +0.8
baz=56,SNR=15
HEC Hector,Ludlow 55.76 78 ⇓P P 21 32 08.1 +1.5
baz=56,SNR=6.9
O20A White River Ci 55.79 68 ⇑P P 21 32 07.8 +1.0
baz=56,SNR=16
P19A Cripple Cowboy 55.81 69 ⇑P P 21 32 08.0 +1.0
baz=56,SNR=16
KAF Kangasniemi 55.84 338 *eP* **P 21 32 04.8 -1.8**
KAF pmax pmax
comp=Z,7.0nm,0.6s
KAF Kangasniemi 55.84 338 *ep* **P 21 32 04.8 -1.8**
comp=Z,7.2nm,0.6s
AML Aiyayashu 55.84 296 P **P 21 32 08.2 +0.8**
SNR=35
BBRC Big Bear Solar 55.90 79 ⇑P P 21 32 09.0 +1.3
baz=56
L24A Wheatland 55.94 64 ⇓P P 21 32 08.4 +0.6
baz=56
M23A Laramie 56.00 65 ⇑P P 21 32 08.7 +0.4
baz=56
K25A Mack Ranch, Ha 56.00 63 ⇑P P 21 32 08.9 +0.6
baz=56
SCI San Clemente I 56.04 81 ⇓P P 21 32 10.1 +1.6
baz=56
O21A Pagoda 56.11 67 ⇑P P 21 32 10.1 +0.9
baz=56,SNR=16
GMRC Granite Mounta 56.15 77 ⇓P P 21 32 10.8 +1.4
baz=56,SNR=24
N22A Wattenberg Ran 56.15 66 ⇓P P 21 32 10.5 +0.9
baz=56,SNR=7.2
P20A De Beque 56.20 68 ⇓P P 21 32 10.6 +0.8
baz=56,SNR=6.4
LDFC Landfair 56.20 77 *eP* **P 21 32 10.9 +1.2**
comp=Z,106nm,1.1s
AKTO Aktyubinsk 56.26 312 P **P 21 32 09.8 0.0**
AKTO pmax pmax
comp=Z,34nm,1.2s
AKTO Aktyubinsk 56.26 312 P **P 21 32 09.8 0.0**
AKTO PcP **PcP 21 33 06.3 -0.8**
AKTO Aktyubinsk 56.26 312 P **P 21 32 09.8 0.0**
comp=Z,34nm,1.1s,baz=41,slow=8.7,SNR=66
AKTO PcP **PcP 21 33 06.3 -0.8**
comp=Z,12nm,1.0s,baz=27,slow=0.8,SNR=4.2
K26A Motz Farm, Whi 56.26 62 ⇓P P 21 32 10.5 +0.4
baz=56
MURC Murrieta 56.26 80 ⇓P P 21 32 11.2 +1.1
baz=56,SNR=5.4
L25A Engebretsen Ra 56.31 63 ⇓P P 21 32 11.1 +0.6
baz=56
N23A Red Feather La 56.33 66 ⇑P P 21 32 11.6 +0.9
baz=56,SNR=13
ABKAR Akbulak array 56.42 310 *eP* **P 21 32 10.4 -0.6**
ABKAR *e*PcP **PcP 21 33 07.5 -0.2**
M24A Cheyenne 56.43 64 ⇓P P 21 32 12.5 +1.2
baz=56,SNR=9.7
FIA1 FINESS Array S 56.49 337 *eP* **P 21 32 10.2 -1.0**
FIA1 *e*PcP **PcP 21 33 07.4 -0.4**
FINES FINESS Array B 56.49 337 P **P 21 32 10.6 -0.6**
FINES PcP **PcP 21 33 06.8 -1.0**
FINES FINESS Array B 56.49 337 P **P 21 32 10.6 -0.6**

comp=Z,23nm,0.9s,baz=27,slow=9.4,SNR=36
FINES PcP **PcP 21 33 06.8 -1.0**
comp=Z,11nm,1.0s,baz=44,slow=4.6,SNR=6.2
FINES LR LR 21 59 03.7
comp=Z,850nm,19.2s,baz=90,slow=39
LSA Lhasa 56.55 273 P **P 21 32 13.2 +0.5**
LSA pmax pmax
comp=Z,60nm,1.4s
LSA Lhasa 56.55 273 *eP* **P 21 32 13.1 +0.4**
LSA *e* 21 33 10.5
LSA pmax pmax
comp=Z,119nm,1.2s
LSA MLR MLR
comp=Z,2µm,22.0s
LSA Lhasa 56.55 273 *eP* **P 21 32 13.1 +0.4**
comp=Z,119nm,1.2s
LSA *e*PcP **PcP 21 33 10.5 +1.4**
LSA LR LR
comp=Z,2µm,22.0s
BELC Belle Mtn. Jos 56.58 78 ⇓P P 21 32 13.5 +1.0
baz=56,SNR=14
KKAR Karatay Array 56.59 299 *eP* **P 21 32 12.3 0.0**
KKAR *e* 21 34 16.6
KKAR Karatay Array 56.59 299 *eP* **P 21 32 12.3 0.0**
KKAR *e*PP **PP 21 34 16.6 -1.3**
O22A Kremmling 56.60 67 ⇓P P 21 32 13.9 +1.1
baz=56,SNR=11
U15A North Rim 56.61 74 ⇑P P 21 32 14.4 +1.6
baz=56,SNR=34
PFO Pinyon Flat Ob 56.65 79 *eP* **P 21 32 14.0 +1.0**
comp=Z,61nm,1.6s
PFO Pinyon Flat Ob 56.65 79 LR LR 21 52 26.2
comp=Z,402nm,20.6s,baz=336,slow=32
PFO Pinyon Flat Ob 56.65 79 ⇑P P 21 32 13.9 +1.0
baz=56,SNR=7.9
P21A Newcastle 56.65 68 ⇑P P 21 32 14.3 +1.3
baz=56,SNR=16
Q20A Ridgley Place, 56.67 69 ⇑P P 21 32 13.6 +0.5
baz=56,SNR=13
NEE2 Needles Airpor 56.70 77 ⇓P P 21 32 14.3 +1.2
baz=56
K27A Flueckinger Fa 56.70 62 ⇓P P 21 32 13.7 +0.5
baz=56
KSH Kashi 56.74 292 P P 21 32 17.2 +3.6
KSH *e*pP pP 21 32 21.7 +2.4
KSH sP sP 21 32 24.1 +2.7
KSH PcP **PcP 21 33 12.7 +3.3**
KSH *e*PP PP 21 34 25.1 +5.7
KSH *e*ScP **ScP 21 37 10.1 +2.4**
KSH *e*PcS **PcS 21 37 12.1 +1.9**
KSH *e*S **S 21 40 08.7 +3.3**
KSH *e*ScS **ScS 21 42 02.2 +0.4**
KSH *e*SS **SS 21 43 57.1 +4.4**
KSH LR LR
comp=N,4µm,16.3s
KSH LR LR
comp=E,3µm,9.8s
KSH LR LR
comp=Z,3µm,12.9s
S18A Hurst Farm, Bl 56.80 71 ⇑P P 21 32 15.1 +1.0
baz=57,SNR=27
PV04 Paradox Valley 56.80 70 *eP* **P 21 32 15.5 +1.5**
L26A Underwood Farm 56.82 63 ⇑P P 21 32 14.5 +0.5
baz=57
W13A Hualapai Mount 56.82 76 ⇓P P 21 32 15.7 +1.4
baz=57,SNR=22
M25A Palm-Egli Farm 56.82 64 ⇑P P 21 32 15.1 +1.0
baz=57
BRSD Miller 56.87 58 ⇓P P 21 32 14.5 +0.3
baz=57
109C Camp Elliot, M 56.87 80 ⇑P P 21 32 15.9 +1.5
baz=57
O23A Lake Granby, G 56.87 66 ⇑P P 21 32 16.4 +1.7
baz=57,SNR=16
N24A Carr 56.90 65 ⇑P P 21 32 15.9 +1.2
baz=57
IRM Iron Mountain 56.90 78 ⇑P P 21 32 16.3 +1.7
baz=57,SNR=49
P22A Eagle 56.93 67 ⇓P P 21 32 16.5 +1.4
baz=57
Q21A Lamborn Mesa, 57.12 68 ⇓P P 21 32 17.6 +1.3
baz=57,SNR=13
BC3 Big Chuckawall 57.13 78 ⇑P P 21 32 17.4 +1.1
baz=57,SNR=13
SMCO Snowmass 57.15 68 *eP* **P 21 32 18.0 +1.2**
comp=Z,37nm,0.8s
PV01 Paradox Valley 57.17 70 *eP* **P 21 32 17.3 +0.6**
comp=Z,4µm,1.3s
R20A Redvale 57.22 69 ⇑P P 21 32 18.2 +1.1
baz=57,SNR=17
MONP Monument Peak 57.23 79 ⇓P P 21 32 18.4 +1.3
baz=57
M26A McRoberts Ranc 57.23 63 ⇓P P 21 32 17.9 +0.9
baz=57
BAR Barrett 57.26 80 *eP* **P 21 32 16.2 -0.9**
comp=Z,257nm,2.5s
N25A Grover 57.29 64 ⇓P P 21 32 18.7 +1.2
baz=57
PDMCI Parker Dam,Lak 57.31 77 ⇑P P 21 32 18.7 +1.2
baz=57,SNR=8.9
ISCO Idaho Springs 57.34 66 *eP* **P 21 32 19.6 +1.6**
ISCO pmax pmax
comp=Z,57nm,1.3s
ISCO MLR MLR
comp=Z,519nm,19.0s
ISCO Idaho Springs 57.34 66 *eP* **P 21 32 19.6 +1.6**
comp=Z,57nm,1.3s
ISCO LR LR
comp=Z,519nm,19.0s
ISCO Idaho Springs 57.34 66 ⇑P P 21 32 19.6 +1.6
baz=57,SNR=29
EYMN Ely 57.35 51 *eP* **P 21 32 17.8 +0.2**
comp=Z,68nm,1.0s
EYMN LR LR
comp=Z,430nm,21.0s
O24A Longmont 57.35 66 ⇑P P 21 32 19.6 +1.8
baz=57
Q22A Crested Butte, 57.43 68 ⇑P P 21 32 20.0 +1.4
baz=57,SNR=23
R21A Cimarron 57.49 69 ⇓P P 21 32 20.5 +1.5
baz=57,SNR=36
S20A Disappointment 57.51 70 ⇓P P 21 32 20.2 +1.1
baz=57,SNR=22
SWSC Sam W. Stewart 57.51 79 ⇓P P 21 32 20.0 +1.1
baz=57,SNR=6.5
Y12C Blythe 57.54 77 ⇑P P 21 32 20.6 +1.5
baz=57,SNR=14
M27A Reverse DX Ran 57.54 63 ⇓P P 21 32 20.0 +0.9
baz=57
P23A Jefferson 57.55 67 ⇑P P 21 32 21.7 +2.1
baz=57,SNR=25
DVTC Desert V Tower 57.57 79 ⇓P P 21 32 20.8 +1.4
baz=57
N26A Koester Ranch, 57.69 64 ⇑P P 21 32 21.9 +1.7
baz=58
WUAZ Wupatki 57.78 74 *eP* **P 21 32 22.1 +1.1**
WUAZ comp=Z,82nm,1.4s LR LR
comp=Z,738nm,21.0s
WUAZ Wupatki 57.78 74 ⇓P P 21 32 22.7 +1.7
baz=58,SNR=18
O25A Wiggins 57.81 65 ⇓P P 21 32 22.4 +1.3
baz=58
P24A Kohler Place, 57.90 66 ⇑P P 21 32 23.7 +1.9
baz=58
MVCO Mesa Verde 57.92 70 *eP* **P 21 32 23.5 +1.5**
comp=Z,54nm,1.4s
MVCO Mesa Verde 57.92 70 ⇓P P 21 32 23.2 +1.2
baz=58,SNR=5.7
Q23A Hartsel 57.92 67 ⇑P P 21 32 23.8 +1.7
baz=58,SNR=17
S21A Coal Bank Pass 57.92 69 ⇑P P 21 32 23.9 +1.8
baz=58,SNR=24
GLA Glamis 57.93 78 *eP* **P 21 32 23.5 +1.6**
GLA pmax pmax
comp=Z,195nm,1.8s
GLA Glamis 57.93 78 *eP* **P 21 32 23.5 +1.6**
comp=Z,195nm,1.8s
GLA Glamis 57.93 78 ⇑P P 21 32 23.4 +1.6
baz=58,SNR=19
R22A Saguache, Gunn 57.99 68 ⇓P P 21 32 24.5 +1.9
baz=58,SNR=12
N27A Anderson Farm, 58.03 63 ⇑P P 21 32 23.8 +1.2
baz=58
O26A Horse Wrangler 58.10 64 ⇑P P 21 32 24.2 +1.1
baz=58,SNR=5.8
OGNE Ogallala 58.16 63 ⇑P P 21 32 24.7 +1.2

baz=58
Y14A Wickenburg 58.18 76 ⇓P P 21 32 25.3 +1.7
baz=58,SNR=19
Q24A Divide 58.21 67 ⇓P P 21 32 25.6 +1.5
baz=58,SNR=10
P25A Willow Gulch B 58.26 65 ⇓P P 21 32 25.9 +1.6
baz=58,SNR=13
S22A 4UR Ranch, Cre 58.33 69 ⇓P P 21 32 26.9 +1.9
baz=58,SNR=32
ECSD EROS Data Cent 58.47 57 *e*P P 21 32 26.1 +0.5
comp=Z,215nm,2.0s
ECSD LR LR
comp=Z,514nm,19.0s
R23A Moffat 58.48 68 ⇑P P 21 32 27.7 +1.7
baz=58,SNR=16
O27A Beecher Island 58.54 64 ⇑P P 21 32 27.1 +1.0
baz=58,SNR=6.6
U20A Newcomb 58.56 71 ⇑P P 21 32 27.9 +1.5
baz=58
T21A Navajo Lake 58.57 70 ⇑P P 21 32 28.2 +1.6
baz=58,SNR=7.0
X16A Lo Mia Camp, P 58.61 74 ⇑P P 21 32 28.7 +1.9
baz=58,SNR=17
P26A Davis Ranch, A 58.62 65 ⇑P P 21 32 28.1 +1.3
baz=58,SNR=8.4
Z14A Wintersburg 58.66 76 ⇑P P 21 32 28.5 +1.5
baz=58,SNR=8.5
Q25A Bedland, Calha 58.69 66 ⇑P P 21 32 28.6 +1.2
baz=58,SNR=23
MOS Moscow 58.76 328 *e*P P 21 32 25.7 -1.6
MOS *e* 21 33 16.5
MOS *e* 21 34 35.9
MOS pmax pmax
comp=Z,128nm,1.6s
MOS MLR MLR
comp=Z,1μm,12.0s
S23A Nye Farm, Mont 58.77 68 ⇑P P 21 32 29.9 +1.9
baz=59
R24A Sanders Place, 58.80 67 ⇓P P 21 32 29.8 +1.7
baz=59,SNR=15
T22A Edith 58.87 69 ⇓P P 21 32 30.5 +1.8
baz=59,SNR=18
W18A Petrified Fore 58.93 73 ⇑P P 21 32 30.6 +1.6
baz=59,SNR=5.9
U21A Nageezi 58.95 70 ⇓P P 21 32 30.8 +1.6
baz=59,SNR=25
SPMN St. Paul 58.96 54 ⇓P P 21 32 29.1 +0.3
baz=59,SNR=6.8
P27A Ficken Ranch, 58.99 64 ⇓P P 21 32 30.3 +1.0
baz=59,SNR=8.2
SDCO Great Sand Dun 58.99 68 *e*P P 21 32 31.0 +1.5
comp=Z,102nm,1.6s
SDCO LR LR
comp=Z,347nm,20.0s
DAV Davao City (W) 59.00 226 P P 21 32 31.4 +2.0
SNR=10
Q26A Hugo 59.03 65 ⇓P P 21 32 31.0 +1.3
baz=59,SNR=16
V20A Brimhall 59.04 71 ⇓P P 21 32 30.8 +1.0
baz=59,SNR=8.1
VSU Vasula 59.07 336 *c iP* P 21 32 28.9 -0.4
VSU pmax pmax
comp=Z,68nm,1.3s
S24A Houchin Ranch, 59.21 68 ⇑P P 21 32 32.8 +1.7
baz=59,SNR=27
R25A Fountain Ranch 59.27 66 ⇓P P 21 32 32.6 +1.3
baz=59,SNR=24
T23A Casias Ranch, 59.28 69 ⇑P P 21 32 33.0 +1.4
baz=59
X18A Snowflake 59.28 73 ⇓P P 21 32 33.5 +2.0
baz=59,SNR=32
U22A Llaves 59.39 70 ⇓P P 21 32 34.0 +1.8
baz=59,SNR=7.8
KSCO Kaye Shedlock' 59.39 65 ⇓P P 21 32 33.3 +1.2
baz=59,SNR=8.0
NB2 NORSAR Subarra 59.40 345 P P 21 32 31.5 -0.2
comp=Z,177nm,1.4s,baz=16,slow=7.4
NB2 NORSAR Subarra 59.40 345 P P 21 32 31.5 -0.2
baz=16,slow=7.4
NOA NORSAR Array B 59.40 345 P P 21 32 31.2 -0.5
NOA PcP PcP 21 33 19.3 -0.1
NOA NORSAR Array B 59.40 345 P P 21 32 31.2 -0.5
comp=Z,47nm,1.0s,baz=17,slow=7.0,SNR=46
NOA PcP PcP 21 33 19.3 -0.1
comp=Z,6.7nm,0.8s,baz=17,slow=2.7,SNR=4.6
NOA LR LR 22 03 09.5
comp=Z,438nm,18.9s,baz=10.0,slow=41
V21A Milan 59.45 71 ⇑P P 21 32 34.0 +1.4
baz=59
SHL Shillong 59.46 270 *e*PKP P 21 32 34.0 +1.2
W20A Ramah 59.55 72 ⇑P P 21 32 34.8 +1.4
baz=59,SNR=29
R26A Arlington 59.56 66 ⇑P P 21 32 34.5 +1.2
baz=59,SNR=71
S25A Robets Cordova 59.58 67 ⇑P P 21 32 34.4 +0.9
baz=59,SNR=22
OBN Obninsk 59.60 328 *c iP* P 21 32 32.6 -0.5
OBN *e* 21 33 18.7
OBN *e* 21 34 44.7
OBN *e*SS SS 21 44 38.3 +1.9
OBN pmax pmax
comp=Z,165nm,1.6s
OBN MLR MLR
comp=Z,1μm,15.0s
BGNE Belgrade 59.61 60 ⇓P P 21 32 33.8 +0.4
baz=59
NC602 NORSAR Array S 59.65 345 *e*P P 21 32 32.3 -1.1
V22A San Miguel Ran 59.73 70 ⇑P P 21 32 35.9 +1.3
baz=60,SNR=11
T24A Torres, Weston 59.74 68 ⇓P P 21 32 36.6 +1.9
baz=60
U23A El Rito 59.76 69 ⇓P P 21 32 36.3 +1.5
baz=60,SNR=6.3
COWI Conover 59.79 51 *e*P P 21 32 34.0 -0.6
comp=Z,106nm,1.6s
COWI LR LR
comp=Z,523nm,22.0s
214A Organ Pipe Nat 59.84 77 ⇓P P 21 32 36.7 +1.5
baz=60
R27A Eads 59.88 65 ⇑P P 21 32 36.4 +0.9
baz=60,SNR=17
HYA Hoyanger 59.90 348 *e*P P 21 32 34.4 -0.6
W21A San Fidel 59.99 71 ⇑P P 21 32 37.2 +0.9
baz=60,SNR=8.0
T25A Trinidad 60.00 67 ⇓P P 21 32 37.5 +1.1
baz=60,SNR=15
X20A Quemado 60.01 72 ⇓P P 21 32 38.3 +1.7
baz=60,SNR=28
S26A Kim 60.08 66 ⇓P P 21 32 37.6 +0.7
baz=60,SNR=15
SCHQ Schefferville 60.13 31 *e*P P 21 32 36.2 -0.6
comp=Z,188nm,1.9s
SCHQ *e*PcP PcP 21 33 22.3 -0.1
SCHQ P'P' 22 02 06.0
SCHQ Schefferville 60.13 31 P P 21 32 36.2 -0.6
comp=Z,15nm,0.8s,baz=344,slow=9.7,SNR=30
SCHQ LR LR 22 01 53.5
comp=Z,248nm,19.3s,baz=352,slow=39
SCHQ PKPPKP P'P'df 22 02 06.0 -2.0
comp=Z,4.8nm,1.0s,baz=101,slow=3.2,SNR=3.8
U24A Moreno Valley 60.15 68 ⇑P P 21 32 39.3 +1.8
baz=60
V23A Ortiz Mt. (NFS 60.22 70 ⇑P P 21 32 40.0 +2.0
baz=60,SNR=12
TAPN Taplejung 60.24 275 ⇑*iP* P 21 32 37.8 -0.5
comp=Z,331nm,1.3s
S27A Las Animas 60.31 66 ⇑P P 21 32 39.3 +0.8
baz=60
R28A Tribune 60.31 65 ⇓P P 21 32 39.0 +0.6
baz=60,SNR=14
T26A Comanche Natio 60.37 67 ⇓P P 21 32 39.5 +0.5
baz=60
W22A Albuquerque 60.41 71 ⇓P P 21 32 40.9 +1.6
baz=60
X21A Alamocita Cree 60.45 72 ⇓P P 21 32 41.5 +1.9
baz=60,SNR=48
R29A Marienthal 60.57 64 ⇑P P 21 32 40.7 +0.6
baz=60
Y20A Horse Springs, 60.57 73 ⇑P P 21 32 42.6 +2.2
baz=60,SNR=48
U25A Circle Dot Ran 60.59 68 ⇓P P 21 32 41.5 +1.1
baz=60,SNR=16
TUC Tucson 60.60 75 *e*P P 21 32 41.6 +1.1
TUC pmax pmax
comp=Z,10.0nm,1.4s
TUC MLR MLR
comp=Z,323nm,21.0s
TUC Tucson 60.60 75 *e*P P 21 32 41.5 +1.1
comp=Z,9.7nm,1.4s
TUC LR LR
comp=Z,323nm,21.0s
V24A Rampart Ranch, 60.69 69 ⇑P P 21 32 42.8 +1.6
baz=60,SNR=20
W23A Werner Place, 60.70 70 ⇑P P 21 32 42.7 +1.4
baz=60,SNR=8.5
ANMO Albuquerque 60.72 70 *e*P P 21 32 42.6 +1.3
comp=Z,29nm,1.1s
ANMO Albuquerque 60.72 70 LR LR 21 59 48.7
comp=Z,247nm,19.1s,baz=138,slow=37
GUN Gumba 60.77 276 ⇑*iP* P 21 32 41.4 -0.5
comp=Z,327nm,1.0s
X22A Bernardo 60.79 71 ⇓P P 21 32 43.9 +2.1
baz=61,SNR=6.8
LAZ Ladron 60.81 71 *e*P P 21 32 43.6 +1.6
comp=Z,26nm,1.3s
ODAN Odare 60.81 274 ⇑*iP* P 21 32 41.7 -0.4
comp=Z,188nm,1.1s
Y21A Point of Rocks 60.85 72 ⇓P P 21 32 44.3 +2.0
baz=61,SNR=13
UBPT Khong Chiam 60.86 251 P P 21 32 43.2 +1.0
comp=Z,108nm,1.4s,comp=Z,1μm
S28A Manter 60.87 65 ⇓P P 21 32 42.7 +0.5
baz=61
T27A Campo 60.89 66 ⇑P P 21 32 43.1 +0.7
baz=61,SNR=11
U26A Atchley Ranch, 60.92 67 ⇓P P 21 32 43.5 +0.8
baz=61,SNR=17
V25A Rancho No Teng 60.93 68 ⇓P P 21 32 44.0 +1.3
baz=61,SNR=38
KONO Kongsberg 60.96 346 *e*P P 21 32 42.4 0.0
W24A Lazy 6 Ranch, 61.03 69 ⇓P P 21 32 45.0 +1.5
baz=61,SNR=19
LENM Lemitar 61.08 71 *e*P P 21 32 45.6 +1.9
Z20A Nine Sixteen R 61.09 73 ⇓P P 21 32 45.6 +1.7
baz=61,SNR=29
R30A Dighton 61.09 64 ⇓P P 21 32 44.1 +0.4
baz=61
LPM Los Pinos Moun 61.13 71 *e*P P 21 32 45.6 +1.4
T28A Walsh 61.14 66 ⇓P P 21 32 44.5 +0.5
baz=61
X23A Hourglass Bar 61.14 70 ⇑P P 21 32 45.6 +1.3
baz=61,SNR=11
RAMN Ramite 61.15 275 ⇑*iP* P 21 32 43.9 -0.5
comp=Z,474nm,1.2s
Y22D IRIS PASSCAL I 61.18 71 ⇓P P 21 32 46.4 +2.0
baz=61
KKN Kakani 61.18 277 ⇑*iP* P 21 32 44.3 -0.3
comp=Z,368nm,1.5s
S29A Ulysses 61.22 65 ⇓P P 21 32 45.0 +0.4
baz=61
CMMT Chiang Mai 61.24 259 P P 21 32 45.0 +0.2
CMMT Chiang Mai 61.24 259 P P 21 32 45.8 +1.0
comp=Z,114nm,1.8s,comp=Z,2μm
CHTO Chiang Mai 61.24 259 *e*P P 21 32 45.5 +0.7
CHTO pmax pmax
comp=Z,180nm,1.3s
CHTO MLR MLR
comp=Z,605nm,22.0s
CHTO Chiang Mai 61.24 259 *e*P P 21 32 45.5 +0.7
comp=Z,180nm,1.3s
CHTO LR LR
comp=Z,605nm,22.0s
CHTO Chiang Mai 61.24 259 P P 21 32 45.9 +1.1
SNR=35
CHTO Chiang Mai 61.24 259 P P 21 32 45.3 +0.5
comp=Z,127nm,1.8s,comp=Z,2μm
CHTO Chiang Mai 61.24 259 P P 21 32 45.3 +0.5
comp=Z,127nm,1.8s,comp=Z,2μm
Y22A Socorro 61.26 71 ⇓P P 21 32 46.7 +1.7
baz=61,SNR=24
BNM Barren Site 61.26 71 *e*P P 21 32 46.4 +1.3
comp=Z,55nm,1.5s
PKI Pulchoki 61.28 277 ⇑*iP* P 21 32 45.0 -0.4
comp=Z,377nm,1.3s
PKIN Phulchoki 61.29 277 ⇑*iP* P 21 32 44.8 -0.6
comp=Z,256nm,1.3s
U27A Thompson Grove 61.35 67 ⇑P P 21 32 46.0 +0.5
baz=61,SNR=16
V26A Tequesquite Ra 61.37 68 ⇓P P 21 32 46.1 +0.5
baz=61,SNR=6.8
Z21A St. Cloud Mine 61.40 72 ⇑P P 21 32 47.7 +1.7
baz=61,SNR=6.0
DMN Daman 61.41 277 ⇑*iP* P 21 32 45.9 -0.3
comp=Z,342nm,1.5s
SCIA State Center 61.44 56 *e*P P 21 32 46.7 +0.8
comp=Z,282nm,1.6s
W25A X Bar L Ranch, 61.50 69 ⇓P P 21 32 47.5 +0.9
baz=61,SNR=38
T29A Hugoton 61.50 65 ⇑P P 21 32 46.6 +0.1
baz=61
S30A Mezcuma 61.52 64 ⇓P P 21 32 46.8 +0.2
baz=61,SNR=7.3
120A U Bar Ranch, L 61.52 74 ⇑P P 21 32 48.5 +1.8
baz=61,SNR=36
DANN Dangsing 61.53 278 ⇑*iP* P 21 32 46.7 -0.3
comp=Z,492nm,1.5s
X24A Lazy VL Ranch, 61.53 70 ⇓P P 21 32 48.4 +1.5
baz=61,SNR=29
CM31 Chiang Mai Arr 61.54 259 *e*P P 21 32 47.7 +0.9
comp=Z,29nm,0.8s
CMAR Chiang Mai Arr 61.54 259 P P 21 32 47.8 +1.0
CMAR PcP PcP 21 33 28.4 -0.1
CMAR P'P' 22 02 02.9
CMAR Chiang Mai Arr 61.54 259 P P 21 32 47.8 +1.0
comp=Z,35nm,1.0s,baz=23,slow=7.8,SNR=151
CMAR PcP PcP 21 33 28.4 -0.1
comp=Z,16nm,1.0s,baz=7.7,slow=4.4,SNR=6.9
CMAR LR LR 22 01 34.6
comp=Z,644nm,18.1s,baz=241,slow=38
CMAR PKPPKP P'P'df 22 02 02.9 +3.5
comp=Z,1.3nm,0.9s,baz=229,slow=3.6,SNR=6.8
IZAR Zarasai 61.66 335 *e*P P 21 32 47.2 +0.2
IZAR AMB AMB 21 32 48.1
comp=Z,38nm,1.2s
U28A Mallet 61.67 66 ⇑P P 21 32 47.9 +0.2
baz=62,SNR=16
Y23A Lovelace Mesa, 61.73 71 ⇑P P 21 32 49.7 +1.6
baz=62,SNR=42
Z22A Elephant Butte 61.80 72 ⇑P P 21 32 50.2 +1.6
baz=62,SNR=46
ISAL Salakas 61.85 335 *e*P P 21 32 48.5 +0.2
ISAL AMB AMB 21 32 49.5
comp=Z,35nm,1.3s
V27A Dan Oppiter Fa 61.87 67 ⇓P P 21 32 49.3 +0.2
baz=62
JFWS Jewell Farm 61.91 53 *e*P P 21 32 48.7 -0.4
JFWS pmax pmax
comp=Z,62nm,1.6s
JFWS MLR MLR
comp=Z,359nm,20.0s
JFWS Jewell Farm 61.91 53 *e*P P 21 32 48.6 -0.4
comp=Z,62nm,1.6s
JFWS LR LR
comp=Z,359nm,20.0s
IDID Didziasalis 61.94 334 AMB AMB 21 32 50.4
comp=Z,51nm,1.3s
W26A Owens Ranch, T 61.94 68 ⇓P P 21 32 50.5 +0.9
baz=62
X25A Clemmons Ranch 61.95 69 ⇓P P 21 32 50.8 +1.2
baz=62,SNR=16
T30A Plains 61.95 65 ⇓P P 21 32 49.4 -0.1
baz=62
121A Cookes Peak, D 61.96 73 ⇓P P 21 32 51.5 +1.8
baz=62,SNR=23
S31A Mullinville 62.00 63 ⇓P P 21 32 49.1 -0.6
baz=62
IIGN Ignalina 62.03 334 *e*P P 21 32 49.8 +0.2
IIGN AMB AMB 21 32 52.0
comp=Z,53nm,1.4s
Y24A Capitan 62.04 70 ⇑P P 21 32 51.7 +1.4
baz=62,SNR=88
U29A Oasis Ranch, S 62.08 65 ⇓P P 21 32 50.1 -0.3
baz=62
KOLN Koldanda 62.08 278 ⇑*iP* P 21 32 50.1 -0.5
comp=Z,134nm,1.3s
220A Playas Peak, P 62.09 74 ⇓P P 21 32 52.0 +1.5
baz=62,SNR=37
319A Douglas 62.12 75 ⇓P P 21 32 52.4 +1.6
baz=62,SNR=17
PYUN Piuthan 62.14 279 ⇑*iP* P 21 32 50.5 -0.5
comp=Z,578nm,1.2s
KSU1 Kansas State U 62.16 60 *e*P P 21 32 50.7 -0.1
comp=Z,68nm,1.1s
KSU1 LR LR
comp=Z,573nm,21.0s
Z23A Rita Site, Whi 62.17 71 ⇓P P 21 32 52.7 +1.6
baz=62,SNR=18
V28A Channing 62.17 67 ⇓P P 21 32 51.0 0.0
baz=62
122A Conniff Cattle 62.23 72 ⇓P P 21 32 53.4 +1.9
baz=62,SNR=8.6
VSR Storozhevoye 62.24 324 *c iP* P 21 32 50.9 -0.2
VSR pmax pmax
comp=N,140nm,1.5s
VSR pmax pmax
comp=E,80nm,1.5s
VSR pmax pmax
comp=Z,140nm,1.5s
VSR MLR MLR
comp=N,1μm,14.0s
VSR MLR MLR
comp=E,710nm,14.0s
VSR MLR MLR
comp=Z,2μm,14.0s
W27A Bowe Ranch, En 62.31 68 ⇓P P 21 32 52.0 0.0
baz=62,SNR=7.4
U30A WK&E Inc. Balk 62.31 65 ⇓P P 21 32 51.8 -0.1
baz=62
T31A Randall Ranch, 62.33 64 ⇑P P 21 32 51.6 -0.3
baz=62,SNR=6.4
X26A CR and CR Fran 62.35 69 ⇑P P 21 32 53.1 +0.8
baz=62,SNR=18
221A Mesquite Ranch 62.38 73 ⇓P P 21 32 54.4 +1.9
baz=62,SNR=9.4
MICGM Minsk 62.42 333 *e*P P 21 32 50.0 -2.2
V29A Stinnett 62.42 66 ⇓P P 21 32 52.6 -0.1
baz=62
VORD Divnogorie 62.42 324 *e*P P 21 32 51.7 -0.6
VORD pmax pmax
comp=N,60nm,1.4s
VORD pmax pmax
comp=Z,80nm,1.4s
VORD pmax pmax
comp=E,10.0nm,0.7s
VORD MLR MLR
comp=N,910nm,16.0s
VORD MLR MLR
comp=E,1μm,16.0s
VORD MLR MLR
comp=Z,2μm,16.0s
MNK Minsk 62.43 333 *e*P P 21 32 50.0 -2.3
MNK pmax pmax
comp=Z,360nm,1.2s
MNK pmax pmax
comp=N,480nm,1.5s
320A Kipp Ranch, An 62.54 74 ⇓P P 21 32 55.2 +1.6
baz=62,SNR=12
W28A Vega 62.58 67 ⇓P P 21 32 54.3 +0.5
baz=62,SNR=11
X27A F and S Farms, 62.63 68 ⇑P P 21 32 55.0 +0.9
baz=62,SNR=11
222A Williams Famil 62.65 73 ⇑P P 21 32 55.8 +1.5
baz=62,SNR=7.9
123A Bell Site, Whi 62.65 72 ⇑P P 21 32 55.7 +1.4
baz=62
GLMI Grayling 62.66 48 *e*P P 21 32 52.9 -1.2
comp=N,80nm,1.0s
GLMI LR LR
comp=Z,505nm,20.0s
KDM Kudat 62.75 235 P P 21 32 56.3 +1.3
U31A Nine Bar Ranch 62.83 65 ⇑P P 21 32 55.4 0.0
baz=63
Y26A Elida 62.84 69 ⇓P P 21 32 56.4 +0.8
baz=63,SNR=8.5
V30A Spur Ranch, Mi 62.91 66 ⇓P P 21 32 55.6 -0.3
baz=63
Z25A Roswell 62.91 70 ⇓P P 21 32 57.1 +1.1
baz=63,SNR=20
DDI Dehra Dun 62.93 284 ⇑*iP* P 21 32 53.0 -3.1
W29A Amraillo 62.96 67 ⇑P P 21 32 56.4 +0.1
baz=63
124A Stringfield Ra 63.01 71 ⇓P P 21 32 57.9 +1.1
baz=63,SNR=15
GAMI Galela, Maluku 63.01 222 P P 21 32 55.9 -0.8
223A Chaparral, Ant 63.07 72 ⇑P P 21 32 58.5 +1.4
baz=63
AMTX Amarillo 63.13 67 *e*P P 21 32 57.8 +0.4
comp=Z,29nm,0.8s
AMTX LR LR
comp=Z,572nm,20.0s
X28A Dimmitt 63.17 67 ⇑P P 21 32 58.0 +0.3
baz=63
Y27A Causey 63.20 69 ⇑P P 21 32 58.7 +0.7
baz=63,SNR=44
Z26A Caprock 63.29 70 ⇑P P 21 32 59.4 +0.9
baz=63,SNR=46
V31A Spring Creek L 63.31 65 ⇑P P 21 32 58.9 +0.4
baz=63,SNR=7.3
MSTX Muleshoe 63.33 68 ⇓P P 21 32 59.2 +0.4
baz=63,SNR=25
W30A Crocket Farms 63.43 66 ⇓P P 21 32 59.8 +0.4
baz=63
125A Gardner Draw, 63.44 71 ⇑P P 21 33 00.7 +1.2
baz=63,SNR=45
224A Cornudas Mount 63.47 72 ⇓P P 21 33 01.0 +1.2
baz=63
X29A Tulia 63.47 67 ⇑P P 21 33 00.2 +0.5
baz=63,SNR=8.7
MYLDM Lahad Datu 63.59 233 P P 21 33 03.1 +2.6
MYLDM Lahad Datu 63.59 233 P P 21 33 03.1 +2.6
comp=Z,43nm,3.0s,comp=Z,1μm
Z27A Tatum 63.63 69 ⇓P P 21 33 01.4 +0.6
baz=64,SNR=28
Y28A McKinney Farm, 63.64 68 ⇓P P 21 33 01.1 +0.3
baz=63
W31A Holland Ranch, 63.73 65 ⇑P P 21 33 01.5 +0.1
baz=64
SDKM Sandakan 63.73 234 P P 21 33 02.7 +1.2
126A Clayton Basin, 63.77 70 ⇑P P 21 33 02.4 +0.7
baz=64,SNR=14
225A Deer Hill, Car 63.80 71 ⇑P P 21 33 03.2 +1.2
baz=64,SNR=17
KKM Kota Kinabalu 63.80 236 *e*P P 21 33 01.9 -0.1
comp=Z,225nm,2.1s
KKM Kota Kinabalu 63.80 236 P P 21 33 03.9 +1.9
KKM Kota Kinabalu 63.80 236 P P 21 33 04.0 +2.0
comp=Z,45nm,2.0s,comp=Z,1μm
MNTX Cornudas Mount 63.85 72 *e*P P 21 33 03.0 +0.9
comp=Z,78nm,1.2s
MNTX LR LR
comp=Z,631nm,21.0s
X30A Coker Ranch, T 63.88 67 ⇑P P 21 33 02.6 +0.3
baz=64,SNR=11
SUW Suwalki 63.95 336 *e*P P 21 33 02.1 -0.3
SUW pmax pmax
comp=Z,241nm,1.3s
SUW Suwalki 63.95 336 *e*P P 21 33 02.1 -0.3
comp=Z,241nm,1.3s
SUW Suwalki 63.95 336 *e*P P 21 33 02.1 -0.3
SUW *e*pP pP 21 33 09.5 +1.4
SUW LMZ LR 21 56 54.9
GDL2 Guadalupe Moun 63.96 71 *e*P P 21 33 03.9 +0.9
Y29A Porterfield Fa 63.96 68 ⇓P P 21 33 03.5 +0.6
baz=64
324A Moseley Ranch, 64.00 72 ⇓P P 21 33 04.4 +1.1
baz=64,SNR=28
KBL Kabul 64.06 294 *e*P P 21 33 02.5 -1.2
KBL *e* 21 35 22.8
KBL pmax pmax
comp=Z,123nm,1.5s
KBL Kabul 64.06 294 *e*P P 21 33 02.5 -1.2
comp=Z,123nm,1.5s
KBL *e*PP PP 21 35 22.8 -1.4
Z28A Tucker Farm, M 64.07 68 ⇑P P 21 33 03.8 +0.2
baz=64
127A Arkansas Junct 64.08 70 ⇑P P 21 33 04.3 +0.6
baz=64,SNR=14
MUD Monsted U'grnd 64.12 345 ⇑*iP* P 21 33 04.7 +1.3
MUD pmax pmax
comp=Z,18nm,1.1s
MUD Monsted U'grnd 64.12 345 ⇑*iP* P 21 33 04.7 +1.3
comp=Z,18nm,1.0s
226B Tecolote Peak, 64.16 71 ⇓P P 21 33 05.1 +0.8
baz=64,SNR=33
X31A McDonald Ranch 64.16 66 ⇑P P 21 33 04.8 +0.6
baz=64,SNR=6.6
HDIL Hopedale 64.25 54 *e*P P 21 33 04.2 -0.4
comp=Z,382nm,1.9s
HDIL LR LR
comp=Z,400nm,19.0s
325A Bean Ranch, Si 64.32 72 ⇑P P 21 33 06.4 +1.0
baz=64,SNR=18
Y30A Stafford Cattl 64.33 67 ⇑P P 21 33 05.6 +0.4

baz=64
Z29A Hungry Hill Ra 64.43 68 ⇑P P 21 33 06.7 +0.8
baz=64,SNR=20
BSD Bornholm Skovb 64.52 341 *i* P P 21 33 06.6 +0.5
BSD pmax pmax
comp=Z,17nm,0.8s
BSD MLR MLR
comp=Z,850nm,22.0s
BSD Bornholm Skovb 64.52 341 *i* P P 21 33 06.6 +0.5
comp=Z,17nm,0.7s
BSD
comp=Z,850nm,22.0s
128A Castleberry Fa 64.56 69 ⇑P P 21 33 07.2 +0.3
baz=64
Y31A Rekieta Farm, 64.57 66 ⇓P P 21 33 07.0 +0.2
baz=64
CHBT CHBT 64.59 253 P P 21 33 08.3 +1.2
comp=Z,101nm,1.6s,comp=Z,2µm
227A Bennet, Jal 64.64 70 ⇑P P 21 33 08.0 +0.5
baz=64
TSM Tawau 64.65 233 P P 21 33 08.4 +0.9
WMOK Wichita Mounta 64.66 65 *eP* P 21 33 05.9 -1.5
WMOK pmax pmax
comp=Z,274nm,1.7s
WMOK Wichita Mounta 64.66 65 *eP* P 21 33 05.9 -1.5
comp=Z,274nm,1.7s
Z30A Sanderson Ranc 64.69 67 ⇓P P 21 33 08.0 +0.3
baz=64
425A Indio Mountain 64.78 72 ⇑P P 21 33 09.8 +1.4
baz=65,SNR=52
SADO Sadowa 64.82 45 LR LR 22 02 38.9
comp=Z,238nm,19.3s,baz=351,slow=37
129A Stewart Farms, 64.85 68 ⇑P P 21 33 09.0 +0.3
baz=65
326A Caldwell Ranch 64.86 71 ⇑P P 21 33 09.7 +0.8
baz=65,SNR=21
228A UT Block 9, Go 64.91 69 ⇓P P 21 33 09.7 +0.5
baz=65,SNR=7.4
Y32A R-V Farms, Ver 64.93 66 ⇓P P 21 33 09.6 +0.4
baz=65,SNR=19
327A Balmorhea Ranc 65.06 71 ⇓P P 21 33 11.1 +0.9
baz=65
TUL1 Tulsa 65.12 62 ⇓P P 21 33 10.3 -0.1
baz=65
Z31A Sharp Cattle R 65.14 67 ⇓P P 21 33 10.7 +0.1
baz=65
130A Snyder 65.33 68 ⇓P P 21 33 12.2 +0.3
baz=65
SFIN Scholer Farm 65.34 53 ⇓P P 21 33 10.7 -0.9
baz=65
426A McDonald Obser 65.36 71 ⇓P P 21 33 13.0 +0.8
baz=65
328A Wristen Ranch, 65.39 70 ⇓P P 21 33 12.7 +0.4
baz=65,SNR=21
229A Bryant Ranch, 65.42 69 ⇓P P 21 33 12.9 +0.4
baz=65
SLM Saint Louis 65.42 56 *eP* P 21 33 12.4 +0.2
SLM pmax pmax
comp=Z,197nm,1.6s
SLM Saint Louis 65.42 56 *eP* P 21 33 12.4 +0.2
comp=Z,197nm,1.6s
Z32A Haskell 65.48 66 ⇓P P 21 33 12.7 0.0
baz=65
427A Hayter Ranch, 65.53 71 ⇓P P 21 33 14.1 +0.9
baz=65
AKASG Malin Array Be 65.54 330 *i* P P 21 33 12.6 -0.2
AKASG pmax pmax
comp=Z,15nm,0.7s
AKASG Malin Array Be 65.54 330 P P 21 33 12.3 -0.5
AKASG P'P' 22 01 51.8
AKASG Malin Array Be 65.54 330 P P 21 33 12.3 -0.5
comp=Z,15nm,0.7s,baz=27,slow=6.3,SNR=94
AKASG PKPPKP P'P'df 22 01 51.8 -7.1
comp=Z,0.2nm,0.3s,baz=193,slow=3.3,SNR=4.6
AKASG LR LR 22 03 58.5
comp=Z,1µm,20.9s,baz=15,slow=38
131A Roby 65.55 67 ⇓P P 21 33 13.8 +0.5
baz=65,SNR=11
KIEV Kiev 65.55 330 *eP* P 21 33 12.5 -0.4
KIEV pmax pmax
comp=Z,175nm,1.5s
KIEV MLR MLR
comp=Z,2µm,21.0s
KIEV Kiev 65.55 330 *eP* P 21 33 12.5 -0.4
comp=Z,175nm,1.5s
KIEV LR LR
comp=Z,2µm,21.0s
AK01 Malin Array Si 65.56 330 *eP* P 21 33 12.3 -0.6
AK02 Malin Array Si 65.59 330 *eP* P 21 33 12.6 -0.5
329A Wagon Wheel Ra 65.72 69 ⇑P P 21 33 15.1 +0.7
baz=66
526A Mary Lane Ranc 65.82 72 ⇑P P 21 33 16.4 +1.2
baz=66
230A Sterling City 65.83 68 ⇓P P 21 33 15.4 +0.4
baz=66
GKP Gorka Klasztor 65.86 339 *eP* P 21 33 15.0 +0.2
GKP *epP* **pP** 21 33 22.6 +2.0
GKP LMZ LR 22 02 49.2
ABTX Abilene, Hawle 65.95 67 ⇑P P 21 33 16.2 +0.4
baz=66
428A Kincaid Ranch, 65.99 70 ⇑P P 21 33 17.4 +1.3
baz=66
527A Woodward Ranch 65.99 71 ⇓P P 21 33 17.1 +0.9
baz=66
231A Bronte 66.18 68 ⇑P P 21 33 17.3 0.0
baz=66
330A Mertzon 66.19 69 ⇑P P 21 33 17.7 +0.3
baz=66
626A Big Bend Ranch 66.21 72 ⇑P P 21 33 18.8 +1.2
baz=66
OLIL Olney 66.27 55 *eP* P 21 33 17.0 -0.8
comp=Z,72nm,1.3s
ABKT Ailbek 66.37 304 P P 21 33 19.6 +1.2
comp=Z,598nm,1.3s,SNR=81
528A Cox Ranch, San 66.40 71 ⇑P P 21 33 19.9 +1.1
baz=66
BSEG Bad Segeberg 66.40 344 *eP* P 21 33 19.0 +0.7
BSEG pmax pmax
comp=Z,216nm,1.8s
BSEG Bad Segeberg 66.40 344 *eP* P 21 33 19.0 +0.7
comp=Z,216nm,1.8s
MRSI Marisa 66.45 227 P P 21 33 18.3 -0.8
429A Davenport Ranc 66.47 70 ⇓P P 21 33 19.5 +0.3
baz=66
MAK Makhachkala 66.50 314 *eP* P 21 33 19.5 +0.4
MAK *e* 21 33 42.6
MAK *i* 21 35 45.3
MAK *ePPP* PPP 21 37 21.5
MAK *eS* **S** **21 42 08.1 -0.4**
MAK *eSS* **SS** **21 46 19.4 -5.1**
MAK pmax pmax
comp=Z,195nm,1.6s
BEL Belsk 66.50 336 *eP* P 21 33 19.9 +0.9
BEL *epP* **pP** 21 33 29.4 +4.7
BEL LMZ LR 22 00 01.6
EKA Eskdalemuir Ar 66.52 352 P P 21 33 19.1 +0.1
EKA Eskdalemuir Ar 66.52 352 P P 21 33 19.1 +0.1
comp=Z,14nm,0.7s,baz=14,slow=5.8,SNR=25
ESK Eskdalemuir 66.54 352 *i* P P 21 33 20.2 +1.0
ESK Eskdalemuir 66.54 352 *eP* P 21 33 19.3 +0.2
comp=Z,44nm,1.0s
232A Coleman 66.55 67 ⇓P P 21 33 20.0 +0.3
baz=66
BLO Bloomington 66.59 53 *eP* P 21 33 19.3 -0.4
BLO pmax pmax
comp=Z,26nm,1.0s
BLO Bloomington 66.59 53 *eP* P 21 33 19.3 -0.4
comp=Z,26nm,1.0s
LONY Lake Ozonia 66.61 42 *eP* P 21 33 18.5 -1.4
LONY LR LR
comp=Z,420nm,20.0s
TXAR Lajitas Array 66.62 72 P P 21 33 21.2 +0.9
TXAR P'P' 22 01 46.8
TXAR Lajitas Array 66.62 72 P P 21 33 21.2 +0.9
comp=Z,39nm,1.0s,baz=306,slow=4.5,SNR=184
TXAR PKPPKP P'P'df 22 01 46.8 -7.5
comp=Z,0.7nm,0.8s,baz=157,slow=3.5,SNR=5.7
TXAR LR LR 22 03 07.5
comp=Z,490nm,19.4s,baz=345,slow=37
331A San Angelo 66.64 68 ⇓P P 21 33 20.4 +0.1
baz=66
430A Baggett Ranch, 66.66 69 ⇓P P 21 33 20.6 +0.2
baz=66
627A Terlingua Ranc 66.67 72 ⇓P P 21 33 21.5 +1.0
baz=66,SNR=57
529A Stev Forest Ra 66.71 70 ⇓P P 21 33 21.6 +0.8
baz=66

ERPA Erie 66.76 47 *eP* P 21 33 20.4 -0.4
comp=Z,62nm,0.8s
ERPA LR LR
comp=Z,410nm,21.0s
FRNY Flat Rock 66.78 41 *eP* P 21 33 19.9 -0.9
comp=Z,108nm,2.1s
IMYA Miami 66.80 302 *eP* P 21 33 22.1 +0.7
ISHV Shirvan 66.88 304 *eP* P 21 33 23.0 +1.1
628A Black Gap, Mar 66.89 71 ⇑P P 21 33 22.6 +0.6
baz=67
332A Millersview 66.92 68 ⇑P P 21 33 22.3 +0.3
baz=67
431A Sonora 67.06 69 ⇓P P 21 33 23.3 +0.3
baz=67
RFTA Plano 67.06 64 *eP* P 21 33 22.9 0.0
ALLY Alegheny Colle 67.10 47 *eP* P 21 33 22.4 -0.6
comp=Z,136nm,1.2s
USIN University of 67.10 55 *eP* P 21 33 22.9 -0.1
comp=Z,276nm,1.8s
ISRO Mashad 67.11 302 *eP* P 21 33 24.6 +1.3
530A J-C Ranch, Com 67.13 70 ⇓P P 21 33 24.0 +0.6
baz=67
ISFR Sfrayin 67.15 304 *eP* P 21 33 24.4 +0.7
IKRD Kardeh 67.15 303 *eP* P 21 33 21.8 -1.9
ACSO Alum Creek Sta 67.17 50 *eP* P 21 33 23.2 -0.2
comp=Z,74nm,1.1s
ACSO LR LR
comp=Z,395nm,20.0s
IAKL Akhelmad 67.19 303 *eP* P 21 33 24.3 +0.3
IPAY Payeh 67.20 303 *eP* P 21 33 25.8 +1.8
RUE Ruedersdorf 67.24 341 *eP* P 21 33 24.4 +0.7
comp=Z,110nm,1.3s
PARMO Parma 67.27 57 *eP* P 21 33 24.0 -0.1
MIAR Mount Ida 67.28 61 *eP* P 21 33 24.5 +0.3
MIAR pmax pmax
comp=Z,174nm,1.6s
MIAR MLR MLR
comp=Z,460nm,20.0s
MIAR Mount Ida 67.28 61 *eP* P 21 33 24.5 +0.3
comp=Z,174nm,1.6s
MIAR LR LR
comp=Z,460nm,20.0s
432A Menard 67.30 68 ⇑P P 21 33 24.7 +0.2
baz=67
NCB Newcomb 67.31 42 *eP* P 21 33 23.7 -0.6
comp=Z,142nm,2.2s
NCB LR LR
comp=Z,360nm,19.0s
IMOG Moghan 67.33 302 *eP* P 21 33 25.6 +0.7
HNR Honiara 67.34 185 LR LR 21 57 29.4
comp=Z,875nm,21.9s,baz=181,slow=31
KIV Kislovodsk 67.41 318 *c iP* P 21 33 25.6 +0.6
KIV *i* 21 33 52.6
KIV *eS* **S** **21 42 22.1 +2.4**
KIV pmax pmax
comp=Z,196nm,2.5s
KIV Kislovodsk 67.41 318 P P 21 33 25.2 +0.2
comp=Z,307nm,1.4s,SNR=18
LPIG La Paz 67.46 80 LR LR 22 03 07.6
comp=Z,18nm,19.2s,baz=204,slow=36
531A Rocksprings 67.51 69 ⇑P P 21 33 25.9 +0.1
baz=67
LUWI Luwuk 67.52 226 P P 21 33 24.4 -1.5
KBZ Khabaz 67.53 318 P P 21 33 26.6 +1.0
KBZ pmax pmax
comp=Z,58nm,1.1s
KBZ MLR MLR
comp=Z,1µm,20.7s
KBZ Khabaz 67.53 318 P P 21 33 26.6 +1.0
KBZ Khabaz 67.53 318 P P 21 33 26.6 +1.0
comp=Z,58nm,1.1s,baz=40,slow=4.7,SNR=70
KBZ LR LR 22 06 34.4
comp=Z,1µm,20.7s,baz=26,slow=39
WHTX Lake Whitney 67.53 66 ⇓P P 21 33 25.9 0.0
baz=67
JCT Junction City 67.62 68 *eP* P 21 33 26.1 -0.4
JCT pmax pmax
comp=Z,101nm,1.3s
JCT MLR MLR
comp=Z,351nm,19.0s
JCT Junction City 67.62 68 *eP* P 21 33 26.1 -0.4
comp=Z,100nm,1.3s
JCT LR LR
comp=Z,351nm,19.0s
JCT Junction City 67.62 68 ⇑P P 21 33 26.7 +0.2
baz=67
LVV L'vov 67.66 333 *i* P P 21 33 25.5 -0.9
LVV *e* 21 33 31.0
LVV MLR MLR
comp=N,830nm,18.0s
LVV MLR MLR
comp=E,470nm,18.0s
LVV MLR MLR
comp=Z,960nm,18.0s
BTM Bintulu 67.72 237 P P 21 33 27.7 +0.5
GNAR Gosnell 67.73 58 *eP* P 21 33 27.3 +0.3
HBAR Harrisburg 67.78 58 *eP* P 21 33 27.3 -0.1
NRDL Niedersach Rie 67.83 343 *eP* P 21 33 27.6 +0.3
comp=Z,135nm,2.0s
532A Rocksprings 67.86 69 ⇑P P 21 33 28.0 0.0
baz=68
LBNH Lisbon 67.87 40 *eP* P 21 33 27.5 -0.3
LBNH pmax pmax
comp=Z,120nm,1.6s
LBNH MLR MLR
comp=Z,426nm,19.0s
LBNH Lisbon 67.87 40 *eP* P 21 33 27.5 -0.3
comp=Z,120nm,1.6s
LBNH LR LR
comp=Z,426nm,19.0s
UTMT University of 67.93 57 *eP* P 21 33 28.5 +0.2
ZEI Tsey 67.98 317 *eP* P 21 33 26.9 -1.9
ZEI pmax pmax
comp=Z,159nm,1.8s
ACCN Adirondack Com 68.02 42 *eP* P 21 33 27.7 -1.0
comp=Z,132nm,1.9s
GUDG Gudauri 68.06 316 P P 21 33 29.9 +0.6
631A Perdido Creek 68.11 69 ⇑P P 21 33 29.5 -0.1
baz=68
IMND Minoodasht 68.11 306 *eP* P 21 33 31.9 +2.5
KWP Kalwaria Pacla 68.14 334 *eP* P 21 33 30.4 +0.9
KWP pmax pmax
comp=Z,592nm,1.3s
KWP MLR MLR
comp=Z,2µm,19.0s
KWP Kalwaria Pacla 68.14 334 *eP* P 21 33 30.4 +0.9
comp=Z,592nm,1.3s
KWP LR LR
comp=Z,2µm,19.0s
KWP Kalwaria Pacla 68.14 334 ⇓*iP* P 21 33 31.0 +1.6
KWP Kalwaria Pacla 68.14 334 *eP* P 21 33 30.6 +1.2
KWP *epP* **pP** 21 33 38.7 +3.5
KWP LMZ LR 22 00 03.9
BINY Binghamton 68.21 44 *eP* P 21 33 27.7 -2.2
comp=Z,106nm,1.7s
BINY LR LR
comp=Z,600nm,19.0s
HNH Hanover 68.22 41 *eP* P 21 33 30.3 +0.3
OJC Ojcow 68.23 336 ⇑*iP* P 21 33 30.6 +0.6
OJC Ojcow 68.23 336 *eP* P 21 33 30.6 +0.6
comp=Z,290nm,1.5s
OJC Ojcow 68.23 336 *i* P P 21 33 30.6 +0.6
ONI Oni 68.32 317 P P 21 33 31.3 +0.5
KSP Ksiaz 68.35 339 ⇑*iP* P 21 33 30.9 +0.2
KSP *e* 21 33 56.8
KSP MLR MLR
comp=Z,1µm,19.4s
KSP Ksiaz 68.35 339 *eP* P 21 33 30.8 +0.1
KSP *epP* **pP** 21 33 39.6 +3.1
KSP *ePcP* **PcP** 21 33 56.7 +0.5
KSP LMZ LR 21 57 04.9
IBBN Ibbenburen 68.35 345 *eP* P 21 33 31.1 +0.4
comp=Z,161nm,1.4s
632A Uvalde 68.43 69 ⇓P P 21 33 31.6 0.0
baz=68
ANN Anapa 68.45 322 *eP* P 21 33 31.7 +0.3
ANN *eS* **S** **21 42 30.4 -1.4**
ANN pmax pmax
comp=Z,193nm,1.7s
ANN MLR MLR
comp=N,917nm,16.0s
ANN MLR MLR
comp=E,626nm,16.0s
ANN MLR MLR
comp=Z,916nm,16.0s
MET Memphis--Engin 68.47 58 *eP* P 21 33 34.6 +3.0

CLL Collm 68.51 341 ⇑*iP* P 21 33 31.5 -0.2
CLL pmax pmax
comp=Z,120nm,1.4s
CLL MLR MLR
comp=Z,1µm,22.0s
CLL Collm 68.51 341 *eP* P 21 33 31.5 -0.2
comp=Z,120nm,1.4s
CLL *epP* **pP** 21 33 39.4 +1.9
CLL Collm 68.51 341 ⇑*iP* P 21 33 31.5 -0.2
comp=Z,120nm,1.4s
CLL *i* 21 33 39.8
CLL *ePP* **PP** **21 36 02.0 -0.2**
CLL *eS* **S** **21 42 30.0 -2.4**
CLL *eSS* **SS** **21 47 00.0 +4.9**
CLL L L 22 04 00.0
comp=Z,1µm,22.0s
SEAG Tbilisi Sea 68.54 316 P P 21 33 32.9 +0.8
TBLG Delisi 68.59 316 *eP* P 21 33 32.9 +0.5
TBLG Delisi 68.59 316 P P 21 33 32.9 +0.5
DGRG David-gareji 68.60 315 P P 21 33 33.3 +0.8
GOR Gori 68.61 316 P P 21 33 33.4 +0.8
PMG Port Moresby 68.67 198 *eP* P 21 33 33.9 +0.9
comp=Z,84nm,1.3s
PMG LR LR
comp=Z,351nm,21.0s
PMG Port Moresby 68.67 198 P P 21 33 34.2 +1.2
comp=Z,59nm,1.6s
PMG Port Moresby 68.67 198 P P 21 33 33.5 +0.5
comp=Z,25nm,1.0s,baz=17,slow=7.1,SNR=7.1
CHVG Ch'k'valeri 68.70 318 P P 21 33 33.9 +0.9
UPC Upice 68.73 339 ⇑*iP* P 21 33 33.2 +0.1
UPC *e* 21 33 40.3
UPC Upice 68.73 339 ⇑*iP* P 21 33 33.2 +0.1
UPC *ex* x 21 33 40.3
BRG Berggiesshubel 68.76 340 *eP* P 21 33 33.2 0.0
comp=Z,51nm,1.3s
BRG
comp=N,959nm,20.3s
BRG
comp=E,654nm,16.0s
BRG
comp=Z,1µm,33.8s
BRG Berggiesshubel 68.76 340 *eP* P 21 33 33.2 0.0
BRG pmax pmax
comp=Z,51nm,1.3s
BRG MLR MLR
comp=N,959nm,20.3s
BRG MLR MLR
comp=E,654nm,16.0s
BRG Berggiesshubel 68.76 340 *eP* P 21 33 33.3 0.0
comp=Z,67nm,1.5s
SOC Sochi 68.76 320 *c iP* P 21 33 33.3 -0.1
SOC *eS* **S** **21 42 35.7 0.0**
SOC *eSSS* SSS 21 50 00.1
SOC pmax pmax
comp=Z,83nm,1.0s
SOC MLR MLR
comp=Z,1µm,14.0s
SBUM Sibu 68.77 238 P P 21 33 35.2 +1.4
SBUM Sibu 68.77 238 P P 21 33 34.7 +0.9
comp=Z,114nm,1.8s,comp=Z,2µm
DPC Dobruska-Polom 68.82 339 ⇑*iP* P 21 33 34.1 +0.4
DPC *e* 21 33 41.5
DPC MLR MLR
comp=Z,800nm,17.8s
DPC Dobruska-Polom 68.82 339 *eP* P 21 33 33.1 -0.6
comp=Z,163nm,1.3s
DPC Dobruska-Polom 68.82 339 ⇑*iP* P 21 33 34.1 +0.4
DPC *ex* x 21 33 41.5
DPC AMS AMS 22 08 10.0
comp=Z,800nm,17.8s
WTSB Winterswijk 68.82 345 *i* P P 21 33 33.7 +0.1
comp=Z,158nm,1.5s
SSPA Standing Stone 68.84 46 *eP* P 21 33 32.9 -1.0
comp=Z,197nm,1.9s
NIE Niedzica 68.88 336 ⇑*iP* P 21 33 35.3 +1.2
NIE Niedzica 68.88 336 *i* P P 21 33 35.3 +1.2
KOLS Kolonicke sedl 68.90 334 *eP* P 21 33 35.0 +0.8
KOLS pmax pmax
comp=Z,100nm,1.4s
KOLS Kolonicke sedl 68.90 334 *eP* P 21 33 35.0 +0.8
EMMW East Machias 68.94 37 *eP* P 21 33 32.9 -1.5
comp=Z,279nm,1.5s
OKC Ostrava-Krasne 68.94 337 ⇑*iP* P 21 33 35.2 +0.8
OKC MLR MLR
comp=Z,700nm,15.6s
OKC Ostrava-Krasne 68.94 337 ⇑*iP* P 21 33 35.2 +0.8
OKC AMS AMS 22 06 10.0
comp=Z,700nm,15.6s
732A Laxson Ranch, 68.97 69 ⇓P P 21 33 35.8 +0.8
baz=69,SNR=26
PVCC Panska Ves 68.98 340 ⇑*iP* P 21 33 34.8 +0.2
PVCC MLR MLR
comp=Z,1µm,20.8s
PVCC Panska Ves 68.98 340 ⇑*iP* P 21 33 34.8 +0.2
PVCC AMS AMS 22 08 30.0
comp=Z,1µm,20.8s
KRLC Kraliky 68.99 338 ⇑*iP* P 21 33 35.1 +0.3
KRLC Kraliky 68.99 338 ⇑*iP* P 21 33 35.1 +0.3
KZR Kazreti 69.02 316 P P 21 33 35.7 +0.6
KIS Kishinev 69.04 329 *eP* P 21 33 34.0 -1.1
KIS *e* 21 33 42.0
KIS *e* 21 36 12.0
KIS *eS* **S** **21 42 33.0 -5.9**
KIS pmax pmax
comp=Z,330nm,1.7s
KIS pmax pmax
comp=N,270nm,2.0s
KIS MLR MLR
comp=Z,2µm,17.0s
KIS MLR MLR
comp=N,2µm,19.0s
KIS MLR MLR
comp=E,1µm,15.0s
KIS MLR MLR
comp=Z,2µm,19.0s
KIS Kishinev 69.04 329 *eP* P 21 33 34.0 -1.1
comp=Z,300nm,1.7s
KIS Kishinev 69.04 329 *ePP* PP 21 36 12.0 +5.1
KIS *eS* **S** **21 42 33.0 -5.9**
KIS *eL* L 21 56 08.0
KIS *eLQ* LQ 21 59 00.0
KIS *eLR* LR 22 03 24.0
comp=Z,2µm,17.0s
NATX Nacogdoches 69.06 64 *eP* P 21 33 36.6 +1.1
comp=Z,291nm,1.6s
CRVS Cervenica-Dubn 69.11 335 *eP* P 21 33 35.1 -0.4
CRVS pmax pmax
comp=Z,116nm,1.7s
CRVS Cervenica-Dubn 69.11 335 *eP* P 21 33 35.1 -0.4
MORC Moravsky Berou 69.12 338 P P 21 33 36.3 +0.7
MORC Moravsky Berou 69.12 338 *eP* P 21 33 35.8 +0.2
comp=Z,121nm,1.5s
MORC Moravsky Berou 69.12 338 ⇑*iP* P 21 33 36.5 +0.9
UZH Uzhgorod 69.17 334 *eP* P 21 33 34.3 -1.5
UZH *e* 21 33 40.1
UZH *e* 21 33 47.7
UZH *e* 21 34 02.7
UZH *eS* **S** **21 42 34.5 -5.9**
UZH *e* 21 43 27.7
UZH *e* 21 50 09.3
UZH MLR MLR
comp=N,780nm,15.0s
UZH MLR MLR
comp=E,890nm,15.0s
UZH MLR MLR
comp=Z,500nm,15.0s
IAS Iasi 69.20 330 P P 21 33 36.5 +0.5
OXF Oxford 69.21 58 *eP* P 21 33 36.3 0.0
OXF pmax pmax
comp=Z,198nm,1.1s
OXF Oxford 69.21 58 *eP* P 21 33 36.3 0.0
comp=Z,198nm,1.1s
BUG Bochum--Univer 69.27 345 *eP* P 21 33 36.5 +0.1
comp=Z,161nm,1.7s
AKH Akhalkalaki 69.33 316 P P 21 33 38.0 +0.8
SIM Simferopol' 69.36 325 *ceP* P 21 33 37.6 +0.5
SIM pmax pmax
comp=Z,37nm,1.2s
SIM MLR MLR
comp=Z,2µm,15.0s
MOX Moxa 69.38 342 *eP* P 21 33 37.4 +0.3
MOX pmax pmax
comp=Z,98nm,1.5s
MOX Moxa 69.38 342 *eP* P 21 33 37.4 +0.3

comp=Z,98nm,1.5s
BUR08 Bucovina Ar. S 69.39 332 eP P 21 33 37.8 +0.4
BURAR Bucovina Array 69.42 332⇑iP P 21 33 38.2 +0.7
PLAL Pickwick Lake 69.42 57 eP P 21 33 37.3 -0.3
comp=Z,40nm,0.9s
TANN Tannenbergstha 69.46 341 eP P 21 33 38.2 +0.5
comp=Z,123nm,1.7s
UBBA Unterbreizbach 69.47 343 eP P 21 33 37.9 +0.4
comp=Z,84nm,1.6s
UBBA epP **pP 21 33 45.6 +2.2**
PRU Pruhonice 69.50 340⇑iP P 21 33 38.1 +0.2
PRU e 21 33 45.3
PRU MLR MLR
comp=Z,800nm,11.1s
PRU Pruhonice 69.50 340⇑iP P 21 33 38.1 +0.2
PRU ex x 21 33 45.3
PRU AMS AMS 22 08 50.0
comp=Z,800nm,11.1s
HRV Adam Dziewonsk 69.53 41 eP P 21 33 37.5 -0.6
HRV pmax pmax
comp=Z,35nm,1.3s
HRV Adam Dziewonsk 69.53 41 eP P 21 33 37.5 -0.6
comp=Z,35nm,1.3s
TRPA Tarpa 69.59 334⇑iP P 21 33 39.3 +0.9
TRPA Tarpa 69.59 334⇑eP P 21 33 39.4 +1.0
NKC Novy Kostel 69.64 341⇑iP P 21 33 39.0 +0.3
NKC MLR MLR
comp=Z,1µm,18.6s
NKC Novy Kostel 69.64 341⇑iP P 21 33 39.0 +0.3
NKC AMS AMS 22 04 50.0
comp=Z,1µm,18.6s
LEOM Leova 69.68 329 P P 21 33 39.7 +0.8
LEOM Leova 69.68 329⇓iP P 21 33 39.8 +0.8
WES Weston 69.72 41 eP P 21 33 38.4 -0.9
WES pmax pmax
comp=Z,62nm,1.3s
WES Weston 69.72 41 eP P 21 33 38.4 -0.9
comp=Z,62nm,1.3s
VRAC Vranov 69.76 338 P P 21 33 39.5 0.0
VRAC Vranov 69.76 338⇑iP P 21 33 40.2 +0.7
VRAC Vranov 69.76 338 P P 21 33 39.5 0.0
comp=Z,23nm,0.8s,baz=18,slow=7.7,SNR=42
BMR Baia Mare 69.79 333 P P 21 33 40.8 +1.1
BMR Baia Mare 69.79 333⇓iP P 21 33 41.0 +1.3
NGP Nagpur 69.85 278 ePKP P 21 33 39.4 -1.0
NGP ex x 21 44 06.7
IDAH Dahanechah 69.89 300 eP P 21 33 40.9 0.0
GNI Garni 69.97 315 eP P 21 33 42.4 +1.3
comp=Z,202nm,1.4s
GNI LR LR
comp=Z,2µm,21.0s
GNI Garni 69.97 315 P P 21 33 43.1 +1.9
SNR=47
GNI Garni 69.97 315 P P 21 33 42.7 +1.5
comp=Z,34nm,1.0s,baz=170,slow=8.1,SNR=59
MVL Millersville 69.98 45 eP P 21 33 40.1 -0.8
comp=Z,16nm,1.0s
TREC Trest 69.99 339 eP P 21 33 41.5 +0.6
TREC MLR MLR
comp=Z,800nm,13.1s
TREC Trest 69.99 339⇑eP P 21 33 41.5 +0.6
TREC AMS AMS 22 10 30.0
comp=Z,800nm,13.1s
HKT Hockley 70.00 66 eP P 21 33 40.9 -0.3
HKT pmax pmax
comp=Z,126nm,1.7s
HKT Hockley 70.00 66 eP P 21 33 40.9 -0.3
comp=Z,126nm,1.7s
DBOC Borcka 70.05 318 iP P 21 33 41.1 -0.4
TZTN Tazewell 70.06 53 eP P 21 33 41.7 +0.1
comp=Z,283nm,2.1s
TESR Tescani 70.07 330⇑iP P 21 33 41.6 +0.2
VYHS Vyhne 70.07 336 eP P 21 33 42.3 +0.9
VYHS pmax pmax
comp=Z,66nm,1.5s
VYHS Vyhne 70.07 336 eP P 21 33 42.3 +0.9
ARTV Artvin 70.10 317 iP P 21 33 42.2 +0.2
HGN Heimansgroeve 70.11 346 eP P 21 33 41.5 0.0
comp=Z,216nm,1.8s
BEBN Eben Emael 70.11 346 P P 21 33 41.7 +0.2
ROTZ Rotzenmuhle 70.13 341 eP P 21 33 42.5 +0.7
comp=Z,120nm,1.6s
SWET Sewanee 70.16 55 eP P 21 33 41.9 -0.4
comp=Z,204nm,1.9s
CPNY Central Park 70.18 43 eP P 21 33 41.6 -0.5
comp=Z,66nm,1.1s
DAGI Agillar 70.20 317 iP P 21 33 43.3 +0.8
ISHM Shahmirzad 70.25 306 eP P 21 33 44.1 +1.1
MEM Membach 70.25 346 P P 21 33 42.5 0.0
comp=Z,66nm,1.4s
IANJ Anjilo 70.27 306 eP P 21 33 44.1 +1.0
ITEG Tejag 70.28 301 eP P 21 33 43.5 +0.3
GHRR 70.29 330⇓iP P 21 33 44.3 +1.6
TNS Taunus Mts 70.29 344 eP P 21 33 43.1 +0.3
TNS e*PP **pP 21 33 50.8 +2.2**
TNS pmax pmax
comp=Z,73nm,1.6s
TNS Taunus Mts 70.29 344 eP P 21 33 43.1 +0.3
comp=Z,73nm,1.6s
TNS epP **pP 21 33 50.8 +2.2**
SDMD Soldier's Deli 70.30 46 eP P 21 33 42.2 -0.8
comp=Z,122nm,1.8s
DBAD Bademkaya 70.33 317 iP P 21 33 43.9 +0.6
SMOL Smolenice 70.35 337 eP P 21 33 44.6 +1.5
SMOL Smolenice 70.35 337 eP P 21 33 44.6 +1.5
GRF Grafenberg Arr 70.37 342 eP P 21 33 43.9 +0.7
GRF pmax pmax
comp=Z,152nm,1.5s
GRF MLR MLR
comp=Z,800nm,21.6s
GRF Grafenberg Arr 70.37 342 eP P 21 33 43.9 +0.7
comp=Z,152nm,1.5s
GRF eL L 22 05 47.3
comp=Z,784nm,21.6s
PSZ Piszkesteto 70.39 335 eP P 21 33 44.7 +1.3
PSZ pmax pmax
comp=Z,229nm,1.7s
PSZ MLR MLR
comp=Z,1µm,20.0s
PSZ Piszkesteto 70.39 335 eP P 21 33 44.7 +1.3
comp=Z,228nm,1.7s
PSZ LR LR
comp=Z,1µm,20.0s
PSZ Piszkesteto 70.39 335⇑iP P 21 33 44.5 +1.0
PSZ Piszkesteto 70.39 335⇑eP P 21 33 44.8 +1.3
DDEM Demirkent 70.42 317 iP P 21 33 44.4 +0.5
KHC Kasperske Hory 70.50 340⇑iP P 21 33 44.6 +0.5
KHC e 21 33 53.3
KHC MLR MLR
comp=Z,1µm,19.8s
KHC Kasperske Hory 70.50 340 eP P 21 33 44.5 +0.4
comp=Z,66nm,1.3s
KHC Kasperske Hory 70.50 340⇑iP P 21 33 44.6 +0.5
KHC ex x 21 33 53.3
KHC AMS AMS 22 09 30.0
comp=Z,1µm,19.8s
TTSI Tana Toraja 70.50 228 P P 21 33 42.8 -1.6
KSM Kuching 70.50 239 eP P 21 33 45.0 +0.6
comp=Z,83nm,1.2s
KSM Kuching 70.50 239 P P 21 33 45.9 +1.4
KSM Kuching 70.50 239 P P 21 33 45.0 +0.6
comp=Z,66nm,1.4s,comp=Z,892nm
BCLA Clavier 70.53 346 P P 21 33 44.0 -0.1
KTGM Kuala Trenggan 70.55 248 P P 21 33 46.0 +1.3
IKOO Kooshah 70.56 300 eP P 21 33 45.2 +0.3
SNF Seneffe 70.57 347 P P 21 33 44.7 +0.3
comp=Z,46nm,2.5s
CPCT Cooper Cave 70.58 54 eP P 21 33 43.6 -1.1
WET Wettzell 70.61 341 eP P 21 33 45.5 +0.7
WET pmax pmax
comp=Z,128nm,1.7s
WET Wettzell 70.61 341 eP P 21 33 45.5 +0.7
comp=Z,128nm,1.7s
IFIR Firoozkooh 70.62 307 eP P 21 33 46.2 +0.9
VRI Vrincioaia 70.65 330⇓iP P 21 33 44.7 -0.3
IHRS Heris 70.67 312 eP P 21 33 46.4 +0.9
PLOR Plostina 70.68 330⇑iP P 21 33 45.9 +0.7
TLCR 70.71 328 P P 21 33 46.0 +0.7
ZST Bratislava 70.72 337 eP P 21 33 45.7 +0.4
ZST pmax pmax
comp=Z,107nm,1.6s
ZST Bratislava 70.72 337 eP P 21 33 45.7 +0.4
TKL Tuckaleechee C 70.72 53 eP P 21 33 45.4 -0.2
TKL Tuckaleechee C 70.72 53 LR LR 22 06 23.4
comp=Z,311nm,20.7s,baz=196,slow=37

ILAS Lasjerd 70.75 306 eP P 21 33 46.8 +0.7
GEC2 GERESS Array S 70.75 340 eP P 21 33 46.1 +0.4
GEC2 pmax pmax
comp=Z,71nm,1.6s
GEC2 GERESS Array S 70.75 340 eP P 21 33 46.1 +0.4
comp=Z,71nm,1.6s
GEC2 GERESS Array S 70.75 340 eP P 21 33 46.0 +0.4
GERES GERESS Array B 70.75 340 P P 21 33 45.6 -0.1
GERES GERESS Array B 70.75 340 P P 21 33 45.6 -0.1
comp=Z,7.5nm,0.7s,baz=40,slow=5.2,SNR=59
GERES LR LR 22 10 08.6
comp=Z,781nm,18.3s,baz=9.0,slow=40
BLA Blacksburg 70.79 50 eP P 21 33 45.4 -0.6
BLA pmax pmax
comp=Z,178nm,1.6s
BLA MLR MLR
comp=Z,273nm,20.0s
BLA Blacksburg 70.79 50 eP P 21 33 45.4 -0.6
comp=Z,178nm,1.6s
BLA LR LR
comp=Z,273nm,20.0s
DRGR 70.80 333 P P 21 33 46.8 +0.8
DRGR 70.80 333⇑iP P 21 33 46.4 +0.4
TOD Tromm 70.83 343 eP P 21 33 46.2 +0.1
TOD Tromm 70.83 343 eP P 21 33 46.2 +0.1
ISRB Sarab 70.85 311 eP P 21 33 47.0 +0.4
IMRD Marand 70.85 313 eP P 21 33 46.1 -0.4
DYDN Diyadin 70.89 315 iP P 21 33 48.4 +1.5
CFR Carcaliu 70.90 329 P P 21 33 47.0 +0.6
CFR Carcaliu 70.90 329⇓iP P 21 33 47.1 +0.6
GIVF Givet 70.90 346⇑iP P 21 33 46.1 -0.3
comp=Z,99nm,1.3s
GIVF Givet 70.90 346⇑iP P 21 33 46.1 -0.3
GIVF pmax pmax
comp=Z,99nm,1.3s
GIVF Givet 70.90 346⇑iP P 21 33 46.1 -0.3
comp=Z,99nm,1.3s
DOU Dourbes 70.94 346 P P 21 33 46.5 -0.1
comp=Z,13nm,1.1s
IDMV Damavand 70.98 307 eP P 21 33 47.9 +0.4
BUD Budapest 70.99 336⇑eP P 21 33 48.3 +1.3
RUP Ruppelstein 71.00 345 eP P 21 33 46.7 -0.4
RUP Ruppelstein 71.00 345 eP P 21 33 46.7 -0.4
BAIF Baives 71.02 347⇑iP P 21 33 47.1 -0.1
comp=Z,163nm,1.4s
BAIF Baives 71.02 347⇑iP P 21 33 47.1 -0.1
BAIF pmax pmax
comp=Z,163nm,1.4s
BAIF Baives 71.02 347⇑iP P 21 33 47.1 -0.1
comp=Z,163nm,1.4s
IGZV Ghazvin 71.05 309 eP P 21 33 48.9 +1.0
ITBZ Tabriz 71.09 313 eP P 21 33 48.6 +0.6
HOMI Horasan 71.11 317 iP P 21 33 49.8 +1.6
CBN Corbin 71.14 47 eP P 21 33 47.6 -0.4
CBN LR LR
comp=Z,352nm,20.0s
WLF Walferdange 71.16 345 P P 21 33 48.3 +0.3
comp=Z,38nm,2.0s
WLF Walferdange 71.16 345 eP P 21 33 47.7 -0.3
WLF pmax pmax
comp=Z,17nm,1.1s
WLF Walferdange 71.16 345 eP P 21 33 48.5 +0.5
comp=Z,60nm,1.4s
WLF Walferdange 71.16 345 eP P 21 33 47.7 -0.3
comp=Z,17nm,1.1s
MLR Muntele Rosu 71.20 330 P P 21 33 49.9 +1.4
MLR Muntele Rosu 71.20 330⇑iP P 21 33 50.7 +2.2
MLR Muntele Rosu 71.20 330 P P 21 33 49.9 +1.4
comp=Z,4.5nm,1.0s,baz=31,slow=5.1,SNR=32
PKSG 71.21 336⇑eP P 21 33 49.6 +1.2
CONA Conrad Observa 71.22 338⇑ipP P 21 33 49.4 +0.8
comp=Z,70nm,1.4s,SNR=28
ISHB Shabestar 71.25 313 eP P 21 33 49.4 +0.3
SOP Sopron 71.32 338⇑eP P 21 33 50.4 +1.4
PKS7 Kunszentmiklos 71.37 336⇑eP P 21 33 50.7 +1.4
ISR Istrita 71.39 330⇓iP P 21 33 51.2 +1.7
JSRW J. Sargeant Re 71.39 48 eP P 21 33 48.9 -0.6
PKST T``s 71.42 337⇑eP P 21 33 50.7 +1.1
ERZM Erzurum 71.43 317 iP P 21 33 51.7 +1.6
IMHD Mahdasht 71.46 308 eP P 21 33 50.8 +0.6
VOIR 71.48 331 P P 21 33 51.4 +1.2
VOIR 71.48 331⇓iP P 21 33 51.6 +1.4
TIRR Tirgusor 71.49 328 eP P 21 33 50.5 +0.4
TIRR pmax pmax
comp=Z,84nm,1.4s
TIRR Tirgusor 71.49 328 eP P 21 33 50.5 +0.4
comp=Z,84nm,1.4s
TIRR Tirgusor 71.49 328⇑iP P 21 33 50.3 +0.2
IR3 Iran Long-Peri 71.49 308 eP P 21 33 51.4 +1.0
LRAL Lakeview Retre 71.54 57 eP P 21 33 49.5 -1.1
comp=Z,14nm,0.6s
STU Stuttgart 71.59 343 eP P 21 33 51.1 +0.5
STU pmax pmax
comp=Z,52nm,1.4s
STU Stuttgart 71.59 343 eP P 21 33 50.7 +0.1
comp=Z,51nm,1.4s
STU Stuttgart 71.59 343 eP P 21 33 51.1 +0.5
comp=Z,52nm,1.4s
LANF Langenberg 71.59 344 eP P 21 33 50.8 +0.1
LANF Langenberg 71.59 344 eP P 21 33 50.8 +0.1
LANF Langenberg 71.59 344 eP P 21 33 50.8 +0.1
IVRN Varamin 71.60 307 eP P 21 33 51.5 +0.5
DEV Deva 71.61 333 P P 21 33 51.5 +0.7
MOA Moa 71.61 339⇑ipP P 21 33 51.2 +0.4
comp=Z,40nm,1.4s,SNR=16
IAZR Azarshahr 71.64 313 eP P 21 33 52.3 +0.9
KOPT Kop Dagi 71.64 318 iP P 21 33 52.8 +1.3
AMRR Amara 71.64 329 P P 21 33 52.4 +1.4
ARR Arges 71.66 331⇓iP P 21 33 52.8 +1.6
LOT Lotru 71.80 332⇑iP P 21 33 52.3 +0.2
FUR Furstenfeldbru 71.84 341 eP P 21 33 52.5 +0.3
FUR pmax pmax
comp=Z,415nm,2.6s
FUR Furstenfeldbru 71.84 341 eP P 21 33 52.5 +0.3
comp=Z,415nm,2.6s
PKS2 Kecel 71.89 335⇓eP P 21 33 53.7 +1.3
IR5 Iran Long-Peri 71.90 308 eP P 21 33 53.4 +0.5
ARSA Arzberg 71.94 338⇓ipP P 21 33 53.8 +1.0
comp=Z,42nm,1.5s,SNR=24
KELT Kelkit 71.97 319 iP P 21 33 53.6 +0.3
RJOB Jochberg 71.98 340 eP P 21 33 53.7 +0.6
comp=Z,44nm,1.1s
RJOB epP **pP 21 34 01.5 +2.6**
PKS9 Tamasi 72.00 336⇑eP P 21 33 53.8 +0.7
IRAZ Razeghan 72.01 309 eP P 21 33 54.4 +0.8
BFO Black Forest 72.15 343 eP P 21 33 54.0 0.0
BFO pmax pmax
comp=Z,80nm,1.6s
BFO Black Forest 72.15 343 eP P 21 33 54.0 0.0
comp=Z,80nm,1.6s
BFO Black Forest 72.15 343 eP P 21 33 53.8 -0.2
comp=Z,71nm,1.5s
BFO Black Forest 72.15 343 P P 21 33 53.8 -0.2
comp=Z,134nm,1.4s,SNR=8.1
BZS Buzias 72.17 333 P P 21 33 54.8 +0.6
BZS Buzias 72.17 333⇑iP P 21 33 54.7 +0.6
KMSC Kings Mountain 72.19 52 ⇓P P 21 33 53.9 -0.6
baz=72
GEVA Gevas 72.21 315 iP P 21 33 55.8 +1.1
CDF Champ du Feu 72.22 344⇑iP P 21 33 54.3 -0.3
comp=Z,148nm,1.4s
CDF Champ du Feu 72.22 344⇑iP P 21 33 54.3 -0.3
CDF pmax pmax
comp=Z,148nm,1.4s
CDF Champ du Feu 72.22 344⇑iP P 21 33 54.3 -0.3
comp=Z,148nm,1.4s
SUSE Susehri 72.28 320 iP P 21 33 45.2 -10
PKSM Moragy 72.28 336 P P 21 33 55.3 +0.5
PKSM Moragy 72.28 336⇓iP P 21 33 55.3 +0.5
PKSM Moragy 72.28 336⇑eP P 21 33 55.1 +0.3
SPAK Spaichingen-Ko 72.30 343 eP P 21 33 54.9 -0.1
PAGF Fort de Pagny 72.30 345⇑iP P 21 33 55.0 +0.1
comp=Z,90nm,1.6s
PAGF Fort de Pagny 72.30 345⇑iP P 21 33 55.0 +0.1
comp=Z,90nm,1.6s
IPM Ipoh 72.32 249 eP P 21 33 55.1 -0.3
comp=Z,134nm,1.3s
IPM Ipoh 72.32 249 P P 21 33 55.7 +0.3
IPM Ipoh 72.32 249 P P 21 33 54.2 -1.3
comp=Z,87nm,1.3s,comp=Z,1µm
IPM Ipoh 72.32 249 P P 21 33 55.5 0.0
comp=Z,93nm,1.3s,comp=Z,1µm
KAPI Kappang 72.32 227 eP P 21 33 54.8 -0.6
comp=Z,68nm,1.3s

KAPI Kappang 72.32 227 P P 21 33 55.3 -0.1
SNR=5.1
KAPI Kappang 72.32 227 P P 21 33 54.1 -1.3
comp=Z,191nm,1.3s,SNR=5.9
KAPI Kappang 72.32 227 P P 21 33 55.2 -0.2
comp=Z,49nm,1.9s,comp=Z,948nm
BNGL BINGOL 72.35 317 iP P 21 33 56.8 +1.1
ERBA Erbaa 72.35 321 iP P 21 33 57.0 +1.6
BEHE Beesehely 72.43 337⇑eP P 21 33 56.9 +1.2
LIBD Limburg 72.43 344 eP P 21 33 55.8 +0.1
LIBD Limburg 72.43 344 eP P 21 33 55.8 +0.1
ECH Echery 72.43 344 eP P 21 33 55.2 -0.5
ECH pmax pmax
comp=Z,59nm,1.4s
ECH Echery 72.43 344 eP P 21 33 55.2 -0.5
comp=Z,59nm,1.4s
ECH Echery 72.43 344 eP P 21 33 55.5 -0.2
MEZF Maizieres J'vi 72.44 346⇑iP P 21 33 55.8 +0.1
comp=Z,159nm,1.5s
MEZF Maizieres J'vi 72.44 346⇑iP P 21 33 55.8 +0.1
comp=Z,159nm,1.5s
KBA Koelnbreinsper 72.52 340⇑ipP P 21 33 57.4 +0.9
comp=Z,77nm,1.2s,SNR=42
SOKA Soboth 72.58 338⇑ipP P 21 33 57.3 +0.6
comp=Z,42nm,1.5s
THEF They Montfort 72.59 345 eP P 21 33 56.6 0.0
THEF They Montfort 72.59 345 eP P 21 33 56.6 0.0
THEF They Montfort 72.59 345 eP P 21 33 56.6 0.0
PERS Pernice 72.61 338 iP P 21 33 57.4 +0.6
HAKT HAKKARI 72.62 314 iP P 21 33 56.8 -0.5
FELD Feldberg im Sc 72.64 344 eP P 21 33 56.8 -0.3
FELD Feldberg im Sc 72.64 344 eP P 21 33 56.8 -0.3
WTTA Wattenberg 72.65 341⇑ipP P 21 33 57.8 +0.5
comp=Z,64nm,1.7s,SNR=21
MOTA Moosalm 72.66 341⇑ipP P 21 33 57.4 +0.1
SNR=15
BALT Daday 72.68 324 iP P 21 33 58.3 +0.8
HAU Haudompre 72.75 345⇑iP P 21 33 57.2 -0.5
comp=Z,114nm,1.4s
HAU eR
comp=Z,724nm,22.2s
HAU Haudompre 72.75 345⇑iP P 21 33 57.2 -0.5
HAU pmax pmax
comp=Z,114nm,1.4s
HAU Haudompre 72.75 345⇑iP P 21 33 57.2 -0.5
comp=Z,114nm,1.4s
TOKA Tokat 72.76 321 iP P 21 33 58.8 +0.9
GOGA Godfrey 72.77 54 eP P 21 33 57.6 -0.3
GOGA pmax pmax
comp=Z,50nm,1.7s
GOGA Godfrey 72.77 54 eP P 21 33 57.6 -0.3
comp=Z,50nm,1.7s
ICHK Chekchek 72.78 303 eP P 21 33 59.4 +1.1
MOF Molkenrain 72.79 344 eP P 21 33 57.3 -0.7
MOF Molkenrain 72.79 344 eP P 21 33 57.3 -0.7
MOF Molkenrain 72.79 344 eP P 21 33 57.3 -0.7
FLN La Foliniere 72.82 350⇑iP P 21 33 57.4 -0.6
comp=Z,189nm,1.4s
FLN eR
comp=Z,758nm,19.8s
FLN La Foliniere 72.82 350⇑iP P 21 33 57.4 -0.6
FLN pmax pmax
comp=Z,189nm,1.4s
FLN La Foliniere 72.82 350⇑iP P 21 33 57.4 -0.6
comp=Z,189nm,1.4s
IBAF Batgh 72.82 302 eP P 21 33 58.1 -0.4
OBKA Obir 72.84 339⇑ipP P 21 33 58.9 +0.7
comp=Z,82nm,0.9s,SNR=40
HINF Hinteralfeld 72.87 344⇑iP P 21 33 57.7 -0.7
comp=Z,132nm,1.7s
HINF Hinteralfeld 72.87 344⇑iP P 21 33 57.7 -0.7
HINF pmax pmax
comp=Z,132nm,1.7s
HINF Hinteralfeld 72.87 344⇑iP P 21 33 57.7 -0.7
comp=Z,132nm,1.7s
BBKI Banjar Baru 72.91 233 P P 21 33 57.6 -1.3
LDF La Druitiere 72.95 349⇑iP P 21 33 58.2 -0.5
comp=Z,173nm,1.4s
LDF La Druitiere 72.95 349⇑iP P 21 33 58.2 -0.5
LDF pmax pmax
comp=Z,173nm,1.4s
LDF La Druitiere 72.95 349⇑iP P 21 33 58.2 -0.5
comp=Z,173nm,1.4s
ABTA Abfaltersbach 72.99 340⇑ipP P 21 33 59.2 +0.1
comp=Z,59nm,1.3s,SNR=30
ILGA Ilgaz 73.01 323 iP P 21 34 00.9 +1.3
KEMA Kemaliye 73.02 319 iP P 21 34 00.1 +0.7
FETA Feichten 73.04 341 ipP P 21 33 59.9 +0.4
comp=Z,46nm,1.2s,SNR=20
ZIMR 73.06 330 P P 21 33 59.8 +0.4
ZIMR 73.06 330⇓iP P 21 33 59.8 +0.4
FRIM Kepong 73.10 248 P P 21 34 00.8 +0.7
IKLH Kolahrood 73.10 306 eP P 21 34 00.7 +0.5
BBS Basel-Blauen 73.12 344 eP P 21 33 59.7 -0.1
BBS Basel-Blauen 73.12 344 eP P 21 33 59.7 -0.1
IZEF Zefreh 73.14 305 eP P 21 34 00.7 +0.2
HYB Hyderabad 73.19 276 iP P 21 33 58.5 -2.2
comp=Z,90nm,1.0s
BRAL Brewton 73.22 58 eP P 21 34 00.3 -0.3
comp=Z,402nm,1.6s
GRR Gorron 73.22 350⇑iP P 21 34 00.0 -0.4
comp=Z,210nm,1.3s
GRR Gorron 73.22 350⇑iP P 21 34 00.0 -0.4
GRR pmax pmax
comp=Z,210nm,1.3s
GRR Gorron 73.22 350⇑iP P 21 34 00.0 -0.4
comp=Z,210nm,1.3s
MYKOM Kota Tinggi 73.26 245 P P 21 34 02.2 +1.2
KGM Kluang 73.33 246 P P 21 34 02.6 +1.2
LOMF Lomont 73.33 344 eP P 21 34 00.9 -0.2
LOMF Lomont 73.33 344 eP P 21 34 00.9 -0.2
LOMF Lomont 73.33 344 eP P 21 34 00.9 -0.2
DAVOX Davos/Dischmat 73.41 342 P P 21 34 02.2 +0.4
DAVOX Davos/Dischmat 73.41 342 P P 21 34 02.2 +0.4
comp=Z,20nm,1.0s,baz=345,slow=5.6,SNR=23
IMEH Mehriz 73.42 303 eP P 21 34 01.4 -0.7
VISS Visnje 73.46 338 iP P 21 34 01.6 -0.2
SISC Sisak 73.47 337 P P 21 34 03.1 +1.2
ROSF Rostrenen 73.48 351⇑iP P 21 34 01.8 -0.1
comp=Z,138nm,1.3s
ROSF Rostrenen 73.48 351⇑iP P 21 34 01.8 -0.1
ROSF pmax pmax
comp=Z,138nm,1.3s
ROSF Rostrenen 73.48 351⇑iP P 21 34 01.8 -0.1
comp=Z,138nm,1.3s
FUORN Ofenpass-Fuorn 73.50 342 eP P 21 34 03.1 +0.7
comp=Z,68nm,1.5s
SGMF Saint Gilles 73.51 351⇑iP P 21 34 01.8 -0.2
comp=Z,257nm,1.4s
SGMF Saint Gilles 73.51 351⇑iP P 21 34 01.8 -0.2
SGMF pmax pmax
comp=Z,257nm,1.4s
SGMF Saint Gilles 73.51 351⇑iP P 21 34 01.8 -0.2
comp=Z,257nm,1.4s
CNNC Cliffs of the 73.52 49 eP P 21 34 02.1 -0.2
JAVS Javornik 73.52 339 iP P 21 34 01.9 -0.5
ELZG Elazig 73.53 318 iP P 21 34 04.2 +1.6
PBKI Pangkalan Bun 73.60 236 P P 21 34 00.8 -2.2
ELDT Eldivan 73.61 323 iP P 21 34 04.0 +1.0
DIYA Diyarbakir 73.63 317 iP P 21 34 03.9 +0.9
BOJS Bojanci 73.67 338 iP P 21 34 03.3 +0.3
LHMI Lhok Sumawe 73.73 253 P P 21 34 01.0 -2.8
TUE Stuetta 73.80 342 eP P 21 34 04.5 +0.4
comp=Z,96nm,1.6s
TUE LR LR
comp=Z,953nm,21.0s
LOR Lormes 73.81 346⇑iP P 21 34 03.3 -0.6
comp=Z,238nm,1.6s
LOR eR
comp=Z,608nm,23.0s
LOR Lormes 73.81 346⇑iP P 21 34 03.3 -0.6
comp=Z,238nm,1.6s
COEN Coen 73.84 201 eP P 21 34 05.3 +1.1
comp=Z,473nm,1.1s
MARD Mardin 73.93 316 iP P 21 34 05.5 +0.6
HYF Humbligny 73.96 347⇑P P 21 34 04.7 0.0
HYF Humbligny 73.96 347⇑iP P 21 34 04.7 0.0
IVIS Veis 74.03 310 eP P 21 34 04.9 -0.6
SSF Saint Saulge 74.06 347⇑iP P 21 34 04.9 -0.4
comp=Z,111nm,1.6s
SSF Saint Saulge 74.06 347⇑iP P 21 34 04.9 -0.4
SSF pmax pmax
comp=Z,111nm,1.6s
SSF Saint Saulge 74.06 347⇑iP P 21 34 04.9 -0.4
comp=Z,111nm,1.6s

IDHR Dehrash 74.07 311 *e*P **P 21 34 05.4 -0.4**
IKOM Komasi 74.07 310 *e*P **P 21 34 05.9 +0.1**
AKCD Akcadag 74.08 319 *i* P **P 21 34 06.7 +0.9**
CABF La Chapelle 74.16 345⇑*i*P **P 21 34 05.8 -0.2**
comp=Z,91nm,1.3s
CABF La Chapelle 74.16 345⇑*i*P **P 21 34 05.8 -0.2**
CABF pmax pmax
comp=Z,91nm,1.3s
CABF La Chapelle 74.16 345⇑*i*P **P 21 34 05.8 -0.2**
comp=Z,91nm,1.3s
SENIN Lac Senin/Sane 74.22 344 *e*P **P 21 34 07.0 +0.4**
comp=Z,23nm,1.3s
BR131 Keskin Array S 74.24 323 *e*P **P 21 34 07.2 +0.5**
comp=Z,32nm,1.1s
BRTR Keskin Array B 74.24 323 P **P 21 34 07.3 +0.6**
BRTR Keskin Array B 74.24 323 P **P 21 34 07.3 +0.6**
comp=Z,11nm,0.8s,baz=37,slow=3.5,SNR=70
BRTR LR LR 22 12 59.7
comp=Z,516nm,19.3s,baz=11,slow=41
PINB Pinarbasi 74.27 320 *i* P **P 21 34 06.3 -0.7**
AVF Avril sur Loir 74.34 347⇑*i*P **P 21 34 06.6 -0.3**
comp=Z,149nm,1.4s
AVF Avril sur Loir 74.34 347⇑*i*P **P 21 34 06.6 -0.3**
AVF pmax pmax
comp=Z,149nm,1.4s
AVF Avril sur Loir 74.34 347⇑*i*P **P 21 34 06.6 -0.3**
comp=Z,149nm,1.4s
AFI Afiamalu 74.34 156 LR LR 21 59 12.2
comp=Z,551nm,20.7s,baz=302,slow=30
ANTO Ankara 74.38 323 *e*P **P 21 34 08.6 +1.2**
ANTO pmax pmax
comp=Z,130nm,1.4s
ANTO MLR MLR
comp=Z,679nm,20.0s
ANTO Ankara 74.38 323 *e*P **P 21 34 08.6 +1.2**
comp=Z,130nm,1.4s
ANTO LR LR
comp=Z,679nm,20.0s
ANTO Ankara 74.38 323 P **P 21 34 09.0 +1.6**
SNR=23
TSI Tuntungan 74.39 251 P P 21 34 04.4 -3.2
TIGA Tifton 74.40 55⇓P **P 21 34 07.5 -0.1**
baz=74
SMF Signal de Mont 74.42 346⇑*i*P **P 21 34 07.0 -0.5**
comp=Z,152nm,1.7s
SMF Signal de Mont 74.42 346⇑*i*P **P 21 34 07.0 -0.5**
SMF pmax pmax
comp=Z,152nm,1.7s
SMF Signal de Mont 74.42 346⇑*i*P **P 21 34 07.0 -0.5**
comp=Z,152nm,1.7s
ELBA Catalca 74.53 327 *i* P **P 21 34 09.0 +0.8**
BUY Buyukada 74.61 326 *i* P **P 21 34 09.1 +0.5**
VTS Vitosha 74.61 331⇓*i*P **P 21 34 08.6 -0.2**
BGF Bois d'Agland 74.63 347⇑*i*P **P 21 34 08.3 -0.4**
comp=Z,93nm,1.6s
BGF Bois d'Agland 74.63 347⇑*i*P **P 21 34 08.3 -0.4**
BGF pmax pmax
comp=Z,93nm,1.5s
BGF Bois d'Agland 74.63 347*i*P **P 21 34 08.3 -0.4**
comp=Z,93nm,1.5s
ATAB Bozova 74.69 318 *i* P **P 21 34 10.3 +1.1**
AVNT Avonos 74.70 321 *i* P **P 21 34 10.1 +0.7**
POO Poona 74.75 280⇓*i*P **P 21 34 07.0 -2.8**
comp=Z,127nm,1.2s
PSI Prapat 74.81 250 P **P 21 34 10.6 +0.4**
PSI Prapat 74.81 250 P **P 21 34 07.8 -2.4**
PSI Prapat 74.81 250 P **P 21 34 10.1 -0.1**
comp=Z,73nm,1.5s,comp=Z,1µm
PSI Prapat 74.81 250 P **P 21 34 10.6 +0.4**
comp=Z,40nm,1.1s,baz=16,slow=3.6,SNR=28
PSI LR LR 22 08 15.9
comp=Z,460nm,19.3s,baz=9.7,slow=37
MFF Saint Martin d 74.92 349⇑*i*P **P 21 34 10.2 -0.1**
comp=Z,144nm,1.4s
MFF Saint Martin d 74.92 349⇑*i*P **P 21 34 10.2 -0.1**
MFF pmax pmax
comp=Z,144nm,1.4s
MFF Saint Martin d 74.92 349⇑*i*P **P 21 34 10.2 -0.1**
comp=Z,144nm,1.4s
TCF Toulx Ste Croi 74.97 347⇑*i*P **P 21 34 10.4 -0.3**
comp=Z,93nm,1.5s
TCF Toulx Ste Croi 74.97 347⇑*i*P **P 21 34 10.4 -0.3**
TCF pmax pmax
comp=Z,93nm,1.5s
TCF Toulx Ste Croi 74.97 347⇑*i*P **P 21 34 10.4 -0.3**
comp=Z,93nm,1.5s
GZT Gaziantep 75.05 319 *i* P **P 21 34 12.2 +0.8**
AGO Saint Agoulin 75.10 347 *e*P **P 21 34 11.8 +0.4**
AGO Saint Agoulin 75.10 347 *e*P **P 21 34 11.8 +0.4**
BORA Eskisehir 75.10 325 *i* P **P 21 34 10.8 -0.8**
LPL La Plagne 75.14 344⇑*i*P **P 21 34 12.3 +0.4**
comp=Z,84nm,1.3s
LPL La Plagne 75.14 344⇑*i*P **P 21 34 12.3 +0.4**
LPL pmax pmax
comp=Z,84nm,1.3s
LPL La Plagne 75.14 344⇑*i*P **P 21 34 12.3 +0.4**
comp=Z,84nm,1.3s
LPG La Plagne 75.15 344⇑*i*P **P 21 34 12.6 +0.6**
comp=Z,156nm,1.3s
LPG La Plagne 75.15 344⇑*i*P **P 21 34 12.6 +0.6**
LPG pmax pmax
comp=Z,156nm,1.3s
LPG La Plagne 75.15 344*i*P **P 21 34 12.6 +0.6**
comp=Z,156nm,1.3s
AYKD Aykdinkavak 75.26 319 *i* P **P 21 34 13.4 +0.9**
ANDN Andirin 75.27 320 *i* P **P 21 34 13.8 +1.2**
SEYT Eskypehyr 75.31 325 *i* P **P 21 34 12.9 0.0**
SART Tekirdag 75.32 328 *i* P **P 21 34 12.2 -0.6**
PYM Petit Puy Mans 75.41 347 *e*P **P 21 34 13.4 +0.1**
PYM Petit Puy Mans 75.41 347 *e*P **P 21 34 13.4 +0.1**
PYM Petit Puy Mans 75.41 347 *e*P **P 21 34 13.4 +0.1**
IPAR Pars 75.44 303 *e*P **P 21 34 13.7 -0.2**
PPBI Pangkal Pinang 75.63 241 P **P 21 34 12.1 -2.7**
SKO Skopje 75.64 332⇑*i*P **P 21 34 14.9 +0.3**
STON Ston 75.67 335 P **P 21 34 13.6 -1.1**
SSB Saint Sauveur 75.67 345 *e*P **P 21 34 14.6 -0.1**
SSB pmax pmax
comp=Z,119nm,2.0s
SSB Saint Sauveur 75.67 345 *e*P **P 21 34 14.6 -0.1**
comp=Z,119nm,2.0s
SSB Saint Sauveur 75.67 345 *e*P **P 21 34 14.9 +0.2**
KUZU Kuzuini 75.75 319 *i* P **P 21 34 15.5 +0.2**
ISRV Sarvestan 75.80 303 *e*P **P 21 34 15.0 -1.1**
KDHN Kadinhani 75.82 323 *i* P P 21 34 06.0 -10
ORIF Oris-en-Rattie 75.84 344⇑*i*P **P 21 34 16.1 +0.3**
comp=Z,88nm,1.5s
ORIF *e*R
comp=Z,580nm,20.5s
ORIF Oris-en-Rattie 75.84 344⇑*i*P **P 21 34 16.1 +0.3**
ORIF pmax pmax
comp=Z,88nm,1.5s
ORIF Oris-en-Rattie 75.84 344⇑*i*P **P 21 34 16.1 +0.3**
comp=Z,88nm,1.5s
SHI Shiraz 75.84 304 *e*P **P 21 34 16.2 +0.1**
VLC Villacollemand 75.87 341 *e*P **P 21 34 16.5 +0.7**
comp=Z,18nm,0.9s
VLC LR LR
comp=Z,888nm,22.0s
LBL Lubilhac 75.89 346 *e*P **P 21 34 16.7 +0.7**
LBL Lubilhac 75.89 346 *e*P **P 21 34 16.7 +0.7**
LBL Lubilhac 75.89 346 *e*P **P 21 34 16.7 +0.7**
IBND Bandar-abas 75.89 299 *e*P **P 21 34 15.9 -0.3**
MBDF Montbardon 75.90 344⇑*i*P **P 21 34 16.4 +0.2**
comp=Z,48nm,1.2s
MBDF Montbardon 75.90 344⇑*i*P **P 21 34 16.4 +0.2**
MBDF pmax pmax
comp=Z,48nm,1.2s
MBDF Montbardon 75.90 344⇑*i*P **P 21 34 16.4 +0.2**
comp=Z,48nm,1.2s
BKNI Bangkinang 75.90 247 P **P 21 34 15.3 -1.0**
DURS Dursunbey 75.95 326 *i* P **P 21 34 16.6 +0.2**
VAY Valandovo 75.97 331⇑*i*P **P 21 34 16.4 0.0**
BOLV Bolvadin 76.01 324 *i* P P 21 34 24.8 +7.9
DRWC Darouich 76.03 319 *e*P **PcP 21 34 29.6 +0.4**
RJF Les Rejaudoux 76.03 348⇑*i*P **P 21 34 16.4 -0.3**
comp=Z,128nm,1.6s
RJF *e*R
comp=Z,574nm,20.8s
RJF Les Rejaudoux 76.03 348⇑*i*P **P 21 34 16.4 -0.3**
RJF pmax pmax
comp=Z,128nm,1.6s
RJF Les Rejaudoux 76.03 348*i*P **P 21 34 16.4 -0.3**
comp=Z,128nm,1.6s
BALY Balya 76.07 327 *i* P **P 21 34 16.6 -0.5**
VIVF Saint-Julien-l 76.07 345⇑*i*P **P 21 34 17.1 +0.1**
comp=Z,79nm,1.5s
VIVF Saint-Julien-l 76.07 345⇑*i*P **P 21 34 17.1 +0.1**
VIVF pmax pmax
comp=Z,79nm,1.5s
VIVF Saint-Julien-l 76.07 345⇑*i*P **P 21 34 17.1 +0.1**
comp=Z,79nm,1.5s
GULE Gulek 76.08 321 *i* P **P 21 34 16.7 -0.6**
GDZ Gediz 76.12 325 *i* P **P 21 34 17.1 -0.4**
YURE YUREGIR 76.20 320 *i* P **P 21 34 19.5 +1.6**
COBT Iskenderun 76.26 319 *i* P **P 21 34 19.6 +1.2**
CAF Calviac 76.33 347⇑*i*P **P 21 34 18.7 +0.2**
comp=Z,80nm,1.4s
CAF Calviac 76.33 347⇑*i*P **P 21 34 18.7 +0.2**
CAF pmax pmax
comp=Z,80nm,1.4s
CAF Calviac 76.33 347⇑*i*P **P 21 34 18.7 +0.2**
comp=Z,80nm,1.4s
MSVF Nonsavu 76.35 167 *e*P **P 21 34 20.8 +2.1**
MSVF pmax pmax
comp=Z,59nm,1.3s
MSVF Nonsavu 76.35 167 *e*P **P 21 34 20.8 +2.1**
comp=Z,59nm,1.3s
OG25 Le Caire 76.35 344 *e*P **P 21 34 19.2 +0.5**
OG25 Le Caire 76.35 344 *e*P **P 21 34 19.2 +0.5**
BOZC Bozcaada 76.42 328 *i* P **P 21 34 18.0 -1.0**
LFF La Frestale 76.47 348⇑*i*P **P 21 34 19.3 +0.1**
comp=Z,121nm,1.4s
LFF La Frestale 76.47 348⇑*i*P **P 21 34 19.3 +0.1**
LFF pmax pmax
comp=Z,121nm,1.4s
LFF La Frestale 76.47 348⇑*i*P **P 21 34 19.3 +0.1**
comp=Z,121nm,1.4s
SAOF Saorge 76.50 343 *e*P **P 21 34 18.9 -0.6**
SAOF Saorge 76.50 343 *e*P **P 21 34 18.9 -0.6**
SAOF Saorge 76.50 343 *e*P **P 21 34 18.9 -0.6**
KMMI Kalianget 76.51 232 P **P 21 34 19.8 +0.1**
AUTN L'Aution 76.52 343 *e*P **P 21 34 19.7 -0.1**
AUTN L'Aution 76.52 343 *e*P **P 21 34 19.7 -0.1**
AUTN L'Aution 76.52 343 *e*P **P 21 34 19.7 -0.1**
TOUF Mont Tournerai 76.53 343 *e*P **P 21 34 19.7 -0.1**
TOUF Mont Tournerai 76.53 343 *e*P **P 21 34 19.7 -0.1**
TOUF Mont Tournerai 76.53 343 *e*P **P 21 34 19.7 -0.1**
BIA Bitola 76.57 332‖*e*P **P 21 34 20.0 0.0**
TIR Tirane 76.61 333 *e*P **P 21 34 21.0 +0.9**
TIR pmax pmax
comp=Z,195nm,1.7s
TIR MLR MLR
comp=Z,930nm,21.0s
TIR Tirane 76.61 333 *e*P **P 21 34 21.0 +0.9**
comp=Z,195nm,1.7s
TIR LR LR
comp=Z,930nm,21.0s
SBF Sospel 76.64 343⇑*i*P **P 21 34 19.8 -0.5**
comp=Z,118nm,1.2s
SBF Sospel 76.64 343⇑*i*P **P 21 34 19.8 -0.5**
SBF pmax pmax
comp=Z,118nm,1.2s
SBF Sospel 76.64 343⇑*i*P **P 21 34 19.8 -0.5**
comp=Z,118nm,1.2s
MVIF Mont Vial 76.66 343 *e*P **P 21 34 20.4 -0.1**
MVIF Mont Vial 76.66 343 *e*P **P 21 34 20.4 -0.1**
MVIF Mont Vial 76.66 343 *e*P **P 21 34 20.4 -0.1**
YAYL Yayladag 76.75 319 *i* P **P 21 34 21.3 +0.2**
REVF Revere 76.78 343 *e*P **P 21 34 20.8 -0.2**
REVF Revere 76.78 343 *e*P **P 21 34 20.8 -0.2**
REVF Revere 76.78 343 *e*P **P 21 34 20.8 -0.2**
GSI Gunungsitoli 76.78 251 P **P 21 34 21.1 -0.2**
KHAL Karahalli 76.78 325 *i* P **P 21 34 21.1 -0.1**
AKHS Akhisar 76.81 327 *i* P **P 21 34 21.4 +0.2**
SMRF Simiane la Rot 76.81 344⇑*i*P **P 21 34 22.0 +0.8**
comp=Z,86nm,1.5s
SMRF Simiane la Rot 76.81 344⇑*i*P **P 21 34 22.0 +0.8**
comp=Z,86nm,1.5s
CALN Calern 76.84 343 *e*P **P 21 34 21.5 0.0**
CALN Calern 76.84 343 *e*P **P 21 34 21.5 0.0**
CALN Calern 76.84 343 *e*P **P 21 34 21.5 0.0**
PPI Padang Panjang 76.89 247 P **P 21 34 20.3 -1.6**
LASF Ste Croix 76.95 346⇑*i*P **P 21 34 22.5 +0.5**
comp=Z,88nm,1.7s
LASF Ste Croix 76.95 346⇑*i*P **P 21 34 22.5 +0.5**
comp=Z,88nm,1.7s
ISP Isparta 76.96 324 P **P 21 34 23.2 +0.9**
AQU L'Aquila 77.06 338 *e*P **P 21 34 23.8 +1.2**
comp=Z,135nm,1.3s
AQU LR LR
comp=Z,564nm,20.0s
AQU L'Aquila 77.06 338⇓*i*P **P 21 34 24.2 +1.5**
FRF La Foret Royal 77.06 344⇑*i*P **P 21 34 22.3 -0.3**
comp=Z,54nm,1.4s
FRF La Foret Royal 77.06 344⇑*i*P **P 21 34 22.3 -0.3**
FRF pmax pmax
comp=Z,54nm,1.4s
FRF La Foret Royal 77.06 344⇑*i*P **P 21 34 22.3 -0.3**
comp=Z,54nm,1.4s
WRDH Warideh 77.12 319 *e*P **P 21 34 24.8 +1.7**
ERMK Ermenek 77.28 322 *i* P **P 21 34 23.8 -0.3**
GOA Goa 77.29 279⇓*e*PKP **P 21 34 23.4 -0.7**
BANOM Banah 77.30 299 P **P 21 34 24.2 0.0**
SNR=7.0
LMR La Mourre 77.30 344⇑*i*P **P 21 34 23.8 -0.1**
comp=Z,106nm,1.5s
LMR La Mourre 77.30 344⇑*i*P **P 21 34 23.8 -0.1**
LMR pmax pmax
comp=Z,106nm,1.5s
LMR La Mourre 77.30 344⇑*i*P **P 21 34 23.8 -0.1**
comp=Z,106nm,1.5s
DNZL Cakiroluk 77.54 325 *i* P **P 21 34 25.5 -0.1**
BIDA Albida 77.59 319 *e*P **P 21 34 25.6 -0.2**
URLA Izmir 77.64 327 *i* P **P 21 34 25.5 -0.5**
PGF Pioggiola 77.67 342⇑*i*P **P 21 34 26.1 -0.1**
comp=Z,89nm,1.2s
PGF Pioggiola 77.67 342⇑*i*P **P 21 34 26.1 -0.1**
PGF pmax pmax
comp=Z,89nm,1.2s
PGF Pioggiola 77.67 342⇑*i*P **P 21 34 26.1 -0.1**
comp=Z,89nm,1.2s
KORT Korkueli 77.77 324 *i* P **P 21 34 25.3 -1.6**
GOLH Golhisar 77.80 325 *i* P **P 21 34 26.7 -0.2**
GMJI Gumukmas 77.83 232 P **P 21 34 24.6 -2.5**
GAZI Gazipasa 77.84 322 *i* P **P 21 34 24.0 -3.1**
MTLF Montolieu 77.88 347⇑*i*P **P 21 34 27.5 +0.3**
comp=Z,62nm,1.4s
MTLF Montolieu 77.88 347⇑*i*P **P 21 34 27.5 +0.3**
MTLF pmax pmax
comp=Z,62nm,1.4s
MTLF Montolieu 77.88 347⇑*i*P **P 21 34 27.5 +0.3**
comp=Z,62nm,1.4s
AYDN Tasoluk 77.92 326 *i* P **P 21 34 28.0 +0.5**
UMR Umm Al-Rimmam 78.00 307 *e*P **P 21 34 27.5 -0.5**
UMR AMb AMB 21 34 29.6
comp=Z,179nm,1.6s
HAWK Haweek 78.01 318 *e*P **P 21 34 28.7 +0.6**
GCAM G?zelcaml? 78.07 327 *i* P **P 21 34 27.6 -0.7**
KRKI Karangkates 78.15 233 P **P 21 34 27.6 -1.3**
PWJI Pagerwojo 78.30 233 P P 21 34 25.8 -3.9
HATD Hatta, Dubai 78.31 298 P **P 21 34 29.6 -0.3**
SNR=16
KBD Kabd 78.34 307 *e*P **P 21 34 29.5 -0.5**
KBD AMb AMB 21 34 31.8
comp=Z,112nm,1.7s
NAZ Nazwa, Dubai 78.39 299 P **P 21 34 30.0 -0.3**
SNR=11
EPF Esparros 78.40 348⇑*i*P **P 21 34 29.6 -0.5**
comp=Z,81nm,1.5s
EPF Esparros 78.40 348⇑*i*P **P 21 34 29.6 -0.5**
EPF pmax pmax
comp=Z,81nm,1.5s
EPF Esparros 78.40 348⇑*i*P **P 21 34 29.6 -0.5**
comp=Z,81nm,1.5s
TURN Turunc 78.43 325 *i* P **P 21 34 30.2 0.0**
TGJI Tegal 78.44 236 P **P 21 34 29.3 -1.2**
NAY Al-Naaiem 78.47 307 *e*P **P 21 34 29.8 -0.8**
NAY AMb AMB 21 34 32.2
comp=Z,120nm,1.5s
ASHO Ashiyiah 78.47 298 P **P 21 34 30.4 -0.4**
SNR=19
OSPF L'Ospedale 78.50 341 *e*P **P 21 34 30.9 +0.2**
OSPF L'Ospedale 78.50 341 *e*P **P 21 34 30.9 +0.2**
WOJI Wonogiri, Jawa 78.51 234 P **P 21 34 28.5 -2.4**
BJII Banjamegara 78.59 236 P **P 21 34 30.3 -1.1**
ETSF Etsaut 78.63 349⇑*i*P **P 21 34 31.8 +0.4**
comp=Z,95nm,1.4s
ETSF Etsaut 78.63 349⇑*i*P **P 21 34 31.8 +0.4**
ETSF pmax pmax
comp=Z,95nm,1.4s
ETSF Etsaut 78.63 349⇑*i*P **P 21 34 31.8 +0.4**
comp=Z,95nm,1.4s
CSS Prodhromos 78.67 321 *e*P **P 21 34 31.8 +0.1**
comp=Z,196nm,1.6s
CSS LR LR
comp=Z,619nm,21.0s
HOQ Hoqain 78.82 297 P **P 21 34 32.3 -0.3**
SNR=24
CUC Castrocucco 78.83 336 *e*P **P 21 34 32.3 -0.3**
comp=Z,50nm,1.2s
CUC LR LR
comp=Z,849nm,20.0s
WBK Wadi Bani Khal 78.85 295 P **P 21 34 33.9 +1.1**
SNR=18
ASUD Al Ashush, Dub 78.86 299 P **P 21 34 32.3 -0.6**
SNR=6.4
SMDO Samad 78.91 296 P **P 21 34 33.6 +0.4**
SNR=16
BRBR Barbar 79.17 318 *e*P **P 21 34 32.7 -2.0**
CTA Charters Tower 79.29 197 P **P 21 34 35.4 +0.3**
CTA Charters Tower 79.29 197 P **P 21 34 35.4 +0.3**
comp=Z,40nm,1.1s,baz=11,slow=7.9,SNR=10
CTA LR LR 22 08 03.9
comp=Z,284nm,18.5s,baz=41,slow=34
CTAO Charters Tower 79.29 197 *e*P **P 21 34 34.5 -0.5**
CTAO pmax pmax
comp=Z,83nm,1.2s
CTAO Charters Tower 79.29 197 *e*P **P 21 34 34.5 -0.5**
comp=Z,83nm,1.2s
TIP Timpagrande 79.40 335 *e*P **P 21 34 36.6 +0.9**
comp=Z,334nm,1.4s
TIP LR LR
comp=Z,870nm,20.0s
ARQ Araqi 79.40 297 P **P 21 34 35.5 -0.3**
SNR=31
JMDO Jabal Madar 79.47 295 P **P 21 34 36.3 0.0**
SNR=34
BSY Bisya 79.58 296 P **P 21 34 36.9 +0.1**
SNR=36
TCHB Talchebab 79.83 318 *e*P P 21 34 33.9 -4.2
DZM Mont Dzumac 79.83 178 *e*P **P 21 34 35.2 -2.8**
comp=Z,196nm,1.5s
DZM *e*S S 21 44 31.5 -8.6
comp=Z,183nm,24.1s
DZM *e*LR LR 21 59 30.4
comp=Z,803nm,27.1s
DZM Mont Dzumac 79.83 178 *e*P **P 21 34 39.9 +1.8**
comp=Z,89nm,1.4s
DZM Mont Dzumac 79.83 178 P **P 21 34 39.3 +1.2**
comp=Z,51nm,1.2s,baz=31,slow=9.9,SNR=12
DZM LR LR 22 02 51.5
comp=Z,250nm,20.8s,baz=25,slow=30
PGAV Gavieira, Arco 80.16 354 *e*P **P 21 34 40.3 +0.5**
comp=Z,90nm,1.7s
PBRG Braganca 80.23 353 *e*P **P 21 34 40.6 +0.5**
comp=Z,58nm,1.7s
PCAB Cabril 80.40 354 *e*P **P 21 34 41.6 +0.6**
comp=Z,64nm,1.8s
CEL Celeste 80.47 335 *e*P **P 21 34 40.8 -0.7**
comp=Z,22nm,1.1s
CEL LR LR
comp=Z,575nm,21.0s
PALK Pallekele 80.51 268 *e*P **P 21 34 42.1 +0.1**
comp=Z,147nm,1.2s
PALK Pallekele 80.51 268 P **P 21 34 42.6 +0.6**
SNR=7.8
PALK Pallekele 80.51 268 P **P 21 34 42.0 +0.1**
comp=Z,470nm,1.2s,SNR=8.0
PALK Pallekele 80.51 268 P **P 21 34 42.3 +0.3**
comp=Z,104nm,1.6s,comp=Z,1µm
VSL Villasalto 80.58 341 *e*P **P 21 34 42.5 +0.5**
comp=Z,118nm,1.6s
VSL LR LR
comp=Z,639nm,19.0s
POLO Lamas de Olo 80.72 354 *e*P **P 21 34 43.0 +0.2**
comp=Z,30nm,1.7s
PVRL Vila Real 80.81 354 *e*P **P 21 34 43.5 +0.2**
comp=Z,88nm,1.7s
MVO Moncorvo 80.89 353 *e*P **P 21 34 43.9 +0.2**
comp=Z,73nm,1.6s
PVIS Viseu 81.38 354 *e*P **P 21 34 46.4 +0.1**
comp=Z,60nm,1.4s
WRAB Tennant Creek 81.59 208 *e*P **P 21 34 46.7 -0.7**
WRAB pmax pmax
comp=Z,177nm,1.4s
WRAB Tennant Creek 81.59 208 *e*P **P 21 34 46.7 -0.7**
comp=Z,177nm,1.4s
WRAB Tennant Creek 81.59 208 P **P 21 34 47.0 -0.4**
comp=Z,460nm,1.2s,SNR=20
WRA Warramunga Arr 81.61 208 P **P 21 34 47.5 +0.1**
WRA Warramunga Arr 81.61 208 P **P 21 34 47.5 +0.1**
comp=Z,53nm,1.1s,baz=13,slow=5.6,SNR=77
GVD Gavdhos 81.65 328 *e*P **P 21 34 47.5 -0.2**
comp=Z,560nm,1.7s
MTE Manteigas 81.68 354 *e*P **P 21 34 48.0 +0.1**
comp=Z,62nm,1.5s
TEIG Tepich 81.84 65 LR LR 22 16 36.1
comp=Z,207nm,20.5s,baz=317,slow=40
SOR Soroa 82.11 59 *e* **P 21 34 50.7 +0.4**
ESDC Sonseca Array 82.14 351 P **P 21 34 50.4 +0.1**
ESDC Sonseca Array 82.14 351 P **P 21 34 50.4 +0.1**
comp=Z,14nm,1.1s,baz=360,slow=5.6,SNR=49
PCBR Castelo Branco 82.23 354 *e*P **P 21 34 50.5 -0.2**
comp=Z,48nm,1.4s
PAB San Pablo 82.30 351 *e*P **P 21 34 51.4 +0.2**
PAB pmax pmax
comp=Z,31nm,1.3s
PAB San Pablo 82.30 351 *e*P **P 21 34 51.4 +0.2**
comp=Z,32nm,1.3s
FITZ Fitzroy Crossi 82.35 217 LR LR 22 11 47.3
comp=Z,85nm,20.6s,baz=263,slow=36
PTOM Tomar 82.50 354 *e*P **P 21 34 52.5 +0.4**
comp=Z,40nm,1.3s
PMRV Marv??o 82.64 354 *e*P **P 21 34 52.9 0.0**
comp=Z,29nm,1.9s
PMTG Montargil 83.04 354 *e*P **P 21 34 54.8 -0.1**
comp=Z,50nm,1.8s
WDD Wield Dalam 83.07 336 *e*P **P 21 34 56.0 +0.9**
comp=Z,294nm,1.4s
PESTR Estremoz 83.21 354 *e*P **P 21 34 55.8 0.0**
comp=Z,44nm,1.9s
EVO Evora 83.56 354⇑*i*P **P 21 34 57.6 0.0**
comp=Z,159nm,1.8s
EVO *e*R
comp=Z,520nm,18.5s
EVO Evora 83.56 354 *e*P **P 21 34 57.6 0.0**
comp=Z,66nm,1.8s
EVOP Sao Brissos 83.57 354*i*P **P 21 34 57.6 -0.1**
EVOP pmax pmax
comp=Z,159nm,1.8s
EVOP Sao Brissos 83.57 354⇑*i*P **P 21 34 57.6 -0.1**
comp=Z,159nm,1.8s
CMAH Djebel Manchou 83.71 342 P **P 21 34 59.0 +0.5**
EIDS Eidsvold 83.84 192 *e*P **P 21 35 00.3 +1.4**
comp=Z,64nm,1.4s
PNCL Nicolau / Gran 84.01 354 *e*P **P 21 35 00.8 +0.9**
comp=Z,22nm,1.7s
ABSA Djebel Ababsia 84.05 341 P **P 21 35 00.0 -0.3**
CKFL Kef-Lekhel 84.05 342 P **P 21 35 00.9 +0.6**
PBEJ Beja 84.06 354 *e*P **P 21 35 00.4 +0.2**
comp=Z,56nm,1.7s
CASM Ain Smara 84.22 342 P **P 21 35 01.3 +0.2**
RAYN Ar Rayn 84.22 306 P **P 21 35 00.5 -0.8**
comp=Z,508nm,1.4s,SNR=59
KEST Kesra 84.24 340 *e*P **P 21 35 02.3 +1.0**
KEST *e*PP **PP 21 38 14.7 -0.3**
KEST Kesra 84.24 340 P **P 21 35 02.2 +1.0**
comp=Z,21nm,1.1s,baz=346,slow=1.6,SNR=37
KEST LR LR 22 19 44.9
comp=Z,170nm,18.4s,baz=319,slow=41
PPT Papeete 84.39 136 LR LR 22 04 33.4
comp=Z,751nm,20.4s,baz=347,slow=30
PPT2 Papeete2 84.41 136 *e*P **P 21 35 00.3 -1.8**
comp=Z,40nm,1.3s
PPT2 *e*S **S 21 45 23.0 -4.2**
comp=Z,217nm,25.8s
PPT2 *e*SS **SS 21 50 51.2 -6.9**
comp=Z,229nm,26.2s
PPT2 *e*LR LR 22 01 38.2
comp=Z,2µm,23.8s,baz=339
CTEI Djebel Teioual 84.43 342 P **P 21 35 03.3 +1.0**
SET Setif 84.45 343 P **P 21 35 04.0 +1.6**
PCVE Castro Verde 84.46 354 *e*P **P 21 35 02.9 +0.7**
comp=Z,67nm,1.5s
TIAR Tiarei 84.46 136 *e*P **P 21 35 00.2 -2.1**
comp=Z,19nm,0.8s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PAE	Paea	84.47	136	eP	P	21 35 00.3	-2.0
	comp=Z,10nm,1.3s						
CKHR	Kef el Ahmar	84.62	343	P	P	21 35 04.7	+1.5
PVAQ	Vaqueiros	84.67	354	eP	P	21 35 03.6	+0.3
	comp=Z,74nm,1.8s						
EMHD	Djebel Mahouad	84.81	345	P	P	21 35 06.0	+1.8
PBDV	Barranco-do-Ve	84.84	354	eP	P	21 35 05.1	+0.9
	comp=Z,48nm,1.5s						
EBNR	Beni Rached	84.91	346	P	P	21 35 07.0	+2.4
ECHA	Ech Chlef	85.07	346	P	P	21 35 10.0	+4.7
AS31	Alice Springs	85.28	208	eP	P	21 35 06.9	+0.6
ASAR	Alice Springs	85.28	208	P	P	21 35 06.5	+0.2
ASAR	Alice Springs	85.28	208	P	P	21 35 06.5	+0.2
	comp=Z,11nm,1.0s,baz=11,slow=4.6,SNR=57						
ASAR				LR	LR	22 08 46.1	
	comp=Z,218nm,20.0s,baz=17,slow=32						
ABTO	Aybut	86.06	297	P	P	21 35 09.7	-0.9
	SNR=7.5						
MBWA	Marble Bar	87.17	221	eP	P	21 35 15.1	-0.6
	comp=Z,125nm,1.2s						
TGUH	Tegucigalpa,Un	87.61	67	eP	P	21 35 19.6	+1.6
	comp=Z,382nm,1.9s						
ARMA	Armidale	88.78	191	eP	P	21 35 25.4	+2.2
	comp=Z,122nm,1.2s						
TBI	Tubuai	89.74	138	eS	S	21 46 13.6	-4.7
	comp=Z,453nm,27.2s						
TBI				eLR	LR	22 04 09.3	
	comp=Z,1μm,29.5s,baz=334						
SDDR	Presa de Saban	90.58	51	eP	P	21 35 33.2	+1.2
	comp=Z,66nm,1.4s						
STKA	Stephens Creek	91.60	199	eP	P	21 35 36.7	+0.5
	comp=Z,14nm,1.4s						
STKA	Stephens Creek	91.60	199	P	P	21 35 36.8	+0.6
	comp=Z,24nm,1.1s,baz=3.6,slow=7.3,SNR=19						
STKA				LR	LR	22 17 06.2	
	comp=Z,236nm,18.2s,baz=22,slow=36						
LRS	Lares	93.00	48	eP	P	21 35 44.4	+1.1
BBOO	Buckleboo	93.58	204	eP	P	21 35 45.4	+0.1
	comp=Z,582nm,1.2s						
URZ	Urewera	96.55	170	LR	LR	22 13 57.4	
	comp=Z,207nm,19.0s,baz=16,slow=32						
TAM	Tamanrasset	97.55	340	eP	P	21 36 03.7	-0.5
TAM				e		21 39 58.9	
TAM				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TAM	Tamanrasset	97.55	340	eP	P	21 36 03.7	-0.5
	comp=Z,7.6nm,1.3s						
TAM				ePP	PP	21 39 58.9	-1.7
TORD	Torodi Ar. Bea	107.64	342	Pdif	Pdif	21 36 47.0	-1.9
TORD				PKiKP	PKiKP	21 40 56.2	-0.6
TORD				PKKPbc	PKKPbc	21 52 09.5	+1.2
TORD	Torodi Ar. Bea	107.64	342	Pdiff	Pdif	21 36 47.0	-1.9
	comp=Z,0.7nm,1.0s,baz=3.8,slow=4.3,SNR=4.1						
TORD				PKiKP	PKiKP	21 40 56.2	-0.6
	comp=Z,0.6nm,0.8s,baz=32,slow=1.3,SNR=3.2						
TORD				PKKPbc	PKKPbc	21 52 09.5	+1.2
	comp=Z,0.9nm,0.9s,baz=181,slow=3.5,SNR=5.2						
DBIC	Dimbokro	114.91	348	PKP	PKPdf	21 41 09.8	-0.8
DBIC	Dimbokro	114.91	348	PKP	PKPdf	21 41 09.8	-0.8
	comp=Z,12nm,1.1s,baz=270,slow=3.0,SNR=3.3						
LPAZ	La Paz	123.16	66	PKP	PKPdf	21 41 26.2	-0.8
LPAZ				ePKPdf	PKiKP	21 41 27.5	+0.2
LPAZ				PKKPbc	PKKPab	21 51 18.2	+0.1
LPAZ	La Paz	123.16	66	PKP	PKPdf	21 41 26.2	-0.8
	comp=Z,3.1nm,1.0s,baz=353,slow=3.7,SNR=8.4						
LPAZ				PKKPbc	PKKPab	21 51 18.2	+0.1
	comp=Z,0.8nm,0.7s,baz=74,slow=3.8,SNR=3.9						
DRV	Dumont d'Urvil	125.72	192	SS	SS	22 00 49.0	+27
LSZ	Lusaka	126.29	304	ePKPdf	PKPdf	21 41 32.8	+0.3
LSZ				ePP	PP	21 43 26.0	-1.1
LVC	Limon Verde	128.15	70	ePKPdf	PKPdf	21 41 37.4	+1.4
BDFB	Brasilia	131.27	43	PKP	PKPdf	21 41 42.2	+0.2
BDFB	Brasilia	131.27	43	PKP	PKPdf	21 41 42.2	+0.2
	comp=Z,10nm,1.1s,baz=353,slow=2.6,SNR=7.9						
VNDA	Vanda	135.32	181	PKP	PKPdf	21 41 48.2	+0.7
VNDA	Vanda	135.32	181	PKP	PKPdf	21 41 48.2	+0.7
	comp=Z,0.9nm,0.3s,baz=1.3,slow=1.1,SNR=8.1						
SBA	Scott Base	135.66	179	ePKIKP	PKPdf	21 41 48.3	+0.1
SBA	Scott Base	135.66	179	ePKPdf	PKPdf	21 41 48.3	+0.1
LBTB	Lobatse	135.96	301	ePKPdf	PKPdf	21 41 50.1	-0.4
CPUP	Villa Florida	136.89	61	PKP	PKPdf	21 41 51.7	-0.3
CPUP	Villa Florida	136.89	61	PKP	PKPdf	21 41 51.7	-0.3
	comp=Z,7.0nm,0.9s,baz=303,slow=1.9,SNR=13						
BOSA	Boshof	139.19	298	PKP	PKPdf	21 41 56.2	-0.2
BOSA	Boshof	139.19	298	PKP	PKPdf	21 41 56.2	-0.2
	comp=Z,4.2nm,0.6s,baz=43,slow=2.3,SNR=9.4						
PLCA	Paso Flores	141.52	88	PKP	PKPdf	21 41 60.0	-0.2
PLCA	Paso Flores	141.52	88	PKP	PKPdf	21 41 60.0	-0.2
	comp=Z,13nm,1.0s,baz=314,slow=1.4,SNR=7.2						
TRQA	Tornquist	144.07	77	ePKPdf	PKPbc	21 42 03.2	+0.5
SUR	Sutherland	144.41	300	ePKPdf	PKPdf	21 42 05.2	-0.5
MAW	Mawson	145.37	221	PKPbc	PKPbc	21 42 05.5	-0.3
MAW				ePKPdf	PKPab	21 42 06.7	+0.6
MAW	Mawson	145.37	221	PKPbc	PKPbc	21 42 05.5	-0.3
	comp=Z,153nm,1.1s,baz=74,slow=3.3,SNR=129						
SYO	Syowa Base	154.06	223⇑	eX	PKPbc	21 42 26.7	-1.0
SYO	Syowa Base	154.06	223⇑	eX	PKPab	21 42 40.5	-1.0
SNAA	Sanae	165.34	196	PKP	PKPdf	21 42 30.7	-1.7
SNAA				ePKPdf	PKPdf	21 42 30.9	-1.6
SNAA				ePKPab	PKPab	21 43 29.4	-1.2
SNAA				PKPab	PKPab	21 43 30.0	-0.6
SNAA				ePP	PP	21 47 18.5	+0.5
SNAA	Sanae	165.34	196	PKP	PKPdf	21 42 30.7	-1.7
	comp=Z,0.7nm,0.5s,baz=316,slow=3.3,SNR=9.1						
SNAA				PKPab	PKPab	21 43 30.0	-0.6
	comp=Z,3.0nm,1.0s,baz=148,slow=3.8,SNR=6.9						

IDC 08 21:40:04.3±2.0, 6°.73S×156°.04E, h221km±19km, mb3.8/19, mb1 3.9/22, mb1mx3.8/26, mbtmp3.8/22, Error ellipse: s-maj=14.1km s-min=9.0km az=109.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	9.19	253	P	Pn	21 42 14.9	+1.9
	1.1nm,0.3s,baz=58,slow=13,SNR=3.2						
PMG				S	S	21 44 01.9	+5.5
	0.6nm,0.3s,baz=300,slow=20,SNR=2.5						
CTA	Charters Tower	16.32	215	P	Pn	21 43 41.6	0.0
	0.9nm,0.3s,baz=46,slow=14,SNR=6.9						
DZM	Mont Dzumac	18.26	148	P	P	21 44 01.4	-0.4
	0.7nm,0.3s,baz=321,slow=13,SNR=7.0						
WRA	Warramunga Arr	24.82	236	P	P	21 45 06.9	+0.3
	4.6nm,0.5s,baz=61,slow=9.1,SNR=67						
WRA				S	S	21 49 13.0	+0.1
	1.6nm,0.9s,baz=68,slow=14,SNR=4.4						
ASAR	Alice Springs	27.13	229	P	P	21 45 26.7	-0.5
	4.7nm,0.4s,baz=58,slow=9.4,SNR=42						
ASAR				S	S	21 49 50.8	+1.6
	0.4nm,0.9s,baz=62,slow=16,SNR=3.9						
STKA	Stephens Creek	28.42	206	P	P	21 45 37.8	-0.8
	0.8nm,0.7s,baz=35,slow=10.0,SNR=2.3						
FITZ	Fitzroy Crossi	31.71	246	P	P	21 46 07.1	-0.6
	5.4nm,0.7s,baz=71,slow=8.4,SNR=21						
KAPI	Kappang	36.13	271	P	P	21 46 44.5	-1.3
	6.8nm,0.5s,baz=173,slow=0.7,SNR=8.3						
RPZ	Rata Peaks	39.13	163	P	P	21 47 10.0	-0.4
	6.7nm,0.6s,baz=18,slow=7.1,SNR=4.2						
MJAR	Matsushiro Arr	46.18	340	P	P	21 48 06.3	-0.9
	1.7nm,0.8s,baz=172,slow=8.6,SNR=9.4						
JNU	Nakatsue	46.29	330	P	P	21 48 07.4	-0.7
	6.1nm,0.8s,baz=32,slow=4.4,SNR=4.9						
KSRS	Korea Array	51.20	331	P	P	21 48 45.7	+0.5
	1.7nm,0.8s,baz=141,slow=7.6,SNR=6.5						
PETK	Petropavlovsk-	59.63	1	P	P	21 49 45.4	+0.4
	6.7nm,0.8s,baz=161,slow=8.2,SNR=12						
CMAR	Chiang Mai Arr	61.61	295	P	P	21 49 59.6	+0.5
	0.8nm,0.8s,baz=124,slow=5.1,SNR=5.4						
SONM	Songino Array	69.68	327	P	P	21 50 51.0	+0.8
	3.4nm,0.9s,baz=133,slow=6.1,SNR=13						
VNDA	Vanda	70.82	179	P	P	21 50 57.4	+1.0
	0.5nm,0.8s,baz=341,slow=9.0,SNR=3.5						
ILAR	Eielson Array	82.75	21	P	P	21 52 02.0	-1.1
	0.9nm,0.4s,baz=243,slow=4.7,SNR=25						
QSPA	South Pole Qui	83.24	180	P	P	21 52 06.3	+0.4
	2.3nm,0.8s,baz=259,slow=1.2,SNR=7.4						
MKAR	Makanchi Array	83.89	318	P	P	21 52 10.1	+0.7
	4.0nm,0.5s,baz=99,slow=6.5,SNR=78						
ZALV	Zalesovo Beam	84.55	326	P	P	21 52 12.0	-0.4
	2.1nm,0.4s,baz=111,slow=5.6,SNR=16						
MAW	Mawson	85.04	203	P	P	21 52 15.6	+0.9
	3.9nm,0.8s,baz=94,slow=4.7,SNR=7.0						
YKA	Yellowknife Ar	95.62	28	P	P	21 53 04.4	+0.1
	0.5nm,0.7s,baz=263,slow=4.5,SNR=7.5						
GERES	GERESS Array B	127.36	329	PKP	PKPdf	21 58 43.3	+0.4
	0.6nm,0.6s,baz=5.7,slow=1.3,SNR=4.7						
TORD	Torodi Ar. Bea	153.95	286	PKPbc	PKPbc	21 59 37.8	-0.8
	0.4nm,0.5s,baz=62,slow=1.6,SNR=11						
TORD				PKPab	PKPab	21 59 52.5	-0.3
	0.2nm,0.4s,baz=70,slow=4.1,SNR=6.1						

IDC 08 21:48:36.8±13.0, 6°.82S×129°.17E, h75km±143km, mb2.9/1, mb1 3.6/4, mb1mx3.2/20, mbtmp3.4/4, ML3.8/3, Error ellipse: s-maj=111.8km s-min=59.3km az=32.0
ISCJB 08 21:48:43.1±1.1, 7°.24S±0°.06×129°.1E±0°.1, h156km, mb2.9/1, Error ellipse: s-maj=14.6km s-min=9.0km az=2.4
AUST 08 21:48:56.7±0.0, 8°.49S×130°.30E, h415km±1km, Error ellipse: s-maj=3.1km s-min=2.1km az=314.0
ISC 08 21:48:43.8±1.3, 7°.28S±0°.08×129°.1E±0°.1, h156km, n9, σ2ˢ26/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	Manton Dam	5.88	160	P	Pn	21 50 12.1	+3.1
	baz=4.4,SNR=8.3						
MTN				S	Sn	21 51 15.8	0.0
	baz=4.4,SNR=15						
KDU	Kakadu	6.32	149	P	Pn	21 50 17.3	+2.5
	baz=4.7,SNR=18						
KDU				S	Sn	21 51 24.6	-1.5
	baz=4.7,SNR=7.2						
KNRA	Kununurra	8.35	182	P	Pn	21 50 44.3	+2.4
	baz=7.3,SNR=5.1						
KNRA				S	Sn	21 52 13.9	-1.0
	baz=7.3,SNR=9.0						
FITZ	Fitzroy Crossi	11.28	197	P	Pn	21 51 21.9	+1.5
	0.1nm,0.3s,baz=15,slow=11,SNR=8.7						
FITZ				S	Sn	21 53 21.7	-3.6
	0.6nm,0.3s,baz=104,slow=19,SNR=5.9						
FITZ	Fitzroy Crossi	11.28	197	S	Sn	21 53 23.2	-2.1
	baz=11,SNR=4.5						
JAY	Jayapura	12.49	68	P	Pn	21 51 34.8	-1.6
	baz=12,SNR=19						
WRA	Warramunga Arr	13.58	159	P	Pn	21 51 50.8	+0.6
	0.7nm,0.3s,baz=337,slow=14,SNR=23						
WRA				S	Sn	21 54 13.3	-7.4
	0.5nm,0.3s,baz=336,slow=23,SNR=7.2						
ASAR	Alice Springs	16.93	165	P	Pn	21 52 34.1	+2.4
	0.7nm,0.3s,baz=347,slow=12,SNR=45						
ASAR				S	S	21 55 36.9	-2.7
	0.1nm,0.3s,baz=349,slow=27,SNR=3.9						
MKAR	Makanchi Array	67.97	327	P	P	21 59 25.7	-0.3
	0.1nm,0.4s,baz=112,slow=7.4,SNR=3.7						

ATH 08 21:52:40.7, 39°.25N×28°.38E, h8km±3km, MD3.3/5
ISK 08 21:52:46.2, 39°.31N×27°.93E, h2km, MD3.1
DDA 08 21:52:46.8, 39°.30N×27°.95E, h24km, MD3.0
ISCJB 08 21:52:46.9±0.4, 39°.31N±0°.02×27°.94E±0°.02, h2km±3km, Error ellipse: s-maj=3.2km s-min=2.7km az=2.1
CSEM 08 21:52:47.0±0.1, 39°.30N×27°.92E, h2km, MD3.1, Error ellipse: s-maj=1.9km s-min=1.6km az=85.0
ISC 08 21:52:47.2±1.0, 39°.31N±0°.01×27°.93E±0°.02, h10km±9km, n108, σ0ˢ68/139, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.34	353	ePG	Pg	21 52 54.1	+0.3
BALB				eSG	Sb	21 52 59.8	-0.9
BALB	Balikesir	0.34	353	ePg	Pg	21 52 54.2	+0.3
BALB				eSg	Sb	21 52 59.8	-0.9
AKHS	Akhisar	0.44	192	i P	Pg	21 52 55.4	-0.3
AKHS				i S	Sb	21 53 03.4	-0.1
AKHS	Akhisar	0.44	192	i P	Pg	21 52 55.4	-0.3
AKHS				i S	Sb	21 53 03.4	-0.1
AKS	Akhisar	0.44	193	ePG	Pg	21 52 55.4	-0.3
AKS				eSG	Sb	21 53 03.4	-0.2
AKS	Akhisar	0.44	193	ePg	Pg	21 52 55.4	-0.3
BALY	Balya	0.50	331	i P	Pg	21 52 56.8	-0.1
BALY				i S	Sg	21 53 04.1	+0.6
BALY	Balya	0.50	331	i P	Pg	21 52 56.8	-0.1
BALY				i S	Sg	21 53 04.1	+0.6
DURS	Dursunbey	0.51	55	i P	Pg	21 52 57.1	0.0
DURS				i S	Sb	21 53 05.0	-0.8
DURS	Dursunbey	0.51	55	i P	Pg	21 52 57.1	0.0
DURS				i S	Sb	21 53 05.0	-0.8
DST	Dursunbey	0.61	60	ePG	Pg	21 52 58.7	-0.3
DST				eSG	Sb	21 53 07.9	-0.7
DST	Dursunbey	0.61	60	ePg	Pg	21 52 58.7	-0.3
DST				eSg	Sb	21 53 07.9	-0.7
DEMI	Demirci	0.66	113	i P	Pb	21 53 00.1	-0.8
DEMI	Demirci	0.66	113	i P	Pb	21 53 00.1	-0.8
GONE	Gonen-Balikesi	0.77	346	ePG	Pg	21 53 01.7	-0.2
GONE				eSG	Sg	21 53 12.2	+0.3
GONE	Gonen-Balikesi	0.77	346	ePg	Pg	21 53 01.7	-0.2
GONE				eSg	Sg	21 53 12.2	+0.3
MANT	Manisa	0.95	149	i P	Pg	21 53 05.2	-0.2
MANT				i S	Sg	21 53 17.3	-0.4
MANT	Manisa	0.95	149	i P	Pg	21 53 05.2	-0.2
MANT				i S	Sg	21 53 17.3	-0.4
AYVA	Ayvalik	0.96	271	i P	Pn	21 53 06.4	-0.3
AYVA				i S	Sn	21 53 20.7	+0.2
AYVA	Ayvalik	0.96	271	i P	Pn	21 53 06.4	-0.3
AYVA				i S	Sn	21 53 20.7	+0.2
KULA	Kula-Manisa	0.97	144	ePG	Pb	21 53 05.8	-0.3
KULA	Kula-Manisa	0.97	144	ePg	Pb	21 53 05.8	-0.3
KCTX	Karacabey (Bur	1.01	19	ePG	Pg	21 53 06.4	-0.3
KCTX	Karacabey (Bur	1.01	19	ePg	Pg	21 53 06.4	-0.3
EDC	Edincik	1.04	357	ePG	Pb	21 53 07.2	-0.1
EDC	Edincik	1.04	357	ePg	Pb	21 53 07.2	-0.1
IZM	Izmir	1.05	210	ePG	Pg	21 53 06.9	-0.4
IZM	Izmir	1.05	210	ePg	Pg	21 53 06.9	-0.4
ORLT	Orhaneli	1.05	45	ePG	Pb	21 53 07.2	-0.1
ORLT	Orhaneli	1.05	45	ePg	Pb	21 53 07.3	-0.1
BNT	Bandirma	1.05	359	ePG	Pg	21 53 06.6	-0.7
BNT	Bandirma	1.05	359	ePg	Pg	21 53 06.6	-0.7
BLCB	Balcova	1.15	217	ePN	Pg	21 53 09.0	-0.3
BLCB	Balcova	1.15	217	ePn	Pg	21 53 09.0	-0.3
KRBG	Karabiga-Canak	1.19	336	ePN	Pb	21 53 09.5	-0.4
KRBG	Karabiga-Canak	1.19	336	ePn	Pb	21 53 09.5	-0.4
TVSB	Tavsanli	1.19	83	ePN	Pn	21 53 09.9	-0.1
TVSB	Tavsanli	1.19	83	ePn	Pn	21 53 09.9	-0.1
ULDT	Uludag	1.25	48	i P	Pg	21 53 11.9	+0.8
ULDT				i S	Sg	21 53 27.4	0.0
ULDT	Uludag	1.25	48	i P	Pg	21 53 11.9	+0.8
ULDT				i S	Sg	21 53 27.4	0.0
MDNY	Mudanya-Bursa	1.29	34	ePN	Pg	21 53 11.7	-0.2
MDNY	Mudanya-Bursa	1.29	34	ePn	Pg	21 53 11.7	-0.2
PRK	Paraskevi	1.29	268	ePB	Pn	21 53 11.4	+0.2
PRK	Paraskevi	1.29	268	ePb	Pn	21 53 11.4	+0.2
MRMT	Marmara Adasi	1.32	349	ePN	Pg	21 53 12.3	-0.3
MRMT	Marmara Adasi	1.32	349	ePn	Pg	21 53 12.3	-0.3
EZN	Ezine	1.35	293	ePN	Pb	21 53 12.6	+0.1
EZN	Ezine	1.35	293	ePn	Pb	21 53 12.6	+0.1
LPK	Lapseki	1.40	320	ePN	Pb	21 53 13.3	-0.1
LPK	Lapseki	1.40	320	ePn	Pb	21 53 13.3	-0.1
GEMT	Gemlik	1.48	40	ePN	Pb	21 53 14.6	-0.3
GEMT	Gemlik	1.48	40	ePn	Pb	21 53 14.6	-0.3
SART	Tekirdag	1.50	337	i P	Pn	21 53 14.4	+0.2
SART				i S	Sg	21 53 35.1	-0.3
SART	Tekirdag	1.50	337	i P	Pn	21 53 14.4	+0.2
SART				i S	Sg	21 53 35.1	-0.3
BOZC	Bozcaada	1.55	291	i P	Pn	21 53 14.9	+0.1
BOZC				i S	Sn	21 53 34.9	-0.1
GELI	Tayfur-Gelibol	1.57	315	ePN	Pb	21 53 15.9	-0.3
GELI	Tayfur-Gelibol	1.57	315	ePn	Pb	21 53 15.9	-0.3
IZI	Iznik	1.57	48	ePN	Pb	21 53 16.0	-0.3
IZI	Iznik	1.57	48	ePn	Pb	21 53 16.0	-0.3
KHL	Karahalli	1.58	128	ePN	Pb	21 53 16.3	-0.2
KHL	Karahalli	1.58	128	ePn	Pb	21 53 16.3	-0.2
AYDN	Tasoluk	1.64	182	i P	Pb	21 53 17.7	+0.1
AYDN				i S	Sg	21 53 39.6	-0.3
AYDN	Tasoluk	1.64	182	i P	Pb	21 53 17.7	+0.1
AYDN				i S	Sg	21 53 39.6	-0.3
ALT	Altintas	1.71	98	ePN	Pb	21 53 18.2	-0.5
ALT	Altintas	1.71	98	ePn	Pb	21 53 18.2	-0.5
CHOS	Chios island	1.73	239	ePN	Pn	21 53 17.2	-0.1
CHOS				eSN	Sg	21 53 43.6	+0.8
CHOS	Chios island	1.73	239	ePn	Pn	21 53 17.2	-0.1
CHOS				eSn	Sg	21 53 43.6	+0.8
ERIK	Erikli-Kesan	1.75	322	ePN	Pb	21 53 18.4	-0.9
ERIK	Erikli-Kesan	1.75	322	ePn	Pb	21 53 18.4	-0.9
ADVT	Abdulvahap	1.79	50	ePN	Pb	21 53 19.2	-0.8
ADVT	Abdulvahap	1.79	50	ePn	Pb	21 53 19.2	-0.8
BUY	Buyukada	1.79	30	ePN	Pb	21 53 19.2	-0.9
BUY	Buyukada	1.79	30	ePn	Pb	21 53 19.2	-0.9
CRLT	Corlu	1.83	355	ePN	Pn	21 53 19.5	+0.9
CRLT	Corlu	1.83	355	ePn	Pn	21 53 19.5	+0.9
SLVT	Silivri	1.94	6	ePN	Pb	21 53 21.1	-1.4
SLVT	Silivri	1.94	6	ePn	Pb	21 53 21.1	-1.4
ISK	Istanbul-Kandi	1.96	26	ePN	Pb	21 53 21.5	-1.4
ISK	Istanbul-Kandi	1.96	26	ePn	Pb	21 53 21.5	-1.4
CTKS	Kestanelik-??a	1.98	13	ePN	Pn	21 53 21.8	+1.1
CTKS	Kestanelik-??a	1.98	13	ePn	Pn	21 53 21.8	+1.1
BGKT	Bogazkoy	1.98	19	ePN	Pb	21 53 21.8	-1.5
BGKT	Bogazkoy	1.98	19	ePn	Pb	21 53 21.8	-1.5
MLSB	Milas	2.01	184	ePN	Pn	21 53 22.2	+1.1
MLSB	Milas	2.01	184	ePn	Pn	21 53 22.2	+1.1
HRT	Hereke	2.02	41	ePN	Pn	21 53 22.3	+1.0
HRT	Hereke	2.02	41	ePn	Pn	21 53 22.3	+1.0
BORA	Eskisehir	2.03	73	i P	Pg	21 53 25.0	-1.1
BORA				i S	Sg	21 53 53.1	+0.7
BORA	Eskisehir	2.03	73	i P	Pg	21 53 25.0	-1.1
BORA				i S	Sg	21 53 53.1	+0.7
ALN	Alexandroupoli	2.15	318	ePN	Pn	21 53 23.7	+0.6
ALN				eSN	Sb	21 53 53.6	+0.7
ALN	Alexandroupoli	2.15	318	ePn	Pn	21 53 23.7	+0.6
ALN				eSn	Sb	21 53 53.6	+0.7
SHUT	Suhut-Afyon	2.17	109	ePN	Pn	21 53 24.6	+1.1
SHUT	Suhut-Afyon	2.17	109	ePn	Pn	21 53 24.6	+1.1
CTYL	Yal??k??y-??at	2.19	7	ePN	Pn	21 53 24.7	+1.2
CTYL	Yal??k??y-??at	2.19	7	ePn	Pn	21 53 24.7	+1.2
SMTH	Samothraki Isl	2.19	303	ePB	Pn	21 53 23.3	-0.3
SMTH	Samothraki Isl	2.19	303	ePb	Pn	21 53 23.3	-0.3
LIA	Limnos Island	2.21	286	ePB	Pn	21 53 24.1	+0.3
LIA	Limnos Island	2.21	286	ePb	Pn	21 53 24.1	+0.3
ESKT	Eskisehir	2.27	84	ePN	Pn	21 53 25.9	+1.1
ESKT	Eskisehir	2.27	84	ePn	Pn	21 53 25.9	+1.1
SEYT	Eskypehyr	2.27	84	i P	Pg	21 53 31.1	+0.4
SEYT				i S	Sg	21 54 00.6	+0.5
GULT	Gulveren	2.28	60	ePN	Pn	21 53 26.2	+1.2
GULT	Gulveren	2.28	60	ePn	Pn	21 53 26.2	+1.2
EDRB	Edirne	2.70	341	ePN	Pn	21 53 31.9	+1.3
EDRB	Edirne	2.70	341	ePn	Pn	21 53 31.9	+1.3
SVRH	Sivrihisar-ESK	2.79	86	ePN	Pn	21 53 33.3	+1.4
SVRH	Sivrihisar-ESK	2.79	86	ePn	Pn	21 53 33.3	+1.4

IDC 08 21:54:52.8±2.3, 16°.97S×173°.43W, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.8/21, mbtmp3.9/5, ML2.6/1, Error ellipse: s-maj=119.5km s-min=23.9km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.43	28	Pn	Pn	21 55 48.4	+0.6
	36nm,0.3s,baz=306,slow=9.3,SNR=11						
AFI				Sn	Sn	21 56 22.7	-6.5
	77nm,0.3s,baz=60,slow=20,SNR=13						
STKA	Stephens Creek	43.25	241	P	P	22 02 57.2	+1.0
	0.4nm,0.4s,baz=78,slow=9.3,SNR=3.5						
WRA	Warramunga Arr	49.48	258	P	P	22 03 44.6	-0.8
	0.2nm,0.4s,baz=96,slow=6.6,SNR=4.1						
ASAR	Alice Springs	49.62	253	P	P	22 03 46.1	-0.3
	2.2nm,0.5s,baz=89,slow=8.5,SNR=40						
PDAR	Pinedale Array	83.45	42	P	P	22 07 22.4	-0.3
	0.5nm,0.8s,baz=227,slow=3.3,SNR=3.3						

IDC 08 22:03:58.4±2.3, 5°.97S×130°.23E, h0km, mb3.3/1, mb1 3.5/4, mb1mx3.4/19, mbtmp3.3/4, ML3.4/3, Error ellipse: s-maj=99.4km s-min=28.1km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.87	200	Pn	Pn	22 07 02.6	-0.1
	0.1nm,0.3s,baz=21,slow=11,SNR=6.3						
FITZ				Sn	Sn	22 09 12.7	-14
	0.6nm,0.3s,baz=135,slow=16,SNR=8.2						
WRA	Warramunga Arr	14.45	164	Pn	Pn	22 07 24.4	0.0
	0.2nm,0.3s,baz=348,slow=12,SNR=9.5						
WRA				Sn	Sn	22 09 51.1	-14
	0.3nm,0.3s,baz=343,slow=22,SNR=8.4						
ASAR	Alice Springs	17.95	169	P	Pn	22 08 09.6	0.0
	0.1nm,0.3s,baz=345,slow=9.7,SNR=5.6						
MKAR	Makanchi Array	67.50	326	P	P	22 14 56.3	0.0
	0.2nm,0.5s,baz=123,slow=7.1,SNR=3.6						

IDC 08 22:15:07.0±2.4, 32°.83N×141°.59E, h0km, mb3.3/2, mb1 3.3/3, mb1mx3.2/25, mbtmp3.1/3, ML2.7/1, Error ellipse: s-maj=50.5km s-min=24.7km az=50.0
JMA 08 22:15:08.5±0.2, 32°.99N×141°.70E, h16km, M3.2
ISC 08 22:15:07.3±3.6, 33°.00N±0°.07×141°.71E±0°.09, h10km±23km, n12, σ1ˢ61/19, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.59	275	P	Pb	22 15 36.3	-0.5
JHJ2				eS	Sb	22 15 56.4	-0.6
JHJ	Hachijo jima 2	1.62	275	Pn	Pn	22 15 36.1	+0.1
	12nm,0.3s,baz=248,slow=22,SNR=10.0						
JHJ				Sn	Sn	22 15 55.8	-1.1
	15nm,0.3s,baz=107,slow=20,SNR=4.9						
BSO1	Boso 1	1.76	340	P	Pb	22 15 39.0	-0.4
BSO1				eS	Sb	22 16 00.8	-0.6
BSO3	Boso 3	2.06	331	P	Pb	22 15 43.6	-1.0
BSO4	Boso 4	2.29	331	eS	Sb	22 16 15.8	-1.3
JHO	Hitachi	3.73	346	P	Pn	22 16 06.3	+1.4
JHO				eS	Sn	22 16 48.0	-0.9
JAG	Ashikaga	3.89	332	P	Pn	22 16 09.4	+2.2
JAG				eS	Sn	22 16 54.1	+1.1
JFK	Kawauchi	4.41	351	eS	Sn	22 17 02.2	-3.7
MJAR	Matsushiro Arr	4.56	322	Pn	Pn	22 16 18.5	+2.1
	0.3nm,0.3s,baz=155,slow=15,SNR=3.7						
MJAR				Sn	Sn	22 17 11.6	+2.0
	0.3nm,0.3s,baz=139,slow=20,SNR=3.1						
JFT	Otama	4.65	346	P	Pn	22 16 18.5	+0.9
JFT				eS	Sn	22 17 10.6	-1.1
MKAR	Makanchi Array	46.56	305	P	P	22 23 36.2	+0.9
	0.2nm,0.5s,baz=99,slow=7.1,SNR=5.2						
WRA	Warramunga Arr	53.11	189	P	P	22 24 24.8	-0.4
	0.2nm,0.4s,baz=5.7,slow=7.4,SNR=4.8						

ISCJB 08 22:28:30.6±0.2, 49°.14N±0°.01×8°.09E±0°.02, h0km, Error ellipse: s-maj=1.9km s-min=1.6km az=178.7
STR 08 22:28:31.9±0.1, 49°.15N×8°.13E, h10km, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
CSEM 08 22:28:31.3±0.1, 49°.14N×8°.13E, h1km, ML2.4/11, Error ellipse: s-maj=2.7km s-min=2.3km az=117.0
LDG 08 22:28:32.6±0.1, 49°.16N×8°.12E, h10km, Md2.5/1, Ml2.3/10, Error ellipse: s-maj=1.1km s-min=0.9km az=93.0
BGR 08 22:28:32.5±0.3, 49°.16N×8°.16E, h3km, ML1.9/5, Error ellipse: s-maj=3.3km s-min=3.3km az=12.0, correlated with geothermal plant in Insheim
BNS 08 22:28:33.9±0.5, 49°.16N×8°.18E, h10km, ML1.5
PRU 08 22:28:35.4, 49°.16N×8°.34E, h13km
ISC 08 22:28:32.0±0.7, 49°.16N±0°.01×8°.16E±0°.01, h0km, n122, σ1ˢ47/187, 4C-3D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTD	Kalmit	0.17	342⇓	iP*	Pg	22 28 36.2	+1.0
KTD	Kalmit	0.17	342	Pg	Pg	22 28 36.3	+1.0
KTD				Sg	Sg	22 28 39.5	+2.0
LANF	Langenberg	0.29	233⇑	iP*	Pg	22 28 38.3	+0.6
LANF				S*	Sg	22 28 42.3	+0.9
LANF	Langenberg	0.29	233	Pg	Pg	22 28 38.2	+0.6
LANF				Sg	Sg	22 28 41.9	+0.5
LANF	Langenberg	0.29	233	Pg	Pg	22 28 38.2	+0.6
LANF				Sg	Sg	22 28 41.9	+0.5
LANF				Sb	Sg	22 28 42.3	+0.9
PEB	Petersbachel	0.31	253⇑	iP*	Pg	22 28 38.4	+0.6
PEB	Petersbachel	0.31	253	Pb	Pg	22 28 38.4	+0.6
IMS	Imsbach	0.47	339⇓	iP*	Pg	22 28 41.5	+0.5
IMS				S*	Sg	22 28 48.2	+1.1
IMS	Imsbach	0.47	339	Pb	Pg	22 28 41.5	+0.5
IMS				Sb	Sg	22 28 48.2	+1.1
SWS	Schriesheim-Wi	0.48	47⇑	P*	Pg	22 28 42.0	+0.8
SWS				S*	Sg	22 28 48.7	+1.3
SWS	Schriesheim-Wi	0.48	47	Pb	Pg	22 28 42.0	+0.8
SWS				Sb	Sg	22 28 48.7	+1.3
TOD	Tromm	0.61	43	P*	Pg	22 28 44.8	+1.1
TOD	Tromm	0.61	43	Pg	Pg	22 28 44.5	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TOD	Tromm	0.61	43	Pb	Pg	22 28 44.8	+1.1
TOD				Sg	Sg	22 28 52.5	+0.8
LBG	Lerchenberg	0.65	140	P*	Pg	22 28 45.1	+0.9
LBG				S*	Sg	22 28 53.8	+1.1
LBG				SmS		22 28 56.7	
LBG	Lerchenberg	0.65	140	Pb	Pg	22 28 45.2	+0.9
LBG				Sb	Sg	22 28 53.8	+1.1
STU	Stuttgart	0.78	119	eSg	Sg	22 28 58.0	+1.0
STU				SmS		22 29 00.2	
STU	Stuttgart	0.78	119	Sg	Sg	22 28 58.0	+1.0
ABH	Alteburg	0.83	331	P*	Pg	22 28 48.6	+0.8
ABH	Alteburg	0.83	331	Pg	Pg	22 28 48.4	+0.6
ABH	Alteburg	0.83	331	Pb	Pg	22 28 48.7	+0.8
ABH				Sg	Sg	22 28 59.0	+0.4
BFO	Black Forest	0.84	172	P*	Pg	22 28 48.3	+0.3
BFO				S*	Sg	22 28 59.4	+0.7
BFO	Black Forest	0.84	172	Pb	Pg	22 28 48.3	+0.3
BFO				Sb	Sg	22 28 59.4	+0.7
TUBL	Tuebingen-Lenn	0.88	136	P*	Pg	22 28 50.1	+1.3
TUBL	Tuebingen-Lenn	0.88	136	Pb	Pg	22 28 50.1	+1.3
RUP	Ruppelstein	0.90	307	Pg	Pg	22 28 49.0	-0.3
RUP				Sg	Sg	22 29 01.2	+0.2
CDF	Champ du Feu	0.95	219	ePg	Pg	22 28 49.9	-0.2
	SNR=1.0						
CDF				eSg	Sg	22 29 02.5	+0.1
	8.2nm,0.2s,SNR=1.0						
CDF	Champ du Feu	0.95	219	ePg	Pg	22 28 49.9	-0.2
	SNR=1.0						
CDF				eSg	Sg	22 29 02.5	+0.1
	4.1nm,0.2s,SNR=1.0						
SIND	Sindeldorf	0.96	78⇓	ePn	Pg	22 28 50.4	0.0
SIND				Sg	Sb	22 29 04.8	0.0
SIND	Sindeldorf	0.96	78	Pn	Pg	22 28 50.4	0.0
SIND				Sg	Sb	22 29 04.8	0.0
BUCH	Bad Urach	1.06	132	Pg	Pg	22 28 53.2	+1.0
BUCH				Sg	Sb	22 29 08.0	+0.4
BUCH	Bad Urach	1.06	132	Pg	Pg	22 28 53.2	+1.0
BUCH				Sg	Sb	22 29 08.0	+0.4
TNS	Taunus Mts	1.08	10	P*	Pg	22 28 52.7	0.0
TNS				S*	Sg	22 29 07.3	+0.6
TNS	Taunus Mts	1.08	10	Pb	Pg	22 28 52.7	0.0
TNS				Sb	Sg	22 29 07.3	+0.6
FSH	Hochheid	1.15	324	⇑Pg	Pg	22 28 54.6	+0.7
FSH				Sg	Sg	22 29 09.5	+0.7
FSH	Hochheid	1.15	324	Pg	Pg	22 28 54.6	+0.7
FSH				Sg	Sg	22 29 09.5	+0.7
ECH	Echery	1.15	216	Pg	Pg	22 28 54.2	+0.1
ECH	Echery	1.15	216	Pg	Pg	22 28 53.9	-0.2
ECH				Sg	Sg	22 29 10.2	+1.2
ECH	Echery	1.15	216	Pg	Pg	22 28 53.9	-0.2
ECH				Sg	Sg	22 29 10.2	+1.2
BGG	Burgeitz	1.18	333	ePg	Pg	22 28 54.4	-0.1
BGG	Burgeitz	1.18	333	Pg	Pg	22 28 54.4	-0.1
FACH	Fachingen	1.21	355	Pg	Pg	22 28 55.3	+0.3
FACH				Sg	Sb	22 29 12.0	+0.3
FACH	Fachingen	1.21	355	Pg	Pg	22 28 55.3	+0.3
FACH				Sg	Sb	22 29 12.0	+0.3
KIZ	Kirchzarten	1.21	188	Pg	Pg	22 28 55.3	+0.1
KIZ				S	Sg	22 29 09.8	-1.1
KIZ	Kirchzarten	1.21	188	Pg	Pg	22 28 55.3	+0.1
KIZ				S	Sg	22 29 09.8	-1.1
GUT	Gutenstein	1.26	149	Pg	Pg	22 28 56.7	+0.7
GUT				Sg	Sg	22 29 13.2	+0.8
GUT	Gutenstein	1.26	149	Pg	Pg	22 28 56.7	+0.7
GUT				Sg	Sg	22 29 13.1	+0.8
FELD	Feldberg im Sc	1.29	185	Pg	Pg	22 28 56.8	+0.2
FELD	Feldberg im Sc	1.29	185	Pg	Pg	22 28 56.8	+0.2
FELD				Sg	Sg	22 29 14.0	+0.7
FELD	Feldberg im Sc	1.29	185	Pg	Pg	22 28 56.8	+0.2
FELD				Sg	Sg	22 29 14.0	+0.7
KOE	Koeppel	1.30	348	ePg	Pg	22 28 56.6	-0.3
KOE	Koeppel	1.30	348	Pg	Pg	22 28 56.6	-0.3
WLF	Walferdange	1.41	292	ePg	Pg	22 28 59.6	+0.7
WLF				Sg	Sg	22 29 17.2	0.0
WLF	Walferdange	1.41	292	Sn	Sg	22 29 16.6	-0.6
WLF				Sg	Sg	22 29 17.2	0.0
WLF	Walferdange	1.41	292	PN	Pn	22 28 58.6	-0.2
WLF				SN	Sg	22 29 16.6	-0.6
	comp=E,7.0nm,0.0s						
MOF	Molkenrain	1.48	208	Pg	Pn	22 28 58.8	-1.1
MOF				Sg	Sg	22 29 19.5	+0.2
MOF	Molkenrain	1.48	208	Pg	Pn	22 28 58.8	-1.1
MOF				Sg	Sg	22 29 19.5	+0.2
HILG	Hillesheim	1.49	320	ePg	Pn	22 28 59.4	-0.6
HILG	Hillesheim	1.49	320	Pg	Pn	22 28 59.4	-0.6
SISB	Singen-Schiene	1.57	160	Pg	Pg	22 29 02.8	+0.8
SISB				S	Sn	22 29 19.4	-2.6
SISB	Singen-Schiene	1.57	160	Pg	Pg	22 29 02.8	+0.8
SISB				S	Sn	22 29 19.4	-2.6
BIW	Bindweide	1.59	353	Pg	Pn	22 29 01.6	+0.2
BIW	Bindweide	1.59	353	Pg	Pn	22 29 01.6	+0.2
HINF	Hinteralfeld	1.60	213	ePn	Pn	22 28 58.7	-2.8
	SNR=1.0						
HINF	Hinteralfeld	1.60	213	eP	Pn	22 29 01.3	-0.2
HINF	Hinteralfeld	1.60	213	ePg	Pn	22 29 02.4	+0.9
HINF				eSn	Sn	22 29 18.5	-4.4
	SNR=1.0						
HINF				eSg	Sb	22 29 23.0	-0.2
	comp=E,15nm,0.3s						
HINF	Hinteralfeld	1.60	213	ePn	Pn	22 28 58.7	-2.8
	SNR=1.0						
HINF	Hinteralfeld	1.60	213	eP	Pn	22 29 01.3	-0.2
HINF	Hinteralfeld	1.60	213	ePg	Pn	22 29 02.4	+0.9
HINF				eSn	Sn	22 29 18.5	-4.4
	SNR=1.0						
HINF				eSg	Sb	22 29 23.0	-0.2
	comp=E,7.4nm,0.3s						
BLI	Bleialf	1.62	312	Sg	Sn	22 29 22.8	-0.7
BLI	Bleialf	1.62	312	Sg	Sn	22 29 22.8	-0.7
HAU	Haudompre	1.67	227	ePn	Pn	22 29 00.2	-2.3
	SNR=1.0						
HAU	Haudompre	1.67	227	ePg	Pn	22 29 03.6	+1.1
HAU				eSn	Sn	22 29 19.7	-4.9
	SNR=1.0						
HAU				eSg	Sb	22 29 24.9	-0.2
	comp=E,7.3nm,0.2s,SNR=1.0						
HAU	Haudompre	1.67	227	ePn	Pn	22 29 00.2	-2.3
	SNR=1.0						
HAU	Haudompre	1.67	227	ePg	Pn	22 29 03.6	+1.1
HAU				eSn	Sn	22 29 19.7	-4.9
	SNR=1.0						
HAU				eSg	Sb	22 29 24.9	-0.2
	comp=E,3.7nm,0.2s,SNR=1.0						
STB	Steinbach	1.67	330	ePg	Pn	22 29 01.4	-1.1
STB				eSg	Sn	22 29 22.0	-2.6
	comp=E,6.3nm,0.3s						
STB	Steinbach	1.67	330	Pg	Pn	22 29 01.4	-1.1
STB				Sg	Sn	22 29 22.0	-2.6
	comp=E,6.3nm,0.3s						
THEF	They Montfort	1.72	238	Pg	Pn	22 29 03.1	0.0
THEF				Sg	Sb	22 29 27.1	+0.6
THEF	They Montfort	1.72	238	Pg	Pn	22 29 03.1	0.0
THEF				Sg	Sb	22 29 27.1	+0.6
PAGF	Fort de Pagny	1.72	250	ePn	Pn	22 29 00.7	-2.4
PAGF	Fort de Pagny	1.72	250	ePg	Pn	22 29 04.3	+1.2
PAGF				eSg	Sn	22 29 26.3	+0.5
	comp=E,0.5nm,0.1s						
PAGF	Fort de Pagny	1.72	250	ePn	Pn	22 29 00.7	-2.4
PAGF	Fort de Pagny	1.72	250	ePg	Pn	22 29 04.3	+1.2
PAGF				eSg	Sn	22 29 26.3	+0.5
	comp=E,0.2nm,0.1s						
UBR	Ueberruh	1.96	138	Sg	Sg	22 29 36.2	+1.1
UBR	Ueberruh	1.96	138	Sg	Sg	22 29 36.2	+1.1
GRA1	Grafenberg Arr	2.07	74	Sg	Sb	22 29 38.0	+1.4
GRF	Grafenberg Arr	2.07	74	eSg	Sb	22 29 38.0	+1.4
MEZF	Maizieres J'vi	2.16	253	ePg	Pb	22 29 12.1	+0.2
MEZF				eSg	Sb	22 29 39.9	+0.7
	comp=E,1.7nm,0.3s						
MEZF	Maizieres J'vi	2.16	253	ePg	Pb	22 29 12.1	+0.2
MEZF				eSg	Sb	22 29 39.9	+0.7
	comp=E,0.9nm,0.3s						
SFTF	Sexfontaines	2.28	246	ePn	Pn	22 29 08.3	-2.5
SFTF	Sexfontaines	2.28	246	ePg	Pb	22 29 14.5	+0.5
SFTF				eSg	Sb	22 29 43.4	+0.7
	comp=E,1.8nm,0.2s						
SFTF	Sexfontaines	2.28	246	ePn	Pn	22 29 08.3	-2.5
SFTF	Sexfontaines	2.28	246	ePg	Pb	22 29 14.5	+0.5
SFTF				eSg	Sb	22 29 43.4	+0.7
	comp=E,0.9nm,0.2s						
GIVF	Givet	2.37	295	eSn	Sn	22 29 37.0	-4.8
	SNR=1.0						
GIVF				eSg	Sb	22 29 46.5	+1.3
	comp=E,4.2nm,0.3s						
GIVF	Givet	2.37	295	eSn	Sn	22 29 37.0	-4.8
	SNR=1.0						
GIVF				eSg	Sb	22 29 46.5	+1.3
	comp=E,2.1nm,0.3s						
MOX	Moxa	2.68	55	eSg	Sg	22 29 57.5	-0.6
MOX	Moxa	2.68	55	Sg	Sg	22 29 57.5	-0.6
BAIF	Baives	2.73	291	ePg	Pb	22 29 22.6	+1.0
BAIF				eSg	Sb	22 29 58.1	+2.6
	comp=E,3.1nm,0.4s,SNR=1.0						
BAIF	Baives	2.73	291	ePg	Pb	22 29 22.6	+1.0
BAIF				eSg	Sb	22 29 58.1	+2.6
	comp=E,1.5nm,0.4s,SNR=1.0						
CABF	La Chapelle	2.91	210	ePn	Pn	22 29 16.3	-3.2
	SNR=1.0						
CABF	La Chapelle	2.91	210	ePg	Pb	22 29 26.3	+1.6
CABF				eSg	Sb	22 30 03.3	+2.5
	comp=E,4.4nm,0.7s,SNR=1.0						
CABF	La Chapelle	2.91	210	ePn	Pn	22 29 16.3	-3.2
	SNR=1.0						
CABF	La Chapelle	2.91	210	ePg	Pb	22 29 26.3	+1.6
CABF				eSg	Sb	22 30 03.3	+2.5
	comp=E,2.2nm,0.7s,SNR=1.0						
NKC	Novy Kostel	2.98	67	ePG	Pb	22 29 27.0	+1.0
NKC				eSG	Sg	22 30 06.3	-1.4
	comp=E,4.5nm,0.3s						
NKC	Novy Kostel	2.98	67	Pg	Pb	22 29 27.0	+1.0
NKC				Sg	Sg	22 30 06.3	-1.4
	comp=E,4.5nm,0.3s						
TANN	Tannenbergstha	3.06	64	eSg	Sg	22 30 09.0	-1.1
TANN	Tannenbergstha	3.06	64	Sg	Sg	22 30 09.0	-1.1
LOR	Lormes	3.44	238	ePn	Pn	22 29 23.8	-3.1
	SNR=1.0						
LOR	Lormes	3.44	238	ePg	Pb	22 29 35.6	+1.8
LOR				eSn	Sn	22 30 01.8	-6.6
	SNR=1.0						
LOR				eSg	Sb	22 30 19.9	+3.7
	comp=E,1.6nm,0.2s,SNR=1.0						
LOR	Lormes	3.44	238	ePn	Pn	22 29 23.8	-3.1
	SNR=1.0						
LOR	Lormes	3.44	238	ePg	Pb	22 29 35.6	+1.8
LOR				eSn	Sn	22 30 01.8	-6.6
	SNR=1.0						
LOR				eSg	Sb	22 30 19.9	+3.7
	comp=E,0.8nm,0.2s,SNR=1.0						
KHC	Kasperske Hory	3.56	88	ePG	Pb	22 29 37.7	+2.0
KHC				ex	x	22 29 43.5	
KHC				eSN	Sn	22 30 08.6	-2.5
KHC				eSG	Sg	22 30 25.1	-1.0
KHC	Kasperske Hory	3.56	88	Pg	Pb	22 29 37.7	+2.0
KHC				Sn	Sn	22 30 08.6	-2.5
KHC				Sg	Sg	22 30 25.1	-1.0
SSF	Saint Saulge	3.76	238	ePn	Pn	22 29 28.1	-3.1
SSF	Saint Saulge	3.76	238	ePg	Pb	22 29 41.6	+2.4
SSF	Saint Saulge	3.76	238	ePn	Pn	22 29 28.1	-3.1
SSF	Saint Saulge	3.76	238	ePg	Pb	22 29 41.6	+2.4
CLL	Collm	3.78	53	eSg	Sg	22 30 32.0	-1.3
SMF	Signal de Mont	3.84	231	ePg	Pb	22 29 43.4	+2.8
SMF	Signal de Mont	3.84	231	ePg	Pb	22 29 43.4	+2.8
BGF	Bois d'Agland	4.42	236	ePn	Pn	22 29 38.3	-2.0
	SNR=1.0						
BGF	Bois d'Agland	4.42	236	ePn	Pn	22 29 38.3	-2.0
	SNR=1.0						

CSEM 08 22:32:17.9, 42°.47N×13°.31E, h11km, After ROM, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.10	48	Pg	Pg	22 32 21.1	+0.2
CAMP				Sg	Sg	22 32 23.4	+0.4
	39nm,0.3s						
CAMP	Campotosto	0.10	48	Pg	Pg	22 32 21.1	+0.2
CAMP				Sg	Sg	22 32 23.4	+0.4
	39nm,0.3s						
AQU	L'Aquila	0.13	148	Pg	Pg	22 32 21.6	+0.4
AQU				Sg	Sg	22 32 24.2	+0.7
	53nm,0.4s						
AQU	L'Aquila	0.13	148	Pg	Pg	22 32 21.6	+0.4
AQU				Sg	Sg	22 32 24.2	+0.7
	53nm,0.4s						
LNSS	Leonessa	0.24	305	Pg	Pg	22 32 23.3	+0.3
LNSS				Sg	Sg	22 32 27.3	+0.8
	36nm,0.1s						
LNSS	Leonessa	0.24	305	Pg	Pg	22 32 23.3	+0.3
LNSS				Sg	Sg	22 32 27.3	+0.8
	36nm,0.1s						
TERO	Teramo	0.27	55	Pg	Pg	22 32 23.8	+0.3
TERO				Sg	Sg	22 32 28.2	+0.9
	16nm,0.3s						
TERO	Teramo	0.27	55	Pg	Pg	22 32 23.8	+0.3
TERO				Sg	Sg	22 32 28.2	+0.9
	16nm,0.3s						
NRCA	Norcia	0.39	339	Pg	Pg	22 32 26.1	+0.3
NRCA				Sg	Sb	22 32 32.2	-1.0
	3.0nm,0.1s						
NRCA	Norcia	0.39	339	Pg	Pg	22 32 26.1	+0.3
NRCA				Sg	Sb	22 32 32.2	-1.0
	3.0nm,0.1s						
VCEL	Villa Celiera	0.40	100	Pg	Pb	22 32 27.0	-0.2
VCEL				Sg	Sg	22 32 32.2	+0.7
VCEL	Villa Celiera	0.40	100	Pg	Pb	22 32 27.0	-0.2
VCEL				Sg	Sg	22 32 32.2	+0.7

*CSEM **08** 22:32:45.0±0.1, 42°.35N×13°.41E, h10km, ML2.9/9, Error ellipse: s-maj=2.4km s-min=1.9km az=62.0*

ROM 08 22:32:44.8±0.1, 42°.35N×13°.41E, h10km, Ml2.3/25, Error ellipse: s-maj=1.0km s-min=0.8km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.01	286	Pg	Pg	22 32 46.7	+0.1
AQU				Sg	Sg	22 32 47.5	-0.3
	35µm,0.1s						
AQU	L'Aquila	0.01	286	Pg	Pg	22 32 46.7	+0.1
AQU				Sg	Sg	22 32 47.5	-0.3
	35µm,0.1s						
FAGN	Fagnano	0.15	124	Pg	Pg	22 32 49.1	+0.8
FAGN				Sg	Sg	22 32 52.5	+1.8
FAGN	Fagnano	0.15	124	Pg	Pg	22 32 49.1	+0.8
FAGN				Sg	Sg	22 32 52.5	+1.8
CAMP	Campotosto	0.18	360	Pg	Pg	22 32 49.5	+0.6
CAMP				Sg	Sg	22 32 52.6	+0.9
	775nm,0.6s						
CAMP	Campotosto	0.18	360	Pg	Pg	22 32 49.5	+0.6
CAMP				Sg	Sg	22 32 52.6	+0.9
	775nm,0.6s						
FIAM	Fiamignano	0.23	249	Pg	Pg	22 32 50.4	+0.7
FIAM				Sg	Sg	22 32 54.3	+1.2
FIAM	Fiamignano	0.23	249	Pg	Pg	22 32 50.4	+0.7
FIAM				Sg	Sg	22 32 54.3	+1.2
TERO	Teramo	0.31	28	Pg	Pg	22 32 51.3	+0.3
TERO				Sg	Sg	22 32 55.9	+0.7
	491nm,0.2s						
TERO	Teramo	0.31	28	Pg	Pg	22 32 51.3	+0.3
TERO				Sg	Sg	22 32 55.9	+0.7
	491nm,0.2s						
VCEL	Villa Celiera	0.32	82	Pg	Pg	22 32 51.8	+0.4
VCEL				Sg	Sg	22 32 56.8	+1.0
	935nm,0.3s						
VCEL	Villa Celiera	0.32	82	Pg	Pg	22 32 51.8	+0.4
VCEL				Sg	Sg	22 32 56.8	+1.0
	935nm,0.3s						
PTQR	Pietraquaria	0.33	181	Pg	Pg	22 32 52.0	+0.5
PTQR				Sg	Sb	22 32 57.7	-0.7
	56nm,0.2s						
PTQR	Pietraquaria	0.33	181	Pg	Pg	22 32 52.0	+0.5
PTQR				Sg	Sb	22 32 57.7	-0.7
	56nm,0.2s						
LNSS	Leonessa	0.37	313	Pg	Pg	22 32 52.8	+0.5
LNSS				Sg	Sg	22 32 58.5	+1.1
	359nm,0.3s						
LNSS	Leonessa	0.37	313	Pg	Pg	22 32 52.8	+0.5
LNSS				Sg	Sg	22 32 58.5	+1.1
	359nm,0.3s						
INTR	Introdacqua	0.50	133	Pg	Pg	22 32 54.8	+0.1
INTR				Sg	Sb	22 33 02.4	-0.9
	264nm,0.5s						
INTR	Introdacqua	0.50	133	Pg	Pg	22 32 54.8	+0.1
INTR				Sg	Sb	22 33 02.4	-0.9
	264nm,0.5s						
VVLD	Villa Vallelon	0.51	162	Pg	Pg	22 32 54.8	0.0
VVLD				Sg	Sg	22 33 02.3	+0.8
	188nm,0.6s						
VVLD	Villa Vallelon	0.51	162	Pg	Pg	22 32 54.8	0.0
VVLD				Sg	Sg	22 33 02.3	+0.8
	188nm,0.6s						
CERT	Cerreto	0.51	219	Pg	Pg	22 32 55.1	+0.2
	323nm,0.3s						
CERT	Cerreto	0.51	219	Pg	Pg	22 32 55.1	+0.2
	323nm,0.3s						
NRCA	Norcia	0.53	336	Pg	Pg	22 32 55.5	+0.3
NRCA				Sg	Sb	22 33 03.8	-0.4
	216nm,0.1s						
NRCA	Norcia	0.53	336	Pg	Pg	22 32 55.5	+0.3
NRCA				Sg	Sb	22 33 03.8	-0.4
	216nm,0.1s						
MNS	Montasola	0.54	274	Pg	Pg	22 32 55.5	+0.1
	109nm,0.6s						
MNS	Montasola	0.54	274	Pg	Pg	22 32 55.5	+0.1
	109nm,0.6s						
GUAR	Guarcino	0.56	188	Pg	Pg	22 32 56.0	+0.2
	126nm,0.3s						
GUAR	Guarcino	0.56	188	Pg	Pg	22 32 56.0	+0.2
	126nm,0.3s						
MTCE	Montecelio	0.60	237	Pg	Pg	22 32 56.4	0.0
	66nm,0.3s						
MTCE	Montecelio	0.60	237	Pg	Pg	22 32 56.4	0.0
	66nm,0.3s						
OFFI	Offida	0.62	19	Pg	Pb	22 32 57.8	0.0
	551nm,0.3s						
OFFI	Offida	0.62	19	Pg	Pb	22 32 57.8	0.0
	551nm,0.3s						
LPEL	Lama dei Pelig	0.65	118	Pg	Pg	22 32 57.4	-0.1
LPEL				Sg	Sb	22 33 07.2	-0.4
	261nm,0.8s						
LPEL	Lama dei Pelig	0.65	118	Pg	Pg	22 32 57.4	-0.1
LPEL				Sg	Sb	22 33 07.2	-0.4
	261nm,0.8s						
CESX	Cesi	0.67	293	Pg	Pg	22 32 57.9	+0.2
	74nm,0.4s						
CESX	Cesi	0.67	293	Pg	Pg	22 32 57.9	+0.2
	74nm,0.4s						
POFI	Posta Fibreno	0.67	160	Pg	Pg	22 32 57.5	-0.4
	53nm,0.4s						
POFI	Posta Fibreno	0.67	160	Pg	Pg	22 32 57.5	-0.4
	53nm,0.4s						
CAFR	Castel Frentan	0.71	100	Pg	Pb	22 32 59.0	-0.2
	369nm,0.3s						
CAFR	Castel Frentan	0.71	100	Pg	Pb	22 32 59.0	-0.2
	369nm,0.3s						
SDI	San Donato	0.71	155	Pg	Pg	22 32 58.2	-0.4
	49nm,0.4s						
SDI	San Donato	0.71	155	Pg	Pg	22 32 58.2	-0.4
	49nm,0.4s						
FDMO	Fiordimonte	0.72	341	Pg	Pg	22 32 58.6	-0.3
	52nm,0.4s						
FDMO	Fiordimonte	0.72	341	Pg	Pg	22 32 58.6	-0.3
	52nm,0.4s						
CESI	CESI - Serrava	0.75	330	Pg	Pg	22 32 59.5	0.0
	16nm,0.3s						
CESI	CESI - Serrava	0.75	330	Pg	Pg	22 32 59.5	0.0
	16nm,0.3s						
RMP	Rome, Mte Porz	0.76	225	Pg	Pb	22 33 00.4	+0.3
	116nm,0.5s						
RMP	Rome, Mte Porz	0.76	225	Pg	Pb	22 33 00.4	+0.3
	116nm,0.5s						
GIUL	Giuliano Di Ro	0.80	188	Pg	Pg	22 33 00.2	-0.1
	56nm,0.4s						
GIUL	Giuliano Di Ro	0.80	188	Pg	Pg	22 33 00.2	-0.1
	56nm,0.4s						
GUMA	Gualdo di Mace	0.81	28	Pg	Pg	22 32 59.1	-1.4
	385nm,0.4s						
GUMA	Gualdo di Mace	0.81	28	Pg	Pg	22 32 59.1	-1.4
	385nm,0.4s						
RNI2	Rionero Sannit	0.85	139	Pg	Pg	22 33 01.2	-0.2
	140nm,0.7s						
RNI2	Rionero Sannit	0.85	139	Pg	Pg	22 33 01.2	-0.2
	140nm,0.7s						
MIDA	Miranda	0.95	138	Pg	Pg	22 33 02.3	-0.9
	35nm,0.3s						
MIDA	Miranda	0.95	138	Pg	Pg	22 33 02.3	-0.9
	35nm,0.3s						
CING	Cingoli	1.03	351	Pg	Pg	22 33 04.5	-0.3
	35nm,0.3s						
CING	Cingoli	1.03	351	Pg	Pg	22 33 04.5	-0.3
	35nm,0.3s						
MGAB	Montegabbione	1.11	301	Pg	Pb	22 33 05.7	-0.5
	35nm,0.4s						
MGAB	Montegabbione	1.11	301	Pg	Pb	22 33 05.7	-0.5
	35nm,0.4s						
STON	Ston	3.21	79	ePn	Pn	22 33 36.7	+1.5
STON				Sn	Sn	22 34 16.3	+2.7
STON	Ston	3.21	79	ePn	Pn	22 33 36.7	+1.4
STON				Sn	Sn	22 34 16.2	+2.6

*NSSC **08** 22:34:23.6±2.4, 33°.23N×35°.54E, h1km±10km, MD1.2, ML1.6*
*ISCJB **08** 22:34:23.2±0.6, 33°.26N±0°.03×35°.51E±0°.03, h3km±6km, Error ellipse: s-maj=4.9km s-min=4.6km az=18.6*
*GRAL **08** 22:34:24.7±0.2, 33°.32N×35°.46E, h4km±1km, MD3.0*
*CSEM **08** 22:34:24.1±0.3, 33°.32N×35°.49E, h2km, ML3.0, Error ellipse: s-maj=6.3km s-min=4.3km az=112.0*

ISC 08 22:34:22.6±1.1, 33°.26N±0°.03×35°.49E±0°.03, h7km±10km, n20, σ0s.55/38, 2C, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATL	Matarih	0.27	330	eP	Pg	22 34 28.4	+0.4
MATL	Matarih	0.27	330	eP	Pg	22 34 28.4	+0.4
NAQL	Naqoura	0.33	245	eP	Pb	22 34 30.7	0.0
NAQL				eS	Sb	22 34 35.2	-1.0
RCY	Rachaya	0.38	50	eP	Pb	22 34 31.1	-0.6
RCY				eS	Sg	22 34 36.0	+1.1
BRBR	Barbar	0.41	68	eP	Pg	22 34 29.9	-0.9
BRBR				eS	Sg	22 34 36.6	+0.4
BRBR				AML	AML	22 34 38.6	
	comp=E,28nm,0.3s						
BRBR				AML	AML	22 34 40.4	
	comp=N,57nm,0.6s						
BRBR				AML	AML	22 34 40.5	
	comp=Z,68nm,0.4s						
BRBR	Barbar	0.41	68	eP	Pg	22 34 29.9	-0.9
	SNR=94						
BRBR				eS	Sg	22 34 36.6	+0.4
	comp=Z,68nm,0.4s,SNR=59						
BHL	Bhannes	0.66	12	eP	Pg	22 34 35.6	+0.2
BHL				eS	Sg	22 34 43.5	-0.5
BHL	Bhannes	0.66	12	eP	Pg	22 34 35.6	+0.2
BHL				eS	Sg	22 34 43.5	-0.5
TCHB	Talchebab	0.71	145	eP	Pg	22 34 35.6	-0.6
TCHB				eS	Sg	22 34 45.6	+0.1
TCHB				AML	AML	22 34 46.9	
	comp=N,116nm,0.3s						
TCHB				AML	AML	22 34 49.3	
	comp=Z,76nm,0.2s						
TCHB				AML	AML	22 34 52.4	
	comp=E,37nm,0.5s						
TCHB	Talchebab	0.71	145	eP	Pg	22 34 35.7	-0.6
	SNR=75						
TCHB				eS	Sg	22 34 45.6	+0.1
	comp=E,37nm,0.5s,SNR=59						
TOTH	TOTAH	0.79	82	eP	Pn	22 34 40.2	0.0
TOTH				eS	Sb	22 34 49.7	0.0
TOTH				AML	AML	22 34 56.6	
	comp=N,16nm,0.2s						
TOTH				AML	AML	22 35 00.7	
	comp=Z,17nm,0.4s						
TOTH				AML	AML	22 35 00.9	
	comp=E,12nm,0.5s						
TOTH	TOTAH	0.79	82	eP	Pn	22 34 40.2	0.0
	SNR=75						
TOTH				eS	Sb	22 34 49.7	0.0
	comp=E,12nm,0.5s,SNR=59						
HWQ	Hawqa	1.09	20	eP	Pg	22 34 43.3	-0.2
HWQ				eS	Sg	22 34 57.0	-0.7
HWQ	Hawqa	1.09	20	eP	Pg	22 34 43.3	-0.2
HWQ				eS	Sg	22 34 57.0	-0.7
SALA	Sala	1.18	117	eP	Pn	22 34 46.4	+0.8
SALA				eS	Sg	22 35 00.7	+0.2
SALA				AML	AML	22 35 05.2	
	comp=N,38nm,0.2s						
SALA				AML	AML	22 35 05.3	
	comp=Z,61nm,0.3s						
SALA				AML	AML	22 35 06.5	
	comp=E,3.4nm,0.3s						
SALA	Sala	1.18	117	eP	Pn	22 34 46.4	+0.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	SNR=57						
SALA				eS	Sg	22 35 00.7	+0.2
	comp=E,3.4nm,0.3s,SNR=49						
HAWK	**Haweek**	**1.47**	**31**	⇑eP	**Pg**	**22 34 50.8**	**-0.1**
HAWK				eS	**Sg**	**22 35 10.8**	**+0.8**
HAWK				AML	AML	22 35 13.6	
	comp=N,30nm,0.4s						
HAWK				AML	AML	22 35 15.2	
	comp=E,18nm,0.5s						
HAWK				AML	AML	22 35 15.6	
	comp=Z,21nm,0.5s						
HAWK	**Haweek**	**1.47**	**31**	⇑eP	**Pg**	**22 34 50.8**	**-0.1**
	SNR=57						
HAWK				eS	**Sg**	**22 35 10.8**	**+0.8**
	comp=Z,21nm,0.5s,SNR=49						
ZALF	**Zalf**	**1.58**	**102**	eP	**Pg**	**22 34 53.6**	**+0.7**
ZALF				eS	**Sn**	**22 35 11.9**	**+0.1**
ZALF				AML	AML	22 35 17.1	
	comp=E,16nm,0.3s						
ZALF				AML	AML	22 35 17.6	
	comp=Z,12nm,0.5s						
ZALF				AML	AML	22 35 19.0	
	comp=N,6.3nm,0.3s						
ZALF	**Zalf**	**1.58**	**102**	eP	**Pg**	**22 34 53.6**	**+0.7**
	SNR=57						
ZALF				eS	**Sn**	**22 35 11.9**	**+0.1**
	comp=N,6.3nm,0.3s,SNR=49						

CSEM 08 22:35:00.5, 42.°28N×13.°51E, h10km, After ROM, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**101**	Pg	Pg	22 35 02.9	+0.3
FAGN				Sg	Sg	22 35 04.1	-0.1
FAGN	**Fagnano**	**0.06**	**101**	Pg	Pg	22 35 02.9	+0.3
FAGN				Sg	Sg	22 35 04.1	-0.1
AQU	**L'Aquila**	**0.11**	**314**	Pg	Pg	22 35 03.9	+0.5
AQU				Sg	Sg	22 35 06.2	+0.8
	192nm,0.4s						
AQU	**L'Aquila**	**0.11**	**314**	Pg	Pg	22 35 03.9	+0.5
AQU				Sg	Sg	22 35 06.2	+0.8
	192nm,0.4s						
PTQR	**Pietraquaria**	**0.27**	**198**	Pg	Pg	22 35 06.5	+0.4
PTQR				Sg	Sg	22 35 10.8	+1.0
	12nm,0.2s						
PTQR	**Pietraquaria**	**0.27**	**198**	Pg	Pg	22 35 06.5	+0.4
PTQR				Sg	Sg	22 35 10.8	+1.0
	12nm,0.2s						
CAMP	**Campotosto**	**0.27**	**344**	Pg	Pg	22 35 06.7	+0.5
CAMP				Sg	Sg	22 35 11.2	+1.2
	38nm,0.6s						
CAMP	**Campotosto**	**0.27**	**344**	Pg	Pg	22 35 06.7	+0.5
CAMP				Sg	Sg	22 35 11.2	+1.2
	38nm,0.6s						
VCEL	**Villa Celiera**	**0.27**	**64**	Pg	Pb	22 35 07.2	-0.5
VCEL				Sg	Sg	22 35 10.8	+0.8
	114nm,0.3s						
VCEL	**Villa Celiera**	**0.27**	**64**	Pg	Pb	22 35 07.2	-0.5
VCEL				Sg	Sg	22 35 10.8	+0.8
	114nm,0.3s						
FIAM	**Fiamignano**	**0.29**	**268**	Pg	Pg	22 35 06.9	+0.4
FIAM				Sg	Sb	22 35 12.0	-1.1
	42nm,0.4s						
FIAM	**Fiamignano**	**0.29**	**268**	Pg	Pg	22 35 06.9	+0.4
FIAM				Sg	Sb	22 35 12.0	-1.1
	42nm,0.4s						
TERO	**Teramo**	**0.35**	**11**	Pg	Pg	22 35 07.9	+0.3
TERO				Sg	Sb	22 35 13.6	-1.1
	45nm,0.3s						
TERO	**Teramo**	**0.35**	**11**	Pg	Pg	22 35 07.9	+0.3
TERO				Sg	Sb	22 35 13.6	-1.1
	45nm,0.3s						
INTR	**Introdacqua**	**0.40**	**132**	Pg	Pg	22 35 08.9	+0.5
INTR				Sg	Sb	22 35 15.1	-0.9
	46nm,0.3s						
INTR	**Introdacqua**	**0.40**	**132**	Pg	Pg	22 35 08.9	+0.5
INTR				Sg	Sb	22 35 15.1	-0.9
	46nm,0.3s						
VVLD	**Villa Vallelon**	**0.41**	**168**	Pg	Pg	22 35 08.9	+0.1
VVLD				Sg	Sg	22 35 15.3	+0.9
	38nm,0.7s						
VVLD	**Villa Vallelon**	**0.41**	**168**	Pg	Pg	22 35 08.9	+0.1
VVLD				Sg	Sg	22 35 15.3	+0.9
	38nm,0.7s						
CERT	**Cerreto**	**0.51**	**230**	Pg	Pg	22 35 10.6	0.0
CERT				Sg	Sb	22 35 18.7	-0.6
CERT	**Cerreto**	**0.51**	**230**	Pg	Pg	22 35 10.6	0.0
CERT				Sg	Sb	22 35 18.7	-0.6
LPEL	**Lama dei Pelig**	**0.55**	**114**	Pg	Pg	22 35 11.6	+0.3
LPEL				Sg	Sb	22 35 20.2	-0.2
	24nm,0.3s						
LPEL	**Lama dei Pelig**	**0.55**	**114**	Pg	Pg	22 35 11.6	+0.3
LPEL				Sg	Sb	22 35 20.2	-0.2
	24nm,0.3s						
POFI	**Posta Fibreno**	**0.58**	**165**	Pg	Pg	22 35 12.0	+0.1
POFI	**Posta Fibreno**	**0.58**	**165**	Pg	Pg	22 35 12.0	+0.1
SDI	**San Donato**	**0.61**	**158**	Pg	Pg	22 35 12.7	+0.3
SDI				Sg	Sb	22 35 22.1	0.0
	13nm,0.3s						
SDI	**San Donato**	**0.61**	**158**	Pg	Pg	22 35 12.7	+0.3
SDI				Sg	Sb	22 35 22.1	0.0
	13nm,0.3s						
NRCA	**Norcia**	**0.63**	**332**	Pg	Pg	22 35 12.9	+0.1
	3.0nm,0.4s						
NRCA	**Norcia**	**0.63**	**332**	Pg	Pg	22 35 12.9	+0.1
	3.0nm,0.4s						

*CSEM **08** 22:35:47.8±0.1, 42.°35N×13.°35E, h12km, ML3.2/12, Error ellipse: s-maj=2.2km s-min=1.7km az=64.0*

ROM 08 22:35:47.8±0.1**, 42.°34N×13.°36E, h10km, Ml2.6**/29**, Error ellipse: s-maj=0.8km s-min=0.8km az=72.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**74**	Pg	Pg	22 35 50.2	+0.4
AQU				Sg	Sg	22 35 51.5	+0.3
	20μm,0.3s						
AQU	**L'Aquila**	**0.04**	**74**	Pg	Pg	22 35 50.2	+0.4
AQU				Sg	Sg	22 35 51.5	+0.3
	20μm,0.3s						
FAGN	**Fagnano**	**0.19**	**115**	Pg	Pg	22 35 52.5	+0.6
FAGN				Sg	Sg	22 35 56.1	+1.5
	7μm,0.4s						
FAGN	**Fagnano**	**0.19**	**115**	Pg	Pg	22 35 52.5	+0.6
FAGN				Sg	Sg	22 35 56.1	+1.5
	7μm,0.4s						
FIAM	**Fiamignano**	**0.19**	**247**	Pg	Pg	22 35 52.8	+0.8
FIAM				Sg	Sg	22 35 56.1	+1.2
	2μm,0.5s						
FIAM	**Fiamignano**	**0.19**	**247**	Pg	Pg	22 35 52.8	+0.8
FIAM				Sg	Sg	22 35 56.1	+1.2
	2μm,0.5s						
CAMP	**Campotosto**	**0.20**	**12**	Pg	Pg	22 35 52.4	+0.3
CAMP				Sg	Sg	22 35 55.6	+0.5
	1μm,0.5s						
CAMP	**Campotosto**	**0.20**	**12**	Pg	Pg	22 35 52.4	+0.3
CAMP				Sg	Sg	22 35 55.6	+0.5
	1μm,0.5s						
PTQR	**Pietraquaria**	**0.32**	**174**	Pg	Pg	22 35 54.8	+0.4
PTQR				Sg	Sg	22 36 00.0	+1.2
	132nm,0.2s						
PTQR	**Pietraquaria**	**0.32**	**174**	Pg	Pg	22 35 54.8	+0.4
PTQR				Sg	Sg	22 36 00.0	+1.2
	132nm,0.2s						
TERO	**Teramo**	**0.33**	**33**	Pg	Pg	22 35 54.4	-0.2
TERO				Sg	Sb	22 36 00.6	-0.9
	1μm,0.3s						
TERO	**Teramo**	**0.33**	**33**	Pg	Pg	22 35 54.4	-0.2
TERO				Sg	Sb	22 36 00.6	-0.9
	1μm,0.3s						
LNSS	**Leonessa**	**0.35**	**318**	Pg	Pg	22 35 55.1	+0.2
LNSS				Sg	Sb	22 36 01.7	-0.3
	633nm,0.4s						
LNSS	**Leonessa**	**0.35**	**318**	Pg	Pg	22 35 55.1	+0.2
LNSS				Sg	Sb	22 36 01.7	-0.3
	633nm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**82**	Pg	Pg	22 35 55.5	+0.3
VCEL				Sg	Sb	22 36 01.7	-0.7
	2μm,0.5s						
VCEL	**Villa Celiera**	**0.36**	**82**	Pg	Pg	22 35 55.5	+0.3
VCEL				Sg	Sb	22 36 01.7	-0.7
	2μm,0.5s						
CERT	**Cerreto**	**0.48**	**215**	Pg	Pg	22 35 57.5	+0.2
CERT				Sg	Sb	22 36 05.0	-0.7
	603nm,0.4s						
CERT	**Cerreto**	**0.48**	**215**	Pg	Pg	22 35 57.5	+0.2
CERT				Sg	Sb	22 36 05.0	-0.7
	603nm,0.4s						
MNS	**Montasola**	**0.50**	**275**	Pg	Pg	22 35 57.7	0.0
	210nm,0.3s						
MNS	**Montasola**	**0.50**	**275**	Pg	Pg	22 35 57.7	0.0
	210nm,0.3s						
VVLD	**Villa Vallelon**	**0.51**	**157**	Pg	Pg	22 35 57.9	0.0
	254nm,0.5s						
VVLD	**Villa Vallelon**	**0.51**	**157**	Pg	Pg	22 35 57.9	0.0
	254nm,0.5s						
NRCA	**Norcia**	**0.52**	**340**	Pg	Pg	22 35 57.8	-0.3
NRCA				Sg	Sb	22 36 06.2	-0.7
	378nm,0.1s						
NRCA	**Norcia**	**0.52**	**340**	Pg	Pg	22 35 57.8	-0.3
NRCA				Sg	Sb	22 36 06.2	-0.7
	378nm,0.1s						
INTR	**Introdacqua**	**0.53**	**129**	Pg	Pg	22 35 58.2	0.0
INTR				Sg	Sb	22 36 06.2	-0.8
	348nm,0.6s						
INTR	**Introdacqua**	**0.53**	**129**	Pg	Pg	22 35 58.2	0.0
INTR				Sg	Sb	22 36 06.2	-0.8
	348nm,0.6s						
MTCE	**Montecelio**	**0.56**	**235**	Pg	Pg	22 35 58.8	+0.1
	159nm,0.3s						
MTCE	**Montecelio**	**0.56**	**235**	Pg	Pg	22 35 58.8	+0.1
	159nm,0.3s						
TRTR	**Tortoreto Alta**	**0.62**	**41**	Pg	Pb	22 36 00.8	0.0
TRTR	**Tortoreto Alta**	**0.62**	**41**	Pg	Pb	22 36 00.8	0.0
CESX	**Cesi**	**0.63**	**295**	Pg	Pg	22 36 00.1	0.0
	126nm,0.3s						
CESX	**Cesi**	**0.63**	**295**	Pg	Pg	22 36 00.1	0.0
	126nm,0.3s						
OFFI	**Offida**	**0.64**	**22**	Pg	Pg	22 36 00.6	+0.4
	980nm,0.6s						
OFFI	**Offida**	**0.64**	**22**	Pg	Pg	22 36 00.6	+0.4
	980nm,0.6s						
POFI	**Posta Fibreno**	**0.68**	**157**	Pg	Pg	22 36 00.9	-0.2
	231nm,1.2s						
POFI	**Posta Fibreno**	**0.68**	**157**	Pg	Pg	22 36 00.9	-0.2
	231nm,1.2s						
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	Pg	22 36 00.8	-0.3
LPEL				Sg	Sb	22 36 11.4	-0.1
	243nm,0.5s						
LPEL	**Lama dei Pelig**	**0.68**	**115**	Pg	Pg	22 36 00.8	-0.3
LPEL				Sg	Sb	22 36 11.4	-0.1
	243nm,0.5s						
SDI	**San Donato**	**0.72**	**152**	Pg	Pg	22 36 01.7	-0.1
	77nm,0.2s						
SDI	**San Donato**	**0.72**	**152**	Pg	Pg	22 36 01.7	-0.1
	77nm,0.2s						
FDMO	**Fiordimonte**	**0.72**	**344**	Pg	Pg	22 36 01.3	-0.5
	122nm,0.4s						
FDMO	**Fiordimonte**	**0.72**	**344**	Pg	Pg	22 36 01.3	-0.5
	122nm,0.4s						
CESI	**CESI - Serrava**	**0.74**	**333**	Pg	Pg	22 36 02.1	-0.1
	43nm,0.4s						
CESI	**CESI - Serrava**	**0.74**	**333**	Pg	Pg	22 36 02.1	-0.1
	43nm,0.4s						
CAFR	**Castel Frentan**	**0.74**	**99**	Pg	Pg	22 36 02.3	+0.1
	352nm,0.4s						
CAFR	**Castel Frentan**	**0.74**	**99**	Pg	Pg	22 36 02.3	+0.1
	352nm,0.4s						
RDP	**Rocca di Papa**	**0.75**	**219**	Pg	Pb	22 36 02.8	-0.3
	356nm,0.4s						
RDP	**Rocca di Papa**	**0.75**	**219**	Pg	Pb	22 36 02.8	-0.3
	356nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.79**	**185**	Pg	Pg	22 36 02.7	-0.4
	109nm,0.6s						
GIUL	**Giuliano Di Ro**	**0.79**	**185**	Pg	Pg	22 36 02.7	-0.4
	109nm,0.6s						
GUMA	**Gualdo di Mace**	**0.84**	**31**	Pg	Pg	22 36 01.6	-2.4
	452nm,0.4s						
GUMA	**Gualdo di Mace**	**0.84**	**31**	Pg	Pg	22 36 01.6	-2.4
	452nm,0.4s						
CERA	**Filignano**	**0.90**	**146**	Pg	Pg	22 36 04.6	-0.6
	106nm,0.8s						
CERA	**Filignano**	**0.90**	**146**	Pg	Pg	22 36 04.6	-0.6
	106nm,0.8s						
MIDA	**Miranda**	**0.97**	**136**	Pg	Pg	22 36 05.6	-1.0
	61nm,0.5s						
MIDA	**Miranda**	**0.97**	**136**	Pg	Pg	22 36 05.6	-1.0
	61nm,0.5s						
CING	**Cingoli**	**1.04**	**354**	Pg	Pg	22 36 07.0	-0.9
	120nm,0.7s						
CING	**Cingoli**	**1.04**	**354**	Pg	Pg	22 36 07.0	-0.9
	120nm,0.7s						
MGAB	**Montegabbione**	**1.08**	**302**	Pg	Pb	22 36 08.8	+0.2
	95nm,0.7s						
MGAB	**Montegabbione**	**1.08**	**302**	Pg	Pb	22 36 08.8	+0.2
	95nm,0.7s						
MURB	**Monte Urbino**	**1.10**	**327**	Pg	Pb	22 36 09.1	0.0
	246nm,0.3s						
MURB	**Monte Urbino**	**1.10**	**327**	Pg	Pb	22 36 09.1	0.0
	246nm,0.3s						
ARVD	**Arcevia**	**1.19**	**345**	Pg	Pb	22 36 10.0	-0.6
	81nm,0.7s						
ARVD	**Arcevia**	**1.19**	**345**	Pg	Pb	22 36 10.0	-0.6
	81nm,0.7s						
AOI	**Ancona**	**1.22**	**8**	Pg	Pn	22 36 10.6	-0.4
	60nm,0.5s						
AOI	**Ancona**	**1.22**	**8**	Pg	Pn	22 36 10.6	-0.4
	60nm,0.5s						
STON	**Ston**	**3.25**	**79**	ePn	Pn	22 36 40.1	+1.2
STON				Sn	Sn	22 37 18.4	+0.9
STON	**Ston**	**3.25**	**79**	ePn	Pn	22 36 40.0	+1.2
STON				Sn	Sn	22 37 18.4	+0.9

*ISK **08** 22:38:33.3, 36.°32N×29.°09E, h7km, MD2.8*
*CSEM **08** 22:38:34.9±0.3, 36.°42N×29.°17E, h15km, MD2.8, Error ellipse: s-maj=6.6km s-min=4.4km az=18.0*
*DDA **08** 22:38:35.1, 36.°53N×29.°13E, h7km, MD2.8*
*ISCJB **08** 22:38:35.0±0.8, 36.°39N±0.°05×29.°09E±0.°04, h13km±5km, Error ellipse: s-maj=8.2km s-min=5.5km az=23.3*

ISC 08 22:38:35.7±1.1**, 36.°44N**±0.°04×**29.°14E**±0.°03**, h12**km±8km**, n23, σ1.s17**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.20**	**348**	ePG	**Pb**	**22 38 40.4**	**-1.0**
FETY				eSG	**Sg**	**22 38 44.9**	**+1.8**
FETY	**Fethiye**	**0.20**	**348**	ePg	**Pb**	**22 38 40.4**	**-1.0**
FETY				eSg	**Sg**	**22 38 44.9**	**+1.8**
AKAS	**Kas**	**0.43**	**118**	i P	**Pg**	**22 38 43.8**	**-0.4**
AKAS				i S	**Sb**	**22 38 52.1**	**+0.2**
AKAS	**Kas**	**0.43**	**118**	i P	**Pg**	**22 38 43.8**	**-0.4**
AKAS				i S	**Sb**	**22 38 52.1**	**+0.2**
DALY	**Dalyan (Mu˜la**	**0.54**	**314**	ePG	**Pg**	**22 38 45.7**	**-0.6**
DALY				eSG	**Sb**	**22 38 54.4**	**-0.5**
DALY	**Dalyan (Mu˜la**	**0.54**	**314**	ePg	**Pg**	**22 38 45.7**	**-0.6**
DALY				eSg	**Sb**	**22 38 54.4**	**-0.5**
TURN	**Turunc**	**0.61**	**316**	i P	**Pn**	**22 38 50.8**	**+0.6**
TURN				i S	**Sn**	**22 39 04.0**	**+4.1**
ELL	**Elmali**	**0.69**	**63**	ePG	**Pg**	**22 38 47.9**	**-1.3**
ELL				eSG	**Sb**	**22 39 00.7**	**+1.2**
ELL	**Elmali**	**0.69**	**63**	ePg	**Pg**	**22 38 47.9**	**-1.3**
GOLH	**Golhisar**	**0.87**	**23**	i P	**Pg**	**22 38 51.3**	**-1.2**
GOLH				i S	**Sb**	**22 39 04.4**	**0.0**
GOLH	**Golhisar**	**0.87**	**23**	i P	**Pg**	**22 38 51.3**	**-1.2**
GOLH				i S	**Sb**	**22 39 04.4**	**0.0**
YER	**Yerkesik**	**0.97**	**316**	ePG	**Pg**	**22 38 53.6**	**-0.9**
YER	**Yerkesik**	**0.97**	**316**	ePg	**Pg**	**22 38 53.6**	**-0.9**
DNZL	**Cakiroluk**	**1.25**	**357**	i P	**Pn**	**22 38 58.3**	**-0.9**
DNZL				i S	**Sb**	**22 39 15.5**	**-0.1**
DNZL	**Cakiroluk**	**1.25**	**357**	i P	**Pn**	**22 38 58.3**	**-0.9**
DNZL				i S	**Sb**	**22 39 15.5**	**-0.1**
DAT	**Datca**	**1.29**	**283**	ePN	**Pg**	**22 38 59.3**	**-1.2**
DAT	**Datca**	**1.29**	**283**	ePn	**Pg**	**22 38 59.3**	**-1.2**
MLSB	**Milas**	**1.39**	**309**	ePN	**Pn**	**22 39 00.2**	**-0.6**
MLSB	**Milas**	**1.39**	**309**	ePn	**Pn**	**22 39 00.3**	**-0.6**
AYDN	**Tasoluk**	**1.58**	**321**	i P	**Pn**	**22 39 03.4**	**-0.2**
AYDN				i S	**Sb**	**22 39 25.0**	**+0.1**
AYDN	**Tasoluk**	**1.58**	**321**	i P	**Pn**	**22 39 03.4**	**-0.2**
AYDN				i S	**Sb**	**22 39 25.0**	**+0.1**
BODT	**Bodrum**	**1.59**	**294**	ePN	**Pn**	**22 39 02.5**	**-1.2**
BODT	**Bodrum**	**1.59**	**294**	ePn	**Pn**	**22 39 02.5**	**-1.2**

*IDC **08** 22:47:22.9±1.1, 34.°32N×69.°41E, h0km, mb3.7/5, mb1 3.7/9, mb1mx3.5/31, mbtmp3.5/9, ML3.5/4, Error ellipse: s-maj=28.5km s-min=20.1km az=108.0*
*NEIC **08** 22:47:22.7±10.0, 34.°02N×69.°04E, h35km, mb3.2/1, Error ellipse: s-maj=119.0km s-min=29.4km az=185.0*
NEIC Felt [II] at Kabul.
*ISCJB **08** 22:47:22.1±0.5, 34.°29N±0.°04×69.°45E±0.°05, h10km, mb3.6/5, Error ellipse: s-maj=7.1km s-min=4.3km az=144.1*
*NNC **08** 22:47:26.0±5.8, 34.°63N×68.°78E, h0km, mb3.5, mpv3.9, Error ellipse: s-maj=57.9km s-min=48.9km az=135.0*

ISC 08 22:47:23.9±0.9**, 34.°26N**±0.°08×**69.°33E**±0.°07**, h10km, n33, σ1.s57**/39**, mb3.8**/5**, 2C-5D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.37**	**320**	⇑iP	**Pg**	**22 47 31.8**	**+0.6**
KBL				eS	**Sg**	**22 47 36.3**	**+0.2**
THN	**Thein Dam**	**5.65**	**107**	ePN	**Pn**	**22 48 49.5**	**+1.6**
THN				eSN	**Sg**	**22 50 26.1**	**+0.9**
KK31	**Karatay Array**	**8.88**	**6**	Pn	**Pn**	**22 49 32.5**	**+0.3**
	2.2nm,0.5s,baz=193,slow=14,SNR=64						
KK31				Sn	**Sn**	**22 51 11.6**	**-0.7**
	2.2nm,0.6s,baz=193,slow=21,SNR=6.6						
KKAR	**Karatay Array**	**8.88**	**6**	ePn	**Pn**	**22 49 33.0**	**+0.8**
EKS2	**Erkin-Say**	**9.08**	**21**	ePn	**Pn**	**22 49 36.0**	**+0.9**
EKS2				eSn	**Sn**	**22 51 18.4**	**+0.9**
AAK	**Ala-Archa**	**9.29**	**24**	Pn	**Pn**	**22 49 39.3**	**+1.3**
AAK	**Ala-Archa**	**9.29**	**24**	Pn	**Pn**	**22 49 40.5**	**+2.6**
	0.7nm,0.3s,baz=180,slow=7.8,SNR=8.5						
AAK				Sn	**Sn**	**22 51 23.0**	**+0.4**
	0.2nm,0.3s,baz=331,slow=19,SNR=5.1						
TKM2	**Tokmak 2**	**9.94**	**28**	⇓Pn	**Pn**	**22 49 47.6**	**+0.7**
	4.1nm,1.2s						
TKM2				⇓Sn	**Sn**	**22 51 39.1**	**+0.5**
	1.3nm,0.6s						
TKM2	**Tokmak 2**	**9.94**	**28**	ePn	**Pn**	**22 49 48.5**	**+1.6**
PYUN	**Piuthan**	**13.21**	**114**	eP	**Pn**	**22 50 30.7**	**-1.0**
	7.1nm,0.3s						
PYUN				eS	Sn	22 52 52.9	-5.8
DANN	**Dangsing**	**13.67**	**112**	eP	**Pn**	**22 50 36.9**	**-1.1**
KOLN	**Koldanda**	**13.84**	**114**	eP	**Pn**	**22 50 39.5**	**-0.8**
	4.2nm,0.4s						
DMN	**Daman**	**15.07**	**112**	eP	**Pn**	**22 50 55.6**	**-1.5**
	6.4nm,0.5s						
KKN	**Kakani**	**15.11**	**111**	eP	**Pn**	**22 50 55.5**	**-2.2**
	8.8nm,0.5s						
PKIN	**Phulchoki**	**15.31**	**111**	eP	**Pn**	**22 50 57.8**	**-2.5**
	6.0nm,0.3s						
PKI	**Pulchoki**	**15.32**	**111**	eP	**Pn**	**22 50 57.9**	**-2.6**
	4.8nm,0.3s						
GUN	**Gumba**	**15.52**	**110**	eP	**Pn**	**22 51 01.5**	**-1.7**
MK31	**Makanchi Array**	**15.90**	**34**	⇓Pn	**Pn**	**22 51 10.9**	**+3.2**
	0.1nm,0.3s,baz=209,slow=10,SNR=15						
MK31	**Makanchi Array**	**15.90**	**34**	ePn	**Pn**	**22 51 06.8**	**-0.9**
MKAR	**Makanchi Array**	**15.90**	**34**	Pn	**Pn**	**22 51 06.5**	**-1.2**
	0.2nm,0.3s,baz=216,slow=11,SNR=11						
AB31	**Akbulak array**	**16.52**	**338**	⇑Pn	**Pn**	**22 51 13.0**	**-2.5**
	0.5nm,0.5s						
ABKAR	**Akbulak array**	**16.52**	**338**	P	**Pn**	**22 51 13.9**	**-1.6**
	0.9nm,0.5s						
RAMN	**Ramite**	**16.55**	**111**	eP	**Pn**	**22 51 13.5**	**-2.8**
	5.3nm,0.4s						
TAPN	**Taplejung**	**17.22**	**109**	eP	**Pn**	**22 51 22.9**	**-1.9**
KURBB	**Kurchatov Arra**	**17.68**	**20**	⇓Pn	**Pn**	**22 51 31.0**	**+0.9**
	0.2nm,0.8s						
KURBB	**Kurchatov Arra**	**17.68**	**20**	P	**Pn**	**22 51 28.7**	**-1.4**
	0.0nm,0.3s,baz=203,slow=12,SNR=6.7						
KURK	**Kurchatov**	**17.79**	**20**	⇓Pn	**Pn**	**22 51 32.9**	**+1.5**
	2.2nm,1.4s						
BVAR	**Borovoye Array**	**18.77**	**2**	P	**P**	**22 51 42.1**	**-0.9**
	0.2nm,0.3s,baz=163,slow=11,SNR=4.5						
ZALV	**Zalesovo Beam**	**22.52**	**24**	P	**P**	**22 52 21.6**	**-1.9**
	0.6nm,0.3s,baz=210,slow=11,SNR=6.6						
ARCES	**ARCESS Array B**	**42.72**	**339**	P	**P**	**22 55 20.8**	**+0.2**
	1.3nm,0.7s,baz=116,slow=8.2,SNR=8.1						
TORD	**Torodi Ar. Bea**	**64.30**	**269**	P	**P**	**22 58 01.1**	**+1.3**
	0.7nm,1.0s,baz=34,slow=5.0,SNR=2.9						
WRA	**Warramunga Arr**	**82.00**	**121**	P	**P**	**22 59 44.7**	**+0.4**
	0.3nm,0.3s,baz=323,slow=5.0,SNR=6.3						
ASAR	**Alice Springs**	**84.13**	**124**	P	**P**	**22 59 56.2**	**+0.9**
	0.3nm,0.5s,baz=312,slow=5.2,SNR=6.3						

*TAP **09** 00:10:14.4, 24.°09N×121.°39E, h63km, ML4.0, B*
*ISCJB **09** 00:10:14.5±0.3, 24.°09N±0.°02×121.°42E±0.°02, h69km±3km, Error ellipse: s-maj=3.5km s-min=2.1km az=40.5*
*JMA **09** 00:10:15.1±0.2, 24.°34N×121.°47E, h86km, M3.2*

ISC 09 00:10:15.1±1.2**, 24.°09N**±0.°02×**121.°41E**±0.°02**, h64**km±5km**, n65, σ0.s84**/121**, 8C-10D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WHF	**Hehuan Shan**	**0.14**	**292**	⇓iP	**Pn**	**00 10 25.4**	**+0.1**
	baz=297						
WHF				S	**Sn**	**00 10 32.7**	**0.0**
	baz=297						
TWD	**Chiawan**	**0.17**	**93**	⇓iP	**Pn**	**00 10 24.2**	**-0.7**
	baz=102						
TWD				S	**Sn**	**00 10 30.7**	**-1.2**
	baz=102						
HWA	**Hwalien**	**0.21**	**122**	eP	**Pn**	**00 10 24.8**	**-0.3**
	baz=113						
HWA				eS	**Sn**	**00 10 32.2**	**0.0**
	baz=113						
ESF	**Shoufeng Towns**	**0.23**	**158**	eP	**Pn**	**00 10 24.9**	**-0.4**
	baz=148						
TWT	**Tachien**	**0.27**	**307**	⇑iP	**Pn**	**00 10 25.9**	**+0.2**
	baz=302						
TWT				S	**Sn**	**00 10 33.5**	**+0.2**
	baz=302						
ESL	**Shilin**	**0.28**	**176**	eP	**Pn**	**00 10 24.7**	**-0.8**
	baz=166						
ESL				eS	**Sn**	**00 10 33.2**	**+0.2**
	baz=166						
NNS	**Nan Shan**	**0.35**	**354**	⇓iP	**Pn**	**00 10 26.6**	**+0.3**
	baz=358						
NNS				S	**Sn**	**00 10 34.8**	**+0.5**
	baz=358						
ENA	**Nanau**	**0.45**	**42**	eP	**Pn**	**00 10 26.5**	**-0.5**
	baz=52						
ENA				eS	**Sn**	**00 10 35.6**	**0.0**
	baz=52						
SMLT	**Sun Moon Lake**	**0.51**	**246**	⇑iP	**Pn**	**00 10 27.9**	**+0.2**
	baz=245						
SMLT				i S	**Sn**	**00 10 37.5**	**+0.7**
	baz=245						
TYC	**Yuchr**	**0.54**	**250**	⇑iP	**Pn**	**00 10 27.9**	**+0.1**
	baz=249						
TYC				S	**Sn**	**00 10 37.2**	**+0.2**
	baz=249						
ENTT	**Nioudou**	**0.57**	**14**	⇓iP	**Pn**	**00 10 28.4**	**+0.2**
	baz=26						
ENTT				eS	**Sn**	**00 10 38.7**	**+1.1**
	baz=26						
NSK	**Sanguang**	**0.59**	**355**	⇓iP	**Pn**	**00 10 28.9**	**+0.5**
	baz=3.0						
NSK				S	**Sn**	**00 10 38.7**	**+0.6**
	baz=3.0						
EHY	**Hungye**	**0.59**	**188**	eP	**Pn**	**00 10 27.2**	**-1.2**
	baz=174						
EHY				eS	**Sn**	**00 10 38.5**	**+0.5**
	baz=174						
TWQ1	**Liyutan**	**0.64**	**294**	⇑iP	**Pn**	**00 10 28.3**	**-0.6**
	baz=295						
TWQ1				eS	**Sn**	**00 10 38.1**	**-0.9**
	baz=295						
TWC	**Suao**	**0.65**	**38**	eP	**Pn**	**00 10 28.8**	**-0.3**
	baz=33						
TWC				eS	**Sn**	**00 10 40.0**	**+0.7**
	baz=33						
NSTT	**Nanjuang**	**0.66**	**325**	⇑iP	**Pn**	**00 10 28.6**	**-0.5**
	baz=319						
NSTT				i S	**Sn**	**00 10 39.3**	**-0.1**
	baz=319						
TWE	**Neicheng**	**0.67**	**20**	⇓P	**Pn**	**00 10 29.4**	**+0.1**
	baz=32						
TWE				eS	**Sn**	**00 10 40.1**	**+0.5**
	baz=32						
TCU	**Taichung**	**0.68**	**275**	⇑iP	**Pn**	**00 10 29.0**	**-0.3**
	baz=285						
TCU				S	**Sn**	**00 10 39.2**	**-0.5**
	baz=285						
NSY	**Sanyi**	**0.68**	**299**	⇑iP	**Pn**	**00 10 29.0**	**-0.4**
	baz=300						
NSY				eS	**Sn**	**00 10 39.7**	**-0.1**
	baz=300						

WNT	Mingjian	0.70	253	eP	Pn	00 10 29.6	0.0
	baz=262						
WNT				S	Sn	00 10 40.7	+0.5
	baz=262						
ILA	Ilan	0.74	24	eP	Pn	00 10 29.8	-0.3
	baz=34						
ILA				eS	Sn	00 10 42.0	+0.9
	baz=34						
TWF1	Yuli	0.74	188	eP	Pn	00 10 28.7	-1.4
	baz=178						
ALS	Alishan	0.80	224	⇓iP	Pn	00 10 31.5	+0.4
	baz=231						
ALS				eS	Sn	00 10 43.9	+1.0
	baz=231						
HSN	Hsinchu	0.82	330	eP	Pn	00 10 31.4	+0.3
	baz=323						
HSN				eS	Sn	00 10 43.0	+0.3
	baz=323						
CHN5	Tsauling	0.83	234	⇑iP	Pn	00 10 31.3	0.0
	baz=241						
CHN5				eS	Sn	00 10 43.7	+0.5
	baz=241						
WGK	Gukeng	0.88	243	eP	Pn	00 10 32.0	+0.3
	baz=253						
WGK				eS	Sn	00 10 44.6	+0.6
	baz=253						
NCU	National Centr	0.90	347	eP	Pn	00 10 32.1	0.0
	baz=349						
NCU				eS	Sn	00 10 44.9	+0.3
	baz=349						
TAP	Taipei	0.95	5	eP	Pn	00 10 32.4	-0.3
	baz=19						
TAP				eS	Sn	00 10 46.3	+0.6
	baz=19						
TAP1	Taipei	0.95	6	eP	Pn	00 10 32.7	0.0
	baz=19						
TAP1				S	Sn	00 10 45.9	+0.2
	baz=19						
ELDTW	Lidau	0.97	202	eP	Pn	00 10 33.4	+0.3
	baz=191						
ELDTW				eS	Sn	00 10 48.0	+1.7
	baz=191						
CHKT	Chengkung	0.99	182	eP	Pn	00 10 30.9	-2.2
	baz=172						
CHKT				eS	Sn	00 10 47.0	+0.4
	baz=172						
TWS1	Kuangyinshan	1.01	0	P	Pn	00 10 33.7	+0.2
	baz=2.0						
TWS1				eS	Sn	00 10 47.5	+0.6
	baz=2.0						
CHN2	Minshiung	1.02	237	eP	Pn	00 10 34.0	+0.4
	baz=247						
CHN2				eS	Sn	00 10 48.1	+0.8
	baz=247						
NWF	Wu-fen Shan	1.03	19	P	Pn	00 10 33.9	0.0
	baz=21						
NWF				S	Sn	00 10 47.9	+0.1
	baz=21						
CHN4	Tsaushan	1.05	226	⇓iP	Pn	00 10 34.2	+0.2
	baz=224						
CHN4				eS	Sn	00 10 49.3	+1.3
	baz=224						
TWB1	Santiao Chiao	1.05	30	P	Pn	00 10 34.8	+0.7
	baz=20						
TWB1				eS	Sn	00 10 49.2	+1.1
	baz=20						
WTCT	Ta-ch'eng	1.06	258	eP	Pn	00 10 33.5	-0.6
	baz=257						
WTCT				S	Sn	00 10 47.7	-0.4
	baz=257						
CHY	Chiayi	1.08	237	eP	Pn	00 10 34.4	+0.1
	baz=246						
CHY				eS	Sn	00 10 48.8	+0.2
	baz=246						
WTP	Ta-pu	1.11	221	⇓P	Pn	00 10 34.9	0.0
	baz=229						
WTP				eS	Sn	00 10 51.2	+1.7
	baz=229						
TWK	Hsinying	1.18	226	eP	Pn	00 10 35.7	-0.1
	baz=224						
TWK				eS	Sn	00 10 51.9	+0.9
	baz=224						
WSF	Szhu	1.18	248	eP	Pn	00 10 35.2	-0.4
	baz=255						
WSF				eS	Sn	00 10 50.9	0.0
	baz=255						
TWY	Chenhua	1.19	8	P	Pn	00 10 36.0	+0.1
	baz=10.0						
TWY				eS	Sn	00 10 51.7	+0.4
	baz=10.0						
CHN1	Nanshi	1.21	222	⇓P	Pn	00 10 36.1	-0.1
	baz=230						
CHN1				eS	Sn	00 10 52.9	+1.1
	baz=230						
CHN8	Yiju	1.33	236	eP	Pn	00 10 37.9	+0.3
	baz=235						
CHN8				eS	Sn	00 10 54.4	0.0
	baz=235						
TTN	Taitung	1.35	190	eP	Pn	00 10 38.1	+0.2
	baz=179						
SCLT	Jiali	1.44	231	eP	Pn	00 10 39.0	-0.1
	baz=229						
SCLT				eS	Sn	00 10 57.7	+0.5
	baz=229						
YOJ	Yonaguni jima	1.50	75	eP	Pn	00 10 38.0	-2.0
	baz=76						
YOJ	Yonaguni jima	1.50	75	P	Pn	00 10 39.8	-0.2
YOJ				eS	Sn	00 10 58.5	-0.2
SSD	Sandimen	1.52	208	eP	Pn	00 10 40.9	+0.7
	baz=213						
SSD				eS	Sn	00 11 01.0	+2.0
	baz=213						
ECL	Taimali	1.54	196	eP	Pn	00 10 39.4	-1.1
	baz=184						
ECL				eS	Sn	00 11 01.6	+2.0
	baz=184						
TWM1	Shoushan	1.55	216	eP	Pn	00 10 42.4	+1.8
	baz=213						
SGLT	Jiouru	1.60	212	eP	Pn	00 10 42.6	+1.3
	baz=221						
PCYT	Pengchaiyu	1.65	21	eP	Pn	00 10 41.2	-0.6
	baz=23						
PCYT				eS	Sn	00 11 02.3	+0.2
	baz=23						
EAST	Anshuo	1.78	197	eP	Pn	00 10 44.1	+0.4
	baz=193						
PNG	Penghu	1.78	253	eP	Pn	00 10 41.9	-1.8
	baz=253						
PNG				eS	Sn	00 11 02.4	-2.9
	baz=253						
WDGT	Dungji	1.81	243	eP	Pn	00 10 43.0	-1.0
	baz=242						
WDGT				eS	Sn	00 11 02.8	-3.2
	baz=242						
SCZT	Fangliau	1.86	203	eP	Pn	00 10 45.3	+0.6
	baz=199						
SCZT				eS	Sn	00 11 08.2	+0.9
	baz=199						
TWP	Hsiaoliuchiu	1.99	209	eP	Pn	00 10 46.0	-0.5
	baz=217						
LAY	Lan-yu	2.04	176	eP	Pn	00 10 45.9	-1.4
	baz=169						
LAY				eS	Sn	00 11 12.0	+0.2
	baz=169						
IRIF	Iriomote-Funau	2.13	83	P	Pn	00 10 48.6	+0.2
IRIF				eS	Sn	00 11 14.3	+0.5
HATJ	Hateruma jima	2.19	90	P	Pn	00 10 49.8	+0.6
HATJ				eS	Sn	00 11 15.7	+0.5
JKRS	Kuro-shima	2.38	86	P	Pn	00 10 52.2	+0.4
JKRS				eS	Sn	00 11 19.8	0.0
JIJ	Ishigaki jima	2.51	83	P	Pn	00 10 53.3	-0.3
JIJ				S	Sn	00 11 22.0	-1.0
KNM	Kinmen	2.74	277	eP	Pn	00 10 56.7	0.0
	baz=278						
JTJ	Tarama	3.05	79	P	Pn	00 11 01.2	+0.2
JTJ				S	Sn	00 11 35.7	-0.6

*NEIC **09** 00:28:56.6±0.8, 11.30S×118.63E, h10km, mb4.6/3, Error ellipse: s-maj=23.8km s-min=9.4km az=60.0*
*IDC **09** 00:28:56.2±1.0, 10.71S×119.25E, h0km, mb4.3/4, mb1 4.5/7, mb1mx4.0/22, mbtmp4.3/7, ML4.2/3, Error ellipse: s-maj=53.9km s-min=18.6km az=61.0*
*ISCJB **09** 00:28:56.6±0.3, 11.25S±0.03×118.57E±0.03, h33km, mb4.4/5, MS4.7/1, Error ellipse: s-maj=4.6km s-min=3.1km az=32.6*
*AUST **09** 00:28:57.3±10.0, 11.33S×118.81E, h0km, Error ellipse: s-maj=1.0km s-min=0.9km az=24.0*
*DJA **09** 00:29:00.0±0.4, 11°S±3°×11°9E±°, h92km±12km, M4.8/13, mb4.8/12, mB5.2/5, MLv4.9/13, Mw(mB)4.6/5*
ISC 09 00:28:59.3±0.6, **11.22S**±0.06×**118.62E**±0.05, **h33**km, **n61**, σ**1.55**/63, **mb4.3**/5, **South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	1.75	26	P	Pn	00 29 28.2	+0.8
WBSI				S	Sn	00 29 47.5	-1.0
BASI	Baing, Sumba	2.17	63	P	Pn	00 29 33.3	+0.2
KHKI	Kahang-Kahang	4.11	313	P	Pn	00 30 01.7	+1.8
KHKI				S	Sn	00 30 45.8	-1.0
IGBI	Denpasar	4.18	305	P	Pn	00 30 01.0	+0.2
DNP	Denpasar	4.21	307	S	Sn	00 30 49.6	+0.4
MMRI	Maumere	4.39	54	P	Pn	00 30 02.8	-1.0
SRBI	Singaraja	4.59	313	S	Sn	00 30 58.6	0.0
BSSI	Bau Bau, Buton	5.38	20	P	Sn	00 31 19.4	+1.3
BSSI	Bau Bau, Buton	5.38	20	P	Pn	00 30 20.5	+3.2
	170nm,0.4s,4µm						
BSSI				S	Sn	00 31 17.8	-0.3
	170nm,0.4s,4µm						
GMJI	Gumukmas	5.89	299	P	Pn	00 30 21.0	-3.3
	62nm,0.8s,3µm0.7nm						
GMJI				S	Sn	00 31 30.5	-0.1
	62nm,0.8s,3µm0.7nm						
BLJI	Banyuglugur	6.04	304	P	Pn	00 30 26.9	+0.4
	70nm,0.5s,5µm1.0nm						
BKSI	Bulukumba	6.05	14	P	Sn	00 31 34.8	+0.1
BKSI	Bulukumba	6.05	14	P	Pn	00 30 28.9	+2.4
	113nm,0.6s,2µm0.6nm						
BKSI				S	Sn	00 31 33.0	-1.7
	113nm,0.6s,2µm0.6nm						
KMMI	Kalianget	6.19	312	S	Sn	00 31 38.2	0.0
KAPI	Kappang	6.27	10	ePn	Pn	00 30 31.0	+1.4
KAPI				eSn	Sn	00 31 35.8	-4.3
KAPI	Kappang	6.27	10	P	Sn	00 31 42.1	+2.0
KAPI	Kappang	6.27	10	P	Pn	00 30 31.5	+1.9
	42nm,0.7s,1µm0.4nm						
KAPI	Kappang	6.27	10	Pn	Pn	00 30 29.6	0.0
	6.0nm,0.3s,baz=177,slow=6.2,SNR=26						
KAPI				Sn	Sn	00 31 35.9	-4.3
	14nm,0.3s,baz=197,slow=19,SNR=12						
KRKI	Karangkates	6.80	296	P	Pn	00 30 35.3	-1.6
	223nm,0.3s,4.1nm						
KRKI				S	Sn	00 31 52.3	-0.9
	223nm,0.3s,4.1nm						
SPSI	Sidrap Palu	7.30	9	P	Pn	00 30 47.3	+3.6
	22nm,0.6s,0.2nm						
GRJI	Gresik	7.42	305	S	Sn	00 32 09.1	+0.5
PWJI	Pagerwojo	7.44	295	P	Pn	00 30 47.9	+2.3
	76nm,0.6s,0.7nm						
PWJI				S	Sn	00 32 07.9	-1.0
	76nm,0.6s,0.7nm						
SJI	Sawahan	7.60	297	S	Sn	00 32 11.8	-1.2
PCJI	Pacitan	7.93	292	P	Pn	00 30 49.9	-2.5
	91nm,0.7s,0.6nm						
TTSI	Tana Toraja	8.21	8	P	Pn	00 31 00.9	+4.7
TTSI				S	Sn	00 32 28.1	+0.1
KBKI	Kotabaru	8.24	343	P	Pn	00 30 55.6	-1.0
	29nm,0.6s						
WOJI	Wonogiri, Jawa	8.30	293	S	Sn	00 32 29.1	-1.1
BBKI	Banjar Baru	8.57	334	P	Pn	00 31 05.2	+4.0
UGM	Wanagama	8.64	292	S	Sn	00 32 36.2	-2.3
UGM	Wanagama	8.64	292	P	Pn	00 31 06.6	+4.4
	baz=8.9,SNR=4.0						
BJII	Banjamegara	9.61	293	P	Pn	00 31 13.1	-2.4
	36nm,1.5s						
FITZ	Fitzroy Crossi	9.63	136	Pn	Pn	00 31 13.7	-2.1
FITZ				Sn	Sn	00 32 54.8	-8.1
FITZ	Fitzroy Crossi	9.63	136	Pn	Pn	00 31 13.7	-2.1
	2.7nm,0.3s,baz=329,slow=9.9,SNR=66						
FITZ				Sn	Sn	00 32 54.8	-8.1
	4.3nm,0.3s,baz=16,slow=12,SNR=10						
FITZ	Fitzroy Crossi	9.63	136	P	Pn	00 31 14.2	-1.5
	baz=9.5,SNR=40						
FITZ				S	Sn	00 32 53.6	-9.2
	baz=9.5,SNR=4.7						
MBWA	Marble Bar	9.94	174	ePn	Pn	00 31 18.6	-1.2
MBWA				eSn	Sn	00 32 54.5	-16
KNRA	Kununurra	10.81	115	P	Pn	00 31 31.8	-0.1
	baz=11,SNR=4.6						
CISI	Cisompet, Garu	11.27	288	P	Sn	00 33 43.2	+0.1
GIRL	Giralia	12.10	200	P	Pn	00 31 51.5	+1.9
	baz=12,SNR=4.2						
MTN	Manton Dam	12.34	99	P	Pn	00 31 51.7	-1.2
	baz=12,SNR=13						
KDU	Kakadu	13.63	98	P	Pn	00 32 09.0	-1.4
	baz=13,SNR=9.5						
MEEK	Meekatharra	15.33	180	P	Pn	00 32 31.1	-2.4
	baz=15,SNR=73						
MEEK				S	Sn	00 35 05.0	-17
	baz=15,SNR=17						
WRA	Warramunga Arr	17.43	122	P	Pn	00 32 58.0	-2.1
WRA				S	Sn	00 35 56.7	-17
WRA	Warramunga Arr	17.43	122	P	Pn	00 32 58.0	-2.1
	0.4nm,0.3s,baz=295,slow=13,SNR=4.5						
WRA				S	Sn	00 35 56.7	-17
	0.4nm,0.3s,baz=292,slow=23,SNR=2.6						
WRAB	Tennant Creek	17.44	122	ePn	Pn	00 32 59.0	-1.3
	3.1nm,0.5s						
MORW	Morawa	17.92	187	P	Pn	00 33 05.2	-0.8
	baz=18,SNR=22						
AS31	Alice Springs	19.10	132	ePn	Pn	00 33 21.0	+0.5
ASAR	Alice Springs	19.10	132	P	Pn	00 33 21.2	+0.7
ASAR	Alice Springs	19.10	132	P	Pn	00 33 21.2	+0.7
	1.1nm,0.3s,baz=311,slow=12,SNR=93						
BLDU	Ballidu	19.38	185	P	Pn	00 33 24.0	+0.3
	baz=19,SNR=31						
KMBL	Kambalda	20.27	172	P	Pn	00 33 35.7	+1.4
	baz=20,SNR=12						
KLBR	Kellerberrin	20.29	182	P	Pn	00 33 37.2	+2.7
	baz=20,SNR=16						
NWAO	Narrogin (SRO)	21.64	183	eP	P	00 33 54.0	+7.1
	17nm,0.5s						
NWAO	Narrogin (SRO)	21.64	183	P	P	00 33 54.3	+7.4
	21nm,0.5s,baz=9.4,slow=13,SNR=20						
NJ2	Nanjing	43.03	0	eP	P	00 36 55.8	-0.1
NJ2				pP	pP	00 37 05.3	-0.4
NJ2				sP	sP	00 37 09.1	-0.5
NJ2				S	ScP	00 42 02.5	-32
NJ2				sS	sS	00 42 11.0	-85
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,150nm,11.6s						
NJ2				LR	LR		
	comp=N,980nm,21.4s						
NJ2				LR	LR		
	comp=E,500nm,23.6s						
NJ2				LR	LR		
	comp=Z,240nm,15.4s						
MK31	Makanchi Array	66.26	334	eP	P	00 39 44.9	+0.7
MKAR	Makanchi Array	66.26	334	P	P	00 39 45.4	+1.1
MKAR	Makanchi Array	66.26	334	P	P	00 39 45.4	+1.1
	comp=Z,1.5nm,0.5s,baz=146,slow=7.5,SNR=22						
AAK	Ala-Archa	67.09	326	eP	P	00 39 51.9	+2.1
	comp=Z,1.0nm,0.4s						
AAK	Ala-Archa	67.09	326	P	P	00 39 51.5	+1.7
	comp=Z,0.6nm,0.3s,baz=135,slow=4.3,SNR=3.3						
ZALV	Zalesovo Beam	70.98	340	P	P	00 40 13.3	-0.1
ZALV	Zalesovo Beam	70.98	340	P	P	00 40 13.3	-0.1
	comp=Z,0.7nm,0.4s,baz=143,slow=5.9,SNR=4.9						

*IDC **09** 00:29:44.2±0.7, 0.27S×132.57E, h0km, mb4.3/13, mb1 4.5/15, mb1mx4.3/26, mbtmp4.4/15, ML4.6/2, MS4.2/19, Ms1 4.2/19, ms1mx4.0/37, Error ellipse: s-maj=30.1km s-min=11.8km az=72.0*
*DJA **09** 00:29:47.2±0.3, 0°S±3°×13°3E±°, h10km, M5.0/19, mB5.5/14, mb4.8/19, MLv5.0/9, Mw(mB)5.0/14*
*ISCJB **09** 00:29:48.4±0.7, 0.39S±0.04×132.52E±0.04, h38km±7km, mb4.4/27, MS4.2/18, Error ellipse: s-maj=7.3km s-min=5.4km az=40.0*
*GCMT **09** 00:29:48.9±0.2, 0.33S×132.43E, h17km±1km, MW5.1, Moment Tensor Solution. s42,c55; s71,c116; Moment tensor: Scale 10^{16}Nm; M_{rr}3.72±.23; $M_{\theta\theta}$-3.82±.15; $M_{\phi\phi}$0.10±.17; $M_{r\theta}$-2.51±.38; $M_{\theta\phi}$2.32±.10; $M_{\phi r}$1.91±.52; Best double couple: $M_0$5.40000×10^{16} NP1:ϕ_s102.00000°, δ28.00000°, λ71.00000°. NP2:ϕ_s304.00000°, δ63.00000°, λ100.00000°. Principal axes: T 4.8200, Plg70.0000°, Azm235.0000°; N 1.0700, Plg9.0000°, Azm120.0000°; P -5.8900, Plg18.0000°, Azm27.0000°; Data Used: II IU IC CN G.*
*BJI **09** 00:29:49.5, 0.40S×132.40E, h33km, mB4.9/1, mb4.6/7, Ms4.5/2, Ms7 4.1/3*
*NEIC **09** 00:29:49.6±0.3, 0.34S×132.48E, h35km, mb4.5/10, Error ellipse: s-maj=10.0km s-min=5.8km az=58.0*
*AUST **09** 00:29:51.4, 0.49S×132.50E, h60km*
ISC 09 00:29:50.8±0.6, **0.43S**±0.04×**132.46E**±0.04, **h47**km±6km, **n101**, σ**1.82**/97, **mb4.4**/26, **MS4.2**/18, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	Sorong	1.27	250	P	Pn	00 30 10.0	-2.2
SWI				S	Sn	00 30 30.2	+2.0
SWI	Sorong	1.27	250	P	Pn	00 30 09.6	-2.6
SWI	Sorong	1.27	250	P	Pn	00 30 10.1	-2.1
	baz=1.3,SNR=413						
SWI				S	Sn	00 30 30.3	+2.1
	baz=1.3,SNR=10						
RKPI	Ransiki, Papua	2.02	122	P	Pn	00 30 22.1	-0.4
RKPI				S	Sn	00 30 49.4	+2.8
RKPI	Ransiki, Papua	2.02	122	P	Pn	00 30 21.8	-0.7
FAKI	Fak Fak	2.48	185	P	Pn	00 30 28.0	-0.8
FAKI				S	Sn	00 31 02.0	+4.2
FAKI	Fak Fak	2.48	185	P	Pn	00 30 29.0	+0.2
FAKI	Fak Fak	2.48	185	P	Pn	00 30 29.5	+0.7
	baz=2.4,SNR=91						
FAKI				S	Sn	00 31 02.6	+4.7
	baz=2.4,SNR=5.0						
BAKI	Biak	3.72	102	P	Pn	00 30 43.9	-2.0
BAKI				S	Pn	00 30 45.1	-0.8
LBMI	Labuha	4.96	268	P	Pn	00 31 02.0	-0.9
	223nm,1.0s,6µm1.6nm						
GAMI	Galela, Maluku	5.19	296	P	Pn	00 31 06.1	+0.1
	308nm,0.8s,11µm2.2nm						
TNTI	Ternate	5.23	283	P	Pn	00 31 06.5	-0.1
	130nm,0.9s,4µm0.8nm						
TNTI				S	Sn	00 32 06.1	+0.4
	130nm,0.9s,4µm0.8nm						
NLAI	Namlea	6.04	242	P	Pn	00 31 18.3	+0.6
	99nm,1.1s,2µm0.8nm						
NLAI				S	Sn	00 32 28.8	+3.3
	99nm,1.1s,2µm0.8nm						
PALU	Palau	7.98	15	P	Pn	00 31 43.8	-0.5
	baz=8.1,SNR=4.4						
LUWI	Luwuk	9.71	266	P	Pn	00 32 07.4	-0.6
	113nm,1.5s,1µm						
MRSI	Marisa	10.56	275	P	Pn	00 32 30.0	+10
KDU	Kakadu	12.17	180	P	Pn	00 32 40.8	-0.9
	baz=12,SNR=14						
MTN	Manton Dam	12.40	186	P	Pn	00 32 42.9	-1.9
	baz=12,SNR=28						
MTN				S	Sn	00 34 59.4	-2.2
	baz=12,SNR=8.8						
TTSI	Tana Toraja	12.90	258	P	P	00 32 58.9	-2.3
KAPI	Kappang	13.48	250	P	Pn	00 33 00.7	+1.1
KAPI	Kappang	13.48	250	Pn	Pn	00 33 03.4	+3.8
	baz=92,slow=10,SNR=5.1						
KAPI				LR	LR	00 38 18.5	
	comp=Z,694nm,20.9s,baz=84,slow=38						
SMKI	Samarinda	15.25	270	P	P	00 33 31.4	+4.0
KNRA	Kununurra	15.58	193	S	Sn	00 36 11.4	-7.7
	baz=16,SNR=5.4						
COEN	Coen	17.12	142	P	Pn	00 33 47.0	+0.1
	baz=17,SNR=4.1						
PMG	Port Moresby	17.13	122	eP	P	00 33 48.6	+0.4
	32nm,0.9s						
PMG	Port Moresby	17.13	122	P	P	00 33 51.9	+3.7
PMG	Port Moresby	17.13	122	P	P	00 33 50.1	+1.9
	0.3nm,0.3s,baz=298,slow=10,SNR=6.8						
KKM	Kota Kinabalu	17.45	292	eP	Pn	00 33 50.8	-0.3
	86nm,1.4s						
KKM	Kota Kinabalu	17.45	292	P	P	00 33 53.5	+1.7
	43nm,1.5s,1µm						
KKM	Kota Kinabalu	17.45	292	P	Pn	00 33 51.8	+0.7
	baz=18,SNR=7.7						
BBKI	Banjar Baru	17.86	260	P	P	00 33 59.9	+3.6
GUMO	Guam	18.58	41	LR	LR	00 40 16.9	
	comp=Z,665nm,18.5s,baz=233,slow=34						
FITZ	Fitzroy Crossi	18.80	201	P	Pn	00 34 08.3	+1.0
FITZ				S	Sn	00 37 28.3	-8.6
FITZ	Fitzroy Crossi	18.80	201	P	Pn	00 34 08.3	+1.0
	1.3nm,0.3s,baz=41,slow=11,SNR=2.1						
FITZ				S	Sn	00 37 28.3	-8.6
	0.8nm,0.3s,baz=80,slow=19,SNR=4.3						
FITZ				LR	LR	00 41 33.9	
	comp=Z,547nm,20.9s,baz=30,slow=37						
WRAB	Tennant Creek	19.47	175	eP	P	00 34 14.1	+0.2
	26nm,0.9s						
WRA	Warramunga Arr	19.48	175	P	Pn	00 34 14.4	-1.1
WRA				S	S	00 37 46.2	-5.5
WRA	Warramunga Arr	19.48	175	P	Pn	00 34 14.4	-1.1
	2.1nm,0.3s,baz=354,slow=12,SNR=23						
WRA				S	S	00 37 46.2	-5.5
	0.9nm,0.3s,baz=356,slow=23,SNR=5.2						
WRA				LR	LR	00 41 23.2	
	comp=Z,333nm,20.8s,baz=20,slow=36						
SBUM	Sibu	20.44	278	P	Pn	00 34 26.5	-0.5
	64nm,1.5s,1µm						
GMJI	Gumukmas	20.48	247	P	Pn	00 34 32.5	+5.0
STKI	Sintang	20.99	271	P	Pn	00 34 34.9	+1.3
	105nm,1.3s						
KSM	Kuching	22.23	275	eP	P	00 34 44.4	+0.6
	118nm,1.4s						
KSM	Kuching	22.23	275	P	P	00 34 45.5	+1.7
	41nm,1.6s,637nm						
KSM	Kuching	22.23	275	P	P	00 34 45.2	+1.4
	baz=22,SNR=7.4						
AS31	Alice Springs	23.14	177	eP	P	00 34 54.0	+0.8
ASAR	Alice Springs	23.14	177	P	P	00 34 53.5	+0.3
ASAR				S	S	00 39 10.2	+8.9
ASAR	Alice Springs	23.14	177	P	P	00 34 53.5	+0.3
	40nm,1.1s,baz=357,slow=10,SNR=33						
ASAR				S	S	00 39 10.2	+8.9
	5.4nm,0.9s,baz=1.5,slow=28,SNR=6.4						
ASAR				LR	LR	00 45 09.9	
	comp=Z,906nm,20.0s,baz=345,slow=40						
BJII	Banjamegara	23.70	253	P	P	00 35 01.8	+3.1
	117nm,2.0s,3µm						
CTA	Charters Tower	23.75	146	P	P	00 34 59.4	+0.3
CTA	Charters Tower	23.75	146	P	P	00 34 59.4	+0.3
	12nm,0.8s,baz=322,slow=8.9,SNR=5.9						
CTA				LR	LR	00 45 30.1	
	comp=Z,819nm,18.2s,baz=146,slow=40						
TPI	Tanjungpandan	24.90	264	P	P	00 35 11.9	+2.2
	19nm,1.5s,458nm						
PPBI	Pangkal Pinang	26.37	266	P	P	00 35 25.8	+2.8
	22nm,1.6s,4µm						
QLP	Quilpie	28.36	157	P	P	00 35 41.2	+0.6
	baz=28,SNR=3.8						
STKA	Stephens Creek	32.45	165	eP	P	00 36 16.8	+0.1
	5.8nm,1.4s						
STKA	Stephens Creek	32.45	165	P	P	00 36 17.4	+0.7
	4.1nm,0.7s,baz=356,slow=9.0,SNR=6.8						
PSI	Prapat	33.68	276	P	P	00 36 27.1	-0.7
PSI	Prapat	33.68	276	P	P	00 36 28.9	+1.0
	30nm,1.9s,562nm						
PSI	Prapat	33.68	276	P	P	00 36 27.1	-0.7
	5.1nm,0.3s,baz=116,slow=6.4,SNR=7.6						
PSI	Prapat	33.68	276	P	P	00 36 27.8	0.0
	baz=34,SNR=7.3						
NWAO	Narrogin (SRO)	35.36	202	LR	LR	00 53 10.9	
	comp=Z,290nm,20.0s,baz=16,slow=40						
MJAR	Matsushiro Arr	37.17	8	LR	LR	00 49 23.8	
	comp=Z,566nm,20.3s,baz=200,slow=32						
CMAR	Chiang Mai Arr	37.91	301	P	P	00 37 03.8	-0.1
CMAR	Chiang Mai Arr	37.91	301	P	P	00 37 03.8	-0.1
	1.1nm,0.3s,baz=125,slow=5.7,SNR=6.8						
KSRS	Korea Array	37.93	354	LR	LR	00 51 04.2	
	comp=Z,242nm,19.2s,baz=177,slow=34						
CMMT	Chiang Mai	38.06	302	P	P	00 37 07.5	+2.3
	5.8nm,1.6s						
CHTO	Chiang Mai	38.07	302	eP	P	00 37 03.8	-1.5
	1.2nm,1.1s						
CHTO	Chiang Mai	38.07	302	P	P	00 37 07.7	+2.5
	6.3nm,1.6s						
KMI	Kunming	38.37	314	P	P	00 37 13.1	+5.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KMI				LR	LR		
	comp=N,260nm,17.3s						
KMI				LR	LR		
	comp=E,300nm,19.0s						
KMI				LR	LR		
	comp=Z,200nm,13.0s						
DZM	Mont Dzumac	39.47	125	eLR	LR	00 47 53.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,326nm,24.2s						
USRK	Ussuriysk Arra	44.44	360	LR	LR	00 54 06.5	
	comp=Z,194nm,21.2s,baz=151,slow=33						
CN2	Changchun	44.48	353	eP	P	00 38 02.4	+4.9
CN2				eS	S	00 44 36.3	+6.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
MDJ	Mudanjiang	44.93	357	S	S	00 44 36.1	+0.3
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,52nm,5.3s						
MDJ				LR	LR		
	comp=N,120nm,22.8s						
MDJ				LR	LR		
	comp=E,180nm,21.8s						
MDJ				LR	LR		
	comp=Z,240nm,30.4s						
LZH	Lanzhou	45.04	327	eP	P	00 38 03.8	+1.5
LZH				pP	pP	00 38 15.0	-0.1
LZH				sP	sP	00 38 18.8	-1.8
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
ASAJ	Asahikawa	45.27	10	LR	LR	00 55 28.5	
	comp=Z,289nm,21.0s,baz=259,slow=34						
ULN	Ulaanbaatar	52.94	339	P	P	00 39 09.4	+6.8
SONM	Songino Array	53.16	338	P	P	00 39 03.8	-0.4
SONM	Songino Array	53.16	338	P	P	00 39 03.8	-0.4
	comp=Z,0.8nm,0.6s,baz=165,slow=6.0,SNR=3.0						
SONM				LR	LR	01 01 06.9	
	comp=Z,152nm,18.6s,baz=124,slow=36						
RPZ	Rata Peaks	55.12	147	LR	LR	01 03 45.0	
	comp=Z,431nm,18.9s,baz=312,slow=37						
PETK	Petropavlovsk-	57.36	18	LR	LR	01 00 29.6	
	comp=Z,121nm,21.5s,baz=214,slow=32						
MK31	Makanchi Array	64.24	324	eP	P	00 40 19.9	-1.3
MKAR	Makanchi Array	64.24	324	P	P	00 40 21.4	+0.2
MKAR	Makanchi Array	64.24	324	P	P	00 40 21.4	+0.2
	comp=Z,1.2nm,0.4s,baz=110,slow=8.3,SNR=9.1						
MKAR				LR	LR	01 12 35.9	
	comp=Z,94nm,18.1s,baz=115,slow=40						
TKM2	Tokmak 2	66.64	318	eP	P	00 40 36.4	-0.6
	comp=Z,6.8nm,1.1s						
ZALV	Zalesovo Beam	66.91	332	P	P	00 40 37.5	-0.7
ZALV	Zalesovo Beam	66.91	332	P	P	00 40 37.5	-0.7
	comp=Z,1.0nm,0.5s,baz=138,slow=5.0,SNR=4.8						
AAK	Ala-Archa	67.27	317	P	P	00 40 41.8	+0.8
AAK	Ala-Archa	67.27	317	P	P	00 40 41.8	+0.8
	comp=Z,1.2nm,0.7s,baz=89,slow=4.5,SNR=5.1						
KKAR	Karatay Array	70.17	317	eP	P	00 40 58.7	0.0
	comp=Z,7.3nm,1.0s						
PPT2	Papeete2	78.39	108	eS	S	00 51 35.6	-4.5
	comp=Z,56nm,24.5s						
PPT2				eLR	LR	01 05 50.2	
	comp=Z,74nm,22.2s						
VNDA	Vanda	78.65	174	P	P	00 41 47.5	+0.2
VNDA	Vanda	78.65	174	P	P	00 41 47.5	+0.2
	comp=Z,1.5nm,0.8s,baz=321,slow=7.0,SNR=7.2						
VNDA				LR	LR	01 17 46.0	
	comp=Z,271nm,19.1s,baz=347,slow=37						
ABKAR	Akbulak array	78.98	320	eP	P	00 41 48.9	-0.9
	comp=Z,2.5nm,0.6s						
MAW	Mawson	81.92	201	P	P	00 42 05.3	+0.2
MAW	Mawson	81.92	201	P	P	00 42 05.3	+0.2
	comp=Z,2.4nm,0.8s,baz=39,slow=7.8,SNR=4.4						
MAW				LR	LR	01 14 37.2	
	comp=Z,196nm,19.3s,baz=62,slow=33						
MCK	McKinley	85.34	26	eP	P	00 42 24.2	+1.4
ILAR	Eielson Array	86.40	25	P	P	00 42 27.1	-0.9
ILAR	Eielson Array	86.40	25	P	P	00 42 27.1	-0.9
	comp=Z,1.6nm,0.8s,baz=260,slow=4.2,SNR=14						
ILAR				LR	LR	01 20 49.6	
	comp=Z,85nm,20.3s,baz=235,slow=36						
QSPA	South Pole Qui	89.50	180	eP	P	00 42 42.9	0.0
	comp=Z,8.0nm,0.9s						
QSPA	South Pole Qui	89.50	180	P	P	00 42 42.9	0.0
	comp=Z,7.2nm,0.8s,baz=309,slow=2.4,SNR=18						
KMBO	Kilima Mbogo	95.20	269	LR	LR	01 24 24.3	
	comp=Z,87nm,18.9s,baz=95,slow=34						
CPUP	Villa Florida	151.77	161	PKPbc	PKPbc	00 49 41.8	+0.6
CPUP				PKPab	PKPab	00 49 51.2	+1.3
CPUP	Villa Florida	151.77	161	PKPbc	PKPbc	00 49 41.8	+0.6
	comp=Z,0.8nm,0.5s,baz=213,slow=1.0,SNR=8.7						
CPUP				PKPab	PKPab	00 49 51.2	+1.3
	comp=Z,0.6nm,0.4s,baz=196,slow=6.3,SNR=4.9						

IDC ***09*** *00:40:05.3±0.6, 0°.35S×132°.50E, h0km, mb4.3/11, mb1 4.4/13, mb1mx4.3/25, mbtmp4.3/13, ML4.5/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/31, Error ellipse: s-maj=28.6km s-min=11.4km az=76.0*

ISCJB ***09*** *00:40:08.7±0.4, 0°.35S±0°.04×132°.47E±0°.04, h33km, mb4.3/16, Error ellipse: s-maj=6.9km s-min=5.3km az=34.8*

DJA ***09*** *00:40:09.8±0.3, 1°S±4°×13°3E±°, h10km, M4.8/10, mb4.8/10, mB5.5/2, MLv4.7/10, Mw(mB)4.9/2*

NEIC ***09*** *00:40:11.4±1.7, 0°.44S×132°.34E, h43km±16km, mb4.4/5, Error ellipse: s-maj=13.0km s-min=7.0km az=58.0*

ISC 09 00:40:10.3±0.5**, 0°.38S**±0°.06×**132°.48E**±0°.04**, h33**km**, n57,** σ1s**42**/58**, mb4.4**/16**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SWI	Sorong	1.31	248	P	Pn	00 40 30.7	-1.6
SWI				S	Sb	00 40 50.9	0.0
RKPI	Ransiki, Papua	2.04	124	P	Pn	00 40 42.3	-0.1
RKPI				S	Sb	00 41 08.2	-3.6
FAKI	Fak Fak	2.54	185	P	Pn	00 40 48.8	-0.4
FAKI				S	Sn	00 41 17.4	-1.6
BAKI	Biak	3.72	103	P	Pn	00 41 05.5	0.0
SRPI	Serui, Papua	4.04	112	P	Pn	00 41 10.9	+1.0
LBMI	Labuha	4.98	267	P	Pn	00 41 26.6	+3.7
	108nm,0.7s,0.5nm						
GAMI	Galela, Maluku	5.18	295	P	Pn	00 41 32.7	+7.2
	183nm,0.6s,1.4nm						
TNTI	Ternate	5.24	283	P	Pn	00 41 30.7	+4.4
	63nm,0.9s,0.4nm						
AAI	Ambon	5.40	232	P	Pn	00 41 31.1	+2.5
	188nm,0.8s,3µm0.8nm						
TTSI	Tana Toraja	12.93	258	P	Pn	00 43 13.5	+1.7
SPSI	Sidrap Palu	13.19	254	P	Pn	00 43 16.8	+1.4
	20nm,0.8s						
BKSI	Bulukumba	13.28	248	P	Pn	00 43 17.7	+1.1
	24nm,0.9s						
KAPI	Kappang	13.52	250	ePn	Pn	00 43 18.6	-1.3
	20nm,1.0s						
KAPI	Kappang	13.52	250	P	Pn	00 43 21.1	+1.2
	22nm,1.0s						
KAPI	Kappang	13.52	250	Pn	Pn	00 43 23.5	+3.6
	0.9nm,0.3s,baz=120,slow=9.0,SNR=8.2						
PMG	Port Moresby	17.15	122	P	P	00 44 10.4	+1.5
PMG	Port Moresby	17.15	122	P	P	00 44 10.4	+1.5
	0.8nm,0.3s,baz=265,slow=8.8,SNR=4.3						
FITZ	Fitzroy Crossi	18.86	201	P	P	00 44 25.5	-2.3
FITZ				S	Sn	00 47 46.8	-12
FITZ	Fitzroy Crossi	18.86	201	P	P	00 44 25.5	-2.3
	0.9nm,0.3s,baz=24,slow=12,SNR=11						
FITZ				S	Sn	00 47 46.8	-12
	0.4nm,0.3s,baz=323,slow=20,SNR=3.3						
FITZ				LR	LR	00 51 02.0	
	comp=Z,217nm,19.5s,baz=41,slow=35						
WRAB	Tennant Creek	19.52	175	eP	P	00 44 34.6	-0.5
WRA	Warramunga Arr	19.53	175	P	P	00 44 34.7	-0.5
WRA				S	S	00 48 04.2	-10
WRA	Warramunga Arr	19.53	175	P	P	00 44 34.7	-0.5
	1.7nm,0.3s,baz=353,slow=11,SNR=30						
WRA				S	S	00 48 04.2	-10
	0.4nm,0.3s,baz=358,slow=23,SNR=4.8						
SBUM	Sibu	20.45	278	P	Pn	00 44 47.4	-0.1
AS31	Alice Springs	23.19	177	eP	P	00 45 13.8	-0.7
ASAR	Alice Springs	23.20	177	P	P	00 45 14.2	-0.3
ASAR				S	S	00 49 28.9	+4.7
ASAR	Alice Springs	23.20	177	P	P	00 45 14.2	-0.3
	16nm,0.8s,baz=354,slow=12,SNR=62						
ASAR				S	S	00 49 28.8	+4.7
	5.0nm,1.0s,baz=0.2,slow=24,SNR=6.8						
CTA	Charters Tower	23.79	146	P	P	00 45 20.9	+0.7
CTA	Charters Tower	23.79	146	P	P	00 45 20.9	+0.7
	6.3nm,0.7s,baz=316,slow=11,SNR=6.1						
STKA	Stephens Creek	32.50	165	eP	P	00 46 37.2	-0.8
STKA	Stephens Creek	32.50	165	P	P	00 46 36.9	-1.1
	4.5nm,0.9s,baz=341,slow=10,SNR=11						
JNU	Nakatsue	33.35	358	P	P	00 46 45.4	-0.1
JNU	Nakatsue	33.35	358	P	P	00 46 45.4	-0.1
	2.5nm,0.4s,baz=156,slow=4.7,SNR=9.7						
PSI	Prapat	33.69	276	P	P	00 46 48.5	-0.3
PSI	Prapat	33.69	276	P	P	00 46 48.5	-0.3
	9.4nm,0.7s,baz=91,slow=4.4,SNR=5.9						
CMAR	Chiang Mai Arr	37.89	301	P	P	00 47 25.6	+0.9
CMAR	Chiang Mai Arr	37.89	301	P	P	00 47 25.6	+0.9
	0.7nm,0.4s,baz=130,slow=6.9,SNR=6.6						
SONM	Songino Array	53.11	338	P	P	00 49 23.9	-0.9
SONM	Songino Array	53.11	338	P	P	00 49 23.9	-0.9
	0.9nm,0.7s,baz=155,slow=11,SNR=3.6						
MK31	Makanchi Array	64.20	324	eP	P	00 50 42.2	+0.2
MKAR	Makanchi Array	64.20	324	P	P	00 50 42.2	+0.3
MKAR	Makanchi Array	64.20	324	P	P	00 50 42.2	+0.3
	3.8nm,0.8s,baz=116,slow=7.8,SNR=40						
TKM2	Tokmak 2	66.61	318	eP	P	00 50 52.8	-5.1
	3.4nm,1.0s						
ZAA0	Zalesovo Array	66.87	332	eP	P	00 50 58.6	-0.4
ZALV	Zalesovo Beam	66.87	332	P	P	00 50 59.1	+0.2
ZALV	Zalesovo Beam	66.87	332	P	P	00 50 59.1	+0.2
	1.6nm,0.7s,baz=122,slow=5.4,SNR=8.6						
KURK	Kurchatov	68.29	326	eP	P	00 51 07.9	-0.1
	4.3nm,0.8s						
KKAR	Karatay Array	70.14	317	eP	P	00 51 19.9	+0.2
	0.9nm,0.6s						
ABKAR	Akbulak array	78.95	320	eP	P	00 52 10.1	-0.6
	2.8nm,0.9s						
MAW	Mawson	81.98	201	P	P	00 52 26.5	0.0
MAW	Mawson	81.98	201	P	P	00 52 26.5	0.0
	2.6nm,0.6s,baz=51,slow=5.1,SNR=5.1						
ILAR	Eielson Array	86.34	25	P	P	00 52 47.5	-1.3
ILAR	Eielson Array	86.34	25	P	P	00 52 47.5	-1.3
	0.8nm,0.7s,baz=253,slow=4.6,SNR=11						
QSPA	South Pole Qui	89.56	180	eP	P	00 53 03.8	-0.5
	7.8nm,0.9s						
LVC	Limon Verde	149.08	139	PKPbc	PKPbc	00 59 57.8	+1.4
LVC	Limon Verde	149.08	139	PKPbc	PKPbc	00 59 57.8	+1.4
	baz=221,slow=8.2						
CPUP	Villa Florida	151.82	161	PKPbc	PKPbc	01 00 02.2	-0.2
CPUP				PKPab	PKPab	01 00 12.5	+1.2
CPUP	Villa Florida	151.82	161	PKPbc	PKPbc	01 00 02.2	-0.2
	2.4nm,0.7s,baz=201,slow=2.1,SNR=12						
CPUP				PKPab	PKPab	01 00 12.5	+1.2
	0.3nm,0.4s,baz=172,slow=1.9,SNR=6.6						

IDC 09 00:47:46.4±50.0**, 18°.46S**×**177°.45W, h0**km**, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.8**/19**, mbtmp4.1**/3**, Error ellipse: s-maj=918.7km s-min=166.5km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.17	242	P	P	00 55 15.1	-1.0
	1.0nm,0.6s,baz=67,slow=7.7,SNR=3.2						
WRA	Warramunga Arr	45.43	260	P	P	00 56 08.0	+0.6
	0.9nm,0.3s,baz=92,slow=7.5,SNR=7.6						
ASAR	Alice Springs	45.52	255	P	P	00 56 07.8	-0.2
	2.8nm,0.5s,baz=93,slow=8.3,SNR=37						

CASC ***09*** *00:51:39.6±1.2, 13°.52N×90°.65W, h24km±4km, MD3.8, ML3.9*

ISCJB ***09*** *00:51:39.1±0.8, 13°.54N±0°.08×90°.67W±0°.05, h79km±6km, mb3.6/7, Error ellipse: s-maj=14.0km s-min=6.0km az=29.6*

IDC ***09*** *00:51:52.3±7.0, 14°.28N×90°.16W, h148km±46km, mb3.3/7, mb1 3.5/9, mb1mx3.3/24, mbtmp3.3/9, MS3.3/2, Ms1 3.3/2, ms1mx2.8/19, Error ellipse: s-maj=59.8km s-min=32.5km az=179.0*

ISC 09 00:51:40.3±1.2**, 13°.59N**±0°.08×**90°.64W**±0°.05**, h68**km±9km**, n31,** σ1s**20**/39**, mb3.7**/7**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCG	Pacaya	0.80	2	eP	Pn	00 51 56.0	-0.5
PCG				eS	Sn	00 52 08.1	-0.4
FUG	Fuego 3	0.88	347	eP	Pn	00 51 57.0	-0.4
RTR	El Retiro	1.01	72	eP	Pn	00 51 58.3	-0.7
RTR				eS	Sn	00 52 13.7	+0.8
SBLS	San Blas	1.02	76	eP	Pn	00 51 58.2	-1.0
NBG	Las Nubes	1.03	16	eP	Pn	00 52 00.2	+0.8
NBG				eS	Sn	00 52 15.2	+1.7
SNJE	San Jose	1.04	74	eP	Pn	00 51 58.7	-0.7
RBDL	Robledal	1.06	60	eP	Pn	00 51 59.1	-0.5
JAT	Jato	1.21	307	eP	Pn	00 52 01.8	+0.4
JAT				eS	Sn	00 52 17.7	+0.5
BOQS	Boqueron	1.33	84	eP	Pn	00 52 02.9	-0.3
SNET	Serv Nac Est T	1.37	86	eP	Pn	00 52 03.3	-0.3
SNET				AML	AML	00 52 25.5	
	comp=Z,2µm,0.2s						
MTO2	Montecristo 2	1.48	57	eP	Pn	00 52 04.5	-0.7
LFU	La Fuente	1.49	84	eP	Pn	00 52 05.0	-0.1
LFRS	El Faro	1.53	89	eP	Pn	00 52 05.7	0.0
LBRS	Las Brisas	1.56	84	eP	Pn	00 52 05.7	-0.3
MRL	Marmol	1.73	32	eP	Pn	00 52 09.4	+0.9
MRL				eS	Sn	00 52 32.5	+2.7
SNVI	San Vicente	1.75	89	eP	Pn	00 52 09.0	+0.3
SNVI				eS	Sn	00 52 31.8	+1.7
VSM	San Miguel	2.30	94	eP	Pn	00 52 17.4	+1.1
BLLM	Bellamira	2.34	93	eP	Pn	00 52 17.3	+0.7
CAHU	Cacacuatique	2.36	85	eP	Pn	00 52 16.7	-0.3
CNCH	Conchagua	2.75	96	eP	Pn	00 52 23.0	+0.8
TEIG	Tepich	6.98	19	P	Pn	00 53 20.9	+1.1
	comp=Z,8.3nm,0.3s,baz=190,slow=3.4,SNR=32						
TXAR	Lajitas Array	19.78	324	P	Pn	00 56 08.0	+0.7
	comp=Z,0.1nm,0.3s,baz=152,slow=12,SNR=16						
TXAR				PcP	PcP	01 00 22.7	+1.6
	comp=Z,0.0nm,0.3s,baz=150,slow=2.0,SNR=3.5						
TKL	Tuckaleechee C	22.83	15	P	P	00 56 36.2	-1.5
	comp=Z,1.7nm,0.5s,baz=192,slow=12,SNR=5.4						
TKL				LR	LR	01 05 58.1	
	comp=Z,53nm,18.6s,baz=191,slow=38						
ATAH	Atahualpa	23.91	149	LR	LR	01 04 41.4	
	comp=Z,78nm,19.0s,baz=91,slow=32						
PDAR	Pinedale Array	33.35	334	P	P	00 58 13.5	+1.3
	comp=Z,0.2nm,0.6s,baz=144,slow=9.6,SNR=2.6						
NVAR	Mina Array Bea	34.83	320	P	P	00 58 27.8	+2.8
	comp=Z,2.3nm,0.7s,baz=133,slow=8.2,SNR=13						
NVAR				PcP	PcP	01 00 57.9	+0.9
	comp=Z,0.7nm,0.6s,baz=160,slow=2.9,SNR=4.2						
ULM	Lac du Bonnet	36.81	354	P	P	00 58 39.4	-2.1
	comp=Z,1.2nm,0.5s,baz=188,slow=7.1,SNR=3.4						
SCHQ	Schefferville	45.16	19	P	P	00 59 47.6	-2.5
	comp=Z,1.2nm,0.5s,baz=225,slow=11,SNR=6.0						
YKA	Yellowknife Ar	51.73	346	P	P	01 00 39.1	-1.4
	comp=Z,0.2nm,0.6s,baz=137,slow=7.1,SNR=7.3						
YKA				PcP	PcP	01 01 53.1	+0.2
	comp=Z,0.1nm,0.4s,baz=148,slow=4.3,SNR=5.6						
ILAR	Eielson Array	63.74	337	P	P	01 02 04.8	+0.2
	comp=Z,0.3nm,0.7s,baz=178,slow=5.3,SNR=4.5						
CMAR	Chiang Mai Arr	146.78	343	PKPbc	PKPbc	01 11 15.5	-0.1
	comp=Z,2.1nm,0.6s,baz=338,slow=3.0,SNR=8.5						

IDC ***09*** *01:07:55.0±0.7, 25°.49N×109°.78W, h0km, mb4.1/7, mb1 4.3/13, mb1mx4.1/29, mbtmp4.0/13, ML3.7/6, MS4.0/18, Ms1 4.0/18, ms1mx3.9/36, Error ellipse: s-maj=21.0km s-min=10.4km az=99.0*

ISCJB ***09*** *01:07:56.0±0.3, 25°.52N±0°.03×109°.76W±0°.04, h10km, mb4.4/30, MS4.0/12, Error ellipse: s-maj=5.1km s-min=3.7km az=147.7*

NEIC ***09*** *01:07:57.4±0.4, 25°.48N×109°.84W, h10km, mb4.4/42, Error ellipse: s-maj=6.2km s-min=4.4km az=50.0*

MEX ***09*** *01:07:57.8±0.3, 25°.60N×109°.88W, h7km±7km, MD4.4*

ISC 09 01:07:57.4±0.5**, 25°.56N**±0°.04×**109°.80W**±0°.06**, h10**km**, n348,** σ1s**29**/334**, mb4.5**/30**, MS4.0**/12**, 84C-91D, Gulf of California**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.53	198	Pn	Pn	01 08 22.3	-2.4
LPIG				Lg	Lg	01 08 40.9	
LPIG	La Paz	1.53	198	eP	Pn	01 08 22.1	-2.6
LPIG				i S	Sn	01 08 41.2	-3.4
LPIG	La Paz	1.53	198	Pn	Pn	01 08 22.3	-2.4
	1.8nm,0.3s,baz=45,slow=1.4,SNR=40						
LPIG				Lg	Lg	01 08 40.9	
	11nm,0.3s,baz=0.0,slow=0.0,SNR=18						
MAIG	Mazatlaan	3.88	127	i P	Pn	01 08 56.6	-0.5
MAIG				i S	Sn	01 09 41.9	-1.0
HPIG		3.96	69	i P	Pn	01 08 57.5	-0.9
HPIG				i S	Sn	01 09 43.6	-1.4
CGIG		5.05	18	eP	Pn	01 09 11.7	-1.7
CGIG				i S	Sn	01 10 08.9	-3.0
319A	Douglas	5.81	4	P	Pn	01 09 21.6	-2.2
	baz=5.9,SNR=48						
319A				⇑S	Sn	01 10 26.1	-4.4
	baz=5.9						
320A	Kipp Ranch, An	5.86	11	⇑P	Pn	01 09 22.9	-1.6
	baz=6.0,SNR=27						
320A				⇓S	Sn	01 10 28.3	-3.6
	baz=6.0						
626A	Big Bend Ranch	6.41	50	P	Pn	01 09 29.9	-2.1
	baz=6.5,SNR=15						
626A				⇓S	Sn	01 10 42.4	-3.0
	baz=6.5						
220A	Playas Peak, P	6.42	10	⇑P	Pn	01 09 30.1	-2.0
	baz=6.5,SNR=32						
220A				⇑S	Sn	01 10 43.1	-2.4
	baz=6.5						
TXAR	Lajitas Array	6.62	54	Pn	Pn	01 09 32.6	-2.2
TXAR				Lg	Lg	01 11 18.8	
TXAR	Lajitas Array	6.62	54	Pn	Pn	01 09 32.6	-2.2
	0.9nm,0.3s,baz=229,slow=14,SNR=33						
TXAR				Lg	Lg	01 11 18.8	
	6.1nm,0.3s,baz=243,slow=27,SNR=5.2						
TXAR				LR	LR	01 12 35.4	
	comp=Z,577nm,21.0s,baz=20,slow=42						
221A	Mesquite Ranch	6.66	15	⇑P	Pn	01 09 34.1	-1.4
	baz=6.8,SNR=16						
425A	Indio Mountain	6.72	38	⇑P	Pn	01 09 35.9	-0.4
	baz=6.8,SNR=21						
526A	Mary Lane Ranc	6.76	47	⇓P	Pn	01 09 35.9	-0.9
	baz=6.8,SNR=21						
TUC	Tucson	6.78	353	ePn	Pn	01 09 35.4	-1.6
TUC				eSn	Sn	01 10 54.3	0.0
TUC				eSg	Sg	01 11 27.9	-7.1
214A	Organ Pipe Nat	6.89	338	⇓P	Pn	01 09 38.2	-0.4
	baz=7.0,SNR=18						
222A	Williams Famil	6.94	19	⇓P	Pn	01 09 38.6	-0.6
	baz=7.0,SNR=9.3						
324A	Moseley Ranch,	6.98	32	⇓P	Pn	01 09 39.1	-0.8
	baz=7.1						
120A	U Bar Ranch, L	7.03	8	⇑P	Pn	01 09 39.1	-1.5
	baz=7.1,SNR=22						
527A	Woodward Ranch	7.13	49	⇑P	Pn	01 09 41.1	-0.9
	baz=7.2						
121A	Cookes Peak, D	7.17	14	⇑P	Pn	01 09 41.9	-0.5
	baz=7.3,SNR=52						
325A	Bean Ranch, Si	7.18	35	⇓P	Pn	01 09 41.9	-0.7
	baz=7.3						
426A	McDonald Obser	7.20	44	⇓P	Pn	01 09 42.0	-1.0
	baz=7.3,SNR=24						
MNTX	Cornudas Mount	7.24	31	ePn	Pn	01 09 42.3	-1.0
	34nm,0.7s						
MNTX				ePg	Pg	01 10 11.1	-5.0
MNTX				eSg	Sg	01 11 41.0	-8.9
Z20A	Nine Sixteen R	7.60	8	P	Pn	01 09 47.6	-0.7
	baz=7.7,SNR=55						
326A	Caldwell Ranch	7.69	40	⇓P	Pn	01 09 49.2	-0.3
	baz=7.8,SNR=20						
528A	Cox Ranch, San	7.71	52	⇓P	Pn	01 09 50.1	+0.2
	baz=7.8						
427A	Hayter Ranch,	7.72	46	⇑P	Pn	01 09 49.4	-0.6
	baz=7.8,SNR=10						
225A	Deer Hill, Car	7.85	33	⇑P	Pn	01 09 51.2	-0.6
	baz=8.0,SNR=13						
Z21A	St. Cloud Mine	7.94	13	⇓P	Pn	01 09 51.9	-1.1
	baz=8.1,SNR=47						
Z22A	Elephant Butte	8.05	17	⇓P	Pn	01 09 53.9	-0.7
	baz=8.2,SNR=41						
124A	Stringfield Ra	8.06	27	⇓P	Pn	01 09 54.7	-0.1
	baz=8.2,SNR=16						
GDL2	Guadalupe Moun	8.15	35	ePn	Pn	01 09 57.9	+2.0
GDL2				eLg	Lg	01 12 11.0	
226B	Tecolote Peak,	8.16	36	⇓P	Pn	01 09 55.6	-0.3
	baz=8.3						
Z14A	Wintersburg	8.24	341	⇑P	Pn	01 09 57.1	+0.2
	baz=8.3						
Z23A	Rita Site, Whi	8.28	21	⇓P	Pn	01 09 57.6	-0.1
	baz=8.4,SNR=43						
Y20A	Horse Springs,	8.41	8	⇓P	Pn	01 09 59.6	+0.1
	baz=8.5,SNR=10.0						
328A	Wristen Ranch,	8.45	45	⇓P	Pn	01 10 00.6	+0.6
	baz=8.5						
Y21A	Point of Rocks	8.62	12	⇑P	Pn	01 10 03.0	+0.6
	baz=8.7,SNR=20						
GLA	Glamis	8.65	331	ePn	Pn	01 10 02.3	-0.4
GLA	Glamis	8.65	331	P	Pn	01 10 02.4	-0.4
	baz=8.7,SNR=11						
126A	Clayton Basin,	8.68	34	⇓P	Pn	01 10 04.2	+1.0
	baz=8.8						
Y22A	Socorro	8.70	16	P	Pn	01 10 02.8	-0.7
	baz=8.8,SNR=19						
530A	J-C Ranch, Com	8.77	57	⇑P	Pn	01 10 04.3	-0.1
	baz=8.8						
Y14A	Wickenburg	8.80	342	⇑P	Pn	01 10 04.6	-0.1
	baz=8.9,SNR=9.3						
Z25A	Roswell	8.88	29	⇑P	Pn	01 10 05.6	-0.3
	baz=9.0						
LENM	Lemitar	8.92	15	ePn	Pn	01 10 07.9	+1.4
LENM				eLg	Lg	01 12 33.4	
X18A	Snowflake	8.94	359	⇑P	Pn	01 10 06.6	-0.1
	baz=9.1,SNR=12						
X16A	Lo Mia Camp, P	8.94	351	⇑P	Pn	01 10 06.7	0.0
	baz=9.0,SNR=42						
Y23A	Lovelace Mesa,	8.95	20	⇑P	Pn	01 10 07.0	+0.1
	baz=9.1,SNR=36						
BNM	Barren Site	8.99	17	ePn	Pn	01 10 07.0	-0.5
	183nm,1.7s						
BNM				eLg	Lg	01 12 36.7	
X20A	Quemado	9.02	7	⇑P	Pn	01 10 08.2	+0.3
	baz=9.1						
X21A	Alamocita Cree	9.02	11	⇓P	Pn	01 10 08.8	+0.8
	baz=9.1,SNR=17						
LAZ	Ladron	9.11	14	ePn	Pn	01 10 08.6	-0.5
	13nm,1.0s						
LAZ				eLg	Lg	01 12 42.8	
Y12C	Blythe	9.13	334	⇑P	Pn	01 10 09.8	+0.6
	baz=9.2,SNR=5.3						
LPM	Los Pinos Moun	9.14	17	ePn	Pn	01 10 12.1	+2.5
Y24A	Capitan	9.16	23	⇓P	Pn	01 10 10.6	+0.9
	baz=9.3,SNR=12						
X22A	Bernardo	9.23	15	⇓P	Pn	01 10 10.8	0.0
	baz=9.4						
MONP	Monument Peak	9.31	323	⇑P	Pn	01 10 12.0	+0.1
	baz=9.4						
531A	Rocksprings	9.39	59	⇓P	Pn	01 10 13.0	+0.3
	baz=9.5						
128A	Castleberry Fa	9.51	41	⇑P	Pn	01 10 14.9	+0.5
	baz=9.6						
X23A	Hourglass Bar	9.52	18	⇓P	Pn	01 10 15.0	+0.3
	baz=9.6,SNR=39						
W18A	Petrified Fore	9.52	0	⇓P	Pn	01 10 16.5	+1.7
	baz=9.6,SNR=5.2						
431A	Sonora	9.59	56	⇓P	Pn	01 10 15.6	+0.1
	baz=9.7,SNR=16						
W20A	Ramah	9.60	6	⇓P	Pn	01 10 16.3	+0.5
	baz=9.7,SNR=15						
Z27A	Tatum	9.62	35	⇑P	Pn	01 10 16.8	+0.8
	baz=9.7						
632A	Uvalde	9.72	64	⇓P	Pn	01 10 17.6	+0.2
	baz=9.8,SNR=6.7						
IRM	Iron Mountain	9.74	333	P	Pn	01 10 18.2	+0.6
	baz=9.8,SNR=5.7						
ANMO	Albuquerque	9.79	16	ePn	Pn	01 10 20.0	+1.6
ANMO				eLg	Lg	01 12 56.8	
ANMO				Lg	Lg	01 13 03.7	
ANMO	Albuquerque	9.79	16	Pn	Pn	01 10 19.4	+1.0
	0.1nm,0.3s,baz=202,slow=12,SNR=16						
ANMO				Lg	Lg	01 13 03.7	
	1.7nm,0.3s,baz=121,slow=9.2,SNR=7.7						
532A	Rocksprings	9.87	60	⇓P	Pn	01 10 20.7	+1.3
	baz=9.9						
PFO	Pinyon Flat Ob	9.89	326	Pn	Pn	01 10 20.3	+0.6
PFO	Pinyon Flat Ob	9.89	326	Pn	Pn	01 10 20.3	+0.6
	0.1nm,0.3s,baz=153,slow=7.6,SNR=5.0						
PFO				LR	LR	01 14 05.3	
	comp=Z,362nm,18.2s,baz=319,slow=37						
WUAZ	Wupatki	10.01	353	ePn	Pn	01 10 20.8	-0.6
	32nm,1.0s						
WUAZ				eLg	Lg	01 13 09.3	
WUAZ	Wupatki	10.01	353	⇑P	Pn	01 10 21.5	0.0
	baz=10,SNR=9.2						
331A	San Angelo	10.04	53	⇓P	Pn	01 10 21.7	-0.1
	baz=10						
W23A	Werner Place,	10.07	17	⇓P	Pn	01 10 21.8	-0.5

baz=10,SNR=6.4
Y27A Causey 10.10 33 ⇓P Pn 01 10 22.9 +0.3
baz=10
JCT Junction City 10.10 59 ePn Pn 01 10 22.8 +0.3
JCT Junction City 10.10 59 ⇓P Pn 01 10 23.2 +0.7
baz=10
W13A Hualapai Mount 10.13 341 ⇓P Pn 01 10 24.6 +1.4
baz=10,SNR=32
V20A Brimhall 10.27 6 ⇑P Pn 01 10 24.5 -0.5
baz=10,SNR=11
432A Menard 10.29 57 ⇓P Pn 01 10 25.0 -0.2
baz=10
W24A Lazy 6 Ranch, 10.34 20 ⇑P Pn 01 10 27.8 +1.9
baz=10,SNR=14
MSTX Muleshoe 10.36 34 ⇑P Pn 01 10 27.0 +0.7
baz=10
V21A Milan 10.38 10 ⇑P Pn 01 10 28.0 +1.5
baz=10,SNR=5.1
GMRC Granite Mounta 10.49 333 ⇓P Pn 01 10 27.4 -0.5
baz=11
V22A San Miguel Ran 10.61 13 ⇑P Pn 01 10 30.7 +1.0
baz=11,SNR=33
V23A Ortiz Mt. (NFS 10.62 16 ⇑P Pn 01 10 29.3 -0.4
baz=11,SNR=7.3
W25A X Bar L Ranch, 10.67 24 ⇑P Pn 01 10 31.1 +0.7
baz=11
U20A Newcomb 10.83 6 P Pn 01 10 35.4 +2.7
baz=11,SNR=9.1
U21A Nageezi 10.98 9 ⇓P Pn 01 10 37.2 +2.3
baz=11,SNR=20
U15A North Rim 11.04 349 ⇑P Pn 01 10 38.3 +2.7
baz=11,SNR=15
U22A Llaves 11.07 12 ⇑P Pn 01 10 38.4 +2.3
baz=11,SNR=6.8
U23A El Rito 11.17 15 P Pn 01 10 39.8 +2.5
baz=11,SNR=9.7
V25A Rancho No Teng 11.17 22 ⇓P Pn 01 10 39.8 +2.5
baz=11,SNR=5.9
AMTX Amarillo 11.64 35 ePn Pn 01 10 44.5 +0.8
MVCO Mesa Verde 11.66 5 ePn Pn 01 10 46.0 +1.9
MVCO eLg Lg 01 14 06.0
MVCO Mesa Verde 11.66 5 P Pn 01 10 46.0 +1.9
baz=12,SNR=11
U25A Circle Dot Ran 11.75 22 ⇑P Pn 01 10 48.1 +2.9
baz=12
U26A Atchley Ranch, 11.98 24 ⇓P Pn 01 10 51.1 +2.7
baz=12
S18A Hurst Farm, Bl 12.09 359 P Pn 01 10 52.0 +2.0
baz=12,SNR=17
S21A Coal Bank Pass 12.18 8 P Pn 01 10 53.7 +2.4
baz=12,SNR=6.7
S20A Disappointment 12.29 5 ⇓P Pn 01 10 54.1 +1.4
baz=12,SNR=5.6
ARVC Arvin 12.30 323 ⇓P Pn 01 10 55.5 +2.8
baz=12
CCUT Cedar City 12.33 347 ePn Pn 01 10 57.3 +4.1
MPMC Manual Prospec 12.37 330 ⇓P Pn 01 10 55.4 +1.7
baz=12
ISA Isabella 12.53 326 ePn Pn 01 10 55.2 -0.5
PV01 Paradox Valley 12.58 4 ePn Pn 01 10 58.5 +1.9
639nm,0.9s
PV01 eLg Lg 01 14 32.9
R20A Redvale 12.64 5 P Pn 01 10 59.5 +1.9
baz=13,SNR=8.8
SDCO Great Sand Dun 12.68 16 ePn Pn 01 10 59.1 +1.0
T26A Comanche Natio 12.73 23 ⇓P Pn 01 11 01.3 +2.6
baz=13
PV04 Paradox Valley 12.81 3 ePn Pn 01 11 01.5 +1.7
PV04 eLg Lg 01 14 36.7
R22A Saguache, Gunn 12.89 11 ⇓P Pn 01 11 03.1 +2.2
baz=13
S25A Robets Cordova 12.89 19 ⇓P Pn 01 11 03.2 +2.3
baz=13
VES Vestal, Richgr 12.98 324 ⇓P Pn 01 11 04.9 +3.1
baz=13
R23A Moffat 13.03 14 ⇑P Pn 01 11 05.5 +2.6
baz=13
MSU Marysvale 13.07 352 ePn Pn 01 11 05.9 +2.7
SMMC Simmler 13.10 320 ⇓P Pn 01 11 06.8 +3.3
baz=13
GRAC Grapevine Rang 13.10 332 P Pn 01 11 07.3 +3.7
baz=13,SNR=8.4
HKT Hockley 13.12 67 ePn Pn 01 11 05.0 +1.2
Q16A Castle Valley 13.37 355 P Pn 01 11 10.6 +3.2
baz=14,SNR=13
Q20A Ridgley Place, 13.41 5 ⇑P Pn 01 11 09.8 +1.8
baz=14
R11A Troy Canyon, C 13.65 340 ⇑P Pn 01 11 14.1 +2.8
baz=14,SNR=10.0
S28A Manter 13.74 27 ⇓P Pn 01 11 12.0 -0.5
baz=14
SMCO Snowmass 13.78 9 ePn Pn 01 11 16.6 +3.4
P17A Butcher Ranch, 13.89 357 ⇑P Pn 01 11 16.8 +2.3
baz=14
MTUM Tungsten Hills 13.92 330 ePn Pn 01 11 19.2 +4.3
R27A Eads 14.00 23 ⇑P Pn 01 11 17.4 +1.4
baz=14
P18A Preston Nutter 14.03 359 ⇓P Pn 01 11 17.8 +1.3
baz=14
P21A Newcastle 14.06 8 P Pn 01 11 19.5 +2.6
baz=14,SNR=15
R28A Tribune 14.43 26 ⇓P Pn 01 11 22.3 +0.5
baz=14,SNR=6.1
O20A White River Ci 14.59 5 ⇓P Pn 01 11 25.6 +1.5
baz=15,SNR=7.0
ISCO Idaho Springs 14.62 13 ePn Pn 01 11 25.6 +0.9
ISCO Idaho Springs 14.62 13 ⇓P Pn 01 11 26.2 +1.6
baz=15,SNR=6.6
NV11 Mina Array Sit 14.64 333 ePn Pn 01 11 27.0 +2.2
NATX Nacogdoches 14.65 62 ePn Pn 01 11 25.5 +0.7
NVAR Mina Array Bea 14.70 333 Pn Pn 01 11 28.2 +2.5
NVAR Mina Array Bea 14.70 333 Pn Pn 01 11 28.2 +2.5
0.1nm,0.3s,baz=156,slow=14,SNR=8.0
NVAR LR LR 01 16 27.6
comp=Z,270nm,19.5s,baz=213,slow=35
O19A Miners Draw (B 14.71 2 ⇑P Pn 01 11 26.8 +1.2
baz=15
DUG Dugway 14.81 351 ePn Pn 01 11 28.9 +1.9
O22A Kremmling 14.81 10 ⇑P Pn 01 11 29.1 +1.9
baz=15,SNR=8.7
DAU Daniels Canyon 14.86 356 ePn Pn 01 11 28.3 +0.5
O23A Lake Granby, G 14.96 12 ⇓P Pn 01 11 31.3 +2.1
baz=15
JLU Jordanelle 15.06 355 ePn Pn 01 11 32.0 +1.5
25nm,1.3s
N21A Black Mountain 15.28 7 P Pn 01 11 36.1 +2.8
baz=15,SNR=15
N20A Spence Gulch, 15.28 4 ⇓P Pn 01 11 35.1 +1.7
baz=15,SNR=15,
CMB Columbia Colle 15.33 327 ePn Pn 01 11 35.8 +1.9
8.3nm,1.0s
N22A Wattenberg Ran 15.45 10 ⇑P Pn 01 11 37.9 +2.2
baz=16,SNR=6.8
N23A Red Feather La 15.62 11 ⇓P Pn 01 11 38.4 +0.5
baz=16
ELK Elko 15.80 345 ePn Pn 01 11 41.4 +1.2
ELK Lg Lg 01 16 25.4
ELK Elko 15.80 345 Pn Pn 01 11 41.8 +1.6
0.2nm,0.3s,baz=174,slow=9.2,SNR=14
ELK Lg Lg 01 16 25.4
baz=118,slow=19,SNR=4.9
ELK LR LR 01 17 57.7
comp=Z,930nm,18.5s,baz=167,slow=38
M20A Sweetwater, Wa 15.94 4 ⇑P P 01 11 44.3 -1.3
baz=16
WCN Washoe City 16.05 331 ePn Pn 01 11 45.7 +2.3
37nm,1.2s
BMN Battle Mountai 16.07 339 ePn Pn 01 11 44.2 +0.6
30nm,1.1s
HWUT Hardware Ranch 16.07 355 ePn Pn 01 11 44.9 +1.4
47nm,1.3s
M21A Separation Pea 16.13 7 ⇓P Pn 01 11 46.3 +1.9
baz=16
HVU Hansel Valley 16.36 352 ePn Pn 01 11 49.0 +1.7
155nm,2.4s
N27A Anderson Farm, 16.36 20 ⇓P Pn 01 11 48.5 +1.2
baz=16
L20A Wamsutter 16.45 4 ⇓P Pn 01 11 48.8 +0.3
baz=17
L21A Rawlins 16.48 6 ⇓P Pn 01 11 49.6 +0.7
baz=17
L19A Farson 16.50 1 ⇑P Pn 01 11 48.9 -0.3
baz=17,SNR=8.5
MIAR Mount Ida 16.64 54 ePn P 01 11 54.5 +1.2
34nm,1.5s
BEKR Beckworth 16.78 331 ePn P 01 11 55.0 +0.1
18nm,1.1s
L23A Garrett 16.85 11 ⇓P Pn 01 11 54.3 +0.7
baz=17
K18A Toltan Ranch, 17.03 359 ⇑P Pn 01 11 55.8 -0.1
baz=17
K20A Yellowstone Ra 17.09 4 ⇓P Pn 01 11 55.8 -0.8
baz=17,SNR=9.9
K21A Alcova 17.16 6 ⇑P Pn 01 11 58.5 +1.1
baz=17
BW06 Boulder Array 17.16 1 eP Pn 01 11 57.6 +0.1
14nm,0.9s
PDAR Pinedale Array 17.16 1 P Pn 01 11 57.4 -0.2
PDAR Lg Lg 01 16 57.6
PDAR Pinedale Array 17.16 1 P Pn 01 11 57.4 -0.2
0.1nm,0.3s,baz=170,slow=12,SNR=32
PDAR Lg Lg 01 16 57.7
0.0nm,0.3s,baz=185,slow=34,SNR=3.5
PDAR LR LR 01 18 52.2
comp=Z,1µm,18.7s,baz=191,slow=38
K19A Absolon Red Bu 17.24 2 ⇑P Pn 01 11 58.6 +0.2
baz=17,SNR=5.5
K22A Casper 17.26 8 ⇓P P 01 12 00.2 0.0
baz=17
K16A Soda Springs 17.29 356 ⇓P P 01 12 01.0 +0.5
baz=17
K23A Bowen Ranch, D 17.49 10 ⇑P Pn 01 12 02.1 +0.6
baz=18
J18A Kendall Valley 17.61 359 ⇓P Pn 01 12 03.4 +0.4
baz=18,SNR=10
UALR University of 17.65 55 eP P 01 12 05.9 +1.5
20nm,1.0s
J19A Crowheart 17.67 2 P Pn 01 12 04.4 +0.6
baz=18,SNR=23
J16A Bone 17.73 356 ⇑P Pn 01 12 05.2 +0.7
baz=18
J17A Brown Place, J 17.77 358 ⇓P Pn 01 12 04.5 -0.6
baz=18
RRI2 Red Ridge 17.78 356 eP P 01 12 06.8 +0.8
14nm,1.1s
J20A Shoshoni 17.80 4 P P 01 12 07.2 +1.1
baz=18,SNR=15
J21A Lysite 17.84 6 ⇓P P 01 12 06.9 +0.2
baz=18
SNOW Snow King Moun 17.87 358 eP Pn 01 12 06.5 +0.1
17nm,1.0s
TPAW Teton Pass 17.91 357 eP Pn 01 12 07.3 +0.5
25nm,1.3s
J15A Blackfoot 17.92 354 ⇑P Pn 01 12 06.8 -0.1
baz=18,SNR=6.7
J14A Carey 17.98 351 ⇑P P 01 12 09.2 +1.2
baz=18
J22A Midwest 18.01 8 ⇑P P 01 12 09.1 +0.6
baz=18,SNR=13
LOHW Long Hollow 18.02 358 eP Pn 01 12 08.4 +0.3
13nm,1.1s
I18A Diamond G Ranc 18.09 360 P P 01 12 10.0 +0.5
baz=18,SNR=15
J13A Cove Ranch, Pi 18.15 350 ⇓P P 01 12 11.2 +1.3
baz=18,SNR=9.8
MOOW Moose Ponds 18.16 358 eP Pn 01 12 09.7 -0.2
34nm,1.8s
IMW Indian Meadow 18.31 357 eP Pn 01 12 12.3 +0.5
14nm,1.0s
I21A Big Trails, Te 18.32 6 ⇑P P 01 12 12.8 +0.9
baz=18,SNR=8.0
I17A Pilgrim Ck. 18.32 358 ⇑P P 01 12 12.8 +0.8
baz=18
WVOR Wild Horse Val 18.33 339 eP P 01 12 13.3 +1.3
24nm,1.3s
HLID Hailey 18.35 349 eP P 01 12 12.8 +0.6
5.9nm,0.9s
HLID Hailey 18.35 349 ⇓P P 01 12 12.9 +0.8
baz=18,SNR=8.2
I20A Worland 18.39 4 P Pn 01 12 13.7 +1.1
baz=18,SNR=12
I19A Meeteetse 18.44 2 ⇓P Pn 01 12 13.9 +0.6
baz=19
MOD Modoc 18.46 335 eP P 01 12 13.5 +0.1
38nm,1.1s
MFID Camas Ranch 18.48 346 eP Pn 01 12 14.2 +0.6
18nm,1.3s
MFID Camas Ranch 18.48 346 ⇓P Pn 01 12 14.2 +0.6
baz=19,SNR=6.3
I22A 9 Mile Ranch, 18.48 8 P Pn 01 12 14.2 +0.5
baz=19,SNR=7.8
I13A Wildhorse Cree 18.64 350 ⇓P Pn 01 12 16.7 +1.0
baz=19,SNR=14
I12A Atlanta 18.70 348 ⇓P Pn 01 12 17.5 +1.1
baz=19,SNR=14
H20A Greybull 18.94 4 P P 01 12 19.2 +0.6
baz=19,SNR=9.3
H18A Shoshone NF, C 19.07 0 P Pn 01 12 21.4 +0.4
baz=19,SNR=11
H19A Powell 19.07 2 P Pn 01 12 21.7 +0.8
baz=19,SNR=5.6
RSSD Black Hills 19.10 13 eP Pn 01 12 22.8 +1.5
QLMT Earthquake Lak 19.27 356 eP Pn 01 12 25.9 +2.6
YBH Yreka Blue Hor 19.34 330 LR LR 01 19 17.3
comp=Z,346nm,19.9s,baz=334,slow=35
MCMT McKenzie Canyo 19.38 353 eP Pn 01 12 25.5 +0.9
11nm,1.3s
H12A Diamond D Ranc 19.38 349 P Pn 01 12 25.3 +0.7
baz=20,SNR=38
H24A Dirks Ranch, A 19.61 11 ⇑P P 01 12 25.7 -0.3
baz=20,SNR=7.7
G20A Bridger 19.66 3 ⇑P P 01 12 26.3 -0.1
baz=20,SNR=10
G15A Dillon 19.68 354 ⇓P Pn 01 12 28.7 +0.5
baz=20,SNR=8.1
G18A Lazy EL Ranch, 19.71 1 ⇑P P 01 12 28.0 +0.9
baz=20,SNR=13
G21A Lodge Grass 19.73 5 ⇑P P 01 12 27.2 0.0
baz=20
G13A Cobalt 19.81 351 ⇑P Pn 01 12 29.6 -0.1
baz=20,SNR=9.0
G22A Birney 19.82 7 ⇑P P 01 12 28.1 0.0
baz=20
DLMT Dillon 19.88 354 eP Pn 01 12 32.0 +1.4
13nm,1.1s
G12A Big Creek, Yel 20.02 349 ⇓P P 01 12 31.8 +1.3
baz=20
BOZ Bozeman (W) 20.09 356 eP P 01 12 32.3 +1.0
15nm,1.5s
BMO Blue Mountains 20.18 344 eP P 01 12 32.9 +0.8
12nm,1.0s
GCMT Greycliff 20.18 0 eP P 01 12 31.6 -0.7
18nm,1.5s
F16A Kennard Place, 20.23 356 ⇓P Pn 01 12 35.2 +0.5
baz=20
F20A Billings 20.24 3 ⇑P P 01 12 33.6 +0.9
baz=20,SNR=5.0
F19A Roth Farm, Mol 20.26 2 ⇑P P 01 12 33.2 +0.2
baz=20
F18A Big Timber 20.30 0 P P 01 12 34.8 +1.4
baz=20,SNR=11
LCCM Lewis and Clar 20.30 356 P Pn 01 12 35.3 -0.2
F17A Fitzpatrick Pl 20.31 358 ⇑P P 01 12 35.0 +1.4
baz=20,SNR=9.5
LRM Limekiln Ridge 20.33 355 eP Pn 01 12 35.5 -0.5
F15A Butte 20.35 355 P Pn 01 12 35.7 -0.5
baz=20,SNR=13
PARMO Parma 20.38 52 eP Pn 01 12 35.8 -0.6
F23A Volborg 20.42 9 ⇓P P 01 12 34.8 +0.1
baz=21
F13A Darby 20.51 351 ⇑P P 01 12 36.9 +1.2
baz=21,SNR=28
TEIG Tepich 20.52 101 LR LR 01 21 35.4
comp=Z,376nm,21.7s,baz=316,slow=40
F12A Elk City 20.62 349 ⇓P P 01 12 37.7 +0.8
baz=21,SNR=25
F24A Ekalaka 20.69 11 ⇑P P 01 12 38.0 +0.4
baz=21
BRSD Miller 20.79 22 ⇑P P 01 12 38.8 +0.1
baz=21
E19A Rath Farm, Rou 20.87 2 ⇓P P 01 12 40.5 +0.9
baz=21
E17A Martinsdale 20.87 358 ⇑P P 01 12 40.8 +1.1
baz=21,SNR=10.0
E20A Meyer Farm, Mu 20.94 3 P P 01 12 40.9 +0.6
baz=21,SNR=16
E15A Deer Lodge 20.94 355 P P 01 12 41.2 +0.8
baz=21,SNR=5.3
E18A Harlowton 20.96 360 ⇑P P 01 12 41.3 +0.7
baz=21
E14A Clinton 21.02 353 ⇑P P 01 12 41.9 +0.6
baz=21,SNR=9.8
ECSD EROS Data Cent 21.08 27 eP P 01 12 41.8 0.0
9.2nm,0.9s
E13A Victor 21.13 352 P P 01 12 43.4 +1.0
baz=21,SNR=13
HRY Holter Researc 21.17 356 eP P 01 12 44.3 +1.5
E23A Ismay 21.20 9 ⇓P P 01 12 43.6 +0.5
baz=21,SNR=5.7
LRAL Lakeview Retre 21.21 64 eP P 01 12 44.3 +1.0
21nm,0.9s
E24A Baker 21.41 10 ⇑P P 01 12 45.3 -0.1
baz=22,SNR=6.1
D16A Dana Ranch, Ca 21.47 357 P P 01 12 47.4 +1.2
baz=22,SNR=14
MSO Missoula 21.48 352 eP P 01 12 47.2 +1.0
7.5nm,1.0s
MSO Missoula 21.48 352 P P 01 12 46.9 +0.7
baz=22,SNR=12
CHMT Chamberlain Mo 21.48 354 eP P 01 12 46.2 -0.1
D20A Manuel Ranch, 21.53 3 ⇓P P 01 12 47.0 +0.4
baz=22,SNR=8.8
D15A Lincoln 21.54 355 ⇑P P 01 12 47.3 +0.4
baz=22,SNR=6.3
D17A Six Diamond Ra 21.56 358 ⇑P P 01 12 46.8 -0.3
baz=22,SNR=9.6
WVT Waverly 21.56 56 eP P 01 12 48.8 +1.7
18nm,0.9s
D19A Cripps Ranch, 21.57 2 ⇓P P 01 12 47.4 +0.3
baz=22,SNR=11
D21A La Casta Ranch 21.58 5 ⇑P P 01 12 47.7 +0.5
baz=22
D14A Greenough 21.68 353 ⇓P P 01 12 48.9 +0.6
baz=22,SNR=22
D22A Cohagen 21.73 7 ⇑P P 01 12 49.9 +1.0
baz=22
D13A Huson 21.80 351 P P 01 12 50.5 +0.8
baz=22,SNR=9.3
SLMT Seeley Lake 21.83 353 eP P 01 12 50.8 +0.8
D23A Lindsay 21.87 8 ⇓P P 01 12 50.9 +0.6
baz=22
D12A Red Ives Fores 21.89 350 ⇓P P 01 12 51.3 +0.7
baz=22
C17A Wharram Farm, 22.04 358 P P 01 12 53.0 +0.9
baz=22,SNR=12
C19A Slack Wire Ran 22.14 1 ⇑P P 01 12 54.2 +1.1
baz=22
C20A Veseth Ranch, 22.15 3 P P 01 12 54.2 +0.8
baz=22,SNR=9.0
SWMT Swartz Lake 22.15 352 eP P 01 12 53.4 -0.1
HAWA Hanford 22.19 342 eP P 01 12 54.4 +0.7
10nm,0.9s
C16A Fuhringer Ranc 22.25 357 ⇑P P 01 12 55.1 +0.7
baz=22
C15A Salmond Ranch, 22.28 355 ⇓P P 01 12 55.4 +0.6
baz=22
C21A Desert Coulee 22.32 5 ⇑P P 01 12 56.6 +1.4
baz=22
C24A Savage 22.33 10 ⇑P P 01 12 55.9 +0.6
baz=22
C22A Vida 22.36 7 ⇓P P 01 12 56.3 +0.8
baz=22
C14A Swan Lake 22.38 353 ⇑P P 01 12 55.7 -0.1
baz=22
C13A Hot Springs 22.39 352 ⇑P P 01 12 56.3 +0.3
baz=22
EGMT Eagleton 22.42 0 eP P 01 12 57.4 +1.1
26nm,1.1s
EGMT Eagleton 22.42 0 P P 01 12 57.5 +1.3
baz=22,SNR=12
USIN University of 22.46 51 eP P 01 12 58.7 +2.1
C23A Lambert 22.50 8 P P 01 12 57.6 +0.6
baz=23,SNR=11
OLIL Olney 22.52 49 eP P 01 12 58.3 +1.0
38nm,0.9s
C12B Naegeli Ranch, 22.55 350 ⇑P P 01 12 58.0 +0.3
baz=23
ASR Mount Adams--S 22.61 338 P P 01 13 01.4 +3.1
SWET Sewanee 22.68 59 eP P 01 13 04.7 +5.6
72nm,1.9s
HDIL Hopedale 22.70 44 eP P 01 12 59.8 +0.6
20nm,0.7s
B18A Beardsley Farm 22.79 0 ⇓P P 01 13 01.2 +1.1
baz=23
C11A Tepee Creek (N 22.81 349 ⇑P P 01 13 00.7 +0.4
baz=23
B16A M & M Farms, S 22.86 357 ⇓P P 01 13 02.0 +1.1
baz=23
B14A Marquette Ranc 22.92 354 ⇑P P 01 13 02.8 +1.2
baz=23
B13A Whitefish 23.06 352 P P 01 13 03.6 +0.6
baz=23,SNR=5.9
LON Longmire 23.21 339 eP P 01 13 05.3 +0.8
16nm,1.0s
DGMT Dagmar 23.29 9 eP P 01 13 06.2 +0.9
NEW Newport 23.38 348 eP P 01 13 05.4 -0.8
133nm,2.6s
NEW Newport 23.38 348 P P 01 13 04.8 -1.4
3.1nm,0.7s,baz=150,slow=10,SNR=9.4
NEW LR LR 01 22 48.1
comp=Z,273nm,20.1s,baz=188,slow=38
NEW Newport 23.38 348 ⇓P P 01 13 06.3 +0.1
baz=24,SNR=8.2
WTV Waterville 23.50 343 P P 01 13 08.7 +1.2
ETW Entiat 23.52 342 P P 01 13 07.7 0.0
A14A Double T Ranch 23.54 354 P P 01 13 08.0 +0.1
baz=24,SNR=6.3
JFWS Jewell Farm 23.59 38 eP P 01 13 09.1 +0.8
A13A Flathead Natio 23.61 352 ⇓P P 01 13 09.4 +1.0
baz=24
WALA Waterton Lakes 23.67 353 eP P 01 13 08.9 -0.2
0.4nm,1.1s
TIGA Tifton 23.74 70 ⇓P P 01 13 10.4 +0.6
baz=24
BLO Bloomington 23.81 50 eP P 01 13 12.8 +2.3
21nm,0.9s
CPCT Cooper Cave 23.85 60 eP P 01 13 12.2 +1.3
GOGA Godfrey 24.18 65 eP P 01 13 13.9 -0.1
21nm,1.1s
TKL Tuckaleechee C 24.49 60 eP P 01 13 18.6 +1.7
TKL Tuckaleechee C 24.49 60 P P 01 13 16.9 +0.1
3.4nm,0.6s,baz=213,slow=11,SNR=5.2
TKL LR LR 01 23 42.4
comp=Z,528nm,18.8s,baz=13,slow=39
TZTN Tazewell 24.94 58 eP P 01 13 21.6 +0.7
36nm,1.3s
AGMN Agassiz Nation 25.20 22 eP P 01 13 23.4 +0.4
7.7nm,1.0s
KMSC Kings Mountain 26.28 62 ⇓P P 01 13 34.0 +0.9
baz=26
ULM Lac du Bonnet 26.89 20 P P 01 13 39.0 +0.7
ULM Lac du Bonnet 26.89 20 P P 01 13 39.0 +0.7
2.8nm,0.5s,baz=229,slow=11,SNR=2.7
ULM LR LR 01 24 12.1
comp=Z,354nm,18.3s,baz=266,slow=36
JTS JuntasAbangare 28.02 118 eP P 01 13 49.8 +0.9
26nm,0.9s
DLBC Dease Lake 35.83 342 eP P 01 14 58.4 +1.4
YKA Yellowknife Ar 37.06 356 P P 01 15 06.5 -0.8
YKA Yellowknife Ar 37.06 356 P P 01 15 06.5 -0.8
1.6nm,0.8s,baz=176,slow=8.2,SNR=40
OTAV Otavalo 39.37 125 eP P 01 15 27.4 -0.4
14nm,1.6s
SDV Santo Domingo 40.73 107 eP P 01 15 43.5 +4.6
8.0nm,0.8s
ILAR Eielson Array 45.85 339 P P 01 16 19.9 +0.5
ILAR Eielson Array 45.85 339 P P 01 16 19.9 +0.5
1.2nm,0.7s,baz=146,slow=7.0,SNR=15
ILAR LR LR 01 35 36.1
comp=Z,100nm,18.4s,baz=147,slow=36
TRF Thorofare Moun 46.20 336 eP P 01 16 22.6 +0.2
8.3nm,0.8s
PPLA Purkeypile 46.60 335 eP P 01 16 26.3 +0.8
16nm,1.2s
SAML Samuel 56.87 121 eP P 01 17 42.2 -0.5
6.9nm,1.4s
PPT Papeete 57.76 226 LR LR 01 36 24.0
comp=Z,138nm,20.3s,baz=6.0,slow=30
PPT2 Papeete2 57.77 226 eLR LR 01 34 30.1
172nm,27.2s
LPAZ La Paz 58.11 131 eP P 01 17 51.0 -1.1
4.3nm,1.3s
LVC Limon Verde 62.17 137 eP P 01 18 20.1 +0.7
21nm,1.4s
PETK Petropavlovsk- 71.42 321 LR LR 01 48 48.6
comp=Z,21nm,18.7s,baz=239,slow=34
SPITS Spitsbergen Ar 71.94 10 LR LR 01 51 52.4
comp=Z,359nm,18.8s,baz=295,slow=37
CPUP Villa Florida 72.28 132 P P 01 19 21.9 -1.3
CPUP Villa Florida 72.28 132 P P 01 19 21.9 -1.3
0.7nm,0.4s,baz=300,slow=6.1,SNR=6.0
ARCES ARCESS Array B 79.87 15 LR LR 01 56 22.4
comp=Z,102nm,19.1s,baz=132,slow=36

NOA	NORSAR Array B	81.47	25	LR	LR	01 54 49.2	
	comp=Z,67nm,21.1s,baz=0.0,slow=34						
FINES	FINESS Array B	86.28	20	P	P	01 20 38.6	-0.5
FINES	FINESS Array B	86.28	20	P	P	01 20 38.6	-0.5
	2.2nm,0.9s,baz=303,slow=6.4,SNR=4.1						
MJAR	Matsushiro Arr	91.03	312	LR	LR	01 56 02.6	
	comp=Z,62nm,18.6s,baz=50,slow=32						
ZALV	Zalesovo Beam	99.81	351	LR	LR	02 13 59.1	
	comp=Z,61nm,20.3s,baz=40,slow=40						
WRA	Warramunga Arr	121.07	261	PKP	PKPdf	01 26 51.6	+0.6
WRA	Warramunga Arr	121.07	261	PKP	PKPdf	01 26 51.6	+0.6
	0.2nm,0.3s,baz=80,slow=3.4,SNR=4.5						
ASAR	Alice Springs	122.56	257	PKP	PKPdf	01 26 52.8	-1.0
ASAR	Alice Springs	122.56	257	PKP	PKPdf	01 26 52.8	-1.0
	0.2nm,0.4s,baz=83,slow=2.1,SNR=2.6						
KAPI	Kappang	128.39	285	*e*PKPdf	PKPdf	01 27 06.8	+1.6

OTT 09 01:11:34.5±0.4, 78°.03N×107°.52W, h18km, ML3.7/4, 124km southwest from Isachsen, Nu Gustaf-Lougheed Arch Seismic Zone., Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RES	Resolute Bay	4.49	132	PN	Pn	01 12 41.3	-0.1
RES				SN	Sn	01 13 30.7	-2.3
RES				Trac		01 13 36.7	
	comp=Z,3.6nm,0.1s						
EUNU	Eureka	4.49	53	PN	Pn	01 12 41.3	-0.2
EUNU				SN	Sn	01 13 29.1	-4.1
EUNU				Trac		01 13 45.5	
	comp=Z,3.8nm,0.4s						
CB31	Cambridge Bay	8.98	174	PN	Pn	01 13 41.8	-1.2
CB31				mb		01 13 46.4	
	comp=Z,6.2nm,0.2s						
CB31				SN	Sn	01 15 16.6	-6.7
CB31				Trac		01 15 43.7	
	comp=Z,6.8nm,0.2s						
GIFN	Gifford Fjord,	10.62	125	PN	Pn	01 14 03.9	-1.5
GIFN				SN	Sn	01 15 54.8	-8.9
LAIN	Lailor River,	11.10	131	PN	Pn	01 14 11.8	-0.2
LAIN				SN	Sn	01 16 06.0	-9.3
KUGN	Kugaaruk Camp,	11.12	144	PN	Pn	01 14 10.2	-2.1
KUGN				SN	Sn	01 16 12.8	-3.2
ILON	Igloolik, Nuna	11.14	127	PN	Pn	01 14 09.9	-2.6
ILON				SN	Sn	01 16 08.5	-7.8
STLN	Stellar Camp,	11.54	151	PN	Pn	01 14 15.8	-2.3
STLN				SN	Sn	01 16 19.4	-6.9
SRLN	Sarcpa Lake, N	11.64	132	PN	Pn	01 14 19.3	0.0
JERN	Jeri Cho Mine,	12.13	188	PN	Pn	01 14 25.0	-1.1
JERN				mb		01 14 26.0	
	comp=Z,0.5nm,0.3s						
JERN				SN	Sn	01 16 30.8	-10
JERN				Trac		01 16 53.5	
	comp=Z,0.9nm,0.2s						
INK	Inuvik	12.14	231	PN	Pn	01 14 24.6	-1.6
INK				mb		01 14 28.3	
	comp=Z,0.3nm,0.2s						
INK				SN	Sn	01 16 31.5	-9.4
INK				Trac		01 16 43.9	
	comp=Z,3.2nm,0.9s						
BULN	Bullion Camp,	12.42	152	PN	Pn	01 14 27.9	-2.1
BULN				SN	Sn	01 16 39.7	-8.0
NUNN	Nunuq Camp, NU	13.78	150	PN	Pn	01 14 47.6	-0.9
NUNN				SN	Sn	01 17 13.2	-7.6
CTLN	Castor Lake	13.91	195	PN	Pn	01 14 50.3	-0.2
CTLN				SN	Sn	01 17 14.4	-10
GALN	Gameti Lake	14.30	198	PN	Pn	01 14 53.6	-2.1
GALN				SN	Sn	01 17 21.2	-12
COKN	Cook Lake	14.84	182	PN	Pn	01 14 59.4	-3.6
COKN				SN	Sn	01 17 30.9	-16
YKW3	Yellowknife Ar	15.71	192	*e*P	Pn	01 15 07.4	-7.0
YKW3	Yellowknife Ar	15.71	192	PN	Pn	01 15 07.4	-7.0
YKW3				mb		01 15 08.1	
	comp=Z,2.0nm,0.7s						
YKW3				SN	Sn	01 17 55.3	-12
YKW3				Trac		01 18 09.2	
	comp=Z,0.6nm,0.4s						

ISCJB 09 01:36:44.2±0.6, 37°.03N±0°.04×71°.50E±0°.09, h106km, mb3.2/1, Error ellipse: s-maj=10.8km s-min=5.1km az=160.5
IDC 09 01:36:47.8±7.6, 37°.48N×70°.95E, h99km±69km, mb3.0/1, mb1 3.1/5, mb1mx2.9/30, mbtmp3.1/5, ML3.5/4, Error ellipse: s-maj=126.4km s-min=47.8km az=132.0
NNC 09 01:36:50.5±3.6, 37°.44N×71°.36E, h109km±64km, mb3.0, mpv3.7, Error ellipse: s-maj=30.6km s-min=22.2km az=16.0

ISC 09 01:36:44.5±0.9, 37°.11N±0°.06×71°.43E±0°.10, h106km, n21, σ1s.74/26, 2C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.32	19	P	Pn	01 38 03.7	+1.8
	SNR=40						
UCH	Uchtor	5.64	24	P	Sn	01 39 08.9	-1.1
	SNR=20						
KZA	Kyzart	5.78	30	P	Pn	01 38 10.6	+2.5
	SNR=7.8						
EKS2	Erkin-Say	5.84	17	P	Pn	01 38 11.1	+2.4
	SNR=7.5						
THN	Thein Dam	5.85	142	*e*PKP	Pn	01 38 09.0	+0.3
THN				*e*S	Sn	01 39 12.5	-1.9
AAK	Ala-Archa	6.00	22	P	Pn	01 38 13.2	+2.2
	SNR=20						
AAK	Ala-Archa	6.00	22	P	Pn	01 38 12.7	+1.8
	5.4nm,0.3s,baz=162,slow=6.2,SNR=54						
AAK				S	Sn	01 39 17.1	-1.3
	2.8nm,0.3s,baz=150,slow=20,SNR=12						
KK31	Karatay Array	6.03	354	⇑P	Pn	01 38 13.4	+2.1
	1.8nm,0.2s,baz=175,slow=12,SNR=239						
KK31				⇑S	Sn	01 39 17.1	-1.8
	2.5nm,0.3s,baz=162,slow=18,SNR=7.7						
DHRM	DHARAMSHALA	6.29	139	*e*PKP	Pn	01 38 14.3	-0.7
DHRM				*e*S	Sn	01 39 18.9	-6.6
DHRM				AML	AML	01 39 24.4	
	comp=N,92nm,0.2s						
DHRM				AML	AML	01 39 24.7	
	comp=E,128nm,0.4s						
CHMS	Chumysh	6.42	22	P	Pn	01 38 18.3	+1.9
	SNR=10						
USP	Ospenovka	6.59	20	P	Pn	01 38 20.3	+1.5
	SNR=8.4						
TKM2	Tokmak 2	6.63	28	⇓P	Pn	01 38 21.1	+1.6
	comp=E,4.2nm,0.5s						
TKM2				⇓S	Sn	01 39 34.2	+0.5
	comp=E,2.6nm,0.6s						
TKM2	Tokmak 2	6.63	28	P	Pn	01 38 21.3	+1.8
	SNR=12						
SMLA	Simla	7.63	140	*e*PKP	Pn	01 38 33.0	+0.1
SMLA				*e*S	Sn	01 39 48.0	-10
SMLA				AML	AML	01 39 57.6	
	comp=E,42nm,0.3s						
SMLA				AML	AML	01 39 58.1	
	comp=N,48nm,0.6s						
DDI	Dehra Dun	8.73	139	*e*PKP	Pn	01 38 48.4	+0.4
MKAR	Makanchi Array	12.60	36	P	Pn	01 39 40.9	+1.1
	comp=N,0.0nm,0.3s,baz=221,slow=13,SNR=4.8						
KURBB	Kurchatov Arra	14.44	18	P	P	01 40 06.0	-1.4
	comp=N,0.0nm,0.3s,baz=207,slow=10,SNR=3.4						
AB31	Akbulak array	14.73	329	P	P	01 40 08.2	-2.4
	comp=N,0.3nm,0.3s,baz=154,slow=9.2,SNR=27						
AKTO	Aktyubinsk	16.44	328	⇓P	P	01 40 31.9	+2.4
	comp=N,0.5nm,1.4s						
AKTO				⇓S	Sn	01 43 29.3	-1.6
ZALV	Zalesovo Beam	19.22	25	P	Pn	01 41 02.6	+0.5
	comp=N,0.3nm,0.3s,baz=230,slow=10.0,SNR=7.0						
TORD	Torodi Ar. Bea	66.08	269	P	P	01 47 21.8	+1.3
	comp=N,0.4nm,0.9s,baz=48,slow=6.6,SNR=3.1						

TAP 09 01:37:12.4, 23°.03N×120°.18E, h17km, ML2.5, 1D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAI1	Yung-k'ang	0.05	77	⇓*i*P	Pg	01 37 15.9	+0.4
	baz=80						
TAI1				*i*S	Sg	01 37 18.4	+0.7
	baz=80						
SCLT	Jiali	0.15	6	*i*P	Pb	01 37 17.0	+0.3
	baz=9.0						
SCLT				*i*S	Sb	01 37 20.6	+1.0
	baz=9.0						
CHN3	Shinhua	0.18	75	*i*P	Pb	01 37 17.7	+0.5
	baz=75						
CHN3				S	Sb	01 37 21.6	+1.1
	baz=75						
TWM1	Shoushan	0.30	132	*e*P	Pn	01 37 21.4	-0.8
	baz=131						
CHN1	Nanshi	0.36	64	P	Pb	01 37 20.6	+0.2
	baz=64						
CHN1				S	Sb	01 37 26.6	+0.9
	baz=64						
TWK	Hsinying	0.37	50	*e*P	Pb	01 37 21.1	+0.5
	baz=52						
TWK				*e*S	Sb	01 37 27.1	+0.9
	baz=52						
WTP	Ta-pu	0.46	62	*e*P	Pb	01 37 22.1	0.0
	baz=62						
WTP				*e*S	Sb	01 37 29.7	+1.1
	baz=62						
CHN4	Tsaushan	0.50	50	P	Pb	01 37 23.0	+0.2
	baz=50						
CHN4				*e*S	Sb	01 37 30.6	+0.8
	baz=50						
WDGT	Dungji	0.53	296	*i*P	Pb	01 37 23.7	+0.5
	baz=295						
WDGT				S	Sb	01 37 31.4	+0.9
	baz=295						
CHN5	Tsauling	0.73	39	P	Pb	01 37 26.8	0.0
	baz=39						
CHN5				S	Sg	01 37 37.6	+0.9
	baz=39						
ALS	Alishan	0.75	50	P	Pg	01 37 27.5	-0.1
	baz=50						
ALS				S	Sg	01 37 38.5	+0.7
	baz=50						
SCZT	Fangliau	0.77	148	*e*P	Pn	01 37 29.2	+0.8
	baz=147						
PNG	Penghu	0.78	313	*e*P	Pb	01 37 27.7	+0.1
	baz=313						
PNG				*e*S	Sg	01 37 38.6	+0.5
	baz=313						
ELDTW	Lidau	0.79	78	*e*P	Pg	01 37 28.3	+0.2
	baz=78						
ELDTW				*e*S	Sn	01 37 40.0	-0.4
	baz=78						
TYC	Yuchr	1.07	36	*e*P	Pn	01 37 32.6	0.0
	baz=36						
TYC				*e*S	Sn	01 37 47.1	+0.1
	baz=36						
TWF1	Yuli	1.08	72	*e*P	Pg	01 37 33.5	+0.1
	baz=72						
TWF1				*e*S	Sg	01 37 47.7	+0.1
	baz=72						
HEN	Hengchun	1.14	153	*e*P	Pn	01 37 33.3	-0.3
	baz=152						

NIED 09 01:38:00, 27°.10N×130°.10E, h5km, Mw3.9 Best double couple: $M_0$8.69000×10[14] NP1:ϕ_s211.00000°, δ80.00000°, λ-101.00000°. NP2:ϕ_s80.00000°, δ15.00000°, λ-42.00000°.
IDC 09 01:38:44.2±0.8, 27°.18N×129°.78E, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.9/28, mbtmp3.9/13, ML3.9/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/48, Error ellipse: s-maj=28.4km s-min=17.9km az=78.0
JMA 09 01:38:46.9±0.1, 27°.13N×130°.05E, h61km, M3.9
ISCJB 09 01:38:46.3±1.6, 27°.16N±0°.03×130°.06E±0°.04, h28km±12km, mb4.0/17, MS4.2/1, Error ellipse: s-maj=5.5km s-min=4.6km az=16.8
NEIC 09 01:38:48.6±4.2, 27°.22N×129°.82E, h28km±30km, mb4.4/4, Error ellipse: s-maj=15.8km s-min=11.0km az=89.0

ISC 09 01:38:48.0±0.9, 27°.22N±0°.06×129°.97E±0°.07, h22km±7km, n48, σ1s.15/56, mb3.9/17, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTK	Tokunoshima	1.07	302	P	Pn	01 39 07.5	-0.1
JTK				S	Sn	01 39 22.4	+0.6
JZK	Kikaishima	1.09	0	*e*S	Sn	01 39 24.3	+1.9
JAM	Amami Oshima	1.23	345	P	Pn	01 39 09.8	-0.1
JAM				S	Sn	01 39 26.5	+0.6
JAMN	Amaminishikomi	1.24	326	P	Pn	01 39 09.7	-0.3
JAMN				*e*S	Sb	01 39 26.8	+0.6
JOW	Kunigami	1.56	256	*e*Pn	Pn	01 39 13.7	-0.7
JOW	Kunigami	1.56	256	P	Pn	01 39 14.0	-0.4
JOW				S	Sn	01 39 33.7	-0.3
JMZ	Minamidaito 2	1.79	141	P	Pn	01 39 14.4	-3.2
JMZ				S	Sn	01 39 34.6	-5.0
JIH	Iheya	1.79	265	P	Pn	01 39 17.3	-0.3
JIH				*e*S	Sn	01 39 40.7	+1.0
JJT2	Tamagusuku 2	2.26	242	P	Pn	01 39 23.8	-0.2
JJT2				*e*S	Sn	01 39 50.4	-0.9
JAGN	Aguni-jima	2.52	256	P	Pn	01 39 26.9	-0.7
JAGN				*e*S	Sn	01 39 56.9	-0.6
JNN	Nakanoshima	2.61	358	P	Pn	01 39 29.0	+0.1
JNN				*e*S	Sn	01 39 59.6	-0.4
JKE	Kume jima 2	2.98	253	P	Pn	01 39 32.9	-1.1
JKC	Kuchinoerabu	3.24	3	P	Pn	01 39 37.3	-0.2
JKC				*e*S	Sn	01 40 13.7	-1.7
JTN	Tanegashima 3	3.54	14	P	Pn	01 39 41.3	-0.3
JTN				*e*S	Sn	01 40 21.8	-1.0
JNU	Nakatsue	5.94	7	Pn	Pn	01 40 14.7	+0.1
JNU				Sn	Sn	01 41 18.8	-3.2
JNU	Nakatsue	5.94	7	Pn	Pn	01 40 14.7	+0.1
	2.9nm,0.3s,baz=203,slow=1.8,SNR=17						
JNU				Sn	Sn	01 41 18.8	-3.2
	2.2nm,0.3s,baz=90,slow=16,SNR=4.4						
KSRS	Korea Array	10.35	351	LR	LR	01 46 25.2	
	comp=Z,21nm,18.1s,baz=165,slow=44						
PMG	Port Moresby	40.04	153	*e*P	P	01 46 22.6	+0.9
	22nm,1.0s						
MKAR	Makanchi Array	42.05	311	P	P	01 46 35.4	-2.6
MKAR	Makanchi Array	42.05	311	P	P	01 46 35.4	-2.6
	0.2nm,0.4s,baz=93,slow=9.3,SNR=4.7						
ZALV	Zalesovo Beam	42.42	322	P	P	01 46 38.9	-2.0
ZALV	Zalesovo Beam	42.42	322	P	P	01 46 38.9	-2.0
	0.5nm,0.5s,baz=86,slow=10,SNR=2.4						
KURK	Kurchatov	45.19	316	*e*P	P	01 46 59.7	-3.4
	1.2nm,0.8s						
KURBB	Kurchatov Arra	45.23	315	P	P	01 47 01.8	-1.7
	0.3nm,0.3s,baz=100,slow=8.5,SNR=4.3						
WRAB	Tennant Creek	47.06	174	*e*P	P	01 47 17.5	-0.7
	5.6nm,1.0s						
WRA	Warramunga Arr	47.07	174	P	P	01 47 17.1	-1.2
WRA	Warramunga Arr	47.07	174	P	P	01 47 17.1	-1.2
	1.0nm,0.6s,baz=353,slow=8.4,SNR=4.3						
AAK	Ala-Archa	47.20	304	*e*P	P	01 47 19.7	+0.4
	0.5nm,0.5s						
ASAR	Alice Springs	50.73	175	P	P	01 47 45.9	-0.4
ASAR	Alice Springs	50.73	175	P	P	01 47 45.9	-0.4
	0.7nm,0.4s,baz=7.3,slow=13,SNR=15						
MCK	McKinley	62.05	30	*e*P	P	01 49 07.7	+1.1
	1.8nm,0.6s						
ILAR	Eielson Array	62.83	29	P	P	01 49 11.8	0.0
ILAR	Eielson Array	62.83	29	P	P	01 49 11.8	0.0
	0.4nm,0.8s,baz=265,slow=6.5,SNR=5.2						
INK	Inuvik	67.37	24	P	P	01 49 41.3	+0.2
INK	Inuvik	67.37	24	P	P	01 49 41.3	+0.2
	0.5nm,0.6s,baz=322,slow=6.6,SNR=6.9						
SPITS	Spitsbergen Ar	68.18	348	P	P	01 49 47.3	+1.1
SPITS	Spitsbergen Ar	68.18	348	P	P	01 49 47.3	+1.1
	13nm,1.1s,baz=56,slow=4.9,SNR=6.0						
KBZ	Khabaz	69.73	309	P	P	01 49 56.3	0.0
KBZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	Khabaz	69.73	309	P	P	01 49 56.3	0.0
KBZ	Khabaz	69.73	309	P	P	01 49 56.3	0.0
	comp=Z,6.2nm,1.0s,baz=18,slow=17,SNR=9.7						
KBZ	Khabaz	69.73	309	P	P	01 49 56.3	0.0
	comp=Z,6.0nm,1.0s						
FINES	FINESS Array B	72.77	331	P	P	01 50 13.6	-0.7
FINES	FINESS Array B	72.77	331	P	P	01 50 13.6	-0.7
	comp=Z,1.5nm,0.5s,baz=74,slow=6.8,SNR=12						
YKA	Yellowknife Ar	76.97	25	P	P	01 50 39.0	+0.4
YKA	Yellowknife Ar	76.97	25	P	P	01 50 39.0	+0.4
	comp=Z,0.4nm,0.8s,baz=305,slow=5.3,SNR=6.0						
BRTR	Keskin Array B	77.65	308	P	P	01 50 43.2	+0.1
BRTR	Keskin Array B	77.65	308	P	P	01 50 43.2	+0.1
	comp=Z,0.7nm,0.7s,baz=96,slow=2.9,SNR=3.4						
DAVOX	Davos/Dischmat	88.64	324	LR	LR	02 34 53.7	
	comp=Z,96nm,20.2s,baz=79,slow=38						

IDC 09 01:46:00.6±0.7, 38°.11N×22°.70E, h0km, mb4.0/22, mb1 4.1/28, mb1mx4.0/38, mbtmp3.9/28, ML3.6/6, MS3.5/8, Ms1 3.5/8, ms1mx3.0/54, Error ellipse: s-maj=14.7km s-min=12.7km az=1.0
THE 09 01:46:02.9, 38°.13N×22°.73E, h15km, ML4.3/5, Error ellipse: s-maj=0.5km s-min=0.3km az=69.0
BJI 09 01:46:02.4, 38°.82N×22°.60E, h7km, mB4.8/5, mb4.6/9, Ms4.1/2, Ms7 3.8/2
ATH 09 01:46:02.6, 38°.13N×22°.73E, h23km, MD3.4/43, ML3.9
ISCJB 09 01:46:03.3±0.2, 38°.14N±0°.01×22°.73E±0°.01, h21km±2km, mb4.3/56, MS3.8/7, Error ellipse: s-maj=2.1km s-min=1.5km az=12.9
CSEM 09 01:46:03.0±0.1, 38°.13N×22°.74E, h8km, mb4.3/36, Ms3.0, Error ellipse: s-maj=2.5km s-min=2.0km az=28.0
NEIC 09 01:46:03.5±0.6, 38°.07N×22°.80E, h13km±4km, mb4.4/43, ML3.9(ATH), Error ellipse: s-maj=4.5km s-min=3.1km az=199.0
NEIC Felt at Corinth, Loutrakion and Sikion.
MOS 09 01:46:04.7±1.1, 38°.13N×22°.80E, h33km, mb4.5/31, Error ellipse: s-maj=5.4km s-min=3.2km az=116.0

ISC 09 01:46:03.3±0.4, 38°.13N±0°.01×22°.73E±0°.01, h14km±2km, n667, σ1s.38/738, mb4.3/56, MS3.5/8, 19C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTK	Loutraki	0.21	120	P	Pg	01 46 07.8	-0.3
LTK				S	Sg	01 46 11.4	+0.1
LTK	Loutraki	0.21	120	*e*Pb	Pg	01 46 07.9	-0.2
LTK				*e*Sb	Sb	01 46 12.2	-0.7
LTK	Loutraki	0.21	120	*e*PB	Pg	01 46 07.9	-0.2
LTK				*e*SB	Sb	01 46 12.2	-0.7
LTK	Loutraki	0.21	120	P	Pg	01 46 07.8	-0.3
LTK				S	Sg	01 46 11.0	-0.3
DSF	Desfina	0.32	330	P	Pg	01 46 09.6	-0.4
DSF				S	Sg	01 46 14.7	+0.2
DSF	Desfina	0.32	330	P	Pg	01 46 09.6	-0.4
DSF				S	Sg	01 46 14.4	-0.1
GUR	Goura	0.36	238	P	Pg	01 46 10.0	-0.7
GUR				S	Sg	01 46 15.7	-0.1
GUR	Goura	0.36	238	*e*Pb	Pg	01 46 10.1	-0.7
GUR	Goura	0.36	238	*e*PB	Pg	01 46 10.1	-0.7
GUR	Goura	0.36	238	*e*Pb	Pg	01 46 10.1	-0.7
GUR				S	Sg	01 46 15.7	-0.1
KLV	Kalavryta, Ach	0.47	259	*e*Pn	Pg	01 46 12.9	+0.3
KLV	Kalavryta, Ach	0.47	259	*e*PB	Pg	01 46 12.9	+0.3
KLV	Kalavryta, Ach	0.47	259	*e*Pn	Pg	01 46 12.9	+0.3
KALE	Kalithea	0.54	299	*e*Pn	Pg	01 46 13.5	-0.4
KALE				*e*Sn	Sg	01 46 20.8	-0.2
KALE	Kalithea	0.54	299	*e*PN	Pg	01 46 13.5	-0.4
KALE				*e*SN	Sg	01 46 20.8	-0.2
KALE	Kalithea	0.54	299	P	Pg	01 46 13.4	-0.4
KALE				*e*Sn	Sg	01 46 20.8	-0.2
KALE				S	Sb	01 46 21.2	-1.0
LKR	Lokris	0.56	22	P	Pg	01 46 13.8	-0.5
LKR				S	Sg	01 46 22.2	+0.4
LKR	Lokris	0.56	22	*e*Pn	Pg	01 46 13.8	-0.5
LKR	Lokris	0.56	22	*e*PN	Pg	01 46 13.8	-0.5
LKR	Lokris	0.56	22	P	Pg	01 46 13.8	-0.5
LKR				S	Sg	01 46 21.3	-0.5
TRIZ	Trizonia	0.57	294	P	Pg	01 46 13.9	-0.6
TRIZ				S	Sg	01 46 22.4	+0.3
TRIZ	Trizonia	0.57	294	*e*PN	Pg	01 46 14.3	-0.2
TRIZ				*e*SN	Sb	01 46 22.8	-0.3
TRIZ	Trizonia	0.57	294	P	Pg	01 46 13.9	-0.6
TRIZ	Trizonia	0.57	294	*e*Pn	Pg	01 46 14.3	-0.2
TRIZ				S	Sg	01 46 22.4	+0.3
TRIZ				*e*Sn	Sb	01 46 22.8	-0.3
ATAL	Atalanti	0.60	22	P	Pg	01 46 14.6	-0.6
ATAL	Atalanti	0.60	22	P	Pg	01 46 14.6	-0.6
ATAL				S	Sg	01 46 22.7	-0.5
LAKA	Lakka	0.60	281	*e*Pn	Pg	01 46 14.6	-0.6
LAKA				*e*Sn	Sg	01 46 23.1	-0.1
LAKA	Lakka	0.60	281	*e*PN	Pg	01 46 14.6	-0.6
LAKA				*e*SN	Sg	01 46 23.1	-0.1
LAKA	Lakka	0.60	281	P	Pg	01 46 14.5	-0.6
LAKA				S	Sg	01 46 22.4	-0.8
LAKA				*e*Sn	Sg	01 46 23.1	-0.1
AXAR	Agios Charalam	0.64	355	P	Pg	01 46 15.2	-0.6
AXAR	Agios Charalam	0.64	355	P	Pg	01 46 15.2	-0.6
PSA1	Psathopyrgos	0.70	286	*e*PN	Pg	01 46 16.5	-0.4
PSA1				*e*SN	Sb	01 46 26.6	-0.2
NAIG	Nisos Aigina	0.70	122	*e*Pn	Pg	01 46 17.1	+0.1
NAIG	Nisos Aigina	0.70	122	*e*PN	Pg	01 46 17.1	+0.1
NAIG	Nisos Aigina	0.70	122	*e*Pn	Pg	01 46 17.1	+0.1
EFP	Efpalio	0.72	295	P	Pg	01 46 16.4	-0.8
EFP				S	Sg	01 46 26.9	+0.2
EFP	Efpalio	0.72	295	*e*Pn	Pg	01 46 16.8	-0.5
EFP				*e*Sn	Sg	01 46 26.3	-0.4
EFP	Efpalio	0.72	295	*e*PN	Pg	01 46 16.8	-0.5
EFP				*e*SN	Sg	01 46 26.3	-0.4
EFP	Efpalio	0.72	295	P	Pg	01 46 16.5	-0.8
EFP	Efpalio	0.72	295	*e*Pn	Pg	01 46 16.8	-0.5
EFP				*e*Sn	Sg	01 46 26.3	-0.4
DID	Didima	0.74	147	P	Pg	01 46 17.0	-0.7
DID	Didima	0.74	147	*e*Pn	Pg	01 46 17.1	-0.7
DID				*e*Sn	Sb	01 46 28.2	+0.2
DID	Didima	0.74	147	*e*PN	Pg	01 46 17.1	-0.7
DID				*e*SN	Sb	01 46 28.2	+0.2
DID	Didima	0.74	147	P	Pg	01 46 17.0	-0.7
DID				S	Sg	01 46 27.8	+0.3
DID				*e*Sn	Sb	01 46 28.2	+0.2
UPR	University Cam	0.76	282	*e*Pn	Pg	01 46 17.6	-0.5
UPR	University Cam	0.76	282	*e*PN	Pg	01 46 17.6	-0.5
UPR	University Cam	0.76	282	P	Pg	01 46 17.4	-0.7
UPR				S	Sg	01 46 27.8	-0.3
ATH	Athens Observa	0.79	101	*e*P	Pg	01 46 18.7	0.0
ATH	Athens Observa	0.79	101	*e*Pn	Pg	01 46 18.7	0.0
ATH	Athens Observa	0.79	101	*e*PN	Pg	01 46 18.7	0.0
ATH	Athens Observa	0.79	101	P	Pg	01 46 18.5	-0.2
ATH				S	Sb	01 46 29.4	-0.1
VLX	Vlachokerasia	0.81	200	P	Pg	01 46 18.1	-1.0
VLX				S	Sg	01 46 29.8	+0.1
VLX	Vlachokerasia	0.81	200	*e*Pn	Pg	01 46 18.1	-1.0
VLX				*e*Sn	Sg	01 46 29.0	-0.7
VLX	Vlachokerasia	0.81	200	*e*PN	Pg	01 46 18.1	-1.0
VLX				*e*SN	Sg	01 46 29.0	-0.7
VLX	Vlachokerasia	0.81	200	P	Pg	01 46 18.1	-1.0
VLX				*e*Sn	Sg	01 46 29.0	-0.7
VLX				S	Sg	01 46 29.8	+0.1
SMIA	Simia	0.83	26	P	Pg	01 46 18.6	-0.9
SMIA	Simia	0.83	26	P	Pg	01 46 18.6	-0.9
ATHU	Athens Univers	0.84	101	P	Pg	01 46 19.4	-0.3
ATHU				S	Sb	01 46 31.4	+0.3
PTL	Penteli	0.90	95	*e*Pn	Pg	01 46 20.6	-0.1
PTL	Penteli	0.90	95	*e*PN	Pg	01 46 20.6	-0.1
PTL	Penteli	0.90	95	P	Pg	01 46 20.2	-0.5
PTL	Penteli	0.90	95	*e*Pn	Pg	01 46 20.6	-0.1
PTL				S	Sg	01 46 32.6	+0.2
AGG	Agios Georgios	0.94	341	*e*P	Pb	01 46 20.8	-0.7
AGG	Agios Georgios	0.94	341	*e*Pn	Pb	01 46 20.8	-0.7
AGG	Agios Georgios	0.94	341	*e*PN	Pb	01 46 20.8	-0.7
AGG	Agios Georgios	0.94	341	P	Pb	01 46 20.3	-1.2
AGG	Agios Georgios	0.94	341	*e*Pn	Pb	01 46 20.8	-0.7
AGG				S	Sb	01 46 33.5	-0.5
MAKR	Makrakomi, Fth	1.00	332	P	Pb	01 46 21.6	-0.9
MAKR	Makrakomi, Fth	1.00	332	P	Pb	01 46 21.6	-0.9
RLS	Riolos of Patr	1.00	266	P	Pb	01 46 21.1	-1.4
RLS	Riolos of Patr	1.00	266	*e*Pn	Pb	01 46 21.4	-1.1
RLS	Riolos of Patr	1.00	266	*e*PN	Pb	01 46 21.4	-1.1
RLS	Riolos of Patr	1.00	266	P	Pb	01 46 21.2	-1.3
RLS				S	Sb	01 46 35.2	-0.4
EVR	Evrytania	1.07	318	P	Pb	01 46 22.3	-1.4
EVR	Evrytania	1.07	318	*e*Pn	Pb	01 46 23.1	-0.6
EVR	Evrytania	1.07	318	*e*PN	Pb	01 46 23.1	-0.6
EVR	Evrytania	1.07	318	P	Pb	01 46 22.5	-1.2
EVR	Evrytania	1.07	318	*e*Pn	Pb	01 46 23.1	-0.6
EVR				S	Sg	01 46 38.5	+0.6
ITM	Ithomi	1.15	214	P	Pb	01 46 23.4	-1.6
ITM	Ithomi	1.15	214	*e*Pn	Pb	01 46 23.8	-1.2
ITM	Ithomi	1.15	214	*e*PN	Pb	01 46 23.8	-1.2
ITM	Ithomi	1.15	214	P	Pb	01 46 23.7	-1.2
ITM				S	Sn	01 46 40.6	+0.1
NEO	Neokhori	1.23	18	*e*PN	Pn	01 46 26.1	-0.2
NEO	Neokhori	1.23	18	*e*Pn	Pn	01 46 26.1	-0.2
XOR	Xorichti	1.28	16	P	Pn	01 46 26.7	-0.2
XOR				S	Sg	01 46 45.0	+0.2
AOS	Alonnisos	1.37	40	*e*PN	Pn	01 46 28.1	0.0
AOS	Alonnisos	1.37	40	*e*Pn	Pn	01 46 28.1	0.0
AOS				S	Sn	01 46 46.0	-0.1

DYR	Agios Nikonas	1.40	193	ePN	Pn	01 46 28.6	0.0
DYR	Agios Nikonas	1.40	193	ePn	Pn	01 46 28.6	0.0
DYR				S	Sn	01 46 46.6	-0.3
VLI	Veliai	1.42	173	ePN	Pn	01 46 28.7	-0.1
VLI	Veliai	1.42	173	ePn	Pn	01 46 28.7	-0.1
VLI				S	Sn	01 46 47.2	-0.1
PYL	PYLOS	1.46	213	ePN	Pn	01 46 29.8	+0.4
PYL	PYLOS	1.46	213	P	Pn	01 46 29.4	0.0
PYL	PYLOS	1.46	213	ePn	Pn	01 46 29.8	+0.4
PYL				S	Sg	01 46 51.0	+0.5
THL	Klokotos Trika	1.54	339	ePN	Pb	01 46 31.6	0.0
THL	Klokotos Trika	1.54	339	ePn	Pb	01 46 31.6	0.0
VLS	Valsamata	1.69	272	ePN	Pb	01 46 33.8	-0.5
VLS	Valsamata	1.69	272	ePn	Pb	01 46 33.8	-0.5
KYTH	Kithira	1.86	172	ePN	Pn	01 46 36.0	+1.1
KYTH	Kithira	1.86	172	ePn	Pn	01 46 36.0	+1.1
PAIG	Paliouri	1.94	22	ePB	Pn	01 46 35.7	-0.2
LIT	Litokhoron	1.98	355	ePN	Pn	01 46 37.0	+0.6
LIT	Litokhoron	1.98	355	ePn	Pn	01 46 37.0	+0.6
KZN	Kozani	2.30	341	ePB	Pn	01 46 42.3	+1.4
ANKY	Antikythira Is	2.31	168	ePN	Pn	01 46 41.5	+0.6
ANKY	Antikythira Is	2.31	168	ePn	Pn	01 46 41.5	+0.6
PLG	Polygyros	2.31	14	ePN	Pn	01 46 41.0	0.0
PLG	Polygyros	2.31	14	ePn	Pn	01 46 41.0	0.0
APE	Apeiranthos	2.46	115	eP	Pn	01 46 43.5	+0.4
APE	Apeiranthos	2.46	115	ePN	Pn	01 46 43.3	+0.2
APE	Apeiranthos	2.46	115⇑	iP	Pn	01 46 43.3	+0.2
APE	Apeiranthos	2.46	115⇑	iP	Pn	01 46 43.3	+0.2
LIA	Limnos Island	2.60	46	ePn	Pn	01 46 44.9	-0.1
LIA	Limnos Island	2.60	46	ePN	Pn	01 46 44.9	-0.1
LIA	Limnos Island	2.60	46	ePn	Pn	01 46 44.9	-0.1
LSK	Leskovik	2.61	321	ePG	Pb	01 46 49.4	-0.6
LSK				iSG	Sb	01 47 24.7	+2.7
LSK	Leskovik	2.61	321	ePg	Pb	01 46 49.4	-0.6
LSK				iSg	Sb	01 47 24.7	+2.7
SOH	Sokhos	2.73	10	eP	Pn	01 46 47.8	+1.0
SOH	Sokhos	2.73	10	ePn	Pn	01 46 47.8	+1.0
SOH	Sokhos	2.73	10	ePN	Pn	01 46 47.8	+1.0
SOH	Sokhos	2.73	10	ePn	Pn	01 46 47.8	+1.0
KEK	Kerkira	2.78	306	ePB	Pn	01 46 49.2	+1.7
SANT	Santorini	2.79	128	ePn	Pn	01 46 48.5	+0.8
SANT				ePg	Pg	01 46 56.6	-0.3
SANT	Santorini	2.79	128	ePN	Pn	01 46 48.4	+0.7
SANT	Santorini	2.79	128	ePn	Pn	01 46 48.4	+0.7
GRG	Griva	2.83	355	eP	Pn	01 46 48.7	+0.5
GRG	Griva	2.83	355	ePn	Pn	01 46 48.7	+0.5
GRG	Griva	2.83	355	ePN	Pn	01 46 48.7	+0.5
GRG	Griva	2.83	355	ePn	Pn	01 46 48.7	+0.5
FNA	Florina	2.85	339	eP	Pn	01 46 49.7	+1.2
FNA	Florina	2.85	339	ePn	Pn	01 46 49.7	+1.2
FNA	Florina	2.85	339	ePN	Pn	01 46 49.7	+1.2
FNA	Florina	2.85	339	ePn	Pn	01 46 49.7	+1.2
VAM	Vamos	2.96	156	ePN	Pn	01 46 50.4	+0.4
VAM	Vamos	2.96	156	ePn	Pn	01 46 50.4	+0.4
PRK	Paraskevi	2.98	67	ePN	Pn	01 46 50.5	+0.2
PRK	Paraskevi	2.98	67	ePn	Pn	01 46 50.5	+0.2
URLA	Izmir	3.05	85	iP	Pn	01 46 52.4	+1.2
URLA				iS	Sg	01 47 40.8	-0.5
URLA	Izmir	3.05	85	iP	Pn	01 46 52.4	+1.2
BIA	Bitola	3.08	340	ePn	Pn	01 46 52.9	+1.2
BIA				iPg	Pb	01 46 56.6	-1.4
BIA	Bitola	3.08	340	ePn	Pn	01 46 52.9	+1.2
BOZC	Bozcaada	3.10	56	iP	Pn	01 46 51.7	-0.1
SMTH	Samothraki Isl	3.19	42	ePN	Pn	01 46 52.5	-0.6
SMTH	Samothraki Isl	3.19	42	ePn	Pn	01 46 52.5	-0.6
VAY	Valandovo	3.19	358	iPn	Pn	01 46 53.7	+0.6
VAY				iSn	Sn	01 47 29.8	-1.1
VAY				eSn	Sb	01 47 35.6	-2.8
VAY				eLg	Lg	01 47 39.0	
	comp=N,236nm,0.9s						
VAY	Valandovo	3.19	358	iPn	Pn	01 46 54.2	+1.1
VAY				iSn	Sn	01 47 30.2	-0.7
EZN	Ezine	3.27	58	eP	Pn	01 46 54.2	0.0
AYVA	Ayvalik	3.31	68	iP	Pn	01 46 54.6	-0.1
AYVA	Ayvalik	3.31	68	iP	Pn	01 46 54.6	-0.1
NVR	Nevrokopi	3.33	15	ePN	Pn	01 46 55.4	+0.3
NVR	Nevrokopi	3.33	15	ePn	Pn	01 46 55.4	+0.3
BLCB	Balcova	3.40	84	eP	Pn	01 46 57.5	+1.5
GVD	Gavdhos	3.46	161	ePn	Pn	01 46 58.8	+2.0
GVD				ePg	Pb	01 47 06.2	+1.8
GVD	Gavdhos	3.46	161	ePn	Pn	01 46 58.8	+2.0
IZM	Izmir	3.57	84	eP	Pn	01 47 00.1	+1.7
GCAM	G?zelcaml?	3.58	96	iP	Pn	01 47 00.4	+1.9
GCAM	G?zelcaml?	3.58	96	iP	Pn	01 47 00.4	+1.9
NPS	Neapolis	3.68	140	ePN	Pn	01 47 01.2	+1.3
NPS	Neapolis	3.68	140	ePn	Pn	01 47 01.2	+1.3
GELI	Tayfur-Gelibol	3.68	51	eP	Pn	01 46 60.0	+0.2
LAST	Lasithi	3.69	143	ePn	Pn	01 47 01.0	+0.9
LAST	Lasithi	3.69	143	ePN	Pn	01 47 01.0	+0.9
LAST	Lasithi	3.69	143	ePn	Pn	01 47 01.0	+0.9
ALN	Alexandroupoli	3.77	42	eP	Pn	01 47 00.6	-0.4
ALN	Alexandroupoli	3.77	42	ePn	Pn	01 47 00.6	-0.4
ALN	Alexandroupoli	3.77	42	ePN	Pn	01 47 00.6	-0.4
ALN	Alexandroupoli	3.77	42	ePn	Pn	01 47 00.6	-0.4
BODT	Bodrum	3.79	105	eP	Pn	01 47 03.8	+2.5
LPK	Lapseki	3.84	53	eP	Pn	01 47 02.5	+0.4
ERIK	Erikli-Kesan	3.87	48	eP	Pn	01 47 02.2	-0.3
TIR	Tirane	3.90	326	eP	Pn	01 47 06.0	+3.1
TIR	Tirane	3.90	326	ePn	Pn	01 47 06.0	+3.1
TIR	Tirane	3.90	326	eP	Pn	01 47 06.0	+3.1
PHP	Peshkopia	3.96	334	ePN	Pn	01 47 05.7	+1.9
PHP	Peshkopia	3.96	334	ePn	Pn	01 47 05.7	+1.9
SKO	Skopje	3.96	346	iPn	Pn	01 47 05.4	+1.7
SKO				iSn	Sn	01 47 52.7	+2.7
SKO				eLg	Lg	01 48 20.9	
	comp=Z,193nm,1.2s						
SKO	Skopje	3.96	346	iPn	Pn	01 47 01.9	-1.8
SKO				iSn	Sn	01 47 53.2	+3.2
AKHS	Akhisar	4.05	78	iP	Pg	01 47 20.9	-0.1
AKHS				iS	Sg	01 48 09.5	-4.0
AKS	Akhisar	4.05	78	eP	Pn	01 47 06.6	+1.6
MLSB	Milas	4.08	100	eP	Pn	01 47 08.1	+2.7
AYDN	Tasoluk	4.10	95	iP	Pn	01 47 08.2	+2.5
AYDN	Tasoluk	4.10	95	iP	Pn	01 47 08.2	+2.5
DAT	Datca	4.10	108	eP	Pn	01 47 08.6	+2.9
BALY	Balya	4.13	66	iP	Pn	01 47 06.9	+0.8
BALY	Balya	4.13	66	iP	Pn	01 47 06.9	+0.8
KRBG	Karabiga-Canak	4.20	56	eP	Pn	01 47 07.5	+0.5
SART	Tekirdag	4.29	52	iP	Pn	01 47 08.1	-0.1
SART	Tekirdag	4.29	52	iP	Pn	01 47 08.1	-0.1
BALB	Balikesir	4.29	68	eP	Pn	01 47 09.3	+1.1
GONE	Gonen-Balikesi	4.30	62	eP	Pn	01 47 08.8	+0.5
KARP	Karpathos	4.39	125	ePn	Pn	01 47 11.9	+2.3
KARP	Karpathos	4.39	125	ePN	Pn	01 47 11.9	+2.3
KARP	Karpathos	4.39	125	ePn	Pn	01 47 11.9	+2.3
VTS	Vitosha	4.47	4⇑	iP	Pn	01 47 12.4	+1.6
VTS	Vitosha	4.47	4⇑	iP	Pn	01 47 12.4	+1.6
PUK	Puka	4.47	332	ePN	Pn	01 47 13.4	+2.6
PUK	Puka	4.47	332	ePn	Pn	01 47 13.4	+2.6
MRMT	Marmara Adasi	4.50	55	eP	Pn	01 47 11.7	+0.5
YER	Yerkesik	4.51	101	eP	Pn	01 47 14.3	+3.0
EDC	Edincik	4.56	59	eP	Pn	01 47 13.1	+1.2
BNT	Bandirma	4.60	59	eP	Pn	01 47 13.3	+0.8
KULA	Kula-Manisa	4.68	83	eP	Pn	01 47 15.7	+2.1
TKR	Tekirdag	4.68	51	eP	Pn	01 47 14.2	+0.6
BCI	Bajram Curri	4.70	335	ePN	Pn	01 47 16.7	+2.9
BCI	Bajram Curri	4.70	335	ePn	Pn	01 47 16.7	+2.9
DURS	Dursunbey	4.71	70	iP	Pn	01 47 15.3	+1.2
DURS	Dursunbey	4.71	70	iP	Pn	01 47 15.3	+1.2
BARS	Barje	4.73	352⇑	iPn	Pn	01 47 15.8	+1.5
DEMI	Demirci	4.78	77	iP	Pn	01 47 17.0	+2.0
DEMI	Demirci	4.78	77	iP	Pn	01 47 17.0	+2.0
TIP	Timpagrande	4.79	284	ePn	Pn	01 47 17.3	+2.1
TIP				eSn	Sn	01 48 13.0	+2.4
TIP	Timpagrande	4.79	284	ePn	Pn	01 47 17.3	+2.1
TIP				eSn	Sn	01 48 13.0	+2.4
EDRB	Edirne	4.82	38	eP	Pn	01 47 15.6	0.0
DST	Dursunbey	4.82	70	eP	Pn	01 47 17.1	+1.5
TURN	Turunc	4.83	103	iP	Pn	01 47 13.5	-2.2
TURN	Turunc	4.83	103	iP	Pn	01 47 13.5	-2.2
KCTX	Karacabey (Bur	4.86	62	eP	Pn	01 47 16.7	+0.7
CRLT	Corlu	4.89	51	eP	Pn	01 47 17.2	+0.8
DALY	Dalyan (Mu˜la	4.89	104	eP	Pn	01 47 19.8	+3.4
ORLT	Orhaneli	5.16	66	eP	Pn	01 47 21.9	+1.6
SLVT	Silivri	5.24	52	eP	Pn	01 47 22.1	+0.9
MDNY	Mudanya-Bursa	5.27	63	eP	Pn	01 47 22.9	+1.2
FETY	Fethiye	5.27	105	eP	Pn	01 47 24.5	+2.8
KHAL	Karahalli	5.33	85	iP	Pn	01 47 25.1	+2.5
KHAL	Karahalli	5.33	85	iP	Pn	01 47 25.1	+2.5
KHL	Karahalli	5.35	86	eP	Pn	01 47 25.1	+2.2
ULDT	Uludag	5.37	66	iP	Pn	01 47 24.5	+1.3
ULDT	Uludag	5.37	66	iP	Pn	01 47 24.5	+1.3
CEL	Celeste	5.39	273	ePn	Pn	01 47 24.6	+1.2
CEL				eSn	Sn	01 48 26.9	+1.6
CEL	Celeste	5.39	273	ePn	Pn	01 47 24.6	+1.2
CEL				eSn	Sn	01 48 26.9	+1.6
BAI	Bari	5.41	305	ePn	Pn	01 47 25.0	+1.4
BAI				eSn	Sn	01 48 24.4	-1.2
TVSB	Tavsanli	5.42	74	eP	Pn	01 47 25.8	+2.0
CTKS	Kestanelik-??a	5.43	53	eP	Pn	01 47 23.8	0.0
CTYL	Yal??k??y-??at	5.43	50	eP	Pn	01 47 24.5	+0.7
GLHS	Glhisar (BURDU	5.46	98	eP	Pn	01 47 27.1	+2.8
BGKT	Bogazkoy	5.57	55	eP	Pn	01 47 25.9	+0.2
BUY	Buyukada	5.64	59	eP	Pn	01 47 27.2	+0.5
IZI	Iznik	5.68	65	eP	Pn	01 47 28.6	+1.2
CUC	Castrocucco	5.70	291	ePn	Pn	01 47 29.4	+1.8
CUC	Castrocucco	5.70	291	ePn	Pn	01 47 29.4	+1.8
ISK	Istanbul-Kandi	5.70	57	eP	Pn	01 47 28.2	+0.7
ALT	Altintas	5.85	79	eP	Pn	01 47 31.4	+1.6
ELL	Elmali	5.87	101	eP	Pn	01 47 32.9	+2.8
ADVT	Abdulvahap	5.90	65	eP	Pn	01 47 31.1	+0.8
HRT	Hereke	6.00	61	eP	Pn	01 47 32.6	+0.9
STON	Ston	6.09	323	ePn	Pn	01 47 32.3	-0.6
STON				Sn	Sn	01 48 40.1	-2.4
STON	Ston	6.09	323	ePn	Pn	01 47 32.3	-0.6
SILT	Sile	6.13	58	eP	Pn	01 47 34.1	+0.6
LTBQ	Tobruq	6.14	171	iP	Pn	01 47 34.4	+0.8
	SNR=112						
LTBQ				eS	Sn	01 48 41.4	-2.3
	SNR=112						
SHUT	Suhut-Afyon	6.16	84	eP	Pn	01 47 35.8	+1.8
BCK	Bucak	6.26	94	eP	Pn	01 47 37.6	+2.3
GPA	Golpazari	6.26	68	eP	Pn	01 47 36.4	+1.0
MS1	Monte Sant'Ang	6.32	306	ePn	Pn	01 47 36.6	+0.4
ANTB	Antalya	6.41	99	eP	Pn	01 47 39.8	+2.4
GULT	Gulveren	6.46	67	eP	Pn	01 47 39.1	+1.0
ESKT	Eskisehir	6.49	75	eP	Pn	01 47 39.8	+1.3
WDD	Wield Dalam	6.95	254	ePn	Pn	01 47 44.9	+0.2
	comp=Z,73nm,0.6s						
WDD	Wield Dalam	6.95	254	ePn	Pn	01 47 44.9	+0.2
	comp=Z,73nm,0.6s						
MDUB	Mudurnu	6.97	68	eP	Pn	01 47 45.9	+0.8
SVRH	Sivrihisar-ESK	6.99	76	eP	Pn	01 47 46.5	+1.1
KIZT	Kizilcal	7.21	81	eP	Pn	01 47 49.9	+1.5
ARR	Arges	7.37	10⇓	iP	Pn	01 47 51.4	+0.8
VOIR		7.50	13⇓	iP	Pn	01 47 54.2	+1.8
BZS	Buzias	7.53	354⇑	iP	Pn	01 47 53.8	+1.2
LADK	Ladik-KONYA	7.59	87	eP	Pn	01 47 54.9	+1.2
KONT	Konya--Tatoy	7.60	88	eP	Pn	01 47 55.1	+1.4
MLR	Muntele Rosu	7.73	17	Pn	Pn	01 47 57.2	+1.5
MLR				Lg	Lg	01 50 07.6	
MLR	Muntele Rosu	7.73	17⇓	iP	Pn	01 47 57.1	+1.5
MLR	Muntele Rosu	7.73	17	Pn	Pn	01 47 57.2	+1.5
	comp=Z,0.4nm,0.3s,baz=164,slow=12,SNR=30						
MLR				Lg	Lg	01 50 07.6	
	baz=132,slow=22,SNR=3.0						
MLR				LR	LR	01 51 06.8	
	comp=Z,67nm,19.6s,baz=187,slow=39						
MLR	Muntele Rosu	7.73	17	P	Pn	01 47 57.2	+1.5
	comp=Z,67nm,19.6s						
CFR	Carcaliu	8.12	28⇑	iP	Pn	01 48 02.2	+1.5
AFSR	Af¯ar-Bala (A	8.18	78	eP	Pn	01 48 02.8	+1.0
SAFT	Safranbolu	8.28	65	eP	Pn	01 48 03.3	+0.3
VRI	Vrincioaia	8.28	20⇓	iP	Pn	01 48 05.9	+2.9
AQU	L'Aquila	8.29	304	ePn	Pn	01 48 05.5	+2.3
AQU	L'Aquila	8.29	304	eP	Pn	01 48 05.5	+2.3
PKSM	Moragy	8.63	341⇑	ePn	Pn	01 48 09.9	+2.2
BR131	Keskin Array S	8.65	76	ePn	Pn	01 48 10.1	+1.9
	comp=Z,8.9nm,1.0s						
BR131	Keskin Array S	8.65	76	ePn	Pn	01 48 10.1	+1.9
	comp=Z,8.9nm,1.0s						
BRTR	Keskin Array B	8.65	76	Pn	Pn	01 48 11.0	+2.8
BRTR	Keskin Array B	8.65	76	Pn	Pn	01 48 11.0	+2.8
	comp=Z,0.4nm,0.3s,baz=257,slow=12,SNR=17						
DRGR		8.65	360⇓	iP	Pn	01 48 12.1	+3.9
TESR	Tescani	8.86	18⇑	iP	Pn	01 48 13.9	+2.9
CSS	Prodhromos	9.09	107	ePn	Pn	01 48 13.7	-0.5
CSS	Prodhromos	9.09	107	ePn	Pn	01 48 13.7	-0.5
BEHE	Becsehely	9.43	334⇓	ePn	Pn	01 48 19.7	+1.0
LEGS	Legarje	9.56	327	iPn	Pn	01 48 19.8	-0.7
LEGS	Legarje	9.56	327	Pn	Pn	01 48 19.8	-0.7
BURAR	Bucovina Array	9.65	10⇑	iP	Pn	01 48 23.9	+2.0
BURAR	Bucovina Array	9.65	10⇑	iP	Pn	01 48 23.9	+2.0
BUR08	Bucovina Ar. S	9.68	10	ePn	Pn	01 48 22.9	+0.7
BUR08	Bucovina Ar. S	9.68	10	ePn	Pn	01 48 22.9	+0.7
TRPA	Tarpa	10.00	359⇑	ePn	Pn	01 48 31.5	+5.0
PSZ	Piszkesteto	10.00	349	eP	Pn	01 48 29.0	+2.4
PSZ	Piszkesteto	10.00	349	ePn	Pn	01 48 29.0	+2.4
PSZ	Piszkesteto	10.00	349⇑	ePn	Pn	01 48 30.2	+3.6
PSZ	Piszkesteto	10.00	349	eP	Pn	01 48 29.0	+2.4
JAVS	Javornik	10.08	323	iPn	Pn	01 48 27.5	-0.3
JAVS				iSn	Sn	01 50 10.9	-10
JAVS	Javornik	10.08	323	iPn	Pn	01 48 27.5	-0.3
UZH	Uzhgorod	10.50	358	eP	Pn	01 48 33.3	-0.1
UZH				eS	Sn	01 50 30.5	-0.3
UZH				MLR	MLR		
	comp=Z,270nm,14.0s						
UZH	Uzhgorod	10.50	358	eP	Pn	01 48 33.3	-0.1
UZH				eS	Sn	01 50 30.5	-0.3
	comp=Z,270nm,14.0s						
VYHS	Vyhne	10.74	346	eP	Pn	01 48 41.6	+4.9
VYHS				e		01 50 42.2	
VYHS	Vyhne	10.74	346	ePN	Pn	01 48 41.6	+4.9
VYHS	Vyhne	10.74	346	eSN	Sn	01 50 42.2	+5.5
KOLS	Kolonicke sedl	10.80	358	eP	Pn	01 48 41.3	+3.7
KOLS	Kolonicke sedl	10.80	358	ePN	Pn	01 48 41.3	+3.7
CRVS	Cervenica-Dubn	10.81	356	eP	Pn	01 48 40.3	+2.7
CRVS	Cervenica-Dubn	10.81	356	ePN	Pn	01 48 40.3	+2.7
CRVS	Cervenica-Dubn	10.81	356	eP	Pn	01 48 40.3	+2.7
KEST	Kesra	10.98	261	ePn	Pn	01 48 42.3	+2.2
KEST				Sn	Sn	01 50 42.5	-0.3
KEST	Kesra	10.98	261	Pn	Pn	01 48 42.2	+2.1
	comp=Z,0.1nm,0.3s,baz=103,slow=3.5,SNR=5.7						
KEST				Sn	Sn	01 50 42.5	-0.3
	comp=Z,0.0nm,0.3s,baz=56,slow=16,SNR=2.6						
KEST	Kesra	10.98	261	ePn	Pn	01 48 42.3	+2.2
KEST				Sn	Sn	01 50 42.5	-0.3
PGF	Pioggiola	11.37	297	eP	Pn	01 48 48.0	+2.6
	comp=Z,13nm,0.9s						
PGF	Pioggiola	11.37	297	eP	Pn	01 48 48.0	+2.6
PGF				pmax	pmax		
	comp=Z,13nm,0.9s						
PGF	Pioggiola	11.37	297	eP	Pn	01 48 48.0	+2.6
	comp=Z,13nm,0.9s						
PGF	Pioggiola	11.37	297	eP	Pn	01 48 48.0	+2.6
	comp=Z,6.3nm,0.9s						
KWP	Kalwaria Pacla	11.50	360	eP	Pn	01 48 51.6	+4.5
KWP	Kalwaria Pacla	11.50	360	ePn	Pn	01 48 51.5	+4.5
KWP	Kalwaria Pacla	11.50	360	eP	Pn	01 48 51.8	+4.8
MMAI	Mount Meron Ar	11.51	113	Pn	Pn	01 48 45.8	-1.5
MMAI	Mount Meron Ar	11.51	113	Pn	Pn	01 48 45.8	-1.5
	comp=Z,0.4nm,0.3s,baz=293,slow=12,SNR=4.4						
MMAI	Mount Meron Ar	11.51	113	Pn	Pn	01 48 45.8	-1.5
LVV	L'vov	11.72	4	eP	Pn	01 49 00.2	+10
MORC	Moravsky Berou	12.22	344	eP	Pn	01 48 59.1	+2.1
MORC	Moravsky Berou	12.22	344	ePn	Pn	01 48 59.1	+2.1
MORC	Moravsky Berou	12.22	344	eP	Pn	01 48 59.1	+2.1
GERES	GERESS Array B	12.55	331	Pn	Pn	01 49 02.6	+1.1
GERES	GERESS Array B	12.55	331	Pn	Pn	01 49 02.6	+1.1
	comp=Z,0.1nm,0.3s,baz=146,slow=14,SNR=8.8						
GERES	GERESS Array B	12.55	331	P	Pn	01 49 02.6	+1.1
DAVOX	Davos/Dischmat	12.82	316	Pn	Pn	01 49 06.4	+1.0
DAVOX				Sn	Sn	01 51 27.5	-0.5
DAVOX	Davos/Dischmat	12.82	316	Pn	Pn	01 49 06.4	+1.0
	comp=Z,0.3nm,0.3s,baz=108,slow=20,SNR=2.2						
DAVOX				Sn	Sn	01 51 27.5	-0.5
	comp=Z,0.2nm,0.3s,baz=63,slow=2.4,SNR=3.5						
DAVOX	Davos/Dischmat	12.82	316	P	Pn	01 49 06.4	+1.0
DAVOX				S	Sn	01 51 27.5	-0.5
KHC	Kasperske Hory	12.83	332	eP	Pn	01 49 07.0	+1.7
KHC	Kasperske Hory	12.83	332	ePn	Pn	01 49 06.9	+1.7
KHC	Kasperske Hory	12.83	332	eP	Pn	01 49 07.0	+1.7
KHC				ex	x	01 49 20.1	
KHC	Kasperske Hory	12.83	332	ePn	Pn	01 49 06.9	+1.7
ANN	Anapa	12.87	54	eP	Pn	01 49 07.4	+1.6
ANN				pmax	pmax		
	comp=Z,163nm,1.8s						
ANN	Anapa	12.87	54	eP	Pn	01 49 07.4	+1.6
	comp=Z,163nm,1.8s						
SBF	Sospel	12.89	301	eP	Pn	01 49 09.3	+3.1
	comp=Z,11nm,0.7s						
SBF	Sospel	12.89	301	eP	Pn	01 49 09.3	+3.1
SBF				pmax	pmax		
	comp=Z,11nm,0.7s						
SBF	Sospel	12.89	301	eP	Pn	01 49 09.3	+3.1
	comp=Z,11nm,0.7s						
ASF	Jabal al Asfar	13.02	113	Pn	Pn	01 49 07.8	-0.2
ASF	Jabal al Asfar	13.02	113	Pn	Pn	01 49 07.8	-0.2
	comp=Z,0.1nm,0.3s,baz=352,slow=14,SNR=2.6						
EIL	Elat	13.19	126	Pn	Pn	01 49 13.1	+2.8
EIL	Elat	13.19	126	Pn	Pn	01 49 13.1	+2.8
	comp=Z,0.3nm,0.3s,baz=355,slow=6.7,SNR=4.1						
PRU	Pruhonice	13.22	336	eP	P	01 49 24.6	+4.1
PRU	Pruhonice	13.22	336	eP	P	01 49 24.6	+4.1
FRF	La Foret Royal	13.33	299	eP	Pn	01 49 15.2	+3.1
FRF	La Foret Royal	13.33	299	eP	Pn	01 49 15.2	+3.1
FRF	La Foret Royal	13.33	299	eP	Pn	01 49 15.2	+3.1
LMR	La Mourre	13.35	298	eP	Pn	01 49 15.4	+3.0
	comp=Z,13nm,1.1s						
LMR	La Mourre	13.35	298	eP	Pn	01 49 15.4	+3.0
LMR				pmax	pmax		
	comp=Z,13nm,1.1s						
LMR	La Mourre	13.35	298	eP	Pn	01 49 15.4	+3.0
	comp=Z,13nm,1.1s						
KIEV	Kiev	13.38	18	eP	Pn	01 49 15.0	+2.3
KIEV	Kiev	13.38	18	ePn	Pn	01 49 15.0	+2.3
KIEV	Kiev	13.38	18	eP	Pn	01 49 15.0	+2.3
AKASG	Malin Array Be	13.39	18	P	Pn	01 49 12.5	-0.3
AKASG	Malin Array Be	13.39	18	Pn	Pn	01 49 12.5	-0.3
AKASG	Malin Array Be	13.39	18	Pn	Pn	01 49 12.5	-0.3
	comp=Z,0.4nm,0.3s,baz=206,slow=12,SNR=4.0						
AKASG	Malin Array Be	13.39	18	P	Pn	01 49 12.5	-0.3
MBDF	Montbardon	13.66	304	eP	Pn	01 49 19.4	+2.7
	comp=Z,11nm,0.8s						
MBDF	Montbardon	13.66	304	eP	Pn	01 49 19.4	+2.7
MBDF				pmax	pmax		
	comp=Z,11nm,0.8s						
MBDF	Montbardon	13.66	304	eP	Pn	01 49 19.4	+2.7
	comp=Z,11nm,0.8s						
MBDF	Montbardon	13.66	304	eP	Pn	01 49 19.4	+2.7
	comp=Z,5.3nm,0.8s						
LPG	La Plagne	13.99	307	eP	Pn	01 49 23.8	+2.4
	comp=Z,13nm,0.8s						
LPG	La Plagne	13.99	307	eP	Pn	01 49 23.8	+2.4
LPG				pmax	pmax		
	comp=Z,13nm,0.8s						
LPG	La Plagne	13.99	307	eP	Pn	01 49 23.8	+2.4
	comp=Z,13nm,0.8s						
LPG	La Plagne	13.99	307	eP	Pn	01 49 23.8	+2.4
	comp=Z,6.4nm,0.8s						
LPL	La Plagne	14.02	307	eP	Pn	01 49 23.3	+1.6
	comp=Z,6.8nm,0.6s						
LPL	La Plagne	14.02	307	eP	Pn	01 49 23.3	+1.6
LPL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LPL	La Plagne	14.02	307	eP	Pn	01 49 23.3	+1.6
	comp=Z,6.8nm,0.6s						
LPL	La Plagne	14.02	307	eP	Pn	01 49 23.3	+1.6
	comp=Z,3.4nm,0.6s						
SENIN	Lac Senin/Sane	14.07	311	ePn	P	01 49 28.0	-2.2
SMRF	Simiane la Rot	14.19	300	eP	Pn	01 49 27.2	+3.2
SMRF	Simiane la Rot	14.19	300	eP	Pn	01 49 27.2	+3.2
SMRF	Simiane la Rot	14.19	300	eP	Pn	01 49 27.2	+3.2
ORIF	Oris-en-Rattie	14.32	304	eP	Pn	01 49 28.1	+2.4
ORIF				eR			
	comp=Z,148nm,21.8s						
ORIF	Oris-en-Rattie	14.32	304	eP	Pn	01 49 28.1	+2.4
ORIF	Oris-en-Rattie	14.32	304	eP	Pn	01 49 28.1	+2.4
CLL	Collm	14.86	336	eP	P	01 49 40.0	+1.3
CLL				pmax	pmax		
	comp=Z,15nm,1.4s						
CLL	Collm	14.86	336	e(PP)	P	01 49 40.0	+1.3
	comp=Z,15nm,1.4s						
CLL				L	L	01 59 00.0	
	comp=Z,100nm,21.2s						
CLL	Collm	14.86	336	eP	P	01 49 40.0	+1.3
	comp=Z,15nm,1.4s						
CABF	La Chapelle	14.92	310	eP	Pn	01 49 35.8	+2.0
	comp=Z,39nm,1.2s						
CABF	La Chapelle	14.92	310	eP	Pn	01 49 35.8	+2.0
CABF				pmax	pmax		
	comp=Z,39nm,1.2s						
CABF	La Chapelle	14.92	310	eP	Pn	01 49 35.8	+2.0
	comp=Z,39nm,1.2s						
VIVF	Saint-Julien-l	15.10	302	eP	Pn	01 49 37.3	+1.1
	comp=Z,18nm,1.3s						
VIVF	Saint-Julien-l	15.10	302	eP	Pn	01 49 37.3	+1.1
VIVF				pmax	pmax		
	comp=Z,18nm,1.3s						
VIVF	Saint-Julien-l	15.10	302	eP	Pn	01 49 37.3	+1.1
	comp=Z,18nm,1.3s						
HINF	Hinteralfeld	15.10	315	eP	Pn	01 49 37.1	+0.9
	comp=Z,8.4nm,0.8s						
HINF	Hinteralfeld	15.10	315	eP	Pn	01 49 37.1	+0.9
HINF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HINF	Hinteralfeld	15.10	315	eP	Pn	01 49 37.1	+0.9
	comp=Z,8.4nm,0.8s						
CDF	Champ du Feu	15.21	317	eP	P	01 49 40.4	-2.4
	comp=Z,9.8nm,1.0s						
CDF	Champ du Feu	15.21	317	eP	P	01 49 40.4	-2.4
CDF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CDF	Champ du Feu	15.21	317	eP	P	01 49 40.4	-2.4
	comp=Z,9.8nm,1.0s						
HAU	Haudompre	15.49	315	eP	Pn	01 49 42.0	+0.7
	comp=Z,24nm,0.9s						
HAU				eR			
	comp=Z,214nm,22.0s						
HAU	Haudompre	15.49	315	eP	Pn	01 49 42.0	+0.7
HAU				pmax	pmax		
	comp=Z,24nm,0.9s						
HAU	Haudompre	15.49	315	eP	Pn	01 49 42.0	+0.7
	comp=Z,24nm,0.9s						
SUW	Suwalki	15.89	1	eP	Pn	01 49 45.3	-1.1
SUW	Suwalki	15.89	1	ePn	Pn	01 49 45.3	-1.1
SUW	Suwalki	15.89	1	eP	Pn	01 49 45.3	-1.1
SUW	Suwalki	15.89	1	ePn	Pn	01 49 45.3	-1.1
KIV	Kislovodsk	16.12	63	P	Pn	01 49 51.0	+1.4
KIV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KIV				MLR	MLR		
	comp=Z,100nm,14.0s						
KIV	Kislovodsk	16.12	63	P	Pn	01 49 51.0	+1.4
	comp=Z,100nm,14.0s						
PAGF	Fort de Pagny	16.14	316	eP	P	01 49 52.0	-0.9
	comp=Z,4.3nm,0.8s						
PAGF	Fort de Pagny	16.14	316	eP	P	01 49 52.0	-0.9
	comp=Z,4.3nm,0.8s						
PAGF	Fort de Pagny	16.14	316	eP	P	01 49 52.0	-0.9
	comp=Z,2.2nm,0.8s						
KBZ	Khabaz	16.22	63	LR	LR	01 57 13.0	
	comp=Z,56nm,20.3s,baz=4.7,slow=41						
SMF	Signal de Mont	16.32	307	eP	P	01 49 54.5	-0.4
	comp=Z,19nm,1.0s						
SMF	Signal de Mont	16.32	307	eP	P	01 49 54.5	-0.4
SMF				pmax	pmax		
	comp=Z,19nm,1.0s						
SMF	Signal de Mont	16.32	307	eP	P	01 49 54.5	-0.4
	comp=Z,19nm,1.0s						
SMF	Signal de Mont	16.32	307	eP	P	01 49 54.5	-0.4
	comp=Z,9.4nm,1.0s						
MTLF	Montolieu	16.39	295	eP	P	01 49 55.0	-0.7
	comp=Z,11nm,0.8s						
MTLF	Montolieu	16.39	295	eP	P	01 49 55.0	-0.7
MTLF				pmax	pmax		
	comp=Z,11nm,0.8s						
MTLF	Montolieu	16.39	295	eP	P	01 49 55.0	-0.7
	comp=Z,11nm,0.8s						
MTLF	Montolieu	16.39	295	eP	P	01 49 55.0	-0.7
	comp=Z,5.6nm,0.8s						
MEZF	Maizieres J'vi	16.48	315	eP	Pn	01 49 55.0	+0.9
MEZF	Maizieres J'vi	16.48	315	eP	Pn	01 49 55.0	+0.9
MEZF	Maizieres J'vi	16.48	315	eP	Pn	01 49 55.0	+0.9
WLF	Walferdange	16.56	319	eP	P	01 49 57.8	+0.2
WLF	Walferdange	16.56	319	ePn	P	01 49 57.8	+0.2
WLF	Walferdange	16.56	319	eP	P	01 49 57.8	+0.2
LOR	Lormes	16.57	309	eP	P	01 49 57.2	-0.6
LOR				eR			
	comp=Z,103nm,18.5s						
LOR	Lormes	16.57	309	eP	P	01 49 57.2	-0.6
LOR	Lormes	16.57	309	eP	P	01 49 57.2	-0.6
AVF	Avril sur Loir	16.68	307	eP	P	01 50 00.3	+1.4
	comp=Z,46nm,1.3s						
AVF	Avril sur Loir	16.68	307	eP	P	01 50 00.3	+1.4
AVF				pmax	pmax		
	comp=Z,46nm,1.3s						

AVF Avril sur Loir 16.68 307 eP P 01 50 00.3 +1.4
comp=Z,46nm,1.3s
AVF Avril sur Loir 16.68 307 eP P 01 50 00.3 +1.4
comp=Z,23nm,1.3s
SSF Saint Saulge 16.70 308 eP P 01 49 59.7 +0.5
comp=Z,30nm,0.9s
SSF Saint Saulge 16.70 308 eP P 01 49 59.7 +0.5
SSF pmax pmax
comp=Z,30nm,0.9s
SSF Saint Saulge 16.70 308 eP P 01 49 59.7 +0.5
comp=Z,30nm,0.9s
SSF Saint Saulge 16.70 308 eP P 01 49 59.7 +0.5
comp=Z,15nm,0.9s
ZEI Tsey 16.75 67 eP P 01 50 03.9 +3.9
ZEI pmax pmax
comp=Z,5.0nm,0.8s
CAF Calviac 16.88 300 eP P 01 50 00.2 -1.0
comp=Z,27nm,1.2s
CAF Calviac 16.88 300 eP P 01 50 00.2 -1.0
CAF pmax pmax
comp=Z,27nm,1.2s
CAF Calviac 16.88 300 eP P 01 50 00.2 -1.0
comp=Z,27nm,1.2s
CAF Calviac 16.88 300 eP P 01 50 00.2 -1.0
comp=Z,14nm,1.2s
BGF Bois d'Agland 16.91 306 eP P 01 50 02.7 +1.2
comp=Z,44nm,1.2s
BGF Bois d'Agland 16.91 306 eP P 01 50 02.7 +1.2
BGF pmax pmax
comp=Z,44nm,1.2s
BGF Bois d'Agland 16.91 306 eP P 01 50 02.7 +1.2
comp=Z,44nm,1.2s
BGF Bois d'Agland 16.91 306 eP P 01 50 02.7 +1.2
comp=Z,22nm,1.2s
GNI Garni 17.19 76 ePn Pn 01 50 03.6 +0.4
GNI Garni 17.19 76 ePn Pn 01 50 03.6 +0.4
TCF Toulx Ste Croi 17.22 305 eP P 01 50 04.8 -0.1
comp=Z,44nm,1.5s
TCF Toulx Ste Croi 17.22 305 eP P 01 50 04.8 -0.1
TCF pmax pmax
comp=Z,44nm,1.5s
TCF Toulx Ste Croi 17.22 305 eP P 01 50 04.8 -0.1
comp=Z,44nm,1.5s
TCF Toulx Ste Croi 17.22 305 eP P 01 50 04.8 -0.1
comp=Z,22nm,1.5s
RJF Les Rejaudoux 17.36 301 eP P 01 50 06.2 -0.2
comp=Z,35nm,1.4s
RJF eR
comp=Z,150nm,17.0s
RJF Les Rejaudoux 17.36 301 eP P 01 50 06.2 -0.2
RJF pmax pmax
comp=Z,35nm,1.4s
RJF Les Rejaudoux 17.36 301 eP P 01 50 06.2 -0.2
comp=Z,35nm,1.4s
RJF Les Rejaudoux 17.36 301 eP P 01 50 06.2 -0.2
comp=Z,18nm,1.4s
VORD Divnogorie 17.38 37 eP P 01 50 07.5 +0.9
VORD pmax pmax
comp=N,10.0nm,1.1s
VORD pmax pmax
comp=E,30nm,1.1s
VORD pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 17.38 37 eP P 01 50 07.5 +0.9
VSR Storozhevoye 17.49 36 eP P 01 50 07.4 -0.4
VSR pmax pmax
comp=Z,9.0nm,1.1s
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,9.0nm,1.1s
VSR Storozhevoye 17.49 36 eP P 01 50 07.4 -0.4
comp=E,3.0nm,0.6s
GIVF Givet 17.51 319 eP P 01 50 09.8 +1.7
GIVF Givet 17.51 319 eP P 01 50 09.8 +1.7
GIVF Givet 17.51 319 eP P 01 50 09.8 +1.7
GIVF Givet 17.51 319 eP P 01 50 09.8 +1.7
EPF Esparros 17.68 293 eP P 01 50 10.7 +0.6
comp=E,18nm,1.1s
EPF Esparros 17.68 293 eP P 01 50 10.7 +0.6
EPF pmax pmax
comp=Z,18nm,1.1s
EPF Esparros 17.68 293 eP P 01 50 10.7 +0.6
comp=Z,18nm,1.1s
EPF Esparros 17.68 293 eP P 01 50 10.7 +0.6
comp=Z,9.0nm,1.1s
LFF La Frestale 17.79 299 eP P 01 50 11.2 0.0
comp=Z,44nm,1.3s
LFF La Frestale 17.79 299 eP P 01 50 11.2 0.0
LFF pmax pmax
comp=Z,44nm,1.3s
LFF La Frestale 17.79 299 eP P 01 50 11.2 0.0
comp=Z,44nm,1.3s
LFF La Frestale 17.79 299 eP P 01 50 11.2 0.0
comp=Z,22nm,1.3s
BAIF Baives 17.81 318 eP P 01 50 12.1 +0.7
BAIF Baives 17.81 318 eP P 01 50 12.1 +0.7
BAIF Baives 17.81 318 eP P 01 50 12.1 +0.7
BAIF Baives 17.81 318 eP P 01 50 12.1 +0.7
BHD Baghdad 18.23 99 ex Pn 01 50 16.0 +0.1
BHD ex x 01 50 26.0
BHD ex Sn 01 53 41.0 +1.8
BHD Baghdad 18.23 99 ePn Pn 01 50 16.0 +0.1
BHD eSn Sn 01 53 41.0 +1.8
ETSF Etsaut 18.32 292 eP P 01 50 18.5 +1.3
comp=Z,18nm,0.9s
ETSF Etsaut 18.32 292 eP P 01 50 18.5 +1.3
ETSF pmax pmax
comp=Z,18nm,0.9s
ETSF Etsaut 18.32 292 eP P 01 50 18.5 +1.3
comp=Z,18nm,0.9s
ETSF Etsaut 18.32 292 eP P 01 50 18.5 +1.3
comp=Z,8.9nm,0.9s
SJPF Ste Jean 18.83 293 eP Pn 01 50 23.4 +0.2
comp=Z,14nm,0.8s
SJPF Ste Jean 18.83 293 eP Pn 01 50 23.4 +0.2
SJPF pmax pmax
comp=Z,14nm,0.8s
SJPF Ste Jean 18.83 293 eP Pn 01 50 23.4 +0.2
comp=Z,14nm,0.8s
SJPF Ste Jean 18.83 293 eP Pn 01 50 23.4 +0.2
comp=Z,7.1nm,0.8s
MFF Saint Martin d 18.86 304 eP Pn 01 50 24.5 +1.0
comp=Z,60nm,1.1s
MFF Saint Martin d 18.86 304 eP Pn 01 50 24.5 +1.0
MFF pmax pmax
comp=Z,60nm,1.1s
MFF Saint Martin d 18.86 304 eP Pn 01 50 24.5 +1.0
comp=Z,60nm,1.1s
MFF Saint Martin d 18.86 304 eP Pn 01 50 24.5 +1.0
comp=Z,30nm,1.1s
OBN Obninsk 19.40 24⇑ eP Pn 01 50 29.6 -0.3
OBN S Sn 01 54 01.0 -6.2
OBN pmax pmax
comp=Z,7.0nm,0.6s
OBN Obninsk 19.40 24 eP Pn 01 50 29.6 -0.3
comp=Z,7.0nm,0.6s
LDF La Druitiere 19.56 310 eP Pn 01 50 31.5 -0.5
LDF La Druitiere 19.56 310 eP Pn 01 50 31.5 -0.5
LDF La Druitiere 19.56 310 eP Pn 01 50 31.5 -0.5
LDF La Druitiere 19.56 310 eP Pn 01 50 31.5 -0.5
FLN La Foliniere 19.85 310 eP Pn 01 50 34.6 -0.8
FLN eR
comp=Z,171nm,21.2s
FLN La Foliniere 19.85 310 eP Pn 01 50 34.6 -0.8
FLN La Foliniere 19.85 310 eP Pn 01 50 34.6 -0.8
FLN La Foliniere 19.85 310 eP Pn 01 50 34.6 -0.8
GRR Gorron 19.93 309 eP Pn 01 50 35.9 -0.5
comp=Z,18nm,0.8s
GRR Gorron 19.93 309 eP Pn 01 50 35.9 -0.5
GRR pmax pmax
comp=Z,19nm,0.8s
GRR Gorron 19.93 309 eP Pn 01 50 35.9 -0.5
comp=Z,18nm,0.8s
GRR Gorron 19.93 309 eP Pn 01 50 35.9 -0.5
comp=Z,9.2nm,0.8s
MOS Moscow 20.26 25 eP Pn 01 50 45.6 +5.5
MOS pmax pmax
comp=Z,38nm,1.1s
VSU Vasula 20.51 6c iP P 01 50 41.2 +0.4
VSU pmax pmax
comp=Z,31nm,0.8s
VSU Vasula 20.51 6 i P P 01 50 41.2 +0.4
comp=Z,31nm,0.8s
ESDC Sonseca Array 20.81 283 P P 01 50 44.8 +0.4
ESDC Sonseca Array 20.81 283 P P 01 50 44.8 +0.4
comp=Z,7.6nm,0.7s,baz=76,slow=11,SNR=52
ESDC Sonseca Array 20.81 283 P P 01 50 44.8 +0.4
SGMF Saint Gilles 20.94 307 eP P 01 50 46.4 +0.7
comp=Z,42nm,0.9s
SGMF Saint Gilles 20.94 307 eP P 01 50 46.4 +0.7
SGMF pmax pmax
comp=Z,42nm,0.9s
SGMF Saint Gilles 20.94 307 eP P 01 50 46.4 +0.7
comp=Z,21nm,0.9s
SGMF Saint Gilles 20.94 307 eP P 01 50 46.4 +0.7
comp=Z,21nm,0.9s
PAB San Pablo 21.12 282 eP P 01 50 47.9 +0.2
PAB pmax pmax
comp=Z,14nm,1.0s
PAB San Pablo 21.12 282 eP P 01 50 47.9 +0.2
comp=Z,14nm,1.0s
PAB San Pablo 21.12 282 eP P 01 50 47.9 +0.2
comp=Z,14nm,1.0s
QUIF Quistinic 21.22 306 eP P 01 50 49.3 +0.7
comp=Z,113nm,1.0s
QUIF Quistinic 21.22 306 eP P 01 50 49.3 +0.7
QUIF pmax pmax
comp=Z,113nm,1.0s
QUIF Quistinic 21.22 306 eP P 01 50 49.3 +0.7
comp=Z,113nm,1.0s
QUIF Quistinic 21.22 306 eP P 01 50 49.3 +0.7
comp=Z,57nm,1.0s
TAM Tamanrasset 21.25 229 eP P 01 50 50.7 +1.4
TAM pmax pmax
comp=Z,6.0nm,1.2s
TAM Tamanrasset 21.25 229 eP P 01 50 50.7 +1.4
comp=Z,5.7nm,1.2s
TAM Tamanrasset 21.25 229 eP P 01 50 50.7 +1.4
comp=Z,5.7nm,1.2s
ROSF Rostrenen 21.42 307 eP P 01 50 50.9 +0.1
comp=Z,28nm,0.7s
ROSF Rostrenen 21.42 307 eP P 01 50 50.9 +0.1
ROSF pmax pmax
comp=Z,28nm,0.7s
ROSF Rostrenen 21.42 307 eP P 01 50 50.9 +0.1
comp=Z,28nm,0.7s
ROSF Rostrenen 21.42 307 eP P 01 50 50.9 +0.1
comp=Z,14nm,0.7s
MIB Mutribah 21.99 105 eP P 01 50 55.0 -2.0
MIB AMb AMB 01 51 10.6
comp=Z,20nm,0.7s
MIB Mutribah 21.99 105 eP P 01 50 55.0 -2.0
NAY Al-Naaiem 22.18 106 eP P 01 50 58.5 -0.6
NAY AMb AMB 01 51 04.6
comp=Z,14nm,0.8s
NAY Al-Naaiem 22.18 106 eP P 01 50 58.5 -0.6
comp=Z,14nm,0.8s
HFS Hagfors 22.76 348 P P 01 51 02.8 -2.2
HFS Hagfors 22.76 348 P P 01 51 02.8 -2.2
comp=Z,1.6nm,0.5s,baz=162,slow=11,SNR=9.3
HFS LR LR 01 59 40.9
comp=Z,91nm,19.2s,baz=31,slow=36
PBRG Braganca 22.83 289 eP P 01 51 06.8 +0.8
comp=Z,21nm,1.6s
PBRG Braganca 22.83 289 eP P 01 51 06.8 +0.8
comp=Z,21nm,1.6s
MDT Midelt 22.85 265 P P 01 51 06.8 +0.4
MDT Midelt 22.85 265 P P 01 51 06.8 +0.4
comp=Z,2.9nm,1.1s,baz=70,slow=12,SNR=4.5
MDT Midelt 22.85 265 P P 01 51 06.8 +0.4
MVO Moncorvo 23.07 287 eP P 01 51 07.4 -1.1
comp=Z,23nm,1.7s
MVO Moncorvo 23.07 287 eP P 01 51 07.4 -1.1
comp=Z,23nm,1.7s
FINES FINESS Array B 23.43 4 P P 01 51 10.2 -1.7
FINES FINESS Array B 23.43 4 P P 01 51 10.2 -1.7
comp=Z,2.4nm,1.0s,baz=207,slow=9.0,SNR=3.9
FINES LR LR 01 59 16.3
comp=Z,171nm,20.5s,baz=270,slow=34
FINES FINESS Array B 23.43 4 P P 01 51 10.2 -1.7
comp=Z,171nm,20.5s
PCBR Castelo Branco 23.50 284 eP P 01 51 13.2 +0.5
comp=Z,16nm,1.7s
PCBR Castelo Branco 23.50 284 eP P 01 51 13.2 +0.5
comp=Z,16nm,1.7s
NAO01 NORSAR Array S 23.93 346 eP P 01 51 16.8 +0.1
comp=Z,5.8nm,0.8s
NAO01 NORSAR Array S 23.93 346 eP P 01 51 16.8 +0.1
comp=Z,5.8nm,0.8s
PVAQ Vaqueiros 24.04 278 eP P 01 51 19.1 +1.2
comp=Z,20nm,1.9s
PVAQ Vaqueiros 24.04 278 eP P 01 51 19.1 +1.2
comp=Z,20nm,1.9s
NB2 NORSAR Subarra 24.04 346 P P 01 51 16.1 -1.7
comp=Z,8.8nm,1.2s,baz=159,slow=9.3
NB2 NORSAR Subarra 24.04 346 P P 01 51 16.1 -1.7
comp=Z,8.8nm,1.2s,SNR=4.5
NOA NORSAR Array B 24.04 346 P P 01 51 15.4 -2.4
NOA NORSAR Array B 24.04 346 P P 01 51 15.4 -2.4
comp=Z,0.7nm,0.5s,baz=149,slow=9.4,SNR=5.8
EKA Eskdalemuir Ar 24.50 323 P P 01 51 19.9 -2.1
EKA Eskdalemuir Ar 24.50 323 P P 01 51 19.9 -2.1
comp=Z,2.2nm,0.7s,baz=155,slow=8.6,SNR=4.8
ESK Eskdalemuir 24.51 323 eP P 01 51 24.0 +1.9
ESK pmax pmax
comp=Z,28nm,1.1s
ESK Eskdalemuir 24.51 323 eP P 01 51 24.0 +1.9
comp=Z,28nm,1.1s
ESK Eskdalemuir 24.51 323 eP P 01 51 24.0 +1.9
comp=Z,28nm,1.1s
ARU Arti 29.95 41 c iP P 01 52 13.2 +2.3
ARU 01 53 08.2
ARU S S 01 57 13.4 +5.6
ARU SS SnSn 01 58 43.3 +4.2
ARU pmax pmax
comp=Z,8.0nm,1.7s
ARU Arti 29.95 41 i P P 01 52 13.2 +2.3
comp=Z,8.0nm,1.7s
TOA0 Torodi Ar. Sit 31.13 223 eP P 01 52 21.4 -0.2
TOA0 Torodi Ar. Sit 31.13 223 eP P 01 52 21.5 -0.2
TORD Torodi Ar. Bea 31.13 223 P P 01 52 21.4 -0.3
TORD Torodi Ar. Bea 31.13 223 P P 01 52 21.4 -0.3
comp=Z,1.1nm,0.6s,baz=33,slow=9.2,SNR=13
TORD Torodi Ar. Bea 31.13 223 P P 01 52 21.4 -0.3
ARCES ARCESS Array B 31.50 2 P P 01 52 23.2 -1.2
ARCES ARCESS Array B 31.50 2 P P 01 52 23.2 -1.2
comp=Z,5.6nm,1.1s,baz=202,slow=9.2,SNR=5.2
ARCES LR LR 02 06 10.9
comp=Z,108nm,21.2s,baz=69,slow=38
ARCES ARCESS Array B 31.50 2 P P 01 52 23.3 -1.2
comp=Z,108nm,21.2s
BRVK Borovoye 35.75 50⇑ eP P 01 53 02.6 +1.0
BRVK pmax pmax
comp=Z,3.0nm,1.0s
BRVK Borovoye 35.75 50 eP P 01 53 02.8 +1.2
comp=Z,4.9nm,0.8s
BRVK Bovoye 35.75 50 eP P 01 53 02.6 +1.0
comp=Z,3.0nm,1.0s
BVAR Borovoye Array 35.81 50 P P 01 53 02.5 +0.4
BVAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 35.81 50 P P 01 53 02.5 +0.4
BVAR Borovoye Array 35.81 50 P P 01 53 02.5 +0.4
comp=Z,1.3nm,0.8s,baz=282,slow=2.9,SNR=5.5
BVAR Borovoye Array 35.81 50 P P 01 53 02.5 +0.4
comp=Z,1.0nm,0.8s
KKAR Karatay Array 36.22 67 eP P 01 53 06.0 +0.3
KKAR pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 36.22 67 eP P 01 53 06.0 +0.3
comp=Z,1.7nm,0.6s
KKAR Karatay Array 36.22 67 eP P 01 53 06.0 +0.3
comp=Z,1.7nm,0.6s
EKS2 Erkin-Say 38.66 67 eP P 01 53 27.0 +0.5
EKS2 pmax pmax
comp=Z,3.0nm,0.8s
EKS2 Erkin-Say 38.66 67 eP P 01 53 27.0 +0.5
comp=Z,2.7nm,0.8s
EKS2 Erkin-Say 38.66 67 eP P 01 53 27.0 +0.5
comp=Z,2.7nm,0.8s
AAK Ala-Archa 39.18 67⇑ eP P 01 53 31.1 +0.1
AAK pmax pmax
comp=Z,7.0nm,1.0s
AAK Ala-Archa 39.18 67 eP P 01 53 31.8 +0.8
comp=Z,3.4nm,0.9s
AAK Ala-Archa 39.18 67 P P 01 53 31.8 +0.8
comp=Z,0.9nm,0.4s,baz=194,slow=5.1,SNR=5.2
AAK Ala-Archa 39.18 67 eP P 01 53 31.1 +0.1
comp=Z,7.0nm,1.0s
TKM2 Tokmak 2 39.92 66 eP P 01 53 38.1 +0.9
TKM2 pmax pmax
comp=Z,1.0nm,0.8s
TKM2 Tokmak 2 39.92 66 eP P 01 53 38.1 +0.9
comp=Z,1.4nm,0.8s
TKM2 Tokmak 2 39.92 66 eP P 01 53 38.1 +0.9
comp=Z,1.4nm,0.8s
SPITS Spitsbergen Ar 40.24 358 P P 01 53 40.6 +1.4
SPITS Spitsbergen Ar 40.24 358 P P 01 53 40.6 +1.4
comp=Z,3.3nm,0.7s,baz=150,slow=15,SNR=5.5
SPITS Spitsbergen Ar 40.24 358 P P 01 53 40.6 +1.4
comp=Z,3.0nm,0.7s
KURBB Kurchatov Arra 40.85 54 P P 01 53 44.7 +0.2
comp=Z,2.7nm,0.7s,baz=280,slow=8.9,SNR=11
KURK Kurchatov 40.90 53⇑ eP P 01 53 45.4 +0.5
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK Kurchatov 40.90 53 eP P 01 53 45.0 0.0
KURK Kurchatov 40.90 53 eP P 01 53 45.4 +0.5
comp=Z,4.0nm,1.0s
MK31 Makanchi Array 43.84 59 eP P 01 54 08.9 -0.1
MK31 Makanchi Array 43.84 59 eP P 01 54 08.9 -0.1
MK31 Makanchi Array 43.84 59 eP P 01 54 08.9 -0.1
MKAR Makanchi Array 43.84 59 P P 01 54 09.1 +0.1
MKAR pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 43.84 59 P P 01 54 09.1 +0.1
MKAR Makanchi Array 43.84 59 P P 01 54 09.1 +0.1
comp=Z,2.2nm,0.5s,baz=273,slow=7.4,SNR=26
MKAR Makanchi Array 43.84 59 P P 01 54 09.1 +0.1
comp=Z,2.0nm,0.5s
ZAA0 Zalesovo Array 44.42 48 eP P 01 54 13.3 -0.2
ZAA0 Zalesovo Array 44.42 48 eP P 01 54 13.3 -0.2
ZALV Zalesovo Beam 44.42 48 P P 01 54 13.3 -0.2
ZALV pmax pmax
comp=Z,5.0nm,0.6s
ZALV Zalesovo Beam 44.42 48 P P 01 54 13.3 -0.2
ZALV Zalesovo Beam 44.42 48 P P 01 54 13.3 -0.2
comp=Z,5.2nm,0.6s,baz=275,slow=9.3,SNR=28
ZALV Zalesovo Beam 44.42 48 P P 01 54 13.3 -0.2
comp=Z,5.0nm,0.6s
WMQ Urumqi 48.25 62 eP P 01 54 45.7 +1.9
HVS Khovu-Aksy 50.24 51⇓ eP P 01 54 59.3 +0.3
HVS pmax pmax
comp=Z,17nm,1.0s
HVS Khovu-Aksy 50.24 51 eP P 01 54 59.3 +0.3
comp=Z,17nm,1.0s
SONM Songino Array 59.13 51 P P 01 56 03.6 0.0
SONM Songino Array 59.13 51 P P 01 56 03.6 0.0
comp=Z,1.2nm,0.6s,baz=297,slow=6.8,SNR=2.8
SONM Songino Array 59.13 51 P P 01 56 03.6 0.0
comp=Z,1.0nm,0.6s
SCHQ Schefferville 59.67 318 eP P 01 56 06.8 -0.2
comp=Z,11nm,1.0s
SCHQ Schefferville 59.67 318 P P 01 56 06.2 -0.8
comp=Z,5.0nm,0.7s,baz=70,slow=9.4,SNR=15
SCHQ Schefferville 59.67 318 eP P 01 56 06.8 -0.2
comp=Z,11nm,1.0s
LZH Lanzhou 62.66 64 eP P 01 56 29.5 +1.7
LZH pP pP 01 56 34.4 +2.2
LZH sP sP 01 56 36.7 +2.9
LZH pmax pmax
comp=Z,14nm,1.0s
HHC Hu-ho-hao-te 65.62 56 eP P 01 56 45.6 -1.4
HHC pP pP 01 56 50.4 -1.1
HHC sP sP 01 56 53.0 -0.1
HHC S S 02 05 28.1 -4.2
HHC sS sS 02 05 38.8 -0.8
HHC ScS SKSac 02 06 41.7 -0.6
HHC SS SS 02 09 39.8 -5.8
HHC pmax pmax
comp=Z,20nm,0.6s
HHC pmax pmax
comp=Z,230nm,8.6s
HHC LR LR
comp=N,250nm,19.2s
HHC LR LR
comp=E,350nm,20.0s
HHC LR LR
comp=Z,150nm,19.8s
BOSA Boshof 66.44 178 LR LR 02 26 30.1
comp=Z,94nm,18.5s,baz=109,slow=37
KMI Kunming 67.44 75 P P 01 57 00.9 +1.8
KMI pmax pmax
comp=Z,9.0nm,0.5s
CMAR Chiang Mai Arr 68.16 83 P P 01 57 01.2 -2.2
CMAR Chiang Mai Arr 68.16 83 P P 01 57 01.2 -2.2
comp=Z,1.0nm,0.3s,baz=300,slow=8.2,SNR=6.2
CMAR Chiang Mai Arr 68.16 83 P P 01 57 01.3 -2.2
comp=Z,1.0nm,0.4s
INK Inuvik 72.39 351 P P 01 57 27.4 -1.1
INK Inuvik 72.39 351 P P 01 57 27.4 -1.1
comp=Z,0.8nm,0.6s,baz=12,slow=11,SNR=6.7
INK Inuvik 72.39 351 P P 01 57 27.4 -1.1
comp=Z,1.0nm,0.6s
YKA Yellowknife Ar 74.02 341 P P 01 57 38.0 -0.1
YKA Yellowknife Ar 74.02 341 P P 01 57 38.0 -0.1
comp=Z,0.5nm,0.7s,baz=30,slow=5.3,SNR=11
YKA Yellowknife Ar 74.02 341 P P 01 57 38.1 -0.1
MDJ Mudanjiang 74.51 45 P P 01 57 40.7 -0.7
MDJ pP pP 01 57 44.0 -1.9
MDJ sP sP 01 57 45.2 -2.3
MDJ PP PP 02 00 25.4 -2.0
MDJ pmax pmax
comp=Z,4.0nm,1.5s
MDJ pmax pmax
comp=Z,60nm,6.4s
MDJ LR LR
comp=E,18nm,33.4s
MDJ LR LR
comp=Z,27nm,21.4s
ULM Lac du Bonnet 76.76 325 P P 01 57 52.6 -1.6
ULM Lac du Bonnet 76.76 325 P P 01 57 52.6 -1.6
comp=Z,4.1nm,0.8s,baz=56,slow=2.9,SNR=3.5
ULM Lac du Bonnet 76.76 325 P P 01 57 52.6 -1.6
comp=Z,4.0nm,0.8s
ILAR Eielson Array 77.11 355 P P 01 57 55.4 -0.5
ILAR Eielson Array 77.11 355 P P 01 57 55.4 -0.5
comp=Z,0.7nm,0.6s,baz=353,slow=3.2,SNR=16
ILAR Eielson Array 77.11 355 P P 01 57 55.4 -0.5
comp=Z,1.0nm,0.6s
KSRS Korea Array 78.00 52 LR LR 02 35 49.8
comp=Z,22nm,18.0s,baz=350,slow=38
DOT Dot Lake 78.02 354 eP P 01 58 01.9 +0.9
comp=Z,5.6nm,1.2s
DOT Dot Lake 78.02 354 eP P 01 58 01.9 +0.9
comp=Z,5.6nm,1.2s
MCK McKinley 78.26 356 eP P 01 58 02.4 0.0
MCK pmax pmax
comp=Z,4.0nm,0.9s
MCK McKinley 78.26 356 eP P 01 58 02.4 0.0
comp=Z,4.0nm,0.9s
MCK McKinley 78.26 356 eP P 01 58 02.4 0.0
comp=Z,4.0nm,0.9s
WVT Waverly 82.14 310 eP P 01 58 23.9 +0.1
WVT pmax pmax
comp=Z,4.0nm,0.9s
WVT Waverly 82.14 310 eP P 01 58 23.9 +0.1
comp=Z,4.1nm,0.9s
WVT Waverly 82.14 310 eP P 01 58 23.9 +0.1
comp=Z,4.1nm,0.9s
EGMT Eagleton 84.37 330 eP P 01 58 36.3 +1.2
comp=Z,6.5nm,0.9s
EGMT Eagleton 84.37 330 eP P 01 58 36.3 +1.2
comp=Z,6.5nm,0.9s
RSSD Black Hills 85.03 325 eP P 01 58 38.9 +0.1
RSSD Black Hills 85.03 325 eP P 01 58 38.9 +0.1
RSSD Black Hills 85.03 325 eP P 01 58 38.9 +0.1
SWMT Swartz Lake 86.40 332 eP P 01 58 46.2 +0.8
comp=Z,3.2nm,1.1s
MIAR Mount Ida 86.64 312 eP P 01 58 47.8 +1.2
MIAR pmax pmax
comp=Z,8.0nm,1.1s
MIAR Mount Ida 86.64 312 eP P 01 58 47.8 +1.2
comp=Z,7.8nm,1.1s
NEW Newport 86.87 334 eP P 01 58 48.1 +0.6
comp=Z,3.6nm,0.9s
BOZ Bozeman (W) 87.05 330 eP P 01 58 49.3 +0.6
BOZ pmax pmax
comp=Z,1.0nm,0.9s
BOZ Bozeman (W) 87.05 330 eP P 01 58 49.2 +0.6
comp=Z,1.2nm,0.9s
MOOW Moose Ponds 88.25 328 eP P 01 58 55.6 +1.1
comp=Z,0.9nm,0.7s
TPAW Teton Pass 88.55 328 eP P 01 58 57.0 +1.0
comp=Z,1.9nm,0.9s
BW06 Boulder Array 88.55 327 eP P 01 58 58.0 +2.0
PDAR Pinedale Array 88.55 327 P P 01 58 55.5 -0.5
PDAR Pinedale Array 88.55 327 P P 01 58 55.5 -0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,0.5nm,0.8s,baz=101,slow=6.2,SNR=4.0						
HWUT	Hardware Ranch	90.36	328	eP	P	01 59 04.4	0.0
	comp=Z,2.9nm,0.9s						
PV01	Paradox Valley	91.85	324	eP	P	01 59 11.7	+0.2
NVAR	Mina Array Bea	95.80	330	LR	LR	02 43 11.0	
	comp=Z,55nm,19.5s,baz=211,slow=36						
TXAR	Lajitas Array	96.25	315	P	P	01 59 32.0	+0.4
TXAR	Lajitas Array	96.25	315	P	P	01 59 32.0	+0.4
	comp=Z,1.1nm,0.9s,baz=73,slow=4.2,SNR=10						
WRA	Warramunga Arr	118.79	94	PKP	PKPdf	02 04 50.8	-0.8
WRA	Warramunga Arr	118.79	94	PKP	PKPdf	02 04 50.7	-0.8
	comp=Z,0.7nm,0.8s,baz=311,slow=2.5,SNR=3.2						
ASAR	Alice Springs	120.44	97	PKP	PKPdf	02 04 53.3	-1.3
ASAR	Alice Springs	120.44	97	PKP	PKPdf	02 04 53.3	-1.3
	comp=Z,0.9nm,0.9s,baz=319,slow=1.3,SNR=7.8						

TIF 09 01:46:49.1, 40.94N×47.49E, h15^{km}±8^{km}, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DGRG	David-gareji	1.68	288	P	Pg	01 47 21.8	+0.3
DGRG				S	Sg	01 47 45.8	+2.4

IDC 09 01:49:19.0±3.4, 10.27S×118.38E, h0^{km}, mb3.6/2, mb1 3.6/4, mb1mx3.5/20, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=269.2km s-min=25.6km az=48.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.15	124	P	Pn	01 53 31.4	-1.3
	0.2nm,0.3s,baz=293,slow=13,SNR=4.2						
WRA				S	Sn	01 56 43.7	-12
	0.3nm,0.3s,baz=299,slow=23,SNR=3.7						
ASAR	Alice Springs	19.92	134	P	Pn	01 53 53.4	-0.7
	0.1nm,0.3s,baz=309,slow=10,SNR=14						
MKAR	Makanchi Array	65.31	334	P	P	02 00 02.5	-0.3
	0.4nm,0.4s,baz=157,slow=6.9,SNR=8.1						
KURBB	Kurchatov Arra	69.83	334	P	P	02 00 31.7	+0.4
	0.2nm,0.4s,baz=141,slow=6.1,SNR=3.3						

ISCJB 09 02:10:27.5±0.3, 44.14N±0.02×9.87E±0.02, h15^{km}±2^{km}, Error ellipse: s-maj=3.7km s-min=2.4km az=10.2
ROM 09 02:10:27.5±0.2, 44.15N×9.91E, h4^{km}±2^{km}, Ml2.3/20, Error ellipse: s-maj=2.7km s-min=1.6km az=26.0
CSEM 09 02:10:28.0±0.1, 44.13N×9.86E, h10^{km}, ML2.8/23, Error ellipse: s-maj=3.4km s-min=1.9km az=14.0
GEN 09 02:10:28.5, 44.19N×9.90E, h6^{km}, ML2.4
LDG 09 02:10:29.2±0.1, 44.08N×9.95E, h5^{km}, Ml2.6/16, Error ellipse: s-maj=3.4km s-min=2.0km az=9.0
STR 09 02:10:33.5±0.9, 44.77N×9.13E, h5^{km}, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0
ISC 09 02:10:28.2±0.9, 44.10N±0.02×9.86E±0.01, h11^{km}±8^{km}, n97, σ0.91/151, 2C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSSA	Maissana	0.33	311	Pg	Pg	02 10 34.7	-0.1
MSSA				Sg	Sg	02 10 38.9	-0.3
	183nm,0.2s						
MSSA	Maissana	0.33	311	Pg	Pg	02 10 34.7	-0.1
MSSA				Sg	Sg	02 10 38.9	-0.3
	183nm,0.2s						
VLC	Villacollemand	0.38	81	Pg	Pg	02 10 35.4	-0.4
VLC				Sg	Sg	02 10 40.4	-0.4
	178nm,0.2s						
VLC	Villacollemand	0.38	81	Pg	Pg	02 10 35.4	-0.4
VLC				Sg	Sg	02 10 40.4	-0.4
	178nm,0.2s						
MAIM	Mastiano	0.49	112	⇑ePg	Pg	02 10 38.0	+0.2
MAIM				Sg	Sg	02 10 44.5	+0.2
	176nm,0.3s						
MAIM	Mastiano	0.49	112	⇑ePg	Pg	02 10 38.0	+0.2
MAIM				Sg	Sg	02 10 44.5	+0.2
	176nm,0.3s						
ERBM	Eremo	0.51	51	Pg	Pg	02 10 37.6	-0.5
ERBM				Sg	Sg	02 10 44.8	0.0
	276nm,0.5s						
ERBM	Eremo	0.51	51	Pg	Pg	02 10 37.6	-0.5
ERBM				Sg	Sg	02 10 44.8	0.0
	276nm,0.5s						
BDI	Bagni Di Lucca	0.53	94	Pg	Pg	02 10 38.3	-0.2
BDI				Sg	Sg	02 10 45.3	-0.3
	199nm,0.2s						
BDI	Bagni Di Lucca	0.53	94	Pg	Pg	02 10 38.3	-0.2
BDI				Sg	Sg	02 10 45.3	-0.3
	199nm,0.2s						
GSCL	Gusciola	0.58	64	Pg	Pg	02 10 39.0	-0.4
GSCL				Sg	Sg	02 10 46.6	-0.5
	1.0nm,0.2s						
GSCL	Gusciola	0.58	64	Pg	Pg	02 10 39.0	-0.4
GSCL				Sg	Sg	02 10 46.6	-0.5
	1.0nm,0.2s						
PII	Pisa	0.61	128	Pg	Pb	02 10 40.7	-0.2
	169nm,0.2s						
PII	Pisa	0.61	128	Pg	Pb	02 10 40.7	-0.2
	169nm,0.2s						
GROG	Isola di Gorgo	0.68	178	Pg	Pb	02 10 42.7	+0.7
	139nm,0.3s						
GROG	Isola di Gorgo	0.68	178	Pg	Pb	02 10 42.7	+0.7
	139nm,0.3s						
GENL	Genova Univers	0.71	296	P	Pg	02 10 41.9	0.0
GENL				S	Sg	02 10 51.1	-0.1
PZZT	Monte Pizzetto	0.72	87	⇓ePg	Pg	02 10 41.6	-0.5
PZZT				Sg	Sg	02 10 51.7	+0.1
	167nm,0.2s						
PZZT	Monte Pizzetto	0.72	87	⇓ePg	Pg	02 10 41.6	-0.5
PZZT				Sg	Sg	02 10 51.7	+0.1
	167nm,0.2s						
BOB	Bobbio (Coli)	0.73	336	Pg	Pg	02 10 41.5	-0.8
BOB				Sg	Sg	02 10 51.6	-0.2
	189nm,0.3s						
BOB	Bobbio (Coli)	0.73	336	Pg	Pg	02 10 41.5	-0.8
BOB				Sg	Sg	02 10 51.6	-0.2
	189nm,0.3s						
PRMA	PARMA	0.74	26	Pg	Pg	02 10 42.4	0.0
	299nm,0.6s						
PRMA	PARMA	0.74	26	Pg	Pg	02 10 42.4	0.0
	299nm,0.6s						
ZCCA	Zocca	0.84	72	Pg	Pn	02 10 45.6	-0.4
	55nm,0.4s						
ZCCA	Zocca	0.84	72	Pg	Pn	02 10 45.6	-0.4
	55nm,0.4s						
CRMI	Carmignano	0.86	111	Pg	Pg	02 10 44.9	+0.2
CRMI				Sg	Sg	02 10 56.5	+0.6
	58nm,0.5s						
CRMI	Carmignano	0.86	111	Pg	Pg	02 10 44.9	+0.2
CRMI				Sg	Sg	02 10 56.5	+0.6
	58nm,0.5s						
FNVD	Fontana Vidola	0.91	85	Pg	Pg	02 10 45.4	-0.3
FNVD				Sg	Sg	02 10 58.0	+0.4
	75nm,0.3s						
FNVD	Fontana Vidola	0.91	85	Pg	Pg	02 10 45.4	-0.3
FNVD				Sg	Sg	02 10 58.0	+0.4
	75nm,0.3s						
PCP	Piancastagn	1.04	295	Pg	Pb	02 10 47.9	-0.4
	41nm,0.2s						
PCP	Piancastagn	1.04	295	P	Pb	02 10 47.6	-0.7
PCP	Piancastagn	1.04	295	Pg	Pb	02 10 47.9	-0.4
	41nm,0.2s						
SEI	Scarperia	1.08	92	Pg	Pb	02 10 48.4	-0.5
	120nm,0.4s						
SEI	Scarperia	1.08	92	Pg	Pb	02 10 48.4	-0.5
	120nm,0.4s						
FINB	Finale Ligure	1.11	274	Pg	Pb	02 10 48.9	-0.5
	148nm,0.3s						
FINB	Finale Ligure	1.11	274	Pg	Pb	02 10 48.9	-0.5
	148nm,0.3s						
CSNT	Castellina Chi	1.21	121	Pg	Pn	02 10 50.5	-0.6
	30nm,0.5s						
CSNT	Castellina Chi	1.21	121	Pg	Pn	02 10 50.5	-0.6
	30nm,0.5s						
RORO	Rocca Rossa	1.29	271	P	Pn	02 10 51.3	-0.9
SFI	Santa Sofia	1.45	97	Pg	Pn	02 10 54.8	+0.4
	25nm,0.8s						
SFI	Santa Sofia	1.45	97	Pg	Pn	02 10 54.8	+0.4
	25nm,0.8s						
SALO	Salr	1.59	17	Pg	Pb	02 10 57.8	+0.2
SALO	Salr	1.59	17	Pg	Pb	02 10 57.8	+0.2
SAOF	Saorge	1.67	267	Pn	Pn	02 10 57.0	-0.4
SAOF				Sg	Sn	02 11 18.6	-0.2
SAOF	Saorge	1.67	267	Pn	Pn	02 10 57.0	-0.4
SAOF				Sg	Sn	02 11 18.6	-0.2
PGF	Pioggiola	1.68	202	ePn	Pn	02 10 57.4	-0.2
	SNR=1.0						
PGF				eSn	Sn	02 11 17.0	-2.1
	9.2nm,0.2s,SNR=1.0						
PGF	Pioggiola	1.68	202	ePn	Pn	02 10 57.4	-0.2
	SNR=1.0						
PGF				eSn	Sn	02 11 17.0	-2.1
	4.6nm,0.2s,SNR=1.0						
MDI	Monti di Nese	1.68	356	Pg	Pb	02 10 59.1	-0.1
	39nm,0.3s						
MDI	Monti di Nese	1.68	356	Pg	Pb	02 10 59.1	-0.1
	39nm,0.3s						
ROVR	Roverˆ¤ Verone	1.77	29	Pg	Pn	02 10 59.3	+0.4
	46nm,0.4s						
ROVR	Roverˆ¤ Verone	1.77	29	Pg	Pn	02 10 59.3	+0.4
	46nm,0.4s						
SBF	Sospel	1.77	263	ePn	Pn	02 10 58.2	-0.6
	SNR=1.0						
SBF				eSn	Sn	02 11 20.3	-1.1
	26nm,0.2s,SNR=1.0						
PARC	Parchiule	1.78	104	Pg	Pn	02 10 58.4	-0.5
	10.0nm,0.8s						
REVF	Revere	1.84	260	Pn	Pb	02 11 02.0	+0.1
TOUF	Mont Tournerai	1.89	268	Pn	Pn	02 11 00.5	-0.1
TOUF	Mont Tournerai	1.89	268	Pn	Pn	02 11 00.5	-0.1
MVIF	Mont Vial	1.97	265	Pn	Pn	02 11 02.4	+0.8
TRAV	Traversella	2.06	314	Pg	Pb	02 11 05.1	-0.6
TRAV	Traversella	2.06	314	P	Pn	02 11 02.4	-0.5
TRAV	Traversella	2.06	314	Pg	Pb	02 11 05.1	-0.6
TRAV				S	Sn	02 11 25.0	-3.7
MBDF	Montbardon	2.30	287	ePn	Pn	02 11 06.6	+0.4
MBDF				eSn	Sn	02 11 36.0	+1.4
	12nm,0.5s,SNR=1.0						
MBDF	Montbardon	2.30	287	ePn	Pn	02 11 06.6	+0.4
MBDF				eSn	Sn	02 11 36.0	+1.4
	6.2nm,0.5s,SNR=1.0						
CTI	Castel Tesino	2.32	32	Pg	Pn	02 11 06.9	+0.4
	20nm,0.3s						
FRF	La Foret Royal	2.39	258	ePn	Pn	02 11 06.9	-0.4
	SNR=1.0						
FRF				eSn	Sn	02 11 33.5	-3.1
	6.0nm,0.2s,SNR=1.0						
LMR	La Mourre	2.55	254	ePn	Pn	02 11 08.4	-1.1
	SNR=1.0						
LMR				eSn	Sn	02 11 37.0	-3.5
	8.8nm,0.2s,SNR=1.0						
LPG	La Plagne	2.62	303	ePn	Pn	02 11 11.5	+0.8
	SNR=1.0						
LPG				eSn	Sn	02 11 42.9	+0.3
LPG				eSg	Sg	02 11 53.6	+1.3
	5.9nm,0.4s,SNR=1.0						
LPG	La Plagne	2.62	303	ePn	Pn	02 11 11.5	+0.8
	SNR=1.0						
LPG				eSn	Sn	02 11 42.9	+0.3
LPG				eSg	Sg	02 11 53.6	+1.3
	3.0nm,0.4s,SNR=1.0						
LPL	La Plagne	2.64	304	eP	Pb	02 11 14.5	-1.1
LPL				eSn	Sn	02 11 42.9	-0.2
	3.7nm,0.3s						
LPL	La Plagne	2.64	304	eP	Pb	02 11 14.5	-1.1
LPL				eSn	Sn	02 11 42.9	-0.2
	1.9nm,0.3s						
ORIF	Oris-en-Rattie	2.96	287	ePn	Pn	02 11 16.9	+1.6
	SNR=1.0						
ORIF				eSn	Sn	02 11 50.5	-0.4
	5.6nm,0.5s,SNR=1.0						
SMRF	Simiane la Rot	3.09	269	ePn	Pn	02 11 17.7	+0.7
	SNR=1.0						
SMRF				eSn	Sn	02 11 54.0	0.0
SMRF				eSg	Sg	02 12 08.1	+0.6
	5.3nm,0.4s,SNR=1.0						
VOJS	Vojsko	3.44	54	i Pn	Pn	02 11 22.3	+0.4
VOJS				i Sn	Sn	02 12 02.2	-0.5
VOJS	Vojsko	3.44	54	Pn	Pn	02 11 22.3	+0.4
VOJS				i Sn	Sn	02 12 02.2	-0.5
CABF	La Chapelle	3.66	315	ePn	Pn	02 11 25.4	+0.6
CABF	La Chapelle	3.66	315	eP	Pn	02 11 28.5	+3.7
	SNR=1.0						
CABF				eSn	Sn	02 12 07.0	-1.0
	0.6nm,0.2s						
VIVF	Saint-Julien-l	3.79	283	ePn	Pn	02 11 27.3	+0.7
	SNR=1.0						
VIVF				eSn	Sn	02 12 10.6	-0.6
	1.2nm,0.3s,SNR=1.0						
VISS	Visnje	3.92	63	i Pn	Pn	02 11 28.9	+0.6
VISS				i Sn	Sn	02 12 13.5	-0.9
VISS	Visnje	3.92	63	i Pn	Pn	02 11 29.0	+0.6
VISS				i Sn	Sn	02 12 13.5	-0.9
HINF	Hinteralfeld	4.27	332	ePn	Pn	02 11 34.1	+1.0
	SNR=1.0						
HINF				eSn	Sn	02 12 21.4	-1.6
	2.9nm,0.3s,SNR=1.0						
HINF	Hinteralfeld	4.27	332	ePn	Pn	02 11 34.1	+1.0
	SNR=1.0						
HINF				eSn	Sn	02 12 21.4	-1.6
	1.5nm,0.3s,SNR=1.0						
LASF	Ste Croix	4.33	272	ePn	Pn	02 11 34.0	+0.1
	SNR=1.0						
HAU	Haudompre	4.61	329	ePn	Pn	02 11 38.5	+0.7
	SNR=1.0						
HAU				eSn	Sn	02 12 30.3	-1.0
	3.8nm,0.3s,SNR=1.0						
HAU	Haudompre	4.61	329	ePn	Pn	02 11 38.5	+0.7
	SNR=1.0						
HAU				eSn	Sn	02 12 30.3	-1.0
	1.9nm,0.3s,SNR=1.0						
CDF	Champ du Feu	4.67	338	ePn	Pn	02 11 38.7	0.0
	SNR=1.0						
CDF				eSn	Sn	02 12 30.2	-2.7
	2.2nm,0.4s,SNR=1.0						
CDF	Champ du Feu	4.67	338	ePn	Pn	02 11 38.7	0.0
	SNR=1.0						
CDF				eSn	Sn	02 12 30.2	-2.7
	1.1nm,0.4s,SNR=1.0						
SMF	Signal de Mont	4.95	303	ePn	Pn	02 11 43.0	+0.6
	SNR=1.0						
SMF				eSn	Sn	02 12 38.7	-0.9
	0.9nm,0.2s,SNR=1.0						
LOR	Lormes	5.26	309	ePn	Pn	02 11 48.0	+1.2
	SNR=1.0						
LOR				eSn	Sn	02 12 45.8	-1.7
	1.6nm,0.3s,SNR=1.0						
PAGF	Fort de Pagny	5.29	329	ePn	Pn	02 11 48.1	+0.9
PAGF	Fort de Pagny	5.29	329	ePn	Pn	02 11 48.1	+0.9
AVF	Avril sur Loir	5.31	303	ePn	Pn	02 11 48.5	+1.1
	SNR=1.0						
BGF	Bois d'Agland	5.52	299	ePn	Pn	02 11 51.6	+1.3
	SNR=1.0						
MTLF	Montolieu	5.59	265	ePn	Pn	02 11 52.0	+0.7
MTLF	Montolieu	5.59	265	ePn	Pn	02 11 52.0	+0.7
CAF	Calviac	5.64	281	ePn	Pn	02 11 52.8	+0.8
KHC	Kasperske Hory	5.64	26	ePN	Pn	02 11 52.0	0.0
KHC				eSN	Sn	02 12 57.0	+0.1
STON	Ston	5.83	99	ePn	Pn	02 11 56.2	+1.6
STON	Ston	5.83	99	ePn	Pn	02 11 56.2	+1.6

VIE 09 02:25:42.0±0.3, 46.55N×16.78E, h4^{km}±3^{km}, mb1.9/4, ML2.4/4, Error ellipse: s-maj=2.2km s-min=1.8km az=161.0 43 km NE of Varazdin
ISCJB 09 02:25:42.8±0.4, 46.56N±0.02×16.72E±0.02, h4^{km}±3^{km}, Error ellipse: s-maj=3.0km s-min=2.7km az=149.4
CSEM 09 02:25:43.9±0.1, 46.54N×16.68E, h10^{km}, ML2.6, Error ellipse: s-maj=3.2km s-min=2.5km az=157.0
LJU 09 02:25:43.7, 46.52N×16.69E, h18^{km}, ML2.2
PRU 09 02:25:44.2, 46.54N×16.76E, h8^{km}
BEO 09 02:25:44.2±0.3, 46.58N×16.76E, h15^{km}±3^{km}, ML2.1/7
ISC 09 02:25:44.5±0.8, 46.54N±0.02×16.71E±0.02, h12^{km}±5^{km}, n68, σ1.27/115, 26C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BEHE	Becsehely	0.08	148	⇑ePg	Pg	02 25 47.0	-0.1
BEHE				eSg	Sg	02 25 49.2	+0.1
BEHE	Becsehely	0.08	148	⇑ePg	Pg	02 25 47.0	-0.1
BEHE				⇑eSg	Sg	02 25 49.2	+0.1
KOGS	Kog	0.33	254	i Pg	Pg	02 25 50.9	-0.4
KOGS				i Sg	Sg	02 25 56.0	+0.3
KOGS							
	comp=Z,136nm,0.2s						
KOGS	Kog	0.33	254	i Pg	Pg	02 25 50.8	-0.4
KOGS				i Sg	Sg	02 25 56.0	+0.3
	comp=Z,136nm,0.2s						
GROS	Grobnik	0.84	265	i Pg	Pg	02 25 59.8	-0.9
GROS				i Sg	Sg	02 26 11.3	-0.4
GROS	Grobnik	0.84	265	i Pb	Pg	02 25 59.8	-0.9
GROS				i Sb	Sg	02 26 11.3	-0.4
GOLS	Golise	0.92	235	i Pg	Pg	02 26 01.6	-0.7
GOLS				i Sg	Sg	02 26 13.8	-0.5
GOLS							
	comp=Z,46nm,0.2s						
GOLS	Golise	0.92	235	i Pb	Pg	02 26 01.6	-0.7
GOLS				i Sb	Sg	02 26 13.8	-0.5
DOBS	Dobrina	0.94	246	⇑iPg	Pg	02 26 01.9	-0.8
DOBS				i Sg	Sg	02 26 15.3	+0.3
DOBS							
	comp=Z,18nm,0.1s						
DOBS	Dobrina	0.94	246	⇑iPb	Pg	02 26 01.9	-0.8
DOBS				⇑iSb	Sg	02 26 15.3	+0.3
GCIS	Gornji Cirnik	1.01	229	i Pg	Pg	02 26 03.0	-1.0
GCIS				i Sg	Sg	02 26 16.2	-0.9
GCIS							
	comp=Z,28nm,0.1s						
GCIS	Gornji Cirnik	1.01	229	i Pg	Pg	02 26 03.0	-1.0
GCIS				i Sg	Sg	02 26 16.2	-0.9
	comp=Z,28nm,0.1s						
CESS	Cesta pri Krsk	1.03	237	i Pg	Pg	02 26 03.4	-1.0
CESS				i Sg	Sg	02 26 18.2	+0.3
CESS							
	comp=Z,31nm,0.1s						
CESS	Cesta pri Krsk	1.03	237	i Pg	Pg	02 26 03.4	-1.0
CESS				i Sg	Sg	02 26 18.2	+0.3
	comp=Z,31nm,0.1s						
ARSA	Arzberg	1.08	312	⇓iPg	Pg	02 26 03.7	-1.6
ARSA				⇑iSg	Sg	02 26 18.6	-0.8
	comp=Z,15nm,0.2s						
ARSA	Arzberg	1.08	312	Pg	Pg	02 26 03.7	-1.6
ARSA				Sg	Sg	02 26 18.6	-0.8
	comp=Z,15nm,0.2s						
PKS9	Tamasi	1.08	87	⇑ePn	Pn	02 26 05.8	+0.3
PKS9				eSn	Sn	02 26 21.8	+1.4
PKS9	Tamasi	1.08	87	⇑ePn	Pn	02 26 05.8	+0.3
PKS9				⇑eSn	Sn	02 26 21.8	+1.4
SISC	Sisak	1.09	193	ePg	Pg	02 26 04.8	-0.7
SISC				Sn	Sg	02 26 20.4	+0.6
SISC	Sisak	1.09	193	ePg	Pg	02 26 04.8	-0.7
SISC				Sn	Sg	02 26 20.4	+0.6
SOP	Sopron	1.15	355	⇑ePn	Pg	02 26 06.3	-0.3
SOP				eSn	Sg	02 26 21.8	+0.2
SOP	Sopron	1.15	355	⇑ePn	Pg	02 26 06.3	-0.3
SOP				⇑eSn	Sg	02 26 21.8	+0.2
PKST	T˜'s	1.16	51	⇑ePn	Pg	02 26 05.8	-1.0
PKST				eSn	Sn	02 26 23.5	+1.2
PKST	T˜'s	1.16	51	⇑ePn	Pg	02 26 05.8	-1.0
PKST				⇑eSn	Sn	02 26 23.5	+1.2
SOKA	Soboth	1.17	277	⇑iPg	Pb	02 26 05.3	-1.3
SOKA				⇑iSg	Sg	02 26 21.0	-1.1
	comp=Z,9.8nm,0.3s						
SOKA	Soboth	1.17	277	Pg	Pb	02 26 05.3	-1.3
SOKA				Sg	Sg	02 26 21.0	-1.1
	comp=Z,9.8nm,0.3s						
CSKK	Csˆ‡kako	1.34	52	⇑ePn	Pb	02 26 09.8	+0.2
CSKK				eSn	Sn	02 26 30.4	+3.6
CSKK	Csˆ‡kako	1.34	52	⇑ePn	Pb	02 26 09.8	+0.2
PKSM	Moragy	1.38	103	ePg	Pn	02 26 07.4	-2.0
PKSM				eSg	Sb	02 26 27.7	+0.1
PKSM	Moragy	1.38	103	⇓ePn	Pn	02 26 07.5	-2.0
PKSM				eSn	Sb	02 26 24.7	-2.9
PKSM	Moragy	1.38	103	⇓ePn	Pn	02 26 07.5	-2.0
PKSM				eSg	Sb	02 26 27.7	+0.1
PKSG		1.43	53	⇑ePn	Pb	02 26 11.5	+0.4
PKSG				eSn	Sg	02 26 36.4	+5.8
PKSG		1.43	53	⇑ePn	Pb	02 26 11.5	+0.4
BOJS	Bojanci	1.45	225	ePn	Pn	02 26 09.5	-1.0
BOJS	Bojanci	1.45	225	ePg	Pn	02 26 11.8	+1.3
BOJS				eSn	Sn	02 26 30.1	+0.6
BOJS	Bojanci	1.45	225	ePn	Pn	02 26 09.5	-1.0
BOJS	Bojanci	1.45	225	ePg	Pn	02 26 11.8	+1.3
BOJS				eSn	Sn	02 26 30.1	+0.6
OBKA	Obir	1.49	270	⇓iPn	Pn	02 26 10.0	-1.2
OBKA				⇓iSg	Sn	02 26 32.8	+2.1
	comp=Z,38nm,0.5s						
OBKA	Obir	1.49	270	Pn	Pn	02 26 10.0	-1.2
OBKA				Sg	Sn	02 26 32.8	+2.1
	comp=Z,38nm,0.5s						
CONA	Conrad Observa	1.50	338	⇑iPg	Pn	02 26 11.0	-0.4
CONA				⇑iSn	Sn	02 26 31.3	+0.3
CONA	Conrad Observa	1.50	338	Pn	Pn	02 26 10.9	-0.4
CONA				Sn	Sn	02 26 31.3	+0.3
LJU	Ljubljana	1.59	253	ePn	Pn	02 26 12.4	-0.1
LJU				eSg	Sb	02 26 36.3	+2.4
LJU	Ljubljana	1.59	253	ePn	Pn	02 26 12.4	-0.1
LJU				eSg	Sb	02 26 36.3	+2.4
PKS2	Kecel	1.73	91	⇑ePn	Pb	02 26 16.5	+0.4
PKS2				eSn	Sg	02 26 41.9	+1.9
PKS2	Kecel	1.73	91	⇑ePn	Pb	02 26 16.5	+0.4
CEY	Cerknica	1.78	244	ePg	Pn	02 26 16.9	+1.8
CEY				eSn	Sn	02 26 38.2	+0.6
CEY	Cerknica	1.78	244	ePg	Pn	02 26 16.9	+1.8
CEY				eSn	Sn	02 26 38.2	+0.6
BLY	Banja Luka	1.82	169	eSn	Sn	02 26 38.7	+0.1
BLY	Banja Luka	1.82	169	eSn	Sn	02 26 38.7	+0.1
VOY	Vojsko	2.02	256	e	Pn	02 26 20.5	+2.1
VOY				e		02 26 51.8	
VOJS	Vojsko	2.03	257	ePn	Pn	02 26 17.1	-1.4
VOJS	Vojsko	2.03	257	ePn	Pn	02 26 17.1	-1.4
VYHS	Vyhne	2.43	36	ePn	Pn	02 26 23.1	-0.9
VYHS				eSn	Sn	02 26 51.5	-2.1
VYHS	Vyhne	2.43	36	ePn	Pn	02 26 23.1	-0.9
VYHS				eSn	Sn	02 26 51.5	-2.1
VRAC	Vranov	2.77	358	ePn	Pn	02 26 28.1	-0.6
BBLS	Lazići	3.28	144	ePn	Pn	02 26 35.4	-0.4
BBLS	Lazići	3.28	144	ePn	Pn	02 26 35.4	-0.4
MORC	Moravsky Berou	3.29	9	ePn	Pn	02 26 35.8	0.0
KHC	Kasperske Hory	3.34	322	ePN	Pn	02 26 37.8	+1.2
KHC				eSN	Sn	02 27 16.7	+0.5
KHC				eSG	Sg	02 27 31.1	-0.7
KHC	Kasperske Hory	3.34	322	ePn	Pn	02 26 37.8	+1.2
KHC				eSn	Sn	02 27 16.7	+0.5
KHC				Sg	Sg	02 27 31.1	-0.7
DIVS	Divibare	3.36	135	ePn	Pn	02 26 35.8	-1.1
DIVS	Divibare	3.36	135	ePn	Pn	02 26 35.8	-1.1
PRU	Pruhonice	3.74	338	eSG	Sg	02 27 43.1	-1.5
	comp=Z,3.2nm,0.6s						
PRU	Pruhonice	3.74	338	Sg	Sg	02 27 43.1	-1.5
	comp=Z,3.2nm,0.6s						
GRUS	Gruza	3.88	132	ePn	Pn	02 26 43.3	-0.6
GRUS	Gruza	3.88	132	ePn	Pn	02 26 43.3	-0.6
BRG	Berggiesshubel	4.71	338	SG	Sg	02 28 20.6	+5.0
	comp=Z,2.7nm,0.8s						
CLL	Collm	5.36	334	eSg	Sg	02 28 40.0	+3.5

IDC 09 02:38:49.6±72.0, 14.54S×179.85W, h0^{km}, mb4.1/3, mb1 4.2/3, mb1mx3.7/19, mbtmp4.1/3, Error ellipse: s-maj=1319.0km s-min=171.4km az=74.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.16	237	P	P	02 46 19.2	-0.2
	0.9nm,0.8s,baz=72,slow=8.1,SNR=3.2						
WRA	Warramunga Arr	43.98	256	P	P	02 46 58.8	-0.3
	1.1nm,0.9s,baz=89,slow=8.5,SNR=5.4						
ASAR	Alice Springs	44.47	251	P	P	02 47 03.0	0.0
	5.6nm,0.5s,baz=86,slow=7.9,SNR=107						

WEL 09 02:45:16.9±0.3, 40.22S×173.48E, h164^{km}±2^{km}, ML3.7/12, 8C-5D, Error ellipse: s-maj=1.7km s-min=0.7km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.67	150	⇑PN	Pn	02 45 40.8	+0.1
DUWZ				SN	Sn	02 45 57.5	-1.6
QRZ	Quartz Range	0.95	230	PN	Pn	02 45 42.2	-0.3
NRZ	Ngariki Road	0.95	22	PN	Pn	02 45 42.7	+0.1
NNZ	Nelson	1.00	185	⇑PN	Pn	02 45 42.7	-0.2
NNZ				SN	Sn	02 46 01.8	-1.2
DFE	Dawson Falls	1.01	28	PN	Pn	02 45 43.1	-0.1
NEZ	North Egmont	1.06	27	PN	Pn	02 45 43.5	-0.1
PKE	Pukeiti	1.10	21	⇓PN	Pn	02 45 43.7	-0.1
TCW	Tory Channel	1.16	149	PN	Pn	02 45 44.6	+0.4

TCW				SN	Sn	02 46 04.1	-1.3
RAEZ	**Rainy Point**	**1.17**	**37**	PN	Pn	02 45 44.6	+0.2
DREZ	**Durham Road**	**1.17**	**28**	PN	Pn	02 45 44.4	0.0
WAZ	**Wanganui**	**1.24**	**68**	⇓PN	Pn	02 45 45.4	+0.3
TUWZ	**Tuamarina**	**1.26**	**164**	PN	Pn	02 45 45.2	+0.1
KIW	**Kapiti Island**	**1.26**	**121**	PN	Pn	02 45 45.3	+0.1
MHEZ	**Mangahewa**	**1.31**	**30**	PN	Pn	02 45 46.0	+0.2
OGWZ	**Otaki Gorge**	**1.42**	**115**	PN	Pn	02 45 46.8	+0.1
SNZO	**South Karori**	**1.43**	**140**	⇑PN	Pn	02 45 46.8	+0.1
VRZ	**Vera Road**	**1.47**	**42**	⇓PN	Pn	02 45 46.6	-0.6
VRZ				SN	Sn	02 46 09.4	-1.1
CAW	**Cannon Point**	**1.50**	**127**	PN	Pn	02 45 47.6	+0.1
BSWZ	**Blackbirch Sta**	**1.52**	**169**	PN	Pn	02 45 48.0	+0.3
BHW	**Baring Head**	**1.58**	**139**	PN	Pn	02 45 48.2	-0.1
THZ	**Tophouse**	**1.60**	**196**	⇑PN	Pn	02 45 48.2	-0.4
MRZ	**Mangatainoka R**	**1.66**	**106**	PN	Pn	02 45 48.9	-0.2
HOWZ	**Holdsworth Sta**	**1.69**	**114**	PN	Pn	02 45 49.3	-0.2
PKVZ	**Pokaka**	**1.71**	**58**	PN	Pn	02 45 49.2	-0.6
MTVZ	**Mangateitei**	**1.74**	**62**	PN	Pn	02 45 49.6	-0.5
POWZ	**Post Office Ro**	**1.75**	**96**	PN	Pn	02 45 49.9	-0.3
MSWZ	**Moikau Station**	**1.79**	**132**	PN	Pn	02 45 50.5	-0.1
MTW	**Mount Morrison**	**1.80**	**122**	PN	Pn	02 45 50.5	-0.1
TRVZ	**Turoa**	**1.84**	**61**	PN	Pn	02 45 50.5	-0.8
FWVZ	**Far West T-bar**	**1.86**	**59**	PN	Pn	02 45 50.9	-0.8
PLWZ	**Palliser**	**1.90**	**136**	PN	Pn	02 45 51.5	-0.3
TSZ	**Takapari Road**	**1.91**	**86**	PN	Pn	02 45 51.3	-0.5
TIWZ	**Tintock**	**1.91**	**108**	⇓PN	Pn	02 45 51.7	-0.2
TUVZ	**Tukino**	**1.93**	**61**	PN	Pn	02 45 51.7	-0.6
MOVZ	**Moawhango**	**1.93**	**66**	PN	Pn	02 45 51.1	-1.0
NGZ	**Ngauruhoe**	**1.94**	**58**	PN	Pn	02 45 51.6	-0.7
WTVZ	**West Tongariro**	**1.96**	**56**	⇑PN	Pn	02 45 51.8	-0.8
OTVZ	**Oturere**	**1.99**	**59**	PN	Pn	02 45 52.4	-0.5
HIZ	**Hauiti**	**2.01**	**32**	⇓PN	Pn	02 45 52.2	-0.8
KRVZ	**Karewarewa**	**2.01**	**57**	PN	Pn	02 45 52.2	-0.9
TMWZ	**Te Maipa**	**2.03**	**117**	PN	Pn	02 45 53.0	-0.2
DVHZ	**Dannevirke**	**2.05**	**93**	PN	Pn	02 45 52.9	-0.6
PNHZ	**Pukenui**	**2.11**	**82**	PN	Pn	02 45 53.5	-0.6
BHHZ	**Black Hill Sta**	**2.12**	**71**	PN	Pn	02 45 53.0	-1.3
BFZ	**Birch Farm**	**2.16**	**103**	PN	Pn	02 45 54.2	-0.4
KHZ	**Kahutara**	**2.19**	**179**	⇑PN	Pn	02 45 54.7	-0.3
WPHZ	**Waipukurau**	**2.27**	**87**	⇑PN	Pn	02 45 55.5	-0.5
BKZ	**Black Stump Fm**	**2.55**	**67**	PN	Pn	02 45 57.8	-1.6
LTZ	**Lake Taylor**	**2.72**	**199**	PN	Pn	02 46 00.2	-1.1
NMHZ	**Naumai**	**2.80**	**67**	PN	Pn	02 46 01.6	-0.8
URZ	**Urewera**	**3.43**	**56**	PN	Pn	02 46 07.6	-2.6
KNZ	**Kokohu**	**3.45**	**71**	PN	Pn	02 46 08.5	-1.9
MQZ	**McQueen's Vall**	**3.54**	**190**	PN	Pn	02 46 09.0	-2.5
MWZ	**Matawai**	**3.66**	**60**	PN	Pn	02 46 11.0	-2.2
JCZ	**Jackson Bay**	**5.21**	**221**	PN	Pn	02 46 30.8	-2.5
ODZ	**Otahua Downs**	**5.25**	**203**	⇑PN	Pn	02 46 31.4	-2.4

*IDC **09** 02:51:12.7±0.4, 11°.73N×92°.10E, h0km, mb4.4/27, mb1 4.5/28, mb1mx4.4/33, mbtmp4.4/28, ML4.5/1, MS3.9/15, Ms1 3.9/15, ms1mx3.6/42, Error ellipse: s-maj=15.2km s-min=10.5km az=59.0*

*BJI **09** 02:51:13.1, 11°.55N×91°.88E, h16km, mB4.7/25, mb4.5/36, Ms4.3/31, Ms7 3.9/31*

*ISCJB **09** 02:51:14.9±0.7, 11°.64N±0°.02×91°.94E±0°.03, h26km±5km, mb4.7/112, MS3.9/23, Error ellipse: s-maj=4.6km s-min=3.6km az=44.6*

*MOS **09** 02:51:16.6±1.0, 11°.85N×92°.06E, h33km, mb5.0/51, Error ellipse: s-maj=9.5km s-min=4.8km az=118.9*

*NEIC **09** 02:51:17.3±0.2, 11°.74N×92°.01E, mb4.8/46, Error ellipse: s-maj=5.7km s-min=3.8km az=220.0*

*DJA **09** 02:51:23.2±1.6, 11°N±4°×9°2E±1°6, h51km±12km, M4.6/10, mB5.0/4, mb4.5/10, MLv4.7/1, Mw(mB)4.3/4*

ISC 09 02:51:17.4±0.3, **11°.66N**±0°.03×**91°.97E**±0°.04, **h30**km±1km, **h30**km**:pP-P, n343, σ1s.31**/423, **mb4.7**/112, **MS3.9**/24, **6C-6D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.76**	**90**	*e*PKP	Pn	02 51 30.5	-1.7
PBA				*e*S	Sb	02 51 41.6	-0.6
PBA				AML	AML	02 51 51.5	
	comp=E,36μm,0.6s						
PBA				AML	AML	02 51 55.8	
	comp=N,26μm,0.7s						
DGPR	**DIGLIPUR**	**1.78**	**32**	*e*PKP	**Pn**	**02 51 45.0**	**-1.2**
DGPR				*e*S	**Sn**	**02 52 06.8**	**-1.0**
DGPR				AML	AML	02 52 07.9	
	comp=N,13μm,0.2s						
DGPR				AML	AML	02 52 08.0	
	comp=E,16μm,0.3s						
CMBY	**CAMPBELL BAY**	**5.01**	**157**	*e*PKP	**Pn**	**02 52 30.5**	**-0.1**
CMBY				*e*S	**Sn**	**02 53 27.0**	**-0.6**
BSI	**Banda Aceh**	**6.95**	**151**	P	**Pn**	**02 52 57.8**	**+0.4**
	comp=E,29nm,0.8s,comp=E,989nmcomp=E,0.3nm						
BSI				S	**Sn**	**02 54 15.9**	**+0.4**
	comp=E,29nm,0.8s,comp=E,989nmcomp=E,0.3nm						
PHET	**Kaeng Krachan**	**7.59**	**80**	P	**Pn**	**02 53 06.5**	**+0.4**
	comp=E,456nm,0.6s,comp=E,4μm						
CM31	**Chiang Mai Arr**	**9.54**	**44**	*e*Pn	**Pn**	**02 53 33.1**	**+0.2**
	comp=E,15nm,0.6s						
CMAR	**Chiang Mai Arr**	**9.54**	**44**	Pn	**Pn**	**02 53 31.4**	**-1.5**
CMAR				Sn	**Sn**	**02 55 17.2**	**-1.9**
CMAR	**Chiang Mai Arr**	**9.54**	**44**	Pn	**Pn**	**02 53 31.4**	**-1.5**
	comp=E,1.2nm,0.3s,baz=236,slow=14,SNR=17						
CMAR				Sn	**Sn**	**02 55 17.2**	**-1.9**
	comp=E,0.5nm,0.3s,baz=236,slow=28,SNR=2.6						
CHTO	**Chiang Mai**	**9.79**	**43**	*e*P	Pn	02 53 39.7	+3.4
CHTO	**Chiang Mai**	**9.79**	**43**	*e*Pn	Pn	02 53 39.7	+3.4
CHTO	**Chiang Mai**	**9.79**	**43**	P	Pn	02 53 40.3	+4.0
	comp=E,25nm,0.9s						
CMMT	**Chiang Mai**	**9.79**	**43**	P	Pn	02 53 39.5	+3.2
	comp=E,22nm,0.9s,comp=E,479nm						
CHBT	**CHBT**	**10.19**	**83**	P	**Pn**	**02 53 44.0**	**+2.3**
	comp=E,41nm,1.2s						
KULM	**Kulim**	**10.67**	**126**	*e*Pn	**Pn**	**02 53 51.1**	**+2.8**
	comp=E,36nm,0.8s						
PSI	**Prapat**	**11.18**	**141**	Pn	Pn	02 54 01.0	+5.5
PSI	**Prapat**	**11.18**	**141**	P	Pn	02 54 01.7	+6.2
	comp=E,19nm,1.2s						
PSI	**Prapat**	**11.18**	**141**	Pn	Pn	02 54 01.0	+5.5
	comp=E,1.0nm,0.3s,baz=3.4,slow=14,SNR=6.9						
PSI				LR	LR	02 59 02.2	
	comp=E,515nm,19.3s,baz=95,slow=42						
IPM	**Ipoh**	**11.46**	**128**	*e*Pn	**Pn**	**02 54 00.4**	**+1.2**
	comp=E,27nm,0.7s						
IPM	**Ipoh**	**11.46**	**128**	P	**Pn**	**02 54 02.3**	**+3.1**
	comp=E,42nm,0.9s						
PALK	**Pallekele**	**11.94**	**250**	*e*Pn	**Pn**	**02 54 06.0**	**+0.3**
BOK	**Bokaro**	**13.38**	**335**	*e*PKP	**Pn**	**02 54 24.8**	**-0.6**
UBPT	**Khong Chiam**	**13.62**	**73**	P	**P**	**02 54 34.8**	**-2.4**
	comp=E,29nm,1.1s						
SHL	**Shillong**	**13.83**	**360**	*e*PKP	**Pn**	**02 54 31.3**	**-0.4**
HYB	**Hyderabad**	**14.19**	**295**	P	**Pn**	**02 54 35.5**	**-1.0**
HYB				*e*S	**Sn**	**02 57 13.0**	**0.0**
HYB	**Hyderabad**	**14.19**	**295**	*i* P	**Pn**	**02 54 35.5**	**-1.0**
HYB				*e*		02 56 59.5	
HYB				*e*S	**Sn**	**02 57 13.0**	**0.0**
HYB	**Hyderabad**	**14.19**	**295**	P	**Pn**	**02 54 35.5**	**-1.0**
HYB				*e*S	**Sn**	**02 57 13.0**	**0.0**
HYB	**Hyderabad**	**14.19**	**295**	*e*PKP	**Pn**	**02 54 35.8**	**-0.7**
MYKOM	**Kota Tinggi**	**15.33**	**129**	P	**P**	**02 54 58.5**	**+2.2**
NGP	**Nagpur**	**15.56**	**309**	*e*PKP	**Pn**	**02 54 53.2**	**-1.6**
NGP				*e*x	x	02 57 32.9	
ODAN	**Odare**	**15.72**	**345**	*e*P	**Pn**	**02 54 54.9**	**-2.2**
	comp=E,34nm,0.6s						
RAMN	**Ramite**	**16.02**	**342**	*e*P	**Pn**	**02 54 58.6**	**-2.4**
	comp=E,72nm,0.6s						
TAPN	**Taplejung**	**16.11**	**346**	*e*P	**Pn**	**02 54 59.5**	**-2.7**
	comp=E,38nm,0.6s						
KMI	**Kunming**	**16.83**	**36**	P	**P**	**02 55 13.4**	**+0.3**
KMI				pP	**pP**	**02 55 19.4**	**-1.7**
KMI				sP	**sP**	**02 55 24.1**	**-0.8**
KMI				PP	PP	02 55 27.1	
KMI				S	**Sn**	**02 58 18.3**	**+0.8**
KMI				SS	**SnSn**	**02 58 39.2**	**+8.1**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,130nm,3.2s						
KMI				LR	LR		
	comp=N,370nm,16.2s						
KMI				LR	LR		
	comp=E,220nm,11.9s						
KMI				LR	LR		
	comp=Z,230nm,16.0s						
AKL	**Akola**	**16.93**	**304**	*e*PKP	**P**	**02 55 13.9**	**-0.1**
PKI	**Pulchoki**	**16.98**	**340**	*e*P	**Pn**	**02 55 12.0**	**-1.2**
	comp=Z,74nm,0.7s						
DMN	**Daman**	**17.12**	**339**	*e*P	**Pn**	**02 55 13.4**	**-1.5**
	comp=Z,135nm,0.8s						
GUN	**Gumba**	**17.14**	**341**	*e*P	**Pn**	**02 55 13.2**	**-2.0**
	comp=Z,95nm,0.8s						
KKN	**Kakani**	**17.23**	**340**	*e*P	**Pn**	**02 55 15.1**	**-1.1**
KOLN	**Koldanda**	**17.84**	**335**	*e*P	**Pn**	**02 55 24.0**	**+0.2**
	comp=Z,98nm,0.6s						
LSA	**Lhasa**	**17.96**	**358**	P	**P**	**02 55 27.0**	**+1.1**
LSA	**Lhasa**	**17.96**	**358**	*e*P	**Pn**	**02 55 24.4**	**-1.1**
LSA				pmax	pmax		
	comp=Z,32nm,1.0s						
LSA	**Lhasa**	**17.96**	**358**	*e*Pn	**Pn**	**02 55 24.4**	**-1.1**
	comp=Z,32nm,1.0s						
BHPL	**Bhopal**	**18.01**	**312**	*e*PKP	**Pn**	**02 55 25.5**	**-0.2**
DANN	**Dangsing**	**18.29**	**336**	*e*P	**Pn**	**02 55 29.5**	**+0.1**
	comp=Z,105nm,0.7s						
PYUN	**Piuthan**	**18.39**	**334**	*e*P	**Pn**	**02 55 31.0**	**+0.5**
	comp=Z,156nm,0.7s						
QIZ	**Qiongzhong**	**18.72**	**65**	P	**Pn**	**02 55 36.4**	**+2.0**
QIZ				S	**Sn**	**02 59 02.9**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,31nm,1.9s						
QIZ				LR	LR		
	comp=N,390nm,16.5s						
QIZ				LR	LR		
	comp=Z,320nm,15.3s						
POO	**Poona**	**18.77**	**294**	*e*PKP	**P**	**02 55 34.6**	**+0.2**
GYA	**Guiyang**	**20.21**	**41**	P	**P**	**02 55 50.4**	**+0.3**
GYA				pP	**pP**	**02 56 01.0**	**+2.8**
GYA				PP	**PnPn**	**02 56 12.6**	**+5.4**
GYA				S	**S**	**02 59 33.0**	**-2.6**
GYA				ScP	**ScP**	**03 03 38.9**	**+0.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,20nm,3.0s						
GYA				LR	LR		
	comp=N,620nm,14.8s						
GYA				LR	LR		
	comp=E,490nm,15.9s						
GYA				LR	LR		
	comp=Z,560nm,14.2s						
KSM	**Kuching**	**20.82**	**118**	*e*P	**P**	**02 55 56.2**	**-0.5**
	comp=Z,17nm,0.7s						
KSM	**Kuching**	**20.82**	**118**	P	**P**	**02 55 57.5**	**+0.7**
	comp=Z,26nm,1.2s						
AJM	**Ajmer**	**21.99**	**315**	*e*PKP	**P**	**02 56 08.1**	**-1.2**
CD2	**Chengdu**	**22.05**	**28**	P	**P**	**02 56 12.2**	**+2.3**
CD2				pP	**pP**	**02 56 20.5**	**+2.5**
CD2				sP	**sP**	**02 56 24.3**	**+2.5**
CD2				PP	**PnPn**	**02 56 39.0**	**+6.7**
CD2				S	**S**	**03 00 09.7**	**-1.9**
CD2				sS	Sn	03 00 23.2	+0.1
CD2				SS	SnSn	03 00 50.0	+11
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,260nm,5.4s						
CD2				LR	LR		
	comp=N,320nm,17.6s						
CD2				LR	LR		
	comp=E,380nm,17.6s						
CD2				LR	LR		
	comp=Z,250nm,13.2s						
SBUM	**Sibu**	**22.07**	**113**	P	**P**	**02 56 09.8**	**-0.3**
SMLA	**Simla**	**23.72**	**327**	*e*PKP	**P**	**02 56 27.9**	**+0.9**
KKM	**Kota Kinabalu**	**24.59**	**101**	*e*P	**P**	**02 56 35.3**	**0.0**
ENH	**Enshi**	**24.65**	**39**	*e*P	**P**	**02 56 33.2**	**-2.3**
	comp=Z,66nm,0.9s						
DHRM	**DHARAMSHALA**	**25.06**	**327**	*e*PKP	**P**	**02 56 40.1**	**+0.5**
LZH	**Lanzhou**	**26.58**	**22**	*e*P	**P**	**02 56 52.5**	**-0.7**
LZH				PP	**PnPn**	**02 57 36.3**	**+1.9**
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.2s						
LZH				LR	LR		
	comp=N,430nm,14.8s						
LZH				LR	LR		
	comp=E,490nm,14.3s						
LZH				LR	LR		
	comp=Z,690nm,16.4s						
XAN	**Xi'an**	**27.12**	**32**	P	P	02 57 05.7	+7.7
XAN				pP	pP	02 57 12.4	+5.7
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,26nm,8.0s						
GTA	**Gaotai**	**28.50**	**13**	⇑P	**P**	**02 57 10.5**	**+0.2**
GTA				pP	**pP**	**02 57 18.4**	**-0.7**
GTA				S	**S**	**03 01 56.9**	**+0.6**
GTA				SS	**SnSn**	**03 03 24.8**	**+8.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,48nm,5.5s						
GTA				LR	LR		
	comp=N,150nm,16.6s						
GTA				LR	LR		
	comp=E,160nm,15.4s						
GTA				LR	LR		
	comp=Z,160nm,15.0s						
KSH	**Kashi**	**31.16**	**336**	P	**P**	**02 57 33.0**	**-0.9**
KSH				*e*pP	**pP**	**02 57 42.7**	**+0.1**
KSH				*e*sP	**sP**	**02 57 46.6**	**+0.3**
KSH				*e*PP	**PnPn**	**02 58 35.4**	**-0.7**
KSH				*e*PcP	**PcP**	**03 00 28.5**	**-0.1**
KSH				*e*S	**S**	**03 02 33.5**	**-4.6**
KSH				*e*sS	**sS**	**03 02 50.4**	**-2.1**
KSH				*e*ScP	**ScP**	**03 04 07.7**	**-1.9**
KSH				*e*PcS	**PcS**	**03 04 11.6**	**-1.2**
KSH				*e*ScS	**ScS**	**03 08 02.9**	**-3.9**
KSH				pmax	pmax		
	comp=Z,12nm,0.7s						
KSH				pmax	pmax		
	comp=Z,61nm,4.9s						
KSH				LR	LR		
	comp=N,400nm,8.9s						
KSH				LR	LR		
	comp=E,400nm,7.1s						
KSH				LR	LR		
	comp=Z,290nm,5.2s						
NJ2	**Nanjing**	**32.01**	**46**	*e*P	**P**	**02 57 43.3**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
KAPI	**Kappang**	**32.22**	**119**	*e*P	**P**	**02 57 42.3**	**-1.1**
	comp=Z,13nm,1.1s						
WMQ	**Urumqi**	**32.26**	**354**	*e*P	**P**	**02 57 45.4**	**+2.0**
WMQ				pP	**pP**	**02 57 52.6**	**+0.5**
WMQ				PP	**PnPn**	**02 58 52.2**	**+2.0**
WMQ				PcP	**PcP**	**03 00 32.0**	**+0.6**
WMQ				S	**S**	**03 02 56.5**	**+1.6**
WMQ				ScP	**ScP**	**03 04 14.0**	**+0.9**
WMQ				SS	**SnSn**	**03 04 51.1**	**+3.4**
WMQ				ScS	**ScS**	**03 08 11.6**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,14nm,0.5s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.2s						
WMQ				LR	LR		
	comp=N,270nm,6.0s						
WMQ				LR	LR		
	comp=E,260nm,10.0s						
WMQ				LR	LR		
	comp=Z,140nm,16.4s						
HHC	**Hu-ho-hao-te**	**33.80**	**27**	*e*P	**P**	**02 57 57.3**	**+0.3**
HHC				pP	**pP**	**02 58 06.5**	**+0.7**
HHC				sP	**sP**	**02 58 10.8**	**+1.4**
HHC				S	**S**	**03 03 20.0**	**+0.8**
HHC				SS	**SnSn**	**03 05 24.1**	**-1.3**
HHC				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC				pmax	pmax		
	comp=Z,190nm,9.0s						
HHC				LR	LR		
	comp=N,380nm,21.4s						
HHC				LR	LR		
	comp=E,560nm,16.3s						
HHC				LR	LR		
	comp=Z,340nm,19.8s						
TKM2	**Tokmak 2**	**34.24**	**338**	*e*P	**P**	**02 58 01.8**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TKM2	**Tokmak 2**	**34.24**	**338**	*e*P	**P**	**02 58 01.8**	**+0.9**
	comp=Z,3.8nm,0.8s						
AAK	**Ala-Archa**	**34.40**	**337**	*de*P	**P**	**02 58 02.5**	**+0.3**
AAK				pmax	pmax		
	comp=Z,14nm,1.6s						
AAK	**Ala-Archa**	**34.40**	**337**	*e*P	**P**	**02 58 02.5**	**+0.3**
	comp=Z,4.9nm,1.6s						
AAK	**Ala-Archa**	**34.40**	**337**	P	**P**	**02 58 02.3**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=154,slow=7.0,SNR=9.7						
AAK				LR	LR	03 14 05.3	
	comp=Z,186nm,18.6s,baz=142,slow=40						
EKS2	**Erkin-Say**	**34.70**	**336**	*e*P	**P**	**02 58 06.2**	**+1.4**
EKS2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
EKS2	**Erkin-Say**	**34.70**	**336**	*e*P	**P**	**02 58 06.2**	**+1.4**
	comp=Z,5.8nm,0.8s						
BJI	**Beijing**	**35.45**	**33**	P	**P**	**02 58 12.8**	**+1.7**
BJI				S	**S**	**03 03 40.6**	**-3.7**
BJI				pmax	pmax		
	comp=Z,30nm,0.7s						
BJI				LR	LR		
	comp=N,290nm,23.3s						
BJI				LR	LR		
	comp=E,220nm,18.5s						
BJI				LR	LR		
	comp=Z,150nm,20.6s						
MK31	**Makanchi Array**	**35.96**	**349**	*i* P	**P**	**02 58 14.5**	**-1.0**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK31	**Makanchi Array**	**35.96**	**349**	*e*P	**P**	**02 58 14.9**	**-0.5**
MK31				*e*pP	**pP**	**02 58 24.0**	**-0.2**
MKAR	**Makanchi Array**	**35.96**	**349**	*e*P	**P**	**02 58 15.2**	**-0.3**
MKAR						03 00 41.0	
MKAR	**Makanchi Array**	**35.96**	**349**	*e*P	**P**	**02 58 15.2**	**-0.3**
MKAR				PcP	**PcP**	**03 00 41.0**	**-0.8**
MKAR	**Makanchi Array**	**35.96**	**349**	P	**P**	**02 58 15.0**	**-0.5**
	comp=Z,6.0nm,0.9s,baz=166,slow=7.8,SNR=44						
MKAR				PcP	**PcP**	**03 00 41.0**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=161,slow=2.6,SNR=3.3						
KK31	**Karatay Array**	**36.44**	**333**	*ce*P	**P**	**02 58 20.0**	**+0.4**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KKAR	**Karatay Array**	**36.44**	**333**	*e*P	**P**	**02 58 20.3**	**+0.7**
KKAR	**Karatay Array**	**36.44**	**333**	*e*P	**P**	**02 58 20.2**	**+0.7**
SONM	**Songino Array**	**38.04**	**16**	P	**P**	**02 58 32.9**	**-0.3**
SONM	**Songino Array**	**38.04**	**16**	P	**P**	**02 58 32.9**	**-0.3**
	comp=Z,1.7nm,0.7s,baz=198,slow=8.4,SNR=4.8						
SONM				LR	LR	03 16 33.5	
	comp=Z,102nm,19.7s,baz=224,slow=40						
HVS	**Khovu-Aksy**	**39.39**	**2**	⇑*i*P	**P**	**02 58 43.8**	**-0.6**
HVS				pmax	pmax		
	comp=Z,27nm,1.0s						
ZAK	**Zakamensk**	**39.71**	**11**	*e*P	**P**	**02 58 46.7**	**-0.5**
ZAK				*e*		03 00 43.5	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.5s						
KURBB	**Kurchatov Arra**	**40.38**	**347**	P	**P**	**02 58 52.5**	**-0.1**
	comp=Z,4.4nm,0.8s,baz=159,slow=7.6,SNR=35						
KURBB				PcP	**PcP**	**03 00 55.1**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=166,slow=2.3,SNR=6.2						
KURK	**Kurchatov**	**40.45**	**347**	*d i*P	**P**	**02 58 52.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KURK	**Kurchatov**	**40.45**	**347**	*e*P	**P**	**02 58 52.9**	**-0.2**
	comp=Z,10nm,1.0s						
KURK				PcP	**PcP**	**03 00 55.1**	**-0.5**
KSAR	**Wonju Array Be**	**41.15**	**45**	P	**P**	**02 58 57.4**	**-1.7**
KSRS	**Korea Array**	**41.18**	**45**	P	**P**	**02 58 57.4**	**-1.9**
	comp=Z,3.6nm,0.7s,baz=242,slow=8.7,SNR=11						
KSRS				LR	LR	03 17 41.8	
	comp=Z,121nm,18.5s,baz=96,slow=39						
JNU	**Nakatsue**	**41.51**	**53**	*e*P	**P**	**02 59 03.8**	**+1.7**
	comp=Z,4.4nm,0.9s						
JNU	**Nakatsue**	**41.51**	**53**	P	**P**	**02 59 01.4**	**-0.8**
	comp=Z,10.0nm,1.0s,baz=223,slow=5.4,SNR=5.2						
MBWA	**Marble Bar**	**42.52**	**140**	*e*P	**P**	**02 59 09.3**	**-1.1**
	comp=Z,27nm,1.0s						
MBWA				*e*pP	**pP**	**02 59 17.5**	**-1.9**
ZAA0	**Zalesovo Array**	**42.56**	**354**	*e*P	**P**	**02 59 09.6**	**-0.8**
ZAA0				*e*pP	**pP**	**02 59 18.5**	**-0.8**
ZALV	**Zalesovo Beam**	**42.56**	**354**	P	**P**	**02 59 09.8**	**-0.6**
ZALV	**Zalesovo Beam**	**42.56**	**354**	P	**P**	**02 59 09.8**	**-0.6**
ZALV	**Zalesovo Beam**	**42.56**	**354**	P	**P**	**02 59 09.8**	**-0.6**
	comp=Z,6.2nm,0.8s,baz=170,slow=9.0,SNR=21						
ZALV				LR	LR	03 20 12.8	
	comp=Z,107nm,18.2s,baz=247,slow=41						
CN2	**Changchun**	**43.10**	**36**	*e*P	**P**	**02 59 13.9**	**-1.1**
CN2				*e*S	**S**	**03 05 36.7**	**-2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
NVS	**Novosibirsk**	**43.62**	**353**	*e*P	**P**	**02 59 16.2**	**-2.7**
NVS				pmax	pmax		
	comp=N,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FITZ	**Fitzroy Crossi**	**44.49**	**131**	P	**P**	**02 59 24.3**	**-2.1**
FITZ	**Fitzroy Crossi**	**44.49**	**131**	P	**P**	**02 59 24.3**	**-2.1**
	comp=Z,7.0nm,0.8s,baz=338,slow=7.9,SNR=14						
BVAR	**Borovoye Array**	**44.74**	**342**	P	**P**	**02 59 26.9**	**-1.1**
BVAR						03 01 10.1	
BVAR	**Borovoye Array**	**44.74**	**342**	P	**P**	**02 59 26.9**	**-1.1**
BVAR				PcP	**PcP**	**03 01 10.1**	**+0.2**
BVAR	**Borovoye Array**	**44.74**	**342**	P	**P**	**02 59 26.9**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=142,slow=7.5,SNR=12						
BVAR				PcP	**PcP**	**03 01 10.1**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=165,slow=6.2,SNR=4.3						
RDF	**Al-Radifah**	**44.76**	**299**	*e*P	**P**	**02 59 29.3**	**+0.8**
RDF				AMb	AMB	02 59 30.9	
	comp=Z,26nm,0.7s						
BRVK	**Borovoye**	**44.80**	**342**	*e*P	**P**	**02 59 27.8**	**-0.7**
BRVK				*e**PP	**pP**	**02 59 36.9**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	**Borovoye**	**44.80**	**342**	*e*P	**P**	**02 59 27.8**	**-0.7**
	comp=Z,3.5nm,0.9s						
BRVK				*e*pP	**pP**	**02 59 36.9**	**-0.5**
NAY	**Al-Naaiem**	**45.10**	**300**	*e*P	**P**	**02 59 31.8**	**+0.6**
NAY				AMb	AMB	02 59 34.3	
	comp=Z,15nm,0.7s						
MIB	**Mutribah**	**45.15**	**301**	*e*P	**P**	**02 59 32.2**	**+0.6**
MIB				AMb	AMB	02 59 33.5	
	comp=Z,17nm,0.7s						
AB31	**Akbulak array**	**45.90**	**331**	*e*P	**P**	**02 59 37.1**	**-0.1**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ABKAR	**Akbulak array**	**45.90**	**331**	*e*P	**P**	**02 59 37.7**	**+0.4**
MDJ	**Mudanjiang**	**46.00**	**37**	P	**P**	**02 59 39.6**	**+1.5**
MDJ				S	**S**	**03 06 23.9**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,7.0nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,59nm,6.6s						
MDJ				LR	LR		
	comp=N,120nm,20.6s						
MDJ				LR	LR		
	comp=E,120nm,20.6s						
MDJ				LR	LR		
	comp=Z,140nm,20.6s						
USRK	**Ussuriysk Arra**	**47.23**	**39**	LR	LR	03 23 29.8	
	comp=Z,90nm,19.4s,baz=352,slow=41						
AKTO	**Aktyubinsk**	**47.62**	**331**	P	**P**	**02 59 49.9**	**-0.8**
AKTO				pmax	pmax		
	comp=Z,1.0nm,1.2s						
MAJO	**Matsushiro**	**48.34**	**51**	*e*P	**P**	**02 59 57.2**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,125nm,2.8s						
MAJO	**Matsushiro**	**48.34**	**51**	*e*P	**P**	**02 59 57.1**	**+0.7**
	comp=Z,125nm,2.8s						
MAT	**Matsushiro**	**48.34**	**51**	P	**P**	**02 59 57.3**	**+0.8**
MJAR	**Matsushiro Arr**	**48.34**	**51**	P	**P**	**02 59 56.3**	**-0.2**
MJAR				PcP	**PcP**	**03 01 21.9**	**-1.1**
MJAR	**Matsushiro Arr**	**48.34**	**51**	P	**P**	**02 59 56.3**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=235,slow=7.2,SNR=4.7						
MJAR				PcP	**PcP**	**03 01 21.9**	**-1.1**
	comp=Z,1.9nm,0.9s,baz=250,slow=4.0,SNR=4.4						
MJAR				LR	LR	03 23 40.6	
	comp=Z,80nm,19.3s,baz=335,slow=40						
GNI	**Garni**	**50.29**	**313**	*e*P	**P**	**03 00 12.9**	**+1.4**
	comp=Z,15nm,0.9s						
NWAO	**Narrogin (SRO)**	**50.48**	**152**	P	**P**	**03 00 11.6**	**-1.1**
NWAO	**Narrogin (SRO)**	**50.48**	**152**	P	**P**	**03 00 11.6**	**-1.1**
	comp=Z,7.1nm,0.9s,baz=347,slow=9.1,SNR=4.1						

NWAO LR LR 03 23 56.8
comp=Z,108nm,18.1s,baz=183,slow=39
SVE Sverdlovsk 51.11 338 *eP* **P 03 00 17.6 +0.4**
SVE pmax pmax
comp=Z,17nm,1.4s
HABR Khabarovsk 51.24 36 *eP* **P 03 00 15.7 -2.6**
HABR *e**PP **pP 03 00 25.6 -1.8**
HABR *e**SP **sP 03 00 29.8 -1.2**
HABR *e*PPP PPP 03 03 12.9
HABR *eS* **S 03 07 33.4 -1.6**
HABR *e**SS **sS 03 07 50.4 +0.4**
HABR *e* 03 10 03.0
HABR *e*SS **SS 03 11 10.8 +0.1**
HABR *e*SSS SSS 03 12 47.6
HABR pmax pmax
comp=Z,28nm,1.7s
HABR pmax pmax
comp=N,32nm,1.7s
HABR pmax pmax
comp=E,13nm,0.9s
HABR MLR MLR
comp=Z,60nm,14.0s
ARU Arti 51.59 337 *d i* P **P 03 00 20.3 -0.5**
ARU 03 02 17.1
ARU S **S 03 07 42.2 +2.6**
ARU SS **SS 03 11 12.1 -3.8**
ARU pmax pmax
comp=Z,4.0nm,0.8s
ZEI Tsey 51.84 316 *eP* **P 03 00 24.3 +1.1**
ZEI pmax pmax
comp=Z,7.0nm,0.9s
WRA Warramunga Arr 52.21 127 P **P 03 00 25.0 -1.0**
WRA PcP **PcP 03 01 37.4 0.0**
WRA Warramunga Arr 52.21 127 P **P 03 00 25.0 -1.0**
comp=Z,6.5nm,0.6s,baz=305,slow=8.6,SNR=46
WRA PcP **PcP 03 01 37.4 0.0**
comp=Z,1.5nm,0.7s,baz=318,slow=2.8,SNR=2.1
WRAB Tennant Creek 52.21 127 *eP* **P 03 00 24.9 -1.1**
WRAB pmax pmax
comp=Z,15nm,0.6s
WRAB Tennant Creek 52.21 127 *eP* **P 03 00 24.9 -1.1**
comp=Z,15nm,0.6s
KBZ Khabaz 52.87 317 P **P 03 00 31.3 +0.7**
KBZ Khabaz 52.87 317 P **P 03 00 31.3 +0.7**
KBZ Khabaz 52.87 317 P **P 03 00 31.3 +0.7**
comp=Z,2.7nm,0.9s,baz=139,slow=9.3,SNR=4.9
KIV Kislovodsk 53.10 317 *de*P **P 03 00 32.4 0.0**
KIV *e**PP **pP 03 00 41.7 +0.2**
KIV 03 01 39.0
KIV pmax pmax
comp=Z,17nm,1.0s
ASAR Alice Springs 53.98 131 P **P 03 00 38.0 -1.0**
ASAR PcP **PcP 03 01 44.2 +0.1**
ASAR Alice Springs 53.98 131 P **P 03 00 38.0 -1.0**
comp=Z,4.3nm,0.8s,baz=310,slow=7.3,SNR=35
ASAR PcP **PcP 03 01 44.2 +0.1**
comp=Z,1.1nm,0.6s,baz=311,slow=4.2,SNR=2.7
AS31 Alice Springs 53.99 131 *eP* **P 03 00 38.0 -1.1**
ASAJ Asahikawa 54.06 43 LR LR 03 24 18.1
comp=Z,65nm,19.0s,baz=134,slow=37
FORT Forrest 54.62 142 *eP* **P 03 00 44.0 +0.5**
comp=Z,54nm,0.8s
ANN Anapa 56.93 316 *eP* **P 03 01 01.3 +1.4**
ANN pmax pmax
comp=Z,142nm,1.3s
VSR Storozhevoye 58.09 324 *eP* **P 03 01 07.6 -0.3**
VSR pmax pmax
comp=Z,6.0nm,0.8s
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
BR131 Keskin Array S 58.36 310 *eP* **P 03 01 09.4 -0.8**
comp=E,4.2nm,0.8s
BR131 *ep*P **pP 03 01 18.7 -0.8**
BRTR Keskin Array B 58.36 310 P **P 03 01 09.8 -0.6**
BRTR Keskin Array B 58.36 310 P **P 03 01 09.8 -0.6**
comp=E,3.2nm,0.8s,baz=121,slow=7.7,SNR=20
BBOO Buckleboo 61.04 138 *eP* **P 03 01 28.6 0.0**
comp=E,1µm,1.8s
OBN Obninsk 61.05 327 P **P 03 01 27.0 -1.3**
OBN *e* 03 02 10.5
OBN pmax pmax
comp=Z,8.0nm,0.6s
CTAO Charters Tower 62.04 120 *eP* **P 03 01 35.5 -0.1**
CTAO *e**PP **pP 03 01 44.2 -0.6**
CTAO pmax pmax
comp=Z,37nm,1.4s
CTAO Charters Tower 62.04 120 *eP* **P 03 01 35.5 -0.1**
comp=Z,37nm,1.4s
CTAO *ep*P **pP 03 01 44.2 -0.6**
AKASG Malin Array Be 63.88 321 *ce*P **P 03 01 46.7 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 63.88 321 P **P 03 01 46.3 -0.9**
AKASG Malin Array Be 63.88 321 P **P 03 01 46.3 -0.9**
comp=Z,2.0nm,0.6s,baz=89,slow=5.0,SNR=6.9
KIEV Kiev 63.88 321 *eP* **P 03 01 46.4 -0.9**
KIEV *e**PP **pP 03 01 55.8 -0.8**
KIEV pmax pmax
comp=Z,2.0nm,0.4s
KIEV Kiev 63.88 321 *eP* **P 03 01 46.4 -0.9**
comp=Z,2.5nm,0.4s
KIEV *ep*P **pP 03 01 55.8 -0.8**
STKA Stephens Creek 64.26 134 *eP* **P 03 01 50.3 +0.2**
STKA *ep*P **pP 03 01 58.8 -0.6**
STKA Stephens Creek 64.26 134 P **P 03 01 50.2 +0.1**
comp=Z,5.2nm,0.8s,baz=308,slow=8.0,SNR=10
STKA LR LR 03 30 18.1
comp=Z,96nm,20.0s,baz=222,slow=36
BUR08 Bucovina Ar. S 65.84 317 *eP* **P 03 02 00.4 +0.1**
BUR08 *ep*P **pP 03 02 09.7 +0.1**
PETK Petropavlovsk- 66.24 37 LR LR 03 35 20.2
comp=Z,46nm,18.3s,baz=44,slow=40
JOF Joensuu 66.53 334 *eP* **P 03 02 03.3 -0.9**
JOF pmax pmax
comp=Z,4.0nm,0.6s
JOF Joensuu 66.53 334 *ep* **P 03 02 03.3 -0.9**
comp=Z,4.0nm,0.6s
VSU Vasula 67.26 329 *d i* P **P 03 02 08.4 -0.6**
VSU pmax pmax
comp=Z,12nm,1.0s
UZH Uzhgorod 67.91 318 *eP* P 03 02 16.6 +3.3
KOLS Kolonicke sedl 67.97 318 *eP* **P 03 02 13.9 +0.2**
KOLS Kolonicke sedl 67.97 318 *eP* **P 03 02 13.9 +0.2**
SUW Suwalki 68.20 324 *eP* **P 03 02 14.9 -0.1**
SUW pmax pmax
comp=Z,36nm,1.1s
SUW Suwalki 68.20 324 *eP* **P 03 02 14.9 -0.1**
comp=Z,36nm,1.1s
SUW Suwalki 68.20 324 *eP* **P 03 02 14.5 -0.5**
FINES FINESS Array B 68.38 332 P **P 03 02 15.7 -0.3**
FINES FINESS Array B 68.38 332 P **P 03 02 15.7 -0.3**
comp=Z,6.2nm,0.8s,baz=90,slow=5.9,SNR=22
KAF Kangasniemi 68.46 333 *eP* **P 03 02 15.9 -0.6**
KAF pmax pmax
comp=Z,5.0nm,0.8s
KAF Kangasniemi 68.46 333 *ep* **P 03 02 15.9 -0.6**
comp=Z,4.7nm,0.8s
CRVS Cervenica-Dubn 68.49 318 *eP* **P 03 02 16.6 -0.4**
CRVS pmax pmax
comp=Z,21nm,2.0s
CRVS Cervenica-Dubn 68.49 318 *eP* **P 03 02 16.6 -0.4**
LSZ Lusaka 68.58 248 *eP* **P 03 02 20.2 +2.0**
comp=Z,12nm,1.0s
LSZ *ep*P **pP 03 02 29.5 +1.9**
LSZ Lusaka 68.58 248 LR LR 03 28 58.9
comp=Z,100nm,19.9s,baz=97,slow=33
VYHS Vyhne 70.18 317 *eP* **P 03 02 27.5 +0.1**
VYHS Vyhne 70.18 317 *eP* **P 03 02 27.5 +0.1**
ARCES ARCESS Array B 71.00 340 P **P 03 02 31.9 -0.1**
ARCES ARCESS Array B 71.00 340 P **P 03 02 31.9 -0.1**
comp=Z,2.9nm,0.6s,baz=90,slow=6.4,SNR=15
ARCES LR LR 03 36 38.6
comp=Z,186nm,18.5s,baz=129,slow=38
MORC Moravsky Berou 71.13 319 *eP* **P 03 02 32.4 -0.9**
MORC *e**PP **pP 03 02 42.2 -0.4**
MORC pmax pmax
comp=Z,4.0nm,0.9s
MORC Moravsky Berou 71.13 319 *eP* **P 03 02 32.4 -0.9**
comp=Z,3.8nm,0.9s
MORC *ep*P **pP 03 02 42.2 -0.4**
TIP Timpagrande 71.29 307 *eP* **P 03 02 34.2 -0.3**
comp=Z,5.8nm,0.9s
KRLC Kraliky 71.64 319 *eP* **P 03 02 34.5 -1.8**
KRLC Kraliky 71.64 319 *eP* **P 03 02 34.5 -1.8**
DPC Dobruska-Polom 71.95 319 *eP* **P 03 02 38.5 +0.3**
DPC Dobruska-Polom 71.95 319 *eP* **P 03 02 38.5 +0.3**
CEL Celeste 71.97 307 *eP* **P 03 02 39.0 +0.5**
CUC Castrocucco 72.02 308 *eP* **P 03 02 36.9 -1.9**
comp=Z,4.5nm,0.9s
PRU Pruhonice 73.08 319 *eP* **P 03 02 45.0 +0.2**
PRU Pruhonice 73.08 319 *eP* **P 03 02 45.0 +0.2**
BILL Bilibino 73.40 22 *eP* **P 03 02 45.2 -1.1**
BILL *e* 03 02 52.3
BILL pmax pmax
comp=Z,9.0nm,2.5s
BRG Berggiesshubel 73.49 320 *eP* **P 03 02 47.8 +0.6**
comp=Z,4.9nm,1.1s
BRG *e* 03 02 57.1
comp=Z,3.0nm,1.0s
GERES GERESS Array B 73.60 318 P **P 03 02 47.9 -0.1**
GERES GERESS Array B 73.60 318 P **P 03 02 47.9 -0.1**
comp=Z,2.9nm,0.8s,baz=84,slow=5.5,SNR=34
KHC Kasperske Hory 73.68 318 *eP* **P 03 02 48.4 -0.1**
KHC Kasperske Hory 73.68 318 *eP* **P 03 02 48.4 -0.1**
CLL Collm 74.09 320 *eP* **P 03 02 51.0 +0.2**
CLL pmax pmax
comp=Z,6.0nm,1.2s
CLL Collm 74.09 320 *eP* **P 03 02 51.0 +0.2**
comp=Z,6.0nm,1.2s
LBTB Lobatse 74.23 240 *eP* **P 03 02 54.3 +2.2**
comp=Z,4.4nm,0.6s
NB2 NORSAR Subarra 75.40 330 P **P 03 02 57.4 -0.8**
comp=Z,1.7nm,0.6s,baz=95,slow=5.6
NOA NORSAR Array B 75.40 330 P **P 03 02 57.7 -0.5**
NOA NORSAR Array B 75.40 330 P **P 03 02 57.7 -0.5**
comp=Z,3.6nm,0.8s,baz=93,slow=5.8,SNR=7.9
NOA LR LR 03 42 06.8
comp=Z,49nm,18.1s,baz=160,slow=40
BOSA Boshof 75.83 236 *eP* **P 03 03 03.3 +2.0**
comp=Z,15nm,1.0s
BOSA Boshof 75.83 236 P **P 03 03 03.2 +1.9**
comp=Z,8.9nm,0.8s,baz=72,slow=5.3,SNR=13
KEST Kesra 77.34 304 *eP* **P 03 03 10.0 +0.2**
KEST *ep*P **pP 03 03 19.1 -0.2**
KEST Kesra 77.34 304 P **P 03 03 10.0 +0.2**
comp=Z,2.0nm,0.8s,baz=73,slow=8.5,SNR=7.5
CDF Champ du Feu 77.87 317 *eP* **P 03 03 11.8 -0.7**
CDF Champ du Feu 77.87 317 *eP* **P 03 03 11.8 -0.7**
CDF Champ du Feu 77.87 317 *eP* **P 03 03 11.8 -0.7**
HINF Hinteralfeld 78.19 317 *eP* **P 03 03 13.7 -0.5**
comp=Z,6.0nm,0.9s
HINF pmax pmax
comp=Z,6.0nm,0.9s
HINF Hinteralfeld 78.19 317 *eP* **P 03 03 13.7 -0.5**
comp=Z,6.0nm,0.9s
LPG La Plagne 78.45 314 *eP* **P 03 03 15.7 -0.3**
comp=Z,6.2nm,0.6s
LPG La Plagne 78.45 314 *eP* **P 03 03 15.7 -0.3**
LPG pmax pmax
comp=Z,6.0nm,0.6s
LPG La Plagne 78.45 314 *eP* **P 03 03 15.7 -0.3**
comp=Z,6.2nm,0.6s
LPL La Plagne 78.46 314 *eP* **P 03 03 15.6 -0.4**
comp=Z,15nm,0.8s
LPL La Plagne 78.46 314 *eP* **P 03 03 15.6 -0.4**
LPL pmax pmax
comp=Z,15nm,0.8s
LPL La Plagne 78.46 314 *eP* **P 03 03 15.6 -0.4**
comp=Z,15nm,0.8s
HAU Haudompre 78.52 317 *eP* **P 03 03 15.3 -0.7**
comp=Z,13nm,0.9s
HAU Haudompre 78.52 317 *eP* **P 03 03 15.3 -0.7**
HAU pmax pmax
comp=Z,13nm,0.9s
HAU Haudompre 78.52 317 *eP* **P 03 03 15.3 -0.7**
comp=Z,13nm,0.9s
FRF La Foret Royal 78.70 312 *eP* **P 03 03 16.5 -0.5**
comp=Z,5.9nm,0.8s
FRF La Foret Royal 78.70 312 *eP* **P 03 03 16.5 -0.5**
FRF pmax pmax
comp=Z,6.0nm,0.8s
FRF La Foret Royal 78.70 312 *eP* **P 03 03 16.5 -0.5**
comp=Z,5.9nm,0.8s
CABF La Chapelle 78.81 316 *eP* **P 03 03 17.6 -0.1**
comp=Z,11nm,0.8s
CABF La Chapelle 78.81 316 *eP* **P 03 03 17.6 -0.1**
CABF pmax pmax
comp=Z,11nm,0.8s
CABF La Chapelle 78.81 316 *eP* **P 03 03 17.6 -0.1**
comp=Z,11nm,0.8s
PAGF Fort de Pagny 78.89 317 *eP* **P 03 03 17.5 -0.5**
PAGF Fort de Pagny 78.89 317 *eP* **P 03 03 17.5 -0.5**
MEZF Maizieres J'vi 79.34 317 *eP* **P 03 03 20.0 -0.4**
MEZF Maizieres J'vi 79.34 317 *eP* **P 03 03 20.0 -0.4**
SMRF Simiane la Rot 79.43 313 *eP* **P 03 03 21.1 0.0**
SMRF Simiane la Rot 79.43 313 *eP* **P 03 03 21.1 0.0**
BAIF Baives 79.73 319 *eP* **P 03 03 22.2 -0.3**
comp=Z,11nm,1.0s
BAIF Baives 79.73 319 *eP* **P 03 03 22.2 -0.3**
BAIF pmax pmax
comp=Z,11nm,1.0s
BAIF Baives 79.73 319 *eP* **P 03 03 22.2 -0.3**
comp=Z,11nm,1.0s
VIVF Saint-Julien-l 79.98 314 *eP* **P 03 03 23.7 -0.3**
comp=Z,9.4nm,0.8s
VIVF Saint-Julien-l 79.98 314 *eP* **P 03 03 23.7 -0.3**
VIVF pmax pmax
comp=Z,9.0nm,0.8s
VIVF Saint-Julien-l 79.98 314 *eP* **P 03 03 23.7 -0.3**
comp=Z,9.4nm,0.8s
LOR Lormes 80.27 316 *eP* **P 03 03 24.9 -0.6**
comp=Z,11nm,0.8s
LOR Lormes 80.27 316 *eP* **P 03 03 24.9 -0.6**
comp=Z,11nm,0.8s
SMF Signal de Mont 80.35 316 *eP* **P 03 03 25.3 -0.7**
comp=Z,7.8nm,0.7s
SMF Signal de Mont 80.35 316 *eP* **P 03 03 25.3 -0.7**
SMF pmax pmax
comp=Z,8.0nm,0.7s
SMF Signal de Mont 80.35 316 *eP* **P 03 03 25.3 -0.7**
comp=Z,7.8nm,0.7s
SSF Saint Saulge 80.53 316 *eP* **P 03 03 26.4 -0.5**
comp=Z,6.9nm,0.8s
SSF Saint Saulge 80.53 316 *eP* **P 03 03 26.4 -0.5**
SSF pmax pmax
comp=Z,7.0nm,0.8s
SSF Saint Saulge 80.53 316 *eP* **P 03 03 26.4 -0.5**
comp=Z,6.9nm,0.8s
LASF Ste Croix 80.65 313 *eP* **P 03 03 27.7 0.0**
comp=Z,17nm,1.1s
LASF Ste Croix 80.65 313 *eP* **P 03 03 27.7 0.0**
comp=Z,17nm,1.1s
AVF Avril sur Loir 80.67 316 *eP* **P 03 03 27.1 -0.6**
comp=Z,13nm,0.9s
AVF Avril sur Loir 80.67 316 *eP* **P 03 03 27.1 -0.6**
AVF pmax pmax
comp=Z,13nm,0.9s
AVF Avril sur Loir 80.67 316 *eP* **P 03 03 27.1 -0.6**
comp=Z,13nm,0.9s
SUR Sutherland 80.75 234 *eP* **P 03 03 31.3 +2.7**
comp=Z,21nm,0.9s
SUR *ep*P **pP 03 03 40.4 +2.3**
BGF Bois d'Agland 81.04 316 *eP* **P 03 03 29.4 -0.3**
comp=Z,12nm,0.8s
BGF Bois d'Agland 81.04 316 *eP* **P 03 03 29.4 -0.3**
BGF pmax pmax
comp=Z,12nm,0.8s
BGF Bois d'Agland 81.04 316 *eP* **P 03 03 29.4 -0.3**
comp=Z,12nm,0.8s
HYF Humbligny 81.09 316 *eP* **P 03 03 30.0 +0.1**
HYF Humbligny 81.09 316 *eP* **P 03 03 30.0 +0.1**
TCF Toulx Ste Croi 81.51 315 *eP* **P 03 03 32.1 -0.1**
comp=Z,3.5nm,0.6s
TCF Toulx Ste Croi 81.51 315 *eP* **P 03 03 32.1 -0.1**
TCF pmax pmax
comp=Z,4.0nm,0.6s
TCF Toulx Ste Croi 81.51 315 *eP* **P 03 03 32.1 -0.1**
comp=Z,3.5nm,0.6s
CAF Calviac 81.81 314 *eP* **P 03 03 33.8 0.0**
CAF Calviac 81.81 314 *eP* **P 03 03 33.8 0.0**
CAF Calviac 81.81 314 *eP* **P 03 03 33.8 0.0**
MAW Mawson 81.81 191 P **P 03 03 34.2 +1.1**
MAW Mawson 81.81 191 P **P 03 03 34.2 +1.1**
comp=Z,1.9nm,0.7s,baz=14,slow=7.0,SNR=9.4
MTLF Montolieu 81.92 313 *eP* **P 03 03 34.3 -0.1**
comp=Z,8.7nm,0.7s
MTLF Montolieu 81.92 313 *eP* **P 03 03 34.3 -0.1**
MTLF pmax pmax
comp=Z,9.0nm,0.7s
MTLF Montolieu 81.92 313 *eP* **P 03 03 34.3 -0.1**
comp=Z,8.7nm,0.7s
RJF Les Rejaudoux 82.13 315 *eP* **P 03 03 35.7 +0.2**
comp=Z,14nm,0.9s
RJF Les Rejaudoux 82.13 315 *eP* **P 03 03 35.7 +0.2**
RJF pmax pmax
comp=Z,14nm,0.9s
RJF Les Rejaudoux 82.13 315 *eP* **P 03 03 35.7 +0.2**
comp=Z,14nm,0.9s
TAM Tamanrasset 82.33 292 *eP* **P 03 03 38.1 +0.9**
TAM *e**PP **pP 03 03 47.6 +0.9**
TAM pmax pmax
comp=Z,1.0nm,0.6s
TAM Tamanrasset 82.33 292 *eP* **P 03 03 38.0 +0.9**
comp=Z,0.8nm,0.6s
TAM *ep*P **pP 03 03 47.6 +0.9**
LFF La Frestale 82.73 314 *eP* **P 03 03 38.8 +0.2**
LFF La Frestale 82.73 314 *eP* **P 03 03 38.8 +0.2**
LFF La Frestale 82.73 314 *eP* **P 03 03 38.8 +0.2**
LDF La Druitiere 82.73 318 *eP* **P 03 03 38.0 -0.5**
comp=Z,12nm,0.9s
LDF La Druitiere 82.73 318 *eP* **P 03 03 38.0 -0.5**
LDF pmax pmax
comp=Z,12nm,0.9s
LDF La Druitiere 82.73 318 *eP* **P 03 03 38.0 -0.5**
comp=Z,12nm,0.9s
FLN La Foliniere 82.94 318 *eP* **P 03 03 39.0 -0.6**
comp=Z,23nm,1.1s
FLN La Foliniere 82.94 318 *eP* **P 03 03 39.0 -0.6**
FLN pmax pmax
comp=Z,23nm,1.1s
FLN La Foliniere 82.94 318 *eP* **P 03 03 39.0 -0.6**
comp=Z,23nm,1.1s
MFF Saint Martin d 83.08 316 *eP* **P 03 03 39.9 -0.5**
comp=Z,11nm,0.7s
MFF Saint Martin d 83.08 316 *eP* **P 03 03 39.9 -0.5**
MFF pmax pmax
comp=Z,11nm,0.7s
MFF Saint Martin d 83.08 316 *eP* **P 03 03 39.9 -0.5**
comp=Z,11nm,0.7s
GRR Gorron 83.25 318 *eP* **P 03 03 40.7 -0.5**
GRR Gorron 83.25 318 *eP* **P 03 03 40.7 -0.5**
GRR Gorron 83.25 318 *eP* **P 03 03 40.7 -0.5**
ESK Eskdalemuir 83.44 325 *eP* **P 03 03 41.5 -0.5**
ESK pmax pmax
comp=Z,12nm,0.9s
ESK Eskdalemuir 83.44 325 *eP* **P 03 03 41.5 -0.5**
comp=Z,12nm,0.9s
ESDC Sonseca Array 87.16 310 P **P 03 04 01.0 -0.1**
ESDC Sonseca Array 87.16 310 P **P 03 04 01.0 -0.1**
comp=Z,0.4nm,0.4s,baz=74,slow=4.5,SNR=8.4
TOA0 Torodi Ar. Sit 87.66 283 *eP* **P 03 04 04.6 +0.8**
TORD Torodi Ar. Bea 87.66 283 P **P 03 04 04.6 +0.8**
TORD Torodi Ar. Bea 87.66 283 P **P 03 04 04.6 +0.8**
comp=Z,2.9nm,0.9s,baz=87,slow=4.9,SNR=13
SYO Syowa Base 88.39 197 *i eP* **P 03 04 06.3 +0.3**
SUMG Summit 89.99 347 *eP* **P 03 04 13.9 -0.3**
SUMG pmax pmax
comp=Z,10.0nm,1.1s
SUMG Summit 89.99 347 *eP* **P 03 04 13.9 -0.3**
comp=Z,9.8nm,1.1s
SUMG Summit 89.99 347 *i* P **P 03 04 14.2 0.0**
comp=Z,5.5nm,0.9s
TRF Thorofare Moun 91.46 23 *eP* **P 03 04 19.9 -1.0**
comp=Z,4.6nm,0.8s
MCK McKinley 91.84 23 *eP* **P 03 04 21.9 -0.6**
MCK *e**PP **pP 03 04 30.1 -2.0**
MCK pmax pmax
comp=Z,10.0nm,1.0s
MCK McKinley 91.84 23 *eP* **P 03 04 21.9 -0.6**
comp=Z,9.5nm,1.0s
MCK *ep*P **pP 03 04 30.1 -2.0**
ILAR Eielson Array 92.05 22 P **P 03 04 21.2 -2.1**
ILAR Eielson Array 92.05 22 P **P 03 04 21.2 -2.1**
comp=Z,1.6nm,0.9s,baz=296,slow=4.2,SNR=15
PMR Palmer 92.87 25 *eP* **P 03 04 25.9 -1.3**
PMR *e**PP **pP 03 04 35.4 -1.5**
PMR pmax pmax
comp=Z,5.0nm,0.7s
PMR Palmer 92.87 25 *eP* **P 03 04 25.9 -1.3**
comp=Z,4.8nm,0.7s
PMR *ep*P **pP 03 04 35.4 -1.5**
DOT Dot Lake 93.70 22 *eP* **P 03 04 29.9 -1.2**
comp=Z,2.4nm,0.9s
RES Resolute Bay 93.72 2 *eP* **P 03 04 30.6 -0.3**
comp=Z,8.1nm,1.1s
RES *ep*P **pP 03 04 39.0 -1.5**
DBIC Dimbokro 95.30 278 LR LR 03 49 11.7
comp=Z,73nm,18.3s,baz=239,slow=36
VNA1 Neumayer--Stat 104.32 200 *eP* **PKiKP 03 09 32.1 -2.7**
HLID Hailey 120.00 22 *e*PKPdf **PKPdf 03 10 06.1 +0.4**
MOOW Moose Ponds 121.10 19 *e*PKPdf **PKPdf 03 10 08.4 +0.5**
ELK Elko 122.10 24 *e*PKPdf **PKPdf 03 10 10.3 +0.4**
BW06 Boulder Array 122.36 19 *e*PKPdf **PKPdf 03 10 10.4 +0.1**
PDAR Pinedale Array 122.36 19 PKP **PKPdf 03 10 09.7 -0.7**
PDAR Pinedale Array 122.36 19 PKP **PKPdf 03 10 09.7 -0.7**
comp=Z,0.3nm,0.5s,baz=85,slow=1.9,SNR=3.2
RSSD Black Hills 122.61 14 *e*PKIKP **PKPdf 03 10 10.8 0.0**
RSSD Black Hills 122.61 14 *e*PKPdf **PKPdf 03 10 10.8 0.0**
NVAR Mina Array Bea 122.70 28 PKP **PKPdf 03 10 10.8 -0.3**
NVAR Mina Array Bea 122.70 28 PKP **PKPdf 03 10 10.8 -0.3**
comp=Z,0.7nm,0.6s,baz=300,slow=2.0,SNR=5.8
HWUT Hardware Ranch 122.73 21 *e*PKPdf **PKPdf 03 10 10.3 -0.7**
DUG Dugway 123.52 23 *e*PKIKP **PKPdf 03 10 12.6 +0.1**
DUG Dugway 123.52 23 *e*PKPdf **PKPdf 03 10 12.6 +0.1**
ANMO Albuquerque 130.47 20 *e*PKPdf **PKPdf 03 10 26.4 +0.4**
ANMO *ep*PKPdf **pPKPdf 03 10 36.2 +0.3**
TUC Tucson 131.16 26 *e*PKIKP **PKPdf 03 10 28.2 +0.9**
TUC Tucson 131.16 26 *e*PKPdf **PKPdf 03 10 28.2 +0.9**
MNTX Cornudas Mount 133.79 21 *e*PKPdf **PKPdf 03 10 32.8 +0.7**
TXAR Lajitas Array 136.54 20 PKP **PKPdf 03 10 38.6 +1.1**
TXAR Lajitas Array 136.54 20 PKP **PKPdf 03 10 38.6 +1.1**
comp=Z,0.4nm,0.6s,baz=15,slow=0.8,SNR=5.1
JCT Junction City 136.60 15 *e*PKIKP **PKPdf 03 10 37.6 +0.1**
JCT Junction City 136.60 15 *e*PKPdf **PKPdf 03 10 37.6 +0.1**
BDFB Brasilia 140.95 260 PKP **PKPdf 03 10 47.2 +1.4**
BDFB Brasilia 140.95 260 PKP **PKPdf 03 10 47.2 +1.4**
comp=Z,1.4nm,0.6s,baz=124,slow=7.3,SNR=3.2
TRQA Tornquist 144.89 217 *e*PKPdf PKPbc 03 10 51.6 +0.4
PLCA Paso Flores 147.20 205 PKPbc **PKPbc 03 10 58.5 +0.3**
PLCA Paso Flores 147.20 205 PKPbc **PKPbc 03 10 58.9 +0.7**
comp=Z,5.4nm,0.7s,baz=139,slow=4.5,SNR=9.6
CPUP Villa Florida 147.62 239 PKPbc **PKPbc 03 11 00.1 +0.4**
CPUP Villa Florida 147.62 239 PKPbc **PKPbc 03 11 00.1 +0.4**
comp=Z,3.3nm,0.6s,baz=84,slow=3.6,SNR=9.0
SAML Samuel 155.41 274 *e*PKPdf **PKPdf 03 11 07.5 -1.5**
SAML *e*PKPab **PKPab 03 11 35.2 +0.5**
LPAZ La Paz 160.15 254 PKP **PKPdf 03 11 15.8 +0.2**
LPAZ PKPab **PKPab 03 11 56.4 +0.6**
LPAZ La Paz 160.15 254 PKP **PKPdf 03 11 15.8 +0.2**
comp=Z,1.1nm,0.9s,baz=68,slow=5.4,SNR=4.2
LPAZ PKPab **PKPab 03 11 56.4 +0.6**
comp=Z,2.6nm,0.8s,baz=66,slow=3.4,SNR=8.0
OTAV Otavalo 164.82 321 *e*PKPdf **PKPdf 03 11 20.4 +0.1**
NNA Nana 169.04 267 *e*PKPdf **PKPdf 03 11 23.1 +0.2**

DDA **09** *02:59:00.9, 37.°76N×36.°20E, h7km, MD2.9*
CSEM **09** *02:59:01.5±0.4, 37.84N×36.26E, h2km, MD2.9, Error ellipse: s-maj=11.0km s-min=8.3km az=55.0*
ISK **09** *02:59:01.4, 37.83N×36.34E, h7km, MD2.9*
ISC 09 02:59:01.0±1.1, 37.79N±0.02×36.23E±0.03, h5km±10km, n26, σ0 95/40, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.23**	**157**	*i* P		**Pg**	**02 59 05.1**	**-0.4**
ANDN				*i* S		**Sg**	**02 59 08.9**	**+0.4**
ANDN	**Andirin**	**0.23**	**157**	*i* P		**Pg**	**02 59 05.1**	**-0.4**
ANDN				*i* S		**Sg**	**02 59 08.9**	**+0.4**
AYKD	**Aykdinkavak**	**0.59**	**129**	*i* P		**Pg**	**02 59 12.0**	**-0.4**
AYKD				*i* S		**Sg**	**02 59 20.3**	**+0.2**
KMRS	**Kahramanmaras**	**0.60**	**118**	*e*PG		**Pg**	**02 59 12.4**	**-0.2**
KMRS				*e*SG		**Sg**	**02 59 20.6**	**+0.2**
KMRS	**Kahramanmaras**	**0.60**	**118**	*e*Pg		**Pg**	**02 59 12.4**	**-0.2**
KMRS				*e*Sg		**Sg**	**02 59 20.6**	**+0.2**
SARI	**SarD1z-Kayseri**	**0.63**	**13**	*e*PG		**Pg**	**02 59 12.5**	**-0.7**
SARI				*e*SG		**Sg**	**02 59 22.3**	**+0.9**
SARI	**SarD1z-Kayseri**	**0.63**	**13**	*e*Pg		**Pg**	**02 59 12.5**	**-0.7**
SARI				*e*Sg		**Sg**	**02 59 22.3**	**+0.9**
CEYT	**Ceyhan**	**0.87**	**206**	*e*PG		**Pn**	**02 59 19.3**	**-0.6**
CEYT				*e*SG		**Sn**	**02 59 33.7**	**+0.7**
CEYT	**Ceyhan**	**0.87**	**206**	*e*Pg		**Pn**	**02 59 19.3**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEYT				eSg	Sn	02 59 33.7	+0.7
GAZ	Gaziantep	0.99	128	ePG	Pg	02 59 20.2	+0.1
GAZ	Gaziantep	0.99	128	ePg	Pg	02 59 20.2	+0.1
BNN	Bunyan	1.10	344	ePN	Pn	02 59 22.6	-0.7
BNN	Bunyan	1.10	344	ePn	Pn	02 59 22.6	-0.7
GZT	Gaziantep	1.15	112	iP	Pn	02 59 23.6	-0.3
GZT				iS	Sn	02 59 40.2	+0.2
KUZU	Kuzuini	1.22	146	iP	Pg	02 59 25.3	+0.9
KUZU				iS	Sn	02 59 42.2	+0.5
KUZU	Kuzuini	1.22	146	iP	Pg	02 59 25.3	+0.9
KUZU				iS	Sn	02 59 42.2	+0.5
DARE	Darende-Malaty	1.26	51	ePN	Pn	02 59 24.4	-1.0
DARE	Darende-Malaty	1.26	51	ePn	Pn	02 59 24.4	-1.0
NIG	Nigde	1.32	284	ePN	Pg	02 59 27.5	+1.1
NIG	Nigde	1.32	284	ePn	Pg	02 59 27.5	+1.1
AKCD	Akcadag	1.43	69	iP	Pg	02 59 28.9	+0.6
AKCD				iS	Sg	02 59 49.6	+2.8
AKCD	Akcadag	1.43	69	iP	Pg	02 59 28.9	+0.6
AKCD				iS	Sg	02 59 49.6	+2.8
MYA	Malataya	1.81	72	ePN	Pn	02 59 33.0	0.0
MYA	Malataya	1.81	72	ePn	Pn	02 59 33.0	0.0
YOZ	Yozgat	1.98	339	ePN	Pb	02 59 36.3	-1.3
YOZ	Yozgat	1.98	339	ePn	Pb	02 59 36.3	-1.3

WEL 09 02:59:05.6±0.3**,37°.57S**×**176°.42E,h177**km±2km**,ML3.9**/15**, 3C-1D,Error ellipse: s-maj=4.0km s-min=3.4km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.88	142	⇑PN	Pn	02 59 32.3	+0.2
URZ				SN	Sn	02 59 52.9	+0.2
MWZ	Matawai	1.17	131	PN	Pn	02 59 34.5	+0.2
MWZ				SN	Sn	02 59 55.9	-0.7
RAHZ	Arahi	1.45	159	PN	Pn	02 59 37.5	+0.8
MXZ	Matakaoa Point	1.50	90	⇑PN	Pn	02 59 37.4	+0.1
MXZ				SN	Sn	03 00 02.0	+0.2
PUZ	Puketiti	1.54	110	⇑PN	Pn	02 59 37.4	-0.3
PUZ				SN	Sn	03 00 02.0	-0.6
NMHZ	Naumai	1.56	169	PN	Pn	02 59 38.9	+1.0
BKZ	Black Stump Fm	1.59	178	PN	Pn	02 59 38.0	-0.2
BKZ				eSN	Sn	03 00 02.6	-1.1
CNGZ	Carnagh Statio	1.68	123	PN	Pn	02 59 39.6	+0.6
KNZ	Kokohu	1.75	146	PN	Pn	02 59 39.8	+0.1
PRGZ	Paritu Road	1.78	140	PN	Pn	02 59 40.3	+0.2
TUVZ	Tukino	1.80	199	PN	Pn	02 59 40.7	+0.3
TRVZ	Turoa	1.86	201	PN	Pn	02 59 41.4	+0.2
MCHZ	McNeill Hill	1.88	173	PN	Pn	02 59 41.6	+0.4
MCHZ				SN	Sn	03 00 08.6	-0.3
MOVZ	Moawhango	1.91	196	PN	Pn	02 59 41.0	-0.4
PKVZ	Pokaka	1.91	206	PN	Pn	02 59 42.0	+0.5
BHHZ	Black Hill Sta	1.94	188	PN	Pn	02 59 41.2	-0.5
MHGZ	Mahia Peninsul	1.97	144	PN	Pn	02 59 42.2	+0.1
CKHZ	Cape Kidnapper	2.15	166	PN	Pn	02 59 43.9	-0.1
KAHZ	Kahuranaki	2.25	171	PN	Pn	02 59 44.9	-0.3
PNHZ	Pukenui	2.35	184	PN	Pn	02 59 45.4	-1.0
WAZ	Wanganui	2.45	207	PN	Pn	02 59 47.3	-0.2
PXZ	Pawanui	2.48	172	PN	Pn	02 59 46.9	-0.9
WPHZ	Waipukurau	2.49	180	PN	Pn	02 59 46.9	-1.0
TSZ	Takapari Road	2.51	188	PN	Pn	02 59 47.1	-1.1
PRHZ	Porangahau	2.70	176	PN	Pn	02 59 49.0	-1.4
DVHZ	Dannevirke	2.73	184	PN	Pn	02 59 49.2	-1.6
POWZ	Post Office Ro	2.86	190	PN	Pn	02 59 50.8	-1.6
BFZ	Birch Farm	3.11	182	PN	Pn	02 59 53.3	-2.1
MRZ	Mangatainoka R	3.15	192	⇓PN	Pn	02 59 53.6	-2.3
MRZ				SN	Sn	03 00 31.4	-3.9
TIWZ	Tintock	3.23	187	PN	Pn	02 59 54.5	-2.3
OGWZ	Otaki Gorge	3.38	196	PN	Pn	02 59 56.4	-2.4
KIW	Kapiti Island	3.49	199	PN	Pn	02 59 57.4	-2.7
TMWZ	Te Maipa	3.56	186	PN	Pn	02 59 58.0	-2.9
MTW	Mount Morrison	3.65	191	PN	Pn	02 59 58.8	-3.3
CAW	Cannon Point	3.68	196	PN	Pn	02 59 59.5	-3.0
DUWZ	D'Urville Isla	3.76	210	PN	Pn	03 00 00.7	-2.9
TRWZ	Traveller	3.87	188	PN	Pn	03 00 01.5	-3.3
PAWZ	Paruwai Farm	3.88	191	PN	Pn	03 00 01.6	-3.4
WEL	Wellington	3.92	198	PN	Pn	03 00 02.9	-2.6
MSWZ	Moikau Station	3.94	193	PN	Pn	03 00 02.2	-3.6
SNZO	South Karori	3.96	199	PN	Pn	03 00 02.6	-3.4
TCW	Tory Channel	4.00	204	PN	Pn	03 00 03.3	-3.1
PLWZ	Palliser	4.09	192	PN	Pn	03 00 04.0	-3.8
TUWZ	Tuamarina	4.30	206	PN	Pn	03 00 06.9	-3.5
NNZ	Nelson	4.33	212	PN	Pn	03 00 07.1	-3.7
QRZ	Quartz Range	4.44	222	PN	Pn	03 00 08.5	-3.6
BSWZ	Blackbirch Sta	4.58	205	PN	Pn	03 00 10.4	-3.5
THZ	Tophouse	4.99	212	PN	Pn	03 00 16.6	-2.7
KHZ	Kahutara	5.32	204	ePN	Pn	03 00 19.3	-4.2
LTZ	Lake Taylor	6.10	210	PN	Pn	03 00 29.3	-4.5
MQZ	McQueen's Vall	6.76	204	ePN	Pn	03 00 36.4	-6.1

NIED 09 04:10:00,22°.80N×122°.90E,h38km,Mw4.4 Best double couple: M0 3.86000×10^15 NP1:φs242.00000°,δ90.00000°,λ-156.00000°. NP2:φs152.00000°,δ66.00000°,λ0.00000°.
IDC 09 04:10:49.6±0.8,22°.70N×122°.95E,h0km,mb3.7/11, mb1 3.9/13,mb1mx3.8/29,mbtmp3.8/13,ML3.4/2,MS3.4/12, Ms1 3.4/12,ms1mx3.1/44,Error ellipse: s-maj=24.7km s-min=18.1km az=67.0
TAP 09 04:10:52.9,22°.71N×122°.70E,h58km,ML4.4,D
JMA 09 04:10:52.7±0.4,22°.76N×122°.86E,h82km,M3.6
BJI 09 04:10:54.5,22°.87N×122°.68E,h4km,mB4.2/1,mb4.0/4, ML3.9/1,Ms3.9/2,Ms7 3.7/2
ISC 09 04:10:50.5±3.0**,22°.70N**±0°.04×**122°.78E**±0°.03**,h10**km±20km**, n89,**σ1s**89**/128**,mb3.8**/12**,MS3.3**/8**,10C-1D,Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	1.31	240	⇑iP	Pn	04 11 13.5	-1.6
	baz=237						
LAY				eS	Sb	04 11 27.8	-4.5
	baz=237						
CHKT	Chengkung	1.36	287	⇑iP	Pn	04 11 13.8	-1.8
	baz=293						
CHKT				eS	Sb	04 11 29.0	-4.6
	baz=293						
TTN	Taitung	1.51	272	eP	Pn	04 11 16.7	-0.9
	baz=278						
TTN				eS	Sn	04 11 34.1	-3.3
	baz=278						
TWF1	Yuli	1.51	296	⇑iP	Pn	04 11 16.2	-1.5
	baz=296						
TWF1				eS	Sn	04 11 33.2	-4.3
	baz=296						
EHY	Hungye	1.56	301	iP	Pn	04 11 16.8	-1.6
	baz=302						
EHY				eS	Sn	04 11 34.6	-4.1
	baz=302						
HATJ	Hateruma jima	1.64	35	P	Pn	04 11 19.1	-0.4
HATJ				S	Sn	04 11 39.2	-1.5
ESL	Shilin	1.66	312	P	Pn	04 11 17.8	-1.9
	baz=314						
ECL	Taimali	1.69	267	⇑iP	Pn	04 11 19.0	-1.1
	baz=277						
ECL				eS	Sn	04 11 38.1	-3.7
	baz=277						
ELDTW	Lidau	1.69	287	P	Pn	04 11 19.0	-1.4
	baz=295						
ELDTW				eS	Sn	04 11 37.7	-4.4
	baz=295						
TWD	Chiawan	1.75	322	P	Pn	04 11 19.7	-1.2
	baz=323						
TWD				eS	Sn	04 11 39.3	-4.0
	baz=323						
YOJ	Yonaguni jima	1.76	7	P	Pn	04 11 21.2	0.0
YOJ				S	Sn	04 11 42.7	-1.0
TAW	Tawu	1.77	259	eP	Pn	04 11 21.0	-0.3
	baz=247						
TAW				eS	Sn	04 11 41.3	-2.6
	baz=247						
EAST	Anshuo	1.81	260	⇑iP	Pn	04 11 21.4	-0.5
	baz=249						
EAST				S	Sn	04 11 42.8	-2.2
	baz=249						
JKRS	Kuro-shima	1.90	36	P	Pn	04 11 23.1	+0.1
JKRS				eS	Sn	04 11 45.3	-1.7
TSEB	Hengchuen, Pin	1.92	246	eP	Pn	04 11 24.5	+1.3
	baz=245						
TSEB				eS	Sn	04 11 47.3	-0.1
	baz=245						
ENA	Nanau	1.96	331	eP	Pn	04 11 23.6	-0.3
	baz=332						
ENA				eS	Sn	04 11 46.4	-2.2
	baz=332						
SSD	Sandimen	1.98	272	eP	Pn	04 11 23.5	-0.6
	baz=271						
ALS	Alishan	1.99	294	⇑iP	Pn	04 11 24.6	+0.1
	baz=300						
WHF	Hehuan Shan	2.00	316	⇑iP	Pn	04 11 23.7	-1.1
	baz=316						
WHF				S	Sn	04 11 46.2	-3.9
	baz=316						
HEN	Hengchun	2.01	250	P	Pn	04 11 24.8	+0.2
	baz=249						
HEN				eS	Sn	04 11 48.1	-1.8
	baz=249						
SCZT	Fangliau	2.02	261	eP	Pn	04 11 24.5	-0.2
	baz=250						
WTP	Ta-pu	2.07	286	P	Pn	04 11 26.1	+0.7
	baz=286						
WTP				eS	Sn	04 11 51.3	0.0
	baz=286						
JIJ	Ishigaki jima	2.07	37	P	Pn	04 11 24.8	-0.6
JIJ				S	Sn	04 11 48.6	-2.7
TWC	Suao	2.08	336	P	Pn	04 11 25.2	-0.3
	baz=337						
TWC				eS	Sn	04 11 48.5	-3.0
	baz=337						
SMLT	Sun Moon Lake	2.09	305	eP	Pn	04 11 25.6	-0.1
	baz=304						
SMLT				eS	Sn	04 11 48.5	-3.4
	baz=304						
SGLT	Jiouru	2.11	271	eP	Pb	04 11 29.1	+0.1
	baz=270						
CHN4	Tsaushan	2.11	288	⇑iP	Pn	04 11 27.1	+1.1
	baz=295						
CHN5	Tsauling	2.13	295	iP	Pn	04 11 27.3	+1.0
	baz=299						
CHN5				eS	Sn	04 11 51.0	-1.9
	baz=299						
CHN1	Nanshi	2.13	283	⇑iP	Pn	04 11 27.5	+1.3
	baz=290						
CHN1				eS	Sn	04 11 53.6	+0.8
	baz=290						
TWT	Tachien	2.13	317	eP	Pn	04 11 26.5	+0.1
	baz=316						
TWT				eS	Sn	04 11 49.3	-3.7
	baz=316						
TYC	Yuchr	2.13	304	eP	Pn	04 11 26.1	-0.1
	baz=304						
TYC				eS	Sn	04 11 48.6	-4.2
	baz=304						
NNS	Nan Shan	2.16	324	P	Pn	04 11 26.3	-0.4
	baz=324						
NNS				S	Sn	04 11 50.5	-3.0
	baz=324						
TWM1	Shoushan	2.18	274	eP	Pb	04 11 29.3	-0.8
	baz=271						
TWK	Hsinying	2.18	285	P	Pn	04 11 28.2	+1.2
	baz=294						
TWK				eS	Sn	04 11 55.1	+0.9
	baz=294						
ENTT	Nioudou	2.23	330	⇓iP	Pn	04 11 27.5	0.0
	baz=330						
ENTT				eS	Sn	04 11 52.8	-2.3
	baz=330						
TWE	Neicheng	2.25	333	P	Pn	04 11 28.3	+0.4
	baz=334						
TWE				eS	Sn	04 11 53.8	-1.9
	baz=334						
WNT	Mingjian	2.25	302	eP	Pn	04 11 30.1	+2.2
	baz=302						
CHN3	Shinhua	2.26	280	eP	Pb	04 11 30.6	-0.8
	baz=279						
ILA	Ilan	2.26	335	eP	Pn	04 11 28.7	+0.7
	baz=336						
ILA				eS	Sn	04 11 55.2	-0.7
	baz=336						
TWP	Hsiaoliuchiu	2.26	261	eP	Pb	04 11 31.4	-0.1
	baz=251						
WGK	Gukeng	2.26	296	eP	Pn	04 11 30.2	+2.2
	baz=304						
WGK				eS	Sn	04 11 56.0	0.0
	baz=304						
CHN2	Minshiung	2.27	292	eP	Pn	04 11 29.4	+1.2
	baz=292						
CHN2				eS	Sn	04 11 57.5	+1.2
	baz=292						
CHY	Chiayi	2.31	290	eP	Pn	04 11 30.3	+1.7
	baz=290						
NSK	Sanguang	2.36	327	P	Pn	04 11 29.5	+0.1
	baz=326						
NSK				S	Sn	04 11 54.9	-3.5
	baz=326						
TWB1	Santiao Chiao	2.41	343	eP	Pn	04 11 31.1	+1.1
	baz=343						
TWB1				eS	Sn	04 11 57.6	-2.0
	baz=343						
TCU	Taichung	2.41	307	eP	Pn	04 11 32.0	+2.0
	baz=308						
SCLT	Jiali	2.43	282	eP	Pn	04 11 32.8	+2.4
	baz=281						
CHN8	Yiju	2.45	286	eP	Pn	04 11 32.2	+1.6
	baz=285						
TWQ1	Liyutan	2.46	312	eP	Pn	04 11 32.6	+1.8
	baz=319						
TWQ1				eS	Sn	04 12 02.0	+1.0
	baz=319						
NSY	Sanyi	2.52	313	eP	Pn	04 11 33.5	+1.9
	baz=321						
NSY				eS	Sn	04 12 02.7	+0.3
	baz=321						
NSTT	Nanjuang	2.52	320	eP	Pn	04 11 32.9	+1.4
	baz=319						
NSTT				eS	Sn	04 12 01.1	-1.2
	baz=319						
NWF	Wu-fen Shan	2.53	339	eP	Pn	04 11 31.9	+0.2
	baz=339						
NWF				S	Sn	04 12 01.1	-1.6
	baz=339						
WSF	Szhu	2.53	292	eS	Sn	04 12 02.5	-0.1
	baz=292						
WTCT	Ta-ch'eng	2.57	297	eP	Pn	04 11 33.9	+1.7
	baz=296						
WTCT				eS	Sn	04 12 04.2	+0.6
	baz=296						
TAP1	Taipei	2.59	334	eP	Pn	04 11 33.3	+0.8
	baz=333						
TAP1				eS	Sn	04 12 02.0	-2.2
	baz=333						
JTJ	Tarama	2.61	42	P	Pn	04 11 32.4	-0.4
JTJ				S	Sn	04 12 02.8	-1.9
HSN	Hsinchu	2.67	322	eS	Sn	04 12 06.4	+0.4
	baz=329						
NCU	National Centr	2.69	327	eP	Pn	04 11 35.7	+1.8
	baz=326						
NCU				eS	Sn	04 12 06.1	-0.3
	baz=326						
TWS1	Kuangyinshan	2.69	333	eP	Pn	04 11 35.5	+1.5
	baz=332						
TWS1				eS	Sn	04 12 05.0	-1.6
	baz=332						
TWY	Chenhua	2.78	337	eP	Pn	04 11 36.4	+1.2
	baz=347						
TWY				eS	Sn	04 12 06.7	-2.1
	baz=347						
WDGT	Dungji	2.93	282	eP	Pn	04 11 38.1	+0.9
	baz=282						
WDGT				eS	Sn	04 12 10.5	-1.9
	baz=282						
PNG	Penghu	3.09	287	eP	Pn	04 11 39.9	+0.5
	baz=286						
JMJ	Miyako jima 2	3.12	47	eS	Sn	04 12 15.4	-1.7
JOGS	Gusukube	3.16	49	P	Pn	04 11 40.6	+0.2
JOGS				S	Sn	04 12 16.8	-1.4
KNM	Kinmen	4.34	294	eP	Pn	04 11 58.2	+1.7
	baz=292						
QZH	Quanzhou	4.43	301	⇑iPn	Pn	04 11 59.3	+1.4
QZH				Sn	Sn	04 12 47.0	-2.6
QZH				smax	smax		
	comp=N,240nm,0.8s						
QZH				smax	smax		
	comp=E,230nm,0.9s						
JKE	Kume jima 2	5.13	45	P	Pn	04 12 05.8	-1.7
JKE				eS	Sn	04 13 02.7	-4.1
JNU	Nakatsue	12.60	33	LR	LR	04 19 01.0	
	comp=E,114nm,21.4s,baz=212,slow=39						
KSRS	Korea Array	15.36	16	Pn	Pn	04 14 28.1	+0.8
	comp=E,0.1nm,0.3s,baz=194,slow=11,SNR=9.2						
KSRS				LR	LR	04 21 03.5	
	comp=E,123nm,18.6s,baz=169,slow=40						
DAV	Davao City (W)	15.78	170	LR	LR	04 20 55.2	
	comp=E,101nm,19.3s,baz=157,slow=38						
JHJ	Hachijo jima 2	18.24	52	LR	LR	04 22 06.4	
	comp=E,62nm,19.2s,baz=163,slow=37						
MJAR	Matsushiro Arr	19.20	41	P	Pn	04 15 15.9	+0.3
	comp=E,0.3nm,0.3s,baz=233,slow=11,SNR=9.4						
CMAR	Chiang Mai Arr	22.70	264	P	P	04 15 55.0	+2.3
	comp=E,0.7nm,0.4s,baz=65,slow=8.3,SNR=4.5						
CMAR				LR	LR	04 25 39.7	
	comp=E,60nm,19.2s,baz=218,slow=39						
USRK	Ussuriysk Arra	22.75	17	LR	LR	04 25 34.9	
	comp=E,85nm,21.3s,baz=183,slow=39						
GTA	Gaotai	25.66	316	eP	P	04 16 27.1	+6.3
GTA				pP	pP	04 16 31.9	+8.2
GTA				sP	sP	04 16 34.2	+9.3
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ASAJ	Asahikawa	26.88	33	LR	LR	04 27 09.0	
	comp=Z,87nm,21.1s,baz=27,slow=36						
KAPI	Kappang	27.71	186	LR	LR	04 27 06.7	
	comp=Z,41nm,21.1s,baz=78,slow=35						
SONM	Songino Array	28.30	336	P	P	04 16 46.6	+2.2
	comp=Z,1.4nm,0.8s,baz=134,slow=6.4,SNR=3.8						
SONM				LR	LR	04 29 28.1	
	comp=Z,101nm,20.1s,baz=254,slow=39						
PETK	Petropavlovsk-	40.30	32	LR	LR	04 34 24.9	
	comp=Z,40nm,21.4s,baz=241,slow=35						
MKAR	Makanchi Array	40.41	317	P	P	04 18 30.8	+1.8
	comp=Z,1.6nm,0.8s,baz=107,slow=9.3,SNR=17						
ZALV	Zalesovo Beam	42.28	327	P	P	04 18 43.4	-0.7
	comp=Z,1.5nm,0.4s,baz=122,slow=7.7,SNR=4.0						
WRA	Warramunga Arr	43.86	164	P	P	04 18 57.2	-0.1
	comp=Z,1.3nm,0.9s,baz=347,slow=8.8,SNR=6.1						
KURBB	Kurchatov Arra	44.18	320	P	P	04 19 00.9	+1.4
	comp=Z,1.1nm,0.7s,baz=112,slow=8.2,SNR=11						
ASAR	Alice Springs	47.34	166	P	P	04 19 25.4	+0.6
	comp=Z,0.9nm,0.9s,baz=340,slow=6.5,SNR=6.0						
BVAR	Borovoye Array	49.74	321	P	P	04 19 44.4	+1.4
	comp=Z,0.3nm,0.5s,baz=102,slow=6.6,SNR=2.5						
AKTO	Aktyubinsk	56.85	316	P	P	04 20 36.9	+1.5
	comp=Z,0.4nm,0.2s,baz=111,slow=14,SNR=3.1						
ILAR	Eielson Array	69.85	27	P	P	04 22 00.2	-1.0
	comp=Z,0.2nm,0.8s,baz=283,slow=4.4,SNR=3.2						
ILAR				LR	LR	04 58 44.5	
	comp=Z,40nm,18.2s,baz=254,slow=41						
FINES	FINESS Array B	73.45	330	LR	LR	04 58 47.8	
	comp=Z,71nm,20.0s,baz=270,slow=39						
YKA	Yellowknife Ar	83.75	23	P	P	04 23 20.2	+0.6
	comp=Z,0.2nm,0.6s,baz=304,slow=5.1,SNR=4.6						

IDC 09 04:23:12.5±1.5**,2°.47S**×**140°.17E,h0**km**,mb3.8**/6**, mb1 4.1**/7**,mb1mx3.9**/19**,mbtmp3.9**/7**,ML3.9**/1**,MS3.5**/1**, Ms1 3.5**/1**,ms1mx2.7**/33**,Error ellipse: s-maj=46.7km s-min=21.8km az=97.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	9.79	135	LR	LR	04 28 47.1	
	comp=Z,285nm,21.0s,baz=229,slow=34						
WRA	Warramunga Arr	18.28	198	P	Pn	04 27 27.5	-0.3
	0.4nm,0.3s,baz=20,slow=12,SNR=20						
FITZ	Fitzroy Crossi	21.08	222	P	P	04 27 58.8	+0.2
	5.8nm,1.1s,baz=58,slow=13,SNR=4.0						
ASAR	Alice Springs	21.93	196	P	P	04 28 07.1	-0.7
	2.6nm,0.7s,baz=28,slow=10,SNR=25						
CMAR	Chiang Mai Arr	45.59	299	P	P	04 31 34.6	-0.2
	1.1nm,0.3s,baz=121,slow=5.5,SNR=5.9						
MKAR	Makanchi Array	70.49	322	P	P	04 34 29.6	+0.5
	1.0nm,0.7s,baz=108,slow=7.8,SNR=6.9						
KURBB	Kurchatov Arra	74.38	324	P	P	04 34 51.4	-0.8
	0.3nm,0.4s,baz=111,slow=5.7,SNR=7.3						
ILAR	Eielson Array	85.01	24	P	P	04 35 50.6	+0.9
	0.4nm,0.7s,baz=251,slow=4.7,SNR=5.4						

IDC 09 04:39:58.8±4.0,21°.73N×94°.80E,h101km±37km,mb3.4/5, mb1 3.5/6,mb1mx3.2/28,mbtmp3.3/6,Error ellipse: s-maj=70.2km s-min=16.4km az=58.0
ISC 09 04:39:57.1±0.9**,21°.5N**±0°.1×**94°.3E**±0°.1**,h97**km**,n17, σ2s26**/26**,mb3.6**/5**,Myanmar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SHL	Shillong	4.60	332	ePN	Pn	04 41 06.0	+1.5
SHL				eSN	Sn	04 41 53.5	-3.4
CMAR	Chiang Mai Arr	5.33	124	P	Pn	04 41 12.6	-1.8
	0.3nm,0.3s,baz=306,slow=13,SNR=19						
CMAR				S	Sn	04 42 27.4	+13
	0.5nm,0.3s,baz=314,slow=11,SNR=2.7						
ODAN	Odare	8.24	312	ePn	Pn	04 41 57.0	+2.9
ODAN				eSn	Sn	04 43 24.2	-1.5
	60nm,0.5s						
TAPN	Taplejung	8.35	315	ePn	Pn	04 41 57.3	+1.7
TAPN				eSn	Sn	04 43 27.0	-1.3
	64nm,0.4s						
RAMN	Ramite	8.86	309	ePn	Pn	04 42 04.9	+2.4
GUN	Gumba	9.95	311	ePn	Pn	04 42 19.0	+1.6
GUN				eSn	Sn	04 44 04.9	-2.4
	24nm,0.3s						
PKI	Pulchoki	10.08	309	ePn	Pn	04 42 21.4	+2.2
PKI				eSn	Sn	04 44 08.9	-1.7
	15nm,0.4s						
KKN	Kakani	10.30	309	eSn	Sn	04 44 13.5	-2.3
	8.8nm,0.2s						
DMN	Daman	10.32	308	ePn	Pn	04 42 25.0	+2.5
DMN				eSn	Sn	04 44 14.5	-1.9
	10nm,0.4s						
KOLN	Koldanda	11.54	305	ePn	Pn	04 42 39.9	+1.0
KOLN				eSn	Sn	04 44 42.7	-3.2
	19nm,0.3s						
DANN	Dangsing	11.72	308	ePn	Pn	04 42 43.3	+1.9
DANN				eSn	Sn	04 44 47.5	-3.0
	12nm,0.4s						
PYUN	Piuthan	12.17	305	ePn	Pn	04 42 48.9	+1.6
PYUN				eSn	Sn	04 44 57.2	-4.1
	196nm,1.6s						
MKAR	Makanchi Array	27.04	342	P	P	04 45 31.3	+1.1
	0.6nm,0.5s,baz=142,slow=9.2,SNR=11						
ZALV	Zalesovo Beam	33.18	350	P	P	04 46 24.7	+0.4
	1.7nm,0.6s,baz=171,slow=10,SNR=4.6						
AKTO	Aktyubinsk	40.50	324	P	P	04 47 28.1	+1.7
	0.7nm,0.3s,baz=114,slow=12,SNR=5.6						
WRA	Warramunga Arr	56.84	134	P	P	04 49 30.8	-1.1
	0.2nm,0.5s,baz=323,slow=7.1,SNR=5.3						
ASAR	Alice Springs	59.19	137	P	P	04 49 49.1	+0.8
	0.2nm,0.4s,baz=313,slow=7.1,SNR=3.2						

AUST 09 04:54:20.6,11°.47S×116°.91E,h0km
ISCJB 09 04:54:21.7±0.4,11°.60S±0°.04×116°.97E±0°.04,h26km, mb3.9/2,Error ellipse: s-maj=7.2km s-min=4.7km az=140.4
DJA 09 04:54:26.0±0.9,11°S±12°×11°7E±°,h70km±66km,M4.5/8, mb4.5/5,mB5.3/1,MLv4.5/8,Mw(mB)4.7/1
IDC 09 04:54:30.5±2.7,11°.30S×117°.55E,h76km±26km,mb3.6/2, mb1 3.6/6,mb1mx3.4/22,mbtmp3.5/6,Error ellipse: s-maj=27.3km s-min=13.6km az=62.0
ISC 09 04:54:23.1±0.7**,11°.57S**±0°.06×**117°.05E**±0°.05**,h26**km**,n27, σ2s15**/30**,South of Sumbawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	2.99	50	P	Pn	04 55 10.7	+1.8
WBSI				S	Sn	04 55 45.8	+1.8
IGBI	Denpasar	3.31	325	P	Pn	04 55 12.7	-0.6
IGBI				S	Sn	04 55 51.6	-0.3
KHKI	Kahang-Kahang	3.48	336	P	Pn	04 55 17.0	+1.3
SRBI	Singaraja	3.91	332	P	Pn	04 55 22.6	+1.1
GMJI	Gumukmas	4.83	312	P	Pn	04 55 32.8	-1.4
BLJI	Banyuglugur	5.10	318	P	Pn	04 55 37.7	-0.2
KMMI	Kalianget	5.42	326	P	Pn	04 55 43.7	+1.4
	69nm,1.4s,0.3nm						
PWJI	Pagerwojo	6.26	304	P	Pn	04 55 53.5	-0.3
	40nm,1.4s,2μm0.4nm						
SJI	Sawahan	6.45	306	P	Pn	04 55 56.5	-0.1
	54nm,0.6s,0.4nm						
PCJI	Pacitan	6.69	300	P	Pn	04 55 59.5	-0.2
	56nm,1.7s,0.4nm						
KAPI	Kappang	7.04	23	P	Pn	04 56 06.6	+2.1
	0.7nm,0.3s,baz=216,slow=10,SNR=4.3						
KAPI				S	Sn	04 57 19.2	-4.6
	1.9nm,0.3s,baz=95,slow=22,SNR=6.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UGM	Wanagama	7.39	299	P	Pn	04 56 09.1	-0.3
UGM	Wanagama	7.39	299	P	Pn	04 56 09.6	+0.2
	baz=7.2,SNR=6.2						
FITZ	Fitzroy Crossi	10.54	129	P	Pn	04 56 54.2	+1.6
	1.4nm,0.3s,baz=330,slow=10,SNR=36						
FITZ				S	Sn	04 58 44.9	-5.0
	0.7nm,0.3s,baz=13,slow=23,SNR=6.5						
FITZ	Fitzroy Crossi	10.54	129	P	Pn	04 56 54.0	+1.4
	baz=11,SNR=22						
GIRL	Giralia	11.34	193	P	Pn	04 57 04.3	+0.8
	baz=12,SNR=5.6						
GIRL				S	Sn	04 59 02.0	-7.5
	baz=12,SNR=5.4						
KNRA	Kununurra	12.09	111	P	Pn	04 57 16.3	+2.4
	baz=12,SNR=5.4						
MTN	Manton Dam	13.82	97	S	Sn	05 00 06.1	-4.2
	baz=14,SNR=3.7						
MEEK	Meekatharra	15.06	175	P	Pn	04 57 54.5	+0.1
	baz=15,SNR=16						
MEEK				S	Sn	05 00 25.8	-15
	baz=15,SNR=14						
MORW	Morawa	17.44	183	P	Pn	04 58 24.8	+0.1
	baz=18,SNR=14						
MORW				S	Sn	05 01 23.5	-15
	baz=18,SNR=7.1						
WRA	Warramunga Arr	18.59	119	P	P	04 58 37.4	-1.1
	0.1nm,0.3s,baz=289,slow=14,SNR=5.8						
WRA				S	Sn	05 01 55.4	-11
	0.1nm,0.3s,baz=291,slow=25,SNR=4.6						
BLDU	Ballidu	18.96	181	P	Pn	04 58 45.2	+1.9
	baz=19,SNR=16						
BLDU				S	Sn	05 01 53.9	-21
	baz=19,SNR=6.3						
PPI	Padang Panjang	19.88	303	S	S	05 02 34.0	-1.4
	baz=20,SNR=1000						
KLBR	Kellerberrin	19.94	178	P	Pn	04 58 58.5	+3.6
	baz=20,SNR=12						
KLBR				S	S	05 02 25.1	-11
	baz=20,SNR=4.7						
ASAR	Alice Springs	20.04	129	P	Pn	04 58 57.3	+1.0
	0.1nm,0.3s,baz=306,slow=11,SNR=21						
ASAR				S	S	05 02 35.4	-3.2
	0.1nm,0.3s,baz=303,slow=23,SNR=4.9						
NWAO	Narrogin (SRO)	21.26	180	P	P	04 59 13.6	+6.1
	4.2nm,0.4s,baz=22,slow=14,SNR=10						
MKAR	Makanchi Array	65.90	335	P	P	05 05 07.8	+1.1
	0.3nm,0.4s,baz=147,slow=7.3,SNR=9.5						

IDC 09 04:54:50.5±1.1**, 42°.80S**×**72°.16W, h0**km**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.8**/17**, mbtmp3.8**/5**, MS2.4**/1**, Ms1 2.4**/1**, ms1mx2.4**/20**, Error ellipse: s-maj=49.5km s-min=26.1km az=103.0, Southern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.39	31	Pg	Pg	04 55 37.6	+1.1
	8.3nm,0.3s,baz=224,slow=16,SNR=31						
PLCA				Lg	Lg	04 56 12.8	
	33nm,0.3s,baz=127,slow=9.7,SNR=20						
CFAA	Coronel Fontan	11.61	17	LR	LR	05 02 31.7	
	comp=Z,18nm,19.3s,baz=201,slow=40						
CPUP	Villa Florida	20.42	41	P	P	04 59 28.8	-0.3
	1.0nm,0.8s,baz=197,slow=17,SNR=2.2						
SIV	San Ignacio	28.36	23	P	P	05 00 47.0	+0.7
	1.3nm,0.9s,baz=211,slow=12,SNR=3.3						
QSPA	South Pole Qui	47.45	180	P	P	05 03 26.8	+0.1
	4.7nm,1.0s,baz=167,slow=7.8,SNR=8.0						
TXAR	Lajitas Array	77.42	332	P	P	05 06 48.2	+0.8
	0.4nm,0.8s,baz=153,slow=5.0,SNR=5.3						
PDAR	Pinedale Array	91.58	333	P	P	05 07 57.4	-1.7
	0.4nm,0.6s,baz=159,slow=5.8,SNR=4.8						
ILAR	Eielson Array	121.91	331	PKP	PKPdf	05 13 45.5	+0.1
	0.4nm,0.8s,baz=146,slow=1.0,SNR=5.7						
AKTO	Aktyubinsk	145.50	60	PKPbc	PKPdf	05 14 28.6	-1.2
	0.5nm,0.3s,baz=309,slow=6.5,SNR=4.0						

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*ISCJB **09** 05:11:12.6±1.7, 37°.19S±0°.05×179°.76E±0°.10, h31km±12km, mb4.4/5, MS3.7/6, Error ellipse: s-maj=12.8km s-min=8.0km az=4.6*
*IDC **09** 05:11:13.6±1.0, 36°.71S×179°.24E, h0km, mb4.5/4, mb1 4.7/5, mb1mx4.2/18, mbtmp4.5/5, ML4.6/1, MS3.7/7, Ms1 3.7/7, ms1mx3.3/38, Error ellipse: s-maj=30.5km s-min=28.1km az=38.0*
*WEL **09** 05:11:17.7±0.8, 37°.01S×179°.39E, h33km, ML4.6/47, Error ellipse: s-maj=6.6km s-min=4.2km az=90.0*
*NEIC **09** 05:11:17.7, 37°.01S×179°.39E, h33km, mb4.4/3, ML4.6(WEL), After WEL.*
*AUST **09** 05:11:21.4, 37°.27S×178°.13E, h0km*
ISC 09 05:11:14.2±1.9**, 37°.22S**±0°.05×**179°.46E**±0°.08**, h12**km±10km**, n156, σ1s.49**/148**, mb4.5**/5**, MS3.7**/6**, 5C-5D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	1.28	228	PN	Pg	05 11 40.2	+1.4
PUZ				SN	Sg	05 11 56.8	+1.3
PUZ	Puketiti	1.28	228	Pn	Pg	05 11 40.2	+1.4
PUZ				Sn	Sg	05 11 56.8	+1.3
CNGZ	Carnagh Statio	1.60	218	PN	Pg	05 11 45.7	+0.7
CNGZ				SN	Sg	05 12 06.2	+0.4
CNGZ	Carnagh Statio	1.60	218	Pn	Pg	05 11 45.7	+0.7
CNGZ				Sn	Sg	05 12 06.2	+0.4
WIZ	White Island	1.84	260	PN	Pn	05 11 45.6	+0.1
WIZ	White Island	1.84	260	Pn	Pn	05 11 45.6	+0.1
MWZ	Matawai	1.89	233	⇓PN	Pb	05 11 48.5	-0.2
MWZ				SN	Sn	05 12 10.8	+0.7
MWZ	Matawai	1.89	233	Pn	Pb	05 11 48.5	-0.2
MWZ				Sn	Sn	05 12 10.8	+0.7
PRGZ	Paritu Road	2.11	216	PN	Pb	05 11 51.9	-0.4
PRGZ	Paritu Road	2.11	216	Pn	Pb	05 11 51.9	-0.4
URZ	Urewera	2.13	240	ePn	Pb	05 11 51.4	-1.4
URZ				eSn	Sn	05 12 15.9	0.0
URZ	Urewera	2.13	240	Pn	Pb	05 11 51.7	-1.0
	160nm,0.3s,baz=122,slow=1.0,SNR=390						
URZ				Sn	Sn	05 12 15.4	-0.6
	207nm,0.3s,baz=348,slow=23,SNR=28						
KNZ	Kokohu	2.28	218	⇑PN	Pn	05 11 53.6	+1.9
KNZ	Kokohu	2.28	218	Pn	Pn	05 11 53.6	+1.9
MHGZ	Mahia Peninsul	2.29	212	PN	Pb	05 11 54.4	-1.0
MHGZ	Mahia Peninsul	2.29	212	Pn	Pb	05 11 54.4	-1.0
EDRZ	Edgecumbe	2.33	247	PN	Pn	05 11 54.2	+1.7
EDRZ	Edgecumbe	2.33	247	Pn	Pn	05 11 54.2	+1.7
MARZ	Manawahe	2.34	250	PN	Pn	05 11 53.2	+0.7
MARZ	Manawahe	2.34	250	Pn	Pn	05 11 53.2	+0.7
OPRZ	Ohinepanea	2.39	254	PN	Pn	05 11 54.0	+0.8
OPRZ	Ohinepanea	2.39	254	eP	Pn	05 11 54.0	+0.8
RAHZ	Arahi	2.53	227	⇓PN	Pn	05 11 57.4	+2.3
RAHZ	Arahi	2.53	227	Pn	Pn	05 11 57.4	+2.3
TARZ	Mount Tarawera	2.55	246	PN	Pn	05 11 57.4	+2.0
TARZ	Mount Tarawera	2.55	246	Pn	Pn	05 11 57.4	+2.0
RRRZ	Republican Roa	2.59	244	PN	Pn	05 11 57.6	+1.7
RRRZ	Republican Roa	2.59	244	Pn	Pn	05 11 57.6	+1.7
KARZ	Kaharoa	2.68	252	PN	Pn	05 11 58.4	+1.3
KARZ	Kaharoa	2.68	252	Pn	Pn	05 11 58.4	+1.3
PRRZ	Plateau Road	2.74	241	PN	Pn	05 11 59.3	+1.3
PRRZ	Plateau Road	2.74	241	Pn	Pn	05 11 59.3	+1.3
HRRZ	Handcock Road	2.77	244	⇓PN	Pn	05 12 00.2	+1.8
HRRZ	Handcock Road	2.77	244	Pn	Pn	05 12 00.4	+1.9
ALRZ	Allen Road	2.81	241	PN	Pn	05 12 00.4	+1.5
ALRZ	Allen Road	2.81	241	Pn	Pn	05 12 00.4	+1.5
NMHZ	Naumai	2.81	227	PN	Pn	05 12 00.9	+2.0
NMHZ	Naumai	2.81	227	Pn	Pn	05 12 00.9	+2.0
KUZ	Kuaotunu	3.03	278	⇑PN	Pn	05 12 01.2	-0.7
KUZ	Kuaotunu	3.03	278	Pn	Pn	05 12 01.2	-0.7
BKZ	Black Stump Fm	3.04	229	PN	Pn	05 12 03.1	+1.0
BKZ	Black Stump Fm	3.04	229	Pn	Pn	05 12 03.1	+1.0
CKHZ	Cape Kidnapper	3.07	217	⇑PN	Pn	05 12 04.3	+1.9
CKHZ	Cape Kidnapper	3.07	217	Pn	Pn	05 12 04.3	+1.9
MCHZ	McNeill Hill	3.11	224	PN	Pn	05 12 04.9	+1.9
MCHZ	McNeill Hill	3.11	224	Pn	Pn	05 12 04.8	+1.9
TOZ	Tahuroa Road	3.19	260	⇓PN	Pn	05 12 04.6	+0.5
TOZ	Tahuroa Road	3.19	260	Pn	Pn	05 12 04.6	+0.5
KAHZ	Kahuranaki	3.27	218	PN	Pn	05 12 06.4	+1.1
KAHZ	Kahuranaki	3.27	218	Pn	Pn	05 12 06.4	+1.1
RATZ	Rangitukua	3.34	239	PN	Pn	05 12 08.6	+2.3
RATZ	Rangitukua	3.34	239	Pn	Pn	05 12 08.6	+2.3
MKAZ	Moumakai	3.43	271	⇑PN	Pn	05 12 07.5	0.0
MKAZ	Moumakai	3.43	271	Pn	Pn	05 12 07.5	0.0
PXZ	Pawanui	3.47	215	PN	Pn	05 12 08.5	+0.6
PXZ	Pawanui	3.47	215	Pn	Pn	05 12 08.5	+0.6
BHHZ	Black Hill Sta	3.50	229	PN	Pn	05 12 10.0	+1.5
BHHZ	Black Hill Sta	3.50	229	Pn	Pn	05 12 10.0	+1.5
OTVZ	Oturere	3.56	236	PN	Pn	05 12 10.3	+0.8
OTVZ	Oturere	3.56	236	Pn	Pn	05 12 10.2	+0.8
NGZ	Ngauruhoe	3.61	236	PN	Pn	05 12 11.3	+1.2
MOVZ	Moawhango	3.64	232	PN	Pn	05 12 11.2	+0.8
FWVZ	Far West T-bar	3.69	235	PN	Pn	05 12 12.6	+1.4
WPHZ	Waipukurau	3.69	219	PN	Pn	05 12 11.8	+0.7
PNHZ	Pukenui	3.71	223	PN	Pn	05 12 11.9	+0.6
TRVZ	Turoa	3.71	235	⇑PN	Pn	05 12 12.4	+0.8
PRHZ	Porangahau	3.76	215	PN	Pn	05 12 12.1	+0.2
MTVZ	Mangateitei	3.81	234	PN	Pn	05 12 14.1	+1.4
KAAZ	Kauri Point	3.83	275	PN	Pn	05 12 14.1	+1.3
PKVZ	Pokaka	3.84	236	PN	Pn	05 12 14.6	+1.5
HIZ	Hauiti	3.87	249	PN	Pn	05 12 15.6	+2.1
RVAZ	Riverhead Bore	3.94	275	PN	Pn	05 12 15.2	+0.9
TSZ	Takapari Road	3.94	223	PN	Pn	05 12 14.5	0.0
DVHZ	Dannevirke	4.01	219	PN	Pn	05 12 15.6	+0.1
VRZ	Vera Road	4.17	241	PN	Pn	05 12 19.6	+2.1
BFZ	Birch Farm	4.27	215	ePN	Pn	05 12 19.0	0.0
POWZ	Post Office Ro	4.28	221	PN	Pn	05 12 19.2	0.0
WCZ	Waipu Caves	4.31	286	PN	Pn	05 12 20.1	+0.5
WAZ	Wanganui	4.33	233	PN	Pn	05 12 21.3	+1.5
MHEZ	Mangahewa	4.45	244	PN	Pn	05 12 25.6	+4.1
RAEZ	Rainy Point	4.49	241	PN	Pn	05 12 24.5	+2.5
TIWZ	Tintock	4.51	217	PN	Pn	05 12 22.0	-0.3
MRZ	Mangatainoka R	4.58	220	⇓PN	Pn	05 12 22.4	-0.8
TMWZ	Te Maipa	4.77	214	PN	Pn	05 12 25.2	-0.6
HOWZ	Holdsworth Sta	4.79	219	PN	Pn	05 12 25.2	-0.9
OGWZ	Otaki Gorge	4.91	222	PN	Pn	05 12 26.8	-0.9
MTW	Mount Morrison	4.99	217	PN	Pn	05 12 27.8	-1.1
KIW	Kapiti Island	5.08	223	PN	Pn	05 12 29.6	-0.4
TRWZ	Traveller	5.09	214	PN	Pn	05 12 29.2	-1.1
OUZ	Omahuta	5.15	291	PN	Pn	05 12 31.9	+0.9
OUZ	Omahuta	5.15	291	ePn	Pn	05 12 32.3	+1.3
	87nm,0.5s						
CAW	Cannon Point	5.17	220	PN	Pn	05 12 29.8	-1.5
PAWZ	Paruwai Farm	5.20	216	PN	Pn	05 12 30.5	-1.2
MSWZ	Moikau Station	5.31	217	PN	Pn	05 12 31.7	-1.5
PLWZ	Palliser	5.43	216	PN	Pn	05 12 33.0	-1.9
SNZO	South Karori	5.50	221	PN	Pn	05 12 33.9	-1.9
SNZO	South Karori	5.50	221	ePn	Pn	05 12 32.7	-3.2
SNZO				eSn	Sn	05 13 33.1	-6.0
DUWZ	D'Urville Isla	5.60	229	PN	Pn	05 12 36.4	-0.9
TCW	Tory Channel	5.66	224	PN	Pn	05 12 37.1	-1.0
THZ	Tophouse	6.80	226	PN	Pn	05 12 52.1	-1.7
KHZ	Kahutara	6.91	219	PN	Pn	05 12 53.5	-1.6
KHZ	Kahutara	6.91	219	ePn	Pn	05 12 54.1	-1.1
KHZ				eSn	Sn	05 14 05.0	-8.6
CTZ	Chatham Island	7.16	157	PN	Pn	05 13 03.9	+5.3
MQZ	McQueen's Vall	8.30	217	PN	Pn	05 13 11.9	-2.3
LBZ	Lake Benmore	10.03	222	PN	Pn	05 13 35.6	-2.4
ODZ	Otahua Downs	10.26	218	PN	Pn	05 13 38.4	-2.8
ODZ	Otahua Downs	10.26	218	ePn	Pn	05 13 38.3	-2.8
ODZ				eSn	Sn	05 15 25.5	-10
JCZ	Jackson Bay	10.62	227	ePN	Pn	05 13 42.7	-3.5
TUZ	Tuapeka	11.41	217	PN	Pn	05 13 54.1	-2.7
DZM	Mont Dzumac	18.84	320	eLR	LR	05 20 07.3	
	416nm,24.1s						
DZM	Mont Dzumac	18.84	320	LR	LR	05 20 49.0	
	comp=Z,283nm,21.2s,baz=200,slow=31						
MCQ	Macquarie Isla	22.28	213	S	S	05 20 20.1	+4.5
	baz=22,SNR=6.2						
TBI	Tubuai	30.04	71	eLR	LR	05 25 16.6	
	108nm,28.0s						
TBI				eT	T	05 48 45.9	
	18nm,0.4s						
STKA	Stephens Creek	31.50	268	eP	P	05 17 36.3	+0.4
	0.7nm,0.7s						
STKA	Stephens Creek	31.50	268	P	P	05 17 36.1	+0.2
	3.5nm,0.8s,baz=103,slow=8.4,SNR=6.1						
STKA				LR	LR	05 29 06.3	
	comp=Z,134nm,18.3s,baz=167,slow=34						
PPT2	Papeete2	33.51	63	eLR	LR	05 26 53.5	
	105nm,25.0s						
CTA	Charters Tower	33.55	291	LR	LR	05 29 30.5	
	comp=Z,118nm,19.3s,baz=55,slow=33						
BBOO	Buckleboo	35.59	264	P	P	05 18 11.4	-0.1
	baz=34,SNR=6.9						
PMOR	Pomariorio Ree	36.44	61	eT	T	05 56 49.2	
	1.3nm,0.2s						
QIS	Mount Isa	38.33	284	P	P	05 18 35.4	+0.4
	baz=37,SNR=4.9						
COEN	Coen	39.73	296	P	P	05 18 47.1	+0.4
	baz=39,SNR=7.2						
AS31	Alice Springs	41.16	276	eP	P	05 18 58.0	-0.6
ASAR	Alice Springs	41.16	276	P	P	05 18 58.0	-0.6
ASAR	Alice Springs	41.16	276	P	P	05 18 58.0	-0.6
	6.6nm,0.5s,baz=119,slow=8.1,SNR=116						
FORT	Forrest	42.67	263	P	P	05 19 10.2	-0.5
	baz=42,SNR=10						
WRAB	Tennant Creek	42.77	281	eP	P	05 19 10.5	-1.2
	5.5nm,0.5s						
WRA	Warramunga Arr	42.77	281	P	P	05 19 10.8	-0.9
WRA				PcP	PcP	05 21 05.6	+2.5
WRA	Warramunga Arr	42.77	281	P	P	05 19 10.8	-0.9
	4.5nm,0.4s,baz=120,slow=7.9,SNR=178						
WRA				PcP	PcP	05 21 05.6	+2.5
	1.4nm,0.8s,baz=120,slow=3.6,SNR=4.8						
KNRA	Kununurra	49.55	282	P	P	05 20 09.9	+4.8
	baz=48,SNR=12						
NWAO	Narrogin (SRO)	50.31	255	LR	LR	05 38 32.2	
	comp=Z,68nm,18.2s,baz=1.9,slow=33						
KLBR	Kellerberrin	50.44	257	P	P	05 20 11.2	-0.5
	baz=49,SNR=9.8						
FITZ	Fitzroy Crossi	50.64	277	P	P	05 20 13.1	-0.2
	baz=50,SNR=23						
MEEK	Meekatharra	51.93	263	P	P	05 20 21.9	-1.1
	baz=51,SNR=6.7						
MORW	Morawa	52.86	259	P	P	05 20 28.7	-1.1
	baz=52,SNR=5.2						
QSPA	South Pole Qui	52.90	180	eP	P	05 20 34.9	+5.1
	7.9nm,1.1s						
QSPA	South Pole Qui	52.90	180	P	P	05 20 35.8	+6.0
	1.6nm,0.8s,baz=275,slow=2.8,SNR=15						
GUMO	Guam	60.11	320	LR	LR	05 40 58.3	
	comp=Z,31nm,20.4s,baz=90,slow=30						
PALU	Palau	61.09	307	P	P	05 21 30.7	+2.5
	baz=60,SNR=4.9						
KAPI	Kappang	63.04	285	LR	LR	05 46 46.6	
	comp=Z,52nm,19.8s,baz=90,slow=34						
CPUP	Villa Florida	97.27	131	LR	LR	06 01 40.7	
	comp=Z,71nm,21.8s,baz=318,slow=31						
MKAR	Makanchi Array	120.41	308	PKP	PKPdf	05 30 03.6	-1.4
MKAR	Makanchi Array	120.41	308	PKP	PKPdf	05 30 03.6	-1.4
	0.6nm,0.9s,baz=158,slow=1.6,SNR=4.1						
AKTO	Aktyubinsk	136.84	307	PKP	PKPdf	05 30 38.4	+2.4
AKTO	Aktyubinsk	136.84	307	PKP	PKPdf	05 30 38.4	+2.4
	1.5nm,0.4s,baz=56,slow=3.6,SNR=6.7						
ARCES	ARCESS Array B	144.70	345	PKP	PKPdf	05 30 50.0	+0.4
ARCES	ARCESS Array B	144.70	345	PKP	PKPdf	05 30 50.0	+0.4
	1.2nm,0.5s,baz=58,slow=3.4,SNR=12						
JOF	Joensuu	147.77	333	ep	PKPbc	05 30 57.0	-0.9
	1.7nm,0.4s						
KAF	Kangasniemi	150.05	335	ep	PKPbc	05 31 03.6	-0.1
	2.3nm,0.5s						
FINES	FINESS Array B	150.59	334	PKPbc	PKPbc	05 31 05.7	+0.7
FINES	FINESS Array B	150.59	334	PKPbc	PKPbc	05 31 05.7	+0.7
	1.3nm,0.4s,baz=33,slow=5.5,SNR=18						
BRTR	Keskin Array B	153.22	286	PKPbc	PKPbc	05 31 11.1	-0.9
BRTR	Keskin Array B	153.22	286	PKPbc	PKPbc	05 31 11.1	-0.9
	0.5nm,0.6s,baz=123,slow=7.0,SNR=2.7						
NOA	NORSAR Array B	155.03	346	PKPbc		05 31 14.5	
NOA	NORSAR Array B	155.03	346	PKPbc		05 31 14.5	
	1.9nm,0.9s,baz=324,slow=2.2,SNR=3.4						
TORD	Torodi Ar. Bea	155.94	185	PKPab	PKPab	05 31 37.7	+2.1
TORD	Torodi Ar. Bea	155.94	185	PKPab	PKPab	05 31 37.7	+2.1
	0.5nm,0.7s,baz=167,slow=2.7,SNR=4.1						

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*IDC **09** 05:12:43.7±5.2, 36°.03N×140°.49E, h50km±40km, mb3.6/3, mb1 3.7/4, mb1mx3.2/27, mbtmp3.7/4, ML3.0/1, Error ellipse: s-maj=49.8km s-min=9.1km az=59.0*
*ISCJB **09** 05:12:46.6±0.5, 35°.98N±0°.03×140°.12E±0°.05, h77km±5km, mb3.6/3, Error ellipse: s-maj=6.8km s-min=4.6km az=4.1*
*JMA **09** 05:12:47.8±0.1, 36°.04N×140°.10E, h64km±1km, M3.2 Broadband fault plane solution: P waves. NP1: φs358.00000°, δ64.00000°, λ78.00000°. NP2: φs203.00000°, δ28.00000°, λ112.00000°. Principal axes: T Plg69.0000°, Azm245.0000°; N Plg10.0000°, Azm4.0000°; P Plg18.0000°, Azm97.0000°;*
JMA Felt I J1.
ISC 09 05:12:47.4±1.0**, 36°.00N**±0°.03×**140°.10E**±0°.05**, h71**km±7km**, n19, σ1s.04**/33**, mb3.7**/3**, 1C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.24	18	⇑P	Pn	05 12 57.8	-0.6
JYT				S	Sn	05 13 05.2	-1.2
TOK	Tokyo	0.42	222	P	Pn	05 13 00.8	+1.2
TOK				S	Sn	05 13 10.3	+1.8
JAG	Ashikaga	0.67	309	⇓P	Pn	05 13 02.0	-0.1
JAG				S	Sn	05 13 12.2	-0.8
JRY	Ryogami san	0.97	271	⇓P	Pn	05 13 05.7	0.0
JRY				S	Sn	05 13 19.1	-0.1
JKT	Katashina	1.03	318	P	Pn	05 13 06.2	-0.2
JKT				S	Sn	05 13 20.5	-0.1
JOD2	Odawara 2	1.11	229	P	Pn	05 13 07.2	-0.1
JOD2				S	Sn	05 13 21.0	-1.2
BSO3	Boso 3	1.24	164	P	Pn	05 13 10.4	+1.6
BSO3				S	Sn	05 13 26.4	+1.6
JYN	Shimob	1.36	249	⇓P	Pn	05 13 11.2	+0.5
JYN				eS	Sn	05 13 28.4	+0.3
JIM2	Oshima 3	1.39	203	P	Pn	05 13 10.4	-0.6
JIM2				eS	Sn	05 13 27.3	-1.5
JFY	Yanaizu	1.44	347	P	Pn	05 13 12.3	+0.7
JFY				S	Sn	05 13 30.2	+0.3
JFK	Kawauchi	1.50	24	P	Pn	05 13 12.5	+0.1
JFK				S	Sn	05 13 31.1	-0.2
BSO1	Boso 1	1.52	152	P	Pn	05 13 13.3	+1.1
JFT	Otama	1.53	7	P	Pn	05 13 13.0	+0.2
JFT				S	Sn	05 13 32.8	+0.9
MJAR	Matsushiro Arr	1.62	290	P	Pn	05 13 14.3	+0.2
	27nm,0.3s,baz=101,slow=8.7,SNR=158						
MJAR				S	Sn	05 13 36.2	+2.0
	7.1nm,0.3s,baz=154,slow=12,SNR=9.8						
MAT	Matsushiro	1.62	290	P	Pn	05 13 14.8	+0.7
MAT				S	Sn	05 13 36.2	+2.0
JHJ	Hachijo jima 2	2.89	185	P	Pn	05 13 27.1	-4.0
	5.2nm,0.3s,baz=94,slow=19,SNR=5.0						
JHJ				S	Sn	05 14 03.1	-1.6
	14nm,0.3s,baz=328,slow=17,SNR=4.9						
MKAR	Makanchi Array	43.78	303	P	P	05 20 46.0	+0.1
	0.5nm,0.6s,baz=90,slow=9.5,SNR=7.3						
KURBB	Kurchatov Arra	45.81	309	P	P	05 21 01.9	0.0
	0.5nm,0.3s,baz=87,slow=8.0,SNR=7.3						
WRA	Warramunga Arr	55.91	187	P	P	05 22 17.0	-1.0
	0.7nm,0.8s,baz=4.3,slow=7.6,SNR=4.9						

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*IDC **09** 05:18:18.2±1.1, 17°.40N×122°.61E, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.8/24, mbtmp3.8/6, MS3.3/2, Ms1 3.3/2, ms1mx2.7/55, Error ellipse: s-maj=46.3km s-min=20.6km az=58.0*
*MAN **09** 05:18:21, 17°.56N×122°.56E, h33km, mb4.6, ML3.5, MS3.5*
*ISCJB **09** 05:18:24.2±0.8, 17°.42N±0°.05×122°.46E±0°.06, h52km±9km, mb3.9/7, MS3.1/2, Error ellipse: s-maj=11.0km s-min=7.3km az=147.2*
*NEIC **09** 05:18:25.4±0.6, 17°.22N×123°.00E, h35km, mb4.4/1, Error ellipse: s-maj=25.2km s-min=9.1km az=86.0*
ISC 09 05:18:23.1±1.6**, 17°.54N**±0°.06×**122°.55E**±0°.09**, h35**km±7km**, n29, σ1s.12**/29**, mb3.8**/7**, 2C-2D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PALP	Palanan	0.49	195	⇑iP	Pb	05 18 33.5	-0.2
CAUP	Cauayan	0.92	230	eP	Pn	05 18 39.5	0.0
CAUP				eS	Sn	05 18 50.2	-1.3
APYP	Conner	1.29	284	eP	Pn	05 18 43.9	-0.8
APYP				eS	Sn	05 18 59.0	-1.8
ABRA	Dolores	1.76	274	eP	Pn	05 18 50.7	-0.4
ABRA				eS	Sn	05 19 12.0	-0.4
PIP	Pasuquin	2.00	293	⇓iP	Pn	05 18 53.9	-0.5
PIP				eS	Sn	05 19 18.3	0.0
BALP	Baler	2.02	208	eP	Pn	05 18 55.0	+0.3
SIPP	Brgy, Tapao	2.03	281	⇓eP	Pn	05 18 51.6	-3.3
SIPP				eS	Sn	05 19 20.8	+1.7
BCPH	Baguio City Da	2.21	239	⇑iP	Pn	05 18 58.3	+0.8
BCPH				eS	Sn	05 19 23.8	0.0
BOLP	Bolinao	2.78	246	eP	Pn	05 19 06.2	+1.1
TGY	Tagaytay City	3.76	205	Pn	Pn	05 19 19.8	+1.1
TGY	Tagaytay City	3.76	205	Pn	Pn	05 19 19.8	+1.1
	72nm,0.3s,baz=251,slow=4.1,SNR=3.8						
TWG	Pinlang	5.43	345	ePn	Pb	05 19 51.0	-6.3
YULB	Yu-li	5.94	349	ePn	Pn	05 19 55.3	+6.6
KSAR	Wonju Array Be	20.37	12	P	Pn	05 23 02.5	+3.5
KSRS	Korea Array	20.39	12	P	Pn	05 23 02.5	+3.3
	0.5nm,0.3s,baz=196,slow=10,SNR=3.4						
KSRS				LR	LR	05 31 12.2	
	comp=Z,41nm,19.2s,baz=180,slow=38						
CMAR	Chiang Mai Arr	22.47	276	P	P	05 23 20.2	+0.7
CMAR	Chiang Mai Arr	22.47	276	P	P	05 23 20.2	+0.7
	0.6nm,0.3s,baz=79,slow=8.5,SNR=5.0						
SONM	Songino Array	32.99	340	LR	LR	05 39 12.0	
	comp=Z,80nm,19.0s,baz=8.8,slow=38						
WRAB	Tennant Creek	39.00	162	eP	P	05 25 45.2	-1.2
	5.4nm,0.8s						
WRA	Warramunga Arr	39.01	162	P	P	05 25 45.2	-1.3
WRA	Warramunga Arr	39.01	162	P	P	05 25 45.2	-1.3
	6.4nm,0.8s,baz=343,slow=9.4,SNR=26						
ASAR	Alice Springs	42.43	164	P	P	05 26 14.2	-0.5
ASAR	Alice Springs	42.43	164	P	P	05 26 14.2	-0.5
	1.7nm,0.8s,baz=333,slow=6.8,SNR=12						
MKAR	Makanchi Array	44.12	320	P	P	05 26 29.2	+1.0
MKAR	Makanchi Array	44.12	320	P	P	05 26 29.2	+1.0
	0.5nm,0.5s,baz=116,slow=9.7,SNR=8.0						
STKA	Stephens Creek	52.42	159	P	P	05 27 30.6	-1.7
STKA	Stephens Creek	52.42	159	P	P	05 27 30.6	-1.7
	1.3nm,0.7s,baz=335,slow=8.7,SNR=4.9						
YKA	Yellowknife Ar	88.56	23	P	P	05 31 13.6	+1.5
YKA	Yellowknife Ar	88.56	23	P	P	05 31 13.5	+1.5
	0.2nm,0.7s,baz=308,slow=4.5,SNR=4.6						

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*IDC **09** 05:33:29.4±2.6, 6°.13S×132°.10E, h0km, mb4.0/1, mb1 4.3/4, mb1mx3.8/18, mbtmp4.1/4, ML4.3/3, Error ellipse: s-maj=113.3km s-min=27.8km az=80.0*
*ISCJB **09** 05:33:33.3±0.7, 6°.25S±0°.04×131°.91E±0°.10, h33km, mb3.9/1, Error ellipse: s-maj=14.2km s-min=6.1km az=0.7*
*AUST **09** 05:33:35.7±0.0, 6°.09S×132°.06E, h62km, Error ellipse: s-maj=1.5km s-min=0.8km az=273.0*
ISC 09 05:33:34.4±0.8**, 6°.14S**±0°.05×**131°.9E**±0°.1**, h35**km**, n14, σ1s.81**/16**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	3.22	6	P	Pn	05 34 24.5	+1.9
	baz=3.2,SNR=16						
FAKI				S	Sn	05 34 57.9	-1.8
	baz=3.2,SNR=13						
AAI	Ambon	4.42	303	P	Pn	05 34 43.5	+4.4
	baz=4.5,SNR=5.2						
SWI	Sorong	5.28	353	P	Pn	05 34 52.5	+1.6
	baz=5.3,SNR=6.7						
SWI				S	Sn	05 35 46.9	-3.7
	baz=5.3,SNR=15						
KDU	Kakadu	6.53	175	P	Pn	05 35 11.2	+3.2
	baz=6.6,SNR=73						
KDU				S	Sn	05 36 20.5	-0.8
	baz=6.6,SNR=7.1						
MTN	Manton Dam	6.71	186	P	Pn	05 35 13.9	+3.5
	baz=6.8,SNR=59						
MTN				S	Sn	05 36 25.3	-0.3
	baz=6.8,SNR=11						
KNRA	Kununurra	9.97	198	P	Pn	05 35 58.0	+2.7
	baz=10,SNR=18						
KNRA				S	Sn	05 37 44.5	-1.4
	baz=10,SNR=7.0						
FITZ	Fitzroy Crossi	13.37	207	Pn	Pn	05 36 41.9	+0.1
	2.5nm,0.3s,baz=38,slow=11,SNR=113						
FITZ				Sn	Sn	05 39 00.7	-8.5
	4.8nm,0.3s,baz=194,slow=16,SNR=12						
FITZ	Fitzroy Crossi	13.37	207	P	Pn	05 36 42.9	+1.1
	baz=14,SNR=18						
COEN	Coen	13.54	126	P	Pn	05 36 43.8	-0.4
	baz=14,SNR=6.4						
WRA	Warramunga Arr	13.92	170	Pn	Pn	05 36 47.1	-2.3
	1.1nm,0.3s,baz=352,slow=14,SNR=49						
WRA				Sn	Sn	05 39 11.8	-11
	2.5nm,0.3s,baz=348,slow=24,SNR=6.5						
QIS	Mount Isa	16.16	153	P	Pn	05 37 18.9	-0.2
	baz=16,SNR=6.4						
MTSU	Mount Surprise	17.00	136	P	P	05 37 30.2	-1.0
	baz=17,SNR=16						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**17.53**	**174**	P	**Pn**	**05 37 35.8**	**-0.5**
	0.6nm,0.3s,baz=340,slow=8.6,SNR=26						
ASAR				S	Sn	05 40 40.9	-10
	0.7nm,0.3s,baz=360,slow=29,SNR=8.4						
MKAR	**Makanchi Array**	**68.56**	**326**	P	**P**	**05 44 34.7**	**+1.0**
	0.6nm,0.4s,baz=113,slow=7.8,SNR=15						

*ISCJB **09** 05:45:56.9±0.6, 1°.77N±0°.06×127°.37E±0°.05, h112^{km}, mb4.3/8, Error ellipse: s-maj=9.0km s-min=6.7km az=8.2*
*DJA **09** 05:45:58.8±1.3, 2°N±11°×12°7E±°, h92^{km}±17^{km}, M4.3/6, mb4.6/4, mB4.8/3, MLv4.1/6, Mw(mB)4.0/3*
*IDC **09** 05:46:02.7±6.1, 1°.59N×127°.09E, h157^{km}±56^{km}, mb4.2/6, mb1 4.2/8, mb1mx3.7/23, mbtmp4.1/8, Error ellipse: s-maj=47.1km s-min=13.8km az=60.0*
*AUST **09** 05:46:06.5±2.2, 1°.45N×126°.98E, h194^{km}, Error ellipse: s-maj=2.4km s-min=1.4km az=31.0*
ISC 09 05:45:58.1±0.6**, 1°.75N**±0°.07×**127°.29E**±0°.07**, h112^{km}, n37, σ1^{s}46**/39**, mb4.4**/8**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.51**	**80**	P	**Pn**	**05 46 14.2**	**-1.0**
TNTI	**Ternate**	**0.97**	**175**	P	**Pn**	**05 46 20.8**	**+1.6**
LBMI	**Labuha**	**2.38**	**175**	P	**Pn**	**05 46 37.8**	**+1.8**
MNI	**Manado**	**2.46**	**263**	P	**Pn**	**05 46 38.9**	**+1.8**
MNI				S	**Sn**	**05 47 10.0**	**+2.9**
KMSI	**Cibinong**	**3.50**	**251**	P	**Pn**	**05 46 52.6**	**+1.7**
NLAI	**Namlea**	**4.95**	**182**	P	**Pn**	**05 47 12.0**	**+1.6**
	31nm,0.5s,3μm0.4nm						
LUWI	**Luwuk**	**5.30**	**239**	S	**Sn**	**05 48 10.4**	**-4.5**
	baz=4.9,SNR=3.7						
MRSI	**Marisa**	**5.49**	**257**	P	**Pn**	**05 47 19.7**	**+2.1**
	59nm,0.7s,759nm0.3nm						
FAKI	**Fak Fak**	**6.79**	**133**	S	Sn	05 49 10.2	+19
	baz=6.8,SNR=4.1						
SKSI	**Soroako, Sulaw**	**7.31**	**235**	P	**Pn**	**05 47 43.4**	**+1.1**
	38nm,0.7s,448nm						
SPSI	**Sidrap Palu**	**9.41**	**233**	P	**Pn**	**05 48 12.7**	**+1.9**
KAPI	**Kappang**	**10.09**	**228**	P	**Pn**	**05 48 21.7**	**+1.8**
	2.5nm,0.3s,baz=37,slow=3.9,SNR=10						
KAPI				S	**Sn**	**05 50 11.2**	**-0.1**
	2.6nm,0.3s,baz=188,slow=19,SNR=8.0						
MTN	**Manton Dam**	**14.99**	**165**	P	**P**	**05 49 27.6**	**+0.6**
	baz=15,SNR=4.8						
KDU	**Kakadu**	**15.23**	**160**	P	**P**	**05 49 30.1**	**+0.5**
	baz=15,SNR=14						
FITZ	**Fitzroy Crossi**	**19.79**	**185**	P	**P**	**05 50 19.1**	**-0.6**
	0.9nm,0.3s,baz=17,slow=7.8,SNR=22						
FITZ	**Fitzroy Crossi**	**19.79**	**185**	P	**P**	**05 50 19.0**	**-0.6**
	baz=20,SNR=14						
WRA	**Warramunga Arr**	**22.64**	**163**	P	**P**	**05 50 49.0**	**-0.9**
	16nm,0.4s,baz=335,slow=11,SNR=322						
QIS	**Mount Isa**	**25.24**	**152**	P	**P**	**05 51 14.0**	**+0.2**
	baz=25,SNR=15						
MTSU	**Mount Surprise**	**25.91**	**140**	P	**P**	**05 51 21.9**	**+1.9**
	baz=26,SNR=5.5						
ASAR	**Alice Springs**	**26.07**	**166**	P	**P**	**05 51 20.6**	**-0.8**
	5.7nm,0.5s,baz=351,slow=7.5,SNR=119						
MEEK	**Meekatharra**	**29.43**	**196**	P	**P**	**05 51 51.1**	**-0.2**
	baz=29,SNR=12						
MORW	**Morawa**	**32.48**	**199**	P	**P**	**05 52 17.8**	**-0.2**
	baz=32,SNR=3.6						
KMBL	**Kambalda**	**33.33**	**188**	P	**P**	**05 52 25.0**	**-0.4**
	baz=33,SNR=9.5						
KLBR	**Kellerberrin**	**34.37**	**194**	P	**P**	**05 52 34.2**	**-0.2**
	baz=34,SNR=13						
BBOO	**Buckleboo**	**35.35**	**167**	P	**P**	**05 52 42.2**	**-0.7**
	baz=35,SNR=34						
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**05 52 48.8**	**-0.3**
	13nm,0.4s,baz=334,slow=8.8,SNR=63						
STKA	**Stephens Creek**	**36.09**	**159**	P	**P**	**05 52 48.9**	**-0.3**
	baz=36,SNR=48						
ARMA	**Armidale**	**39.52**	**146**	P	**P**	**05 53 18.9**	**+0.7**
	baz=40,SNR=5.6						
LZH	**Lanzhou**	**40.49**	**330**	*e*P	**P**	**05 53 26.9**	**+0.7**
LZH				pP	pP	05 53 32.0	-20
LZH				sP	sP	05 53 34.7	-30
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
ARPS	**Mount Arapiles**	**40.64**	**162**	P	**P**	**05 53 27.6**	**+0.4**
	baz=41,SNR=5.6						
MKAR	**Makanchi Array**	**59.49**	**326**	P	**P**	**05 55 49.1**	**-0.4**
	comp=Z,1.2nm,0.3s,baz=118,slow=7.8,SNR=28						
KURBB	**Kurchatov Arra**	**63.70**	**328**	P	**P**	**05 56 17.0**	**-0.6**
	comp=Z,2.8nm,0.5s,baz=127,slow=6.2,SNR=30						
VNDA	**Vanda**	**81.40**	**173**	P	**P**	**05 58 01.3**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=289,slow=5.1,SNR=5.9						
BHD	**Baghdad**	**83.11**	**303**	*e*x	**P**	**05 58 10.0**	**-1.8**
BHD				*e*x	x	05 58 14.0	
BHD				*e*x	x	06 01 23.0	
BHD				*e*x	**S**	**06 08 21.0**	**-1.7**
BHD				*e*x	x	06 13 49.0	
BHD				*e*x	x	06 21 08.0	
BHD				*e*x	x	06 25 00.0	
ILAR	**Eielson Array**	**86.65**	**25**	P	**P**	**05 58 30.8**	**+1.9**
	comp=Z,0.1nm,0.6s,baz=264,slow=6.3,SNR=3.1						
TXAR	**Lajitas Array**	**122.35**	**53**	PKP	**PKPdf**	**06 04 40.0**	**-0.9**
	comp=Z,0.2nm,0.8s,baz=329,slow=1.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**124.05**	**287**	PKP	**PKPdf**	**06 04 43.5**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=79,slow=1.6,SNR=6.2						

IDC 09 05:55:17.0±0.9**, 11°.15N**×**140°.94E, h0^{km}, mb3.8**/8**, mb1 4.1**/8**, mb1mx3.8**/25**, mbtmp3.8**/8**, Error ellipse: s-maj=35.2km s-min=20.2km az=92.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.58**	**192**	P	P	06 01 41.1	-0.4
	1.3nm,0.7s,baz=11,slow=9.7,SNR=8.5						
ASAR	**Alice Springs**	**35.28**	**191**	P	P	06 02 13.3	-0.5
	0.6nm,0.5s,baz=18,slow=12,SNR=15						
ASAR				PcP	PcP	06 04 45.8	+1.1
	0.2nm,0.7s,baz=14,slow=2.6,SNR=4.5						
CMAR	**Chiang Mai Arr**	**41.17**	**285**	P	P	06 03 04.2	+0.7
	0.6nm,0.3s,baz=101,slow=7.7,SNR=4.2						
MKAR	**Makanchi Array**	**60.63**	**318**	P	P	06 05 30.1	+0.2
	0.3nm,0.6s,baz=99,slow=8.3,SNR=5.1						
KURBB	**Kurchatov Arra**	**64.05**	**321**	P	P	06 05 52.2	-0.4
	0.6nm,0.7s,baz=103,slow=7.5,SNR=7.9						
ILAR	**Eielson Array**	**72.40**	**25**	P	P	06 06 44.0	-0.8
	0.3nm,0.5s,baz=240,slow=5.9,SNR=8.3						
YKA	**Yellowknife Ar**	**86.76**	**27**	P	P	06 08 04.3	+1.4
	0.5nm,0.5s,baz=289,slow=4.9,SNR=15						
FINES	**FINESS Array B**	**91.70**	**334**	P	P	06 08 24.5	-1.7
	4.1nm,1.1s,baz=62,slow=9.6,SNR=3.9						

*ISK **09** 06:06:38.0, 37°.47N×28°.25E, h3^{km}, MD2.4*
*DDA **09** 06:06:42.6, 37°.27N×28°.19E, h6^{km}, MD2.8*
*CSEM **09** 06:06:42.0±0.3, 37°.23N×28°.18E, h10^{km}, MD2.4, Error ellipse: s-maj=7.3km s-min=5.3km az=20.0*
ISC 09 06:06:41.8±1.3**, 37°.30N**±0°.04×**28°.17E**±0°.03**, h3^{km}**±13^{km}**, n20, σ0^{s}82**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.19**	**150**	PG	**Pg**	**06 06 44.8**	**-0.7**
YER	**Yerkesik**	**0.19**	**150**	*i* Pg	**Pg**	**06 06 44.8**	**-0.7**
MLSB	**Milas**	**0.31**	**270**	*e*PG	**Pg**	**06 06 47.1**	**-0.8**
MLSB	**Milas**	**0.31**	**270**	*e*Pg	**Pg**	**06 06 47.1**	**-0.8**
AYDN	**Tasoluk**	**0.43**	**328**	*i* P	**Pb**	**06 06 52.0**	**-0.1**
AYDN				*i* S	**Sb**	**06 06 58.9**	**-0.1**
AYDN	**Tasoluk**	**0.43**	**328**	*i* P	**Pb**	**06 06 52.0**	**-0.1**
AYDN				*i* S	**Sb**	**06 06 58.9**	**-0.1**
TURN	**Turunc**	**0.55**	**140**	*i* P	**Pg**	**06 06 50.9**	**-1.5**
TURN	**Turunc**	**0.55**	**140**	*i* P	**Pg**	**06 06 50.9**	**-1.5**
DALY	**Dalyan (Mu˜la**	**0.62**	**141**	*e*PG	**Pg**	**06 06 53.7**	**0.0**
DALY				*e*SG	**Sb**	**06 07 03.8**	**-0.6**
DALY	**Dalyan (Mu˜la**	**0.62**	**141**	*e*Pg	**Pg**	**06 06 53.7**	**0.0**
BODT	**Bodrum**	**0.72**	**251**	*e*PG	**Pg**	**06 06 55.7**	**0.0**
BODT				*e*SG	**Sb**	**06 07 07.3**	**-0.1**
BODT	**Bodrum**	**0.72**	**251**	*e*Pg	**Pg**	**06 06 55.7**	**0.0**
BODT				*e*Sg	**Sb**	**06 07 07.3**	**-0.1**
DAT	**Datca**	**0.74**	**220**	*e*PG	**Pg**	**06 06 56.4**	**+0.4**
DAT				*e*SG	**Sn**	**06 07 10.2**	**-0.7**
DAT	**Datca**	**0.74**	**220**	*e*Pg	**Pg**	**06 06 56.4**	**+0.4**
DNZL	**Cakiroluk**	**0.80**	**61**	*i* P	**Pb**	**06 06 58.5**	**0.0**
DNZL				*i* S	**Sb**	**06 07 10.4**	**+0.6**
DNZL	**Cakiroluk**	**0.80**	**61**	*i* P	**Pb**	**06 06 58.5**	**0.0**
DNZL				*i* S	**Sb**	**06 07 10.4**	**+0.6**
FETY	**Fethiye**	**0.99**	**132**	*e*PG	**Pg**	**06 06 59.4**	**-1.4**
FETY	**Fethiye**	**0.99**	**132**	*e*Pg	**Pg**	**06 06 59.4**	**-1.4**
AKAS	**Kas**	**1.57**	**132**	*i* P	**Pg**	**06 07 13.1**	**+1.2**
AKAS				*i* S	**Sg**	**06 07 33.3**	**+1.0**
AKAS	**Kas**	**1.57**	**132**	*i* P	**Pg**	**06 07 13.1**	**+1.2**
AKAS				*i* S	**Sg**	**06 07 33.3**	**+1.0**

IDC 09 06:55:29.7±2.2**, 9°.97N**×**104°.40W, h0^{km}, mb3.7**/7**, mb1 4.0**/8**, mb1mx3.9**/19**, mbtmp3.7**/8**, ML3.6**/1**, MS3.5**/7**, Ms1 3.5**/7**, ms1mx3.3**/26**, Error ellipse: s-maj=101.4km s-min=20.2km az=60.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	**15.14**	**339**	LR	LR	07 03 29.9	
	comp=Z,16nm,18.4s,baz=169,slow=32						
TXAR	**Lajitas Array**	**19.27**	**2**	P	P	06 59 56.4	+0.2
	0.1nm,0.3s,baz=182,slow=9.8,SNR=14						
TXAR				LR	LR	07 06 58.8	
	comp=Z,124nm,18.4s,baz=5.0,slow=36						
ANMO	**Albuquerque**	**24.93**	**356**	P	P	07 00 55.8	+0.9
	2.1nm,1.0s,baz=162,slow=8.3,SNR=5.7						
PFO	**Pinyon Flat Ob**	**26.00**	**337**	LR	LR	07 09 58.3	
	comp=Z,62nm,18.1s,baz=317,slow=33						
NVAR	**Mina Array Bea**	**30.96**	**338**	P	P	07 01 49.2	+0.3
	0.2nm,0.5s,baz=126,slow=8.0,SNR=3.9						
NVAR				LR	LR	07 12 19.6	
	comp=Z,38nm,18.0s,baz=143,slow=33						
PDAR	**Pinedale Array**	**32.98**	**353**	P	P	07 02 06.3	-0.3
	1.1nm,1.0s,baz=155,slow=11,SNR=6.9						
LPAZ	**La Paz**	**44.38**	**126**	P	P	07 03 42.6	-0.5
	1.1nm,0.9s,baz=0.0,slow=7.1,SNR=3.6						
YKA	**Yellowknife Ar**	**52.95**	**354**	P	P	07 04 46.3	-1.3
	0.2nm,0.5s,baz=166,slow=7.0,SNR=4.9						
CPUP	**Villa Florida**	**58.25**	**129**	P	P	07 05 26.6	+0.3
	0.6nm,0.5s,baz=287,slow=14,SNR=4.8						
PLCA	**Paso Flores**	**59.34**	**151**	LR	LR	07 24 06.5	
	comp=Z,71nm,21.9s,baz=1.9,slow=29						
ILAR	**Eielson Array**	**62.17**	**341**	P	P	07 05 52.7	0.0
	2.3nm,1.0s,baz=154,slow=4.9,SNR=20						
URZ	**Urewera**	**87.21**	**231**	LR	LR	07 38 37.1	
	comp=Z,144nm,18.4s,baz=2.1,slow=30						
NOA	**NORSAR Array B**	**93.27**	**26**	LR	LR	07 49 38.6	
	comp=Z,34nm,19.7s,baz=70,slow=35						

*IDC **09** 07:18:46.5±2.1, 49°.29N×156°.28E, h0^{km}, mb3.4/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.4/5, ML3.6/1, Error ellipse: s-maj=47.3km s-min=33.6km az=159.0*
*KRSC **09** 07:18:52.8±0.3, 49°.77N×156°.86E, h5^{km}±5^{km}, ML4.4*
*MOS **09** 07:18:52.0±1.7, 49°.64N×156°.18E, h57^{km}, mb4.0/1, Error ellipse: s-maj=35.2km s-min=8.3km az=74.0*
*ISCJB **09** 07:18:53.5±0.9, 49°.62N±0°.06×156°.6E±0°.1, h57^{km}, mb3.4/4, Error ellipse: s-maj=13.4km s-min=7.4km az=17.4*
ISC 09 07:18:53.8±1.0**, 49°.57N**±0°.09×**156°.40E**±0°.08**, h57^{km}, n32, σ1^{s}70**/49**, mb3.3**/4**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.13**	**351**	*e*PN	**Pn**	**07 19 11.2**	**-2.3**
SKR				*i* S	**Sn**	**07 19 23.9**	**-4.2**
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR				pmax	pmax		
	comp=E,80nm,0.4s						
SKR				pmax	pmax		
	comp=Z,240nm,0.4s						
SKR				smax	smax		
	comp=N,3μm,0.3s						
SKR				smax	smax		
	comp=E,2μm,0.3s						
SKR				smax	smax		
	comp=N,3μm,1.5s						
SKR				smax	smax		
	comp=E,3μm,1.5s						
SKR	**Severo-Kuril's**	**1.13**	**351**	*e*P	**Pn**	**07 19 12.7**	**-0.8**
SKR				*i* S	**Sn**	**07 19 26.2**	**-1.9**
PAU	**Pauzhetka**	**1.92**	**8**	PN	**Pn**	**07 19 23.7**	**-0.4**
PAU				S	**Sn**	**07 19 46.1**	**-1.0**
PAU	**Pauzhetka**	**1.92**	**8**	*e*P	**Pn**	**07 19 23.7**	**-0.4**
PAU				*i* S	**Sn**	**07 19 46.1**	**-1.0**
MIPR	**Malaya Ipel'ka**	**2.72**	**5**	*e*P	**Pn**	**07 19 35.6**	**+0.5**
MIPR				*e*S	**Sn**	**07 20 07.0**	**+0.2**
ASAK	**Asacha**	**2.97**	**18**	*e*P	**Pn**	**07 19 38.1**	**-0.5**
ASAK				*i* S	**Sn**	**07 20 12.1**	**-0.9**
MTVR	**Mutnovka**	**3.13**	**20**	*e*P	**Pn**	**07 19 40.1**	**-0.6**
MTVR				*i* S	**Sn**	**07 20 15.5**	**-1.4**
RUS	**Russkaya**	**3.16**	**24**	PN	**Pn**	**07 19 39.9**	**-1.2**
RUS				S	**Sn**	**07 20 15.3**	**-2.2**
RUS	**Russkaya**	**3.16**	**24**	P	**Pn**	**07 19 39.9**	**-1.2**
RUS				*i* S	**Sn**	**07 20 15.3**	**-2.2**
GRL	**Gorelyy**	**3.17**	**19**	P	**Pn**	**07 19 40.8**	**-0.5**
GRL				*i* S	**Sn**	**07 20 15.7**	**-2.2**
APC	**Apacha**	**3.40**	**8**	*e*P	**Pn**	**07 19 45.9**	**+1.7**
APC				*i* S	**Sn**	**07 20 25.7**	**+2.5**
PETK	**Petropavlovsk-**	**3.64**	**12**	PN	**Pn**	**07 19 49.1**	**+1.5**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.64**	**12**	Pn	**Pn**	**07 19 49.1**	**+1.5**
	comp=Z,4.4nm,0.3s,baz=174,slow=18,SNR=66						
PETK				Sn	Sn	07 20 36.0	+6.8
	comp=Z,1.4nm,0.3s,baz=151,slow=21,SNR=2.7						
PET	**Petropavlovsk**	**3.74**	**21**	*e*PN	**Pn**	**07 19 46.8**	**-2.1**
PET				*e*S	**Sn**	**07 20 31.2**	**-0.4**
PET				smax	smax		
	comp=N,154nm,0.5s						
PET				smax	smax		
	comp=E,204nm,0.6s						
PET	**Petropavlovsk**	**3.74**	**21**	P	**Pn**	**07 19 49.5**	**+0.6**
PET				*i* S	**Sn**	**07 20 31.5**	**-0.1**
SDLR	**Sedlovina**	**4.03**	**22**	P	**Pn**	**07 19 52.7**	**-0.3**
SDLR				*i* S	**Sn**	**07 20 37.9**	**-1.0**
SPN	**Mys Shipunski**	**4.20**	**31**	PN	**Pn**	**07 19 54.9**	**-0.4**
SPN				S	**Sn**	**07 20 41.5**	**-1.5**
SPN	**Mys Shipunski**	**4.20**	**31**	*e*P	**Pn**	**07 19 54.9**	**-0.4**
SPN				*i* S	**Sn**	**07 20 41.5**	**-1.5**
GNL	**Ganaly**	**4.24**	**12**	P	**Pn**	**07 19 56.7**	**+0.7**
MKZ	**Mys Kozlova**	**5.98**	**31**	PN	**Pn**	**07 20 18.1**	**-1.5**
MKZ	**Mys Kozlova**	**5.98**	**31**	*e*P	**Pn**	**07 20 18.1**	**-1.5**
MKZ				*e*S	**Sn**	**07 21 21.4**	**-5.2**
TUMR	**Tumrok**	**6.17**	**20**	P	**Pn**	**07 20 23.7**	**+1.4**
KMNR	**Kamenistaya**	**6.62**	**19**	P	**Pn**	**07 20 29.3**	**+0.8**
KBTR	**Krutoberegovo**	**7.70**	**28**	PN	**Pn**	**07 20 42.5**	**-0.6**
KBTR	**Krutoberegovo**	**7.70**	**28**	P	**Pn**	**07 20 42.5**	**-0.6**
ERM	**Erimo**	**11.93**	**236**	*i* PN	**Pn**	**07 21 38.3**	**-2.6**
BILL	**Bilibino**	**19.17**	**11**	⇑*e*P	**Pn**	**07 23 12.5**	**-1.2**
BILL				pmax	pmax		
	comp=Z,16nm,0.7s						
ILAR	**Eielson Array**	**32.97**	**41**	P	**P**	**07 25 23.4**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=255,slow=8.3,SNR=6.1						
YKA	**Yellowknife Ar**	**47.35**	**39**	P	**P**	**07 27 23.8**	**+2.4**
	comp=Z,1.0nm,0.9s,baz=298,slow=7.6,SNR=10						
MKAR	**Makanchi Array**	**47.63**	**297**	*e*P	**P**	**07 27 25.4**	**+1.5**
MKAR	**Makanchi Array**	**47.63**	**297**	P	**P**	**07 27 24.2**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=54,slow=6.0,SNR=4.1						
TXAR	**Lajitas Array**	**74.22**	**63**	P	**P**	**07 30 27.1**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=301,slow=4.1,SNR=3.9						

TRN 09 07:21:10.4, 14°.37N×**61°.05W, h129^{km}, MD3.5, 1C-4D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIM	**Bigot**	**0.14**	**350**	*e*P	Pn	07 21 28.2	+0.1
MVM	**Montagne Vaucl**	**0.23**	**39**	*e*P	Pn	07 21 28.2	-0.1
SLW	**Petit Monier**	**0.37**	**164**	*e*P	Pn	07 21 28.4	-0.4
SLW	**Petit Monier**	**0.37**	**164**	*e*P	Pn	07 21 30.3	+1.5
SLW				*e*S	Sn	07 21 41.9	-0.7
SLW				*e*S		07 21 43.6	
FDF	**Fort de France**	**0.37**	**344**	⇓*e*P	Pn	07 21 29.4	+0.6
FDF	**Fort de France**	**0.37**	**344**	⇓*i*P	Pn	07 21 29.5	+0.7
FDF				⇓*e*S	Sn	07 21 43.5	+0.8
FDF				⇓*e*S		07 21 43.5	
SLPE	**Piton Saint Es**	**0.53**	**175**	*e*P	Pn	07 21 30.8	+1.2
SLPE				*e*S	Sn	07 21 45.6	+1.5
SLB	**Belfond**	**0.54**	**180**	*e*P	Pn	07 21 30.9	+1.1
SLB				*e*S	Sn	07 21 46.3	+2.0
SLDE	**Delcer**	**0.57**	**181**	*e*P	Pn	07 21 30.7	+0.9
SLDE				*e*S	Sn	07 21 46.5	+2.0
MCLT	**Moule a Chique**	**0.67**	**171**	*e*P	Pn	07 21 31.0	+0.5
MCLT				*e*S	Sn	07 21 43.9	-1.7
SVV	**Soufriere Volc**	**1.06**	**189**	*e*S	Sn	07 21 52.4	+0.8
SVB	**Belmont**	**1.11**	**190**	*e*P	Pn	07 21 35.1	+0.7
SVB				*e*S	Sn	07 21 52.6	+0.1
MGG	**Marie-Galante**	**1.56**	**350**	⇑*i*P	Pn	07 21 39.8	+0.7
PHG	**Guadaloupe-2**	**1.73**	**341**	*e*P	Pn	07 21 42.9	+1.7
DOG	**Dongo Capester**	**1.74**	**342**	*e*P	Pn	07 21 42.8	+1.5
SEG	**Port Louis**	**2.07**	**348**	*e*P	Pn	07 21 46.5	+1.4
TOSP	**Speyside**	**3.10**	**171**	*e*S	Sn	07 22 31.3	-3.9

*NEIC **09** 07:59:07.8, 37°.81S×178°.49E, h57^{km}, ML4.2(WEL), After WEL.*
WEL 09 07:59:07.8±0.3**, 37°.81S**×**178°.49E, h57^{km}**±2^{km}**, ML4.2**/16**, 8C-18D, Error ellipse: s-maj=3.0km s-min=1.5km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.29**	**329**	⇓PN	Pn	07 59 17.3	-0.2
MXZ				SN	Sn	07 59 24.2	-0.1
MXZ	**Matakaoa Point**	**0.29**	**329**	⇓Pn	Pn	07 59 17.3	-0.2
MXZ				Sn	Sn	07 59 24.2	-0.1
PUZ	**Puketiti**	**0.32**	**215**	PN	Pn	07 59 17.2	-0.6
PUZ				SN	Sn	07 59 24.8	-0.2
PUZ	**Puketiti**	**0.32**	**215**	Pn	Pn	07 59 17.2	-0.6
PUZ				Sn	Sn	07 59 24.8	-0.2
CNGZ	**Carnagh Statio**	**0.71**	**198**	⇓PN	Pn	07 59 22.6	+0.6
CNGZ	**Carnagh Statio**	**0.71**	**198**	⇓Pn	Pn	07 59 22.6	+0.6
MWZ	**Matawai**	**0.93**	**235**	PN	Pn	07 59 24.2	-0.5
MWZ				SN	Sn	07 59 36.8	-0.5
MWZ	**Matawai**	**0.93**	**235**	Pn	Pn	07 59 24.2	-0.5
MWZ				Sn	Sn	07 59 36.9	-0.5
WIZ	**White Island**	**1.07**	**285**	PN	Pn	07 59 26.6	0.0
WIZ	**White Island**	**1.07**	**285**	Pn	Pn	07 59 26.6	0.0
URZ	**Urewera**	**1.18**	**247**	PN	Pn	07 59 27.9	-0.2
URZ	**Urewera**	**1.18**	**247**	Pn	Pn	07 59 27.9	-0.2
PRGZ	**Paritu Road**	**1.21**	**203**	PN	Pn	07 59 28.1	-0.5
PRGZ	**Paritu Road**	**1.21**	**203**	Pn	Pn	07 59 28.1	-0.5
KNZ	**Kokohu**	**1.37**	**208**	⇓PN	Pn	07 59 29.8	-0.8
KNZ	**Kokohu**	**1.37**	**208**	⇓Pn	Pn	07 59 29.8	-0.8
EDRZ	**Edgecumbe**	**1.42**	**257**	PN	Pn	07 59 31.3	-0.1
EDRZ	**Edgecumbe**	**1.42**	**257**	Pn	Pn	07 59 31.3	-0.1
MHGZ	**Mahia Peninsul**	**1.42**	**199**	PN	Pn	07 59 30.9	-0.4
MHGZ	**Mahia Peninsul**	**1.42**	**199**	Pn	Pn	07 59 30.9	-0.4
OPRZ	**Ohinepanea**	**1.53**	**268**	⇓PN	Pn	07 59 32.2	-0.6
OPRZ	**Ohinepanea**	**1.53**	**268**	⇓Pn	Pn	07 59 32.2	-0.6
RAHZ	**Arahi**	**1.56**	**225**	PN	Pn	07 59 33.1	-0.2
RAHZ	**Arahi**	**1.56**	**225**	Pn	Pn	07 59 33.1	-0.2
TARZ	**Mount Tarawera**	**1.62**	**254**	PN	Pn	07 59 34.3	+0.1
TARZ	**Mount Tarawera**	**1.62**	**254**	Pn	Pn	07 59 34.3	+0.1
RRRZ	**Republican Roa**	**1.65**	**251**	⇓PN	Pn	07 59 34.2	-0.2
RRRZ	**Republican Roa**	**1.65**	**251**	⇓Pn	Pn	07 59 34.2	-0.2
LIRZ	**Lichensteins R**	**1.68**	**263**	PN	Pn	07 59 34.5	-0.3
LIRZ	**Lichensteins R**	**1.68**	**263**	Pn	Pn	07 59 34.5	-0.3
KARZ	**Kaharoa**	**1.79**	**263**	⇓PN	Pn	07 59 35.9	-0.5
KARZ	**Kaharoa**	**1.79**	**263**	⇓Pn	Pn	07 59 35.9	-0.5
PRRZ	**Plateau Road**	**1.79**	**247**	PN	Pn	07 59 36.1	-0.3
PRRZ	**Plateau Road**	**1.79**	**247**	Pn	Pn	07 59 36.1	-0.3
HRRZ	**Handcock Road**	**1.84**	**251**	PN	Pn	07 59 36.8	-0.2
HRRZ	**Handcock Road**	**1.84**	**251**	Pn	Pn	07 59 36.8	-0.2
NMHZ	**Naumai**	**1.85**	**225**	⇓PN	Pn	07 59 37.2	0.0
NMHZ	**Naumai**	**1.85**	**225**	⇓Pn	Pn	07 59 37.2	0.0
ALRZ	**Allen Road**	**1.85**	**245**	⇓PN	Pn	07 59 36.9	-0.3
ALRZ	**Allen Road**	**1.85**	**245**	⇓Pn	Pn	07 59 36.9	-0.3
BKZ	**Black Stump Fm**	**2.07**	**229**	PN	Pn	07 59 39.1	-1.2
BKZ	**Black Stump Fm**	**2.07**	**229**	Pn	Pn	07 59 39.1	-1.2
CKHZ	**Cape Kidnapper**	**2.15**	**210**	⇑PN	Pn	07 59 40.0	-1.2
CKHZ	**Cape Kidnapper**	**2.15**	**210**	⇑Pn	Pn	07 59 40.0	-1.2
MCHZ	**McNeill Hill**	**2.15**	**220**	PN	Pn	07 59 41.0	-0.4
MCHZ	**McNeill Hill**	**2.15**	**220**	Pn	Pn	07 59 41.0	-0.4
KAHZ	**Kahuranaki**	**2.35**	**212**	PN	Pn	07 59 42.7	-1.3
KAHZ	**Kahuranaki**	**2.35**	**212**	Pn	Pn	07 59 42.7	-1.3
TOZ	**Tahuroa Road**	**2.37**	**271**	PN	Pn	07 59 42.5	-1.7
TOZ	**Tahuroa Road**	**2.37**	**271**	Pn	Pn	07 59 42.5	-1.7
RITZ	**Rihia Road**	**2.38**	**240**	PN	Pn	07 59 44.3	-0.1
RITZ	**Rihia Road**	**2.38**	**240**	Pn	Pn	07 59 44.3	-0.1
RATZ	**Rangitukua**	**2.39**	**243**	PN	Pn	07 59 44.3	-0.2
RATZ	**Rangitukua**	**2.39**	**243**	Pn	Pn	07 59 44.3	-0.2
KUZ	**Kuaotunu**	**2.45**	**295**	⇑PN	Pn	07 59 44.6	-0.7
KUZ	**Kuaotunu**	**2.45**	**295**	⇑Pn	Pn	07 59 44.6	-0.7
BHHZ	**Black Hill Sta**	**2.54**	**228**	PN	Pn	07 59 46.1	-0.5
BHHZ	**Black Hill Sta**	**2.54**	**228**	Pn	Pn	07 59 46.1	-0.5
PXZ	**Pawanui**	**2.56**	**209**	⇓PN	Pn	07 59 44.6	-2.2
PXZ	**Pawanui**	**2.56**	**209**	⇓Pn	Pn	07 59 44.6	-2.2
KRVZ	**Karewarewa**	**2.58**	**239**	PN	Pn	07 59 46.8	-0.5
KRVZ	**Karewarewa**	**2.58**	**239**	Pn	Pn	07 59 46.8	-0.5
WTVZ	**West Tongariro**	**2.63**	**239**	PN	Pn	07 59 47.7	-0.2
WTVZ	**West Tongariro**	**2.63**	**239**	Pn	Pn	07 59 47.7	-0.2
NGZ	**Ngauruhoe**	**2.65**	**238**	PN	Pn	07 59 47.7	-0.5
NGZ	**Ngauruhoe**	**2.65**	**238**	Pn	Pn	07 59 47.7	-0.5
TUVZ	**Tukino**	**2.66**	**236**	PN	Pn	07 59 48.1	-0.3
TUVZ	**Tukino**	**2.66**	**236**	Pn	Pn	07 59 48.1	-0.3
MOVZ	**Moawhango**	**2.67**	**233**	PN	Pn	07 59 47.6	-0.9
MOVZ	**Moawhango**	**2.67**	**233**	Pn	Pn	07 59 47.6	-0.9
WPVZ	**Whakapapa**	**2.70**	**238**	PN	Pn	07 59 48.4	-0.5
WPVZ	**Whakapapa**	**2.70**	**238**	Pn	Pn	07 59 48.5	-0.5
TWVZ	**Taurewa**	**2.71**	**241**	PN	Pn	07 59 48.7	-0.3
TWVZ	**Taurewa**	**2.71**	**241**	Pn	Pn	07 59 48.7	-0.3
FWVZ	**Far West T-bar**	**2.72**	**237**	PN	Pn	07 59 48.8	-0.6
FWVZ	**Far West T-bar**	**2.72**	**237**	Pn	Pn	07 59 48.8	-0.6
MKAZ	**Moumakai**	**2.74**	**284**	⇑PN	Pn	07 59 49.1	-0.1
MKAZ	**Moumakai**	**2.74**	**284**	⇑Pn	Pn	07 59 49.1	-0.1
TRVZ	**Turoa**	**2.75**	**236**	PN	Pn	07 59 49.0	-0.7
TRVZ	**Turoa**	**2.75**	**236**	Pn	Pn	07 59 49.0	-0.7
PNHZ	**Pukenui**	**2.76**	**220**	PN	Pn	07 59 47.7	-1.9
PNHZ	**Pukenui**	**2.76**	**220**	Pn	Pn	07 59 47.7	-1.9
WPHZ	**Waipukurau**	**2.76**	**215**	PN	Pn	07 59 47.9	-1.8
WPHZ	**Waipukurau**	**2.76**	**215**	Pn	Pn	07 59 47.9	-1.8
PRHZ	**Porangahau**	**2.85**	**210**	PN	Pn	07 59 48.5	-2.3
PRHZ	**Porangahau**	**2.85**	**210**	Pn	Pn	07 59 48.5	-2.3
PKVZ	**Pokaka**	**2.88**	**238**	PN	Pn	07 59 50.9	-0.3
PKVZ	**Pokaka**	**2.88**	**238**	Pn	Pn	07 59 50.9	-0.3
HIZ	**Hauiti**	**2.95**	**255**	PN	Pn	07 59 52.6	+0.4
HIZ	**Hauiti**	**2.95**	**255**	Pn	Pn	07 59 52.6	+0.4
TSZ	**Takapari Road**	**2.99**	**221**	PN	Pn	07 59 50.6	-2.1
TSZ	**Takapari Road**	**2.99**	**221**	Pn	Pn	07 59 50.6	-2.2
DVHZ	**Dannevirke**	**3.08**	**215**	PN	Pn	07 59 51.6	-2.3
DVHZ	**Dannevirke**	**3.08**	**215**	Pn	Pn	07 59 51.6	-2.3
VRZ	**Vera Road**	**3.21**	**245**	PN	Pn	07 59 56.1	+0.4
VRZ	**Vera Road**	**3.21**	**245**	Pn	Pn	07 59 56.1	+0.3
POWZ	**Post Office Ro**	**3.34**	**219**	PN	Pn	07 59 55.4	-2.1
POWZ	**Post Office Ro**	**3.34**	**219**	Pn	Pn	07 59 55.4	-2.1
BFZ	**Birch Farm**	**3.36**	**211**	PN	Pn	07 59 54.8	-3.0
BFZ	**Birch Farm**	**3.36**	**211**	Pn	Pn	07 59 54.8	-3.0
WAZ	**Wanganui**	**3.36**	**234**	⇑PN	Pn	07 59 58.0	+0.2
WAZ	**Wanganui**	**3.36**	**234**	⇑Pn	Pn	07 59 58.0	+0.2
TIWZ	**Tintock**	**3.59**	**213**	PN	Pn	07 59 58.2	-2.8
TIWZ	**Tintock**	**3.59**	**213**	Pn	Pn	07 59 58.2	-2.8
MRZ	**Mangatainoka R**	**3.64**	**218**	PN	Pn	07 59 58.4	-3.2
MRZ	**Mangatainoka R**	**3.64**	**218**	Pn	Pn	07 59 58.4	-3.2
WCZ	**Waipu Caves**	**3.81**	**298**	PN	Pn	08 00 04.2	+0.2
WCZ	**Waipu Caves**	**3.81**	**298**	Pn	Pn	08 00 04.2	+0.2
HOWZ	**Holdsworth Sta**	**3.85**	**216**	PN	Pn	08 00 01.2	-3.4
HOWZ	**Holdsworth Sta**	**3.85**	**216**	Pn	Pn	08 00 01.2	-3.4
TMWZ	**Te Maipa**	**3.86**	**211**	PN	Pn	08 00 01.2	-3.5
TMWZ	**Te Maipa**	**3.86**	**211**	Pn	Pn	08 00 01.2	-3.5
OGWZ	**Otaki Gorge**	**3.96**	**220**	PN	Pn	08 00 02.7	-3.3
OGWZ	**Otaki Gorge**	**3.96**	**220**	Pn	Pn	08 00 02.7	-3.3
MTW	**Mount Morrison**	**4.07**	**214**	PN	Pn	08 00 03.8	-3.7
MTW	**Mount Morrison**	**4.07**	**214**	Pn	Pn	08 00 03.8	-3.7
KIW	**Kapiti Island**	**4.12**	**221**	PN	Pn	08 00 04.9	-3.3
KIW	**Kapiti Island**	**4.12**	**221**	Pn	Pn	08 00 04.9	-3.3
TRWZ	**Traveller**	**4.19**	**210**	PN	Pn	08 00 04.8	-4.3
TRWZ	**Traveller**	**4.19**	**210**	Pn	Pn	08 00 04.8	-4.3
CAW	**Cannon Point**	**4.23**	**218**	PN	Pn	08 00 05.8	-3.9
CAW	**Cannon Point**	**4.23**	**218**	Pn	Pn	08 00 05.8	-3.9
PAWZ	**Paruwai Farm**	**4.28**	**213**	PN	Pn	08 00 06.5	-4.0
PAWZ	**Paruwai Farm**	**4.28**	**213**	Pn	Pn	08 00 06.5	-4.0
MSWZ	**Moikau Station**	**4.39**	**214**	PN	Pn	08 00 07.7	-4.1
MSWZ	**Moikau Station**	**4.39**	**214**	Pn	Pn	08 00 07.8	-4.1
PLWZ	**Palliser**	**4.51**	**213**	PN	Pn	08 00 09.4	-4.2
PLWZ	**Palliser**	**4.51**	**213**	Pn	Pn	08 00 09.4	-4.2
SNZO	**South Karori**	**4.56**	**219**	PN	Pn	08 00 09.8	-4.3
SNZO	**South Karori**	**4.56**	**219**	Pn	Pn	08 00 09.8	-4.3
DUWZ	**D'Urville Isla**	**4.64**	**228**	PN	Pn	08 00 12.4	-2.9
DUWZ	**D'Urville Isla**	**4.64**	**228**	Pn	Pn	08 00 12.4	-2.9
TCW	**Tory Channel**	**4.71**	**222**	PN	Pn	08 00 12.6	-3.7
TCW	**Tory Channel**	**4.71**	**222**	Pn	Pn	08 00 12.6	-3.7
NNZ	**Nelson**	**5.22**	**228**	PN	Pn	08 00 19.7	-3.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NNZ	**Nelson**	**5.22**	**228**	Pn	Pn	08 00 19.7	-3.5
BSWZ	**Blackbirch Sta**	**5.28**	**221**	PN	Pn	08 00 19.9	-4.1
BSWZ	**Blackbirch Sta**	**5.28**	**221**	Pn	Pn	08 00 19.9	-4.1
QRZ	**Quartz Range**	**5.52**	**235**	PN	Pn	08 00 23.9	-3.4
QRZ	**Quartz Range**	**5.52**	**235**	Pn	Pn	08 00 23.9	-3.4
THZ	**Tophouse**	**5.84**	**226**	PN	Pn	08 00 27.8	-4.0
THZ	**Tophouse**	**5.84**	**226**	Pn	Pn	08 00 27.8	-4.0
KHZ	**Kahutara**	**5.96**	**218**	PN	Pn	08 00 28.5	-5.0
KHZ	**Kahutara**	**5.96**	**218**	Pn	Pn	08 00 28.5	-5.0
LTZ	**Lake Taylor**	**6.88**	**222**	PN	Pn	08 00 40.5	-5.5
LTZ	**Lake Taylor**	**6.88**	**222**	Pn	Pn	08 00 40.5	-5.5
MQZ	**McQueen's Vall**	**7.37**	**215**	PN	Pn	08 00 47.4	-5.2
MQZ	**McQueen's Vall**	**7.37**	**215**	Pn	Pn	08 00 47.4	-5.2
ODZ	**Otahua Downs**	**9.32**	**217**	PN	Pn	08 01 14.2	-5.2
ODZ	**Otahua Downs**	**9.32**	**217**	Pn	Pn	08 01 14.2	-5.2
TUZ	**Tuapeka**	**10.48**	**216**	PN	Pn	08 01 30.4	-4.8
TUZ	**Tuapeka**	**10.48**	**216**	Pn	Pn	08 01 30.4	-4.8

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*IDC **09** 08:03:52.4±1.8, 8°.45S×124°.57E, h0km, mb3.7/1, mb1 4.2/4, mb1mx3.8/21, mbtmp4.0/4, ML4.1/3, MS3.3/1, Ms1 3.3/1, ms1mx2.1/39, Error ellipse: s-maj=104.3km s-min=26.5km az=65.0*
*AUST **09** 08:03:59.0, 9°.00S×124°.01E, h60km*
ISC 09 08:04:01.6±1.5**, 9°.2S**±0°.1×**124°.1E**±0°.1**, h74km, n10, σ3s61**/10**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**7.78**	**118**	P	Pn	08 05 56.8	+4.6
	baz=8.0,SNR=30						
MTN				S	**Sn**	**08 07 20.0**	**+1.1**
	baz=8.0,SNR=6.1						
KNRA	**Kununurra**	**7.87**	**145**	P	Pn	08 05 57.3	+4.0
	baz=8.1,SNR=38						
KDU	**Kakadu**	**8.91**	**114**	P	Pn	08 06 10.9	+3.3
	baz=9.1,SNR=16						
KDU				S	**Sn**	**08 07 47.7**	**+1.3**
	baz=9.1,SNR=5.1						
FITZ	**Fitzroy Crossi**	**8.96**	**171**	Pn	**Pn**	**08 06 11.0**	**+2.8**
	1.4nm,0.3s,baz=358,slow=11,SNR=36						
FITZ				Sn	**Sn**	**08 07 46.6**	**-0.9**
	4.8nm,0.3s,baz=73,slow=24,SNR=12						
FITZ	**Fitzroy Crossi**	**8.96**	**171**	P	**Pn**	**08 06 10.8**	**+2.6**
	baz=9.2,SNR=22						
FAKI	**Fak Fak**	**10.23**	**53**	P	Pn	08 06 18.4	-7.3
	baz=10,SNR=3.2						
WRA	**Warramunga Arr**	**14.54**	**138**	Pn	**Pn**	**08 07 24.7**	**+1.0**
	1.0nm,0.3s,baz=320,slow=14,SNR=50						
WRA				Sn	**Sn**	**08 09 58.3**	**-5.4**
	0.6nm,0.3s,baz=308,slow=25,SNR=6.4						
DAV	**Davao City (W)**	**16.25**	**5**	LR	LR	08 14 48.6	
	comp=Z,115nm,18.7s,baz=282,slow=42						
ASAR	**Alice Springs**	**17.15**	**148**	P	**P**	**08 07 59.9**	**+2.7**
	0.4nm,0.3s,baz=321,slow=11,SNR=48						
ASAR				S	**Sn**	**08 11 01.4**	**-5.5**
	0.1nm,0.3s,baz=314,slow=21,SNR=3.6						
MKAR	**Makanchi Array**	**67.05**	**330**	P	**P**	**08 14 44.8**	**-2.2**
	0.6nm,0.7s,baz=128,slow=9.3,SNR=6.4						

IDC 09 08:10:38.2±6.3**, 18°.79N**×**104°.96W, h0km, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.4**/23**, mbtmp3.1**/3**, ML2.8**/1**, Error ellipse: s-maj=221.1km s-min=42.7km az=106.0, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**10.57**	**6**	Pn	Pn	08 13 13.6	+2.5
	0.0nm,0.3s,baz=188,slow=13,SNR=3.7						
TXAR				Lg	Lg	08 16 11.7	
	0.0nm,0.3s,baz=164,slow=32,SNR=3.0						
YKA	**Yellowknife Ar**	**44.18**	**354**	P	P	08 18 47.7	-0.8
	0.5nm,0.9s,baz=164,slow=7.7,SNR=5.8						
ILAR	**Eielson Array**	**53.75**	**339**	P	P	08 20 02.3	+0.3
	0.3nm,0.8s,baz=155,slow=8.8,SNR=4.2						

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*NEIC **09** 08:17:45.9, 15°.82N×94°.35W, h116km, MD4.0(MEX), After MEX.*
MEX 09 08:17:46.8±0.7**, 16°.01N**×**94°.38W, h111km**±13km**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.16**	**105**	eP	Pn	08 18 07.0	-2.7
PCIG				eS	Sn	08 18 24.2	-2.9
PCIG		**1.16**	**105**	i P	Pn	08 18 09.1	-0.7
PCIG				i S	Sn	08 18 25.5	-1.6
HUIG	**Huatulco**	**1.68**	**262**	eP	Pn	08 18 14.1	-1.7
HUIG				eS	Sn	08 18 36.2	-1.7
HUIG	**Huatulco**	**1.68**	**262**	eP	Pn	08 18 14.5	-1.3
HUIG				i S	Sn	08 18 35.9	-2.0
CCIG	**Comitan**	**2.18**	**83**	i P	Pn	08 18 20.8	-1.5
CCIG				i S	Sn	08 18 46.4	-3.1
CCIG	**Comitan**	**2.18**	**83**	eP	Pn	08 18 20.6	-1.7
CCIG				i S	Sn	08 18 47.8	-1.7
VHO	**Vista Hermosa**	**2.49**	**295**	eP	Pn	08 18 25.6	-0.7
VHO				eS	Sn	08 18 57.7	+0.9
VHO	**Vista Hermosa**	**2.49**	**295**	eP	Pn	08 18 25.8	-0.5
VHO				i S	Sn	08 18 55.3	-1.5
PNIG	**Pinotepa**	**3.62**	**277**	eP	Pn	08 18 40.3	-0.8
PNIG				eS	Sn	08 19 22.5	-0.5
PNIG	**Pinotepa**	**3.62**	**277**	eP	Pn	08 18 40.3	-0.8
PNIG				eS	Sn	08 19 22.5	-0.5
YAIG	**Yautepec**	**5.29**	**303**	eP	Pn	08 19 02.9	-1.0
YAIG				eS	Sn	08 20 03.9	+0.1
YAIG	**Yautepec**	**5.29**	**303**	i P	Pn	08 19 03.6	-0.2
YAIG				i S	Sn	08 20 01.5	-2.3

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*BNS **09** 08:28:09.0±1.0, 51°.55N×6°.54E, h1km, ML1.8*
*CSEM **09** 08:28:09.5±0.4, 51°.49N×6°.54E, h1km, ML1.8, Error ellipse: s-maj=9.3km s-min=5.5km az=119.0*
*ISCJB **09** 08:28:09.1±0.6, 51°.51N±0°.03×6°.55E±0°.07, h0km, Error ellipse: s-maj=6.6km s-min=3.4km az=30.3*
*BGR **09** 08:28:10.5±0.4, 51°.51N×6°.57E, h1km, ML2.0/3, Error ellipse: s-maj=6.7km s-min=3.3km az=121.0*
ISC 09 08:28:09.7±0.9**, 51°.49N**±0°.03×**6°.56E**±0°.03**, h0km, n32, σ0s45**/45**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.28**	**120**	ePg	**Pg**	**08 28 14.9**	**-0.1**
LAUG	**Laupendahl**	**0.28**	**120**	Pg	**Pg**	**08 28 14.9**	**-0.1**
BUG	**Bochum--Univer**	**0.45**	**96**	ePg	**Pg**	**08 28 18.1**	**-0.1**
BUG				eSg	**Sg**	**08 28 24.8**	**+0.9**
WTSB	**Winterswijk**	**0.50**	**17**	ePg	**Pg**	**08 28 19.8**	**+0.6**
WTSB				eSg	**Sg**	**08 28 25.4**	**-0.3**
WTSB	**Winterswijk**	**0.50**	**17**	ePg	**Pg**	**08 28 19.5**	**+0.3**
WTSB				eSg	**Sg**	**08 28 25.4**	**-0.3**
WTSB	**Winterswijk**	**0.50**	**17**	Pg	**Pg**	**08 28 19.8**	**+0.6**
WTSB				Sg	**Sg**	**08 28 25.4**	**-0.3**
HOBG	**Hohbusch**	**0.70**	**136**	ePg	**Pg**	**08 28 23.5**	**+0.4**
HOBG	**Hohbusch**	**0.70**	**136**	Pg	**Pg**	**08 28 23.5**	**+0.4**
HGN	**Heimansgroeve**	**0.83**	**209**	ePg	**Pg**	**08 28 25.5**	**0.0**
HGN				eSg	**Sb**	**08 28 38.4**	**-0.2**
HGN	**Heimansgroeve**	**0.83**	**209**	ePn	**Pg**	**08 28 25.6**	**0.0**
	2.3nm,0.4s						
HGN				ePg	**Pb**	**08 28 27.1**	**+0.2**
	38nm,0.2s						
HGN				eSn	**Sg**	**08 28 36.8**	**+0.6**
HGN	**Heimansgroeve**	**0.83**	**209**	Pg	**Pg**	**08 28 25.5**	**0.0**
HGN	**Heimansgroeve**	**0.83**	**209**	ePn	**Pg**	**08 28 25.6**	**0.0**
	2.3nm,0.4s						
HGN				eSn	**Sg**	**08 28 36.8**	**+0.6**
HGN				Sg	**Sb**	**08 28 38.4**	**-0.2**
HGN	**Heimansgroeve**	**0.83**	**209**	eSg	**Sb**	**08 28 38.3**	**-0.2**
DREG	**Dreilaegerbach**	**0.85**	**194**	ePg	**Pg**	**08 28 25.7**	**-0.3**
DREG	**Dreilaegerbach**	**0.85**	**194**	Pg	**Pg**	**08 28 25.7**	**-0.3**
KLL	**Kalltalsperre**	**0.86**	**191**	ePg	**Pg**	**08 28 26.9**	**+0.8**
KLL	**Kalltalsperre**	**0.86**	**191**	Pg	**Pg**	**08 28 26.9**	**+0.8**
STB	**Steinbach**	**0.92**	**169**	ePg	**Pg**	**08 28 27.6**	**+0.4**
STB				eSg	**Sb**	**08 28 41.2**	**+0.1**
	27nm,0.8s						
STB	**Steinbach**	**0.92**	**169**	Pg	**Pg**	**08 28 27.6**	**+0.4**
STB				Sg	**Sb**	**08 28 41.2**	**+0.1**
	27nm,0.8s						
MEM	**Membach**	**0.95**	**202**	P	**Pg**	**08 28 27.2**	**-0.6**
MEM	**Membach**	**0.95**	**202**	ePg	**Pg**	**08 28 27.5**	**-0.3**
MEM				eSg	**Sb**	**08 28 42.4**	**+0.3**
MEM	**Membach**	**0.95**	**202**	Pg	**Pg**	**08 28 27.5**	**-0.3**
MEM				Sg	**Sb**	**08 28 42.4**	**+0.3**
IBBN	**Ibbenburen**	**1.10**	**42**	eSg	**Sb**	**08 28 46.2**	**-0.3**
IBBN	**Ibbenburen**	**1.10**	**42**	Sg	**Sb**	**08 28 46.2**	**-0.3**
KOE	**Koeppel**	**1.30**	**145**	ePg	**Pg**	**08 28 33.9**	**-0.6**
KOE	**Koeppel**	**1.30**	**145**	Pg	**Pg**	**08 28 33.9**	**-0.6**
BCLA	**Clavier**	**1.34**	**217**	P	**Pg**	**08 28 35.2**	**0.0**
BCLA	**Clavier**	**1.34**	**217**	P	**Pg**	**08 28 35.2**	**0.0**
BGG	**Burgeitz**	**1.38**	**159**	ePg	**Pn**	**08 28 35.1**	**-0.9**
BGG	**Burgeitz**	**1.38**	**159**	Pg	**Pn**	**08 28 35.2**	**-0.9**
TNS	**Taunus Mts**	**1.74**	**136**	ePn	**Pn**	**08 28 41.5**	**+0.3**
TNS	**Taunus Mts**	**1.74**	**136**	Pn	**Pn**	**08 28 41.5**	**+0.3**

IDC 09 08:33:42.1±3.6**, 58°.84S**×**25°.87W, h0km, mb4.0**/1**, mb1 4.0**/1**, mb1mx3.5**/16**, mbtmp4.0**/1**, Error ellipse: s-maj=207.5km s-min=80.9km az=97.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**75.16**	**28**	P	P	08 45 26.0	0.0
	0.7nm,0.5s,baz=196,slow=5.4,SNR=14						
YKA	**Yellowknife Ar**	**138.69**	**315**	PKP	PKPdf	08 53 07.8	-0.5
	0.3nm,0.6s,baz=126,slow=2.4,SNR=9.9						
SONM	**Songino Array**	**150.09**	**90**	PKPbc	PKPbc	08 53 33.3	-0.4
	0.3nm,0.4s,baz=257,slow=1.4,SNR=2.6						

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*ISK **09** 08:57:10.7, 39°.28N×27°.92E, h9km, MD3.2*
*ISCJB **09** 08:57:10.9±0.5, 39°.27N±0°.02×27°.95E±0°.04, h4km±4km, Error ellipse: s-maj=4.7km s-min=3.5km az=177.8*
*DDA **09** 08:57:11.1, 39°.31N×27°.98E, h9km, MD3.1*
*CSEM **09** 08:57:11.3±0.1, 39°.28N×27°.93E, h8km, MD3.2, Error ellipse: s-maj=2.7km s-min=1.8km az=95.0*
ISC 09 08:57:11.6±1.0**, 39°.28N**±0°.02×**27°.92E**±0°.02**, h9km**±10km**, n66, σ0s51**/81**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.36**	**354**	ePG	**Pg**	**08 57 18.1**	**-0.6**
BALB				eSG	**Sg**	**08 57 24.4**	**+1.0**
BALB	**Balikesir**	**0.36**	**354**	ePg	**Pg**	**08 57 18.1**	**-0.6**
BALB				eSg	**Sg**	**08 57 24.4**	**+1.0**
AKHS	**Akhisar**	**0.41**	**192**	i P	**Pg**	**08 57 19.7**	**0.0**
AKHS				i S	**Sb**	**08 57 27.7**	**+0.1**
AKHS	**Akhisar**	**0.41**	**192**	i P	**Pg**	**08 57 19.7**	**0.0**
AKHS				i S	**Sb**	**08 57 27.7**	**+0.1**
AKS	**Akhisar**	**0.41**	**192**	ePG	**Pg**	**08 57 19.5**	**-0.2**
AKS	**Akhisar**	**0.41**	**192**	ePg	**Pg**	**08 57 19.5**	**-0.2**
BALY	**Balya**	**0.51**	**333**	i P	**Pg**	**08 57 21.1**	**-0.6**
BALY				i S	**Sg**	**08 57 29.2**	**+0.8**
BALY	**Balya**	**0.51**	**333**	i P	**Pg**	**08 57 21.1**	**-0.6**
DURS	**Dursunbey**	**0.53**	**53**	i P	**Pg**	**08 57 21.5**	**-0.5**
DURS				i S	**Sg**	**08 57 29.4**	**+0.4**
DURS	**Dursunbey**	**0.53**	**53**	i P	**Pg**	**08 57 21.5**	**-0.5**
DURS				i S	**Sg**	**08 57 29.4**	**+0.4**
DST	**Dursunbey**	**0.63**	**59**	ePG	**Pg**	**08 57 22.9**	**-0.9**
DST				eSG	**Sg**	**08 57 32.6**	**+0.7**
DST	**Dursunbey**	**0.63**	**59**	ePg	**Pg**	**08 57 22.9**	**-0.9**
DST				eSg	**Sg**	**08 57 32.6**	**+0.7**
GONE	**Gonen-Balikesi**	**0.79**	**347**	ePG	**Pg**	**08 57 26.3**	**-0.5**
GONE				eSG	**Sg**	**08 57 37.0**	**+0.1**
GONE	**Gonen-Balikesi**	**0.79**	**347**	ePg	**Pg**	**08 57 26.3**	**-0.5**
GONE				eSg	**Sg**	**08 57 37.1**	**+0.1**
AYVA	**Ayvalik**	**0.96**	**272**	i P	**Pb**	**08 57 30.8**	**+0.4**
AYVA				i S	**Sn**	**08 57 45.4**	**+0.3**
AYVA	**Ayvalik**	**0.96**	**272**	i P	**Pb**	**08 57 30.8**	**+0.4**
AYVA				i S	**Sn**	**08 57 45.4**	**+0.3**
KULA	**Kula-Manisa**	**0.96**	**143**	ePG	**Pg**	**08 57 29.7**	**-0.4**
KULA	**Kula-Manisa**	**0.96**	**143**	ePg	**Pg**	**08 57 29.7**	**-0.4**
IZM	**Izmir**	**1.02**	**211**	ePG	**Pg**	**08 57 30.2**	**-1.1**
IZM	**Izmir**	**1.02**	**211**	ePg	**Pg**	**08 57 30.2**	**-1.1**
KCTX	**Karacabey (Bur**	**1.04**	**19**	ePG	**Pg**	**08 57 30.4**	**-1.1**
KCTX	**Karacabey (Bur**	**1.04**	**19**	ePg	**Pg**	**08 57 30.4**	**-1.1**
EDC	**Edincik**	**1.06**	**357**	ePG	**Pg**	**08 57 32.0**	**-0.1**
EDC	**Edincik**	**1.06**	**357**	ePg	**Pg**	**08 57 32.0**	**-0.1**
ORLT	**Orhaneli**	**1.07**	**44**	ePG	**Pg**	**08 57 32.4**	**+0.2**
ORLT	**Orhaneli**	**1.07**	**44**	ePg	**Pg**	**08 57 32.4**	**+0.2**
BNT	**Bandirma**	**1.07**	**360**	ePG	**Pg**	**08 57 32.2**	**0.0**
BNT	**Bandirma**	**1.07**	**360**	ePg	**Pg**	**08 57 32.2**	**0.0**
BLCB	**Balcova**	**1.13**	**218**	ePN	**Pg**	**08 57 32.8**	**-0.5**
BLCB	**Balcova**	**1.13**	**218**	ePn	**Pg**	**08 57 32.8**	**-0.5**
TVSB	**Tavsanli**	**1.20**	**82**	ePN	**Pb**	**08 57 34.4**	**-0.3**
TVSB	**Tavsanli**	**1.20**	**82**	ePn	**Pb**	**08 57 34.4**	**-0.3**
KRBG	**Karabiga-Canak**	**1.21**	**337**	ePN	**Pb**	**08 57 34.4**	**-0.3**
KRBG	**Karabiga-Canak**	**1.21**	**337**	ePn	**Pb**	**08 57 34.4**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.31**	**34**	ePN	**Pn**	**08 57 36.5**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.31**	**34**	ePn	**Pn**	**08 57 36.5**	**+0.3**
MRMT	**Marmara Adasi**	**1.34**	**349**	ePN	**Pn**	**08 57 35.9**	**-0.8**
MRMT	**Marmara Adasi**	**1.34**	**349**	ePn	**Pn**	**08 57 35.9**	**-0.8**
LPK	**Lapseki**	**1.41**	**321**	ePN	**Pn**	**08 57 37.4**	**-0.1**
LPK	**Lapseki**	**1.41**	**321**	ePn	**Pn**	**08 57 37.4**	**-0.1**
SART	**Tekirdag**	**1.52**	**338**	i P	**Pn**	**08 57 39.0**	**-0.1**
SART				i S	**Sg**	**08 58 00.2**	**-0.2**
SART	**Tekirdag**	**1.52**	**338**	i P	**Pn**	**08 57 39.0**	**-0.1**
SART				i S	**Sg**	**08 58 00.2**	**-0.2**
KHL	**Karahalli**	**1.57**	**127**	ePN	**Pn**	**08 57 39.7**	**-0.2**
KHL	**Karahalli**	**1.57**	**127**	ePn	**Pn**	**08 57 39.7**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.58**	**315**	ePN	**Pn**	**08 57 39.9**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.58**	**315**	ePn	**Pn**	**08 57 39.9**	**+0.1**
IZI	**Iznik**	**1.59**	**48**	ePN	**Pn**	**08 57 39.4**	**-0.7**
IZI	**Iznik**	**1.59**	**48**	ePn	**Pn**	**08 57 39.4**	**-0.7**
ALT	**Altintas**	**1.71**	**97**	ePN	**Pn**	**08 57 41.5**	**-0.3**
ALT	**Altintas**	**1.71**	**97**	ePn	**Pn**	**08 57 41.5**	**-0.3**
MLSB	**Milas**	**1.99**	**183**	ePN	**Pn**	**08 57 45.3**	**-0.2**
MLSB	**Milas**	**1.99**	**183**	ePn	**Pn**	**08 57 45.3**	**-0.2**
CTKS	**Kestanelik-??a**	**2.00**	**13**	ePN	**Pn**	**08 57 46.0**	**+0.3**
CTKS	**Kestanelik-??a**	**2.00**	**13**	ePn	**Pn**	**08 57 46.0**	**+0.3**
YER	**Yerkesik**	**2.16**	**172**	ePN	**Pn**	**08 57 47.6**	**-0.4**
YER	**Yerkesik**	**2.16**	**172**	ePn	**Pn**	**08 57 47.6**	**-0.4**
CTYL	**Yal??k??y-??at**	**2.21**	**7**	ePN	**Pn**	**08 57 48.9**	**+0.4**
CTYL	**Yal??k??y-??at**	**2.21**	**7**	ePn	**Pn**	**08 57 48.9**	**+0.4**
BODT	**Bodrum**	**2.27**	**193**	ePN	**Pn**	**08 57 49.2**	**-0.2**
BODT	**Bodrum**	**2.27**	**193**	ePn	**Pn**	**08 57 49.2**	**-0.2**
GULT	**Gulveren**	**2.30**	**59**	ePN	**Pn**	**08 57 50.5**	**+0.6**
GULT	**Gulveren**	**2.30**	**59**	ePn	**Pn**	**08 57 50.5**	**+0.6**
DALY	**Dalyan (Mu˜la**	**2.53**	**167**	ePN	**Pn**	**08 57 53.4**	**+0.5**
DALY	**Dalyan (Mu˜la**	**2.53**	**167**	ePn	**Pn**	**08 57 53.4**	**+0.5**
DAT	**Datca**	**2.56**	**186**	ePN	**Pn**	**08 57 53.1**	**-0.4**
DAT	**Datca**	**2.56**	**186**	ePn	**Pn**	**08 57 53.1**	**-0.4**

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*CSEM **09** 09:00:29.9, 45°.49N×26°.27E, h125km, MD3.5/2, After BUC*
BUC 09 09:00:29.9±1.0**, 45°.49N**×**26°.27E, h125km**±9km**, MD3.5**/2**, 42C-27D, Error ellipse: s-maj=7.1km s-min=5.6km az=320.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.23**	**270**	⇑ iP	Pn	09 00 47.5	+0.2
MLR				i S	Sn	09 01 00.5	0.0
MLR	**Muntele Rosu**	**0.23**	**270**	⇑ iP	Pn	09 00 47.5	+0.2
MLR	**Muntele Rosu**	**0.23**	**270**	⇑ iP	Pn	09 00 47.5	+0.2
MLR				i S	Sn	09 01 00.5	0.0
ISR	**Istrita**	**0.42**	**152**	⇑ iP	Pn	09 00 48.1	+0.1
ISR				i S	Sn	09 01 01.3	-0.4
ISR	**Istrita**	**0.42**	**152**	⇑ iP	Pn	09 00 48.1	+0.1
ISR	**Istrita**	**0.42**	**152**	⇑ iP	Pn	09 00 48.1	+0.1
ISR				i S	Sn	09 01 01.3	-0.4
PLOR	**Plostina**	**0.45**	**37**	⇑ iP	Pn	09 00 48.2	+0.1
PLOR				i S	Sn	09 01 01.4	-0.5
PLOR	**Plostina**	**0.45**	**37**	⇑ iP	Pn	09 00 48.2	+0.1
PLOR	**Plostina**	**0.45**	**37**	⇑ iP	Pn	09 00 48.2	+0.1
PLOR				i S	Sn	09 01 01.4	-0.5
SECR		**0.48**	**197**	⇑ iP	Pn	09 00 48.8	+0.5
SECR				i S	Sn	09 01 02.6	+0.5
SECR		**0.48**	**197**	⇑ iP	Pn	09 00 48.8	+0.5
SECR		**0.48**	**197**	⇑ iP	Pn	09 00 48.8	+0.5
SECR				i S	Sn	09 01 02.6	+0.5
VRI	**Vrincioaia**	**0.49**	**41**	⇑ iP	Pn	09 00 48.6	+0.3
VRI				i S	Sn	09 01 02.3	0.0
VRI	**Vrincioaia**	**0.49**	**41**	⇑ iP	Pn	09 00 48.6	+0.3
VRI	**Vrincioaia**	**0.49**	**41**	⇑ iP	Pn	09 00 48.6	+0.3
VRI				i S	Sn	09 01 02.3	0.0
GRER		**0.51**	**103**	⇑ iP	Pn	09 00 48.0	-0.4
GRER				i S	Sn	09 01 02.2	-0.2
GRER		**0.51**	**103**	⇑ iP	Pn	09 00 48.0	-0.4
GRER		**0.51**	**103**	⇑ iP	Pn	09 00 48.0	-0.4
GRER				i S	Sn	09 01 02.2	-0.2
PLAR	**PLOIESTI**	**0.60**	**196**	⇑ iP	Pn	09 00 49.7	+0.7
PLAR				i S	Sn	09 01 04.3	+0.9
PLAR	**PLOIESTI**	**0.60**	**196**	⇑ iP	Pn	09 00 49.7	+0.7
PLAR	**PLOIESTI**	**0.60**	**196**	⇑ iP	Pn	09 00 49.7	+0.7
PLAR				i S	Sn	09 01 04.3	+0.9
ODBI	**Odobesti**	**0.61**	**64**	⇑ iP	Pn	09 00 50.2	+1.1
ODBI				i S	Sn	09 01 04.7	+1.1
ODBI	**Odobesti**	**0.61**	**64**	⇑ iP	Pn	09 00 50.2	+1.1
ODBI	**Odobesti**	**0.61**	**64**	⇑ iP	Pn	09 00 50.2	+1.1
ODBI				i S	Sn	09 01 04.7	+1.1
PETR	**Petresti**	**0.71**	**71**	⇑ iP	Pn	09 00 50.4	+0.6
PETR				i S	Sn	09 01 05.0	+0.2
PETR	**Petresti**	**0.71**	**71**	⇑ iP	Pn	09 00 50.4	+0.6
PETR	**Petresti**	**0.71**	**71**	⇑ iP	Pn	09 00 50.4	+0.6
PETR				i S	Sn	09 01 05.0	+0.2
PGOR	**Pogoanele**	**0.77**	**139**	⇑ iP	Pn	09 00 50.6	+0.3
PGOR				i S	Sn	09 01 06.3	+0.6
PGOR	**Pogoanele**	**0.77**	**139**	⇑ iP	Pn	09 00 50.6	+0.3
PGOR	**Pogoanele**	**0.77**	**139**	⇑ iP	Pn	09 00 50.6	+0.3
PGOR				i S	Sn	09 01 06.3	+0.6
DOPR	**Dopca**	**0.78**	**308**	⇓ iP	Pn	09 00 50.4	0.0
DOPR				i S	Sn	09 01 04.8	-1.1
DOPR	**Dopca**	**0.78**	**308**	⇓ iP	Pn	09 00 50.4	0.0
DOPR	**Dopca**	**0.78**	**308**	⇓ iP	Pn	09 00 50.4	0.0
DOPR				i S	Sn	09 01 04.8	-1.1
VOIR		**0.86**	**267**	⇓ iP	Pn	09 00 51.4	+0.3
VOIR				i S	Sn	09 01 06.2	-1.0
VOIR		**0.86**	**267**	⇓ iP	Pn	09 00 51.4	+0.3
VOIR		**0.86**	**267**	⇓ iP	Pn	09 00 51.4	+0.3
VOIR				i S	Sn	09 01 06.2	-1.0
TESR	**Tescani**	**1.05**	**14**	⇑ iP	Pn	09 00 53.1	+0.3
TESR				i S	Sn	09 01 09.0	-1.3
TESR	**Tescani**	**1.05**	**14**	⇑ iP	Pn	09 00 53.1	+0.3
TESR	**Tescani**	**1.05**	**14**	⇑ iP	Pn	09 00 53.1	+0.3
TESR				i S	Sn	09 01 09.0	-1.3
ARR	**Arges**	**1.16**	**264**	⇓ iP	Pn	09 00 54.5	+0.5
ARR				i S	Sn	09 01 12.2	0.0
ARR	**Arges**	**1.16**	**264**	⇓ iP	Pn	09 00 54.5	+0.5
ARR	**Arges**	**1.16**	**264**	⇓ iP	Pn	09 00 54.5	+0.5
ARR				i S	Sn	09 01 12.2	0.0
BUC1	**Bucharest**	**1.16**	**189**	⇓ iP	Pn	09 00 54.2	+0.3
BUC1				i S	Sn	09 01 11.4	-0.6
BUC1	**Bucharest**	**1.16**	**189**	⇓ iP	Pn	09 00 54.2	+0.3
BUC1	**Bucharest**	**1.16**	**189**	⇓ iP	Pn	09 00 54.2	+0.3
BUC1				i S	Sn	09 01 11.4	-0.6
AMRR	**Amara**	**1.16**	**139**	i S	Sn	09 01 11.5	-0.6
AMRR	**Amara**	**1.16**	**139**	S	Sn	09 01 11.5	-0.6
AMRR	**Amara**	**1.16**	**139**	i S	Sn	09 01 11.5	-0.6
HUMR	**Humele**	**1.33**	**224**	⇑ iP	Pn	09 00 55.8	+0.1
HUMR				i S	Sn	09 01 14.8	-0.5
HUMR	**Humele**	**1.33**	**224**	⇑ iP	Pn	09 00 55.8	+0.1
HUMR	**Humele**	**1.33**	**224**	⇑ iP	Pn	09 00 55.8	+0.1
HUMR				i S	Sn	09 01 14.8	-0.5
CFR	**Carcaliu**	**1.35**	**103**	⇓ iP	Pn	09 00 55.7	-0.2
CFR	**Carcaliu**	**1.35**	**103**	⇓ iP	Pn	09 00 55.7	-0.2
CFR	**Carcaliu**	**1.35**	**103**	⇓ iP	Pn	09 00 55.7	-0.2
LEOM	**Leova**	**1.69**	**54**	⇓ iP	Pn	09 01 00.0	+0.2
LEOM				i S	Sn	09 01 21.8	-0.8
LEOM	**Leova**	**1.69**	**54**	⇓ iP	Pn	09 01 00.0	+0.2
LEOM	**Leova**	**1.69**	**54**	⇓ iP	Pn	09 01 00.0	+0.2
LEOM				i S	Sn	09 01 21.8	-0.8
CVD	**Cernavoda**	**1.72**	**133**	⇓ iP	Pn	09 01 00.0	-0.2
CVD				i S	Sn	09 01 21.6	-1.6
CVD	**Cernavoda**	**1.72**	**133**	⇓ iP	Pn	09 01 00.0	-0.2
CVD	**Cernavoda**	**1.72**	**133**	⇓ iP	Pn	09 01 00.0	-0.2
CVD				i S	Sn	09 01 21.6	-1.6
TLCR		**1.82**	**99**	⇑ iP	Pn	09 01 01.6	+0.2
TLCR				i S	Sn	09 01 24.5	-0.9
TLCR		**1.82**	**99**	⇑ iP	Pn	09 01 01.6	+0.2
TLCR		**1.82**	**99**	⇑ iP	Pn	09 01 01.6	+0.2
TLCR				i S	Sn	09 01 24.5	-0.9
TIRR	**Tirgusor**	**1.84**	**123**	⇓ iP	Pn	09 01 01.5	-0.1
TIRR	**Tirgusor**	**1.84**	**123**	⇓ iP	Pn	09 01 01.5	-0.1
TIRR	**Tirgusor**	**1.84**	**123**	⇓ iP	Pn	09 01 01.5	-0.1
ZIMR		**1.95**	**200**	i S	Sn	09 01 26.7	-1.4
ZIMR		**1.95**	**200**	S	Sn	09 01 26.7	-1.4
BURAR	**Bucovina Array**	**2.24**	**342**	⇑ iP	Pn	09 01 08.1	+1.4
BURAR	**Bucovina Array**	**2.24**	**342**	⇑ iP	Pn	09 01 08.1	+1.4
BURAR	**Bucovina Array**	**2.24**	**342**	⇑ iP	Pn	09 01 08.1	+1.4
MANR	**Mangalia**	**2.36**	**135**	i S	Sn	09 01 35.6	-1.6
MANR	**Mangalia**	**2.36**	**135**	S	Sn	09 01 35.6	-1.6
MANR	**Mangalia**	**2.36**	**135**	i S	Sn	09 01 35.6	-1.6
DRGR		**2.79**	**299**	⇓ iP	Pn	09 01 14.2	+0.5
DRGR		**2.79**	**299**	⇓ iP	Pn	09 01 14.2	+0.5
DRGR		**2.79**	**299**	⇓ iP	Pn	09 01 14.2	+0.5

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*ISCJB **09** 09:09:39.7±0.2, 42°.36N±0°.02×13°.32E±0°.02, h15km±1km, mb3.3/4, Error ellipse: s-maj=2.8km s-min=2.5km az=138.8*
*ROM **09** 09:09:40.0±0.1, 42°.35N×13°.36E, h10km, Ml3.5/32, Error ellipse: s-maj=0.8km s-min=0.6km az=75.0*
*PRU **09** 09:09:40.8, 42°.32N×13°.59E, h1km*
*IDC **09** 09:09:41.0±1.1, 42°.50N×13°.24E, h0km, mb3.2/4, mb1 3.5/7, mb1mx3.4/28, mbtmp3.3/7, ML3.4/3, Error ellipse: s-maj=21.5km s-min=13.9km az=98.0*
*CSEM **09** 09:09:40.3±0.1, 42°.35N×13°.32E, h5km, ML4.0/11, Error ellipse: s-maj=2.4km s-min=2.0km az=57.0*
*BEO **09** 09:09:41.5±1.2, 42°.41N×13°.24E, h6km±9km, ML3.6/5*
*LDG **09** 09:09:42.0±0.2, 42°.31N×13°.27E, h2km, Ml3.1/7, Error ellipse: s-maj=7.1km s-min=4.2km az=43.0*
ISC 09 09:09:40.5±0.7**, 42°.35N**±0°.02×**13°.33E**±0°.02**, h13km**±4km**, n134, σ1s32**/168**, mb3.4**/4**, 2C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**83**	Pg	**Pg**	**09 09 42.5**	**-0.6**
AQU				Sg	**Sg**	**09 09 43.8**	**-1.1**
	85μm,0.3s						
AQU	**L'Aquila**	**0.05**	**83**	Pg	**Pg**	**09 09 42.5**	**-0.6**
AQU				Sg	**Sg**	**09 09 43.8**	**-1.1**
	85μm,0.3s						
FIAM	**Fiamignano**	**0.18**	**244**	⇑ ePg	**Pg**	**09 09 45.0**	**+0.3**
FIAM				Sg	**Sg**	**09 09 48.2**	**+0.6**
	16μm,0.6s						
FIAM	**Fiamignano**	**0.18**	**244**	⇑ ePg	**Pg**	**09 09 45.0**	**+0.3**
FIAM				Sg	**Sg**	**09 09 48.2**	**+0.6**
	16μm,0.6s						
CAMP	**Campotosto**	**0.20**	**16**	Pg	**Pg**	**09 09 44.7**	**-0.3**
CAMP				Sg	**Sg**	**09 09 47.8**	**-0.3**
	12μm,0.4s						
CAMP	**Campotosto**	**0.20**	**16**	Pg	**Pg**	**09 09 44.7**	**-0.3**
CAMP				Sg	**Sg**	**09 09 47.8**	**-0.3**
	12μm,0.4s						
FAGN	**Fagnano**	**0.20**	**114**	Pg	**Pg**	**09 09 44.7**	**-0.4**
FAGN				Sg	**Sg**	**09 09 48.0**	**-0.2**
	36μm,0.5s						
FAGN	**Fagnano**	**0.20**	**114**	Pg	**Pg**	**09 09 44.7**	**-0.4**
FAGN				Sg	**Sg**	**09 09 48.0**	**-0.2**
	36μm,0.5s						
PTQR	**Pietraquaria**	**0.33**	**171**	Pg	**Pb**	**09 09 47.1**	**-1.2**
PTQR				Sg	**Sb**	**09 09 52.2**	**-1.4**
PTQR	**Pietraquaria**	**0.33**	**171**	Pg	**Pb**	**09 09 47.1**	**-1.2**
PTQR				Sg	**Sb**	**09 09 52.2**	**-1.4**
LNSS	**Leonessa**	**0.34**	**320**	Pg	**Pb**	**09 09 47.3**	**-1.2**
LNSS				Sg	**Sb**	**09 09 53.2**	**-0.6**
	5μm,0.3s						
LNSS	**Leonessa**	**0.34**	**320**	Pg	**Pb**	**09 09 47.3**	**-1.2**
LNSS				Sg	**Sb**	**09 09 53.2**	**-0.6**
	5μm,0.3s						
TERO	**Teramo**	**0.34**	**36**	Pg	**Pb**	**09 09 46.7**	**-1.8**
TERO				Sg	**Sg**	**09 09 51.6**	**-0.5**
	8μm,0.4s						
TERO	**Teramo**	**0.34**	**36**	Pg	**Pb**	**09 09 46.7**	**-1.8**
TERO				Sg	**Sg**	**09 09 51.6**	**-0.5**
	8μm,0.4s						
VCEL	**Villa Celiera**	**0.38**	**83**	Pg	**Pb**	**09 09 47.9**	**-1.3**
	15μm,0.4s						
VCEL	**Villa Celiera**	**0.38**	**83**	Pg	**Pb**	**09 09 47.9**	**-1.3**
	15μm,0.4s						
CERT	**Cerreto**	**0.48**	**213**	Pg	**Pb**	**09 09 49.8**	**-1.0**
CERT				Sg	**Sb**	**09 09 57.1**	**-0.7**
	4μm,0.4s						
CERT	**Cerreto**	**0.48**	**213**	Pg	**Pb**	**09 09 49.8**	**-1.0**
CERT				Sg	**Sb**	**09 09 57.1**	**-0.7**
	4μm,0.4s						
MNS	**Montasola**	**0.48**	**275**	Pg	**Pb**	**09 09 49.9**	**-1.1**
	2μm,0.5s						
MNS	**Montasola**	**0.48**	**275**	Pg	**Pb**	**09 09 49.9**	**-1.1**
	2μm,0.5s						

NRCA	**Norcia**	**0.51**	**342**	Pg	**Pb**	**09 09 50.1**	**-1.4**
NRCA				Sg	**Sb**	**09 09 58.3**	**-0.6**
	3μm,0.2s						
NRCA	**Norcia**	**0.51**	**342**	Pg	**Pb**	**09 09 50.1**	**-1.4**
NRCA				Sg	**Sb**	**09 09 58.3**	**-0.6**
	3μm,0.2s						
VVLD	**Villa Vallelon**	**0.52**	**156**	Pg	**Pb**	**09 09 50.2**	**-1.4**
	2μm,0.6s						
VVLD	**Villa Vallelon**	**0.52**	**156**	Pg	**Pb**	**09 09 50.2**	**-1.4**
	2μm,0.6s						
INTR	**Introdacqua**	**0.54**	**128**	Pg	**Pb**	**09 09 50.4**	**-1.6**
INTR				Sg	**Sb**	**09 09 58.4**	**-1.3**
	3μm,0.7s						
INTR	**Introdacqua**	**0.54**	**128**	Pg	**Pb**	**09 09 50.4**	**-1.6**
INTR				Sg	**Sb**	**09 09 58.4**	**-1.3**
	3μm,0.7s						
MTCE	**Montecelio**	**0.55**	**234**	Pg	**Pb**	**09 09 51.1**	**-0.9**
MTCE				Sg	**Sb**	**09 09 59.2**	**-0.6**
	1μm,0.6s						
MTCE	**Montecelio**	**0.55**	**234**	Pg	**Pb**	**09 09 51.1**	**-0.9**
MTCE				Sg	**Sb**	**09 09 59.2**	**-0.6**
	1μm,0.6s						
GUAR	**Guarcino**	**0.55**	**182**	Pg	**Pb**	**09 09 50.8**	**-1.3**
	1μm,0.4s						
GUAR	**Guarcino**	**0.55**	**182**	Pg	**Pb**	**09 09 50.8**	**-1.3**
	1μm,0.4s						
CESX	**Cesi**	**0.62**	**295**	Pg	**Pb**	**09 09 52.0**	**-1.2**
CESX	**Cesi**	**0.62**	**295**	Pg	**Pb**	**09 09 52.0**	**-1.2**
TRTR	**Tortoreto Alta**	**0.63**	**43**	Pg	**Pb**	**09 09 53.1**	**-0.3**
	9μm,0.8s						
TRTR	**Tortoreto Alta**	**0.63**	**43**	Pg	**Pb**	**09 09 53.1**	**-0.3**
	9μm,0.8s						
OFFI	**Offida**	**0.64**	**24**	Pg	**Pb**	**09 09 53.0**	**-0.6**
	9μm,0.6s						
OFFI	**Offida**	**0.64**	**24**	Pg	**Pb**	**09 09 53.0**	**-0.6**
	9μm,0.6s						
POFI	**Posta Fibreno**	**0.69**	**156**	Pg	**Pb**	**09 09 53.5**	**-1.0**
	749nm,0.9s						
POFI	**Posta Fibreno**	**0.69**	**156**	Pg	**Pb**	**09 09 53.5**	**-1.0**
	749nm,0.9s						
LPEL	**Lama dei Pelig**	**0.70**	**115**	Pg	**Pg**	**09 09 53.1**	**-1.0**
	1μm,0.4s						
LPEL	**Lama dei Pelig**	**0.70**	**115**	Pg	**Pg**	**09 09 53.1**	**-1.0**
	1μm,0.4s						
FDMO	**Fiordimonte**	**0.71**	**345**	Pg	**Pb**	**09 09 53.5**	**-1.4**
FDMO				Sg	**Sb**	**09 10 04.4**	**-0.2**
	906nm,0.4s						
FDMO	**Fiordimonte**	**0.71**	**345**	Pg	**Pb**	**09 09 53.5**	**-1.4**
FDMO				Sg	**Sb**	**09 10 04.4**	**-0.2**
	906nm,0.4s						
RMP	**Rome, Mte Porz**	**0.71**	**221**	Pg	**Pb**	**09 09 53.8**	**-1.0**
	2μm,0.6s						
RMP	**Rome, Mte Porz**	**0.71**	**221**	Pg	**Pb**	**09 09 53.8**	**-1.0**
	2μm,0.6s						
CESI	**CESI - Serrava**	**0.73**	**334**	Pg	**Pb**	**09 09 54.0**	**-1.2**
	374nm,0.4s						
CESI	**CESI - Serrava**	**0.73**	**334**	Pg	**Pb**	**09 09 54.0**	**-1.2**
	374nm,0.4s						
SDI	**San Donato**	**0.73**	**151**	Pg	**Pb**	**09 09 54.0**	**-1.2**
	411nm,0.4s						
SDI	**San Donato**	**0.73**	**151**	Pg	**Pb**	**09 09 54.0**	**-1.2**
	411nm,0.4s						
RDP	**Rocca di Papa**	**0.75**	**218**	Pg	**Pb**	**09 09 54.4**	**-1.1**
	3μm,0.5s						
RDP	**Rocca di Papa**	**0.75**	**218**	Pg	**Pb**	**09 09 54.4**	**-1.1**
	3μm,0.5s						
CAFR	**Castel Frentan**	**0.76**	**99**	Pg	**Pb**	**09 09 54.7**	**-1.0**
	2μm,0.6s						
CAFR	**Castel Frentan**	**0.76**	**99**	Pg	**Pb**	**09 09 54.7**	**-1.0**
	2μm,0.6s						
GIUL	**Giuliano Di Ro**	**0.79**	**184**	Pg	**Pb**	**09 09 54.9**	**-1.3**
	914nm,0.8s						
GIUL	**Giuliano Di Ro**	**0.79**	**184**	Pg	**Pb**	**09 09 54.9**	**-1.3**
	914nm,0.8s						
GUMA	**Gualdo di Mace**	**0.84**	**32**	Pg	**Pg**	**09 09 53.9**	**-2.9**
	4μm,0.5s						
RNI2	**Rionero Sannit**	**0.89**	**136**	Pg	**Pb**	**09 09 56.9**	**-1.0**
	831nm,0.6s						
RNI2	**Rionero Sannit**	**0.89**	**136**	Pg	**Pb**	**09 09 56.9**	**-1.0**
	831nm,0.6s						
CERA	**Filignano**	**0.91**	**146**	Pg	**Pg**	**09 09 56.7**	**-1.4**
	1μm,0.9s						
CERA	**Filignano**	**0.91**	**146**	Pg	**Pg**	**09 09 56.7**	**-1.4**
	1μm,0.9s						
SNTG	**Esanatoglia**	**0.95**	**342**	Pg	**Pb**	**09 09 57.7**	**-1.2**
	546nm,0.6s						
SNTG	**Esanatoglia**	**0.95**	**342**	Pg	**Pb**	**09 09 57.7**	**-1.2**
	546nm,0.6s						
MIDA	**Miranda**	**0.98**	**136**	Pg	**Pg**	**09 09 57.8**	**-1.7**
	501nm,0.6s						
MIDA	**Miranda**	**0.98**	**136**	Pg	**Pg**	**09 09 57.8**	**-1.7**
	501nm,0.6s						
CING	**Cingoli**	**1.03**	**354**	Pg	**Pb**	**09 09 59.1**	**-1.2**
	1μm,0.6s						
CING	**Cingoli**	**1.03**	**354**	Pg	**Pb**	**09 09 59.1**	**-1.2**
	1μm,0.6s						
MGAB	**Montegabbione**	**1.06**	**302**	Pg	**Pn**	**09 10 00.8**	**-0.4**
	718nm,0.6s						
MGAB	**Montegabbione**	**1.06**	**302**	Pg	**Pn**	**09 10 00.8**	**-0.4**
	718nm,0.6s						
MURB	**Monte Urbino**	**1.09**	**327**	Pg	**Pn**	**09 10 00.7**	**-0.9**
	2μm,0.3s						
MURB	**Monte Urbino**	**1.09**	**327**	Pg	**Pn**	**09 10 00.7**	**-0.9**
	2μm,0.3s						
ARVD	**Arcevia**	**1.19**	**346**	Pg	**Pn**	**09 10 02.1**	**-0.8**
	841nm,0.8s						
ARVD	**Arcevia**	**1.19**	**346**	Pg	**Pn**	**09 10 02.1**	**-0.8**
	841nm,0.8s						
AOI	**Ancona**	**1.22**	**9**	Pg	**Pn**	**09 10 02.6**	**-0.7**
	626nm,0.7s						
AOI	**Ancona**	**1.22**	**9**	Pg	**Pn**	**09 10 02.6**	**-0.7**
	626nm,0.7s						
MS1	**Monte Sant'Ang**	**2.05**	**107**	*e*Pn	**Pg**	**09 10 18.0**	**-1.8**
MAIM	**Mastiano**	**2.60**	**308**	P	**Pn**	**09 10 23.5**	**+1.2**
PGF	**Pioggiola**	**3.21**	**275**	*e*Pn	**Pn**	**09 10 31.7**	**+0.9**
PGF				*e*Sn	**Sn**	**09 11 06.7**	**-2.3**
	13nm,0.6s						
PGF	**Pioggiola**	**3.21**	**275**	*e*Pn	**Pn**	**09 10 31.7**	**+0.9**
PGF				*e*Sn	**Sn**	**09 11 06.7**	**-2.3**
	6.5nm,0.6s						
STON	**Ston**	**3.27**	**79**	*e*Pn	**Pn**	**09 10 31.9**	**+0.5**
STON				Sn	**Sn**	**09 11 10.6**	**+0.5**
STON	**Ston**	**3.27**	**79**	*e*Pn	**Pn**	**09 10 31.9**	**+0.5**
STON				Sn	**Sn**	**09 11 10.5**	**+0.5**
PE1	**Pezze di Greco**	**3.43**	**115**	*e*Pn	**Pn**	**09 10 35.5**	**+1.8**
BOJS	**Bojanci**	**3.45**	**23**	*e*Pn	**Pn**	**09 10 35.6**	**+1.7**
BOJS	**Bojanci**	**3.45**	**23**	*e*Pn	**Pn**	**09 10 35.6**	**+1.7**
TAR1	**Taranto**	**3.48**	**120**	*e*Pn	Pn	09 10 37.3	+2.9
JAVS	**Javornik**	**3.58**	**8**	*i* Pn	**Pn**	**09 10 36.1**	**+0.2**
JAVS				*i* Sn	**Sn**	**09 11 19.4**	**+1.3**
JAVS	**Javornik**	**3.58**	**8**	*i* Pn	**Pn**	**09 10 36.1**	**+0.2**
JAVS				*i* Sn	**Sn**	**09 11 19.4**	**+1.3**
VOY	**Vojsko**	**3.71**	**6**	*e*	Pn	09 10 40.3	+2.7
VOY				*e*		09 10 49.1	
VOY				*e*		09 10 59.8	
VOY				*e*		09 11 23.2	
VOY				*e*		09 11 46.9	
PDKS	**Podkum**	**3.90**	**17**	*i* Pn	**Pn**	**09 10 41.2**	**+1.0**
PDKS	**Podkum**	**3.90**	**17**	*i* Pn	**Pn**	**09 10 41.2**	**+1.0**
PDG	**Podgorica**	**4.39**	**87**	*e*Pn	Pn	09 10 49.8	+3.0
PDG				*e*Sn	**Sn**	**09 11 39.7**	**+1.9**
PDG	**Podgorica**	**4.39**	**87**	*e*Pn	Pn	09 10 49.8	+3.0
PDG				*e*Sn	**Sn**	**09 11 39.7**	**+1.9**
ABTA	**Abfaltersbach**	**4.44**	**353**	⇓*i*Pn	**Pn**	**09 10 49.1**	**+1.5**
	SNR=16						
ABTA	**Abfaltersbach**	**4.44**	**353**	Pn	**Pn**	**09 10 49.1**	**+1.5**
	SNR=16						
SBF	**Sospel**	**4.58**	**291**	*e*Pn	**Pn**	**09 10 50.0**	**+0.5**
SBF				*e*Sn	**Sn**	**09 11 40.5**	**-2.1**
	5.5nm,0.5s						
SBF	**Sospel**	**4.58**	**291**	*e*Pn	**Pn**	**09 10 50.0**	**+0.5**
SBF				*e*Sn	**Sn**	**09 11 40.5**	**-2.1**
	2.8nm,0.5s						
BBLS	**Lazići**	**4.70**	**69**	*e*Pn	**Pn**	**09 10 53.5**	**+2.3**
BBLS	**Lazići**	**4.70**	**69**	*e*Pn	**Pn**	**09 10 53.5**	**+2.3**
FRF	**La Foret Royal**	**5.05**	**286**	*e*Pn	**Pn**	**09 10 56.0**	**0.0**
FRF	**La Foret Royal**	**5.05**	**286**	*e*Pn	**Pn**	**09 10 56.0**	**0.0**
DAVOX	**Davos/Dischmat**	**5.07**	**332**	Pn	Pn	09 10 59.0	+2.6
	1.2nm,0.3s,baz=159,slow=17,SNR=10						
DAVOX				Sn	**Sn**	**09 11 56.3**	**+1.4**
	1.3nm,0.3s,baz=108,slow=17,SNR=3.9						
LMR	**La Mourre**	**5.11**	**283**	*e*Pn	**Pn**	**09 10 56.9**	**+0.1**
LMR	**La Mourre**	**5.11**	**283**	*e*Pn	**Pn**	**09 10 56.9**	**+0.1**
ARSA	**Arzberg**	**5.14**	**17**	*e*Pn	**Pn**	**09 10 57.8**	**+0.5**
ARSA	**Arzberg**	**5.14**	**17**	*e*Pn	**Pn**	**09 10 57.8**	**+0.5**
DIVS	**Divibare**	**5.17**	**68**	*e*Pn	**Pn**	**09 10 58.7**	**+1.0**
DIVS				*e*Sn	**Sn**	**09 11 58.2**	**+1.0**
DIVS	**Divibare**	**5.17**	**68**	*e*Pn	**Pn**	**09 10 58.7**	**+1.0**
DIVS				*e*Sn	**Sn**	**09 11 58.2**	**+1.0**
MBDF	**Montbardon**	**5.33**	**299**	*e*Pn	**Pn**	**09 10 59.8**	**-0.1**
MBDF	**Montbardon**	**5.33**	**299**	*e*P	Pn	09 11 03.7	+3.8
MBDF				*e*Sn	**Sn**	**09 11 59.1**	**-2.2**
	1.7nm,0.3s						
MBDF	**Montbardon**	**5.33**	**299**	*e*Pn	**Pn**	**09 10 59.8**	**-0.1**
MBDF	**Montbardon**	**5.33**	**299**	*e*P	Pn	09 11 03.7	+3.8
MBDF				*e*Sn	**Sn**	**09 11 59.1**	**-2.2**
	0.9nm,0.3s						
LPL	**La Plagne**	**5.72**	**306**	*e*P	Pn	09 11 10.5	+5.1
LPL				*e*Sn	**Sn**	**09 12 08.8**	**-2.2**
	3.0nm,0.4s						
SMRF	**Simiane la Rot**	**5.90**	**289**	*e*Pn	**Pn**	**09 11 08.6**	**+0.9**
SMRF	**Simiane la Rot**	**5.90**	**289**	*e*Pn	**Pn**	**09 11 08.6**	**+0.9**
ORIF	**Oris-en-Rattie**	**5.99**	**298**	*e*P	Pn	09 11 13.1	+4.2
BARS	**Barje**	**6.28**	**83**	⇓*i*Pn	**Pn**	**09 11 14.7**	**+1.9**
BARS	**Barje**	**6.28**	**83**	⇓*i*Pn	**Pn**	**09 11 14.7**	**+1.9**
GERES	**GERESS Array B**	**6.50**	**2**	Pn	**Pn**	**09 11 16.3**	**+0.3**
	0.6nm,0.3s,baz=172,slow=14,SNR=12						
GERES				Sn	**Sn**	**09 12 29.0**	**-1.0**
	1.4nm,0.3s,baz=181,slow=24,SNR=8.6						
CABF	**La Chapelle**	**6.71**	**312**	*e*Pn	**Pn**	**09 11 19.1**	**+0.3**
CABF	**La Chapelle**	**6.71**	**312**	*e*Pn	**Pn**	**09 11 19.1**	**+0.3**
KHC	**Kasperske Hory**	**6.79**	**1**	*e*PN	**Pn**	**09 11 20.5**	**+0.7**
KHC				*e*x	x	09 12 07.0	
KHC				*e*SN	**Sn**	**09 12 34.4**	**-2.5**
KHC	**Kasperske Hory**	**6.79**	**1**	Pn	**Pn**	**09 11 20.5**	**+0.7**
ZAPS	**Zavoj**	**6.90**	**79**	*e*Pn	**Pn**	**09 11 23.4**	**+2.0**
ZAPS				*e*Sn	**Sn**	**09 12 40.1**	**+0.3**
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn	**Pn**	**09 11 23.8**	**-0.8**
HINF				*e*Sn	**Sn**	**09 12 42.2**	**-3.3**
	6.0nm,0.5s						
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn	**Pn**	**09 11 23.8**	**-0.8**
KEST	**Kesra**	**7.30**	**206**	Pn	Pn	09 11 32.2	+5.3
	0.4nm,0.3s,baz=293,slow=5.7,SNR=9.9						
CDF	**Champ du Feu**	**7.41**	**327**	*e*Pn	**Pn**	**09 11 27.7**	**-0.7**
CDF				*e*Sn	**Sn**	**09 12 48.5**	**-3.9**
	7.8nm,0.6s						
CDF	**Champ du Feu**	**7.41**	**327**	*e*Pn	**Pn**	**09 11 27.7**	**-0.7**
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	**Pn**	**09 11 29.8**	**+0.1**
HAU				*e*Sn	**Sn**	**09 12 50.8**	**-3.8**
	4.9nm,0.3s						
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	**Pn**	**09 11 29.8**	**+0.1**
NKC	**Novy Kostel**	**7.91**	**356**	*e*SN	**Sn**	**09 13 03.0**	**-1.6**
MLR	**Muntele Rosu**	**9.63**	**67**	Pn	Pn	09 12 01.9	+3.0
	0.1nm,0.3s,baz=142,slow=15,SNR=4.6						
KBZ	**Khabaz**	**21.61**	**76**	P	**P**	**09 14 34.1**	**+4.1**
	1.7nm,0.8s,baz=317,slow=7.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**30.80**	**203**	P	P	09 15 58.7	+2.7
	0.3nm,0.9s,baz=20,slow=8.6,SNR=3.4						
MKAR	**Makanchi Array**	**47.89**	**60**	P	**P**	**09 18 19.5**	**+1.3**
	0.3nm,0.6s,baz=274,slow=7.7,SNR=4.5						
YKA	**Yellowknife Ar**	**67.49**	**337**	P	**P**	**09 20 37.4**	**+1.7**
	0.1nm,0.5s,baz=37,slow=5.6,SNR=2.7						

IDC 09 09:10:12.9±1.6**, 19.°32S**×**177.°45W, h572**km±20km**, mb3.3**/7**, mb1 3.6**/9**, mb1mx3.2**/22**, mbtmp3.4**/9**, Error ellipse: s-maj=27.0km s-min=12.3km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.64**	**46**	P	P	09 12 06.9	-1.3
	12nm,0.3s,baz=118,slow=1.5,SNR=26						
AFI				S	S	09 13 35.5	-7.0
	0.5nm,0.3s,baz=227,slow=19,SNR=1.9						
URZ	**Urewera**	**19.46**	**193**	P	P	09 14 02.1	-0.8
	2.5nm,0.3s,baz=301,slow=15,SNR=19						
STKA	**Stephens Creek**	**38.78**	**243**	P	P	09 16 50.2	+0.9
	5.6nm,0.7s,baz=96,slow=7.8,SNR=26						
WRA	**Warramunga Arr**	**45.29**	**261**	P	P	09 17 40.1	-0.6
	1.6nm,0.3s,baz=97,slow=7.1,SNR=79						
WRA				PcP	PcP	09 19 08.5	+0.3
	0.4nm,0.4s,baz=94,slow=3.4,SNR=3.3						
ASAR	**Alice Springs**	**45.30**	**256**	P	P	09 17 40.9	+0.1
	8.4nm,0.8s,baz=88,slow=8.0,SNR=59						
ASAR				S	S	09 23 38.6	-1.8
	0.8nm,0.7s,baz=91,slow=16,SNR=8.5						
FITZ	**Fitzroy Crossi**	**53.71**	**261**	P	P	09 18 42.7	+0.3
	1.7nm,0.4s,baz=113,slow=3.6,SNR=28						
NVAR	**Mina Array Bea**	**79.81**	**43**	P	P	09 21 21.7	-1.1
	0.3nm,0.6s,baz=238,slow=6.9,SNR=3.2						
TXAR	**Lajitas Array**	**85.98**	**57**	P	P	09 21 55.3	+1.6
	0.5nm,0.7s,baz=218,slow=6.3,SNR=8.1						
CMAR	**Chiang Mai Arr**	**90.21**	**289**	P	P	09 22 13.4	-0.2
	0.5nm,0.3s,baz=125,slow=4.5,SNR=4.4						
BRTR	**Keskin Array B**	**146.41**	**314**	PKPbc	PKPdf	09 28 49.4	+1.0
	0.7nm,0.8s,baz=54,slow=3.7,SNR=2.5						
MMAI	**Mount Meron Ar**	**147.66**	**302**	PKPbc	PKPbc	09 28 54.5	+0.3
	0.6nm,0.3s,baz=64,slow=6.6,SNR=3.3						
GERES	**GERESS Array B**	**149.20**	**346**	PKPbc	PKPbc	09 28 56.7	-0.9
	0.3nm,0.4s,baz=11,slow=2.0,SNR=2.7						

IDC 09 09:11:05.3±6.8**, 18.°23S**×**167.°60E, h194**km±99km**, mb3.1**/3**, mb1 3.3**/4**, mb1mx3.1**/18**, mbtmp3.1**/4**, MS4.2**/1**, Ms1 4.2**/1**, ms1mx3.2**/7**, Error ellipse: s-maj=134.2km s-min=42.9km az=145.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.97**	**196**	P	Pn	09 12 07.2	+0.6
	3.2nm,0.3s,baz=66,slow=18,SNR=28						
DZM				S	Sn	09 12 54.8	0.0
	2.4nm,0.3s,baz=18,slow=20,SNR=9.9						
RAO	**Raoul Island**	**17.19**	**132**	LR	LR	09 19 06.4	
	comp=Z,739nm,19.4s,baz=332,slow=28						
WRA	**Warramunga Arr**	**31.45**	**261**	P	P	09 17 09.2	+0.3
	1.0nm,1.2s,baz=81,slow=6.0,SNR=5.4						
ASAR	**Alice Springs**	**31.88**	**254**	P	P	09 17 12.3	-0.3
	0.8nm,0.5s,baz=82,slow=9.3,SNR=20						
SONM	**Songino Array**	**85.49**	**324**	P	P	09 23 21.3	-0.1
	0.2nm,0.3s,baz=114,slow=3.5,SNR=3.6						

MAN 09 09:11:37, 12.°81N×122.°99E, h11km, mb3.9, ML2.7, MS2.3, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUQP	**San Andres**	**0.60**	**329**	*e*P	Pb	09 11 49.7	+0.2
AUQP				*e*S	Sg	09 11 56.8	+0.2
OTRP	**Odiongan**	**1.05**	**245**	*e*P	Pn	09 11 57.4	-0.2
OTRP				*e*S	Sg	09 12 01.5	-9.3
GQP	**Guinayangan**	**1.21**	**334**	⇓*e*P	Pn	09 11 59.2	-0.7
GQP				*e*S	Sn	09 12 17.9	+1.5

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*ISCJB **09** 09:17:56.0±0.6, 40.°64N±0.°04×141.°80E±0.°09, h115km±5km, mb3.1/3, Error ellipse: s-maj=11.7km s-min=6.1km az=4.9*

*IDC **09** 09:17:57.4±2.2, 40.°62N×141.°78E, h118km±22km, mb2.8/3, mb1 3.0/6, mb1mx2.9/27, mbtmp2.8/6, MS2.5/1, Ms1 2.5/1, ms1mx1.9/9, Error ellipse: s-maj=30.9km s-min=19.9km az=107.0*

*JMA **09** 09:17:57.2±0.1, 40.°67N×141.°86E, h106km±1km, M3.5*

ISC 09 09:17:56.5±1.0**, 40.°66N**±0.°04×**141.°87E**±0.°08**, h111**km±8km**, n16,** σ**1.s37**/26**, mb3.2**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**0.39**	**223**	P	**Pn**	**09 18 13.0**	**+0.1**
JANG				S	**Sn**	**09 18 24.6**	**-0.5**
JTM	**Tenmabayashi**	**0.62**	**282**	P	**Pn**	**09 18 14.2**	**-0.1**
JTM				*e*S	**Sn**	**09 18 26.9**	**-0.8**
JOT	**Ohata**	**0.95**	**320**	P	**Pn**	**09 18 17.3**	**+0.1**
JOT				S	**Sn**	**09 18 32.3**	**-0.6**
JAH	**Hinai**	**1.05**	**244**	P	**Pn**	**09 18 18.8**	**+0.5**
JAH				S	**Sn**	**09 18 35.0**	**+0.2**
JOM	**Ohasama**	**1.27**	**201**	P	**Pn**	**09 18 20.9**	**+0.2**
JOM				S	**Sn**	**09 18 38.5**	**-0.4**
JKB	**Kayabe**	**1.38**	**333**	P	**Pn**	**09 18 22.4**	**+0.5**
JKB				S	**Sn**	**09 18 41.0**	**-0.1**
JSR	**Shiriuchi**	**1.40**	**309**	P	**Pn**	**09 18 22.2**	**+0.1**
JSR				*e*S	**Sn**	**09 18 40.7**	**-0.9**
JIW	**Iwasaki**	**1.42**	**268**	P	**Pn**	**09 18 23.0**	**+0.6**
JIW				*e*S	**Sn**	**09 18 42.1**	**+0.1**
JNBK	**Urakawa-nobuka**	**1.75**	**22**	S	**Sn**	**09 18 51.3**	**+2.2**
JMK	**Ichinoseki**	**1.78**	**196**	P	**Pn**	**09 18 26.8**	**0.0**
JMK				S	**Sn**	**09 18 48.9**	**-0.9**
ASAJ	**Asahikawa**	**3.49**	**9**	P	**Pn**	**09 18 49.8**	**+0.7**
	3.8nm,0.3s,baz=222,slow=10,SNR=29						
ASAJ				S	**Sn**	**09 19 24.6**	**-5.1**
	1.8nm,0.3s,baz=188,slow=21,SNR=3.5						
MJAR	**Matsushiro Arr**	**5.01**	**216**	P	**Pn**	**09 19 09.7**	**+0.1**
	0.4nm,0.3s,baz=22,slow=12,SNR=6.0						
USRK	**Ussuriysk Arra**	**8.11**	**299**	P	**Pn**	**09 19 53.4**	**+2.1**
	0.2nm,0.3s,baz=87,slow=13,SNR=4.7						
USRK				LR	LR	09 22 23.0	
	comp=Z,37nm,20.3s,baz=298,slow=33						
MKAR	**Makanchi Array**	**42.58**	**299**	P	**P**	**09 25 40.8**	**-0.6**
	0.1nm,0.5s,baz=82,slow=11,SNR=3.5						
ILAR	**Eielson Array**	**46.27**	**34**	P	**P**	**09 26 11.6**	**+1.2**
	0.3nm,0.7s,baz=272,slow=6.2,SNR=4.2						
WRA	**Warramunga Arr**	**60.70**	**188**	P	**P**	**09 27 55.8**	**-0.3**
	0.3nm,0.8s,baz=7.5,slow=7.0,SNR=3.8						

IDC 09 09:41:45.0±3.2**, 3.°63N**×**128.°69E, h0**km**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/23**, mbtmp3.3**/3**, Error ellipse: s-maj=249.7km s-min=27.1km az=68.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.07**	**167**	P	P	09 47 02.5	+0.1
	0.4nm,0.5s,baz=347,slow=10,SNR=8.7						
ASAR	**Alice Springs**	**27.60**	**170**	P	P	09 47 34.0	-0.2
	0.2nm,0.6s,baz=357,slow=8.4,SNR=3.7						
MKAR	**Makanchi Array**	**58.77**	**324**	P	P	09 51 45.0	0.0
	0.2nm,0.5s,baz=127,slow=7.6,SNR=4.4						

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*NIED **09** 09:52:00, 27.°70N×127.°90E, h101km, Mw3.8 Best double couple: $M_0$6.23000×10^{14} NP1:ϕ_s223.00000°, δ84.00000°, λ70.00000°. NP2:ϕ_s118.00000°, δ21.00000°, λ164.00000°.*

*ISCJB **09** 09:52:00.9±0.5, 27.°57N±0.°06×127.°95E±0.°08, h110km±6km, mb3.4/6, Error ellipse: s-maj=15.2km s-min=5.8km az=38.8*

*JMA **09** 09:52:02.1±0.1, 27.°66N×127.°87E, h93km±3km, M3.6*

*IDC **09** 09:52:04.4±3.0, 27.°66N×127.°95E, h132km±29km, mb3.2/6, mb1 3.3/8, mb1mx3.2/27, mbtmp3.1/8, Error ellipse: s-maj=31.2km s-min=17.2km az=80.0*

ISC 09 09:52:01.5±0.8**, 27.°59N**±0.°08×**127.°92E**±0.°08**, h105**km±8km**, n19,** σ**1.s03**/26**, mb3.5**/6**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.56**	**176**	P	**Pn**	**09 52 18.5**	**+0.3**
JIH				S	**Sn**	**09 52 30.4**	**-0.3**
JOW	**Kunigami**	**0.82**	**157**	P	**Pn**	**09 52 21.0**	**+0.5**
JOW				*e*S	**Sn**	**09 52 34.6**	**-0.2**
JTK	**Tokunoshima**	**0.93**	**78**	P	**Pn**	**09 52 21.8**	**+0.2**
JTK				*e*S	**Sn**	**09 52 36.1**	**-0.7**
JAGN	**Aguni-jima**	**1.17**	**211**	P	**Pn**	**09 52 24.4**	**+0.3**
JAGN				*e*S	**Sn**	**09 52 41.1**	**-0.1**
JAMN	**Amaminishikomi**	**1.29**	**59**	P	**Pn**	**09 52 25.6**	**+0.1**
JAMN				*e*S	**Sn**	**09 52 42.5**	**-1.1**
JJT2	**Tamagusuku 2**	**1.45**	**186**	P	**Pn**	**09 52 28.7**	**+1.2**
JKE	**Kume jima 2**	**1.61**	**219**	P	**Pn**	**09 52 29.8**	**+0.3**
JAM	**Amami Oshima**	**1.70**	**61**	P	**Pn**	**09 52 30.9**	**+0.4**
JAM				*e*S	**Sn**	**09 52 51.9**	**-0.6**
JZK	**Kikaishima**	**1.95**	**68**	P	**Pn**	**09 52 34.8**	**+1.1**
JZK				*e*S	**Sn**	**09 52 59.5**	**+1.3**
JNN	**Nakanoshima**	**2.82**	**37**	P	**Pn**	**09 52 45.9**	**+0.8**
JTN	**Tanegashima 3**	**4.06**	**41**	P	**Pn**	**09 53 01.2**	**-0.4**
JNU	**Nakatsue**	**6.08**	**24**	P	**Pn**	**09 53 30.7**	**+1.8**
	1.3nm,0.3s,baz=242,slow=3.9,SNR=15						
KSRS	**Korea Array**	**9.84**	**0**	P	**Pn**	**09 54 21.8**	**+1.9**
	0.2nm,0.3s,baz=189,slow=13,SNR=4.8						
SONM	**Songino Array**	**26.27**	**326**	P	**P**	**09 57 28.4**	**+1.3**
	1.1nm,0.6s,baz=140,slow=11,SNR=9.5						
MKAR	**Makanchi Array**	**40.43**	**311**	P	**P**	**09 59 27.9**	**-1.6**
	0.2nm,0.5s,baz=95,slow=9.9,SNR=5.0						
WRA	**Warramunga Arr**	**47.66**	**172**	P	**P**	**10 00 28.0**	**+0.6**
	1.0nm,0.8s,baz=354,slow=9.0,SNR=6.9						
ASAR	**Alice Springs**	**51.28**	**173**	P	**P**	**10 00 55.5**	**+0.5**
	0.4nm,0.5s,baz=0.0,slow=10.0,SNR=8.8						
ILAR	**Eielson Array**	**63.38**	**29**	P	**P**	**10 02 17.6**	**-1.9**
	0.1nm,0.4s,baz=272,slow=5.2,SNR=5.5						
YKA	**Yellowknife Ar**	**77.41**	**25**	P	**P**	**10 03 45.2**	**+0.4**
	0.3nm,0.4s,baz=305,slow=5.7,SNR=8.9						

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*ISK **09** 09:56:37.4, 39.°20N×29.°47E, h8km, ML3.5*

*DDA **09** 09:56:37.7, 39.°19N×29.°41E, h3km, MD3.3*

*CSEM **09** 09:56:37.8±0.1, 39.°20N×29.°48E, h5km, MD3.3, Error ellipse: s-maj=2.0km s-min=1.7km az=82.0*

*ISCJB **09** 09:56:37.4±0.4, 39.°21N±0.°02×29.°46E±0.°02, h4km±3km, Error ellipse: s-maj=3.1km s-min=2.8km az=170.3*

ISC 09 09:56:38.0±0.8**, 39.°21N**±0.°02×**29.°46E**±0.°02**, h11**km±6km**, n157,** σ**0.s85**/182**, 7C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.12**	**174**	*i* P	**Pg**	**09 56 40.8**	**-0.3**
GDZ				*i* S	**Sg**	**09 56 43.0**	**-0.4**
GDZ	**Gediz**	**0.12**	**174**	*i* P	**Pg**	**09 56 40.8**	**-0.3**
GDZ				*i* S	**Sg**	**09 56 43.0**	**-0.4**
TVSB	**Tavsanli**	**0.24**	**359**	*e*PG	**Pg**	**09 56 43.4**	**+0.3**
TVSB				*e*SG	**Sg**	**09 56 46.9**	**+0.4**
TVSB	**Tavsanli**	**0.24**	**359**	*e*Pg	**Pg**	**09 56 43.4**	**+0.3**
TVSB				*e*Sg	**Sg**	**09 56 46.9**	**+0.4**
ALT	**Altintas**	**0.53**	**107**	*e*PG	**Pg**	**09 56 47.8**	**-0.5**
ALT				*e*SG	**Sg**	**09 56 55.1**	**-0.2**
ALT	**Altintas**	**0.53**	**107**	*e*Pg	**Pg**	**09 56 47.8**	**-0.5**
ALT				*e*Sg	**Sg**	**09 56 55.1**	**-0.2**
DEMI	**Demirci**	**0.60**	**254**	*i* P	**Pg**	**09 56 49.5**	**-0.3**
DEMI				*i* S	**Sg**	**09 56 57.2**	**-0.6**
DEMI	**Demirci**	**0.60**	**254**	*i* P	**Pg**	**09 56 49.5**	**-0.3**
DEMI				*i* S	**Sg**	**09 56 57.2**	**-0.6**
DST	**Dursunbey**	**0.77**	**301**	*e*PG	**Pg**	**09 56 52.6**	**-0.2**
DST	**Dursunbey**	**0.77**	**301**	*e*Pg	**Pg**	**09 56 52.6**	**-0.2**
KHAL	**Karahalli**	**0.84**	**179**	*i* P	**Pg**	**09 56 53.4**	**-0.8**
KHAL	**Karahalli**	**0.84**	**179**	*i* P	**Pg**	**09 56 53.4**	**-0.8**
DURS	**Dursunbey**	**0.86**	**297**	*i* P	**Pg**	**09 56 54.5**	**-0.2**
DURS	**Dursunbey**	**0.86**	**297**	*i* P	**Pg**	**09 56 54.5**	**-0.2**
KHL	**Karahalli**	**0.89**	**177**	*e*PG	**Pg**	**09 56 54.5**	**-0.6**
KHL	**Karahalli**	**0.89**	**177**	*e*Pg	**Pg**	**09 56 54.5**	**-0.6**
KULA	**Kula-Manisa**	**0.94**	**222**	*e*PG	**Pg**	**09 56 54.9**	**-1.1**
KULA	**Kula-Manisa**	**0.94**	**222**	*e*Pg	**Pg**	**09 56 54.9**	**-1.1**
ORLT	**Orhaneli**	**0.94**	**332**	*e*PG	**Pb**	**09 56 56.7**	**+0.2**
ULDT	**Uludag**	**0.97**	**345**	*i* P	**Pg**	**09 56 56.7**	**0.0**
ULDT				*i* S	**Sb**	**09 57 09.9**	**+0.1**
ULDT	**Uludag**	**0.97**	**345**	*i* P	**Pg**	**09 56 56.7**	**0.0**
ULDT				*i* S	**Sb**	**09 57 09.9**	**+0.1**
BORA	**Eskisehir**	**1.02**	**48**	*i* P	**Pb**	**09 56 57.6**	**-0.1**
BORA				*i* S	**Sb**	**09 57 11.5**	**+0.4**
BORA	**Eskisehir**	**1.02**	**48**	*i* P	**Pb**	**09 56 57.6**	**-0.1**
BORA				*i* S	**Sb**	**09 57 11.5**	**+0.4**
CAVI	**Cavuskoy**	**1.03**	**16**	*e*PG	**Pb**	**09 56 57.8**	**-0.2**
CAVI	**Cavuskoy**	**1.03**	**16**	*e*Pg	**Pb**	**09 56 57.8**	**-0.2**
SHUT	**Suhut-Afyon**	**1.07**	**127**	*e*PG	**Pb**	**09 56 58.6**	**0.0**
SHUT	**Suhut-Afyon**	**1.07**	**127**	*e*Pg	**Pb**	**09 56 58.6**	**0.0**
ESKT	**Eskisehir**	**1.12**	**73**	*e*PN	**Pb**	**09 56 58.8**	**-0.7**
ESKT	**Eskisehir**	**1.12**	**73**	*e*Pn	**Pb**	**09 56 58.8**	**-0.7**
SEYT	**Eskypehyr**	**1.12**	**73**	*i* P	**Pb**	**09 56 59.0**	**-0.5**
SEYT	**Eskypehyr**	**1.12**	**73**	*i* P	**Pb**	**09 56 59.0**	**-0.5**
IZI	**Iznik**	**1.13**	**0**	*e*PN	**Pn**	**09 56 59.6**	**-0.2**
ADVT	**Abdulvahap**	**1.24**	**10**	*e*PN	**Pg**	**09 57 01.5**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.24**	**339**	*e*PN	**Pg**	**09 57 01.5**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.24**	**339**	*e*Pn	**Pg**	**09 57 01.5**	**-0.4**
GEMT	**Gemlik**	**1.24**	**350**	*e*PN	**Pg**	**09 57 01.5**	**-0.4**
GEMT	**Gemlik**	**1.24**	**350**	*e*Pn	**Pg**	**09 57 01.5**	**-0.4**
BOLV	**Bolvadin**	**1.26**	**112**	*i* P	Pg	09 57 09.6	+7.4
BOLV				*i* S	Sg	09 57 25.6	+7.0
GPA	**Golpazari**	**1.26**	**31**	*e*PN	**Pg**	**09 57 02.1**	**-0.2**
GPA	**Golpazari**	**1.26**	**31**	*e*Pn	**Pg**	**09 57 02.1**	**-0.2**
BALB	**Balikesir**	**1.30**	**290**	*e*PN	**Pb**	**09 57 02.5**	**+0.1**
BALB	**Balikesir**	**1.30**	**290**	*e*Pn	**Pb**	**09 57 02.6**	**+0.1**
AKHS	**Akhisar**	**1.33**	**256**	*i* P	**Pb**	**09 57 02.9**	**0.0**
AKHS				*i* S	**Sg**	**09 57 21.9**	**+1.2**
AKHS	**Akhisar**	**1.33**	**256**	*i* P	**Pb**	**09 57 02.9**	**0.0**
AKHS				*i* S	**Sg**	**09 57 21.9**	**+1.2**
AKS	**Akhisar**	**1.33**	**256**	*e*PN	**Pb**	**09 57 02.9**	**-0.1**
AKS	**Akhisar**	**1.33**	**256**	*e*Pn	**Pb**	**09 57 02.9**	**-0.1**
KCTX	**Karacabey (Bur**	**1.36**	**321**	*e*PN	**Pn**	**09 57 03.0**	**0.0**
KCTX	**Karacabey (Bur**	**1.36**	**321**	*e*Pn	**Pn**	**09 57 03.0**	**0.0**
GULT	**Gulveren**	**1.47**	**33**	*e*PN	**Pb**	**09 57 04.9**	**-0.5**
GULT	**Gulveren**	**1.47**	**33**	*e*Pn	**Pb**	**09 57 04.9**	**-0.5**

DENT	Denizli	1.49	193	ePN	Pn	09 57 05.2	+0.4
DENT	Denizli	1.49	193	ePn	Pn	09 57 05.2	+0.4
BALY	Balya	1.52	291	iP	Pb	09 57 06.0	-0.3
BALY				iS	Sn	09 57 24.5	-0.6
BALY	Balya	1.52	291	iP	Pb	09 57 06.0	-0.3
BALY				iS	Sn	09 57 24.5	-0.6
DNZL	Cakiroluk	1.55	192	iP	Pn	09 57 05.2	-0.6
DNZL				iS	Sg	09 57 29.6	+1.6
DNZL	Cakiroluk	1.55	192	iP	Pn	09 57 05.2	-0.6
GONE	Gonen-Balikesi	1.61	302	ePN	Pb	09 57 07.1	-0.6
GONE	Gonen-Balikesi	1.61	302	ePn	Pb	09 57 07.1	-0.6
SPNC	Sapanca-Adapaz	1.61	23	ePN	Pb	09 57 06.9	-0.9
SPNC	Sapanca-Adapaz	1.61	23	ePn	Pb	09 57 06.9	-0.9
ISP	Isparta	1.61	149	ePN	Pn	09 57 06.1	-0.5
ISP	Isparta	1.61	149	⇓iP	Pn	09 57 06.0	-0.5
ISP				S	Sg	09 57 30.0	+0.1
ISP	Isparta	1.61	149	ePn	Pn	09 57 06.1	-0.5
ISP				S	Sg	09 57 30.0	+0.1
SVRH	Sivrihisar-ESK	1.61	81	ePN	Pb	09 57 07.1	-0.8
SVRH	Sivrihisar-ESK	1.61	81	ePn	Pb	09 57 07.1	-0.8
HRT	Hereke	1.62	5	ePN	Pn	09 57 06.2	-0.4
HRT	Hereke	1.62	5	ePn	Pn	09 57 06.2	-0.4
BNT	Bandirma	1.65	314	ePN	Pn	09 57 07.2	+0.2
BNT	Bandirma	1.65	314	ePn	Pn	09 57 07.2	+0.2
BUY	Buyukada	1.66	351	ePN	Pn	09 57 07.1	0.0
BUY	Buyukada	1.66	351	iP	Pn	09 57 07.3	+0.2
BUY				iS	Sg	09 57 31.4	-0.1
BUY	Buyukada	1.66	351	iP	Pn	09 57 07.3	+0.2
BUY				iS	Sg	09 57 31.4	-0.1
EDC	Edincik	1.68	313	ePN	Pn	09 57 07.8	+0.5
EDC	Edincik	1.68	313	ePn	Pn	09 57 07.8	+0.5
MDUB	Mudurnu	1.84	46	ePN	Pn	09 57 10.4	+0.8
ISK	Istanbul-Kandi	1.88	351	ePN	Pn	09 57 10.2	+0.1
ISK	Istanbul-Kandi	1.88	351	ePn	Pn	09 57 10.2	+0.1
IZM	Izmir	1.90	245	ePN	Pn	09 57 10.9	+0.5
IZM	Izmir	1.90	245	ePn	Pn	09 57 10.9	+0.5
SILT	Sile	1.95	4	ePN	Pn	09 57 11.4	+0.4
SILT	Sile	1.95	4	ePn	Pn	09 57 11.4	+0.4
BCK	Bucak	1.96	153	ePN	Pn	09 57 12.2	+1.0
BCK	Bucak	1.96	153	ePn	Pn	09 57 12.2	+1.0
GOLH	Golhisar	1.97	178	iP	Pn	09 57 11.4	0.0
GOLH				iS	Sg	09 57 45.0	+3.6
GOLH	Golhisar	1.97	178	iP	Pn	09 57 11.4	0.0
MRMT	Marmara Adasi	2.00	315	ePN	Pn	09 57 12.7	+0.9
MRMT	Marmara Adasi	2.00	315	ePn	Pn	09 57 12.7	+0.9
BGKT	Bogazkoy	2.04	345	ePN	Pn	09 57 13.2	+0.9
BGKT	Bogazkoy	2.04	345	ePn	Pn	09 57 13.2	+0.9
KRBG	Karabiga-Canak	2.05	306	ePN	Pn	09 57 13.3	+0.9
KRBG	Karabiga-Canak	2.05	306	ePn	Pn	09 57 13.3	+0.9
GLHS	Glhisar (BURDU	2.05	179	ePN	Pn	09 57 13.5	+1.0
GLHS	Glhisar (BURDU	2.05	179	ePn	Pn	09 57 13.5	+1.0
BLCB	Balcova	2.06	247	ePN	Pn	09 57 13.3	+0.7
BLCB	Balcova	2.06	247	ePn	Pn	09 57 13.3	+0.7
ELBA	Catalca	2.09	338	iP	Pg	09 57 17.3	-0.8
ELBA				iS	Sg	09 57 44.9	-0.3
CTKS	Kestanelik-??a	2.15	340	ePN	Pn	09 57 14.8	+1.0
CTKS	Kestanelik-??a	2.15	340	ePn	Pn	09 57 14.8	+1.0
AYVA	Ayvalik	2.16	274	iP	Pg	09 57 19.0	-0.3
AYVA				iS	Sg	09 57 47.1	-0.2
SLVT	Silivri	2.24	335	ePN	Pn	09 57 16.0	+1.0
SLVT	Silivri	2.24	335	ePn	Pn	09 57 16.0	+1.0
YER	Yerkesik	2.27	205	ePN	Pn	09 57 16.2	+0.7
YER	Yerkesik	2.27	205	ePn	Pn	09 57 16.2	+0.7
SART	Tekirdag	2.29	311	iP	Pn	09 57 16.2	+0.3
SART				iS	Sg	09 57 51.8	0.0
SART	Tekirdag	2.29	311	iP	Pn	09 57 16.2	+0.3
TKR	Tekirdag	2.31	321	ePN	Pn	09 57 17.1	+1.1
TKR	Tekirdag	2.31	321	ePn	Pn	09 57 17.2	+1.1
MLSB	Milas	2.33	215	ePN	Pn	09 57 17.0	+0.7
MLSB	Milas	2.33	215	ePn	Pn	09 57 17.0	+0.7
CRLT	Corlu	2.33	326	ePN	Pn	09 57 17.8	+1.5
CRLT	Corlu	2.33	326	ePn	Pn	09 57 17.8	+1.5
LPK	Lapseki	2.39	300	ePN	Pn	09 57 18.0	+0.9
LPK	Lapseki	2.39	300	ePn	Pn	09 57 18.0	+0.9
URLA	Izmir	2.40	250	iP	Pg	09 57 23.5	-0.4
URLA				iS	Sg	09 57 54.8	-0.3
CTYL	Yal??k??y-??at	2.44	339	ePN	Pn	09 57 17.8	+0.1
CTYL	Yal??k??y-??at	2.44	339	ePn	Pn	09 57 17.8	+0.1
PRK	Paraskevi	2.48	272	eP	Pn	09 57 18.4	+0.1
ELL	Elmali	2.48	172	ePN	Pn	09 57 20.1	+1.6
ELL	Elmali	2.48	172	ePn	Pn	09 57 20.1	+1.6
EZN	Ezine	2.50	285	ePN	Pn	09 57 19.7	+1.0
EZN	Ezine	2.50	285	ePn	Pn	09 57 19.7	+1.0
FETY	Fethiye	2.59	187	ePN	Pn	09 57 19.9	+0.1
FETY	Fethiye	2.59	187	ePn	Pn	09 57 19.9	+0.1
GELI	Tayfur-Gelibol	2.59	298	ePN	Pn	09 57 20.7	+0.8
GELI	Tayfur-Gelibol	2.59	298	ePn	Pn	09 57 20.7	+0.8
LOD	Lodumlu	2.64	74	ePN	Pn	09 57 21.6	+1.0
LOD	Lodumlu	2.64	74	ePn	Pn	09 57 21.6	+1.0
ANTO	Ankara	2.66	75	ePN	Pn	09 57 22.4	+1.6
ERIK	Erikli-Kesan	2.70	304	ePN	Pn	09 57 22.6	+1.3
ERIK	Erikli-Kesan	2.70	304	ePn	Pn	09 57 22.6	+1.3
BOZC	Bozcaada	2.71	285	iP	Pn	09 57 22.0	+0.4
BOZC				iS	Sg	09 58 03.8	-1.4
BODT	Bodrum	2.73	219	ePN	Pn	09 57 23.2	+1.3
BODT	Bodrum	2.73	219	ePn	Pn	09 57 23.2	+1.3
CHOS	Chios island	2.79	254	eP	Pn	09 57 22.6	-0.1
AFSR	Af¯ar-Bala (A	2.81	84	ePN	Pn	09 57 24.4	+1.4
AFSR	Af¯ar-Bala (A	2.81	84	ePn	Pn	09 57 24.4	+1.4
DAT	Datca	2.89	212	ePN	Pn	09 57 25.1	+1.0
DAT	Datca	2.89	212	ePn	Pn	09 57 25.1	+1.0
ALN	Alexandroupoli	3.12	304	eP	Pn	09 57 27.5	+0.4
SMTH	Samothraki Isl	3.28	294	eP	Pn	09 57 30.2	+0.8
EDRB	Edirne	3.35	323	ePN	Pn	09 57 31.2	+0.9
EDRB	Edirne	3.35	323	ePn	Pn	09 57 31.2	+0.9
LIA	Limnos Island	3.38	283	eP	Pb	09 57 34.4	-3.5
APE	Apeiranthos	3.77	237	ePN	Pn	09 57 37.9	+1.8
APE	Apeiranthos	3.77	237	⇓iP	Pg	09 57 47.9	-2.3
APE	Apeiranthos	3.77	237	ePn	Pn	09 57 37.9	+1.8
TIRR	Tirgusor	5.30	352	⇑iP	Pn	09 57 57.8	+0.7
TIRR	Tirgusor	5.30	352	⇑iP	Pn	09 57 57.8	+0.7
TIRR				S	Sn	09 58 57.4	-0.8
VTS	Vitosha	5.82	307	⇓iP	Pn	09 58 06.7	+2.3
VTS	Vitosha	5.82	307	S	Sn	09 59 17.8	+6.6
VTS	Vitosha	5.82	307	⇓iP	Pn	09 58 06.7	+2.3
TLCR		5.99	356	⇑iP	Pn	09 58 07.1	+0.5
TLCR		5.99	356	⇑iP	Pn	09 58 07.1	+0.5
MLR	Muntele Rosu	6.80	339	⇑iP	Pn	09 58 19.5	+1.7
MLR	Muntele Rosu	6.80	339	⇑iP	Pn	09 58 19.5	+1.7
VRI	Vrincioaia	6.95	344	⇑iP	Pn	09 58 21.1	+1.3
VRI	Vrincioaia	6.95	344	S	Sn	09 59 37.2	-1.7

*NIED **09** 10:00:00, 28.°10N×126.°80E, h59km, Mw3.4 Best double couple: M₀1.56000×10¹⁴ NP1:φs2.00000°, δ83.00000°, λ-48.00000°. NP2:φs100.00000°, δ42.00000°, λ-170.00000°.*

JMA 09 10:00:28.2±0.3**, 28.°08N×126.°80E, h174km, M3.8, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIH	Iheya	1.47	135	P	Pn	10 00 59.9	+0.5
JIH				eS	Sn	10 01 23.5	+0.1
JAGN	Aguni-jima	1.54	165	P	Pn	10 01 00.2	+0.2
JKE	Kume jima 2	1.75	180	P	Pn	10 01 01.8	-0.4
JKE				eS	Sn	10 01 28.3	-0.2
JOW	Kunigami	1.81	133	P	Pn	10 01 02.8	0.0
JOW				eS	Sn	10 01 28.2	-1.3
JTK	Tokunoshima	1.93	98	P	Pn	10 01 04.3	+0.3
JTK				eS	Sn	10 01 31.3	-0.4
JAMN	Amaminishikomi	2.10	85	P	Pn	10 01 06.3	+0.3
JAMN				eS	Sn	10 01 34.9	-0.3
JAM	Amami Oshima	2.50	82	P	Pn	10 01 10.8	+0.3
JAM				eS	Sn	10 01 43.3	0.0
JZK	Kikaishima	2.81	84	eS	Sn	10 01 50.7	+0.7
JOGS	Gusukube	3.54	201	P	Pn	10 01 21.2	-2.0
JOGS				eS	Sn	10 02 01.9	-4.3
JTJ	Tarama	3.91	209	eS	Sn	10 02 08.6	-6.0
JIJ	Ishigaki jima	4.40	213	P	Pn	10 01 30.0	-4.3
JIJ				eS	Sn	10 02 18.0	-8.1
JTN	Tanegashima 3	4.46	54	P	Pn	10 01 35.2	+0.2

TRN 09 10:05:37.0, 14.°84N×61.°78W, h143km, MD3.7, 1C-3D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDF	Fort de France	0.62	100	⇓eP	Pn	10 05 59.9	+1.6
FDF				⇓eS	Sn	10 06 19.8	+5.4
MVM	Montagne Vaucl	0.90	109	⇑iP	Pn	10 06 01.4	+1.0
MGG	Marie-Galante	1.16	23	eP	Pn	10 06 03.5	+0.9
PHG	Guadaloupe-2	1.17	6	eP	Pn	10 06 04.5	+1.6
DOG	Dongo Capester	1.19	7	eP	Pn	10 06 04.6	+1.6
SLB	Belfond	1.24	145	eP	Pn	10 06 05.3	+1.9
SLB				eS	Sn	10 06 24.1	+0.6
LZG	Guadaloupe-1	1.29	0	eP	Pn	10 06 05.3	+1.4
MCLT	Moule a Chique	1.39	144	eP	Pn	10 06 06.4	+1.4
MCLT				eS	Sn	10 06 27.2	+1.0
SVV	Soufriere Volc	1.61	160	eP	Pn	10 06 07.9	+0.5
SVV				eS	Sn	10 06 30.6	0.0
SVB	Belmont	1.64	162	eP	Pn	10 06 09.2	+1.4
SVB				eS	Sn	10 06 32.6	+1.4
BPA	Boggy Peak	2.19	358	⇓iP	Pn	10 06 14.4	+0.3
BPA				eS	Sn	10 06 42.4	-0.2
TOSP	Speyside	3.73	161	eP	Pn	10 06 34.8	+1.2
TOSP				eS	Sn	10 07 16.6	-0.8

*IDC **09** 10:44:59.6±6.9, 12.°89N×91.°62W, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.7/24, mbtmp3.6/6, ML3.7/2, Error ellipse: s-maj=122.5km s-min=57.7km az=158.0*
*CASC **09** 10:45:10.9±2.0, 13.°69N×92.°29W, h56km±50km, MD3.9*
*ISCJB **09** 10:45:11.0±1.6, 13.°6N±0.°1×92.°26W±0.°07, h41km±16km, mb3.4/4, Error ellipse: s-maj=17.5km s-min=10.6km az=18.8*

ISC 09 10:45:13.9±2.9**, 13.°8N**±0.°2×**92.°2W**±0.°1**, h48km**±26km**, n14, σ1.°32/21, mb3.5/4, 2C-1D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.77	43	⇓eP	Pn	10 45 27.6	-1.0
JAT				eS	Sn	10 45 40.3	+1.1
FUG	Fuego 3	1.47	62	eP	Pn	10 45 36.4	-1.8
PCG	Pacaya	1.66	67	eP	Pn	10 45 40.0	-0.8
PCG				eS	Sn	10 46 03.2	+2.2
RBDL	Robledal	2.45	81	eP	Pn	10 45 50.6	-1.1
RBDL				eS	Sn	10 46 20.1	-0.4
RTR	El Retiro	2.47	86	eP	Pn	10 45 51.6	-0.3
RTR				⇑eS	Sn	10 46 21.2	+0.2
SNJE	San Jose	2.51	87	eP	Pn	10 45 51.9	-0.5
SNJE				⇑eS	Sn	10 46 21.9	+0.1
MRL	Marmol	2.74	61	eP	Pn	10 45 55.6	-0.1
MRL				eS	Sn	10 46 29.4	+1.8
LFRS	El Faro	3.04	92	eP	Pn	10 45 58.9	-0.8
LFRS				eS	Sn	10 46 35.4	+0.5
TEIG	Tepich	7.44	30	Pn	Pn	10 46 57.9	-2.1
	1.8nm,0.3s,baz=203,slow=0.8,SNR=7.3						
TXAR	Lajitas Array	18.80	327	P	Pn	10 49 31.1	+0.5
	0.0nm,0.3s,baz=149,slow=11,SNR=7.4						
ANMO	Albuquerque	24.73	331	P	P	10 50 32.4	+1.3
	0.5nm,0.4s,baz=158,slow=15,SNR=4.0						
NVAR	Mina Array Bea	33.75	322	P	P	10 51 53.0	+1.7
	0.6nm,0.8s,baz=143,slow=5.2,SNR=4.7						
YKA	Yellowknife Ar	51.22	347	P	P	10 54 10.5	-1.9
	0.3nm,0.5s,baz=148,slow=7.3,SNR=9.0						
ILAR	Eielson Array	62.99	337	P	P	10 55 35.2	-0.4
	0.2nm,0.8s,baz=127,slow=6.4,SNR=5.7						

*NSSC **09** 10:57:26.3±4.7, 34.°08N×36.°12E, h0km±36km, ML1.7*
*CSEM **09** 10:57:30.6±0.1, 33.°78N×35.°74E, h5km, ML2.8, Error ellipse: s-maj=2.0km s-min=1.2km az=92.0*
*GRAL **09** 10:57:31.2±0.3, 33.°78N×35.°74E, h8km±3km, MD2.8*

ISC 09 10:57:29.2±1.0**, 33.°78N**±0.°03×**35.°72E**±0.°06**, h19km**±3km**, n17, σ0.°95/20, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.14	338	eP	Pg	10 57 34.2	+0.6
BHL				eS	Sg	10 57 36.3	-0.3
BHL	Bhannes	0.14	338	eP	Pg	10 57 34.2	+0.6
BHL				eS	Sg	10 57 36.3	-0.3
RCY	Rachaya	0.30	160	eP	Pb	10 57 36.7	+0.8
RCY				eS	Sg	10 57 40.7	+0.2
RCY	Rachaya	0.30	160	eP	Pb	10 57 36.7	+0.8
RCY				eS	Sg	10 57 40.7	+0.2
MATL	Matarih	0.43	228	eP	Pn	10 57 39.3	-1.1
MATL	Matarih	0.43	228	eP	Pn	10 57 39.3	-1.1
HWQ	Hawqa	0.53	21	eP	Pg	10 57 40.8	+0.7
HWQ				eS	Sg	10 57 47.8	+0.5
HWQ	Hawqa	0.53	21	eP	Pg	10 57 40.8	+0.7
HWQ				eS	Sg	10 57 47.8	+0.5
TOTH	TOTAH	0.72	125	eP	Pb	10 57 38.4	-4.9
TOTH				AML	AML	10 58 02.1	
	comp=Z,26nm,0.4s						
TOTH	TOTAH	0.72	125	eP	Pb	10 57 38.4	-4.9
	SNR=75						
BIDA	Albida	1.33	22	AML	AML	10 58 06.9	
	comp=N,94nm,0.3s						
SALA	Sala	1.36	141	eP	Pg	10 57 56.0	+0.4
SALA				eS	Sg	10 58 14.2	+0.7
SALA				AML	AML	10 58 19.3	
	comp=Z,32nm,0.4s						
SALA				AML	AML	10 58 19.8	
	comp=N,21nm,0.6s						
SALA				AML	AML	10 58 20.0	
	comp=E,1.5nm,0.4s						
SALA	Sala	1.36	141	eP	Pg	10 57 56.0	+0.4
	SNR=57						
SALA				eS	Sg	10 58 14.2	+0.7
	comp=E,1.5nm,0.4s,SNR=49						
ZALF	Zalf	1.60	122	eP	Pn	10 57 54.6	-1.9
ZALF				AML	AML	10 58 19.8	
	comp=Z,20nm,0.3s						
ZALF	Zalf	1.60	122	eP	Pn	10 57 54.6	-1.9
	SNR=57						
ARNB	Al Arnab	2.09	6	eP	Pn	10 57 58.5	-4.8
ARNB				AML	AML	10 58 33.6	
	comp=E,13nm,0.3s						
ARNB				AML	AML	10 58 40.8	
	comp=N,8.0nm,0.5s						
ARNB				AML	AML	10 58 41.1	
	comp=Z,16nm,0.7s						
ARNB	Al Arnab	2.09	6	eP	Pn	10 57 58.5	-4.8
	SNR=45						

IDC 09 11:23:48.9±2.6**, 13.°59S×167.°82E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.7/4, Error ellipse: s-maj=91.0km s-min=37.3km az=133.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.64	254	P	P	11 30 22.6	-0.3
	0.3nm,0.5s,baz=85,slow=9.4,SNR=5.7						
ASAR	Alice Springs	33.59	248	P	P	11 30 31.4	+0.2
	0.5nm,0.5s,baz=74,slow=9.6,SNR=20						
ASAR				PcP	PcP	11 33 10.9	-0.9
	0.2nm,0.5s,baz=78,slow=2.2,SNR=4.4						
SONM	Songino Array	81.91	323	P	P	11 36 10.8	+0.3
	0.2nm,0.5s,baz=134,slow=4.2,SNR=2.9						
MKAR	Makanchi Array	96.75	316	P	P	11 37 21.6	0.0
	0.3nm,0.5s,baz=91,slow=5.4,SNR=3.2						
ARCES	ARCESS Array B	119.29	346	PKP	PKPdf	11 42 39.2	-0.4
	3.4nm,1.0s,baz=93,slow=1.8,SNR=5.6						

GUC 09 11:30:43.1±0.5**, 32.°42S×71.°56W, h55km**±6km**, MD3.6, ML2.8, 3C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.53	5	⇑iP	Pn	11 30 55.4	+0.3
CHNG				iS	Sn	11 31 04.3	+0.5
CHNG				AML	AML	11 31 04.8	
	comp=N,424nm,0.2s						
JACH	Jahuel	0.86	108	eP	Pn	11 30 59.9	+0.6
JACH				iS	Sn	11 31 12.3	+1.1
CLCH	Cerro Calan	1.30	139	⇓iP	Pn	11 31 05.7	+0.6
CLCH				iS	Sn	11 31 22.8	+1.2
CLCH				AML	AML	11 31 25.1	
	comp=E,172nm,0.4s						
CMCH	Combarbala	1.33	21	⇑iP	Pn	11 31 05.7	+0.2
CMCH				iS	Sn	11 31 23.3	+1.1
CMCH				AML	AML	11 31 25.9	
	comp=E,372nm,0.5s						
TACH	Talagante	1.34	157	⇑iP	Pn	11 31 06.0	+0.4
TACH				iS	Sn	11 31 23.3	+0.9
ANTU	Antumapu	1.39	146	iS	Sn	11 31 24.5	+0.9
ANTU				AML	AML	11 31 26.5	
	comp=N,182nm,0.3s						
PCH	Pirque	1.49	144	eP	Pn	11 31 08.0	+0.3
PCH				eS	Sn	11 31 26.9	+0.8
LMEL	Las Melosas	1.82	142	⇓iP	Pn	11 31 13.2	+0.9
LMEL				eS	Sn	11 31 35.7	+1.2
LMEL				AML	AML	11 31 38.3	
	comp=N,303nm,0.1s						

IDC 09 11:36:58.4±1.4**, 4.°13N×126.°69E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.3/23, mbtmp3.3/4, Error ellipse: s-maj=141.6km s-min=21.7km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.08	163	P	P	11 42 23.2	-1.7
	1.8nm,0.9s,baz=343,slow=11,SNR=8.0						
ASAR	Alice Springs	28.51	166	P	P	11 42 57.6	+1.7
	0.1nm,0.5s,baz=342,slow=11,SNR=3.2						
SONM	Songino Array	46.90	341	P	P	11 45 31.5	+0.6
	0.1nm,0.4s,baz=139,slow=8.9,SNR=2.7						
MKAR	Makanchi Array	57.20	325	P	P	11 46 46.5	-1.0
	0.1nm,0.5s,baz=123,slow=7.9,SNR=3.6						

MAN 09 11:56:56, 15.°35N×120.°49E, h7km, mb3.9, ML2.7, MS2.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCPH	Palayan	0.62	70	⇓eP	Pb	11 57 08.9	-0.4
PCPH				eS	Sb	11 57 17.6	-0.5
SCZP	Santa Cruz	0.70	307	eP	Pg	11 57 09.3	-0.2
SCZP				eS	Sg	11 57 19.5	+0.8
BALP	Baler	1.12	69	eP	Pg	11 57 17.0	-0.5
BOLP	Bolinao	1.17	332	eP	Pn	11 57 19.1	+0.4

KRSC 09 12:09:00.1±2.1**, 51.°14N×154.°27E, h441km**±71km**, ML3.9, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	1.92	53	eP	P	12 09 59.9	+0.7
RUS	Russkaya	2.94	62	eP	P	12 10 07.4	+1.6
RUS				iS	S	12 10 56.9	-2.4
UGLR	Uglovaya	3.49	52	P	P	12 10 11.5	+1.3
KRER	Koryakskii	3.50	50	P	P	12 10 12.4	+1.9
SPN	Mys Shipunski	4.05	59	eP	P	12 10 17.1	+2.2
SPN				iS	S	12 11 12.4	-3.6
TUMR	Tumrok	5.45	38	eP	P	12 10 30.4	+2.0
MKZ	Mys Kozlova	5.67	50	eP	P	12 10 31.7	+1.3
MKZ				eS	S	12 11 39.2	-5.1
KMNR	Kamenistaya	5.84	35	P	P	12 10 34.1	+1.8

WEL 09 12:26:52.0±0.2**, 37.°31S×177.°77E, h53km**±2km**, ML3.7/6, 4C-4D, Error ellipse: s-maj=1.9km s-min=1.5km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.50	120	⇑P*	Pn	12 27 02.5	-1.0
MXZ				S*	Sn	12 27 11.3	-0.3
WIZ	White Island	0.51	245	⇑P*	Pn	12 27 03.5	0.0
WIZ				S*	Sn	12 27 12.5	+0.7
PUZ	Puketiti	0.85	153	⇓PN	Pn	12 27 08.1	+0.2
MWZ	Matawai	1.04	190	P*	Pn	12 27 09.6	-0.8
URZ	Urewera	1.08	209	⇑P*	Pn	12 27 10.3	-0.5
URZ				S*	Sn	12 27 24.3	-0.6
OPRZ	Ohinepanea	1.10	241	P*	Pn	12 27 11.0	-0.2
CNGZ	Carnagh Statio	1.22	163	PN	Pn	12 27 13.0	+0.2
TGRZ	Tauranga	1.27	250	⇓P*	Pn	12 27 13.3	-0.1
LIRZ	Lichensteins R	1.29	237	P*	Pn	12 27 14.4	+0.6
RRRZ	Republican Roa	1.43	224	P*	Pn	12 27 15.4	-0.2
PRGZ	Paritu Road	1.61	177	ePN	Pn	12 27 17.9	-0.3
ALRZ	Allen Road	1.68	222	P*	Pn	12 27 19.1	+0.1
KNZ	Kokohu	1.71	182	PN	Pn	12 27 18.6	-0.7
KUZ	Kuaotunu	1.73	288	⇓PN	Pn	12 27 19.4	-0.3
KUZ				SN	Sn	12 27 40.1	-0.6
MHGZ	Mahia Peninsul	1.84	177	PN	Pn	12 27 20.7	-0.6
TOZ	Tahuroa Road	1.85	256	⇓P*	Pn	12 27 21.2	0.0
NMHZ	Naumai	1.94	203	PN	Pn	12 27 23.5	+0.9
MKAZ	Moumakai	2.08	275	PN	Pn	12 27 24.8	+0.3
BKZ	Black Stump Fm	2.10	208	P*	Pn	12 27 24.8	-0.1
MCHZ	McNeill Hill	2.29	201	ePN	Pn	12 27 27.3	0.0
KAHZ	Kahuranaki	2.57	195	PN	Pn	12 27 30.5	-0.8
RVAZ	Riverhead Bore	2.61	281	ePN	Pn	12 27 32.3	+0.6
FWVZ	Far West T-bar	2.61	221	P*	Pn	12 27 32.7	+0.7
MOVZ	Moawhango	2.62	216	P*	Pn	12 27 32.0	-0.1
WNVZ	Wahianoa	2.64	220	P*	Pn	12 27 32.8	+0.5
PXZ	Pawanui	2.81	194	⇑PN	Pn	12 27 32.3	-2.0
PNHZ	Pukenui	2.87	205	PN	Pn	12 27 33.9	-1.5
WPHZ	Waipukurau	2.94	200	PN	Pn	12 27 34.5	-1.8
WCZ	Waipu Caves	3.07	295	ePN	Pn	12 27 38.3	+0.2
TSZ	Takapari Road	3.08	207	PN	Pn	12 27 36.3	-2.0
MRZ	Mangatainoka R	3.75	206	PN	Pn	12 27 44.7	-2.7
MRZ				SN	Sn	12 28 26.9	-3.4
OGWZ	Otaki Gorge	4.04	209	PN	Pn	12 27 49.2	-2.1
MTW	Mount Morrison	4.22	204	PN	Pn	12 27 50.2	-3.6
TUWZ	Tuamarina	5.07	215	PN	Pn	12 28 02.2	-3.2
NNZ	Nelson	5.17	220	PN	Pn	12 28 03.7	-3.2
QRZ	Quartz Range	5.38	228	PN	Pn	12 28 07.0	-2.7
THZ	Tophouse	5.82	219	PN	Pn	12 28 12.2	-3.6
KHZ	Kahutara	6.04	211	PN	Pn	12 28 15.1	-3.7
LTZ	Lake Taylor	6.90	216	PN	Pn	12 28 25.2	-5.4

*ISCJB **09** 12:30:04.4±0.5, 37.°23N±0.°03×71.°93E±0.°07, h130km, mb3.6/6, Error ellipse: s-maj=8.9km s-min=3.3km az=157.2*
*IDC **09** 12:30:10.0±5.2, 37.°60N×71.°69E, h137km±36km, mb3.4/6, mb1 3.5/12, mb1mx3.2/32, mbtmp3.4/12, Error ellipse: s-maj=45.5km s-min=26.1km az=165.0*
*NNC **09** 12:30:16.1±3.9, 38.°08N×71.°83E, h189km±31km, mb2.6, mpv3.7, Error ellipse: s-maj=39.9km s-min=17.6km az=25.0*

ISC 09 12:30:05.6±0.7**, 37.°32N**±0.°05×**72.°10E**±0.°08**, h130km, n46, σ1.°96/49, mb3.7/6, 5C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	3.75	53	Pn	Pn	12 31 02.5	+0.4
KSH				Sn	Sn	12 31 40.9	-5.0
KSH				smax	smax		
	comp=N,330nm,0.6s						
KSH				smax	smax		
	comp=E,240nm,0.5s						
AML	Almayashu	4.96	14	P	Pn	12 31 21.0	+2.5
	SNR=38						
UCH	Uchtor	5.24	20	P	Sn	12 32 23.2	+1.3
	SNR=16						
KZA	Kyzart	5.33	26	P	Pn	12 31 26.9	+3.4
	SNR=7.7						
AAK	Ala-Archa	5.61	18	P	Pn	12 31 30.3	+3.3
	comp=E,3.7nm,0.3s,baz=184,slow=7.5,SNR=24						
AAK				S	Sn	12 32 32.8	+2.3
	comp=E,2.8nm,0.3s,baz=324,slow=22,SNR=18						
THN	Thein Dam	5.71	148	ePKP	Pn	12 31 30.0	+1.8
THN				eS	Sn	12 32 30.8	-1.9
DLH	Dalhousie	5.73	145	ePKP	Pn	12 31 30.0	+1.3
DLH				eS	Sn	12 32 32.0	-1.5
KK31	Karatay Array	5.90	349	⇑P	Pn	12 31 31.1	+0.4
	comp=E,2.4nm,0.2s,baz=167,slow=10,SNR=242						
KK31				⇑S	Sn	12 32 32.8	-4.4
	comp=E,8.4nm,0.3s,baz=155,slow=16,SNR=17						
CHMS	Chumysh	6.02	19	P	Pn	12 31 35.5	+3.1
	SNR=7.1						
DHRM	DHARAMSHALA	6.13	144	ePKP	Pn	12 31 36.9	+2.8
DHRM				eS	Sn	12 32 41.7	-1.4
DHRM				AML	AML	12 32 47.1	
	comp=E,299nm,0.5s						
DHRM				AML	AML	12 32 47.4	
	comp=N,187nm,0.4s						
TKM2	Tokmak 2	6.20	25	⇑P	Pn	12 31 38.4	+3.4
	comp=N,4.4nm,0.5s						
TKM2				⇑S	Sn	12 32 42.0	-2.7
	comp=N,9.1nm,0.9s						
TKM2	Tokmak 2	6.20	25	P	Pn	12 31 38.5	+3.6
	SNR=14						
USP	Ospenovka	6.21	16	P	Pn	12 31 37.3	+2.4
	SNR=5.8						
SDNR	Sundarnagar	7.07	144	ePKP	Pn	12 31 51.0	+4.5
SDNR				eS	Sn	12 33 02.2	-3.2

SMLA	Simla	7.47	144	ePKP	Pn	12 31 54.2	+2.3
SMLA				eS	Sn	12 33 11.0	-4.1
SMLA				AML	AML	12 33 16.8	
	comp=E,96nm,0.5s						
SMLA				AML	AML	12 33 16.9	
	comp=N,116nm,0.3s						
DDI	Dehra Dun	8.56	143	eS	Sn	12 33 39.2	-2.4
MK31	Makanchi Array	12.11	35	⇓P	Pn	12 32 56.6	+2.8
	comp=N,0.3nm,0.5s,baz=218,slow=15,SNR=5.5						
MKAR	Makanchi Array	12.11	35	P	Pn	12 32 56.6	+2.8
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=6.4						
PYUN	Piuthan	12.98	132	eP	Pn	12 33 06.0	+0.6
	comp=N,32nm,0.7s						
DANN	Dangsing	13.26	129	eP	Pn	12 33 09.4	+0.2
	comp=N,15nm,0.4s						
KOLN	Koldanda	13.58	131	eP	Pn	12 33 13.1	-0.1
	comp=N,8.9nm,0.4s						
KUR16	Kurchatov Arra	14.07	17	⇑P	Pn	12 33 19.8	+0.9
	comp=N,0.1nm,0.4s						
KURBB	Kurchatov Arra	14.07	17	P	Pn	12 33 19.2	+0.2
	comp=N,0.0nm,0.3s,baz=209,slow=12,SNR=3.6						
KURBB				S	Sn	12 35 46.4	-7.9
	baz=210,slow=44,SNR=10						
KKN	Kakani	14.61	127	eP	Pn	12 33 25.9	-0.4
	comp=N,9.8nm,0.5s						
DMN	Daman	14.63	128	eP	Pn	12 33 25.8	-0.7
	comp=N,15nm,0.5s						
AB31	Akbulak array	14.83	327	⇓P	Pn	12 33 27.4	-1.2
	comp=N,0.9nm,0.5s,baz=139,slow=12,SNR=17						
AB31				S	Sn	12 36 00.2	-12
	comp=N,3.8nm,0.6s,baz=104,slow=50,SNR=25						
PKIN	Phulchoki	14.83	127	eP	Pn	12 33 28.6	-0.5
PKI	Pulchoki	14.85	127	eP	Pn	12 33 29.9	+0.6
	comp=N,22nm,0.7s						
GUN	Gumba	14.92	125	eP	Pn	12 33 29.7	-0.5
	comp=N,7.4nm,0.4s						
VOSK	Vostochnaya	15.42	357	⇓P	Pn	12 33 35.1	-0.9
	comp=N,2.1nm,0.9s						
BVAR	Borovoye Array	15.75	356	P	Pn	12 33 39.8	-0.2
	comp=N,0.5nm,0.3s,baz=160,slow=10,SNR=9.9						
BVAR				S	Sn	12 36 30.2	-4.5
	comp=N,0.1nm,0.3s,baz=162,slow=19,SNR=4.2						
ZRNK	Zerenda	15.78	353	⇓P	Pn	12 33 39.4	-1.0
	comp=N,1.9nm,0.6s						
RAMN	Ramite	16.04	126	eP	Pn	12 33 44.2	+0.1
	comp=N,8.8nm,0.4s						
TAPN	Taplejung	16.50	123	eP	P	12 33 50.0	-0.1
	comp=N,7.4nm,0.4s						
AKTO	Aktyubinsk	16.54	327	⇓P	Pn	12 33 49.6	-0.2
	comp=N,1.1nm,0.8s						
AKTO				⇓S	Sn	12 36 43.5	-10
	comp=N,0.8nm,0.8s						
AKTO	Aktyubinsk	16.54	327	P	P	12 33 49.9	-0.1
	comp=N,1.1nm,0.3s,baz=136,slow=9.5,SNR=19						
AKTO				S	Sn	12 36 43.1	-11
	comp=N,0.4nm,0.3s,baz=159,slow=18,SNR=3.8						
ODAN	Odare	16.61	125	eP	P	12 33 51.9	+0.6
	comp=N,8.3nm,0.5s						
ZALV	Zalesovo Beam	18.80	24	P	Pn	12 34 17.5	+0.7
	comp=N,1.3nm,0.3s,baz=212,slow=10,SNR=19						
BRTR	Keskin Array B	30.03	287	P	P	12 36 02.0	-0.3
	comp=N,0.9nm,0.8s,baz=92,slow=4.8,SNR=3.7						
FINES	FINESS Array B	37.30	325	P	P	12 37 05.5	+0.8
	comp=N,1.6nm,0.4s,baz=116,slow=9.8,SNR=14						
CRVS	Cervenica-Dubn	38.07	304	eP	P	12 37 16.8	+5.4
ARCES	ARCESS Array B	40.73	337	P	P	12 37 34.1	+1.0
	comp=N,3.3nm,0.9s,baz=109,slow=7.8,SNR=13						
NB2	NORSAR Subarra	44.26	322	P	P	12 38 02.5	+0.7
	comp=Z,1.2nm,0.6s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.26	322	P	P	12 38 02.4	+0.5
	comp=Z,1.4nm,0.6s,baz=95,slow=7.9,SNR=4.8						
ESDC	Sonseca Array	57.85	298	P	P	12 39 44.1	+0.4
	comp=Z,0.3nm,0.5s,baz=48,slow=7.4,SNR=3.9						
YKA	Yellowknife Ar	80.38	3	P	P	12 42 03.8	+1.7
	comp=Z,0.2nm,0.4s,baz=349,slow=5.4,SNR=8.0						

MAN 09 12:36:59, 18.°39N×120.°78E, h17km, mb4.5, ML3.3, MS3.2, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.17	246	⇑iP	Pb	12 37 04.0	+0.3
PIP				eS	Sb	12 37 13.2	+6.4
APYP	Conner	0.69	140	eP	Pg	12 37 12.2	-0.4
APYP				eS	Sg	12 37 19.7	-2.0
ABRA	Dolores	0.74	185	eP	Pg	12 37 14.1	+0.5
ABRA				eS	Sn	12 37 25.7	+0.1
CAUP	Cauayan	1.75	145	eP	Pb	12 37 30.0	-0.7

WEL 09 12:40:56.2±0.4, 36.°62S×177.°10E, h232km±3km, ML4.0/5, 2C-1D, Error ellipse: s-maj=5.4km s-min=4.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.35	135	PN	Pn	12 41 31.5	0.0
MXZ				SN	S	12 41 59.5	+0.2
URZ	Urewera	1.64	180	PN	Pn	12 41 34.1	+0.2
URZ				eSN	S	12 42 02.6	-0.8
PUZ	Puketiti	1.72	148	⇑PN	Pn	12 41 34.5	-0.1
PUZ				SN	S	12 42 04.1	-0.6
MWZ	Matawai	1.75	169	⇑PN	Pn	12 41 35.2	+0.3
MWZ				SN	S	12 42 05.0	-0.3
CNGZ	Carnagh Statio	2.06	155	PN	Pn	12 41 38.0	+0.4
RAHZ	Arahi	2.30	180	PN	Pn	12 41 40.8	+0.7
PRGZ	Paritu Road	2.39	165	PN	Pn	12 41 41.3	+0.3
KNZ	Kokohu	2.44	169	PN	Pn	12 41 41.4	-0.1
NMHZ	Naumai	2.49	185	PN	Pn	12 41 43.2	+1.1
BKZ	Black Stump Fm	2.59	191	PN	Pn	12 41 43.1	-0.1
MHGZ	Mahia Peninsul	2.61	166	PN	Pn	12 41 43.3	0.0
FWVZ	Far West T-bar	2.91	204	PN	Pn	12 41 47.7	+1.0
WNVZ	Wahianoa	2.96	203	PN	Pn	12 41 47.8	+0.5
BHHZ	Black Hill Sta	2.98	196	PN	Pn	12 41 47.4	0.0
PKVZ	Pokaka	3.01	207	PN	Pn	12 41 48.5	+0.8
KAHZ	Kahuranaki	3.18	183	PN	Pn	12 41 49.3	-0.3
PNHZ	Pukenui	3.37	192	⇓PN	Pn	12 41 51.1	-0.7
PXZ	Pawanui	3.42	183	PN	Pn	12 41 51.5	-0.7
WPHZ	Waipukurau	3.48	188	PN	Pn	12 41 52.5	-0.5
TSZ	Takapari Road	3.56	194	PN	Pn	12 41 53.3	-0.6
PRHZ	Porangahau	3.67	186	PN	Pn	12 41 54.5	-0.7
DVHZ	Dannevirke	3.75	191	PN	Pn	12 41 55.2	-1.0
MRZ	Mangatainoka R	4.21	196	ePN	Pn	12 42 00.2	-1.5
MRZ				SN	S	12 42 51.9	-1.7
OGWZ	Otaki Gorge	4.46	199	PN	Pn	12 42 03.3	-1.3
KIW	Kapiti Island	4.57	201	PN	Pn	12 42 04.5	-1.6
CAW	Cannon Point	4.76	199	PN	Pn	12 42 06.5	-1.9
MSWZ	Moikau Station	5.01	196	PN	Pn	12 42 09.4	-2.0
TCW	Tory Channel	5.09	205	PN	Pn	12 42 11.6	-0.8
PLWZ	Palliser	5.15	196	PN	Pn	12 42 11.5	-1.8
TUWZ	Tuamarina	5.40	206	PN	Pn	12 42 14.2	-2.1
NNZ	Nelson	5.44	211	PN	Pn	12 42 15.7	-1.0
THZ	Tophouse	6.09	211	PN	Pn	12 42 24.3	-0.7
KHZ	Kahutara	6.42	204	PN	Pn	12 42 26.9	-2.2
LTZ	Lake Taylor	7.20	210	PN	Pn	12 42 36.5	-2.6
ODZ	Otahua Downs	9.74	208	PN	Pn	12 43 10.0	-1.4

JMA 09 12:58:02.8±0.4, 44.°60N×149.°06E, h30km, M4.3
IDC 09 12:58:05.6±3.8, 44.°69N×149.°17E, h55km±31km, mb3.1/7, mb1 3.5/9, mb1mx3.3/26, mbtmp3.3/9, ML3.5/2, Error ellipse: s-maj=62.9km s-min=16.5km az=164.0
ISCJB 09 12:58:05.4±1.1, 43.°85N±0.°07×148.°98E±0.°10, h101km±11km, mb3.2/7, Error ellipse: s-maj=14.4km s-min=8.5km az=44.0
ISC 09 12:58:04.2±2.5, 43.°94N±0.°09×149.°2E±0.°1, h72km±26km, n35, σ1.s34/48, mb3.4/7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.56	258	P	Pn	12 58 42.8	-0.5
NEM2				eS	Sn	12 59 12.7	-0.7
JRA	Rausu	2.93	271	P	Pn	12 58 48.2	-0.2
JRA				eS	Sn	12 59 21.8	-0.6
JNK	Nakash	3.25	265	P	Pn	12 58 52.6	-0.2
JNK				eS	Sn	12 59 29.6	-0.7
JAK	Akkeshi	3.40	255	P	Pn	12 58 54.9	+0.2
JAK				eS	Sn	12 59 33.2	-0.6
JTKR	Abashiri--Toko	3.81	272	P	Pn	12 59 00.5	+0.2
JAR	Ashorobuto	3.98	263	P	Pn	12 59 03.4	+0.7
JOB	Onbets	4.03	257	P	Pn	12 59 04.1	+0.8
JOB				eS	Sn	12 59 50.0	+0.7
JMP	Maruseppu	4.20	273	P	Pn	12 59 06.2	+0.5
JCH	Churui	4.45	255	P	Pn	12 59 10.3	+1.2
JCH				eS	Sn	12 59 59.4	-0.2
JKK2	Kamakawa 2	4.65	271	P	Pn	12 59 13.1	+1.3
ASAJ	Asahikawa	4.75	274	P	Pn	12 59 13.8	+0.6
	1.9nm,0.3s,baz=121,slow=13,SNR=13						
ASAJ				S	Sn	13 00 09.4	+2.5
	baz=32,slow=19,SNR=1.6						
JEM	Erimo	4.82	249	P	Pn	12 59 16.8	+2.7
JFR	Furan	4.85	263	P	Pn	12 59 16.3	+1.7
JNBK	Urakawa-nobuka	4.99	253	P	Pn	12 59 16.9	+0.4
JAB	Ashibetsu	5.06	267	P	Pn	12 59 19.6	+2.2
JBT2	Biratori 2	5.10	259	P	Pn	12 59 19.3	+1.3
JNB	Noboribetsu	6.13	259	P	Pn	12 59 32.9	+0.9
JNB				eS	Sn	13 00 40.8	+0.1
JKB	Kayabe	6.32	254	P	Pn	12 59 35.3	+0.6
JKB				eS	Sn	13 00 43.2	-2.2
JYM2	Yakumo 2	6.71	257	P	Pn	12 59 40.6	+0.6
JANG	Nango	6.72	241	P	Pn	12 59 40.9	+0.8
JANG				eS	Sn	13 00 53.3	-1.9
JTH	Tanohata	6.76	236	P	Pn	12 59 42.8	+2.1
JTH				eS	Sn	13 00 54.6	-1.6
JTM	Tenmabayashi	6.78	245	P	Pn	12 59 42.3	+1.3
JTM				eS	Sn	13 00 53.9	-2.8
JSR	Shiriuchi	6.89	253	P	Pn	12 59 42.8	+0.4
JOSM	Okushiri--Mats	7.35	259	P	Pn	12 59 49.3	+0.6
OFUJ	Ofunato	7.44	232	P	Pn	12 59 51.5	+1.5
JRG	Rokugo	7.84	238	P	Pn	12 59 57.5	+2.0
JRG				eS	Sn	13 01 22.1	-0.6
JIO	Ouri	8.05	230	P	Pn	12 59 59.8	+1.4
JIO				eS	Sn	13 01 26.1	-1.7
PETK	Petropavlovsk-	10.76	29	P	Pn	13 00 27.6	-7.6
	0.3nm,0.3s,baz=206,slow=16,SNR=6.5						
SONM	Songino Array	29.75	293	P	P	13 04 04.8	+1.1
	0.1nm,0.4s,baz=75,slow=8.6,SNR=2.8						
ILAR	Eielson Array	40.46	36	P	P	13 05 33.5	-1.8
	0.4nm,0.6s,baz=268,slow=9.1,SNR=9.1						
MKAR	Makanchi Array	45.79	298	P	P	13 06 17.7	-0.8
	0.1nm,0.5s,baz=79,slow=7.8,SNR=2.4						
YKA	Yellowknife Ar	54.82	34	P	P	13 07 25.4	-0.9
	0.5nm,0.6s,baz=302,slow=7.1,SNR=10						
NVAR	Mina Array Bea	66.23	59	P	P	13 08 45.8	+1.1
	0.2nm,0.5s,baz=310,slow=7.0,SNR=2.9						
PDAR	Pinedale Array	68.66	51	P	P	13 09 00.1	+0.1
	0.2nm,0.5s,baz=297,slow=4.0,SNR=2.6						
TXAR	Lajitas Array	81.31	58	P	P	13 10 13.9	+1.0
	0.3nm,0.5s,baz=294,slow=2.9,SNR=4.8						

MAN 09 13:12:29, 10.°96N×122.°48E, h23km, mb3.5, ML2.2, MS1.7, 1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	0.35	163	eP	Pn	13 12 38.0	-0.7
GUIM				eS	Sn	13 12 46.6	+1.6
RCP	Roxas	0.65	23	⇓iP	Pb	13 12 42.0	+0.3
RCP				i S	Sn	13 12 53.4	+1.1
CUYO	Cuyo Island	1.44	266	eP	Pn	13 12 53.5	-0.2
CUYO				eS	Sn	13 13 06.2	-5.8

MOS 09 13:24:57.5±1.3, 59.°14N×161.°35E, h8km, mb4.0/1, Error ellipse: s-maj=34.6km s-min=11.5km az=87.6
KRSC 09 13:24:57.9±1.0, 59.°06N×161.°33E, h5km±5km, ML4.6
ISCJB 09 13:24:57.5±0.4, 59.°22N±0.°02×161.°24E±0.°10, h10km, mb3.5/7, Error ellipse: s-maj=7.1km s-min=3.3km az=168.8
IDC 09 13:24:58.0±0.9, 59.°08N×161.°17E, h0km, mb3.6/7, mb1 3.8/8, mb1mx3.5/29, mbtmp3.6/8, ML3.7/1, Error ellipse: s-maj=25.2km s-min=18.1km az=28.0
NERS 09 13:24:58.7, 59.°08N×161.°21E, h7km
ISC 09 13:24:59.2±0.7, 59.°01N±0.°03×161.°16E±0.°05, h10km, n33, σ1.s98/43, mb3.7/7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALN	Palana	0.62	278	i P	Pn	13 25 13.1	-0.9
PALN				i S	Sn	13 25 23.6	-0.5
SRKR	Sorokina	2.37	180	eP	Pb	13 25 40.5	-1.4
SRKR				i S	Sb	13 26 12.1	+1.0
SMKR	Semkarok	2.44	176	P	Pn	13 25 41.0	+1.9
SMKR				i S	Sb	13 26 12.9	-0.4
KLY	Klyuchi	2.72	186	PN	Pb	13 25 45.7	-2.2
KLY				S	Sb	13 26 21.2	0.0
KLY	Klyuchi	2.72	186	eP	Pb	13 25 45.7	-2.2
KLY				i S	Sb	13 26 21.2	0.0
KRSR	Krestovskiy	2.82	187	P	Pn	13 25 46.9	+2.5
KRSR				i S	Sb	13 26 22.7	-1.6
KBTR	Krutoberegovo	2.95	162	PN	Pn	13 25 46.6	+0.6
KBTR	Krutoberegovo	2.95	162	eP	Pn	13 25 46.6	+0.6
EVEN	Evensk	3.06	343	eP	Pn	13 25 48.8	+1.2
EVEN				eSg	Sb	13 26 31.6	+0.5
EVEN				Sgmax		13 26 35.0	
	150nm,0.5s						
ESO	Esso	3.37	204	PN	Pn	13 25 53.7	+1.9
ESO				S	Sn	13 26 35.3	+3.5
ESO	Esso	3.37	204	eP	Pn	13 25 53.7	+1.9
ESO				i S	Sn	13 26 35.3	+3.5
TUMR	Tumrok	3.78	189	P	Pn	13 25 59.2	+1.6
OMS	Omsukchan	4.40	325	ePg	Pb	13 26 18.2	+1.8
OMS				eSg	Sg	13 27 16.0	-4.2
OMS				Sgmax		13 27 28.8	
	70nm,0.6s						
TLAR	Talaya	4.88	300	eP	Pn	13 26 15.0	+2.5
TLAR				ePg	Pb	13 26 26.8	+2.2
TLAR				eS	Sn	13 27 14.6	+5.6
TLAR				eSg	Sg	13 27 31.8	-3.8
TLAR				Sgmax		13 27 50.2	
	80nm,1.0s						
MGD	Magadan 1	5.41	285	eP	Pn	13 26 20.9	+1.1
MGD				Pmax		13 26 22.5	
	40nm,0.3s						
MGD				eS	Sn	13 27 22.1	0.0
MGD				eSg	Sg	13 27 47.9	-4.8
MGD				Smax		13 27 59.9	
	90nm,0.8s						
GNL	Ganaly	5.62	200	P	Pn	13 26 25.6	+2.7
SEY	Seymchan	5.81	316	eP	Pn	13 26 25.2	0.0
SEY				ePg	Pb	13 26 43.6	+3.2
SEY				Pgmax		13 26 47.7	
	10.0nm,0.8s						
SEY				eSg	Sg	13 27 58.4	-6.9
SEY				Sgmax		13 28 19.1	
	30nm,0.6s						
PETK	Petropavlovsk-	6.23	200	PN	Pn	13 26 36.4	+5.3
PETK	Petropavlovsk-	6.23	200	Pn	Pn	13 26 36.4	+5.3
	0.4nm,0.3s,baz=45,slow=13,SNR=6.0						
OCHR	Omchak	7.11	298	eP	Pb	13 26 52.7	-10
OCHR				Pmax		13 26 54.6	
	10.0nm,0.2s						
OCHR				e		13 28 53.5	
OCHR				e		13 28 56.7	
OCHR				emax		13 29 04.8	
	50nm,0.8s						
OCHR				emax		13 29 04.8	
	120nm,0.8s						
SUUS	Susuman	7.37	306	eP	Pn	13 26 48.8	+2.0
SUUS				e		13 28 03.1	
SUUS				eSg	Sg	13 28 46.8	-8.7
SUUS				Sgmax		13 29 10.4	
	40nm,0.9s						
FX1	Attu Island--F	9.11	127	Pn	Pn	13 27 11.0	+0.5
	2.6nm,0.3s,baz=330,slow=6.1,SNR=6.8						
BILL	Bilibino	9.34	12	eP	Pn	13 27 17.0	+3.4
BILL				Pmax		13 27 19.2	
	10.0nm,0.4s						
BILL				eS	Sn	13 28 55.4	-3.2
BILL				eSg		13 29 47.4	
BILL				Sgmax		13 30 04.2	
	10.0nm,0.7s						
BILL	Bilibino	9.34	12	P	Pn	13 27 17.3	+3.7
ILAR	Eielson Array	24.52	54	P	P	13 30 17.9	-0.4
	1.6nm,0.9s,baz=273,slow=9.1,SNR=19						
YKA	Yellowknife Ar	38.55	48	P	P	13 32 21.1	-0.3
	0.2nm,0.6s,baz=306,slow=8.2,SNR=4.9						
MKAR	Makanchi Array	46.34	291	P	P	13 33 25.1	+0.1
MKAR	Makanchi Array	46.34	291	P	P	13 33 25.1	+0.1
	0.2nm,0.7s,baz=30,slow=8.9,SNR=2.9						
BVAR	Borovoye Array	47.33	305	P	P	13 33 33.6	+1.0
BVAR	Borovoye Array	47.33	305	P	P	13 33 33.6	+1.0
	0.6nm,0.6s,baz=60,slow=8.5,SNR=4.9						
WRA	Warramunga Arr	81.71	205	P	P	13 37 18.4	+0.9
	0.6nm,0.8s,baz=14,slow=5.0,SNR=3.3						
ASAR	Alice Springs	85.40	205	P	P	13 37 36.8	+0.4
	0.2nm,0.8s,baz=22,slow=4.9,SNR=2.8						
STKA	Stephens Creek	92.00	197	P	P	13 38 07.2	-0.4
	1.2nm,0.7s,baz=0.0,slow=6.1,SNR=2.9						

IDC 09 13:28:39.9±1.7, 8.°94S×117.°36E, h0km, mb3.2/2, mb1 3.6/5, mb1mx3.4/23, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=39.2km s-min=14.5km az=50.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	4.56	32	Pn	Pn	13 29 50.4	+0.2
	2.8nm,0.3s,baz=238,slow=5.4,SNR=12						
KAPI				Sn	Sn	13 30 45.8	+1.8
	10.0nm,0.3s,baz=74,slow=23,SNR=16						
FITZ	Fitzroy Crossi	12.16	139	Pn	Pn	13 31 36.0	+1.6
	0.1nm,0.3s,baz=307,slow=10.0,SNR=3.5						
FITZ				Sn	Sn	13 33 50.2	-0.6
	0.1nm,0.3s,baz=58,slow=16,SNR=3.8						
WRA	Warramunga Arr	19.73	126	P	Pn	13 33 13.2	+0.5
	0.1nm,0.3s,baz=302,slow=12,SNR=12						
WRA				S	S	13 36 54.3	-0.6
	0.0nm,0.3s,baz=300,slow=24,SNR=3.0						
ASAR	Alice Springs	21.57	135	P	P	13 33 33.2	+2.0
	0.8nm,0.8s,baz=304,slow=9.3,SNR=10						
MKAR	Makanchi Array	63.67	334	P	P	13 39 12.1	-0.9
	0.2nm,0.5s,baz=160,slow=7.7,SNR=6.8						

NSSC 09 13:41:47.3±0.6, 33.°77N×35.°84E, h10km±6km, MD1.2, ML1.5
CSEM 09 13:41:47.4±0.2, 33.°75N×35.°85E, h10km, ML1.5, Error ellipse: s-maj=6.1km s-min=3.3km az=81.0
ISCJB 09 13:41:47.7±0.6, 33.°75N±0.°07×35.°9E±0.°2, h12km±21km, Error ellipse: s-maj=32.3km s-min=4.9km az=160.3
GRAL 09 13:41:48.7±0.3, 33.°74N×35.°88E, h0km±31km, MD2.7
ISC 09 13:41:47.3±1.0, 33.°75N±0.°03×35.°84E±0.°05, h17km±10km, n13, σ0.s38/22, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.22	315	eP	Pb	13 41 53.1	+0.2
BHL				eS	Sb	13 41 56.4	-0.3
BHL	Bhannes	0.22	315	eP	Pb	13 41 53.1	+0.2
BHL				eS	Sb	13 41 56.4	-0.3
RCY	Rachaya	0.25	181	eP	Pg	13 41 53.1	-0.1
RCY				eS	Sg	13 41 56.4	-0.6
BRBR	Barbar	0.35	165	i P	Pg	13 41 54.5	-0.3
BRBR				eS	Sg	13 42 00.5	+0.7
BRBR				AML	AML	13 42 03.5	
	comp=E,51nm,0.4s						
BRBR				AML	AML	13 42 11.3	
	comp=N,75nm,0.7s						
BRBR				AML	AML	13 42 12.8	
	comp=Z,78nm,0.7s						
BRBR	Barbar	0.35	165	i P	Pg	13 41 54.5	-0.3
	SNR=92						
BRBR				eS	Sg	13 42 00.5	+0.7
	comp=Z,78nm,0.7s,SNR=59						
HWQ	Hawqa	0.54	9	eP	Pg	13 41 58.4	+0.3
HWQ	Hawqa	0.54	9	eP	Pg	13 41 58.4	+0.3
TOTH	TOTAH	0.62	128	eP	Pb	13 41 59.7	-0.1
TOTH				eS	Sb	13 42 08.5	+0.2
TOTH				AML	AML	13 42 13.8	
	comp=N,29nm,0.6s						
TOTH				AML	AML	13 42 15.2	
	comp=Z,20nm,1.1s						
TOTH				AML	AML	13 42 20.2	
	comp=E,23nm,0.8s						
TOTH	TOTAH	0.62	128	eP	Pb	13 41 59.7	-0.1
	SNR=75						
TOTH				eS	Sb	13 42 08.5	+0.2
	comp=E,23nm,0.8s,SNR=59						
HAWK	Haweek	0.90	31	eP	Pb	13 42 04.0	-0.6
HAWK				eS	Sb	13 42 16.3	0.0
HAWK				AML	AML	13 42 19.3	
	comp=E,14nm,0.5s						
HAWK				AML	AML	13 42 26.2	
	comp=N,21nm,0.6s						
HAWK	Haweek	0.90	31	eP	Pb	13 42 04.0	-0.6
	SNR=75						
HAWK				eS	Sb	13 42 16.3	0.0
	comp=N,21nm,0.6s,SNR=59						
ZALF	Zalf	1.50	123	eP	Pb	13 42 14.7	0.0
ZALF				AML	AML	13 42 36.7	
	comp=E,5.0nm,0.7s						
ZALF				AML	AML	13 42 37.4	
	comp=N,4.5nm,0.5s						
ZALF	Zalf	1.50	123	eP	Pb	13 42 14.7	0.0
	SNR=57						

IDC 09 13:46:17.2±1.4, 17.°54S×175.°54W, h244km±15km, mb3.5/10, mb1 3.7/11, mb1mx3.5/22, mbtmp3.5/11, Error ellipse: s-maj=23.8km s-min=10.7km az=132.0
ISCJB 09 13:46:17.1±0.5, 17.°52S±0.°09×175.°45W±0.°08, h250km, mb3.7/10, Error ellipse: s-maj=14.5km s-min=7.5km az=143.1
AUST 09 13:46:20.0±0.0, 17.°61S×175.°14W, h270km, Error ellipse: s-maj=1.6km s-min=1.4km az=321.0
ISC 09 13:46:18.0±0.6, 17.°53S±0.°10×175.°45W±0.°09, h250km, n21, σ1.s72/22, mb3.6/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.05	45	P	Pn	13 47 34.8	+0.3
	6.7nm,0.3s,baz=246,slow=10.0,SNR=9.5						
AFI				S	S	13 48 32.8	-2.6
	13nm,0.3s,baz=9.2,slow=19,SNR=11						
NIUE	Niue	5.46	107	P	Pn	13 47 39.8	+0.4
	baz=5.2,SNR=4.8						
RAO	Raoul Island	11.88	191	P	Pn	13 49 00.5	+0.4
	680nm,0.3s,baz=23,slow=19,SNR=10						
DZM	Mont Dzumac	17.63	252	P	P	13 50 08.5	+1.8
	0.7nm,0.3s,baz=75,slow=20,SNR=4.7						
URZ	Urewera	21.66	196	P	P	13 50 47.6	-1.1
	6.8nm,0.4s,baz=61,slow=10,SNR=19						
COEN	Coen	39.93	269	P	P	13 53 29.1	+0.6
	baz=40,SNR=4.7						
STKA	Stephens Creek	41.29	241	P	P	13 53 38.5	-0.8
	1.4nm,0.5s,baz=73,slow=13,SNR=7.7						
STKA	Stephens Creek	41.29	241	P	P	13 53 39.0	-0.3
	baz=42,SNR=6.1						
WRA	Warramunga Arr	47.48	259	P	P	13 54 27.2	-1.2
	2.3nm,0.5s,baz=97,slow=6.8,SNR=49						
ASAR	Alice Springs	47.61	254	P	P	13 54 28.5	-0.9
	9.6nm,0.6s,baz=90,slow=8.2,SNR=207						
ASAR				S	S	14 01 00.8	-4.9
	0.3nm,0.9s,baz=86,slow=15,SNR=3.0						
KDU	Kakadu	50.39	268	P	P	13 54 52.8	+2.3
	baz=51,SNR=5.3						
KNRA	Kununurra	53.34	263	P	P	13 55 15.2	+3.1
	baz=54,SNR=4.1						
FITZ	Fitzroy Crossi	55.87	260	P	P	13 55 30.2	-0.1
	3.4nm,0.8s,baz=90,slow=2.0,SNR=9.8						
FITZ	Fitzroy Crossi	55.87	260	P	P	13 55 34.0	+3.7
	baz=56,SNR=5.6						
MJAR	Matsushiro Arr	69.33	321	P	P	13 56 59.3	+0.6
	0.6nm,0.9s,baz=152,slow=44,SNR=3.5						
NVAR	Mina Array Bea	77.22	43	P	P	13 57 44.8	-0.1
	0.7nm,0.8s,baz=233,slow=7.2,SNR=5.0						
TXAR	Lajitas Array	83.42	57	P	P	13 58 18.3	+0.4
	0.4nm,0.8s,baz=218,slow=6.9,SNR=3.8						
ILAR	Eielson Array	84.92	12	P	P	13 58 24.8	+0.3
	0.5nm,0.5s,baz=225,slow=5.9,SNR=16						
YKA	Yellowknife Ar	92.83	24	P	P	13 59 01.9	+0.1
	0.2nm,0.6s,baz=241,slow=5.9,SNR=4.0						
BRTR	Keskin Array B	146.48	317	PKPbc	PKPdf	14 05 29.5	+1.2
	0.6nm,0.5s,baz=53,slow=5.6,SNR=4.2						
GERES	GERESS Array B	147.90	349	PKPbc	PKPbc	14 05 33.6	-0.1
	0.7nm,0.6s,baz=12,slow=5.0,SNR=5.4						

IDC 09 14:15:50.1±30.0, 16.°23S×177.°12W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.6/20, mbtmp4.0/4, Error ellipse: s-maj=581.0km s-min=145.1km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.52	240	P	P	14 23 30.7	-0.4
	3.1nm,1.0s,baz=67,slow=8.3,SNR=5.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.16**	**258**	P	P	14 24 17.1	+0.1
	0.3nm,0.3s,baz=90,slow=8.2,SNR=18						
ASAR	**Alice Springs**	**46.44**	**253**	P	P	14 24 19.0	-0.1
	3.6nm,0.6s,baz=88,slow=8.5,SNR=58						
FITZ	**Fitzroy Crossi**	**54.53**	**259**	P	P	14 25 20.0	-0.3
	0.8nm,0.7s,baz=108,slow=3.2,SNR=3.4						

MEX 09 14:44:35.6±0.5**, 16°.14N×98°.52W, h7**km±5km**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.46**	**56**	*e*P	Pg	14 44 44.2	-0.4
PNIG				*i* S	Sg	14 44 51.0	+0.3
CAIG	**El Cayaco**	**1.90**	**299**	*i* P	Pn	14 45 05.7	-2.8
VHO	**Vista Hermosa**	**1.95**	**61**	*i* P	Pn	14 45 05.2	-4.2
VHO				*e*S	Sn	14 45 29.3	-5.1
HUIG	**Huatulco**	**2.35**	**99**	*i* P	Pn	14 45 11.0	-3.7
HUIG				*i* S	Sn	14 45 40.0	-3.8
ARIG	**Puente Sto Nin**	**2.75**	**321**	*i* P	Pn	14 45 17.8	-2.5
ARIG				*i* S	Sn	14 45 50.5	-3.3

*SZGRF **09** 14:55:00.6, 48°.85N×152°.02E, h33km, mb4.8, Kuril Islands, Russia*
*ISCJB **09** 14:55:01.7±0.5, 47°.57N±0°.07×151°.93E±0°.07, h124km, mb4.3/54, Error ellipse: s-maj=11.4km s-min=5.2km az=150.9*
*BJI **09** 14:55:03.6, 47°.50N×152°.00E, h132km, mB4.5/5, mb4.4/9*
*MOS **09** 14:55:05.7±1.2, 47°.76N×151°.72E, h150km, mb4.2/32, Error ellipse: s-maj=10.7km s-min=6.1km az=92.3*
*NEIC **09** 14:55:06.3±1.0, 47°.63N×151°.89E, h149km±8km, mb4.4/12, Error ellipse: s-maj=20.2km s-min=7.7km az=131.0*
*IDC **09** 14:55:06.9±0.7, 47°.48N×152°.09E, h171km±6km, mb3.6/23, mb1 3.8/26, mb1mx3.7/31, mbtmp3.6/26, Error ellipse: s-maj=13.2km s-min=8.5km az=148.0*
ISC 09 14:55:03.2±0.5**, 47°.58N**±0°.08×**151°.86E**±0°.06**, h124**km**, n206, σ0s.99**/207**, mb4.3**/54**, 20C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.62**	**231**	*e*PN	Pn	14 56 07.3	+10
KUR				*e*S	Sn	14 56 48.9	+9.0
KUR				pmax	pmax		
	comp=Z,110nm,0.8s						
KUR				smax	smax		
	comp=N,140nm,0.5s						
KUR				smax	smax		
	comp=E,60nm,0.5s						
SKR	**Severo-Kuril's**	**4.18**	**40**	*e*PN	**Pn**	**14 56 07.1**	**+2.0**
SKR				*e*S	**Sn**	**14 56 53.5**	**+0.4**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax	smax		
	comp=E,140nm,0.3s						
SKR				smax	smax		
	comp=N,310nm,0.3s						
PEA0B	**Petropavlovsk-**	**6.68**	**32**	*e*Pn	Pn	14 56 41.5	+2.9
PETK	**Petropavlovsk-**	**6.68**	**32**	PN	Pn	14 56 42.1	+3.4
PETK				S	**Sn**	**14 57 58.0**	**+4.7**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**6.68**	**32**	P	Pn	14 56 42.0	+3.4
	comp=Z,0.5nm,0.3s,baz=203,slow=14,SNR=14						
PETK				S	**Sn**	**14 57 58.0**	**+4.7**
	comp=Z,0.2nm,0.3s,baz=191,slow=28,SNR=3.0						
ASAJ	**Asahikawa**	**7.33**	**245**	P	Pn	14 56 53.4	+5.8
	comp=Z,0.8nm,0.3s,baz=96,slow=22,SNR=7.4						
ERM	**Erimo**	**8.32**	**231**	*i* PN	**Pn**	**14 57 02.3**	**+1.5**
ERM	**Erimo**	**8.32**	**231**	*e*Pn	**Pn**	**14 57 02.1**	**+1.3**
HABR	**Khabarovsk**	**11.29**	**281**	PN	**Pn**	**14 57 39.2**	**-1.6**
HABR				S	**Sn**	**14 59 44.7**	**-0.3**
HABR				MLR	MLR		
	comp=Z,35nm,18.0s						
USRK	**Ussuriysk Arra**	**14.23**	**264**	P	**P**	**14 58 22.9**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=75,slow=14,SNR=4.1						
FX1	**Attu Island--F**	**14.61**	**61**	P	**P**	**14 58 27.2**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=290,slow=23,SNR=2.8						
FX1				S	Sn	15 00 56.5	-8.5
	comp=Z,1.5nm,0.3s,baz=110,slow=22,SNR=9.8						
MAJO	**Matsushiro**	**14.95**	**227**	*e*P	**P**	**14 58 33.4**	**+2.8**
MAJO	**Matsushiro**	**14.95**	**227**	*e*Pn	**P**	**14 58 33.4**	**+2.8**
SEY	**Seymchan**	**15.39**	**1**⇑	*e*P	**P**	**14 58 35.5**	**+0.3**
SEY	**Seymchan**	**15.39**	**1**⇑	*e*P	**P**	**14 58 35.5**	**+0.3**
YAK	**Yakutsk**	**19.16**	**327**⇑	*e*P	**Pn**	**14 59 18.8**	**0.0**
YAK	**Yakutsk**	**19.16**	**327**⇑	*e*P	**Pn**	**14 59 18.8**	**0.0**
KSRS	**Korea Array**	**20.26**	**249**	P	Pn	14 59 31.1	-0.7
	comp=Z,4.1nm,0.8s,baz=54,slow=10,SNR=16						
BILL	**Bilibino**	**21.79**	**15**	P	**P**	**14 59 47.0**	**+2.2**
BILL				pmax	pmax		
	comp=Z,21nm,0.5s						
BILL	**Bilibino**	**21.79**	**15**	*e*P	**P**	**14 59 44.9**	**+0.1**
	comp=Z,3.1nm,0.4s						
SONM	**Songino Array**	**30.26**	**288**	P	**P**	**15 01 02.6**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=73,slow=8.4,SNR=5.7						
XAN	**Xi'an**	**34.75**	**263**	P	**P**	**15 01 42.3**	**+0.9**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,13nm,5.0s						
COLA	**College**	**36.03**	**39**	*e*P	**P**	**15 01 51.2**	**-0.7**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
COLA	**College**	**36.03**	**39**	*e*P	**P**	**15 01 51.2**	**-0.7**
	comp=Z,4.8nm,0.5s						
ILAR	**Eielson Array**	**36.44**	**39**	P	**P**	**15 01 54.4**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=263,slow=6.6,SNR=28						
INK	**Inuvik**	**41.42**	**33**	P	**P**	**15 02 36.6**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=306,slow=6.3,SNR=21						
ZALV	**Zalesovo Beam**	**41.43**	**305**	P	**P**	**15 02 36.4**	**-0.7**
ZALV						15 04 31.8	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**41.43**	**305**	P	**P**	**15 02 36.4**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=70,slow=6.5,SNR=4.1						
ZALV				PcP	**PcP**	**15 04 31.8**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=57,slow=5.5,SNR=4.7						
MK31	**Makanchi Array**	**45.80**	**296**	*e*P	**P**	**15 03 12.0**	**-0.3**
MK31	**Makanchi Array**	**45.80**	**296**	*e*P	**P**	**15 03 12.0**	**-0.3**
MKAR	**Makanchi Array**	**45.80**	**296**	P	**P**	**15 03 12.3**	**0.0**
MKAR						15 04 46.4	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**45.80**	**296**	P	**P**	**15 03 12.3**	**0.0**
	comp=Z,1.3nm,0.4s,baz=60,slow=6.2,SNR=31						
MKAR				pP	pP	15 03 52.1	+12
	comp=Z,0.9nm,0.7s,baz=67,slow=7.9,SNR=4.9						
MKAR				PcP	**PcP**	**15 04 46.4**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=72,slow=2.2,SNR=4.8						
KURK	**Kurchatov**	**46.20**	**302**	*ce*P	**P**	**15 03 14.5**	**-0.7**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	**Kurchatov**	**46.20**	**302**	*e*P	**P**	**15 03 14.4**	**-0.7**
	comp=Z,3.2nm,0.6s						
KURBB	**Kurchatov Arra**	**46.29**	**302**	P	**P**	**15 03 15.9**	**0.0**
	comp=Z,3.3nm,0.7s,baz=68,slow=8.4,SNR=32						
KURBB				pP	pP	15 03 55.5	+11
	comp=Z,1.9nm,0.8s,baz=67,slow=8.7,SNR=5.9						
LSA	**Lhasa**	**49.38**	**272**	*e*P	**P**	**15 03 42.5**	**+1.8**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LSA	**Lhasa**	**49.38**	**272**	*e*P	**P**	**15 03 42.5**	**+1.8**
	comp=Z,6.4nm,0.6s						
BRVK	**Borovoye**	**49.71**	**308**	*ce*P	**P**	**15 03 42.4**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	**49.71**	**308**	*e*P	**P**	**15 03 42.1**	**-0.1**
RES	**Resolute Bay**	**50.32**	**18**	*e*P	**P**	**15 03 46.3**	**-0.2**
	comp=Z,4.1nm,0.8s						
RES	**Resolute Bay**	**50.32**	**18**	P	**P**	**15 03 45.8**	**-0.8**
	comp=Z,3.5nm,0.8s,baz=323,slow=8.9,SNR=12						
YKA	**Yellowknife Ar**	**50.77**	**37**	P	**P**	**15 03 49.4**	**-0.7**
	comp=Z,0.9nm,0.4s,baz=299,slow=7.0,SNR=18						
CMAR	**Chiang Mai Arr**	**51.75**	**255**	P	**P**	**15 03 58.2**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=35,slow=7.6,SNR=8.7						
TAPN	**Taplejung**	**53.21**	**272**	*e*P	**P**	**15 04 10.2**	**+1.2**
	comp=Z,8.9nm,0.6s						
ODAN	**Odare**	**53.74**	**271**	*e*P	**P**	**15 04 14.5**	**+1.7**
	comp=Z,10.0nm,0.5s						
ARU	**Arti**	**53.82**	**317**	*d i*P	**P**	**15 04 12.9**	**+0.2**
ARU						15 05 17.3	
ARU						15 06 13.6	
ARU				S	**S**	**15 11 36.1**	**-1.4**
ARU				SS	**SKiKP**	**15 15 10.0**	**-2.5**
ARU				pmax	pmax		
	comp=Z,18nm,2.5s						
GUN	**Gumba**	**54.09**	**274**	*e*P	**P**	**15 04 16.4**	**+1.0**
	comp=Z,9.3nm,0.5s						
RAMN	**Ramite**	**54.22**	**272**	*e*P	**P**	**15 04 17.4**	**+1.1**
	comp=Z,24nm,0.5s						
KKN	**Kakani**	**54.57**	**274**	*e*P	**P**	**15 04 19.9**	**+1.1**
	comp=Z,12nm,0.6s						
PKI	**Pulchoki**	**54.62**	**274**	*e*P	**P**	**15 04 20.3**	**+1.0**
	comp=Z,9.5nm,0.5s						
PKIN	**Phulchoki**	**54.63**	**274**	*e*P	**P**	**15 04 19.7**	**+0.4**
	comp=Z,5.3nm,0.5s						
DMN	**Daman**	**54.80**	**274**	*e*P	**P**	**15 04 21.8**	**+1.3**
DANN	**Dangsing**	**55.23**	**275**	*e*P	**P**	**15 04 25.2**	**+1.6**
	comp=Z,24nm,0.6s						
KOLN	**Koldanda**	**55.71**	**275**	*e*P	**P**	**15 04 28.1**	**+1.1**
	comp=Z,16nm,0.7s						
PYUN	**Piuthan**	**55.91**	**276**	*e*P	**P**	**15 04 29.0**	**+0.6**
	comp=Z,41nm,0.9s						
KEV	**Kevo**	**56.27**	**340**	*e*P	**P**	**15 04 28.8**	**-1.3**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KEV	**Kevo**	**56.27**	**340**	*e*p	**P**	**15 04 28.8**	**-1.3**
	comp=Z,0.5nm,0.3s						
ARCES	**ARCESS Array B**	**56.79**	**340**	P	**P**	**15 04 33.0**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=41,slow=8.4,SNR=6.5						
ABKAR	**Akbulak array**	**57.24**	**309**	*e*P	**P**	**15 04 36.7**	**-0.5**
	comp=Z,1.3nm,0.4s						
SUMG	**Summit**	**59.93**	**4**	*e*P	**P**	**15 04 55.6**	**-0.4**
SUMG				pmax	pmax		
	comp=Z,15nm,0.8s						
SUMG	**Summit**	**59.93**	**4**	*e*P	**P**	**15 04 55.5**	**-0.4**
	comp=Z,15nm,0.8s						
SUMG	**Summit**	**59.93**	**4**	*i* P	**P**	**15 04 56.2**	**+0.2**
	comp=Z,12nm,0.8s						
JOF	**Joensuu**	**60.21**	**333**	*e*P	**P**	**15 04 56.0**	**-1.5**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
JOF	**Joensuu**	**60.21**	**333**	*e*p	**P**	**15 04 56.0**	**-1.5**
	comp=Z,3.2nm,0.7s						
SCO	**Scoresbysund**	**62.17**	**358**	*i* P	**P**	**15 05 11.0**	**+0.4**
SCO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SCO	**Scoresbysund**	**62.17**	**358**	*i* P	**P**	**15 05 11.0**	**+0.4**
	comp=Z,5.7nm,1.0s						
KAF	**Kangasniemi**	**62.33**	**334**	*e*P	**P**	**15 05 10.3**	**-1.5**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KAF	**Kangasniemi**	**62.33**	**334**	*e*p	**P**	**15 05 10.3**	**-1.5**
	comp=Z,2.7nm,0.6s						
NVAR	**Mina Array Bea**	**62.80**	**62**	P	**P**	**15 05 13.9**	**-1.7**
	comp=Z,0.8nm,0.6s,baz=303,slow=7.7,SNR=7.3						
FINES	**FINESS Array B**	**62.92**	**334**	P	**P**	**15 05 15.2**	**-0.5**
	comp=Z,3.7nm,0.3s,baz=35,slow=7.6,SNR=32						
PDAR	**Pinedale Array**	**64.95**	**53**	P	**P**	**15 05 28.1**	**-1.6**
	comp=Z,0.9nm,0.6s,baz=305,slow=2.2,SNR=8.5						
NB2	**NORSAR Subarra**	**67.16**	**340**	P	**P**	**15 05 42.7**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**67.16**	**340**	P	**P**	**15 05 42.9**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=28,slow=6.4,SNR=21						
WRA	**Warramunga Arr**	**69.03**	**198**	P	**P**	**15 05 52.8**	**-2.4**
	comp=Z,0.2nm,0.5s,baz=16,slow=6.8,SNR=4.9						
KBZ	**Khabaz**	**69.67**	**313**	P	**P**	**15 05 59.5**	**+0.5**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**69.67**	**313**	P	**P**	**15 05 59.5**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=64,slow=2.5,SNR=7.1						
AKASG	**Malin Array Be**	**70.38**	**325**	*ce*P	**P**	**15 06 02.5**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG	**Malin Array Be**	**70.38**	**325**	P	**P**	**15 06 02.3**	**-1.0**
	comp=Z,2.9nm,0.3s,baz=34,slow=6.1,SNR=19						
ASAR	**Alice Springs**	**72.73**	**197**	P	**P**	**15 06 16.2**	**-1.3**
	comp=Z,0.9nm,0.8s,baz=11,slow=6.0,SNR=17						
ASAR				pP	pP	15 06 55.6	+7.2
	comp=Z,0.5nm,0.9s,baz=16,slow=6.0,SNR=3.0						
SCHQ	**Schefferville**	**72.87**	**22**	P	**P**	**15 06 16.9**	**-1.2**
	comp=Z,1.7nm,0.6s,baz=358,slow=10,SNR=8.0						
BUR08	**Bucovina Ar. S**	**74.41**	**326**	*e*P	**P**	**15 06 26.7**	**-0.6**
KOLS	**Kolonicke sedl**	**74.41**	**328**	*e*P	**P**	**15 06 27.6**	**+0.4**
KOLS	**Kolonicke sedl**	**74.41**	**328**	*e*P	**P**	**15 06 27.6**	**+0.4**
BURAR	**Bucovina Array**	**74.42**	**326**⇑	*i*P	**P**	**15 06 26.8**	**-0.6**
CRVS	**Cervenica-Dubn**	**74.73**	**329**	*e*P	**P**	**15 06 31.8**	**+2.8**
CRVS	**Cervenica-Dubn**	**74.73**	**329**	*e*P	**P**	**15 06 31.8**	**+2.8**
TRPA	**Tarpa**	**74.99**	**328**⇑	*i*P	**P**	**15 06 30.3**	**-0.2**
UPC	**Upice**	**75.16**	**333**	*e*P	**P**	**15 06 30.0**	**-1.5**
UPC	**Upice**	**75.16**	**333**	*e*P	**P**	**15 06 30.0**	**-1.5**
DPC	**Dobruska-Polom**	**75.20**	**332**	*e*P	**P**	**15 06 31.3**	**-0.5**
DPC	**Dobruska-Polom**	**75.20**	**332**	*e*P	**P**	**15 06 31.3**	**-0.5**
MORC	**Moravsky Berou**	**75.31**	**331**⇓	*i*P	**P**	**15 06 32.2**	**-0.2**
CLL	**Collm**	**75.35**	**335**	*i* P	**P**	**15 06 32.1**	**-0.5**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CLL	**Collm**	**75.35**	**335**	*e*P	**P**	**15 06 32.1**	**-0.5**
	comp=Z,7.0nm,0.6s						
CLL	**Collm**	**75.35**	**335**	*i* P	**P**	**15 06 32.1**	**-0.5**
	comp=Z,7.0nm,0.6s						
BRG	**Berggiesshubel**	**75.46**	**334**	*e*(P)	**P**	**15 06 32.6**	**-0.6**
	comp=Z,1.6nm,0.7s						
PVCC	**Panska Ves**	**75.58**	**333**	*e*P	P	15 06 40.8	+6.9
MLR	**Muntele Rosu**	**75.89**	**324**⇑	*i*P	**P**	**15 06 36.6**	**+0.7**
VYHS	**Vyhne**	**75.98**	**330**	*e*P	**P**	**15 06 36.2**	**0.0**
VYHS	**Vyhne**	**75.98**	**330**	*e*P	**P**	**15 06 36.2**	**0.0**
VRAC	**Vranov**	**76.02**	**332**⇑	*i*P	**P**	**15 06 36.3**	**-0.1**
DRGR		**76.05**	**327**⇓	*i*P	**P**	**15 06 36.6**	**-0.1**
PRU	**Pruhonice**	**76.06**	**333**	*e*P	**P**	**15 06 36.5**	**-0.1**
PRU	**Pruhonice**	**76.06**	**333**	*e*P	**P**	**15 06 36.5**	**-0.1**
VOIR		**76.29**	**325**⇑	*i*P	**P**	**15 06 38.8**	**+0.7**
MOX	**Moxa**	**76.34**	**335**	*e*P	**P**	**15 06 38.2**	**0.0**
MOX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MOX	**Moxa**	**76.34**	**335**	*e*P	**P**	**15 06 38.2**	**0.0**
	comp=Z,3.0nm,0.7s						
ARR	**Arges**	**76.51**	**325**⇑	*i*P	**P**	**15 06 41.2**	**+1.8**
KHC	**Kasperske Hory**	**77.12**	**333**	*e*P	**P**	**15 06 42.9**	**+0.3**
KHC	**Kasperske Hory**	**77.12**	**333**	*e*P	**P**	**15 06 42.9**	**+0.3**
BRTR	**Keskin Array B**	**77.20**	**316**	P	**P**	**15 06 43.7**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=44,slow=6.4,SNR=8.0						
GRF	**Grafenberg Arr**	**77.31**	**335**	*e*P	**P**	**15 06 44.1**	**+0.4**
GRF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GRF	**Grafenberg Arr**	**77.31**	**335**	*e*P	**P**	**15 06 44.1**	**+0.4**
	comp=Z,8.0nm,0.6s						
WET	**Wettzell**	**77.32**	**334**	*e*P	**P**	**15 06 44.1**	**+0.4**
WET				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WET	**Wettzell**	**77.32**	**334**	*e*P	**P**	**15 06 44.1**	**+0.4**
	comp=Z,4.0nm,0.7s						
GEC2	**GERESS Array S**	**77.33**	**333**	*e*P	**P**	**15 06 43.7**	**-0.2**
GEC2	**GERESS Array S**	**77.33**	**333**	*e*P	**P**	**15 06 43.7**	**-0.2**
GERES	**GERESS Array B**	**77.33**	**333**	P	**P**	**15 06 43.7**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=39,slow=5.2,SNR=21						
BZS	**Buzias**	**77.45**	**327**⇓	*i*P	**P**	**15 06 43.5**	**-1.0**
CONA	**Conrad Observa**	**77.46**	**331**⇑	*i*P	**P**	**15 06 45.2**	**+0.6**
	comp=Z,5.1nm,0.6s						
TNS	**Taunus Mts**	**77.59**	**337**	*e*P	**P**	**15 06 45.4**	**+0.1**
TNS	**Taunus Mts**	**77.59**	**337**	*e*P	**P**	**15 06 45.4**	**+0.1**
KBD	**Kabd**	**77.76**	**300**	*e*P	**P**	**15 06 46.8**	**+0.3**
TXAR	**Lajitas Array**	**77.82**	**60**	P	**P**	**15 06 45.3**	**-1.7**
	comp=Z,1.6nm,0.6s,baz=294,slow=3.8,SNR=13						
TXAR				pP	pP	15 07 25.1	+7.1
	comp=Z,0.4nm,0.8s,baz=281,slow=4.2,SNR=2.7						
QRN	**Al-Qurain**	**77.94**	**299**	*e*P	**P**	**15 06 47.8**	**+0.2**
NAY	**Al-Naaiem**	**77.97**	**300**	*e*P	**P**	**15 06 47.8**	**+0.1**
NAY				AMb	AMB	15 06 48.2	
	comp=Z,8.5nm,0.9s						
RDF	**Al-Radifah**	**78.03**	**300**	*e*P	**P**	**15 06 48.9**	**+0.9**
RDF				AMb	AMB	15 06 49.6	
	comp=Z,25nm,0.5s						
ARSA	**Arzberg**	**78.17**	**331**⇑	*i*P	**P**	**15 06 48.7**	**+0.2**
	comp=Z,2.1nm,0.5s						
GIVF	**Givet**	**78.62**	**339**	*e*P	**P**	**15 06 50.6**	**-0.3**
GIVF	**Givet**	**78.62**	**339**	*e*P	**P**	**15 06 50.6**	**-0.3**
GIVF	**Givet**	**78.62**	**339**	*e*P	**P**	**15 06 50.6**	**-0.3**
BAIF	**Baives**	**78.81**	**339**	*e*P	**P**	**15 06 51.9**	**0.0**
BAIF	**Baives**	**78.81**	**339**	*e*P	**P**	**15 06 51.9**	**0.0**
BAIF	**Baives**	**78.81**	**339**	*e*P	**P**	**15 06 51.9**	**0.0**
PERS	**Pernice**	**78.84**	**331**	*i* P	**P**	**15 06 52.2**	**-0.1**
GROS	**Grobnik**	**78.87**	**331**	*i* P	**P**	**15 06 52.1**	**-0.3**
KBA	**Koelnbreinsper**	**79.01**	**333**⇑	*i*P	**P**	**15 06 53.8**	**+0.5**
	comp=Z,8.4nm,0.5s						
WATA	**Walderalm**	**79.32**	**334**⇑	*i*P	**P**	**15 06 55.2**	**+0.3**
	comp=Z,5.6nm,0.5s						
GCIS	**Gornji Cirnik**	**79.35**	**331**	*i* P	**P**	**15 06 54.7**	**-0.3**
BFO	**Black Forest**	**79.35**	**336**	*e*P	**P**	**15 06 54.8**	**-0.2**
BFO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BFO	**Black Forest**	**79.35**	**336**	*e*P	**P**	**15 06 54.8**	**-0.2**
	comp=Z,6.0nm,1.0s						
WTTA	**Wattenberg**	**79.37**	**334**⇑	*i*P	**P**	**15 06 55.7**	**+0.5**
	comp=Z,11nm,0.5s						
VTS	**Vitosha**	**79.40**	**324**⇑	*i*P	**P**	**15 06 55.6**	**+0.1**
MOTA	**Moosalm**	**79.46**	**334**⇑	*i*P	**P**	**15 06 55.9**	**+0.2**
	comp=Z,4.1nm,0.6s						
CDF	**Champ du Feu**	**79.56**	**337**	*e*P	**P**	**15 06 56.1**	**-0.1**
	comp=Z,6.8nm,0.7s						
CDF	**Champ du Feu**	**79.56**	**337**	*e*P	**P**	**15 06 56.1**	**-0.1**
CDF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CDF	**Champ du Feu**	**79.56**	**337**	*e*P	**P**	**15 06 56.1**	**-0.1**
	comp=Z,6.8nm,0.6s						
PAGF	**Fort de Pagny**	**79.83**	**338**	*e*P	**P**	**15 06 57.8**	**+0.3**
	comp=Z,5.6nm,0.8s						
PAGF	**Fort de Pagny**	**79.83**	**338**	*e*P	**P**	**15 06 57.8**	**+0.3**
	comp=Z,5.6nm,0.8s						
MEZF	**Maizieres J'vi**	**80.05**	**338**	*e*P	**P**	**15 06 58.9**	**+0.2**
MEZF	**Maizieres J'vi**	**80.05**	**338**	*e*P	**P**	**15 06 58.9**	**+0.2**
HAU	**Haudompre**	**80.18**	**337**	*e*P	**P**	**15 06 59.1**	**-0.3**
HAU	**Haudompre**	**80.18**	**337**	*e*P	**P**	**15 06 59.1**	**-0.3**
HAU	**Haudompre**	**80.18**	**337**	*e*P	**P**	**15 06 59.1**	**-0.3**
HINF	**Hinteralfeld**	**80.22**	**337**	*e*P	**P**	**15 06 59.1**	**-0.6**
HINF	**Hinteralfeld**	**80.22**	**337**	*e*P	**P**	**15 06 59.1**	**-0.6**
HINF	**Hinteralfeld**	**80.22**	**337**	*e*P	**P**	**15 06 59.1**	**-0.6**
LOR	**Lormes**	**81.50**	**339**	*e*P	**P**	**15 07 06.4**	**0.0**
	comp=Z,3.9nm,0.4s						
LOR	**Lormes**	**81.50**	**339**	*e*P	**P**	**15 07 06.4**	**0.0**
	comp=Z,3.9nm,0.4s						
CABF	**La Chapelle**	**81.54**	**337**	*e*P	**P**	**15 07 06.8**	**+0.1**
CABF	**La Chapelle**	**81.54**	**337**	*e*P	**P**	**15 07 06.8**	**+0.1**
CABF	**La Chapelle**	**81.54**	**337**	*e*P	**P**	**15 07 06.8**	**+0.1**
SGMF	**Saint Gilles**	**81.99**	**343**	*e*P	**P**	**15 07 09.5**	**+0.6**
SGMF	**Saint Gilles**	**81.99**	**343**	*e*P	**P**	**15 07 09.5**	**+0.6**
SGMF	**Saint Gilles**	**81.99**	**343**	*e*P	**P**	**15 07 09.5**	**+0.6**
AVF	**Avril sur Loir**	**82.07**	**339**	*e*P	**P**	**15 07 09.2**	**-0.2**
	comp=Z,4.1nm,0.6s						
AVF	**Avril sur Loir**	**82.07**	**339**	*e*P	**P**	**15 07 09.2**	**-0.2**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AVF	**Avril sur Loir**	**82.07**	**339**	*e*P	**P**	**15 07 09.2**	**-0.2**
	comp=Z,4.1nm,0.6s						
SMF	**Signal de Mont**	**82.08**	**338**	*e*P	**P**	**15 07 09.7**	**+0.2**
SMF	**Signal de Mont**	**82.08**	**338**	*e*P	**P**	**15 07 09.7**	**+0.2**
SMF	**Signal de Mont**	**82.08**	**338**	*e*P	**P**	**15 07 09.7**	**+0.2**
LPL	**La Plagne**	**82.37**	**336**	*e*P	**P**	**15 07 11.7**	**+0.4**
LPL	**La Plagne**	**82.37**	**336**	*e*P	**P**	**15 07 11.7**	**+0.4**
LPL	**La Plagne**	**82.37**	**336**	*e*P	**P**	**15 07 11.7**	**+0.4**
LPG	**La Plagne**	**82.38**	**336**	*e*P	**P**	**15 07 11.8**	**+0.4**
	comp=Z,3.1nm,0.5s						
LPG	**La Plagne**	**82.38**	**336**	*e*P	**P**	**15 07 11.8**	**+0.4**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LPG	**La Plagne**	**82.38**	**336**	*e*P	**P**	**15 07 11.8**	**+0.4**
	comp=Z,3.1nm,0.5s						
BGF	**Bois d'Agland**	**82.41**	**339**	*e*P	**P**	**15 07 11.5**	**+0.3**
BGF	**Bois d'Agland**	**82.41**	**339**	*e*P	**P**	**15 07 11.5**	**+0.3**
BGF	**Bois d'Agland**	**82.41**	**339**	*e*P	**P**	**15 07 11.5**	**+0.3**
TCF	**Toulx Ste Croi**	**82.81**	**339**	*e*P	**P**	**15 07 13.7**	**+0.4**
TCF	**Toulx Ste Croi**	**82.81**	**339**	*e*P	**P**	**15 07 13.7**	**+0.4**
TCF	**Toulx Ste Croi**	**82.81**	**339**	*e*P	**P**	**15 07 13.7**	**+0.4**
MFF	**Saint Martin d**	**83.06**	**341**	*e*P	**P**	**15 07 15.1**	**+0.6**
MFF	**Saint Martin d**	**83.06**	**341**	*e*P	**P**	**15 07 15.1**	**+0.6**
MFF	**Saint Martin d**	**83.06**	**341**	*e*P	**P**	**15 07 15.1**	**+0.6**
ORIF	**Oris-en-Rattie**	**83.16**	**336**	*e*P	**P**	**15 07 15.5**	**+0.3**
ORIF	**Oris-en-Rattie**	**83.16**	**336**	*e*P	**P**	**15 07 15.5**	**+0.3**
ORIF	**Oris-en-Rattie**	**83.16**	**336**	*e*P	**P**	**15 07 15.5**	**+0.3**
VIVF	**Saint-Julien-l**	**83.53**	**337**	*e*P	**P**	**15 07 17.4**	**+0.3**
VIVF	**Saint-Julien-l**	**83.53**	**337**	*e*P	**P**	**15 07 17.4**	**+0.3**
VIVF	**Saint-Julien-l**	**83.53**	**337**	*e*P	**P**	**15 07 17.4**	**+0.3**
RJF	**Les Rejaudoux**	**83.91**	**339**	*e*P	**P**	**15 07 18.7**	**-0.2**
RJF	**Les Rejaudoux**	**83.91**	**339**	*e*P	**P**	**15 07 18.7**	**-0.2**
RJF	**Les Rejaudoux**	**83.91**	**339**	*e*P	**P**	**15 07 18.7**	**-0.2**
CAF	**Calviac**	**84.13**	**339**	*e*P	**P**	**15 07 21.1**	**+1.0**
CAF	**Calviac**	**84.13**	**339**	*e*P	**P**	**15 07 21.1**	**+1.0**
CAF	**Calviac**	**84.13**	**339**	*e*P	**P**	**15 07 21.1**	**+1.0**
LFF	**La Frestale**	**84.43**	**340**	*e*P	**P**	**15 07 22.4**	**+0.9**
LFF	**La Frestale**	**84.43**	**340**	*e*P	**P**	**15 07 22.4**	**+0.9**
LFF	**La Frestale**	**84.43**	**340**	*e*P	**P**	**15 07 22.4**	**+0.9**
MTLF	**Montolieu**	**85.58**	**338**	*e*P	**P**	**15 07 27.9**	**+0.6**
MTLF	**Montolieu**	**85.58**	**338**	*e*P	**P**	**15 07 27.9**	**+0.6**
MTLF	**Montolieu**	**85.58**	**338**	*e*P	**P**	**15 07 27.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**113.94**	**328**	PKP	**PKiKP**	**15 13 24.9**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=21,slow=1.6,SNR=6.4						
CPUP	**Villa Florida**	**148.77**	**58**	PKPbc	**PKPdf**	**15 14 32.6**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=292,slow=5.4,SNR=4.4						

IDC 09 15:10:40.0±51.0**, 17°.26S×179°.72E, h0**km**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/19**, mbtmp3.9**/3**, Error ellipse: s-maj=919.7km s-min=139.6km az=77.0, Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.39**	**240**	P	P	15 17 55.4	+0.6
	1.2nm,0.5s,baz=91,slow=11,SNR=11						
WRA	**Warramunga Arr**	**43.00**	**259**	P	P	15 18 40.9	-0.6
	0.3nm,0.4s,baz=96,slow=8.0,SNR=14						
ASAR	**Alice Springs**	**43.25**	**254**	P	P	15 18 43.2	-0.4
	3.1nm,0.6s,baz=88,slow=8.3,SNR=80						

ISK 09 15:13:14.1, 41°.05N×36°.02E, h34km**, MD2.6, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KVT	**Kavak**	**0.04**	**25**	*e*PG	Pb	15 13 20.1	+0.2
KVT				*e*SG	Sb	15 13 24.4	+0.6
CORM	**Corum**	**1.37**	**231**	*e*PN	Pn	15 13 37.5	+0.5
CORM				*e*SN	Sn	15 13 54.6	+0.5
YOZ	**Yozgat**	**1.50**	**201**	*e*PN	Pn	15 13 39.5	+0.7
YOZ				*e*SN	Sn	15 13 57.9	+0.5

IDC 09 15:17:07.6±2.0**, 51°.40N×93°.59E, h0**km**, mb1 2.5**/4**, mb1mx2.5**/32**, mbtmp2.5**/4**, ML2.3**/4**, Error ellipse: s-maj=32.2km s-min=17.0km az=15.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**5.92**	**299**	Pn	Pn	15 18 37.8	+1.4
	0.2nm,0.3s,baz=108,slow=11,SNR=3.6						
ZALV				Sn	Sn	15 19 44.6	-0.3
	0.2nm,0.3s,baz=116,slow=20,SNR=3.8						
ZALV				Lg	Lg	15 20 11.4	
	0.6nm,0.3s,baz=111,slow=24,SNR=4.4						
MKAR	**Makanchi Array**	**8.73**	**243**	Pn	Pn	15 19 15.3	+0.2
	0.0nm,0.3s,baz=55,slow=16,SNR=4.0						
MKAR				Lg	Lg	15 21 45.6	
	0.1nm,0.3s,baz=54,slow=33,SNR=5.5						
SONM	**Songino Array**	**9.04**	**108**	Pn	Pn	15 19 19.4	-0.2
	0.0nm,0.3s,baz=304,slow=16,SNR=2.4						
SONM				Lg	Lg	15 21 51.8	
	0.3nm,0.3s,baz=298,slow=32,SNR=14						
KURBB	**Kurchatov Arra**	**9.53**	**271**	Pn	Pn	15 19 26.7	+0.7
	0.0nm,0.3s,baz=77,slow=16,SNR=2.6						
KURBB				Lg	Lg	15 22 06.2	
	0.0nm,0.3s,baz=81,slow=31,SNR=5.3						

*NAO **09** 15:28:44.8±1.0, 63°.68N×21°.42E, ML2.1*
*ISCJB **09** 15:28:45.9±0.8, 63°.66N±0°.02×21°.63E±0°.04, h4km±5km, Error ellipse: s-maj=3.4km s-min=2.9km az=152.8*
*CSEM **09** 15:28:46.2±0.1, 63°.66N×21°.66E, h2km, ML2.3, Error ellipse: s-maj=3.1km s-min=2.6km az=64.0*
*BER **09** 15:28:46.4±3.5, 63°.69N×21°.43E, h0km±14km, ML2.1(NAO)*
*HEL **09** 15:28:47.8±0.1, 63°.66N×21°.57E, h11km±1km, ML2.3, ML1.9(UPP), ML2.1(NAO)*
*UPP **09** 15:28:48.1, 63°.69N×21°.42E, h9km, ML1.9*
*IDC **09** 15:28:50.1±0.8, 63°.87N×22°.68E, h0km, mb1 2.8/4, mb1mx2.7/28, mbtmp2.8/4, ML2.3/4, Error ellipse:*

s-maj=7.9km s-min=7.0km az=72.0

ISC 09 15:28:45.0±1.1, 63°.70N±0°.02×21°.60E±0°.02, h2km±10km, n75, σ1.74/120, 2C-2D, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAF	Ylistaro	0.81	143	eP	Pb	15 29 01.9	+0.1
VAF				eS	Sg	15 29 12.1	+1.0
VAF	Ylistaro	0.81	143	P	Pb	15 29 01.9	+0.1
VAF				S	Sg	15 29 12.0	+1.0
BURU	Burvik	0.90	354	⇑eP	Pn	15 29 04.7	+0.1
BURU				eS	Sb	15 29 16.9	+1.2
BURU	Burvik	0.90	354	P	Pn	15 29 04.7	+0.1
BURU				S	Sb	15 29 16.9	+1.2
HUSU	Husum	1.13	253	⇓eP	Pg	15 29 06.9	+0.3
HUSU				eS	Sg	15 29 20.7	-0.5
HUSU	Husum	1.13	253	⇓P	Pg	15 29 06.9	+0.3
	baz=74						
HUSU				S	Sg	15 29 20.7	-0.5
SVAU	Svanoeiden	1.20	313	⇑eP	Pn	15 29 09.1	+0.3
SVAU				eS	Sb	15 29 24.7	+0.4
SVAU	Svanoeiden	1.20	313	P	Pn	15 29 09.1	+0.3
SVAU				S	Sb	15 29 24.7	+0.4
LILU	Lilltraesk	1.77	335	eP	Pb	15 29 18.6	+0.5
LILU				eS	Sg	15 29 42.2	+0.5
LILU	Lilltraesk	1.77	335	P	Pb	15 29 18.6	+0.5
LILU				S	Sg	15 29 42.2	+0.5
SJUU	Sjulsmark	1.82	0	eP	Pb	15 29 19.4	+0.4
SJUU				eS	Sg	15 29 44.1	+0.7
SJUU	Sjulsmark	1.82	0	P	Pb	15 29 19.4	+0.4
SJUU				S	Sg	15 29 44.1	+0.7
HEMU	Hemsoen	1.91	239	eP	Pn	15 29 19.0	+0.4
HEMU				eS	Sn	15 29 43.5	+0.3
HEMU	Hemsoen	1.91	239	P	Pn	15 29 19.0	+0.4
HEMU				S	Sn	15 29 43.5	+0.3
SOLU	Sollefteaa	2.00	259	eP	Pb	15 29 21.7	-0.4
SOLU				eS	Sn	15 29 46.9	+1.4
SOLU	Sollefteaa	2.00	259	P	Pb	15 29 21.7	-0.4
SOLU				S	Sn	15 29 46.8	+1.4
KEF	Keuruu	2.14	134	eP	Pb	15 29 23.4	-1.0
KEF				ePB	Pg	15 29 24.3	-1.7
KEF				eSB	Sb	15 29 51.7	+0.3
KEF				MSG		15 29 52.6	
	comp=Z,22nm,0.1s						
KEF	Keuruu	2.14	134	P	Pb	15 29 23.4	-1.0
SUF	Sumiainen	2.28	113	eP	Pn	15 29 24.9	+1.2
SUF				ePB	Pb	15 29 26.5	-0.3
SUF				eSB	Sb	15 29 55.8	+0.3
SUF	Sumiainen	2.28	113	P	Pn	15 29 24.8	+1.2
KALU	Kalix	2.30	18	eP	Pb	15 29 26.1	-1.1
KALU	Kalix	2.30	18	P	Pb	15 29 26.0	-1.1
OUL	Oulu	2.33	51	ePG	Pg	15 29 30.8	+1.2
OUL				eS	Sn	15 29 53.5	+0.1
OUL				eSB	Sg	15 29 58.8	-1.0
OUL	Oulu	2.33	51	Pg	Pg	15 29 30.8	+1.2
OUL				S	Sn	15 29 53.5	+0.1
OUL				Sb	Sg	15 29 58.7	-1.0
HARU	Harads	2.49	354	eP	Pb	15 29 29.2	-1.2
HARU	Harads	2.49	354	P	Pb	15 29 29.2	-1.2
KAF	Kangasniemi	2.67	124	eP	Pn	15 29 30.2	+1.2
KAF				eS	Sn	15 30 03.4	+1.4
KAF				eSB	Sb	15 30 06.2	-0.6
KAF				MSG		15 30 11.6	
	comp=Z,10nm,0.1s						
KAF	Kangasniemi	2.67	124	P	Pn	15 29 30.2	+1.2
KAF				S	Sn	15 30 03.4	+1.4
KAF				Sb	Sb	15 30 06.2	-0.6
RAF	Rauma	2.68	178	ePB	Pb	15 29 32.6	-1.1
RAF				eS	Sn	15 30 02.1	0.0
RAF				eSB	Sb	15 30 05.7	-1.4
RAF				MSG		15 30 10.8	
	comp=Z,9.1nm,0.1s						
RAF	Rauma	2.68	178	Pb	Pb	15 29 32.6	-1.1
RAF				S	Sn	15 30 02.1	0.0
RAF				Sb	Sb	15 30 05.6	-1.4
KJN	Kajaani	2.73	79	eP	Pn	15 29 31.2	+1.3
KJN				ePB	Pb	15 29 34.4	-0.1
KJN				eSB	Sb	15 30 09.3	+0.9
KJN	Kajaani	2.73	79	P	Pn	15 29 31.1	+1.3
HASU	Hassela	2.76	238	eP	Pn	15 29 32.0	+1.8
HASU	Hassela	2.76	238	P	Pn	15 29 32.0	+1.8
ARNU	Arnoeviken	2.80	226	eP	Pb	15 29 33.7	-2.0
ARNU	Arnoeviken	2.80	226	P	Pb	15 29 33.6	-2.0
HUDU	Hudiksvall	2.85	228	eP	Pb	15 29 34.7	-1.8
HUDU	Hudiksvall	2.85	228	P	Pb	15 29 34.7	-1.8
ERTU	Ertsjaerv	2.88	5	eP	Pn	15 29 33.9	+2.0
ERTU	Ertsjaerv	2.88	5	P	Pn	15 29 33.9	+2.0
FIA0	FINESS Array S	3.06	135	Pn	Pn	15 29 36.3	+1.9
	baz=318,slow=16						
FIA0				Pg	Pb	15 29 40.5	+0.3
	baz=323,slow=14						
FIA0				Sn	Sn	15 30 12.8	+1.2
	baz=323,slow=28						
FIA0				Lg	Lg	15 30 21.0	
	baz=326,slow=28						
FIA0	FINESS Array S	3.06	135	Pn	Pn	15 29 36.3	+1.9
	baz=318,slow=16						
FIA0				Pg	Pb	15 29 40.5	+0.3
	baz=323,slow=14						
FIA0				Sn	Sn	15 30 12.8	+1.2
	baz=323,slow=28						
FIA0				Lg	Lg	15 30 21.0	
	baz=326,slow=28						
FIA0	FINESS Array S	3.06	135	MSG		15 30 25.2	
	comp=Z,12nm,0.2s						
FIA0	FINESS Array S	3.06	135	Pn	Pn	15 29 36.3	+1.9
	baz=318,slow=15,SNR=50						
FIA0	FINESS Array S	3.06	135	Pg	Pb	15 29 40.5	+0.3
	baz=323,slow=14,SNR=90						
FIA0				Sn	Sn	15 30 12.8	+1.2
	baz=323,slow=28,SNR=50						
FIA0				Lg	Lg	15 30 21.0	
	baz=326,slow=25,SNR=92						
FINES	FINESS Array B	3.06	135	Pn	Pn	15 29 36.2	+1.9
	comp=Z,0.2nm,0.3s,baz=327,slow=15,SNR=7.0						
FINES				Pg	Pb	15 29 41.5	+1.3
	comp=Z,0.7nm,0.3s,baz=326,slow=15,SNR=14						
FINES				Sn	Sb	15 30 15.1	-2.9
	comp=Z,3.0nm,0.3s,baz=324,slow=24,SNR=22						
FINES				Lg	Lg	15 30 22.0	
	comp=Z,3.9nm,0.3s,baz=326,slow=30,SNR=18						
RNF	Rovaniemi	3.47	31	eP	Pn	15 29 41.2	+1.2
RNF				eS	Sn	15 30 19.8	-1.7
RNF				eSG	Sg	15 30 35.7	-0.6
RNF	Rovaniemi	3.47	31	P	Pn	15 29 41.1	+1.2
AAL	Aland	3.61	193	eSB	Sb	15 30 34.2	+0.5
AAL	Aland	3.61	193	Sb	Sb	15 30 34.2	+0.5
MEF	Metsahovi	3.73	158	ePB	Pb	15 29 51.1	-0.4
MEF				eS	Sn	15 30 29.3	+1.2
MEF				MSG		15 30 48.2	
	comp=Z,4.7nm,0.2s						
MEF	Metsahovi	3.73	158	Pb	Pb	15 29 51.1	-0.4
MEF				S	Sn	15 30 29.2	+1.2
PVF	Pernaja	3.74	146	MSG		15 30 44.8	
	comp=Z,5.8nm,0.2s						
MASU	Masugnsbyn	3.78	2	eP	Pn	15 29 46.4	+2.1
MASU	Masugnsbyn	3.78	2	P	Pn	15 29 46.4	+2.1
MSF	Maaselka	3.88	52	eS	Sn	15 30 31.8	+0.1
MSF	Maaselka	3.88	52	S	Sn	15 30 31.8	+0.1
SALU	Saltoluokta	3.92	342	eP	Pn	15 29 48.6	+2.5
SALU	Saltoluokta	3.92	342	P	Pn	15 29 48.6	+2.5
VJF	Virojoki	4.22	136	eSG	Sg	15 30 57.2	-3.3
HFS	Hagfors	5.17	230	Sn	Sn	15 30 59.3	-4.2
	baz=53,slow=22						
HFS				Lg	Lg	15 31 22.9	
	baz=47,slow=28						
HFS	Hagfors	5.17	230	Sn	Sn	15 30 59.3	-4.2
	baz=53,slow=22						
HFS				Lg	Lg	15 31 22.9	
	baz=47,slow=28						
HFS	Hagfors	5.17	230	eS	Sn	15 30 59.3	-4.2
HFS				eSG	Sb	15 31 22.9	+4.3
HFS	Hagfors	5.17	230	Pn	Pb	15 30 11.7	-4.3
	comp=Z,0.1nm,0.3s,baz=42,slow=15,SNR=4.6						
HFS				Sn	Sb	15 31 19.6	+1.1
	comp=Z,2.3nm,0.3s,baz=51,slow=24,SNR=19						
HFS				Lg	Lg	15 31 50.6	
	baz=41,slow=31,SNR=2.0						
HFS	Hagfors	5.17	230	Lg	Lg	15 31 22.9	
	baz=47,slow=27,SNR=1.2						
NB2	NORSAR Subarra	5.52	246	Lg	Lg	15 31 34.2	
NB2	NORSAR Subarra	5.52	246	Lg	Lg	15 31 34.2	
NB2	NORSAR Subarra	5.52	246	eSG	Sb	15 31 34.2	+5.5
NB2	NORSAR Subarra	5.52	246	Lg	Lg	15 31 34.2	
NOA	NORSAR Array B	5.52	246	Pn	Pb	15 30 17.0	-5.1
	comp=Z,0.1nm,0.3s,baz=33,slow=17,SNR=2.4						
NOA				Sn	Sb	15 31 27.0	-1.6
	comp=Z,0.4nm,0.3s,baz=36,slow=19,SNR=2.8						
ARA0	ARCESS Array S	6.07	13	Pn	Pn	15 30 15.3	-0.3
	baz=192,slow=16						
ARA0				Sn	Sn	15 31 21.2	-4.3
	baz=194,slow=22						
ARA0				Lg	Lg	15 31 55.2	
	baz=187,slow=37						
ARA0	ARCESS Array S	6.07	13	Pn	Pn	15 30 15.3	-0.3
	baz=192,slow=16						
ARA0				Sn	Sn	15 31 21.2	-4.3
	baz=194,slow=22						
ARA0				Lg	Lg	15 31 55.2	
	baz=187,slow=37						
ARA0	ARCESS Array S	6.07	13	eP	Pn	15 30 15.3	-0.3
ARA0				eS	Sn	15 31 21.2	-4.3
ARA0				eSG	Sg	15 31 55.2	-4.4
ARA0	ARCESS Array S	6.07	13	Pn	Pn	15 30 15.3	-0.3
	baz=192,slow=14,SNR=50						
ARA0				Lg	Lg	15 31 55.2	
	baz=187,slow=28,SNR=51						
ARCES	ARCESS Array B	6.07	13	Pn	Pn	15 30 16.4	+0.8
	comp=Z,0.3nm,0.3s,baz=196,slow=14,SNR=9.7						
ARCES				Sn	Sn	15 31 21.2	-4.4
	comp=Z,0.2nm,0.3s,baz=193,slow=23,SNR=2.6						
ARCES				Lg	Lg	15 31 55.0	
	comp=Z,0.4nm,0.3s,baz=187,slow=27,SNR=4.4						

IDC 09 15:32:16.8±2.3, 6°.84N×126°.95E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/24, mbtmp3.3/3, 1D, Error ellipse: s-maj=209.7km s-min=26.5km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	2.71	278	⇓iP	Pb	15 33 05.3	-0.9
WRA	Warramunga Arr	27.59	165	P	P	15 38 07.5	+1.6
	0.2nm,0.5s,baz=345,slow=10,SNR=4.6						
ASAR	Alice Springs	31.07	168	P	P	15 38 35.8	-1.1
	0.2nm,0.5s,baz=345,slow=7.3,SNR=7.3						
ASAR				PcP	PcP	15 41 31.3	-1.4
	0.2nm,0.4s,baz=336,slow=2.3,SNR=6.7						
MKAR	Makanchi Array	55.16	324	P	P	15 41 51.5	+0.3
	0.2nm,0.4s,baz=114,slow=7.3,SNR=6.4						

MEX 09 15:43:51.8±1.1, 16°.35N×97°.93W, h10km±15km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.19	282	iP	Pg	15 43 55.0	-0.9
PNIG				iS	Sg	15 43 59.4	+0.7
VHO	Vista Hermosa	1.35	58	iP	Pn	15 44 12.4	-4.7
VHO				iS	Sb	15 44 30.4	-4.7
OXBJ	Oaxaca	1.36	58	iP	Pn	15 44 12.7	-4.5
OXBJ				iS	Sb	15 44 30.7	-4.6
HUIG	Huatulco	1.85	108	eP	Pn	15 44 20.5	-3.1
HUIG				iS	Sn	15 44 42.8	-4.3
MEIG	Mezcala	2.25	314	iP	Pn	15 44 26.1	-3.1
MEIG				iS	Sn	15 44 52.8	-4.3
ARIG	Puente Sto Nin	3.00	310	iP	Pn	15 44 37.3	-2.2
ARIG				iS	Sn	15 45 10.9	-4.6

IDC 09 15:47:19.1±3.5, 6°.89S×130°.00E, h61km±34km, mb3.6/7, mb1 3.9/10, mb1mx3.8/19, mbtmp3.8/10, ML4.3/3, Error ellipse: s-maj=34.8km s-min=16.8km az=74.0
AUST 09 15:47:20.5, 6°.98S×129°.54E, h60km
ISCJB 09 15:47:22.7±0.4, 7°.05S±0°.03×130°.07E±0°.06, h104km, mb4.0/8, Error ellipse: s-maj=8.2km s-min=4.8km az=176.2
DJA 09 15:47:26.6±0.3, 7°S±3°×13°0E±°, h118km±11km, M4.6/12, mB5.3/4, mb4.6/12, MLv4.6/5, Mw(mB)4.8/4

ISC 09 15:47:23.3±0.5, 7°.01S±0°.05×129°.96E±0°.07, h104km, n41, σ2.33/38, mb3.9/8, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.74	332	P	Pn	15 48 24.5	+5.4
AAI	Ambon	3.74	332	P	Pn	15 48 24.7	+5.6
	baz=3.6,SNR=3.3						
FAKI	Fak Fak	4.66	29	P	Pn	15 48 32.5	+1.0
FAKI	Fak Fak	4.66	29	P	Pn	15 48 32.4	+0.9
	baz=4.9,SNR=62						
FAKI				S	Sn	15 49 22.6	-1.9
	baz=4.9,SNR=25						
MTN	Manton Dam	5.92	169	P	Pn	15 48 50.9	+2.4
	baz=6.1,SNR=68						
MTN				S	Sn	15 49 53.7	-1.3
	baz=6.1,SNR=9.2						
KDU	Kakadu	6.17	157	P	Pn	15 48 53.5	+1.6
	baz=6.4,SNR=287						
KDU				S	Sn	15 49 58.9	-2.1
	baz=6.4,SNR=7.7						
SWI	Sorong	6.24	12	P	Pn	15 48 56.0	+3.1
	18nm,0.8s,4μm0.7nm						
SWI	Sorong	6.24	12	P	Pn	15 48 53.8	+0.9
	baz=6.4,SNR=11						
SWI				S	Sn	15 49 59.1	-3.8
	baz=6.4,SNR=18						
LBMI	Labuha	6.78	339	P	Pn	15 49 05.4	+5.0
	49nm,0.7s						
RKPI	Ransiki, Papua	6.89	38	P	Pn	15 49 03.5	+1.7
	102nm,0.7s,4μm						
BAKI	Biak	8.42	47	P	Pn	15 49 25.4	+2.8
	193nm,0.7s						
KNRA	Kununurra	8.70	188	P	Pn	15 49 27.1	+0.7
	baz=8.7,SNR=47						
KNRA				S	Sn	15 50 57.2	-5.5
	baz=8.7,SNR=21						
WAMI	Wamena	9.25	71	P	Pn	15 49 48.2	+14
KMSI	Cibinong	9.61	321	P	Pn	15 49 44.4	+5.7
	56nm,1.1s						
WSI	Waingapu	9.92	254	P	Pn	15 49 46.6	+3.6
	baz=9.5,SNR=4.4						
BKSI	Bulukumba	9.92	279	P	Pn	15 49 49.2	+6.2
	10nm,0.8s						
WBSI	Waikabubak, Su	10.78	255	P	Pn	15 49 57.2	+2.5
	87nm,0.7s						
TTSI	Tana Toraja	10.84	291	P	Pn	15 49 55.4	-0.1
MRSI	Marisa	10.92	313	P	Pn	15 50 02.3	+5.7
	44nm,0.8s,426nm						
JAY	Jayapura	11.60	68	P	P	15 50 13.2	-1.8
	baz=12,SNR=3.0						
JAY				S	S	15 52 44.4	-3.6
	baz=12,SNR=4.0						
FITZ	Fitzroy Crossi	11.81	201	P	Pn	15 50 06.4	-2.0
	2.2nm,0.3s,baz=28,slow=11,SNR=65						
FITZ				S	Sn	15 52 08.9	-9.4
	11nm,0.3s,baz=215,slow=16,SNR=14						
FITZ	Fitzroy Crossi	11.81	201	P	Pn	15 50 07.5	-0.9
	baz=12,SNR=13						
FITZ				S	Sn	15 52 12.6	-5.7
	baz=12,SNR=5.5						
WRA	Warramunga Arr	13.54	162	P	Pn	15 50 28.8	-2.6
	1.7nm,0.3s,baz=347,slow=14,SNR=96						
WRA				S	Sn	15 52 50.6	-10
	4.5nm,0.3s,baz=330,slow=22,SNR=11						
CTBH	Cotabato--PC H	15.24	338	⇑iP	P	15 50 58.1	+2.6
ASAR	Alice Springs	16.99	168	P	P	15 51 15.2	+0.2
	0.7nm,0.3s,baz=20,slow=14,SNR=47						
ASAR				S	Sn	15 54 11.9	-12
	0.2nm,0.3s,baz=351,slow=30,SNR=4.9						
MTSU	Mount Surprise	17.84	130	P	Pn	15 51 28.9	+3.9
	baz=18,SNR=6.3						
SBUM	Sibu	20.04	297	P	Pn	15 51 52.1	+1.0
MEEK	Meekatharra	22.31	208	P	P	15 52 13.8	+1.3
	baz=22,SNR=5.3						
MORW	Morawa	25.57	209	P	P	15 52 45.5	+2.7
	baz=26,SNR=5.6						
STKA	Stephens Creek	27.02	158	P	P	15 52 56.8	+1.0
	0.7nm,0.5s,baz=307,slow=11,SNR=3.7						
GSI	Gunungsitoli	33.35	283	P	P	15 53 47.7	-4.2
	baz=33,SNR=4.5						
CMAR	Chiang Mai Arr	39.70	310	P	P	15 54 45.3	-0.5
	1.5nm,0.7s,baz=140,slow=6.6,SNR=11						
MJAR	Matsushiro Arr	44.00	10	P	P	15 55 19.2	-1.3
	1.1nm,0.7s,baz=188,slow=9.9,SNR=7.1						
KSRS	Korea Array	44.27	358	P	P	15 55 21.4	-1.1
	0.2nm,0.4s,baz=162,slow=9.5,SNR=3.5						
SONM	Songino Array	58.43	342	P	P	15 57 08.6	+0.3
	0.5nm,0.4s,baz=157,slow=7.0,SNR=7.4						
PETK	Petropavlovsk-	64.34	18	P	P	15 57 47.8	0.0
	2.7nm,0.8s,baz=201,slow=8.9,SNR=3.6						
MKAR	Makanchi Array	68.21	327	P	P	15 58 13.3	+0.6
	16nm,0.4s,baz=115,slow=8.4,SNR=426						
ZALV	Zalesovo Beam	71.57	334	P	P	15 58 32.5	-0.5
	2.4nm,0.7s,baz=118,slow=5.5,SNR=13						
TORD	Torodi Ar. Bea	128.77	281	PKP	PKPdf	16 06 20.0	+0.4
	0.5nm,0.6s,baz=150,slow=2.5,SNR=3.4						
CPUP	Villa Florida	146.12	168	PKPbc	PKPab	16 06 52.6	-0.3
	0.8nm,0.4s,baz=209,slow=1.4,SNR=4.9						
LPAZ	La Paz	150.74	142	PKPbc	PKPbc	16 07 06.2	+0.9
	1.0nm,0.3s,baz=209,slow=0.6,SNR=7.6						

IDC 09 15:53:27.8±2.0, 36°.91S×176°.97E, h195km±12km, mb3.5/5, mb1 3.7/5, mb1mx3.4/18, mbtmp3.5/5, Error ellipse: s-maj=46.5km s-min=18.5km az=45.0
ISCJB 09 15:53:28.8±0.6, 37°.45S±0°.04×176°.64E±0°.07, h220km±3km, mb3.6/6, Error ellipse: s-maj=8.9km s-min=6.5km az=159.5
WEL 09 15:53:30.1±0.3, 37°.28S×176°.82E, h197km±2km, ML4.7/21, Error ellipse: s-maj=2.2km s-min=1.9km az=0.0
NEIC 09 15:53:30.1, 37°.28S×176°.82E, h197km, MG4.7(WEL), After WEL.

ISC 09 15:53:29.3±0.8, 37°.45S±0°.06×176°.67E±0°.05, h215km±5km, n208, σ1.18/217, mb3.7/6, 42C-12D, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.41	193	PN	Pn	15 53 56.9	-0.9
OPRZ	Ohinepanea	0.41	193	Pn	Pn	15 53 56.9	-0.9
TGRZ	Tauranga	0.43	229	PN	Pn	15 53 57.3	-0.6
TGRZ	Tauranga	0.43	229	Pn	Pn	15 53 57.3	-0.6
KARZ	Kaharoa	0.66	210	PN	Pn	15 53 58.7	-0.1
KARZ	Kaharoa	0.66	210	Pn	Pn	15 53 58.7	-0.1
OMRZ	Omania	0.70	200	⇑PN	Pn	15 53 59.1	+0.1
OMRZ	Omania	0.70	200	⇑Pn	Pn	15 53 59.1	+0.1
TARZ	Mount Tarawera	0.79	189	PN	Pn	15 54 00.1	+0.5
TARZ	Mount Tarawera	0.79	189	Pn	Pn	15 54 00.1	+0.5
UTU	Utuhina	0.82	207	PN	Pn	15 54 00.1	+0.5
UTU	Utuhina	0.82	207	Pn	Pn	15 54 00.1	+0.5
URZ	Urewera	0.88	157	PN	Pn	15 53 59.2	-0.7
URZ				SN	S	15 54 22.0	-1.9
URZ	Urewera	0.88	157	Pn	Pn	15 53 59.1	-0.7
URZ				Sn	S	15 54 21.9	-1.9
URZ	Urewera	0.88	157	P	Pn	15 53 59.5	-0.3
	161nm,0.3s,baz=276,slow=2.5,SNR=821						
URZ				S	S	15 54 21.9	-1.9
	93nm,0.3s,baz=192,slow=23,SNR=27						
RRRZ	Republican Roa	0.90	188	⇑PN	Pn	15 54 00.5	+0.5
RRRZ	Republican Roa	0.90	188	⇑Pn	Pn	15 54 00.5	+0.5
TOZ	Tahuroa Road	0.97	253	PN	Pn	15 54 00.3	0.0
TOZ				SN	S	15 54 24.5	-0.1
TOZ	Tahuroa Road	0.97	253	Pn	Pn	15 54 00.3	0.0
TOZ				Sn	S	15 54 24.5	-0.1
HRRZ	Handcock Road	0.99	198	PN	Pn	15 54 01.3	+0.8
HRRZ	Handcock Road	0.99	198	Pn	Pn	15 54 01.3	+0.8
KUZ	Kuaotunu	1.03	312	⇓PN	Pn	15 53 59.4	-1.5
KUZ				SN	S	15 54 22.3	-2.9
KUZ	Kuaotunu	1.03	312	⇓Pn	Pn	15 53 59.4	-1.5
KUZ				Sn	S	15 54 22.4	-2.9
PRRZ	Plateau Road	1.07	192	⇑PN	Pn	15 54 01.7	+0.7
PRRZ	Plateau Road	1.07	192	⇑Pn	Pn	15 54 01.7	+0.7
MWZ	Matawai	1.11	143	⇑PN	Pn	15 54 01.1	-0.3
MWZ				SN	S	15 54 24.3	-2.1
MWZ	Matawai	1.11	143	⇑Pn	Pn	15 54 01.1	-0.3
MWZ				Sn	S	15 54 24.3	-2.1
ALRZ	Allen Road	1.14	193	PN	Pn	15 54 02.3	+0.7
ALRZ	Allen Road	1.14	193	Pn	Pn	15 54 02.3	+0.7
MKAZ	Moumakai	1.25	285	PN	Pn	15 54 01.7	-0.6
MKAZ				SN	S	15 54 26.9	-1.0
MKAZ	Moumakai	1.25	285	Pn	Pn	15 54 01.7	-0.6
MKAZ				Sn	S	15 54 26.9	-1.0
MXZ	Matakaoa Point	1.31	95	PN	Pn	15 54 02.1	-0.7
MXZ	Matakaoa Point	1.31	95	Pn	Pn	15 54 02.1	-0.7
WHTZ	Whakaora	1.34	205	PN	Pn	15 54 04.5	+1.4
WHTZ	Whakaora	1.34	205	Pn	Pn	15 54 04.5	+1.4
PUZ	Puketiti	1.40	117	PN	Pn	15 54 03.0	-0.5
PUZ				eSN	S	15 54 27.8	-2.3
PUZ	Puketiti	1.40	117	Pn	Pn	15 54 03.0	-0.5
PUZ				eSn	S	15 54 27.8	-2.3
WATZ	Wairara	1.46	210	⇑PN	Pn	15 54 05.5	+1.5
WATZ	Wairara	1.46	210	⇑Pn	Pn	15 54 05.5	+1.5
RAHZ	Arahi	1.50	168	PN	Pn	15 54 05.3	+1.0
RAHZ	Arahi	1.50	168	Pn	Pn	15 54 05.3	+1.0
HATZ	Hinemaiaia	1.51	197	PN	Pn	15 54 05.3	+0.9
HATZ	Hinemaiaia	1.51	197	Pn	Pn	15 54 05.3	+0.9
RATZ	Rangitukua	1.58	206	PN	Pn	15 54 06.3	+1.2
RATZ	Rangitukua	1.58	206	Pn	Pn	15 54 06.3	+1.2
CNGZ	Carnagh Statio	1.59	131	PN	Pn	15 54 06.2	+1.1
CNGZ	Carnagh Statio	1.59	131	Pn	Pn	15 54 06.2	+1.1
NMHZ	Naumai	1.65	176	⇑PN	Pn	15 54 07.0	+1.3
NMHZ	Naumai	1.65	176	⇑Pn	Pn	15 54 07.0	+1.3
RITZ	Rihia Road	1.65	202	⇑PN	Pn	15 54 07.2	+1.5
RITZ	Rihia Road	1.65	202	⇑Pn	Pn	15 54 07.2	+1.5
KATZ	Kakaramea	1.71	206	PN	Pn	15 54 07.5	+1.3
KATZ	Kakaramea	1.71	206	Pn	Pn	15 54 07.5	+1.3
BKZ	Black Stump Fm	1.72	185	PN	Pn	15 54 06.5	+0.2
BKZ	Black Stump Fm	1.72	185	Pn	Pn	15 54 06.5	+0.2
PRGZ	Paritu Road	1.75	147	PN	Pn	15 54 07.3	+0.8
PRGZ	Paritu Road	1.75	147	Pn	Pn	15 54 07.3	+0.8
KNZ	Kokohu	1.76	154	PN	Pn	15 54 07.3	+0.8
KNZ	Kokohu	1.76	154	Pn	Pn	15 54 07.3	+0.8
HIZ	Hauiti	1.78	233	PN	Pn	15 54 08.1	+1.3
HIZ	Hauiti	1.78	233	Pn	Pn	15 54 08.1	+1.3
KRVZ	Karewarewa	1.83	206	PN	Pn	15 54 08.7	+1.3
KRVZ	Karewarewa	1.83	206	Pn	Pn	15 54 08.7	+1.3
WTVZ	West Tongariro	1.87	207	PN	Pn	15 54 09.0	+1.3
WTVZ	West Tongariro	1.87	207	Pn	Pn	15 54 09.1	+1.3
OTVZ	Oturere	1.89	204	⇓PN	Pn	15 54 09.5	+1.6
OTVZ	Oturere	1.89	204	⇓Pn	Pn	15 54 09.5	+1.6
TWVZ	Taurewa	1.89	211	PN	Pn	15 54 09.2	+1.3
TWVZ	Taurewa	1.89	211	Pn	Pn	15 54 09.2	+1.3
NGZ	Ngauruhoe	1.92	206	PN	Pn	15 54 09.5	+1.3
NGZ	Ngauruhoe	1.92	206	Pn	Pn	15 54 09.5	+1.3
MHGZ	Mahia Peninsul	1.96	151	PN	Pn	15 54 09.5	+1.0
MHGZ	Mahia Peninsul	1.96	151	Pn	Pn	15 54 09.6	+1.0
WPVZ	Whakapapa	1.96	206	⇑PN	Pn	15 54 10.0	+1.3
WPVZ	Whakapapa	1.96	206	⇑Pn	Pn	15 54 10.0	+1.3
TUVZ	Tukino	1.98	203	PN	Pn	15 54 10.1	+1.2
TUVZ	Tukino	1.98	203	Pn	Pn	15 54 10.1	+1.2
MCHZ	McNeill Hill	1.99	179	PN	Pn	15 54 10.1	+1.3
MCHZ	McNeill Hill	1.99	179	Pn	Pn	15 54 10.1	+1.3
FWVZ	Far West T-bar	2.01	206	⇓PN	Pn	15 54 10.2	+1.0
FWVZ	Far West T-bar	2.01	206	⇓Pn	Pn	15 54 10.2	+1.0
DRZ	Dome Shelter	2.02	205	PN	Pn	15 54 10.7	+1.3
DRZ	Dome Shelter	2.02	205	Pn	Pn	15 54 10.7	+1.3
TRVZ	Turoa	2.05	205	⇑PN	Pn	15 54 10.8	+1.2
TRVZ	Turoa	2.05	205	⇑Pn	Pn	15 54 10.8	+1.2
WNVZ	Wahianoa	2.06	204	PN	Pn	15 54 10.8	+1.1
WNVZ	Wahianoa	2.06	204	Pn	Pn	15 54 10.8	+1.1
MOVZ	Moawhango	2.08	200	PN	Pn	15 54 10.4	+0.6
MOVZ	Moawhango	2.08	200	Pn	Pn	15 54 10.4	+0.6
BHHZ	Black Hill Sta	2.09	193	⇑PN	Pn	15 54 10.5	+0.7
BHHZ	Black Hill Sta	2.09	193	⇑Pn	Pn	15 54 10.6	+0.7
PKVZ	Pokaka	2.11	209	⇑PN	Pn	15 54 11.4	+1.3
PKVZ	Pokaka	2.11	209	⇑Pn	Pn	15 54 11.4	+1.3
MTVZ	Mangateitei	2.15	206	⇓PN	Pn	15 54 11.8	+1.3
MTVZ	Mangateitei	2.15	206	⇓Pn	Pn	15 54 11.8	+1.3
CKHZ	Cape Kidnapper	2.23	172	⇑PN	Pn	15 54 12.4	+1.2
CKHZ	Cape Kidnapper	2.23	172	⇑Pn	Pn	15 54 12.4	+1.2
VRZ	Vera Road	2.25	221	PN	Pn	15 54 13.5	+2.1
VRZ	Vera Road	2.25	221	Pn	Pn	15 54 13.5	+2.1
KAHZ	Kahuranaki	2.35	176	⇑PN	Pn	15 54 13.8	+1.3
KAHZ	Kahuranaki	2.35	176	⇑Pn	Pn	15 54 13.8	+1.3
WCZ	Waipu Caves	2.40	308	PN	Pn	15 54 11.7	-1.4
WCZ	Waipu Caves	2.40	308	Pn	Pn	15 54 11.7	-1.4
PNHZ	Pukenui	2.49	188	⇑PN	Pn	15 54 14.6	+0.6
PNHZ	Pukenui	2.49	188	⇑Pn	Pn	15 54 14.6	+0.6
RAEZ	Rainy Point	2.56	224	PN	Pn	15 54 17.8	+3.0
RAEZ	Rainy Point	2.56	224	Pn	Pn	15 54 17.8	+3.0
PXZ	Pawanui	2.58	177	⇑PN	Pn	15 54 15.7	+0.7
PXZ	Pawanui	2.58	177	⇑Pn	Pn	15 54 15.7	+0.7
WPHZ	Waipukurau	2.62	184	⇑PN	Pn	15 54 16.0	+0.7
WPHZ	Waipukurau	2.62	184	⇑Pn	Pn	15 54 16.0	+0.7
WAZ	Wanganui	2.65	209	⇑PN	Pn	15 54 16.9	+1.1
WAZ	Wanganui	2.65	209	⇑Pn	Pn	15 54 16.9	+1.1
TSZ	Takapari Road	2.66	192	PN	Pn	15 54 16.4	+0.5
TSZ	Takapari Road	2.66	192	Pn	Pn	15 54 16.4	+0.5

NEZ	**North Egmont**	**2.72**	**227**	PN	**Pn**	**15 54 19.3**	**+2.7**
NEZ	**North Egmont**	**2.72**	**227**	Pn	**Pn**	**15 54 19.3**	**+2.7**
PKE	**Pukeiti**	**2.74**	**230**	PN	**Pn**	**15 54 19.5**	**+2.8**
PKE	**Pukeiti**	**2.74**	**230**	Pn	**Pn**	**15 54 19.5**	**+2.8**
DFE	**Dawson Falls**	**2.75**	**226**	PN	Pn	15 54 20.0	+3.0
DFE	**Dawson Falls**	**2.75**	**226**	Pn	Pn	15 54 20.0	+3.0
PRHZ	**Porangahau**	**2.81**	**181**	⇓PN	**Pn**	**15 54 18.2**	**+0.7**
PRHZ	**Porangahau**	**2.81**	**181**	⇓Pn	**Pn**	**15 54 18.2**	**+0.7**
DVHZ	**Dannevirke**	**2.87**	**188**	⇑PN	**Pn**	**15 54 18.5**	**+0.3**
DVHZ	**Dannevirke**	**2.87**	**188**	⇑Pn	**Pn**	**15 54 18.5**	**+0.3**
POWZ	**Post Office Ro**	**3.02**	**193**	PN	**Pn**	**15 54 20.4**	**+0.5**
POWZ	**Post Office Ro**	**3.02**	**193**	Pn	**Pn**	**15 54 20.4**	**+0.5**
BFZ	**Birch Farm**	**3.24**	**186**	PN	**Pn**	**15 54 22.8**	**+0.3**
BFZ	**Birch Farm**	**3.24**	**186**	Pn	**Pn**	**15 54 22.8**	**+0.3**
MRZ	**Mangatainoka R**	**3.32**	**194**	⇑PN	**Pn**	**15 54 23.3**	**0.0**
MRZ	**Mangatainoka R**	**3.32**	**194**	⇑Pn	**Pn**	**15 54 23.3**	**0.0**
OUZ	**Omahuta**	**3.33**	**311**	*e*Pn	**Pn**	**15 54 22.6**	**-1.0**
TIWZ	**Tintock**	**3.38**	**190**	PN	**Pn**	**15 54 24.3**	**+0.2**
TIWZ	**Tintock**	**3.38**	**190**	Pn	**Pn**	**15 54 24.3**	**+0.2**
HOWZ	**Holdsworth Sta**	**3.56**	**194**	PN	**Pn**	**15 54 25.9**	**-0.3**
HOWZ	**Holdsworth Sta**	**3.56**	**194**	Pn	**Pn**	**15 54 25.9**	**-0.3**
OGWZ	**Otaki Gorge**	**3.56**	**199**	⇑PN	**Pn**	**15 54 26.2**	**0.0**
OGWZ	**Otaki Gorge**	**3.56**	**199**	⇑Pn	**Pn**	**15 54 26.2**	**0.0**
KIW	**Kapiti Island**	**3.67**	**201**	PN	**Pn**	**15 54 27.3**	**-0.2**
KIW	**Kapiti Island**	**3.67**	**201**	Pn	**Pn**	**15 54 27.3**	**-0.2**
TMWZ	**Te Maipa**	**3.70**	**189**	PN	**Pn**	**15 54 27.7**	**-0.3**
TMWZ	**Te Maipa**	**3.70**	**189**	Pn	**Pn**	**15 54 27.7**	**-0.3**
MTW	**Mount Morrison**	**3.81**	**193**	PN	**Pn**	**15 54 28.6**	**-0.7**
MTW	**Mount Morrison**	**3.81**	**193**	Pn	**Pn**	**15 54 28.6**	**-0.7**
CAW	**Cannon Point**	**3.86**	**198**	⇑PN	**Pn**	**15 54 29.3**	**-0.5**
CAW	**Cannon Point**	**3.86**	**198**	⇑Pn	**Pn**	**15 54 29.3**	**-0.5**
DUWZ	**D'Urville Isla**	**3.97**	**212**	PN	**Pn**	**15 54 31.1**	**-0.2**
DUWZ	**D'Urville Isla**	**3.97**	**212**	Pn	**Pn**	**15 54 31.1**	**-0.2**
TRWZ	**Traveller**	**4.02**	**191**	PN	**Pn**	**15 54 31.2**	**-0.5**
TRWZ	**Traveller**	**4.02**	**191**	Pn	**Pn**	**15 54 31.2**	**-0.5**
PAWZ	**Paruwai Farm**	**4.04**	**193**	PN	**Pn**	**15 54 31.3**	**-0.8**
PAWZ	**Paruwai Farm**	**4.04**	**193**	Pn	**Pn**	**15 54 31.3**	**-0.8**
WEL	**Wellington**	**4.10**	**200**	PN	**Pn**	**15 54 32.3**	**-0.5**
WEL	**Wellington**	**4.10**	**200**	Pn	**Pn**	**15 54 32.3**	**-0.5**
MSWZ	**Moikau Station**	**4.11**	**195**	⇓PN	**Pn**	**15 54 32.1**	**-0.8**
MSWZ	**Moikau Station**	**4.11**	**195**	⇓Pn	**Pn**	**15 54 32.1**	**-0.8**
SNZO	**South Karori**	**4.14**	**201**	PN	**Pn**	**15 54 32.4**	**-0.9**
SNZO	**South Karori**	**4.14**	**201**	Pn	**Pn**	**15 54 32.4**	**-0.9**
BHW	**Baring Head**	**4.19**	**199**	PN	**Pn**	**15 54 33.0**	**-0.9**
BHW	**Baring Head**	**4.19**	**199**	Pn	**Pn**	**15 54 33.0**	**-0.9**
TCW	**Tory Channel**	**4.19**	**206**	PN	**Pn**	**15 54 33.4**	**-0.5**
TCW	**Tory Channel**	**4.19**	**206**	Pn	**Pn**	**15 54 33.4**	**-0.5**
PLWZ	**Palliser**	**4.26**	**194**	PN	**Pn**	**15 54 33.8**	**-0.9**
PLWZ	**Palliser**	**4.26**	**194**	Pn	**Pn**	**15 54 33.8**	**-0.9**
TUWZ	**Tuamarina**	**4.50**	**207**	PN	**Pn**	**15 54 37.2**	**-0.5**
TUWZ	**Tuamarina**	**4.50**	**207**	Pn	**Pn**	**15 54 37.2**	**-0.5**
NNZ	**Nelson**	**4.55**	**213**	PN	**Pn**	**15 54 37.2**	**-1.1**
NNZ	**Nelson**	**4.55**	**213**	Pn	**Pn**	**15 54 37.2**	**-1.1**
QRZ	**Quartz Range**	**4.66**	**222**	PN	**Pn**	**15 54 39.2**	**-0.5**
QRZ	**Quartz Range**	**4.66**	**222**	Pn	**Pn**	**15 54 39.2**	**-0.5**
CMWZ	**Cape Campbell**	**4.69**	**203**	PN	**Pn**	**15 54 40.1**	**0.0**
CMWZ	**Cape Campbell**	**4.69**	**203**	Pn	**Pn**	**15 54 40.1**	**0.0**
BSWZ	**Blackbirch Sta**	**4.77**	**206**	PN	**Pn**	**15 54 40.9**	**-0.2**
BSWZ	**Blackbirch Sta**	**4.77**	**206**	Pn	**Pn**	**15 54 40.9**	**-0.2**
THZ	**Tophouse**	**5.20**	**213**	PN	**Pn**	**15 54 46.0**	**-0.5**
THZ	**Tophouse**	**5.20**	**213**	Pn	**Pn**	**15 54 46.0**	**-0.5**
KHZ	**Kahutara**	**5.51**	**205**	PN	**Pn**	**15 54 49.6**	**-0.8**
KHZ	**Kahutara**	**5.51**	**205**	Pn	**Pn**	**15 54 49.6**	**-0.8**
LTZ	**Lake Taylor**	**6.30**	**211**	PN	**Pn**	**15 54 59.1**	**-1.5**
LTZ	**Lake Taylor**	**6.30**	**211**	Pn	**Pn**	**15 54 59.1**	**-1.5**
MQZ	**McQueen's Vall**	**6.96**	**205**	PN	**Pn**	**15 55 06.9**	**-2.0**
MQZ	**McQueen's Vall**	**6.96**	**205**	Pn	**Pn**	**15 55 06.9**	**-2.0**
WVZ	**Waitaha Valley**	**7.22**	**217**	PN	**Pn**	**15 55 12.0**	**-0.3**
WVZ	**Waitaha Valley**	**7.22**	**217**	Pn	**Pn**	**15 55 12.0**	**-0.3**
RPZ	**Rata Peaks**	**7.58**	**213**	PN	**Pn**	**15 55 15.6**	**-1.3**
RPZ	**Rata Peaks**	**7.58**	**213**	Pn	**Pn**	**15 55 15.6**	**-1.3**
RPZ	**Rata Peaks**	**7.58**	**213**	P	**Pn**	**15 55 16.0**	**-1.0**
	1.3nm,0.3s,baz=129,slow=17,SNR=22						
RPZ				S	**S**	**15 56 37.5**	**-5.4**
	7.9nm,0.3s,baz=89,slow=10,SNR=17						
FOZ	**Fox Glacier**	**8.10**	**219**	PN	**Pn**	**15 55 23.3**	**-0.3**
FOZ	**Fox Glacier**	**8.10**	**219**	Pn	**Pn**	**15 55 23.3**	**-0.3**
LBZ	**Lake Benmore**	**8.49**	**213**	PN	**Pn**	**15 55 27.3**	**-1.4**
LBZ	**Lake Benmore**	**8.49**	**213**	Pn	**Pn**	**15 55 27.4**	**-1.4**
ODZ	**Otahua Downs**	**8.84**	**209**	PN	**Pn**	**15 55 32.3**	**-0.9**
ODZ	**Otahua Downs**	**8.84**	**209**	Pn	**Pn**	**15 55 32.3**	**-0.9**
WKZ	**Wanaka**	**9.36**	**216**	PN	**Pn**	**15 55 38.2**	**-1.8**
WKZ	**Wanaka**	**9.36**	**216**	Pn	**Pn**	**15 55 38.2**	**-1.8**
TUZ	**Tuapeka**	**9.99**	**210**	PN	**Pn**	**15 55 48.6**	**+0.6**
TUZ	**Tuapeka**	**9.99**	**210**	Pn	**Pn**	**15 55 48.6**	**+0.6**
WHZ	**Wether Hill Ro**	**10.66**	**215**	PN	**Pn**	**15 55 56.0**	**-0.6**
WHZ	**Wether Hill Ro**	**10.66**	**215**	Pn	**Pn**	**15 55 56.0**	**-0.6**
ASAR	**Alice Springs**	**38.98**	**278**	P	**P**	**16 00 36.4**	**+1.5**
	1.0nm,0.6s,baz=124,slow=7.6,SNR=11						
WRAB	**Tennant Creek**	**40.64**	**283**	*e*P	**P**	**16 00 48.2**	**-0.3**
	4.3nm,1.0s						
WRA	**Warramunga Arr**	**40.64**	**283**	P	**P**	**16 00 49.7**	**+1.1**
	0.7nm,0.4s,baz=123,slow=7.0,SNR=22						
FITZ	**Fitzroy Crossi**	**48.47**	**279**	P	**P**	**16 01 52.4**	**+2.1**
	2.5nm,0.8s,baz=120,slow=7.2,SNR=4.5						
QSPA	**South Pole Qui**	**52.67**	**180**	P	P	16 02 26.4	+5.2
	1.3nm,0.4s,baz=197,slow=0.9,SNR=21						
CMAR	**Chiang Mai Arr**	**91.72**	**292**	P	**P**	**16 06 14.0**	**+1.5**
	0.6nm,0.7s,baz=137,slow=2.7,SNR=4.5						
ARCES	**ARCESS Array B**	**144.29**	**343**	PKP	**PKPdf**	**16 12 36.9**	**-1.5**
	4.4nm,0.9s,baz=66,slow=3.0,SNR=10						
FINES	**FINESS Array B**	**149.79**	**332**	PKPbc	**PKPbc**	**16 12 52.8**	**+0.1**
	2.6nm,1.0s,baz=63,slow=4.7,SNR=3.1						
TORD	**Torodi Ar. Bea**	**155.38**	**192**	PKPab	**PKPab**	**16 13 24.6**	**+1.0**
	0.2nm,0.5s,baz=183,slow=4.0,SNR=2.8						

IDC 09 16:00:30.1±4.6**, 62°.41S×154°.37E, h0**km**, mb3.8**/2**, mb1 4.2**/3**, mb1mx3.9**/12**, mbtmp3.9**/3**, ML4.2**/1**, MS3.6**/3**, Ms1 3.6**/3**, ms1mx2.8**/32**, Error ellipse: s-maj=298.3km s-min=41.0km az=76.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**15.38**	**174**	Pn	Pn	16 04 08.1	+0.2
	0.9nm,0.3s,baz=342,slow=14,SNR=30						
VNDA				Sn	Sn	16 06 47.0	-12
	1.2nm,0.3s,baz=235,slow=17,SNR=10						
VNDA				LR	LR	16 10 03.8	
	comp=Z,120nm,20.1s,baz=340,slow=37						
QSPA	**South Pole Qui**	**27.68**	**180**	P	P	16 06 22.6	+3.2
	1.0nm,1.0s,baz=342,slow=6.4,SNR=3.7						
RAO	**Raoul Island**	**37.77**	**42**	LR	LR	16 21 57.2	
	comp=Z,127nm,19.4s,baz=332,slow=34						
ASAR	**Alice Springs**	**41.13**	**331**	P	P	16 08 15.4	-0.2
	1.1nm,0.8s,baz=163,slow=8.7,SNR=15						
WRA	**Warramunga Arr**	**44.63**	**333**	P	P	16 08 44.0	-0.1
	1.0nm,0.6s,baz=164,slow=7.0,SNR=15						
GUMO	**Guam**	**76.11**	**350**	LR	LR	16 41 50.6	
	comp=Z,32nm,18.7s,baz=166,slow=33						

MEX 09 16:14:40.4±0.6**, 17°.99N×102°.50W, h65**km±16km**, MD3.9, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.86**	**290**	*i* P	Pn	16 14 55.2	-1.6
MMIG				*i* S	Sn	16 15 07.4	-1.7
ZIIG	**Zihuatanejo**	**1.05**	**111**	*i* P	Pn	16 14 58.7	-0.7
ZIIG				*i* S	Sn	16 15 11.1	-2.4
ARIG	**Puente Sto Nin**	**2.06**	**82**	*i* P	Pn	16 15 11.1	-1.8
ARIG				*i* S	Sn	16 15 35.9	-1.8
CAIG	**El Cayaco**	**2.33**	**113**	*i* P	Pn	16 15 14.7	-1.7
CAIG				*i* S	Sn	16 15 42.3	-1.6

*BJI **09** 16:18:15.4, 28°.66N×100°.59E, h6km, mB4.5/14, mb4.4/19, ML4.1/13, Ms4.2/30, Ms7 4.0/23*

*IDC **09** 16:18:15.8±0.6, 28°.60N×100°.59E, h0km, mb4.1/22, mb1 4.1/23, mb1mx4.0/35, mbtmp4.1/23, ML3.5/1, MS3.4/11, Ms1 3.5/11, ms1mx3.1/45, Error ellipse: s-maj=17.3km s-min=12.3km az=30.0*

*ISCJB **09** 16:18:17.4±1.4, 28°.65N±0°.04×100°.53E±0°.03, h17km±11km, mb4.2/43, MS3.5/13, Error ellipse: s-maj=6.0km s-min=4.4km az=3.4*

*MOS **09** 16:18:19.4±1.4, 28°.58N×100°.61E, h33km, mb4.4/22, Error ellipse: s-maj=11.3km s-min=7.9km az=110.8*

*NEIC **09** 16:18:21.7±0.3, 28°.70N×100°.55E, h35km, mb4.4/14, Error ellipse: s-maj=7.0km s-min=5.3km az=60.0*

*DJA **09** 16:18:24.9±1.1, 29°N±6°×10°1E±°, h75km±13km, M4.3/8, mb4.3/8*

ISC 09 16:18:21.2±0.5**, 28°.70N**±0°.03×**100°.52E**±0°.03**, h28**km±3km**, n142, σ1^{s}93**/173**, mb4.3**/43**, MS3.4**/13**, 5C-2D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**3.57**	**51**	Pn	**Pn**	**16 19 13.6**	**-1.3**
CD2				Sn	**Sn**	**16 19 55.6**	**-0.6**
CD2				Sg	**Sb**	**16 20 11.4**	**+4.6**
CD2				smax	smax		
	comp=N,630nm,0.9s						
CD2				smax	smax		
	comp=E,860nm,0.9s						
KMI	**Kunming**	**4.08**	**150**	Pg	**Pn**	**16 19 22.2**	**+0.2**
KMI				Sn	**Sn**	**16 20 10.3**	**+1.4**
KMI				Sg	**Sb**	**16 20 23.9**	**+2.4**
KMI				smax	smax		
	comp=N,170nm,0.8s						
KMI				smax	smax		
	comp=E,170nm,1.0s						
KMI				LR	LR		
	comp=N,3μm,5.6s						
KMI				LR	LR		
	comp=E,4μm,6.1s						
KMI	**Kunming**	**4.08**	**150**	P	**Pn**	**16 19 22.2**	**+0.2**
KMI						16 20 10.3	
KMI	**Kunming**	**4.08**	**150**	Pn	**Pn**	**16 19 22.2**	**+0.2**
KMI				Pg	**Pb**	**16 19 32.3**	**-0.2**
KMI				Sn	**Sn**	**16 20 10.3**	**+1.4**
KMI				Sg	**Sb**	**16 20 23.9**	**+2.4**
GYA	**Guiyang**	**5.89**	**111**	Pn	**Pn**	**16 19 48.4**	**+1.6**
GYA				Pg	Pb	16 20 10.6	+7.2
GYA				Sn	**Sn**	**16 20 56.6**	**+3.0**
GYA				Sg	**Sb**	**16 21 16.8**	**+3.2**
GYA				smax	smax		
	comp=N,70nm,1.3s						
GYA				smax	smax		
	comp=E,90nm,1.4s						
LZH	**Lanzhou**	**7.88**	**20**	*e*P	Pn	16 20 18.7	+4.6
LZH				pP	pP	16 20 22.8	
LZH				sP		16 20 26.3	
LZH				*e*S	Sn	16 21 53.4	+11
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,6.0s						
LZH				LR	LR		
	comp=E,970nm,5.2s						
LZH				LR	LR		
	comp=Z,1μm,8.2s						
LZH	**Lanzhou**	**7.88**	**20**	*e*P	Pn	16 20 18.7	+4.6
LZH	**Lanzhou**	**7.88**	**20**	*e*P	Pn	16 20 18.7	+4.6
XAN	**Xi'an**	**8.94**	**51**	P	**Pn**	**16 20 25.7**	**-2.8**
XAN				S	**Sn**	**16 22 05.7**	**-2.6**
XAN				LR	LR		
	comp=N,390nm,13.9s						
XAN				LR	LR		
	comp=E,94nm,9.8s						
XAN				LR	LR		
	comp=Z,210nm,12.5s						
CHTO	**Chiang Mai**	**9.95**	**189**	*e*P	**Pn**	**16 20 43.4**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CHTO	**Chiang Mai**	**9.95**	**189**	*e*Pn	**Pn**	**16 20 43.4**	**+1.0**
	comp=Z,7.1nm,1.1s						
CHTO				*e*		16 23 35.2	
CHTO	**Chiang Mai**	**9.95**	**189**	P	**Pn**	**16 20 43.7**	**+1.3**
	comp=Z,7.1nm,1.8s						
CMMT	**Chiang Mai**	**9.95**	**189**	P	**Pn**	**16 20 43.5**	**+1.1**
	comp=Z,6.3nm,1.8s						
CMAR	**Chiang Mai Arr**	**10.30**	**188**	Pn	**Pn**	**16 20 48.9**	**+1.7**
CMAR				Pg		16 21 27.4	
CMAR				Lg	Lg	16 23 46.4	
CMAR	**Chiang Mai Arr**	**10.30**	**188**	Pn	**Pn**	**16 20 48.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=1.2,slow=14,SNR=10						
CMAR				Pg		16 21 27.4	
	comp=Z,0.4nm,0.3s,baz=357,slow=18,SNR=12						
CMAR				Lg	Lg	16 23 46.4	
	comp=Z,0.0nm,0.3s,baz=18,slow=29,SNR=5.4						
CMAR				LR	LR	16 25 05.5	
	comp=Z,312nm,18.8s,baz=5.0,slow=40						
TAPN	**Taplejung**	**11.40**	**266**	*e*P	**Pn**	**16 21 02.2**	**-0.3**
ODAN	**Odare**	**11.77**	**264**	*e*P	**Pn**	**16 21 06.5**	**-1.0**
	comp=Z,25nm,0.8s						
WHN	**Wuhan**	**12.18**	**78**	P	**Pn**	**16 21 11.8**	**-1.0**
WHN				S	**Sn**	**16 23 28.7**	**+1.1**
WHN				LR	LR		
	comp=N,2μm,7.2s						
WHN				LR	LR		
	comp=E,2μm,8.7s						
WHN				LR	LR		
	comp=Z,2μm,10.2s						
RAMN	**Ramite**	**12.44**	**265**	*e*P	**Pn**	**16 21 16.3**	**-0.4**
	comp=Z,25nm,0.7s						
GUN	**Gumba**	**12.92**	**270**	*e*P	**Pn**	**16 21 22.7**	**-0.7**
	comp=Z,19nm,0.5s						
PKI	**Pulchoki**	**13.38**	**269**	*e*P	**Pn**	**16 21 27.8**	**-1.8**
PKIN	**Phulchoki**	**13.39**	**269**	*e*P	**Pn**	**16 21 27.6**	**-2.1**
	comp=Z,14nm,0.6s						
KKN	**Kakani**	**13.46**	**270**	*e*P	**Pn**	**16 21 29.0**	**-1.7**
	comp=Z,49nm,1.0s						
DMN	**Daman**	**13.64**	**269**	*e*P	**Pn**	**16 21 30.5**	**-2.6**
	comp=Z,15nm,0.7s						
DANN	**Dangsing**	**14.74**	**273**	*e*P	Pn	16 21 42.7	-5.4
	comp=Z,35nm,0.9s						
KOLN	**Koldanda**	**14.94**	**270**	*e*P	Pn	16 21 45.9	-4.9
	comp=Z,12nm,0.6s						
HHC	**Hu-ho-hao-te**	**15.12**	**34**	*e*P	**Pn**	**16 21 51.8**	**-1.2**
HHC				pP	**P**	**16 21 59.1**	**+1.2**
HHC				sP	**sP**	**16 22 04.7**	**-4.4**
HHC				S	**Sn**	**16 24 33.2**	**-6.4**
HHC				sS	S	16 24 48.9	-7.4
HHC				SS	**SnSn**	**16 24 57.7**	**+5.2**
HHC				pmax	pmax		
	comp=Z,34nm,0.5s						
HHC				pmax	pmax		
	comp=Z,170nm,7.5s						
HHC				LR	LR		
	comp=N,940nm,11.0s						
HHC				LR	LR		
	comp=E,1μm,7.9s						
HHC				LR	LR		
	comp=Z,860nm,11.6s						
PYUN	**Piuthan**	**15.44**	**272**	*e*P	Pn	16 21 50.7	-6.6
	comp=Z,58nm,0.9s						
NJ2	**Nanjing**	**16.17**	**74**	*e*P	**P**	**16 22 10.3**	**+0.8**
NJ2				pP	**pP**	**16 22 15.5**	**-1.5**
NJ2				S	**S**	**16 25 19.0**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,60nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,50nm,9.6s						
NJ2				LR	LR		
	comp=N,570nm,18.1s						
NJ2				LR	LR		
	comp=E,660nm,19.5s						
NJ2				LR	LR		
	comp=Z,790nm,18.8s						
BJI	**Beijing**	**17.15**	**45**	P	**Pn**	**16 22 18.1**	**-0.7**
BJI				pmax	pmax		
	comp=Z,15nm,0.6s						
BJI				LR	LR		
	comp=N,290nm,10.1s						
BJI				LR	LR		
	comp=E,200nm,9.6s						
BJI				LR	LR		
	comp=Z,69nm,18.6s						
BJI	**Beijing**	**17.15**	**45**	P	**Pn**	**16 22 18.1**	**-0.7**
BJI	**Beijing**	**17.15**	**45**	P	**Pn**	**16 22 18.1**	**-0.7**
WMQ	**Urumqi**	**18.25**	**329**	*e*P	**Pn**	**16 22 33.9**	**+1.4**
WMQ				pP	**pP**	**16 22 41.8**	**+1.7**
WMQ				PP	**PnPn**	**16 22 49.3**	**+5.2**
WMQ				S	**Sn**	**16 25 53.7**	**-1.8**
WMQ				sS	**S**	**16 26 06.3**	**+6.4**
WMQ				PcP	**PcP**	**16 27 05.5**	**+1.5**
WMQ				PcS	**PcS**	**16 30 41.0**	**+0.4**
WMQ				ScS	**ScS**	**16 34 16.7**	**-1.5**
WMQ				pmax	pmax		
	comp=Z,16nm,0.4s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.6s						
WMQ				LR	LR		
	comp=N,200nm,8.0s						
WMQ				LR	LR		
	comp=E,180nm,5.2s						
WMQ				LR	LR		
	comp=Z,150nm,5.6s						
SSLB	**Suanglung**	**18.97**	**100**	*e*P	**Pn**	**16 22 41.4**	**+0.1**
	comp=Z,9.5nm,0.7s						
YHNB	**Yeheng**	**19.06**	**97**	*e*P	**Pn**	**16 22 43.1**	**+0.7**
	comp=Z,22nm,0.9s						
SONM	**Songino Array**	**19.64**	**12**	P	**P**	**16 22 47.6**	**-0.2**
SONM	**Songino Array**	**19.64**	**12**	P	**P**	**16 22 47.6**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=195,slow=11,SNR=17						
ULN	**Ulaanbaatar**	**19.79**	**13**	*e*P	**P**	**16 22 48.6**	**-0.8**
	comp=Z,3.1nm,0.7s						
ULN	**Ulaanbaatar**	**19.79**	**13**	P	**P**	**16 22 49.0**	**-0.4**
	comp=Z,5.9nm,0.8s						
ZAK	**Zakamensk**	**21.75**	**5**	*e*P	**P**	**16 23 10.9**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SNY	**Shenyang**	**22.85**	**49**	⇓P	**P**	**16 23 23.9**	**+1.7**
SNY				S	**S**	**16 27 32.8**	**+3.0**
SNY				pmax	pmax		
	comp=Z,14nm,1.8s						
SNY				pmax	pmax		
	comp=Z,130nm,3.5s						
SNY				LR	LR		
	comp=N,190nm,9.7s						
SNY				LR	LR		
	comp=E,140nm,9.1s						
SNY				LR	LR		
	comp=Z,160nm,9.4s						
KSH	**Kashi**	**22.94**	**304**	P	**P**	**16 23 25.5**	**+2.2**
KSH				pP	**pP**	**16 23 34.8**	**+3.8**
KSH				*e*PP	PnPn	16 23 55.8	+7.5
KSH				*e*PcP	**PcP**	**16 27 16.0**	**+3.0**
KSH				*e*S	**S**	**16 27 30.0**	**-1.7**
KSH				*e*sS	**sS**	**16 27 44.6**	**-0.5**
KSH				*e*SS	**SnSn**	**16 28 14.3**	**+10**
KSH				*e*ScP	**ScP**	**16 30 50.1**	**+1.2**
KSH				*e*PcS	**PcS**	**16 30 54.0**	**+1.9**
KSH				*e*ScS	**ScS**	**16 34 34.4**	**-0.4**
KSH				pmax	pmax		
	comp=Z,35nm,1.7s						
KSH				pmax	pmax		
	comp=Z,360nm,5.9s						
KSH				LR	LR		
	comp=N,870nm,13.5s						
KSH				LR	LR		
	comp=E,390nm,14.4s						
KSH				LR	LR		
	comp=Z,320nm,5.6s						
HVS	**Khovu-Aksy**	**22.99**	**349***c*	*i*P	**P**	**16 23 23.5**	**-0.1**
MK31	**Makanchi Array**	**23.01**	**327**	*e*P	**P**	**16 23 22.9**	**-0.9**
MK31	**Makanchi Array**	**23.01**	**327**	*e*P	**P**	**16 23 22.9**	**-0.9**
MKAR	**Makanchi Array**	**23.01**	**327***c*	*e*P	**P**	**16 23 24.1**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	**Makanchi Array**	**23.01**	**327**	P	**P**	**16 23 23.4**	**-0.4**
MKAR	**Makanchi Array**	**23.01**	**327**	P	**P**	**16 23 23.4**	**-0.4**
	comp=Z,7.4nm,0.8s,baz=128,slow=7.9,SNR=58						
HYB	**Hyderabad**	**23.08**	**246**	*i* P	**P**	**16 23 23.0**	**-1.8**
ULHL	**Ulahol**	**23.84**	**311**	*i* P	**P**	**16 23 34.6**	**+2.3**
ULHL	**Ulahol**	**23.84**	**311**	P	**P**	**16 23 34.6**	**+2.3**
	SNR=8.6						
KZA	**Kyzart**	**24.44**	**310**	*i* P	**P**	**16 23 39.3**	**+1.3**
KZA	**Kyzart**	**24.44**	**310**	P	**P**	**16 23 39.2**	**+1.3**
	SNR=15						
KSAR	**Wonju Array Be**	**24.47**	**62**	P	**P**	**16 23 37.5**	**-0.4**
KSRS	**Korea Array**	**24.50**	**62**	P	**P**	**16 23 37.5**	**-0.7**
	comp=Z,6.3nm,1.0s,baz=253,slow=9.6,SNR=16						
KSRS				LR	LR	16 34 42.6	
	comp=Z,76nm,18.3s,baz=154,slow=40						
KBK	**Karagaybulak**	**24.89**	**311**	*i* P	**P**	**16 23 43.7**	**+1.9**
KBK	**Karagaybulak**	**24.89**	**311**	P	**P**	**16 23 43.7**	**+1.9**
	SNR=22						
CN2	**Changchun**	**25.00**	**46**	*e*P	**P**	**16 23 41.0**	**-1.5**
CN2				*e*S	S	16 27 55.9	-8.8
CN2				LR	LR		
	comp=N,200nm,10.0s						
CN2				LR	LR		
	comp=E,200nm,10.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
AAK	**Ala-Archa**	**25.18**	**310***c*	*e*P	**P**	**16 23 45.8**	**+1.4**
AAK				pmax	pmax		
	comp=Z,50nm,1.2s						
AAK	**Ala-Archa**	**25.18**	**310**	*e*P	**P**	**16 23 45.4**	**+0.9**
	comp=Z,17nm,1.0s						
AAK	**Ala-Archa**	**25.18**	**310**	P	**P**	**16 23 45.6**	**+1.2**
	comp=Z,11nm,0.9s,baz=103,slow=6.1,SNR=32						
AAK				LR	LR	16 35 13.4	
	comp=Z,99nm,18.5s,baz=285,slow=40						
USP	**Ospenovka**	**25.45**	**312**	*i* P	**P**	**16 23 47.6**	**+0.9**
USP	**Ospenovka**	**25.45**	**312**	P	**P**	**16 23 47.6**	**+0.9**
	SNR=21						
AML	**Almayashu**	**25.52**	**309**	*i* P	**P**	**16 23 49.4**	**+1.7**
AML	**Almayashu**	**25.52**	**309**	P	**P**	**16 23 49.4**	**+1.7**
	SNR=20						
EKS2	**Erkin-Say**	**25.67**	**310**	P	**P**	**16 23 51.3**	**+2.4**
	SNR=8.1						
PSI	**Prapat**	**25.80**	**184**	P	**P**	**16 23 49.9**	**-0.3**
PSI	**Prapat**	**25.80**	**184**	P	**P**	**16 23 49.2**	**-1.0**
	comp=Z,14nm,1.5s						
PSI	**Prapat**	**25.80**	**184**	P	**P**	**16 23 49.9**	**-0.3**
	comp=Z,2.3nm,0.4s,baz=286,slow=3.9,SNR=4.9						
PSI				LR	LR	16 34 31.1	
	comp=Z,115nm,19.0s,baz=22,slow=38						
JNU	**Nakatsue**	**26.37**	**73**	P	**P**	**16 23 55.0**	**-0.2**
JNU	**Nakatsue**	**26.37**	**73**	P	**P**	**16 23 55.0**	**-0.2**
	comp=Z,6.7nm,0.8s,baz=277,slow=6.8,SNR=5.0						
JNU				LR	LR	16 35 50.7	
	comp=Z,145nm,18.1s,baz=61,slow=40						
KKM	**Kota Kinabalu**	**26.99**	**144**	P	**P**	**16 23 59.4**	**-1.6**
	comp=Z,13nm,1.0s						
KKM	**Kota Kinabalu**	**26.99**	**144**	P	P	16 23 55.8	-5.2
	comp=Z,11nm,1.1s						
KBL	**Kabul**	**27.36**	**290**	*e*P	**P**	**16 24 03.6**	**-0.7**
KBL				pmax	pmax		
	comp=Z,26nm,1.1s						
KBL	**Kabul**	**27.36**	**290**	*e*P	**P**	**16 24 03.6**	**-0.7**
	comp=Z,26nm,1.1s						
KURBB	**Kurchatov Arra**	**27.48**	**329**	P	**P**	**16 24 04.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=144,slow=8.9,SNR=18						
KURBB				PcP	**PcP**	**16 27 21.3**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=120,slow=1.9,SNR=5.2						
KURBB				LR	LR	16 34 36.4	
	comp=Z,23nm,21.2s,baz=40,slow=36						
KURK	**Kurchatov**	**27.50**	**329***c*	*e*P	**P**	**16 24 04.2**	**-0.9**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURK	**Kurchatov**	**27.50**	**329**	P	**P**	**16 24 04.7**	**-0.4**
KURK				PcP	**PcP**	**16 27 21.3**	**-1.5**
ZAA0	**Zalesovo Array**	**27.71**	**340**	P	**P**	**16 24 03.3**	**-3.7**
ZALV	**Zalesovo Beam**	**27.71**	**340**	P	**P**	**16 24 07.1**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV				MLR	MLR		
	comp=Z,35nm,21.1s						
ZALV	**Zalesovo Beam**	**27.71**	**340**	P	**P**	**16 24 07.0**	**+0.1**
ZALV	**Zalesovo Beam**	**27.71**	**340**	P	**P**	**16 24 07.0**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=152,slow=9.6,SNR=5.9						
ZALV				LR	LR	16 36 26.7	
	comp=Z,35nm,21.1s,baz=233,slow=39						
MDJ	**Mudanjiang**	**28.02**	**48**	P	**P**	**16 24 10.1**	**+0.3**
MDJ				pP	**pP**	**16 24 18.9**	**+0.8**
MDJ				S	**S**	**16 28 53.3**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,6.0nm,2.3s						
MDJ				pmax	pmax		
	comp=Z,42nm,4.4s						
MDJ				LR	LR		
	comp=N,30nm,19.6s						
MDJ				LR	LR		
	comp=E,31nm,21.5s						
MDJ				LR	LR		
	comp=Z,70nm,18.1s						
SBUM	**Sibu**	**28.39**	**155**	P	**P**	**16 24 11.0**	**-2.3**
KSM	**Kuching**	**28.64**	**159**	*e*P	**P**	**16 24 13.5**	**-2.1**
	comp=Z,7.2nm,1.1s						
USRK	**Ussuriysk Arra**	**29.45**	**50**	P	**P**	**16 24 20.1**	**-2.5**
	comp=Z,1.0nm,0.6s,baz=244,slow=8.9,SNR=2.4						
MAJO	**Matsushiro**	**32.53**	**66**	*e*P	**P**	**16 24 49.0**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,14nm,1.3s						
MAJO	**Matsushiro**	**32.53**	**66**	*e*P	**P**	**16 24 49.0**	**-0.8**
	comp=Z,14nm,1.3s						
MJAR	**Matsushiro Arr**	**32.53**	**66**	P	**P**	**16 24 48.5**	**-1.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	32.53	66	P	P	16 24 48.5	-1.4
	comp=Z,2.5nm,1.1s,baz=268,slow=10,SNR=9.2						
MJAR				LR	LR	16 38 38.2	
	comp=Z,67nm,18.4s,baz=210,slow=38						
BVAR	Borovoye Array	32.89	326	P	P	16 24 52.8	+0.1
BVAR						16 27 35.5	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	Borovoye Array	32.89	326	P	P	16 24 52.8	+0.1
BVAR				PcP	PcP	16 27 35.5	-1.3
BVAR	Borovoye Array	32.89	326	P	P	16 24 52.8	+0.1
	comp=Z,1.0nm,0.5s,baz=116,slow=10,SNR=9.8						
BVAR				PcP	PcP	16 27 35.5	-1.3
	comp=Z,0.7nm,0.6s,baz=116,slow=3.4,SNR=4.2						
BRVK	Borovoye	32.96	326	ceP	P	16 24 53.1	-0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BRVK	Borovoye	32.96	326	eP	P	16 24 53.6	+0.3
	comp=Z,2.5nm,0.6s						
ASAJ	Asahikawa	36.77	54	P	P	16 25 25.8	-0.6
ASAJ	Asahikawa	36.77	54	P	P	16 25 25.8	-0.6
	comp=Z,7.9nm,0.9s,baz=297,slow=18,SNR=3.6						
ABKAR	Akbulak array	37.05	315	P	P	16 25 28.5	-0.1
	comp=Z,0.4nm,0.5s						
AKTO	Aktyubinsk	38.60	316	P	P	16 25 42.0	+0.2
AKTO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKTO	Aktyubinsk	38.60	316	P	P	16 25 42.0	+0.2
AKTO	Aktyubinsk	38.60	316	P	P	16 25 42.0	+0.2
	comp=Z,1.8nm,1.1s,baz=73,slow=7.4,SNR=3.0						
ARU	Arti	40.52	325	d iP	P	16 25 57.7	+0.1
ARU						16 27 31.4	
ARU				S	S	16 32 07.5	+2.8
ARU				SS	SS	16 34 58.7	-5.9
ARU				pmax	pmax		
	comp=Z,16nm,1.2s						
RDF	Al-Radifah	46.08	284	eP	P	16 26 43.0	+0.1
RDF				AMb	AMB	16 26 44.1	
	comp=Z,46nm,1.1s						
NAY	Al-Naaiem	46.27	284	eP	P	16 26 43.8	-0.6
NAY				AMb	AMB	16 26 44.9	
	comp=Z,31nm,1.0s						
KIV	Kislovodsk	48.07	305	P	P	16 26 59.0	+0.7
KIV				pmax	pmax		
	comp=Z,10.0nm,1.5s						
PETK	Petropavlovsk-	48.07	43	LR	LR	16 49 47.5	
	comp=Z,28nm,19.8s,baz=84,slow=39						
ASF	Jabal al Asfar	54.25	291	P	P	16 27 45.4	+0.4
ASF	Jabal al Asfar	54.25	291	P	P	16 27 45.4	+0.4
	comp=Z,1.5nm,0.7s,baz=101,slow=5.2,SNR=6.4						
BRTR	Keskin Array B	55.24	300	P	P	16 27 51.0	-1.0
BRTR	Keskin Array B	55.24	300	P	P	16 27 51.0	-1.0
	comp=Z,0.6nm,0.8s,baz=73,slow=5.0,SNR=3.0						
AKASG	Malin Array Be	56.78	314	P	P	16 28 01.5	-1.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	56.78	314	P	P	16 28 01.4	-1.2
AKASG	Malin Array Be	56.78	314	P	P	16 28 01.5	-1.2
	comp=Z,1.4nm,0.6s,baz=70,slow=6.7,SNR=3.2						
FINES	FINESS Array B	57.84	327	P	P	16 28 09.5	-0.5
FINES	FINESS Array B	57.84	327	P	P	16 28 09.5	-0.5
	comp=Z,2.5nm,0.7s,baz=90,slow=7.6,SNR=6.2						
ARCES	ARCESS Array B	58.19	336	LR	LR	16 53 51.0	
	comp=Z,63nm,18.4s,baz=80,slow=37						
WRAB	Tennant Creek	58.36	142	eP	P	16 28 12.3	-1.8
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRAB	Tennant Creek	58.36	142	eP	P	16 28 12.3	-1.8
	comp=Z,7.8nm,0.9s						
WRA	Warramunga Arr	58.36	142	P	P	16 28 11.8	-2.3
WRA	Warramunga Arr	58.36	142	P	P	16 28 11.8	-2.3
	comp=Z,4.2nm,0.8s,baz=330,slow=7.6,SNR=20						
MLR	Muntele Rosu	59.74	308	P	P	16 28 23.3	-0.3
MLR	Muntele Rosu	59.74	308	P	P	16 28 23.3	-0.3
	comp=Z,1.1nm,1.0s,baz=134,slow=6.1,SNR=7.2						
ASAR	Alice Springs	61.20	145	P	P	16 28 31.7	-1.9
ASAR	Alice Springs	61.20	145	P	P	16 28 31.7	-1.9
	comp=Z,0.5nm,0.9s,baz=322,slow=5.9,SNR=4.6						
UZH	Uzhgorod	61.55	312	eP	P	16 28 38.0	+2.3
KMBO	Kilima Mbogo	67.31	255	P	P	16 29 14.8	+0.6
	comp=Z,2.7nm,1.0s						
LPG	La Plagne	72.60	313	eP	P	16 29 45.8	-0.6
	comp=Z,14nm,1.1s						
LPL	La Plagne	72.60	313	eP	P	16 29 45.8	-0.5
	comp=Z,6.9nm,0.7s						
MCK	McKinley	73.10	26	P	P	16 29 49.7	+1.0
MCK	McKinley	73.10	26	P	P	16 29 49.7	+1.0
ILAR	Eielson Array	73.32	24	P	P	16 29 48.5	-1.4
ILAR	Eielson Array	73.32	24	P	P	16 29 48.5	-1.4
	comp=Z,1.9nm,1.2s,baz=279,slow=5.4,SNR=10						
PMR	Palmer	74.13	28	P	P	16 29 53.4	-1.3
PMR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PMR	Palmer	74.13	28	P	P	16 29 53.4	-1.3
	comp=Z,3.0nm,0.8s						
AVF	Avril sur Loir	74.22	315	eP	P	16 29 55.4	-0.1
SML	Sawmill	74.34	27	P	P	16 29 55.3	-0.7
SML				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SML	Sawmill	74.34	27	P	P	16 29 55.2	-0.7
	comp=Z,6.1nm,1.5s						
INK	Inuvik	75.42	18	LR	LR	17 02 40.8	
	comp=Z,40nm,21.3s,baz=356,slow=35						
YKA	Yellowknife Ar	84.86	16	P	P	16 30 51.8	-1.2
YKA	Yellowknife Ar	84.86	16	P	P	16 30 51.8	-1.2
	comp=Z,0.6nm,0.8s,baz=326,slow=4.8,SNR=7.6						
TORD	Torodi Ar. Bea	91.33	286	P	P	16 31 23.2	-1.7
TORD	Torodi Ar. Bea	91.33	286	P	P	16 31 23.2	-1.7
	comp=Z,0.9nm,1.0s,baz=67,slow=3.9,SNR=3.7						

IDC 09 16:29:38.8±0.9, 11°.17N×140°.82E, h0km, mb3.5/8, mb1 3.7/8, mb1mx3.6/25, mbtmp3.5/8, Error ellipse: s-maj=32.6km s-min=20.9km az=84.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.63	58	Pn	Pb	16 30 56.8	-4.2
	2.1nm,0.3s,baz=198,slow=20,SNR=2.9						
GUMO				Sn	Sb	16 31 54.7	-2.5
	1.8nm,0.3s,baz=217,slow=20,SNR=2.2						
WRA	Warramunga Arr	31.57	192	P	P	16 36 02.5	-0.8
	0.6nm,0.7s,baz=12,slow=9.6,SNR=4.7						
ASAR	Alice Springs	35.28	191	P	P	16 36 35.6	0.0
	0.3nm,0.5s,baz=22,slow=11,SNR=9.5						
CMAR	Chiang Mai Arr	41.06	285	P	P	16 37 25.2	+0.7
	0.6nm,0.8s,baz=105,slow=5.8,SNR=5.6						
SONM	Songino Array	46.56	328	P	P	16 38 08.1	-0.5
	0.2nm,0.3s,baz=136,slow=5.9,SNR=3.4						
MKAR	Makanchi Array	60.54	318	P	P	16 39 50.5	-0.6
	0.3nm,0.5s,baz=92,slow=8.8,SNR=4.9						
KURBB	Kurchatov Arra	63.96	321	P	P	16 40 13.9	0.0
	0.8nm,0.8s,baz=106,slow=6.8,SNR=5.6						
ILAR	Eielson Array	72.43	25	P	P	16 41 06.2	-0.6
	0.3nm,0.7s,baz=248,slow=6.4,SNR=5.0						
YKA	Yellowknife Ar	86.80	27	P	P	16 42 25.6	+0.7
	0.4nm,0.6s,baz=293,slow=5.5,SNR=6.2						
LPAZ	La Paz	151.43	104	PKPbc	PKPbc	16 49 36.9	+0.3
	1.0nm,1.0s,baz=270,slow=2.0,SNR=2.7						

ISK 09 16:31:21.3, 39°.37N×28°.22E, h4km, MD2.8
DDA 09 16:31:21.6, 39°.45N×28°.24E, h18km, MD2.8
CSEM 09 16:31:21.9±0.1, 39°.39N×28°.22E, h2km, MD2.8, Error ellipse: s-maj=2.5km s-min=1.9km az=40.0
ISCJB 09 16:31:21.9±0.5, 39°.40N±0°.03×28°.22E±0°.03, h2km±5km, Error ellipse: s-maj=4.7km s-min=3.8km az=32.4
ISC 09 16:31:22.1±1.0, 39°.39N±0°.02×28°.23E±0°.02, h9km±10km, n50, σ0.51s/63, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	Dursunbey	0.28	42	iP	Pg	16 31 27.3	-0.5
DURS				iS	Sg	16 31 31.7	+0.1
DURS	Dursunbey	0.28	42	iP	Pg	16 31 27.3	-0.5
DURS				iS	Sg	16 31 31.7	+0.1
BALB	Balikesir	0.37	313	ePG	Pg	16 31 29.2	-0.2
BALB				eSG	Sg	16 31 35.3	+1.1
BALB	Balikesir	0.37	313	ePg	Pg	16 31 29.2	-0.2
BALB				eSg	Sg	16 31 35.3	+1.1
DST	Dursunbey	0.37	54	ePG	Pg	16 31 29.5	+0.1
DST				eSG	Sg	16 31 34.8	+0.5
DST	Dursunbey	0.37	54	ePg	Pg	16 31 29.5	+0.1
DST				eSg	Sg	16 31 34.8	+0.5
DEMI	Demirci	0.51	132	iP	Pg	16 31 32.6	+0.5
DEMI				iS	Sb	16 31 40.0	-1.0
DEMI	Demirci	0.51	132	iP	Pg	16 31 32.6	+0.5
DEMI				iS	Sb	16 31 40.0	-1.0
BALY	Balya	0.59	307	iP	Pg	16 31 33.1	-0.4
BALY				iS	Sg	16 31 41.1	-0.1
BALY	Balya	0.59	307	iP	Pg	16 31 33.1	-0.4
BALY				iS	Sg	16 31 41.1	-0.1
AKHS	Akhisar	0.60	213	iP	Pg	16 31 33.9	+0.2
AKHS				iS	Sb	16 31 44.7	+1.2
AKHS	Akhisar	0.60	213	iP	Pg	16 31 33.9	+0.2
AKS	Akhisar	0.60	213	ePG	Pg	16 31 33.0	-0.8
AKS	Akhisar	0.60	213	ePg	Pg	16 31 33.0	-0.8
GONE	Gonen-Balikesi	0.78	328	ePG	Pg	16 31 36.7	-0.4
GONE	Gonen-Balikesi	0.78	328	ePg	Pg	16 31 36.7	-0.4
KCTX	Karacabey (Bur	0.88	6	ePG	Pg	16 31 38.2	-0.9
KCTX	Karacabey (Bur	0.88	6	ePg	Pg	16 31 38.2	-0.9
KULA	Kula-Manisa	0.94	159	ePG	Pg	16 31 39.2	-0.8
KULA	Kula-Manisa	0.94	159	ePg	Pg	16 31 39.3	-0.8
TVSB	Tavsanli	0.96	86	ePG	Pb	16 31 40.9	0.0
TVSB	Tavsanli	0.96	86	ePg	Pb	16 31 40.9	0.0
BNT	Bandirma	0.99	346	ePG	Pg	16 31 41.3	+0.1
BNT	Bandirma	0.99	346	ePg	Pg	16 31 41.3	+0.1
EDC	Edincik	1.00	344	ePG	Pg	16 31 41.3	0.0
EDC	Edincik	1.00	344	ePg	Pg	16 31 41.3	0.0
GDZ	Gediz	1.02	107	iP	Pg	16 31 41.4	-0.3
GDZ				iS	Sb	16 31 55.7	+0.1
GDZ	Gediz	1.02	107	iP	Pg	16 31 41.4	-0.3
GDZ				iS	Sb	16 31 55.7	+0.1
MDNY	Mudanya-Bursa	1.10	27	ePN	Pn	16 31 43.7	-0.1
MDNY	Mudanya-Bursa	1.10	27	ePn	Pn	16 31 43.7	-0.1
KRBG	Karabiga-Canak	1.23	325	ePN	Pn	16 31 45.5	-0.1
KRBG	Karabiga-Canak	1.23	325	ePn	Pn	16 31 45.5	-0.1
ARMT	Armutlu	1.27	22	ePN	Pn	16 31 46.2	+0.1
ARMT	Armutlu	1.27	22	ePn	Pn	16 31 46.2	+0.1
GEMT	Gemlik	1.28	35	ePN	Pg	16 31 47.0	+0.3
GEMT	Gemlik	1.28	35	ePn	Pg	16 31 47.0	+0.3
MRMT	Marmara Adasi	1.31	338	ePN	Pg	16 31 47.2	+0.1
MRMT	Marmara Adasi	1.31	338	ePn	Pg	16 31 47.3	+0.1
IZI	Iznik	1.35	45	ePN	Pg	16 31 48.2	+0.3
IZI	Iznik	1.35	45	ePn	Pg	16 31 48.2	+0.3
CAVI	Cavuskoy	1.48	56	ePN	Pb	16 31 50.0	+0.1
CAVI	Cavuskoy	1.48	56	ePn	Pb	16 31 50.0	+0.1
ALT	Altintas	1.50	102	ePN	Pb	16 31 50.0	-0.2
ALT	Altintas	1.50	102	ePn	Pb	16 31 50.0	-0.2
EZN	Ezine	1.53	287	ePN	Pn	16 31 50.0	+0.3
EZN	Ezine	1.53	287	ePn	Pn	16 31 50.0	+0.3
GELI	Tayfur-Gelibol	1.69	307	ePN	Pn	16 31 52.5	+0.7
GELI	Tayfur-Gelibol	1.69	307	ePn	Pn	16 31 52.5	+0.7
CTKS	Kestanelik-??a	1.86	6	ePN	Pb	16 31 55.4	-0.9
CTKS	Kestanelik-??a	1.86	6	ePn	Pb	16 31 55.4	-0.9

IDC 09 17:20:30.4±3.9, 14°.00N×90°.87W, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/22, mbtmp3.5/4, ML4.1/1, Error ellipse: s-maj=85.6km s-min=52.5km az=10.0, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	19.32	324	P	P	17 24 57.2	-0.2
	0.1nm,0.3s,baz=144,slow=7.8,SNR=3.5						
NVAR	Mina Array Bea	34.37	320	P	P	17 27 20.1	+0.6
	0.3nm,0.6s,baz=123,slow=9.5,SNR=2.7						
SCHQ	Schefferville	44.85	20	P	P	17 28 46.9	+0.6
	0.8nm,0.5s,baz=220,slow=12,SNR=5.1						
YKA	Yellowknife Ar	51.29	346	P	P	17 29 35.0	-0.9
	0.4nm,0.6s,baz=146,slow=7.6,SNR=12						
CMAR	Chiang Mai Arr	146.33	343	PKPbc	PKPdf	17 40 12.9	0.0
	0.5nm,0.7s,baz=337,slow=5.9,SNR=3.9						

IDC 09 17:50:11.1±2.9, 14°.15N×44°.61W, h0km, mb3.7/5, mb1 4.1/5, mb1mx3.7/25, mbtmp3.7/5, MS3.5/7, Ms1 3.5/7, ms1mx3.3/25, Error ellipse: s-maj=121.8km s-min=28.5km az=15.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	38.14	218	LR	LR	18 11 59.0	
	comp=Z,78nm,21.9s,baz=76,slow=34						
DBIC	Dimbokro	39.75	97	LR	LR	18 11 00.3	
	comp=Z,96nm,20.9s,baz=340,slow=31						
SCHQ	Schefferville	44.14	342	LR	LR	18 14 34.8	
	comp=Z,41nm,18.6s,baz=323,slow=33						
TORD	Torodi Ar. Bea	44.95	85	P	P	17 58 28.1	-0.3
	0.6nm,0.7s,baz=284,slow=8.5,SNR=3.5						
TORD				LR	LR	18 17 45.8	
	comp=Z,79nm,18.8s,baz=180,slow=37						
TXAR	Lajitas Array	56.37	296	P	P	17 59 54.3	-0.3
	1.5nm,1.1s,baz=103,slow=7.5,SNR=2.8						
TXAR				LR	LR	18 24 52.0	
	comp=Z,36nm,18.2s,baz=0.0,slow=37						
NOA	NORSAR Array B	61.48	27	LR	LR	18 21 00.9	
	comp=Z,22nm,19.2s,baz=350,slow=30						
PDAR	Pinedale Array	62.17	311	P	P	18 00 34.5	-0.3
	0.5nm,0.9s,baz=99,slow=8.1,SNR=3.9						
PDAR				LR	LR	18 25 05.1	
	comp=Z,36nm,19.4s,baz=340,slow=34						
YKA	Yellowknife Ar	68.34	332	P	P	18 01 13.7	-0.3
	0.8nm,1.0s,baz=98,slow=6.6,SNR=7.4						
ILAR	Eielson Array	82.47	335	P	P	18 02 36.0	+0.7
	1.5nm,0.9s,baz=69,slow=5.3,SNR=14						

NEIC 09 17:57:41.3±1.1, 14°.48S×75°.76W, h38km±10km, MG4.1(ARE), Error ellipse: s-maj=18.7km s-min=7.6km az=52.0
NEIC Felt [III] at Ica.
IDC 09 17:57:42.9±2.9, 14°.60S×76°.00W, h53km±23km, mb3.4/5, mb1 3.9/8, mb1mx3.6/21, mbtmp3.7/8, ML3.8/4, MS3.3/7, Ms1 3.4/7, ms1mx3.3/15, Error ellipse: s-maj=51.8km s-min=17.3km az=48.0
ISC 09 17:57:39.2±0.7, 14°.69S±0°.08×76°.2W±0°.1, h29km, n31, σ1.48s/29, mb3.6/5, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.75	347	ePn	Pn	17 58 21.4	0.0
NNA				eSn	Sn	17 58 46.8	-7.1
NNA				S	Sb	17 58 59.5	-1.7
NNA	Nana	2.75	347	P	Pn	17 58 23.5	+2.0
	24nm,0.3s,baz=154,slow=11,SNR=26						
NNA				S	Sb	17 58 59.5	-1.7
	82nm,0.3s,baz=159,slow=9.1,SNR=6.2						
NNA				LR	LR	17 59 32.5	
	comp=Z,487nm,19.6s,baz=132,slow=40						
ARE	Arequipa	4.87	112	eP	Pn	17 58 49.0	-1.8
ARE				eS	Sn	17 59 47.0	+0.6
ATAH	Atahualpa	7.81	344	P	Pn	17 59 35.2	+3.9
ATAH				S	Sn	18 01 06.4	+7.4
ATAH	Atahualpa	7.81	344	P	Pn	17 59 35.2	+3.9
	0.9nm,0.3s,baz=169,slow=9.4,SNR=6.2						
ATAH				S	Sn	18 01 06.4	+7.4
	0.4nm,0.3s,baz=188,slow=15,SNR=2.3						
ATAH				LR	LR	18 02 36.9	
	comp=Z,125nm,19.5s,baz=357,slow=38						
LPAZ	La Paz	7.94	103	ePn	Pn	17 59 35.2	+1.9
	15nm,0.6s						
LPAZ	La Paz	7.94	103	P	Pn	17 59 35.2	+1.9
	2.4nm,0.3s,baz=288,slow=8.3,SNR=78						
LPAZ				LR	LR	18 02 43.7	
	comp=Z,180nm,18.2s,baz=121,slow=39						
LVC	Limon Verde	10.48	140	ePn	Pn	18 00 07.6	-0.2
	6.6nm,0.6s						
LVC				eSn	Sn	18 02 00.1	-4.3
SAML	Samuel	13.96	67	ePn	Pn	18 00 50.0	-5.1
	3.0nm,0.7s						
SIV	San Ignacio	14.65	97	P	Pn	18 00 59.2	-5.5
SIV	San Ignacio	14.65	97	P	Pn	18 00 59.2	-5.5
	0.1nm,0.3s,baz=338,slow=19,SNR=3.6						
SIV				LR	LR	18 07 04.4	
	comp=Z,418nm,19.0s,slow=39						
OTAV	Otavalo	14.99	351	P	P	18 01 13.1	-1.8
	3.0nm,0.8s						
CFAA	Coronel Fontan	18.35	158	P	P	18 01 52.5	+0.9
CFAA	Coronel Fontan	18.35	158	P	P	18 01 52.5	+0.9
	0.1nm,0.3s,baz=10,slow=8.4,SNR=4.1						
CFAA				LR	LR	18 08 15.6	
	comp=Z,16nm,19.1s,baz=15,slow=34						
CPUP	Villa Florida	21.10	126	P	P	18 02 21.5	0.0
CPUP	Villa Florida	21.10	126	P	P	18 02 21.5	0.0
	1.3nm,0.7s,baz=308,slow=12,SNR=4.7						
CPUP				LR	LR	18 12 04.8	
	comp=Z,106nm,19.7s,baz=66,slow=41						
BDFB	Brasilia	27.21	96	LR	LR	18 14 56.0	
	comp=Z,247nm,18.8s,baz=103,slow=38						
TXAR	Lajitas Array	51.17	329	P	P	18 06 40.8	+0.8
TXAR	Lajitas Array	51.17	329	P	P	18 06 40.8	+0.8
	0.4nm,0.5s,baz=141,slow=8.1,SNR=3.8						
NVAR	Mina Array Bea	65.92	325	P	P	18 08 24.2	+1.4
NVAR	Mina Array Bea	65.92	325	P	P	18 08 24.2	+1.4
	0.2nm,0.3s,baz=144,slow=6.3,SNR=2.9						
TORD	Torodi Ar. Bea	81.91	74	P	P	18 09 56.0	-0.6
TORD	Torodi Ar. Bea	81.91	74	P	P	18 09 56.0	-0.6
	2.9nm,0.7s,baz=261,slow=5.1,SNR=14						
YKA	Yellowknife Ar	82.59	343	P	P	18 09 58.5	-0.7
YKA	Yellowknife Ar	82.59	343	P	P	18 09 58.5	-0.7
	0.3nm,0.7s,baz=137,slow=5.5,SNR=5.0						
WRA	Warramunga Arr	134.32	222	PKP	PKPdf	18 16 57.0	+1.7
WRA	Warramunga Arr	134.32	222	PKP	PKPdf	18 16 57.0	+1.7
	0.7nm,1.1s,baz=132,slow=2.1,SNR=4.6						
ZALV	Zalesovo Beam	138.08	17	PKP	PKPdf	18 17 01.1	0.0
ZALV	Zalesovo Beam	138.08	17	PKP	PKPdf	18 17 01.1	0.0
	0.2nm,0.3s,baz=322,slow=4.2,SNR=2.8						
SONM	Songino Array	146.88	357	PKPbc	PKPbc	18 17 19.5	+0.5
SONM	Songino Array	146.88	357	PKPbc	PKPbc	18 17 19.5	+0.5
	1.1nm,0.7s,baz=326,slow=2.0,SNR=14						

ISCJB 09 18:02:35.2±0.7, 23°.98N±0°.02×122°.30E±0°.02, h9km±5km, Error ellipse: s-maj=3.6km s-min=2.8km az=155.6
TAP 09 18:02:36.5, 24°.05N×122°.27E, h25km, ML2.9, D
JMA 09 18:02:37.6±0.3, 24°.49N×122°.27E, h54km, M2.0
ISC 09 18:02:35.3±1.1, 24°.01N±0°.03×122°.28E±0°.02, h14km±9km, n43, σ0.73s/76, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.62	267	eP	Pb	18 02 48.8	+0.8
	baz=250						
TWD	Chiawan	0.63	276	P	Pb	18 02 48.1	-0.1
	baz=273						
TWD				eS	Sb	18 02 57.6	+0.7
	baz=273						
ENA	Nanau	0.65	310	P	Pb	18 02 48.5	+0.1
	baz=318						
ENA				eS	Sb	18 02 57.6	+0.3
	baz=318						
TWC	Suao	0.72	326	iP	Pb	18 02 49.4	-0.2
	baz=332						
TWC				eS	Sg	18 02 57.9	-0.8
	baz=332						
YOJ	Yonaguni jima	0.80	56	P	Pb	18 02 51.3	+0.3
YOJ				S	Sb	18 03 01.1	-0.7
ESL	Shilin	0.80	256	eP	Pg	18 02 51.1	+0.3
	baz=244						
ESL				eS	Sg	18 03 01.5	+0.1
	baz=244						
ILA	Ilan	0.90	327	eP	Pn	18 02 53.0	-0.5
	baz=326						
ILA				eS	Sn	18 03 06.0	-0.3
	baz=326						
TWE	Neicheng	0.90	322	P	Pb	18 02 53.0	+0.2
	baz=327						
TWE				eS	Sn	18 03 05.4	-1.2
	baz=327						
ENTT	Nioudou	0.91	314	P	Pn	18 02 53.5	-0.2
	baz=323						
ENTT				eS	Sn	18 03 05.7	-1.0
	baz=323						
NNS	Nan Shan	0.94	297	P	Pb	18 02 53.8	+0.4
	baz=283						
NNS				eS	Sb	18 03 06.4	+0.6
	baz=283						
WHF	Hehuan Shan	0.94	278	P	Pg	18 02 53.6	0.0
	baz=264						
WHF				S	Sg	18 03 06.4	+0.5
	baz=264						
EHY	Hungye	1.01	241	eP	Pb	18 02 54.4	-0.3
	baz=239						
EHY				eS	Sb	18 03 07.4	-0.5
	baz=239						
TWT	Tachien	1.04	284	eP	Pb	18 02 55.4	+0.1
	baz=269						
NSK	Sanguang	1.07	308	eP	Pb	18 02 55.4	-0.3
	baz=306						
NSK				eS	Sg	18 03 09.7	-0.3
	baz=306						
TWF1	Yuli	1.12	234	P	Pb	18 02 55.8	-0.6
	baz=249						
TWF1				eS	Sb	18 03 10.5	-0.4
	baz=249						
NWF	Wu-fen Shan	1.15	337	eP	Pn	18 02 57.5	+0.3
	baz=350						
NWF				eS	Sn	18 03 12.9	+0.1
	baz=350						
CHKT	Chengkung	1.24	223	eP	Pn	18 02 56.7	-1.5
	baz=222						
SMLT	Sun Moon Lake	1.27	265	P	Pn	18 02 58.7	-0.1
	baz=253						
SMLT				S	Sb	18 03 14.8	-0.6
	baz=253						
TYC	Yuchr	1.31	266	eP	Pn	18 02 59.5	+0.3
	baz=255						
TYC				eS	Sb	18 03 16.3	-0.1
	baz=255						
NSTT	Nanjuang	1.32	298	eP	Pg	18 03 00.3	-0.5
	baz=296						
NSTT				eS	Sg	18 03 17.7	-0.3
	baz=296						
TWS1	Kuangyinshan	1.34	324	eP	Pb	18 03 00.1	-0.2
	baz=334						
TWS1				eS	Sg	18 03 18.9	+0.3
	baz=334						
IRIF	Iriomote-Funau	1.36	76	P	Pb	18 03 00.6	0.0
IRIF				S	Sn	18 03 18.2	+0.5
HATJ	Hateruma jima	1.39	88	P	Pg	18 03 02.1	0.0
TWQ1	Liyutan	1.42	284	eP	Pb	18 03 01.4	-0.2
	baz=281						
TWQ1				eS	Sb	18 03 20.1	+0.5
	baz=281						
ELDTW	Lidau	1.42	235	eP	Pn	18 03 00.4	-0.5
	baz=222						
ELDTW				eS	Sn	18 03 17.4	-2.0
	baz=222						
ALS	Alishan	1.44	250	eP	Pn	18 03 01.6	+0.2
	baz=249						
ALS				eS	Sn	18 03 19.6	-0.6
	baz=249						
NSY	Sanyi	1.45	287	eP	Pb	18 03 01.9	-0.2
	baz=285						
TCU	Taichung	1.48	276	eP	Pb	18 03 03.1	+0.6
	baz=273						
TCU				eS	Sg	18 03 22.8	-0.1
	baz=273						
CHN5	Tsauling	1.53	255	eP	Pb	18 03 03.5	0.0
	baz=243						
CHN5				eS	Sb	18 03 23.2	+0.5
	baz=243						
JKRS	Kuro-shima	1.59	81	P	Pn	18 03 04.0	+0.9
WGK	Gukeng	1.61	259	eP	Pb	18 03 05.0	+0.2
	baz=257						
TWG	Pinlang	1.62	223	eP	Pn	18 03 03.0	-0.5
	baz=223						
CHN4	Tsaushan	1.68	247	eP	Pn	18 03 05.7	+1.3
	baz=247						
CHN4				eS	Sb	18 03 27.8	+0.6
	baz=247						
WTP	Ta-pu	1.71	244	eP	Pn	18 03 06.2	+1.5
	baz=243						
WTP				eS	Sn	18 03 27.9	+1.4
	baz=243						
JIJ	Ishigaki jima	1.73	78	P	Pn	18 03 05.1	+0.1
JIJ				S	Sn	18 03 26.8	-0.2
TWK	Hsinying	1.81	246	eP	Pn	18 03 07.3	+1.2
	baz=245						
TWK				eS	Sn	18 03 30.6	+1.8
	baz=245						
CHN1	Nanshi	1.81	243	eP	Pb	18 03 08.2	0.0
	baz=242						
CHN1				eS	Sb	18 03 30.9	+0.1
	baz=242						
ECL	Taimali	1.86	221	eP	Pn	18 03 06.3	-0.6
	baz=231						
WSF	Szhu	1.92	259	eP	Pb	18 03 09.4	-0.8
	baz=258						
WSF				eS	Sb	18 03 33.9	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=258						
CHN8	**Yiju**	**2.01**	**251**	*e*P	**Pn**	**18 03 09.6**	**+0.7**
	baz=250						
TWM1	**Shoushan**	**2.08**	**236**	*e*P	**Pn**	**18 03 11.7**	**+1.9**
	baz=235						
TWM1				*e*S	**Sb**	**18 03 38.7**	**+0.2**
	baz=235						
EAST	**Anshuo**	**2.09**	**219**	*e*P	**Pn**	**18 03 09.7**	**-0.3**
	baz=220						
EAST				*e*S	**Sn**	**18 03 33.9**	**-1.9**
	baz=220						
SCZT	**Fangliau**	**2.24**	**224**	*e*P	**Pn**	**18 03 13.1**	**+1.1**
	baz=218						
SCZT				*e*S	**Sn**	**18 03 39.7**	**+0.3**
	baz=218						

IDC 09 19:01:45.0±3.2**,19°.00S**×**177°.81W,h600**^{km}±40^{km}**,**
mb3.4/3**,mb1 3.5**/3**,mb1mx2.9**/19**,mbtmp3.4**/3**,Error ellipse: s-maj=88.8km s-min=25.6km az=154.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.62**	**242**	P	P	19 08 18.7	+0.3
	3.2nm,0.5s,baz=98,slow=9.9,SNR=14						
WRA	**Warramunga Arr**	**45.00**	**261**	P	P	19 09 08.3	-0.4
	1.5nm,0.4s,baz=97,slow=7.5,SNR=90						
WRA				PcP	PcP	19 10 35.7	-0.9
	0.5nm,0.6s,baz=90,slow=3.3,SNR=3.4						
ASAR	**Alice Springs**	**45.05**	**255**	P	P	19 09 08.9	-0.2
	3.5nm,0.4s,baz=87,slow=8.4,SNR=74						
ASAR				PcP	PcP	19 10 36.1	-0.6
	0.7nm,0.9s,baz=98,slow=4.7,SNR=4.2						
ASAR				S	S	19 15 06.2	+0.6
	1.3nm,0.6s,baz=92,slow=16,SNR=13						
BRTR	**Keskin Array B**	**145.95**	**314**	PKPbc	PKPbc	19 20 18.6	-0.3
	0.3nm,0.5s,baz=29,slow=3.3,SNR=2.7						

WEL 09 19:19:37.0±0.4**,39°.14S**×**174°.91E,h224**^{km}±3^{km}**,ML3.7**/14**,**
10C,Error ellipse: s-maj=2.6km s-min=2.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.12**	**276**	PN	Pn	19 20 05.5	-0.6
PKVZ	**Pokaka**	**0.37**	**114**	⇑PN	Pn	19 20 06.4	-0.2
WPVZ	**Whakapapa**	**0.50**	**98**	PN	Pn	19 20 06.8	-0.3
FWVZ	**Far West T-bar**	**0.52**	**103**	⇑PN	Pn	19 20 07.0	-0.3
TRVZ	**Turoa**	**0.52**	**108**	PN	Pn	19 20 06.7	-0.6
WTVZ	**West Tongariro**	**0.53**	**88**	PN	Pn	19 20 06.9	-0.3
WNVZ	**Wahianoa**	**0.57**	**110**	PN	Pn	19 20 07.3	-0.1
WAZ	**Wanganui**	**0.62**	**174**	PN	Pn	19 20 07.7	+0.4
NEZ	**North Egmont**	**0.64**	**258**	PN	Pn	19 20 07.5	0.0
MOVZ	**Moawhango**	**0.71**	**113**	PN	Pn	19 20 07.4	-0.4
BHHZ	**Black Hill Sta**	**0.96**	**112**	PN	Pn	19 20 08.7	-0.4
TSZ	**Takapari Road**	**1.23**	**139**	PN	Pn	19 20 11.1	+0.3
TSZ				SN	S	19 20 36.7	-0.6
BKZ	**Black Stump Fm**	**1.23**	**92**	⇑PN	Pn	19 20 10.2	-0.8
BKZ				SN	S	19 20 35.4	-1.9
PNHZ	**Pukenui**	**1.27**	**128**	PN	Pn	19 20 11.2	+0.1
POWZ	**Post Office Ro**	**1.42**	**152**	PN	Pn	19 20 12.2	0.0
MCHZ	**McNeill Hill**	**1.42**	**103**	PN	Pn	19 20 12.7	+0.4
NMHZ	**Naumai**	**1.48**	**89**	PN	Pn	19 20 12.8	0.0
WPHZ	**Waipukurau**	**1.50**	**129**	⇑PN	Pn	19 20 13.1	+0.2
WPHZ				SN	S	19 20 40.7	-0.2
DVHZ	**Dannevirke**	**1.51**	**140**	PN	Pn	19 20 13.0	0.0
MRZ	**Mangatainoka R**	**1.61**	**161**	PN	Pn	19 20 13.5	-0.3
MRZ				SN	S	19 20 41.7	-0.8
KAHZ	**Kahuranaki**	**1.66**	**114**	⇑PN	Pn	19 20 14.6	+0.3
OGWZ	**Otaki Gorge**	**1.69**	**173**	⇑PN	Pn	19 20 14.5	0.0
KIW	**Kapiti Island**	**1.72**	**180**	PN	Pn	19 20 14.5	-0.2
PRHZ	**Porangahau**	**1.75**	**131**	PN	Pn	19 20 15.0	0.0
PXZ	**Pawanui**	**1.75**	**121**	PN	Pn	19 20 15.0	0.0
TIWZ	**Tintock**	**1.80**	**156**	PN	Pn	19 20 15.2	-0.3
HOWZ	**Holdsworth Sta**	**1.82**	**165**	PN	Pn	19 20 15.2	-0.4
DUWZ	**D'Urville Isla**	**1.83**	**204**	PN	Pn	19 20 15.3	-0.4
BFZ	**Birch Farm**	**1.85**	**147**	PN	Pn	19 20 15.6	-0.3
CAW	**Cannon Point**	**1.97**	**176**	⇑PN	Pn	19 20 16.7	-0.3
MTW	**Mount Morrison**	**2.07**	**167**	PN	Pn	19 20 17.4	-0.6
TMWZ	**Te Maipa**	**2.11**	**159**	PN	Pn	19 20 18.1	-0.3
TCW	**Tory Channel**	**2.13**	**193**	PN	Pn	19 20 18.3	-0.3
WEL	**Wellington**	**2.15**	**183**	PN	Pn	19 20 18.2	-0.5
SNZO	**South Karori**	**2.17**	**184**	PN	Pn	19 20 18.5	-0.5
MWZ	**Matawai**	**2.20**	**69**	PN	Pn	19 20 17.4	-2.0
PAWZ	**Paruwai Farm**	**2.28**	**170**	⇑PN	Pn	19 20 19.5	-0.6
MSWZ	**Moikau Station**	**2.29**	**174**	⇑PN	Pn	19 20 19.6	-0.7
NNZ	**Nelson**	**2.38**	**209**	⇑PN	Pn	19 20 20.2	-1.0
NNZ				SN	S	19 20 54.1	-1.6
TUWZ	**Tuamarina**	**2.41**	**198**	PN	Pn	19 20 20.9	-0.5
PLWZ	**Palliser**	**2.44**	**174**	PN	Pn	19 20 21.0	-0.9
QRZ	**Quartz Range**	**2.49**	**227**	PN	Pn	19 20 20.5	-1.8
BSWZ	**Blackbirch Sta**	**2.69**	**197**	PN	Pn	19 20 24.0	-0.5
THZ	**Tophouse**	**3.04**	**210**	PN	Pn	19 20 26.9	-1.5
KHZ	**Kahutara**	**3.44**	**197**	PN	Pn	19 20 31.8	-1.1
LTZ	**Lake Taylor**	**4.15**	**208**	PN	Pn	19 20 39.6	-2.0
MQZ	**McQueen's Vall**	**4.87**	**200**	PN	Pn	19 20 47.3	-3.0

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*IDC **09** 19:31:19.1±16.0,22°.57S×174°.31W,h0^{km},mb4.2/5, mb1 4.3/5,mb1mx4.0/22,mbtmp4.2/5,Error ellipse: s-maj=313.3km s-min=128.7km az=82.0*
*AUST **09** 19:32:32.4,26°.10S×179°.41W,h300^{km}*
ISC 09 19:31:33.3±10.0**,23°.6S**±0°.8×**17°5W**±°**,h35**^{km}**,n13,**
σ**0^{s}91**/12**,mb4.2**/5**,Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMSA	**Cobar Meteorol**	**35.30**	**248**	P	**P**	**19 38 25.8**	**+0.7**
	baz=31,SNR=7.3						
CTA	**Charters Tower**	**35.76**	**268**	P	**P**	**19 38 29.9**	**+0.7**
	4.1nm,0.4s,baz=84,slow=11,SNR=15						
QLP	**Quilpie**	**36.63**	**257**	P	**P**	**19 38 36.6**	**0.0**
	baz=32,SNR=4.9						
MTSU	**Mount Surprise**	**38.01**	**270**	P	**P**	**19 38 49.4**	**+1.0**
	baz=34,SNR=4.7						
STKA	**Stephens Creek**	**38.80**	**248**	P	**P**	**19 38 55.4**	**+0.5**
	1.2nm,0.3s,baz=90,slow=9.6,SNR=16						
STKA	**Stephens Creek**	**38.80**	**248**	P	**P**	**19 38 55.5**	**+0.6**
	baz=34,SNR=9.8						
ASAR	**Alice Springs**	**46.30**	**259**	P	**P**	**19 39 54.1**	**-1.8**
	0.6nm,0.3s,baz=96,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**46.69**	**264**	P	**P**	**19 39 58.1**	**-1.0**
	1.9nm,0.3s,baz=98,slow=8.3,SNR=63						
KNRA	**Kununurra**	**52.97**	**268**	P	**P**	**19 40 46.9**	**+0.1**
	baz=49,SNR=6.7						
FITZ	**Fitzroy Crossi**	**55.11**	**264**	P	**P**	**19 41 02.1**	**-0.4**
	2.1nm,0.9s,baz=95,slow=9.5,SNR=7.4						
FITZ	**Fitzroy Crossi**	**55.11**	**264**	P	**P**	**19 41 03.0**	**+0.6**
	baz=51,SNR=3.8						
MORW	**Morawa**	**60.98**	**249**	P	**P**	**19 41 43.8**	**+0.3**
	baz=57,SNR=3.3						
LUWI	**Luwuk**	**63.95**	**281**	P	P	19 42 20.0	+17
	baz=61,SNR=3.8						

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*NIED **09** 19:34:00,36°.70N×142°.60E,h5^{km},Mw5.1 Best double couple: M$_0$5.21000×10^{16} NP1:φ$_s$201.00000°,δ59.00000°, λ142.00000°. NP2:φ$_s$313.00000°,δ58.00000°,λ37.00000°.*
*IDC **09** 19:34:29.2±0.3,36°.53N×142°.72E,h0^{km},mb4.8/45, mb1 4.9/52,mb1mx4.9/54,mbtmp4.8/52,ML4.3/6,MS4.6/30, Ms1 4.6/30,ms1mx4.5/40,Error ellipse: s-maj=10.5km s-min=8.7km az=114.0*
*ISCJB **09** 19:34:29.8±0.7,36°.60N±0°.02×142°.64E±0°.02,h11^{km}±4^{km}, mb5.3/290,MS4.8/203,Error ellipse: s-maj=3.5km s-min=2.4km az=161.4*
*JMA **09** 19:34:30.2±0.2,36°.62N×142°.67E,h21^{km},M5.5*
JMA Felt II J1.
*BJI **09** 19:34:31.7,36°.77N×142°.38E,h12^{km},mB5.4/43,mb5.3/63, Ms5.3/75,Ms7 5.1/69*
*MOS **09** 19:34:32.9±0.9,36°.54N×142°.66E,h33^{km},mb5.6/91, MS4.7/47,Error ellipse: s-maj=6.3km s-min=3.9km az=113.3*
*NEIC **09** 19:34:33.2±0.7,36°.54N×142°.64E,h27^{km}±4^{km},mb5.5/161, MS4.7/134,MW5.1(NIED),Error ellipse: s-maj=4.3km s-min=2.9km az=149.0*
NEIC Recorded [2 JMA] in Fukushima and [1 JMA] in Miyagi and Yamagata.
*TEH **09** 19:34:34.0,36°.56N×142°.57E,h27^{km},ML5.2*
*GCMT **09** 19:34:35.5±0.2,36°.57N×142°.61E,h12^{km},MW5.1, Moment Tensor Solution. s43,c55; s91,c165; Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.28±.10; M$_{\theta\theta}$3.58±.09; M$_{\phi\phi}$-5.86±.08; M$_{r\theta}$-2.84±.25; M$_{\theta\phi}$0.81±.08; M$_{\phi r}$-0.33±.26; Best double couple: M$_0$5.90000×10^{16} NP1:φ$_s$317.00000°, δ64.00000°,λ29.00000°. NP2:φ$_s$213.00000°,δ65.00000°, λ150.00000°. Principal axes: T 5.9000, Plg38.0000°, Azm175.0000°; N 0.0300, Plg52.0000°, Azm356.0000°; P -5.9300, Plg1.0000°, Azm265.0000°; Data Used: II IU IC CN G.*
*SZGRF **09** 19:34:38.2,37°.33N×143°.17E,h33^{km},mb5.7,MS5.1,Off east coast of Honshu, Japan*
*DJA **09** 19:34:46.5±2.9,37°N±7°×14°2E±1°1,h132^{km}±28^{km}, M5.1/19,mB5.6/15,mb5.2/19,Mw(mB)5.1/15*
ISC 09 19:34:33.5±0.3**,36°.57N**±0°.03×**142°.62E**±0°.03**,h27**^{km}±1^{km}**,**
h27^{km}**:pP-P,n1163,**σ**1^{s}29**/1253**,mb5.4**/304**,MS4.8**/203**,**
130C-135D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.55**	**290**	⇓P	**Pn**	**19 34 57.6**	**-1.9**
JFK	**Kawauchi**	**1.61**	**300**	⇓P	**Pn**	**19 34 58.1**	**-2.1**
JFK				*e*S	**Sn**	**19 35 18.6**	**-1.5**
JHO	**Hitachi**	**1.65**	**272**	⇓P	**Pn**	**19 34 59.1**	**-1.6**
CHOJ	**Chosi**	**1.67**	**239**	P	**Pn**	**19 35 00.1**	**-0.9**
CHOJ				*e*S	**Sn**	**19 35 21.6**	**+0.1**
JMM	**Marumori**	**1.95**	**312**	⇓P	**Pn**	**19 35 02.8**	**-2.0**
JFT	**Otama**	**2.06**	**298**	⇓P	**Pn**	**19 35 05.5**	**-0.8**
JFT				*e*S	**Sn**	**19 35 31.3**	**+0.2**
JIO	**Ouri**	**2.13**	**332**	⇓P	**Pn**	**19 35 04.8**	**-2.6**
BSO1	**Boso 1**	**2.33**	**215**	P	**Pn**	**19 35 09.1**	**-0.5**
BSO1				*e*S	**Sn**	**19 35 37.5**	**+0.4**
JOU	**Okura**	**2.37**	**320**	P	**Pn**	**19 35 09.1**	**-1.6**
JFY	**Yanaizu**	**2.48**	**291**	⇓P	**Pn**	**19 35 11.4**	**-0.7**
JAG	**Ashikaga**	**2.56**	**268**	P	**Pn**	**19 35 12.0**	**-1.2**
JAG				*e*S	**Sn**	**19 35 43.0**	**-0.4**
JMK	**Ichinoseki**	**2.62**	**335**	P	**Pn**	**19 35 12.0**	**-2.1**
JMK				*e*S	**Sn**	**19 35 42.2**	**-2.8**
JNS	**Sasagawa**	**2.92**	**296**	*e*S	**Sn**	**19 35 51.2**	**-1.1**
JYK	**Kaneyama**	**2.95**	**323**	⇓P	**Pn**	**19 35 17.0**	**-1.6**
JHK	**Hiroka**	**2.97**	**284**	⇓P	**Pn**	**19 35 18.5**	**-0.3**
JRY	**Ryogami san**	**3.05**	**261**	P	**Pn**	**19 35 19.0**	**-1.1**
JRY				*e*S	**Sn**	**19 35 54.4**	**-1.3**
JOM	**Ohasama**	**3.08**	**341**	⇓P	**Pn**	**19 35 18.3**	**-2.1**
JOM				*e*S	**Sn**	**19 35 54.4**	**-2.0**
JOD2	**Odawara 2**	**3.15**	**247**	P	**Pn**	**19 35 20.8**	**-0.6**
JIZZ	**Izumozaki**	**3.27**	**288**	P	**Pn**	**19 35 23.5**	**+0.5**
JAW	**Awa shima**	**3.27**	**306**	P	**Pn**	**19 35 23.2**	**+0.1**
JYN	**Shimob**	**3.47**	**253**	P	**Pn**	**19 35 25.8**	**0.0**
MJAR	**Matsushiro Arr**	**3.55**	**271**	Pn	**Pn**	**19 35 26.8**	**-0.1**
MJAR				Sn	**Sn**	**19 36 09.8**	**+1.8**
MJAR	**Matsushiro Arr**	**3.55**	**271**	Pn	**Pn**	**19 35 26.8**	**-0.1**
	67nm,0.3s,baz=91,slow=13,SNR=775						
MJAR				Sn	**Sn**	**19 36 09.8**	**+1.8**
	40nm,0.3s,baz=129,slow=20,SNR=4.9						
MJAR				LR	LR	19 37 06.0	
	comp=Z,10μm,20.1s,baz=90,slow=44						
MAJO	**Matsushiro**	**3.55**	**271**	⇓*e*P	**Pn**	**19 35 26.6**	**-0.3**
MAJO	**Matsushiro**	**3.55**	**271**	⇓*e*Pn	**Pn**	**19 35 26.6**	**-0.3**
MAT	**Matsushiro**	**3.55**	**271**	P	**Pn**	**19 35 27.3**	**+0.3**
MAT				S	**Sb**	**19 36 18.7**	**+0.3**
MAT	**Matsushiro**	**3.55**	**271**	P	**Pn**	**19 35 27.2**	**+0.3**
JJN	**Nakama**	**3.61**	**280**	P	**Pn**	**19 35 28.3**	**+0.6**
JNG	**Nsakai**	**3.65**	**269**	P	**Pn**	**19 35 28.3**	**0.0**
JSD	**Sado**	**3.77**	**294**	P	**Pn**	**19 35 28.8**	**-1.1**
SHZ3	**Shizuoka 3**	**3.88**	**249**	P	**Pn**	**19 35 32.0**	**+0.5**
JNY	**Yasuok**	**4.04**	**254**	⇓P	**Pn**	**19 35 34.4**	**+0.7**
JHJ	**Hachijo jima 2**	**4.16**	**215**	Pn	**Pn**	**19 35 34.1**	**-1.1**
	166nm,0.3s,baz=156,slow=2.8,SNR=42						
JHJ				Sn	**Sn**	**19 36 20.4**	**-2.6**
	390nm,0.3s,baz=72,slow=21,SNR=9.4						
ERM	**Erimo**	**5.45**	**4**	*ce*P	**Pn**	**19 35 50.3**	**-2.7**
ERM				pmax	pmax		
	comp=Z,453nm,1.2s						
ERM	**Erimo**	**5.45**	**4**	*e*Pn	Pn	19 35 49.5	-3.5
ERM	**Erimo**	**5.45**	**4**	Pn	Pn	19 35 49.8	-3.2
	comp=Z,2μm,0.9s,SNR=22						
ASAJ	**Asahikawa**	**7.54**	**360**	*e*Pn	**Pn**	**19 36 19.2**	**-2.3**
ASAJ	**Asahikawa**	**7.54**	**360**	Pn	**Pn**	**19 36 19.7**	**-1.9**
	comp=Z,9.1nm,0.3s,baz=220,slow=12,SNR=74						
ASAJ				LR	LR	19 40 11.5	
	comp=Z,3μm,20.0s,baz=193,slow=45						
KUR	**Kuril'sk**	**9.52**	**23**	*e*P	**Pn**	**19 36 49.0**	**+0.3**
KUR				MLR	MLR		
	comp=Z,6μm,14.0s						
KUR				MLR	MLR		
	comp=N,14μm,15.0s						
JNU	**Nakatsue**	**10.24**	**254**	⇓*e*Pn	**Pn**	**19 36 59.0**	**+0.2**
JNU	**Nakatsue**	**10.24**	**254**	P	**Pn**	**19 36 59.7**	**+0.9**
JNU	**Nakatsue**	**10.24**	**254**	Pn	**Pn**	**19 36 59.0**	**+0.2**
	comp=N,1.5nm,0.3s,baz=66,slow=8.4,SNR=35						
JNU				LR	LR	19 41 13.5	
	comp=N,5μm,19.6s,baz=76,slow=39						
YSS	**Yuzh-Sakhalins**	**10.38**	**1**	*b i*P	**Pn**	**19 36 59.6**	**-0.9**
YSS				*e*S	**Sn**	**19 38 56.0**	**+0.2**
YSS				pmax	pmax		
	comp=N,220nm,1.0s						
YSS				pmax	pmax		
	comp=E,70nm,1.0s						
YSS				pmax	pmax		
	comp=Z,200nm,1.0s						
YSS				MLR	MLR		
	comp=N,4μm,18.0s						
YSS				MLR	MLR		
	comp=Z,6μm,18.0s						
YSS				MLR	MLR		
	comp=E,5μm,16.0s						
VLA	**Vladivostok**	**10.53**	**312**	*c i*P	**Pn**	**19 37 04.2**	**+1.7**
VLA				pmax	pmax		
	comp=Z,253nm,2.3s						
USRK	**Ussuriysk Arra**	**11.12**	**317**	Pn	**Pn**	**19 37 10.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=127,slow=13,SNR=16						
KSRS	**Korea Array**	**11.79**	**279**	Pn	**Pn**	**19 37 22.1**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=89,slow=13,SNR=113						
KSRS				LR	LR	19 41 47.6	
	comp=Z,5μm,19.2s,baz=82,slow=37						
KSAR	**Wonju Array Be**	**11.82**	**279**	Pn	**Pn**	**19 37 22.1**	**+1.9**
MDJ	**Mudanjiang**	**12.74**	**313**	P	**Pn**	**19 37 33.5**	**+0.7**
MDJ				sP		19 37 42.1	
MDJ				S	**Sn**	**19 39 54.9**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,53nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,1μm,10.8s						
MDJ				LR	LR		
	comp=N,6μm,16.2s						
MDJ				LR	LR		
	comp=E,5μm,16.0s						
MDJ				LR	LR		
	comp=Z,3μm,17.4s						
MDJ	**Mudanjiang**	**12.74**	**313**	*e*Pn	**Pn**	**19 37 33.7**	**+0.8**
	comp=Z,118nm,0.9s						
INCN	**Inchon**	**12.81**	**279**	*e*Pn	**Pn**	**19 37 34.2**	**+0.3**
INCN	**Inchon**	**12.81**	**279**	P	**Pn**	**19 37 36.2**	**+2.3**
	SNR=8.8						
HABR	**Khabarovsk**	**13.13**	**337**	*ce*P	**Pn**	**19 37 36.1**	**-2.0**
HABR				*e*		19 40 01.2	
HABR				pmax	pmax		
	comp=N,34nm,1.4s						
HABR				pmax	pmax		
	comp=Z,41nm,1.4s						
HABR				pmax	pmax		
	comp=E,37nm,1.4s						
HABR				MLR	MLR		
	comp=Z,5μm,18.0s						
KLR	**Kul'dur**	**14.93**	**331**	*e*P	Pn	19 37 55.0	-7.6
KLR				MLR	MLR		
	comp=Z,36μm,12.0s						
CN2	**Changchun**	**14.96**	**304**	⇑P	**Pn**	**19 38 00.7**	**-2.4**
CN2				*e*pP	**P**	**19 38 06.4**	**-2.0**
CN2				*e*S	**Sn**	**19 40 46.9**	**-1.1**
CN2				pmax	pmax		
	comp=Z,30nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=N,6μm,12.0s						
CN2				LR	LR		
	comp=E,4μm,12.0s						
CN2				LR	LR		
	comp=Z,3μm,13.0s						
JOW	**Kunigami**	**15.58**	**236**	*e*Pn	Pn	19 38 04.0	-7.4
	comp=Z,46nm,1.0s						
SNY	**Shenyang**	**15.66**	**295**	⇓P	**Pn**	**19 38 10.1**	**-2.1**
SNY				pmax	pmax		
	comp=Z,28nm,1.3s						
SNY				pmax	pmax		
	comp=Z,360nm,3.5s						
SNY				LR	LR		
	comp=N,7μm,11.4s						
SNY				LR	LR		
	comp=E,6μm,12.7s						
SNY				LR	LR		
	comp=Z,8μm,13.5s						
OKH	**Okha**	**16.98**	**1**	*e*P	**P**	**19 38 32.0**	**+1.4**
OKH				*e*S	**S**	**19 41 42.4**	**-3.8**
OKH				pmax	pmax		
	comp=Z,1μm,5.0s						
OKH				smax	smax		
	comp=N,2μm,5.0s						
OKH				smax	smax		
	comp=Z,4μm,16.0s						
SKR	**Severo-Kuril's**	**17.12**	**30**	*e*P	P	19 38 40.0	+7.8
SKR				*e*S	**Sn**	**19 41 44.0**	**+3.9**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				pmax	pmax		
	comp=N,2μm,3.0s						
SKR				pmax	pmax		
	comp=E,2μm,3.0s						
SKR				pmax	pmax		
	comp=Z,2μm,3.0s						
SKR				smax	smax		
	comp=N,2μm,10.0s						
SKR				smax	smax		
	comp=E,3μm,10.0s						
SKR				MLR	MLR		
	comp=N,3μm,12.0s						
SKR				MLR	MLR		
	comp=E,5μm,12.0s						
SKR				MLR	MLR		
	comp=Z,5μm,12.0s						
SSE	**Sheshan**	**18.61**	**259**	*e*P	**P**	**19 38 48.2**	**-0.6**
SSE				pP	**pP**	**19 38 55.4**	**-0.7**
SSE				sP	**sP**	**19 39 00.1**	**+0.6**
SSE				S	**Sn**	**19 42 14.1**	**-2.4**
SSE				pmax	pmax		
	comp=Z,15nm,0.8s						
SSE				pmax	pmax		
	comp=Z,310nm,10.9s						
SSE				LR	LR		
	comp=N,6μm,17.3s						
SSE				LR	LR		
	comp=E,2μm,17.2s						
SSE				LR	LR		
	comp=Z,3μm,12.9s						
PEA0B	**Petropavlovsk-**	**19.62**	**28**	Pn	**P**	**19 39 00.2**	**+0.5**
PETK	**Petropavlovsk-**	**19.62**	**28**	P	**P**	**19 38 59.4**	**-0.3**
PETK				MLR	MLR		
	comp=Z,1μm,18.3s						
PETK	**Petropavlovsk-**	**19.62**	**28**	P	**P**	**19 38 59.4**	**-0.3**
PETK	**Petropavlovsk-**	**19.62**	**28**	P	**P**	**19 38 59.4**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=186,slow=13,SNR=5.7						
PETK				LR	LR	19 45 55.7	
	comp=Z,1μm,18.3s,baz=215,slow=35						
PET	**Petropavlovsk**	**19.93**	**29**	*de*P	**P**	**19 39 02.6**	**-0.4**
PET				*e*S	**S**	**19 42 39.0**	**-6.7**
PET				pmax	pmax		
	comp=Z,600nm,10.3s						
PET				pmax	pmax		
	comp=Z,900nm,10.7s						
PET				pmax	pmax		
	comp=Z,72nm,1.1s						
PET				MLR	MLR		
	comp=Z,2μm,15.0s						
PET				MLR	MLR		
	comp=Z,2μm,12.0s						
NJ2	**Nanjing**	**20.13**	**264**	*e*P	**P**	**19 39 04.2**	**-1.2**
NJ2				pP	**pP**	**19 39 10.8**	**-1.9**
NJ2				sP	**sP**	**19 39 14.4**	**-1.7**
NJ2				S	Sn	19 42 52.5	-0.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,350nm,10.6s						
NJ2				LR	LR		
	comp=N,4μm,15.1s						
NJ2				LR	LR		
	comp=E,3μm,12.9s						
NJ2				LR	LR		
	comp=Z,3μm,16.6s						
HIA	**Hailar**	**20.92**	**314**	*e*Pn	**P**	**19 39 11.8**	**-2.0**
	comp=Z,179nm,1.1s						
HIA				LR	LR		
	comp=Z,2μm,21.0s						
BJI	**Beijing**	**21.01**	**288**	P	**P**	**19 39 12.3**	**-2.6**
BJI				pP	**pP**	**19 39 20.1**	**-2.1**
BJI				sP	**sP**	**19 39 22.9**	**-2.8**
BJI				S	**S**	**19 43 02.1**	**-5.4**
BJI				pmax	pmax		
	comp=Z,58nm,1.7s						
BJI				pmax	pmax		
	comp=Z,600nm,6.5s						
BJI				LR	LR		
	comp=N,2μm,13.9s						
BJI				LR	LR		
	comp=E,4μm,13.3s						
BJI				LR	LR		
	comp=Z,1μm,13.8s						
BJT	**Baijiatuau**	**21.02**	**287**	*e*Pn	**P**	**19 39 15.1**	**+0.1**
	comp=Z,70nm,0.7s						
BJT				LR	LR		
	comp=Z,1μm,22.0s						
TATO	**Taipei**	**21.47**	**243**	PFAKE		19 39 30.0	+10
TATO				LR	LR		
	comp=Z,1μm,20.0s						
YHNB	**Yeheng**	**21.74**	**243**	P	**P**	**19 39 19.5**	**-3.4**
	comp=Z,40nm,1.0s						
YHNB				LR	LR		
	comp=Z,2μm,20.0s						
NACB	**Ninganchiao**	**21.89**	**242**	P	**P**	**19 39 22.9**	**-1.6**
SSLB	**Suanglung**	**22.59**	**242**	*e*P	**P**	**19 39 28.9**	**-3.2**
	comp=Z,56nm,1.1s						
SSLB				*e*S	**S**	**19 43 33.1**	**-5.0**
YULB	**Yu-li**	**22.60**	**240**	*e*P	**P**	**19 39 30.4**	**-1.7**
	comp=Z,54nm,1.1s						
YULB				*e*S	**S**	**19 43 39.4**	**+1.2**
GUMO	**Guam**	**22.97**	**174**	P	**P**	**19 39 35.4**	**-0.6**
GUMO	**Guam**	**22.97**	**174**	P	**P**	**19 39 35.4**	**-0.6**
	comp=Z,46nm,0.9s,baz=24,slow=20,SNR=2.4						
GUMO				LR	LR	19 46 42.1	
	comp=Z,1μm,19.6s,baz=2.5,slow=32						
TPUB	**Ta-pu**	**23.13**	**241**	*e*P	**P**	**19 39 34.3**	**-3.3**
	comp=Z,133nm,1.1s						
TWG	**Pinlang**	**23.13**	**240**	*e*P	**P**	**19 39 36.6**	**-0.9**
	comp=Z,316nm,1.0s						
CLNS	**Chul'man**	**23.50**	**335**	*i* P	**P**	**19 39 39.7**	**-1.4**
CLNS				*e**PP	**pP**	**19 39 48.5**	**-0.2**
CLNS				*e*		19 39 56.3	
CLNS				*e*PPP	PPP	19 40 15.8	
CLNS				*e*		19 43 25.1	
CLNS				*e*S	**S**	**19 43 50.7**	**-2.3**
CLNS				*e*SSS	SSS	19 45 00.4	
CLNS				pmax	pmax		
	comp=N,74nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,111nm,1.3s						
CLNS				pmax	pmax		
	comp=E,26nm,1.1s						
CLNS				pmax	pmax		
	comp=E,100nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,158nm,1.2s						
CLNS				pmax	pmax		
	comp=N,193nm,1.3s						
CLNS				smax	smax		
	comp=N,2μm,13.1s						
CLNS				smax	smax		
	comp=E,957nm,12.7s						
CLNS				MLR	MLR		
	comp=N,3μm,16.0s						
CLNS				MLR	MLR		
	comp=E,4μm,14.0s						
CLNS				MLR	MLR		
	comp=Z,3μm,14.0s						
QZH	**Quanzhou**	**23.61**	**247**	⇑P	**P**	**19 39 43.2**	**+0.9**
QZH				S	**S**	**19 43 48.3**	**-6.8**
QZH				pmax	pmax		
	comp=Z,100nm,1.0s						

QZH pmax pmax
comp=Z,610nm,3.8s
QZH LR LR
comp=N,3μm,11.4s
QZH LR LR
comp=E,3μm,8.3s
QZH LR LR
comp=Z,3μm,15.2s
TIY Taiyuan 24.05 282 *e*P **P** **19 39 44.0 -2.4**
TIY S **S** **19 44 05.5 +3.4**
TIY pmax pmax
comp=Z,510nm,5.9s
TIY LR LR
comp=N,2μm,11.7s
TIY LR LR
comp=E,2μm,11.2s
TIY LR LR
comp=Z,4μm,13.1s
WHN Wuhan 24.26 264 P **P** **19 39 48.4 0.0**
WHN pP **pP** **19 39 57.2 +0.9**
WHN S **S** **19 44 00.0 -5.5**
WHN LR LR
comp=N,6μm,14.4s
WHN LR LR
comp=E,6μm,13.3s
WHN LR LR
comp=Z,7μm,11.5s
HHC Hu-ho-hao-te 24.54 290 *e*P **P** **19 39 48.7 -2.3**
HHC pP **pP** **19 39 55.8 -3.1**
HHC sP **sP** **19 39 59.3 -2.9**
HHC S **S** **19 44 14.9 +4.8**
HHC sS sS 19 44 17.5 -5.5
HHC SS **SnSn** **19 45 00.5 +4.8**
HHC ScS **ScS** **19 50 52.4 -0.9**
HHC pmax pmax
comp=Z,140nm,0.9s
HHC pmax pmax
comp=Z,1μm,4.9s
HHC LR LR
comp=N,5μm,11.0s
HHC LR LR
comp=E,5μm,10.7s
HHC LR LR
comp=Z,5μm,13.0s
CIT Chita 25.68 316 *e*P **P** **19 40 01.8 +0.7**
CIT *e* 19 40 19.6
CIT *e* 19 44 31.2
CIT pmax pmax
comp=Z,1μm,2.2s
BTO Baotou 25.71 289 *e*P **P** **19 39 59.5 -2.1**
YAK Yakutsk 26.74 346 *d* P **P** **19 40 09.9 -0.6**
YAK *e**PP **pP** **19 40 19.6 +1.2**
YAK *e* 19 40 49.4
YAK *e*S **S** **19 44 40.8 -3.5**
YAK *e*SSS SSS 19 45 58.7
YAK pmax pmax
comp=Z,204nm,1.2s
YAK pmax pmax
comp=N,229nm,1.5s
YAK pmax pmax
comp=E,66nm,1.3s
YAK pmax pmax
comp=Z,104nm,1.1s
YAK pmax pmax
comp=E,187nm,1.5s
YAK pmax pmax
comp=N,339nm,1.3s
YAK smax smax
comp=E,504nm,3.0s
YAK smax smax
comp=N,1μm,4.0s
YAK MLR MLR
comp=Z,5μm,13.0s
YAK MLR MLR
comp=N,4μm,14.0s
YAK MLR MLR
comp=E,1μm,11.0s
FX1 Attu Island--F 26.87 43 LR LR 19 49 34.8
comp=E,520nm,20.8s,baz=255,slow=34
SEY Seymchan 27.07 10⇓ *e*P **P** **19 40 12.8 -0.7**
XAN Xi'an 27.54 275 P **P** **19 40 17.4 -0.7**
XAN pP **pP** **19 40 26.7 +0.7**
XAN sP **sP** **19 40 30.3 +1.0**
XAN PP **PnPn** **19 41 05.0 +1.6**
XAN PcP **PcP** **19 43 34.6 -1.0**
XAN S **S** **19 44 54.1 -3.5**
XAN SS **SnSn** **19 46 14.1 +5.1**
XAN pmax pmax
comp=Z,20nm,1.2s
XAN pmax pmax
comp=Z,160nm,10.7s
XAN LR LR
comp=N,2μm,14.3s
XAN LR LR
comp=E,500nm,13.9s
XAN LR LR
comp=Z,670nm,15.3s
ENH Enshi 28.27 267⇓ *e*P **P** **19 40 23.7 -0.9**
comp=Z,582nm,1.1s
ENH LR LR
comp=Z,2μm,19.0s
ULN Ulaanbaatar 28.41 305⇓ *e*P **P** **19 40 25.9 +0.1**
comp=Z,161nm,1.2s
ULN LR LR
comp=Z,1μm,19.0s
ULN Ulaanbaatar 28.41 305 P **P** **19 40 26.8 +1.0**
SNR=75
ULN Ulaanbaatar 28.41 305 P **P** **19 40 25.4 -0.5**
comp=Z,124nm,1.2s,comp=Z,2μm
GZH Guangzhou 28.61 250 P **P** **19 40 24.7 -2.9**
GZH S **S** **19 45 09.2 -5.2**
GZH LR LR
comp=N,3μm,14.4s
GZH LR LR
comp=E,3μm,15.9s
GZH LR LR
comp=Z,3μm,14.2s
SONM Songino Array 28.85 304 P **P** **19 40 30.5 +0.8**
SONM Songino Array 28.85 304 P **P** **19 40 30.5 +0.8**
comp=Z,77nm,1.1s,baz=99,slow=7.2,SNR=52
SONM LR LR 19 52 41.6
comp=Z,1μm,19.1s,baz=99,slow=38
TGY Tagaytay City 29.61 227 P **P** **19 40 37.1 +0.5**
TGY Tagaytay City 29.61 227 P **P** **19 40 37.1 +0.5**
comp=Z,55nm,0.4s,baz=162,slow=16,SNR=4.8
PLP Palo 29.89 217⇓ *e*P **P** **19 40 39.2 +0.1**
PLP eS **pP** **19 40 49.5 +2.6**
LZH Lanzhou 31.10 281 *e*P **P** **19 40 50.2 +0.4**
LZH pP **pP** **19 40 55.4 -2.4**
LZH sP **sP** **19 40 58.1 -3.0**
LZH S **S** **19 45 54.3 +0.5**
LZH sS **sS** **19 46 06.6 -0.3**
LZH SS **SnSn** **19 47 38.6 +2.6**
LZH pmax pmax
comp=Z,120nm,1.2s
LZH pmax pmax
comp=Z,390nm,4.0s
LZH LR LR
comp=N,5μm,14.0s
LZH LR LR
comp=E,3μm,14.3s
LZH LR LR
comp=Z,5μm,14.8s
IRK Irkutsk 31.13 312 *e*P **P** **19 40 50.1 +0.4**
IRK *e* 19 40 59.7
IRK pmax pmax
comp=Z,107nm,1.9s
ZAK Zakamensk 31.32 309 *e*P **P** **19 40 51.5 0.0**
ZAK pmax pmax
comp=Z,68nm,1.4s
TLY Talaya 31.36 311 P **P** **19 40 52.8 +1.0**
comp=Z,285nm,0.9s,SNR=8.2
GYA Guiyang 32.11 262 P **P** **19 40 57.8 -0.9**
GYA pP **pP** **19 41 07.0 +0.4**
GYA PP **PnPn** **19 42 07.0 +2.4**
GYA PcP **PcP** **19 43 50.3 +2.7**
GYA S **S** **19 46 06.7 -2.9**
GYA pmax pmax
comp=Z,30nm,0.9s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,3μm,15.8s
GYA LR LR
comp=E,2μm,15.8s
GYA LR LR
comp=Z,2μm,15.5s
CD2 Chengdu 32.65 272 P **P** **19 41 04.3 +1.0**
CD2 pP **pP** **19 41 12.1 +0.8**
CD2 sP **sP** **19 41 15.6 +1.0**
CD2 PP **PnPn** **19 42 13.2 +1.7**
CD2 PcP **PcP** **19 43 50.4 +1.5**
CD2 S **S** **19 46 17.1 -0.7**
CD2 sS **sS** **19 46 30.0 -0.9**
CD2 PcS **PcS** **19 47 34.4 +0.2**
CD2 SS **SnSn** **19 48 14.4 +0.9**
CD2 pmax pmax
comp=Z,60nm,0.7s
CD2 pmax pmax
comp=Z,510nm,5.3s
CD2 LR LR
comp=N,5μm,17.1s
CD2 LR LR
comp=E,4μm,18.3s
CD2 LR LR
comp=Z,4μm,17.1s
MOY Mondy 32.98 311 *e*P **P** **19 41 07.2 +1.2**
DAV Davao City (W) 33.23 212 P **P** **19 41 08.7 +0.2**
DAV LR LR
comp=Z,708nm,20.0s
DAV Davao City (W) 33.23 212 P **P** **19 41 08.6 +0.2**
comp=Z,72nm,0.3s,baz=43,slow=15,SNR=4.0
GTA Gaotai 33.63 288⇓ P **P** **19 41 11.7 -0.2**
GTA pP **pP** **19 41 19.3 -0.5**
GTA sP **sP** **19 41 22.4 -0.7**
GTA PP **PP** **19 42 26.1 -2.0**
GTA S **S** **19 46 33.8 +0.8**
GTA pmax pmax
comp=Z,26nm,2.1s
GTA pmax pmax
comp=Z,400nm,7.4s
GTA LR LR
comp=N,4μm,18.3s
GTA LR LR
comp=E,1μm,17.8s
GTA LR LR
comp=Z,920nm,17.3s
QIZ Qiongzhong 33.63 248 P **P** **19 41 13.7 +1.8**
QIZ sP **sP** **19 41 20.4 -2.8**
QIZ S **S** **19 46 34.4 +1.3**
QIZ sS **sS** **19 46 44.0 -2.3**
QIZ pmax pmax
comp=Z,34nm,1.5s
QIZ LR LR
comp=N,2μm,15.1s
QIZ LR LR
comp=Z,2μm,12.7s
QIZ Qiongzhong 33.63 248 P **P** **19 41 13.6 +1.6**
comp=Z,139nm,1.3s
QIZ *e* 19 41 23.6
QIZ LR LR
comp=Z,913nm,20.0s
CTBH Cotabato--PC H 33.69 214⇓ *i* P **P** **19 41 13.5 +1.2**
BILL Bilibino 34.20 16*α* *i* P **P** **19 41 15.5 -0.9**
BILL *i* *PP **pP** **19 41 24.6 +0.2**
BILL *e**SP **sP** **19 41 28.8 +1.1**
BILL pmax pmax
comp=Z,19nm,1.3s
BILL MLR MLR
comp=Z,500nm,14.0s
BILL Bilibino 34.20 16 PFAKE **19 41 30.0 +14**
BILL LR LR
comp=Z,1μm,20.0s
MIDW Midway 34.60 92 PFAKE **19 41 30.0 +10**
MIDW LR LR
comp=Z,1μm,22.0s
KMI Kunming 35.86 263 P **P** **19 41 31.6 +0.2**
KMI pP **pP** **19 41 38.8 -0.6**
KMI sP **sP** **19 41 42.8 +0.1**
KMI PP **PP** **19 42 54.1 +1.1**
KMI PcP **PcP** **19 43 57.9 -0.5**
KMI S **S** **19 47 05.9 -1.9**
KMI sS **sS** **19 47 19.9 -1.1**
KMI ScP **ScP** **19 47 41.9 -0.8**
KMI SS **SnSn** **19 49 27.6 -4.1**
KMI ScS **ScS** **19 51 46.3 -2.0**
KMI pmax pmax
comp=Z,45nm,0.9s
KMI pmax pmax
comp=Z,190nm,4.8s
KMI LR LR
comp=N,2μm,18.0s
KMI LR LR
comp=E,2μm,13.9s
KMI LR LR
comp=Z,2μm,21.8s
TIXI Tiksi 35.87 353 PFAKE **19 41 40.0 +9.4**
TIXI LR LR
comp=Z,2μm,19.0s
HVS Khovu-Aksy 37.44 309 *i* P **P** **19 41 45.0 +0.6**
KDM Kudat 37.76 225 P **P** **19 41 50.3 +3.0**
MYLDM Lahad Datu 38.28 221 P **P** **19 41 54.4 +2.6**
MYLDM Lahad Datu 38.28 221 P **P** **19 41 54.1 +2.4**
comp=Z,181nm,1.2s,comp=Z,2μm
SDKM Sandakan 38.60 223 P **P** **19 41 56.9 +2.4**
KKM Kota Kinabalu 38.82 225 *e*P **P** **19 41 56.5 +0.2**
comp=Z,128nm,1.3s
KKM LR LR
comp=Z,552nm,20.0s
KKM Kota Kinabalu 38.82 225 P **P** 19 42 00.7 +4.3
KKM Kota Kinabalu 38.82 225 P **P** **19 41 57.6 +1.2**
comp=Z,78nm,1.4s,comp=Z,2μm
TSM Tawau 39.36 221 P **P** **19 42 02.4 +1.6**
TNA Tin City 40.78 29 P **P** **19 42 13.0 +1.0**
comp=Z,20nm,1.0s
WMQ Urumqi 41.91 298 P **P** **19 42 23.2 +1.5**
WMQ PcP **PcP** **19 44 19.2 +2.3**
WMQ ScP **ScP** **19 48 06.6 +1.2**
WMQ PcS **PcS** **19 48 09.5 +1.0**
WMQ S **S** **19 48 39.7 +1.4**
WMQ SS **SS** **19 51 41.0 -4.1**
WMQ ScS **ScS** **19 52 22.1 -0.5**
WMQ pmax pmax
comp=Z,160nm,0.8s
WMQ pmax pmax
comp=Z,980nm,4.0s
WMQ LR LR
comp=N,7μm,17.0s
WMQ LR LR
comp=E,2μm,16.0s
WMQ LR LR
comp=Z,1μm,18.0s
CMMT Chiang Mai 42.12 257 P **P** **19 42 24.3 +0.7**
comp=Z,38nm,1.7s,comp=Z,620nm
CHTO Chiang Mai 42.12 257 *e*P **P** **19 42 22.6 -1.0**
CHTO pmax pmax
comp=Z,52nm,1.2s
CHTO MLR MLR
comp=Z,1μm,21.0s
CHTO Chiang Mai 42.12 257 *e*P **P** **19 42 22.6 -1.0**
comp=Z,52nm,1.2s
CHTO LR LR
comp=Z,1μm,21.0s
CHTO Chiang Mai 42.12 257 ⇑ **P** **19 42 22.6 -1.0**
CHTO ⇓ 19 42 23.7
CHTO P **pP** **19 42 33.9 +2.2**
SNR=8.2
CHTO Chiang Mai 42.12 257 P **P** **19 42 23.5 -0.1**
comp=Z,43nm,1.7s,comp=Z,644nm
CM31 Chiang Mai Arr 42.33 257 *e*P **P** **19 42 25.4 +0.1**
comp=Z,22nm,0.9s
CMAR Chiang Mai Arr 42.33 257 P **P** **19 42 25.6 +0.3**
CMAR Chiang Mai Arr 42.33 257 P **P** **19 42 25.6 +0.3**
comp=Z,3.6nm,0.8s,baz=46,slow=5.9,SNR=16
CMAR LR LR 20 02 12.5
comp=Z,912nm,19.2s,baz=229,slow=39
BTM Bintulu 42.93 226 P P 19 42 33.9 +3.8
ZAA0 Zalesovo Array 42.94 313⇓ *e*P **P** **19 42 29.3 -0.5**
ZALV Zalesovo Beam 42.94 313 P **P** **19 42 30.2 +0.4**
ZALV 19 44 20.5
ZALV pmax pmax
comp=Z,34nm,1.0s
ZALV pmax pmax
comp=Z,8.0nm,0.8s
ZALV MLR MLR
comp=Z,723nm,18.4s
ZALV Zalesovo Beam 42.94 313 P **P** **19 42 30.2 +0.4**
ZALV PcP **PcP** **19 44 20.5 +0.4**
ZALV Zalesovo Beam 42.94 313 P **P** **19 42 30.2 +0.4**
comp=Z,34nm,1.0s,baz=92,slow=6.7,SNR=27
ZALV PcP **PcP** **19 44 20.5 +0.4**
comp=Z,7.6nm,0.8s,baz=88,slow=3.6,SNR=2.4
ZALV LR LR 20 00 06.8
comp=Z,723nm,18.4s,baz=262,slow=36
CHBT CHBT 43.18 247 P **P** **19 42 34.5 +2.3**
comp=Z,68nm,1.0s,comp=Z,1μm
LSA Lhasa 43.22 276 P **P** **19 42 33.7 +0.7**
LSA S **S** **19 48 54.7 -3.9**
LSA LR LR
comp=N,520nm,18.3s
LSA LR LR
comp=E,2μm,16.1s
LSA Lhasa 43.22 276 *e*P **P** **19 42 33.9 +0.9**
LSA pmax pmax
comp=Z,39nm,0.9s
LSA MLR MLR
comp=Z,929nm,20.0s
LSA Lhasa 43.22 276 *e*P **P** **19 42 33.9 +0.9**
comp=Z,39nm,0.9s
LSA LR LR
comp=Z,929nm,20.0s
NVS Novosibirsk 43.86 314 *e*P **P** **19 42 36.1 -1.1**
NVS *e*S **S** **19 49 00.9 -5.5**
NVS pmax pmax
comp=Z,92nm,1.1s
NVS pmax pmax
comp=N,19nm,1.6s
NVS pmax pmax
comp=E,69nm,1.3s
NVS smax smax
comp=N,22nm,2.0s
NVS smax smax
comp=E,40nm,1.8s
SBUM Sibu 44.03 227 P **P** **19 42 40.1 +1.0**
SBUM Sibu 44.03 227 P **P** **19 42 39.9 +0.8**
comp=E,44nm,1.1s,comp=E,501nm
SHL Shillong 44.37 271 *e*PKP **P** **19 42 42.5 +0.5**
SHL *ex* x 19 49 21.0
MK31 Makanchi Array 45.18 303 *i* P **P** **19 42 48.4 +0.4**
MK31 pmax pmax
comp=Z,109nm,1.1s
MKAR Makanchi Array 45.18 303 P **P** **19 42 48.5 +0.5**
MKAR pmax pmax
comp=Z,26nm,1.0s
MKAR MLR MLR
comp=Z,519nm,18.5s
MKAR Makanchi Array 45.18 303 P **P** **19 42 48.5 +0.5**
MKAR Makanchi Array 45.18 303 P **P** **19 42 48.5 +0.5**
comp=Z,26nm,1.0s,baz=83,slow=9.9,SNR=29
MKAR LR LR 20 01 40.4
comp=Z,519nm,18.5s,baz=88,slow=36
PMG Port Moresby 45.93 174 P **P** **19 42 53.8 -0.2**
PMG LR LR
comp=Z,348nm,19.0s
PMG Port Moresby 45.93 174 P **P** **19 42 54.2 +0.2**
comp=Z,76nm,1.2s
PMG Port Moresby 45.93 174 P **P** **19 42 53.8 -0.2**
comp=Z,24nm,0.9s,baz=355,slow=11,SNR=3.7
KSM Kuching 45.95 228 *e*P **P** **19 42 55.0 +0.7**
comp=Z,53nm,1.0s
KSM LR LR
comp=Z,329nm,21.0s
KSM Kuching 45.95 228 P **P** **19 42 55.9 +1.6**
KSM Kuching 45.95 228 P **P** **19 42 55.8 +1.6**
comp=Z,58nm,1.3s,comp=Z,892nm
KAPI Kappang 46.57 212 *e*P **P** **19 42 58.4 -0.7**
comp=Z,263nm,1.4s
KAPI LR LR
comp=Z,319nm,19.0s
KAPI Kappang 46.57 212 P **P** **19 42 59.7 +0.5**
SNR=21
KAPI Kappang 46.57 212 P **P** **19 42 59.8 +0.7**
comp=Z,231nm,1.3s,SNR=7.5
KAPI Kappang 46.57 212 P **P** **19 42 58.7 -0.4**
comp=Z,131nm,1.8s,comp=Z,2μm
KAPI Kappang 46.57 212 P **P** **19 42 58.7 -0.4**
comp=Z,28nm,0.8s,baz=3.7,slow=6.9,SNR=13
RSO Redoubt South 46.67 38 *e*P **P** **19 42 58.4 -1.3**
KDAK Kodiak Island 46.80 42 *e*P **P** **19 42 59.9 -0.6**
comp=Z,72nm,1.2s
KDAK LR LR
comp=Z,637nm,20.0s
KDAK Kodiak Island 46.80 42 P **P** **19 43 00.3 -0.1**
comp=Z,20nm,0.7s,baz=287,slow=2.7,SNR=29
TAPN Taplejung 46.94 275 *e*P **P** **19 43 02.7 +0.3**
comp=Z,185nm,1.2s
KURK Kurchatov 46.98 309 *ce*P **P** **19 43 01.8 -0.2**
KURK pmax pmax
comp=Z,83nm,1.0s
KURK Kurchatov 46.98 309 *e*P **P** **19 43 01.5 -0.5**
comp=Z,209nm,1.0s
KURK Kurchatov 46.98 309 P **P** **19 43 02.3 +0.4**
SNR=75
KURK Kurchatov 46.98 309 P **P** **19 43 02.9 +0.9**
comp=Z,1μm,0.9s,SNR=23
PPLA Purkeypile 47.00 35⇑ *e*P **P** **19 43 02.3 +0.2**
comp=Z,90nm,1.2s
SPU Mount Spurr 47.02 37 *e*P **P** **19 43 02.0 -0.3**
KURBB Kurchatov Arra 47.05 308 P **P** **19 43 02.4 -0.2**
comp=Z,42nm,0.8s,baz=83,slow=7.9,SNR=62
KURBB LR LR 20 03 26.4
comp=Z,1μm,18.8s,baz=80,slow=37
ODAN Odare 47.41 275 *e*P **P** **19 43 06.8 +0.8**
comp=Z,231nm,1.0s
KTGM Kuala Trenggan 47.67 239 P P 19 43 12.0 +4.2
TRF Thorofare Moun 47.87 34 *e*P **P** **19 43 07.8 -1.2**
comp=Z,114nm,1.8s
RAMN Ramite 48.01 275 *e*P **P** **19 43 11.3 +0.7**
comp=Z,496nm,1.1s
COLD Coldfoot 48.09 29 P **P** **19 43 08.2 -2.2**
comp=Z,17nm,1.2s
GUN Gumba 48.17 277 *e*P **P** **19 43 12.8 +0.8**
comp=Z,743nm,1.5s
SEW Seward 48.32 38 *e*P **P** **19 43 11.1 -1.1**
comp=Z,82nm,1.4s
PMR Palmer 48.42 36 *e*P **P** **19 43 12.4 -0.6**
PMR *e* 19 43 22.4
PMR pmax pmax
comp=Z,33nm,0.9s
PMR Palmer 48.42 36 *e*P **P** **19 43 12.3 -0.6**
comp=Z,33nm,0.9s
PMR *e* 19 43 22.4
MCK McKinley 48.48 34 *e*P **P** **19 43 13.7 +0.2**
MCK *e* 19 43 23.4
MCK pmax pmax
comp=Z,32nm,1.1s
MCK McKinley 48.48 34 *e*P **P** **19 43 13.7 +0.2**
comp=Z,32nm,1.1s
MCK *e* 19 43 23.4
HNR Honiara 48.57 157 PFAKE 19 43 30.0 +15
HNR LR LR
comp=Z,1μm,21.0s
PKI Pulchoki 48.69 277 *e*P **P** **19 43 16.5 +0.5**
comp=Z,123nm,1.1s
PKIN Phulchoki 48.70 277 *e*P **P** **19 43 16.4 +0.4**
comp=Z,79nm,0.9s
KKN Kakani 48.70 277 *e*P **P** **19 43 16.8 +0.9**
comp=Z,161nm,1.0s
SML Sawmill 48.79 36 *e*P **P** **19 43 16.1 +0.1**
SML pmax pmax
comp=Z,11nm,0.9s
SML Sawmill 48.79 36 *e*P **P** **19 43 16.1 +0.1**
comp=Z,11nm,0.9s
DMN Daman 48.92 277 *e*P **P** **19 43 18.0 +0.4**
comp=Z,335nm,1.4s
COLA College 48.95 32 *e*P **P** **19 43 16.6 -0.4**
COLA pmax pmax
comp=Z,106nm,1.6s
COLA MLR MLR
comp=Z,344nm,20.0s
COLA College 48.95 32 *e*P **P** **19 43 16.6 -0.4**
comp=Z,106nm,1.6s
COLA LR LR
comp=Z,344nm,20.0s
ILAR Eielson Array 49.37 32 P **P** **19 43 19.7 -0.6**
ILAR Eielson Array 49.37 32 P **P** **19 43 19.7 -0.6**
comp=Z,13nm,0.8s,baz=266,slow=6.3,SNR=129
ILAR LR LR 20 05 09.7
comp=Z,439nm,18.9s,baz=125,slow=37
DANN Dangsing 49.67 278 *e*P **P** **19 43 23.8 +0.4**
comp=Z,304nm,0.8s
IPM Ipoh 49.74 240 *e*P **P** **19 43 23.1 -0.7**
comp=Z,169nm,1.7s
IPM Ipoh 49.74 240 P **P** **19 43 23.5 -0.2**
IPM Ipoh 49.74 240 P **P** **19 43 22.8 -0.9**
comp=Z,52nm,1.4s,comp=Z,768nm
MYKOM Kota Tinggi 49.78 235 P P 19 43 28.9 +4.9
MYKOM Kota Tinggi 49.78 235 P **P** **19 43 23.4 -0.6**

comp=Z,39nm,1.5s,comp=Z,555nm
KGM Kluang 49.96 236 P **P** **19 43 27.9 +2.6**
KOLN Koldanda 50.05 278 *e*P **P** **19 43 26.8 +0.6**
comp=Z,161nm,1.0s
DIV Divide 50.06 37 *e*P **P** **19 43 25.7 +0.1**
comp=Z,121nm,1.4s
DIV *e* 19 43 35.4
FRIM Kepong 50.21 238 P P 19 43 31.3 +4.1
COEN Coen 50.26 179 *e*P **P** **19 43 27.7 +0.2**
comp=Z,338nm,1.3s
PYUN Piuthan 50.39 278 *e*P **P** **19 43 29.7 +0.9**
comp=Z,511nm,1.0s
ULHL Ulahol 50.44 298 *i* P **P** **19 43 30.3 +1.3**
ULHL Ulahol 50.44 298 P **P** **19 43 30.3 +1.3**
SNR=11
DOT Dot Lake 50.65 34 *e*P **P** **19 43 29.8 -0.3**
comp=Z,232nm,1.8s
DOT *e* 19 43 39.8
RAGM Ragged Mountai 50.67 38 *e*P **P** **19 43 31.1 +0.8**
comp=Z,49nm,1.0s
TKM2 Tokmak 2 50.70 299 *i* P **P** **19 43 32.4 +1.4**
TKM2 Tokmak 2 50.70 299 PFAKE 19 43 40.0 +9.0
TKM2 LR LR
comp=Z,2µm,19.0s
TKM2 Tokmak 2 50.70 299 P **P** **19 43 32.4 +1.4**
SNR=23
MENT Mentasta 50.87 34 *e*P **P** **19 43 31.8 +0.1**
KZA Kyzart 51.19 298 *i* P **P** **19 43 37.1 +2.2**
KZA Kyzart 51.19 298 P **P** **19 43 37.1 +2.2**
SNR=9.7
KBK Karagaybulak 51.23 299 *i* P **P** **19 43 36.4 +1.5**
KBK Karagaybulak 51.23 299 P **P** **19 43 36.4 +1.5**
SNR=15
VOSK Vostochnaya 51.31 312 P **P** **19 43 34.5 -0.6**
VOSK pmax pmax
comp=Z,81nm,1.4s
USP Ospenovka 51.37 300 *i* P **P** **19 43 36.8 +1.0**
USP Ospenovka 51.37 300 P **P** **19 43 36.8 +1.0**
SNR=8.0
FRU Bishkek 51.42 299 *e*P **P** **19 43 36.5 +0.4**
FRU *i* 19 43 46.0
FRU pmax pmax
comp=Z,74nm,1.2s
FRU MLR MLR
comp=Z,1µm,13.0s
KSH Kashi 51.48 295 ⇑P P 19 43 41.7 +5.0
KSH pP pP 19 43 49.3 +4.3
KSH sP sP 19 43 52.2 +4.0
KSH *e*PcP **PcP** **19 44 54.8 +4.0**
KSH *e*PP PP 19 45 40.2 +6.3
KSH *e*ScP **ScP** **19 48 48.1 +2.6**
KSH *e*PcS **PcS** **19 48 51.3 +2.5**
KSH S **S** **19 51 01.1 +5.8**
KSH *e*sS sS 19 51 13.5 +4.6
KSH *e*ScS **ScS** **19 53 27.0 +1.6**
KSH *e*SS **SS** **19 54 35.4 +4.3**
KSH pmax pmax
comp=Z,230nm,2.1s
KSH LR LR
comp=N,3µm,9.3s
KSH LR LR
comp=E,1µm,8.9s
KSH LR LR
comp=Z,2µm,14.6s
AAK Ala-Archa 51.56 299⇑ *i*P **P** **19 43 37.8 +0.4**
AAK pmax pmax
comp=Z,23nm,1.1s
AAK Ala-Archa 51.56 299 P **P** **19 43 37.6 +0.2**
AAK Ala-Archa 51.56 299 ⇓P **P** **19 43 38.0 +0.6**
SNR=12
AAK Ala-Archa 51.56 299 P P 19 43 42.8 +5.4
SNR=7.4
AAK Ala-Archa 51.56 299 P **P** **19 43 37.6 +0.2**
comp=Z,20nm,1.1s,baz=58,slow=5.6,SNR=7.7
AAK LR LR 20 06 56.8
comp=Z,1µm,18.6s,baz=59,slow=38
BVA0 Borovoye Array 51.60 313 *i* P **P** **19 43 37.8 +0.5**
BVA0 pmax pmax
comp=Z,6.0nm,1.4s
BVAR Borovoye Array 51.60 313 P **P** **19 43 37.7 +0.5**
BVAR pmax pmax
comp=Z,10.0nm,0.9s
BVAR MLR MLR
comp=Z,753nm,18.3s
BVAR Borovoye Array 51.60 313 P **P** **19 43 37.7 +0.5**
BVAR Borovoye Array 51.60 313 P **P** **19 43 37.7 +0.5**
comp=Z,9.6nm,0.9s,baz=72,slow=6.7,SNR=17
BVAR LR LR 20 09 27.7
comp=Z,753nm,18.3s,baz=74,slow=41
BRVK Borovoye 51.65 313 *ce*P **P** **19 43 37.8 +0.1**
BRVK pmax pmax
comp=Z,16nm,1.0s
BRVK Borovoye 51.65 313 *e*P **P** **19 43 38.1 +0.5**
comp=Z,41nm,1.0s
BRVK *e* 19 43 47.7
BRVK LR LR
comp=Z,1µm,21.0s
BRVK Borovoye 51.65 313 P P 19 43 48.2 +11
SNR=8.1
EGAK Eagle 51.82 32 *e*P **P** **19 43 38.4 -0.4**
comp=Z,157nm,2.1s
EGAK *e* 19 43 48.3
EGAK LR LR
comp=Z,455nm,20.0s
EKS2 Erkin-Say 52.06 299 PFAKE 19 43 50.0 +9.0
EKS2 LR LR
comp=Z,835nm,20.0s
AML Almayashu 52.28 299 *i* P **P** **19 43 43.8 +0.8**
AML Almayashu 52.28 299 P **P** **19 43 43.9 +0.8**
SNR=23
PSI Prapat 52.40 241 P **P** **19 43 44.1 +0.3**
PSI Prapat 52.40 241 P **P** **19 43 43.3 -0.5**
comp=Z,30nm,1.1s
PSI Prapat 52.40 241 P **P** **19 43 44.1 +0.3**
comp=Z,11nm,1.0s,baz=124,slow=3.1,SNR=5.5
ZRNK Zerenda 52.43 313 P **P** **19 43 43.4 -0.1**
ZRNK pmax pmax
comp=Z,108nm,1.4s
DDI Dehra Dun 53.35 283 *e*PKP **P** **19 43 49.8 -0.8**
SDNR Sundarnagar 53.70 285 *e*PKP **P** **19 43 55.0 +1.8**
SMLA Simla 53.70 285 *i* P **P** **19 43 53.7 +0.6**
SMLA *i* S **S** **19 51 26.2 +0.6**
KK31 Karatay Array 54.19 301 P **P** **19 43 57.0 +0.4**
KK31 pmax pmax
comp=Z,211nm,1.4s
KKAR Karatay Array 54.19 301 *e*P **P** **19 43 57.9 +1.3**
KKAR *e* 19 44 07.7
KKAR pmax pmax
comp=Z,147nm,1.2s
KKAR Karatay Array 54.19 301 *e*P **P** **19 43 57.9 +1.3**
comp=Z,147nm,1.2s
KKAR *e* 19 44 07.7
INK Inuvik 54.36 27 P **P** **19 43 57.6 +0.3**
INK Inuvik 54.36 27 P **P** **19 43 57.6 +0.3**
comp=Z,11nm,0.9s,baz=292,slow=7.2,SNR=48
SKAG Skagway 55.47 38 *e*P **P** **19 44 06.5 +1.0**
comp=Z,53nm,1.4s
SKAG *e* 19 44 16.3
SVE Sverdlovsk 56.13 319 *de*P **P** **19 44 11.6 +1.3**
SVE *e*S S 19 52 04.4 +6.9
SVE pmax pmax
comp=Z,138nm,1.5s
SVE MLR MLR
comp=Z,2µm,14.0s
CTAO Charters Tower 56.46 176 PFAKE 19 44 20.0 +7.0
CTAO LR LR
comp=Z,289nm,19.0s
FUNA Funafuti 56.49 135 PFAKE 19 44 30.0 +17
FUNA LR LR
comp=Z,16µm,20.0s
FITZ Fitzroy Crossi 56.70 199 P **P** **19 44 13.8 -0.8**
FITZ Fitzroy Crossi 56.70 199 P **P** **19 44 13.8 -0.8**
comp=Z,14nm,1.2s,baz=1.6,slow=11,SNR=8.7
FITZ LR LR 20 06 42.5
comp=Z,141nm,20.0s,baz=16,slow=34
WRAB Tennant Creek 56.74 189 *e*P **P** **19 44 13.9 -1.0**
WRAB pmax pmax
comp=Z,109nm,1.4s
WRAB MLR MLR
comp=Z,511nm,21.0s
WRAB Tennant Creek 56.74 189 *e*P **P** **19 44 13.9 -1.0**
comp=Z,108nm,1.4s
WRAB LR LR
comp=Z,511nm,21.0s
WRAB Tennant Creek 56.74 189 P **P** **19 44 14.0 -1.0**
comp=Z,234nm,1.1s,SNR=13
WRA Warramunga Arr 56.75 189 P **P** **19 44 14.1 -1.0**
WRA Warramunga Arr 56.75 189 P **P** **19 44 14.1 -1.0**
comp=Z,39nm,1.1s,baz=7.5,slow=7.2,SNR=77
ARU Arti 57.35 319 *di*P **P** **19 44 19.0 +0.1**
ARU *e**PP **pP** **19 44 28.6 +1.3**
ARU 19 45 11.4
ARU 19 46 23.6
ARU PPP PPP 19 47 43.6
ARU S **S** **19 52 15.3 +1.8**
ARU SS **SS** **19 56 00.0 -2.6**
ARU pmax pmax
comp=Z,44nm,1.0s
ARU MLR MLR
comp=Z,1µm,17.0s
ARU Arti 57.35 319 P **P** **19 44 19.2 +0.3**
comp=Z,550nm,1.1s,SNR=22
WRAK Wrangell Islan 57.86 41 *e*P **P** **19 44 23.2 +0.6**
comp=Z,18nm,1.1s
WRAK *e* 19 44 41.0
WRAK LR LR
comp=Z,445nm,20.0s
DLBC Dease Lake 58.39 38 P **P** **19 44 26.0 -0.4**
DLBC *e* 19 44 37.2
DLBC Dease Lake 58.39 38 P **P** **19 44 26.0 -0.4**
comp=Z,6.8nm,0.9s,baz=285,slow=8.0,SNR=12
KBL Kabul 58.48 292 *e*P **P** **19 44 27.7 +0.1**
KBL pmax pmax
comp=Z,129nm,1.3s
KBL Kabul 58.48 292 *e*P **P** **19 44 27.7 +0.1**
comp=Z,128nm,1.3s
AKL Akola 58.68 274 ⇓*i*P **P** **19 44 29.8 +0.9**
AKL AMP 19 44 31.3
comp=Z,75nm,1.2s
AKL *i* x x 19 44 38.7
AB31 Akbulak array 58.98 311 *i* P **P** **19 44 30.3 -0.2**
AB31 pmax pmax
comp=Z,35nm,0.8s
ABKAR Akbulak array 58.98 311 *e*P **P** **19 44 28.4 -2.1**
HYB Hyderabad 59.16 269 *i* P **P** **19 44 31.5 -0.8**
comp=Z,80nm,1.0s
HYB *e*S **S** **19 52 40.0 +1.7**
AKTO Aktyubinsk 59.70 312 P **P** **19 44 34.5 -1.0**
AKTO pmax pmax
comp=Z,16nm,0.9s
AKTO Aktyubinsk 59.70 312 P **P** **19 44 34.5 -1.0**
AKTO Aktyubinsk 59.70 312 P **P** **19 44 34.5 -1.0**
comp=Z,16nm,0.8s,baz=77,slow=6.4,SNR=26
AS31 Alice Springs 60.47 189 *e*P **P** **19 44 39.8 -1.2**
ASAR Alice Springs 60.48 189 P **P** **19 44 40.3 -0.7**
ASAR Alice Springs 60.48 189 P **P** **19 44 40.3 -0.7**
comp=Z,9.8nm,0.9s,baz=10.0,slow=5.4,SNR=56
ASAR LR LR 20 08 42.4
comp=Z,382nm,21.6s,baz=358,slow=34
KBS Kingsbay 61.28 350 PFAKE 19 45 00.0 +14
KBS LR LR
comp=Z,653nm,19.0s
MBWA Marble Bar 61.36 204 *e*P **P** **19 44 46.4 -0.6**
comp=Z,41nm,1.2s
POO Poona 62.36 273⇑ *i*P **P** **19 44 52.0 -2.0**
comp=Z,120nm,1.0s
DZM Mont Dzumac 62.52 155 *e*P **P** **19 44 56.4 +1.5**
comp=Z,81nm,1.3s
DZM *e*S **S** **19 53 18.9 -1.9**
comp=Z,443nm,27.6s
DZM *e*LR LR 20 03 37.1
comp=Z,1µm,21.8s
DZM Mont Dzumac 62.52 155 P **P** **19 44 54.6 -0.3**
DZM Mont Dzumac 62.52 155 P **P** **19 44 54.6 -0.3**
comp=Z,25nm,1.1s,baz=29,slow=12,SNR=5.0
RES Resolute Bay 62.81 15 *e*P **P** **19 44 55.6 -0.4**
comp=Z,47nm,1.1s
RES *e* 19 45 05.2
RES Resolute Bay 62.81 15 P **P** **19 44 56.2 +0.1**
comp=Z,9.7nm,0.9s,baz=307,slow=7.3,SNR=23
PALK Pallekele 63.22 259 *e*P **P** **19 45 00.4 +0.5**
comp=Z,81nm,1.4s
PALK *e* 19 45 09.9
PALK Pallekele 63.22 259 P **P** **19 45 00.3 +0.5**
comp=Z,41nm,1.4s
APA Apatity 63.50 336 ⇓*i*P P 19 45 05.0 +4.2
APA *e*S **S** **19 53 30.0 -2.0**
APA *i* SS SS 19 57 46.0 +7.5
APA MLR MLR
comp=Z,2µm,13.0s
YKW3 Yellowknife Ar 63.68 30 *e*P **P** **19 45 01.6 -0.5**
comp=Z,1.7nm,1.8s
YKW3 *e* 19 45 11.2
YKA Yellowknife Ar 63.72 30 P **P** **19 45 02.0 -0.3**
YKA Yellowknife Ar 63.72 30 P **P** **19 45 02.0 -0.3**
comp=Z,6.3nm,0.8s,baz=299,slow=6.7,SNR=64
KEV Kevo 64.22 340 *e*P **pP** **19 45 14.2 +0.3**
KEV pmax pmax
comp=Z,6.0nm,0.8s
KEV Kevo 64.22 340 *ep* pP 19 45 14.2 +0.3
comp=Z,5.7nm,0.8s
KEV Kevo 64.22 340 PFAKE 19 45 20.0 +15
KEV LR LR
comp=Z,954nm,20.0s
IMYA Miami 64.24 297 *e*P **P** **19 45 07.3 +0.9**
ISRO Mashad 64.70 297 *e*P pP 19 45 18.1 +0.3
ARCES ARCESS Array B 64.77 340 P **P** **19 45 08.5 -0.6**
ARCES ARCESS Array B 64.77 340 P **P** **19 45 08.5 -0.6**
comp=Z,4.5nm,0.8s,baz=24,slow=15,SNR=4.5
ARCES LR LR 20 20 26.2
comp=Z,743nm,18.3s,baz=30,slow=42
ARE0 ARCESS Array S 64.77 340 P P 19 45 04.0 -5.1
ABKT Ailbek 64.90 300 P **P** **19 45 11.3 +0.7**
comp=Z,236nm,1.2s,SNR=13
IPAY Payeh 64.98 298 *e*P **P** **19 45 11.0 -0.3**
IAKL Akhelmad 65.08 298 *e*P **P** **19 45 13.1 +1.1**
IKRD Kardeh 65.17 298 *e*P P 19 45 09.1 -3.5
ISHV Shirvan 65.38 299 *e*P **P** **19 45 14.7 +0.8**
ISFR Sfrayin 65.40 299 *e*P **P** **19 45 15.0 +0.9**
IDAH Dahanechah 66.11 294 *e*P **P** **19 45 19.4 +0.6**
NLWA Neilton Lookou 66.31 48 *e*P **P** **19 45 20.8 +1.3**
comp=Z,42nm,1.1s
NLWA LR LR
comp=Z,293nm,19.0s
DAG Danmarks Havn 66.31 355 *i* P **P** **19 45 19.8 +0.8**
DAG Danmarks Havn 66.31 355 *i* P **P** **19 45 19.8 +0.8**
JOF Joensuu 66.82 332 *e*P **P** **19 45 22.0 -0.4**
JOF pmax pmax
comp=Z,6.0nm,0.6s
JOF Joensuu 66.82 332 *ep* P **19 45 22.0 -0.4**
comp=Z,5.8nm,0.6s
ITEG Tejag 66.86 295 *e*P **P** **19 45 24.3 +0.9**
IKOO Kooshah 66.90 294 *e*P **P** **19 45 22.9 -0.9**
STKA Stephens Creek 68.10 181 P **P** **19 45 30.4 -0.3**
STKA Stephens Creek 68.10 181 P **P** **19 45 30.4 -0.3**
comp=Z,8.0nm,1.0s,baz=355,slow=8.8,SNR=12
STKA LR LR 20 12 52.9
comp=Z,308nm,20.1s,baz=134,slow=34
MOS Moscow 68.19 324 *e*P **P** **19 45 30.1 -1.1**
MOS *e* 19 45 40.5
MOS *e* 19 45 58.2
MOS *e* 19 48 09.7
MOS *e*S **S** **19 54 29.5 0.0**
MOS pmax pmax
comp=Z,70nm,1.2s
MOS MLR MLR
comp=E,1µm,17.0s
MOS MLR MLR
comp=Z,2µm,17.0s
MOS MLR MLR
comp=N,1µm,17.0s
FORT Forrest 68.38 193 *e*P **P** **19 45 32.9 +0.5**
comp=N,84nm,0.7s
IKIA Kiasar 68.84 300 *e*P **P** **19 45 36.8 +0.9**
OBN Obninsk 69.04 324k *i*P **P** **19 45 35.4 -1.1**
OBN *PP **pP** **19 45 44.8 -0.2**
OBN *e**SP **sP** **19 45 51.6 +3.4**
OBN *e* 19 46 00.8
OBN 19 48 20.0
OBN *e*S **S** **19 54 44.0 +4.4**
OBN *e* 19 55 26.7
OBN *e*SS **SS** **19 59 00.0 -4.8**
OBN pmax pmax
comp=Z,53nm,1.4s
OBN MLR MLR
comp=Z,900nm,13.0s
IANJ Anjilo 69.05 299 *e*P **P** **19 45 38.5 +1.3**
KAF Kangasniemi 69.16 333 *e*P **P** **19 45 36.5 -0.6**
KAF pmax pmax
comp=Z,7.0nm,0.7s
KAF Kangasniemi 69.16 333 *ep* **P** **19 45 36.5 -0.6**
comp=Z,7.2nm,0.7s
BBOO Buckleboo 69.29 186 *e*P **P** **19 45 38.4 +0.2**
comp=Z,504nm,1.2s
ISHM Shahmirzad 69.32 300 *e*P **P** **19 45 40.3 +1.4**
HAWA Hanford 69.39 47 *e*P **P** **19 45 39.1 +0.3**
comp=Z,14nm,1.1s
HAWA LR LR
comp=Z,239nm,22.0s
MAK Makhachkala 69.50 309 *e*P **P** **19 45 37.2 -2.4**
MAK *e* 19 46 00.4
MAK *e* 19 48 17.9
MAK S S 19 54 39.0 -6.4
MAK *e*SSS SSS 20 02 14.8
MAK pmax pmax
comp=Z,18nm,0.6s
VOR Voronezh 69.61 320 P **P** **19 45 43.0 +2.9**
VOR pmax pmax
comp=Z,250nm,1.4s
FIA1 FINESS Array S 69.67 333 *e*P **P** **19 45 40.0 -0.3**
FIA1 *e* 19 45 47.3
FINES FINESS Array B 69.67 333 P **P** **19 45 40.5 +0.3**
FINES FINESS Array B 69.67 333 P **P** **19 45 40.5 +0.3**
comp=Z,16nm,0.9s,baz=46,slow=8.2,SNR=21
FINES LR LR 20 18 38.7
comp=Z,496nm,18.8s,baz=90,slow=38
IPRN Peran 69.76 301 *e*P **P** **19 45 42.2 +0.7**
ILAS Lasjerd 69.77 299 *e*P **P** **19 45 43.2 +1.5**
NEW Newport 69.78 44 *e*P **P** **19 45 41.9 +0.6**
comp=Z,20nm,1.1s
NEW *e* 19 45 50.8
NEW LR LR
comp=Z,240nm,19.0s
NEW Newport 69.78 44 P **P** **19 45 41.6 +0.3**
baz=70,SNR=6.8
IBAF Bafgh 69.84 295 *e*P **P** **19 45 42.6 +0.5**
YBH Yreka Blue Hor 69.86 53 P **P** **19 45 41.6 -0.3**
comp=Z,13nm,1.2s
YBH Yreka Blue Hor 69.86 53 P **P** **19 45 42.4 +0.5**
comp=Z,1.6nm,0.7s,baz=11,slow=5.2,SNR=3.5
VSR Storozhevoye 69.92 319 *e*P **P** **19 45 42.0 0.0**
VSR *e**PP **pP** **19 45 52.3 +1.8**
VSR *e**SP **sP** **19 45 56.4 +2.7**
VSR *e* 19 48 15.7
VSR *e*S **S** **19 54 48.8 -1.2**
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,30nm,1.0s
VSR pmax pmax
comp=Z,40nm,1.0s
VSR pmax pmax
comp=Z,40nm,1.9s
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,60nm,1.9s
VSR smax smax
comp=N,80nm,2.2s
VSR smax smax
comp=E,50nm,2.2s
VSR smax smax
comp=Z,20nm,2.2s
VSR MLR MLR
comp=N,480nm,20.0s
VSR MLR MLR
comp=E,1µm,20.0s
VSR MLR MLR
comp=Z,2µm,20.0s
VORD Divnogorie 69.99 319 *e*P **P** **19 45 42.4 0.0**
VORD *e**PP **pP** **19 45 52.5 +1.6**
VORD *e* 19 48 15.6
VORD pmax pmax
comp=N,40nm,0.5s
VORD pmax pmax
comp=E,50nm,0.5s
VORD pmax pmax
comp=Z,10.0nm,0.5s
VORD pmax pmax
comp=N,40nm,0.7s
VORD pmax pmax
comp=E,80nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s
VORD MLR MLR
comp=N,1µm,16.0s
VORD MLR MLR
comp=E,620nm,16.0s
VORD MLR MLR
comp=Z,1µm,16.0s
A12A Yaak River Ran 70.24 43⇑P **P** **19 45 44.9 +0.8**
baz=70
ICHK Chekchek 70.35 296 *e*P **P** **19 45 45.8 +0.5**
C11A Tepee Creek (N 70.50 45⇑P **P** **19 45 46.3 +0.6**
baz=70
WDC Whiskeytown Da 70.57 54 *e*P **P** **19 45 44.1 -2.1**
WDC pmax pmax
comp=Z,15nm,1.2s
WDC Whiskeytown Da 70.57 54 *e*P **P** **19 45 44.1 -2.1**
comp=Z,15nm,1.2s
IMEH Mehriz 70.64 295 *e*P **P** **19 45 46.7 -0.4**
A13A Flathead Natio 70.92 43 ⇓P **P** **19 45 48.7 +0.4**
baz=71
WALA Waterton Lakes 71.13 43 *e*P **P** **19 45 49.7 +0.1**
comp=Z,0.4nm,0.9s
WALA *e* 19 45 59.3
SUMG Summit 71.14 0 *e*P **P** **19 45 49.7 +0.1**
SUMG pmax pmax
comp=Z,922nm,2.9s
SUMG Summit 71.14 0 *e*P **P** **19 45 49.7 +0.1**
comp=Z,922nm,2.9s
SUMG Summit 71.14 0 *i* P **P** **19 45 51.2 +1.6**
comp=Z,29nm,1.0s
SUMG pmax pmax
comp=Z,650nm,16.0s
B13A Whitefish 71.21 43 P **P** **19 45 50.7 +0.7**
baz=71,SNR=11
MOD Modoc 71.30 51 *e*P **P** **19 45 50.4 -0.4**
comp=Z,42nm,1.3s
BSMT Bassoo Peak 71.32 44 *e*P **P** **19 45 50.7 -0.1**
VSU Vasula 71.34 330*c* *i*P **P** **19 45 51.4 +0.9**
VSU pmax pmax
comp=Z,36nm,1.2s
A14A Double T Ranch 71.44 42 P **P** **19 45 51.7 +0.2**
baz=71,SNR=6.6
BLMT Blacktail Moun 71.47 44 P **P** **19 45 50.3 -1.5**
IZEF Zefreh 71.50 297 *e*P **P** **19 45 53.0 +0.7**
BMO Blue Mountains 71.53 48 *e*P **P** **19 45 51.9 -0.2**
BMO pmax pmax
comp=Z,19nm,1.2s
BMO MLR MLR
comp=Z,204nm,19.0s
BMO Blue Mountains 71.53 48 *e*P **P** **19 45 51.9 -0.2**
comp=Z,19nm,1.2s
BMO LR LR
comp=Z,204nm,19.0s
C13A Hot Springs 71.54 44 P **P** **19 45 52.7 +0.6**
baz=71,SNR=6.1
DGRG David-gareji 71.65 308 P **P** **19 45 53.5 +0.8**
GUDG Gudauri 71.66 309 P **P** **19 45 54.0 +1.0**
JTMT Jette 71.66 44 *e*P **P** **19 45 53.0 +0.1**
YBMT Yellow Bay 71.75 44 *e*P **P** **19 45 52.5 -0.9**
comp=Z,9.1nm,0.9s
A15A Johnson Ranch, 71.81 42⇑P **P** **19 45 53.5 -0.2**
baz=72,SNR=9.6
IKLH Kolahrood 71.81 298 *e*P **P** **19 45 54.9 +0.7**
SEAG Tbilisi Sea 71.83 309 P **P** **19 45 55.4 +1.5**
ZEI Tsey 71.84 310 *e*P **P** **19 45 51.7 -2.4**
ZEI *e* 19 46 01.9
ZEI pmax pmax
comp=Z,23nm,1.5s
B14A Marquette Ranc 71.87 43 P **P** **19 45 54.4 +0.3**
baz=72,SNR=9.5
TBLG Delisi 71.89 309 P **P** **19 45 54.9 +0.7**
TBLG Delisi 71.89 309 P **P** **19 45 54.9 +0.7**
D13A Huson 71.93 44⇑P **P** **19 45 54.4 0.0**
baz=72,SNR=6.8
KBZ Khabaz 71.94 311 P **P** **19 45 55.4 +1.1**
KBZ pmax pmax
comp=Z,30nm,0.9s
KBZ MLR MLR
comp=Z,656nm,19.6s
KBZ Khabaz 71.94 311 P **P** **19 45 55.4 +1.1**
KBZ Khabaz 71.94 311 P **P** **19 45 55.4 +1.1**
comp=Z,30nm,0.9s,baz=49,slow=2.2,SNR=57
KBZ LR LR 20 20 14.6

comp=Z,656nm,19.6s,baz=222,slow=38
KIV Kislovodsk 71.94 312 *k i*P **P** **19 45 55.1 +0.6**
KIV *PP **pP** **19 46 05.0 +1.9**
KIV *SP **sP** **19 46 09.0 +2.7**
KIV *e* 19 46 13.1
KIV 19 48 38.0
KIV S **S** **19 55 18.0 +4.0**
KIV pmax pmax
comp=Z,106nm,1.1s
KIV MLR MLR
comp=Z,800nm,14.0s
KIV Kislovodsk 71.94 312 P **P** **19 45 55.9 +1.4**
comp=Z,1μm,1.1s,SNR=15
SWMT Swartz Lake 71.95 44 *e*P **P** **19 45 54.2 -0.4**
WVOR Wild Horse Val 72.05 50 *e*P **P** **19 45 55.6 +0.3**
WVOR MLR MLR
comp=Z,284nm,19.0s
WVOR Wild Horse Val 72.05 50 *e*P **P** **19 45 55.6 +0.3**
WVOR LR LR
comp=Z,284nm,19.0s
GOR Gori 72.15 309 P P 19 45 59.5 +3.7
ONI Oni 72.22 310 P **P** **19 45 57.3 +1.1**
F12A Elk City 72.23 46 P **P** **19 45 56.6 +0.3**
baz=72,SNR=14
B15A Bradely Ranch, 72.29 43 P **P** **19 45 56.8 +0.2**
baz=72,SNR=12
KZR Kazreti 72.29 309 P P 19 46 00.1 +3.5
BEKR Beckworth 72.36 53 *e*P **P** **19 45 57.0 -0.3**
comp=Z,7.3nm,0.9s
MSO Missoula 72.37 44 *e*P **P** **19 45 56.6 -0.5**
comp=Z,18nm,1.4s
MSO LR LR
comp=Z,139nm,21.0s
MSO Missoula 72.37 44 P **P** **19 45 57.0 -0.1**
baz=72,SNR=6.0
SLMT Seeley Lake 72.39 44 *e*P **P** **19 45 57.0 -0.2**
A16A West Butte Ran 72.44 42 ⇑P **P** **19 45 57.4 -0.1**
baz=72
E13A Victor 72.45 45 ⇓P **P** **19 45 57.3 -0.3**
baz=72
SMDO Samad 72.47 286 ⇑P **P** **19 46 00.9 +2.9**
SNR=5.5
D14A Greenough 72.47 44 P **P** **19 45 57.3 -0.4**
baz=72,SNR=11
C15A Salmond Ranch, 72.57 43 ⇓P **P** **19 45 59.0 +0.7**
baz=72,SNR=11
IPAR Pars 72.61 294 *e*P **P** **19 45 59.9 +0.9**
IPIR Pirpir 72.64 298 *e*P **P** **19 46 01.0 +1.8**
SCO Scoresbysund 72.67 355 *i* P **P** **19 45 57.8 -0.5**
SCO pmax pmax
comp=Z,10.0nm,1.1s
SCO Scoresbysund 72.67 355 *i* P **P** **19 45 57.8 -0.5**
comp=Z,9.6nm,1.1s
B16A M & M Farms, S 72.69 42 P **P** **19 45 59.1 +0.1**
baz=72,SNR=5.9
CHMT Chamberlain Mo 72.71 44 *e*P **P** **19 45 58.7 -0.5**
F13A Darby 72.74 46 P **P** **19 45 59.1 -0.2**
baz=72,SNR=8.9
GNI Garni 72.76 307 *e*P **P** **19 46 00.2 +0.6**
comp=Z,148nm,1.4s
GNI LR LR
comp=Z,481nm,21.0s
GNI Garni 72.76 307 P **P** **19 46 01.9 +2.3**
SNR=29
GNI Garni 72.76 307 P **P** **19 46 01.4 +1.8**
comp=Z,4.8nm,0.7s,baz=214,slow=7.0,SNR=11
AKH Akhalkalaki 72.85 309 P **P** **19 46 01.9 +1.8**
E14A Clinton 72.86 45 ⇑P **P** **19 46 00.1 0.0**
baz=73
A17A Triple J Farms 72.92 41 P **P** **19 46 00.2 -0.1**
baz=73,SNR=5.0
CHVG Ch'k'valeri 72.99 311 P **P** **19 46 02.8 +2.0**
HATD Hatta, Dubai 72.99 288 ⇑P **P** **19 46 02.4 +1.3**
SNR=6.1
C16A Fuhringer Ranc 73.03 43 P **P** **19 46 01.1 +0.1**
baz=73,SNR=16
D15A Lincoln 73.05 44 ⇑P **P** **19 46 01.3 +0.1**
baz=73
NWAO Narrogin (SRO) 73.10 202 *e*P **P** **19 46 00.2 -1.0**
G13A Cobalt 73.20 46 ⇓P **P** **19 46 01.8 -0.2**
baz=73,SNR=12
MFID Camas Ranch 73.22 48 *e*P **P** **19 46 02.7 +0.5**
comp=Z,24nm,1.3s
MFID *e* 19 46 12.0
MFID Camas Ranch 73.22 48 ⇑P **P** **19 46 02.5 +0.3**
baz=73
B17A L&G Farms, Che 73.25 42 P **P** **19 46 02.5 +0.3**
baz=73,SNR=7.2
F14A Wisdom 73.28 45 ⇑P **P** **19 46 02.5 -0.1**
baz=73
BSY Bisya 73.30 286 P **P** **19 46 04.6 +1.8**
SNR=5.9
IZAR Zarasai 73.31 328 *e*P **P** **19 46 03.0 +0.6**
IZAR AMB AMB 19 46 13.8
comp=Z,32nm,1.4s
E15A Deer Lodge 73.34 44 P **P** **19 46 03.0 +0.2**
baz=73,SNR=10.0
CMB Columbia Colle 73.35 55 *e*P **P** **19 46 03.2 +0.3**
CMB pmax pmax
comp=Z,21nm,1.1s
CMB Columbia Colle 73.35 55 *e*P **P** **19 46 03.2 +0.3**
comp=Z,21nm,1.1s
A18A Metzger Ranch, 73.39 41 P **P** **19 46 03.0 0.0**
baz=73,SNR=6.6
IDID Didziasalis 73.39 328 *e*P **P** **19 46 03.3 +0.5**
IDID AMB AMB 19 46 14.3
comp=Z,34nm,1.1s
I12A Atlanta 73.41 48 P **P** **19 46 03.7 +0.3**
baz=73,SNR=12
MICGM Minsk 73.42 326 *e*P **P** **19 46 02.0 -1.0**
MNK Minsk 73.44 326 *e*P **P** **19 46 02.0 -1.1**
MNK MLR MLR
comp=Z,5μm,14.0s
ISAL Salakas 73.48 328 *e*P **P** **19 46 04.0 +0.6**
ISAL AMB AMB 19 46 15.0
comp=Z,58nm,1.2s
H13A Challis 73.49 47 P **P** **19 46 04.0 +0.2**
baz=73,SNR=9.2
IIGN Ignalina 73.59 328 *e*P **P** **19 46 04.6 +0.6**
IIGN AMB AMB 19 46 15.6
comp=Z,36nm,1.1s
D16A Dana Ranch, Ca 73.59 43 ⇑P **P** **19 46 04.6 +0.3**
baz=73,SNR=14
HRY Holter Researc 73.62 44 *e*P **P** **19 46 04.6 +0.1**
NACGM Naroch 73.64 327 *e*P **P** **19 46 03.0 -1.3**
C17A Wharram Farm, 73.67 42 P **P** **19 46 04.5 -0.2**
baz=73,SNR=6.2
B18A Beardsley Farm 73.74 41 ⇓P **P** **19 46 05.5 +0.3**
baz=74,SNR=15
F15A Butte 73.76 45 P **P** **19 46 05.6 +0.2**
baz=74,SNR=12
LRM Limekiln Ridge 73.80 45 *e*P **P** **19 46 06.0 +0.3**
E16A East Helena 73.81 44 P **P** **19 46 06.0 +0.4**
baz=74,SNR=16
SOC Sochi 73.92 313 *e*P **pP** **19 46 15.2 +0.5**
SOC *e* 19 48 46.7
SOC *e*PPP PPP 19 50 36.8
SOC pmax pmax
comp=Z,132nm,1.4s
SOC MLR MLR
comp=Z,1μm,18.0s
I13A Wildhorse Cree 73.95 47 P **P** **19 46 07.2 +0.6**
baz=74,SNR=7.5
A19A Klindworth Far 73.96 41 P **P** **19 46 06.4 0.0**
baz=74,SNR=5.7
HLID Hailey 73.97 47 *e*P **P** **19 46 06.5 -0.2**
comp=Z,15nm,1.2s
HLID LR LR
comp=Z,279nm,19.0s
HLID Hailey 73.97 47 P **P** **19 46 07.2 +0.5**
baz=74,SNR=6.0
EGMT Eagleton 73.97 42 *e*P **P** **19 46 06.0 -0.5**
comp=Z,359nm,2.7s
EGMT LR LR
comp=Z,308nm,21.0s
DLMT Dillon 73.98 45 *e*P **P** **19 46 07.0 +0.3**
comp=Z,43nm,1.2s
D17A Six Diamond Ra 73.99 43 P **P** **19 46 06.9 +0.1**
baz=74,SNR=11
BMN Battle Mountai 74.05 51 *e*P **P** **19 46 07.5 +0.3**
BMN MLR MLR
comp=Z,200nm,19.0s
BMN Battle Mountai 74.05 51 *e*P **P** **19 46 07.5 +0.3**
BMN LR LR
comp=Z,200nm,19.0s
B19A Brinkman Farms 74.14 41 P **P** **19 46 07.7 +0.3**
baz=74,SNR=7.3
MCMT McKenzie Canyo 74.15 46 *e*P **P** **19 46 06.3 -1.5**
comp=Z,3.5nm,1.1s
G15A Dillon 74.16 45 P **P** **19 46 08.0 +0.2**
baz=74,SNR=9.3
J13A Cove Ranch, Pi 74.21 48 P **P** **19 46 08.8 +0.8**
baz=74,SNR=5.4
F16A Kennard Place, 74.29 44 P **P** **19 46 08.8 +0.4**
baz=74,SNR=9.7
E17A Martinsdale 74.31 44 P **P** **19 46 09.2 +0.6**
baz=74,SNR=12
I14A Mackay 74.33 47 ⇓P **P** **19 46 09.6 +0.8**
baz=74,SNR=14
BOZ Bozeman (W) 74.36 45 *e*P **P** **19 46 08.9 0.0**
BOZ pmax pmax
comp=Z,16nm,0.9s
BOZ MLR MLR
comp=Z,232nm,19.0s
BOZ Bozeman (W) 74.36 45 *e*P **P** **19 46 08.9 0.0**
comp=Z,16nm,0.9s
BOZ LR LR
comp=Z,232nm,19.0s
D18A Linhart Farms, 74.45 42 ⇑P **P** **19 46 09.8 +0.5**
baz=74
NVAR Mina Array Bea 74.49 54 P **P** **19 46 10.1 +0.2**
NVAR Mina Array Bea 74.49 54 P **P** **19 46 10.1 +0.2**
comp=Z,4.4nm,0.8s,baz=287,slow=6.3,SNR=29
G16A Moss Hill, Enn 74.52 45 P **P** **19 46 09.9 +0.1**
baz=74,SNR=7.7
C19A Slack Wire Ran 74.53 42 ⇓P **P** **19 46 10.4 +0.6**
baz=74,SNR=22
ANN Anapa 74.55 315 *e*P **P** **19 46 09.9 +0.2**
ANN *e*PP **pP** **19 46 19.0 +0.7**
ANN *e* 19 48 52.8
ANN *e*S **S** **19 55 44.5 +1.2**
ANN *e*SS **SS** **20 00 32.1 +2.6**
ANN pmax pmax
comp=Z,55nm,1.1s
NV11 Mina Array Sit 74.58 54 *e*P **P** **19 46 09.6 -0.7**
B20A Solberg Farm, 74.64 41 P **P** **19 46 10.3 0.0**
baz=74
F17A Fitzpatrick Pl 74.76 44 P **P** **19 46 11.7 +0.6**
baz=74,SNR=11
E18A Harlowton 74.77 43 P **P** **19 46 12.0 +0.8**
baz=74,SNR=8.2
I15A Monteview 74.85 46 ⇓P **P** **19 46 12.3 +0.6**
baz=75
HFS Hagfors 74.91 336 P **P** **19 46 12.3 +0.7**
HFS Hagfors 74.91 336 P **P** **19 46 12.3 +0.7**
comp=Z,10.0nm,0.8s,baz=65,slow=8.4,SNR=11
QLMT Earthquake Lak 74.97 45 *e*P **P** **19 46 13.1 +0.6**
D19A Cripps Ranch, 74.97 42 P **P** **19 46 12.8 +0.5**
baz=75,SNR=5.5
NB2 NORSAR Subarra 74.98 338 P **P** **19 46 12.2 +0.1**
comp=Z,1.2nm,0.8s,baz=44,slow=5.9
NOA NORSAR Array B 74.98 338 P **P** **19 46 12.6 +0.5**
NOA NORSAR Array B 74.98 338 P **P** **19 46 12.6 +0.5**
comp=Z,8.2nm,0.8s,baz=38,slow=5.8,SNR=16
NOA LR LR 20 24 57.4
comp=Z,673nm,18.2s,baz=25,slow=40
G17A Pierce Place, 75.06 44 ⇑P **P** **19 46 13.8 +0.8**
baz=75
C20A Veseth Ranch, 75.10 41 P **P** **19 46 13.5 +0.5**
baz=75,SNR=11
ELK Elko 75.10 50 *e*P **P** **19 46 13.6 +0.2**
comp=Z,4μm,2.6s
H16A Russell Place, 75.14 45 P **P** **19 46 14.0 +0.5**
baz=75,SNR=12
AKASG Malin Array Be 75.25 323 P **P** **19 46 14.0 +0.3**
AKASG 19 49 08.2
AKASG pmax pmax
comp=Z,20nm,0.8s
AKASG pmax pmax
comp=Z,8.0nm,1.1s
AKASG Malin Array Be 75.25 323 P **P** **19 46 14.0 +0.3**
AKASG PP PP 19 49 08.2 +6.4
AKASG Malin Array Be 75.25 323 P **P** **19 46 14.0 +0.3**
comp=Z,20nm,0.8s,baz=47,slow=5.8,SNR=51
AKASG PP PP 19 49 08.2 +6.4
comp=Z,8.0nm,1.1s,baz=44,slow=8.3,SNR=4.0
AK01 Malin Array Si 75.27 323 *e*P **P** **19 46 13.5 -0.3**
KIEV Kiev 75.27 323 *e*P **P** **19 46 13.7 -0.1**
KIEV pmax pmax
comp=Z,62nm,0.9s
KIEV MLR MLR
comp=Z,731nm,19.0s
KIEV Kiev 75.27 323 *e*P **P** **19 46 13.7 -0.1**
comp=Z,62nm,0.9s
KIEV LR LR
comp=Z,731nm,19.0s
F18A Big Timber 75.28 43 P **P** **19 46 14.7 +0.5**
baz=75,SNR=11
AK02 Malin Array Si 75.29 323 *e*P **P** **19 46 13.9 0.0**
AK02 *e* 19 46 23.3
YMR Madison River 75.33 45 *e*P **P** **19 46 14.8 +0.2**
comp=Z,42nm,1.2s
GCMT Greycliff 75.38 44 *e*P **P** **19 46 15.2 +0.5**
comp=Z,20nm,1.2s
A22A Carney Farms, 75.38 39 ⇓P **P** **19 46 14.5 -0.1**
baz=75
TPH Tonopah 75.39 53 PFAKE 19 46 30.0 +15
TPH LR LR
comp=Z,279nm,20.0s
D20A Manuel Ranch, 75.41 42 P **P** **19 46 15.5 +0.7**
baz=75,SNR=13
E19A Rath Farm, Rou 75.45 43 P **P** **19 46 15.6 +0.5**
baz=75,SNR=18
H17A Grant Village 75.71 45 P **P** **19 46 19.0 +2.1**
baz=76,SNR=16
F19A Roth Farm, Mol 75.74 43 P **P** **19 46 17.1 +0.3**
baz=76,SNR=8.0
E20A Meyer Farm, Mu 75.78 42 ⇓P **P** **19 46 17.5 +0.5**
baz=76
J16A Bone 75.79 46 ⇑P **P** **19 46 18.5 +1.2**
baz=76
SUW Suwalki 75.80 328 *e*P **P** **19 46 16.7 -0.1**
SUW pmax pmax
comp=Z,134nm,1.1s
SUW Suwalki 75.80 328 *e*P **P** **19 46 16.7 -0.1**
comp=Z,134nm,1.1s
SUW Suwalki 75.80 328 *e*P **P** **19 46 17.5 +0.7**
SUW *e*pP **pP** **19 46 21.9 -3.5**
SUW *e*S S 19 56 04.2 +7.3
SUW LMZ LR 20 23 46.9
IMW Indian Meadow 75.81 46 *e*P **P** **19 46 18.8 +1.3**
comp=Z,32nm,1.1s
DCID1 Drake Creek 75.85 46 *e*P **P** **19 46 19.3 +1.8**
comp=Z,38nm,1.0s
RRI2 Red Ridge 75.92 46 *e*P **P** **19 46 18.7 +0.6**
comp=Z,70nm,1.5s
ISA Isabella 75.95 56 P **P** **19 46 15.3 -2.8**
ISA pmax pmax
comp=Z,19nm,1.4s
ISA Isabella 75.95 56 P **P** **19 46 15.3 -2.8**
comp=Z,19nm,1.4s
HVU Hansel Valley 76.00 48 *e*P **P** **19 46 19.6 +1.2**
HVU Hansel Valley 76.00 48 *e*P **P** **19 46 19.6 +1.2**
I17A Pilgrim Ck. 76.00 45 ⇓P **P** **19 46 20.1 +1.7**
baz=76
RLMT Red Lodge 76.01 44 *e*P **P** **19 46 18.2 -0.3**
comp=Z,3.2nm,0.7s
RLMT LR LR
comp=Z,363nm,22.0s
MOOW Moose Ponds 76.01 46 *e*P **P** **19 46 19.1 +0.5**
comp=Z,70nm,1.8s
MOOW *e* 19 46 27.9
TPAW Teton Pass 76.05 46 *e*P **P** **19 46 19.8 +1.0**
comp=Z,40nm,1.3s
TPAW *e* 19 46 29.1
K16A Soda Springs 76.07 47 P **P** **19 46 20.2 +1.3**
baz=76,SNR=7.1
LOHW Long Hollow 76.17 46 *e*P **P** **19 46 19.9 +0.4**
comp=Z,126nm,2.5s
DAC Darwin (Calif) 76.18 55 PFAKE 19 46 30.0 +10
DAC LR LR
comp=Z,334nm,20.0s
B23A Brockton 76.19 39 P **P** **19 46 19.4 +0.2**
baz=76,SNR=5.7
SFJD Kangerlussuaq 76.26 5 P **P** **19 46 19.6 +0.4**
SFJD LR LR
comp=Z,720nm,22.0s
SFJD Kangerlussuaq 76.26 5 *i* P P 19 46 29.1 +10
comp=Z,12nm,1.0s
SFJD
comp=Z,540nm,21.0s
SFJD Kangerlussuaq 76.26 5 P **P** **19 46 19.6 +0.4**
comp=Z,5.0nm,0.7s,baz=306,slow=8.7,SNR=3.2
J17A Brown Place, J 76.26 46 ⇓P **P** **19 46 20.8 +0.9**
baz=76
R11A Troy Canyon, C 76.28 52 P **P** **19 46 20.7 +0.6**
baz=76,SNR=9.2
SIM Simferopol' 76.33 316 *e*P **P** **19 46 19.9 -0.1**
SIM *e*S **S** **19 56 03.0 -0.1**
SIM pmax pmax
comp=Z,18nm,0.9s
MPMC Manual Prospec 76.37 55 ⇑P **P** **19 46 21.1 +0.4**
baz=76
A24A Westby 76.40 39 ⇑P **P** **19 46 20.4 0.0**
baz=76
AHID Auburn Hatcher 76.40 47 PFAKE 19 46 30.0 +9.3
AHID LR LR
comp=Z,268nm,19.0s
D22A Cohagen 76.42 41 P **P** **19 46 20.8 +0.3**
baz=76,SNR=8.2
BLG Laguna Peak 76.44 58 ⇑P **P** **19 46 22.1 +1.2**
baz=76
H19A Powell 76.44 44 ⇓P **P** **19 46 21.7 +0.9**
baz=76
C23A Lambert 76.52 40 P **P** **19 46 21.1 0.0**
baz=76,SNR=6.1
G20A Bridger 76.53 43 P **P** **19 46 21.1 -0.2**
baz=76,SNR=5.3
FURC Furnace Creek, 76.55 55 ⇑P **P** **19 46 21.7 +0.4**
baz=76
I18A Diamond G Ranc 76.57 45 ⇑P **P** **19 46 22.9 +1.1**
baz=76
KONO Kongsberg 76.58 338 PFAKE 19 46 30.0 +8.9
KONO LR LR
comp=Z,1μm,20.0s
DGMT Dagmar 76.59 39 *e*P **P** **19 46 21.9 +0.5**
comp=Z,47nm,1.2s
DGMT LR LR
comp=Z,269nm,19.0s
EDW2 Edwards Air Fo 76.72 56 ⇓P **P** **19 46 23.1 +0.6**
baz=76
J18A Kendall Valley 76.75 46 P **P** **19 46 23.4 +0.6**
baz=76,SNR=5.3
HWUT Hardware Ranch 76.83 48 *e*P **P** **19 46 23.7 +0.5**
comp=Z,48nm,1.5s
I19A Meeteetse 76.83 45 ⇑P **P** **19 46 23.8 +0.7**
baz=77
BHD Baghdad 76.86 302 *ex* **P** **19 46 23.0 -0.2**
BHD *ex* x 19 46 34.0
BHD *ex* **S** **19 56 11.0 +1.7**
BHD *ex* x 20 01 09.0
BHD *ex* x 20 07 02.0
BHD *ex* x 20 10 36.0
KBD Kabd 76.86 297 *e*P **P** **19 46 23.7 +0.4**
D23A Lindsay 76.91 40 ⇓P **P** **19 46 23.7 +0.3**
baz=77
DUG Dugway 76.92 50 *e*P **P** **19 46 24.1 +0.5**
DUG *e* 19 46 34.4
DUG pmax pmax
comp=Z,23nm,1.2s
DUG MLR MLR
comp=Z,279nm,19.0s
DUG Dugway 76.92 50 *e*P **P** **19 46 24.1 +0.5**
comp=Z,23nm,1.2s
DUG *e* 19 46 34.4
DUG LR LR
comp=Z,279nm,19.0s
DUG Dugway 76.92 50 P **P** **19 46 24.3 +0.7**
baz=77,SNR=9.2
QRN Al-Qurain 76.95 296 *e*P **P** **19 46 23.9 +0.1**
QRN AMb AMB 19 46 37.0
comp=Z,193nm,1.3s
E22A Miles City 76.99 41 ⇑P **P** **19 46 23.8 0.0**
baz=77
G21A Lodge Grass 77.08 43 ⇓P **P** **19 46 24.4 0.0**
baz=77
C24A Savage 77.09 40 ⇓P **P** **19 46 24.3 0.0**
baz=77
K18A Toltan Ranch, 77.09 46 ⇑P **P** **19 46 25.5 +0.8**
baz=77
RDF Al-Radifah 77.11 296 *e*P **P** **19 46 25.3 +0.7**
RDF AMb AMB 19 46 36.3
comp=Z,202nm,1.0s
NAY Al-Naaiem 77.15 297 *e*P **P** **19 46 24.6 -0.3**
NAY AMb AMB 19 46 36.1
comp=Z,80nm,1.4s
F22A Rosebud 77.25 42 ⇓P **P** **19 46 25.2 0.0**
baz=77
GSC Goldstone 77.27 56 P **P** **19 46 22.6 -3.0**
GSC pmax pmax
comp=Z,22nm,1.5s
GSC Goldstone 77.27 56 P **P** **19 46 22.6 -3.0**
comp=Z,22nm,1.5s
J19A Crowheart 77.28 45 P **P** **19 46 26.4 +0.7**
baz=77,SNR=16
E23A Ismay 77.30 41 P **P** **19 46 25.9 +0.4**
baz=77,SNR=6.7
BW06 Boulder Array 77.30 46 *e*P **P** **19 46 25.2 -0.7**
comp=Z,22nm,1.3s
BW06 LR LR
comp=Z,270nm,19.0s
PDAR Pinedale Array 77.30 46 P **P** **19 46 25.7 -0.1**
PDAR Pinedale Array 77.30 46 P **P** **19 46 25.7 -0.1**
comp=Z,3.0nm,0.8s,baz=265,slow=2.2,SNR=20
PDAR LR LR 20 23 02.0
comp=Z,146nm,18.5s,baz=149,slow=38
I20A Worland 77.38 44 P **P** **19 46 26.9 +0.8**
baz=77,SNR=5.7
D24A Glendive 77.41 40 P **P** **19 46 26.7 +0.6**
baz=77,SNR=7.5
M17A Scullys Gap (B 77.44 48 ⇓P **P** **19 46 26.9 +0.3**
baz=77
JLU Jordanelle 77.51 49 *e*P **P** **19 46 27.5 +0.4**
comp=Z,50nm,1.7s
H21A Big Horn, Sher 77.55 43 ⇑P **P** **19 46 27.5 +0.4**
baz=77
K19A Absolon Red Bu 77.67 46 ⇑P **P** **19 46 27.4 -0.5**
baz=77
DAU Daniels Canyon 77.74 49 *e*P **P** **19 46 29.0 +0.6**
DAU Daniels Canyon 77.74 49 *e*P **P** **19 46 29.0 +0.6**
F23A Volborg 77.74 42 ⇑P **P** **19 46 28.0 -0.1**
baz=78,SNR=9.0
MPU Maple Canyon 77.75 49 *e*P **P** **19 46 29.0 +0.6**
comp=Z,20nm,1.0s
J20A Shoshoni 77.78 45 ⇑P **P** **19 46 28.6 +0.3**
baz=78,SNR=8.8
E24A Baker 77.78 41 ⇑P **P** **19 46 28.6 +0.3**
baz=78
L19A Farson 77.83 46 ⇑P **P** **19 46 29.0 +0.3**
baz=78
M18A Lyman 77.83 47 ⇑P **P** **19 46 28.9 +0.1**
baz=78
HEC Hector,Ludlow 77.86 56 ⇑P **P** **19 46 29.2 +0.3**
baz=78
KIS Kishinev 77.87 320 *e*P **P** **19 46 28.0 -0.6**
KIS *i* 19 46 38.0
KIS *e* 19 46 46.0
KIS *e* 19 49 26.0
KIS *e*S **S** **19 56 16.0 -3.8**
KIS MLR MLR
comp=N,1μm,14.0s
KIS MLR MLR
comp=E,1μm,14.0s
KIS MLR MLR
comp=Z,2μm,14.0s
KIS MLR MLR
comp=Z,2μm,14.0s
KIS Kishinev 77.87 320 *e*P **P** **19 46 28.0 -0.6**
KIS Kishinev 77.87 320 *i* PcP **PcP** **19 46 38.0 -0.4**
KIS Kishinev 77.87 320 *e*PP PP 19 49 26.0 +2.1
KIS *e*S **S** **19 56 16.0 -3.8**
KIS *e*LQ LQ 20 15 00.0
comp=Z,1μm,20.0s
KIS LRM MLR 20 24 38.0
comp=Z,2μm,14.0s
I21A Big Trails, Te 77.93 44 P **P** **19 46 30.2 +0.9**
baz=78,SNR=8.8
H22A Clearmont 77.95 43 ⇑P **P** **19 46 29.5 +0.2**
baz=78
K20A Yellowstone Ra 78.06 45 ⇑P **P** **19 46 29.8 -0.3**
baz=78
G23A Biddle 78.09 42 ⇑P **P** **19 46 29.9 -0.1**
baz=78
J21A Lysite 78.14 44 ⇓P **P** **19 46 30.5 0.0**
baz=78
CCUT Cedar City 78.17 52 *e*P **P** **19 46 31.3 +0.5**
comp=Z,19nm,1.2s
BSD Bornholm Skovb 78.31 332 ⇑*i*P **pP** **19 46 41.0 +1.5**
BSD pmax pmax
comp=Z,27nm,1.0s

BSD MLR MLR
comp=Z,1µm,15.0s
BSD Bornholm Skovb 78.31 332⇑ *i*P **pP 19 46 41.0 +1.5**
comp=Z,27nm,0.9s
BSD
comp=Z,1µm,15.0s
MVU Marysvale 78.31 51 *e*P **P 19 46 32.1 +0.5**
comp=Z,18nm,1.1s
MVU LR LR
comp=Z,235nm,21.0s
LVV L'vov 78.32 324 *e*P **P 19 46 31.8 +0.7**
LVV *e* 19 46 42.2
LVV *e* 19 49 38.0
LVV *i*S **S 19 56 25.0 +0.5**
GMRC Granite Mounta 78.33 55⇓P **P 19 46 32.1 +0.5**
baz=78
I22A 9 Mile Ranch, 78.33 44 P **P 19 46 31.9 +0.5**
baz=78,SNR=5.7
MSU Marysvale 78.33 51 *e*P **P 19 46 33.2 +1.6**
MSU Marysvale 78.33 51 *e*P **P 19 46 33.2 +1.6**
BEL Belsk 78.36 327 *e*P **P 19 46 32.6 +1.4**
BEL *e*pP **PcP 19 46 42.0 +1.5**
BEL *e*S S 19 56 33.1 +8.3
L20A Wamsutter 78.47 46⇑P **P 19 46 32.5 +0.2**
baz=78
PFO Pinyon Flat Ob 78.49 57 P **P 19 46 32.3 -0.2**
PFO LR LR
comp=Z,562nm,19.0s
PFO Pinyon Flat Ob 78.49 57 P **P 19 46 32.3 -0.2**
comp=Z,3.5nm,1.0s,baz=315,slow=17,SNR=3.0
P17A Butcher Ranch, 78.63 49 P **P 19 46 33.9 +0.7**
baz=78,SNR=5.3
J22A Midwest 78.64 44⇑P **P 19 46 33.3 +0.1**
baz=78,SNR=13
K21A Alcova 78.70 45⇓P **P 19 46 33.7 +0.1**
baz=78
Q16A Castle Valley 78.70 50 P **P 19 46 34.4 +0.7**
baz=78,SNR=9.6
COP Copenhagen 78.77 334 *i*P **pP 19 46 43.5 +1.5**
COP pmax pmax
comp=Z,28nm,0.8s
COP MLR MLR
comp=Z,530nm,16.0s
COP Copenhagen 78.77 334 *i*P **pP 19 46 43.5 +1.5**
comp=Z,28nm,0.8s
COP
comp=Z,520nm,16.0s
GKP Gorka Klasztor 78.80 330 *e*P **P 19 46 34.3 +0.7**
GKP *e*pP **PcP 19 46 43.5 +1.2**
GKP *e*S S 19 56 37.2 +7.8
P18A Preston Nutter 78.83 49 P **P 19 46 35.2 +0.7**
baz=79,SNR=5.7
H24A Dirks Ranch, A 78.83 42⇑P **P 19 46 33.8 -0.3**
baz=79
M20A Sweetwater, Wa 78.89 46 P **P 19 46 35.3 +0.7**
baz=79,SNR=5.6
IRM Iron Mountain 79.04 56⇓P **P 19 46 35.7 +0.3**
baz=79
L21A Rawlins 79.06 46⇓P **P 19 46 35.6 0.0**
baz=79,SNR=6.0
KWP Kalwaria Pacla 79.07 325⇓P **P 19 46 36.7 +1.5**
KWP Kalwaria Pacla 79.07 325 *e*P **P 19 46 36.0 +0.8**
comp=Z,183nm,1.1s
KWP LR LR
comp=Z,740nm,21.0s
KWP Kalwaria Pacla 79.07 325⇓ *i*P **P 19 46 36.7 +1.5**
KWP Kalwaria Pacla 79.07 325 *e*P **P 19 46 36.6 +1.4**
KWP *e*pP **pP 19 46 46.3 +2.5**
KWP *e*S **S 19 56 36.2 +3.7**
K22A Casper 79.11 45⇓P **P 19 46 36.0 +0.2**
baz=79
LLD Lille Linde 79.12 334 *e*P **pP 19 46 45.0 +1.0**
LLD pmax pmax
comp=Z,7.0nm,0.9s
LLD Lille Linde 79.12 334 *i*P pP 19 46 45.0 +1.0
comp=Z,7.0nm,0.8s
J23A Dilts Ranch, B 79.16 44⇑P **P 19 46 35.7 -0.3**
baz=79
BUR08 Bucovina Ar. S 79.26 322 *e*P **P 19 46 37.0 +0.5**
BUR08 *e*PP **PP 19 49 36.5 +0.9**
N20A Spence Gulch, 79.26 47 P **P 19 46 37.3 +0.6**
baz=79,SNR=9.3
BURAR Bucovina Array 79.27 322⇑P **P 19 46 37.8 +1.3**
MUD Monsted U'grnd 79.28 336 *i*P **pP 19 46 46.5 +1.7**
MUD pmax pmax
comp=Z,16nm,1.1s
MUD Monsted U'grnd 79.28 336 *i*P pP 19 46 46.5 +1.7
comp=Z,16nm,1.0s
M21A Separation Pea 79.29 46⇑P **P 19 46 37.1 +0.2**
baz=79
MDND Maddock 79.29 37⇓P **P 19 46 36.7 +0.2**
baz=79
TESR Tescani 79.31 321⇓*i*P **P 19 46 36.8 +0.2**
ULM Lac du Bonnet 79.35 34 P **P 19 46 36.7 -0.1**
ULM Lac du Bonnet 79.35 34 P **P 19 46 36.7 -0.1**
comp=Z,4.3nm,0.8s,baz=6.5,slow=6.7,SNR=4.3
ULM LR LR 20 22 23.6
comp=Z,234nm,19.9s,baz=286,slow=36
CFR Carcaliu 79.43 319⇑P **P 19 46 37.7 +0.5**
CFR Carcaliu 79.43 319⇑*i*P **P 19 46 37.7 +0.5**
RSSD Black Hills 79.52 42 *e*P **P 19 46 37.4 -0.7**
RSSD pmax pmax
comp=Z,16nm,1.1s
RSSD Black Hills 79.52 42 *e*P **P 19 46 37.4 -0.7**
comp=Z,16nm,1.1s
U15A North Rim 79.53 52⇓P **P 19 46 39.3 +0.9**
baz=79
L22A Ellis Ranch, M 79.55 45⇓P **P 19 46 38.5 +0.3**
baz=79
P19A Cripple Cowboy 79.59 48⇑P **P 19 46 39.0 +0.5**
baz=79,SNR=10
J24A Dixon Ranch, L 79.70 43⇑P **P 19 46 38.5 -0.4**
baz=80
VRI Vrincioaia 79.70 320⇑P **P 19 46 40.9 +2.1**
VRI Vrincioaia 79.70 320⇑*i*P **P 19 46 40.8 +2.0**
O20A White River Ci 79.72 47⇓P **P 19 46 39.5 +0.3**
baz=80
N21A Black Mountain 79.74 47⇓P **P 19 46 39.9 +0.5**
baz=80
PLOR Plostina 79.75 320⇓P **P 19 46 38.2 -0.9**
PLOR Plostina 79.75 320⇓*i*P **P 19 46 38.2 -0.9**
KOLS Kolonicke sedl 79.76 325 *e*P **P 19 46 40.2 +1.2**
KOLS pmax pmax
comp=Z,41nm,1.2s
KOLS Kolonicke sedl 79.76 325 *e*P **P 19 46 40.2 +1.2**
KOLS *e*pP **pP 19 46 49.5 +1.9**
KOLS *e*PP **PP 19 49 42.4 +2.8**
TIRR Tirgusor 79.77 318⇑P **P 19 46 39.8 +0.7**
TIRR Tirgusor 79.77 318 *e*P **P 19 46 39.4 +0.3**
comp=Z,200nm,2.6s
TIRR Tirgusor 79.77 318⇑*i*P **P 19 46 39.8 +0.7**
M22A Cedar Creek Ra 79.87 46⇑P **P 19 46 40.3 +0.2**
baz=80
BR131 Keskin Array S 79.88 312 *e*P **P 19 46 40.9 +0.9**
comp=Z,28nm,1.0s
BR131 *e* 19 46 50.2
BRTR Keskin Array B 79.88 312 P **P 19 46 40.5 +0.5**
BRTR PP **PP 19 49 43.1 +2.0**
BRTR Keskin Array B 79.88 312 P **P 19 46 40.5 +0.5**
comp=Z,8.2nm,1.0s,baz=104,slow=4.0,SNR=34
BRTR PP **PP 19 49 43.1 +2.0**
comp=Z,3.6nm,1.1s,baz=77,slow=5.3,SNR=4.1
BRTR LR LR 20 25 28.1
comp=Z,405nm,18.1s,baz=313,slow=38
L23A Garrett 79.92 45⇑P **P 19 46 40.1 -0.2**
baz=80
GLA Glamis 79.92 56 *e*P **P 19 46 39.2 -1.0**
GLA Glamis 79.92 56 *e*P **P 19 46 39.2 -1.0**
OJC Ojcow 79.96 327⇓ *e*P **P 19 46 41.1 +1.0**
OJC *e**PP **pP 19 46 50.9 +2.2**
OJC Ojcow 79.96 327 *e*P **P 19 46 41.1 +1.0**
comp=Z,126nm,1.2s
OJC Ojcow 79.96 327 *e*P **P 19 46 41.1 +1.0**
OJC *e*pP **pP 19 46 50.9 +2.2**
UZH Uzhgorod 79.97 324 *e*P **P 19 46 37.1 -3.0**
UZH *e* 19 46 53.0
UZH *e* 19 49 47.6
UZH *e*S S 19 56 35.6 -6.4
UZH MLR MLR
comp=Z,900nm,12.0s
CRVS Cervenica-Dubn 80.16 325 *e*P **P 19 46 41.4 +0.2**
CRVS pmax pmax
comp=Z,163nm,2.1s
CRVS Cervenica-Dubn 80.16 325 *e*P **P 19 46 41.4 +0.2**
CRVS *e*pP **pP 19 46 50.8 +1.0**

S18A Hurst Farm, Bl 80.19 50 P **P 19 46 41.8 -0.1**
baz=80,SNR=8.4
TRPA Tarpa 80.20 324⇑*i*P **P 19 46 42.8 +1.4**
TRPA Tarpa 80.20 324⇓*e*P **P 19 46 42.8 +1.4**
TRPA *e*P **pP 19 46 52.6 +2.6**
ANTO Ankara 80.29 313 *e*P **P 19 46 43.4 +1.3**
ANTO *e* 19 46 52.6
ANTO pmax pmax
comp=Z,157nm,1.8s
ANTO MLR MLR
comp=Z,320nm,19.0s
ANTO Ankara 80.29 313 *e*P **P 19 46 43.4 +1.3**
comp=Z,157nm,1.8s
ANTO *e* 19 46 52.6
ANTO LR LR
comp=Z,320nm,19.0s
ANTO Ankara 80.29 313 P **P 19 46 44.0 +1.9**
SNR=18
ISR Istrita 80.31 320⇑P **P 19 46 43.7 +1.6**
ISR Istrita 80.31 320⇑*i*P **P 19 46 43.7 +1.6**
NIE Niedzica 80.31 326⇓*e*P **P 19 46 43.6 +1.6**
NIE *e**PP **pP 19 46 53.5 +2.9**
NIE Niedzica 80.31 326 *e*P **P 19 46 43.6 +1.6**
NIE *e*pP **pP 19 46 53.5 +2.9**
M23A Laramie 80.33 45⇑P **P 19 46 42.5 0.0**
baz=80
N22A Wattenberg Ran 80.33 46⇑P **P 19 46 43.4 +0.8**
baz=80
MLR Muntele Rosu 80.36 320 P **P 19 46 43.1 +0.7**
MLR PP **PP 19 49 49.1 +4.2**
MLR Muntele Rosu 80.36 320⇑*i*P **P 19 46 43.7 +1.2**
MLR Muntele Rosu 80.36 320 P **P 19 46 43.1 +0.7**
comp=Z,1.8nm,1.1s,baz=40,slow=2.8,SNR=9.7
MLR PP **PP 19 49 49.1 +4.2**
comp=Z,1.1nm,0.9s,baz=98,slow=12,SNR=3.3
PV04 Paradox Valley 80.42 49 *e*P **P 19 46 43.1 +0.2**
Q20A Ridgley Place, 80.43 48 P **P 19 46 43.3 +0.2**
baz=80,SNR=6.9
N23A Red Feather La 80.57 46 P **P 19 46 44.5 +0.6**
baz=80,SNR=10
PHWY Pilot Hill 80.58 45 *e*P **P 19 46 43.1 -0.8**
comp=Z,72nm,2.0s
Y14A Wickenburg 80.59 55⇑P **P 19 46 44.2 +0.3**
baz=80
WUAZ Wupatki 80.68 53 *e*P **P 19 46 45.0 +0.6**
comp=Z,25nm,1.0s
WUAZ *e* 19 46 54.6
WUAZ LR LR
comp=Z,253nm,20.0s
WUAZ Wupatki 80.68 53⇓P **P 19 46 45.1 +0.7**
baz=80
O22A Kremmling 80.69 47 P **P 19 46 44.8 +0.3**
baz=80,SNR=6.9
AGMN Agassiz Nation 80.76 35 *e*P **P 19 46 43.1 -1.2**
comp=Z,13nm,1.0s
AGMN LR LR
comp=Z,268nm,20.0s
RUE Ruedersdorf 80.76 331 P **P 19 46 43.6 -0.6**
PV01 Paradox Valley 80.79 49 *e*P **P 19 46 45.3 +0.3**
comp=Z,3µm,1.3s
PV01 *e* 19 46 54.8
M24A Cheyenne 80.83 45⇑P **P 19 46 46.1 +0.9**
baz=81
R20A Redvale 80.87 49 P **P 19 46 45.9 +0.5**
baz=81,SNR=6.4
BSEG Bad Segeberg 80.91 334 *e*P **P 19 46 45.7 +0.7**
BSEG pmax pmax
comp=Z,140nm,1.2s
BSEG Bad Segeberg 80.91 334 *e*P **P 19 46 45.7 +0.7**
comp=Z,140nm,1.2s
K26A Motz Farm, Whi 80.93 43⇓P **P 19 46 45.4 -0.2**
baz=81
P22A Eagle 80.94 47 P **P 19 46 46.5 +0.7**
baz=81,SNR=5.2
Q21A Lamborn Mesa, 80.94 48⇑P **P 19 46 46.3 +0.5**
baz=81
OKC Ostrava-Krasne 80.96 327 *i*P **P 19 46 46.4 +1.0**
OKC *e**PP **pP 19 46 56.2 +2.1**
OKC *e* 19 50 00.3
OKC MLR MLR
comp=Z,1µm,14.2s
OKC Ostrava-Krasne 80.96 327⇓*i*P **P 19 46 46.4 +1.0**
OKC *e*pP **pP 19 46 56.2 +2.1**
OKC *ex* x 19 50 00.3
OKC AMS AMS 20 27 10.0
comp=Z,1µm,14.2s
KSP Ksiaz 81.00 329 *e*P **P 19 46 46.4 +0.8**
KSP *e**PP **pP 19 46 55.9 +1.6**
KSP *e*S **S 19 56 51.0 -1.8**
KSP Ksiaz 81.00 329 *e*P **P 19 46 46.8 +1.2**
KSP *e*pP **pP 19 46 56.2 +1.9**
KSP *e*S **S 19 56 57.0 +4.2**
O23A Lake Granby, G 81.03 46⇓P **P 19 46 47.1 +0.8**
baz=81
DRGR 81.07 323⇑P **P 19 46 47.2 +1.0**
DRGR 81.07 323⇑*i*P **P 19 46 47.2 +1.0**
SMCO Snowmass 81.08 48 *e*P **P 19 46 47.0 +0.2**
comp=Z,25nm,1.4s
S20A Disappointment 81.11 49⇓P **P 19 46 47.4 +0.6**
baz=81
ARR Arges 81.11 321⇓*i*P **P 19 46 48.5 +2.1**
R21A Cimarron 81.25 48 P **P 19 46 48.5 +0.9**
baz=81,SNR=7.2
MORC Moravsky Berou 81.27 328⇑P **P 19 46 47.5 +0.4**
MORC Moravsky Berou 81.27 328 *e*P **P 19 46 47.6 +0.5**
comp=Z,58nm,1.2s
MORC *e* 19 46 57.1
MORC Moravsky Berou 81.27 328⇑*i*P **P 19 46 47.5 +0.4**
X16A Lo Mia Camp, P 81.31 54⇓P **P 19 46 48.6 +0.8**
baz=81
Q22A Crested Butte, 81.32 48 P **P 19 46 48.6 +0.7**
baz=81,SNR=6.5
DPC Dobruska-Polom 81.36 329⇓*i*P **P 19 46 48.8 +1.2**
DPC *e**PP **pP 19 46 58.3 +2.0**
DPC *e* 19 49 52.5
DPC MLR MLR
comp=Z,900nm,13.1s
DPC Dobruska-Polom 81.36 329 *e*P **P 19 46 48.9 +1.3**
comp=Z,139nm,1.4s
DPC Dobruska-Polom 81.36 329⇓*i*P **P 19 46 48.8 +1.2**
DPC *e*pP **pP 19 46 58.3 +2.0**
DPC *e*PP **PP 19 49 52.5 -0.3**
DPC AMS AMS 20 29 40.0
comp=Z,900nm,13.1s
UPC Upice 81.37 329 *i*P **P 19 46 48.4 +0.8**
UPC *e**PP **pP 19 46 57.9 +1.6**
UPC *e* 19 50 01.8
UPC Upice 81.37 329⇓*i*P **P 19 46 48.4 +0.8**
UPC *e*pP **pP 19 46 57.9 +1.6**
UPC *e*PP **PP** 19 50 01.8 +8.9
KRLC Kraliky 81.37 328 *i*P **P 19 46 48.5 +0.8**
KRLC *e**PP **pP 19 46 58.1 +1.8**
KRLC Kraliky 81.37 328⇓*i*P **P 19 46 48.5 +0.8**
KRLC *e*pP **pP 19 46 58.1 +1.8**
MVCO Mesa Verde 81.42 50 *e*P **P 19 46 48.2 -0.2**
comp=Z,48nm,1.4s
MVCO LR LR
comp=Z,344nm,20.0s
MVCO Mesa Verde 81.42 50⇑P **P 19 46 49.1 +0.7**
baz=81
ISCO Idaho Springs 81.47 46 *e*P **P 19 46 47.7 -1.0**
ISCO pmax pmax
comp=Z,35nm,1.6s
ISCO MLR MLR
comp=Z,293nm,19.0s
ISCO Idaho Springs 81.47 46 *e*P **P 19 46 47.7 -1.0**
comp=Z,35nm,1.6s
ISCO LR LR
comp=Z,293nm,19.0s
ISCO Idaho Springs 81.47 46⇓P **P 19 46 49.4 +0.7**
baz=81
LOT Lotru 81.50 321⇑*i*P **P 19 46 49.6 +1.1**
S21A Coal Bank Pass 81.56 49⇑P **P 19 46 50.3 +1.1**
baz=81
PSZ Piszkesteto 81.59 325⇓P **P 19 46 50.1 +1.2**
PSZ Piszkesteto 81.59 325 *e*P **P 19 46 50.1 +1.2**
comp=Z,95nm,1.2s
PSZ LR LR
comp=Z,2µm,19.0s
PSZ Piszkesteto 81.59 325⇓*i*P **P 19 46 50.1 +1.2**
PSZ Piszkesteto 81.59 325⇓*e*P **P 19 46 50.2 +1.3**
PSZ *e* 19 46 59.9
VYHS Vyhne 81.65 326 *e*P **P 19 46 50.0 +0.9**
VYHS pmax pmax
comp=Z,30nm,1.3s

VYHS Vyhne 81.65 326 *e*P **P 19 46 50.0 +0.9**
VYHS *e*pP **pP 19 46 59.9 +2.1**
VYHS *e**PP **PP 19 49 56.8 +1.5**
RAYN Ar Rayn 81.73 293 P **P 19 46 50.0 0.0**
comp=Z,203nm,1.4s,SNR=6.4
R22A Saguache, Gunn 81.82 48⇓P **P 19 46 52.1 +1.5**
baz=82
BRG Berggiesshubel 81.94 330 *e*P **P 19 46 51.0 +0.5**
comp=Z,10nm,0.9s
BRG *i* 19 47 01.1
BRG comp=Z,59nm,1.4s *e*PP **PP 19 49 57.6 +0.1**
BRG comp=Z,20nm,1.4s S **S 19 57 08.0 +5.5**
BRG comp=N,1µm,15.2s
BRG comp=E,672nm,16.5s
BRG comp=Z,2µm,14.4s
BRG Berggiesshubel 81.94 330 *e*P **P 19 46 51.1 +0.5**
comp=Z,60nm,1.4s
PVCC Panska Ves 81.95 329 *i*P **P 19 46 51.8 +1.2**
PVCC *e**PP **pP 19 47 01.4 +2.1**
PVCC MLR MLR
comp=Z,1µm,15.7s
PVCC Panska Ves 81.95 329⇓*i*P **P 19 46 51.8 +1.2**
PVCC *e*pP **pP 19 47 01.4 +2.1**
PVCC AMS AMS 20 29 00.0
comp=Z,1µm,15.7s
W18A Petrified Fore 81.97 52⇓P **P 19 46 51.7 +0.5**
baz=82
CLL Collm 81.98 331 *e*P **P 19 46 51.0 +0.2**
CLL *e*S **SKSac 19 57 08.0 -1.1**
CLL pmax pmax
comp=Z,22nm,1.2s
CLL MLR MLR
comp=Z,900nm,18.1s
CLL Collm 81.98 331 *e*P **P 19 46 50.9 +0.2**
comp=Z,82nm,1.3s
CLL Collm 81.98 331⇓*i*P **P 19 46 51.2 +0.5**
comp=Z,22nm,1.2s
CLL *i*sP **sP 19 47 00.6 -2.0**
comp=Z,82nm,1.3s
CLL *e*S **SKSac 19 57 08.0 -1.1**
CLL LV 20 26 00.0
comp=Z,900nm,18.1s
VRAC Vranov 82.03 328 P **P 19 46 52.3 +1.1**
VRAC Vranov 82.03 328⇑*i*P **P 19 46 52.2 +1.1**
VRAC Vranov 82.03 328 P **P 19 46 52.3 +1.1**
comp=Z,11nm,0.9s,baz=51,slow=4.4,SNR=18
NRDL Niedersach Rie 82.14 333 *e*P **P 19 46 51.9 +0.4**
comp=Z,58nm,1.5s
SMOL Smolenice 82.27 327 *e*P **P 19 46 54.0 +1.7**
SMOL *e* 19 47 03.3
SMOL Smolenice 82.27 327 *e*P **P 19 46 54.0 +1.7**
SMOL *e*pP **pP 19 47 03.3 +2.3**
Q24A Divide 82.30 47⇓P **P 19 46 53.5 +0.4**
baz=82
BUD Budapest 82.31 325⇓*e*P **P 19 46 54.1 +1.5**
BUD *e*P **pP 19 47 03.4 +2.2**
V20A Brimhall 82.34 51⇓P **P 19 46 53.7 +0.5**
baz=82
PRU Pruhonice 82.38 329⇓*i*P **P 19 46 53.8 +0.9**
PRU *e**PP **pP 19 47 03.4 +1.8**
PRU *e* 19 50 01.8
PRU MLR MLR
comp=Z,1µm,13.9s
PRU Pruhonice 82.38 329⇓*i*P **P 19 46 53.8 +0.9**
PRU *e*pP **pP 19 47 03.4 +1.8**
PRU *e*PP **PP 19 50 01.8 +0.7**
PRU AMS AMS 20 29 10.0
comp=Z,1µm,13.9s
R23A Moffat 82.40 48 P **P 19 46 54.8 +1.2**
baz=82,SNR=11
U21A Nageezi 82.44 50⇑P **P 19 46 54.6 +0.9**
baz=82
BZS Buzias 82.44 323⇑P **P 19 46 53.9 +0.6**
BZS Buzias 82.44 323⇑*i*P **P 19 46 53.9 +0.6**
O26A Horse Wrangler 82.50 45⇑P **P 19 46 54.3 +0.4**
baz=82
TREC Trest 82.52 328 *i*P **P 19 46 54.5 +0.8**
TREC *e**PP **pP 19 47 04.2 +1.9**
TREC MLR MLR
comp=Z,1µm,15.0s
TREC Trest 82.52 328⇓*i*P **P 19 46 54.5 +0.8**
TREC *e*pP **pP 19 47 04.2 +1.9**
TREC AMS AMS 20 28 10.0
comp=Z,1µm,15.0s
T22A Edith 82.52 49⇑P **P 19 46 55.3 +1.1**
baz=82,SNR=5.6
ZST Bratislava 82.65 327 *e*pP pP 19 47 04.5 +1.5
W20A Ramah 82.75 51⇓P **P 19 46 55.8 +0.4**
baz=82
OGNE Ogallala 82.75 44 PFAKE 19 47 10.0 +15
OGNE LR LR
comp=Z,324nm,20.0s
R24A Sanders Place, 82.80 47⇓P **P 19 46 56.5 +0.9**
baz=83
V21A Milan 82.85 50⇑P **P 19 46 56.4 +0.5**
baz=83
Q25A Bedland, Calha 82.85 46⇓P **P 19 46 56.1 +0.3**
baz=83
SDCO Great Sand Dun 82.89 48 *e*P **P 19 46 56.4 +0.3**
comp=Z,18nm,1.3s
SDCO LR LR
comp=Z,203nm,20.0s
TANN Tannenbergstha 82.89 330 *e*P **P 19 46 56.2 +0.6**
comp=Z,98nm,2.0s
TANN *e*pP **pP 19 47 05.9 +1.6**
ISP Isparta 82.97 312 PFAKE 19 47 10.0 +14
ISP LR LR
comp=Z,402nm,19.0s
EYMN Ely 83.00 33 *e*P **P 19 46 57.7 +1.5**
EYMN LR LR
comp=Z,287nm,21.0s
NKC Novy Kostel 83.04 330 *i*P **P 19 46 56.1 -0.2**
NKC *e**PP **pP 19 47 06.7 +1.7**
NKC MLR MLR
comp=Z,1µm,11.9s
NKC Novy Kostel 83.04 330⇓*i*P **P 19 46 56.1 -0.2**
NKC *e*pP **pP 19 47 06.7 +1.7**
NKC AMS AMS 20 29 10.0
comp=Z,1µm,11.9s
MOX Moxa 83.04 331 *e*P **P 19 46 56.8 +0.5**
MOX *e**PP **pP 19 47 06.5 +1.5**
MOX pmax pmax
comp=Z,69nm,1.6s
MOX Moxa 83.04 331 *e*P **P 19 46 56.8 +0.5**
comp=Z,69nm,1.6s
MOX *e*pP **pP 19 47 06.5 +1.5**
TUC Tucson 83.06 55 *e*P **P 19 46 56.0 -0.9**
TUC *e* 19 47 05.7
TUC pmax pmax
comp=Z,11nm,2.2s
TUC MLR MLR
comp=Z,348nm,19.0s
TUC Tucson 83.06 55 *e*P **P 19 46 56.0 -0.9**
comp=Z,11nm,2.2s
TUC *e* 19 47 05.7
TUC LR LR
comp=Z,348nm,19.0s
PMOR Pomariorio Ree 83.11 114 *e*P **P 19 46 57.8 +0.7**
comp=Z,71nm,1.2s
PMOR Pomariorio Ree 83.11 114 *e*T T 21 18 32.1
comp=Z,3.0nm,0.2s
CSS Prodhromos 83.11 309 *e*P **P 19 46 57.5 +0.5**
comp=Z,66nm,1.2s
CSS *e* 19 47 06.6
CSS LR LR
comp=Z,454nm,19.0s
X20A Quemado 83.12 52 P **P 19 46 58.5 +1.1**
baz=83,SNR=7.0
S24A Houchin Ranch, 83.13 48⇑P **P 19 46 58.2 +0.8**
baz=83
IBBN Ibbenburen 83.13 334 *e*P **P 19 46 57.1 +0.4**
comp=Z,88nm,1.3s
V22A San Miguel Ran 83.23 50⇓P **P 19 46 58.8 +0.9**
baz=83
SOP Sopron 83.27 327 *e*P **P 19 46 58.6 +1.0**
SOP *e*P **pP 19 47 08.7 +2.4**
CONA Conrad Observa 83.39 327 *i*PcP **P 19 46 59.5 +1.2**
comp=Z,67nm,1.4s,SNR=14
U23A El Rito 83.40 49 P **P 19 46 59.6 +0.9**
baz=83,SNR=12
PKSM Moragy 83.43 325⇑P **P 19 46 58.8 +0.4**

PKSM **Moragy** 83.43 325⇑ *i*P **P** 19 46 58.8 +0.4
PKSM **Moragy** 83.43 325⇓ *e*P **P** 19 46 58.7 +0.4
PKSM *e*P **pP** 19 47 08.6 +1.5
KHC **Kasperske Hory** 83.44 329⇓ *i*P **P** 19 46 59.1 +0.6
KHC *e**PP **pP** 19 47 08.9 +1.7
KHC *e* 19 50 12.0
KHC MLR MLR
comp=Z,1µm,12.0s
KHC **Kasperske Hory** 83.44 329 *e*P **P** 19 46 59.0 +0.5
comp=Z,42nm,1.0s
KHC *e* 19 47 08.6
KHC **Kasperske Hory** 83.44 329⇓ *i*P **P** 19 46 59.1 +0.6
KHC *e*pP **pP** 19 47 08.9 +1.7
KHC *ex* x 19 50 00.7
KHC *e*PP **PP** 19 50 12.0 +2.1
KHC *ex* x 19 52 22.5
KHC AMS AMS 20 31 30.0
comp=Z,1µm,12.0s
ALN **Alexandroupoli** 83.46 317 *e*P pP 19 47 09.2 +1.9
ROTZ **Rotzenmuhle** 83.50 330 *e*P **P** 19 46 59.8 +1.1
comp=Z,199nm,1.9s
UBBA **Unterbreizbach** 83.52 332 *e*P **P** 19 46 59.2 +0.5
comp=Z,24nm,1.3s
PPT **Papeete** 83.56 117 LR LR 20 16 49.0
comp=Z,464nm,20.4s,baz=176,slow=30
PPT2 **Papeete2** 83.58 117 *e*S **S** 19 57 15.9 -4.2
comp=Z,100nm,24.2s
PPT2 *e*LR LR 20 13 13.1
comp=Z,457nm,22.5s,baz=315
S25A **Robets Cordova** 83.58 47⇑ P **P** 19 46 59.8 +0.2
baz=83
T24A **Torres, Weston** 83.60 48⇓ P **P** 19 47 01.0 +1.2
baz=83
Y20A **Horse Springs,** 83.60 52 P **P** 19 47 00.9 +1.0
baz=83,SNR=9.0
GEC2 **GERESS Array S** 83.61 329 *e*P **P** 19 46 59.7 +0.3
GEC2 *e**PP **pP** 19 47 09.4 +1.3
GEC2 pmax pmax
comp=Z,43nm,1.3s
GEC2 **GERESS Array S** 83.61 329 *e*P **P** 19 46 59.7 +0.3
comp=Z,43nm,1.3s
GEC2 *e*pP **pP** 19 47 09.4 +1.3
GEC2 **GERESS Array S** 83.61 329 *e*P **P** 19 46 59.9 +0.5
GERES **GERESS Array B** 83.61 329 P **P** 19 46 59.8 +0.3
GERES PP **PP** 19 50 15.4 +4.0
comp=Z,4.3nm,0.7s,baz=35,slow=5.2,SNR=49
GERES **GERESS Array B** 83.61 329 P **P** 19 46 59.8 +0.3
GERES PP **PP** 19 50 15.4 +4.0
comp=Z,1.3nm,1.0s,baz=44,slow=4.1,SNR=3.5
GERES LR LR 20 29 51.8
comp=Z,607nm,18.4s,baz=213,slow=40
X21A **Alamocita Cree** 83.63 52 P **P** 19 47 01.2 +1.2
baz=83,SNR=8.0
ECSD **EROS Data Cent** 83.68 39 *e*P **P** 19 46 59.0 -0.8
comp=Z,15nm,0.9s
ECSD *e* 19 47 08.8
ECSD LR LR
comp=Z,190nm,19.0s
WET **Wettzell** 83.72 329 *e*P **P** 19 47 00.6 +0.7
WET pmax pmax
comp=Z,61nm,1.4s
WET **Wettzell** 83.72 329 *e*P **P** 19 47 00.6 +0.7
comp=Z,61nm,1.4s
KSCO **Kaye Shedlock'** 83.72 45⇑ P **P** 19 47 00.5 +0.3
baz=84
R26A **Arlington** 83.73 46 P **P** 19 47 00.4 +0.1
baz=84,SNR=9.7
WTSB **Winterswijk** 83.75 334 *e*P pP 19 47 09.9 +1.3
comp=Z,104nm,1.7s
V23A **Ortiz Mt. (NFS** 83.79 50⇑ P **P** 19 47 02.2 +1.5
baz=84
VTS **Vitosha** 83.80 320⇓ P **P** 19 47 01.8 +1.2
VTS **Vitosha** 83.80 320⇓ *i*P **P** 19 47 01.8 +1.2
EKA **Eskdalemuir Ar** 83.89 341 P **P** 19 47 01.5 +0.9
EKA PP PP 19 50 21.1 +7.9
EKA **Eskdalemuir Ar** 83.89 341 P **P** 19 47 01.5 +0.9
comp=Z,2.9nm,0.7s,baz=26,slow=4.9,SNR=7.9
EKA PP PP 19 50 21.1 +7.9
comp=Z,5.6nm,1.0s,baz=26,slow=7.7,SNR=3.6
U24A **Moreno Valley** 83.90 49⇑ P **P** 19 47 02.3 +0.9
baz=84
ESK **Eskdalemuir** 83.91 341 *i* P P 19 46 56.1 -4.6
T25A **Trinidad** 83.94 48⇑ P **P** 19 47 02.1 +0.6
baz=84
GRF **Grafenberg Arr** 83.95 331 *e*P **P** 19 47 02.0 +1.0
GRF *e**PP **pP** 19 47 11.2 +1.5
GRF pmax pmax
comp=Z,275nm,1.8s
GRF MLR MLR
comp=Z,800nm,19.3s
GRF **Grafenberg Arr** 83.95 331 *e*P **P** 19 47 02.0 +1.0
comp=Z,275nm,1.8s
GRF *e*pP **pP** 19 47 11.2 +1.5
GRF *e*L L 20 30 15.3
comp=Z,796nm,19.3s
GRFO **Grafenberg** 83.95 331 *e*P **P** 19 47 01.7 +0.7
GRFO *e* 19 47 11.5
GRFO pmax pmax
comp=Z,143nm,1.4s
GRFO **Grafenberg** 83.95 331 *e*P **P** 19 47 01.7 +0.7
comp=Z,143nm,1.4s
GRFO *e* 19 47 11.5
Z20A **Nine Sixteen R** 83.98 53 P **P** 19 47 02.4 +0.7
baz=84,SNR=11
Y21A **Point of Rocks** 83.99 52 P **P** 19 47 02.7 +0.9
baz=84,SNR=7.6
BUG **Bochum-Univer** 84.02 334 *e*P **P** 19 47 01.4 +0.1
comp=Z,111nm,1.8s
ARSA **Arzberg** 84.06 327⇓ *i*PcP **P** 19 47 02.6 +0.9
comp=Z,34nm,1.5s,SNR=6.7
LAZ **Ladron** 84.07 51 *e*P **P** 19 47 02.4 +0.3
comp=Z,8.0nm,1.2s
X22A **Bernardo** 84.08 51⇑ P **P** 19 47 03.3 +1.1
baz=84
BEHE **Becsehely** 84.09 326⇑ *e*P **P** 19 47 03.0 +1.2
BEHE *e*P **pP** 19 47 12.2 +1.7
ANMO **Albuquerque** 84.14 50 *e*P **P** 19 47 02.6 +0.1
comp=Z,25nm,1.2s
ANMO *e* 19 47 12.3
ANMO LR LR
comp=Z,212nm,19.0s
MOA **Molln** 84.14 328⇑ *i*PcP **P** 19 47 03.6 +1.5
comp=Z,41nm,1.5s,SNR=6.9
S26A **Kim** 84.17 47⇑ P **P** 19 47 03.0 +0.5
baz=84,SNR=5.4
W23A **Werner Place,** 84.19 50⇑ P **P** 19 47 03.6 +0.8
baz=84
KOGS **Kog** 84.35 326 *e*P **P** 19 47 03.8 +0.7
KOGS *e*pP **pP** 19 47 12.7 +0.9
KOGS *e*SKSac **S** 19 57 28.3 +1.2
V24A **Rampart Ranch,** 84.36 49⇓ P **P** 19 47 04.8 +1.2
baz=84
T26A **Comanche Natio** 84.40 47⇓ P **P** 19 47 04.1 +0.3
baz=84,SNR=5.4
U25A **Circle Dot Ran** 84.43 48 P **P** 19 47 04.6 +0.6
baz=84,SNR=8.1
Z21A **St. Cloud Mine** 84.44 52⇓ P **P** 19 47 04.6 +0.5
baz=84
LPM **Los Pinos Moun** 84.44 51 *e*P **P** 19 47 03.6 -0.4
PRK **Paraskevi** 84.47 316 *e*P pP 19 47 14.0 +1.5
Y22A **Socorro** 84.48 52⇓ P **P** 19 47 04.4 +0.2
baz=84
BNM **Barren Site** 84.55 51 *e*P **P** 19 47 04.5 -0.2
comp=Z,10nm,1.2s
TNS **Taunus Mts** 84.59 332 *e*P **P** 19 47 04.8 +0.5
TNS pmax pmax
comp=Z,76nm,1.7s
TNS **Taunus Mts** 84.59 332 *e*P **P** 19 47 04.8 +0.5
comp=Z,76nm,1.7s
W24A **Lazy 6 Ranch,** 84.61 50 P **P** 19 47 05.8 +0.9
baz=84,SNR=12
LIA **Limnos Island** 84.63 317 *e*P **P** 19 47 04.9 +0.3
V25A **Rancho No Teng** 84.68 49 P **P** 19 47 06.3 +1.0
baz=84,SNR=13
PERS **Pernice** 84.71 327 *i* P **P** 19 47 05.5 +0.5
PERS *i*pP **pP** 19 47 14.9 +1.2
220A **Playas Peak, P** 84.79 54 P **P** 19 47 06.3 +0.5
baz=85,SNR=6.5
U26A **Atchley Ranch,** 84.83 48⇓ P **P** 19 47 06.6 +0.6
baz=85
RJOB **Jochberg** 84.86 329 *e*P **P** 19 47 06.4 +0.7
comp=Z,59nm,1.3s
RJOB *e*pP **pP** 19 47 16.2 +1.8
121A **Cookes Peak, D** 84.87 53 P **P** 19 47 07.0 +0.8
baz=85,SNR=7.1
Z22A **Elephant Butte** 84.92 52 P **P** 19 47 07.1 +0.6
baz=85,SNR=5.2
GOLS **Golise** 84.96 326 *i* P **P** 19 47 06.5 +0.2
SOH **Sokhos** 84.97 318 *e*P pP 19 47 16.6 +1.5
R29A **Marienthal** 84.98 45⇑ P **P** 19 47 06.2 -0.4
baz=85
T27A **Campo** 84.99 47⇓ P **P** 19 47 06.8 +0.1
baz=85
VAY **Valandovo** 85.03 319 *i* P **P** 19 47 07.2 +0.5
VAY *i* 19 47 16.3
HGN **Heimansgroeve** 85.05 334 *e*P pP 19 47 16.7 +1.5
comp=Z,135nm,1.6s
Y23A **Lovelace Mesa,** 85.06 51⇓ P **P** 19 47 07.8 +0.6
baz=85
BEBN **Eben Emael** 85.11 334 P **P** 19 47 07.4 +0.5
BEBN AP **pP** 19 47 17.2 +1.6
comp=Z,27nm,1.9s
FUR **Furstenfeldbru** 85.14 330 *e*P **P** 19 47 07.7 +0.6
FUR pmax pmax
comp=Z,86nm,1.1s
FUR **Furstenfeldbru** 85.14 330 *e*P **P** 19 47 07.7 +0.6
comp=Z,86nm,1.1s
MEM **Membach** 85.16 334 P **P** 19 47 07.9 +0.9
MEM AP **pP** 19 47 17.2 +1.4
comp=Z,28nm,1.5s
SKO **Skopje** 85.16 320 *i* P **P** 19 47 08.3 +1.0
SKO *i* 19 47 18.7
320A **Kipp Ranch, An** 85.16 54⇓ P **P** 19 47 08.2 +0.5
baz=85
CHOS **Chios island** 85.19 315 *e*P pP 19 47 18.0 +1.7
W25A **X Bar L Ranch,** 85.19 49⇑ P **P** 19 47 08.5 +0.8
baz=85,SNR=9.1
PDKS **Podkum** 85.20 326 *e*P **P** 19 47 07.1 -0.4
PDKS *e*pP **pP** 19 47 17.0 +0.8
V26A **Tequesquite Ra** 85.21 48⇑ P **P** 19 47 08.2 +0.4
baz=85
221A **Mesquite Ranch** 85.21 53⇓ P **P** 19 47 08.3 +0.4
baz=85
122A **Conniff Cattle** 85.26 52⇑ P **P** 19 47 09.2 +1.0
baz=85
U27A **Thompson Grove** 85.36 47⇑ P **P** 19 47 09.0 +0.4
baz=85
GRG **Griva** 85.38 319 *e*P pP 19 47 18.6 +1.4
Z23A **Rita Site, Whi** 85.38 52⇓ P **P** 19 47 09.3 +0.5
baz=85
LJU **Ljubljana** 85.43 327 *e*P **P** 19 47 08.0 -0.5
LJU *e*pP **pP** 19 47 18.0 +0.7
LJU *e*SKSac **SKSac** 19 57 29.4 -2.5
PAIG **Paliouri** 85.43 318 *e*P P 19 47 18.6 +10
Y24A **Capitan** 85.44 51⇑ P **P** 19 47 09.0 -0.1
baz=85
COWI **Conover** 85.45 33 PFAKE 19 47 20.0 +11
COWI LR LR
comp=Z,335nm,21.0s
STU **Stuttgart** 85.48 331 *e*P **P** 19 47 08.9 +0.1
STU *e* 19 47 18.6
STU pmax pmax
comp=Z,70nm,1.0s
STU **Stuttgart** 85.48 331 *e*P **P** 19 47 09.2 +0.4
comp=Z,84nm,1.1s
STU *e*pP **pP** 19 47 18.9 +1.4
STU **Stuttgart** 85.48 331 *e*P **P** 19 47 08.9 +0.1
comp=Z,70nm,1.0s
STU *e* 19 47 18.6
SCHQ **Schefferville** 85.51 17 *e*P **P** 19 47 08.5 -0.3
comp=Z,37nm,1.4s
SCHQ **Schefferville** 85.51 17 P **P** 19 47 08.7 -0.1
comp=Z,2.6nm,0.8s,baz=318,slow=6.4,SNR=5.4
SCHQ LR LR 20 32 59.8
comp=Z,293nm,18.1s,baz=330,slow=41
BOJS **Bojanci** 85.52 326 *e*P **P** 19 47 09.2 +0.2
BOJS *i* pP **pP** 19 47 18.6 +0.9
X25A **Clemmons Ranch** 85.53 50⇑ P **P** 19 47 09.8 +0.4
baz=85
BCLA **Clavier** 85.56 334 P **P** 19 47 09.5 +0.4
BCLA AP **pP** 19 47 19.2 +1.4
comp=Z,39nm,1.5s
R30A **Dighton** 85.56 45⇑ P **P** 19 47 09.1 -0.4
baz=85
222A **Williams Famil** 85.59 53⇓ P **P** 19 47 10.1 +0.3
baz=85
VOY **Vojsko** 85.72 327 *e*P **P** 19 47 09.8 -0.3
VOY *e*pP **pP** 19 47 19.2 +0.4
V27A **Dan Oppiter Fa** 85.81 48⇑ P **P** 19 47 11.1 +0.3
baz=86
SNF **Seneffe** 85.84 335 P **P** 19 47 10.8 +0.3
SNF AP **pP** 19 47 20.4 +1.2
comp=Z,34nm,1.5s
LANF **Langenberg** 85.84 332 *e*P pP 19 47 20.9 +1.6
AOS **Alonnisos** 85.86 317 *e*P pP 19 47 20.9 +1.4
MOTA **Moosalm** 85.87 329⇑ *i*PcP **P** 19 47 10.9 0.0
comp=Z,28nm,1.2s
WLF **Walferdange** 85.89 333 P **P** 19 47 11.6 +0.8
WLF AP **pP** 19 47 19.4 0.0
comp=Z,65nm,1.9s
WLF **Walferdange** 85.89 333 *e*P **P** 19 47 11.8 +1.1
WLF *e* 19 47 20.1
WLF pmax pmax
comp=Z,22nm,1.3s
WLF MLR MLR
comp=Z,1µm,21.0s
WLF **Walferdange** 85.89 333 *e*P **P** 19 47 11.5 +0.8
comp=Z,168nm,1.6s
WLF **Walferdange** 85.89 333 *e*P **P** 19 47 11.8 +1.1
comp=Z,22nm,1.3s
WLF *e* 19 47 20.1
WLF LR LR
comp=Z,1µm,21.0s
RETA **Reutte** 85.89 330⇑ *i*PcP **P** 19 47 12.0 +1.1
comp=Z,56nm,1.2s,SNR=5.7
S30A **Montezuma** 85.90 45⇓ P **P** 19 47 10.8 -0.4
baz=86
LIT **Litokhoron** 85.95 318 *e*P pP 19 47 21.0 +1.0
GIVF **Givet** 86.00 334 *e*P **P** 19 47 10.9 -0.4
comp=Z,287nm,1.9s
GIVF **Givet** 86.00 334 *e*P **P** 19 47 10.9 -0.4
GIVF pmax pmax
comp=Z,287nm,1.9s
GIVF **Givet** 86.00 334 *e*P **P** 19 47 10.9 -0.4
comp=Z,287nm,1.9s
TRI **Trieste** 86.02 327 *e*P **P** 19 47 09.8 -1.7
TRI **Trieste** 86.02 327 *e*P **P** 19 47 09.8 -1.7
X26A **CR and CF Fran** 86.03 49⇓ P **P** 19 47 12.2 +0.3
baz=86
FNA **Florina** 86.05 319 *e*P pP 19 47 21.9 +1.4
DOU **Dourbes** 86.08 334 P **P** 19 47 12.3 +0.6
DOU AP **pP** 19 47 21.8 +1.4
comp=Z,21nm,1.7s
W27A **Bowe Ranch, En** 86.14 49 P **P** 19 47 13.0 +0.6
baz=86,SNR=7.7
V28A **Channing** 86.17 48⇓ P **P** 19 47 13.0 +0.4
baz=86
BFO **Black Forest** 86.18 331 *e*P **P** 19 47 12.2 -0.1
BFO *e* 19 47 22.3
BFO pmax pmax
comp=Z,85nm,1.3s
BFO MLR MLR
comp=Z,388nm,19.0s
BFO **Black Forest** 86.18 331 *e*P **P** 19 47 12.5 +0.2
comp=Z,95nm,1.3s
BFO *e*pP **pP** 19 47 22.4 +1.4
BFO **Black Forest** 86.18 331 *e*P **P** 19 47 12.2 -0.1
comp=Z,85nm,1.3s
BFO *e* 19 47 22.3
BFO LR LR
comp=Z,388nm,19.0s
BFO **Black Forest** 86.18 331 P **P** 19 47 12.9 +0.6
comp=Z,282nm,1.5s,SNR=10
KZN **Kozani** 86.18 319 *e*P pP 19 47 21.5 +0.3
124A **Stringfield Ra** 86.24 52⇑ P **P** 19 47 13.4 +0.3
baz=86
BAIF **Baives** 86.25 335 *e*P **P** 19 47 12.2 -0.3
comp=Z,76nm,1.3s
BAIF **Baives** 86.25 335 *e*P **P** 19 47 12.2 -0.3
BAIF pmax pmax
comp=Z,76nm,1.3s
BAIF **Baives** 86.25 335 *e*P **P** 19 47 12.2 -0.3
comp=Z,76nm,1.3s
Z25A **Roswell** 86.32 51⇓ P **P** 19 47 13.5 +0.1
baz=86
DAVA **Damuels** 86.41 330⇑ *i*PcP **P** 19 47 14.3 +0.7
comp=Z,44nm,1.1s
TIR **Tirane** 86.42 321 PFAKE 19 47 20.0 +6.5
TIR LR LR
comp=Z,595nm,22.0s
CDF **Champ du Feu** 86.51 332 *e*P **P** 19 47 13.7 -0.3
comp=Z,161nm,1.3s
CDF **Champ du Feu** 86.51 332 *e*P **P** 19 47 13.7 -0.3
CDF pmax pmax
comp=Z,161nm,1.3s
CDF **Champ du Feu** 86.51 332 *e*P **P** 19 47 13.7 -0.3
comp=Z,161nm,1.3s
W28A **Vega** 86.52 48⇑ P **P** 19 47 14.7 +0.4
baz=86
224A **Cornudas Mount** 86.61 52⇓ P **P** 19 47 15.1 +0.2
baz=86,SNR=5.1
FELD **Feldberg im Sc** 86.67 331 *e*P pP 19 47 24.8 +1.2
SCIA **State Center** 86.72 38 P **P** 19 47 12.3 -2.7
SCIA LR LR
comp=Z,356nm,19.0s
ECH **Echery** 86.72 332 *e*P **P** 19 47 15.2 +0.3
ECH *e* 19 47 24.6
ECH pmax pmax
comp=Z,54nm,1.3s
ECH MLR MLR
comp=Z,663nm,19.0s
ECH **Echery** 86.72 332 *e*P **P** 19 47 15.2 +0.3
comp=Z,54nm,1.3s
ECH *e* 19 47 24.6
ECH LR LR
comp=Z,663nm,19.0s
ECH **Echery** 86.72 332 *e*P pP 19 47 24.8 +1.2
T31A **Randall Ranch,** 86.73 45⇑ P **P** 19 47 14.9 -0.3
baz=86
125A **Gardner Draw,** 86.77 51⇓ P **P** 19 47 16.2 +0.6
baz=86,SNR=5.6
Z26A **Caprock** 86.79 50 P **P** 19 47 15.7 0.0
baz=87,SNR=5.4
DAVOX **Davos/Dischmat** 86.82 330 P **P** 19 47 16.2 +0.5
DAVOX **Davos/Dischmat** 86.82 330 P **P** 19 47 16.2 +0.5
comp=Z,1.6nm,0.5s,baz=267,slow=5.8,SNR=3.9
Y27A **Causey** 86.88 49⇑ P **P** 19 47 16.3 +0.2
baz=87
SANT **Santorini** 86.92 314 *e*P **P** 19 47 17.3 +1.2
SANT LR LR
comp=Z,378nm,19.0s
MNTX **Cornudas Mount** 86.95 52 *e*P **P** 19 47 15.4 -1.0
comp=Z,13nm,1.5s
MNTX *e* 19 47 25.9
MNTX LR LR
comp=Z,219nm,20.0s
PAGF **Fort de Pagny** 86.97 333 *e*P **P** 19 47 16.2 +0.1
comp=Z,66nm,1.4s
PAGF **Fort de Pagny** 86.97 333 *e*P **P** 19 47 16.2 +0.1
comp=Z,66nm,1.4s
KSU1 **Kansas State U** 87.01 42 *e*P **P** 19 47 15.9 -0.6
comp=Z,20nm,0.8s
KSU1 LR LR
comp=Z,344nm,21.0s
MOF **Molkenrain** 87.03 332 *e*P pP 19 47 26.3 +1.1
AMTX **Amarillo** 87.09 48 *e*P **P** 19 47 16.5 -0.6
comp=Z,26nm,1.1s
AMTX LR LR
comp=Z,210nm,20.0s
U31A **Nine Bar Ranch** 87.14 46⇑ P **P** 19 47 17.4 +0.2
baz=87
JAN **Janina** 87.14 319 *e*P pP 19 47 27.5 +1.6
THEF **They Montfort** 87.15 333 *e*P pP 19 47 27.2 +1.5
HINF **Hinteralfeld** 87.16 332 *e*P **P** 19 47 16.5 -0.6
comp=Z,70nm,1.5s
HINF **Hinteralfeld** 87.16 332 *e*P **P** 19 47 16.5 -0.6
HINF pmax pmax
comp=Z,70nm,1.5s
HINF **Hinteralfeld** 87.16 332 *e*P **P** 19 47 16.5 -0.6
comp=Z,70nm,1.5s
HAU **Haudompre** 87.20 332 *e*P **P** 19 47 16.7 -0.5
comp=Z,79nm,1.4s
HAU *e*R
comp=Z,820nm,17.5s
HAU **Haudompre** 87.20 332 *e*P **P** 19 47 16.7 -0.5
HAU pmax pmax
comp=Z,79nm,1.4s
HAU **Haudompre** 87.20 332 *e*P **P** 19 47 16.7 -0.5
comp=Z,79nm,1.4s
Z27A **Tatum** 87.23 50 P **P** 19 47 17.5 -0.3
baz=87,SNR=7.5
MEZF **Maizieres J'vi** 87.26 333 *e*P **P** 19 47 17.5 0.0
comp=Z,268nm,1.6s
MEZF **Maizieres J'vi** 87.26 333 *e*P **P** 19 47 17.5 0.0
comp=Z,268nm,1.6s
GDL2 **Guadalupe Moun** 87.26 51 *e*P **P** 19 47 17.8 -0.2
GDL2 *e* 19 47 27.9
TUE **Stuetta** 87.29 330 *e*P **P** 19 47 17.3 -0.6
comp=Z,52nm,1.4s
TUE LR LR
comp=Z,1µm,20.0s
X29A **Tulia** 87.38 48⇓ P **P** 19 47 18.6 +0.1
baz=87
JFWS **Jewell Farm** 87.39 36 PFAKE 19 47 30.0 +12
JFWS LR LR
comp=Z,314nm,20.0s
Y28A **McKinney Farm,** 87.42 49⇑ P **P** 19 47 18.4 -0.3
baz=87
325A **Bean Ranch, Si** 87.43 52⇓ P **P** 19 47 18.9 0.0
baz=87
TBI **Tubuai** 87.46 122 *e*LR LR 20 15 09.6
comp=Z,413nm,22.8s
TBI *e*T T 21 23 56.2
comp=Z,12nm,0.3s
226B **Tecolote Peak,** 87.47 51⇓ P **P** 19 47 18.9 0.0
baz=87,SNR=5.8
LOMF **Lomont** 87.56 332 *e*P pP 19 47 29.1 +1.3
V31A **Spring Creek L** 87.56 46⇑ P **P** 19 47 19.6 +0.4
baz=87
Z28A **Tucker Farm, M** 87.75 49⇑ P **P** 19 47 20.3 -0.1
baz=88
Y29A **Porterfield Fa** 87.80 49⇓ P **P** 19 47 20.6 +0.1
baz=88
425A **Indio Mountain** 87.81 53⇑ P **P** 19 47 20.8 +0.1
baz=88
GLMI **Grayling** 88.41 32 PFAKE 19 47 30.0 +6.9
GLMI LR LR
comp=Z,486nm,22.0s
CABF **La Chapelle** 88.45 332 *e*P **P** 19 47 23.0 -0.4
comp=Z,53nm,1.6s
CABF **La Chapelle** 88.45 332 *e*P **P** 19 47 23.0 -0.4
CABF pmax pmax
comp=Z,53nm,1.6s
CABF **La Chapelle** 88.45 332 *e*P **P** 19 47 23.0 -0.4
comp=Z,53nm,1.6s
VLC **Villacollemand** 88.72 328 PFAKE 19 47 40.0 +15
VLC LR LR
comp=Z,543nm,20.0s
LOR **Lormes** 88.73 333 *e*P **P** 19 47 24.2 -0.4
comp=Z,224nm,1.6s
LOR *e*R
comp=Z,593nm,19.2s
LOR **Lormes** 88.73 333 *e*P **P** 19 47 24.2 -0.4
comp=Z,224nm,1.6s
AQU **L'Aquila** 88.80 325 *e*pP **pP** 19 47 35.3 +1.6
AQU LR LR
comp=Z,2µm,19.0s
WMOK **Wichita Mounta** 88.90 46 *e*P **P** 19 47 25.0 -0.6
WMOK pmax pmax
comp=Z,65nm,2.0s
WMOK MLR MLR
comp=Z,228nm,20.0s
WMOK **Wichita Mounta** 88.90 46 *e*P **P** 19 47 25.0 -0.6
comp=Z,65nm,2.0s
WMOK LR LR
comp=Z,228nm,20.0s
FLN **La Foliniere** 88.92 337 *e*P **P** 19 47 25.1 -0.3
comp=Z,80nm,1.1s
FLN *e*R
comp=Z,844nm,18.8s
FLN **La Foliniere** 88.92 337 *e*P **P** 19 47 25.1 -0.3
FLN pmax pmax
comp=Z,80nm,1.1s
FLN **La Foliniere** 88.92 337 *e*P **P** 19 47 25.1 -0.3
comp=Z,80nm,1.1s
LDF **La Druitiere** 88.95 336 *e*P **P** 19 47 25.5 0.0
comp=Z,246nm,1.7s
LDF **La Druitiere** 88.95 336 *e*P **P** 19 47 25.5 0.0
LDF pmax pmax
comp=Z,246nm,1.7s
LDF **La Druitiere** 88.95 336 *e*P **P** 19 47 25.5 0.0
comp=Z,246nm,1.7s
SSF **Saint Saulge** 89.03 333 *e*P **P** 19 47 25.8 -0.2
comp=Z,70nm,1.4s
SSF **Saint Saulge** 89.03 333 *e*P **P** 19 47 25.8 -0.2
SSF pmax pmax
comp=Z,70nm,1.4s
SSF **Saint Saulge** 89.03 333 *e*P **P** 19 47 25.8 -0.2
comp=Z,70nm,1.4s

LPL	La Plagne	89.11	331	eP	P	19 47 26.2	-0.5
LPL	La Plagne	89.11	331	eP	P	19 47 26.2	-0.5
LPL	La Plagne	89.11	331	eP	P	19 47 26.2	-0.5
LPG	La Plagne	89.12	331	eP	P	19 47 26.4	-0.4
	comp=Z,26nm,1.0s						
LPG	La Plagne	89.12	331	eP	P	19 47 26.4	-0.4
LPG				pmax	pmax		
	comp=Z,26nm,1.0s						
LPG	La Plagne	89.12	331	eP	P	19 47 26.4	-0.4
	comp=Z,26nm,1.0s						
HYF	Humbligny	89.17	334	eP	P	19 47 26.9	+0.3
HYF	Humbligny	89.17	334	eP	P	19 47 26.9	+0.3
626A	Big Bend Ranch	89.18	53	⇓P	P	19 47 27.2	+0.1
	baz=89						
SMF	Signal de Mont	89.27	333	eP	P	19 47 26.9	-0.2
	comp=Z,267nm,1.9s						
SMF	Signal de Mont	89.27	333	eP	P	19 47 26.9	-0.2
SMF				pmax	pmax		
	comp=Z,267nm,1.9s						
SMF	Signal de Mont	89.27	333	eP	P	19 47 26.9	-0.2
	comp=Z,267nm,1.9s						
428A	Kincaid Ranch,	89.31	51	⇓P	P	19 47 27.9	+0.2
	baz=89						
AVF	Avril sur Loir	89.32	333	eP	P	19 47 27.1	-0.2
	comp=Z,92nm,1.2s						
AVF	Avril sur Loir	89.32	333	eP	P	19 47 27.1	-0.2
AVF				pmax	pmax		
	comp=Z,92nm,1.2s						
AVF	Avril sur Loir	89.32	333	eP	P	19 47 27.1	-0.2
	comp=Z,92nm,1.2s						
GRR	Gorron	89.37	337	eP	P	19 47 27.4	-0.1
	comp=Z,199nm,1.5s						
GRR	Gorron	89.37	337	eP	P	19 47 27.4	-0.1
GRR				pmax	pmax		
	comp=Z,199nm,1.5s						
GRR	Gorron	89.37	337	eP	P	19 47 27.4	-0.1
	comp=Z,199nm,1.5s						
CUC	Castrocucco	89.47	322	eP	P	19 47 27.1	-1.1
	comp=Z,18nm,1.3s						
CUC				LR	LR		
	comp=Z,805nm,21.0s						
TIP	Timpagrande	89.62	321	eP	P	19 47 28.6	-0.3
	comp=Z,475nm,2.6s						
TIP				e		19 47 38.0	
TIP				LR	LR		
	comp=Z,866nm,19.0s						
TXAR	Lajitas Array	89.63	53	P	P	19 47 29.3	+0.1
TXAR	Lajitas Array	89.63	53	P	P	19 47 29.3	+0.1
	comp=Z,2.3nm,0.8s,baz=299,slow=3.0,SNR=13						
TXAR				LR	LR	20 24 56.7	
	comp=Z,233nm,18.8s,baz=0.0,slow=34						
528A	Cox Ranch, San	89.63	52	⇑P	P	19 47 29.5	+0.2
	baz=89						
HDIL	Hopedale	89.66	37	P	P	19 47 28.5	-0.6
HDIL				LR	LR		
	comp=Z,308nm,20.0s						
BGF	Bois d'Agland	89.70	334	eP	P	19 47 28.8	-0.3
	comp=Z,109nm,1.7s						
BGF	Bois d'Agland	89.70	334	eP	P	19 47 28.8	-0.3
BGF				pmax	pmax		
	comp=Z,109nm,1.7s						
BGF	Bois d'Agland	89.70	334	eP	P	19 47 28.8	-0.3
	comp=Z,109nm,1.7s						
627A	Terlingua Ranc	89.73	53	⇑P	P	19 47 30.2	+0.5
	baz=90						
MBDF	Montbardon	89.75	330	eP	P	19 47 28.6	-1.0
MBDF	Montbardon	89.75	330	eP	P	19 47 28.6	-1.0
MBDF	Montbardon	89.75	330	eP	P	19 47 28.6	-1.0
TUL1	Tulsa	89.77	44	⇑P	P	19 47 29.4	-0.2
	baz=90						
ORIF	Oris-en-Rattie	89.95	331	eP	P	19 47 29.9	-0.5
	comp=Z,25nm,1.1s						
ORIF				eR			
	comp=Z,1μm,18.0s						
ORIF	Oris-en-Rattie	89.95	331	eP	P	19 47 29.9	-0.5
ORIF				pmax	pmax		
	comp=Z,25nm,1.0s						
ORIF	Oris-en-Rattie	89.95	331	eP	P	19 47 29.9	-0.5
	comp=Z,25nm,1.0s						
SGMF	Saint Gilles	90.02	338	eP	P	19 47 30.6	+0.1
	comp=Z,150nm,1.5s						
SGMF	Saint Gilles	90.02	338	eP	P	19 47 30.6	+0.1
SGMF				pmax	pmax		
	comp=Z,150nm,1.5s						
SGMF	Saint Gilles	90.02	338	eP	P	19 47 30.6	+0.1
	comp=Z,150nm,1.5s						
AGO	Saint Agoulin	90.03	333	eP	pP	19 47 41.3	+1.9
TCF	Toulx Ste Croi	90.16	334	eP	P	19 47 31.2	-0.1
	comp=Z,73nm,1.5s						
TCF	Toulx Ste Croi	90.16	334	eP	P	19 47 31.2	-0.1
TCF				pmax	pmax		
	comp=Z,73nm,1.5s						
TCF	Toulx Ste Croi	90.16	334	eP	P	19 47 31.2	-0.1
	comp=Z,73nm,1.5s						
SSB	Saint Sauveur	90.16	332	eP	P	19 47 29.8	-1.5
SSB				e		19 47 41.2	
SSB				pmax	pmax		
	comp=Z,31nm,1.4s						
SSB				MLR	MLR		
	comp=Z,563nm,20.0s						
SSB	Saint Sauveur	90.16	332	eP	P	19 47 29.8	-1.5
	comp=Z,31nm,1.4s						
SSB				e		19 47 41.2	
SSB				LR	LR		
	comp=Z,563nm,20.0s						
ROSF	Rostrenen	90.17	338	eP	P	19 47 31.3	+0.1
	comp=Z,52nm,1.2s						
ROSF	Rostrenen	90.17	338	eP	P	19 47 31.3	+0.1
ROSF				pmax	pmax		
	comp=Z,52nm,1.2s						
ROSF	Rostrenen	90.17	338	eP	P	19 47 31.3	+0.1
	comp=Z,52nm,1.2s						
SBF	Sospel	90.20	329	eP	P	19 47 31.7	+0.1
	comp=Z,102nm,1.1s						
SBF	Sospel	90.20	329	eP	P	19 47 31.7	+0.1
SBF				pmax	pmax		
	comp=Z,102nm,1.1s						
SBF	Sospel	90.20	329	eP	P	19 47 31.7	+0.1
	comp=Z,102nm,1.1s						
PYM	Petit Puy Mans	90.33	333	eP	pP	19 47 42.7	+1.8
MSEY	Mahe Island	90.46	265	PFAKE		19 47 40.0	+6.8
MSEY				LR	LR		
	comp=Z,358nm,20.0s						
VIVF	Saint-Julien-l	90.47	332	eP	P	19 47 32.5	-0.3
	comp=Z,71nm,1.4s						
VIVF	Saint-Julien-l	90.47	332	eP	P	19 47 32.5	-0.3
VIVF				pmax	pmax		
	comp=Z,71nm,1.4s						
VIVF	Saint-Julien-l	90.47	332	eP	P	19 47 32.5	-0.3
	comp=Z,71nm,1.4s						
QUIF	Quistinic	90.51	338	eP	P	19 47 32.6	-0.2
	comp=Z,132nm,1.7s						
QUIF	Quistinic	90.51	338	eP	P	19 47 32.6	-0.2
QUIF				pmax	pmax		
	comp=Z,132nm,1.7s						
QUIF	Quistinic	90.51	338	eP	P	19 47 32.6	-0.2
	comp=Z,132nm,1.7s						
PGF	Pioggiola	90.61	328	eP	P	19 47 32.6	-1.0
	comp=Z,75nm,1.2s						
PGF	Pioggiola	90.61	328	eP	P	19 47 32.6	-1.0
PGF				pmax	pmax		
	comp=Z,75nm,1.2s						
PGF	Pioggiola	90.61	328	eP	P	19 47 32.6	-1.0
	comp=Z,75nm,1.2s						
LBL	Lubilhac	90.69	333	eP	pP	19 47 43.6	+1.0
LBL	Lubilhac	90.69	333	eP	pP	19 47 43.6	+1.0
LBL	Lubilhac	90.69	333	eP	pP	19 47 43.6	+1.0
MFF	Saint Martin d	90.70	335	eP	P	19 47 33.9	+0.1
	comp=Z,169nm,1.4s						
MFF	Saint Martin d	90.70	335	eP	P	19 47 33.9	+0.1
MFF				pmax	pmax		
	comp=Z,169nm,1.4s						
MFF	Saint Martin d	90.70	335	eP	P	19 47 33.9	+0.1
	comp=Z,169nm,1.4s						
CEL	Celeste	90.75	321	eP	P	19 47 34.5	+0.2
	comp=Z,48nm,1.1s						
CEL				LR	LR		
	comp=Z,496nm,19.0s						
FRF	La Foret Royal	90.77	330	eP	P	19 47 33.1	-1.0
	comp=Z,94nm,1.4s						
FRF	La Foret Royal	90.77	330	eP	P	19 47 33.1	-1.0
FRF				pmax	pmax		
	comp=Z,95nm,1.4s						
FRF	La Foret Royal	90.77	330	eP	P	19 47 33.1	-1.0
	comp=Z,94nm,1.4s						
SMRF	Simiane la Rot	90.85	331	eP	P	19 47 34.4	-0.2
	comp=Z,100nm,1.6s						
SMRF	Simiane la Rot	90.85	331	eP	P	19 47 34.4	-0.2
	comp=Z,100nm,1.6s						
LMR	La Mourre	91.01	330	eP	P	19 47 34.5	-0.8
	comp=Z,93nm,1.2s						
LMR	La Mourre	91.01	330	eP	P	19 47 34.5	-0.8
LMR				pmax	pmax		
	comp=Z,93nm,1.2s						
LMR	La Mourre	91.01	330	eP	P	19 47 34.5	-0.8
	comp=Z,93nm,1.2s						
531A	Rocksprings	91.04	51	⇓P	P	19 47 36.2	+0.5
	baz=91						
RJF	Les Rejaudoux	91.25	334	eP	P	19 47 36.5	+0.1
	comp=Z,124nm,1.5s						
RJF				eR			
	comp=Z,989nm,18.0s						
RJF	Les Rejaudoux	91.25	334	eP	P	19 47 36.5	+0.1
RJF				pmax	pmax		
	comp=Z,124nm,1.5s						
RJF	Les Rejaudoux	91.25	334	eP	P	19 47 36.5	+0.1
	comp=Z,124nm,1.5s						
JCT	Junction City	91.28	50	eP	P	19 47 35.3	-1.5
JCT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
JCT				MLR	MLR		
	comp=Z,211nm,19.0s						
JCT	Junction City	91.28	50	eP	P	19 47 35.3	-1.5
	comp=Z,9.1nm,0.9s						
JCT				LR	LR		
	comp=Z,211nm,19.0s						
CAF	Calviac	91.38	333	eP	P	19 47 37.4	+0.4
	comp=Z,112nm,1.4s						
CAF	Calviac	91.38	333	eP	P	19 47 37.4	+0.4
CAF				pmax	pmax		
	comp=Z,112nm,1.4s						
CAF	Calviac	91.38	333	eP	P	19 47 37.4	+0.4
	comp=Z,112nm,1.4s						
LASF	Ste Croix	91.44	332	eP	P	19 47 37.2	-0.1
	comp=Z,132nm,1.6s						
LASF	Ste Croix	91.44	332	eP	P	19 47 37.2	-0.1
	comp=Z,132nm,1.6s						
631A	Perdido Creek	91.54	51	⇓P	P	19 47 37.8	-0.2
	baz=91						
OLIL	Olney	91.66	37	eP	P	19 47 38.1	-0.2
LFF	La Frestale	91.84	334	eP	P	19 47 39.5	+0.4
	comp=Z,108nm,1.4s						
LFF	La Frestale	91.84	334	eP	P	19 47 39.5	+0.4
LFF				pmax	pmax		
	comp=Z,108nm,1.4s						
LFF	La Frestale	91.84	334	eP	P	19 47 39.5	+0.4
	comp=Z,108nm,1.4s						
MIAR	Mount Ida	92.00	43	eP	P	19 47 39.8	-0.2
MIAR				pmax	pmax		
	comp=Z,36nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,423nm,19.0s						
MIAR	Mount Ida	92.00	43	eP	P	19 47 39.8	-0.2
	comp=Z,36nm,1.1s						
MIAR				LR	LR		
	comp=Z,423nm,19.0s						
732A	Laxson Ranch,	92.40	51	⇑P	P	19 47 42.2	+0.3
	baz=92						
LONY	Lake Ozonia	92.44	26	PFAKE		19 47 50.0	+8.1
LONY				LR	LR		
	comp=Z,288nm,19.0s						
ERPA	Erie	92.55	30	PFAKE		19 47 50.0	+7.6
ERPA				LR	LR		
	comp=Z,363nm,22.0s						
MTLF	Montolieu	92.69	332	eP	P	19 47 43.2	+0.2
	comp=Z,102nm,1.7s						
MTLF	Montolieu	92.69	332	eP	P	19 47 43.2	+0.2
MTLF				pmax	pmax		
	comp=Z,103nm,1.7s						
MTLF	Montolieu	92.69	332	eP	P	19 47 43.2	+0.2
	comp=Z,102nm,1.7s						
ACSO	Alum Creek Sta	92.84	33	eP	P	19 47 41.9	-1.9
	comp=Z,39nm,1.4s						
ACSO				LR	LR		
	comp=Z,437nm,19.0s						
VSL	Villasalto	92.92	326	PFAKE		19 48 00.0	+16
VSL				LR	LR		
	comp=Z,492nm,20.0s						
NCB	Newcomb	93.14	26	PFAKE		19 48 00.0	+15
NCB				LR	LR		
	comp=Z,313nm,20.0s						
WDD	Wield Dalam	93.29	320	PFAKE		19 48 00.0	+14
WDD				LR	LR		
	comp=Z,320nm,20.0s						
NATX	Nacogdoches	93.44	46	PFAKE		19 48 00.0	+13
NATX				LR	LR		
	comp=Z,413nm,21.0s						
EPF	Esparros	93.64	333	eP	P	19 47 47.1	-0.4
	comp=Z,48nm,1.5s						
EPF	Esparros	93.64	333	eP	P	19 47 47.1	-0.4
EPF				pmax	pmax		
	comp=Z,48nm,1.5s						
EPF	Esparros	93.64	333	eP	P	19 47 47.1	-0.4
	comp=Z,48nm,1.5s						
LBNH	Lisbon	93.68	24	PFAKE		19 48 00.0	+12
LBNH				LR	LR		
	comp=Z,441nm,19.0s						
BINY	Binghamton	94.04	28	PFAKE		19 48 00.0	+11
BINY				LR	LR		
	comp=Z,334nm,21.0s						
ETSF	Etsaut	94.08	334	eP	P	19 47 49.9	+0.3
ETSF	Etsaut	94.08	334	eP	P	19 47 49.9	+0.3
ETSF	Etsaut	94.08	334	eP	P	19 47 49.9	+0.3
SJPF	Ste Jean	94.13	334	eP	P	19 47 49.3	-0.4
	comp=Z,52nm,1.5s						
SJPF	Ste Jean	94.13	334	eP	P	19 47 49.3	-0.4
SJPF				pmax	pmax		
	comp=Z,52nm,1.5s						
SJPF	Ste Jean	94.13	334	eP	P	19 47 49.3	-0.4
	comp=Z,52nm,1.5s						
OXF	Oxford	94.27	41	eP	P	19 47 50.3	-0.1
OXF				pmax	pmax		
	comp=Z,30nm,1.1s						
OXF				MLR	MLR		
	comp=Z,237nm,20.0s						
OXF	Oxford	94.27	41	eP	P	19 47 50.3	-0.1
	comp=Z,30nm,1.1s						
OXF				LR	LR		
	comp=Z,237nm,20.0s						
PLAL	Pickwick Lake	94.60	40	PFAKE		19 48 00.0	+8.0
PLAL				LR	LR		
	comp=Z,258nm,20.0s						
VBMS	Vicksburg	95.43	43	PFAKE		19 48 10.0	+14
VBMS				LR	LR		
	comp=Z,364nm,19.0s						
BLA	Blacksburg	96.46	33	PFAKE		19 48 10.0	+10
BLA				LR	LR		
	comp=Z,319nm,20.0s						
LRAL	Lakeview Retre	96.68	40	PFAKE		19 48 10.0	+8.5
LRAL				LR	LR		
	comp=Z,221nm,19.0s						
CBN	Corbin	96.92	31	PFAKE		19 48 10.0	+7.5
CBN				LR	LR		
	comp=Z,469nm,20.0s						
RKT	Rikitea	97.68	113	eLR	LR	20 19 54.2	
	comp=Z,437nm,30.8s,baz=311						
ESDC	Sonseca Array	98.13	335	P	Pdif	19 48 08.1	+0.1
ESDC	Sonseca Array	98.13	335	P	Pdif	19 48 08.1	+0.1
	comp=Z,0.6nm,0.8s,baz=85,slow=3.1,SNR=4.9						
ESDC				LR	LR	20 37 30.2	
	comp=Z,399nm,20.2s,baz=120,slow=38						
BRAL	Brewton	98.23	41	PFAKE		19 48 20.0	+11
BRAL				LR	LR		
	comp=Z,269nm,19.0s						
PAB	San Pablo	98.38	335	PFAKE		19 48 20.0	+11
PAB				LR	LR		
	comp=Z,735nm,20.0s						
MTE	Manteigas	98.64	337	PFAKE		19 48 20.0	+10
MTE				LR	LR		
	comp=Z,1μm,19.0s						
CNNC	Cliffs of the	99.22	33	PFAKE		19 48 20.0	+7.2
CNNC				LR	LR		
	comp=Z,1μm,21.0s						
NHSC	New Hope	99.98	35	PFAKE		19 48 30.0	+14
NHSC				LR	LR		
	comp=Z,443nm,19.0s						
DRV	Dumont d'Urvil	102.93	181	PP	PP	19 52 53.0	+10
DRV				SKS		19 58 39.0	
DRV				SS	SS	20 07 43.0	+20
KMBO	Kilima Mbogo	103.00	278	PFAKE		19 48 40.0	+10
KMBO				LR	LR		
	comp=Z,357nm,22.0s						
RTC	Rabat Centre	104.25	334	PFAKE		19 48 50.0	+15
RTC				LR	LR		
	comp=Z,270nm,19.0s						
ABPO	Ambohimpanom	105.29	258	PFAKE		19 53 10.0	
ABPO				LR	LR		
	comp=Z,282nm,20.0s						
CASY	Casey	105.46	193	PFAKE		19 53 00.0	
CASY				LR	LR		
	comp=Z,622nm,20.0s						
TEIG	Tepich	105.84	49	PFAKE		19 53 10.0	
TEIG				LR	LR		
	comp=Z,249nm,19.0s						
BBSR	BB Station	106.81	24	PFAKE		19 53 10.0	
BBSR				LR	LR		
	comp=Z,386nm,20.0s						
MBAR	Mbarara	107.83	283	PFAKE		19 53 10.0	
MBAR				LR	LR		
	comp=Z,1μm,19.0s						
TAM	Tamanrasset	108.40	319	PFAKE		19 53 10.0	
TAM				LR	LR		
	comp=Z,278nm,19.0s						
TGUH	Tegucigalpa,Un	111.11	53	PFAKE		19 53 20.0	
TGUH				LR	LR		
	comp=Z,192nm,19.0s						
GTBY	Guantanamo Bay	113.46	39	PFAKE		19 53 20.0	
GTBY				LR	LR		
	comp=Z,233nm,19.0s						
MTDJ	Mount Denham	113.60	42	PFAKE		19 53 20.0	
MTDJ				LR	LR		
	comp=Z,224nm,21.0s						
GRTK	Grand Turk	114.02	34	PFAKE		19 53 20.0	+9.5
GRTK				LR	LR		
	comp=Z,362nm,19.0s						
SDDR	Presa de Saban	116.13	36	PFAKE		19 53 30.0	+15
SDDR				LR	LR		
	comp=Z,309nm,21.0s						
TORD	Torodi Ar. Bea	118.34	316	PKP	PKPdf	19 53 18.8	-0.2
TORD				PP	PP	19 54 26.9	-7.4
TORD	Torodi Ar. Bea	118.34	316	PKP	PKPdf	19 53 18.8	-0.2
	comp=Z,1.4nm,1.0s,baz=30,slow=1.0,SNR=4.9						
TORD				PP	PP	19 54 26.9	-7.4
	comp=Z,2.0nm,0.9s,baz=36,slow=4.3,SNR=4.1						
LSZ	Lusaka	118.47	272	PFAKE		19 53 30.0	+11
LSZ				LR	LR		
	comp=Z,220nm,21.0s						
SJG	San Juan	119.20	32	PFAKE		19 53 30.0	+9.5
SJG				LR	LR		
	comp=Z,131nm,20.0s						
ANWB	Willy Bob	121.33	27	PFAKE		19 53 40.0	+15
ANWB				LR	LR		
	comp=Z,302nm,19.0s						
MSKU	Masuku	121.57	294	PFAKE		19 53 40.0	+15
MSKU				LR	LR		
	comp=Z,2.0nm,21.0s						
FDF	Fort de France	124.26	28	PFAKE		19 53 40.0	+10
FDF				LR	LR		
	comp=Z,200nm,19.0s						
SDV	Santo Domingo	125.04	41	PFAKE		19 53 40.0	+7.9
SDV				LR	LR		
	comp=Z,1.0nm,20.0s						
QSPA	South Pole Qui	126.31	180	PFAKE		19 53 40.0	+7.3
QSPA				LR	LR		
	comp=Z,262nm,21.0s						
SACV	Santiago Islan	127.11	343	PFAKE		19 53 50.0	+14
SACV				LR	LR		
	comp=Z,558nm,20.0s						
OTAV	Otavalo	127.19	56	PFAKE		19 53 50.0	+13
OTAV				LR	LR		
	comp=Z,173nm,20.0s						
SYO	Syowa Base	128.23	207	⇑epPdiff	pPdif	19 50 28.0	-1.5
TSUM	Tsumeb	129.10	274	PFAKE		19 53 50.0	+10
TSUM				LR	LR		
	comp=Z,238nm,19.0s						
SNAA	Sanae	140.58	196	ePKPdf	PKPdf	19 53 53.2	-6.2
SNAA	Sanae	140.58	196	ePKPpre	PKPpre	19 53 51.8	
SNAA				ePKPdf	PKPdf	19 53 59.9	+0.5
VNA2	Neumayer--Watz	142.14	196	ePKPdf	PKPdf	19 53 59.4	-2.7
VNA1	Neumayer--Stat	142.53	195	ePKPdf	PKPdf	19 53 59.8	-2.9
SAML	Samuel	143.88	47	ePKPpre	PKPpre	19 54 03.7	
SAML				ePKPdf	PKPdf	19 54 06.8	0.0
SAML				LR	LR		
	comp=Z,256nm,21.0s						
LPAZ	La Paz	146.08	62	ePKPdf	PKPdf	19 54 11.4	+0.1
LPAZ				PKPbc	PKPbc	19 54 11.9	-0.3
LPAZ	La Paz	146.08	62	PKPbc	PKPbc	19 54 11.9	-0.3
	comp=Z,5.0nm,0.6s,baz=343,slow=4.1,SNR=23						
RCBR	Riachuelo	149.37	357	ePKPdf	PKPdf	19 54 17.0	+0.8
RCBR				ePKPbc	PKPbc	19 54 21.0	+0.5
RCBR				LR	LR		
	comp=Z,244nm,19.0s						
LVC	Limon Verde	149.41	72	ePKPdf	PKPdf	19 54 16.9	+0.6
LVC				ePKPbc	PKiKP	19 54 21.9	+0.1
LCO	Las Campanas	151.10	85	ePKPdf	PKPdf	19 54 20.3	+1.5
LCO				ePKPbc	PKiKP	19 54 25.1	-0.1
CFAA	Coronel Fontan	154.03	88	PKPbc	PKPbc	19 54 29.2	-1.5
CFAA	Coronel Fontan	154.03	88	PKPbc	PKPbc	19 54 29.2	-1.5
	comp=Z,0.4nm,0.6s,baz=275,slow=3.6,SNR=6.1						

NNC ***09*** *19:35:06.5±7.9, 49.°23N×92.°09E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=75.2km s-min=44.4km az=75.0*
ISCJB ***09*** *19:35:06.1±1.0, 49.°6N±0.°1×91.°9E±0.°1, h10km, Error ellipse: s-maj=21.2km s-min=10.1km az=12.4*
IDC ***09*** *19:35:07.4±1.6, 49.°69N×91.°90E, h0km, mb1 3.3/4, mb1mx3.2/31, mbtmp3.3/4, ML3.0/4, Error ellipse: s-maj=24.5km s-min=15.9km az=7.0*
ISC 09 19:35:09.7±1.3**, 49.°63N**±0.°09×**92.°03E**±0.°08**, h10km, n8, σ1.s56**/9**, 4C-1D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	Zalesovo Beam	6.22	317	Pn	Pn	19 36 41.1	-0.3
	0.2nm,0.3s,baz=129,slow=11,SNR=5.9						
ZALV				Pg	Pb	19 36 59.5	+1.5
	1.6nm,0.3s,baz=136,slow=16,SNR=24						
ZALV				Lg	Lg	19 38 19.9	
	3.3nm,0.3s,baz=132,slow=26,SNR=7.6						
MK31	Makanchi Array	7.10	250	Pn	Pn	19 36 52.1	-1.4
	0.4nm,0.3s,baz=67,slow=13,SNR=29						
MK31				Pg	Pb	19 37 14.7	+1.7
	3.4nm,0.5s,baz=73,slow=16,SNR=12						
MK31				⇑Lg	Lg	19 38 50.1	
	26nm,0.8s,baz=66,slow=37,SNR=6.2						
MKAR	Makanchi Array	7.10	250	Pn	Pn	19 36 53.2	-0.3
	0.6nm,0.3s,baz=63,slow=16,SNR=34						
MKAR				Pg	Pb	19 37 14.3	+1.4
	0.4nm,0.3s,baz=48,slow=15,SNR=6.4						
MKAR				Lg	Lg	19 38 49.0	
	2.2nm,0.3s,baz=66,slow=16,SNR=6.8						
KURK	Kurchatov	8.68	282	⇑Pn	Pn	19 37 15.3	+0.1
	3.0nm,0.6s						
KURK				⇑Lg	Lg	19 39 42.7	
	44nm,1.0s						
KURBB	Kurchatov Arra	8.73	282	Pn	Pn	19 37 13.2	-2.6
	0.1nm,0.3s,baz=93,slow=14,SNR=23						
KURBB				Lg	Lg	19 39 39.6	
	0.3nm,0.3s,baz=200,slow=23,SNR=6.1						
KUR16	Kurchatov Arra	8.75	282	⇑Pn	Pn	19 37 13.7	-2.4
	0.2nm,0.6s						
KUR16				⇓Lg	Lg	19 39 46.4	
	0.8nm,0.6s						
SONM	Songino Array	9.66	95	Pn	Pn	19 37 28.5	-0.3
	0.1nm,0.3s,baz=285,slow=15,SNR=3.1						
SONM				Pg		19 38 05.0	
	0.2nm,0.3s,baz=288,slow=14,SNR=4.1						
SONM				Lg	Lg	19 40 15.1	
	0.7nm,0.3s,baz=290,slow=31,SNR=14						
BVAR	Borovoye Array	13.94	292	Sn	Sn	19 40 59.5	-2.3
	0.2nm,0.3s,baz=106,slow=21,SNR=2.9						

MEX 09 19:41:52.6±0.5**, 17.°02N**×**99.°93W, h39km**±6km**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	Acapulco	0.15	162	i P	Pn	19 41 58.2	-2.6
ACP2				i S	Sn	19 42 02.2	-5.4
CAIG	El Cayaco	0.32	276	eP	Pn	19 41 59.3	-1.7
CAIG				eS	Sn	19 42 05.3	-2.0
MEIG	Mezcala	0.95	18	eP	Pn	19 42 07.7	-1.9
MEIG				i S	Sn	19 42 19.6	-2.5
ARIG	Puente Sto Nin	1.32	343	eP	Pn	19 42 13.1	-1.5
ARIG				i S	Sn	19 42 29.1	-1.9
PNIG	Pinotepa	1.84	109	i P	Pn	19 42 20.4	-1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PNIG				i S	Sn	19 42 42.2	-1.6

*CSEM **09** 19:44:19.5, 42.°34N×13.°39E, h10km, After ROM*

ROM 09 19:44:19.5±0.1**, 42.°34N×13.°39E, h10km, Ml2.3**/24**, 2C-2D, Error ellipse: s-maj=1.1km s-min=0.8km az=66.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.01	31	Pg	Pg	19 44 21.7	+0.4
AQU				Sg	Sg	19 44 22.6	0.0
	3µm,0.1s						
AQU	L'Aquila	0.01	31	Pg	Pg	19 44 21.7	+0.4
AQU				Sg	Sg	19 44 22.6	0.0
	3µm,0.1s						
FAGN	Fagnano	0.16	119⇓	iPg	Pg	19 44 23.8	+0.7
FAGN				Sg	Sg	19 44 27.0	+1.4
	5µm,0.3s						
FAGN	Fagnano	0.16	119⇓	iPg	Pg	19 44 23.8	+0.7
FAGN				Sg	Sg	19 44 27.0	+1.4
	5µm,0.3s						
CAMP	Campotosto	0.19	3	Pg	Pg	19 44 24.3	+0.5
CAMP				Sg	Sg	19 44 27.4	+0.7
	703nm,0.6s						
CAMP	Campotosto	0.19	3	Pg	Pg	19 44 24.3	+0.5
CAMP				Sg	Sg	19 44 27.4	+0.7
	703nm,0.6s						
FIAM	Fiamignano	0.22	250⇑	iPg	Pg	19 44 25.0	+0.8
FIAM				Sg	Sg	19 44 28.3	+1.0
	569nm,0.5s						
FIAM	Fiamignano	0.22	250⇑	iPg	Pg	19 44 25.0	+0.8
FIAM				Sg	Sg	19 44 28.3	+1.0
	569nm,0.5s						
TERO	Teramo	0.32	29	Pg	Pg	19 44 26.1	+0.1
TERO				Sg	Sg	19 44 30.7	+0.4
	375nm,0.3s						
TERO	Teramo	0.32	29	Pg	Pg	19 44 26.1	+0.1
TERO				Sg	Sg	19 44 30.7	+0.4
	375nm,0.3s						
PTQR	Pietraquaria	0.32	179	Pg	Pg	19 44 26.6	+0.5
PTQR				Sg	Sb	19 44 31.7	-1.2
	54nm,0.2s						
PTQR	Pietraquaria	0.32	179	Pg	Pg	19 44 26.6	+0.5
PTQR				Sg	Sb	19 44 31.7	-1.2
	54nm,0.2s						
VCEL	Villa Celiera	0.34	81	Pg	Pg	19 44 26.7	+0.4
VCEL				Sg	Sb	19 44 32.9	-0.4
	901nm,0.4s						
VCEL	Villa Celiera	0.34	81	Pg	Pg	19 44 26.7	+0.4
VCEL				Sg	Sb	19 44 32.9	-0.4
	901nm,0.4s						
LNSS	Leonessa	0.37	315	Pg	Pg	19 44 27.5	+0.5
LNSS				Sg	Sb	19 44 33.7	-0.6
	363nm,0.5s						
LNSS	Leonessa	0.37	315	Pg	Pg	19 44 27.5	+0.5
LNSS				Sg	Sb	19 44 33.7	-0.6
	363nm,0.5s						
CERT	Cerreto	0.50	218	Pg	Pg	19 44 29.6	+0.3
	443nm,0.4s						
CERT	Cerreto	0.50	218	Pg	Pg	19 44 29.6	+0.3
	443nm,0.4s						
VVLD	Villa Vallelon	0.50	160	Pg	Pg	19 44 29.8	+0.4
	216nm,0.6s						
VVLD	Villa Vallelon	0.50	160	Pg	Pg	19 44 29.8	+0.4
	216nm,0.6s						
INTR	Introdacqua	0.50	131	Pg	Pg	19 44 29.6	+0.1
INTR				Sg	Sb	19 44 37.4	-0.7
	353nm,0.3s						
INTR	Introdacqua	0.50	131	Pg	Pg	19 44 29.6	+0.1
INTR				Sg	Sb	19 44 37.4	-0.7
	353nm,0.3s						
MNS	Montasola	0.53	275	Pg	Pg	19 44 30.1	+0.2
	112nm,0.3s						
MNS	Montasola	0.53	275	Pg	Pg	19 44 30.1	+0.2
	112nm,0.3s						
NRCA	Norcia	0.53	337	Pg	Pg	19 44 30.0	0.0
NRCA				Sg	Sb	19 44 38.5	-0.4
	307nm,0.2s						
NRCA	Norcia	0.53	337	Pg	Pg	19 44 30.0	0.0
NRCA				Sg	Sb	19 44 38.5	-0.4
	307nm,0.2s						
GUAR	Guarcino	0.55	186	Pg	Pg	19 44 30.5	+0.2
	111nm,0.4s						
GUAR	Guarcino	0.55	186	Pg	Pg	19 44 30.5	+0.2
	111nm,0.4s						
MTCE	Montecelio	0.58	237	Pg	Pg	19 44 31.1	+0.3
	71nm,0.3s						
MTCE	Montecelio	0.58	237	Pg	Pg	19 44 31.1	+0.3
	71nm,0.3s						
OFFI	Offida	0.63	20	Pg	Pb	19 44 32.7	0.0
	361nm,0.3s						
OFFI	Offida	0.63	20	Pg	Pb	19 44 32.7	0.0
	361nm,0.3s						
LPEL	Lama dei Pelig	0.66	117	Pg	Pg	19 44 32.4	+0.1
LPEL				Sg	Sb	19 44 42.5	0.0
	132nm,0.3s						
LPEL	Lama dei Pelig	0.66	117	Pg	Pg	19 44 32.4	+0.1
LPEL				Sg	Sb	19 44 42.5	0.0
	132nm,0.3s						
CESX	Cesi	0.66	294	Pg	Pb	19 44 33.5	+0.3
	67nm,0.5s						
CESX	Cesi	0.66	294	Pg	Pb	19 44 33.5	+0.3
	67nm,0.5s						
POFI	Posta Fibreno	0.67	159	Pg	Pg	19 44 32.6	0.0
	59nm,0.7s						
POFI	Posta Fibreno	0.67	159	Pg	Pg	19 44 32.6	0.0
	59nm,0.7s						
SDI	San Donato	0.71	154	Pg	Pg	19 44 32.9	-0.3
	62nm,0.2s						
SDI	San Donato	0.71	154	Pg	Pg	19 44 32.9	-0.3
	62nm,0.2s						
FDMO	Fiordimonte	0.73	342	Pg	Pg	19 44 33.4	-0.3
	78nm,0.2s						
FDMO	Fiordimonte	0.73	342	Pg	Pg	19 44 33.4	-0.3
	78nm,0.2s						
CESI	CESI - Serrava	0.75	332	Pg	Pg	19 44 34.0	-0.2
	24nm,0.3s						
CESI	CESI - Serrava	0.75	332	Pg	Pg	19 44 34.0	-0.2
	24nm,0.3s						
GIUL	Giuliano Di Ro	0.79	188	Pg	Pg	19 44 34.8	0.0
	42nm,0.5s						
GIUL	Giuliano Di Ro	0.79	188	Pg	Pg	19 44 34.8	0.0
	42nm,0.5s						
GUMA	Gualdo di Mace	0.82	29	Pg	Pg	19 44 34.1	-1.3
	342nm,0.5s						
GUMA	Gualdo di Mace	0.82	29	Pg	Pg	19 44 34.1	-1.3
	342nm,0.5s						
RNI2	Rionero Sannit	0.85	138	Pg	Pb	19 44 36.4	-0.2
	71nm,0.4s						
RNI2	Rionero Sannit	0.85	138	Pg	Pb	19 44 36.4	-0.2
	71nm,0.4s						
CERA	Filignano	0.88	148	Pg	Pg	19 44 35.9	-0.6
	75nm,0.5s						
CERA	Filignano	0.88	148	Pg	Pg	19 44 35.9	-0.6
	75nm,0.5s						
MIDA	Miranda	0.95	137	Pg	Pg	19 44 37.1	-0.8
MIDA	Miranda	0.95	137	Pg	Pg	19 44 37.1	-0.8
CING	Cingoli	1.04	352	Pg	Pg	19 44 39.3	-0.3
	75nm,0.8s						
CING	Cingoli	1.04	352	Pg	Pg	19 44 39.3	-0.3
	75nm,0.8s						

*DDA **09** 19:49:48.0, 39.°28N×26.°74E, h11km, MD3.2*
*ISK **09** 19:49:47.3, 39.°28N×26.°76E, h6km, MD3.3*
*ISCJB **09** 19:49:47.7±0.3, 39.°28N±0.°02×26.°75E±0.°02, h7km±2km, Error ellipse: s-maj=2.8km s-min=2.4km az=23.3*
*CSEM **09** 19:49:48.0±0.1, 39.°28N×26.°75E, h8km, MD3.2, Error ellipse: s-maj=2.0km s-min=1.9km az=17.0*
*THE **09** 19:49:48.4, 39.°25N×26.°74E, h2km±1km, ML2.8/5, Error ellipse: s-maj=1.4km s-min=0.5km az=207.0*
*ATH **09** 19:49:48.5, 39.°26N×26.°70E, h25km±2km, MD3.4/11*

ISC 09 19:49:48.1±0.8**, 39.°29N**±0.°02×**26.°75E**±0.°02**, h11**km±5km**, n121, σ0.s70**/166**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.05	294	i P	Pg	19 49 50.2	-0.1
AYVA				i S	Sg	19 49 51.7	-0.2
AYVA	Ayvalik	0.05	294	i P	Pg	19 49 50.2	-0.1
AYVA				i S	Sg	19 49 51.7	-0.2
PRK	Paraskevi	0.38	264	P	Pg	19 49 55.6	+0.1
PRK				S	Sg	19 50 01.3	+0.7
PRK	Paraskevi	0.38	264	ePB	Pg	19 49 55.8	+0.3
PRK				eSB	Sb	19 50 01.8	-0.8
PRK	Paraskevi	0.38	264	P	Pg	19 49 55.6	+0.1
PRK				S	Sg	19 50 01.3	+0.7
PRK				eSb	Sb	19 50 01.8	-0.8
EZN	Ezine	0.63	329	ePG	Pg	19 50 00.5	+0.1
EZN				eSG	Sb	19 50 09.3	-0.7
EZN	Ezine	0.63	329	ePg	Pg	19 50 00.5	+0.1
EZN				eSg	Sb	19 50 09.3	-0.7
SIGR	SIGRI	0.70	264	P	Pg	19 50 01.4	-0.2
SIGR				S	Sb	19 50 11.8	-0.1
SIGR	SIGRI	0.70	264	P	Pg	19 50 01.4	-0.2
SIGR				S	Sb	19 50 11.8	-0.1
BOZC	Bozcaada	0.78	316	i P	Pg	19 50 02.9	-0.1
BOZC				i S	Sb	19 50 13.8	-0.3
BALY	Balya	0.81	56	i P	Pg	19 50 02.9	-0.8
BALY				i S	Sb	19 50 15.6	+0.5
BALY	Balya	0.81	56	i P	Pg	19 50 02.9	-0.8
BALY				i S	Sb	19 50 15.6	+0.5
AKHS	Akhisar	0.92	116	i P	Pg	19 50 05.7	-0.1
AKHS				i S	Sb	19 50 18.5	+0.2
AKHS	Akhisar	0.92	116	i P	Pg	19 50 05.7	-0.1
AKHS				i S	Sb	19 50 18.5	+0.2
AKS	Akhisar	0.92	116	ePG	Pg	19 50 05.7	-0.1
AKS				eSG	Sb	19 50 18.3	0.0
AKS	Akhisar	0.92	116	ePg	Pg	19 50 05.7	-0.1
AKS				eSg	Sb	19 50 18.3	0.0
BLCB	Balcova	0.93	166	ePG	Pg	19 50 05.3	-0.7
BLCB				eSG	Sb	19 50 18.2	-0.2
BLCB	Balcova	0.93	166	ePg	Pg	19 50 05.3	-0.7
BLCB				eSg	Sb	19 50 18.3	-0.2
URLA	Izmir	0.93	188	i P	Pg	19 50 05.3	-0.8
URLA				i S	Sn	19 50 20.8	+0.3
URLA	Izmir	0.93	188	i P	Pg	19 50 05.3	-0.8
BALB	Balikesir	0.94	68	ePG	Pg	19 50 05.8	-0.4
BALB	Balikesir	0.94	68	ePg	Pg	19 50 05.8	-0.4
IZM	Izmir	0.97	156	ePG	Pg	19 50 06.5	-0.3
IZM	Izmir	0.97	156	ePg	Pg	19 50 06.5	-0.3
GONE	Gonen-Balikesi	1.05	43	ePG	Pb	19 50 07.3	-0.8
GONE	Gonen-Balikesi	1.05	43	ePg	Pb	19 50 07.3	-0.9
CHOS	Chios island	1.05	211	P	Pb	19 50 07.6	-0.7
CHOS				S	Sg	19 50 22.1	+0.1
CHOS	Chios island	1.05	211	ePN	Pb	19 50 07.9	-0.4
CHOS				eSN	Sg	19 50 22.5	+0.5
CHOS	Chios island	1.05	211	P	Pb	19 50 07.6	-0.7
CHOS	Chios island	1.05	211	ePn	Pb	19 50 07.9	-0.4
CHOS				S	Sg	19 50 22.1	+0.1
CHOS				eSn	Sg	19 50 22.5	+0.5
LPK	Lapseki	1.08	0	ePN	Pb	19 50 08.5	-0.3
LPK	Lapseki	1.08	0	ePn	Pb	19 50 08.5	-0.3
GELI	Tayfur-Gelibol	1.13	349	ePN	Pb	19 50 09.4	-0.2
GELI	Tayfur-Gelibol	1.13	349	ePn	Pb	19 50 09.4	-0.2
KRBG	Karabiga-Canak	1.18	21	ePN	Pn	19 50 10.0	-0.5
KRBG	Karabiga-Canak	1.18	21	ePn	Pn	19 50 10.0	-0.5
LIA	Limnos Island	1.36	297	P	Pn	19 50 13.0	+0.1
LIA				S	Sg	19 50 32.7	+0.9
LIA	Limnos Island	1.36	297	ePN	Pn	19 50 13.1	+0.1
LIA				eSN	Sn	19 50 30.9	0.0
LIA	Limnos Island	1.36	297	ePn	Pn	19 50 13.1	+0.1
LIA				eSn	Sn	19 50 30.9	0.0
LIA				S	Sg	19 50 32.7	+0.9
EDC	Edincik	1.36	39	ePN	Pn	19 50 12.9	-0.1
EDC	Edincik	1.36	39	ePn	Pn	19 50 12.9	-0.1
DURS	Dursunbey	1.37	76	i P	Pn	19 50 12.3	-0.9
DURS				i S	Sb	19 50 31.6	+0.3
DURS	Dursunbey	1.37	76	i P	Pn	19 50 12.3	-0.9
DURS				i S	Sb	19 50 31.6	+0.3
BNT	Bandirma	1.40	40	ePN	Pn	19 50 13.2	-0.3
BNT	Bandirma	1.40	40	ePn	Pn	19 50 13.2	-0.3
ERIK	Erikli-Kesan	1.40	352	ePN	Pb	19 50 13.7	-0.4
ERIK	Erikli-Kesan	1.40	352	ePn	Pb	19 50 13.7	-0.4
SART	Tekirdag	1.44	13	i P	Pn	19 50 13.8	-0.4
SART				i S	Sb	19 50 34.0	+0.7
SART	Tekirdag	1.44	13	i P	Pn	19 50 13.8	-0.4
SART				i S	Sb	19 50 34.0	+0.7
MRMT	Marmara Adasi	1.47	26	ePN	Pb	19 50 15.3	-0.1
MRMT	Marmara Adasi	1.47	26	ePn	Pb	19 50 15.3	-0.1
DST	Dursunbey	1.48	77	ePN	Pn	19 50 15.0	+0.3
DST	Dursunbey	1.48	77	ePn	Pn	19 50 15.0	+0.3
SMTH	Samothraki Isl	1.51	322	ePN	Pb	19 50 15.5	-0.6
SMTH				eSN	Sg	19 50 36.6	-0.1
SMTH	Samothraki Isl	1.51	322	ePn	Pb	19 50 15.5	-0.6
SMTH				eSn	Sg	19 50 36.6	-0.1
DEMI	Demirci	1.54	98	i P	Pn	19 50 15.6	0.0
DEMI				i S	Sn	19 50 35.9	+0.2
DEMI	Demirci	1.54	98	i P	Pn	19 50 15.6	0.0
DEMI				i S	Sn	19 50 35.9	+0.2
KCTX	Karacabey (Bur	1.57	51	ePN	Pn	19 50 16.3	+0.3
KCTX	Karacabey (Bur	1.57	51	ePn	Pn	19 50 16.3	+0.3
MANT	Manisa	1.62	119	i P	Pn	19 50 17.0	+0.3
MANT				i S	Sb	19 50 38.7	+0.2
MANT	Manisa	1.62	119	i P	Pn	19 50 17.0	+0.3
MANT				i S	Sb	19 50 38.7	+0.2
GCAM	G?zelcaml?	1.63	166	i P	Pb	19 50 17.5	-0.6
GCAM				i S	Sg	19 50 40.1	-0.3
GCAM	G?zelcaml?	1.63	166	i P	Pb	19 50 17.5	-0.6
KULA	Kula-Manisa	1.68	117	ePN	Pn	19 50 18.0	+0.6
KULA	Kula-Manisa	1.68	117	ePn	Pn	19 50 18.0	+0.6
ALN	Alexandroupoli	1.70	342	P	Pn	19 50 18.3	+0.7
ALN				S	Sb	19 50 41.2	+0.6
ALN	Alexandroupoli	1.70	342	ePN	Pb	19 50 18.8	-0.5
ALN				eSN	Sg	19 50 41.8	-0.9
ALN	Alexandroupoli	1.70	342	P	Pn	19 50 18.3	+0.7
ALN	Alexandroupoli	1.70	342	ePn	Pb	19 50 18.8	-0.5
ALN				S	Sb	19 50 41.2	+0.6
ALN				eSn	Sg	19 50 41.8	-0.9
CRLT	Corlu	1.99	22	ePN	Pn	19 50 21.9	+0.3
CRLT	Corlu	1.99	22	ePn	Pn	19 50 21.9	+0.3
ARMT	Armutlu	2.06	51	ePN	Pn	19 50 23.6	+0.9
ARMT	Armutlu	2.06	51	ePn	Pn	19 50 23.6	+0.9
TVSB	Tavsanli	2.10	85	ePN	Pn	19 50 23.8	+0.4
TVSB	Tavsanli	2.10	85	ePn	Pn	19 50 23.8	+0.4
MLSB	Milas	2.15	158	ePN	Pn	19 50 25.0	+1.2
MLSB	Milas	2.15	158	ePn	Pn	19 50 25.0	+1.2
SLVT	Silivri	2.24	29	ePN	Pn	19 50 25.8	+0.8
SLVT	Silivri	2.24	29	ePn	Pn	19 50 25.8	+0.8
BODT	Bodrum	2.26	169	ePN	Pn	19 50 26.4	+0.9
BODT	Bodrum	2.26	169	ePn	Pn	19 50 26.4	+1.0
IZI	Iznik	2.34	63	ePN	Pn	19 50 27.1	+0.5
IZI	Iznik	2.34	63	ePn	Pn	19 50 27.1	+0.5
CTKS	Kestanelik-??a	2.37	34	ePN	Pn	19 50 27.0	+0.2
CTKS	Kestanelik-??a	2.37	34	ePn	Pn	19 50 27.0	+0.2
KHL	Karahalli	2.37	113	ePN	Pn	19 50 27.9	+0.9
KHL	Karahalli	2.37	113	ePn	Pn	19 50 27.9	+0.9
BUY	Buyukada	2.40	48	ePN	Pn	19 50 28.1	+0.9
BUY	Buyukada	2.40	48	ePn	Pn	19 50 28.1	+0.9
APE	Apeiranthos	2.42	204	ePN	Pn	19 50 27.4	-0.1
APE	Apeiranthos	2.42	204	ePN	Pn	19 50 27.5	0.0
APE	Apeiranthos	2.42	204	ePn	Pn	19 50 27.4	-0.1
BGKT	Bogazkoy	2.44	39	ePN	Pn	19 50 29.0	+1.1
BGKT	Bogazkoy	2.44	39	ePn	Pn	19 50 29.0	+1.1
PAIG	Paliouri	2.46	286	ePN	Pn	19 50 28.0	-0.1
PAIG	Paliouri	2.46	286	ePn	Pn	19 50 28.0	-0.1
CTYL	Yal??k??y-??at	2.48	28	ePN	Pn	19 50 29.5	+1.1
CTYL	Yal??k??y-??at	2.48	28	ePn	Pn	19 50 29.5	+1.1
ISK	Istanbul-Kandi	2.50	44	ePN	Pn	19 50 29.8	+1.1
ISK	Istanbul-Kandi	2.50	44	ePn	Pn	19 50 29.8	+1.1
EDRB	Edirne	2.56	360	ePN	Pn	19 50 30.7	+1.2
EDRB	Edirne	2.56	360	ePn	Pn	19 50 30.7	+1.2
ADVT	Abdulvahap	2.57	63	ePN	Pn	19 50 30.6	+1.0
ADVT	Abdulvahap	2.57	63	ePn	Pn	19 50 30.6	+1.0
ALT	Altintas	2.62	94	ePN	Pn	19 50 31.6	+1.2
ALT	Altintas	2.62	94	ePn	Pn	19 50 31.6	+1.2
HRT	Hereke	2.71	55	ePN	Pn	19 50 32.4	+0.8
HRT	Hereke	2.71	55	ePn	Pn	19 50 32.4	+0.8
NEO	Neokhori	2.74	272	ePB	Pn	19 50 34.1	+2.1
NEO	Neokhori	2.74	272	ePb	Pn	19 50 34.1	+2.1
PLG	Polygyros	2.77	294	ePN	Pn	19 50 33.3	+0.9
PLG	Polygyros	2.77	294	ePn	Pn	19 50 33.3	+0.9
SILT	Sile	2.89	49	ePN	Pn	19 50 35.6	+1.6
SILT	Sile	2.89	49	ePn	Pn	19 50 35.6	+1.6
NVR	Nevrokopi	3.02	314	ePN	Pn	19 50 36.6	+0.7
NVR				eSN	Sn	19 51 10.9	-1.2
NVR	Nevrokopi	3.02	314	ePn	Pn	19 50 36.6	+0.7
NVR				eSn	Sn	19 51 10.9	-1.2
GULT	Gulveren	3.11	67	ePN	Pn	19 50 38.4	+1.2
GULT	Gulveren	3.11	67	ePn	Pn	19 50 38.4	+1.2
GRG	Griva	3.73	298	ePN	Pn	19 50 47.6	+2.0
FNA	Florina	4.39	292	ePN	Pn	19 50 54.6	-0.1
FNA	Florina	4.39	292	ePn	Pn	19 50 54.6	-0.1

*BJI **09** 19:55:04.5, 7.°06N×94.°11E, h52km, mB5.1/12, mb4.6/30, Ms4.5/10, Ms7 4.4/10*
*IDC **09** 19:55:04.4±0.5, 7.°63N×94.°14E, h0km, mb4.3/26, mb1 4.4/28, mb1mx4.3/35, mbtmp4.3/28, ML4.1/2, MS3.9/2, Ms1 3.9/2, ms1mx3.2/32, Error ellipse: s-maj=21.3km s-min=11.7km az=55.0*
*MOS **09** 19:55:07.5±0.9, 7.°67N×94.°27E, h33km, mb4.9/32, Error ellipse: s-maj=10.6km s-min=5.2km az=118.3*
*ISCJB **09** 19:55:09.2±0.5, 7.°69N±0.°03×94.°20E±0.°03, h46km±5km, mb4.5/76, MS4.3/8, Error ellipse: s-maj=6.1km s-min=4.1km az=149.2*
*NEIC **09** 19:55:10.1±0.7, 7.°65N×94.°24E, h42km±6km, mb4.4/16, Error ellipse: s-maj=7.2km s-min=5.0km az=56.0*
*DJA **09** 19:55:12.9±1.6, 8°N±4°×9°5E±1°1, h10km±14km, M4.6/8, mB5.2/2, mb4.5/8, MLv4.7/4, Mw(mB)4.6/2*
*AUST **09** 19:55:16.6, 7.°27N×94.°36E, h100km*

ISC 09 19:55:12.1±0.4**, 7.°67N**±0.°04×**94.°22E**±0.°05**, h54**km±3km**, n278, σ1.s23**/301**, mb4.5**/76**, MS4.4**/8**, 12C-8D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	0.71	204	ePKP	Pn	19 55 23.1	-3.1
CMBY				eS	Sn	19 55 33.3	-3.2
BSI	Banda Aceh	2.41	154	P	Pn	19 55 51.3	+2.3
BSI				S	Sn	19 56 18.6	+1.2
LHMI	Lhok Sumawe	3.63	132	P	Pn	19 56 04.4	-1.5
LHMI				S	Sn	19 56 48.5	+1.0
LHMI	Lhok Sumawe	3.63	132	P	Pn	19 56 04.5	-1.3
	baz=3.3,SNR=19						
LHMI				S	Sn	19 56 46.3	-1.2
	baz=3.3,SNR=8.2						
PBA	Port Blair	4.22	340	ePKP	Pn	19 56 12.1	-1.8
PBA				eS	Sn	19 57 03.3	+1.3
DGPR	DIGLIPUR	5.62	347	ePKP	Pn	19 56 33.1	0.0
DGPR				eS	Sn	19 57 39.7	+3.3
TSI	Tuntungan	5.98	134	P	Pn	19 56 42.2	+4.1
PSI	Prapat	6.73	136	Pn	Pn	19 56 45.9	-2.6
PSI	Prapat	6.73	136	P	Pn	19 56 49.8	+1.4
	40nm,1.2s,0.2nm						
PSI	Prapat	6.73	136	Pn	Pn	19 56 45.9	-2.6
	0.9nm,0.3s,baz=336,slow=18,SNR=2.6						
PSI				LR	LR	19 59 58.0	
	comp=Z,978nm,18.5s,baz=300,slow=43						
PSI	Prapat	6.73	136	P	Pn	19 56 51.5	+3.1
	baz=6.4,SNR=8.7						
PSI				S	Sn	19 58 07.1	+3.2
	baz=6.4,SNR=4.1						
GSI	Gunungsitoli	7.15	152	P	Pn	19 56 58.0	+3.9
	baz=6.8,SNR=5.2						
PHET	Kaeng Krachan	7.45	45	P	Pn	19 56 56.9	-1.3
	146nm,0.8s,2µm0.5nm						
IPM	Ipoh	7.47	115	ePn	Pn	19 56 54.7	-3.8
	45nm,0.6s						
IPM				eSn	Sn	19 58 16.9	-5.0
IPM	Ipoh	7.47	115	P	Pn	19 56 54.9	-3.6
IPM	Ipoh	7.47	115	P	Pn	19 56 54.9	-3.6
FRIM	Kepong	8.58	120	P	Pn	19 57 11.0	-2.8
FRIM	Kepong	8.58	120	P	Pn	19 57 11.0	-2.8
KTGM	Kuala Trenggan	9.16	104	P	Pn	19 57 20.5	-1.0
BKNI	Bangkinang	9.97	137	P	Pn	19 57 33.2	+0.5
	70nm,1.3s,758nm						
PPI	Padang Panjang	10.15	142	S	Sn	19 59 19.3	-8.4
	baz=9.8,SNR=7.9						
MYKOM	Kota Tinggi	11.23	121	P	Pn	19 57 47.9	-2.0
MYKOM	Kota Tinggi	11.23	121	P	Pn	19 57 48.0	-2.0
	33nm,0.8s						
CM31	Chiang Mai Arr	11.67	23	ePn	Pn	19 57 56.2	+0.2
	2.8nm,0.3s						
CMAR	Chiang Mai Arr	11.67	23	Pn	Pn	19 57 54.6	-1.4
CMAR				ScP	ScP	20 07 13.8	+2.6
CMAR	Chiang Mai Arr	11.67	23	Pn	Pn	19 57 54.6	-1.4
	0.9nm,0.3s,baz=212,slow=14,SNR=29						
CMAR				ScP	ScP	20 07 13.8	+2.6
	0.0nm,0.3s,baz=237,slow=3.1,SNR=4.4						
CHTO	Chiang Mai	11.99	22	eP	Pn	19 57 59.6	-0.8
CHTO				pmax	pmax		
	comp=Z,18nm,1.2s						
CHTO	Chiang Mai	11.99	22	ePn	Pn	19 57 59.6	-0.8
	comp=Z,18nm,1.2s						
CHTO	Chiang Mai	11.99	22	P	Pn	19 58 01.8	+1.4
	comp=Z,15nm,1.2s						
CMMT	Chiang Mai	11.99	22	P	Pn	19 58 02.2	+1.8
	comp=Z,13nm,1.2s						
PALK	Pallekele	13.41	269	Pn	Pn	19 58 19.0	-0.8
PALK				eSn	Sn	20 00 34.7	-13
VIS	Vishakhapatnam	14.58	314	ePKP	Pn	19 58 33.3	-2.1
VIS				AMB	AMB	19 58 35.0	
	comp=Z,18nm,1.1s						
PMBI	Palembang	14.88	135	S	Sn	20 01 08.0	-15
	baz=15,SNR=3.2						
PPBI	Pangkal Pinang	15.38	129	P	Pn	19 58 46.4	+0.6
LWLI	Liwa	15.97	142	P	P	19 58 59.3	+3.1
KSM	Kuching	17.17	110	ePn	P	19 59 10.1	+0.8
	comp=Z,26nm,1.0s						
KSM	Kuching	17.17	110	P	P	19 59 08.7	-0.6
KSM	Kuching	17.17	110	P	P	19 59 10.7	+1.4
	baz=17,SNR=7.2						
BOK	Bokaro	17.92	334	ePKP	P	19 59 15.5	-2.1
SHL	Shillong	17.94	353	ePKP	P	19 59 17.0	-0.9
SBUM	Sibu	18.66	105	P	Pn	19 59 28.2	+1.6
SBUM	Sibu	18.66	105	P	Pn	19 59 27.3	+0.7
	comp=Z,12nm,1.5s						
STKI	Sintang	18.79	113	P	Pn	19 59 28.4	+0.3
KMI	Kunming	19.17	24	P	Pn	19 59 35.4	+2.5
KMI				pmax	pmax		
	comp=Z,25nm,1.0s						
BTM	Bintulu	19.29	102	P	Pn	19 59 39.3	+5.1
ODAN	Odare	20.16	342	eP	P	19 59 41.2	-1.1
	comp=Z,31nm,0.6s						
RAMN	Ramite	20.50	340	eP	P	19 59 45.7	-0.3
	comp=Z,146nm,0.7s						
TAPN	Taplejung	20.53	343	eP	P	19 59 45.3	-1.0
	comp=Z,87nm,0.8s						
PKI	Pulchoki	21.49	338	eP	P	19 59 55.3	-1.4
	comp=Z,56nm,0.9s						
PKIN	Phulchoki	21.50	338	eP	P	19 59 56.0	-0.7
	comp=Z,23nm,0.7s						
GUN	Gumba	21.63	340	eP	P	19 59 56.5	-1.7
	comp=Z,73nm,0.8s						
DMN	Daman	21.63	338	eP	P	19 59 56.8	-1.4
	comp=Z,129nm,1.0s						
KKN	Kakani	21.73	338	eP	P	19 59 57.7	-1.5
	comp=Z,76nm,1.0s						
KKM	Kota Kinabalu	21.90	93	eP	P	20 00 00.6	-0.4
	comp=Z,14nm,0.9s						
KKM	Kota Kinabalu	21.90	93	P	P	20 00 04.5	+3.6
	baz=22,SNR=7.4						
LSA	Lhasa	22.11	353	eP	P	20 00 02.1	-1.3
LSA				pmax	pmax		
	comp=Z,55nm,0.7s						
LSA	Lhasa	22.11	353	eP	P	20 00 02.1	-1.3
	comp=Z,54nm,0.7s						
GYA	Guiyang	22.12	31	eP	P	20 00 03.2	-0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BHPL	Bhopal	22.36	316	ePKP	P	20 00 06.2	+0.4
BHPL				AMB	AMB	20 00 15.1	
	comp=Z,16nm,1.0s						
KOLN	Koldanda	22.38	335	eP	P	20 00 05.3	-0.9
	comp=Z,50nm,0.8s						
DANN	Dangsing	22.82	336	eP	P	20 00 09.8	-1.1
	comp=Z,52nm,0.8s						
PYUN	Piuthan	22.93	334	eP	P	20 00 10.9	-1.0
	comp=Z,115nm,0.9s						
CD2	Chengdu	24.79	20	P	P	20 00 29.3	+0.3
CD2				pP	pP	20 00 42.2	-0.5
CD2				sP	sP	20 00 48.7	-0.4
CD2				PP	PnPn	20 01 08.0	+4.3
CD2				PcP	PcP	20 04 04.9	+0.3
CD2				S	S	20 04 46.1	-1.7
CD2				sS	sS	20 05 08.1	-2.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.2s						
CD2				LR	LR		
	comp=N,320nm,13.7s						
CD2				LR	LR		
	comp=E,320nm,15.6s						
CD2				LR	LR		
	comp=Z,310nm,13.7s						

ENH Enshi 26.66 31 *e*P P **20 00 44.3 -1.7**
comp=Z,9.3nm,0.9s
SMLA Simla 28.26 328 *e*PKP P **20 00 59.4 -0.9**
DHRM DHARAMSHALA 29.60 328 *e*PKP P **20 01 11.4 -1.0**
DHRM AMB AMB 20 01 14.3
comp=Z,9.6nm,3.6s
LZH Lanzhou 29.62 16 *e*P P **20 01 13.3 +0.8**
LZH pP **pP 20 01 26.1 -0.2**
LZH sP **sP 20 01 34.6 +1.9**
LZH pmax pmax
comp=Z,14nm,1.0s
LUWI Luwuk 29.76 106 S S 20 05 55.9 -11
baz=30,SNR=3.3
GTA Gaotai 32.00 8 ⇓P P **20 01 33.7 +0.3**
GTA pmax pmax
comp=Z,9.0nm,1.2s
KBL Kabul 35.38 323 *e*P P **20 02 02.2 -0.8**
KBL *e* 20 04 33.1
KBL pmax pmax
comp=Z,4.0nm,0.7s
KBL Kabul 35.38 323 *e*P P **20 02 02.2 -0.8**
comp=Z,3.6nm,0.7s
KBL *e*PcP **PcP 20 04 33.1 +0.9**
KSH Kashi 35.69 335 *e*P P **20 02 03.3 -2.2**
KSH pmax pmax
comp=Z,9.0nm,0.7s
KSH pmax pmax
comp=Z,270nm,4.3s
KSH LR LR
comp=N,500nm,4.6s
KSH LR LR
comp=E,200nm,4.9s
KSH LR LR
comp=Z,310nm,5.9s
WMQ Urumqi 36.46 352 *e*P P **20 02 12.2 +0.3**
WMQ pP **pP 20 02 27.4 +1.6**
WMQ sP **sP 20 02 34.6 +2.4**
WMQ pmax pmax
comp=Z,15nm,0.8s
WMQ pmax pmax
comp=Z,150nm,6.2s
WMQ LR LR
comp=N,370nm,11.4s
WMQ LR LR
comp=E,480nm,14.4s
WMQ LR LR
comp=Z,400nm,13.6s
HHC Hu-ho-hao-te 36.48 22 *e*P P **20 02 11.3 -0.8**
HHC pP **pP 20 02 26.6 +0.5**
HHC sP **sP 20 02 33.8 +1.4**
HHC S **S 20 07 50.2 -0.2**
HHC ScP **ScP 20 08 13.7 -3.6**
HHC ScS **ScS 20 12 20.6 -3.2**
HHC pmax pmax
comp=Z,51nm,0.5s
HHC pmax pmax
comp=Z,1μm,9.8s
HHC LR LR
comp=N,270nm,20.0s
HHC LR LR
comp=E,370nm,19.8s
HHC LR LR
comp=Z,750nm,19.0s
KBK Karagaybulak 38.77 337 P P **20 02 31.9 +0.3**
SNR=8.6
AML Almayashu 38.83 335 *i*P P **20 02 32.4 +0.1**
AML Almayashu 38.83 335 P P **20 02 32.4 +0.1**
SNR=18
AAK Ala-Archa 38.92 337 *i*P P **20 02 32.1 -0.7**
AAK Ala-Archa 38.92 337 P P **20 02 32.7 -0.2**
AAK *e*PcP **PcP 20 04 44.3 +1.6**
AAK Ala-Archa 38.92 337 P P **20 02 33.4 +0.6**
SNR=8.8
AAK Ala-Archa 38.92 337 P P **20 02 32.7 -0.2**
comp=Z,4.7nm,0.9s,baz=139,slow=4.1,SNR=22
EKS2 Erkin-Say 39.23 336 P P **20 02 36.0 +0.6**
SNR=7.5
USP Ospenovka 39.46 337 *i*P P **20 02 36.8 -0.3**
USP Ospenovka 39.46 337 P P **20 02 36.8 -0.3**
SNR=13
MK31 Makanchi Array 40.31 347 *i*P P **20 02 42.9 -1.2**
MK31 pmax pmax
comp=Z,9.0nm,0.7s
MK31 Makanchi Array 40.31 347 *e*P P **20 02 43.4 -0.7**
MK31 *e*PcP **PcP 20 04 44.9 -1.9**
MKAR Makanchi Array 40.31 347 P P **20 02 43.5 -0.6**
MKAR Makanchi Array 40.31 347 P P **20 02 43.5 -0.6**
MKAR Makanchi Array 40.31 347 P P **20 02 43.5 -0.6**
comp=Z,12nm,0.7s,baz=165,slow=8.2,SNR=138
KK31 Karatay Array 40.98 333 *i*P P **20 02 49.4 -0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.6s
KKAR Karatay Array 40.98 333 *e*P P **20 02 49.1 -0.6**
KKAR pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 40.98 333 *e*P P **20 02 49.1 -0.6**
comp=Z,4.1nm,0.8s
SONM Songino Array 41.35 12 P P **20 02 53.2 +0.5**
SONM PcP **PcP 20 04 49.9 -0.4**
SONM Songino Array 41.35 12 P P **20 02 53.2 +0.5**
comp=Z,5.6nm,0.9s,baz=194,slow=7.8,SNR=46
SONM PcP **PcP 20 04 49.9 -0.4**
comp=Z,1.3nm,0.7s,baz=200,slow=4.1,SNR=6.5
ULN Ulaanbaatar 41.52 13 *e*P P **20 02 54.3 +0.1**
comp=Z,3.9nm,0.8s
KSRS Korea Array 42.57 41 LR LR 20 22 57.8
comp=Z,112nm,18.0s,baz=240,slow=39
ZAK Zakamensk 43.24 8 *e*P P 20 02 59.0 -9.1
ZAK *e* 20 04 53.6
ZAK pmax pmax
comp=Z,2.0nm,1.0s
HVS Khovu-Aksy 43.33 360 *c i*P P **20 03 09.5 +0.7**
KURBB Kurchatov Arra 44.77 346 P P **20 03 20.0 -0.2**
comp=Z,18nm,0.8s,baz=167,slow=7.0,SNR=132
KURBB PcP **PcP 20 05 02.6 +1.1**
comp=Z,1.9nm,0.7s,baz=158,slow=2.8,SNR=5.8
KURK Kurchatov 44.83 346 *ce*P P **20 03 20.6 -0.1**
KURK pmax pmax
comp=Z,24nm,1.0s
KURK Kurchatov 44.83 346 P P **20 03 20.0 -0.7**
KURK PcP **PcP 20 05 02.6 +0.9**
NWAO Narrogin (SRO) 45.93 153 P P **20 03 27.5 -2.1**
NWAO Narrogin (SRO) 45.93 153 P P **20 03 29.7 +0.1**
comp=Z,9.8nm,0.9s,baz=286,slow=12,SNR=4.0
ZAA0 Zalesovo Array 46.77 352 *e*P P **20 03 35.6 -0.3**
ZALV Zalesovo Beam 46.77 352 P P **20 03 35.9 0.0**
ZALV Zalesovo Beam 46.77 352 P P **20 03 35.9 0.0**
ZALV Zalesovo Beam 46.77 352 P P **20 03 35.9 0.0**
comp=Z,20nm,0.7s,baz=178,slow=7.9,SNR=118
MDJ Mudanjiang 47.94 34 P P **20 03 44.8 -0.4**
MDJ pmax pmax
comp=Z,5.0nm,1.3s
MDJ pmax pmax
comp=Z,310nm,11.5s
MDJ LR LR
comp=N,120nm,15.9s
MDJ LR LR
comp=E,160nm,14.4s
MDJ LR LR
comp=Z,140nm,13.7s
WRA Warramunga Arr 48.08 125 P P **20 03 46.0 -0.7**
WRA Warramunga Ar 48.08 125 P P **20 03 46.0 -0.7**
comp=Z,1.4nm,0.6s,baz=305,slow=8.5,SNR=18
WRAB Tennant Creek 48.08 125 *e*P P **20 03 45.5 -1.2**
WRAB pmax pmax
comp=Z,3.0nm,0.8s
WRAB Tennant Creek 48.08 125 *e*P P **20 03 45.5 -1.2**
comp=Z,2.8nm,0.8s
VOSK Vostochnaya 48.77 341 P P **20 03 50.3 -1.1**
VOSK pmax pmax
comp=Z,9.0nm,0.8s
BVA0 Borovoye Array 49.21 341 P P **20 03 54.0 -0.8**
BVA0 pmax pmax
comp=Z,1.0nm,1.0s
BVAR Borovoye Array 49.21 341 P P **20 03 54.3 -0.5**
BVAR 20 05 18.3
BVAR Borovoye Array 49.21 341 P P **20 03 54.3 -0.5**
BVAR PcP **PcP 20 05 18.3 +1.0**
BVAR Borovoye Array 49.21 341 P P **20 03 54.3 -0.5**
comp=Z,5.1nm,0.9s,baz=138,slow=9.0,SNR=33
BVAR PcP **PcP 20 05 18.3 +1.0**
comp=Z,1.8nm,0.7s,baz=158,slow=5.6,SNR=7.1
MJAR Matsushiro Arr 49.24 48 P P **20 03 55.3 -0.1**
MJAR PcP **PcP 20 05 18.3 +0.5**
MJAR Matsushiro Arr 49.24 48 P P **20 03 55.3 -0.1**
comp=Z,1.0nm,1.2s,baz=98,slow=8.8,SNR=4.0
MJAR PcP **PcP 20 05 18.3 +0.5**
comp=Z,1.1nm,0.9s,baz=260,slow=5.4,SNR=4.6
BRVK Borovoye 49.27 341 *ce*P P **20 03 54.4 -0.9**
BRVK pmax pmax
comp=Z,7.0nm,0.8s
BRVK Borovoye 49.27 341 *e*P P **20 03 54.0 -1.3**
comp=Z,8.5nm,1.0s
AS31 Alice Springs 49.72 130 *e*P P **20 03 57.6 -1.6**
ASAR Alice Springs 49.72 130 P P **20 03 58.5 -0.7**
ASAR Alice Springs 49.72 130 P P **20 03 58.5 -0.7**
comp=Z,1.6nm,0.9s,baz=304,slow=7.1,SNR=20
AB31 Akbulak array 50.45 331 P P **20 04 03.1 -1.2**
ABKAR Akbulak array 50.45 331 *e*P P **20 04 03.2 -1.0**
comp=Z,2.8nm,0.7s
AKTO Aktyubinsk 52.17 331 P P **20 04 16.1 -1.1**
AKTO 20 05 29.3
AKTO Aktyubinsk 52.17 331 P P **20 04 16.1 -1.1**
AKTO PcP **PcP 20 05 29.3 +1.0**
AKTO Aktyubinsk 52.17 331 P P **20 04 16.1 -1.1**
comp=Z,2.2nm,0.8s,baz=112,slow=10.0,SNR=3.5
AKTO PcP **PcP 20 05 29.3 +1.0**
comp=Z,3.6nm,0.6s,baz=118,slow=3.6,SNR=5.1
GNI Garni 54.64 314 P P **20 04 33.0 -2.7**
comp=Z,3.7nm,0.7s
SVE Sverdlovsk 55.62 338 ⇓*i*P P **20 04 42.7 +0.5**
SVE pmax pmax
comp=Z,25nm,1.2s
ARU Arti 56.11 337 *d i*P P **20 04 45.3 -0.4**
ARU 20 05 40.6
ARU 20 06 48.9
ARU S **S 20 12 35.2 +4.6**
ARU pmax pmax
comp=Z,20nm,1.7s
ZEI Tsey 56.24 317 *e*P P **20 04 45.5 -1.8**
ZEI pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 57.29 318 P P **20 04 53.6 -0.8**
KBZ Khabaz 57.29 318 P P **20 04 53.5 -0.8**
KBZ Khabaz 57.29 318 P P **20 04 53.5 -0.8**
comp=Z,3.2nm,0.9s,baz=126,slow=6.2,SNR=8.3
KIV Kislovodsk 57.52 318 ⇓*e*P P **20 04 55.2 -0.9**
KIV *e* 20 05 03.0
KIV *e* 20 13 06.9
KIV *i* 20 14 44.0
KIV pmax pmax
comp=Z,8.0nm,1.2s
KIV MLR MLR
comp=Z,200nm,14.0s
STKA Stephens Creek 59.91 134 P P **20 05 12.2 -0.5**
STKA Stephens Creek 59.91 134 P P **20 05 12.2 -0.5**
comp=Z,0.9nm,0.5s,baz=284,slow=4.2,SNR=3.5
ANN Anapa 61.34 317 *e*P P **20 05 22.6 +0.3**
ANN pmax pmax
comp=Z,76nm,2.3s
ANN MLR MLR
comp=Z,414nm,13.0s
BR131 Keskin Array S 62.62 311 *e*P P **20 05 28.9 -2.4**
comp=Z,0.9nm,0.5s
BRTR Keskin Array B 62.62 311 P P **20 05 29.5 -1.7**
BRTR Keskin Array B 62.62 311 P P **20 05 29.5 -1.7**
comp=Z,2.7nm,0.7s,baz=130,slow=7.2,SNR=17
OBN Obninsk 65.60 328 ⇑*e*P P **20 05 48.2 -2.0**
OBN *e* 20 05 55.0
OBN 20 06 22.0
OBN eS **S 20 14 34.5 +3.0**
OBN pmax pmax
comp=Z,32nm,1.7s
OBN MLR MLR
comp=Z,200nm,14.0s
TIRR Tirgusor 67.46 315 ⇑*i*P P **20 06 01.2 -1.1**
CFR Carcaliu 67.80 316 ⇑*i*P P **20 06 02.9 -1.5**
AKASG Malin Array Be 68.36 322 P P **20 06 06.2 -1.6**
AKASG Malin Array Be 68.36 322 P P **20 06 06.2 -1.6**
AKASG Malin Array Be 68.36 322 P P **20 06 06.2 -1.6**
comp=Z,2.6nm,0.7s,baz=89,slow=5.2,SNR=7.8
AK01 Malin Array Si 68.37 322 *e*P P **20 06 06.0 -1.8**
VRI Vrincioaia 68.91 316 ⇑*i*P P **20 06 11.5 +0.1**
PLOR Plostina 68.95 316 ⇓*i*P P **20 06 11.7 0.0**
TESR Tescani 69.08 317 ⇓*i*P P **20 06 12.0 -0.5**
LSZ Lusaka 69.28 251 P P **20 06 15.0 +0.7**
MLR Muntele Rosu 69.37 316 ⇑*i*P P **20 06 14.1 -0.3**
BURAR Bucovina Array 70.25 318 ⇓*i*P P **20 06 17.9 -1.9**
ARR Arges 70.26 315 ⇓*i*P P **20 06 18.8 -1.0**
BUR08 Bucovina Ar. S 70.27 318 *e*P P **20 06 17.7 -2.2**
JOF Joensuu 71.07 334 *e*P P **20 06 23.4 -0.9**
JOF pmax pmax
comp=Z,9.0nm,0.7s
JOF Joensuu 71.07 334 *ep* P **20 06 23.4 -0.9**
comp=Z,8.7nm,0.7s
DRGR 71.80 317 ⇓*i*P P **20 06 28.9 -0.2**
KOLS Kolonicke sedl 72.41 319 *e*P P **20 06 33.9 +1.2**
KOLS Kolonicke sedl 72.41 319 *e*P P **20 06 33.8 +1.1**
FINES FINESS Array B 72.93 332 P P **20 06 34.8 -0.6**
FINES FINESS Array B 72.93 332 P P **20 06 34.8 -0.6**
comp=Z,8.8nm,0.7s,baz=110,slow=4.4,SNR=32
CRVS Cervenica-Dubn 72.94 319 *e*P P **20 06 35.3 -0.5**
CRVS pmax pmax
comp=Z,3.0nm,1.0s
CRVS Cervenica-Dubn 72.94 319 *e*P P **20 06 35.3 -0.5**
KAF Kangasniemi 73.01 333 *e*P P **20 06 34.8 -1.1**
KAF pmax pmax
comp=Z,4.0nm,0.6s
KAF Kangasniemi 73.01 333 *ep* P **20 06 34.8 -1.1**
comp=Z,4.1nm,0.6s
OJC Ojcow 74.18 320 *e*P P **20 06 43.2 +0.1**
OJC Ojcow 74.18 320 *e*P P **20 06 43.2 +0.1**
LBTB Lobatse 74.21 241 *e*P P **20 06 45.5 +1.7**
comp=Z,4.7nm,1.0s
VYHS Vyhne 74.61 318 *e*P P **20 06 45.3 -0.3**
VYHS pmax pmax
comp=Z,6.0nm,1.5s
VYHS Vyhne 74.61 318 *e*P P **20 06 45.3 -0.3**
ARCES ARCESS Array B 75.49 340 P P **20 06 49.7 -0.5**
ARCES ARCESS Array B 75.49 340 P P **20 06 49.7 -0.5**
comp=Z,5.3nm,0.8s,baz=95,slow=7.3,SNR=9.9
BOSA Boshof 75.54 238 P P **20 06 52.2 +0.8**
BOSA Boshof 75.54 238 P P **20 06 52.2 +0.8**
comp=Z,1.4nm,0.7s,baz=182,slow=7.5,SNR=4.4
MORC Moravsky Berou 75.58 319 *e*P P **20 06 49.8 -1.4**
MORC pmax pmax
comp=Z,7.0nm,1.4s
MORC Moravsky Berou 75.58 319 *e*P P **20 06 49.8 -1.4**
comp=Z,6.9nm,1.4s
MORC Moravsky Berou 75.58 319 ⇑*i*P P **20 06 50.3 -0.9**
VRAC Vranov 76.16 319 ⇑*i*P P **20 06 54.5 0.0**
BILL Bilibino 76.25 22 ⇑*e*P P **20 06 54.8 +0.2**
BILL *e* 20 07 02.7
BILL 20 09 50.0
BILL pmax pmax
comp=Z,21nm,1.7s
GERES GERESS Array B 78.03 318 P P **20 07 05.2 +0.1**
GERES GERESS Array B 78.03 318 P P **20 07 05.2 +0.1**
comp=Z,2.6nm,0.8s,baz=90,slow=5.3,SNR=28
KHC Kasperske Hory 78.12 319 *e*P P **20 07 05.5 0.0**
KHC Kasperske Hory 78.12 319 *e*P P **20 07 05.5 0.0**
CLL Collm 78.57 321 *i*P P **20 07 07.3 -0.6**
CLL pmax pmax
comp=Z,8.0nm,1.5s
CLL Collm 78.57 321 *e*P P **20 07 07.0 -0.9**
comp=Z,8.0nm,1.5s
NB2 NORSAR Subarra 79.95 331 P P **20 07 14.7 -0.6**
comp=Z,5.6nm,0.7s,baz=97,slow=5.1
NOA NORSAR Array B 79.95 331 P P **20 07 14.9 -0.3**
NOA NORSAR Array B 79.95 331 P P **20 07 14.9 -0.3**
comp=Z,4.2nm,0.7s,baz=92,slow=5.7,SNR=14
SUR Sutherland 80.28 235 P P 20 07 13.1 -4.6
DAVOX Davos/Dischmat 80.59 316 P P **20 07 18.6 -0.7**
DAVOX Davos/Dischmat 80.59 316 P P **20 07 18.6 -0.7**
comp=Z,2.1nm,0.5s,baz=127,slow=12,SNR=5.7
KEST Kesra 81.42 305 P P **20 07 23.4 -0.3**
KEST Kesra 81.42 305 P P **20 07 23.4 -0.3**
comp=Z,1.2nm,0.8s,baz=38,slow=4.0,SNR=5.6
CDF Champ du Feu 82.30 318 *e*P P **20 07 27.3 -0.8**
CDF Champ du Feu 82.30 318 *e*P P **20 07 27.3 -0.8**
CDF Champ du Feu 82.30 318 *e*P P **20 07 27.3 -0.8**
LPG La Plagne 82.82 315 *e*P P **20 07 31.0 -0.1**
comp=Z,10.0nm,0.8s
LPG La Plagne 82.82 315 *e*P P **20 07 31.0 -0.1**
LPG pmax pmax
comp=Z,10.0nm,0.8s
LPG La Plagne 82.82 315 *e*P P **20 07 31.0 -0.1**
comp=Z,10.0nm,0.8s
LPL La Plagne 82.83 315 *e*P P **20 07 31.1 0.0**
LPL pmax pmax
comp=Z,11nm,0.8s
LPL La Plagne 82.83 315 *e*P P **20 07 31.1 0.0**
comp=Z,11nm,0.8s
HAU Haudompre 82.94 317 *e*P P **20 07 30.8 -0.5**
HAU Haudompre 82.94 317 *e*P P **20 07 30.8 -0.5**
HAU Haudompre 82.94 317 *e*P P **20 07 30.8 -0.5**
FRF La Foret Royal 83.02 313 *e*P P **20 07 31.2 -0.6**
FRF La Foret Royal 83.02 313 *e*P P **20 07 31.2 -0.6**
FRF La Foret Royal 83.02 313 *e*P P **20 07 31.2 -0.6**
LMR La Mourre 83.14 313 *e*P P **20 07 32.3 -0.1**
comp=Z,6.2nm,0.8s
LMR La Mourre 83.14 313 *e*P P **20 07 32.3 -0.1**
LMR pmax pmax
comp=Z,6.0nm,0.8s
LMR La Mourre 83.14 313 *e*P P **20 07 32.3 -0.1**
comp=Z,6.2nm,0.8s
CABF La Chapelle 83.21 316 *e*P P **20 07 32.9 +0.1**
CABF La Chapelle 83.21 316 *e*P P **20 07 32.9 +0.1**
CABF La Chapelle 83.21 316 *e*P P **20 07 32.9 +0.1**
PAGF Fort de Pagny 83.32 318 *e*P P **20 07 33.1 -0.2**
PAGF Fort de Pagny 83.32 318 *e*P P **20 07 33.1 -0.2**
ORIF Oris-en-Rattie 83.47 314 *e*P P **20 07 34.2 -0.1**
comp=Z,3.1nm,0.6s
ORIF Oris-en-Rattie 83.47 314 *e*P P **20 07 34.2 -0.1**
ORIF pmax pmax
comp=Z,3.0nm,0.6s
ORIF Oris-en-Rattie 83.47 314 *e*P P **20 07 34.2 -0.1**
comp=Z,3.1nm,0.6s
BAIF Baives 84.19 320 *e*P P **20 07 37.8 +0.1**
comp=Z,5.9nm,0.7s
BAIF Baives 84.19 320 *e*P P **20 07 37.8 +0.1**
BAIF pmax pmax
comp=Z,6.0nm,0.7s
BAIF Baives 84.19 320 *e*P P **20 07 37.8 +0.1**
comp=Z,5.9nm,0.7s
VIVF Saint-Julien-l 84.33 314 *e*P P **20 07 38.5 -0.1**
comp=Z,7.2nm,0.9s
VIVF Saint-Julien-l 84.33 314 *e*P P **20 07 38.5 -0.1**
VIVF pmax pmax
comp=Z,7.0nm,0.9s
VIVF Saint-Julien-l 84.33 314 *e*P P **20 07 38.5 -0.1**
comp=Z,7.2nm,0.9s
LOR Lormes 84.68 317 *e*P P **20 07 39.9 -0.3**
comp=Z,3.9nm,0.7s
LOR Lormes 84.68 317 *e*P P **20 07 39.9 -0.3**
comp=Z,3.9nm,0.7s
SMF Signal de Mont 84.75 316 *e*P P **20 07 40.2 -0.4**
comp=Z,5.6nm,0.8s
SMF Signal de Mont 84.75 316 *e*P P **20 07 40.2 -0.4**
SMF pmax pmax
comp=Z,6.0nm,0.8s
SMF Signal de Mont 84.75 316 *e*P P **20 07 40.2 -0.4**
comp=Z,5.6nm,0.8s
SSF Saint Saulge 84.94 317 *e*P P **20 07 41.2 -0.3**
SSF Saint Saulge 84.94 317 *e*P P **20 07 41.2 -0.3**
SSF Saint Saulge 84.94 317 *e*P P **20 07 41.2 -0.3**
AVF Avril sur Loir 85.07 316 *e*P P **20 07 41.6 -0.5**
AVF Avril sur Loir 85.07 316 *e*P P **20 07 41.6 -0.5**
AVF Avril sur Loir 85.07 316 *e*P P **20 07 41.6 -0.5**
BGF Bois d'Agland 85.44 316 *e*P P **20 07 44.1 +0.1**
comp=Z,6.8nm,0.8s
BGF Bois d'Agland 85.44 316 *e*P P **20 07 44.1 +0.1**
BGF pmax pmax
comp=Z,7.0nm,0.8s
BGF Bois d'Agland 85.44 316 *e*P P **20 07 44.1 +0.1**
comp=Z,6.8nm,0.8s
TAM Tamanrasset 85.88 292 *e*P P **20 07 46.1 -0.8**
TAM pmax pmax
comp=Z,3.0nm,0.9s
TAM Tamanrasset 85.88 292 *e*P P **20 07 46.1 -0.8**
comp=Z,3.2nm,0.9s
MTLF Montolieu 86.25 313 *e*P P **20 07 48.3 +0.2**
comp=Z,8.4nm,0.9s
MTLF Montolieu 86.25 313 *e*P P **20 07 48.3 +0.2**
MTLF pmax pmax
comp=Z,8.0nm,0.9s
MTLF Montolieu 86.25 313 *e*P P **20 07 48.3 +0.2**
comp=Z,8.4nm,0.9s
RJF Les Rejaudoux 86.51 315 *e*P P **20 07 49.7 +0.3**
RJF Les Rejaudoux 86.51 315 *e*P P **20 07 49.7 +0.3**
RJF Les Rejaudoux 86.51 315 *e*P P **20 07 49.7 +0.3**
LFF La Frestale 87.10 315 *e*P P **20 07 52.5 +0.3**
LFF La Frestale 87.10 315 *e*P P **20 07 52.5 +0.3**
LFF La Frestale 87.10 315 *e*P P **20 07 52.5 +0.3**
LDF La Druitiere 87.17 318 *e*P P **20 07 52.3 -0.2**
LDF La Druitiere 87.17 318 *e*P P **20 07 52.3 -0.2**
LDF La Druitiere 87.17 318 *e*P P **20 07 52.3 -0.2**
GRR Gorron 87.69 318 *e*P P **20 07 55.0 0.0**
GRR Gorron 87.69 318 *e*P P **20 07 55.0 0.0**
GRR Gorron 87.69 318 *e*P P **20 07 55.0 0.0**
EKA Eskdalemuir Ar 87.94 325 P P **20 07 56.7 +0.7**
EKA Eskdalemuir Ar 87.94 325 P P **20 07 56.7 +0.7**
comp=Z,3.1nm,0.7s,baz=98,slow=5.4,SNR=10
TORD Torodi Ar. Bea 90.72 283 P P **20 08 10.3 +0.4**
TORD Torodi Ar. Bea 90.72 283 P P **20 08 10.3 +0.4**
comp=Z,0.3nm,0.7s,baz=98,slow=6.5,SNR=3.6
ESDC Sonseca Array 91.41 310 P P **20 08 13.4 +0.7**
ESDC Sonseca Array 91.41 310 P P **20 08 13.4 +0.7**
comp=Z,1.0nm,0.6s,baz=56,slow=3.5,SNR=8.1
ILAR Eielson Array 94.91 22 P P **20 08 27.8 -0.4**
ILAR Eielson Array 94.91 22 P P **20 08 27.8 -0.4**
comp=Z,0.3nm,0.8s,baz=284,slow=3.6,SNR=3.8
YKA Yellowknife Ar 106.61 14 PP PP 20 13 43.0 -2.3
YKA Yellowknife Ar 106.61 14 PP PP 20 13 43.0 -2.3
comp=Z,0.6nm,0.9s,baz=331,slow=7.2,SNR=5.4
NVAR Mina Array Bea 125.05 31 PKP **PKPdf 20 14 08.2 +1.1**
NVAR Mina Array Bea 125.05 31 PKP **PKPdf 20 14 08.2 +1.1**
comp=Z,0.3nm,0.5s,baz=289,slow=2.8,SNR=3.4
PDAR Pinedale Array 125.33 21 PKP **PKPdf 20 14 07.9 +0.3**
PDAR Pinedale Array 125.33 21 PKP **PKPdf 20 14 07.9 +0.3**
comp=Z,0.5nm,0.8s,baz=358,slow=2.7,SNR=3.7
PLCA Paso Flores 144.38 200 PKP **PKPdf 20 14 42.4 -0.3**
PLCA Paso Flores 144.38 200 PKP **PKPdf 20 14 42.4 -0.3**
comp=Z,3.1nm,1.1s,baz=21,slow=8.9,SNR=3.4
CPUP Villa Florida 147.20 232 PKPbc **PKPbc 20 14 49.7 -0.3**
CPUP Villa Florida 147.20 232 PKPbc **PKPbc 20 14 49.7 -0.3**
comp=Z,1.8nm,0.7s,baz=99,slow=19,SNR=8.6

CSEM ***09*** *20:24:33.7, 42°.39N×13°.42E, h10km, MD1.7/6, After ROM*
ROM 09 20:24:33.7±0.1, 42°.39N×13°.42E, h10km±1km, Md1.7/6, MI0.9/2, Error ellipse: s-maj=1.9km s-min=1.4km az=117.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**198**	Pg	Pg		20 24 35.6	0.0
AQU				Sg	Sg		20 24 36.9	-0.1
	454nm,0.2s							
AQU	**L'Aquila**	**0.03**	**198**	Pg	Pg		20 24 35.6	0.0
AQU				Sg	Sg		20 24 36.9	-0.1
	454nm,0.2s							
CAMP	**Campotosto**	**0.15**	**358**	Pg	Pg		20 24 37.8	+0.5
CAMP				Sg	Sg		20 24 40.5	+0.8
	28nm,0.7s							
CAMP	**Campotosto**	**0.15**	**358**	Pg	Pg		20 24 37.8	+0.5
CAMP				Sg	Sg		20 24 40.5	+0.8
	28nm,0.7s							
FAGN	**Fagnano**	**0.17**	**134**	Pg	Pg		20 24 38.4	+0.9
FAGN	**Fagnano**	**0.17**	**134**	Pg	Pg		20 24 38.4	+0.9
FIAM	**Fiamignano**	**0.25**	**242**	Pg	Pg		20 24 39.7	+0.7
FIAM				Sg	Sg		20 24 43.6	+1.1
FIAM	**Fiamignano**	**0.25**	**242**	Pg	Pg		20 24 39.7	+0.7
FIAM				Sg	Sg		20 24 43.6	+1.1
TERO	**Teramo**	**0.27**	**30**	Pg	Pg		20 24 39.6	+0.2
TERO				Sg	Sg		20 24 44.1	+0.9
	22nm,0.3s							
TERO	**Teramo**	**0.27**	**30**	Pg	Pg		20 24 39.6	+0.2
TERO				Sg	Sg		20 24 44.1	+0.9
	22nm,0.3s							
VCEL	**Villa Celiera**	**0.32**	**88**	Pg	Pb		20 24 41.1	-0.5
VCEL				Sg	Sb		20 24 45.9	-1.0
VCEL	**Villa Celiera**	**0.32**	**88**	Pg	Pb		20 24 41.1	-0.5
VCEL				Sg	Sb		20 24 45.9	-1.0
LNSS	**Leonessa**	**0.35**	**308**	Pg	Pb		20 24 41.8	-0.5
LNSS	**Leonessa**	**0.35**	**308**	Pg	Pb		20 24 41.8	-0.5

TRN 09 20:31:49.2, 17°.61N×61°.65W, h22km, MD3.6, M3.7(FDF), **1C-3D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPA	Boggy Peak	0.59	200	⇑ iP	Pn	20 32 03.2	+0.9
BPA				eS	Sn	20 32 12.9	+1.6
MBRV		0.95	214	iP	Pn	20 32 08.8	+1.5
NEV	Hard Times	1.00	242	⇓ iP	Pn	20 32 10.3	+2.4
NEV				eS	Sn	20 32 24.4	+3.1
MBWH		1.00	211	iP	Pn	20 32 09.2	+1.2
MBWH				iS	Sn	20 32 24.2	+2.7
MBRY		1.02	208	iP	Pn	20 32 09.7	+1.5
MBRY				iS	Sn	20 32 25.1	+3.2
MLYT	Lee's Yard	1.02	211	iP	Pn	20 32 09.7	+1.4
MLYT				iS	Sn	20 32 23.1	+1.1
MBGB		1.03	213	iP	Pb	20 32 09.7	+1.3
NVBH	Bath Hotel, Ne	1.05	242	⇓ iP	Pb	20 32 10.0	+1.4
NVBH				eS	Sn	20 32 25.4	+3.0
SKI	Saint Kitts	1.08	256	eP	Pb	20 32 10.2	+1.0
SKI				eS	Sn	20 32 26.6	+3.3
BSK	Brimstone Hill	1.17	257	⇓ iP	Pb	20 32 11.7	+1.0
BSK				eS	Sn	20 32 28.4	+2.9
SEG	Port Louis	1.21	174	eP	Pb	20 32 12.1	+0.8
DEG	La Desirade	1.40	156	eP	Pb	20 32 16.7	+1.9
LZG	Guadaloupe-1	1.46	185	eP	Pb	20 32 15.7	0.0
BCG	Bois Riant Cap	1.51	179	eP	Pb	20 32 16.4	-0.2
DOG	Dongo Capester	1.57	179	eP	Pb	20 32 17.8	+0.2
SCG	Saint Claude	1.57	181	eP	Pb	20 32 17.6	-0.1
PHG	Guadaloupe-2	1.58	180	eP	Pb	20 32 17.8	-0.2
HMG	Houelmont	1.62	182	eP	Pb	20 32 19.0	+0.6
MGG	Marie-Galante	1.71	169	eP	Pb	20 32 19.2	-0.7
TBG	Guadaloupe-3	1.75	180	eP	Pb	20 32 19.8	-0.7

*IDC **09** 20:37:36.5±1.1, 6.°58S×129.°34E, h0km, mb3.9/4, mb1 4.2/7, mb1mx3.9/20, mbtmp4.0/7, ML4.2/3, Error ellipse: s-maj=83.8km s-min=18.9km az=72.0*
*AUST **09** 20:37:53.0, 7.°49S×128.°54E, h100km*
*ISCJB **09** 20:37:53.2±0.6, 7.°28S±0.°04×128.°85E±0.°09, h151km, mb3.5/4, Error ellipse: s-maj=12.7km s-min=5.4km az=3.0*
ISC 09 20:37:53.3±0.8**, 7.°35S**±0.°05×**128.°75E**±0.°08**, h151km, n19, σ2.s92/23, mb3.6/4, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	5.61	39	P	Pn	20 39 15.4	+0.6
	baz=5.9,SNR=11						
FAKI				S	Sn	20 40 13.8	-4.8
	baz=5.9,SNR=3.8						
MTN	Manton Dam	5.94	157	P	Pn	20 39 22.6	+3.3
	baz=5.9,SNR=74						
MTN				S	Sn	20 40 27.6	+1.0
	baz=5.9,SNR=12						
KDU	Kakadu	6.45	146	P	Pn	20 39 29.3	+3.2
	baz=6.5,SNR=50						
KDU				S	Sn	20 40 38.4	-0.3
	baz=6.5,SNR=9.4						
SWI	Sorong	6.91	21	P	Pn	20 39 33.0	+0.9
	baz=7.2,SNR=14						
SWI				S	Sn	20 40 48.4	-1.4
	baz=7.2,SNR=3.8						
KNRA	Kununurra	8.28	180	P	Pn	20 39 52.2	+1.8
	baz=8.2,SNR=85						
KNRA				S	Sn	20 41 19.2	-3.5
	baz=8.2,SNR=18						
FITZ	Fitzroy Crossi	11.11	196	Pn	Pn	20 40 27.3	-0.8
	1.2nm,0.3s,baz=35,slow=10,SNR=48						
FITZ				Sn	Sn	20 42 26.0	-5.0
	2.7nm,0.3s,baz=292,slow=19,SNR=8.3						
FITZ	Fitzroy Crossi	11.11	196	P	Pn	20 40 27.7	-0.3
	baz=11,SNR=26						
FITZ				S	Sn	20 42 25.9	-5.1
	baz=11,SNR=3.9						
WRA	Warramunga Arr	13.64	157	Pn	Pn	20 40 59.9	-0.9
	0.7nm,0.3s,baz=332,slow=13,SNR=59						
WRA				Sn	Sn	20 43 26.1	-5.9
	1.4nm,0.3s,baz=328,slow=22,SNR=10						
ASAR	Alice Springs	16.96	164	P	Pn	20 41 44.6	+2.8
	1.8nm,0.3s,baz=343,slow=10,SNR=126						
ASAR				S	S	20 44 49.2	-1.3
	0.4nm,0.3s,baz=326,slow=20,SNR=5.5						
SMRI	Semarang	18.17	270	S	Sn	20 45 19.5	-1.2
	baz=18,SNR=3.1						
MEEK	Meekatharra	21.47	205	P	P	20 42 31.9	+1.8
	baz=21,SNR=5.1						
MEEK				S	Sn	20 46 34.4	-4.5
	baz=21,SNR=3.6						
QLP	Quilpie	24.14	144	P	P	20 43 00.8	+5.4
	baz=24,SNR=7.9						
MORW	Morawa	24.71	207	P	P	20 43 04.0	+3.4
	baz=25,SNR=4.8						
MORW				S	S	20 47 43.2	+32
	baz=25,SNR=4.4						
STKA	Stephens Creek	27.19	156	P	P	20 43 25.4	+2.5
	1.6nm,0.5s,baz=346,slow=10,SNR=11						
STKA	Stephens Creek	27.19	156	P	P	20 43 25.4	+2.5
	baz=27,SNR=6.5						
GSI	Gunungsitoli	32.27	284	S	S	20 49 45.1	+35
	baz=32,SNR=34						
SONM	Songino Array	58.39	342	P	P	20 47 29.0	-3.9
	0.2nm,0.7s,baz=176,slow=5.5,SNR=3.2						
MKAR	Makanchi Array	67.84	327	P	P	20 48 35.5	+0.3
	0.5nm,0.5s,baz=114,slow=8.7,SNR=10						
ZALV	Zalesovo Beam	71.35	334	P	P	20 48 55.4	-1.1
	0.3nm,0.3s,baz=119,slow=7.2,SNR=3.8						

*MDD **09** 20:38:39.8±2.7, 37.°15N×13.°01W, h0km, mb3.6/2, Error ellipse: s-maj=21.2km s-min=19.1km az=39.0, PRXIMO*
*INMG **09** 20:38:39.1±1.1, 36.°97N×13.°51W, h25km±26km, ML2.3, Error ellipse: s-maj=7.9km s-min=6.0km az=61.0*
*CSEM **09** 20:38:43.2±0.6, 37.°28N×12.°84W, h20km, mb3.6/2, Error ellipse: s-maj=9.8km s-min=9.0km az=27.0*
ISC 09 20:38:40.4±3.4**, 37.°24N**±0.°09×**12.°9W**±0.°2**, h10km, n56, σ1.s36/72, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	3.27	91	eP	Pn	20 39 31.2	-0.6
PFVI				eS	Sn	20 40 10.2	-0.6
PFVI	Vila Bisbo	3.27	91	P	Pn	20 39 31.1	-0.6
	1.2nm,0.1s,SNR=7.9						
PFVI				S	Sn	20 40 10.1	-0.6
	8.2nm,0.1s,SNR=6.3						
PFVI	Vila Bisbo	3.27	91	eP	Pn	20 39 31.2	-0.6
PFVI				eS	Sn	20 40 10.2	-0.6
PMAFR	Mafra	3.34	58	eS	Sn	20 40 13.8	+1.3
PMAFR				A	A	20 40 18.1	
	14nm,0.3s						
PMAFR	Mafra	3.34	58	P	Pn	20 39 33.4	+0.7
	1.7nm,0.2s,SNR=7.9						
PMAFR				S	Sn	20 40 13.5	+1.0
	10nm,0.3s,SNR=8.0						
PMAFR	Mafra	3.34	58	P	Pn	20 39 33.4	+0.7
	1.7nm,0.2s,SNR=7.9						
PMAFR				S	Sn	20 40 13.5	+1.0
	10nm,0.3s,SNR=8.0						
PTEO	Sao Teotonio	3.36	84	eS	Sn	20 40 12.6	-0.3
PTEO	Sao Teotonio	3.36	84	S	Sn	20 40 12.6	-0.3
PTEO	Sao Teotonio	3.36	84	S	Sn	20 40 12.6	-0.3
PNCL	Nicolau / Gran	3.59	75	eS	Sn	20 40 18.9	+0.2
PNCL				A	A	20 40 21.2	
	2.1nm,0.1s						
PNCL	Nicolau / Gran	3.59	75	eS	Sn	20 40 18.9	+0.2
	2.1nm,0.1s						
MOE	Montemor	3.84	69	eS	Sn	20 40 24.5	-0.2
MOE	Montemor	3.84	69	S	Sn	20 40 24.5	-0.2
MOE	Montemor	3.84	69	S	Sn	20 40 24.5	-0.2
PBDV	Barranco-do-Ve	3.98	88	eS	Sn	20 40 27.6	-0.8
PBDV				A	A	20 40 32.9	
	3.5nm,0.3s						
PBDV	Barranco-do-Ve	3.98	88	S	Sn	20 40 27.6	-0.8
	3.5nm,0.3s						
PBDV	Barranco-do-Ve	3.98	88	eS	Sn	20 40 27.6	-0.8
	3.5nm,0.3s						
EVO	Evora	4.09	70	eS	Sn	20 40 30.4	-0.6
EVO				A	A	20 40 35.0	
	4.5nm,0.1s						
EVO	Evora	4.09	70	S	Sn	20 40 30.4	-0.6
	4.5nm,0.1s						
EVO	Evora	4.09	70	eS	Sn	20 40 30.4	-0.6
	4.5nm,0.1s						
PMTG	Montargil	4.13	62	eS	Sn	20 40 32.1	+0.2
PMTG				A	A	20 40 36.0	
	2.0nm,0.1s						
PMTG	Montargil	4.13	62	eS	Sn	20 40 32.1	+0.2
	2.0nm,0.1s						
PVAQ	Vaqueiros	4.15	86	eS	Sn	20 40 31.2	-1.3
PVAQ				A	A	20 40 36.1	
	3.8nm,0.1s						
PVAQ	Vaqueiros	4.15	86	S	Sn	20 40 31.2	-1.3
	3.8nm,0.1s						
PVAQ	Vaqueiros	4.15	86	eS	Sn	20 40 31.2	-1.3
	3.8nm,0.1s						
PTOM	Tomar	4.26	55	eS	Sn	20 40 36.5	+1.3
PTOM				A	A	20 40 38.8	
	5.1nm,0.2s						
PTOM	Tomar	4.26	55	S	Sn	20 40 36.5	+1.3
	2.6nm,0.2s						
PTOM	Tomar	4.26	55	eS	Sn	20 40 36.5	+1.3
	5.1nm,0.2s						
EGRO	El Granado	4.34	85	P	Pn	20 39 49.5	+3.0
	0.1nm,0.1s,SNR=4.0						
EGRO				S	Sn	20 40 36.3	-0.9
	1.5nm,0.1s,SNR=7.9						
PESTR	Estremoz	4.51	67	eS	Sn	20 40 41.4	0.0
PESTR	Estremoz	4.51	67	S	Sn	20 40 41.4	0.0
PESTR	Estremoz	4.51	67	S	Sn	20 40 41.4	0.0
PMRV	Marv??o	4.87	62	eP	Pn	20 39 55.6	+1.9
PMRV				eS	Sn	20 40 49.4	-0.7
PMRV				A	A	20 40 52.4	
	2.0nm,0.2s						
PMRV	Marv??o	4.87	62	P	Pn	20 39 55.6	+1.9
PMRV				S	Sn	20 40 49.4	-0.7
	2.0nm,0.2s						
PMRV	Marv??o	4.87	62	P	Pn	20 39 55.6	+1.9
PMRV				eS	Sn	20 40 49.4	-0.7
	2.0nm,0.2s						
EBAD	Badajoz	4.91	70	P	Pn	20 39 54.4	+0.2
	0.1nm,0.1s,SNR=7.9						
EBAD				S	Sn	20 40 49.4	-1.7
	0.8nm,0.1s,SNR=7.3						
EBAD	Badajoz	4.91	70	P	Pn	20 39 54.4	+0.2
	0.1nm,0.1s,SNR=7.9						
EBAD				S	Sn	20 40 49.4	-1.7
	0.8nm,0.1s,SNR=7.3						
EMIN	Mina Concepcio	5.00	82	P	Pn	20 39 57.0	+1.5
	0.1nm,0.2s,SNR=8.1						
EMIN				S	Sn	20 40 51.5	-1.8
	0.9nm,0.2s,SNR=7.3						
EMIN	Mina Concepcio	5.00	82	P	Pn	20 39 57.0	+1.5
	0.1nm,0.2s,SNR=8.1						
EMIN				S	Sn	20 40 51.5	-1.8
	0.9nm,0.2s,SNR=7.3						
ESPR	Espera	5.67	92	P	Pn	20 40 05.4	+0.8
	0.6nm,0.2s,SNR=7.9						
ESPR				S	Sn	20 41 08.2	-1.6
	3.8nm,0.2s,SNR=7.9						
ESPR	Espera	5.67	92	P	Pn	20 40 05.4	+0.8
	0.6nm,0.2s,SNR=7.9						
ESPR				S	Sn	20 41 08.2	-1.6
	3.8nm,0.2s,SNR=7.9						
ELOB	Lobios	5.95	38	S	Sn	20 41 14.5	-2.5
	1.8nm,0.1s,SNR=7.9						
ELOB	Lobios	5.95	38	S	Sn	20 41 14.5	-2.5
	1.8nm,0.1s,SNR=7.9						
MVO	Moncorvo	6.02	48	S	Sn	20 41 16.9	-1.8
	1.9nm,0.2s,SNR=7.9						
MVO	Moncorvo	6.02	48	S	Sn	20 41 16.9	-1.8
	1.9nm,0.2s,SNR=7.9						
EPLA	Plasencia	6.05	60	S	Sn	20 41 16.8	-2.6
	0.2nm,0.0s,SNR=6.4						
EPLA	Plasencia	6.05	60	S	Sn	20 41 16.8	-2.6
	0.2nm,0.0s,SNR=6.4						
EMAZ	Mazaricos	6.45	27	P	Pn	20 40 15.9	+0.4
	0.2nm,0.1s,SNR=7.9						
EMAZ				S	Sn	20 41 21.9	-7.3
	1.3nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.45	27	P	Pn	20 40 15.9	+0.4
	0.2nm,0.1s,SNR=7.9						
EADA	Adamuz	6.68	80	P	Pn	20 40 21.8	+3.2
	0.2nm,0.2s,SNR=7.9						
EADA				S	Sn	20 41 33.4	-1.5
	1.4nm,0.1s,SNR=7.9						
ECAL	Calabor	6.70	44	S	Sn	20 41 33.7	-1.5
	0.7nm,0.2s,SNR=7.9						
ECAL	Calabor	6.70	44	S	Sn	20 41 33.7	-1.5
	0.7nm,0.2s,SNR=7.9						
GUD	Guadarrama	7.63	61	S	Sn	20 41 55.9	-2.5
	0.5nm,0.3s,SNR=7.9						
GUD	Guadarrama	7.63	61	S	Sn	20 41 55.9	-2.5
	0.5nm,0.3s,SNR=7.9						
EQES	Quesada	7.85	83	S	Sn	20 42 03.2	-0.5
	0.3nm,0.3s,SNR=7.9						
EQES	Quesada	7.85	83	S	Sn	20 42 03.2	-0.5
	0.3nm,0.3s,SNR=7.9						

IDC 09 20:44:04.1±16.0**, 9.°04N×104.°71W, h0km, mb3.2**/3**, mb1 3.7**/3**, mb1mx3.5**/19**, mbtmp3.2**/3**, Error ellipse: s-maj=480.9km s-min=111.8km az=121.0, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	20.22	3	P	P	20 48 40.4	-0.5
	0.8nm,0.9s,baz=185,slow=10.0,SNR=4.4						
YKA	Yellowknife Ar	53.84	354	P	P	20 53 29.3	+0.7
	0.1nm,0.3s,baz=160,slow=6.7,SNR=2.5						
ILAR	Eielson Array	62.96	341	P	P	20 54 31.7	-0.6
	0.6nm,0.9s,baz=161,slow=4.5,SNR=7.7						

IDC 09 20:52:11.4±2.2**, 7.°62N×93.°87E, h0km, mb3.8**/6**, mb1 3.8**/6**, mb1mx3.5**/27**, mbtmp3.8**/6**, Error ellipse: s-maj=88.6km s-min=25.8km az=57.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	40.27	348	P	P	20 59 49.8	-0.4
	1.2nm,0.7s,baz=170,slow=8.2,SNR=15						
SONM	Songino Array	41.47	13	P	P	20 59 59.9	-0.2
	0.5nm,0.8s,baz=196,slow=5.4,SNR=4.8						
KURBB	Kurchatov Arra	44.72	346	P	P	21 00 26.6	+0.3
	1.4nm,0.6s,baz=165,slow=6.9,SNR=17						
ZALV	Zalesovo Beam	46.77	353	P	P	21 00 42.5	+0.1
	1.6nm,0.5s,baz=174,slow=7.4,SNR=13						
WRA	Warramunga Arr	48.34	125	P	P	21 00 55.0	-0.1
	0.7nm,1.0s,baz=306,slow=8.4,SNR=3.5						
FINES	FINESS Array B	72.81	332	P	P	21 03 41.4	-0.2
	1.3nm,0.7s,baz=119,slow=8.1,SNR=5.2						

*ISCJB **09** 20:54:56.2±0.2, 46.°21N±0.°01×7.°16E±0.°02, h3km±2km, Error ellipse: s-maj=2.2km s-min=1.7km az=14.7*
*GEN **09** 20:54:57.8, 46.°18N×7.°30E, h10km, ML2.2*
*ZUR **09** 20:54:57.8, 46.°21N×7.°30E, h7km±1km, ML2.5/12*
*CSEM **09** 20:54:57.1±0.1, 46.°19N×7.°26E, h2km, ML2.8/32, Error ellipse: s-maj=2.5km s-min=1.9km az=101.0*
*VIE **09** 20:54:59.0±0.7, 46.°30N×7.°33E, h8km, mb2.3/1, ML2.8/1, Error ellipse: s-maj=7.6km s-min=3.7km az=145.0 8 km NNW of Sion*
*LDG **09** 20:54:58.0±0.1, 46.°21N×7.°27E, h7km, Md2.8/3, Ml2.8/26, Error ellipse: s-maj=1.4km s-min=1.0km az=108.0*
*SZGRF **09** 20:54:59.7, 46.°27N×7.°18E, h10km, mb2.6, Switzerland*
*STR **09** 20:55:01.8±0.2, 46.°35N×7.°47E, h10km, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*PRU **09** 20:55:05.3, 46.°45N×7.°41E, h15km*
ISC 09 20:54:58.2±0.8**, 46.°22N**±0.°01×**7.°30E**±0.°01**, h10km**±5km**, n155, σ1.s74/249, 15C-5D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRYON	Gryon	0.13	285	⇓ iPg	Pg	20 55 00.8	-0.6
	2µm,0.1s						
GRYON				i Sg	Sg	20 55 02.9	-0.8
	2µm,0.1s						
GRYON	Gryon	0.13	285	⇓ iPg	Pg	20 55 00.8	-0.6
	2µm,0.1s						
GRYON				i Sg	Sg	20 55 02.9	-0.8
	2µm,0.1s						
SENIN	Lac Senin/Sane	0.15	1	⇑ iPg	Pg	20 55 01.3	-0.5
	5µm,0.3s						
SENIN				i Sg	Sg	20 55 03.4	-0.8
	5µm,0.3s						
SENIN	Lac Senin/Sane	0.15	1	⇑ iPg	Pg	20 55 01.3	-0.5
	5µm,0.3s						
SENIN				i Sg	Sg	20 55 03.4	-0.8
	5µm,0.3s						
DIX	Grande Dixence	0.16	150	⇑ iPg	Pg	20 55 01.3	-0.6
	3µm,0.3s						
DIX				i Sg	Sg	20 55 03.7	-0.8
	3µm,0.3s						
DIX	Grande Dixence	0.16	150	⇑ iPg	Pg	20 55 01.3	-0.6
	3µm,0.3s						
DIX				i Sg	Sg	20 55 03.7	-0.8
	3µm,0.3s						
SALAN	Lac Salanfe	0.23	252	⇑ iPg	Pg	20 55 02.7	-0.5
	428nm,0.3s						
SALAN				i Sg	Sg	20 55 05.9	-0.6
	428nm,0.3s						
SALAN	Lac Salanfe	0.23	252	⇑ iPg	Pg	20 55 02.7	-0.5
	428nm,0.3s						
SALAN				i Sg	Sg	20 55 05.9	-0.6
	428nm,0.3s						
AIGLE	Aigle	0.27	298	⇓ iPg	Pg	20 55 03.3	-0.4
	482nm,0.4s						
AIGLE	Aigle	0.27	298	⇓ iPg	Pg	20 55 03.3	-0.4
	482nm,0.4s						
LKBD	Leukerbad	0.29	53	⇑ iPg	Pg	20 55 03.7	-0.4
	178nm,0.4s						
LKBD				eSg	Sg	20 55 07.6	-0.5
	178nm,0.4s						
LKBD	Leukerbad	0.29	53	⇑ iPg	Pg	20 55 03.7	-0.4
	178nm,0.4s						
LKBD				eSg	Sg	20 55 07.6	-0.5
	178nm,0.4s						
LKBD2	Leukerbad 2	0.29	57	⇑ iPg	Pg	20 55 03.8	-0.4
	182nm,0.5s						
LKBD2	Leukerbad 2	0.29	57	⇑ iPg	Pg	20 55 03.8	-0.4
	182nm,0.5s						
WIMIS	Wimmis	0.50	27	⇑ iPg	Pb	20 55 07.8	-1.4
	187nm,0.6s						
WIMIS	Wimmis	0.50	27	⇑ iPg	Pb	20 55 07.8	-1.4
	187nm,0.6s						
TORNY	Torny/Romont	0.60	338	⇑ iPg	Pb	20 55 10.4	-0.5
	393nm,0.4s						
TORNY				eSg	Sb	20 55 19.1	-0.4
	393nm,0.4s						
TORNY	Torny/Romont	0.60	338	⇑ iPg	Pb	20 55 10.4	-0.5
	393nm,0.4s						
LSD	Lago del Serru	0.77	188	P	Pg	20 55 11.6	-1.4
TRAV	Traversella	0.77	156	P	Pg	20 55 11.6	-1.5
TRAV				S	Sg	20 55 21.0	-2.2
GIMEL	St. Georges /	0.78	294	eP	Pg	20 55 13.2	-0.1
	116nm,0.3s						
GIMEL	St. Georges /	0.78	294	eP	Pg	20 55 13.2	-0.1
	116nm,0.3s						
HASLI	Hasliberg/Brie	0.80	47	ePn	Pn	20 55 17.2	+1.5
	397nm,0.3s						
HASLI	Hasliberg/Brie	0.80	47	ePn	Pn	20 55 17.2	+1.5
	397nm,0.3s						
LPL	La Plagne	0.80	210	ePg	Pg	20 55 12.9	-0.8
LPL				eSg	Sg	20 55 23.8	-0.4
	33nm,0.2s						
LPL	La Plagne	0.80	210	ePg	Pg	20 55 12.9	-0.8
LPL				eSg	Sg	20 55 23.8	-0.4
	16nm,0.2s						
LPG	La Plagne	0.81	208	ePg	Pg	20 55 13.2	-0.7
LPG				eSg	Sg	20 55 24.0	-0.6
	36nm,0.2s						
LPG	La Plagne	0.81	208	ePg	Pg	20 55 13.2	-0.7
LPG				eSg	Sg	20 55 24.0	-0.6
	18nm,0.2s						
CABF	La Chapelle	0.92	296	ePg	Pg	20 55 16.1	+0.1
CABF				eSg	Sg	20 55 27.9	-0.2
	22nm,0.3s						
CABF	La Chapelle	0.92	296	ePg	Pg	20 55 16.1	+0.1
CABF				eSg	Sg	20 55 27.9	-0.2
	11nm,0.3s						
BNALP	Bannalp	1.02	50	eP	Pg	20 55 13.8	-4.0
	214nm,0.5s						
RSP	Reno Superiore	1.07	181	P	Pg	20 55 16.9	-1.9
RSP				S	Sg	20 55 29.5	-3.2
BALST	Balsthal	1.15	14	ePn	Pn	20 55 20.4	-0.1
BALST				eSg	Sn	20 55 36.2	-0.2
LOMF	Lomont	1.18	344	Pg	Pn	20 55 21.9	+1.0
LOMF				Sg	Sn	20 55 38.4	+1.4
LOMF	Lomont	1.18	344	Pg	Pn	20 55 21.9	+1.0
LOMF				Sg	Sn	20 55 38.4	+1.4
BBS	Basel-Blauen	1.26	7	Pg	Pn	20 55 23.0	+1.1
BBS				Sg	Sn	20 55 39.7	+0.8
SULZ	Cheisacher	1.43	23	ePn	Pg	20 55 25.6	0.0
SULZ				eSg	Sn	20 55 44.2	+1.1
MBDF	Montbardon	1.53	194	ePn	Pn	20 55 24.2	-1.6
	SNR=1.0						
MBDF	Montbardon	1.53	194	ePg	Pn	20 55 26.8	+1.0
	SNR=1.0						
MBDF				eSn	Sn	20 55 42.8	-3.0
	SNR=1.0						
MBDF				eSg	Sb	20 55 46.2	-0.1
	35nm,0.5s,SNR=1.0						
MBDF	Montbardon	1.53	194	ePn	Pn	20 55 24.2	-1.6
	SNR=1.0						
MBDF	Montbardon	1.53	194	ePg	Pn	20 55 26.8	+1.0
	SNR=1.0						
MBDF				eSn	Sn	20 55 42.8	-3.0
	SNR=1.0						
MBDF				eSg	Sb	20 55 46.2	-0.1
	18nm,0.5s,SNR=1.0						
HINF	Hinteralfeld	1.63	349	eP	Pn	20 55 26.8	-0.2
	SNR=1.0						
HINF				eSg	Sg	20 55 49.6	-1.0
	27nm,0.2s						
HINF	Hinteralfeld	1.63	349	eP	Pn	20 55 26.8	-0.2
	SNR=1.0						
HINF				eSg	Sg	20 55 49.6	-1.0
	13nm,0.2s						
WILA	Wila	1.63	42	ePn	Pg	20 55 29.5	-0.1
WILA				eSg	Sg	20 55 52.3	+1.6
ORIF	Oris-en-Rattie	1.63	218	ePg	Pn	20 55 26.1	-1.0
	SNR=1.0						
ORIF	Oris-en-Rattie	1.63	218	ePn	Pn	20 55 27.1	0.0
	SNR=1.0						
ORIF				eSg	Sn	20 55 49.3	+1.1
	22nm,0.3s,SNR=1.0						
ORIF	Oris-en-Rattie	1.63	218	ePg	Pn	20 55 26.1	-1.0
	SNR=1.0						
ORIF	Oris-en-Rattie	1.63	218	ePn	Pn	20 55 27.1	0.0
	SNR=1.0						
ORIF				eSg	Sn	20 55 49.3	+1.1
	11nm,0.3s,SNR=1.0						
MOF	Molkenrain	1.64	356	Pn	Pn	20 55 27.1	-0.1
MOF				Sg	Sg	20 55 51.6	+0.6
MOF	Molkenrain	1.64	356	Pn	Pn	20 55 27.1	-0.1
MOF				Sg	Sg	20 55 51.6	+0.6
PLONS	Plons/SG	1.66	59	ePn	Pg	20 55 29.3	-0.8
PZZ	Stroppo	1.71	184	P	Pn	20 55 27.0	-1.2
PZZ				S	Sn	20 55 46.0	-4.2
FELD	Feldberg im Sc	1.73	16	Pg	Pg	20 55 31.2	-0.2
FELD				Sg	Sg	20 55 53.7	-0.2
FELD	Feldberg im Sc	1.73	16	Pg	Pg	20 55 31.2	-0.2
FELD				Sg	Sg	20 55 53.7	-0.2
SLE	Schleitheim	1.75	27	ePn	Pn	20 55 28.2	-0.5
SLE				eSg	Sg	20 55 54.4	-0.2
PCP	Piancastagn	1.89	152	P	Pn	20 55 29.3	-1.3
PCP				S	Sn	20 55 50.2	-4.3
HAU	Haudompre	1.90	340	eP	Pn	20 55 30.8	0.0
	SNR=1.0						
HAU				eSg	Sg	20 55 58.0	-1.4
	32nm,0.2s,SNR=1.0						
HAU	Haudompre	1.90	340	eP	Pn	20 55 30.8	0.0
	SNR=1.0						
HAU				eSg	Sg	20 55 58.0	-1.4
	16nm,0.2s,SNR=1.0						
DAVA	Damuels	2.08	58	eSg	Sg	20 56 06.9	+2.0
DAVA	Damuels	2.08	58	⇓ iPg	Pg	20 55 37.7	-0.3
DAVA				⇑ iSg	Sg	20 56 05.5	+0.6
	18nm,0.3s						
DAVA	Damuels	2.08	58	Pg	Pg	20 55 37.7	-0.3
DAVA				Sg	Sg	20 56 05.5	+0.6
	18nm,0.3s						
SPAK	Spaichingen-Ko	2.14	28	Pg	Pg	20 55 38.6	-0.7
CDF	Champ du Feu	2.20	360	ePn	Pn	20 55 34.3	-0.6
	SNR=1.0						
CDF	Champ du Feu	2.20	360	ePg	Pg	20 55 39.3	-1.1
	SNR=1.0						
CDF				eSn	Sn	20 55 58.7	-3.4
	SNR=1.0						
CDF				eSg	Sg	20 56 07.3	-1.5
	7.7nm,0.2s,SNR=1.0						
CDF	Champ du Feu	2.20	360	ePn	Pn	20 55 34.3	-0.6
	SNR=1.0						
CDF	Champ du Feu	2.20	360	ePg	Pg	20 55 39.3	-1.1
	SNR=1.0						
CDF				eSn	Sn	20 55 58.7	-3.4
	SNR=1.0						

CDF				*e*Sg	Sg	20 56 07.3	-1.5
	3.8nm,0.2s,SNR=1.0						
THEF	**They Montfort**	**2.20**	**337**	Pg	**Pg**	**20 55 42.1**	**+1.7**
THEF	**They Montfort**	**2.20**	**337**	Pg	**Pg**	**20 55 42.1**	**+1.7**
TOUF	**Mont Tournerai**	**2.20**	**181**	Pn	**Pb**	**20 55 38.9**	**+0.7**
TOUF	**Mont Tournerai**	**2.20**	**181**	Pn	**Pb**	**20 55 38.9**	**+0.7**
BFO	**Black Forest**	**2.23**	**18**	*e*Pn	**Pn**	**20 55 34.3**	**-0.9**
SAOF	**Saorge**	**2.24**	**175**	Pn	**Pb**	**20 55 39.4**	**+0.7**
SAOF	**Saorge**	**2.24**	**175**	Pn	**Pb**	**20 55 39.4**	**+0.7**
VIVF	**Saint-Julien-l**	**2.29**	**235**	*e*P	**Pn**	**20 55 36.5**	**+0.4**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.29**	**235**	*e*Pg	**Pb**	**20 55 40.4**	**+0.8**
VIVF				*e*Sn	**Sn**	**20 56 01.2**	**-3.1**
	SNR=1.0						
VIVF				*e*Sg	**Sb**	**20 56 09.6**	**+1.6**
	16nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.29**	**235**	*e*P	**Pn**	**20 55 36.5**	**+0.4**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.29**	**235**	*e*Pg	**Pb**	**20 55 40.4**	**+0.8**
VIVF				*e*Sn	**Sn**	**20 56 01.2**	**-3.1**
	SNR=1.0						
VIVF				*e*Sg	**Sb**	**20 56 09.6**	**+1.6**
	8.2nm,0.3s,SNR=1.0						
MVIF	**Mont Vial**	**2.32**	**183**	Pn	**Pb**	**20 55 40.9**	**+0.7**
SBF	**Sospel**	**2.35**	**178**	*e*P	**Pn**	**20 55 38.4**	**+1.4**
	SNR=1.0						
SBF	**Sospel**	**2.35**	**178**	*e*Pg	**Pb**	**20 55 41.7**	**+0.9**
SBF				*e*Sg	**Sb**	**20 56 12.2**	**+2.3**
	20nm,0.5s,SNR=1.0						
SBF	**Sospel**	**2.35**	**178**	*e*P	**Pn**	**20 55 38.4**	**+1.4**
	SNR=1.0						
SBF	**Sospel**	**2.35**	**178**	*e*Pg	**Pb**	**20 55 41.7**	**+0.9**
SBF				*e*Sg	**Sb**	**20 56 12.2**	**+2.3**
	10nm,0.5s,SNR=1.0						
SMF	**Signal de Mont**	**2.43**	**281**	*e*P	**Pn**	**20 55 38.6**	**+0.7**
	SNR=1.0						
SMF	**Signal de Mont**	**2.43**	**281**	*e*Pg	**Pb**	**20 55 42.9**	**+0.9**
SMF				*e*Sg	**Sb**	**20 56 13.2**	**+1.3**
	12nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.43**	**281**	*e*P	**Pn**	**20 55 38.6**	**+0.7**
	SNR=1.0						
SMF	**Signal de Mont**	**2.43**	**281**	*e*Pg	**Pb**	**20 55 42.9**	**+0.9**
SMF				*e*Sg	**Sb**	**20 56 13.2**	**+1.3**
	5.8nm,0.2s,SNR=1.0						
SFTF	**Sexfontaines**	**2.52**	**323**	*e*P	**Pn**	**20 55 39.9**	**+0.8**
	baz=129						
SFTF	**Sexfontaines**	**2.52**	**323**	*e*Pg	**Pb**	**20 55 44.3**	**+0.8**
	baz=142						
SFTF				*e*Sg	**Sg**	**20 56 17.5**	**-1.5**
	19nm,0.4s						
SFTF	**Sexfontaines**	**2.52**	**323**	*e*P	**Pn**	**20 55 39.9**	**+0.8**
	baz=129						
SFTF	**Sexfontaines**	**2.52**	**323**	*e*Pg	**Pb**	**20 55 44.3**	**+0.8**
	baz=142						
SFTF				*e*Sg	**Sg**	**20 56 17.5**	**-1.5**
	9.6nm,0.4s						
SMRF	**Simiane la Rot**	**2.55**	**209**	*e*P	**Pn**	**20 55 40.3**	**+0.7**
	SNR=1.0						
SMRF	**Simiane la Rot**	**2.55**	**209**	*e*Pg	**Pb**	**20 55 46.1**	**+2.0**
SMRF				*e*Sg	**Sb**	**20 56 18.4**	**+2.9**
	6.5nm,0.5s						
SMRF	**Simiane la Rot**	**2.55**	**209**	*e*P	**Pn**	**20 55 40.3**	**+0.7**
	SNR=1.0						
SMRF	**Simiane la Rot**	**2.55**	**209**	*e*Pg	**Pb**	**20 55 46.1**	**+2.0**
SMRF				*e*Sg	**Sb**	**20 56 18.4**	**+2.9**
	3.2nm,0.5s						
PAGF	**Fort de Pagny**	**2.57**	**336**	*e*P	**Pn**	**20 55 40.1**	**+0.2**
PAGF	**Fort de Pagny**	**2.57**	**336**	*e*Pg	**Pg**	**20 55 45.5**	**-2.0**
	baz=154						
PAGF				*e*Sg	**Sg**	**20 56 18.4**	**-2.4**
	3.2nm,0.4s						
PAGF	**Fort de Pagny**	**2.57**	**336**	*e*P	**Pn**	**20 55 40.1**	**+0.2**
PAGF	**Fort de Pagny**	**2.57**	**336**	*e*Pg	**Pg**	**20 55 45.5**	**-2.0**
	baz=154						
PAGF				*e*Sg	**Sg**	**20 56 18.4**	**-2.4**
	1.6nm,0.4s						
LOR	**Lormes**	**2.59**	**295**	*e*P	**Pn**	**20 55 40.8**	**+0.7**
	baz=114,SNR=1.0						
LOR	**Lormes**	**2.59**	**295**	*e*Pg	**Pb**	**20 55 45.3**	**+0.6**
	baz=117						
LOR				*e*Sn	**Sn**	**20 56 07.8**	**-3.8**
	SNR=1.0						
LOR				*e*Sg	**Sb**	**20 56 18.8**	**+2.3**
	5.6nm,0.2s,SNR=1.0						
LOR	**Lormes**	**2.59**	**295**	*e*P	**Pn**	**20 55 40.8**	**+0.7**
	baz=114,SNR=1.0						
LOR	**Lormes**	**2.59**	**295**	*e*Pg	**Pb**	**20 55 45.3**	**+0.6**
	baz=117						
LOR				*e*Sn	**Sn**	**20 56 07.8**	**-3.8**
	SNR=1.0						
LOR				*e*Sg	**Sb**	**20 56 18.8**	**+2.3**
	2.8nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**2.69**	**190**	*e*P	**Pn**	**20 55 43.0**	**+1.4**
	SNR=1.0						
FRF	**La Foret Royal**	**2.69**	**190**	*e*Pg	**Pb**	**20 55 47.9**	**+1.4**
FRF				*e*Sg	**Sb**	**20 56 22.6**	**+3.0**
	8.2nm,0.3s						
FRF	**La Foret Royal**	**2.69**	**190**	*e*P	**Pn**	**20 55 43.0**	**+1.4**
	SNR=1.0						
FRF	**La Foret Royal**	**2.69**	**190**	*e*Pg	**Pb**	**20 55 47.9**	**+1.4**
FRF				*e*Sg	**Sb**	**20 56 22.6**	**+3.0**
	4.1nm,0.3s						
SSF	**Saint Saulge**	**2.74**	**289**	*e*P	**Pn**	**20 55 43.1**	**+0.8**
	SNR=1.0						
SSF	**Saint Saulge**	**2.74**	**289**	*e*Pg	**Pb**	**20 55 48.7**	**+1.3**
SSF				*e*Sn	**Sn**	**20 56 11.9**	**-3.6**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**20 56 24.3**	**-2.0**
	4.4nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**2.74**	**289**	*e*P	**Pn**	**20 55 43.1**	**+0.8**
	SNR=1.0						
SSF	**Saint Saulge**	**2.74**	**289**	*e*Pg	**Pb**	**20 55 48.7**	**+1.3**
SSF				*e*Sn	**Sn**	**20 56 11.9**	**-3.6**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**20 56 24.3**	**-2.0**
	2.2nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.75**	**327**	*e*P	**Pn**	**20 55 43.1**	**+0.8**
	baz=150,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.75**	**327**	*e*Pg	**Pg**	**20 55 48.8**	**-2.1**
	baz=148						
MEZF				*e*Sg	**Sg**	**20 56 25.0**	**-1.5**
	12nm,0.4s,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.75**	**327**	*e*P	**Pn**	**20 55 43.1**	**+0.8**
	baz=150,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.75**	**327**	*e*Pg	**Pg**	**20 55 48.8**	**-2.1**
	baz=148						
MEZF				*e*Sg	**Sg**	**20 56 25.0**	**-1.5**
	5.9nm,0.4s,SNR=1.0						
AVF	**Avril sur Loir**	**2.78**	**283**	*e*P	**Pn**	**20 55 43.4**	**+0.6**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.78**	**283**	*e*Pg	**Pb**	**20 55 49.4**	**+1.4**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**20 56 12.8**	**-3.6**
	SNR=1.0						
AVF				*e*Sg	**Sb**	**20 56 25.0**	**+2.9**
	2.9nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.78**	**283**	*e*P	**Pn**	**20 55 43.4**	**+0.6**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.78**	**283**	*e*Pg	**Pb**	**20 55 49.4**	**+1.4**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**20 56 12.8**	**-3.6**
	SNR=1.0						
AVF				*e*Sg	**Sb**	**20 56 25.0**	**+2.9**
	1.5nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**2.94**	**191**	*e*Pg	**Pb**	**20 55 52.9**	**+2.3**
LMR				*e*Sn	**Sn**	**20 56 20.8**	**+0.6**
	2.9nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**2.94**	**191**	*e*Pg	**Pb**	**20 55 52.9**	**+2.3**
LMR				*e*Sn	**Sn**	**20 56 20.8**	**+0.6**
	1.5nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**3.10**	**278**	*e*P	**Pn**	**20 55 48.2**	**+1.1**
	SNR=1.0						
BGF	**Bois d'Agland**	**3.10**	**278**	*e*Pg	**Pb**	**20 55 55.2**	**+1.8**
BGF				*e*Sn	Sn	20 56 19.3	-4.9
	SNR=1.0						
BGF				*e*Sg	**Sg**	**20 56 35.8**	**-1.9**
	8.3nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**3.10**	**278**	*e*P	**Pn**	**20 55 48.2**	**+1.1**
	SNR=1.0						
BGF	**Bois d'Agland**	**3.10**	**278**	*e*Pg	**Pb**	**20 55 55.2**	**+1.8**
BGF				*e*Sn	Sn	20 56 19.3	-4.9
	SNR=1.0						
BGF				*e*Sg	**Sg**	**20 56 35.8**	**-1.9**
	4.2nm,0.3s,SNR=1.0						
WTTA	**Wattenberg**	**3.16**	**69**	*e*Sg	**Sg**	**20 56 42.2**	**+2.4**
LASF	**Ste Croix**	**3.24**	**230**	*e*P	**Pn**	**20 55 49.9**	**+0.8**
	SNR=1.0						
LASF	**Ste Croix**	**3.24**	**230**	*e*Pg	**Pb**	**20 55 57.8**	**+2.0**
LASF				*e*Sg	**Sb**	**20 56 38.2**	**+2.9**
	4.8nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**3.24**	**230**	*e*P	**Pn**	**20 55 49.9**	**+0.8**
	SNR=1.0						
LASF	**Ste Croix**	**3.24**	**230**	*e*Pg	**Pb**	**20 55 57.8**	**+2.0**
LASF				*e*Sg	**Sb**	**20 56 38.2**	**+2.9**
	2.4nm,0.3s,SNR=1.0						
HYF	**Humbligny**	**3.37**	**290**	*e*P	**Pn**	**20 55 52.0**	**+1.1**
HYF	**Humbligny**	**3.37**	**290**	*e*Pg	**Pb**	**20 55 59.8**	**+1.8**
HYF				*e*Sg	**Sg**	**20 56 44.1**	**-2.3**
HYF	**Humbligny**	**3.37**	**290**	*e*P	**Pn**	**20 55 52.0**	**+1.1**
HYF	**Humbligny**	**3.37**	**290**	*e*Pg	**Pb**	**20 55 59.8**	**+1.8**
HYF				*e*Sg	**Sg**	**20 56 44.1**	**-2.3**
TCF	**Toulx Ste Croi**	**3.53**	**273**	*e*Pn	**Pn**	**20 55 51.7**	**-1.4**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.53**	**273**	*e*Pg	**Pb**	**20 56 03.1**	**+2.4**
TCF				*e*Sn	**Sn**	**20 56 31.0**	**-3.9**
	SNR=1.0						
TCF				*e*Sg	**Sb**	**20 56 47.9**	**+4.3**
	5.9nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.53**	**273**	*e*Pn	**Pn**	**20 55 51.7**	**-1.4**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.53**	**273**	*e*Pg	**Pb**	**20 56 03.1**	**+2.4**
TCF				*e*Sn	**Sn**	**20 56 31.0**	**-3.9**
	SNR=1.0						
TCF				*e*Sg	**Sb**	**20 56 47.9**	**+4.3**
	3.0nm,0.4s,SNR=1.0						
WLF	**Walferdange**	**3.54**	**348**	*e*Sg	**Sg**	**20 56 50.4**	**-1.3**
CAF	**Calviac**	**3.89**	**253**	*e*P	**Pn**	**20 55 59.2**	**+1.1**
	SNR=1.0						
CAF				*e*Sg	**Sb**	**20 56 58.4**	**+4.3**
	5.9nm,0.4s,SNR=1.0						
CAF	**Calviac**	**3.89**	**253**	*e*P	**Pn**	**20 55 59.2**	**+1.1**
	SNR=1.0						
CAF				*e*Sg	**Sb**	**20 56 58.4**	**+4.3**
	3.0nm,0.4s,SNR=1.0						
RJF	**Les Rejaudoux**	**4.15**	**259**	*e*Sg	**Sb**	**20 57 06.2**	**+4.8**
	3.1nm,0.3s,SNR=1.0						
RJF	**Les Rejaudoux**	**4.15**	**259**	*e*Sg	**Sb**	**20 57 06.2**	**+4.8**
	1.5nm,0.3s,SNR=1.0						
BAIF	**Baives**	**4.37**	**333**	*e*P	**Pn**	**20 56 05.7**	**+1.2**
	SNR=1.0						
BAIF	**Baives**	**4.37**	**333**	*e*P	**Pn**	**20 56 05.7**	**+1.2**
	SNR=1.0						
MTLF	**Montolieu**	**4.62**	**233**	*e*Sg	**Sg**	**20 57 22.8**	**-3.6**
	1.9nm,0.4s,SNR=1.0						
MTLF	**Montolieu**	**4.62**	**233**	*e*Sg	**Sg**	**20 57 22.8**	**-3.6**
	0.9nm,0.4s,SNR=1.0						
WET	**Wettzell**	**4.78**	**50**	*e*Pn	**Pn**	**20 56 09.7**	**-0.5**
WET				*e*Sn	**Sn**	**20 57 02.3**	**-3.3**
ROTZ	**Rotzenmuhle**	**4.85**	**41**	*e*Pg	**Pg**	**20 56 29.2**	**-1.8**
KHC	**Kasperske Hory**	**5.15**	**53**	*e*PN	Pn	20 56 18.9	+3.5
KHC				*e*PG	**Pg**	**20 56 34.6**	**-2.2**
KHC				*e*SN	**Sn**	**20 57 13.6**	**-1.2**
KHC				*e*SG	**Sg**	**20 57 42.0**	**-1.5**
KHC	**Kasperske Hory**	**5.15**	**53**	Pn	Pn	20 56 18.9	+3.5
KHC	**Kasperske Hory**	**5.15**	**53**	Pg	**Pg**	**20 56 34.6**	**-2.2**
KHC				Sn	**Sn**	**20 57 13.6**	**-1.2**
KHC				Sg	**Sg**	**20 57 42.0**	**-1.5**
MFF	**Saint Martin d**	**5.16**	**277**	*e*P	**Pn**	**20 56 16.3**	**+0.8**
	SNR=1.0						
MFF	**Saint Martin d**	**5.16**	**277**	*e*P	**Pn**	**20 56 16.3**	**+0.8**
	SNR=1.0						
PRU	**Pruhonice**	**6.15**	**49**	*e*SG	**Sg**	**20 58 13.9**	**-1.6**
PRU	**Pruhonice**	**6.15**	**49**	Sg	**Sg**	**20 58 13.9**	**-1.6**

*ISK **09** 20:55:11.6, 39°.30N×27°.91E, h5^{km}, MD3.3*
*ISCJB **09** 20:55:12.7±0.4, 39°.29N±0°.01×27°.91E±0°.02, h5^{km}±3^{km}, Error ellipse: s-maj=2.6km s-min=2.4km az=172.9*
*DDA **09** 20:55:12.4, 39°.28N×27°.94E, h12^{km}, MD3.2*
*ATH **09** 20:55:12.1, 39°.26N×28°.01E, h24^{km}±15^{km}, MD3.5/5*
*CSEM **09** 20:55:12.8±0.1, 39°.28N×27°.91E, h2^{km}, MD3.3, Error ellipse: s-maj=2.0km s-min=1.8km az=82.0*
*THE **09** 20:55:15.5, 39°.27N×27°.84E, h11^{km}±2^{km}, ML2.9/5, Error ellipse: s-maj=3.8km s-min=0.7km az=101.0*
ISC 09 20:55:11.4±1.2**, 39°.28N**±0°.01×**27°.94E**±0°.01**, h2**^{km}±10^{km}**, n162,** σ1°.**15**/193**, 5C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.36**	**353**	PG	**Pb**	**20 55 20.2**	**-0.4**
BALB				*e*SG	**Sb**	**20 55 25.3**	**-1.4**
BALB	**Balikesir**	**0.36**	**353**	*i* Pg	**Pb**	**20 55 20.2**	**-0.4**
BALB				*e*Sg	**Sb**	**20 55 25.3**	**-1.4**
AKHS	**Akhisar**	**0.41**	**193**	*i* P	**Pb**	**20 55 20.8**	**-0.7**
AKHS				*i* S	**Sb**	**20 55 28.4**	**+0.2**
AKHS	**Akhisar**	**0.41**	**193**	*i* P	**Pb**	**20 55 20.8**	**-0.7**
AKHS				*i* S	**Sb**	**20 55 28.4**	**+0.2**
AKS	**Akhisar**	**0.41**	**194**	PG	**Pb**	**20 55 20.9**	**-0.5**
AKS				*e*SG	**Sb**	**20 55 28.4**	**+0.2**
AKS	**Akhisar**	**0.41**	**194**	*i* Pg	**Pb**	**20 55 20.9**	**-0.5**
BALY	**Balya**	**0.52**	**332**	*i* P	**Pb**	**20 55 23.1**	**-0.2**
BALY				*i* S	**Sb**	**20 55 30.8**	**-0.6**
BALY	**Balya**	**0.52**	**332**	*i* P	**Pb**	**20 55 23.1**	**-0.2**
BALY				*i* S	**Sb**	**20 55 30.8**	**-0.6**
DURS	**Dursunbey**	**0.53**	**52**	*i* P	**Pb**	**20 55 22.5**	**-0.9**
DURS				*i* S	**Sb**	**20 55 30.8**	**-0.7**
DURS	**Dursunbey**	**0.53**	**52**	*i* P	**Pb**	**20 55 22.5**	**-0.9**
DURS				*i* S	**Sb**	**20 55 30.8**	**-0.7**
DST	**Dursunbey**	**0.62**	**58**	*e*PG	**Pb**	**20 55 24.8**	**-0.2**
DST				*e*SG	**Sb**	**20 55 34.5**	**+0.3**
DST	**Dursunbey**	**0.62**	**58**	*e*Pg	**Pb**	**20 55 24.8**	**-0.2**
DST				*e*Sg	**Sb**	**20 55 34.5**	**+0.3**
DEMI	**Demirci**	**0.65**	**111**	*i* P	**Pb**	**20 55 25.3**	**-0.2**
DEMI				*i* S	**Sb**	**20 55 34.6**	**-0.5**
DEMI	**Demirci**	**0.65**	**111**	*i* P	**Pb**	**20 55 25.3**	**-0.2**
DEMI				*i* S	**Sb**	**20 55 34.6**	**-0.5**
GONE	**Gonen-Balikesi**	**0.79**	**346**	*e*PG	**Pb**	**20 55 27.4**	**-0.5**
GONE	**Gonen-Balikesi**	**0.79**	**346**	*e*Pg	**Pb**	**20 55 27.4**	**-0.5**
MANT	**Manisa**	**0.93**	**148**	*i* P	**Pn**	**20 55 30.8**	**-0.9**
MANT				*i* S	**Sb**	**20 55 42.5**	**-0.6**
MANT	**Manisa**	**0.93**	**148**	*i* P	**Pn**	**20 55 30.8**	**-0.9**
MANT				*i* S	**Sb**	**20 55 42.5**	**-0.6**
KULA	**Kula-Manisa**	**0.95**	**143**	*e*PG	**Pn**	**20 55 31.4**	**-0.5**
KULA	**Kula-Manisa**	**0.95**	**143**	*e*Pg	**Pn**	**20 55 31.4**	**-0.5**
AYVA	**Ayvalik**	**0.97**	**272**	*i* P	**Pn**	**20 55 31.8**	**-0.2**
AYVA				*i* S	**Sn**	**20 55 47.7**	**+1.4**
AYVA	**Ayvalik**	**0.97**	**272**	*i* P	**Pn**	**20 55 31.8**	**-0.2**
AYVA				*i* S	**Sn**	**20 55 47.7**	**+1.4**
IZM	**Izmir**	**1.03**	**211**	*e*PG	**Pn**	**20 55 32.6**	**-0.3**
IZM	**Izmir**	**1.03**	**211**	*e*Pg	**Pn**	**20 55 32.6**	**-0.3**
KCTX	**Karacabey (Bur**	**1.03**	**18**	*e*PG	**Pn**	**20 55 32.2**	**-0.8**
KCTX	**Karacabey (Bur**	**1.03**	**18**	*e*Pg	**Pn**	**20 55 32.2**	**-0.8**
ORLT	**Orhaneli**	**1.06**	**44**	*e*PG	**Pn**	**20 55 33.0**	**-0.4**
ORLT	**Orhaneli**	**1.06**	**44**	*e*Pg	**Pn**	**20 55 33.0**	**-0.4**
EDC	**Edincik**	**1.07**	**357**	*e*PG	**Pn**	**20 55 33.5**	**+0.1**
EDC	**Edincik**	**1.07**	**357**	*e*Pg	**Pn**	**20 55 33.5**	**+0.1**
BNT	**Bandirma**	**1.07**	**359**	*e*PG	**Pn**	**20 55 32.9**	**-0.6**
BNT	**Bandirma**	**1.07**	**359**	*e*Pg	**Pn**	**20 55 32.9**	**-0.6**
BLCB	**Balcova**	**1.14**	**218**	*e*PN	**Pn**	**20 55 34.5**	**+0.3**
BLCB	**Balcova**	**1.14**	**218**	*e*Pn	**Pn**	**20 55 34.6**	**+0.3**
TVSB	**Tavsanli**	**1.19**	**81**	*e*PN	**Pn**	**20 55 35.5**	**+0.2**
TVSB	**Tavsanli**	**1.19**	**81**	*e*Pn	**Pn**	**20 55 35.5**	**+0.2**
GDZ	**Gediz**	**1.22**	**99**	*i* P	**Pn**	**20 55 36.0**	**+0.4**
GDZ				*i* S	**Sn**	**20 55 54.3**	**+1.6**
GDZ	**Gediz**	**1.22**	**99**	*i* P	**Pn**	**20 55 36.0**	**+0.4**
GDZ				*i* S	**Sn**	**20 55 54.3**	**+1.6**
KRBG	**Karabiga-Canak**	**1.22**	**336**	*e*PN	**Pn**	**20 55 35.3**	**-0.1**
KRBG	**Karabiga-Canak**	**1.22**	**336**	*e*Pn	**Pn**	**20 55 35.3**	**-0.1**
ULDT	**Uludag**	**1.26**	**47**	*i* P	**Pn**	**20 55 37.4**	**+1.1**
ULDT				*i* S	**Sb**	**20 55 52.3**	**-0.6**
ULDT	**Uludag**	**1.26**	**47**	*i* P	**Pn**	**20 55 37.4**	**+1.1**
ULDT				*i* S	**Sb**	**20 55 52.3**	**-0.6**
PRK	**Paraskevi**	**1.29**	**269**	P	**Pb**	**20 55 37.1**	**+0.6**
PRK				S	**Sn**	**20 55 54.1**	**-0.3**
PRK	**Paraskevi**	**1.29**	**269**	*e*PN	**Pb**	**20 55 37.3**	**+0.8**
PRK				*e*SN	**Sn**	**20 55 56.3**	**+1.9**
PRK	**Paraskevi**	**1.29**	**269**	*e*Pn	**Pb**	**20 55 37.3**	**+0.8**
PRK				S	**Sn**	**20 55 54.1**	**-0.3**
PRK				*e*Sn	**Sn**	**20 55 56.3**	**+1.9**
MDNY	**Mudanya-Bursa**	**1.31**	**34**	*e*PN	**Pb**	**20 55 37.1**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.31**	**34**	*e*Pn	**Pb**	**20 55 37.1**	**+0.4**
MRMT	**Marmara Adasi**	**1.35**	**349**	*e*PN	**Pg**	**20 55 38.1**	**+0.9**
MRMT	**Marmara Adasi**	**1.35**	**349**	*e*Pn	**Pg**	**20 55 38.1**	**+0.9**
EZN	**Ezine**	**1.36**	**294**	*e*PN	**Pg**	**20 55 38.0**	**+0.5**
EZN	**Ezine**	**1.36**	**294**	*e*Pn	**Pg**	**20 55 38.0**	**+0.5**
LPK	**Lapseki**	**1.42**	**321**	*e*PN	**Pg**	**20 55 39.0**	**+0.5**
LPK	**Lapseki**	**1.42**	**321**	*e*Pn	**Pg**	**20 55 39.1**	**+0.5**
ARMT	**Armutlu**	**1.47**	**29**	*e*PN	**Pg**	**20 55 39.2**	**-0.3**
ARMT	**Armutlu**	**1.47**	**29**	*e*Pn	**Pg**	**20 55 39.2**	**-0.3**
GEMT	**Gemlik**	**1.50**	**39**	*e*PN	**Pg**	**20 55 40.9**	**+0.7**
GEMT	**Gemlik**	**1.50**	**39**	*e*Pn	**Pg**	**20 55 40.9**	**+0.7**
SART	**Tekirdag**	**1.52**	**338**	*i* P	**Pg**	**20 55 40.5**	**-0.1**
SART				*i* S	**Sg**	**20 56 01.9**	**+1.5**
SART	**Tekirdag**	**1.52**	**338**	*i* P	**Pg**	**20 55 40.5**	**-0.1**
SART				*i* S	**Sg**	**20 56 01.9**	**+1.5**
BOZC	**Bozcaada**	**1.56**	**292**	*i* P	**Pb**	**20 55 40.5**	**-0.6**
BOZC				*i* S	**Sg**	**20 56 01.2**	**-0.4**
KHL	**Karahalli**	**1.56**	**127**	*e*PN	**Pg**	**20 55 41.6**	**+0.2**
KHL	**Karahalli**	**1.56**	**127**	*e*Pn	**Pg**	**20 55 41.6**	**+0.2**
IZI	**Iznik**	**1.58**	**48**	*e*PN	**Pg**	**20 55 42.0**	**+0.2**
IZI	**Iznik**	**1.58**	**48**	*e*Pn	**Pg**	**20 55 42.0**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.59**	**315**	*e*PN	**Pg**	**20 55 41.4**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.59**	**315**	*e*Pn	**Pg**	**20 55 41.4**	**-0.4**
AYDN	**Tasoluk**	**1.62**	**182**	*i* P	**Pn**	**20 55 40.8**	**-0.2**
AYDN				*i* S	**Sg**	**20 56 03.2**	**-0.2**
AYDN	**Tasoluk**	**1.62**	**182**	*i* P	**Pn**	**20 55 40.8**	**-0.2**
AYDN				*i* S	**Sg**	**20 56 03.2**	**-0.2**
SIGR	**SIGRI**	**1.62**	**268**	P	**Pb**	**20 55 41.5**	**-0.5**
SIGR				S	**Sb**	**20 56 02.2**	**-0.7**
SIGR	**SIGRI**	**1.62**	**268**	P	**Pb**	**20 55 41.5**	**-0.5**
SIGR				S	**Sb**	**20 56 02.2**	**-0.7**
ALT	**Altintas**	**1.70**	**97**	*e*PN	**Pg**	**20 55 44.2**	**+0.1**
ALT	**Altintas**	**1.70**	**97**	*e*Pn	**Pg**	**20 55 44.2**	**+0.1**
CHOS	**Chios island**	**1.72**	**239**	P	**Pb**	**20 55 43.2**	**-0.6**
CHOS				S	**Sn**	**20 56 04.7**	**-0.3**
CHOS	**Chios island**	**1.72**	**239**	P	**Pb**	**20 55 43.2**	**-0.6**
CHOS				S	**Sn**	**20 56 04.7**	**-0.3**
CAVI	**Cavuskoy**	**1.73**	**57**	*e*PN	**Pg**	**20 55 44.4**	**-0.2**
CAVI	**Cavuskoy**	**1.73**	**57**	*e*Pn	**Pg**	**20 55 44.4**	**-0.2**
TKR	**Tekirdag**	**1.73**	**350**	*e*PN	**Pg**	**20 55 43.7**	**-1.0**
TKR	**Tekirdag**	**1.73**	**350**	*e*Pn	**Pg**	**20 55 43.7**	**-1.0**
DENT	**Denizli**	**1.75**	**150**	*e*PN	**Pg**	**20 55 44.9**	**0.0**
DENT	**Denizli**	**1.75**	**150**	*e*Pn	**Pg**	**20 55 44.9**	**0.0**
ERIK	**Erikli-Kesan**	**1.77**	**322**	*e*PN	**Pb**	**20 55 44.0**	**-0.5**
ERIK	**Erikli-Kesan**	**1.77**	**322**	*e*Pn	**Pb**	**20 55 44.1**	**-0.5**
ADVT	**Abdulvahap**	**1.80**	**50**	*e*PN	**Pg**	**20 55 45.1**	**-0.8**
ADVT	**Abdulvahap**	**1.80**	**50**	*e*Pn	**Pg**	**20 55 45.1**	**-0.8**
BUY	**Buyukada**	**1.81**	**30**	*e*PN	**Pb**	**20 55 44.8**	**-0.5**
BUY	**Buyukada**	**1.81**	**30**	*e*Pn	**Pb**	**20 55 44.8**	**-0.5**
CRLT	**Corlu**	**1.85**	**355**	*e*PN	**Pb**	**20 55 45.4**	**-0.6**
CRLT	**Corlu**	**1.85**	**355**	*e*Pn	**Pb**	**20 55 45.4**	**-0.6**
SLVT	**Silivri**	**1.96**	**6**	*e*PN	**Pb**	**20 55 47.0**	**-0.8**
SLVT	**Silivri**	**1.96**	**6**	*e*Pn	**Pb**	**20 55 47.0**	**-0.8**
ISK	**Istanbul-Kandi**	**1.98**	**25**	*e*PN	**Pb**	**20 55 47.6**	**-0.5**
ISK	**Istanbul-Kandi**	**1.98**	**25**	*e*Pn	**Pb**	**20 55 47.6**	**-0.5**
MLSB	**Milas**	**1.99**	**184**	*e*PN	**Pb**	**20 55 47.8**	**-0.5**
MLSB	**Milas**	**1.99**	**184**	*e*Pn	**Pb**	**20 55 47.8**	**-0.5**
CTKS	**Kestanelik-??a**	**2.00**	**12**	*e*PN	**Pb**	**20 55 47.8**	**-0.7**
CTKS	**Kestanelik-??a**	**2.00**	**12**	*e*Pn	**Pb**	**20 55 47.8**	**-0.7**
BGKT	**Bogazkoy**	**2.00**	**18**	*e*PN	**Pb**	**20 55 47.7**	**-0.9**
BGKT	**Bogazkoy**	**2.00**	**18**	*e*Pn	**Pb**	**20 55 47.7**	**-0.9**
HRT	**Hereke**	**2.03**	**40**	*e*PN	**Pb**	**20 55 48.2**	**-0.9**
HRT	**Hereke**	**2.03**	**40**	*e*Pn	**Pb**	**20 55 48.2**	**-0.9**
GPA	**Golpazari**	**2.09**	**60**	*e*PN	**Pb**	**20 55 49.5**	**-0.5**
GPA	**Golpazari**	**2.09**	**60**	*e*Pn	**Pb**	**20 55 49.5**	**-0.5**
YER	**Yerkesik**	**2.16**	**173**	*e*PN	**Pb**	**20 55 50.5**	**-0.8**
YER	**Yerkesik**	**2.16**	**173**	*e*Pn	**Pb**	**20 55 50.5**	**-0.8**
SHUT	**Suhut-Afyon**	**2.17**	**109**	*e*PN	**Pb**	**20 55 50.4**	**-1.0**
SHUT	**Suhut-Afyon**	**2.17**	**109**	*e*Pn	**Pb**	**20 55 50.4**	**-1.0**
ALN	**Alexandroupoli**	**2.17**	**319**	P	**Pb**	**20 55 49.7**	**-1.7**
ALN				S	**Sb**	**20 56 16.5**	**-2.3**
ALN	**Alexandroupoli**	**2.17**	**319**	*e*PB	**Pb**	**20 55 50.0**	**-1.4**
ALN	**Alexandroupoli**	**2.17**	**319**	P	**Pb**	**20 55 49.7**	**-1.7**
ALN	**Alexandroupoli**	**2.17**	**319**	*e*Pb	**Pb**	**20 55 50.0**	**-1.4**
ALN				S	**Sb**	**20 56 16.5**	**-2.3**
SMTH	**Samothraki Isl**	**2.20**	**303**	*e*PN	**Pb**	**20 55 50.0**	**-1.9**
SMTH	**Samothraki Isl**	**2.20**	**303**	*e*Pn	**Pb**	**20 55 50.0**	**-1.9**
CTYL	**Yal??k??y-??at**	**2.21**	**7**	*e*PN	**Pb**	**20 55 50.6**	**-1.5**
CTYL	**Yal??k??y-??at**	**2.21**	**7**	*e*Pn	**Pb**	**20 55 50.6**	**-1.5**
LIA	**Limnos Island**	**2.22**	**287**	P	**Pb**	**20 55 50.2**	**-1.9**
LIA				S	**Sn**	**20 56 17.0**	**-0.1**
LIA	**Limnos Island**	**2.22**	**287**	*e*PN	**Pb**	**20 55 50.3**	**-1.9**
LIA				*e*SN	**Sb**	**20 56 18.1**	**-2.0**
LIA	**Limnos Island**	**2.22**	**287**	P	**Pb**	**20 55 50.2**	**-1.9**
LIA				S	**Sn**	**20 56 17.0**	**-0.1**
LIA				*e*Sn	**Sb**	**20 56 18.1**	**-2.0**
BODT	**Bodrum**	**2.27**	**193**	*e*PN	**Pb**	**20 55 52.0**	**-1.1**
BODT	**Bodrum**	**2.27**	**193**	*e*Pn	**Pb**	**20 55 52.0**	**-1.1**
ESKT	**Eskisehir**	**2.27**	**83**	*e*PN	**Pb**	**20 55 52.0**	**-1.2**
ESKT	**Eskisehir**	**2.27**	**83**	*e*Pn	**Pb**	**20 55 52.0**	**-1.2**
SEYT	**Eskypehyr**	**2.27**	**83**	*i* P	**Pg**	**20 55 54.4**	**-0.5**
SEYT				*i* S	**Sg**	**20 56 27.5**	**+3.2**
SEYT	**Eskypehyr**	**2.27**	**83**	*i* P	**Pg**	**20 55 54.4**	**-0.5**
SILT	**Sile**	**2.28**	**34**	*e*PN	**Pb**	**20 55 51.4**	**-1.9**
SILT	**Sile**	**2.28**	**34**	*e*Pn	**Pb**	**20 55 51.4**	**-1.9**
GULT	**Gulveren**	**2.29**	**59**	*e*PN	**Pb**	**20 55 52.4**	**-1.2**
GULT	**Gulveren**	**2.29**	**59**	*e*Pn	**Pb**	**20 55 52.4**	**-1.2**
SPNC	**Sapanca-Adapaz**	**2.30**	**52**	*e*PN	**Pb**	**20 55 52.4**	**-1.2**
SPNC	**Sapanca-Adapaz**	**2.30**	**52**	*e*Pn	**Pb**	**20 55 52.4**	**-1.2**
DAT	**Datca**	**2.56**	**186**	*e*PN	**Pb**	**20 55 56.1**	**-2.1**
DAT	**Datca**	**2.56**	**186**	*e*Pn	**Pb**	**20 55 56.1**	**-2.1**
EDRB	**Edirne**	**2.72**	**341**	*e*PN	**Pb**	**20 55 57.8**	**-3.0**
EDRB	**Edirne**	**2.72**	**341**	*e*Pn	**Pb**	**20 55 57.8**	**-3.0**
BCK	**Bucak**	**2.77**	**130**	*e*PN	**Pb**	**20 55 59.2**	**-2.4**
BCK	**Bucak**	**2.77**	**130**	*e*Pn	**Pb**	**20 55 59.2**	**-2.4**
MDUB	**Mudurnu**	**2.78**	**64**	*e*PN	**Pb**	**20 55 59.2**	**-2.5**
MDUB	**Mudurnu**	**2.78**	**64**	*e*Pn	**Pb**	**20 55 59.3**	**-2.5**
SVRH	**Sivrihisar-ESK**	**2.79**	**85**	*e*PN	**Pb**	**20 55 59.3**	**-2.7**
SVRH	**Sivrihisar-ESK**	**2.79**	**85**	*e*Pn	**Pb**	**20 55 59.3**	**-2.7**
FETY	**Fethiye**	**2.79**	**161**	*e*PN	**Pb**	**20 55 59.5**	**-2.6**
FETY	**Fethiye**	**2.79**	**161**	*e*Pn	**Pb**	**20 55 59.5**	**-2.6**
APE	**Apeiranthos**	**2.91**	**221**	*e*PN	**Pn**	**20 56 00.7**	**+1.9**
APE	**Apeiranthos**	**2.91**	**221**	⇑*i*P	Pg	20 56 13.5	+6.3
APE	**Apeiranthos**	**2.91**	**221**	*e*Pn	**Pn**	**20 56 00.7**	**+1.9**
KIZT	**Kizilcal**	**3.10**	**96**	*e*PN	Pb	20 56 03.8	-3.5
KIZT	**Kizilcal**	**3.10**	**96**	*e*Pn	Pb	20 56 03.8	-3.5
PLG	**Polygyros**	**3.63**	**289**	*e*PN	**Pn**	**20 56 10.0**	**+1.4**
PLG	**Polygyros**	**3.63**	**289**	*e*Pn	**Pn**	**20 56 10.0**	**+1.4**
NVR	**Nevrokopi**	**3.74**	**305**	*e*PN	**Pn**	**20 56 11.8**	**+1.6**
NVR	**Nevrokopi**	**3.74**	**305**	*e*Pn	**Pn**	**20 56 11.8**	**+1.6**
VTS	**Vitosha**	**4.88**	**314**	⇑*i*P	**Pn**	**20 56 24.6**	**-1.3**
VTS	**Vitosha**	**4.88**	**314**	⇑*i*P	**Pn**	**20 56 24.6**	**-1.3**
TIRR	**Tirgusor**	**5.19**	**4**	⇓*i*P	Pn	20 56 32.7	+2.7
TIRR	**Tirgusor**	**5.19**	**4**	⇓*i*P	Pn	20 56 32.7	+2.7
TIRR				S	**Sn**	**20 57 29.5**	**-0.9**
CFR	**Carcaliu**	**5.89**	**1**	⇓*i*P	Pn	20 56 43.3	+3.6
CFR	**Carcaliu**	**5.89**	**1**	⇓*i*P	Pn	20 56 43.3	+3.6
MLR	**Muntele Rosu**	**6.38**	**347**	⇓*i*P	**Pn**	**20 56 48.3**	**+1.8**
MLR	**Muntele Rosu**	**6.38**	**347**	⇓*i*P	**Pn**	**20 56 48.3**	**+1.8**
PLOR	**Plostina**	**6.63**	**352**	⇑*i*P	Pn	20 56 52.5	+2.5
PLOR	**Plostina**	**6.63**	**352**	⇑*i*P	Pn	20 56 52.5	+2.5
VRI	**Vrincioaia**	**6.64**	**353**	⇓*i*P	Pn	20 56 53.0	+3.0
VRI	**Vrincioaia**	**6.64**	**353**	⇓*i*P	Pn	20 56 53.0	+3.0

IDC 09 22:11:12.9±4.7**, 56°.21N**×**164°.78E, h0**^{km}**, mb3.3**/4**, mb1 3.6**/4**, mb1mx3.2**/27**, mbtmp3.3**/4**, Error ellipse: s-maj=161.9km s-min=24.8km az=178.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**24.70**	**50**	P	P	22 16 35.4	+0.1
	0.5nm,0.7s,baz=261,slow=7.6,SNR=8.6						
ZALV	**Zalesovo Beam**	**43.41**	**302**	P	P	22 19 15.9	-1.0
	0.4nm,0.6s,baz=41,slow=9.6,SNR=2.9						
MKAR	**Makanchi Array**	**49.25**	**296**	P	P	22 20 03.6	+0.7
	0.2nm,0.6s,baz=46,slow=4.2,SNR=2.5						
PDAR	**Pinedale Array**	**53.68**	**66**	P	P	22 20 36.2	-0.2
	0.3nm,0.8s,baz=316,slow=5.7,SNR=2.7						

MAN 09 22:12:04, 8°.02N×**123°.19E, h36**^{km}**, mb3.7, ML2.4, MS2.0, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.26**	**131**	*e*P	Pn	22 12 14.1	+2.0
PAGZ				*e*S	Sn	22 12 18.6	-0.6
DCPH	**Dipolog City**	**0.58**	**16**	⇓*e*P	Pn	22 12 18.2	+2.3
DCPH				*e*S	Sn	22 12 26.6	+2.4
IPIL	**Ipil**	**0.65**	**249**	*e*P	Pn	22 12 19.6	+2.8
IPIL				*e*S	Sn	22 12 28.5	+2.6

MEX 09 22:57:37.5±1.3**, 16°.93N**×**94°.75W, h143**^{km}±20^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		1.57	95	eP	Pn	22 58 05.8	-1.6
TGIG				i S	Sn	22 58 27.4	-2.8
HUIG	Huatulco	1.74	229	eP	Pn	22 58 07.1	-2.2
HUIG				i S	Sn	22 58 31.6	-1.9
VHO	Vista Hermosa	1.90	275	i P	Pn	22 58 10.7	-0.7
VHO				i S	Sn	22 58 36.1	-1.1
PCIG		1.91	129	eP	Pn	22 58 10.7	-0.5
PCIG				i S	Sn	22 58 35.7	-1.2
CCIG	Comitan	2.59	104	eP	Pn	22 58 18.5	-1.1
CCIG				eS	Sn	22 58 50.8	-1.3
PNIG	Pinotepa	3.28	261	i P	Pn	22 58 26.3	-1.9
PNIG				i S	Sn	22 59 04.9	-2.6

IDC 09 23:06:58.4±0.7, 30°.73S×176°.68W, h0km, mb4.2/9, mb1 4.5/9, mb1mx4.3/19, mbtmp4.2/9, MS3.6/2, Ms1 3.5/2, ms1mx2.9/24, Error ellipse: s-maj=23.1km s-min=18.8km az=64.0

ISCJB 09 23:07:00.4±0.8, 31°.11S±0°.04×177°.0W±0°.1, h33km, mb4.2/9, MS3.5/1, Error ellipse: s-maj=16.2km s-min=5.6km az=10.7

ISC 09 23:07:02.8±0.8, 31°.04S±0°.07×176°.9W±0°.1, h35km, n25, σ1§46/26, mb4.2/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.97	334	Pn	Pn	23 07 32.7	-1.0
	216nm,0.3s,baz=252,slow=19,SNR=5.7						
RAO				Sn	Sn	23 07 56.3	-0.9
	679nm,0.3s,baz=88,slow=22,SNR=7.6						
PUZ	Puketiti	8.06	208	ePN	Pn	23 08 56.7	-0.6
PUZ				eSN	Sn	23 10 28.2	+1.0
MWZ	Matawai	8.59	211	ePN	Pn	23 09 03.9	-0.7
URZ	Urewera	8.71	213	Pn	Pn	23 09 04.7	-1.5
	0.8nm,0.3s,baz=148,slow=14,SNR=5.5						
URZ				Sn	Sn	23 10 45.4	+2.2
	2.9nm,0.3s,baz=146,slow=18,SNR=7.8						
BFZ	Birch Farm	11.09	208	ePN	Pn	23 09 37.0	-1.9
MRZ	Mangatainoka R	11.36	210	ePN	Pn	23 09 39.9	-2.6
MRZ				eSN	Sn	23 11 45.0	-3.1
THZ	Tophouse	13.46	215	ePN	Pn	23 10 09.7	-1.6
KHZ	Kahutara	13.67	211	ePN	Pn	23 10 13.2	-0.9
RPZ	Rata Peaks	15.83	214	Pn	Pn	23 10 41.9	-1.0
	1.8nm,0.3s,baz=56,slow=3.8,SNR=10.0						
DZM	Mont Dzumac	17.32	297	LR	LR	23 15 25.3	
	comp=Z,206nm,19.4s,baz=53,slow=29						
STKA	Stephens Creek	35.23	258	P	P	23 13 58.1	+4.2
	8.8nm,1.0s,baz=98,slow=9.2,SNR=8.9						
STKA				LR	LR	23 25 12.8	
	comp=Z,86nm,20.1s,baz=27,slow=31						
ASAR	Alice Springs	43.99	267	P	P	23 15 09.3	+2.4
	1.9nm,0.6s,baz=107,slow=7.4,SNR=38						
WRA	Warramunga Arr	45.03	272	P	P	23 15 17.0	+1.7
	1.8nm,0.3s,baz=111,slow=8.0,SNR=16						
VNDA	Vanda	47.56	186	P	P	23 15 38.7	+4.3
	0.3nm,0.3s,baz=338,slow=6.1,SNR=3.6						
QSPA	South Pole Qui	59.08	180	P	P	23 17 02.6	+3.3
	5.3nm,1.0s,baz=52,slow=2.2,SNR=9.8						
MJAR	Matsushiro Arr	79.28	325	P	P	23 19 04.6	0.0
	1.1nm,0.7s,baz=162,slow=4.0,SNR=3.7						
NVAR	Mina Array Bea	88.09	42	P	P	23 19 49.9	0.0
	1.7nm,0.8s,baz=225,slow=8.2,SNR=7.2						
TXAR	Lajitas Array	91.97	57	P	P	23 20 07.7	-0.3
	0.7nm,0.8s,baz=198,slow=3.7,SNR=3.8						
ILAR	Eielson Array	98.34	13	P	P	23 20 35.7	-0.5
	0.4nm,0.7s,baz=227,slow=4.1,SNR=6.6						
MKAR	Makanchi Array	118.88	310	PKP	PKPdf	23 25 47.6	+0.3
	0.4nm,0.7s,baz=79,slow=3.3,SNR=4.7						
KAF	Kangasniemi	145.45	341	epkp	PKPdf	23 26 35.2	-1.1
	4.4nm,0.6s						
FINES	FINESS Array B	146.05	340	PKPbc	PKPbc	23 26 38.4	+0.2
	2.7nm,0.5s,baz=55,slow=4.1,SNR=45						
AKASG	Malin Array Be	152.36	323	PKPbc	PKPbc	23 26 55.2	+0.6
	3.0nm,0.7s,baz=47,slow=2.9,SNR=12						
BRTR	Keskin Array B	153.70	298	PKPbc	PKPbc	23 26 59.0	+0.8
	0.6nm,0.9s,baz=139,slow=1.3,SNR=3.2						
BRTR				PKPab	PKPab	23 27 11.9	+0.9
	0.5nm,0.8s,baz=92,slow=2.3,SNR=4.2						
TORD	Torodi Ar. Bea	162.15	176	PKPab	PKPab	23 27 49.0	+1.3
	1.2nm,0.7s,baz=181,slow=2.9,SNR=12						

IDC 09 23:33:48.6±2.1, 3°.03S×130°.06E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/21, mbtmp3.8/4, ML3.4/1, Error ellipse: s-maj=167.7km s-min=23.9km az=68.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.32	166	P	P	23 37 53.0	-0.6
	0.1nm,0.3s,baz=349,slow=12,SNR=4.0						
ASAR	Alice Springs	20.85	170	P	P	23 38 32.5	+0.1
	4.8nm,0.7s,baz=350,slow=9.7,SNR=65						
STKA	Stephens Creek	30.68	161	P	P	23 40 04.7	-0.5
	2.1nm,0.9s,baz=346,slow=8.3,SNR=2.4						
MKAR	Makanchi Array	64.97	326	P	P	23 44 30.5	+0.1
	0.2nm,0.5s,baz=124,slow=8.0,SNR=4.3						

ISCJB 09 23:47:50.7±0.6, 39°.47N±0°.04×20°.53E±0°.06, h9km, Error ellipse: s-maj=6.5km s-min=5.6km az=148.2

ATH 09 23:47:51.3, 39°.37N×20°.55E, h6km, MD3.0/6

CSEM 09 23:47:51.3, 39°.37N×20°.55E, h7km, MD3.0, After ATH

ISC 09 23:47:50.3±0.8, 39°.42N±0°.03×20°.56E±0°.03, h9km, n18, σ1§54/26, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.33	43	ePB	Pg	23 47 57.9	+1.1
JAN				eSB	Sb	23 48 03.8	0.0
JAN	Janina	0.33	43	ePb	Pg	23 47 57.9	+1.1
JAN				eSb	Sb	23 48 03.8	0.0
KEK	Kerkira	0.66	297	ePB	Pg	23 48 03.4	+0.3
KEK				eSB	Sb	23 48 14.4	+1.0
KEK	Kerkira	0.66	297	ePb	Pg	23 48 03.4	+0.3
KEK				eSb	Sb	23 48 14.4	+1.0
EVR	Evrytania	1.09	117	ePN	Pb	23 48 12.2	+0.8
EVR	Evrytania	1.09	117	ePn	Pb	23 48 12.2	+0.8
THL	Klokotos Trika	1.13	82	ePG	Pb	23 48 12.5	+0.5
THL	Klokotos Trika	1.13	82	ePg	Pb	23 48 12.5	+0.5
VLS	Valsamata	1.24	179	ePB	Pn	23 48 12.8	-1.0
VLS				eSB	Sn	23 48 31.5	+0.9
VLS	Valsamata	1.24	179	ePb	Pn	23 48 12.8	-1.0
VLS				eSb	Sn	23 48 31.5	+0.9
EFP	Efpalio	1.44	133	ePB	Pg	23 48 19.0	+1.1
EFP	Efpalio	1.44	133	ePb	Pg	23 48 19.0	+1.1
GUR	Goura	2.03	136	ePN	Pb	23 48 28.1	+0.7
GUR	Goura	2.03	136	ePn	Pb	23 48 28.1	+0.7
VLI	Veliai	3.28	144	ePG	Sb	23 49 30.7	+2.0
VLI				eSG	Sg	23 49 34.7	-1.0
KYTH	Kithira	3.69	147	ePG	Sn	23 49 28.9	-2.3
STON	Ston	4.07	329	ePn	Pn	23 48 52.9	+0.2
STON				Sn	Sn	23 49 38.5	-2.0
ANKY	Antikythira Is	4.16	148	ePB	Sn	23 49 37.4	-5.2

IDC 10 00:01:53.0±1.5, 36°.18N×101°.81E, h0km, mb3.3/6, mb1 3.6/8, mb1mx3.4/30, mbtmp3.3/8, ML3.1/2, MS2.7/2, Ms1 2.8/2, ms1mx2.3/25, Error ellipse: s-maj=39.9km s-min=23.1km az=45.0, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	12.13	15	Pn	Pn	00 04 48.1	+0.9
	0.2nm,0.3s,baz=192,slow=13,SNR=3.4						
CMAR	Chiang Mai Arr	17.84	189	LR	LR	00 13 33.4	
	comp=Z,33nm,18.6s,baz=0.0,slow=39						
MKAR	Makanchi Array	18.01	312	P	P	00 06 06.6	+1.3
	0.1nm,0.3s,baz=113,slow=15,SNR=3.9						
KSRS	Korea Array	20.93	79	P	P	00 06 38.1	+0.9
	2.1nm,0.7s,baz=269,slow=9.2,SNR=8.7						
ZALV	Zalesovo Beam	21.34	332	P	P	00 06 41.6	+0.2
	0.3nm,0.4s,baz=132,slow=6.2,SNR=2.9						
ZALV				LR	LR	00 16 01.2	
	comp=Z,13nm,20.4s,baz=75,slow=40						
KURBB	Kurchatov Arra	22.11	318	P	P	00 06 49.7	0.0
	0.1nm,0.3s,baz=124,slow=11,SNR=3.8						
WRA	Warramunga Arr	63.74	146	P	P	00 12 26.8	+0.1
	0.4nm,0.6s,baz=341,slow=7.0,SNR=4.1						
ILAR	Eielson Array	66.10	26	P	P	00 12 41.1	-0.4
	0.7nm,0.9s,baz=291,slow=6.4,SNR=8.6						
YKA	Yellowknife Ar	77.39	16	P	P	00 13 48.5	-0.9
	0.2nm,0.5s,baz=332,slow=6.0,SNR=5.0						

ISCJB 10 00:07:39.5±0.8, 39°.05N±0°.05×42°.00E±0°.07, h8km, Error ellipse: s-maj=7.5km s-min=6.8km az=3.6

DDA 10 00:07:41.2, 39°.11N×42°.09E, h3km, MD3.1

ISC 10 00:07:39.5±1.0, 39°.10N±0°.05×42°.05E±0°.04, h8km, n6, σ1§28/10, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRTB	Varto-Mus	0.47	277	ePN	Pg	00 07 48.0	-0.6
TUTA	Tutak	0.66	63	i P	Pg	00 07 51.5	-0.8
TUTA				i S	Sb	00 08 03.2	+0.3
HOMI	Horasan	0.95	353	i P	Pn	00 07 59.6	+0.3
HOMI				i S	Sn	00 08 13.4	+0.2
BNGB	Bingˆ¶l	1.07	264	ePN	Pg	00 07 58.5	-1.6
GEVA	Gevas	1.11	135	i P	Pg	00 07 59.5	-1.3
GEVA				i S	Sn	00 08 17.7	+0.5
BEST	Besiri	1.36	207	i P	Pn	00 08 04.4	-0.4
BEST				i S	Sg	00 08 25.4	+2.4

ISK 10 00:09:43.9, 40°.77N×30°.96E, h10km, MD2.9

DDA 10 00:09:43.9, 40°.89N×30°.94E, h10km, MD3.1

CSEM 10 00:09:44.4±0.1, 40°.74N×30°.95E, h5km, MD3.1, Error ellipse: s-maj=3.9km s-min=2.5km az=11.0

ISCJB 10 00:09:44.6±0.5, 40°.76N±0°.03×30°.93E±0°.03, h6km±4km, Error ellipse: s-maj=5.5km s-min=4.2km az=15.1

ISC 10 00:09:44.7±0.8, 40°.77N±0°.03×30°.93E±0°.02, h7km±6km, n51, σ0§68/66, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HENT	Hendek	0.06	336	i P	Pg	00 09 46.4	0.0
HENT				i S	Sg	00 09 48.0	+0.4
HENT	Hendek	0.06	336	i P	Pg	00 09 46.4	0.0
HENT				i S	Sg	00 09 48.0	+0.4
MDUB	Mudurnu	0.36	146	ePG	Pg	00 09 51.3	-0.5
MDUB				eSG	Sg	00 09 56.4	-0.2
MDUB	Mudurnu	0.36	146	ePg	Pg	00 09 51.3	-0.5
MDUB				eSg	Sg	00 09 56.4	-0.2
GULT	Gulveren	0.46	223	ePG	Pg	00 09 54.3	+0.7
GULT				eSG	Sb	00 10 01.7	-0.6
GULT	Gulveren	0.46	223	ePg	Pg	00 09 54.3	+0.7
GULT				eSg	Sb	00 10 01.7	-0.6
SPNC	Sapanca-Adapaz	0.48	260	ePG	Pg	00 09 53.9	0.0
SPNC	Sapanca-Adapaz	0.48	260	ePg	Pg	00 09 53.9	0.0
GPA	Golpazari	0.68	225	ePG	Pg	00 09 57.8	+0.1
GPA	Golpazari	0.68	225	ePg	Pg	00 09 57.8	+0.1
HRT	Hereke	0.96	273	ePG	Pb	00 10 03.2	-0.4
HRT	Hereke	0.96	273	ePg	Pb	00 10 03.2	-0.4
ADVT	Abdulvahap	0.97	250	ePG	Pg	00 10 03.0	-0.2
ADVT				eSG	Sb	00 10 17.3	+0.6
ADVT	Abdulvahap	0.97	250	ePg	Pg	00 10 03.1	-0.2
ADVT				eSg	Sb	00 10 17.3	+0.6
SILT	Sile	1.05	292	ePG	Pb	00 10 05.1	0.0
SILT				eSG	Sn	00 10 19.5	-1.1
SILT	Sile	1.05	292	ePg	Pb	00 10 05.1	0.0
SILT				eSg	Sn	00 10 19.5	-1.1
IZI	Iznik	1.19	249	ePN	Pb	00 10 07.0	-0.6
IZI	Iznik	1.19	249	ePn	Pb	00 10 07.0	-0.6
ESKT	Eskisehir	1.25	183	ePN	Pn	00 10 07.7	-1.0
ESKT	Eskisehir	1.25	183	ePn	Pn	00 10 07.7	-1.0
SEYT	Eskypehyr	1.25	183	i P	Pg	00 10 10.8	+2.1
SEYT				i S	Sn	00 10 28.5	+2.6
GEMT	Gemlik	1.37	256	ePN	Pn	00 10 09.9	-0.2
GEMT	Gemlik	1.37	256	ePn	Pn	00 10 09.9	-0.2
BUY	Buyukada	1.38	274	ePN	Pb	00 10 10.4	-0.3
BUY	Buyukada	1.38	274	i P	Pn	00 10 09.6	-0.7
BUY				i S	Sg	00 10 29.7	+0.8
BUY	Buyukada	1.38	274	i P	Pn	00 10 09.6	-0.7
BUY	Buyukada	1.38	274	ePn	Pb	00 10 10.4	-0.3
BUY				i S	Sg	00 10 29.7	+0.8
SVRH	Sivrihisar-ESK	1.40	161	ePN	Pn	00 10 09.7	-1.0
SVRH	Sivrihisar-ESK	1.40	161	ePn	Pn	00 10 09.7	-1.0
SAFT	Safranbolu	1.41	70	ePN	Pn	00 10 10.7	-0.1
SAFT	Safranbolu	1.41	70	ePn	Pn	00 10 10.7	-0.1
ISK	Istanbul-Kandi	1.45	282	ePN	Pb	00 10 11.4	-0.4
ISK	Istanbul-Kandi	1.45	282	ePn	Pb	00 10 11.5	-0.4
ARMT	Armutlu	1.59	263	ePN	Pn	00 10 13.1	-0.1
ARMT	Armutlu	1.59	263	ePn	Pn	00 10 13.1	-0.1
BGKT	Bogazkoy	1.68	285	ePN	Pb	00 10 15.0	-0.9
BGKT	Bogazkoy	1.68	285	ePn	Pb	00 10 15.0	-0.9
ANTO	Ankara	1.69	122	ePN	Pn	00 10 14.4	-0.2
ANTO	Ankara	1.69	122	ePn	Pn	00 10 14.4	-0.2
ORLT	Orhaneli	1.71	246	ePN	Pn	00 10 14.5	-0.5
ORLT	Orhaneli	1.71	246	ePn	Pn	00 10 14.5	-0.5
TVSB	Tavsanli	1.74	221	ePN	Pn	00 10 14.9	-0.4
TVSB	Tavsanli	1.74	221	ePn	Pn	00 10 14.9	-0.4
ALT	Altintas	1.83	200	ePN	Pn	00 10 16.1	-0.5
ALT	Altintas	1.83	200	ePn	Pn	00 10 16.1	-0.5
CTKS	Kestanelik-??a	1.89	285	ePN	Pn	00 10 18.0	+0.7
CTKS	Kestanelik-??a	1.89	285	ePn	Pn	00 10 18.0	+0.7
BALT	Daday	2.00	67	i P	Pn	00 10 19.2	+0.1
BALT				i S	Sb	00 10 47.0	+0.2
BALT	Daday	2.00	67	i P	Pn	00 10 19.2	+0.1
BALT				i S	Sb	00 10 47.0	+0.2
DST	Dursunbey	2.12	237	ePN	Pn	00 10 20.5	-0.1
DST	Dursunbey	2.12	237	ePn	Pn	00 10 20.5	-0.1

ISCJB 10 00:36:30.5±0.4, 19°.42S±0°.04×69°.01W±0°.06, h114km±4km, mb4.0/18, Error ellipse: s-maj=9.7km s-min=5.7km az=159.0

NEIC 10 00:36:32.0, 19°.49S×69°.22W, h115km, mb4.0/8, After GUC.

GUC 10 00:36:32.0±0.4, 19°.49S×69°.22W, h115km±3km, ML4.7

IDC 10 00:36:33.0±0.7, 19°.49S×68°.93W, h121km±5km, mb3.9/14, mb1 4.1/17, mb1mx4.0/23, mbtmp3.9/17, Error ellipse: s-maj=14.7km s-min=11.8km az=92.0

ISC 10 00:36:32.1±0.4, 19°.46S±0°.03×69°.14W±0°.05, h116km±4km, n75, σ1§29/105, mb3.9/18, 10C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	Minimini	0.54	307	⇑iP	Pn	00 36 50.3	0.0
MNMC				i S	Sn	00 37 04.0	+0.1
MNMC	Minimini	0.54	307	⇑iP	Pn	00 36 50.3	0.0
MNMC				i S	Sn	00 37 04.0	+0.1
MNMC				AML	AML	00 37 05.1	
	comp=N,65μm,0.3s						
PSGC	Pisagua	0.94	262	⇑iP	Pn	00 36 52.8	-0.5
PSGC				i S	Sn	00 37 08.8	-0.5
PSGC	Pisagua	0.94	262	⇑iP	Pn	00 36 52.8	-0.5
PSGC				i S	Sn	00 37 08.8	-0.5
PSGC				AML	AML	00 37 14.4	
	comp=E,4μm,0.4s						
HMBC	Humberstone	1.07	221	⇑iP	Pn	00 36 54.4	-0.3
HMBC				i S	Sn	00 37 11.2	-0.5
HMBC	Humberstone	1.07	221	⇑iP	Pn	00 36 54.4	-0.3
HMBC				i S	Sn	00 37 11.2	-0.5
HMBC				AML	AML	00 37 12.5	
	comp=E,16μm,0.4s						
ARCH	Arica	1.46	311	⇓iP	Pn	00 36 58.8	0.0
ARCH				i S	Sn	00 37 18.9	-0.3
ARCH	Arica	1.46	311	⇓iP	Pn	00 36 58.8	0.0
ARCH				i S	Sn	00 37 18.9	-0.3
ARCH				AML	AML	00 37 19.6	
	comp=E,15μm,0.7s						
PB01	Plate Boundary	1.60	192	⇑iP	Pn	00 37 00.8	+0.2
PB01				i S	Sn	00 37 22.2	-0.1
PB01	Plate Boundary	1.60	192	⇑iP	Pn	00 37 00.8	+0.2
PB01				i S	Sn	00 37 22.2	-0.1
PB01				AML	AML	00 37 23.6	
	comp=E,17μm,0.6s						
PB09	Plate Boundary	2.32	182	⇑iP	Pn	00 37 10.1	+0.5
PB09				i S	Sn	00 37 39.1	+0.7
PB09	Plate Boundary	2.32	182	⇑iP	Pn	00 37 10.1	+0.5
PB09				i S	Sn	00 37 39.1	+0.7
PB09				AML	AML	00 37 52.9	
	comp=E,6μm,0.5s						
LVC	Limon Verde	3.14	176	ePn	Pn	00 37 21.6	+1.3
LVC	Limon Verde	3.14	176	eP	Pn	00 37 21.6	+1.3
LPAZ	La Paz	3.30	17	ePn	Pn	00 37 25.0	+2.1
LPAZ				S	Sn	00 38 03.8	+1.9
LPAZ	La Paz	3.30	17	P	Pn	00 37 25.1	+2.2
	comp=E,40nm,0.3s,baz=204,slow=6.3,SNR=1221						
LPAZ				S	Sn	00 38 03.8	+1.9
	comp=E,2.4nm,0.3s,baz=217,slow=20,SNR=3.7						
ARE	Arequipa	3.73	323	⇓iP	Pn	00 37 26.4	-1.9
ARE				i S	Sn	00 38 06.6	-5.1
SIV	San Ignacio	8.43	67	P	Pn	00 38 28.8	-2.6
SIV	San Ignacio	8.43	67	P	Pn	00 38 28.8	-2.6
	comp=E,22nm,0.3s,baz=271,slow=10,SNR=431						
NNA	Nana	10.50	314	ePn	Pn	00 38 59.8	+0.3
NNA				Sn	Sn	00 40 52.9	-2.4
NNA	Nana	10.50	314	P	Pn	00 38 58.3	-1.2
	comp=E,1.6nm,0.3s,baz=145,slow=12,SNR=3.6						
SAML	Samuel	11.94	30	ePn	Pn	00 39 16.8	-1.9
	comp=E,6.1nm,0.4s						
CFAA	Coronel Fontan	12.12	176	P	Pn	00 39 18.3	-2.6
CFAA				S	Sn	00 41 23.8	-11
CFAA	Coronel Fontan	12.12	176	P	Pn	00 39 18.3	-2.6
	comp=E,0.0nm,0.3s,baz=347,slow=13,SNR=4.7						
CFAA				S	Sn	00 41 23.8	-11
	comp=E,0.1nm,0.3s,baz=192,slow=14,SNR=3.5						
CPUP	Villa Florida	12.85	124	P	Pn	00 39 28.2	-2.3
CPUP	Villa Florida	12.85	124	P	Pn	00 39 28.2	-2.3
	comp=E,0.4nm,0.3s,baz=279,slow=12,SNR=6.1						
TRQA	Tornquist	19.55	163	eP	P	00 40 49.4	-1.3
BDFB	Brasilia	20.49	83	P	P	00 40 59.8	-1.4
BDFB	Brasilia	20.49	83	P	P	00 40 59.8	-1.4
	comp=E,31nm,0.5s,baz=252,slow=10.0,SNR=34						
SPB	Sao Paulo	20.60	105	eP	P	00 41 00.3	-1.8
	comp=E,10nm,0.4s						
PLCA	Paso Flores	21.23	183	eP	P	00 41 10.7	+1.9
	comp=E,6.0nm,0.8s						
PLCA	Paso Flores	21.23	183	P	P	00 41 08.6	-0.2
	comp=E,5.9nm,0.8s,baz=0.4,slow=11,SNR=8.0						
OTAV	Otavalo	21.61	334	eP	P	00 41 15.5	+2.1
	comp=E,5.0nm,0.8s						
RCBR	Riachuelo	35.06	72	P	P	00 43 12.9	-1.3
RCBR	Riachuelo	35.06	72	P	P	00 43 12.9	-1.3
	comp=E,11nm,0.5s,baz=228,slow=8.6,SNR=27						
CELP	Cerrillos	37.39	4	eP	P	00 43 33.0	-0.8
TXAR	Lajitas Array	58.85	325	P	P	00 46 19.5	+0.7
TXAR	Lajitas Array	58.85	325	P	P	00 46 19.5	+0.7
	comp=E,0.2nm,0.4s,baz=148,slow=7.9,SNR=3.8						
SDCO	Great Sand Dun	66.40	329	eP	P	00 47 09.8	+0.7
	comp=E,3.5nm,1.2s						
SMCO	Snowmass	68.23	329	eP	P	00 47 21.8	+1.0
	comp=E,1.1nm,0.6s						
DBIC	Dimbokro	68.38	74	P	P	00 47 20.7	-1.0
DBIC	Dimbokro	68.38	74	P	P	00 47 20.7	-1.0
	comp=E,15nm,0.7s,baz=240,slow=5.3,SNR=17						
QSPA	South Pole Qui	70.72	180	P	P	00 47 36.5	+1.2
QSPA	South Pole Qui	70.72	180	P	P	00 47 36.5	+1.2
	comp=E,1.1nm,0.6s,baz=29,slow=4.2,SNR=6.5						
PDAR	Pinedale Array	72.25	330	P	P	00 47 45.2	+0.3
PDAR	Pinedale Array	72.25	330	P	P	00 47 45.2	+0.3
	comp=E,0.7nm,0.8s,baz=120,slow=6.6,SNR=5.3						
NVAR	Mina Array Bea	73.77	322	P	P	00 47 54.5	+0.6
NVAR	Mina Array Bea	73.77	322	P	P	00 47 54.5	+0.6
	comp=E,0.6nm,0.5s,baz=153,slow=5.0,SNR=3.7						
SCHQ	Schefferville	74.02	1	P	P	00 47 55.0	+0.3
SCHQ	Schefferville	74.02	1	P	P	00 47 55.0	+0.3
	comp=E,1.4nm,0.8s,baz=153,slow=6.8,SNR=3.3						
HLID	Hailey	75.22	328	eP	P	00 48 03.3	+1.1
	comp=E,3.3nm,1.2s						
MCMT	McKenzie Canyo	75.37	329	eP	P	00 48 04.6	+1.5
	comp=E,0.8nm,0.7s						
TORD	Torodi Ar. Bea	76.89	71	P	P	00 48 10.7	-1.4
TORD				pP	pP	00 48 42.0	+0.6
TORD				PP	PP	00 50 54.4	-12
TORD	Torodi Ar. Bea	76.89	71	P	P	00 48 10.7	-1.4
	comp=E,3.6nm,0.4s,baz=252,slow=5.3,SNR=115						
TORD				pP	pP	00 48 42.0	+0.6
	comp=E,2.7nm,0.8s,baz=250,slow=5.9,SNR=2.6						
TORD				PP	PP	00 50 54.4	-12
	comp=E,1.3nm,0.8s,baz=246,slow=7.8,SNR=4.3						
TSUM	Tsumeb	80.83	107	P	P	00 48 33.9	+0.2
TSUM	Tsumeb	80.83	107	P	P	00 48 33.9	+0.2
	comp=E,1.8nm,0.8s,baz=207,slow=6.8,SNR=6.1						
ESDC	Sonseca Array	84.54	45	P	P	00 48 52.0	-0.3
ESDC	Sonseca Array	84.54	45	P	P	00 48 52.0	-0.3
	comp=E,0.3nm,0.5s,baz=221,slow=8.1,SNR=4.4						
BOSA	Boshof	84.59	118	P	P	00 48 53.0	-0.1
BOSA	Boshof	84.59	118	P	P	00 48 53.0	-0.1
	comp=E,2.1nm,0.8s,baz=8.1,slow=5.5,SNR=3.2						
YKA	Yellowknife Ar	89.20	341	P	P	00 49 14.7	+0.5
YKA				pP	pP	00 49 45.6	+1.2
YKA	Yellowknife Ar	89.20	341	P	P	00 49 14.7	+0.5
	comp=E,2.5nm,0.5s,baz=132,slow=4.7,SNR=110						
YKA				pP	pP	00 49 45.6	+1.2
	comp=E,1.3nm,0.6s,baz=134,slow=4.8,SNR=6.1						
ASAR	Alice Springs	131.60	209	PKP	PKPdf	00 55 32.4	+0.4
ASAR				pPKP	pPKPdf	00 56 04.2	+0.7
ASAR	Alice Springs	131.60	209	PKP	PKPdf	00 55 32.4	+0.4
	comp=E,0.3nm,0.6s,baz=132,slow=1.6,SNR=7.2						
ASAR				pPKP	pPKPdf	00 56 04.2	+0.7
	comp=E,0.7nm,0.9s,baz=144,slow=2.4,SNR=3.0						
WRA	Warramunga Arr	134.58	212	PKP	PKPdf	00 55 38.6	+0.9
WRA				pPKP	pPKPdf	00 56 10.0	+0.9
WRA	Warramunga Arr	134.58	212	PKP	PKPdf	00 55 38.6	+0.9
	comp=E,0.3nm,0.4s,baz=151,slow=1.7,SNR=4.0						
WRA				pPKP	pPKPdf	00 56 10.0	+0.9
	comp=E,0.4nm,0.3s,baz=155,slow=1.8,SNR=2.6						
ZALV	Zalesovo Beam	140.20	24	PKP	PKPdf	00 55 48.8	+1.9
ZALV	Zalesovo Beam	140.20	24	PKP	PKPdf	00 55 48.8	+1.9
	comp=E,0.3nm,0.4s,baz=281,slow=3.4,SNR=2.3						
MKAR	Makanchi Array	144.10	34	PKP	PKPdf	00 55 54.4	+0.3
MKAR				pPKP	pPKPdf	00 56 27.4	+1.8
MKAR	Makanchi Array	144.10	34	PKP	PKPdf	00 55 54.4	+0.3
	comp=E,0.1nm,0.4s,baz=327,slow=2.9,SNR=3.6						
MKAR				pPKP	pPKPdf	00 56 27.4	+1.8
	comp=E,0.3nm,0.6s,baz=317,slow=3.4,SNR=2.4						
USRK	Ussuriysk Arra	149.67	329	PKPbc	PKPbc	00 56 09.5	+1.4
	comp=E,1.5nm,0.6s,baz=90,slow=1.9,SNR=3.8						
MJAR	Matsushiro Arr	150.61	311	PKPbc	PKPbc	00 56 11.4	+0.6
MJAR	Matsushiro Arr	150.61	311	PKPbc	PKPbc	00 56 11.4	+0.6
	comp=E,1.5nm,0.7s,baz=96,slow=1.2,SNR=8.5						
SONM	Songino Array	151.47	6	PKP	PKPdf	00 56 06.9	+0.6
SONM				PKPbc	PKiKP	00 56 13.6	+0.6
SONM				pPKPbc	pPKPbc	00 56 45.5	+1.6
SONM	Songino Array	151.47	6	PKP	PKPdf	00 56 06.9	+0.6
	comp=E,0.2nm,0.3s,baz=93,slow=2.9,SNR=4.5						
SONM				PKPbc	PKiKP	00 56 13.6	+0.6
	comp=E,0.4nm,0.3s,baz=344,slow=1.4,SNR=5.7						
SONM				pPKPbc	pPKPbc	00 56 45.5	+1.6
	comp=E,0.8nm,0.6s,baz=314,slow=1.2,SNR=3.3						

CSEM 10 00:41:11.5±0.4, 37°.72N×44°.06E, h2km, MD3.5, Error ellipse: s-maj=9.4km s-min=5.3km az=98.0

ISK 10 00:41:11.5, 37°.76N×43°.87E, h5km, MD3.7

DDA 10 00:41:14.1, 37°.74N×43°.74E, h5km, MD3.5

ISC 10 00:41:11.9±1.2, 37°.70N±0°.02×44°.06E±0°.04, h12km±9km, n50, σ1§34/72, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAKT	HAKKARI	0.31	243	i P	Pg	00 41 18.0	-0.3
HAKT				i S	Sg	00 41 22.9	+0.4
HAKT	HAKKARI	0.31	243	i P	Pg	00 41 18.0	-0.3
HAKT				i S	Sg	00 41 22.9	+0.4
CUKT	Cukurca	0.57	219	ePG	Pg	00 41 23.5	+0.4
CUKT				eSG	Sg	00 41 31.8	+1.1
CUKT	Cukurca	0.57	219	ePg	Pg	00 41 23.5	+0.4
CUKT				eSg	Sg	00 41 31.8	+1.1
TVAN	Van	0.97	328	i P	Pg	00 41 29.7	-1.0
TVAN				i S	Sb	00 41 44.3	+0.5
TVAN	Van	0.97	328	i P	Pg	00 41 29.7	-1.0
TVAN				i S	Sb	00 41 44.3	+0.5
GEVA	Gevas	1.00	308	i P	Pg	00 41 29.3	-1.8
GEVA				i S	Sg	00 41 43.6	-0.6
GEVA	Gevas	1.00	308	i P	Pg	00 41 29.3	-1.8
GEVA				i S	Sg	00 41 43.6	-0.6
VANB	Van	1.04	330	ePG	Pg	00 41 29.4	-2.5
VANB				eSG	Sg	00 41 43.4	-2.1
VANB	Van	1.04	330	ePg	Pg	00 41 29.4	-2.5
VANB				eSg	Sg	00 41 43.4	-2.1
SIRN	S˜–rnak	1.32	262	i P	Pn	00 41 35.8	-0.5
SIRN				i S	Sb	00 41 53.9	+0.3
SIRN	S˜–rnak	1.32	262	i P	Pn	00 41 35.8	-0.5
SIRN				i S	Sb	00 41 53.9	+0.3
CLDR	Caldiran	1.45	356	ePN	Pn	00 41 38.5	+0.4
CLDR				eSN	Sg	00 41 58.8	+0.3
CLDR	Caldiran	1.45	356	ePn	Pn	00 41 38.5	+0.4
CLDR				eSn	Sg	00 41 58.8	+0.3
TATV	Tatvan	1.63	300	i P	Pn	00 41 41.4	+0.8
TATV				i S	Sg	00 42 06.0	+1.8
TATV	Tatvan	1.63	300	i P	Pn	00 41 41.4	+0.8
TATV				i S	Sg	00 42 06.0	+1.8
DYDN	Diyadin	1.86	351	i P	Pg	00 41 48.2	+0.5
DYDN				i S	Sg	00 42 18.8	+6.9

DYDN	Diyadin	1.86	351	*i*P	Pg	00 41 48.2	+0.5
TUTA	Tutak	1.96	331	*i*P	Pb	00 41 47.5	-0.2
TUTA				*i*S	Sg	00 42 17.0	+2.1
TUTA	Tutak	1.96	331	*i*P	Pb	00 41 47.5	-0.2
BTMT	Batman	2.09	284	*e*PN	Pb	00 41 48.6	-1.1
BTMT	Batman	2.09	284	*e*Pn	Pb	00 41 48.7	-1.1
BEST	Besiri	2.22	276	*i*P	Pn	00 41 50.3	+1.8
BEST				*i*S	Sg	00 42 22.0	-1.1
GNI	Garni	2.50	12	*e*PN	Pn	00 41 54.7	+2.1
GNI	Garni	2.50	12	*e*Pn	Pn	00 41 54.7	+2.1
VRTB	Varto-Mus	2.51	306	*e*PN	Pn	00 41 52.8	+0.1
VRTB	Varto-Mus	2.51	306	*e*Pn	Pn	00 41 52.8	+0.1
BNGL	BINGOL	2.61	300	*i*P	Pb	00 41 58.9	+0.2
BNGL				*i*S	Sg	00 42 40.5	+4.9
MARD	Mardin	2.63	263	*i*P	Pn	00 41 56.4	+2.0
MARD				*i*S	Sg	00 42 35.5	-1.0
BNGB	Bingˆ¶l	2.95	297	*e*PN	Pn	00 41 59.2	+0.5
DIY	Diyarbakir	3.04	275	*e*PN	Pn	00 42 00.6	+0.7
ERZM	Erzurum	3.05	317	*i*P	Pb	00 42 07.8	+1.6
ERZM				*i*S	Sg	00 42 48.4	-1.4
EZM	Erzurum	3.05	317	*e*PN	Pn	00 42 00.9	+0.7
PTK	Pertek	3.86	289	*e*PN	Pn	00 42 12.0	+0.7
PTK	Pertek	3.86	289	*e*Pn	Pn	00 42 12.0	+0.7
ERZN	Erzincan	3.88	300	*e*PN	Pn	00 42 12.3	+0.8
BAYT	Ayd˜–ntepe-Bay	4.07	313	*e*PN	Pn	00 42 15.4	+1.3
BAYT	Ayd˜–ntepe-Bay	4.07	313	*e*Pn	Pn	00 42 15.4	+1.3
URFA	Urfa	4.17	268	*e*PN	Pn	00 42 16.4	+1.0
URFA	Urfa	4.17	268	*e*Pn	Pn	00 42 16.4	+1.0
EZC	Erzincan	4.21	301	*e*PN	Pn	00 42 17.2	+1.1
EZC	Erzincan	4.21	301	*e*Pn	Pn	00 42 17.2	+1.1
BHD	Baghdad	4.43	176	*e*x	Pn	00 42 18.0	-0.9
BHD				*e*x	Sn	00 43 08.0	-2.3
BHD	Baghdad	4.43	176	*e*P	Pn	00 42 18.0	-0.9
MYA	Malataya	4.49	280	*e*PN	Pn	00 42 21.2	+1.3
MYA	Malataya	4.49	280	*e*Pn	Pn	00 42 21.2	+1.3
ILIC	ilic-Erzincan	4.64	294	*e*PN	Pn	00 42 23.1	+1.1
ILIC	ilic-Erzincan	4.64	294	*e*Pn	Pn	00 42 23.1	+1.1
GAZ	Gaziantep	5.47	267	*e*PN	Pn	00 42 34.6	+1.2
GAZ	Gaziantep	5.47	267	*e*Pn	Pn	00 42 34.6	+1.2

ROM 10 00:57:40.7±0.1**, 42°.32N×13°.41E, h12**km±1km**, Md1.2**/2**, Ml0.6**/1**, 1C, Error ellipse: s-maj=2.2km s-min=1.0km az=19.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	347	⇑*i*Pg	Pg	00 57 43.4	+0.4
AQU				Sg	Sg	00 57 45.1	+0.4
	31nm,0.4s						
FAGN	Fagnano	0.14	111	Pg	Pg	00 57 44.3	+0.2
FAGN				Sg	Sg	00 57 47.3	+0.7
	13nm,0.4s						

*IDC **10** 01:07:29.4±0.7, 25°.34N×57°.06E, h0km, mb4.1/24, mb1 4.2/27, mb1mx4.1/35, mbtmp4.1/27, ML3.9/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/48, Error ellipse: s-maj=16.5km s-min=13.3km az=162.0*

*OMAN **10** 01:07:31.6±0.7, 25°.61N×57°.30E, h29km, Error ellipse: s-maj=1.9km s-min=0.7km az=19.0*

*MOS **10** 01:07:32.5±0.8, 25°.39N×57°.03E, h33km, mb4.6/50, Error ellipse: s-maj=8.1km s-min=4.9km az=119.4*

*TEH **10** 01:07:32.1, 25°.42N×57°.04E, h30km, ML4.2*

*CSEM **10** 01:07:33.9±0.1, 25°.40N×57°.05E, h30km, mb4.3/61, Ms4.0, Error ellipse: s-maj=3.7km s-min=3.5km az=105.0*

*THR **10** 01:07:34.0±0.3, 25°.62N×56°.97E, h14km±8km, ML4.1*

*NEIC **10** 01:07:34.4±1.5, 25°.39N×57°.05E, h34km±10km, mb4.4/21, ML4.1(THR), MN4.2(TEH), Error ellipse: s-maj=6.7km s-min=3.8km az=165.0*

NEIC Felt at Khawr Fakkan, United Arab Emirates.

ISC 10 01:07:31.6±1.2**, 25°.41N**±0°.03×**57°.14E**±0°.04**, h16**km±7km**, n427, σ1§03**/430**, mb4.4**/70**, 43C-15D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BANOM	Banah	0.91	304	⇑P	Pg	01 07 48.5	-0.8
	SNR=1729						
BANOM				⇓S	Sg	01 07 59.5	-1.9
BANOM	Banah	0.91	304	P	Pg	01 07 48.6	-0.7
	SNR=1000						
BANOM				S	Sg	01 07 59.8	-1.5
HATD	Hatta, Dubai	1.08	238	⇓P	Pb	01 07 51.5	-0.3
HATD				⇑S	Sg	01 08 04.9	-1.7
HATD	Hatta, Dubai	1.08	238	P	Pb	01 07 51.5	-0.3
HATD				S	Sg	01 08 04.9	-1.7
ASHO	Ashiyiah	1.22	234	⇓P	Pn	01 07 54.3	+0.4
ASHO	Ashiyiah	1.22	234	P	Pn	01 07 54.3	+0.4
NAZ	Nazwa, Dubai	1.40	253	⇓P	Pg	01 07 59.5	+0.9
	SNR=49						
NAZ				⇑S	Sg	01 08 20.2	+3.4
NAZ	Nazwa, Dubai	1.40	253	P	Pn	01 07 57.0	+0.6
FAQ	Al Faqa, Dubai	1.55	245	P	Pb	01 07 59.7	-0.1
ASUD	Al Ashush, Dub	1.81	245	⇓P	Pg	01 08 05.8	-0.6
	SNR=446						
ASUD				⇑S	Sg	01 08 30.7	+0.6
ASUD	Al Ashush, Dub	1.81	245	P	Pg	01 08 05.8	-0.6
	SNR=446						
HOQ	Hoqain	1.82	175	⇑P	Pn	01 08 02.1	-0.2
	SNR=166						
HOQ	Hoqain	1.82	175	P	Pn	01 08 02.1	-0.2
	SNR=166						
IBND	Bandar-abas	2.10	345	*e*Sg	Sb	01 08 35.2	+0.1
IBND				*e*Pn	Pn	01 08 06.8	+0.7
IBND				*e*		01 08 54.3	
	comp=Z,45μm,0.1s						
IBND	Bandar-abas	2.10	345	Pn	Pn	01 08 07.0	+0.9
IBND	Bandar-abas	2.10	345	Sg	Sb	01 08 35.1	0.0
ARQ	Araqi	2.14	195	⇑P	Pb	01 08 09.9	0.0
	SNR=76						
ARQ	Araqi	2.14	195	P	Pb	01 08 09.9	0.0
	SNR=76						
BNDS	Bandar-Abbas	2.16	337	*e*Pg	Pn	01 08 09.0	+1.9
BNDS				AML	AML	01 08 50.8	
	comp=N,1μm,0.3s						
BNDS	Bandar-Abbas	2.16	337	*e*P	Pn	01 08 07.0	-0.1
BNDS	Bandar-Abbas	2.16	337	*e*P	Pn	01 08 07.0	-0.1
BNDS	Bandar-Abbas	2.16	337	*e*Pg	Pn	01 08 09.0	+1.9
SMDO	Samad	2.48	160	P	Pn	01 08 12.1	+0.7
	SNR=92						
SMDO	Samad	2.48	160	P	Pn	01 08 12.1	+0.7
	SNR=92						
BSY	Bisya	2.65	179	⇑P	Pb	01 08 16.7	-2.0
	SNR=94						
BSYO	Bisya	2.67	178	P	Pn	01 08 16.7	+2.8
	SNR=94						
JMDO	Jabal Madar	3.15	163	⇑P	Pn	01 08 22.7	+2.2
	SNR=61						
JMDO	Jabal Madar	3.15	163	P	Pn	01 08 22.7	+2.2
	SNR=61						
WBK	Wadi Bani Khal	3.25	149	⇓P	Pn	01 08 23.2	+1.3
	SNR=199						
WBK	Wadi Bani Khal	3.25	149	P	Pn	01 08 23.2	+1.3
	SNR=199						
KRBR	Kerman	4.57	356	*e*Pn	Pn	01 08 42.1	+1.8
KRBR				AML	AML	01 09 59.9	
	comp=N,154nm,0.5s						
KRBR				AML	AML	01 10 00.3	
	comp=E,246nm,0.3s						
KRBR	Kerman	4.57	356	*e*P	Pn	01 08 42.0	+1.8
KRBR	Kerman	4.57	356	*e*P	Pn	01 08 42.0	+1.8
GHIR	Ghir-Karzin	4.69	309	*e*Pn	Pn	01 08 43.1	+1.4
GHIR				AML	AML	01 09 39.4	
	comp=N,167nm,0.2s						
GHIR				AML	AML	01 09 40.8	
	comp=E,180nm,0.4s						
GHIR	Ghir-Karzin	4.69	309	*e*P	Pn	01 08 42.0	+0.3
GHIR	Ghir-Karzin	4.69	309	*e*P	Pn	01 08 42.0	+0.3
GHIR	Ghir-Karzin	4.69	309	*e*Pn	Pn	01 08 43.1	+1.4
ZHSF	Zahedan	5.29	37	*e*PN5	Pn	01 08 53.9	+3.8
ZHSF	Zahedan	5.29	37	*e*P	Pn	01 08 53.0	+3.0
ZHSF	Zahedan	5.29	37	*e*P	Pn	01 08 53.0	+3.0
ISRV	Sarvestan	5.33	319	*e*Pn	Pn	01 08 52.0	+1.2
ISRV				*e*		01 10 02.6	
	comp=Z,2μm,0.2s						
ISRV	Sarvestan	5.33	319	Pn	Pn	01 08 52.5	+1.7
ISRV				Sn	Sn	01 09 50.8	-1.3
ISRV	Sarvestan	5.33	319	*e*Pn	Pn	01 08 52.0	+1.2
ISRV				Sn	Sn	01 09 50.8	-1.3
IBAF	Bafgh	6.31	348	*e*		01 10 45.1	
	comp=Z,352nm,0.3s						
IMEH	Mehriz	6.36	340	*e*Pn	Pn	01 09 05.4	+0.6
IMEH				*e*		01 10 24.3	
	comp=Z,483nm,0.1s						
IMEH	Mehriz	6.36	340	*e*Pn	Pn	01 09 05.4	+0.6
ICHK	Chekchek	7.22	341	*e*Pn	Pn	01 09 17.5	+0.9
ICHK				*e*		01 09 43.2	
	comp=Z,257nm,0.2s						
ICHK	Chekchek	7.22	341	*e*Pn	Pn	01 09 17.5	+0.9
IGAR	Gharneh	8.28	329	*e*Pn	Pn	01 09 31.5	+0.4
IGAR				*e*		01 09 36.7	
	comp=Z,859nm,0.1s						
RBK	Rabkut	8.33	200	⇓S	Sn	01 10 59.4	-6.1
IZEF	Zefreh	8.56	332	*e*Pn	Pn	01 09 34.4	-0.7
IZEF				*e*		01 09 43.8	
	comp=Z,194nm,0.1s						
IZEF	Zefreh	8.56	332	*e*Pn	Pn	01 09 34.4	-0.7
ABTO	Aybut	8.78	205	⇑P	Pn	01 09 36.2	-1.7
ABTO				⇑S	Sn	01 11 10.4	-6.2
ABTO	Aybut	8.78	205	P	Pn	01 09 36.2	-1.7
QRN	Al-Qurain	8.86	294	*e*P	Pn	01 09 39.2	+0.3
QRN				AML	AML	01 11 12.5	
	comp=Z,43nm,0.4s						
IPIR	Pirpir	9.07	324	*e*Pn	Pn	01 09 43.0	+0.8
IPIR				*e*		01 11 21.9	
	comp=Z,762nm,0.3s						
IPIR	Pirpir	9.07	324	*e*Pn	Pn	01 09 43.0	+0.8
KBD	Kabd	9.20	296	*e*P	Pn	01 09 43.4	-0.2
KBD	Kabd	9.20	296	*e*P	Pn	01 09 43.4	-0.2
RDF	Al-Radifah	9.23	294	*e*P	Pn	01 09 44.4	+0.4
RDF				AML	AML	01 11 20.0	
	comp=Z,21nm,0.6s						
RDF	Al-Radifah	9.23	294	*e*P	Pn	01 09 44.4	+0.4
IKLH	Kolahrood	9.25	330	*e*Pn	Pn	01 09 45.2	+0.7
IKLH				*e*		01 09 58.0	
	comp=Z,207nm,0.2s						
IKLH	Kolahrood	9.25	330	*e*Pn	Pn	01 09 45.2	+0.7
MIB	Mutribah	9.73	299	*e*P	Pn	01 09 51.0	+0.1
MIB				AML	AML	01 11 31.0	
	comp=Z,28nm,0.5s						
MIB	Mutribah	9.73	299	*e*P	Pn	01 09 51.0	+0.1
RAYN	Ar Rayn	10.76	262	P	Pn	01 10 03.4	-1.7
RAYN	Ar Rayn	10.76	262	P	Pn	01 10 03.4	-1.7
ISFR	Sfrayin	11.63	3	*e*Pn	Pn	01 10 18.4	+1.2
ISFR	Sfrayin	11.63	3	*e*Pn	Pn	01 10 18.4	+1.2
IKOM	Komasi	12.08	319	*e*Pn	Pn	01 10 21.9	-1.3
IKOM				*e*		01 10 23.4	
	comp=Z,612nm,0.2s						
IKOM	Komasi	12.08	319	*e*Pn	Pn	01 10 21.9	-1.3
IVIS	Veis	12.72	318	*e*Pn	Pn	01 10 30.3	-1.6
IVIS	Veis	12.72	318	*e*Pn	Pn	01 10 30.3	-1.6
IDHR	Dehrash	13.12	317	*e*Pn	Pn	01 10 34.9	-2.5
IDHR				*e*		01 12 58.6	
	comp=Z,678nm,0.2s						
IDHR	Dehrash	13.12	317	*e*Pn	Pn	01 10 34.9	-2.5
KBL	Kabul	13.75	46	P	Pn	01 10 47.3	+1.3
KBL	Kabul	13.75	46	Pn	Pn	01 10 47.3	+1.3
KBL				*e*		01 10 55.2	
KBL	Kabul	13.75	46	Pn	Pn	01 10 47.3	+1.3
GNI	Garni	17.99	328	*e*P	P	01 11 42.3	+0.7
	comp=Z,11nm,0.9s						
GNI	Garni	17.99	328	P	P	01 11 42.9	+1.3
	comp=Z,0.3nm,0.3s,baz=149,slow=5.9,SNR=3.6						
GNI	Garni	17.99	328	*e*P	P	01 11 42.3	+0.7
	comp=Z,11nm,0.9s						
ASF	Jabal al Asfar	18.96	295	P	P	01 11 51.9	-0.4
ASF	Jabal al Asfar	18.96	295	P	P	01 11 51.9	-0.4
	comp=Z,0.3nm,0.3s,baz=175,slow=4.5,SNR=4.2						
ATD	Arta Tunnel	19.32	227	P	P	01 11 56.9	+0.7
ATD	Arta Tunnel	19.32	227	P	P	01 11 56.9	+0.7
	comp=Z,0.4nm,0.3s,baz=125,slow=12,SNR=5.0						
ATD	Arta Tunnel	19.32	227	P	P	01 11 56.9	+0.7
EIL	Elat	20.12	287	P	P	01 12 04.6	-0.2
EIL	Elat	20.12	287	P	P	01 12 04.6	-0.2
	comp=Z,3.8nm,0.6s,baz=97,slow=5.9,SNR=3.7						
EIL	Elat	20.12	287	P	P	01 12 04.6	-0.2
MMAI	Mount Meron Ar	20.41	297	P	P	01 12 09.2	+1.3
MMAI	Mount Meron Ar	20.41	297	P	P	01 12 09.2	+1.3
	comp=Z,1.8nm,0.4s,baz=98,slow=11,SNR=5.7						
MMAI				LR	LR	01 19 49.3	
	comp=Z,16nm,19.0s,baz=275,slow=36						
MMAI	Mount Meron Ar	20.41	297	P	P	01 12 09.2	+1.3
ZEI	Tsey	20.45	331	*e*P	Pn	01 12 10.5	-0.3
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
ZEI	Tsey	20.45	331	*e*P	Pn	01 12 10.5	-0.3
	comp=Z,8.0nm,1.5s						
KKAR	Karatay Array	20.78	29	*e*P	P	01 12 11.5	-0.4
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KKAR	Karatay Array	20.78	29	*e*P	P	01 12 11.5	-0.4
	comp=Z,6.5nm,0.7s						
KKAR	Karatay Array	20.78	29	*e*P	P	01 12 11.5	-0.4
	comp=Z,6.5nm,0.7s						
KSH	Kashi	21.17	44	P	P	01 12 10.5	-5.7
KSH				*e*pP	pP	01 12 16.2	-4.7
KSH				*e*sP	sP	01 12 19.3	-3.7
KSH				*e*PP	PnPn	01 12 32.1	-3.5
KSH				*e*S	S	01 15 55.4	-16
KSH				*e*sS	sS	01 16 03.7	-15
KSH				*e*PcP	PcP	01 16 19.4	-2.3
KSH				*e*SS	SnSn	01 16 28.9	-4.2
KSH				*e*ScP	ScP	01 19 53.7	-4.3
KSH				*e*PcS	PcS	01 19 57.3	-2.5
KSH	Kashi	21.17	44	*e*ScS	ScS	01 23 35.8	-6.0
KSH				pmax	pmax		
	comp=Z,95nm,2.2s						
KSH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSH				LR	LR		
	comp=N,190nm,6.4s						
KSH				LR	LR		
	comp=E,190nm,6.3s						
KSH				LR	LR		
	comp=Z,290nm,5.2s						
AML	Almayashu	21.56	35	*i*P	P	01 12 21.1	+0.4
AML	Almayashu	21.56	35	P	P	01 12 21.1	+0.4
	SNR=40						
AML	Almayashu	21.56	35	*i*P	P	01 12 21.1	+0.4
KBZ	Khabaz	21.66	331	P	P	01 12 23.0	+1.8
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	Khabaz	21.66	331	P	P	01 12 23.0	+1.8
KBZ	Khabaz	21.66	331	P	P	01 12 23.0	+1.8
	comp=Z,2.4nm,0.8s,baz=126,slow=7.3,SNR=5.8						
KBZ	Khabaz	21.66	331	P	P	01 12 23.0	+1.8
	comp=Z,2.0nm,0.8s						
KIV	Kislovodsk	21.93	331	⇑*i*P	P	01 12 25.2	+0.9
KIV				pmax	pmax		
	comp=Z,18nm,1.3s						
KIV	Kislovodsk	21.93	331	*i*P	P	01 12 25.2	+0.9
	comp=Z,18nm,1.3s						
EKS2	Erkin-Say	21.98	34	*e*P	P	01 12 26.0	+1.0
EKS2				pmax	pmax		
	comp=Z,17nm,0.7s						
EKS2	Erkin-Say	21.98	34	*e*P	P	01 12 25.9	+1.0
	comp=Z,17nm,0.7s						
EKS2	Erkin-Say	21.98	34	P	P	01 12 26.2	+1.2
	SNR=21						
EKS2	Erkin-Say	21.98	34	*e*P	P	01 12 26.0	+1.0
	comp=Z,17nm,0.7s						
AAK	Ala-Archa	22.34	35	P	P	01 12 30.3	+1.5
AAK				pmax	pmax		
	comp=Z,18nm,1.0s						
AAK	Ala-Archa	22.34	35	*e*P	P	01 12 29.8	+1.0
	comp=Z,15nm,0.8s						
AAK	Ala-Archa	22.34	35	P	P	01 12 30.3	+1.5
	SNR=10						
AAK	Ala-Archa	22.34	35	P	P	01 12 30.3	+1.5
	comp=Z,18nm,1.0s,baz=203,slow=8.8,SNR=18						
AAK	Ala-Archa	22.34	35	*e*P	P	01 12 29.8	+1.0
	comp=Z,15nm,0.8s						
KZA	Kyzart	22.36	37	*i*P	P	01 12 30.6	+1.3
KZA	Kyzart	22.36	37	P	P	01 12 30.6	+1.3
	SNR=24						
KZA	Kyzart	22.36	37	*i*P	P	01 12 30.6	+1.3
CHMS	Chumysh	22.73	35	*i*P	P	01 12 36.1	+3.3
CHMS	Chumysh	22.73	35	P	P	01 12 36.1	+3.3
	SNR=5.5						
CHMS	Chumysh	22.73	35	*i*P	P	01 12 36.1	+3.3
ULHL	Ulahol	23.02	38	*i*P	P	01 12 39.9	+3.9
ULHL	Ulahol	23.02	38	P	P	01 12 40.0	+3.9
	SNR=6.1						
TKM2	Tokmak 2	23.12	36	*e*P	P	01 12 37.3	+0.2
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TKM2	Tokmak 2	23.12	36	*e*P	P	01 12 37.3	+0.2
	comp=Z,3.3nm,0.6s						
TKM2	Tokmak 2	23.12	36	P	P	01 12 37.9	+0.8
	SNR=8.2						
TKM2	Tokmak 2	23.12	36	*e*P	P	01 12 37.3	+0.2
	comp=Z,3.3nm,0.6s						
BRTR	Keskin Array B	24.32	312	P	P	01 12 49.8	+1.1
BRTR	Keskin Array B	24.32	312	P	P	01 12 49.8	+1.1
	comp=Z,6.3nm,0.8s,baz=133,slow=12,SNR=55						
BRTR	Keskin Array B	24.32	312	*e*P	P	01 12 49.7	+1.1
	comp=Z,6.0nm,0.8s						
BR131	Keskin Array S	24.32	312	*e*P	P	01 12 49.2	+0.6
	comp=Z,5.8nm,0.8s						
BR131	Keskin Array S	24.32	312	*e*P	P	01 12 49.2	+0.6
	comp=Z,5.8nm,0.8s						
ANTO	Ankara	24.96	311	*e*P	P	01 12 54.8	+0.5
ANTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ANTO	Ankara	24.96	311	*e*P	P	01 12 54.8	+0.5
	comp=Z,10nm,1.0s						
ANTO	Ankara	24.96	311	*e*P	P	01 12 54.8	+0.5
	comp=Z,10nm,1.0s						
AKTK	Aktyubinsk	25.00	1	P	P	01 12 55.6	+1.2
	comp=Z,8.0nm,0.8s						
AKTO	Aktyubinsk	25.00	1	P	P	01 12 55.6	+1.2
AKTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AKTO	Aktyubinsk	25.00	1	P	P	01 12 55.6	+1.2
AKTO	Aktyubinsk	25.00	1	P	P	01 12 55.6	+1.2
	comp=Z,8.0nm,0.8s,baz=174,slow=9.6,SNR=24						
AKTO	Aktyubinsk	25.00	1	P	P	01 12 55.6	+1.2
MKAR	Makanchi Array	29.25	37	P	P	01 13 33.8	+1.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	29.25	37	P	P	01 13 33.8	+1.0
MKAR	Makanchi Array	29.25	37	P	P	01 13 33.8	+1.0
	comp=Z,1.5nm,0.8s,baz=231,slow=7.1,SNR=15						
MKAR	Makanchi Array	29.25	37	P	P	01 13 33.8	+1.0
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	29.33	16	P	P	01 13 34.4	+1.0
BVAR						01 16 39.9	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR				MLR	MLR		
	comp=Z,69nm,18.2s						
BVAR	Borovoye Array	29.33	16	P	P	01 13 34.4	+1.0
BVAR				PcP	PcP	01 16 39.9	+0.4
BVAR	Borovoye Array	29.33	16	P	P	01 13 34.4	+1.0
	comp=Z,3.1nm,0.7s,baz=193,slow=8.6,SNR=22						
BVAR				PcP	PcP	01 16 39.9	+0.4
	comp=Z,0.5nm,0.4s,baz=208,slow=5.1,SNR=4.3						
BVAR				LR	LR	01 27 27.2	
	comp=Z,69nm,18.2s,baz=32,slow=41						
BVAR	Borovoye Array	29.33	16	P	P	01 13 34.4	+1.0
	comp=Z,3.0nm,0.7s						
BVAR	Borovoye Array	29.33	16	PcP	PcP	01 16 39.9	+0.4
	comp=Z,69nm,18.2s						
BRVK	Borovoye	29.33	16*c*	*i*P	P	01 13 34.7	+1.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	Borovoye	29.33	16	*i*P	P	01 13 34.7	+1.3
	comp=Z,2.0nm,0.7s						
TIRR	Tirgusor	30.03	317	⇑*i*P	P	01 13 39.5	-0.1
TIRR	Tirgusor	30.03	317	⇑*i*P	P	01 13 39.5	-0.1
KURK	Kurchatov	30.19	28*c*	*e*P	P	01 13 41.5	+0.6
KURK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KURK	Kurchatov	30.19	28	*e*P	P	01 13 41.8	+0.9
	comp=Z,5.3nm,0.5s						
KURK	Kurchatov	30.19	28	*e*P	P	01 13 41.8	+0.9
	comp=Z,5.3nm,0.5s						
CFR	Carcaliu	30.56	318	⇑*i*P	P	01 13 44.3	0.0
CFR	Carcaliu	30.56	318	⇑*i*P	P	01 13 44.3	0.0
VRI	Vrincioaia	31.76	318	⇑*i*P	P	01 13 52.3	-2.6
PLOR	Plostina	31.80	318	⇓*i*P	P	01 13 54.5	-0.8
PLOR	Plostina	31.80	318	⇓*i*P	P	01 13 54.5	-0.8
MLR	Muntele Rosu	32.06	317	⇑*i*P	P	01 14 00.0	+2.3
MLR	Muntele Rosu	32.06	317	⇑*i*P	P	01 14 00.0	+2.3
TESR	Tescani	32.13	319	⇑*i*P	P	01 13 58.7	+0.6
TESR	Tescani	32.13	319	⇑*i*P	P	01 13 58.7	+0.6
VTS	Vitosha	32.66	310	⇓*i*P	P	01 14 03.6	+0.6
VTS	Vitosha	32.66	310	⇓*i*P	P	01 14 03.6	+0.6
ARR	Arges	32.82	316	⇑*i*P	P	01 14 05.3	+1.0
ARR	Arges	32.82	316	⇑*i*P	P	01 14 05.3	+1.0
AK01	Malin Array Si	33.12	327	*e*P	P	01 14 06.4	-0.3
AK01	Malin Array Si	33.12	327	*e*P	P	01 14 06.4	-0.3
AKASG	Malin Array Be	33.12	327	P	P	01 14 06.6	-0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	33.12	327	P	P	01 14 06.6	-0.1
AKASG	Malin Array Be	33.12	327	P	P	01 14 06.6	-0.1
	comp=Z,0.6nm,0.3s,baz=134,slow=8.3,SNR=6.7						
AKASG	Malin Array Be	33.12	327	P	P	01 14 06.6	-0.1
	comp=Z,1.0nm,0.4s						
KIEV	Kiev	33.12	327	*e*P	P	01 14 06.3	-0.5
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIEV	Kiev	33.12	327	*e*P	P	01 14 06.3	-0.5
	comp=Z,5.9nm,0.9s						
KIEV	Kiev	33.12	327	*e*P	P	01 14 06.3	-0.5
	comp=Z,5.9nm,0.9s						
OBN	Obninsk	33.31	338	⇓*i*P	P	01 14 09.3	+1.0
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
OBN	Obninsk	33.31	338	*i*P	P	01 14 09.3	+1.0
	comp=Z,10.0nm,0.9s						
BURAR	Bucovina Array	33.53	320	⇓*i*P	P	01 14 11.1	+0.6
BURAR	Bucovina Array	33.53	320	⇓*i*P	P	01 14 11.1	+0.6
BUR08	Bucovina Ar. S	33.55	320	*e*P	P	01 14 11.3	+0.6
BUR08	Bucovina Ar. S	33.55	320	*e*P	P	01 14 11.3	+0.6
DRGR		34.65	317	⇑*i*P	P	01 14 20.8	+0.6
DRGR		34.65	317	⇑*i*P	P	01 14 20.8	+0.6
BZS	Buzias	34.86	314	⇑*i*P	P	01 14 22.4	+0.5
BZS	Buzias	34.86	314	⇑*i*P	P	01 14 22.4	+0.5
NVS	Novosibirsk	35.13	26	⇑*i*P	P	01 14 24.1	0.0
NVS				pmax	pmax		
	comp=N,8.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,16nm,1.2s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.6s						
NVS	Novosibirsk	35.13	26	*i*P	P	01 14 24.1	0.0
ZAA0	Zalesovo Array	35.16	28	*e*P	P	01 14 24.8	+0.4
ZAA0	Zalesovo Array	35.16	28	*e*P	P	01 14 24.8	+0.4
ZALV	Zalesovo Beam	35.16	28	P	P	01 14 25.0	+0.6
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ZALV	Zalesovo Beam	35.16	28	P	P	01 14 25.0	+0.6
ZALV	Zalesovo Beam	35.16	28	P	P	01 14 25.0	+0.6
	comp=Z,10.0nm,0.3s,baz=233,slow=9.4,SNR=66						
ZALV	Zalesovo Beam	35.16	28	P	P	01 14 25.0	+0.6
	comp=Z,10.0nm,0.3s						
KOLS	Kolonicke sedl	35.89	320	*e*P	P	01 14 32.2	+1.4
KOLS				pmax	pmax		
	comp=Z,16nm,1.0s						
KOLS	Kolonicke sedl	35.89	320	*e*P	P	01 14 32.2	+1.4
KOLS	Kolonicke sedl	35.89	320	*e*P	P	01 14 32.2	+1.4
	comp=Z,16nm,1.0s						
KWP	Kalwaria Pacla	35.98	321	⇑*i*P	P	01 14 33.0	+1.5
KWP	Kalwaria Pacla	35.98	321	⇑*i*P	P	01 14 33.0	+1.5
CRVS	Cervenica-Dubn	36.35	320	*e*P	P	01 14 34.6	-0.1
CRVS				pmax	pmax		
	comp=Z,7.0nm,1.3s						
CRVS	Cervenica-Dubn	36.35	320	*e*P	P	01 14 34.6	-0.1
CRVS	Cervenica-Dubn	36.35	320	*e*P	P	01 14 34.6	-0.1
	comp=Z,7.0nm,1.3s						
PKSM	Moragy	37.01	314	⇑*i*P	P	01 14 40.6	+0.3
PKSM	Moragy	37.01	314	⇑*i*P	P	01 14 40.6	+0.3
CUC	Castrocucco	37.35	303	*e*P	P	01 14 44.6	+1.3
	comp=Z,2.9nm,0.6s						
CUC	Castrocucco	37.35	303	*e*P	P	01 14 44.6	+1.3
	comp=Z,2.9nm,0.6s						
VYHS	Vyhne	37.75	318	*e*P	P	01 14 47.1	+0.5
VYHS	Vyhne	37.75	318	*e*P	P	01 14 47.1	+0.5
VYHS	Vyhne	37.75	318	*e*P	P	01 14 47.1	+0.5
OJC	Ojcow	37.91	321	*e*P	P	01 14 48.6	+0.6
OJC	Ojcow	37.91	321	*e*P	P	01 14 48.6	+0.6
OJC	Ojcow	37.91	321	*e*P	P	01 14 48.6	+0.6
MORC	Moravsky Berou	39.04	319	⇑*i*P	P	01 14 54.2	-3.3
DPC	Dobruska-Polom	39.99	319	*e*P	P	01 15 05.5	+0.1
DPC	Dobruska-Polom	39.99	319	*e*P	P	01 15 05.5	+0.1
DPC	Dobruska-Polom	39.99	319	*e*P	P	01 15 05.5	+0.1

TREC	Trest	40.09	318	eP	P	01 15 07.1	+0.8
TREC				MLR	MLR		
	comp=Z,6μm,25.2s						
TREC	Trest	40.09	318	eP	P	01 15 07.1	+0.8
TREC	Trest	40.09	318	eP	P	01 15 07.1	+0.8
	comp=Z,6μm,25.2s						
GERES	GERESS Array B	41.05	316	P	P	01 15 14.2	0.0
GERES	GERESS Array B	41.05	316	P	P	01 15 14.2	0.0
	comp=Z,0.5nm,0.5s,baz=104,slow=7.2,SNR=9.3						
GERES	GERESS Array B	41.05	316	P	P	01 15 14.2	0.0
	comp=Z,1.0nm,0.5s						
ABTA	Abfaltersbach	41.20	313	⇓iP	P	01 15 15.6	+0.1
	comp=Z,2.9nm,0.6s						
ABTA	Abfaltersbach	41.20	313	P	P	01 15 15.6	+0.1
	comp=Z,2.9nm,0.6s						
KHC	Kasperske Hory	41.21	317	eP	P	01 15 15.3	-0.2
KHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KHC	Kasperske Hory	41.21	317	eP	P	01 15 15.3	-0.2
	comp=Z,6.6nm,1.1s						
KHC	Kasperske Hory	41.21	317	eP	P	01 15 15.5	0.0
KHC	Kasperske Hory	41.21	317	eP	P	01 15 15.3	-0.2
	comp=Z,6.6nm,1.1s						
JOF	Joensuu	41.24	342	eP	P	01 15 16.3	+0.9
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	Joensuu	41.24	342	ep	P	01 15 16.3	+0.9
	comp=Z,1.7nm,0.5s						
JOF	Joensuu	41.24	342	eP	P	01 15 16.3	+0.9
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	41.71	338	P	P	01 15 20.0	+0.7
FINES	FINESS Array B	41.71	338	P	P	01 15 20.0	+0.7
	comp=Z,7.0nm,0.5s,baz=135,slow=9.7,SNR=82						
FINES	FINESS Array B	41.71	338	P	P	01 15 20.0	+0.7
	comp=Z,7.0nm,0.5s						
WTTA	Wattenberg	41.91	313	⇑iP	P	01 15 21.2	-0.2
	comp=Z,7.3nm,0.5s						
WTTA	Wattenberg	41.91	313	P	P	01 15 21.2	-0.2
	comp=Z,7.3nm,0.5s						
KAF	Kangasniemi	42.12	339	eP	P	01 15 22.8	+0.1
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KAF	Kangasniemi	42.12	339	ep	P	01 15 22.8	+0.1
	comp=Z,1.2nm,0.4s						
KAF	Kangasniemi	42.12	339	eP	P	01 15 22.8	+0.1
	comp=Z,1.0nm,0.4s						
MOTA	Moosalm	42.28	313	⇑iP	P	01 15 23.7	-0.8
	comp=Z,4.0nm,0.6s						
MOTA	Moosalm	42.28	313	P	P	01 15 23.7	-0.8
	comp=Z,4.0nm,0.6s						
CLL	Collm	42.30	320	eP	P	01 15 23.0	-1.3
CLL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CLL	Collm	42.30	320	eP	P	01 15 24.0	-0.3
CLL	Collm	42.30	320	eP	P	01 15 23.0	-1.3
	comp=Z,2.0nm,0.8s						
FETA	Feichten	42.45	313	⇑iP	P	01 15 25.7	-0.1
	comp=Z,5.3nm,0.6s						
FETA	Feichten	42.45	313	P	P	01 15 25.7	-0.1
	comp=Z,5.3nm,0.6s						
DAVA	Damuels	43.08	313	⇑iP	P	01 15 30.5	-0.4
	comp=Z,11nm,0.5s						
DAVA	Damuels	43.08	313	P	P	01 15 30.5	-0.4
	comp=Z,11nm,0.5s						
SBF	Sospel	44.13	308	eP	P	01 15 39.5	+0.2
	comp=Z,31nm,1.0s						
SBF	Sospel	44.13	308	eP	P	01 15 39.5	+0.2
SBF				pmax	pmax		
	comp=Z,31nm,1.0s						
SBF	Sospel	44.13	308	eP	P	01 15 39.5	+0.2
	comp=Z,31nm,1.0s						
SBF	Sospel	44.13	308	eP	P	01 15 39.5	+0.2
	comp=Z,16nm,1.0s						
SONM	Songino Array	44.52	47	P	P	01 15 44.7	+2.2
SONM	Songino Array	44.52	47	P	P	01 15 44.7	+2.2
	comp=Z,1.2nm,0.7s,baz=257,slow=8.6,SNR=15						
SONM	Songino Array	44.52	47	P	P	01 15 44.7	+2.2
	comp=Z,1.0nm,0.7s						
LMR	La Mourre	44.73	307	eP	P	01 15 43.5	-0.5
LMR	La Mourre	44.73	307	eP	P	01 15 43.5	-0.5
LMR	La Mourre	44.73	307	eP	P	01 15 43.5	-0.5
LMR	La Mourre	44.73	307	eP	P	01 15 43.5	-0.5
LPG	La Plagne	44.85	310	eP	P	01 15 44.3	-1.0
	comp=Z,2.1nm,0.7s						
LPG	La Plagne	44.85	310	eP	P	01 15 44.3	-1.0
LPG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LPG	La Plagne	44.85	310	eP	P	01 15 44.3	-1.0
	comp=Z,2.1nm,0.7s						
LPG	La Plagne	44.85	310	eP	P	01 15 44.3	-1.0
	comp=Z,1.0nm,0.7s						
LPL	La Plagne	44.87	310	eP	P	01 15 44.4	-1.0
	comp=Z,4.6nm,0.8s						
LPL	La Plagne	44.87	310	eP	P	01 15 44.4	-1.0
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LPL	La Plagne	44.87	310	eP	P	01 15 44.4	-1.0
	comp=Z,4.6nm,0.8s						
LPL	La Plagne	44.87	310	eP	P	01 15 44.4	-1.0
	comp=Z,2.3nm,0.8s						
CDF	Champ du Feu	45.04	314	eP	P	01 15 46.2	-0.3
CDF	Champ du Feu	45.04	314	eP	P	01 15 46.2	-0.3
CDF	Champ du Feu	45.04	314	eP	P	01 15 46.2	-0.3
CDF	Champ du Feu	45.04	314	eP	P	01 15 46.2	-0.3
HINF	Hinteralfeld	45.19	313	eP	P	01 15 47.0	-0.7
HINF	Hinteralfeld	45.19	313	eP	P	01 15 47.0	-0.7
HINF	Hinteralfeld	45.19	313	eP	P	01 15 47.0	-0.7
HINF	Hinteralfeld	45.19	313	eP	P	01 15 47.0	-0.7
SMRF	Simiane la Rot	45.48	308	eP	P	01 15 49.8	-0.2
SMRF	Simiane la Rot	45.48	308	eP	P	01 15 49.8	-0.2
SMRF	Simiane la Rot	45.48	308	eP	P	01 15 49.8	-0.2
CABF	La Chapelle	45.49	311	eP	P	01 15 49.9	-0.2
	comp=Z,2.4nm,0.6s						
CABF	La Chapelle	45.49	311	eP	P	01 15 49.9	-0.2
CABF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CABF	La Chapelle	45.49	311	eP	P	01 15 49.9	-0.2
	comp=Z,2.4nm,0.6s						
CABF	La Chapelle	45.49	311	eP	P	01 15 49.9	-0.2
	comp=Z,1.2nm,0.6s						
HAU	Haudompre	45.56	313	eP	P	01 15 49.7	-0.9
HAU	Haudompre	45.56	313	eP	P	01 15 49.7	-0.9
HAU	Haudompre	45.56	313	eP	P	01 15 49.7	-0.9
HAU	Haudompre	45.56	313	eP	P	01 15 49.7	-0.9
PAGF	Fort de Pagny	46.08	314	eP	P	01 15 54.6	-0.1
	comp=Z,0.9nm,0.6s						
PAGF	Fort de Pagny	46.08	314	eP	P	01 15 54.6	-0.1
	comp=Z,0.9nm,0.6s						
PAGF	Fort de Pagny	46.08	314	eP	P	01 15 54.6	-0.1
	comp=Z,0.4nm,0.6s						
VIVF	Saint-Julien-l	46.22	309	eP	P	01 15 55.1	-0.8
VIVF	Saint-Julien-l	46.22	309	eP	P	01 15 55.1	-0.8
VIVF	Saint-Julien-l	46.22	309	eP	P	01 15 55.1	-0.8
VIVF	Saint-Julien-l	46.22	309	eP	P	01 15 55.1	-0.8
MEZF	Maizieres J'vi	46.51	314	eP	P	01 15 58.0	0.0
	comp=Z,5.9nm,0.7s						
MEZF	Maizieres J'vi	46.51	314	eP	P	01 15 58.0	0.0
	comp=Z,5.9nm,0.7s						
MEZF	Maizieres J'vi	46.51	314	eP	P	01 15 58.0	0.0
	comp=Z,3.0nm,0.7s						
LASF	Ste Croix	46.72	307	eP	P	01 15 59.5	-0.3
LASF	Ste Croix	46.72	307	eP	P	01 15 59.5	-0.3
LASF	Ste Croix	46.72	307	eP	P	01 15 59.5	-0.3
TAM	Tamanrasset	46.95	278	P	P	01 16 02.0	0.0
TAM				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TAM	Tamanrasset	46.95	278	P	P	01 16 02.0	0.0
	comp=Z,2.0nm,1.1s						
TAM	Tamanrasset	46.95	278	P	P	01 16 02.0	0.0
	comp=Z,2.0nm,1.1s						
GIVF	Givet	46.96	316	eP	P	01 16 02.5	+1.0
	comp=Z,6.4nm,0.5s						
GIVF	Givet	46.96	316	eP	P	01 16 02.5	+1.0
GIVF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GIVF	Givet	46.96	316	eP	P	01 16 02.5	+1.0
	comp=Z,6.4nm,0.5s						
GIVF	Givet	46.96	316	eP	P	01 16 02.5	+1.0
	comp=Z,3.2nm,0.5s						
SMF	Signal de Mont	47.02	311	eP	P	01 16 01.4	-0.7
	comp=Z,9.3nm,0.8s						
SMF	Signal de Mont	47.02	311	eP	P	01 16 01.4	-0.7
SMF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SMF	Signal de Mont	47.02	311	eP	P	01 16 01.4	-0.7
	comp=Z,9.3nm,0.8s						
SMF	Signal de Mont	47.02	311	eP	P	01 16 01.4	-0.7
	comp=Z,4.7nm,0.8s						
LOR	Lormes	47.10	312	eP	P	01 16 02.0	-0.7
	comp=Z,3.4nm,0.5s						
LOR	Lormes	47.10	312	eP	P	01 16 02.0	-0.7
	comp=Z,3.4nm,0.5s						
LOR	Lormes	47.10	312	eP	P	01 16 02.0	-0.7
	comp=Z,1.7nm,0.5s						
NB2	NORSAR Subarra	47.24	332	P	P	01 16 03.4	-0.2
	comp=Z,1.6nm,0.8s,baz=117,slow=7.9						
NB2	NORSAR Subarra	47.24	332	P	P	01 16 03.4	-0.2
	comp=Z,1.6nm,0.8s,SNR=3.9						
NOA	NORSAR Array B	47.24	332	P	P	01 16 03.8	+0.2
NOA	NORSAR Array B	47.24	332	P	P	01 16 03.8	+0.2
	comp=Z,0.9nm,0.5s,baz=119,slow=7.5,SNR=3.9						
NOA	NORSAR Array B	47.24	332	P	P	01 16 03.8	+0.2
	comp=Z,1.0nm,0.5s						
SSF	Saint Saulge	47.31	311	⇑iP	P	01 16 03.9	-0.4
	comp=Z,7.3nm,0.5s						
SSF	Saint Saulge	47.31	311	⇑iP	P	01 16 03.9	-0.4
SSF				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SSF	Saint Saulge	47.31	311	⇑iP	P	01 16 03.9	-0.4
	comp=Z,7.3nm,0.5s						
SSF	Saint Saulge	47.31	311	⇑iP	P	01 16 03.9	-0.4
	comp=Z,3.7nm,0.5s						
BAIF	Baives	47.34	316	eP	P	01 16 05.4	+0.9
	comp=Z,4.9nm,0.7s						
BAIF	Baives	47.34	316	eP	P	01 16 05.4	+0.9
BAIF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BAIF	Baives	47.34	316	eP	P	01 16 05.4	+0.9
	comp=Z,4.9nm,0.7s						
BAIF	Baives	47.34	316	eP	P	01 16 05.4	+0.9
	comp=Z,2.5nm,0.7s						
AVF	Avril sur Loir	47.38	311	eP	P	01 16 04.1	-0.7
	comp=Z,1.9nm,0.4s						
AVF	Avril sur Loir	47.38	311	eP	P	01 16 04.1	-0.7
AVF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AVF	Avril sur Loir	47.38	311	eP	P	01 16 04.1	-0.7
	comp=Z,1.9nm,0.4s						
AVF	Avril sur Loir	47.38	311	eP	P	01 16 04.1	-0.7
	comp=Z,0.9nm,0.4s						
BGF	Bois d'Agland	47.69	311	eP	P	01 16 06.8	-0.5
	comp=Z,4.2nm,0.6s						
BGF	Bois d'Agland	47.69	311	eP	P	01 16 06.8	-0.5
BGF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BGF	Bois d'Agland	47.69	311	eP	P	01 16 06.8	-0.5
	comp=Z,4.2nm,0.6s						
BGF	Bois d'Agland	47.69	311	eP	P	01 16 06.8	-0.5
	comp=Z,2.1nm,0.6s						
KEV	Kevo	47.75	346	eP	P	01 16 07.3	-0.1
KEV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KEV	Kevo	47.75	346	ep	P	01 16 07.3	-0.1
	comp=Z,0.6nm,0.4s						
KEV	Kevo	47.75	346	eP	P	01 16 07.3	-0.1
	comp=Z,1.0nm,0.4s						
MTLF	Montolieu	47.85	306	eP	P	01 16 08.9	+0.3
MTLF	Montolieu	47.85	306	eP	P	01 16 08.9	+0.3
MTLF	Montolieu	47.85	306	eP	P	01 16 08.9	+0.3
MTLF	Montolieu	47.85	306	eP	P	01 16 08.9	+0.3
ARCES	ARCESS Array B	47.91	346	P	P	01 16 09.3	+0.7
ARCES	ARCESS Array B	47.91	346	P	P	01 16 09.3	+0.7
	comp=Z,2.2nm,0.7s,baz=146,slow=8.8,SNR=7.0						
ARCES	ARCESS Array B	47.91	346	P	P	01 16 09.4	+0.7
	comp=Z,2.0nm,0.7s						
HYF	Humbligny	47.92	312	eP	P	01 16 09.2	+0.1
HYF	Humbligny	47.92	312	eP	P	01 16 09.2	+0.1
HYF	Humbligny	47.92	312	eP	P	01 16 09.2	+0.1
CAF	Calviac	48.07	308	eP	P	01 16 10.2	-0.1
	comp=Z,6.6nm,0.7s						
CAF	Calviac	48.07	308	eP	P	01 16 10.2	-0.1
CAF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CAF	Calviac	48.07	308	eP	P	01 16 10.2	-0.1
	comp=Z,6.6nm,0.7s						
CAF	Calviac	48.07	308	eP	P	01 16 10.2	-0.1
	comp=Z,3.3nm,0.7s						
TCF	Toulx Ste Croi	48.10	310	eP	P	01 16 10.1	-0.4
TCF	Toulx Ste Croi	48.10	310	eP	P	01 16 10.1	-0.4
TCF	Toulx Ste Croi	48.10	310	eP	P	01 16 10.1	-0.4
TCF	Toulx Ste Croi	48.10	310	eP	P	01 16 10.1	-0.4
RJF	Les Rejaudoux	48.49	309	eP	P	01 16 13.6	+0.1
	comp=Z,4.6nm,0.6s						
RJF	Les Rejaudoux	48.49	309	eP	P	01 16 13.6	+0.1
RJF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
RJF	Les Rejaudoux	48.49	309	eP	P	01 16 13.6	+0.1
	comp=Z,4.6nm,0.6s						
RJF	Les Rejaudoux	48.49	309	eP	P	01 16 13.6	+0.1
	comp=Z,2.3nm,0.6s						
LFF	La Frestale	49.01	308	eP	P	01 16 17.5	0.0
	comp=Z,6.2nm,0.7s						
LFF	La Frestale	49.01	308	eP	P	01 16 17.5	0.0
LFF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LFF	La Frestale	49.01	308	eP	P	01 16 17.5	0.0
	comp=Z,6.2nm,0.7s						
LFF	La Frestale	49.01	308	eP	P	01 16 17.5	0.0
	comp=Z,3.1nm,0.7s						
MFF	Saint Martin d	49.75	311	eP	P	01 16 22.4	-0.7
	comp=Z,4.8nm,0.7s						
MFF	Saint Martin d	49.75	311	eP	P	01 16 22.4	-0.7
MFF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MFF	Saint Martin d	49.75	311	eP	P	01 16 22.4	-0.7
	comp=Z,4.8nm,0.7s						
MFF	Saint Martin d	49.75	311	eP	P	01 16 22.4	-0.7
	comp=Z,2.4nm,0.7s						
ETSF	Etsaut	49.87	306	eP	P	01 16 24.4	+0.2
ETSF	Etsaut	49.87	306	eP	P	01 16 24.4	+0.2
ETSF	Etsaut	49.87	306	eP	P	01 16 24.4	+0.2
ETSF	Etsaut	49.87	306	eP	P	01 16 24.4	+0.2
LDF	La Druitiere	49.92	313	eP	P	01 16 23.5	-0.9
	comp=Z,7.6nm,0.6s						
LDF	La Druitiere	49.92	313	eP	P	01 16 23.5	-0.9
LDF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LDF	La Druitiere	49.92	313	eP	P	01 16 23.5	-0.9
	comp=Z,7.6nm,0.6s						
LDF	La Druitiere	49.92	313	eP	P	01 16 23.5	-0.9
	comp=Z,3.8nm,0.6s						
FLN	La Foliniere	50.17	313	eP	P	01 16 25.8	-0.5
	comp=Z,7.8nm,0.7s						
FLN	La Foliniere	50.17	313	eP	P	01 16 25.8	-0.5
FLN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FLN	La Foliniere	50.17	313	eP	P	01 16 25.8	-0.5
	comp=Z,7.8nm,0.7s						
FLN	La Foliniere	50.17	313	eP	P	01 16 25.8	-0.5
	comp=Z,3.9nm,0.7s						
SJPF	Ste Jean	50.36	306	eP	P	01 16 28.1	+0.3
SJPF	Ste Jean	50.36	306	eP	P	01 16 28.1	+0.3
SJPF	Ste Jean	50.36	306	eP	P	01 16 28.1	+0.3
SJPF	Ste Jean	50.36	306	eP	P	01 16 28.1	+0.3
GRR	Gorron	50.39	313	eP	P	01 16 27.4	-0.5
GRR	Gorron	50.39	313	eP	P	01 16 27.4	-0.5
GRR	Gorron	50.39	313	eP	P	01 16 27.4	-0.5
GRR	Gorron	50.39	313	eP	P	01 16 27.4	-0.5
SGMF	Saint Gilles	51.51	313	eP	P	01 16 36.0	-0.3
	comp=Z,7.4nm,0.7s						
SGMF	Saint Gilles	51.51	313	eP	P	01 16 36.0	-0.3
SGMF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SGMF	Saint Gilles	51.51	313	eP	P	01 16 36.0	-0.3
	comp=Z,7.4nm,0.7s						
SGMF	Saint Gilles	51.51	313	eP	P	01 16 36.0	-0.3
	comp=Z,3.7nm,0.7s						
ROSF	Rostrenen	51.99	313	eP	P	01 16 39.4	-0.6
	comp=Z,5.2nm,0.6s						
ROSF	Rostrenen	51.99	313	eP	P	01 16 39.4	-0.6
ROSF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ROSF	Rostrenen	51.99	313	eP	P	01 16 39.4	-0.6
	comp=Z,5.2nm,0.6s						
ROSF	Rostrenen	51.99	313	eP	P	01 16 39.4	-0.6
	comp=Z,2.6nm,0.6s						
ESDC	Sonseca Array	52.51	302	P	P	01 16 43.6	-0.4
ESDC	Sonseca Array	52.51	302	P	P	01 16 43.6	-0.4
	comp=Z,0.3nm,0.4s,baz=68,slow=7.0,SNR=8.6						
ESDC	Sonseca Array	52.51	302	P	P	01 16 43.7	-0.4
TORD	Torodi Ar. Bea	53.40	268	P	P	01 16 50.3	-0.6
TORD	Torodi Ar. Bea	53.40	268	P	P	01 16 50.3	-0.6
	comp=Z,1.6nm,0.4s,baz=64,slow=7.1,SNR=66						
TORD	Torodi Ar. Bea	53.40	268	P	P	01 16 50.3	-0.6
KSAR	Wonju Array Be	60.29	60	P	P	01 17 40.5	+1.1
KSAR	Wonju Array Be	60.29	60	P	P	01 17 40.5	+1.1
KSRS	Korea Array	60.31	60	P	P	01 17 40.5	+0.9
	comp=Z,1.2nm,0.6s,baz=273,slow=6.7,SNR=4.8						
KSRS	Korea Array	60.31	60	P	P	01 17 40.5	+0.9
	comp=Z,1.0nm,0.6s						
BOSA	Boshof	61.84	212	P	P	01 17 49.6	-0.5
BOSA	Boshof	61.84	212	P	P	01 17 49.6	-0.5
	comp=Z,1.3nm,0.7s,baz=28,slow=10,SNR=5.0						
BOSA	Boshof	61.84	212	P	P	01 17 49.6	-0.5
	comp=Z,1.0nm,0.7s						
DBIC	Dimbokro	61.90	264	P	P	01 17 50.6	-0.1
DBIC	Dimbokro	61.90	264	P	P	01 17 50.6	-0.1
	comp=Z,2.0nm,0.5s,baz=80,slow=6.1,SNR=3.0						
DBIC	Dimbokro	61.90	264	P	P	01 17 50.6	-0.1
	comp=Z,2.0nm,0.5s						
SEY	Seymchan	70.02	29	ceP	P	01 18 38.8	-3.4
BILL	Bilibino	73.51	22	eP	P	01 19 00.5	-2.6
BILL				i		01 19 11.7	
BILL				pmax	pmax		
	comp=Z,12nm,1.0s						
SCHQ	Schefferville	86.81	331	P	P	01 20 15.0	-0.1
SCHQ	Schefferville	86.81	331	P	P	01 20 15.0	-0.1
	comp=Z,0.8nm,0.5s,baz=53,slow=5.1,SNR=3.8						
WRA	Warramunga Arr	87.49	113	P	P	01 20 19.8	+0.9
WRA	Warramunga Arr	87.49	113	P	P	01 20 19.8	+0.9
	comp=Z,0.5nm,0.4s,baz=308,slow=4.2,SNR=9.1						
ILAR	Eielson Array	88.19	10	P	P	01 20 21.1	-0.5
ILAR	Eielson Array	88.19	10	P	P	01 20 21.1	-0.5
	comp=Z,0.3nm,0.6s,baz=319,slow=4.5,SNR=8.6						
ASAR	Alice Springs	88.88	117	P	P	01 20 26.7	+1.2
ASAR	Alice Springs	88.88	117	P	P	01 20 26.7	+1.2
	comp=Z,0.4nm,0.5s,baz=302,slow=5.3,SNR=9.0						
YKA	Yellowknife Ar	92.16	356	P	P	01 20 40.9	+0.8
YKA	Yellowknife Ar	92.16	356	P	P	01 20 40.8	+0.8
	comp=Z,0.9nm,0.7s,baz=359,slow=4.6,SNR=25						

FUNV ***10*** *01:10:11.3, 10°.95N×62°.17W, h106km, MW2.3*
ISCJB ***10*** *01:10:11.1±0.9, 10°.81N±0°.05×62°.26W±0°.05, h110km±8km, Error ellipse: s-maj=8.8km s-min=7.0km az=43.3*
TRN ***10*** *01:10:17.1, 11°.17N×61°.01W, h3km, MD2.8*
ISC 10 01:10:11.5±1.7**, 10°.83N**±0°.06×**62°.27W**±0°.05**, h110km**±11km**, n13, σ0s.74**/17**, 1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.18	165	eP	Pn	01 10 26.6	-0.3
GUIV				eS	Sn	01 10 37.4	-1.0
TRN	Trinidad (W)	0.87	102	eP	Pn	01 10 32.6	+1.2
TRN	Trinidad (W)	0.87	102	e	Pn	01 10 41.0	+10
TRN				eS	Sn	01 10 45.6	-0.8
CRUV	Carupano	0.96	261	⇓iP	Pn	01 10 32.5	+0.3
CRUV				eS	Sn	01 10 48.0	+0.1
TOSP	Speyside	1.77	74	eP	Pn	01 10 29.9	-12
ORIV	Oritupano	2.08	213	eP	Pn	01 10 45.8	+0.3
ORIV				eS	Sn	01 11 12.3	+0.9
PCRV	Puerto La Cruz	2.41	255	eP	Pn	01 10 50.1	+0.2
PCRV				eS	Sn	01 11 18.9	-0.4
SVB	Belmont	2.63	22	eP	Pn	01 10 54.3	+1.6
SVB				eS	Sn	01 11 24.5	+0.2
RIOV	Rio Grande	2.78	171	eP	Pn	01 10 55.0	+0.4
RIOV				eS	Sn	01 11 27.6	-0.2
PRGV	PARIAGUAN	3.11	229	eP	Pn	01 10 59.9	+0.9
GURV	El Guri	3.15	195	eP	Pn	01 11 00.3	+0.7
LUEV	Luepa	5.02	171	eP	Pn	01 11 23.8	-1.0
BAUV	El Baul	5.99	252	eP	Pn	01 11 37.1	-0.6

SZGRF ***10*** *01:16:05.0, 0°.90N×85°.56W, h33km, mb5.1, MS5.9, Off coast of Ecuador*
ISCJB ***10*** *01:16:05.4±0.2, 1°.38N±0°.03×85°.26W±0°.03, h6km, mb5.4/231, MS5.7/207, Error ellipse: s-maj=4.5km s-min=3.2km az=138.7*
IDC ***10*** *01:16:05.6±0.4, 1°.42N×85°.24W, h0km, mb4.8/28, mb1 5.0/32, mb1mx5.0/34, mbtmp4.9/32, ML4.6/4, MS5.7/27, Ms1 5.7/27, ms1mx5.6/29, Error ellipse: s-maj=20.4km s-min=8.9km az=61.0*
NEIC ***10*** *01:16:07.0±0.2, 1°.39N×85°.17W, h6km, mb5.5/191, ME5.9, MS5.7/149, MW6.1, MW6.0, Error ellipse: s-maj=4.7km s-min=3.0km az=224.0 Broadband fault plane solution: P waves. NP1:φs187.00000°, δ83.00000°, λ-170.00000°. NP2:φs96.00000°, δ80.00000°, λ-7.00000°. Principal axes: T Plg2.0000°, Azm321.0000°; N Plg0.0000°, Azm0.0000°; P Plg12.0000°, Azm52.0000°; Moment Tensor Solution. s70 Moment tensor: Scale 10^{18} Nm; Mrr0.15; Mθθ0.02; Mφφ-0.18; Mrθ0.08; Mθφ1.17; Mφr0.12; Best double couple: Mo1.20000×10^{18} NP1:φs93.00000°, δ83.00000°, λ5.00000°. NP2:φs2.00000°, δ85.00000°, λ173.00000°. Principal axes: T 1.1200, Plg8.0000°, Azm317.0000°; N 0.1300, Plg81.0000°, Azm146.0000°; P -1.2500, Plg1.0000°, Azm47.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Puerto Baquerizo Moreno, Galapagos Islands.
BJI ***10*** *01:16:10.3, 1°.40N×85°.20W, h26km, mB5.8/35, Ms6.0/44, Ms7 5.9/45*
MOS ***10*** *01:16:10.4±1.2, 1°.57N×85°.09W, h33km, mb5.7/71, MS5.7/38, Error ellipse: s-maj=7.7km s-min=4.7km az=99.8*
GCMT ***10*** *01:16:11.6±0.1, 1°.22N×85°.33W, h14km, MW6.1, Moment Tensor Solution. s106,c235; s88,c149; Moment tensor: Scale 10^{18}Nm; Mrr-0.09±.01; Mθθ0.46±.01; Mφφ-0.37±.01; Mrθ-0.17±.02; Mθφ1.74±.01; Mφr0.18±.02; Best double couple: Mo1.80000×10^{18} NP1:φs187.00000°, δ84.00000°, λ-175.00000°. NP2:φs96.00000°, δ85.00000°, λ-6.00000°. Principal axes: T 1.8300, Plg1.0000°, Azm142.0000°; N -0.0500, Plg82.0000°, Azm236.0000°; P -1.7800, Plg8.0000°, Azm52.0000°; Data Used: II IU CN IC G. Surface waves: sta=107, comp=247, per= 50.*
NEIC ***10*** *01:16:27.7±0.0, 1°.24N×84°.61W, h10km, Moment Tensor Solution. s146 Moment tensor: Scale 10^{18}Nm; Mrr-0.06; Mθθ0.40; Mφφ-0.33; Mrθ-0.18; Mθφ1.55; Mφr0.72; Best double couple: Mo1.70000×10^{18} NP1:φs188.00000°, δ83.00000°, λ-156.00000°. NP2:φs95.00000°, δ67.00000°, λ-7.00000°. Principal axes: T 1.6800, Plg10.0000°, Azm319.0000°; N 0.1400, Plg65.0000°, Azm204.0000°; P -1.8200, Plg21.0000°, Azm53.0000°;*
ISC 10 01:16:06.3±0.2**, 1°.34N**±0°.04×**85°.29W**±0°.05**, h6km, n1161, σ1s.35**/1147**, mb5.5**/230**, MS5.7**/208**, 223C-220D, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAYG	Puerto Ayora	5.38	248	ePn	Pn	01 17 28.8	+1.6
	331nm,1.0s						
OTAV	Otavalo	6.93	99	ePn	Pn	01 17 48.0	-0.9
ACR	Cerro Adams	7.57	16	eP	Pn	01 17 57.7	+0.4
ACR				eP	Pn	01 17 58.4	+1.1
BRU	Baru	7.90	20	eP	Pn	01 18 03.2	+1.0
QCR	Quepos	8.11	8	eP	Pn	01 18 06.6	+2.0
QCR				eP	Pn	01 18 06.6	+2.0
BUS	Buena Vista	8.30	11	eP	Pn	01 18 09.5	+1.7
BUS				eP	Pn	01 18 10.9	+3.1
LAJ	Bijagual	8.55	8	eP	Pn	01 18 08.7	-2.2
SJS	Escuela Geolog	8.63	8	eP	Pn	01 18 16.1	+4.1
CGA2	Cerro Gallo 2	8.66	5	eP	Pn	01 18 14.2	+1.8
CGA2				eP	Pn	01 18 14.7	+2.3
CGA2				eS	Sn	01 19 49.9	-0.6
VCR	Vista de Mar	8.74	358	eP	Pn	01 18 14.4	+1.1
JTS	JuntasAbangare	8.90	2	Pn	Pn	01 18 15.4	-0.1
JTS				Sn	Sn	01 19 48.5	-7.7
JTS	JuntasAbangare	8.90	2	Pn	Pn	01 18 15.4	-0.1
	15nm,0.3s,baz=222,slow=6.1,SNR=43						
JTS				Sn	Sn	01 19 48.5	-7.7
	4.5nm,0.3s,baz=54,slow=19,SNR=3.8						
JTS				LR	LR	01 20 59.5	
	comp=Z,71μm,21.4s,baz=169,slow=33						
FORC	Fortuna	9.09	4	eP	Pn	01 18 20.7	+2.5
PINA	Piqa, Costa Ab	9.43	33	eP	Pn	01 18 25.7	+2.9
BCIP	Isla Barro Col	9.48	35	ePn	Pn	01 18 26.6	+3.0
BCIP	Isla Barro Col	9.48	35	⇓iP	Pn	01 18 24.9	+1.4
ATAH	Atahualpa	10.87	141	Pn	Pn	01 18 44.0	+1.1
ATAH	Atahualpa	10.87	141	Pn	Pn	01 18 44.0	+1.1

12nm,0.3s,baz=323,slow=12,SNR=61
TGUH Tegucigalpa,Un 12.79 351 *e*Pn Pn 01 19 12.3 +3.6
NNA Nana 15.68 148 *e*Pn **Pn 01 19 49.4 +1.3**
254nm,1.2s
NNA Nana 15.68 148 Pn **Pn 01 19 48.0 0.0**
760nm,1.0s,SNR=11
NNA Nana 15.68 148 Pn **Pn 01 19 47.3 -0.7**
1.0nm,0.3s,baz=329,slow=15,SNR=6.0
NNA LR LR 01 25 00.3
comp=Z,67µm,21.4s,baz=327,slow=34
SDV Santo Domingo 16.41 62 *e*Pn **P 01 19 58.6 -1.8**
912nm,1.8s
MTDJ Mount Denham 18.43 24 *e*Pn **P 01 20 25.2 +2.6**
538nm,1.3s
HOJ Hope 18.57 26 *i* P **Pn 01 20 26.9 +2.6**
STH Stony Hill 18.60 26 *i* P **Pn 01 20 26.9 +2.2**
GWJ Greenwich 18.64 26 ⇑*i*P **Pn 01 20 27.4 +2.2**
TEIG Tepich 19.00 351 *e*P **Pn 01 20 29.7 +0.2**
327nm,1.7s
TEIG Tepich 19.00 351 P **P 01 20 28.1 -0.7**
1.1nm,0.3s,baz=188,slow=4.9,SNR=13
TEIG LR LR 01 27 07.9
comp=Z,23µm,19.9s,baz=312,slow=35
GTBY Guantanamo Bay 20.99 28 *e*P Pn 01 20 51.6 -1.5
782nm,1.5s
GTBY LR LR
comp=Z,18µm,22.0s
SDDR Presa de Saban 22.27 37 *e*P **P 01 21 05.2 +0.9**
ARE Arequipa 22.33 143 *e*P **P 01 21 06.0 +0.7**
ARE Arequipa 22.33 143 *e*P **P 01 21 06.0 +0.7**
SAML Samuel 24.29 115 *e*P **P 01 21 23.9 -0.8**
comp=Z,182nm,1.2s
SAML LR LR
comp=Z,48µm,19.0s
GRTK Grand Turk 24.34 34 *e*P **P 01 21 24.3 -0.8**
comp=Z,2µm,2.0s
GRTK LR LR
comp=Z,21µm,21.0s
CRPR Cabo Rojo, PR 24.36 46 *e*P **P 01 21 26.8 +1.5**
LPAZ La Paz 24.37 137 *e*P **P 01 21 26.9 +0.7**
comp=Z,223nm,1.2s
LPAZ La Paz 24.37 137 P **P 01 21 26.9 +0.7**
comp=Z,57nm,0.8s,baz=326,slow=10,SNR=83
MPR Mayaguez 24.47 46 *e*P **P 01 21 28.2 +1.8**
comp=Z,644nm,1.7s
LSP Las Mesas 24.48 46 *e*P **P 01 21 27.0 +0.5**
LRS Lares 24.73 46 *e*P **P 01 21 29.4 +0.6**
OBIP Obispado Ponce 24.75 47 *e*P **P 01 21 30.1 +1.3**
comp=Z,756nm,1.4s
CELP Cerrillos 24.79 47 *e*P **P 01 21 30.1 +0.9**
AOPR Arecibo Observ 24.83 46 *e*P **P 01 21 31.0 +1.3**
comp=Z,993nm,1.6s
SJG San Juan 25.12 47 *e*P **P 01 21 32.5 +0.3**
comp=Z,617nm,1.4s
SJG LR LR
comp=Z,15µm,21.0s
HUMP Col San Antoni 25.36 48 *e*P **P 01 21 34.8 +0.4**
comp=Z,370nm,1.3s
CBYP Canovanas 25.44 47 *e*P **P 01 21 34.8 -0.4**
comp=Z,387nm,1.4s
MTP Monte Pirata 25.55 48 *e*P **P 01 21 36.2 +0.1**
comp=Z,398nm,1.4s
PTP Ponta Puerca 25.59 48 *e*P x 01 17 53.0
GRGR Grenville 25.78 64 PFAKE 01 21 50.0 +12
GRGR LR LR
comp=Z,13µm,20.0s
CDVI St. Croix 25.94 50 *e*P **P 01 21 40.4 +0.7**
comp=Z,852nm,1.4s
STVI Saint Thomas 26.16 48 *e*P **P 01 21 41.5 -0.1**
comp=Z,924nm,2.0s
FDF Fort de France 27.31 60 *e*P **P 01 21 51.8 -0.4**
comp=Z,184nm,1.2s
FDF LR LR
comp=Z,11µm,20.0s
BBGH Gun Hill 28.05 64 PFAKE 01 22 10.0 +11
BBGH LR LR
comp=Z,23µm,22.0s
ANWB Willy Bob 28.23 54 PFAKE 01 22 10.0 +10
ANWB LR LR
comp=Z,7µm,20.0s
LVC Limon Verde 28.67 147 *e*P **P 01 22 06.5 +2.0**
comp=Z,66nm,1.3s
LVC LR LR
comp=Z,36µm,20.0s
SIV San Ignacio 29.48 127 P **P 01 22 11.5 0.0**
SIV San Ignacio 29.48 127 P **P 01 22 11.5 0.0**
comp=Z,6.7nm,0.8s,baz=310,slow=10,SNR=26
BRAL Brewton 29.56 357 *e*P P 01 22 16.6 +4.6
comp=Z,174nm,1.3s
BRAL LR LR
comp=Z,5µm,21.0s
TIGA Tifton 29.98 3 ⇑P **P 01 22 14.7 -1.0**
baz=30
TIGA ⇓S **S 01 27 16.1 +2.1**
baz=30
TIGA ⇓S **S 01 27 16.1 +2.1**
baz=30
TIGA ⇓S **S 01 27 16.1 +2.1**
baz=30
HKT Hockley 30.17 342 *e*P **P 01 22 18.2 +0.9**
HKT pmax pmax
comp=Z,327nm,1.9s
HKT Hockley 30.17 342 *e*P **P 01 22 18.2 +0.9**
comp=Z,327nm,1.9s
732A Laxson Ranch, 30.63 334 ⇓P **P 01 22 21.4 0.0**
baz=31,SNR=13
VBMS Vicksburg 31.11 351 PFAKE 01 22 40.0 +14
VBMS LR LR
comp=Z,6µm,20.0s
NATX Nacogdoches 31.52 345 PFAKE 01 22 40.0 +11
NATX LR LR
comp=Z,9µm,21.0s
LRAL Lakeview Retre 31.57 357 *e*P **P 01 22 29.8 +0.1**
comp=Z,49nm,1.2s
LRAL LR LR
comp=Z,4µm,20.0s
532A Rocksprings 31.82 336 ⇓P **P 01 22 32.7 +0.6**
baz=32,SNR=37
GOGA Godfrey 31.95 3 *e*P **P 01 22 33.9 +0.9**
GOGA pmax pmax
comp=Z,65nm,1.2s
GOGA Godfrey 31.95 3 *e*P **P 01 22 33.9 +0.9**
comp=Z,65nm,1.2s
NHSC New Hope 31.96 8 *e*P **P 01 22 33.6 +0.4**
comp=Z,99nm,1.1s
NHSC LR LR
comp=Z,13µm,20.0s
JCT Junction City 32.09 336 *e*P **P 01 22 35.5 +1.2**
comp=Z,143nm,1.4s
JCT LR LR
comp=Z,3µm,19.0s
JCT Junction City 32.09 336 ⇑P **P 01 22 34.6 +0.3**
baz=32,SNR=14
432A Menard 32.43 336 ⇑P **P 01 22 37.6 +0.2**
baz=33,SNR=22
530A J-C Ranch, Com 32.45 334 ⇑P **P 01 22 38.0 +0.4**
baz=33,SNR=37
WHTX Lake Whitney 32.58 341 ⇓P **P 01 22 38.5 -0.1**
baz=33
431A Sonora 32.60 335 ⇓P **P 01 22 39.1 +0.3**
baz=33,SNR=124
628A Black Gap, Mar 32.62 331 ⇓P **P 01 22 39.9 +0.8**
baz=33,SNR=15
627A Terlingua Ranc 32.84 330 ⇑P **P 01 22 41.5 +0.4**
baz=33,SNR=33
332A Millersview 32.86 337 ⇓P **P 01 22 41.5 +0.4**
baz=33,SNR=121
TXAR Lajitas Array 32.89 330 P **P 01 22 41.6 +0.1**
TXAR Lajitas Array 32.89 330 P **P 01 22 41.6 +0.1**
comp=Z,12nm,1.1s,baz=149,slow=8.4,SNR=5.3
TXAR LR LR 01 34 56.8
comp=Z,14µm,20.2s,baz=265,slow=34
430A Baggett Ranch, 32.96 334 ⇑P **P 01 22 42.7 +0.7**
baz=33,SNR=54
331A San Angelo 33.07 336 ⇑P **P 01 22 43.2 +0.3**
baz=33,SNR=30
429A Davenport Ranc 33.11 333 ⇑P **P 01 22 43.8 +0.4**
baz=33,SNR=22
528A Cox Ranch, San 33.13 332 ⇑P **P 01 22 44.1 +0.5**
baz=33,SNR=24
LPIG La Paz 33.14 315 P **P 01 22 44.2 +0.6**
LPIG La Paz 33.14 315 P **P 01 22 44.2 +0.6**
comp=Z,1.4nm,0.3s,baz=133,slow=8.4,SNR=5.5
LPIG LR LR 01 35 39.2
comp=Z,883nm,18.1s,baz=118,slow=35
OXF Oxford 33.23 354 *e*P **P 01 22 43.6 -0.6**
OXF pmax pmax
comp=Z,96nm,1.2s
OXF MLR MLR
comp=Z,5µm,22.0s
OXF Oxford 33.23 354 *e*P **P 01 22 43.6 -0.6**
comp=Z,96nm,1.2s
OXF LR LR
comp=Z,5µm,22.0s
LCO Las Campanas 33.26 156 *e*P **P 01 22 47.3 +2.4**
comp=Z,6.3nm,0.8s
LCO LR LR
comp=Z,22µm,21.0s
232A Coleman 33.27 337 ⇑P **P 01 22 44.9 +0.2**
baz=33,SNR=39
RFTA Plano 33.28 342 *e*P **P 01 22 46.0 +1.3**
626A Big Bend Ranch 33.30 329 ⇓P **P 01 22 45.6 +0.6**
baz=33,SNR=20
330A Mertzon 33.47 335 ⇑P **P 01 22 46.9 +0.4**
baz=34,SNR=21
527A Woodward Ranch 33.52 330 ⇓P **P 01 22 47.1 +0.1**
baz=34,SNR=19
428A Kincaid Ranch, 33.56 332 ⇑P **P 01 22 48.1 +0.8**
baz=34,SNR=26
231A Bronte 33.57 337 ⇓P **P 01 22 47.3 -0.1**
baz=34,SNR=10
526A Mary Lane Ranc 33.69 330 ⇓P **P 01 22 48.6 +0.1**
baz=34,SNR=22
SWET Sewanee 33.71 359 *e*P **P 01 22 48.0 -0.5**
comp=Z,55nm,1.3s
KMSC Kings Mountain 33.83 6 ⇓P **P 01 22 49.2 -0.3**
baz=34,SNR=14
230A Sterling City 33.86 335 ⇑P **P 01 22 49.7 -0.1**
baz=34,SNR=11
329A Wagon Wheel Ra 33.88 334 ⇓P **P 01 22 50.1 0.0**
baz=34,SNR=48
UALR University of 33.91 350 *e*P **P 01 22 50.0 -0.2**
comp=Z,64nm,1.5s
ABTX Abilene, Hawle 33.92 338 ⇓P **P 01 22 50.5 +0.2**
baz=34,SNR=24
MIAR Mount Ida 33.93 348 *e*P **P 01 22 50.6 +0.3**
MIAR pmax pmax
comp=Z,39nm,1.4s
MIAR MLR MLR
comp=Z,5µm,20.0s
MIAR Mount Ida 33.93 348 *e*P **P 01 22 50.6 +0.3**
comp=Z,39nm,1.4s
MIAR LR LR
comp=Z,5µm,20.0s
CPCT Cooper Cave 33.95 1 *e*P **P 01 22 50.5 +0.1**
427A Hayter Ranch, 34.00 331 ⇓P **P 01 22 51.3 +0.2**
baz=34,SNR=27
426A McDonald Obser 34.16 330 ⇓P **P 01 22 52.5 -0.1**
baz=34,SNR=22
328A Wristen Ranch, 34.17 333 ⇑P **P 01 22 52.3 -0.2**
baz=34,SNR=46
TKL Tuckaleechee C 34.17 2 *e*P **P 01 22 51.7 -0.8**
TKL Tuckaleechee C 34.17 2 P **P 01 22 50.9 -1.6**
comp=Z,12nm,0.8s,baz=179,slow=9.7,SNR=14
TKL LR LR 01 36 32.8
comp=Z,5µm,19.0s,baz=283,slow=36
229A Bryant Ranch, 34.22 335 ⇓P **P 01 22 53.0 0.0**
baz=34,SNR=15
131A Roby 34.25 337 ⇓P **P 01 22 53.1 -0.1**
baz=34,SNR=12
130A Snyder 34.41 336 ⇑P **P 01 22 54.9 +0.2**
baz=35,SNR=18
CNNC Cliffs of the 34.43 11 PFAKE 01 23 10.0 +15
CNNC LR LR
comp=Z,15µm,20.0s
327A Balmorhea Ranc 34.47 332 ⇓P **P 01 22 55.1 -0.1**
baz=35
Z32A Haskell 34.48 339 ⇓P **P 01 22 55.4 +0.3**
baz=35,SNR=30
326A Caldwell Ranch 34.66 331 ⇓P **P 01 22 57.2 +0.3**
baz=35,SNR=35
228A UT Block 9, Go 34.69 334 ⇑P **P 01 22 57.2 +0.1**
baz=35,SNR=14
WVT Waverly 34.70 356 *e*P **P 01 22 56.3 -0.7**
WVT pmax pmax
comp=Z,37nm,1.3s
WVT Waverly 34.70 356 *e*P **P 01 22 56.3 -0.7**
comp=Z,37nm,1.3s
425A Indio Mountain 34.73 329 ⇓P **P 01 22 57.9 +0.4**
baz=35,SNR=107
GNAR Gosnell 34.73 353 *e*P **P 01 22 57.8 +0.5**
comp=Z,2µm,1.7s
Z31A Sharp Cattle R 34.73 338 ⇓P **P 01 22 57.6 +0.2**
baz=35,SNR=34
129A Stewart Farms, 34.82 335 ⇑P **P 01 22 58.1 0.0**
baz=35,SNR=30
227A Bennet, Jal 34.92 333 ⇓P **P 01 22 59.1 0.0**
baz=35,SNR=13
TZTN Tazewell 35.07 2 *e*P **P 01 22 59.8 -0.4**
comp=Z,222nm,2.2s
128A Castleberry Fa 35.07 334 ⇑P **P 01 23 00.3 -0.1**
baz=35,SNR=34
Z30A Sanderson Ranc 35.09 337 ⇑P **P 01 23 00.3 -0.2**
baz=35,SNR=17
Y32A R-V Farms, Ver 35.09 339 ⇑P **P 01 23 00.8 +0.4**
baz=35,SNR=17
325A Bean Ranch, Si 35.19 330 ⇓P **P 01 23 01.3 -0.2**
baz=35,SNR=50
Z29A Hungry Hill Ra 35.30 336 ⇑P **P 01 23 02.4 +0.1**
baz=35,SNR=24
Y31A Rekieta Farm, 35.35 338 ⇓P **P 01 23 03.0 +0.3**
baz=36,SNR=26
226B Tecolote Peak, 35.38 332 ⇓P **P 01 23 03.8 +0.8**
baz=36,SNR=93
PARMO Parma 35.39 354 *e*P **P 01 23 03.1 +0.1**
CLNB Carlsbad 35.40 332 *e*P **P 01 23 04.7 +1.4**
comp=Z,15nm,1.6s
127A Arkansas Junct 35.51 333 ⇓P **P 01 23 03.8 -0.4**
baz=36,SNR=17
324A Moseley Ranch, 35.51 329 ⇑P **P 01 23 03.8 -0.5**
baz=36,SNR=44
Y30A Stafford Cattl 35.52 337 ⇑P **P 01 23 04.0 -0.2**
baz=36
WMOK Wichita Mounta 35.53 341 *e*P **P 01 23 04.7 +0.4**
WMOK pmax pmax
comp=Z,4.0nm,0.9s
WMOK MLR MLR
comp=Z,6µm,22.0s
WMOK Wichita Mounta 35.53 341 *e*P **P 01 23 04.7 +0.4**
comp=Z,4.2nm,0.9s
WMOK LR LR
comp=Z,6µm,22.0s
GDL2 Guadalupe Moun 35.58 332 *e*P **P 01 23 05.3 +0.6**
Z28A Tucker Farm, M 35.60 335 ⇓P **P 01 23 04.5 -0.5**
baz=36,SNR=8.7
MNTX Cornudas Mount 35.66 330 *e*P **P 01 23 04.7 -0.7**
comp=Z,163nm,1.7s
MNTX LR LR
comp=Z,12µm,20.0s
225A Deer Hill, Car 35.72 331 ⇓P **P 01 23 06.4 +0.3**
baz=36,SNR=25
TUL1 Tulsa 35.75 345 ⇑P **P 01 23 05.1 -1.0**
baz=36,SNR=6.3
126A Clayton Basin, 35.78 332 ⇓P **P 01 23 06.8 +0.3**
baz=36,SNR=17
Y29A Porterfield Fa 35.80 336 ⇓P **P 01 23 06.9 +0.2**
baz=36,SNR=10
X31A McDonald Ranch 35.85 339 ⇓P **P 01 23 06.8 -0.2**
baz=36,SNR=19
BLA Blacksburg 35.98 7 *e*P **P 01 23 08.4 +0.3**
BLA pmax pmax
comp=Z,110nm,1.4s
BLA MLR MLR
comp=Z,12µm,22.0s
BLA Blacksburg 35.98 7 *e*P **P 01 23 08.4 +0.3**
comp=Z,110nm,1.4s
BLA LR LR
comp=Z,12µm,22.0s
Z27A Tatum 35.98 334 ⇑P **P 01 23 07.9 -0.4**
baz=36,SNR=23
X30A Coker Ranch, T 36.01 338 ⇓P **P 01 23 08.6 +0.2**
baz=36,SNR=21
224A Cornudas Mount 36.04 330 ⇓P **P 01 23 08.8 +0.1**
baz=36,SNR=38
VWCC Virginia Weste 36.07 7 *e*P **P 01 23 08.3 -0.5**
Y28A McKinney Farm, 36.08 336 ⇑P **P 01 23 08.7 -0.3**
baz=36,SNR=5.5
125A Gardner Draw, 36.09 332 ⇑P **P 01 23 09.6 +0.4**
baz=36,SNR=43
Z26A Caprock 36.29 333 ⇑P **P 01 23 11.1 +0.2**
baz=36,SNR=102
X29A Tulia 36.33 337 ⇑P **P 01 23 10.9 -0.3**
baz=36,SNR=11
W31A Holland Ranch, 36.34 340 ⇑P **P 01 23 10.9 -0.2**
baz=36
MSTX Muleshoe 36.35 335 ⇓P **P 01 23 11.5 +0.1**
baz=36,SNR=22
223A Chaparral, Ant 36.44 329 ⇑P **P 01 23 12.0 -0.2**
baz=37
Y27A Causey 36.45 335 ⇑P **P 01 23 12.0 -0.2**
baz=37,SNR=15
BBSR BB Station 36.46 30 *e*P P 01 23 14.6 +2.4
comp=Z,357nm,1.6s
BBSR LR LR
comp=Z,11µm,21.0s
124A Stringfield Ra 36.51 331 ⇑P **P 01 23 13.5 +0.6**
baz=37,SNR=74
USIN University of 36.51 357 *e*P **P 01 23 13.5 +0.9**
comp=Z,71nm,1.0s
CFAA Coronel Fontan 36.54 155 P **P 01 23 13.4 +0.4**
CFAA Coronel Fontan 36.54 155 P **P 01 23 13.4 +0.4**
comp=Z,2.3nm,1.0s,baz=321,slow=6.6,SNR=13
CFAA LR LR 01 35 11.0
comp=Z,2µm,20.9s,baz=349,slow=31
W30A Crocket Farms 36.56 339 ⇓P **P 01 23 13.2 +0.1**
baz=37
X28A Dimmitt 36.59 336 ⇓P **P 01 23 13.0 -0.4**
baz=37,SNR=9.8
Z25A Roswell 36.63 332 ⇓P **P 01 23 14.2 +0.4**
baz=37,SNR=35
AMTX Amarillo 36.71 337 *e*P **P 01 23 14.9 +0.5**
comp=Z,165nm,1.4s
AMTX LR LR
comp=Z,3µm,19.0s
Y26A Elida 36.77 334 ⇓P **P 01 23 15.2 +0.2**
baz=37,SNR=22
JSRW J. Sargeant Re 36.82 10 *e*P **P 01 23 14.2 -1.0**
V31A Spring Creek L 36.83 340 ⇓P **P 01 23 15.8 +0.4**
baz=37,SNR=13
123A Bell Site, Whi 36.86 330 ⇑P **P 01 23 16.2 +0.4**
baz=37,SNR=6.5
222A Williams Famil 36.87 328 ⇑P **P 01 23 16.7 +0.9**
baz=37,SNR=34
W29A Amraillo 36.90 337 ⇓P **P 01 23 16.4 +0.3**
baz=37
320A Kipp Ranch, An 37.05 326 ⇑P **P 01 23 18.6 +1.1**
baz=37,SNR=42
X27A F and S Farms, 37.07 335 ⇓P **P 01 23 17.7 +0.2**
baz=37,SNR=11
V30A Spur Ranch, Mi 37.12 339 ⇓P **P 01 23 18.2 +0.4**
baz=37
221A Mesquite Ranch 37.16 327 ⇑P **P 01 23 19.6 +1.3**
baz=37,SNR=16
W28A Vega 37.24 337 ⇑P **P 01 23 19.1 +0.2**
baz=37
122A Conniff Cattle 37.28 329 ⇓P **P 01 23 20.9 +1.5**
baz=37,SNR=11
X26A CR and CF Fran 37.29 334 ⇓P **P 01 23 19.8 +0.3**
baz=37,SNR=20
OLIL Olney 37.30 356 *e*P **P 01 23 19.0 -0.3**
comp=Z,134nm,1.3s
Z23A Rita Site, Whi 37.35 330 ⇑P **P 01 23 21.3 +1.4**
baz=38,SNR=24
U31A Nine Bar Ranch 37.37 340 ⇑P **P 01 23 20.0 0.0**
baz=38
CBN Corbin 37.40 10 PFAKE 01 23 30.0 +10
CBN LR LR
comp=Z,20µm,21.0s
W27A Bowe Ranch, En 37.42 336 ⇓P **P 01 23 20.6 +0.1**
baz=38,SNR=43
220A Playas Peak, P 37.48 327 ⇓P **P 01 23 21.7 +0.6**
baz=38,SNR=53
Y24A Capitan 37.50 332 ⇑P **P 01 23 21.8 +0.5**
baz=38,SNR=45
319A Douglas 37.51 325 ⇓P **P 01 23 21.9 +0.6**
baz=38,SNR=44
V29A Stinnett 37.52 338 ⇓P **P 01 23 21.4 +0.1**
baz=38
121A Cookes Peak, D 37.56 328 ⇓P **P 01 23 22.7 +0.9**
baz=38,SNR=43
X25A Clemmons Ranch 37.65 333 ⇑P **P 01 23 22.8 +0.3**
baz=38
BLO Bloomington 37.67 358 *e*P **P 01 23 22.6 +0.2**
BLO pmax pmax
comp=Z,41nm,0.9s
BLO Bloomington 37.67 358 *e*P **P 01 23 22.6 +0.2**
comp=Z,41nm,0.9s
V28A Channing 37.68 337 ⇓P **P 01 23 22.7 0.0**
baz=38
Z22A Elephant Butte 37.71 330 ⇑P **P 01 23 24.0 +1.0**
baz=38,SNR=15
W26A Owens Ranch, T 37.73 335 ⇑P **P 01 23 23.4 +0.2**
baz=38
U30A WK&E Inc. Balk 37.79 340 ⇓P **P 01 23 23.8 +0.2**
baz=38
Y23A Lovelace Mesa, 37.80 331 ⇓P **P 01 23 24.8 +0.9**
baz=38,SNR=127
V27A Dan Oppiter Fa 37.92 336 ⇑P **P 01 23 25.1 +0.3**
baz=38,SNR=9.2
U29A Oasis Ranch, S 37.94 339 ⇑P **P 01 23 24.8 0.0**
baz=38
T31A Randall Ranch, 37.98 341 ⇓P **P 01 23 25.1 0.0**
baz=38,SNR=8.3
120A U Bar Ranch, L 38.03 327 ⇑P **P 01 23 26.6 +0.9**
baz=38,SNR=16
X24A Lazy VL Ranch, 38.03 333 ⇑P **P 01 23 25.7 0.0**
baz=38
Z21A St. Cloud Mine 38.11 329 ⇓P **P 01 23 27.7 +1.2**
baz=38,SNR=21
W25A X Bar L Ranch, 38.14 334 ⇑P **P 01 23 27.4 +0.8**
baz=38,SNR=39
T30A Plains 38.22 340 ⇑P **P 01 23 27.2 0.0**
baz=38
U28A Mallet 38.23 338 ⇓P **P 01 23 27.5 +0.2**
baz=38
Y22A Socorro 38.25 330 ⇓P **P 01 23 28.9 +1.3**
baz=38,SNR=39
BNM Barren Site 38.26 331 *e*P **P 01 23 29.2 +1.5**
comp=Z,138nm,1.5s
Y22D IRIS PASSCAL I 38.34 330 ⇓P **P 01 23 29.2 +0.9**
baz=38
V26A Tequesquite Ra 38.34 335 ⇓P **P 01 23 29.1 +0.8**
baz=38,SNR=76
LPM Los Pinos Moun 38.39 331 *e*P **P 01 23 30.1 +1.4**
X23A Hourglass Bar 38.40 332 ⇓P **P 01 23 29.4 +0.6**
baz=38,SNR=13
S31A Mullinville 38.40 342 ⇑P **P 01 23 28.9 +0.3**
baz=38
LENM Lemitar 38.44 330 *e*P **P 01 23 30.8 +1.6**
Z20A Nine Sixteen R 38.44 328 ⇑P **P 01 23 30.4 +1.2**
baz=39,SNR=46
U27A Thompson Grove 38.50 337 ⇑P **P 01 23 30.3 +0.6**
baz=39,SNR=15
CPUP Villa Florida 38.54 138 P **P 01 23 30.4 +0.5**
CPUP Villa Florida 38.54 138 P **P 01 23 30.4 +0.5**
comp=Z,4.9nm,0.9s,baz=305,slow=9.0,SNR=9.3
CPUP LR LR 01 41 30.0
comp=Z,19µm,18.6s,baz=303,slow=40
W24A Lazy 6 Ranch, 38.55 333 ⇓P **P 01 23 30.7 +0.5**
baz=39,SNR=64
T29A Hugoton 38.58 339 ⇓P **P 01 23 30.3 +0.1**
baz=39
Y21A Point of Rocks 38.66 330 ⇑P **P 01 23 32.4 +1.2**
baz=39,SNR=12
LAZ Ladron 38.71 331 *e*P **P 01 23 33.2 +1.7**
comp=Z,129nm,2.0s
X22A Bernardo 38.73 331 ⇓P **P 01 23 32.2 +0.6**
baz=39
S30A Montezuma 38.73 341 ⇓P **P 01 23 31.7 +0.2**
baz=39,SNR=5.7
V25A Rancho No Teng 38.73 335 ⇑P **P 01 23 32.0 +0.3**
baz=39,SNR=54
ACSO Alum Creek Sta 38.77 3 *e*P **P 01 23 31.7 +0.1**
comp=Z,101nm,1.5s
ACSO LR LR
comp=Z,7µm,21.0s
ANMO Albuquerque 38.82 332 *e*P **P 01 23 32.5 +0.1**
comp=Z,54nm,1.2s
ANMO Albuquerque 38.82 332 P **P 01 23 32.8 +0.4**
comp=Z,19nm,0.9s,baz=153,slow=10,SNR=54
ANMO LR LR 01 38 42.5
comp=Z,11µm,21.5s,baz=309,slow=35
U26A Atchley Ranch, 38.84 336 ⇑P **P 01 23 32.9 +0.4**
baz=39,SNR=26
T28A Walsh 38.84 338 ⇓P **P 01 23 32.4 -0.1**
baz=39
W23A Werner Place, 38.85 332 ⇓P **P 01 23 33.4 +0.7**
baz=39,SNR=44
SFIN Scholer Farm 38.89 358 ⇑P **P 01 23 31.7 -1.0**
baz=39,SNR=13
V24A Rampart Ranch, 38.92 334 ⇑P **P 01 23 33.9 +0.6**
baz=39,SNR=26
S29A Ulysses 38.94 340 ⇓P **P 01 23 33.8 +0.7**

baz=39,SNR=16
Y20A Horse Springs, 38.95 329 ⇑P P 01 23 35.0 +1.4
baz=39,SNR=28
KSU1 Kansas State U 38.98 346 eP P 01 23 33.7 +0.3
comp=Z,213nm,1.4s
KSU1 LR LR
comp=Z,6µm,21.0s
T27A Campo 39.02 338 ⇑P P 01 23 34.3 +0.3
baz=39,SNR=17
TUC Tucson 39.06 325 eP P 01 23 35.6 +1.3
TUC pmax pmax
comp=Z,47nm,2.2s
TUC MLR MLR
comp=Z,30µm,21.0s
TUC Tucson 39.06 325 eP P 01 23 35.6 +1.3
comp=Z,47nm,2.2s
TUC LR LR
comp=Z,30µm,21.0s
X21A Alamocita Cree 39.07 330 ⇓P P 01 23 35.6 +1.1
baz=39,SNR=40
W22A Albuquerque 39.12 331 ⇑P P 01 23 35.6 +0.7
baz=39
U25A Circle Dot Ran 39.12 335 ⇓P P 01 23 35.6 +0.7
baz=39,SNR=12
S28A Manter 39.18 339 ⇑P P 01 23 34.7 -0.5
baz=39
HDIL Hopedale 39.20 355 eP P 01 23 35.0 -0.3
comp=Z,143nm,1.2s
HDIL LR LR
comp=Z,3µm,20.0s
R30A Dighton 39.26 341 ⇓P P 01 23 36.5 +0.6
baz=39,SNR=18
MVL Millersville 39.33 11 eP P 01 23 36.8 +0.5
comp=Z,67nm,1.3s
V23A Ortiz Mt. (NFS 39.35 333 ⇓P P 01 23 37.3 +0.5
baz=40,SNR=23
T26A Comanche Natio 39.46 337 ⇑P P 01 23 38.1 +0.4
baz=40,SNR=6.4
U24A Moreno Valley 39.50 334 ⇑P P 01 23 39.0 +0.8
baz=40,SNR=10.0
X20A Quemado 39.50 329 ⇑P P 01 23 38.6 +0.5
baz=40,SNR=21
W21A San Fidel 39.53 331 ⇓P P 01 23 39.2 +0.8
baz=40
S27A Las Animas 39.63 338 ⇓P P 01 23 39.1 0.0
baz=40
R29A Marienthal 39.67 340 ⇑P P 01 23 39.4 +0.1
baz=40,SNR=11
SSPA Standing Stone 39.69 9 eP P 01 23 39.0 -0.3
comp=Z,81nm,1.7s
T25A Trinidad 39.75 336 ⇑P P 01 23 40.6 +0.4
baz=40
S26A Kim 39.80 337 ⇓P P 01 23 41.1 +0.6
baz=40,SNR=25
R28A Tribune 39.82 340 ⇓P P 01 23 40.5 -0.1
baz=40,SNR=35
V22A San Miguel Ran 39.82 332 ⇑P P 01 23 41.4 +0.5
baz=40,SNR=52
U23A El Rito 39.84 333 ⇑P P 01 23 41.5 +0.6
baz=40,SNR=26
W20A Ramah 39.96 330 ⇓P P 01 23 42.7 +0.8
baz=40,SNR=32
T24A Torres, Weston 39.97 335 ⇓P P 01 23 43.0 +1.0
baz=40,SNR=15
214A Organ Pipe Nat 40.01 322 ⇑P P 01 23 43.1 +0.9
baz=40,SNR=17
V21A Milan 40.08 331 ⇓P P 01 23 43.7 +0.8
baz=40,SNR=17
R27A Eads 40.13 338 ⇓P P 01 23 43.3 +0.2
baz=40,SNR=16
U22A Llaves 40.18 333 ⇓P P 01 23 45.1 +1.4
baz=40,SNR=22
S25A Robets Cordova 40.21 336 ⇓P P 01 23 44.4 +0.5
baz=40,SNR=42
X18A Snowflake 40.25 328 ⇓P P 01 23 44.8 +0.5
baz=40,SNR=18
T23A Casias Ranch, 40.36 334 ⇓P P 01 23 45.8 +0.5
baz=40,SNR=17
R26A Arlington 40.38 338 ⇑P P 01 23 46.1 +0.8
baz=40,SNR=22
V20A Brimhall 40.48 330 ⇓P P 01 23 46.9 +0.7
baz=41,SNR=11
S24A Houchin Ranch, 40.51 335 ⇓P P 01 23 47.3 +0.7
baz=41,SNR=28
BDFB Brasilia 40.52 116 P P 01 23 46.7 -0.1
BDFB Brasilia 40.52 116 P P 01 23 46.7 -0.1
comp=Z,7.6nm,0.9s,baz=285,slow=7.5,SNR=10
BDFB LR LR 01 41 58.4
comp=Z,38µm,18.6s,baz=288,slow=38
R25A Fountain Ranch 40.57 337 ⇑P P 01 23 47.6 +0.7
baz=41,SNR=17
W18A Petrified Fore 40.59 329 ⇑P P 01 23 48.0 +0.9
baz=41,SNR=6.5
U21A Nageezi 40.59 332 ⇓P P 01 23 47.9 +0.7
baz=41,SNR=37
KSCO Kaye Shedlock' 40.71 339 ⇓P P 01 23 48.4 +0.4
baz=41
T22A Edith 40.72 333 ⇑P P 01 23 49.3 +1.0
baz=41,SNR=16
SDCO Great Sand Dun 40.72 335 eP P 01 23 49.5 +1.2
comp=Z,139nm,1.5s
SDCO LR LR
comp=Z,6µm,22.0s
ERPA Erie 40.88 6 PFAKE 01 24 00.0 +11
ERPA LR LR
comp=Z,13µm,21.0s
S23A Nye Farm, Mont 40.90 335 ⇑P P 01 23 50.3 +0.6
baz=41
Q26A Hugo 40.95 338 ⇑P P 01 23 50.6 +0.5
baz=41,SNR=20
U20A Newcomb 40.96 331 ⇑P P 01 23 50.9 +0.7
baz=41,SNR=9.2
R24A Sanders Place, 40.97 336 ⇑P P 01 23 50.8 +0.5
baz=41,SNR=17
X16A Lo Mia Camp, P 40.98 326 ⇑P P 01 23 50.9 +0.6
baz=41,SNR=24
T21A Navajo Lake 40.99 332 ⇓P P 01 23 51.3 +0.8
baz=41,SNR=28
SCIA State Center 41.01 351 eP P 01 23 50.9 +0.6
comp=Z,133nm,1.4s
SCIA LR LR
comp=Z,3µm,21.0s
Z14A Wintersburg 41.08 324 ⇑P P 01 23 51.5 +0.5
baz=41
P27A Ficken Ranch, 41.17 340 ⇓P P 01 23 52.4 +0.6
baz=41
Q25A Bedland, Calha 41.22 337 ⇑P P 01 23 52.7 +0.4
baz=41,SNR=22
R23A Moffat 41.24 335 ⇓P P 01 23 52.7 +0.2
baz=41
S22A 4UR Ranch, Cre 41.30 334 ⇓P P 01 23 53.4 +0.4
baz=41,SNR=42
YLE Yale 41.33 14 eP P 01 23 53.1 +0.2
comp=Z,122nm,1.1s
P26A Davis Ranch, A 41.45 339 ⇓P P 01 23 54.6 +0.5
baz=42
Y14A Wickenburg 41.52 324 ⇓P P 01 23 55.3 +0.6
baz=42,SNR=34
BINY Binghamton 41.53 10 PFAKE 01 24 10.0 +15
BINY LR LR
comp=Z,9µm,19.0s
BGNE Belgrade 41.54 345 ⇓P P 01 23 54.5 -0.2
baz=42
Q24A Divide 41.62 337 ⇓P P 01 23 56.0 +0.3
baz=42,SNR=12
MVCO Mesa Verde 41.62 332 eP P 01 23 56.8 +1.1
comp=Z,642nm,2.1s
MVCO LR LR
comp=Z,15µm,19.0s
MVCO Mesa Verde 41.62 332 ⇓P P 01 23 56.2 +0.5
baz=42,SNR=35
JFWS Jewell Farm 41.63 355 eP P 01 23 55.1 -0.2
JFWS pmax pmax
comp=Z,69nm,1.3s
JFWS MLR MLR
comp=Z,4µm,21.0s
JFWS Jewell Farm 41.63 355 eP P 01 23 55.1 -0.2
comp=Z,69nm,1.3s
JFWS LR LR
comp=Z,4µm,21.0s
S21A Coal Bank Pass 41.66 333 ⇑P P 01 23 56.7 +0.6
baz=42,SNR=10
R22A Saguache, Gunn 41.66 334 ⇓P P 01 23 56.3 +0.2
baz=42,SNR=20
O27A Beecher Island 41.71 340 ⇓P P 01 23 56.6 +0.5
baz=42
P25A Willow Gulch B 41.71 338 ⇑P P 01 23 56.7 +0.3
baz=42
WUAZ Wupatki 41.76 327 eP P 01 23 58.2 +1.5
comp=Z,262nm,1.9s
WUAZ LR LR
comp=Z,19µm,19.0s
WUAZ Wupatki 41.76 327 ⇑P P 01 23 57.3 +0.5
baz=42,SNR=13
Q23A Hartsel 41.84 336 ⇑P P 01 23 57.8 +0.2
baz=42,SNR=24
P24A Kohler Place, 42.00 337 ⇓P P 01 23 58.8 +0.2
baz=42
GLA Glamis 42.00 322 eP P 01 24 00.4 +1.8
GLA pmax pmax
comp=Z,78nm,1.4s
GLA Glamis 42.00 322 eP P 01 24 00.3 +1.8
comp=Z,78nm,1.4s
GLA Glamis 42.00 322 ⇑P P 01 23 59.1 +0.5
baz=42,SNR=9.6
O26A Horse Wrangler 42.04 339 ⇑P P 01 23 58.9 -0.1
baz=42
S20A Disappointment 42.06 332 ⇓P P 01 24 00.0 +0.8
baz=42,SNR=38
R21A Cimarron 42.13 334 ⇓P P 01 23 60.0 +0.2
baz=42,SNR=7.7
O25A Wiggins 42.22 338 ⇑P P 01 24 00.8 +0.4
baz=42
OGNE Ogallala 42.24 341 eP P 01 24 01.9 +1.4
comp=Z,178nm,1.5s
OGNE LR LR
comp=Z,5µm,20.0s
OGNE Ogallala 42.24 341 ⇓P P 01 24 00.7 +0.3
baz=42
P23A Jefferson 42.25 336 ⇓P P 01 24 01.9 +1.0
baz=42,SNR=66
Q22A Crested Butte, 42.26 335 ⇑P P 01 24 01.3 +0.3
baz=42,SNR=41
N27A Anderson Farm, 42.28 340 ⇓P P 01 24 01.2 +0.3
baz=42
Y12C Blythe 42.29 323 ⇑P P 01 24 01.5 +0.6
baz=42,SNR=8.8
R20A Redvale 42.36 333 ⇓P P 01 24 02.0 +0.4
baz=42,SNR=17
PV01 Paradox Valley 42.40 332 eP P 01 24 03.0 +1.0
comp=Z,16µm,1.8s
PDMCI Parker Dam,Lak 42.44 324 ⇑P P 01 24 02.9 +0.8
baz=43,SNR=8.2
TRY Troy 42.51 13 eP P 01 24 01.4 -1.1
comp=Z,132nm,1.3s
ISCO Idaho Springs 42.52 337 eP P 01 24 04.3 +1.2
ISCO pmax pmax
comp=Z,38nm,1.0s
ISCO MLR MLR
comp=Z,7µm,21.0s
ISCO Idaho Springs 42.52 337 eP P 01 24 04.3 +1.2
comp=Z,38nm,1.0s
ISCO LR LR
comp=Z,7µm,21.0s
ISCO Idaho Springs 42.52 337 ⇑P P 01 24 03.4 +0.3
baz=43,SNR=28
Q21A Lamborn Mesa, 42.52 334 ⇓P P 01 24 03.5 +0.5
baz=43,SNR=10
N26A Koester Ranch, 42.53 340 ⇑P P 01 24 03.1 +0.2
baz=43
SWSC Sam W. Stewart 42.53 321 ⇑P P 01 24 03.6 +0.8
baz=43,SNR=9.2
DVTC Desert V Tower 42.54 320 ⇓P P 01 24 03.7 +0.6
baz=43
SMCO Snowmass 42.55 335 eP P 01 24 03.6 +0.2
comp=Z,130nm,1.4s
O24A Longmont 42.59 337 ⇑P P 01 24 03.3 -0.1
baz=43
S18A Hurst Farm, Bl 42.72 331 ⇓P P 01 24 04.6 -0.1
baz=43,SNR=27
PV04 Paradox Valley 42.76 332 eP P 01 24 06.3 +1.4
BC3 Big Chuckawall 42.80 322 ⇓P P 01 24 05.7 +0.5
baz=43,SNR=20
HRV Adam Dziewonsk 42.80 15 eP P 01 24 05.3 +0.4
HRV pmax pmax
comp=Z,27nm,1.0s
HRV Adam Dziewonsk 42.80 15 eP P 01 24 05.3 +0.4
comp=Z,27nm,1.0s
P22A Eagle 42.81 335 ⇑P P 01 24 06.0 +0.7
baz=43,SNR=21
N25A Grover 42.82 339 ⇑P P 01 24 05.6 +0.3
baz=43
W13A Hualapai Mount 42.86 325 ⇑P P 01 24 06.7 +0.9
baz=43,SNR=25
M27A Reverse DX Ran 42.88 341 ⇓P P 01 24 06.0 +0.4
baz=43
MONP Monument Peak 42.90 320 ⇓P P 01 24 07.1 +0.9
baz=43,SNR=6.2
BAR Barrett 42.92 320 eP P 01 24 08.2 +2.1
comp=Z,43nm,1.4s
U15A Nch Rim 42.93 327 ⇓P P 01 24 07.1 +0.6
baz=43,SNR=25
Q20A Ridgley Place, 42.94 333 ⇑P P 01 24 06.6 +0.3
baz=43
IRM Iron Mountain 42.95 323 ⇑P P 01 24 07.1 +0.8
baz=43,SNR=34
O23A Lake Granby, G 42.99 337 ⇑P P 01 24 07.5 +0.6
baz=43,SNR=12
P21A Newcastle 43.04 335 ⇓P P 01 24 07.9 +0.7
baz=43,SNR=31
NEE2 Needles Airpor 43.05 324 ⇑P P 01 24 07.1 0.0
baz=43
M26A McRoberts Ranc 43.07 340 ⇑P P 01 24 08.0 +0.7
baz=43
N24A Carr 43.13 338 ⇑P P 01 24 07.9 +0.1
baz=43,SNR=21
ACCN Adirondack Com 43.13 12 eP P 01 24 07.6 0.0
comp=Z,93nm,1.8s
O22A Kremling 43.20 336 ⇓P P 01 24 08.5 -0.1
baz=43,SNR=21
GLMI Grayling 43.31 1 eP P 01 24 08.8 -0.2
comp=Z,90nm,1.2s
GLMI LR LR
comp=Z,6µm,19.0s
109C Camp Elliot, M 43.34 320 ⇓P P 01 24 10.2 +0.8
baz=44,SNR=7.0
L27A T5 Ranch, Ells 43.36 341 ⇓P P 01 24 10.0 +0.5
baz=44
M25A Palm-Egli Farm 43.36 339 ⇓P P 01 24 09.9 +0.3
baz=44
BELC Belle Mtn. Jos 43.36 322 ⇓P P 01 24 10.4 +0.6
baz=44,SNR=16
PFO Pinyon Flat Ob 43.39 321 eP P 01 24 11.7 +1.7
comp=Z,69nm,1.6s
PFO Pinyon Flat Ob 43.39 321 P P 01 24 11.0 +1.0
comp=Z,149nm,1.3s,SNR=9.6
PFO Pinyon Flat Ob 43.39 321 P P 01 24 10.1 +0.1
comp=Z,65nm,1.2s,baz=123,slow=11
PFO LR LR 01 40 52.0
comp=Z,8µm,18.6s,baz=138,slow=34
PFO Pinyon Flat Ob 43.39 321 ⇑P P 01 24 10.7 +0.7
baz=44,SNR=8.5
ECSD EROS Data Cent 43.40 348 eP P 01 24 09.2 -0.5
comp=Z,159nm,1.9s
ECSD LR LR
comp=Z,4µm,19.0s
P20A De Beque 43.43 334 ⇑P P 01 24 10.7 +0.4
baz=44
L26A Underwood Farm 43.56 341 ⇑P P 01 24 11.6 +0.3
baz=44
NCB Newcomb 43.58 12 PFAKE 01 24 20.0 +8.8
NCB LR LR
comp=Z,6µm,20.0s
N23A Red Feather La 43.59 337 ⇑P P 01 24 11.9 +0.3
baz=44,SNR=16
O21A Pagoda 43.63 335 ⇓P P 01 24 12.2 +0.2
baz=44,SNR=9.5
M24A Cheyenne 43.66 339 ⇓P P 01 24 12.5 +0.3
baz=44
GMRC Granite Mounta 43.68 323 ⇑P P 01 24 13.2 +0.9
baz=44,SNR=26
N22A Wattenberg Ran 43.71 337 ⇑P P 01 24 12.6 0.0
baz=44,SNR=22
HNH Hanover 43.75 14 eP P 01 24 13.0 +0.5
comp=Z,83nm,1.3s
PHWY Pilot Hill 43.75 338 eP P 01 24 14.5 +1.5
comp=Z,134nm,1.6s
P19A Cripple Cowboy 43.80 333 ⇑P P 01 24 13.3 -0.1
baz=44,SNR=26
MURC Murrieta 43.85 320 ⇑P P 01 24 13.9 +0.2
baz=44
O20A White River Ci 43.89 334 ⇑P P 01 24 14.1 +0.1
baz=44,SNR=20
K27A Fluecknger Fa 43.89 342 ⇑P P 01 24 13.7 -0.1
baz=44
L25A Engebretsen Ra 43.97 340 ⇑P P 01 24 14.7 +0.2
baz=44
PLCA Paso Flores 43.98 164 eP P 01 24 15.0 +0.5
comp=Z,33nm,0.9s
PLCA Paso Flores 43.98 164 P P 01 24 13.8 -0.7
comp=Z,39nm,0.9s,baz=341,slow=9.1,SNR=20
PLCA LR LR 01 39 27.1
comp=Z,13µm,18.2s,baz=342,slow=32
M23A Laramie 44.00 338 ⇑P P 01 24 14.9 0.0
baz=44
N21A Black Mountain 44.10 336 ⇑P P 01 24 16.4 +0.7
baz=44,SNR=27
BBRC Big Bear Solar 44.11 321 ⇓P P 01 24 16.1 +0.2
baz=44
HEC Hector,Ludlow 44.12 322 ⇓P P 01 24 16.6 +0.8
baz=44,SNR=9.6
LONY Lake Ozonia 44.13 11 eP P 01 24 14.0 -1.6
comp=Z,67nm,1.4s
LONY LR LR
comp=Z,7µm,20.0s
K26A Motz Farm, Whi 44.19 341 ⇑P P 01 24 16.5 +0.2
baz=44
SPMN St. Paul 44.20 352 ⇑P P 01 24 14.3 -1.9
baz=44,SNR=15
L24A Wheatland 44.21 339 ⇑P P 01 24 16.5 0.0
baz=44
LPA La Plata 44.23 147 ceP P 01 24 17.0 +0.4
LPA PP PP 01 26 00.0 +0.3
LPA S S 01 30 52.0 +1.4
LPA PKIKP PKiKP 01 33 00.0 -2.1
Q16A Castle Valley 44.26 331 ⇑P P 01 24 17.1 +0.1
baz=44,SNR=21
M22A Cedar Creek Ra 44.28 337 ⇓P P 01 24 17.3 +0.1
baz=44
TUQ Turquoise Moun 44.29 323 ⇑P P 01 24 17.3 +0.1
baz=44
LBNH Lisbon 44.34 14 PFAKE 01 24 30.0 +13
LBNH LR LR
comp=Z,3µm,19.0s
K25A Mack Ranch, Ha 44.34 340 ⇑P P 01 24 17.8 +0.3
baz=44
CCUT Cedar City 44.34 328 eP P 01 24 19.3 +1.6
comp=Z,49nm,1.1s
SPB Sao Paulo 44.37 126 PFAKE 01 24 30.0 +12
SPB LR LR
comp=Z,17µm,19.0s
P18A Preston Nutter 44.38 332 ⇑P P 01 24 18.1 +0.1
baz=44,SNR=20
O19A Miners Draw (B 44.41 334 ⇑P P 01 24 18.3 +0.2
baz=45,SNR=11
MSNY Massena 44.44 11 eP P 01 24 17.3 -0.8
MSU Marysvale 44.45 330 eP P 01 24 19.9 +1.4
MSU Marysvale 44.45 330 eP P 01 24 19.9 +1.4
MVU Marysvale 44.46 330 eP P 01 24 20.0 +1.4
comp=Z,73nm,1.5s
MVU LR LR
comp=Z,6µm,20.0s
N20A Spence Gulch, 44.48 335 ⇑P P 01 24 18.5 -0.2
baz=45,SNR=23
P17A Butcher Ranch, 44.48 332 ⇓P P 01 24 18.9 +0.1
baz=45,SNR=12
CIS Catalina Islan 44.51 319 ⇓P P 01 24 19.1 +0.2
baz=45
FRNY Flat Rock 44.53 12 eP P 01 24 18.4 -0.4
comp=Z,38nm,1.4s
L23A Garrett 44.55 338 ⇓P P 01 24 19.5 +0.2
baz=45,SNR=24
BFSC Mount Baldy Ra 44.56 321 ⇓P P 01 24 20.1 +0.7
baz=45,SNR=13
ARUT Antelope Range 44.56 328 eP P 01 24 21.4 +2.0
ARUT pmax pmax
comp=Z,47nm,1.0s
ARUT Antelope Range 44.56 328 eP P 01 24 21.4 +2.0
comp=Z,47nm,1.0s
RRX Edison Barstow 44.56 322 ⇑P P 01 24 20.1 +0.8
baz=45
BRSD Miller 44.60 346 ⇑P P 01 24 19.7 +0.3
baz=45
FMP Fort Macarthur 44.63 320 ⇓P P 01 24 19.2 -0.5
baz=45
COWI Conover 44.71 356 eP P 01 24 19.6 -0.6
comp=Z,83nm,1.4s
COWI LR LR
comp=Z,5µm,22.0s
TRQA Tornquist 44.72 154 eP P 01 24 21.9 +1.4
comp=Z,9.0nm,1.2s
TRQA LR LR
comp=Z,26µm,22.0s
GSC Goldstone 44.73 323 eP P 01 24 22.3 +1.6
GSC pmax pmax
comp=Z,178nm,1.8s
GSC Goldstone 44.73 323 eP P 01 24 22.3 +1.6
comp=Z,178nm,1.8s
GSC Goldstone 44.73 323 ⇓P P 01 24 21.6 +0.9
baz=45,SNR=18
L22A Ellis Ranch, M 44.75 338 ⇓P P 01 24 21.5 +0.6
baz=45,SNR=13
M21A Separation Pea 44.75 336 ⇑P P 01 24 21.4 +0.4
baz=45,SNR=12
K24A Anderson Ranch 44.76 340 ⇓P P 01 24 21.5 +0.7
baz=45
MWC Mount Wilson 44.80 320 eP P 01 24 23.5 +2.1
MWC pmax pmax
comp=Z,106nm,1.3s
MWC Mount Wilson 44.80 320 eP P 01 24 23.5 +2.1
comp=Z,106nm,1.3s
SHOC Shoshone 44.81 324 ⇑P P 01 24 21.2 -0.1
baz=45,SNR=20
PASC Pasadena Art C 44.85 320 eP P 01 24 23.1 +1.6
comp=Z,114nm,1.5s
DECC Green Verdugo 44.99 320 ⇓P P 01 24 23.0 +0.3
baz=45
M20A Sweetwater, Wa 44.99 336 ⇑P P 01 24 22.3 -0.5
baz=45,SNR=16
L21A Rawlins 45.06 337 ⇑P P 01 24 23.2 -0.2
baz=45,SNR=21
K23A Bowen Ranch, D 45.08 339 ⇓P P 01 24 23.0 -0.4
baz=45
EDW2 Edwards Air Fo 45.18 321 ⇓P P 01 24 24.4 +0.1
baz=45,SNR=14
J24A Dixon Ranch, L 45.24 340 ⇓P P 01 24 24.9 +0.2
baz=45
K22A Casper 45.32 338 ⇑P P 01 24 25.4 +0.1
baz=46,SNR=13
MPU Maple Canyon 45.34 331 eP P 01 24 26.8 +1.2
comp=Z,153nm,2.1s
BLG Laguna Peak 45.37 320 ⇑P P 01 24 25.7 0.0
baz=46
LRMC Laurel Mountai 45.38 322 ⇑P P 01 24 25.7 -0.2
baz=46
M19A Rock Springs 45.41 335 ⇑P P 01 24 25.8 -0.4
baz=46
DAU Daniels Canyon 45.47 332 eP P 01 24 28.0 +1.2
DAU Daniels Canyon 45.47 332 eP P 01 24 28.0 +1.2
OSI Osito Adit 45.47 320 eP P 01 24 28.9 +2.3
comp=Z,135nm,1.6s
OSI Osito Adit 45.47 320 ⇑P P 01 24 26.1 -0.5
baz=46
L20A Wamsutter 45.48 336 ⇑P P 01 24 26.4 -0.3
baz=46,SNR=8.9
FURC Furnace Creek, 45.55 324 ⇑P P 01 24 27.4 +0.4
baz=46,SNR=22
K21A Alcova 45.58 337 ⇑P P 01 24 27.2 -0.2
baz=46,SNR=18
J23A Dilts Ranch, B 45.62 339 ⇑P P 01 24 27.6 -0.1
baz=46
MPMC Manual Prospec 45.65 323 ⇓P P 01 24 28.2 +0.1
baz=46,SNR=31
I24A Kuemmerle Ranc 45.70 340 ⇑P P 01 24 27.6 -0.7
baz=46
JLU Jordanelle 45.71 332 eP P 01 24 29.8 +1.2
comp=Z,335nm,2.3s
M18A Lyman 45.74 334 ⇓P P 01 24 28.2 -0.6
baz=46,SNR=8.4
DAC Darwin (Calif) 45.85 323 eP P 01 24 31.0 +1.3
DAC pmax pmax
comp=Z,27nm,1.1s
DAC MLR MLR
comp=Z,11µm,19.0s
DAC Darwin (Calif) 45.85 323 eP P 01 24 31.0 +1.3
comp=Z,27nm,1.1s
DAC LR LR
comp=Z,11µm,19.0s
ARVC Arvin 45.87 321 ⇓P P 01 24 28.5 -1.0
baz=46
J22A Midwest 45.96 339 ⇑P P 01 24 30.0 -0.3
baz=46,SNR=23
L19A Farson 45.99 335 ⇓P P 01 24 30.3 -0.4
baz=46,SNR=17

ISA	Isabella	45.99	322	eP	P	01 24 32.2	+1.6
ISA				pmax	pmax		
	comp=Z,66nm,1.5s						
ISA	Isabella	45.99	322	eP	P	01 24 32.2	+1.6
	comp=Z,66nm,1.5s						
ISA	Isabella	45.99	322	⇑P	P	01 24 30.6	-0.1
	baz=46,SNR=10						
K20A	Yellowstone Ra	46.03	336	⇑P	P	01 24 30.7	-0.3
	baz=46,SNR=17						
M17A	Scullys Gap (B	46.04	333	⇓P	P	01 24 30.9	-0.3
	baz=46,SNR=31						
DUG	Dugway	46.05	331	eP	P	01 24 32.5	+1.4
DUG				pmax	pmax		
	comp=Z,72nm,1.6s						
DUG				MLR	MLR		
	comp=Z,11µm,20.0s						
DUG	Dugway	46.05	331	eP	P	01 24 32.5	+1.4
	comp=Z,72nm,1.6s						
DUG				LR	LR		
	comp=Z,11µm,20.0s						
DUG	Dugway	46.05	331	⇑P	P	01 24 31.2	+0.1
	baz=46,SNR=22						
I23A	Meade Ranch, G	46.07	340	⇑P	P	01 24 30.6	-0.7
	baz=46						
R11A	Troy Canyon, C	46.13	327	⇑P	P	01 24 32.1	+0.3
	baz=46,SNR=25						
L18A	Fontenelle, Gr	46.13	334	⇑P	P	01 24 31.5	-0.3
	baz=46,SNR=22						
GRAC	Grapevine Rang	46.20	324	⇓P	P	01 24 32.0	-0.3
	baz=46						
CWC	Cottonwood Cre	46.25	323	⇑P	P	01 24 33.5	+0.7
	baz=46,SNR=6.2						
J21A	Lysite	46.26	338	⇑P	P	01 24 33.0	+0.1
	baz=46,SNR=48						
PKM	Peak Mountain	46.35	320	⇑P	P	01 24 33.9	+0.2
	baz=46,SNR=6.0						
K19A	Absolon Red Bu	46.37	336	⇑P	P	01 24 32.8	-0.9
	baz=46,SNR=28						
I22A	9 Mile Ranch,	46.38	339	⇓P	P	01 24 33.4	-0.2
	baz=46						
H24A	Dirks Ranch, A	46.47	341	⇓P	P	01 24 33.9	-0.4
	baz=47,SNR=26						
VES	Vestal, Richgr	46.48	321	⇑P	P	01 24 35.0	+0.6
	baz=47,SNR=19						
J20A	Shoshoni	46.51	337	⇑P	P	01 24 34.8	+0.1
	baz=47,SNR=18						
HWUT	Hardware Ranch	46.56	333	eP	P	01 24 34.6	-0.6
	comp=Z,184nm,1.6s						
HWUT				LR	LR		
	comp=Z,16µm,20.0s						
H23A	Clabaugh Cattl	46.58	340	⇑P	P	01 24 34.7	-0.5
	baz=47						
I21A	Big Trails, Te	46.60	338	⇓P	P	01 24 35.0	-0.5
	baz=47,SNR=17						
BW06	Boulder Array	46.62	335	eP	P	01 24 35.8	+0.1
	comp=Z,81nm,1.6s						
BW06				LR	LR		
	comp=Z,18µm,19.0s						
PDAR	Pinedale Array	46.62	335	P	P	01 24 35.8	+0.1
PDAR	Pinedale Array	46.62	335	P	P	01 24 35.8	+0.1
	comp=Z,11nm,0.9s,baz=134,slow=8.6,SNR=37						
PDAR				LR	LR	01 44 39.7	
	comp=Z,16µm,18.8s,baz=148,slow=37						
K18A	Toltan Ranch,	46.72	335	⇓P	P	01 24 36.6	+0.1
	baz=47,SNR=34						
SMMC	Simmler	46.72	320	⇓P	P	01 24 35.3	-1.1
	baz=47						
EYMN	Ely	46.73	354	eP	P	01 24 37.1	+0.9
	comp=Z,77nm,1.5s						
EYMN				LR	LR		
	comp=Z,5µm,21.0s						
TIN	Tinemaha	46.75	323	⇓P	P	01 24 36.4	-0.3
	baz=47						
J19A	Crowheart	46.82	336	⇓P	P	01 24 37.0	-0.2
	baz=47,SNR=23						
TPH	Tonopah	46.85	325	PFAKE		01 24 50.0	+12
TPH				LR	LR		
	comp=Z,9µm,19.0s						
RCTC	Rector, Farmer	46.88	322	⇓P	P	01 24 37.3	-0.2
	baz=47						
H22A	Clearmont	46.94	339	⇑P	P	01 24 37.3	-0.7
	baz=47						
G24A	Alzada	46.94	342	⇑P	P	01 24 37.2	-0.7
	baz=47						
I20A	Worland	47.04	337	⇓P	P	01 24 38.2	-0.6
	baz=47,SNR=26						
G23A	Biddle	47.14	341	⇑P	P	01 24 39.2	-0.4
	baz=47						
MTUM	Tungsten Hills	47.15	323	eP	P	01 24 41.4	+1.5
J18A	Kendall Valley	47.18	335	⇑P	P	01 24 39.4	-0.6
	baz=47,SNR=47						
K17A	Gardner Place,	47.18	334	⇓P	P	01 24 39.1	-1.0
	baz=47						
H21A	Big Horn, Sher	47.21	339	⇑P	P	01 24 39.2	-1.0
	baz=47						
HVU	Hansel Valley	47.25	332	eP	P	01 24 41.4	+0.8
HVU				pmax	pmax		
	comp=Z,52nm,1.2s						
HVU	Hansel Valley	47.25	332	eP	P	01 24 41.4	+0.8
	comp=Z,52nm,1.2s						
AHID	Auburn Hatcher	47.27	334	eP	P	01 24 40.8	0.0
	comp=Z,66nm,1.4s						
AHID				LR	LR		
	comp=Z,10µm,19.0s						
F24A	Ekalaka	47.41	342	⇑P	P	01 24 41.4	-0.2
	baz=48,SNR=15						
H20A	Greybull	47.44	338	⇓P	P	01 24 41.3	-0.7
	baz=48						
I19A	Meeteetse	47.45	337	⇓P	P	01 24 41.6	-0.5
	baz=48,SNR=10.0						
G22A	Birney	47.46	340	⇓P	P	01 24 41.2	-0.9
	baz=48						
MLAC	Mammoth Lakes	47.49	323	⇓P	P	01 24 42.1	-0.5
	baz=48						
I18A	Diamond G Ranc	47.50	336	⇑P	P	01 24 42.0	-0.5
	baz=48,SNR=12						
K16A	Soda Springs	47.54	334	⇑P	P	01 24 42.4	-0.5
	baz=48,SNR=18						
J17A	Brown Place, J	47.59	335	⇑P	P	01 24 43.0	-0.2
	baz=48,SNR=26						
F23A	Volborg	47.61	341	⇓P	P	01 24 42.1	-1.0
	baz=48,SNR=32						
PQI	Presque Isle	47.61	16	eP	P	01 24 42.3	-0.7
	comp=Z,184nm,1.4s						
NV11	Mina Array Sit	47.63	325	eP	P	01 24 45.0	+1.4
REDW	Red Top Meadow	47.65	335	eP	P	01 24 46.1	+2.4
	comp=Z,2.7nm,1.4s						
AGMN	Agassiz Nation	47.66	350	eP	P	01 24 43.0	-0.4
	comp=Z,37nm,1.0s						
AGMN				LR	LR		
	comp=Z,3µm,21.0s						
ELK	Elko	47.68	329	eP	P	01 24 45.1	+1.1
	comp=Z,837nm,1.3s						
SNOW	Snow King Moun	47.69	335	eP	P	01 24 44.8	+0.8
	comp=Z,84nm,1.3s						
NVAR	Mina Array Bea	47.72	325	P	P	01 24 45.9	+1.5
NVAR	Mina Array Bea	47.72	325	P	P	01 24 45.9	+1.5
	comp=Z,22nm,1.0s,baz=139,slow=7.3,SNR=42						
NVAR				LR	LR	01 44 34.6	
	comp=Z,8µm,18.5s,baz=233,slow=36						
LOHW	Long Hollow	47.75	335	eP	P	01 24 44.9	+0.4
	comp=Z,70nm,1.4s						
G21A	Lodge Grass	47.79	339	⇓P	P	01 24 43.6	-1.0
	baz=48						
TPAW	Teton Pass	47.80	335	eP	P	01 24 45.3	+0.4
	comp=Z,95nm,1.4s						
RRI2	Red Ridge	47.84	334	eP	P	01 24 46.0	+0.7
	comp=Z,58nm,1.0s						
J16A	Bone	47.91	334	⇑P	P	01 24 45.2	-0.5
	baz=48,SNR=33						
MOOW	Moose Ponds	47.92	335	eP	P	01 24 46.0	+0.2
	comp=Z,74nm,1.8s						
F22A	Rosebud	47.94	340	⇑P	P	01 24 45.1	-0.7
	baz=48,SNR=9.1						
MDND	Maddock	47.96	347	⇓P	P	01 24 45.2	-0.6
	baz=48						
H19A	Powell	47.97	337	⇑P	P	01 24 45.5	-0.6
	baz=48						
DCID1	Drake Creek	47.98	335	eP	P	01 24 46.5	+0.2
	comp=Z,151nm,1.4s						
I17A	Pilgrim Ck.	47.99	335	⇑P	P	01 24 45.5	-0.9
	baz=48						
E24A	Baker	48.01	342	⇓P	P	01 24 45.4	-0.8
	baz=48						
IMW	Indian Meadow	48.12	335	eP	P	01 24 47.8	+0.3
	comp=Z,63nm,1.6s						
G20A	Bridger	48.15	338	⇑P	P	01 24 46.6	-0.9
	baz=48,SNR=15						
H18A	Shoshone NF, C	48.24	337	⇑P	P	01 24 47.6	-0.8
	baz=48,SNR=25						
E23A	Ismay	48.26	342	⇓P	P	01 24 47.8	-0.4
	baz=48,SNR=9.5						
F21A	Absaloka Mine,	48.27	340	⇓P	P	01 24 47.3	-1.0
	baz=48						
I16A	Newdale	48.34	335	⇓P	P	01 24 48.3	-0.7
	baz=48						
H17A	Grant Village	48.38	336	⇓P	P	01 24 49.8	+0.5
	baz=48,SNR=8.1						
E22A	Miles City	48.42	341	⇓P	P	01 24 48.8	-0.5
	baz=49,SNR=8.7						
RLMT	Red Lodge	48.46	337	eP	P	01 24 50.2	+0.2
	comp=Z,48nm,1.5s						
RLMT				LR	LR		
	comp=Z,8µm,20.0s						
BMN	Battle Mountai	48.50	327	eP	P	01 24 51.3	+1.1
BMN				pmax	pmax		
	comp=Z,50nm,1.3s						
BMN				MLR	MLR		
	comp=Z,18µm,20.0s						
BMN	Battle Mountai	48.50	327	eP	P	01 24 51.3	+1.1
	comp=Z,50nm,1.3s						
BMN				LR	LR		
	comp=Z,18µm,20.0s						
D24A	Glendive	48.52	343	⇑P	P	01 24 49.9	-0.2
	baz=49,SNR=7.2						
F20A	Billings	48.62	339	⇑P	P	01 24 50.5	-0.6
	baz=49						
CMB	Columbia Colle	48.69	323	eP	P	01 24 52.4	+0.8
CMB				pmax	pmax		
	comp=Z,252nm,2.8s						
CMB	Columbia Colle	48.69	323	eP	P	01 24 52.4	+0.8
	comp=Z,252nm,2.8s						
G18A	Lazy EL Ranch,	48.74	337	⇓P	P	01 24 51.2	-0.8
	baz=49,SNR=14						
YMR	Madison River	48.76	336	eP	P	01 24 53.6	+1.3
	comp=Z,19nm,0.7s						
J14A	Carey	48.80	333	⇓P	P	01 24 52.3	-0.2
	baz=49,SNR=31						
D23A	Lindsay	48.83	342	⇓P	P	01 24 52.1	-0.5
	baz=49						
I15A	Monteview	48.87	334	⇑P	P	01 24 53.0	-0.1
	baz=49,SNR=6.6						
E21A	Keefer Ranch,	48.88	340	⇓P	P	01 24 52.3	-0.7
	baz=49						
H16A	Russell Place,	48.91	336	⇓P	P	01 24 53.5	+0.1
	baz=49,SNR=22						
C24A	Savage	48.92	343	⇑P	P	01 24 52.9	-0.3
	baz=49,SNR=11						
F19A	Roth Farm, Mol	48.96	338	⇓P	P	01 24 52.9	-0.8
	baz=49,SNR=8.2						
QLMT	Earthquake Lak	49.09	335	eP	P	01 24 56.3	+1.6
D22A	Cohagen	49.12	341	⇓P	P	01 24 54.6	-0.2
	baz=49,SNR=10						
WCN	Washoe City	49.14	325	eP	P	01 24 56.8	+1.5
WCN				pmax	pmax		
	comp=Z,19nm,1.2s						
WCN	Washoe City	49.14	325	eP	P	01 24 56.8	+1.5
	comp=Z,19nm,1.2s						
J13A	Cove Ranch, Pi	49.16	332	⇑P	P	01 24 54.9	-0.4
	baz=49,SNR=16						
GCMT	Greycliff	49.18	338	eP	P	01 24 55.4	+0.1
	comp=Z,65nm,1.5s						
G17A	Pierce Place,	49.21	336	⇑P	P	01 24 55.6	0.0
	baz=49,SNR=26						
E20A	Meyer Farm, Mu	49.22	339	⇑P	P	01 24 55.1	-0.4
	baz=49,SNR=11						
I14A	Mackay	49.24	333	⇓P	P	01 24 55.8	-0.1
	baz=49,SNR=22						
F18A	Big Timber	49.29	338	⇑P	P	01 24 55.8	-0.4
	baz=49,SNR=30						
D21A	La Casta Ranch	49.31	341	⇓P	P	01 24 55.9	-0.4
	baz=50,SNR=10						
C23A	Lambert	49.39	342	⇓P	P	01 24 55.9	-1.0
	baz=50,SNR=7.5						
HLID	Hailey	49.40	332	eP	P	01 24 58.0	+0.9
	comp=Z,98nm,1.5s						
HLID				LR	LR		
	comp=Z,6µm,19.0s						
HLID	Hailey	49.40	332	⇑P	P	01 24 56.9	-0.2
	baz=50,SNR=37						
E19A	Rath Farm, Rou	49.41	339	⇑P	P	01 24 56.4	-0.7
	baz=50,SNR=15						
H15A	Lima	49.43	334	⇑P	P	01 24 57.5	+0.1
	baz=50,SNR=11						
I13A	Wildhorse Cree	49.53	333	⇓P	P	01 24 58.1	-0.1
	baz=50,SNR=47						
C22A	Vida	49.55	342	⇑P	P	01 24 57.9	-0.2
	baz=50,SNR=15						
ULM	Lac du Bonnet	49.56	351	eP	P	01 24 57.5	-0.5
	comp=Z,54nm,1.2s						
ULM	Lac du Bonnet	49.56	351	P	P	01 24 57.0	-1.0
	comp=Z,34nm,1.1s,baz=166,slow=6.5,SNR=15						
ULM				LR	LR	01 49 25.0	
	comp=Z,2µm,18.6s,baz=164,slow=40						
G16A	Moss Hill, Enn	49.56	336	⇑P	P	01 24 58.2	-0.2
	baz=50,SNR=27						
F17A	Fitzpatrick Pl	49.66	337	⇑P	P	01 24 58.9	-0.1
	baz=50,SNR=22						
MCMT	McKenzie Canyo	49.68	334	eP	P	01 25 00.1	+0.7
	comp=Z,30nm,1.5s						
DGMT	Dagmar	49.70	344	PFAKE		01 25 10.0	+11
DGMT				LR	LR		
	comp=Z,5µm,21.0s						
DGMT	Dagmar	49.70	344	⇓P	P	01 24 58.0	-1.1
	baz=50						
D20A	Manuel Ranch,	49.72	340	⇑P	P	01 24 59.0	-0.4
	baz=50,SNR=13						
H14A	Leadore	49.74	334	⇑P	P	01 24 59.8	0.0
	baz=50,SNR=15						
G15A	Dillon	49.80	335	⇑P	P	01 24 60.0	-0.2
	baz=50,SNR=16						
RCBR	Riachuelo	49.83	99	eP	P	01 25 01.7	+0.9
	comp=Z,13nm,1.0s						
RCBR				LR	LR		
	comp=Z,16µm,19.0s						
RCBR	Riachuelo	49.83	99	P	P	01 25 01.5	+0.7
	comp=Z,6.7nm,0.9s,baz=280,slow=7.2,SNR=4.5						
BOZ	Bozeman (W)	49.83	336	eP	P	01 24 59.8	-0.6
BOZ				pmax	pmax		
	comp=Z,62nm,1.5s						
BOZ				MLR	MLR		
	comp=Z,6µm,19.0s						
BOZ	Bozeman (W)	49.83	336	eP	P	01 24 59.8	-0.6
	comp=Z,62nm,1.5s						
BOZ				LR	LR		
	comp=Z,6µm,19.0s						
BEKR	Beckworth	49.86	325	eP	P	01 25 01.6	+0.9
	comp=Z,28nm,1.2s						
I12A	Atlanta	49.91	332	⇓P	P	01 25 00.6	-0.4
	baz=50,SNR=19						
E18A	Harlowton	49.92	338	⇓P	P	01 25 00.7	-0.3
	baz=50,SNR=14						
B23A	Brockton	49.92	343	⇓P	P	01 25 00.4	-0.5
	baz=50						
F16A	Kennard Place,	49.94	336	⇑P	P	01 25 00.8	-0.4
	baz=50,SNR=13						
MFID	Camas Ranch	49.96	331	eP	P	01 25 02.2	+0.9
	comp=Z,300nm,2.3s						
MFID	Camas Ranch	49.96	331	⇑P	P	01 25 01.0	-0.3
	baz=50,SNR=22						
DLMT	Dillon	50.00	335	eP	P	01 25 02.6	+0.9
	comp=Z,74nm,1.4s						
C21A	Desert Coulee	50.01	341	⇑P	P	01 25 01.3	-0.3
	baz=50,SNR=16						
D19A	Cripps Ranch,	50.05	339	⇑P	P	01 25 01.4	-0.5
	baz=50,SNR=28						
A24A	Westby	50.06	344	⇓P	P	01 25 01.3	-0.6
	baz=50,SNR=7.4						
B22A	Reddig Ranch S	50.08	342	⇑P	P	01 25 01.6	-0.5
	baz=50						
H13A	Challis	50.10	333	⇓P	P	01 25 02.0	-0.5
	baz=50,SNR=37						
OHCM	Honcut	50.18	323	eP	P	01 25 04.0	+1.1
E17A	Martinsdale	50.19	337	⇑P	P	01 25 02.7	-0.4
	baz=50,SNR=18						
C20A	Veseth Ranch,	50.22	340	⇑P	P	01 25 03.2	+0.1
	baz=50,SNR=9.8						
G14A	Jackson	50.28	334	⇓P	P	01 25 03.6	-0.3
	baz=50,SNR=14						
LRM	Limekiln Ridge	50.31	335	eP	P	01 25 04.5	+0.4
A23A	Redstone	50.34	343	⇑P	P	01 25 03.5	-0.5
	baz=50						
F15A	Butte	50.34	335	⇓P	P	01 25 04.0	-0.3
	baz=50,SNR=15						
H12A	Diamond D Ranc	50.36	333	⇑P	P	01 25 03.9	-0.5
	baz=50,SNR=30						
D18A	Linhart Farms,	50.41	338	⇓P	P	01 25 04.5	-0.1
	baz=51,SNR=6.6						
G13A	Cobalt	50.50	334	⇓P	P	01 25 04.9	-0.5
	baz=51,SNR=18						
B21A	Ellsworth Farm	50.51	341	⇑P	P	01 25 05.0	-0.3
	baz=51						
E16A	East Helena	50.57	337	⇓P	P	01 25 06.0	0.0
	baz=51,SNR=7.4						
C19A	Slack Wire Ran	50.59	339	⇓P	P	01 25 05.3	-0.7
	baz=51,SNR=25						
WVOR	Wild Horse Val	50.66	328	eP	P	01 25 06.1	-0.6
WVOR				pmax	pmax		
	comp=Z,83nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,17µm,19.0s						
WVOR	Wild Horse Val	50.66	328	eP	P	01 25 06.1	-0.6
	comp=Z,82nm,1.2s						
WVOR				LR	LR		
	comp=Z,17µm,19.0s						
A22A	Carney Farms,	50.67	343	⇑P	P	01 25 05.9	-0.7
	baz=51						
F14A	Wisdom	50.69	335	⇓P	P	01 25 06.7	-0.2
	baz=51						
D17A	Six Diamond Ra	50.70	338	⇓P	P	01 25 06.2	-0.7
	baz=51,SNR=37						
HRY	Holter Researc	50.78	337	eP	P	01 25 08.1	+0.6
B20A	Solberg Farm,	50.85	341	⇑P	P	01 25 07.2	-0.7
	baz=51						
E15A	Deer Lodge	50.88	336	⇑P	P	01 25 07.5	-0.8
	baz=51,SNR=20						
D16A	Dana Ranch, Ca	50.93	337	⇑P	P	01 25 07.9	-0.7
	baz=51,SNR=20						
F13A	Darby	51.09	334	⇓P	P	01 25 09.2	-0.6
	baz=51,SNR=30						
EGMT	Eagleton	51.09	339	eP	P	01 25 10.9	+1.1
	comp=Z,119nm,1.4s						
EGMT				LR	LR		
	comp=Z,7µm,21.0s						
EGMT	Eagleton	51.09	339	⇓P	P	01 25 09.3	-0.4
	baz=51,SNR=11						
C17A	Wharram Farm,	51.13	338	⇓P	P	01 25 09.4	-0.6
	baz=51,SNR=16						
B19A	Brinkman Farms	51.17	340	⇑P	P	01 25 10.1	-0.3
	baz=51,SNR=6.3						
MOD	Modoc	51.19	327	eP	P	01 25 11.4	+0.7
	comp=Z,85nm,1.3s						
A20A	Cobblestone Ra	51.20	341	⇓P	P	01 25 09.8	-0.7
	baz=51						
E14A	Clinton	51.22	335	⇑P	P	01 25 10.4	-0.4
	baz=51,SNR=30						
D15A	Lincoln	51.33	336	⇓P	P	01 25 11.1	-0.5
	baz=52,SNR=6.9						
B18A	Beardsley Farm	51.41	339	⇑P	P	01 25 11.9	-0.2
	baz=52,SNR=16						
F12A	Elk City	51.47	333	⇑P	P	01 25 11.9	-0.8
	baz=52,SNR=34						
A19A	Klindworth Far	51.51	340	⇓P	P	01 25 12.6	-0.3
	baz=52,SNR=10						
CHMT	Chamberlain Mo	51.52	336	eP	P	01 25 13.3	+0.1
E13A	Victor	51.54	335	⇓P	P	01 25 13.0	-0.2
	baz=52,SNR=16						
WDC	Whiskeytown Da	51.60	324	eP	P	01 25 12.2	-1.4
WDC				pmax	pmax		
	comp=Z,23nm,1.2s						
WDC	Whiskeytown Da	51.60	324	eP	P	01 25 12.2	-1.4
	comp=Z,23nm,1.2s						
C16A	Fuhringer Ranc	51.64	337	⇓P	P	01 25 13.3	-0.6
	baz=52,SNR=37						
B17A	L&G Farms, Che	51.70	339	⇓P	P	01 25 13.0	-1.3
	baz=52						
BMO	Blue Mountains	51.74	331	eP	P	01 25 14.3	-0.4
	comp=Z,54nm,1.4s						
BMO				LR	LR		
	comp=Z,5µm,22.0s						
MSO	Missoula	51.74	335	eP	P	01 25 15.3	+0.6
	comp=Z,67nm,1.3s						
MSO				LR	LR		
	comp=Z,6µm,21.0s						
MSO	Missoula	51.74	335	⇑P	P	01 25 14.1	-0.6
	baz=52,SNR=43						
D14A	Greenough	51.76	336	⇑P	P	01 25 14.1	-0.7
	baz=52,SNR=14						
SLMT	Seeley Lake	51.88	336	eP	P	01 25 16.5	+0.7
A18A	Metzger Ranch,	51.88	340	⇓P	P	01 25 15.1	-0.6
	baz=52,SNR=16						
C15A	Salmond Ranch,	51.95	337	⇑P	P	01 25 16.3	0.0
	baz=52,SNR=12						
LHEM	Herd Peak	52.08	325	P	P	01 25 17.9	+0.4
B16A	M & M Farms, S	52.13	338	⇓P	P	01 25 16.8	-0.7
	baz=52,SNR=19						
D13A	Huson	52.16	335	⇑P	P	01 25 17.4	-0.4
	baz=52,SNR=27						
A17A	Triple J Farms	52.21	339	⇓P	P	01 25 18.0	-0.1
	baz=52,SNR=10						
SWMT	Swartz Lake	52.30	336	eP	P	01 25 19.5	+0.6
B15A	Bradely Ranch,	52.38	337	⇓P	P	01 25 18.8	-0.6
	baz=52,SNR=14						
C14A	Swan Lake	52.41	336	⇑P	P	01 25 19.0	-0.6
	baz=52						
YBH	Yreka Blue Hor	52.43	325	eP	P	01 25 19.2	-0.7
	comp=Z,31nm,1.0s						
YBH	Yreka Blue Hor	52.43	325	P	P	01 25 18.4	-1.6
	comp=Z,27nm,0.9s,baz=109,slow=4.7,SNR=27						
KHMM	Horse Mountain	52.49	324	eP	P	01 25 21.2	+0.8
	comp=Z,98nm,1.1s						
D12A	Red Ives Fores	52.51	334	⇓P	P	01 25 19.5	-0.9
	baz=53						
A16A	West Butte Ran	52.53	338	⇑P	P	01 25 19.7	-0.9
	baz=53						
YBMT	Yellow Bay	52.59	336	eP	P	01 25 21.4	+0.4
	comp=Z,37nm,1.3s						
JTMT	Jette	52.61	336	eP	P	01 25 21.9	+0.7
C13A	Hot Springs	52.67	335	⇓P	P	01 25 21.1	-0.5
	baz=53,SNR=7.9						
B14A	Marquette Ranc	52.69	337	⇑P	P	01 25 21.0	-0.7
	baz=53,SNR=22						
BLMT	Blacktail Moun	52.85	336	eP	P	01 25 23.9	+0.8
BSMT	Bassoo Peak	52.90	335	eP	P	01 25 22.9	-0.4
A15A	Johnson Ranch,	52.98	338	⇓P	P	01 25 23.2	-0.7
	baz=53,SNR=33						
KRMB	Red Mountain	52.99	324	eP	P	01 25 25.4	+1.2
	comp=Z,461nm,1.9s						
C12B	Naegeli Ranch,	53.08	335	⇑P	P	01 25 24.3	-0.2
	baz=53,SNR=9.6						
HUMO	Hull Mountain	53.14	326	eP	P	01 25 26.4	+1.3
	comp=Z,64nm,1.9s						
B13A	Whitefish	53.18	336	⇓P	P	01 25 24.5	-0.8
	baz=53,SNR=20						
A14A	Double T Ranch	53.24	337	⇓P	P	01 25 25.0	-0.8
	baz=53,SNR=20						
WALA	Waterton Lakes	53.51	337	eP	P	01 25 28.3	+0.5
	comp=Z,1.7nm,1.3s						
C11A	Tepee Creek (N	53.51	334	⇓P	P	01 25 27.0	-0.7
	baz=54						
A13A	Flathead Natio	53.60	337	⇑P	P	01 25 27.5	-1.0
	baz=54						
KBO	Bosley Butte	53.61	325	eP	P	01 25 30.7	+2.1
	comp=Z,112nm,1.3s						
IRO	Indian Ridge	53.66	327	P	P	01 25 29.4	+0.3
B12A	Libby	53.72	335	⇓P	P	01 25 28.5	-0.7
	baz=54,SNR=10						
BLTW	Bickleton	53.90	330	P	P	01 25 31.9	+1.2
HAWA	Hanford	53.93	331	eP	P	01 25 31.4	+0.7
	comp=Z,171nm,2.3s						
HAWA				LR	LR		
	comp=Z,6µm,19.0s						
KEBM	Edson Butte	54.09	325	eP	P	01 25 32.8	+0.7
	comp=Z,181nm,1.3s						
RKT	Rikitea	54.09	240	eS	S	01 33 04.3	-5.3
	comp=Z,8µm,27.5s						
RKT				eLQ	LQ	01 38 57.9	
	comp=Z,5µm,28.0s						
RKT				eLR	LR	01 41 15.0	
	comp=Z,24µm,28.2s,baz=68						
A12A	Yaak River Ran	54.10	336	⇑P	P	01 25 31.5	-0.6
	baz=54						
VFP	Flag Point	54.14	329	P	P	01 25 34.6	+2.1
NEW	Newport	54.21	334	eP	P	01 25 33.1	+0.2
	comp=Z,54nm,1.5s						
NEW				LR	LR		
	comp=Z,8µm,19.0s						
NEW	Newport	54.21	334	⇑P	P	01 25 32.0	-0.9
	baz=54,SNR=16						
OD2	Odessa Site #2	54.27	333	P	P	01 25 34.3	+1.1
RNO	Roman Nose	54.41	326	P	P	01 25 36.8	+2.3
ASR	Mount Adams--S	54.77	330	P	P	01 25 38.3	+1.3
WPW	White Pass	55.13	330	P	P	01 25 41.8	+2.2

LON Longmire 55.30 330 eP P 01 25 41.5 +0.7
LON pmax pmax
comp=Z,14nm,1.0s
LON Longmire 55.30 330 eP P 01 25 41.5 +0.7
comp=Z,14nm,1.0s
SCHQ Schefferville 55.42 13 eP P 01 25 39.5 -1.9
comp=Z,83nm,1.5s
SCHQ Schefferville 55.42 13 P P 01 25 39.2 -2.2
comp=Z,7.3nm,0.8s,baz=204,slow=6.4,SNR=11
SCHQ LR LR 01 50 46.1
comp=Z,3µm,18.6s,baz=206,slow=38
JCW Jim Creek 56.36 331 P P 01 25 48.3 0.0
NLWA Neilton Lookou 56.77 330 eP P 01 25 53.0 +1.7
comp=Z,59nm,1.1s
NLWA LR LR
comp=Z,18µm,19.0s
PGC Sidney 57.41 331 eP P 01 25 56.5 +0.8
comp=Z,2.5nm,1.0s
EFI East Falkland 57.63 160 PFAKE
EFI LR LR 01 26 10.0 +13
comp=Z,13µm,21.0s
USHA Ushuaia 57.68 169 P P 01 25 57.2 -0.2
USHA Ushuaia 57.68 169 P P 01 25 57.2 -0.2
comp=Z,10nm,0.8s,baz=308,slow=5.4,SNR=7.9
SACV Santiago Islan 62.34 74 PFAKE
SACV LR LR 01 26 40.0 +10
comp=Z,2µm,20.0s
PMOR Pomariorio Ree 63.98 253 eP P 01 26 41.9 +0.8
comp=Z,106nm,1.4s
YKA Yellowknife Ar 64.83 345 P P 01 26 44.2 -1.6
YKA Yellowknife Ar 64.83 345 P P 01 26 44.2 -1.6
comp=Z,16nm,0.9s,baz=141,slow=6.4,SNR=163
YKW3 Yellowknife Ar 64.89 345 eP P 01 26 44.7 -1.5
comp=Z,0.9nm,1.3s
YKW3 ePP PP 01 29 08.7 -0.2
PPT Papeete 65.99 250 LR LR 01 48 22.9
comp=Z,4µm,19.3s,baz=72,slow=29
PPT2 Papeete2 66.00 250 eS S 01 35 36.7 -6.4
comp=Z,4µm,24.8s
PPT2 eSS SS 01 39 54.8 -3.7
comp=Z,2µm,26.2s
PPT2 eLQ LQ 01 43 56.6
comp=Z,19µm,32.2s
PPT2 eLR LR 01 46 46.3
comp=Z,32µm,26.2s,baz=84
WRAK Wrangell Islan 66.56 334 eP P 01 26 58.6 +1.5
comp=Z,39nm,1.5s
WRAK LR LR
comp=Z,4µm,19.0s
DLBC Dease Lake 66.84 336 eP P 01 27 00.6 +1.6
DLBC ePP PP 01 29 26.4 +0.2
TBI Tubuai 66.97 244 eS S 01 35 50.2 -4.3
comp=Z,4µm,27.0s
TBI eLQ LQ 01 44 22.4
comp=Z,9µm,35.5s
TBI eLR LR 01 47 13.6
comp=Z,27µm,26.2s,baz=76
PMSA Palmer Station 67.77 170 PFAKE
PMSA LR LR 01 27 20.0 +15
comp=Z,5µm,19.0s
SFJD Kangerlussuaq 69.85 14 eP P 01 27 16.9 -0.7
comp=Z,114nm,1.5s
SFJD LR LR
comp=Z,3µm,22.0s
SFJD Kangerlussuaq 69.85 14 i P P 01 27 18.0 +0.5
comp=Z,12nm,1.2s
SFJD
comp=Z,3µm,22.0s
PMOZ Porto Moniz, M 70.94 56 eS S 01 36 46.7 +5.1
PMOZ eLR LR 01 49 43.6
comp=Z,2µm,20.0s
POHA Pohakuloa 70.97 290 PFAKE 01 27 40.0 +14
POHA LR LR
comp=Z,12µm,22.0s
PNL Peninsula 71.49 334 eP P 01 27 28.6 +0.9
comp=Z,87nm,1.6s
XMAS Kiritimati 72.12 272 PFAKE 01 27 50.0 +18
XMAS LR LR
comp=Z,4µm,21.0s
KIP Kipapa 73.44 292 PFAKE 01 27 50.0 +10
KIP LR LR
comp=Z,7µm,21.0s
RES Resolute Bay 73.48 357 eP P 01 27 38.5 -0.7
comp=Z,19nm,1.0s
RAGM Ragged Mountai 74.16 334 eP P 01 27 46.2 +2.7
EGAK Eagle 74.85 338 eP P 01 27 48.3 +0.8
comp=Z,35nm,1.1s
EGAK LR LR
comp=Z,7µm,19.0s
DOT Dot Lake 75.40 337 eP P 01 27 52.8 +2.1
comp=Z,179nm,1.3s
RAR Rarotonga 76.04 248 PFAKE 01 28 10.0 +15
RAR LR LR
comp=Z,6µm,20.0s
SML Sawmill 76.37 334 eP P 01 27 57.8 +1.5
SML pmax pmax
comp=Z,20nm,1.3s
SML Sawmill 76.37 334 eP P 01 27 57.8 +1.5
comp=Z,20nm,1.3s
PMR Palmer 76.63 334 eP P 01 27 58.2 +0.5
PMR pmax pmax
comp=Z,8.0nm,1.0s
PMR Palmer 76.63 334 eP P 01 27 58.2 +0.5
comp=Z,7.7nm,1.0s
SUMG Summit 76.81 13 eP P 01 27 58.7 -0.4
SUMG pmax pmax
comp=Z,527nm,2.2s
SUMG Summit 76.81 13 eP P 01 27 58.7 -0.4
comp=Z,527nm,2.2s
SUMG Summit 76.81 13 i P P 01 27 59.0 0.0
comp=Z,20nm,1.0s
SUMG
comp=Z,3µm,22.0s
KDAK Kodiak Island 76.92 330 PFAKE 01 28 10.0 +11
KDAK LR LR
comp=Z,3µm,19.0s
ILAR Eielson Array 77.01 337 P P 01 27 59.2 -0.6
ILAR Eielson Array 77.01 337 P P 01 27 59.2 -0.6
comp=Z,16nm,1.1s,baz=137,slow=3.4,SNR=87
ILAR LR LR 02 03 38.2
comp=Z,6µm,18.2s,baz=120,slow=37
OHAK Old Harbor 77.10 329 eP P 01 28 02.2 +1.8
comp=Z,97nm,1.4s
MCK McKinley 77.39 336 eP P 01 28 03.7 +1.7
MCK pmax pmax
comp=Z,33nm,1.0s
MCK McKinley 77.39 336 eP P 01 28 03.7 +1.7
comp=Z,32nm,1.0s
COLA College 77.43 337 eP P 01 28 03.2 +1.1
COLA pmax pmax
comp=Z,50nm,1.5s
COLA MLR MLR
comp=Z,6µm,20.0s
COLA College 77.43 337 eP P 01 28 03.2 +1.1
comp=Z,50nm,1.5s
COLA LR LR
comp=Z,6µm,20.0s
SPU Mount Spurr 77.79 333 eP P 01 28 05.7 +1.3
TRF Thorofare Moun 77.84 335 eP P 01 28 05.2 +0.5
comp=Z,475nm,2.8s
RSO Redoubt South 77.88 332 eP P 01 28 07.3 +2.3
BORG Borgarnes 77.93 23 PFAKE
BORG LR LR 01 28 20.0 +15
comp=Z,4µm,21.0s
LIS Lisbon 78.36 51 eP P 01 28 07.8 -0.1
LIS eS S 01 38 05.2 +1.1
LIS eSS SS 01 43 07.1 +0.2
LIS AMS AMS 01 57 32.9
comp=Z,4µm,23.8s
LIS Lisbon 78.36 51 eP P 01 28 07.8 -0.1
LIS eS S 01 38 05.2 +1.1
LIS eSS SS 01 43 07.1 +0.2
LIS A A 01 57 32.9
comp=Z,4µm,23.8s
LIS Lisbon 78.36 51 eP P 01 28 07.7 -0.1
LIS eS S 01 38 05.2 +1.1
PPLA Purkeypile 78.44 335 eP P 01 28 08.8 +0.7
comp=Z,136nm,1.4s
MORF Marmelete 78.57 52 eP P 01 28 11.2 +2.0
comp=Z,152nm,1.5s
MORF Marmelete 78.57 52 eP P 01 28 09.0 -0.2
MORF eS S 01 38 06.4 -0.2
MESJ Messejana 78.97 52 eP P 01 28 11.2 -0.1
MESJ eS S 01 38 10.5 -0.3
MESJ AMS AMS 01 58 36.2
comp=Z,2µm,19.0s
MESJ Messejana 78.97 52 eP P 01 28 11.2 -0.1
MESJ eS S 01 38 10.5 -0.3
MESJ A A 01 58 36.2
comp=Z,2µm,19.0s
MESJ Messejana 78.97 52 eP P 01 28 11.1 -0.1
MESJ eS S 01 38 10.4 -0.3
PTOM Tomar 79.05 50 eP P 01 28 13.5 +1.8
comp=Z,81nm,1.7s
PMTG Montargil 79.12 51 eP P 01 28 13.5 +1.4
comp=Z,56nm,1.5s
EVOP Sao Brissos 79.13 51 eP P 01 28 11.7 -0.4
EVOP pmax pmax
comp=Z,175nm,1.7s
EVOP Sao Brissos 79.13 51 eP P 01 28 11.7 -0.4
comp=Z,175nm,1.7s
EVO Evora 79.22 51 eP P 01 28 11.7 -0.9
comp=Z,175nm,1.7s
EVO eR
comp=Z,6µm,22.2s
EVO Evora 79.22 51 eP P 01 28 16.5 +3.9
comp=Z,72nm,2.0s
COLD Coldfoot 79.26 339 eP P 01 28 14.8 +2.6
comp=Z,30nm,1.0s
PBEJ Beja 79.27 52 eP P 01 28 14.6 +1.6
comp=Z,58nm,1.6s
PVAQ Vaqueiros 79.32 52 eS S 01 38 18.4 +3.9
PVAQ eLR LR 01 53 28.5
comp=Z,2µm,22.0s
PGAV Gavieira, Arco 79.46 48 eS S 01 38 18.6 +2.6
PGAV eLR LR 01 53 32.2
comp=Z,4µm,22.0s
PESTR Estremoz 79.59 51 eP P 01 28 15.9 +1.2
comp=Z,80nm,1.6s
RTC Rabat Centre 79.66 56 PFAKE
RTC LR LR 01 28 30.0 +15
comp=Z,4µm,22.0s
POLO Lamas de Olo 79.74 48 eP P 01 28 18.9 +3.4
comp=Z,25nm,1.7s
VAL Valentia 79.75 37 ||i S S 01 38 36.8 +18
VAL Valentia 79.75 37 ||i SS SS 01 43 28.6 +1.5
PCBR Castelo Branco 79.79 50 eP P 01 28 17.8 +2.1
comp=Z,45nm,1.9s
MTE Manteigas 79.81 49 A A 01 28 38.4
comp=Z,40nm,1.7s
MTE eS S 01 38 22.1 +2.4
MTE eLQ LQ 01 50 00.3
MTE eLR LR 01 53 42.3
comp=Z,3µm,20.0s
MTE Manteigas 79.81 49 PFAKE 01 28 30.0 +14
MTE LR LR
comp=Z,3µm,21.0s
PMRV Marv??o 79.81 50 eP P 01 28 17.1 +1.3
comp=Z,54nm,1.6s
PMRV eS S 01 38 21.3 +1.7
PMRV eLQ LQ 01 50 04.6
PMRV eLR LR 01 53 42.0
comp=Z,2µm,26.0s
LIC Lamto 80.18 84 eP P 01 28 18.1 -0.2
comp=Z,44nm,1.0s,baz=278
LIC eR
comp=Z,5µm,18.0s
LIC Lamto 80.18 84 eP P 01 28 18.1 -0.2
comp=Z,44nm,1.0s
MVO Moncorvo 80.28 49 eP P 01 28 20.5 +2.0
comp=Z,55nm,1.8s
MVO eS S 01 38 27.4 +2.7
MVO eLR LR 01 53 54.2
comp=Z,3µm,22.0s
SHEL Horse Pasture 80.32 106 PFAKE 01 28 30.0 +11
SHEL LR LR
comp=Z,5µm,20.0s
DBIC Dimbokro 80.35 84 eP P 01 28 21.4 +2.1
comp=Z,53nm,1.4s
DBIC Dimbokro 80.35 84 P P 01 28 20.1 +0.9
comp=Z,19nm,1.1s,baz=257,slow=4.7,SNR=6.0
DBIC LR LR 02 02 42.5
comp=Z,3µm,20.4s,baz=249,slow=35
PBRG Braganca 80.57 48 eP P 01 28 21.8 +1.8
comp=Z,50nm,1.7s
ALE Alert 81.72 3 P P 01 28 26.9 +1.6
comp=Z,212nm,1.1s,SNR=7.8
PAB San Pablo 82.16 50 eP P 01 28 29.8 +1.3
PAB pmax pmax
comp=Z,84nm,1.8s
PAB MLR MLR
comp=Z,2µm,19.0s
PAB San Pablo 82.16 50 eP P 01 28 29.8 +1.3
comp=Z,84nm,1.8s
PAB LR LR
comp=Z,2µm,19.0s
ESDC Sonseca Array 82.47 50 P P 01 28 30.3 +0.2
ESDC Sonseca Array 82.47 50 P P 01 28 30.3 +0.2
comp=Z,4.7nm,0.8s,baz=275,slow=4.8,SNR=24
ESDC LR LR 02 01 04.9
comp=Z,1µm,19.9s,baz=265,slow=33
ESLA Sonseca Array 82.47 50 eP P 01 28 31.8 +1.7
comp=Z,48nm,1.8s
DAG Danmarks Havn 83.46 12 eP P 01 28 33.4 -1.0
DAG pmax pmax
comp=Z,12nm,1.0s
DAG MLR MLR
comp=Z,4µm,18.0s
DAG Danmarks Havn 83.46 12 i P P 01 28 33.4 -1.0
comp=Z,12nm,1.0s
DAG
comp=Z,3µm,17.0s
ROSF Rostrenen 83.69 42 eP P 01 28 34.8 -1.3
comp=Z,286nm,1.9s
ROSF Rostrenen 83.69 42 eP P 01 28 34.8 -1.3
ROSF pmax pmax
comp=Z,286nm,1.9s
ROSF Rostrenen 83.69 42 eP P 01 28 34.8 -1.3
comp=Z,286nm,1.9s
QUIF Quistinic 83.73 42 eP P 01 28 35.0 -1.3
comp=Z,110nm,1.4s
QUIF Quistinic 83.73 42 eP P 01 28 35.0 -1.3
QUIF pmax pmax
comp=Z,110nm,1.4s
QUIF Quistinic 83.73 42 eP P 01 28 35.0 -1.3
comp=Z,110nm,1.4s
UNV Unalaska Valle 83.73 324 eP P 01 28 38.2 +2.0
comp=Z,87nm,1.4s
SGMF Saint Gilles 84.16 42 eP P 01 28 37.2 -1.3
comp=Z,112nm,1.4s
SGMF Saint Gilles 84.16 42 eP P 01 28 37.2 -1.3
SGMF pmax pmax
comp=Z,112nm,1.4s
SGMF Saint Gilles 84.16 42 eP P 01 28 37.2 -1.3
comp=Z,112nm,1.4s
ESK Eskdalemuir 84.39 35 eP P 01 28 40.0 +0.5
ESK pmax pmax
comp=Z,336nm,2.3s
ESK MLR MLR
comp=Z,3µm,21.0s
ESK Eskdalemuir 84.39 35 eP P 01 28 40.0 +0.5
comp=Z,336nm,2.3s
ESK LR LR
comp=Z,3µm,21.0s
SJPF Ste Jean 84.75 47 eP P 01 28 41.0 -0.7
comp=Z,260nm,1.9s
SJPF Ste Jean 84.75 47 eP P 01 28 41.0 -0.7
SJPF pmax pmax
comp=Z,260nm,1.9s
SJPF Ste Jean 84.75 47 eP P 01 28 41.0 -0.7
comp=Z,260nm,1.9s
ETSF Etsaut 85.23 47 eP P 01 28 43.6 -0.6
comp=Z,193nm,1.9s
ETSF Etsaut 85.23 47 eP P 01 28 43.6 -0.6
ETSF pmax pmax
comp=Z,193nm,1.9s
ETSF Etsaut 85.23 47 eP P 01 28 43.6 -0.6
comp=Z,193nm,1.9s
GRR Gorron 85.30 42 eP P 01 28 43.0 -1.3
comp=Z,253nm,1.8s
GRR Gorron 85.30 42 eP P 01 28 43.0 -1.3
GRR pmax pmax
comp=Z,253nm,1.8s
GRR Gorron 85.30 42 eP P 01 28 43.0 -1.3
comp=Z,253nm,1.8s
REYF Montagne du Re 85.36 47 eP P 01 28 45.1 +0.3
FLN La Foliniere 85.57 41 eP P 01 28 44.4 -1.2
comp=Z,145nm,1.3s
FLN eR
comp=Z,5µm,23.0s
FLN La Foliniere 85.57 41 eP P 01 28 44.4 -1.2
FLN pmax pmax
comp=Z,145nm,1.3s
FLN La Foliniere 85.57 41 eP P 01 28 44.4 -1.2
comp=Z,145nm,1.3s
MFF Saint Martin d 85.69 44 eP P 01 28 45.0 -1.3
comp=Z,64nm,1.2s
MFF Saint Martin d 85.69 44 eP P 01 28 45.0 -1.3
MFF pmax pmax
comp=Z,64nm,1.2s
MFF Saint Martin d 85.69 44 eP P 01 28 45.0 -1.3
comp=Z,64nm,1.2s
LABF Labassere 85.70 47 eP P 01 28 48.4 +1.9
LDF La Druitiere 85.80 42 eP P 01 28 45.5 -1.3
comp=Z,154nm,1.4s
LDF La Druitiere 85.80 42 eP P 01 28 45.5 -1.3
LDF pmax pmax
comp=Z,154nm,1.4s
LDF La Druitiere 85.80 42 eP P 01 28 45.5 -1.3
comp=Z,154nm,1.4s
EPF Esparros 85.89 47 eP P 01 28 46.6 -0.8
comp=Z,110nm,1.5s
EPF Esparros 85.89 47 eP P 01 28 46.6 -0.8
EPF pmax pmax
comp=Z,110nm,1.5s
EPF Esparros 85.89 47 eP P 01 28 46.6 -0.8
comp=Z,110nm,1.5s
LFF La Frestale 86.25 45 eP P 01 28 47.9 -1.1
comp=Z,179nm,1.7s
LFF La Frestale 86.25 45 eP P 01 28 47.9 -1.1
LFF pmax pmax
comp=Z,179nm,1.7s
LFF La Frestale 86.25 45 eP P 01 28 47.9 -1.1
comp=Z,179nm,1.7s
MLS Moulis 86.44 47 eP P 01 28 50.1 0.0
TOA0 Torodi Ar. Sit 86.77 77 eP P 01 28 52.4 +0.2
TORD Torodi Ar. Bea 86.77 77 P P 01 28 51.8 -0.4
TORD Torodi Ar. Bea 86.77 77 P P 01 28 51.8 -0.4
comp=Z,7.6nm,1.2s,baz=258,slow=4.0,SNR=18
TORD LR LR 02 05 47.0
comp=Z,3µm,20.3s,baz=255,slow=34
RJF Les Rejaudoux 86.81 45 eP P 01 28 50.6 -1.2
comp=Z,128nm,1.6s
RJF eR
comp=Z,3µm,22.0s
RJF Les Rejaudoux 86.81 45 eP P 01 28 50.6 -1.2
RJF pmax pmax
comp=Z,128nm,1.6s
RJF Les Rejaudoux 86.81 45 eP P 01 28 50.6 -1.2
comp=Z,128nm,1.6s
AFI Afiamalu 86.91 256 LR LR 01 58 41.5
comp=Z,6µm,20.4s,baz=112,slow=29
VNA1 Neumayer--Stat 86.97 161 eP P 01 28 54.3 +2.3
VNA1 Neumayer--Stat 86.97 161 eOFF P 01 28 56.9 +4.9
CAF Calviac 87.19 45 eP P 01 28 52.4 -1.3
comp=Z,161nm,1.9s
CAF Calviac 87.19 45 eP P 01 28 52.4 -1.3
CAF pmax pmax
comp=Z,161nm,1.9s
CAF Calviac 87.19 45 eP P 01 28 52.4 -1.3
comp=Z,161nm,1.9s
MTLF Montolieu 87.27 47 eP P 01 28 52.9 -1.2
comp=Z,82nm,1.4s
MTLF Montolieu 87.27 47 eP P 01 28 52.9 -1.2
MTLF pmax pmax
comp=Z,82nm,1.4s
MTLF Montolieu 87.27 47 eP P 01 28 52.9 -1.2
comp=Z,82nm,1.4s
VNA2 Neumayer--Watz 87.31 161 eP P 01 28 55.2 +1.5
VNA2 Neumayer--Watz 87.31 161 eOFF P 01 28 58.4
TCF Toulx Ste Croi 87.31 44 eP P 01 28 52.6 -1.7
comp=Z,66nm,1.4s
TCF Toulx Ste Croi 87.31 44 eP P 01 28 52.6 -1.7
TCF pmax pmax
comp=Z,66nm,1.4s
TCF Toulx Ste Croi 87.31 44 eP P 01 28 52.6 -1.7
comp=Z,66nm,1.4s
HYF Humbligny 87.62 43 eP P 01 28 54.3 -1.4
HYF Humbligny 87.62 43 eP P 01 28 54.3 -1.4
BGF Bois d'Agland 87.75 44 eP P 01 28 54.9 -1.5
comp=Z,164nm,1.8s
BGF Bois d'Agland 87.75 44 eP P 01 28 54.9 -1.5
BGF pmax pmax
comp=Z,164nm,1.8s
BGF Bois d'Agland 87.75 44 eP P 01 28 54.9 -1.5
comp=Z,164nm,1.8s
AVF Avril sur Loir 88.10 43 eP P 01 28 56.2 -1.8
comp=Z,44nm,1.5s
AVF Avril sur Loir 88.10 43 eP P 01 28 56.2 -1.8
AVF pmax pmax
comp=Z,44nm,1.5s
AVF Avril sur Loir 88.10 43 eP P 01 28 56.2 -1.8
comp=Z,44nm,1.5s
SSF Saint Saulge 88.21 43 eP P 01 28 56.6 -1.9
comp=Z,58nm,1.9s
SSF Saint Saulge 88.21 43 eP P 01 28 56.6 -1.9
SSF pmax pmax
comp=Z,58nm,1.9s
SSF Saint Saulge 88.21 43 eP P 01 28 56.6 -1.9
comp=Z,58nm,1.9s
SMF Signal de Mont 88.44 44 eP P 01 28 57.9 -1.7
comp=Z,57nm,1.7s
SMF Signal de Mont 88.44 44 eP P 01 28 57.9 -1.7
SMF pmax pmax
comp=Z,57nm,1.7s
SMF Signal de Mont 88.44 44 eP P 01 28 57.9 -1.7
comp=Z,57nm,1.7s
LOR Lormes 88.45 43 eP P 01 28 57.8 -1.9
comp=Z,59nm,1.8s
LOR eR
comp=Z,3µm,22.5s
LOR Lormes 88.45 43 eP P 01 28 57.8 -1.9
comp=Z,59nm,1.8s
LASF Ste Croix 88.47 46 eP P 01 28 58.9 -0.9
comp=Z,103nm,1.8s
LASF Ste Croix 88.47 46 eP P 01 28 58.9 -0.9
comp=Z,103nm,1.8s
BAIF Baives 88.66 40 eP P 01 28 59.1 -1.5
comp=Z,95nm,1.8s
BAIF Baives 88.66 40 eP P 01 28 59.1 -1.5
BAIF pmax pmax
comp=Z,95nm,1.8s
BAIF Baives 88.66 40 eP P 01 28 59.1 -1.5
comp=Z,95nm,1.8s
SNAA Sanae 88.88 162 eP P 01 29 00.6 -0.6
SNAA Sanae 88.88 162 eOFF P 01 29 05.1 +3.9
SNAA Sanae 88.88 162 eP P 01 29 00.7 -0.6
comp=Z,14nm,1.1s
SNAA Sanae 88.88 162 P P 01 29 01.2 0.0
comp=Z,3.0nm,0.8s,baz=278,slow=3.6,SNR=23
SSB Saint Sauveur 88.94 45 PFAKE
SSB LR LR 01 29 10.0 +7.9
comp=Z,1µm,21.0s
VIVF Saint-Julien-l 89.04 45 eP P 01 29 01.8 -0.7
comp=Z,142nm,1.9s
VIVF Saint-Julien-l 89.04 45 eP P 01 29 01.8 -0.7
VIVF pmax pmax
comp=Z,142nm,1.9s
VIVF Saint-Julien-l 89.04 45 eP P 01 29 01.8 -0.7
comp=Z,142nm,1.9s
GIVF Givet 89.06 40 eP P 01 29 01.2 -1.2
comp=Z,113nm,1.5s
GIVF Givet 89.06 40 eP P 01 29 01.2 -1.2
GIVF pmax pmax
comp=Z,113nm,1.5s
GIVF Givet 89.06 40 eP P 01 29 01.2 -1.2
comp=Z,113nm,1.5s
BER Bergen 89.16 30 eSKS SKSac 01 39 31.9 -1.0
BER AMS AMS 02 00 47.5
comp=Z,3µm,24.6s
MEZF Maizieres J'vi 89.24 42 eP P 01 29 01.9 -1.4
comp=Z,80nm,1.7s
MEZF Maizieres J'vi 89.24 42 eP P 01 29 01.9 -1.4
comp=Z,80nm,1.7s
BCLA Clavier 89.36 40 P P 01 29 05.7 +1.9
comp=Z,23nm,2.4s
ORIF Oris-en-Rattie 89.90 45 eP P 01 29 06.3 -0.3
comp=Z,43nm,1.6s
ORIF eR
comp=Z,2µm,22.5s
ORIF Oris-en-Rattie 89.90 45 eP P 01 29 06.3 -0.3
ORIF pmax pmax
comp=Z,43nm,1.6s
ORIF Oris-en-Rattie 89.90 45 eP P 01 29 06.3 -0.3
comp=Z,43nm,1.6s
WLF Walferdange 89.93 41 P P 01 29 08.7 +2.1
comp=Z,23nm,3.3s
WLF Walferdange 89.93 41 eP P 01 29 06.3 -0.2
WLF pmax pmax
comp=Z,9.0nm,1.1s

WLF				MLR	MLR		
	comp=Z,4µm,22.0s						
WLF	Walferdange	89.93	41	eSP	SP	01 41 04.1	-0.9
WLF	Walferdange	89.93	41	eP	P	01 29 06.3	-0.2
	comp=Z,8.6nm,1.1s						
WLF				LR	LR		
	comp=Z,4µm,22.0s						
KBS	Kingsbay	90.09	11	AMS	AMS	02 11 10.0	
	comp=Z,3µm,17.4s						
KBS	Kingsbay	90.09	11	PFAKE		01 29 20.0	+13
KBS				LR	LR		
	comp=Z,3µm,19.0s						
HAU	Haudompre	90.12	42	eP	P	01 29 05.7	-1.8
HAU				eR			
	comp=Z,2µm,20.2s						
HAU	Haudompre	90.12	42	eP	P	01 29 05.7	-1.8
HAU	Haudompre	90.12	42	eP	P	01 29 05.7	-1.8
MOL	Molde	90.14	28	AMS	AMS	02 00 02.5	
	comp=Z,5µm,27.1s						
TAM	Tamanrasset	90.24	67	eP	P	01 29 08.7	-0.1
TAM				e		01 32 42.2	
TAM				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TAM				MLR	MLR		
	comp=Z,2µm,20.0s						
TAM	Tamanrasset	90.24	67	eP	P	01 29 08.7	-0.1
	comp=Z,10nm,1.0s						
TAM				ePP	PP	01 32 42.2	-0.4
TAM				LR	LR		
	comp=Z,2µm,20.0s						
LMR	La Mourre	90.41	47	eP	P	01 29 07.7	-1.2
	comp=Z,132nm,1.8s						
LMR	La Mourre	90.41	47	eP	P	01 29 07.7	-1.2
LMR				pmax	pmax		
	comp=Z,132nm,1.8s						
LMR	La Mourre	90.41	47	eP	P	01 29 07.7	-1.2
	comp=Z,132nm,1.8s						
HINF	Hinteralfeld	90.46	42	eP	P	01 29 07.0	-2.1
HINF	Hinteralfeld	90.46	42	eP	P	01 29 07.0	-2.1
HINF	Hinteralfeld	90.46	42	eP	P	01 29 07.0	-2.1
LPG	La Plagne	90.49	45	eP	P	01 29 09.5	-0.1
LPG	La Plagne	90.49	45	eP	P	01 29 09.5	-0.1
LPG	La Plagne	90.49	45	eP	P	01 29 09.5	-0.1
MBDF	Montbardon	90.54	45	eP	P	01 29 09.0	-0.7
MBDF	Montbardon	90.54	45	eP	P	01 29 09.0	-0.7
MBDF	Montbardon	90.54	45	eP	P	01 29 09.0	-0.7
BUG	Bochum--Univer	90.57	39	eSKSac	SKSac	01 39 39.3	-2.3
BUG				eSP	SP	01 41 10.8	-1.1
ECH	Echery	90.65	42	PFAKE		01 29 20.0	+10
ECH				LR	LR		
	comp=Z,1µm,19.0s						
CDF	Champ du Feu	90.72	42	eP	P	01 29 08.4	-2.0
	comp=Z,62nm,1.9s						
CDF	Champ du Feu	90.72	42	eP	P	01 29 08.4	-2.0
CDF				pmax	pmax		
	comp=Z,62nm,1.9s						
CDF	Champ du Feu	90.72	42	eP	P	01 29 08.4	-2.0
	comp=Z,62nm,1.9s						
IBBN	Ibbenburen	90.82	38	eSKSac	SKSac	01 39 40.8	-2.2
IBBN				eSP	SPn	01 41 13.8	-1.1
IBBN				eSS	SS	01 46 18.6	+8.7
MIDW	Midway	91.21	298	PFAKE		01 29 30.0	+17
MIDW				LR	LR		
	comp=Z,2µm,20.0s						
TBLU	Trondheim	91.32	27	AMS	AMS	02 01 20.3	
	comp=Z,3µm,27.8s						
KONO	Kongsberg	91.33	30	eSKS	SKSac	01 39 40.9	-4.8
KONO				AMS	AMS	02 02 13.8	
	comp=Z,4µm,24.9s						
KONO	Kongsberg	91.33	30	PFAKE		01 29 20.0	+7.2
KONO				LR	LR		
	comp=Z,3µm,21.0s						
QSPA	South Pole Qui	91.38	180	eP	P	01 29 13.5	+0.5
	comp=Z,64nm,1.3s						
QSPA	South Pole Qui	91.38	180	P	P	01 29 13.8	+0.8
	comp=Z,19nm,1.0s,baz=144,slow=3.0,SNR=35						
TNS	Taunus Mts	91.38	40	eSP	SP	01 41 20.5	-0.6
TNS				eSS	SS	01 46 24.5	+6.2
BFO	Black Forest	91.42	42	eSP	SP	01 41 19.3	-2.4
BFO				eSS	SS	01 46 24.6	+5.6
BFO	Black Forest	91.42	42	PFAKE		01 29 20.0	+6.4
BFO				LR	LR		
	comp=Z,2µm,22.0s						
STU	Stuttgart	91.97	41	eSKSac	SKSac	01 39 47.4	-2.4
STU				eSP	SP	01 41 25.2	-2.4
STU				eSS	SS	01 46 32.4	+5.7
NB2	NORSAR Subarra	92.00	29	P	P	01 29 17.0	+1.0
	comp=Z,16nm,1.4s,baz=270,slow=4.6						
NB2	NORSAR Subarra	92.00	29	P	P	01 29 17.0	+1.0
	baz=270,slow=4.6						
NOA	NORSAR Array B	92.00	29	P	P	01 29 16.6	+0.7
NOA	NORSAR Array B	92.00	29	P	P	01 29 16.6	+0.7
	comp=Z,2.6nm,0.9s,baz=272,slow=4.4,SNR=3.9						
NOA				LR	LR	02 06 09.6	
	comp=Z,3µm,21.7s,baz=270,slow=33						
NC602	NORSAR Array S	92.19	29	eSS	SS	01 46 26.8	-2.4
BSEG	Bad Segeberg	92.24	36	eSP	SP	01 41 29.2	-1.1
BSEG				eSS	SS	01 46 37.2	+7.0
TUE	Stuetta	92.24	44	PFAKE		01 29 30.0	+12
TUE				LR	LR		
	comp=Z,2µm,20.0s						
NRDL	Niedersach Rie	92.24	38	eSKSac	SKSac	01 39 48.9	-2.1
NRDL				eSP	SP	01 41 29.2	-1.2
NRDL				eSS	SS	01 46 36.5	+6.2
PGF	Pioggiola	92.27	48	eP	P	01 29 16.4	-1.3
	comp=Z,49nm,1.3s						
PGF	Pioggiola	92.27	48	eP	P	01 29 16.4	-1.3
PGF				pmax	pmax		
	comp=Z,49nm,1.3s						
PGF	Pioggiola	92.27	48	eP	P	01 29 16.4	-1.3
	comp=Z,49nm,1.3s						
UBBA	Unterbreizbach	92.33	39	eSKSac	SKSac	01 39 49.4	-2.0
UBBA				eSP	SP	01 41 30.2	-1.2
UBBA				eSS	SS	01 46 37.8	+6.3
BJO	Bjornoya	92.57	15	e	S	01 40 20.9	-1.9
VSL	Villasalto	92.77	51	PFAKE		01 29 30.0	+10
VSL				LR	LR		
	comp=Z,1µm,20.0s						
RAO	Raoul Island	92.94	241	LR	LR	02 00 42.6	
	comp=Z,4µm,21.9s,baz=233,slow=29						
KEST	Kesra	93.00	54	P	P	01 29 25.0	+3.8
KEST	Kesra	93.00	54	P	P	01 29 25.0	+3.8
	comp=Z,1.1nm,0.7s,baz=272,slow=6.9,SNR=4.7						
KEST				LR	LR	02 06 27.6	
	comp=Z,253nm,22.0s,baz=220,slow=32						
FETA	Feichten	93.14	43⇓	isP	P	01 29 24.3	+2.5
	comp=Z,12nm,1.5s						
VLC	Villacollemand	93.16	46	PFAKE		01 29 30.0	+8.3
VLC				LR	LR		
	comp=Z,1µm,19.0s						
GRF	Grafenberg Arr	93.21	40	eP	P	01 29 23.0	+1.2
GRF				e		01 39 54.3	
GRF				eSP	SP	01 41 40.0	-1.4
GRF				eSS	SS	01 46 51.2	+6.7
GRF				pmax	pmax		
	comp=Z,11nm,1.5s						
GRF	Grafenberg Arr	93.21	40	eP	P	01 29 23.0	+1.2
	comp=Z,11nm,1.5s						
GRF				eSKSac	SKSac	01 39 54.3	-2.4
GRF				eSP	SP	01 41 40.0	-1.4
GRF				eSS	SS	01 46 51.2	+6.7
GRF				eL	L	02 05 05.1	
	comp=Z,5µm,21.9s						
MOX	Moxa	93.36	39	eSKSac	SKSac	01 39 55.2	-2.3
MOX				eSP	SP	01 41 41.9	-1.1
MOX				eSS	SS	01 46 54.3	+7.7
MOX				eL	L	02 05 11.2	
	comp=Z,4µm,21.4s						
FUR	Furstenfeldbru	93.40	42	eSP	SP	01 41 41.9	-1.7
FUR				eSS	SS	01 46 54.8	+7.4
ROTZ	Rotzenmuhle	93.84	40	eSKSac	SKSac	01 40 00.3	+0.2
ROTZ				eSP	SP	01 41 47.3	-1.0
ROTZ				eSS	SS	01 47 01.4	+7.9
TANN	Tannenbergstha	93.93	39	eSKSac	SKSac	01 39 58.3	-2.4
TANN				eSP	SP	01 41 48.1	-1.1
TANN				eSS	SS	01 47 02.7	+7.9
NKC	Novy Kostel	93.94	40	eP	P	01 29 25.8	+0.7
NKC				e		01 41 47.4	
NKC				e		01 46 59.7	
NKC				MLR	MLR		
	comp=Z,8µm,24.5s						
NKC	Novy Kostel	93.94	40	eP	P	01 29 25.8	+0.7
NKC				eSKS	SKSac	01 40 04.3	+3.6
NKC				eSP	SP	01 41 47.4	-2.0
NKC				eSS	SS	01 46 59.7	+4.8
NKC				AMS	AMS	02 04 10.0	
	comp=Z,8µm,24.5s						
CLL	Collm	94.16	39	iP	P	01 29 28.7	+2.6
CLL				e		01 40 02.0	
CLL				ePS	PS	01 41 53.0	+0.2
CLL				pmax	pmax		
	comp=Z,17nm,1.6s						
CLL				MLR	MLR		
	comp=Z,3µm,21.6s						
CLL	Collm	94.16	39	eSKSac	SKSac	01 39 59.5	-2.2
CLL				eSP	SP	01 41 49.7	-1.9
CLL				eSS	SS	01 47 05.3	+7.4
CLL	Collm	94.16	39	i(P)	P	01 29 28.7	+2.6
	comp=Z,17nm,1.6s						
CLL				ePP	PP	01 33 07.0	-5.4
CLL				eSKSac	SKSac	01 40 02.0	+0.3
CLL				eS	S	01 40 36.0	-1.7
CLL				eSP	SP	01 41 50.0	-1.6
CLL				ePS	PS	01 41 53.0	+0.2
CLL				eSS	SS	01 47 04.0	+6.1
CLL				eSSS	SSS	01 50 36.0	
CLL				L	L	02 07 00.0	
	comp=Z,3µm,21.6s						
WET	Wettzell	94.35	41	eSKSac	SKSac	01 40 00.6	-2.4
WET				eSP	SP	01 41 51.8	-2.1
WET				eSS	SS	01 47 08.6	+7.8
ABTA	Abfaltersbach	94.39	43⇓	iPcP	PcP	01 29 27.7	-0.1
	comp=Z,7.8nm,1.4s						
RJOB	Jochberg	94.46	42	eSKSac	SKSac	01 40 01.2	-2.5
RJOB				eSP	SP	01 41 53.0	-2.3
RJOB				eSS	SS	01 47 10.4	+7.8
BRG	Berggiesshubel	94.80	39	eP	P	01 29 31.7	+2.7
	comp=Z,24nm,1.8s						
BRG				e		01 29 43.3	
	comp=Z,20nm,1.7s						
BRG				SKS	SKSac	01 40 06.0	+0.8
BRG				e		01 42 53.0	
BRG				e		01 43 11.0	
BRG				e		01 43 53.0	
BRG				e		01 47 04.0	
BRG				e		01 50 18.0	
BRG							
	comp=N,4µm,26.2s						
BRG							
	comp=E,3µm,25.5s						
BRG							
	comp=Z,6µm,25.4s						
BRG	Berggiesshubel	94.80	39	eSKSac	SKSac	01 40 03.0	-2.2
BRG				eSP	SP	01 41 57.0	-1.8
BRG				eSS	SS	01 47 15.6	+8.5
KHC	Kasperske Hory	94.81	41	eP	P	01 29 31.4	+2.2
KHC				e		01 29 47.0	
KHC				e		01 33 23.0	
KHC				e		01 40 05.5	
KHC				e		01 41 57.9	
KHC				e		01 47 12.8	
KHC				MLR	MLR		
	comp=Z,5µm,23.7s						
KHC	Kasperske Hory	94.81	41	eP	P	01 29 31.6	+2.5
	comp=Z,27nm,2.0s						
KHC	Kasperske Hory	94.81	41	eP	P	01 29 31.4	+2.2
KHC				ex	x	01 29 47.0	
KHC				ePP	PP	01 33 23.0	+5.4
KHC				eSKS	SKSac	01 40 05.5	+0.1
KHC				eSP	SP	01 41 57.9	-1.1
KHC				eSS	SS	01 47 12.8	+5.5
KHC				AMS	AMS	02 04 10.0	
	comp=Z,5µm,23.7s						
GEC2	GERESS Array S	94.92	41	eSKSac	SKSac	01 40 03.7	-2.5
GEC2				eSP	SP	01 41 57.9	-2.4
GEC2				eSS	SS	01 47 16.0	+6.8
GERES	GERESS Array B	94.92	41	P	P	01 29 31.2	+1.4
GERES	GERESS Array B	94.92	41	P	P	01 29 31.2	+1.4
	comp=Z,0.7nm,0.8s,baz=254,slow=5.0,SNR=7.0						
GERES				LR	LR	02 05 53.9	
	comp=Z,2µm,21.3s,baz=280,slow=32						
SBA	Scott Base	95.05	192	PFAKE		01 29 40.0	+10
SBA				LR	LR		
	comp=Z,2µm,19.0s						
PVCC	Panska Ves	95.25	39	eP	P	01 29 32.8	+1.7
PVCC				e		01 42 01.2	
PVCC				MLR	MLR		
	comp=Z,7µm,22.9s						
PVCC	Panska Ves	95.25	39	eP	P	01 29 32.8	+1.7
PVCC				ex	x	01 41 57.3	
PVCC				eSP	SP	01 42 01.2	-2.5
PVCC				AMS	AMS	02 05 10.0	
	comp=Z,7µm,22.9s						
PRU	Pruhonice	95.31	40	eP	P	01 29 32.9	+1.5
PRU				e		01 29 48.6	
PRU				e		01 40 08.9	
PRU				e		01 42 00.6	
PRU				e		01 47 18.6	
PRU				MLR	MLR		
	comp=Z,8µm,24.0s						
PRU	Pruhonice	95.31	40	eP	P	01 29 32.9	+1.5
PRU				ex	x	01 29 48.6	
PRU				eSKS	SKSac	01 40 08.9	+0.9
PRU				eSP	SP	01 42 00.6	-3.8
PRU				eSS	SS	01 47 18.6	+4.3
PRU				AMS	AMS	02 04 40.0	
	comp=Z,8µm,24.0s						
AQU	L'Aquila	95.53	47	eP	P	01 29 33.9	+1.3
	comp=Z,30nm,0.6s						
AQU				LR	LR		
	comp=Z,3µm,21.0s						
JAVS	Javornik	95.56	44	iP	P	01 29 34.9	+2.1
BILL	Bilibino	95.59	339⇓	iP	P	01 29 33.1	+0.8
BILL				iS	S	01 40 38.2	-11
BILL				iPS	PS	01 42 06.7	-1.3
BILL				pmax	pmax		
	comp=Z,18nm,1.9s						
BILL	Bilibino	95.59	339	eP	P	01 29 33.4	+1.1
	comp=Z,22nm,1.3s						
FUNA	Funafuti	95.64	262	PFAKE		01 29 50.0	+16
FUNA				LR	LR		
	comp=Z,13µm,19.0s						
ARCES	ARCESS Array B	95.92	19	P	P	01 29 35.4	+1.7
ARCES	ARCESS Array B	95.92	19	P	P	01 29 35.4	+1.7
	comp=Z,2.9nm,0.9s,baz=305,slow=8.4,SNR=3.3						
ARCES				LR	LR	02 07 33.2	
	comp=Z,3µm,21.9s,baz=295,slow=32						
ARE0	ARCESS Array S	95.92	19	eSKS	SKSac	01 40 07.8	-2.7
ARE0				eSS	SS	01 47 22.9	+0.9
TREC	Trest	96.02	40	eSKS	SKSac	01 40 13.3	+1.4
TREC				AMS	AMS	02 05 10.0	
	comp=Z,6µm,25.2s						
VISS	Visnje	96.11	44	iP	P	01 29 43.4	+8.2
SOKA	Soboth	96.12	43⇓	ipP	pP	01 29 36.8	-0.5
	comp=Z,4.4nm,1.0s						
UPC	Upice	96.16	39	eP	P	01 29 38.1	+2.8
UPC				e		01 29 50.3	
UPC	Upice	96.16	39	eP	P	01 29 38.1	+2.8
UPC				ex	x	01 29 50.3	
PERS	Pernice	96.18	43	iP	P	01 29 36.8	+1.3
KEV	Kevo	96.33	19	PFAKE		01 29 50.0	+14
KEV				LR	LR		
	comp=Z,2µm,22.0s						
DPC	Dobruska-Polom	96.38	39	eP	P	01 29 38.5	+2.2
DPC				e		01 29 53.5	
DPC				e		01 40 15.5	
DPC				e		01 42 15.5	
DPC				e		01 47 34.0	
DPC				MLR	MLR		
	comp=Z,6µm,23.4s						
DPC	Dobruska-Polom	96.38	39	eP	P	01 29 39.5	+3.2
DPC	Dobruska-Polom	96.38	39	eP	P	01 29 38.5	+2.2
DPC				ex	x	01 29 53.5	
DPC				eSKS	SKSac	01 40 15.5	+1.7
DPC				eSP	SP	01 42 15.5	-0.7
DPC				eSS	SS	01 47 34.0	+4.4
DPC				AMS	AMS	02 05 50.0	
	comp=Z,6µm,23.4s						
MSVF	Nonsavu	96.75	252	PFAKE		01 29 50.0	+11
MSVF				LR	LR		
	comp=Z,3µm,19.0s						
URZ	Urewera	96.80	232	LR	LR	02 04 18.8	
	comp=Z,5µm,19.8s,baz=109,slow=30						
WDD	Wield Dalam	97.17	54	PFAKE		01 29 50.0	+10
WDD				LR	LR		
	comp=Z,1µm,21.0s						
OKC	Ostrava-Krasne	97.63	39	eSKS	SKSac	01 40 21.9	+1.8
OKC				eSP	SP	01 42 26.5	-3.2
OKC				ex	x	01 48 00.7	
OKC				AMS	AMS	02 06 10.0	
	comp=Z,6µm,22.7s						
CUC	Castrocucco	97.65	50	eP	Pdif	01 29 43.1	+0.8
	comp=Z,3.2nm,0.9s						
CUC				LR	LR		
	comp=Z,1µm,21.0s						
CEL	Celeste	97.95	51	PFAKE		01 29 50.0	+6.2
CEL				LR	LR		
	comp=Z,1µm,21.0s						
VYHS	Vyhne	98.34	41	eP	Pdif	01 29 47.4	+2.2
VYHS	Vyhne	98.34	41	PDIF	Pdif	01 29 47.4	+2.2
VYHS				e		01 30 08.1	
SNZO	South Karori	98.40	229	PFAKE		01 30 00.0	+14
SNZO				LR	LR		
	comp=Z,4µm,22.0s						
TIP	Timpagrande	98.49	50	eP	Pdif	01 29 46.7	+0.5
	comp=Z,8.8nm,1.3s						
TIP				LR	LR		
	comp=Z,2µm,22.0s						
FINES	FINESS Array B	98.90	27	P	P	01 29 46.4	-0.9
FINES	FINESS Array B	98.90	27	P	P	01 29 46.4	-0.9
	comp=Z,3.6nm,1.0s,baz=228,slow=10,SNR=3.2						
FINES				LR	LR	02 10 22.2	
	comp=Z,2µm,21.6s,baz=270,slow=33						
PSZ	Piszkesteto	99.15	41	PFAKE		01 30 00.0	+11
PSZ				LR	LR		
	comp=Z,1µm,22.0s						
APA	Apatity	99.37	20⇑	eP	Pdif	01 29 52.0	+2.7
APA				eS	S	01 41 20.0	-1.8
CRVS	Cervenica-Dubn	99.95	40	eP	Pdif	01 29 53.1	+0.8
CRVS	Cervenica-Dubn	99.95	40	PDIF	Pdif	01 29 53.1	+0.8
TIR	Tirane	100.46	48	PFAKE		01 30 10.0	+15
TIR				LR	LR		
	comp=Z,1µm,22.0s						
UZH	Uzhgorod	100.55	40	eP	Pdif	01 29 53.6	-1.4
UZH				e		01 34 05.0	
UZH				e		01 36 13.0	
UZH				e		01 40 31.0	
UZH				eS	Sdif	01 41 23.8	-8.6
UZH				e		01 42 53.4	
UZH				i		01 48 28.2	
KWP	Kalwaria Pacla	100.56	39	PFAKE		01 30 10.0	+15
KWP				LR	LR		
	comp=Z,2µm,20.0s						
TARA	Tarawa	101.75	272	PFAKE		01 30 10.0	+8.9
TARA				LR	LR		
	comp=Z,2µm,19.0s						
KIEV	Kiev	104.23	37	PFAKE		01 30 20.0	+8.7
KIEV				LR	LR		
	comp=Z,3µm,22.0s						
SUR	Sutherland	104.30	123	PFAKE		01 30 20.0	+7.7
SUR				LR	LR		
	comp=Z,5µm,20.0s						
SANT	Santorini	105.80	52	PFAKE		01 34 40.0	
SANT				LR	LR		
	comp=Z,964nm,21.0s						
WAKE	Wake Island	106.56	290	PFAKE		01 34 50.0	
WAKE				LR	LR		
	comp=Z,5µm,22.0s						
DZM	Mont Dzumac	107.41	247	ePS	PS	01 44 15.0	-0.9
	comp=Z,714nm,25.9s						
DZM				eLQ	LQ	02 01 18.5	
	comp=Z,4µm,30.7s						
DZM				eLR	LR	02 05 58.6	
	comp=Z,7µm,27.4s						
DRV	Dumont d'Urvil	107.54	197	PP	PP	01 35 01.0	+8.0
DRV				SKS	SKSac	01 41 16.0	+10
DRV				SKKS	SKKSac	01 42 20.0	+22
DRV				SP	SP	01 43 50.0	-23
DRV				SS	SS	01 50 04.0	+1.2
ISP	Isparta	109.30	49	PFAKE		01 34 50.0	
ISP				LR	LR		
	comp=Z,1µm,21.0s						
SIM	Simferopol'	109.41	41	P	Pdif	01 30 32.0	-2.5
SIM				e		01 41 14.0	
SIM				ePS	PS	01 44 20.0	-15
SIM				eSS	SS	01 50 26.0	-3.3
SIM				pmax	pmax		
	comp=Z,60nm,7.3s						
ANTO	Ankara	110.33	46	PFAKE		01 34 50.0	
ANTO				LR	LR		
	comp=Z,875nm,21.0s						
ANN	Anapa	111.62	40	ePKIKP	PKiKP	01 34 30.7	-11
ANN				pmax	pmax		
	comp=Z,37nm,1.1s						
CSS	Prodhromos	112.34	51	PFAKE		01 35 00.0	
CSS				LR	LR		
	comp=Z,749nm,22.0s						
LSZ	Lusaka	112.99	106	ePKP	PKiKP	01 34 46.2	+0.6
LSZ				LR	LR		
	comp=Z,6µm,20.0s						
CASY	Casey	114.22	187	PFAKE		01 35 00.0	+14
CASY				LR	LR		
	comp=Z,3µm,20.0s						
HNR	Honiara	114.64	260	PFAKE		01 35 00.0	+11
HNR				LR	LR		
	comp=Z,3µm,21.0s						
KIV	Kislovodsk	115.36	39	eP	Pdif	01 30 53.7	-7.4
KIV				i		01 35 52.0	
KIV				iPS	PKKPbc	01 45 22.7	-2.2
KIV				iSS	SS	01 52 05.2	+17
KIV				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KIV				MLR	MLR		
	comp=Z,1µm,19.0s						
MBAR	Mbarara	116.04	90	PFAKE		01 35 00.0	+8.3
MBAR				LR	LR		
	comp=Z,1µm,22.0s						
ONI	Oni	116.51	40	P	PP	01 35 55.2	-2.9
AKH	Akhalkalaki	117.11	41	P	PP	01 35 58.2	-4.2
TAU	Tasmania Unive	117.50	221	PFAKE		01 35 10.0	+17
TAU				LR	LR		
	comp=Z,4µm,21.0s						
TBLG	Delisi	117.77	40	P	PP	01 36 05.2	-1.5
DGRG	David-gareji	118.32	40	P	PP	01 36 07.8	-2.8
GNI	Garni	118.56	42	PFAKE		01 35 10.0	+14
GNI				LR	LR		
	comp=Z,1µm,22.0s						
ERM	Erimo	118.60	321	PFAKE		01 35 10.0	+14
ERM				LR	LR		
	comp=Z,1µm,21.0s						
MAK	Makhachkala	118.87	38	PKIKP	PKPdf	01 35 07.3	+11
MAK				e		01 36 13.9	
MAK				ePPP	PPP	01 38 42.6	
MAK				e		01 41 51.6	
MAK				e		01 42 06.5	
MAK				ePS	PS	01 45 53.5	-8.6
MAK				eSS	SS	01 52 33.7	-0.2
MAK				e		01 52 53.3	
MAK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HABR	Khabarovsk	119.32	330	eP	Pdif	01 31 18.1	-0.4
HABR				i		01 34 56.6	
HABR				e		01 35 03.3	
HABR						01 36 17.4	
HABR				PPP	PPP	01 38 49.0	
HABR				ePS	PS	01 46 05.8	-0.1
HABR				eSS	SS	01 52 39.4	+0.2
HABR				e		01 52 50.1	
HABR				eSSS	SSS	01 57 04.1	
HABR				pmax	pmax		
	comp=E,53nm,2.1s						
HABR				pmax	pmax		
	comp=Z,32nm,2.1s						
HABR				pmax	pmax		
	comp=N,26nm,1.6s						
HABR				MLR	MLR		
	comp=Z,916nm,24.0s						
CAN	Canberra	119.37	230	PFAKE		01 35 10.0	+13
CAN				LR	LR		
	comp=Z,2µm,19.0s						
ABKAR	Akbulak array	121.37	26	ePKPdf	PKPdf	01 35 01.1	+0.4
BHD	Baghdad	121.47	49	ex	x	01 36 20.5	
BHD				ex	x	01 37 49.0	
BHD				ex	x	01 40 26.0	
BHD				ex	x	01 43 22.5	
BHD				ex	x	01 43 31.9	
BRVK	Borovoye	122.07	17c	iPKIKP	PKPdf	01 35 04.2	+2.3
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BRVK	Borovoye	122.07	17	ePKPdf	PKPdf	01 35 02.4	+0.5
BRVK				LR	LR		

comp=Z,3μm,22.0s
BVAR Borovoye Array 122.13 17 PKIKP **PKPdf 01 35 02.8 +0.8**
BVAR Borovoye Array 122.13 17 PKP **PKPdf 01 35 02.8 +0.8**
BVAR Borovoye Array 122.13 17 PKP **PKPdf 01 35 02.8 +0.8**
comp=Z,2.3nm,1.0s,baz=294,slow=1.5,SNR=7.4
KMBO Kilima Mbogo 122.56 90 PFAKE 01 35 20.0 +16
KMBO LR LR
comp=Z,7μm,21.0s
NVS Novosibirsk 123.22 8 *e*PKIKP **PKPdf 01 35 04.3 +0.2**
USRK Ussuriysk Arra 123.78 328 PKP **PKPdf 01 35 07.1 +1.6**
comp=Z,1.0nm,0.6s,baz=300,slow=4.2,SNR=4.3
ZAA0 Zalesovo Array 124.29 7 *e*PKPdf **PKPdf 01 35 06.0 -0.2**
ZALV Zalesovo Beam 124.29 7 PKIKP **PKPdf 01 35 05.4 -0.8**
ZALV Zalesovo Beam 124.29 7 PKP **PKPdf 01 35 05.3 -0.8**
ZALV Zalesovo Beam 124.29 7 PKP **PKPdf 01 35 05.4 -0.8**
comp=Z,5.2nm,0.9s,baz=337,slow=1.9,SNR=12
MDJ Mudanjiang 124.71 330 PKP **PKPdf 01 35 08.1 +0.8**
MDJ PKS **PKSdf 01 38 44.2 +0.4**
MDJ SKS **SKSdf 01 42 18.2 -1.7**
MDJ SS **SS 01 53 47.8 -0.1**
MDJ AMB AMB
comp=Z,190nm,9.2s
MDJ LR LR
comp=N,1μm,35.1s
MDJ LR LR
comp=E,1μm,38.0s
MDJ LR LR
comp=Z,2μm,35.1s
MJAR Matsushiro Arr 124.77 318 PKP **PKPdf 01 35 08.1 +0.5**
MJAR Matsushiro Arr 124.77 318 PKP **PKPdf 01 35 08.1 +0.5**
comp=Z,2.3nm,0.9s,baz=118,slow=1.3,SNR=5.4
MAJO Matsushiro 124.77 318 *e*PKIKP **PKPdf 01 35 08.1 +0.4**
MAJO MLR MLR
comp=Z,4μm,22.0s
MAJO Matsushiro 124.77 318 *e*PKPdf **PKPdf 01 35 08.1 +0.4**
MAJO LR LR
comp=Z,4μm,22.0s
IRK Irkutsk 126.01 353 *e*PKIKP **PKPdf 01 35 10.0 +0.5**
IRK pmax pmax
comp=Z,30nm,1.3s
CTAO Charters Tower 126.32 246 *e*PKIKP **PKPdf 01 35 12.5 +1.5**
CTAO MLR MLR
comp=Z,3μm,21.0s
CTAO Charters Tower 126.32 246 *e*PKPdf **PKPdf 01 35 12.5 +1.5**
CTAO LR LR
comp=Z,3μm,21.0s
KURK Kurchatov 126.35 13 *c i*PKIKP **PKPdf 01 35 11.0 +0.8**
KURK pmax pmax
comp=Z,12nm,1.0s
KURK Kurchatov 126.35 13 PKP **PKPdf 01 35 09.7 -0.5**
KURK *e*PKPdf **PKiKP 01 35 10.5 -0.1**
KURK *e*PP **PP 01 37 03.1 -1.0**
KURK LR LR
comp=Z,3μm,22.0s
STKA Stephens Creek 126.40 231 PKP **PKPdf 01 35 11.0 +0.1**
STKA Stephens Creek 126.40 231 PKP **PKPdf 01 35 11.0 +0.1**
comp=Z,2.2nm,0.8s,baz=101,slow=4.9,SNR=4.1
KURBB Kurchatov Arra 126.42 13 PKP **PKPdf 01 35 09.7 -0.7**
comp=Z,8.0nm,1.0s,baz=332,slow=2.4,SNR=19
PMG Port Moresby 127.22 259 PFAKE 01 35 30.0 +17
PMG LR LR
comp=Z,2μm,20.0s
CN2 Changchun 127.31 332 *e*PKP **PKPdf 01 35 11.7 -0.6**
CN2 PP **PP 01 37 14.6 +3.7**
CN2 *e*SS SS 01 54 17.7 -2.6
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,1μm,21.0s
CN2 LR LR
comp=E,1μm,21.0s
CN2 LR LR
comp=Z,1μm,23.0s
HVS Khovu-Aksy 127.72 1 *j i*PKIKP **PKPdf 01 35 12.8 -0.2**
PAF Port-aux-Franc 127.77 160 PFAKE 01 35 30.0 +17
PAF LR LR
comp=Z,6μm,21.0s
ZAK Zakamensk 127.96 353 *e*PKIKP **PKPdf 01 35 12.6 -0.9**
ZAK pmax pmax
comp=Z,5.0nm,1.4s
GUMO Guam 128.12 288 PFAKE 01 35 30.0 +15
GUMO LR LR
comp=Z,2μm,22.0s
SNY Shenyang 129.71 332 PKP **PKPdf 01 35 17.7 +0.8**
SNY PP **PP 01 37 29.9 +3.3**
SNY SS SS 01 54 55.5 +5.5
SNY AMB AMB
comp=Z,280nm,11.4s
SNY LR LR
comp=N,920nm,21.4s
SNY LR LR
comp=E,1μm,19.6s
SNY LR LR
comp=Z,2μm,33.7s
ULN Ulaanbaatar 129.82 349 *e*PKPdf **PKPdf 01 35 17.5 +0.4**
ULN LR LR
comp=Z,2μm,22.0s
SONM Songino Array 129.97 350 PKP **PKPdf 01 35 18.0 +0.6**
SONM Songino Array 129.97 350 PKP **PKPdf 01 35 18.0 +0.6**
comp=Z,6.9nm,1.1s,baz=317,slow=0.5,SNR=18
ABPO Ambohimpanom 130.30 114 PFAKE 01 35 30.0 +11
ABPO LR LR
comp=Z,6μm,22.0s
KSRS Korea Array 130.66 325 PKP **PKPdf 01 35 19.2 +0.5**
comp=Z,3.4nm,0.9s,baz=48,slow=1.8,SNR=9.8
KSAR Wonju Array Be 130.69 325 PKP **PKPdf 01 35 19.2 +0.4**
KKAR Karatay Array 130.70 23 *e*PKIKP **PKPdf 01 35 19.8 +1.0**
KKAR Karatay Array 130.70 23 *e*PKPdf **PKPdf 01 35 19.8 +1.0**
MK31 Makanchi Array 130.84 11 *e*PKIKP **PKPdf 01 35 19.3 +0.4**
MK31 Makanchi Array 130.84 11 *e*PKPdf **PKPdf 01 35 19.3 +0.4**
MKAR Makanchi Array 130.84 11 PKIKP **PKPdf 01 35 18.5 -0.4**
MKAR Makanchi Array 130.84 11 PKP **PKPdf 01 35 18.5 -0.4**
MKAR Makanchi Array 130.84 11 PKP **PKPdf 01 35 18.5 -0.4**
comp=Z,4.2nm,1.0s,baz=358,slow=2.9,SNR=14
INCN Inchon 131.37 326 PFAKE 01 35 30.0 +10
INCN LR LR
comp=Z,1μm,21.0s
USP Ospenovka 132.03 20 P **PKPdf 01 35 24.4 +3.1**
SNR=11
EKS2 Erkin-Say 132.31 21 *e*PKIKP **PKPdf 01 35 23.9 +1.9**
EKS2 *e* 01 37 41.0
EKS2 MLR MLR
comp=Z,2μm,20.0s
EKS2 Erkin-Say 132.31 21 *e*PKPdf **PKPdf 01 35 23.9 +1.9**
EKS2 *e*PP **PP 01 37 41.0 -2.4**
EKS2 LR LR
comp=Z,2μm,20.0s
EKS2 Erkin-Say 132.31 21 P **PKPdf 01 35 24.6 +2.6**
SNR=10
FRU Bishkek 132.45 20 *e*PKIKP **PKPdf 01 35 24.0 +1.9**
FRU pmax pmax
comp=Z,63nm,2.2s
AAK Ala-Archa 132.58 20 *e*PKIKP **PKPdf 01 35 25.0 +2.4**
AAK *e* 01 37 42.8
AAK MLR MLR
comp=Z,2μm,21.0s
AAK Ala-Archa 132.58 20 *e*PKPdf **PKPdf 01 35 25.0 +2.4**
AAK *e*PP **PP 01 37 42.8 -2.4**
AAK LR LR
comp=Z,2μm,21.0s
AAK Ala-Archa 132.58 20 P **PKPdf 01 35 25.8 +3.2**
SNR=6.4
TKM2 Tokmak 2 132.70 19 *e*PKIKP **PKPdf 01 35 23.7 +0.9**
TKM2 MLR MLR
comp=Z,2μm,21.0s
TKM2 Tokmak 2 132.70 19 *e*PKPdf **PKPdf 01 35 23.7 +0.9**
TKM2 LR LR
comp=Z,2μm,21.0s
TKM2 Tokmak 2 132.70 19 P **PKPdf 01 35 25.7 +2.9**
SNR=8.3
ULHL Ulahol 133.51 19 P **PKPdf 01 35 26.6 +2.2**
SNR=6.3
BJI Beijing 134.38 337 PKP **PKPdf 01 35 26.5 +0.8**
BJI PP **PP 01 37 57.5 +1.0**
BJI SKS **SKSdf 01 42 34.3 -3.4**
BJI SS **SS 01 55 46.4 -0.2**
BJI AMB AMB
comp=Z,350nm,8.2s
BJI LR LR
comp=N,1μm,30.7s
BJI LR LR
comp=E,1μm,28.6s
BJI LR LR
comp=Z,3μm,38.8s
WMQ Urumqi 134.60 7 PKP **PKPdf 01 35 28.6 +2.4**
WMQ PP PP 01 38 05.1 +7.4
WMQ PKS **PKSdf 01 39 03.5 +0.9**
WMQ SKS **SKSdf 01 42 38.1 -0.1**
WMQ SKKS **SKKSac 01 44 56.2 +1.0**
WMQ SS **SS 01 55 54.2 +5.3**
WMQ LR LR
comp=N,4μm,25.6s
WMQ LR LR
comp=E,3μm,28.2s
WMQ LR LR
comp=Z,3μm,24.0s
HHC Hu-ho-hao-te 135.29 342 *e*PKP **PKPdf 01 35 26.3 -1.3**
HHC PP **PP 01 38 02.8 +0.5**
HHC PKS **PKSdf 01 39 00.3 -3.7**
HHC SKS SKSdf 01 42 32.5 -7.1
HHC SKKS **SKKSac 01 44 52.8 -6.8**
HHC SS **SS 01 55 57.7 +0.1**
HHC AMB AMB
comp=Z,510nm,9.5s
HHC LR LR
comp=N,3μm,23.8s
HHC LR LR
comp=E,3μm,23.8s
HHC LR LR
comp=Z,3μm,20.2s
KSH Kashi 135.86 21 *e*PKP **PKPdf 01 35 31.4 +2.6**
KSH sPKP 01 35 45.5
KSH PP **PP 01 38 09.9 +3.9**
KSH *e*PKS **PKSdf 01 39 07.1 +1.9**
KSH *e*SKS **SKSdf 01 42 37.0 -3.7**
KSH *e*SKKS **SKKSac 01 44 56.4 -6.7**
KSH AMB AMB
comp=Z,420nm,4.2s
KSH LR LR
comp=N,1μm,16.4s
KSH LR LR
comp=E,1μm,15.3s
KSH LR LR
comp=Z,1μm,16.3s
AS31 Alice Springs 136.02 237 *e*PKPdf **PKPdf 01 35 29.9 +0.6**
ASAR Alice Springs 136.02 237 PKP **PKPdf 01 35 29.7 +0.3**
ASAR Alice Springs 136.02 237 PKP **PKPdf 01 35 29.7 +0.3**
comp=Z,2.6nm,0.9s,baz=117,slow=2.5,SNR=11
WRAB Tennant Creek 137.07 242 *e*PKIKP **PKPdf 01 35 33.2 +1.9**
WRAB MLR MLR
comp=Z,3μm,22.0s
WRAB Tennant Creek 137.07 242 *e*PKPdf **PKPdf 01 35 33.2 +1.9**
WRAB LR LR
comp=Z,3μm,22.0s
WRA Warramunga Arr 137.07 242 PKPpre PKPpre 01 35 23.7
WRA PKP **PKPdf 01 35 32.2 +0.9**
WRA Warramunga Arr 137.07 242 PKhKP PKPpre 01 35 23.7
comp=Z,0.7nm,0.6s,baz=119,slow=1.9,SNR=4.8
WRA PKP **PKPdf 01 35 32.2 +0.9**
comp=Z,9.8nm,1.1s,baz=111,slow=1.5,SNR=14
RER Riviere de l'E 137.22 120 PFAKE 01 35 40.0 +8.3
RER LR LR
comp=Z,3μm,22.0s
SSE Sheshan 139.09 324 PKP **PKPdf 01 35 32.7 -2.0**
SSE PP **PP 01 38 30.8 +4.4**
SSE SS SS 01 56 38.5 -5.1
SSE AMB AMB
comp=Z,180nm,5.8s
SSE LR LR
comp=N,980nm,20.8s
SSE LR LR
comp=E,270nm,20.8s
SSE LR LR
comp=Z,1μm,19.0s
GTA Gaotai 139.18 354 *e*PKP **PKPdf 01 35 36.2 +1.3**
GTA sPKP 01 35 50.6
GTA PP PP 01 38 33.1 +6.7
GTA SKS **SKSdf 01 42 41.5 -4.8**
GTA SKKS **SKKSac 01 45 18.5 -4.3**
GTA SS **SS 01 56 42.6 -0.9**
GTA AMB AMB
comp=Z,200nm,9.3s
GTA LR LR
comp=N,1μm,22.8s
GTA LR LR
comp=E,1μm,22.8s
GTA LR LR
comp=Z,2μm,23.3s
NJ2 Nanjing 139.68 328 *e*Pdif **Pdif 01 32 49.0 -0.4**
NJ2 PKP **PKPdf 01 35 35.0 -0.8**
NJ2 sPKP 01 35 45.0
NJ2 PP **PP 01 38 30.0 +0.1**
NJ2 AMB AMB
comp=Z,260nm,6.7s
NJ2 LR LR
comp=N,2μm,23.8s
NJ2 LR LR
comp=E,1μm,27.0s
NJ2 LR LR
comp=Z,490nm,18.4s
MSEY Mahe Island 140.69 96 PFAKE 01 35 50.0 +12
MSEY LR LR
comp=Z,5μm,22.0s
LZH Lanzhou 141.80 348 *e*PKP **PKPdf 01 35 42.0 +2.2**
LZH SKS **SKSdf 01 42 48.1 -2.7**
LZH SKKS SKKSac 01 45 30.0 -8.3
LZH SS **SS 01 57 13.1 -1.3**
LZH AMB AMB
comp=Z,390nm,5.4s
LZH LR LR
comp=N,1μm,18.5s
LZH LR LR
comp=E,1μm,18.2s
LZH LR LR
comp=Z,3μm,20.1s
NWAO Narrogin (SRO) 142.11 212 PFAKE 01 35 50.0 +10
NWAO LR LR
comp=Z,2μm,21.0s
XAN Xi'an 142.36 340 PKP **PKPdf 01 35 41.9 +1.2**
XAN sPKP 01 35 54.0
XAN PP **PP 01 38 50.7 +4.7**
XAN PKS **PKSdf 01 39 15.4 -1.2**
XAN SKS **SKSdf 01 42 46.6 -4.9**
XAN SKKS **SKKSac 01 45 35.5 -5.8**
XAN AMB AMB
comp=Z,91nm,9.1s
XAN LR LR
comp=N,1μm,27.8s
XAN LR LR
comp=E,410nm,26.4s
XAN LR LR
comp=Z,690nm,27.6s
TATO Taipei 143.15 317 PFAKE 01 35 50.0 +7.8
TATO LR LR
comp=Z,2μm,19.0s
WHN Wuhan 143.19 331 *e*PKP PKPab 01 35 37.8 +0.1
WHN LR LR
comp=N,3μm,29.2s
WHN LR LR
comp=E,5μm,27.2s
WHN LR LR
comp=Z,5μm,32.1s
YHNB Yeheng 143.43 317 PFAKE 01 36 00.0 +17
YHNB LR LR
comp=Z,3μm,22.0s
SSLB Suanglung 144.30 316 *e*PKPdf **PKPdf 01 35 44.6 +0.2**
DDI Dehra Dun 144.74 25 *e*PKP **PKPab 01 35 42.3 -1.4**
DDI *ex* x 01 39 04.6
TPUB Ta-pu 144.84 316 *e*PKPdf **PKPdf 01 35 45.4 +0.1**
QZH Quanzhou 145.09 320 *f*PKPbc **PKPdf 01 35 49.0 +3.4**
QZH LR LR
comp=N,9μm,32.5s
QZH LR LR
comp=E,5μm,28.0s
QZH LR LR
comp=Z,6μm,27.7s
FITZ Fitzroy Crossi 145.37 239 PKPbc **PKPab 01 35 47.0 +0.8**
FITZ Fitzroy Crossi 145.37 239 PKPbc **PKPab 01 35 47.0 +0.8**
comp=Z,29nm,1.1s,baz=107,slow=1.9,SNR=12
ENH Enshi 145.55 337 *e*PKPbc **PKPab 01 35 46.8 +0.2**
AJM Ajmer 146.24 34 *ex* **PKPdf 01 35 42.7 -4.9**
AJM AMb AMB 01 36 09.4
CD2 Chengdu 146.79 346 PKPbc **PKPdf 01 35 48.0 -0.4**
CD2 PKPab **PKiKP 01 35 52.6 -0.3**
CD2 pPKP PKPab 01 35 58.7 +7.4
CD2 sPKP 01 36 02.4
CD2 PP **PP 01 39 16.9 +4.5**
CD2 PKS **PKSdf 01 39 21.9 -2.0**
CD2 SKS **SKSdf 01 42 52.5 -5.8**
CD2 SKKS **SKKSac 01 46 02.9 -3.8**
CD2 SS **SS 01 58 10.5 -1.1**
CD2 AMB AMB
comp=Z,470nm,8.0s
CD2 LR LR
comp=N,1μm,23.0s
CD2 LR LR
comp=E,2μm,20.1s
CD2 LR LR
comp=Z,2μm,21.5s
DAV Davao City (W) 148.08 286 PFAKE 01 36 00.0 +3.1
DAV LR LR
comp=Z,2μm,20.0s
MBWA Marble Bar 148.64 229 *e*PKPbc **PKPbc 01 35 56.9 +1.6**
MBWA *e*PKPab **PKPab 01 36 00.6 +1.7**
MBWA LR LR
comp=Z,5μm,22.0s
PYUN Piuthan 148.64 20 *e*P **PKPdf 01 35 52.4 +0.6**
comp=Z,507nm,1.1s
DANN Dangsing 148.67 19 *e*P **PKPbc 01 35 54.0 -1.6**
comp=Z,518nm,1.4s
LSA Lhasa 148.95 6 PKPbc **PKPbc 01 35 54.2 -2.3**
LSA Lhasa 148.95 6 *e*PKIKP **PKPdf 01 35 53.4 +0.8**
LSA *e* 01 35 56.0
LSA Lhasa 148.95 6 *e*PKPdf **PKPdf 01 35 53.4 +0.8**
LSA *e*PKPbc **PKPbc 01 35 56.0 -0.5**
KOLN Koldanda 149.15 19 *e*P **PKPdf 01 35 54.2 +1.6**
comp=Z,33nm,0.8s
KKN Kakani 149.65 17 *e*P **PKPdf 01 35 55.1 +1.7**
comp=Z,104nm,1.0s
GUN Gumba 149.71 16 *e*P **PKPdf 01 35 55.0 +1.3**
comp=Z,459nm,1.3s
DMN Daman 149.77 17 *e*P **PKPdf 01 35 55.2 +1.5**
comp=Z,221nm,1.2s
PKIN Phulchoki 149.89 17 *e*P **PKPdf 01 35 55.2 +1.3**
comp=Z,130nm,1.2s
PKI Pulchoki 149.90 17 *e*P **PKPdf 01 35 55.0 +1.0**
comp=Z,132nm,1.2s
GYA Guiyang 150.05 338 PKPbc **PKPdf 01 35 53.0 -1.0**
GYA PKPab **PKPab 01 36 04.8 +0.3**
GYA PP **PP 01 39 34.4 +2.7**
GYA SKKS 01 46 24.4
GYA SS **SS 01 58 47.5 -1.2**
GYA AMB AMB
comp=Z,340nm,7.1s
GYA LR LR
comp=N,1μm,31.4s
GYA LR LR
comp=E,1μm,26.4s
GYA LR LR
comp=Z,2μm,26.7s
TAPN Taplejung 150.69 13 *e*P **PKPdf 01 35 56.7 +1.5**
comp=Z,155nm,1.1s
RAMN Ramite 150.81 15 *e*P **PKPdf 01 35 55.4 +0.1**
comp=Z,196nm,1.1s
ODAN Odare 151.09 14 *e*P **PKPdf 01 35 55.4 -0.3**
comp=Z,163nm,1.4s
POO Poona 151.53 45 *e*PKP **PKPdf 01 35 55.7 -0.6**
AKL Akola 152.07 37 *e*PKP **PKPdf 01 35 55.5 -1.6**
AKL AMB AMB 01 36 27.4
comp=Z,42nm,1.4s
KMI Kunming 152.57 344 PKPbc **PKPdf 01 35 57.1 -0.9**
KMI pPKP **PKiKP 01 36 05.0 -0.2**
KMI sPKP 01 36 07.6
NGP Nagpur 152.90 34 *e*PKP **PKPdf 01 35 56.8 -1.5**
NGP AMB AMB 01 36 17.4
comp=Z,25nm,3.6s
SHL Shillong 153.11 6 *e*PKP **PKPdf 01 36 00.5 +1.8**
KAPI Kappang 154.73 261 *e*PKPbc **PKPbc 01 36 11.1 +1.5**
QIZ Qiongzhong 154.88 324 PKPbc **PKPdf 01 35 59.3 -1.8**
QIZ PP **PP 01 39 59.8 +0.3**
QIZ SS SS 01 59 38.9 -3.6
QIZ LR LR
comp=N,1μm,20.7s
QIZ LR LR
comp=Z,3μm,34.6s
HYB Hyderabad 155.49 40 *i* PKP **PKPdf 01 36 02.0 0.0**
DGAR Diego Garcia 157.01 106 PFAKE 01 36 20.0 -14
DGAR LR LR
comp=Z,4μm,22.0s
VIS Vishakhapatnam 157.99 30 *e*PKP **PKPdf 01 36 04.8 -0.4**
CHTO Chiang Mai 159.54 348 *e*PKIKP **PKPdf 01 36 07.1 +0.1**
CHTO Chiang Mai 159.54 348 *e*PKPdf **PKPdf 01 36 07.1 +0.1**
TRD Trivandrum 159.78 61 *e*PKP **PKPdf 01 36 08.0 +0.6**
CMAR Chiang Mai Arr 159.89 348 PKP **PKPdf 01 36 08.9 +1.5**
CMAR Chiang Mai Arr 159.89 348 PKP **PKPdf 01 36 08.9 +1.5**
comp=Z,2.5nm,0.9s,baz=286,slow=1.9,SNR=6.6

IDC 10 01:20:24.3±1.3, 13°.80N×92°.43W, h0km, mb3.9/3, mb1 4.3/5, mb1mx3.9/24, mbtmp4.0/5, ML3.7/2, Error ellipse: s-maj=58.9km s-min=25.8km az=71.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**7.52**	**31**	Pn		Pn	Pn	01 22 16.0	+0.7
	3.9nm,0.3s,baz=223,slow=18,SNR=13								
TXAR	**Lajitas Array**	**18.64**	**328**	P		P	Pn	01 24 44.6	+0.7
	0.0nm,0.3s,baz=136,slow=12,SNR=2.0								
CFAA	**Coronel Fontan**	**50.77**	**153**	P		P	P	01 29 26.4	0.0
	0.5nm,0.9s,baz=337,slow=8.8,SNR=6.3								
YKA	**Yellowknife Ar**	**51.12**	**347**	P		P	P	01 29 27.8	-0.8
	2.8nm,0.6s,baz=149,slow=7.3,SNR=15								
ILAR	**Eielson Array**	**62.85**	**337**	P		P	P	01 30 51.7	-0.1
	1.1nm,0.8s,baz=131,slow=5.4,SNR=4.8								
CMAR	**Chiang Mai Arr**	**146.04**	**340**	PKPbc		PKPdf		01 40 06.5	+0.1
	0.6nm,0.4s,baz=341,slow=2.8,SNR=5.8								

*IDC **10** 01:26:18.9±0.7, 6°.95S×155°.89E, h52km±5km, mb3.8/10, mb1 3.9/12, mb1mx3.8/22, mbtmp3.9/12, MS3.0/2, Ms1 3.0/2, ms1mx2.7/43, Error ellipse: s-maj=23.2km s-min=15.3km az=125.0*
*NEIC **10** 01:26:18.7±0.3, 6.92S×155.85E, mb4.6/8, Error ellipse: s-maj=8.8km s-min=7.9km az=17.0*
*ISCJB **10** 01:26:18.2±0.5, 6°.98S±0°.08×155°.88E±0°.08, h62km, mb4.3/18, Error ellipse: s-maj=12.0km s-min=10.9km az=9.8*

ISC 10 01:26:19.2±0.5, 7°.0S±0°.1×155°.84E±0°.09, h62km, n44, σ1s29/63, mb4.4/18, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.75**	**121**	P		P	**Pn**	**01 27 27.9**	**-0.5**
HNR	**Honiara**	**4.75**	**121**	P		P	**Pn**	**01 27 27.9**	**-0.5**
	10.0nm,0.3s,baz=264,slow=9.2,SNR=2.6								
HNR				LR		LR		01 28 25.8	
	comp=Z,98nm,21.1s,baz=312,slow=27								
PMG	**Port Moresby**	**8.93**	**254**	*e*Pn		Pn		01 28 31.3	+5.7
PMG	**Port Moresby**	**8.93**	**254**	P		Pn		01 28 29.6	+4.1
	3.7nm,0.3s,baz=67,slow=7.7,SNR=9.6								
CTA	**Charters Tower**	**16.02**	**215**	LR		LR		01 35 31.0	
	comp=Z,113nm,19.4s,baz=48,slow=34								
DZM	**Mont Dzumac**	**18.18**	**147**	P		**Pn**		**01 30 27.9**	**+0.4**
DZM	**Mont Dzumac**	**18.18**	**147**	P		**Pn**		**01 30 27.9**	**+0.4**
	0.7nm,0.3s,baz=326,slow=18,SNR=4.4								
WRAB	**Tennant Creek**	**24.52**	**236**	*e*P		**P**		**01 31 33.9**	**+0.8**
	5.6nm,0.6s								
WRA	**Warramunga Arr**	**24.53**	**236**	P		P		**01 31 34.6**	**+1.5**
WRA				pP		**pP**		**01 31 47.7**	**-0.6**
WRA				PcP		**PcP**		**01 35 11.2**	**+0.8**
WRA	**Warramunga Arr**	**24.53**	**236**	P		**P**		**01 31 34.6**	**+1.5**
	3.5nm,0.5s,baz=63,slow=9.4,SNR=19								
WRA				pP		**pP**		**01 31 47.7**	**-0.6**
	2.7nm,0.5s,baz=60,slow=9.3,SNR=9.5								
WRA				PcP		**PcP**		**01 35 11.2**	**+0.8**
	1.0nm,0.8s,baz=65,slow=2.9,SNR=5.9								
AS31	**Alice Springs**	**26.82**	**229**	*e*P		**P**		**01 31 54.7**	**+0.7**
ASAR	**Alice Springs**	**26.83**	**229**	P		**P**		**01 31 54.6**	**+0.6**
ASAR				pP		**pP**		**01 32 08.9**	**-0.1**
ASAR				PcP		**PcP**		**01 35 16.6**	**+1.1**
ASAR	**Alice Springs**	**26.83**	**229**	P		**P**		**01 31 54.6**	**+0.6**
	1.0nm,0.5s,baz=58,slow=9.6,SNR=18								
ASAR				pP		**pP**		**01 32 08.9**	**-0.1**
	0.9nm,0.5s,baz=58,slow=9.6,SNR=4.8								
ASAR				PcP		**PcP**		**01 35 16.6**	**+1.1**
	0.4nm,0.4s,baz=52,slow=2.4,SNR=5.1								
FITZ	**Fitzroy Crossi**	**31.43**	**247**	P		**P**		**01 32 36.0**	**+1.0**
FITZ				pP		**pP**		**01 32 48.1**	**-2.1**
FITZ	**Fitzroy Crossi**	**31.43**	**247**	P		**P**		**01 32 36.0**	**+1.0**
	5.6nm,0.6s,baz=84,slow=8.8,SNR=14								
FITZ				pP		**pP**		**01 32 48.1**	**-2.1**

	3.0nm,0.5s,baz=83,slow=8.2,SNR=3.1							
KAPI	**Kappang**	**35.93**	**271**	*e*P	**P**	**01 33 14.0**	**-0.1**
	6.7nm,0.7s							
KAPI				*e*pP	**pP**	**01 33 27.6**	**-1.9**
KSM	**Kuching**	**46.20**	**279**	*e*P	**P**	**01 34 39.4**	**+1.0**
	5.3nm,0.3s							
IPM	**Ipoh**	**55.87**	**280**	*e*P	**P**	**01 35 51.8**	**+0.7**
	4.3nm,0.5s							
IPM				*e*pP	**pP**	**01 36 04.6**	**-2.8**
CMAR	**Chiang Mai Arr**	**61.52**	**295**	pP	pP	01 36 45.0	-1.8
CMAR	**Chiang Mai Arr**	**61.52**	**295**	pP	pP	01 36 45.0	-1.8
	2.9nm,0.7s,baz=119,slow=5.0,SNR=2.9							
SONM	**Songino Array**	**69.76**	**327**	P	**P**	**01 37 25.4**	**+2.4**
SONM				pP	**pP**	**01 37 38.7**	**-1.1**
SONM	**Songino Array**	**69.76**	**327**	P	**P**	**01 37 25.4**	**+2.4**
	3.6nm,0.8s,baz=136,slow=5.6,SNR=9.7							
SONM				pP	**pP**	**01 37 38.7**	**-1.1**
	2.5nm,1.0s,baz=126,slow=2.8,SNR=3.4							
MCK	**McKinley**	**81.71**	**22**	*e*P	**P**	**01 38 30.8**	**+0.1**
	5.2nm,1.0s							
ILAR	**Eielson Array**	**83.03**	**21**	P	**P**	**01 38 38.0**	**+0.4**
ILAR				pP	**pP**	**01 38 52.6**	**-2.2**
ILAR	**Eielson Array**	**83.03**	**21**	P	**P**	**01 38 38.0**	**+0.4**
	0.3nm,0.6s,baz=245,slow=5.2,SNR=6.8							
ILAR				pP	**pP**	**01 38 52.6**	**-2.2**
	0.5nm,0.9s,baz=264,slow=5.0,SNR=4.8							
MK31	**Makanchi Array**	**83.93**	**318**	*e*P	**P**	**01 38 42.9**	**+0.2**
MKAR	**Makanchi Array**	**83.93**	**318**	P	**P**	**01 38 44.3**	**+1.7**
MKAR				pP	**pP**	**01 38 59.1**	**-0.8**
MKAR	**Makanchi Array**	**83.93**	**318**	P	**P**	**01 38 44.3**	**+1.7**
	1.8nm,0.5s,baz=97,slow=6.1,SNR=17							
MKAR				pP	**pP**	**01 38 59.1**	**-0.8**
	1.0nm,0.6s,baz=88,slow=8.9,SNR=4.4							
ZALV	**Zalesovo Beam**	**84.62**	**326**	P	**P**	**01 38 46.5**	**+0.6**
ZALV	**Zalesovo Beam**	**84.62**	**326**	P	**P**	**01 38 46.5**	**+0.6**
	1.0nm,0.5s,baz=126,slow=5.5,SNR=3.8							
KURK	**Kurchatov**	**87.32**	**322**	*e*P	**P**	**01 38 58.8**	**-0.5**
	3.3nm,1.0s							
KURBB	**Kurchatov Arra**	**87.35**	**322**	P	**P**	**01 38 58.9**	**-0.6**
	0.4nm,0.5s,baz=99,slow=4.7,SNR=8.3							
TKM2	**Tokmak 2**	**87.59**	**314**	*e*P	**P**	**01 39 02.1**	**+1.0**
	2.5nm,0.8s							
BVAR	**Borovoye Array**	**92.77**	**323**	P	**P**	**01 39 25.0**	**+0.2**
BVAR	**Borovoye Array**	**92.77**	**323**	P	**P**	**01 39 25.0**	**+0.2**
	0.8nm,0.5s,baz=115,slow=5.7,SNR=5.6							
BRVK	**Borovoye**	**92.84**	**323**	*e*P	**P**	**01 39 25.0**	**-0.1**
	5.2nm,1.2s							
YKA	**Yellowknife Ar**	**95.91**	**28**	P	**P**	**01 39 40.1**	**+1.2**
YKA				pP	**pP**	**01 39 55.0**	**-1.5**
YKA	**Yellowknife Ar**	**95.91**	**28**	P	**P**	**01 39 40.1**	**+1.2**
	0.1nm,0.4s,baz=267,slow=4.2,SNR=3.5							
YKA				pP	**pP**	**01 39 54.9**	**-1.5**
	0.4nm,0.8s,baz=263,slow=4.8,SNR=5.0							
BUR08	**Bucovina Ar. S**	**121.72**	**323**	*e*PKPdf	**PKPdf**	**01 45 08.0**	**+1.6**
MORC	**Moravsky Berou**	**124.90**	**328**	*e*PKPdf	**PKPdf**	**01 45 13.3**	**+0.9**
GERES	**GERESS Array B**	**127.45**	**329**	PKP	**PKPdf**	**01 45 18.0**	**+0.7**
GERES	**GERESS Array B**	**127.45**	**329**	PKP	**PKPdf**	**01 45 18.0**	**+0.7**
	0.6nm,0.8s,baz=101,slow=1.0,SNR=7.3							
TORD	**Torodi Ar. Bea**	**153.82**	**286**	PKPbc	**PKPbc**	**01 46 12.5**	**0.0**
TORD				PKPab	**PKPab**	**01 46 26.6**	**+0.9**
TORD				pPKPab	**pPKPab**	**01 46 40.3**	**-3.0**
TORD	**Torodi Ar. Bea**	**153.82**	**286**	PKPbc	**PKPbc**	**01 46 12.5**	**0.0**
	1.0nm,0.7s,baz=37,slow=2.1,SNR=9.6							
TORD				PKPab	**PKPab**	**01 46 26.6**	**+0.9**
	0.4nm,0.5s,baz=80,slow=3.5,SNR=4.0							
TORD				pPKPab	**pPKPab**	**01 46 40.3**	**-3.0**
	0.6nm,0.7s,baz=87,slow=3.1,SNR=2.8							

*CSEM **10** 01:35:45.7±0.2,39.4°N×33.0°E,h5km, MD2.8, Error ellipse: s-maj=5.0km s-min=3.9km az=104.0*
*ISK **10** 01:35:45.2,39.4°N×33.0°E,h6km, MD2.8*
*ISCJB **10** 01:35:45.4±0.9,39.4°N±0.0°×33.0°E±0.0°,h2km±8km, Error ellipse: s-maj=8.9km s-min=5.4km az=19.2*
*DDA **10** 01:35:46.2,39.5°N×32.7°E,h7km, MD2.8*
ISC 10 01:35:45.7±1.0,**39.4°N**±0.0°×**33.1°E**±0.0°,**h5.1**±8km, **n26,σ0.8s3.3/34, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFSR	**Afʼar-Bala (A**	**0.04**	**321**		*e*PG	**Pg**	**01 35 46.6**	**-0.4**
AFSR	**Afʼar-Bala (A**	**0.04**	**321**		*e*Pg	**Pg**	**01 35 46.7**	**-0.4**
ANTO	**Ankara**	**0.51**	**332**		*e*PG	**Pg**	**01 35 55.1**	**-0.4**
ANTO					*e*SG	**Sg**	**01 36 02.4**	**+0.1**
ANTO	**Ankara**	**0.51**	**332**		*e*Pg	**Pg**	**01 35 55.2**	**-0.4**
ANTO					*e*Sg	**Sg**	**01 36 02.4**	**+0.1**
LOD	**Lodumlu**	**0.54**	**331**		*e*PG	**Pg**	**01 35 55.7**	**-0.5**
LOD					*e*SG	**Sg**	**01 36 03.5**	**+0.4**
LOD	**Lodumlu**	**0.54**	**331**		*e*Pg	**Pg**	**01 35 55.7**	**-0.5**
LOD					*e*Sg	**Sg**	**01 36 03.6**	**+0.4**
KIZT	**Kizilcal**	**1.09**	**241**		*e*PG	**Pg**	**01 36 06.1**	**-0.5**
KIZT	**Kizilcal**	**1.09**	**241**		*e*Pg	**Pg**	**01 36 06.1**	**-0.5**
ELDT	**Eldivan**	**1.10**	**13**		*i* P	**Pg**	**01 36 05.5**	**-1.3**
ELDT					*i* S	**Sb**	**01 36 22.3**	**+0.3**
ELDT	**Eldivan**	**1.10**	**13**		*i* P	**Pg**	**01 36 05.5**	**-1.3**
ELDT					*i* S	**Sb**	**01 36 22.3**	**+0.3**
KDHN	**Kadinhani**	**1.18**	**221**		*i* P	**Pn**	**01 36 09.1**	**+0.2**
KDHN					*i* S	**Sb**	**01 36 24.4**	**+0.3**
KDHN	**Kadinhani**	**1.18**	**221**		*i* P	**Pn**	**01 36 09.1**	**+0.2**
KDHN					*i* S	**Sb**	**01 36 24.4**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.22**	**272**		*e*PN	**Pg**	**01 36 08.4**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.22**	**272**		*e*Pn	**Pg**	**01 36 08.4**	**-0.8**
SULT	**Sultanhani-AKS**	**1.26**	**165**		*e*PN	**Pn**	**01 36 09.8**	**-0.1**
SULT	**Sultanhani-AKS**	**1.26**	**165**		*e*Pn	**Pn**	**01 36 09.8**	**-0.1**
LADK	**Ladik-KONYA**	**1.34**	**206**		*e*PN	**Pn**	**01 36 10.8**	**-0.4**
LADK	**Ladik-KONYA**	**1.34**	**206**		*e*Pn	**Pn**	**01 36 10.8**	**-0.4**
CORM	**Corum**	**1.40**	**57**		*e*PN	**Pn**	**01 36 12.2**	**+0.2**
CORM	**Corum**	**1.40**	**57**		*e*Pn	**Pn**	**01 36 12.2**	**+0.2**
AVNT	**Avonos**	**1.50**	**114**		*i* P	**Pb**	**01 36 14.5**	**+0.4**
AVNT					*i* S	Sg	01 36 46.9	+12
AVNT	**Avonos**	**1.50**	**114**		*i* P	**Pb**	**01 36 14.5**	**+0.4**
KONT	**Konya--Tatoy**	**1.58**	**202**		*e*PN	**Pn**	**01 36 14.3**	**0.0**
KONT	**Konya--Tatoy**	**1.58**	**202**		*e*Pn	**Pn**	**01 36 14.3**	**0.0**
YOZ	**Yozgat**	**1.73**	**82**		*e*PN	**Pn**	**01 36 16.9**	**+0.4**
YOZ	**Yozgat**	**1.73**	**82**		*e*Pn	**Pn**	**01 36 16.9**	**+0.4**

*NSSC **10** 01:36:22.1±1.5,38.1°N×39.0°E,h0km±25km, ML2.8*
*ISK **10** 01:36:31.9,38.1°N×38.6°E,h6km, MD3.6*
*DDA **10** 01:36:32.1,38.2°N×38.6°E,h12km, MD3.4*
*CSEM **10** 01:36:32.3±0.1,38.1°N×38.6°E,h2km, MD3.6, Error ellipse: s-maj=4.0km s-min=3.1km az=134.0*
ISC 10 01:36:32.1±1.0,**38.2°N**±0.0°×**38.6°E**±0.0°,**h12**km±8km, **n78,σ1.9s37/102, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.19**	**313**		PG	**Pg**	**01 36 36.8**	**+0.3**
MYA	**Malataya**	**0.19**	**313**		*i* Pg	**Pg**	**01 36 36.8**	**+0.3**
ELZG	**Elazig**	**0.42**	**45**		*i* P	**Pb**	**01 36 40.6**	**-1.1**
ELZG					*i* S	**Sb**	**01 36 46.9**	**-1.2**
ELZG	**Elazig**	**0.42**	**45**		*i* P	**Pb**	**01 36 40.6**	**-1.1**
ELZG					*i* S	**Sb**	**01 36 46.9**	**-1.2**
AKCD	**Akcadag**	**0.55**	**281**		*i* P	**Pb**	**01 36 43.0**	**-0.7**
AKCD					*i* S	**Sb**	**01 36 50.8**	**-0.7**
AKCD	**Akcadag**	**0.55**	**281**		*i* P	**Pb**	**01 36 43.0**	**-0.7**
AKCD					*i* S	**Sb**	**01 36 50.8**	**-0.7**
SVRC	**Sivrice-ELAZID**	**0.58**	**72**		*e*PG	**Pb**	**01 36 43.3**	**-1.0**
SVRC					*e*SG	**Sb**	**01 36 51.7**	**-1.0**
SVRC	**Sivrice-ELAZID**	**0.58**	**72**		*e*Pg	**Pb**	**01 36 43.3**	**-1.0**
SVRC					*e*Sg	**Sb**	**01 36 51.7**	**-1.0**
ATAB	**Bozova**	**0.77**	**199**		*i* P	**Pb**	**01 36 47.5**	**+0.1**
ATAB					*i* S	**Sn**	**01 37 01.4**	**+1.2**
ATAB	**Bozova**	**0.77**	**199**		*i* P	**Pb**	**01 36 47.5**	**+0.1**
ATAB					*i* S	**Sn**	**01 37 01.4**	**+1.2**
URFA	**Urfa**	**0.77**	**167**		*e*PG	**Pb**	**01 36 47.1**	**-0.5**
URFA					*e*SG	**Sb**	**01 36 58.1**	**+0.1**
URFA	**Urfa**	**0.77**	**167**		*e*Pg	**Pb**	**01 36 47.1**	**-0.5**
URFA					*e*Sg	**Sb**	**01 36 58.2**	**+0.1**
PTK	**Pertek**	**0.93**	**41**		*e*PG	**Pb**	**01 36 49.8**	**-0.5**
PTK	**Pertek**	**0.93**	**41**		*e*Pg	**Pb**	**01 36 49.8**	**-0.5**
DARE	**Darende-Malaty**	**0.96**	**293**		*e*PG	**Pg**	**01 36 50.1**	**-0.5**
DARE					*e*SG	**Sn**	**01 37 05.0**	**0.0**
DARE	**Darende-Malaty**	**0.96**	**293**		*e*Pg	**Pg**	**01 36 50.1**	**-0.5**
DARE					*e*Sg	**Sn**	**01 37 05.0**	**0.0**
KEMA	**Kemaliye**	**1.07**	**355**		*i* P	**Pg**	**01 36 52.0**	**-0.8**
KEMA					*i* S	**Sn**	**01 37 08.5**	**+0.6**
KEMA	**Kemaliye**	**1.07**	**355**		*i* P	**Pg**	**01 36 52.0**	**-0.9**
GZT	**Gaziantep**	**1.18**	**225**		*i* P	**Pn**	**01 36 55.6**	**+1.0**
GZT					*i* S	**Sn**	**01 37 12.4**	**+1.9**
DIYA	**Diyarbakir**	**1.23**	**102**		*i* P	**Pn**	**01 36 55.9**	**+0.8**
DIYA					*i* S	**Sn**	**01 37 14.8**	**+3.1**
DIYA	**Diyarbakir**	**1.23**	**102**		*i* P	**Pn**	**01 36 55.9**	**+0.8**
DIYA					*i* S	**Sn**	**01 37 14.8**	**+3.1**
ILIC	**ilic-Erzincan**	**1.25**	**359**		*e*PN	**Pg**	**01 36 56.1**	**-0.2**
ILIC	**ilic-Erzincan**	**1.25**	**359**		*e*Pn	**Pg**	**01 36 56.1**	**-0.2**
DIY	**Diyarbakir**	**1.32**	**103**		*e*PN	**Pg**	**01 36 57.1**	**-0.3**
DIY	**Diyarbakir**	**1.32**	**103**		*e*Pn	**Pg**	**01 36 57.1**	**-0.3**
GAZ	**Gaziantep**	**1.50**	**228**		*e*PN	**Pg**	**01 37 00.0**	**-1.0**
GAZ	**Gaziantep**	**1.50**	**228**		*e*Pn	**Pg**	**01 37 00.0**	**-1.0**
AYKD	**Aykdinkavak**	**1.62**	**242**		*i* P	**Pg**	**01 37 02.2**	**-1.1**
AYKD					*i* S	**Sg**	**01 37 25.0**	**+0.6**
BINT	**Bingol**	**1.63**	**65**		*e*Pn	**Pg**	**01 37 04.3**	**+0.9**
ERZN	**Erzincan**	**1.64**	**32**		*e*PN	**Pb**	**01 37 02.0**	**-0.4**
EZC	**Erzincan**	**1.66**	**20**		*e*PN	**Pb**	**01 37 02.5**	**-0.1**
EZC	**Erzincan**	**1.66**	**20**		*e*Pn	**Pb**	**01 37 02.6**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.73**	**278**		*e*PN	**Pb**	**01 37 03.6**	**-0.4**
SARI	**SarD1z-Kayseri**	**1.73**	**278**		*e*Pn	**Pb**	**01 37 03.6**	**-0.4**
BNGB	**Bingʼll**	**1.81**	**63**		*e*PN	**Pb**	**01 37 04.3**	**-1.0**
KUZU	**Kuzuini**	**1.87**	**221**		*i* P	**Pn**	**01 37 03.8**	**-0.1**
KUZU					*i* S	**Sg**	**01 37 32.7**	**+0.4**
KUZU	**Kuzuini**	**1.87**	**221**		*i* P	**Pn**	**01 37 03.8**	**-0.1**
KUZU					*i* S	**Sg**	**01 37 32.7**	**+0.4**
ANDN	**Andirin**	**1.89**	**252**		*i* P	**Pb**	**01 37 05.8**	**-0.8**
ANDN					*i* S	**Sg**	**01 37 34.4**	**+1.5**
ANDN	**Andirin**	**1.89**	**252**		*i* P	**Pb**	**01 37 05.8**	**-0.8**
ANDN					*i* S	**Sg**	**01 37 34.4**	**+1.5**
KBSD	**Kabsdagh**	**1.95**	**127**		*e*P	Pn	01 36 59.6	-5.4
KBSD					*e*S	**Sn**	**01 37 26.4**	**-3.0**
KBSD				AML	AML		01 37 35.9	
	comp=Z,151nm,0.4s							
SLMH	**Al Salmeh**	**2.05**	**195**		*e*P	**Pb**	**01 37 08.1**	**-1.2**
SLMH	**Al Salmeh**	**2.05**	**195**		*e*P	**Pb**	**01 37 08.1**	**-1.2**
	SNR=45							
DRWC	**Darouich**	**2.20**	**225**		*e*P	**Pn**	**01 37 08.3**	**-0.3**
DRWC				AML	AML		01 37 45.1	
	comp=N,34nm,0.3s							
DRWC				AML	AML		01 37 50.5	
	comp=E,86nm,0.4s							
DRWC	**Darouich**	**2.20**	**225**		*e*P	**Pn**	**01 37 08.3**	**-0.3**
	SNR=45							
BNN	**Bunyan**	**2.26**	**288**		*e*PN	**Pb**	**01 37 11.1**	**-1.8**
BNN	**Bunyan**	**2.26**	**288**		*e*Pn	**Pb**	**01 37 11.1**	**-1.8**
BTMT	**Batman**	**2.27**	**89**		*e*PN	**Pn**	**01 37 08.7**	**-0.8**
BTMT	**Batman**	**2.27**	**89**		*e*Pn	**Pn**	**01 37 08.7**	**-0.8**
KOZT	**Kozan**	**2.31**	**253**		*e*PN	**Pb**	**01 37 12.1**	**-1.7**
KOZT	**Kozan**	**2.31**	**253**		*e*Pn	**Pb**	**01 37 12.1**	**-1.7**
GUMT	**Gumushane**	**2.36**	**16**		*e*PN	**Pn**	**01 37 12.2**	**+1.4**
GUMT	**Gumushane**	**2.36**	**16**		*e*Pn	**Pn**	**01 37 12.2**	**+1.4**
RSDY	**Resadiye-TOKAT**	**2.41**	**336**		*e*PN	**Pn**	**01 37 13.1**	**+1.7**
RSDY	**Resadiye-TOKAT**	**2.41**	**336**		*e*Pn	**Pn**	**01 37 13.1**	**+1.7**
VRTB	**Varto-Mus**	**2.43**	**66**		*e*PN	**Pn**	**01 37 13.2**	**+1.4**
VRTB	**Varto-Mus**	**2.43**	**66**		*e*Pn	**Pn**	**01 37 13.2**	**+1.4**
BAYT	**Ayd¨–ntepe-Bay**	**2.50**	**28**		*e*PN	**Pn**	**01 37 14.3**	**+1.6**
BAYT	**Ayd¨–ntepe-Bay**	**2.50**	**28**		*e*Pn	**Pn**	**01 37 14.3**	**+1.6**
ESPY	**Espiye-Giresun**	**2.72**	**2**		*e*PN	**Pb**	**01 37 17.8**	**-2.9**
ESPY	**Espiye-Giresun**	**2.72**	**2**		*e*Pn	**Pb**	**01 37 17.8**	**-2.9**
EZM	**Erzurum**	**2.74**	**51**		*e*PN	**Pn**	**01 37 17.6**	**+1.4**
BTCH	**Batrach**	**2.75**	**219**		*e*P	**Pn**	**01 37 17.7**	**+1.6**
BTCH					*e*S	**Sg**	**01 37 58.0**	**-2.6**
BTCH				AML	AML		01 38 06.0	
	comp=N,118nm,0.4s							
BTCH				AML	AML		01 38 07.8	
	comp=E,86nm,0.4s							
BTCH	**Batrach**	**2.75**	**219**		*e*P	**Pn**	**01 37 17.7**	**+1.6**
	SNR=45							
HTY	**Hatay**	**2.86**	**224**		*e*PN	**Pn**	**01 37 18.8**	**+1.3**
HTY	**Hatay**	**2.86**	**224**		*e*Pn	**Pn**	**01 37 18.8**	**+1.3**
KRTS	**Karatas**	**3.04**	**239**		*e*PN	**Pn**	**01 37 22.0**	**+2.0**
KRTS	**Karatas**	**3.04**	**239**		*e*Pn	**Pn**	**01 37 22.0**	**+2.0**
ARNB	**Al Arnab**	**3.14**	**223**		*e*P	**Pn**	**01 37 22.9**	**+1.4**
ARNB					*e*S	**Sb**	**01 38 07.0**	**+0.8**
ARNB				AML	AML		01 38 19.5	
	comp=E,32nm,0.3s							
ARNB				AML	AML		01 38 20.2	
	comp=N,20nm,0.5s							
ARNB	**Al Arnab**	**3.14**	**223**		*e*P	**Pn**	**01 37 22.9**	**+1.4**
	SNR=45							
NIG	**Nigde**	**3.15**	**270**		*e*PN	**Pn**	**01 37 23.5**	**+1.8**
NIG	**Nigde**	**3.15**	**270**		*e*Pn	**Pn**	**01 37 23.5**	**+1.8**
KFRA	**Kufra**	**3.31**	**206**		*e*P	**Pn**	**01 37 24.9**	**+1.1**
KFRA					*e*S	**Sb**	**01 38 10.5**	**-0.6**
KFRA				AML	AML		01 38 20.9	
	comp=N,142nm,0.5s							
KFRA				AML	AML		01 38 27.8	
	comp=E,193nm,0.4s							
KFRA	**Kufra**	**3.31**	**206**		*e*P	**Pn**	**01 37 24.9**	**+1.1**
	SNR=45							
HAWK	**Haweek**	**4.07**	**206**		*e*P	**Pn**	**01 37 35.5**	**+1.2**
HAWK					*e*S	**Sb**	**01 38 29.2**	**-3.8**
HAWK				AML	AML		01 38 47.5	
	comp=N,22nm,0.7s							
HAWK				AML	AML		01 38 50.7	
	comp=E,12nm,0.7s							
HAWK	**Haweek**	**4.07**	**206**		*e*P	**Pn**	**01 37 35.5**	**+1.2**
	SNR=45							
BRBR	**Barbar**	**5.24**	**205**		*e*P	**Pn**	**01 37 52.9**	**+2.4**
BRBR					*e*S	Sn	01 38 57.2	+6.4
BRBR	**Barbar**	**5.24**	**205**		*e*P	**Pn**	**01 37 52.8**	**+2.4**
	SNR=45							
BRBR					*e*S	Sn	01 38 57.2	+6.4
	SNR=40							
BHD	**Baghdad**	**6.80**	**135**		*ex*	x	01 38 03.9	
BHD					*ex*	x	01 39 20.0	

IDC 10 01:46:14.4±2.1,**0.9°N**×**126.3°E**,**h0**km,**mb3.4**/3, **mb1 3.6**/3,**mb1mx3.3**/21,**mbtmp3.4**/3,**MS3.3**/1,**Ms1 3.3**/1, **ms1mx2.5**/21,**Error ellipse: s-maj=182.2km s-min=25.5km az=65.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**6.08**	**353**		LR	LR	01 50 16.3	
	comp=Z,284nm,19.2s,baz=302,slow=40							
WRA	**Warramunga Arr**	**22.25**	**160**		P	P	01 51 12.3	-0.8
	1.2nm,0.6s,baz=338,slow=11,SNR=48							
ASAR	**Alice Springs**	**25.60**	**164**		P	P	01 51 46.2	+0.6
	0.4nm,0.5s,baz=343,slow=11,SNR=7.7							
MKAR	**Makanchi Array**	**59.57**	**326**		P	P	01 56 19.8	-0.1
	0.4nm,0.5s,baz=119,slow=7.8,SNR=5.8							

IDC 10 01:58:51.7±9.0,**23.6°S**×**179.84°W**,**h522**km±83km, **mb3.5/6,mb1 3.6/7,mb1mx3.3/21,mbtmp3.5/7,Error ellipse: s-maj=78.7km s-min=22.5km az=44.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.77**	**189**		P	P	02 01 58.3	-0.7
	1.0nm,0.3s,baz=123,slow=15,SNR=6.2							
CTA	**Charters Tower**	**31.62**	**270**		P	P	02 04 32.5	+0.6
	6.7nm,0.3s,baz=97,slow=12,SNR=12							
STKA	**Stephens Creek**	**34.94**	**248**		P	P	02 04 59.9	+0.1
	1.5nm,0.3s,baz=149,slow=5.9,SNR=3.8							
ASAR	**Alice Springs**	**42.22**	**260**		P	P	02 05 58.5	-0.5
	2.5nm,0.5s,baz=97,slow=7.5,SNR=58							
WRA	**Warramunga Arr**	**42.57**	**266**		P	P	02 06 00.9	-0.9
	3.4nm,0.3s,baz=96,slow=8.5,SNR=37							
FITZ	**Fitzroy Crossi**	**50.99**	**265**		P	P	02 07 05.8	+0.4
	1.9nm,0.6s,baz=89,slow=5.5,SNR=8.1							
QSPA	**South Pole Qui**	**66.40**	**180**		P	P	02 08 48.9	+0.3
	3.0nm,1.0s,baz=174,slow=4.7,SNR=7.7							
AKASG	**Malin Array Be**	**144.87**	**328**		PKP	PKPdf	02 17 28.4	-0.5
	0.4nm,0.5s,baz=45,slow=1.6,SNR=4.2							
BRTR	**Keskin Array B**	**147.56**	**308**		PKPbc	PKPbc	02 17 36.6	-0.9
	0.3nm,0.7s,baz=91,slow=5.8,SNR=3.2							
TORD	**Torodi Ar. Bea**	**169.42**	**188**		PKPab	PKPab	02 19 15.5	-0.6
	1.0nm,1.2s,baz=184,slow=5.7,SNR=4.1							

*SZGRF **10** 02:30:00.0,42.3°N×143.8°E,h33km, mb4.5, Hokkaido, Japan, region*
*BJI **10** 02:30:05.7,42.3°N×142.6°E,h92km, mB4.9/3, mb4.7/18*
*ISCJB **10** 02:30:07.8±0.2,42.3°N±0.0°×142.3°E±0.0°,h99km±1km, mb4.4/115, Error ellipse: s-maj=4.1km s-min=3.0km az=157.4*
*MOS **10** 02:30:07.7±0.9,42.4°N×142.3°E,h97km, mb4.6/45, Error ellipse: s-maj=7.8km s-min=4.8km az=101.5*
*NEIC **10** 02:30:08.7±0.4,42.8°N×142.3°E,h91km±3km, mb4.5/58, Error ellipse: s-maj=5.0km s-min=3.0km az=163.0*
NEIC Recorded [2 JMA] in southern Hokkaido. Also recorded [1 JMA] in Aomori, Honshu.

*JMA **10** 02:30:08.3±0.1,42.2°N×142.2°E,h102km±2km,M4.2 Broadband fault plane solution: P waves. NP1: φ±53.00000°,δ83.00000°,λ146.00000°. NP2: φ±148.00000°,δ57.00000°,λ8.00000°. Principal axes: T Plg28.0000°, Azm5.0000°; N Plg56.0000°, Azm224.0000°; P Plg18.0000°, Azm105.0000°.*
JMA Felt II J1.
*IDC **10** 02:30:09.3±0.6,42.4°N×142.3°E,h97km±4km,mb4.1/33, mb1 4.2/36,mb1mx4.2/40,mbtmp4.1/36 Error ellipse: s-maj=9.8km s-min=7.2km az=113.0*
ISC 10 02:30:08.7±0.4,**42.4°N**±0.0°×**142.3°E**±0.0°,**h95**km±3km, **h94**km:**pP-P,n494,σ0.9s93/554,mb4.5**/123,**82C-59D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.31**	**116**		⇑P	**Pn**	**02 30 23.1**	**+0.4**
JNBK					*e*S	**Sn**	**02 30 33.8**	**+0.6**
JBT2	**Biratori 2**	**0.36**	**358**		⇓P	**Pn**	**02 30 23.2**	**+0.2**
JBT2					*e*S	**Sn**	**02 30 34.0**	**+0.3**
ERM	**Erimo**	**0.70**	**125**		*ce*PN	**Pn**	**02 30 25.7**	**0.0**
ERM					pmax	pmax		
	comp=Z,5μm,1.0s							
ERM	**Erimo**	**0.70**	**125**		*e*Pn	**Pn**	**02 30 26.0**	**+0.3**
ERM					*e*Sn	**Sn**	**02 30 38.0**	**-0.3**
JEM	**Erimo**	**0.70**	**125**		⇑P	**Pn**	**02 30 25.9**	**+0.2**
JEM					*e*S	**Sn**	**02 30 38.8**	**+0.5**
JCH	**Churui**	**0.75**	**75**		⇓P	**Pn**	**02 30 26.1**	**0.0**
JCH					*e*S	**Sn**	**02 30 39.1**	**-0.1**
JFR	**Furan**	**0.76**	**12**		⇓P	**Pn**	**02 30 26.3**	**0.0**
JFR					*e*S	**Sn**	**02 30 39.8**	**+0.4**
JEW	**Eniwo**	**0.81**	**302**		⇓P	**Pn**	**02 30 27.1**	**+0.4**
JEW					*e*S	**Sn**	**02 30 40.9**	**+0.8**
JNB	**Noboribetsu**	**0.99**	**273**		⇓P	**Pn**	**02 30 28.2**	**-0.4**
JNB					*e*S	**Sn**	**02 30 43.2**	**-0.4**
JAB	**Ashibetsu**	**1.09**	**354**		⇑P	**Pn**	**02 30 30.7**	**+0.9**
JAB					*e*S	**Sn**	**02 30 47.5**	**+1.9**
JKB	**Kayabe**	**1.13**	**243**		⇑P	**Pn**	**02 30 30.1**	**-0.1**
JKB					*e*S	**Sn**	**02 30 45.5**	**-0.9**
JOB	**Onbets**	**1.18**	**65**		⇓P	**Pn**	**02 30 31.2**	**+0.5**
JOB					*e*S	**Sn**	**02 30 47.6**	**+0.2**
JAR	**Ashorobuto**	**1.35**	**49**		⇑P	**Pn**	**02 30 32.6**	**-0.2**
JAR					*e*S	**Sn**	**02 30 50.5**	**-0.5**
JHR	**Hokuryu**	**1.41**	**340**		P	**Pn**	**02 30 34.4**	**+0.9**
JHR					*e*S	**Sn**	**02 30 54.4**	**+2.1**
JOT	**Ohata**	**1.44**	**224**		⇑P	**Pn**	**02 30 33.5**	**-0.4**
JOT					*e*S	**Sn**	**02 30 51.7**	**-1.2**
JKK2	**Kamakawa 2**	**1.48**	**10**		⇑P	**Pn**	**02 30 34.9**	**+0.5**
JKK2			

SONM Songino Array 25.80 295 P **P** **02 35 31.6 +0.7**
comp=Z,1.7nm,0.6s,baz=76,slow=8.3,SNR=15
ZAK Zakamensk 27.85 300 *e*P **P** **02 35 47.4 -1.8**
ZAK pmax pmax
comp=Z,1.0nm,1.0s
BILL Bilibino 28.67 19⇓ *i*P **P** **02 35 55.8 -0.4**
BILL *e* 02 36 49.2
BILL pmax pmax
comp=Z,4.0nm,1.3s
LZH Lanzhou 30.31 271 *e*P **P** **02 36 12.1 +0.9**
LZH pP **pP** **02 36 34.5 +1.9**
LZH sP **sP** **02 36 45.2 +1.6**
LZH pmax pmax
comp=Z,17nm,1.0s
GYA Guiyang 33.20 253 *e*P **P** **02 36 38.0 +1.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 36.80 255 P **P** **02 37 09.3 +1.6**
KMI pmax pmax
comp=Z,11nm,0.8s
ZAA0 Zalesovo Array 39.02 308 *e*P **P** **02 37 25.6 -0.2**
ZAA0 *e*PcP **PcP** **02 39 34.0 0.0**
ZALV Zalesovo Beam 39.02 308 P **P** **02 37 25.9 +0.2**
ZALV *PP **pP** **02 37 47.8 +0.1**
ZALV 02 39 34.3
ZALV Zalesovo Beam 39.02 308 P **P** **02 37 25.9 +0.2**
ZALV pP **pP** **02 37 47.8 +0.1**
ZALV PcP **PcP** **02 39 34.3 +0.3**
ZALV Zalesovo Beam 39.02 308 P **P** **02 37 25.9 +0.2**
comp=Z,16nm,0.6s,baz=88,slow=7.5,SNR=63
ZALV pP **pP** **02 37 47.8 +0.1**
comp=Z,3.5nm,0.7s,baz=78,slow=9.2,SNR=2.2
ZALV PcP **PcP** **02 39 34.3 +0.3**
comp=Z,2.3nm,0.5s,baz=106,slow=2.1,SNR=6.9
WMQ Urumqi 39.33 291 *e*P **P** **02 37 28.9 +0.4**
NVS Novosibirsk 39.83 309 *i*P **P** **02 37 31.7 -0.8**
MK31 Makanchi Array 42.10 297 *i*P **P** **02 37 51.4 +0.2**
MK31 pmax pmax
comp=Z,5.0nm,0.5s
MK31 Makanchi Array 42.10 297 *e*P **P** **02 37 51.1 0.0**
MK31 *e*PcP **PcP** **02 39 44.3 +0.2**
MKAR Makanchi Array 42.10 297 *e*P **P** **02 37 51.5 +0.3**
MKAR *PP **pP** **02 38 13.5 +0.1**
MKAR 02 39 44.5
MKAR Makanchi Array 42.10 297 *e*P **P** **02 37 51.5 +0.3**
MKAR pP **pP** **02 38 13.4 +0.1**
MKAR PcP **PcP** **02 39 44.5 +0.3**
MKAR Makanchi Array 42.10 297 P **P** **02 37 51.5 +0.3**
comp=Z,3.6nm,0.5s,baz=82,slow=9.9,SNR=61
MKAR pP **pP** **02 38 13.4 +0.1**
comp=Z,1.5nm,0.6s,baz=59,slow=14,SNR=3.6
MKAR PcP **PcP** **02 39 44.5 +0.3**
comp=Z,1.0nm,0.3s,baz=74,slow=5.0,SNR=11
PPLA Purkeypile 42.40 38 *e*P **P** **02 37 54.9 +1.3**
comp=Z,8.2nm,1.1s
SPU Mount Spurr 42.58 41 *e*P **P** **02 37 56.4 +1.4**
KDAK Kodiak Island 42.70 46 P **P** **02 37 55.6 -0.2**
KDAK PcP **PcP** **02 39 46.6 +0.8**
KDAK Kodiak Island 42.70 46 P **P** **02 37 55.6 -0.2**
comp=Z,3.0nm,0.3s,baz=258,slow=2.7,SNR=13
KDAK PcP **PcP** **02 39 46.6 +0.8**
comp=Z,2.3nm,0.3s,baz=191,slow=5.2,SNR=6.3
COLD Coldfoot 43.13 32 *e*P **P** **02 37 58.7 -0.6**
comp=Z,5.8nm,1.0s
TRF Thorofare Moun 43.23 37 *e*P **P** **02 38 00.0 -0.3**
comp=Z,4.4nm,0.8s
KURK Kurchatov 43.37 304 *ce*P **P** **02 38 01.6 +0.2**
KURK pmax pmax
comp=Z,15nm,0.7s
KURK Kurchatov 43.37 304 *e*P **P** **02 38 01.3 0.0**
comp=Z,14nm,0.7s
KURK *e*PcP **PcP** **02 39 47.6 -0.7**
KURBB Kurchatov Arra 43.45 304 P **P** **02 38 02.2 +0.2**
comp=Z,9.5nm,0.3s,baz=75,slow=8.9,SNR=124
KURBB pP **pP** **02 38 24.8 +0.5**
comp=Z,6.0nm,0.6s,baz=75,slow=8.8,SNR=3.9
MCK McKinley 43.81 37 *e*P **P** **02 38 03.8 -1.0**
MCK pmax pmax
comp=Z,6.0nm,0.8s
MCK McKinley 43.81 37 *e*P **P** **02 38 03.8 -1.0**
comp=Z,6.1nm,0.8s
PMR Palmer 43.94 40 *e*P **P** **02 38 05.7 0.0**
PMR pmax pmax
comp=Z,4.0nm,0.7s
PMR Palmer 43.94 40 *e*P **P** **02 38 05.7 0.0**
comp=Z,4.3nm,0.7s
COLA College 44.19 35 *e*P **P** **02 38 07.5 -0.2**
COLA pmax pmax
comp=Z,10.0nm,0.8s
COLA College 44.19 35 *e*P **P** **02 38 07.5 -0.2**
comp=Z,10.0nm,0.8s
ILAR Eielson Array 44.61 35 P **P** **02 38 10.4 -0.6**
ILAR PcP **PcP** **02 39 51.2 -1.0**
ILAR Eielson Array 44.61 35 P **P** **02 38 10.4 -0.6**
comp=Z,4.6nm,0.5s,baz=258,slow=5.1,SNR=86
ILAR PcP **PcP** **02 39 51.2 -1.0**
comp=Z,0.5nm,0.5s,baz=276,slow=3.1,SNR=4.1
DIV Divide 45.61 40 *e*P **P** **02 38 19.2 +0.1**
DOT Dot Lake 45.98 37 *e*P **P** **02 38 21.5 -0.4**
comp=Z,13nm,0.6s
MENT Mentasta 46.25 37 *e*P **P** **02 38 24.7 +0.7**
RAGM Ragged Mountai 46.28 41 *e*P **P** **02 38 25.4 +1.0**
comp=Z,37nm,2.0s
TAPN Taplejung 46.53 269 *e*P **P** **02 38 28.2 +1.1**
comp=Z,6.7nm,0.5s
ODAN Odare 47.03 269 *e*P **P** **02 38 32.5 +1.5**
EGAK Eagle 47.04 35 *e*P **P** **02 38 29.8 -0.4**
comp=Z,6.5nm,0.8s
RAMN Ramite 47.57 270 *e*P **P** **02 38 35.8 +0.7**
GUN Gumba 47.57 271 *e*P **P** **02 38 36.0 +0.7**
comp=Z,26nm,0.3s
BVA0 Borovoye Array 47.63 309 *i*P **P** **02 38 35.2 +0.2**
BVA0 pmax pmax
comp=Z,1.0nm,0.4s
BRVK Borovoye 47.68 309⇓ *i*P **P** **02 38 36.3 +1.0**
BRVK pmax pmax
comp=Z,4.0nm,0.7s
BRVK Borovoye 47.68 309 *e*P **P** **02 38 36.1 +0.8**
comp=Z,13nm,1.3s
TKM2 Tokmak 2 47.90 295 *e*P **P** **02 38 38.2 +0.8**
TKM2 pmax pmax
comp=Z,13nm,0.5s
TKM2 Tokmak 2 47.90 295 *e*P **P** **02 38 38.2 +0.8**
comp=Z,12nm,0.5s
TKM2 Tokmak 2 47.90 295 P **P** **02 38 38.2 +0.8**
SNR=19
KKN Kakani 48.08 272 *e*P **P** **02 38 40.4 +1.4**
comp=Z,8.7nm,0.4s
PKI Pulchoki 48.11 271 *e*P **P** **02 38 40.2 +0.8**
comp=Z,4.8nm,0.3s
PKIN Phulchoki 48.12 271 *e*P **P** **02 38 40.8 +1.5**
comp=Z,4.4nm,0.3s
KBK Karagaybulak 48.44 294 *i*P **P** **02 38 42.4 +0.8**
KBK Karagaybulak 48.44 294 P **P** **02 38 42.4 +0.8**
SNR=12
ZRNK Zerenda 48.45 309 P **P** **02 38 41.4 +0.1**
ZRNK pmax pmax
comp=Z,9.0nm,0.8s
KZA Kyzart 48.47 294 *i*P **P** **02 38 43.5 +1.4**
KZA Kyzart 48.47 294 P **P** **02 38 43.5 +1.4**
SNR=7.5
USP Ospenovka 48.50 295 *i*P **P** **02 38 42.3 +0.5**
USP Ospenovka 48.50 295 P **P** **02 38 42.3 +0.5**
SNR=5.6
AAK Ala-Archa 48.76 295 *i*P **P** **02 38 44.2 +0.2**
AAK Ala-Archa 48.76 295 *e*P **P** **02 38 43.9 -0.1**
comp=Z,4.6nm,0.4s
AAK Ala-Archa 48.76 295 P **P** **02 38 44.4 +0.4**
SNR=6.1
DANN Dangsing 48.90 273 *e*P **P** **02 38 46.5 +1.1**
comp=Z,32nm,0.6s
KSH Kashi 49.07 290 *e*P P 02 38 56.5 +10
KSH *es*P sP 02 39 30.1 +10
KSH *e*PcP PcP 02 40 14.2 +5.5
KSH *e*ScP **ScP** **02 43 59.7 +4.7**
KSH *e*PcS **PcS** **02 44 10.0 +4.8**
KSH *e*S S 02 45 59.2 +15
KSH *e*ScS **ScS** **02 48 34.1 +5.0**
KSH pmax pmax
comp=Z,4.0nm,0.5s
KSH pmax pmax
comp=Z,200nm,4.7s
KSH LR LR
comp=N,260nm,4.2s
KSH LR LR
comp=E,260nm,6.0s
KSH LR LR
comp=Z,200nm,7.9s
EKS2 Erkin-Say 49.23 295 *e*P **P** **02 38 48.0 +0.5**
EKS2 pmax pmax
comp=Z,5.0nm,0.6s
EKS2 Erkin-Say 49.23 295 *e*P **P** **02 38 48.0 +0.5**
comp=Z,4.7nm,0.6s
EKS2 Erkin-Say 49.23 295 P **P** **02 38 48.0 +0.5**
SNR=7.8
INK Inuvik 49.29 29 P **P** **02 38 47.2 -0.2**
INK Inuvik 49.29 29 P **P** **02 38 47.2 -0.2**
comp=Z,7.6nm,0.4s,baz=305,slow=7.9,SNR=75
KOLN Koldanda 49.34 273 *e*P **P** **02 38 48.9 +0.3**
comp=Z,8.0nm,0.4s
AML Almayashu 49.50 294 *i*P **P** **02 38 50.8 +0.9**
AML Almayashu 49.50 294 P **P** **02 38 50.8 +0.9**
SNR=5.2
PYUN Piuthan 49.61 273 *e*P **P** **02 38 50.8 +0.1**
comp=Z,22nm,0.7s
KK31 Karatay Array 51.22 297 *i*P **P** **02 39 02.3 -0.1**
KK31 pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 51.22 297 *e*P **P** **02 39 02.4 0.0**
KKAR pmax pmax
comp=Z,3.0nm,0.6s
KKAR Karatay Array 51.22 297 *e*P **P** **02 39 02.4 0.0**
comp=Z,2.8nm,0.6s
SVE Sverdlovsk 51.69 316⇓ *e*P **P** **02 39 06.3 +0.6**
SVE pmax pmax
comp=Z,12nm,0.6s
ARU Arti 52.91 316 *ce*P **P** **02 39 14.5 -0.2**
ARU *PP **pP** **02 39 38.1 +0.4**
ARU 02 41 11.5
ARU S **S** **02 46 38.6 +2.4**
ARU SS SS 02 50 07.3 -8.4
ARU pmax pmax
comp=Z,13nm,1.2s
DLBC Dease Lake 53.99 41 P **P** **02 39 24.1 +1.5**
DLBC Dease Lake 53.99 41 P **P** **02 39 24.1 +1.5**
comp=Z,1.7nm,0.4s,baz=256,slow=8.3,SNR=6.7
AB31 Akbulak array 55.14 308 P **P** **02 39 31.0 0.0**
AB31 pmax pmax
comp=Z,3.0nm,0.3s
ABKAR Akbulak array 55.14 308 *e*P **P** **02 39 31.3 +0.3**
comp=Z,3.3nm,0.4s
RES Resolute Bay 57.21 15 *e*P **P** **02 39 44.4 -1.0**
comp=Z,9.0nm,0.6s
RES Resolute Bay 57.21 15 P **P** **02 39 44.6 -0.7**
comp=Z,7.5nm,0.4s,baz=310,slow=6.1,SNR=77
YKW3 Yellowknife Ar 58.77 32 *e*P **P** **02 39 55.9 -0.5**
comp=Z,0.1nm,0.6s
YKA Yellowknife Ar 58.81 32 P **P** **02 39 56.5 -0.2**
YKA Yellowknife Ar 58.81 32 P **P** **02 39 56.5 -0.2**
comp=Z,2.9nm,0.8s,baz=306,slow=6.5,SNR=54
ARCES ARCESS Array B 59.24 339 P **P** **02 39 59.2 -0.3**
ARCES ARCESS Array B 59.24 339 P **P** **02 39 59.2 -0.3**
comp=Z,3.1nm,0.7s,baz=81,slow=8.0,SNR=22
DAG Danmarks Havn 60.48 355 *i*P **P** **02 40 06.8 -1.1**
DAG pmax pmax
comp=Z,4.0nm,0.8s
DAG Danmarks Havn 60.48 355 *i*P **P** **02 40 06.8 -1.1**
comp=Z,4.7nm,0.8s
JOF Joensuu 61.59 331 *e*P **P** **02 40 14.6 -1.0**
JOF pmax pmax
comp=Z,5.0nm,0.3s
JOF Joensuu 61.59 331 *ep* **P** **02 40 14.6 -1.0**
comp=Z,4.8nm,0.3s
WRA Warramunga Arr 62.49 189 P **P** **02 40 22.4 +0.3**
WRA pP **pP** **02 40 46.2 +0.4**
WRA Warramunga Arr 62.49 189 P **P** **02 40 22.4 +0.3**
comp=Z,0.4nm,0.4s,baz=6.9,slow=6.9,SNR=7.2
WRA pP **pP** **02 40 46.2 +0.4**
comp=Z,5.8nm,0.9s,baz=3.0,slow=6.9,SNR=18
KAF Kangasniemi 63.89 332 *e*P **P** **02 40 29.5 -1.4**
KAF pmax pmax
comp=Z,5.0nm,0.5s
KAF Kangasniemi 63.89 332 *ep* **P** **02 40 29.5 -1.4**
comp=Z,4.5nm,0.5s
OBN Obninsk 64.27 322 *e*P **P** **02 40 30.6 -2.8**
OBN *e* 02 41 04.6
OBN pmax pmax
comp=Z,6.0nm,1.0s
FINES FINESS Array B 64.42 331 P **P** **02 40 33.8 -0.6**
FINES FINESS Array B 64.42 331 P **P** **02 40 33.8 -0.6**
comp=Z,13nm,0.5s,baz=46,slow=7.7,SNR=127
SUMG Summit 65.31 0 *i*P **P** **02 40 40.7 +0.3**
SUMG pmax pmax
comp=Z,7.0nm,0.7s
SUMG Summit 65.31 0 *e*P **P** **02 40 40.7 +0.3**
comp=Z,9.2nm,0.7s
SUMG Summit 65.31 0 *i*P **P** **02 40 40.7 +0.3**
comp=Z,7.4nm,0.7s
VSR Storozhevoye 65.41 318 *e*P **P** **02 40 40.3 -0.7**
VSR pmax pmax
comp=Z,7.0nm,0.5s
VSR pmax pmax
comp=E,1.0nm,0.5s
VSR MLR MLR
comp=N,220nm,17.0s
VSR MLR MLR
comp=E,230nm,17.0s
VSR MLR MLR
comp=Z,400nm,17.0s
NEW Newport 65.80 46 *e*P **P** **02 40 43.9 +0.2**
comp=Z,3.1nm,0.8s
NEW Newport 65.80 46 P **P** **02 40 44.3 +0.7**
comp=Z,2.8nm,0.8s,baz=316,slow=2.3,SNR=5.2
NEW Newport 65.80 46⇑ P **P** **02 40 44.0 +0.3**
baz=66
ASAR Alice Springs 66.22 188 P **P** **02 40 46.9 +0.5**
ASAR pP **pP** **02 41 12.2 +1.9**
ASAR Alice Springs 66.22 188 P **P** **02 40 46.9 +0.5**
comp=Z,0.3nm,0.8s,baz=16,slow=6.9,SNR=4.0
ASAR pP **pP** **02 41 12.2 +1.9**
comp=Z,3.3nm,0.8s,baz=6.9,slow=5.7,SNR=19
C11A Tepee Creek (N 66.52 46⇓ P **P** **02 40 48.5 +0.2**
baz=66
SCO Scoresbysund 66.84 354 *i*P **P** **02 40 51.9 +2.2**
SCO pmax pmax
comp=Z,4.0nm,1.0s
SCO Scoresbysund 66.84 354 *i*P **P** **02 40 51.9 +2.2**
comp=Z,3.5nm,1.0s
B13A Whitefish 67.14 45⇑ P **P** **02 40 52.8 +0.7**
baz=67,SNR=5.8
A14A Double T Ranch 67.30 44⇑ P **P** **02 40 53.2 -0.1**
baz=67
C13A Hot Springs 67.52 45⇑ P **P** **02 40 54.7 +0.2**
baz=67
JTMT Jette 67.63 45 *e*P **P** **02 40 56.4 +1.0**
A15A Johnson Ranch, 67.65 44⇑ P **P** **02 40 55.4 0.0**
baz=67
C14A Swan Lake 67.89 45⇓ P **P** **02 40 57.0 0.0**
baz=68
SWMT Swartz Lake 67.92 45 *e*P **P** **02 40 58.1 +0.9**
D13A Huson 67.94 46⇑ P **P** **02 40 57.1 -0.2**
baz=68,SNR=7.3
KIV Kislovodsk 67.99 310 *e*P **P** **02 40 59.0 +1.4**
KIV *i* 02 41 23.8
KIV pmax pmax
comp=Z,11nm,1.0s
ZEI Tsey 68.01 308 *e*P **P** **02 40 56.6 -1.3**
ZEI pmax pmax
comp=Z,8.0nm,1.5s
KBZ Khabaz 68.01 310 P **P** **02 40 58.7 +1.1**
KBZ Khabaz 68.01 310 P **P** **02 40 58.6 +1.1**
KBZ Khabaz 68.01 310 P **P** **02 40 58.6 +1.1**
comp=Z,3.0nm,0.7s,baz=13,slow=5.6,SNR=7.6
B15A Bradely Ranch, 68.16 44 P **P** **02 40 58.9 +0.3**
baz=68,SNR=8.1
A16A West Butte Ran 68.25 43⇑ P **P** **02 40 59.2 0.0**
baz=68
F12A Elk City 68.36 47 P **P** **02 41 00.5 +0.6**
baz=68,SNR=5.1
SLMT Seeley Lake 68.36 45 *e*P **P** **02 41 00.6 +0.6**
MSO Missoula 68.39 46 P **P** **02 41 00.6 +0.5**
baz=68
D14A Greenough 68.45 45 P **P** **02 41 00.7 +0.2**
baz=68,SNR=7.7
C15A Salmond Ranch, 68.48 44⇓ P **P** **02 41 01.6 +0.9**
baz=68,SNR=5.1
B16A M & M Farms, S 68.54 44⇓ P **P** **02 41 01.2 +0.2**
baz=68,SNR=9.8
A17A Triple J Farms 68.70 43 P **P** **02 41 01.9 0.0**
baz=68,SNR=8.9
F13A Darby 68.83 47⇑ P **P** **02 41 02.5 -0.4**
baz=69
E14A Clinton 68.89 46 P **P** **02 41 03.6 +0.3**
baz=69
C16A Fuhringer Ranc 68.91 44 P **P** **02 41 03.9 +0.6**
baz=69,SNR=9.6
A18A Metzger Ranch, 69.14 42⇑ P **P** **02 41 04.7 0.0**
baz=69
G13A Cobalt 69.33 47⇓ P **P** **02 41 06.0 -0.1**
baz=69
E15A Deer Lodge 69.33 46⇑ P **P** **02 41 06.2 +0.3**
baz=69
H12A Diamond D Ranc 69.34 48⇓ P **P** **02 41 06.4 +0.3**
baz=69,SNR=7.9
HFS Hagfors 69.50 335 P **P** **02 41 06.4 -0.2**
HFS Hagfors 69.50 335 P **P** **02 41 06.4 -0.2**
comp=Z,13nm,0.5s,baz=48,slow=6.7,SNR=12
D16A Dana Ranch, Ca 69.51 45⇑ P **P** **02 41 07.5 +0.4**
baz=69
NB2 NORSAR Subarra 69.52 337 P **P** **02 41 06.3 -0.4**
comp=Z,7.9nm,0.7s,baz=35,slow=6.5
NOA NORSAR Array B 69.52 337 P **P** **02 41 06.3 -0.4**
NOA NORSAR Array B 69.52 337 P **P** **02 41 06.3 -0.4**
comp=Z,6.3nm,0.6s,baz=37,slow=6.2,SNR=22
B18A Beardsley Farm 69.52 43⇑ P **P** **02 41 07.3 +0.2**
baz=69
C17A Wharram Farm, 69.53 44⇑ P **P** **02 41 07.1 0.0**
baz=69
H13A Challis 69.66 48⇓ P **P** **02 41 08.6 +0.6**
baz=69
I12A Atlanta 69.66 49⇓ P **P** **02 41 08.6 +0.5**
baz=69,SNR=7.1
A19A Klindworth Far 69.69 42⇑ P **P** **02 41 08.5 +0.5**
baz=69,SNR=5.1
E16A East Helena 69.77 45⇑ P **P** **02 41 08.9 +0.2**
baz=70
NAO01 NORSAR Array S 69.77 337 *e*P **P** **02 41 07.7 -0.6**
comp=Z,3.0nm,0.5s
EGMT Eagleton 69.78 43 *e*P **P** **02 41 09.4 +0.7**
comp=Z,7.4nm,0.8s
EGMT Eagleton 69.78 43⇓ P **P** **02 41 08.7 +0.1**
baz=70,SNR=5.0
F15A Butte 69.79 46⇓ P **P** **02 41 09.3 +0.4**
baz=70
LRM Limekiln Ridge 69.82 46 *e*P **P** **02 41 09.9 +0.8**
D17A Six Diamond Ra 69.88 44⇑ P **P** **02 41 09.4 0.0**
baz=70
B19A Brinkman Farms 69.90 42⇓ P **P** **02 41 09.4 +0.1**
baz=70
DLMT Dillon 70.04 46 *e*P **P** **02 41 10.7 +0.3**
comp=Z,4.6nm,0.6s
I13A Wildhorse Cree 70.15 48⇑ P **P** **02 41 11.8 +0.7**
baz=70,SNR=5.8
HLID Hailey 70.21 49 *e*P **P** **02 41 12.1 +0.6**
comp=Z,2.0nm,0.9s
HLID Hailey 70.21 49⇓ P **P** **02 41 12.3 +0.8**
baz=70
G15A Dillon 70.23 47⇑ P **P** **02 41 12.3 +0.7**
baz=70,SNR=13
E17A Martinsdale 70.24 45⇑ P **P** **02 41 12.4 +0.8**
baz=70
F16A Kennard Place, 70.29 46⇑ P **P** **02 41 12.4 +0.6**
baz=70
D18A Linhart Farms, 70.30 44⇓ P **P** **02 41 12.7 +0.8**
baz=70
BOZ Bozeman (W) 70.37 46 *e*P **P** **02 41 12.6 +0.2**
BOZ pmax pmax
comp=Z,4.0nm,0.6s
BOZ Bozeman (W) 70.37 46 *e*P **P** **02 41 12.6 +0.2**
comp=Z,3.7nm,0.6s
J13A Cove Ranch, Pi 70.45 49⇑ P **P** **02 41 14.0 +1.1**
baz=70
AKASG Malin Array Be 70.52 322 P **P** **02 41 12.5 -0.4**
AKASG Malin Array Be 70.52 322 P **P** **02 41 12.5 -0.4**
AKASG Malin Array Be 70.52 322 P **P** **02 41 12.5 -0.4**
comp=Z,1.5nm,0.3s,baz=43,slow=6.7,SNR=151
AK01 Malin Array Si 70.53 322 *e*P **P** **02 41 12.2 -0.8**
KIEV Kiev 70.53 322 *e*P **P** **02 41 12.5 -0.5**
KIEV pmax pmax
comp=Z,6.0nm,1.0s
KIEV Kiev 70.53 322 *e*P **P** **02 41 12.5 -0.5**
comp=Z,5.7nm,1.0s
G16A Moss Hill, Enn 70.56 46⇑ P **P** **02 41 13.0 -0.5**
baz=70
AK02 Malin Array Si 70.56 322 *e*P **P** **02 41 12.5 -0.7**
E18A Harlowton 70.67 44⇓ P **P** **02 41 15.0 +0.9**
baz=70
F17A Fitzpatrick Pl 70.72 45⇓ P **P** **02 41 15.0 +0.5**
baz=70
D19A Cripps Ranch, 70.79 43⇑ P **P** **02 41 15.9 +1.1**
baz=70
C20A Veseth Ranch, 70.86 42⇓ P **P** **02 41 15.8 +0.6**
baz=71,SNR=7.8
J14A Carey 70.86 49⇓ P **P** **02 41 16.1 +0.7**
baz=71,SNR=5.4
A22A Carney Farms, 71.02 40⇑ P **P** **02 41 16.5 +0.4**
baz=71
G17A Pierce Place, 71.06 46⇑ P **P** **02 41 16.7 +0.2**
baz=71
H16A Russell Place, 71.20 46⇑ P **P** **02 41 17.8 +0.3**
baz=71
F18A Big Timber 71.21 45⇓ P **P** **02 41 17.5 +0.1**
baz=71
D20A Manuel Ranch, 71.22 43⇓ P **P** **02 41 17.9 +0.5**
baz=71
NVAR Mina Array Bea 71.22 55 P **P** **02 41 17.8 0.0**
NVAR Mina Array Bea 71.22 55 P **P** **02 41 17.8 0.0**
comp=Z,2.1nm,0.7s,baz=296,slow=6.6,SNR=12
E19A Rath Farm, Rou 71.31 44 P **P** **02 41 19.0 +1.0**
baz=71,SNR=5.4
F19A Roth Farm, Mol 71.64 44⇓ P **P** **02 41 20.7 +0.7**
baz=71
D21A La Casta Ranch 71.81 42 P **P** **02 41 21.3 +0.4**
baz=72
B23A Brockton 71.82 40⇑ P **P** **02 41 20.9 -0.1**
baz=72
J16A Bone 71.95 48⇓ P **P** **02 41 22.6 +0.6**
baz=72
RCTC Rector, Farmer 72.00 57⇓ P **P** **02 41 22.9 +0.7**
baz=72
H18A Shoshone NF, C 72.06 46⇓ P **P** **02 41 22.4 -0.3**
baz=72
MOOW Moose Ponds 72.10 47 *e*P **P** **02 41 24.4 +1.4**
comp=Z,2.0nm,0.8s
D22A Cohagen 72.16 42⇓ P **P** **02 41 22.8 -0.2**
baz=72
TPAW Teton Pass 72.16 47 *e*P **P** **02 41 24.2 +0.8**
comp=Z,1.6nm,0.4s
GRAC Grapevine Rang 72.71 56⇑ P **P** **02 41 27.0 +0.6**
baz=72
R11A Troy Canyon, C 72.91 54 P **P** **02 41 28.0 +0.2**
baz=73
G21A Lodge Grass 72.96 44 P **P** **02 41 28.0 +0.1**
baz=73
HWUT Hardware Ranch 73.08 49 *e*P **P** **02 41 29.6 +0.8**
comp=Z,3.1nm,0.9s
MPMC Manual Prospec 73.24 56 P **P** **02 41 30.1 +0.3**
baz=73
DUG Dugway 73.32 51 *e*P **P** **02 41 30.4 +0.3**
DUG pmax pmax
comp=Z,4.0nm,0.6s
DUG Dugway 73.32 51 *e*P **P** **02 41 30.4 +0.3**
comp=Z,3.8nm,0.6s
DUG Dugway 73.32 51⇑ P **P** **02 41 30.4 +0.3**
baz=73,SNR=5.2
J19A Crowheart 73.34 46 P **P** **02 41 30.5 +0.3**
baz=73
FURC Furnace Creek, 73.36 56⇓ P **P** **02 41 30.7 +0.5**
baz=73
BW06 Boulder Array 73.40 47 *e*P **P** **02 41 30.5 -0.2**
comp=Z,3.1nm,0.6s
PDAR Pinedale Array 73.40 47 P **P** **02 41 30.9 +0.2**
PDAR Pinedale Array 73.40 47 P **P** **02 41 30.9 +0.2**
comp=Z,3.2nm,0.6s,baz=231,slow=0.8,SNR=22
H21A Big Horn, Sher 73.46 44⇑ P **P** **02 41 30.8 0.0**
baz=73
E24A Baker 73.49 41 P **P** **02 41 30.8 -0.1**
baz=73
F23A Volborg 73.53 43 P **P** **02 41 31.1 -0.1**
baz=73
L18A Fontenelle, Gr 73.71 48 P **P** **02 41 32.6 +0.1**
baz=73
K19A Absolon Red Bu 73.75 47 P **P** **02 41 32.5 -0.1**
baz=74
J20A Shoshoni 73.79 46 P **P** **02 41 33.1 +0.3**
baz=74
I21A Big Trails, Te 73.89 45 P **P** **02 41 34.3 +0.9**
baz=74,SNR=7.0
J21A Lysite 74.14 45⇓ P **P** **02 41 34.9 0.0**

	baz=74										
KWP	Kalwaria Pacla	74.20	324	⇓	*i*	P		P	02 41 35.2	+0.3	
I22A	9 Mile Ranch,	74.26	44		P			P	02 41 35.8	+0.3	
	baz=74										
BUR08	Bucovina Ar. S	74.55	321		*eP*			P	02 41 36.9	-0.2	
BURAR	Bucovina Array	74.56	321	⇓	*i*	P		P	02 41 36.6	-0.6	
J22A	Midwest	74.60	45		P			P	02 41 37.5	0.0	
	baz=74,SNR=5.7										
H24A	Dirks Ranch, A	74.65	43	⇓		P		P	02 41 37.5	-0.2	
	baz=74										
TESR	Tescani	74.69	320	⇑	*i*	P		P	02 41 37.9	+0.1	
K21A	Alcova	74.73	46		P			P	02 41 38.6	+0.2	
	baz=74										
CFR	Carcaliu	74.93	318	⇓	*i*	P		P	02 41 39.3	+0.2	
P17A	Butcher Ranch,	74.98	50		P			P	02 41 40.7	+0.9	
	baz=75										
OJC	Ojcow	75.00	326		*eP*			P	02 41 40.1	+0.6	
OJC	Ojcow	75.00	326		*eP*			P	02 41 39.2	-0.3	
	comp=Z,5.3nm,0.7s										
OJC	Ojcow	75.00	326		*eP*			P	02 41 40.1	+0.6	
VRI	Vrincioaia	75.12	319	⇑	*i*	P		P	02 41 42.8	+2.5	
P18A	Preston Nutter	75.16	50	⇓		P		P	02 41 41.5	+0.5	
	baz=75,SNR=5.2										
TIRR	Tirgusor	75.30	317	⇓	*i*	P		P	02 41 41.3	0.0	
O19A	Miners Draw (B	75.33	49	⇓		P		P	02 41 41.6	-0.2	
	baz=75										
M21A	Separation Pea	75.39	47	⇑		P		P	02 41 42.3	+0.1	
	baz=75										
TRPA	Tarpa	75.40	323	⇓	*i*	P		P	02 41 41.3	-0.5	
N20A	Spence Gulch,	75.43	48	⇓		P		P	02 41 42.8	+0.3	
	baz=75										
PFO	Pinyon Flat Ob	75.49	58	⇓		P		P	02 41 42.6	-0.2	
	baz=75										
MLR	Muntele Rosu	75.77	319		P			P	02 41 44.1	0.0	
MLR	Muntele Rosu	75.77	319	⇓	*i*	P		P	02 41 44.2	0.0	
MLR	Muntele Rosu	75.77	319		P			P	02 41 44.1	0.0	
	comp=Z,0.1nm,0.3s,baz=85,slow=3.6,SNR=4.4										
BR131	Keskin Array S	75.86	311		*eP*			P	02 41 44.8	0.0	
	comp=Z,0.6nm,0.6s										
BRTR	Keskin Array B	75.86	311		P			P	02 41 45.0	+0.3	
BRTR	Keskin Array B	75.86	311		P			P	02 41 45.0	+0.3	
	comp=Z,1.0nm,0.6s,baz=90,slow=3.6,SNR=8.4										
P19A	Cripple Cowboy	75.86	49		P			P	02 41 45.4	+0.5	
	baz=76,SNR=8.7										
N21A	Black Mountain	75.89	47	⇓		P		P	02 41 45.6	+0.5	
	baz=76										
MORC	Moravsky Berou	76.26	327		*eP*			P	02 41 46.4	-0.4	
MORC						pmax	pmax				
	comp=Z,3.0nm,0.9s										
MORC	Moravsky Berou	76.26	327		*eP*			P	02 41 46.4	-0.4	
	comp=Z,3.5nm,0.9s										
MORC	Moravsky Berou	76.26	327	⇑	*i*	P		P	02 41 47.4	+0.6	
P20A	De Beque	76.29	49		P			P	02 41 47.5	+0.2	
	baz=76										
ARR	Arges	76.49	320	⇑	*i*	P		P	02 41 49.7	+1.5	
S18A	Hurst Farm, Bl	76.63	51		P			P	02 41 49.6	+0.3	
	baz=76,SNR=6.5										
PSZ	Piszkesteto	76.72	324		*eP*			P	02 41 50.0	+0.6	
PSZ						pmax	pmax				
	comp=Z,2.0nm,0.6s										
PSZ	Piszkesteto	76.72	324		*eP*			P	02 41 50.0	+0.6	
	comp=Z,1.7nm,0.6s										
PV04	Paradox Valley	76.76	50		*eP*			P	02 41 51.5	+1.5	
P21A	Newcastle	76.79	48	⇓		P		P	02 41 50.6	+0.5	
	baz=76,SNR=5.3										
CLL	Collm	76.80	330	⇑	*i*	P		P	02 41 49.5	-0.2	
CLL					*i*				02 41 54.4		
CLL						pmax	pmax				
	comp=Z,4.0nm,0.7s										
CLL	Collm	76.80	330	⇑	*i*	P		P	02 41 49.5	-0.2	
	comp=Z,4.0nm,0.7s										
CLL					*i*				02 41 54.4		
O22A	Kremmling	76.84	47	⇑		P		P	02 41 50.8	+0.2	
	baz=77										
VRAC	Vranov	77.01	327		P			P	02 41 51.7	+0.7	
VRAC	Vranov	77.01	327		P			P	02 41 51.7	+0.7	
	comp=Z,1.9nm,0.7s,baz=39,slow=6.6,SNR=4.7										
P22A	Eagle	77.12	48	⇓		P		P	02 41 52.4	+0.3	
	baz=77,SNR=5.1										
PV01	Paradox Valley	77.13	50		*eP*			P	02 41 52.5	+0.4	
	comp=Z,206nm,0.6s										
R20A	Redvale	77.20	50		P			P	02 41 53.1	+0.6	
	baz=77										
Q21A	Lamborn Mesa,	77.20	49		P			P	02 41 53.1	+0.7	
	baz=77										
SMCO	Snowmass	77.30	48		*eP*			P	02 41 53.9	+0.7	
	comp=Z,3.3nm,0.6s										
Y14A	Wickenburg	77.40	56		P			P	02 41 54.2	+0.7	
	baz=77										
ISCO	Idaho Springs	77.60	47		*eP*			P	02 41 55.9	+1.1	
ISCO						pmax	pmax				
	comp=Z,34nm,2.5s										
ISCO	Idaho Springs	77.60	47		*eP*			P	02 41 55.9	+1.1	
	comp=Z,34nm,2.5s										
ISCO	Idaho Springs	77.60	47	⇑		P		P	02 41 54.9	+0.1	
	baz=77										
BZS	Buzias	77.71	322	⇓	*i*	P		P	02 41 54.9	0.0	
EKA	Eskdalemuir Ar	78.31	341		P			P	02 41 58.1	+0.1	
EKA	Eskdalemuir Ar	78.31	341		P			P	02 41 58.1	+0.1	
	comp=Z,1.2nm,0.5s,baz=27,slow=5.2,SNR=10										
KHC	Kasperske Hory	78.35	328		*eP*			P	02 41 59.0	+0.6	
KHC	Kasperske Hory	78.35	328		*eP*			P	02 41 58.3	-0.1	
	comp=Z,2.7nm,0.8s										
KHC	Kasperske Hory	78.35	328		*eP*			P	02 41 59.0	+0.6	
KHC					*ePP*			PP	02 44 51.0	-4.9	
S22A	4UR Ranch, Cre	78.39	49	⇓		P		P	02 41 59.7	+0.5	
	baz=78										
GERES	GERESS Array B	78.53	328		P			P	02 41 59.7	+0.2	
GERES	GERESS Array B	78.53	328		P			P	02 41 59.7	+0.2	
	comp=Z,0.4nm,0.4s,baz=43,slow=5.9,SNR=8.6										
R23A	Moffat	78.63	48		P			P	02 42 01.3	+0.8	
	baz=78										
GRF	Grafenberg Arr	78.78	330		*eP*			P	02 42 01.2	+0.4	
GRF						pmax	pmax				
	comp=Z,5.0nm,1.0s										
GRF	Grafenberg Arr	78.78	330		*eP*			P	02 42 01.2	+0.4	
	comp=Z,5.0nm,1.0s										
T22A	Edith	78.86	50	⇓		P		P	02 42 02.4	+0.7	
	baz=79										
P26A	Davis Ranch, A	78.99	46	⇑		P		P	02 42 02.6	+0.3	
	baz=79										
R24A	Sanders Place,	79.00	48		P			P	02 42 03.0	+0.6	
	baz=79										
SDCO	Great Sand Dun	79.13	48		*eP*			P	02 42 03.7	+0.5	
	comp=Z,3.0nm,1.4s										
VTS	Vitosha	79.24	319	⇑	*i*	P		P	02 42 04.0	+0.4	
ECSD	EROS Data Cent	79.25	39		*eP*			P	02 42 03.1	-0.4	
	comp=Z,5.5nm,0.8s										
W20A	Ramah	79.27	52		P			P	02 42 04.6	+0.6	
	baz=79										
S24A	Houchin Ranch,	79.36	48		P			P	02 42 05.2	+0.6	
	baz=79										
MMAI	Mount Meron Ar	79.47	305		P			P	02 42 05.5	+0.7	
MMAI	Mount Meron Ar	79.47	305		P			P	02 42 05.5	+0.7	
	comp=Z,4.1nm,0.7s,baz=39,slow=5.4,SNR=7.2										
X20A	Quemado	79.68	52		P			P	02 42 07.3	+1.1	
	baz=79										
U23A	El Rito	79.75	50		P			P	02 42 07.6	+1.1	
	baz=80										
S25A	Robets Cordova	79.78	48		P			P	02 42 07.5	+0.9	
	baz=80										
R26A	Arlington	79.85	47		P			P	02 42 07.1	+0.1	
	baz=80										
T24A	Torres, Weston	79.86	49	⇓		P		P	02 42 08.3	+1.2	
	baz=80,SNR=5.2										
SCHQ	Schefferville	79.97	17		P			P	02 42 07.0	-0.1	
SCHQ	Schefferville	79.97	17		P			P	02 42 07.0	-0.1	
	comp=Z,1.6nm,0.3s,baz=341,slow=5.0,SNR=15										
X21A	Alamocita Cree	80.17	52		P			P	02 42 09.7	+0.8	
	baz=80										
Y20A	Horse Springs,	80.20	53		P			P	02 42 09.8	+0.8	
	baz=80										
R27A	Eads	80.21	46		P			P	02 42 09.0	+0.1	
	baz=80										
ANMO	Albuquerque	80.58	51		*eP*			P	02 42 11.4	+0.4	
	comp=Z,2.2nm,1.0s										
ANMO	Albuquerque	80.58	51		P			P	02 42 11.5	+0.5	
	comp=Z,1.1nm,0.8s,baz=315,slow=7.1,SNR=4.9										
T26A	Comanche Natio	80.59	48		P			P	02 42 11.2	+0.2	
	baz=80										
Z20A	Nine Sixteen R	80.63	54		P			P	02 42 12.1	+0.8	
	baz=80										
GIVF	Givet	80.66	334		*eP*			P	02 42 10.3	-0.6	
GIVF	Givet	80.66	334		*eP*			P	02 42 10.3	-0.6	
GIVF	Givet	80.66	334		*eP*			P	02 42 10.3	-0.6	
BAIF	Baives	80.90	334		*eP*			P	02 42 11.6	-0.5	
BAIF	Baives	80.90	334		*eP*			P	02 42 11.6	-0.5	
V25A	Rancho No Teng	80.99	49		P			P	02 42 14.1	+0.9	
	baz=81										
W24A	Lazy 6 Ranch,	80.99	50		P			P	02 42 13.7	+0.5	
	baz=81										
120A	U Bar Ranch, L	81.00	54		P			P	02 42 14.1	+0.8	
	baz=81										
CDF	Champ du Feu	81.28	332	⇑	*i*	P		P	02 42 14.0	-0.3	
CDF	Champ du Feu	81.28	332	⇑	*i*	P		P	02 42 14.0	-0.3	
CDF	Champ du Feu	81.28	332	⇑	*i*	P		P	02 42 14.0	-0.3	
220A	Playas Peak, P	81.52	54	⇓		P		P	02 42 16.4	+0.4	
	baz=81										
W25A	X Bar L Ranch,	81.53	50	⇓		P		P	02 42 16.0	+0.1	
	baz=81										
R30A	Dighton	81.55	45	⇓		P		P	02 42 15.6	-0.3	
	baz=81										
FUORN	Ofenpass-Fuorn	81.68	329		*eP*			P	02 42 17.4	+0.7	
PAGF	Fort de Pagny	81.69	333	⇑	*i*	P		P	02 42 16.4	0.0	
	comp=Z,2.7nm,0.8s										
PAGF	Fort de Pagny	81.69	333	⇑	*i*	P		P	02 42 16.4	0.0	
	comp=Z,2.7nm,0.8s										
DAVOX	Davos/Dischmat	81.70	329		P			P	02 42 17.1	+0.5	
DAVOX	Davos/Dischmat	81.70	329		P			P	02 42 17.1	+0.5	
	comp=Z,1.3nm,0.3s,baz=38,slow=1.0,SNR=8.0										
HINF	Hinteralfeld	81.93	332		*eP*			P	02 42 17.0	-0.7	
HINF	Hinteralfeld	81.93	332		*eP*			P	02 42 17.0	-0.7	
HINF	Hinteralfeld	81.93	332		*eP*			P	02 42 17.0	-0.7	
HAU	Haudompre	81.95	332		*eP*			P	02 42 17.1	-0.7	
	comp=Z,11nm,1.1s										
HAU	Haudompre	81.95	332		*eP*			P	02 42 17.1	-0.7	
HAU						pmax	pmax				
	comp=Z,11nm,1.0s										
HAU	Haudompre	81.95	332		*eP*			P	02 42 17.1	-0.7	
	comp=Z,11nm,1.0s										
MEZF	Maizieres J'vi	81.97	333		*eP*			P	02 42 17.8	0.0	
	comp=Z,4.5nm,0.7s										
MEZF	Maizieres J'vi	81.97	333		*eP*			P	02 42 17.8	0.0	
	comp=Z,4.5nm,0.7s										
TUE	Stuetta	82.16	329		*eP*			P	02 42 19.3	+0.2	
Z25A	Roswell	82.78	51		P			P	02 42 22.8	+0.3	
	baz=82										
224A	Cornudas Mount	83.18	52		P			P	02 42 25.3	+0.6	
	baz=83										
Z26A	Caprock	83.21	51		P			P	02 42 25.2	+0.5	
	baz=83										
125A	Gardner Draw,	83.27	51		P			P	02 42 24.6	-0.4	
	baz=83										
LOR	Lormes	83.44	333	⇑	*i*	P		P	02 42 25.0	-0.5	
	comp=Z,13nm,0.9s										
LOR	Lormes	83.44	333	⇑	*i*	P		P	02 42 25.0	-0.5	
	comp=Z,13nm,0.9s										
FLN	La Foliniere	83.49	336		*eP*			P	02 42 25.2	-0.5	
	comp=Z,4.3nm,0.6s										
FLN	La Foliniere	83.49	336		*eP*			P	02 42 25.2	-0.5	
FLN						pmax	pmax				
	comp=Z,4.0nm,0.6s										
FLN	La Foliniere	83.49	336		*eP*			P	02 42 25.2	-0.5	
	comp=Z,4.3nm,0.6s										
LDF	La Druitiere	83.54	336		*eP*			P	02 42 25.2	-0.7	
LDF	La Druitiere	83.54	336		*eP*			P	02 42 25.2	-0.7	
LDF	La Druitiere	83.54	336		*eP*			P	02 42 25.2	-0.7	
MNTX	Cornudas Mount	83.54	53		*eP*			P	02 42 26.4	+0.1	
	comp=Z,1.2nm,0.7s										
Z27A	Tatum	83.62	50		P			P	02 42 27.4	+0.6	
	baz=83										
SSF	Saint Saulge	83.73	333		*eP*			P	02 42 26.5	-0.5	
	comp=Z,9.2nm,1.0s										
SSF	Saint Saulge	83.73	333		*eP*			P	02 42 26.5	-0.5	
SSF						pmax	pmax				
	comp=Z,9.0nm,1.0s										
SSF	Saint Saulge	83.73	333		*eP*			P	02 42 26.5	-0.5	
	comp=Z,9.2nm,1.0s										
HYF	Humbligny	83.84	334		*eP*			P	02 42 27.5	0.0	
HYF	Humbligny	83.84	334		*eP*			P	02 42 27.5	0.0	
AQU	L'Aquila	83.92	325		*eP*			P	02 42 28.3	+0.2	
	comp=Z,7.6nm,0.8s										
LPL	La Plagne	83.94	330	⇑	*i*	P		P	02 42 28.4	+0.1	
	comp=Z,7.3nm,0.8s										
LPL	La Plagne	83.94	330	⇑	*i*	P		P	02 42 28.4	+0.1	
LPL						pmax	pmax				
	comp=Z,7.0nm,0.8s										
LPL	La Plagne	83.94	330	⇑	*i*	P		P	02 42 28.4	+0.1	
	comp=Z,7.3nm,0.8s										
GRR	Gorron	83.94	336		*eP*			P	02 42 27.5	-0.5	
GRR	Gorron	83.94	336		*eP*			P	02 42 27.5	-0.5	
GRR	Gorron	83.94	336		*eP*			P	02 42 27.5	-0.5	
LPG	La Plagne	83.95	330	⇑	*i*	P		P	02 42 28.5	0.0	
	comp=Z,4.2nm,0.6s										
LPG	La Plagne	83.95	330	⇑	*i*	P		P	02 42 28.5	0.0	
LPG						pmax	pmax				
	comp=Z,4.0nm,0.6s										
LPG	La Plagne	83.95	330	⇑	*i*	P		P	02 42 28.5	0.0	
	comp=Z,4.2nm,0.6s										
226B	Tecolote Peak,	83.97	52		P			P	02 42 29.2	+0.6	
	baz=84										
SMF	Signal de Mont	83.98	333		*eP*			P	02 42 28.0	-0.3	
	comp=Z,18nm,1.0s										
SMF	Signal de Mont	83.98	333		*eP*			P	02 42 28.0	-0.3	
SMF						pmax	pmax				
	comp=Z,18nm,1.0s										
SMF	Signal de Mont	83.98	333		*eP*			P	02 42 28.0	-0.3	
	comp=Z,18nm,1.0s										
AVF	Avril sur Loir	84.02	333	⇑	*i*	P		P	02 42 28.3	-0.1	
	comp=Z,11nm,0.7s										
AVF	Avril sur Loir	84.02	333	⇑	*i*	P		P	02 42 28.3	-0.1	
AVF						pmax	pmax				
	comp=Z,11nm,0.7s										
AVF	Avril sur Loir	84.02	333	⇑	*i*	P		P	02 42 28.3	-0.1	
	comp=Z,11nm,0.7s										
BGF	Bois d'Agland	84.39	333		*eP*			P	02 42 30.6	+0.2	
BGF	Bois d'Agland	84.39	333		*eP*			P	02 42 30.6	+0.2	
BGF	Bois d'Agland	84.39	333		*eP*			P	02 42 30.6	+0.2	
425A	Indio Mountain	84.43	53	⇑		P		P	02 42 31.6	+0.6	
	baz=84										
X31A	McDonald Ranch	84.44	47		P			P	02 42 31.5	+0.6	
	baz=84										
Z29A	Hungry Hill Ra	84.51	49	⇑		P		P	02 42 31.8	+0.5	
	baz=84										
128A	Castleberry Fa	84.54	50	⇓		P		P	02 42 31.9	+0.4	
	baz=84										
SGMF	Saint Gilles	84.56	337		*eP*			P	02 42 31.1	0.0	
	comp=Z,12nm,0.7s										
SGMF	Saint Gilles	84.56	337		*eP*			P	02 42 31.1	0.0	
SGMF						pmax	pmax				
	comp=Z,12nm,0.7s										
SGMF	Saint Gilles	84.56	337		*eP*			P	02 42 31.1	0.0	
	comp=Z,12nm,0.7s										
MBDF	Montbardon	84.60	330		*eP*			P	02 42 31.8	+0.2	
MBDF	Montbardon	84.60	330		*eP*			P	02 42 31.8	+0.2	
MBDF	Montbardon	84.60	330		*eP*			P	02 42 31.8	+0.2	
326A	Caldwell Ranch	84.64	52		P			P	02 42 32.6	+0.6	
	baz=84										
CUC	Carrocucco	84.76	322		*eP*			P	02 42 31.5	-0.8	
	comp=Z,5.5nm,0.5s										
ORIF	Oris-en-Rattie	84.76	331		*eP*			P	02 42 32.4	+0.1	
ORIF	Oris-en-Rattie	84.76	331		*eP*			P	02 42 32.4	+0.1	
ORIF	Oris-en-Rattie	84.76	331		*eP*			P	02 42 32.4	+0.1	
Y31A	Rekieta Farm,	84.79	48		P			P	02 42 33.0	+0.4	
	baz=84										
TCF	Toulx Ste Croi	84.84	334	⇑	*i*	P		P	02 42 32.6	0.0	
TCF	Toulx Ste Croi	84.84	334	⇑	*i*	P		P	02 42 32.6	0.0	
TCF	Toulx Ste Croi	84.84	334	⇑	*i*	P		P	02 42 32.6	0.0	
QUIF	Quistinic	85.03	338		*eP*			P	02 42 33.3	-0.2	
QUIF	Quistinic	85.03	338		*eP*			P	02 42 33.3	-0.2	
QUIF	Quistinic	85.03	338		*eP*			P	02 42 33.3	-0.2	
VIVF	Saint-Julien-l	85.25	331	⇑	*i*	P		P	02 42 34.7	0.0	
	comp=Z,11nm,0.9s										
VIVF	Saint-Julien-l	85.25	331	⇑	*i*	P		P	02 42 34.7	0.0	
VIVF						pmax	pmax				
	comp=Z,11nm,0.9s										
VIVF	Saint-Julien-l	85.25	331	⇑	*i*	P		P	02 42 34.7	0.0	
	comp=Z,11nm,0.9s										
328A	Wristen Ranch,	85.27	51		P			P	02 42 35.6	+0.6	
	baz=85										
427A	Hayter Ranch,	85.31	52	⇑		P		P	02 42 35.8	+0.5	
	baz=85										
MFF	Saint Martin d	85.32	335		*eP*			P	02 42 35.2	+0.2	
MFF	Saint Martin d	85.32	335		*eP*			P	02 42 35.2	+0.2	
MFF	Saint Martin d	85.32	335		*eP*			P	02 42 35.2	+0.2	
526A	Mary Lane Ranc	85.49	53		P			P	02 42 36.8	+0.5	
	baz=85										
329A	Wagon Wheel Ra	85.67	51		P			P	02 42 37.5	+0.4	
	baz=85										
SMRF	Simiane la Rot	85.68	330		*eP*			P	02 42 37.6	+0.7	
SMRF	Simiane la Rot	85.68	330		*eP*			P	02 42 37.6	+0.7	
527A	Woodward Ranch	85.71	53		P			P	02 42 37.9	+0.5	
	baz=86										
Z32A	Haskell	85.71	48		P			P	02 42 37.4	+0.2	
	baz=85										
230A	Sterling City	85.86	50		P			P	02 42 38.4	+0.4	
	baz=86										
LMR	La Mourre	85.89	329		*eP*			P	02 42 37.3	-0.5	
LMR	La Mourre	85.89	329		*eP*			P	02 42 37.3	-0.5	
LMR	La Mourre	85.89	329		*eP*			P	02 42 37.3	-0.5	
RJF	Les Rejaudoux	85.94	333		*eP*			P	02 42 38.2	+0.1	
RJF	Les Rejaudoux	85.94	333		*eP*			P	02 42 38.2	+0.1	
RJF	Les Rejaudoux	85.94	333		*eP*			P	02 42 38.2	+0.1	
CAF	Calviac	86.09	333	⇑	*i*	P		P	02 42 39.6	+0.7	
	comp=Z,12nm,0.8s										
CAF	Calviac	86.09	333	⇑	*i*	P		P	02 42 39.6	+0.7	
CAF						pmax	pmax				
	comp=Z,12nm,0.8s										
CAF	Calviac	86.09	333	⇑	*i*	P		P	02 42 39.6	+0.7	
	comp=Z,12nm,0.8s										
LASF	Ste Croix	86.22	331		*eP*			P	02 42 39.1	-0.4	
LASF	Ste Croix	86.22	331		*eP*			P	02 42 39.1	-0.4	
TXAR	Lajitas Array	86.27	53		P			P	02 42 40.8	+0.7	
TXAR	Lajitas Array	86.27	53		P			P	02 42 40.8	+0.7	
	comp=Z,2.1nm,0.5s,baz=296,slow=4.3,SNR=33										
430A	Baggett Ranch,	86.61	51		P			P	02 42 41.5	-0.2	
	baz=86										
MTLF	Montolieu	87.43	332		*eP*			P	02 42 45.9	+0.5	
MTLF	Montolieu	87.43	332		*eP*			P	02 42 45.9	+0.5	
MTLF	Montolieu	87.43	332		*eP*			P	02 42 45.9	+0.5	
EPF	Esparros	88.35	333		*eP*			P	02 42 49.5	-0.3	
EPF	Esparros	88.35	333		*eP*			P	02 42 49.5	-0.3	
EPF	Esparros	88.35	333		*eP*			P	02 42 49.5	-0.3	
ETSF	Etsaut	88.76	334		*eP*			P	02 42 52.4	+0.6	
ETSF	Etsaut	88.76	334		*eP*			P	02 42 52.4	+0.6	
ETSF	Etsaut	88.76	334		*eP*			P	02 42 52.4	+0.6	
WVT	Waverly	89.38	38		*eP*			P	02 42 54.4	-0.3	
WVT						pmax	pmax				
	comp=Z,3.0nm,0.8s										
WVT	Waverly	89.38	38		*eP*			P	02 42 54.4	-0.3	
	comp=Z,2.5nm,0.8s										
KEST	Kesra	91.17	323		P			P	02 43 02.5	-0.7	
KEST	Kesra	91.17	323		P			P	02 43 02.5	-0.7	
	comp=Z,2.0nm,1.2s,baz=12,slow=9.3,SNR=3.8										
ESDC	Sonseca Array	92.77	335		P			P	02 43 10.4	-0.1	
ESDC	Sonseca Array	92.77	335		P			P	02 43 10.4	-0.1	
	comp=Z,2.0nm,0.3s,baz=20,slow=4.3,SNR=4.6										
LBTB	Lobatse	125.83	267		*eP*	PKPdf		PKPdf	02 49 00.6	+1.0	
SNAA	Sanae	146.09	199		*eP*	PKPbc		PKPab	02 49 37.6	+0.2	
BDFB	Brasilia	151.86	22		PKPbc			PKPbc	02 49 53.1	+0.2	
BDFB	Brasilia	151.86	22		PKPbc			PKPbc	02 49 53.1	+0.2	
	comp=Z,0.9nm,0.4s,baz=256,slow=9.3,SNR=3.9										

*IDC **10** 02:36:38.7±3.6, 11°.42N×86°.30W, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/24, mbtmp3.5/6, Error ellipse: s-maj=73.4km s-min=55.6km az=155.0*
*ISCJB **10** 02:36:51.0±0.4, 11°.78N±0°.08×86°.55W±0°.09, h88km±6km, mb3.4/6

TWF1				*e*S		**Sn**	02 39 12.9	0.0
	baz=240								
NSK	**Sanguang**	**1.31**	**306**	P		**Pb**	02 38 58.4	-0.4
	baz=288								
NSK				*e*S		**Sb**	02 39 14.9	-0.2
	baz=288								
CHKT	**Chengkung**	**1.33**	**233**	*e*S		**Sn**	02 39 13.8	-1.1
	baz=216								
NWF	**Wu-fen Shan**	**1.34**	**330**	P		**Pb**	02 38 58.6	-0.8
	baz=328								
NWF				*e*S		**Sb**	02 39 16.7	+0.6
	baz=328								
JKRS	**Kuro-shima**	**1.40**	**76**	P		**Pb**	02 39 00.2	-0.1
JKRS				*e*S		**Sb**	02 39 17.9	+0.1
SMLT	**Sun Moon Lake**	**1.48**	**269**	*e*P		**Pb**	02 39 01.3	-0.5
	baz=266								
SMLT				*e*S		**Sn**	02 39 19.2	+0.4
	baz=266								
TYC	**Yuchr**	**1.52**	**270**	P		**Pb**	02 39 01.6	-0.8
	baz=267								
TYC				*e*S		**Sb**	02 39 20.9	-0.4
	baz=267								
JlJ	**Ishigaki jima**	**1.55**	**73**	P		**Pn**	02 39 01.5	+0.5
JlJ				*e*S		**Sb**	02 39 20.8	-1.3
ELDTW	**Lidau**	**1.55**	**243**	*e*P		**Pn**	02 39 00.9	-0.2
	baz=240								
ELDTW				*e*S		**Sn**	02 39 20.6	0.0
	baz=240								
NSTT	**Nanjuang**	**1.56**	**298**	P		**Pb**	02 39 02.9	-0.2
	baz=294								
NSTT				*e*S		**Sb**	02 39 22.2	-0.3
	baz=294								
TWY	**Chenhua**	**1.60**	**329**	*e*P		**Pb**	02 39 03.2	-0.5
	baz=326								
ALS	**Alishan**	**1.62**	**256**	P		**Pb**	02 39 03.8	-0.5
	baz=253								
ALS				S		**Sn**	02 39 23.9	+1.4
	baz=253								
TWQ1	**Liyutan**	**1.66**	**286**	P		**Pb**	02 39 04.5	-0.1
	baz=282								
TWQ1				*e*S		**Sb**	02 39 25.3	+0.1
	baz=282								
NSY	**Sanyi**	**1.68**	**288**	*e*P		**Pb**	02 39 05.5	+0.3
	baz=284								
NSY				*e*S		**Sb**	02 39 27.0	+1.0
	baz=284								
TCU	**Taichung**	**1.70**	**278**	*e*P		**Pb**	02 39 04.5	-1.0
	baz=274								
TCU				*e*S		**Sb**	02 39 28.0	+1.5
	baz=274								
CHN5	**Tsauling**	**1.72**	**260**	P		**Pb**	02 39 05.3	-0.4
	baz=257								
CHN5				S		**Sb**	02 39 27.0	+0.1
	baz=257								
CHN4	**Tsaushan**	**1.85**	**253**	P		**Pb**	02 39 07.6	-0.4
	baz=250								
CHN4				S		**Sb**	02 39 31.4	+0.6
	baz=250								
WTP	**Ta-pu**	**1.87**	**250**	P		**Pb**	02 39 07.9	-0.5
	baz=239								
WTP				*e*S		**Sb**	02 39 31.1	-0.2
	baz=239								
CHN2	**Minshiung**	**1.91**	**259**	*e*P		**Pb**	02 39 08.8	-0.3
	baz=256								
CHN2				*e*S		**Sb**	02 39 33.1	+0.7
	baz=256								
CHN1	**Nanshi**	**1.96**	**249**	P		**Pb**	02 39 09.5	-0.4
	baz=246								
CHN1				S		**Sb**	02 39 34.8	+0.7
	baz=246								
TWK	**Hsinying**	**1.97**	**252**	*e*P		**Pb**	02 39 09.4	-0.6
	baz=249								
TWK				S		**Sb**	02 39 34.4	+0.2
	baz=249								
LAY	**Lan-yu**	**2.06**	**206**	P		**Pn**	02 39 07.6	-0.5
	baz=205								
LAY				*e*S		**Sn**	02 39 31.7	-1.3
	baz=205								
SSD	**Sandimen**	**2.08**	**237**	*e*P		**Pb**	02 39 11.5	-0.5
	baz=227								
JTJ	**Tarama**	**2.12**	**69**	P		**Pn**	02 39 09.8	+1.0
JTJ				*e*S		**Sn**	02 39 35.0	+0.6
EAST	**Anshuo**	**2.16**	**226**	P		**Pn**	02 39 10.4	+1.0
	baz=224								
SCZT	**Fangliau**	**2.32**	**229**	*e*P		**Pn**	02 39 13.6	+2.0
	baz=221								
SCZT				*e*S		**Sb**	02 39 43.4	-0.9
	baz=221								

TAP ***10*** *02:40:06.0,23˙98N×122˙52E,h27km,ML3.8,D*
JMA ***10*** *02:40:06.1±0.3,23˙99N×122˙51E,h24km,M3.2*
IDC ***10*** *02:40:10.8±1.0,24˙03N×122˙44E,h72km±9km,mb3.2/6, mb1 3.4/7,mb1mx3.2/26,mbtmp3.2/7, Error ellipse: s-maj=47.0km s-min=16.2km az=67.0*

ISC 10 02:40:05.7±1.2, 23˙91N±0˙03×122˙51E±0˙02, h26km±10km, n55, σ0s86/89, mb3.5/6, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.71**	**40**	P	**Pb**	02 40 18.7	-0.8
YOJ				*e*S	**Sb**	02 40 27.7	-1.2
TWD	**Chiawan**	**0.85**	**282**	P	**Pb**	02 40 21.4	-0.4
	baz=278						
TWD				*e*S	**Sb**	02 40 33.1	+0.2
	baz=278						
ENA	**Nanau**	**0.87**	**306**	*i* P	**Pb**	02 40 21.9	-0.3
	baz=309						
ENA				S	**Sb**	02 40 33.7	+0.3
	baz=309						
TWC	**Suao**	**0.92**	**319**	*i* P	**Pn**	02 40 22.3	-0.6
	baz=316						
TWC				S	**Sb**	02 40 34.8	-0.1
	baz=316						
ESL	**Shilin**	**0.99**	**265**	P	**Pn**	02 40 23.4	-0.6
	baz=261						
ESL				*e*S	**Sb**	02 40 36.2	-0.6
	baz=261						
ILA	**Ilan**	**1.10**	**321**	*e*P	**Pn**	02 40 25.6	+0.3
	baz=306						
ILA				*e*S	**Sb**	02 40 41.1	+1.2
	baz=306						
TWE	**Neicheng**	**1.11**	**316**	P	**Pn**	02 40 25.9	+0.3
	baz=302						
TWE				*e*S	**Sb**	02 40 41.3	+0.9
	baz=302						
ENTT	**Nioudou**	**1.13**	**310**	P	**Pn**	02 40 26.2	+0.4
	baz=307						
ENTT				S	**Sb**	02 40 41.9	+1.1
	baz=307						
EHY	**Hungye**	**1.16**	**250**	⇓*i* P	**Pn**	02 40 26.4	+0.1
	baz=247						
EHY				*e*S	**Sn**	02 40 41.4	+0.1
	baz=247						
WHF	**Hehuan Shan**	**1.16**	**282**	P	**Pn**	02 40 26.7	+0.1
	baz=267						
WHF				*e*S	**Sn**	02 40 41.8	-0.1
	baz=267						
NNS	**Nan Shan**	**1.16**	**297**	*i* P	**Pn**	02 40 26.7	+0.3
	baz=283						
NNS				*e*S	**Sb**	02 40 42.4	+0.5
	baz=283						
IRIF	**Iriomote-Funau**	**1.19**	**69**	P	**Pn**	02 40 27.4	+0.8
IRIF				*e*S	**Sn**	02 40 42.4	+0.4
TWB1	**Santiao Chiao**	**1.19**	**337**	P	**Pn**	02 40 26.7	+0.1
	baz=351						
TWB1				*e*S	**Sb**	02 40 43.3	+0.8
	baz=351						
HATJ	**Hateruma jima**	**1.19**	**83**	P	**Pn**	02 40 27.1	+0.4
HATJ				*e*S	**Sn**	02 40 42.6	+0.6
TWF1	**Yuli**	**1.24**	**244**	P	**Pn**	02 40 27.8	+0.4
	baz=241						
TWF1				S	**Sn**	02 40 43.8	+0.4
	baz=241						
TWT	**Tachien**	**1.27**	**286**	P	**Pb**	02 40 28.9	-0.1
	baz=271						
NSK	**Sanguang**	**1.30**	**306**	⇓*i* P	**Pn**	02 40 28.7	+0.5
	baz=290						
CHKT	**Chengkung**	**1.33**	**233**	*e*P	**Pn**	02 40 29.3	+0.8
	baz=219						
CHKT				S	**Sn**	02 40 44.2	-1.1
	baz=219						
NWF	**Wu-fen Shan**	**1.33**	**330**	P	**Pn**	02 40 28.9	+0.2
	baz=328						
NWF				*e*S	**Sb**	02 40 47.6	+0.9
	baz=328						
JKRS	**Kuro-shima**	**1.41**	**76**	P	**Pn**	02 40 30.7	+1.1
JKRS				*e*S	**Sn**	02 40 47.8	+0.5
TAP1	**Taipei**	**1.44**	**321**	*e*P	**Pb**	02 40 31.5	-0.3
	baz=318						
TAP1				*e*S	**Sb**	02 40 51.3	+1.6
	baz=318						
SMLT	**Sun Moon Lake**	**1.47**	**269**	P	**Pn**	02 40 31.4	+0.8
	baz=267						
SMLT				*e*S	**Sb**	02 40 51.1	+0.2
	baz=267						
TYC	**Yuchr**	**1.51**	**270**	P	**Pn**	02 40 32.1	+1.0
	baz=268						
TYC				*e*S	**Sb**	02 40 52.5	+0.6
	baz=268						
TWS1	**Kuangyinshan**	**1.55**	**320**	*e*P	**Pb**	02 40 33.0	-0.6
	baz=335						
ELDTW	**Lidau**	**1.55**	**243**	*e*P	**Pn**	02 40 31.6	-0.1
	baz=240						
NSTT	**Nanjuang**	**1.55**	**298**	P	**Pb**	02 40 33.4	-0.4
	baz=294						
NSTT				*e*S	**Sb**	02 40 53.6	+0.6
	baz=294						
JlJ	**Ishigaki jima**	**1.56**	**73**	P	**Pn**	02 40 31.8	+0.1
JlJ				*e*S	**Sn**	02 40 51.0	-0.1
TWY	**Chenhua**	**1.59**	**329**	*e*P	**Pb**	02 40 34.0	-0.4
	baz=327						
ALS	**Alishan**	**1.61**	**256**	P	**Pn**	02 40 34.1	+1.4
	baz=254						
ALS				*e*S	**Sn**	02 40 54.2	+1.3
	baz=254						
TWQ1	**Liyutan**	**1.65**	**286**	P	**Pb**	02 40 35.0	-0.3
	baz=284						
TWQ1				*e*S	**Sb**	02 40 56.4	+0.8
	baz=284						
WNT	**Mingjian**	**1.67**	**269**	*e*P	**Pb**	02 40 35.4	-0.4
	baz=267						
NSY	**Sanyi**	**1.68**	**288**	*e*P	**Pb**	02 40 35.5	-0.3
	baz=285						
NSY				*e*S	**Sb**	02 40 56.9	+0.4
	baz=285						
TCU	**Taichung**	**1.69**	**278**	P	**Pb**	02 40 35.9	-0.2
	baz=276						
TCU				*e*S	**Sb**	02 40 57.5	+0.5
	baz=276						
CHN5	**Tsauling**	**1.71**	**260**	P	**Pb**	02 40 35.9	-0.6
	baz=258						
CHN5				S	**Sb**	02 40 58.3	+0.8
	baz=258						
WGK	**Gukeng**	**1.80**	**263**	*e*P	**Pb**	02 40 37.5	-0.5
	baz=261						
WGK				*e*S	**Sb**	02 41 01.8	+1.7
	baz=261						
CHN4	**Tsaushan**	**1.84**	**253**	P	**Pb**	02 40 38.0	-0.7
	baz=251						
CHN4				S	**Sb**	02 41 01.5	+0.1
	baz=251						
WTP	**Ta-pu**	**1.86**	**250**	P	**Pb**	02 40 38.0	-1.0
	baz=240						
WTP				*e*S	**Sb**	02 41 01.8	-0.2
	baz=240						
CHN2	**Minshiung**	**1.90**	**259**	*e*P	**Pb**	02 40 39.3	-0.4
	baz=257						
CHN2				*e*S	**Sb**	02 41 03.3	+0.2
	baz=257						
CHN1	**Nanshi**	**1.96**	**249**	*e*P	**Pb**	02 40 39.5	-1.1
	baz=247						
CHN1				*e*S	**Sb**	02 41 04.3	-0.4
	baz=247						
TWK	**Hsinying**	**1.96**	**251**	*e*P	**Pn**	02 40 39.5	+2.2
	baz=250						
TWK				S	**Sb**	02 41 05.5	+0.6
	baz=250						
WTCT	**Ta-ch'eng**	**2.04**	**269**	*e*S	**Sb**	02 41 07.2	+0.2
	baz=282						
LAY	**Lan-yu**	**2.06**	**206**	P	**Pn**	02 40 38.0	-0.7
	baz=205						
SSD	**Sandimen**	**2.08**	**236**	*e*P	**Pn**	02 40 41.3	+2.4
	baz=227						
JTJ	**Tarama**	**2.13**	**70**	P	**Pn**	02 40 41.3	+1.8
JTJ				*e*S	**Sn**	02 41 06.8	+1.7
CHN3	**Shinhua**	**2.14**	**248**	*e*S	**Sb**	02 41 11.3	+1.5
	baz=246						
EAST	**Anshuo**	**2.16**	**225**	P	**Pn**	02 40 40.2	+0.2
	baz=224						
TWM1	**Shoushan**	**2.20**	**241**	*e*P	**Pb**	02 40 46.1	+1.2
	baz=239						
SCZT	**Fangliau**	**2.32**	**229**	*e*P	**Pb**	02 40 45.4	-1.4
	baz=220						
KSRS	**Korea Array**	**14.27**	**18**	P	Pn	02 43 29.4	+3.4
	0.4nm,0.3s,baz=199,slow=11,SNR=7.5						
SONM	**Songino Array**	**27.10**	**336**	P	**P**	02 45 45.4	-1.0
	0.4nm,0.8s,baz=163,slow=5.4,SNR=3.6						
MKAR	**Makanchi Array**	**39.38**	**316**	P	**P**	02 47 32.7	-0.4
	0.4nm,0.6s,baz=102,slow=9.1,SNR=7.3						
MKAR				pP	pP	02 47 49.9	+9.0
	0.4nm,0.6s,baz=100,slow=8.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**41.13**	**327**	P	**P**	02 47 46.0	-1.5
	0.7nm,0.4s,baz=147,slow=2.9,SNR=2.5						
WRA	**Warramunga Arr**	**45.09**	**164**	P	**P**	02 48 20.2	+0.4
	0.4nm,0.6s,baz=346,slow=8.9,SNR=3.1						
WRA				pP	pP	02 48 38.2	+11
	0.4nm,0.8s,baz=344,slow=8.6,SNR=2.1						
ASAR	**Alice Springs**	**48.57**	**166**	P	**P**	02 48 48.8	+1.8
	0.2nm,0.3s,baz=353,slow=7.1,SNR=6.8						
ASAR				pP	pP	02 49 06.1	+11
	0.3nm,0.5s,baz=351,slow=7.2,SNR=3.3						
YKA	**Yellowknife Ar**	**82.75**	**23**	P	**P**	02 52 25.9	-1.1
	0.2nm,0.6s,baz=310,slow=5.0,SNR=6.5						

IDC ***10*** *02:40:52.6±1.2,35˙55N×22˙68E,h0km,mb3.8/12, mb1 3.8/13,mb1mx3.7/31,mbtmp3.8/13,ML3.9/1,MS4.0/2, Ms1 4.0/2,ms1mx3.2/53,Error ellipse: s-maj=26.1km s-min=22.2km az=3.0*
ISCJB ***10*** *02:40:57.3±0.5,35˙37N±0˙04×22˙49E±0˙05,h44km, mb3.7/12,MS3.9/2, Error ellipse: s-maj=6.8km s-min=4.2km az=136.9*
THE ***10*** *02:40:58.8,35˙43N×22˙53E,h83km±3km,ML3.3/3, Error ellipse: s-maj=3.9km s-min=0.8km az=57.0*
ATH ***10*** *02:40:58.7,35˙50N×22˙66E,h77km±2km,ML3.2*
CSEM ***10*** *02:41:00.0±0.2,35˚46N×22˚62E,h60km,Mw3.1, Error ellipse: s-maj=6.5km s-min=2.8km az=45.0*

ISC 10 02:40:58.6±0.7, 35˚43N±0˚05×22˚57E±0˚05, h44km, n126, σ1s40/129, mb3.7/12, 1C-1D, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.74**	**54**	*e*P	**Pn**	02 41 13.3	+0.6
ANKY				*e*S	**Sn**	02 41 25.3	+2.5
ANKY	**Antikythira Is**	**0.74**	**54**	*e*P	**Pn**	02 41 13.3	+0.6
ANKY				*e*S	**Sn**	02 41 25.3	+2.5
KYTH	**Kithira**	**0.93**	**24**	P	**Pn**	02 41 16.9	+1.6
KYTH	**Kithira**	**0.93**	**24**	*e*P	**Pn**	02 41 16.4	+1.1
KYTH	**Kithira**	**0.93**	**24**	P	**Pn**	02 41 16.9	+1.6
VLI	**Veliai**	**1.32**	**13**	P	**Pn**	02 41 22.0	+1.5
VLI				S	**Sn**	02 41 40.1	+3.2
VLI	**Veliai**	**1.32**	**13**	*e*P	**Pn**	02 41 22.1	+1.5
VLI	**Veliai**	**1.32**	**13**	P	**Pn**	02 41 22.0	+1.5
VLI				S	**Sn**	02 41 40.1	+3.2
VAM	**Vamos**	**1.33**	**91**	P	**Pn**	02 41 22.1	+1.3
VAM	**Vamos**	**1.33**	**91**	*e*P	**Pn**	02 41 22.1	+1.3
VAM	**Vamos**	**1.33**	**91**	*e*P	**Pn**	02 41 22.1	+1.3
DYR	**Agios Nikonas**	**1.34**	**352**	P	**Pn**	02 41 22.4	+1.5
DYR	**Agios Nikonas**	**1.34**	**352**	*e*P	**Pn**	02 41 22.2	+1.3
DYR	**Agios Nikonas**	**1.34**	**352**	*e*P	**Pn**	02 41 22.2	+1.3
GVD	**Gavdhos**	**1.38**	**115**	P	**Pn**	02 41 23.0	+1.6
GVD	**Gavdhos**	**1.38**	**115**	P	**Pn**	02 41 23.0	+1.6
PYL	**PYLOS**	**1.60**	**336**	P	**Pn**	02 41 25.3	+0.8
PYL	**PYLOS**	**1.60**	**336**	*e*P	**Pn**	02 41 24.9	+0.4
PYL	**PYLOS**	**1.60**	**336**	P	**Pn**	02 41 25.3	+0.8
ITM	**Ithomi**	**1.82**	**344**	P	**Pn**	02 41 28.5	+1.1
ITM	**Ithomi**	**1.82**	**344**	*e*P	**Pn**	02 41 28.5	+1.1
ITM	**Ithomi**	**1.82**	**344**	*e*P	**Pn**	02 41 28.5	+1.1
SIVA	**Sivas**	**1.88**	**102**	P	**Pn**	02 41 29.8	+1.5
SIVA	**Sivas**	**1.88**	**102**	P	**Pn**	02 41 29.8	+1.5
VLX	**Vlachokerasia**	**1.94**	**356**	*e*P	**Pn**	02 41 31.5	+2.3
VLX	**Vlachokerasia**	**1.94**	**356**	*e*P	**Pn**	02 41 31.5	+2.3
DID	**Didima**	**2.14**	**14**	P	**Pn**	02 41 32.8	+1.0
DID				S	**Sn**	02 41 59.0	+1.8
DID	**Didima**	**2.14**	**14**	*e*P	**Pn**	02 41 32.5	+0.7
DID	**Didima**	**2.14**	**14**	P	**Pn**	02 41 32.8	+1.0
DID				S	**Sn**	02 41 59.0	+1.8
LAST	**Lasithi**	**2.40**	**96**	P	**Pn**	02 41 37.0	+1.6
LAST	**Lasithi**	**2.40**	**96**	P	**Pn**	02 41 37.0	+1.6
NAIG	**Nisos Aigina**	**2.44**	**17**	*e*P	**Pn**	02 41 37.1	+1.2
NAIG	**Nisos Aigina**	**2.44**	**17**	*e*P	**Pn**	02 41 37.1	+1.2
NPS	**Neapolis**	**2.50**	**93**	*e*P	**Pn**	02 41 37.9	+1.2
NPS	**Neapolis**	**2.50**	**93**	*e*P	**Pn**	02 41 37.9	+1.2
GUR	**Goura**	**2.50**	**356**	P	**Pn**	02 41 39.1	+2.1
GUR	**Goura**	**2.50**	**356**	*e*P	**Pn**	02 41 39.0	+2.1
GUR	**Goura**	**2.50**	**356**	*e*P	**Pn**	02 41 39.0	+2.1
SANT	**Santorini**	**2.53**	**67**	*e*P	**Pn**	02 41 37.6	+0.4
SANT	**Santorini**	**2.53**	**67**	*e*P	**Pn**	02 41 37.6	+0.4
LTK	**Loutraki**	**2.60**	**7**	*e*P	**Pn**	02 41 39.8	+1.6
LTK	**Loutraki**	**2.60**	**7**	*e*P	**Pn**	02 41 39.8	+1.6
KLV	**Kalavryta, Ach**	**2.63**	**353**	*e*P	**Pn**	02 41 40.7	+2.1
KLV	**Kalavryta, Ach**	**2.63**	**353**	*e*P	**Pn**	02 41 40.7	+2.1
ATH	**Athens Observa**	**2.70**	**20**	*e*P	**Pn**	02 41 40.3	+0.8
ATH	**Athens Observa**	**2.70**	**20**	*e*P	**Pn**	02 41 40.3	+0.8
RLS	**Riolos of Patr**	**2.76**	**342**	*e*P	**Pn**	02 41 42.2	+1.8
RLS	**Riolos of Patr**	**2.76**	**342**	*e*P	**Pn**	02 41 42.2	+1.8
PTL	**Penteli**	**2.81**	**21**	P	**Pn**	02 41 42.1	+1.0
PTL	**Penteli**	**2.81**	**21**	*e*P	**Pn**	02 41 41.9	+0.8
PTL	**Penteli**	**2.81**	**21**	*e*P	**Pn**	02 41 41.9	+0.8
LAKA	**Lakka**	**2.84**	**351**	*e*P	**Pn**	02 41 43.4	+1.9
LAKA	**Lakka**	**2.84**	**351**	*e*P	**Pn**	02 41 43.4	+1.9
APE	**Apeiranthos**	**2.90**	**55**	*e*P	**Pn**	02 41 43.4	+1.1
APE	**Apeiranthos**	**2.90**	**55**	⇑*i*P	Pn	02 41 47.1	+4.8
APE	**Apeiranthos**	**2.90**	**55**	*e*P	**Pn**	02 41 43.4	+1.1
TRIZ	**Trizonia**	**2.95**	**352**	*e*P	**Pn**	02 41 44.0	+1.0
TRIZ	**Trizonia**	**2.95**	**352**	*e*P	**Pn**	02 41 44.0	+1.0
KALE	**Kalithea**	**2.97**	**354**	*e*P	**Pn**	02 41 44.4	+1.1
KALE	**Kalithea**	**2.97**	**354**	*e*P	**Pn**	02 41 44.4	+1.1
ZKR	**Zakros**	**3.00**	**95**	*e*P	**Pn**	02 41 45.3	+1.6
ZKR	**Zakros**	**3.00**	**95**	*e*P	**Pn**	02 41 45.3	+1.6
EFP	**Efpalio**	**3.03**	**350**	*e*P	**Pn**	02 41 46.2	+2.1
EFP	**Efpalio**	**3.03**	**350**	*e*P	**Pn**	02 41 46.2	+2.1
VLS	**Valsamata**	**3.16**	**331**	P	**Pn**	02 41 45.9	0.0
VLS	**Valsamata**	**3.16**	**331**	*e*P	**Pn**	02 41 47.9	+2.0
VLS	**Valsamata**	**3.16**	**331**	*e*P	**Pn**	02 41 47.9	+2.0
LKR	**Lokris**	**3.23**	**6**	*e*P	**Pn**	02 41 47.7	+0.9
LKR	**Lokris**	**3.23**	**6**	*e*P	**Pn**	02 41 47.7	+0.9
EVR	**Evrytania**	**3.53**	**350**	*e*P	**Pn**	02 41 54.1	+3.1
EVR	**Evrytania**	**3.53**	**350**	*e*P	**Pn**	02 41 54.1	+3.1
LTBQ	**Tobruq**	**3.55**	**161**	⇓*i*P	**Pn**	02 41 52.6	+1.4
	SNR=46						
AGG	**Agios Georgios**	**3.59**	**357**	*e*P	**Pn**	02 41 53.4	+1.7
AGG	**Agios Georgios**	**3.59**	**357**	*e*P	**Pn**	02 41 53.4	+1.7
LKD2	**Lefkada island**	**3.68**	**336**	P	**Pn**	02 41 54.0	+1.1
LKD2				S	**Sn**	02 42 36.7	+1.6
LKD2	**Lefkada island**	**3.68**	**336**	*e*P	**Pn**	02 41 54.1	+1.1
LKD2	**Lefkada island**	**3.68**	**336**	*e*P	**Pn**	02 41 54.1	+1.1
LKD2				S	**Sn**	02 42 36.7	+1.6
KARP	**Karpathos**	**3.75**	**87**	*e*P	**Pn**	02 41 54.3	+0.3
KARP	**Karpathos**	**3.75**	**87**	*e*P	**Pn**	02 41 54.3	+0.3
AOS	**Alonnisos**	**3.87**	**15**	*e*P	**Pn**	02 41 56.2	+0.6
AOS	**Alonnisos**	**3.87**	**15**	*e*P	**Pn**	02 41 56.2	+0.6
NEO	**Neokhori**	**3.90**	**8**	*e*P	**Pn**	02 41 56.9	+0.9
NEO	**Neokhori**	**3.90**	**8**	*e*P	**Pn**	02 41 56.9	+0.9
XOR	**Xorichti**	**3.96**	**7**	P	**Pn**	02 41 58.0	+1.2
XOR	**Xorichti**	**3.96**	**7**	P	**Pn**	02 41 58.0	+1.2
CHOS	**Chios island**	**4.06**	**42**	*e*P	**Pn**	02 41 58.7	+0.4
CHOS	**Chios island**	**4.06**	**42**	*e*P	**Pn**	02 41 58.7	+0.4
THL	**Klokotos Trika**	**4.15**	**354**	P	**Pn**	02 42 00.2	+0.9
THL	**Klokotos Trika**	**4.15**	**354**	*e*P	**Pn**	02 42 00.3	+0.9
THL	**Klokotos Trika**	**4.15**	**354**	*e*P	**Pn**	02 42 00.3	+0.9
JAN	**Janina**	**4.43**	**343**	*e*P	**Pn**	02 42 04.2	+0.9
JAN	**Janina**	**4.43**	**343**	*e*P	**Pn**	02 42 04.2	+0.9
PAIG	**Paliouri**	**4.57**	**11**	P	**Pn**	02 42 06.4	+1.2
PAIG	**Paliouri**	**4.57**	**11**	P	**Pn**	02 42 06.4	+1.2
ARG	**Arkhangelos**	**4.58**	**79**	*e*P	**Pn**	02 42 05.8	+0.4
ARG	**Arkhangelos**	**4.58**	**79**	*e*P	**Pn**	02 42 05.8	+0.4
LIT	**Litokhoron**	**4.66**	**359**	P	**Pn**	02 42 07.2	+0.8
LIT	**Litokhoron**	**4.66**	**359**	P	**Pn**	02 42 07.2	+0.8
KEK	**Kerkira**	**4.80**	**334**	*e*P	**Pn**	02 42 08.8	+0.4
KEK	**Kerkira**	**4.80**	**334**	*e*P	**Pn**	02 42 08.8	+0.4
KZN	**Kozani**	**4.91**	**353**	*e*P	**Pn**	02 42 11.0	+1.1
KZN	**Kozani**	**4.91**	**353**	*e*P	**Pn**	02 42 11.0	+1.1
LIA	**Limnos Island**	**4.92**	**24**	*e*P	**Pn**	02 42 10.6	+0.7
LIA	**Limnos Island**	**4.92**	**24**	*e*P	**Pn**	02 42 10.6	+0.7
PLG	**Polygyros**	**4.98**	**8**	*e*P	**Pn**	02 42 11.0	+0.1
PLG	**Polygyros**	**4.98**	**8**	*e*P	**Pn**	02 42 11.0	+0.1
SMTH	**Samothraki Isl**	**5.55**	**24**	*e*P	**Pn**	02 42 18.4	-0.2
SMTH	**Samothraki Isl**	**5.55**	**24**	*e*P	**Pn**	02 42 18.4	-0.2
STON	**Ston**	**8.33**	**335**	*e*Pn	Pn	02 42 53.4	-3.3
STON					Sn	02 44 19.8	-10
BRTR	**Keskin Array B**	**9.78**	**61**	Pn	**Pn**	**02 43 17.3**	**+0.6**
	0.2nm,0.3s,baz=237,slow=15,SNR=7.0						
MMAI	**Mount Meron Ar**	**10.90**	**99**	Pn	Pn	02 43 27.6	-4.5
	1.0nm,0.3s,baz=298,slow=11,SNR=4.1						
MMAI					Sn	02 45 26.1	-6.5
	0.8nm,0.3s,baz=269,slow=20,SNR=3.0						
EIL	**Elat**	**11.92**	**115**	Sn	Sn	02 45 48.8	-8.7
	0.4nm,0.3s,baz=77,slow=18,SNR=4

Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**14.66**	**150**	Pn	Pn	03 07 23.6	-1.0
	0.2nm,0.3s,baz=314,slow=16,SNR=14						
PLCA	**Paso Flores**	**33.26**	**286**	P	P	03 10 35.7	+0.7
	0.8nm,0.7s,baz=158,slow=5.4,SNR=3.4						
CFAA	**Coronel Fontan**	**39.70**	**298**	P	P	03 11 29.4	-0.5
	0.6nm,0.5s,baz=158,slow=8.6,SNR=20						
CPUP	**Villa Florida**	**40.03**	**315**	P	P	03 11 32.3	-0.3
	0.5nm,0.3s,baz=142,slow=10.0,SNR=5.5						
LPAZ	**La Paz**	**53.22**	**308**	P	P	03 13 16.7	-0.1
	0.7nm,0.4s,baz=100,slow=11,SNR=7.1						
TORD	**Torodi Ar. Bea**	**76.83**	**28**	P	P	03 15 49.6	0.0
	2.1nm,0.7s,baz=200,slow=6.1,SNR=37						
YKA	**Yellowknife Ar**	**139.56**	**314**	PKP	PKPdf	03 23 24.2	+0.3
	0.2nm,0.5s,baz=127,slow=2.7,SNR=7.4						
SONM	**Songino Array**	**150.46**	**94**	PKPbc	PKPbc	03 23 48.7	0.0
	0.4nm,0.6s,baz=211,slow=2.6,SNR=4.4						
ILAR	**Eielson Array**	**153.08**	**305**	PKPbc	PKPbc	03 23 53.6	-0.3
	0.4nm,0.6s,baz=177,slow=4.6,SNR=6.0						

*DDA **10** 03:14:05.2, 37˚.22N×44˚.45E, h4km, MD3.5*
*CSEM **10** 03:14:07.0±1.1, 37˚.34N×44˚.48E, h2km, MD3.4, Error ellipse: s-maj=21.4km s-min=11.8km az=138.0*
*ISK **10** 03:14:08.0, 37˚.47N×44˚.32E, h5km, MD3.4*
ISC 10 03:14:07.5±2.5, 37˚.34N±0˚.07×44˚.46E±0˚.09, h6km±11km, n26, σ1§37/42, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAKT	**HAKKARI**	**0.64**	**290**	*i* P	**Pg**	**03 14 17.9**	**-1.9**
HAKT				*i* S	**Sg**	**03 14 28.1**	**0.0**
HAKT	**HAKKARI**	**0.64**	**290**	*i* P	**Pg**	**03 14 17.9**	**-1.9**
HAKT				*i* S	**Sg**	**03 14 28.1**	**0.0**
CUKT	**Cukurca**	**0.69**	**262**	*e*PG	**Pg**	**03 14 20.2**	**-0.5**
CUKT				*e*SG	**Sb**	**03 14 30.9**	**-0.9**
CUKT	**Cukurca**	**0.69**	**262**	*e*Pg	**Pg**	**03 14 20.2**	**-0.5**
CUKT				*e*Sg	**Sb**	**03 14 30.9**	**-0.9**
TVAN	**Van**	**1.45**	**325**	*i* P	**Pn**	**03 14 33.8**	**-0.7**
TVAN				*i* S	**Sg**	**03 14 56.7**	**+2.6**
TVAN	**Van**	**1.45**	**325**	*i* P	**Pn**	**03 14 33.8**	**-0.7**
TVAN				*i* S	**Sg**	**03 14 56.7**	**+2.6**
GEVA	**Gevas**	**1.47**	**312**	*i* P	**Pn**	**03 14 35.1**	**+0.3**
GEVA				*i* S	**Sg**	**03 14 56.7**	**+1.9**
GEVA	**Gevas**	**1.47**	**312**	*i* P	**Pn**	**03 14 35.1**	**+0.3**
GEVA				*i* S	**Sg**	**03 14 56.7**	**+1.9**
VANB	**Van**	**1.51**	**326**	*e*PN	**Pn**	**03 14 34.0**	**-1.3**
VANB				*e*SN	**Sn**	**03 14 54.7**	**-0.7**
VANB	**Van**	**1.51**	**326**	*e*Pn	**Pn**	**03 14 34.0**	**-1.3**
VANB				*e*Sn	**Sn**	**03 14 54.7**	**-0.7**
SIRN	**S¨¨rnak**	**1.64**	**276**	*i* P	**Pn**	**03 14 37.0**	**0.0**
SIRN				*i* S	**Sg**	**03 15 02.4**	**+2.3**
SIRN	**S¨¨rnak**	**1.64**	**276**	*i* P	**Pn**	**03 14 37.0**	**0.0**
SIRN				*i* S	**Sg**	**03 15 02.4**	**+2.3**
CLDR	**Caldiran**	**1.85**	**347**	*e*PN	**Pn**	**03 14 39.9**	**-0.1**
CLDR				*e*SN	**Sn**	**03 15 03.8**	**0.0**
CLDR	**Caldiran**	**1.85**	**347**	*e*Pn	**Pn**	**03 14 39.9**	**-0.1**
CLDR				*e*Sn	**Sn**	**03 15 03.8**	**0.0**
BTMT	**Batman**	**2.50**	**291**	*e*PN	**Pb**	**03 14 51.0**	**-1.9**
BTMT	**Batman**	**2.50**	**291**	*e*Pn	**Pb**	**03 14 51.0**	**-1.9**
BEST	**Besiri**	**2.59**	**283**	*i* P	**Pb**	**03 14 55.6**	**+1.2**
BEST				*i* S	**Sb**	**03 15 28.0**	**+1.4**
GNI	**Garni**	**2.81**	**4**	*e*PN	**Pn**	**03 14 54.0**	**+0.8**
GNI	**Garni**	**2.81**	**4**	*e*Pn	**Pn**	**03 14 54.0**	**+0.8**
MARD	**Mardin**	**2.93**	**271**	*i* P	**Pb**	**03 15 01.2**	**+0.8**
MARD				*i* S	**Sg**	**03 15 40.6**	**-1.2**
BNGB	**Bing¨¶l**	**3.40**	**300**	*e*PN	**Pn**	**03 15 01.8**	**+0.5**
BINT	**Bingol**	**3.49**	**297**	*e*Pn	**Pn**	**03 15 01.8**	**-0.6**
SVRC	**Sivrice-ELAZID**	**4.21**	**286**	*e*PN	**Pn**	**03 15 13.6**	**+1.2**
SVRC	**Sivrice-ELAZID**	**4.21**	**286**	*e*Pn	**Pn**	**03 15 13.6**	**+1.2**
PTK	**Pertek**	**4.29**	**293**	*e*PN	**Pn**	**03 15 15.4**	**+1.9**
PTK	**Pertek**	**4.29**	**293**	*e*Pn	**Pn**	**03 15 15.4**	**+1.9**

*IDC **10** 03:20:54.6±0.7, 1˚.29N×85˚.36W, h0km, mb3.8/12, mb1 4.1/12, mb1mx4.0/21, mbtmp3.8/12, ML5.0/2, MS4.3/12, Ms1 4.3/12, ms1mx4.0/29, Error ellipse: s-maj=42.0km s-min=13.0km az=56.0*
*NEIC **10** 03:20:56.2±0.3, 1˚.29N×85˚.32W, h10km, mb4.4/22, Error ellipse: s-maj=10.4km s-min=5.8km az=51.0*
*BJI **10** 03:20:56.3, 1˚.30N×85˚.30W, h10km*
*ISCJB **10** 03:20:57.0±0.3, 1˚.31N±0˚.06×85˚.29W±0˚.07, h27km, mb4.1/33, MS4.3/10, Error ellipse: s-maj=11.2km s-min=6.0km az=140.8*
*GCMT **10** 03:20:58.2±0.4, 1˚.25N×85˚.42W, h25km±1km, MW5.1, Moment Tensor Solution. s18,c20; s67,c89; Moment tensor: Scale 10^16 Nm; Mrr 0.44±.36; Mθθ 2.54±.34; Mϕϕ -2.98±.38; Mrθ 1.30±.59; Mrϕ 5.04±.21; Mθϕ 1.20±.63; Best double couple: M0 6.00000×10^16 NP1:ϕs 106.00000°, δ 75.00000°, λ 10.00000°. NP2:ϕs 13.00000°, δ 80.00000°, λ 165.00000°. Principal axes: T 6.0600, Plg17.0000°, Azm329.0000°; N -0.0700, Plg72.0000°, Azm161.0000°; P -5.9900, Plg3.0000°, Azm60.0000°; Data Used: II G IC IU CN.*
ISC 10 03:20:58.3±0.4, 1˚.29N±0˚.07×85˚.30W±0˚.09, h27km, n131, σ1§48/132, mb4.2/34, MS4.3/10, 24C-27D, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**5.35**	**249**	*e*Pn	**Pn**	**03 22 16.4**	**-0.1**
	154nm,0.9s						
OTAV	**Otavalo**	**6.93**	**99**	*e*Pn	**Pn**	**03 22 37.4**	**-1.2**
BCIP	**Isla Barro Col**	**9.53**	**35**	*e*Pn	**Pn**	**03 23 13.3**	**-0.6**
ATAH	**Atahualpa**	**10.84**	**141**	Pn	**Pn**	**03 23 33.6**	**+1.3**
ATAH	**Atahualpa**	**10.84**	**141**	Pn	**Pn**	**03 23 33.6**	**+1.3**
	14nm,0.3s,baz=326,slow=12,SNR=61						
NNA	**Nana**	**15.64**	**148**	*e*Pn	**Pn**	**03 24 37.7**	**+0.6**
	373nm,1.9s						
NNA	**Nana**	**15.64**	**148**	Pn	**Pn**	**03 24 37.6**	**+0.4**
	5.9nm,0.3s,baz=324,slow=13,SNR=23						
NNA				LR	LR	03 29 44.6	
	comp=Z,875nm,21.4s,baz=309,slow=34						
SDV	**Santo Domingo**	**16.44**	**62**	*e*P	**P**	**03 24 49.9**	**-0.2**
	182nm,2.7s						
TEIG	**Tepich**	**19.04**	**351**	LR	LR	03 32 08.5	
	comp=Z,548nm,19.6s,baz=203,slow=35						
SAML	**Samuel**	**24.27**	**115**	*e*P	**P**	**03 26 13.1**	**-0.6**
	101nm,1.9s						
LPAZ	**La Paz**	**24.34**	**137**	*e*P	**P**	**03 26 15.3**	**+0.4**
	74nm,1.3s						
LPAZ	**La Paz**	**24.34**	**137**	P	**P**	**03 26 15.0**	**+0.1**
	39nm,1.2s,baz=328,slow=9.7,SNR=52						
SIV	**San Ignacio**	**29.46**	**127**	P	**P**	**03 26 58.1**	**-2.2**
SIV	**San Ignacio**	**29.46**	**127**	P	**P**	**03 26 58.1**	**-2.2**
	1.1nm,0.6s,baz=309,slow=8.8,SNR=4.1						
SIV				LR	LR	03 39 11.5	
	comp=Z,557nm,21.7s,slow=37						
532A	**Rocksprings**	**31.86**	**336**	⇑P	**P**	**03 27 22.7**	**+1.3**
	baz=32						
431A	**Sonora**	**32.64**	**335**	P	**P**	**03 27 29.0**	**+0.8**
	baz=33,SNR=8.3						
628A	**Black Gap, Mar**	**32.66**	**331**	⇓P	**P**	**03 27 29.5**	**+1.1**
	baz=33						
332A	**Millersview**	**32.90**	**337**	P	**P**	**03 27 31.3**	**+0.8**
	baz=33,SNR=9.5						
TXAR	**Lajitas Array**	**32.92**	**330**	P	**P**	**03 27 30.9**	**+0.1**
TXAR	**Lajitas Array**	**32.92**	**330**	P	**P**	**03 27 30.9**	**+0.1**
	0.4nm,0.8s,baz=142,slow=10,SNR=5.8						
TXAR				LR	LR	03 39 47.5	
	comp=Z,262nm,21.7s,baz=235,slow=34						
232A	**Coleman**	**33.31**	**337**	⇓P	**P**	**03 27 35.2**	**+1.1**
	baz=33						
626A	**Big Bend Ranch**	**33.34**	**329**	⇓P	**P**	**03 27 35.1**	**+0.8**
	baz=34						
KMSC	**Kings Mountain**	**33.88**	**6**	⇓P	**P**	**03 27 41.0**	**+2.1**
	baz=34						
329A	**Wagon Wheel Ra**	**33.92**	**334**	⇓P	**P**	**03 27 40.4**	**+1.0**
	baz=34						
ABTX	**Abilene, Hawle**	**33.97**	**338**	⇑P	**P**	**03 27 40.5**	**+0.8**
	baz=34						
328A	**Wristen Ranch,**	**34.20**	**333**	⇓P	**P**	**03 27 42.8**	**+1.0**
	baz=34						
Z32A	**Haskell**	**34.52**	**339**	⇑P	**P**	**03 27 45.7**	**+1.2**
	baz=35						
425A	**Indio Mountain**	**34.77**	**329**	P	**P**	**03 27 47.4**	**+0.6**
	baz=35,SNR=6.2						
Z31A	**Sharp Cattle R**	**34.77**	**338**	⇓P	**P**	**03 27 47.7**	**+1.0**
	baz=35						
128A	**Castleberry Fa**	**35.11**	**334**	⇓P	**P**	**03 27 50.5**	**+0.8**
	baz=35						
Y31A	**Rekieta Farm,**	**35.39**	**338**	⇑P	**P**	**03 27 53.1**	**+1.1**
	baz=36						
226B	**Tecolote Peak,**	**35.42**	**332**	⇑P	**P**	**03 27 53.8**	**+1.4**
	baz=36						
127A	**Arkansas Junct**	**35.54**	**333**	⇑P	**P**	**03 27 54.4**	**+0.9**
	baz=36						
324A	**Moseley Ranch,**	**35.54**	**330**	⇑P	**P**	**03 27 54.1**	**+0.6**
	baz=36						
MNTX	**Cornudas Mount**	**35.70**	**330**	*e*P	**P**	**03 27 55.2**	**+0.5**
	4.2nm,1.4s						
X31A	**McDonald Ranch**	**35.89**	**339**	⇓P	**P**	**03 27 57.3**	**+1.0**
	baz=36						
X30A	**Coker Ranch, T**	**36.05**	**338**	⇓P	**P**	**03 27 59.2**	**+1.5**
	baz=36						
125A	**Gardner Draw,**	**36.13**	**332**	⇓P	**P**	**03 27 59.7**	**+1.2**
	baz=36						
Z26A	**Caprock**	**36.33**	**333**	P	**P**	**03 28 01.5**	**+1.4**
	baz=36,SNR=5.0						
AMTX	**Amarillo**	**36.75**	**337**	*e*P	**P**	**03 28 04.4**	**+0.8**
	8.7nm,1.0s						
320A	**Kipp Ranch, An**	**37.09**	**326**	⇓P	**P**	**03 28 07.3**	**+0.6**
	baz=37						
W27A	**Bowe Ranch, En**	**37.45**	**336**	⇑P	**P**	**03 28 10.7**	**+0.9**
	baz=38						
Y24A	**Capitan**	**37.54**	**332**	⇓P	**P**	**03 28 12.3**	**+1.7**
	baz=38						
121A	**Cookes Peak, D**	**37.60**	**328**	⇓P	**P**	**03 28 12.6**	**+1.5**
	baz=38						
Y23A	**Lovelace Mesa,**	**37.84**	**331**	⇑P	**P**	**03 28 14.3**	**+1.2**
	baz=38,SNR=6.0						
W25A	**X Bar L Ranch,**	**38.18**	**334**	⇓P	**P**	**03 28 16.8**	**+0.9**
	baz=38						
BNM	**Barren Site**	**38.29**	**331**	*e*P	**P**	**03 28 18.6**	**+1.7**
	3.8nm,1.1s						
V26A	**Tequesquite Ra**	**38.38**	**335**	P	**P**	**03 28 18.5**	**+0.9**
	baz=38,SNR=8.3						
Z20A	**Nine Sixteen R**	**38.48**	**328**	⇓P	**P**	**03 28 20.0**	**+1.5**
	baz=39						
CPUP	**Villa Florida**	**38.51**	**137**	P	**P**	**03 28 19.2**	**+0.7**
CPUP	**Villa Florida**	**38.51**	**137**	P	**P**	**03 28 19.2**	**+0.7**
	0.2nm,0.4s,baz=260,slow=14,SNR=2.4						
CPUP				LR	LR	03 45 54.9	
	comp=Z,383nm,19.1s,baz=344,slow=39						
W24A	**Lazy 6 Ranch,**	**38.59**	**333**	P	**P**	**03 28 20.7**	**+1.2**
	baz=39,SNR=5.2						
Y21A	**Point of Rocks**	**38.70**	**330**	⇓P	**P**	**03 28 21.7**	**+1.3**
	baz=39						
V25A	**Rancho No Teng**	**38.77**	**335**	⇓P	**P**	**03 28 22.3**	**+1.4**
	baz=39						
ANMO	**Albuquerque**	**38.86**	**332**	*e*P	**P**	**03 28 22.6**	**+0.9**
	2.6nm,1.1s						
ANMO	**Albuquerque**	**38.86**	**332**	P	**P**	**03 28 22.1**	**+0.5**
	0.4nm,0.3s,baz=116,slow=5.6,SNR=4.1						
U26A	**Atchley Ranch,**	**38.88**	**336**	⇑P	**P**	**03 28 22.5**	**+0.7**
	baz=39						
W23A	**Werner Place,**	**38.89**	**332**	⇑P	**P**	**03 28 23.1**	**+1.1**
	baz=39						
V24A	**Rampart Ranch,**	**38.96**	**334**	⇑P	**P**	**03 28 23.6**	**+1.1**
	baz=39						
TUC	**Tucson**	**39.09**	**325**	*e*P	**P**	**03 28 24.2**	**+0.6**
	0.3nm,0.7s						
X21A	**Alamocita Cree**	**39.10**	**330**	⇓P	**P**	**03 28 25.0**	**+1.2**
	baz=39						
U25A	**Circle Dot Ran**	**39.16**	**335**	⇑P	**P**	**03 28 25.2**	**+1.0**
	baz=39						
S26A	**Kim**	**39.84**	**337**	⇑P	**P**	**03 28 31.3**	**+1.6**
	baz=40						
V22A	**San Miguel Ran**	**39.86**	**332**	⇑P	**P**	**03 28 31.8**	**+1.8**
	baz=40						
R28A	**Tribune**	**39.86**	**340**	⇑P	**P**	**03 28 30.7**	**+0.8**
	baz=40						
U23A	**El Rito**	**39.87**	**333**	⇓P	**P**	**03 28 31.2**	**+1.1**
	baz=40,SNR=5.7						
T24A	**Torres, Weston**	**40.00**	**335**	⇓P	**P**	**03 28 33.2**	**+1.9**
	baz=40						
S25A	**Robets Cordova**	**40.25**	**336**	⇑P	**P**	**03 28 34.8**	**+1.6**
	baz=40						
BDFB	**Brasilia**	**40.51**	**116**	P	**P**	**03 28 36.7**	**+1.1**
BDFB	**Brasilia**	**40.51**	**116**	P	**P**	**03 28 36.7**	**+1.1**
	1.7nm,0.9s,baz=264,slow=15,SNR=3.0						
BDFB				LR	LR	03 46 52.7	
	comp=Z,401nm,18.6s,baz=78,slow=38						
S24A	**Houchin Ranch,**	**40.55**	**335**	⇓P	**P**	**03 28 37.3**	**+1.4**
	baz=41						
R25A	**Fountain Ranch**	**40.61**	**337**	⇑P	**P**	**03 28 37.4**	**+1.3**
	baz=41						
U21A	**Nageezi**	**40.63**	**332**	⇑P	**P**	**03 28 38.1**	**+1.7**
	baz=41						
T22A	**Edith**	**40.76**	**333**	⇑P	**P**	**03 28 39.2**	**+1.7**
	baz=41						
SDCO	**Great Sand Dun**	**40.76**	**335**	*e*P	**P**	**03 28 39.0**	**+1.4**
	23nm,2.3s						
Q26A	**Hugo**	**40.99**	**338**	⇓P	**P**	**03 28 41.2**	**+1.9**
	baz=41						
X16A	**Lo Mia Camp, P**	**41.01**	**326**	⇓P	**P**	**03 28 41.0**	**+1.4**
	baz=41						
T21A	**Navajo Lake**	**41.03**	**333**	⇓P	**P**	**03 28 41.5**	**+1.8**
	baz=41						
S20A	**Disappointment**	**42.09**	**332**	⇑P	**P**	**03 28 49.9**	**+1.4**
	baz=42						
P23A	**Jefferson**	**42.28**	**336**	P	**P**	**03 28 51.5**	**+1.4**
	baz=42,SNR=5.5						
PV01	**Paradox Valley**	**42.44**	**333**	*e*P	**P**	**03 28 53.2**	**+1.9**
	184nm,1.2s						
ISCO	**Idaho Springs**	**42.56**	**337**	⇓P	**P**	**03 28 52.7**	**+0.4**
	baz=43						
SMCO	**Snowmass**	**42.59**	**335**	*e*P	**P**	**03 28 52.9**	**+0.2**
	5.9nm,1.3s						
S18A	**Hurst Farm, Bl**	**42.76**	**331**	⇑P	**P**	**03 28 55.1**	**+1.2**
	baz=43						
P22A	**Eagle**	**42.85**	**335**	⇑P	**P**	**03 28 55.9**	**+1.4**
	baz=43						
W13A	**Hualapai Mount**	**42.89**	**325**	⇓P	**P**	**03 28 56.2**	**+1.3**
	baz=43						
P21A	**Newcastle**	**43.08**	**335**	P	**P**	**03 28 57.6**	**+1.2**
	baz=43,SNR=5.5						
M26A	**McRoberts Ranc**	**43.11**	**340**	⇑P	**P**	**03 28 58.5**	**+1.9**
	baz=43						
PLCA	**Paso Flores**	**43.93**	**164**	*e*P	**P**	**03 29 02.5**	**-0.5**
	9.4nm,0.9s						
PLCA	**Paso Flores**	**43.93**	**164**	P	**P**	**03 29 02.0**	**-1.1**
	6.2nm,1.0s,baz=337,slow=11,SNR=6.7						
CCUT	**Cedar City**	**44.38**	**328**	*e*P	**P**	**03 29 08.9**	**+2.0**
	5.2nm,1.4s						
HWUT	**Hardware Ranch**	**46.59**	**333**	*e*P	**P**	**03 29 24.8**	**+0.4**
	3.5nm,0.7s						
PDAR	**Pinedale Array**	**46.66**	**335**	P	**P**	**03 29 24.6**	**-0.2**
PDAR				PcP	**PcP**	**03 31 01.6**	**+3.1**
PDAR	**Pinedale Array**	**46.66**	**335**	P	**P**	**03 29 24.6**	**-0.2**
	0.8nm,0.9s,baz=127,slow=11,SNR=5.0						
PDAR				PcP	**PcP**	**03 31 01.6**	**+3.1**
	0.4nm,0.7s,baz=96,slow=4.9,SNR=2.6						
PDAR				LR	LR	03 49 47.5	
	comp=Z,264nm,18.1s,baz=2.8,slow=37						
AGMN	**Agassiz Nation**	**47.71**	**350**	*e*P	**P**	**03 29 32.5**	**-0.2**
	5.5nm,1.1s						
NVAR	**Mina Array Bea**	**47.75**	**325**	P	**P**	**03 29 32.1**	**-1.4**
NVAR				PcP	**PcP**	**03 31 04.9**	**+2.5**
NVAR	**Mina Array Bea**	**47.75**	**325**	P	**P**	**03 29 32.1**	**-1.4**
	1.0nm,0.9s,baz=142,slow=7.5,SNR=4.9						
NVAR				PcP	**PcP**	**03 31 04.9**	**+2.5**
	0.5nm,0.6s,baz=162,slow=3.8,SNR=3.1						
TPAW	**Teton Pass**	**47.84**	**335**	*e*P	**P**	**03 29 33.5**	**-0.6**
	2.8nm,0.9s						
HLID	**Hailey**	**49.44**	**332**	*e*P	**P**	**03 29 47.1**	**+0.8**
	1.3nm,0.8s						
ULM	**Lac du Bonnet**	**49.60**	**351**	P	**P**	**03 29 46.6**	**-0.5**
ULM	**Lac du Bonnet**	**49.60**	**351**	P	**P**	**03 29 46.6**	**-0.5**
	3.1nm,0.5s,baz=170,slow=4.9,SNR=2.3						
MCMT	**McKenzie Canyo**	**49.72**	**334**	*e*P	**P**	**03 29 49.2**	**+0.7**
BOZ	**Bozeman (W)**	**49.87**	**336**	*e*P	**P**	**03 29 49.4**	**-0.1**
	9.0nm,1.9s						
MFID	**Camas Ranch**	**49.99**	**331**	*e*P	**P**	**03 29 51.2**	**+0.7**
	18nm,1.8s						
WVOR	**Wild Horse Val**	**50.70**	**328**	*e*P	**P**	**03 29 55.1**	**-0.7**
	8.1nm,1.4s						
MSO	**Missoula**	**51.78**	**335**	*e*P	**P**	**03 30 04.4**	**+0.5**
	4.0nm,1.3s						
YKA	**Yellowknife Ar**	**64.87**	**345**	P	**P**	**03 31 33.4**	**-1.5**
YKA	**Yellowknife Ar**	**64.87**	**345**	P	**P**	**03 31 33.4**	**-1.5**
	1.1nm,0.7s,baz=141,slow=6.3,SNR=13						
YKW3	**Yellowknife Ar**	**64.93**	**346**	*e*P	**P**	**03 31 35.1**	**-0.1**
	0.1nm,1.1s						
DLBC	**Dease Lake**	**66.88**	**336**	LR	LR	03 59 15.6	
	comp=Z,352nm,21.3s,baz=314,slow=34						
INK	**Inuvik**	**74.43**	**343**	LR	LR	04 08 53.8	
	comp=Z,232nm,18.1s,baz=125,slow=39						
ILAR	**Eielson Array**	**77.05**	**337**	P	**P**	**03 32 50.0**	**+1.2**
ILAR	**Eielson Array**	**77.05**	**337**	P	**P**	**03 32 50.0**	**+1.2**
	0.3nm,0.6s,baz=133,slow=3.8,SNR=5.4						
ESDC	**Sonseca Array**	**82.51**	**50**	P	**P**	**03 33 20.4**	**+1.4**
ESDC	**Sonseca Array**	**82.51**	**50**	P	**P**	**03 33 20.4**	**+1.4**
	0.7nm,0.6s,baz=281,slow=4.3,SNR=7.0						
TORD	**Torodi Ar. Bea**	**86.79**	**77**	P	**P**	**03 33 41.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**86.79**	**77**	P	**P**	**03 33 41.1**	**+0.1**
	0.4nm,1.0s,baz=263,slow=8.1,SNR=2.7						
AFI	**Afiamalu**	**86.88**	**256**	LR	LR	04 02 02.8	
	comp=Z,307nm,19.5s,baz=289,slow=28						
SNAA	**Sanae**	**88.84**	**162**	*e*P	**P**	**03 33 51.1**	**+1.3**
	6.4nm,1.0s						
QSPA	**South Pole Qui**	**91.33**	**180**	*e*P	**P**	**03 34 02.3**	**+0.8**
	235nm,3.0s						
NOA	**NORSAR Array B**	**92.05**	**29**	LR	LR	04 11 36.2	
	comp=Z,67nm,18.2s,baz=40,slow=33						
GERES	**GERESS Array B**	**94.97**	**41**	LR	LR	04 09 08.0	
	comp=Z,154nm,20.5s,baz=197,slow=30						
CN2	**Changchun**	**127.35**	**332**	*e*PKP	**PKPdf**	**03 39 57.5**	**-3.4**
WMQ	**Urumqi**	**134.65**	**7**	*e*PKP	**PKPdf**	**03 40 16.8**	**+1.9**
HHC	**Hu-ho-hao-te**	**135.33**	**342**	*e*PKP	**PKPdf**	**03 40 12.1**	**-4.2**
HHC				SKS	**SKSdf**	**03 47 20.1**	**-5.8**
KSH	**Kashi**	**135.91**	**21**	*e*PKP	**PKPdf**	**03 40 17.1**	**-0.3**
KSH				*e*PKS	**PKSdf**	**03 43 52.0**	**-1.8**
KSH				*e*SKS	**SKSdf**	**03 47 22.6**	**-4.4**
ASAR	**Alice Springs**	**135.99**	**237**	PKP	**PKPdf**	**03 40 17.1**	**-0.8**
ASAR	**Alice Springs**	**135.99**	**237**	PKP	**PKPdf**	**03 40 17.1**	**-0.8**
	0.3nm,0.8s,baz=94,slow=2.8,SNR=3.3						
WRA	**Warramunga Arr**	**137.04**	**242**	PKP	**PKPdf**	**03 40 20.0**	**+0.1**
WRA	**Warramunga Arr**	**137.04**	**242**	PKP	**PKPdf**	**03 40 20.0**	**+0.1**
	0.6nm,0.9s,baz=101,slow=2.3,SNR=3.9						
LZH	**Lanzhou**	**141.85**	**348**	*e*PKP	**PKPdf**	**03 40 25.7**	**-2.7**

*IDC **10** 03:49:05.3±0.8, 34˚.07N×70˚.04E, h0km, mb3.7/13, mb1 3.8/18, mb1mx3.7/34, mbtmp3.7/18, ML3.8/5, Error ellipse: s-maj=18.7km s-min=17.6km az=17.0*
*ISCJB **10** 03:49:08.7±0.5, 34˚.13N±0˚.05×70˚.03E±0˚.07, h33km, mb3.6/12, Error ellipse: s-maj=8.7km s-min=5.3km az=146.3*
*NNC **10** 03:49:09.6±1.6, 34˚.34N×69˚.59E, h0km, mb3.6, mpv4.0, Error ellipse: s-maj=19.0km s-min=8.2km az=42.0*
ISC 10 03:49:10.8±0.7, 34˚.13N±0˚.07×69˚.95E±0˚.07, h35km, n41, σ1§26/41, mb3.7/12, 4C-6D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.65**	**100**	⇓P	**Pn**	**03 49 37.4**	**0.0**
CEP				S	Sn	03 50 04.0	+6.5
THW	**Thamme Wali**	**2.00**	**131**	P	**Pn**	**03 49 43.7**	**+1.6**
THW				S	Sn	03 50 12.0	+6.0
CHCP	**Chirah Chowk**	**2.79**	**99**	P	**Pn**	**03 49 54.5**	**+1.5**
THN	**Thein Dam**	**5.11**	**108**	*e*PKP	**Pn**	**03 50 24.5**	**-0.4**
THN				*ex*	x	03 50 42.0	
DLH	**Dalhousie**	**5.28**	**106**	*e*PKP	**Pn**	**03 50 26.0**	**-1.3**
DLH				*ex*	**Sn**	**03 51 28.0**	**+1.0**
SDNR	**Sundarnagar**	**6.46**	**112**	*ex*	**Pn**	**03 50 45.1**	**+1.7**
SDNR				*ex*	x	03 52 32.0	
SMLA	**Simla**	**6.78**	**114**	*i* x	**Sn**	**03 52 03.7**	**-0.1**
KK31	**Karatay Array**	**8.97**	**3**	P	**Pn**	**03 51 18.1**	**+0.2**
	2.8nm,0.5s,baz=190,slow=13,SNR=57						
KK31				⇑S	**Sn**	**03 52 58.8**	**+1.1**
	2.7nm,0.4s,baz=192,slow=23,SNR=6.3						
AAK	**Ala-Archa**	**9.21**	**21**	Pn	**Pn**	**03 51 22.0**	**+0.7**
	1.0nm,0.3s,baz=178,slow=7.2,SNR=8.7						
AAK				Sn	**Sn**	**03 53 03.9**	**+0.3**
	0.3nm,0.3s,baz=335,slow=22,SNR=5.1						
TKM2	**Tokmak 2**	**9.83**	**25**	⇑P	**Pn**	**03 51 32.0**	**+2.3**
	3.7nm,0.8s						
PYUN	**Piuthan**	**12.68**	**115**	*e*P	**Pn**	**03 52 06.0**	**-2.8**
	15nm,0.5s						
PYUN				*e*S	Sn	03 54 19.6	-9.2
DANN	**Dangsing**	**13.14**	**112**	*e*P	Pn	03 52 11.3	-3.9
	5.4nm,0.3s						
KOLN	**Koldanda**	**13.31**	**115**	*e*P	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAN	**Janina**	**0.17**	**206**	*e*P	**Pn**	**03 54 45.8**	**-0.2**
JAN				*e*S	**Sn**	**03 54 52.8**	**-0.3**
JAN	**Janina**	**0.17**	**206**	*e*P	**Pn**	**03 54 45.8**	**-0.2**
JAN				*e*S	**Sn**	**03 54 52.8**	**-0.3**
KZN	**Kozani**	**0.80**	**52**	*e*P	**Pn**	**03 54 51.9**	**-0.1**
KZN				*e*S	**Sn**	**03 55 03.3**	**-0.3**
KZN	**Kozani**	**0.80**	**52**	*e*P	**Pn**	**03 54 51.9**	**-0.1**
KZN				*e*S	**Sn**	**03 55 03.3**	**-0.3**
KBN	**Korca**	**0.82**	**351**	*e*PG	**Pn**	**03 54 53.4**	**+1.1**
KBN				*i* SG	**Sn**	**03 55 04.7**	**+0.7**
KBN	**Korca**	**0.82**	**351**	*e*Pg	**Pn**	**03 54 53.4**	**+1.1**
KBN				*i* Sg	**Sn**	**03 55 04.7**	**+0.7**
THL	**Klokotos Trika**	**0.86**	**106**	*e*P	**Pn**	**03 54 52.6**	**0.0**
THL				*e*S	**Sn**	**03 55 04.4**	**-0.3**
THL	**Klokotos Trika**	**0.86**	**106**	*e*P	**Pn**	**03 54 52.6**	**0.0**
THL				*e*S	**Sn**	**03 55 04.4**	**-0.3**
KEK	**Kerkira**	**0.89**	**264**	*e*P	**Pn**	**03 54 53.7**	**+0.6**
KEK	**Kerkira**	**0.89**	**264**	*e*P	**Pn**	**03 54 53.7**	**+0.6**
EVR	**Evrytania**	**1.11**	**143**	*e*P	**Pn**	**03 54 57.8**	**+1.8**
EVR	**Evrytania**	**1.11**	**143**	*e*P	**Pn**	**03 54 57.8**	**+1.8**
BIA	**Bitola**	**1.24**	**13**	*i* Pn	**Pn**	**03 54 58.3**	**+0.7**
BIA				*e*Sn	**Sn**	**03 55 14.7**	**+1.1**
	comp=E,68nm,0.6s						
BIA	**Bitola**	**1.24**	**13**	*i* Pn	**Pn**	**03 54 58.3**	**+0.7**
BIA				*e*Sn	**Sn**	**03 55 14.6**	**+1.1**
	comp=E,68nm,0.6s						
EFP	**Efpalio**	**1.57**	**151**	*e*P	**Pn**	**03 55 03.4**	**+1.4**
EFP	**Efpalio**	**1.57**	**151**	*e*P	**Pn**	**03 55 03.4**	**+1.4**
VLS	**Valsamata**	**1.66**	**190**	*e*P	**Pn**	**03 55 02.7**	**-0.5**
VLS	**Valsamata**	**1.66**	**190**	*e*P	**Pn**	**03 55 02.7**	**-0.5**
KALE	**Kalithea**	**1.69**	**146**	*e*P	**Pn**	**03 55 05.4**	**+1.7**
KALE	**Kalithea**	**1.69**	**146**	*e*P	**Pn**	**03 55 05.4**	**+1.7**
LAKA	**Lakka**	**1.76**	**153**	*e*P	**Pn**	**03 55 06.3**	**+1.7**
LAKA	**Lakka**	**1.76**	**153**	*e*P	**Pn**	**03 55 06.3**	**+1.7**
RLS	**Riolos of Patr**	**1.80**	**167**	*e*P	**Pn**	**03 55 06.0**	**+1.0**
RLS	**Riolos of Patr**	**1.80**	**167**	*e*P	**Pn**	**03 55 06.0**	**+1.0**
NEO	**Neokhori**	**1.83**	**105**	*e*P	**Pn**	**03 55 05.7**	**+0.2**
NEO				*e*S	**Sn**	**03 55 26.9**	**-0.8**
NEO	**Neokhori**	**1.83**	**105**	*e*P	**Pn**	**03 55 05.7**	**+0.2**
NEO				*e*S	**Sn**	**03 55 26.9**	**-0.8**
PHP	**Peshkopia**	**1.91**	**349**	*e*PN	**Pn**	**03 55 08.5**	**+1.9**
PHP	**Peshkopia**	**1.91**	**349**	*e*Pn	**Pn**	**03 55 08.5**	**+1.9**
VAY	**Valandovo**	**1.95**	**39**	*i* Pn	**Pn**	**03 55 06.2**	**-0.9**
VAY				*e*Lg	Lg	03 55 28.8	
	comp=E,31nm,0.7s						
VAY	**Valandovo**	**1.95**	**39**	*e*Lg	Lg	03 55 29.2	
	comp=E,31nm,0.7s						
PLG	**Polygyros**	**2.00**	**73**	*e*P	**Pn**	**03 55 07.7**	**0.0**
PLG				*e*S	**Sn**	**03 55 29.9**	**-1.8**
PLG	**Polygyros**	**2.00**	**73**	*e*P	**Pn**	**03 55 07.7**	**0.0**
PLG				*e*S	**Sn**	**03 55 29.9**	**-1.8**
KLV	**Kalavryta, Ach**	**2.00**	**152**	*e*P	**Pn**	**03 55 09.2**	**+1.4**
KLV	**Kalavryta, Ach**	**2.00**	**152**	*e*P	**Pn**	**03 55 09.2**	**+1.4**
GUR	**Goura**	**2.17**	**149**	*e*P	**Pn**	**03 55 10.8**	**+0.7**
GUR	**Goura**	**2.17**	**149**	*e*P	**Pn**	**03 55 10.8**	**+0.7**
SKO	**Skopje**	**2.19**	**10**	*i* Pn	Pn	03 55 15.1	+4.8
SKO	**Skopje**	**2.19**	**10**	*i* Pn	Pn	03 55 15.6	+5.3
PUK	**Puka**	**2.37**	**341**	*e*PN	**Pn**	**03 55 13.9**	**+1.1**
PUK	**Puka**	**2.37**	**341**	*e*Pn	**Pn**	**03 55 13.9**	**+1.1**
LTK	**Loutraki**	**2.38**	**138**	*e*P	**Pn**	**03 55 13.4**	**+0.4**
LTK	**Loutraki**	**2.38**	**138**	*e*P	**Pn**	**03 55 13.4**	**+0.4**
KKB	**Krupnik**	**2.61**	**38**	P	**Pn**	**03 55 16.7**	**+0.6**
KKB	**Krupnik**	**2.61**	**38**	P	**Pn**	**03 55 16.7**	**+0.6**
BCI	**Bajram Curri**	**2.64**	**346**	*e*PN	**Pn**	**03 55 18.4**	**+1.9**
BCI	**Bajram Curri**	**2.64**	**346**	*e*Pn	**Pn**	**03 55 18.4**	**+1.9**
VLX	**Vlachokerasia**	**2.68**	**155**	*e*P	**Pn**	**03 55 19.2**	**+2.0**
VLX	**Vlachokerasia**	**2.68**	**155**	*e*P	**Pn**	**03 55 19.2**	**+2.0**
NVR	**Nevrokopi**	**2.70**	**54**	*e*P	**Pn**	**03 55 17.2**	**-0.1**
NVR	**Nevrokopi**	**2.70**	**54**	*e*P	**Pn**	**03 55 17.2**	**-0.1**
ITM	**Ithomi**	**2.74**	**163**	*e*P	**Pn**	**03 55 19.2**	**+1.4**
ITM	**Ithomi**	**2.74**	**163**	*e*P	**Pn**	**03 55 19.2**	**+1.4**
MMB	**Musomiste**	**2.76**	**49**	P	**Pn**	**03 55 18.1**	**0.0**
MMB	**Musomiste**	**2.76**	**49**	P	**Pn**	**03 55 18.1**	**0.0**
PE1	**Pezze di Greco**	**2.87**	**291**	*e*Pn	**Pn**	**03 55 19.0**	**-0.6**
DID	**Didima**	**2.92**	**141**	*e*P	**Pn**	**03 55 20.5**	**+0.2**
DID	**Didima**	**2.92**	**141**	*e*P	**Pn**	**03 55 20.5**	**+0.2**
VTS	**Vitosha**	**3.26**	**31**	P	**Pn**	**03 55 26.3**	**+1.3**
VTS	**Vitosha**	**3.26**	**31**	P	**Pn**	**03 55 26.3**	**+1.3**
RZN	**Rozhen**	**3.42**	**56**	P	**Pn**	**03 55 28.1**	**+0.8**
RZN	**Rozhen**	**3.42**	**56**	P	**Pn**	**03 55 28.1**	**+0.8**
VLI	**Veliai**	**3.46**	**153**	*e*P	**Pn**	**03 55 27.8**	**+0.1**
VLI	**Veliai**	**3.46**	**153**	*e*P	**Pn**	**03 55 27.8**	**+0.1**
STON	**Ston**	**3.91**	**322**	*e*Pn	**Pn**	**03 55 32.9**	**-1.0**
STON				Sn	**Sn**	**03 56 14.8**	**-3.7**
STON	**Ston**	**3.91**	**322**	*e*Pn	**Pn**	**03 55 32.8**	**-1.0**
KHC	**Kasperske Hory**	**10.70**	**333**	*e*P	Pn	03 57 03.0	-3.6

IDC ***10*** *04:00:26.1±3.0,36°.22N×67°.72E,h0km,mb3.7/2, mb1 3.6/6,mb1mx3.3/31,mbtmp3.6/6,ML3.5/4,Error ellipse: s-maj=86.3km s-min=19.9km az=140.0*

NNC ***10*** *04:00:29.9±5.5,36°.48N×67°.32E,h42km±86km,mb3.7, mpv3.3,Error ellipse: s-maj=44.2km s-min=31.3km az=172.0*

ISCJB ***10*** *04:00:29.5±1.4,36°.7N±0°.1×67°.3E±0°.1,h33km,mb3.7/2, Error ellipse: s-maj=21.3km s-min=10.0km az=144.5*

ISC 10 04:00:32.3±2.0,36°.7N±0°.2×67°.2E±0°.2,h35km,n13, σ1$45/16,6C,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.89**	**20**	Pn	**Pn**	**04 02 11.3**	**+0.5**
	0.4nm,0.2s,baz=208,slow=13,SNR=7.7						
KK31				Sn	**Sn**	**04 03 30.2**	**+2.3**
	1.6nm,0.3s,baz=198,slow=24						
KK31				⇑Lg	Lg	04 04 14.2	
	2.9nm,0.5s,baz=201,slow=26,SNR=4.4						
AAK	**Ala-Archa**	**8.16**	**41**	Pn	**Pn**	**04 02 28.2**	**-0.1**
	1.4nm,0.3s,baz=183,slow=5.2,SNR=9.0						
AAK				Sn	**Sn**	**04 04 01.1**	**+1.7**
	0.5nm,0.3s,baz=147,slow=18,SNR=3.2						
TKM2	**Tokmak 2**	**8.95**	**43**	Pn	**Pn**	**04 02 38.4**	**-0.8**
	1.5nm,0.3s						
TKM2				⇑Sn	**Sn**	**04 04 19.4**	**+0.5**
	2.2nm,0.8s						
AB31	**Akbulak array**	**13.64**	**339**	P	**Pn**	**04 03 41.7**	**-1.4**
	0.6nm,0.4s,baz=160,slow=12,SNR=8.5						
MKAR	**Makanchi Array**	**15.08**	**43**	Pn	**Pn**	**04 04 00.9**	**-1.8**
	0.0nm,0.3s,baz=239,slow=16,SNR=3.4						
KURBB	**Kurchatov Arra**	**16.12**	**27**	⇑P	**Pn**	**04 04 16.1**	**0.0**
	0.3nm,0.9s						
KURBB	**Kurchatov Arra**	**16.12**	**27**	Pn	**Pn**	**04 04 13.9**	**-2.2**
	0.0nm,0.3s,baz=217,slow=12,SNR=5.9						
KURK	**Kurchatov**	**16.23**	**27**	⇑P	**Pn**	**04 04 17.4**	**-0.1**
	4.3nm,1.0s						
VOSK	**Vostochnaya**	**16.25**	**8**	⇑P	**Pn**	**04 04 17.6**	**-0.1**
	1.3nm,0.8s						
ZRNK	**Zerenda**	**16.31**	**4**	⇑P	**Pn**	**04 04 17.2**	**-1.3**
	3.1nm,0.8s						
BVAR	**Borovoye Array**	**16.49**	**7**	Pn	**Pn**	**04 04 18.9**	**-1.8**
	0.5nm,0.3s,baz=188,slow=11,SNR=6.7						
ZALV	**Zalesovo Beam**	**21.13**	**30**	P	**P**	**04 05 13.2**	**-0.7**
	3.0nm,0.6s,baz=224,slow=11,SNR=18						
TORD	**Torodi Ar. Bea**	**62.70**	**266**	P	**P**	**04 10 55.5**	**+1.5**
	0.2nm,0.5s,baz=43,slow=5.3,SNR=5.7						

CSEM ***10*** *04:23:48.3,42°.25N×13°.50E,h9km,MD1.8/3,After ROM*

ROM 10 04:23:48.3±0.1,42°.25N×13°.50E,h9km,Md1.8/3,MlO.9/4, Error ellipse: s-maj=0.8km s-min=0.7km az=20.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**75**	Pg	Pg	04 23 50.8	+0.4
FAGN				Sg	Sg	04 23 52.2	+0.3
FAGN	**Fagnano**	**0.07**	**75**	Pg	Pg	04 23 50.8	+0.4
FAGN				Sg	Sg	04 23 52.2	+0.3
AQU	**L'Aquila**	**0.13**	**326**	Pg	Pg	04 23 51.7	+0.4
AQU				Sg	Sg	04 23 53.8	+0.5
	29nm,0.2s						
AQU	**L'Aquila**	**0.13**	**326**	Pg	Pg	04 23 51.7	+0.4
AQU				Sg	Sg	04 23 53.8	+0.5
	29nm,0.2s						
PTQR	**Pietraquaria**	**0.24**	**198**	Pg	Pg	04 23 54.0	+0.8
PTQR				Sg	Sg	04 23 58.0	+1.4
	3.0nm,0.2s						
PTQR	**Pietraquaria**	**0.24**	**198**	Pg	Pg	04 23 54.0	+0.8
PTQR				Sg	Sg	04 23 58.0	+1.4
	3.0nm,0.2s						
VCEL	**Villa Celiera**	**0.29**	**60**	Pg	Pg	04 23 55.1	+0.8
VCEL				Sg	Sb	04 24 00.1	-1.0
	11nm,0.3s						
VCEL	**Villa Celiera**	**0.29**	**60**	Pg	Pg	04 23 55.1	+0.8
VCEL				Sg	Sb	04 24 00.1	-1.0
	11nm,0.3s						
INTR	**Introdacqua**	**0.39**	**128**	Pg	Pg	04 23 56.4	+0.4
INTR				Sg	Sb	04 24 02.5	-1.1
	11nm,0.3s						
INTR	**Introdacqua**	**0.39**	**128**	Pg	Pg	04 23 56.4	+0.4
INTR				Sg	Sb	04 24 02.5	-1.1
	11nm,0.3s						

NIED ***10*** *04:28:00,36°.80N×142°.80E,h11km,Mw4.4 Best double couple: M0 4.00000×10^15 NP1:φ0±5.00000°,δ77.00000°, λ44.00000°. NP2:φ0±262.00000°,δ47.00000°,λ162.00000°.*

BJI ***10*** *04:28:31.0,36°.95N×142°.98E,h7km,mB4.9/26,mb4.7/39, Ms4.3/26,Ms7 4.0/26*

IDC ***10*** *04:28:32.0±0.6,36°.65N×142°.93E,h0km,mb4.2/18, mb1 4.4/24,mb1mx4.3/30,mbtmp4.2/24,ML4.0/5,MS3.6/9, Ms1 3.7/9,ms1mx3.2/46,Error ellipse: s-maj=16.1km s-min=13.9km az=147.0*

NEIC ***10*** *04:28:33.1±2.5,36°.77N×142°.88E,h4km±15km,mb4.5/18, MW4.3(NIED),Error ellipse: s-maj=7.1km s-min=5.5km az=136.0*

ISCJB ***10*** *04:28:33.1±1.0,36°.82N±0°.03×142°.76E±0°.03,h15km±7km, mb4.5/64,MS3.9/16,Error ellipse: s-maj=5.3km s-min=3.8km az=147.1*

JMA ***10*** *04:28:34.8±0.2,36°.78N×142°.81E,h70km,M4.1*

MOS ***10*** *04:28:37.2±0.8,36°.99N×142°.74E,h33km,mb4.8/26,Error ellipse: s-maj=9.9km s-min=6.0km az=114.9*

SZGRF ***10*** *04:28:42.9,37°.50N×142°.69E,h33km,mb4.8,Off east coast of Honshu, Japan*

ISC 10 04:28:35.2±0.6,36°.80N±0°.04×142°.87E±0°.04,h15km±2km, n213,σ1$42/258,mb4.6/64,MS3.9/16,14C-8D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.68**	**281**	P	**Pn**	**04 29 02.2**	**-1.9**
ONAJ				S	**Sn**	**04 29 22.8**	**-2.7**
JFK	**Kawauchi**	**1.69**	**290**	P	**Pn**	**04 29 02.0**	**-2.2**
JFK				*e*S	**Sn**	**04 29 22.8**	**-2.8**
JHO	**Hitachi**	**1.85**	**265**	P	**Pn**	**04 29 04.3**	**-2.1**
JHO				*e*S	**Sn**	**04 29 25.5**	**-4.1**
JFT	**Otama**	**2.15**	**290**	P	**Pn**	**04 29 09.2**	**-1.2**
JFT				*e*S	**Sn**	**04 29 33.8**	**-3.0**
JMK	**Ichinoseki**	**2.52**	**329**	P	**Pn**	**04 29 14.3**	**-1.2**
JMK				*e*S	**Sn**	**04 29 43.6**	**-2.3**
BSO1	**Boso 1**	**2.63**	**216**	P	**Pn**	**04 29 14.8**	**-1.8**
BSO1				S	**Sn**	**04 29 46.1**	**-1.9**
JAG	**Ashikaga**	**2.77**	**263**	P	**Pn**	**04 29 17.4**	**-1.6**
JAG				S	**Sn**	**04 29 49.1**	**-3.1**
JOM	**Ohasama**	**2.95**	**336**	*e*S	**Sn**	**04 29 54.2**	**-2.3**
JRY	**Ryogami san**	**3.29**	**257**	P	**Pn**	**04 29 24.5**	**-1.7**
JRY				S	**Sn**	**04 30 00.9**	**-4.2**
JOD2	**Odawara 2**	**3.42**	**245**	P	**Pn**	**04 29 26.3**	**-1.7**
JOD2				*e*S	**Sn**	**04 30 03.8**	**-4.5**
JANG	**Nango**	**3.73**	**344**	P	**Pn**	**04 29 31.0**	**-1.2**
JANG				S	**Sn**	**04 30 12.5**	**-3.3**
JYN	**Shimob**	**3.73**	**251**	P	**Pn**	**04 29 31.3**	**-1.0**
JYN				*e*S	**Sn**	**04 30 12.1**	**-3.9**
MJAR	**Matsushiro Arr**	**3.75**	**267**	Pn	**Pn**	**04 29 32.0**	**-0.6**
MJAR				Sn	**Sn**	**04 30 15.8**	**-0.6**
MJAR	**Matsushiro Arr**	**3.75**	**267**	Pn	**Pn**	**04 29 32.0**	**-0.6**
	23nm,0.3s,baz=95,slow=13,SNR=242						
MJAR				Sn	**Sn**	**04 30 15.8**	**-0.6**
	9.8nm,0.3s,baz=80,slow=25,SNR=3.9						
MAJO	**Matsushiro**	**3.75**	**268**	*e*P	**Pn**	**04 29 32.6**	**0.0**
MAJO	**Matsushiro**	**3.75**	**268**	*e*Pn	**Pn**	**04 29 32.6**	**0.0**
MAT	**Matsushiro**	**3.75**	**268**	P	**Pn**	**04 29 32.3**	**-0.3**
MAT				S	**Sn**	**04 30 13.4**	**-3.1**
MAT	**Matsushiro**	**3.75**	**268**	P	**Pn**	**04 29 32.5**	**-0.1**
JSD	**Sado**	**3.87**	**290**	P	**Pn**	**04 29 33.0**	**-1.1**
JHJ	**Hachijo jima 2**	**4.46**	**215**	Pn	Pn	04 29 38.8	-3.4
	44nm,0.3s,baz=109,slow=20,SNR=7.6						
JHJ				Sn	Sn	04 30 26.4	-7.4
	58nm,0.3s,baz=208,slow=21,SNR=3.9						
JHJ				LR	LR	04 31 21.0	
	comp=Z,336nm,20.4s,baz=202,slow=39						
ERM	**Erimo**	**5.22**	**2**	*ce*P	**Pn**	**04 29 50.8**	**-1.8**
ERM				pmax	pmax		
	comp=Z,28nm,0.5s						
ERM	**Erimo**	**5.22**	**2**	*e*Pn	**Pn**	**04 29 50.6**	**-2.0**
	comp=Z,71nm,0.5s						
ERM				*e*Sn	**Sn**	**04 30 52.4**	**-0.1**
ASAJ	**Asahikawa**	**7.32**	**358**	*e*Pn	**Pn**	**04 30 19.7**	**-1.8**
	comp=Z,15nm,0.6s						
ASAJ				Sn	**Sn**	**04 31 41.4**	**-2.8**
ASAJ	**Asahikawa**	**7.32**	**358**	Pn	**Pn**	**04 30 20.2**	**-1.3**
	comp=Z,7.0nm,0.3s,baz=223,slow=13,SNR=32						
ASAJ				Sn	**Sn**	**04 31 41.4**	**-2.8**
	comp=Z,2.1nm,0.3s,baz=43,slow=30,SNR=6.9						
ASAJ				LR	LR	04 33 58.0	
	comp=Z,526nm,18.4s,baz=144,slow=44						
YUK	**Yuzh-Kuril'sk**	**7.58**	**17**	*i* P	Pn	04 30 19.6	-5.5
YUK				*i* S	Sn	04 31 41.4	-9.3
YUK				pmax	pmax		
	comp=N,35nm,0.2s						
YUK				pmax	pmax		
	comp=Z,59nm,0.3s						
YUK				pmax	pmax		
	comp=E,20nm,0.1s						
YUK				smax	smax		
	comp=N,102nm,0.6s						
YUK				smax	smax		
	comp=E,203nm,0.6s						
YUK				MLR	MLR		
	comp=N,293nm,16.0s						
YUK				MLR	MLR		
	comp=Z,449nm,16.0s						
YSS	**Yuzh-Sakhalins**	**10.15**	**360**	*e*P	**Pn**	**04 31 01.1**	**+0.8**
YSS				*e*S	**Sn**	**04 32 51.0**	**-2.8**
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				smax	smax		
	comp=E,40nm,1.1s						
YSS				smax	smax		
	comp=N,40nm,1.0s						
YSS				MLR	MLR		
	comp=N,500nm,14.0s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
JNU	**Nakatsue**	**10.50**	**253**	*e*Pn	**Pn**	**04 31 05.4**	**+0.2**
JNU	**Nakatsue**	**10.50**	**253**	Pn	**Pn**	**04 31 05.0**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=56,slow=9.8,SNR=8.4						
USRK	**Ussuriysk Arra**	**11.09**	**315**	Pn	**Pn**	**04 31 15.9**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=88,slow=12,SNR=12						
KSRS	**Korea Array**	**11.95**	**278**	Pn	**Pn**	**04 31 26.4**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=87,slow=13,SNR=15						
KSRS				LR	LR	04 35 19.8	
	comp=Z,152nm,20.6s,baz=85,slow=34						
KSAR	**Wonju Array Be**	**11.98**	**278**	Pn	**Pn**	**04 31 26.4**	**+1.0**
HABR	**Khabarovsk**	**13.00**	**336**	*e*P	Pn	04 31 36.2	-3.0
HABR				*e*		04 33 58.1	
HABR				pmax	pmax		
	comp=E,22nm,1.4s						
HABR				pmax	pmax		
	comp=N,10.0nm,1.0s						
HABR				pmax	pmax		
	comp=Z,16nm,1.4s						
KLR	**Kul'dur**	**14.83**	**330**	*e*P	**Pn**	**04 32 03.1**	**-1.1**
CN2	**Changchun**	**15.01**	**303**	*e*P	**Pn**	**04 32 04.7**	**-1.9**
CN2				*e*S	**Sn**	**04 34 50.8**	**-1.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,11.0s						
CN2				LR	LR		
	comp=E,300nm,11.0s						
CN2				LR	LR		
	comp=Z,400nm,12.0s						
NJ2	**Nanjing**	**20.35**	**264**	*e*P	**P**	**04 33 10.3**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,40nm,0.5s						
WHN	**Wuhan**	**24.48**	**264**	P	**P**	**04 33 52.6**	**-1.1**
WHN				S	**S**	**04 38 06.8**	**-6.7**
WHN				LR	LR		
	comp=Z,550nm,18.6s						
HHC	**Hu-ho-hao-te**	**24.65**	**289**	*e*P	**P**	**04 33 55.4**	**+0.1**
HHC				PP	**PnPn**	**04 34 31.3**	**+4.5**
HHC				PcP	**PcP**	**04 37 35.9**	**+3.4**
HHC				S	**S**	**04 38 19.0**	**+2.7**
HHC				SS	**SnSn**	**04 39 05.8**	**+3.9**
HHC				ScP	**ScP**	**04 41 14.1**	**+3.4**
HHC				pmax	pmax		
	comp=Z,53nm,0.4s						
HHC				pmax	pmax		
	comp=Z,290nm,6.0s						
HHC				LR	LR		
	comp=N,370nm,13.2s						
HHC				LR	LR		
	comp=E,340nm,13.2s						
HHC				LR	LR		
	comp=Z,400nm,15.6s						
YAK	**Yakutsk**	**26.57**	**346**	*e*P	**P**	**04 34 10.9**	**-1.4**
YAK				pmax	pmax		
	comp=Z,24nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,221nm,14.0s						
YAK				MLR	MLR		
	comp=N,112nm,12.0s						
YAK				MLR	MLR		
	comp=E,95nm,16.0s						
SEY	**Seymchan**	**26.81**	**10**	*ce*P	**P**	**04 34 14.9**	**+0.4**
ULN	**Ulaanbaatar**	**28.45**	**304**	*e*P	**P**	**04 34 29.8**	**+0.2**
	comp=E,8.2nm,1.0s						
ENH	**Enshi**	**28.48**	**267**	*e*P	**P**	**04 34 29.4**	**-0.4**
	comp=E,24nm,0.8s						
SONM	**Songino Array**	**28.88**	**304**	P	**P**	**04 34 34.2**	**+0.9**
SONM	**Songino Array**	**28.88**	**304**	P	**P**	**04 34 34.2**	**+0.9**
	comp=E,6.6nm,0.9s,baz=105,slow=8.6,SNR=38						
LZH	**Lanzhou**	**31.25**	**281**	*e*P	**P**	**04 34 54.8**	**+0.3**
LZH				pP	**pP**	**04 34 57.8**	**-1.3**
LZH				sP	**sP**	**04 34 59.8**	**-1.2**
LZH				PP	**PnPn**	**04 35 57.7**	**+1.2**
LZH				*e*S	**S**	**04 39 59.0**	**-1.6**
LZH				*e*SS	**SnSn**	**04 41 47.2**	**+3.9**
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,6.5s						
LZH				LR	LR		
	comp=N,390nm,14.6s						
LZH				LR	LR		
	comp=E,310nm,14.3s						
LZH				LR	LR		
	comp=Z,490nm,15.7s						
ZAK	**Zakamensk**	**31.33**	**308**	*e*P	**P**	**04 34 55.1**	**+0.2**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GYA	**Guiyang**	**32.33**	**262**	*e*P	**P**	**04 35 04.5**	**+0.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	**Chengdu**	**32.84**	**271**	P	**P**	**04 35 08.7**	**+0.4**
CD2				pP	**pP**	**04 35 13.1**	**+0.2**
CD2				sP	**sP**	**04 35 15.7**	**+0.9**
CD2				PP	**PnPn**	**04 36 17.8**	**+0.9**
CD2				PcP	**PcP**	**04 37 54.3**	**+1.3**
CD2				S	**S**	**04 40 25.1**	**-0.1**
CD2				sS	**sS**	**04 40 31.1**	**-1.7**
CD2				PcS	**PcS**	**04 41 38.4**	**0.0**
CD2				SS	**SnSn**	**04 42 22.2**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=N,300nm,14.7s						
CD2				LR	LR		
	comp=E,340nm,15.7s						
CD2				LR	LR		
	comp=Z,300nm,13.7s						
GTA	**Gaotai**	**33.74**	**288**	P	**P**	**04 35 16.6**	**+0.4**
GTA				pP	**pP**	**04 35 21.1**	**+0.2**
GTA				sP	**sP**	**04 35 23.6**	**+0.9**
GTA				S	**S**	**04 40 41.4**	**+2.1**
GTA				sS	**sS**	**04 40 49.2**	**+2.3**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,140nm,4.3s						
GTA				LR	LR		
	comp=N,140nm,15.4s						
GTA				LR	LR		
	comp=E,130nm,14.7s						
GTA				LR	LR		
	comp=Z,130nm,12.4s						
BILL	**Bilibino**	**33.93**	**16**	⇓*i* P	**P**	**04 35 17.2**	**-0.2**
BILL				*e*		04 36 36.1	
BILL				pmax	pmax		
	comp=Z,11nm,1.9s						
KMI	**Kunming**	**36.08**	**263**	P	**P**	**04 35 37.3**	**+0.7**
KMI				pP	**pP**	**04 35 42.2**	**+0.9**
KMI				PP	**PP**	**04 36 59.0**	**+0.3**
KMI				S	**S**	**04 41 15.2**	**-0.5**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,69nm,5.0s						
KMI				LR	LR		
	comp=N,100nm,15.7s						
KMI				LR	LR		
	comp=E,120nm,16.6s						
KMI				LR	LR		
	comp=Z,150nm,14.6s						
WMQ	**Urumqi**	**41.98**	**297**	*e*P	**P**	**04 36 27.0**	**+1.3**
WMQ				pmax	pmax		
	comp=Z,13nm,0.4s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.6s						
WMQ				LR	LR		
	comp=N,230nm,5.6s						
WMQ				LR	LR		
	comp=E,120nm,7.0s						
WMQ				LR	LR		
	comp=Z,44nm

comp=Z,7.2nm,0.6s
PYUN Piuthan 50.55 278 *e*P **P** 04 37 33.1 -0.4
comp=Z,20nm,0.6s
TKM2 Tokmak 2 50.76 299 *e*P **P** 04 37 35.4 +0.5
TKM2 pmax pmax
comp=Z,4.0nm,0.8s
TKM2 Tokmak 2 50.76 299 *e*P **P** 04 37 35.4 +0.5
comp=Z,4.5nm,0.8s
KSH Kashi 51.56 295 P P 04 37 44.6 +3.8
KSH *e*pP pP 04 37 49.2 +3.6
KSH *e*sP sP 04 37 51.5 +4.1
KSH *e*PcP **PcP** 04 38 57.2 +2.5
KSH *e*PP PP 04 39 43.1 +5.1
KSH *e*ScP **ScP** 04 42 52.1 +1.3
KSH *e*PcS **PcS** 04 42 54.0 +1.3
KSH *e*S **S** 04 45 06.2 +5.2
KSH *e*sS sS 04 45 14.1 +5.2
KSH *e*ScS **ScS** 04 47 30.9 +0.1
KSH *e*SS **SS** 04 48 40.8 +4.0
KSH pmax pmax
comp=Z,6.0nm,0.5s
KSH pmax pmax
comp=Z,90nm,3.5s
KSH LR LR
comp=N,110nm,4.1s
KSH LR LR
comp=E,140nm,6.1s
KSH LR LR
comp=Z,67nm,5.6s
AAK Ala-Archa 51.62 299⇑ *i*P **P** 04 37 41.1 -0.2
AAK pmax pmax
comp=Z,4.0nm,0.7s
AAK Ala-Archa 51.62 299 *e*P **P** 04 37 40.4 -0.9
comp=Z,0.5nm,0.7s
BRVK Borovoye 51.65 313 *ce*P **P** 04 37 40.8 -0.2
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BRVK Borovoye 51.65 313 *e*P **P** 04 37 40.9 -0.2
comp=Z,2.5nm,0.7s
EKS2 Erkin-Say 52.12 299 *e*P **P** 04 37 45.1 +0.2
EKS2 pmax pmax
comp=Z,3.0nm,1.0s
EKS2 Erkin-Say 52.12 299 *e*P **P** 04 37 45.1 +0.2
comp=Z,3.2nm,1.0s
KKAR Karatay Array 54.25 301 *e*P **P** 04 38 00.8 +0.3
KKAR Karatay Array 54.25 301 *e*P **P** 04 38 00.8 +0.3
SVE Sverdlovsk 56.09 319⇑ *e*P **P** 04 38 14.1 +0.6
SVE pmax pmax
comp=Z,10.0nm,0.7s
WRAB Tennant Creek 56.99 190 *e*P **P** 04 38 17.9 -2.3
WRAB pmax pmax
comp=Z,7.0nm,0.9s
WRAB Tennant Creek 56.99 190 *e*P **P** 04 38 17.9 -2.3
comp=Z,7.1nm,0.9s
WRA Warramunga Arr 57.00 190 P **P** 04 38 17.9 -2.4
WRA Warramunga Arr 57.00 190 P **P** 04 38 17.9 -2.4
comp=Z,3.9nm,0.9s,baz=10,slow=7.5,SNR=20
ARU Arti 57.30 319 *c i*P **P** 04 38 21.6 -0.5
ARU 04 39 14.6
ARU S **S** 04 46 15.7 -1.9
ARU SS SS 04 49 58.3 -8.0
ARU pmax pmax
comp=Z,11nm,1.2s
ABKAR Akbulak array 58.98 311 *e*P **P** 04 38 33.5 -0.4
AKTO Aktyubinsk 59.70 312 LR LR 05 05 24.4
comp=Z,53nm,18.5s,baz=232,slow=37
ASAR Alice Springs 60.73 189 P **P** 04 38 44.6 -1.6
ASAR Alice Springs 60.73 189 P **P** 04 38 44.6 -1.6
comp=Z,2.1nm,0.8s,baz=11,slow=6.0,SNR=25
RES Resolute Bay 62.54 15 *e*P **P** 04 38 57.4 -0.4
comp=Z,4.3nm,0.9s
YKW3 Yellowknife Ar 63.39 30 *e*P **P** 04 39 03.1 -0.4
YKA Yellowknife Ar 63.42 30 P **P** 04 39 03.8 -0.1
YKA PcP **PcP** 04 39 40.5 -0.1
YKA Yellowknife Ar 63.42 30 P **P** 04 39 03.7 -0.1
comp=Z,1.0nm,0.8s,baz=301,slow=6.9,SNR=13
YKA PcP **PcP** 04 39 40.5 -0.1
comp=Z,0.2nm,0.5s,baz=302,slow=4.4,SNR=9.8
ARCES ARCESS Array B 64.62 340 P **P** 04 39 11.5 -0.1
ARCES ARCESS Array B 64.62 340 P **P** 04 39 11.5 -0.1
comp=Z,3.1nm,0.9s,baz=50,slow=11,SNR=3.9
OBN Obninsk 68.98 324 *e*P **P** 04 39 37.6 -1.9
OBN pmax pmax
comp=Z,7.0nm,1.3s
OBN MLR MLR
comp=Z,100nm,14.0s
MAK Makhachkala 69.52 309 *e*P P 04 39 32.5 -11
MAK MLR MLR
comp=Z,160nm,13.0s
FINES FINESS Array B 69.56 333 P **P** 04 39 42.7 -0.4
FINES FINESS Array B 69.56 333 P **P** 04 39 42.7 -0.4
comp=Z,2.2nm,0.7s,baz=46,slow=11,SNR=4.7
FINES LR LR 05 14 55.0
comp=Z,74nm,18.1s,baz=90,slow=40
VSR Storozhevoye 69.87 319 *e*P **P** 04 39 43.8 -1.4
VSR pmax pmax
comp=Z,7.0nm,1.0s
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,1.0s
VORD Divnogorie 69.95 319 *e*P **P** 04 39 44.4 -1.2
VORD pmax pmax
comp=N,2.0nm,0.5s
VORD pmax pmax
comp=E,8.0nm,0.5s
VORD pmax pmax
comp=Z,5.0nm,0.5s
WVOR Wild Horse Val 71.75 50 *e*P **P** 04 39 58.0 +1.0
WVOR pmax pmax
comp=Z,3.0nm,1.1s
WVOR Wild Horse Val 71.75 50 *e*P **P** 04 39 58.0 +1.0
comp=Z,2.9nm,1.1s
ZEI Tsey 71.86 310 *e*P **P** 04 39 56.0 -1.7
ZEI pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 71.94 311 P **P** 04 39 58.5 +0.7
KBZ Khabaz 71.94 311 P **P** 04 39 58.5 +0.7
KBZ Khabaz 71.94 311 P **P** 04 39 58.5 +0.7
comp=Z,5.5nm,0.8s,baz=64,slow=3.2,SNR=15
KIV Kislovodsk 71.94 312 *d i*P **P** 04 39 59.1 +1.1
KIV *e* 04 40 18.6
KIV pmax pmax
comp=Z,14nm,0.8s
LRM Limekiln Ridge 73.50 45 *e*P **P** 04 40 07.5 +0.1
DLMT Dillon 73.69 45 *e*P **P** 04 40 09.4 +1.0
comp=Z,5.3nm,1.3s
BOZ Bozeman (W) 74.07 45 *e*P **P** 04 40 11.0 +0.3
BOZ pmax pmax
comp=Z,2.0nm,0.9s
BOZ Bozeman (W) 74.07 45 *e*P **P** 04 40 10.9 +0.3
comp=Z,1.6nm,0.9s
NVAR Mina Array Bea 74.19 54 P **P** 04 40 12.2 +0.6
NVAR Mina Array Bea 74.19 54 P **P** 04 40 12.2 +0.6
comp=Z,1.2nm,0.7s,baz=283,slow=6.5,SNR=7.3
HFS Hagfors 74.78 336 LR LR 05 16 40.8
comp=Z,87nm,18.1s,baz=197,slow=39
NOA NORSAR Array B 74.85 338 P **P** 04 40 14.4 -0.4
NOA NORSAR Array B 74.85 338 P **P** 04 40 14.4 -0.4
comp=Z,1.3nm,0.8s,baz=38,slow=5.8,SNR=3.9
NOA LR LR 05 19 17.3
comp=Z,56nm,18.1s,baz=315,slow=41
AKASG Malin Array Be 75.19 323 P **P** 04 40 16.5 -0.4
AKASG Malin Array Be 75.19 323 P **P** 04 40 16.5 -0.4
AKASG Malin Array Be 75.19 323 P **P** 04 40 16.5 -0.4
comp=Z,5.2nm,0.6s,baz=46,slow=6.1,SNR=27
AK01 Malin Array Si 75.20 323 *e*P **P** 04 40 16.2 -0.7
KIEV Kiev 75.20 323 *e*P **P** 04 40 16.2 -0.7
KIEV pmax pmax
comp=Z,5.0nm,0.6s
KIEV Kiev 75.20 323 *e*P **P** 04 40 16.2 -0.7
comp=Z,5.5nm,0.6s
AK02 Malin Array Si 75.23 323 *e*P **P** 04 40 16.4 -0.7
IMW Indian Meadow 75.51 46 *e*P **P** 04 40 20.8 +1.6
PDAR Pinedale Array 77.00 46 P **P** 04 40 27.1 -0.5
PDAR Pinedale Array 77.00 46 P **P** 04 40 27.1 -0.5
comp=Z,0.5nm,0.5s,baz=244,slow=0.7,SNR=4.9
KWP Kalwaria Pacla 79.00 325 ⇓P P 04 40 27.7 -11
KWP Kalwaria Pacla 79.00 325 ⇓ *i*P P 04 40 27.7 -11
BUR08 Bucovina Ar. S 79.20 322 *e*P **P** 04 40 39.4 -0.2
BURAR Bucovina Array 79.21 322⇑ *i*P **P** 04 40 40.0 +0.3
TESR Tescani 79.26 321 ⇓ *i*P **P** 04 40 39.9 +0.1
VRI Vrincioaia 79.66 320⇑ P **P** 04 40 42.6 +0.6
VRI Vrincioaia 79.66 320⇑ *i*P **P** 04 40 42.6 +0.6
BRTR Keskin Array B 79.88 312 P **P** 04 40 43.5 0.0
comp=Z,1.1nm,0.8s,baz=121,slow=4.8,SNR=8.3
TRPA Tarpa 80.14 324⇑ *i*P **P** 04 40 45.2 +0.7
MORC Moravsky Berou 81.19 328⇑ P **P** 04 40 50.3 +0.1
MORC Moravsky Berou 81.19 328 *e*P **P** 04 40 49.7 -0.5
comp=Z,2.7nm,0.9s
MORC Moravsky Berou 81.19 328⇑ *i*P **P** 04 40 50.3 +0.1
PSZ Piszkesteto 81.52 325 ⇓P **P** 04 40 52.1 +0.1
PSZ Piszkesteto 81.52 325 *e*P **P** 04 40 52.0 -0.1
comp=Z,4.2nm,0.9s
PSZ Piszkesteto 81.52 325 ⇓ *i*P **P** 04 40 52.1 +0.1
BRG Berggiesshubel 81.84 330 *e*(P) **P** 04 40 53.4 -0.1
comp=Z,2.7nm,1.0s
CLL Collm 81.88 331 *i* P **P** 04 40 53.3 -0.4
CLL pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 81.88 331 *i* P **P** 04 40 53.3 -0.4
comp=Z,5.0nm,1.0s
SDCO Great Sand Dun 82.59 48 *e*P **P** 04 40 58.2 +0.1
KHC Kasperske Hory 83.35 329 *e*P **P** 04 41 02.0 +0.5
KHC Kasperske Hory 83.35 329 *e*P **P** 04 41 02.0 +0.5
comp=Z,3.3nm,0.8s
KHC Kasperske Hory 83.35 329 *e*P **P** 04 41 02.0 +0.5
GERES GERESS Array B 83.52 329 P **P** 04 41 02.4 -0.1
GERES GERESS Array B 83.52 329 P **P** 04 41 02.4 -0.1
comp=Z,1.1nm,0.6s,baz=35,slow=5.4,SNR=17
VTS Vitosha 83.75 320⇑ P **P** 04 41 04.4 +0.6
VTS Vitosha 83.75 320⇑ *i*P **P** 04 41 04.4 +0.6
GRF Grafenberg Arr 83.85 331 *e*P **P** 04 41 04.5 +0.5
GRF pmax pmax
comp=Z,7.0nm,1.2s
GRF Grafenberg Arr 83.85 331 *e*P **P** 04 41 04.5 +0.5
comp=Z,7.0nm,1.2s
GIVF Givet 85.88 334 *e*P **P** 04 41 13.9 -0.3
GIVF Givet 85.88 334 *e*P **P** 04 41 13.9 -0.3
GIVF Givet 85.88 334 *e*P **P** 04 41 13.9 -0.3
BAIF Baives 86.12 335 *e*P **P** 04 41 15.3 -0.1
comp=Z,8.1nm,0.9s
BAIF Baives 86.12 335 *e*P **P** 04 41 15.3 -0.1
BAIF pmax pmax
comp=Z,8.0nm,0.9s
BAIF Baives 86.12 335 *e*P **P** 04 41 15.3 -0.1
comp=Z,8.1nm,0.9s
CDF Champ du Feu 86.40 332 *e*P **P** 04 41 16.8 -0.2
comp=Z,16nm,1.1s
CDF Champ du Feu 86.40 332 *e*P **P** 04 41 16.8 -0.2
CDF pmax pmax
comp=Z,16nm,1.1s
CDF Champ du Feu 86.40 332 *e*P **P** 04 41 16.8 -0.2
comp=Z,16nm,1.1s
PAGF Fort de Pagny 86.86 333 *e*P **P** 04 41 19.3 +0.2
comp=Z,6.4nm,1.1s
PAGF Fort de Pagny 86.86 333 *e*P **P** 04 41 19.3 +0.2
comp=Z,6.4nm,1.1s
HINF Hinteralfeld 87.06 332 *e*P **P** 04 41 19.6 -0.5
HINF Hinteralfeld 87.06 332 *e*P **P** 04 41 19.6 -0.5
HINF Hinteralfeld 87.06 332 *e*P **P** 04 41 19.6 -0.5
HAU Haudompre 87.09 332 *e*P **P** 04 41 19.9 -0.3
HAU Haudompre 87.09 332 *e*P **P** 04 41 19.9 -0.3
HAU Haudompre 87.09 332 *e*P **P** 04 41 19.9 -0.3
FLN La Foliniere 88.79 337 *e*P **P** 04 41 28.1 -0.2
comp=Z,39nm,1.5s
FLN La Foliniere 88.79 337 *e*P **P** 04 41 28.1 -0.2
FLN pmax pmax
comp=Z,39nm,1.5s
FLN La Foliniere 88.79 337 *e*P **P** 04 41 28.1 -0.2
comp=Z,39nm,1.5s
LPL La Plagne 89.01 331 *e*P **P** 04 41 29.9 +0.2
LPL La Plagne 89.01 331 *e*P **P** 04 41 29.9 +0.2
LPL La Plagne 89.01 331 *e*P **P** 04 41 29.9 +0.2
LPG La Plagne 89.02 331 *e*P **P** 04 41 30.1 +0.3
LPG La Plagne 89.02 331 *e*P **P** 04 41 30.1 +0.3
LPG La Plagne 89.02 331 *e*P **P** 04 41 30.1 +0.3
SMF Signal de Mont 89.15 333 *e*P **P** 04 41 30.0 -0.1
comp=Z,18nm,1.4s
SMF Signal de Mont 89.15 333 *e*P **P** 04 41 30.0 -0.1
SMF pmax pmax
comp=Z,18nm,1.4s
SMF Signal de Mont 89.15 333 *e*P **P** 04 41 30.0 -0.1
comp=Z,18nm,1.4s
AVF Avril sur Loir 89.21 334 *e*P **P** 04 41 30.1 -0.2
comp=Z,15nm,1.2s
AVF Avril sur Loir 89.21 334 *e*P **P** 04 41 30.1 -0.2
AVF pmax pmax
comp=Z,15nm,1.2s
AVF Avril sur Loir 89.21 334 *e*P **P** 04 41 30.1 -0.2
comp=Z,15nm,1.2s
GRR Gorron 89.24 337 *e*P **P** 04 41 30.4 0.0
GRR Gorron 89.24 337 *e*P **P** 04 41 30.4 0.0
GRR Gorron 89.24 337 *e*P **P** 04 41 30.4 0.0
TXAR Lajitas Array 89.34 53 P **P** 04 41 30.8 -0.6
TXAR Lajitas Array 89.34 53 P **P** 04 41 30.8 -0.6
comp=Z,0.2nm,0.6s,baz=285,slow=2.5,SNR=5.3
MFF Saint Martin d 90.58 335 *e*P **P** 04 41 37.0 +0.3
comp=Z,16nm,1.1s
MFF Saint Martin d 90.58 335 *e*P **P** 04 41 37.0 +0.3
MFF pmax pmax
comp=Z,16nm,1.1s
MFF Saint Martin d 90.58 335 *e*P **P** 04 41 37.0 +0.3
comp=Z,16nm,1.1s
LMR La Mourre 90.92 330 *e*P **P** 04 41 38.3 0.0
LMR La Mourre 90.92 330 *e*P **P** 04 41 38.3 0.0
LMR La Mourre 90.92 330 *e*P **P** 04 41 38.3 0.0
CAF Calviac 91.27 333 *e*P **P** 04 41 40.5 +0.5
CAF Calviac 91.27 333 *e*P **P** 04 41 40.5 +0.5
CAF Calviac 91.27 333 *e*P **P** 04 41 40.5 +0.5
LPAZ La Paz 145.79 62 PKPbc **PKPdf** 04 48 13.8 -0.7
LPAZ La Paz 145.79 62 PKPbc **PKPdf** 04 48 13.8 -0.7
comp=Z,1.4nm,0.6s,baz=32,slow=4.7,SNR=6.7

IDC ***10*** *04:44:12.2*±*0.8,2˚.98S*×*129˚.40E, h0km, mb4.3/9, mb1 4.5/12, mb1mx4.2/24, mbtmp4.4/12, ML4.4/3, MS3.4/3, Ms1 3.4/3, ms1mx2.8/32, Error ellipse: s-maj=33.8km s-min=15.2km az=64.0*
ISCJB ***10*** *04:44:14.6*±*0.3, 3˚.03S*±*0˚.04*×*129˚.35E*±*0˚.04, h28km, mb4.3/20, MS3.2/1, Error ellipse: s-maj=6.1km s-min=4.6km az=141.4*
NEIC ***10*** *04:44:16.0*±*4.0, 3˚.02S*×*129˚.44E, h26km*±*28km, mb4.4/15, Error ellipse: s-maj=18.3km s-min=6.5km az=53.0*
DJA ***10*** *04:44:16.8*±*1.1, 3˚.5*×*12˚.9E*±*˚, h16km*±*12km, M4.7/8, mB5.4/3, mb4.8/8, MLv4.6/5, Mw(mB)4.8/3*
AUST ***10*** *04:44:22.6*±*0.3, 3˚.34S*×*129˚.14E, h78km, Error ellipse: s-maj=1.2km s-min=0.7km az=34.0*

ISC 10 04:44:16.9±0.4**, 3˚.02S**×0˚.05×**129˚.26E**±0˚.05**, h28km, n85,**
σ1§**41**/87**, mb4.4**/21**, Seram**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
AAI	**Ambon**	**1.25**	**238**	P		**Pb**	**04 44 41.2**	**+1.3**
AAI	**Ambon**	**1.25**	**238**	P		**Pb**	**04 44 40.8**	**+0.8**
baz=1.0,SNR=232								
NLAI	**Namlea**	**2.17**	**264**	P		**Pb**	**04 44 53.5**	**-2.0**
FAKI	**Fak Fak**	**2.99**	**88**	P		**Pn**	**04 45 03.5**	**+1.0**
FAKI	**Fak Fak**	**2.99**	**88**	P		**Pn**	**04 45 03.7**	**+1.2**
baz=3.1,SNR=18								
TNTI	**Ternate**	**4.21**	**333**	P		**Pn**	**04 45 16.5**	**-2.8**
RKPI	**Ransiki, Papua**	**5.14**	**73**	P		**Pn**	**04 45 32.3**	**+0.3**
RKPI				S		**Sn**	**04 46 30.6**	**+0.2**
LUWI	**Luwuk**	**6.77**	**287**	P		**Pn**	**04 45 55.5**	**+1.0**
baz=6.8,SNR=4.6								
BKSI	**Bulukumba**	**9.40**	**256**	P		Pn	04 46 34.0	+3.5
49nm,1.3s,1μm								
KAPI	**Kappang**	**9.69**	**258**	Pn		**Pn**	**04 46 37.2**	**+2.6**
KAPI	**Kappang**	**9.69**	**258**	P		Pn	04 46 38.3	+3.7
56nm,1.2s,516nm								
KAPI	**Kappang**	**9.69**	**258**	Pn		**Pn**	**04 46 37.2**	**+2.6**
3.1nm,0.3s,baz=102,slow=7.3,SNR=24								
KAPI				LR		LR	04 51 18.1	
comp=Z,221nm,18.1s,baz=104,slow=43								
MTN	**Manton Dam**	**9.94**	**169**	P		**Pn**	**04 46 39.5**	**+1.5**
baz=9.7,SNR=25								
KDU	**Kakadu**	**10.12**	**162**	P		**Pn**	**04 46 40.8**	**+0.3**
baz=9.9,SNR=20								
KDU				S		**Sn**	**04 48 31.4**	**-1.7**
baz=9.9,SNR=3.8								
JAY	**Jayapura**	**11.44**	**88**	P		Pn	04 47 03.1	+4.5
baz=12,SNR=3.1								
KNRA	**Kununurra**	**12.59**	**182**	P		**Pn**	**04 47 15.7**	**+1.4**
baz=12,SNR=12								
BBKI	**Banjar Baru**	**14.40**	**268**	P		**P**	**04 47 47.8**	**+2.1**
KHKI	**Kahang-Kahang**	**14.58**	**248**	P		**Pn**	**04 47 43.0**	**+1.5**
55nm,1.0s								

FITZ Fitzroy Crossi 15.41 193 Pn **Pn** 04 47 51.7 -0.8
FITZ Fitzroy Crossi 15.41 193 Pn **Pn** 04 47 51.7 -0.8
1.3nm,0.3s,baz=29,slow=10,SNR=24
FITZ LR LR 04 54 25.8
comp=Z,178nm,20.8s,baz=25,slow=40
FITZ Fitzroy Crossi 15.41 193 P **Pn** 04 47 52.1 -0.4
baz=15,SNR=21
COEN Coen 17.52 129 P **P** 04 48 22.6 +2.3
baz=18,SNR=6.1
WRAB Tennant Creek 17.53 164 *e*P **Pn** 04 48 17.1 -2.4
10nm,0.8s
WRA Warramunga Arr 17.54 164 P **Pn** 04 48 17.9 -1.7
WRA Warramunga Arr 17.54 164 P **Pn** 04 48 17.9 -1.7
1.3nm,0.3s,baz=342,slow=12,SNR=24
PWJI Pagerwojo 18.07 253 P **P** 04 48 29.0 +2.7
41nm,0.8s
WOJI Wonogiri, Jawa 18.87 255 P **Pn** 04 48 37.4 +1.6
81nm,1.1s,7μm
KSM Kuching 19.46 283 P **Pn** 04 48 44.4 +1.4
baz=19,SNR=4.2
BJII Banjamegara 19.93 257 P **Pn** 04 48 49.6 +0.9
QIS Mount Isa 20.14 151 P **P** 04 48 49.6 +0.5
baz=20,SNR=11
MBWA Marble Bar 20.28 206 *e*P **P** 04 48 49.9 -0.7
23nm,0.8s
AS31 Alice Springs 21.02 168 *e*P **P** 04 48 58.3 -0.2
ASAR Alice Springs 21.02 168 P **P** 04 48 58.2 -0.3
ASAR S **S** 04 52 48.5 -2.8
ASAR Alice Springs 21.02 168 P **P** 04 48 58.2 -0.3
24nm,0.5s,baz=348,slow=11,SNR=328
ASAR S **S** 04 52 48.5 -2.8
5.8nm,1.0s,baz=348,slow=21,SNR=10
GUMO Guam 22.63 43 LR LR 04 57 17.1
comp=Z,76nm,18.2s,baz=98,slow=35
CTAO Charters Tower 23.73 137 *e*P **P** 04 49 25.2 -1.7
8.2nm,0.8s
MEEK Meekatharra 25.61 202 P **P** 04 49 41.6 -2.5
baz=25,SNR=12
MORW Morawa 28.80 205 P **P** 04 50 11.2 -1.4
baz=29,SNR=4.5
IPM Ipoh 29.18 285 *e*P **P** 04 50 17.7 +1.5
12nm,0.6s
KULM Kulim 29.75 286 *e*P **P** 04 50 22.6 +1.3
14nm,0.9s
BBOO Buckleboo 30.32 169 P **P** 04 50 24.9 -1.1
baz=30,SNR=6.4
PSI Prapat 30.87 281 P **P** 04 50 31.5 +0.2
PSI Prapat 30.87 281 P **P** 04 50 31.5 +0.2
13nm,0.8s,baz=82,slow=5.8,SNR=14
PSI Prapat 30.87 281 P **P** 04 50 31.6 +0.3
baz=31,SNR=7.9
STKA Stephens Creek 30.97 159 P **P** 04 50 31.6 -0.2
STKA Stephens Creek 30.97 159 P **P** 04 50 31.6 -0.2
2.0nm,0.6s,baz=78,slow=20,SNR=7.6
GSI Gunungsitoli 31.96 277 S **S** 04 55 47.2 -3.6
baz=32,SNR=31
CMAR Chiang Mai Arr 36.70 307 P **P** 04 51 23.1 +1.3
CMAR PcP **PcP** 04 53 46.3 +2.0
CMAR Chiang Mai Arr 36.70 307 P **P** 04 51 23.1 +1.3
2.6nm,0.5s,baz=137,slow=7.2,SNR=14
CMAR PcP **PcP** 04 53 46.3 +2.0
1.4nm,0.3s,baz=188,slow=2.6,SNR=4.4
CHTO Chiang Mai 36.88 307 *e*P **P** 04 51 24.8 +1.4
18nm,1.2s
LSA Lhasa 48.86 315 *e*P **P** 04 53 02.2 +1.4
7.8nm,0.6s
TAPN Taplejung 50.14 310 *e*P **P** 04 53 09.3 -1.2
ODAN Odare 50.15 309 *e*P **P** 04 53 09.7 -0.7
9.5nm,0.6s
RAMN Ramite 50.80 309 *e*P **P** 04 53 14.6 -0.8
17nm,0.6s
GUN Gumba 51.83 309 *e*P **P** 04 53 22.4 -0.8
11nm,0.4s
KOLN Koldanda 53.54 308 *e*P **P** 04 53 36.2 +0.5
19nm,0.7s
DANN Dangsing 53.68 309 *e*P **P** 04 53 36.7 -0.2
24nm,0.6s
PYUN Piuthan 54.17 308 *e*P **P** 04 53 39.4 -1.0
139nm,1.1s
ULN Ulaanbaatar 54.27 342 *e*P **P** 04 53 40.3 -0.3
2.1nm,0.7s
SONM Songino Array 54.45 341 P **P** 04 53 42.0 0.0
SONM Songino Array 54.45 341 P **P** 04 53 42.0 0.0
1.1nm,0.9s,baz=161,slow=9.2,SNR=5.4
MK31 Makanchi Array 64.52 326 *e*P **P** 04 54 51.3 0.0
MKAR Makanchi Array 64.52 326 P **P** 04 54 49.6 -1.7
MKAR Makanchi Array 64.52 326 P **P** 04 54 49.6 -1.7
1.3nm,0.8s,baz=131,slow=8.2,SNR=10
TKM2 Tokmak 2 66.47 320 *e*P **P** 04 55 04.6 +0.3
2.0nm,0.6s
EKS2 Erkin-Say 67.53 319 *e*P **P** 04 55 11.1 +0.1
1.8nm,0.8s
ZALV Zalesovo Beam 67.71 333 P **P** 04 55 11.4 -0.2
ZALV Zalesovo Beam 67.71 333 P **P** 04 55 11.4 -0.2
1.1nm,0.3s,baz=123,slow=5.5,SNR=4.7
KURK Kurchatov 68.76 328 *e*P **P** 04 55 18.2 0.0
7.5nm,1.0s
KKAR Karatay Array 69.89 318 *e*P **P** 04 55 24.8 -0.7
1.2nm,0.7s
BRVK Borovoye 74.39 328 *e*P **P** 04 55 52.4 +0.2
2.4nm,0.6s
VNDA Vanda 76.47 173 *e*P **P** 04 56 03.1 -0.6
1.3nm,0.7s
VNDA Vanda 76.47 173 P **P** 04 56 03.2 -0.5
0.7nm,0.7s,baz=332,slow=7.7,SNR=3.8
MAW Mawson 78.37 201 P **P** 04 56 13.4 -1.1
MAW Mawson 78.37 201 P **P** 04 56 13.4 -1.1
1.8nm,0.4s,baz=91,slow=7.2,SNR=8.5
ABKAR Akbulak array 78.95 321 *e*P **P** 04 56 17.4 -0.7
1.3nm,0.6s
TOA0 Torodi Ar. Sit 127.22 284 *e*PKPdf **PKPdf** 05 03 19.9 +0.1
TORD Torodi Ar. Bea 127.22 284 PKP **PKPdf** 05 03 18.7 -1.2
TORD Torodi Ar. Bea 127.22 284 PKP **PKPdf** 05 03 18.7 -1.2
1.0nm,0.8s,baz=53,slow=2.1,SNR=5.8
LCO Las Campanas 142.84 150 *e*PKPdf **PKPdf** 05 03 46.2 -2.7
LVC Limon Verde 148.96 146 *e*PKPbc **PKPbc** 05 04 04.3 +0.8
CPUP Villa Florida 150.14 168 PKPbc **PKPbc** 05 04 06.2 +0.3
CPUP Villa Florida 150.14 168 PKPbc **PKPbc** 05 04 06.2 +0.3
3.4nm,0.7s,baz=277,slow=1.0,SNR=13
LPAZ La Paz 154.25 139 PKPbc **PKPbc** 05 04 17.5 +1.2
LPAZ La Paz 154.25 139 PKPbc **PKPbc** 05 04 17.5 +1.2
0.3nm,0.4s,baz=310,slow=7.9,SNR=5.1

IDC ***10*** *05:12:55.7*±*1.2,24˚.42S*×*115˚.59W, h0km, mb3.8/6, mb1 4.2/6, mb1mx3.9/17, mbtmp3.8/6, MS3.8/15, Ms1 3.8/15, ms1mx3.6/28, Error ellipse: s-maj=39.3km s-min=37.5km az=76.0*
ISCJB ***10*** *05:12:55.2*±*0.7,24˚.6S*±*0˚.1*×*115˚.5W*±*0˚.2, h10km, mb4.2/15, MS3.8/15, Error ellipse: s-maj=23.3km s-min=16.1km az=160.6*
NEIC ***10*** *05:12:57.0*±*0.4,24˚.59S*×*115˚.52W, h10km, mb4.4/9, Error ellipse: s-maj=16.4km s-min=11.8km az=73.0*

ISC 10 05:12:56.9±0.8**, 24˚.6S**±0˚.2×**115˚.5W**±0˚.2**, h10**km**, n47,**
σ0§**75**/33**, mb4.3**/15**, MS3.8**/15**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
RKT	**Rikitea**	**17.86**	**271**	*e*LR		LR	05 21 03.8	
968nm,26.8s								
RKT				*e*T		T	05 34 54.5	
6.0nm,0.3s								
PPT2	**Papeete2**	**32.47**	**276**	*e*LR		LR	05 27 40.5	
445nm,27.8s								
PLCA	**Paso Flores**	**40.67**	**125**	LR		LR	05 33 18.8	
comp=Z,305nm,21.6s,baz=350,slow=30								
LPAZ	**La Paz**	**44.98**	**89**	P		**P**	**05 21 14.4**	**+1.0**
LPAZ	**La Paz**	**44.98**	**89**	P		**P**	**05 21 14.4**	**+1.0**
4.5nm,1.1s,baz=254,slow=5.8,SNR=6.1								
LPAZ				LR		LR	05 35 03.6	
comp=Z,89nm,21.1s,baz=126,slow=30								
LPIG	**La Paz**	**48.66**	**6**	LR		LR	05 36 53.8	
comp=Z,14nm,20.1s,baz=217,slow=30								
SIV	**San Ignacio**	**51.50**	**91**	LR		LR	05 40 44.4	
comp=Z,89nm,18.7s,slow=32								
SAML	**Samuel**	**52.15**	**82**	*e*P		**P**	**05 22 08.4**	**+0.4**
1.8nm,0.9s								
CPUP	**Villa Florida**	**52.18**	**105**	LR		LR	05 41 29.2	
comp=Z,100nm,18.2s,baz=64,slow=33								
TXAR	**Lajitas Array**	**54.81**	**13**	P		**P**	**05 22 26.8**	**-0.4**
TXAR	**Lajitas Array**	**54.81**	**13**	P		**P**	**05 22 26.8**	**-0.4**
0.4nm,1.0s,baz=193,slow=12,SNR=2.8								
TXAR				LR		LR	05 40 14.3	
comp=Z,61nm,18.8s,baz=180,slow=30								

JCT	**Junction City** 10nm,1.1s	**56.79**	**16**	*eP*	**P**	**05 22 40.9**	**-0.5**
PFO	**Pinyon Flat Ob** comp=Z,66nm,19.6s,baz=130,slow=29	**57.88**	**359**	LR	LR	05 40 42.9	
ANMO	**Albuquerque** comp=Z,63nm,19.7s,baz=349,slow=32	**59.83**	**9**	LR	LR	05 44 37.9	
SPB	**Sao Paulo** 3.1nm,0.4s	**61.55**	**105**	*eP*	**P**	**05 23 14.2**	**-0.5**
NVAR	**Mina Array Bea**	**62.74**	**358**	P	**P**	**05 23 22.2**	**-0.2**
NVAR	**Mina Array Bea** 0.7nm,0.6s,baz=184,slow=9.0,SNR=5.2	**62.74**	**358**	P	**P**	**05 23 22.2**	**-0.2**
NVAR	comp=Z,63nm,18.5s,baz=276,slow=30			LR	LR	05 44 18.5	
BDFB	**Brasilia** comp=Z,82nm,20.9s,baz=220,slow=32	**63.48**	**96**	LR	LR	05 46 32.6	
QSPA	**South Pole Qui** 2.8nm,0.9s	**65.57**	**180**	*eP*	**P**	**05 23 39.7**	**-1.0**
TKL	**Tuckaleechee C** comp=Z,48nm,18.5s,baz=59,slow=33	**67.02**	**28**	LR	LR	05 49 18.2	
PDAR	**Pinedale Array**	**67.24**	**5**	P	**P**	**05 23 50.4**	**-1.2**
PDAR	**Pinedale Array** 1.0nm,0.9s,baz=187,slow=6.4,SNR=5.1	**67.24**	**5**	P	**P**	**05 23 50.4**	**-1.2**
MFID	**Camas Ranch** 1.1nm,0.7s	**67.66**	**360**	*eP*	**P**	**05 23 54.6**	**+0.4**
HLID	**Hailey** 2.0nm,0.9s	**67.82**	**1**	*eP*	**P**	**05 23 56.0**	**+0.8**
MOOW	**Moose Ponds** 3.3nm,1.3s	**68.14**	**4**	*eP*	**P**	**05 23 57.5**	**+0.2**
IMW	**Indian Meadow** 2.0nm,0.9s	**68.27**	**4**	*eP*	**P**	**05 23 58.2**	**0.0**
DLMT	**Dillon** 3.4nm,1.2s	**69.66**	**2**	*eP*	**P**	**05 24 06.7**	**+0.1**
HRY	**Holter Researc**	**71.04**	**3**	*eP*	**P**	**05 24 15.7**	**+0.7**
CHMT	**Chamberlain Mo**	**71.19**	**2**	*eP*	**P**	**05 24 16.4**	**+0.4**
NEW	**Newport** 1.1nm,0.8s,baz=175,slow=5.1,SNR=16	**72.53**	**359**	LR	LR	05 49 52.0	
SADO	**Sadowa** comp=Z,55nm,18.5s,baz=243,slow=33	**76.60**	**26**	LR	LR	05 55 02.1	
HNR	**Honiara** comp=Z,114nm,21.6s,baz=256,slow=29	**81.21**	**264**	LR	LR	05 52 39.4	
DLBC	**Dease Lake**	**83.59**	**352**	P	**P**	**05 25 25.7**	**+0.7**
YKA	**Yellowknife Ar**	**86.78**	**0**	P	**P**	**05 25 39.8**	**-1.0**
YKA	**Yellowknife Ar** 1.1nm,0.8s,baz=175,slow=5.1,SNR=16	**86.78**	**0**	P	**P**	**05 25 39.8**	**-1.0**
YKW3	**Yellowknife Ar**	**86.85**	**0**	*eP*	**P**	**05 25 41.2**	**0.0**
STKA	**Stephens Creek**	**87.44**	**236**	P	**P**	**05 25 45.5**	**+0.5**
STKA	**Stephens Creek** 1.7nm,0.9s,baz=172,slow=7.1,SNR=2.9	**87.44**	**236**	P	**P**	**05 25 45.5**	**+0.5**
SCHQ	**Schefferville** comp=Z,45nm,20.7s,baz=232,slow=33	**89.41**	**26**	LR	LR	06 02 16.0	
ZALV	**Zalesovo Beam**	**146.96**	**338**	PKPbc	**PKPbc**	**05 32 39.1**	**-0.3**
ZALV	**Zalesovo Beam** 1.7nm,0.7s,baz=4.8,slow=1.9,SNR=4.4	**146.96**	**338**	PKPbc	**PKPbc**	**05 32 39.1**	**-0.3**
BR131	**Keskin Array S**	**150.02**	**52**	*e*PKPbc	**PKPbc**	**05 32 49.7**	**+1.6**
BRTR	**Keskin Array B**	**150.02**	**52**	PKPbc	**PKPbc**	**05 32 47.4**	**-0.6**
BRTR	**Keskin Array B** 2.0nm,1.0s,baz=225,slow=2.8,SNR=6.0	**150.02**	**52**	PKPbc	**PKPbc**	**05 32 47.4**	**-0.6**
KURK	**Kurchatov**	**151.72**	**341**	*e*PKPbc	**PKPbc**	**05 32 52.6**	**+1.2**
MKAR	**Makanchi Array**	**153.66**	**332**	PKPbc	**PKPbc**	**05 32 56.5**	**+0.5**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=42,slow=2.0,SNR=5.1	**153.66**	**332**	PKPbc	**PKPbc**	**05 32 56.5**	**+0.5**

*DDA **10** 05:13:33.4,35.80N×27.66E,h7km,MD3.4*
*ATH **10** 05:13:35.3,35.83N×27.69E,h24km,MD3.2/7*
*CSEM **10** 05:13:35.9±0.1,35.83N×27.70E,h10km,MD3.2, Error ellipse: s-maj=4.4km s-min=2.0km az=142.0*
*ISCJB **10** 05:13:35.7±1.1,35.83N±0.04×27.70E±0.04,h14km±7km, Error ellipse: s-maj=8.0km s-min=4.1km az=140.6*
*ISK **10** 05:13:36.0,35.85N×27.67E,h20km,MD3.4*
ISC 10 05:13:33.9±0.8,**35.80N**±0.03×**27.69E**±0.03,**h10**km±9km, **n75**,σ1°**57**/91,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.50**	**240**	*e*PN	**Pn**	**05 13 45.8**	**-1.4**
KARP				*e*SN	**Sb**	**05 13 53.6**	**+1.4**
KARP	**Karpathos**	**0.50**	**240**	*e*Pn	**Pn**	**05 13 45.8**	**-1.4**
KARP				*e*Sn	**Sb**	**05 13 53.6**	**+1.4**
ARG	**Arkhangelos**	**0.54**	**40**	*e*PN	**Pn**	**05 13 46.3**	**-1.4**
ARG				*e*SN	**Sb**	**05 13 53.8**	**+0.4**
ARG	**Arkhangelos**	**0.54**	**40**	*e*Pn	**Pn**	**05 13 46.3**	**-1.4**
ARG				*e*Sn	**Sb**	**05 13 53.8**	**+0.4**
DAT	**Datca**	**0.93**	**354**	*e*PG	**Pn**	**05 13 53.6**	**+0.4**
DAT				*e*SG	**Sn**	**05 14 06.6**	**0.0**
DAT	**Datca**	**0.93**	**354**	*e*Pg	**Pn**	**05 13 53.6**	**+0.4**
DAT				*e*Sg	**Sn**	**05 14 06.6**	**0.0**
DALY	**Dalyan (Mu¨la**	**1.28**	**37**	*e*PN	**Pg**	**05 13 59.0**	**+0.6**
DALY	**Dalyan (Mu¨la**	**1.28**	**37**	*e*Pn	**Pg**	**05 13 59.0**	**+0.6**
BODT	**Bodrum**	**1.29**	**346**	*e*PN	**Pg**	**05 13 59.1**	**+0.3**
BODT	**Bodrum**	**1.29**	**346**	*e*Pn	**Pg**	**05 13 59.1**	**+0.3**
TURN	**Turunc**	**1.30**	**34**	*i*P	**Pn**	**05 13 55.7**	**-2.4**
TURN				*i*S	**Sb**	**05 14 10.2**	**-4.9**
TURN	**Turunc**	**1.30**	**34**	*i*P	**Pn**	**05 13 55.7**	**-2.4**
ZKR	**Zakros**	**1.39**	**241**	*e*PN	**Pg**	**05 14 01.3**	**+0.8**
ZKR				*e*SN	**Sg**	**05 14 22.2**	**+3.7**
ZKR	**Zakros**	**1.39**	**241**	*e*Pn	**Pg**	**05 14 01.3**	**+0.8**
ZKR				*e*Sn	**Sg**	**05 14 22.2**	**+3.7**
FETY	**Fethiye**	**1.40**	**53**	*e*PN	**Pg**	**05 14 00.8**	**0.0**
FETY	**Fethiye**	**1.40**	**53**	*e*Pn	**Pg**	**05 14 00.8**	**0.0**
YER	**Yerkesik**	**1.41**	**20**	*e*PN	**Pg**	**05 14 01.0**	**0.0**
YER				*e*SN	**Sg**	**05 14 19.0**	**-0.4**
YER	**Yerkesik**	**1.41**	**20**	*e*Pn	**Pg**	**05 14 01.0**	**0.0**
YER				*e*Sn	**Sg**	**05 14 19.0**	**-0.4**
MLSB	**Milas**	**1.49**	**3**	*e*PN	**Pg**	**05 14 01.7**	**-0.8**
MLSB	**Milas**	**1.49**	**3**	*e*Pn	**Pg**	**05 14 01.7**	**-0.8**
KSL	**Kastellorizon**	**1.57**	**77**	*e*PN	**Pg**	**05 14 03.5**	**-0.6**
KSL	**Kastellorizon**	**1.57**	**77**	*e*Pn	**Pg**	**05 14 03.5**	**-0.6**
AKAS	**Kas**	**1.61**	**74**	*i*P	**Pb**	**05 14 03.6**	**-0.2**
AKAS	**Kas**	**1.61**	**74**	*i*P	**Pb**	**05 14 03.6**	**-0.2**
NPS	**Neapolis**	**1.78**	**253**	*e*PN	**Pg**	**05 14 06.6**	**-1.5**
NPS				*e*SN	**Sb**	**05 14 28.6**	**-0.4**
NPS	**Neapolis**	**1.78**	**253**	*e*Pn	**Pg**	**05 14 06.6**	**-1.5**
NPS				*e*Sn	**Sb**	**05 14 28.6**	**-0.4**
AYDN	**Tasoluk**	**1.86**	**5**	*i*P	**Pb**	**05 14 07.5**	**-0.5**
AYDN				*e*S	**Sb**	**05 14 31.6**	**+0.2**
AYDN	**Tasoluk**	**1.86**	**5**	*i*P	**Pb**	**05 14 07.5**	**-0.5**
AYDN				*e*S	**Sb**	**05 14 31.6**	**+0.2**
XRY	**Khrisi**	**1.88**	**241**	*e*PN	**Pg**	**05 14 08.3**	**-1.6**
XRY	**Khrisi**	**1.88**	**241**	*e*Pn	**Pg**	**05 14 08.3**	**-1.6**
LAST	**Lasithi**	**1.92**	**251**	*e*PN	**Pg**	**05 14 08.7**	**-2.0**
LAST	**Lasithi**	**1.92**	**251**	*e*Pn	**Pg**	**05 14 08.7**	**-2.0**
GLHS	**Glhisar (BURDU**	**1.99**	**47**	*e*PN	**Pb**	**05 14 09.3**	**-0.9**
GLHS	**Glhisar (BURDU**	**1.99**	**47**	*e*Pn	**Pb**	**05 14 09.3**	**-0.9**
ELL	**Elmali**	**2.02**	**62**	*e*PN	**Pb**	**05 14 10.0**	**-0.9**
ELL	**Elmali**	**2.02**	**62**	*e*Pn	**Pb**	**05 14 10.0**	**-0.9**
GOLH	**Golhisar**	**2.08**	**46**	*i*P	**Pb**	**05 14 12.0**	**+0.2**
GOLH				*i*S	**Sg**	**05 14 40.6**	**-0.1**
GOLH	**Golhisar**	**2.08**	**46**	*i*P	**Pb**	**05 14 12.0**	**+0.2**
GOLH				*i*S	**Sg**	**05 14 40.6**	**-0.1**
APE	**Apeiranthos**	**2.15**	**307**	*e*PN	**Pb**	**05 14 11.8**	**-1.2**
APE	**Apeiranthos**	**2.15**	**307**	*e*Pn	**Pb**	**05 14 11.8**	**-1.2**
DNZL	**Cakiroluk**	**2.17**	**30**	*i*P	**Pg**	**05 14 15.3**	**-0.3**
DNZL				*i*S	**Sg**	**05 14 45.8**	**+1.9**
DNZL	**Cakiroluk**	**2.17**	**30**	*i*P	**Pg**	**05 14 15.3**	**-0.3**
DENT	**Denizli**	**2.23**	**29**	*e*PN	**Pb**	**05 14 12.8**	**-1.5**
DENT	**Denizli**	**2.23**	**29**	*e*Pn	**Pb**	**05 14 12.8**	**-1.5**
SIVA	**Sivas**	**2.48**	**252**	*e*PN	**Pb**	**05 14 17.0**	**-1.6**
SIVA	**Sivas**	**2.48**	**252**	*e*Pn	**Pb**	**05 14 17.0**	**-1.6**
IZM	**Izmir**	**2.61**	**353**	*e*PN	**Pn**	**05 14 17.3**	**+1.1**
IZM	**Izmir**	**2.61**	**353**	*e*Pn	**Pn**	**05 14 17.3**	**+1.1**
BLCB	**Balcova**	**2.63**	**349**	*e*PN	**Pn**	**05 14 17.3**	**+0.9**
BLCB	**Balcova**	**2.63**	**349**	*e*Pn	**Pn**	**05 14 17.3**	**+0.9**
KULA	**Kula-Manisa**	**2.81**	**16**	*e*PN	**Pn**	**05 14 20.4**	**+1.4**
KULA	**Kula-Manisa**	**2.81**	**16**	*e*Pn	**Pn**	**05 14 20.4**	**+1.4**
BCK	**Bucak**	**2.86**	**54**	*e*PN	**Pn**	**05 14 21.6**	**+2.0**
BCK	**Bucak**	**2.86**	**54**	*e*Pn	**Pn**	**05 14 21.6**	**+2.0**
VAM	**Vamos**	**2.87**	**263**	*e*PN	**Pb**	**05 14 22.8**	**-2.5**
VAM	**Vamos**	**2.87**	**263**	*e*Pn	**Pb**	**05 14 22.8**	**-2.5**
KHL	**Karahalli**	**2.91**	**30**	*e*PN	**Pn**	**05 14 22.3**	**+2.0**
KHL	**Karahalli**	**2.91**	**30**	*e*Pn	**Pn**	**05 14 22.3**	**+2.0**
ISP	**Isparta**	**3.04**	**48**	*e*PN	**Pn**	**05 14 23.9**	**+1.8**
ISP	**Isparta**	**3.04**	**48**	*e*Pn	**Pn**	**05 14 23.9**	**+1.8**
AKS	**Akhisar**	**3.07**	**2**	*e*PN	**Pn**	**05 14 24.2**	**+1.7**
AKS	**Akhisar**	**3.07**	**2**	*e*Pn	**Pn**	**05 14 24.2**	**+1.7**
GVD	**Gavdhos**	**3.10**	**253**	*e*PN	Pb	05 14 25.8	-3.3
GVD	**Gavdhos**	**3.10**	**253**	*e*Pn	Pb	05 14 25.8	-3.3
SHUT	**Suhut-Afyon**	**3.57**	**39**	*e*PN	**Pn**	**05 14 32.0**	**+2.5**
SHUT	**Suhut-Afyon**	**3.57**	**39**	*e*Pn	**Pn**	**05 14 32.0**	**+2.5**
KYTH	**Kithira**	**3.80**	**279**	*e*PN	**Pn**	**05 14 34.7**	**+2.1**
KYTH	**Kithira**	**3.80**	**279**	*e*Pn	**Pn**	**05 14 34.7**	**+2.1**
BALB	**Balikesir**	**3.83**	**2**	*e*PN	**Pn**	**05 14 35.0**	**+2.0**
BALB	**Balikesir**	**3.83**	**2**	*e*Pn	**Pn**	**05 14 35.0**	**+2.0**
TVSB	**Tavsanli**	**3.90**	**21**	*e*PN	**Pn**	**05 14 36.2**	**+2.2**
TVSB	**Tavsanli**	**3.90**	**21**	*e*Pn	**Pn**	**05 14 36.2**	**+2.2**
GONE	**Gonen-Balikesi**	**4.24**	**360**	*e*PN	**Pn**	**05 14 40.3**	**+1.8**
LPK	**Lapseki**	**4.62**	**351**	*e*PN	**Pn**	**05 14 45.5**	**+1.8**
LPK	**Lapseki**	**4.62**	**351**	*e*Pn	**Pn**	**05 14 45.6**	**+1.8**

*IDC **10** 05:39:12.4±1.7,33.11S×127.89E,h0km,mb3.5/3, mb1 3.8/5,mb1mx3.6/24,mbtmp3.6/5,ML3.5/2,MS2.7/1, Ms1 2.7/1,ms1mx2.2/26,Error ellipse: s-maj=118.5km s-min=22.0km az=70.0*
*DJA **10** 05:39:14.0±1.6,4.5S±10°×12°7E±°,h10km,M3.7/3, MLv3.7/3*
*ISCJB **10** 05:39:16.2±0.9,3.23S±0.10×127.50E±0.07,h42km, mb3.4/3,Error ellipse: s-maj=16.1km s-min=7.2km az=32.2*
ISC 10 05:39:16.9±1.1,**3.4S**±0.1×**127.43E**±0.09,**h42**km,**n8**, σ1°**60**/9,**mb3.2**/3,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**0.35**	**291**	P	**Pn**	**05 39 24.3**	**-1.6**
NLAI				S	**Sn**	**05 39 32.7**	**+0.5**
AAI	**Ambon**	**0.83**	**113**	P	**Pn**	**05 39 30.3**	**-1.8**
AAI				S	**Sn**	**05 39 43.3**	**+0.1**
KAPI	**Kappang** comp=Z,56nm,20.1s,baz=287,slow=38	**7.83**	**258**	LR	LR	05 44 28.5	
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=11,slow=12,SNR=2.6	**14.75**	**187**	Pn	**P**	**05 42 46.6**	**-1.5**
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=342,slow=12,SNR=18	**17.80**	**158**	P	**P**	**05 43 23.2**	**+1.2**
WRA	baz=340,slow=20,SNR=2.7			S	**Sn**	**05 46 39.7**	**+0.5**
ASAR	**Alice Springs** 3.2nm,0.6s,baz=344,slow=10,SNR=49	**21.13**	**163**	P	**P**	**05 44 00.5**	**+2.1**
MKAR	**Makanchi Array** 0.2nm,0.8s,baz=133,slow=6.1,SNR=2.6	**63.80**	**327**	P	P	05 49 47.6	+2.7
KURBB	**Kurchatov Arra** 0.1nm,0.4s,baz=124,slow=6.0,SNR=2.9	**68.10**	**329**	P	**P**	**05 50 13.3**	**+1.0**

*CASC **10** 05:42:51.8±2.7,9.77N×82.43W,h23km±10km,MD4.3*
*ISCJB **10** 05:42:51.2±1.3,9.81N±0.06×82.40W±0.03,h22km±11km, mb3.6/11,MS3.0/2, Error ellipse: s-maj=9.3km s-min=4.9km az=6.4*
*IDC **10** 05:42:54.0±1.4,10.74N×82.08W,h0km,mb3.7/11, mb1 4.0/11,mb1mx3.9/25,mbtmp3.7/11,MS3.2/3, Ms1 3.2/3,ms1mx2.7/31, Error ellipse: s-maj=49.8km s-min=18.7km az=34.0*
ISC 10 05:42:51.8±3.4,**9.75N**±0.06×**82.43W**±0.04,**h16**km±22km, **n27**,σ0°**84**/30,**mb3.8**/11,**5C-2D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU	**Baru**	**0.95**	**188**	*i*P	**Pb**	**05 43 10.2**	**+0.1**
TBS2		**0.98**	**193**	*e*P	**Pb**	**05 43 09.5**	**-1.0**
TBS2				*e*S	**Sb**	**05 43 23.1**	**0.0**
ACR	**Cerro Adams**	**1.31**	**214**	*i*P	**Pn**	**05 43 15.8**	**+0.3**
ACR				*e*S	**Sb**	**05 43 33.1**	**+0.5**
BUS	**Buena Vista**	**1.32**	**262**	*e*P	**Pn**	**05 43 15.0**	**-1.0**
SJS	**Escuela Geolog**	**1.61**	**277**	*e*P	**Pn**	**05 43 19.7**	**0.0**
SJS				*e*S	**Sn**	**05 43 39.4**	**-0.9**
QCR	**Quepos**	**1.74**	**259**	*i*P	**Pn**	**05 43 21.5**	**+0.1**
QCR				*e*S	**Sn**	**05 43 42.9**	**-0.4**
CGA2	**Cerro Gallo 2**	**2.02**	**278**	*e*P	**Pn**	**05 43 25.5**	**+0.1**
CGA2				*e*S	**Sn**	**05 43 51.0**	**+0.6**
FORC	**Fortuna**	**2.32**	**288**	*e*P	**Pn**	**05 43 29.3**	**-0.1**
BCIP	**Isla Barro Col**	**2.62**	**103**	*i*P	**Pn**	**05 43 33.1**	**-0.4**
BCIP				*e*S	**Sn**	**05 44 03.3**	**-1.7**
UPIG		**2.96**	**105**	*e*P	**Pn**	**05 43 39.3**	**+1.2**
UPIG				*e*S	**Sn**	**05 44 12.8**	**-0.5**
TEIG	**Tepich** 0.9nm,0.3s,baz=337,slow=14,SNR=6.4	**11.85**	**332**	Pn	**Pn**	**05 45 40.6**	**+0.5**
TEIG	0.1nm,0.3s,baz=166,slow=20,SNR=1.7			Sn	Sn	05 47 42.7	-9.4
TEIG	comp=Z,100nm,18.1s,baz=267,slow=41			LR	LR	05 50 34.5	
PTP	**Ponta Puerca**	**18.35**	**61**	*i*P	x	05 43 21.0	
PTP				*e*S	x	05 43 39.2	
TKL	**Tuckaleechee C** comp=Z,57nm,20.5s,baz=59,slow=40	**25.82**	**357**	LR	LR	05 59 21.8	
TXAR	**Lajitas Array** 0.4nm,0.8s,baz=132,slow=8.6,SNR=7.2	**27.84**	**317**	P	**P**	**05 48 41.4**	**+0.6**
LPAZ	**La Paz** comp=Z,35nm,20.5s,baz=299,slow=37	**29.49**	**151**	LR	LR	06 01 20.9	
ANMO	**Albuquerque** 1.2nm,0.7s,baz=114,slow=3.5,SNR=7.2	**33.33**	**322**	P	**P**	**05 49 29.6**	**+0.3**
PDAR	**Pinedale Array** 0.8nm,0.8s,baz=139,slow=12,SNR=6.8	**40.55**	**329**	P	**P**	**05 50 30.7**	**0.0**
BDFB	**Brasilia** 2.4nm,0.9s,baz=339,slow=8.5,SNR=5.2	**42.41**	**126**	P	P	05 50 54.5	+8.4
NVAR	**Mina Array Bea** 1.9nm,0.8s,baz=130,slow=6.9,SNR=13	**42.99**	**318**	P	**P**	**05 50 51.8**	**+1.1**
YKA	**Yellowknife Ar** 0.4nm,0.5s,baz=136,slow=7.2,SNR=16	**57.56**	**343**	P	**P**	**05 52 38.6**	**-1.8**
INK	**Inuvik** 0.9nm,1.0s,baz=163,slow=4.6,SNR=4.0	**67.27**	**342**	P	**P**	**05 53 45.2**	**0.0**
ILAR	**Eielson Array** 0.6nm,0.8s,baz=128,slow=5.0,SNR=9.9	**70.48**	**336**	P	**P**	**05 54 04.3**	**-1.0**
ESDC	**Sonseca Array** 0.9nm,0.7s,baz=283,slow=6.3,SNR=7.4	**74.98**	**52**	P	**P**	**05 54 33.4**	**+0.7**
EKA	**Eskdalemuir Ar** 0.6nm,0.7s,baz=270,slow=7.7,SNR=2.1	**75.94**	**35**	P	**P**	**05 54 37.3**	**-0.5**
TORD	**Torodi Ar. Bea** 0.3nm,0.8s,baz=286,slow=5.4,SNR=3.6	**82.17**	**78**	P	**P**	**05 55 13.0**	**+0.3**
ASAR	**Alice Springs** 0.3nm,0.7s,baz=108,slow=3.6,SNR=4.0	**142.68**	**244**	PKhKP	PKPpre	06 02 20.1	
ASAR	0.4nm,0.7s,baz=113,slow=3.6,SNR=4.2			PKP	**PKiKP**	**06 02 29.1**	**+0.8**
WRA	**Warramunga Arr** 0.8nm,0.6s,baz=342,slow=0.9,SNR=11	**143.12**	**250**	PKhKP	PKPpre	06 02 22.1	
WRA	0.4nm,0.6s,baz=94,slow=3.1,SNR=5.8			PKP	**PKiKP**	**06 02 30.9**	**+1.6**

KRSC 10 05:44:08.8±0.7,**49.67N**×**156.78E**,**h5**km±5km,**ML3.8**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.10**	**337**	*e*P	Pn	05 44 30.9	+0.1
SKR				*i*S	Sn	05 44 46.3	-0.1
MIPR	**Malaya Ipel'ka**	**2.61**	**360**	P	Pn	05 44 50.4	-1.2
ASAK	**Asacha**	**2.81**	**14**	*i*P	Pn	05 44 56.6	+2.2
ASAK				*e*S	Sn	05 45 31.3	+2.6
MTVR	**Mutnovka**	**2.95**	**17**	*e*P	Pn	05 44 58.2	+1.7
MTVR				*i*S	Sn	05 45 34.1	+1.6
RUS	**Russkaya**	**2.98**	**21**	*i*P	Pn	05 44 58.4	+1.8
RUS				*i*S	Sn	05 45 34.7	+2.1
APC	**Apacha**	**3.27**	**4**	P	Pn	05 45 02.8	+2.2
UGLR	**Uglovaya**	**3.77**	**19**	P	Pn	05 45 09.7	+2.0
AVH	**Avacha**	**3.80**	**18**	P	Pn	05 45 09.7	+1.6
AVH				*i*S	Sn	05 45 54.9	+1.6
SMAR	**Somma**	**3.81**	**19**	P	Pn	05 45 10.5	+2.1
SDLR	**Sedlovina**	**3.84**	**19**	P	Pn	05 45 10.2	+1.4
SDLR				*i*S	Sn	05 45 55.2	+0.8
SPN	**Mys Shipunski**	**3.99**	**29**	P	Pn	05 45 11.2	+0.7
SPN				*i*S	Sn	05 45 58.1	+0.5
GNL	**Ganaly**	**4.09**	**10**	P	Pn	05 45 11.8	-0.4
MKZ	**Mys Kozlova**	**5.76**	**30**	P	Pn	05 45 34.9	0.0

IDC 10 05:57:08.8±9.7,**24.04S**×**179.54E**,**h644**km±116km, **mb3.0**/5,**mb1 3.2**/5,**mb1mx2.9**/19,**mbtmp3.0**/5,**Error ellipse: s-maj=68.2km s-min=44.6km az=133.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower** 2.9nm,0.3s,baz=94,slow=12,SNR=4.9	**31.06**	**271**	P	P	06 02 37.5	0.0
ASAR	**Alice Springs** 0.4nm,0.3s,baz=95,slow=6.6,SNR=12	**41.60**	**261**	P	P	06 04 03.2	-0.2
WRA	**Warramunga Arr** 1.5nm,0.3s,baz=98,slow=8.4,SNR=64	**41.98**	**266**	P	P	06 04 06.0	-0.5
FITZ	**Fitzroy Crossi** 1.6nm,0.7s,baz=79,slow=5.2,SNR=5.5	**50.40**	**266**	P	P	06 05 10.8	+1.2
TXAR	**Lajitas Array** 0.3nm,0.9s,baz=220,slow=4.9,SNR=3.8	**90.86**	**58**	P	P	06 09 06.4	+0.5
HFS	**Hagfors** 1.8nm,0.9s,baz=4.1,slow=6.1,SNR=5.4	**142.60**	**348**	PKP	PKPdf	06 15 28.7	-1.0
TORD	**Torodi Ar. Bea** 0.4nm,0.9s,baz=189,slow=2.8,SNR=2.3	**168.98**	**191**	PKPab	PKPab	06 17 19.4	-0.8

IDC 10 06:00:12.8±6.4,**6.56S**×**146.77E**,**h99**km±65km,**mb3.3**/3, **mb1 3.5**/5,**mb1mx3.2**/19,**mbtmp3.2**/5,**ML3.1**/2,**Error ellipse: s-maj=65.7km s-min=27.4km az=144.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby** 6.7nm,0.3s,baz=331,slow=21,SNR=26	**2.85**	**172**	P	Pn	06 00 58.1	+1.4
PMG	11nm,0.3s,baz=158,slow=20,SNR=20			S	Sn	06 01 30.7	+0.3
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=43,slow=12,SNR=7.7	**17.96**	**221**	P	P	06 04 15.2	-0.4
ASAR	**Alice Springs** 0.7nm,0.7s,baz=54,slow=9.0,SNR=9.6	**21.03**	**215**	P	P	06 04 49.1	+0.2
FITZ	**Fitzroy Crossi** 3.0nm,1.0s,baz=61,slow=10,SNR=10	**23.58**	**239**	P	P	06 05 15.0	+0.2
ILAR	**Eielson Array** 0.5nm,0.6s,baz=250,slow=5.3,SNR=13	**86.08**	**23**	P	P	06 12 41.5	-0.8
TORD	**Torodi Ar. Bea** 0.3nm,0.4s,baz=68,slow=2.5,SNR=4.7	**145.00**	**284**	PKPbc	PKPdf	06 19 39.6	-0.1

IDC 10 06:07:30.0±14.0,**21.06S**×**65.61E**,**h0**km,**mb3.8**/5, **mb1 3.9**/5,**mb1mx3.6**/25,**mbtmp3.8**/5,**MS4.1**/3,**Ms1 4.1**/3, **ms1mx3.4**/30,**Error ellipse: s-maj=467.6km s-min=32.0km az=56.0,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland** comp=Z,296nm,18.6s,baz=8.0,slow=30	**41.31**	**245**	LR	LR	06 28 26.5	
ASAR	**Alice Springs** 0.8nm,0.8s,baz=268,slow=5.6,SNR=7.0	**62.66**	**106**	P	P	06 17 56.5	-0.4
WRA	**Warramunga Arr** 1.6nm,1.0s,baz=259,slow=5.8,SNR=3.1	**63.90**	**103**	P	P	06 18 05.4	+0.2
WRA	comp=Z,169nm,18.2s,baz=260,slow=33			LR	LR	06 43 04.8	
DAV	**Davao City (W)** comp=Z,108nm,19.3s,baz=36,slow=32	**65.15**	**71**	LR	LR	06 42 44.2	
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=207,slow=8.1,SNR=4.3	**69.19**	**12**	P	P	06 18 37.4	-0.9
ZALV	**Zalesovo Beam** 1.2nm,0.8s,baz=204,slow=3.2,SNR=2.2	**76.51**	**12**	P	P	06 19 22.1	+0.5
SONM	**Songino Array** 0.3nm,0.3s,baz=210,slow=1.2,SNR=2.9	**77.73**	**27**	P	P	06 19 29.2	+0.4

IDC 10 06:08:60.0±0.9,**20.05S**×**66.34E**,**h0**km,**mb3.8**/8, **mb1 3.9**/8,**mb1mx3.7**/26,**mbtmp3.8**/8,**MS4.0**/4,**Ms1 4.0**/4, **ms1mx3.5**/30,**Error ellipse: s-maj=34.3km s-min=21.3km az=85.0,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo** comp=Z,877nm,22.0s,baz=145,slow=31	**18.14**	**271**	LR	LR	06 18 20.8	
BOSA	**Boshof** comp=Z,226nm,19.2s,baz=147,slow=31	**38.24**	**249**	LR	LR	06 28 57.1	
MAW	**Mawson** 2.1nm,0.7s,baz=339,slow=11,SNR=3.3	**47.59**	**182**	P	P	06 17 37.4	+0.3
MAW	comp=Z,160nm,20.6s,baz=183,slow=29			LR	LR	06 32 18.9	
ASAR	**Alice Springs** 1.1nm,0.9s,baz=262,slow=6.6,SNR=6.1	**62.29**	**107**	P	P	06 19 24.6	+0.2
WRA	**Warramunga Arr** 1.7nm,0.9s,baz=259,slow=8.0,SNR=5.7	**63.45**	**103**	P	P	06 19 32.0	-0.2
SNAA	**Sanae** 0.5nm,0.9s,baz=95,slow=7.8,SNR=4.0	**64.59**	**199**	P	P	06 19 38.3

RAR	**Rarotonga**	**17.91**	**62**	LR	LR	06 21 09.3			
	comp=Z,242nm,18.3s,baz=313,slow=30								
TBI	**Tubuai**	**25.32**	**80**	*e*LR	LR	06 23 46.6			
	298nm,27.0s								
PPT2	**Papeete2**	**27.91**	**68**	*e*LR	LR	06 24 54.5			
	259nm,27.0s								
PPT	**Papeete**	**27.92**	**68**	LR	LR	06 26 38.6			
	comp=Z,160nm,18.7s,baz=131,slow=31								
HNR	**Honiara**	**30.35**	**309**	LR	LR	06 27 43.6			
	comp=Z,58nm,21.6s,baz=175,slow=30								
CTA	**Charters Tower**	**34.94**	**279**	P	P	06 19 11.9	+1.3		
	4.3nm,0.5s,baz=107,slow=10,SNR=7.9								
STKA	**Stephens Creek**	**35.49**	**257**	P	P	06 19 15.9	+0.7		
	3.3nm,0.7s,baz=106,slow=10,SNR=10								
ASAR	**Alice Springs**	**44.20**	**267**	P	P	06 20 27.1	-0.7		
	2.0nm,0.6s,baz=107,slow=7.4,SNR=31								
WRA	**Warramunga Arr**	**45.22**	**272**	P	P	06 20 34.8	-1.2		
	1.4nm,0.4s,baz=110,slow=7.8,SNR=23								
VNDA	**Vanda**	**47.90**	**186**	P	P	06 20 57.1	+0.9		
	1.2nm,0.9s,baz=25,slow=3.9,SNR=4.3								
SNAA	**Sanae**	**77.81**	**178**	P	P	06 24 15.6	0.0		
	2.1nm,1.0s,baz=210,slow=2.9,SNR=8.5								
NVAR	**Mina Array Bea**	**87.72**	**42**	P	P	06 25 07.5	-0.2		
	1.3nm,0.8s,baz=218,slow=8.9,SNR=7.7								
TXAR	**Lajitas Array**	**91.63**	**57**	P	P	06 25 27.1	+1.1		
	1.4nm,1.1s,baz=212,slow=6.8,SNR=8.1								
ANMO	**Albuquerque**	**92.91**	**51**	LR	LR	07 00 58.9			
	comp=Z,28nm,19.4s,baz=209,slow=31								
ILAR	**Eielson Array**	**97.99**	**12**	P	P	06 25 54.0	-0.2		
	0.2nm,0.6s,baz=216,slow=5.5,SNR=5.4								
MKAR	**Makanchi Array**	**118.83**	**310**	PKP	PKPdf	06 31 04.9	-2.0		
	0.2nm,0.5s,baz=210,slow=1.5,SNR=3.6								
ARCES	**ARCESS Array B**	**139.12**	**348**	PKP	PKPdf	06 31 43.2	-1.5		
	3.1nm,0.8s,baz=42,slow=9.7,SNR=2.9								
FINES	**FINESS Array B**	**145.81**	**341**	PKPbc	PKPdf	06 31 56.2	-0.5		
	2.0nm,0.5s,baz=44,slow=3.8,SNR=22								
AKASG	**Malin Array Be**	**152.22**	**323**	PKPbc	PKPbc	06 32 13.2	-0.9		
	1.2nm,0.6s,baz=50,slow=2.9,SNR=5.9								

IDC 10 06:31:34.4±1.0, 20.04S×66.42E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/27, mbtmp3.8/9, MS3.6/5, Ms1 3.7/5, ms1mx3.1/36, Error ellipse: s-maj=35.1km s-min=23.9km az=60.0, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**18.22**	**271**	LR	LR	06 41 04.6	
	comp=Z,174nm,19.7s,baz=278,slow=31						
BOSA	**Boshof**	**38.32**	**249**	LR	LR	06 50 41.8	
	comp=Z,65nm,20.4s,baz=163,slow=30						
CMAR	**Chiang Mai Arr**	**49.81**	**42**	LR	LR	06 57 24.4	
	comp=Z,65nm,20.7s,baz=152,slow=31						
ASAR	**Alice Springs**	**62.22**	**107**	P	P	06 41 58.1	-0.3
	1.0nm,0.8s,baz=262,slow=6.1,SNR=9.4						
ASAR				LR	LR	07 04 36.6	
	comp=Z,122nm,19.4s,baz=127,slow=32						
WRA	**Warramunga Arr**	**63.38**	**103**	P	P	06 42 06.2	0.0
	1.6nm,0.9s,baz=262,slow=5.5,SNR=6.4						
SNAA	**Sanae**	**64.63**	**199**	P	P	06 42 13.7	+0.2
	0.5nm,0.8s,baz=211,slow=6.8,SNR=3.5						
BRTR	**Keskin Array B**	**66.88**	**333**	P	P	06 42 28.8	+0.3
	0.9nm,0.7s,baz=155,slow=7.1,SNR=5.8						
MKAR	**Makanchi Array**	**68.05**	**12**	P	P	06 42 35.9	+0.2
	0.4nm,0.7s,baz=208,slow=6.9,SNR=5.2						
BVAR	**Borovoye Array**	**72.84**	**3**	P	P	06 43 04.3	-0.5
	0.3nm,0.4s,baz=172,slow=2.9,SNR=3.8						
ZALV	**Zalesovo Beam**	**75.37**	**11**	P	P	06 43 19.2	-0.3
	1.4nm,0.6s,baz=240,slow=2.9,SNR=4.2						
SONM	**Songino Array**	**76.49**	**26**	P	P	06 43 27.0	+0.8
	0.6nm,0.7s,baz=216,slow=4.8,SNR=4.0						
KSRS	**Korea Array**	**81.33**	**45**	LR	LR	07 19 41.8	
	comp=Z,29nm,19.0s,baz=135,slow=36						
MJAR	**Matsushiro Arr**	**88.01**	**5**	P	P	06 44 27.0	+0.3
	0.6nm,0.6s,baz=240,slow=4.6,SNR=3.4						
TXAR	**Lajitas Array**	**167.10**	**318**	PKPab	PKPab	06 52 46.2	-0.7
	0.5nm,0.9s,baz=66,slow=3.1,SNR=4.5						

IDC 10 06:34:21.1±0.6, 9.87S×75.45W, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.9/24, mbtmp3.9/11, ML4.2/1, Error ellipse: s-maj=21.2km s-min=12.0km az=99.0
ISCJB 10 06:34:25.8±0.4, 9.88S±0.05×75.43W±0.07, h41km, mb3.8/12, Error ellipse: s-maj=9.6km s-min=7.1km az=179.3
NEIC 10 06:34:27.5±0.9, 9.92S×75.43W, h44km±9km, mb4.7/1, Error ellipse: s-maj=12.3km s-min=8.1km az=57.0

ISC 10 06:34:27.0±0.5, 9.94S±0.06×75.34W±0.08, h41km, n48, σ1s04/48, mb3.7/12, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.52**	**216**	Pn	Pn	**06 35 04.7**	**-0.8**
NNA				*e*Sn	**Sn**	**06 35 34.1**	**-0.8**
NNA				Sn	Sn	06 35 35.3	+0.3
NNA				Lg	Lg	06 35 39.5	
NNA	**Nana**	**2.52**	**216**	Pn	**Pn**	**06 35 04.7**	**-0.8**
	48nm,0.3s,baz=26,slow=18,SNR=101						
NNA				Pg		06 35 07.0	
	60nm,0.3s,baz=24,slow=15,SNR=100						
NNA				Sn	**Sn**	**06 35 35.3**	**+0.3**
	44nm,0.3s,baz=329,slow=24,SNR=13						
NNA				Lg	Lg	06 35 39.5	
	176nm,0.3s,baz=243,slow=18,SNR=41						
ATAH	**Atahualpa**	**4.11**	**312**	Pn	**Pn**	**06 35 28.9**	**+1.2**
ATAH				Lg	Lg	06 36 24.6	
ATAH	**Atahualpa**	**4.11**	**312**	Pn	**Pn**	**06 35 28.9**	**+1.2**
	3.6nm,0.3s,baz=146,slow=6.1,SNR=20						
ATAH				Lg	Lg	06 36 24.6	
	7.0nm,0.3s,baz=332,slow=16,SNR=4.4						
LPAZ	**La Paz**	**9.44**	**133**	Pn	Pn	06 36 44.0	+2.9
LPAZ				Lg	Lg	06 39 23.3	
LPAZ	**La Paz**	**9.44**	**133**	Pn	Pn	06 36 44.0	+2.9
	0.1nm,0.3s,baz=320,slow=11,SNR=6.1						
LPAZ				Lg	Lg	06 39 23.3	
	0.3nm,0.3s,baz=193,slow=13,SNR=3.6						
OTAV	**Otavalo**	**10.57**	**343**	*e*Pn	**Pn**	**06 36 57.6**	**+1.1**
	4.2nm,0.8s						
SAML	**Samuel**	**12.04**	**86**	*e*Pn	**Pn**	**06 37 14.5**	**-1.6**
	6.2nm,0.6s						
SAML				*e*Sn	Sn	06 39 18.7	-10
SIV	**San Ignacio**	**15.15**	**115**	Pn	**P**	**06 38 01.3**	**-1.6**
SIV				Lg	Lg	06 42 19.4	
SIV	**San Ignacio**	**15.15**	**115**	Pn	**P**	**06 38 01.3**	**-1.6**
	0.3nm,0.3s,baz=300,slow=15,SNR=4.4						
SIV				Lg	Lg	06 42 19.4	
	0.3nm,0.3s,baz=35,slow=22,SNR=5.5						
SDV	**Santo Domingo**	**19.28**	**14**	P	**Pn**	**06 38 49.6**	**-0.3**
	0.1nm,0.4s						
CFAA	**Coronel Fontan**	**22.55**	**164**	P	**P**	**06 39 23.6**	**0.0**
CFAA	**Coronel Fontan**	**22.55**	**164**	P	**P**	**06 39 23.6**	**0.0**
	0.1nm,0.5s,baz=346,slow=8.0,SNR=3.1						
CPUP	**Villa Florida**	**23.59**	**136**	P	**P**	**06 39 34.6**	**+0.4**
CPUP	**Villa Florida**	**23.59**	**136**	P	**P**	**06 39 34.6**	**+0.4**
	1.7nm,0.7s,baz=325,slow=11,SNR=3.8						
PLCA	**Paso Flores**	**30.96**	**173**	P	**P**	**06 40 41.3**	**+0.9**
PLCA	**Paso Flores**	**30.96**	**173**	P	**P**	**06 40 41.3**	**+0.9**
	1.0nm,0.6s,baz=266,slow=16,SNR=3.2						
RCBR	**Riachuelo**	**39.26**	**87**	P	**P**	**06 41 54.2**	**+2.1**
	22nm,1.5s						
TXAR	**Lajitas Array**	**47.65**	**326**	P	**P**	**06 42 57.5**	**-2.0**
TXAR				PcP	**PcP**	**06 44 28.8**	**+0.1**
TXAR	**Lajitas Array**	**47.65**	**326**	P	**P**	**06 42 57.5**	**-2.0**
	0.2nm,0.6s,baz=151,slow=11,SNR=4.8						
TXAR				PcP	**PcP**	**06 44 28.8**	**+0.1**
	0.4nm,0.8s,baz=159,slow=2.8,SNR=3.3						
ULM	**Lac du Bonnet**	**62.56**	**345**	P	**P**	**06 44 46.1**	**-0.5**
ULM	**Lac du Bonnet**	**62.56**	**345**	P	**P**	**06 44 46.1**	**-0.5**
	1.8nm,0.5s,baz=165,slow=4.4,SNR=2.9						
NVAR	**Mina Array Bea**	**62.60**	**323**	P	**P**	**06 44 48.4**	**+0.9**
NVAR	**Mina Array Bea**	**62.60**	**323**	P	**P**	**06 44 48.4**	**+0.9**
	0.3nm,0.6s,baz=161,slow=5.7,SNR=3.8						
SNAA	**Sanae**	**75.15**	**162**	P	**P**	**06 46 05.3**	**+0.5**
SNAA	**Sanae**	**75.15**	**162**	P	**P**	**06 46 05.3**	**+0.5**
	0.4nm,0.9s,baz=248,slow=12,SNR=4.2						
YKA	**Yellowknife Ar**	**78.33**	**343**	P	**P**	**06 46 21.3**	**-1.3**
YKA	**Yellowknife Ar**	**78.33**	**343**	P	**P**	**06 46 21.3**	**-1.3**
	0.4nm,0.5s,baz=140,slow=5.8,SNR=20						
TORD	**Torodi Ar. Bea**	**79.83**	**75**	P	**P**	**06 46 32.9**	**+1.0**
TORD	**Torodi Ar. Bea**	**79.83**	**75**	P	**P**	**06 46 32.9**	**+1.0**
	2.0nm,0.9s,baz=260,slow=4.6,SNR=6.9						
QSPA	**South Pole Qui**	**80.18**	**180**	P	**P**	**06 46 33.7**	**+0.7**
QSPA	**South Pole Qui**	**80.18**	**180**	P	**P**	**06 46 33.7**	**+0.7**
	1.3nm,1.0s,baz=136,slow=0.6,SNR=4.4						
INK	**Inuvik**	**88.05**	**342**	P	**P**	**06 47 11.5**	**-1.1**
INK	**Inuvik**	**88.05**	**342**	P	**P**	**06 47 11.5**	**-1.1**
	2.0nm,0.9s,baz=133,slow=4.1,SNR=9.1						
ZALV	**Zalesovo Beam**	**133.32**	**16**	PKP	**PKPdf**	**06 53 39.4**	**+0.8**
ZALV	**Zalesovo Beam**	**133.32**	**16**	PKP	**PKPdf**	**06 53 39.4**	**+0.8**
	0.7nm,0.3s,baz=325,slow=1.8,SNR=2.2						
KURK	**Kurchatov**	**134.03**	**23**	PKP	**PKPdf**	**06 53 40.6**	**+0.7**
KURBB	**Kurchatov Arra**	**134.07**	**23**	PKP	**PKPdf**	**06 53 40.6**	**+0.6**
	0.2nm,0.7s,baz=296,slow=2.4,SNR=3.8						
ASAR	**Alice Springs**	**136.03**	**220**	PKP	**PKPdf**	**06 53 46.2**	**+1.6**
ASAR	**Alice Springs**	**136.03**	**220**	PKP	**PKPdf**	**06 53 46.2**	**+1.6**
	0.1nm,0.3s,baz=119,slow=1.2,SNR=3.1						
WRA	**Warramunga Arr**	**138.34**	**224**	PKP	**PKPdf**	**06 53 48.2**	**-0.7**
WRA	**Warramunga Arr**	**138.34**	**224**	PKP	**PKPdf**	**06 53 48.2**	**-0.7**
	0.7nm,0.8s,baz=127,slow=1.9,SNR=5.3						
MKAR	**Makanchi Array**	**138.64**	**23**	PKP	**PKPdf**	**06 53 49.2**	**+0.5**
MKAR	**Makanchi Array**	**138.64**	**23**	PKP	**PKPdf**	**06 53 49.2**	**+0.5**
	0.2nm,0.7s,baz=336,slow=3.2,SNR=2.6						
SONM	**Songino Array**	**142.20**	**358**	PKPpre	PKPpre	06 53 51.7	
SONM	**Songino Array**	**142.20**	**358**	PKhKP	PKPpre	06 53 51.7	
	0.4nm,0.6s,baz=7.6,slow=4.4,SNR=2.8						
KSRS	**Korea Array**	**145.50**	**326**	PKPbc	**PKPdf**	**06 54 00.6**	**-0.6**
	2.1nm,0.7s,baz=57,slow=3.2,SNR=7.7						
KSAR	**Wonju Array Be**	**145.53**	**326**	PKPbc	**PKPdf**	**06 54 00.6**	**-0.7**

ISK 10 06:50:44.5, 39.12N×27.56E, h10km, MD2.8
DDA 10 06:50:44.8, 39.09N×27.55E, h7km, MD2.6
CSEM 10 06:50:44.7±0.2, 39.13N×27.57E, h1km, MD2.6, Error ellipse: s-maj=4.6km s-min=3.3km az=84.0
ISCJB 10 06:50:44.6±0.4, 39.12N±0.02×27.55E±0.04, h0km, Error ellipse: s-maj=4.2km s-min=3.1km az=169.4

ISC 10 06:50:44.4±0.8, 39.14N±0.02×27.56E±0.03, h0km, n43, σ0s68/55, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.33**	**143**	*i* P	**Pg**	**06 50 51.1**	**+0.4**
AKHS				*i* S	**Sg**	**06 50 55.3**	**+0.4**
AKHS	**Akhisar**	**0.33**	**143**	*i* P	**Pg**	**06 50 51.1**	**+0.4**
AKHS				*i* S	**Sg**	**06 50 55.3**	**+0.4**
AKS	**Akhisar**	**0.33**	**143**	*e*PG	**Pg**	**06 50 50.9**	**+0.3**
AKS				*e*SG	**Sg**	**06 50 56.5**	**+1.6**
AKS	**Akhisar**	**0.33**	**143**	*e*Pg	**Pg**	**06 50 50.9**	**+0.3**
AKS				*e*Sg	**Sg**	**06 50 56.5**	**+1.6**
BALB	**Balikesir**	**0.56**	**26**	*e*PG	**Pg**	**06 50 56.1**	**+1.0**
BALB				*e*SG	**Sb**	**06 51 04.6**	**-1.0**
BALB	**Balikesir**	**0.56**	**26**	*e*Pg	**Pg**	**06 50 56.1**	**+1.0**
BALB				*e*Sg	**Sb**	**06 51 04.6**	**-1.0**
BALY	**Balya**	**0.60**	**4**	*i* P	**Pb**	**06 50 57.3**	**-0.6**
BALY				*i* S	**Sb**	**06 51 05.8**	**-1.1**
BALY	**Balya**	**0.60**	**4**	*i* P	**Pb**	**06 50 57.3**	**-0.6**
BALY				*i* S	**Sb**	**06 51 05.8**	**-1.1**
AYVA	**Ayvalik**	**0.70**	**284**	*i* P	**Pb**	**06 50 59.6**	**+0.2**
AYVA	**Ayvalik**	**0.70**	**284**	*i* P	**Pb**	**06 50 59.7**	**+0.2**
IZM	**Izmir**	**0.78**	**198**	*e*PG	**Pg**	**06 50 59.2**	**-0.1**
IZM				*e*SG	**Sb**	**06 51 10.8**	**-1.1**
IZM	**Izmir**	**0.78**	**198**	*e*Pg	**Pg**	**06 50 59.2**	**-0.1**
IZM				*e*Sg	**Sb**	**06 51 10.8**	**-1.1**
DURS	**Dursunbey**	**0.84**	**57**	*i* P	**Pb**	**06 51 01.7**	**-0.3**
DURS				*i* S	**Sb**	**06 51 15.4**	**+1.4**
DURS	**Dursunbey**	**0.84**	**57**	*i* P	**Pb**	**06 51 01.7**	**-0.3**
BLCB	**Balcova**	**0.85**	**208**	*e*PG	**Pg**	**06 51 01.5**	**+0.7**
BLCB	**Balcova**	**0.85**	**208**	*e*Pg	**Pg**	**06 51 01.5**	**+0.7**
DST	**Dursunbey**	**0.94**	**60**	*e*PG	**Pg**	**06 51 03.3**	**+0.8**
DST	**Dursunbey**	**0.94**	**60**	*e*Pg	**Pg**	**06 51 03.3**	**+0.8**
KULA	**Kula-Manisa**	**1.06**	**126**	*e*PG	**Pg**	**06 51 04.4**	**-0.4**
KULA	**Kula-Manisa**	**1.06**	**126**	*e*Pg	**Pg**	**06 51 04.4**	**-0.4**
EDC	**Edincik**	**1.23**	**11**	*e*PN	**Pg**	**06 51 08.2**	**+0.2**
EDC	**Edincik**	**1.23**	**11**	*e*Pn	**Pg**	**06 51 08.2**	**+0.2**
KRBG	**Karabiga-Canak**	**1.27**	**351**	*e*PN	**Pg**	**06 51 09.2**	**+0.4**
KRBG	**Karabiga-Canak**	**1.27**	**351**	*e*Pn	**Pg**	**06 51 09.2**	**+0.4**
KCTX	**Karacabey (Bur**	**1.28**	**28**	*e*PN	**Pg**	**06 51 09.3**	**+0.3**
KCTX	**Karacabey (Bur**	**1.28**	**28**	*e*Pn	**Pg**	**06 51 09.3**	**+0.3**
BOZC	**Bozcaada**	**1.36**	**301**	*i* P	**Pn**	**06 51 11.0**	**+0.4**
BOZC				*i* S	**Sn**	**06 51 29.8**	**+0.4**
ORLT	**Orhaneli**	**1.37**	**48**	*e*PN	**Pg**	**06 51 10.3**	**-0.4**
ORLT	**Orhaneli**	**1.37**	**48**	*e*Pn	**Pg**	**06 51 10.3**	**-0.4**
LPK	**Lapseki**	**1.38**	**334**	*e*PN	**Pg**	**06 51 10.6**	**-0.2**
LPK	**Lapseki**	**1.38**	**334**	*e*Pn	**Pg**	**06 51 10.6**	**-0.2**
MRMT	**Marmara Adasi**	**1.46**	**1**	*e*PN	**Pn**	**06 51 11.8**	**-0.3**
MRMT	**Marmara Adasi**	**1.46**	**1**	*e*Pn	**Pn**	**06 51 11.8**	**-0.3**
TVSB	**Tavsanli**	**1.51**	**78**	*e*PN	**Pn**	**06 51 12.4**	**-0.4**
TVSB	**Tavsanli**	**1.51**	**78**	*e*Pn	**Pn**	**06 51 12.4**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.51**	**327**	*e*PN	**Pn**	**06 51 12.4**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.51**	**327**	*e*Pn	**Pn**	**06 51 12.4**	**-0.3**
ULDT	**Uludag**	**1.57**	**50**	*i* P	**Pg**	**06 51 15.2**	**+0.6**
ULDT	**Uludag**	**1.57**	**50**	*i* P	**Pg**	**06 51 15.2**	**+0.6**
ERIK	**Erikli-Kesan**	**1.73**	**333**	*e*PN	**Pn**	**06 51 15.6**	**-0.1**
ERIK	**Erikli-Kesan**	**1.73**	**333**	*e*Pn	**Pn**	**06 51 15.6**	**-0.1**
KHL	**Karahalli**	**1.74**	**117**	*e*PN	**Pn**	**06 51 15.5**	**-0.4**
KHL	**Karahalli**	**1.74**	**117**	*e*Pn	**Pn**	**06 51 15.5**	**-0.4**

IDC 10 06:52:16.6±2.5, 1.06N×30.23E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.2/26, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=78.8km s-min=22.2km az=19.0, Uganda

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**7.35**	**107**	Pn	Pn	06 54 07.7	+2.0
	0.4nm,0.3s,baz=269,slow=16,SNR=4.1						
KMBO				Sn	Sn	06 55 29.7	-0.4
	1.0nm,0.3s,baz=254,slow=21,SNR=4.4						
KMBO				Lg	Lg	06 56 07.8	
	1.5nm,0.3s,baz=233,slow=22,SNR=3.5						
TORD	**Torodi Ar. Bea**	**30.70**	**294**	P	P	06 58 33.2	-0.4
	0.2nm,0.4s,baz=101,slow=7.0,SNR=4.2						
MKAR	**Makanchi Array**	**64.18**	**37**	P	P	07 02 53.3	0.0
	0.3nm,0.7s,baz=257,slow=5.2,SNR=3.1						

IDC 10 07:14:56.8±0.7, 30.79S×176.62W, h0km, mb4.3/9, mb1 4.5/9, mb1mx4.3/20, mbtmp4.3/9, MS3.7/6, Ms1 3.6/6, ms1mx3.2/39, Error ellipse: s-maj=21.7km s-min=19.5km az=13.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.90**	**324**	Pn	Pn	07 15 30.8	+0.3
	110nm,0.3s,baz=90,slow=19,SNR=5.2						
RAO				Sn	Sn	07 15 54.7	-0.5
	404nm,0.3s,baz=77,slow=23,SNR=9.5						
RAO				LR	LR	07 15 56.5	
	comp=Z,1μm,20.3s,baz=9.7,slow=31						
URZ	**Urewera**	**9.06**	**213**	Pn	Pn	07 17 05.5	-3.4
	1.4nm,0.3s,baz=191,slow=6.7,SNR=9.3						
URZ				Sn	Sn	07 18 44.0	-7.6
	1.8nm,0.3s,baz=235,slow=19,SNR=7.5						
RPZ	**Rata Peaks**	**16.18**	**214**	Pn	Pn	07 18 39.6	-5.9
	1.9nm,0.3s,baz=70,slow=18,SNR=11						
DZM	**Mont Dzumac**	**17.46**	**296**	*e*LR	LR	07 23 08.3	
	428nm,27.3s						
DZM	**Mont Dzumac**	**17.46**	**296**	P	P	07 19 05.8	+2.5
	0.2nm,0.3s,baz=43,slow=19,SNR=2.7						
DZM				LR	LR	07 24 30.5	
	comp=Z,175nm,19.5s,baz=217,slow=33						
TBI	**Tubuai**	**25.25**	**80**	*e*LR	LR	07 26 24.9	
	189nm,28.2s						
PPT2	**Papeete2**	**27.87**	**68**	*e*LR	LR	07 27 33.2	
	172nm,25.0s						
CTA	**Charters Tower**	**35.03**	**279**	P	P	07 21 51.8	+0.3
	6.8nm,0.7s,baz=110,slow=11,SNR=7.5						
CTA				LR	LR	07 34 04.8	
	comp=Z,113nm,21.1s,baz=195,slow=33						
STKA	**Stephens Creek**	**35.55**	**257**	P	P	07 21 56.4	+0.6
	4.3nm,1.0s,baz=100,slow=10.0,SNR=6.5						
STKA				LR	LR	07 34 54.7	
	comp=Z,79nm,19.0s,baz=26,slow=34						
ASAR	**Alice Springs**	**44.27**	**267**	P	P	07 23 08.3	-0.2
	2.5nm,0.7s,baz=106,slow=7.4,SNR=30						
WRA	**Warramunga Arr**	**45.30**	**272**	P	P	07 23 15.5	-1.1
	1.2nm,0.4s,baz=111,slow=8.0,SNR=28						
FITZ	**Fitzroy Crossi**	**53.54**	**269**	LR	LR	07 46 46.2	
	comp=Z,61nm,19.0s,baz=14,slow=36						
GUMO	**Guam**	**57.60**	**314**	LR	LR	07 46 16.8	
	comp=Z,40nm,19.1s,baz=355,slow=33						
QSPA	**South Pole Qui**	**59.32**	**180**	P	P	07 25 00.5	+0.2
	3.8nm,0.8s,baz=41,slow=2.9,SNR=15						
QSPA				LR	LR	07 43 39.0	
	comp=Z,144nm,21.4s,baz=122,slow=29						
NVAR	**Mina Array Bea**	**87.73**	**42**	P	P	07 27 47.8	+0.1
	2.1nm,0.8s,baz=224,slow=6.3,SNR=12						
TXAR	**Lajitas Array**	**91.61**	**57**	P	P	07 28 05.9	0.0
	1.1nm,1.0s,baz=202,slow=6.2,SNR=9.3						
PDAR	**Pinedale Array**	**95.61**	**43**	P	P	07 28 23.3	-0.9
	0.5nm,0.9s,baz=208,slow=5.1,SNR=4.2						
ILAR	**Eielson Array**	**98.05**	**12**	P	P	07 28 34.0	-0.4
	0.3nm,0.7s,baz=220,slow=5.8,SNR=8.4						
MKAR	**Makanchi Array**	**118.94**	**310**	PKP	PKPdf	07 33 45.6	-1.5
	0.2nm,0.5s,baz=180,slow=2.9,SNR=3.2						
AAK	**Ala-Archa**	**123.32**	**303**	PKP	PKPdf	07 33 55.9	0.0
	0.8nm,0.4s,baz=204,slow=18,SNR=2.6						
FINES	**FINESS Array B**	**145.92**	**341**	PKPbc	PKPdf	07 34 37.0	+0.2
	3.0nm,0.6s,baz=42,slow=2.3,SNR=20						
AKASG	**Malin Array Be**	**152.33**	**323**	PKPbc	PKPbc	07 34 53.3	-1.0
	1.2nm,0.6s,baz=52,slow=2.6,SNR=5.4						
GERES	**GERESS Array B**	**160.34**	**339**	PKPab	PKPab	07 35 40.4	+1.7
	0.7nm,0.9s,baz=328,slow=3.5,SNR=6.1						
TORD	**Torodi Ar. Bea**	**162.37**	**175**	PKPab	PKPab	07 35 47.5	-0.8
	1.0nm,0.6s,baz=188,slow=2.9,SNR=7.5						

IDC 10 07:18:17.2±0.9, 30.75S×176.49W, h0km, mb4.1/7, mb1 4.3/7, mb1mx4.1/20, mbtmp4.1/7, Error ellipse: s-maj=26.6km s-min=21.2km az=35.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.93**	**320**	Pn	Pn	07 18 51.3	0.0
	138nm,0.3s,baz=90,slow=17,SNR=4.0						
RAO				Sn	Sn	07 19 17.4	-0.6
	442nm,0.3s,baz=76,slow=23,SNR=5.7						
URZ	**Urewera**	**9.16**	**213**	Pn	Pn	07 20 25.1	-5.5
	0.4nm,0.3s,baz=260,slow=13,SNR=5.7						
URZ				Sn	Sn	07 22 04.5	-10
	1.1nm,0.3s,baz=193,slow=18,SNR=7.3						
RPZ	**Rata Peaks**	**16.28**	**214**	Pn	Pn	07 21 59.2	-8.1
	0.8nm,0.3s,baz=46,slow=16,SNR=3.4						
DZM	**Mont Dzumac**	**17.54**	**295**	*e*LR	LR	07 26 30.6	
	312nm,27.8s						
TBI	**Tubuai**	**25.14**	**80**	*e*LR	LR	07 29 47.4	
	180nm,28.0s						
CTA	**Charters Tower**	**35.13**	**279**	P	P	07 25 13.9	+1.2
	4.0nm,0.8s,baz=102,slow=14,SNR=3.6						
STKA	**Stephens Creek**	**35.67**	**257**	P	P	07 25 17.6	+0.5
	3.5nm,0.9s,baz=111,slow=11,SNR=6.4						
ASAR	**Alice Springs**	**44.39**	**267**	P	P	07 26 28.8	-1.0
	1.5nm,0.8s,baz=107,slow=7.8,SNR=9.8						
WRA	**Warramunga Arr**	**45.41**	**272**	P	P	07 26 36.9	-1.0
	1.1nm,0.6s,baz=111,slow=8.0,SNR=13						
QSPA	**South Pole Qui**	**59.37**	**180**	P	P	07 28 21.4	+0.3
	3.4nm,1.0s,baz=79,slow=2.8,SNR=6.9						
TXAR	**Lajitas Array**	**91.49**	**57**	P	P	07 31 26.0	+0.2
	0.6nm,0.9s,baz=241,slow=8.8,SNR=3.0						
ILAR	**Eielson Array**	**97.98**	**12**	P	P	07 31 53.7	-0.8
	0.3nm,0.7s,baz=230,slow=5.4,SNR=6.

CLDR				*e*SG	**Sn**	07 22 11.4	-0.6
HAKT	**HAKKARI**	**0.97**	**178**	*i* P	**Pg**	07 22 03.2	-0.2
HAKT				*i* S	**Sb**	07 22 18.0	+0.2
HAKT	**HAKKARI**	**0.97**	**178**	*i* P	**Pg**	07 22 03.2	-0.2
HAKT				*i* S	**Sb**	07 22 18.0	+0.2
TUTA	**Tutak**	**1.10**	**323**	*i* P	**Pg**	07 22 05.6	-0.2
TUTA				*i* S	**Sg**	07 22 20.1	+0.1
TUTA	**Tutak**	**1.10**	**323**	*i* P	**Pg**	07 22 05.6	-0.2
TUTA				*i* S	**Sg**	07 22 20.1	+0.1

IDC ***10*** *07:22:12.6±0.5, 1°.55N×85°.12W, h0km, mb4.5/20, mb1 4.7/22, mb1mx4.7/28, mbtmp4.6/22, ML4.6/3, MS4.4/26, Ms1 4.4/26, ms1mx4.3/40, Error ellipse: s-maj=25.9km s-min=10.3km az=63.0*

NEIC ***10*** *07:22:14.2±0.2, 1°.43N×85°.24W, h10km, mb5.1/115, Error ellipse: s-maj=4.6km s-min=2.9km az=49.0*

BJI ***10*** *07:22:14.3, 1°.40N×85°.30W, h10km, mB5.4/13, Ms5.4/11, Ms7 4.9/14*

GCMT ***10*** *07:22:16.9±0.2, 1°.44N×85°.33W, h18km, MW5.3, Moment Tensor Solution. s69,c107; s85,c154; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{r\phi}$0.00; Best double couple: $M_0$1.00000×10^{17} NP1:ϕ_s94.00000°,δ69.00000°,λ-4.00000°. NP2: ϕ_s186.00000°,δ86.00000°,λ-159.00000°. Principal axes: T 1.0300, Plg12.0000°, Azm318.0000°; N -0.0500, Plg69.0000°, Azm196.0000°; P -0.9800, Plg17.0000°, Azm52.0000°; Data Used: ll IU IC G CN.*

ISCJB ***10*** *07:22:16.0±0.2, 1°.45N±0°.03×85°.24W±0°.03, h33km, mb5.0/136, MS4.5/30 Error ellipse: s-maj=5.7km s-min=3.5km az=43.2*

MOS ***10*** *07:22:16.7±0.9, 1°.59N×85°.12W, h33km, mb5.3/41, Error ellipse: s-maj=10.9km s-min=5.3km az=108.9*

ISC 10 07:22:16.4±0.3, **1°.36N**±0°.05×**85°.30W**±0°.06, **h27**km, **n710**, σ**1**§**14**/722, **mb5.0**/136, **MS4.5**/31, **52C-59D, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**5.38**	**248**	*e*Pn	**Pn**	**07 23 36.2**	**+1.3**
PAYG				*e*Sn	Sb	07 24 47.1	-6.8
OTAV	**Otavalo**	**6.94**	**99**	*e*Pn	**Pn**	**07 23 55.5**	**-1.3**
OTAV				*e*Sn	**Sn**	**07 25 15.0**	**-0.2**
JTS	**JuntasAbangare**	**8.88**	**2**	*e*Pn	**Pn**	**07 24 22.9**	**-0.2**
JTS				Sn	Sn	07 26 14.8	+12
BCIP	**Isla Barro Col**	**9.47**	**35**	*e*Pn	**Pn**	**07 24 29.9**	**-1.2**
ATAH	**Atahualpa**	**10.90**	**141**	Pn	**Pn**	**07 24 52.2**	**+1.1**
ATAH	**Atahualpa**	**10.90**	**141**	Pn	**Pn**	**07 24 52.2**	**+1.1**
	15nm,0.3s,baz=322,slow=12,SNR=93						
TGUH	**Tegucigalpa,Un**	**12.76**	**351**	*e*Pn	**Pn**	**07 25 16.2**	**0.0**
TGUH				*e*Sn	**Sn**	**07 27 40.4**	**+2.9**
NNA	**Nana**	**15.70**	**148**	*e*Pn	**Pn**	**07 25 56.1**	**+0.1**
	383nm,1.8s						
NNA	**Nana**	**15.70**	**148**	Pn	**Pn**	**07 25 57.9**	**+1.9**
	432nm,0.9s,SNR=7.1						
NNA	**Nana**	**15.70**	**148**	Pn	**Pn**	**07 25 57.7**	**+1.6**
	2.8nm,0.3s,baz=321,slow=12,SNR=16						
NNA				LR	LR	07 31 08.0	
	comp=Z,2µm,21.4s,baz=322,slow=34						
SDV	**Santo Domingo**	**16.40**	**62**	*e*Pn	**Pn**	**07 26 04.6**	**-0.6**
	156nm,1.0s						
MTDJ	**Mount Denham**	**18.41**	**24**	*e*Pn	**Pn**	**07 26 30.6**	**+0.6**
	268nm,1.5s						
TEIG	**Tepich**	**18.97**	**351**	*e*P	**P**	**07 26 35.2**	**-0.6**
	42nm,1.0s						
TEIG	**Tepich**	**18.97**	**351**	P	**P**	**07 26 35.4**	**-0.5**
	0.6nm,0.3s,baz=134,slow=9.7,SNR=8.9						
TEIG				LR	LR	07 33 21.3	
	comp=Z,2µm,18.8s,baz=248,slow=36						
GTBY	**Guantanamo Bay**	**20.97**	**28**	*e*P	**P**	**07 26 57.5**	**-0.1**
	428nm,1.8s						
SDDR	**Presa de Saban**	**22.26**	**37**	*e*P	**P**	**07 27 10.8**	**-0.8**
	422nm,1.8s						
ARE	**Arequipa**	**22.35**	**143**	*e*P	**P**	**07 27 15.0**	**+2.2**
ARE	**Arequipa**	**22.35**	**143**	*e*P	**P**	**07 27 15.0**	**+2.2**
SAML	**Samuel**	**24.31**	**115**	*e*P	**P**	**07 27 31.9**	**-0.1**
	621nm,2.0s						
GRTK	**Grand Turk**	**24.33**	**34**	*e*P	**P**	**07 27 31.8**	**-0.3**
	276nm,1.4s						
CRPR	**Cabo Rojo, PR**	**24.35**	**46**	*e*P	**P**	**07 27 32.2**	**-0.1**
	168nm,0.8s						
LPAZ	**La Paz**	**24.39**	**137**	*e*P	**P**	**07 27 34.5**	**+1.1**
	95nm,1.0s						
LPAZ	**La Paz**	**24.39**	**137**	P	**P**	**07 27 34.5**	**+1.1**
	80nm,1.1s,baz=322,slow=9.8,SNR=132						
LSP	**Las Mesas**	**24.48**	**46**	P	**P**	**07 27 33.3**	**-0.2**
LRS	**Lares**	**24.72**	**46**	*e*P	**P**	**07 27 35.4**	**-0.3**
OBIP	**Obispado Ponce**	**24.74**	**47**	*e*P	**P**	**07 27 36.3**	**+0.4**
	238nm,1.4s						
CELP	**Cerrillos**	**24.78**	**47**	*e*P	**P**	**07 27 36.9**	**+0.7**
AOPR	**Arecibo Observ**	**24.82**	**46**	*e*P	**P**	**07 27 37.4**	**+0.7**
	138nm,0.8s						
SJG	**San Juan**	**25.11**	**47**	*e*P	**P**	**07 27 39.1**	**-0.2**
	105nm,1.0s						
HUMP	**Col San Antoni**	**25.35**	**48**	*e*P	**P**	**07 27 40.1**	**-1.4**
	169nm,1.1s						
CBYP	**Canovanas**	**25.43**	**47**	*e*P	**P**	**07 27 41.8**	**-0.4**
	144nm,1.3s						
MTP	**Monte Pirata**	**25.55**	**48**	*e*P	**P**	**07 27 42.9**	**-0.3**
	110nm,1.1s						
CDVI	**St. Croix**	**25.93**	**50**	*e*P	**P**	**07 27 47.0**	**+0.3**
	192nm,0.9s						
STVI	**Saint Thomas**	**26.15**	**49**	*e*P	**P**	**07 27 50.2**	**+1.5**
	60nm,1.2s						
LVC	**Limon Verde**	**28.69**	**147**	*e*P	**P**	**07 28 12.9**	**+1.2**
SIV	**San Ignacio**	**29.50**	**127**	P	**P**	**07 28 19.2**	**+0.4**
SIV	**San Ignacio**	**29.50**	**127**	P	**P**	**07 28 19.2**	**+0.4**
	6.0nm,0.8s,baz=308,slow=8.9,SNR=17						
HKT	**Hockley**	**30.14**	**342**	*e*P	**P**	**07 28 25.0**	**+0.9**
HKT				pmax	pmax		
	comp=Z,64nm,1.6s						
HKT	**Hockley**	**30.14**	**342**	*e*P	**P**	**07 28 25.0**	**+0.9**
	comp=Z,64nm,1.6s						
632A	**Uvalde**	**31.20**	**335**	P	**P**	**07 28 33.8**	**+0.2**
	baz=31,SNR=9.0						
631A	**Perdido Creek**	**31.46**	**334**	P	**P**	**07 28 35.4**	**-0.5**
	baz=32						
LRAL	**Lakeview Retre**	**31.55**	**357**	*e*P	**P**	**07 28 35.9**	**-0.6**
	comp=Z,33nm,1.4s						
532A	**Rocksprings**	**31.79**	**336**	P	**P**	**07 28 39.5**	**+0.6**
	baz=32,SNR=19						
GOGA	**Godfrey**	**31.93**	**3**	*e*P	**P**	**07 28 39.1**	**-0.8**
GOGA				pmax	pmax		
	comp=Z,57nm,1.7s						
GOGA	**Godfrey**	**31.93**	**3**	*e*P	**P**	**07 28 39.1**	**-0.8**
	comp=Z,56nm,1.7s						
JCT	**Junction City**	**32.06**	**336**	*e*P	**P**	**07 28 41.3**	**+0.1**
JCT				pmax	pmax		
	comp=Z,34nm,1.3s						
JCT	**Junction City**	**32.06**	**336**	*e*P	**P**	**07 28 41.2**	**+0.1**
	comp=Z,34nm,1.3s						
JCT	**Junction City**	**32.06**	**336**	P	**P**	**07 28 41.5**	**+0.3**
	baz=32,SNR=17						
531A	**Rocksprings**	**32.10**	**335**	↑P	**P**	**07 28 42.0**	**+0.5**
	baz=32						
432A	**Menard**	**32.41**	**336**	P	**P**	**07 28 44.1**	**-0.1**
	baz=32,SNR=11						
530A	**J-C Ranch, Com**	**32.43**	**334**	P	**P**	**07 28 44.3**	**-0.1**
	baz=32,SNR=23						
WHTX	**Lake Whitney**	**32.55**	**341**	P	**P**	**07 28 45.4**	**0.0**
	baz=33						
431A	**Sonora**	**32.57**	**335**	P	**P**	**07 28 46.0**	**+0.3**
	baz=33,SNR=86						
628A	**Black Gap, Mar**	**32.60**	**331**	P	**P**	**07 28 47.0**	**+1.0**
	baz=33,SNR=26						
529A	**Stev Forest Ra**	**32.81**	**332**	P	**P**	**07 28 48.1**	**+0.3**
	baz=33,SNR=9.4						
627A	**Terlingua Ranc**	**32.82**	**330**	↓P	**P**	**07 28 48.6**	**+0.6**
	baz=33,SNR=17						
332A	**Millersview**	**32.83**	**337**	P	**P**	**07 28 48.2**	**+0.3**
	baz=33,SNR=77						
TXAR	**Lajitas Array**	**32.86**	**330**	P	**P**	**07 28 48.5**	**+0.2**
TXAR	**Lajitas Array**	**32.86**	**330**	P	**P**	**07 28 48.5**	**+0.2**
	comp=Z,13nm,1.1s,baz=146,slow=9.8,SNR=33						
TXAR				LR	LR	07 41 00.6	
	comp=Z,816nm,20.1s,baz=130,slow=34						
430A	**Baggett Ranch,**	**32.93**	**334**	P	**P**	**07 28 49.1**	**+0.3**
	baz=33,SNR=27						
331A	**San Angelo**	**33.04**	**336**	P	**P**	**07 28 49.8**	**0.0**
	baz=33,SNR=18						
429A	**Davenport Ranc**	**33.08**	**333**	P	**P**	**07 28 50.3**	**+0.1**
	baz=33,SNR=6.9						
528A	**Cox Ranch, San**	**33.11**	**332**	P	**P**	**07 28 50.9**	**+0.4**
	baz=33,SNR=11						
OXF	**Oxford**	**33.20**	**354**	*e*P	**P**	**07 28 49.8**	**-1.2**
OXF				pmax	pmax		
	comp=Z,44nm,1.3s						
OXF	**Oxford**	**33.20**	**354**	*e*P	**P**	**07 28 49.8**	**-1.2**
	comp=Z,44nm,1.3s						
232A	**Coleman**	**33.24**	**337**	P	**P**	**07 28 51.6**	**+0.1**
	baz=33,SNR=18						
626A	**Big Bend Ranch**	**33.28**	**329**	P	**P**	**07 28 52.4**	**+0.4**
	baz=33,SNR=19						
LCO	**Las Campanas**	**33.28**	**156**	*e*P	**P**	**07 28 53.8**	**+1.6**
330A	**Mertzon**	**33.44**	**335**	P	**P**	**07 28 53.1**	**-0.2**
	baz=34,SNR=8.5						
527A	**Woodward Ranch**	**33.49**	**330**	P	**P**	**07 28 54.0**	**+0.2**
	baz=34,SNR=16						
428A	**Kincaid Ranch,**	**33.53**	**332**	P	**P**	**07 28 54.7**	**+0.5**
	baz=34,SNR=18						
231A	**Bronte**	**33.55**	**337**	P	**P**	**07 28 53.8**	**-0.4**
	baz=34						
526A	**Mary Lane Ranc**	**33.66**	**330**	↓P	**P**	**07 28 55.9**	**+0.6**
	baz=34,SNR=13						
SWET	**Sewanee**	**33.69**	**359**	*e*P	**P**	**07 28 57.3**	**+1.9**
	comp=Z,42nm,1.7s						
KMSC	**Kings Mountain**	**33.81**	**6**	P	**P**	**07 28 55.5**	**-0.9**
	baz=34,SNR=6.1						
230A	**Sterling City**	**33.83**	**335**	P	**P**	**07 28 56.4**	**-0.3**
	baz=34,SNR=12						
329A	**Wagon Wheel Ra**	**33.86**	**334**	P	**P**	**07 28 57.0**	**0.0**
	baz=34,SNR=27						
UALR	**University of**	**33.88**	**350**	*e*P	**P**	**07 28 56.3**	**-0.7**
	comp=Z,13nm,1.0s						
ABTX	**Abilene, Hawle**	**33.90**	**338**	P	**P**	**07 28 57.2**	**0.0**
	baz=34,SNR=17						
MIAR	**Mount Ida**	**33.90**	**348**	*e*P	**P**	**07 28 56.5**	**-0.7**
MIAR				pmax	pmax		
	comp=Z,49nm,2.3s						
MIAR	**Mount Ida**	**33.90**	**348**	*e*P	**P**	**07 28 56.5**	**-0.7**
	comp=Z,49nm,2.3s						
CPCT	**Cooper Cave**	**33.92**	**1**	*e*P	**P**	**07 28 57.1**	**-0.2**
427A	**Hayter Ranch,**	**33.97**	**331**	P	**P**	**07 28 58.3**	**+0.3**
	baz=34,SNR=18						
426A	**McDonald Obser**	**34.13**	**330**	P	**P**	**07 28 59.6**	**+0.2**
	baz=34,SNR=15						
328A	**Wristen Ranch,**	**34.14**	**333**	P	**P**	**07 28 59.4**	**0.0**
	baz=34,SNR=29						
TKL	**Tuckaleechee C**	**34.15**	**2**	*e*P	**P**	**07 28 58.9**	**-0.5**
TKL	**Tuckaleechee C**	**34.15**	**2**	P	**P**	**07 28 58.2**	**-1.1**
	comp=Z,4.3nm,0.8s,baz=186,slow=12,SNR=6.3						
229A	**Bryant Ranch,**	**34.20**	**335**	P	**P**	**07 28 59.5**	**-0.4**
	baz=34,SNR=8.3						
131A	**Roby**	**34.23**	**337**	P	**P**	**07 29 00.1**	**0.0**
	baz=34,SNR=12						
HBAR	**Harrisburg**	**34.38**	**352**	*e*P	**P**	**07 29 00.9**	**-0.4**
130A	**Snyder**	**34.39**	**336**	P	**P**	**07 29 01.1**	**-0.4**
	baz=34,SNR=12						
Z32A	**Haskell**	**34.45**	**339**	P	**P**	**07 29 02.1**	**+0.1**
	baz=35,SNR=18						
326A	**Caldwell Ranch**	**34.64**	**331**	↓P	**P**	**07 29 04.0**	**+0.3**
	baz=35,SNR=10						
228A	**UT Block 9, Go**	**34.66**	**334**	P	**P**	**07 29 03.7**	**-0.2**
	baz=35,SNR=10						
WVT	**Waverly**	**34.67**	**356**	*e*P	**P**	**07 29 02.1**	**-1.7**
WVT				pmax	pmax		
	comp=Z,19nm,1.4s						
WVT	**Waverly**	**34.67**	**356**	*e*P	**P**	**07 29 02.1**	**-1.7**
	comp=Z,18nm,1.4s						
425A	**Indio Mountain**	**34.70**	**329**	P	**P**	**07 29 04.6**	**+0.3**
	baz=35,SNR=78						
Z31A	**Sharp Cattle R**	**34.71**	**338**	P	**P**	**07 29 04.4**	**+0.2**
	baz=35,SNR=14						
129A	**Stewart Farms,**	**34.79**	**335**	P	**P**	**07 29 04.7**	**-0.3**
	baz=35,SNR=5.4						
227A	**Bennet, Jal**	**34.89**	**333**	↑P	**P**	**07 29 06.1**	**+0.2**
	baz=35,SNR=6.3						
128A	**Castleberry Fa**	**35.05**	**334**	P	**P**	**07 29 06.8**	**-0.4**
	baz=35,SNR=24						
Z30A	**Sanderson Ranc**	**35.06**	**337**	P	**P**	**07 29 06.9**	**-0.4**
	baz=35,SNR=10						
325A	**Bean Ranch, Si**	**35.17**	**330**	P	**P**	**07 29 08.2**	**-0.2**
	baz=35,SNR=43						
Z29A	**Hungry Hill Ra**	**35.27**	**336**	P	**P**	**07 29 08.5**	**-0.6**
	baz=35,SNR=27						
Y31A	**Rekieta Farm,**	**35.33**	**338**	P	**P**	**07 29 09.8**	**+0.3**
	baz=35,SNR=24						
226B	**Tecolote Peak,**	**35.35**	**332**	P	**P**	**07 29 10.7**	**+0.9**
	baz=36,SNR=49						
PARMO	**Parma**	**35.37**	**354**	*e*P	**P**	**07 29 08.8**	**-1.0**
127A	**Arkansas Junct**	**35.48**	**333**	P	**P**	**07 29 10.5**	**-0.5**
	baz=36,SNR=11						
324A	**Moseley Ranch,**	**35.48**	**329**	P	**P**	**07 29 10.8**	**-0.3**
	baz=36,SNR=49						
Y30A	**Stafford Cattl**	**35.49**	**337**	↑P	**P**	**07 29 11.2**	**+0.2**
	baz=36						
WMOK	**Wichita Mounta**	**35.51**	**341**	*e*P	**P**	**07 29 10.3**	**-0.8**
WMOK				pmax	pmax		
	comp=Z,29nm,1.5s						
WMOK	**Wichita Mounta**	**35.51**	**341**	*e*P	**P**	**07 29 10.3**	**-0.8**
	comp=Z,29nm,1.5s						
GDL2	**Guadalupe Moun**	**35.55**	**332**	*e*P	**P**	**07 29 12.7**	**+1.1**
Z28A	**Tucker Farm, M**	**35.58**	**335**	↑P	**P**	**07 29 12.7**	**+0.8**
	baz=36						
MNTX	**Cornudas Mount**	**35.64**	**330**	*e*P	**P**	**07 29 11.9**	**-0.3**
	comp=Z,96nm,1.8s						
225A	**Deer Hill, Car**	**35.70**	**331**	↓P	**P**	**07 29 13.4**	**+0.4**
	baz=36,SNR=5.8						
Y29A	**Porterfield Fa**	**35.78**	**336**	↓P	**P**	**07 29 14.3**	**+0.8**
	baz=36						
X31A	**McDonald Ranch**	**35.82**	**339**	P	**P**	**07 29 13.9**	**+0.1**
	baz=36,SNR=12						
Z27A	**Tatum**	**35.96**	**334**	P	**P**	**07 29 14.5**	**-0.6**
	baz=36,SNR=16						
X30A	**Coker Ranch, T**	**35.98**	**338**	P	**P**	**07 29 15.2**	**-0.1**
	baz=36,SNR=19						
224A	**Cornudas Mount**	**36.01**	**330**	P	**P**	**07 29 15.2**	**-0.4**
	baz=36,SNR=22						
Y28A	**McKinney Farm,**	**36.06**	**336**	P	**P**	**07 29 15.5**	**-0.4**
	baz=36,SNR=10						
125A	**Gardner Draw,**	**36.07**	**332**	↓P	**P**	**07 29 16.4**	**+0.4**
	baz=36,SNR=19						
Z26A	**Caprock**	**36.26**	**333**	↓P	**P**	**07 29 18.1**	**+0.4**
	baz=36,SNR=28						
X29A	**Tulia**	**36.30**	**337**	P	**P**	**07 29 17.9**	**-0.1**
	baz=36,SNR=8.0						
MSTX	**Muleshoe**	**36.33**	**335**	↑P	**P**	**07 29 18.0**	**-0.2**
	baz=36,SNR=8.8						
Y27A	**Causey**	**36.42**	**335**	P	**P**	**07 29 18.8**	**-0.3**
	baz=36,SNR=6.3						
124A	**Stringfield Ra**	**36.48**	**331**	P	**P**	**07 29 20.4**	**+0.7**
	baz=37,SNR=30						
USIN	**University of**	**36.49**	**357**	*e*P	**P**	**07 29 21.4**	**+2.0**
	comp=Z,48nm,1.2s						
X28A	**Dimmitt**	**36.56**	**336**	↑P	**P**	**07 29 20.0**	**-0.2**
	baz=37						
CFAA	**Coronel Fontan**	**36.57**	**155**	P	**P**	**07 29 21.4**	**+1.1**
CFAA	**Coronel Fontan**	**36.57**	**155**	P	**P**	**07 29 21.4**	**+1.1**
	comp=Z,1.5nm,1.1s,baz=338,slow=7.6,SNR=18						
Z25A	**Roswell**	**36.61**	**332**	P	**P**	**07 29 21.0**	**+0.4**
	baz=37,SNR=26						
AMTX	**Amarillo**	**36.68**	**337**	*e*P	**P**	**07 29 21.1**	**-0.1**
	comp=Z,22nm,1.0s						
Y26A	**Elida**	**36.74**	**334**	↓P	**P**	**07 29 22.1**	**+0.3**
	baz=37						
V31A	**Spring Creek L**	**36.81**	**340**	P	**P**	**07 29 22.7**	**+0.5**
	baz=37,SNR=9.2						
123A	**Bell Site, Whi**	**36.83**	**330**	↑P	**P**	**07 29 23.3**	**+0.7**
	baz=37						
W29A	**Amraillo**	**36.88**	**337**	↑P	**P**	**07 29 22.4**	**-0.4**
	baz=37						
320A	**Kipp Ranch, An**	**37.03**	**326**	P	**P**	**07 29 25.3**	**+1.0**
	baz=37,SNR=38						
X27A	**F and S Farms,**	**37.05**	**335**	P	**P**	**07 29 24.4**	**+0.1**
	baz=37,SNR=6.1						
221A	**Mesquite Ranch**	**37.13**	**327**	↓P	**P**	**07 29 26.6**	**+1.4**
	baz=37,SNR=7.4						
122A	**Conniff Cattle**	**37.26**	**329**	P	**P**	**07 29 27.7**	**+1.4**
	baz=37,SNR=19						
X26A	**CR and CF Fran**	**37.27**	**334**	P	**P**	**07 29 26.4**	**+0.1**
	baz=37,SNR=7.6						
OLIL	**Olney**	**37.28**	**356**	*e*P	**P**	**07 29 25.2**	**-0.9**
	comp=Z,43nm,1.1s						
Z23A	**Rita Site, Whi**	**37.32**	**330**	↓P	**P**	**07 29 27.8**	**+1.1**
	baz=37,SNR=9.3						
U31A	**Nine Bar Ranch**	**37.35**	**340**	↓P	**P**	**07 29 27.1**	**+0.2**
	baz=38						
W27A	**Bowe Ranch, En**	**37.39**	**336**	P	**P**	**07 29 27.3**	**+0.1**
	baz=38,SNR=13						
220A	**Playas Peak, P**	**37.46**	**327**	P	**P**	**07 29 28.8**	**+0.9**
	baz=38,SNR=32						
Y24A	**Capitan**	**37.48**	**332**	P	**P**	**07 29 28.6**	**+0.5**
	baz=38,SNR=30						
319A	**Douglas**	**37.48**	**325**	P	**P**	**07 29 29.1**	**+1.0**
	baz=38,SNR=34						
121A	**Cookes Peak, D**	**37.54**	**328**	P	**P**	**07 29 29.9**	**+1.3**
	baz=38,SNR=29						
BLO	**Bloomington**	**37.65**	**358**	*e*P	**P**	**07 29 28.1**	**-1.1**
BLO				pmax	pmax		
	comp=Z,34nm,1.3s						
BLO	**Bloomington**	**37.65**	**358**	*e*P	**P**	**07 29 28.1**	**-1.1**
	comp=Z,34nm,1.3s						
V28A	**Channing**	**37.65**	**337**	↓P	**P**	**07 29 29.7**	**+0.2**
	baz=38						
Z22A	**Elephant Butte**	**37.68**	**330**	P	**P**	**07 29 30.8**	**+1.0**
	baz=38,SNR=77						
W26A	**Owens Ranch, T**	**37.71**	**335**	↑P	**P**	**07 29 30.3**	**+0.4**
	baz=38						
U30A	**WK&E Inc. Balk**	**37.77**	**340**	↑P	**P**	**07 29 30.8**	**+0.4**
	baz=38						
Y23A	**Lovelace Mesa,**	**37.78**	**331**	P	**P**	**07 29 31.6**	**+0.9**
	baz=38,SNR=111						
V27A	**Dan Oppiter Fa**	**37.90**	**336**	↑P	**P**	**07 29 31.9**	**+0.3**
	baz=38						
T31A	**Randall Ranch,**	**37.95**	**341**	↑P	**P**	**07 29 32.4**	**+0.5**
	baz=38,SNR=6.8						
120A	**U Bar Ranch, L**	**38.00**	**327**	P	**P**	**07 29 33.5**	**+0.9**
	baz=38,SNR=13						
X24A	**Lazy VL Ranch,**	**38.00**	**333**	P	**P**	**07 29 33.0**	**+0.4**
	baz=38,SNR=7.1						
Z21A	**St. Cloud Mine**	**38.09**	**329**	P	**P**	**07 29 34.4**	**+1.1**
	baz=38,SNR=12						
W25A	**X Bar L Ranch,**	**38.11**	**334**	P	**P**	**07 29 33.8**	**+0.3**
	baz=38,SNR=36						
Y22A	**Socorro**	**38.23**	**330**	P	**P**	**07 29 35.5**	**+1.1**
	baz=38,SNR=33						
BNM	**Barren Site**	**38.23**	**331**	*e*P	**P**	**07 29 35.4**	**+0.8**
	comp=Z,42nm,1.2s						
V26A	**Tequesquite Ra**	**38.32**	**335**	P	**P**	**07 29 35.6**	**+0.5**
	baz=38,SNR=56						
LPM	**Los Pinos Moun**	**38.36**	**331**	*e*P	**P**	**07 29 36.9**	**+1.3**
X23A	**Hourglass Bar**	**38.37**	**332**	P	**P**	**07 29 36.4**	**+0.7**
	baz=38						
LENM	**Lemitar**	**38.41**	**330**	*e*P	**P**	**07 29 37.5**	**+1.5**
Z20A	**Nine Sixteen R**	**38.42**	**328**	P	**P**	**07 29 37.2**	**+1.2**
	baz=38,SNR=32						
U27A	**Thompson Grove**	**38.47**	**337**	↑P	**P**	**07 29 36.8**	**+0.4**
	baz=39,SNR=7.8						
W24A	**Lazy 6 Ranch,**	**38.53**	**333**	P	**P**	**07 29 37.5**	**+0.5**
	baz=39,SNR=35						
T29A	**Hugoton**	**38.55**	**339**	↑P	**P**	**07 29 37.2**	**+0.2**
	baz=39						
CPUP	**Villa Florida**	**38.56**	**138**	P	**P**	**07 29 37.5**	**+0.4**
CPUP	**Villa Florida**	**38.56**	**138**	P	**P**	**07 29 37.5**	**+0.4**
	comp=Z,6.4nm,1.1s,baz=307,slow=7.3,SNR=6.5						
CPUP				LR	LR	07 47 27.5	
	comp=Z,786nm,19.1s,baz=304,slow=39						
Y21A	**Point of Rocks**	**38.64**	**330**	↓P	**P**	**07 29 39.5**	**+1.5**
	baz=39,SNR=18						
LAZ	**Ladron**	**38.68**	**331**	*e*P	**P**	**07 29 39.7**	**+1.4**
	comp=Z,18nm,1.6s						
X22A	**Bernardo**	**38.70**	**331**	↓P	**P**	**07 29 39.1**	**+0.6**
	baz=39						
V25A	**Rancho No Teng**	**38.71**	**335**	P	**P**	**07 29 39.1**	**+0.6**
	baz=39,SNR=31						
ACSO	**Alum Creek Sta**	**38.75**	**3**	*e*P	**P**	**07 29 37.3**	**-1.2**
	comp=Z,20nm,1.8s						
ANMO	**Albuquerque**	**38.80**	**332**	*e*P	**P**	**07 29 39.6**	**+0.4**
	comp=Z,20nm,1.1s						
U26A	**Atchley Ranch,**	**38.82**	**336**	P	**P**	**07 29 39.8**	**+0.4**
	baz=39,SNR=16						
W23A	**Werner Place,**	**38.83**	**332**	P	**P**	**07 29 40.4**	**+0.9**
	baz=39,SNR=34						
V24A	**Rampart Ranch,**	**38.90**	**334**	P	**P**	**07 29 40.7**	**+0.6**
	baz=39,SNR=24						
S29A	**Ulysses**	**38.91**	**340**	P	**P**	**07 29 40.2**	**+0.2**
	baz=39,SNR=8.5						
Y20A	**Horse Springs,**	**38.92**	**329**	P	**P**	**07 29 41.4**	**+1.1**
	baz=39,SNR=16						
KSU1	**Kansas State U**	**38.96**	**346**	*e*P	**P**	**07 29 40.1**	**-0.1**
	comp=Z,51nm,1.1s						
T27A	**Campo**	**38.99**	**338**	↓P	**P**	**07 29 40.6**	**-0.2**
	baz=39						
TUC	**Tucson**	**39.03**	**325**	*e*P	**P**	**07 29 41.7**	**+0.6**
TUC				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TUC	**Tucson**	**39.03**	**325**	*e*P	**P**	**07 29 41.7**	**+0.6**
	comp=Z,2.9nm,1.1s						
X21A	**Alamocita Cree**	**39.04**	**330**	P	**P**	**07 29 42.6**	**+1.3**
	baz=39,SNR=28						
U25A	**Circle Dot Ran**	**39.09**	**335**	↑P	**P**	**07 29 42.4**	**+0.7**
	baz=39,SNR=6.1						
S28A	**Manter**	**39.16**	**339**	↓P	**P**	**07 29 42.2**	**+0.1**
	baz=39

Z14A **Wintersburg** 41.05 324 P P 07 29 58.7 +0.9
baz=41,SNR=6.1
Q25A **Bedland, Calha** 41.20 337 P P 07 29 59.2 0.0
baz=41,SNR=12
R23A **Moffat** 41.21 335 ⇑P P 07 29 59.8 +0.5
baz=41
S22A **4UR Ranch, Cre** 41.27 334 P P 07 30 00.2 +0.4
baz=41,SNR=20
P26A **Davis Ranch, A** 41.43 339 ⇓P P 07 30 01.4 +0.4
baz=42
Y14A **Wickenburg** 41.50 324 P P 07 30 02.3 +0.8
baz=42,SNR=26
Q24A **Divide** 41.59 337 ⇓P P 07 30 02.4 -0.1
baz=42
MVCO **Mesa Verde** 41.59 332 eP P 07 30 02.9 +0.4
comp=Z,99nm,1.7s
MVCO **Mesa Verde** 41.59 332 P P 07 30 03.1 +0.6
baz=42,SNR=20
JFWS **Jewell Farm** 41.60 355 eP P 07 29 59.7 -2.5
JFWS pmax pmax
comp=Z,39nm,1.5s
JFWS **Jewell Farm** 41.60 355 eP P 07 29 59.7 -2.5
comp=Z,40nm,1.5s
S21A **Coal Bank Pass** 41.63 333 P P 07 30 03.2 +0.3
baz=42,SNR=5.7
R22A **Saguache, Gunn** 41.64 334 P P 07 30 03.4 +0.5
baz=42,SNR=11
O27A **Beecher Island** 41.68 340 ⇑P P 07 30 03.4 +0.4
baz=42
P25A **Willow Gulch B** 41.69 338 ⇑P P 07 30 03.6 +0.5
baz=42
WUAZ **Wupatki** 41.73 327 eP P 07 30 04.3 +0.8
comp=Z,22nm,1.2s
WUAZ **Wupatki** 41.73 327 P P 07 30 04.5 +0.9
baz=42,SNR=9.9
Q23A **Hartsel** 41.82 336 P P 07 30 04.7 +0.3
baz=42,SNR=8.8
P24A **Kohler Place,** 41.97 337 P P 07 30 05.6 +0.2
baz=42,SNR=5.6
GLA **Glamis** 41.98 322 eP P 07 30 06.8 +1.3
GLA **Glamis** 41.98 322 eP P 07 30 06.8 +1.3
GLA **Glamis** 41.98 322 ⇓P P 07 30 06.3 +0.9
baz=42
O26A **Horse Wrangler** 42.02 339 ⇓P P 07 30 05.8 0.0
baz=42
S20A **Disappointment** 42.03 332 P P 07 30 06.9 +0.8
baz=42,SNR=15
R21A **Cimarron** 42.10 334 P P 07 30 07.2 +0.6
baz=42,SNR=5.8
P23A **Jefferson** 42.22 336 P P 07 30 08.5 +0.8
baz=42,SNR=49
Q22A **Crested Butte,** 42.23 335 P P 07 30 08.2 +0.5
baz=42,SNR=27
N27A **Anderson Farm,** 42.25 340 ⇑P P 07 30 07.8 +0.2
baz=42
R20A **Redvale** 42.33 333 P P 07 30 09.2 +0.8
baz=42,SNR=8.6
PV01 **Paradox Valley** 42.37 332 eP P 07 30 09.2 +0.4
comp=Z,2µm,1.4s
ISCO **Idaho Springs** 42.49 337 P P 07 30 10.1 +0.2
baz=43,SNR=18
N26A **Koester Ranch,** 42.51 340 ⇑P P 07 30 10.0 +0.3
baz=43
SWSC **Sam W. Stewart** 42.51 321 P P 07 30 10.7 +1.0
baz=43
SMCO **Snowmass** 42.52 335 eP P 07 30 10.7 +0.5
O24A **Longmont** 42.56 337 ⇓P P 07 30 10.6 +0.4
baz=43
S18A **Hurst Farm, Bl** 42.70 331 P P 07 30 11.6 +0.2
baz=43,SNR=16
PV04 **Paradox Valley** 42.74 332 eP P 07 30 12.6 +0.9
BC3 **Big Chuckawall** 42.77 322 P P 07 30 12.8 +0.8
baz=43,SNR=16
P22A **Eagle** 42.78 335 P P 07 30 12.6 +0.4
baz=43,SNR=11
W13A **Hualapai Mount** 42.83 325 ⇑P P 07 30 13.5 +0.9
baz=43
MONP **Monument Peak** 42.87 320 ⇑P P 07 30 13.6 +0.7
baz=43
BAR **Barrett** 42.90 320 eP P 07 30 14.0 +1.1
comp=Z,6.2nm,1.1s
U15A **North Rim** 42.91 327 P P 07 30 14.2 +1.0
baz=43,SNR=15
Q20A **Ridgley Place,** 42.92 333 ⇓P P 07 30 13.5 +0.4
baz=43
IRM **Iron Mountain** 42.93 323 P P 07 30 13.9 +0.8
baz=43,SNR=22
O23A **Lake Granby, G** 42.97 337 ⇑P P 07 30 14.1 +0.5
baz=43
P21A **Newcastle** 43.02 335 P P 07 30 14.7 +0.7
baz=43,SNR=32
NEE2 **Needles Airpor** 43.03 324 P P 07 30 14.4 +0.5
baz=43
N24A **Carr** 43.10 338 ⇑P P 07 30 15.4 +0.8
baz=43
O22A **Kremmling** 43.18 336 P P 07 30 15.4 0.0
baz=43,SNR=16
109C **Camp Elliot, M** 43.31 320 ⇓P P 07 30 16.8 +0.6
baz=43
BELC **Belle Mtn. Jos** 43.34 322 P P 07 30 17.3 +0.7
baz=43,SNR=12
PFO **Pinyon Flat Ob** 43.36 321 eP P 07 30 18.1 +1.4
PFO **Pinyon Flat Ob** 43.36 321 P P 07 30 17.8 +1.0
baz=44,SNR=6.3
ECSD **EROS Data Cent** 43.38 348 eP P 07 30 15.1 -1.5
comp=Z,33nm,1.4s
P20A **De Beque** 43.41 334 P P 07 30 17.4 +0.3
baz=44,SNR=9.4
LDFC **Landfair** 43.53 324 eP P 07 30 21.3 +3.2
comp=Z,103nm,1.9s
L26A **Underwood Farm** 43.54 341 ⇑P P 07 30 18.5 +0.5
baz=44
N23A **Red Feather La** 43.56 337 P P 07 30 18.7 +0.3
baz=44,SNR=9.4
O21A **Pagoda** 43.60 335 P P 07 30 19.4 +0.6
baz=44,SNR=6.0
M24A **Cheyenne** 43.64 339 P P 07 30 19.2 +0.3
baz=44
GMRC **Granite Mounta** 43.66 323 P P 07 30 20.2 +1.0
baz=44,SNR=8.7
N22A **Wattenberg Ran** 43.68 337 P P 07 30 20.1 +0.7
baz=44,SNR=12
PHWY **Pilot Hill** 43.73 338 eP P 07 30 20.2 +0.5
comp=Z,36nm,1.5s
P19A **Cripple Cowboy** 43.78 333 ⇑P P 07 30 20.9 +0.8
baz=44
MURC **Murrieta** 43.83 320 ⇓P P 07 30 21.2 +0.8
baz=44
O20A **White River Ci** 43.86 334 P P 07 30 20.9 +0.1
baz=44,SNR=9.0
K27A **Flueckinger Fa** 43.87 342 ⇓P P 07 30 20.6 0.0
baz=44
M23A **Laramie** 43.97 338 P P 07 30 21.8 +0.1
baz=44,SNR=9.1
PLCA **Paso Flores** 44.00 164 eP P 07 30 22.2 +0.6
comp=Z,41nm,1.3s
PLCA **Paso Flores** 44.00 164 P P 07 30 22.3 +0.6
comp=Z,18nm,1.0s,baz=332,slow=8.2,SNR=17
PLCA LR LR 07 45 52.9
comp=Z,460nm,18.2s,baz=341,slow=32
N21A **Black Mountain** 44.08 336 P P 07 30 23.2 +0.6
baz=44,SNR=14
BBRC **Big Bear Solar** 44.08 321 P P 07 30 23.9 +1.2
baz=44,SNR=6.5
HEC **Hector,Ludlow** 44.10 322 ⇑P P 07 30 23.6 +1.0
baz=44
LONY **Lake Ozonia** 44.11 11 eP P 07 30 23.7 +1.2
comp=Z,28nm,1.3s
K26A **Motz Farm, Whi** 44.16 341 ⇑P P 07 30 22.7 -0.4
baz=44
SPMN **St. Paul** 44.18 352 P P 07 30 21.5 -1.5
baz=44,SNR=11
L24A **Wheatland** 44.18 339 ⇓P P 07 30 23.4 +0.1
baz=44
Q16A **Castle Valley** 44.23 331 P P 07 30 24.2 +0.4
baz=44,SNR=13
SCI **San Clemente I** 44.31 319 ⇓P P 07 30 25.2 +0.9
baz=44
CCUT **Cedar City** 44.31 328 eP P 07 30 25.6 +1.1
comp=Z,26nm,1.2s
P18A **Preston Nutter** 44.35 332 P P 07 30 24.9 +0.1
baz=44,SNR=9.4
O19A **Miners Draw (B** 44.38 334 P P 07 30 25.0 +0.1
baz=44,SNR=9.7
MSU **Marysvale** 44.42 330 eP P 07 30 25.5 +0.2
MSU **Marysvale** 44.42 330 eP P 07 30 25.5 +0.2
MVU **Marysvale** 44.43 330 eP P 07 30 26.2 +0.8
comp=Z,43nm,1.8s

N20A **Spence Gulch,** 44.45 335 ⇓P P 07 30 25.5 0.0
baz=45,SNR=14
P17A **Butcher Ranch,** 44.46 332 P P 07 30 25.6 +0.1
baz=45,SNR=14
CIS **Catalina Island** 44.48 319 ⇓P P 07 30 26.3 +0.7
baz=45
L23A **Garrett** 44.52 338 P P 07 30 25.9 -0.2
baz=45,SNR=11
ARUT **Antelope Range** 44.53 328 eP P 07 30 27.1 +1.0
ARUT pmax pmax
comp=Z,23nm,0.9s
ARUT **Antelope Range** 44.53 328 eP P 07 30 27.1 +1.0
comp=Z,23nm,0.9s
BFSC **Mount Baldy Ra** 44.53 321 P P 07 30 26.7 +0.5
baz=45,SNR=11
GSC **Goldstone** 44.70 323 eP P 07 30 28.8 +1.3
GSC pmax pmax
comp=Z,90nm,2.0s
GSC **Goldstone** 44.70 323 eP P 07 30 28.8 +1.3
comp=Z,90nm,2.0s
M21A **Separation Pea** 44.73 336 ⇓P P 07 30 28.3 +0.5
baz=45
TRQA **Tornquist** 44.75 154 eP P 07 30 27.9 +0.2
comp=Z,58nm,1.8s
MWC **Mount Wilson** 44.77 320 eP P 07 30 28.7 +0.5
MWC pmax pmax
comp=Z,38nm,1.3s
MWC **Mount Wilson** 44.77 320 eP P 07 30 28.7 +0.5
comp=Z,38nm,1.3s
DECC **Green Verdugo** 44.97 320 ⇑P P 07 30 30.6 +1.1
baz=45
M20A **Sweetwater, Wa** 44.97 336 P P 07 30 29.2 -0.4
baz=45,SNR=10
L21A **Rawlins** 45.03 337 ⇓P P 07 30 29.9 -0.2
baz=45
EDW2 **Edwards Air Fo** 45.15 321 ⇑P P 07 30 31.5 +0.4
baz=45
K22A **Casper** 45.29 338 P P 07 30 31.9 -0.2
baz=45,SNR=8.6
MPU **Maple Canyon** 45.31 331 eP P 07 30 32.9 +0.5
comp=Z,11nm,0.9s
BLG **Laguna Peak** 45.35 320 ⇓P P 07 30 33.1 +0.6
baz=45
DAU **Daniels Canyon** 45.44 332 eP P 07 30 34.0 +0.5
DAU **Daniels Canyon** 45.44 332 eP P 07 30 34.0 +0.5
L20A **Wamsutter** 45.46 336 P P 07 30 33.3 -0.2
baz=46,SNR=12
FURC **Furnace Creek,** 45.52 324 P P 07 30 34.6 +0.8
baz=46,SNR=19
J23A **Dilts Ranch, B** 45.59 339 ⇑P P 07 30 35.0 +0.5
baz=46
MPMC **Manual Prospec** 45.62 323 P P 07 30 35.0 +0.1
baz=46,SNR=9.2
JLU **Jordanelle** 45.68 332 eP P 07 30 36.0 +0.6
comp=Z,28nm,1.6s
RSSD **Black Hills** 45.71 341 eP P 07 30 35.6 +0.1
RSSD pmax pmax
comp=Z,25nm,1.3s
RSSD **Black Hills** 45.71 341 eP P 07 30 35.6 +0.1
comp=Z,25nm,1.3s
M18A **Lyman** 45.72 334 P P 07 30 34.8 -0.8
baz=46,SNR=13
ARVC **Arvin** 45.84 321 ⇓P P 07 30 37.2 +0.8
baz=46
J22A **Midwest** 45.93 339 P P 07 30 36.9 -0.2
baz=46,SNR=9.3
L19A **Farson** 45.96 335 P P 07 30 37.3 -0.2
baz=46,SNR=12
ISA **Isabella** 45.96 322 eP P 07 30 38.7 +1.3
ISA pmax pmax
comp=Z,36nm,1.7s
ISA **Isabella** 45.96 322 eP P 07 30 38.7 +1.3
comp=Z,36nm,1.7s
ISA **Isabella** 45.96 322 P P 07 30 38.0 +0.6
baz=46,SNR=6.0
K20A **Yellowstone Ra** 46.01 336 P P 07 30 37.1 -0.7
baz=46,SNR=26
M17A **Scullys Gap (B** 46.02 333 P P 07 30 37.3 -0.7
baz=46,SNR=30
DUG **Dugway** 46.02 331 eP P 07 30 38.5 +0.6
DUG pmax pmax
comp=Z,9.0nm,1.0s
DUG **Dugway** 46.02 331 eP P 07 30 38.5 +0.6
comp=Z,8.6nm,1.0s
DUG **Dugway** 46.02 331 P P 07 30 38.1 +0.2
baz=46,SNR=10
R11A **Troy Canyon, C** 46.10 327 P P 07 30 39.1 +0.5
baz=46,SNR=19
L18A **Fontenelle, Gr** 46.11 334 ⇑P P 07 30 38.3 -0.3
baz=46,SNR=26
K19A **Absolon Red Bu** 46.35 336 ⇑P P 07 30 39.9 -0.6
baz=46,SNR=16
I22A **9 Mile Ranch,** 46.35 339 P P 07 30 40.1 -0.3
baz=46,SNR=10
H24A **Dirks Ranch, A** 46.44 341 P P 07 30 40.6 -0.5
baz=47,SNR=13
VES **Vestal, Richgr** 46.46 321 ⇓P P 07 30 42.0 +0.8
baz=47,SNR=16
J20A **Shoshoni** 46.49 337 P P 07 30 41.9 +0.4
baz=47,SNR=5.4
HWUT **Hardware Ranch** 46.53 333 eP P 07 30 41.6 -0.4
comp=Z,25nm,0.9s
I21A **Big Trails, Te** 46.58 338 ⇑P P 07 30 41.8 -0.5
baz=47,SNR=6.0
PDAR **Pinedale Array** 46.59 335 P P 07 30 41.8 -0.7
PDAR **Pinedale Array** 46.59 335 P P 07 30 41.8 -0.7
comp=Z,5.6nm,0.8s,baz=135,slow=9.0,SNR=36
PDAR LR LR 07 50 52.9
comp=Z,972nm,18.1s,baz=148,slow=37
BW06 **Boulder Array** 46.59 335 eP P 07 30 41.7 -0.7
comp=Z,12nm,1.1s
BW06 ePP PP 07 32 31.8 -0.5
K18A **Toltan Ranch,** 46.69 335 ⇑P P 07 30 43.4 +0.2
baz=47,SNR=32
SMMC **Simmler** 46.70 320 P P 07 30 44.5 +1.3
baz=47,SNR=5.1
EYMN **Ely** 46.71 354 eP P 07 30 41.8 -1.3
comp=Z,28nm,1.4s
J19A **Crowheart** 46.80 336 P P 07 30 43.5 -0.5
baz=47,SNR=15
H22A **Clearmont** 46.91 339 P P 07 30 44.0 -0.8
baz=47,SNR=11
G24A **Alzada** 46.91 342 ⇑P P 07 30 44.5 -0.3
baz=47
I20A **Worland** 47.01 337 P P 07 30 45.2 -0.4
baz=47,SNR=14
G23A **Biddle** 47.12 341 ⇓P P 07 30 45.8 -0.6
baz=47
MTUM **Tungsten Hills** 47.12 323 eP P 07 30 47.8 +1.1
J18A **Kendall Valley** 47.15 335 ⇓P P 07 30 46.2 -0.7
baz=47,SNR=26
K17A **Gardner Place,** 47.16 334 P P 07 30 46.0 -0.8
baz=47,SNR=11
HVU **Hansel Valley** 47.23 332 eP P 07 30 47.5 +0.2
HVU pmax pmax
comp=Z,17nm,0.9s
HVU **Hansel Valley** 47.23 332 eP P 07 30 47.5 +0.2
comp=Z,17nm,0.9s
F24A **Ekalaka** 47.38 342 P P 07 30 47.6 -0.8
baz=48,SNR=8.1
H20A **Greybull** 47.42 338 P P 07 30 47.9 -0.8
baz=48,SNR=12
I19A **Meeteetse** 47.42 337 ⇑P P 07 30 48.9 0.0
baz=48
G22A **Birney** 47.44 340 ⇑P P 07 30 47.9 -0.9
baz=48
MLAC **Mammoth Lakes** 47.47 323 ⇑P P 07 30 50.3 +0.9
baz=48
I18A **Diamond G Ranc** 47.47 336 ⇓P P 07 30 48.6 -0.7
baz=48,SNR=8.4
K16A **Soda Springs** 47.52 334 P P 07 30 49.3 -0.3
baz=48,SNR=8.0
J17A **Brown Place, J** 47.56 335 P P 07 30 49.8 -0.2
baz=48,SNR=25
F23A **Volborg** 47.58 341 P P 07 30 49.3 -0.7
baz=48,SNR=28
NV11 **Mina Array Sit** 47.61 325 eP P 07 30 51.0 +0.7
NV11 ePcP PcP 07 32 15.9 -3.9
AGMN **Agassiz Nation** 47.64 350 eP P 07 30 49.1 -1.1
comp=Z,10nm,0.9s
ELK **Elko** 47.66 329 eP P 07 30 51.5 +0.8
comp=Z,198nm,1.1s
SNOW **Snow King Moun** 47.66 335 eP P 07 30 50.6 -0.2
comp=Z,33nm,1.3s
NVAR **Mina Array Bea** 47.69 325 P P 07 30 51.8 +0.7
NVAR PcP PcP 07 32 20.5 +0.3
NVAR **Mina Array Bea** 47.69 325 P P 07 30 51.8 +0.7
comp=Z,11nm,0.9s,baz=134,slow=7.7,SNR=61

NVAR PcP PcP 07 32 20.5 +0.3
comp=Z,1.5nm,0.8s,baz=130,slow=4.9,SNR=2.8
NVAR LR LR 07 50 38.7
comp=Z,502nm,18.6s,baz=241,slow=36
LOHW **Long Hollow** 47.72 335 eP P 07 30 51.2 -0.1
comp=Z,31nm,1.6s
G21A **Lodge Grass** 47.76 339 ⇓P P 07 30 50.7 -0.7
baz=48
TPAW **Teton Pass** 47.77 335 eP P 07 30 51.7 +0.1
comp=Z,18nm,1.0s
J16A **Bone** 47.88 334 P P 07 30 52.0 -0.4
baz=48,SNR=16
MOOW **Moose Ponds** 47.89 335 eP P 07 30 52.0 -0.6
comp=Z,75nm,2.7s
F22A **Rosebud** 47.91 340 P P 07 30 51.4 -1.1
baz=48,SNR=11
MDND **Maddock** 47.93 347 ⇑P P 07 30 51.8 -0.7
baz=48
H19A **Powell** 47.95 337 ⇓P P 07 30 52.4 -0.4
baz=48
DCID1 **Drake Creek** 47.95 335 eP P 07 30 53.3 +0.3
I17A **Pilgrim Ck.** 47.96 335 ⇓P P 07 30 52.9 -0.2
baz=48
E24A **Baker** 47.98 342 ⇓P P 07 30 52.5 -0.6
baz=48
IMW **Indian Meadow** 48.10 335 eP P 07 30 54.0 -0.2
G20A **Bridger** 48.12 338 P P 07 30 53.0 -1.2
baz=48,SNR=18
E23A **Ismay** 48.24 342 ⇓P P 07 30 53.9 -1.1
baz=48
F21A **Absaloka Mine,** 48.25 340 ⇓P P 07 30 54.0 -1.1
baz=48
I16A **Newdale** 48.31 335 P P 07 30 55.6 -0.2
baz=48,SNR=10
H17A **Grant Village** 48.35 336 ⇑P P 07 30 56.2 +0.1
baz=48
BMN **Battle Mountai** 48.47 327 eP P 07 30 57.7 +0.7
BMN **Battle Mountai** 48.47 327 eP P 07 30 57.7 +0.7
D24A **Glendive** 48.49 343 P P 07 30 56.6 -0.3
baz=49,SNR=10
F20A **Billings** 48.59 339 ⇓P P 07 30 56.9 -0.9
baz=49
CMB **Columbia Colle** 48.66 323 eP P 07 31 02.4 +4.0
CMB pmax pmax
comp=Z,15nm,1.3s
CMB **Columbia Colle** 48.66 323 eP P 07 31 02.4 +4.0
comp=Z,15nm,1.3s
G18A **Lazy EL Ranch,** 48.71 337 P P 07 30 58.1 -0.7
baz=49,SNR=12
YMR **Madison River** 48.74 336 eP P 07 30 59.7 +0.6
comp=Z,48nm,1.7s
J14A **Carey** 48.77 333 P P 07 30 59.2 -0.1
baz=49,SNR=20
D23A **Lindsay** 48.81 342 P P 07 30 59.2 -0.1
baz=49,SNR=9.4
I15A **Monteview** 48.84 334 ⇓P P 07 31 00.1 +0.3
baz=49
E21A **Keefer Ranch,** 48.86 340 ⇑P P 07 30 59.2 -0.5
baz=49
H16A **Russell Place,** 48.88 336 P P 07 31 00.3 +0.1
baz=49,SNR=12
C24A **Savage** 48.89 343 P P 07 30 59.8 -0.2
baz=49,SNR=8.3
F19A **Roth Farm, Mol** 48.93 338 ⇓P P 07 31 00.1 -0.3
baz=49
QLMT **Earthquake Lak** 49.06 335 eP P 07 31 02.7 +1.2
D22A **Cohagen** 49.09 341 P P 07 31 01.3 -0.2
baz=49,SNR=14
WCN **Washoe City** 49.12 325 eP P 07 31 02.3 +0.3
WCN pmax pmax
comp=Z,10.0nm,1.4s
WCN **Washoe City** 49.12 325 eP P 07 31 02.3 +0.3
comp=Z,10nm,1.4s
J13A **Cove Ranch, Pi** 49.13 332 P P 07 31 01.8 -0.3
baz=49,SNR=12
GCMT **Greycliff** 49.15 338 eP P 07 31 01.7 -0.4
comp=Z,21nm,1.4s
G17A **Pierce Place,** 49.18 336 P P 07 31 03.2 +0.8
baz=49,SNR=30
I14A **Mackay** 49.22 333 P P 07 31 03.0 +0.3
baz=49,SNR=23
F18A **Big Timber** 49.27 338 P P 07 31 02.6 -0.3
baz=49,SNR=21
D21A **La Casta Ranch** 49.29 341 P P 07 31 02.6 -0.5
baz=49,SNR=9.1
C23A **Lambert** 49.36 342 ⇓P P 07 31 03.3 -0.3
baz=50
HLID **Hailey** 49.37 332 eP P 07 31 04.0 0.0
comp=Z,19nm,1.2s
HLID **Hailey** 49.37 332 P P 07 31 03.9 0.0
baz=50,SNR=27
E19A **Rath Farm, Rou** 49.39 339 P P 07 31 03.3 -0.6
baz=50,SNR=13
H15A **Lima** 49.40 334 P P 07 31 04.6 +0.4
baz=50,SNR=23
I13A **Wildhorse Cree** 49.51 333 P P 07 31 05.0 +0.1
baz=50,SNR=28
C22A **Vida** 49.53 342 P P 07 31 04.3 -0.5
baz=50,SNR=15
ULM **Lac du Bonnet** 49.53 351 eP P 07 31 03.8 -1.0
ULM **Lac du Bonnet** 49.53 351 P P 07 31 03.0 -1.7
comp=Z,6.5nm,0.8s,baz=166,slow=4.2,SNR=8.2
ULM LR LR 07 55 29.1
comp=Z,191nm,18.9s,baz=167,slow=40
G16A **Moss Hill, Enn** 49.54 336 P P 07 31 05.2 0.0
baz=50,SNR=17
F17A **Fitzpatrick Pl** 49.63 337 ⇑P P 07 31 05.9 +0.1
baz=50,SNR=10
MCMT **McKenzie Canyo** 49.66 334 eP P 07 31 06.6 +0.5
comp=Z,15nm,1.7s
D20A **Manuel Ranch,** 49.70 340 P P 07 31 05.9 -0.2
baz=50,SNR=21
H14A **Leadore** 49.72 334 P P 07 31 06.7 +0.2
baz=50,SNR=26
G15A **Dillon** 49.77 335 P P 07 31 07.1 +0.1
baz=50,SNR=9.9
BOZ **Bozeman (W)** 49.81 336 eP P 07 31 06.7 -0.4
BOZ pmax pmax
comp=Z,10.0nm,1.0s
BOZ **Bozeman (W)** 49.81 336 eP P 07 31 06.7 -0.4
comp=Z,10nm,1.0s
BEKR **Beckworth** 49.84 325 eP P 07 31 08.0 +0.5
comp=Z,8.6nm,0.9s
I12A **Atlanta** 49.89 332 P P 07 31 07.5 -0.3
baz=50,SNR=16
E18A **Harlowton** 49.90 338 P P 07 31 07.5 -0.2
baz=50,SNR=12
B23A **Brockton** 49.90 343 P P 07 31 07.3 -0.3
baz=50,SNR=13
F16A **Kennard Place,** 49.92 336 P P 07 31 07.8 -0.1
baz=50,SNR=9.5
MFID **Camas Ranch** 49.93 331 eP P 07 31 07.5 -0.6
comp=Z,32nm,1.4s
MFID **Camas Ranch** 49.93 331 P P 07 31 08.1 0.0
baz=50,SNR=16
C21A **Desert Coulee** 49.99 341 P P 07 31 07.9 -0.4
baz=50,SNR=23
D19A **Cripps Ranch,** 50.02 339 P P 07 31 08.4 -0.3
baz=50,SNR=16
A24A **Westby** 50.03 344 P P 07 31 08.6 -0.1
baz=50,SNR=6.4
H13A **Challis** 50.07 333 P P 07 31 09.0 -0.2
baz=50,SNR=20
OHCM **Honcut** 50.16 323 eP P 07 31 10.4 +0.7
E17A **Martinsdale** 50.17 337 P P 07 31 09.6 -0.3
baz=50,SNR=10
C20A **Veseth Ranch,** 50.19 340 P P 07 31 09.4 -0.4
baz=50,SNR=12
G14A **Jackson** 50.25 334 P P 07 31 10.3 -0.4
baz=50,SNR=9.2
LRM **Imekiln Ridge** 50.28 335 eP P 07 31 10.9 0.0
F15A **Butte** 50.32 335 P P 07 31 10.6 -0.4
baz=50,SNR=9.9
H12A **Diamond D Ranc** 50.33 333 P P 07 31 10.8 -0.4
baz=50,SNR=20
D18A **Linhart Farms,** 50.38 338 P P 07 31 11.3 -0.1
baz=50,SNR=11
G13A **Cobalt** 50.47 334 P P 07 31 11.8 -0.4
baz=51,SNR=12
E16A **East Helena** 50.55 337 P P 07 31 12.3 -0.4
baz=51,SNR=19
C19A **Slack Wire Ran** 50.57 339 P P 07 31 12.6 -0.1
baz=51,SNR=25
WVOR **Wild Horse Val** 50.64 328 eP P 07 31 13.2 -0.3
WVOR pmax pmax
comp=Z,32nm,1.1s
WVOR **Wild Horse Val** 50.64 328 eP P 07 31 13.2 -0.3
comp=Z,32nm,1.1s

A22A	Carney Farms,	50.65	343	P		P	07 31 13.2	-0.1	
	baz=51,SNR=7.9								
D17A	Six Diamond Ra	50.68	338	P		P	07 31 13.3	-0.4	
	baz=51,SNR=32								
HRY	Holter Researc	50.76	337	*e*P		P	07 31 14.4	+0.2	
B20A	Solberg Farm,	50.82	341	P		P	07 31 14.3	-0.3	
	baz=51,SNR=19								
E15A	Deer Lodge	50.85	336	P		P	07 31 14.4	-0.6	
	baz=51,SNR=15								
D16A	Dana Ranch, Ca	50.91	337	P		P	07 31 15.0	-0.4	
	baz=51,SNR=16								
G12A	Big Creek, Yel	50.99	333	⇓P		P	07 31 15.7	-0.4	
	baz=51								
F13A	Darby	51.06	334	P		P	07 31 16.0	-0.6	
	baz=51,SNR=17								
EGMT	Eagleton	51.07	339	*e*P		P	07 31 16.4	-0.2	
	comp=Z,33nm,1.4s								
EGMT	Eagleton	51.07	339	P		P	07 31 15.8	-0.7	
	baz=51,SNR=12								
C17A	Wharram Farm,	51.10	338	P		P	07 31 16.2	-0.6	
	baz=51,SNR=13								
B19A	Brinkman Farms	51.15	340	P		P	07 31 16.6	-0.6	
	baz=51,SNR=19								
MOD	Modoc	51.17	327	*e*P		P	07 31 17.2	-0.2	
	comp=Z,34nm,1.4s								
E14A	Clinton	51.20	335	P		P	07 31 17.2	-0.4	
	baz=51,SNR=24								
D15A	Lincoln	51.30	336	⇓P		P	07 31 17.8	-0.6	
	baz=51								
LTIM	Timbered Crate	51.35	325	P		P	07 31 19.3	+0.5	
B18A	Beardsley Farm	51.39	339	⇓P		P	07 31 18.7	-0.3	
	baz=52,SNR=16								
F12A	Elk City	51.44	333	⇓P		P	07 31 19.0	-0.5	
	baz=52,SNR=24								
A19A	Klindworth Far	51.49	340	P		P	07 31 19.4	-0.3	
	baz=52,SNR=12								
CHMT	Chamberlain Mo	51.49	336	*e*P		P	07 31 19.4	-0.6	
E13A	Victor	51.51	335	P		P	07 31 19.5	-0.4	
	baz=52,SNR=18								
C16A	Fuhringer Ranc	51.62	337	P		P	07 31 20.6	-0.1	
	baz=52,SNR=5.2								
BMO	Blue Mountains	51.71	331	*e*P		P	07 31 20.1	-1.3	
	comp=Z,13nm,1.3s								
MSO	Missoula	51.71	335	*e*P		P	07 31 21.3	-0.1	
MSO	Missoula	51.71	335	P		P	07 31 21.1	-0.3	
	baz=52,SNR=13								
D14A	Greenough	51.73	336	P		P	07 31 20.8	-0.8	
	baz=52,SNR=9.5								
SLMT	Seeley Lake	51.85	336	*e*P		P	07 31 22.3	-0.3	
A18A	Metzger Ranch,	51.86	340	P		P	07 31 21.7	-0.7	
	baz=52,SNR=18								
C15A	Salmond Ranch,	51.93	337	P		P	07 31 22.7	-0.4	
	baz=52,SNR=13								
B16A	M & M Farms, S	52.11	338	P		P	07 31 23.5	-0.8	
	baz=52,SNR=5.6								
D13A	Huson	52.14	335	P		P	07 31 24.2	-0.4	
	baz=52,SNR=20								
A17A	Triple J Farms	52.18	339	P		P	07 31 24.0	-0.8	
	baz=52,SNR=25								
SWMT	Swartz Lake	52.27	336	*e*P		P	07 31 25.6	0.0	
LAMM	Antelope Mount	52.28	325	P		P	07 31 24.9	-0.9	
B15A	Bradely Ranch,	52.35	337	P		P	07 31 25.4	-0.7	
	baz=52,SNR=9.9								
C14A	Swan Lake	52.38	336	⇓P		P	07 31 26.1	-0.3	
	baz=52								
YBH	Yreka Blue Hor	52.41	325	*e*P		P	07 31 25.5	-1.1	
	comp=Z,15nm,1.0s								
KHMM	Horse Mountain	52.46	324	*e*P		P	07 31 28.5	+1.3	
	comp=Z,39nm,1.0s								
D12A	Red Ives Fores	52.49	334	⇑P		P	07 31 26.3	-0.9	
	baz=53								
A16A	West Butte Ran	52.51	338	⇑P		P	07 31 26.9	-0.4	
	baz=53								
YBMT	Yellow Bay	52.56	336	*e*P		P	07 31 27.7	-0.1	
	comp=Z,12nm,1.1s								
JTMT	Jette	52.58	336	*e*P		P	07 31 28.2	+0.3	
C13A	Hot Springs	52.65	335	P		P	07 31 27.8	-0.5	
	baz=53,SNR=12								
B14A	Marquette Ranc	52.67	337	P		P	07 31 28.2	-0.4	
	baz=53,SNR=25								
BLMT	Blacktail Moun	52.82	336	*e*P		P	07 31 30.2	+0.5	
BSMT	Bassoo Peak	52.87	335	*e*P		P	07 31 30.2	+0.1	
A15A	Johnson Ranch,	52.96	338	P		P	07 31 30.2	-0.4	
	baz=53,SNR=37								
C12B	Naegeli Ranch,	53.05	335	P		P	07 31 31.2	-0.1	
	baz=53,SNR=8.0								
B13A	Whitefish	53.15	336	P		P	07 31 32.2	+0.1	
	baz=53,SNR=15								
A14A	Double T Ranch	53.22	337	⇓P		P	07 31 32.4	-0.1	
	baz=53								
JBO	Jordan Butte	53.39	330	P		P	07 31 34.3	+0.5	
WALA	Waterton Lakes	53.48	337	*e*P		P	07 31 34.6	+0.2	
	comp=Z,1.0nm,1.2s								
C11A	Tepee Creek (N	53.48	334	⇑P		P	07 31 34.1	-0.4	
	baz=54								
VTHM	Trough	53.55	330	P		P	07 31 36.1	+1.0	
A13A	Flathead Natio	53.58	337	P		P	07 31 35.2	0.0	
	baz=54,SNR=5.4								
B12A	Libby	53.69	335	P		P	07 31 35.9	-0.1	
	baz=54,SNR=7.1								
BLTW	Bickleton	53.88	330	P		P	07 31 38.2	+0.9	
HAWA	Hanford	53.90	331	*e*P		P	07 31 38.4	+0.9	
	comp=Z,47nm,1.8s								
RKT	Rikitea	54.10	240	*e*S		S	07 39 10.2	-4.3	
	comp=Z,251nm,30.8s								
RKT				*e*LR		LR	07 47 07.3		
	comp=Z,1μm,28.0s								
NEW	Newport	54.18	334	*e*P		P	07 31 39.4	-0.2	
	comp=Z,14nm,1.3s								
NEW	Newport	54.18	334	⇓P		P	07 31 39.0	-0.6	
	baz=54,SNR=6.7								
OD2	Odessa Site #2	54.24	333	P		P	07 31 40.1	+0.2	
LON	Longmire	55.27	330	*e*P		P	07 31 51.2	+3.7	
LON	Longmire	55.27	330	*e*P		P	07 31 51.1	+3.7	
SCHQ	Schefferville	55.40	13	P		P	07 31 46.3	-1.9	
SCHQ	Schefferville	55.40	13	P		P	07 31 46.3	-1.9	
	comp=Z,2.7nm,0.8s,baz=261,slow=13,SNR=4.0								
SCHQ					LR	LR	07 52 57.9		
	comp=Z,464nm,21.4s,baz=204,slow=33								
USHA	Ushuaia	57.71	169	P		P	07 32 04.7	+0.1	
USHA	Ushuaia	57.71	169	P		P	07 32 04.7	+0.1	
	comp=Z,18nm,1.2s,baz=327,slow=9.0,SNR=2.5								
YKA	Yellowknife Ar	64.81	345	P		P	07 32 51.2	-1.3	
YKA	Yellowknife Ar	64.81	345	P		P	07 32 51.2	-1.3	
	comp=Z,7.2nm,0.8s,baz=142,slow=5.8,SNR=146								
YKW3	Yellowknife Ar	64.86	345	*e*P		P	07 32 51.8	-1.1	
	comp=Z,0.3nm,1.2s								
YKW3				*e*PP		PP	07 35 17.1	+1.3	
PPT	Papeete	65.99	250	LR		LR	07 54 08.9		
	comp=Z,633nm,20.6s,baz=65,slow=29								
PPT2	Papeete2	65.99	250	*e*S		S	07 41 45.4	-2.4	
	comp=Z,152nm,25.8s								
PPT2				*e*LR		LR	07 52 36.0		
	comp=Z,1μm,26.0s,baz=77								
DLBC	Dease Lake	66.81	336	*e*P		P	07 33 06.7	+1.0	
TBI	Tubuai	66.97	244	*e*S		S	07 41 54.6	-4.7	
	comp=Z,158nm,24.2s								
TBI				*e*LQ		LQ	07 50 16.5		
	comp=Z,478nm,38.8s								
TBI				*e*LR		LR	07 53 05.5		
	comp=Z,898nm,27.0s,baz=76								
PMSA	Palmer Station	67.79	170	LR		LR	07 57 40.3		
	comp=Z,244nm,18.6s,baz=328,slow=31								
SKAG	Skagway	69.62	335	*e*P		P	07 33 23.3	+0.3	
	comp=Z,23nm,1.6s								
RES	Resolute Bay	73.46	357	*e*P		P	07 33 45.1	-0.9	
	comp=Z,13nm,1.3s								
RES				*e*PP		PP	07 36 28.9	-1.0	
INK	Inuvik	74.36	343	LR		LR	08 09 49.5		
	comp=Z,381nm,18.5s,baz=125,slow=38								
EGAK	Eagle	74.82	338	*e*P		P	07 33 54.0	-0.1	
	comp=Z,10nm,0.9s								
DOT	Dot Lake	75.37	337	*e*P		P	07 33 57.7	+0.4	
	comp=Z,14nm,1.2s								
SML	Sawmill	76.34	334	*e*P		P	07 34 03.5	+0.5	
SML				pmax		pmax			
	comp=Z,5.0nm,1.1s								
SML	Sawmill	76.34	334	*e*P		P	07 34 03.5	+0.5	
	comp=Z,5.0nm,1.1s								
SUMG	Summit	76.79	13	*e*P		P	07 34 04.7	-1.0	
SUMG				pmax		pmax			
	comp=Z,37nm,1.3s								
SUMG	Summit	76.79	13	*e*P		P	07 34 04.7	-1.0	
	comp=Z,37nm,1.3s								
SUMG	Summit	76.79	13	*i* P		P	07 34 05.4	-0.3	
	comp=Z,12nm,0.9s								
ILAR	Eielson Array	76.98	337	P		P	07 34 05.8	-0.7	
	comp=Z,4.6nm,1.0s,baz=136,slow=4.0,SNR=38								
MCK	McKinley	77.37	336	*e*P		P	07 34 08.3	-0.4	
MCK				pmax		pmax			
	comp=Z,16nm,1.1s								
MCK	McKinley	77.37	336	*e*P		P	07 34 08.3	-0.4	
	comp=Z,16nm,1.1s								
COLA	College	77.40	337	*e*P		P	07 34 09.1	+0.3	
COLA				pmax		pmax			
	comp=Z,5.0nm,1.0s								
COLA	College	77.40	337	*e*P		P	07 34 09.1	+0.3	
	comp=Z,5.4nm,1.0s								
TRF	Thorofare Moun	77.81	335	*e*P		P	07 34 10.2	-1.2	
	comp=Z,12nm,1.2s								
PPLA	Purkeypile	78.42	335	*e*P		P	07 34 14.2	-0.5	
	comp=Z,40nm,1.5s								
EVOP	Sao Brissos	79.13	51	*e*P		P	07 34 19.3	+0.4	
EVOP				pmax		pmax			
	comp=Z,52nm,1.4s								
EVOP	Sao Brissos	79.13	51	*e*P		P	07 34 19.3	+0.4	
	comp=Z,52nm,1.4s								
EVO	Evora	79.21	51	*e*P		P	07 34 19.3	-0.1	
	comp=Z,52nm,1.4s								
EVO				*e*R					
	comp=Z,253nm,20.2s								
COLD	Coldfoot	79.23	339	*e*P		P	07 34 19.4	+0.5	
	comp=Z,14nm,1.1s								
LIC	Lamto	80.19	84	⇑*i* P		P	07 34 26.5	+1.3	
	comp=Z,17nm,0.7s								
LIC				*e*R					
	comp=Z,236nm,22.0s								
LIC	Lamto	80.19	84	⇑*i* P		P	07 34 26.5	+1.3	
	comp=Z,17nm,0.7s								
DBIC	Dimbokro	80.36	84	P		P	07 34 24.5	-1.5	
DBIC	Dimbokro	80.36	84	P		P	07 34 24.5	-1.5	
	comp=Z,4.9nm,1.1s,baz=195,slow=19,SNR=2.2								
MDT	Midelt	81.44	57	LR		LR	08 05 25.4		
	comp=Z,177nm,19.4s,baz=88,slow=32								
ESDC	Sonseca Array	82.46	50	P		P	07 34 36.5	-0.4	
ESDC	Sonseca Array	82.46	50	P		P	07 34 36.5	-0.4	
	comp=Z,1.6nm,0.7s,baz=272,slow=5.3,SNR=6.3								
ESDC				LR		LR	08 06 58.8		
	comp=Z,90nm,18.2s,baz=315,slow=33								
DAG	Danmarks Havn	83.44	12	*i* P		P	07 34 39.9	-1.1	
DAG				pmax		pmax			
	comp=Z,5.0nm,0.9s								
DAG	Danmarks Havn	83.44	12	*i* P		P	07 34 39.9	-1.1	
	comp=Z,5.6nm,0.9s								
SJPF	Ste Jean	84.74	47	*e*P		P	07 34 48.4	0.0	
	comp=Z,20nm,1.0s								
SJPF	Ste Jean	84.74	47	*e*P		P	07 34 48.4	0.0	
SJPF				pmax		pmax			
	comp=Z,20nm,1.0s								
SJPF	Ste Jean	84.74	47	*e*P		P	07 34 48.4	0.0	
	comp=Z,20nm,1.0s								
GRR	Gorron	85.29	42	*e*P		P	07 34 50.3	-0.7	
	comp=Z,52nm,1.3s								
GRR	Gorron	85.29	42	*e*P		P	07 34 50.3	-0.7	
GRR				pmax		pmax			
	comp=Z,52nm,1.3s								
GRR	Gorron	85.29	42	*e*P		P	07 34 50.3	-0.7	
	comp=Z,52nm,1.3s								
FLN	La Foliniere	85.56	41	*e*P		P	07 34 51.9	-0.4	
	comp=Z,44nm,1.2s								
FLN				*e*R					
	comp=Z,282nm,21.5s								
FLN	La Foliniere	85.56	41	*e*P		P	07 34 51.9	-0.4	
FLN				pmax		pmax			
	comp=Z,44nm,1.2s								
FLN	La Foliniere	85.56	41	*e*P		P	07 34 51.9	-0.4	
	comp=Z,44nm,1.2s								
MFF	Saint Martin d	85.68	44	*e*P		P	07 34 52.3	-0.7	
	comp=Z,115nm,1.8s								
MFF	Saint Martin d	85.68	44	*e*P		P	07 34 52.3	-0.7	
MFF				pmax		pmax			
	comp=Z,115nm,1.8s								
MFF	Saint Martin d	85.68	44	*e*P		P	07 34 52.3	-0.7	
	comp=Z,115nm,1.8s								
LDF	La Druitiere	85.79	42	*e*P		P	07 34 52.9	-0.6	
	comp=Z,97nm,1.4s								
LDF	La Druitiere	85.79	42	*e*P		P	07 34 52.9	-0.6	
LDF				pmax		pmax			
	comp=Z,97nm,1.4s								
LDF	La Druitiere	85.79	42	*e*P		P	07 34 52.9	-0.6	
	comp=Z,97nm,1.4s								
EPF	Esparros	85.89	47	*e*P		P	07 34 54.0	-0.2	
	comp=Z,38nm,1.5s								
EPF	Esparros	85.89	47	*e*P		P	07 34 54.0	-0.2	
EPF				pmax		pmax			
	comp=Z,38nm,1.5s								
EPF	Esparros	85.89	47	*e*P		P	07 34 54.0	-0.2	
	comp=Z,38nm,1.5s								
LFF	La Frestale	86.24	45	*e*P		P	07 34 55.2	-0.6	
LFF	La Frestale	86.24	45	*e*P		P	07 34 55.2	-0.6	
LFF	La Frestale	86.24	45	*e*P		P	07 34 55.2	-0.6	
TORD	Torodi Ar. Bea	86.77	77	P		P	07 34 57.4	-1.6	
TORD	Torodi Ar. Bea	86.77	77	P		P	07 34 57.4	-1.6	
	comp=Z,1.9nm,1.1s,baz=282,slow=6.3,SNR=5.8								
TORD				LR		LR	08 11 51.7		
	comp=Z,128nm,19.2s,baz=255,slow=34								
RJF	Les Rejaudoux	86.80	45	*e*P		P	07 34 58.0	-0.5	
RJF				*e*R					
	comp=Z,155nm,21.0s								
RJF	Les Rejaudoux	86.80	45	*e*P		P	07 34 58.0	-0.5	
RJF	Les Rejaudoux	86.80	45	*e*P		P	07 34 58.0	-0.5	
VNA1	Neumayer--Stat	86.99	161	*e*P		P	07 35 02.3	+3.4	
VNA1	Neumayer--Stat	86.99	161	*e*pP		pP	07 35 06.5	-1.1	
VNA1	Neumayer--Stat	86.99	161	*e*sP		sP	07 35 10.8	0.0	
CAF	Calviac	87.18	45	*e*P		P	07 34 59.7	-0.7	
CAF	Calviac	87.18	45	*e*P		P	07 34 59.7	-0.7	
CAF	Calviac	87.18	45	*e*P		P	07 34 59.7	-0.7	
MTLF	Montolieu	87.27	47	*e*P		P	07 35 00.2	-0.7	
	comp=Z,21nm,1.2s								
MTLF	Montolieu	87.27	47	*e*P		P	07 35 00.2	-0.7	
MTLF				pmax		pmax			
	comp=Z,21nm,1.2s								
MTLF	Montolieu	87.27	47	*e*P		P	07 35 00.2	-0.7	
	comp=Z,21nm,1.2s								
TCF	Toulx Ste Croi	87.30	44	*e*P		P	07 35 00.1	-0.9	
	comp=Z,71nm,1.8s								
TCF	Toulx Ste Croi	87.30	44	*e*P		P	07 35 00.1	-0.9	
TCF				pmax		pmax			
	comp=Z,71nm,1.8s								
TCF	Toulx Ste Croi	87.30	44	*e*P		P	07 35 00.1	-0.9	
	comp=Z,71nm,1.8s								
BGF	Bois d'Agland	87.74	44	*e*P		P	07 35 02.4	-0.7	
	comp=Z,72nm,1.7s								
BGF	Bois d'Agland	87.74	44	*e*P		P	07 35 02.4	-0.7	
BGF				pmax		pmax			
	comp=Z,73nm,1.7s								
BGF	Bois d'Agland	87.74	44	*e*P		P	07 35 02.4	-0.7	
	comp=Z,72nm,1.7s								
SSF	Saint Saulge	88.20	43	*e*P		P	07 35 03.8	-1.4	
	comp=Z,27nm,1.7s								
SSF	Saint Saulge	88.20	43	*e*P		P	07 35 03.8	-1.4	
SSF				pmax		pmax			
	comp=Z,27nm,1.7s								
SSF	Saint Saulge	88.20	43	*e*P		P	07 35 03.8	-1.4	
	comp=Z,27nm,1.7s								
LOR	Lormes	88.44	43	*e*P		P	07 35 05.6	-0.8	
LOR				*e*R					
	comp=Z,201nm,22.8s								
LOR	Lormes	88.44	43	*e*P		P	07 35 05.6	-0.8	
BAIF	Baives	88.65	40	*e*P		P	07 35 06.3	-1.0	
BAIF	Baives	88.65	40	*e*P		P	07 35 06.3	-1.0	
BAIF	Baives	88.65	40	*e*P		P	07 35 06.3	-1.0	
SNAA	Sanae	88.91	162	*e*P		P	07 35 10.5	+2.4	
SNAA	Sanae	88.91	162	*e*pP		pP	07 35 14.6	-2.3	
SNAA	Sanae	88.91	162	*e*sP		sP	07 35 19.3	-0.7	
SNAA	Sanae	88.91	162	*e*P		P	07 35 08.8	+0.6	
	comp=Z,17nm,1.3s								
GIVF	Givet	89.05	40	*e*P		P	07 35 08.5	-0.6	
	comp=Z,47nm,1.5s								
GIVF	Givet	89.05	40	*e*P		P	07 35 08.5	-0.6	
GIVF				pmax		pmax			
	comp=Z,47nm,1.5s								
GIVF	Givet	89.05	40	*e*P		P	07 35 08.5	-0.6	
	comp=Z,47nm,1.5s								
BCLA	Clavier	89.35	40	P		P	07 35 11.3	+0.8	
WLF	Walferdange	89.92	41	P		P	07 35 14.0	+0.7	
	comp=Z,14nm,2.4s								
TAM	Tamanrasset	90.24	67	*e*P		P	07 35 15.3	-0.3	
TAM				pmax		pmax			
	comp=Z,7.0nm,0.9s								
TAM	Tamanrasset	90.24	67	*e*P		P	07 35 15.3	-0.3	
	comp=Z,7.2nm,0.9s								
CDF	Champ du Feu	90.71	42	*e*P		P	07 35 16.0	-1.1	
CDF	Champ du Feu	90.71	42	*e*P		P	07 35 16.0	-1.1	
CDF	Champ du Feu	90.71	42	*e*P		P	07 35 16.0	-1.1	
SPITS	Spitsbergen Ar	91.06	12	LR		LR	08 17 28.6		
	comp=Z,213nm,18.3s,baz=255,slow=36								
QSPA	South Pole Qui	91.40	180	*e*P		P	07 35 20.9	+1.0	
	comp=Z,38nm,1.4s								
QSPA	South Pole Qui	91.40	180	P		P	07 35 21.4	+1.4	
	comp=Z,14nm,1.1s,baz=139,slow=2.6,SNR=16								
NOA	NORSAR Array B	91.98	29	P		P	07 35 22.6	0.0	
NOA	NORSAR Array B	91.98	29	P		P	07 35 22.6	0.0	
	comp=Z,1.5nm,0.9s,baz=269,slow=4.2,SNR=2.6								
NOA				LR		LR	08 12 21.7		
	comp=Z,116nm,18.1s,baz=265,slow=33								
DAVOX	Davos/Dischmat	92.57	43	LR		LR	08 14 17.8		
	comp=Z,106nm,19.2s,baz=262,slow=34								
KEST	Kesra	92.99	54	LR		LR	08 14 29.9		
	comp=Z,39nm,18.2s,baz=283,slow=34								
HFS	Hagfors	93.31	30	LR		LR	08 09 48.6		
	comp=Z,243nm,21.6s,baz=293,slow=31								
GERES	GERESS Array B	94.91	41	LR		LR	08 11 10.4		
	comp=Z,196nm,21.9s,baz=282,slow=31								
BILL	Bilibino	95.56	339	*i* P		P	07 35 38.6	-0.3	
BILL				*i*			07 39 31.0		
BILL				*e*PS		PS	07 48 23.7	+8.7	
BILL				pmax		pmax			
	comp=Z,9.0nm,1.9s								
FX1	Attu Island--F	95.87	323	LR		LR	08 18 05.8		
	comp=Z,67nm,20.4s,baz=285,slow=35								
ARCES	ARCESS Array B	95.90	19	LR		LR	08 13 36.3		
	comp=Z,161nm,20.1s,baz=148,slow=32								
VRAC	Vranov	96.72	40	LR		LR	08 13 03.6		
	comp=Z,224nm,21.6s,baz=275,slow=32								
FINES	FINESS Array B	98.88	27	LR		LR	08 13 56.3		
	comp=Z,158nm,20.1s,baz=270,slow=32								
CRVS	Cervenica-Dubn	99.94	40	*e*P		Pdif	07 36 08.4	+9.4	
CRVS	Cervenica-Dubn	99.94	40	PDIF		Pdif	07 36 08.4	+9.4	
DZM	Mont Dzumac	107.41	247	*e*LR		LR	08 11 48.5		
	comp=Z,241nm,28.4s								
ABKAR	Akbulak array	121.35	26	*e*PKPdf		PKPdf	07 41 07.0	-0.3	
ZALV	Zalesovo Beam	124.27	7	PKIKP		PKPdf	07 41 13.7	+0.9	
ZALV							07 42 54.8		
ZALV	Zalesovo Beam	124.27	7	PKP		PKPdf	07 41 13.7	+0.9	
ZALV				PP		PP	07 42 54.8	-2.3	
ZALV	Zalesovo Beam	124.27	7	PKP		PKPdf	07 41 13.7	+0.9	
	comp=Z,1.2nm,0.5s,baz=292,slow=0.8,SNR=4.0								
ZALV				PP		PP	07 42 54.8	-2.3	
	comp=Z,0.7nm,0.3s,baz=345,slow=9.7,SNR=2.7								
MJAR	Matsushiro Arr	124.74	318	PKP		PKPdf	07 41 14.7	+0.5	
MJAR	Matsushiro Arr	124.74	318	PKP		PKPdf	07 41 14.7	+0.5	
	comp=Z,0.8nm,0.7s,baz=108,slow=1.7,SNR=3.2								
KURK	Kurchatov	126.33	13	PKIKP		PKPdf	07 41 16.1	-0.7	
KURK							07 43 09.6		
KURK	Kurchatov	126.33	13	PKP		PKPdf	07 41 16.1	-0.7	
KURK				*e*PKPdf		PKiKP	07 41 16.7	-0.6	
KURK				PP		PP	07 43 09.6	-1.3	
KURBB	Kurchatov Arra	126.40	13	PKP		PKPdf	07 41 16.1	-0.8	
	comp=Z,3.0nm,1.0s,baz=335,slow=2.3,SNR=8.1								
KURBB				PP		PP	07 43 09.6	-1.7	
	comp=Z,0.2nm,0.3s,baz=330,slow=4.9,SNR=4.3								
STKA	Stephens Creek	126.41	231	PKP		PKPdf	07 41 19.8	+2.2	
STKA	Stephens Creek	126.41	231	PKP		PKPdf	07 41 19.8	+2.2	
	comp=Z,1.6nm,0.8s,baz=117,slow=4.5,SNR=2.7								
CN2	Changchun	127.29	332	*e*PKP		PKPdf	07 41 13.8	-5.1	
SONM	Songino Array	129.95	350	PKP		PKPdf	07 41 25.3	+1.2	
SONM	Songino Array	129.95	350	PKP		PKPdf	07 41 25.3	+1.2	
	comp=Z,0.8nm,0.7s,baz=173,slow=2.4,SNR=3.6								
KSRS	Korea Array	130.63	325	PKP		PKPdf	07 41 26.5	+1.0	
	comp=Z,0.4nm,0.3s,baz=336,slow=2.7,SNR=3.5								
KSAR	Wonju Array Be	130.66	325	PKP		PKPdf	07 41 26.5	+1.0	
MKAR	Makanchi Array	130.82	11	PKIKP		PKPdf	07 41 25.9	+0.3	
MKAR	Makanchi Array	130.82	11	PKP		PKPdf	07 41 25.9	+0.3	
MKAR	Makanchi Array	130.82	11	PKP		PKPdf	07 41 25.9	+0.3	
	comp=Z,0.5nm,0.8s,baz=61,slow=3.6,SNR=3.6								
AAK	Ala-Archa	132.56	20	PKIKP		PKPdf	07 41 27.8	-1.4	
AAK	Ala-Archa	132.56	20	PKP		PKPdf	07 41 27.8	-1.4	
AAK	Ala-Archa	132.56	20	PKP		PKPdf	07 41 27.8	-1.4	
	comp=Z,0.5nm,0.2s,baz=126,slow=7.1,SNR=2.3								
BJI	Beijing	134.35	337	PKP		PKPdf	07 41 30.9	-1.5	
BJI				LR		LR			
	comp=Z,150nm,36.0s								
WMQ	Urumqi	134.58	7	*e*PKP		PKPdf	07 41 34.5	+1.7	
WMQ				LR		LR			
	comp=N,110nm,30

	comp=E,130nm,25.4s						
GYA				LR	LR		
	comp=Z,140nm,24.7s						
KMI	**Kunming**	**152.54**	**344**	PKPbc	**PKPdf**	07 42 03.0	**-1.6**
KMI				pPKP	**PKPbc**	07 42 07.1	**-4.4**
KMI				sPKP		07 42 09.2	
SHL	**Shillong**	**153.09**	**6**	*e*PKP	**PKPbc**	07 42 12.0	**-0.7**
CMAR	**Chiang Mai Arr**	**159.87**	**348**	PKPab	**PKPab**	07 42 53.7	**+0.7**
CMAR	**Chiang Mai Arr**	**159.87**	**348**	PKPab	**PKPab**	07 42 53.7	**+0.7**
	comp=Z,0.7nm,0.3s,baz=2.2,slow=4.8,SNR=4.3						

NIED ***10*** *07:33:00.29˚.10N×129˚.50E,h53km,Mw3.9 Best double couple: M0 9.42000×10^14 NP1:φ=185.00000°,δ60.00000°, λ=-76.00000°. NP2:φ=340.00000°,δ33.00000°, λ=-112.00000°.*

JMA ***10*** *07:33:45.9±0.2,29˚.05N×129˚.60E,h58km±4km,M3.8*

JMA Felt I J1.

ISCJB ***10*** *07:33:45.4±0.4,28˚.99N±0˚.04×129˚.74E±0˚.08,h65km±4km, mb3.5/11,Error ellipse: s-maj=12.8km s-min=4.0km az=24.5*

IDC ***10*** *07:33:46.5±0.8,28˚.95N×129˚.98E,h61km±7km,mb3.3/11, mb1 3.6/13,mb1mx3.5/29,mbtmp3.4/13,MS3.1/4, Ms1 3.2/4,ms1mx2.7/27,Error ellipse: s-maj=24.8km s-min=14.9km az=86.0*

ISC 10 07:33:46.5±0.7,28˚.97N±0˚.04×129˚.73E±0˚.07,h57km±6km, n27,σ1=50/38,mb3.6/11,MS3.2/3,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.57**	**191**	P	**Pn**	**07 33 58.8**	**-0.3**
JAM				S	**Sn**	**07 34 08.1**	**-0.1**
JZK	**Kikaishima**	**0.69**	**162**	P	**Pn**	**07 34 01.8**	**+1.3**
JZK				*e*S	**Sn**	**07 34 14.2**	**+3.5**
JNN	**Nakanoshima**	**0.87**	**8**	P	**Pn**	**07 34 01.6**	**-1.2**
JNN				*e*S	**Sn**	**07 34 13.1**	**-1.7**
JAMN	**Amaminishikomi**	**0.88**	**214**	P	**Pn**	**07 34 02.9**	**0.0**
JAMN				S	**Sn**	**07 34 14.9**	**+0.1**
JTK	**Tokunoshima**	**1.37**	**210**	P	**Pn**	**07 34 09.7**	**+0.3**
JTK				S	**Sn**	**07 34 26.8**	**+0.3**
JKC	**Kuchinoerabu**	**1.54**	**15**	P	**Pn**	**07 34 10.7**	**-1.0**
JKC				*e*S	**Sn**	**07 34 28.9**	**-1.7**
JTN	**Tanegashima 3**	**2.00**	**33**	P	**Pn**	**07 34 17.4**	**-0.5**
JTN				*e*S	**Sn**	**07 34 41.5**	**-0.3**
JIH	**Iheya**	**2.48**	**219**	P	**Pn**	**07 34 25.4**	**+0.9**
JIH				*e*S	**Sn**	**07 34 53.8**	**+0.1**
JOW	**Kunigami**	**2.49**	**211**	P	**Pn**	**07 34 24.9**	**+0.2**
JOW				*e*S	**Sn**	**07 34 54.0**	**+0.1**
JAGN	**Aguni-jima**	**3.24**	**223**	P	**Pn**	**07 34 35.6**	**+0.7**
JAGN				*e*S	**Sn**	**07 35 12.1**	**-0.2**
JKE	**Kume jima 2**	**3.71**	**225**	P	**Pn**	**07 34 41.9**	**+0.5**
JNU	**Nakatsue**	**4.25**	**13**	P	**Pn**	**07 34 49.5**	**+0.7**
	5.5nm,0.3s,baz=176,slow=4.9,SNR=31						
JNU				S	**Sn**	**07 35 43.0**	**+5.9**
	0.9nm,0.3s,baz=46,slow=18,SNR=3.8						
KSRS	**Korea Array**	**8.59**	**350**	P	**Pn**	**07 35 49.5**	**+1.4**
	0.3nm,0.3s,baz=170,slow=14,SNR=7.0						
MJAR	**Matsushiro Arr**	**10.38**	**41**	LR	LR	07 40 18.3	
	comp=Z,34nm,18.9s,baz=300,slow=38						
SONM	**Songino Array**	**26.08**	**323**	P	**P**	**07 39 16.7**	**+1.9**
	0.7nm,0.6s,baz=137,slow=11,SNR=3.8						
CMAR	**Chiang Mai Arr**	**29.99**	**256**	P	**P**	**07 39 51.9**	**+2.0**
	0.7nm,0.3s,baz=62,slow=7.0,SNR=4.0						
CMAR				LR	LR	07 51 56.7	
	comp=Z,15nm,18.6s,baz=190,slow=36						
KURBB	**Kurchatov Arra**	**43.84**	**314**	P	**P**	**07 41 46.7**	**-0.2**
	0.3nm,0.3s,baz=98,slow=9.1,SNR=4.9						
AAK	**Ala-Archa**	**46.06**	**303**	LR	LR	08 04 54.1	
	comp=Z,23nm,18.0s,baz=183,slow=40						
WRA	**Warramunga Arr**	**48.83**	**174**	P	**P**	**07 42 25.3**	**-1.0**
	0.5nm,0.6s,baz=354,slow=8.4,SNR=2.7						
BVAR	**Borovoye Array**	**49.16**	**317**	P	**P**	**07 42 29.3**	**+0.8**
	0.5nm,0.6s,baz=101,slow=7.5,SNR=2.6						
ASAR	**Alice Springs**	**52.49**	**175**	P	**P**	**07 42 53.6**	**-0.2**
	0.3nm,0.6s,baz=8.5,slow=14,SNR=5.7						
ASAR				pP	**pP**	**07 43 08.6**	**-0.4**
	0.3nm,0.7s,baz=7.8,slow=14,SNR=1.9						
ILAR	**Eielson Array**	**61.40**	**29**	P	**P**	**07 43 55.0**	**-1.4**
	0.2nm,0.8s,baz=282,slow=4.5,SNR=4.2						
ILAR				pP	**pP**	**07 44 11.6**	**-0.4**
	0.3nm,0.8s,baz=288,slow=8.1,SNR=3.7						
STKA	**Stephens Creek**	**61.56**	**169**	P	**P**	**07 43 56.7**	**-1.0**
	0.8nm,0.6s,baz=342,slow=11,SNR=3.6						
AKASG	**Malin Array Be**	**74.31**	**320**	LR	LR	08 19 23.8	
	comp=Z,96nm,19.6s,baz=310,slow=37						
YKA	**Yellowknife Ar**	**75.48**	**26**	P	**P**	**07 45 23.7**	**-0.5**
	0.4nm,0.8s,baz=302,slow=5.8,SNR=7.5						
YKA				pP	**pP**	**07 45 40.3**	**+0.1**
	0.5nm,0.6s,baz=301,slow=6.0,SNR=8.7						
BRTR	**Keskin Array B**	**76.40**	**308**	P	**P**	**07 45 30.2**	**0.0**
	0.6nm,1.0s,baz=96,slow=7.4,SNR=3.2						
PDAR	**Pinedale Array**	**90.20**	**39**	P	**P**	**07 46 40.0**	**-1.1**
	0.5nm,0.9s,baz=311,slow=1.9,SNR=3.3						

IDC 10 07:39:14.8±1.1,5˚.00S×151˚.84E,h63km±6km,mb3.7/9, mb1 4.0/9,mb1mx3.7/20,mbtmp3.7/9,MS3.0/1,Ms1 3.0/1, ms1mx2.3/35,Error ellipse: s-maj=42.2km s-min=16.3km az=128.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.38**	**226**	P	Pn	07 40 50.2	+4.0
	1.9nm,0.3s,baz=347,slow=13,SNR=4.6						
PMG				S	Sn	07 42 01.7	+4.0
	3.2nm,0.3s,baz=143,slow=20,SNR=4.4						
CTA	**Charters Tower**	**15.95**	**199**	LR	LR	07 48 28.0	
	comp=Z,57nm,20.8s,baz=28,slow=35						
WRA	**Warramunga Arr**	**22.60**	**227**	P	P	07 44 10.4	0.0
	6.9nm,0.7s,baz=53,slow=9.7,SNR=46						
WRA				pP	pP	07 44 24.9	+0.8
	11nm,0.7s,baz=53,slow=9.9,SNR=22						
WRA				PcP	PcP	07 48 01.8	+0.1
	0.9nm,0.7s,baz=44,slow=2.1,SNR=5.5						
ASAR	**Alice Springs**	**25.36**	**221**	P	P	07 44 36.7	+0.4
	2.3nm,0.6s,baz=57,slow=8.6,SNR=29						
ASAR				pP	pP	07 44 52.0	+0.5
	12nm,0.8s,baz=56,slow=9.1,SNR=25						
FITZ	**Fitzroy Crossi**	**28.72**	**241**	P	P	07 45 04.6	-1.9
	2.2nm,0.6s,baz=53,slow=9.8,SNR=8.1						
FITZ				pP	pP	07 45 21.2	-0.7
	3.8nm,0.6s,baz=121,slow=5.3,SNR=3.4						
CMAR	**Chiang Mai Arr**	**57.10**	**296**	P	P	07 48 56.7	+1.5
	0.9nm,0.3s,baz=129,slow=6.2,SNR=4.9						
MKAR	**Makanchi Array**	**79.85**	**319**	P	P	07 51 17.3	+0.6
	0.5nm,0.8s,baz=123,slow=2.4,SNR=4.2						
ILAR	**Eielson Array**	**82.71**	**22**	P	P	07 51 29.9	-1.5
	0.2nm,0.4s,baz=252,slow=4.9,SNR=5.7						
ILAR				sP	sP	07 51 55.8	-0.2
	0.3nm,0.7s,baz=247,slow=5.5,SNR=3.5						
KURBB	**Kurchatov Arra**	**83.37**	**322**	P	P	07 51 34.5	-0.6
	0.3nm,0.8s,baz=125,slow=4.6,SNR=4.6						
NVAR	**Mina Array Bea**	**92.96**	**52**	P	P	07 52 22.5	+0.7
	0.4nm,0.6s,baz=263,slow=6.3,SNR=3.2						
YKA	**Yellowknife Ar**	**96.05**	**28**	P	P	07 52 36.7	+1.6
	0.1nm,0.7s,baz=268,slow=5.1,SNR=3.9						
TORD	**Torodi Ar. Bea**	**149.46**	**287**	PKPbc	PKPbc	07 58 56.5	-1.4
	1.7nm,0.8s,baz=90,slow=2.0,SNR=9.5						

ISK ***10*** *07:39:43.9,37˚.56N×36˚.52E,h21km,MD2.4*

DDA ***10*** *07:39:43.9,37˚.65N×36˚.41E,h6km,MD2.8*

CSEM ***10*** *07:39:43.8±0.6,37˚.76N×36˚.44E,h2km,MD2.8,Error ellipse: s-maj=12.4km s-min=11.2km az=103.0*

ISC 10 07:39:44.0±0.9,37˚.62N±0˚.04×36˚.42E±0˚.03,h8km±6km, n16,σ=98/29,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.07**	**238**	*i* P	**Pg**	**07 39 46.0**	**-0.1**
ANDN				*i* S	**Sg**	**07 39 48.0**	**+0.4**
ANDN	**Andirin**	**0.07**	**238**	*i* P	**Pg**	**07 39 46.0**	**-0.1**
ANDN				*i* S	**Sg**	**07 39 48.0**	**+0.4**
AYKD	**Aykdinkavak**	**0.37**	**124**	*i* P	**Pg**	**07 39 50.7**	**-0.4**
KMRS	**Kahramanmaras**	**0.40**	**106**	*e*PG	**Pg**	**07 39 51.1**	**-0.6**
KMRS				*e*SG	**Sg**	**07 39 56.5**	**-0.4**
KMRS	**Kahramanmaras**	**0.40**	**106**	*e*Pg	**Pg**	**07 39 51.1**	**-0.6**
KMRS				*e*Sg	**Sg**	**07 39 56.5**	**-0.4**
KOZT	**Kozan**	**0.49**	**254**	*e*PG	**Pn**	**07 39 55.4**	**-1.9**
KOZT				*e*SG	**Sb**	**07 40 04.0**	**+1.7**
KOZT	**Kozan**	**0.49**	**254**	*e*Pg	**Pn**	**07 39 55.4**	**-1.9**
KOZT				*e*Sg	**Sb**	**07 40 04.0**	**+1.7**
SARI	**SarD1z-Kayseri**	**0.79**	**360**	*e*PG	**Pn**	**07 40 01.5**	**-0.1**
SARI				*e*SG	**Sn**	**07 40 13.4**	**-0.2**
SARI	**SarD1z-Kayseri**	**0.79**	**360**	*e*Pg	**Pn**	**07 40 01.5**	**-0.1**
SARI				*e*Sg	**Sn**	**07 40 13.4**	**-0.2**
GZT	**Gaziantep**	**0.94**	**106**	*i* P	**Pb**	**07 40 02.2**	**-0.5**
GZT				*i* S	**Sn**	**07 40 16.7**	**-0.8**
KUZU	**Kuzuini**	**0.99**	**148**	*i* P	**Pn**	**07 40 04.7**	**+0.5**
KUZU				*i* S	**Sn**	**07 40 18.9**	**+0.5**
KUZU	**Kuzuini**	**0.99**	**148**	*i* P	**Pn**	**07 40 04.7**	**+0.5**
KUZU				*i* S	**Sn**	**07 40 18.9**	**+0.5**
DARE	**Darende-Malaty**	**1.27**	**41**	*e*PN	**Pn**	**07 40 07.0**	**-1.1**
DARE	**Darende-Malaty**	**1.27**	**41**	*e*Pn	**Pn**	**07 40 07.0**	**-1.1**
AKCD	**Akcadag**	**1.36**	**60**	*i* P	**Pg**	**07 40 10.4**	**+0.2**
AKCD				*i* S	**Sn**	**07 40 29.3**	**+1.5**
AKCD	**Akcadag**	**1.36**	**60**	*i* P	**Pg**	**07 40 10.4**	**+0.2**
AKCD				*i* S	**Sn**	**07 40 29.3**	**+1.5**

IDC ***10*** *07:47:49.6±1.1,21˚.66S×69˚.20W,h85km±6km,mb3.4/4, mb1 3.7/6,mb1mx3.5/17,mbtmp3.5/6,Error ellipse: s-maj=28.7km s-min=25.6km az=32.0*

GUC ***10*** *07:47:49.9±0.6,21˚.47S×69˚.32W,h81km±4km,ML3.9*

ISCJB ***10*** *07:47:49.4±0.5,21˚.45S±0˚.05×69˚.2W±0˚.1,h90km±5km, mb3.5/3,Error ellipse: s-maj=16.8km s-min=6.1km az=163.7*

ISC 10 07:47:50.3±0.8,21˚.45S±0˚.05×69˚.2W±0˚.1,h83km±5km,n16, σ1=09/23,mb3.6/3,3C-4D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**Plate Boundary**	**0.35**	**180**	⇓*i* P	**Pn**	**07 48 02.9**	**-0.6**
PB09				*i* S	**Sn**	**07 48 12.8**	**-0.4**
PB09				AML	AML	07 48 17.8	
	comp=E,25μm,0.6s						
PB01	**Plate Boundary**	**0.46**	**330**	⇓*i* P	**Pn**	**07 48 03.8**	**-0.4**
PB01				*i* S	**Sn**	**07 48 14.1**	**-0.2**
PB01				AML	AML	07 48 14.6	
	comp=E,8μm,0.3s						
PB04	**Plate Boundary**	**0.85**	**195**	⇑*i* P	Pn	07 48 11.3	+3.6
PB04				*i* S	Sn	07 48 28.5	+7.7
PB04				AML	AML	07 48 31.5	
	comp=E,3μm,0.2s						
LVC	**Limon Verde**	**1.20**	**165**	⇓*i* P	**Pn**	**07 48 12.6**	**+0.3**
LVC				*i* S	**Sn**	**07 48 29.7**	**+1.1**
HMBC	**Humberstone**	**1.31**	**332**	⇑*i* P	**Pn**	**07 48 13.3**	**-0.1**
HMBC				*i* S	**Sn**	**07 48 31.9**	**+1.2**
HMBC				AML	AML	07 48 35.8	
	comp=E,2μm,0.4s						
PSGC	**Pisagua**	**2.02**	**336**	⇓*i* P	**Pn**	**07 48 21.8**	**-0.7**
PSGC				*e*S	**Sn**	**07 48 46.8**	**-0.4**
PSGC				AML	AML	07 48 56.4	
	comp=E,686nm,0.3s						
MNMC	**Minimini**	**2.33**	**352**	⇑*i* P	**Pn**	**07 48 27.4**	**+0.5**
MNMC				*e*S	**Sn**	**07 48 56.8**	**+2.0**
MNMC				AML	AML	07 49 07.5	
	comp=N,1μm,0.2s						
ANCH	**Antofagasta**	**2.47**	**206**	*e*P	**Pn**	**07 48 28.7**	**+0.2**
LPAZ	**La Paz**	**5.24**	**12**	P	**Pn**	**07 49 08.9**	**+2.3**
	comp=N,2.6nm,0.3s,baz=200,slow=5.8,SNR=55						
SIV	**San Ignacio**	**9.45**	**56**	P	**Pn**	**07 50 02.2**	**-1.5**
	comp=N,1.7nm,0.3s,baz=263,slow=9.2,SNR=36						
CFAA	**Coronel Fontan**	**10.16**	**175**	P	Pn	07 50 07.8	-5.4
	comp=N,0.0nm,0.3s,baz=357,slow=15,SNR=4.4						
BDFB	**Brasilia**	**20.93**	**78**	P	**P**	**07 52 24.2**	**-2.3**
	comp=N,1.7nm,0.4s,baz=256,slow=9.0,SNR=7.5						
TXAR	**Lajitas Array**	**60.41**	**325**	P	**P**	**07 57 50.7**	**-0.5**
	comp=N,0.3nm,0.9s,baz=132,slow=5.4,SNR=3.3						
TORD	**Torodi Ar. Bea**	**77.63**	**70**	P	**P**	**07 59 39.1**	**+1.1**
	comp=N,0.3nm,0.3s,baz=252,slow=5.0,SNR=6.5						
TORD				pP	**pP**	**07 59 59.6**	**-0.3**
	comp=N,1.6nm,0.8s,baz=250,slow=5.3,SNR=5.7						
TORD				sP	**sP**	**08 00 09.5**	**+0.5**
	comp=N,0.4nm,0.7s,baz=245,slow=5.2,SNR=1.7						
YKA	**Yellowknife Ar**	**91.03**	**341**	P	**P**	**08 00 44.6**	**-0.2**
	comp=N,0.6nm,0.6s,baz=134,slow=4.3,SNR=21						
YKA				pP	**pP**	**08 01 07.7**	**+0.5**
	comp=N,0.1nm,0.5s,baz=132,slow=4.6,SNR=1.9						
MKAR	**Makanchi Array**	**145.77**	**36**	PKPbc	**PKPdf**	**08 07 19.1**	**-0.1**
	comp=N,0.2nm,0.5s,baz=298,slow=3.1,SNR=2.4						
MKAR				pPKPbc	pPKPbc	08 07 42.9	0.0
	comp=N,0.3nm,0.6s,baz=347,slow=5.0,SNR=3.2						

NIED ***10*** *07:52:00.44˚.80N×144˚.50E,h5km,Mw4.2 Best double couple: M0 2.45000×10^15 NP1:φ=115.00000°,δ60.00000°, λ=103.00000°. NP2:φ=270.00000°,δ32.00000°,λ=68.00000°.*

ISCJB ***10*** *07:52:29.0±1.2,44˚.78N±0˚.03×144˚.46E±0˚.03,h2km±8km, mb4.0/26,MS3.5/5,Error ellipse: s-maj=4.3km s-min=3.8km az=168.9*

IDC ***10*** *07:52:29.8±0.7,44˚.73N×144˚.40E,h0km,mb3.8/15, mb1 4.0/19,mb1mx3.9/31,mbtmp3.8/19,ML3.2/1,MS3.3/8, Ms1 3.3/8,ms1mx3.0/47,Error ellipse: s-maj=19.8km s-min=12.3km az=150.0*

BJI ***10*** *07:52:29.2,44˚.96N×145˚.25E,h50km,mB4.9/3,mb4.3/5*

NEIC ***10*** *07:52:31.5,44˚.74N×144˚.45E,h16km,mb4.4/8,After JMA.*

NEIC Recorded [2 JMA] in northeastern Hokkaido.

JMA ***10*** *07:52:31.4±0.1,44˚.73N×144˚.45E,h16km±2km,M4.3 JMA Felt II J1.*

MOS ***10*** *07:52:32.7±1.2,44˚.66N×144˚.44E,h33km,mb4.6/8,Error ellipse: s-maj=11.2km s-min=7.8km az=76.0*

ISC 10 07:52:31.4±0.9,44˚.70N±0˚.03×144˚.45E±0˚.03,h11km±6km, n109,σ=84/123,mb4.1/26,MS3.5/5,9C-3D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTKR	**Abashiri--Toko**	**0.83**	**208**	⇓P	**Pg**	**07 52 47.1**	**-0.2**
JTKR				*e*S	**Sb**	**07 52 58.8**	**-0.1**
JRA	**Rausu**	**0.90**	**148**	⇓P	**Pg**	**07 52 48.7**	**0.0**
JRA				*e*S	**Sb**	**07 53 01.3**	**+0.3**
JMP	**Maruseppu**	**1.05**	**229**	⇓P	**Pg**	**07 52 51.0**	**-0.5**
JMP				*e*S	**Sb**	**07 53 05.5**	**+0.3**
JNK	**Nakash**	**1.13**	**170**	⇑P	**Pb**	**07 52 52.0**	**-0.9**
JNK				*e*S	**Sb**	**07 53 07.4**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**1.21**	**123**	⇑*i*PN	**Pn**	**07 52 53.4**	**-0.7**
YUK				*i* S	**Sg**	**07 53 10.2**	**-0.1**
YUK				pmax	pmax		
	comp=N,460nm,0.3s						
YUK				pmax	pmax		
	comp=Z,974nm,0.3s						
YUK				pmax	pmax		
	comp=E,370nm,0.1s						
YUK				smax	smax		
	comp=N,2μm,0.3s						
YUK				smax	smax		
	comp=E,3μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**1.21**	**123**	⇑*i*P	**Pn**	**07 52 53.5**	**-0.7**
JSE	**Soyaes**	**1.35**	**282**	⇑P	**Pn**	**07 52 55.3**	**-0.9**
JSE				*e*S	**Sb**	**07 53 12.7**	**-1.3**
ASAJ	**Asahikawa**	**1.45**	**247**	Pn	**Pn**	**07 52 57.5**	**0.0**
ASAJ				Sn	**Sg**	**07 53 17.7**	**-0.4**
ASAJ	**Asahikawa**	**1.45**	**247**	⇑P	**Pn**	**07 52 57.5**	**0.0**
ASAJ				*e*S	**Sn**	**07 53 16.9**	**+0.3**
ASAJ	**Asahikawa**	**1.45**	**247**	Pn	**Pn**	**07 52 57.5**	**0.0**
	comp=E,114nm,0.3s,baz=76,slow=12,SNR=356						
ASAJ				Sn	**Sg**	**07 53 17.7**	**-0.4**
	comp=E,280nm,0.3s,baz=274,slow=13,SNR=30						
JKK2	**Kamakawa 2**	**1.48**	**236**	⇑P	**Pn**	**07 52 57.7**	**-0.2**
JKK2				*e*S	**Sb**	**07 53 17.8**	**+0.2**
JAR	**Ashorobuto**	**1.49**	**200**	⇑P	**Pn**	**07 52 58.1**	**+0.1**
JAR				*e*S	**Sg**	**07 53 19.0**	**-0.2**
NEM2	**Nemuro 2**	**1.63**	**145**	⇑P	**Pn**	**07 52 59.6**	**-0.3**
KUR	**Kuril'sk**	**2.48**	**76**	*e*PN	**Pn**	**07 53 11.5**	**-0.2**
KUR				*e*S	**Sn**	**07 53 41.0**	**-0.9**
KUR				pmax	pmax		
	comp=Z,340nm,1.0s						
KUR				smax	smax		
	comp=N,320nm,0.5s						
KUR				smax	smax		
	comp=E,150nm,0.5s						
YSS	**Yuzh-Sakhalins**	**2.55**	**333**	*e*PN	**Pn**	**07 53 13.0**	**+0.4**
YSS				*e*S	**Sg**	**07 53 52.0**	**-1.1**
YSS				smax	smax		
	comp=N,960nm,0.8s						
YSS				smax	smax		
	comp=E,1μm,0.9s						
YSS	**Yuzh-Sakhalins**	**2.55**	**333**	⇑*e*P	**Pn**	**07 53 12.6**	**0.0**
ERM	**Erimo**	**2.85**	**200**	*e*PN	**Pn**	**07 53 18.2**	**+1.5**
ERM	**Erimo**	**2.85**	**200**	*e*Pn	**Pn**	**07 53 18.2**	**+1.5**
ERM				*e*Sg	**Sg**	**07 54 02.9**	**+0.2**
USRK	**Ussuriysk Arra**	**8.92**	**271**	Pn	**Pn**	**07 54 41.4**	**+1.2**
	baz=93,slow=19,SNR=2.3						
MAJO	**Matsushiro**	**9.43**	**212**	PN	**Pn**	**07 54 47.3**	**+0.2**
MAJO	**Matsushiro**	**9.43**	**212**	Pn	**Pn**	**07 54 47.3**	**+0.2**
MJAR	**Matsushiro Arr**	**9.43**	**212**	Pn	**Pn**	**07 54 47.0**	**-0.1**
MJAR	**Matsushiro Arr**	**9.43**	**212**	Pn	**Pn**	**07 54 47.0**	**-0.1**
	comp=E,0.3nm,0.3s,baz=32,slow=12,SNR=3.9						
MJAR				LR	LR	07 59 39.9	
	comp=E,177nm,18.0s,baz=25,slow=46						
KLR	**Kul'dur**	**9.79**	**302**	*e*PN	**Pn**	**07 54 54.2**	**+2.2**
KLR				pmax	pmax		
	comp=E,42nm,1.8s						
KLR				pmax	pmax		
	comp=Z,50nm,1.8s						
MDJ	**Mudanjiang**	**10.59**	**275**	*e*Pn	**Pn**	**07 55 00.2**	**-2.7**
	comp=Z,4.4nm,0.6s						
PETK	**Petropavlovsk-**	**12.10**	**41**	PN	**Pn**	**07 55 23.9**	**+0.4**
PETK	**Petropavlovsk-**	**12.10**	**41**	Pn	**Pn**	**07 55 23.9**	**+0.4**
PETK	**Petropavlovsk-**	**12.10**	**41**	Pn	**Pn**	**07 55 23.9**	**+0.4**
	baz=216,slow=12,SNR=2.8						
PETK				LR	LR	07 59 52.1	
	comp=Z,91nm,20.4s,baz=52,slow=37						
JHJ	**Hachijo jima 2**	**12.12**	**199**	LR	LR	08 00 41.9	
	comp=Z,137nm,22.0s,baz=35,slow=41						
KSRS	**Korea Array**	**14.40**	**246**	Pn	**Pn**	**07 55 56.2**	**+1.2**
	baz=59,slow=13,SNR=8.5						
KSRS				LR	LR	08 01 20.5	
	comp=E,39nm,19.1s,baz=342,slow=37						
KSAR	**Wonju Array Be**	**14.43**	**246**	Pn	**Pn**	**07 55 56.2**	**+0.7**
JNU	**Nakatsue**	**15.64**	**227**	*e*Pn	**Pn**	**07 56 10.8**	**-0.9**
	comp=Z,7nm,1.4s						
SEY	**Seymchan**	**18.83**	**11**	*i* P	**Pn**	**07 56 54.8**	**+3.4**
SEY	**Seymchan**	**18.83**	**11**	*i* P	**P**	**07 56 48.0**	**-2.8**
YAK	**Yakutsk**	**19.38**	**339**	*e*P	**P**	**07 56 56.3**	**-0.6**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
ULN	**Ulaanbaatar**	**25.87**	**290**	*e*P	**P**	**07 58 03.8**	**+0.7**
	comp=N,4.1nm,0.9s						
BILL	**Bilibino**	**26.03**	**19**	*i* P	**P**	**07 58 05.7**	**+1.6**
BILL				*i*		07 58 44.1	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.9s						
BILL				MLR	MLR		
	comp=Z,100nm,13.0s						
SONM	**Songino Array**	**26.32**	**290**	P	**P**	**07 58 07.1**	**0.0**
SONM	**Songino Array**	**26.32**	**290**	P	**P**	**07 58 07.1**	**0.0**
	comp=Z,2.9nm,0.9s,baz=89,slow=9.3,SNR=12						
SONM				LR	LR	08 08 43.4	
	comp=Z,40nm,21.6s,baz=171,slow=37						
WHN	**Wuhan**	**27.53**	**249**	*e*P	**P**	**07 58 20.3**	**+2.3**
GUMO	**Guam**	**31.01**	**179**	LR	LR	08 10 52.1	
	comp=Z,31nm,18.8s,baz=143,slow=36						
ILAR	**Eielson Array**	**41.88**	**37**	P	**P**	**08 00 21.3**	**+0.1**
ILAR	**Eielson Array**	**41.88**	**37**	P	**P**	**08 00 21.3**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=275,slow=7.0,SNR=7.2						
MKAR	**Makanchi Array**	**42.42**	**296**	*i* P	**P**	**08 00 26.1**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**42.42**	**296**	P	**P**	**08 00 25.6**	**-0.3**
MKAR	**Makanchi Array**	**42.42**	**296**	P	**P**	**08 00 25.6**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=76,slow=9.3,SNR=7.1						
KURK	**Kurchatov**	**43.38**	**302**	*i* P	**P**	**08 00 32.0**	**-1.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**43.38**	**302**	P	**P**	**08 00 33.3**	**-0.2**
KURBB	**Kurchatov Arra**	**43.47**	**302**	P	**P**	**08 00 33.3**	**-0.9**
	comp=Z,3.1nm,0.9s,baz=71,slow=8.7,SNR=9.7						
INK	**Inuvik**	**46.56**	**30**	P	**P**	**08 00 57.8**	**-0.8**
INK	**Inuvik**	**46.56**	**30**	P	**P**	**08 00 57.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=77,slow=4.0,SNR=3.3						
BVAR	**Borovoye Array**	**47.39**	**308**	P	**P**	**08 01 04.8**	**-0.5**
BVAR						08 02 36.6	
BVAR	**Borovoye Array**	**47.39**	**308**	P	**P**	**08 01 04.8**	**-0.5**
BVAR				PcP	**PcP**	**08 02 36.6**	**+0.8**
BVAR	**Borovoye Array**	**47.39**	**308**	P	**P**	**08 01 04.8**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=79,slow=10,SNR=3.7						
BVAR				PcP	**PcP**	**08 02 36.6**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=90,slow=2.9,SNR=3.8						
ABKAR	**Akbulak array

TXAR	**Lajitas Array**	**83.71**	**55**	P	**P**	**08 05 01.7**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=297,slow=3.6,SNR=24						
MFF	**Saint Martin d**	**83.86**	**336**	*eP*	**P**	**08 05 01.1**	**+0.3**
MFF	**Saint Martin d**	**83.86**	**336**	*eP*	**P**	**08 05 01.1**	**+0.3**
MFF	**Saint Martin d**	**83.86**	**336**	*eP*	**P**	**08 05 01.1**	**+0.3**

IDC 10 08:02:03.9±0.9, 30.76S×176.61W, h0km, mb4.1/8, mb1 4.2/8, mb1mx4.0/21, mbtmp4.0/8, MS3.7/1, Ms1 3.7/1, ms1mx2.6/25, Error ellipse: s-maj=26.2km s-min=21.1km az=38.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.88**	**323**	Pn	Pn	08 02 38.1	+0.8
	260nm,0.3s,baz=83,slow=17,SNR=11						
RAO				Sn	Sb	08 03 03.5	+0.4
	358nm,0.3s,baz=60,slow=22,SNR=6.3						
RAO				LR	LR	08 03 04.2	
	comp=Z,999nm,19.8s,baz=296,slow=32						
URZ	**Urewera**	**9.10**	**213**	Pn	Pn	08 04 12.7	-3.8
	1.1nm,0.3s,baz=33,slow=7.9,SNR=9.8						
URZ				Sn	Sn	08 05 50.4	-9.3
	1.8nm,0.3s,baz=81,slow=20,SNR=8.9						
RPZ	**Rata Peaks**	**16.22**	**214**	Pn	Pn	08 05 46.1	-7.0
	1.1nm,0.3s,baz=87,slow=3.3,SNR=6.1						
RPZ				Sn		08 08 33.4	-20
	0.2nm,0.3s,baz=56,slow=11,SNR=2.5						
RPZ				LR	LR	08 10 41.5	
	comp=Z,254nm,20.4s,baz=141,slow=32						
DZM	**Mont Dzumac**	**17.45**	**296**	P	P	08 06 13.2	+3.0
	0.4nm,0.3s,baz=135,slow=18,SNR=3.7						
CTA	**Charters Tower**	**35.04**	**279**	P	P	08 08 59.6	+1.1
	3.9nm,0.6s,baz=106,slow=10.0,SNR=4.2						
STKA	**Stephens Creek**	**35.57**	**257**	P	P	08 09 03.6	+0.6
	1.0nm,0.4s,baz=109,slow=9.7,SNR=5.0						
ASAR	**Alice Springs**	**44.29**	**267**	P	P	08 10 14.5	-1.1
	1.0nm,0.4s,baz=108,slow=7.4,SNR=17						
WRA	**Warramunga Arr**	**45.31**	**272**	P	P	08 10 22.4	-1.4
	1.1nm,0.4s,baz=113,slow=7.8,SNR=40						
FITZ	**Fitzroy Crossi**	**53.56**	**269**	P	P	08 11 26.6	-0.1
	2.1nm,0.9s,baz=107,slow=9.0,SNR=2.6						
QSPA	**South Pole Qui**	**59.36**	**180**	P	P	08 12 08.5	+0.9
	2.4nm,1.0s,baz=84,slow=3.8,SNR=5.1						
TXAR	**Lajitas Array**	**91.58**	**57**	P	P	08 15 12.0	-0.9
	0.6nm,1.1s,baz=187,slow=6.3,SNR=3.8						
ILAR	**Eielson Array**	**98.01**	**12**	P	P	08 15 41.3	0.0
	0.1nm,0.7s,baz=231,slow=5.7,SNR=3.4						
FINES	**FINESS Array B**	**145.88**	**341**	PKPbc	PKPdf	08 21 44.0	+0.1
	1.5nm,0.5s,baz=54,slow=3.0,SNR=16						
AKASG	**Malin Array Be**	**152.30**	**323**	PKPbc	PKPbc	08 22 00.8	-0.4
	0.7nm,0.5s,baz=47,slow=2.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**162.41**	**175**	PKPab	PKPab	08 22 55.1	-0.4
	0.6nm,0.7s,baz=189,slow=4.1,SNR=3.5						

*GUC **10** 08:04:43.3±0.9, 19.87S×69.57W, h111km±8km, ML3.6*
*ISCJB **10** 08:04:43.4±0.7, 19.82S±0.04×69.5W±0.1, h114km±7km, mb3.4/2, Error ellipse: s-maj=19.0km s-min=6.5km az=175.5*
*IDC **10** 08:04:50.5±8.2, 19.39S×69.30W, h150km±55km, mb3.2/2, mb1 3.3/3, mb1mx3.0/18, mbtmp3.1/3, Error ellipse: s-maj=80.4km s-min=55.3km az=26.0*
ISC 10 08:04:44.1±1.0, 19.83S±0.04×69.5W±0.1, h109km±9km, n9, σ0s91/15, 2C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.62**	**292**	⇑*iP*	**Pn**	**08 05 01.8**	**0.0**
PSGC				*i* S	**Sn**	**08 05 15.1**	**0.0**
PSGC				AML	AML	08 05 15.9	
	comp=E,2μm,0.3s						
MNMC	**Minimini**	**0.70**	**354**	⇓*iP*	**Pn**	**08 05 03.0**	**+0.3**
MNMC				*i* S	**Sn**	**08 05 17.4**	**+0.8**
MNMC				AML	AML	08 05 20.3	
	comp=N,2μm,0.2s						
PB01	**Plate Boundary**	**1.21**	**179**	⇓*iP*	**Pn**	**08 05 07.1**	**-0.5**
PB01				*i* S	**Sn**	**08 05 24.5**	**-0.8**
PB01				AML	AML	08 05 25.6	
	comp=E,2μm,0.2s						
ARCH	**Arica**	**1.52**	**331**	⇑*iP*	**Pn**	**08 05 11.1**	**0.0**
ARCH				*i* S	**Sn**	**08 05 31.7**	**0.0**
ARCH				AML	AML	08 05 32.9	
	comp=E,706nm,0.2s						
PB09	**Plate Boundary**	**1.97**	**173**	*eP*	**Pn**	**08 05 17.0**	**+0.1**
PB09				*i* S	**Sn**	**08 05 42.1**	**+0.3**
PB09				AML	AML	08 05 43.8	
	comp=E,778nm,0.4s						
PB04	**Plate Boundary**	**2.42**	**179**	⇓*iP*	**Pn**	**08 05 23.6**	**+1.1**
PB04				AML	AML	08 05 55.8	
	comp=E,230nm,0.2s						
LPAZ	**La Paz**	**3.76**	**21**	P	**Pn**	**08 05 42.1**	**+1.3**
	comp=E,0.7nm,0.3s,baz=196,slow=6.2,SNR=29						
LPAZ				S	**Sn**	**08 06 22.5**	**-2.1**
	comp=E,0.1nm,0.3s,baz=242,slow=18,SNR=2.2						
TORD	**Torodi Ar. Bea**	**77.34**	**71**	P	**P**	**08 16 27.4**	**-0.1**
	comp=E,0.5nm,0.9s,baz=247,slow=5.0,SNR=3.7						
YKA	**Yellowknife Ar**	**89.43**	**341**	P	**P**	**08 17 28.1**	**-0.1**
	comp=E,0.3nm,0.6s,baz=130,slow=4.5,SNR=11						

*ISCJB **10** 08:16:49.7±1.2, 38.43N±0.07×21.9E±0.1, h12km±7km, Error ellipse: s-maj=14.8km s-min=9.6km az=144.1*
*CSEM **10** 08:16:50.8, 38.43N×21.91E, h7km, MD2.6, After ATH*
*ATH **10** 08:16:50.8, 38.43N×21.91E, h7km, MD2.6/5*
*SOF **10** 08:17:46.5, 41.26N×22.72E, h8km, MD2.9*
ISC 10 08:16:50.6±1.8, 38.40N±0.04×21.87E±0.06, h8km±7km, n15, σ0s55/20, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.04**	**41**	*e*PG	**Pg**	**08 16 52.0**	**-0.1**
EFP				*e*SG	**Sg**	**08 16 53.1**	**-0.1**
EFP	**Efpalio**	**0.04**	**41**	*e*Pg	**Pg**	**08 16 52.0**	**-0.1**
EFP				*e*Sg	**Sg**	**08 16 53.1**	**-0.1**
TRIZ	**Trizonia**	**0.16**	**102**	*e*PG	**Pg**	**08 16 53.8**	**-0.1**
TRIZ				*e*SG	**Sg**	**08 16 56.3**	**+0.2**
TRIZ	**Trizonia**	**0.16**	**102**	*e*Pg	**Pg**	**08 16 53.8**	**-0.1**
TRIZ				*e*Sg	**Sg**	**08 16 56.3**	**+0.2**
LAKA	**Lakka**	**0.18**	**153**	*e*PG	**Pg**	**08 16 55.1**	**+0.9**
LAKA	**Lakka**	**0.18**	**153**	*e*Pg	**Pg**	**08 16 55.1**	**+0.9**
KALE	**Kalithea**	**0.21**	**92**	*e*PG	**Pg**	**08 16 54.7**	**-0.1**
KALE				*e*SG	**Sg**	**08 16 57.6**	**-0.1**
KALE	**Kalithea**	**0.21**	**92**	*e*Pg	**Pg**	**08 16 54.7**	**-0.1**
KALE				*e*Sg	**Sg**	**08 16 57.6**	**-0.1**
KLV	**Kalavryta, Ach**	**0.42**	**148**	*e*PG	**Pg**	**08 16 57.6**	**-1.1**
KLV	**Kalavryta, Ach**	**0.42**	**148**	*e*Pg	**Pg**	**08 16 57.6**	**-1.1**
EVR	**Evrytania**	**0.52**	**354**	*e*PB	**Pg**	**08 17 00.3**	**-0.4**
EVR	**Evrytania**	**0.52**	**354**	*e*Pb	**Pg**	**08 17 00.3**	**-0.4**
MMB	**Musomiste**	**3.49**	**23**	*i* Pg	Pg	08 18 02.9	+5.5
KKB	**Krupnik**	**3.59**	**15**	*i* Pg	**Pg**	**08 17 59.8**	**+0.5**
VTS	**Vitosha**	**4.31**	**13**	*i* P	**Pg**	**08 18 13.6**	**+0.5**

WEL 10 08:23:44.2±0.3, 35.29S×178.97E, h288km±5km, ML3.7/7, 1C, Error ellipse: s-maj=8.3km s-min=7.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**2.84**	**191**	PN	Pn	08 24 37.4	0.0
PUZ				PN	S	08 25 19.0	-0.9
MWZ	**Matawai**	**3.25**	**200**	PN	Pn	08 24 42.1	+0.5
MWZ				SN	S	08 25 27.7	+0.2
URZ	**Urewera**	**3.32**	**206**	PN	Pn	08 24 42.7	+0.4
URZ				SN	S	08 25 27.6	-1.1
KNZ	**Kokohu**	**3.87**	**195**	PN	Pn	08 24 48.3	+0.1
RAHZ	**Arahi**	**3.92**	**202**	PN	Pn	08 24 49.2	+0.3
NMHZ	**Naumai**	**4.17**	**204**	PN	Pn	08 24 52.4	+0.7
BKZ	**Black Stump Fm**	**4.35**	**206**	PN	Pn	08 24 54.0	+0.3
MCHZ	**McNeill Hill**	**4.52**	**203**	PN	Pn	08 24 56.0	+0.4
KAHZ	**Kahuranaki**	**4.79**	**200**	PN	Pn	08 24 59.2	+0.4
FWVZ	**Far West T-bar**	**4.81**	**214**	PN	Pn	08 24 59.9	+0.7
TRVZ	**Turoa**	**4.84**	**213**	PN	Pn	08 25 00.2	+0.5
PNHZ	**Pukenui**	**5.11**	**205**	PN	Pn	08 25 02.8	+0.2
WPHZ	**Waipukurau**	**5.17**	**202**	PN	Pn	08 25 03.7	+0.5
DVHZ	**Dannevirke**	**5.47**	**203**	PN	Pn	08 25 07.1	+0.4
BFZ	**Birch Farm**	**5.80**	**201**	PN	Pn	08 25 10.9	+0.3
MRZ	**Mangatainoka R**	**5.99**	**206**	⇑PN	Pn	08 25 12.5	-0.5
TIWZ	**Tintock**	**5.99**	**203**	PN	Pn	08 25 13.4	+0.3
OGWZ	**Otaki Gorge**	**6.28**	**207**	PN	Pn	08 25 15.9	-0.5
MTW	**Mount Morrison**	**6.46**	**204**	PN	Pn	08 25 18.0	-0.7
CAW	**Cannon Point**	**6.57**	**207**	PN	Pn	08 25 19.1	-0.9

IDC 10 08:31:18.1±2.1, 22.79S×179.41W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/18, mbtmp3.9/4, Error ellipse: s-maj=162.6km s-min=32.2km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.65**	**247**	P	P	08 38 18.0	0.0
	0.6nm,0.6s,baz=100,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**42.76**	**259**	P	P	08 39 17.6	0.0
	1.3nm,0.9s,baz=96,slow=7.2,SNR=12						
WRA	**Warramunga Arr**	**43.04**	**265**	P	P	08 39 19.5	-0.4
	1.2nm,0.4s,baz=102,slow=8.3,SNR=38						
TXAR	**Lajitas Array**	**89.38**	**58**	P	P	08 44 17.1	0.0
	0.4nm,0.8s,baz=211,slow=5.1,SNR=5.1						

IDC 10 08:41:50.5±47.0, 18.21S×177.71W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/19, mbtmp3.8/3, Error ellipse: s-maj=874.8km s-min=159.8km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.07**	**242**	P	P	08 49 19.8	+0.2
	0.8nm,0.6s,baz=106,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**45.24**	**260**	P	P	08 50 09.7	-0.4
	0.5nm,0.4s,baz=98,slow=7.5,SNR=35						
ASAR	**Alice Springs**	**45.35**	**254**	P	P	08 50 10.8	-0.2
	0.6nm,0.4s,baz=86,slow=8.4,SNR=20						

*IDC **10** 08:51:07.5±8.1, 32.40S×179.91W, h385km±96km, mb2.7/2, mb1 3.1/3, mb1mx2.9/18, mbtmp2.9/3, Error ellipse: s-maj=113.5km s-min=45.1km az=3.0*
*ISCJB **10** 08:51:10.8±1.5, 32.66S±0.09×180.0W±0.3, h439km, mb3.0/2, Error ellipse: s-maj=31.9km s-min=11.9km az=177.6*
ISC 10 08:51:12.3±2.1, 32.7S±0.1×180.0E±0.3, h439km, n31, σ1s19/36, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**5.51**	**194**	PN	**P**	**08 52 42.4**	**+1.5**
PUZ				SN	**S**	**08 53 52.7**	**-0.9**
CNGZ	**Carnagh Statio**	**5.91**	**194**	*e*PN	**P**	**08 52 46.2**	**+1.1**
MWZ	**Matawai**	**5.93**	**199**	PN	**P**	**08 52 45.6**	**+0.3**
MWZ				SN	**S**	**08 54 00.9**	**-0.7**
URZ	**Urewera**	**5.99**	**202**	PN	**P**	**08 52 44.0**	**-1.8**
URZ				SN	**S**	**08 54 01.2**	**-1.2**
URZ	**Urewera**	**5.99**	**202**	P	**P**	**08 52 44.0**	**-1.8**
	4.6nm,0.3s,baz=295,slow=2.5,SNR=71						
URZ				S	**S**	**08 54 00.4**	**-2.1**
	2.8nm,0.3s,baz=88,slow=20,SNR=18						
KNZ	**Kokohu**	**6.54**	**196**	PN	**P**	**08 52 52.8**	**+1.0**
RAHZ	**Arahi**	**6.60**	**200**	PN	**P**	**08 52 52.9**	**+0.4**
MHGZ	**Mahia Peninsul**	**6.62**	**194**	PN	**P**	**08 52 51.6**	**-1.0**
NMHZ	**Naumai**	**6.85**	**201**	PN	**P**	**08 52 56.1**	**+1.0**
BKZ	**Black Stump Fm**	**7.01**	**203**	PN	**P**	**08 52 57.3**	**+0.5**
BKZ				SN	**S**	**08 54 22.4**	**+0.1**
MCHZ	**McNeill Hill**	**7.20**	**201**	PN	**P**	**08 53 00.6**	**+1.8**
FWVZ	**Far West T-bar**	**7.43**	**208**	PN	**P**	**08 53 01.6**	**+0.1**
BHHZ	**Black Hill Sta**	**7.44**	**204**	PN	**P**	**08 53 01.9**	**+0.4**
TRVZ	**Turoa**	**7.47**	**207**	PN	**P**	**08 53 02.5**	**+0.6**
WNVZ	**Wahianoa**	**7.47**	**207**	PN	**P**	**08 53 02.7**	**+0.8**
KAHZ	**Kahuranaki**	**7.47**	**199**	PN	**P**	**08 53 02.7**	**+0.9**
PXZ	**Pawanui**	**7.70**	**198**	PN	**P**	**08 53 05.1**	**+0.9**
PNHZ	**Pukenui**	**7.78**	**202**	PN	**P**	**08 53 05.6**	**+0.5**
WPHZ	**Waipukurau**	**7.85**	**200**	PN	**P**	**08 53 07.0**	**+1.2**
BFZ	**Birch Farm**	**8.47**	**200**	PN	**P**	**08 53 13.7**	**+1.2**
MRZ	**Mangatainoka R**	**8.66**	**203**	PN	**P**	**08 53 15.0**	**+0.5**
TIWZ	**Tintock**	**8.67**	**201**	PN	**P**	**08 53 16.0**	**+1.3**
OGWZ	**Otaki Gorge**	**8.94**	**204**	PN	**P**	**08 53 17.9**	**+0.3**
KIW	**Kapiti Island**	**9.07**	**205**	PN	**P**	**08 53 19.9**	**+0.8**
CAW	**Cannon Point**	**9.23**	**204**	PN	**P**	**08 53 21.2**	**+0.4**
TUWZ	**Tuamarina**	**9.92**	**207**	PN	**P**	**08 53 29.7**	**+1.3**
KHZ	**Kahutara**	**10.93**	**206**	PN	**P**	**08 53 41.7**	**+2.4**
LTZ	**Lake Taylor**	**11.73**	**209**	PN	**P**	**08 53 50.6**	**+2.4**
ASAR	**Alice Springs**	**41.33**	**271**	P	**P**	**08 58 18.5**	**+0.3**
	0.2nm,0.4s,baz=109,slow=7.3,SNR=4.0						
WRA	**Warramunga Arr**	**42.54**	**276**	P	**P**	**08 58 27.5**	**-0.3**
	0.4nm,0.3s,baz=111,slow=8.1,SNR=18						
FINES	**FINESS Array B**	**146.69**	**337**	PKPbc	**PKPbc**	**09 10 02.2**	**-0.7**
	0.6nm,0.4s,baz=40,slow=2.4,SNR=5.2						

IDC 10 08:56:14.0±3.0, 30.74S×176.71W, h0km, mb3.4/2, mb1 3.6/2, mb1mx3.5/18, mbtmp3.4/2, Error ellipse: s-maj=60.6km s-min=35.3km az=76.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.82**	**325**	Pn	Pn	08 56 46.7	+0.1
	61nm,0.3s,baz=114,slow=20,SNR=3.0						
RAO				Sn	Sb	08 57 12.0	+0.5
	86nm,0.3s,baz=66,slow=20,SNR=4.0						
ASAR	**Alice Springs**	**44.20**	**267**	P	P	09 04 25.1	+0.1
	0.3nm,0.9s,baz=108,slow=7.3,SNR=4.4						
WRA	**Warramunga Arr**	**45.22**	**272**	P	P	09 04 32.8	-0.4
	0.2nm,0.3s,baz=111,slow=7.9,SNR=12						
FINES	**FINESS Array B**	**145.84**	**341**	PKPbc	PKPdf	09 15 53.7	-0.3
	1.2nm,0.8s,baz=56,slow=2.5,SNR=3.8						

*ISCJB **10** 08:58:19.5±0.8, 5.51S±0.03×101.11E±0.03, h8km±4km, mb4.9/109, MS4.9/63, Error ellipse: s-maj=5.4km s-min=3.9km az=34.2*
*MOS **10** 08:58:23.5±1.5, 5.37S×101.26E, h33km, mb5.2/36, MS4.8/13, Error ellipse: s-maj=10.8km s-min=5.9km az=105.2*
*BJI **10** 08:58:24.2, 5.50S×101.10E, h25km, mB5.3/48, mb5.0/55, Ms5.5/62, Ms7 5.3/57*
*AUST **10** 08:58:24.2, 5.32S×101.43E, h0km*
*IDC **10** 08:58:24.3±0.5, 5.30S×101.21E, h30km±2km, mb4.2/33, mb1 4.3/35, mb1mx4.3/36, mbtmp4.2/35, ML4.2/2, MS4.7/28, Ms1 4.7/28, ms1mx4.6/51, Error ellipse: s-maj=14.2km s-min=8.9km az=49.0*
*NEIC **10** 08:58:24.3±0.2, 5.44S×101.14E, mb5.1/33, Error ellipse: s-maj=6.5km s-min=5.4km az=57.0*
NEIC Felt at Bengkulu.
*GCMT **10** 08:58:24.1±0.2, 5.46S×101.02E, h12km, MW5.2, Moment Tensor Solution. s34,c51; s78,c135; Moment tensor: Scale 10^16 Nm; Mrr 3.75±. 15; Mθθ 4.37±. 13; Mff 0.62±. 17; Mrθ 4.07±. 37; Mθf 5.00±. 12; Mfr 1.84±. 43; Best double couple: Mo 7.90000×10^16 NP1: ϕ 337.00000°, δ 48.00000°, λ 152.00000°. NP2: ϕ 87.00000°, δ 70.00000°, λ 46.00000°. Principal axes: T 7.6500, Plg 46.0000°, Azm 312.0000°; N 0.4000, Plg 41.0000°, Azm 106.0000°; P -8.0500, Plg 13.0000°, Azm 208.0000°; Data Used: IU IC II G CN.*
*DJA **10** 08:58:25.5±0.4, 5°S±3°×10^11 E±°, h43km±5km, MS.1/37, mb5.3/37, mB5.6/34, MLv5.5/23, Mw(mB) 5.1/34*
*TEH **10** 08:58:25.0, 5.53S×101.09E, h35km, ML5.1*
ISC 10 08:58:23.9±0.3, 5.55S±0.03×101.14E±0.04, h27km±1km, h27km: pP-P, n449, σ1s63/488, mb5.0/117, MS4.9/64, 12C-11D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGSI	**Enggano, Bengk**	**1.15**	**80**	P	**Pb**	**08 58 45.4**	**+0.2**
MBSI	**MBSI**	**2.11**	**32**	P	**Pn**	**08 58 56.2**	**-1.3**
MNAI	**Manna**	**2.16**	**57**	P	**Pn**	**08 58 59.5**	**+1.3**
MNAI	**Manna**	**2.16**	**57**	P	**Pn**	**08 58 56.3**	**-1.9**
	baz=1.8,SNR=40						
KSI	**Kapahiang**	**2.38**	**38**	P	**Pn**	**08 59 00.8**	**-0.5**
MASI	**Maura Aman, Be**	**2.63**	**25**	P	**Pn**	**08 59 04.9**	**+0.1**
LWLI	**Liwa**	**2.96**	**80**	P	**Pn**	**08 59 08.7**	**-0.6**
KASI	**Kota Agung**	**3.34**	**90**	P	**Pn**	**08 59 13.7**	**-0.8**
BLSI	**Bandar Lampung**	**4.09**	**88**	P	**Pn**	**08 59 25.1**	**+0.3**
PMBI	**Palembang**	**4.46**	**54**	P	**Pn**	**08 59 29.0**	**-0.9**
CGJI	**Cibinong**	**4.65**	**103**	P	**Pn**	**08 59 31.3**	**-1.2**
SBJI	**Serang**	**5.00**	**97**	P	**Pn**	**08 59 36.0**	**-1.2**
	533nm,1.1s,14μm3.5nm						
PPI	**Padang Panjang**	**5.12**	**352**	P	**Pn**	**08 59 37.9**	**-0.9**
	511nm,0.9s,10μm1.7nm						
PPI	**Padang Panjang**	**5.12**	**352**	P	**Pn**	**08 59 35.9**	**-3.0**
	baz=5.0,SNR=7.0						
RGRI	**Rengat**	**5.30**	**13**	P	**Pn**	**08 59 41.4**	**-0.1**
TNG	**Tangerang**	**5.51**	**97**	P	**Pn**	**08 59 43.7**	**-0.6**
	1μm,1.0s,15μm4.3nm						
TNG	**Tangerang**	**5.51**	**97**	P	**Pn**	**08 59 44.5**	**+0.2**
	2μm,1.0s,23μm6.9nm						
SKJI	**Sukabumi**	**5.58**	**105**	P	**Pn**	**08 59 48.1**	**+2.9**
	685nm,1.0s						
DBJI	**Dramaga**	**5.67**	**100**	P	**Pn**	**08 59 47.6**	**+1.1**
	645nm,0.7s,10μm2.8nm						
BKNI	**Bangkinang**	**5.84**	**359**	P	**Pn**	**08 59 49.0**	**+0.2**
	412nm,0.8s,5μm1.9nm						
BKNI	**Bangkinang**	**5.84**	**359**	P	Pn	08 59 54.8	+6.0
	baz=5.7,SNR=4.9						
PPBI	**Pangkal Pinang**	**6.02**	**56**	P	**Pn**	**08 59 51.7**	**+0.4**
	102nm,1.3s,3μm1.3nm						
MNSI	**Mandailing Nat**	**6.49**	**346**	P	**Pn**	**08 59 55.2**	**-2.6**
	307nm,0.8s,3μm1.1nm						
LEM	**Lembang**	**6.56**	**101**	P	**Pn**	**09 00 01.6**	**+2.7**
	857nm,1.2s,9μm3.4nm						
LEM	**Lembang**	**6.56**	**101**	P	Pn	09 00 01.1	+2.2
	baz=6.3,SNR=24						
CISI	**Cisompet, Garu**	**6.93**	**107**	P	**Pn**	**09 00 02.8**	**-1.0**
	689nm,0.7s,8μm2.4nm						
CISI	**Cisompet, Garu**	**6.93**	**107**	P	Pn	09 00 02.3	-1.5
	baz=6.7,SNR=13						
TPI	**Tanjungpandan**	**7.07**	**67**	P	Pn	09 00 13.4	+7.7
GSI	**Gunungsitoli**	**7.68**	**332**	P	**Pn**	**09 00 12.8**	**-1.4**
	285nm,0.9s,3μm1.1nm						
GSI	**Gunungsitoli**	**7.68**	**332**	P	Pn	**09 00 11.7**	**-2.5**
	baz=7.7,SNR=7.3						
MYKOM	**Kota Tinggi**	**7.78**	**20**	P	Pn	09 00 19.0	+3.6
MYKOM	**Kota Tinggi**	**7.78**	**20**	P	**Pn**	**09 00 16.0**	**+0.5**
	94nm,1.1s,1μm1.3nm						
KGM	**Kluang**	**7.83**	**16**	P	Pn	09 00 21.0	+4.8
COCO	**West Island**	**7.85**	**213**	*i* P	**Pn**	**09 00 17.9**	**+1.5**
COCO	**West Island**	**7.85**	**213**	*e*Pn	**Pn**	**09 00 14.9**	**-1.5**
COCO				*e*Sn	Sn	09 01 30.7	-14
COCO	**West Island**	**7.85**	**213**	Pn	**Pn**	**09 00 14.9**	**-1.5**
	1μm,0.5s,SNR=5.5						
COCO	**West Island**	**7.85**	**213**	P	**Pn**	**09 00 18.9**	**+2.5**
	366nm,1.3s,4.1nm						
TGJI	**Tegal**	**8.04**	**100**	P	**Pn**	**09 00 21.8**	**+2.7**
	241nm,1.0s,5μm						
CLJI	**Cilicap**	**8.12**	**106**	P	Pn	09 00 31.5	+11
PSI	**Prapat**	**8.59**	**345**	Pn	Pn	09 00 22.3	-4.4
PSI	**Prapat**	**8.59**	**345**	P	**Pn**	**09 00 24.2**	**-2.5**
	79nm,0.8s,1μm						
PSI	**Prapat**	**8.59**	**345**	Pn	Pn	09 00 22.3	-4.4
	2.6nm,0.3s,baz=148,slow=11,SNR=14						
PSI	**Prapat**	**8.59**	**345**	P	**Pn**	**09 00 24.0**	**-2.7**
	baz=8.4,SNR=10						
BJII	**Banjamegara**	**8.70**	**102**	P	**Pn**	**09 00 29.0**	**+0.8**
	178nm,1.4s,4μm						
FRIM	**Kepong**	**8.74**	**3**	P	Pn	09 00 32.9	+4.2
SMRI	**Semarang**	**9.37**	**100**	P	Pn	09 00 49.1	+12
UGM	**Wanagama**	**9.61**	**105**	*e*Pn	**Pn**	**09 00 39.5**	**-1.2**
UGM	**Wanagama**	**9.61**	**105**	P	Pn	09 00 52.4	+12
UGM	**Wanagama**	**9.61**	**105**	P	**Pn**	**09 00 39.5**	**-1.2**
	baz=9.4,SNR=8.8						
IPM	**Ipoh**	**9.96**	**359**	*e*Pn	**Pn**	**09 00 46.2**	**+0.8**
IPM	**Ipoh**	**9.96**	**359**	P	Pn	09 00 49.9	+4.4
IPM	**Ipoh**	**9.96**	**359**	P	**Pn**	**09 00 44.9**	**-0.6**
	90nm,0.9s,1μm						
WOJI	**Wonogiri, Jawa**	**9.98**	**104**	P	Pn	09 00 57.8	+12
PCJI	**Pacitan**	**10.31**	**105**	P	Pn	09 01 01.2	+11
SJI	**Sawahan**	**10.78**	**102**	P	**Pn**	**09 00 58.7**	**+2.0**
	100nm,1.2s,5μm						
KULM	**Kulim**	**10.78**	**357**	*e*Pn	**Pn**	**09 00 56.0**	**-0.7**
KULM	**Kulim**	**10.78**	**357**	P	Pn	09 01 02.1	+5.4
KULM	**Kulim**	**10.78**	**357**	P	**Pn**	**09 00 56.5**	**-0.2**
	83nm,1.2s,1μm						
PWJI	**Pagerwojo**	**10.87**	**104**	P	**Pn**	**09 00 57.8**	**-0.1**
	157nm,1.0s,3μm						
KSM	**Kuching**	**11.51**	**53**	*e*Pn	**Pn**	**09 01 06.7**	**0.0**
KSM	**Kuching**	**11.51**	**53**	P	**Pn**	**09 01 08.6**	**+1.9**
KSM	**Kuching**	**11.51**	**53**	P	Pn	09 01 14.0	+7.3
KSM	**Kuching**	**11.51**	**53**	P	Pn	09 01 13.6	+6.9
	baz=11,SNR=6.8						
STKI	**Sintang**	**11.73**	**62**	P	Pn	09 01 15.9	+6.2
BSI	**Banda Aceh**	**12.43**	**332**	P	**Pn**	**09 01 18.2**	**-1.0**
	145nm,0.8s,1μm						
SBUM	**Sibu**	**13.63**	**55**	P	**Pn**	**09 01 36.4**	**+0.8**
SBUM	**Sibu**	**13.63**	**55**	P	**Pn**	**09 01 36.6**	**+1.0**
	114nm,1.5s,1μm					

DAV	Davao City (W)	27.42	63	LR	LR	09 16 28.0			
	comp=Z,1µm,18.3s,baz=330,slow=40								
GAMI	Galela, Maluku	27.61	75	P	P	09 04 16.6	+7.2		
TGY	Tagaytay City	27.70	45	LR	LR	09 15 21.1			
	comp=Z,10nm,19.1s,baz=60,slow=37								
KNRA	Kununurra	28.92	113	P	P	09 04 21.0	0.0		
	baz=29,SNR=9.1								
MTN	Manton Dam	30.46	106	P	P	09 04 34.0	-0.7		
	baz=30,SNR=7.3								
KMI	Kunming	30.53	3	P	P	09 04 38.3	+2.8		
KMI				pP	pP	09 04 44.1	+0.7		
KMI				sP	sP	09 04 46.9	+0.2		
KMI				PP	PnPn	09 05 38.3	+3.3		
KMI				S	S	09 09 38.1	+2.4		
KMI				sS	sS	09 09 51.5	+2.7		
KMI				SS	ScP	09 11 20.7	+5.6		
KMI				pmax	pmax				
	comp=Z,14nm,0.9s								
KMI				pmax	pmax				
	comp=Z,270nm,5.1s								
KMI				LR	LR				
	comp=N,5µm,13.3s								
KMI				LR	LR				
	comp=E,3µm,12.2s								
KMI				LR	LR				
	comp=Z,5µm,13.7s								
FAKI	Fak Fak	31.13	86	P	P	09 04 39.0	-1.7		
FAKI	Fak Fak	31.13	86	P	P	09 04 39.2	-1.5		
	baz=31,SNR=3.6								
KDU	Kakadu	31.71	105	P	P	09 04 44.5	-1.3		
	baz=32,SNR=8.2								
HYB	Hyderabad	31.91	316	*i* P	P	09 04 55.0	+7.4		
SHL	Shillong	32.21	344	*e*PKP	P	09 04 50.5	+0.3		
SHL				*e*S	S	09 10 05.0	+3.0		
GYA	Guiyang	32.27	9	P	P	09 04 58.0	+7.4		
GYA				ScP	ScP	09 11 21.0	+0.2		
GYA				pmax	pmax				
	comp=Z,40nm,1.0s								
GYA				pmax	pmax				
	comp=Z,60nm,3.2s								
GYA				LR	LR				
	comp=N,4µm,13.7s								
GYA				LR	LR				
	comp=E,5µm,15.8s								
GYA				LR	LR				
	comp=Z,4µm,14.6s								
TPUB	Ta-pu	34.42	33	*e*P	P	09 05 09.4	0.0		
	comp=Z,12nm,0.6s								
QZH	Quanzhou	34.74	29	*e*P	P	09 05 14.8	+2.7		
QZH				S	S	09 10 43.0	+2.1		
QZH				LR	LR				
	comp=N,5µm,13.5s								
QZH				LR	LR				
	comp=E,3µm,12.0s								
QZH				LR	LR				
	comp=Z,6µm,12.5s								
ODAN	Odare	34.86	338	*e*P	P	09 05 13.9	+0.5		
	comp=Z,49nm,0.7s								
SSLB	Suanglung	34.99	33	P	P	09 05 14.6	+0.4		
	comp=Z,17nm,0.9s								
TAPN	Taplejung	35.19	339	*e*P	P	09 05 16.2	-0.1		
	comp=Z,216nm,0.9s								
RAMN	Ramite	35.24	337	*e*P	P	09 05 16.7	0.0		
	comp=Z,47nm,0.6s								
WRA	Warramunga Arr	35.30	117	P	P	09 05 17.1	0.0		
WRA	Warramunga Arr	35.30	117	P	P	09 05 17.0	0.0		
	comp=Z,1.8nm,0.5s,baz=289,slow=10,SNR=18								
WRAB	Tennant Creek	35.31	117	*e*P	P	09 05 17.5	+0.4		
WRAB				pmax	pmax				
	comp=Z,28nm,0.8s								
WRAB	Tennant Creek	35.31	117	*e*P	P	09 05 17.5	+0.4		
	comp=Z,28nm,0.8s								
WRAB	Tennant Creek	35.31	117	P	P	09 05 18.5	+1.4		
	comp=Z,147nm,0.8s,SNR=5.6								
PALU	Palau	35.64	69	P	P	09 05 25.5	+5.5		
	baz=35,SNR=7.8								
YHNB	Yeheng	35.92	32	*e*P	P	09 05 22.9	+0.6		
	comp=Z,32nm,0.9s								
POO	Poona	36.01	312	*ex*	P	09 05 27.0	+3.9		
PKI	Pulchoki	36.27	336	*e*P	P	09 05 25.8	+0.3		
ASAR	Alice Springs	36.31	123	P	P	09 05 26.4	+0.7		
ASAR				S	S	09 11 04.6	-0.6		
ASAR	Alice Springs	36.31	123	P	P	09 05 26.4	+0.7		
	comp=Z,11nm,0.6s,baz=299,slow=7.8,SNR=180								
ASAR				S	S	09 11 04.6	-0.6		
	comp=Z,0.2nm,0.6s,baz=286,slow=14,SNR=3.6								
ASAR				LR	LR	09 21 13.0			
	comp=Z,1µm,19.4s,baz=292,slow=38								
AS31	Alice Springs	36.31	123	*e*P	P	09 05 26.3	+0.6		
LSA	Lhasa	36.34	345	P	P	09 05 31.5	+5.2		
LSA	Lhasa	36.34	345	*e*P	P	09 05 25.2	-1.1		
LSA				pmax	pmax				
	comp=Z,29nm,0.8s								
LSA	Lhasa	36.34	345	*e*P	P	09 05 25.2	-1.1		
	comp=Z,29nm,0.8s								
CD2	Chengdu	36.34	4	P	P	09 05 28.3	+2.5		
CD2				pP	pP	09 05 35.7	+1.9		
CD2				sP	sP	09 05 39.1	+2.0		
CD2				PP	PP	09 06 52.7	+3.9		
CD2				PcP	PcP	09 07 52.1	+1.9		
CD2				S	S	09 11 08.5	+3.1		
CD2				sS	sS	09 11 20.7	+2.1		
CD2				PcS	PcS	09 11 38.7	+0.7		
CD2				SS	SnSn	09 13 34.8	+0.7		
CD2				ScS	ScS	09 15 40.8	-0.5		
CD2				pmax	pmax				
	comp=Z,20nm,0.7s								
CD2				pmax	pmax				
	comp=Z,230nm,4.5s								
CD2				LR	LR				
	comp=N,6µm,16.6s								
CD2				LR	LR				
	comp=E,7µm,16.6s								
CD2				LR	LR				
	comp=Z,5µm,17.6s								
GUN	Gumba	36.38	337	*e*P	P	09 05 25.9	-0.6		
	comp=Z,86nm,0.6s								
ENH	Enshi	36.51	12	*e*P	P	09 05 25.4	-1.7		
	comp=Z,69nm,1.1s								
KKN	Kakani	36.51	336	*e*P	P	09 05 27.8	+0.3		
	comp=Z,57nm,1.0s								
KOLN	Koldanda	37.21	334	*e*P	P	09 05 32.5	-0.9		
	comp=Z,61nm,0.8s								
DANN	Dangsing	37.64	334	*e*P	P	09 05 36.4	-0.8		
	comp=Z,38nm,0.4s								
PYUN	Piuthan	37.76	333	*e*P	P	09 05 37.3	-0.8		
	comp=Z,107nm,1.0s								
WHN	Wuhan	38.05	19	P	P	09 05 49.5	+9.2		
WHN				S	S	09 11 33.9	+2.6		
WHN				LR	LR				
	comp=N,7µm,11.0s								
WHN				LR	LR				
	comp=E,3µm,11.0s								
WHN				LR	LR				
	comp=Z,9µm,12.2s								
XAN	Xi'an	40.06	10	P	P	09 05 55.0	-2.1		
XAN				PcP	PcP	09 08 04.9	+3.2		
XAN				S	S	09 11 56.6	-5.0		
XAN				ScS	ScS	09 15 58.5	-4.0		
XAN				pmax	pmax				
	comp=Z,8.0nm,1.2s								
XAN				pmax	pmax				
	comp=Z,75nm,8.4s								
XAN				LR	LR				
	comp=N,3µm,13.0s								
XAN				LR	LR				
	comp=E,800nm,12.7s								
XAN				LR	LR				
	comp=Z,2µm,12.7s								
QIS	Mount Isa	40.19	115	P	P	09 06 00.0	+1.6		
	baz=40,SNR=5.4								
NJ2	Nanjing	41.03	23	*e*P	P	09 06 12.3	+7.3		
NJ2				pP	pP	09 06 17.7	+4.6		
NJ2				sP	sP	09 06 20.5	+4.1		
NJ2				S	S	09 12 18.0	+2.1		
NJ2				sS	sS	09 12 30.0	+0.7		
NJ2				pmax	pmax				
	comp=Z,30nm,1.0s								
NJ2				pmax	pmax				
	comp=Z,230nm,7.1s								
NJ2				LR	LR				
	comp=N,5µm,16.2s								
NJ2				LR	LR				
	comp=E,3µm,15.2s								
NJ2				LR	LR				
	comp=Z,3µm,18.3s								
SSE	Sheshan	41.17	27	*e*P	P	09 06 05.1	-1.1		
SSE				S	S	09 12 18.2	+0.1		
SSE				sS	sS	09 12 29.9	-1.5		
SSE				pmax	pmax				
	comp=Z,24nm,0.6s								
SSE				pmax	pmax				
	comp=Z,66nm,5.0s								
SSE				LR	LR				
	comp=N,2µm,13.0s								
SSE				LR	LR				
	comp=E,950nm,13.0s								
SSE				LR	LR				
	comp=Z,2µm,14.1s								
LZH	Lanzhou	41.50	3	*e*P	P	09 06 09.3	+0.3		
LZH				pP	pP	09 06 16.9	-0.2		
LZH				sP	sP	09 06 19.4	-1.0		
LZH				PP	PnPn	09 07 49.0	-1.1		
LZH				*e*S	S	09 12 25.0	+1.9		
LZH				sS	sS	09 12 36.2	-0.3		
LZH				*e*SS	SS	09 15 24.8	-3.6		
LZH				pmax	pmax				
	comp=Z,36nm,1.2s								
LZH				pmax	pmax				
	comp=Z,260nm,4.8s								
LZH				LR	LR				
	comp=N,3µm,11.9s								
LZH				LR	LR				
	comp=E,3µm,10.8s								
LZH				LR	LR				
	comp=Z,3µm,12.6s								
JOW	Kunigami	41.55	38	*e*P	P	09 06 10.0	+0.5		
	comp=Z,14nm,0.9s								
COEN	Coen	42.20	105	P	P	09 06 14.7	-0.3		
	baz=42,SNR=5.0								
MTSU	Mount Surprise	43.95	110	P	P	09 06 30.1	+1.0		
	baz=44,SNR=5.4								
GTA	Gaotai	44.75	359	P	P	09 06 37.1	+1.8		
GTA				pP	pP	09 06 44.6	+1.1		
GTA				sP	sP	09 06 48.0	+1.3		
GTA				PcP	PcP	09 08 18.4	+1.1		
GTA				PP	PP	09 08 23.3	+3.1		
GTA				S	S	09 13 13.5	+2.7		
GTA				sS	sS	09 13 25.8	+1.6		
GTA				SS	ScS	09 16 27.1	-4.3		
GTA				pmax	pmax				
	comp=Z,5.0nm,1.7s								
GTA				pmax	pmax				
	comp=Z,400nm,6.4s								
GTA				LR	LR				
	comp=N,3µm,17.1s								
GTA				LR	LR				
	comp=E,3µm,16.2s								
GTA				LR	LR				
	comp=Z,3µm,16.9s								
PMG	Port Moresby	45.76	98	P	P	09 06 43.4	-0.2		
PMG	Port Moresby	45.76	98	P	P	09 06 43.4	-0.2		
	comp=Z,16nm,0.8s,baz=321,slow=16,SNR=4.0								
STKA	Stephens Creek	45.98	130	*e*P	P	09 06 46.5	+1.4		
	comp=Z,6.3nm,0.6s								
STKA	Stephens Creek	45.98	130	P	P	09 06 47.0	+1.8		
	comp=Z,27nm,0.7s,baz=299,slow=8.0,SNR=26								
STKA				LR	LR	09 27 14.1			
	comp=Z,1µm,18.4s,baz=296,slow=38								
STKA	Stephens Creek	45.98	130	P	P	09 06 46.5	+1.4		
	baz=46,SNR=51								
QLP	Quilpie	46.08	122	P	P	09 06 47.5	+1.5		
	baz=46,SNR=6.5								
CTA	Charters Tower	46.13	113	P	P	09 06 47.8	+1.3		
CTA	Charters Tower	46.13	113	P	P	09 06 47.8	+1.3		
	comp=Z,4.8nm,0.9s,baz=296,slow=13,SNR=2.8								
CTA				LR	LR	09 27 43.7			
	comp=Z,777nm,20.2s,baz=282,slow=38								
BTO	Baotou	46.65	9	*e*P	P	09 06 52.0	+1.8		
CHCP	Chirah Chowk	47.09	328	P	P	09 06 54.4	+0.7		
HHC	Hu-ho-hao-te	47.16	11	*e*P	P	09 06 56.1	+1.9		
HHC				pP	pP	09 07 05.9	+3.5		
HHC				sP	sP	09 07 09.5	+3.9		
HHC				PcP	PcP	09 08 27.4	+1.8		
HHC				PP	PP	09 08 46.6	+1.2		
HHC				ScP	ScP	09 12 16.4	-1.5		
HHC				S	S	09 13 47.5	+2.2		
HHC				sS	sS	09 14 05.5	+6.8		
HHC				ScS	ScS	09 16 45.0	-1.9		
HHC				SS	SS	09 17 08.9	-4.0		
HHC				pmax	pmax				
	comp=Z,48nm,0.8s								
HHC				pmax	pmax				
	comp=Z,720nm,7.2s								
HHC				LR	LR				
	comp=N,8µm,11.4s								
HHC				LR	LR				
	comp=E,8µm,12.0s								
HHC				LR	LR				
	comp=Z,7µm,12.0s								
THW	Thamme Wali	47.26	326	P	P	09 06 59.4	+4.3		
GUMO	Guam	47.39	66	LR	LR	09 26 38.8			
	comp=Z,418nm,19.1s,baz=269,slow=36								
BJT	Baijiatuan	47.41	16	*e*P	P	09 06 56.1	0.0		
	comp=Z,37nm,0.6s								
BJI	Beijing	47.44	16	P	P	09 06 57.6	+1.4		
BJI				S	S	09 13 48.3	-0.7		
BJI				pmax	pmax				
	comp=Z,15nm,1.2s								
BJI				pmax	pmax				
	comp=Z,310nm,5.7s								
BJI				LR	LR				
	comp=N,3µm,16.3s								
BJI				LR	LR				
	comp=E,800nm,15.9s								
BJI				LR	LR				
	comp=Z,2µm,17.0s								
JNU	Nakatsue	47.70	34	*e*P	P	09 06 57.9	-0.6		
	comp=Z,24nm,1.1s								
JNU	Nakatsue	47.70	34	LR	LR	09 28 53.6			
	comp=Z,528nm,18.6s,baz=50,slow=39								
CEP	Cherat	47.94	327	P	P	09 06 54.3	-6.2		
DL2	Dalian	48.13	22	P	P	09 07 02.1	+0.4		
DL2				PP	PP	09 09 00.7	+6.5		
DL2				S	S	09 13 59.2	+0.2		
DL2				pmax	pmax				
	comp=Z,31nm,1.4s								
DL2				pmax	pmax				
	comp=Z,180nm,7.7s								
DL2				LR	LR				
	comp=N,990nm,15.3s								
DL2				LR	LR				
	comp=E,1µm,15.1s								
DL2				LR	LR				
	comp=Z,1µm,14.5s								
CMSA	Cobar Meteorol	49.03	127	P	P	09 07 10.4	+1.6		
	baz=49,SNR=14								
KSAR	Wonju Array Be	49.51	28	P	P	09 07 09.5	-2.8		
KSAR				pP	pP	09 07 19.4	-1.1		
KSRS	Korea Array	49.54	28	P	P	09 07 09.5	-3.0		
	comp=Z,7.8nm,1.1s,baz=230,slow=6.5,SNR=14								
KSRS				pP	pP	09 07 19.4	-1.3		
	comp=Z,25nm,0.8s,baz=220,slow=7.7,SNR=27								
KSRS				LR	LR	09 29 47.4			
	comp=Z,477nm,18.1s,baz=217,slow=38								
KSH	Kashi	50.51	335	P	P	09 07 17.1	-2.9		
KSH				*e*pP	pP	09 07 27.1	-1.2		
KSH				*e*sP	sP	09 07 30.9	-0.6		
KSH				*e*PcP	PcP	09 08 37.0	-0.8		
KSH				*e*PP	PP	09 09 12.3	-3.7		
KSH				*e*ScP	ScP	09 12 28.0	-4.2		
KSH				*e*PcS	PcS	09 12 32.1	-3.1		
KSH				S	S	09 14 23.6	-9.0		
KSH				*e*ScS	ScS	09 17 02.2	-7.3		
KSH				pmax	pmax				
	comp=Z,3.0nm,0.5s								
KSH				pmax	pmax				
	comp=Z,150nm,2.9s								
KSH				LR	LR				
	comp=N,830nm,9.9s								
KSH				LR	LR				
	comp=E,580nm,14.7s								
KSH				LR	LR				
	comp=Z,740nm,11.9s								
WMQ	Urumqi	50.62	347	P	P	09 07 21.8	+1.1		
WMQ				pP	pP	09 07 29.3	+0.3		
WMQ				sP	sP	09 07 32.6	+0.4		
WMQ				PcP	PcP	09 08 39.5	+1.4		
WMQ				PP	PP	09 09 18.6	+1.7		
WMQ				ScP	ScP	09 12 32.4	-0.2		
WMQ				PcS	PcS	09 12 35.3	0.0		
WMQ				S	S	09 14 33.5	-0.4		
WMQ				sS	sS	09 14 46.1	-1.4		
WMQ				SKS	ScS	09 17 07.9	-2.0		
WMQ				pmax	pmax				
	comp=Z,130nm,0.8s								
WMQ				LR	LR				
	comp=N,1µm,11.8s								
WMQ				LR	LR				
	comp=E,1µm,13.2s								
WMQ				LR	LR				
	comp=Z,590nm,16.0s								
SMDO	Samad	50.80	306	P	P	09 07 32.0	+10		
	SNR=8.8								
BSY	Bisya	51.34	305	P	P	09 07 36.2	+10		
	SNR=6.6								
SNY	Shenyang	51.41	21	⇓P	P	09 07 33.6	+7.1		
SNY				S	S	09 14 42.6	-2.0		
SNY				pmax	pmax				
	comp=Z,18nm,0.8s								
SNY				pmax	pmax				
	comp=Z,240nm,8.3s								
SNY				LR	LR				
	comp=N,1µm,16.2s								
SNY				LR	LR				
	comp=E,1µm,17.9s								
SNY				LR	LR				
	comp=Z,2µm,17.2s								
HOQ	Hoqain	51.64	306	P	P	09 07 39.7	+11		
	SNR=8.1								
JHJ	Hachijo jima 2	53.12	41	LR	LR	09 28 37.4			
	comp=Z,516nm,20.9s,baz=149,slow=34								
SONM	Songino Array	53.36	4	P	P	09 07 39.4	-1.7		
SONM				pP	pP	09 07 48.9	-0.5		
SONM	Songino Array	53.36	4	P	P	09 07 39.4	-1.7		
	comp=Z,7.1nm,0.6s,baz=179,slow=9.0,SNR=23								
SONM				pP	pP	09 07 48.9	-0.5		
	comp=Z,53nm,0.8s,baz=186,slow=8.4,SNR=63								
SONM				LR	LR	09 32 57.1			
	comp=Z,1µm,18.7s,baz=74,slow=39								
ULN	Ulaanbaatar	53.44	5	*e*P	P	09 07 42.9	+1.1		
	comp=Z,37nm,0.8s								
ULN	Ulaanbaatar	53.44	5	P	P	09 07 42.7	+0.9		
	SNR=29								
TKM2	Tokmak 2	53.52	337	*e*P	P	09 07 41.3	-1.2		
TKM2				pmax	pmax				
	comp=Z,13nm,0.6s								
TKM2	Tokmak 2	53.52	337	*e*P	P	09 07 41.3	-1.2		
	comp=Z,14nm,0.6s								
AAK	Ala-Archa	53.72	336⇑	*e*P	P	09 07 46.8	+2.9		
AAK				pmax	pmax				
	comp=Z,31nm,3.3s								
AAK				MLR	MLR				
	comp=Z,2µm,18.0s								
AAK	Ala-Archa	53.72	336	P	P	09 07 42.5	-1.4		
AAK	Ala-Archa	53.72	336	P	P	09 07 42.5	-1.4		
	comp=Z,0.6nm,0.3s,baz=122,slow=11,SNR=2.6								
CN2	Changchun	53.81	22	*e*P	P	09 07 50.9	+6.6		
CN2				*e*pP	pP	09 07 58.5	+5.9		
CN2				*e*sP	sP	09 08 01.8	+6.0		
CN2				PcP	PcP	09 08 55.0	+5.1		
CN2				PP	PP	09 09 53.5	+7.9		
CN2				*e*S	S	09 15 24.4	+7.0		
CN2				pmax	pmax				
	comp=Z,70nm,0.8s								
CN2				pmax	pmax				
	comp=Z,200nm,4.0s								
CN2				LR	LR				
	comp=N,2µm,14.0s								
CN2				LR	LR				
	comp=E,2µm,14.0s								
CN2				LR	LR				
	comp=Z,1µm,16.0s								
FRU	Bishkek	53.84	336	*e*P	P	09 07 47.0	+2.4		
FRU				MLR	MLR				
	comp=Z,1µm,16.0s								
EKS2	Erkin-Say	54.04	335	*e*P	P	09 07 45.5	-0.7		
EKS2				pmax	pmax				
	comp=Z,13nm,0.8s								
EKS2	Erkin-Say	54.04	335	*e*P	P	09 07 45.5	-0.7		
	comp=Z,13nm,0.8s								
OPO	Ambohidratompo	54.12	251	pP	pP	09 07 57.0	+1.4		
OPO	Ambohidratompo	54.12	251	pP	pP	09 07 57.0	+1.4		
	comp=Z,2.4nm,0.8s,baz=71,slow=7.8,SNR=3.3								
MAJO	Matsushiro	54.36	37	*e*P	P	09 07 47.2	-1.4		
MAJO				pmax	pmax				
	comp=Z,26nm,0.8s								
MAJO	Matsushiro	54.36	37	*e*P	P	09 07 47.2	-1.4		
	comp=Z,26nm,0.8s								
MAT	Matsushiro	54.36	37	P	P	09 07 45.4	-3.1		
MAT				S	S	09 15 19.4	-5.8		
MJAR	Matsushiro Arr	54.37	37	P	P	09 07 46.0	-2.6		
MJAR	Matsushiro Arr	54.37	37	P	P	09 07 46.0	-2.6		
	comp=Z,4.4nm,0.8s,baz=216,slow=8.4,SNR=12								
MJAR				LR	LR	09 31 51.7			
	comp=Z,320nm,18.6s,baz=205,slow=37								
MK31	Makanchi Array	54.73	344	*i* P	P	09 07 49.5	-1.5		
MK31				pmax	pmax				
	comp=Z,42nm,1.0s								
MK31	Makanchi Array	54.73	344	*e*P	P	09 07 49.7	-1.3		
MKAR	Makanchi Array	54.73	344	P	P	09 07 49.6	-1.4		
MKAR				*PP	pP	09 07 58.0	-1.3		
MKAR	Makanchi Array	54.73	344	P	P	09 07 49.6	-1.4		
MKAR				pP	pP	09 07 58.0	-1.3		
MKAR	Makanchi Array	54.73	344	P	P	09 07 49.6	-1.4		
	comp=Z,3.7nm,0.8s,baz=149,slow=8.3,SNR=23								
MKAR				pP	pP	09 07 58.0	-1.3		
	comp=Z,14nm,0.6s,baz=144,slow=8.6,SNR=34								
MKAR				LR	LR	09 35 09.4			
	comp=Z,531nm,18.8s,baz=282,slow=40								
ZAK	Zakamensk	55.74	2	*e*P	P	09 07 58.2	-0.1		
ZAK				*e*		09 10 08.5			
ZAK				pmax	pmax				
	comp=Z,10.0nm,0.9s								
KKAR	Karatay Array	55.81	333	*e*P	P	09 07 58.5	-0.4		
KKAR				pmax	pmax				
	comp=Z,4.0nm,0.8s								
KKAR	Karatay Array	55.81	333	*e*P	P	09 07 58.5	-0.4		
	comp=Z,4.5nm,0.8s								
VLA	Vladivostok	55.88	27	*i* P	P	09 08 00.7	+1.4		
VLA				pmax	pmax				
	comp=Z,24nm,1.0s								
VLA				MLR	MLR				
	comp=Z,896nm,17.0s								
MDJ	Mudanjiang	56.10	24	P	P	09 08 01.7	+0.8		
MDJ				pP	pP	09 08 08.1	-1.1		
MDJ				sP	sP	09 08 10.8	-1.6		
MDJ				PP	PP	09 10 05.9	-0.3		
MDJ				ScP	ScP	09 12 56.6	+0.3		
MDJ				PcS	PcS	09 12 59.3	+0.3		
MDJ				S	S	09 15 48.3	+0.2		
MDJ				sS	sS	09 16 03.6	+1.7		
MDJ				pmax	pmax				
	comp=Z,10.0nm,1.0s								
MDJ				pmax	pmax				
	comp=Z,220nm,7.3s								
MDJ				LR	LR				
	comp=N,2µm,12.0s								
MDJ				LR	LR				
	comp=E,1µm,13.4s								
MDJ				LR	LR				
	comp=Z,2µm,12.0s								
MDJ	Mudanjiang	56.10	24	*e*P	P	09 07 59.4	-1.5		
	comp=Z,31nm,0.9s								
IMYA	Miami	56.67	321	*e*P	P	09 08 12.1	+6.8		
USRK	Ussuriysk Arra	56.78	26	P	P	09 08 04.5	-1.2		
	comp=Z,7.2nm,0.7s,baz=214,slow=5.5,SNR=20								
USRK				pP	pP	09 08 12.9	-1.2		
	comp=Z,75nm,0.8s,baz=220,slow=3.9,SNR=48								
USRK				LR	LR	09 34 09.1			
	comp=Z,1µm,19.9s,baz=25,slow=38								
HVS	Khovu-Aksy	56.82	354	*i* P	P	09 08 07.0	+1.0		
HVS				pmax	pmax				
	comp=Z,12nm,1.2s								
HVS				MLR	MLR				
	comp=Z,4µm,16.0s								
MOY	Mondy	56.99	360	*e*P	P	09 08 15.0	+7.8		
ISRO	Mashad	57.05	320	*e*P	P	09 08 10.6	+2.7		
IPAY	Payeh	57.44	320	*e*P	P	09 08 09.8	-1.0		
IKRD	Kardeh	57.94	320	*e*P	P	09 08 08.5	-5.9		
ISFR	Sfrayin	58.44	320	*e*P	P	09 08 15.1	-2.8		
ABKT	Ailbek	58.89	321	P	P	09 08 24.7	+3.9		
	comp=Z,124nm,1.0s

comp=Z,18nm,1.9s
KURK MLR MLR

comp=Z,780nm,17.0s
KURK Kurchatov 59.31 344 *e*P **P 09 08 22.2 -1.1**
KURK Kurchatov 59.31 344 P P 09 08 31.6 +8.3
comp=Z,165nm,0.7s,SNR=6.2
IANJ Anjilo 60.24 316 *e*P P 09 08 34.6 +4.2
ATD Arta Tunnel 60.42 287 P **P 09 08 31.2 -0.5**
ATD Arta Tunnel 60.42 287 P P 09 08 31.2 -0.5
comp=Z,3.4nm,0.4s,baz=288,slow=19,SNR=3.0
KLR Kul'dur 60.73 22 *e*P P 09 08 27.8 -5.3
KLR *e*S **S 09 16 45.5 -2.8**
ZAA0 Zalesovo Array 60.85 349 *e*P **P 09 08 32.8 -0.9**
ZALV Zalesovo Beam 60.85 349 P **P 09 08 32.1 -1.7**
ZALV *PP **pP 09 08 41.1 -1.1**
ZALV Zalesovo Beam 60.85 349 P P 09 08 32.1 -1.7
ZALV pP **pP 09 08 41.1 -1.1**
ZALV Zalesovo Beam 60.85 349 P P 09 08 32.1 -1.7
comp=Z,6.7nm,0.7s,baz=189,slow=4.2,SNR=16
ZALV pP **pP 09 08 41.1 -1.1**
comp=Z,41nm,0.7s,baz=198,slow=4.7,SNR=27
ZALV LR LR 09 38 10.0
comp=Z,783nm,18.9s,baz=296,slow=39
ISHM Shahmirzad 60.85 316 *e*P P 09 08 41.8 +7.2
HABR Khabarovsk 61.45 25 *e*P P 09 08 42.7 +4.8
HABR 09 09 18.5
HABR *e* 09 10 52.0
HABR *e*PPP PPP 09 12 16.6
HABR *e*S **S 09 16 57.1 -0.3**
HABR *e**SS sS 09 17 07.8 -3.5
HABR *e* 09 18 26.6
HABR MLR MLR
comp=Z,1μm,21.0s
ASAJ Asahikawa 61.92 33 *e*P **P 09 08 40.9 -0.4**
comp=Z,5.5nm,0.8s
ASAJ Asahikawa 61.92 33 LR LR 09 35 51.0
comp=Z,478nm,20.1s,baz=191,slow=36
NVS Novosibirsk 62.00 348 *e*P **P 09 08 39.5 -2.0**
NVS pmax pmax
comp=N,29nm,1.7s
NVS pmax pmax
comp=Z,43nm,1.7s
NVS pmax pmax
comp=E,18nm,1.5s
IR5 Iran Long-Peri 62.44 314 *e*P **P 09 08 47.9 +2.8**
IRAZ Razeghan 63.00 314 *e*P **P 09 08 49.5 +0.5**
YUK Yuzh-Kuril'sk 63.67 34 *d i*P **P 09 08 50.7 -2.2**
YUK *e*S **S 09 17 21.2 -4.4**
YUK *e*SS SS 09 21 23.2 -11
YUK pmax pmax
comp=E,9μm,1.3s
YUK pmax pmax
comp=Z,15μm,1.3s
YUK pmax pmax
comp=N,10μm,1.3s
YUK MLR MLR
comp=Z,632nm,20.0s
BVAR Borovoye Array 63.89 340 P **P 09 08 51.7 -2.5**
BVAR *PP **pP 09 09 01.0 -1.6**
BVAR Borovoye Array 63.89 340 P **P 09 08 51.7 -2.5**
BVAR pP **pP 09 09 01.0 -1.6**
BVAR Borovoye Array 63.89 340 P **P 09 08 51.7 -2.5**
comp=Z,1.0nm,0.5s,baz=147,slow=8.5,SNR=7.0
BVAR pP **pP 09 09 01.0 -1.6**
comp=Z,5.4nm,0.6s,baz=149,slow=9.5,SNR=20
KMBO Kilima Mbogo 63.90 271 pP pP 09 09 04.9 +1.1
KMBO Kilima Mbogo 63.90 271 pP **pP 09 09 04.9 +1.1**
comp=Z,5.9nm,0.8s,baz=62,slow=7.9,SNR=9.7
KMBO LR LR 09 31 20.5
comp=Z,366nm,20.2s,baz=98,slow=31
YSS Yuzh-Sakhalins 63.91 30 *e*P P 09 08 58.0 +3.6
YSS *e**SP sP 09 09 03.0 -3.1
YSS *e*S **S 09 17 30.0 +1.5**
YSS *e*SS **SS 09 21 38.0 +0.6**
YSS MLR MLR
comp=Z,500nm,19.0s
YSS MLR MLR
comp=N,700nm,18.0s
BRVK Borovoye 63.95 340⇑ *e*P **P 09 08 57.1 +2.5**
BRVK pmax pmax
comp=Z,6.0nm,1.5s
BRVK MLR MLR
comp=Z,534nm,20.0s
BRVK Borovoye 63.95 340 *e*P **P 09 08 55.7 +1.1**
comp=Z,17nm,1.2s
DZM Mont Dzumac 65.06 112 *e*LR LR 09 28 38.5
comp=Z,526nm,21.1s
CLNS Chul'man 65.14 14 *e*P P 09 09 07.0 +4.7
CLNS pmax pmax
comp=Z,16nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,0.9s
CLNS pmax pmax
comp=N,11nm,0.8s
CLNS MLR MLR
comp=E,845nm,13.0s
CLNS MLR MLR
comp=Z,2μm,13.0s
AB31 Akbulak array 65.28 332 *i*P **P 09 09 00.8 -2.6**
AB31 pmax pmax
comp=Z,51nm,1.1s
ABKAR Akbulak array 65.28 332 *e*P **P 09 09 01.5 -1.8**
comp=Z,25nm,0.9s
DRV Dumont d'Urvil 66.62 164 PP PP 09 11 47.0 +8.5
DRV S S 09 17 52.0 -9.1
DRV SS SS 09 22 32.0 +13
DRV L L 09 25 00.0
DRV R 09 29 00.0
AKTO Aktyubinsk 67.00 332 P **P 09 09 13.8 -0.6**
AKTO Aktyubinsk 67.00 332 P **P 09 09 13.8 -0.6**
AKTO Aktyubinsk 67.00 332 P **P 09 09 13.8 -0.6**
comp=Z,9.2nm,1.2s,baz=135,slow=9.4,SNR=5.9
MAW Mawson 67.16 195 P **P 09 09 17.2 +2.1**
MAW Mawson 67.16 195 P **P 09 09 17.2 +2.1**
comp=Z,5.9nm,0.9s,baz=52,slow=15,SNR=5.4
MAW LR LR 09 32 54.4
comp=Z,2μm,19.5s,baz=38,slow=31
MAK Makhachkala 68.41 321 *e*P **P 09 09 21.8 -1.6**
MAK *e* 09 11 53.2
MAK *e*PPP PPP 09 13 31.0
MAK *e*S **S 09 18 21.3 -2.0**
MAK *e* 09 19 17.8
MAK pmax pmax
comp=Z,12nm,0.2s
SVE Sverdlovsk 70.38 338 *e*P **P 09 09 35.5 +0.2**
SVE *e*S **S 09 18 51.9 +5.9**
SVE pmax pmax
comp=Z,43nm,1.4s
SVE MLR MLR
comp=Z,696nm,19.0s
ZEI Tsey 70.64 319 *e*P P 09 09 44.8 +7.3
ZEI pmax pmax
comp=Z,6.0nm,0.9s
YAK Yakutsk 70.88 14 *e*P **P 09 09 37.5 -0.7**
YAK *e**PP **pP 09 09 48.5 +1.7**
YAK *e* 09 09 54.4
YAK *e* 09 12 10.2
YAK *e*PPP PPP 09 13 55.9
YAK *e*S **S 09 18 49.7 -2.0**
YAK *e* 09 19 28.5
YAK *e*SS **SS 09 23 23.3 -1.5**
YAK pmax pmax
comp=Z,89nm,0.9s
YAK pmax pmax
comp=N,23nm,1.3s
YAK pmax pmax
comp=E,19nm,1.3s
YAK pmax pmax
comp=Z,55nm,3.0s
YAK pmax pmax
comp=N,42nm,3.0s
YAK pmax pmax
comp=E,47nm,4.0s
YAK smax smax
comp=N,68nm,4.1s
YAK smax smax
comp=E,98nm,3.8s
YAK MLR MLR
comp=Z,455nm,14.0s
YAK MLR MLR
comp=N,519nm,16.0s
YAK MLR MLR
comp=E,390nm,13.0s
ARU Arti 70.90 337 *d i*P **P 09 09 40.3 +1.8**
ARU 09 12 12.8
ARU S **S 09 18 55.1 +3.0**
ARU SS SS 09 23 17.0 -8.3
ARU pmax pmax
comp=Z,11nm,1.7s
ARU MLR MLR
comp=Z,712nm,19.0s
ASF Jabal al Asfar 71.58 306 P **P 09 09 44.0 +0.7**
ASF Jabal al Asfar 71.58 306 P **P 09 09 44.0 +0.7**
comp=Z,1.2nm,0.3s,baz=346,slow=8.5,SNR=3.4
KBZ Khabaz 71.72 320 P **P 09 09 43.4 -0.3**
KBZ Khabaz 71.72 320 P **P 09 09 43.4 -0.3**
KBZ Khabaz 71.72 320 P **P 09 09 43.4 -0.3**
comp=Z,1.3nm,0.6s,baz=136,slow=6.8,SNR=3.7
KIV Kislovodsk 71.96 320 *i*P **P 09 09 46.3 +1.0**
KIV *i* 09 09 57.8
KIV *i*S **S 09 19 06.0 +0.9**
KIV pmax pmax
comp=Z,15nm,1.9s
KIV MLR MLR
comp=Z,200nm,23.0s
LSZ Lusaka 72.13 256 *e*P **P 09 09 48.3 +1.4**
comp=Z,7.0nm,0.8s
EIL Elat 72.40 303 P **P 09 09 46.8 -1.3**
EIL pP **pP 09 09 57.5 +0.8**
EIL Elat 72.40 303 P **P 09 09 46.8 -1.3**
comp=Z,5.6nm,0.7s,baz=92,slow=5.4,SNR=4.1
EIL pP **pP 09 09 57.5 +0.8**
comp=Z,22nm,0.8s,baz=351,slow=2.0,SNR=12
EIL Elat 72.40 303 P P 09 09 57.7 +10
baz=73,SNR=7.1
MMAI Mount Meron Ar 73.05 307 P **P 09 09 50.6 -1.4**
MMAI Mount Meron Ar 73.05 307 P **P 09 09 50.6 -1.4**
comp=Z,0.6nm,0.3s,baz=105,slow=11,SNR=2.6
SOC Sochi 73.74 318 *e*P P 09 10 00.4 +4.7
SOC *e* 09 12 35.6
SOC *e*S **SKiKP 09 19 23.8 0.0**
SOC *e* 09 20 11.2
BOSA Boshof 74.97 242 P **P 09 10 04.6 +1.1**
BOSA Boshof 74.97 242 P **P 09 10 04.6 +1.1**
comp=Z,3.4nm,0.9s,baz=114,slow=5.0,SNR=4.0
BOSA LR LR 09 38 41.4
comp=Z,909nm,18.2s,baz=107,slow=32
PETK Petropavlovsk- 75.28 31 P **P 09 10 02.2 -2.3**
PETK *PP **pP 09 10 12.2 -0.9**
PETK Petropavlovsk- 75.28 31 P **P 09 10 02.2 -2.3**
PETK pP **pP 09 10 12.2 -0.9**
PETK Petropavlovsk- 75.28 31 P **P 09 10 02.2 -2.3**
comp=Z,3.5nm,0.8s,baz=231,slow=9.1,SNR=4.4
PETK pP **pP 09 10 12.2 -0.9**
comp=Z,8.3nm,0.7s,baz=208,slow=5.0,SNR=9.7
PETK LR LR 09 45 41.7
comp=Z,383nm,18.8s,baz=241,slow=38
PET Petropavlovsk 75.74 32 *e*P P 09 10 14.9 +7.8
PET *e*S **S 09 19 50.5 +3.4**
PET pmax pmax
comp=Z,55nm,0.8s
PET pmax pmax
comp=Z,100nm,11.5s
PET MLR MLR
comp=Z,500nm,20.0s
BR131 Keskin Array S 76.55 313 *e*P **P 09 10 10.9 -1.4**
comp=Z,4.8nm,0.9s
BRTR Keskin Array B 76.55 313 P **P 09 10 10.9 -1.4**
BRTR Keskin Array B 76.55 313 P **P 09 10 10.9 -1.4**
comp=Z,0.9nm,0.8s,baz=125,slow=6.7,SNR=4.9
BRTR LR LR 09 46 33.2
comp=Z,384nm,19.3s,baz=96,slow=38
VORD Divnogorie 77.14 325 *e*P **P 09 10 16.1 +1.0**
VORD *e**SP **sP 09 10 22.9 -3.9**
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD pmax pmax
comp=Z,5.0nm,0.8s
VSR Storozhevoye 77.32 325 *e*P **P 09 10 17.2 +1.1**
VSR *e**SP **sP 09 10 23.8 -4.1**
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=E,3.0nm,0.4s
VNDA Vanda 78.48 169 P **P 09 10 23.1 +1.0**
VNDA Vanda 78.48 169 P **P 09 10 23.1 +1.0**
comp=E,3.2nm,0.8s,baz=301,slow=5.2,SNR=11
VNDA LR LR 09 39 19.4
comp=E,467nm,22.0s,baz=309,slow=31
SEY Seymchan 78.49 21⇑ *e*P **P 09 10 21.6 -0.7**
TIXI Tiksi 79.17 9 *e*P **P 09 10 23.7 -2.2**
TIXI pmax pmax
comp=Z,32nm,0.8s
TIXI Tiksi 79.17 9 *e*P **P 09 10 23.7 -2.2**
comp=Z,32nm,0.8s
MOS Moscow 80.11 329 *e*P **P 09 10 33.5 +2.2**
MOS pmax pmax
comp=Z,51nm,1.0s
OBN Obninsk 80.39 328 *i*P **P 09 10 34.3 +1.5**
OBN *i* 09 10 39.8
OBN *e* 09 13 36.3
OBN *i*S **S 09 20 39.6 +2.5**
OBN *e*SS **SS 09 25 48.5 -0.7**
OBN pmax pmax
comp=Z,7.0nm,1.4s
OBN MLR MLR
comp=N,300nm,18.0s
TIRR Tirgusor 81.69 316 *e*P **P 09 10 41.3 +1.3**
TIRR pmax pmax
comp=Z,8.0nm,0.9s
TIRR Tirgusor 81.69 316 *e*P **P 09 10 41.3 +1.3**
comp=Z,7.9nm,0.9s
AKASG Malin Array Be 82.97 322 P P 09 10 54.2 +7.6
AKASG Malin Array Be 82.97 322 pP P 09 10 54.1 +7.6
AKASG Malin Array Be 82.97 322 pP P 09 10 54.1 +7.6
comp=Z,3.1nm,0.7s,baz=92,slow=4.6,SNR=4.1
MLR Muntele Rosu 83.65 317 P **P 09 10 49.8 -0.6**
MLR Muntele Rosu 83.65 317 P **P 09 10 49.8 -0.6**
comp=Z,0.5nm,0.7s,baz=150,slow=9.5,SNR=5.4
MLR LR LR 09 49 56.8
comp=Z,100nm,21.9s,baz=270,slow=37
QSPA South Pole Qui 84.43 180 P **P 09 10 54.8 +0.8**
QSPA South Pole Qui 84.43 180 P **P 09 10 54.8 +0.8**
comp=Z,2.2nm,0.9s,baz=265,slow=3.3,SNR=4.9
QSPA LR LR 09 43 35.2
comp=Z,573nm,21.9s,baz=325,slow=32
BUR08 Bucovina Ar. S 84.68 319 *e*P **P 09 10 55.7 +0.1**
JOF Joensuu 85.89 334 *e*P **P 09 11 02.0 +0.9**
JOF pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 85.89 334 *ep* **P 09 11 02.0 +0.9**
comp=Z,2.5nm,0.6s
BILL Bilibino 86.08 20 *i*P **P 09 11 02.7 +0.7**
BILL *i* 09 11 08.5
BILL *i*S S 09 21 24.8 -10
BILL pmax pmax
comp=Z,7.0nm,1.5s
BILL Bilibino 86.08 20 *e*P **P 09 11 01.1 -0.8**
comp=Z,9.1nm,0.8s
KOLS Kolonicke sedl 86.88 320 *e*P **P 09 11 07.5 +1.2**
KOLS *e* 09 11 16.0
KOLS pmax pmax
comp=Z,14nm,1.0s
KOLS Kolonicke sedl 86.88 320 *e*P **P 09 11 07.5 +1.2**
KOLS *ep*P **pP 09 11 15.9 +0.9**
CRVS Cervenica-Dubn 87.39 319 *e*P P 09 11 13.2 +4.4
CRVS Cervenica-Dubn 87.39 319 *e*P P 09 11 13.1 +4.3
SUW Suwalki 87.42 325 *e*P **P 09 11 07.1 -1.7**
SUW pmax pmax
comp=Z,22nm,0.8s
SUW Suwalki 87.42 325 *e*P **P 09 11 07.1 -1.7**
comp=Z,22nm,0.8s
FINES FINESS Array B 87.76 332 P **P 09 11 08.4 -1.9**
FINES FINESS Array B 87.76 332 P **P 09 11 08.4 -1.9**
comp=Z,2.9nm,0.9s,baz=64,slow=3.2,SNR=5.7
FINES LR LR 09 57 24.5
comp=Z,320nm,19.9s,baz=90,slow=40
KAF Kangasniemi 87.84 333 *e*P **P 09 11 09.6 -1.0**
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 87.84 333 *ep* **P 09 11 09.6 -1.0**
comp=Z,5.1nm,0.6s
VYHS Vyhne 89.03 319 *e*P **P 09 11 17.2 +0.6**
VYHS *e* 09 11 25.4
VYHS Vyhne 89.03 319 *e*P **P 09 11 17.2 +0.6**
VYHS *ep*P **pP 09 11 25.4 +0.1**
TIP Timpagrande 89.12 309 *e*P **P 09 11 17.1 -0.2**
comp=Z,5.6nm,1.0s
SNAA Sanae 89.14 198 *e*P **P 09 11 17.0 +0.3**
comp=Z,25nm,1.5s
SNAA Sanae 89.14 198 P **P 09 11 17.1 +0.3**
comp=Z,0.7nm,0.9s,baz=72,slow=3.2,SNR=4.3
CEL Celeste 89.67 308 P **P 09 11 21.6 +1.7**
comp=Z,20nm,1.1s
OKC Ostrava-Krasne 89.69 320 *e*P **pP 09 11 29.0 +0.6**
OKC *e* 09 11 38.2
OKC Ostrava-Krasne 89.69 320 *ep*P **pP 09 11 29.0 +0.6**
OKC *ex* x 09 11 38.2
CUC Castrocucco 89.95 310 P P **09 11 21.7 +0.5**
comp=Z,4.6nm,1.0s
MORC Moravsky Berou 90.07 320 *e*P **P 09 11 22.3 +0.8**
MORC pmax pmax
comp=Z,3.0nm,0.8s
MORC Moravsky Berou 90.07 320 *e*P **P 09 11 22.3 +0.8**
comp=Z,2.5nm,0.8s
ARCES ARCESS Array B 90.18 340 P **P 09 11 19.7 -1.8**
ARCES ARCESS Array B 90.18 340 P **P 09 11 19.7 -1.8**
comp=Z,2.0nm,0.7s,baz=92,slow=4.5,SNR=5.7
ARCES LR LR 09 56 47.2
comp=Z,504nm,18.2s,baz=95,slow=39
KRLC Kraliky 90.60 320 *e*P P 09 11 28.1 +4.2
KRLC *e* 09 11 33.8
KRLC Kraliky 90.60 320 *e*P P 09 11 28.1 +4.2
KRLC *ep*P pP 09 11 33.8 +1.1
DPC Dobruska-Polom 90.93 320 *e*P **P 09 11 26.6 +1.1**
DPC *e* 09 11 35.2
DPC Dobruska-Polom 90.93 320 *e*P **P 09 11 26.6 +1.1**
DPC *ep*P **pP 09 11 35.2 +1.0**
BOJS Bojanci 91.04 315 *e*P pP 09 11 35.7 +1.0
UPC Upice 91.14 320 *e*P **pP 09 11 35.5 +0.3**
UPC *e* 09 11 44.5
UPC Upice 91.14 320 *ep*P **pP 09 11 35.5 +0.3**
UPC *ex* x 09 11 44.5
PERS Pernice 91.26 317 *i*P pP 09 11 37.0 +1.2
VISS Visnje 91.36 316 *i*P pP 09 11 37.5 +1.3
PRU Pruhonice 92.02 320 AMS AMS 09 58 00.0
comp=Z,400nm,22.9s
GERES GERESS Array B 92.45 319 P **P 09 11 32.2 -0.4**
GERES GERESS Array B 92.45 319 P **P 09 11 32.2 -0.4**
comp=Z,0.4nm,0.7s,baz=72,slow=6.3,SNR=4.2
BRG Berggiesshubel 92.49 321 *e*P **pP 09 11 42.0 +0.7**
comp=Z,15nm,1.7s
BRG *e* 09 11 50.4
comp=Z,11nm,1.4s
BRG
comp=N,335nm,15.7s
BRG
comp=E,343nm,18.6s
BRG
comp=Z,464nm,26.0s
CLL Collm 93.12 321 *e*SKSac **SKSac 09 22 06.0 -1.9**
CLL *e*S **S 09 22 40.0 -0.6**
CLL *e*PS **PS 09 23 58.0 +1.6**
CLL LmV 09 59 00.0
comp=Z,300nm,21.8s
SPITS Spitsbergen Ar 94.32 348 LR LR 10 01 28.6
comp=Z,799nm,18.5s,baz=100,slow=40
KEST Kesra 94.66 305 pP pP 09 11 52.9 +1.1
KEST Kesra 94.66 305 pP pP 09 11 52.9 +1.1
comp=Z,1.3nm,0.8s,baz=213,slow=10,SNR=2.8
NOA NORSAR Array B 94.78 331 LR LR 10 00 50.6
comp=Z,365nm,18.0s,baz=70,slow=40
ILAR Eielson Array 104.27 24 PP PP 09 16 47.8 +4.1
comp=Z,0.6nm,0.9s,baz=293,slow=6.4,SNR=4.2
TBI Tubuai 105.43 116 *e*LR LR 09 47 21.7
comp=Z,202nm,32.0s
PPT2 Papeete2 106.54 110 *e*LR LR 09 47 53.4
comp=Z,312nm,25.2s
YKA Yellowknife Ar 117.40 18 PKP **PKPdf 09 17 04.8 -2.0**
YKA pPKP **pPKPdf 09 17 14.4 -1.4**
YKA Yellowknife Ar 117.40 18 PKP **PKPdf 09 17 04.9 -2.0**
comp=Z,0.2nm,0.7s,baz=354,slow=2.4,SNR=6.2
YKA pPKP **pPKPdf 09 17 14.4 -1.4**
comp=Z,0.6nm,0.7s,baz=346,slow=2.4,SNR=9.7
BSMT Bassoo Peak 127.87 30 *e*PKPdf **PKPdf 09 17 26.3 -1.3**
SLMT Seeley Lake 128.93 30 *e*PKPdf **PKPdf 09 17 29.9 +0.2**
CHMT Chamberlain Mo 129.28 30 PKPdf **PKPdf 09 17 29.5 -0.9**
DLMT Dillon 130.67 31 *e*PKPdf **PKPdf 09 17 32.7 -0.3**
MCMT McKenzie Canyo 130.91 32 *e*PKPdf **PKPdf 09 17 33.5 -0.1**
BOZ Bozeman (W) 130.97 30 *e*PKIKP **PKPdf 09 17 31.6 -1.9**
BOZ Bozeman (W) 130.97 30 *e*PKPdf **PKPdf 09 17 31.6 -1.9**
NVAR Mina Array Bea 131.54 42 PKP **PKPdf 09 17 35.8 +0.9**
NVAR pPKP **pPKPdf 09 17 44.9 +1.0**
NVAR Mina Array Bea 131.54 42 PKP **PKPdf 09 17 35.8 +0.9**
comp=Z,0.4nm,0.6s,baz=300,slow=1.8,SNR=3.6
NVAR pPKP **pPKPdf 09 17 44.9 +1.0**
comp=Z,1.4nm,0.7s,baz=294,slow=1.5,SNR=8.7
YMR Madison River 131.99 31 *e*PKPdf **PKPdf 09 17 35.0 -0.6**
SNOW Snow King Moun 132.94 32 *e*PKPdf **PKPdf 09 17 36.0 -1.4**
PDAR Pinedale Array 134.05 32 PKP **PKPdf 09 17 39.3 -0.3**
PDAR pPKP **pPKPdf 09 17 49.1 +0.6**
PDAR Pinedale Array 134.05 32 PKP **PKPdf 09 17 39.3 -0.3**
comp=Z,0.3nm,0.6s,baz=151,slow=2.1,SNR=3.1
PDAR pPKP **pPKPdf 09 17 49.1 +0.6**
comp=Z,0.8nm,0.6s,baz=166,slow=1.5,SNR=5.3
MSU Marysvale 135.41 38 *e*PKIKP **PKPdf 09 17 44.3 +2.1**
MSU Marysvale 135.41 38 *e*PKPdf **PKPdf 09 17 44.3 +2.1**
PV01 Paradox Valley 137.80 36 *e*PKPdf **PKPdf 09 17 44.3 -2.4**
ECSD EROS Data Cent 138.88 20 *e*PKPdf **PKPdf 09 17 47.2 -1.0**
ANMO Albuquerque 141.21 37 PKPdf **PKPdf 09 17 49.1 -3.9**
BDFB Brasilia 142.90 235 PKP **PKPdf 09 17 57.3 +1.0**
BDFB Brasilia 142.90 235 PKP **PKPdf 09 17 57.3 +1.0**
comp=Z,2.3nm,1.0s,baz=62,slow=14,SNR=2.5
MNTX Cornudas Mount 144.04 40 *e*PKPdf PKPbc 09 17 56.4 +0.6
GDL2 Guadalupe Moun 144.35 39 *e*PKPdf PKPbc 09 17 57.5 +0.7
Y29A Porterfield Fa 144.76 34 ⇑P **PKPab 09 17 57.7 -0.3**
baz=145
425A Indio Mountain 144.89 41 ⇑P PKPbc 09 17 58.7 +0.1
baz=145
SSPA Standing Stone 145.06 359 *e*PKPdf **PKPbc 09 17 58.3 -0.3**
X31A McDonald Ranch 145.09 31 ⇑P **PKPbc 09 17 58.9 0.0**
baz=145
326A Caldwell Ranch 145.19 40 P **PKPbc 09 17 59.1 -0.4**
baz=145,SNR=16
Z29A Hungry Hill Ra 145.19 35 ⇑P **PKPdf 09 17 59.9 0.0**
baz=145,SNR=12
ACSO Alum Creek Sta 145.27 6 *e*PKPdf **PKPbc 09 17 58.2 -1.2**
SLM Saint Louis 145.49 16 *e*PKIKP **PKPab 09 18 00.3 0.0**
SLM Saint Louis 145.49 16 *e*PKPbc **PKPab 09 18 00.3 0.0**
Z30A Sanderson Ranc 145.49 34 P **PKPdf 09 17 59.9 -0.4**
baz=145,SNR=12
426A McDonald Obser 145.59 40 P **PKPdf 09 18 00.9 +0.1**
baz=145,SNR=16
WMOK Wichita Mounta 145.61 30 *e*PKIKP **PKPdf 09 18 00.2 -0.3**
WMOK Wichita Mounta 145.61 30 *e*PKPdf **PKPdf 09 18 00.2 -0.3**
BLO Bloomington 145.82 11 *e*PKP2 **PKPab 09 18 01.4 -0.1**
BLO Bloomington 145.82 11 *e*PKPdf **PKPab 09 18 01.4 -0.1**
Y32A R-V Farms, Ver 145.85 31 ⇓P **PKPdf 09 18 00.6 -0.2**
baz=146
427A Hayter Ranch, 145.87 40 ⇓P **PKPab 09 18 02.1 0.0**
baz=146,SNR=9.9
OLIL Olney 145.92 13 *e*PKPdf **PKPdf 09 18 00.4 -0.4**
526A Mary Lane Ranc 145.95 41 P **PKPbc 09 18 02.2 +0.2**
baz=146,SNR=12
Z31A Sharp Cattle R 146.01 33 P **PKPdf 09 18 01.5 +0.3**
baz=146,SNR=13
527A Woodward Ranch 146.20 41 P **PKPbc 09 18 02.6 -0.2**
baz=146,SNR=20
626A Big Bend Ranch 146.25 42 P **PKPbc 09 18 03.0 +0.2**
baz=146,SNR=15
329A Wagon Wheel Ra 146.31 37 ⇑P **PKPbc 09 18 02.9 -0.1**
baz=146,SNR=7.8
131A Roby 146.36 34 ⇓P **PKPbc 09 18 03.2 +0.1**
baz=146,SNR=8.5
Z32A Haskell 146.38 32 ⇑P **PKPbc 09 18 02.7 -0.3**
baz=146
428A Kincaid Ranch, 146.40 39 P **PKPbc 09 18 03.7 +0.4**
baz=146,SNR=46
230A Sterling City 146.53 36 P **PKPbc 09 18 03.3 -0.2**
baz=146,SNR=14
TXAR Lajitas Array 146.70 42 PKPbc **PKPbc 09 18 04.3 +0.1**
TXAR pPKPbc pPKPbc 09 18 12.9 -0.2
TXAR Lajitas Array 146.70 42 PKPbc **PKPbc 09 18 04.3 +0.1**
comp=Z,5.7nm,0.8s,baz=295,slow=1.0,SNR=55
TXAR pPKPbc pPKPbc 09 18 12.9 -0.2
comp=Z,17nm,0.7s,baz=318,slow=1.2,SNR=28
528A Cox Ranch, San 146.72 40 ⇓P **PKPbc 09 18 04.1 -0.1**
baz=147
627A Terlingua Ranc 146.80 41 P **PKPbc 09 18 04.5 0.0**
baz=147,SNR=24
ABTX Abilene, Hawle 146.81 33 ⇑P **PKPbc 09 18 04.0 -0.3**

baz=147,SNR=7.7
330A Mertzon 146.84 36 ⇓P **PKPbc 09 18 03.9 -0.6**
baz=147,SNR=8.9
231A Bronte 146.96 35 ⇑P **PKPbc 09 18 04.0 -0.7**
baz=147,SNR=7.5
429A Davenport Ranc 146.97 38 P **PKPbc 09 18 04.7 -0.1**
baz=147,SNR=11
529A Stev Forest Ra 147.11 39 P **PKPbc 09 18 04.8 -0.5**
baz=147,SNR=14
628A Black Gap, Mar 147.11 41 P **PKPbc 09 18 05.1 -0.2**
baz=147,SNR=13
430A Baggett Ranch, 147.25 37 ⇓P **PKPbc 09 18 05.2 -0.5**
baz=147
331A San Angelo 147.35 36 ⇓P **PKPbc 09 18 05.4 -0.5**
baz=147,SNR=12
530A J-C Ranch, Com 147.64 38 ⇑P **PKPbc 09 18 06.7 0.0**
baz=148,SNR=14
GLAT Glass 147.96 16 PKPdf **PKPdf 09 18 02.5 -1.7**
GNAR Gosnell 148.04 17 PKPbc **PKPbc 09 18 08.8 +1.3**
MIAR Mount Ida 148.10 23 PKP2 **PKPbc 09 18 08.7 +0.9**
MIAR Mount Ida 148.10 23 PKPbc **PKPbc 09 18 08.7 +0.9**
JCT Junction City 148.32 36 *e*PKIKP **PKPdf 09 18 04.6 -0.6**
JCT *e* 09 18 08.2
JCT Junction City 148.32 36 *e*PKPdf **PKPdf 09 18 04.6 -0.6**
JCT *e*PKPbc **PKPbc 09 18 08.2 -0.3**
WVT Waverly 148.47 14 *e*PKP2 **PKPbc 09 18 08.3 -0.4**
WVT Waverly 148.47 14 *e*PKPbc **PKPbc 09 18 08.3 -0.4**
TZTN Tazewell 148.86 7 *e*PKPdf **PKPdf 09 18 03.2 -2.6**
OXF Oxford 149.57 17 *e*PKIKP **PKPdf 09 18 03.9 -3.0**
OXF Oxford 149.57 17 *e*PKPdf **PKPdf 09 18 03.9 -3.0**
TKL Tuckaleechee C 149.70 8 *e*PKPbc **PKPbc 09 18 11.3 -0.6**
SWET Sewanee 149.77 12 *e*PKPbc **PKPbc 09 18 11.7 -0.4**
CPCT Cooper Cave 149.79 9 *e*PKPbc **PKPbc 09 18 11.4 -0.7**
NATX Nacogdoches 150.02 28 *e*PKPbc **PKPbc 09 18 13.0 +0.3**
HKT Hockley 150.93 31 *e*PKIKP **PKPbc 09 18 15.6 +0.8**
HKT Hockley 150.93 31 *e*PKPbc **PKPbc 09 18 15.6 +0.8**
LRAL Lakeview Retre 151.62 14 *e*PKPbc **PKPbc 09 18 16.2 -0.2**
LRAL *e*PKPab **PKPab 09 18 24.5 -0.4**
BRAL Brewton 153.53 16 *e*PKPab **PKPab 09 18 33.5 +0.6**
OTAV Otavalo 174.71 184 *e*PKPdf **PKPdf 09 18 29.3 -3.7**

*ISK **10** 09:04:36.9, 37°.10N×37°.34E, h5km, MD2.5*
*DDA **10** 09:04:38.4, 37°.19N×37°.12E, h7km, MD2.8*
*CSEM **10** 09:04:38.3±0.5, 37°.08N×37°.30E, h5km, MD2.8, Error ellipse: s-maj=13.5km s-min=8.4km az=96.0*
*ISCJB **10** 09:04:38.9±0.7, 37°.15N±0°.05×37°.14E±0°.06, h5km±7km, Error ellipse: s-maj=9.2km s-min=7.9km az=16.0*
ISC 10 09:04:39.1±1.0, 37.19N±0°.05×37°.23E±0.05, h8km±5km, n16, σ1§28/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	**Gaziantep**	**0.02**	**227**	*e*PG	**Pg**	**09 04 39.6**	**-1.0**
GAZ				*e*SG	**Sg**	**09 04 42.2**	**+0.6**
GAZ	**Gaziantep**	**0.02**	**227**	*e*Pg	**Pg**	**09 04 39.6**	**-1.0**
GAZ				*e*Sg	**Sg**	**09 04 42.2**	**+0.6**
GZT	**Gaziantep**	**0.32**	**58**	*i* P	**Pb**	**09 04 46.8**	**-0.4**
AYKD	**Aykdinkavak**	**0.41**	**304**	*i* P	**Pg**	**09 04 44.8**	**-2.2**
AYKD				*i* S	**Sg**	**09 04 50.9**	**-1.6**
KMRS	**Kahramanmaras**	**0.41**	**321**	*e*PG	**Pb**	**09 04 48.8**	**+0.1**
KMRS				*e*SG	**Sb**	**09 04 57.4**	**+2.2**
KMRS	**Kahramanmaras**	**0.41**	**321**	*e*Pg	**Pb**	**09 04 48.8**	**+0.1**
KMRS				*e*Sg	**Sb**	**09 04 57.4**	**+2.2**
KUZU	**Kuzuini**	**0.43**	**197**	*i* P	**Pg**	**09 04 46.2**	**-1.2**
KUZU	**Kuzuini**	**0.43**	**197**	*i* P	**Pg**	**09 04 46.2**	**-1.2**
COBT	**Iskenderun**	**1.03**	**230**	*i* P	**Pg**	**09 04 57.4**	**-1.4**
COBT	**Iskenderun**	**1.03**	**230**	*i* P	**Pg**	**09 04 57.4**	**-1.4**
KOZT	**Kozan**	**1.16**	**285**	*e*PN	**Pn**	**09 05 02.3**	**+0.6**
KOZT	**Kozan**	**1.16**	**285**	*e*Pn	**Pn**	**09 05 02.3**	**+0.6**
DARE	**Darende-Malaty**	**1.40**	**8**	*e*PN	**Pb**	**09 05 05.9**	**+0.3**
DARE	**Darende-Malaty**	**1.40**	**8**	*e*Pn	**Pb**	**09 05 05.9**	**+0.3**
MYA	**Malataya**	**1.48**	**39**	*e*PN	**Pn**	**09 05 06.3**	**+0.1**
MYA	**Malataya**	**1.48**	**39**	*e*Pn	**Pn**	**09 05 06.3**	**+0.1**

MEX 10 09:06:20.3±0.5, 15.54N×96.72W, h6km±4km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PANG	**Puerto Angel**	**0.26**	**62**	*i* P	Pg	09 06 25.4	-0.1
PANG				*i* S	Sg	09 06 28.7	-0.2
HUIG	**Huatulco**	**0.63**	**69**	*e*P	Pg	09 06 31.3	-1.1
HUIG				*e*S	Sg	09 06 40.7	+0.1
VHO	**Vista Hermosa**	**1.52**	**359**	*e*P	Pn	09 06 44.9	-3.6
VHO				*e*S	Sn	09 07 04.6	-4.2
PNIG	**Pinotepa**	**1.60**	**302**	*i* P	Pn	09 06 45.4	-3.9
PNIG				*e*S	Sn	09 07 04.9	-5.4
TPIG	**Tehuac#an**	**2.93**	**348**	*e*P	Pn	09 07 05.6	-2.1
TPIG				*i* S	Sn	09 07 38.6	-4.8

*IDC **10** 09:19:45.1±3.3, 31°.94N×141°.49E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.3/25, mbtmp3.4/3, ML2.7/1, Error ellipse: s-maj=109.9km s-min=21.1km az=60.0*
*JMA **10** 09:19:46.5±0.4, 32°.54N×142°.50E, h96km, M3.0*
ISC 10 09:19:47.8±4.6, 32°.6N±0°.2×142°.6E±0°.2, h96km±56km, n12, σ1§07/14, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.44**	**283**	Pn	Pn	09 20 17.6	-8.4
	9.7nm,0.3s,baz=53,slow=18,SNR=5.2						
JHJ				Sn	Sn	09 20 43.8	-12
	19nm,0.3s,baz=355,slow=11,SNR=4.2						
BSO1	**Boso 1**	**2.47**	**327**	P	**Pn**	**09 20 25.5**	**-0.4**
BSO1				*e*S	**Sn**	**09 20 56.3**	**+0.8**
BSO3	**Boso 3**	**2.82**	**322**	P	**Pn**	**09 20 30.2**	**-0.6**
BSO3				*e*S	**Sn**	**09 21 03.6**	**-0.3**
BSO4	**Boso 4**	**3.06**	**322**	*e*S	**Sn**	**09 21 10.9**	**+1.1**
JHO	**Hitachi**	**4.35**	**338**	P	**Pn**	**09 20 51.8**	**+0.1**
JHO				*e*S	**Sn**	**09 21 41.8**	**+0.5**
JYN	**Shimob**	**4.45**	**312**	*e*S	**Sn**	**09 21 45.2**	**+1.3**
JAG	**Ashikaga**	**4.63**	**327**	P	**Pn**	**09 20 55.0**	**-0.5**
JAG				*e*S	**Sn**	**09 21 45.8**	**-2.3**
JFK	**Kawauchi**	**4.98**	**344**	*e*S	**Sn**	**09 21 55.8**	**-0.7**
JFT	**Otama**	**5.26**	**340**	P	**Pn**	**09 21 05.0**	**+1.0**
JFT				*e*S	**Sn**	**09 22 03.6**	**+0.2**
MJAR	**Matsushiro Arr**	**5.36**	**319**	Pn	**Pn**	**09 21 05.4**	**0.0**
	0.3nm,0.3s,baz=151,slow=10,SNR=5.0						
WRA	**Warramunga Arr**	**52.83**	**190**	P	P	09 28 56.3	+2.8
	0.3nm,0.5s,baz=6,slow=7.7,SNR=7.0						
STKA	**Stephens Creek**	**64.12**	**181**	P	P	09 30 17.1	+5.3
	1.2nm,0.8s,baz=4.3,slow=5.3,SNR=3.2						

IDC 10 09:25:56.6±0.8, 72.48S×123.62W, h0km, mb3.9/4, mb1 4.0/6, mb1mx3.8/13, mbtmp3.8/6, ML3.4/2, Error ellipse: s-maj=34.5km s-min=25.7km az=2.0, Southern Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**17.63**	**180**	P	P	09 30 05.4	+0.8
	0.1nm,0.3s,baz=99,slow=7.8,SNR=14						
VNDA	**Vanda**	**18.60**	**221**	P	Pn	09 30 15.8	+0.9
	0.0nm,0.3s,baz=119,slow=10,SNR=2.6						
SNAA	**Sanae**	**31.23**	**148**	P	P	09 32 16.0	-1.2
	0.3nm,0.7s,baz=211,slow=12,SNR=5.9						
STKA	**Stephens Creek**	**61.36**	**255**	P	P	09 36 13.7	-0.1
	1.6nm,0.9s,baz=159,slow=6.4,SNR=4.4						
ASAR	**Alice Springs**	**71.31**	**251**	P	P	09 37 17.9	+0.2
	1.1nm,0.8s,baz=160,slow=5.9,SNR=11						
WRA	**Warramunga Arr**	**74.71**	**253**	P	P	09 37 37.2	-0.6
	1.9nm,0.9s,baz=158,slow=5.1,SNR=7.9						
BRTR	**Keskin Array B**	**145.29**	**148**	PKPbc	PKPbc	09 45 34.5	-0.6
	1.0nm,0.8s,baz=183,slow=5.8,SNR=6.7						
SONM	**Songino Array**	**146.66**	**250**	PKPbc	PKPdf	09 45 37.5	+0.3
	0.8nm,0.7s,baz=163,slow=3.4,SNR=4.1						
DAVOX	**Davos/Dischmat**	**146.68**	**115**	PKPbc	PKPbc	09 45 39.1	0.0
	0.7nm,0.4s,baz=22,slow=8.5,SNR=3.6						
RES	**Resolute Bay**	**148.02**	**14**	PKPbc	PKPbc	09 45 41.6	0.0
	1.5nm,0.8s,baz=193,slow=6.8,SNR=9.4						
AAK	**Ala-Archa**	**148.82**	**206**	PKPbc	PKPbc	09 45 44.6	-0.4
	1.1nm,0.5s,baz=239,slow=5.9,SNR=6.0						
GERES	**GERESS Array B**	**149.60**	**118**	PKPbc	PKPbc	09 45 46.0	-0.6
	0.4nm,0.4s,baz=160,slow=3.1,SNR=4.3						
EKA	**Eskdalemuir Ar**	**150.44**	**93**	PKPbc	PKPbc	09 45 47.8	-0.5
	0.4nm,0.6s,baz=183,slow=1.2,SNR=4.2						
KBZ	**Khabaz**	**150.45**	**160**	PKPbc	PKPbc	09 45 48.4	-0.2
	0.7nm,0.6s,baz=207,slow=4.5,SNR=3.9						
MKAR	**Makanchi Array**	**151.60**	**219**	PKPbc	PKPbc	09 45 50.7	-0.6
	0.5nm,0.7s,baz=149,slow=3.4,SNR=5.1						

IDC 10 10:07:08.1±2.1, 2.39N×84.02W, h0km, mb3.5/3, mb1 4.0/4, mb1mx3.6/22, mbtmp3.7/4, ML3.9/1, Error ellipse: s-maj=206.7km s-min=23.4km az=59.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**11.00**	**149**	Pn	Pn	10 09 47.9	+0.5
	0.9nm,0.3s,baz=333,slow=9.0,SNR=8.6						
LPAZ	**La Paz**	**24.31**	**140**	P	P	10 12 28.0	-0.4
	1.7nm,0.9s,baz=320,slow=10,SNR=5.2						
TXAR	**Lajitas Array**	**32.66**	**327**	P	P	10 13 41.8	-0.5
	0.3nm,0.8s,baz=150,slow=11,SNR=3.7						
YKA	**Yellowknife Ar**	**64.15**	**345**	P	P	10 17 44.3	+0.2
	0.4nm,0.7s,baz=140,slow=6.3,SNR=14						

IDC 10 10:13:12.7±1.4, 13.80S×166.37E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.8/21, mbtmp3.8/6, ML3.6/1, MS3.7/3, Ms1 3.7/3, ms1mx3.0/30, Error ellipse: s-maj=41.8km s-min=28.1km az=124.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.23**	**180**	Pn	Pn	10 15 12.4	-1.2
	0.7nm,0.3s,baz=342,slow=20,SNR=6.6						
DZM				Sn	Sn	10 16 39.3	-8.1
	baz=97,slow=16,SNR=2.1						
AFI	**Afiamalu**	**21.22**	**93**	LR	LR	10 24 05.1	
	comp=Z,160nm,19.6s,baz=327,slow=31						
STKA	**Stephens Creek**	**28.96**	**227**	P	P	10 19 14.6	+0.6
	0.9nm,0.6s,baz=52,slow=8.9,SNR=3.8						
STKA				LR	LR	10 29 19.0	
	comp=Z,153nm,18.7s,baz=202,slow=33						
WRA	**Warramunga Arr**	**31.22**	**254**	P	P	10 19 33.9	-0.3
	0.7nm,0.8s,baz=82,slow=9.2,SNR=3.9						
ASAR	**Alice Springs**	**32.21**	**247**	P	P	10 19 42.9	0.0
	0.6nm,0.7s,baz=74,slow=9.6,SNR=7.1						
FITZ	**Fitzroy Crossi**	**39.34**	**258**	LR	LR	10 33 32.9	
	comp=Z,113nm,21.7s,baz=164,slow=31						
QSPA	**South Pole Qui**	**76.22**	**180**	P	P	10 25 02.7	-0.3
	1.8nm,0.9s,baz=6.4,slow=9.0,SNR=3.1						
ILAR	**Eielson Array**	**85.92**	**18**	P	P	10 25 54.4	+0.2
	0.7nm,0.6s,baz=237,slow=5.5,SNR=16						

*IDC **10** 10:13:14.6±1.3, 30°.34S×179°.58W, h327km±14km, mb3.2/4, mb1 3.3/5, mb1mx3.1/19, mbtmp3.3/5, Error ellipse: s-maj=25.3km s-min=19.7km az=58.0*
*ISCJB **10** 10:13:14.2±0.8, 30°.31S±0°.06×179°.9W±0°.2, h321km, mb3.2/4, Error ellipse: s-maj=18.8km s-min=8.2km az=7.2*
ISC 10 10:13:14.6±1.1, 30.42S±0°.10×179.7W±0°.2, h321km, n43, σ0§94/47, mb3.5/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.96**	**54**	P	**Pn**	**10 14 02.5**	**-0.5**
	181nm,0.3s,baz=181,slow=9.4,SNR=9.2						
RAO				S	S	10 14 31.2	-10
	84nm,0.3s,baz=319,slow=20,SNR=3.1						
PUZ	**Puketiti**	**7.81**	**192**	PN	Pn	10 15 09.3	+3.2
PUZ				SN	**S**	**10 16 36.5**	**-0.1**
MWZ	**Matawai**	**8.21**	**195**	PN	**P**	**10 15 14.9**	**-0.3**
MWZ				SN	**S**	**10 16 45.0**	**-0.5**
CNGZ	**Carnagh Statio**	**8.22**	**191**	PN	**P**	**10 15 15.5**	**+0.2**
URZ	**Urewera**	**8.24**	**198**	PN	**P**	**10 15 13.9**	**-1.5**
URZ				SN	**S**	**10 16 46.5**	**+0.5**
URZ	**Urewera**	**8.24**	**198**	P	**Pn**	**10 15 13.2**	**+2.0**
	2.5nm,0.3s,baz=271,slow=3.1,SNR=24						
URZ				S	**S**	**10 16 47.1**	**+1.0**
	3.9nm,0.3s,baz=126,slow=20,SNR=16						
KNZ	**Kokohu**	**8.84**	**193**	PN	**P**	**10 15 21.3**	**-1.0**
MHGZ	**Mahia Peninsul**	**8.93**	**192**	PN	**P**	**10 15 23.2**	**0.0**
NMHZ	**Naumai**	**9.11**	**197**	PN	**P**	**10 15 25.2**	**-0.2**
BKZ	**Black Stump Fm**	**9.26**	**199**	PN	**Pn**	**10 15 25.4**	**+1.8**
BKZ				SN	**S**	**10 17 07.2**	**-1.7**
MCHZ	**McNeill Hill**	**9.47**	**197**	PN	**P**	**10 15 28.8**	**-0.4**
FWVZ	**Far West T-bar**	**9.63**	**202**	PN	**P**	**10 15 31.1**	**-0.2**
WHVZ	**Whangaehu Hut**	**9.64**	**202**	PN	**P**	**10 15 31.3**	**-0.1**
TRVZ	**Turoa**	**9.67**	**202**	PN	**P**	**10 15 31.5**	**-0.2**
WNVZ	**Wahianoa**	**9.68**	**202**	PN	**P**	**10 15 31.1**	**-0.6**
BHHZ	**Black Hill Sta**	**9.68**	**200**	PN	**Pn**	**10 15 29.7**	**+1.0**
KAHZ	**Kahuranaki**	**9.76**	**196**	PN	**P**	**10 15 31.9**	**-0.6**
MTVZ	**Mangateitei**	**9.77**	**202**	PN	**P**	**10 15 32.8**	**+0.1**
PXZ	**Pawanui**	**9.98**	**195**	PN	**Pn**	**10 15 33.5**	**+1.2**
PNHZ	**Pukenui**	**10.04**	**198**	PN	**P**	**10 15 34.9**	**-0.8**
WPHZ	**Waipukurau**	**10.12**	**197**	PN	**P**	**10 15 36.6**	**+0.1**
DVHZ	**Dannevirke**	**10.41**	**198**	PN	**Pn**	**10 15 38.8**	**+1.4**
BFZ	**Birch Farm**	**10.75**	**197**	PN	**Pn**	**10 15 41.7**	**+0.2**
MRZ	**Mangatainoka R**	**10.91**	**199**	PN	**Pn**	**10 15 43.3**	**-0.2**
TIWZ	**Tintock**	**10.93**	**198**	PN	**P**	**10 15 45.2**	**-0.3**
HOWZ	**Holdsworth Sta**	**11.14**	**199**	PN	**Pn**	**10 15 46.4**	**0.0**
OGWZ	**Otaki Gorge**	**11.17**	**200**	PN	**Pn**	**10 15 46.0**	**-0.6**
TMWZ	**Te Maipa**	**11.24**	**197**	PN	**Pn**	**10 15 48.2**	**+0.7**
KIW	**Kapiti Island**	**11.29**	**201**	*e*PN	**Pn**	**10 15 48.4**	**+0.3**
MTW	**Mount Morrison**	**11.39**	**199**	PN	**Pn**	**10 15 49.7**	**+0.4**
CAW	**Cannon Point**	**11.47**	**200**	PN	**Pn**	**10 15 50.2**	**0.0**
TCW	**Tory Channel**	**11.81**	**203**	PN	**Pn**	**10 15 54.0**	**-0.3**
TUWZ	**Tuamarina**	**12.12**	**203**	PN	**Pn**	**10 15 56.3**	**-1.8**
NNZ	**Nelson**	**12.13**	**206**	PN	**Pn**	**10 15 56.7**	**-1.5**
QRZ	**Quartz Range**	**12.14**	**209**	PN	**Pn**	**10 15 57.6**	**-0.7**
THZ	**Tophouse**	**12.78**	**206**	PN	**P**	**10 16 04.4**	**-1.7**
KHZ	**Kahutara**	**13.13**	**202**	PN	**P**	**10 16 09.3**	**-0.6**
LTZ	**Lake Taylor**	**13.90**	**205**	PN	**P**	**10 16 17.5**	**-0.9**
STKA	**Stephens Creek**	**33.02**	**257**	P	**P**	**10 19 22.6**	**+2.0**
	1.3nm,0.5s,baz=89,slow=8.1,SNR=4.1						
ASAR	**Alice Springs**	**41.61**	**268**	P	**P**	**10 20 32.5**	**+0.1**
	0.4nm,0.7s,baz=97,slow=6.8,SNR=3.7						
WRA	**Warramunga Arr**	**42.60**	**273**	P	**P**	**10 20 40.3**	**-0.1**
	0.8nm,0.4s,baz=110,slow=7.9,SNR=19						
QSPA	**South Pole Qui**	**59.69**	**180**	P	**P**	**10 22 46.1**	**+0.3**
	1.6nm,0.6s,baz=343,slow=0.3,SNR=30						
TORD	**Torodi Ar. Bea**	**162.76**	**185**	PKPab	**PKPab**	**10 33 27.9**	**-1.7**
	0.3nm,0.4s,baz=173,slow=3.9,SNR=8.8						

*ISCJB **10** 10:17:44.8±0.8, 36°.16N±0°.06×77°.2E±0°.1, h10km, mb3.6/4, Error ellipse: s-maj=17.5km s-min=7.2km az=166.0*
*IDC **10** 10:17:46.9±2.1, 36°.27N×76°.82E, h0km, mb3.8/4, mb1 3.9/7, mb1mx3.5/29, mbtmp3.7/7, ML3.7/3, Error ellipse: s-maj=34.2km s-min=29.1km az=34.0*
*DMN **10** 10:19:15.8±10.0, 31°.02N×82°.19E, h10km, Error ellipse: s-maj=322.2km s-min=26.8km az=149.0*
ISC 10 10:17:46.9±1.0, 36°.18N±0°.08×77°.0E±0°.1, h10km, n13, σ1§87/14, mb3.7/4, 1C-3D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.72**	**344**	Pn	Pn	10 19 30.8	+5.1
	0.7nm,0.3s,baz=140,slow=9.2,SNR=6.8						
AAK				Lg	Lg	10 21 17.6	
	0.3nm,0.3s,baz=317,slow=19,SNR=3.4						
KK31	**Karatay Array**	**8.52**	**326**	⇑Pg	**Pg**	**10 20 29.4**	**-0.5**
	0.5nm,0.5s,baz=198,slow=16,SNR=5.5						
KK31				⇓Lg	Lg	10 21 14.4	
	1.6nm,0.3s,baz=198,slow=26,SNR=9.7						
PYUN	**Piuthan**	**9.54**	**146**	*e*P	**Pn**	**10 20 04.7**	**+0.3**
	37nm,0.3s						
DANN	**Dangsing**	**9.70**	**142**	*e*P	**Pn**	**10 20 04.9**	**-1.8**
	17nm,0.4s						
KOLN	**Koldanda**	**10.10**	**144**	*e*P	**Pn**	**10 20 11.0**	**-1.2**
	16nm,0.5s						
GUN	**Gumba**	**11.19**	**135**	*e*P	**Pn**	**10 20 25.7**	**-1.4**
	13nm,0.5s						
MK31	**Makanchi Array**	**11.33**	**19**	⇓Pn	**Pn**	**10 20 30.0**	**+1.2**
	0.4nm,0.5s,baz=198,slow=12,SNR=17						
MK31				⇓Sn	**Sn**	**10 22 31.6**	**-3.9**
	0.5nm,0.5s,baz=199,slow=23,SNR=4.2						
MKAR	**Makanchi Array**	**11.33**	**19**	Pn	**Pn**	**10 20 29.8**	**+1.0**
	0.3nm,0.3s,baz=200,slow=12,SNR=11						
MKAR				Sn	**Sn**	**10 22 35.6**	**+0.1**
	0.2nm,0.3s,baz=197,slow=24,SNR=5.4						
AKTO	**Aktyubinsk**	**19.75**	**322**	P	**Pn**	**10 22 17.4**	**-0.8**
	0.7nm,0.3s,baz=114,slow=10,SNR=9.0						
SONM	**Songino Array**	**24.63**	**53**	P	**Pn**	**10 23 11.0**	**+3.5**
	0.5nm,0.5s,baz=252,slow=8.9,SNR=3.5						
FINES	**FINESS Array B**	**40.48**	**325**	P	**P**	**10 25 25.9**	**+0.6**
	2.3nm,0.5s,baz=107,slow=9.3,SNR=22						
ARCES	**ARCESS Array B**	**43.33**	**336**	P	**P**	**10 25 49.2**	**+0.6**
	2.6nm,0.9s,baz=110,slow=8.0,SNR=5.3						
YKA	**Yellowknife Ar**	**81.23**	**5**	P	**P**	**10 30 02.2**	**-0.4**
	0.2nm,0.5s,baz=345,slow=5.5,SNR=5.9						

IDC 10 10:25:18.8±2.2, 2.54N×128.21E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/23, mbtmp3.2/4, Error ellipse: s-maj=120.4km s-min=25.5km az=71.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.67**	**187**	P	P	10 30 00.2	-0.2
	0.5nm,0.6s,baz=3.8,slow=15,SNR=3.1						
WRA	**Warramunga Arr**	**23.14**	**165**	P	P	10 30 26.8	-0.1
	0.6nm,0.7s,baz=344,slow=9.8,SNR=6.9						
ASAR	**Alice Springs**	**26.64**	**168**	P	P	10 30 58.2	-1.2
	0.1nm,0.3s,baz=342,slow=7.8,SNR=3.9						
MKAR	**Makanchi Array**	**59.37**	**325**	P	P	10 35 24.0	+1.0
	0.2nm,0.4s,baz=120,slow=6.5,SNR=4.1						

IDC 10 10:54:08.1±1.6, 2.62N×128.99E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/23, mbtmp3.9/5, Error ellipse: s-maj=88.1km s-min=20.9km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.86**	**189**	P	P	10 58 52.7	+0.9
	2.2nm,1.1s,baz=20,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**23.03**	**167**	P	P	10 59 15.8	+0.7
	1.6nm,0.4s,baz=346,slow=11,SNR=33						
ASAR	**Alice Springs**	**26.56**	**170**	P	P	10 59 47.3	-0.8
	0.6nm,0.5s,baz=343,slow=7.4,SNR=24						
STKA	**Stephens Creek**	**36.34**	**162**	P	P	11 01 13.3	-0.6
	1.5nm,0.5s,baz=336,slow=9.0,SNR=10.0						
MKAR	**Makanchi Array**	**59.75**	**325**	P	P	11 04 15.1	+0.2
	0.9nm,0.4s,baz=115,slow=6.8,SNR=22						

IDC 10 10:55:39.9±4.5, 5.69S×149.48E, h124km±32km, mb3.3/4, mb1 3.5/6, mb1mx3.2/20, mbtmp3.4/6, Error ellipse: s-maj=71.6km s-min=26.9km az=105.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.35**	**212**	P	Pn	10 56 43.0	-1.3
	6.5nm,0.3s,baz=31,slow=7.4,SNR=28						
PMG				S	Sn	10 57 34.9	+0.7
	19nm,0.3s,baz=5.5,slow=18,SNR=14						
CTA	**Charters Towr**	**14.65**	**192**	P	P	10 59 03.0	-1.2
	0.3nm,0.3s,baz=14,slow=12,SNR=3.5						
WRA	**Warramunga Arr**	**20.43**	**225**	P	P	11 00 07.9	+0.3
	1.4nm,0.4s,baz=50,slow=11,SNR=11						
WRA				pP	pP	11 00 27.8	-2.5
	1.1nm,0.7s,baz=50,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**23.33**	**218**	P	P	11 00 37.5	+0.2
	0.5nm,0.4s,baz=51,slow=8.4,SNR=15						
FITZ	**Fitzroy Crossi**	**26.34**	**240**	P	P	11 01 05.0	+0.4
	1.6nm,0.8s,baz=68,slow=10,SNR=5.0						
KSRS	**Korea Array**	**47.40**	**337**	P	P	11 04 02.5	+0.7
	0.8nm,0.6s,baz=159,slow=8.3,SNR=5.3						
TORD	**Torodi Ar. Bea**	**147.40**	**285**	PKPbc	PKPdf	11 15 07.8	+0.1
	0.2nm,0.6s,baz=76,slow=2.7,SNR=4.1						

JMA 10 11:00:31.6±0.5, 30.95N×141.28E, h0km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**2.46**	**330**	P	Pn	11 01 13.3	+0.3
JHCJ				*e*S	Sn	11 01 45.2	+1.4
JHJ2	**Mitsune**	**2.49**	**330**	P	Pn	11 01 14.2	+0.8
JHJ2				*e*S	Sn	11 01 45.5	+1.1
BSO1	**Boso 1**	**3.70**	**356**	P	Pn	11 01 31.3	+1.9
BSO2	**Boso 2**	**3.82**	**353**	*e*S	Sn	11 02 21.1	+4.5
BSO4	**Boso 4**	**4.11**	**349**	P	Pn	11 01 39.5	+4.0
BSO4				*e*S	Sn	11 02 26.2	+2.1
JCN	**Nagara**	**4.55**	**349**	P	Pn	11 01 44.9	+3.2
JOD2	**Odawara 2**	**4.68**	**337**	P	Pn	11 01 47.4	+3.9
JHU	**Hanno**	**5.17**	**342**	P	Pn	11 01 52.5	+2.3
JRY	**Ryogami san**	**5.43**	**339**	P	Pn	11 01 56.0	+2.1
JRY				*e*S	Sn	11 02 59.0	+1.9

GOR	**Gori**	**0.60**	**12**	P	**Pn**	**11 45 46.9**	**-0.6**
GOR				S	**Sb**	**11 45 53.9**	**-0.3**
TBLG	**Delisi**	**0.69**	**60**	P	**Pg**	**11 45 45.4**	**-0.3**
TBLG				S	**Sg**	**11 45 55.2**	**+0.5**
SEAG	**Tbilisi Sea**	**0.75**	**60**	P	**Pg**	**11 45 46.6**	**-0.2**
SEAG				S	**Sg**	**11 45 57.4**	**+0.9**
KARS	**Kars**	**1.00**	**221**	*e*PG	**Pg**	**11 45 51.6**	**-0.2**
DGRG	**David-gareji**	**1.08**	**87**	P	**Pg**	**11 45 52.8**	**-0.4**
DGRG				S	**Sb**	**11 46 09.0**	**+1.2**
GUDG	**Gudauri**	**1.14**	**20**	P	**Pg**	**11 45 53.9**	**-0.5**
GUDG				S	**Sb**	**11 46 10.5**	**+0.7**
ONI	**Oni**	**1.25**	**343**	P	**Pg**	**11 45 56.2**	**-0.2**
ONI				S	**Sg**	**11 46 13.1**	**+0.4**
ARTV	**Artvin**	**1.53**	**263**	*i* P	**Pn**	**11 45 50.0**	**-0.5**
ARTV				*i* S	**Sn**	**11 46 20.0**	**-0.7**
DAGI	**Agillar**	**1.56**	**259**	*i* P	**Pn**	**11 46 00.7**	**0.0**
DAGI				*i* S	**Sn**	**11 46 20.6**	**-0.7**
DBAD	**Bademkaya**	**1.73**	**258**	*i* P	**Pn**	**11 46 03.5**	**+0.4**
DBAD				*i* S	**Sn**	**11 46 25.6**	**0.0**
BCA	**Borcka**	**1.74**	**272**	*e*PG	**Pn**	**11 46 03.3**	**+0.1**
BCA				*e*SG	**Sn**	**11 46 26.0**	**+0.3**
CHVG	**Ch'k'valeri**	**1.91**	**314**	P	**Sg**	**11 46 34.8**	**+0.8**

IDC 10 11:48:14.4±30.0, 4°.81N×127°.10E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/24, mbtmp3.5/4, Error ellipse: s-maj=512.7km s-min=97.4km az=153.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.82**	**184**	P	P	11 53 19.6	+0.6
	1.1nm,0.8s,baz=4.1,slow=14,SNR=2.4						
WRA	**Warramunga Arr**	**25.61**	**164**	P	P	11 53 44.8	-0.9
	1.0nm,0.3s,baz=343,slow=10,SNR=26						
ASAR	**Alice Springs**	**29.08**	**167**	P	P	11 54 16.9	+0.1
	0.1nm,0.3s,baz=349,slow=8.9,SNR=3.2						
STKA	**Stephens Creek**	**39.01**	**160**	P	P	11 55 43.2	+0.4
	1.0nm,0.7s,baz=350,slow=11,SNR=2.8						

IDC 10 12:03:54.9±1.5, 1°.43N×96°.82E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/27, mbtmp3.5/7, ML2.8/1, Error ellipse: s-maj=36.9km s-min=22.1km az=49.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.51**	**57**	Pn	Pn	12 04 36.4	-0.9
	2.1nm,0.3s,baz=347,slow=8.3,SNR=7.3						
PSI				Sn	Sn	12 05 08.8	+0.1
	1.8nm,0.3s,baz=206,slow=6.0,SNR=4.8						
WRA	**Warramunga Arr**	**42.48**	**122**	P	P	12 11 52.2	0.0
	0.2nm,0.6s,baz=303,slow=8.9,SNR=2.7						
ASAR	**Alice Springs**	**43.84**	**127**	P	P	12 12 02.9	-0.3
	0.4nm,1.0s,baz=299,slow=8.4,SNR=3.6						
MKAR	**Makanchi Array**	**46.93**	**346**	P	P	12 12 28.7	+1.3
	1.1nm,0.7s,baz=162,slow=9.5,SNR=12						
SONM	**Songino Array**	**46.97**	**9**	P	P	12 12 28.0	+0.2
	1.1nm,0.8s,baz=187,slow=9.4,SNR=8.4						
KURBB	**Kurchatov Arra**	**51.41**	**345**	P	P	12 13 00.5	-1.1
	0.2nm,0.4s,baz=160,slow=7.9,SNR=2.7						
ZALV	**Zalesovo Beam**	**53.28**	**351**	P	P	12 13 14.5	-0.9
	0.5nm,0.3s,baz=159,slow=6.2,SNR=2.6						

CASC 10 12:11:09.8±1.4, 13°.43N×89°.79W, h55km±11km, MD3.6, ML3.9, 2C-7D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.44**	**22**⇑	*i* P	Pn	12 11 21.0	-0.1
SBLS				*e*S	Sn	12 11 30.4	+1.1
SNJE	**San Jose**	**0.47**	**23**⇓	*i* P	Pn	12 11 21.4	-0.1
SNJE				*e*S	Sn	12 11 30.3	+0.5
RTR	**El Retiro**	**0.49**	**17**⇓	*i* P	Pn	12 11 21.6	0.0
RTR				*e*S	Sn	12 11 29.9	-0.1
BOQS	**Boqueron**	**0.59**	**59**⇓	*i* P	Pn	12 11 22.6	-0.1
BOQS				*e*S	Sn	12 11 32.9	+0.9
SNET	**Serv Nac Est T**	**0.60**	**65**⇓	*i* P	Pn	12 11 22.5	-0.3
SNET				*e*S	Sn	12 11 32.9	+0.8
SNET				AML	AML	12 11 37.4	
	comp=Z,5μm,0.3s						
RBDL	**Robledal**	**0.69**	**9**⇓	*i* P	Pn	12 11 23.5	-0.4
LFRS	**El Faro**	**0.74**	**75**⇓	*i* P	Pn	12 11 24.1	-0.3
LBRS	**Las Brisas**	**0.79**	**67**	*i* P	Pn	12 11 24.7	-0.4
LBRS				*e*S	Sn	12 11 37.1	+0.9
SNVI	**San Vicente**	**0.95**	**79**	*i* P	Pn	12 11 26.7	-0.4
SNVI				*e*S	Sn	12 11 40.6	+0.6
MTO2	**Montecristo 2**	**1.05**	**23**⇓	*i* P	Pn	12 11 28.0	-0.7
PCG	**Pacaya**	**1.24**	**321**	*e*P	Pn	12 11 32.0	+0.7
PCG				*e*S	Sn	12 11 47.6	+0.3
NBG	**Las Nubes**	**1.27**	**335**	*e*P	Pn	12 11 32.5	+0.9
FUG	**Fuego 3**	**1.44**	**315**	*e*P	Pn	12 11 34.3	+0.5
BLLM	**Bellamira**	**1.51**	**89**	*e*P	Pn	12 11 34.8	+0.1
BLLM				*e*S	Sn	12 11 53.4	-0.1
MRL	**Marmol**	**1.63**	**3**⇑	*e*P	Pn	12 11 37.3	+0.9
JAT	**Jato**	**2.00**	**297**	*e*P	Pn	12 11 41.6	+0.5

IDC 10 12:21:37.6±2.9, 30°.14S×177°.62W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.8/19, mbtmp3.9/4, Error ellipse: s-maj=56.4km s-min=21.2km az=102.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.92**	**344**	Pn	Pn	12 21 58.8	+1.0
	98nm,0.3s,baz=109,slow=14,SNR=8.4						
RAO				Sn	Sn	12 22 10.8	-1.0
	446nm,0.3s,baz=17,slow=19,SNR=15						
CTA	**Charters Tower**	**34.08**	**279**	P	P	12 28 25.1	+1.0
	5.3nm,1.0s,baz=132,slow=18,SNR=4.3						
STKA	**Stephens Creek**	**34.86**	**256**	P	P	12 28 30.7	+0.1
	0.5nm,0.3s,baz=103,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**43.45**	**266**	P	P	12 29 41.6	-1.1
	0.3nm,0.4s,baz=106,slow=7.1,SNR=9.2						
WRA	**Warramunga Arr**	**44.41**	**272**	P	P	12 29 50.0	-0.4
	0.9nm,0.3s,baz=109,slow=8.0,SNR=64						
FINES	**FINESS Array B**	**145.01**	**340**	PKPbc	PKPbc	12 41 14.3	-1.2
	0.9nm,0.5s,baz=32,slow=3.9,SNR=8.1						

WEL 10 12:22:35.8±0.3, 40°.08S×173°.94E, h163km±2km, ML3.9/17, 6C-13D, Error ellipse: s-maj=1.5km s-min=0.7km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.73**	**181**	PN	Pn	12 22 59.9	+0.1
DUWZ				SN	Sn	12 23 16.4	-2.0
NRZ	**Ngariki Road**	**0.74**	**359**	PN	Pn	12 22 59.9	0.0
DFE	**Dawson Falls**	**0.76**	**9**	PN	Pn	12 23 00.1	-0.1
NWEZ	**Newall Road**	**0.80**	**356**	PN	Pn	12 23 00.4	+0.1
NWEZ				SN	Sn	12 23 18.6	-0.6
NEZ	**North Egmont**	**0.81**	**8**	PN	Pn	12 23 00.2	-0.4
RAEZ	**Rainy Point**	**0.86**	**24**	PN	Pn	12 23 00.7	-0.1
WAZ	**Wanganui**	**0.86**	**69**⇑	PN	Pn	12 23 01.4	+0.6
WAZ				SN	Sn	12 23 19.9	0.0
PKE	**Pukeiti**	**0.88**	**2**	PN	Pn	12 23 00.9	-0.1
DREZ	**Durham Road**	**0.91**	**13**	PN	Pn	12 23 01.0	-0.1
DREZ				SN	Sn	12 23 19.2	-1.3
MHEZ	**Mangahewa**	**1.04**	**17**	PN	Pn	12 23 02.2	+0.1
MHEZ				SN	Sn	12 23 20.8	-1.4
KIW	**Kapiti Island**	**1.08**	**137**	⇓PN	Pn	12 23 02.4	0.0
VRZ	**Vera Road**	**1.14**	**34**	PN	Pn	12 23 02.6	-0.4
TCW	**Tory Channel**	**1.17**	**168**	⇓PN	Pn	12 23 03.4	+0.3
OGWZ	**Otaki Gorge**	**1.20**	**129**	PN	Pn	12 23 03.5	+0.1
NNZ	**Nelson**	**1.22**	**200**	PN	Pn	12 23 03.6	-0.1
NNZ				SN	Sn	12 23 22.7	-2.5
QRZ	**Quartz Range**	**1.31**	**235**	⇑PN	Pn	12 23 04.0	-0.5
PKVZ	**Pokaka**	**1.34**	**55**	PN	Pn	12 23 04.6	-0.2
CAW	**Cannon Point**	**1.34**	**141**	⇓PN	Pn	12 23 04.9	+0.1
TUWZ	**Tuamarina**	**1.35**	**180**	PN	Pn	12 23 04.8	-0.1
MTVZ	**Mangateitei**	**1.36**	**60**	PN	Pn	12 23 04.9	-0.2
SNZO	**South Karori**	**1.36**	**155**	⇓PN	Pn	12 23 05.0	+0.1
MRZ	**Mangatainoka R**	**1.38**	**116**	⇓PN	Pn	12 23 05.1	-0.1
POWZ	**Post Office Ro**	**1.43**	**103**	PN	Pn	12 23 05.6	-0.1
HOWZ	**Holdsworth Sta**	**1.46**	**125**	⇓PN	Pn	12 23 05.8	-0.1
TRVZ	**Turoa**	**1.46**	**59**	⇑PN	Pn	12 23 05.8	-0.5
WNVZ	**Wahianoa**	**1.48**	**60**	PN	Pn	12 23 06.1	-0.3
DRZ	**Dome Shelter**	**1.48**	**58**	PN	Pn	12 23 06.2	-0.4
FWVZ	**Far West T-bar**	**1.49**	**57**	⇑PN	Pn	12 23 06.0	-0.5
WPVZ	**Whakapapa**	**1.51**	**55**	PN	Pn	12 23 06.3	-0.4
TWVZ	**Taurewa**	**1.53**	**50**	PN	Pn	12 23 06.2	-0.6
MOVZ	**Moawhango**	**1.55**	**65**	PN	Pn	12 23 06.3	-0.6
TUVZ	**Tukino**	**1.55**	**59**	PN	Pn	12 23 06.8	-0.2
TSZ	**Takapari Road**	**1.55**	**90**	PN	Pn	12 23 06.7	-0.2
NGZ	**Ngauruhoe**	**1.56**	**56**	PN	Pn	12 23 06.7	-0.5
WTVZ	**West Tongariro**	**1.59**	**54**	PN	Pn	12 23 07.0	-0.4
MTW	**Mount Morrison**	**1.61**	**133**	⇓PN	Pn	12 23 07.4	0.0
OTVZ	**Oturere**	**1.61**	**56**	PN	Pn	12 23 07.5	-0.3
KRVZ	**Karewarewa**	**1.64**	**54**	⇓PN	Pn	12 23 07.5	-0.4
BSWZ	**Blackbirch Sta**	**1.64**	**182**	PN	Pn	12 23 08.0	+0.2
TIWZ	**Tintock**	**1.64**	**116**	⇓PN	Pn	12 23 07.8	0.0
MSWZ	**Moikau Station**	**1.67**	**144**	⇓PN	Pn	12 23 08.0	0.0
HIZ	**Hauiti**	**1.71**	**25**	PN	Pn	12 23 08.0	-0.6
DVHZ	**Dannevirke**	**1.72**	**98**	PN	Pn	12 23 08.4	-0.2
PAWZ	**Paruwai Farm**	**1.73**	**140**	PN	Pn	12 23 08.7	0.0
BHHZ	**Black Hill Sta**	**1.73**	**71**	PN	Pn	12 23 08.1	-0.8
PNHZ	**Pukenui**	**1.74**	**85**	PN	Pn	12 23 08.8	-0.1
KATZ	**Kakaramea**	**1.74**	**52**	PN	Pn	12 23 08.8	-0.3
PLWZ	**Palliser**	**1.80**	**147**	PN	Pn	12 23 09.3	-0.2
TMWZ	**Te Maipa**	**1.81**	**125**	⇓PN	Pn	12 23 09.6	0.0
RATZ	**Rangitukua**	**1.86**	**50**	PN	Pn	12 23 10.3	+0.1
BFZ	**Birch Farm**	**1.86**	**110**	⇑PN	Pn	12 23 10.0	-0.2
THZ	**Tophouse**	**1.86**	**205**	⇓PN	Pn	12 23 10.0	-0.2
TRWZ	**Traveller**	**1.87**	**136**	⇓PN	Pn	12 23 10.2	-0.1
WPHZ	**Waipukurau**	**1.92**	**91**	PN	Pn	12 23 10.7	0.0
BKZ	**Black Stump Fm**	**2.17**	**66**	PN	Pn	12 23 12.8	-0.9
MCHZ	**McNeill Hill**	**2.21**	**74**	PN	Pn	12 23 14.3	+0.1
PXZ	**Pawanui**	**2.24**	**90**	⇑PN	Pn	12 23 14.3	-0.1
KAHZ	**Kahuranaki**	**2.27**	**84**	PN	Pn	12 23 14.9	0.0
KHZ	**Kahutara**	**2.36**	**187**	PN	Pn	12 23 15.8	0.0
LTZ	**Lake Taylor**	**2.98**	**204**	PN	Pn	12 23 22.6	-0.9
URZ	**Urewera**	**3.06**	**55**	PN	Pn	12 23 23.0	-1.4
KNZ	**Kokohu**	**3.07**	**71**	PN	Pn	12 23 23.6	-1.0
MWZ	**Matawai**	**3.28**	**59**	PN	Pn	12 23 25.9	-1.4
MQZ	**McQueen's Vall**	**3.76**	**194**	PN	Pn	12 23 31.1	-2.0
PUZ	**Puketiti**	**3.91**	**61**	PN	Pn	12 23 33.3	-1.9

OTT 10 12:25:51.4±0.5, 57°.68N×59°.74W, h18km, ML3.5/9, Labrador Sea. 130km east from Nutak, NI Boothia Ungava Seismic Zone., Labrador Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUQ	**Kuujjuuaa**	**4.65**	**279**	PN	Pn	12 26 59.4	-1.3
KUQ				SN	Sn	12 27 51.6	-2.4
KUQ				Trac		12 28 18.6	
	comp=Z,3.9nm,0.2s						
SCHQ	**Schefferville**	**4.88**	**237**	PN	Pn	12 27 05.0	+1.1
SCHQ				SN	Sn	12 27 58.9	-1.1
SCHQ				Trac		12 28 01.7	
	comp=Z,2.0nm,0.1s						
FRB	**Frobisher Bay**	**7.46**	**328**	SN	Sn	12 28 51.8	-11
FRB				Trac		12 29 23.8	
	comp=Z,7.8nm,1.0s						
NATG	**Natashquan Que**	**7.63**	**195**	SN	Sn	12 29 02.1	-5.3
NATG				SN	Sb	12 29 02.3	-31
SMQ	**Clarke City**	**8.53**	**212**	PN	Pn	12 27 52.1	-1.8
SMQ				SN	Sn	12 29 23.5	-6.1
SMQ				Trac		12 29 29.4	
	comp=Z,2.2nm,0.1s						
DRLN	**Deer Lake**	**8.55**	**170**	PN	Pn	12 27 53.4	-0.8
DRLN				SN	Sn	12 29 23.0	-7.0
DRLN				Trac		12 29 28.4	
	comp=Z,374nm,2.6s						
YOSQ	**Ashton Mining**	**8.59**	**241**	PN	Pn	12 27 53.4	-1.4
YOSQ				SN	Sn	12 29 24.3	-7.0
YOSQ				Trac		12 29 30.8	
	comp=Z,1.5nm,0.1s						
MNQ	**Manicouagan**	**8.91**	**220**	PN	Pn	12 27 53.8	-5.4
MNQ				SN	Sn	12 29 31.1	-8.0
MNQ				Trac		12 29 38.8	
	comp=Z,1.8nm,0.1s						
ICQ	**Pointe Anglais**	**9.32**	**212**	SN	Sn	12 29 43.6	-5.3
ICQ				SN		12 29 43.6	
ICQ				Trac		12 29 50.0	
	comp=Z,40nm,0.9s						
CNQ	**Baie Comeau**	**9.75**	**214**	PN	Pn	12 28 16.7	+6.1
CNQ				SN	Sn	12 29 50.0	-10
CNQ				Trac		12 29 59.4	
	comp=Z,0.8nm,0.1s						
GSQ	**Grosses Roches**	**9.83**	**210**	SN	Sn	12 29 55.4	-6.1
WEMQ	**Wemindji, Queb**	**11.35**	**254**	PN	Pn	12 28 30.8	-1.7
WEMQ				SN	Sn	12 30 29.4	-9.4
WEMQ				Trac		12 30 31.9	
	comp=Z,29nm,1.2s						
A61	**Sainte Mathild**	**11.80**	**216**	SN	Sn	12 30 46.4	-3.4
LMQ	**La Malbaie**	**12.00**	**217**	SN	Sn	12 30 45.0	-10
LMQ				SN		12 30 46.6	
LMQ				Trac		12 30 51.5	
	comp=Z,21nm,0.8s						
HAL	**Halifax**	**13.28**	**192**	SN	Sn	12 31 20.3	-5.7
MALO	**McAlpine Lake**	**14.05**	**246**	SN	Sn	12 31 29.2	-16
MALO				SN	S	12 31 32.4	-33
SILO	**Sutton Inlier**	**14.38**	**268**	PN	Pn	12 29 09.3	-4.6
SILO				SN	Sn	12 31 40.2	-13
SILO				Trac		12 31 57.2	
	comp=Z,142nm,2.7s						

IDC 10 12:27:20.6±65.0, 20°.75S×177°.60E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=1142.0km s-min=146.7km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**33.98**	**243**	P	P	12 34 05.2	-0.9
	0.8nm,0.8s,baz=73,slow=11,SNR=4.2						
ASAR	**Alice Springs**	**40.45**	**258**	P	P	12 35 00.9	-0.3
	1.0nm,0.8s,baz=97,slow=8.3,SNR=12						
WRA	**Warramunga Arr**	**40.48**	**263**	P	P	12 35 02.1	+0.6
	0.2nm,0.3s,baz=95,slow=7.9,SNR=15						

*IDC **10** 13:12:14.9±1.5, 5°.56S×147°.11E, h172km±15km, mb3.5/8, mb1 3.8/12, mb1mx3.6/21, mbtmp3.7/12, MS4.2/1, Ms1 4.2/1, ms1mx2.9/26, Error ellipse: s-maj=24.0km s-min=9.9km az=112.0*

*ISCJB **10** 13:12:15.6±0.6, 5°.44S±0°.06×147°.12E±0°.06, h195km, mb3.7/8, Error ellipse: s-maj=8.7km s-min=7.7km az=157.7*

*AUST **10** 13:12:19.8±1.2, 5°.74S×146°.97E, h194km, Error ellipse: s-maj=2.1km s-min=1.2km az=7.0*

ISC 10 13:12:16.7±0.7, 5°.45S±0°.07×147°.07E±0°.09, h195km, n31, σ1°62/34, mb3.6/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.93**	**179**	P	**Pn**	**13 13 14.8**	**-2.7**
	46nm,0.3s,baz=17,slow=5.4,SNR=422						
PMG				S	Sn	13 13 57.9	-7.3
	113nm,0.3s,baz=218,slow=17,SNR=19						
JAY	**Jayapura**	**6.98**	**294**	P	Pn	13 13 44.8	-12
	baz=7.0,SNR=3.9						
COEN	**Coen**	**9.28**	**204**	P	**Pn**	**13 14 28.3**	**+1.6**
	baz=9.0,SNR=12						
COEN				S	**Sn**	**13 16 07.7**	**-3.0**
	baz=9.0,SNR=6.8						
MTSU	**Mount Surprise**	**12.89**	**192**	P	**Pn**	**13 15 14.2**	**+1.2**
	baz=13,SNR=8.3						
HNR	**Honiara**	**13.37**	**108**	P	**Pn**	**13 15 16.8**	**-2.3**
	2.6nm,0.3s,baz=211,slow=5.6,SNR=4.5						
CTA	**Charters Tower**	**14.57**	**183**	P	**Pn**	**13 15 33.7**	**-0.2**
	1.2nm,0.3s,baz=359,slow=12,SNR=20						
KDU	**Kakadu**	**16.10**	**242**	P	**P**	**13 15 52.2**	**+0.1**
	baz=16,SNR=15						
SWI	**Sorong**	**16.42**	**286**	S	**S**	**13 18 53.3**	**-4.5**
	baz=16,SNR=52						
QIS	**Mount Isa**	**16.67**	**205**	P	**Pn**	**13 15 59.6**	**+0.2**
	baz=16,SNR=6.3						
QIS				S	**S**	**13 19 02.5**	**-0.2**
	baz=16,SNR=6.2						
MTN	**Manton Dam**	**17.35**	**244**	P	**Pn**	**13 16 07.4**	**-0.1**
	baz=17,SNR=6.7						
WRA	**Warramunga Arr**	**18.99**	**220**	P	**P**	**13 16 24.8**	**+1.0**
	2.5nm,0.3s,baz=45,slow=10,SNR=101						
WRA				S	**S**	**13 19 47.1**	**-2.0**
	0.3nm,0.3s,baz=38,slow=20,SNR=19						
EIDS	**Eidsvold**	**20.18**	**169**	P	**P**	**13 16 37.3**	**+1.0**
	baz=20,SNR=7.2						
KNRA	**Kununurra**	**20.64**	**239**	P	**P**	**13 16 41.6**	**+0.2**
	baz=20,SNR=13						
RMQ	**Roma**	**20.98**	**176**	P	**P**	**13 16 46.0**	**+1.1**
	baz=21,SNR=7.7						
QLP	**Quilpie**	**21.19**	**187**	P	**P**	**13 16 47.6**	**+0.5**
	baz=21,SNR=27						
ASAR	**Alice Springs**	**22.11**	**214**	P	**P**	**13 16 57.6**	**+1.1**
	9.9nm,0.5s,baz=50,slow=8.3,SNR=232						
ASAR				S	**S**	**13 20 48.2**	**+2.3**
	12nm,0.9s,baz=30,slow=22,SNR=35						
FITZ	**Fitzroy Crossi**	**24.41**	**237**	P	**P**	**13 17 18.6**	**+1.0**
	4.5nm,0.3s,baz=109,slow=5.8,SNR=37						
FITZ	**Fitzroy Crossi**	**24.41**	**237**	P	**P**	**13 17 18.5**	**+1.0**
	baz=24,SNR=28						
ARMA	**Armidale**	**25.20**	**171**	P	**P**	**13 17 25.6**	**+1.0**
	baz=25,SNR=11						
STKA	**Stephens Creek**	**26.78**	**190**	P	**P**	**13 17 39.8**	**+1.1**
	1.5nm,0.8s,baz=347,slow=10.0,SNR=3.6						
ARPS	**Mount Arapiles**	**31.54**	**188**	P	**P**	**13 18 21.8**	**+1.2**
	baz=31,SNR=6.2						
MEEK	**Meekatharra**	**34.36**	**229**	P	**P**	**13 18 46.3**	**+1.0**
	baz=34,SNR=13						
MORW	**Morawa**	**37.58**	**228**	P	**P**	**13 19 13.6**	**+1.0**
	baz=37,SNR=5.6						
JHJ	**Hachijo jima 2**	**38.98**	**350**	LR	LR	13 33 56.7	
	comp=Z,332nm,20.4s,baz=83,slow=33						
CISI	**Cisompet, Garu**	**39.05**	**265**	P	**P**	**13 19 24.8**	**-0.2**
	baz=39,SNR=3.2						
SONM	**Songino Array**	**63.96**	**331**	P	**P**	**13 22 30.9**	**+1.7**
	0.6nm,0.7s,baz=153,slow=5.7,SNR=4.8						
VNDA	**Vanda**	**72.45**	**177**	P	**P**	**13 23 21.6**	**+0.3**
	1.0nm,0.7s,baz=332,slow=4.1,SNR=7.0						
MKAR	**Makanchi Array**	**77.12**	**320**	P	**P**	**13 23 49.5**	**+0.9**
	0.2nm,0.5s,baz=99,slow=8.9,SNR=3.0						
ZALV	**Zalesovo Beam**	**78.59**	**328**	P	**P**	**13 23 56.8**	**+0.2**
	0.3nm,0.3s,baz=72,slow=6.4,SNR=3.5						
ILAR	**Eielson Array**	**84.95**	**23**	P	**P**	**13 24 29.8**	**+0.2**
	0.5nm,0.6s,baz=258,slow=5.1,SNR=11						
ILAR				pP	**pP**	**13 25 14.3**	**-3.1**
	0.4nm,0.8s,baz=252,slow=4.9,SNR=4.5						
TORD	**Torodi Ar. Bea**	**145.02**	**285**	PKPbc	**PKPdf**	**13 31 31.8**	**+0.1**
	0.5nm,0.5s,baz=60,slow=3.6,SNR=9.3						

*ISCJB **10** 13:20:41.8±0.6, 47°.68N±0°.08×154°.1E±0°.1, h31km, mb3.8/16, MS3.4/1, Error ellipse: s-maj=17.7km s-min=5.8km az=39.3*

*MOS **10** 13:20:42.4±1.0, 47°.64N×154°.08E, h36km, mb4.0/10, Error ellipse: s-maj=19.1km s-min=9.3km az=68.4*

*IDC **10** 13:20:45.2±2.7, 47°.66N×154°.03E, h44km±25km, mb3.5/13, mb1 3.8/16, mb1mx3.6/28, mbtmp3.5/16, ML3.1/3, MS3.1/2, Ms1 3.1/2, ms1mx2.7/30, Error ellipse: s-maj=23.1km s-min=14.2km az=137.0*

ISC 10 13:20:43.8±0.8, 47°.7N±0°.1×154°.1E±0°.1, h31km, n28, σ0°93/29, mb3.8/16, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.29**	**23**	*e*PN	**Pn**	**13 21 32.5**	**-0.6**
SKR				*e*S	**Sn**	**13 22 10.7**	**-0.4**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax	smax		
	comp=E,90nm,0.6s						
SKR				smax	smax		
	comp=N,150nm,0.5s						
SKR				smax	smax		
	comp=Z,50nm,0.5s						
PETK	**Petropavlovsk-**	**5.90**	**22**	PN	**Pn**	**13 22 10.0**	**+0.9**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,98nm,19.3s						
PETK	**Petropavlovsk-**	**5.90**	**22**	P	**Pn**	**13 22 10.0**	**+0.9**
	comp=Z,1.8nm,0.3s,baz=181,slow=13,SNR=62						
PETK				LR	LR	13 24 46.0	
	comp=Z,98nm,19.3s,baz=220,slow=41						
PET	**Petropavlovsk**	**6.09**	**27**	*e*PN	**Pn**	**13 22 14.3**	**+2.7**
PET				*e*S	**Sn**	**13 23 19.0**	**-1.2**
PET				smax	smax		
	comp=E,78nm,0.8s						
PET				smax	smax		
	comp=N,48nm,0.7s						
ASAJ	**Asahikawa**	**8.77**	**250**	P	**Pn**	**13 22 49.6**	**+1.2**
	comp=N,0.1nm,0.3s,baz=43,slow=20,SNR=2.6						
ERM	**Erimo**	**9.61**	**238**	*i* PN	**Pn**	**13 23 00.7**	**+0.8**
MJAR	**Matsushiro Arr**	**16.18**	**232**	P	**Pn**	**13 24 27.3**	**-1.5**
	comp=N,0.1nm,0.3s,baz=35,slow=8.1,SNR=4.0						
BILL	**Bilibino**	**21.34**	**13**	*e*P	**P**	**13 25 27.0**	**-0.9**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KSRS	**Korea Array**	**21.72**	**252**	P	**P**	**13 25 32.1**	**-0.1**
	comp=Z,3.1nm,0.8s,baz=56,slow=10,SNR=9.8						
ILAR

0.7nm,0.3s,baz=43,slow=10,SNR=21
FITZ Sn **Sn** 13 59 08.8 -3.5
1.4nm,0.3s,baz=88,slow=20,SNR=8.1
WRA Warramunga Arr 13.46 159 Pn **Pn** 13 57 36.9 0.0
0.7nm,0.3s,baz=332,slow=14,SNR=39
WRA Sn **Sn** 14 00 00.3 -5.3
2.0nm,0.3s,baz=335,slow=22,SNR=10
ASAR Alice Springs 16.83 165 P **Pn** 13 58 22.5 +3.4
0.7nm,0.3s,baz=341,slow=9.3,SNR=107
ASAR S **Sn** 14 01 26.6 -0.2
0.5nm,0.3s,baz=356,slow=28,SNR=7.1
STKA Stephens Creek 26.98 156 P **P** 14 00 04.0 +3.3
2.0nm,0.9s,baz=77,slow=16,SNR=4.6
CMAR Chiang Mai Arr 39.39 311 P **P** 14 01 46.5 -1.9
0.7nm,0.7s,baz=144,slow=6.4,SNR=6.1
MKAR Makanchi Array 68.11 327 P **P** 14 05 16.4 -0.4
0.7nm,0.3s,baz=115,slow=8.1,SNR=12
ZALV Zalesovo Beam 71.57 334 P **P** 14 05 37.8 0.0
0.8nm,0.5s,baz=139,slow=9.5,SNR=3.0
KURBB **Kurchatov Arra 72.42 329** P **P** 14 05 41.7 -1.2
1.3nm,0.5s,baz=130,slow=5.2,SNR=25
LPAZ La Paz 150.89 144 PKPbc **PKPbc** 14 14 12.4 +2.3
0.5nm,0.3s,baz=47,slow=4.1,SNR=6.7

*AUST **10** 14:21:42.5±1.2,20.°04S×179.°61E,h315km, Error ellipse: s-maj=1.9km s-min=1.6km az=354.0*
*ISCJB **10** 14:21:49.9±0.9,20.°7S±0.°3×178.°9W±0.°2,h579km, mb3.7/13, Error ellipse: s-maj=37.5km s-min=10.3km az=151.5*
*IDC **10** 14:21:51.3±2.1,20.°75S×178.°76W,h588km±23km, mb3.2/13,mb1 3.5/15,mb1mx3.3/22,mbtmp3.2/15,Error ellipse: s-maj=38.2km s-min=13.0km az=150.0*
ISC 10 14:21:50.3±1.0**, 20.°8S**±0.°3×**178.°7W**±0.°2**, h579**km**, n30, σ0°80/29, mb3.6/13, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**8.42**	**80**	S	S	14 25 56.1	+22
	baz=9.9,SNR=3.4						
AFI	**Afiamalu**	**9.51**	**45**	P	**P**	**14 24 04.4**	**+0.4**
	4.0nm,0.3s,baz=321,slow=21,SNR=8.4						
DZM	**Mont Dzumac**	**13.90**	**262**	P	**P**	**14 24 49.9**	**+1.4**
	0.5nm,0.3s,baz=75,slow=19,SNR=6.3						
CTA	**Charters Tower**	**32.81**	**265**	P	**P**	**14 27 37.8**	**+0.5**
	3.9nm,0.4s,baz=82,slow=9.7,SNR=12						
QLP	**Quilpie**	**34.35**	**253**	P	**P**	**14 27 50.5**	**+0.5**
	baz=33,SNR=5.2						
MTSU	**Mount Surprise**	**34.92**	**268**	P	**P**	**14 27 55.6**	**+0.6**
	baz=33,SNR=8.0						
STKA	**Stephens Creek**	**37.08**	**244**	P	**P**	**14 28 12.4**	**0.0**
	0.8nm,0.5s,baz=87,slow=12,SNR=6.4						
STKA	**Stephens Creek**	**37.08**	**244**	P	**P**	**14 28 13.3**	**+0.8**
	baz=36,SNR=4.8						
ASAR	**Alice Springs**	**43.82**	**257**	P	**P**	**14 29 06.2**	**0.0**
	4.9nm,0.5s,baz=93,slow=7.8,SNR=190						
ASAR				PcP	**PcP**	**14 30 39.4**	**-0.4**
	0.8nm,0.5s,baz=100,slow=4.0,SNR=7.3						
WRA	**Warramunga Arr**	**43.91**	**262**	P	**P**	**14 29 06.3**	**-0.6**
	2.7nm,0.3s,baz=97,slow=7.7,SNR=154						
KDU	**Kakadu**	**47.30**	**272**	P	**P**	**14 29 32.4**	**-0.3**
	baz=46,SNR=8.6						
MTN	**Manton Dam**	**48.51**	**271**	P	**P**	**14 29 41.3**	**-0.5**
	baz=47,SNR=5.6						
MTN				S	S	14 36 19.7	+18
	baz=47,SNR=4.8						
KNRA	**Kununurra**	**49.99**	**267**	P	**P**	**14 29 52.5**	**-0.1**
	baz=48,SNR=9.1						
FITZ	**Fitzroy Crossi**	**52.34**	**263**	P	**P**	**14 30 09.7**	**+0.2**
	1.8nm,0.4s,baz=91,slow=20,SNR=17						
FITZ	**Fitzroy Crossi**	**52.34**	**263**	P	**P**	**14 30 09.7**	**+0.2**
	baz=51,SNR=9.8						
MEEK	**Meekatharra**	**57.21**	**251**	P	**P**	**14 30 42.7**	**-0.8**
	baz=56,SNR=3.4						
MJAR	**Matsushiro Arr**	**70.06**	**324**	P	**P**	**14 32 04.4**	**-0.5**
	0.9nm,0.6s,baz=162,slow=6.7,SNR=4.4						
PETK	**Petropavlovsk-**	**76.39**	**346**	P	**P**	**14 32 40.4**	**-0.1**
	1.1nm,0.7s,baz=137,slow=5.3,SNR=6.0						
USRK	**Ussuriysk Arra**	**78.83**	**326**	P	**P**	**14 32 55.0**	**+1.2**
	1.5nm,0.6s,baz=113,slow=2.2,SNR=4.4						
NVAR	**Mina Array Bea**	**81.68**	**44**	P	**P**	**14 33 09.8**	**+0.6**
	0.5nm,0.6s,baz=222,slow=8.9,SNR=4.3						
TXAR	**Lajitas Array**	**87.76**	**58**	P	**P**	**14 33 39.8**	**+1.0**
	0.7nm,0.8s,baz=201,slow=6.7,SNR=8.6						
ILAR	**Eielson Array**	**88.74**	**13**	P	**P**	**14 33 41.7**	**-0.7**
	0.6nm,0.7s,baz=227,slow=5.2,SNR=7.4						
CMAR	**Chiang Mai Arr**	**89.60**	**290**	P	**P**	**14 33 46.9**	**-0.5**
	1.1nm,0.9s,baz=128,slow=3.0,SNR=7.7						
PDAR	**Pinedale Array**	**89.62**	**43**	P	**P**	**14 33 48.2**	**+1.0**
	0.6nm,0.7s,baz=231,slow=4.8,SNR=5.6						
MKAR	**Makanchi Array**	**110.92**	**313**	PKiKP	**PKiKP**	**14 39 17.4**	**-0.9**
	0.2nm,0.4s,baz=177,slow=1.0,SNR=5.3						
ARCES	**ARCESS Array B**	**129.09**	**349**	PKP	**PKPdf**	**14 39 51.0**	**-1.4**
	3.6nm,0.9s,baz=90,slow=0.4,SNR=4.8						
FINES	**FINESS Array B**	**135.86**	**343**	PKP	**PKPdf**	**14 40 03.5**	**-1.8**
	1.7nm,0.8s,baz=35,slow=7.0,SNR=3.6						
AKASG	**Malin Array Be**	**142.95**	**330**	PKhKP	PKPpre	14 40 15.0	
	2.5nm,0.4s,baz=43,slow=4.0,SNR=17						
BRTR	**Keskin Array B**	**146.55**	**312**	PKPbc	**PKPbc**	**14 40 27.1**	**-0.8**
	1.2nm,0.6s,baz=128,slow=4.4,SNR=3.8						
GERES	**GERESS Array B**	**150.30**	**343**	PKPbc	**PKPbc**	**14 40 36.4**	**-0.3**
	0.6nm,0.6s,baz=35,slow=3.3,SNR=6.5						

*ISK **10** 14:22:16.6,40.°00N×27.°69E,h12km, MD3.0*
*DDA **10** 14:22:16.8,40.°00N×27.°70E,h12km, MD3.2, ML3.4*
*ISCJB **10** 14:22:17.0±0.3,40.°01N±0.°02×27.°71E±0.°03,h7km,3km, Error ellipse: s-maj=3.4km s-min=3.1km az=147.3*
*CSEM **10** 14:22:17.1±0.1,40.°00N×27.°68E,h10km,MD3.0, Error ellipse: s-maj=1.4km s-min=1.2km az=59.0*
ISC 10 14:22:17.3±0.8**, 40.°00N**±0.°02×**27.°70E**±0.°02**, h12**km±6**km, n87, σ0°38/108, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GONE	**Gonen-Balikesi**	**0.05**	**348**	*e*PG	**Pg**	**14 22 19.6**	**-0.1**
GONE	**Gonen-Balikesi**	**0.05**	**348**	*e*Pg	**Pg**	**14 22 19.6**	**-0.1**
BALY	**Balya**	**0.27**	**193**	*i*P	**Pg**	**14 22 22.8**	**-0.1**
BALY				*i*S	**Sg**	**14 22 27.1**	**+0.5**
BALY	**Balya**	**0.27**	**193**	*i*P	**Pg**	**14 22 22.8**	**-0.1**
BALY				*i*S	**Sg**	**14 22 27.1**	**+0.5**
BALB	**Balikesir**	**0.39**	**159**	*e*PG	**Pg**	**14 22 24.9**	**-0.1**
BALB	**Balikesir**	**0.39**	**159**	*e*Pg	**Pg**	**14 22 24.9**	**-0.1**
BNT	**Bandirma**	**0.39**	**25**	*e*PG	**Pg**	**14 22 25.1**	**-0.1**
BNT				*e*SG	**Sg**	**14 22 30.2**	**-0.3**
BNT	**Bandirma**	**0.39**	**25**	*e*Pg	**Pg**	**14 22 25.1**	**-0.1**
BNT				*e*Sg	**Sg**	**14 22 30.2**	**-0.3**
KRBG	**Karabiga-Canak**	**0.50**	**322**	*e*PG	**Pg**	**14 22 27.0**	**-0.1**
KRBG				*e*SG	**Sg**	**14 22 33.9**	**+0.1**
KRBG	**Karabiga-Canak**	**0.50**	**322**	*e*Pg	**Pg**	**14 22 27.0**	**-0.1**
KRBG				*e*Sg	**Sg**	**14 22 33.9**	**+0.1**
KCTX	**Karacabey (Bur**	**0.57**	**62**	*e*PG	**Pg**	**14 22 28.2**	**-0.2**
KCTX				*e*SG	**Sg**	**14 22 35.7**	**-0.3**
KCTX	**Karacabey (Bur**	**0.57**	**62**	*e*Pg	**Pg**	**14 22 28.2**	**-0.2**
KCTX				*e*Sg	**Sg**	**14 22 35.7**	**-0.3**
MRMT	**Marmara Adasi**	**0.61**	**353**	*e*PG	**Pg**	**14 22 29.2**	**0.0**
MRMT	**Marmara Adasi**	**0.61**	**353**	*e*Pg	**Pg**	**14 22 29.2**	**0.0**
DURS	**Dursunbey**	**0.72**	**123**	*i*P	**Pg**	**14 22 31.0**	**-0.2**
DURS				*i*S	**Sg**	**14 22 40.7**	**0.0**
DURS	**Dursunbey**	**0.72**	**123**	*i*P	**Pg**	**14 22 31.0**	**-0.2**
DURS				*i*S	**Sg**	**14 22 40.7**	**0.0**
SART	**Tekirdag**	**0.80**	**330**	*i*P	**Pg**	**14 22 32.6**	**-0.1**
SART				*i*S	**Sb**	**14 22 44.5**	**+0.6**
SART	**Tekirdag**	**0.80**	**330**	*i*P	**Pg**	**14 22 32.6**	**-0.1**
SART				*i*S	**Sb**	**14 22 44.5**	**+0.6**
LPK	**Lapseki**	**0.81**	**298**	*e*PG	**Pg**	**14 22 32.7**	**-0.3**
LPK	**Lapseki**	**0.81**	**298**	*e*Pg	**Pg**	**14 22 32.7**	**-0.3**
DST	**Dursunbey**	**0.81**	**119**	*e*PG	**Pg**	**14 22 33.0**	**0.0**
DST	**Dursunbey**	**0.81**	**119**	*e*Pg	**Pg**	**14 22 33.0**	**0.0**
ORLT	**Orhaneli**	**0.92**	**87**	*e*PG	**Pg**	**14 22 35.0**	**-0.1**
ORLT	**Orhaneli**	**0.92**	**87**	*e*Pg	**Pg**	**14 22 35.0**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.98**	**67**	*e*PG	**Pb**	**14 22 35.9**	**-0.3**
MDNY	**Mudanya-Bursa**	**0.98**	**67**	*e*Pg	**Pb**	**14 22 35.9**	**-0.3**
TKR	**Tekirdag**	**1.00**	**353**	*e*PG	**Pg**	**14 22 36.6**	**0.0**
TKR	**Tekirdag**	**1.00**	**353**	*e*Pg	**Pg**	**14 22 36.6**	**0.0**
GELI	**Tayfur-Gelibol**	**1.02**	**293**	*e*PG	**Pb**	**14 22 36.4**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.02**	**293**	*e*Pg	**Pb**	**14 22 36.4**	**-0.5**
AYVA	**Ayvalik**	**1.04**	**229**	*i*P	**Pn**	**14 22 39.1**	**+1.5**
AYVA				*i*S	**Sb**	**14 22 50.7**	**-0.1**
AYVA	**Ayvalik**	**1.04**	**229**	*i*P	**Pn**	**14 22 39.1**	**+1.5**
AYVA				*i*S	**Sb**	**14 22 50.7**	**-0.1**
ARMT	**Armutlu**	**1.05**	**57**	*e*PG	**Pb**	**14 22 37.2**	**-0.3**
ARMT	**Armutlu**	**1.05**	**57**	*e*Pg	**Pb**	**14 22 37.2**	**-0.3**
EZN	**Ezine**	**1.07**	**261**	*e*PG	**Pb**	**14 22 36.9**	**-0.8**
EZN	**Ezine**	**1.07**	**261**	*e*Pg	**Pb**	**14 22 36.9**	**-0.8**
AKS	**Akhisar**	**1.12**	**175**	*e*PN	**Pn**	**14 22 38.8**	**0.0**
AKS	**Akhisar**	**1.12**	**175**	*e*Pn	**Pn**	**14 22 38.8**	**0.0**
AKHS	**Akhisar**	**1.12**	**175**	*i*P	**Pb**	**14 22 38.6**	**0.0**
AKHS				*i*S	**Sn**	**14 22 54.3**	**+0.1**
AKHS	**Akhisar**	**1.12**	**175**	*i*P	**Pb**	**14 22 38.6**	**0.0**
AKHS				*i*S	**Sn**	**14 22 54.3**	**+0.1**
ERIK	**Erikli-Kesan**	**1.13**	**307**	*e*PN	**Pb**	**14 22 38.6**	**-0.1**
ERIK	**Erikli-Kesan**	**1.13**	**307**	*e*Pn	**Pb**	**14 22 38.6**	**-0.1**
GEMT	**Gemlik**	**1.22**	**69**	*e*PN	**Pb**	**14 22 40.4**	**+0.1**
GEMT	**Gemlik**	**1.22**	**69**	*e*Pn	**Pb**	**14 22 40.4**	**+0.1**
DEMI	**Demirci**	**1.24**	**140**	*i*P	**Pb**	**14 22 40.9**	**+0.3**
DEMI				*i*S	**Sn**	**14 22 57.0**	**-0.1**
DEMI	**Demirci**	**1.24**	**140**	*i*P	**Pb**	**14 22 40.9**	**+0.3**
DEMI				*i*S	**Sn**	**14 22 57.0**	**-0.1**
BOZC	**Bozcaada**	**1.28**	**263**	*i*P	**Pb**	**14 22 41.1**	**-0.1**
BOZC				*i*S	**Sg**	**14 22 58.3**	**-0.1**
SLVT	**Silivri**	**1.29**	**17**	*e*PN	**Pn**	**14 22 41.2**	**+0.1**
SLVT	**Silivri**	**1.29**	**17**	*e*Pn	**Pn**	**14 22 41.2**	**+0.1**
CTKS	**Kestanelik-??a**	**1.38**	**26**	*e*PN	**Pn**	**14 22 42.6**	**+0.3**
CTKS	**Kestanelik-??a**	**1.38**	**26**	*e*Pn	**Pn**	**14 22 42.6**	**+0.3**
IZI	**Iznik**	**1.40**	**76**	*e*PN	**Pn**	**14 22 42.7**	**0.0**
IZI	**Iznik**	**1.40**	**76**	*e*Pn	**Pn**	**14 22 42.7**	**0.0**
BGKT	**Bogazkoy**	**1.44**	**34**	*e*PN	**Pn**	**14 22 43.5**	**+0.4**
BGKT	**Bogazkoy**	**1.44**	**34**	*e*Pn	**Pn**	**14 22 43.5**	**+0.4**
TVSB	**Tavsanli**	**1.47**	**111**	*e*PN	**Pn**	**14 22 43.9**	**+0.3**
TVSB	**Tavsanli**	**1.47**	**111**	*e*Pn	**Pn**	**14 22 43.9**	**+0.3**
ISK	**Istanbul-Kandi**	**1.49**	**44**	*e*PN	**Pn**	**14 22 44.3**	**+0.5**
ISK	**Istanbul-Kandi**	**1.49**	**44**	*e*Pn	**Pn**	**14 22 44.3**	**+0.5**
CTYL	**Yal??k??y-??at**	**1.54**	**17**	*e*PN	**Pn**	**14 22 44.4**	**-0.1**
CTYL	**Yal??k??y-??at**	**1.54**	**17**	*e*Pn	**Pn**	**14 22 44.4**	**-0.1**
ADVT	**Abdulvahap**	**1.62**	**74**	*e*PN	**Pn**	**14 22 46.0**	**+0.4**
ADVT	**Abdulvahap**	**1.62**	**74**	*e*Pn	**Pn**	**14 22 46.0**	**+0.4**
IZM	**Izmir**	**1.64**	**192**	*e*PN	**Pn**	**14 22 45.2**	**-0.7**
IZM	**Izmir**	**1.64**	**192**	*e*Pn	**Pn**	**14 22 45.2**	**-0.7**
GDZ	**Gediz**	**1.65**	**123**	*i*P	**Pb**	**14 22 47.1**	**-0.6**
GDZ				*i*S	**Sg**	**14 23 10.0**	**-0.4**
GDZ	**Gediz**	**1.65**	**123**	*i*P	**Pb**	**14 22 47.1**	**-0.6**
GDZ				*i*S	**Sg**	**14 23 10.0**	**-0.4**
CAVI	**Cavuskoy**	**1.66**	**82**	*e*PN	**Pn**	**14 22 46.5**	**+0.3**
CAVI	**Cavuskoy**	**1.66**	**82**	*e*Pn	**Pn**	**14 22 46.5**	**+0.3**
KULA	**Kula-Manisa**	**1.66**	**153**	*e*PN	**Pn**	**14 22 46.3**	**0.0**
KULA	**Kula-Manisa**	**1.66**	**153**	*e*Pn	**Pn**	**14 22 46.3**	**0.0**
BLCB	**Balcova**	**1.69**	**198**	*e*PN	**Pn**	**14 22 46.1**	**-0.5**
BLCB	**Balcova**	**1.69**	**198**	*e*Pn	**Pn**	**14 22 46.1**	**-0.5**
HRT	**Hereke**	**1.71**	**61**	*e*PN	**Pn**	**14 22 47.4**	**+0.4**
HRT	**Hereke**	**1.71**	**61**	*e*Pn	**Pn**	**14 22 47.4**	**+0.4**
SILT	**Sile**	**1.88**	**51**	*e*PN	**Pn**	**14 22 49.3**	**+0.2**
SILT	**Sile**	**1.88**	**51**	*e*Pn	**Pn**	**14 22 49.3**	**+0.2**
EDRB	**Edirne**	**1.98**	**339**	*e*PN	**Pn**	**14 22 50.6**	**0.0**
EDRB	**Edirne**	**1.98**	**339**	*e*Pn	**Pn**	**14 22 50.6**	**0.0**
ALT	**Altintas**	**2.09**	**116**	*e*PN	**Pn**	**14 22 52.6**	**+0.4**
ALT	**Altintas**	**2.09**	**116**	*e*Pn	**Pn**	**14 22 52.6**	**+0.4**
KHL	**Karahalli**	**2.19**	**139**	*e*PN	**Pn**	**14 22 53.6**	**+0.1**
KHL	**Karahalli**	**2.19**	**139**	*e*Pn	**Pn**	**14 22 53.7**	**+0.1**
GULT	**Gulveren**	**2.20**	**78**	*e*PN	**Pn**	**14 22 54.2**	**+0.5**
GULT	**Gulveren**	**2.20**	**78**	*e*Pn	**Pn**	**14 22 54.2**	**+0.5**
SHUT	**Suhut-Afyon**	**2.64**	**122**	*e*PN	**Pn**	**14 23 00.3**	**+0.5**
SHUT	**Suhut-Afyon**	**2.64**	**122**	*e*Pn	**Pn**	**14 23 00.3**	**+0.5**

IGQ 10 14:23:21.3,1.°66S×81.°50W,h6km±18km, Mb4.0,Ms3.8, 7C-3D, Error ellipse: s-maj=6.5km s-min=3.2km az=4.2, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHIS	**Cerro-Chispas-**	**0.98**	**52**	⇑S	Sg	14 23 51.6	-1.4
CHIS	**Cerro-Chispas-**	**0.98**	**52**	⇑P	Pg	14 23 40.0	-0.2
PECV	**Mancha de Ca P**	**1.69**	**59**	S	Sn	14 24 05.7	-7.8
PECV	**Mancha de Ca P**	**1.69**	**59**	P	Pn	14 23 48.5	-3.0
JAMA	**Jama**	**1.90**	**43**	S	Sn	14 24 17.1	-1.6
JAMA	**Jama**	**1.90**	**43**	P	Pn	14 23 55.1	+0.8
IGUA	**Igualata**	**2.86**	**87**	P	Pn	14 24 09.8	+1.5
RIOE	**Riobamba**	**2.87**	**92**	P	Pn	14 24 08.8	+0.7
GOLV	**Golondrinas**	**3.00**	**52**	P	Pn	14 24 11.7	+2.2
GOLV	**Golondrinas**	**3.00**	**52**	S	Sn	14 24 47.6	+1.7
BBIL	**Ulba Tungurahu**	**3.02**	**86**	P	Pn	14 24 12.8	+2.7
BMAS	**Trigal station**	**3.02**	**87**	⇑P	Pn	14 24 11.3	+1.1
JUI6	**Juive**	**3.04**	**86**	P	Pn	14 24 12.6	+2.2
ARRY	**Arrayan**	**3.04**	**87**	⇑S	Sn	14 24 46.5	-1.2
ARRY	**Arrayan**	**3.04**	**87**	⇑P	Pn	14 24 11.4	+0.9
PAT1	**Patacocha**	**3.06**	**87**	P	Pn	14 24 12.6	+1.7
RUN5	**Runtun**	**3.08**	**86**	P	Pn	14 24 12.4	+1.5
BRUN	**Tungurahua Vol**	**3.09**	**86**	⇓P	Pn	14 24 12.8	+1.7
BULB	**Ulba Tungurahu**	**3.09**	**86**	S	Sn	14 24 49.7	+0.8
BULB	**Ulba Tungurahu**	**3.09**	**86**	P	Pn	14 24 13.2	+2.0
ULBA	**Ulba**	**3.10**	**86**	⇓P	Pn	14 24 13.7	+2.4
PISA	**Pisayambo**	**3.17**	**79**	P	Pn	14 24 14.6	+2.3
BNAS	**Cotopaxi Volca**	**3.17**	**72**	P	Pn	14 24 14.6	+2.2
BMOR	**Cotopaxi Volca**	**3.17**	**73**	P	Pn	14 24 14.3	+1.7
NAS2	**Nasa**	**3.19**	**72**	P	Pn	14 24 15.7	+3.0
BREF	**Cotopaxi Volca**	**3.21**	**72**	⇓P	Pn	14 24 16.1	+3.0
JUA2	**San Juan 2**	**3.23**	**64**	P	Pn	14 24 14.2	+1.0
BVC2	**Cotopaxi Volca**	**3.24**	**72**	P	Pn	14 24 15.0	+1.5
TERV	**Terraza Guagua**	**3.25**	**63**	P	Pn	14 24 15.7	+2.2
BTAM	**Cotopaxi Volca**	**3.25**	**73**	P	Pb	14 24 17.0	-3.2
PINO	**Pino**	**3.25**	**63**	P	Pn	14 24 14.6	+1.0
PITA	**Cotopaxi Volc**	**3.25**	**70**	P	Pn	14 24 16.1	+2.6
VC1	**Cotopaxi 1**	**3.25**	**72**	P	Pn	14 24 16.9	+3.3
GGP	**Refugio Guagua**	**3.26**	**63**	P	Pn	14 24 15.2	+1.5
COV1	**Cotopaxi Volc**	**3.31**	**73**	P	Pn	14 24 15.5	+1.1
ANTI	**Antisana**	**3.54**	**70**	P	Pn	14 24 21.0	+3.3
OTAV	**Otavalo**	**3.58**	**58**	⇑P	Pn	14 24 19.1	+1.1
OTAV	**Otavalo**	**3.58**	**58**	⇑S	Sn	14 25 01.6	+0.5
CAYR	**Refugio Cayamb**	**3.87**	**65**	P	Pn	14 24 25.7	+3.5
LITE	**Lita**	**3.98**	**52**	P	Pn	14 24 22.1	-1.0

*NIED **10** 14:25:00,32.°30N×142.°00E,h5km,Mw3.8 Best double couple: M0 5.16000×10^14 NP1:φs169.00000°,δ48.00000°, λ66.00000°. NP2:φs23.00000°,δ47.00000°,λ114.00000°.*
*JMA **10** 14:25:12.2±0.4,32.°27N×142.°01E,h9km,M3.8*
*IDC **10** 14:25:13.4±0.9,32.°09N×141.°72E,h0km,mb3.8/8, mb1 4.0/9,mb1mx3.8/25,mbtmp3.8/9,ML3.7/1,MS3.1/2, Ms1 3.1/2,ms1mx2.5/37, Error ellipse: s-maj=25.3km s-min=17.0km az=76.0*
*ISCJB **10** 14:25:13.5±1.7,32.°20N±0.°04×141.°97E±0.°08, h23km±14km,mb3.9/9,MS3.5/1, Error ellipse: s-maj=11.7km s-min=5.1km az=158.0*
ISC 10 14:25:16.9±0.9**, 32.°16N**±0.°06×**141.°79E**±0.°09**, h21**km±8**km, n29, σ1°52/37, mb4.0/9, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**1.92**	**299**	P	**Pn**	**14 25 47.0**	**-1.3**
JHCJ				*e*S	**Sn**	**14 26 12.5**	**+0.7**
JHJ2	**Mitsune**	**1.92**	**300**	P	**Pn**	**14 25 47.2**	**-1.2**
JHJ2				S	**Sb**	**14 26 14.2**	**-0.5**
JHJ	**Hachijo jima 2**	**1.95**	**300**	Pn	**Pn**	**14 25 47.4**	**-1.4**
	66nm,0.3s,baz=69,slow=20,SNR=16						
JHJ				Sn	**Sn**	**14 26 10.6**	**-2.0**
	63nm,0.3s,baz=86,slow=19,SNR=5.0						
BSO1	**Boso 1**	**2.58**	**345**	P	Pn	14 25 54.6	-2.4
BSO1				*e*S	**Sn**	**14 26 25.5**	**-1.9**
BSO2	**Boso 2**	**2.73**	**342**	*e*S	**Sn**	**14 26 29.5**	**-1.9**
BSO3	**Boso 3**	**2.85**	**338**	P	Pn	14 25 58.8	-2.1
BSO3				*e*S	**Sn**	**14 26 32.4**	**-2.0**
JKO	**Kozu shima**	**3.01**	**313**	P	Pn	**14 26 02.7**	**-0.7**
BSO4	**Boso 4**	**3.08**	**337**	P	Pn	**14 26 02.6**	**-1.6**
BSO4				*e*S	**Sn**	**14 26 40.6**	**+0.4**
JOD2	**Odawara 2**	**3.83**	**325**	P	Pn	**14 26 14.8**	**+0.1**
JOD2				*e*S	**Sn**	**14 26 56.3**	**-2.8**
JYN	**Shimob**	**4.29**	**322**	P	Pn	**14 26 21.2**	**+0.2**
JYN				*e*S	**Sn**	**14 27 13.0**	**+2.5**
JRY	**Ryogami san**	**4.54**	**329**	P	Pn	**14 26 23.7**	**-0.7**
JRY				*e*S	**Sn**	**14 27 16.5**	**0.0**
JAG	**Ashikaga**	**4.68**	**336**	P	Pn	14 26 24.0	-2.3
JAG				*e*S	**Sn**	**14 27 16.4**	**-3.5**
CBIJ	**Chichi jima**	**5.06**	**176**	P	Pn	**14 26 30.7**	**-0.8**
CBIJ				*e*S	**Sn**	**14 27 26.9**	**-2.4**
MJAR	**Matsushiro Arr**	**5.28**	**327**	Pn	**Pn**	**14 26 33.5**	**-1.2**
	2.6nm,0.3s,baz=154,slow=11,SNR=30						
MJAR				Sn	**Sn**	**14 27 35.9**	**+1.0**
	0.8nm,0.3s,baz=139,slow=13,SNR=5.2						
MAT	**Matsushiro**	**5.29**	**327**	P	**Pn**	**14 26 33.9**	**-0.7**
MAT				S	**Sn**	**14 27 33.5**	**-1.4**
MAT	**Matsushiro**	**5.29**	**327**	P	**Pn**	**14 26 34.1**	**-0.5**
MAT				*e*S	**Sn**	**14 27 34.7**	**-0.2**
JNU	**Nakatsue**	**9.26**	**279**	Sn	**Sn**	**14 29 11.8**	**-0.9**
	0.2nm,0.3s,baz=215,slow=19,SNR=5.3						
ASAJ	**Asahikawa**	**11.96**	**3**	Pn	Pn	14 28 02.3	-3.7
	0.5nm,0.3s,baz=320,slow=20,SNR=6.1						
KSRS	**Korea Array**	**12.56**	**299**	LR	LR	14 32 52.7	
	comp=Z,31nm,18.9s,baz=100,slow=37						
PETK	**Petropavlovsk-**	**23.88**	**24**	P	**P**	**14 30 30.2**	**+1.4**
	5.1nm,1.1s,baz=165,slow=12,SNR=4.1						
SONM	**Songino Array**	**30.99**	**311**	P	**P**	**14 31 34.0**	**+1.1**
	0.8nm,0.6s,baz=108,slow=12,SNR=3.4						
MKAR	**Makanchi Array**	**47.11**	**306**	P	**P**	**14 33 46.6**	**-0.8**
	1.1nm,0.6s,baz=90,slow=8.5,SNR=6.7						
KURBB	**Kurchatov Arra**	**49.35**	**311**	P	**P**	**14 34 03.8**	**-0.8**
	1.5nm,0.2s,baz=90,slow=7.5,SNR=9.0						
KDAK	**Kodiak Island**	**50.59**	**39**	LR	LR	14 58 05.1	
	comp=Z,44nm,18.1s,baz=235,slow=39						
WRA	**Warramunga Arr**	**52.29**	**189**	P	**P**	**14 34 26.2**	**-0.8**
	2.5nm,0.5s,baz=5.3,slow=7.6,SNR=69						
ILAR	**Eielson Array**	**53.49**	**30**	P	**P**	**14 34 37.6**	**+2.3**
	0.3nm,0.7s,baz=265,slow=7.5,SNR=4.4						
ASAR	**Alice Springs**	**56.02**	**189**	P	**P**	**14 34 53.5**	**-0.6**
	0.5nm,0.4s,baz=6.9,slow=7.2,SNR=21						
YKA	**Yellowknife Ar**	**67.88**	**29**	P	**P**	**14 36 12.0**	**-1.4**
	0.3nm,0.8s,baz=291,slow=6.3,SNR=4.4						
FINES	**FINESS Array B**	**73.28**	**333**	P	**P**	**14 36 45.6**	**-0.7**
	2.1nm,0.8s,baz=49,slow=3.5,SNR=4.4						

*NNC **10** 14:25:44.5±1.6,39.°53N×73.°26E,h0km,mb3.9,mpv3.4, Error ellipse: s-maj=14.5km s-min=7.7km az=176.0*
*ISCJB **10** 14:25:46.7±0.6,39.°72N±0.°05×73.°59E±0.°08,h10km, mb3.7/6,MS3.5/1, Error ellipse: s-maj=9.6km s-min=6.0km az=154.0*
*IDC **10** 14:25:50.0±1.4,39.°63N×73.°28E,h0km,mb3.7/6, mb1 3.7/11,mb1mx3.5/33,mbtmp3.6/11,ML3.2/5,MS2.9/3, Ms1 2.9/3,ms1mx2.6/44, Error ellipse: s-maj=29.7km s-min=12.6km az=130.0*
ISC 10 14:25:50.2±0.6**, 39.°67N**±0.°05×**73.°46E**±0.°06**, h10**km**, n32, σ2°14/28, mb3.8/6, 12C-9D, Tajikistan-Xinjiang border region**

| Code

mb1 4.3/30,mb1mx4.3/36,mbtmp4.2/30,ML3.3/4,MS3.2/4, Ms1 3.3/4,ms1mx2.8/47,Error ellipse: s-maj=12.7km s-min=10.2km az=36.0

NEIC ***10*** *14:47:44.3±0.2,46.80N×125.12E,h10km,mb4.5/17,Error ellipse: s-maj=5.7km s-min=4.9km az=16.0*

MOS ***10*** *14:47:45.6±0.9,46.76N×125.25E,h33km,mb4.7/21,Error ellipse: s-maj=10.4km s-min=6.0km az=112.0*

SZGRF ***10*** *14:47:49.1,47.90N×126.96E,h33km,mb4.8, Northeastern China*

ISC 10 14:47:44.7±0.5,46.75N±0.04×125.17E±0.03,h16km±2km, h16km:pP-P,n218,σ1s37/256,mb4.5/54,MS3.4/6,12C-2D, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CN2	**Changchun**	**2.95**	**176**	*e*Pg		**Pg**	**14 48 41.1**	**-0.2**
CN2				*e*Sn		**Sn**	**14 49 07.8**	**+1.9**
CN2				*e*Sg		**Sg**	**14 49 17.9**	**-1.6**
CN2				smax	smax			
	comp=N,2μm,0.6s							
CN2				smax	smax			
	comp=E,2μm,0.6s							
CN2	**Changchun**	**2.95**	**176**	*e*Pn		**Pn**	**14 48 31.0**	**+0.2**
CN2				*e*Sn		**Sn**	**14 49 07.8**	**+1.9**
CN2				*e*Sg		**Sg**	**14 49 17.9**	**-1.6**
CN2				smax	smax			
	comp=N,2μm,0.6s							
CN2				smax	smax			
	comp=E,2μm,0.6s							
MDJ	**Mudanjiang**	**3.76**	**123**	Pn		**Pn**	**14 48 41.4**	**-0.6**
MDJ				Pg		**Pb**	**14 48 52.8**	**+2.1**
MDJ				Sg		**Sg**	**14 49 41.5**	**-3.9**
MDJ				smax	smax			
	comp=N,2μm,0.5s							
MDJ				smax	smax			
	comp=E,3μm,0.6s							
MDJ	**Mudanjiang**	**3.76**	**123**	*e*Pn		**Pn**	**14 48 40.6**	**-1.3**
HIA	**Hailar**	**4.43**	**307**	*e*Pn		**Pn**	**14 48 50.3**	**-0.9**
SNY	**Shenyang**	**5.05**	**194**	Pn		**Pn**	**14 49 00.2**	**+0.6**
SNY				Pg		Pg	14 49 17.1	-4.2
SNY				Sg		**Sg**	**14 50 23.2**	**-3.5**
SNY				smax	smax			
	comp=N,600nm,0.5s							
SNY				smax	smax			
	comp=E,460nm,0.5s							
KLR	**Kul'dur**	**5.07**	**58**	*e*P		**Pn**	**14 48 57.3**	**-2.6**
KLR				MLR	MLR			
	comp=E,2μm,9.0s							
KLR				MLR	MLR			
	comp=E,4μm,9.0s							
USRK	**Ussuriysk Arra**	**5.44**	**115**	Pn		**Pn**	**14 49 04.3**	**-0.7**
	comp=Z,2.6nm,0.3s,baz=292,slow=13,SNR=24							
USRK				Pg		Pg	14 49 24.5	-4.3
	comp=Z,20nm,0.3s,baz=313,slow=20,SNR=23							
USRK				Sn		**Sn**	**14 50 05.1**	**-2.0**
	comp=Z,15nm,0.3s,baz=311,slow=23,SNR=6.2							
USRK				Lg		Lg	14 50 34.4	
	comp=Z,58nm,0.3s,baz=304,slow=28,SNR=10							
VLA	**Vladivostok**	**5.99**	**125**	*i* P		**Pn**	**14 49 14.1**	**+1.5**
HABR	**Khabarovsk**	**6.90**	**72**	*e*P		**Pn**	**14 49 23.8**	**-1.2**
HABR				*e*			14 50 43.2	
HABR				pmax	pmax			
	comp=Z,6.0nm,0.7s							
HABR				pmax	pmax			
	comp=N,5.0nm,0.5s							
HABR				pmax	pmax			
	comp=E,8.0nm,0.7s							
HABR				MLR	MLR			
	comp=Z,157nm,9.0s							
DL2	**Dalian**	**8.26**	**200**	P		Pn	14 49 48.1	+4.4
DL2				*e*S		Sn	14 51 26.4	+10
DL2				pmax	pmax			
	comp=Z,38nm,1.0s							
DL2				LR	LR			
	comp=N,520nm,11.2s							
DL2				LR	LR			
	comp=E,520nm,11.0s							
DL2				LR	LR			
	comp=Z,380nm,12.1s							
BJI	**Beijing**	**9.37**	**228**	P		**Pn**	**14 49 58.3**	**-0.6**
BJI				pmax	pmax			
	comp=Z,14nm,0.4s							
BJI				LR	LR			
	comp=N,850nm,8.9s							
BJI				LR	LR			
	comp=E,680nm,9.4s							
BJI				LR	LR			
	comp=Z,150nm,11.8s							
BJI	**Beijing**	**9.37**	**228**	P		**Pn**	**14 49 58.3**	**-0.6**
BJI	**Beijing**	**9.37**	**228**	P		**Pn**	**14 49 58.3**	**-0.6**
KSRS	**Korea Array**	**9.51**	**167**	Pn		**Pn**	**14 50 03.0**	**+2.2**
	comp=Z,2.4nm,0.3s,baz=353,slow=13,SNR=26							
KSRS				Lg		Lg	14 52 45.5	
	comp=Z,5.0nm,0.3s,baz=344,slow=29,SNR=16							
KSAR	**Wonju Array Be**	**9.52**	**167**	Pn		**Pn**	**14 50 03.0**	**+2.1**
KSAR				Lg		Lg	14 52 45.5	
CLNS	**Chul'man**	**10.11**	**359**	*e*P		**Pn**	**14 50 07.7**	**-1.3**
CLNS				pmax	pmax			
	comp=Z,3.0nm,0.8s							
CLNS				pmax	pmax			
	comp=N,2.0nm,0.6s							
CLNS				pmax	pmax			
	comp=E,3.0nm,1.1s							
CLNS				pmax	pmax			
	comp=Z,9.0nm,1.1s							
CLNS				pmax	pmax			
	comp=E,4.0nm,0.6s							
CLNS				pmax	pmax			
	comp=N,11nm,0.9s							
CLNS				MLR	MLR			
	comp=N,87nm,18.0s							
CLNS				MLR	MLR			
	comp=E,134nm,15.0s							
CLNS				MLR	MLR			
	comp=Z,127nm,20.0s							
YSS	**Yuzh-Sakhalins**	**12.05**	**83**	*e*P		P	14 50 44.0	-4.4
YSS				MLR	MLR			
	comp=Z,500nm,14.0s							
ULN	**Ulaanbaatar**	**12.35**	**282**	*e*P		**Pn**	**14 50 38.5**	**-1.3**
	comp=Z,5.3nm,0.8s							
SONM	**Songino Array**	**12.79**	**282**	Pn		**Pn**	**14 50 43.4**	**-2.4**
SONM				Sn		**Sn**	**14 53 07.1**	**-0.8**
SONM				Lg		Lg	14 54 29.3	
SONM	**Songino Array**	**12.79**	**282**	Pn		**Pn**	**14 50 43.4**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=94,slow=13,SNR=5.9							
SONM				Sn		**Sn**	**14 53 07.1**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=90,slow=21,SNR=4.6							
SONM				Lg		Lg	14 54 29.3	
	comp=Z,3.0nm,0.3s,baz=92,slow=26,SNR=5.6							
SONM				LR	LR		14 55 11.6	
	comp=Z,78nm,19.5s,baz=66,slow=35							
MJAR	**Matsushiro Arr**	**14.09**	**132**	Pn		**Pn**	**14 51 05.3**	**+1.8**
MJAR	**Matsushiro Arr**	**14.09**	**132**	Pn		**Pn**	**14 51 05.3**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=311,slow=14,SNR=2.7							
YAK	**Yakutsk**	**15.53**	**8**	*e*P		**Pn**	**14 51 20.5**	**-2.2**
YAK				pmax	pmax			
	comp=Z,14nm,1.0s							
YAK				pmax	pmax			
	comp=N,9.0nm,1.1s							
YAK				pmax	pmax			
	comp=E,2.0nm,1.3s							
YAK				MLR	MLR			
	comp=Z,225nm,12.0s							
LZH	**Lanzhou**	**19.16**	**244**	*e*P		**P**	**14 52 07.0**	**-0.4**
LZH				pP		**pP**	**14 52 10.6**	**-1.4**
LZH				sP		**sP**	**14 52 14.3**	**+0.2**
LZH				*e*S		**Sn**	**14 55 38.0**	**-4.6**
LZH				sS		**S**	**14 55 43.5**	**-0.5**
LZH				*e*SS		**SnSn**	**14 56 03.4**	**+7.0**
LZH				pmax	pmax			
	comp=Z,19nm,1.0s							
LZH				pmax	pmax			
	comp=Z,66nm,4.7s							
LZH				LR	LR			
	comp=N,480nm,10.2s							
LZH				LR	LR			
	comp=E,330nm,12.8s							
LZH				LR	LR			
	comp=Z,520nm,13.4s							
LZH	**Lanzhou**	**19.16**	**244**	*e*P		**P**	**14 52 07.0**	**-0.4**
LZH				*e*S		**Sn**	**14 55 38.0**	**-4.6**
LZH	**Lanzhou**	**19.16**	**244**	*e*P		**P**	**14 52 07.0**	**-0.4**
LZH				pP		**pP**	**14 52 10.6**	**-1.4**
LZH				sP		**sP**	**14 52 14.3**	**+0.2**
LZH				*e*S		**Sn**	**14 55 38.0**	**-4.6**
GTA	**Gaotai**	**19.86**	**258**	*e*P		**Pn**	**14 52 18.6**	**+1.9**
GTA				pP		**pP**	**14 52 23.1**	**+3.4**
GTA				sP		**sP**	**14 52 25.6**	**+3.8**
GTA				pmax	pmax			
	comp=Z,4.0nm,1.4s							
GTA				pmax	pmax			
	comp=Z,120nm,5.0s							
GTA				LR	LR			
	comp=N,240nm,10.4s							
GTA				LR	LR			
	comp=E,210nm,11.9s							
GTA				LR	LR			
	comp=Z,370nm,11.4s							
ENH	**Enshi**	**20.46**	**222**	*e*P		Pn	14 52 24.5	+0.8
	comp=Z,14nm,1.0s							
HVS	**Khovu-Aksy**	**21.04**	**294**	*i* P		**P**	**14 52 31.0**	**+3.4**
HVS				pmax	pmax			
	comp=Z,9.0nm,0.8s							
HVS				MLR	MLR			
	comp=Z,4μm,25.0s							
PEA0B	**Petropavlovsk-**	**21.75**	**61**	*e*P		**P**	**14 52 36.5**	**+1.3**
PETK	**Petropavlovsk-**	**21.75**	**61**	*e*P		**P**	**14 52 36.9**	**+1.7**
PETK				pmax	pmax			
	comp=Z,18nm,0.8s							
PETK	**Petropavlovsk-**	**21.75**	**61**	P		**P**	**14 52 35.8**	**+0.6**
PETK	**Petropavlovsk-**	**21.75**	**61**	P		**P**	**14 52 35.8**	**+0.6**
	comp=Z,18nm,0.8s,baz=225,slow=6.3,SNR=22							
PETK				LR	LR		15 02 23.3	
	comp=Z,36nm,19.8s,baz=261,slow=40							
SEY	**Seymchan**	**22.27**	**33**	*i* P		**P**	**14 52 41.6**	**+0.9**
TIXI	**Tiksi**	**25.04**	**3**	*e*P		**P**	**14 53 07.2**	**-0.3**
TIXI				pmax	pmax			
	comp=Z,36nm,0.9s							
TIXI	**Tiksi**	**25.04**	**3**	*e*P		**P**	**14 53 07.2**	**-0.3**
	comp=Z,36nm,0.9s							
WMQ	**Urumqi**	**26.37**	**277**	*e*P		**P**	**14 53 18.8**	**-1.2**
WMQ				pP		**pP**	**14 53 23.0**	**-1.9**
WMQ				sP		**sP**	**14 53 25.8**	**-1.2**
WMQ				PP		**PnPn**	**14 54 01.8**	**+2.4**
WMQ				PcP		**PcP**	**14 56 44.7**	**-0.6**
WMQ				S		**S**	**14 57 49.4**	**-3.0**
WMQ				SS		**SnSn**	**14 58 58.9**	**+6.1**
WMQ				ScP		**ScP**	**15 00 22.8**	**-1.5**
WMQ				ScS		**ScS**	**15 04 11.6**	**-2.8**
WMQ				pmax	pmax			
	comp=Z,10.0nm,0.4s							
WMQ				pmax	pmax			
	comp=Z,130nm,4.6s							
WMQ				LR	LR			
	comp=N,610nm,8.2s							
WMQ				LR	LR			
	comp=E,280nm,8.0s							
WMQ				LR	LR			
	comp=Z,89nm,14.6s							
ZALV	**Zalesovo Beam**	**26.44**	**301**	P		**P**	**14 53 20.7**	**+0.3**
ZALV							14 56 44.9	
ZALV	**Zalesovo Beam**	**26.44**	**301**	*e*P		**P**	**14 53 22.5**	**+2.1**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**26.44**	**301**	P		**P**	**14 53 20.7**	**+0.3**
ZALV				PcP		**PcP**	**14 56 44.9**	**-0.4**
ZALV	**Zalesovo Beam**	**26.44**	**301**	P		**P**	**14 53 20.7**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=76,slow=8.0,SNR=5.4							
ZALV				PcP		**PcP**	**14 56 44.9**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=90,slow=0.6,SNR=3.6							
MKAR	**Makanchi Array**	**29.10**	**286**	P		**P**	**14 53 42.9**	**-1.5**
MKAR							14 56 51.6	
MKAR	**Makanchi Array**	**29.10**	**286**	P		**P**	**14 53 42.9**	**-1.5**
MKAR				PcP		**PcP**	**14 56 51.6**	**-0.3**
MKAR	**Makanchi Array**	**29.10**	**286**	P		**P**	**14 53 42.9**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=79,slow=7.5,SNR=2.8							
MKAR				PcP		**PcP**	**14 56 51.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=63,slow=1.3,SNR=4.8							
BILL	**Bilibino**	**29.82**	**30**	*i* P		**P**	**14 53 50.8**	**+0.4**
BILL				pmax	pmax			
	comp=Z,9.0nm,1.4s							
BILL	**Bilibino**	**29.82**	**30**	*e*P		**P**	**14 53 50.5**	**+0.1**
	comp=Z,3.4nm,0.8s							
KURK	**Kurchatov**	**30.56**	**295**	*e*P		**P**	**14 53 57.5**	**+0.3**
KURK				pmax	pmax			
	comp=Z,5.0nm,1.7s							
KURK				MLR	MLR			
	comp=Z,40nm,18.0s							
KURK	**Kurchatov**	**30.56**	**295**	P		**P**	**14 53 58.5**	**+1.4**
KURK				PcP		**PcP**	**14 56 54.3**	**-1.2**
KURBB	**Kurchatov Arra**	**30.63**	**295**	P		**P**	**14 53 58.5**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=80,slow=9.6,SNR=8.8							
KURBB				PcP		**PcP**	**14 56 54.3**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=83,slow=2.2,SNR=5.4							
TKM2	**Tokmak 2**	**34.89**	**282**	*e*P		**P**	**14 54 37.6**	**+2.1**
TKM2				pmax	pmax			
	comp=Z,4.0nm,0.8s							
TKM2	**Tokmak 2**	**34.89**	**282**	*e*P		**P**	**14 54 37.5**	**+2.1**
	comp=Z,4.0nm,0.8s							
BVAR	**Borovoye Array**	**35.10**	**301**	P		**P**	**14 54 37.3**	**+0.5**
BVAR							14 57 07.8	
BVAR	**Borovoye Array**	**35.10**	**301**	P		**P**	**14 54 37.3**	**+0.5**
BVAR				PcP		**PcP**	**14 57 07.8**	**-0.3**
BVAR	**Borovoye Array**	**35.10**	**301**	P		**P**	**14 54 37.3**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=80,slow=10,SNR=17							
BVAR				PcP		**PcP**	**14 57 07.8**	**-0.3**
	comp=Z,2.9nm,0.5s,baz=92,slow=2.4,SNR=19							
BRVK	**Borovoye**	**35.15**	**301**	*e*P		**P**	**14 54 38.1**	**+0.8**
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.6s							
BRVK	**Borovoye**	**35.15**	**301**	*e*P		**P**	**14 54 38.1**	**+0.8**
	comp=Z,1.8nm,0.6s							
CMAR	**Chiang Mai Arr**	**35.51**	**226**	P		**P**	**14 54 41.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**35.51**	**226**	P		**P**	**14 54 41.5**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=30,slow=7.3,SNR=4.4							
AAK	**Ala-Archa**	**35.75**	**282**	*e*P		**P**	**14 54 44.4**	**+1.6**
AAK				pmax	pmax			
	comp=Z,7.0nm,1.7s							
AAK				MLR	MLR			
	comp=Z,112nm,18.0s							
AAK	**Ala-Archa**	**35.75**	**282**	*e*P		**P**	**14 54 43.8**	**+1.1**
	comp=Z,1.9nm,1.0s							
AAK	**Ala-Archa**	**35.75**	**282**	P		**P**	**14 54 43.8**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=153,slow=2.5,SNR=5.4							
AAK				LR	LR		15 09 28.2	
	comp=Z,28nm,18.8s,baz=212,slow=37							
KKAR	**Karatay Array**	**38.22**	**285**	P		**P**	**14 55 02.6**	**-0.9**
KKAR	**Karatay Array**	**38.22**	**285**	P		**P**	**14 55 02.6**	**-0.9**
TNA	**Tin City**	**39.43**	**37**	*e*P		**P**	**14 55 13.8**	**+0.5**
ABKAR	**Akbulak array**	**42.50**	**298**	*e*P		**P**	**14 55 39.7**	**+0.8**
	comp=Z,1.8nm,0.4s							
AKTO	**Aktyubinsk**	**43.20**	**301**	P		**P**	**14 55 44.1**	**-0.5**
AKTO	**Aktyubinsk**	**43.20**	**301**	P		**P**	**14 55 44.0**	**-0.5**
AKTO	**Aktyubinsk**	**43.20**	**301**	P		**P**	**14 55 44.0**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=76,slow=12,SNR=3.1							
KDAK	**Kodiak Island**	**48.49**	**45**	P		**P**	**14 56 26.3**	**+0.2**
KDAK	**Kodiak Island**	**48.49**	**45**	P		**P**	**14 56 26.3**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=303,slow=2.6,SNR=5.0							
ARCES	**ARCESS Array B**	**50.28**	**333**	P		**P**	**14 56 39.6**	**0.0**
ARCES	**ARCESS Array B**	**50.28**	**333**	P		**P**	**14 56 39.6**	**0.0**
	comp=Z,2.1nm,0.7s,baz=66,slow=9.4,SNR=5.5							
ARCES				LR	LR		15 21 05.7	
	comp=Z,97nm,19.1s,baz=243,slow=40							
INK	**Inuvik**	**51.40**	**28**	P		**P**	**14 56 49.0**	**+1.0**
INK	**Inuvik**	**51.40**	**28**	P		**P**	**14 56 49.0**	**+1.0**
	comp=Z,9.0nm,0.6s,baz=318,slow=7.6,SNR=77							
FINES	**FINESS Array B**	**54.23**	**324**	P		**P**	**14 57 08.3**	**-0.7**
FINES				PcP		**PcP**	**14 58 12.4**	**-0.8**
FINES	**FINESS Array B**	**54.23**	**324**	P		**P**	**14 57 08.3**	**-0.7**
	comp=Z,2.8nm,0.5s,baz=66,slow=7.5,SNR=19							
FINES				PcP		**PcP**	**14 58 12.4**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=43,slow=4.2,SNR=3.5							
RES	**Resolute Bay**	**55.94**	**12**	*e*P		**P**	**14 57 21.1**	**-0.1**
	comp=Z,5.2nm,1.1s							
RES	**Resolute Bay**	**55.94**	**12**	P		**P**	**14 57 21.1**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=333,slow=6.8,SNR=10.0							
AKASG	**Malin Array Be**	**59.00**	**312**	P		**P**	**14 57 41.5**	**-1.7**
AKASG	**Malin Array Be**	**59.00**	**312**	P		**P**	**14 57 41.5**	**-1.7**
AKASG	**Malin Array Be**	**59.00**	**312**	P		**P**	**14 57 41.4**	**-1.7**
	comp=Z,2.4nm,0.6s,baz=47,slow=6.4,SNR=4.4							
AK01	**Malin Array Si**	**59.01**	**312**	*e*P		**P**	**14 57 43.2**	**-0.1**
AK02	**Malin Array Si**	**59.03**	**312**	*e*P		**P**	**14 57 43.3**	**-0.1**
HFS	**Hagfors**	**59.83**	**327**	P		**P**	**14 57 48.4**	**-0.4**
HFS	**Hagfors**	**59.83**	**327**	P		**P**	**14 57 48.4**	**-0.4**
	comp=Z,2.1nm,0.4s,baz=53,slow=4.7,SNR=21							
NB2	**NORSAR Subarra**	**60.11**	**329**	P		**P**	**14 57 50.4**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=45,slow=6.5							
NOA	**NORSAR Array B**	**60.11**	**329**	P		**P**	**14 57 50.5**	**-0.2**
NOA	**NORSAR Array B**	**60.11**	**329**	P		**P**	**14 57 50.5**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=48,slow=6.5,SNR=14							
YKW3	**Yellowknife Ar**	**61.11**	**27**	*e*P		**P**	**14 57 57.0**	**-0.4**
YKA	**Yellowknife Ar**	**61.16**	**27**	P		**P**	**14 57 57.3**	**-0.5**
YKA	**Yellowknife Ar**	**61.16**	**27**	P		**P**	**14 57 57.3**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=318,slow=6.9,SNR=52							
BUR08	**Bucovina Ar. S**	**62.97**	**312**	*e*P		**P**	**14 58 11.2**	**+0.9**
BR131	**Keskin Array S**	**63.38**	**300**	*e*P		**P**	**14 58 13.8**	**+0.6**
	comp=Z,2.5nm,0.9s							
BRTR	**Keskin Array B**	**63.38**	**300**	P		**P**	**14 58 13.1**	**-0.2**
BRTR	**Keskin Array B**	**63.38**	**300**	P		**P**	**14 58 13.1**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=70,slow=5.4,SNR=14							
MORC	**Moravsky Berou**	**65.30**	**317**	*e*P		**P**	**14 58 26.1**	**+0.6**
MORC				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MORC	**Moravsky Berou**	**65.30**	**317**	*e*P		**P**	**14 58 26.1**	**+0.6**
	comp=Z,3.8nm,0.8s							
DPC	**Dobruska-Polom**	**65.47**	**318**	⇑ *i* P		**P**	**14 58 28.0**	**+1.4**
DPC	**Dobruska-Polom**	**65.47**	**318**	⇑ *i* P		**P**	**14 58 28.0**	**+1.4**
UPC	**Upice**	**65.50**	**318**	*e*P		**P**	**14 58 28.0**	**+1.3**
UPC	**Upice**	**65.50**	**318**	⇑ *e*P		**P**	**14 58 28.0**	**+1.3**
PVCC	**Panska Ves**	**66.14**	**319**	*e*P		**P**	**14 58 31.8**	**+1.0**
PVCC	**Panska Ves**	**66.14**	**319**	⇑ *e*P		**P**	**14 58 31.8**	**+1.0**
BRG	**Berggiesshubel**	**66.17**	**320**	*e*P		**P**	**14 58 32.5**	**+1.4**
	comp=Z,3.3nm,0.7s							
BRG	**Berggiesshubel**	**66.17**	**320**	*e*P		**P**	**14 58 32.5**	**+1.4**
	comp=Z,3.0nm,0.8s							
CLL	**Collm**	**66.28**	**321**	⇑ *i* P		**P**	**14 58 32.2**	**+0.5**
CLL				pmax	pmax			
	comp=Z,6.0nm,0.6s							
CLL	**Collm**	**66.28**	**321**	*e*P		**P**	**14 58 32.2**	**+0.5**
	comp=Z,6.0nm,0.6s							
CLL	**Collm**	**66.28**	**321**	⇑ *i* P		**P**	**14 58 32.2**	**+0.5**
	comp=Z,6.0nm,0.6s							
CLL				*e*pP		**pP**	**14 58 36.0**	**-1.0**
PRU	**Pruhonice**	**66.54**	**319**	*e*P		**P**	**14 58 34.6**	**+1.2**
PRU	**Pruhonice**	**66.54**	**319**	⇑ *e*P		**P**	**14 58 34.6**	**+1.2**
TREC	**Trest**	**66.60**	**318**	*e*P		**P**	**14 58 35.1**	**+1.3**
TREC	**Trest**	**66.60**	**318**	⇑ *e*P		**P**	**14 58 35.1**	**+1.3**
NEUB	**Neuenburg**	**66.88**	**321**	*e*P		**P**	**14 58 36.4**	**+0.8**
	comp=Z,8.0nm,0.7s							
WRA	**Warramunga Arr**	**66.89**	**171**	P		**P**	**14 58 35.8**	**-0.1**
WRA	**Warramunga Arr**	**66.89**	**171**	P		**P**	**14 58 35.8**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=354,slow=7.1,SNR=29							
PLN	**Plauen**	**67.24**	**320**	*e*P		**P**	**14 58 38.6**	**+0.7**
	comp=Z,28nm,1.1s							
GUNZ	**Gunzen**	**67.25**	**320**	*e*P		**P**	**14 58 39.0**	**+1.0**
	comp=Z,19nm,2.1s							
WERN	**Wernitzgruen**	**67.29**	**320**	*e*P		**P**	**14 58 39.4**	**+1.2**
	comp=Z,4.0nm,0.5s							
ROHR	**Rohrbach**	**67.35**	**320**	*e*P		**P**	**14 58 39.7**	**+1.1**
MOX	**Moxa**	**67.36**	**321**	*e*P		**P**	**14 58 39.1**	**+0.4**
MOX				pmax	pmax			
	comp=Z,2.0nm,0.6s							
MOX	**Moxa**	**67.36**	**321**	*e*P		**P**	**14 58 39.1**	**+0.4**
	comp=Z,2.0nm,0.6s							
KHC	**Kasperske Hory**	**67.59**	**319**	⇑ *i* P		**P**	**14 58 41.3**	**+1.1**
KHC	**Kasperske Hory**	**67.59**	**319**	*e*P		**P**	**14 58 41.2**	**+1.1**
	comp=Z,6.6nm,1.0s							
KHC	**Kasperske Hory**	**67.59**	**319**	⇑ *i* P		**P**	**14 58 41.3**	**+1.1**
KHC				*e*pP		**pP**	**14 58 45.3**	**-0.2**
GEC2	**GERESS Array S**	**67.74**	**318**	*e*P		**P**	**14 58 41.8**	**+0.6**
GEC2				pmax	pmax			
	comp=Z,2.0nm,0.7s							
GEC2	**GERESS Array S**	**67.74**	**318**	*e*P		**P**	**14 58 41.8**	**+0.6**
	comp=Z,2.0nm,0.7s							
GERES	**GERESS Array B**	**67.74**	**318**	P		**P**	**14 58 42.0**	**+0.8**
GERES	**GERESS Array B**	**67.74**	**318**	P		**P**	**14 58 42.0**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=38,slow=6.8,SNR=15							
ROTZ	**Rotzenmuhle**	**67.74**	**320**	*e*P		**P**	**14 58 42.4**	**+1.3**
	comp=Z,4.0nm,0.7s							
WET	**Wettzell**	**67.90**	**319**	*e*P		**P**	**14 58 43.2**	**+1.1**
WET				pmax	pmax			
	comp=Z,2.0nm,0.8s							
WET	**Wettzell**	**67.90**	**319**	*e*P		**P**	**14 58 43.2**	**+1.1**
	comp=Z,2.0nm,0.8s							
GRF	**Grafenberg Arr**	**68.23**	**320**	*e*P		**P**	**14 58 45.4**	**+1.2**
GRF				pmax	pmax			
	comp=Z,10.0nm,0.8s							
GRF	**Grafenberg Arr**	**68.23**	**320**	*e*P		**P**	**14 58 45.4**	**+1.2**
	comp=Z,10.0nm,0.8s							
BFO	**Black Forest**	**70.52**	**321**	*e*P		**P**	**14 58 59.1**	**+0.8**
BFO				pmax	pmax			
	comp=Z,5.0nm,0.9s							
BFO	**Black Forest**	**70.52**	**321**	*e*P		**P**	**14 58 59.1**	**+0.8**
	comp=Z,5.0nm,0.9s							
AS31	**Alice Springs**	**70.53**	**172**	P		**P**	**14 59 00.4**	**+1.9**
ASAR	**Alice Springs**	**70.53**	**172**	P		**P**	**14 58 58.6**	**+0.1**
ASAR	**Alice Springs**	**70.53**	**172**	P		**P**	**14 58 58.6**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=357,slow=6.7,SNR=24							
BAIF	**Baives**	**70.91**	**324**	*e*P		**P**	**14 59 00.8**	**+0.2**
BAIF	**Baives**	**70.91**	**324**	*e*P		**P**	**14 59 00.8**	**+0.2**
BAIF	**Baives**	**70.91**	**324**	*e*P		**P**	**14 59 00.8**	**+0.2**
CDF	**Champ du Feu**	**70.91**	**321**	*e*P		**P**	**14 59 01.5**	**+0.7**
CDF	**Champ du Feu

EPF	Esparros	78.13	322	*e*P		P	14 59 43.2	+0.4
	comp=Z,6.5nm,0.8s							
PDAR	Pinedale Array	78.53	38	P		P	14 59 45.0	-0.3
PDAR	Pinedale Array	78.53	38	P		P	14 59 45.0	-0.3
	comp=Z,0.9nm,0.6s,baz=350,slow=1.6,SNR=12							
ETSF	Etsaut	78.62	323	*e*P		P	14 59 46.0	+0.5
ETSF	Etsaut	78.62	323	*e*P		P	14 59 46.0	+0.5
ETSF	Etsaut	78.62	323	*e*P		P	14 59 46.0	+0.5
STKA	Stephens Creek	79.65	166	P		P	14 59 51.6	+0.6
STKA	Stephens Creek	79.65	166	P		P	14 59 51.6	+0.6
	comp=Z,3.8nm,0.6s,baz=328,slow=4.9,SNR=9.4							
ISCO	Idaho Springs	82.65	37	*e*P		P	15 00 08.0	+0.5
ISCO	Idaho Springs	82.65	37	*e*P		P	15 00 08.0	+0.5
ESDC	Sonseca Array	82.72	323	P		P	15 00 08.3	+0.8
ESDC	Sonseca Array	82.72	323	P		P	15 00 08.3	+0.8
	comp=Z,1.3nm,0.6s,baz=22,slow=5.3,SNR=8.9							
TXAR	Lajitas Array	92.37	41	P		P	15 00 56.5	+2.0
TXAR	Lajitas Array	92.37	41	P		P	15 00 56.5	+2.0
	comp=Z,0.4nm,0.9s,baz=284,slow=5.0,SNR=4.7							
SNAA	Sanae	145.36	206	*e*PKP		PKPbc	15 07 19.9	-0.3
SNAA	Sanae	145.36	206	PKPbc		PKPbc	15 07 19.9	-0.3
SNAA	Sanae	145.36	206	PKPbc		PKPbc	15 07 19.9	-0.3
	comp=Z,1.2nm,0.6s,baz=161,slow=12,SNR=17							
VNA2	Neumayer--Watz	146.99	206	*e*PKP		PKPbc	15 07 25.2	+0.1
LPAZ	La Paz	147.68	24	*e*PKPbc		PKPbc	15 07 29.0	-0.3
LPAZ	La Paz	147.68	24	PKPbc		PKPdf	15 07 27.3	+0.7
	comp=Z,2.5nm,0.7s,baz=353,slow=1.0,SNR=11							
BDFB	Brasilia	148.47	347	PKPbc		PKPbc	15 07 29.8	-1.0
BDFB	Brasilia	148.47	347	PKPbc		PKPbc	15 07 29.8	-1.0
	comp=Z,1.9nm,0.7s,baz=203,slow=9.5,SNR=3.2							

ISK ***10*** *14:48:30.8, 37.21N×28.17E, h11km, MD2.7*
ISCJB ***10*** *14:48:31.0±0.5, 37.17N±0.05×28.15E±0.04, h14km±5km, Error ellipse: s-maj=8.7km s-min=4.9km az=29.9*
DDA ***10*** *14:48:31.3, 37.22N×28.17E, h7km, MD3.0*
CSEM ***10*** *14:48:31.1±0.1, 37.20N×28.17E, h12km, MD2.7, Error ellipse: s-maj=3.4km s-min=2.4km az=29.0*

ISC 10 14:48:31.4±0.9, 37.21N±0.03×28.18E±0.03, h10km±7km, n20, σ0.945/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YER	Yerkesik	0.11	130	*e*Pg		Pg	14 48 33.6	-0.5
YER				*e*Sg		Sg	14 48 36.6	+0.5
YER	Yerkesik	0.11	130	*e*Pg		Pg	14 48 33.7	-0.5
YER				*e*Sg		Sg	14 48 36.6	+0.5
MLSB	Milas	0.33	286	*e*Pg		Pg	14 48 37.7	-0.4
MLSB				*e*Sg		Sg	14 48 43.2	+0.7
MLSB	Milas	0.33	286	*e*Pg		Pg	14 48 37.7	-0.4
MLSB				*e*Sg		Sg	14 48 43.2	+0.7
TURN	Turunc	0.47	134	*i* P		Pg	14 48 40.0	-0.6
TURN				*i* S		Sg	14 48 47.2	+0.3
TURN	Turunc	0.47	134	*i* P		Pg	14 48 40.0	-0.6
TURN				*i* S		Sg	14 48 47.2	+0.3
AYDN	Tasoluk	0.51	332	*i* P		Pg	14 48 41.2	-0.3
AYDN				*i* S		Sg	14 48 48.5	+0.3
AYDN	Tasoluk	0.51	332	*i* P		Pg	14 48 41.2	-0.3
AYDN				*i* S		Sg	14 48 48.5	+0.3
DALY	Dalyan (Mu˘la	0.54	135	*e*PG		Pg	14 48 42.1	+0.2
DALY	Dalyan (Mu˘la	0.54	135	*e*Pg		Pg	14 48 42.2	+0.2
DAT	Datca	0.68	226	*e*PG		Pg	14 48 44.1	-0.4
DAT	Datca	0.68	226	*e*Pg		Pg	14 48 44.1	-0.4
BODT	Bodrum	0.71	259	*e*PG		Pg	14 48 44.8	-0.3
BODT	Bodrum	0.71	259	*e*Pg		Pg	14 48 44.8	-0.3
DNZL	Cakiroluk	0.84	55	*i* P		Pg	14 48 47.3	-0.4
DNZL				*i* S		Sb	14 49 00.4	+0.6
DNZL	Cakiroluk	0.84	55	*i* P		Pg	14 48 47.3	-0.4
DNZL				*i* S		Sb	14 49 00.4	+0.6
FETY	Fethiye	0.92	128	*e*PG		Pb	14 48 49.5	-0.1
FETY	Fethiye	0.92	128	*e*Pg		Pb	14 48 49.5	-0.1
KULA	Kula-Manisa	1.36	16	*e*PN		Pn	14 48 56.3	-0.3
KULA	Kula-Manisa	1.36	16	*e*Pn		Pn	14 48 56.3	-0.3

IDC 10 15:08:29.3±10.0, 22.26N×143.86E, h233km±84km, mb3.0/5, mb1 3.1/5, mb1mx2.8/26, mbtmp3.0/5, Error ellipse: s-maj=119.6km s-min=18.5km az=77.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSRS	Korea Array	20.46	321	P		P	15 12 49.6	+0.3
	0.8nm,0.5s,baz=144,slow=8.5,SNR=4.3							
WRA	Warramunga Arr	42.96	193	P		P	15 16 05.7	-0.1
	0.1nm,0.3s,baz=17,slow=9.1,SNR=11							
MKAR	Makanchi Array	54.79	312	P		P	15 17 34.9	-0.3
	0.2nm,0.7s,baz=90,slow=5.8,SNR=2.7							
KURBB	Kurchatov Arra	57.55	317	P		P	15 17 54.5	-0.1
	0.4nm,0.5s,baz=93,slow=7.8,SNR=9.9							
FINES	FINESS Array B	82.95	335	P		P	15 20 28.2	+0.2
	1.1nm,0.6s,baz=70,slow=5.6,SNR=9.0							

IDC 10 15:14:42.7±1.1, 4.58N×124.84E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/25, mbtmp3.6/7, 1C, Error ellipse: s-maj=104.5km s-min=16.3km az=68.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTBH	Cotabato--PC H	2.69	347	⇑*i*P		Pb	15 15 31.0	-0.9
FITZ	Fitzroy Crossi	22.55	178	P		P	15 19 44.5	-0.1
	1.0nm,0.7s,baz=14,slow=15,SNR=2.3							
WRA	Warramunga Arr	26.09	159	P		P	15 20 17.6	-0.8
	2.2nm,0.9s,baz=338,slow=10,SNR=15							
ASAR	Alice Springs	29.43	163	P		P	15 20 47.5	-0.8
	0.6nm,0.6s,baz=344,slow=7.0,SNR=19							
STKA	Stephens Creek	39.60	157	P		P	15 22 17.6	+1.5
	2.1nm,0.6s,baz=334,slow=8.6,SNR=8.1							
MKAR	Makanchi Array	55.80	326	P		P	15 24 23.2	+1.5
	0.3nm,0.5s,baz=121,slow=7.2,SNR=5.1							
ZALV	Zalesovo Beam	59.39	34	P		P	15 24 43.4	-0.8
	0.3nm,0.4s,baz=104,slow=12,SNR=3.2							
KURBB	Kurchatov Arra	60.02	328	P		P	15 24 50.5	-0.8
	0.4nm,0.5s,baz=130,slow=6.5,SNR=5.0							

ISCJB ***10*** *15:35:33.5±0.4, 31.32S±0.04×68.66W±0.05, h110km±4km, mb4.0/14, Error ellipse: s-maj=7.4km s-min=5.8km az=163.8*
IDC ***10*** *15:35:34.5±0.5, 31.40S×68.63W, h106km±3km, mb3.8/9, mb1 3.9/13, mb1mx3.8/19, mbtmp3.7/13, Error ellipse: s-maj=20.9km s-min=12.2km az=66.0*
NEIC ***10*** *15:35:34.4±0.3, 31.33S×68.66W, mb4.1/10, Error ellipse: s-maj=6.6km s-min=5.2km az=103.0*
GUC ***10*** *15:35:34.1±0.7, 31.28S×68.89W, h140km, MD4.2, ML4.3*

ISC 10 15:35:34.5±0.5, 31.32S±0.05×68.66W±0.05, h109km±4km, n208, σ0.996/230, mb4.0/14, 13C-11D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CFAA	Coronel Fontan	0.46	129	P		Pn	15 35 50.8	-0.2
CFAA				S		Sn	15 36 03.9	+0.5
CFAA	Coronel Fontan	0.46	129	P		Pn	15 35 50.8	-0.2
	165nm,0.3s,baz=314,slow=5.4							
CFAA				S		Sn	15 36 03.9	+0.5
	203nm,0.3s,baz=130,slow=18,SNR=112							
CMCH	Combarbala	2.02	273	⇓*i*P		Pn	15 36 06.9	-0.8
CMCH				*i* S		Sn	15 36 31.8	-1.3
CMCH	Combarbala	2.02	273	⇓*i*P		Pn	15 36 06.9	-0.8
CMCH				*i* S		Sn	15 36 31.8	-1.3
CMCH					AML	AML	15 36 33.0	
	comp=N,13μm,0.5s							
JACH	Jahuel	2.13	230	*e*P		Pn	15 36 09.8	+0.5
JACH	Jahuel	2.13	230	*e*P		Pn	15 36 09.8	+0.5
TLL	Tololo Astrono	2.18	301	⇑*i*P		Pn	15 36 09.7	-0.3
TLL				*i* S		Sn	15 36 36.7	-0.4
TLL	Tololo Astrono	2.18	301	⇑*i*P		Pn	15 36 09.7	-0.3
TLL				*i* S		Sn	15 36 36.7	-0.4
TLL					AML	AML	15 36 40.5	
	comp=N,2μm,0.4s							
CHNG	Los Chungos	2.49	256	⇓*i*P		Pn	15 36 12.2	-1.5
CHNG	Los Chungos	2.49	256	⇓*i*P		Pn	15 36 12.2	-1.5
CHNG					AML	AML	15 36 49.8	
	comp=E,913nm,0.4s							
PEL	Peldehue	2.50	223	⇓*i*P		Pn	15 36 13.6	-0.4
ROCH	El Roble	2.59	230	⇓*i*P		Pn	15 36 14.4	-0.9
ROCH					AML	AML	15 37 18.7	
	comp=N,551nm,0.7s							
CLCH	Cerro Calan	2.61	217	*e*P		Pn	15 36 15.9	+0.5
CLCH				*i* S		Sn	15 36 47.3	+0.4
CLCH					AML	AML	15 36 50.4	
	comp=E,996nm,0.4s							
PCH	Pirque	2.78	214	*e*P		Pn	15 36 18.2	+0.5
PCH	Pirque	2.78	214	*e*P		Pn	15 36 18.2	+0.5
LMEL	Las Melosas	2.84	207	*e*P		Pn	15 36 19.4	+0.9
LMEL	Las Melosas	2.84	207	*e*P		Pn	15 36 19.4	+0.9
LMEL					AML	AML	15 37 06.0	
	comp=N,199nm,0.4s							
LCO	Las Campanas	2.90	322	⇑*i*P		Pn	15 36 18.9	-0.5
LCO				*i* S		Sn	15 36 53.1	-0.9
LCO	Las Campanas	2.90	322	⇑*i*P		Pn	15 36 18.9	-0.5
LCO				*i* S		Sn	15 36 53.1	-0.9
LCO					AML	AML	15 36 57.0	
	comp=E,1μm,0.3s							
TACH	Talagante	3.02	219	⇑*i*P		Pn	15 36 20.3	-0.5
TACH	Talagante	3.02	219	⇑*i*P		Pn	15 36 20.3	-0.5
LVC	Limon Verde	8.67	358	*e*P		Pn	15 37 34.9	-2.5
	comp=E,19nm,0.5s							
TRQA	Tornquist	8.68	143	*e*P		Pn	15 37 36.3	-0.8
	comp=E,9.8nm,0.8s							
TRQA				*e*S		Sn	15 39 09.4	-3.9
PLCA	Paso Flores	9.52	189	*e*P		Pn	15 37 46.9	-1.7
PLCA	Paso Flores	9.52	189	P		Pn	15 37 46.3	-2.3
	comp=E,0.4nm,0.3s,baz=14,slow=12,SNR=9.6							
CPUP	Villa Florida	11.10	66	P		Pn	15 38 09.1	-0.9
CPUP	Villa Florida	11.10	66	P		Pn	15 38 09.1	-0.9
	comp=E,1.1nm,0.3s,baz=208,slow=12,SNR=7.9							
LPAZ	La Paz	14.97	2	*e*P		Pn	15 39 00.7	-0.4
	comp=E,3.5nm,0.6s							
LPAZ	La Paz	14.97	2	P		Pn	15 39 01.0	-0.1
	comp=E,0.3nm,0.3s,baz=183,slow=6.7,SNR=15							
SIV	San Ignacio	16.75	26	P		P	15 39 23.4	+0.3
SIV	San Ignacio	16.75	26	P		P	15 39 23.4	+0.3
	comp=E,0.1nm,0.3s,baz=224,slow=12,SNR=7.4							
EFI	East Falkland	21.79	162	*e*P		P	15 40 16.6	-0.8
	comp=E,12nm,0.7s							
SAML	Samuel	22.83	14	*e*P		P	15 40 29.0	+0.5
	comp=E,1.3nm,0.5s							
USHA	Ushuaia	23.50	180	P		P	15 40 34.7	+0.3
USHA	Ushuaia	23.50	180	P		P	15 40 34.7	+0.3
	comp=E,6.7nm,0.6s,baz=339,slow=7.0,SNR=6.9							
BDFB	Brasilia	24.47	55	pP		pP	15 41 07.9	+0.9
BDFB	Brasilia	24.47	55	pP		pP	15 41 07.9	+0.9
	comp=E,0.8nm,0.3s,baz=194,slow=6.5,SNR=2.6							
SNAA	Sanae	53.02	159	*e*P		P	15 44 40.6	+0.9
	comp=E,1.2nm,0.6s							
SNAA				pP		pP	15 45 05.9	+0.2
SNAA	Sanae	53.02	159	P		P	15 44 40.4	+0.6
	comp=E,0.4nm,0.6s,baz=340,slow=9.0,SNR=10							
SNAA				pP		pP	15 45 05.9	+0.2
	comp=E,0.8nm,0.6s,baz=290,slow=6.3,SNR=4.4							
732A	Laxson Ranch,	66.75	330	P		P	15 46 15.3	+1.2
	baz=67							
632A	Uvalde	67.35	331	P		P	15 46 19.0	+1.1
	baz=68,SNR=5.3							
532A	Rocksprings	67.94	331	P		P	15 46 22.8	+1.2
	baz=68,SNR=8.6							
JCT	Junction City	68.20	331	P		P	15 46 24.6	+1.3
	baz=68							
531A	Rocksprings	68.24	330	P		P	15 46 24.6	+1.1
	baz=68,SNR=5.6							
530A	J-C Ranch, Com	68.56	330	P		P	15 46 26.8	+1.3
	baz=69							
628A	Black Gap, Mar	68.68	328	P		P	15 46 27.7	+1.5
	baz=69							
431A	Sonora	68.72	331	P		P	15 46 27.4	+0.9
	baz=69							
627A	Terlingua Ranc	68.88	328	P		P	15 46 28.0	+0.5
	baz=69							
TXAR	Lajitas Array	68.90	328	P		P	15 46 28.4	+0.7
TXAR				pP		pP	15 46 56.1	+1.2
TXAR	Lajitas Array	68.90	328	P		P	15 46 28.4	+0.7
	comp=E,1.2nm,0.6s,baz=152,slow=8.2,SNR=21							
TXAR				pP		pP	15 46 56.1	+1.2
	comp=E,0.4nm,0.6s,baz=152,slow=11,SNR=2.6							
529A	Stev Forest Ra	68.93	329	P		P	15 46 29.0	+1.2
	baz=69							
332A	Millersview	68.97	332	P		P	15 46 28.6	+0.6
	baz=69							
430A	Baggett Ranch,	69.07	330	P		P	15 46 29.4	+0.8
	baz=69,SNR=6.9							
331A	San Angelo	69.19	331	⇓P		P	15 46 29.8	+0.5
	baz=70							
528A	Cox Ranch, San	69.21	329	P		P	15 46 30.5	+0.9
	baz=70							
429A	Davenport Ranc	69.22	330	P		P	15 46 30.5	+0.9
	baz=70							
626A	Big Bend Ranch	69.30	327	P		P	15 46 31.4	+1.3
	baz=70							
232A	Coleman	69.38	332	P		P	15 46 31.1	+0.6
	baz=70							
527A	Woodward Ranch	69.57	328	P		P	15 46 32.8	+1.0
	baz=70							
330A	Mertzon	69.58	331	P		P	15 46 32.3	+0.5
	baz=70							
428A	Kincaid Ranch,	69.65	329	P		P	15 46 33.0	+0.7
	baz=70							
231A	Bronte	69.69	332	⇑P		P	15 46 32.9	+0.5
	baz=70,SNR=6.1							
526A	Mary Lane Ranc	69.71	328	P		P	15 46 33.7	+0.9
	baz=70							
329A	Wagon Wheel Ra	70.00	330	P		P	15 46 35.2	+0.9
	baz=70,SNR=5.0							
427A	Hayter Ranch,	70.07	329	P		P	15 46 35.6	+0.7
	baz=70							
426A	McDonald Obser	70.20	328	P		P	15 46 36.9	+1.1
	baz=70							
328A	Wristen Ranch,	70.26	329	P		P	15 46 36.7	+0.7
	baz=71							
131A	Roby	70.37	332	P		P	15 46 37.3	+0.7
	baz=71							
130A	Snyder	70.53	331	P		P	15 46 37.8	+0.2
	baz=71							
425A	Indio Mountain	70.74	327	P		P	15 46 39.4	+0.5
	baz=71							
228A	UT Block 9, Go	70.80	330	P		P	15 46 39.8	+0.6
	baz=71							
Z31A	Sharp Cattle R	70.83	332	⇓P		P	15 46 40.0	+0.6
	baz=71,SNR=5.7							
Y32A	R-V Farms, Ver	71.16	333	P		P	15 46 42.0	+0.7
	baz=72							
128A	Castleberry Fa	71.19	330	P		P	15 46 42.2	+0.6
	baz=72							
Z30A	Sanderson Ranc	71.20	332	P		P	15 46 42.0	+0.4
	baz=72							
325A	Bean Ranch, Si	71.22	328	P		P	15 46 42.4	+0.4
	baz=72							
Z29A	Hungry Hill Ra	71.42	331	P		P	15 46 43.1	+0.2
	baz=72							
226B	Tecolote Peak,	71.45	329	P		P	15 46 44.0	+0.7
	baz=72							
324A	Moseley Ranch,	71.52	327	P		P	15 46 43.2	-0.4
	baz=72							
Z28A	Tucker Farm, M	71.72	331	P		P	15 46 45.1	+0.3
	baz=72							
225A	Deer Hill, Car	71.78	328	P		P	15 46 45.4	+0.1
	baz=72							
126A	Clayton Basin,	71.87	329	P		P	15 46 46.1	+0.4
	baz=72							
Y29A	Porterfield Fa	71.92	332	⇑P		P	15 46 46.4	+0.4
	baz=72,SNR=5.8							
X31A	McDonald Ranch	71.92	333	P		P	15 46 46.4	+0.5
	baz=72							
224A	Cornudas Mount	72.07	328	P		P	15 46 46.9	0.0
	baz=72							
Z27A	Tatum	72.10	330	P		P	15 46 47.2	+0.1
	baz=72							
125A	Gardner Draw,	72.17	329	P		P	15 46 47.5	0.0
	baz=72							
Z26A	Caprock	72.39	329	P		P	15 46 49.3	+0.5
	baz=73,SNR=10							
MSTX	Muleshoe	72.47	331	P		P	15 46 49.7	+0.4
	baz=73,SNR=5.6							
124A	Stringfield Ra	72.56	328	P		P	15 46 50.9	+0.9
	baz=73							
V31A	Spring Creek L	72.88	334	P		P	15 46 52.9	+1.3
	baz=73							
W29A	Amraillo	73.01	332	P		P	15 46 53.0	+0.6
	baz=73							
Z23A	Rita Site, Whi	73.39	328	P		P	15 46 56.3	+1.6
	baz=74							
X26A	CR and CF Fran	73.41	330	⇑P		P	15 46 55.8	+0.9
	baz=74							
121A	Cookes Peak, D	73.50	326	P		P	15 46 57.0	+1.6
	baz=74							
W27A	Bowe Ranch, En	73.54	331	⇑P		P	15 46 56.2	+0.6
	baz=74							
Z22A	Elephant Butte	73.72	327	P		P	15 46 58.0	+1.3
	baz=74							
W25A	X Bar L Ranch,	74.25	330	P		P	15 47 00.5	+0.7
	baz=75							
W24A	Lazy 6 Ranch,	74.66	329	P		P	15 47 02.9	+0.8
	baz=75							
V25A	Rancho No Teng	74.85	330	⇓P		P	15 47 04.2	+0.9
	baz=75							
ANMO	Albuquerque	74.90	329	*e*P		P	15 47 04.4	+0.8
	comp=E,0.7nm,0.5s							
ANMO	Albuquerque	74.90	329	P		P	15 47 03.4	-0.2
	comp=E,0.7nm,0.5s,baz=125,slow=9.8,SNR=3.9							
MAW	Mawson	74.91	163	P		P	15 47 01.4	-1.6
MAW	Mawson	74.91	163	P		P	15 47 01.4	-1.6
	comp=E,3.4nm,1.0s,baz=68,slow=8.4,SNR=3.6							
Y20A	Horse Springs,	74.92	327	P		P	15 47 04.4	+0.7
	baz=75							
U25A	Circle Dot Ran	75.24	331	⇑P		P	15 47 06.8	+1.4
	baz=76							
T25A	Trinidad	75.87	331	P		P	15 47 10.1	+1.0
	baz=76							
S26A	Kim	75.91	332	P		P	15 47 10.5	+1.4
	baz=76							
V22A	San Miguel Ran	75.91	329	P		P	15 47 11.2	+1.9
	baz=76							
W20A	Ramah	75.97	327	P		P	15 47 10.9	+1.1
	baz=76							
S25A	Robets Cordova	76.33	331	P		P	15 47 13.1	+1.4
	baz=77							
V20A	Brimhall	76.51	328	P		P	15 47 14.1	+1.4
	baz=77							
S24A	Houchin Ranch,	76.63	331	P		P	15 47 15.0	+1.5
	baz=77							
U21A	Nageezi	76.67	329	P		P	15 47 15.2	+1.5
	baz=77							
X16A	Lo Mia Camp, P	76.81	325	P		P	15 47 15.7	+1.3
	baz=77							
T22A	Edith	76.82	329	P		P	15 47 16.2	+1.7
	baz=77							
R24A	Sanders Place,	77.09	331	P		P	15 47 17.7	+1.7
	baz=77							
S22A	4UR Ranch, Cre	77.41	330	P		P	15 47 18.9	+1.1
	baz=78							
WUAZ	Wupatki	77.66	325	P		P	15 47 20.2	+1.1
	baz=78							
Q24A	Divide	77.73	332	P		P	15 47 20.8	+1.1
	baz=78							
O27A	Beecher Island	77.75	334	P		P	15 47 21.1	+1.7
	baz=78							
S21A	Coal Bank Pass	77.75	329	P		P	15 47 21.0	+1.2
	baz=78							
ISCO	Idaho Springs	78.63	332	P		P	15 47 26.0	+1.4
	baz=79							
SMCO	Snowmass	78.67	331	*e*P		P	15 47 26.4	+1.5
	comp=E,1.7nm,0.8s							
BOSA	Boshof	78.75	117	pP		pP	15 47 52.7	-0.6
BOSA	Boshof	78.75	117	pP		pP	15 47 52.7	-0.6
	comp=E,3.5nm,0.8s,baz=159,slow=7.0,SNR=3.7							
S18A	Hurst Farm, Bl	78.76	328	P		P	15 47 26.6	+1.3
	baz=79							
U15A	North Rim	78.83	325	P		P	15 47 27.2	+1.5
	baz=79							
O23A	Lake Granby, G	79.11	332	P		P	15 47 29.1	+2.0
	baz=79							
O22A	Kremmling	79.32	331	P		P	15 47 29.7	+1.4
	baz=80							
N22A	Wattenberg Ran	79.82	332	P		P	15 47 32.7	+1.7
	baz=80							
P19A	Cripple Cowboy	79.91	329	P		P	15 47 32.7	+1.2
	baz=80							
N21A	Black Mountain	80.22	331	P		P	15 47 35.0	+1.9
	baz=80							
P18A	Preston Nutter	80.46	329	P		P	15 47 35.4	+0.9
	baz=81							
O19A	Miners Draw (B	80.52	330	P		P	15 47 35.7	+1.1
	baz=81							
TOA0	Torodi Ar. Sit	80.59	68	*e*P		P	15 47 36.0	+0.6
TORD	Torodi Ar. Bea	80.59	68	P		P	15 47 36.1	+0.7
TORD				pP		pP	15 48 03.8	+0.6
TORD				sP		sP	15 48 16.2	+1.3
TORD	Torodi Ar. Bea	80.59	68	P		P	15 47 36.1	+0.7
	comp=E,2.2nm,0.7s,baz=280,slow=6.5,SNR=14							
TORD				pP		pP	15 48 03.8	+0.6
	comp=E,0.9nm,0.6s,baz=284,slow=6.2,SNR=3.6							
TORD				sP		sP	15 48 16.2	+1.3
	comp=E,0.9nm,0.8s,baz=260,slow=5.7,SNR=3.1							
M21A	Separation Pea	80.87	332	P		P	15 47 37.6	+1.0
	baz=81							
K23A	Bowen Ranch, D	81.16	333	P		P	15 47 39.2	+1.3
	baz=82							
L21A	Rawlins	81.17	332	P		P	15 47 38.9	+0.8
	baz=82,SNR=5.5							
K22A	Casper	81.42	333	P		P	15 47 40.8	+1.5
	baz=82							
K21A	Alcova	81.69	332	P		P	15 47 41.9	+1.1
	baz=82,SNR=6.1							
R11A	Troy Canyon, C	81.96	325	P		P	15 47 43.6	+1.3
	baz=82							
J22A	Midwest	82.04	333	P		P	15 47 42.7	+0.1
	baz=82							
K20A	Yellowstone Ra	82.15	332	P		P	15 47 43.4	+0.2
	baz=82							
I22A	9 Mile Ranch,	82.45	333	P		P	15 47 45.2	+0.5
	baz=83							
H24A	Dirks Ranch, A	82.47	335	P		P	15 47 44.8	+0.2
	baz=83							
K19A	Absolon Red Bu	82.49	331	P		P	15 47 45.4	+0.4
	baz=83							
J20A	Shoshoni	82.62	332	P		P	15 47 46.9	+1.3
	baz=83,SNR=5.2							
I21A	Big Trails, Te	82.70	333	P		P	15 47 46.2	+0.3
	baz=83							
PDAR	Pinedale Array	82.74	331

C19A	**Slack Wire Ran**	**86.65**	**334**	P		**P**	**15 48 05.3**	**-0.3**
	baz=87							
D17A	**Six Diamond Ra**	**86.80**	**333**	⇑P		**P**	**15 48 07.0**	**+0.5**
	baz=87							
B20A	**Solberg Farm,**	**86.86**	**335**	P		**P**	**15 48 07.2**	**+0.6**
	baz=87							
MOD	**Modoc**	**87.00**	**324**	*e*P		**P**	**15 48 08.3**	**+0.7**
	comp=E,3.8nm,0.7s							
D16A	**Dana Ranch, Ca**	**87.04**	**332**	P		**P**	**15 48 08.6**	**+1.0**
	baz=87							
F13A	**Darby**	**87.20**	**330**	P		**P**	**15 48 08.5**	**+0.1**
	baz=88							
C17A	**Wharram Farm,**	**87.22**	**333**	⇓P		**P**	**15 48 08.7**	**+0.3**
	baz=88							
E14A	**Clinton**	**87.34**	**331**	P		**P**	**15 48 10.1**	**+1.0**
	baz=88							
D15A	**Lincoln**	**87.44**	**332**	P		**P**	**15 48 09.9**	**+0.3**
	baz=88							
F12A	**Elk City**	**87.57**	**329**	P		**P**	**15 48 10.6**	**+0.4**
	baz=88							
E13A	**Victor**	**87.65**	**330**	P		**P**	**15 48 11.6**	**+1.0**
	baz=88							
C16A	**Fuhringer Ranc**	**87.75**	**333**	P		**P**	**15 48 11.4**	**+0.5**
	baz=88							
B17A	**L&G Farms, Che**	**87.78**	**333**	P		**P**	**15 48 11.3**	**+0.3**
	baz=88							
D14A	**Greenough**	**87.88**	**331**	P		**P**	**15 48 12.5**	**+0.9**
	baz=88							
C15A	**Salmond Ranch,**	**88.07**	**332**	P		**P**	**15 48 13.1**	**+0.6**
	baz=88,SNR=5.3							
B16A	**M & M Farms, S**	**88.23**	**333**	P		**P**	**15 48 13.6**	**+0.5**
	baz=88							
A17A	**Triple J Farms**	**88.27**	**334**	P		**P**	**15 48 14.1**	**+0.7**
	baz=89							
B15A	**Bradely Ranch,**	**88.48**	**332**	P		**P**	**15 48 14.5**	**+0.1**
	baz=89							
A16A	**West Butte Ran**	**88.62**	**333**	P		**P**	**15 48 15.5**	**+0.5**
	baz=89,SNR=10							
D12A	**Red Ives Fores**	**88.63**	**330**	P		**P**	**15 48 15.7**	**+0.6**
	baz=89							
AAK	**Ala-Archa**	**148.70**	**58**	PKPbc		**PKPbc**	**15 55 10.5**	**+1.4**
AAK	**Ala-Archa**	**148.70**	**58**	PKPbc		**PKPbc**	**15 55 10.5**	**+1.4**
	comp=E,2.2nm,0.6s,baz=254,slow=1.9,SNR=9.4							
ZAA0	**Zalesovo Array**	**150.44**	**32**	*e*PKPbc		**PKPbc**	**15 55 12.8**	**0.0**
ZALV	**Zalesovo Beam**	**150.44**	**32**	PKPbc		**PKPbc**	**15 55 13.1**	**+0.4**
ZALV				pPKPbc		**pPKPbc**	**15 55 42.6**	**+0.3**
ZALV	**Zalesovo Beam**	**150.44**	**32**	PKPbc		**PKPbc**	**15 55 13.1**	**+0.4**
	comp=E,3.1nm,0.4s,baz=301,slow=3.5,SNR=22							
ZALV				pPKPbc		**pPKPbc**	**15 55 42.6**	**+0.3**
	comp=E,2.5nm,0.6s,baz=298,slow=3.0,SNR=6.2							
MKAR	**Makanchi Array**	**152.85**	**47**	PKPbc		**PKPbc**	**15 55 18.8**	**+0.2**
MKAR				PKPab		**PKPab**	**15 55 30.7**	**+0.7**
MKAR				pPKPbc		**pPKPbc**	**15 55 47.4**	**-0.7**
MKAR				pPKPab		**pPKPab**	**15 55 57.9**	**-0.9**
MKAR	**Makanchi Array**	**152.85**	**47**	PKPbc		**PKPbc**	**15 55 18.8**	**+0.2**
	comp=E,1.2nm,0.8s,baz=306,slow=1.8,SNR=13							
MKAR				PKPab		**PKPab**	**15 55 30.7**	**+0.7**
	comp=E,1.4nm,0.7s,baz=293,slow=4.2,SNR=12							
MKAR				pPKPbc		**pPKPbc**	**15 55 47.4**	**-0.7**
	comp=E,0.9nm,0.9s,baz=305,slow=1.9,SNR=3.2							
MKAR				pPKPab		**pPKPab**	**15 55 57.9**	**-0.9**
	comp=E,0.4nm,0.5s,baz=302,slow=2.5,SNR=3.4							

IDC 10 15:46:16.1±6.2,**7°38S**×**129°04E**,**h172**km±61km,**mb3.6**/2,
mb1 3.3/5,**mb1mx3.1**/20,**mbtmp3.2**/5,**Error ellipse:**
s-maj=62.7km s-min=22.2km az=60.0,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.17**	**197**	P	Pn	15 48 51.7	+0.7
	0.2nm,0.3s,baz=26,slow=10,SNR=13						
FITZ				S	Sn	15 50 51.6	-3.5
	1.2nm,0.3s,baz=20,slow=13,SNR=9.2						
WRA	**Warramunga Arr**	**13.51**	**158**	P	Pn	15 49 21.4	+0.3
	0.5nm,0.3s,baz=345,slow=13,SNR=30						
WRA				S	Sn	15 51 46.1	-5.2
	1.2nm,0.3s,baz=332,slow=22,SNR=8.4						
ASAR	**Alice Springs**	**16.86**	**164**	P	Pn	15 50 03.1	+0.8
	0.1nm,0.3s,baz=338,slow=9.7,SNR=22						
ASAR				S	S	15 53 08.8	+0.4
	0.3nm,0.3s,baz=346,slow=25,SNR=6.9						
STKA	**Stephens Creek**	**27.04**	**156**	P	P	15 51 42.3	-0.2
	2.7nm,0.8s,baz=337,slow=7.7,SNR=6.0						
MKAR	**Makanchi Array**	**68.02**	**327**	P	P	15 56 56.8	-0.1
	0.4nm,0.4s,baz=116,slow=8.3,SNR=14						

*TRN **10** 15:46:55.4,11°.10N×61°.10W,h36km,MD3.1*
*FUNV **10** 15:46:59.7,10°.91N×61°.33W,h26km,MW3.1*
ISC 10 15:46:55.6±1.0,**11°07N**±0°.03×**61°21W**±0°.03,**h29**km±11km,
n19,σ1s**80**/35,**3C-1D**,**Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPR	**Prospect**	**0.44**	**75**	*i*P	**Pn**	**15 47 05.4**	**-0.5**
TPR				*e*S	**Sb**	**15 47 11.7**	**+0.3**
TRN	**Trinidad (W)**	**0.46**	**205**	⇑*e*P	**Pn**	**15 47 07.9**	**+1.6**
TRN				*e*S	**Sn**	**15 47 15.9**	**+2.4**
BOT	**Bacolet**	**0.49**	**79**	*e*P	**Pn**	**15 47 06.0**	**-0.6**
BOT				*e*S	**Sb**	**15 47 12.2**	**-0.5**
TBH	**Brigand Hill**	**0.60**	**167**	*e*P	**Pn**	**15 47 09.5**	**+1.3**
TBH				*e*S	**Sn**	**15 47 19.0**	**+2.1**
TOSP	**Speyside**	**0.69**	**71**	*e*P	**Pb**	**15 47 08.4**	**-0.8**
TOSP				*e*S	**Sb**	**15 47 17.8**	**-0.7**
TPP	**Pointe-a-Pierr**	**0.79**	**198**	*e*S	**Sn**	**15 47 24.3**	**+2.8**
GUIV	**Guiria**	**1.08**	**247**	*e*P	**Pb**	**15 47 16.7**	**+1.0**
GUIV				*e*S	**Sb**	**15 47 29.6**	**+0.1**
GRW	**Mount Saint Ca**	**1.17**	**338**	⇑*e*P	**Pn**	**15 47 16.7**	**+0.6**
GRW				*e*S	**Sn**	**15 47 32.6**	**+1.5**
GRHS	**Sauteurs**	**1.22**	**340**	⇑*e*P	**Pn**	**15 47 17.5**	**+0.8**
GRHS				*e*S	**Sn**	**15 47 33.5**	**+1.2**
GRSS	**Sisters**	**1.28**	**342**	*e*P	**Pb**	**15 47 18.7**	**-0.4**
GRSS				*e*S	**Sn**	**15 47 35.1**	**+1.4**
CRUV	**Carupano**	**2.03**	**259**	*e*S	**Sn**	**15 47 51.1**	**-1.2**
SVB	**Belmont**	**2.19**	**359**	*e*P	**Pn**	**15 47 30.6**	**+0.5**
SVB				*e*S	**Sn**	**15 47 56.3**	**+0.1**
MCLT	**Moule a Chique**	**2.63**	**6**	*e*P	**Pn**	**15 47 38.3**	**+2.1**
MCLT				*e*S	**Sn**	**15 48 07.0**	**-0.2**
ORIV	**Oritupano**	**2.94**	**228**	*e*P	**Pn**	**15 47 41.5**	**+1.1**
ORIV				*e*S	**Sn**	**15 48 11.7**	**-3.1**
RIOV	**Rio Grande**	**3.04**	**191**	*e*P	**Pn**	**15 47 43.1**	**+1.3**
RIOV				*e*S	**Sn**	**15 48 15.6**	**-1.7**
PCRV	**Puerto La Cruz**	**3.49**	**256**	*e*P	**Pn**	**15 47 48.1**	**+0.2**
PCRV				*e*S	**Sn**	**15 48 24.3**	**-4.0**
GURV	**El Guri**	**3.78**	**210**	*e*P	**Pn**	**15 47 52.1**	**+0.3**
GURV				*e*S	**Sn**	**15 48 31.1**	**-4.3**
CUPV	**Cœpira**	**4.62**	**258**	*e*P	**Pn**	**15 48 04.5**	**+1.1**
CUPV				*e*S	**Sn**	**15 48 52.9**	**-3.3**
BAUV	**El Baul**	**7.06**	**253**	*e*P	**Pn**	**15 48 37.2**	**+0.2**

IDC 10 15:53:22.6±5.1,**2°57S**×**146°62E**,**h0**km,**mb3.2**/2,
mb1 3.6/2,**mb1mx3.2**/17,**mbtmp3.3**/2,**MS3.6**/1,**Ms1 3.6**/1,
ms1mx2.6/19,**Error ellipse: s-maj=264.9km**
s-min=69.4km az=112.0,**Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.02**	**214**	P	P	15 58 08.7	+0.6
	0.8nm,0.7s,baz=40,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**24.31**	**209**	P	P	15 58 41.9	-0.3
	0.6nm,0.8s,baz=41,slow=7.3,SNR=7.0						
ASAR				LR	LR	16 09 11.7	
	comp=Z,122nm,18.4s,baz=74,slow=39						
TORD	**Torodi Ar. Bea**	**143.75**	**289**	PKP	PKPdf	16 13 00.0	-0.9
	0.5nm,0.9s,baz=98,slow=2.8,SNR=2.5						

*CSEM **10** 16:00:07.7±0.1,42°.27N×13°.45E,h2km,ML3.8/8,Error ellipse: s-maj=2.7km s-min=2.3km az=47.0*
*ROM **10** 16:00:07.3±0.1,42°.30N×13°.49E,h10km,Ml3.4/32,Error ellipse: s-maj=1.2km s-min=0.8km az=49.0*
*ISCJB **10** 16:00:07.2±0.2,42°.28N±0°.02×13°.46E±0°.02,h9km±2km, mb3.3/3,Error ellipse: s-maj=3.1km s-min=2.5km az=35.3*
*IDC **10** 16:00:08.5±1.2,42°.41N×13°.43E,h0km,mb3.4/4, mb1 3.6/9,mb1mx3.4/30,mbtmp3.4/9,ML3.3/5,Error ellipse: s-maj=19.1km s-min=13.9km az=87.0*
*BEO **10** 16:00:09.6±1.0,42°.88N×13°.26E,h10km±8km,ML3.5/4*
*LDG **10** 16:00:09.4±0.2,42°.23N×13°.41E,h2km,Ml3.1/5,Error ellipse: s-maj=8.5km s-min=4.9km az=42.0*
ISC 10 16:00:08.3±0.8,**42°29N**±0°.02×**13°46E**±0°.02,**h8**km±4km,
n144,σ1s**45**/180,**mb3.4**/3,**8C-2D**,**Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**325**	Pg	**Pg**	**16 00 10.1**	**-0.2**
AQU				Sg	**Sg**	**16 00 11.8**	**+0.1**
	28µm,0.8s						
AQU	**L'Aquila**	**0.07**	**325**	Pg	**Pg**	**16 00 10.1**	**-0.2**
AQU				Sg	**Sg**	**16 00 11.8**	**+0.1**
	28µm,0.8s						
FAGN	**Fagnano**	**0.10**	**107**	Pg	**Pg**	**16 00 09.8**	**-0.8**
FAGN				Sg	**Sg**	**16 00 11.2**	**-1.0**
	116µm,1.5s						
FAGN	**Fagnano**	**0.10**	**107**	Pg	**Pg**	**16 00 09.8**	**-0.8**
FAGN				Sg	**Sg**	**16 00 11.2**	**-1.0**
	116µm,1.5s						
CAMP	**Campotosto**	**0.24**	**351**	Pg	**Pg**	**16 00 12.9**	**-0.3**
CAMP				Sg	**Sg**	**16 00 17.1**	**+0.6**
	3µm,0.8s						
CAMP	**Campotosto**	**0.24**	**351**	Pg	**Pg**	**16 00 12.9**	**-0.3**
CAMP				Sg	**Sg**	**16 00 17.1**	**+0.6**
	3µm,0.8s						
FIAM	**Fiamignano**	**0.26**	**264**	Pg	**Pg**	**16 00 13.7**	**+0.3**
FIAM				Sg	**Sg**	**16 00 18.0**	**+1.2**
	22µm,1.3s						
FIAM	**Fiamignano**	**0.26**	**264**	Pg	**Pg**	**16 00 13.7**	**+0.3**
FIAM				Sg	**Sg**	**16 00 18.0**	**+1.2**
	22µm,1.3s						
VCEL	**Villa Celiera**	**0.30**	**70**	Pg	**Pg**	**16 00 13.7**	**-0.5**
VCEL				Sg	**Sg**	**16 00 17.9**	**-0.3**
VCEL	**Villa Celiera**	**0.30**	**70**	Pg	**Pg**	**16 00 13.7**	**-0.5**
VCEL				Sg	**Sg**	**16 00 17.9**	**-0.3**
TERO	**Teramo**	**0.35**	**18**	Pg	**Pg**	**16 00 14.3**	**-0.8**
TERO				Sg	**Sg**	**16 00 19.3**	**-0.4**
	7µm,0.9s						
TERO	**Teramo**	**0.35**	**18**	Pg	**Pg**	**16 00 14.3**	**-0.8**
TERO				Sg	**Sg**	**16 00 19.3**	**-0.4**
	7µm,0.9s						
INTR	**Introdacqua**	**0.43**	**130**	Pg	**Pg**	**16 00 16.1**	**-0.6**
INTR				Sg	**Sg**	**16 00 22.7**	**+0.3**
	5µm,0.5s						
INTR	**Introdacqua**	**0.43**	**130**	Pg	**Pg**	**16 00 16.1**	**-0.6**
INTR				Sg	**Sg**	**16 00 22.7**	**+0.3**
	5µm,0.5s						
LNSS	**Leonessa**	**0.44**	**315**	Pg	**Pg**	**16 00 16.6**	**-0.2**
	4µm,0.7s						
LNSS	**Leonessa**	**0.44**	**315**	Pg	**Pg**	**16 00 16.6**	**-0.2**
	4µm,0.7s						
VVLD	**Villa Vallelon**	**0.44**	**164**	Pg	**Pg**	**16 00 16.2**	**-0.6**
VVLD	**Villa Vallelon**	**0.44**	**164**	Pg	**Pg**	**16 00 16.2**	**-0.6**
CERT	**Cerreto**	**0.49**	**226**	Pg	**Pg**	**16 00 17.6**	**-0.2**
	6µm,0.6s						
CERT	**Cerreto**	**0.49**	**226**	Pg	**Pg**	**16 00 17.6**	**-0.2**
	6µm,0.6s						
GUAR	**Guarcino**	**0.51**	**192**	Pg	**Pg**	**16 00 17.7**	**-0.4**
	3µm,0.7s						
GUAR	**Guarcino**	**0.51**	**192**	Pg	**Pg**	**16 00 17.7**	**-0.4**
	3µm,0.7s						
MNS	**Montasola**	**0.58**	**279**	Pg	**Pg**	**16 00 19.1**	**-0.4**
	1µm,0.4s						
MNS	**Montasola**	**0.58**	**279**	Pg	**Pg**	**16 00 19.1**	**-0.4**
	1µm,0.4s						
LPEL	**Lama dei Pelig**	**0.59**	**114**	Pg	**Pg**	**16 00 18.6**	**-1.1**
LPEL				Sg	**Sg**	**16 00 27.6**	**+0.2**
	6µm,0.5s						
LPEL	**Lama dei Pelig**	**0.59**	**114**	Pg	**Pg**	**16 00 18.6**	**-1.1**
LPEL				Sg	**Sg**	**16 00 27.6**	**+0.2**
	6µm,0.5s						
NRCA	**Norcia**	**0.60**	**335**	Pg	**Pg**	**16 00 19.0**	**-0.8**
NRCA				Sg	**Sg**	**16 00 28.1**	**+0.5**
	992nm,0.2s						
NRCA	**Norcia**	**0.60**	**335**	Pg	**Pg**	**16 00 19.0**	**-0.8**
NRCA				Sg	**Sg**	**16 00 28.1**	**+0.5**
	992nm,0.2s						
MTCE	**Montecelio**	**0.60**	**243**	Pg	**Pg**	**16 00 19.4**	**-0.4**
	2µm,0.7s						
MTCE	**Montecelio**	**0.60**	**243**	Pg	**Pg**	**16 00 19.4**	**-0.4**
	2µm,0.7s						
POFI	**Posta Fibreno**	**0.61**	**162**	Pg	**Pg**	**16 00 18.9**	**-1.1**
	2µm,0.9s						
POFI	**Posta Fibreno**	**0.61**	**162**	Pg	**Pg**	**16 00 18.9**	**-1.1**
	2µm,0.9s						
TRTR	**Tortoreto Alta**	**0.61**	**33**	Pg	**Pg**	**16 00 20.5**	**+0.4**
	6µm,0.6s						
TRTR	**Tortoreto Alta**	**0.61**	**33**	Pg	**Pg**	**16 00 20.5**	**+0.4**
	6µm,0.6s						
OFFI	**Offida**	**0.66**	**15**	Pg	**Pg**	**16 00 20.9**	**-0.1**
	6µm,0.7s						
OFFI	**Offida**	**0.66**	**15**	Pg	**Pg**	**16 00 20.9**	**-0.1**
	6µm,0.7s						
CAFR	**Castel Frentan**	**0.66**	**95**	Pg	**Pg**	**16 00 20.7**	**-0.3**
	7µm,0.4s						
CAFR	**Castel Frentan**	**0.66**	**95**	Pg	**Pg**	**16 00 20.7**	**-0.3**
	7µm,0.4s						
CESX	**Cesi**	**0.72**	**296**	Pg	**Pg**	**16 00 21.5**	**-0.7**
	926nm,1.0s						
CESX	**Cesi**	**0.72**	**296**	Pg	**Pg**	**16 00 21.5**	**-0.7**
	926nm,1.0s						
RMP	**Rome, Mte Porz**	**0.74**	**230**	Pg	**Pg**	**16 00 21.9**	**-0.6**
	2µm,0.4s						
RMP	**Rome, Mte Porz**	**0.74**	**230**	Pg	**Pg**	**16 00 21.9**	**-0.6**
	2µm,0.4s						
GIUL	**Giuliano Di Ro**	**0.75**	**192**	Pg	**Pg**	**16 00 21.7**	**-1.0**
GIUL	**Giuliano Di Ro**	**0.75**	**192**	Pg	**Pg**	**16 00 21.7**	**-1.0**
RDP	**Rocca di Papa**	**0.77**	**226**	Pg	**Pg**	**16 00 22.4**	**-0.7**
	4µm,0.5s						
RDP	**Rocca di Papa**	**0.77**	**226**	Pg	**Pg**	**16 00 22.4**	**-0.7**
	4µm,0.5s						
RNI2	**Rionero Sannit**	**0.79**	**139**	Pg	**Pg**	**16 00 22.5**	**-0.9**
	2µm,0.6s						
RNI2	**Rionero Sannit**	**0.79**	**139**	Pg	**Pg**	**16 00 22.5**	**-0.9**
	2µm,0.6s						
FDMO	**Fiordimonte**	**0.79**	**340**	Pg	**Pg**	**16 00 22.1**	**-1.4**
	644nm,0.7s						
FDMO	**Fiordimonte**	**0.79**	**340**	Pg	**Pg**	**16 00 22.1**	**-1.4**
	644nm,0.7s						
CERA	**Filignano**	**0.81**	**149**	Pg	**Pg**	**16 00 22.4**	**-1.5**
	2µm,0.7s						
CERA	**Filignano**	**0.81**	**149**	Pg	**Pg**	**16 00 22.4**	**-1.5**
	2µm,0.7s						
CESI	**CESI - Serrava**	**0.82**	**330**	Pg	**Pg**	**16 00 22.9**	**-1.1**
	248nm,0.6s						
CESI	**CESI - Serrava**	**0.82**	**330**	Pg	**Pg**	**16 00 22.9**	**-1.1**
	248nm,0.6s						
GUMA	**Gualdo di Mace**	**0.84**	**24**	Pg	**Pg**	**16 00 22.3**	**-2.2**
	3µm,0.6s						
GUMA	**Gualdo di Mace**	**0.84**	**24**	Pg	**Pg**	**16 00 22.3**	**-2.2**
	3µm,0.6s						
MIDA	**Miranda**	**0.88**	**137**	Pg	**Pg**	**16 00 23.6**	**-1.6**
	1µm,0.5s						
MIDA	**Miranda**	**0.88**	**137**	Pg	**Pg**	**16 00 23.6**	**-1.6**
	1µm,0.5s						
TRIV	**Trivento**	**0.97**	**123**	Pg	**Pg**	**16 00 25.4**	**-1.5**
	917nm,0.9s						
TRIV	**Trivento**	**0.97**	**123**	Pg	**Pg**	**16 00 25.4**	**-1.5**
	917nm,0.9s						
VAGA	**Valle Agricola**	**1.05**	**146**	Pg	**Pg**	**16 00 26.8**	**-1.6**
	638nm,0.6s						
VAGA	**Valle Agricola**	**1.05**	**146**	Pg	**Pg**	**16 00 26.8**	**-1.6**
	638nm,0.6s						
CING	**Cingoli**	**1.10**	**350**	Pg	**Pg**	**16 00 27.7**	**-1.7**
	425nm,0.6s						
CING	**Cingoli**	**1.10**	**350**	Pg	**Pg**	**16 00 27.7**	**-1.7**
	425nm,0.6s						
TOLF	**Tolfa**	**1.11**	**259**	Pg	**Pg**	**16 00 28.3**	**-1.2**
TOLF	**Tolfa**	**1.11**	**259**	Pg	**Pg**	**16 00 28.3**	**-1.2**
SGG	**Gregorio Mates**	**1.14**	**143**	Pg	**Pg**	**16 00 28.4**	**-1.7**
	718nm,0.7s						
SGG	**Gregorio Mates**	**1.14**	**143**	Pg	**Pg**	**16 00 28.4**	**-1.7**
	718nm,0.7s						
AOI	**Ancona**	**1.26**	**5**	Pg	**Pn**	**16 00 31.4**	**-0.9**
	487nm,0.9s						
AOI	**Ancona**	**1.26**	**5**	Pg	**Pn**	**16 00 31.4**	**-0.9**
	487nm,0.9s						
ARVD	**Arcevia**	**1.26**	**343**	Pg	**Pn**	**16 00 30.8**	**-1.5**
	658nm,0.9s						
ARVD	**Arcevia**	**1.26**	**343**	Pg	**Pn**	**16 00 30.8**	**-1.5**
	658nm,0.9s						
LATE	**Laterza**	**1.27**	**285**	Pn	**Pn**	**16 00 32.1**	**-0.2**
	2µm,1.3s						
LATE	**Laterza**	**1.27**	**285**	Pn	**Pn**	**16 00 32.1**	**-0.2**
	2µm,1.3s						
MAIM	**Mastiano**	**2.71**	**308**	P	**Pb**	**16 00 55.0**	**-2.0**
STON	**Ston**	**3.19**	**78**	*e*Pn	**Pn**	**16 00 59.8**	**+1.1**
STON				Sn	**Sn**	**16 01 36.7**	**-0.1**
STON	**Ston**	**3.19**	**78**	*e*Pn	**Pn**	**16 00 59.7**	**+1.1**
STON				Sn	**Sn**	**16 01 36.7**	**-0.1**
SKDS	**Skadanscina**	**3.28**	**7**	*e*Pn	**Pn**	**16 01 00.2**	**+0.2**
SKDS	**Skadanscina**	**3.28**	**7**	Pn	**Pn**	**16 01 00.2**	**+0.2**
PGF	**Pioggiola**	**3.31**	**276**	*e*Pn	**Pn**	**16 01 01.1**	**+0.6**
PGF				*e*Sn	**Sn**	**16 01 37.5**	**-2.7**
	13nm,0.6s						
PGF	**Pioggiola**	**3.31**	**276**	*e*Pn	**Pn**	**16 01 01.1**	**+0.6**
PGF				*e*Sn	**Sn**	**16 01 37.5**	**-2.7**
	6.4nm,0.6s						
PE1	**Pezze di Greco**	**3.33**	**115**	*e*Pn	**Pn**	**16 01 01.3**	**+0.7**
BOJS	**Bojanci**	**3.46**	**21**	*i*Pn	**Pn**	**16 01 03.9**	**+1.4**
BOJS				*i*Sn	**Sn**	**16 01 46.5**	**+2.9**
BOJS	**Bojanci**	**3.46**	**21**	*i*Pn	**Pn**	**16 01 03.9**	**+1.4**
BOJS				*i*Sn	**Sn**	**16 01 46.5**	**+2.9**
JAVS	**Javornik**	**3.62**	**7**	*i*Pn	**Pn**	**16 01 05.3**	**+0.5**
JAVS				*i*Sn	**Sn**	**16 01 50.7**	**+2.8**
JAVS	**Javornik**	**3.62**	**7**	*i*Pn	**Pn**	**16 01 05.3**	**+0.5**
JAVS				*i*Sn	**Sn**	**16 01 50.7**	**+2.8**
VISS	**Visnje**	**3.65**	**15**	*e*Pn	**Pn**	**16 01 06.1**	**+1.0**
VISS	**Visnje**	**3.65**	**15**	*e*Pn	**Pn**	**16 01 06.1**	**+1.0**
VOY	**Vojsko**	**3.75**	**5**	*e*Pn	**Pn**	**16 01 09.2**	**+2.7**
VOY				*e*		16 01 13.6	
VOY				*e*		16 02 05.0	
VOY	**Vojsko**	**3.75**	**5**	*e*Pn	**Pn**	**16 01 09.2**	**+2.7**
VOY				*e*Sn	**Sn**	**16 01 53.8**	**+2.9**
PERS	**Pernice**	**4.50**	**15**	*i*Pn	**Pn**	**16 01 18.7**	**+1.9**
PERS	**Pernice**	**4.50**	**15**	*i*Pn	**Pn**	**16 01 18.7**	**+1.9**
ABTA	**Abfaltersbach**	**4.50**	**352**	*i*Pn	**Pn**	**16 01 18.0**	**+1.1**
	SNR=25						
ABTA	**Abfaltersbach**	**4.50**	**352**	Pn	**Pn**	**16 01 18.0**	**+1.1**
	SNR=25						
BBLS	**Lazići**	**4.63**	**68**	*e*Sn	**Sn**	**16 02 10.3**	**-2.3**
BBLS	**Lazići**	**4.63**	**68**	*e*Sn	**Sn**	**16 02 10.3**	**-2.3**
SBF	**Sospel**	**4.68**	**292**	*e*Pn	**Pn**	**16 01 19.0**	**-0.3**
SBF				*e*Sn	**Sn**	**16 02 09.7**	**-4.2**
	16nm,0.6s						
SBF	**Sospel**	**4.68**	**292**	*e*Pn	**Pn**	**16 01 19.0**	**-0.3**
SBF				*e*Sn	**Sn**	**16 02 09.7**	**-4.2**
	8.1nm,0.6s						
DIVS	**Divibare**	**5.11**	**67**	*e*Pn	**Pn**	**16 01 24.9**	**-0.3**
DIVS				*e*Sn	**Sn**	**16 02 21.5**	**-2.8**
DIVS	**Divibare**	**5.11**	**67**	*e*Pn	**Pn**	**16 01 24.9**	**-0.3**
DIVS				*e*Sn	**Sn**	**16 02 21.5**	**-2.8**
FETA	**Feichten**	**5.11**	**339**	⇑*i*Pn	**Pn**	**16 01 27.0**	**+1.7**
	SNR=6.8						
FETA	**Feichten**	**5.11**	**339**	Pn	**Pn**	**16 01 27.0**	**+1.7**
	SNR=6.8						
FRF	**La Foret Royal**	**5.16**	**286**	*e*Pn	**Pn**	**16 01 25.4**	**-0.4**
FRF	**La Foret Royal**	**5.16**	**286**	*e*Pn	**Pn**	**16 01 25.4**	**-0.4**
DAVOX	**Davos/Dischmat**	**5.16**	**332**	Pn	**Pn**	**16 01 27.4**	**+1.3**
	1.0nm,0.3s,baz=153,slow=19,SNR=14						
DAVOX				Sn	**Sn**	**16 02 26.9**	**+0.9**
	0.4nm,0.3s,baz=180,slow=20,SNR=2.1						
LMR	**La Mourre**	**5.22**	**284**	*e*Pn	**Pn**	**16 01 26.2**	**-0.4**
LMR	**La Mourre**	**5.22**	**284**	*e*Pn	**Pn**	**16 01 26.2**	**-0.4**
MOTA	**Moosalm**	**5.32**	**342**	⇑*i*Pn	**Pn**	**16 01 30.0**	**+1.8**
	SNR=11						
MOTA	**Moosalm**	**5.32**	**342**	Pn	**Pn**	**16 01 30.0**	**+1.8**
	SNR=11						
PKSM	**Moragy**	**5.40**	**42**	⇑*i*P	Pn	16 01 32.7	+3.6
MBDF	**Montbardon**	**5.44**	**299**	*e*Pn	**Pn**	**16 01 29.4**	**-0.4**
MBDF	**Montbardon**	**5.44**	**299**	*e*P	Pn	16 01 33.4	+3.6
MBDF				*e*Sn	**Sn**	**16 02 29.2**	**-3.4**
	9.6nm,0.8s						
MBDF	**Montbardon**	**5.44**	**299**	*e*Pn	**Pn**	**16 01 29.4**	**-0.4**
LPG	**La Plagne**	**5.81**	**306**	*e*P	**Pn**	**16 01 37.8**	**+2.8**
SMRF	**Simiane la Rot**	**6.01**	**289**	*e*Pn	**Pn**	**16 01 37.9**	**+0.4**
SMRF	**Simiane la Rot**	**6.01**	**289**	*e*Pn	**Pn**	**16 01 37.9**	**+0.4**
BARS	**Barje**	**6.19**	**82**	*e*Pn	**Pn**	**16 01 40.8**	**+0.8**
BARS				*e*Sn	**Sn**	**16 02 51.3**	**+0.2**
BARS	**Barje**	**6.19**	**82**	*e*Pn	**Pn**	**16 01 40.8**	**+0.8**
BARS				*e*Sn	**Sn**	**16 02 51.3**	**+0.2**
GERES	**GERESS Array B**	**6.55**	**1**	Pn	**Pn

SMLT	**Sun Moon Lake**	**0.69**	**301**	⇑*i*P		**Pb**	**16 18 58.4**	**-0.5**
	baz=302							
SMLT				*e*S		**Sn**	**16 19 08.2**	**-1.1**
	baz=302							
TYC	**Yuchr**	**0.74**	**301**	⇑*i*P		**Pb**	**16 18 59.0**	**-0.5**
	baz=306							
TYC				S		**Sn**	**16 19 09.8**	**-0.3**
	baz=306							
TWT	**Tachien**	**0.80**	**335**	P		**Pb**	**16 19 00.6**	**-0.1**
	baz=333							
TWT				S		**Sb**	**16 19 10.3**	**-0.9**
	baz=333							
CHN5	**Tsauling**	**0.80**	**275**	⇑*i*P		**Pn**	**16 19 00.7**	**-0.2**
	baz=276							
CHN5				S		**Sn**	**16 19 11.9**	**-0.1**
	baz=276							
TTN	**Taitung**	**0.85**	**206**	*e*P		**Pn**	**16 19 01.3**	**-0.2**
	baz=208							
TTN				*e*S		**Sn**	**16 19 13.1**	**0.0**
	baz=208							
WNT	**Mingjian**	**0.87**	**294**	P		**Pn**	**16 19 01.9**	**+0.3**
	baz=295							
WNT				S		**Sn**	**16 19 14.1**	**+0.6**
	baz=295							
CHN4	**Tsaushan**	**0.90**	**259**	P		**Pb**	**16 19 02.2**	**+0.1**
	baz=257							
CHN4				S		**Sn**	**16 19 15.0**	**+0.9**
	baz=257							
WTP	**Ta-pu**	**0.91**	**252**	⇑*i*P		**Pb**	**16 19 02.1**	**-0.3**
	baz=254							
WTP				*e*S		**Sn**	**16 19 14.5**	**+0.1**
	baz=254							
ENA	**Nanau**	**0.91**	**11**	*e*P		**Pn**	**16 19 01.6**	**-0.7**
	baz=354							
ENA				*e*S		**Sb**	**16 19 13.6**	**-0.7**
	baz=354							
WGK	**Gukeng**	**0.92**	**280**	*e*P		**Pb**	**16 19 02.8**	**+0.2**
	baz=282							
NNS	**Nan Shan**	**0.92**	**350**	*e*P		**Pn**	**16 19 02.2**	**-0.3**
	baz=348							
NNS				*e*S		**Sb**	**16 19 13.5**	**-1.2**
	baz=348							
CHN2	**Minshiung**	**0.99**	**270**	*e*P		**Pb**	**16 19 04.4**	**+0.7**
	baz=272							
CHN2				*e*S		**Sn**	**16 19 17.8**	**+1.5**
	baz=272							
CHN1	**Nanshi**	**1.00**	**250**	P		**Pb**	**16 19 03.8**	**-0.1**
	baz=252							
CHN1				S		**Sn**	**16 19 17.8**	**+1.0**
	baz=252							
TWK	**Hsinying**	**1.01**	**255**	P		**Pb**	**16 19 04.1**	**0.0**
	baz=257							
TWK				*i* S		**Sn**	**16 19 17.7**	**+0.7**
	baz=257							
TCU	**Taichung**	**1.01**	**308**	*e*P		**Pb**	**16 19 04.5**	**+0.4**
	baz=307							
TCU				*e*S		**Sn**	**16 19 18.1**	**+1.2**
	baz=307							
CHY	**Chiayi**	**1.03**	**269**	*e*P		**Pb**	**16 19 04.6**	**+0.1**
	baz=270							
CHY				*e*S		**Sb**	**16 19 18.4**	**+0.8**
	baz=270							
ECL	**Taimali**	**1.08**	**211**	*e*P		**Pn**	**16 19 03.1**	**-1.4**
	baz=202							
TWQ1	**Liyutan**	**1.08**	**319**	P		**Pb**	**16 19 05.8**	**+0.4**
	baz=327							
TWQ1				*e*S		**Sb**	**16 19 20.4**	**+1.3**
	baz=327							
ENTT	**Nioudou**	**1.11**	**1**	*e*P		**Pn**	**16 19 04.8**	**-0.1**
	baz=357							
ENTT				*e*S		**Sn**	**16 19 18.9**	**-0.5**
	baz=357							
TWC	**Suao**	**1.11**	**14**	*e*P		**Pn**	**16 19 05.0**	**0.0**
	baz=355							
TWC				*e*S		**Sb**	**16 19 21.3**	**+1.4**
	baz=355							
NSY	**Sanyi**	**1.14**	**321**	*e*P		**Pb**	**16 19 06.5**	**+0.2**
	baz=319							
NSY				*e*S		**Sb**	**16 19 21.9**	**+1.1**
	baz=319							
SSD	**Sandimen**	**1.15**	**228**	*e*P		**Pb**	**16 19 05.8**	**-0.7**
	baz=228							
SSD				*e*S		**Sb**	**16 19 21.0**	**0.0**
	baz=228							
NSK	**Sanguang**	**1.16**	**351**	*e*P		**Pb**	**16 19 06.1**	**-0.5**
	baz=347							
NSK				*e*S		**Sn**	**16 19 19.5**	**-1.2**
	baz=347							
CHN3	**Shinhua**	**1.18**	**248**	*e*P		**Pb**	**16 19 07.5**	**+0.5**
	baz=264							
CHN3				*e*S		**Sb**	**16 19 23.3**	**+1.5**
	baz=264							
TWE	**Neicheng**	**1.19**	**5**	*e*P		**Pb**	**16 19 07.0**	**-0.2**
	baz=1.0							
TWE				*e*S		**Sb**	**16 19 22.0**	**-0.3**
	baz=1.0							
NSTT	**Nanjuang**	**1.21**	**336**	*e*P		**Pb**	**16 19 06.8**	**-0.6**
	baz=339							
NSTT				S		**Sb**	**16 19 22.3**	**-0.3**
	baz=339							
WTCT	**Ta-ch'eng**	**1.21**	**286**	*e*P		**Pb**	**16 19 06.8**	**-0.7**
	baz=287							
WTCT				*e*S		**Sb**	**16 19 23.2**	**+0.5**
	baz=287							
WSF	**Szhu**	**1.22**	**275**	*e*P		**Pb**	**16 19 07.3**	**-0.4**
	baz=277							
WSF				*e*S		**Sb**	**16 19 23.3**	**+0.2**
	baz=277							
CHN8	**Yiju**	**1.24**	**262**	*e*P		**Pb**	**16 19 07.5**	**-0.6**
	baz=264							
CHN8				*e*S		**Sb**	**16 19 23.9**	**+0.2**
	baz=264							
TWM1	**Shoushan**	**1.25**	**236**	*e*P		**Pb**	**16 19 09.1**	**+0.9**
	baz=239							
TWM1				*e*S		**Sb**	**16 19 26.7**	**+2.7**
	baz=239							
SGLT	**Jiouru**	**1.26**	**231**	*e*P		**Pb**	**16 19 09.1**	**+0.7**
	baz=234							
SGLT				*e*S		**Sb**	**16 19 27.3**	**+3.1**
	baz=234							
EAST	**Anshuo**	**1.31**	**210**	*e*P		**Pb**	**16 19 08.1**	**-1.1**
	baz=204							
SCZT	**Fangliau**	**1.44**	**217**	*e*P		**Pb**	**16 19 10.5**	**-0.8**
	baz=209							
SCZT				*e*S		**Sb**	**16 19 28.8**	**-0.4**
	baz=209							
LAY	**Lan-yu**	**1.48**	**180**	*e*P		**Pn**	**16 19 08.1**	**-2.0**
	baz=165							
NWF	**Wu-fen Shan**	**1.55**	**8**	*e*P		**Pb**	**16 19 12.8**	**-0.6**
	baz=1.0							
NWF				*e*S		**Sb**	**16 19 31.9**	**-0.7**
	baz=1.0							
TWS1	**Kuangyinshan**	**1.57**	**356**	*e*P		**Pb**	**16 19 12.7**	**-1.0**
	baz=2.0							
TWS1				*e*S		**Sb**	**16 19 32.4**	**-0.7**
	baz=2.0							
YOJ	**Yonaguni jima**	**1.63**	**55**	P		**Pn**	**16 19 12.5**	**+0.4**
YOJ				*e*S		**Sn**	**16 19 33.1**	**+0.9**
HEN	**Hengchun**	**1.69**	**206**	*e*P		**Pn**	**16 19 13.6**	**+0.7**
	baz=203							
WDGT	**Dungji**	**1.76**	**262**	*e*P		**Pn**	**16 19 14.2**	**+0.3**
	baz=264							
WDGT				*e*S		**Sn**	**16 19 33.8**	**-1.6**
	baz=264							
PNG	**Penghu**	**1.83**	**272**	*e*P		**Pn**	**16 19 15.1**	**+0.2**
	baz=273							
PNG				*e*S		**Sn**	**16 19 36.2**	**-1.0**
	baz=273							
HATJ	**Hateruma jima**	**2.13**	**75**	*e*S		**Sn**	**16 19 44.5**	**-0.1**
IRIF	**Iriomote-Funau**	**2.15**	**68**	P		**Pn**	**16 19 19.8**	**+0.5**
IRIF				*e*S		**Sn**	**16 19 45.4**	**+0.3**
JKRS	**Kuro-shima**	**2.36**	**72**	P		**Pn**	**16 19 22.7**	**+0.5**
JKRS				*e*S		**Sn**	**16 19 51.1**	**+0.9**
JIJ	**Ishigaki jima**	**2.51**	**70**	P		**Pn**	**16 19 24.5**	**+0.2**
JIJ				*e*S		**Sn**	**16 19 53.3**	**-0.8**
JTJ	**Tarama**	**3.09**	**68**	P		**Pn**	**16 19 33.3**	**+1.1**
JTJ				*e*S		**Sn**	**16 20 10.3**	**+2.1**

*IDC **10** 16:20:51.1±0.7,36°.17N×141°.23E, h0km, mb3.7/9, mb1 3.9/12, mb1mx3.8/28, mbtmp3.7/12, ML3.9/2, MS2.9/4, Ms1 2.9/4, ms1mx2.6/55, Error ellipse: s-maj=19.0km s-min=17.4km az=154.0*
*ISCJB **10** 16:20:54.7±0.9, 36°.28N±0°.04×141°.15E±0°.06, h33km±6km, mb3.6/9, MS2.9/2, Error ellipse: s-maj=7.9km s-min=6.5km az=174.6*

*JMA **10** 16:20:55.7±0.1, 36°.28N×141°.05E, h47km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs321.00000°, δ59.00000°, λ-115.00000°. NP2: φs182.00000°, δ39.00000°, λ-55.00000°. Principal axes: T Plg11.0000°, Azm68.0000°; N Plg21.0000°, Azm334.0000°; P Plg66.0000°, Azm184.0000°;*
JMA Felt I J1.
*NIED **10** 16:21:00, 36°.30N×141°.10E, h32km, Mw3.8 Best double couple: Mo5.67000×10^14 NP1:φs183.00000°, δ53.00000°, λ-59.00000°. NP2:φs318.00000°, δ47.00000°, λ-125.00000°.*

ISC 10 16:20:55.2±1.3, 36°.30N±0°.04×141°.12E±0°.06, h27km±10km, n23, σ0s84/25, mb3.7/9, 2C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHO	**Hitachi**	**0.54**	**305**	⇓P		**Pb**	**16 21 06.6**	**+0.4**
JHO				S		**Sb**	**16 21 13.9**	**+0.3**
CHOJ	**Chosi**	**0.63**	**200**	P		**Pb**	**16 21 08.0**	**+0.3**
CHOJ				S		**Sb**	**16 21 16.4**	**+0.2**
JYT	**Yasato**	**0.75**	**265**	⇑P		**Pn**	**16 21 09.3**	**-0.7**
JYT				S		**Sb**	**16 21 18.4**	**-1.1**
ONAJ	**Iwakimizuishiy**	**0.84**	**342**	⇓P		**Pn**	**16 21 10.8**	**-0.5**
ONAJ				S		**Sb**	**16 21 21.2**	**-1.0**
JFK	**Kawauchi**	**1.08**	**350**	⇓P		**Pn**	**16 21 14.0**	**-0.6**
JAG	**Ashikaga**	**1.35**	**276**	⇑P		**Pn**	**16 21 17.9**	**-0.4**
JFT	**Otama**	**1.37**	**333**	⇓P		**Pn**	**16 21 19.2**	**+0.7**
JFT				S		**Sn**	**16 21 35.9**	**+0.1**
MJAR	**Matsushiro Arr**	**2.36**	**277**	Pn		**Pn**	**16 21 31.6**	**-0.6**
	28nm,0.3s,baz=181,slow=10,SNR=408							
MJAR				Sn		**Sn**	**16 22 02.6**	**+2.4**
	24nm,0.3s,baz=60,slow=11,SNR=10							
MJAR				LR		LR	16 22 40.9	
	comp=Z,248nm,19.9s,baz=105,slow=45							
MAT	**Matsushiro**	**2.36**	**277**	P		**Pn**	**16 21 32.8**	**+0.6**
MAT				S		**Sn**	**16 21 59.5**	**-0.8**
ASAJ	**Asahikawa**	**7.89**	**8**	Pn		**Pn**	**16 22 47.6**	**-0.5**
	1.8nm,0.3s,baz=232,slow=11,SNR=18							
KSRS	**Korea Array**	**10.64**	**280**	Pn		Pn	16 23 27.4	+1.7
	baz=92,slow=14,SNR=2.9							
KSRS				LR		LR	16 27 24.0	
	comp=Z,42nm,20.3s,baz=80,slow=36							
PETK	**Petropavlovsk-**	**20.44**	**30**	LR		LR	16 32 11.8	
	comp=Z,25nm,21.3s,baz=19,slow=33							
SONM	**Songino Array**	**28.01**	**305**	P		P	16 26 46.4	+2.6
	0.9nm,0.6s,baz=113,slow=10,SNR=3.8							
ZALV	**Zalesovo Beam**	**42.24**	**313**	P		**P**	**16 28 45.2**	**-0.6**
	1.0nm,0.5s,baz=88,slow=7.4,SNR=6.7							
MKAR	**Makanchi Array**	**44.31**	**303**	P		P	16 29 05.0	+2.3
	0.4nm,0.7s,baz=94,slow=9.1,SNR=5.4							
ILAR	**Eielson Array**	**50.24**	**32**	P		**P**	**16 29 49.2**	**+0.7**
	0.8nm,0.7s,baz=267,slow=5.8,SNR=13							
AAK	**Ala-Archa**	**50.63**	**299**	LR		LR	16 52 27.1	
	comp=Z,31nm,19.0s,baz=0.2,slow=37							
WRA	**Warramunga Arr**	**56.30**	**188**	P		**P**	**16 30 32.4**	**-1.2**
	1.0nm,0.6s,baz=5.4,slow=7.5,SNR=15							
ASAR	**Alice Springs**	**60.03**	**188**	P		**P**	**16 30 59.0**	**-0.6**
	0.7nm,0.7s,baz=18,slow=9.3,SNR=13							
YKA	**Yellowknife Ar**	**64.56**	**30**	P		**P**	**16 31 30.0**	**+0.5**
	0.3nm,0.7s,baz=308,slow=7.5,SNR=5.7							
NVAR	**Mina Array Bea**	**75.62**	**53**	P		**P**	**16 32 38.4**	**+0.3**
	0.6nm,0.7s,baz=285,slow=7.5,SNR=4.4							
PDAR	**Pinedale Array**	**78.35**	**45**	P		**P**	**16 32 53.7**	**+0.4**
	0.4nm,0.6s,baz=228,slow=1.1,SNR=3.3							
LPAZ	**La Paz**	**147.26**	**60**	PKPbc		**PKPbc**	**16 40 37.3**	**0.0**
	0.8nm,0.5s,baz=276,slow=1.4,SNR=5.6							

IDC 10 16:24:05.1±1.1, 2°.15N×84°.24W, h0km, mb3.7/5, mb1 4.2/7, mb1mx3.8/23, mbtmp4.0/7, ML4.5/2, MS3.5/10, Ms1 3.5/10, ms1mx3.4/31, Error ellipse: s-maj=115.5km s-min=18.3km az=62.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATAH	**Atahualpa**	**10.91**	**148**	Pn		Pn	16 26 43.7	+0.5
	3.8nm,0.3s,baz=330,slow=7.3,SNR=21							
ATAH				LR		LR	16 30 28.1	
	comp=Z,379nm,20.6s,baz=322,slow=35							
NNA	**Nana**	**15.85**	**153**	Pn		Pn	16 27 48.7	-1.1
	1.4nm,0.3s,baz=326,slow=13,SNR=5.2							
NNA				LR		LR	16 32 55.9	
	comp=Z,216nm,21.9s,baz=320,slow=34							
TEIG	**Tepich**	**18.40**	**348**	LR		LR	16 35 05.6	
	comp=Z,119nm,18.8s,baz=60,slow=36							
LPAZ	**La Paz**	**24.26**	**140**	P		P	16 29 24.9	-0.2
	4.9nm,1.1s,baz=330,slow=7.1,SNR=8.6							
SIV	**San Ignacio**	**29.14**	**129**	LR		LR	16 42 42.9	
	comp=Z,137nm,19.3s,slow=38							
TXAR	**Lajitas Array**	**32.75**	**328**	P		P	16 30 39.8	-0.3
	0.6nm,0.9s,baz=152,slow=11,SNR=5.0							
TXAR				LR		LR	16 42 42.0	
	comp=Z,71nm,19.8s,baz=185,slow=34							
BDFB	**Brasilia**	**39.94**	**118**	LR		LR	16 46 51.9	
	comp=Z,56nm,21.9s,baz=308,slow=34							
PLCA	**Paso Flores**	**44.47**	**165**	P		P	16 32 18.2	0.0
	1.7nm,0.6s,baz=12,slow=9.3,SNR=2.9							
PDAR	**Pinedale Array**	**46.34**	**334**	LR		LR	16 52 47.3	
	comp=Z,54nm,18.8s,baz=350,slow=37							
YBH	**Yreka Blue Hor**	**52.39**	**324**	LR		LR	16 54 46.0	
	comp=Z,53nm,21.5s,baz=154,slow=35							
NEW	**Newport**	**53.96**	**333**	LR		LR	16 56 42.4	
	comp=Z,55nm,20.5s,baz=15,slow=36							
YKA	**Yellowknife Ar**	**64.33**	**345**	P		P	16 34 42.4	+0.1
	0.7nm,0.9s,baz=140,slow=6.2,SNR=11							
ILAR	**Eielson Array**	**76.68**	**337**	P		P	16 35 57.9	+0.1
	0.2nm,0.8s,baz=90,slow=7.2,SNR=2.9							
NOA	**NORSAR Array B**	**90.79**	**29**	LR		LR	17 16 02.1	
	comp=Z,17nm,18.8s,baz=235,slow=34							

*IDC **10** 16:32:36.5±0.8, 6°.84S×130°.53E, h0km, mb4.1/8, mb1 4.4/11, mb1mx4.2/20, mbtmp4.2/11, ML4.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/36, Error ellipse: s-maj=38.5km s-min=16.4km az=79.0*
*ISCJB **10** 16:32:43.2±0.3, 7°.00S±0°.03×130°.63E±0°.06, h78km, mb4.0/8, Error ellipse: s-maj=7.9km s-min=4.5km az=170.9*
*AUST **10** 16:32:44.2, 6°.97S×130°.54E, h60km*
*DJA **10** 16:32:57.3±0.8, 6°.S±6°×13°.1E±°, h10km, M4.8/6, mB5.5/3, mb4.9/6, MLv4.8/5, Mw(mB)4.9/3*

ISC 10 16:32:45.8±0.5, 6°.91S±0°.05×130°.55E±0°.07, h78km, n45, σ1s84/46, mb4.2/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**4.31**	**23**	P		**Pn**	**16 33 51.3**	**+2.3**
FAKI				S		**Sn**	**16 34 36.0**	**-2.1**
FAKI	**Fak Fak**	**4.31**	**23**	P		**Pn**	**16 33 50.6**	**+1.6**
	baz=4.4,SNR=162							
FAKI				S		**Sn**	**16 34 37.5**	**-0.6**
	baz=4.4,SNR=11							
MTN	**Manton Dam**	**5.93**	**174**	P		**Pn**	**16 34 12.2**	**+1.1**
	baz=5.9,SNR=182							
MTN				S		**Sn**	**16 35 15.2**	**-2.3**
	baz=5.9,SNR=11							
KDU	**Kakadu**	**6.05**	**162**	P		**Pn**	**16 34 13.3**	**+0.6**
	baz=6.0,SNR=249							
KDU				S		**Sn**	**16 35 16.4**	**-4.1**
	baz=6.0,SNR=8.4							
SWI	**Sorong**	**6.05**	**7**	P		**Pn**	**16 34 14.0**	**+1.3**
	82nm,0.5s,8μm1.2nm							
SWI				S		**Sn**	**16 35 14.7**	**-5.9**
	82nm,0.5s,8μm1.2nm							
SWI	**Sorong**	**6.05**	**7**	P		**Pn**	**16 34 13.8**	**+1.1**
	baz=6.2,SNR=89							
SWI				S		**Sn**	**16 35 17.5**	**-3.0**
	baz=6.2,SNR=11							
RKPI	**Ransiki, Papua**	**6.47**	**34**	P		**Pn**	**16 34 20.8**	**+2.3**
	198nm,0.6s,4μm1.0nm							
LBMI	**Labuha**	**6.93**	**334**	P		Pn	16 34 29.3	+4.5
	59nm,0.6s,2μm0.4nm							
BAKI	**Biak**	**7.94**	**45**	P		Pn	16 34 42.4	+3.9
	84nm,0.8s							
BBSI	**Bau Bau**	**8.05**	**280**	P		Pn	16 34 54.3	+14
	51nm,1.0s,0.1nm							
KNRA	**Kununurra**	**8.89**	**191**	P		**Pn**	**16 34 51.5**	**0.0**
	baz=8.9,SNR=63							
KNRA				S		Sn	16 36 24.0	-6.0
	baz=8.9,SNR=9.6							
MMPI	**Merauke**	**9.87**	**100**	S		**Sn**	**16 36 50.5**	**-3.7**
	baz=9.9,SNR=3.2							
SKSI	**Soroako, Sulaw**	**10.16**	**295**	P		Pn	16 35 23.6	+15

FITZ	**Fitzroy Crossi**	**12.11**	**203**	Pn		**Pn**	**16 35 32.7**	**-2.7**
	2.6nm,0.3s,baz=31,slow=10.0,SNR=191							
FITZ				Sn		Sn	16 37 36.4	-12
	3.8nm,0.3s,baz=72,slow=20,SNR=7.9							
FITZ				LR		LR	16 39 51.6	
	comp=Z,56nm,20.3s,baz=286,slow=36							
FITZ	**Fitzroy Crossi**	**12.11**	**203**	P		**Pn**	**16 35 32.5**	**-2.9**
	baz=12,SNR=56							
WRA	**Warramunga Arr**	**13.47**	**164**	Pn		Pn	16 35 50.0	-3.7
	1.7nm,0.3s,baz=345,slow=11,SNR=54							
WRA				Sn		Sn	16 38 09.3	-12
	4.0nm,0.3s,baz=346,slow=23,SNR=9.2							
COEN	**Coen**	**14.25**	**120**	P		**Pn**	**16 36 04.7**	**+0.7**
	baz=14,SNR=8.5							
COEN				S		Sn	16 38 28.1	-13
	baz=14,SNR=8.2							
QIS	**Mount Isa**	**16.16**	**148**	S		Sn	16 39 12.8	-14
	baz=16,SNR=5.0							
ASAR	**Alice Springs**	**16.97**	**169**	P		**Pn**	**16 36 37.0**	**-1.4**
	2.1nm,0.3s,baz=345,slow=9.2,SNR=108							
ASAR				S		Sn	16 39 36.0	-11
	1.4nm,0.3s,baz=351,slow=26,SNR=15							
MTSU	**Mount Surprise**	**17.45**	**131**	P		**P**	**16 36 45.0**	**+0.5**
	baz=18,SNR=16							
MTSU				S		Sn	16 39 43.8	-15
	baz=18,SNR=4.1							
MEEK	**Meekatharra**	**22.67**	**209**	P		**P**	**16 37 42.2**	**+1.3**
	baz=23,SNR=4.9							
MORW	**Morawa**	**25.95**	**210**	P		**P**	**16 38 14.2**	**+3.2**
	baz=26,SNR=4.3							
BBOO	**Buckleboo**	**26.28**	**169**	P		**P**	**16 38 16.5**	**+2.6**
	baz=26,SNR=6.4							
STKA	**Stephens Creek**	**26.90**	**159**	P		**P**	**16 38 20.2**	**+0.7**
	0.9nm,0.4s,baz=336,slow=12,SNR=12							
STKA	**Stephens Creek**	**26.90**	**159**	P		**P**	**16 38 20.1**	**+0.5**
	baz=27,SNR=6.4							
CMAR	**Chiang Mai Arr**	**40.09**	**309**	P		**P**	**16 40 14.5**	**+0.5**
	1.9nm,0.6s,baz=135,slow=6.7,SNR=5.5							
CMAR				PcP		**PcP**	**16 42 18.0**	**+0.5**
	1.2nm,0.8s,baz=161,slow=2.6,SNR=8.7							
MJAR	**Matsushiro Arr**	**43.81**	**9**	P		**P**	**16 40 43.5**	**-0.6**
	3.7nm,0.8s,baz=191,slow=11,SNR=14							
MAT	**Matsushiro**	**43.82**	**9**	P		**P**	**16 40 42.6**	**-1.5**
KSRS	**Korea Array**	**44.20**	**357**	P		**P**	**16 40 47.3**	**+0.2**
	0.6nm,0.5s,baz=173,slow=9.7,SNR=4.8							
ODAN	**Odare**	**53.61**	**311**	*e*P		**P**	**16 41 59.0**	**-0.6**
	21nm,0.5s							
TAPN	**Taplejung**	**53.63**	**311**	*e*P		**P**	**16 41 59.4**	**-0.5**
	18nm,0.5s							
RAMN	**Ramite**	**54.25**	**310**	*e*P		**P**	**16 42 04.4**	**0.0**
	47nm,0.6s							
GUN	**Gumba**	**55.30**	**311**	*e*P		**P**	**16 42 11.6**	**-0.5**
	29nm,0.6s							
PKI	**Pulchoki**	**55.48**	**310**	*e*P		**P**	**16 42 12.7**	**-0.6**
	9.8nm,0.6s							
PKIN	**Phulchoki**	**55.49**	**310**	*e*P		**P**	**16 42 12.6**	**-0.7**
	5.7nm,0.5s							
KKN	**Kakani**	**55.69**	**310**	*e*P		**P**	**16 42 14.3**	**-0.4**
	9.8nm,0.6s							
DMN	**Daman**	**55.73**	**310**	*e*P		**P**	**16 42 14.8**	**-0.2**
	14nm,0.8s							
KOLN	**Koldanda**	**56.96**	**309**	*e*P		**P**	**16 42 23.7**	**0.0**
DANN	**Dangsing**	**57.13**	**310**	*e*P		**P**	**16 42 25.0**	**0.0**
	12nm,0.9s							
SONM	**Songino Array**	**58.53**	**341**	P		**P**	**16 42 34.7**	**+0.5**
	1.0nm,0.5s,baz=158,slow=6.4,SNR=4.4							
PETK	**Petropavlovsk-**	**64.07**	**18**	P		**P**	**16 43 12.4**	**+1.1**
	2.9nm,0.8s,baz=151,slow=3.4,SNR=4.7							
MKAR	**Makanchi Array**	**68.45**	**327**	P		**P**	**16 43 40.2**	**+0.7**
	2.6nm,0.7s,baz=115,slow=7.9,SNR=29							
ZALV	**Zalesovo Beam**	**71.74**	**334**	P		**P**	**16 43 59.4**	**-0.1**
	1.9nm,0.6s,baz=119,slow=5.6,SNR=11							
TORD	**Torodi Ar. Bea**	**129.32**	**281**	PKP		**PKPdf**	**16 51 46.5**	**+0.1**
	0.9nm,0.6s,baz=80,slow=2.1,SNR=10							
CPUP	**Villa Florida**	**146.09**	**167**	PKPbc		**PKPab**	**16 52 18.2**	**-0.1**
	1.1nm,0.6s,baz=278,slow=20,SNR=4.0							

*DDA **10** 16:35:01.6, 37°.61N×35°.49E, h6km, MD2.8*
*ISK **10** 16:35:02.4, 37°.63N×35°.62E, h16km, MD2.5*
*CSEM **10** 16:35:02.4±0.3, 37°.60N×35°.56E, h18km±3km, MD2.5, Error ellipse: s-maj=7.2km s-min=5.5km az=21.0*
*ISCJB **10** 16:35:03.3±0.6, 37°.59N±0°.04×35°.58E±0°.04, h21km±10km, Error ellipse: s-maj=7.3km s-min=5.7km az=9.9*

ISC 10 16:35:02.3±1.2, 37°.59N±0°.04×35°.56E±0°.03, h17km±9km, n19, σ0s63/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOZT	**Kozan**	**0.24**	**116**	*e*PG		**Pg**	**16 35 07.7**	**-0.1**
KOZT				*e*SG		**Sb**	**16 35 12.3**	**+0.1**
KOZT	**Kozan**	**0.24**	**116**	*e*Pg		**Pg**	**16 35 07.7**	**-0.1**
KOZT				*e*Sg		**Sb**	**16 35 12.3**	**+0.1**
CEYT	**Ceyhan**	**0.60**	**165**	*e*PG		**Pb**	**16 35 14.6**	**+0.3**
CEYT				*e*SG		**Sn**	**16 35 24.6**	**-0.7**
CEYT	**Ceyhan**	**0.60**	**165**	*e*Pg		**Pb**	**16 35 14.6**	**+0.3**
CEYT				*e*Sg		**Sn**	**16 35 24.6**	**-0.7**
ANDN	**Andirin**	**0.63**	**90**	*i* P		**Pg**	**16 35 14.7**	**0.0**
ANDN				*i* S		**Sn**	**16 35 25.2**	**-1.0**
ANDN	**Andirin**	**0.63**	**90**	*i* P		**Pg**	**16 35 14.7**	**0.0**
ANDN				*i* S		**Sn**	**16 35 25.2**	**-1.0**
GULE	**Gulek**	**0.69**	**244**	*i* P		**Pg**	**16 35 14.6**	**-1.3**
GULE				*i* S		**Sb**	**16 35 26.2**	**+0.8**
GULE	**Gulek**	**0.69**	**244**	*i* P		**Pg**	**16 35 14.6**	**-1.3**
GULE				*i* S		**Sb**	**16 35 26.2**	**+0.8**
YURE	**YUREGIR**	**0.76**

*ATH **10** 16:50:18.7, 40°.31N×25°.45E, h30km±1km, MD2.9/5*
*ISK **10** 16:50:19.4, 40°.28N×25°.45E, h11km, MD3.3*
*CSEM **10** 16:50:19.7±0.1, 40°.31N×25°.39E, h12km, MD2.9, Error ellipse: s-maj=3.3km s-min=2.5km az=173.0*
*ISCJB **10** 16:50:19.1±0.5, 40°.31N±0°.02×25°.41E±0°.02, h6km±4km, Error ellipse: s-maj=3.6km s-min=3.0km az=155.5*
*THE **10** 16:50:20.1, 40°.29N×25°.47E, h18km, ML2.7/5, Error ellipse: s-maj=0.6km s-min=0.3km az=196.0*
*DDA **10** 16:50:22.9, 40°.29N×25°.61E, h8km, MD3.2*
*SOF **10** 16:50:24.5, 40°.70N×25°.68E, h2km, MD2.9*

ISC 10 16:50:19.5±1.0, 40°.29N±0°.02×25°.40E±0°.02, h13km±8km, n84, σ0958/111, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.20**	**29**	*e*PB	**Pg**	**16 50 24.5**	**+0.4**
SMTH				*e*SB	**Sb**	**16 50 29.2**	**+0.3**
SMTH	**Samothraki Isl**	**0.20**	**29**	*e*Pb	**Pg**	**16 50 24.5**	**+0.4**
SMTH				*e*Sb	**Sb**	**16 50 29.2**	**+0.3**
LIA	**Limnos Island**	**0.43**	**203**	P	**Pb**	**16 50 29.1**	**+0.2**
LIA				S	**Sb**	**16 50 36.1**	**+0.8**
LIA	**Limnos Island**	**0.43**	**203**	*e*PB	**Pb**	**16 50 29.0**	**+0.2**
LIA				*e*SB	**Sb**	**16 50 36.0**	**+0.8**
LIA	**Limnos Island**	**0.43**	**203**	P	**Pb**	**16 50 29.1**	**+0.2**
LIA				*e*Sb	**Sb**	**16 50 36.0**	**+0.8**
BOZC	**Bozcaada**	**0.67**	**132**	*i* P	**Pb**	**16 50 33.0**	**0.0**
BOZC				*i* S	**Sb**	**16 50 42.2**	**-0.1**
ALN	**Alexandroupoli**	**0.78**	**39**	P	**Pg**	**16 50 33.9**	**-0.7**
ALN				S	**Sg**	**16 50 44.7**	**-0.1**
ALN	**Alexandroupoli**	**0.78**	**39**	*e*PN	**Pg**	**16 50 33.8**	**-0.8**
ALN				*e*SN	**Sg**	**16 50 44.1**	**-0.7**
ALN	**Alexandroupoli**	**0.78**	**39**	P	**Pg**	**16 50 33.9**	**-0.7**
ALN				S	**Sg**	**16 50 44.7**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.82**	**82**	*e*PG	**Pg**	**16 50 35.2**	**-0.3**
GELI				*e*SG	**Sg**	**16 50 46.4**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.82**	**82**	*e*Pg	**Pg**	**16 50 35.2**	**-0.3**
GELI				*e*Sg	**Sg**	**16 50 46.4**	**+0.1**
EZN	**Ezine**	**0.85**	**123**	*e*PG	**Pb**	**16 50 36.0**	**-0.1**
EZN				*e*SG	**Sb**	**16 50 47.2**	**0.0**
EZN	**Ezine**	**0.85**	**123**	*e*Pg	**Pb**	**16 50 36.0**	**-0.1**
EZN				*e*Sg	**Sb**	**16 50 47.3**	**0.0**
ERIK	**Erikli-Kesan**	**0.93**	**66**	*e*PG	**Pg**	**16 50 36.5**	**-0.9**
ERIK				*e*SG	**Sb**	**16 50 50.1**	**+0.4**
ERIK	**Erikli-Kesan**	**0.93**	**66**	*e*Pg	**Pg**	**16 50 36.5**	**-0.9**
ERIK				*e*Sg	**Sb**	**16 50 50.1**	**+0.4**
KAVA	**Kavala**	**0.98**	**316**	P	**Pb**	**16 50 38.4**	**+0.1**
KAVA				S	**Sn**	**16 50 52.8**	**+0.2**
KAVA	**Kavala**	**0.98**	**316**	P	**Pb**	**16 50 38.4**	**+0.1**
LPK	**Lapseki**	**1.04**	**85**	*e*PG	**Pb**	**16 50 38.8**	**-0.6**
LPK				*e*SG	**Sn**	**16 50 54.1**	**-0.1**
LPK	**Lapseki**	**1.04**	**85**	*e*Pg	**Pb**	**16 50 38.8**	**-0.6**
LPK				*e*Sg	**Sn**	**16 50 54.1**	**-0.1**
OUR	**Ouranopolis**	**1.09**	**273**	P	**Pb**	**16 50 40.1**	**-0.1**
OUR				S	**Sn**	**16 50 56.1**	**+0.8**
OUR	**Ouranopolis**	**1.09**	**273**	P	**Pb**	**16 50 40.1**	**-0.1**
SIGR	**SIGRI**	**1.13**	**162**	P	**Pb**	**16 50 40.0**	**-1.0**
SIGR				S	**Sb**	**16 50 55.5**	**-0.1**
SIGR	**SIGRI**	**1.13**	**162**	P	**Pb**	**16 50 40.0**	**-1.0**
SIGR				S	**Sb**	**16 50 55.5**	**-0.1**
KDZ	**Kurdzhali**	**1.36**	**0**	*i* P	**Pn**	**16 50 43.6**	**-0.6**
KDZ	**Kurdzhali**	**1.36**	**0**	*i* P	**Pn**	**16 50 43.6**	**-0.6**
PAIG	**Paliouri**	**1.37**	**255**	P	**Pn**	**16 50 44.1**	**-0.2**
PAIG	**Paliouri**	**1.37**	**255**	P	**Pn**	**16 50 44.1**	**-0.2**
AYVA	**Ayvalik**	**1.40**	**134**	*i* P	**Pg**	**16 50 46.5**	**+0.2**
AYVA				*i* S	**Sb**	**16 51 03.6**	**+0.5**
AYVA	**Ayvalik**	**1.40**	**134**	*i* P	**Pg**	**16 50 46.5**	**+0.2**
AYVA				*i* S	**Sb**	**16 51 03.6**	**+0.5**
SART	**Tekirdag**	**1.41**	**73**	*i* P	**Pb**	**16 50 45.5**	**-0.2**
SART				*i* S	**Sb**	**16 51 03.8**	**+0.1**
SART	**Tekirdag**	**1.41**	**73**	*i* P	**Pb**	**16 50 45.5**	**-0.2**
SART				*i* S	**Sb**	**16 51 03.8**	**+0.1**
KRBG	**Karabiga-Canak**	**1.45**	**85**	*e*PN	**Pn**	**16 50 45.3**	**-0.1**
KRBG	**Karabiga-Canak**	**1.45**	**85**	*e*Pn	**Pn**	**16 50 45.3**	**-0.1**
PLG	**Polygyros**	**1.50**	**274**	P	**Pn**	**16 50 46.0**	**-0.1**
PLG	**Polygyros**	**1.50**	**274**	P	**Pn**	**16 50 46.0**	**-0.1**
NVR	**Nevrokopi**	**1.58**	**313**	P	**Pn**	**16 50 46.9**	**-0.3**
NVR	**Nevrokopi**	**1.58**	**313**	*e*PN	**Pn**	**16 50 47.1**	**-0.1**
NVR	**Nevrokopi**	**1.58**	**313**	*e*Pn	**Pn**	**16 50 47.1**	**-0.1**
SRS	**Serrai**	**1.60**	**301**	P	**Pn**	**16 50 47.3**	**-0.3**
SRS	**Serrai**	**1.60**	**301**	P	**Pn**	**16 50 47.3**	**-0.3**
AOS	**Alonnisos**	**1.62**	**227**	P	**Pn**	**16 50 47.7**	**-0.1**
AOS	**Alonnisos**	**1.62**	**227**	*e*PB	**Pn**	**16 50 47.6**	**-0.2**
AOS	**Alonnisos**	**1.62**	**227**	P	**Pn**	**16 50 47.7**	**-0.1**
SOH	**Sokhos**	**1.65**	**289**	P	**Pn**	**16 50 48.2**	**0.0**
SOH	**Sokhos**	**1.65**	**289**	P	**Pn**	**16 50 48.2**	**0.0**
MRMT	**Marmara Adasi**	**1.70**	**79**	*e*PN	**Pn**	**16 50 49.3**	**+0.3**
MRMT	**Marmara Adasi**	**1.70**	**79**	*e*Pn	**Pn**	**16 50 49.3**	**+0.3**
GONE	**Gonen-Balikesi**	**1.77**	**97**	*e*PN	**Pn**	**16 50 50.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.77**	**97**	*e*Pn	**Pn**	**16 50 50.1**	**+0.3**
TKR	**Tekirdag**	**1.77**	**66**	*e*PN	**Pn**	**16 50 50.4**	**+0.6**
TKR	**Tekirdag**	**1.77**	**66**	*e*Pn	**Pn**	**16 50 50.4**	**+0.6**
BALY	**Balya**	**1.79**	**107**	*i* P	**Pb**	**16 50 52.1**	**-0.1**
BALY				*i* S	**Sg**	**16 51 15.9**	**-1.2**
BALY	**Balya**	**1.79**	**107**	*i* P	**Pb**	**16 50 52.1**	**-0.1**
BALY				*i* S	**Sg**	**16 51 15.9**	**-1.2**
EDRB	**Edirne**	**1.85**	**33**	*e*PN	**Pn**	**16 50 52.1**	**+1.1**
EDRB	**Edirne**	**1.85**	**33**	*e*Pn	**Pn**	**16 50 52.1**	**+1.1**
EDC	**Edincik**	**1.88**	**88**	*e*PN	**Pn**	**16 50 51.8**	**+0.5**
EDC	**Edincik**	**1.88**	**88**	*e*Pn	**Pn**	**16 50 51.8**	**+0.5**
PLD	**Plovdiv**	**1.89**	**344**	*i* P	**Pg**	**16 50 55.4**	**-0.3**
PLD	**Plovdiv**	**1.89**	**344**	*i* P	**Pg**	**16 50 55.4**	**-0.3**
BNT	**Bandirma**	**1.93**	**87**	*e*PN	**Pn**	**16 50 52.1**	**+0.1**
BNT	**Bandirma**	**1.93**	**87**	*e*Pn	**Pn**	**16 50 52.1**	**+0.1**
CRLT	**Corlu**	**1.96**	**64**	*e*PN	**Pn**	**16 50 53.1**	**+0.7**
CRLT	**Corlu**	**1.96**	**64**	*e*Pn	**Pn**	**16 50 53.2**	**+0.7**
BALB	**Balikesir**	**2.01**	**108**	*e*PN	**Pn**	**16 50 53.5**	**+0.4**
BALB	**Balikesir**	**2.01**	**108**	*e*Pn	**Pn**	**16 50 53.5**	**+0.4**
SLVT	**Silivri**	**2.33**	**65**	*e*PN	**Pn**	**16 50 58.4**	**+0.9**
SLVT	**Silivri**	**2.33**	**65**	*e*Pn	**Pn**	**16 50 58.4**	**+0.9**
JMB	**Yambol**	**2.35**	**22**	*i* P	**Pg**	**16 51 04.2**	**-0.3**
CTYL	**Yal??k??y-??at**	**2.49**	**61**	*e*PN	**Pn**	**16 51 00.6**	**+0.9**
CTYL	**Yal??k??y-??at**	**2.49**	**61**	*e*Pn	**Pn**	**16 51 00.5**	**+0.9**
CTKS	**Kestanelik-??a**	**2.54**	**67**	*e*PN	**Pn**	**16 51 01.3**	**+0.9**
CTKS	**Kestanelik-??a**	**2.54**	**67**	*e*Pn	**Pn**	**16 51 01.3**	**+0.9**
DST	**Dursunbey**	**2.57**	**105**	*e*PN	**Pn**	**16 51 01.5**	**+0.7**
DST	**Dursunbey**	**2.57**	**105**	*e*Pn	**Pn**	**16 51 01.5**	**+0.7**
ARMT	**Armutlu**	**2.65**	**83**	*e*PN	**Pn**	**16 51 02.8**	**+0.8**
ARMT	**Armutlu**	**2.65**	**83**	*e*Pn	**Pn**	**16 51 02.8**	**+0.8**
BGKT	**Bogazkoy**	**2.71**	**70**	*e*PN	**Pn**	**16 51 03.8**	**+1.1**
BGKT	**Bogazkoy**	**2.71**	**70**	*e*Pn	**Pn**	**16 51 03.8**	**+1.1**
ISK	**Istanbul-Kandi**	**2.89**	**73**	*e*PN	**Pn**	**16 51 06.2**	**+1.1**
ISK	**Istanbul-Kandi**	**2.89**	**73**	*e*Pn	**Pn**	**16 51 06.2**	**+1.1**
IZI	**Iznik**	**3.11**	**88**	*e*PN	**Pn**	**16 51 09.3**	**+0.9**
IZI	**Iznik**	**3.11**	**88**	*e*Pn	**Pn**	**16 51 09.3**	**+0.9**
TVSB	**Tavsanli**	**3.23**	**104**	*e*PN	**Pn**	**16 51 11.1**	**+1.0**
TVSB	**Tavsanli**	**3.23**	**104**	*e*Pn	**Pn**	**16 51 11.1**	**+1.0**

*IDC **10** 16:50:46.7±7.9, 37°.82N×71°.88E, h129km±50km, mb3.4/2, mb1 3.4/6, mb1mx3.0/31, mbtmp3.3/6, MS3.2/1, Ms1 3.2/1, ms1mx2.1/28, Error ellipse: s-maj=70.6km s-min=37.7km az=173.0*
*NNC **10** 16:50:50.4±4.4, 38°.40N×72°.12E, h221km±38km, mb2.4, mpv3.6, Error ellipse: s-maj=43.3km s-min=21.0km az=11.0*

ISC 10 16:50:43.1±2.0, 37°.7N±0°.2×71°.7E±0°.1, h100km, n24, σ1941/18, mb3.8/3, 2C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=20	**4.72**	**18**	P	**Pn**	**16 51 53.7**	**+1.4**
UCH	**Uchtor** SNR=8.3	**5.04**	**24**	P	**Sn**	**16 52 53.5**	**-0.5**
KZA	**Kyzart** SNR=7.3	**5.18**	**31**	P	**Pn**	**16 52 00.0**	**+1.4**
EKS2	**Erkin-Say** SNR=8.1	**5.24**	**17**	P	**Pn**	**16 52 01.1**	**+2.0**
AAK	**Ala-Archa** SNR=10	**5.40**	**22**	P	**Pn**	**16 52 03.2**	**+1.9**
AAK	**Ala-Archa** 2.3nm,0.3s,baz=170,slow=5.2,SNR=38	**5.40**	**22**	P	**Pn**	**16 52 03.3**	**+1.9**
AAK	1.5nm,0.3s,baz=304,slow=23,SNR=21			S	**Sn**	**16 53 02.5**	**+0.1**
KK31	**Karatay Array** 8.1nm,0.3s,baz=173,slow=12,SNR=298	**5.51**	**351**	⇓P	**Pn**	**16 52 04.1**	**+1.5**
KK31				⇑S	**Sn**	**16 53 02.4**	**-2.2**
	11nm,0.6s,baz=168,slow=22,SNR=15						
ULHL	**Ulahol** SNR=8.7	**5.75**	**36**	P	**Pn**	16 52 38.5	+32
CHMS	**Chumysh** SNR=7.7	**5.81**	**23**	P	**Pn**	**16 52 08.1**	**+1.3**
TKM2	**Tokmak 2** 1.2nm,0.4s	**6.04**	**28**	⇓P	**Pn**	**16 52 08.8**	**-1.1**
TKM2				S	Sn	16 53 09.2	-8.6
TKM2	**Tokmak 2** SNR=6.8	**6.04**	**28**	P	**Pn**	**16 52 11.6**	**+1.7**
MK31	**Makanchi Array** 0.4nm,0.7s,baz=227,slow=14,SNR=3.6	**12.02**	**37**	⇓P	Pn	16 53 23.9	-7.0
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=228,slow=14,SNR=5.9	**12.02**	**37**	P	**Pn**	**16 53 30.2**	**-0.7**
DANN	**Dangsing**	**13.72**	**129**	*e*P	Pn	16 53 44.8	-9.0
KOLN	**Koldanda** 4.4nm,0.4s	**14.05**	**131**	*e*P	Pn	16 53 48.3	-10
AB31	**Akbulak array** 0.5nm,0.4s,baz=143,slow=11,SNR=29	**14.37**	**327**	P	Pn	16 53 59.6	-1.9
AB31	1.9nm,0.9s,baz=132,slow=25,SNR=5.9			⇑S	Sn	16 56 33.7	-6.1
PKIN	**Phulchoki**	**15.29**	**127**	*e*P	Pn	16 54 06.0	-7.8
GUN	**Gumba** 5.3nm,0.5s	**15.37**	**125**	*e*P	Pn	16 54 06.3	-8.6
AKTO	**Aktyubinsk** 0.9nm,0.8s	**16.08**	**327**	⇓P	Pn	16 54 19.8	-3.3
AKTO	0.4nm,1.4s			⇓S	Sn	16 57 11.9	-9.3
AKTO	**Aktyubinsk** 0.5nm,0.3s,baz=132,slow=14,SNR=8.2	**16.08**	**327**	P	**Pn**	**16 54 23.0**	**-0.1**
ZALV	**Zalesovo Beam** 0.4nm,0.3s,baz=222,slow=10,SNR=4.9	**18.62**	**25**	P	**P**	**16 54 52.1**	**-0.5**
FINES	**FINESS Array B** 0.6nm,0.3s,baz=120,slow=8.1,SNR=12	**36.84**	**325**	P	**P**	**16 57 41.8**	**+0.6**
FINES	comp=Z,31nm,19.2s,baz=91,slow=39			LR	LR	17 14 44.2	
NB2	**NORSAR Subarra** comp=Z,0.6nm,0.4s,baz=95,slow=7.9	**43.80**	**322**	P	**P**	**16 58 38.2**	**-0.4**
YKA	**Yellowknife Ar** comp=Z,0.3nm,0.5s,baz=350,slow=5.6,SNR=10	**80.06**	**3**	P	**P**	**17 02 40.5**	**-0.7**

IDC 10 17:03:50.1±4.1, 8.77S×123.19E, h188km±43km, mb2.7/1, mb1 3.0/4, mb1mx2.8/21, mbtmp2.8/4, Error ellipse: s-maj=103.1km s-min=17.6km az=59.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=349,slow=13,SNR=5.5	**9.58**	**166**	P	Pn	17 06 04.7	+0.7
FITZ	0.6nm,0.3s,baz=76,slow=15,SNR=11			S	Sn	17 07 50.3	-0.8
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=315,slow=13,SNR=14	**15.49**	**137**	P	Pn	17 07 17.5	-1.3
WRA	0.1nm,0.3s,baz=318,slow=25,SNR=3.8			S	S	17 09 57.7	-14
ASAR	**Alice Springs** 0.2nm,0.3s,baz=329,slow=12,SNR=23	**18.02**	**147**	P	P	17 07 47.9	+0.8
ASAR	0.0nm,0.3s,baz=317,slow=20,SNR=3.1			S	S	17 11 04.7	+0.7
MKAR	**Makanchi Array** 0.2nm,0.8s,baz=135,slow=6.7,SNR=3.0	**66.21**	**331**	P	P	17 14 17.6	-0.1

WEL 10 17:09:57.6±0.1, 39.64S×175.47E, h64km±1km, ML3.6/13, 12C-7D, Error ellipse: s-maj=1.0km s-min=0.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTVZ	**Mangateitei**	**0.25**	**1**	PN	Pn	17 10 07.6	-0.3
MTVZ				SN	Sn	17 10 15.5	0.0
MOVZ	**Moawhango**	**0.32**	**44**	⇑PN	Pn	17 10 07.8	-0.6
MOVZ				SN	Sn	17 10 15.4	-0.9
WNVZ	**Wahianoa**	**0.33**	**18**	⇑PN	Pn	17 10 08.3	-0.3
WNVZ				SN	Sn	17 10 16.7	+0.1
TRVZ	**Turoa**	**0.34**	**11**	⇑PN	Pn	17 10 08.4	-0.4
PKVZ	**Pokaka**	**0.36**	**345**	⇓PN	Pn	17 10 08.4	-0.3
DRZ	**Dome Shelter**	**0.37**	**12**	PN	Pn	17 10 08.8	-0.3
FWVZ	**Far West T-bar**	**0.39**	**10**	⇑PN	Pn	17 10 08.7	-0.5
WAZ	**Wanganui**	**0.39**	**252**	⇑PN	Pn	17 10 08.8	-0.1
TUVZ	**Tukino**	**0.40**	**21**	⇑PN	Pn	17 10 08.9	-0.2
WPVZ	**Whakapapa**	**0.44**	**8**	PN	Pn	17 10 09.1	-0.4
NGZ	**Ngauruhoe**	**0.47**	**13**	PN	Pn	17 10 09.5	-0.4
BHHZ	**Black Hill Sta**	**0.48**	**72**	⇑PN	Pn	17 10 09.2	-0.7
OTVZ	**Oturere**	**0.50**	**18**	⇑PN	Pn	17 10 09.8	-0.3
WTVZ	**West Tongariro**	**0.53**	**10**	⇑PN	Pn	17 10 09.9	-0.5
KRVZ	**Karewarewa**	**0.56**	**14**	⇓PN	Pn	17 10 10.3	-0.4
TSZ	**Takapari Road**	**0.57**	**138**	⇑PN	Pn	17 10 10.8	+0.1
TWVZ	**Taurewa**	**0.57**	**358**	PN	Pn	17 10 10.0	-0.7
PNHZ	**Pukenui**	**0.63**	**116**	PN	Pn	17 10 11.4	+0.1
KATZ	**Kakaramea**	**0.69**	**15**	PN	Pn	17 10 11.8	-0.3
RITZ	**Rihia Road**	**0.70**	**25**	PN	Pn	17 10 12.2	-0.2
VRZ	**Vera Road**	**0.75**	**313**	⇓PN	Pn	17 10 12.1	-0.6
POWZ	**Post Office Ro**	**0.79**	**163**	PN	Pn	17 10 13.1	-0.1
RATZ	**Rangitukua**	**0.81**	**17**	PN	Pn	17 10 13.3	-0.1
DVHZ	**Dannevirke**	**0.85**	**141**	PN	Pn	17 10 14.0	0.0
WPHZ	**Waipukurau**	**0.86**	**120**	PN	Pn	17 10 14.5	+0.5
HATZ	**Hinemaiaia**	**0.89**	**33**	PN	Pn	17 10 13.7	-0.8
RAEZ	**Rainy Point**	**0.90**	**293**	⇓PN	Pn	17 10 14.6	+0.1
BKZ	**Black Stump Fm**	**0.92**	**60**	PN	Pn	17 10 14.5	-0.4
WATZ	**Wairara**	**0.95**	**13**	PN	Pn	17 10 14.9	-0.3
MCHZ	**McNeill Hill**	**0.97**	**79**	PN	Pn	17 10 16.2	+0.7
MRZ	**Mangatainoka R**	**1.02**	**175**	⇓PN	Pn	17 10 15.6	-0.6
WHTZ	**Whakaora**	**1.04**	**22**	*e*PN	Pn	17 10 16.7	+0.2
MHEZ	**Mangahewa**	**1.05**	**302**	PN	Pn	17 10 16.5	+0.1
DREZ	**Durham Road**	**1.08**	**294**	PN	Pn	17 10 16.8	0.0
PRHZ	**Porangahau**	**1.10**	**125**	PN	Pn	17 10 17.7	+0.6
KAHZ	**Kahuranaki**	**1.10**	**99**	*e*PN	Pn	17 10 17.6	+0.5
DFE	**Dawson Falls**	**1.10**	**286**	PN	Pn	17 10 17.3	+0.2
NEZ	**North Egmont**	**1.12**	**289**	PN	Pn	17 10 17.7	+0.2
PXZ	**Pawanui**	**1.14**	**110**	*e*PN	Pn	17 10 17.5	-0.1
NMHZ	**Naumai**	**1.17**	**63**	⇑PN	Pn	17 10 18.9	+0.1
TIWZ	**Tintock**	**1.18**	**164**	PN	Pn	17 10 18.2	0.0
OGWZ	**Otaki Gorge**	**1.20**	**191**	⇓PN	Pn	17 10 18.1	-0.3
BFZ	**Birch Farm**	**1.20**	**150**	PN	Pn	17 10 17.9	-0.5
HIZ	**Hauiti**	**1.22**	**337**	PN	Pn	17 10 18.2	-0.5
NRZ	**Ngariki Road**	**1.22**	**284**	PN	Pn	17 10 18.8	+0.1
PKE	**Pukeiti**	**1.23**	**291**	PN	Pn	17 10 18.9	+0.1
CKHZ	**Cape Kidnapper**	**1.24**	**91**	*e*PN	Pn	17 10 20.4	+1.4
HOWZ	**Holdsworth Sta**	**1.26**	**178**	PN	Pn	17 10 18.2	-1.0
ALRZ	**Allen Road**	**1.27**	**33**	PN	Pn	17 10 18.8	-0.6
NWEZ	**Newall Road**	**1.29**	**286**	PN	Pn	17 10 19.6	+0.1
KIW	**Kapiti Island**	**1.29**	**199**	PN	Pn	17 10 19.0	-0.6
RAHZ	**Arahi**	**1.45**	**61**	PN	Pn	17 10 22.0	+0.3
CAW	**Cannon Point**	**1.50**	**192**	PN	Pn	17 10 21.4	-1.0
TMWZ	**Te Maipa**	**1.50**	**168**	PN	Pn	17 10 21.4	-1.0
RRRZ	**Republican Roa**	**1.53**	**33**	PN	Pn	17 10 22.5	-0.4
TARZ	**Mount Tarawera**	**1.62**	**30**	PN	Pn	17 10 24.2	+0.1
DUWZ	**D'Urville Isla**	**1.66**	**225**	PN	Pn	17 10 23.7	-0.8
WEL	**Wellington**	**1.73**	**198**	*e*PN	Pn	17 10 24.7	-0.7
SNZO	**South Karori**	**1.77**	**199**	PN	Pn	17 10 24.5	-1.4
TCW	**Tory Channel**	**1.81**	**210**	PN	Pn	17 10 25.4	-1.1
KNZ	**Kokohu**	**1.82**	**71**	PN	Pn	17 10 25.8	-0.8
URZ	**Urewera**	**1.88**	**43**	⇑PN	Pn	17 10 26.7	-0.8
TOZ	**Tahuroa Road**	**1.91**	**1**	PN	Pn	17 10 27.2	-0.6
PLWZ	**Palliser**	**1.94**	**185**	PN	Pn	17 10 26.6	-1.7
MHGZ	**Mahia Peninsul**	**1.95**	**76**	PN	Pn	17 10 27.9	-0.6
PRGZ	**Paritu Road**	**2.01**	**70**	PN	Pn	17 10 28.5	-0.7
MWZ	**Matawai**	**2.07**	**52**	⇓PN	Pn	17 10 29.2	-0.9
TUWZ	**Tuamarina**	**2.13**	**212**	PN	Pn	17 10 29.5	-1.4
NNZ	**Nelson**	**2.24**	**225**	PN	Pn	17 10 30.7	-1.6
BSWZ	**Blackbirch Sta**	**2.40**	**210**	PN	Pn	17 10 32.7	-1.9
CNGZ	**Carnagh Statio**	**2.42**	**62**	PN	Pn	17 10 34.0	-0.9
QRZ	**Quartz Range**	**2.54**	**241**	PN	Pn	17 10 34.7	-1.7
PUZ	**Puketiti**	**2.68**	**55**	PN	Pn	17 10 36.8	-1.6
THZ	**Tophouse**	**2.88**	**222**	PN	Pn	17 10 39.2	-1.9
KHZ	**Kahutara**	**3.13**	**207**	PN	Pn	17 10 42.0	-2.4
LTZ	**Lake Taylor**	**3.96**	**216**	PN	Pn	17 10 52.6	-3.3
MQZ	**McQueen's Vall**	**4.58**	**206**	PN	Pn	17 11 00.2	-4.0

WEL 10 17:19:04.8±0.3, 37.98S×177.87E, h70km±3km, ML4.0/15, 3C-23D, Error ellipse: s-maj=1.6km s-min=1.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**0.32**	**107**	⇑PN	Pn	17 19 15.6	-0.6
PUZ				SN	Sn	17 19 23.6	-0.9
MWZ	**Matawai**	**0.45**	**217**	⇓PN	Pn	17 19 17.1	-0.2
MWZ				SN	Sn	17 19 26.2	-0.2
MXZ	**Matakaoa Point**	**0.54**	**40**	⇓PN	Pn	17 19 18.0	0.0
MXZ				SN	Sn	17 19 28.9	+1.2
CNGZ	**Carnagh Statio**	**0.57**	**153**	⇑PN	Pn	17 19 18.5	+0.2
URZ	**Urewera**	**0.67**	**245**	⇓PN	Pn	17 19 19.1	-0.2
WIZ	**White Island**	**0.70**	**309**	PN	Pn	17 19 19.1	-0.7
EDRZ	**Edgecumbe**	**0.91**	**262**	⇓PN	Pn	17 19 22.0	-0.3
PRGZ	**Paritu Road**	**0.94**	**180**	PN	Pn	17 19 21.9	-0.7
MARZ	**Manawahe**	**0.95**	**269**	⇓PN	Pn	17 19 22.1	-0.6
KNZ	**Kokohu**	**1.05**	**189**	⇓PN	Pn	17 19 23.4	-0.5
OPRZ	**Ohinepanea**	**1.05**	**277**	⇓PN	Pn	17 19 23.3	-0.6
TARZ	**Mount Tarawera**	**1.11**	**256**	⇓PN	Pn	17 19 24.8	-0.1
RAHZ	**Arahi**	**1.12**	**213**	⇓PN	Pn	17 19 25.0	+0.1
RRRZ	**Republican Roa**	**1.13**	**251**	⇓PN	Pn	17 19 24.7	-0.3
MHGZ	**Mahia Peninsul**	**1.17**	**179**	PN	Pn	17 19 25.3	-0.2
LIRZ	**Lichensteins R**	**1.18**	**268**	PN	Pn	17 19 25.5	-0.1
PRRZ	**Plateau Road**	**1.28**	**246**	⇓PN	Pn	17 19 26.6	-0.3
KARZ	**Kaharoa**	**1.29**	**268**	⇓PN	Pn	17 19 26.6	-0.4
HRRZ	**Handcock Road**	**1.32**	**251**	PN	Pn	17 19 27.2	-0.3
ALRZ	**Allen Road**	**1.34**	**244**	PN	Pn	17 19 27.5	-0.2
NMHZ	**Naumai**	**1.40**	**217**	⇓PN	Pn	17 19 28.8	+0.3
BKZ	**Black Stump Fm**	**1.61**	**222**	⇓PN	Pn	17 19 31.1	-0.2
MCHZ	**McNeill Hill**	**1.73**	**212**	PN	Pn	17 19 32.6	-0.2
CKHZ	**Cape Kidnapper**	**1.79**	**200**	PN	Pn	17 19 33.0	-0.6
RITZ	**Rihia Road**	**1.87**	**237**	PN	Pn	17 19 34.9	+0.2
TOZ	**Tahuroa Road**	**1.89**	**277**	⇓PN	Pn	17 19 34.7	-0.3
KAHZ	**Kahuranaki**	**1.97**	**203**	PN	Pn	17 19 35.3	-0.8
BHHZ	**Black Hill Sta**	**2.07**	**223**	PN	Pn	17 19 37.1	-0.3
KRVZ	**Karewarewa**	**2.08**	**237**	PN	Pn	17 19 37.5	-0.1
OTVZ	**Oturere**	**2.10**	**235**	PN	Pn	17 19 37.8	-0.2
KUZ	**Kuaotunu**	**2.11**	**305**	⇓PN	Pn	17 19 37.3	-0.6
NGZ	**Ngauruhoe**	**2.15**	**235**	PN	Pn	17 19 38.5	-0.1
TUVZ	**Tukino**	**2.16**	**233**	PN	Pn	17 19 38.6	-0.2
MOVZ	**Moawhango**	**2.19**	**229**	⇓PN	Pn	17 19 38.5	-0.6
PXZ	**Pawanui**	**2.20**	**201**	PN	Pn	17 19 37.3	-1.8
WPVZ	**Whakapapa**	**2.20**	**235**	PN	Pn	17 19 39.3	0.0
FWVZ	**Far West T-bar**	**2.22**	**234**	⇓PN	Pn	17 19 39.3	-0.4
DRZ	**Dome Shelter**	**2.23**	**234**	⇓PN	Pn	17 19 39.7	-0.2
WNVZ	**Wahianoa**	**2.23**	**232**	PN	Pn	17 19 39.4	-0.4
TRVZ	**Turoa**	**2.25**	**233**	⇓PN	Pn	17

SNR=91
AAK Ala-Archa 6.82 48 P **Pn 17 35 47.7 +1.2**
SNR=166
AAK Ala-Archa 6.82 48 Pn **Pn 17 35 47.0 +0.5**
comp=Z,1μm,0.4s
AAK Ala-Archa 6.82 48 Pn **Pn 17 35 47.5 +1.1**
comp=Z,38nm,0.3s,baz=280,slow=0.8,SNR=141
AAK Sn **Sn 17 37 05.2 +1.6**
comp=Z,30nm,0.3s,baz=180,slow=20,SNR=3.0
KZA Kyzart 6.97 54 *i* PN **Pn 17 35 50.2 +1.5**
KZA Kyzart 6.97 54 P **Pn 17 35 50.2 +1.5**
SNR=705
IMOG Moghan 6.97 255 *eP* **Pn 17 35 48.7 0.0**
FRU Bishkek 7.01 47 *eP*N **Pn 17 35 50.0 +1.0**
FRU *i* S **Sn 17 37 10.0 +1.8**
FRU pmax pmax
comp=Z,2μm,1.6s
FRU pmax pmax
comp=Z,2μm,2.0s
FRU pmax pmax
comp=N,4μm,1.8s
FRU MLR MLR
comp=Z,11μm,12.0s
KBK Karagaybulak 7.10 49 *i* PN **Pn 17 35 52.1 +1.7**
KBK Karagaybulak 7.10 49 P **Pn 17 35 52.1 +1.7**
SNR=213
IPAY Payeh 7.13 258 *eP* **Pn 17 35 50.3 -0.5**
CHMS Chumysh 7.20 46 *i* PN **Pn 17 35 52.4 +0.9**
CHMS Chumysh 7.20 46 P **Pn 17 35 52.4 +0.9**
SNR=52
USP Ospenovka 7.23 44 *i* PN **Pn 17 35 52.5 +0.5**
USP Ospenovka 7.23 44 P **Pn 17 35 52.5 +0.5**
SNR=58
IAKL Akhelmad 7.27 260 *eP* **Pn 17 35 52.1 -0.7**
IQHU Qucahn 7.33 264 *eP* **Pn 17 35 52.7 -0.8**
IKRD Kardeh 7.42 262 *eP* Pn 17 35 44.2 -11
SARP Sargodha 7.51 145 P **Pn 17 35 56.0 +0.2**
ABKT Ailbek 7.53 271 Pn **Pn 17 35 55.5 -0.7**
comp=Z,1μm,0.5s,SNR=48
TKM2 Tokmak 2 7.64 50 ⇓Pn **Pn 17 35 58.9 +1.1**
comp=Z,161nm,0.7s
TKM2 ⇑Sn **Sn 17 37 25.9 +2.0**
comp=Z,275nm,0.8s
TKM2 ⇑Lg Lg 17 38 08.2
comp=Z,764nm,1.4s
TKM2 Tokmak 2 7.64 50 P **Pn 17 35 58.5 +0.6**
TKM2 pmax pmax
comp=Z,161nm,0.7s
TKM2 Tokmak 2 7.64 50 *eP* **Pn 17 35 58.4 +0.6**
TKM2 Tokmak 2 7.64 50 P **Pn 17 35 58.7 +0.9**
SNR=218
ULHL Ulahol 7.69 56 *i* P **Pn 17 35 59.5 +1.0**
ULHL Ulahol 7.69 56 P **Pn 17 35 59.5 +1.0**
SNR=87
ISFR Sfrayin 7.76 264 *eP* **Pn 17 35 59.1 -0.3**
ISHV Shirvan 7.91 268 *eP* **Pn 17 35 59.6 -1.9**
QUE Quetta 8.04 184 *eP* Pn 17 36 13.0 +10
QUE Quetta 8.04 184 *eP* Pn 17 36 13.0 +10
QUE *eS* Sb 17 37 51.0 -11
JMU Jammu 8.06 131 *ex* x 17 36 12.5
JMU *ex* **Sn 17 37 29.0 -5.0**
KNDC Almaty 8.64 52 ⇑Pn **Pn 17 36 13.1 +1.7**
KNDC ⇓Lg Lg 17 38 49.3
AAA Alma-Ata 8.66 51 *eP* **Pn 17 36 11.3 -0.3**
AAA *eS* **Sn 17 37 44.8 -3.9**
AAA pmax pmax
comp=Z,500nm,1.0s
AAA smax smax
comp=E,1μm,1.9s
AAA MLR MLR
comp=Z,8μm,15.0s
THN Thein Dam 8.76 129 *e*PKP **Pn 17 36 10.1 -2.8**
THN *ex* x 17 37 46.0
DLH Dalhousie 8.84 127 *e*PKP Pn 17 36 10.0 -4.2
DLH *ex* x 17 37 47.0
DHRM DHARAMSHALA 9.24 128 *e*PKP **Pn 17 36 18.4 -1.4**
DHRM AMB AMB 17 37 11.6
comp=Z,339nm,0.7s
SDNR Sundarnagar 10.17 129 *e*PKP **Pn 17 36 31.0 -1.3**
SMLA Simla 10.55 129 *e*PKP **Pn 17 36 36.0 -1.4**
SMLA AMB AMB 17 36 43.9
comp=Z,84nm,1.0s
SMLA *i* x x 17 38 29.1
SMLA ⇓E 17 38 33.4
comp=E,4μm,0.3s
SMLA ⇓E 17 38 35.4
comp=N,4μm,0.3s
DDI Dehra Dun 11.66 129 *ex* Sn 17 38 53.3 -9.0
IBAF Bafgh 11.93 240 *eP* **Pn 17 36 56.6 +0.1**
IFIR Firoozkooh 12.21 262 *eP* **Pn 17 37 00.4 0.0**
AB31 Akbulak array 12.35 336 ⇑Pn **Pn 17 37 00.5 -1.6**
comp=N,102nm,0.5s,baz=157,slow=12,SNR=4227
AB31 ⇓Sn **Sn 17 39 15.2 -3.7**
comp=N,64nm,0.5s,baz=155,slow=24,SNR=6.1
AB31 ⇑Lg Lg 17 40 36.2
comp=N,167nm,0.7s
AB31 Akbulak array 12.35 336 *eP* **Pn 17 37 00.4 -1.6**
AB31 pmax pmax
comp=Z,105nm,0.3s
ABKAR Akbulak array 12.35 336 *eP*n **Pn 17 37 00.6 -1.4**
ICHK Chekchek 12.37 245 *eP* **Pn 17 37 03.5 +0.9**
IMEH Mehriz 12.70 241 *eP* **Pn 17 37 08.1 +0.9**
IDMV Damavand 12.79 263 *eP* **Pn 17 37 08.1 -0.3**
PTH Pithoragarh 13.54 126 *e*PKP **Pn 17 37 15.9 -2.7**
PTH *ex* x 17 39 42.9
IZEF Zefreh 13.56 252 *eP* **Pn 17 37 18.1 -0.9**
MK31 Makanchi Array 13.76 47 *eP* **Pn 17 37 20.1 -1.2**
MK31 Makanchi Array 13.76 47 *eP* **Pn 17 37 20.1 -1.2**
MKAR Makanchi Array 13.76 47 P **Pn 17 37 19.9 -1.4**
MKAR pmax pmax
comp=Z,2.0nm,0.3s
MKAR MLR MLR
comp=Z,309nm,21.3s
MKAR Makanchi Array 13.76 47 *eP*n **Pn 17 37 20.1 -1.2**
MKAR Makanchi Array 13.76 47 Pn **Pn 17 37 19.9 -1.4**
comp=Z,1.8nm,0.3s,baz=238,slow=13,SNR=165
MKAR LR LR 17 43 48.2
comp=Z,309nm,21.3s,baz=245,slow=42
IKLH Kolahrood 13.94 254 *eP* **Pn 17 37 23.2 -0.9**
AKTO Aktyubinsk 14.01 334 ⇑Pn **Pn 17 37 22.9 -1.7**
comp=Z,24nm,0.8s
AKTO ⇑Sn **Sn 17 39 53.7 -5.7**
comp=Z,22nm,0.8s
AKTO ⇓Lg Lg 17 41 26.2
comp=Z,53nm,1.3s
AKTO Aktyubinsk 14.01 334 P **Pn 17 37 23.2 -1.4**
AKTO 17 39 53.6
AKTO pmax pmax
comp=Z,24nm,0.8s
AKTO smax smax
comp=N,22nm,0.8s
AKTO Aktyubinsk 14.01 334 Pn **Pn 17 37 23.6 -1.1**
AKTO Sn Sn 17 39 51.9 -7.5
AKTO Aktyubinsk 14.01 334 Pn **Pn 17 37 23.6 -1.1**
comp=N,11nm,0.3s,baz=149,slow=14,SNR=294
AKTO Sn Sn 17 39 51.9 -7.5
comp=N,8.3nm,0.3s,baz=139,slow=20,SNR=5.3
AKTO LR LR 17 43 27.9
comp=N,2μm,19.7s,baz=22,slow=40
IRAZ Razeghan 14.48 264 *eP* **Pn 17 37 30.0 -1.5**
KURBB Kurchatov Arra 14.60 28 ⇑Pn **Pn 17 37 31.0 -1.8**
comp=N,6.8nm,0.8s
KURBB ⇓Lg Lg 17 41 51.5
comp=N,119nm,1.4s
KURBB Kurchatov Arra 14.60 28 Pn **Pn 17 37 29.8 -3.0**
comp=N,1.2nm,0.3s,baz=221,slow=13,SNR=109
KURBB LR LR 17 43 47.1
comp=N,1μm,21.4s,baz=220,slow=40
VOSK Vostochnaya 14.68 8 ⇓Pn **Pn 17 37 30.8 -3.0**
comp=N,86nm,0.9s
VOSK ⇑Sn **Sn 17 40 10.5 -5.2**
comp=N,57nm,0.9s
VOSK ⇓Lg Lg 17 41 50.5
comp=N,357nm,1.4s
IPAR Pars 14.71 240 *eP* **Pn 17 37 35.4 +0.7**
KURK Kurchatov 14.71 28 ⇑Pn Pn 17 37 30.7 -3.6
comp=N,99nm,1.0s
KURK ⇑Lg Lg 17 41 55.3
comp=N,506nm,1.2s
KURK Kurchatov 14.71 28⇑ *eP* **Pn 17 37 31.2 -3.0**
KURK pmax pmax
comp=Z,37nm,1.7s
KURK Kurchatov 14.71 28 *eP* **Pn 17 37 31.5 -2.8**
KURK Kurchatov 14.71 28 P **Pn 17 37 31.4 -2.8**
SNR=38
KURK Kurchatov 14.71 28 Pn **Pn 17 37 31.6 -2.6**
comp=Z,484nm,0.8s,SNR=21
IPIR Pirpir 14.74 253 *eP* **Pn 17 37 35.9 +0.9**
BVA0 Borovoye Array 14.92 6 *i* P **Pn 17 37 34.8 -2.3**
BVA0 17 40 12.8
BVA0 pmax pmax
comp=Z,26nm,0.9s
BVA0 smax smax
comp=N,14nm,0.9s
BVAR Borovoye Array 14.92 6 P **Pn 17 37 34.8 -2.3**
BVAR Borovoye Array 14.92 6 Pn **Pn 17 37 34.8 -2.3**
BVAR Sn Sn 17 40 11.5 -10
BVAR Borovoye Array 14.92 6 Pn **Pn 17 37 34.8 -2.3**
comp=N,19nm,0.3s,baz=177,slow=12,SNR=140
BVAR Sn Sn 17 40 11.5 -10
comp=N,5.8nm,0.3s,baz=188,slow=12,SNR=2.9
BVAR LR LR 17 44 04.6
comp=N,2μm,20.9s,baz=33,slow=40
BRVK Borovoye 14.94 6 ⇑Pn **Pn 17 37 34.9 -2.5**
comp=N,593nm,0.9s
BRVK ⇓Sn Sn 17 40 16.1 -6.1
comp=N,214nm,1.0s
BRVK ⇓Lg Lg 17 42 01.4
comp=N,475nm,1.2s
BRVK Borovoye 14.94 6*de*P **Pn 17 37 36.0 -1.3**
BRVK pmax pmax
comp=Z,88nm,1.2s
BRVK Borovoye 14.94 6 *eP* **Pn 17 37 36.2 -1.2**
BRVK Borovoye 14.94 6 P **Pn 17 37 36.5 -0.8**
SNR=120
BRVK Borovoye 14.94 6 Pn **Pn 17 37 36.1 -1.3**
comp=Z,μm,1.0s,SNR=75
ISRV Sarvestan 14.96 238 *eP* **Pn 17 37 37.5 -0.5**
BHJ Bhuj 15.02 173 *e*PKP **Pn 17 37 39.2 +0.7**
BHJ AMB AMB 17 37 41.6
comp=Z,130nm,0.9s
MAK Makhachkala 16.02 294 *eP* **Pn 17 37 48.3 -3.1**
MAK *eS* **Sn 17 40 45.6 -2.7**
MAK pmax pmax
comp=Z,62nm,0.6s
MAK MLR MLR
comp=Z,4μm,11.0s
WMQ Urumqi 16.11 63 P **Pn 17 37 50.4 -2.3**
WMQ pP **P 17 37 54.9 -1.0**
WMQ sP sP 17 37 58.9 -5.5
WMQ PP **pP 17 38 02.8 +1.1**
WMQ S **Sn 17 40 48.5 -2.1**
WMQ sS S 17 40 55.8 -8.0
WMQ SS **SnSn 17 41 07.6 +4.1**
WMQ ScS **ScS 17 49 56.4 -3.4**
WMQ pmax pmax
comp=Z,98nm,0.8s
WMQ pmax pmax
comp=Z,340nm,2.6s
WMQ LR LR
comp=N,2μm,10.6s
WMQ LR LR
comp=E,2μm,10.6s
WMQ LR LR
comp=Z,900nm,20.0s
PYUN Piuthan 16.31 124 *eP* Pn 17 37 49.7 -5.8
comp=Z,403nm,0.5s
DANN Dangsing 16.66 122 *eP* Pn 17 37 54.2 -5.8
comp=Z,580nm,0.7s
NAZ Nazwa, Dubai 16.67 221 P **Pn 17 37 59.7 -0.2**
SNR=9.8
KOLN Koldanda 16.93 123 *eP* Pn 17 37 58.0 -5.4
comp=Z,220nm,0.6s
KOLN *eS* Sn 17 40 54.4 -17
HOQ Hoqain 17.07 214 P **P 17 38 06.3 -0.3**
SNR=14
BHPL Bhopal 17.11 148 *ex* **Pn 17 38 01.6 -3.9**
BHPL AMB AMB 17 38 13.2
comp=Z,231nm,0.8s
SMDO Samad 17.22 211 P **Pn 17 38 06.3 -0.5**
SNR=8.0
WBK Wadi Bani Khal 17.26 208 P **P 17 38 08.4 -0.3**
SNR=10
DGRG David-gareji 17.41 288 P **Pn 17 38 08.1 -1.0**
ARQ Araqi 17.64 216 P **P 17 38 13.6 +0.7**
SNR=15
JMDO Jabal Madar 17.81 210 P **P 17 38 15.5 +0.7**
SNR=19
BSY Bisya 17.85 213 P **P 17 38 15.4 +0.1**
SNR=31
SEAG Tbilisi Sea 17.86 289 P **Pn 17 38 13.8 -0.9**
GNI Garni 17.87 283 *eP* **P 17 38 15.3 -0.1**
GNI Garni 17.87 283 *eP* **Pn 17 38 15.1 +0.2**
comp=Z,262nm,1.0s
GNI Garni 17.87 283 P **P 17 38 15.5 0.0**
SNR=95
GNI Garni 17.87 283 P **Pn 17 38 14.7 -0.2**
comp=Z,1.7nm,0.3s,baz=73,slow=2.2,SNR=55
GNI LR LR 17 46 46.9
comp=Z,1μm,18.5s,baz=108,slow=42
TBLG Delisi 17.90 288 *i* P **Pn 17 38 13.6 -1.6**
TBLG Delisi 17.90 288 P **Pn 17 38 13.6 -1.6**
TBLG S **S 17 41 43.7 +3.3**
DMN Daman 18.04 121 *eP* Pn 17 38 12.0 -5.2
comp=Z,1μm,1.0s
KKN Kakani 18.04 120 *eP* **Pn 17 38 13.0 -4.2**
comp=Z,757nm,0.6s
KZR Kazreti 18.13 287 P **P 17 38 19.3 +1.1**
GUDG Gudauri 18.16 291 P **Pn 17 38 17.8 -0.7**
GUDG S **Sn 17 41 39.5 -1.1**
PKIN Phulchoki 18.26 120 *eP* **Pn 17 38 15.6 -4.3**
comp=Z,984nm,0.8s
PKI Pulchoki 18.27 120 *eP* **Pn 17 38 15.7 -4.4**
comp=Z,1μm,0.7s
GUN Gumba 18.38 119 *eP* **P 17 38 17.3 -4.1**
comp=Z,1μm,1.1s
GOR Gori 18.39 289 P **Pn 17 38 21.2 +0.1**
CLDR Caldiran 18.55 280 *eP* **Pn 17 38 23.7 +0.3**
ZEI Tsey 18.61 292 *eP* **Pn 17 38 24.3 +0.2**
ZEI *eS* **Sn 17 41 51.5 -0.1**
ZEI pmax pmax
comp=Z,38nm,1.3s
ZEI MLR MLR
comp=Z,2μm,15.0s
UMR Umm Al-Rimmam 18.66 248 *eP* **P 17 38 24.1 +0.1**
UMR AMb AMB 17 38 34.2
comp=Z,353nm,0.7s
AKH Akhalkalaki 18.82 287 P **Pn 17 38 26.7 +0.2**
KBD Kabd 18.88 247 *eP* **P 17 38 26.7 +0.2**
KBD AMb AMB 17 38 35.4
comp=Z,185nm,0.8s
ONI Oni 18.92 291 P **Pn 17 38 28.5 +0.9**
ONI S **Sn 17 41 59.7 +0.8**
VANB Van 19.02 279 *eP* **Pn 17 38 29.6 +0.7**
CUKT Cukurca 19.04 275 *eP* **Pn 17 38 30.1 +0.9**
RDF Al-Radifah 19.12 247 *eP* **Pn 17 38 29.8 -0.3**
RDF AMb AMB 17 38 39.0
comp=Z,213nm,0.8s
KARS Kars 19.13 285 *eP* **Pn 17 38 31.8 +1.5**
NAY Al-Naaiem 19.17 248 *eP* **P 17 38 29.7 0.0**
NAY AMb AMB 17 38 38.6
comp=Z,162nm,0.9s
SVE Sverdlovsk 19.18 348⇑ *eP* **P 17 38 29.8 +0.2**
SVE pmax pmax
comp=Z,151nm,1.2s
SVE MLR MLR
comp=Z,5μm,14.0s
ARU Arti 19.20 344*c i*P **P 17 38 29.6 -0.2**
ARU S **S 17 42 07.3 +1.2**
ARU pmax pmax
comp=Z,127nm,1.2s
ARU MLR MLR
comp=Z,2μm,13.0s
ARU Arti 19.20 344 P **P 17 38 29.7 -0.1**
comp=Z,1μm,1.0s,SNR=52
AKL Akola 19.25 153 *e*PKP **Pn 17 38 31.4 -0.2**
AKL *i* x x 17 41 49.1
KBZ Khabaz 19.46 294 P **P 17 38 33.1 +0.4**
KBZ S S 17 42 01.7 -10
KBZ Khabaz 19.46 294 P **P 17 38 33.1 +0.4**
KBZ S S 17 42 01.6 -10
KBZ Khabaz 19.46 294 P **P 17 38 33.1 +0.4**
comp=Z,2.4nm,0.3s,baz=106,slow=8.5,SNR=132
KBZ S S 17 42 01.6 -10
comp=Z,1.5nm,0.3s,baz=138,slow=12,SNR=3.2
KBZ LR LR 17 48 11.1
comp=Z,2μm,19.8s,baz=86,slow=43
RAMN Ramite 19.48 120 *eP* **P 17 38 30.5 -2.9**
comp=Z,738nm,0.8s
ZAA0 Zalesovo Array 19.63 31 *eP* **P 17 38 33.5 -1.0**
ZALV Zalesovo Beam 19.63 31 P **P 17 38 33.8 -0.8**
ZALV Zalesovo Beam 19.63 31 P **P 17 38 33.8 -0.8**
ZALV Zalesovo Beam 19.63 31 P **P 17 38 33.8 -0.8**
comp=Z,15nm,0.3s,baz=222,slow=11,SNR=220
ZALV LR LR 17 46 38.2
comp=Z,1μm,18.4s,baz=238,slow=38
KIV Kislovodsk 19.64 295*c i*P **P 17 38 35.2 +0.4**
KIV *i* S **S 17 42 14.6 -0.9**
KIV pmax pmax
comp=Z,190nm,1.0s
KIV MLR MLR
comp=Z,3μm,16.0s
KIV Kislovodsk 19.64 295 P **Pn 17 38 35.9 -0.4**
comp=Z,1μm,0.7s,SNR=38
NGP Nagpur 19.66 147 *e*PKP **P 17 38 34.1 -0.9**
NGP *ex* x 17 38 41.6
comp=Z,163nm,1.0s
NGP *ex* x 17 41 58.1
NVS Novosibirsk 19.69 27⇑ *i*P **P 17 38 33.4 -1.8**
NVS *eS* **S 17 42 11.6 -4.6**
NVS pmax pmax
comp=N,56nm,0.6s
NVS pmax pmax
comp=Z,85nm,0.6s
NVS pmax pmax
comp=E,85nm,0.7s
NVS smax smax
comp=N,40nm,1.6s
NVS smax smax
comp=E,77nm,1.6s
CHVG Ch'k'valeri 19.94 291 P **Pn 17 38 41.3 +1.5**
TAPN Taplejung 20.00 117 *eP* **P 17 38 37.2 -1.9**
comp=E,540nm,0.7s
ODAN Odare 20.08 119 *eP* **P 17 38 38.3 -1.6**
comp=E,675nm,0.9s
BCA Borcka 20.23 287 *eP* Pn 17 38 45.2 +2.0
POO Poona 20.36 163 *e*PKP **P 17 38 43.5 +0.8**
POO AMB AMB 17 38 48.9
comp=Z,75nm,0.8s
POO *i* x x 17 43 15.0
VRTB Varto-Mus 20.46 281 *eP* Pn 17 38 47.3 +1.2
EZM Erzurum 20.47 283 *eP* Pn 17 38 46.5 +0.2
PZAR Pazar-Rize 20.77 287 *eP* Pn 17 38 49.2 -0.3
BNGB Bing˜ll 21.08 281 *eP* **P 17 38 52.9 +2.4**
BOK Bokaro 21.18 128 *e*PKP **P 17 38 50.4 -1.2**
BOK AMB AMB 17 38 58.8
comp=Z,194nm,1.2s
LSA Lhasa 21.21 107 P **P 17 38 53.0 +0.6**
LSA pmax pmax
comp=Z,50nm,1.2s
LSA Lhasa 21.21 107 *eP* **P 17 38 53.3 +0.9**
LSA pmax pmax
comp=Z,196nm,0.9s
LSA Lhasa 21.21 107 *eP* **P 17 38 53.3 +0.9**
comp=Z,196nm,0.9s
BAYT Ayd¯ntepe-Bay 21.37 284 *eP* **P 17 38 54.3 +0.5**
KBSD Kabsdagh 21.49 275 *eP* P 17 38 47.6 -7.3
MZRK Al-Mazaregh 21.67 272 *eP* **P 17 38 58.4 +1.6**
SOC Sochi 21.73 293*c i*P **P 17 38 58.4 +1.0**
SOC *e* 17 39 15.5
SOC *e*PPP PPP 17 39 24.2
SOC *eS* **S 17 43 00.1 +3.2**
SOC *e*SS **SnSn 17 43 25.1 +3.5**
SOC pmax pmax
comp=Z,216nm,1.0s
SOC MLR MLR
comp=Z,1μm,13.0s
SOC MLR MLR
comp=E,611nm,13.0s
SOC MLR MLR
comp=N,807nm,13.0s
GUMT Gumushane 21.88 285 *eP* **P 17 39 00.7 +1.6**
SFNV Sufian 21.96 274 *eP* **P 17 38 59.1 -0.8**
PTK Pertek 22.09 281 *eP* **P 17 39 02.9 +1.5**
SVRC Sivrice-ELAZID 22.22 279 *eP* **P 17 39 03.7 +0.8**
ESPY Espiye-Giresun 22.42 286 *eP* **P 17 39 06.0 +1.1**
HVS Khovu-Aksy 22.43 46*d i*P **P 17 39 04.7 -0.2**
HVS pmax pmax
comp=Z,321nm,1.1s
HVS MLR MLR
comp=Z,4μm,13.0s
ILIC ilic-Erzincan 22.66 282 *eP* **P 17 39 09.7 +2.2**
URFA Urfa 22.76 277 *eP* **P 17 39 09.4 +0.9**
HYB Hyderabad 22.82 152 *i* P **P 17 39 08.0 -1.2**
comp=Z,160nm,1.0s
HYB *eS* **S 17 43 12.0 -5.5**
HYB Hyderabad 22.82 152 *e*PKP **P 17 39 10.6 +1.3**
HYB AMB AMB 17 39 16.5
comp=Z,211nm,1.3s
ANN Anapa 23.48 296*c i*P **P 17 39 16.5 +0.9**
ANN *i* 17 39 25.6
ANN *i* 17 39 43.8
ANN *e* 17 43 00.6
ANN *eS* **S 17 43 32.5 +4.4**
ANN *eSS* **SnSn 17 44 08.4 +4.1**
ANN pmax pmax
comp=Z,168nm,1.0s
ANN MLR MLR
comp=N,1μm,15.0s
ANN MLR MLR
comp=E,2μm,15.0s
ANN MLR MLR
comp=Z,2μm,15.0s
RSDY Resadiye-TOKAT 23.52 285 *eP* **P 17 39 18.0 +1.9**
DARE Darende-Malaty 23.61 280 *eP* **P 17 39 19.3 +2.2**
VORD Divnogorie 23.71 312 *eP* **P 17 39 18.1 +0.3**
VORD *e**SP **sP 17 39 24.6 -2.0**
VORD pmax pmax
comp=N,70nm,0.8s
VORD pmax pmax
comp=E,120nm,0.8s
VORD pmax pmax
comp=Z,120nm,0.8s
VORD MLR MLR
comp=N,780nm,16.0s
VORD MLR MLR
comp=E,920nm,16.0s
VORD MLR MLR
comp=Z,1μm,16.0s
VSR Storozhevoye 23.88 312*c i*P **P 17 39 19.8 +0.4**
VSR *e**SP **sP 17 39 26.1 -2.2**
VSR pmax pmax
comp=N,50nm,0.8s
VSR pmax pmax
comp=E,170nm,0.8s
VSR pmax pmax
comp=Z,160nm,0.8s
VSR MLR MLR
comp=N,390nm,14.0s
VSR MLR MLR
comp=E,650nm,14.0s
VSR MLR MLR
comp=Z,1μm,14.0s
RAYN Ar Rayn 23.93 239 P **P 17 39 19.5 -0.7**
comp=Z,398nm,0.8s,SNR=29
RAYN Ar Rayn 23.93 239 *eP* **P 17 39 19.9 -0.3**
comp=Z,64nm,0.9s
SHL Shillong 24.05 115 *e*PKP **P 17 39 21.5 0.0**
SHL *eS* **S 17 43 40.0 +2.2**
VOR Voronezh 24.05 313 *eP* **P 17 39 19.0 -2.1**
VOR pmax pmax
comp=Z,750nm,2.0s
GAZ Gaziantep 24.07 277 *eP* **P 17 39 23.2 +1.7**
KMRS Kahramanmaras 24.25 278 *eP* **P 17 39 24.6 +1.6**
ABTO Aybut 24.31 215 P **P 17 39 22.6 -1.2**
SNR=6.2
KVT Kavak 24.44 287 *eP* **P 17 39 26.4 +1.6**
SARI SarD1z-Kayseri 24.46 280 *eP* **P 17 39 27.2 +2.1**
VIS Vishakhapatnam 24.60 142 *e*PKP **P 17 39 25.1 -1.2**
VIS AMB AMB 17 39 33.6
comp=Z,107nm,1.6s
AGT Agartala 24.66 119 *ex* P 17 39 18.0 -8.8
AGT *ex* x 17 40 07.0
BNN Bunyan 24.83 281 *eP* **P 17 39 30.0 +1.6**
BTCH Batrach 24.92 275 *i* P **P 17 39 27.0 -2.1**
DIKM Dikmen 25.00 288 *eP* **P 17 39 31.5 +1.7**
GTA Gaotai 25.01 77 ⇑P **P 17 39 31.3 +1.2**
GTA pP **pP 17 39 37.3 +0.9**
GTA sP **sP 17 39 39.9 +0.9**
GTA S **S 17 43 55.0 +1.9**
GTA sS **sS 17 44 04.2 +0.8**
GTA pmax pmax
comp=Z,17nm,1.4s
GTA pmax pmax
comp=Z,120nm,5.2s

GTA LR LR
comp=N,1μm,14.5s
GTA LR LR
comp=E,1μm,16.1s
GTA LR LR
comp=Z,1μm,15.7s
WRDH Warideh 25.09 273 *e*P **P 17 39 30.0 -0.8**
YOZ Yozgat 25.13 283 *e*P **P 17 39 32.4 +1.3**
ZALF Zalf 25.17 267 *e*P **P 17 39 31.4 0.0**
CEYT Ceyhan 25.25 277 *e*P **P 17 39 34.0 +2.0**
BIDA Albida 25.30 272 *i* P P 17 39 26.4 -6.3
ARNB Al Arnab 25.34 274 *e*P **P 17 39 31.6 -1.5**
HAWK Haweek 25.37 271 *e*P **P 17 39 34.0 +0.7**
SALA Sala 25.71 267 *e*P **P 17 39 36.9 +0.3**
TOTH TOTAH 25.73 269 *e*P **P 17 39 35.6 -1.0**
ASF Jabal al Asfar 25.78 266 P **P 17 39 38.8 +1.7**
ASF Jabal al Asfar 25.78 266 P **P 17 39 38.8 +1.7**
comp=Z,23nm,1.0s,baz=90,slow=5.1,SNR=28
ASF LR LR 17 52 05.3
comp=Z,642nm,18.8s,baz=294,slow=42
SIM Simferopol' 25.84 296*c e*P **P 17 39 36.0 -1.4**
SIM S **S 17 44 09.0 +3.1**
SIM pmax pmax
comp=Z,411nm,0.9s
TCHB Talchebab 26.33 268 *e*P **P 17 39 41.2 -0.8**
BR131 Keskin Array S 26.40 284 *e*P **P 17 39 43.8 +1.1**
comp=Z,57nm,0.7s
BRTR Keskin Array B 26.40 284 P **P 17 39 43.9 +1.1**
BRTR PKiKP **PKiKP 17 50 42.8 -3.7**
BRTR Keskin Array B 26.40 284 P **P 17 39 43.9 +1.1**
comp=Z,33nm,0.7s,baz=101,slow=9.1,SNR=260
BRTR PKiKP **PKiKP 17 50 42.8 -3.7**
comp=Z,0.5nm,0.7s,baz=64,slow=2.9,SNR=3.6
BRTR LR LR 17 52 06.9
comp=Z,424nm,18.3s,baz=152,slow=41
MOS Moscow 26.65 321 *e*P **P 17 39 44.5 0.0**
MOS *e* 17 40 29.8
MOS *e*S **S 17 44 24.2 +5.9**
MOS *e* 17 44 44.6
MOS pmax pmax
comp=Z,121nm,1.3s
MOS MLR MLR
comp=N,600nm,16.0s
MOS MLR MLR
comp=Z,1μm,16.0s
MOS MLR MLR
comp=E,900nm,15.0s
MMAI Mount Meron Ar 26.65 269 P **P 17 39 46.2 +1.3**
MMAI Mount Meron Ar 26.65 269 P **P 17 39 46.2 +1.3**
comp=E,7.0nm,0.9s,baz=83,slow=9.4,SNR=6.5
MOY Mondy 26.88 49 *e*P **P 17 39 47.9 +1.0**
MOY pmax pmax
comp=Z,43nm,1.7s
OBN Obninsk 26.89 319*c i*P **P 17 39 47.2 +0.4**
OBN *i* 17 39 56.9
OBN *i* S **S 17 44 26.5 +4.3**
OBN pmax pmax
comp=Z,227nm,1.6s
OBN MLR MLR
comp=Z,2μm,18.0s
OBN Obninsk 26.89 319 P **P 17 39 47.2 +0.4**
comp=Z,696nm,0.9s,SNR=6.0
ANTO Ankara 27.03 284 *e*P **P 17 39 49.4 +1.1**
ANTO pmax pmax
comp=Z,141nm,1.7s
ANTO Ankara 27.03 284 *e*P **P 17 39 49.4 +1.1**
comp=Z,141nm,1.7s
ANTO Ankara 27.03 284 P **P 17 39 50.1 +1.9**
SNR=20
CSS Prodhromos 27.66 274 P **P 17 39 52.5 -1.5**
comp=Z,14nm,0.9s
ZAK Zakamensk 27.96 53⇑ *i*P **P 17 39 57.4 +0.8**
ZAK pmax pmax
comp=Z,29nm,1.1s
EIL Elat 28.33 262 P **P 17 40 01.1 +1.1**
EIL Elat 28.33 262 P **P 17 40 01.1 +1.1**
comp=Z,12nm,0.9s,baz=49,slow=8.2,SNR=6.3
EIL LR LR 17 53 49.4
comp=Z,1μm,19.1s,baz=231,slow=42
LZH Lanzhou 28.80 83 *e*P **P 17 40 05.4 +1.1**
LZH pP **pP 17 40 10.6 0.0**
LZH sP **sP 17 40 14.7 +1.5**
LZH PP **PnPn 17 40 59.1 +3.8**
LZH S **S 17 44 49.8 -3.2**
LZH sS **sS 17 44 59.4 -4.1**
LZH SS **SnSn 17 46 19.6 +4.8**
LZH pmax pmax
comp=Z,30nm,1.1s
LZH pmax pmax
comp=Z,160nm,5.4s
LZH LR LR
comp=N,1μm,13.6s
LZH LR LR
comp=E,2μm,15.1s
LZH LR LR
comp=Z,2μm,15.6s
IRK Irkutsk 28.99 49 *e*P **P 17 40 06.1 +0.5**
IRK *e* 17 43 12.6
IRK pmax pmax
comp=Z,42nm,1.4s
ISP Isparta 29.14 281 *e*P **P 17 40 07.6 +0.5**
ISP pmax pmax
comp=Z,14nm,0.9s
ISP Isparta 29.14 281 *e*P **P 17 40 07.6 +0.5**
comp=Z,14nm,0.9s
ISP Isparta 29.14 281⇑ *i*P **P 17 40 07.8 +0.7**
TLCR 29.61 296⇑ *i*P **P 17 40 12.2 +1.2**
SONM Songino Array 29.62 59 P **P 17 40 12.2 +0.8**
SONM pP **pP 17 40 17.7 0.0**
SONM Songino Array 29.62 59 P **P 17 40 12.2 +0.8**
comp=Z,1.8nm,0.4s,baz=263,slow=10.0,SNR=4.8
SONM pP **pP 17 40 17.7 0.0**
comp=Z,12nm,0.7s,baz=273,slow=9.1,SNR=14
SONM LR LR 17 51 52.8
comp=Z,313nm,19.7s,baz=70,slow=36
KIS Kishinev 29.64 300α *i*P **P 17 40 11.0 -0.4**
KIS *e*S **S 17 45 10.0 +4.3**
KIS pmax pmax
comp=Z,200nm,1.0s
KIS MLR MLR
comp=Z,1μm,17.0s
KIS MLR MLR
comp=Z,900nm,16.0s
KIS Kishinev 29.64 300⇑ *i*P **P 17 40 11.0 -0.4**
comp=Z,200nm,1.0s
KIS *e*S **S 17 45 10.0 +4.3**
KIS *e*LQ LQ 17 52 50.0
KIS LRM MLR 17 54 48.0
comp=Z,900nm,16.0s
AKASG Malin Array Be 29.79 307 P **P 17 40 13.0 +0.4**
AKASG Malin Array Be 29.79 307 P **P 17 40 13.0 +0.4**
AKASG Malin Array Be 29.79 307 P **P 17 40 13.0 +0.4**
comp=Z,25nm,0.6s,baz=82,slow=7.5,SNR=120
AK02 Malin Array Si 29.79 307 *e*P **P 17 40 13.0 +0.3**
AK01 Malin Array Si 29.79 307 *e*P **P 17 40 12.8 +0.1**
KIEV Kiev 29.80 307 *e*P **P 17 40 13.1 +0.4**
KIEV pmax pmax
comp=Z,140nm,1.6s
KIEV Kiev 29.80 307 *e*P **P 17 40 13.1 +0.4**
comp=Z,140nm,1.6s
TIRR Tirgusor 29.90 295 *e*P **P 17 40 14.4 +0.7**
TIRR pmax pmax
comp=Z,18nm,0.9s
TIRR Tirgusor 29.90 295 *e*P **P 17 40 14.4 +0.7**
comp=Z,18nm,0.9s
TIRR Tirgusor 29.90 295⇑ *i*P **P 17 40 14.7 +1.0**
LEOM Leova 30.02 299⇓ *i*P **P 17 40 15.8 +1.1**
ULN Ulaanbaatar 30.07 59 *e*P **P 17 40 15.8 +0.5**
comp=Z,23nm,0.6s
ULN *e* **pP 17 40 22.0 +0.3**
ULN *e*PcP PcP 17 43 22.1 +5.3
ULN Ulaanbaatar 30.07 59 P **P 17 40 15.8 +0.5**
comp=Z,41nm,0.8s,comp=Z,453nm
CFR Carcaliu 30.09 296⇑ *i*P **P 17 40 16.3 +1.0**
PSN Preselentsi 30.10 293 *i* P **P 17 40 17.0 +1.5**
CD2 Chengdu 30.46 93 P **P 17 40 20.1 +1.2**
CD2 pP **pP 17 40 26.4 +1.2**
CD2 sP **sP 17 40 29.5 +1.7**
CD2 PP **PnPn 17 41 19.9 +2.2**
CD2 PcP **PcP 17 43 19.5 +1.6**
CD2 S **S 17 45 18.6 -0.4**
CD2 sS **sS 17 45 29.6 +0.2**
CD2 SS **ScP 17 46 58.9 -0.3**
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,320nm,5.4s
CD2 LR LR
comp=N,700nm,13.2s
CD2 LR LR
comp=E,1μm,16.6s
CD2 LR LR
comp=Z,980nm,12.2s
PRD Provadia 30.71 292 *i* P **P 17 40 22.2 +1.4**
VRI Vrincioaia 31.07 297⇑ *i*P **P 17 40 26.1 +2.1**
PLOR Plostina 31.12 297⇑ *i*P **P 17 40 26.6 +2.1**
TESR Tescani 31.12 299⇓ *i*P **P 17 40 25.8 +1.3**
ISR Istrita 31.21 296⇓ *i*P **P 17 40 28.5 +3.1**
JMB Yambol 31.37 291 *i* P **P 17 40 29.1 +2.4**
MICGM Minsk 31.40 314⇑ *e*P **P 17 40 26.0 -0.8**
MNK Minsk 31.43 314⇑ *e*P **P 17 40 26.0 -1.0**
MNK *e*S **S 17 45 30.0 -3.4**
MNK pmax pmax
comp=Z,200nm,1.0s
MLR Muntele Rosu 31.62 297 P **P 17 40 31.6 +2.6**
MLR Muntele Rosu 31.62 297⇑ *i*P **P 17 40 31.5 +2.4**
MLR Muntele Rosu 31.62 297 P **P 17 40 31.6 +2.6**
comp=Z,11nm,0.9s,baz=109,slow=1.9,SNR=104
SZH Strazhica 31.77 293 *i* P **P 17 40 31.1 +0.9**
PUL Pulkovo 31.97 325 *i* P **P 17 40 32.2 +0.5**
PUL pmax pmax
comp=Z,99nm,1.0s
PUL MLR MLR
comp=Z,2μm,20.0s
DOPR Dopca 32.00 298⇑ *i*P **P 17 40 34.3 +2.1**
BURAR Bucovina Array 32.12 301⇑ *i*P **P 17 40 34.6 +1.3**
NACGM Naroch 32.12 315 *e*P **P 17 40 31.0 -2.1**
BUR08 Bucovina Ar. S 32.13 301 *e*P **P 17 40 34.5 +1.0**
IDID Didziasalis 32.24 315 *e*P **P 17 40 35.3 +1.1**
IDID AMB AMB 17 40 37.0
comp=Z,36nm,1.1s
KDZ Kurdzhali 32.34 290 *i* P **P 17 40 36.5 +1.3**
KMI Kunming 32.39 103 P **P 17 40 37.8 +1.7**
KMI pP **pP 17 40 43.9 +1.5**
KMI sP **sP 17 40 46.7 +1.7**
KMI PP **PnPn 17 41 45.5 +2.5**
KMI S **S 17 45 48.0 -1.5**
KMI sS **sS 17 46 00.8 +0.9**
KMI pmax pmax
comp=Z,9.0nm,1.0s
KMI pmax pmax
comp=Z,80nm,3.1s
KMI LR LR
comp=N,710nm,15.1s
KMI LR LR
comp=E,580nm,17.3s
KMI LR LR
comp=Z,1μm,15.1s
IIGN Ignalina 32.54 315 *e*P **P 17 40 38.0 +1.2**
IIGN AMB AMB 17 40 39.8
comp=Z,36nm,1.1s
ARR Arges 32.55 297⇑ *i*P **P 17 40 38.7 +1.6**
IZAR Zarasai 32.63 316 *e*P **P 17 40 38.8 +1.3**
IZAR AMB AMB 17 40 39.5
comp=Z,39nm,0.9s
ISAL Salakas 32.65 316 *e*P **P 17 40 39.0 +1.2**
ISAL AMB AMB 17 40 39.7
comp=Z,29nm,1.1s
LVV L'vov 33.00 305*d i*P **P 17 40 41.6 +0.7**
LVV *e*S **S 17 46 00.2 +2.2**
LVV MLR MLR
comp=Z,500nm,14.0s
LVV MLR MLR
comp=N,200nm,15.0s
LVV MLR MLR
comp=E,500nm,15.0s
JOF Joensuu 33.05 330 *e*P **P 17 40 40.5 -0.7**
JOF pmax pmax
comp=Z,24nm,0.7s
JOF Joensuu 33.05 330 *e*p **P 17 40 40.5 -0.7**
comp=Z,24nm,0.7s
PGB Panagyurishte 33.14 291 *i* P **P 17 40 43.9 +1.6**
LOT Lotru 33.16 297⇓ *i*P **P 17 40 43.7 +1.2**
APE Apeiranthos 33.17 281⇓ *i*P **P 17 40 43.2 +0.6**
VSU Vasula 33.18 321*c i*P **P 17 40 42.8 +0.5**
VSU pmax pmax
comp=Z,80nm,1.1s
VSU MLR MLR
comp=Z,9.0nm,16.0s
CHTO Chiang Mai 33.37 117 *e*P **P 17 40 45.5 +1.0**
CHTO pmax pmax
comp=Z,27nm,1.5s
CHTO Chiang Mai 33.37 117 *e*P **P 17 40 45.5 +1.0**
comp=Z,28nm,1.5s
CHTO Chiang Mai 33.37 117 P **P 17 40 46.7 +2.2**
comp=Z,13nm,1.2s
CMMT Chiang Mai 33.38 117 P **P 17 40 47.0 +2.5**
XAN Xi'an 33.39 84 P **P 17 40 44.8 +0.3**
XAN pmax pmax
comp=Z,2.0nm,0.9s
XAN Xi'an 33.39 84 P P 17 40 50.9 +6.4
XAN pP pP 17 40 57.2 +6.3
XAN sP sP 17 40 59.5 +6.0
XAN PcP **PcP 17 43 30.1 +4.3**
XAN S **S 17 46 05.4 +0.9**
XAN ScS **ScS 17 51 12.6 +2.6**
XAN pmax pmax
comp=Z,16nm,0.7s
XAN pmax pmax
comp=Z,36nm,8.3s
XAN LR LR
comp=N,500nm,15.2s
XAN LR LR
comp=E,260nm,17.9s
XAN LR LR
comp=Z,440nm,16.4s
CM31 Chiang Mai Arr 33.61 117 *e*P **P 17 40 45.5 -1.1**
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 33.61 117 P **P 17 40 46.5 0.0**
CMAR PcP **PcP 17 43 26.9 +0.2**
CMAR pPcP 17 43 34.0
CMAR Chiang Mai Arr 33.61 117 P **P 17 40 46.5 0.0**
comp=Z,4.2nm,0.7s,baz=296,slow=7.9,SNR=30
CMAR PcP **PcP 17 43 26.9 +0.2**
comp=Z,2.9nm,0.8s,baz=284,slow=3.6,SNR=4.8
CMAR pPcP 17 43 34.0
comp=Z,7.1nm,0.9s,baz=296,slow=4.9,SNR=7.0
CMAR LR LR 17 57 32.6
comp=Z,511nm,18.8s,baz=290,slow=42
HHC Hu-ho-hao-te 33.70 71 *e*P P 17 40 51.1 +3.9
HHC pP pP 17 40 58.7 +5.1
HHC sP sP 17 41 01.1 +4.9
HHC PP **PP 17 42 03.5 0.0**
HHC PcP PcP 17 43 33.4 +6.7
HHC S **S 17 46 14.0 +4.7**
HHC sS sS 17 46 20.0 +0.2
HHC ScP **ScP 17 47 14.0 +3.9**
HHC SS **SnSn 17 48 12.7 -0.9**
HHC ScS **ScS 17 51 14.9 +3.4**
HHC pmax pmax
comp=Z,68nm,1.3s
HHC pmax pmax
comp=Z,140nm,6.0s
HHC LR LR
comp=N,1μm,19.2s
HHC LR LR
comp=E,1μm,19.2s
DRGR 33.83 299⇑ *i*P **P 17 40 50.1 +1.8**
VTS Vitosha 33.83 292⇑ *i*P **P 17 40 50.1 +1.6**
VTS Vitosha 33.83 292 *i* P **P 17 40 49.5 +1.0**
TRPA Tarpa 33.92 302⇑ *i*P **P 17 40 51.0 +2.0**
TRPA Tarpa 33.92 302⇑ *e*P **P 17 40 50.7 +1.7**
SUW Suwalki 33.99 312 *e*P **P 17 40 50.0 +0.5**
SUW pmax pmax
comp=Z,59nm,0.9s
SUW Suwalki 33.99 312 *e*P **P 17 40 50.0 +0.5**
comp=Z,59nm,0.9s
SUW Suwalki 33.99 312 *e*P **P 17 40 49.8 +0.3**
SUW *e*pP **pP 17 40 59.0 +3.1**
SUW LMZ LR 17 56 24.7
KKB Krupnik 34.03 290 *i* P **P 17 40 50.8 +0.8**
UZH Uzhgorod 34.09 303 *e*P **P 17 40 51.5 +1.1**
UZH *e* 17 42 06.3
UZH *e*S **S 17 46 13.3 -1.7**
UZH *e* 17 48 44.1
UZH MLR MLR
comp=N,500nm,12.0s
UZH MLR MLR
comp=E,800nm,12.0s
UZH MLR MLR
comp=Z,500nm,12.0s
KOLS Kolonicke sedl 34.11 303 *e*P **P 17 40 51.9 +1.3**
KOLS pmax pmax
comp=Z,20nm,1.1s
KOLS Kolonicke sedl 34.11 303 *e*P **P 17 40 51.9 +1.3**
VAY Valandovo 34.50 290 *i* P **P 17 40 54.7 +0.7**
FIA1 FINESS Array S 34.57 326 *e*P **P 17 40 54.9 +0.6**
FIA1 *e* **pP 17 41 01.7 +0.9**
FINES FINESS Array B 34.57 326 P **P 17 40 55.1 +0.7**
FINES FINESS Array B 34.57 326 P **P 17 40 55.1 +0.7**
comp=Z,25nm,0.7s,baz=115,slow=8.0,SNR=98
FINES LR LR 17 56 21.0
comp=Z,1μm,19.8s,baz=90,slow=38
CIT Chita 34.59 51 *e*P **P 17 40 54.9 +0.1**
CIT *e* 17 41 07.0
CIT *e* 17 43 26.3
CIT pmax pmax
comp=Z,159nm,0.9s
CRVS Cervenica-Dubn 34.64 303 *e*P **P 17 40 55.0 -0.2**
CRVS pmax pmax
comp=Z,7.0nm,1.0s
CRVS Cervenica-Dubn 34.64 303 *e*P **P 17 40 55.0 -0.2**
BZS Buzias 34.65 297⇑ *i*P **P 17 40 57.1 +1.8**
KAF Kangasniemi 34.73 327 *e*P **P 17 40 55.3 -0.5**
KAF pmax pmax
comp=Z,15nm,0.7s
KAF Kangasniemi 34.73 327 *ep* **P 17 40 55.3 -0.5**
comp=Z,15nm,0.7s
GYA Guiyang 34.74 98 P **P 17 40 58.0 +1.6**
GYA pP **pP 17 41 04.9 +2.1**
GYA PP **PP 17 42 15.2 0.0**
GYA S **S 17 46 26.8 +1.1**
GYA ScP **ScP 17 47 13.2 -0.8**
GYA SS **SnSn 17 48 38.9 -0.4**
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,140nm,4.9s
GYA LR LR
comp=N,3μm,17.7s
GYA LR LR
comp=E,2μm,18.8s
GYA LR LR
comp=Z,2μm,17.6s
LVZ Lovozero 34.88 339*c i*P **P 17 40 57.5 +0.4**
LVZ pmax pmax
comp=Z,64nm,1.2s
LVZ MLR MLR
comp=Z,1μm,17.0s
LVZ Lovozero 34.88 339 P **P 17 40 57.0 -0.1**
comp=Z,324nm,0.9s,SNR=7.8
APA Apatity 35.03 338⇑ *i*P **P 17 41 00.0 +1.7**
APA *e*S **S 17 46 30.0 +0.9**
APA *i* SS **SnSn 17 48 40.0 -5.1**
APA MLR MLR
comp=Z,3μm,14.0s
BEL Belsk 35.18 308 *e*P **P 17 41 00.9 +1.1**
BEL *e*pP **pP 17 41 09.9 +3.7**
BEL LMZ LR 17 57 49.8
ENH Enshi 35.23 90 *e*P **P 17 41 01.1 +0.5**
comp=Z,94nm,1.1s
NIE Niedzica 35.40 304⇑ *i*P **P 17 41 03.8 +2.0**
NIE Niedzica 35.40 304 *i* P **P 17 41 03.8 +2.0**
BIA Bitola 35.48 289 *e*P **P 17 41 02.8 +0.2**
PSZ Piszkesteto 35.70 301 *e*P **P 17 41 05.0 +0.5**
PSZ pmax pmax
comp=Z,29nm,1.1s
PSZ Piszkesteto 35.70 301 *e*P **P 17 41 05.0 +0.5**
comp=Z,29nm,1.1s
PSZ Piszkesteto 35.70 301⇑ *i*P **P 17 41 05.9 +1.4**
PSZ Piszkesteto 35.70 301⇑ *e*P **P 17 41 06.1 +1.6**
OJC Ojcow 35.74 305⇑ *e*P **P 17 41 05.7 +1.1**
OJC *e* 17 42 24.6
OJC Ojcow 35.74 305 *e*P **P 17 41 05.4 +0.7**
comp=Z,209nm,1.8s
OJC Ojcow 35.74 305 *e*P **P 17 41 05.7 +1.1**
OJC *ep*P **pP 17 41 10.1 -0.9**
OJC *e*PP **PnPn 17 42 24.6 +0.1**
PVY Plav 36.20 292⇑ *i*P **P 17 41 09.5 +0.6**
IVA Berane 36.21 293⇑ *i*P **P 17 41 10.3 +1.5**
BUD Budapest 36.31 301⇓ *e*P **P 17 41 11.2 +1.6**
VYHS Vyhne 36.39 302 *e*P **P 17 41 11.5 +1.3**
VYHS pmax pmax
comp=Z,13nm,1.3s
VYHS Vyhne 36.39 302 *e*P **P 17 41 11.5 +1.3**
VYHS *e*PP **PP 17 42 38.5 +5.5**
TIR Tirane 36.50 290 *e*P **P 17 41 10.2 -1.0**
TIR pmax pmax
comp=Z,22nm,0.6s
TIR Tirane 36.50 290 *e*P **P 17 41 10.2 -1.0**
comp=Z,22nm,0.6s
PLE Pljevlja 36.50 294⇑ *i*P **P 17 41 12.6 +1.2**
PKSM Moragy 36.67 299⇓ *i*P **P 17 41 14.4 +1.8**
PKSM Moragy 36.67 299⇑ *e*P **P 17 41 13.9 +1.3**
TTG Podgorica 36.74 292⇑ *i*P **P 17 41 14.0 +0.7**
OKC Ostrava-Krasne 36.80 305 *e*P **P 17 41 14.3 +0.6**
OKC *e* 17 42 37.8
OKC Ostrava-Krasne 36.80 305⇑ *e*P **P 17 41 14.3 +0.6**
OKC *e*PP **PnPn 17 42 37.8 +0.2**
ULC Ulcinj 36.84 291⇑ *i*P **P 17 41 14.2 0.0**
NKY Niksic 36.87 293⇑ *i*P **P 17 41 15.4 +0.9**
UPM Unac-Piva 36.87 294⇑ *i*P **P 17 41 15.9 +1.3**
BUM Brajici-Budva 37.03 292⇑ *i*P **P 17 41 16.3 +0.4**
BRY Bratogost 37.18 293⇑ *i*P **P 17 41 18.2 +1.0**
MORC Moravsky Berou 37.20 305 *e*P **P 17 41 17.8 +0.7**
MORC pmax pmax
comp=Z,36nm,1.1s
MORC Moravsky Berou 37.20 305 *e*P **P 17 41 17.8 +0.7**
comp=Z,36nm,1.1s
MORC Moravsky Berou 37.20 305⇑ *i*P **P 17 41 18.4 +1.3**
HCY Herceg Novi 37.30 292 *e*P **P 17 41 18.4 +0.4**
BJI Beijing 37.31 72 P **P 17 41 19.4 +1.3**
BJI PP **PP 17 42 43.3 +0.1**
BJI S **S 17 47 08.5 +4.0**
BJI pmax pmax
comp=Z,12nm,0.5s
BJI LR LR
comp=N,570nm,14.7s
BJI LR LR
comp=E,680nm,16.1s
BJI LR LR
comp=Z,540nm,17.4s
BJT Baijiatuau 37.31 72 P **P 17 41 19.4 +1.3**
SMOL Smolenice 37.32 303 *e*P **P 17 41 19.4 +1.2**
SMOL Smolenice 37.32 303 *e*P **P 17 41 19.4 +1.2**
GKP Gorka Klasztor 37.44 310 *e*P **P 17 41 20.1 +1.1**
GKP *ep*P **pP 17 41 29.3 +3.9**
GKP LMZ LR 17 59 07.9
ZST Bratislava 37.56 302 *e*P **P 17 41 20.4 +0.2**
ZST pmax pmax
comp=Z,44nm,1.9s
ZST Bratislava 37.56 302 *e*P **P 17 41 20.4 +0.2**
ZST *e*PP **PP 17 42 45.6 -0.3**
KRLC Kraliky 37.68 305⇑ *i*P **P 17 41 22.5 +1.3**
KRLC Kraliky 37.68 305⇑ *i*P **P 17 41 22.5 +1.3**
VRAC Vranov 37.83 304 P **P 17 41 24.1 +1.6**
VRAC Vranov 37.83 304⇑ *i*P **P 17 41 24.5 +2.0**
VRAC Vranov 37.83 304 P **P 17 41 24.1 +1.6**
comp=Z,50nm,1.0s,baz=93,slow=8.5,SNR=53
VRAC LR LR 18 00 09.2
comp=Z,529nm,18.9s,baz=76,slow=41
BEHE Becsehely 37.93 299⇓ *e*P **P 17 41 24.3 +1.0**
SOP Sopron 37.96 301⇓ *e*P **P 17 41 25.0 +1.4**
DPC Dobruska-Polom 37.97 306⇑ *i*P **P 17 41 25.3 +1.6**
DPC *e**PP **pP 17 41 33.4 +3.3**
DPC MLR MLR
comp=Z,600nm,16.1s
DPC Dobruska-Polom 37.97 306 *e*P **P 17 41 23.4 -0.3**
comp=Z,100nm,1.4s
DPC Dobruska-Polom 37.97 306⇑ *i*P **P 17 41 25.3 +1.6**
DPC *ep*P **pP 17 41 33.4 +3.3**
DPC *e*PP PP 17 42 43.1 -7.3
DPC AMS AMS 18 00 20.0
comp=Z,600nm,16.1s
KSP Ksiaz 37.98 306⇑ *i*P **P 17 41 24.9 +1.2**
KSP *e* 17 41 33.0
KSP *e* 17 42 48.3
KSP MLR MLR
comp=Z,2μm,15.8s
KSP Ksiaz 37.98 306 *e*P **P 17 41 24.9 +1.2**
KSP *ep*P **pP 17 41 34.0 +3.9**
KSP LMZ LR 17 59 52.8

UPC Upice 38.16 306⇑ *i*P P 17 41 26.7 +1.5
UPC *e**PP **pP** 17 41 33.1 +1.4
UPC *e* 17 42 50.6
UPC Upice 38.16 306⇑ *i*P **P** **17 41 26.7 +1.5**
UPC *e*pP **pP** **17 41 33.1 +1.4**
UPC *e*PP **PP** **17 42 50.6 -1.9**
KEV Kevo 38.22 338 *e*P **P** **17 41 25.0 -0.4**
KEV pmax pmax
comp=Z,17nm,0.7s
KEV Kevo 38.22 338 *e*p **P** **17 41 25.0 -0.4**
comp=Z,17nm,0.7s
CONA Conrad Observa 38.41 302 *i* P **P** **17 41 28.8 +1.4**
comp=Z,83nm,1.3s,SNR=49
HIA Hailar 38.49 56 *e*P **P** **17 41 28.3 +0.2**
comp=Z,32nm,0.8s
HIA *e* **pP** **17 41 34.8 +0.3**
ARCES ARCESS Array B 38.54 338 P **P** **17 41 29.1 +0.9**
ARCES ARCESS Array B 38.54 338 P **P** **17 41 29.1 +0.9**
comp=Z,66nm,0.8s,baz=128,slow=8.3,SNR=131
ARCES LR LR 17 58 05.1
comp=Z,1μm,18.6s,baz=124,slow=37
ARE0 ARCESS Array S 38.54 338 *e*P **P** **17 41 29.0 +0.8**
ARE0 ARCESS Array S 38.54 338 *e*P **P** **17 41 28.9 +0.8**
TREC Trest 38.56 304⇑ *i*P **P** **17 41 30.1 +1.5**
TREC *e**PP **pP** **17 41 37.9 +2.9**
TREC MLR MLR
comp=Z,600nm,11.0s
TREC Trest 38.56 304⇑ *i*P **P** **17 41 30.1 +1.5**
TREC *e*pP **pP** **17 41 37.9 +2.9**
TREC AMS AMS 18 00 00.0
comp=Z,600nm,11.0s
ARSA Arzberg 38.70 301⇓ *i*P **P** **17 41 30.7 +0.9**
comp=Z,20nm,1.2s,SNR=14
BSD Bornholm Skovb 38.90 313⇑ *i*P **P** **17 41 31.0 -0.3**
BSD *i* 17 41 37.5
BSD pmax pmax
comp=Z,45nm,0.8s
BSD MLR MLR
comp=Z,1μm,13.0s
BSD Bornholm Skovb 38.90 313⇑ *i*P **P** **17 41 31.0 -0.3**
comp=Z,45nm,0.8s
BSD *i* 17 41 37.5
BSD
comp=Z,1μm,13.0s
WHN Wuhan 38.95 87 P **P** **17 41 35.2 +3.1**
WHN S **S** **17 47 25.6 -3.9**
WHN LR LR
comp=N,720nm,13.3s
WHN LR LR
comp=E,2μm,18.7s
WHN LR LR
comp=Z,2μm,16.9s
KTK1 Kautokeino 38.97 336 *e*P **P** **17 41 30.2 -1.6**
PERS Pernice 39.05 300 *i* P **P** **17 41 34.1 +1.3**
PERS Pernice 39.05 300 *i* P **P** **17 41 34.1 +1.3**
TIA Tai'an 39.06 77 ⇓P **P** **17 41 34.1 +1.1**
TIA pmax pmax
comp=Z,10.0nm,1.1s
PVCC Panska Ves 39.08 306⇑ *i*P **P** **17 41 34.4 +1.5**
PVCC *e**PP **pP** **17 41 40.5 +1.1**
PVCC *e* 17 43 04.9
PVCC MLR MLR
comp=Z,900nm,14.9s
PVCC Panska Ves 39.08 306⇑ *i*P **P** **17 41 34.4 +1.5**
PVCC *e*pP **pP** **17 41 40.5 +1.1**
PVCC *e*PP **PnPn** **17 43 04.9 -0.2**
PVCC AMS AMS 18 00 20.0
comp=Z,900nm,14.9s
SOKA Soboth 39.10 300⇑ *i*P **P** **17 41 34.6 +1.3**
comp=Z,37nm,0.9s
BOJS Bojanci 39.11 298 *i* P **P** **17 41 34.4 +1.2**
BOJS Bojanci 39.11 298 *i* P **P** **17 41 34.4 +1.2**
PRU Pruhonice 39.13 305⇑ *i*P **P** **17 41 34.8 +1.5**
PRU *e**PP **pP** **17 41 41.2 +1.4**
PRU *e* 17 43 03.9
PRU MLR MLR
comp=Z,500nm,15.5s
PRU Pruhonice 39.13 305⇑ *i*P **P** **17 41 34.8 +1.5**
PRU *e*pP **pP** **17 41 41.2 +1.4**
PRU *e*PP **PP** **17 43 03.9 +0.9**
PRU AMS AMS 18 00 40.0
comp=Z,500nm,15.5s
TIP Timpagrande 39.31 288 *e*P **P** **17 41 34.8 -0.3**
comp=Z,31nm,1.0s
VISS Visnje 39.35 298 *i* P **P** **17 41 36.4 +1.1**
VISS Visnje 39.35 298 *i* P **P** **17 41 36.4 +1.1**
BRG Berggiesshubel 39.46 307⇑ *i*P **P** **17 41 37.6 +1.5**
comp=Z,57nm,0.9s
BRG *i* pP **pP** **17 41 45.8 +3.3**
comp=Z,41nm,0.9s
BRG PP **PP** **17 43 02.0 -4.7**
BRG S **S** **17 47 39.0 +2.1**
BRG *e* 17 51 00.7
comp=Z,19nm,1.8s
BRG
comp=N,467nm,15.1s
BRG
comp=E,510nm,14.2s
BRG
comp=Z,830nm,16.8s
BRG Berggiesshubel 39.46 307 *e*P **P** **17 41 37.6 +1.5**
comp=Z,67nm,1.0s
MOA Molln 39.49 302 *i* P **P** **17 41 37.4 +1.0**
comp=Z,39nm,1.1s,SNR=16
RUE Ruedersdorf 39.52 309 *e*P **P** **17 41 37.1 +0.7**
comp=Z,11nm,0.4s
GEC2 GERESS Array S 39.76 303 *e*P **P** **17 41 40.0 +1.2**
GEC2 *e* 17 43 11.8
GEC2 pmax pmax
comp=Z,21nm,1.1s
GEC2 GERESS Array S 39.76 303 *e*P **P** **17 41 40.0 +1.2**
GEC2 *e*PP **PnPn** **17 43 11.8 -1.5**
GEC2 GERESS Array S 39.76 303 *e*P **P** **17 41 39.5 +0.7**
GERES GERESS Array B 39.76 303 P **P** **17 41 39.8 +1.0**
GERES PP **PP** **17 43 07.0 -3.1**
GERES PcP **PcP** **17 43 44.2 -0.6**
GERES GERESS Array B 39.76 303 P **P** **17 41 39.8 +1.0**
comp=Z,11nm,1.0s,baz=80,slow=7.5,SNR=66
GERES PP **PP** **17 43 07.0 -3.1**
comp=Z,3.2nm,0.8s,baz=67,slow=9.9,SNR=3.6
GERES PcP **PcP** **17 43 44.2 -0.6**
comp=Z,5.6nm,0.9s,baz=90,slow=4.0,SNR=5.4
GERES LR LR 18 01 17.7
comp=Z,438nm,18.0s,baz=91,slow=41
RGN Rugen 39.80 312 *e*P **P** **17 41 40.3 +1.5**
comp=Z,418nm,1.0s
RGN *e* **pP** **17 41 46.8 +1.5**
CUC Castrocucco 39.80 289 *e*P **P** **17 41 40.0 +0.9**
comp=Z,126nm,0.9s
KHC Kasperske Hory 39.82 304⇑ *i*P **P** **17 41 40.2 +1.0**
KHC *e**PP **pP** **17 41 48.7 +3.1**
KHC *e* 17 43 10.8
KHC MLR MLR
comp=Z,500nm,16.8s
KHC Kasperske Hory 39.82 304 *e*P **P** **17 41 39.8 +0.6**
comp=Z,26nm,1.0s
KHC Kasperske Hory 39.82 304⇑ *i*P **P** **17 41 40.2 +1.0**
KHC *e*pP **pP** **17 41 48.7 +3.1**
KHC *e*PP **PP** **17 43 10.8 +0.2**
KHC AMS AMS 18 02 30.0
comp=Z,500nm,16.8s
JAVS Javornik 39.88 299 *i* P **P** **17 41 40.4 +0.7**
JAVS Javornik 39.88 299 *i* P **P** **17 41 40.4 +0.7**
VOY Vojsko 39.97 299 *e*P **P** **17 41 41.4 +0.9**
VOY *e* 17 41 49.0
VOY *e* 17 41 53.3
VOY Vojsko 39.97 299 *e*P **P** **17 41 41.4 +0.9**
CLL Collm 40.03 307⇑ *i*P **P** **17 41 41.7 +0.9**
CLL pmax pmax
comp=Z,58nm,1.1s
CLL MLR MLR
comp=Z,900nm,18.1s
CLL Collm 40.03 307 *e*P **P** **17 41 41.8 +0.9**
comp=Z,58nm,1.1s
CLL Collm 40.03 307⇑ *i*P **P** **17 41 41.7 +0.9**
comp=Z,58nm,1.1s
CLL *i* sP **sP** **17 41 50.3 +0.4**
CLL *e*PP **PP** **17 43 13.0 +0.1**
comp=Z,36nm,1.3s
CLL *e*PPIp 17 43 17.0
CLL *e*pPP 17 43 20.0
CLL *e*S S 17 48 06.0 +21
CLL Lm MLR 18 01 00.0
comp=Z,900nm,18.1s

MYKA Terra Mystica 40.06 300⇑ *i*P **P** **17 41 42.3 +1.1**
comp=Z,17nm,0.9s
HFS Hagfors 40.06 321 P **P** **17 41 41.5 +0.5**
HFS pP **pP** **17 41 47.2 -0.2**
HFS Hagfors 40.06 321 P **P** **17 41 41.5 +0.5**
comp=Z,113nm,0.8s,baz=98,slow=9.7,SNR=148
HFS pP **pP** **17 41 47.2 -0.2**
comp=Z,116nm,0.7s,baz=96,slow=11,SNR=23
HFS LR LR 18 01 01.2
comp=Z,1μm,18.4s,baz=96,slow=40
TRI Trieste 40.11 299 *e*P **P** **17 41 41.7 +0.2**
TRI pmax pmax
comp=Z,20nm,0.8s
TRI Trieste 40.11 299 *e*P **P** **17 41 41.7 +0.2**
comp=Z,20nm,0.8s
KBA Koelnbreinsper 40.20 301⇑ *i*P **P** **17 41 43.5 +1.0**
comp=Z,53nm,1.2s,SNR=19
CEL Celeste 40.21 287 *e*P **P** **17 41 42.9 +0.4**
comp=Z,39nm,0.9s
CEL *e*PcP **PcP** **17 43 46.4 0.0**
WET Wettzell 40.27 304 *e*P **P** **17 41 44.4 +1.5**
WET *e* 17 43 18.2
WET pmax pmax
comp=Z,28nm,1.3s
WET Wettzell 40.27 304 *e*P **P** **17 41 44.4 +1.5**
comp=Z,28nm,1.3s
WET *e*PP **PnPn** **17 43 18.2 -1.1**
COP Copenhagen 40.34 314 *i* P **P** **17 41 44.5 +1.2**
COP *e* 17 41 50.9
COP pmax pmax
comp=Z,41nm,0.8s
COP MLR MLR
comp=Z,370nm,11.0s
COP Copenhagen 40.34 314 *i* P **P** **17 41 44.5 +1.2**
comp=Z,41nm,0.8s
COP *e* 17 41 50.9
COP
comp=Z,360nm,11.0s
UBPT Khong Chiam 40.37 114 P **P** **17 41 46.3 +2.3**
TANN Tannenbergstha 40.43 306 *e*P **P** **17 41 45.7 +1.4**
comp=Z,50nm,1.4s
LLD Lille Linde 40.45 314 *i* P **P** **17 41 45.7 +1.5**
LLD *i* 17 41 54.2
LLD pmax pmax
comp=Z,20nm,0.8s
LLD Lille Linde 40.45 314 *i* P **P** **17 41 45.7 +1.5**
comp=Z,20nm,0.8s
LLD *i* 17 41 54.2
NKC Novy Kostel 40.46 306⇑ *i*P **P** **17 41 45.6 +1.2**
NKC *e**PP **pP** **17 41 54.3 +3.4**
NKC MLR MLR
comp=Z,1μm,15.4s
NKC Novy Kostel 40.46 306⇑ *i*P **P** **17 41 45.6 +1.2**
NKC *e*pP **pP** **17 41 54.3 +3.4**
NKC AMS AMS 18 01 20.0
comp=Z,1μm,15.4s
RJOB Jochberg 40.48 302 *e*P **P** **17 41 45.7 +1.0**
comp=Z,20nm,1.1s
TRO Tromso 40.62 336 *e*P **P** **17 41 46.0 +0.6**
ROTZ Rotzenmuhle 40.65 305 *e*P **P** **17 41 48.1 +2.1**
comp=Z,96nm,1.6s
ROTZ *e*pP **pP** **17 41 55.0 +2.5**
ABTA Abfaltersbach 40.81 300⇑ *i*P **P** **17 41 47.8 +0.3**
comp=Z,19nm,1.2s,SNR=10
MOX Moxa 40.95 306 *e*P **P** **17 41 49.9 +1.4**
MOX pmax pmax
comp=Z,46nm,1.1s
MOX Moxa 40.95 306 *e*P **P** **17 41 49.9 +1.4**
comp=Z,46nm,1.1s
MOR8 Moi Rana 41.01 330⇑ *i*P **P** **17 41 48.4 -0.3**
MOR8 AMB AMB 17 41 50.2
comp=Z,88nm,1.0s
AQU L'Aquila 41.01 294 *e*P **P** **17 41 49.6 +0.5**
comp=Z,86nm,1.0s
AQU L'Aquila 41.01 294⇓ *i*P **P** **17 41 50.1 +1.0**
NC602 NORSAR Array S 41.20 322 *e*P **P** **17 41 50.4 0.0**
NC602 *e*pP **pP** **17 41 57.0 +0.2**
STEI Steigen 41.23 333 *e*P **P** **17 41 51.1 +0.6**
QIZ Qiongzhong 41.25 106 P P 17 41 47.8 -3.5
QIZ S **S** **17 48 00.9 -3.3**
QIZ pmax pmax
comp=Z,85nm,3.0s
QIZ LR LR
comp=N,440nm,17.9s
QIZ LR LR
comp=Z,420nm,17.9s
GRF Grafenberg Arr 41.30 305 *e*P **P** **17 41 53.5 +2.2**
GRF *e* 17 43 31.8
GRF pmax pmax
comp=Z,130nm,1.3s
GRF MLR MLR
comp=Z,600nm,18.0s
GRF Grafenberg Arr 41.30 305 *e*P **P** **17 41 53.5 +2.2**
comp=Z,130nm,1.3s
GRF *e*PP **PnPn** **17 43 31.8 +0.6**
GRF *e*L L 18 02 10.7
comp=Z,551nm,18.0s
WTTA Wattenberg 41.33 301⇑ *i*P **P** **17 41 52.1 +0.3**
comp=Z,48nm,1.2s,SNR=16
WATA Walderalm 41.36 301⇑ *i*P **P** **17 41 52.2 +0.2**
comp=Z,40nm,1.4s,SNR=9.4
NB2 NORSAR Subarra 41.40 322 P **P** **17 41 51.9 -0.1**
comp=Z,53nm,0.7s,baz=98,slow=8.6
NB2 NORSAR Subarra 41.40 322 P **P** **17 41 51.9 -0.1**
baz=98,slow=8.6
NOA NORSAR Array B 41.40 322 P **P** **17 41 52.1 +0.1**
NOA pP **pP** **17 41 58.4 -0.1**
NOA PP **PP** **17 43 25.2 -2.4**
NOA NORSAR Array B 41.40 322 P **P** **17 41 52.1 +0.1**
comp=Z,56nm,0.8s,baz=97,slow=8.1,SNR=129
NOA pP **pP** **17 41 58.4 -0.1**
comp=Z,42nm,0.7s,baz=98,slow=8.2,SNR=19
NOA PP **PP** **17 43 25.2 -2.4**
comp=Z,9.1nm,0.8s,baz=95,slow=10,SNR=3.9
NOA LR LR 18 00 14.0
comp=Z,781nm,18.1s,baz=100,slow=38
FUR Furstenfeldbru 41.44 303 *e*P **P** **17 41 53.9 +1.3**
FUR pmax pmax
comp=Z,66nm,1.0s
FUR Furstenfeldbru 41.44 303 *e*P **P** **17 41 53.9 +1.3**
comp=Z,66nm,1.0s
FLOS Flostrand 41.47 330 *e*P **P** **17 41 53.2 +0.7**
CLNS Chul'man 41.49 44 *e*P P 17 41 58.1 +5.3
CLNS *e**PP pP 17 42 06.3 +7.0
CLNS *e* 17 43 39.3
CLNS *e*PPP PPP 17 43 56.5
CLNS *e*S **S** **17 48 07.6 +0.6**
CLNS pmax pmax
comp=E,35nm,1.1s
CLNS pmax pmax
comp=Z,51nm,0.8s
CLNS pmax pmax
comp=N,19nm,1.0s
CLNS pmax pmax
comp=Z,12nm,0.9s
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS smax smax
comp=N,45nm,14.7s
CLNS smax smax
comp=E,375nm,15.5s
CLNS MLR MLR
comp=E,290nm,13.0s
CLNS MLR MLR
comp=Z,421nm,12.0s
CLNS MLR MLR
comp=N,82nm,10.0s
NAO01 NORSAR Array S 41.53 322 *e*P **P** **17 41 53.0 -0.1**
comp=N,34nm,0.9s
BSEG Bad Segeberg 41.56 311 *e*P **P** **17 41 55.0 +1.6**
BSEG pmax pmax
comp=Z,156nm,0.9s
BSEG Bad Segeberg 41.56 311 *e*P **P** **17 41 55.0 +1.6**
comp=Z,156nm,0.9s
MOTA Moosalm 41.67 301⇑ *i*P **P** **17 41 54.6 -0.1**
comp=Z,36nm,0.9s,SNR=32
DL2 Dalian 41.67 72 P P 17 42 00.2 +5.7
DL2 pmax pmax
comp=Z,56nm,0.8s
DL2 LR LR
comp=N,300nm,17.2s
DL2 LR LR
comp=E,370nm,14.7s
DL2 LR LR

comp=Z,360nm,17.3s
NRDL Niedersach Rie 41.76 309 *e*P **P** **17 41 56.5 +1.5**
comp=Z,77nm,1.1s
NJ2 Nanjing 41.88 82 *e*P **P** **17 41 57.1 +0.8**
NJ2 pP **pP** **17 42 01.5 -1.2**
NJ2 sP **sP** **17 42 04.7 -0.6**
NJ2 PP **PP** **17 43 33.0 -0.2**
NJ2 S **S** **17 48 12.0 -1.2**
NJ2 sS **sS** **17 48 24.0 +0.2**
NJ2 pmax pmax
comp=Z,20nm,0.5s
NJ2 pmax pmax
comp=Z,50nm,9.2s
NJ2 LR LR
comp=N,2μm,21.2s
NJ2 LR LR
comp=E,270nm,16.3s
NJ2 LR LR
comp=Z,190nm,24.2s
UBBA Unterbreizbach 41.96 307 *e*P **P** **17 41 57.9 +1.3**
comp=Z,23nm,0.8s
FETA Feichten 41.98 301⇑ *i*P **P** **17 41 57.1 0.0**
comp=Z,34nm,1.1s,SNR=16
KONO Kongsberg 42.06 320 *e*P **P** **17 41 57.6 +0.2**
KONO Kongsberg 42.06 320 *e*P **P** **17 41 57.5 +0.1**
KONO pmax pmax
comp=Z,69nm,0.8s
KONO Kongsberg 42.06 320 *e*P **P** **17 41 57.5 +0.1**
comp=Z,69nm,0.8s
MUD Monsted U'grnd 42.18 315 *i* P **P** **17 42 00.0 +1.6**
MUD pmax pmax
comp=Z,47nm,1.0s
MUD Monsted U'grnd 42.18 315 *i* P **P** **17 42 00.0 +1.6**
comp=Z,47nm,0.9s
SNY Shenyang 42.33 67 ⇓P P 17 42 05.4 +5.6
SNY S **S** **17 48 15.9 -3.8**
SNY pmax pmax
comp=Z,11nm,0.8s
SNY pmax pmax
comp=Z,69nm,3.5s
SNY LR LR
comp=N,680nm,16.4s
SNY LR LR
comp=E,320nm,17.4s
SNY LR LR
comp=Z,160nm,14.7s
FUORN Ofenpass-Fuorn 42.36 300 *e*P **P** **17 42 01.0 +0.7**
comp=Z,26nm,1.0s
DAVA Damuels 42.51 302⇓ *i*P **P** **17 42 01.8 +0.4**
comp=Z,60nm,1.1s
DOMB Dombas 42.53 323 *e*P **P** **17 42 01.3 0.0**
HOMB Homborsund 42.56 318 *e*P **P** **17 42 02.3 +0.8**
DAVOX Davos/Dischmat 42.59 301 P **P** **17 42 02.4 +0.3**
DAVOX PcP **PcP** **17 43 53.7 -0.5**
DAVOX Davos/Dischmat 42.59 301 P **P** **17 42 02.4 +0.3**
comp=Z,15nm,0.7s,baz=106,slow=8.3,SNR=28
DAVOX PcP **PcP** **17 43 53.7 -0.5**
comp=Z,11nm,0.8s,baz=275,slow=6.2,SNR=4.4
DAVOX LR LR 18 02 51.5
comp=Z,418nm,19.4s,baz=87,slow=40
STU Stuttgart 42.73 304 *e*P **P** **17 42 04.1 +1.1**
STU pmax pmax
comp=Z,48nm,1.1s
STU Stuttgart 42.73 304 *e*P **P** **17 42 04.4 +1.4**
comp=Z,43nm,1.1s
STU Stuttgart 42.73 304 *e*P **P** **17 42 04.1 +1.1**
comp=Z,48nm,1.1s
VLC Villacollemand 42.76 297 P **P** **17 42 02.6 -0.8**
comp=Z,60nm,1.1s
TOD Tromm 42.87 305 *e*P **P** **17 42 05.5 +1.3**
TOD Tromm 42.87 305 *e*P **P** **17 42 05.5 +1.3**
TUE Stuetta 43.01 300 *e*P **P** **17 42 04.8 -0.8**
comp=Z,99nm,2.0s
TNS Taunus Mts 43.01 306 *e*P **P** **17 42 06.8 +1.4**
TNS pmax pmax
comp=Z,64nm,1.5s
TNS Taunus Mts 43.01 306 *e*P **P** **17 42 06.8 +1.4**
comp=Z,64nm,1.5s
SPAK Spaichingen-Ko 43.10 303 *e*P **P** **17 42 07.0 +0.9**
CN2 Changchun 43.20 64 *e*P **P** **17 42 07.3 +0.4**
CN2 *e*pP **pP** **17 42 14.7 +1.4**
CN2 *e*sP **sP** **17 42 18.1 +2.2**
CN2 PcP **PcP** **17 43 57.8 +1.8**
CN2 *e*S **S** **17 48 31.3 -1.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,16.0s
CN2 LR LR
comp=E,400nm,16.0s
CN2 LR LR
comp=Z,900nm,17.0s
IBBN Ibbenburen 43.21 309 *e*P **P** **17 42 08.2 +1.4**
comp=Z,179nm,1.0s
SNART Snartemo 43.25 318 *e*P **P** **17 42 05.9 -1.1**
SNART AMB AMB 17 42 08.0
comp=Z,73nm,1.7s
SNART *e*pP **pP** **17 42 12.3 -1.2**
MOL Molde 43.29 324 *e*P **P** **17 42 08.3 +1.0**
BFO Black Forest 43.36 303 *e*P **P** **17 42 08.7 +0.5**
BFO pmax pmax
comp=Z,34nm,0.9s
BFO Black Forest 43.36 303 *e*P **P** **17 42 08.9 +0.7**
comp=Z,42nm,1.0s
BFO *e*PP **PP** **17 43 49.3 +0.3**
BFO Black Forest 43.36 303 *e*P **P** **17 42 08.7 +0.5**
comp=Z,34nm,0.9s
BFO Black Forest 43.36 303 P **P** **17 42 08.0 -0.2**
comp=Z,215nm,0.9s,SNR=17
KTD Kalmit 43.37 305 *e*P **P** **17 42 09.8 +1.5**
KTD Kalmit 43.37 305 *e*P **P** **17 42 09.8 +1.5**
ODD1 Odda 43.58 320 *e*P **P** **17 42 10.3 +0.6**
LANF Langenberg 43.60 304 *e*P **P** **17 42 11.5 +1.4**
LANF Langenberg 43.60 304 *e*P **P** **17 42 11.5 +1.4**
LANF Langenberg 43.60 304 *e*P **P** **17 42 11.5 +1.4**
BUG Bochum--Univer 43.60 308 *e*P **P** **17 42 11.3 +1.3**
comp=Z,84nm,1.2s
ABH Alteburg 43.63 306 *e*P **P** **17 42 11.8 +1.4**
FELD Feldberg im Sc 43.66 303 *e*P **P** **17 42 11.3 +0.6**
FELD Feldberg im Sc 43.66 303 *e*P **P** **17 42 11.3 +0.6**
WTSB Winterswijk 43.83 309 *i* P **P** **17 42 13.2 +1.4**
comp=Z,108nm,1.0s
RUP Ruppelstein 43.97 305 *e*P **P** **17 42 14.3 +1.2**
RUP Ruppelstein 43.97 305 *e*P **P** **17 42 14.3 +1.2**
CDF Champ du Feu 44.04 304⇑ *i*P **P** **17 42 14.1 +0.4**
comp=Z,50nm,1.2s
CDF Champ du Feu 44.04 304⇑ *i*P **P** **17 42 14.1 +0.4**
CDF pmax pmax
comp=Z,50nm,1.2s
CDF Champ du Feu 44.04 304⇑ *i*P **P** **17 42 14.1 +0.4**
comp=Z,50nm,1.2s
BBS Basel-Blauen 44.06 302 *e*P **P** **17 42 13.9 +0.1**
BBS Basel-Blauen 44.06 302 *e*P **P** **17 42 13.9 +0.1**
SSE Sheshan 44.08 83 ⇓P P 17 42 21.1 +7.0
SSE S S 17 48 52.3 +6.7
SSE pmax pmax
comp=Z,63nm,0.7s
SSE pmax pmax
comp=Z,49nm,3.5s
SSE LR LR
comp=N,300nm,14.9s
SSE LR LR
comp=E,400nm,14.9s
SSE LR LR
comp=Z,710nm,14.7s
PGF Pioggiola 44.12 295⇑ *i*P **P** **17 42 14.8 +0.3**
comp=Z,116nm,1.0s
PGF Pioggiola 44.12 295⇑ *i*P **P** **17 42 14.8 +0.3**
PGF pmax pmax
comp=Z,116nm,1.0s
PGF Pioggiola 44.12 295⇑ *i*P **P** **17 42 14.8 +0.3**
comp=Z,116nm,1.0s
YAK Yakutsk 44.14 37*c* *i*P **P** **17 42 14.1 -0.1**
YAK *e* 17 43 55.3
YAK *e*PPP PPP 17 44 38.2
YAK *e*S S 17 48 38.8 -6.9
YAK *e*SS **SS** **17 52 05.3 +2.2**
YAK *e*SSS SSS 17 52 43.3
YAK pmax pmax
comp=Z,86nm,0.9s
YAK pmax pmax
comp=E,27nm,1.0s
YAK pmax pmax

comp=Z,56nm,1.8s
YAK pmax pmax
comp=N,32nm,2.0s
YAK pmax pmax
comp=E,46nm,1.7s
YAK smax smax
comp=N,105nm,3.0s
YAK smax smax
comp=E,86nm,2.2s
ECH Echery 44.16 303 *e*P **P 17 42 14.6 0.0**
ECH pmax pmax
comp=Z,19nm,0.9s
ECH Echery 44.16 303 *e*P **P 17 42 14.6 0.0**
comp=Z,19nm,0.9s
ECH Echery 44.16 303 *e*P **P 17 42 15.2 +0.6**
RUND Rundenannen 44.22 321 *e*P **P 17 42 14.6 -0.3**
RUND *e*pP **pP 17 42 21.0 -0.4**
BER Bergen 44.23 321 *e*P **P 17 42 14.6 -0.3**
BER *e*pP **pP 17 42 21.2 -0.3**
BER *e*sP **sP 17 42 23.6 -0.4**
MOF Molkenrain 44.24 303 *e*P **P 17 42 16.1 +0.8**
MOF Molkenrain 44.24 303 *e*P **P 17 42 16.1 +0.8**
MOF Molkenrain 44.24 303 *e*P **P 17 42 16.1 +0.8**
EGD Espegrend 44.29 321 *e*P **P 17 42 15.2 -0.2**
EGD *e*pP **pP 17 42 21.5 -0.4**
EGD AMB AMB 17 42 23.6
comp=Z,160nm,1.6s
ASK Askoy 44.30 321 *e*P **P 17 42 15.2 -0.3**
ASK *e*pP **pP 17 42 21.3 -0.7**
ASK *e*sP **sP 17 42 23.6 -0.9**
SENIN Lac Senin/Sane 44.42 301 *e*P **P 17 42 16.9 0.0**
comp=Z,35nm,0.8s
HINF Hinteralfeld 44.43 303⇑*i*P **P 17 42 17.2 +0.4**
comp=Z,100nm,1.0s
HINF Hinteralfeld 44.43 303⇑*i*P **P 17 42 17.2 +0.4**
HINF pmax pmax
comp=Z,100nm,1.0s
HINF Hinteralfeld 44.43 303⇑*i*P **P 17 42 17.2 +0.4**
comp=Z,100nm,1.0s
MEM Membach 44.51 307 P **P 17 42 18.5 +1.2**
comp=Z,45nm,1.1s
MEM AP **pP 17 42 24.5 +0.7**
HGN Heimansgroeve 44.53 307 *i*P **P 17 42 18.5 +1.0**
comp=Z,28nm,1.0s
LOMF Lomont 44.54 302 *e*P **P 17 42 18.0 +0.3**
LOMF Lomont 44.54 302 *e*P **P 17 42 18.0 +0.3**
LOMF Lomont 44.54 302 *e*P **P 17 42 18.0 +0.3**
WLF Walferdange 44.56 306 P **P 17 42 19.5 +1.7**
comp=Z,67nm,1.2s
WLF Walferdange 44.56 306 *e*P **P 17 42 19.3 +1.5**
WLF pmax pmax
comp=Z,99nm,1.0s
WLF Walferdange 44.56 306 *e*P **P 17 42 19.5 +1.7**
comp=Z,107nm,1.0s
WLF Walferdange 44.56 306 *e*P **P 17 42 19.3 +1.5**
comp=Z,99nm,1.0s
BEBN Eben Emael 44.69 307 P **P 17 42 19.6 +1.0**
HAU Haudompre 44.73 303⇑*i*P **P 17 42 19.7 +0.6**
comp=Z,63nm,1.0s
HAU *e*R
comp=Z,328nm,17.2s
HAU Haudompre 44.73 303⇑*i*P **P 17 42 19.7 +0.6**
HAU pmax pmax
comp=Z,63nm,1.0s
HAU Haudompre 44.73 303⇑*i*P **P 17 42 19.7 +0.6**
comp=Z,63nm,1.0s
SAOF Saorge 44.78 297 *e*P **P 17 42 20.6 +1.0**
SAOF Saorge 44.78 297 *e*P **P 17 42 20.6 +1.0**
SAOF Saorge 44.78 297 *e*P **P 17 42 20.6 +1.0**
QZH Quanzhou 44.84 92⇓*i*P P 17 42 28.4 +8.1
QZH S **S 17 48 54.8 -1.9**
QZH pmax pmax
comp=Z,540nm,3.1s
QZH LR LR
comp=N,830nm,15.5s
QZH LR LR
comp=E,1μm,13.4s
QZH LR LR
comp=Z,1μm,15.8s
OG01 Vacheresse 44.84 301 *e*P **P 17 42 20.8 +0.6**
OG01 Vacheresse 44.84 301 *e*P **P 17 42 20.8 +0.6**
AUTN L'Aution 44.87 297 *e*P **P 17 42 21.7 +1.1**
AUTN L'Aution 44.87 297 *e*P **P 17 42 21.7 +1.1**
AUTN L'Aution 44.87 297 *e*P **P 17 42 21.7 +1.1**
SBF Sospel 44.90 297⇑*i*P **P 17 42 21.4 +0.8**
comp=Z,282nm,1.1s
SBF Sospel 44.90 297⇑*i*P **P 17 42 21.4 +0.8**
SBF pmax pmax
comp=Z,282nm,1.1s
SBF Sospel 44.90 297⇑*i*P **P 17 42 21.4 +0.8**
comp=Z,282nm,1.1s
THEF They Montfort 44.92 304 *e*P **P 17 42 21.5 +0.8**
THEF They Montfort 44.92 304 *e*P **P 17 42 21.5 +0.8**
THEF They Montfort 44.92 304 *e*P **P 17 42 21.5 +0.8**
BCLA Clavier 44.98 307 P **P 17 42 22.2 +1.2**
comp=Z,17nm,1.2s
BCLA AP **pP 17 42 28.7 +1.1**
LPG La Plagne 44.98 300⇑*i*P **P 17 42 22.1 +0.6**
comp=Z,52nm,0.8s
LPG La Plagne 44.98 300⇑*i*P **P 17 42 22.1 +0.6**
LPG pmax pmax
comp=Z,52nm,0.8s
LPG La Plagne 44.98 300⇑*i*P **P 17 42 22.1 +0.6**
comp=Z,52nm,0.8s
LPL La Plagne 44.99 300⇑*i*P **P 17 42 22.2 +0.7**
comp=Z,74nm,1.1s
LPL La Plagne 44.99 300⇑*i*P **P 17 42 22.2 +0.7**
LPL pmax pmax
comp=Z,74nm,1.0s
LPL La Plagne 44.99 300⇑*i*P **P 17 42 22.2 +0.7**
comp=Z,74nm,1.0s
TOUF Mont Tournerai 44.99 297 *e*P **P 17 42 22.5 +1.0**
TOUF Mont Tournerai 44.99 297 *e*P **P 17 42 22.5 +1.0**
TOUF Mont Tournerai 44.99 297 *e*P **P 17 42 22.5 +1.0**
RSL Roselend 45.02 300 *e*P **P 17 42 22.3 +0.6**
RSL Roselend 45.02 300 *e*P **P 17 42 22.3 +0.6**
RSL Roselend 45.02 300 *e*P **P 17 42 22.3 +0.6**
PAGF Fort de Pagny 45.03 304⇑*i*P **P 17 42 23.0 +1.5**
comp=Z,72nm,1.0s
PAGF Fort de Pagny 45.03 304⇑*i*P **P 17 42 23.0 +1.5**
comp=Z,72nm,1.0s
MVIF Mont Vial 45.09 297 *e*P **P 17 42 23.0 +0.8**
MVIF Mont Vial 45.09 297 *e*P **P 17 42 23.0 +0.8**
MVIF Mont Vial 45.09 297 *e*P **P 17 42 23.0 +0.8**
MBDF Montbardon 45.15 299⇑*i*P **P 17 42 23.0 +0.3**
comp=Z,92nm,1.0s
MBDF Montbardon 45.15 299⇑*i*P **P 17 42 23.0 +0.3**
MBDF pmax pmax
comp=Z,93nm,1.0s
MBDF Montbardon 45.15 299⇑*i*P **P 17 42 23.0 +0.3**
comp=Z,92nm,1.0s
CABF La Chapelle 45.18 301⇑*i*P **P 17 42 23.7 +0.8**
comp=Z,159nm,1.1s
CABF La Chapelle 45.18 301⇑*i*P **P 17 42 23.7 +0.8**
CABF pmax pmax
comp=Z,159nm,1.1s
CABF La Chapelle 45.18 301⇑*i*P **P 17 42 23.7 +0.8**
comp=Z,159nm,1.1s
SPA0 Spitsbergen Ar 45.21 347 *e*P **P 17 42 22.9 +0.4**
SPITS Spitsbergen Ar 45.21 347 P **P 17 42 23.9 +1.3**
SPITS Spitsbergen Ar 45.21 347 P **P 17 42 23.9 +1.3**
comp=Z,30nm,0.8s,baz=113,slow=13,SNR=25
IPM Ipoh 45.28 130 P **P 17 42 23.9 +0.1**
comp=Z,18nm,0.9s
IPM Ipoh 45.28 130 P **P 17 42 25.3 +1.4**
comp=Z,23nm,0.9s
CALN Calern 45.31 297 *e*P **P 17 42 24.3 +0.3**
CALN Calern 45.31 297 *e*P **P 17 42 24.3 +0.3**
CALN Calern 45.31 297 *e*P **P 17 42 24.3 +0.3**
GIVF Givet 45.34 306⇑*i*P **P 17 42 25.1 +1.2**
comp=Z,59nm,0.9s
GIVF Givet 45.34 306⇑*i*P **P 17 42 25.1 +1.2**
GIVF pmax pmax
comp=Z,59nm,0.9s
GIVF Givet 45.34 306⇑*i*P **P 17 42 25.1 +1.2**
comp=Z,59nm,0.9s
PSI Prapat 45.38 133 P **P 17 42 25.6 +0.8**
comp=Z,21nm,1.1s
DOU Dourbes 45.48 306 P **P 17 42 26.4 +1.4**
comp=Z,23nm,1.8s
DOU AP **pP 17 42 32.8 +1.2**
DOU XP **sP 17 42 35.5 +1.4**
MEZF Maizieres J'vi 45.48 304⇑*i*P **P 17 42 26.4 +1.3**
comp=Z,130nm,0.8s
MEZF Maizieres J'vi 45.48 304⇑*i*P **P 17 42 26.4 +1.3**
comp=Z,130nm,0.8s
FRF La Foret Royal 45.53 297⇑*i*P **P 17 42 26.0 +0.5**
comp=Z,119nm,0.9s
FRF La Foret Royal 45.53 297⇑*i*P **P 17 42 26.0 +0.5**
FRF pmax pmax
comp=Z,119nm,0.9s
FRF La Foret Royal 45.53 297⇑*i*P **P 17 42 26.0 +0.5**
comp=Z,119nm,0.9s
LMR La Mourre 45.68 297⇑*i*P **P 17 42 27.0 +0.3**
comp=Z,142nm,1.6s
LMR La Mourre 45.68 297⇑*i*P **P 17 42 27.0 +0.3**
LMR pmax pmax
comp=Z,142nm,1.6s
LMR La Mourre 45.68 297⇑*i*P **P 17 42 27.0 +0.3**
comp=Z,142nm,1.6s
ORIF Oris-en-Rattie 45.72 299⇑*i*P **P 17 42 27.5 +0.4**
comp=Z,13nm,0.8s
ORIF *e*R
comp=Z,333nm,20.8s
ORIF Oris-en-Rattie 45.72 299⇑*i*P **P 17 42 27.5 +0.4**
ORIF pmax pmax
comp=Z,13nm,0.8s
ORIF Oris-en-Rattie 45.72 299⇑*i*P **P 17 42 27.5 +0.4**
comp=Z,13nm,0.8s
BAIF Baives 45.73 306⇑*i*P **P 17 42 28.6 +1.6**
comp=Z,219nm,1.1s
BAIF Baives 45.73 306⇑*i*P **P 17 42 28.6 +1.6**
BAIF pmax pmax
comp=Z,219nm,1.1s
BAIF Baives 45.73 306⇑*i*P **P 17 42 28.6 +1.6**
comp=Z,219nm,1.1s
INCN Inchon 45.87 72 *e*P **P 17 42 28.5 +0.2**
comp=Z,23nm,0.7s
KEST Kesra 45.99 286 *e*P **P 17 42 30.3 +0.9**
KEST Kesra 45.99 286 P **P 17 42 30.6 +1.2**
comp=Z,23nm,1.1s,baz=340,slow=2.1,SNR=36
SMRF Simiane la Rot 46.17 298⇑*i*P **P 17 42 31.3 +0.7**
comp=Z,44nm,0.9s
SMRF Simiane la Rot 46.17 298⇑*i*P **P 17 42 31.3 +0.7**
comp=Z,44nm,0.9s
KBS Kingsbay 46.34 347 *e*P **P 17 42 32.7 +1.3**
KBS *e*ScP **ScP 17 47 55.2 -3.1**
KBS Kingsbay 46.34 347 *e*P **P 17 42 32.3 +0.8**
KBS pmax pmax
comp=Z,67nm,0.9s
KBS Kingsbay 46.34 347 *e*P **P 17 42 32.3 +0.8**
comp=Z,67nm,0.9s
LOR Lormes 46.53 303⇑*i*P **P 17 42 33.6 +0.2**
comp=Z,46nm,0.9s
LOR *e*R
comp=Z,397nm,18.2s
LOR Lormes 46.53 303⇑*i*P **P 17 42 33.6 +0.2**
comp=Z,46nm,0.9s
SSB Saint Sauveur 46.55 300 *e*P **P 17 42 34.2 +0.6**
SSB pmax pmax
comp=Z,36nm,1.0s
SSB Saint Sauveur 46.55 300 *e*P **P 17 42 34.2 +0.6**
comp=Z,36nm,1.0s
SSB Saint Sauveur 46.55 300 *e*P **P 17 42 34.4 +0.8**
VIVF Saint-Julien-l 46.56 299⇑*i*P **P 17 42 34.6 +0.9**
comp=Z,219nm,1.2s
VIVF Saint-Julien-l 46.56 299⇑*i*P **P 17 42 34.6 +0.9**
VIVF pmax pmax
comp=Z,219nm,1.2s
VIVF Saint-Julien-l 46.56 299⇑*i*P **P 17 42 34.6 +0.9**
comp=Z,219nm,1.2s
SMF Signal de Mont 46.68 302⇑*i*P **P 17 42 35.2 +0.6**
comp=Z,208nm,1.1s
SMF Signal de Mont 46.68 302⇑*i*P **P 17 42 35.2 +0.6**
SMF pmax pmax
comp=Z,208nm,1.1s
SMF Signal de Mont 46.68 302⇑*i*P **P 17 42 35.2 +0.6**
comp=Z,208nm,1.1s
SSF Saint Saulge 46.81 302⇑*i*P **P 17 42 36.0 +0.4**
comp=Z,60nm,1.1s
SSF Saint Saulge 46.81 302⇑*i*P **P 17 42 36.0 +0.4**
SSF pmax pmax
comp=Z,60nm,1.1s
SSF Saint Saulge 46.81 302⇑*i*P **P 17 42 36.0 +0.4**
comp=Z,60nm,1.1s
KSAR Wonju Array Be 46.81 71 P **P 17 42 35.8 0.0**
KSAR pP **pP 17 42 41.6 -0.6**
KSRS Korea Array 46.84 71 P **P 17 42 35.8 -0.1**
comp=Z,7.1nm,0.9s,baz=283,slow=6.7,SNR=19
KSRS pP **pP 17 42 41.6 -0.8**
comp=Z,24nm,0.9s,baz=268,slow=6.7,SNR=30
KSRS LR LR 18 05 00.9
comp=Z,345nm,19.8s,baz=290,slow=40
AVF Avril sur Loir 46.98 302⇑*i*P **P 17 42 37.4 +0.5**
comp=Z,152nm,1.0s
AVF Avril sur Loir 46.98 302⇑*i*P **P 17 42 37.4 +0.5**
AVF pmax pmax
comp=Z,152nm,1.0s
AVF Avril sur Loir 46.98 302⇑*i*P **P 17 42 37.4 +0.5**
comp=Z,152nm,1.0s
CMAH Djebel Manchou 47.12 288 P **P 17 42 38.0 -0.2**
AEU East Anglia Un 47.12 310⇓*e*P **P 17 42 38.6 +0.7**
AEU East Anglia Un 47.12 310 P **P 17 42 38.6 +0.7**
YHNB Yeheng 47.17 90 *e*P **P 17 42 40.2 +1.4**
comp=Z,49nm,1.1s
ABSA Djebel Ababsia 47.20 287 P **P 17 42 39.0 +0.1**
TPUB Ta-pu 47.28 92 P **P 17 42 41.8 +2.3**
comp=Z,21nm,0.9s
SSLB Suanglung 47.28 92 *e*P **P 17 42 40.6 +1.0**
comp=Z,49nm,0.9s
AGO Saint Agoulin 47.31 301 *e*P **P 17 42 40.5 +1.0**
AGO Saint Agoulin 47.31 301 *e*P **P 17 42 40.5 +1.0**
LASF Ste Croix 47.33 298⇑*i*P **P 17 42 40.7 +1.0**
comp=Z,207nm,1.2s
LASF Ste Croix 47.33 298⇑*i*P **P 17 42 40.7 +1.0**
comp=Z,207nm,1.2s
HYF Humbligny 47.34 303⇑*i*P **P 17 42 40.6 +0.9**
HYF Humbligny 47.34 303⇑*i*P **P 17 42 40.6 +0.9**
BGF Bois d'Agland 47.37 302⇑*i*P **P 17 42 40.5 +0.5**
comp=Z,64nm,1.0s
BGF Bois d'Agland 47.37 302⇑*i*P **P 17 42 40.5 +0.5**
BGF pmax pmax
comp=Z,64nm,1.0s
BGF Bois d'Agland 47.37 302⇑*i*P **P 17 42 40.5 +0.5**
comp=Z,64nm,1.0s
LBL Lubilhac 47.44 300 *e*P **P 17 42 41.6 +1.0**
LBL Lubilhac 47.44 300 *e*P **P 17 42 41.6 +1.0**
LBL Lubilhac 47.44 300 *e*P **P 17 42 41.6 +1.0**
ELSH Elham, Standar 47.45 308⇓*e*P **P 17 42 41.4 +0.9**
ELSH AMB AMB 17 42 42.5
comp=Z,244nm,0.9s
ELSH Elham, Standar 47.45 308 P **P 17 42 41.4 +0.9**
ELSH AMB AMB 17 42 42.5
comp=Z,244nm,0.9s
PYM Petit Puy Mans 47.47 301 *e*P **P 17 42 41.8 +1.0**
PYM Petit Puy Mans 47.47 301 *e*P **P 17 42 41.8 +1.0**
PYM Petit Puy Mans 47.47 301 *e*P **P 17 42 41.8 +1.0**
LRW Lerwick 47.49 321 *e*P **P 17 42 40.5 -0.2**
LRW AMB AMB 17 42 51.5
comp=Z,119nm,3.2s
LRW Lerwick 47.49 321 P **P 17 42 40.5 -0.2**
LRW AMB AMB 17 42 51.5
comp=Z,119nm,3.2s
USRK Ussuriysk Arra 47.66 61 P **P 17 42 41.7 -0.5**
comp=Z,8.3nm,0.6s,baz=288,slow=9.5,SNR=10
USRK pP **pP 17 42 47.4 -1.4**
comp=Z,8.6nm,0.6s,baz=294,slow=6.2,SNR=16
USRK LR LR 18 05 17.5
comp=Z,357nm,18.0s,baz=292,slow=39
CKFL Kef-Lekhel 47.73 288 P **P 17 42 43.0 0.0**
YULB Yu-li 47.75 92 P **P 17 42 45.3 +2.1**
comp=Z,54nm,1.3s
TCF Toulx Ste Croi 47.87 302⇑*i*P **P 17 42 44.8 +1.0**
comp=Z,245nm,1.2s
TCF Toulx Ste Croi 47.87 302⇑*i*P **P 17 42 44.8 +1.0**
TCF pmax pmax
comp=Z,245nm,1.2s
TCF Toulx Ste Croi 47.87 302⇑*i*P **P 17 42 44.8 +1.0**
comp=Z,245nm,1.2s
TWG Pinlang 47.87 93 *e*P **P 17 42 46.0 +1.9**
comp=Z,498nm,1.3s
VLA Vladivostok 47.90 63⇓*e*P **P 17 42 43.4 -0.6**
VLA pmax pmax
comp=Z,15nm,1.0s
VLA MLR MLR
comp=Z,487nm,16.0s
CASM Ain Smara 47.95 288 P **P 17 42 44.0 -0.6**
KMBO Kilima Mbogo 48.16 223 *e*P **P 17 42 46.2 -0.4**
comp=Z,161nm,2.7s
KMBO Kilima Mbogo 48.16 223 P **P 17 42 46.5 -0.1**
comp=Z,5.3nm,0.9s,baz=31,slow=11,SNR=11
KMBO LR LR 18 04 44.6
comp=Z,168nm,18.4s,baz=90,slow=38
CAF Calviac 48.33 300⇑*i*P **P 17 42 48.5 +1.0**
comp=Z,42nm,0.7s
CAF Calviac 48.33 300⇑*i*P **P 17 42 48.5 +1.0**
CAF pmax pmax
comp=Z,42nm,0.7s
CAF Calviac 48.33 300⇑*i*P **P 17 42 48.5 +1.0**
comp=Z,42nm,0.7s
SKP1 Kophill 48.53 309⇑*e*P **P 17 42 49.2 +0.4**
SKP1 Kophill 48.53 309 P **P 17 42 49.2 +0.4**
DRUM Mains of Drumt 48.55 317⇑*e*P **P 17 42 48.9 0.0**
DRUM AMB AMB 17 42 52.5
comp=Z,70nm,3.1s
DRUM Mains of Drumt 48.55 317 P **P 17 42 48.9 0.0**
DRUM AMB AMB 17 42 52.5
comp=Z,70nm,3.1s
HABR Khabarovsk 48.59 55*c**e*P **P 17 42 47.9 -1.4**
HABR *e* 17 44 13.5
HABR *e* 17 44 40.9
HABR PPP PPP 17 45 28.9
HABR *e*S **S 17 49 50.5 +0.7**
HABR *e**SS **sS 17 49 55.9 -4.6**
HABR *e* 17 52 40.6
HABR *e*SSS SSS 17 54 33.1
HABR MLR MLR
comp=Z,273nm,13.0s
RJF Les Rejaudoux 48.60 301⇑*i*P **P 17 42 50.6 +1.1**
comp=Z,84nm,1.1s
RJF *e*R
comp=Z,329nm,19.8s
RJF Les Rejaudoux 48.60 301⇑*i*P **P 17 42 50.6 +1.1**
RJF pmax pmax
comp=Z,84nm,1.1s
RJF Les Rejaudoux 48.60 301⇑*i*P **P 17 42 50.6 +1.1**
comp=Z,84nm,1.1s
KBI1 Birley Grange 48.65 312⇑*e*P **P 17 42 49.3 -0.5**
KBI1 Birley Grange 48.65 312 P **P 17 42 49.3 -0.5**
FILF Fillols 48.68 297 *e*P **P 17 42 51.1 +0.9**
FILF Fillols 48.68 297 *e*P **P 17 42 51.1 +0.9**
MTLF Montolieu 48.68 298⇑*i*P **P 17 42 50.9 +0.7**
comp=Z,61nm,1.0s
MTLF Montolieu 48.68 298⇑*i*P **P 17 42 50.9 +0.7**
MTLF pmax pmax
comp=Z,61nm,1.0s
MTLF Montolieu 48.68 298⇑*i*P **P 17 42 50.9 +0.7**
comp=Z,61nm,1.0s
ESY Stoneypath 48.78 315⇑*e*P **P 17 42 50.8 +0.1**
ESY Stoneypath 48.78 315 P **P 17 42 50.8 +0.1**
SET Setif 48.79 288 P **P 17 42 51.0 -0.2**
LDF La Druitiere 48.81 305⇑*i*P **P 17 42 51.4 +0.3**
comp=Z,81nm,0.7s
LDF La Druitiere 48.81 305⇑*i*P **P 17 42 51.4 +0.3**
LDF pmax pmax
comp=Z,81nm,0.7s
LDF La Druitiere 48.81 305⇑*i*P **P 17 42 51.4 +0.3**
comp=Z,81nm,0.7s
MCD Coleburn Disti 48.86 317⇑*e*P **P 17 42 51.2 -0.1**
MCD Coleburn Disti 48.86 317 P **P 17 42 51.2 -0.1**
WOL Wolverton 48.87 309⇑*e*P **P 17 42 51.8 +0.4**
WOL AMB AMB 17 42 52.6
comp=Z,128nm,0.9s
WOL Wolverton 48.87 309 P **P 17 42 51.8 +0.4**
WOL AMB AMB 17 42 52.6
comp=Z,128nm,0.9s
FLN La Foliniere 49.00 306⇑*i*P **P 17 42 52.8 +0.3**
comp=Z,102nm,0.7s
FLN *e*R
comp=Z,572nm,18.0s
FLN La Foliniere 49.00 306⇑*i*P **P 17 42 52.8 +0.3**
FLN pmax pmax
comp=Z,102nm,0.7s
FLN La Foliniere 49.00 306⇑*i*P **P 17 42 52.8 +0.3**
comp=Z,102nm,0.7s
EBL Broad Law 49.05 315⇑*e*P **P 17 42 52.9 +0.1**
EBL Broad Law 49.05 315 P **P 17 42 52.9 +0.1**
EDI Edinburgh 49.10 315 AMB AMB 17 42 52.1
comp=Z,54nm,1.2s
EDI Edinburgh 49.10 315 AMB AMB 17 42 52.1
comp=Z,54nm,1.2s
SSW Stow on the Wo 49.11 310 *e*P **P 17 42 54.2 +1.0**
SSW Stow on the Wo 49.11 310 P **P 17 42 54.2 +1.0**
MYKOM Kota Tinggi 49.12 129 P **P 17 42 56.3 +2.5**
comp=Z,14nm,1.1s
SWN1 Swindon 49.18 309⇑*e*P **P 17 42 54.3 +0.5**
SWN1 AMB AMB 17 42 55.5
comp=Z,189nm,0.8s
SWN1 Swindon 49.18 309 P **P 17 42 54.3 +0.5**
SWN1 AMB AMB 17 42 55.5
comp=Z,189nm,0.8s
EKA Eskdalemuir Ar 49.19 315 P **P 17 42 54.1 +0.3**
EKA Eskdalemuir Ar 49.19 315 P **P 17 42 54.1 +0.3**
comp=Z,8.1nm,0.3s,baz=76,slow=8.1,SNR=181
ECK Cauldkaine Hil 49.20 314⇑*i*P **P 17 42 53.9 0.0**
ECK Cauldkaine Hil 49.20 314 P **P 17 42 53.9 0.0**
ESK Eskdalemuir 49.22 315⇑*e*P **P 17 42 54.1 0.0**
ESK AMB AMB 17 42 54.8
comp=Z,46nm,1.2s
ESK Eskdalemuir 49.22 315 P **P 17 42 54.1 0.0**
ESK AMB AMB 17 42 54.8
comp=Z,46nm,1.2s
ESK Eskdalemuir 49.22 315 *i*P **P 17 42 54.6 +0.5**
ESK Eskdalemuir 49.22 315 *e*P **P 17 42 54.0 0.0**
comp=Z,53nm,1.0s
ESK Eskdalemuir 49.22 315 P **P 17 42 54.2 +0.1**
comp=Z,320nm,1.0s,SNR=18
LFF La Frestale 49.23 300⇑*i*P **P 17 42 55.2 +0.9**
comp=Z,82nm,0.8s
LFF La Frestale 49.23 300⇑*i*P **P 17 42 55.2 +0.9**
LFF pmax pmax
comp=Z,82nm,0.8s
LFF La Frestale 49.23 300⇑*i*P **P 17 42 55.2 +0.9**
comp=Z,82nm,0.8s
MVH1 Achvaich 49.30 318⇑*e*P **P 17 42 54.0 -0.6**
MVH1 Achvaich 49.30 318 P **P 17 42 54.0 -0.6**
KESW Keswick, Cumbr 49.30 314⇑*e*P **P 17 42 54.9 +0.2**
KESW AMB AMB 17 42 55.8
comp=Z,94nm,1.3s
KESW Keswick, Cumbr 49.30 314 P **P 17 42 54.9 +0.2**
KESW AMB AMB 17 42 55.8
comp=Z,94nm,1.3s
GRR Gorron 49.34 305⇑*i*P **P 17 42 55.2 +0.1**
comp=Z,179nm,1.0s
GRR Gorron 49.34 305⇑*i*P **P 17 42 55.2 +0.1**
GRR pmax pmax
comp=Z,179nm,1.0s
GRR Gorron 49.34 305⇑*i*P **P 17 42 55.2 +0.1**
comp=Z,179nm,1.0s
MFF Saint Martin d 49.35 303⇑*i*P **P 17 42 55.4 +0.2**
comp=Z,114nm,1.1s
MFF Saint Martin d 49.35 303⇑*i*P **P 17 42 55.4 +0.2**
MFF pmax pmax
comp=Z,114nm,1.1s
MFF Saint Martin d 49.35 303⇑*i*P **P 17 42 55.4 +0.2**
comp=Z,114nm,1.1s
MDO Dochfour 49.48 317⇑*i*P **P 17 42 56.0 0.0**
MDO Dochfour 49.48 317 P **P 17 42 56.0 0.0**
MLS Moulis 49.58 298 *e*P **P 17 42 57.0 -0.1**
MLS Moulis 49.58 298 *e*P **P 17 42 57.0 -0.1**
HLM1 Long Mynd 49.60 311⇑*e*P **P 17 42 57.1 0.0**
HLM1 AMB AMB 17 42 58.5
comp=Z,48nm,1.0s
HLM1 Long Mynd 49.60 311 P **P 17 42 57.1 0.0**
HLM1 AMB AMB 17 42 58.5
comp=Z,48nm,1.0s
EAB Aberfoyle 49.69 316⇑*e*P **P 17 42 57.7 +0.1**
EAB Aberfoyle 49.69 316 P **P 17 42 57.7 +0.1**
FOEL Foel Wylfa 49.71 311 *e*P **P 17 42 58.2 +0.3**
FOEL AMB AMB 17 42 59.0
comp=Z,38nm,1.3s
FOEL Foel Wylfa 49.71 311 P **P 17 42 58.2 +0.3**
FOEL AMB AMB 17 42 59.0
comp=Z,38nm,1.3s
GCD Castle Douglas 49.72 314⇑*e*P **P 17 42 58.0 +0.1**
GCD Castle Douglas 49.72 314 P **P 17 42 58.0 +0.1**
MCH1 Michaelchurch 49.79 310⇑*e*P **P 17 42 58.5 +0.1**
MCH1 AMB AMB 17 42 59.8
comp=Z,121nm,1.1s
MCH1 Michaelchurch 49.79 310 P **P 17 42 58.5 +0.1**
MCH1 AMB AMB 17 42 59.8
comp=Z,121nm,1.1s
PGBU Glenifferbraes 49.84 315⇑*e*P **P 17 42 58.9 +0.2**
PGBU AMB AMB 17 43 06.7
comp=Z,126nm,2.9s
PGBU Glenifferbraes 49.84 315 P **P 17 42 58.9 +0.2**

PGBU AMB AMB 17 43 06.7
comp=Z,126nm,2.9s
KAC Achnashellach 49.96 318 ⇑iP P 17 42 59.8 +0.1
KAC Achnashellach 49.96 318 P P 17 42 59.8 +0.1
JSA Saint Aubin 49.97 306⇑eP P 17 42 59.6 -0.2
JSA Saint Aubin 49.97 306 P P 17 42 59.6 -0.2
WPM1 Penmaenmawr 50.04 312⇑eP P 17 43 00.2 -0.2
WPM1 Penmaenmawr 50.04 312 P P 17 43 00.2 -0.2
KSB Sheil Bridge 50.08 317⇑eP P 17 43 00.4 -0.1
KSB Sheil Bridge 50.08 317 P P 17 43 00.4 -0.1
EPF Esparros 50.09 298⇑iP P 17 43 00.5 -0.4
comp=Z,19nm,0.9s
EPF Esparros 50.09 298⇑iP P 17 43 00.5 -0.4
EPF pmax pmax
comp=Z,19nm,0.9s
EPF Esparros 50.09 298⇑iP P 17 43 00.5 -0.4
comp=Z,19nm,0.9s
GAL1 Galloway 50.16 314 AMB AMB 17 43 01.0
comp=Z,64nm,2.0s
GAL1 ⇑eP P **17 43 01.0 -0.2**
GAL1 Galloway 50.16 314 AMB AMB 17 43 01.0
comp=Z,64nm,2.0s
KPL Plockton 50.18 317⇑eP P 17 43 01.0 -0.3
KPL AMB AMB 17 43 02.0
comp=Z,52nm,1.0s
KPL Plockton 50.18 317 P P **17 43 01.0 -0.3**
KPL AMB AMB 17 43 02.0
comp=Z,52nm,1.0s
WLF1 Llynfaes 50.32 312⇑eP P 17 43 02.3 -0.2
WLF1 AMB AMB 17 43 03.4
comp=Z,31nm,1.2s
WLF1 Llynfaes 50.32 312 P P **17 43 02.3 -0.2**
WLF1 AMB AMB 17 43 03.4
comp=Z,31nm,1.2s
YRE Yr Eifl 50.41 312⇑eP P 17 43 02.8 -0.4
YRE Yr Eifl 50.41 312 P P **17 43 02.8 -0.4**
YRC Rhoscolyn 50.44 312 eP P 17 43 02.3 -1.0
YRC Rhoscolyn 50.44 312 P P **17 43 02.3 -1.0**
SGMF Saint Gilles 50.47 305⇑iP P 17 43 04.2 +0.5
comp=Z,93nm,0.8s
SGMF Saint Gilles 50.47 305⇑iP P 17 43 04.2 +0.5
SGMF pmax pmax
comp=Z,93nm,0.8s
SGMF Saint Gilles 50.47 305⇑iP P 17 43 04.2 +0.5
comp=Z,93nm,0.8s
HEX Exmoor 50.50 309⇑iP P 17 43 03.5 -0.4
HEX Exmoor 50.50 309 P P **17 43 03.5 -0.4**
REYF Montagne du Re 50.58 298 eP P 17 43 05.4 +0.7
REYF Montagne du Re 50.58 298 eP P 17 43 05.4 +0.7
JNU Nakatsue 50.73 75 eP P 17 43 05.9 0.0
comp=Z,24nm,0.9s
DYA Yadsworthy 50.74 308 eP P 17 43 04.7 -1.0
DYA AMB AMB 17 43 06.3
comp=Z,53nm,1.6s
DYA Yadsworthy 50.74 308 P P **17 43 04.7 -1.0**
DYA AMB AMB 17 43 06.3
comp=Z,53nm,1.6s
ETSF Etsaut 50.75 298⇑iP P 17 43 06.7 +0.7
comp=Z,69nm,0.9s
ETSF Etsaut 50.75 298⇑iP P 17 43 06.7 +0.7
ETSF pmax pmax
comp=Z,69nm,0.9s
ETSF Etsaut 50.75 298⇑iP P 17 43 06.7 +0.7
comp=Z,69nm,0.9s
ROSF Rostrenen 50.90 306⇑iP P 17 43 07.3 +0.3
comp=Z,138nm,0.9s
ROSF Rostrenen 50.90 306⇑iP P 17 43 07.3 +0.3
ROSF pmax pmax
comp=Z,138nm,0.9s
ROSF Rostrenen 50.90 306⇑iP P 17 43 07.3 +0.3
comp=Z,138nm,0.9s
QUIF Quistinic 50.95 305⇑iP P 17 43 07.6 +0.3
comp=Z,80nm,0.9s
QUIF Quistinic 50.95 305⇑iP P 17 43 07.6 +0.3
QUIF pmax pmax
comp=Z,80nm,0.9s
QUIF Quistinic 50.95 305⇑iP P 17 43 07.6 +0.3
comp=Z,80nm,0.9s
GMM Mts of Mourne 51.00 314⇑eP P 17 43 07.5 0.0
GMM Mts of Mourne 51.00 314 P P **17 43 07.5 0.0**
SJPF Ste Jean 51.14 299 eP P 17 43 09.6 +0.7
comp=Z,18nm,0.9s
SJPF Ste Jean 51.14 299 eP P 17 43 09.6 +0.7
SJPF pmax pmax
comp=Z,18nm,0.9s
SJPF Ste Jean 51.14 299 eP P 17 43 09.6 +0.7
comp=Z,18nm,0.9s
JOW Kunigami 51.54 84 eP P 17 43 11.8 -0.2
comp=Z,21nm,0.7s
DAG Danmarks Havn 52.32 343⇑iP P 17 43 17.8 +0.7
DAG *i* 17 43 26.6
DAG pmax pmax
comp=Z,29nm,0.9s
DAG Danmarks Havn 52.32 343⇑iP P 17 43 17.8 +0.7
comp=Z,34nm,0.9s
DAG *i* 17 43 26.6
YSS Yuzh-Sakhalins 54.01 55 eP P 17 43 31.0 +1.1
YSS *e* 17 43 37.0
YSS *e* 17 43 49.0
YSS MLR MLR
comp=Z,500nm,15.0s
YSS MLR MLR
comp=N,400nm,14.0s
SBUM Sibu 54.07 120 P P **17 43 30.4 -0.4**
comp=N,10nm,0.9s
ESDC Sonseca Array 54.31 296 P P **17 43 32.5 +0.2**
ESDC Sonseca Array 54.31 296 P P **17 43 32.5 +0.2**
comp=N,7.9nm,0.6s,baz=61,slow=7.8,SNR=75
ESLA Sonseca Array 54.31 296 eP P 17 43 32.4 +0.1
comp=N,8.6nm,1.1s
KKM Kota Kinabalu 54.34 113 eP P 17 43 33.7 +0.8
comp=N,49nm,1.4s
KKM Kota Kinabalu 54.34 113 P P **17 43 34.3 +1.4**
comp=N,25nm,1.4s
SEY Seymchan 54.47 34⇓eP P 17 43 34.0 +0.9
PAB San Pablo 54.63 296 eP P 17 43 34.4 -0.4
PAB pmax pmax
comp=Z,44nm,1.4s
PAB San Pablo 54.63 296 eP P 17 43 34.4 -0.4
comp=Z,44nm,1.4s
TAM Tamanrasset 54.76 273 eP P 17 43 36.0 0.0
TAM pmax pmax
comp=Z,8.0nm,0.8s
TAM Tamanrasset 54.76 273 eP P 17 43 36.0 0.0
comp=Z,7.9nm,0.8s
MAT Matsushiro 54.79 68 P P **17 43 34.2 -1.7**
MAT S S **17 51 11.8 -3.8**
MAJO Matsushiro 54.79 68 eP P 17 43 34.6 -1.3
MAJO pmax pmax
comp=Z,23nm,0.9s
MAJO Matsushiro 54.79 68 eP P 17 43 34.6 -1.3
comp=Z,23nm,0.9s
MJAR Matsushiro Arr 54.79 68 P P **17 43 35.6 -0.3**
MJAR pP pP **17 43 41.2 -1.2**
MJAR Matsushiro Arr 54.79 68 P P **17 43 35.6 -0.3**
comp=Z,4.4nm,1.0s,baz=284,slow=10.0,SNR=14
MJAR pP pP **17 43 41.2 -1.2**
comp=Z,13nm,0.9s,baz=286,slow=12,SNR=24
MJAR LR LR 18 07 50.8
comp=Z,178nm,18.7s,baz=285,slow=37
ASAJ Asahikawa 54.91 58 LR LR 18 09 14.7
comp=Z,424nm,19.1s,baz=150,slow=38
PBRG Braganca 55.42 299 eP P 17 43 40.9 +0.5
comp=Z,49nm,1.9s
MVO Moncorvo 55.87 298 eP P 17 43 44.3 +0.6
comp=Z,41nm,1.7s
MVO A A 18 12 54.1
comp=Z,156nm,18.0s
ERM Erimo 56.09 60 iP P 17 43 46.8 +1.7
PVRL Vila Real 56.30 299 eP P 17 43 47.5 +0.8
comp=Z,39nm,1.6s
POLO Lamas de Olo 56.32 299 eP P 17 43 47.3 +0.4
comp=Z,23nm,1.9s
PCAB Cabril 56.34 299 eP P 17 43 48.0 +1.0
comp=Z,91nm,1.7s
PGAV Gavieira, Arco 56.41 300 eP P 17 43 48.3 +0.8
comp=Z,80nm,1.6s
PGAV A A 18 12 28.8
comp=Z,205nm,20.0s
MTE Manteigas 56.54 298 eP P 17 43 49.5 +1.1
comp=Z,86nm,1.6s
MTE A A 18 15 17.6
comp=Z,173nm,18.0s
MTE Manteigas 56.54 298 eP P 17 43 48.9 +0.4
comp=Z,107nm,1.4s
MYLDM Lahad Datu 56.59 112 P P **17 43 51.3 +2.3**
comp=Z,19nm,1.2s
PVIS Viseu 56.65 298 eP P 17 43 50.2 +1.0
comp=Z,64nm,1.4s
PCBR Castelo Branco 56.72 297 eP P 17 43 50.8 +1.2
comp=Z,36nm,1.1s
PMRV Marv??o 56.83 297 eP P 17 43 51.2 +0.7
comp=Z,57nm,1.7s
PESTR Estremoz 57.21 296 eP P 17 43 53.7 +0.6
comp=Z,65nm,1.3s
PTOM Tomar 57.47 297 eP P 17 43 56.2 +1.3
comp=Z,93nm,1.6s
PMTG Montargil 57.57 297 eP P 17 43 57.1 +1.5
comp=Z,36nm,1.6s
EVO Evora 57.65 296⇑iP P 17 43 55.8 -0.4
comp=Z,69nm,1.4s
EVO eR
comp=Z,186nm,20.5s
EVO Evora 57.65 296 eP P 17 43 57.0 +0.8
comp=Z,54nm,1.5s
EVOP Sao Brissos 57.73 296⇑iP P 17 43 55.8 -1.0
EVOP pmax pmax
comp=Z,69nm,1.4s
EVOP Sao Brissos 57.73 296⇑iP P 17 43 55.8 -1.0
comp=Z,69nm,1.4s
PBEJ Beja 57.76 295 eP P 17 43 58.0 +1.0
PVAQ Vaqueiros 57.92 295 eP P 17 43 59.0 +0.8
comp=Z,65nm,1.4s
PVAQ A A 18 14 39.9
comp=Z,238nm,18.0s
PCVE Castro Verde 58.06 295 eP P 17 43 59.9 +0.8
comp=Z,45nm,2.0s
PBDV Barranco-do-Ve 58.15 295 eP P 17 44 00.7 +0.9
comp=Z,74nm,1.4s
PNCL Nicolau / Gran 58.20 296 eP P 17 44 01.0 +1.0
comp=Z,35nm,1.4s
BILL Bilibino 58.22 26*c iP P* 17 44 00.5 +0.7
BILL *i* 17 44 09.7
BILL *i* 17 44 51.7
BILL *i* 17 46 08.3
BILL eS S **17 52 01.0 +0.9**
BILL pmax pmax
comp=Z,54nm,1.4s
BILL MLR MLR
comp=Z,300nm,16.0s
PMAFR Mafra 58.36 297 eP P 17 44 02.4 +1.2
comp=Z,143nm,1.6s
SUMG Summit 58.55 340 *i* P P **17 44 03.4 +0.9**
SUMG pmax pmax
comp=Z,23nm,1.0s
SUMG Summit 58.55 340 eP P 17 44 03.7 +1.2
comp=Z,67nm,1.2s
SUMG Summit 58.55 340 *i* P P **17 44 03.4 +0.9**
comp=Z,23nm,1.0s
PTEO Sao Teotonio 58.58 295 eP P 17 44 03.9 +1.1
comp=Z,80nm,1.4s
ABPO Ambohimpanom 60.09 202 eP P 17 44 12.7 -0.7
ABPO *e* 17 44 20.0
ABPO pmax pmax
comp=Z,20nm,0.8s
ABPO Ambohimpanom 60.09 202 eP P 17 44 12.7 -0.7
comp=Z,20nm,0.8s
ABPO *e* pP **17 44 20.0 -0.1**
PEA0B Petropavlovsk- 60.57 44 eP P 17 44 17.0 +0.8
PETK Petropavlovsk- 60.57 44 P P **17 44 15.8 -0.5**
PETK 17 46 35.3
PETK Petropavlovsk- 60.57 44 P P **17 44 15.8 -0.5**
PETK pP pP **17 44 21.6 -1.3**
PETK PP PP 17 46 35.3 +5.8
PETK Petropavlovsk- 60.57 44 P P **17 44 15.8 -0.5**
comp=Z,6.6nm,1.2s,baz=280,slow=5.9,SNR=10
PETK pP pP **17 44 21.6 -1.3**
comp=Z,4.7nm,0.8s,baz=220,slow=2.2,SNR=6.1
PETK PP PP 17 46 35.3 +5.8
comp=Z,5.5nm,1.0s,baz=45,slow=0.2,SNR=3.5
DAV Davao City (W) 60.62 105 LR LR 18 17 07.0
comp=Z,213nm,18.1s,baz=311,slow=43
TOA0 Torodi Ar. Sit 63.15 266 eP P 17 44 32.5 -1.6
TORD Torodi Ar. Bea 63.15 266 P P **17 44 32.9 -1.2**
TORD Torodi Ar. Bea 63.15 266 P P **17 44 32.9 -1.2**
comp=Z,12nm,0.6s,baz=48,slow=6.3,SNR=121
TORD LR LR 18 16 29.7
comp=Z,175nm,19.7s,baz=70,slow=40
LSZ Lusaka 64.83 223 eP P 17 44 44.4 -0.7
comp=Z,7.7nm,0.7s
LSZ *e* pP **17 44 50.8 -1.1**
SFJD Kangerlussuaq 65.17 338 eP P 17 44 46.6 +0.1
comp=Z,51nm,0.9s
SFJD Kangerlussuaq 65.17 338 *i* P P **17 44 46.9 +0.3**
comp=Z,33nm,0.8s
SFJD Kangerlussuaq 65.17 338 P P **17 44 46.9 +0.3**
comp=Z,46nm,0.9s,baz=47,slow=6.7,SNR=15
RES Resolute Bay 66.77 355 eP P 17 44 57.0 +0.2
comp=Z,6.3nm,0.9s
COLD Coldfoot 71.00 15 eP P 17 45 24.1 +0.9
comp=Z,47nm,0.9s
COLD *e* pP **17 45 30.6 +0.6**
DBIC Dimbokro 72.17 264 eP P 17 45 30.2 -0.9
DBIC Dimbokro 72.17 264 P P **17 45 29.4 -1.7**
comp=Z,16nm,0.8s,baz=21,slow=7.1,SNR=12
DBIC LR LR 18 21 39.1
comp=Z,359nm,19.7s,baz=32,slow=40
LIC Lamto 72.58 264⇑iP P 17 45 32.3 -1.2
comp=Z,41nm,0.8s
LIC *e*R
comp=Z,1µm,18.2s
LIC Lamto 72.58 264⇑iP P 17 45 32.3 -1.2
comp=Z,41nm,0.8s
INK Inuvik 72.60 8 LR LR 18 22 57.1
comp=Z,233nm,18.9s,baz=322,slow=40
COLA College 73.53 15 eP P 17 45 38.8 +0.5
COLA pmax pmax
comp=Z,78nm,1.0s
COLA College 73.53 15 eP P 17 45 38.8 +0.5
comp=Z,78nm,1.0s
ILAR Eielson Array 73.81 15 P P **17 45 39.9 -0.1**
ILAR Eielson Array 73.81 15 P P **17 45 39.9 -0.1**
comp=Z,20nm,1.0s,baz=323,slow=4.3,SNR=152
ILAR LR LR 18 23 28.0
comp=Z,280nm,18.8s,baz=116,slow=40
TSUM Tsumeb 73.97 229 eP P 17 45 41.4 -0.2
comp=Z,14nm,0.8s
TSUM *e* pP **17 45 48.2 -0.3**
TRF Thorofare Moun 74.25 17 eP P 17 45 42.2 -0.6
comp=Z,12nm,0.7s
LBTB Lobatse 74.26 219 eP P 17 45 42.8 -0.4
comp=Z,16nm,0.9s
LBTB *e* pP **17 45 48.8 -1.2**
PPLA Purkeypile 74.29 18 eP P 17 45 43.0 0.0
comp=Z,30nm,0.6s
MCK McKinley 74.31 16 eP P 17 45 43.0 0.0
MCK pmax pmax
comp=Z,15nm,0.7s
MCK McKinley 74.31 16 eP P 17 45 43.0 0.0
comp=Z,14nm,0.7s
EGAK Eagle 74.86 12 eP P 17 45 46.6 +0.5
comp=Z,41nm,1.4s
SVW2 Sparrevohn 74.94 20 eP P 17 45 48.1 +1.5
comp=Z,23nm,1.1s
DOT Dot Lake 75.38 14 eP P 17 45 49.0 -0.1
comp=Z,45nm,0.7s
DOT *e* pP **17 45 56.1 +0.1**
SPU Mount Spurr 75.79 19 eP P 17 45 51.1 -0.5
MENT Mentasta 76.09 14 eP P 17 45 54.2 +1.0
SML Sawmill 76.13 17 eP P 17 45 54.2 +0.7
SML pmax pmax
comp=Z,25nm,1.0s
SML Sawmill 76.13 17 eP P 17 45 54.1 +0.7
comp=Z,25nm,1.0s
PMR Palmer 76.14 17 eP P 17 45 53.4 0.0
PMR *e* 17 46 00.0
PMR pmax pmax
comp=Z,40nm,1.0s
PMR Palmer 76.14 17 eP P 17 45 53.4 0.0
comp=Z,40nm,1.0s
PMR *e* pP **17 46 00.0 -0.2**
RSO Redoubt South 76.22 19 eP P 17 45 54.3 0.0
BBTS Babate 76.58 278 LR LR 18 27 12.3
comp=Z,173nm,19.1s,baz=342,slow=42
DIV Divide 77.30 16 eP P 17 46 00.9 +0.8
comp=Z,36nm,0.6s
SEW Seward 77.37 18 eP P 17 46 00.5 0.0
comp=Z,58nm,1.2s
BOSA Boshof 77.42 217 eP P 17 46 00.2 -1.0
comp=Z,23nm,1.0s
BOSA *e* pP **17 46 07.0 -1.0**
BOSA Boshof 77.42 217 P P **17 46 00.4 -0.8**
comp=Z,13nm,0.9s,baz=31,slow=6.5,SNR=19
BOSA LR LR 18 21 42.9
comp=Z,166nm,18.9s,baz=358,slow=37
FITZ Fitzroy Crossi 78.06 124 P P **17 46 03.2 -1.6**
FITZ Fitzroy Crossi 78.06 124 P P **17 46 03.2 -1.6**
comp=Z,4.0nm,0.9s,baz=288,slow=4.0,SNR=4.1
RAGM Ragged Mountai 78.21 16 eP P 17 46 06.8 +1.6
comp=Z,58nm,1.2s
KDAK Kodiak Island 78.56 21 eP P 17 46 07.2 +0.1
comp=Z,77nm,1.1s
KDAK *e* pP **17 46 13.9 0.0**
OHAK Old Harbor 78.84 21 eP P 17 46 09.1 +0.5
SCHQ Schefferville 79.44 335 eP P 17 46 11.8 -0.2
comp=Z,35nm,0.9s
SCHQ *e* pP **17 46 18.7 -0.2**
SCHQ Schefferville 79.44 335 P P **17 46 12.3 +0.3**
comp=Z,29nm,0.8s,baz=44,slow=5.8,SNR=25
SCHQ LR LR 18 24 47.7
comp=Z,171nm,18.7s,baz=55,slow=38
YKW3 Yellowknife Ar 79.54 1 eP P 17 46 12.1 -0.3
comp=Z,0.9nm,1.2s
YKA Yellowknife Ar 79.61 1 P P **17 46 12.9 +0.2**
YKA Yellowknife Ar 79.61 1 P P **17 46 12.9 +0.2**
comp=Z,6.3nm,0.5s,baz=352,slow=5.7,SNR=148
PNL Peninsula 79.92 14 eP P 17 46 15.3 +0.7
comp=Z,40nm,1.1s
MORW Morawa 80.79 138 P P **17 46 18.1 -1.4**
baz=26,SNR=3.1
SKAG Skagway 80.82 12 eP P 17 46 20.5 +1.2
comp=Z,35nm,1.1s
DLBC Dease Lake 82.56 9 eP P 17 46 29.3 +0.6
DLBC *e* pP **17 46 36.2 +0.6**
WRAK Wrangell Islan 84.20 11 eP P 17 46 38.0 +1.0
comp=Z,29nm,1.1s
WRAK *e* pP **17 46 44.6 +0.8**
NWAO Narrogin (SRO) 84.48 140 LR LR 18 23 24.0
comp=Z,90nm,20.2s,baz=88,slow=35
WRA Warramunga Arr 85.16 120 P P **17 46 40.8 -1.6**
WRA Warramunga Arr 85.16 120 P P **17 46 40.8 -1.6**
comp=Z,1.9nm,0.6s,baz=324,slow=5.0,SNR=11
PQI Presque Isle 86.63 331 eP P 17 46 50.6 +1.2
comp=Z,26nm,0.8s
ASAR Alice Springs 87.42 123 P P **17 46 52.2 -1.3**
ASAR PKKPbc **PKKPbc 18 04 42.5 -0.1**
ASAR Alice Springs 87.42 123 P P **17 46 52.2 -1.3**
comp=Z,1.8nm,0.8s,baz=318,slow=5.3,SNR=14
ASAR PKKPbc **PKKPbc 18 04 42.5 -0.1**
comp=Z,0.9nm,1.0s,baz=123,slow=2.9,SNR=6.2
ULM Lac du Bonnet 90.71 350 P P **17 47 08.1 -0.5**
ULM Lac du Bonnet 90.71 350 P P **17 47 08.1 -0.5**
comp=Z,12nm,0.8s,baz=12,slow=4.8,SNR=11
ULM LR LR 18 32 19.8
comp=Z,234nm,18.9s,baz=70,slow=38
AGMN Agassiz Nation 92.61 349 eP P 17 47 16.7 -0.7
comp=Z,18nm,1.1s
WALA Waterton Lakes 93.08 1 eP P 17 47 18.4 -1.3
comp=Z,0.1nm,0.7s
A15A Johnson Ranch, 93.17 0 P P **17 47 20.2 0.0**
baz=93,SNR=9.8
A14A Double T Ranch 93.17 1⇓P P 17 47 20.0 -0.2
baz=93
A17A Triple J Farms 93.19 359 P P **17 47 20.6 +0.3**
baz=93,SNR=10
A13A Flathead Natio 93.20 1 P P **17 47 20.7 +0.5**
baz=93
A16A West Butte Ran 93.20 360 P P **17 47 20.1 -0.3**
baz=93,SNR=5.8
A18A Metzger Ranch, 93.20 358 P P **17 47 20.5 +0.3**
baz=93
COWI Conover 93.50 344 eP P 17 47 21.3 -0.4
comp=Z,9.8nm,0.9s
MDND Maddock 93.55 351 P P **17 47 22.1 +0.2**
baz=93,SNR=5.7
B20A Solberg Farm, 93.63 357 P P **17 47 23.0 +0.8**
baz=93,SNR=11
B19A Brinkman Farms 93.64 358⇑P P 17 47 22.6 +0.3
baz=93
CTA Charters Tower 93.67 113 P P **17 47 22.2 -0.5**
CTA Charters Tower 93.67 113 P P **17 47 22.2 -0.5**
comp=Z,4.0nm,0.6s,baz=297,slow=9.0,SNR=2.0
B18A Beardsley Farm 93.73 358⇓P P 17 47 23.1 +0.4
baz=93
B13A Whitefish 93.76 1⇑P P 17 47 22.5 -0.3
baz=93
NEW Newport 93.78 3 eP P 17 47 22.2 -0.7
comp=Z,11nm,1.2s
NEW *e* pP **17 47 29.7 -0.2**
NEW Newport 93.78 3 P P **17 47 23.3 +0.3**
baz=93,SNR=6.4
B14A Marquette Ranc 93.79 1 P P **17 47 23.2 +0.1**
baz=93,SNR=8.2
B15A Bradely Ranch, 93.84 0 P P **17 47 23.4 +0.2**
baz=94,SNR=11
B17A L&G Farms, Che 93.85 359 P P **17 47 23.5 +0.2**
baz=94,SNR=7.7
EGMT Eagleton 94.10 358 eP P 17 47 25.7 +1.3
comp=Z,7.8nm,1.0s
EGMT Eagleton 94.10 358 P P **17 47 24.8 +0.4**
baz=94
NLWA Neilton Lookou 94.14 8 eP P 17 47 26.9 +2.3
comp=Z,14nm,1.1s
C22A Vida 94.21 356⇑P P 17 47 25.7 +0.8
baz=94
C11A Tepee Creek (N 94.24 3 P P **17 47 25.6 +0.6**
baz=94
BSMT Bassoo Peak 94.27 2 eP P 17 47 25.9 +0.5
BSMT *e* pP **17 47 32.8 +0.5**
C16A Fuhringer Ranc 94.35 360 P P **17 47 25.4 -0.2**
baz=94,SNR=8.0
C20A Veseth Ranch, 94.35 357⇓P P 17 47 25.9 +0.3
baz=94
C19A Slack Wire Ran 94.37 358 P P **17 47 25.9 +0.3**
baz=94
C14A Swan Lake 94.37 1 P P **17 47 25.8 +0.1**
baz=94
C15A Salmond Ranch, 94.38 0 P P **17 47 25.8 0.0**
baz=94,SNR=6.2
C12B Naegeli Ranch, 94.40 2 P P **17 47 26.5 +0.7**
baz=94
C13A Hot Springs 94.45 2 P P **17 47 26.5 +0.5**
baz=94,SNR=9.5
C17A Wharram Farm, 94.51 359 P P **17 47 26.3 0.0**
baz=94,SNR=7.1
SWMT Swartz Lake 94.63 1 eP P 17 47 27.5 +0.6
D22A Cohagen 94.82 356⇑P P 17 47 28.9 +1.2
baz=94,SNR=7.1
SLMT Seeley Lake 94.90 1 eP P 17 47 27.6 -0.6
D19A Cripps Ranch, 94.93 358 P P **17 47 28.6 +0.3**
baz=94
D20A Manuel Ranch, 94.98 357 P P **17 47 28.6 +0.1**
baz=95
D17A Six Diamond Ra 94.99 359 P P **17 47 28.8 +0.2**
baz=95,SNR=16
D13A Huson 95.04 1 P P **17 47 28.7 0.0**
baz=95
D12A Red Ives Fores 95.06 2 P P **17 47 28.7 -0.1**
baz=95
D14A Greenough 95.06 1 P P **17 47 28.9 0.0**
baz=95,SNR=7.9
D16A Dana Ranch, Ca 95.12 359 P P **17 47 29.1 -0.1**
baz=95,SNR=7.7
CHMT Chamberlain Mo 95.23 1 eP P 17 47 29.7 -0.1
MSO Missoula 95.31 1⇑P P 17 47 30.3 +0.3
baz=95
E23A Ismay 95.42 355 P P **17 47 31.6 +1.2**
baz=95
HRY Holter Researc 95.44 360 eP P 17 47 31.4 +0.8
HRY *e* pP **17 47 37.9 +0.3**
E18A Harlowton 95.56 358⇓P P 17 47 31.9 +0.7
baz=95,SNR=5.4
E20A Meyer Farm, Mu 95.56 357⇓P P 17 47 31.0 -0.1
baz=95
E16A East Helena 95.62 360 P P **17 47 32.1 +0.7**
baz=95,SNR=12
E19A Rath Farm, Rou 95.63 358 P P **17 47 31.9 +0.4**
baz=95
E17A Martinsdale 95.68 359⇑P P 17 47 32.3 +0.5
baz=95
E13A Victor 95.69 1 P P **17 47 31.4 -0.4**
baz=95
E15A Deer Lodge 95.73 0⇓P P 17 47 32.5 +0.5
baz=95
E14A Clinton 95.73 1⇓P P 17 47 31.9 -0.1
baz=95
F18A Big Timber 96.21 358⇑P P 17 47 34.7 +0.5
baz=96
F17A Fitzpatrick Pl 96.23 359⇓P P 17 47 34.8 +0.5

	baz=96									
F15A	**Butte**	**96.31**	**0**	⇓P		**P**		**17 47 35.0**	**+0.3**
	baz=96									
LRM	**Limekiln Ridge**	**96.33**	**0**	*e*P		**P**		**17 47 35.8**	**+0.9**
F13A	**Darby**	**96.34**	**1**	⇑P		**P**		**17 47 34.7**	**0.0**
	baz=96									
F12A	**Elk City**	**96.36**	**2**	P		**P**		**17 47 34.4**	**-0.5**
	baz=96									
BOZ	**Bozeman (W)**	**96.50**	**360**	*e*P		**P**		**17 47 35.8**	**+0.3**
BOZ				pmax		pmax				
	comp=Z,2.0nm,0.8s									
BOZ	**Bozeman (W)**	**96.50**	**360**	*e*P		**P**		**17 47 35.8**	**+0.3**
	comp=Z,1.9nm,0.8s									
DLMT	**Dillon**	**96.79**	**0**	*e*P		**P**		**17 47 37.1**	**+0.3**
G15A	**Dillon**	**96.99**	**0**	⇑P		**P**		**17 47 37.8**	**0.0**
	baz=97									
G13A	**Cobalt**	**97.04**	**1**	⇓P		Pdif		17 47 38.1	0.0
	baz=97									
ECSD	**EROS Data Cent**	**97.18**	**349**	*e*P		**P**		**17 47 38.2**	**-0.3**
	comp=Z,12nm,0.8s									
MCMT	**McKenzie Canyo**	**97.32**	**0**	P		Pdif		17 47 39.5	0.0
	comp=Z,0.5nm,0.7s									
STKA	**Stephens Creek**	**97.95**	**124**	LR		LR		18 38 15.2		
	comp=Z,184nm,20.6s,baz=207,slow=39									
J22A	**Midwest**	**98.57**	**356**	P		**P**		**17 47 44.6**	**-0.2**
	baz=98									
HLID	**Hailey**	**98.57**	**2**	P		**P**		**17 47 44.2**	**-0.7**
	baz=98									
J19A	**Crowheart**	**98.83**	**358**	⇓P		Pdif		17 47 47.1	+1.0
	baz=98									
PDAR	**Pinedale Array**	**99.34**	**358**	P		**Pdif**		**17 47 48.6**	**+0.1**
PDAR	**Pinedale Array**	**99.34**	**358**	P		**Pdif**		**17 47 48.6**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=37,slow=3.7,SNR=4.1									
PDAR				LR		LR		18 37 27.3		
	comp=Z,172nm,18.1s,baz=15,slow=38									
NVAR	**Mina Array Bea**	**103.52**	**5**	Pdif		**Pdif**		**17 48 07.5**	**+0.4**
NVAR				PKiKP		**PKiKP**		**17 52 25.8**	**+0.1**
NVAR				PKKPbc		**PKKPbc**		**18 03 58.2**	**-1.2**
NVAR	**Mina Array Bea**	**103.52**	**5**	Pdiff		**Pdif**		**17 48 07.5**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=354,slow=2.7,SNR=3.2									
NVAR				PKiKP		**PKiKP**		**17 52 25.8**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=219,slow=1.9,SNR=3.9									
NVAR				PKKPbc		**PKKPbc**		**18 03 58.2**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=205,slow=7.5,SNR=3.9									
TXAR	**Lajitas Array**	**112.30**	**352**	PKiKP		**PKiKP**		**17 52 42.0**	**-0.2**
TXAR				PP		**PP**		**17 53 28.1**	**+2.2**
TXAR				PKKPbc		**PKKPbc**		**18 03 30.0**	**-1.7**
TXAR	**Lajitas Array**	**112.30**	**352**	PKiKP		**PKiKP**		**17 52 42.0**	**-0.2**
	comp=Z,0.6nm,0.9s,baz=117,slow=0.6,SNR=4.9									
TXAR				PP		**PP**		**17 53 28.1**	**+2.2**
	comp=Z,2.1nm,1.1s,baz=52,slow=4.9,SNR=5.6									
TXAR				PKKPbc		**PKKPbc**		**18 03 30.0**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=193,slow=5.0,SNR=4.4									
SNAA	**Sanae**	**120.09**	**200**	*e*PKP		**PKPdf**		**17 52 54.5**	**-1.1**
VNA2	**Neumayer--Watz**	**121.01**	**202**	*e*PKP		**PKPdf**		**17 52 57.6**	**+0.3**
VNA2	**Neumayer--Watz**	**121.01**	**202**	*e*PKKP				18 03 07.4		
VNA1	**Neumayer--Stat**	**121.14**	**202**	*e*PKP		**PKPdf**		**17 52 58.0**	**+0.5**
SAML	**Samuel**	**127.17**	**290**	*e*PKPdf		**PKPdf**		**17 53 10.4**	**-0.4**
VNDA	**Vanda**	**127.88**	**164**	PKP		**PKPdf**		**17 53 09.9**	**-0.3**
VNDA	**Vanda**	**127.88**	**164**	PKP		**PKPdf**		**17 53 09.9**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=300,slow=6.9,SNR=6.5									
OTAV	**Otavalo**	**130.64**	**313**	*e*PKPdf		**PKPdf**		**17 53 18.5**	**+0.4**
CPUP	**Villa Florida**	**132.62**	**268**	PKP		**PKPdf**		**17 53 20.2**	**-0.6**
CPUP	**Villa Florida**	**132.62**	**268**	PKP		**PKPdf**		**17 53 20.2**	**-0.6**
	comp=Z,7.7nm,1.0s,baz=44,slow=4.0,SNR=7.1									
LPAZ	**La Paz**	**135.56**	**287**	*e*PKPdf		**PKPdf**		**17 53 26.8**	**-0.6**
LPAZ	**La Paz**	**135.56**	**287**	PKP		**PKPdf**		**17 53 26.8**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=74,slow=3.1,SNR=13									
LCO	**Las Campanas**	**144.38**	**272**	*e*PKPdf		**PKPab**		**17 53 40.5**	**-0.2**
PLCA	**Paso Flores**	**147.87**	**252**	*e*PKPbc		**PKPbc**		**17 53 51.1**	**+0.2**
PLCA	**Paso Flores**	**147.87**	**252**	PKPbc		**PKPbc**		**17 53 51.3**	**+0.4**
	comp=Z,52nm,1.0s,baz=95,slow=3.5,SNR=46									

*CSEM **10** 17:51:19.1, 45°.85N×15°.18E, h0km, ML0.1, After LJU*

LJU 10 17:51:19.1, 45°.85N×15°.18E, h6km, ML0.1, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
							h m s	ISC
LEGS	**Legarje**	**0.14**	**45**	*i* Pg	Pg		17 51 21.9	-0.2
LEGS				*i* Sg	Sg		17 51 24.1	+0.1
LEGS	**Legarje**	**0.14**	**45**	*i* Pg	Pg		17 51 21.9	-0.2
LEGS				*i* Sg	Sg		17 51 24.1	0.0
CRES	**Cresnjev**	**0.20**	**97**	*i* Pg	Pg		17 51 23.6	+0.5
CRES								
	comp=Z,1.0nm,0.1s							
CRES	**Cresnjev**	**0.20**	**97**	*i* Pg	Pg		17 51 23.6	+0.5
	comp=Z,1.0nm,0.1s							
VISS	**Visnje**	**0.24**	**259**	*i* Pg	Pg		17 51 23.6	-0.3
VISS				*i* Sg	Sg		17 51 27.6	+0.5
VISS								
	comp=Z,2.0nm,0.2s							
VISS	**Visnje**	**0.24**	**259**	*i* Pg	Pg		17 51 23.6	-0.3
VISS				*i* Sg	Sg		17 51 27.6	+0.5
	comp=Z,2.0nm,0.2s							
PDKS	**Podkum**	**0.24**	**330**	*i* Sg	Sg		17 51 27.9	+0.5
PDKS								
	comp=Z,3.0nm,0.1s							
PDKS	**Podkum**	**0.24**	**330**	*i* Sg	Sg		17 51 27.9	+0.5
	comp=Z,3.0nm,0.1s							

*ISCJB **10** 17:55:11.0±1.2, 41°.02N±0°.04×125°.2W±0°.1, h15km, mb3.1/2, Error ellipse: s-maj=14.6km s-min=5.2km az=171.0*

*IDC **10** 17:55:13.0±1.9, 41°.12N×124°.93W, h0km, mb3.0/2, mb1 3.6/4, mb1mx3.3/28, mbtmp3.2/4, ML3.6/2, Error ellipse: s-maj=23.7km s-min=14.5km az=144.0*

*NEIC **10** 17:55:13.6, 41°.06N×125°.18W, h18km, ML3.3(NCEDC), After NCEDC.*

ISC 10 17:55:12.7±1.6, 41°.05N±0°.05×125°.2W±0°.1, h15km, n42, σ1s31/41, 1C, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
							h m s	ISC
KRMB	**Red Mountain**	**1.08**	**63**	*e*P		**Pb**	**17 55 31.2**	**-1.9**
KHMM	**Horse Mountain**	**1.12**	**98**	*e*P		**Pn**	**17 55 32.2**	**-1.7**
KSXB	**Camp Six Broad**	**1.26**	**51**	P		**Pn**	**17 55 34.1**	**-1.8**
KBO	**Bosley Butte**	**1.37**	**32**	*e*Pn		**Pn**	**17 55 35.6**	**-1.7**
KBO				*e*Sn		Sn	17 55 48.4	-6.9
KTRM	**Thompson Ridge**	**1.61**	**57**	⇑P		**Pn**	**17 55 39.2**	**-1.5**
KIPM	**Iron Peak**	**1.80**	**133**	*e*Pn		**Pn**	**17 55 42.2**	**-1.1**
KCPM	**Cahto Peak**	**1.83**	**137**	*e*Pn		**Pn**	**17 55 42.5**	**-1.3**
KCPM				*e*Sn		**Sn**	**17 56 03.7**	**-3.0**
KEBM	**Edson Butte**	**1.93**	**19**	*e*Pn		**Pn**	**17 55 43.6**	**-1.5**
YBH	**Yreka Blue Hor**	**1.99**	**69**	*e*Pn		**Pn**	**17 55 45.0**	**-0.9**
YBH				Lg		Lg	17 56 08.4	
YBH	**Yreka Blue Hor**	**1.99**	**69**	Pn		**Pn**	**17 55 45.2**	**-0.7**
	14nm,0.3s,baz=256,slow=10,SNR=363							
YBH				Lg		Lg	17 56 08.4	
	27nm,0.3s,baz=180,slow=18,SNR=20							
LAMM	**Antelope Mount**	**2.01**	**73**	P		**Pn**	**17 55 45.5**	**-0.8**
WDC	**Whiskeytown Da**	**2.06**	**102**	*e*Pn		**Pn**	**17 55 45.8**	**-1.0**
HUMO	**Hull Mountain**	**2.29**	**46**	*e*Pn		**Pn**	**17 55 48.9**	**-1.0**
LHEM	**Herd Peak**	**2.31**	**74**	P		**Pn**	**17 55 50.3**	**-0.1**
BUOR	**Burton Butte**	**2.53**	**60**	P		**Pn**	**17 55 54.3**	**+0.9**
DBO	**Dodson Butte**	**2.53**	**34**	P		**Pn**	**17 55 52.6**	**-0.7**
BBOR	**Butler Butte**	**2.62**	**45**	P		**Pn**	**17 55 54.7**	**0.0**
LAB	**Little Aspen B**	**2.64**	**61**	P		**Pn**	**17 55 55.5**	**+0.6**
LTIM	**Timbered Crate**	**2.80**	**86**	P		**Pn**	**17 55 56.8**	**-0.3**
HOG	**Hogback Mounta**	**2.87**	**64**	P		**Pn**	**17 55 58.1**	**0.0**
LBCM	**Butte Creek Ri**	**2.92**	**93**	P		**Pn**	**17 55 58.1**	**-0.6**
EUO	**Eugene**	**3.37**	**27**	P		**Pn**	**17 56 04.9**	**+0.2**
MOD	**Modoc**	**3.77**	**75**	*e*Pn		**Pn**	**17 56 09.5**	**-0.9**
BEKR	**Beckworth**	**3.87**	**106**	*e*Pn		**Pn**	**17 56 11.4**	**-0.4**
SAC	**San Andreas**	**4.07**	**147**	*e*Pn		**Pn**	**17 56 13.1**	**-1.4**
WCN	**Washoe City**	**4.51**	**111**	*e*Pn		**Pn**	**17 56 20.5**	**-0.1**
CMB	**Columbia Colle**	**4.78**	**127**	*e*Pn		**Pn**	**17 56 24.4**	**+0.2**
SAO	**San Andreas Ge**	**5.18**	**144**	*e*Pn		**Pn**	**17 56 30.2**	**+0.6**
NVAR	**Mina Array Bea**	**5.92**	**114**	Pn		**Pn**	**17 56 40.4**	**+0.4**
NVAR	**Mina Array Bea**	**5.92**	**114**	Pn		**Pn**	**17 56 40.4**	**+0.4**
	1.1nm,0.3s,baz=289,slow=14,SNR=24							
NV11	**Mina Array Sit**	**6.02**	**113**	*e*Pn		**Pn**	**17 56 41.6**	**+0.3**
LON	**Longmire**	**6.20**	**22**	*e*Pn		**Pn**	**17 56 43.8**	**+0.1**
	3.4nm,0.6s							
HAWA	**Hanford**	**6.73**	**36**	*e*Pn		**Pn**	**17 56 52.0**	**+1.0**
	13nm,0.3s							
BMO	**Blue Mountains**	**6.92**	**54**	*e*Pn		**Pn**	**17 56 55.3**	**+1.6**
	1.2nm,0.6s							
ISA	**Isabella**	**7.53**	**133**	*e*Pn		**Pn**	**17 57 03.4**	**+1.4**
	3.3nm,0.6s							
HLID	**Hailey**	**8.38**	**69**	*e*Pn		**Pn**	**17 57 15.4**	**+1.8**
	1.0nm,0.8s							
PDAR	**Pinedale Array**	**11.78**	**76**	Pn		Pn	17 58 03.5	+3.2
PDAR	**Pinedale Array**	**11.78**	**76**	Pn		Pn	17 58 03.5	+3.2
	0.1nm,0.3s,baz=286,slow=10,SNR=2.1							
TXAR	**Lajitas Array**	**21.06**	**117**	P		**P**	**17 59 59.1**	**+2.9**
TXAR	**Lajitas Array**	**21.06**	**117**	P		**P**	**17 59 59.1**	**+2.9**
	0.7nm,0.9s,baz=308,slow=8.9,SNR=6.3							
YKA	**Yellowknife Ar**	**22.40**	**13**	P		**P**	**18 00 11.1**	**+0.9**
YKA	**Yellowknife Ar**	**22.40**	**13**	P		**P**	**18 00 11.1**	**+0.9**
	0.7nm,0.7s,baz=198,slow=11,SNR=7.3							

GUC 10 18:11:33.0±0.9, 21°.97S×68°.65W, h124km±7km, ML3.5, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
							h m s	ISC
PB09	**Plate Boundary**	**0.58**	**287**	⇑*i* P		Pn	18 11 53.0	+0.8
PB09				*i* S		Sn	18 12 07.7	+1.2
PB09				AML		AML	18 12 09.7	
	comp=N,2μm,0.2s							
LVC	**Limon Verde**	**0.69**	**201**	*e*P		Pn	18 11 53.2	+0.2
LVC				*i* S		Sn	18 12 09.0	+0.8
PB04	**Plate Boundary**	**0.83**	**249**	*e*P		Pn	18 12 01.4	+7.6
PB04				*i* S		Sn	18 12 21.9	+12
PB04				AML		AML	18 12 22.3	
	comp=E,813nm,0.2s							
PB07	**Plate Boundary**	**1.18**	**282**	⇑*i* P		Pn	18 11 58.2	+0.8
PB07				*i* S		Sn	18 12 16.8	+0.9
PB07				AML		AML	18 12 17.8	
	comp=N,1μm,0.2s							
PB01	**Plate Boundary**	**1.21**	**320**	⇑*i* P		Pn	18 11 57.7	+0.1
PB01				*i* S		Sn	18 12 16.9	+0.6
PB01				AML		AML	18 12 18.8	
	comp=E,569nm,0.2s							
CEN1	**Los Morros**	**2.01**	**225**	*e*P		Pn	18 12 10.3	+3.3
CEN1				*i* S		Sn	18 12 38.0	+5.0
CEN1				AML		AML	18 12 41.7	
	comp=E,110nm,0.4s							
HMBC	**Humberstone**	**2.04**	**325**	⇑*i* P		Pn	18 12 06.8	-0.6
HMBC				*i* S		Sn	18 12 33.3	-0.4
HMBC				AML		AML	18 12 38.9	
	comp=N,256nm,0.3s							
ANCH	**Antofagasta**	**2.36**	**223**	⇓*i* P		Pn	18 12 12.2	+1.1
ANCH				*i* S		Sn	18 12 41.6	+1.2
ANCH				AML		AML	18 12 42.0	
	comp=N,454nm,0.0s							
PSGC	**Pisagua**	**2.73**	**329**	*e*P		Pn	18 12 14.5	-1.7
PSGC				*i* S		Sn	18 12 47.9	-1.4
PSGC				AML		AML	18 12 56.4	
	comp=E,88nm,0.3s							

MAN 10 18:22:49, 18°.63N×121°.03E, h1km, mb4.4, ML3.3, MS3.1, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
							h m s	ISC
PIP	**Pasuquin**	**0.50**	**232**	⇑*i* P		Pb	18 22 59.8	-0.8
APYP	**Conner**	**0.79**	**165**	*e*P		Pb	18 23 05.9	+0.4
APYP				*e*S		Sn	18 23 19.4	-0.3
SIPP	**Brgy, Tapao**	**0.89**	**218**	⇓*i* P		Pb	18 23 07.0	-0.2
ABRA	**Dolores**	**1.02**	**197**	*e*P		Pb	18 23 09.4	-0.2
ABRA				*e*S		Sn	18 23 26.4	+0.9
CAUP	**Cauayan**	**1.84**	**156**	*e*P		Pg	18 23 24.0	-0.3
PALP	**Palanan**	**2.05**	**139**	*e*P		Pb	18 23 26.4	-0.6
BALP	**Baler**	**2.92**	**170**	*e*P		Pn	18 23 37.6	+1.0

MEX 10 18:24:42.4±0.6, 16°.23N×94°.55W, h99km±16km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
							h m s	ISC
PCIG		**1.38**	**112**	*e*P		Pn	18 25 06.3	-0.8
PCIG				*e*S		Sn	18 25 23.8	-2.1
TGIG		**1.47**	**68**	*e*P		Pn	18 25 06.8	-1.5
TGIG				*e*S		Sn	18 25 27.0	-1.1
HUIG	**Huatulco**	**1.57**	**253**	*e*P		Pn	18 25 08.1	-1.3
HUIG				*e*S		Sn	18 25 28.8	-1.2
VHO	**Vista Hermosa**	**2.26**	**292**	*i* P		Pn	18 25 16.8	-1.7
VHO				*i* S		Sn	18 25 44.9	-1.3
CCIG	**Comitan**	**2.32**	**88**	*i* P		Pn	18 25 18.3	-1.0
CCIG				*i* S		Sn	18 25 45.4	-2.2

*ISK **10** 18:41:34.8, 37°.86N×29°.08E, h17km, MD2.5*

*CSEM **10** 18:41:35.4±0.2, 37°.86N×29°.11E, h12km, MD2.5, Error ellipse: s-maj=5.1km s-min=2.9km az=123.0*

*DDA **10** 18:41:35.7, 37°.89N×29°.09E, h7km, MD3.0*

*ISCJB **10** 18:41:35.7±0.8, 37°.88N±0°.04×29°.10E±0°.07, h12km±7km, Error ellipse: s-maj=10.3km s-min=5.2km az=28.6*

ISC 10 18:41:35.7±1.0, 37°.88N±0°.05×29°.08E±0°.05, h12km±11km, n12, σ0s23/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
							h m s	ISC
DENT	**Denizli**	**0.13**	**197**	*e*PG		**Pg**	**18 41 38.8**	**-0.3**
DENT				*e*SG		**Sg**	**18 41 41.6**	**+0.2**
DENT	**Denizli**	**0.13**	**197**	*e*Pg		**Pg**	**18 41 38.8**	**-0.3**
DENT				*e*Sg		**Sg**	**18 41 41.6**	**+0.2**
DNZL	**Cakiroluk**	**0.19**	**189**	*i* P		**Pg**	**18 41 39.9**	**-0.2**
DNZL				*i* S		**Sg**	**18 41 43.3**	**+0.2**
DNZL	**Cakiroluk**	**0.19**	**189**	*i* P		**Pg**	**18 41 39.9**	**-0.2**
DNZL				*i* S		**Sg**	**18 41 43.3**	**+0.2**
KHL	**Karahalli**	**0.56**	**38**	*e*PG		**Pg**	**18 41 46.8**	**+0.1**
KHL				*e*SG		**Sb**	**18 41 55.3**	**-0.3**
KHL	**Karahalli**	**0.56**	**38**	*e*Pg		**Pg**	**18 41 46.8**	**+0.1**
KHL				*e*Sg		**Sb**	**18 41 55.3**	**-0.3**
KHAL	**Karahalli**	**0.58**	**33**	*i* P		**Pg**	**18 41 47.0**	**-0.2**
KHAL	**Karahalli**	**0.58**	**33**	*i* P		**Pg**	**18 41 47.0**	**-0.2**
KULA	**Kula-Manisa**	**0.71**	**332**	*e*PG		**Pg**	**18 41 49.4**	**-0.2**
KULA				*e*SG		**Sb**	**18 42 00.3**	**+0.3**
KULA	**Kula-Manisa**	**0.71**	**332**	*e*Pg		**Pg**	**18 41 49.4**	**-0.2**
KULA				*e*Sg		**Sb**	**18 42 00.3**	**+0.3**
AYDN	**Tasoluk**	**0.98**	**257**	*i* P		**Pb**	**18 41 54.8**	**+0.1**
AYDN				*i* S		**Sg**	**18 42 07.3**	**-0.1**
AYDN	**Tasoluk**	**0.98**	**257**	*i* P		**Pb**	**18 41 54.8**	**+0.1**
AYDN				*i* S		**Sg**	**18 42 07.3**	**-0.1**

*NEIC **10** 18:47:52.2±0.4, 1°.03N×125°.90E, h10km, mb4.6/3, Error ellipse: s-maj=13.5km s-min=6.9km az=80.0*

*ISCJB **10** 18:47:56.3±0.3, 1°.04N±0°.03×126°.12E±0°.04, h44km, mb4.3/16, Error ellipse: s-maj=6.1km s-min=4.9km az=160.4*

*DJA **10** 18:47:57.8±0.9, 1°.N±4°.×12°.6E±°., h22km±13km, M4.5/9, mb4.6/8, mB5.1/4, MLv4.5/9, Mw(mB)4.5/4*

*IDC **10** 18:47:58.0±2.8, 0°.93N×125°.99E, h51km±26km, mb3.9/12, mb1 4.0/14, mb1mx3.9/25, mbtmp3.9/14, ML3.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/33, Error ellipse: s-maj=25.8km s-min=9.9km az=80.0*

*AUST **10** 18:48:08.1, 0°.00N×126°.00E, h60km*

ISC 10 18:47:57.4±0.5, 1°.04N±0°.05×126°.11E±0°.06, h44km, n66, σ1s72/66, mb4.3/16, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time	Res
							h m s	ISC
TNTI	**Ternate**	**1.28**	**102**	P		**Pn**	**18 48 19.7**	**+0.9**
MNI	**Manado**	**1.34**	**288**	P		**Pn**	**18 48 20.4**	**+0.8**
GAMI	**Galela, Maluku**	**1.85**	**64**	P		**Pn**	**18 48 27.6**	**+0.9**
LBMI	**Labuha**	**2.16**	**140**	P		**Pn**	**18 48 32.1**	**+1.1**
KMSI	**Cibinong**	**2.18**	**258**	P		**Pn**	**18 48 32.3**	**+1.1**
SGSI	**Sangihe**	**2.70**	**348**	P		**Pn**	**18 48 40.9**	**+2.6**
LUWI	**Luwuk**	**3.93**	**238**	P		**Pn**	**18 48 57.8**	**+2.6**
LUWI	**Luwuk**	**3.93**	**238**	P		**Pn**	**18 48 57.4**	**+2.2**
	baz=3.4,SNR=34							
MRSI	**Marisa**	**4.21**	**262**	P		**Pn**	**18 49 01.8**	**+2.7**
SWI	**Sorong**	**5.48**	**110**	P		**Pn**	**18 49 17.4**	**+0.9**
	15nm,0.8s,0.1nm							
SKSI	**Soroako, Sulaw**	**5.95**	**233**	P		**Pn**	**18 49 23.5**	**+0.5**
	83nm,0.7s,833nm							
CTBH	**Cotabato--PC H**	**6.42**	**343**	⇓*i* P		**Pn**	**18 49 32.3**	**+2.9**
FAKI	**Fak Fak**	**7.28**	**123**	P		Pn	18 49 47.2	+5.9
	baz=6.9,SNR=4.6							
PAGZ	**Pagadian**	**7.29**	**338**	*e*P		**Pn**	**18 49 43.2**	**+1.8**
PAGZ				*e*S		Px	18 49 47.0	
BBSI	**Bau Bau**	**7.38**	**209**	P		**Pn**	**18 49 45.7**	**+3.0**
	79nm,0.9s,818nm							
TTSI	**Tana Toraja**	**7.48**	**237**	P		**Pn**	**18 49 44.0**	**-0.1**
	63nm,0.8s,837nm							
IPIL	**Ipil**	**7.58**	**332**	*e*P		**Pn**	**18 49 47.4**	**+2.0**
IPIL				*e*S		Px	18 49 52.8	
MYLDM	**Lahad Datu**	**8.64**	**299**	P		**Pn**	**18 50 01.6**	**+1.6**
	36nm,1.2s							
BKSI	**Bulukumba**	**8.70**	**223**	P		**Pn**	**18 50 02.9**	**+2.2**
	23nm,0.8s							
KAPI	**Kappang**	**8.75**	**227**	*e*Pn		Pn	18 49 56.4	-5.0
	16nm,0.8s							
KAPI				P			18 49 59.4	
KAPI	**Kappang**	**8.75**	**227**	P		**Pn**	**18 50 03.1**	**+1.7**
KAPI	**Kappang**	**8.75**	**227**	P		**Pn**	**18 49 59.4**	**-1.9**
	0.9nm,0.3s,baz=108,slow=17,SNR=3.0							
KAPI				LR		LR	18 53 31.5	
	comp=Z,89nm,22.0s,baz=56,slow=39							
MTN	**Manton Dam**	**14.66**	**160**	S		Sn	18 53 40.7	-23
	baz=14,SNR=3.8							
KDU	**Kakadu**	**15.02**	**155**	P		**Pn**	**18 51 27.6**	**+0.7**
	baz=14,SNR=6.3							
KSM	**Kuching**	**15.81**	**272**	P		**P**	**18 51 43.6**	**+3.3**
	baz=16,SNR=3.3							
KNRA	**Kununurra**	**16.81**	**171**	P		**P**	**18 51 50.6**	**-0.7**
	baz=16,SNR=4.6							
FITZ	**Fitzroy Crossi**	**19.02**	**181**	P		**P**	**18 52 14.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**19.02**	**181**	P		**P**	**18 52 14.5**	**-1.3**
	0.3nm,0.3s,baz=5.3,slow=7.6,SNR=11							
FITZ	**Fitzroy Crossi**	**19.02**	**181**	P		**P**	**18 52 14.8**	**-0.9**
	baz=18,SNR=6.3							
WRAB	**Tennant Creek**	**22.35**	**159**	*e*P		**P**	**18 52 51.0**	**-0.7**
	15nm,0.8s							
WRA	**Warramunga Arr**	**22.35**	**159**	P		**P**	**18 52 50.7**	**-1.1**
WRA				S		**S**	**18 56 50.2**	**-4.7**
WRA	**Warramunga Arr**	**22.35**	**159**	P		**P**	**18 52 50.7**	**-1.1**
	4.1nm,0.4s,baz=338,slow=11,SNR=89							
WRA				S		**S**	**18 56 50.2**	**-4.7**
	0.8nm,1.1s,baz=331,slow=21,SNR=3.0							
TPUB	**Ta-pu**	**22.77**	**347**	*e*P		**P**	**18 52 53.5**	**-2.6**
	92nm,0.2s							
AS31	**Alice Springs**	**25.69**	**163**	*e*P		**P**	**18 53 22.1**	**-1.5**
ASAR	**Alice Springs**	**25.70**	**163**	P		**P**	**18 53 23.8**	**+0.1**
ASAR				S		**S**	**18 57 50.5**	**+1.1**
ASAR	**Alice Springs**	**25.70**	**163**	P		**P**	**18 53 23.8**	**+0.1**
	4.8nm,0.4s,baz=345,slow=11,SNR=134							
ASAR				S		**S**	**18 57 50.5**	**+1.1**
	0.4nm,1.0s,baz=346,slow=21,SNR=2.9							
PSI	**Prapat**	**27.23**	**274**	P		**P**	**18 53 36.1**	**-1.5**
PSI	**Prapat**	**27.23**	**274**	P		**P**	**18 53 36.1**	**-1.5**
	3.5nm,0.5s,baz=72,slow=6.5,SNR=4.6							
MEEK	**Meekatharra**	**28.45**	**194**	P		P	18 53 52.1	+3.8
	baz=28,SNR=3.1							
FORT	**Forrest**	**31.69**	**177**	P		**P**	**18 54 17.1**	**+0.2**
	baz=31,SNR=7.7							
CHTO	**Chiang Mai**	**31.97**	**305**	*e*P		**P**	**18 54 17.0**	**-2.6**
BBOO	**Buckleboo**	**34.95**	**165**	P		**P**	**18 54 46.7**	**+1.4**
	baz=34,SNR=5.4							
STKA	**Stephens Creek**	**35.87**	**157**	P		**P**	**18 54 53.4**	**+0.2**
STKA	**Stephens Creek**	**35.87**	**157**	P		**P**	**18 54 53.4**	**+0.2**
	0.9nm,0.4s,baz=329,slow=8.2,SNR=14							
STKA	**Stephens Creek**	**35.87**	**157**	P		**P**	**18 54 53.5**	**+0.2**
	baz=35,SNR=7.0							
KSAR	**Wonju Array Be**	**36.27**	**2**	P		**P**	**18 54 57.4**	**+0.9**
KSRS	**Korea Array**	**36.28**	**2**	P		**P**	**18 54 57.4**	**+0.8**
	1.5nm,0.6s,baz=181,slow=10,SNR=9.3							
MJAR	**Matsushiro Arr**	**37.06**	**16**	P		**P**	**18 55 03.6**	**+0.2**
MJAR	**Matsushiro Arr**	**37.06**	**16**	P		**P**	**18 55 03.6**	**+0.2**
	1.6nm,0.7s,baz=

STKA	**Stephens Creek**	**25.54**	**192**	P		**P**	**19 18 18.7**	**0.0**
	1.7nm,0.5s,baz=15,slow=11,SNR=9.3							
STKA	**Stephens Creek**	**25.54**	**192**	P		**P**	**19 18 19.2**	**+0.5**
	baz=27,SNR=7.1							
MEEK	**Meekatharra**	**33.87**	**231**	P		**P**	**19 19 32.8**	**+0.2**
	baz=35,SNR=5.7							
CMAR	**Chiang Mai Arr**	**54.14**	**298**	P		**P**	**19 22 15.1**	**+0.1**
	0.6nm,0.8s,baz=132,slow=6.5,SNR=3.8							
MKAR	**Makanchi Array**	**78.49**	**320**	P		**P**	**19 24 50.5**	**+0.3**
	0.3nm,0.6s,baz=113,slow=5.3,SNR=5.0							
TORD	**Torodi Ar. Bea**	**145.84**	**283**	PKPbc		**PKPab**	**19 32 29.0**	**-0.5**
	0.3nm,0.6s,baz=64,slow=3.9,SNR=6.4							

IDC 10 19:13:10.5±1.5, 17°80S×178°54W, h566km±19km, mb3.5/14, mb1 3.7/15, mb1mx3.5/25, mbtmp3.5/15, 1C, Error ellipse: s-maj=49.1km s-min=9.9km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.57**	**60**	P	P	19 15 05.0	+0.3
	4.8nm,0.3s,baz=207,slow=9.1,SNR=4.9						
AFI				S	S	19 16 38.2	0.0
	4.3nm,0.3s,baz=180,slow=20,SNR=4.2						
CTA	**Charters Tower**	**33.34**	**260**	P	P	19 19 03.0	+0.3
	5.4nm,0.6s,baz=94,slow=12,SNR=5.1						
STKA	**Stephens Creek**	**38.57**	**241**	P	P	19 19 45.4	-0.3
	7.0nm,0.9s,baz=78,slow=8.8,SNR=9.9						
WRA	**Warramunga Arr**	**44.53**	**259**	P	P	19 20 32.2	-0.6
	3.9nm,0.7s,baz=96,slow=7.0,SNR=24						
ASAR	**Alice Springs**	**44.70**	**254**	P	P	19 20 34.0	-0.1
	18nm,0.8s,baz=87,slow=8.7,SNR=103						
FITZ	**Fitzroy Crossi**	**52.92**	**260**	P	P	19 21 34.8	-0.1
	3.9nm,1.0s,baz=90,slow=14,SNR=3.7						
PETK	**Petropavlovsk-**	**73.54**	**345**	P	P	19 23 47.2	+1.2
	1.9nm,0.9s,baz=130,slow=7.8,SNR=4.6						
YBH	**Yreka Blue Hor**	**78.52**	**39**	P	P	19 24 13.3	-0.6
	3.6nm,0.8s,baz=238,slow=2.4,SNR=9.6						
NVAR	**Mina Array Bea**	**79.43**	**44**	P	P	19 24 19.5	+0.5
	2.4nm,0.7s,baz=224,slow=8.5,SNR=21						
ELK	**Elko**	**82.66**	**43**	P	P	19 24 35.6	+0.1
	1.8nm,0.8s,baz=228,slow=5.1,SNR=6.5						
ILAR	**Eielson Array**	**85.81**	**13**	P	P	19 24 49.1	-1.0
	1.2nm,0.7s,baz=226,slow=5.2,SNR=18						
TXAR	**Lajitas Array**	**86.04**	**58**	P	P	19 24 53.0	+0.8
	3.1nm,0.8s,baz=220,slow=6.0,SNR=45						
PDAR	**Pinedale Array**	**87.36**	**43**	P	P	19 24 58.0	-0.2
	1.7nm,0.6s,baz=225,slow=3.4,SNR=17						
INK	**Inuvik**	**91.81**	**15**	P	P	19 25 16.9	-1.0
	2.0nm,0.9s,baz=225,slow=4.4,SNR=8.0						
YKA	**Yellowknife Ar**	**94.28**	**25**	P	P	19 25 28.6	-0.7
	0.3nm,0.6s,baz=248,slow=4.6,SNR=5.7						
CLL	**Collm**	**145.33**	**347**	⇑*i*PKP	PKPbc	19 31 44.9	-0.4
	comp=Z,6.0nm,0.8s						
BRG	**Berggiesshubel**	**145.53**	**346**	*e*P	PKPbc	19 31 45.7	-0.2
	comp=Z,2.5nm,0.7s						
GERES	**GERESS Array B**	**147.47**	**345**	PKPbc	PKPbc	19 31 51.0	-0.5
	comp=Z,1.4nm,0.7s,baz=24,slow=2.8,SNR=13						

WEL 10 19:31:47.8±0.2, 37°08S×177°06E, h141km±4km, ML3.6/11, 2C-1D, Error ellipse: s-maj=4.1km s-min=3.1km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.18**	**178**	PN	Pn	19 32 13.4	+0.1
URZ				SN	Sn	19 32 33.2	+0.3
MWZ	**Matawai**	**1.31**	**164**	⇓PN	Pn	19 32 14.6	0.0
MWZ				SN	Sn	19 32 35.5	+0.2
PUZ	**Puketiti**	**1.37**	**137**	⇑PN	Pn	19 32 15.2	-0.1
PUZ				SN	Sn	19 32 35.6	-0.8
CNGZ	**Carnagh Statio**	**1.67**	**147**	PN	Pn	19 32 18.7	+0.2
RAHZ	**Arahi**	**1.83**	**179**	*e*PN	Pn	19 32 20.1	-0.3
RAHZ				SN	Sn	19 32 44.7	-0.9
PRGZ	**Paritu Road**	**1.95**	**161**	SN	Sn	19 32 46.0	-2.0
KNZ	**Kokohu**	**2.00**	**166**	PN	Pn	19 32 21.4	-0.8
NMHZ	**Naumai**	**2.02**	**186**	PN	Pn	19 32 22.8	+0.1
BKZ	**Black Stump Fm**	**2.13**	**192**	PN	Pn	19 32 23.0	-1.0
MHGZ	**Mahia Peninsul**	**2.17**	**162**	PN	Pn	19 32 23.5	-0.9
MCHZ	**McNeill Hill**	**2.38**	**187**	PN	Pn	19 32 25.9	-1.0
FWVZ	**Far West T-bar**	**2.48**	**208**	PN	Pn	19 32 27.5	-0.9
TRVZ	**Turoa**	**2.52**	**208**	PN	Pn	19 32 27.9	-1.0
WNVZ	**Wahianoa**	**2.52**	**207**	PN	Pn	19 32 28.1	-0.8
BHHZ	**Black Hill Sta**	**2.53**	**198**	PN	Pn	19 32 27.2	-1.7
MOVZ	**Moawhango**	**2.54**	**204**	PN	Pn	19 32 27.7	-1.3
KAHZ	**Kahuranaki**	**2.71**	**183**	PN	Pn	19 32 29.4	-1.7
PNHZ	**Pukenui**	**2.91**	**193**	PN	Pn	19 32 31.2	-2.5
PXZ	**Pawanui**	**2.95**	**183**	⇑PN	Pn	19 32 31.8	-2.2
WPHZ	**Waipukurau**	**3.02**	**189**	PN	Pn	19 32 32.3	-2.7
PRHZ	**Porangahau**	**3.20**	**186**	PN	Pn	19 32 34.6	-2.7
DVHZ	**Dannevirke**	**3.29**	**192**	PN	Pn	19 32 35.1	-3.4
POWZ	**Post Office Ro**	**3.46**	**197**	PN	Pn	19 32 37.6	-3.1
BFZ	**Birch Farm**	**3.65**	**190**	PN	Pn	19 32 39.5	-3.7
MRZ	**Mangatainoka R**	**3.76**	**197**	PN	Pn	19 32 40.7	-3.9
TIWZ	**Tintock**	**3.80**	**194**	PN	Pn	19 32 41.4	-3.8
HOWZ	**Holdsworth Sta**	**4.00**	**197**	PN	Pn	19 32 43.5	-4.3
OGWZ	**Otaki Gorge**	**4.01**	**201**	PN	Pn	19 32 43.9	-4.0
TMWZ	**Te Maipa**	**4.12**	**192**	PN	Pn	19 32 45.3	-4.1
KIW	**Kapiti Island**	**4.13**	**203**	PN	Pn	19 32 45.4	-4.0
CAW	**Cannon Point**	**4.31**	**200**	PN	Pn	19 32 47.2	-4.6
TCW	**Tory Channel**	**4.66**	**207**	PN	Pn	19 32 52.0	-4.4
TUWZ	**Tuamarina**	**4.97**	**208**	PN	Pn	19 32 55.5	-5.0
NNZ	**Nelson**	**5.03**	**214**	PN	Pn	19 32 56.9	-4.3
QRZ	**Quartz Range**	**5.14**	**222**	PN	Pn	19 32 58.0	-4.9
THZ	**Tophouse**	**5.68**	**213**	*e*PN	Pn	19 33 04.9	-5.2
KHZ	**Kahutara**	**5.98**	**206**	PN	Pn	19 33 08.3	-5.6
LTZ	**Lake Taylor**	**6.78**	**211**	PN	Pn	19 33 18.5	-6.3
MQZ	**McQueen's Vall**	**7.42**	**206**	SN	Sn	19 34 43.3	-13

*ROM **10** 19:33:43.1±0.1, 43°77N×13°17E, h35km±1km, MI2.8/11, Error ellipse: s-maj=2.4km s-min=1.4km az=41.0*
*CSEM **10** 19:33:43.2±0.1, 43°77N×13°22E, h35km±1km, ML3.5/11, Error ellipse: s-maj=3.5km s-min=2.6km az=63.0*
*VIE **10** 19:33:47.3±0.6, 44°27N×13°27E, h10km, mb2.2/5, ML2.8/8, Error ellipse: s-maj=7.1km s-min=3.5km az=39.0 75 km ENE of San Marino*

ISC 10 19:33:41.6±1.1, 43°82N±0°02×13°28E±0°02, h17km±8km, n83, σ1§01/119, 18C-11D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SENI	**Senigallia**	**0.12**	**196**	Pg	Pb	19 33 49.4	+4.0
SENI				Sg	Sb	19 33 54.4	+6.5
	198nm,0.2s						
SENI	**Senigallia**	**0.12**	**196**	Pg	Pb	19 33 49.4	+4.0
SENI				Sg	Sb	19 33 54.4	+6.5
	198nm,0.2s						
PESA	**Pesaro**	**0.34**	**291**	Pg	**Pn**	**19 33 51.0**	**-0.7**
PESA				Sg	**Sn**	**19 33 57.6**	**-0.6**
	1µm,0.2s						
PESA	**Pesaro**	**0.34**	**291**	Pg	**Pn**	**19 33 51.0**	**-0.7**
PESA				Sg	**Sn**	**19 33 57.6**	**-0.6**
	1µm,0.2s						
AOI	**Ancona**	**0.36**	**139**	Pg	**Pn**	**19 33 52.4**	**+0.4**
AOI				Sg	**Sn**	**19 33 59.2**	**+0.5**
	293nm,0.2s						
AOI	**Ancona**	**0.36**	**139**	Pg	**Pn**	**19 33 52.4**	**+0.4**
AOI				Sg	**Sn**	**19 33 59.2**	**+0.5**
	293nm,0.2s						
FSSB	**Fossombrone**	**0.39**	**251**	*i*Pg	**Pb**	**19 33 50.7**	**+0.7**
FSSB				Sg	**Sb**	**19 33 56.9**	**+1.3**
	2µm,0.2s						
FSSB	**Fossombrone**	**0.39**	**251**	⇑*i*Pg	**Pb**	**19 33 50.7**	**+0.7**
FSSB				Sg	**Sb**	**19 33 56.9**	**+1.3**
	2µm,0.2s						
ARVD	**Arcevia**	**0.41**	**217**	⇑*i*Pg	**Pb**	**19 33 51.0**	**+0.7**
ARVD				Sg	**Sb**	**19 33 57.3**	**+1.1**
ARVD	**Arcevia**	**0.41**	**217**	⇑*i*Pg	**Pb**	**19 33 51.0**	**+0.7**
ARVD				Sg	**Sb**	**19 33 57.3**	**+1.1**
CING	**Cingoli**	**0.45**	**188**	⇓*i*Pg	**Pb**	**19 33 52.2**	**+1.1**
CING				Sg	**Sb**	**19 33 59.5**	**+2.0**
	265nm,0.5s						
CING	**Cingoli**	**0.45**	**188**	⇓*i*Pg	**Pb**	**19 33 52.2**	**+1.1**
CING				Sg	**Sb**	**19 33 59.5**	**+2.0**
	265nm,0.5s						
RSM	**Repubblica di**	**0.61**	**281**	⇓*i*Pg	**Pb**	**19 33 54.7**	**+0.9**
RSM				Sg	**Sn**	**19 34 04.1**	**-0.9**
	143nm,0.6s						
RSM	**Repubblica di**	**0.61**	**281**	⇓*i*Pg	**Pb**	**19 33 54.7**	**+0.9**
RSM				Sg	**Sn**	**19 34 04.1**	**-0.9**
	143nm,0.6s						

PIEI	**Pieia**	**0.61**	**242**	⇑*i*Pg		**Pg**	**19 33 53.7**	**+0.1**
PIEI				Sg		**Sg**	**19 34 02.0**	**+0.2**
	263nm,0.3s							
PIEI	**Pieia**	**0.61**	**242**	⇑*i*Pg		**Pg**	**19 33 53.7**	**+0.1**
PIEI				Sg		**Sg**	**19 34 02.0**	**+0.2**
	263nm,0.3s							
SNTG	**Esanatoglia**	**0.62**	**204**	⇑*i*Pg		**Pb**	**19 33 54.3**	**+0.4**
	91nm,0.2s							
SNTG	**Esanatoglia**	**0.62**	**204**	⇑*i*Pg		**Pb**	**19 33 54.3**	**+0.4**
	91nm,0.2s							
BLLA	**Bellaria**	**0.67**	**299**	Pg		**Pn**	**19 33 56.5**	**+0.3**
BLLA	**Bellaria**	**0.67**	**299**	Pg		**Pn**	**19 33 56.5**	**+0.3**
PARC	**Parchiule**	**0.77**	**257**	⇑*i*Pg		**Pg**	**19 33 56.3**	**-0.4**
PARC				Sg		**Sg**	**19 34 07.0**	**+0.1**
	236nm,0.4s							
PARC	**Parchiule**	**0.77**	**257**	⇑*i*Pg		**Pg**	**19 33 56.3**	**-0.4**
PARC				Sg		**Sg**	**19 34 07.0**	**+0.1**
	236nm,0.4s							
MURB	**Monte Urbino**	**0.78**	**225**	⇑*i*Pg		**Pg**	**19 33 56.6**	**-0.3**
MURB				Sg		**Sb**	**19 34 07.6**	**+0.5**
	762nm,0.3s							
MURB	**Monte Urbino**	**0.78**	**225**	⇑*i*Pg		**Pg**	**19 33 56.6**	**-0.3**
MURB				Sg		**Sb**	**19 34 07.6**	**+0.5**
	762nm,0.3s							
FDMO	**Fiordimonte**	**0.80**	**190**	Pg		**Pb**	**19 33 57.3**	**+0.3**
FDMO				Sg		**Sb**	**19 34 08.6**	**+1.1**
	312nm,0.2s							
FDMO	**Fiordimonte**	**0.80**	**190**	Pg		**Pb**	**19 33 57.3**	**+0.3**
FDMO				Sg		**Sb**	**19 34 08.6**	**+1.1**
	312nm,0.2s							
BADI	**Badiali**	**0.81**	**248**	⇑*i*Pg		**Pg**	**19 33 57.0**	**-0.4**
BADI				Sg		**Sb**	**19 34 08.3**	**+0.4**
	217nm,0.2s							
BADI	**Badiali**	**0.81**	**248**	⇑*i*Pg		**Pg**	**19 33 57.0**	**-0.4**
BADI				Sg		**Sb**	**19 34 08.3**	**+0.4**
	217nm,0.2s							
CESI	**CESI - Serrava**	**0.86**	**199**	Pg		**Pg**	**19 33 58.0**	**-0.3**
CESI				Sg		**Sb**	**19 34 10.0**	**+0.7**
CESI	**CESI - Serrava**	**0.86**	**199**	Pg		**Pg**	**19 33 58.0**	**-0.3**
CESI				Sg		**Sb**	**19 34 10.0**	**+0.7**
GUMA	**Gualdo di Mace**	**0.90**	**148**	Pg		**Pb**	**19 33 57.1**	**-1.6**
GUMA				Sg		**Sg**	**19 34 08.8**	**-2.0**
	461nm,0.3s							
GUMA	**Gualdo di Mace**	**0.90**	**148**	Pg		**Pb**	**19 33 57.1**	**-1.6**
GUMA				Sg		**Sg**	**19 34 08.8**	**-2.0**
	461nm,0.3s							
OFFI	**Offida**	**0.93**	**161**	Pg		**Pn**	**19 34 00.7**	**+0.8**
OFFI	**Offida**	**0.93**	**161**	Pg		**Pn**	**19 34 00.7**	**+0.8**
CRE	**Caprese Michel**	**0.98**	**259**	Pg		**Pb**	**19 34 00.3**	**+0.1**
CRE	**Caprese Michel**	**0.98**	**259**	Pg		**Pb**	**19 34 00.3**	**+0.1**
NRCA	**Norcia**	**0.99**	**187**	⇓*i*Pg		**Pb**	**19 34 00.3**	**-0.1**
NRCA				Sg		**Sg**	**19 34 14.3**	**+0.4**
NRCA	**Norcia**	**0.99**	**187**	⇓*i*Pg		**Pb**	**19 34 00.3**	**-0.1**
NRCA				Sg		**Sg**	**19 34 14.3**	**+0.4**
SFI	**Santa Sofia**	**1.04**	**275**	Pg		**Pb**	**19 34 01.1**	**0.0**
SFI	**Santa Sofia**	**1.04**	**275**	Pg		**Pb**	**19 34 01.1**	**0.0**
CAFI	**Castiglion Fio**	**1.07**	**243**	Pg		**Pb**	**19 34 01.5**	**-0.2**
CAFI	**Castiglion Fio**	**1.07**	**243**	Pg		**Pb**	**19 34 01.5**	**-0.2**
ASQU	**Asqua**	**1.08**	**269**	Pg		**Pb**	**19 34 01.7**	**-0.1**
ASQU	**Asqua**	**1.08**	**269**	Pg		**Pb**	**19 34 01.7**	**-0.1**
TERO	**Teramo**	**1.22**	**169**	⇓*i*Pg		**Pn**	**19 34 03.5**	**-0.4**
TERO	**Teramo**	**1.22**	**169**	⇓*i*Pg		**Pn**	**19 34 03.5**	**-0.4**
LNSS	**Leonessa**	**1.23**	**188**	Pg		**Pn**	**19 34 04.1**	**0.0**
LNSS	**Leonessa**	**1.23**	**188**	Pg		**Pn**	**19 34 04.1**	**0.0**
MGAB	**Montegabbione**	**1.25**	**224**	Pg		**Pn**	**19 34 03.7**	**-0.5**
MGAB	**Montegabbione**	**1.25**	**224**	Pg		**Pn**	**19 34 03.7**	**-0.5**
CAMP	**Campotosto**	**1.29**	**176**	Pg		**Pn**	**19 34 04.2**	**-0.7**
CAMP	**Campotosto**	**1.29**	**176**	Pg		**Pn**	**19 34 04.2**	**-0.7**
CMPO	**Campotto Po**	**1.30**	**306**	Pg		**Pb**	**19 34 05.8**	**+0.2**
CMPO	**Campotto Po**	**1.30**	**306**	Pg		**Pb**	**19 34 05.8**	**+0.2**
SACS	**San Casciano d**	**1.39**	**226**	Pg		**Pn**	**19 34 05.3**	**-1.0**
VCEL	**Villa Celiera**	**1.48**	**164**	Pg		**Pn**	**19 34 07.3**	**-0.3**
VCEL	**Villa Celiera**	**1.48**	**164**	Pg		**Pn**	**19 34 07.3**	**-0.3**
CSNT	**Castellina Chi**	**1.48**	**257**	Pg		**Pn**	**19 34 07.6**	**+0.1**
CSNT	**Castellina Chi**	**1.48**	**257**	Pg		**Pn**	**19 34 07.6**	**+0.1**
MNS	**Montasola**	**1.50**	**197**	Pg		**Pn**	**19 34 07.3**	**-0.4**
MNS	**Montasola**	**1.50**	**197**	Pg		**Pn**	**19 34 07.3**	**-0.4**
FIAM	**Fiamignano**	**1.56**	**184**	Pg		**Pn**	**19 34 09.3**	**+0.7**
FIAM	**Fiamignano**	**1.56**	**184**	Pg		**Pn**	**19 34 09.3**	**+0.7**
SKDS	**Skadanscina**	**1.80**	**17**	*i* Pn		**Pn**	**19 34 12.3**	**+0.5**
SKDS	**Skadanscina**	**1.80**	**17**	*i* Pn		**Pn**	**19 34 12.4**	**+0.5**
LPEL	**Lama dei Pelig**	**1.89**	**159**	Pg		**Pn**	**19 34 13.1**	**-0.1**
LPEL	**Lama dei Pelig**	**1.89**	**159**	Pg		**Pn**	**19 34 13.1**	**-0.1**
MAIM	**Mastiano**	**2.02**	**274**	P		**Pn**	**19 34 14.3**	**-0.5**
VOY	**Vojsko**	**2.25**	**11**	*e*Pn		**Pn**	**19 34 19.3**	**+1.2**
VOY				*e*Sn		**Sn**	**19 34 46.1**	**+0.5**
VOY	**Vojsko**	**2.25**	**11**	*e*Pn		**Pn**	**19 34 19.3**	**+1.2**
VOY				*e*Sn		**Sn**	**19 34 46.1**	**+0.5**
ABTA	**Abfaltersbach**	**2.98**	**350**	⇓*i*Pg		**Pn**	**19 34 29.5**	**+1.4**
ABTA				⇑*i*Sn		**Sn**	**19 34 59.9**	**-3.5**
ABTA	**Abfaltersbach**	**2.98**	**350**	Pn		**Pn**	**19 34 29.5**	**+1.4**
ABTA				Sn		**Sn**	**19 34 59.9**	**-3.5**
STON	**Ston**	**3.36**	**105**	*e*Pn		**Pn**	**19 34 34.8**	**+1.6**
STON				*e*Sn		**Sn**	**19 35 11.6**	**-1.1**
STON	**Ston**	**3.36**	**105**	*e*Pn		**Pn**	**19 34 34.8**	**+1.6**
STON				*e*Sn		**Sn**	**19 35 11.6**	**-1.1**
PCP	**Piancastagn**	**3.48**	**284**	P		**Pn**	**19 34 36.7**	**+1.7**
WTTA	**Wattenberg**	**3.63**	**342**	⇓*i*Pn		**Pn**	**19 34 38.1**	**+0.9**
WTTA				⇑*i*Sn		**Sn**	**19 35 17.5**	**-2.2**
WTTA	**Wattenberg**	**3.63**	**342**	Pn		**Pn**	**19 34 38.1**	**+0.9**
WTTA				Sn		**Sn**	**19 35 17.5**	**-2.2**
WATA	**Walderalm**	**3.71**	**342**	⇑*i*Pn		**Pn**	**19 34 38.8**	**+0.6**
WATA	**Walderalm**	**3.71**	**342**	Pn		**Pn**	**19 34 38.8**	**+0.6**
MOTA	**Moosalm**	**3.84**	**337**	⇓*i*Pn		**Pn**	**19 34 41.2**	**+1.2**
MOTA				⇑*i*Sn		**Sn**	**19 35 22.9**	**-1.9**
MOTA	**Moosalm**	**3.84**	**337**	Pn		**Pn**	**19 34 41.2**	**+1.2**
MOTA				Sn		**Sn**	**19 35 22.9**	**-1.9**
TRAV	**Traversella**	**4.29**	**295**	P		Pn	19 34 42.7	-3.5
KHC	**Kasperske Hory**	**5.32**	**2**	*e*PN		**Pn**	**19 35 01.5**	**+1.3**
KHC				*e*SN		**Sn**	**19 36 00.0**	**-1.0**

KRSC 10 20:05:11.7±1.6, 60°55N×166°89E, h12km±11km, ML4.4, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TILK	**Tilichiki**	**0.38**	**255**	*i* P	Pg	20 05 19.6	+0.3
TILK				*i* S	Sb	20 05 25.7	-0.6
PALN	**Palana**	**3.79**	**250**	P	Pn	20 06 11.6	+1.8
PALN				*i* S	Sn	20 06 54.6	+0.3
KBTR	**Krutoberegovo**	**4.85**	**208**	*e*P	Pn	20 06 25.9	+1.5
MKZ	**Mys Kozlova**	**6.62**	**207**	P	Pn	20 06 49.7	+1.1
BILL	**Bilibino**	**7.53**	**358**	P	Pn	20 07 02.1	+1.0

IDC 10 20:14:28.8±2.1, 5°24S×126°38E, h0km, mb3.1/1, mb1 3.3/3, mb1mx3.2/22, mbtmp3.1/3, ML3.0/2, Error ellipse: s-maj=233.7km s-min=30.7km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**16.54**	**153**	Pn	Pn	20 18 23.7	+1.3
	0.1nm,0.3s,baz=332,slow=9.3,SNR=5.5						
ASAR	**Alice Springs**	**19.70**	**159**	P	P	20 18 59.4	-0.6
	0.1nm,0.3s,baz=338,slow=10,SNR=7.0						
MKAR	**Makanchi Array**	**64.81**	**328**	P	P	20 25 09.6	0.0
	0.2nm,0.7s,baz=126,slow=8.4,SNR=3.4						

IDC 10 20:20:55.9±3.0, 9°11N×126°48E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/26, mbtmp3.5/5, Error ellipse: s-maj=277.7km s-min=22.0km az=67.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**2.65**	**283**	*e*P	Pg	20 21 47.1	+0.3
LLP	**Lapu-Lapu**	**2.75**	**296**	*e*P	Pb	20 21 47.1	+1.0
LLP				*e*S	Sb	20 22 22.3	+1.9
WRA	**Warramunga Arr**	**29.89**	**165**	P	P	20 27 05.3	-0.2
	0.2nm,0.5s,baz=345,slow=9.7,SNR=3.5						
ASAR	**Alice Springs**	**33.37**	**168**	P	P	20 27 36.3	+0.1
	0.2nm,0.4s,baz=354,slow=7.0,SNR=5.0						
MKAR	**Makanchi Array**	**53.07**	**323**	P	P	20 30 15.3	+0.2
	0.7nm,0.8s,baz=118,slow=7.0,SNR=6.5						
KURBB	**Kurchatov Arra**	**57.14**	**326**	P	P	20 30 44.0	-0.3
	0.6nm,0.6s,baz=123,slow=7.1,SNR=5.8						
BVAR	**Borovoye Array**	**62.73**	**326**	P	P	20 31 22.7	-0.1
	0.4nm,0.6s,baz=130,slow=6.4,SNR=3.6						

IDC 10 20:24:35.9±2.3, 1°37N×126°65E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/21, mbtmp3.1/3, Error ellipse: s-maj=180.9km s-min=28.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.48**	**161**	P	P	20 29 36.6	-0.5
	0.3nm,0.6s,baz=339,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**25.87**	**165**	P	P	20 30 09.9	+0.4
	0.3nm,0.7s,baz=344,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**59.44**	**326**	P	P	20 34 40.5	-0.1
	0.1nm,0.4s,baz=119,slow=7.8,SNR=3.4						

*IDC **10** 20:27:51.7±1.2, 9°21N×126°69E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.6/25, mbtmp3.6/6, Error ellipse: s-maj=74.8km s-min=22.0km az=74.0*
*ISCJB **10** 20:27:55.4±0.9, 9°25N±0°09×126°95E±0°08, h38km, mb3.6/6, Error ellipse: s-maj=15.0km s-min=8.0km az=37.9*
*MAN **10** 20:28:08, 9°14N×125°83E, h21km, mb4.6, ML3.5, MS3.5*

ISC 10 20:27:57.5±1.0, 9°24N±0°09×126°9E±0°1, h38km, n14, σ1§10/15, mb3.6/6, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.26**	**258**	*e*P	**Pn**	**20 28 15.9**	**-2.7**
BUTP				*e*S	Sn	20 28 26.9	-7.4
MSLP	**Maasin**	**2.17**	**294**	*e*P	**Pn**	**20 28 31.8**	**+0.7**
BUKP	**Musuan**	**2.24**	**233**	*e*P	**Pn**	**20 28 32.6**	**+0.5**
DAV	**Davao City (W)**	**2.50**	**211**	Pn	**Pn**	**20 28 36.8**	**+1.2**
	45nm,0.3s,baz=46,slow=3.9,SNR=3.1						
TBP	**Tagbilaran**	**3.00**	**279**	*e*P	**Pn**	**20 28 42.8**	**+0.3**
LLP	**Lapu-Lapu**	**3.06**	**291**	*e*P	**Pn**	**20 28 43.6**	**+0.3**
LLP				*e*S	**Sn**	**20 29 19.9**	**+1.2**
PAGZ	**Pagadian**	**3.71**	**248**	*e*P	**Pn**	**20 28 53.3**	**+1.0**
GUIM	**Jordan**	**4.44**	**288**	*e*P	**Pn**	**20 29 02.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**27.19**	**183**	P	**P**	**20 33 37.3**	**-0.5**
	2.5nm,0.7s,baz=13,slow=10,SNR=5.4						
WRA	**Warramunga Arr**	**29.91**	**166**	P	**P**	**20 34 01.0**	**-1.0**
	0.2nm,0.5s,baz=346,slow=9.0,SNR=6.1						
ASAR	**Alice Springs**	**33.42**	**168**	P	**P**	**20 34 32.4**	**-0.4**
	0.3nm,0.4s,baz=354,slow=7.0,SNR=15						
STKA	**Stephens Creek**	**43.24**	**162**	P	**P**	**20 35 55.4**	**+0.1**
	0.3nm,0.3s,baz=348,slow=9.3,SNR=4.5						
MKAR	**Makanchi Array**	**53.20**	**323**	P	**P**	**20 37 11.1**	**-0.9**
	0.4nm,0.5s,baz=124,slow=8.3,SNR=7.1						
YKA	**Yellowknife Ar**	**94.45**	**24**	P	**P**	**20 41 14.0**	**+0.6**
	0.2nm,0.5s,baz=297,slow=4.1,SNR=4.4						

*ISCJB **10** 20:33:52.8±0.5, 27°55N±0°08×140°0E±0°1, h479km, mb3.3/10, Error ellipse: s-maj=15.1km s-min=8.9km az=155.5*
*JMA **10** 20:33:54.8±0.3, 27°80N×140°63E, h486km±4km, M3.6*
*IDC **10** 20:33:54.3±1.9, 27°63N×140°11E, h487km±21km, mb2.9/8, mb1 3.0/10, mb1mx2.8/26, mbtmp2.9/10, Error ellipse: s-maj=38.4km s-min=14.6km az=81.0*

ISC 10 20:33:53.6±0.8, 27°6N±0°1×140°2E±0°2, h479km, n20, σ1§06/23, mb3.4/10, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.87**	**104**	P

*ISK **10** 20:49:32.2,37°.89N×29°.13E,h18km,MD2.4*
*ISCJB **10** 20:49:32.2±1.8,37°.82N±0°.08×29°.16E±0°.09,h22km±13km, Error ellipse: s-maj=15.8km s-min=7.5km az=138.4*
*DDA **10** 20:49:34.2,37°.83N×29°.00E,h6km,MD2.8*
ISC 10 20:49:32.5±1.1,37°.86N±0°.04×29°.15E±0°.07,h18km±3km, n9,σ0°53/18,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.14**	**221**	*e*PG	**Pg**	**20 49 36.8**	**+0.2**
DENT				*e*SG	**Sg**	**20 49 40.0**	**+0.7**
DENT	**Denizli**	**0.14**	**221**	*e*Pg	**Pg**	**20 49 36.8**	**+0.2**
DENT				*e*Sg	**Sg**	**20 49 40.1**	**+0.7**
DNZL	**Cakiroluk**	**0.18**	**205**	*i* P	**Pb**	**20 49 37.0**	**0.0**
DNZL				*i* S	**Sg**	**20 49 40.1**	**-0.6**
DNZL	**Cakiroluk**	**0.18**	**205**	*i* P	**Pb**	**20 49 37.0**	**0.0**
DNZL				*i* S	**Sg**	**20 49 40.1**	**-0.6**
KHL	**Karahalli**	**0.55**	**32**	*e*PG	**Pb**	**20 49 43.1**	**-0.6**
KHL				*e*SG	**Sg**	**20 49 51.7**	**+0.6**
KHL	**Karahalli**	**0.55**	**32**	*e*Pg	**Pb**	**20 49 43.1**	**-0.6**
KHL				*e*Sg	**Sg**	**20 49 51.7**	**+0.6**
KULA	**Kula-Manisa**	**0.76**	**330**	*e*PG	**Pb**	**20 49 46.9**	**-0.3**
KULA				*e*SG	**Sb**	**20 49 57.5**	**+0.2**
KULA	**Kula-Manisa**	**0.76**	**330**	*e*Pg	**Pb**	**20 49 46.9**	**-0.3**
KULA				*e*Sg	**Sb**	**20 49 57.5**	**+0.2**
AYDN	**Tasoluk**	**1.02**	**259**	*i* P	**Pn**	**20 49 52.1**	**+0.1**
AYDN				*i* S	**Sb**	**20 50 04.1**	**-0.7**

IDC 10 20:52:19.8±1.6,7°.00S×130°.37E,h0km,mb3.9/2, mb1 3.8/5,mb1mx3.6/20,mbtmpg3.7/5,ML3.4/3,Error ellipse: s-maj=70.0km s-min=23.3km az=72.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.96**	**202**	Pn	Pn	20 55 12.4	+0.7
	0.2nm,0.3s,baz=26,slow=9.1,SNR=20						
FITZ				Sn	Sn	20 57 15.4	-10
	0.6nm,0.3s,baz=347,slow=14,SNR=4.9						
WRA	**Warramunga Arr**	**13.43**	**164**	Pn	Pn	20 55 29.8	-2.0
	0.2nm,0.3s,baz=346,slow=13,SNR=16						
WRA				Sn	Sn	20 57 49.0	-13
	0.6nm,0.3s,baz=331,slow=23,SNR=9.3						
ASAR	**Alice Springs**	**16.91**	**169**	Pn	Pn	20 56 18.1	0.0
	0.2nm,0.3s,baz=350,slow=9.1,SNR=19						
ASAR				Sn	Sn	20 59 15.4	-11
	0.1nm,0.3s,baz=356,slow=28,SNR=6.1						
STKA	**Stephens Creek**	**26.88**	**159**	P	P	20 58 02.7	+0.3
	0.6nm,0.3s,baz=328,slow=11,SNR=5.7						
MKAR	**Makanchi Array**	**68.43**	**327**	P	P	21 03 23.5	0.0
	0.5nm,0.4s,baz=123,slow=7.6,SNR=16						

IDC 10 21:04:22.3±3.1,4°.32S×151°.63E,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.5/19,mbtmpg3.7/3,Error ellipse: s-maj=112.1km s-min=43.7km az=122.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.91**	**226**	P	P	21 09 28.1	0.0
	1.1nm,0.4s,baz=51,slow=10.0,SNR=21						
ASAR	**Alice Springs**	**25.73**	**220**	P	P	21 09 54.1	-0.7
	0.3nm,0.3s,baz=54,slow=8.6,SNR=6.4						
FITZ	**Fitzroy Crossi**	**28.87**	**240**	P	P	21 10 23.3	+0.3
	2.1nm,0.9s,baz=52,slow=8.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	**149.05**	**288**	PKPbc	PKPbc	21 24 13.3	-0.3
	0.2nm,0.5s,baz=76,slow=1.9,SNR=6.4						

*ISK **10** 21:12:09.5,38°.32N×38°.87E,h3km,MD2.7*
*DDA **10** 21:12:10.1,38°.24N×38°.89E,h7km,MD2.8*
*CSEM **10** 21:12:10.7±0.2,38°.34N×38°.88E,h10km,MD2.8,Error ellipse: s-maj=4.8km s-min=3.5km az=167.0*
*ISCJB **10** 21:12:10.8±0.5,38°.31N±0°.03×38°.86E±0°.03,h9km±6km, Error ellipse: s-maj=5.9km s-min=4.4km az=163.6*
ISC 10 21:12:10.7±0.9,38°.33N±0°.03×38°.87E±0°.02,h15km±8km, n20,σ0°54/34,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.19**	**29**	*i* P	**Pg**	**21 12 15.8**	**+0.5**
ELZG				*i* S	**Sb**	**21 12 20.1**	**+0.4**
ELZG	**Elazig**	**0.19**	**29**	*i* P	**Pg**	**21 12 15.8**	**+0.5**
ELZG				*i* S	**Sb**	**21 12 20.1**	**+0.4**
MYA	**Malataya**	**0.35**	**270**	*e*PG	**Pg**	**21 12 17.6**	**-0.3**
MYA				*e*SG	**Sg**	**21 12 22.4**	**-0.3**
MYA	**Malataya**	**0.35**	**270**	*e*Pg	**Pg**	**21 12 17.6**	**-0.3**
MYA				*e*Sg	**Sg**	**21 12 22.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.35**	**82**	*e*PG	**Pg**	**21 12 16.7**	**-1.2**
SVRC				*e*SG	**Sg**	**21 12 22.8**	**0.0**
SVRC	**Sivrice-ELAZID**	**0.35**	**82**	*e*Pg	**Pg**	**21 12 16.7**	**-1.2**
SVRC				*e*Sg	**Sg**	**21 12 22.8**	**0.0**
PTK	**Pertek**	**0.70**	**36**	*e*PG	**Pg**	**21 12 23.6**	**-0.8**
PTK				*e*SG	**Sb**	**21 12 35.1**	**+0.9**
PTK	**Pertek**	**0.70**	**36**	*e*Pg	**Pg**	**21 12 23.6**	**-0.8**
PTK				*e*Sg	**Sb**	**21 12 35.1**	**+0.9**
AKCD	**Akcadag**	**0.74**	**268**	*i* P	**Pg**	**21 12 24.9**	**-0.3**
AKCD				*i* S	**Sb**	**21 12 35.9**	**+0.4**
AKCD	**Akcadag**	**0.74**	**268**	*i* P	**Pg**	**21 12 24.9**	**-0.3**
AKCD				*i* S	**Sb**	**21 12 35.9**	**+0.4**
URFA	**Urfa**	**0.89**	**182**	*e*PG	**Pb**	**21 12 27.6**	**-0.2**
URFA				*e*SG	**Sg**	**21 12 40.2**	**+0.7**
URFA	**Urfa**	**0.89**	**182**	*e*Pg	**Pb**	**21 12 27.7**	**-0.2**
URFA				*e*Sg	**Sg**	**21 12 40.2**	**+0.7**
DIYA	**Diyarbakir**	**1.07**	**112**	*i* P	**Pg**	**21 12 31.6**	**+0.3**
DIYA				*i* S	**Sg**	**21 12 45.5**	**+0.2**
DIYA	**Diyarbakir**	**1.07**	**112**	*i* P	**Pg**	**21 12 31.6**	**+0.3**
DIYA				*i* S	**Sg**	**21 12 45.5**	**+0.2**
DARE	**Darende-Malaty**	**1.11**	**283**	*e*PN	**Pb**	**21 12 31.9**	**+0.1**
DARE	**Darende-Malaty**	**1.11**	**283**	*e*Pn	**Pb**	**21 12 31.9**	**+0.1**
ILIC	**ilic-Erzincan**	**1.15**	**348**	*e*PN	**Pn**	**21 12 32.2**	**-0.1**
ILIC	**ilic-Erzincan**	**1.15**	**348**	*e*Pn	**Pn**	**21 12 32.3**	**-0.1**
GAZ	**Gaziantep**	**1.75**	**229**	*e*PN	**Pb**	**21 12 42.1**	**-0.5**
GAZ	**Gaziantep**	**1.75**	**229**	*e*Pn	**Pb**	**21 12 42.1**	**-0.5**

IDC 10 21:13:28.8±3.5,21°.27S×174°.81W,h0km,mb4.0/4, mb1 4.2/5,mb1mx3.9/21,mbtmpg4.1/5,ML2.3/1,Error ellipse: s-maj=112.7km s-min=27.6km az=131.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.87**	**22**	Pn	Pn	21 15 22.6	-2.1
	2.5nm,0.3s,baz=244,slow=21,SNR=5.0						
AFI				Sn	Sn	21 16 46.3	-8.4
	3.1nm,0.3s,baz=235,slow=19,SNR=3.7						
STKA	**Stephens Creek**	**40.16**	**245**	P	P	21 21 06.9	+0.1
	1.8nm,0.8s,baz=96,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**47.25**	**257**	P	P	21 22 03.5	-0.5
	1.4nm,0.8s,baz=91,slow=8.4,SNR=13						
WRA	**Warramunga Arr**	**47.45**	**262**	P	P	21 22 04.9	-0.7
	1.9nm,0.7s,baz=98,slow=7.1,SNR=18						
MJAR	**Matsushiro Arr**	**72.62**	**322**	P	P	21 24 58.9	+0.7
	1.8nm,0.6s,baz=159,slow=5.8,SNR=7.8						
AKASG	**Malin Array Be**	**145.09**	**333**	PKPbc	PKPbc	21 33 07.0	-0.4
	1.8nm,0.8s,baz=16,slow=3.6,SNR=4.2						
BRTR	**Keskin Array B**	**149.55**	**314**	PKPbc	PKPbc	21 33 20.2	-0.3
	0.5nm,0.8s,baz=129,slow=4.0,SNR=3.9						

*CSEM **10** 21:14:53.3,39°.26N×21°.58E,h28km,MD2.8,After ATH*
ATH 10 21:14:53.3,39°.26N×21°.58E,h28km±1km,MD2.8/20, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.39**	**152**	*e*PB	Pb	21 15 01.2	-0.8
EVR				*e*SB	Sb	21 15 08.5	+0.6
EVR	**Evrytania**	**0.39**	**152**	*e*Pb	Pb	21 15 01.2	-0.8
EVR				*e*Sb	Sb	21 15 08.5	+0.6
THL	**Klokotos Trika**	**0.45**	**48**	*e*PB	Pb	21 15 02.7	-0.2
THL				*e*SB	Sb	21 15 10.2	+0.8
THL	**Klokotos Trika**	**0.45**	**48**	*e*Pb	Pb	21 15 02.7	-0.2
THL				*e*Sb	Sb	21 15 10.2	+0.8
AGG	**Agios Georgios**	**0.63**	**112**	*e*PN	Pn	21 15 06.2	-0.2
AGG	**Agios Georgios**	**0.63**	**112**	*e*Pn	Pn	21 15 06.2	-0.2
JAN	**Janina**	**0.69**	**305**	*e*PN	Pn	21 15 07.1	-0.2
JAN				*e*SN	Sn	21 15 17.0	-0.1
JAN	**Janina**	**0.69**	**305**	*e*Pn	Pn	21 15 07.1	-0.2
JAN				*e*Sn	Sn	21 15 17.0	-0.1
LKD2	**Lefkada island**	**0.86**	**237**	*e*PB	Pn	21 15 09.5	-0.1
LKD2				*e*SN	Sn	21 15 23.0	+1.8
LKD2	**Lefkada island**	**0.86**	**237**	*e*Pb	Pn	21 15 09.5	-0.1
LKD2				*e*Sn	Sn	21 15 23.0	+1.8
KALE	**Kalithea**	**0.97**	**153**	*e*PN	Pb	21 15 11.8	+0.2
KALE				*e*SN	Sb	21 15 25.8	+1.6
KALE	**Kalithea**	**0.97**	**153**	*e*Pn	Pb	21 15 11.8	+0.2
KALE				*e*Sn	Sb	21 15 25.8	+1.6
TRIZ	**Trizonia**	**0.97**	**157**	*e*PN	Pb	21 15 11.7	+0.2
TRIZ				*e*SN	Sb	21 15 26.2	+2.2
TRIZ	**Trizonia**	**0.97**	**157**	*e*Pn	Pb	21 15 11.7	+0.2
TRIZ				*e*Sn	Sb	21 15 26.2	+2.2
LAKA	**Lakka**	**1.06**	**163**	*e*PN	Pb	21 15 13.9	+0.7
LAKA	**Lakka**	**1.06**	**163**	*e*Pn	Pb	21 15 13.9	+0.7
LIT	**Litokhoron**	**1.09**	**40**	*e*PN	Pb	21 15 14.7	+1.0
LIT				*e*SN	Sb	21 15 29.9	+2.3
LIT	**Litokhoron**	**1.09**	**40**	*e*Pn	Pb	21 15 14.7	+1.0
LIT				*e*Sn	Sb	21 15 29.9	+2.3
RLS	**Riolos of Patr**	**1.20**	**184**	*e*PN	Pb	21 15 16.8	+1.4
RLS	**Riolos of Patr**	**1.20**	**184**	*e*Pn	Pb	21 15 16.8	+1.4
LKR	**Lokris**	**1.26**	**118**	*e*PN	Pb	21 15 17.5	+1.0
LKR	**Lokris**	**1.26**	**118**	*e*Pn	Pb	21 15 17.5	+1.0
NEO	**Neokhori**	**1.28**	**87**	*e*PN	Pb	21 15 17.7	+1.0
NEO	**Neokhori**	**1.28**	**87**	*e*Pn	Pb	21 15 17.7	+1.0
KLV	**Kalavryta, Ach**	**1.29**	**160**	*e*PN	Pb	21 15 17.8	+0.7
KLV	**Kalavryta, Ach**	**1.29**	**160**	*e*Pn	Pb	21 15 17.8	+0.7
VLS	**Valsamata**	**1.33**	**216**	*e*PB	Pb	21 15 17.1	-0.5
VLS				*e*SN	Sb	21 15 36.8	+2.5
VLS	**Valsamata**	**1.33**	**216**	*e*Pb	Pb	21 15 17.1	-0.5
VLS				*e*Sn	Sb	21 15 36.8	+2.5
FNA	**Florina**	**1.53**	**354**	*e*PB	Pb	21 15 20.2	-0.9
FNA	**Florina**	**1.53**	**354**	*e*Pb	Pb	21 15 20.2	-0.9
PAIG	**Paliouri**	**1.75**	**67**	*e*PB	Pn	21 15 23.2	+1.4
PAIG	**Paliouri**	**1.75**	**67**	*e*Pb	Pn	21 15 23.2	+1.4
AOS	**Alonnisos**	**1.79**	**92**	*e*PN	Pb	21 15 24.2	-1.2
AOS	**Alonnisos**	**1.79**	**92**	*e*Pn	Pb	21 15 24.2	-1.2
GRG	**Griva**	**1.81**	**20**	*e*PB	Pb	21 15 24.5	-1.3
GRG	**Griva**	**1.81**	**20**	*e*Pb	Pb	21 15 24.5	-1.3
PLG	**Polygyros**	**1.82**	**52**	*e*PN	Pn	21 15 24.1	+1.3
PLG	**Polygyros**	**1.82**	**52**	*e*Pn	Pn	21 15 24.1	+1.3
SOH	**Sokhos**	**2.07**	**41**	*e*PB	Pb	21 15 29.0	-1.3
SOH	**Sokhos**	**2.07**	**41**	*e*Pb	Pb	21 15 29.0	-1.3

*ISK **10** 21:16:15.9,37°.90N×29°.09E,h5km,MD2.7*
*DDA **10** 21:16:15.9,37°.87N×29°.02E,h7km,MD3.0*
*CSEM **10** 21:16:16.5±0.2,37°.88N×29°.03E,h2km,MD2.7,Error ellipse: s-maj=5.4km s-min=3.4km az=106.0*
ISC 10 21:16:15.9±1.2,37°.90N±0°.02×29°.01E±0°.03,h1km±12km, n33,σ0°54/46,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.15**	**174**	*e*PG	**Pg**	**21 16 19.5**	**+0.8**
DENT	**Denizli**	**0.15**	**174**	*e*Pg	**Pg**	**21 16 19.5**	**+0.8**
DNZL	**Cakiroluk**	**0.21**	**173**	*i* P	**Pg**	**21 16 19.4**	**-0.6**
DNZL				*i* S	**Sg**	**21 16 22.0**	**-0.7**
DNZL	**Cakiroluk**	**0.21**	**173**	*i* P	**Pg**	**21 16 19.4**	**-0.6**
DNZL				*i* S	**Sg**	**21 16 22.0**	**-0.7**
KHL	**Karahalli**	**0.58**	**43**	*e*PG	**Pg**	**21 16 27.8**	**+0.7**
KHL				*e*SG	**Sb**	**21 16 36.7**	**-1.0**
KHL	**Karahalli**	**0.58**	**43**	*e*Pg	**Pg**	**21 16 27.8**	**+0.7**
KHL				*e*Sg	**Sb**	**21 16 36.7**	**-1.0**
KHAL	**Karahalli**	**0.60**	**39**	*i* P	**Pg**	**21 16 27.6**	**+0.2**
KHAL				*i* S	**Sb**	**21 16 37.5**	**-0.8**
KULA	**Kula-Manisa**	**0.67**	**336**	*e*PG	**Pb**	**21 16 30.7**	**+0.2**
KULA	**Kula-Manisa**	**0.67**	**336**	*e*Pg	**Pb**	**21 16 30.7**	**+0.2**
MANT	**Manisa**	**0.69**	**329**	*i* P	**Pg**	**21 16 28.3**	**-0.8**
MANT				*i* S	**Sb**	**21 16 41.0**	**0.0**
MANT	**Manisa**	**0.69**	**329**	*i* P	**Pg**	**21 16 28.3**	**-0.8**
MANT				*i* S	**Sb**	**21 16 41.0**	**0.0**
AYDN	**Tasoluk**	**0.93**	**255**	*i* P	**Pg**	**21 16 34.1**	**+0.4**
AYDN				*i* S	**Sb**	**21 16 47.7**	**0.0**
AYDN	**Tasoluk**	**0.93**	**255**	*i* P	**Pg**	**21 16 34.1**	**+0.4**
AYDN				*i* S	**Sb**	**21 16 47.7**	**0.0**
YER	**Yerkesik**	**0.96**	**217**	*e*PG	**Pn**	**21 16 36.1**	**-0.5**
YER	**Yerkesik**	**0.96**	**217**	*e*Pg	**Pn**	**21 16 36.1**	**-0.5**
DALY	**Dalyan (Mu˘la**	**1.12**	**195**	*e*PN	**Pn**	**21 16 38.8**	**+0.1**
DALY	**Dalyan (Mu˘la**	**1.12**	**195**	*e*Pn	**Pn**	**21 16 38.8**	**+0.1**
MLSB	**Milas**	**1.15**	**239**	*e*PN	**Pn**	**21 16 40.2**	**+1.0**
MLSB	**Milas**	**1.15**	**239**	*e*Pn	**Pn**	**21 16 40.2**	**+1.0**
DEMI	**Demirci**	**1.16**	**348**	*i* P	**Pb**	**21 16 39.0**	**+0.2**
DEMI				*i* S	**Sn**	**21 16 55.9**	**-0.1**
DEMI	**Demirci**	**1.16**	**348**	*i* P	**Pb**	**21 16 39.0**	**+0.2**
DEMI				*i* S	**Sn**	**21 16 55.9**	**-0.1**
GDZ	**Gediz**	**1.24**	**17**	*i* P	**Pn**	**21 16 40.6**	**+0.1**
GDZ				*i* S	**Sb**	**21 16 57.1**	**+0.3**
GDZ	**Gediz**	**1.24**	**17**	*i* P	**Pn**	**21 16 40.6**	**+0.1**
GDZ				*i* S	**Sb**	**21 16 57.1**	**+0.3**
FETY	**Fethiye**	**1.27**	**177**	*e*PN	**Pn**	**21 16 41.0**	**+0.3**
FETY	**Fethiye**	**1.27**	**177**	*e*Pn	**Pn**	**21 16 41.0**	**+0.3**
ELL	**Elmali**	**1.35**	**148**	*e*PN	**Pb**	**21 16 42.2**	**+0.1**
ELL	**Elmali**	**1.35**	**148**	*e*Pn	**Pb**	**21 16 42.2**	**+0.1**
SHUT	**Suhut-Afyon**	**1.37**	**61**	*e*PN	**Pg**	**21 16 42.5**	**+0.3**
SHUT	**Suhut-Afyon**	**1.37**	**61**	*e*Pn	**Pg**	**21 16 42.5**	**+0.3**
ALT	**Altintas**	**1.44**	**36**	*e*PN	**Pg**	**21 16 43.8**	**+0.3**
ALT	**Altintas**	**1.44**	**36**	*e*Pn	**Pg**	**21 16 43.8**	**+0.3**
TVSB	**Tavsanli**	**1.58**	**13**	*e*PN	**Pb**	**21 16 46.2**	**+0.2**
TVSB	**Tavsanli**	**1.58**	**13**	*e*Pn	**Pb**	**21 16 46.2**	**+0.2**

*MOS **10** 21:20:20.9±1.3,51°.53N×160°.53E,h40km,mb4.3/1,Error ellipse: s-maj=45.6km s-min=20.5km az=94.7*
KRSC 10 21:20:20.9±0.8,51°.53N×160°.53E,h40km±39km,ML4.1, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	**Russkaya**	**1.54**	**307**	PN	Pn	21 20 47.2	+1.4
RUS				S	Sn	21 21 06.7	+2.1
RUS	**Russkaya**	**1.54**	**307**	*i* P	Pn	21 20 47.2	+1.4
RUS				*e*S	Sn	21 21 06.7	+2.1
SPN	**Mys Shipunski**	**1.60**	**349**	PN	Pn	21 20 48.5	+1.8
SPN				S	Sn	21 21 08.7	+2.6
SPN	**Mys Shipunski**	**1.60**	**349**	*e*P	Pn	21 20 48.5	+1.8
SPN				*e*S	Sn	21 21 08.7	+2.6
MTVR	**Mutnovka**	**1.74**	**304**	*i* P	Pn	21 20 50.4	+1.7
MTVR				*i* S	Sn	21 21 12.1	+2.3
NLC	**Nalytchevo**	**1.80**	**337**	*e*S	Sn	21 21 14.9	+4.0
GRL	**Gorelyy**	**1.83**	**305**	*e*P	Pn	21 20 52.5	+2.5
GRL				*e*S	Sn	21 21 15.8	+3.7
ASAK	**Asacha**	**1.84**	**299**	*i* P	Pn	21 20 52.1	+2.0
ASAK				*e*S	Sn	21 21 14.6	+2.4
PET	**Petropavlovsk**	**1.89**	**323**	*e*PN	Pn	21 21 00.7	+10
PET				*e*S	Sn	21 21 16.1	+2.9
PET				smax	smax		
	comp=N,321nm,0.3s						
PET	**Petropavlovsk**	**1.89**	**323**	*e*P	Pn	21 20 52.8	+2.2
PET				*e*S	Sn	21 21 15.8	+2.6
UGLR	**Uglovaya**	**1.98**	**329**	*e*P	Pn	21 20 54.7	+2.6
UGLR				*e*S	Sn	21 21 19.6	+3.9
SDLR	**Sedlovina**	**2.02**	**331**	*i* P	Pn	21 20 55.0	+2.4
SDLR				*e*S	Sn	21 21 20.0	+3.2
SMAR	**Somma**	**2.03**	**329**	P	Pn	21 20 55.5	+2.6
SMAR				S	Sn	21 21 20.9	+3.6
AVH	**Avacha**	**2.06**	**328**	*e*P	Pn	21 20 56.1	+3.1
AVH				*e*S	Sn	21 21 21.5	+4.0
KRER	**Koryakskii**	**2.08**	**329**	*e*P	Pn	21 20 56.7	+3.1
KRER				*e*S	Sn	21 21 22.9	+4.4
KOK	**Koryaka**	**2.11**	**327**	*e*P	Pn	21 20 56.9	+3.1
KOK				*e*S	Sn	21 21 23.3	+4.4
MIPR	**Malaya Ipel'ka**	**2.45**	**289**	*e*P	Pn	21 21 00.4	+2.0
MIPR				*e*S	Sn	21 21 29.1	+1.9
APC	**Apacha**	**2.50**	**305**	*e*P	Pn	21 21 01.8	+2.8
APC				*e*S	Sn	21 21 31.6	+3.4
GNL	**Ganaly**	**2.68**	**325**	*e*P	Pn	21 21 05.1	+3.4
GNL				*e*S	Sn	21 21 37.4	+4.4
SKR	**Severo-Kuril's**	**2.91**	**255**	*e*PN	Pn	21 21 09.0	+4.4
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
SKR	**Severo-Kuril's**	**2.91**	**255**	*e*P	Pn	21 21 05.1	+0.5
SKR				*e*S	Sn	21 21 36.5	-1.8
MKZ	**Mys Kozlova**	**3.12**	**13**	PN	Pn	21 21 09.1	+1.6
MKZ				S	Sn	21 21 43.7	+0.3
MKZ	**Mys Kozlova**	**3.12**	**13**	*e*P	Pn	21 21 09.1	+1.6
MKZ				*e*S	Sn	21 21 43.7	+0.3
TUMR	**Tumrok**	**3.77**	**357**	*e*P	Pn	21 21 20.3	+3.7
KMNR	**Kamenistaya**	**4.24**	**358**	P	Pn	21 21 26.7	+3.7
KMNR				S	Sn	21 22 14.6	+3.3
KBTR	**Krutoberegovo**	**4.88**	**15**	PN	Pn	21 21 33.9	+2.2
KBTR	**Krutoberegovo**	**4.88**	**15**	P	Pn	21 21 33.9	+2.2
BKI	**Bering**	**4.92**	**39**	*e*S	Sn	21 22 24.3	-3.4

IDC 10 21:29:32.2±1.7,2°.57N×123°.81E,h0km,mb3.5/3, mb1 3.6/3,mb1mx3.3/23,mbtmpg3.5/3,Error ellipse: s-maj=220.9km s-min=27.0km az=62.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.65**	**156**	P	P	21 34 54.9	+0.1
	0.4nm,0.5s,baz=334,slow=11,SNR=5.2						
STKA	**Stephens Creek**	**38.20**	**155**	P	P	21 36 53.9	0.0
	0.6nm,0.8s,baz=311,slow=9.3,SNR=3.1						
MKAR	**Makanchi Array**	**56.88**	**327**	P	P	21 39 18.7	-0.2
	0.2nm,0.3s,baz=115,slow=7.5,SNR=7.0						

*TRN **10** 21:33:19.6,11°.86N×61°.03W,h24km,MD3.5*
*ISCJB **10** 21:33:19.9±0.4,11°.80N±0°.02×61°.13W±0°.04,h76km±6km, Error ellipse: s-maj=6.4km s-min=3.3km az=7.1*
*FUNV **10** 21:33:26.2,11°.42N×61°.23W,h80km,MW3.8*
ISC 10 21:33:20.0±1.3,11°.80N±0°.03×61°.13W±0°.05,h78km±9km, n33,σ1°61/54,5C-3D,Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRW	**Mount Saint Ca**	**0.64**	**305**	*e*P	**Pn**	**21 33 35.3**	**+0.3**
GRW				*e*S	**Sn**	**21 33 45.2**	**-0.7**
GRHS	**Sauteurs**	**0.66**	**310**	*i*P	**Pn**	**21 33 35.3**	**+0.2**
GRHS				*e*S	**Sn**	**21 33 45.9**	**-0.3**
GRSS	**Sisters**	**0.69**	**316**	*i*P	**Pn**	**21 33 35.3**	**0.0**
GRSS				*e*S	**Sn**	**21 33 46.2**	**-0.6**
TPR	**Prospect**	**0.70**	**150**	*e*P	**Pn**	**21 33 34.9**	**-0.6**
TPR				*e*S	**Sn**	**21 33 46.7**	**-0.2**
BOT	**Bacolet**	**0.74**	**147**	*e*P	**Pn**	**21 33 36.5**	**+0.5**
TOSP	**Speyside**	**0.76**	**130**	*e*P	**Pn**	**21 33 35.5**	**-0.7**
TOSP				*e*S	**Sn**	**21 33 46.7**	**-1.4**
TRN	**Trinidad (W)**	**1.17**	**193**	*e*P	**Pn**	**21 33 42.4**	**+1.3**
TRN				*e*S	**Sn**	**21 33 59.9**	**+3.0**
TBH	**Brigand Hill**	**1.30**	**177**	*e*P	**Pn**	**21 33 45.2**	**+2.4**
TBH				*e*S	**Sn**	**21 34 02.8**	**+3.0**
FCV	**Fort Charlotte**	**1.36**	**355**	*e*P	**Pn**	**21 33 44.5**	**+1.1**
FCV				*e*S	**Sn**	**21 34 01.3**	**+0.3**
SVB	**Belmont**	**1.47**	**355**	*e*P	**Pn**	**21 33 45.0**	**+0.1**
SVB				*e*S	**Sn**	**21 34 03.5**	**-0.2**
BHS	**Barnard House**	**1.49**	**360**	*e*P	**Pn**	**21 33 46.0**	**+0.8**
BHS				*e*S	**Sn**	**21 34 04.7**	**+0.6**
SVV	**Soufriere Volc**	**1.52**	**357**	*e*P	**Pn**	**21 33 46.4**	**+0.9**
SVV				*e*S	**Sn**	**21 34 04.7**	**0.0**
GUIV	**Guiria**	**1.57**	**223**	*e*P	**Pn**	**21 33 47.2**	**+1.1**
GUIV				*e*S	**Sn**	**21 34 03.8**	**-2.1**
SLDE	**Delcer**	**2.00**	**2**	*e*P	**Pn**	**21 33 52.0**	**+0.2**
SLDE				*e*S	**Sn**	**21 34 15.8**	**-0.3**
SLB	**Belfond**	**2.02**	**2**	*e*P	**Pn**	**21 33 52.8**	**+0.5**
SLB				*e*S	**Sn**	**21 34 16.9**	**+0.1**
SLPE	**Piton Saint Es**	**2.04**	**4**	*e*P	**Pn**	**21 33 54.0**	**+1.5**
SLPE				*e*S	**Sn**	**21 34 17.2**	**0.0**
SLW	**Petit Monier**	**2.22**	**5**	*e*P	**Pn**	**21 33 56.0**	**+1.1**
SLW				*e*S	**Sn**	**21 34 21.6**	**+0.2**
CRUV	**Carupano**	**2.35**	**242**	*e*P	**Pn**	**21 33 58.6**	**+2.0**
CRUV				*e*S	**Sn**	**21 34 22.5**	**-2.0**
MVM	**Montagne Vaucl**	**2.75**	**5**	*e*P	**Pn**	**21 34 01.7**	**-0.3**
MVM				*e*S	**Sn**	**21 34 31.9**	**-2.4**
FDF	**Fort de France**	**2.92**	**360**	*e*P	**Pn**	**21 34 04.6**	**+0.3

3.3nm,1.0s,baz=265,slow=9.7,SNR=4.5
PLCA LR LR 21 53 12.3
comp=Z,115nm,18.2s,baz=317,slow=32
USHA Ushuaia 34.14 139 LR LR 21 53 58.0
comp=Z,326nm,20.2s,baz=224,slow=29
NNA Nana 35.99 59 LR LR 21 55 16.0
comp=Z,232nm,21.8s,baz=318,slow=30
LPAZ La Paz 39.91 73 P P 21 44 56.5 -2.1
1.8nm,0.9s,baz=238,slow=7.7,SNR=3.7
LPAZ LR LR 21 56 51.9
comp=Z,75nm,21.3s,baz=80,slow=29
PMSA Palmer Station 40.25 153 LR LR 21 55 34.1
comp=Z,85nm,22.0s,baz=170,slow=27
CPUP Villa Florida 44.02 94 LR LR 22 00 35.7
comp=Z,70nm,18.9s,baz=325,slow=32
BDFB Brasilia 56.63 87 LR LR 22 09 23.0
comp=Z,112nm,20.2s,baz=268,slow=34
TEIG Tepich 57.42 22 LR LR 22 06 17.8
comp=Z,56nm,18.8s,baz=317,slow=30
URZ Urewera 58.97 243 LR LR 22 07 34.4
comp=Z,124nm,18.8s,baz=195,slow=31
RPZ Rata Peaks 61.27 235 LR LR 22 09 27.0
comp=Z,228nm,18.6s,baz=288,slow=31
PDAR Pinedale Array 76.78 359 P P 21 49 15.6 +0.4
0.7nm,1.1s,baz=193,slow=3.5,SNR=3.3
STKA Stephens Creek 87.19 233 LR LR 22 21 48.1
comp=Z,175nm,21.7s,baz=205,slow=31
AKASG Malin Array Be 145.02 49 PKPbc PKPdf 21 57 00.4 -0.2
0.8nm,0.5s,baz=324,slow=3.3,SNR=4.4
BRTR Keskin Array B 149.03 69 PKPbc PKPbc 21 57 10.5 -1.5
0.4nm,0.8s,baz=332,slow=4.9,SNR=4.7
CMAR Chiang Mai Arr 151.31 243 PKPbc PKPbc 21 57 16.6 -1.3
1.1nm,0.8s,baz=155,slow=3.8,SNR=6.1
ZALV Zalesovo Beam 158.46 339 PKPab PKPab 21 57 55.7 +0.5
0.3nm,0.5s,baz=75,slow=1.7,SNR=4.7

*AUST **10** 21:45:03.2, 20.78S×175.56W, h200km*
*ISCJB **10** 21:46:03.5±1.0, 23.5S±0.2×179.9W±0.1, h532km, mb4.0/7, Error ellipse: s-maj=23.0km s-min=17.0km az=14.3*
*IDC **10** 21:46:06.6±2.9, 23.54S×179.83W, h558km±31km, mb3.4/7, mb1 3.6/8, mb1mx3.3/21, mbtmp3.4/8, Error ellipse: s-maj=27.1km s-min=17.2km az=12.0*
ISC 10 21:46:04.0±0.9, 23.5S±0.2×179.8W±0.1, h532km, n24, σ0s81/22, mb3.9/7, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.96 190**		P		**P**		**21 49 13.1**	**-0.1**
	1.2nm,0.3s,baz=326,slow=5.4,SNR=5.6								
EIDS	**Eidsvold**	**26.60 260**		P		**P**		**21 51 01.2**	**+1.3**
	baz=31,SNR=3.2								
CTA	**Charters Tower**	**31.71 270**		P		**P**		**21 51 44.9**	**+0.6**
	18nm,0.5s,baz=96,slow=11,SNR=18								
MTSU	**Mount Surprise**	**33.95 272**		P		**P**		**21 52 04.2**	**+0.8**
	baz=38,SNR=11								
MCQ	**Macquarie Isla**	**34.82 202**		S		S		21 58 13.3	+71
	baz=39,SNR=3.5								
STKA	**Stephens Creek**	**35.09 248**		P		**P**		**21 52 13.4**	**+0.8**
	2.0nm,0.5s,baz=99,slow=11,SNR=14								
STKA	**Stephens Creek**	**35.09 248**		P		**P**		**21 52 13.5**	**+0.8**
	baz=40,SNR=11								
ASAR	**Alice Springs**	**42.33 260**		P		**P**		**21 53 11.4**	**0.0**
	4.3nm,0.5s,baz=98,slow=7.0,SNR=49								
ASAR				S		S		**21 58 52.3**	**-1.9**
	0.5nm,0.7s,baz=97,slow=14,SNR=4.6								
WRA	**Warramunga Arr**	**42.66 266**		P		**P**		**21 53 13.5**	**-0.6**
	4.5nm,0.4s,baz=91,slow=8.5,SNR=165								
KDU	**Kakadu**	**46.48 275**		P		P		21 53 33.9	-10
	baz=50,SNR=5.8								
FORT	**Forrest**	**46.67 249**		P		**P**		**21 53 44.4**	**-0.4**
	baz=51,SNR=14								
KNRA	**Kununurra**	**48.92 269**		P		**P**		**21 54 01.8**	**+0.1**
	baz=53,SNR=4.1								
FITZ	**Fitzroy Crossi**	**51.09 265**		P		**P**		**21 54 17.8**	**+0.2**
	baz=55,SNR=6.7								
SWI	**Sorong**	**52.53 288**		S		S		22 01 46.2	+31
	baz=56,SNR=7.4								
KLBR	**Kellerberrin**	**55.36 247**		P		**P**		**21 54 47.5**	**-0.4**
	baz=60,SNR=8.2								
MEEK	**Meekatharra**	**55.45 253**		P		**P**		**21 54 47.8**	**-0.8**
	baz=60,SNR=5.8								
MORW	**Morawa**	**57.23 250**		P		**P**		**21 55 00.5**	**-0.3**
	baz=62,SNR=10								
QSPA	**South Pole Qui**	**66.59 180**		P		**P**		**21 56 01.5**	**+0.3**
	0.7nm,0.5s,baz=291,slow=10,SNR=10								
CMAR	**Chiang Mai Arr**	**89.60 290**		P		**P**		**21 58 06.3**	**+0.9**
	0.6nm,0.3s,baz=120,slow=2.5,SNR=5.5								
TXAR	**Lajitas Array**	**90.02 58**		P		**P**		**21 58 07.4**	**+0.2**
	0.2nm,0.8s,baz=210,slow=7.0,SNR=3.7								
FINES	**FINESS Array B**	**138.13 342**		PKP		**PKPdf**		**22 04 27.5**	**-0.4**
	3.2nm,1.0s,baz=31,slow=4.4,SNR=3.7								
AKASG	**Malin Array Be**	**144.75 328**		PKP		**PKPdf**		**22 04 38.7**	**-1.2**
	1.2nm,0.5s,baz=45,slow=3.9,SNR=9.9								
BRTR	**Keskin Array B**	**147.51 308**		PKPbc		**PKPbc**		**22 04 47.9**	**-0.8**
	0.6nm,0.6s,baz=151,slow=5.5,SNR=5.8								
TORD	**Torodi Ar. Bea**	**169.62 188**		PKPab		**PKPab**		**22 06 27.9**	**-0.4**
	0.4nm,0.7s,baz=187,slow=2.1,SNR=2.8								

*NOU **10** 22:06:48.0±1.4, 18.02S×167.89E, h30km, MD3.5, ML4.3*
*ISCJB **10** 22:06:48.6±1.7, 18.27S±0.06×167.9E±0.1, h39km±13km, mb4.2/11, MS3.6/3, Error ellipse: s-maj=18.2km s-min=10.2km az=172.3*
*NEIC **10** 22:06:49.6±1.7, 18.21S×168.03E, h38km±14km, mb4.3/6, Error ellipse: s-maj=16.9km s-min=11.6km az=62.0*
NEIC Felt at Port-Vila.
*IDC **10** 22:06:49.8±4.5, 18.20S×168.04E, h39km±36km, mb4.0/7, mb1 4.3/9, mb1mx4.0/19, mbtmp4.3/9, ML4.4/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/29, Error ellipse: s-maj=32.0km s-min=26.9km az=109.0*
ISC 10 22:06:49.7±0.9, 18.24S±0.09×168.0E±0.2, h37km±2km, n35, σ0s91/36, mb4.2/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.03 195**		*e*P		**P**	**Pn**	**22 07 49.3**	**+0.4**
BAYA				*e*S		**S**	**Sn**	**22 08 34.0**	**-0.9**
DZM	**Mont Dzumac**	**4.08 201**		*e*P		**P**	**Pn**	**22 07 48.9**	**-0.7**
DZM				*e*S		**S**	**Sn**	**22 08 34.8**	**-1.5**
DZM				AMP				22 08 37.4	
	comp=Z,1μm,3.4s								
DZM	**Mont Dzumac**	**4.08 201**		*e*Pn		**P**	**Pn**	**22 07 48.8**	**-0.8**
DZM				*e*Sn		**S**	**Sn**	**22 08 37.1**	**+0.9**
DZM	**Mont Dzumac**	**4.08 201**		Pn		**P**	**Pn**	**22 07 49.7**	**0.0**
	comp=Z,21nm,0.3s,baz=51,slow=19,SNR=86								
DZM				Sn		**S**	**Sn**	**22 08 35.6**	**-0.7**
	comp=Z,22nm,0.3s,baz=138,slow=23,SNR=12								
NOUC	**Port Laguerre**	**4.16 202**		*e*P		**P**	**Pn**	**22 07 50.4**	**-0.3**
NOUC				*e*S		**S**	**Sn**	**22 08 37.2**	**-0.8**
NOUC				AMP				22 08 54.2	
	comp=Z,55nm,5.9s								
LASL	**Noumea**	**4.20 199**		*e*S		**S**	**Sn**	**22 08 38.8**	**-0.2**
NORM	**Noumea**	**4.21 199**		*e*P		**P**	**Pn**	**22 07 52.4**	**+1.0**
HNR	**Honiara**	**11.72 317**		Pn		**P**	**Pn**	**22 09 34.9**	**+0.4**
HNR	**Honiara**	**11.72 317**		Pn		**P**	**Pn**	**22 09 34.9**	**+0.4**
	baz=252,slow=2.0,SNR=4.4								
HNR				LR		LR		22 13 07.3	
	comp=Z,134nm,19.4s,baz=145,slow=32								
AFI	**Afiamalu**	**19.91 80**		LR		LR		22 17 15.1	
	comp=Z,213nm,19.1s,baz=265,slow=32								
CTA	**Charters Tower**	**20.61 261**		P			Pn	22 11 28.1	-0.2
CTA	**Charters Tower**	**20.61 261**		P			Pn	22 11 28.1	-0.3
	comp=Z,6.5nm,0.6s,baz=77,slow=12,SNR=4.9								
CTA				LR		LR		22 18 31.3	
	comp=Z,263nm,18.6s,baz=291,slow=34								
URZ	**Urewera**	**21.48 160**		*e*P		**P**		**22 11 35.8**	**+0.7**
	comp=Z,42nm,1.3s								
CAN	**Canberra**	**23.95 221**		*e*P		**P**		**22 12 02.3**	**+1.7**
	comp=Z,4.3nm,0.5s								
STKA	**Stephens Creek**	**27.41 235**		*e*P		**P**		**22 12 32.7**	**+0.8**
	comp=Z,4.0nm,1.1s								
STKA	**Stephens Creek**	**27.41 235**		P		**P**		**22 12 33.3**	**+1.4**
	comp=Z,9.6nm,0.8s,baz=60,slow=7.0,SNR=24								
WRAB	**Tennant Creek**	**31.80 261**		*e*P		**P**		**22 13 10.4**	**-0.7**
	comp=Z,1.5nm,0.5s								
WRA	**Warramunga Arr**	**31.81 261**		P		**P**		**22 13 10.4**	**-0.7**
WRA	**Warramunga Arr**	**31.81 261**		P		**P**		**22 13 10.4**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=82,slow=6.2,SNR=26								
AS31	**Alice Springs**	**32.23 254**		*e*P		**P**		**22 13 14.6**	**-0.3**
ASAR	**Alice Springs**	**32.23 254**		P		**P**		**22 13 14.6**	**-0.3**
ASAR	**Alice Springs**	**32.23 254**		P		**P**		**22 13 14.6**	**-0.3**
	comp=Z,3.0nm,0.4s,baz=82,slow=8.5,SNR=57								
FITZ	**Fitzroy Crossi**	**40.17 263**		LR		LR		22 30 18.6	
	comp=Z,136nm,20.9s,baz=149,slow=35								
NWAO	**Narrogin (SRO)**	**47.62 242**		*e*P		**P**		**22 15 22.2**	**-0.2**
	comp=Z,2.6nm,0.6s								
VNDA	**Vanda**	**59.39 182**		P		**P**		**22 16 48.8**	**+0.9**
QSPA	**South Pole Qui**	**71.81 180**		*e*P		**P**		**22 18 07.8**	**-0.6**
	comp=Z,7.5nm,1.2s								
CMAR	**Chiang Mai Arr**	**77.01 295**		P		**P**		**22 18 39.3**	**0.0**
CMAR	**Chiang Mai Arr**	**77.01 295**		P		**P**		**22 18 39.3**	**0.0**
	comp=Z,0.5nm,0.3s,baz=135,slow=6.1,SNR=4.7								
MAW	**Mawson**	**78.91 202**		P		**P**		**22 18 49.6**	**+0.6**
MAW	**Mawson**	**78.91 202**		P		**P**		**22 18 49.6**	**+0.6**
	comp=Z,2.5nm,1.0s,baz=100,slow=8.2,SNR=4.4								
NVAR	**Mina Array Bea**	**89.03 49**		P		**P**		**22 19 41.6**	**+0.3**
NVAR	**Mina Array Bea**	**89.03 49**		P		**P**		**22 19 41.6**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=232,slow=9.3,SNR=5.1								
SNAA	**Sanae**	**90.10 183**		*e*P		**P**		**22 19 44.5**	**-1.1**
ARCES	**ARCESS Array B**	**123.80 345**		PKP		**PKPdf**		**22 25 41.1**	**-2.0**
ARCES	**ARCESS Array B**	**123.80 345**		PKP		**PKPdf**		**22 25 41.1**	**-2.0**
	comp=Z,3.4nm,1.0s,baz=73,slow=3.1,SNR=2.8								

MAN 10 22:07:34, 18.34N×120.73E, h42km, mb4.5, ML3.4, MS3.3, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.10 263**		↑*i*P			Pn	22 07 43.4	+2.5
PIP				*e*S			Sn	22 07 51.3	+5.6
SIPP	**Brgy, Tapao**	**0.48 212**		↓*e*P			Pn	22 07 46.5	+1.8
SIPP				*e*S			Sn	22 07 56.5	+4.4
APYP	**Conner**	**0.68 134**		*e*P			Pn	22 07 48.6	+1.3
APYP				*e*S			Sn	22 08 00.1	+3.3
ABRA	**Dolores**	**0.69 181**		*e*P			Pn	22 07 48.2	+0.9
ABRA				*e*S			Sn	22 07 59.2	+2.4
CAUP	**Cauayan**	**1.74 143**		*e*P			Pn	22 08 04.0	+2.3
PALP	**Palanan**	**2.06 128**		↓*i*P			Pn	22 08 08.2	+2.1
BOLP	**Bolinao**	**2.10 202**		*e*P			Pn	22 08 07.7	+1.0
BALP	**Baler**	**2.71 162**		*e*P			Pn	22 08 16.5	+1.4

IDC 10 22:30:55.2±4.0, 19.98S×178.23W, h597km±48km, mb3.6/9, mb1 3.8/10, mb1mx3.5/21, mbtmp3.6/10, Error ellipse: s-maj=69.5km s-min=20.9km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.47 259**		P		P		22 33 59.9	+1.1
	1.5nm,0.3s,baz=68,slow=22,SNR=12								
CTA	**Charters Tower**	**33.33 264**		P		P		22 36 45.8	+0.2
	15nm,0.4s,baz=90,slow=11,SNR=24								
STKA	**Stephens Creek**	**37.83 244**		P		P		22 37 22.1	-0.4
	2.3nm,0.5s,baz=81,slow=11,SNR=9.7								
ASAR	**Alice Springs**	**44.44 256**		P		P		22 38 14.1	-0.7
	6.9nm,0.8s,baz=108,slow=8.0,SNR=32								
WRA	**Warramunga Arr**	**44.47 262**		P		P		22 38 14.4	-0.6
	3.5nm,0.3s,baz=96,slow=7.6,SNR=9.1								
FITZ	**Fitzroy Crossi**	**52.89 262**		P		P		22 39 17.4	+0.3
	3.4nm,0.5s,baz=84,slow=6.9,SNR=5.8								
NVAR	**Mina Array Bea**	**80.79 44**		P		P		22 42 08.2	+0.2
	2.1nm,0.8s,baz=224,slow=8.9,SNR=12								
TXAR	**Lajitas Array**	**86.95 57**		P		P		22 42 38.5	+0.2
	2.2nm,0.8s,baz=217,slow=7.2,SNR=26								
ILAR	**Eielson Array**	**87.85 13**		P		P		22 42 40.8	-0.8
	0.9nm,0.4s,baz=214,slow=5.3,SNR=21								
PDAR	**Pinedale Array**	**88.73 43**		P		P		22 42 46.1	-0.4
	1.3nm,0.6s,baz=200,slow=3.6,SNR=7.5								
MKAR	**Makanchi Array**	**110.69 314**		PKiKP		PKiKP		22 48 20.6	-0.4
	0.2nm,0.5s,baz=230,slow=1.1,SNR=2.9								
KURBB	**Kurchatov Arra**	**113.52 317**		PKiKP		PKiKP		22 48 25.3	-0.9
	0.1nm,0.3s,baz=100,slow=1.5,SNR=5.1								
ARCES	**ARCESS Array B**	**128.37 350**		PKP		PKPdf		22 48 54.2	0.0
	4.3nm,1.0s,baz=64,slow=5.6,SNR=4.1								
FINES	**FINESS Array B**	**135.21 344**		PKP		PKPdf		22 49 08.3	+1.1
	2.7nm,1.1s,baz=15,slow=8.3,SNR=4.0								
AKASG	**Malin Array Be**	**142.45 331**		PKP		PKPdf		22 49 17.1	-3.7
	1.6nm,0.6s,baz=40,slow=4.3,SNR=6.1								
BRTR	**Keskin Array B**	**146.33 313**		PKPbc		PKPbc		22 49 30.2	-0.2
	0.7nm,0.6s,baz=138,slow=5.6,SNR=7.0								
GERES	**GERESS Array B**	**149.64 344**		PKPbc		PKPbc		22 49 38.2	-0.2
	0.6nm,0.6s,baz=50,slow=2.1,SNR=5.6								

*IDC **10** 22:31:07.7±7.2, 7.27S×128.17E, h89km±63km, mb3.4/3, mb1 3.9/6, mb1mx3.5/21, mbtmp3.7/6, ML4.3/3, Error ellipse: s-maj=121.1km s-min=23.0km az=58.0*
*ISCJB **10** 22:31:12.1±0.8, 7.52S±0.06×128.04E±0.09, h142km, mb3.3/3, Error ellipse: s-maj=12.6km s-min=7.8km az=170.0*
*AUST **10** 22:31:13.4, 7.49S×128.54E, h100km*
ISC 10 22:31:13.7±0.8, 7.61S±0.06×128.11E±0.08, h142km, n23, σ2s32/30, mb3.2/3, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.99 151**		P		P	**Pn**	**22 32 42.3**	**+2.0**
	baz=5.9,SNR=35								
MTN				S			**Sn**	**22 33 47.9**	**0.0**
	baz=5.9,SNR=8.7								
FAKI	**Fak Fak**	**6.22 42**		P		P	**Pn**	**22 32 42.1**	**-1.2**
	baz=5.9,SNR=16								
FAKI				S			**Sn**	**22 33 48.8**	**-4.6**
	baz=5.9,SNR=14								
KDU	**Kakadu**	**6.63 140**		P		P	**Pn**	**22 32 50.4**	**+1.7**
	baz=6.5,SNR=18								
KDU				S			**Sn**	**22 34 01.1**	**-2.0**
	baz=6.5,SNR=18								
KNRA	**Kununurra**	**8.05 176**		P		P	**Pn**	**22 33 09.2**	**+1.4**
	baz=8.2,SNR=29								
KNRA				S			**Sn**	**22 34 33.9**	**-3.5**
	baz=8.2,SNR=7.4								
FITZ	**Fitzroy Crossi**	**10.71 193**		P		P	**Pn**	**22 33 42.5**	**-0.8**
	0.6nm,0.3s,baz=26,slow=12,SNR=16								
FITZ				S			**Sn**	**22 35 38.0**	**-3.7**
	1.5nm,0.3s,baz=125,slow=18,SNR=10								
FITZ	**Fitzroy Crossi**	**10.71 193**		P		Pn		**22 33 42.7**	**-0.5**
	baz=11,SNR=11								
FITZ				S			**Sn**	**22 35 37.9**	**-3.7**
	baz=11,SNR=3.6								
WRA	**Warramunga Arr**	**13.67 154**		P		P	**Pn**	**22 34 20.7**	**-1.1**
	1.4nm,0.3s,baz=343,slow=11,SNR=39								
WRA				S			Sn	22 36 46.2	-6.9
	2.2nm,0.3s,baz=328,slow=23,SNR=14								
COEN	**Coen**	**16.08 114**		P		P		**22 34 54.1**	**+1.5**
	baz=16,SNR=8.2								
COEN				S			Sn	22 37 39.6	-12
	baz=16,SNR=6.4								
ASAR	**Alice Springs**	**16.91 161**		P		P	**Pn**	**22 35 04.2**	**+2.2**
	3.8nm,0.3s,baz=340,slow=11,SNR=291								
ASAR				S			**S**	**22 38 05.3**	**-5.4**
	0.4nm,0.3s,baz=341,slow=25,SNR=6.6								
MTSU	**Mount Surprise**	**18.93 125**		P		P	**Pn**	**22 35 25.8**	**-0.3**
	baz=19,SNR=13								
MTSU				S			**S**	**22 38 49.6**	**-2.0**
	baz=19,SNR=4.1								
MEEK	**Meekatharra**	**20.97 204**		P		P	Pn	22 35 53.0	+2.9
	baz=21,SNR=4.4								
MEEK				S			Sn	22 39 40.7	-7.3
	baz=21,SNR=3.9								
QLP	**Quilpie**	**24.31 143**		P		P		**22 36 19.8**	**+1.6**
	baz=24,SNR=6.8								
BBOO	**Buckleboo**	**26.14 165**		P		P		**22 36 36.3**	**+1.5**
	baz=26,SNR=6.2								
STKA	**Stephens Creek**	**27.22 154**		P		P		**22 36 45.6**	**+1.2**
	2.1nm,0.5s,baz=335,slow=8.0,SNR=20								
STKA	**Stephens Creek**	**27.22 154**		P		P		**22 36 45.7**	**+1.3**
	baz=27,SNR=8.4								
CMSA	**Cobar Meteorol**	**28.91 148**		P		P		**22 37 01.3**	**+1.8**
	baz=29,SNR=8.9								
ARPS	**Mount Arapiles**	**31.61 159**		P		P		**22 37 25.5**	**+2.4**
	baz=32,SNR=9.6								
YNG	**Young**	**32.48 148**		P		P		**22 37 33.0**	**+2.1**
	baz=32,SNR=6.1								
MKAR	**Makanchi Array**	**67.72 328**		P		P		**22 41 55.0**	**-0.8**
	0.3nm,0.7s,baz=120,slow=7.5,SNR=4.2								
KURBB	**Kurchatov Arra**	**72.06 329**		P		P		22 42 19.8	-2.5
	0.1nm,0.4s,baz=128,slow=4.8,SNR=4.0								
CLL	**Collm**	**111.50 322**		↑*i*PKP			**PKiKP**	**22 49 32.9**	**+1.7**
	comp=Z,5.0nm,0.6s								
CPUP	**Villa Florida**	**145.85 171**		PKPbc			**PKPbc**	**22 50 37.7**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=104,slow=11,SNR=3.5								
LPAZ	**La Paz**	**151.33 146**		PKPbc			**PKPbc**	**22 50 52.7**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=145,slow=0.6,SNR=3.9								
LPAZ				PKPab			**PKPab**	**22 51 02.3**	**+1.5**
	comp=Z,1.7nm,0.6s,baz=209,slow=2.3,SNR=7.4								

*SZGRF **10** 22:43:06.5, 23.44S×177.83W, h33km, South of Fiji Islands*
*BJI **10** 22:44:13.9, 22.20S×179.50W, h604km, mB4.7/5, mb4.6/8*
*NEIC **10** 22:44:14.0±0.8, 22.17S×179.54W, h604km±8km, mb4.6/17, Error ellipse: s-maj=15.8km s-min=10.5km az=126.0*
*IDC **10** 22:44:14.0±1.1, 22.07S×179.63W, h590km±11km, mb3.7/18, mb1 3.8/19, mb1mx3.7/24, mbtmp3.7/19, Error ellipse: s-maj=16.7km s-min=10.2km az=152.0*
ISC 10 22:44:12.4±0.5, 22.32S±0.07×179.50W±0.08, h579km, n101, σ1s42/116, mb4.3/33, 15C-10D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.11 333**		*e*P		**P**		**22 45 47.1**	**+1.9**
MSVF				*e*S		**S**		**22 47 02.4**	**+1.7**
RAO	**Raoul Island**	**7.05 169**		P		**P**		**22 46 04.4**	**+2.6**
	223nm,0.3s,baz=105,slow=18,SNR=7.7								
AFI	**Afiamalu**	**11.13 43**		*e*P		**P**		**22 46 43.9**	**+1.4**
DZM	**Mont Dzumac**	**13.02 268**		*e*P		P		22 47 05.5	+3.8
DZM	**Mont Dzumac**	**13.02 268**		P		**P**		**22 47 02.6**	**+0.9**
	2.2nm,0.3s,baz=90,slow=12,SNR=19								
PUZ	**Puketiti**	**15.82 186**		SN		**S**		**22 50 09.2**	**0.0**
URZ	**Urewera**	**16.15 190**		*e*P		**P**		**22 47 31.7**	**-0.2**
	15nm,0.6s								
URZ	**Urewera**	**16.15 190**		PN		**P**		**22 47 31.8**	**-0.1**
URZ				SN		**S**		**22 50 09.6**	**-4.9**
URZ	**Urewera**	**16.15 190**		P		**P**		**22 47 31.8**	**-0.1**
	3.2nm,0.3s,baz=25,slow=6.0,SNR=16								
URZ				S		**S**		**22 50 10.1**	**-4.4**
	1.2nm,0.3s,baz=342,slow=22,SNR=7.9								
THZ	**Tophouse**	**20.41 196**		PN		**P**		**22 48 12.9**	**+2.2**
CAN	**Canberra**	**30.35 238**		P		**P**		**22 49 38.3**	**0.0**
CTA	**Charters Tower**	**31.96 268**		P		**P**		**22 49 53.0**	**+0.8**
	25nm,0.4s,baz=94,slow=10,SNR=44								
CTAO	**Charters Tower**	**31.96 268**		*e*P		**P**		**22 49 52.6**	**+0.4**
	24nm,0.6s								
STKA	**Stephens Creek**	**35.76 246**		*e*P		**P**		**22 50 25.1**	**+1.3**
	1.8nm,0.6s								
STKA	**Stephens Creek**	**35.76 246**		P		**P**		**22 50 25.2**	**+1.3**
	8.3nm,0.5s,baz=93,slow=9.8,SNR=49								
BBOO	**Buckleboo**	**40.50 245**		*e*P		**P**		**22 51 02.7**	**+0.5**
	142nm,0.8s								
AS31	**Alice Springs**	**42.77 259**		*e*P		**P**		**22 51 20.2**	**0.0**
ASAR	**Alice Springs**	**42.77 259**		P		**P**		**22 51 20.6**	**+0.3**
	26nm,0.8s,baz=94,slow=8.0,SNR=200								
ASAR				ScP		**ScP**		**22 55 55.5**	**+0.9**
	0.8nm,0.8s,baz=93,slow=4.1,SNR=4.6								
ASAR				S		**S**		**22 57 00.6**	**-2.6**
	2.1nm,0.7s,baz=93,slow=16,SNR=13								
WRAB	**Tennant Creek**	**42.99 264**		*e*P		**P**		**22 51 21.3**	**-0.6**
	23nm,0.8s								
WRA	**Warramunga Arr**	**42.99 264**		P		**P**		**22 51 21.6**	**-0.4**
	17nm,0.5s,baz=100,slow=8.7,SNR=174								
WRA				ScP		**ScP**		**22 55 56.7**	**+1.2**
	2.1nm,0.8s,baz=94,slow=4.0,SNR=6.9								
WRA				S		**S**		**22 57 04.5**	**-1.9**
	1.8nm,0.9s,baz=97,slow=13,SNR=3.6								
FITZ	**Fitzroy Crossi**	**51.42 264**		P		**P**		**22 52 25.5**	**+0.4**
	6.8nm,0.4s,baz=92,slow=10								
VNDA	**Vanda**	**55.98 185**		P		**P**		**22 52 58.8**	**+2.6**
VNDA	**Vanda**	**55.98 185**		P		P		22 53 00.1	+3.8
	0.7nm,0.5s,baz=341,slow=6.2,SNR=6.7								
MBWA	**Marble Bar**	**56.11 259**		*e*P		**P**		**22 52 57.7**	**-0.5**
	21nm,0.6s								
NWAO	**Narrogin (SRO)**	**56.31 245**		*e*P		**P**		**22 52 59.1**	**-0.2**
	2.5nm,0.4s								
NWAO	**Narrogin (SRO)**	**56.31 245**		P		**P**		**22 52 59.7**	**+0.3**
	5.2nm,0.6s,baz=171,slow=4.4,SNR=7.5								
KKM	**Kota Kinabalu**	**68.89 286**		*e*P		**P**		**22 54 20.0**	**-0.7**
	12nm,0.6s								
MJAR	**Matsushiro Arr**	**70.87 325**		P		**P**		**22 54 30.6**	**-1.2**
	4.3nm,0.6s,baz=168,slow=6.3,SNR=15								
MAJO	**Matsushiro**	**70.87 325**		*e*P		**P**		**22 54 30.7**	**-1.1**
	3.5nm,0.4s								
KSM	**Kuching**	**72.30 279**		*e*P		**P**		**22 54 40.0**	**-0.6**
	11nm,0.5s		

NIE	**Niedzica**	**148.75**	**335**	*e*PKP	**PKPbc**	**23**	**02**	**55.0**	**-0.1**
DOPR	**Dopca**	**148.92**	**325**	⫴*i*P	**PKPbc**	**23**	**02**	**55.1**	**-0.5**
MLR	**Muntele Rosu**	**148.93**	**324**	⫴*i*P	**PKPbc**	**23**	**02**	**54.7**	**-1.1**
NRDL	**Niedersach Rie**	**148.98**	**349**	*e*PKPab	**PKPab**	**23**	**03**	**01.4**	**-0.5**
OKC	**Ostrava-Krasne**	**149.22**	**337**	⇑*i*PKP	**PKPbc**	**23**	**02**	**55.4**	**-0.8**
UPC	**Upice**	**149.35**	**340**	⇑*i*PKP	**PKPbc**	**23**	**02**	**56.1**	**-0.4**
UPC				*e*PKPAB	**PKPab**	**23**	**03**	**03.6**	**-0.1**
DPC	**Dobruska-Polom**	**149.39**	**340**	*e*PKPdf	**PKPbc**	**23**	**02**	**56.5**	**-0.2**
DPC	**Dobruska-Polom**	**149.39**	**340**	⇑*i*PKP	**PKPbc**	**23**	**02**	**56.3**	**-0.3**
CLL	**Collm**	**149.47**	**344**	*e*PKPbc	**PKPbc**	**23**	**02**	**56.0**	**-0.7**
CLL				*e*PKPab	**PKPab**	**23**	**03**	**03.1**	**-1.0**
CLL	**Collm**	**149.47**	**344**	⫴*i*PKPbc	**PKPbc**	**23**	**02**	**56.0**	**-0.7**
	comp=Z,9.0nm,0.6s								
CLL				*i* PKPab	**PKPab**	**23**	**03**	**03.1**	**-1.0**
	comp=Z,7.0nm,0.8s								
MORC	**Moravsky Berou**	**149.48**	**338**	⫴*i*P	**PKPbc**	**23**	**02**	**56.5**	**-0.4**
KRLC	**Kraliky**	**149.48**	**339**	⇑*i*PKP	**PKPbc**	**23**	**02**	**56.3**	**-0.6**
BRG	**Berggiesshubel**	**149.63**	**343**	*i* PKP	**PKPbc**	**23**	**02**	**56.6**	**-0.5**
	comp=Z,7.7nm,0.8s								
BRG	**Berggiesshubel**	**149.63**	**343**	*e*PKPbc	**PKPbc**	**23**	**02**	**56.5**	**-0.6**
DRGR		**149.70**	**329**	⇑*i*P	**PKPbc**	**23**	**02**	**56.4**	**-1.1**
PVCC	**Panska Ves**	**149.76**	**342**	⇑*i*PKP	**PKPbc**	**23**	**02**	**57.0**	**-0.4**
PVCC				*e*PKPAB	**PKPab**	**23**	**03**	**03.8**	**-1.6**
ISP	**Isparta**	**149.94**	**308**	⫴*i*P	**PKPbc**	**23**	**02**	**56.6**	**-1.8**
LOT	**Lotru**	**150.11**	**326**	⫴*i*P	**PKPbc**	**23**	**02**	**57.5**	**-1.1**
PRU	**Pruhonice**	**150.25**	**342**	⇑*i*PKP	**PKPbc**	**23**	**02**	**57.9**	**-0.7**
PRU				*e*PKPAB	**PKPab**	**23**	**03**	**06.7**	**-0.7**
MOX	**Moxa**	**150.42**	**346**	*e*PKPbc	**PKPbc**	**23**	**02**	**58.0**	**-1.0**
TANN	**Tannenbergstha**	**150.43**	**344**	*e*PKPbc	**PKPbc**	**23**	**02**	**58.0**	**-1.1**
BZS	**Buzias**	**151.07**	**328**	⇑*i*P	**PKPbc**	**23**	**02**	**59.6**	**-1.0**
KHC	**Kasperske Hory**	**151.30**	**342**	⇑*i*PKP	**PKPbc**	**23**	**03**	**00.4**	**-0.7**
KHC				*e*PKPAB	**PKPab**	**23**	**03**	**11.5**	**-0.4**
WET	**Wettzell**	**151.49**	**343**	*e*PKPab	**PKPab**	**23**	**03**	**12.0**	**-0.7**
GEC2	**GERESS Array S**	**151.52**	**342**	*e*PKPbc	**PKPbc**	**23**	**03**	**00.9**	**-0.8**
GERES	**GERESS Array B**	**151.52**	**342**	PKPbc	**PKPbc**	**23**	**03**	**00.1**	**-1.6**
	comp=Z,0.7nm,0.4s,baz=22,slow=2.8,SNR=9.9								
GERES				PKPab	**PKPab**	**23**	**03**	**11.8**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=45,slow=4.0,SNR=6.6								
PKSM	**Moragy**	**151.98**	**333**	⇑*i*P	**PKPbc**	**23**	**03**	**01.4**	**-1.2**
VTS	**Vitosha**	**152.30**	**322**	⇑*i*P	**PKPab**	**23**	**03**	**16.7**	**+0.2**
RJOB	**Jochberg**	**152.79**	**342**	*e*PKPab	**PKPab**	**23**	**03**	**18.1**	**-0.2**

ROM 10 22:46:29.3±0.6, 44°02'N×10°14'E, h5km±3km, Md1.7/3, Ml1.0/1, 1C, Error ellipse: s-maj=6.6km s-min=2.0km az=95.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLC	**Villacollemand**	**0.23**	**51**	⇑*i*Pg	Pg	22 46 34.7	+0.9
VLC				Sg	Sg	22 46 38.0	+1.2
	23nm,0.1s						
PII	**Pisa**	**0.40**	**137**	Pg	Pg	22 46 38.0	+0.9
PII				Sg	Sb	22 46 45.2	-0.2
	3.0nm,0.2s						
GSCL	**Gusciola**	**0.46**	**44**	Pg	Pb	22 46 39.4	-0.6
GSCL				Sg	Sb	22 46 46.7	-0.5
	1.0nm,0.3s						

*ISK **10** 23:04:49.7, 37°.87N×29°.12E, h4km, MD2.7*
*DDA **10** 23:04:50.5, 37°.88N×29°.04E, h7km, MD2.9*
*CSEM **10** 23:04:50.4±0.2, 37°.87N×29°.08E, h8km, MD2.7, Error ellipse: s-maj=4.9km s-min=3.3km az=114.0*
*ISCJB **10** 23:04:50.6±0.5, 37°.88N±0°.03×29°.04E±0°.05, h5km±6km, Error ellipse: s-maj=6.4km s-min=4.6km az=3.2*

ISC 10 23:04:50.7±1.0, 37°.88N±0°.02×29°.08E±0°.03, h6km±9km, n26, σ0s50/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.13**	**198**	*e*PG	**Pg**	**23**	**04**	**53.3**	**-0.1**
DENT				*e*SG	**Sg**	**23**	**04**	**55.7**	**+0.5**
DENT	**Denizli**	**0.13**	**198**	*e*Pg	**Pg**	**23**	**04**	**53.3**	**-0.1**
DENT				*e*Sg	**Sg**	**23**	**04**	**55.7**	**+0.5**
DNZL	**Cakiroluk**	**0.19**	**189**	*i* P	**Pg**	**23**	**04**	**54.3**	**-0.2**
DNZL				*i* S	**Sg**	**23**	**04**	**57.2**	**+0.1**
DNZL	**Cakiroluk**	**0.19**	**189**	*i* P	**Pg**	**23**	**04**	**54.3**	**-0.2**
DNZL				*i* S	**Sg**	**23**	**04**	**57.2**	**+0.1**
KHL	**Karahalli**	**0.56**	**38**	*e*PG	**Pg**	**23**	**05**	**00.8**	**-0.7**
KHL	**Karahalli**	**0.56**	**38**	*e*Pg	**Pg**	**23**	**05**	**00.8**	**-0.7**
KHAL	**Karahalli**	**0.59**	**33**	*i* P	**Pg**	**23**	**05**	**01.5**	**-0.5**
KHAL	**Karahalli**	**0.59**	**33**	*i* P	**Pg**	**23**	**05**	**01.5**	**-0.5**
KULA	**Kula-Manisa**	**0.72**	**333**	*e*PG	**Pg**	**23**	**05**	**04.5**	**0.0**
KULA	**Kula-Manisa**	**0.72**	**333**	*e*Pg	**Pg**	**23**	**05**	**04.5**	**0.0**
MANT	**Manisa**	**0.74**	**326**	*i* P	**Pb**	**23**	**05**	**06.1**	**0.0**
MANT				*i* S	**Sg**	**23**	**05**	**14.8**	**+0.3**
MANT	**Manisa**	**0.74**	**326**	*i* P	**Pb**	**23**	**05**	**06.1**	**0.0**
MANT				*i* S	**Sg**	**23**	**05**	**14.8**	**+0.3**
GOLH	**Golhisar**	**0.74**	**149**	*i* P	**Pb**	**23**	**05**	**05.9**	**-0.2**
GOLH				*i* S	**Sb**	**23**	**05**	**17.4**	**+0.8**
GOLH	**Golhisar**	**0.74**	**149**	*i* P	**Pb**	**23**	**05**	**05.9**	**-0.2**
GOLH				*i* S	**Sb**	**23**	**05**	**17.4**	**+0.8**
YER	**Yerkesik**	**0.98**	**221**	*e*PG	**Pg**	**23**	**05**	**08.9**	**-0.5**
YER	**Yerkesik**	**0.98**	**221**	*e*Pg	**Pg**	**23**	**05**	**08.9**	**-0.5**
AYDN	**Tasoluk**	**0.98**	**258**	*i* P	**Pg**	**23**	**05**	**09.2**	**-0.2**
AYDN				*i* S	**Sg**	**23**	**05**	**21.2**	**-0.9**
AYDN	**Tasoluk**	**0.98**	**258**	*i* P	**Pg**	**23**	**05**	**09.2**	**-0.2**
AYDN				*i* S	**Sg**	**23**	**05**	**21.2**	**-0.9**
MLSB	**Milas**	**1.19**	**241**	*e*PN	**Pg**	**23**	**05**	**13.1**	**-0.4**
MLSB	**Milas**	**1.19**	**241**	*e*Pn	**Pg**	**23**	**05**	**13.1**	**-0.4**
GDZ	**Gediz**	**1.25**	**14**	*i* P	**Pb**	**23**	**05**	**15.0**	**+0.3**
GDZ				*i* S	**Sn**	**23**	**05**	**32.8**	**+0.7**
GDZ	**Gediz**	**1.25**	**14**	*i* P	**Pb**	**23**	**05**	**15.0**	**+0.3**
GDZ				*i* S	**Sn**	**23**	**05**	**32.8**	**+0.7**
SHUT	**Suhut-Afyon**	**1.34**	**59**	*e*PN	**Pn**	**23**	**05**	**15.5**	**-0.5**
SHUT	**Suhut-Afyon**	**1.34**	**59**	*e*Pn	**Pn**	**23**	**05**	**15.5**	**-0.5**
ALT	**Altintas**	**1.43**	**34**	*e*PN	**Pn**	**23**	**05**	**16.8**	**-0.4**
ALT	**Altintas**	**1.43**	**34**	*e*Pn	**Pn**	**23**	**05**	**16.8**	**-0.4**

*DDA **10** 23:17:27.9, 36°.46N×27°.93E, h11km, MD3.6*
*ISK **10** 23:17:27.9, 36°.52N×27°.96E, h76km, MD3.5*
*ISCJB **10** 23:17:28.7±0.3, 36°.50N±0°.02×27°.96E±0°.02, h67km±5km, Error ellipse: s-maj=4.2km s-min=2.7km az=147.8*
*ATH **10** 23:17:28.1, 36°.50N×27°.98E, h66km, ML3.1*
*CSEM **10** 23:17:29.3±0.1, 36°.46N×28°.04E, h60km, ML3.1, Error ellipse: s-maj=3.6km s-min=2.6km az=167.0*
*NSSC **10** 23:17:30.5±1.6, 36°.09N×28°.85E, h282km±131km, ML2.4*

ISC 10 23:17:29.3±0.9, 36°.48N±0°.03×27°.98E±0°.02, h58km±7km, n156, σ1s05/197, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.29**	**157**	*e*P	**Pn**	**23**	**17**	**39.8**	**+0.7**
ARG				*e*S	**Sn**	**23**	**17**	**47.6**	**+1.4**
ARG	**Arkhangelos**	**0.29**	**157**	*e*P	**Pn**	**23**	**17**	**39.8**	**+0.7**
DAT	**Datca**	**0.41**	**307**	PG	**Pn**	**23**	**17**	**40.6**	**+0.3**
DAT	**Datca**	**0.41**	**307**	*i* Pg	**Pn**	**23**	**17**	**40.6**	**+0.3**
TURN	**Turunc**	**0.63**	**52**	*i* P	**Pn**	**23**	**17**	**40.4**	**-2.1**
TURN				*i* S	**Sn**	**23**	**17**	**48.7**	**-3.6**
TURN	**Turunc**	**0.63**	**52**	*i* P	**Pn**	**23**	**17**	**40.4**	**-2.1**
TURN				*i* S	**Sn**	**23**	**17**	**48.7**	**-3.6**
DALY	**Dalyan (Mu¨la**	**0.63**	**58**	*e*PG	**Pn**	**23**	**17**	**43.5**	**+0.9**
DALY				*e*SG	**Sn**	**23**	**17**	**53.7**	**+1.4**
DALY	**Dalyan (Mu¨la**	**0.63**	**58**	*e*Pg	**Pn**	**23**	**17**	**43.5**	**+0.9**
DALY				*e*Sg	**Sn**	**23**	**17**	**53.7**	**+1.4**
NIS1	**Nisyros Isl.**	**0.66**	**281**	*e*P	**Pn**	**23**	**17**	**43.3**	**+0.4**
NIS1				*e*S	**Sn**	**23**	**17**	**52.8**	**-0.1**
NIS1	**Nisyros Isl.**	**0.66**	**281**	*e*P	**Pn**	**23**	**17**	**43.3**	**+0.4**
NIS1				*e*S	**Sn**	**23**	**17**	**52.8**	**-0.1**
YER	**Yerkesik**	**0.69**	**20**	*e*PG	**Pn**	**23**	**17**	**43.9**	**+0.5**
YER	**Yerkesik**	**0.69**	**20**	*e*Pg	**Pn**	**23**	**17**	**43.9**	**+0.5**
BODT	**Bodrum**	**0.79**	**317**	*e*PG	**Pn**	**23**	**17**	**44.5**	**-0.1**
BODT	**Bodrum**	**0.79**	**317**	*e*Pg	**Pn**	**23**	**17**	**44.5**	**-0.1**
MLSB	**Milas**	**0.83**	**348**	*e*PG	**Pn**	**23**	**17**	**45.0**	**-0.1**
MLSB	**Milas**	**0.83**	**348**	*e*Pg	**Pn**	**23**	**17**	**45.0**	**-0.1**
FETY	**Fethiye**	**0.90**	**80**	*e*PG	**Pn**	**23**	**17**	**46.0**	**+0.1**
FETY	**Fethiye**	**0.90**	**80**	*e*Pg	**Pn**	**23**	**17**	**46.0**	**+0.1**
KARP	**Karpathos**	**1.15**	**216**	*e*P	**Pn**	**23**	**17**	**49.3**	**+0.1**
KARP	**Karpathos**	**1.15**	**216**	*e*P	**Pn**	**23**	**17**	**49.3**	**+0.1**
AYDN	**Tasoluk**	**1.18**	**356**	*i* P	**Pn**	**23**	**17**	**50.4**	**+0.8**
AYDN				*i* S	**Sn**	**23**	**18**	**05.4**	**+0.6**
AYDN	**Tasoluk**	**1.18**	**356**	*i* P	**Pn**	**23**	**17**	**50.4**	**+0.8**
AYDN				*i* S	**Sn**	**23**	**18**	**05.4**	**+0.6**
AKAS	**Kas**	**1.33**	**100**	*i* P	**Pn**	**23**	**17**	**51.4**	**-0.4**
AKAS				*i* S	**Sn**	**23**	**18**	**08.2**	**-0.4**
AKAS	**Kas**	**1.33**	**100**	*i* P	**Pn**	**23**	**17**	**51.4**	**-0.4**
AKAS				*i* S	**Sn**	**23**	**18**	**08.2**	**-0.4**
KSL	**Kastellorizon**	**1.33**	**104**	*e*P	**Pn**	**23**	**17**	**51.8**	**+0.2**
KSL	**Kastellorizon**	**1.33**	**104**	*e*P	**Pn**	**23**	**17**	**51.8**	**+0.2**
GCAM	**G?zelcaml?**	**1.35**	**334**	*i* P	**Pn**	**23**	**17**	**52.5**	**+0.6**
GCAM				*i* S	**Sn**	**23**	**18**	**09.0**	**+0.1**
GCAM	**G?zelcaml?**	**1.35**	**334**	*i* P	**Pn**	**23**	**17**	**52.5**	**+0.6**
GCAM				*i* S	**Sn**	**23**	**18**	**09.0**	**+0.1**
GLHS	**Glhisar (BURDU**	**1.39**	**61**	*e*PN	**Pn**	**23**	**17**	**52.8**	**+0.3**
GLHS	**Glhisar (BURDU**	**1.39**	**61**	*e*Pn	**Pn**	**23**	**17**	**52.8**	**+0.3**
GOLH	**Golhisar**	**1.47**	**59**	*i* P	**Pn**	**23**	**17**	**55.1**	**+1.5**
GOLH				*i* S	**Sn**	**23**	**18**	**13.6**	**+1.7**
GOLH	**Golhisar**	**1.47**	**59**	*i* P	**Pn**	**23**	**17**	**55.1**	**+1.5**
GOLH				*i* S	**Sn**	**23**	**18**	**13.6**	**+1.7**
DNZL	**Cakiroluk**	**1.47**	**35**	*i* P	**Pn**	**23**	**17**	**54.3**	**+0.6**
DNZL				*i* S	**Sn**	**23**	**18**	**15.2**	**+3.1**
DNZL	**Cakiroluk**	**1.47**	**35**	*i* P	**Pn**	**23**	**17**	**54.3**	**+0.6**
DNZL				*i* S	**Sn**	**23**	**18**	**15.2**	**+3.1**
DENT	**Denizli**	**1.52**	**33**	*e*PN	**Pn**	**23**	**17**	**54.3**	**+0.1**
DENT	**Denizli**	**1.52**	**33**	*e*Pn	**Pn**	**23**	**17**	**54.3**	**+0.1**
ELL	**Elmali**	**1.57**	**80**	*e*PN	**Pn**	**23**	**17**	**55.4**	**+0.4**
ELL	**Elmali**	**1.57**	**80**	*e*Pn	**Pn**	**23**	**17**	**55.4**	**+0.4**
KORT	**Korkueli**	**1.97**	**74**	*i* P	**Pn**	**23**	**18**	**02.0**	**+1.6**
KORT				*i* S	**Sn**	**23**	**18**	**24.5**	**+0.5**
KORT	**Korkueli**	**1.97**	**74**	*i* P	**Pn**	**23**	**18**	**02.0**	**+1.6**
KORT				*i* S	**Sn**	**23**	**18**	**24.5**	**+0.5**
ZKR	**Zakros**	**1.98**	**227**	*e*P	**Pn**	**23**	**18**	**00.9**	**+0.5**
ZKR				*e*S	**Sn**	**23**	**18**	**24.8**	**+0.6**
ZKR	**Zakros**	**1.98**	**227**	*e*P	**Pn**	**23**	**18**	**00.9**	**+0.5**
ZKR				*e*S	**Sn**	**23**	**18**	**24.8**	**+0.6**
IZM	**Izmir**	**2.00**	**343**	*e*PN	**Pn**	**23**	**18**	**00.4**	**-0.3**
IZM	**Izmir**	**2.00**	**343**	*e*Pn	**Pn**	**23**	**18**	**00.4**	**-0.3**
BLCB	**Balcova**	**2.04**	**339**	*e*PN	**Pn**	**23**	**18**	**00.9**	**-0.3**
BLCB	**Balcova**	**2.04**	**339**	*e*Pn	**Pn**	**23**	**18**	**01.0**	**-0.3**
APE	**Apeiranthos**	**2.06**	**287**	*e*PN	**Pn**	**23**	**18**	**01.0**	**-0.3**
APE	**Apeiranthos**	**2.06**	**287**	*e*P	**Pn**	**23**	**18**	**01.6**	**+0.1**
APE				*e*S	**Sn**	**23**	**18**	**26.1**	**+0.1**
APE	**Apeiranthos**	**2.06**	**287**	*e*Pn	**Pn**	**23**	**18**	**01.2**	**-0.3**
APE	**Apeiranthos**	**2.06**	**287**	*e*P	**Pn**	**23**	**18**	**01.6**	**+0.1**
APE				*e*S	**Sn**	**23**	**18**	**26.1**	**+0.1**
MANT	**Manisa**	**2.06**	**13**	*i* P	**Pn**	**23**	**18**	**02.6**	**+0.9**
MANT				*i* S	**Sn**	**23**	**18**	**25.9**	**-0.4**
MANT	**Manisa**	**2.06**	**13**	*i* P	**Pn**	**23**	**18**	**02.6**	**+0.9**
MANT				*i* S	**Sn**	**23**	**18**	**25.9**	**-0.4**
KULA	**Kula-Manisa**	**2.10**	**15**	*e*PN	**Pn**	**23**	**18**	**02.1**	**0.0**
KULA	**Kula-Manisa**	**2.10**	**15**	*e*Pn	**Pn**	**23**	**18**	**02.1**	**0.0**
ANTB	**Antalya**	**2.19**	**78**	*e*PN	**Pn**	**23**	**18**	**03.9**	**+0.7**
ANTB	**Antalya**	**2.19**	**78**	*e*Pn	**Pn**	**23**	**18**	**03.9**	**+0.7**
KHL	**Karahalli**	**2.21**	**33**	*e*PN	**Pn**	**23**	**18**	**03.5**	**-0.1**
KHL	**Karahalli**	**2.21**	**33**	*e*Pn	**Pn**	**23**	**18**	**03.5**	**-0.1**
KHAL	**Karahalli**	**2.23**	**32**	*i* P	**Pn**	**23**	**18**	**04.3**	**+0.3**
KHAL				*i* S	**Sn**	**23**	**18**	**30.4**	**-0.1**
KHAL	**Karahalli**	**2.23**	**32**	*i* P	**Pn**	**23**	**18**	**04.3**	**+0.3**
KHAL				*i* S	**Sn**	**23**	**18**	**30.4**	**-0.1**
NPS	**Neapolis**	**2.28**	**238**	*e*P	**Pn**	**23**	**18**	**04.5**	**0.0**
NPS				*e*S	**Sn**	**23**	**18**	**30.6**	**-0.8**
NPS	**Neapolis**	**2.28**	**238**	*e*P	**Pn**	**23**	**18**	**04.5**	**0.0**
NPS				*e*S	**Sn**	**23**	**18**	**30.6**	**-0.8**
BCK	**Bucak**	**2.30**	**64**	*e*PN	**Pn**	**23**	**18**	**05.2**	**+0.3**
BCK	**Bucak**	**2.30**	**64**	*e*Pn	**Pn**	**23**	**18**	**05.2**	**+0.3**
AKS	**Akhisar**	**2.40**	**357**	*e*PN	**Pn**	**23**	**18**	**06.1**	**0.0**
AKS	**Akhisar**	**2.40**	**357**	*e*Pn	**Pn**	**23**	**18**	**06.1**	**0.0**
LAST	**Lasithi**	**2.43**	**238**	*e*P	**Pn**	**23**	**18**	**06.8**	**+0.2**
LAST				*e*S	**Sn**	**23**	**18**	**34.6**	**-0.5**
LAST	**Lasithi**	**2.43**	**238**	*e*P	**Pn**	**23**	**18**	**06.8**	**+0.2**
LAST				*e*S	**Sn**	**23**	**18**	**34.6**	**-0.5**
ISP	**Isparta**	**2.43**	**56**	*e*PN	**Pn**	**23**	**18**	**06.9**	**+0.3**
ISP	**Isparta**	**2.43**	**56**	*e*Pn	**Pn**	**23**	**18**	**06.9**	**+0.3**
CHOS	**Chios island**	**2.44**	**322**	*e*P	**Pn**	**23**	**18**	**06.8**	**0.0**
CHOS				*e*S	**Sn**	**23**	**18**	**35.2**	**-0.3**
CHOS	**Chios island**	**2.44**	**322**	*e*P	**Pn**	**23**	**18**	**06.8**	**0.0**
CHOS				*e*S	**Sn**	**23**	**18**	**35.2**	**-0.3**
DEMI	**Demirci**	**2.62**	**13**	*i* P	**Pn**	**23**	**18**	**09.8**	**+0.6**
DEMI				*i* S	**Sn**	**23**	**18**	**39.9**	**0.0**
DEMI	**Demirci**	**2.62**	**13**	*i* P	**Pn**	**23**	**18**	**09.8**	**+0.6**
DEMI				*i* S	**Sn**	**23**	**18**	**39.9**	**0.0**
SHUT	**Suhut-Afyon**	**2.90**	**44**	*e*PN	**Pn**	**23**	**18**	**13.5**	**+0.3**
SHUT	**Suhut-Afyon**	**2.90**	**44**	*e*Pn	**Pn**	**23**	**18**	**13.5**	**+0.3**
SIVA	**Sivas**	**2.97**	**241**	*e*P	**Pn**	**23**	**18**	**15.2**	**+1.3**
SIVA				*e*S	**Sn**	**23**	**18**	**48.5**	**+0.3**
SIVA	**Sivas**	**2.97**	**241**	*e*P	**Pn**	**23**	**18**	**15.2**	**+1.3**
SIVA				*e*S	**Sn**	**23**	**18**	**48.5**	**+0.3**
ALT	**Altintas**	**3.07**	**33**	*e*PN	**Pn**	**23**	**18**	**15.7**	**+0.3**
ALT	**Altintas**	**3.07**	**33**	*e*Pn	**Pn**	**23**	**18**	**15.7**	**+0.3**
PRK	**Paraskevi**	**3.07**	**334**	*e*P	**Pn**	**23**	**18**	**15.9**	**+0.6**
PRK				*e*S	**Sn**	**23**	**18**	**50.6**	**-0.2**
PRK	**Paraskevi**	**3.07**	**334**	*e*P	**Pn**	**23**	**18**	**15.9**	**+0.6**
PRK				*e*S	**Sn**	**23**	**18**	**50.6**	**-0.2**
BALB	**Balikesir**	**3.15**	**359**	*e*PN	**Pn**	**23**	**18**	**16.6**	**+0.2**
BALB	**Balikesir**	**3.15**	**359**	*e*Pn	**Pn**	**23**	**18**	**16.6**	**+0.2**
DST	**Dursunbey**	**3.16**	**9**	*e*PN	**Pn**	**23**	**18**	**16.7**	**+0.2**
DST	**Dursunbey**	**3.16**	**9**	*e*Pn	**Pn**	**23**	**18**	**16.7**	**+0.2**
TVSB	**Tavsanli**	**3.18**	**21**	*e*PN	**Pn**	**23**	**18**	**17.2**	**+0.2**
TVSB	**Tavsanli**	**3.18**	**21**	*e*Pn	**Pn**	**23**	**18**	**17.2**	**+0.2**
VAM	**Vamos**	**3.25**	**252**	*e*P	**Pn**	**23**	**18**	**19.1**	**+1.3**
VAM				*e*S	**Sn**	**23**	**18**	**55.8**	**+0.5**
VAM	**Vamos**	**3.25**	**252**	*e*P	**Pn**	**23**	**18**	**19.1**	**+1.3**
VAM				*e*S	**Sn**	**23**	**18**	**55.8**	**+0.5**
GONE	**Gonen-Balikesi**	**3.57**	**356**	*e*PN	**Pn**	**23**	**18**	**22.0**	**-0.1**
GONE	**Gonen-Balikesi**	**3.57**	**356**	*e*Pn	**Pn**	**23**	**18**	**22.0**	**-0.1**
GVD	**Gavdhos**	**3.57**	**244**	*e*P	**Pn**	**23**	**18**	**23.3**	**+1.1**
GVD				*e*S	**Sn**	**23**	**19**	**03.2**	**+0.1**
GVD	**Gavdhos**	**3.57**	**244**	*e*P	**Pn**	**23**	**18**	**23.3**	**+1.1**
GVD				*e*S	**Sn**	**23**	**19**	**03.2**	**+0.1**
EZN	**Ezine**	**3.58**	**339**	*e*PN	**Pn**	**23**	**18**	**22.4**	**+0.1**
EZN	**Ezine**	**3.58**	**339**	*e*Pn	**Pn**	**23**	**18**	**22.4**	**+0.1**
PTL	**Penteli**	**3.64**	**297**	*e*P	**Pn**	**23**	**18**	**23.6**	**+0.5**
PTL	**Penteli**	**3.64**	**297**	*e*P	**Pn**	**23**	**18**	**23.6**	**+0.5**
ATH	**Athens Observa**	**3.72**	**295**	*e*P	**Pn**	**23**	**18**	**24.1**	**0.0**
ATH	**Athens Observa**	**3.72**	**295**	*e*P	**Pn**	**23**	**18**	**24.1**	**0.0**
KCTX	**Karacabey (Bur**	**3.79**	**4**	*e*PN	**Pn**	**23**	**18**	**25.3**	**+0.2**
KCTX	**Karacabey (Bur**	**3.79**	**4**	*e*Pn	**Pn**	**23**	**18**	**25.3**	**+0.2**
NAIG	**Nisos Aigina**	**3.81**	**291**	*e*P	**Pn**	**23**	**18**	**27.0**	**+1.6**
NAIG	**Nisos Aigina**	**3.81**	**291**	*e*P	**Pn**	**23**	**18**	**27.0**	**+1.6**
ANKY	**Antikythira Is**	**3.84**	**262**	*e*P	**Pn**	**23**	**18**	**27.1**	**+1.3**
ANKY	**Antikythira Is**	**3.84**	**262**	*e*P	**Pn**	**23**	**18**	**27.1**	**+1.3**
EDC	**Edincik**	**3.86**	**359**	*e*PN	**Pn**	**23**	**18**	**26.3**	**+0.2**
EDC	**Edincik**	**3.86**	**359**	*e*Pn	**Pn**	**23**	**18**	**26.3**	**+0.2**
BNT	**Bandirma**	**3.87**	**359**	*e*PN	**Pn**	**23**	**18**	**26.1**	**-0.1**
BNT	**Bandirma**	**3.87**	**359**	*e*Pn	**Pn**	**23**	**18**	**26.1**	**-0.1**
KRBG	**Karabiga-Canak**	**3.94**	**352**	*e*PN	**Pn**	**23**	**18**	**27.1**	**-0.1**
KRBG	**Karabiga-Canak**	**3.94**	**352**	*e*Pn	**Pn**	**23**	**18**	**27.1**	**-0.1**
KYTH	**Kithira**	**4.00**	**269**	*e*P	**Pn**	**23**	**18**	**29.4**	**+1.4**
KYTH	**Kithira**	**4.00**	**269**	*e*P	**Pn**	**23**	**18**	**29.4**	**+1.4**
LPK	**Lapseki**	**4.00**	**346**	*e*PN	**Pn**	**23**	**18**	**28.0**	**0.0**
LPK	**Lapseki**	**4.00**	**346**	*e*Pn	**Pn**	**23**	**18**	**28.0**	**0.0**
LIA	**Limnos Island**	**4.06**	**328**	*e*P	**Pn**	**23**	**18**	**29.8**	**+1.0**
LIA	**Limnos Island**	**4.06**	**328**	*e*P	**Pn**	**23**	**18**	**29.8**	**+1.0**
VLI	**Veliai**	**4.07**	**275**	*e*P	**Pn**	**23**	**18**	**30.3**	**+1.4**
VLI				*e*S	**Sn**	**23**	**19**	**14.6**	**-0.7**
VLI	**Veliai**	**4.07**	**275**	*e*P	**Pn**	**23**	**18**	**30.3**	**+1.4**
VLI				*e*S	**Sn**	**23**	**19**	**14.6**	**-0.7**
GELI	**Tayfur-Gelibol**	**4.08**	**344**	*e*PN	**Pn**	**23**	**18**	**29.1**	**0.0**
GELI	**Tayfur-Gelibol**	**4.08**	**344**	*e*Pn	**Pn**	**23**	**18**	**29.1**	**0.0**
SMTH	**Samothraki Isl**	**4.42**	**335**	*e*P	**Pn**	**23**	**18**	**34.6**	**+0.8**
SMTH				*e*S	**Sn**	**23**	**19**	**22.5**	**-1.5**
SMTH	**Samothraki Isl**	**4.42**	**335**	*e*P	**Pn**	**23**	**18**	**34.6**	**+0.8**
SMTH				*e*S	**Sn**	**23**	**19**	**22.5**	**-1.5**
LKR	**Lokris**	**4.51**	**300**	*e*P	**Pn**	**23**	**18**	**36.8**	**+1.8**
LKR	**Lokris**	**4.51**	**300**	*e*P	**Pn**	**23**	**18**	**36.8**	**+1.8**
ALN	**Alexandroupoli**	**4.66**	**342**	*e*P	**Pn**	**23**	**18**	**37.7**	**+0.7**
ALN	**Alexandroupoli**	**4.66**	**342**	*e*P	**Pn**	**23**	**18**	**37.7**	**+0.7**
NEO	**Neokhori**	**4.70**	**308**	*e*P	**Pn**	**23**	**18**	**39.1**	**+1.4**
NEO	**Neokhori**	**4.70**	**308**	*e*P	**Pn**	**23**	**18**	**39.1**	**+1.4**
KLV	**Kalavryta, Ach**	**4.91**	**290**	*e*P	**Pn**	**23**	**18**	**43.0**	**+2.5**
KLV	**Kalavryta, Ach**	**4.91**	**290**	*e*P	**Pn**	**23**	**18**	**43.0**	**+2.5**
KALE	**Kalithea**	**5.03**	**294**	*e*P	**Pn**	**23**	**18**	**43.6**	**+1.5**
KALE	**Kalithea**	**5.03**	**294**	*e*P	**Pn**	**23**	**18**	**43.6**	**+1.5**
TRIZ	**Trizonia**	**5.07**	**294**	*e*P	**Pn**	**23**	**18**	**44.3**	**+1.7**
TRIZ	**Trizonia**	**5.07**	**294**	*e*P	**Pn**	**23**	**18**	**44.3**	**+1.7**
LAKA	**Lakka**	**5.09**	**292**	*e*P	**Pn**	**23**	**18**	**44.7**	**+1.7**
LAKA	**Lakka**	**5.09**	**292**	*e*P	**Pn**	**23**	**18**	**44.7**	**+1.7**
**

comp=Z,0.1nm,0.4s,baz=90,slow=9.3,SNR=2.4
ASAR Alice Springs 31.83 253 P P 00 11 22.2 -0.5
comp=Z,2.3nm,0.6s,baz=78,slow=8.8,SNR=32

ISCJB ***11*** *00:13:18.7±1.2,53˚.81N±0˚.05×163˚.73W±0˚.05, h28km±8km, mb3.7/3, Error ellipse: s-maj=9.6km s-min=4.4km az=159.4*

NEIC ***11*** *00:13:19.9, 53˚.88N×163˚.80W, h26km, ML3.3(AEIC), After AEIC.*

IDC ***11*** *00:13:20.9±1.7, 53˚.92N×163˚.04W, h0km, mb3.9/3, mb1 3.9/6, mb1mx3.5/30, mbtmp3.6/6, ML3.4/3, MS2.7/1, Ms1 2.9/1, ms1mx2.3/44, Error ellipse: s-maj=38.6km s-min=25.1km az=145.0*

ISC 11 00:13:20.1±2.8, 53˚.87N±0˚.09×163˚.81W×0˚.05, h24km±21km, n38, σ0˚.95/44, mb3.8/3, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRPK	**Brown Peak**	**0.77**	**3**	P	**Pn**	**00 13 34.3**	**-1.2**
BRPK				S	**Sb**	**00 13 45.0**	**-0.1**
SSLS	**Shishaldin Sou**	**0.85**	**353**	P	**Pn**	**00 13 35.9**	**-0.7**
SSLS				S	**Sn**	**00 13 48.3**	**+0.1**
SSLW	**Shishaldin Wes**	**0.92**	**349**	P	**Pn**	**00 13 36.9**	**-0.6**
ISNN	**Isanotski Nort**	**0.96**	**1**	P	**Pn**	**00 13 37.9**	**-0.2**
ISNN				S	**Sb**	**00 13 51.9**	**+1.5**
FALS	**False Pass**	**1.01**	**13**	P	**Pn**	**00 13 37.8**	**-0.9**
FALS				S	**Sn**	**00 13 51.5**	**-0.7**
AKUT	**Akutan**	**1.19**	**284**	P	**Pn**	**00 13 40.8**	**-0.4**
AKUT				S	**Sn**	**00 13 56.2**	**-0.3**
AKLV	**Akutan Long Va**	**1.30**	**284**	P	**Pn**	**00 13 42.1**	**-0.6**
AKLV				S	**Sn**	**00 13 59.0**	**-0.4**
ZRO	**Akutan Zero**	**1.30**	**281**	P	**Pn**	**00 13 42.2**	**-0.5**
AKGG	**Akutan Green G**	**1.33**	**285**	P	**Pn**	**00 13 42.9**	**-0.2**
AKRB	**Akutan Reef Bi**	**1.36**	**282**	P	**Pn**	**00 13 43.1**	**-0.4**
DRIA	**Deer Island**	**1.42**	**39**	P	**Pn**	**00 13 43.1**	**-1.2**
DT1	**Dutton Round H**	**1.52**	**35**	P	**Pn**	**00 13 44.8**	**-1.0**
UNV	**Unalaska Valle**	**1.60**	**270**	P	**Pn**	**00 13 45.5**	**-1.3**
UNV				S	**Sn**	**00 14 05.5**	**-1.1**
MTBL	**Makushin Table**	**1.70**	**274**	P	**Pn**	**00 13 48.1**	**-0.1**
DOL	**Dolgoi Island**	**1.71**	**41**	P	**Pn**	**00 13 47.5**	**-0.8**
MREP	**Makushin Rep't**	**1.74**	**269**	P	**Pn**	**00 13 48.9**	**+0.1**
MCIR	**Makushin Cirqu**	**1.83**	**274**	P	**Pn**	**00 13 50.1**	**+0.1**
MSOM	**Makushin Julie**	**1.86**	**270**	P	**Pn**	**00 13 50.2**	**-0.2**
PS4A	**Pavlof South-4**	**1.86**	**37**	P	**Pn**	**00 13 50.5**	**+0.1**
SDPT	**Sand Point**	**2.44**	**51**	P	**Pn**	**00 13 58.0**	**-0.3**
SDPT				S	**Sn**	**00 14 27.2**	**-0.1**
CHGN	**Chignik**	**3.94**	**50**	*e*Pn	**Pn**	**00 14 18.4**	**-0.6**
KDAK	**Kodiak Island**	**7.43**	**54**	Pn	**Pn**	**00 15 05.6**	**-1.3**
KDAK				S	Sn	00 16 24.1	-6.2
KDAK	**Kodiak Island** 0.4nm,0.3s,baz=259,slow=5.2,SNR=5.2	**7.43**	**54**	Pn	**Pn**	**00 15 05.6**	**-1.3**
KDAK	baz=286,slow=19,SNR=2.1			S	Sn	00 16 24.1	-6.2
RSO	**Redoubt South** 16nm,0.7s	**8.92**	**38**	*e*Pn	**Pn**	**00 15 26.6**	**-0.8**
PPLA	**Purkeypile**	**10.89**	**29**	*e*Pn	**Pn**	**00 15 52.1**	**-2.2**
ILAR	**Eielson Array**	**13.87**	**31**	Pn	**Pn**	**00 16 33.0**	**-1.8**
ILAR	**Eielson Array** 0.1nm,0.3s,baz=221,slow=12,SNR=3.6	**13.87**	**31**	Pn	**Pn**	**00 16 33.0**	**-1.8**
ILAR	comp=Z,37nm,20.9s,baz=99,slow=40			LR	LR	00 22 21.9	
COLD	**Coldfoot** 4.4nm,1.1s	**14.91**	**21**	*e*Pn	**Pn**	**00 16 50.3**	**+1.2**
DLBC	**Dease Lake**	**19.23**	**63**	P	**Pn**	**00 17 44.1**	**+0.8**
DLBC	**Dease Lake** 0.1nm,0.3s,baz=248,slow=10,SNR=4.6	**19.23**	**63**	P	**Pn**	**00 17 44.1**	**+0.8**
INK	**Inuvik**	**20.25**	**33**	P	**P**	**00 17 52.4**	**-0.9**
INK	**Inuvik** 0.2nm,0.3s,baz=233,slow=10,SNR=8.1	**20.25**	**33**	P	**P**	**00 17 52.4**	**-0.9**
YKA	**Yellowknife Ar**	**26.70**	**51**	P	**P**	**00 18 57.3**	**+0.3**
YKA	**Yellowknife Ar** 0.5nm,0.6s,baz=274,slow=9.8,SNR=9.6	**26.70**	**51**	P	**P**	**00 18 57.3**	**+0.3**
TXAR	**Lajitas Array**	**49.45**	**95**	P	**P**	**00 22 09.3**	**+1.2**
TXAR	**Lajitas Array** 0.8nm,0.7s,baz=301,slow=5.6,SNR=13	**49.45**	**95**	P	**P**	**00 22 09.3**	**+1.2**
CMAR	**Chiang Mai Arr**	**79.47**	**287**	P	P	00 25 31.8	+7.2
CMAR	**Chiang Mai Arr** 0.8nm,0.4s,baz=30,slow=4.3,SNR=4.1	**79.47**	**287**	P	P	00 25 31.8	+7.2

WEL 11 00:17:07.5±0.8, 38˚.30S×175˚.99E, h125km±8km, ML3.5/4, 1C-1D, Error ellipse: s-maj=5.6km s-min=4.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.88**	**88**	PN	Pn	00 17 28.8	-0.1
URZ				*e*SN	Sn	00 17 45.7	+0.8
BKZ	**Black Stump Fm**	**0.95**	**156**	PN	Pn	00 17 29.2	-0.4
BKZ				*e*SN	Sn	00 17 45.8	-0.5
TUVZ	**Tukino**	**1.00**	**195**	PN	Pn	00 17 30.1	0.0
FWVZ	**Far West T-bar**	**1.01**	**200**	PN	Pn	00 17 30.1	-0.3
NMHZ	**Naumai**	**1.02**	**142**	PN	Pn	00 17 30.7	+0.5
TRVZ	**Turoa**	**1.06**	**199**	PN	Pn	00 17 30.7	-0.1
WNVZ	**Wahianoa**	**1.07**	**196**	PN	Pn	00 17 30.6	-0.2
MCHZ	**McNeill Hill**	**1.27**	**154**	PN	Pn	00 17 32.5	-0.1
KAHZ	**Kahuranaki**	**1.65**	**155**	PN	Pn	00 17 35.9	-1.1
MRZ	**Mangatainoka R**	**2.38**	**188**	⇑PN	Pn	00 17 42.9	-3.1
MRZ				SN	Sn	00 18 12.2	-3.3
BFZ	**Birch Farm**	**2.39**	**175**	PN	Pn	00 17 43.0	-3.1
OGWZ	**Otaki Gorge**	**2.59**	**194**	PN	Pn	00 17 45.4	-3.2
HOWZ	**Holdsworth Sta**	**2.62**	**188**	⇓PN	Pn	00 17 45.5	-3.6
MTW	**Mount Morrison**	**2.88**	**187**	PN	Pn	00 17 48.2	-4.2
CAW	**Cannon Point**	**2.89**	**194**	PN	Pn	00 17 48.7	-3.8

ISCJB ***11*** *00:17:52.6±0.3, 0˚.02S±0˚.03×123˚.32E±0˚.03, h182km±3km, mb4.5/58, Error ellipse: s-maj=5.2km s-min=4.2km az=159.0*

IDC ***11*** *00:17:53.5±1.5, 0˚.01N×123˚.04E, h179km±14km, mb4.2/26, mb1 4.2/28, mb1mx4.2/34, mbtmp4.2/28, Error ellipse: s-maj=17.1km s-min=7.6km az=82.0*

BJI ***11*** *00:17:53.4, 0˚.00N×123˚.20E, h180km, mB4.7/18, mb4.6/26*

AUST ***11*** *00:17:54.3±0.3, 0˚.13S×123˚.02E, h186km, Error ellipse: s-maj=1.3km s-min=0.9km az=230.0*

NEIC ***11*** *00:17:55.4±0.9, 0˚.05S×123˚.15E, h196km±8km, mb4.6/19, Error ellipse: s-maj=10.5km s-min=5.0km az=76.0*

DJA ***11*** *00:17:55.5±0.3, 0˚S±3˚×12˚3E±˚, h132km±5km, M4.8/6, mb4.9/5, mB5.0/5, MLv5.0/6, Mw(mB)4.3/5*

ISC 11 00:17:53.6±0.4, 0˚.04S±0˚.03×123˚.28E±0˚.04, h175km±2km, h176km:pP-P, n155, σ1˚.64/208, mb4.5/57, 2D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.93**	**49**	P	**Pn**	**00 18 19.9**	**-0.4**
LUWI	**Luwuk**	**1.12**	**207**	P	**Pn**	**00 18 20.7**	**-1.1**
LUWI				S	**Sn**	**00 18 39.7**	**-3.9**
LUWI	**Luwuk** baz=0.9,SNR=1000	**1.12**	**207**	P	**Pn**	**00 18 20.7**	**-1.1**
LUWI	baz=0.9,SNR=23			S	**Sn**	**00 18 40.8**	**-2.8**
MRSI	**Marisa**	**1.44**	**291**	P	**Pn**	**00 18 23.3**	**-1.3**
MNI	**Manado**	**2.14**	**47**	P	**Pn**	**00 18 31.6**	**-0.4**
SKSI	**Soroako, Sulaw**	**3.15**	**218**	P	**Pn**	**00 18 43.9**	**-0.1**
TNTI	**Ternate**	**4.16**	**79**	P	**Pn**	**00 18 56.2**	**-0.5**
TNTI				S	**Sn**	**00 19 44.1**	**-1.9**
LBMI	**Labuha**	**4.26**	**98**	P	**Pn**	**00 18 57.4**	**-0.6**
LBMI				S	**Sn**	**00 19 45.3**	**-3.0**
TTSI	**Tana Toraja**	**4.57**	**229**	P	**Pn**	**00 19 02.7**	**+0.7**
GAMI	**Galela, Maluku**	**4.88**	**67**	P	Pn	00 19 17.7	+12
NLAI	**Namlea**	**4.97**	**130**	P	**Pn**	**00 19 07.6**	**+0.5**
BBSI	**Bau Bau**	**5.46**	**187**	P	**Pn**	**00 19 12.6**	**-0.9**
SGKI	**Sangatta, Kali**	**5.70**	**265**	P	**Pn**	**00 19 16.4**	**-0.3**
KAPI	**Kappang**	**6.07**	**215**	*e*Pn	**Pn**	**00 19 21.3**	**-0.3**
KAPI				*e*Sn	**Sn**	**00 20 30.3**	**-0.5**
KAPI	**Kappang** 154nm,1.1s,2μm0.4nm	**6.07**	**215**	P	**Pn**	**00 19 21.7**	**+0.2**
KAPI	**Kappang** 7.6nm,0.3s,baz=32,slow=7.0,SNR=36	**6.07**	**215**	P	**Pn**	**00 19 21.3**	**-0.3**
KAPI	2.8nm,0.3s,baz=221,slow=20,SNR=3.0			S	**Sn**	**00 20 33.2**	**+2.5**
SMKI	**Samarinda**	**6.09**	**266**	P	**Pn**	**00 19 22.3**	**+0.5**
BKSI	**Bulukumba** 104nm,1.1s,1μm0.4nm	**6.12**	**211**	P	**Pn**	**00 19 23.3**	**+1.1**
BSSI	**Bau Bau, Buton**	**6.67**	**205**	P	Pn	00 19 32.9	+3.4
TSM	**Tawau**	**6.91**	**309**	P	**Pn**	**00 19 35.3**	**+2.7**
MYLDM	**Lahad Datu**	**7.05**	**317**	P	**Pn**	**00 19 37.5**	**+3.1**
MYLDM	**Lahad Datu** 160nm,1.0s,1μm0.5nm	**7.05**	**317**	P	Pn	00 19 38.5	+4.1
DAV	**Davao City (W)**	**7.42**	**18**	P	Pn	00 19 43.0	+3.6
DAV	**Davao City (W)** 23nm,0.3s,baz=239,slow=21,SNR=3.9	**7.42**	**18**	P	Pn	00 19 43.0	+3.6
SWI	**Sorong**	**8.02**	**96**	P	**Pn**	**00 19 47.3**	**0.0**
SDKM	**Sandakan**	**8.29**	**313**	P	**Pn**	**00 19 53.7**	**+2.8**
KKM	**Kota Kinabalu**	**9.29**	**311**	*e*Pn	**Pn**	**00 20 03.3**	**-0.7**
KKM	**Kota Kinabalu**	**9.29**	**311**	P	**Pn**	**00 20 06.7**	**+2.7**
KKM	**Kota Kinabalu** 43nm,0.6s,929nm	**9.29**	**311**	P	Pn	00 20 09.4	+5.3
KKM	**Kota Kinabalu** baz=9.2,SNR=9.2	**9.29**	**311**	P	Pn	00 20 00.2	-3.9
KDM	**Kudat**	**9.44**	**317**	P	Pn	00 20 09.1	+3.2
TGY	**Tagaytay City**	**14.24**	**351**	P	**P**	**00 21 10.3**	**+0.5**
TGY	**Tagaytay City** 27nm,0.3s,baz=252,slow=18,SNR=6.3	**14.24**	**351**	P	**P**	**00 21 10.3**	**+0.5**
MTN	**Manton Dam** baz=15,SNR=79	**14.91**	**149**	P	**Pn**	**00 21 16.0**	**+0.1**
KDU	**Kakadu** baz=16,SNR=19	**15.52**	**144**	P	**Pn**	**00 21 23.5**	**+0.1**
KNRA	**Kununurra** baz=16,SNR=18	**16.45**	**161**	P	**Pn**	**00 21 35.8**	**+1.1**
KNRA	baz=16,SNR=3.2			S	Sn	00 24 55.3	+16
JAY	**Jayapura** baz=18,SNR=3.5	**17.59**	**98**	P	**Pn**	**00 21 51.7**	**+3.3**
FITZ	**Fitzroy Crossi**	**18.10**	**173**	P	**P**	**00 21 53.0**	**+0.7**
FITZ	**Fitzroy Crossi** 7.4nm,0.3s,baz=5.3,slow=8.0,SNR=173	**18.10**	**173**	P	**P**	**00 21 53.0**	**+0.7**
FITZ	**Fitzroy Crossi** baz=18,SNR=100	**18.10**	**173**	P	**P**	**00 21 53.0**	**+0.7**
MNAI	**Manna** baz=20,SNR=5.5	**20.75**	**258**	S	Sn	00 26 15.7	-6.0
MBWA	**Marble Bar** 56nm,1.5s	**21.28**	**189**	*e*P	**P**	**00 22 26.0**	**-0.5**
WRAB	**Tennant Creek** 46nm,0.6s	**22.55**	**152**	*e*P	**P**	**00 22 38.8**	**-0.4**
WRA	**Warramunga Arr**	**22.55**	**152**	P	**P**	**00 22 38.8**	**-0.4**
WRA				ScP	**ScP**	**00 29 47.4**	**-0.6**
WRA	**Warramunga Arr** 41nm,0.6s,baz=328,slow=10,SNR=164	**22.55**	**152**	P	**P**	**00 22 38.8**	**-0.4**
WRA	1.3nm,0.6s,baz=329,slow=3.2,SNR=6.4			ScP	**ScP**	**00 29 47.4**	**-0.6**
IPM	**Ipoh**	**22.68**	**282**	P	**P**	**00 22 41.3**	**+0.8**
QIZ	**Qiongzhong**	**23.09**	**326**	P	**P**	**00 22 43.2**	**-0.9**
QIZ				sP	**sP**	**00 23 36.7**	**-1.8**
QIZ				S	**S**	**00 26 43.2**	**+1.2**
QIZ	comp=Z,13nm,1.0s			pmax	pmax		
QIZ	comp=Z,87nm,4.4s			pmax	pmax		
TPUB	**Ta-pu** comp=Z,65nm,1.3s	**23.34**	**354**	*e*P	**P**	**00 22 45.1**	**-1.2**
SSLB	**Suanglung** comp=Z,20nm,0.9s	**23.79**	**355**	*e*P	**P**	**00 22 50.5**	**0.0**
COEN	**Coen** comp=Z,385nm,1.6s	**24.07**	**126**	*e*P	**P**	**00 22 53.5**	**+0.5**
COEN	**Coen** baz=24,SNR=19	**24.07**	**126**	P	**P**	**00 22 53.2**	**+0.2**
AS31	**Alice Springs**	**25.65**	**157**	*e*P	**P**	**00 23 07.8**	**+0.4**
ASAR	**Alice Springs**	**25.65**	**157**	P	**P**	**00 23 07.7**	**+0.4**
ASAR	**Alice Springs** comp=Z,4.7nm,0.5s,baz=328,slow=8.6,SNR=39	**25.65**	**157**	P	**P**	**00 23 07.7**	**+0.4**
QIS	**Mount Isa** baz=26,SNR=16	**25.90**	**143**	P	**P**	**00 23 10.6**	**+1.1**
MEEK	**Meekatharra** baz=27,SNR=20	**26.82**	**189**	P	**P**	**00 23 17.3**	**-0.5**
MTSU	**Mount Surprise** baz=28,SNR=4.0	**27.40**	**132**	P	**P**	**00 23 21.6**	**-1.4**
MORW	**Morawa** baz=30,SNR=9.5	**29.68**	**193**	P	**P**	**00 23 42.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**30.16**	**309**	P	**P**	**00 23 48.8**	**+1.3**
CMAR				PcP	**PcP**	**00 26 40.2**	**-4.2**
CMAR	**Chiang Mai Arr** comp=Z,3.5nm,0.6s,baz=136,slow=7.0,SNR=13	**30.16**	**309**	P	**P**	**00 23 48.8**	**+1.3**
CMAR	comp=Z,0.8nm,0.3s,baz=164,slow=1.0,SNR=5.0			PcP	**PcP**	**00 26 40.2**	**-4.2**
CHTO	**Chiang Mai** comp=Z,7.6nm,0.8s	**30.36**	**309**	*e*P	**P**	**00 23 49.5**	**+0.2**
GYA	**Guiyang**	**30.83**	**330**	*e*P	**P**	**00 23 54.8**	**+1.4**
GYA				pP	**pP**	**00 24 30.2**	**+0.3**
GYA				sP	**sP**	**00 24 51.8**	**+1.7**
GYA				PP	**PnPn**	**00 25 03.4**	**+1.5**
GYA				PcP	**PcP**	**00 26 47.0**	**+0.7**
GYA				S	**S**	**00 28 44.5**	**+0.3**
GYA				ScP	**ScP**	**00 30 12.3**	**-0.3**
GYA				PcS	**PcS**	**00 30 29.4**	**-1.2**
GYA				ScS	**ScS**	**00 34 07.9**	**-2.0**
GYA	comp=Z,10.0nm,0.8s			pmax	pmax		
FORT	**Forrest** comp=Z,79nm,0.6s	**30.91**	**172**	*e*P	**P**	**00 23 53.9**	**+0.1**
FORT	**Forrest** baz=31,SNR=65	**30.91**	**172**	P	**P**	**00 23 54.0**	**+0.1**
BLDU	**Ballidu** baz=31,SNR=18	**31.04**	**191**	P	**P**	**00 23 54.5**	**-0.5**
KMBL	**Kambalda** baz=31,SNR=5.8	**31.19**	**182**	P	**P**	**00 23 56.2**	**-0.1**
KLBR	**Kellerberrin** baz=32,SNR=7.7	**31.82**	**189**	P	**P**	**00 24 01.4**	**-0.4**
KMI	**Kunming** comp=Z,12nm,1.0s	**31.94**	**323**	P	**P**	**00 24 05.0**	**+1.7**
KMI				pmax	pmax		
NJ2	**Nanjing**	**32.19**	**353**	*e*P	**P**	**00 24 06.9**	**+1.9**
NJ2	comp=Z,10.0nm,0.6s			pmax	pmax		
ENH	**Enshi** comp=Z,12nm,0.7s	**32.88**	**338**	*e*P	**P**	**00 24 11.1**	**-0.1**
NWAO	**Narrogin (SRO)**	**33.21**	**189**	P	**P**	**00 24 13.3**	**-0.6**
NWAO	**Narrogin (SRO)** comp=Z,5.0nm,0.4s,baz=349,slow=6.3,SNR=9.3	**33.21**	**189**	P	**P**	**00 24 13.3**	**-0.6**
QLP	**Quilpie** baz=33,SNR=12	**33.22**	**144**	P	**P**	**00 24 15.1**	**+1.0**
JNU	**Nakatsue**	**33.75**	**12**	P	**P**	**00 24 19.8**	**+1.2**
JNU	**Nakatsue** comp=Z,4.6nm,0.8s,baz=270,slow=9.1,SNR=3.9	**33.75**	**12**	P	**P**	**00 24 19.8**	**+1.2**
BBOO	**Buckleboo** comp=Z,94nm,0.7s	**34.75**	**161**	*e*P	**P**	**00 24 27.5**	**+0.2**
BBOO	**Buckleboo** baz=35,SNR=27	**34.75**	**161**	P	**P**	**00 24 27.4**	**+0.2**
CD2	**Chengdu**	**35.93**	**331**	P	**P**	**00 24 38.4**	**+1.0**
CD2				pP	**pP**	**00 25 15.1**	**+0.6**
CD2				sP	**sP**	**00 25 34.8**	**+0.2**
CD2				PP	**PnPn**	**00 26 06.8**	**+2.3**
CD2				PcP	**PcP**	**00 27 01.4**	**+0.9**
CD2				S	**S**	**00 30 04.0**	**+1.3**
CD2				PcS	**PcS**	**00 30 47.9**	**-0.4**
CD2				sS	**sS**	**00 31 08.1**	**0.0**
CD2				SS	**SS**	**00 32 38.7**	**-7.9**
CD2	comp=Z,10.0nm,0.5s			pmax	pmax		
CD2	comp=Z,120nm,5.2s			pmax	pmax		
STKA	**Stephens Creek** comp=Z,5.2nm,0.8s	**36.10**	**153**	*e*P	**P**	**00 24 39.7**	**+0.9**
STKA				ScP	**ScP**	**00 30 30.2**	**-0.7**
STKA	**Stephens Creek** comp=Z,21nm,0.5s,baz=326,slow=8.6,SNR=118	**36.10**	**153**	P	**P**	**00 24 39.6**	**+0.9**
STKA	comp=Z,2.7nm,0.9s,baz=332,slow=4.9,SNR=5.7			ScP	**ScP**	**00 30 30.2**	**-0.7**
STKA	**Stephens Creek** baz=36,SNR=87	**36.10**	**153**	P	**P**	**00 24 39.6**	**+0.9**
XAN	**Xi'an**	**36.48**	**340**	P	**P**	**00 24 42.2**	**+0.2**
XAN				pP	**pP**	**00 25 20.2**	**+1.0**
XAN	comp=Z,4.0nm,0.9s			pmax	pmax		
XAN	comp=Z,14nm,5.6s			pmax	pmax		
KSAR	**Wonju Array Be**	**37.54**	**6**	P	**P**	**00 24 50.7**	**-0.1**
KSRS	**Korea Array** comp=Z,2.2nm,0.7s,baz=184,slow=10.0,SNR=8.6	**37.55**	**6**	P	**P**	**00 24 50.7**	**-0.2**
CMAR	**Cobar Meteorol** baz=38,SNR=40	**37.84**	**148**	P	**P**	**00 24 54.9**	**+1.4**
MAJO	**Matsushiro** comp=Z,15nm,0.9s	**38.95**	**19**	*e*P	**P**	**00 25 01.5**	**-1.1**
MAT	**Matsushiro**	**38.95**	**19**	P	**P**	**00 25 01.2**	**-1.4**
MJAR	**Matsushiro Arr**	**38.95**	**19**	P	**P**	**00 25 01.1**	**-1.5**
MJAR	**Matsushiro Arr** comp=Z,13nm,0.7s,baz=196,slow=9.6,SNR=33	**38.95**	**19**	P	**P**	**00 25 01.1**	**-1.5**
LZH	**Lanzhou**	**40.23**	**335**	⇓P	**P**	**00 25 14.2**	**+0.8**
LZH				pP	**pP**	**00 25 49.7**	**-1.5**
LZH				sP	**sP**	**00 26 08.5**	**-2.6**
LZH				PP	**PnPn**	**00 26 53.1**	**-2.1**
LZH	comp=Z,21nm,1.3s			pmax	pmax		
LZH				pmax	pmax		
ARPS	**Mount Arapiles** baz=41,SNR=30	**40.39**	**157**	P	**P**	**00 25 15.8**	**+1.3**
ARMA	**Armidale** baz=41,SNR=8.4	**40.48**	**141**	P	**P**	**00 25 17.8**	**+2.3**
YNG	**Young** baz=42,SNR=10	**41.41**	**148**	P	**P**	**00 25 24.7**	**+1.8**
HHC	**Hu-ho-hao-te**	**42.07**	**347**	⇓P	**P**	**00 25 30.5**	**+2.2**
HHC				pP	**pP**	**00 26 08.7**	**+2.3**
HHC				sP	**sP**	**00 26 28.6**	**+2.4**
HHC				PP	**PP**	**00 27 13.8**	**+4.3**
HHC				PcP	**PcP**	**00 27 21.9**	**+2.1**
HHC				PcS	**PcS**	**00 31 12.7**	**+0.9**
HHC				S	**S**	**00 31 36.9**	**+2.5**
HHC				sS	**sS**	**00 32 44.0**	**+2.9**
HHC				SS	**SS**	**00 34 44.8**	**-4.3**
HHC				ScS	**ScS**	**00 35 11.2**	**-0.7**
HHC	comp=Z,28nm,1.1s			pmax	pmax		
HHC	comp=Z,210nm,5.4s			pmax	pmax		
HHC	comp=N,340nm,21.4s			LR	LR		
HHC	comp=E,2μm,21.4s			LR	LR		
HHC	comp=Z,260nm,21.4s			LR	LR		
CAN	**Canberra** comp=Z,20nm,0.7s	**42.51**	**148**	*e*P	**P**	**00 25 32.7**	**+0.9**
LSA	**Lhasa** comp=Z,7.3nm,0.5s	**42.57**	**317**	*e*P	**P**	**00 25 33.3**	**+0.4**
USRK	**Ussuriysk Arra** comp=Z,3.1nm,0.4s,baz=196,slow=7.9,SNR=12	**44.73**	**9**	P	**P**	**00 25 48.6**	**-0.7**
GTA	**Gaotai**	**44.75**	**334**	P	**P**	**00 25 50.8**	**+1.0**
GTA				pP	**pP**	**00 26 29.0**	**+0.7**
GTA				sP	**sP**	**00 26 47.2**	**-0.8**
GTA				S	**S**	**00 32 15.3**	**+1.8**
GTA				sS	**sS**	**00 33 17.8**	**-3.0**
GTA				SS	**ScS**	**00 35 32.7**	**+3.8**
GTA	comp=Z,17nm,1.2s			pmax	pmax		
GTA	comp=Z,110nm,5.2s			pmax	pmax		
MDJ	**Mudanjiang**	**44.82**	**6**	P	**P**	**00 25 49.8**	**-0.2**
MDJ	comp=Z,9.0nm,0.7s			pmax	pmax		
MDJ	comp=Z,22nm,3.9s			pmax	pmax		
ASAJ	**Asahikawa**	**47.22**	**19**	*e*P	**P**	**00 26 09.1**	**+0.3**
ASAJ	**Asahikawa** comp=Z,5.4nm,0.4s,baz=246,slow=17,SNR=7.7	**47.22**	**19**	P	**P**	**00 26 08.5**	**-0.3**
ULN	**Ulaanbaatar** comp=Z,8.8nm,0.7s	**49.76**	**346**	*e*P	**P**	**00 26 28.0**	**-0.4**
SONM	**Songino Array**	**49.90**	**345**	P	**P**	**00 26 28.2**	**-1.2**
SONM				PcP	**PcP**	**00 27 45.1**	**-2.0**
SONM	**Songino Array** comp=Z,11nm,0.8s,baz=160,slow=8.4,SNR=52	**49.90**	**345**	P	**P**	**00 26 28.2**	**-1.2**
SONM	comp=Z,1.2nm,0.8s,baz=149,slow=4.2,SNR=2.7			PcP	**PcP**	**00 27 45.1**	**-2.0**
WMQ	**Urumqi**	**53.97**	**329**	*e*P	**P**	**00 27 00.8**	**+1.3**
KSH	**Kashi**	**58.40**	**318**	*e*P	**P**	**00 27 30.7**	**-0.3**
KSH				*e*PcP	**PcP**	**00 28 22.1**	**+2.2**
KSH				*e*PP	**PP**	**00 29 42.1**	**-0.2**
KSH				*e*ScP	**ScP**	**00 32 05.2**	**+1.5**
KSH				*e*PcS	**PcS**	**00 32 22.1**	**+0.3**
KSH				*e*S	S	00 35 13.7	-6.5
KSH				*e*ScS	**ScS**	**00 37 00.5**	**-3.0**
KSH	comp=Z,5.0nm,0.9s			pmax	pmax		
KSH	comp=Z,130nm,2.9s			pmax	pmax		
KSH	comp=N,60nm,5.4s			LR	LR		
KSH	comp=E,55nm,3.9s			LR	LR		
KSH	comp=Z,67nm,5.2s			LR	LR		
MK31	**Makanchi Array**	**58.79**	**328**	*e*P	**P**	**00 27 32.2**	**-1.3**
MK31				*e*pP	**pP**	**00 28 12.6**	**-1.4**
MK31				*e*PcP	**PcP**	**00 28 19.8**	**-1.4**
MKAR	**Makanchi Array**	**58.79**	**328**	*e*P	**P**	**00 27 32.7**	**-0.8**
MKAR				PcP	**PcP**	**00 28 19.3**	**-1.9**
MKAR				ScP	**ScP**	**00 32 02.6**	**-2.6**
MKAR	**Makanchi Array** comp=Z,3.3nm,0.5s,baz=124,slow=8.4,SNR=71	**58.79**	**328**	P	**P**	**00 27 32.6**	**-0.9**
MKAR	comp=Z,1.8nm,0.5s,baz=146,slow=3.7,SNR=15			PcP	**PcP**	**00 28 19.3**	**-1.9**
MKAR	comp=Z,0.5nm,0.6s,baz=129,slow=4.1,SNR=4.2			ScP	**ScP**	**00 32 02.6**	**-2.6**
PETK	**Petropavlovsk-**	**60.21**	**23**	P	**P**	**00 27 43.6**	**+0.6**
PETK				PcP	**PcP**	**00 28 26.6**	**-0.1**
PETK	**Petropavlovsk-** comp=Z,5.0nm,0.5s,baz=212,slow=5.1,SNR=16	**60.21**	**23**	P	**P**	**00 27 43.6**	**+0.6**
PETK	comp=Z,1.3nm,0.6s,baz=227,slow=3.6,SNR=2.5			PcP	**PcP**	**00 28 26.6**	**-0.1**
TKM2	**Tokmak 2** comp=Z,3.8nm,1.0s	**60.39**	**321**	*e*P	**P**	**00 27 43.9**	**-0.9**
AAK	**Ala-Archa** comp=Z,1.0nm,1.4s	**60.94**	**321**	*e*P	**P**	**00 27 48.3**	**-0.1**
KBL	**Kabul** comp=Z,11nm,0.6s	**61.18**	**310**	*e*P	**P**	**00 27 50.1**	**-0.2**
KBL	**Kabul** baz=61,SNR=5.8	**61.18**	**310**	P	**P**	**00 27 50.4**	**+0.2**
EKS2	**Erkin-Say** comp=Z,9.9nm,1.4s	**61.41**	**320**	*e*P	**P**	**00 27 51.4**	**-0.1**
URZ	**Urewera**	**62.29**	**134**	P	**P**	**00 27 57.6**	**+0.3**
URZ	**Urewera** comp=Z,6.5nm,0.4s,baz=319,slow=22,SNR=5.5	**62.29**	**134**	P	**P**	**00 27 57.6**	**+0.3**
ZALV	**Zalesovo Beam**	**62.47**	**336**	P	**P**	**00 27 56.1**	**-2.0**
ZALV	**Zalesovo Beam** comp=Z,1.2nm,0.5s,baz=112,slow=6.3,SNR=9.3	**62.47**	**336**	P	**P**	**00 27 56.1**	**-2.0**
KURK	**

comp=Z,0.6nm,0.6s,baz=216,slow=6.1,SNR=4.1

ISK ***11*** *00:31:20.1, 37.˙63N×30.˙57E, h5km, MD3.2*
CSEM ***11*** *00:31:20.4±0.2, 37.˙63N×30.˙58E, h0km±1km, MD3.2, Error ellipse: s-maj=2.5km s-min=2.3km az=122.0*
DDA ***11*** *00:31:21.7, 37.˙58N×30.˙60E, h9km, MD3.5*
ISC 11 00:31:21.1±1.1,**37.˙62N**±0.˙02×**30.˙58E**±0.˙02,**h1**km±10km, **n73,σ1§06/92,Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BCK	**Bucak**	**0.16**	**178**	*e*PG			**Pg**	**00 31 23.5**	**-0.7**
BCK				*e*SG			**Sg**	**00 31 26.8**	**+0.5**
BCK	**Bucak**	**0.16**	**178**	*e*Pg			**Pg**	**00 31 23.5**	**-0.7**
BCK				*e*Sg			**Sg**	**00 31 26.8**	**+0.5**
KORT	**Korkueli**	**0.64**	**197**	*i* P			**Pg**	**00 31 33.1**	**-0.5**
KORT				*i* S			**Sb**	**00 31 45.0**	**+0.3**
KORT	**Korkueli**	**0.64**	**197**	*i* P			**Pg**	**00 31 33.0**	**-0.5**
KORT				*i* S			**Sb**	**00 31 45.0**	**+0.3**
KORT	**Korkueli**	**0.64**	**197**	*i* P			**Pg**	**00 31 33.0**	**-0.5**
KORT				*i* S			**Sb**	**00 31 45.0**	**+0.3**
ANTB	**Antalya**	**0.72**	**175**	*e*PG			**Pg**	**00 31 34.7**	**-0.2**
ANTB	**Antalya**	**0.72**	**175**	*e*Pg			**Pg**	**00 31 34.7**	**-0.2**
GOLH	**Golhisar**	**0.90**	**245**	*i* P			**Pg**	**00 31 37.9**	**-0.5**
GOLH				*i* S			**Sn**	**00 31 53.7**	**-0.9**
GOLH	**Golhisar**	**0.90**	**245**	*i* P			**Pg**	**00 31 38.0**	**-0.3**
GOLH				*i* S			**Sn**	**00 31 53.9**	**-0.7**
GOLH	**Golhisar**	**0.90**	**245**	*i* P			**Pg**	**00 31 38.0**	**-0.3**
GOLH				*i* S			**Sn**	**00 31 53.7**	**-0.9**
SHUT	**Suhut-Afyon**	**0.93**	**359**	*e*PG			**Pg**	**00 31 38.2**	**-0.9**
SHUT	**Suhut-Afyon**	**0.93**	**359**	*e*Pg			**Pg**	**00 31 38.2**	**-0.9**
GLHS	**Glhisar (BURDU**	**0.98**	**242**	*e*PG			**Pg**	**00 31 39.4**	**-0.5**
GLHS	**Glhisar (BURDU**	**0.98**	**242**	*e*Pg			**Pg**	**00 31 39.4**	**-0.5**
ELL	**Elmali**	**1.02**	**212**	*e*PG			**Pg**	**00 31 40.3**	**-0.4**
ELL	**Elmali**	**1.02**	**212**	*e*Pg			**Pg**	**00 31 40.3**	**-0.4**
KHL	**Karahalli**	**1.09**	**310**	*e*PG			**Pg**	**00 31 41.0**	**-1.1**
KHL	**Karahalli**	**1.09**	**310**	*e*Pg			**Pg**	**00 31 41.0**	**-1.1**
KHAL	**Karahalli**	**1.14**	**311**	*i* P			**Pg**	**00 31 41.5**	**-1.5**
KHAL				*i* S			**Sn**	**00 32 01.5**	**+0.8**
KHAL	**Karahalli**	**1.14**	**311**	*i* P			**Pg**	**00 31 41.5**	**-1.5**
KHAL				*i* S			**Sn**	**00 32 01.5**	**+0.8**
DNZL	**Cakiroluk**	**1.22**	**274**	*i* P			**Pg**	**00 31 44.6**	**0.0**
DNZL				*i* S			**Sn**	**00 32 05.0**	**+2.3**
DNZL	**Cakiroluk**	**1.22**	**274**	*i* P			**Pg**	**00 31 44.6**	**0.0**
DNZL				*i* S			**Sn**	**00 32 05.4**	**+2.7**
DNZL	**Cakiroluk**	**1.22**	**274**	*i* P			**Pg**	**00 31 44.6**	**0.0**
DENT	**Denizli**	**1.24**	**277**	*e*PN			**Pb**	**00 31 44.0**	**-1.3**
DENT	**Denizli**	**1.24**	**277**	*e*Pn			**Pb**	**00 31 44.0**	**-1.3**
KONT	**Konya--Tatoy**	**1.45**	**76**	*e*PN			**Pn**	**00 31 47.6**	**-0.9**
KONT	**Konya--Tatoy**	**1.45**	**76**	*e*Pn			**Pn**	**00 31 47.6**	**-0.9**
KDHN	**Kadinhani**	**1.51**	**53**	*i* P			**Pb**	**00 31 49.0**	**-1.0**
KDHN				*i* S			**Sg**	**00 32 12.4**	**+2.7**
KDHN	**Kadinhani**	**1.51**	**53**	*i* P			**Pn**	**00 31 48.8**	**-0.6**
KDHN				*i* S			**Sg**	**00 32 11.9**	**+2.2**
KDHN	**Kadinhani**	**1.51**	**53**	*i* P			**Pn**	**00 31 48.8**	**-0.6**
KDHN				*i* S			**Sg**	**00 32 11.9**	**+2.2**
LADK	**Ladik-KONYA**	**1.52**	**67**	*e*PN			**Pn**	**00 31 48.5**	**-1.0**
LADK	**Ladik-KONYA**	**1.52**	**67**	*e*Pn			**Pn**	**00 31 48.6**	**-1.0**
FETY	**Fethiye**	**1.55**	**231**	*e*PN			**Pn**	**00 31 48.9**	**-0.9**
FETY	**Fethiye**	**1.55**	**231**	*e*Pn			**Pn**	**00 31 48.9**	**-0.9**
AKAS	**Kas**	**1.59**	**210**	*i* P			**Pg**	**00 31 52.4**	**+0.8**
AKAS				*i* S			Sg	00 32 20.2	+8.0
AKAS	**Kas**	**1.59**	**210**	*i* P			**Pg**	**00 31 52.4**	**+0.8**
KIZT	**Kizilcal**	**1.62**	**39**	*e*PN			**Pn**	**00 31 50.1**	**-0.9**
KIZT	**Kizilcal**	**1.62**	**39**	*e*Pn			**Pn**	**00 31 50.1**	**-0.9**
GDZ	**Gediz**	**1.70**	**330**	*i* P			**Pn**	**00 31 51.4**	**-0.7**
GDZ				*i* S			**Sg**	**00 32 17.6**	**+1.7**
GDZ	**Gediz**	**1.70**	**330**	*i* P			**Pn**	**00 31 51.4**	**-0.7**
GDZ				*i* S			**Sg**	**00 32 16.5**	**+0.6**
GDZ	**Gediz**	**1.70**	**330**	*i* P			**Pn**	**00 31 51.4**	**-0.7**
GDZ				*i* S			**Sg**	**00 32 16.5**	**+0.6**
DALY	**Dalyan (Mu˘la**	**1.73**	**243**	*e*PN			**Pn**	**00 31 51.6**	**-0.8**
DALY	**Dalyan (Mu˘la**	**1.73**	**243**	*e*Pn			**Pn**	**00 31 51.6**	**-0.8**
KULA	**Kula-Manisa**	**1.76**	**301**	*e*PN			**Pn**	**00 31 51.5**	**-1.2**
KULA	**Kula-Manisa**	**1.76**	**301**	*e*Pn			**Pn**	**00 31 51.6**	**-1.2**
MANT	**Manisa**	**1.82**	**299**	*i* P			**Pb**	**00 31 54.6**	**-0.8**
MANT				*i* S			**Sg**	**00 32 23.8**	**+4.2**
MANT	**Manisa**	**1.82**	**299**	*i* P			**Pb**	**00 31 54.6**	**-0.8**
YER	**Yerkesik**	**1.89**	**256**	*e*PN			**Pn**	**00 31 54.0**	**-0.6**
YER	**Yerkesik**	**1.89**	**256**	*e*Pn			**Pn**	**00 31 54.0**	**-0.6**
ESKT	**Eskisehir**	**1.91**	**6**	*e*PN			**Pn**	**00 31 54.0**	**-0.9**
ESKT	**Eskisehir**	**1.91**	**6**	*e*Pn			**Pn**	**00 31 54.0**	**-0.9**
SVRH	**Sivrihisar-ESK**	**1.97**	**22**	*e*PN			**Pn**	**00 31 54.9**	**-0.8**
SVRH	**Sivrihisar-ESK**	**1.97**	**22**	*e*Pn			**Pn**	**00 31 54.9**	**-0.8**
TVSB	**Tavsanli**	**2.03**	**335**	*e*PN			**Pn**	**00 31 55.3**	**-1.2**
TVSB	**Tavsanli**	**2.03**	**335**	*e*Pn			**Pn**	**00 31 55.3**	**-1.2**
MLSB	**Milas**	**2.25**	**263**	*e*PN			**Pn**	**00 31 58.8**	**-0.8**
MLSB	**Milas**	**2.25**	**263**	*e*Pn			**Pn**	**00 31 58.8**	**-0.8**
SULT	**Sultanhani-AKS**	**2.39**	**75**	*e*PN			**Pn**	**00 32 01.2**	**-0.3**
SULT	**Sultanhani-AKS**	**2.39**	**75**	*e*Pn			**Pn**	**00 32 01.2**	**-0.3**
AKS	**Akhisar**	**2.52**	**301**	*e*PN			**Pn**	**00 32 02.6**	**-0.5**
AKS	**Akhisar**	**2.52**	**301**	*e*Pn			**Pn**	**00 32 02.6**	**-0.5**
DAT	**Datca**	**2.56**	**251**	*e*PN			**Pn**	**00 32 03.4**	**-0.4**
DAT	**Datca**	**2.56**	**251**	*e*Pn			**Pn**	**00 32 03.4**	**-0.4**
AFSR	**Af˘ar-Bala (A**	**2.67**	**46**	*e*PN			**Pn**	**00 32 05.1**	**-0.3**
AFSR	**Af˘ar-Bala (A**	**2.67**	**46**	*e*Pn			**Pn**	**00 32 05.1**	**-0.3**
GULT	**Gulveren**	**2.81**	**359**	*e*PN			**Pn**	**00 32 06.8**	**-0.5**
GULT	**Gulveren**	**2.81**	**359**	*e*Pn			**Pn**	**00 32 06.8**	**-0.5**
IZI	**Iznik**	**2.85**	**343**	*e*PN			**Pn**	**00 32 07.3**	**-0.5**
IZI	**Iznik**	**2.85**	**343**	*e*Pn			**Pn**	**00 32 07.3**	**-0.5**
ADVT	**Abdulvahap**	**2.89**	**347**	*e*PN			**Pn**	**00 32 07.8**	**-0.4**
ADVT	**Abdulvahap**	**2.89**	**347**	*e*Pn			**Pn**	**00 32 07.8**	**-0.4**
BALB	**Balikesir**	**2.92**	**314**	*e*PN			**Pn**	**00 32 08.5**	**-0.2**
BALB	**Balikesir**	**2.92**	**314**	*e*Pn			**Pn**	**00 32 08.5**	**-0.2**

NIED ***11*** *01:21:00, 46.˚10N×152.˚30E, h35km, Mw4.4 Best double couple: M0 5.26000×10^15 NP1:φs127.00000°, δ70.00000°, λ-29.00000°. NP2:φs228.00000°, δ63.00000°, λ-158.00000°.*
JMA ***11*** *01:21:04.9±0.7, 46.˚06N×152.˚32E, h30km, M4.9*
BJI ***11*** *01:21:04.0, 46.˚05N×152.˚19E, h39km, mB4.8/25, mb4.6/35, Ms4.3/24, Ms7 4.0/24*
MOS ***11*** *01:21:05.4±0.9, 46.˚14N×151.˚99E, h43km, mb5.1/57, Error ellipse: s-maj=7.3km s-min=4.8km az=97.4*
ISCJB ***11*** *01:21:06.0±0.5, 46.˚09N±0.˚04×151.˚99E±0.˚04, h49km±4km, mb4.6/142, MS3.7/16, Error ellipse: s-maj=7.3km s-min=3.4km az=148.4*
NEIC ***11*** *01:21:06.4±0.2, 46.˚20N×151.˚92E, h35km, mb4.8/65, Error ellipse: s-maj=6.8km s-min=3.7km az=152.0*
SKHL ***11*** *01:21:06.6±0.5, 46.˚09N×152.˚29E, h60km±7km, mb5.0/6, Ms3.8/1*
IDC ***11*** *01:21:07.2±2.6, 46.˚22N×151.˚92E, h42km±23km, mb4.1/23, mb1 4.3/28, mb1mx4.2/32, mbtmp4.1/28, ML3.9/5, MS3.5/13, Ms1 3.6/13, ms1mx3.3/45, Error ellipse: s-maj=16.2km s-min=10.8km az=156.0*
SZGRF ***11*** *01:21:13.3, 47.˚76N×152.˚29E, h33km, mb4.8, Kuril Islands, Russia*
ISC 11 01:21:06.7±0.5,**46.˚08N**±0.˚05×**152.˚11E**±0.˚04,**h41**km±2km, **n433,σ1§27/494,mb4.7/142,MS3.7/16,75C-12D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.09**	**256**	⇑*i*P	N		**Pn**	**01 21 54.0**	**+1.0**
KUR				*e*S			**Sn**	**01 22 30.0**	**+1.3**
KUR					pmax	pmax			
	comp=Z,1μm,0.8s								
KUR					pmax	pmax			
	comp=N,180nm,0.4s								
KUR					pmax	pmax			
	comp=E,160nm,0.4s								
KUR					smax	smax			
	comp=N,5μm,1.0s								
KUR					smax	smax			
	comp=E,3μm,0.8s								
KUR	**Kuril'sk**	**3.09**	**256**	⇑*i*P		**Pn**		**01 21 54.0**	**+1.0**
KUR					AMB	AMB		01 21 55.5	
	comp=E,180nm,0.4s								
KUR					AMB	AMB		01 21 55.5	
	comp=E,160nm,0.4s								
KUR					AMB	AMB		01 21 55.5	
	comp=E,1μm,0.8s								
KUR				*e*S		**Sn**		**01 22 30.0**	**+1.3**
KUR					A	A		01 22 38.0	
	comp=E,5μm,0.9s								
KUR					A	A		01 22 38.0	
	comp=E,3μm,0.9s								
YUK	**Yuzh-Kuril'sk**	**4.88**	**247**	*i* P	N		**Pn**	**01 22 19.3**	**+1.9**
YUK				*i* S			**Sn**	**01 23 13.8**	**+1.2**
YUK					pmax	pmax			
	comp=E,72nm,0.4s								
YUK					pmax	pmax			
	comp=Z,311nm,0.4s								
YUK					pmax	pmax			
	comp=N,151nm,0.5s								
YUK					smax	smax			
	comp=E,891nm,0.6s								
YUK					smax	smax			
	comp=N,985nm,0.6s								
YUK	**Yuzh-Kuril'sk**	**4.88**	**247**	⇑*i*P		**Pn**		**01 22 19.4**	**+2.0**
YUK					AMB	AMB		01 22 26.8	
	comp=N,151nm,0.4s								
YUK					AMB	AMB		01 22 26.8	
	comp=N,70nm,0.4s								
YUK					AMB	AMB		01 22 26.8	
	comp=N,310nm,0.4s								
YUK				*i* S		**Sn**		**01 23 13.9**	**+1.3**
YUK					A	A		01 23 35.2	
	comp=N,985nm,0.6s								
YUK					A	A		01 23 35.2	
	comp=N,891nm,0.6s								
NEM2	**Nemuro 2**	**5.29**	**241**	P	N		**Pn**	**01 22 22.7**	**-0.4**
NEM2				*e*S			**Sn**	**01 23 21.1**	**-1.6**
SKR	**Severo-Kuril's**	**5.32**	**29**	PN			**Pn**	**01 22 23.0**	**-0.5**
SKR					pmax	pmax			
	comp=Z,80nm,0.5s								
SKR					MLR	MLR			
	comp=Z,2μm,14.0s								
SKR	**Severo-Kuril's**	**5.32**	**29**	*e*P		**Pn**		**01 22 23.0**	**-0.5**
SKR					AMB	AMB		01 22 24.5	
	comp=Z,80nm,0.5s								
SKR				*e*S		**Sn**		**01 23 19.5**	**-4.0**
SKR					A	A		01 23 44.1	
	comp=Z,180nm,0.5s								
SKR					A	A		01 23 44.1	
	comp=Z,90nm,0.5s								
SKR					A	A		01 23 44.1	
	comp=Z,80nm,0.5s								
SKR					AMS	AMS		01 24 50.0	
	comp=Z,2μm,14.0s								
JRA	**Rausu**	**5.40**	**249**	P		**Pn**		**01 22 27.0**	**+2.4**
JRA				*e*S		**Sn**		**01 23 28.4**	**+3.0**
JNK	**Nakash**	**5.82**	**247**	P		**Pn**		**01 22 31.7**	**+1.3**
JNK				*e*S		**Sn**		**01 23 36.5**	**+0.7**
JAK	**Akkeshi**	**6.13**	**242**	P		**Pn**		**01 22 34.2**	**-0.5**
JAK				*e*S		**Sn**		**01 23 40.7**	**-2.7**
JTKR	**Abashiri--Toko**	**6.18**	**253**	P		**Pn**		**01 22 37.7**	**+2.3**
YSS	**Yuzh-Sakhalins**	**6.51**	**281**	⇑*e*PN		**Pn**		01 22 43.0	+3.1
YSS				*e*S		**Sn**		**01 23 55.0**	**+2.1**
YSS					pmax	pmax			
	comp=Z,50nm,0.8s								
YSS					MLR	MLR			
	comp=Z,400nm,16.0s								
YSS	**Yuzh-Sakhalins**	**6.51**	**281**	⇑*e*P		**Pn**		01 22 43.0	+3.1
YSS					AMB	AMB		01 22 46.1	
	comp=Z,50nm,0.8s								
YSS				*e*S		**Sn**		**01 23 55.0**	**+2.1**
YSS				*e*LQ		LQ		01 24 20.0	
YSS				*e*LR		LR		01 24 46.0	
YSS					AMS	AMS		01 25 08.0	
	comp=Z,400nm,16.0s								
JMP	**Maruseppu**	**6.54**	**255**	P		**Pn**		**01 22 42.6**	**+2.3**
JAR	**Ashorobuto**	**6.56**	**248**	P		**Pn**		**01 22 42.3**	**+1.7**
JAR				*e*S		**Sn**		**01 23 54.5**	**+0.4**
JOB	**Onbets**	**6.72**	**245**	P		**Pn**		**01 22 43.1**	**+0.4**
JSE	**Soyaes**	**6.79**	**264**	P		Pn		01 22 48.1	+4.5
JKK2	**Kamakawa 2**	**7.00**	**255**	P		**Pn**		**01 22 49.4**	**+2.8**
ASAJ	**Asahikawa**	**7.01**	**257**	*e*Pn		Pn		01 22 49.9	+3.1
ASAJ				*e*S		**Sn**		**01 24 04.1**	**-1.1**
ASAJ	**Asahikawa**	**7.01**	**257**	P		Pn		01 22 49.9	+3.1
ASAJ	**Asahikawa**	**7.01**	**257**	P		**Pn**		**01 22 49.5**	**+2.7**
	comp=Z,7.6nm,0.3s,baz=89,slow=14,SNR=36								
ASAJ					LR	LR		01 25 28.4	
	comp=Z,428nm,19.7s,baz=162,slow=38								
JCH	**Churui**	**7.16**	**244**	P		**Pn**		**01 22 48.4**	**-0.4**
JCH				*e*S		**Sn**		**01 24 06.3**	**-2.6**
JWK2	**Keihoku**	**7.19**	**268**	P		Pn		01 22 54.3	+5.1
JFR	**Furan**	**7.39**	**250**	P		**Pn**		**01 22 53.6**	**+1.6**
UGL	**Uglegorsk**	**7.42**	**297**	*e*P		**Pn**		**01 22 55.0**	**+2.6**
UGL					AMB	AMB		01 22 56.0	
	comp=Z,113nm,0.4s								
JAB	**Ashibetsu**	**7.49**	**253**	P		Pn		01 22 56.4	+3.1
ERM	**Erimo**	**7.62**	**241**	*c i*PN		**Pn**		**01 22 56.1**	**+1.0**
ERM					pmax	pmax			
	comp=Z,88nm,1.0s								
ERM	**Erimo**	**7.62**	**241**	*e*Pn		**Pn**		**01 22 56.5**	**+1.4**
ERM				*e*S		**Sn**		**01 24 20.5**	**+0.3**
JBT2	**Biratori 2**	**7.72**	**248**	P		**Pn**		**01 22 57.0**	**+0.6**
JNBK	**Urakawa-nobuka**	**7.72**	**244**	P		**Pn**		**01 22 55.7**	**-0.8**
TYV	**Tymovskoe**	**7.89**	**311**	*e*P		**Pn**		**01 23 00.5**	**+1.7**
TYV					AMB	AMB		01 23 02.0	
	comp=Z,6.0nm,0.6s								
TYV					AMB	AMB		01 23 02.0	
	comp=Z,9.0nm,0.6s								
TYV					AMB	AMB		01 23 02.0	
	comp=Z,13nm,0.6s								
PEA0B	**Petropavlovsk-**	**7.91**	**25**	*e*Pn		Pn		01 23 03.7	+4.6
PEA0B				*e*S		Sn		01 24 38.7	+11
PETK	**Petropavlovsk-**	**7.91**	**25**	PN		**Pn**		**01 23 00.0**	**+0.9**
PETK	**Petropavlovsk-**	**7.91**	**25**	P		**Pn**		**01 22 60.0**	**+0.9**
PETK	**Petropavlovsk-**	**7.91**	**25**	P		**Pn**		**01 22 60.0**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=185,slow=14,SNR=6.4								
JEW	**Eniwo**	**8.28**	**251**	P		**Pn**		**01 23 05.8**	**+1.6**
JNB	**Noboribetsu**	**8.72**	**250**	P		**Pn**		**01 23 11.0**	**+0.8**
JNB				*e*S		**Sn**		**01 24 46.1**	**-1.1**
JKB	**Kayabe**	**9.02**	**246**	P		**Pn**		**01 23 13.8**	**-0.4**
JKB				*e*S		**Sn**		**01 24 49.3**	**-5.1**
JSR	**Shiriuchi**	**9.60**	**246**	P		**Pn**		**01 23 21.8**	**-0.4**
JANG	**Nango**	**9.61**	**237**	P		**Pn**		**01 23 19.3**	**-3.0**
JANG				*e*S		Sn		01 24 59.6	-9.3
JTM	**Tenmabayashi**	**9.61**	**241**	P		**Pn**		**01 23 20.2**	**-2.2**
JTM				*e*S		Sn		01 25 01.5	-7.6
JTH	**Tanohata**	**9.69**	**234**	*e*S		Sn		01 25 00.7	-10
JOSM	**Okushiri--Mats**	**9.93**	**251**	P		**Pn**		**01 23 26.3**	**-0.4**
NKL	**Nikolayevsk**	**10.24**	**318**	*e*P		**Pn**		**01 23 30.0**	**-0.9**
NKL				*e*L		L		01 26 30.0	
NKL					AMS	AMS		01 27 54.0	
	comp=Z,350nm,16.0s								
NKL					AMS	AMS		01 27 54.0	
	comp=Z,500nm,16.0s								
OFUJ	**Ofunato**	**10.40**	**231**	*e*S		Sn		01 25 19.1	-9.2
JRG	**Rokugo**	**10.76**	**236**	P		Pn		01 23 34.4	-3.7
JIO	**Ouri**	**11.02**	**230**	*e*S		Sn		01 25 33.6	-10
HABR	**Khabarovsk**	**11.83**	**288**	*e*PN		**Pn**		**01 23 55.1**	**+2.4**
HABR					pmax	pmax			
	comp=E,32nm,1.7s								
HABR					pmax	pmax			
	comp=Z,23nm,1.1s								
HABR					pmax	pmax			
	comp=N,9.0nm,0.9s								
HABR					MLR	MLR			
	comp=Z,276nm,18.0s								
KLR	**Kul'dur**	**14.07**	**290**	*e*P		**Pn**		**01 24 21.8**	**-1.5**
KLR					MLR	MLR			
	comp=Z,500nm,14.0s								
MAJO	**Matsushiro**	**14.12**	**232**	*e*P		**Pn**		**01 24 21.9**	**-2.1**
MAJO	**Matsushiro**	**14.12**	**232**	*e*Pn		**Pn**		**01 24 21.9**	**-2.1**
MAT	**Matsushiro**	**14.12**	**232**	P		**Pn**		**01 24 21.9**	**-2.1**
MAT				S		**Sn**		**01 26 59.0**	**-0.3**
MJAR	**Matsushiro Arr**	**14.12**	**232**	P		**Pn**		**01 24 22.1**	**-1.9**
MJAR	**Matsushiro Arr**	**14.12**	**232**	P		**Pn**		**01 24 22.1**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=30,slow=14,SNR=15								
MJAR					LR	LR		01 30 41.9	
	comp=Z,74nm,18.7s,baz=40,slow=41								
USRK	**Ussuriysk Arra**	**14.32**	**270**	P		**Pn**		**01 24 25.9**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=71,slow=15,SNR=22								
USRK					LR	LR		01 29 34.7	
	comp=Z,222nm,21.3s,baz=352,slow=36								
FX1	**Attu Island--F**	**15.25**	**56**	*e*Pn		**Pn**		**01 24 40.0**	**+1.1**
FX1	**Attu Island--F**	**15.25**	**56**	P		**Pn**		**01 24 38.0**	**-0.9**
	comp=Z,4.6nm,0.3s,baz=187,slow=16,SNR=6.4								
MDJ	**Mudanjiang**	**15.89**	**273**	P		**Pn**		**01 24 45.6**	**-1.7**
MDJ				S		**Sn**		**01 27 38.3**	**-3.9**
MDJ				PcP		**PcP**		**01 29 46.6**	**+3.1**
MDJ				ScP		**ScP**		**01 33 17.4**	**+3.1**
MDJ				PcS		**PcS**		**01 33 21.3**	**+2.4**
MDJ					pmax	pmax			
	comp=Z,9.0nm,1.1s								
MDJ					pmax	pmax			
	comp=Z,25nm,3.4s								
MDJ					LR	LR			
	comp=N,66nm,15.9s								
MDJ					LR	LR			
	comp=E,150nm,19.9s								
MDJ					LR	LR			
	comp=Z,210nm,17.9s								
MDJ	**Mudanjiang**	**15.89**	**273**	*e*Pn		**Pn**		**01 24 47.5**	**+0.3**
	comp=Z,7.5nm,0.7s								
SEY	**Seymchan**	**16.89**	**0**	*i* P	N	**Pn**		**01 24 59.6**	**-0.1**
ZEA	**Zeya**	**17.68**	**305**	*e*P		**Pn**		**01 25 08.1**	**-1.5**
ZEA					AMB	AMB		01 25 09.4	
	comp=Z,23nm,1.0s								
CN2	**Changchun**	**18.98**	**273**	*e*P		**P**		**01 25 24.1**	**-0.4**
CN2				*e*PP		**PnPn**		**01 25 40.4**	**+1.9**
CN2				*e*S		Sn		01 28 49.1	-7.9
CN2				*e*SS		**SnSn**		**01 29 14.2**	**+3.2**
CN2					pmax	pmax			
	comp=Z,10.0nm,0.8s								
CN2					pmax	pmax			
	comp=Z,200nm,3.0s								
CN2					LR	LR			
	comp=N,200nm,18.0s								
CN2					LR	LR			
	comp=E,200nm,18.0s								
CN2					LR	LR			
	comp=Z,200nm,19.0s								
KSRS	**Korea Array**	**19.93**	**253**	P		**P**		**01 25 35.3**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=56,slow=11,SNR=22								
KSRS					LR	LR		01 32 16.6	
	comp=Z,121nm,19.2s,baz=353,slow=34								
KSAR	**Wonju Array Be**	**19.97**	**253**	P		**P**		**01 25 35.3**	**0.0**
YAK	**Yakutsk**	**20.52**	**329**	*e*P		Pn		01 25 44.8	+1.3
YAK					pmax	pmax			
	comp=E,35nm,1.0s								
YAK					pmax	pmax			
	comp=Z,107nm,1.0s								
YAK					pmax	pmax			
	comp=N,34nm,1.0s								
JNU	**Nakatsue**	**20.78**	**239**	LR		LR		01 33 53.2	
	comp=N,137nm,19.0s,baz=243,slow=37								
BILL	**Bilibino**	**23.20**	**14**	⇑*i*P		**P**		**01 26 09.3**	**-0.2**
BILL				*e*				01 26 37.7	
BILL				*e*				01 29 57.2	
BILL				*e*S		**S**		**01 30 15.2**	**-2.9**
BILL					pmax	pmax			
	comp=Z,37nm,0.7s								
BILL					MLR	MLR			
	comp=Z,200nm,25.0s								
NJ2	**Nanjing**	**29.14**	**253**	*e*P		**P**		**01 27 03.8**	**+0.1**
NJ2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
HHC	**Hu-ho-hao-te**	**29.65**	**275**	⇑*i*P		**P**		**01 27 09.2**	**+0.9**
HHC					pP	**pP**		**01 27 21.0**	**+1.4**
HHC					sP	**sP**		**01 27 26.5**	**+2.0**
HHC					PP	**PnPn**		**01 28 05.6**	**+1.3**
HHC					S	**S**		**01 31 58.6**	**-2.4**
HHC					sS	**sS**		**01 32 18.7**	**-1.1**
HHC					SS	**SnSn**		**01 33 32.7**	**+0.6**
HHC					PcS	**PcS**		**01 33 56.4**	**+1.3**
HHC					ScS	**ScS**		**01 37 44.4**	**-0.8**
HHC					pmax	pmax			
	comp=Z,37nm,1.0s								
HHC					pmax	pmax			
	comp=Z,100nm,5.1s								
HHC					LR	LR			
	comp=N,310nm,21.4s								
HHC					LR	LR			
	comp=E,680nm,23.2s								
HHC					LR	LR			
	comp=Z,150nm,21.4s								
SONM	**Songino Array**	**30.91**	**290**	P		**P**		**01 27 19.4**	**+0.1**
SONM				PcP		**PcP**		**01 30 15.2**	**+0.1**
SONM	**Songino Array**	**30.91**	**290**	P		**P**		**01 27 19.4**	**+0.1**
	comp=Z,1.5nm,1.0s,baz=73,slow=8.2,SNR=5.3								
SONM				PcP		**PcP**		**01 30 15.2**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=102,slow=2.4,SNR=3.3								
SONM					LR	LR	

ZALV Zalesovo Beam 42.44 306 P **P** **01 28 55.8 -1.3**
ZALV 01 30 49.5
ZALV Zalesovo Beam 42.44 306 P **P** **01 28 55.8 -1.3**
ZALV PcP **PcP** **01 30 49.5 0.0**
ZALV Zalesovo Beam 42.44 306 P **P** **01 28 55.8 -1.3**
comp=Z,0.6nm,0.3s,baz=69,slow=7.6,SNR=5.1
ZALV PcP **PcP** **01 30 49.5 0.0**
comp=Z,3.2nm,0.8s,baz=60,slow=3.6,SNR=11
ZALV LR LR 01 47 42.8
comp=Z,170nm,18.5s,baz=247,slow=38
INK Inuvik 42.59 32 P **P** **01 28 58.0 -0.1**
INK Inuvik 42.59 32 P **P** **01 28 58.0 -0.1**
comp=Z,2.1nm,0.8s,baz=284,slow=6.7,SNR=11
QIZ Qiongzhong 43.95 246 P **P** **01 29 11.8 +2.1**
QIZ S **S** **01 35 35.5 -3.0**
QIZ pmax pmax
comp=Z,77nm,5.8s
QIZ LR LR
comp=Z,120nm,6.4s
KMI Kunming 44.44 259 P **P** **01 29 12.0 -1.8**
KMI pmax pmax
comp=Z,8.0nm,1.0s
MK31 Makanchi Array 46.63 297 *eP* **P** **01 29 28.8 -1.9**
MK31 *e* 01 31 03.8
MK31 Makanchi Array 46.63 297 *eP* **P** **01 29 28.8 -1.9**
MK31 *e*PcP **PcP** **01 31 03.8 -0.2**
MKAR Makanchi Array 46.63 297 *eP* **P** **01 29 29.3 -1.4**
MKAR 01 31 03.9
MKAR Makanchi Array 46.63 297 *eP* **P** **01 29 29.2 -1.4**
MKAR PcP **PcP** **01 31 03.9 -0.1**
MKAR Makanchi Array 46.63 297 P **P** **01 29 29.1 -1.6**
comp=Z,2.8nm,0.9s,baz=70,slow=7.1,SNR=19
MKAR PcP **PcP** **01 31 03.9 -0.1**
comp=Z,2.3nm,0.8s,baz=60,slow=3.3,SNR=7.1
MKAR LR LR 01 50 03.7
comp=Z,109nm,20.2s,baz=354,slow=37
KURK Kurchatov 47.16 304 P **P** **01 29 33.0 -1.7**
KURK 01 31 05.5
KURK pmax pmax
comp=Z,3.0nm,0.7s
KURK Kurchatov 47.16 304 P **P** **01 29 33.0 -1.7**
comp=Z,3.3nm,0.7s
KURK PcP **PcP** **01 31 05.5 -0.2**
KURBB Kurchatov Arra 47.25 304 P **P** **01 29 33.0 -2.4**
comp=Z,2.2nm,0.5s,baz=71,slow=8.5,SNR=14
KURBB PcP **PcP** **01 31 05.5 -0.6**
comp=Z,1.4nm,0.9s,baz=67,slow=3.7,SNR=6.2
BRVK Borovoye 50.79 310⇑ *eP* **P** **01 30 01.3 -1.2**
BRVK pmax pmax
comp=Z,3.0nm,1.2s
BRVK MLR MLR
comp=Z,125nm,24.0s
BRVK Borovoye 50.79 310 *eP* **P** **01 30 00.8 -1.7**
comp=Z,37nm,2.6s
CHTO Chiang Mai 51.29 256 *eP* **P** **01 30 07.3 +0.6**
CHTO pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 51.29 256 *eP* **P** **01 30 07.3 +0.6**
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 51.54 256 P **P** **01 30 09.5 +1.0**
CMAR Chiang Mai Arr 51.54 256 P **P** **01 30 09.5 +1.0**
comp=Z,6.5nm,0.8s,baz=36,slow=7.7,SNR=26
CMAR LR LR 01 54 26.7
comp=Z,45nm,18.1s,baz=255,slow=39
SHL Shillong 51.66 268 *eP*KP **P** **01 30 11.0 +1.4**
RES Resolute Bay 51.69 18 *eP* **P** **01 30 08.6 -0.3**
comp=Z,2.7nm,1.0s
YKA Yellowknife Ar 51.87 36 P **P** **01 30 10.7 +0.3**
YKA PcP **PcP** **01 31 23.1 +0.4**
YKA Yellowknife Ar 51.87 36 P **P** **01 30 10.7 +0.3**
comp=Z,2.2nm,0.7s,baz=296,slow=7.0,SNR=25
YKA PcP **PcP** **01 31 23.1 +0.4**
comp=Z,0.6nm,0.8s,baz=316,slow=5.0,SNR=3.8
TAPN Taplejung 53.44 273 *eP* **P** **01 30 23.2 +0.3**
comp=Z,9.8nm,0.6s
AAK Ala-Archa 53.51 296*ceP* **P** **01 30 21.9 -1.1**
AAK pmax pmax
comp=Z,3.0nm,0.6s
AAK MLR MLR
comp=Z,268nm,22.0s
SVE Sverdlovsk 53.85 317 *eP* **P** **01 30 23.1 -2.0**
SVE pmax pmax
comp=Z,6.0nm,0.9s
ODAN Odare 53.97 273 *eP* **P** **01 30 25.8 -0.9**
KSH Kashi 54.26 292 P P 01 30 32.2 +3.6
KSH *e*pP pP 01 30 42.7 +2.3
KSH *e*sP sP 01 30 46.2 +1.0
KSH *e*PcP **PcP** **01 31 36.2 +3.8**
KSH *e*PP **PP** **01 32 35.3 +4.9**
KSH *e*ScP **ScP** **01 35 30.2 +3.1**
KSH *e*PcS **PcS** **01 35 34.2 +2.2**
KSH *e*S **S** **01 38 04.9 +1.7**
KSH *e*ScS **ScS** **01 40 15.2 +0.8**
KSH *e*SS **SS** **01 41 46.4 +1.4**
KSH pmax pmax
comp=Z,8.0nm,0.7s
KSH pmax pmax
comp=Z,140nm,4.2s
KSH LR LR
comp=N,95nm,5.2s
KSH LR LR
comp=E,160nm,4.9s
KSH LR LR
comp=Z,120nm,4.0s
GUN Gumba 54.37 275 *eP* **P** **01 30 30.0 +0.3**
comp=Z,22nm,0.6s
RAMN Ramite 54.46 273 *eP* **P** **01 30 30.3 0.0**
comp=Z,40nm,0.8s
KKN Kakani 54.86 275 *eP* **P** **01 30 33.2 +0.1**
comp=Z,33nm,0.8s
PKI Pulchoki 54.90 275 *eP* **P** **01 30 33.6 0.0**
comp=Z,12nm,0.6s
PKIN Phulchoki 54.91 275 *eP* **P** **01 30 33.5 0.0**
comp=Z,11nm,0.6s
ARU Arti 55.03 317*d iP* **P** **01 30 31.8 -1.9**
ARU 01 31 34.1
ARU 01 32 33.2
ARU S **S** **01 38 07.9 -4.8**
ARU pmax pmax
comp=Z,9.0nm,1.2s
DMN Daman 55.09 275 *eP* **P** **01 30 35.2 +0.4**
comp=Z,34nm,0.2s
DANN Dangsing 55.56 277 *eP* **P** **01 30 38.9 +0.6**
comp=Z,69nm,0.6s
KKAR Karatay Array 55.71 299 *eP* **P** **01 30 37.5 -1.3**
KKAR pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 55.71 299 *eP* **P** **01 30 37.5 -1.3**
comp=Z,0.5nm,0.3s
KOLN Koldanda 56.03 276 *eP* **P** **01 30 41.6 +0.1**
comp=Z,48nm,0.8s
PYUN Piuthan 56.25 277 *eP* **P** **01 30 43.5 +0.4**
comp=Z,118nm,1.0s
KEV Kevo 57.74 340 *eP* **P** **01 30 51.4 -1.3**
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 57.74 340 *ep* **P** **01 30 51.4 -1.3**
comp=Z,0.6nm,0.4s
ARCES ARCESS Array B 58.25 341 P **P** **01 30 55.9 -0.5**
ARCES ARCESS Array B 58.25 341 P **P** **01 30 55.9 -0.5**
comp=Z,2.6nm,0.7s,baz=43,slow=5.5,SNR=7.1
ARCES LR LR 01 56 48.2
comp=Z,47nm,21.1s,baz=138,slow=37
MSO Missoula 60.72 52 *eP* **P** **01 31 14.6 +0.7**
comp=Z,1.7nm,0.8s
SUMG Summit 61.41 4 *eP* **P** **01 31 17.5 -1.0**
SUMG pmax pmax
comp=Z,14nm,0.9s
SUMG Summit 61.41 4 *eP* **P** **01 31 17.5 -1.0**
comp=Z,14nm,0.9s
JOF Joensuu 61.62 333 *eP* **P** **01 31 16.8 -2.7**
JOF pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 61.62 333 *ep* **P** **01 31 16.8 -2.7**
comp=Z,2.3nm,0.7s
KBL Kabul 61.67 291 *eP* **P** **01 31 19.3 -1.3**
KBL pmax pmax
comp=Z,12nm,1.0s
KBL Kabul 61.67 291 *eP* **P** **01 31 19.3 -1.3**
comp=Z,12nm,1.0s
LRM Limekiln Ridge 62.15 52 *eP* **P** **01 31 25.1 +1.4**
NVAR Mina Array Bea 63.36 61 P **P** **01 31 33.4 +1.5**
NVAR Mina Array Bea 63.36 61 P **P** **01 31 33.4 +1.5**
comp=Z,1.6nm,0.7s,baz=291,slow=6.8,SNR=16
KAF Kangasniemi 63.75 335 *eP* **P** **01 31 31.3 -2.4**
KAF pmax pmax
comp=Z,2.0nm,0.6s
KAF Kangasniemi 63.75 335 *ep* **P** **01 31 31.3 -2.4**
comp=Z,1.7nm,0.6s
FINES FINESS Array B 64.35 334 P **P** **01 31 35.6 -2.0**
FINES FINESS Array B 64.35 334 P **P** **01 31 35.6 -2.0**
comp=Z,3.1nm,0.5s,baz=35,slow=7.7,SNR=23
MOOW Moose Ponds 64.41 53 *eP* **P** **01 31 40.6 +1.9**
comp=Z,18nm,2.3s
TPAW Teton Pass 64.46 53 *eP* **P** **01 31 41.2 +2.1**
comp=Z,6.4nm,1.1s
HWUT Hardware Ranch 65.33 55 *eP* **P** **01 31 46.4 +1.8**
comp=Z,1.7nm,0.6s
OBN Obninsk 65.47 325 *eP* **P** **01 31 42.4 -2.6**
OBN pmax pmax
comp=Z,7.0nm,0.8s
DUG Dugway 65.52 57 *eP* **P** **01 31 47.5 +1.7**
DUG pmax pmax
comp=Z,3.0nm,0.9s
DUG Dugway 65.52 57 *eP* **P** **01 31 47.5 +1.7**
comp=Z,2.8nm,0.9s
PDAR Pinedale Array 65.70 53 P **P** **01 31 47.8 +0.7**
PDAR Pinedale Array 65.70 53 P **P** **01 31 47.8 +0.7**
comp=Z,2.1nm,0.8s,baz=302,slow=2.8,SNR=14
CCUT Cedar City 66.92 59 *eP* **P** **01 31 56.3 +1.4**
comp=Z,9.1nm,1.9s
VSR Storozhevoye 67.20 321 *eP* **P** **01 31 55.3 -0.9**
VSR pmax pmax
comp=N,4.0nm,0.8s
VSR pmax pmax
comp=E,5.0nm,0.8s
VSR pmax pmax
comp=Z,6.0nm,0.8s
VORD Divnogorie 67.32 321 *eP* **P** **01 31 56.0 -0.9**
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,7.0nm,0.8s
VORD pmax pmax
comp=Z,4.0nm,0.8s
WRAB Tennant Creek 67.65 198 *eP* **P** **01 31 58.9 -0.4**
WRAB pmax pmax
comp=Z,2.0nm,0.8s
WRAB Tennant Creek 67.65 198 *eP* **P** **01 31 58.9 -0.4**
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 67.66 198 P **P** **01 31 59.5 +0.1**
WRA Warramunga Arr 67.66 198 P **P** **01 31 59.5 +0.1**
comp=Z,1.7nm,0.8s,baz=15,slow=6.8,SNR=8.7
RSSD Black Hills 67.78 49 *eP* **P** **01 32 00.6 +0.3**
RSSD pmax pmax
comp=Z,3.0nm,0.8s
RSSD Black Hills 67.78 49 *eP* **P** **01 32 00.6 +0.3**
comp=Z,3.3nm,0.8s
NB2 NORSAR Subarra 68.63 341 P **P** **01 32 03.7 -1.4**
comp=Z,2.0nm,0.5s,baz=28,slow=6.5
NOA NORSAR Array B 68.63 341 P **P** **01 32 03.9 -1.2**
NOA NORSAR Array B 68.63 341 P **P** **01 32 03.9 -1.2**
comp=Z,2.8nm,0.5s,baz=28,slow=6.4,SNR=15
NOA LR LR 02 05 51.9
comp=Z,46nm,20.4s,baz=10.0,slow=39
MAK Makhachkala 68.98 310 *eP* **P** **01 32 09.4 +1.9**
MAK MLR MLR
comp=Z,53nm,6.0s
PV01 Paradox Valley 69.35 56 *eP* **P** **01 32 10.7 +0.5**
comp=Z,88nm,0.6s
SMCO Snowmass 69.56 55 *eP* **P** **01 32 12.2 +0.5**
comp=Z,3.8nm,0.9s
ISCO Idaho Springs 69.89 53 *eP* **P** **01 32 14.9 +1.2**
ISCO pmax pmax
comp=Z,3.0nm,0.8s
ISCO Idaho Springs 69.89 53 *eP* **P** **01 32 14.8 +1.2**
comp=Z,3.0nm,0.8s
KIV Kislovodsk 70.76 314 *eP* **P** **01 32 19.5 +0.9**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,39nm,18.0s
KBZ Khabaz 70.82 314 P **P** **01 32 19.4 +0.6**
KBZ Khabaz 70.82 314 P **P** **01 32 19.4 +0.6**
KBZ Khabaz 70.82 314 P **P** **01 32 19.4 +0.6**
comp=Z,9.5nm,0.8s,baz=64,slow=4.5,SNR=21
ZEI Tsey 71.00 312 *eP* **P** **01 32 18.6 -1.6**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
EYMN Ely 71.13 40 *eP* **P** **01 32 20.4 -0.2**
comp=Z,7.4nm,1.1s
ASAR Alice Springs 71.36 198 P **P** **01 32 22.9 +0.7**
ASAR Alice Springs 71.36 198 P **P** **01 32 22.9 +0.7**
comp=Z,0.9nm,0.5s,baz=13,slow=5.5,SNR=13
AKASG Malin Array Be 71.71 326*ceP* **P** **01 32 22.2 -1.8**
AKASG pmax pmax
comp=Z,5.0nm,0.6s
AKASG Malin Array Be 71.71 326 P **P** **01 32 22.3 -1.8**
AKASG Malin Array Be 71.71 326 P **P** **01 32 22.3 -1.8**
comp=Z,5.2nm,0.6s,baz=33,slow=6.2,SNR=18
KIEV Kiev 71.72 326 *eP* **P** **01 32 22.0 -2.1**
KIEV pmax pmax
comp=Z,8.0nm,0.9s
KIEV Kiev 71.72 326 *eP* **P** **01 32 22.0 -2.1**
comp=Z,8.5nm,0.9s
ECSD EROS Data Cent 71.85 45 *eP* **P** **01 32 24.6 -0.4**
comp=Z,5.8nm,0.9s
ANN Anapa 72.70 317 *eP* **P** **01 32 32.3 +2.3**
ANN *e*PPP PPP 01 36 53.6
ANN *e*S **S** **01 41 55.0 +2.8**
ANN pmax pmax
comp=Z,39nm,1.6s
SCHQ Schefferville 74.19 22 P **P** **01 32 38.4 -0.3**
SCHQ Schefferville 74.19 22 P **P** **01 32 38.4 -0.3**
comp=Z,1.6nm,0.6s,baz=311,slow=9.3,SNR=6.1
KWP Kalwaria Pacla 75.04 329⇑P **P** **01 32 43.6 -0.1**
KWP Kalwaria Pacla 75.04 329⇑*i*P **P** **01 32 43.6 -0.1**
KWP Kalwaria Pacla 75.04 329 *eP* **P** **01 32 43.7 0.0**
LEOM Leova 75.47 324⇓P **P** **01 32 45.9 -0.3**
LEOM Leova 75.47 324⇓*i*P **P** **01 32 45.9 -0.3**
OJC Ojcow 75.56 331 *eP* **P** **01 32 46.3 -0.4**
OJC pmax pmax
comp=Z,12nm,1.1s
OJC Ojcow 75.56 331 *eP* **P** **01 32 46.3 -0.4**
comp=Z,12nm,1.1s
BUR08 Bucovina Ar. S 75.74 326 *eP* **P** **01 32 47.3 -0.6**
BURAR Bucovina Array 75.76 326⇓*i*P **P** **01 32 47.4 -0.6**
KOLS Kolonicke sedl 75.78 329 *eP* **P** **01 32 47.5 -0.4**
KOLS pmax pmax
comp=Z,8.0nm,1.1s
KOLS Kolonicke sedl 75.78 329 *eP* **P** **01 32 47.5 -0.4**
TESR Tescani 76.09 325⇑*i*P **P** **01 32 49.1 -0.7**
CRVS Cervenica-Dubn 76.09 329 *eP* **P** **01 32 48.3 -1.5**
CRVS pmax pmax
comp=Z,3.0nm,0.9s
CRVS Cervenica-Dubn 76.09 329 *eP* **P** **01 32 48.3 -1.5**
KSP Ksiaz 76.18 333 *eP* **P** **01 32 49.8 -0.4**
KSP Ksiaz 76.18 333 *eP* **P** **01 32 50.0 -0.2**
TLCR 76.26 323⇑P **P** **01 32 50.3 -0.4**
TLCR 76.26 323⇑*i*P **P** **01 32 50.3 -0.4**
TRPA Tarpa 76.35 328⇓*i*P **P** **01 32 51.1 0.0**
OKC Ostrava-Krasne 76.45 331 *eP* **P** **01 32 50.8 -0.9**
OKC Ostrava-Krasne 76.45 331 *eP* **P** **01 32 50.8 -0.9**
NRDL Niedersach Rie 76.54 337 *eP* **P** **01 32 51.7 -0.4**
comp=Z,6.0nm,0.9s
CFR Carcaliu 76.56 323⇑P **P** **01 32 51.7 -0.7**
CFR Carcaliu 76.56 323⇑*i*P **P** **01 32 51.7 -0.7**
UPC Upice 76.56 333 *eP* **P** **01 32 52.3 -0.1**
UPC Upice 76.56 333 *eP* **P** **01 32 52.3 -0.1**
VRI Vrincioaia 76.58 324⇑P **P** **01 32 51.4 -1.2**
VRI Vrincioaia 76.58 324⇑*i*P **P** **01 32 51.4 -1.2**
DPC Dobruska-Polom 76.60 333 *eP* **P** **01 32 52.8 +0.2**
DPC pmax pmax
comp=Z,7.0nm,0.9s
DPC Dobruska-Polom 76.60 333 *eP* **P** **01 32 52.8 +0.2**
comp=Z,6.8nm,0.9s
DPC Dobruska-Polom 76.60 333 *eP* **P** **01 32 52.8 +0.2**
KRLC Kraliky 76.69 332 *eP* **P** **01 32 52.9 -0.3**
KRLC Kraliky 76.69 332 *eP* **P** **01 32 52.9 -0.3**
MORC Moravsky Berou 76.70 332⇑P **P** **01 32 53.2 0.0**
MORC Moravsky Berou 76.70 332 *eP* **P** **01 32 52.5 -0.7**
comp=Z,8.3nm,0.9s
MORC Moravsky Berou 76.70 332⇑*i*P **P** **01 32 53.2 0.0**
CLL Collm 76.78 335 *i* P **P** **01 32 52.8 -0.8**
CLL pmax pmax
comp=Z,15nm,1.2s
CLL Collm 76.78 335 *eP* **P** **01 32 52.6 -1.0**
comp=Z,15nm,1.2s
CLL Collm 76.78 335 *i* P **P** **01 32 52.8 -0.8**
comp=Z,15nm,1.2s
CLL L L 02 09 00.0
comp=Z,100nm,21.4s
BRG Berggiesshubel 76.89 334 *eP* **P** **01 32 53.4 -0.8**
comp=Z,7.0nm,1.2s
BRG Berggiesshubel 76.89 334 *eP* **P** **01 32 53.4 -0.8**
comp=Z,7.0nm,1.2s
TIRR Tirgusor 77.02 322 *eP* **P** **01 32 54.5 -0.5**
TIRR pmax pmax
comp=Z,5.0nm,1.0s
TIRR Tirgusor 77.02 322 *eP* **P** **01 32 54.5 -0.5**
comp=Z,5.1nm,1.0s
TIRR Tirgusor 77.02 322⇓*i*P **P** **01 32 54.5 -0.5**
MLR Muntele Rosu 77.21 324⇑*i*P **P** **01 32 56.4 +0.2**
ISR Istrita 77.27 324⇑P **P** **01 32 56.7 +0.2**
ISR Istrita 77.27 324⇑*i*P **P** **01 32 56.7 +0.2**
VYHS Vyhne 77.36 330 *eP* **P** **01 32 56.7 -0.2**
VYHS pmax pmax
comp=Z,5.0nm,1.1s
VYHS Vyhne 77.36 330 *eP* **P** **01 32 56.7 -0.2**
DRGR 77.40 327⇓P **P** **01 32 56.9 -0.3**
DRGR 77.40 327⇓*i*P **P** **01 32 56.9 -0.3**
VRAC Vranov 77.42 332⇓*i*P **P** **01 32 57.4 +0.2**
PRU Pruhonice 77.48 334 *eP* **P** **01 32 57.1 -0.4**
PRU Pruhonice 77.48 334 *eP* **P** **01 32 57.1 -0.4**
TANN Tannenbergstha 77.73 335 *eP* **P** **01 32 58.3 -0.7**
comp=Z,3.0nm,0.9s
MOX Moxa 77.78 336 *eP* **P** **01 32 58.6 -0.6**
MOX pmax pmax
comp=Z,7.0nm,1.0s
MOX Moxa 77.78 336 *eP* **P** **01 32 58.6 -0.6**
comp=Z,7.0nm,1.0s
TREC Trest 77.79 333 *eP* **P** **01 32 58.7 -0.6**
TREC Trest 77.79 333 *eP* **P** **01 32 58.7 -0.6**
SMOL Smolenice 77.83 331 *eP* **P** **01 32 59.8 +0.3**
SMOL Smolenice 77.83 331 *eP* **P** **01 32 59.8 +0.3**
NKC Novy Kostel 77.90 335 *eP* **P** **01 32 59.3 -0.6**
NKC Novy Kostel 77.90 335 *eP* **P** **01 32 59.3 -0.6**
UBBA Unterbreizbach 78.08 337 *eP* **P** **01 33 00.2 -0.5**
comp=Z,2.0nm,0.6s
ZST Bratislava 78.21 331 *eP* **P** **01 33 00.9 -0.7**
ZST pmax pmax
comp=Z,6.0nm,1.0s
ZST Bratislava 78.21 331 *eP* **P** **01 33 00.9 -0.7**
BUG Bochum--Univer 78.24 338 *eP* **P** **01 33 01.1 -0.6**
comp=Z,15nm,1.1s
ROTZ Rotzenmuhle 78.38 335 *eP* **P** **01 33 02.5 -0.1**
comp=Z,9.0nm,1.0s
BR131 Keskin Array S 78.39 316 *eP* **P** **01 33 03.0 +0.1**
comp=Z,5.0nm,0.9s
BRTR Keskin Array B 78.40 316 P **P** **01 33 02.9 -0.1**
BRTR Keskin Array B 78.40 316 P **P** **01 33 02.9 -0.1**
comp=Z,5.1nm,0.8s,baz=72,slow=4.0,SNR=42
TXAR Lajitas Array 78.43 60 P **P** **01 33 04.2 +0.9**
TXAR Lajitas Array 78.43 60 P **P** **01 33 04.2 +0.9**
comp=Z,2.3nm,0.7s,baz=297,slow=4.2,SNR=29
KHC Kasperske Hory 78.53 334 *eP* **P** **01 33 03.1 -0.3**
KHC pmax pmax
comp=Z,11nm,0.8s
KHC Kasperske Hory 78.53 334 *eP* **P** **01 33 03.1 -0.3**
comp=Z,11nm,0.8s
KHC Kasperske Hory 78.53 334 *eP* **P** **01 33 03.1 -0.3**
KHC *ex* x 01 33 06.2
ANTO Ankara 78.69 317 *eP* **P** **01 33 04.8 +0.3**
ANTO pmax pmax
comp=Z,11nm,0.7s
ANTO Ankara 78.69 317 *eP* **P** **01 33 04.8 +0.3**
comp=Z,11nm,0.7s
WET Wettzell 78.74 334 *eP* **P** **01 33 04.5 0.0**
WET pmax pmax
comp=Z,10.0nm,1.0s
WET Wettzell 78.74 334 *eP* **P** **01 33 04.5 0.0**
comp=Z,10.0nm,1.0s
GRF Grafenberg Arr 78.74 335 *eP* **P** **01 33 04.5 0.0**
GRF pmax pmax
comp=Z,17nm,0.8s
GRF Grafenberg Arr 78.74 335 *eP* **P** **01 33 04.5 0.0**
comp=Z,17nm,0.8s
GEC2 GERESS Array S 78.75 333 *eP* **P** **01 33 04.4 -0.3**
GEC2 GERESS Array S 78.75 333 *eP* **P** **01 33 04.1 -0.6**
comp=Z,5.0nm,0.9s
GEC2 GERESS Array S 78.75 333 *eP* **P** **01 33 04.4 -0.3**
GERES GERESS Array B 78.75 333 P **P** **01 33 04.2 -0.4**
GERES GERESS Array B 78.75 333 P **P** **01 33 04.2 -0.4**
comp=Z,3.4nm,0.7s,baz=37,slow=5.2,SNR=26
BZS Buzias 78.80 327⇓P **P** **01 33 03.7 -1.2**
BZS Buzias 78.80 327⇓*i*P **P** **01 33 03.7 -1.2**
CONA Conrad Observa 78.86 332⇑*i*P **P** **01 33 05.2 -0.1**
comp=Z,9.5nm,0.7s,SNR=17
SZH Strazhica 79.03 323 *i* P **P** **01 33 05.7 -0.5**
TNS Taunus Mts 79.04 337 *eP* **P** **01 33 05.8 -0.4**
TNS pmax pmax
comp=Z,12nm,1.0s
TNS Taunus Mts 79.04 337 *eP* **P** **01 33 05.8 -0.4**
comp=Z,12nm,1.0s
MEM Membach 79.32 339 P **P** **01 33 07.5 -0.2**
comp=Z,7.2nm,0.8s
PKSM Moragy 79.39 329⇑P **P** **01 33 06.8 -1.3**
PKSM Moragy 79.39 329⇑*i*P **P** **01 33 06.8 -1.3**
MOA Molln 79.45 333⇑*i*P **P** **01 33 07.8 -0.6**
comp=Z,5.9nm,0.7s
ARSA Arzberg 79.56 332⇓*i*P **P** **01 33 08.9 -0.2**
comp=Z,6.3nm,1.2s
BCLA Clavier 79.67 339 P **P** **01 33 08.1 -1.4**
comp=Z,8.2nm,1.4s
MPEP Malo Peshtene 79.86 324 P **P** **01 33 10.3 -0.4**
RJOB Jochberg 80.01 333 *eP* **P** **01 33 11.5 0.0**
comp=Z,8.0nm,1.0s
GIVF Givet 80.08 339 *eP* **P** **01 33 11.1 -0.7**
comp=Z,14nm,0.8s
GIVF Givet 80.08 339 *eP* **P** **01 33 11.1 -0.7**
GIVF pmax pmax
comp=Z,14nm,0.8s
GIVF Givet 80.08 339 *eP* **P** **01 33 11.1 -0.7**
comp=Z,14nm,0.8s
FUR Furstenfeldbru 80.09 335 *eP* **P** **01 33 11.8 -0.1**
FUR pmax pmax
comp=Z,18nm,0.9s
FUR Furstenfeldbru 80.09 335 *eP* **P** **01 33 11.8 -0.1**
comp=Z,18nm,0.9s
DOU Dourbes 80.15 339 P **P** **01 33 11.6 -0.6**
STU Stuttgart 80.15 336 *eP* **P** **01 33 11.8 -0.4**
comp=Z,10.0nm,1.1s
WLF Walferdange 80.15 338 *eP* **P** **01 33 11.2 -1.0**
comp=Z,14nm,1.3s
DIM Dimitrovgrad 80.20 323 *i* P **P** **01 33 12.1 -0.5**
SOKA Soboth 80.23 332⇑*i*P **P** **01 33 12.2 -0.5**
comp=Z,12nm,1.1s
PERS Pernice 80.23 332 *i* P **P** **01 33 12.3 -0.5**
GROS Grobnik 80.26 331 *i* P **P** **01 33 12.2 -0.7**
BAIF Baives 80.28 340 *eP* **P** **01 33 12.2 -0.6**
comp=Z,23nm,1.1s
BAIF Baives 80.28 340 *eP* **P** **01 33 12.2 -0.6**
BAIF pmax pmax
comp=Z,23nm,1.1s
BAIF Baives 80.28 340 *eP* **P** **01 33 12.2 -0.6**
comp=Z,23nm,1.1s
KBA Koelnbreinsper 80.42 333⇑*i*P **P** **01 33 14.0 +0.1**
comp=Z,22nm,1.0s,SNR=9.2
VTS Vitosha 80.71 324⇑P **P** **01 33 15.3 -0.3**
VTS Vitosha 80.71 324⇑*i*P **P** **01 33 15.3 -0.3**
VTS Vitosha 80.71 324 *i* P **P** **01 33 15.2 -0.3**
WATA Walderalm 80.74 334⇑*i*P **P** **01 33 15.5 -0.1**
comp=Z,8.9nm,0.5s,SNR=21
WTTA Wattenberg 80.79 334⇑*i*P **P** **01 33 15.8 -0.1**
comp=Z,16nm,0.6s,SNR=24
BFO Black Forest 80.79 336 *eP* **P** **01 33 15.2 -0.5**
BFO pmax pmax
comp=Z,10.0nm,0.9s
BFO Black Forest 80.79 336 *eP* **P** **01 33 15.2 -0.5**
comp=Z,10.0nm,0.9s
BFO Black Forest 80.79 336 *eP* **P** **01 33 15.1 -0.6**
comp=Z,11nm,1.0s
CRES Cresnjev 80.83 331 *i* P **P** **01 33 15.0 -0.9**
RETA Reutte 80.85 335⇑P **P** **01 33 15.8 -0.3**
comp=Z,7.2nm,0.8s
MOTA Moosalm 80.88 334 *i* P **P** **01 33 16.1 -0.3**
comp=Z,16nm,0.9s,SNR=20
LJU Ljubljana 80.95 332 *i* P **P** **01 33 15.4 -1.2**
CDF Champ du Feu 81.01 337⇑*i*P **P** **01 33 16.3 -0.6**
comp=Z,29nm,1.0s
CDF Champ du Feu 81.01 337⇑P **P** **01 33 16.3 -0.6**
CDF pmax pmax
comp=Z,29nm,1.0s
CDF Champ du Feu 81.01 337⇑*i*P **P** **01 33 16.3 -0.6**
comp=Z,29nm,1.0s

VISS	Visnje	81.06 331	*i* P	P	01 33 16.1	-1.1
ECH	Echery	81.22 337	*e*P	P	01 33 17.4	-0.6
ECH			pmax	pmax		
	comp=Z,9.0nm,0.9s					
ECH	Echery	81.22 337	*e*P	P	01 33 17.4	-0.6
	comp=Z,9.0nm,0.9s					
FETA	Feichten	81.28 334⇑	*i*P	P	01 33 18.3	-0.2
	comp=Z,5.8nm,0.9s					
PAGF	Fort de Pagny	81.29 338⇑	*i*P	P	01 33 18.2	-0.1
	comp=Z,11nm,0.7s					
PAGF	Fort de Pagny	81.29 338⇑	*i*P	P	01 33 18.2	-0.1
	comp=Z,11nm,0.6s					
DAVA	Damuels	81.30 335⇑	*i*P	P	01 33 18.1	-0.4
	comp=Z,9.8nm,0.8s					
MMB	Musomiste	81.34 324	*i* P	P	01 33 18.2	-0.5
ISP	Isparta	81.39 317	*e*P	P	01 33 18.7	-0.4
ISP			pmax	pmax		
	comp=Z,6.0nm,0.7s					
ISP	Isparta	81.39 317	*e*P	P	01 33 18.7	-0.4
	comp=Z,5.5nm,0.7s					
MEZF	Maizieres J'vi	81.51 339⇑	*i*P	P	01 33 19.2	-0.2
	comp=Z,19nm,0.7s					
MEZF	Maizieres J'vi	81.51 339⇑	*i*P	P	01 33 19.2	-0.2
	comp=Z,19nm,0.7s					
HAU	Haudompre	81.63 338⇑	*i*P	P	01 33 19.4	-0.7
	comp=Z,13nm,0.8s					
HAU			*e*R			
	comp=Z,59nm,20.5s					
HAU	Haudompre	81.63 338⇑	*i*P	P	01 33 19.4	-0.7
HAU			pmax	pmax		
	comp=Z,13nm,0.8s					
HAU	Haudompre	81.63 338⇑	*i*P	P	01 33 19.4	-0.7
	comp=Z,13nm,0.8s					
HINF	Hinteralfeld	81.67 337	*e*P	P	01 33 19.4	-1.0
HINF	Hinteralfeld	81.67 337	*e*P	P	01 33 19.4	-1.0
HINF	Hinteralfeld	81.67 337	*e*P	P	01 33 19.4	-1.0
FUORN	Ofenpass-Fuorn	81.78 335	*e*P	P	01 33 21.6	+0.3
	comp=Z,8.7nm,1.0s					
TUE	Stuetta	82.19 335	*e*P	P	01 33 23.1	-0.3
	comp=Z,8.6nm,0.8s					
FLN	La Foliniere	82.56 342	*e*P	P	01 33 24.2	-0.7
	comp=Z,59nm,1.2s					
FLN			*e*R			
	comp=Z,58nm,21.2s					
FLN	La Foliniere	82.56 342	*e*P	P	01 33 24.2	-0.7
FLN			pmax	pmax		
	comp=Z,59nm,1.2s					
FLN	La Foliniere	82.56 342	*e*P	P	01 33 24.2	-0.7
	comp=Z,59nm,1.2s					
LDF	La Druitiere	82.64 342	*e*P	P	01 33 24.5	-0.9
	comp=Z,21nm,1.0s					
LDF	La Druitiere	82.64 342	*e*P	P	01 33 24.5	-0.9
LDF			pmax	pmax		
	comp=Z,21nm,1.0s					
LDF	La Druitiere	82.64 342	*e*P	P	01 33 24.5	-0.9
	comp=Z,21nm,1.0s					
LOR	Lormes	82.95 339⇑	*i*P	P	01 33 26.5	-0.6
	comp=Z,26nm,1.0s					
LOR			*e*R			
	comp=Z,75nm,21.0s					
LOR	Lormes	82.95 339⇑	*i*P	P	01 33 26.5	-0.6
	comp=Z,26nm,1.0s					
CABF	La Chapelle	82.98 337⇑	*i*P	P	01 33 26.9	-0.4
	comp=Z,2.6nm,0.5s					
CABF	La Chapelle	82.98 337⇑	*i*P	P	01 33 26.9	-0.4
CABF			pmax	pmax		
	comp=Z,3.0nm,0.5s					
CABF	La Chapelle	82.98 337⇑	*i*P	P	01 33 26.9	-0.4
	comp=Z,2.6nm,0.5s					
GRR	Gorron	83.00 342	*e*P	P	01 33 26.7	-0.5
	comp=Z,13nm,0.7s					
GRR	Gorron	83.00 342	*e*P	P	01 33 26.7	-0.5
GRR			pmax	pmax		
	comp=Z,13nm,0.7s					
GRR	Gorron	83.00 342	*e*P	P	01 33 26.7	-0.5
	comp=Z,13nm,0.7s					
SSF	Saint Saulge	83.23 339⇑	*i*P	P	01 33 28.0	-0.5
	comp=Z,13nm,0.9s					
SSF	Saint Saulge	83.23 339⇑	*i*P	P	01 33 28.0	-0.5
SSF			pmax	pmax		
	comp=Z,13nm,0.9s					
SSF	Saint Saulge	83.23 339⇑	*i*P	P	01 33 28.0	-0.5
	comp=Z,13nm,0.9s					
HYF	Humbligny	83.25 340	*e*P	P	01 33 28.5	-0.1
HYF	Humbligny	83.25 340	*e*P	P	01 33 28.5	-0.1
SGMF	Saint Gilles	83.47 343	*e*P	P	01 33 29.1	-0.6
	comp=Z,13nm,0.7s					
SGMF	Saint Gilles	83.47 343	*e*P	P	01 33 29.1	-0.6
SGMF			pmax	pmax		
	comp=Z,13nm,0.7s					
SGMF	Saint Gilles	83.47 343	*e*P	P	01 33 29.1	-0.6
	comp=Z,13nm,0.7s					
AVF	Avril sur Loir	83.53 339⇑	*i*P	P	01 33 29.6	-0.4
	comp=Z,25nm,1.0s					
AVF	Avril sur Loir	83.53 339⇑	*i*P	P	01 33 29.6	-0.4
AVF			pmax	pmax		
	comp=Z,25nm,1.0s					
AVF	Avril sur Loir	83.53 339⇑	*i*P	P	01 33 29.6	-0.4
	comp=Z,25nm,1.0s					
SMF	Signal de Mont	83.54 339⇑	*i*P	P	01 33 29.8	-0.3
	comp=Z,35nm,1.0s					
SMF	Signal de Mont	83.54 339⇑	*i*P	P	01 33 29.8	-0.3
SMF			pmax	pmax		
	comp=Z,35nm,1.0s					
SMF	Signal de Mont	83.54 339⇑	*i*P	P	01 33 29.8	-0.3
	comp=Z,35nm,1.0s					
LPL	La Plagne	83.81 336	*e*P	P	01 33 31.8	0.0
	comp=Z,9.1nm,0.7s					
LPL	La Plagne	83.81 336	*e*P	P	01 33 31.8	0.0
LPL			pmax	pmax		
	comp=Z,9.0nm,0.7s					
LPL	La Plagne	83.81 336	*e*P	P	01 33 31.8	0.0
	comp=Z,9.1nm,0.7s					
LPG	La Plagne	83.82 336⇑	*i*P	P	01 33 31.9	0.0
	comp=Z,12nm,0.8s					
LPG	La Plagne	83.82 336⇑	*i*P	P	01 33 31.9	0.0
LPG			pmax	pmax		
	comp=Z,12nm,0.8s					
LPG	La Plagne	83.82 336⇑	*i*P	P	01 33 31.9	0.0
	comp=Z,12nm,0.8s					
BGF	Bois d'Agland	83.87 339	*e*P	P	01 33 31.4	-0.4
BGF	Bois d'Agland	83.87 339	*e*P	P	01 33 31.4	-0.4
BGF	Bois d'Agland	83.87 339	*e*P	P	01 33 31.4	-0.4
QUIF	Quistinic	83.92 344	*e*P	P	01 33 31.2	-0.7
QUIF	Quistinic	83.92 344	*e*P	P	01 33 31.2	-0.7
QUIF	Quistinic	83.92 344	*e*P	P	01 33 31.2	-0.7
TCF	Toulx Ste Croi	84.28 340	*e*P	P	01 33 33.6	-0.3
	comp=Z,11nm,0.9s					
TCF	Toulx Ste Croi	84.28 340	*e*P	P	01 33 33.6	-0.3
TCF			pmax	pmax		
	comp=Z,11nm,0.9s					
TCF	Toulx Ste Croi	84.28 340	*e*P	P	01 33 33.6	-0.3
	comp=Z,11nm,0.9s					
MBDF	Montbardon	84.52 336	*e*P	P	01 33 34.7	-0.6
	comp=Z,7.2nm,0.7s					
MBDF	Montbardon	84.52 336	*e*P	P	01 33 34.7	-0.6
MBDF			pmax	pmax		
	comp=Z,7.0nm,0.7s					
MBDF	Montbardon	84.52 336	*e*P	P	01 33 34.7	-0.6
	comp=Z,7.2nm,0.7s					
MFF	Saint Martin d	84.53 341	*e*P	P	01 33 34.8	-0.3
	comp=Z,12nm,0.9s					
MFF	Saint Martin d	84.53 341	*e*P	P	01 33 34.8	-0.3
MFF			pmax	pmax		
	comp=Z,12nm,0.9s					
MFF	Saint Martin d	84.53 341	*e*P	P	01 33 34.8	-0.3
	comp=Z,12nm,0.9s					
ORIF	Oris-en-Rattie	84.60 337⇑	*i*P	P	01 33 35.7	+0.1
	comp=Z,14nm,0.7s					
ORIF			*e*R			
	comp=Z,52nm,19.8s					
ORIF	Oris-en-Rattie	84.60 337⇑	*i*P	P	01 33 35.7	+0.1
ORIF			pmax	pmax		
	comp=Z,14nm,0.7s					
ORIF	Oris-en-Rattie	84.60 337⇑	*i*P	P	01 33 35.7	+0.1
	comp=Z,14nm,0.7s					
SSB	Saint Sauveur	84.62 338	*e*P	P	01 33 35.4	-0.3
SSB			pmax	pmax		
	comp=Z,6.0nm,0.9s					
SSB	Saint Sauveur	84.62 338	*e*P	P	01 33 35.4	-0.3
	comp=Z,5.6nm,0.9s					
VIVF	Saint-Julien-l	84.98 337⇑	*i*P	P	01 33 37.5	0.0
	comp=Z,15nm,0.9s					
VIVF	Saint-Julien-l	84.98 337⇑	*i*P	P	01 33 37.5	0.0
VIVF			pmax	pmax		
	comp=Z,15nm,0.9s					
VIVF	Saint-Julien-l	84.98 337⇑	*i*P	P	01 33 37.5	0.0
	comp=Z,15nm,0.9s					
SBF	Sospel	85.12 335	*e*P	P	01 33 37.3	-0.9
SBF	Sospel	85.12 335	*e*P	P	01 33 37.3	-0.9
SBF	Sospel	85.12 335	*e*P	P	01 33 37.3	-0.9
RJF	Les Rejaudoux	85.37 340	*e*P	P	01 33 38.4	-0.9
	comp=Z,7.3nm,0.8s					
RJF			*e*R			
	comp=Z,66nm,19.2s					
RJF	Les Rejaudoux	85.37 340	*e*P	P	01 33 38.4	-0.9
RJF			pmax	pmax		
	comp=Z,7.0nm,0.8s					
RJF	Les Rejaudoux	85.37 340	*e*P	P	01 33 38.4	-0.9
	comp=Z,7.3nm,0.8s					
CAF	Calviac	85.59 339⇑	*i*P	P	01 33 40.8	+0.3
	comp=Z,7.2nm,0.7s					
CAF	Calviac	85.59 339⇑	*i*P	P	01 33 40.8	+0.3
CAF			pmax	pmax		
	comp=Z,7.0nm,0.7s					
CAF	Calviac	85.59 339⇑	*i*P	P	01 33 40.8	+0.3
	comp=Z,7.2nm,0.7s					
PGF	Pioggiola	85.85 334	*e*P	P	01 33 41.1	-0.8
	comp=Z,18nm,1.0s					
PGF	Pioggiola	85.85 334	*e*P	P	01 33 41.1	-0.8
PGF			pmax	pmax		
	comp=Z,18nm,1.0s					
PGF	Pioggiola	85.85 334	*e*P	P	01 33 41.1	-0.8
	comp=Z,18nm,1.0s					
LFF	La Frestale	85.90 340	*e*P	P	01 33 41.1	-0.9
	comp=Z,12nm,0.9s					
LFF	La Frestale	85.90 340	*e*P	P	01 33 41.1	-0.9
LFF			pmax	pmax		
	comp=Z,12nm,0.9s					
LFF	La Frestale	85.90 340	*e*P	P	01 33 41.1	-0.9
	comp=Z,12nm,0.9s					
TIP	Timpagrande	86.17 327	*e*P	P	01 33 43.1	-0.4
	comp=Z,17nm,1.3s					
SJPF	Ste Jean	88.08 341	*e*P	P	01 33 51.8	-0.8
SJPF	Ste Jean	88.08 341	*e*P	P	01 33 51.8	-0.8
SJPF	Ste Jean	88.08 341	*e*P	P	01 33 51.8	-0.8
KEST	Kesra	91.92 330	P	P	01 34 10.8	0.0
KEST	Kesra	91.92 330	P	P	01 34 10.8	0.0
	comp=Z,1.7nm,0.9s,baz=326,slow=0.8,SNR=5.5					
TORD	Torodi Ar. Bea	115.30 328	PKP	PKPdf	01 39 42.9	-1.1
TORD	Torodi Ar. Bea	115.30 328	PKP	PKPdf	01 39 42.9	-1.1
	comp=Z,0.2nm,0.5s,baz=19,slow=1.7,SNR=7.8					
BDFB	Brasilia	145.29 36	PKPbc	PKPbc	01 40 39.1	-0.9
BDFB	Brasilia	145.29 36	PKPbc	PKPbc	01 40 39.1	-0.9
	comp=Z,2.0nm,0.8s,baz=214,slow=7.3,SNR=3.9					
PLCA	Paso Flores	148.84 96	PKPbc	PKPbc	01 40 49.9	+0.6
PLCA	Paso Flores	148.84 96	PKPbc	PKPbc	01 40 49.9	+0.6
	comp=Z,3.2nm,0.9s,baz=331,slow=4.2,SNR=6.1					
CPUP	Villa Florida	149.40 60	PKPbc	PKPbc	01 40 51.0	0.0
CPUP	Villa Florida	149.40 60	PKPbc	PKPbc	01 40 51.0	0.0
	comp=Z,2.7nm,0.8s,baz=279,slow=1.8,SNR=8.5					
SNAA	Sanae	151.72 196	*e*P	PKPbc	01 40 54.8	-0.5
SNAA	Sanae	151.72 196	*e*	PKPab	01 41 03.8	-0.6
VNA2	Neumayer--Watz	153.18 195	*e*P	PKPbc	01 40 58.8	+0.3
VNA2	Neumayer--Watz	153.18 195	*e*	PKPab	01 41 09.8	-0.6

*CSEM **11** 01:25:09.3±0.5, 34.°92N×28.°05E, h2km, MD3.7, Error ellipse: s-maj=14.4km s-min=5.0km az=154.0*
*ISCJB **11** 01:25:13.2±0.8, 35.°11N±0.°06×27.°94E±0.°06, h28km, Error ellipse: s-maj=9.5km s-min=6.1km az=152.7*
*ISK **11** 01:25:14.4, 35.°31N×28.°14E, h12km, MD3.7*
*ATH **11** 01:25:17.2, 35.°89N×27.°14E, h20km±4km, MD3.7/5*

ISC 11 01:25:13.2±1.1, 35.°18N±0.°06×27.°80E±0.°05, h28km, n52, σ1§46/52, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.64	305	*e*	PB	Pb		01 25 24.7	-1.2
KARP				*e*	SB	Sb		01 25 30.1	-4.5
KARP	Karpathos	0.64	305	*e*	Pb	Pb		01 25 24.7	-1.2
ARG	Arkhangelos	1.07	14	*e*	PN	Pn		01 25 33.5	+1.2
ARG				*e*	SN	Sn		01 25 46.3	+0.1
ARG	Arkhangelos	1.07	14	*e*	Pn	Pn		01 25 33.5	+1.2
ZKR	Zakros	1.30	268	*e*	PN	Pb		01 25 37.5	+0.4
ZKR	Zakros	1.30	268	*e*	Pn	Pb		01 25 37.5	+0.4
DAT	Datca	1.56	353	*e*	PN	Pb		01 25 41.7	+0.2
DAT				*e*	SN	Sb		01 26 01.4	+0.6
DAT	Datca	1.56	353	*e*	Pn	Pb		01 25 41.7	+0.2
DAT				*e*	Sn	Sb		01 26 01.4	+0.6
DALY	Dalyan (Mu¨la	1.77	23	*e*	PN	Pn		01 25 42.8	+0.8
DALY	Dalyan (Mu¨la	1.77	23	*e*	Pn	Pn		01 25 42.8	+0.8
FETY	Fethiye	1.79	35	*e*	PN	Pn		01 25 42.2	0.0
FETY	Fethiye	1.79	35	*e*	Pn	Pn		01 25 42.2	0.0
NPS	Neapolis	1.80	273	*e*	PN	Pn		01 25 43.5	+1.1
NPS	Neapolis	1.80	273	*e*	Pn	Pn		01 25 43.5	+1.1
LAST	Lasithi	1.91	270	*e*	PN	Pn		01 25 45.6	+1.7
LAST	Lasithi	1.91	270	*e*	Pn	Pn		01 25 45.6	+1.7
BODT	Bodrum	1.92	348	*e*	PN	Pb		01 25 47.1	-0.5
BODT	Bodrum	1.92	348	*e*	Pn	Pb		01 25 47.1	-0.5
YER	Yerkesik	1.99	11	*e*	PN	Pn		01 25 46.6	+1.5
YER	Yerkesik	1.99	11	*e*	Pn	Pn		01 25 46.6	+1.5
MLSB	Milas	2.11	359	*e*	PN	Pn		01 25 48.8	+2.1
MLSB	Milas	2.11	359	*e*	Pn	Pn		01 25 48.8	+2.1
ELL	Elmali	2.32	47	*e*	PN	Pn		01 25 49.4	-0.2
ELL	Elmali	2.32	47	*e*	Pn	Pn		01 25 49.4	-0.2
GLHS	Glhisar (BURDU	2.40	34	*e*	PN	Pn		01 25 51.1	+0.3
GLHS	Glhisar (BURDU	2.40	34	*e*	Pn	Pn		01 25 51.1	+0.3
SIVA	Sivas	2.46	267	*e*	PN	Pn		01 25 53.4	+1.9
SIVA	Sivas	2.46	267	*e*	Pn	Pn		01 25 53.4	+1.9
APE	Apeiranthos	2.63	316	*e*	PN	Pb		01 25 59.4	-0.3
APE	Apeiranthos	2.63	316	*e*	Pn	Pb		01 25 59.4	-0.3
DENT	Denizli	2.75	21	*e*	PN	Pn		01 25 56.7	+1.1
DENT	Denizli	2.75	21	*e*	Pn	Pn		01 25 56.7	+1.1
ANTB	Antalya	2.88	53	*e*	PN	Pn		01 25 57.2	0.0
ANTB	Antalya	2.88	53	*e*	Pn	Pn		01 25 57.2	0.0
BCK	Bucak	3.20	44	*e*	PN	Pn		01 26 02.0	+0.3
BCK	Bucak	3.20	44	*e*	Pn	Pn		01 26 02.0	+0.3
IZM	Izmir	3.24	352	*e*	PN	Pn		01 26 05.6	+3.3
IZM	Izmir	3.24	352	*e*	Pn	Pn		01 26 05.6	+3.3
BLCB	Balcova	3.26	349	*e*	PN	Pn		01 26 06.0	+3.6
BLCB	Balcova	3.26	349	*e*	Pn	Pn		01 26 06.0	+3.6
KULA	Kula-Manisa	3.40	11	*e*	PN	Pn		01 26 06.5	+2.0
KULA	Kula-Manisa	3.40	11	*e*	Pn	Pn		01 26 06.5	+2.0
KHL	Karahalli	3.43	23	*e*	PN	Pn		01 26 06.1	+1.2
KHL	Karahalli	3.43	23	*e*	Pn	Pn		01 26 06.1	+1.2
AKS	Akhisar	3.69	0	*e*	PN	Pn		01 26 11.2	+2.8
AKS	Akhisar	3.69	0	*e*	Pn	Pn		01 26 11.2	+2.8
SHUT	Suhut-Afyon	4.02	32	*e*	PN	Pn		01 26 14.2	+1.1
SHUT	Suhut-Afyon	4.02	32	*e*	Pn	Pn		01 26 14.2	+1.1
TVSB	Tavsanli	4.46	17	*e*	PN	Pn		01 26 20.9	+1.8
TVSB	Tavsanli	4.46	17	*e*	Pn	Pn		01 26 20.9	+1.8
CSS	Prodhromos	4.54	91	*e*	PN	Pn		01 26 22.1	+2.0
CSS	Prodhromos	4.54	91	*e*	Pn	Pn		01 26 22.1	+2.0

*ISK **11** 01:40:08.2, 39.°12N×32.°57E, h5km, MD3.5*
*DDA **11** 01:40:08.3, 39.°06N×32.°63E, h7km, MD3.1*
*CSEM **11** 01:40:09.4±0.1, 39.°10N×32.°58E, h2km, MD3.5, Error ellipse: s-maj=2.8km s-min=2.3km az=152.0*

ISC 11 01:40:08.9±1.1, 39.°06N±0.°02×32.°63E±0.°02, h9km±12km, n66, σ1§34/80, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFSR	Af¨ar-Bala (A	0.51	42	*e*	PG	Pb		01 40 19.2	-1.0
AFSR				*e*	SG	Sb		01 40 27.3	-0.5
AFSR	Af¨ar-Bala (A	0.51	42	*e*	Pg	Pb		01 40 19.2	-1.0
AFSR				*e*	Sg	Sb		01 40 27.3	-0.5
KIZT	Kizilcal	0.61	253	*e*	PG	Pg		01 40 20.5	-0.2
KIZT	Kizilcal	0.61	253	*e*	Pg	Pg		01 40 20.5	-0.2
ANTO	Ankara	0.81	9	*e*	PG	Pg		01 40 23.7	-0.9
ANTO	Ankara	0.81	9	*e*	Pg	Pg		01 40 23.7	-0.9
LOD	Lodumlu	0.83	7	*e*	PG	Pg		01 40 24.5	-0.4
LOD	Lodumlu	0.83	7	*e*	Pg	Pg		01 40 24.5	-0.4
DAD	Ankara	0.85	7	*i*	P	Pb		01 40 25.2	-0.7
DAD				*i*	S	Sb		01 40 37.8	+0.4
DAD	Ankara	0.85	7	*i*	P	Pb		01 40 25.2	-0.7
DAD				*i*	S	Sb		01 40 37.8	+0.4
LADK	Ladik-KONYA	0.89	194	*e*	PG	Pn		01 40 27.4	-0.2
LADK	Ladik-KONYA	0.89	194	*e*	Pg	Pn		01 40 27.4	-0.2
SVRH	Sivrihisar-ESK	0.94	294	*e*	PG	Pg		01 40 26.0	-1.0
SVRH	Sivrihisar-ESK	0.94	294	*e*	Pg	Pg		01 40 26.0	-1.0
SULT	Sultanhani-AKS	1.11	141	*e*	PN	Pn		01 40 32.0	+1.3
SULT	Sultanhani-AKS	1.11	141	*e*	Pn	Pn		01 40 32.0	+1.3
KONT	Konya--Tatoy	1.14	191	*e*	PN	Pn		01 40 31.9	+0.9
KONT	Konya--Tatoy	1.14	191	*e*	Pn	Pn		01 40 31.9	+0.9
ESKT	Eskisehir	1.45	289	*e*	PN	Pg		01 40 35.9	-0.8
ESKT	Eskisehir	1.45	289	*e*	Pn	Pg		01 40 35.9	-0.8
SEYT	Eskypehyr	1.45	289	*i*	P	Pb		01 40 35.2	-1.0
SEYT				*i*	S	Sg		01 40 57.5	+1.9
SEYT	Eskypehyr	1.45	289	*i*	P	Pb		01 40 35.2	-1.0
SEYT				*i*	S	Sg		01 40 57.5	+1.9
ELDT	Eldivan	1.55	23	*i*	P	Pb		01 40 37.5	-0.4
ELDT				*i*	S	Sg		01 40 58.8	0.0
ELDT	Eldivan	1.55	23	*i*	P	Pb		01 40 37.5	-0.4
ELDT				*i*	S	Sg		01 40 58.8	0.0
SHUT	Suhut-Afyon	1.70	253	*e*	PN	Pb		01 40 39.9	-0.5
SHUT	Suhut-Afyon	1.70	253	*e*	Pn	Pb		01 40 39.9	-0.5
CANT	Cankiri	1.72	26	*e*	PN	Pb		01 40 40.3	-0.3
AVNT	Avonos	1.76	99	*i*	P	Pg		01 40 42.2	-0.4
AVNT				*i*	S	Sg		01 41 09.2	+3.7
AVNT	Avonos	1.76	99	*i*	P	Pg		01 40 42.2	-0.4
AVNT				*i*	S	Sg		01 41 09.2	+3.7
MDUB	Mudurnu	1.79	322	*e*	PN	Pn		01 40 40.3	+0.3
MDUB	Mudurnu	1.79	322	*e*	Pn	Pn		01 40 40.3	+0.3
NIG	Nigde	1.82	121	*e*	PN	Pg		01 40 42.9	-0.9
NIG	Nigde	1.82	121	*e*	Pn	Pg		01 40 42.9	-0.9
BORA	Eskisehir	1.87	297	*i*	P	Pn		01 40 41.1	0.0
BORA				*i*	S	Sb		01 41 06.7	-0.1
BORA	Eskisehir	1.87	297	*i*	P	Pn		01 40 41.1	0.0
BORA				*i*	S	Sb		01 41 06.7	-0.1
CORM	Corum	1.91	54	*e*	PN	Pb		01 40 42.8	-1.1
CORM	Corum	1.91	54	*e*	Pn	Pb		01 40 42.8	-1.1
ALT	Altintas	1.96	271	*e*	PN	Pb		01 40 43.4	-1.4
ALT	Altintas	1.96	271	*e*	Pn	Pb		01 40 43.4	-1.4
GULT	Gulveren	2.13	311	*e*	PN	Pn		01 40 45.2	+0.5
GULT	Gulveren	2.13	311	*e*	Pn	Pn		01 40 45.2	+0.5
YOZ	Yozgat	2.17	74	*e*	PN	Pb		01 40 47.2	-1.1
YOZ	Yozgat	2.17	74	*e*	Pn	Pb		01 40 47.2	-1.1
GPA	Golpazari	2.17	305	*e*	PN	Pn		01 40 45.9	+0.7
SAFT	Safranbolu	2.17	1	*e*	PN	Pb		01 40 46.3	-2.1
SAFT	Safranbolu	2.17	1	*e*	Pn	Pb		01 40 46.3	-2.1
TOS	Tosya	2.24	28	*e*	PN	Pb		01 40 47.4	-2.2
TOS	Tosya	2.24	28	*e*	Pn	Pb		01 40 47.4	-2.2
BCK	Bucak	2.27	226	*e*	PN	Pb		01 40 48.5	-1.5
BCK	Bucak	2.27	226	*e*	Pn	Pb		01 40 48.5	-1.5
TVSB	Tavsanli	2.49	280	*e*	PN	Pn		01 40 50.9	+1.2
TVSB	Tavsanli	2.49	280	*e*	Pn	Pn		01 40 50.9	+1.2
BNN	Bunyan	2.52	94	*e*	PN	Pb		01 40 52.4	-1.9
BNN	Bunyan	2.52	94	*e*	Pn	Pb		01 40 52.4	-1.9
BALT	Daday	2.54	13	*i*	P	Pb		01 40 55.4	+0.8
BALT				*i*	S	Sg		01 41 29.4	-0.9
BALT	Daday	2.54	13	*i*	P	Pb		01 40 55.4	+0.8
BALT				*i*	S	Sg		01 41 29.4	-0.9
KHL	Karahalli	2.54	254	*e*	PN	Pn		01 40 51.8	+1.4
KHL	Karahalli	2.54	254	*e*	Pn	Pn		01 40 51.8	+1.4
ADVT	Abdulvahap	2.62	302	*e*	PN	Pn		01 40 52.4	+1.1
ADVT	Abdulvahap	2.62	302	*e*	Pn	Pn		01 40 52.4	+1.1
BYBT	Boyabat	2.91	34	*e*	PN	Pn		01 40 57.0	+1.7
BYBT	Boyabat	2.91	34	*e*	Pn	Pn		01 40 57.0	+1.7
KOZT	Kozan	2.97	121	*e*	PN	Pb		01 40 59.2	-2.8
KOZT	Kozan	2.97	121	*e*	Pn	Pb		01 40 59.2	-2.8
GONE	Gonen-Balikesi	3.94	286	*e*	PN	Pn		01 41 11.4	+1.9
GONE	Gonen-Balikesi	3.94	286	*e*	Pn	Pn		01 41 11.5	+1.9

IDC 11 01:42:33.3±2.2, 2.°27N×96.°88E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.4/26, mbtmp3.8/4, ML2.3/1, Error ellipse: s-maj=65.4km s-min=24.1km az=44.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	Prapat	2.11	75	P		Pn	Pn	01 43 09.8	-0.2
	1.1nm,0.3s,baz=288,slow=14,SNR=3.6								
CMAR	Chiang Mai Arr	16.22	7	Pn		P		01 46 27.0	+1.0
	0.7nm,0.3s,baz=187,slow=11,SNR=4.7								
WRA	Warramunga Arr	42.87	123	P		P		01 50 33.7	-0.2
	0.4nm,0.6s,baz=302,slow=9.0,SNR=3.0								
MKAR	Makanchi Array	46.13	346	P		P		01 50 59.5	0.0
	1.3nm,0.7s,baz=155,slow=7.4,SNR=10								
KURBB	Kurchatov Arra	50.62	345	P		P		01 51 33.8	-0.2
	0.5nm,0.5s,baz=166,slow=6.8,SNR=8.6								
ZALV	Zalesovo Beam	52.46	351	P		P		01 51 47.6	-0.1
	1.6nm,0.5s,baz=177,slow=5.4,SNR=8.8								

**IDC 11 01:46:14.4±4.9, 30.°11S×177.°85W, h64km±40km, mb3.5/

CSEM ***11*** *02:09:31.5±0.1,38.74N×38.76E,h8km,MD2.9,Error ellipse: s-maj=4.8km s-min=2.9km az=111.0*
ISCJB ***11*** *02:09:31.5±0.5,38.74N±0.03×38.74E±0.05,h8km±5km, Error ellipse: s-maj=6.4km s-min=4.4km az=19.6*
ISC 11 02:09:31.8±0.9,38.75N±0.02×38.74E±0.03,h12km±11km, n28,σ0941/38,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.31**	**143**	*i* P	**Pg**	**02 09 38.0**	**-0.2**
ELZG				*i* S	**Sg**	**02 09 42.8**	**+0.3**
ELZG	**Elazig**	**0.31**	**143**	*i* P	**Pg**	**02 09 38.0**	**-0.2**
ELZG				*i* S	**Sg**	**02 09 42.8**	**+0.3**
MYA	**Malataya**	**0.49**	**211**	*e*PG	**Pg**	**02 09 41.1**	**-0.2**
MYA				*e*SG	**Sg**	**02 09 48.0**	**+0.2**
MYA	**Malataya**	**0.49**	**211**	*e*Pg	**Pg**	**02 09 41.1**	**-0.2**
MYA				*e*Sg	**Sg**	**02 09 48.1**	**+0.2**
PTK	**Pertek**	**0.53**	**74**	*e*PG	**Pg**	**02 09 41.8**	**-0.4**
PTK	**Pertek**	**0.53**	**74**	*e*Pg	**Pg**	**02 09 41.8**	**-0.4**
KEMA	**Kemaliye**	**0.56**	**340**	*i* P	**Pg**	**02 09 42.8**	**+0.1**
KEMA				*i* S	**Sb**	**02 09 51.5**	**0.0**
KEMA	**Kemaliye**	**0.56**	**340**	*i* P	**Pg**	**02 09 42.8**	**+0.1**
KEMA				*i* S	**Sb**	**02 09 51.5**	**0.0**
ILIC	**ilic-Erzincan**	**0.72**	**349**	*e*PG	**Pg**	**02 09 45.1**	**-0.6**
ILIC	**ilic-Erzincan**	**0.72**	**349**	*e*Pg	**Pg**	**02 09 45.1**	**-0.6**
AKCD	**Akcadag**	**0.79**	**235**	*i* P	**Pg**	**02 09 46.5**	**-0.5**
AKCD				*i* S	**Sg**	**02 09 57.5**	**+0.2**
AKCD	**Akcadag**	**0.79**	**235**	*i* P	**Pg**	**02 09 46.5**	**-0.5**
AKCD				*i* S	**Sg**	**02 09 57.5**	**+0.2**
DARE	**Darende-Malaty**	**1.00**	**260**	*e*PG	**Pb**	**02 09 50.6**	**-0.5**
DARE	**Darende-Malaty**	**1.00**	**260**	*e*Pg	**Pb**	**02 09 50.6**	**-0.5**
EZC	**Erzincan**	**1.11**	**25**	*e*PN	**Pb**	**02 09 52.2**	**-0.8**
EZC	**Erzincan**	**1.11**	**25**	*e*Pn	**Pb**	**02 09 52.7**	**-0.3**
ERZN	**Erzincan**	**1.13**	**42**	*e*PN	**Pb**	**02 09 52.7**	**-0.7**
URFA	**Urfa**	**1.30**	**177**	*e*PN	**Pb**	**02 09 56.1**	**-0.2**
URFA	**Urfa**	**1.30**	**177**	*e*Pn	**Pb**	**02 09 56.1**	**-0.2**
KELT	**Kelkit**	**1.46**	**16**	*i* P	**Pb**	**02 09 59.5**	**+0.6**
KELT				*i* S	**Sg**	**02 10 19.1**	**+0.4**
KELT	**Kelkit**	**1.46**	**16**	*i* P	**Pb**	**02 09 59.5**	**+0.6**
KELT				*i* S	**Sg**	**02 10 19.1**	**+0.4**
GUMT	**Gumushane**	**1.80**	**18**	*e*PN	**Pn**	**02 10 02.9**	**+0.1**
GUMT	**Gumushane**	**1.80**	**18**	*e*Pn	**Pn**	**02 10 02.9**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.85**	**260**	*e*PN	**Pn**	**02 10 03.8**	**+0.3**
KMRS	**Kahramanmaras**	**1.91**	**230**	*e*PN	**Pn**	**02 10 04.7**	**+0.5**
KMRS	**Kahramanmaras**	**1.91**	**230**	*e*Pn	**Pn**	**02 10 04.7**	**+0.5**
BAYT	**Ayd¨–ntepe-Bay**	**1.97**	**33**	*e*PN	**Pn**	**02 10 05.2**	**+0.1**
BAYT	**Ayd¨–ntepe-Bay**	**1.97**	**33**	*e*Pn	**Pn**	**02 10 05.2**	**+0.1**

CSEM ***11*** *02:14:04.8±0.2,30.30N×57.55E,h10km,mb4.3/7,Ms5.1, Error ellipse: s-maj=5.1km s-min=3.9km az=107.0*
IDC ***11*** *02:14:04.4±0.8,30.06N×57.59E,h20km±3km,mb3.9/16, mb1 4.0/19,mb1mx3.8/31,mbtmp3.9/19,ML3.8/3,MS3.4/15, Ms1 3.4/15,ms1mx3.2/38,Error ellipse: s-maj=18.6km s-min=12.6km az=164.0*
MOS ***11*** *02:14:04.7±1.5,30.02N×57.63E,h33km,mb4.4/8,Error ellipse: s-maj=11.0km s-min=8.8km az=99.6*
THR ***11*** *02:14:05.1±0.6,30.29N×57.50E,h18km±5km,ML4.7*
NEIC ***11*** *02:14:05.0,30.29N×57.51E,h17km,mb4.1/6, ML4.8(THR),MN4.9(TEH),After THR.*
OMAN ***11*** *02:14:06.3±0.0,30.35N×57.81E,h49km,Error ellipse: s-maj=15.5km s-min=3.3km az=288.0*
TEH ***11*** *02:14:06.5,30.35N×57.62E,h12km,ML4.9*
BJI ***11*** *02:14:06.3,30.30N×57.60E,h9km,mB4.6/3,mb4.3/5, Ms4.2/2,Ms7 3.9/2*
ISC 11 02:14:05.8±0.5,30.31N±0.03×57.58E±0.03,h18km±2km, h18km:pP-P,n211,σ1$24/217,mb4.1/24,MS3.5/11,10C-4D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.78**	**246**	*e*Pg	**Pg**	**02 14 19.0**	**-2.2**
KRBR				*e*Sg	**Sg**	**02 14 29.1**	**-2.6**
KRBR				AML	AML	02 14 29.8	
	comp=N,41μm,0.3s						
KRBR	**Kerman**	**0.78**	**246**	P	**Pg**	**02 14 19.0**	**-2.2**
KRBR				Sg	**Sg**	**02 14 29.0**	**-2.7**
KRBR	**Kerman**	**0.78**	**246**	*e*Pg	**Pg**	**02 14 19.0**	**-2.2**
KRBR				*e*Sg	**Sg**	**02 14 29.1**	**-2.6**
IBAF	**Bafgh**	**2.15**	**307**	*e*Pn	**Pn**	**02 14 42.1**	**+1.2**
IBAF				*e*Sg	**Sb**	**02 15 12.3**	**+1.5**
IBAF				*e*		02 15 15.6	
	comp=Z,62μm,0.2s						
IBAF	**Bafgh**	**2.15**	**307**	Pn	**Pn**	**02 14 42.4**	**+1.5**
IBAF	**Bafgh**	**2.15**	**307**	*e*Pn	**Pn**	**02 14 42.1**	**+1.2**
IBAF				*e*Sg	**Sb**	**02 15 12.3**	**+1.5**
IKOO	**Kooshah**	**2.43**	**30**⇑	*e*Pn	**Pn**	**02 14 45.3**	**+0.3**
IKOO				*e*		02 14 54.9	
	comp=Z,79μm,0.2s						
IKOO				*e*Sg	**Sb**	**02 15 20.8**	**+1.8**
IKOO	**Kooshah**	**2.43**	**30**	Pn	**Pn**	**02 14 45.2**	**+0.3**
IKOO	**Kooshah**	**2.43**	**30**	Pn	**Pn**	**02 14 45.2**	**+0.3**
IKOO				*e*Sg	**Sb**	**02 15 20.8**	**+1.8**
ITEG	**Tejag**	**2.76**	**21**⇑	*e*Pn	**Pn**	**02 14 49.7**	**+0.3**
ITEG				*e*		02 14 58.0	
	comp=Z,51μm,0.2s						
ITEG				*e*Sg	**Sg**	**02 15 32.1**	**-2.6**
ITEG	**Tejag**	**2.76**	**21**	Pn	**Pn**	**02 14 49.6**	**+0.2**
ITEG	**Tejag**	**2.76**	**21**	Pn	**Pn**	**02 14 49.6**	**+0.2**
ITEG				*e*Sg	**Sg**	**02 15 32.1**	**-2.6**
IMEH	**Mehriz**	**2.77**	**294**	*e*Pn	**Pn**	**02 14 50.7**	**+1.2**
IMEH				*e*Sg	**Sb**	**02 15 32.0**	**+3.3**
IMEH				*e*		02 15 36.2	
	comp=Z,28μm,0.2s						
IMEH	**Mehriz**	**2.77**	**294**	Pn	**Pn**	**02 14 50.7**	**+1.2**
IMEH	**Mehriz**	**2.77**	**294**	*e*Pn	**Pn**	**02 14 50.7**	**+1.2**
IMEH				*e*Sg	**Sb**	**02 15 32.0**	**+3.3**
ZHSF	**Zahedan**	**2.86**	**103**	*e*Pn	**Pn**	**02 14 53.0**	**+2.4**
ZHSF	**Zahedan**	**2.86**	**103**	P	**Pn**	**02 14 52.0**	**+1.4**
ZHSF	**Zahedan**	**2.86**	**103**	P	**Pn**	**02 14 52.0**	**+1.4**
ZHSF	**Zahedan**	**2.86**	**103**	*e*Pn	**Pn**	**02 14 53.0**	**+2.4**
IBND	**Bandar-abas**	**2.99**	**198**	*e*Pn	**Pn**	**02 14 54.2**	**+1.9**
IBND				*e*Sg	**Sg**	**02 15 41.0**	**-1.0**
IBND				*e*		02 15 51.1	
	comp=Z,42μm,0.3s						
IBND	**Bandar-abas**	**2.99**	**198**	*e*Pn	**Pn**	**02 14 54.2**	**+1.9**
IBND				*e*Sg	**Sg**	**02 15 41.0**	**-1.0**
IDAH	**Dahanechah**	**3.11**	**38**⇑	*e*Pn	**Pn**	**02 14 55.0**	**+0.8**
IDAH				*e*		02 15 12.4	
	comp=Z,23μm,0.3s						
IDAH	**Dahanechah**	**3.11**	**38**	Pn	**Pn**	**02 14 55.5**	**+1.3**
IDAH	**Dahanechah**	**3.11**	**38**	*e*Pn	**Pn**	**02 14 55.0**	**+0.8**
BNDS	**Bandar-Abbas**	**3.15**	**203**	*e*Pn	**Pn**	**02 14 55.4**	**+0.7**
BNDS	**Bandar-Abbas**	**3.15**	**203**	Pn	**Pn**	**02 14 55.0**	**+0.3**
BNDS	**Bandar-Abbas**	**3.15**	**203**	Pn	**Pn**	**02 14 55.0**	**+0.3**
ICHK	**Chekchek**	**3.33**	**306**	*e*Pn	**Pn**	**02 14 58.7**	**+1.4**
ICHK				*e*Sg	**Sg**	**02 15 51.0**	**-2.0**
ICHK				*e*		02 15 59.7	
	comp=Z,25μm,0.3s						
ICHK	**Chekchek**	**3.33**	**306**	Pn	**Pn**	**02 14 59.0**	**+1.7**
ICHK				Sg	**Sg**	**02 15 50.9**	**-2.0**
ICHK	**Chekchek**	**3.33**	**306**	*e*Pn	**Pn**	**02 14 58.7**	**+1.4**
ICHK				Sg	**Sg**	**02 15 50.9**	**-2.0**
TABS	**Tabas**	**3.35**	**353**	*e*Pn	**Pn**	**02 14 58.7**	**+1.3**
TABS				*e*Sg	**Sg**	**02 15 49.6**	**-4.0**
TABS				AML	AML	02 16 00.4	
	comp=N,2μm,0.6s						
TABS	**Tabas**	**3.35**	**353**	*e*Pn	**Pn**	**02 14 58.7**	**+1.3**
TABS				*e*Sg	**Sg**	**02 15 49.6**	**-4.0**
SHI	**Shiraz**	**4.45**	**263**	*e*Sg	**Sg**	**02 16 27.8**	**-0.9**
SHI	**Shiraz**	**4.45**	**263**	*e*Sg	**Sg**	**02 16 27.9**	**-0.8**
GHIR	**Ghir-Karzin**	**4.49**	**244**	*e*Pn	**Pn**	**02 15 13.0**	**-0.1**
GHIR	**Ghir-Karzin**	**4.49**	**244**	*e*Pn	**Pn**	**02 15 13.0**	**-0.1**
BANOM	**Banah** SNR=18	**4.51**	**195**	⇓P	**Pn**	**02 15 13.5**	**+0.3**
BANOM				⇓S	**Sn**	**02 16 06.6**	**+1.2**
BANOM	**Banah** SNR=18	**4.51**	**195**	P	**Pn**	**02 15 13.6**	**+0.3**
BANOM				S	**Sn**	**02 16 06.6**	**+1.2**
NASN	**Na'in**	**4.77**	**303**	*e*Pn	**Pn**	**02 15 18.2**	**+1.1**
NASN	**Na'in**	**4.77**	**303**	P	**Pn**	**02 15 18.0**	**+0.9**
NASN	**Na'in**	**4.77**	**303**	P	**Pn**	**02 15 18.0**	**+0.9**
IZEF	**Zefreh**	**5.17**	**301**	*e*Pn	**Pn**	**02 15 23.8**	**+1.3**
IZEF				*e*		02 17 00.1	
	comp=Z,2μm,0.4s						
IZEF	**Zefreh**	**5.17**	**301**	Pn	**Pn**	**02 15 24.3**	**+1.8**
IZEF	**Zefreh**	**5.17**	**301**	*e*Pn	**Pn**	**02 15 23.8**	**+1.3**
IGAR	**Gharneh**	**5.18**	**295**	*e*Pn	**Pn**	**02 15 23.5**	**+0.9**
NAZ	**Nazwa, Dubai** SNR=30	**5.57**	**198**	⇓P	**Pn**	**02 15 28.5**	**+0.7**
NAZ				⇓S	**Sn**	**02 16 32.2**	**+0.9**
NAZ	**Nazwa, Dubai** SNR=30	**5.57**	**198**	P	**Pn**	**02 15 28.5**	**+0.7**
NAZ				S	**Sn**	**02 16 32.2**	**+0.9**
HATD	**Hatta, Dubai**	**5.61**	**194**	P	**Pn**	**02 15 28.2**	**-0.2**
ASHO	**Ashiyiah**	**5.76**	**194**	P	**Pn**	**02 15 30.5**	**0.0**
FAQ	**Al Faqa, Dubai**	**5.82**	**198**	P	**Pn**	**02 15 31.6**	**+0.4**
IKLH	**Kolahrood**	**5.93**	**302**	*e*Pn	**Pn**	**02 15 33.6**	**+0.7**
IKLH	**Kolahrood**	**5.93**	**302**	*e*Pn	**Pn**	**02 15 33.6**	**+0.7**
IMOG	**Moghan**	**5.97**	**14**	*e*Pn	**Pn**	**02 15 33.9**	**+0.4**
IMOG	**Moghan**	**5.97**	**14**	*e*Pn	**Pn**	**02 15 33.9**	**+0.4**
IANJ	**Anjilo**	**6.00**	**330**	*e*Pn	**Pn**	**02 15 34.5**	**+0.6**
IANJ	**Anjilo**	**6.00**	**330**	*e*Pn	**Pn**	**02 15 34.5**	**+0.6**
ASUD	**Al Ashush, Dub** SNR=8.3	**6.00**	**200**	⇑P	**Pn**	**02 15 34.2**	**+0.4**
ASUD				⇑S	**Sn**	**02 16 43.1**	**+1.0**
ASUD	**Al Ashush, Dub** SNR=8.3	**6.00**	**200**	P	**Pn**	**02 15 34.2**	**+0.4**
ASUD				S	**Sn**	**02 16 43.1**	**+1.0**
IPIR	**Pirpir**	**6.19**	**294**	*e*Pn	**Pn**	**02 15 37.3**	**+0.8**
IPIR				*e*		02 17 37.3	
	comp=Z,1μm,0.3s						
IPIR	**Pirpir**	**6.19**	**294**	*e*Pn	**Pn**	**02 15 37.3**	**+0.8**
ISRO	**Mashad**	**6.19**	**14**	*e*Pn	**Pn**	**02 15 36.3**	**-0.1**
ISRO	**Mashad**	**6.19**	**14**	*e*Pn	**Pn**	**02 15 36.3**	**-0.1**
IPAY	**Payeh**	**6.24**	**11**	*e*Pn	**Pn**	**02 15 37.2**	**0.0**
IPAY				*e*		02 17 43.0	
	comp=Z,1μm,0.3s						
IPAY	**Payeh**	**6.24**	**11**	*e*Pn	**Pn**	**02 15 37.2**	**0.0**
IMYA	**Miami**	**6.37**	**19**	*e*Pn	**Pn**	**02 15 38.8**	**-0.2**
IMYA				*e*		02 17 57.8	
	comp=Z,2μm,0.5s						
IMYA	**Miami**	**6.37**	**19**	*e*Pn	**Pn**	**02 15 38.8**	**-0.2**
ILAS	**Lasjerd**	**6.38**	**324**	*e*Pn	**Pn**	**02 15 39.8**	**+0.7**
ILAS				*e*		02 18 13.2	
	comp=Z,3μm,0.4s						
ILAS	**Lasjerd**	**6.38**	**324**	*e*Pn	**Pn**	**02 15 39.8**	**+0.7**
IKRD	**Kardeh**	**6.50**	**7**⇑	*e*Pn	Pn	02 15 44.0	+3.3
IKRD				*e*		02 18 01.0	
	comp=Z,2μm,0.6s						
ISHM	**Shahmirzad**	**6.56**	**328**	*e*Pn	**Pn**	**02 15 41.8**	**+0.2**
ISHM				*e*		02 17 58.2	
	comp=Z,5μm,0.4s						
ISHM	**Shahmirzad**	**6.56**	**328**	*e*Pn	**Pn**	**02 15 41.8**	**+0.2**
ARQ	**Araqi** SNR=6.8	**7.01**	**188**	⇑P	**Pn**	**02 15 47.8**	**+0.2**
ARQ	**Araqi** SNR=6.8	**7.01**	**188**	P	**Pn**	**02 15 47.8**	**+0.2**
BSY	**Bisya**	**7.54**	**183**	⇑P	**Pn**	**02 15 55.3**	**+0.4**
BSYO	**Bisya**	**7.55**	**182**	P	**Pn**	**02 15 55.3**	**+0.2**
WBK	**Wadi Bani Khal** SNR=9.9	**7.77**	**170**	P	Pn	02 15 55.9	-2.1
WBK				⇑S	**Sn**	**02 17 24.3**	**-1.2**
WBK	**Wadi Bani Khal** SNR=9.9	**7.77**	**170**	P	Pn	02 15 55.9	-2.1
QRN	**Al-Qurain**	**8.56**	**262**	*e*P	**Pn**	**02 16 07.2**	**-1.7**
KBD	**Kabd**	**8.67**	**265**	*e*P	**Pn**	**02 16 09.2**	**-1.2**
KBD	**Kabd**	**8.67**	**265**	*e*P	**Pn**	**02 16 09.2**	**-1.2**
RDF	**Al-Radifah**	**8.84**	**264**	*e*P	**Pn**	**02 16 11.8**	**-0.9**
RDF				AML	AML	02 17 51.2	
	comp=Z,25nm,0.4s						
RDF	**Al-Radifah**	**8.84**	**264**	*e*P	**Pn**	**02 16 11.8**	**-0.9**
MIB	**Mutribah**	**8.89**	**269**	*e*P	**Pn**	**02 16 11.8**	**-1.5**
MIB	**Mutribah**	**8.89**	**269**	*e*P	**Pn**	**02 16 11.9**	**-1.5**
NAY	**Al-Naaiem**	**9.05**	**266**	*e*P	**Pn**	**02 16 14.2**	**-1.3**
NAY				AML	AML	02 18 03.5	
	comp=Z,23nm,0.6s						
NAY	**Al-Naaiem**	**9.05**	**266**	*e*P	**Pn**	**02 16 14.2**	**-1.3**
BHD	**Baghdad**	**11.62**	**288**	*ex*	Pn	02 16 42.9	-7.8
BHD				*ex*	x	02 18 43.0	
GNI	**Garni**	**14.36**	**317**	LR	LR	02 23 35.0	
	comp=Z,174nm,20.4s,baz=100,slow=39						
MAK	**Makhachkala**	**14.98**	**330**	*e*P	**Pn**	**02 17 34.2**	**-2.3**
MAK				MLR	MLR		
	comp=Z,278nm,19.0s						
ZEI	**Tsey**	**16.57**	**322**	*e*P	**P**	**02 18 02.5**	**+2.6**
ZEI				pmax	pmax		
	comp=Z,24nm,1.7s						
ZEI	**Tsey**	**16.57**	**322**	*e*P	**P**	**02 18 02.5**	**+2.6**
	comp=Z,24nm,1.7s						
KBZ	**Khabaz**	**17.77**	**323**	LR	LR	02 25 57.9	
	comp=Z,98nm,20.2s,baz=121,slow=40						
ASF	**Jabal al Asfar**	**17.79**	**281**	P	**Pn**	**02 18 11.6**	**-1.0**
ASF	**Jabal al Asfar**	**17.79**	**281**	P	**Pn**	**02 18 11.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=307,slow=6.8,SNR=3.8						
ASF				LR	LR	02 26 33.5	
	comp=Z,171nm,18.6s,baz=323,slow=42						
KIV	**Kislovodsk**	**18.03**	**323**	*e*P	**P**	**02 18 20.6**	**+4.7**
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KIV				MLR	MLR		
	comp=Z,33nm,14.0s						
AAK	**Ala-Archa**	**18.30**	**43**	*i* P	**Pn**	**02 18 19.1**	**+0.3**
AAK				pmax	pmax		
	comp=Z,11nm,0.9s						
AAK				MLR	MLR		
	comp=Z,212nm,20.0s						
AAK	**Ala-Archa**	**18.30**	**43**	P	**Pn**	**02 18 18.5**	**-0.3**
AAK	**Ala-Archa**	**18.30**	**43**	P	**Pn**	**02 18 18.5**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=223,slow=7.2,SNR=10						
AAK				LR	LR	02 26 55.2	
	comp=Z,59nm,19.1s,baz=126,slow=42						
AAK	**Ala-Archa**	**18.30**	**43**	*i* P	**Pn**	**02 18 19.1**	**+0.3**
	comp=Z,212nm,20.0s						
ABKAR	**Akbulak array**	**19.01**	**5**	*e*P	**P**	**02 18 26.9**	**+0.5**
	comp=Z,3.6nm,0.6s						
ABKAR	**Akbulak array**	**19.01**	**5**	*e*P	**P**	**02 18 27.0**	**+0.5**
	comp=Z,3.6nm,0.6s						
MMAI	**Mount Meron Ar**	**19.07**	**284**	P	**P**	**02 18 27.2**	**-0.1**
MMAI	**Mount Meron Ar**	**19.07**	**284**	P	**P**	**02 18 27.2**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=83,slow=12,SNR=2.7						
MMAI				LR	LR	02 27 26.1	
	comp=Z,128nm,19.1s,baz=90,slow=42						
MMAI	**Mount Meron Ar**	**19.07**	**284**	P	**P**	**02 18 27.2**	**-0.1**
TKM2	**Tokmak 2**	**19.12**	**44**	*e*P	**Pn**	**02 18 29.8**	**+0.9**
TKM2	**Tokmak 2**	**19.12**	**44**	*e*P	**Pn**	**02 18 29.8**	**+0.9**
TKM2	**Tokmak 2**	**19.12**	**44**	*e*P	**Pn**	**02 18 29.8**	**+0.9**
EIL	**Elat**	**19.61**	**274**	LR	LR	02 27 04.0	
	comp=Z,81nm,19.3s,baz=264,slow=40						
AKTK	**Aktyubinsk**	**20.11**	**1**	P	**P**	**02 18 39.2**	**+0.8**
AKTO	**Aktyubinsk**	**20.11**	**1**	P	**P**	**02 18 39.2**	**+0.8**
AKTO	**Aktyubinsk**	**20.11**	**1**	P	**P**	**02 18 39.2**	**+0.8**
AKTO	**Aktyubinsk**	**20.11**	**1**	P	**P**	**02 18 39.2**	**+0.8**
	comp=Z,3.8nm,0.5s,baz=174,slow=11,SNR=21						
AKTO				LR	LR	02 27 59.5	
	comp=Z,139nm,18.7s,baz=172,slow=41						
BR131	**Keskin Array S**	**21.69**	**302**	*e*P	**P**	**02 18 55.8**	**0.0**
	comp=Z,6.0nm,0.7s						
BR131	**Keskin Array S**	**21.69**	**302**	*e*P	**P**	**02 18 55.8**	**0.0**
	comp=Z,6.0nm,0.7s						
BRTR	**Keskin Array B**	**21.69**	**302**	P	**P**	**02 18 55.8**	**0.0**
BRTR				pP	**pP**	**02 19 01.1**	**+0.1**
BRTR	**Keskin Array B**	**21.69**	**302**	P	**P**	**02 18 55.8**	**0.0**
	comp=Z,5.1nm,0.7s,baz=121,slow=12,SNR=18						
BRTR				pP	**pP**	**02 19 01.1**	**+0.1**
	comp=Z,5.2nm,0.7s,baz=124,slow=14,SNR=30						
BRTR	**Keskin Array B**	**21.69**	**302**	P	**P**	**02 18 55.8**	**0.0**
PYUN	**Piuthan**	**22.27**	**89**	*e*P	**P**	**02 19 01.5**	**-0.8**
	comp=Z,30nm,0.7s						
KOLN	**Koldanda**	**22.87**	**90**	*e*P	**P**	**02 19 07.8**	**-0.8**
	comp=Z,10nm,1.0s						
DANN	**Dangsing**	**22.89**	**88**	*e*P	**P**	**02 19 08.2**	**-0.7**
	comp=Z,55nm,0.7s						
HYB	**Hyderabad**	**23.02**	**119**	*i* P	**P**	**02 19 09.5**	**-0.5**
ATD	**Arta Tunnel**	**23.16**	**219**	LR	LR	02 27 37.0	
	comp=Z,50nm,19.1s,baz=17,slow=35						
KKN	**Kakani**	**24.32**	**89**	*e*P	**P**	**02 19 22.1**	**-0.7**
PKIN	**Phulchoki**	**24.47**	**89**	*e*P	**P**	**02 19 22.6**	**-1.6**
	comp=Z,12nm,0.6s						
PKI	**Pulchoki**	**24.48**	**89**	*e*P	**P**	**02 19 23.4**	**-0.9**
	comp=Z,25nm,1.0s						
BVAR	**Borovoye Array**	**24.55**	**19**	LR	LR	02 30 26.7	
	comp=Z,160nm,18.1s,baz=210,slow=40						
BRVK	**Borovoye**	**24.56**	**19**	*i* P	**P**	**02 19 24.3**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,153nm,15.0s						
BRVK	**Borovoye**	**24.56**	**19**	*e*P	**P**	**02 19 24.7**	**+0.3**
	comp=Z,2.5nm,0.6s						
BRVK	**Borovoye**	**24.56**	**19**	*e*P	**P**	**02 19 24.7**	**+0.3**
	comp=Z,2.5nm,0.6s						
GUN	**Gumba**	**24.81**	**88**	*e*P	**P**	**02 19 26.9**	**-0.5**
MK31	**Makanchi Array**	**25.23**	**42**	*e*P	**P**	**02 19 30.5**	**-0.1**
MK31	**Makanchi Array**	**25.23**	**42**	*e*P	**P**	**02 19 30.5**	**-0.1**
MK31	**Makanchi Array**	**25.23**	**42**	*e*P	**P**	**02 19 30.5**	**-0.1**
MKAR	**Makanchi Array**	**25.23**	**42**	P	**P**	**02 19 31.2**	**+0.6**
MKAR				*PP	**pP**	**02 19 37.5**	**+1.4**
MKAR	**Makanchi Array**	**25.23**	**42**	P	**P**	**02 19 31.1**	**+0.6**
MKAR				pP	**pP**	**02 19 37.5**	**+1.4**
MKAR	**Makanchi Array**	**25.23**	**42**	P	**P**	**02 19 31.1**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=229,slow=8.5,SNR=26						
MKAR				pP	**pP**	**02 19 37.5**	**+1.4**
	comp=Z,4.4nm,0.6s,baz=232,slow=9.2,SNR=19						
MKAR	**Makanchi Array**	**25.24**	**42**	P	**P**	**02 19 31.2**	**+0.6**
KURBB	**Kurchatov Arra**	**25.64**	**32**	P	**P**	**02 19 34.8**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=231,slow=9.2,SNR=10						
KURBB				LR	LR	02 30 12.1	
	comp=Z,38nm,19.1s,baz=235,slow=37						
RAMN	**Ramite**	**25.66**	**90**	*e*P	**P**	**02 19 33.8**	**-1.1**
	comp=Z,31nm,0.6s						
KURK	**Kurchatov**	**25.75**	**32**	*i* P	**P**	**02 19 37.5**	**+2.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KURK				MLR	MLR		
	comp=Z,128nm,14.0s						
KURK	**Kurchatov**	**25.75**	**32**	*e*P	**P**	**02 19 34.4**	**-0.7**
	comp=Z,0.6nm,0.5s						
KURK	**Kurchatov**	**25.75**	**32**	*i* P	**P**	**02 19 37.5**	**+2.3**
	comp=Z,128nm,14.0s						
ODAN	**Odare**	**26.36**	**90**	*e*P	**P**	**02 19 40.2**	**-1.1**
	comp=Z,20nm,0.8s						
TAPN	**Taplejung**	**26.52**	**89**	*e*P	**P**	**02 19 43.4**	**+0.6**
AKASG	**Malin Array Be**	**29.37**	**322**	P	**P**	**02 20 09.0**	**+1.3**
AKASG	**Malin Array Be**	**29.37**	**322**	P	**P**	**02 20 08.9**	**+1.3**
AKASG	**Malin Array Be**	**29.37**	**322**	P	**P**	**02 20 08.9**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=122,slow=8.4,SNR=4.1						
AKASG	**Malin Array Be**	**29.37**	**322**	P	**P**	**02 20 09.0**	**+1.3**
ZALV	**Zalesovo Beam**	**30.74**	**32**	P	**P**	**02 20 19.6**	**-0.1**
ZALV	**Zalesovo Beam**	**30.74**	**32**	P	**P**	**02 20 19.6**	**-0.1**
ZALV	**Zalesovo Beam**	**30.74**	**32**	P	**P**	**02 20 19.6**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=251,slow=9.1,SNR=6.9						
ZALV	**Zalesovo Beam**	**30.74**	**32**	P	**P**	**02 20 19.6**	**-0.1**
HVS	**Khovu-Aksy**	**33.89**	**42**	*i* P	**P**	**02 20 54.4**	**+6.9**
HVS				pmax	pmax		
	comp=Z,12nm,0.9s						
GTA	**Gaotai**	**35.55**	**64**	*e*P	**P**	**02 21 03.1**	**+1.0**
GTA				pP	**pP**	**02 21 09.1**	**+1.4**
GTA				sP	**sP**	**02 21 12.3**	**+2.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KMBO	**Kilima Mbogo**	**36.78**	**215**	P	**P**	**02 21 12.3**	**-0.6**
KMBO	**Kilima Mbogo**	**36.78**	**215**	P	**P**	**02 21 12.3**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=219,slow=23,SNR=3.9						
KMBO	**Kilima Mbogo**	**36.78**	**215**	P	**P**	**02 21 12.3**	**-0.6**
FINES	**FINESS Array B**	**37.38**	**336**	P	**P**	**02 21 17.6**	**+0.5**
FINES	**FINESS Array B**	**37.38**	**336**	P	**P**	**02 21 17.6**	**+0.5**
	comp=Z,2.8nm,1.0s,baz=107,slow=9.3,SNR=4.9						
FINES	**FINESS Array B**	**37.38**	**336**	P	**P**	**02 21 17.6**	**+0.5**
GERES	**GERES

2.1nm,0.7s,baz=300,slow=9.3,SNR=7.8
ASAR Alice Springs 44.43 127 P P 02 24 05.8 +0.1
0.4nm,0.5s,baz=300,slow=8.0,SNR=6.2
KSRS Korea Array 45.55 35 P P 02 24 13.2 -1.1
1.5nm,0.7s,baz=246,slow=8.0,SNR=4.9
MKAR Makanchi Array 46.27 346 P P 02 24 19.9 0.0
4.8nm,0.7s,baz=162,slow=7.7,SNR=32
SONM Songino Array 46.41 9 P P 02 24 20.7 -0.3
1.1nm,0.4s,baz=187,slow=9.1,SNR=12
KURBB Kurchatov Arra 50.75 345 P P 02 24 54.3 0.0
2.5nm,0.6s,baz=166,slow=7.0,SNR=22
ZALV Zalesovo Beam 52.63 351 P P 02 25 08.1 -0.2
6.2nm,0.6s,baz=177,slow=7.1,SNR=26

MAN 11 02:45:26,9.59N×126.42E,h103km,mb4.3,ML3.1,MS2.9, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.00**	**232**	*e*P	Pn	02 45 46.8	+0.1
BUTP				*e*S	Sn	02 46 00.5	-1.8
MSLP	**Maasin**	**1.63**	**289**	*e*P	Pn	02 45 55.4	+1.3
MSLP				*e*S	Sn	02 46 05.1	-10
PLP	**Palo**	**2.11**	**318**	*e*P	Pn	02 46 00.7	+0.5
PLP				*e*S	Sn	02 46 24.3	-2.0

IDC 11 03:13:36.2±18.0,26.42S×179.65W,h267km±180km, mb2.8/3,mb1 3.2/3,mb1mx3.0/17,mbtmp2.8/3,Error ellipse: s-maj=213.9km s-min=55.1km az=163.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.99**	**263**	P	P	03 21 01.1	-0.7
	0.1nm,0.4s,baz=97,slow=7.6,SNR=2.9						
WRA	**Warramunga Arr**	**42.61**	**269**	P	P	03 21 07.2	+0.5
	0.4nm,0.4s,baz=107,slow=8.0,SNR=6.8						
NVAR	**Mina Array Bea**	**86.34**	**44**	P	P	03 25 48.6	0.0
	0.5nm,0.6s,baz=219,slow=8.1,SNR=4.5						
AKASG	**Malin Array Be**	**147.23**	**325**	PKPbc	PKPbc	03 32 47.0	-0.8
	1.4nm,0.6s,baz=46,slow=2.4,SNR=6.0						

DDA 11 03:21:50.0,37.87N×29.08E,h7km,MD2.8,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DNZL	**Cakiroluk**	**0.18**	**189**	*i* P	Pg	03 21 54.2	+0.2
DNZL				*i* S	Sg	03 21 57.1	+0.4
KHAL	**Karahalli**	**0.59**	**33**	*i* P	Pg	03 22 00.9	-0.7
KHAL				*i* S	Sg	03 22 10.4	+0.9

IDC 11 03:22:33.7±1.8,17.92S×172.92W,h0km,mb3.8/7, mb1 4.1/7,mb1mx3.9/20,mbtmp3.7/7,MS3.6/4,Ms1 3.6/4, ms1mx3.0/38,Error ellipse: s-maj=111.3km s-min=21.3km az=147.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**19.82**	**255**	LR	LR	03 32 26.4	
	comp=Z,75nm,21.4s,baz=249,slow=30						
PPT	**Papeete**	**22.24**	**93**	LR	LR	03 33 40.9	
	comp=Z,132nm,21.8s,baz=93,slow=30						
STKA	**Stephens Creek**	**43.23**	**242**	P	P	03 30 36.5	-0.3
	1.3nm,0.9s,baz=94,slow=14,SNR=2.4						
WRA	**Warramunga Arr**	**49.76**	**259**	P	P	03 31 27.7	-0.7
	0.3nm,0.4s,baz=96,slow=8.7,SNR=3.1						
ASAR	**Alice Springs**	**49.81**	**254**	P	P	03 31 28.9	+0.2
	3.3nm,0.8s,baz=88,slow=8.4,SNR=33						
FITZ	**Fitzroy Crossi**	**58.17**	**259**	LR	LR	03 55 39.5	
	comp=Z,73nm,19.1s,baz=180,slow=34						
NVAR	**Mina Array Bea**	**75.90**	**41**	P	P	03 34 22.2	-0.3
	0.6nm,0.8s,baz=223,slow=10,SNR=3.7						
TXAR	**Lajitas Array**	**81.64**	**56**	P	P	03 34 53.9	-0.3
	0.1nm,0.5s,baz=132,slow=1.9,SNR=3.8						
ILAR	**Eielson Array**	**84.82**	**11**	P	P	03 35 08.6	-1.0
	0.3nm,0.7s,baz=226,slow=6.1,SNR=3.7						
YKA	**Yellowknife Ar**	**92.22**	**23**	P	P	03 35 46.3	+1.3
	0.3nm,0.8s,baz=239,slow=4.2,SNR=6.4						
ULM	**Lac du Bonnet**	**95.60**	**39**	LR	LR	04 14 29.9	
	comp=Z,52nm,21.4s,baz=283,slow=33						
BRTR	**Keskin Array B**	**148.37**	**319**	PKPbc	PKPbc	03 42 23.1	+0.5
	0.6nm,0.9s,baz=194,slow=2.5,SNR=4.7						

ISK 11 03:23:15.9,41.97N×26.35E,h5km,MD3.3
THE 11 03:23:15.1,42.31N×26.45E,h32km±4km,ML2.6/4,Error ellipse: s-maj=4.4km s-min=0.6km az=34.0
CSEM 11 03:23:16.0±0.2,42.04N×26.24E,h2km,MD2.8,Error ellipse: s-maj=4.3km s-min=3.1km az=1.0
ISCJB 11 03:23:17.2±0.4,41.99N±0.03×26.27E±0.04,h10km,Error ellipse: s-maj=4.6km s-min=3.8km az=173.9
ISC 11 03:23:15.0±0.7,42.13N±0.02×26.24E±0.02,h10km,n73, σ1s30/87,6C-4D,Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMB	**Yambol**	**0.43**	**37**	P	**Pg**	**03 23 21.2**	**-2.1**
JMB				S	**Sg**	**03 23 26.2**	**-2.8**
JMB	**Yambol**	**0.43**	**37**	P	**Pg**	**03 23 21.2**	**-2.1**
EDRB	**Edirne**	**0.47**	**126**	*e*PG	**Pg**	**03 23 23.1**	**-1.0**
EDRB				*e*SG	**Sg**	**03 23 28.9**	**-1.4**
EDRB	**Edirne**	**0.47**	**126**	*e*Pg	**Pg**	**03 23 23.1**	**-1.0**
EDRB				*e*Sg	**Sg**	**03 23 28.9**	**-1.4**
ALN	**Alexandroupoli**	**1.24**	**187**	P	**Pg**	**03 23 38.9**	**+0.2**
ALN				S	**Sn**	**03 23 56.7**	**+1.7**
ALN	**Alexandroupoli**	**1.24**	**187**	P	**Pg**	**03 23 38.9**	**+0.2**
ALN				S	**Sn**	**03 23 56.7**	**+1.7**
ERIK	**Erikli-Kesan**	**1.47**	**172**	*e*PN	**Pb**	**03 23 41.7**	**-0.6**
ERIK	**Erikli-Kesan**	**1.47**	**172**	*e*Pn	**Pb**	**03 23 41.7**	**-0.6**
TKR	**Tekirdag**	**1.49**	**139**	*e*PN	**Pb**	**03 23 42.5**	**-0.3**
TKR	**Tekirdag**	**1.49**	**139**	*e*Pn	**Pb**	**03 23 42.5**	**-0.3**
CRLT	**Corlu**	**1.50**	**131**	*e*PN	**Pb**	**03 23 42.7**	**-0.2**
CRLT	**Corlu**	**1.50**	**131**	*e*Pn	**Pb**	**03 23 42.7**	**-0.2**
SART	**Tekirdag**	**1.60**	**153**	*i* P	**Pg**	**03 23 45.0**	**-0.6**
SART				*i* S	**Sg**	**03 24 05.4**	**-1.0**
SART	**Tekirdag**	**1.60**	**153**	P	**Pg**	**03 23 45.0**	**-0.7**
CTYL	**Yal??k??y-??at**	**1.66**	**112**	*e*PN	**Pb**	**03 23 45.5**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.66**	**112**	*e*Pn	**Pb**	**03 23 45.5**	**-0.2**
KAVA	**Kavala**	**1.72**	**230**	P	**Pb**	**03 23 45.9**	**-0.7**
KAVA				S	**Sg**	**03 24 09.6**	**-0.6**
KAVA	**Kavala**	**1.72**	**230**	P	**Pb**	**03 23 45.9**	**-0.7**
KAVA				S	**Sg**	**03 24 09.6**	**-0.6**
SLVT	**Silivri**	**1.73**	**121**	*e*PN	**Pb**	**03 23 46.0**	**-0.7**
SLVT	**Silivri**	**1.73**	**121**	*e*Pn	**Pb**	**03 23 46.0**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.73**	**174**	*e*PN	**Pn**	**03 23 45.4**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.73**	**174**	*e*Pn	**Pn**	**03 23 45.4**	**+0.2**
LPK	**Lapseki**	**1.79**	**167**	*e*PN	**Pb**	**03 23 46.8**	**-1.1**
LPK	**Lapseki**	**1.79**	**167**	*e*Pn	**Pb**	**03 23 46.8**	**-1.1**
MRMT	**Marmara Adasi**	**1.83**	**146**	*e*PN	**Pb**	**03 23 47.5**	**-1.1**
MRMT	**Marmara Adasi**	**1.83**	**146**	*e*Pn	**Pb**	**03 23 47.5**	**-1.1**
KRBG	**Karabiga-Canak**	**1.91**	**155**	*e*PN	**Pb**	**03 23 48.4**	**-1.4**
KRBG	**Karabiga-Canak**	**1.91**	**155**	*e*Pn	**Pb**	**03 23 48.4**	**-1.4**
CTKS	**Kestanelik-??a**	**1.92**	**117**	*e*PN	**Pb**	**03 23 48.9**	**-1.1**
CTKS	**Kestanelik-??a**	**1.92**	**117**	*e*Pn	**Pb**	**03 23 48.9**	**-1.1**
NVR	**Nevrokopi**	**1.94**	**247**	P	**Pn**	**03 23 48.4**	**+0.4**
NVR				S	**Sb**	**03 24 14.2**	**-0.5**
NVR	**Nevrokopi**	**1.94**	**247**	P	**Pn**	**03 23 48.4**	**+0.4**
NVR				S	**Sb**	**03 24 14.2**	**-0.5**
BGKT	**Bogazkoy**	**2.12**	**116**	*e*PN	**Pb**	**03 23 52.0**	**-1.5**
BGKT	**Bogazkoy**	**2.12**	**116**	*e*Pn	**Pb**	**03 23 52.0**	**-1.5**
EDC	**Edincik**	**2.16**	**145**	*e*PN	**Pn**	**03 23 52.1**	**+1.1**
EDC	**Edincik**	**2.16**	**145**	*e*Pn	**Pn**	**03 23 52.1**	**+1.1**
BNT	**Bandirma**	**2.17**	**144**	*e*PN	**Pn**	**03 23 51.9**	**+0.7**
BNT	**Bandirma**	**2.17**	**144**	*e*Pn	**Pn**	**03 23 51.9**	**+0.7**
SRS	**Serrai**	**2.23**	**244**	P	**Pn**	**03 23 52.4**	**+0.5**
SRS				S	**Sb**	**03 24 22.2**	**-0.7**
SRS	**Serrai**	**2.23**	**244**	P	**Pn**	**03 23 52.4**	**+0.5**
SRS				S	**Sb**	**03 24 22.2**	**-0.7**
VTS	**Vitosha**	**2.29**	**283**	*i* P	**Pn**	**03 23 52.8**	**-0.2**
VTS	**Vitosha**	**2.29**	**283**	*i* P	**Pn**	**03 23 52.8**	**-0.2**
VTS				S	**Sn**	**03 24 21.0**	**-0.4**
EZN	**Ezine**	**2.30**	**178**	*e*PN	**Pn**	**03 23 54.2**	**+1.3**
EZN	**Ezine**	**2.30**	**178**	*e*Pn	**Pn**	**03 23 54.2**	**+1.3**
GONE	**Gonen-Balikesi**	**2.35**	**152**	*e*PN	**Pn**	**03 23 54.8**	**+1.2**
GONE	**Gonen-Balikesi**	**2.35**	**152**	*e*Pn	**Pn**	**03 23 54.8**	**+1.2**
ISK	**Istanbul-Kandi**	**2.36**	**116**	*e*PN	**Pn**	**03 23 55.3**	**+1.5**
ISK	**Istanbul-Kandi**	**2.36**	**116**	*e*Pn	**Pn**	**03 23 55.3**	**+1.5**
KCTX	**Karacabey (Bur**	**2.45**	**139**	*e*PN	**Pn**	**03 23 56.0**	**+1.0**
KCTX	**Karacabey (Bur**	**2.45**	**139**	*e*Pn	**Pn**	**03 23 56.0**	**+1.0**
BUY	**Buyukada**	**2.51**	**120**	*e*PN	**Pn**	**03 23 57.5**	**+1.7**
BUY	**Buyukada**	**2.51**	**120**	*e*Pn	**Pn**	**03 23 57.5**	**+1.7**
ARMT	**Armutlu**	**2.51**	**127**	*e*PN	**Pn**	**03 23 57.1**	**+1.2**
ARMT	**Armutlu**	**2.51**	**127**	*e*Pn	**Pn**	**03 23 57.1**	**+1.2**
HUMR	**Humele**	**2.57**	**339**	*i* P	**Pb**	**03 24 00.5**	**-0.7**
HUMR	**Humele**	**2.57**	**339**	S	**Sg**	**03 24 40.8**	**+3.2**
HUMR	**Humele**	**2.57**	**339**	*i* P	**Pb**	**03 24 00.5**	**-0.7**
BALB	**Balikesir**	**2.78**	**153**	*e*PN	**Pn**	**03 24 00.7**	**+1.2**
BALB	**Balikesir**	**2.78**	**153**	*e*Pn	**Pn**	**03 24 00.7**	**+1.2**
TIRR	**Tirgusor**	**2.82**	**33**	*i* P	**Pb**	**03 24 03.5**	**-1.9**
TIRR	**Tirgusor**	**2.82**	**33**	S	**Sb**	**03 24 41.7**	**+1.7**
TIRR	**Tirgusor**	**2.82**	**33**	*i* P	**Pb**	**03 24 03.5**	**-1.9**
TIRR				S	**Sb**	**03 24 41.7**	**+1.7**
HRT	**Hereke**	**2.89**	**116**	*e*PN	**Pn**	**03 24 02.9**	**+1.9**
HRT	**Hereke**	**2.89**	**116**	*e*Pn	**Pn**	**03 24 02.9**	**+1.9**
ISR	**Istrita**	**3.00**	**4**	S	Sg	03 24 58.0	+6.7
IZI	**Iznik**	**3.02**	**125**	*e*PN	**Pn**	**03 24 04.5**	**+1.6**
IZI	**Iznik**	**3.02**	**125**	*e*Pn	**Pn**	**03 24 04.5**	**+1.6**
CFR	**Carcaliu**	**3.35**	**24**	*i* P	**Pb**	**03 24 14.0**	**-0.4**
CFR	**Carcaliu**	**3.35**	**24**	*i* P	**Pb**	**03 24 14.0**	**-0.4**
CFR				S	**Sb**	**03 24 56.1**	**+1.0**
MLR	**Muntele Rosu**	**3.37**	**356**	*i* P	**Pb**	**03 24 15.5**	**+0.6**
MLR	**Muntele Rosu**	**3.37**	**356**	S	**Sg**	**03 25 01.1**	**-2.1**
MLR	**Muntele Rosu**	**3.37**	**356**	*i* P	**Pb**	**03 24 15.5**	**+0.6**
LOT	**Lotru**	**3.77**	**333**	S	**Sb**	**03 25 11.9**	**+4.4**

IDC 11 03:26:43.0±6.8,23.11N×141.71E,h254km±64km,mb3.4/9, mb1 3.5/10,mb1mx3.2/25,mbtmp3.3/10,Error ellipse: s-maj=44.2km s-min=11.5km az=77.0
JMA 11 03:26:43.4±0.2,23.47N×141.34E,h256km,M4.5
ISC 11 03:26:42.6±0.9,23.43N±0.07×141.5E±0.2,h256km,n18, σ2s40/18,mb3.7/10,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**3.25**	**12**	P	**Pn**	**03 27 39.0**	**+0.9**
JHHJ				*e*S	**S**	**03 28 22.2**	**-0.1**
CBIJ	**Chichi jima**	**3.71**	**10**	P	**Pn**	**03 27 44.4**	**+1.1**
CBIJ				*e*S	**S**	**03 28 31.7**	**+0.2**
BSO3	**Boso 3**	**11.36**	**356**	P	**Pn**	**03 29 18.7**	**+1.0**
BSO4	**Boso 4**	**11.56**	**355**	*e*S	**S**	**03 31 28.2**	**-1.1**
JHO	**Hitachi**	**13.15**	**357**	P	**Pn**	**03 29 40.6**	**+0.4**
JHO				*e*S	**S**	**03 32 01.1**	**-5.1**
JFK	**Kawauchi**	**13.90**	**358**	*e*S	**S**	**03 32 18.2**	**-4.8**
KSRS	**Korea Array**	**18.17**	**323**	P	**Pn**	**03 30 40.8**	**+0.9**
	0.2nm,0.3s,baz=126,slow=8.4,SNR=5.2						
SONM	**Songino Array**	**36.99**	**320**	P	P	03 33 32.3	+4.5
	0.7nm,0.5s,baz=135,slow=5.3,SNR=4.1						
WRA	**Warramunga Arr**	**43.67**	**190**	P	**P**	**03 34 20.6**	**-1.9**
	2.5nm,0.5s,baz=7.9,slow=8.1,SNR=20						
ASAR	**Alice Springs**	**47.39**	**189**	P	**P**	**03 34 50.0**	**-1.6**
	0.7nm,0.6s,baz=15,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**51.86**	**321**	P	P	03 35 27.9	+3.0
	1.8nm,0.3s,baz=98,slow=6.6,SNR=9.5						
MKAR	**Makanchi Array**	**52.35**	**312**	P	P	03 35 32.2	+3.7
	1.0nm,0.4s,baz=92,slow=9.1,SNR=18						
STKA	**Stephens Creek**	**55.00**	**180**	P	**P**	**03 35 45.6**	**-2.1**
	1.4nm,0.7s,baz=342,slow=9.0,SNR=7.5						
YKA	**Yellowknife Ar**	**75.67**	**28**	P	**P**	**03 38 01.5**	**+2.0**
	0.2nm,0.6s,baz=294,slow=5.8,SNR=4.3						
ARCES	**ARCESS Array B**	**76.77**	**341**	P	**P**	**03 38 08.5**	**+2.9**
	2.4nm,0.8s,baz=64,slow=8.5,SNR=8.7						
JOF	**Joensuu**	**78.06**	**334**	*ep*	**P**	**03 38 15.0**	**+2.2**
	1.2nm,0.4s						
FINES	**FINESS Array B**	**80.93**	**334**	P	**P**	**03 38 30.1**	**+1.9**
	0.9nm,0.3s,baz=64,slow=5.4,SNR=14						
TORD	**Torodi Ar. Bea**	**126.41**	**309**	PKP	**PKPdf**	**03 45 16.7**	**+0.8**
	0.3nm,0.9s,baz=181,slow=1.3,SNR=4.3						

ISK 11 03:44:01.4,37.90N×29.03E,h6km,MD2.7
ISCJB 11 03:44:01.9±0.5,37.90N±0.03×29.07E±0.05,h5km±7km, Error ellipse: s-maj=6.3km s-min=4.3km az=9.7
DDA 11 03:44:02.5,37.89N×29.06E,h7km,MD2.9
CSEM 11 03:44:02.1±0.2,37.90N×29.07E,h5km,MD2.7,Error ellipse: s-maj=4.1km s-min=3.0km az=99.0
ISC 11 03:44:01.9±1.1,37.91N±0.02×29.05E±0.03,h3km±13km, n26,σ0s39/38,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.16**	**184**	*e*PG	**Pg**	**03 44 04.9**	**-0.1**
DENT				*e*SG	**Sg**	**03 44 07.4**	**+0.3**
DENT	**Denizli**	**0.16**	**184**	*e*Pg	**Pg**	**03 44 04.9**	**-0.1**
DENT				*e*Sg	**Sg**	**03 44 07.4**	**+0.3**
DNZL	**Cakiroluk**	**0.22**	**180**	*i* P	**Pg**	**03 44 06.1**	**-0.1**
DNZL				*i* S	**Sg**	**03 44 09.4**	**+0.3**
DNZL	**Cakiroluk**	**0.22**	**180**	*i* P	**Pg**	**03 44 06.1**	**-0.1**
DNZL				*i* S	**Sg**	**03 44 09.4**	**+0.3**
KHL	**Karahalli**	**0.56**	**42**	*e*PG	**Pg**	**03 44 13.1**	**+0.4**
KHL	**Karahalli**	**0.56**	**42**	*e*Pg	**Pg**	**03 44 13.1**	**+0.4**
KHAL	**Karahalli**	**0.58**	**37**	*i* P	**Pg**	**03 44 13.2**	**+0.2**
KHAL				*i* S	**Sg**	**03 44 19.4**	**-1.2**
KHAL	**Karahalli**	**0.58**	**37**	*i* P	**Pg**	**03 44 13.2**	**+0.2**
KHAL				*i* S	**Sg**	**03 44 19.4**	**-1.2**
KULA	**Kula-Manisa**	**0.68**	**333**	*e*PG	**Pg**	**03 44 15.1**	**+0.1**
KULA	**Kula-Manisa**	**0.68**	**333**	*e*Pg	**Pg**	**03 44 15.1**	**+0.1**
MANT	**Manisa**	**0.70**	**327**	*i* P	**Pb**	**03 44 17.1**	**+0.2**
MANT				*i* S	**Sb**	**03 44 27.2**	**+0.2**
MANT	**Manisa**	**0.70**	**327**	*i* P	**Pb**	**03 44 17.1**	**+0.2**
MANT				*i* S	**Sb**	**03 44 27.2**	**+0.2**
GOLH	**Golhisar**	**0.79**	**149**	*i* P	**Pg**	**03 44 17.4**	**+0.4**
GOLH				*i* S	**Sb**	**03 44 29.5**	**+0.1**
GOLH	**Golhisar**	**0.79**	**149**	*i* P	**Pg**	**03 44 17.4**	**+0.4**
GOLH				*i* S	**Sb**	**03 44 29.5**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.83**	**154**	*e*PG	**Pg**	**03 44 17.8**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.83**	**154**	*e*Pg	**Pg**	**03 44 17.8**	**-0.1**
AYDN	**Tasoluk**	**0.96**	**255**	*i* P	**Pb**	**03 44 21.1**	**-0.1**
AYDN				*i* S	**Sg**	**03 44 32.9**	**+0.2**
AYDN	**Tasoluk**	**0.96**	**255**	*i* P	**Pb**	**03 44 21.1**	**-0.1**
AYDN				*i* S	**Sg**	**03 44 32.9**	**+0.2**
YER	**Yerkesik**	**0.98**	**218**	*e*PG	**Pg**	**03 44 20.2**	**-0.5**
YER	**Yerkesik**	**0.98**	**218**	*e*Pg	**Pg**	**03 44 20.3**	**-0.5**
SHUT	**Suhut-Afyon**	**1.35**	**61**	*e*PN	**Pn**	**03 44 27.5**	**-0.3**
SHUT	**Suhut-Afyon**	**1.35**	**61**	*e*Pn	**Pn**	**03 44 27.5**	**-0.3**
ALT	**Altintas**	**1.42**	**36**	*e*PN	**Pn**	**03 44 28.6**	**-0.1**
ALT	**Altintas**	**1.42**	**36**	*e*Pn	**Pn**	**03 44 28.6**	**-0.1**
TVSB	**Tavsanli**	**1.57**	**12**	*e*PN	**Pn**	**03 44 30.9**	**+0.1**
TVSB	**Tavsanli**	**1.57**	**12**	*e*Pn	**Pn**	**03 44 30.9**	**+0.1**

IDC 11 04:19:58.8±0.9,32.57N×105.41E,h0km,mb3.6/10, mb1 3.7/11,mb1mx3.6/28,mbtmp3.6/11,ML3.2/1,MS2.7/1, Ms1 2.7/1,ms1mx2.1/34,Error ellipse: s-maj=48.2km s-min=17.5km az=55.0
ISCJB 11 04:19:58.7±0.5,32.54N±0.04×105.37E±0.06,h11km, mb3.8/12,MS2.5/1,Error ellipse: s-maj=7.7km s-min=5.0km az=8.6
BJI 11 04:20:00.9,32.56N×105.26E,h5km,mB4.1/1,mb3.8/1, ML3.6/16,Ms3.4/2,Ms7 3.3/2
ISC 11 04:20:00.8±0.6,32.56N±0.04×105.30E±0.05,h11km,n18, σ1s24/27,mb3.7/12,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**2.10**	**219**	Pn	**Pn**	**04 20 37.1**	**+1.1**
CD2				Pg	**Pg**	**04 20 42.0**	**+0.8**
CD2				Sn	**Sb**	**04 21 04.7**	**-0.5**
CD2				Sg	**Sg**	**04 21 07.8**	**-0.6**
				smax	smax		
	comp=N,1μm,0.5s						
CD2				smax	smax		
	comp=E,730nm,0.6s						
XAN	**Xi'an**	**3.37**	**63**	Pn	**Pn**	**04 20 54.5**	**+1.0**
XAN				Pg	**Pg**	**04 21 05.1**	**-0.4**
XAN				Sg	**Sb**	**04 21 43.8**	**+2.1**
XAN				smax	smax		
	comp=N,140nm,0.6s						
XAN				smax	smax		
	comp=E,61nm,0.5s						
LZH	**Lanzhou**	**3.72**	**342**	Pn	**Pn**	**04 21 01.1**	**+2.7**
LZH				Pg	**Pg**	**04 21 10.7**	**-1.4**
LZH				Sg	**Sg**	**04 21 58.3**	**-2.0**
LZH				smax	smax		
	comp=N,220nm,1.0s						
LZH				smax	smax		
	comp=E,440nm,1.2s						
LZH				LR	LR		
	comp=N,330nm,5.0s						
LZH				LR	LR		
	comp=E,230nm,6.0s						
LZH				LR	LR		
	comp=Z,330nm,6.3s						
GYA	**Guiyang**	**6.19**	**169**	Pn	**Pn**	**04 21 32.9**	**+0.6**
GYA				Sn	**Sn**	**04 22 40.8**	**-2.4**
GYA				Sg	Sb	04 23 10.5	+7.5
GYA				smax	smax		
	comp=N,40nm,0.9s						
GYA				smax	smax		
	comp=E,40nm,0.8s						
GTA	**Gaotai**	**8.15**	**329**	*e*P	**Pn**	**04 22 00.1**	**+0.9**
GTA				pP	pP	04 22 03.6	
GTA				sP	sP	04 22 06.2	
GTA				S	**Sn**	**04 23 33.7**	**+2.3**
GTA				sS	sS	04 23 38.9	
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,53nm,5.0s						
GTA				LR	LR		
	comp=N,120nm,9.7s						
GTA				LR	LR		
	comp=E,120nm,8.8s						
GTA				LR	LR		
	comp=Z,170nm,10.7s						
SONM	**Songino Array**	**15.28**	**3**	Pn	**Pn**	**04 23 35.4**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=186,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**22.60**	**316**	P	**P**	**04 25 01.9**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=126,slow=13,SNR=16						
ZALV	**Zalesovo Beam**	**25.89**	**332**	P	**P**	**04 25 33.0**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=132,slow=8.8,SNR=3.6						
KURBB	**Kurchatov Arra**	**26.73**	**320**	P	**P**	**04 25 40.7**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=131,slow=8.9,SNR=11						
KURBB				LR	LR	04 36 19.0	
	comp=Z,14nm,18.1s,baz=320,slow=37						
ARCES	**ARCESS Array B**	**56.36**	**335**	P	**P**	**04 29 41.4**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=85,slow=5.1,SNR=5.4						
BRTR	**Keskin Array B**	**56.92**	**299**	P	**P**	**04 29 45.8**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=81,slow=8.9,SNR=3.4						
FINES	**FINESS Array B**	**56.94**	**326**	P	**P**	**04 29 45.8**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=93,slow=7.6,SNR=5.8						
AKASG	**Malin Array Be**	**57.14**	**313**	P	**P**	**04 29 47.1**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=65,slow=7.5,SNR=3.1						
WRA	**Warramunga Arr**	**59.14**	**148**	P	**P**	**04 30 01.0**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=341,slow=7.2,SNR=4.8						
ASAR	**Alice Springs**	**62.23**	**150**	P	**P**	**04 30 22.4**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=332,slow=6.1,SNR=3.4						
LPG	**La Plagne**	**73.00**	**313**	*e*P	**P**	**04 31 31.2**	**+0.3**
	comp=Z,2.4nm,0.5s						
LPL	**La Plagne**	**73.00**	**313**	*e*P	**P**	**04 31 31.1**	**+0.3**
	comp=Z,5.1nm,0.6s						
YKA	**Yellowknife Ar**	**80.00**	**18**	P	**P**	**04 32 09.1**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=327,slow=4.9,SNR=5.0						

IDC 11 04:24:18.4±4.8,1.43S×15.03W,h0km,mb3.8/1, mb1 4.3/3,mb1mx3.6/25,mbtmp4.4/3,ML4.2/2,MS3.4/2, Ms1 3.4/2,ms1mx2.7/32,Error ellipse: s-maj=77.0km s-min=69.7km az=136.0,North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**12.96**	**51**	Pn	Pn	04 27 22.1	-1.8
	1.0nm,0.3s,baz=231,slow=13,SNR=26						
DBIC				Sn	Sn	04 29 36.9	-12
	0.7nm,0.3s,baz=257,slow=14,SNR=3.9						
BBTS	**Babate**	**16.06**	**355**	Pn	Pn	04 28 05.9	+0.2
	1.0nm,0.3s,baz=197,slow=10.0,SNR=7.3						
BBTS				LR	LR	04 33 14.3	
	comp=Z,85nm,21.6s,baz=26,slow=33						
TORD	**Torodi Ar. Bea**	**22.02**	**48**	P	P	04 29 15.4	+0.7
	3.8nm,0.8s,baz=234,slow=11,SNR=52						
TORD				S	S	04 33 07.6	-11
	0.5nm,0.7s,baz=234,slow=20,SNR=3.4						
KMBO	**Kilima Mbogo**	**52.27**	**90**	LR	LR	04 53 22.2	
	comp=Z,58nm,20.0s,baz=246,slow=33						
BRTR	**Keskin Array B**	**60.44**	**42**	P	P	04 34 33.9	+3.7
	0.4nm,0.7s,baz=233,slow=5.0,SNR=2

TWQ1	**Liyutan** baz=258	**1.83 260**	*e*P	**Pn**	**04 34 16.8**	**+0.1**
SMLT	**Sun Moon Lake** baz=237	**1.86 246**	*e*P	**Pn**	**04 34 17.8**	**+0.6**
SMLT	baz=237		S	**Sn**	**04 34 41.8**	**+1.2**
TWF1	**Yuli** baz=232	**1.86 226** ⇓	*i*P	**Pn**	**04 34 16.8**	**-0.4**
TWF1	baz=232		S	**Sn**	**04 34 40.0**	**-0.5**
TYC	**Yuchr** baz=239	**1.89 247**	P	**Pn**	**04 34 18.2**	**+0.8**
TYC	baz=239		*e*S	**Sn**	**04 34 41.5**	**+0.6**
CHKT	**Chengkung** baz=214	**2.01 219**	*e*P	**Pn**	**04 34 18.4**	**-0.6**
CHKT	baz=214		*e*S	**Sn**	**04 34 42.2**	**-1.6**
WNT	**Mingjian** baz=255	**2.04 248**	*e*P	**Pn**	**04 34 20.3**	**+0.9**
ALS	**Alishan** baz=230	**2.12 237** ⇓	*i*P	**Pn**	**04 34 21.6**	**+0.9**
ALS	baz=230		*e*S	**Sn**	**04 34 47.5**	**+0.7**
ELDTW	**Lidau** baz=226	**2.16 228**	*e*P	**Pn**	**04 34 20.7**	**-0.4**
CHN5	**Tsauling** baz=232	**2.17 241**	*e*P	**Pn**	**04 34 22.1**	**+0.8**
CHN5	baz=232		*e*S	**Sn**	**04 34 49.6**	**+1.9**
CHN4	**Tsaushan** baz=229	**2.37 237**	P	**Pn**	**04 34 24.9**	**+1.2**
CHN4	baz=229		*e*S	**Sn**	**04 34 53.6**	**+1.3**
TWG	**Pinlang** baz=225	**2.39 220**	*e*P	**Pn**	**04 34 23.5**	**-0.6**
TWG	baz=225		*e*S	**Sn**	**04 34 52.0**	**-0.9**
WTP	**Ta-pu** baz=233	**2.41 235**	*e*P	**Pn**	**04 34 25.0**	**+0.7**
WTP	baz=233		*e*S	**Sn**	**04 34 53.6**	**+0.2**
TWK	**Hsinying** baz=235	**2.49 237**	*e*P	**Pn**	**04 34 25.9**	**+0.4**
TWK	baz=235		*e*S	**Sn**	**04 34 56.6**	**+1.3**
CHN1	**Nanshi** baz=233	**2.51 235**	*e*P	**Pn**	**04 34 26.6**	**+0.9**
CHN1	baz=233		*e*S	**Sn**	**04 34 56.8**	**+1.1**
SSD	**Sandimen** baz=224	**2.72 226**	*e*P	**Pn**	**04 34 29.7**	**+1.2**
LAY	**Lan-yu** baz=198	**2.84 203**	*e*P	**Pn**	**04 34 29.6**	**-0.4**
LAY	baz=198		*e*S	**Sn**	**04 35 01.3**	**-2.2**
EAST	**Anshuo** baz=216	**2.86 218**	*e*P	**Pn**	**04 34 29.9**	**-0.5**
SCZT	**Fangliau** baz=219	**3.00 221**	*e*P	**Pn**	**04 34 32.8**	**+0.5**
WDGT	**Dungji** baz=242	**3.15 244**	*e*P	**Pn**	**04 34 33.5**	**-0.8**

MAN 11 04:40:10,18°.36N×120°.71E,h26km,mb4.1,ML2.9,MS2.6, 1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.10 248**	⇑*i*P	Pb		04 40 16.1	+1.3
PIP				*e*S	Sb	04 40 21.5	+3.5
SIPP	**Brgy, Tapao**	**0.50 209**	⇓*e*P	Pn		04 40 21.3	-0.1
SIPP				*e*S	Sn	04 40 31.0	+1.8
ABRA	**Dolores**	**0.71 180**	*e*P	Pn		04 40 24.1	-0.2
ABRA				*e*S	Sn	04 40 35.3	+0.9
APYP	**Conner**	**0.71 134**	*e*P	Pb		04 40 23.9	+0.2
APYP				*e*S	Sn	04 40 35.0	+0.6
PALP	**Palanan**	**2.08 128**	*e*P	Pn		04 40 44.5	+1.3
BOLP	**Bolinao**	**2.11 201**	*e*P	Pb		04 40 46.5	-1.1

IDC 11 04:50:14.8±0.8,6°.23S×145°.97E,h115km±7km,mb3.7/8, mb1 3.8/10,mb1mx3.6/19,mbtmp3.6/10,MS3.1/1, Ms1 3.1/1,ms1mx2.4/41,Error ellipse: s-maj=25.3km s-min=14.4km az=100.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 15nm,0.3s,baz=347,slow=6.6,SNR=15	**3.37 160**		P	Pn	04 51 05.7	-0.1
PMG	56nm,0.3s,baz=126,slow=22,SNR=18			S	Sn	04 51 42.9	-2.5
CTA	**Charters Tower** comp=Z,79nm,18.8s,baz=231,slow=35	**13.78 179**		LR	LR	04 58 12.4	
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=42,slow=11,SNR=8.5	**17.71 219**		P	P	04 54 12.2	-1.3
ASAR	**Alice Springs** 1.9nm,0.9s,baz=42,slow=9.1,SNR=13	**20.87 213**		P	P	04 54 47.2	-0.6
FITZ	**Fitzroy Crossi** 1.0nm,0.5s,baz=68,slow=20,SNR=5.8	**23.08 237**		P	P	04 55 10.0	-0.6
STKA	**Stephens Creek** 2.7nm,0.6s,baz=348,slow=8.9,SNR=12	**25.85 189**		P	P	04 55 35.5	-0.1
STKA	1.7nm,0.7s,baz=334,slow=9.9,SNR=2.4			pP	pP	04 56 02.0	+1.4
CMAR	**Chiang Mai Arr** 1.4nm,0.3s,baz=124,slow=6.7,SNR=9.0	**52.46 299**		P	P	04 59 16.9	+0.7
PETK	**Petropavlovsk-** 1.4nm,0.7s,baz=188,slow=8.0,SNR=3.1	**59.94 8**		P	P	05 00 09.3	+0.6
MKAR	**Makanchi Array** 1.0nm,0.8s,baz=110,slow=5.6,SNR=9.2	**77.02 321**		P	P	05 01 55.5	+0.4
ZALV	**Zalesovo Beam** 0.9nm,0.6s,baz=91,slow=7.9,SNR=4.0	**78.66 328**		P	P	05 02 03.3	-0.7
ILAR	**Eielson Array** 1.2nm,0.7s,baz=251,slow=5.0,SNR=24	**86.09 23**		P	P	05 02 41.0	-1.4
ILAR	0.4nm,0.6s,baz=240,slow=4.6,SNR=2.6			pP	pP	05 03 11.3	-0.8
TORD	**Torodi Ar. Bea** 1.1nm,0.8s,baz=1.4,slow=1.6,SNR=8.9	**144.15 284**		PKP	PKPab	05 09 36.1	+0.1
TORD	0.4nm,0.7s,baz=60,slow=5.3,SNR=2.0			pPKP	pPKPdf	05 10 07.8	-1.5
SIV	**San Ignacio** 3.5nm,0.7s,baz=234,slow=3.2,SNR=13	**145.30 130**		PKPbc	PKPdf	05 09 40.2	+0.1
SIV	1.4nm,0.8s,baz=221,slow=2.9,SNR=3.2			pPKPbc	pPKPbc	05 10 10.3	-0.6
DBIC	**Dimbokro** 2.1nm,0.6s,baz=112,slow=7.6,SNR=5.2	**151.01 273**		PKPbc	PKPbc	05 09 55.5	+0.2

*DDA **11** 04:53:24.3,37°.89N×29°.06E,h7km,MD2.8*
ISC 11 04:53:20.6±2.0,37°.85N±0°.09×28°.8E±0°.2,h31km±10km,n5, σ0°92/8,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.19 121**	*e*PG		**Pb**	**04 53 27.4**	**+0.4**
DENT			*e*SG		**Sb**	**04 53 31.3**	**0.0**
DNZL	**Cakiroluk**	**0.24 133**	*i* P		**Pn**	**04 53 28.5**	**+0.2**
DNZL			*i* S		**Sb**	**04 53 31.5**	**-1.0**
KULA	**Kula-Manisa**	**0.67 349**	*e*PG		**Pb**	**04 53 33.9**	**-0.1**
KHL	**Karahalli**	**0.72 49**	*e*PG		**Pn**	**04 53 35.5**	**+0.7**
KHAL	**Karahalli**	**0.74 45**	*e*P		**Pn**	**04 53 35.9**	**+0.8**
KHAL			*e*S		**Sn**	**04 53 44.2**	**-1.0**

IDC 11 04:56:12.7±6.0,4°.83S×145°.42E,h71km±61km,mb3.3/5, mb1 3.5/7,mb1mx3.4/19,mbtmp3.4/7,ML3.3/2,Error ellipse: s-maj=40.8km s-min=29.2km az=133.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 5.6nm,0.3s,baz=17,slow=6.6,SNR=7.2	**4.86 159**		P	Pn	04 57 23.2	-0.2
PMG	7.3nm,0.3s,baz=157,slow=22,SNR=8.1			S	Sn	04 58 19.3	+0.9
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=36,slow=11,SNR=7.8	**18.50 215**		P	P	05 00 23.2	-0.2
ASAR	**Alice Springs** 0.5nm,0.7s,baz=37,slow=11,SNR=4.3	**21.77 210**		P	P	05 00 59.2	+0.3
FITZ	**Fitzroy Crossi** 4.9nm,0.8s,baz=53,slow=8.3,SNR=13	**23.41 234**		P	P	05 01 15.3	-0.5
STKA	**Stephens Creek** 1.2nm,0.7s,baz=27,slow=11,SNR=3.8	**27.15 187**		P	P	05 01 49.5	0.0
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=96,slow=5.5,SNR=3.8	**75.60 321**		P	P	05 07 50.7	+0.5
ILAR	**Eielson Array** 0.2nm,0.7s,baz=237,slow=4.7,SNR=4.3	**85.03 23**		P	P	05 08 39.9	-0.5

IDC 11 04:56:23.5±1.2,19°.68N×146°.05E,h0km,mb3.5/6, mb1 3.8/6,mb1mx3.5/26,mbtmp3.5/6,MS2.7/1,Ms1 2.7/1, ms1mx2.0/44,Error ellipse: s-maj=129.9km s-min=20.2km az=116.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr** comp=Z,23nm,19.7s,baz=175,slow=33	**18.16 339**		LR	LR	05 06 16.2	
WRA	**Warramunga Arr** 0.3nm,0.4s,baz=22,slow=8.5,SNR=6.7	**41.01 197**		P	P	05 04 08.6	0.0
FITZ	**Fitzroy Crossi** 1.4nm,0.8s,baz=8.3,slow=6.2,SNR=5.2	**42.56 209**		P	P	05 04 20.9	-0.3
ASAR	**Alice Springs** 0.2nm,0.4s,baz=12,slow=6.2,SNR=4.1	**44.68 196**		P	P	05 04 38.0	-0.3
ILAR	**Eielson Array** 0.4nm,1.0s,baz=278,slow=5.4,SNR=4.4	**52.62 26**		P	P	05 06 48.8	-0.6
YKA	**Yellowknife Ar** 0.1nm,0.6s,baz=285,slow=5.3,SNR=4.5	**76.97 28**		P	P	05 08 17.4	-0.3
NVAR	**Mina Array Bea** 0.5nm,0.7s,baz=294,slow=6.8,SNR=4.3	**82.28 52**		P	P	05 08 48.6	+1.2

IDC 11 05:07:07.0±5.4,7°.96N×81°.85W,h0km,mb3.3/6, mb1 3.7/6,mb1mx3.6/21,mbtmp3.3/6,MS3.7/8,Ms1 3.7/8, ms1mx3.4/17,Error ellipse: s-maj=204.1km s-min=33.2km az=30.0,Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array** comp=Z,60nm,18.7s,baz=5.0,slow=43	**29.54 319**		LR	LR	05 28 20.8	
SIV	**San Ignacio** comp=Z,234nm,21.6s,slow=35	**31.46 139**		LR	LR	05 25 21.1	
PFO	**Pinyon Flat Ob** comp=Z,78nm,20.2s,baz=308,slow=36	**40.87 314**		LR	LR	05 31 29.2	
BDFB	**Brasilia** comp=Z,109nm,20.2s,baz=144,slow=37	**40.91 125**		LR	LR	05 32 04.4	
CPUP	**Villa Florida** comp=Z,132nm,20.1s,baz=170,slow=36	**41.58 146**		LR	LR	05 32 06.9	
PDAR	**Pinedale Array** 0.1nm,0.4s,baz=120,slow=6.3,SNR=2.3	**42.37 329**		P	P	05 15 04.0	+0.7
PDAR	comp=Z,67nm,19.7s,baz=320,slow=40			LR	LR	05 35 07.3	
NVAR	**Mina Array Bea** 0.1nm,0.3s,baz=128,slow=7.5,SNR=2.8	**44.69 318**		P	P	05 15 22.1	-0.1
NVAR	comp=Z,118nm,21.5s,baz=58,slow=36			LR	LR	05 33 34.1	
YBH	**Yreka Blue Hor** comp=Z,106nm,20.4s,baz=149,slow=37	**49.31 320**		LR	LR	05 37 15.4	
NEW	**Newport** 0.8nm,0.6s,baz=158,slow=19,SNR=3.1	**50.01 330**		P	P	05 16 04.2	+1.0
YKA	**Yellowknife Ar** 0.2nm,0.7s,baz=138,slow=7.0,SNR=5.6	**59.43 343**		P	P	05 17 10.8	-0.4
ILAR	**Eielson Array** 0.4nm,1.0s,baz=115,slow=4.3,SNR=3.3	**72.33 336**		P	P	05 18 33.1	-1.3
TORD	**Torodi Ar. Bea** 0.5nm,1.1s,baz=269,slow=6.8,SNR=2.9	**81.98 78**		P	P	05 19 29.9	+0.4

*IDC **11** 05:07:37.2±1.5,22°.43S×170°.75E,h0km,mb4.0/4, mb1 4.3/5,mb1mx3.9/18,mbtmp4.1/5,ML4.2/1,MS3.6/6, Ms1 3.6/6,ms1mx3.2/37,Error ellipse: s-maj=65.0km s-min=33.2km az=163.0*
*NOU **11** 05:07:40.8±1.4,21°.14S×170°.69E,h30km,MD3.1,ML3.3*
*ISCJB **11** 05:07:40.2±0.9,22°.6S±0°.2×170°.64E±0°.07,h33km, mb4.1/8,MS3.8/4,Error ellipse: s-maj=23.3km s-min=7.3km az=12.1*
*NEIC **11** 05:07:42.2±0.8,22°.54S×170°.65E,h35km,mb4.5/3,Error ellipse: s-maj=20.4km s-min=16.6km az=206.0*
ISC 11 05:07:42.1±0.8,22°.5S±0°.2×170°.66E±0°.08,h33km,n39, σ0°80/41,mb4.3/8,MS3.7/4,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.51 275**		*e*P	**Pn**	**05 09 35.5**	**+1.1**
BAYA				*e*S	**Sn**	**05 09 13.9**	**-0.9**
BAYA	comp=Z,19nm,0.7s			AMP		05 09 21.4	
LASL	**Noumea**	**3.82 273**		*e*S	**Sn**	**05 09 21.8**	**-0.6**
MVNO	**Noumea**	**3.91 273**		*e*S	**Sn**	**05 09 24.3**	**-0.2**
DZM	**Mont Dzumac**	**3.92 276**		*e*P	**Pn**	**05 08 39.9**	**-0.3**
DZM				*e*S	**Sn**	**05 09 24.7**	**-0.5**
DZM	comp=Z,2μm,2.9s			AMP		05 09 28.1	
DZM	**Mont Dzumac**	**3.92 276**		*e*Pn	**Pn**	**05 08 40.8**	**+0.7**
DZM				*e*Sn	**Sn**	**05 09 26.5**	**+1.3**
DZM	**Mont Dzumac** comp=Z,17nm,0.3s,baz=147,slow=13,SNR=165	**3.92 276**		Pn	**Pn**	**05 08 40.5**	**+0.3**
DZM	comp=Z,31nm,0.3s,baz=310,slow=22,SNR=24			Sn	**Sn**	**05 09 25.0**	**-0.2**
DZM	comp=Z,374nm,21.5s,baz=58,slow=28			LR	LR	05 09 27.5	
NOUC	**Port Laguerre**	**4.05 275**		*e*P	**Pn**	**05 08 41.9**	**+0.1**
NOUC				*e*S	**Sn**	**05 09 28.7**	**+0.5**
NOUC	comp=Z,102nm,0.8s			AMP		05 09 33.4	
RAO	**Raoul Island** comp=Z,239nm,21.1s,baz=147,slow=30	**12.28 125**		LR	LR	05 13 45.8	
RPZ	**Rata Peaks** comp=Z,61nm,1.4s	**21.15 179**		*e*P	**P**	**05 12 23.4**	**-1.0**
RPZ	**Rata Peaks** comp=Z,236nm,18.0s,baz=199,slow=32	**21.15 179**		LR	LR	05 19 02.3	
PMG	**Port Moresby**	**26.03 296**		*e*P	**P**	**05 13 11.3**	**-1.1**
STKA	**Stephens Creek** comp=Z,0.6nm,1.3s	**27.41 244**		P	**P**	**05 13 25.3**	**+0.5**
ASAR	**Alice Springs**	**33.77 261**		P	**P**	**05 14 21.7**	**+0.6**
ASAR	**Alice Springs** comp=Z,1.8nm,0.7s,baz=82,slow=9.3,SNR=17	**33.77 261**		P	**P**	**05 14 21.7**	**+0.6**
WRAB	**Tennant Creek** comp=Z,7.2nm,1.3s	**33.89 267**		Pn	**P**	**05 14 20.1**	**-2.0**
WRA	**Warramunga Arr**	**33.90 267**		P	**P**	**05 14 21.9**	**-0.3**
WRA	**Warramunga Arr** comp=Z,0.7nm,0.9s,baz=100,slow=8.5,SNR=4.4	**33.90 267**		P	**P**	**05 14 21.9**	**-0.3**
KAPI	**Kappang** comp=Z,1.6nm,0.3s	**52.12 282**		*e*P	**P**	**05 16 48.0**	**-1.6**
JHJ	**Hachijo jima 2** comp=Z,122nm,20.6s,baz=70,slow=30	**62.67 331**		LR	LR	05 38 54.1	
ASAJ	**Asahikawa** comp=Z,480nm,18.4s,baz=72,slow=34	**71.12 339**		LR	LR	05 47 38.9	
CMAR	**Chiang Mai Arr**	**81.05 294**		P	**P**	**05 19 56.0**	**+1.8**
CMAR	**Chiang Mai Arr** comp=Z,1.9nm,0.7s,baz=123,slow=4.5,SNR=7.8	**81.05 294**		P	**P**	**05 19 56.0**	**+1.8**
SONM	**Songino Array**	**90.62 323**		P	**P**	**05 20 40.7**	**-0.5**
SONM	**Songino Array** comp=Z,1.4nm,0.8s,baz=130,slow=5.8,SNR=7.8	**90.62 323**		P	**P**	**05 20 40.7**	**-0.5**
BBB	**Bella Bella** comp=Z,23nm,20.2s,baz=139,slow=29	**91.49 33**		LR	LR	05 52 19.2	
ARCES	**ARCESS Array B**	**128.56 345**		PKP	**PKPdf**	**05 26 44.7**	**-0.3**
ARCES	**ARCESS Array B** comp=Z,2.2nm,0.9s,baz=44,slow=2.7,SNR=11	**128.56 345**		PKP	**PKPdf**	**05 26 44.7**	**-0.3**
KRLC	**Kraliky**	**145.70 330**		*e*PKP	**PKPdf**	**05 27 17.0**	**-0.1**
DPC	**Dobruska-Polom**	**145.72 330**		*e*PKP	**PKPab**	**05 27 18.4**	**+0.5**
UPC	**Upice**	**145.75 331**		*e*PKP	**PKPab**	**05 27 18.4**	**+0.5**
PVCC	**Panska Ves**	**146.37 332**		*e*PKP	**PKPab**	**05 27 20.3**	**+0.1**
BRG	**Berggiesshubel** comp=Z,4.5nm,0.6s	**146.38 333**		*e*PKP	**PKPab**	**05 27 19.9**	**-0.3**
CLL	**Collm**	**146.43 334**		*i* PKPbc	**PKPab**	**05 27 20.7**	**+0.3**
KHC	**Kasperske Hory**	**147.83 331**		*e*PKP	**PKPbc**	**05 27 23.9**	**+0.3**
GERES	**GERESS Array B**	**147.99 331**		PKPbc	**PKPbc**	**05 27 24.1**	**-0.1**
GERES	**GERESS Array B** comp=Z,1.2nm,0.5s,baz=45,slow=4.0,SNR=8.9	**147.99 331**		PKPbc	**PKPbc**	**05 27 24.1**	**-0.1**
TUE	**Stuetta**	**151.71 332**		*e*PKPbc	**PKPbc**	**05 27 33.8**	**+0.3**
TORD	**Torodi Ar. Bea**	**165.97 230**		PKP	**PKPdf**	**05 27 44.5**	**0.0**
TORD				PKPab	**PKPab**	**05 28 45.4**	**+0.9**
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.9s,baz=182,slow=4.2,SNR=3.6	**165.97 230**		PKP	**PKPdf**	**05 27 44.5**	**0.0**
TORD	comp=Z,0.2nm,0.7s,baz=127,slow=4.7,SNR=2.2			PKPab	**PKPab**	**05 28 45.4**	**+0.9**

*DJA **11** 05:11:25.1±5.0,20°.S±15°×17°.8W±2°.0,h251km±42km, M5.0/14,mb5.0/14*
*IDC **11** 05:11:33.9±0.9,19°.63S×177°.57W,h345km±7km,mb4.3/34, mb1 4.4/35,mb1mx4.4/37,mbtmp4.3/35,Error ellipse: s-maj=9.7km s-min=7.9km az=122.0*
*ISCJB **11** 05:11:36.6±1.0,19°.63S±0°.05×177°.71W±0°.04, h381km±10km,mb4.8/137,Error ellipse: s-maj=8.8km s-min=5.5km az=149.1*
*BJI **11** 05:11:36.5,19°.50S×177°.42W,h383km,mB4.8/20, mb4.8/26*
*SZGRF **11** 05:11:36.9,19°.58S×177°.36W,h370km,Fiji Islands region*
*MOS **11** 05:11:37.3±1.0,19°.50S×177°.75W,h383km,mb5.0/38, Error ellipse: s-maj=9.2km s-min=7.5km az=47.3*
*NEIC **11** 05:11:38.1±0.7,19°.60S×177°.71W,h387km±7km,mb4.8/97, Error ellipse: s-maj=6.5km s-min=3.7km az=147.0*
ISC 11 05:11:36.9±0.3,19°.67S±0°.05×177°.58W±0°.05, h376km±2km,h376km:pP-P,n951,σ1s01/1067,mb4.8/137, 252C-202D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.57 294**		*e*P	**Pn**	**05 12 53.0**	**-0.4**
MSVF				*e*S	**S**	**05 13 56.3**	**+1.0**
MSVF	**Nonsavu**	**4.57 294**		*e*Pn	**Pn**	**05 12 53.0**	**-0.4**
MSVF				*e*S	**S**	**05 13 56.3**	**+1.0**
AFI	**Afiamalu**	**7.98 45**		*e*Pn	Pn	05 13 24.2	-7.2
AFI				*e*S	S	05 14 51.7	-13
AFI	**Afiamalu** 14nm,0.3s,baz=219,slow=15,SNR=11	**7.98 45**		P	Pn	05 13 23.9	-7.4
AFI	15nm,0.3s,baz=68,slow=23,SNR=8.7			S	S	05 14 49.7	-15
DZM	**Mont Dzumac**	**15.13 258**		P	**Pn**	**05 14 54.0**	**-0.6**
DZM	**Mont Dzumac** 3.9nm,0.3s,baz=79,slow=14,SNR=44	**15.13 258**		P	**Pn**	**05 14 54.0**	**-0.6**
URZ	**Urewera** 69nm,1.0s	**19.09 193**		*e*P	**P**	**05 15 33.0**	**-1.0**
URZ				S	**S**	**05 18 48.8**	**-0.4**
URZ				*e*S	S	05 18 49.4	+0.2
URZ	**Urewera** 7.6nm,0.3s,baz=335,slow=4.1,SNR=36	**19.09 193**		P	**P**	**05 15 31.7**	**-2.2**
URZ	0.9nm,0.3s,baz=202,slow=22,SNR=5.8			S	**S**	**05 18 48.8**	**-0.4**
RPZ	**Rata Peaks**	**25.80 199**		P	**P**	**05 16 35.5**	**+0.2**
RPZ	**Rata Peaks** 16nm,0.6s,baz=0.0,slow=11,SNR=7.8	**25.80 199**		P	**P**	**05 16 35.5**	**+0.2**
CAN	**Canberra**	**33.31 235**		*e*P	**P**	**05 17 42.0**	**+0.9**
CAN	comp=Z,39nm,1.1s			pmax	pmax		
CAN	**Canberra** comp=Z,39nm,1.1s	**33.31 235**		*e*P	**P**	**05 17 42.0**	**+0.9**
CTA	**Charters Tower**	**33.98 263**		P	**P**	**05 17 46.8**	**-0.1**
CTA				ScP	**ScP**	**05 23 28.7**	**+5.0**
CTA	**Charters Tower** comp=Z,22nm,0.5s,baz=90,slow=10,SNR=21	**33.98 263**		P	**P**	**05 17 46.8**	**-0.1**
CTA	comp=Z,2.9nm,0.3s,baz=100,slow=3.8,SNR=3.9			ScP	**ScP**	**05 23 28.7**	**+5.0**
CTAO	**Charters Tower** comp=Z,63nm,1.3s	**33.98 263**		*e*P	**P**	**05 17 46.8**	**-0.1**
CTAO	comp=Z,63nm,1.3s			pmax	pmax		
CTAO	**Charters Tower** comp=Z,63nm,1.3s	**33.98 263**		*e*P	**P**	**05 17 46.8**	**-0.1**
PMG	**Port Moresby** comp=Z,38nm,0.8s	**35.56 282**		*e*P	**P**	**05 17 59.7**	**-0.6**
PMG	**Port Moresby** comp=Z,52nm,0.9s	**35.56 282**		P	**P**	**05 17 57.8**	**-2.5**
PMG	**Port Moresby** comp=Z,42nm,0.8s,baz=76,slow=5.5,SNR=7.8	**35.56 282**		P	**P**	**05 17 59.4**	**-0.9**
COEN	**Coen** comp=Z,138nm,0.8s	**37.94 272**		*e*P	**P**	**05 18 20.0**	**-0.2**
STKA	**Stephens Creek** comp=Z,3.6nm,0.7s	**38.51 243**		*e*P	**P**	**05 18 25.0**	**+0.3**
STKA				PcP	**PcP**	**05 20 29.7**	**+0.9**
STKA				*e*PcP	**PcP**	**05 20 29.9**	**+1.1**
STKA				ScP	**ScP**	**05 23 44.7**	**+4.3**
STKA	**Stephens Creek** comp=Z,22nm,0.8s,baz=89,slow=9.2,SNR=39	**38.51 243**		P	**P**	**05 18 24.8**	**+0.1**
STKA	comp=Z,10.0nm,0.7s,baz=85,slow=4.5,SNR=6.6			PcP	**PcP**	**05 20 29.7**	**+0.9**
STKA	comp=Z,3.7nm,0.9s,baz=56,slow=3.1,SNR=4.2			ScP	**ScP**	**05 23 44.7**	**+4.3**
BBOO	**Buckleboo** comp=Z,337nm,0.7s	**43.28 243**		*e*P	**P**	**05 19 02.8**	**-0.3**
AS31	**Alice Springs**	**45.10 256**		*e*P	**P**	**05 19 17.2**	**-0.5**
ASAR	**Alice Springs**	**45.10 256**		P	**P**	**05 19 17.0**	**-0.6**
ASAR				PcP	**PcP**	**05 20 50.1**	**-0.9**
ASAR				ScP	**ScP**	**05 24 10.5**	**+3.5**
ASAR				S	**S**	**05 25 26.6**	**-1.5**
ASAR	**Alice Springs** comp=Z,66nm,0.6s,baz=91,slow=8.0,SNR=598	**45.10 256**		P	**P**	**05 19 17.0**	**-0.6**
ASAR	comp=Z,9.3nm,0.8s,baz=107,slow=3.3,SNR=10			PcP	**PcP**	**05 20 50.1**	**-0.9**
ASAR	comp=Z,3.2nm,1.0s,baz=112,slow=4.1,SNR=7.7			ScP	**ScP**	**05 24 10.5**	**+3.5**
ASAR	comp=Z,6.0nm,0.9s,baz=91,slow=15,SNR=18			S	**S**	**05 25 26.6**	**-1.5**
WRAB	**Tennant Creek**	**45.11 261**		*e*P	**P**	**05 19 16.5**	**-1.2**
WRAB	comp=Z,27nm,0.7s			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,27nm,0.7s	**45.11 261**		*e*P	**P**	**05 19 16.5**	**-1.2**
WRA	**Warramunga Arr**	**45.12 261**		P	**P**	**05 19 16.4**	**-1.3**
WRA				PcP	**PcP**	**05 20 50.4**	**-0.7**
WRA				ScP	**ScP**	**05 24 11.3**	**+4.2**
WRA				S	**S**	**05 25 26.0**	**-2.4**
WRA	**Warramunga Arr** comp=Z,15nm,0.4s,baz=97,slow=8.0,SNR=112	**45.12 261**		P	**P**	**05 19 16.5**	**-1.3**
WRA	comp=Z,6.1nm,0.9s,baz=91,slow=3.8,SNR=6.0			PcP	**PcP**	**05 20 50.4**	**-0.7**
WRA	comp=Z,2.4nm,1.0s,baz=87,slow=4.2,SNR=4.2			ScP	**ScP**	**05 24 11.3**	**+4.2**
WRA	comp=Z,3.5nm,1.0s,baz=96,slow=13,SNR=7.0			S	**S**	**05 25 26.0**	**-2.4**
GUMO	**Guam**	**49.59 309**		P	**P**	**05 19 50.7**	**-1.1**
GUMO	**Guam** comp=Z,62nm,0.6s,baz=42,slow=21,SNR=5.4	**49.59 309**		P	**P**	**05 19 50.7**	**-1.1**
FORT	**Forrest** comp=Z,35nm,0.8s	**49.99 246**		*e*P	**P**	**05 19 54.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**53.54 262**		P	**P**	**05 20 26.0**	**-0.1**
FITZ	**Fitzroy Crossi** comp=Z,19nm,0.7s,baz=125,slow=3.1,SNR=58	**53.54 262**		P	**P**	**05 20 20.6**	**-0.1**
MBWA	**Marble Bar** comp=Z,30nm,0.7s	**58.43 257**		*e*P	**P**	**05 20 54.4**	**-0.6**
SBA	**Scott Base**	**58.72 184**		*e*P	**P**	**05 20 58.9**	**+2.9**
SBA	comp=Z,254nm,2.3s			pmax	pmax		
SBA	**Scott Base** comp=Z,254nm,2.3s	**58.72 184**		*e*P	**P**	**05 20 58.9**	**+2.9**
VNDA	**Vanda** comp=Z,59nm,2.0s	**58.77 185**		*e*P	**P**	**05 20 57.9**	**+1.5**
VNDA	**Vanda** comp=Z,6.1nm,0.8s,baz=349,slow=7.5,SNR=24	**58.77 185**		P	**P**	**05 20 57.7**	**+1.4**
NWAO	**Narrogin (SRO)**	**59.10 243**		P	**P**	**05 20 59.2**	**-0.1**
NWAO	**Narrogin (SRO)** comp=Z,13nm,0.7s,baz=97,slow=4.9,SNR=9.2	**59.10 243**		P	**P**	**05 20 59.2**	**-0.1**
KAPI	**Kappang** comp=Z,11nm,0.7s	**62.61 275**		*e*P	**P**	**05 21 21.9**	**-1.2**
KAPI	**Kappang** comp=Z,10nm,0.7s,baz=122,slow=4.8,SNR=7.6	**62.61 275**		P	**P**	**05 21 21.6**	**-1.5**
CASY	**Casey** comp=Z,40nm,0.9s	**64.88 205**		*e*P	**P**	**05 21 37.3**	**+0.5**
MJAR	**Matsushiro Arr**	**69.78 323**		P	**P**	**05 22 07.1**	**-0.5**
MJAR	**Matsushiro Arr** comp=Z,9.0nm,0.6s,baz=166,slow=6.5,SNR=22	**69.78 323**		P	**P**	**05 22 07.1**	**-

comp=Z,25nm,0.7s
YSS **Yuzh-Sakhalins** 75.34 333 ⇑ *e*P P 05 22 42.0 +2.3
YSS pmax pmax
comp=Z,20nm,1.0s
PEA0B **Petropavlovsk-** 75.58 345 *e*P P 05 22 40.9 -0.1
PETK **Petropavlovsk-** 75.58 345 P P 05 22 40.3 -0.7
PETK **Petropavlovsk-** 75.58 345 P P 05 22 40.3 -0.7
PETK **Petropavlovsk-** 75.58 345 P P 05 22 40.3 -0.7
comp=Z,15nm,0.7s,baz=127,slow=8.1,SNR=45
KSRS **Korea Array** 76.53 318 P P 05 22 47.5 +0.9
comp=Z,2.3nm,0.6s,baz=130,slow=6.1,SNR=8.5
KSAR **Wonju Array Be** 76.55 318 P P 05 22 47.5 +0.8
SCI **San Clemente I** 76.92 48 ⇓ P P 05 22 49.5 +0.6
baz=77
PKM **Peak Mountain** 77.13 45 ⇓ P P 05 22 51.2 +0.9
baz=77,SNR=5.6
BLG **Laguna Peak** 77.19 47 ⇓ P P 05 22 50.9 +0.4
baz=77
SMMC **Simmler** 77.25 45 ⇓ P P 05 22 51.8 +1.0
baz=78,SNR=5.9
CIS **Catalina Islan** 77.26 47 ⇑ P P 05 22 51.1 +0.2
baz=78
PTRM **Twissleman Ran** 77.31 45 *e*P P 05 22 52.4 +1.3
FMP **Fort Macarthur** 77.50 47 ⇑ P P 05 22 52.8 +0.6
baz=78
OSI **Osito Adit** 77.71 46 *e*P P 05 22 54.1 +0.8
comp=Z,8.0nm,0.7s
OSI **Osito Adit** 77.71 46 ⇓ P P 05 22 54.1 +0.8
baz=78
DECC **Green Verdugo** 77.78 47 ⇑ P P 05 22 54.1 +0.4
baz=78
PASC **Pasadena Art C** 77.83 47 *e*P P 05 22 54.5 +0.5
comp=Z,22nm,0.8s
109C **Camp Elliot, M** 77.88 48 ⇑ P P 05 22 54.7 +0.5
baz=78
ARVC **Arvin** 77.93 46 ⇑ P P 05 22 55.0 +0.6
baz=78,SNR=7.7
MWC **Mount Wilson** 77.95 47 *e*P P 05 22 55.5 +0.7
MWC pmax pmax
comp=Z,41nm,0.9s
MWC **Mount Wilson** 77.95 47 *e*P P 05 22 55.5 +0.7
comp=Z,41nm,0.9s
BAR **Barrett** 78.07 49 *e*P P 05 22 55.9 +0.6
comp=Z,12nm,1.0s
VES **Vestal, Richgr** 78.16 45 ⇓ P P 05 22 56.1 +0.4
baz=78,SNR=17
MURC **Murrieta** 78.20 48 ⇓ P P 05 22 56.6 +0.6
baz=78,SNR=12
BFSC **Mount Baldy Ra** 78.23 47 ⇓ P P 05 22 56.7 +0.4
baz=78,SNR=16
KHMM **Horse Mountain** 78.26 39 *e*P P 05 22 57.0 +0.7
comp=Z,40nm,1.6s
RCTC **Rector, Farmer** 78.33 45 ⇑ P P 05 22 56.6 +0.1
baz=79
EDW2 **Edwards Air Fo** 78.36 46 ⇑ P P 05 22 57.7 +0.8
baz=79,SNR=38
MONP **Monument Peak** 78.36 49 ⇓ P P 05 22 58.0 +0.8
baz=79,SNR=24
DVTC **Desert V Tower** 78.47 49 ⇓ P P 05 22 58.3 +0.8
baz=79
ISA **Isabella** 78.47 45 *e*P P 05 22 58.2 +0.8
ISA pmax pmax
comp=Z,34nm,0.9s
ISA **Isabella** 78.47 45 *e*P P 05 22 58.2 +0.8
comp=Z,34nm,0.9s
ISA **Isabella** 78.47 45 ⇑ P P 05 22 58.3 +0.8
baz=79,SNR=22
USRK **Ussuriysk Arra** 78.51 326 P P 05 22 59.1 +1.8
comp=Z,5.7nm,0.9s,baz=169,slow=4.5,SNR=18
KRMB **Red Mountain** 78.56 38 *e*P P 05 22 59.0 +1.1
comp=Z,45nm,1.6s
CMB **Columbia Colle** 78.58 43 *e*P P 05 22 58.8 +0.8
CMB pmax pmax
comp=Z,25nm,0.9s
CMB **Columbia Colle** 78.58 43 *e*P P 05 22 58.8 +0.8
comp=Z,25nm,0.9s
OHCM **Honcut** 78.67 41 *e*P P 05 22 58.6 +0.3
PFO **Pinyon Flat Ob** 78.73 48 *e*P P 05 22 59.5 +0.6
comp=Z,12nm,1.0s
PFO **Pinyon Flat Ob** 78.73 48 P P 05 22 59.8 +0.8
comp=Z,15nm,1.0s,baz=276,slow=4.1,SNR=23
PFO **Pinyon Flat Ob** 78.73 48 ⇑ P P 05 22 59.6 +0.6
baz=79,SNR=11
BBRC **Big Bear Solar** 78.76 47 ⇓ P P 05 22 59.7 +0.5
baz=79
WDC **Whiskeytown Da** 78.78 40 *e*P P 05 22 59.3 +0.4
WDC pmax pmax
comp=Z,33nm,1.4s
WDC **Whiskeytown Da** 78.78 40 *e*P P 05 22 59.3 +0.4
comp=Z,33nm,1.4s
SWSC **Sam W. Stewart** 78.83 49 ⇑ P P 05 23 00.1 +0.7
baz=79,SNR=9.8
LRMC **Laurel Mountai** 78.90 46 ⇓ P P 05 23 00.5 +0.6
baz=79,SNR=9.3
RRX **Edison Barstow** 79.04 47 ⇓ P P 05 23 01.2 +0.7
baz=79
CWC **Cottonwood Cre** 79.17 45 ⇑ P P 05 23 01.9 +0.6
baz=79,SNR=6.4
OHAK **Old Harbor** 79.25 13 *e*P P 05 23 00.2 -0.8
comp=Z,146nm,2.1s
BELC **Belle Mtn. Jos** 79.26 48 ⇓ P P 05 23 02.7 +0.9
baz=80,SNR=33
MLAC **Mammoth Lakes** 79.35 44 ⇓ P P 05 23 03.2 +0.9
baz=80,SNR=6.0
MPMC **Manual Prospec** 79.36 46 ⇓ P P 05 23 03.0 +0.7
baz=80,SNR=19
MTUM **Tungsten Hills** 79.37 44 *e*P P 05 23 03.2 +0.8
YBH **Yreka Blue Hor** 79.39 39 *e*P P 05 23 03.4 +1.1
comp=Z,29nm,1.4s
YBH **Yreka Blue Hor** 79.39 39 P P 05 23 02.9 +0.6
comp=Z,10.0nm,0.5s,baz=207,slow=1.8,SNR=73
GSC **Goldstone** 79.40 47 *e*P P 05 23 03.0 +0.5
GSC pmax pmax
comp=Z,18nm,1.0s
GSC **Goldstone** 79.40 47 *e*P P 05 23 03.0 +0.5
comp=Z,18nm,1.0s
GSC **Goldstone** 79.40 47 ⇓ P P 05 23 03.1 +0.5
baz=80,SNR=14
TIN **Tinemaha** 79.42 44 ⇓ P P 05 23 03.5 +0.9
baz=80,SNR=5.7
BC3 **Big Chuckawall** 79.46 49 ⇓ P P 05 23 03.8 +0.9
baz=80,SNR=8.5
HEC **Hector,Ludlow** 79.47 47 ⇓ P P 05 23 03.3 +0.4
baz=80,SNR=13
GLA **Glamis** 79.58 49 *e*P P 05 23 05.1 +1.6
GLA pmax pmax
comp=Z,30nm,0.9s
GLA **Glamis** 79.58 49 *e*P P 05 23 05.1 +1.6
comp=Z,30nm,0.9s
GLA **Glamis** 79.58 49 ⇓ P P 05 23 04.7 +1.2
baz=80,SNR=12
NJ2 **Nanjing** 79.66 309 *e*P P 05 23 04.0 +0.2
NJ2 pmax pmax
comp=Z,20nm,0.6s
BEKR **Beckworth** 79.68 41 *e*P P 05 23 04.5 +0.5
comp=Z,9.6nm,0.9s
WCN **Washoe City** 79.73 42 *e*P P 05 23 04.9 +0.6
WCN pmax pmax
comp=Z,22nm,1.0s
WCN **Washoe City** 79.73 42 *e*P P 05 23 04.8 +0.6
comp=Z,22nm,1.0s
HUMO **Hull Mountain** 79.80 38 *e*P P 05 23 05.1 +0.8
comp=Z,22nm,1.3s
GMRC **Granite Mounta** 79.91 48 ⇑ P P 05 23 06.0 +0.7
baz=80,SNR=15
KDAK **Kodiak Island** 79.92 13 P P 05 23 03.9 -0.6
KDAK **Kodiak Island** 79.92 13 P P 05 23 03.9 -0.6
comp=Z,9.5nm,0.7s,baz=185,slow=6.5,SNR=9.8
HABR **Khabarovsk** 79.92 330 *ce* P 05 23 04.3 -0.5
HABR *e* 05 23 10.1
HABR *e**PP **pP** **05 24 28.2** -1.9
HABR *e**SP **sP** **05 25 07.2** -2.4
HABR 05 26 10.5
HABR *e*PPP PPP 05 28 02.8
HABR *eS **S** **05 32 36.9** +0.6
HABR *e* 05 32 53.7
HABR SS **SS** **05 37 57.0** +0.8
HABR *eSSS SSS 05 41 25.4
HABR pmax pmax
comp=Z,39nm,1.3s
HABR pmax pmax
comp=N,11nm,1.1s
HABR pmax pmax
comp=E,10.0nm,1.0s
HABR MLR MLR
comp=Z,63nm,19.0s
IRM **Iron Mountain** 79.94 48 ⇑ P P 05 23 06.3 +1.0
baz=80,SNR=27
GRAC **Grapevine Rang** 79.96 45 ⇓ P P 05 23 06.3 +0.9
baz=80,SNR=8.8
BUOR **Burton Butte** 80.00 38 P P 05 23 06.5 +0.9
FURC **Furnace Creek,** 80.01 46 ⇑ P P 05 23 06.2 +0.6
baz=80,SNR=7.4
MDJ **Mudanjiang** 80.07 325 P P 05 23 06.9 +1.2
MDJ pP **pP** **05 24 32.7** +1.6
MDJ sP **sP** **05 25 09.4** -1.1
MDJ PP **PP** **05 26 12.8** -1.4
MDJ S **S** **05 32 36.5** -1.5
MDJ ScS **SKKSac** **05 32 49.8** +0.9
MDJ sS **sS** **05 35 06.6** -3.0
MDJ SS **SS** **05 38 00.1** +1.5
MDJ pmax pmax
comp=Z,32nm,0.8s
MDJ pmax pmax
comp=Z,41nm,5.7s
MDJ **Mudanjiang** 80.07 325 *e*P P 05 23 07.3 +1.6
comp=Z,27nm,0.9s
TUQ **Turquoise Moun** 80.08 47 ⇑ P P 05 23 06.9 +0.8
baz=80,SNR=12
SHOC **Shoshone** 80.09 46 ⇑ P P 05 23 06.5 +0.5
baz=80,SNR=5.3
NVAR **Mina Array Bea** 80.15 43 P P 05 23 07.1 +0.5
NVAR P'P' 05 49 57.7
NVAR **Mina Array Bea** 80.15 43 P P 05 23 07.1 +0.5
comp=Z,16nm,0.8s,baz=224,slow=8.9,SNR=100
NVAR PKPPKP P'P'df 05 49 57.7 +6.5
comp=Z,1.0nm,1.0s,baz=113,slow=2.6,SNR=4.9
Y12C **Blythe** 80.17 49 ⇑ P P 05 23 07.5 +1.1
baz=80,SNR=13
NV11 **Mina Array Sit** 80.25 43 *e*P P 05 23 07.5 +0.5
LDFC **Landfair** 80.45 48 *e*P P 05 23 09.2 +1.1
comp=Z,59nm,0.8s
214A **Organ Pipe Nat** 80.49 51 ⇓ P P 05 23 09.4 +1.1
baz=81,SNR=16
NEE2 **Needles Airpor** 80.63 48 ⇑ P P 05 23 09.7 +0.8
baz=81
PDMCI **Parker Dam,Lak** 80.72 49 ⇓ P P 05 23 10.4 +1.0
baz=81,SNR=9.7
MOD **Modoc** 80.93 39 *e*P P 05 23 11.0 +0.5
comp=Z,33nm,0.8s
Z14A **Wintersburg** 81.10 50 ⇑ P P 05 23 12.7 +1.3
baz=81,SNR=13
W13A **Hualapai Mount** 81.32 48 ⇓ P P 05 23 13.6 +0.9
baz=82,SNR=11
Y14A **Wickenburg** 81.35 49 ⇓ P P 05 23 13.7 +1.0
baz=82,SNR=28
PRLK **Prince Lake** 81.36 37 P P 05 23 14.0 +1.4
R11A **Troy Canyon, C** 81.88 45 ⇑ P P 05 23 15.8 +0.2
baz=82
CN2 **Changchun** 81.89 322 *e*P P 05 23 16.3 +1.1
CN2 *ep*P **pP** **05 24 43.5** +2.5
CN2 *es*P **sP** **05 25 22.6** +2.2
CN2 *eS **S** **05 32 56.2** -0.4
CN2 *eSS **SS** **05 38 27.6** +2.1
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
BMN **Battle Mountai** 81.97 42 *e*P P 05 23 16.6 +0.6
BMN pmax pmax
comp=Z,30nm,1.0s
BMN **Battle Mountai** 81.97 42 *e*P P 05 23 16.6 +0.6
comp=Z,30nm,1.0s
KLR **Kul'dur** 82.02 329 *e*P P 05 23 12.8 -3.0
TUC **Tucson** 82.16 52 *e*P P 05 23 18.2 +1.2
TUC pmax pmax
comp=Z,9.0nm,1.0s
TUC **Tucson** 82.16 52 *e*P P 05 23 18.2 +1.2
comp=Z,8.9nm,1.0s
WVOR **Wild Horse Val** 82.24 40 *e*P P 05 23 12.7 -4.5
WVOR pmax pmax
comp=Z,29nm,1.0s
WVOR **Wild Horse Val** 82.24 40 *e*P P 05 23 12.7 -4.5
comp=Z,29nm,1.0s
LVP **Lakeview Peak** 82.27 35 P P 05 23 17.8 +0.5
VLL **Laurance Lake** 82.29 36 P P 05 23 18.0 +0.6
VFP **Flag Point** 82.32 36 P P 05 23 17.8 +0.2
NLWA **Neilton Lookou** 82.33 34 *e*P P 05 23 17.8 +0.4
comp=Z,30nm,1.1s
RSO **Redoubt South** 82.35 12 *e*P P 05 23 16.3 -1.1
MAW **Mawson** 82.48 200 P P 05 23 18.0 +0.1
MAW **Mawson** 82.48 200 P P 05 23 18.0 +0.1
comp=Z,10nm,0.8s,baz=113,slow=6.6,SNR=21
TDL **Tradedollar La** 82.55 35 P P 05 23 19.5 +0.7
GULW **Guler Mountain** 82.62 36 P P 05 23 19.6 +0.6
OSD **Olympics--Snow** 82.69 33 P P 05 23 20.5 +0.9
I07A **Izee** 82.69 38 P P 05 23 20.1 +0.6
X16A **Lo Mia Camp, P** 82.71 50 ⇓ P P 05 23 21.1 +1.2
baz=83,SNR=63
ASR **Mount Adams--S** 82.76 36 P P 05 23 20.4 +0.5
319A **Douglas** 82.83 53 ⇓ P P 05 23 22.3 +1.8
baz=83,SNR=48
CCUT **Cedar City** 82.95 46 *e*P P 05 23 21.6 +0.4
comp=Z,23nm,0.9s
LON **Longmire** 83.02 35 *e*P P 05 23 21.1 +0.1
LON pmax pmax
comp=Z,7.0nm,0.8s
LON **Longmire** 83.02 35 *e*P P 05 23 21.1 +0.1
comp=Z,6.7nm,0.8s
ARUT **Antelope Range** 83.02 46 *e*P P 05 23 22.1 +0.7
ARUT pmax pmax
comp=Z,18nm,1.0s
ARUT **Antelope Range** 83.02 46 *e*P P 05 23 22.1 +0.7
comp=Z,18nm,1.0s
U15A **North Rim** 83.11 48 ⇑ P P 05 23 23.2 +1.1
baz=83
WPW **White Pass** 83.12 35 P P 05 23 22.1 +0.5
SPU **Mount Spurr** 83.14 12 *e*P P 05 23 19.5 -1.8
WUAZ **Wupatki** 83.30 49 *e*P P 05 23 23.8 +0.9
comp=Z,29nm,1.1s
WUAZ **Wupatki** 83.30 49 ⇓ P P 05 23 23.8 +0.9
baz=84
320A **Kipp Ranch, An** 83.39 54 ⇑ P P 05 23 25.4 +2.0
baz=84,SNR=66
ELK **Elko** 83.40 43 *e*P P 05 23 23.8 +0.5
comp=Z,253nm,0.9s
IPM **Ipoh** 83.42 277 *e*P P 05 23 23.0 -0.8
comp=Z,23nm,0.5s
IPM **Ipoh** 83.42 277 P P 05 23 24.0 +0.2
comp=Z,30nm,0.6s
RMW **Rattlesnake Mo** 83.46 34 P P 05 23 23.7 +0.4
RMW **Rattlesnake Mo** 83.46 34 P P 05 23 23.7 +0.4
NAC **Naches** 83.54 35 P P 05 23 24.1 +0.5
220A **Playas Peak, P** 83.65 53 ⇑ P P 05 23 26.4 +1.8
baz=84,SNR=32
G08A **Pilot Rock** 83.72 37 P P 05 23 24.8 +0.2
120A **U Bar Ranch, L** 83.87 52 ⇓ P P 05 23 27.3 +1.5
baz=84,SNR=13
HAWA **Hanford** 84.05 36 *e*P P 05 23 26.4 +0.2
comp=Z,26nm,1.1s
PMR **Palmer** 84.12 13 *e*P P 05 23 24.9 -1.2
PMR pmax pmax
comp=Z,9.0nm,0.7s
PMR **Palmer** 84.12 13 *e*P P 05 23 24.9 -1.2
comp=Z,9.0nm,0.7s
Z20A **Nine Sixteen R** 84.16 52 ⇓ P P 05 23 28.8 +1.5
baz=84,SNR=30
MVU **Marysvale** 84.22 46 *e*P P 05 23 28.5 +1.0
comp=Z,24nm,1.3s
MSU **Marysvale** 84.24 46 *e*P P 05 23 28.7 +1.1
MSU **Marysvale** 84.24 46 *e*P P 05 23 28.7 +1.1
221A **Mesquite Ranch** 84.26 53 ⇓ P P 05 23 29.4 +1.7
baz=84,SNR=12
W18A **Petrified Fore** 84.27 50 ⇑ P P 05 23 28.6 +0.8
baz=84
ETW **Entiat** 84.34 35 P P 05 23 27.9 +0.2
BMO **Blue Mountains** 84.42 38 *e*P P 05 23 28.0 -0.2
BMO **Blue Mountains** 84.42 38 *e*P P 05 23 28.0 -0.2
DIV **Divide** 84.48 15 *e*P P 05 23 27.2 -0.8
comp=Z,11nm,0.8s
121A **Cookes Peak, D** 84.50 53 ⇓ P P 05 23 30.3 +1.4
baz=85,SNR=28
MFID **Camas Ranch** 84.50 40 *e*P P 05 23 28.1 -0.5
comp=Z,16nm,1.0s
MFID **Camas Ranch** 84.50 40 ⇑ P P 05 23 28.8 +0.2
baz=85,SNR=17
DUG **Dugway** 84.68 44 *e*P P 05 23 29.9 +0.3
DUG pmax pmax
comp=Z,19nm,1.8s
DUG **Dugway** 84.68 44 *e*P P 05 23 29.9 +0.3
comp=Z,19nm,1.8s
Y20A **Horse Springs,** 84.69 51 ⇑ P P 05 23 31.3 +1.4
baz=85,SNR=16
PPLA **Purkeypile** 84.69 11 *e*P P 05 23 27.1 -2.0
comp=Z,9.4nm,1.2s
222A **Williams Famil** 84.82 53 ⇑ P P 05 23 31.7 +1.3
baz=85,SNR=12
X20A **Quemado** 84.90 51 ⇑ P P 05 23 32.1 +1.1
baz=85,SNR=15
Z21A **St. Cloud Mine** 84.94 52 ⇓ P P 05 23 32.7 +1.6
baz=85,SNR=34
I12A **Atlanta** 85.13 40 ⇓ P P 05 23 32.3 +0.5
baz=85,SNR=20
Q16A **Castle Valley** 85.13 46 ⇑ P P 05 23 32.8 +0.9
baz=85,SNR=8.9
W20A **Ramah** 85.17 50 ⇑ P P 05 23 33.3 +1.0
baz=85,SNR=17
Y21A **Point of Rocks** 85.25 52 ⇓ P P 05 23 34.2 +1.4
baz=86,SNR=39
223A **Chaparral, Ant** 85.28 54 ⇑ P P 05 23 34.0 +1.3
baz=86,SNR=6.9
S18A **Hurst Farm, Bl** 85.33 47 ⇑ P P 05 23 33.1 +0.1
baz=86,SNR=6.1
MPU **Maple Canyon** 85.37 45 *e*P P 05 23 33.8 +0.7
comp=Z,7.9nm,1.0s
X21A **Alamocita Cree** 85.37 51 ⇑ P P 05 23 34.2 +0.9
baz=86,SNR=14
Z22A **Elephant Butte** 85.44 52 ⇑ P P 05 23 34.6 +1.1
baz=86,SNR=44
HLID **Hailey** 85.44 41 *e*P P 05 23 33.9 +0.5
comp=Z,9.3nm,0.8s
HLID **Hailey** 85.44 41 ⇑ P P 05 23 33.8 +0.5
baz=86,SNR=22
J13A **Cove Ranch, Pi** 85.50 41 ⇓ P P 05 23 34.3 +0.7
baz=86,SNR=18
V20A **Brimhall** 85.51 50 ⇑ P P 05 23 34.2 +0.3
baz=86
HVU **Hansel Valley** 85.53 43 *e*P P 05 23 34.1 +0.3
HVU pmax pmax
comp=Z,6.0nm,0.8s
HVU **Hansel Valley** 85.53 43 *e*P P 05 23 34.1 +0.3
comp=Z,6.4nm,0.8s
TRF **Thorofare Moun** 85.56 12 *e*P P 05 23 31.2 -2.2
comp=Z,16nm,0.7s
BJI **Beijing** 85.58 315 P P 05 23 34.6 +0.8
SEY **Seymchan** 85.66 347 ⇓ *e*P P 05 23 32.8 -0.9
123A **Bell Site, Whi** 85.69 53 ⇑ P P 05 23 36.0 +1.2
baz=86
P17A **Butcher Ranch,** 85.69 46 ⇓ P P 05 23 35.1 +0.5
baz=86
H12A **Diamond D Ranc** 85.70 40 ⇑ P P 05 23 34.8 +0.2
baz=86,SNR=32
G12A **Big Creek, Yel** 85.74 39 ⇓ P P 05 23 35.0 +0.3
baz=86
U20A **Newcomb** 85.74 49 ⇓ P P 05 23 35.3 +0.4
baz=86,SNR=5.8
Y22A **Socorro** 85.75 52 ⇑ P P 05 23 35.8 +0.8
baz=86,SNR=6.4
324A **Moseley Ranch,** 85.76 55 ⇓ P P 05 23 36.1 +1.0
baz=86,SNR=31
W21A **San Fidel** 85.78 51 ⇓ P P 05 23 35.9 +0.6
baz=86
JLU **Jordanelle** 85.78 44 *e*P P 05 23 35.3 +0.1
comp=Z,23nm,1.8s
I13A **Wildhorse Cree** 85.81 40 ⇑ P P 05 23 35.6 +0.4
baz=86,SNR=8.6
DAU **Daniels Canyon** 85.82 45 *e*P P 05 23 36.1 +0.7
DAU **Daniels Canyon** 85.82 45 *e*P P 05 23 36.0 +0.7
LAZ **Ladron** 85.83 51 *e*P P 05 23 36.3 +0.8
comp=Z,9.0nm,1.2s
Y22D **IRIS PASSCAL I** 85.84 52 ⇓ P P 05 23 36.5 +1.0
baz=86
LENM **Lemitar** 85.84 52 *e*P P 05 23 36.7 +1.2
425A **Indio Mountain** 85.86 55 ⇓ P P 05 23 36.9 +1.3
baz=86,SNR=46
J14A **Carey** 85.86 41 ⇓ P P 05 23 36.2 +0.8
baz=86
ENH **Enshi** 85.91 304 *e*P P 05 23 35.0 -0.7
comp=Z,17nm,0.8s
MNTX **Cornudas Mount** 85.95 54 *e*P P 05 23 36.9 +1.1
comp=Z,30nm,1.0s
Z23A **Rita Site, Whi** 85.99 53 ⇓ P P 05 23 37.1 +0.9
baz=86,SNR=11
626A **Big Bend Ranch** 86.00 57 ⇓ P P 05 23 37.5 +1.3
baz=86,SNR=20
224A **Cornudas Mount** 86.00 54 ⇑ P P 05 23 37.4 +1.1
baz=86,SNR=32
SKAG **Skagway** 86.07 20 *e*P P 05 23 36.4 +0.7
comp=Z,5.4nm,0.9s
H13A **Challis** 86.07 40 ⇓ P P 05 23 36.7 +0.3
baz=86,SNR=16
MCK **McKinley** 86.08 12 *e*P P 05 23 34.6 -1.1
MCK pmax pmax
comp=Z,20nm,1.2s
MCK **McKinley** 86.08 12 *e*P P 05 23 34.6 -1.1
comp=Z,20nm,1.2s
BNM **Barren Site** 86.09 52 *e*P P 05 23 37.5 +0.7
comp=Z,2.8nm,0.5s
P18A **Preston Nutter** 86.10 46 ⇓ P P 05 23 37.0 +0.2
baz=86,SNR=6.0
V21A **Milan** 86.11 50 ⇑ P P 05 23 37.0 +0.2
baz=86
325A **Bean Ranch, Si** 86.12 55 ⇑ P P 05 23 37.7 +0.8
baz=86,SNR=37
F12A **Elk City** 86.13 38 ⇓ P P 05 23 36.6 +0.1
baz=86,SNR=65
LPM **Los Pinos Moun** 86.16 52 *e*P P 05 23 37.8 +0.8
HWUT **Hardware Ranch** 86.22 43 *e*P P 05 23 36.9 -0.2
comp=Z,3.1nm,0.9s
I14A **Mackay** 86.22 41 ⇓ P P 05 23 37.8 +0.7
baz=86,SNR=16
526A **Mary Lane Ranc** 86.25 56 ⇑ P P 05 23 38.5 +1.0
baz=86,SNR=33
TXAR **Lajitas Array** 86.27 57 P P P 05 23 38.9 +1.3
TXAR **Lajitas Array** 86.27 57 P P P 05 23 38.9 +1.3
comp=Z,17nm,0.8s,baz=219,slow=6.1,SNR=188
124A **Stringfield Ra** 86.33 54 ⇓ P P 05 23 38.8 +0.9
baz=86,SNR=14
W22A **Albuquerque** 86.33 51 ⇑ P P 05 23 38.9 +1.0
baz=86
G13A **Cobalt** 86.37 39 ⇑ P P 05 23 37.9 +0.1
baz=87,SNR=14
U21A **Nageezi** 86.38 49 ⇓ P P 05 23 38.7 +0.6
baz=87,SNR=44
Y23A **Lovelace Mesa,** 86.42 52 ⇑ P P 05 23 38.6 +0.3
baz=87,SNR=11
PV04 **Paradox Valley** 86.42 47 *e*P P 05 23 38.6 +0.4
NEW **Newport** 86.47 36 *e*P P 05 23 37.7 -0.2
comp=Z,58nm,2.5s
NEW **Newport** 86.47 36 P P 05 23 37.8 -0.2
comp=Z,2.7nm,0.6s,baz=248,slow=4.6,SNR=7.2
NEW **Newport** 86.47 36 ⇑ P P 05 23 37.5 -0.5
baz=87,SNR=5.2
PV01 **Paradox Valley** 86.53 48 *e*P P 05 23 38.9 0.0
comp=Z,1µm,1.0s
S20A **Disappointment** 86.53 48 ⇓ P P 05 23 39.2 +0.3
baz=87,SNR=13
MENT **Mentasta** 86.54 15 *e*P P 05 23 37.4 -0.6
627A **Terlingua Ranc** 86.54 57 ⇑ P P 05 23 40.1 +1.2
baz=87,SNR=42
426A **McDonald Obser** 86.55 56 ⇑ P P 05 23 40.1 +1.0
baz=87,SNR=60
225A **Deer Hill, Car** 86.55 54 ⇑ P P 05 23 40.0 +1.0
baz=87,SNR=17
GYA **Guiyang** 86.59 299 P P 05 23 39.6 +0.4
GYA pP **pP** **05 25 08.3** +2.3
GYA sP **sP** **05 25 47.0** +1.9
GYA PP **PP** **05 27 08.6** +1.0
GYA SKS **SKSac** **05 33 27.1** -2.5
GYA S **S** **05 33 42.8** -1.0
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,4.9s
X23A **Hourglass Bar** 86.61 52 ⇑ P P 05 23 39.5 +0.3
baz=87
527A **Woodward Ranch** 86.66 57 ⇓ P P 05 23 40.3 +0.9
baz=87,SNR=16
V22A **San Miguel Ran** 86.68 50 ⇑ P P 05 23 39.7 +0.2
baz=87,SNR=7.1
F13A **Darby** 86.69 39 ⇑ P P 05 23 39.2 -0.1
baz=87,SNR=27
R20A **Redvale** 86.69 48 ⇓ P P 05 23 39.4 -0.1
baz=87,SNR=7.2
T21A **Navajo Lake** 86.73 49 ⇓ P P 05 23 40.2 +0.4
baz=87,SNR=7.2
M17A **Scullys Gap (B** 86.73 44 ⇑ P P 05 23 39.4 -0.2
baz=87
D12A **Red Ives Fores** 86.78 37 ⇑ P P 05 23 39.2 -0.3
baz=87

K16A **Soda Springs** 86.82 42 ⇓P P 05 23 40.5 +0.5
baz=87,SNR=5.3
S21A **Coal Bank Pass** 86.86 48 ⇑P P 05 23 40.7 +0.3
baz=87,SNR=7.2
I15A **Monteview** 86.86 41 ⇑P P 05 23 40.9 +0.9
baz=87,SNR=6.7
326A **Caldwell Ranch** 86.86 55 ⇑P P 05 23 40.7 +0.4
baz=87,SNR=19
Y24A **Capitan** 86.88 52 ⇓P P 05 23 41.2 +0.7
baz=87,SNR=42
W23A **Werner Place,** 86.90 51 ⇑P P 05 23 40.8 +0.2
baz=87
G14A **Jackson** 86.91 40 ⇓P P 05 23 40.7 +0.3
baz=87,SNR=14
125A **Gardner Draw,** 86.92 54 ⇑P P 05 23 41.3 +0.7
baz=87,SNR=14
U22A **Llaves** 86.93 50 ⇑P P 05 23 41.1 +0.4
baz=87
GDL2 **Guadalupe Moun** 86.94 54 *e*P P 05 23 41.8 +1.0
628A **Black Gap, Mar** 86.95 57 ⇑P P 05 23 41.8 +1.1
baz=87,SNR=13
P19A **Cripple Cowboy** 86.96 46 ⇑P P 05 23 40.9 +0.1
baz=87,SNR=9.1
226B **Tecolote Peak,** 87.04 55 ⇑P P 05 23 42.1 +0.9
baz=87,SNR=38
MCMT **McKenzie Canyo** 87.06 40 *e*P P 05 23 41.8 +0.6
comp=Z,15nm,1.1s
MCMT *e*pP pP 05 25 11.2 +3.1
C12B **Naegeli Ranch,** 87.07 37 ⇓P P 05 23 40.8 -0.1
baz=87
H15A **Lima** 87.08 40 ⇓P P 05 23 41.8 +0.6
baz=87,SNR=31
M18A **Lyman** 87.10 44 ⇓P P 05 23 41.5 +0.1
baz=87,SNR=9.1
Q20A **Ridgley Place,** 87.11 47 ⇓P P 05 23 41.5 +0.1
baz=87,SNR=11
427A **Hayter Ranch,** 87.12 56 ⇓P P 05 23 42.8 +1.3
baz=87,SNR=78
E13A **Victor** 87.12 38 ⇑P P 05 23 40.8 -0.4
baz=87,SNR=8.0
V23A **Ortiz Mt. (NFS** 87.13 51 ⇑P P 05 23 42.6 +0.9
baz=87,SNR=10
DLBC **Dease Lake** 87.13 23 P P 05 23 41.3 +0.4
DLBC **Dease Lake** 87.13 23 P P 05 23 41.3 +0.4
comp=Z,2.4nm,0.7s,baz=213,slow=5.5,SNR=7.4
Z25A **Roswell** 87.14 53 ⇑P P 05 23 42.5 +0.9
baz=87,SNR=13
X24A **Lazy VL Ranch,** 87.16 52 ⇑P P 05 23 41.7 -0.1
baz=87
O19A **Miners Draw (B** 87.18 45 ⇑P P 05 23 41.6 -0.1
baz=87,SNR=7.1
T22A **Edith** 87.19 49 ⇓P P 05 23 42.0 +0.1
baz=87,SNR=6.6
K17A **Gardner Place,** 87.20 43 ⇓P P 05 23 42.0 +0.2
baz=87,SNR=6.4
RRI2 **Red Ridge** 87.25 42 *e*P P 05 23 42.9 +0.7
comp=Z,19nm,1.0s
327A **Balmorhea Ranc** 87.26 55 ⇓P P 05 23 43.1 +0.9
baz=88
F14A **Wisdom** 87.27 39 ⇓P P 05 23 42.0 0.0
baz=88,SNR=7.4
P20A **De Beque** 87.30 46 ⇓P P 05 23 42.5 +0.2
baz=88
528A **Cox Ranch, San** 87.31 57 ⇑P P 05 23 43.5 +0.9
baz=88,SNR=20
COLA **College** 87.31 12 *e*P P 05 23 40.3 -1.2
COLA pmax pmax
comp=Z,12nm,0.8s
COLA **College** 87.31 12 *e*P P 05 23 40.3 -1.2
comp=Z,12nm,0.8s
D13A **Huson** 87.32 38 ⇑P P 05 23 41.2 -0.8
baz=88,SNR=9.8
R21A **Cimarron** 87.35 48 ⇓P P 05 23 43.2 +0.5
baz=88,SNR=20
L18A **Fontenelle, Gr** 87.37 44 ⇓P P 05 23 42.9 +0.2
baz=88
U23A **El Rito** 87.39 50 ⇓P P 05 23 43.3 +0.4
baz=88,SNR=17
126A **Clayton Basin,** 87.40 54 ⇑P P 05 23 43.3 +0.4
baz=88,SNR=6.9
I16A **Newdale** 87.41 41 ⇓P P 05 23 43.7 +0.9
baz=88,SNR=29
ILAR **Eielson Array** 87.42 13 P P 05 23 40.4 -1.7
ILAR pP pP 05 25 05.9 -3.2
ILAR **Eielson Array** 87.42 13 P P 05 23 40.4 -1.7
comp=Z,3.4nm,0.5s,baz=218,slow=5.0,SNR=81
ILAR pP pP 05 25 05.9 -3.2
comp=Z,4.4nm,1.0s,baz=227,slow=5.3,SNR=10
B12A **Libby** 87.43 36 ⇓P P 05 23 43.0 +0.4
baz=88
G15A **Dillon** 87.46 40 ⇓P P 05 23 43.3 +0.3
baz=88,SNR=48
W24A **Lazy 6 Ranch,** 87.46 51 ⇓P P 05 23 43.3 0.0
baz=88,SNR=15
MSO **Missoula** 87.47 38 *e*P P 05 23 42.5 -0.4
comp=Z,7.6nm,1.5s
MSO **Missoula** 87.47 38 ⇓P P 05 23 42.2 -0.7
baz=88,SNR=5.5
DLMT **Dillon** 87.50 40 *e*P P 05 23 43.6 +0.5
comp=Z,21nm,0.9s
E14A **Clinton** 87.52 39 ⇓P P 05 23 43.1 0.0
baz=88,SNR=16
BSMT **Basoo Peak** 87.54 37 *e*P P 05 23 43.2 -0.1
Q21A **Lamborn Mesa,** 87.55 47 ⇓P P 05 23 43.9 +0.4
baz=88,SNR=7.2
TPAW **Teton Pass** 87.56 42 *e*P P 05 23 44.3 +0.7
comp=Z,12nm,1.0s
C13A **Hot Springs** 87.57 37 ⇓P P 05 23 42.6 -0.6
baz=88,SNR=5.0
S22A **4UR Ranch, Cre** 87.57 49 ⇑P P 05 23 44.3 +0.5
baz=88,SNR=23
SYO **Syowa Base** 87.62 193⇑*e*P P 05 23 40.6 -2.5
428A **Kincaid Ranch,** 87.63 56 ⇑P P 05 23 45.0 +1.0
baz=88,SNR=13
J17A **Brown Place, J** 87.64 42 ⇑P P 05 23 44.3 +0.4
baz=88,SNR=13
A12A **Yaak River Ran** 87.65 36 ⇓P P 05 23 43.9 +0.2
baz=88
SNOW **Snow King Moun** 87.67 42 *e*P P 05 23 44.9 +0.8
comp=Z,16nm,0.9s
227A **Bennet, Jal** 87.69 55 ⇑P P 05 23 44.6 +0.4
baz=88
Z26A **Caprock** 87.69 54 ⇓P P 05 23 44.5 +0.3
baz=88,SNR=5.7
O20A **White River Ci** 87.70 46 ⇓P P 05 23 44.4 +0.1
baz=88,SNR=5.7
K18A **Toltan Ranch,** 87.71 43 ⇑P P 05 23 44.7 +0.5
baz=88,SNR=18
X25A **Clemmons Ranch** 87.72 52 ⇓P P 05 23 44.4 0.0
baz=88,SNR=6.9
M19A **Rock Springs** 87.74 44 ⇑P P 05 23 44.4 -0.1
baz=88
529A **Stev Forest Ra** 87.75 57 ⇑P P 05 23 44.9 +0.4
baz=88,SNR=5.3
IMW **Indian Meadow** 87.77 42 *e*P P 05 23 44.2 -0.3
comp=Z,18nm,1.0s
JTMT **Jette** 87.77 37 *e*P P 05 23 43.7 -0.6
V24A **Rampart Ranch,** 87.79 51 ⇓P P 05 23 45.2 +0.4
baz=88,SNR=15
328A **Wristen Ranch,** 87.80 56 ⇑P P 05 23 45.1 +0.4
baz=88,SNR=20
SWMT **Swartz Lake** 87.80 37 *e*P P 05 23 44.2 -0.2
F15A **Butte** 87.81 39 ⇑P P 05 23 44.8 +0.2
baz=88,SNR=17
MOOW **Moose Ponds** 87.81 42 *e*P P 05 23 45.2 +0.5
comp=Z,4.8nm,1.0s
T23A **Casias Ranch,** 87.81 49 ⇓P P 05 23 45.2 +0.2
baz=88
LRM **Limekiln Ridge** 87.82 39 *e*P P 05 23 44.7 0.0
LOHW **Long Hollow** 87.83 42 *e*P P 05 23 45.1 +0.3
comp=Z,10.0nm,1.1s
R22A **Saguache, Gunn** 87.84 48 ⇑P P 05 23 45.8 +0.7
baz=88,SNR=23
D14A **Greenough** 87.86 38 ⇓P P 05 23 44.0 -0.7
baz=88,SNR=11
L19A **Farson** 87.89 44 ⇑P P 05 23 45.2 +0.1
baz=88,SNR=11
G16A **Moss Hill, Enn** 87.91 40 ⇑P P 05 23 45.4 +0.3
baz=88,SNR=15
127A **Arkansas Junct** 87.92 54 ⇓P P 05 23 45.7 +0.4
baz=88,SNR=7.4
CHMT **Chamberlain Mo** 87.92 38 *e*P P 05 23 44.7 -0.4
QLMT **Earthquake Lak** 87.93 41 *e*P P 05 23 46.4 +1.2
XAN **Xi'an** 87.95 307 P P 05 23 46.8 +1.5
XAN pmax pmax
comp=Z,3.0nm,1.1s
SLMT **Seeley Lake** 87.95 38 *e*P P 05 23 44.7 -0.5
P21A **Newcastle** 87.95 47 ⇓P P 05 23 45.9 +0.4
baz=88
H16A **Russell Place,** 87.98 41 ⇑P P 05 23 46.5 +1.1
baz=88,SNR=45
B13A **Whitefish** 88.00 37 ⇓P P 05 23 46.2 +0.9
baz=88
I17A **Pilgrim Ck.** 88.00 42 ⇓P P 05 23 46.6 +1.0
baz=88
J18A **Kendall Valley** 88.01 43 ⇑P P 05 23 45.9 +0.2
baz=88,SNR=43
N20A **Spence Gulch,** 88.01 45 ⇓P P 05 23 45.8 +0.1
baz=88,SNR=12
E15A **Deer Lodge** 88.02 39 ⇑P P 05 23 45.3 -0.2
baz=88,SNR=5.8
Q22A **Crested Butte,** 88.02 47 ⇑P P 05 23 46.2 +0.3
baz=88,SNR=11
BW06 **Boulder Array** 88.09 43 *e*P P 05 23 45.8 -0.2
comp=Z,6.6nm,0.9s
C14A **Swan Lake** 88.09 37 ⇓P P 05 23 45.2 -0.5
baz=88
PDAR **Pinedale Array** 88.09 43 P P 05 23 45.9 -0.1
PDAR PKKPbc PKKPbc 05 41 29.2 -1.3
PDAR **Pinedale Array** 88.09 43 P P 05 23 45.9 -0.1
comp=Z,6.1nm,0.8s,baz=210,slow=3.0,SNR=49
PDAR PKKPbc PKKPbc 05 41 29.2 -1.3
comp=Z,1.0nm,0.8s,baz=85,slow=5.2,SNR=4.8
Y26A **Elida** 88.09 53 ⇓P P 05 23 46.2 +0.1
baz=88
SMCO **Snowmass** 88.12 47 *e*P P 05 23 46.8 +0.3
comp=Z,16nm,1.3s
YMR **Madison River** 88.14 41 *e*P P 05 23 46.8 +0.6
comp=Z,64nm,1.5s
S23A **Nye Farm, Mont** 88.14 49 ⇑P P 05 23 46.7 +0.3
baz=88
W25A **X Bar L Ranch,** 88.17 52 ⇑P P 05 23 46.4 -0.1
baz=88,SNR=13
429A **Davenport Ranc** 88.21 57 ⇓P P 05 23 47.2 +0.6
baz=88,SNR=55
BOZ **Bozeman (W)** 88.22 40 *e*P P 05 23 46.8 +0.3
BOZ pmax pmax
comp=Z,36nm,1.4s
BOZ **Bozeman (W)** 88.22 40 *e*P P 05 23 46.8 +0.3
comp=Z,36nm,1.4s
H17A **Grant Village** 88.24 41 ⇑P P 05 23 48.3 +1.6
baz=88,SNR=14
BILL **Bilibino** 88.25 354⇑*i*P P 05 23 45.7 -0.2
BILL *i* *PP pP 05 25 11.0 -2.2
BILL pmax pmax
comp=Z,6.0nm,0.9s
BILL **Bilibino** 88.25 354 *e*P P 05 23 45.0 -0.9
comp=Z,3.5nm,0.4s
O21A **Pagoda** 88.26 46 ⇓P P 05 23 46.7 -0.2
baz=88
228A **UT Block 9, Go** 88.27 55 ⇓P P 05 23 47.4 +0.4
baz=88,SNR=12
Z27A **Tatum** 88.29 54 ⇓P P 05 23 46.8 -0.2
baz=88,SNR=16
F16A **Kennard Place,** 88.30 40 ⇓P P 05 23 47.3 +0.5
baz=88,SNR=9.6
V25A **Rancho No Teng** 88.32 51 ⇑P P 05 23 47.3 +0.1
baz=88,SNR=11
A13A **Flathead Natio** 88.34 36 ⇓P P 05 23 46.9 0.0
baz=89
X26A **CR and CF Fran** 88.36 52 ⇑P P 05 23 47.0 -0.3
baz=89
M20A **Sweetwater, Wa** 88.37 45 ⇓P P 05 23 47.5 +0.1
baz=89,SNR=6.3
I18A **Diamond G Ranc** 88.38 42 ⇑P P 05 23 47.4 +0.1
baz=89,SNR=10
D15A **Lincoln** 88.41 38 ⇑P P 05 23 47.3 0.0
baz=89,SNR=12
530A **J-C Ranch, Com** 88.45 57 ⇓P P 05 23 48.4 +0.6
baz=89,SNR=11
P22A **Eagle** 88.46 47 ⇑P P 05 23 47.9 0.0
baz=89,SNR=5.9
N21A **Black Mountain** 88.48 46 ⇓P P 05 23 48.2 +0.2
baz=89,SNR=10
R23A **Moffat** 88.48 48 ⇑P P 05 23 48.2 +0.1
baz=89,SNR=7.4
329A **Wagon Wheel Ra** 88.49 56 ⇑P P 05 23 48.4 +0.5
baz=89,SNR=25
SDCO **Great Sand Dun** 88.51 49 *e*P P 05 23 48.6 +0.4
comp=Z,6.7nm,0.8s
L20A **Wamsutter** 88.52 44 ⇓P P 05 23 48.4 +0.4
baz=89,SNR=9.0
T24A **Torres, Weston** 88.54 50 ⇓P P 05 23 48.7 +0.4
baz=89,SNR=6.3
128A **Castleberry Fa** 88.56 55 ⇑P P 05 23 48.9 +0.6
baz=89,SNR=19
Y27A **Causey** 88.57 53 ⇓P P 05 23 48.4 0.0
baz=89,SNR=26
K19A **Absolon Red Bu** 88.57 43 ⇓P P 05 23 47.8 -0.5
baz=89
G17A **Pier Place,** 88.60 40 ⇑P P 05 23 49.0 +0.8
baz=89,SNR=12
W26A **Owens Ranch, T** 88.62 52 ⇑P P 05 23 48.4 -0.2
baz=89,SNR=5.6
HRY **Holter Researc** 88.65 39 *e*P P 05 23 49.0 +0.6
E16A **East Helena** 88.65 39 ⇓P P 05 23 48.5 0.0
baz=89,SNR=12
J19A **Crowheart** 88.65 43 ⇓P P 05 23 48.5 -0.1
baz=89,SNR=20
B14A **Marquette Ranc** 88.67 37 ⇑P P 05 23 48.2 -0.3
baz=89,SNR=17
S24A **Houchin Ranch,** 88.67 49 ⇑P P 05 23 49.4 +0.4
baz=89,SNR=11
WALA **Waterton Lakes** 88.68 36 *e*P P 05 23 48.6 +0.1
comp=Z,0.8nm,1.7s
U25A **Circle Dot Ran** 88.71 51 ⇑P P 05 23 49.1 0.0
baz=89,SNR=9.3
C15A **Salmond Ranch,** 88.74 38 ⇑P P 05 23 48.6 -0.3
baz=89,SNR=9.0
631A **Perdido Creek** 88.77 58 ⇑P P 05 23 49.7 +0.4
baz=89,SNR=8.9
430A **Baggett Ranch,** 88.79 57 ⇓P P 05 23 49.8 +0.4
baz=89,SNR=9.2
Q23A **Hartsel** 88.79 48 ⇓P P 05 23 49.6 +0.1
baz=89
229A **Bryant Ranch,** 88.82 55 ⇑P P 05 23 49.8 +0.4
baz=89,SNR=10
K20A **Yellowstone Ra** 88.82 44 ⇓P P 05 23 49.0 -0.4
baz=89,SNR=9.4
SNAA **Sanae** 88.83 178 *e*P P 05 23 47.4 -1.4
O22A **Kremmling** 88.86 46 ⇓P P 05 23 49.9 +0.1
baz=89,SNR=11
MSTX **Muleshoe** 88.90 53 ⇓P P 05 23 50.2 +0.3
baz=89,SNR=22
A14A **Double T Ranch** 88.91 36 ⇑P P 05 23 49.4 -0.1
baz=89,SNR=14
V26A **Tequesquite Ra** 88.91 51 ⇑P P 05 23 49.4 -0.5
baz=89,SNR=10
Z28A **Tucker Farm, M** 88.91 54 ⇑P P 05 23 49.8 -0.1
baz=89,SNR=8.8
X27A **F and S Farms,** 88.94 53 ⇓P P 05 23 50.2 +0.2
baz=89,SNR=12
F17A **Fitzpatrick Pl** 88.94 40 ⇓P P 05 23 50.7 +0.9
baz=89,SNR=20
H18A **Shoshone NF, C** 88.95 41 ⇓P P 05 23 50.3 +0.3
baz=89,SNR=7.5
M21A **Separation Pea** 88.97 45 ⇑P P 05 23 50.2 0.0
baz=89,SNR=12
D16A **Dana Ranch, Ca** 88.98 39 ⇑P P 05 23 50.2 +0.2
baz=89,SNR=12
732A **Laxson Ranch,** 88.99 59 ⇑P P 05 23 50.7 +0.4
baz=89,SNR=12
COLD **Coldfoot** 88.99 10 *e*P P 05 23 49.0 -0.3
comp=Z,7.4nm,0.8s
P23A **Jefferson** 89.00 47 ⇑P P 05 23 50.9 +0.4
baz=89
R24A **Sanders Place,** 89.00 49 ⇓P P 05 23 50.7 +0.3
baz=89,SNR=8.8
T25A **Trinidad** 89.03 50 ⇑P P 05 23 50.4 -0.2
baz=89,SNR=7.6
129A **Stewart Farms,** 89.04 55 ⇓P P 05 23 50.9 +0.4
baz=89,SNR=14
B15A **Bradely Ranch,** 89.05 37 ⇑P P 05 23 49.3 -0.9
baz=89,SNR=7.5
I19A **Meeteetse** 89.06 42 ⇑P P 05 23 50.9 +0.4
baz=89,SNR=17
HHC **Hu-ho-hao-te** 89.06 314⇑*i*P P 05 23 51.0 +0.5
HHC pP pP 05 25 19.8 +1.9
HHC sP sP 05 25 58.5 +1.7
HHC PP PP 05 27 29.5 +2.6
HHC SKS SKSac 05 33 42.5 -1.1
HHC S S 05 34 04.9 -1.4
HHC sS sS 05 36 41.3 -0.3
HHC SS SS 05 40 12.2 +1.7
HHC pmax pmax
comp=Z,48nm,1.0s
HHC pmax pmax
comp=Z,100nm,5.4s
HHC LR LR
comp=N,280nm,22.6s
HHC LR LR
comp=E,320nm,20.8s
HHC LR LR
comp=Z,440nm,22.7s
330A **Mertzon** 89.08 56 ⇓P P 05 23 50.6 -0.1
baz=89,SNR=11
531A **Rocksprings** 89.09 58 ⇓P P 05 23 51.3 +0.6
baz=89,SNR=24
E17A **Martinsdale** 89.10 39 ⇓P P 05 23 50.7 +0.1
baz=89,SNR=5.8
L21A **Rawlins** 89.14 45 ⇓P P 05 23 50.5 -0.4
baz=89,SNR=8.3
W27A **Bowe Ranch, En** 89.14 52 ⇑P P 05 23 50.9 -0.1
baz=89,SNR=11
U26A **Atchley Ranch,** 89.19 51 ⇑P P 05 23 51.3 0.0
baz=89,SNR=11
N22A **Wattenberg Ran** 89.22 46 ⇓P P 05 23 51.8 +0.4
baz=89,SNR=11
S25A **Robets Cordova** 89.24 49 ⇑P P 05 23 51.4 -0.1
baz=89,SNR=15
431A **Sonora** 89.24 57 ⇓P P 05 23 51.6 +0.1
baz=89
C16A **Fuhringer Ranc** 89.25 38 ⇑P P 05 23 50.8 -0.4
baz=90,SNR=12
Y28A **McKinney Farm,** 89.27 54 ⇓P P 05 23 51.5 -0.1
baz=90,SNR=9.3
Q24A **Divide** 89.30 48 ⇓P P 05 23 52.1 +0.3
baz=90
A15A **Johnson Ranch,** 89.30 37 ⇓P P 05 23 50.9 -0.5
baz=90,SNR=10
J20A **Shoshoni** 89.31 43 ⇑P P 05 23 52.0 +0.4
baz=90,SNR=15
O23A **Lake Granby, G** 89.32 47 ⇑P P 05 23 52.2 +0.2
baz=90,SNR=8.1
G18A **Lazy EL Ranch,** 89.32 41 ⇑P P 05 23 52.2 +0.6
baz=90,SNR=6.6
230A **Sterling City** 89.33 56 ⇓P P 05 23 52.1 +0.2
baz=90,SNR=9.5
KMI **Kunming** 89.33 297 P P 05 23 54.3 +2.1
KMI pP pP 05 25 20.6 +1.0
KMI sP sP 05 26 01.0 +2.4
KMI pmax pmax
comp=Z,10.0nm,1.6s
ISCO **Idaho Springs** 89.34 47 *e*P P 05 23 52.6 +0.6
ISCO pmax pmax
comp=Z,4.0nm,1.1s
ISCO **Idaho Springs** 89.34 47 *e*P P 05 23 52.6 +0.6
comp=Z,3.8nm,1.1s
ISCO **Idaho Springs** 89.34 47 ⇑P P 05 23 52.2 +0.1
baz=90
H19A **Powell** 89.37 42 ⇑P P 05 23 52.6 +0.8
baz=90,SNR=14
VNA2 **Neumayer--Watz** 89.39 177 *e*P P 05 23 51.6 +0.2
VNA2 **Neumayer--Watz** 89.39 177 *e*PcP PcP 05 23 53.9 +1.4
M22A **Cedar Creek Ra** 89.39 45 ⇑P P 05 23 52.1 -0.1
baz=90,SNR=6.0
Z29A **Hungry Hill Ra** 89.42 54 ⇑P P 05 23 52.1 -0.2
baz=90,SNR=10
632A **Uvalde** 89.44 58 ⇑P P 05 23 53.1 +0.8
baz=90,SNR=20
GCMT **Greycliff** 89.49 40 *e*P P 05 23 53.4 +1.1
comp=Z,10nm,1.1s
F18A **Big Timber** 89.51 40 ⇑P P 05 23 53.1 +0.7
baz=90,SNR=11
K21A **Alcova** 89.52 44 ⇑P P 05 23 52.5 -0.2
baz=90,SNR=9.4
D17A **Six Diamond Ra** 89.55 39 ⇑P P 05 23 53.0 +0.4
baz=90,SNR=22
PLCA **Paso Flores** 89.55 133 *e*P P 05 23 54.1 +1.2
comp=Z,26nm,1.4s
PLCA **Paso Flores** 89.55 133 P P 05 23 53.3 +0.4
comp=Z,5.7nm,1.0s,baz=350,slow=0.7,SNR=6.6
R25A **Fountain Ranch** 89.55 49 ⇓P P 05 23 52.4 -0.4
baz=90,SNR=12
X28A **Dimmitt** 89.56 53 ⇑P P 05 23 52.7 -0.2
baz=90,SNR=13
I20A **Worland** 89.57 43 ⇓P P 05 23 53.0 +0.2
baz=90,SNR=17
532A **Rocksprings** 89.58 58 ⇑P P 05 23 53.4 +0.3
baz=90,SNR=19
V27A **Dan Oppiter Fa** 89.59 52 ⇑P P 05 23 53.0 -0.1
baz=90,SNR=8.5
N23A **Red Feather La** 89.60 46 ⇓P P 05 23 53.6 +0.4
baz=90,SNR=8.1
VNA1 **Neumayer--Stat** 89.61 176 *e*P P 05 23 52.5 +0.1
331A **San Angelo** 89.63 57 ⇓P P 05 23 53.2 -0.1
baz=90,SNR=17
T26A **Comanche Natio** 89.63 50 ⇓P P 05 23 53.1 -0.2
baz=90
Y29A **Porterfield Fa** 89.69 54 ⇓P P 05 23 53.9 +0.3
baz=90,SNR=22
P24A **Kohler Place,** 89.71 48 ⇑P P 05 23 53.6 0.0
baz=90
130A **Snyder** 89.72 55 ⇑P P 05 23 53.8 +0.1
baz=90
J21A **Lysite** 89.72 43 ⇓P P 05 23 53.9 +0.3
baz=90,SNR=25
C17A **Wharram Farm,** 89.74 38 ⇓P P 05 23 53.5 0.0
baz=90,SNR=18
L22A **Ellis Ranch, M** 89.79 45 ⇑P P 05 23 54.6 +0.7
baz=90,SNR=11
JCT **Junction City** 89.80 58 *e*P P 05 23 54.1 0.0
JCT pmax pmax
comp=Z,13nm,0.9s
JCT **Junction City** 89.80 58 *e*P P 05 23 54.1 0.0
comp=Z,13nm,0.9s
JCT **Junction City** 89.80 58 ⇑P P 05 23 54.1 0.0
baz=90,SNR=6.9
W28A **Vega** 89.86 52 ⇑P P 05 23 54.0 -0.3
baz=90
O24A **Longmont** 89.86 47 ⇑P P 05 23 54.8 +0.6
baz=90
Z30A **Sanderson Ranc** 89.87 55 ⇑P P 05 23 54.0 -0.3
baz=90,SNR=10
U27A **Thompson Grove** 89.88 51 ⇓P P 05 23 53.9 -0.5
baz=90,SNR=7.4
H20A **Greybull** 89.90 42 ⇑P P 05 23 53.9 -0.4
baz=90,SNR=17
X29A **Tulia** 89.90 53 ⇑P P 05 23 54.5 0.0
baz=90,SNR=12
S26A **Kim** 89.91 50 ⇓P P 05 23 54.0 -0.5
baz=90,SNR=6.5
A16A **West Butte Ran** 89.92 37 ⇓P P 05 23 54.2 -0.1
baz=90,SNR=11
F19A **Roth Farm, Mol** 89.96 41 ⇑P P 05 23 54.7 +0.1
baz=90,SNR=8.6
432A **Menard** 89.96 57 ⇑P P 05 23 54.8 0.0
baz=90,SNR=36
231A **Bronte** 89.97 56 ⇑P P 05 23 54.8 0.0
baz=90,SNR=23
K22A **Casper** 90.01 44 ⇑P P 05 23 54.9 0.0
baz=90,SNR=5.2
M23A **Laramie** 90.01 46 ⇓P P 05 23 55.0 0.0
baz=90
I21A **Big Trails, Te** 90.04 43 ⇑P P 05 23 54.7 -0.3
baz=90,SNR=24
V28A **Channing** 90.04 52 ⇓P P 05 23 54.2 -1.0
baz=90
B17A **L&G Farms, Che** 90.05 38 ⇓P P 05 23 54.7 -0.1
baz=90,SNR=10
D18A **Linhart Farms,** 90.09 39 ⇑P P 05 23 55.6 +0.5
baz=90,SNR=6.8
AMTX **Amarillo** 90.10 53 *e*P P 05 23 55.7 +0.3
comp=Z,22nm,0.9s
G20A **Bridger** 90.11 41 ⇑P P 05 23 55.2 -0.1
baz=90,SNR=7.0
131A **Roby** 90.20 55 ⇓P P 05 23 55.9 +0.1
baz=90,SNR=15
332A **Millersview** 90.20 57 ⇓P P 05 23 56.1 +0.2
baz=90,SNR=39
CMAR **Chiang Mai Arr** 90.22 289 P P 05 23 57.9 +1.7
CMAR **Chiang Mai Arr** 90.22 289 P P 05 23 57.9 +1.7
comp=Z,1.5nm,0.4s,baz=111,slow=2.9,SNR=11
R26A **Arlington** 90.22 49 ⇑P P 05 23 55.6 -0.3
baz=90,SNR=17
W29A **Amraillo** 90.22 53 ⇑P P 05 23 56.0 +0.1
baz=90,SNR=8.0
T27A **Campo** 90.22 51 ⇑P P 05 23 55.7 -0.3
baz=90,SNR=6.0
P25A **Willow Gulch B** 90.22 48 ⇑P P 05 23 56.2 +0.2
baz=90,SNR=5.2
Y30A **Stafford Cattl** 90.28 54 ⇓P P 05 23 56.3 0.0
baz=90,SNR=5.3
N24A **Carr** 90.30 46 ⇑P P 05 23 56.7 +0.4

	baz=90,SNR=10									
U28A	**Mallet**	**90.30**	**51**	⇑P		**P**		**05 23 56.1**	**-0.2**
	baz=90,SNR=6.2									
L23A	**Garrett**	**90.31**	**45**	⇓P		**P**		**05 23 56.5**	**+0.1**
	baz=90,SNR=12									
CMMT	**Chiang Mai**	**90.33**	**290**	P		**P**		**05 23 58.2**	**+1.4**
CHTO	**Chiang Mai**	**90.34**	**290**	*e*P		**P**		**05 23 58.3**	**+1.6**
CHTO					pmax	pmax				
	comp=Z,13nm,1.4s									
CHTO	**Chiang Mai**	**90.34**	**290**	*e*P		**P**		**05 23 58.3**	**+1.6**
	comp=Z,13nm,1.4s									
E19A	**Rath Farm, Rou**	**90.35**	**40**	⇑P		**P**		**05 23 56.7**	**+0.4**
	baz=91,SNR=14									
J22A	**Midwest**	**90.38**	**44**	⇓P		**P**		**05 23 56.4**	**-0.2**
	baz=91,SNR=20									
F20A	**Billings**	**90.43**	**41**	⇑P		**P**		**05 23 57.0**	**+0.3**
	baz=91									
Q26A	**Hugo**	**90.43**	**49**	⇓P		**P**		**05 23 56.7**	**-0.2**
	baz=91,SNR=7.6									
A17A	**Triple J Farms**	**90.43**	**37**	⇑P		**P**		**05 23 56.7**	**+0.1**
	baz=91,SNR=14									
232A	**Coleman**	**90.47**	**56**	⇓P		**P**		**05 23 57.4**	**+0.2**
	baz=91,SNR=26									
EGMT	**Eagleton**	**90.53**	**38**	*e*P		**P**		**05 23 57.5**	**+0.4**
	comp=Z,18nm,1.4s									
EGMT	**Eagleton**	**90.53**	**38**	⇓P		**P**		**05 23 57.1**	**0.0**
	baz=91									
X30A	**Coker Ranch, T**	**90.53**	**54**	⇑P		**P**		**05 23 57.2**	**-0.2**
	baz=91,SNR=5.7									
H21A	**Big Horn, Sher**	**90.57**	**42**	⇑P		**P**		**05 23 57.6**	**+0.2**
	baz=91,SNR=5.5									
I22A	**9 Mile Ranch,**	**90.59**	**43**	⇑P		**P**		**05 23 57.7**	**+0.2**
	baz=91,SNR=14									
M24A	**Cheyenne**	**90.61**	**46**	⇑P		**P**		**05 23 58.1**	**+0.3**
	baz=91,SNR=5.0									
V29A	**Stinnett**	**90.62**	**52**	⇑P		**P**		**05 23 57.9**	**+0.1**
	baz=91									
D19A	**Cripps Ranch,**	**90.63**	**39**	⇓P		**P**		**05 23 58.1**	**+0.5**
	baz=91,SNR=11									
Z31A	**Sharp Cattle R**	**90.64**	**55**	⇑P		**P**		**05 23 57.9**	**0.0**
	baz=91,SNR=26									
K23A	**Bowen Ranch, D**	**90.64**	**44**	⇓P		**P**		**05 23 57.7**	**-0.1**
	baz=91,SNR=6.5									
R27A	**Eads**	**90.67**	**49**	⇓P		**P**		**05 23 57.6**	**-0.4**
	baz=91,SNR=9.7									
CD2	**Chengdu**	**90.68**	**303**	P		**P**		**05 23 58.1**	**0.0**
CD2				pP		**pP**		**05 25 27.1**	**+1.4**
CD2				sP		**sP**		**05 26 05.8**	**+1.2**
CD2				PP		**PP**		**05 27 41.7**	**+1.9**
CD2				SKS		**SKSac**		**05 33 51.5**	**-1.8**
CD2				S		**S**		**05 34 18.5**	**-2.9**
CD2				sS		**sS**		**05 36 55.6**	**-1.6**
CD2				SS		**SS**		**05 40 34.5**	**+0.5**
CD2				pmax	pmax					
	comp=Z,10.0nm,0.5s									
CD2				pmax	pmax					
	comp=Z,80nm,5.6s									
T28A	**Walsh**	**90.69**	**51**	⇓P		**P**		**05 23 57.7**	**-0.4**
	baz=91,SNR=7.9									
B18A	**Beardsley Farm**	**90.69**	**38**	⇑P		**P**		**05 23 57.9**	**+0.1**
	baz=91,SNR=8.3									
G21A	**Lodge Grass**	**90.74**	**42**	⇑P		**P**		**05 23 58.3**	**+0.1**
	baz=91									
ABTX	**Abilene, Hawle**	**90.76**	**56**	⇑P		**P**		**05 23 58.8**	**+0.3**
	baz=91,SNR=24									
E20A	**Meyer Farm, Mu**	**90.77**	**40**	⇑P		**P**		**05 23 58.7**	**+0.5**
	baz=91,SNR=10									
C19A	**Slack Wire Ran**	**90.80**	**39**	⇑P		**P**		**05 23 58.8**	**+0.5**
	baz=91,SNR=19									
Y31A	**Rekieta Farm,**	**90.81**	**54**	⇓P		**P**		**05 23 58.6**	**0.0**
	baz=91,SNR=8.7									
P26A	**Davis Ranch, A**	**90.82**	**48**	⇓P		**P**		**05 23 58.8**	**+0.1**
	baz=91									
A18A	**Metzger Ranch,**	**90.91**	**38**	⇓P		**P**		**05 23 58.6**	**-0.1**
	baz=91,SNR=13									
J23A	**Dilts Ranch, B**	**90.98**	**44**	⇑P		**P**		**05 23 59.4**	**+0.1**
	baz=91									
H22A	**Clearmont**	**91.00**	**43**	⇓P		**P**		**05 23 59.5**	**+0.2**
	baz=91,SNR=6.4									
U29A	**Oasis Ranch, S**	**91.03**	**52**	⇑P		**P**		**05 23 59.7**	**0.0**
	baz=91									
S28A	**Manter**	**91.03**	**50**	⇓P		**P**		**05 23 59.6**	**-0.1**
	baz=91,SNR=7.1									
D20A	**Manuel Ranch,**	**91.04**	**40**	⇑P		**P**		**05 24 00.0**	**+0.6**
	baz=91,SNR=14									
F21A	**Absaloka Mine,**	**91.07**	**41**	⇑P		**P**		**05 24 00.4**	**+0.8**
	baz=91,SNR=5.3									
KSCO	**Kaye Shedlock'**	**91.09**	**49**	⇑P		**P**		**05 24 00.2**	**+0.2**
	baz=91,SNR=6.9									
M25A	**Palm-Egli Farm**	**91.12**	**46**	⇑P		**P**		**05 24 00.8**	**+0.7**
	baz=91									
O26A	**Horse Wrangler**	**91.13**	**47**	⇓P		**P**		**05 24 00.4**	**+0.3**
	baz=91									
Z32A	**Haskell**	**91.15**	**55**	⇓P		**P**		**05 24 00.7**	**+0.5**
	baz=91,SNR=35									
K24A	**Anderson Ranch**	**91.17**	**45**	⇑P		**P**		**05 24 00.5**	**+0.3**
	baz=91									
B19A	**Brinkman Farms**	**91.21**	**38**	⇑P		**P**		**05 24 00.5**	**+0.4**
	baz=91,SNR=17									
X31A	**McDonald Ranch**	**91.28**	**54**	⇑P		**P**		**05 24 00.6**	**-0.2**
	baz=92,SNR=6.4									
T29A	**Hugoton**	**91.30**	**51**	⇓P		**P**		**05 24 00.8**	**-0.1**
	baz=92									
G22A	**Birney**	**91.32**	**42**	⇑P		**P**		**05 24 01.1**	**+0.2**
	baz=92									
P27A	**Ficken Ranch,**	**91.35**	**48**	⇓P		**P**		**05 24 01.4**	**+0.2**
	baz=92									
R28A	**Tribune**	**91.40**	**50**	⇓P		**P**		**05 24 01.5**	**+0.1**
	baz=92,SNR=21									
C20A	**Veseth Ranch,**	**91.41**	**39**	⇓P		**P**		**05 24 01.7**	**+0.6**
	baz=92,SNR=26									
E21A	**Keefer Ranch,**	**91.43**	**41**	⇓P		**P**		**05 24 02.3**	**+1.0**
	baz=92,SNR=10									
N26A	**Koester Ranch,**	**91.44**	**47**	⇑P		**P**		**05 24 01.4**	**-0.1**
	baz=92									
Y32A	**R-V Farms, Ver**	**91.45**	**54**	⇑P		**P**		**05 24 01.9**	**+0.3**
	baz=92,SNR=21									
W31A	**Holland Ranch,**	**91.53**	**53**	⇑P		**P**		**05 24 01.9**	**0.0**
	baz=92,SNR=13									
A19A	**Klindworth Far**	**91.55**	**38**	⇑P		**P**		**05 24 01.8**	**+0.1**
	baz=92,SNR=11									
F22A	**Rosebud**	**91.59**	**42**	⇓P		**P**		**05 24 02.5**	**+0.5**
	baz=92									
S29A	**Ulysses**	**91.61**	**51**	⇑P		**P**		**05 24 02.4**	**+0.1**
	baz=92									
O27A	**Beecher Island**	**91.69**	**48**	⇑P		**P**		**05 24 03.0**	**+0.3**
	baz=92									
D21A	**La Casta Ranch**	**91.72**	**40**	⇑P		**P**		**05 24 03.1**	**+0.5**
	baz=92									
B20A	**Solberg Farm,**	**91.74**	**39**	⇑P		**P**		**05 24 02.9**	**+0.3**
	baz=92,SNR=9.7									
K25A	**Mack Ranch, Ha**	**91.75**	**45**	⇓P		**P**		**05 24 03.5**	**+0.6**
	baz=92									
I24A	**Kuemmerle Ranc**	**91.78**	**44**	⇓P		**P**		**05 24 03.0**	**0.0**
	baz=92									
G23A	**Biddle**	**91.88**	**42**	⇑P		**P**		**05 24 03.4**	**0.0**
	baz=92,SNR=9.5									
N27A	**Anderson Farm,**	**91.90**	**47**	⇑P		**P**		**05 24 03.4**	**-0.2**
	baz=92									
R29A	**Marienthal**	**91.92**	**50**	⇑P		**P**		**05 24 03.8**	**0.0**
	baz=92,SNR=10									
A20A	**Cobblestone Ra**	**92.00**	**38**	⇑P		**P**		**05 24 03.9**	**+0.1**
	baz=92,SNR=14									
L26A	**Underwood Farm**	**92.04**	**46**	⇑P		**P**		**05 24 04.7**	**+0.4**
	baz=92									
U31A	**Nine Bar Ranch**	**92.05**	**52**	⇑P		**P**		**05 24 04.7**	**+0.3**
	baz=92									
E22A	**Miles City**	**92.08**	**41**	⇓P		**P**		**05 24 04.7**	**+0.5**
	baz=92									
S30A	**Montezuma**	**92.10**	**51**	⇓P		**P**		**05 24 04.7**	**+0.2**
	baz=92									
F23A	**Volborg**	**92.10**	**42**	⇑P		**P**		**05 24 04.5**	**+0.1**
	baz=92,SNR=13									
H24A	**Dirks Ranch, A**	**92.22**	**43**	⇓P		**P**		**05 24 04.7**	**-0.3**
	baz=92,SNR=19									
WHTX	**Lake Whitney**	**92.23**	**57**	⇑P		**P**		**05 24 05.4**	**+0.2**
	baz=92									
K26A	**Motz Farm, Whi**	**92.25**	**45**	⇑P		**P**		**05 24 05.6**	**+0.4**
	baz=92,SNR=11									
D22A	**Cohagen**	**92.25**	**40**	⇑P		**P**		**05 24 05.6**	**+0.6**
	baz=92,SNR=7.8									
RSSD	**Black Hills**	**92.28**	**44**	*e*P		**P**		**05 24 05.4**	**-0.1**
RSSD					pmax	pmax				
	comp=Z,19nm,1.0s									
RSSD	**Black Hills**	**92.28**	**44**	*e*P		**P**		**05 24 05.4**	**-0.1**
	comp=Z,19nm,1.0s									
B21A	**Ellsworth Farm**	**92.33**	**39**	⇓P		**P**		**05 24 05.7**	**+0.4**
	baz=92,SNR=12									
T31A	**Randall Ranch,**	**92.46**	**51**	⇓P		**P**		**05 24 06.5**	**+0.3**
	baz=93									
R30A	**Dighton**	**92.49**	**50**	⇓P		**P**		**05 24 06.7**	**+0.4**
	baz=93									
E23A	**Ismay**	**92.50**	**41**	⇓P		**P**		**05 24 06.7**	**+0.5**
	baz=93									
LZH	**Lanzhou**	**92.58**	**307**	⇑P		**P**		**05 24 08.1**	**+1.1**
LZH				pP		**pP**		**05 25 37.3**	**+2.7**
LZH				sP		**sP**		**05 26 16.0**	**+2.5**
LZH				PP		**PP**		**05 27 58.5**	**+3.8**
LZH				pmax	pmax					
	comp=Z,18nm,1.4s									
LZH				pmax	pmax					
	comp=Z,72nm,8.3s									
C22A	**Vida**	**92.70**	**40**	⇑P		**P**		**05 24 07.1**	**+0.1**
	baz=93,SNR=7.4									
F24A	**Ekalaka**	**92.76**	**42**	⇑P		**P**		**05 24 07.5**	**+0.1**
	baz=93,SNR=6.4									
HKT	**Hockley**	**92.79**	**59**	*e*P		**P**		**05 24 08.8**	**+1.1**
HKT				pmax	pmax					
	comp=Z,39nm,1.9s									
HKT	**Hockley**	**92.79**	**59**	*e*P		**P**		**05 24 08.8**	**+1.1**
	comp=Z,39nm,1.9s									
S31A	**Mullinville**	**92.81**	**51**	⇑P		**P**		**05 24 08.1**	**+0.3**
	baz=93									
D23A	**Lindsay**	**92.86**	**41**	⇑P		**P**		**05 24 08.8**	**+1.0**
	baz=93,SNR=5.9									
B22A	**Reddig Ranch S**	**92.88**	**39**	⇓P		**P**		**05 24 08.3**	**+0.4**
	baz=93,SNR=11									
K27A	**Fluecksinger Fa**	**92.88**	**46**	⇑P		**P**		**05 24 08.5**	**+0.4**
	baz=93									
C23A	**Lambert**	**93.15**	**40**	⇑P		**P**		**05 24 09.8**	**+0.7**
	baz=93,SNR=12									
A22A	**Carney Farms,**	**93.24**	**39**	⇓P		**P**		**05 24 09.4**	**-0.1**
	baz=93,SNR=6.5									
INK	**Inuvik**	**93.37**	**15**	P		**P**		**05 24 07.6**	**-1.9**
INK	**Inuvik**	**93.37**	**15**	P		**P**		**05 24 07.6**	**-1.9**
	comp=Z,2.6nm,0.5s,baz=251,slow=3.7,SNR=8.3									
D24A	**Glendive**	**93.38**	**41**	⇓P		**P**		**05 24 10.6**	**+0.4**
	baz=94									
C24A	**Savage**	**93.49**	**41**	⇓P		**P**		**05 24 11.3**	**+0.6**
	baz=94,SNR=7.8									
B23A	**Brockton**	**93.55**	**40**	⇑P		**P**		**05 24 11.5**	**+0.6**
	baz=94,SNR=9.1									
DGMT	**Dagmar**	**94.03**	**40**	*e*P		**P**		**05 24 13.9**	**+0.8**
	comp=Z,33nm,0.8s									
DGMT	**Dagmar**	**94.03**	**40**	⇓P		**P**		**05 24 13.5**	**+0.4**
	baz=94,SNR=14									
TUL1	**Tulsa**	**94.94**	**54**	⇑P		**P**		**05 24 17.8**	**+0.2**
	baz=95									
BGNE	**Belgrade**	**95.19**	**48**	⇑P		**P**		**05 24 18.8**	**+0.3**
	baz=95,SNR=6.1									
CFAA	**Coronel Fontan**	**95.27**	**126**	P		**P**		**05 24 19.2**	**0.0**
CFAA	**Coronel Fontan**	**95.27**	**126**	P		**P**		**05 24 19.2**	**0.0**
	comp=Z,0.3nm,0.8s,baz=257,slow=3.5,SNR=6.3									
SONM	**Songino Array**	**95.39**	**319**	P		**P**		**05 24 20.1**	**+0.6**
SONM	**Songino Array**	**95.39**	**319**	P		**P**		**05 24 20.1**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=132,slow=4.9,SNR=5.2									
YKA	**Yellowknife Ar**	**95.59**	**25**	P		**P**		**05 24 18.8**	**-1.0**
YKA				PKiKP		**PKiKP**		**05 28 55.7**	**-1.6**
YKA				PKKPbc		**PKKPdf**		**05 41 07.9**	**-3.9**
YKA	**Yellowknife Ar**	**95.59**	**25**	P		**P**		**05 24 18.8**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=242,slow=4.5,SNR=36									
YKA				PKiKP		**PKiKP**		**05 28 55.7**	**-1.6**
	comp=Z,0.1nm,0.4s,baz=218,slow=1.8,SNR=4.5									
YKA				PKKPbc		**PKKPdf**		**05 41 07.9**	**-3.9**
	comp=Z,0.3nm,0.6s,baz=46,slow=2.1,SNR=9.7									
JTS	**JuntasAbangare**	**95.84**	**81**	*e*P		**P**		**05 24 24.6**	**+2.5**
	comp=Z,pn,1.1s									
MDND	**Maddock**	**96.61**	**42**	⇓P		**P**		**05 24 24.1**	**-0.7**
	baz=97									
GTA	**Gaotai**	**96.76**	**309**	*e*P		**P**		**05 24 27.1**	**+1.3**
GTA				pP		**pP**		**05 25 56.4**	**+2.7**
GTA				sP		**sP**		**05 26 34.8**	**+2.3**
GTA				pmax	pmax					
	comp=Z,2.0nm,1.1s									
ECSD	**EROS Data Cent**	**97.08**	**46**	*e*P		**P**		**05 24 26.8**	**-0.2**
	comp=Z,10nm,1.3s									
SPMN	**St. Paul**	**100.14**	**46**	⇓Pdiff		**Pdif**		**05 24 40.2**	**-0.4**
	baz=100									
ZALV	**Zalesovo Beam**	**110.10**	**321**	PKiKP		**PKiKP**		**05 29 22.5**	**-1.6**
ZALV				SKP				05 32 25.2		
ZALV	**Zalesovo Beam**	**110.10**	**321**	PKiKP		**PKiKP**		**05 29 22.5**	**-1.6**
	comp=Z,3.2nm,0.6s,baz=104,slow=1.1,SNR=13									
ZALV				SKP				05 32 25.2		
	comp=Z,0.9nm,0.6s,baz=207,slow=1.4,SNR=3.5									
MK31	**Makanchi Array**	**110.92**	**314**	*e*PKiKP		**PKiKP**		**05 29 24.8**	**-1.1**
MK31	**Makanchi Array**	**110.92**	**314**	*e*PKPdf		**PKiKP**		**05 29 24.8**	**-1.1**
MKAR	**Makanchi Array**	**110.92**	**314**	P		**Pdif**		**05 25 31.6**	**+3.1**
MKAR				*i*				05 29 24.6		
MKAR	**Makanchi Array**	**110.92**	**314**	Pdif		**Pdif**		**05 25 31.6**	**+3.1**
MKAR				PKiKP		**PKiKP**		**05 29 24.6**	**-1.3**
MKAR				SKP				05 32 27.0		
MKAR				PKKPbc		**PKKPbc**		**05 40 24.4**	**-1.3**
MKAR	**Makanchi Array**	**110.92**	**314**	Pdiff		**Pdif**		**05 25 31.6**	**+3.1**
	comp=Z,0.1nm,0.3s,baz=96,slow=5.8,SNR=2.4									
MKAR				PKiKP		**PKiKP**		**05 29 24.6**	**-1.3**
	comp=Z,2.6nm,0.5s,baz=144,slow=0.6,SNR=47									
MKAR				SKP				05 32 27.0		
	comp=Z,0.8nm,0.7s,baz=48,slow=1.8,SNR=6.4									
MKAR				PKKPbc		**PKKPbc**		**05 40 24.4**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=270,slow=3.7,SNR=7.7									
KURK	**Kurchatov**	**113.65**	**318**	*c* iPKIKP		**PKiKP**		**05 29 29.6**	**-1.4**
KURK				pmax	pmax					
	comp=Z,9.0nm,1.0s									
KURK	**Kurchatov**	**113.65**	**318**	*e*PKPdf		**PKiKP**		**05 29 29.5**	**-1.4**
KURK				SKP				05 32 32.6		
KURK				PKKPbc		**PKKPbc**		**05 40 16.0**	**-0.8**
KURBB	**Kurchatov Arra**	**113.71**	**318**	PKiKP		**PKiKP**		**05 29 29.9**	**-1.2**
	comp=Z,3.7nm,0.7s,baz=99,slow=1.8,SNR=45									
KURBB				SKP				05 32 32.6		
	comp=Z,1.2nm,0.7s,baz=95,slow=1.8,SNR=11									
KURBB				PKKPbc		**PKKPbc**		**05 40 16.0**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=279,slow=4.1,SNR=4.8									
KSH	**Kashi**	**114.74**	**305**	*e*PKP		PKPdf		05 29 34.1	+0.5
KSH				*e*PKS		**PKSdf**		**05 33 09.5**	**-0.8**
KSH				*e*SKS		**SKSdf**		**05 36 11.1**	**+1.7**
KSH				LR	LR					
	comp=N,130nm,3.6s									
KSH				LR	LR					
	comp=E,120nm,4.8s									
KSH				LR	LR					
	comp=Z,94nm,4.2s									
TKM2	**Tokmak 2**	**115.30**	**309**	*e*PKiKP		**PKPdf**		**05 29 33.8**	**-0.8**
TKM2	**Tokmak 2**	**115.30**	**309**	*e*PKPdf		**PKPdf**		**05 29 33.8**	**-0.8**
AAK	**Ala-Archa**	**116.10**	**309**	PKiKP		**PKPdf**		**05 29 35.3**	**-0.8**
AAK	**Ala-Archa**	**116.10**	**309**	PKP		**PKPdf**		**05 29 35.3**	**-0.8**
AAK				*e*PKPdf		**PKiKP**		**05 29 35.5**	**-0.7**
AAK	**Ala-Archa**	**116.10**	**309**	PKP		**PKPdf**		**05 29 35.3**	**-0.8**
	comp=Z,2.7nm,0.9s,baz=150,slow=8.9,SNR=6.9									
EKS2	**Erkin-Say**	**116.63**	**309**	*e*PKiKP		**PKPdf**		**05 29 36.8**	**-0.3**
EKS2	**Erkin-Say**	**116.63**	**309**	*e*PKPdf		**PKPdf**		**05 29 36.8**	**-0.3**
VOSK	**Vostochnaya**	**118.37**	**320**	PKiKP		**PKPdf**		**05 29 37.7**	**-2.3**
VOSK				pmax	pmax					
	comp=Z,10.0nm,0.8s									
BVAR	**Borovoye Array**	**118.70**	**320**	PKiKP		**PKPdf**		**05 29 39.6**	**-1.0**
BVAR	**Borovoye Array**	**118.70**	**320**	PKP		**PKPdf**		**05 29 39.6**	**-1.0**
BVAR				SKP				05 32 42.5		
BVAR	**Borovoye Array**	**118.70**	**320**	PKP		**PKPdf**		**05 29 39.6**	**-1.0**
	comp=Z,8.0nm,0.5s,baz=131,slow=1.4,SNR=42									
BVAR				SKP				05 32 42.5		
	comp=Z,1.3nm,0.6s,baz=100,slow=5.4,SNR=5.5									
BRVK	**Borovoye**	**118.76**	**320**	*i* PKIKP		**PKPdf**		**05 29 40.0**	**-0.7**
BRVK				pmax	pmax					
	comp=Z,10.0nm,1.0s									
BRVK	**Borovoye**	**118.76**	**320**	*e*PKPdf		**PKPdf**		**05 29 39.5**	**-1.2**
KK31	**Karatay Array**	**119.04**	**309**	*i* PKIKP		**PKPdf**		**05 29 40.3**	**-1.3**
KK31				pmax	pmax					
	comp=Z,6.0nm,0.8s									
KKAR	**Karatay Array**	**119.04**	**309**	*e*PKiKP		**PKPdf**		**05 29 40.9**	**-0.7**
KKAR	**Karatay Array**	**119.04**	**309**	*e*PKPdf		**PKPdf**		**05 29 40.9**	**-0.7**
BDFB	**Brasilia**	**119.25**	**122**	PKP		**PKPdf**		**05 29 41.2**	**-1.7**
BDFB	**Brasilia**	**119.25**	**122**	PKP		**PKPdf**		**05 29 41.2**	**-1.7**
	comp=Z,1.4nm,0.6s,baz=247,slow=3.2,SNR=3.9									
ZRNK	**Zerenda**	**119.54**	**320**	PKiKP		**PKPdf**		**05 29 40.8**	**-1.4**
ZRNK				pmax	pmax					
	comp=Z,8.0nm,0.6s									
KBL	**Kabul**	**119.84**	**299**	*e*PKiKP		**PKPdf**		**05 29 43.8**	**+0.1**
KBL	**Kabul**	**119.84**	**299**	*e*PKPdf		**PKPdf**		**05 29 43.8**	**+0.1**
SUMG	**Summit**	**122.26**	**13**	*e*PKiKP		**PKPdf**		**05 29 47.2**	**-0.2**
SUMG	**Summit**	**122.26**	**13**	*e*PKPdf		**PKPdf**		**05 29 47.2**	**-0.2**
SVE	**Sverdlovsk**	**123.53**	**326**	*e*PKiKP		**PKPdf**		**05 29 49.2**	**-0.5**
SVE				pmax	pmax					
	comp=Z,15nm,0.6s									
ARU	**Arti**	**124.75**	**326**	*i* PKIKP		**PKPdf**		**05 29 51.6**	**-0.5**
ARU								05 31 41.9		
ARU								05 36 17.7		
AB31	**Akbulak array**	**125.76**	**317**	*i* PKIKP		**PKPdf**		**05 29 53.4**	**-0.8**
AB31				pmax	pmax					
	comp=Z,4.0nm,0.7s									
ABKAR	**Akbulak array**	**125.76**	**317**	*e*PKPdf		**PKPdf**		**05 29 53.6**	**-0.6**
BOSA	**Boshof**	**127.17**	**205**	PKP		**PKPdf**		**05 29 57.8**	**-0.1**
BOSA	**Boshof**	**127.17**	**205**	PKP		**PKPdf**		**05 29 57.8**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=170,slow=2.2,SNR=10									
KEV	**Kevo**	**127.73**	**349**	*e*PKIKP		**PKPdf**		**05 29 56.2**	**-1.2**
KEV				pmax	pmax					
	comp=Z,4.0nm,0.5s									
KEV	**Kevo**	**127.73**	**349**	*e*pkp		**PKPdf**		**05 29 56.2**	**-1.2**
	comp=Z,4.0nm,0.5s									
ARCES	**ARCESS Array B**	**128.18**	**350**	PKP		**PKPdf**		**05 29 57.7**	**-0.6**
ARCES	**ARCESS Array B**	**128.18**	**350**	PKP		**PKPdf**		**05 29 57.7**	**-0.6**
	comp=Z,8.0nm,0.5s,baz=59,slow=1.0,SNR=60									
JOF	**Joensuu**	**132.46**	**343**	*e*PKIKP		**PKPdf**		**05 30 05.5**	**-1.1**
JOF				pmax	pmax					
	comp=Z,11nm,0.6s									
JOF	**Joensuu**	**132.46**	**343**	*e*pkp		**PKPdf**		**05 30 05.5**	**-1.1**
	comp=Z,11nm,0.6s									
KAF	**Kangasniemi**	**134.46**	**345**	*e*PKIKP		**PKPdf**		**05 30 06.0**	**-4.3**
KAF				pmax	pmax					
	comp=Z,5.0nm,0.5s									
KAF	**Kangasniemi**	**134.46**	**345**	*e*pkp		**PKPdf**		**05 30 06.0**	**-4.3**
	comp=Z,5.0nm,0.5s									
FINES	**FINESS Array B**	**135.09**	**344**	PKPpre		PKPpre		05 29 56.6		
FINES				PKP		**PKPdf**		**05 30 10.9**	**-0.6**
FINES				SKPbc		**SKPab**		**05 33 09.1**	**-1.7**
FINES	**FINESS Array B**	**135.09**	**344**	PKhKP		PKPpre		05 29 56.6		
	comp=Z,0.7nm,0.6s,baz=43,slow=3.7,SNR=3.2									
FINES				PKP		**PKPdf**		**05 30 10.9**	**-0.6**
	comp=Z,4.8nm,0.7s,baz=77,slow=4.1,SNR=5.1									
FINES				SKPbc		**SKPab**		**05 33 09.1**	**-1.7**
	comp=Z,6.2nm,0.9s,baz=29,slow=4.8,SNR=7.7									
VRHR	**Novokhopersk**	**136.07**	**325**	*e*PKIKP		**PKPdf**		**05 30 13.0**	**-0.7**
VRHR				pmax	pmax					
	comp=N,6.0nm,0.6s									
VRHR				pmax	pmax					
	comp=E,7.0nm,0.6s									
VRHR				pmax	pmax					
	comp=Z,9.0nm,0.6s									
OBN	**Obninsk**	**136.22**	**332**	*i* PKIKP		**PKPdf**		**05 30 14.1**	**+0.3**
OBN				pmax	pmax					
	comp=Z,36nm,1.6s									
LSZ	**Lusaka**	**137.01**	**218**	*e*PKPdf		**PKPdf**		**05 30 18.5**	**+1.8**
VSR	**Storozhevoye**	**137.31**	**326**	*e*PKIKP		**PKPdf**		**05 30 16.1**	**+0.1**
VSR				pmax	pmax					
	comp=Z,10.0nm,0.9s									
VSR				pmax

comp=Z,1.9nm,0.8s,baz=79,slow=2.6,SNR=4.6
BRTR PP **PP** 05 34 03.8 **+1.8**
comp=Z,2.0nm,1.0s,baz=108,slow=4.7,SNR=4.5
TESR Tescani 146.67 329 ⇓ *i*P **PKPbc** 05 30 35.2 **+0.2**
NRDL Niedersach Rie 146.70 351 *e*PKPbc **PKPbc** 05 30 34.4 **-0.4**
KOLS Kolonicke sedl 146.72 336 *e*PKP2 **PKPbc** 05 30 34.2 **-0.9**
KOLS Kolonicke sedl 146.72 336 *e*PKP **PKPbc** 05 30 34.2 **-0.9**
ASF Jabal al Asfar 146.74 299 PKPbc **PKPbc** 05 30 36.5 **+0.7**
ASF Jabal al Asfar 146.74 299 PKPbc **PKPbc** 05 30 36.5 **+0.7**
comp=Z,27nm,0.7s,baz=333,slow=2.0,SNR=54
GULE Gulek 146.80 309 *i* P **PKPbc** 05 30 36.2 **+0.3**
CFR Carcaliu 146.83 326 ⇑ *i*P **PKPbc** 05 30 35.5 **0.0**
UZH Uzhgorod 146.96 336 ⇓ *i*PKP2 **PKPbc** 05 30 35.6 **-0.1**
KSP Ksiaz 147.01 344 *e*PKHKP PKPpre 05 30 28.7
KSP *e* 05 30 35.9
KSP Ksiaz 147.01 344 *e*PKPdf **PKPdf** 05 30 28.9 **-4.3**
KSP *e*PKPbab **PKPbc** 05 30 36.0 **+0.2**
NIE Niedzica 147.04 338 *e*PKP2 **PKPbc** 05 30 36.9 **+0.9**
NIE Niedzica 147.04 338 *e*PKP **PKPbc** 05 30 36.9 **+0.9**
CRVS Cervenica-Dubn 147.06 337 *e*PKP2 **PKPbc** 05 30 35.1 **-0.9**
CRVS Cervenica-Dubn 147.06 337 *e*PKP **PKPbc** 05 30 35.1 **-0.9**
ANTO Ankara 147.07 314 *e*PKIKP **PKPdf** 05 30 33.4 **-0.3**
ANTO *e* 05 30 38.1
ANTO Ankara 147.07 314 *e*PKPdf **PKPdf** 05 30 33.4 **-0.3**
ANTO *e*PKPbc **PKPbc** 05 30 36.9 **+0.4**
ANTO *e*PKPbab **PKPbab** 05 30 38.1 **-0.3**
VRI Vrincioaia 147.08 328 ⇑ *i*P **PKPbc** 05 30 36.2 **0.0**
TIRR Tirgusor 147.16 325 *e*PKIKP **PKPdf** 05 30 33.4 **-0.1**
TIRR *e* 05 30 39.0
TIRR Tirgusor 147.16 325 *e*PKPdf **PKPdf** 05 30 33.4 **-0.1**
TIRR *e*PKPbc **PKPbc** 05 30 35.8 **-0.6**
TIRR *e*PKPbab **PKPab** 05 30 39.0 **-0.1**
TIRR Tirgusor 147.16 325 ⇑ *i*P **PKPbc** 05 30 36.4 **0.0**
BRBR Barbar 147.19 302 *e*P **PKPbc** 05 30 37.0 **-0.2**
TRPA Tarpa 147.27 335 ⇑ *i*P **PKPbc** 05 30 36.6 **+0.1**
TRPA Tarpa 147.27 335 ⇑ *e*PP **PKPbc** 05 30 36.6 **+0.1**
CLL Collm 147.34 348 ⇓ *i*PKP2 **PKPbc** 05 30 36.3 **-0.4**
CLL pmax pmax
comp=Z,38nm,0.7s
CLL pmax pmax
comp=Z,15nm,0.9s
CLL Collm 147.34 348 *e*PKPbc **PKPbc** 05 30 36.2 **-0.4**
CLL *e*pPKPbc **pPKPbc** 05 32 06.5 **-1.6**
CLL Collm 147.34 348 ⇓ *i*PKPbc **PKPbc** 05 30 36.3 **-0.4**
comp=Z,38nm,0.7s
CLL *i* PKPab **PKPab** 05 30 39.5 **-0.1**
comp=Z,15nm,0.9s
CLL *i* pPKPbc **pPKPbc** 05 32 06.4 **-1.6**
comp=Z,11nm,1.1s
CLL *e*pPKiKP **pPKiKP** 05 32 10.0 **-0.8**
UPC Upice 147.39 344 *e*PKP2 **PKPbc** 05 30 36.8 **0.0**
UPC Upice 147.39 344 ⇑ *e*PKP **PKPbc** 05 30 36.8 **0.0**
UPC *e*PKPAB **PKPab** 05 30 40.5 **+0.6**
DPC Dobruska-Polom 147.45 343 *e*PKIKP **PKPdf** 05 30 35.1 **+1.1**
DPC *e* 05 30 39.9
DPC Dobruska-Polom 147.45 343 *e*PKPdf **PKPdf** 05 30 35.1 **+1.1**
DPC *e*PKPbc **PKPbc** 05 30 37.4 **+0.3**
DPC *e*PKPbab **PKPab** 05 30 39.9 **-0.2**
DPC Dobruska-Polom 147.45 343 ⇑ *e*PKP **PKPbc** 05 30 37.3 **+0.3**
DPC *e*PKPAB **PKPab** 05 30 40.9 **+0.7**
MANR Mangalia 147.47 324 ⇓ *i*P **PKPbc** 05 30 38.2 **+1.0**
BRG Berggiesshubel 147.56 346 *e*PKP **PKPdf** 05 30 35.7 **+1.6**
comp=Z,15nm,1.7s
BRG *i* 05 30 38.0
comp=Z,24nm,0.8s
BRG *e*pPKP **pPKPdf** 05 32 05.6 **-1.1**
comp=Z,13nm,1.3s
BRG *e* 05 33 42.9
comp=Z,8.4nm,1.3s
BRG *e* 05 46 27.2
comp=Z,16nm,1.7s
BRG Berggiesshubel 147.56 346 *e*PKPbc **PKPbc** 05 30 36.9 **-0.3**
KRLC Kraliky 147.57 343 *e*PKP2 **PKPbc** 05 30 37.5 **+0.1**
KRLC Kraliky 147.57 343 ⇑ *e*PKP **PKPbc** 05 30 37.5 **+0.1**
KRLC *e*PKPAB **PKPab** 05 30 41.2 **+0.5**
MORC Moravsky Berou 147.62 342 *e*PKP2 **PKPbc** 05 30 37.3 **-0.2**
MORC Moravsky Berou 147.62 342 *e*PKPbc **PKPbc** 05 30 37.3 **-0.2**
MORC Moravsky Berou 147.62 342 ⇑ *i*P **PKPbc** 05 30 37.8 **+0.3**
DOPR Dopca 147.67 329 ⇑ *i*P **PKPbc** 05 30 37.4 **+1.0**
ISR Istrita 147.70 327 ⇑ *i*P **PKPbc** 05 30 38.3 **+0.4**
PVCC Panska Ves 147.73 345 *e*PKP2 **PKPbc** 05 30 38.0 **+0.3**
PVCC Panska Ves 147.73 345 ⇑ *e*PKP **PKPbc** 05 30 38.0 **+0.3**
MLR Muntele Rosu 147.74 328 ⇑ *i*P **PKPbc** 05 30 37.7 **-0.4**
PSN Preselentsi 147.78 324 *i* P **PKPbc** 05 30 37.2 **-0.9**
HENT Hendek 147.84 317 *i* P **PKPbc** 05 30 37.7 **-0.6**
SECR 148.00 328 ⇑ *i*P **PKPbc** 05 30 38.7 **+0.1**
KDHN Kadinhani 148.18 313 *i* P **PKPbc** 05 30 38.6 **-0.8**
PHNC Paralimni 148.20 305 P **PKPbc** 05 30 40.0 **+0.6**
PRU Pruhonice 148.24 345 *e*PKP2 **PKPbc** 05 30 39.0 **0.0**
PRU Pruhonice 148.24 345 ⇑ *e*PKP **PKPbc** 05 30 39.0 **0.0**
PRU *e*PKPAB **PKPab** 05 30 44.0 **+0.7**
MOX Moxa 148.24 349 *e*PKP2 **PKPbc** 05 30 38.7 **-0.3**
MOX Moxa 148.24 349 *e*PKPbc **PKPbc** 05 30 38.7 **-0.3**
DRGR 148.26 333 ⇓ *i*P **PKPbc** 05 30 39.4 **+0.1**
TANN Tannenbergstha 148.30 348 *e*PKPbc **PKPbc** 05 30 39.0 **-0.3**
VRAC Vranov 148.32 342 ⇑ *i*P **PKPbc** 05 30 39.5 **+0.2**
VYHS Vyhne 148.34 339 *e*PKP2 **PKPbc** 05 30 39.6 **+0.2**
VYHS Vyhne 148.34 339 *e*PKP **PKPbc** 05 30 39.6 **+0.2**
UBBA Unterbreizbach 148.34 351 *e*PKPbc **PKPbc** 05 30 39.1 **0.0**
ERMK Ermenek 148.43 309 *i* P **PKPbc** 05 30 40.0 **-0.3**
PSZ Piszkesteto 148.46 337 *e*PKPdf **PKPdf** 05 30 35.2 **-0.5**
PSZ *e*PKPbc **PKPbc** 05 30 39.6 **-0.2**
PSZ *e*PKPbab **PKPab** 05 30 44.3 **-0.1**
PSZ Piszkesteto 148.46 337 ⇑ *i*P **PKPbc** 05 30 39.7 **-0.1**
PSZ Piszkesteto 148.46 337 ⇑ *e*PP **PKPbc** 05 30 39.7 **-0.1**
ARR Arges 148.47 329 ⇑ *i*P **PKPbc** 05 30 40.8 **+0.9**
PRD Provadia 148.53 324 *i* P **PKPbc** 05 30 39.4 **-0.6**
BORA Eskisehir 148.62 316 *i* P **PKPbc** 05 30 40.2 **-0.3**
TREC Trest 148.64 343 *e*PKP2 **PKPbc** 05 30 39.9 **-0.2**
TREC Trest 148.64 343 ⇑ *e*PKP **PKPbc** 05 30 39.9 **-0.2**
CSS Prodhromos 148.75 306 P **PKPbc** 05 30 40.7 **-0.2**
comp=Z,0.8nm,0.6s
CSS Prodhromos 148.75 306 *e*PKPbc **PKPbc** 05 30 40.6 **-0.2**
SMOL Smolenice 148.78 341 *e*PKP2 **PKPbc** 05 30 41.3 **+0.9**
SMOL Smolenice 148.78 341 *e*PKP **PKPbc** 05 30 41.3 **+0.9**
BOLV Bolvadin 148.88 314 *i* P **PKPab** 05 30 48.4 **+1.9**
HUMR Humele 148.90 328 ⇓ *i*P **PKPbc** 05 30 41.0 **+0.1**
BUY Buyukada 148.94 319 *i* P **PKPbc** 05 30 40.3 **-0.8**
ROTZ Rotzenmuhle 148.97 348 *e*PKPbc **PKPbc** 05 30 40.9 **0.0**
MEM Membach 149.00 356 PKPbc **PKPbc** 05 30 40.8 **-0.1**
GAZI Gazipasa 149.03 308 *i* P **PKPbc** 05 30 40.1 **-1.4**
TNS Taunus Mts 149.14 352 *e*PKP2 **PKPbc** 05 30 41.1 **-0.3**
TNS Taunus Mts 149.14 352 *e*PKPbc **PKPbc** 05 30 41.1 **-0.3**
ZST Bratislava 149.16 341 *e*PKP **PKPbc** 05 30 41.0 **-0.4**
ELBA Catalca 149.20 320 *i* P **PKPbc** 05 30 41.2 **-0.5**
GRF Grafenberg Arr 149.23 349 *e*PKP2 **PKPbc** 05 30 41.4 **-0.1**
GRF Grafenberg Arr 149.23 349 *e*PKPbc **PKPbc** 05 30 41.4 **-0.1**
BCLA Clavier 149.23 356 PKPbc **PKPbc** 05 30 43.1 **+1.7**
ALFC Alevga 149.24 306 P **PKPbc** 05 30 41.4 **-0.7**
comp=Z,2.0nm,0.6s
KHC Kasperske Hory 149.27 346 *e*PKPdf **PKPdf** 05 30 36.9 **0.0**
KHC *e*PKPbc **PKPbc** 05 30 42.0 **+0.3**
KHC *e*PKPbab **PKPab** 05 30 48.5 **+0.9**
KHC Kasperske Hory 149.27 346 *e*PKPDF **PKPdf** 05 30 36.7 **-0.2**
KHC ⇑ *e*PKP **PKPbc** 05 30 41.6 **-0.1**
SZH Strazhica 149.29 325 *i* P **PKPbc** 05 30 40.8 **-1.1**
WET Wettzell 149.42 346 *e*PKP2 **PKPbc** 05 30 42.0 **0.0**
WET Wettzell 149.42 346 *e*PKPbc **PKPbc** 05 30 42.0 **0.0**
JMB Yambol 149.46 323 *i* P **PKPbc** 05 30 41.8 **-0.5**
AKMC Akamas 149.50 306 P **PKPbc** 05 30 41.6 **-1.1**
GEC2 GERESS Array S 149.51 345 *e*PKPbc **PKPbc** 05 30 41.9 **-0.5**
GEC2 GERESS Array S 149.51 345 *e*PKPdf **PKPbc** 05 30 42.2 **-0.1**
GERES GERESS Array B 149.51 345 PKPbc **PKPbc** 05 30 42.0 **-0.3**
GERES GERESS Array B 149.51 345 PKPbc **PKPbc** 05 30 42.0 **-0.3**
comp=Z,10nm,0.6s,baz=28,slow=2.5,SNR=54
PPCY Paphos 149.54 306 P **PKPbc** 05 30 42.0 **-0.7**
DOU Dourbes 149.59 357 PKPbc **PKPbc** 05 30 42.2 **-0.2**
ISP Isparta 149.61 312 *e*PKPbc **PKPbc** 05 30 42.1 **-0.8**
ISP Isparta 149.61 312 ⇑ *i*P **PKPbc** 05 30 42.2 **-0.8**
PVL Pavlikeni 149.64 326 *i* P **PKPbc** 05 30 42.0 **-0.7**
BZS Buzias 149.65 333 ⇓ *i*P **PKPbc** 05 30 42.5 **-0.2**
GDZ Gediz 149.68 315 *i* P **PKPbc** 05 30 42.4 **-0.8**
CONA Conrad Observa 149.77 342 *i* PKiKP **PKPbc** 05 30 43.1 **+0.1**
comp=Z,41nm,1.0s,SNR=15
SOP Sopron 149.78 341 ⇑ *e*PP **PKPbc** 05 30 43.1 **+0.2**
WLF Walferdange 149.92 355 PKPbc **PKPbc** 05 30 43.9 **+0.7**
WLF Walferdange 149.92 355 *e*PKP2 **PKPbc** 05 30 43.7 **+0.5**
WLF Walferdange 149.92 355 *e*PKPbc **PKPbc** 05 30 43.5 **+0.3**
WLF Walferdange 149.92 355 *e*PKPbc **PKPbc** 05 30 43.7 **+0.5**
KHAL Karahalli 150.05 314 *i* P **PKPbc** 05 30 43.6 **-0.4**
DURS Dursunbey 150.06 317 *i* P **PKPbc** 05 30 43.2 **-0.7**

KORT Korkueli 150.12 311 *i* P **PKPbc** 05 30 43.3 **-1.0**
MOA Molln 150.29 344 ⇑ *i*PKPbc **PKPbc** 05 30 43.6 **-0.5**
comp=Z,18nm,0.9s,SNR=7.8
DIM Dimitrovgrad 150.32 324 *i* P **PKPbc** 05 30 43.8 **-0.6**
PKSM Moragy 150.36 337 ⇓ *i*P **PKPbc** 05 30 44.1 **-0.2**
PKSM Moragy 150.36 337 ⇑ *e*PP **PKPbc** 05 30 44.0 **-0.2**
LANF Langenberg 150.44 353 PKP **PKPbc** 05 30 44.7 **+0.3**
STU Stuttgart 150.46 351 *e*PKIKP **PKPdf** 05 30 39.1 **+0.4**
STU *e* 05 30 52.6
STU Stuttgart 150.46 351 *e*PKPbc **PKPbc** 05 30 44.3 **-0.2**
STU Stuttgart 150.46 351 *e*PKPdf **PKPdf** 05 30 39.1 **+0.4**
STU *e*PKPbc **PKPbc** 05 30 44.6 **+0.1**
STU *e*PKPbab **PKPab** 05 30 52.6 **+0.2**
BALY Balya 150.52 318 *i* P **PKPbc** 05 30 44.2 **-0.8**
MANT Manisa 150.61 315 *i* P **PKPbc** 05 30 45.1 **-0.3**
KDZ Kurdzhali 150.65 323 *i* P **PKPbc** 05 30 43.6 **-1.6**
FUR Furstenfeldbru 150.68 348 *e*PKIKP **PKPbc** 05 30 44.7 **-0.4**
FUR Furstenfeldbru 150.68 348 *e*PKPbc **PKPbc** 05 30 44.7 **-0.4**
DNZL Cakiroluk 150.70 313 *i* P **PKPbc** 05 30 45.6 **0.0**
PGB Panagyurishte 150.72 326 *i* P **PKPbc** 05 30 44.2 **-1.2**
RJOB Jochberg 150.76 346 *e*PKPbc **PKPbc** 05 30 44.5 **-0.8**
AKHS Akhisar 150.89 317 *i* P **PKPbc** 05 30 44.9 **-0.9**
AKAS Kas 151.01 310 *i* P **PKPbc** 05 30 45.6 **-0.8**
BFO Black Forest 151.01 352 *e*PKIKP **PKPbc** 05 30 45.4 **-0.4**
BFO Black Forest 151.01 352 *e*PKPbc **PKPbc** 05 30 45.4 **-0.4**
BFO Black Forest 151.01 352 *e*PKPbc **PKPbc** 05 30 45.7 **-0.1**
RZN Rozhen 151.02 324 *i* P **PKPbc** 05 30 44.5 **-1.7**
SOKA Soboth 151.15 342 ⇑ *i*PKPbc **PKPbc** 05 30 45.2 **-1.1**
comp=Z,23nm,0.9s
PERS Pernice 151.16 342 *i* PKPdf **PKPdf** 05 30 40.0 **0.0**
PERS *j* PKPbc **PKPbc** 05 30 45.3 **-0.9**
VTS Vitosha 151.19 327 ⇑ *i*P **PKPbc** 05 30 46.4 **-0.2**
VTS Vitosha 151.19 327 *i* P **PKPbc** 05 30 45.3 **-1.3**
KBA Koelnbreinsper 151.24 344 *i* PKPbc **PKPbc** 05 30 45.5 **-1.0**
comp=Z,27nm,0.7s,SNR=35
ECH Echery 151.27 353 PKP **PKPbc** 05 30 45.9 **-0.5**
THEF They Montfort 151.37 355 PKP **PKPbc** 05 30 46.6 **0.0**
TURN Turunc 151.41 312 *i* P **PKPbc** 05 30 47.0 **0.0**
WATA Walderalm 151.41 347 ⇓ *i*PKPbc **PKPbc** 05 30 46.1 **-0.8**
comp=Z,16nm,0.4s,SNR=9.3
OBKA Obir 151.44 342 *i* PKPbc **PKPbc** 05 30 46.0 **-0.9**
comp=Z,13nm,0.6s,SNR=9.8
WTTA Wattenberg 151.47 347 ⇑ *i*PKPbc **PKPbc** 05 30 46.5 **-0.6**
comp=Z,48nm,0.5s,SNR=32
MOTA Moosalm 151.50 348 ⇑ *i*PKPbc **PKPbc** 05 30 46.5 **-0.7**
comp=Z,22nm,0.8s
AYDN Tasoluk 151.50 314 *i* P **PKPbc** 05 30 46.9 **-0.4**
MYKA Terra Mystica 151.58 344 ⇓ *i*PKPbc **PKPbc** 05 30 46.2 **-1.1**
comp=Z,30nm,0.5s
MMB Musomiste 151.62 325 *i* P **PKPbc** 05 30 45.6 **-1.8**
MOF Molkenrain 151.63 353 PKP **PKPbc** 05 30 46.8 **-0.5**
ABTA Abfaltersbach 151.75 345 ⇓ *i*PKPbc **PKPbc** 05 30 46.7 **-1.0**
comp=Z,47nm,0.6s,SNR=19
KKB Krupnik 151.77 326 *i* P **PKPbc** 05 30 46.4 **-1.3**
DAVA Damuels 151.79 349 ⇑ *i*PKiKP **PKPbc** 05 30 47.3 **-0.5**
comp=Z,27nm,1.0s
LJU Ljubljana 151.87 342 *e*PKPdf **PKPdf** 05 30 40.8 **-0.2**
LJU *i* PKPbc **PKPbc** 05 30 47.2 **-0.6**
FETA Feichten 151.88 348 ⇑ *i*PKPbc **PKPbc** 05 30 47.5 **-0.5**
comp=Z,16nm,0.6s,SNR=8.1
GCAM G?zelcaml? 151.91 315 *i* P **PKPbc** 05 30 47.4 **-0.7**
VISS Visnje 151.99 341 *i* PKPbc **PKPbc** 05 30 47.6 **-0.5**
VOY Vojsko 152.06 343 *e*PKPdf **PKPdf** 05 30 41.1 **-0.3**
VOY *e*PKPbc **PKPbc** 05 30 47.5 **-0.8**
BOJS Bojanci 152.13 340 *i* PKPdf **PKPdf** 05 30 42.2 **+0.8**
BOJS *i* PKPbc **PKPbc** 05 30 48.2 **-0.1**
LOMF Lomont 152.16 354 PKP **PKPdf** 05 30 44.7 **+3.2**
FUORN Ofenpass-Fuorn 152.36 348 *e*PKPdf **PKPdf** 05 30 42.9 **+0.9**
FUORN *e*PKPbc **PKPbc** 05 30 49.0 **-0.2**
TRI Trieste 152.39 343 *e*PKIKP **PKPbc** 05 30 48.4 **-0.5**
TRI Trieste 152.39 343 *e*PKPbc **PKPbc** 05 30 48.4 **-0.5**
TUE Stuetta 152.67 350 *e*PKPbc **PKPbc** 05 30 49.7 **-0.1**
TUE *e*PKPbab **PKPab** 05 31 01.9 **-0.2**
SENIN Lac Senin/Sane 153.08 353 *e*PKPdf **PKPdf** 05 30 42.2 **-0.8**
SENIN *e*PKPbc **PKPbc** 05 30 50.8 **0.0**
SENIN *e*PKPbab **PKPab** 05 31 04.1 **+0.3**
ESDC Sonseca Array 159.32 14 PKP **PKPdf** 05 30 50.6 **-0.5**
ESDC PKPbab **PKPab** 05 31 29.8 **-0.9**
ESDC Sonseca Array 159.32 14 PKP **PKPdf** 05 30 50.6 **-0.5**
comp=Z,0.4nm,0.4s,baz=338,slow=1.8,SNR=4.6
ESDC PKPbab **PKPab** 05 31 29.8 **-0.9**
comp=Z,0.9nm,0.7s,baz=334,slow=5.2,SNR=6.5
KEST Kesra 162.88 341 PKPab **PKPab** 05 31 45.6 **-0.8**
KEST Kesra 162.88 341 PKPab **PKPab** 05 31 45.6 **-0.8**
comp=Z,1.1nm,0.6s,baz=54,slow=1.7,SNR=6.0
DBIC Dimbokro 165.27 150 PKP **PKPdf** 05 30 56.7 **-1.0**
DBIC PKPbab **PKPab** 05 31 57.6 **+0.2**
DBIC Dimbokro 165.27 150 PKP **PKPdf** 05 30 56.7 **-1.0**
comp=Z,4.3nm,1.0s,baz=22,slow=5.5,SNR=5.9
DBIC PKPbab **PKPab** 05 31 57.6 **+0.2**
comp=Z,4.6nm,0.8s,baz=152,slow=6.7,SNR=5.5
TOA0 Torodi Ar. Sit 173.48 174 *e*PKPdf **PKPdf** 05 31 00.8 **-1.7**
TORD Torodi Ar. Bea 173.48 174 PKP **PKPdf** 05 31 01.0 **-1.6**
TORD PKPbab **PKPab** 05 32 33.4 **-0.2**
TORD PP **PP** 05 36 22.5 **-1.8**
TORD Torodi Ar. Bea 173.48 174 PKP **PKPdf** 05 31 01.0 **-1.6**
comp=Z,4.2nm,0.9s,baz=307,slow=0.5,SNR=22
TORD PKPbab **PKPab** 05 32 33.4 **-0.2**
comp=Z,1.9nm,0.8s,baz=173,slow=2.1,SNR=8.7
TORD PP **PP** 05 36 22.5 **-1.8**
comp=Z,1.4nm,0.9s,baz=161,slow=6.4,SNR=4.7

*ISCJB **11** 05:26:36.1±4.0, 16°.31S±0°.09×177°.74W±0°.05, h15km±28km, mb4.8/97, MS4.6/29, Error ellipse: s-maj=15.7km s-min=7.0km az=165.3*
*IDC **11** 05:26:36.1±0.6, 16°.18S×177°.75W, h0km, mb4.5/22, mb1 4.6/23, mb1mx4.6/27, mbtmp4.5/23, ML4.5/1, MS4.5/22, Ms1 4.5/22, ms1mx4.5/24, Error ellipse: s-maj=22.8km s-min=13.5km az=142.0*
*BJI **11** 05:26:37.9, 16°.20S×177°.80W, h10km, mB5.2/21, mb4.9/23, Ms5.0/18, Ms7 4.6/21*
*MOS **11** 05:26:40.7±1.2, 16°.14S×177°.83W, h33km, mb5.0/26, Error ellipse: s-maj=12.8km s-min=8.8km az=141.3*
*NEIC **11** 05:26:41.7±0.2, 16°.31S×177°.78W, h35km, mb4.8/64, Error ellipse: s-maj=11.0km s-min=4.9km az=150.0*
*GCMT **11** 05:26:42.5±0.2, 16°.18S×177°.53W, h12km, MW5.2, Moment Tensor Solution. s64,c88; s95,c170; Moment tensor: Scale 10^16 Nm; Mrr=0.73±.16; Mθθ=7.93±.16; Mϕϕ=8.67±.14; Mrθ=0.54±.39; Mrϕ=3.92±.15; Mθϕ=0.86±.39; Best double couple: M0=9.20000×10^16 NP1:ϕs=328.00000°, δ85.00000°, λ178.00000°. NP2:ϕs58.00000°, δ88.00000°, λ5.00000°. Principal axes: T 9.6400, Plg5.0000°, Azm283.0000°; N -0.8100, Plg84.0000°, Azm78.0000°; P -8.8200, Plg2.0000°, Azm193.0000°; Data Used: II IU G CN IC.*

ISC 11 05:26:38.4±0.4, **16°.38S**±0°.07×**177°.56W**±0°.05, **h14**km±2km, **n461**, σ1§**12**/489, **mb4.8**/97, **MS4.6**/29, **124C-114D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.41**	**252**	*e*P		**Pn**		**05 27 42.9**	**-2.2**
MSVF				*e*				05 28 32.3	
MSVF	**Nonsavu**	**4.41**	**252**	*e*Pn		**Pn**		**05 27 42.9**	**-2.2**
MSVF				*e*Sn		**Sn**		**05 28 32.3**	**-4.0**
AFI	**Afiamalu**	**6.10**	**67**	*e*Pn		**Pn**		**05 28 05.5**	**-2.8**
AFI	**Afiamalu**	**6.10**	**67**	Pn		Pn		05 28 04.8	-3.5
	4.6nm,0.3s,baz=267,slow=18,SNR=6.6								
AFI				LR		LR		05 30 07.0	
	comp=Z,5μm,18.6s,baz=250,slow=34								
DZM	**Mont Dzumac** 12μm,27.9s	**16.13**	**247**	*e*S		**Sn**		**05 33 26.5**	**+2.7**
DZM				*e*LR		LR		05 34 04.8	
	4μm,25.1s								
DZM	**Mont Dzumac** 62nm,1.5s	**16.13**	**247**	*e*Pn		**Pn**		**05 30 23.2**	**-1.7**
DZM	**Mont Dzumac** 0.2nm,0.3s,baz=78,slow=14,SNR=5.4	**16.13**	**247**	Pn		**P**		**05 30 30.7**	**+2.5**
DZM				LR		LR		05 34 39.7	
	comp=Z,433nm,21.1s,baz=260,slow=30								
RAR	**Rarotonga** 278nm,1.5s	**17.51**	**109**	*e*Pn		**P**		**05 30 46.0**	**+2.6**
RAR	**Rarotonga** 1.5nm,0.3s,baz=259,slow=0.0,SNR=4.7	**17.51**	**109**	P		**P**		**05 30 44.7**	**+1.3**
RAR				LR		LR		05 35 53.2	
	comp=Z,2μm,19.1s,baz=135,slow=31								
URZ	**Urewera**	**22.30**	**191**	P		**P**		**05 31 36.4**	**+1.0**
URZ	**Urewera** 25nm,1.0s,baz=112,slow=17,SNR=6.0	**22.30**	**191**	P		**P**		**05 31 36.4**	**+1.0**

URZ LR LR 05 38 46.5
comp=Z,2μm,19.6s,baz=219,slow=32
HNR Honiara 22.97 285 LR LR 05 39 11.1
comp=Z,6μm,19.4s,baz=132,slow=33
PPT2 Papeete2 26.78 97 *e*S **S** **05 36 49.5** **-4.7**
360nm,25.0s
PPT2 *e*LR LR 05 39 02.1
4μm,27.0s,baz=259
PPT Papeete 26.78 97 LR LR 05 40 15.4
comp=Z,1μm,18.4s,baz=306,slow=30
TBI Tubuai 27.29 109 *e*S **S** **05 36 59.2** **-2.8**
408nm,28.2s
TBI *e*LQ LQ 05 38 21.3
1μm,32.0s
TBI *e*LR LR 05 39 23.3
5μm,29.0s,baz=281
RPZ Rata Peaks 28.91 197 LR LR 05 42 35.3
comp=Z,2μm,20.9s,baz=40,slow=33
CTA Charters Tower 34.52 258 P **P** **05 33 26.3** **-0.4**
CTA Charters Tower 34.52 258 P **P** **05 33 26.3** **-0.4**
16nm,1.0s,baz=95,slow=12,SNR=5.9
STKA Stephens Creek 6.4nm,1.2s **40.08 240** *e*P **P** **05 34 14.3** **+0.6**
STKA Stephens Creek 21nm,1.1s,baz=59,slow=7.3,SNR=16 **40.08 240** P **P** **05 34 13.4** **-0.2**
STKA LR LR 05 49 12.7
comp=Z,886nm,19.3s,baz=65,slow=34
RKT Rikitea 279nm,28.8s **40.53 107** *e*S **S** **05 40 24.7** **-1.7**
RKT *e*LR LR 05 45 27.4
3μm,28.8s,baz=275
BBOO Buckleboo 328nm,1.1s **44.86 240** *e*P **P** **05 34 53.4** **+0.9**
WRAB Tennant Creek 45.71 258 *e*P **P** **05 34 58.0** **-1.5**
WRAB pmax pmax
comp=Z,1nm,1.0s
WRAB Tennant Creek 45.71 258 *e*P **P** **05 34 58.0** **-1.5**
comp=Z,1nm,1.0s
WRA Warramunga Arr 45.72 258 P **P** **05 34 58.0** **-1.7**
WRA PcP **PcP** **05 36 37.6** **+0.1**
WRA Warramunga Arr 45.72 258 P **P** **05 34 58.0** **-1.7**
comp=Z,5.4nm,1.1s,baz=89,slow=7.4,SNR=14
WRA PcP **PcP** **05 36 37.6** **+0.1**
comp=Z,1.3nm,1.0s,baz=100,slow=3.1,SNR=3.6
WRA LR LR 05 51 27.6
comp=Z,767nm,21.8s,baz=90,slow=33
AS31 Alice Springs 46.00 253 *e*P **P** **05 35 00.3** **-1.4**
ASAR Alice Springs 46.00 253 P **P** **05 35 00.1** **-1.7**
ASAR Alice Springs 46.00 253 P **P** **05 35 00.1** **-1.7**
comp=Z,8.8nm,1.0s,baz=84,slow=8.5,SNR=66
ASAR LR LR 05 53 00.5
comp=Z,2μm,19.8s,baz=91,slow=34
FORT Forrest 51.40 244 *e*P **P** **05 35 43.1** **0.0**
comp=Z,30nm,1.1s
VNDA Vanda 62.03 185 *e*P P 05 37 02.7 +4.8
comp=Z,49nm,2.5s
VNDA Vanda 62.03 185 LR LR 06 00 17.8
comp=Z,216nm,21.9s,baz=19,slow=32
MJAR Matsushiro Arr 67.18 322 P **P** **05 37 29.4** **-2.8**
MJAR Matsushiro Arr 67.18 322 P **P** **05 37 29.4** **-2.8**
comp=Z,1.6nm,0.3s,baz=161,slow=6.7,SNR=4.8
MJAR LR LR 06 01 13.3
comp=Z,241nm,21.2s,baz=170,slow=31
MAT Matsushiro 67.19 322 P P 05 37 35.6 +3.4
MAT S **S** **05 46 29.0** **+2.5**
YUK Yuzh-Kuril'sk 68.79 333 *i* P **P** **05 37 43.5** **+1.5**
YUK *i* 05 40 20.4
YUK *i* S **S** **05 46 46.4** **+1.1**
PETK Petropavlovsk- 72.42 345 P **P** **05 38 02.1** **-2.0**
PETK Petropavlovsk- 72.42 345 P **P** **05 38 02.1** **-2.0**
PETK Petropavlovsk- 72.42 345 P **P** **05 38 02.1** **-2.0**
comp=Z,5.9nm,0.8s,baz=97,slow=12,SNR=6.1
PETK LR LR 06 03 48.7
comp=Z,194nm,20.1s,baz=159,slow=31
YSS Yuzh-Sakhalins 72.43 333 *e*P P 05 38 09.0 +4.8
YSS pmax pmax
comp=Z,20nm,1.0s
QSPA South Pole Qui 73.67 180 *e*P P 05 38 17.9 +6.3
comp=Z,110nm,2.7s
KSRS Korea Array 74.11 318 P **P** **05 38 13.7** **-0.6**
comp=Z,1.3nm,0.8s,baz=116,slow=5.5,SNR=4.0
KSRS LR LR 06 04 17.8
comp=Z,192nm,21.2s,baz=6.6,slow=31
KSAR Wonju Array Be 74.13 318 P **P** **05 38 13.8** **-0.8**
SAO San Andreas Ge 74.77 44 *e*P **P** **05 38 19.9** **+1.7**
SAO pmax pmax
comp=Z,14nm,1.2s
SAO San Andreas Ge 74.77 44 *e*P **P** **05 38 19.9** **+1.7**
comp=Z,14nm,1.2s
ARVC Arvin 75.65 46 ⇑ P **P** **05 38 24.1** **+0.8**
baz=76
KHMM Horse Mountain 75.71 39 *e*P **P** **05 38 26.0** **+2.2**
comp=Z,20nm,1.3s
USRK Ussuriysk Arra 75.82 325 P **P** **05 38 22.6** **-1.6**
comp=Z,0.6nm,0.5s,baz=129,slow=2.8,SNR=3.5
USRK LR LR 06 05 47.5
comp=Z,141nm,20.3s,baz=237,slow=31
VES Vestal, Richgr 75.85 46 ⇑ P **P** **05 38 24.7** **+0.2**
baz=76
KRMB Red Mountain 75.99 39 *e*P **P** **05 38 26.1** **+0.8**
comp=Z,76nm,2.7s
EDW2 Edwards Air Fo 76.10 47 ⇑ P **P** **05 38 26.2** **+0.1**
baz=76
CMB Columbia Colle 76.18 43 *e*P **P** **05 38 26.4** **0.0**
CMB pmax pmax
comp=Z,8.0nm,1.0s
CMB Columbia Colle 76.18 43 *e*P **P** **05 38 26.4** **0.0**
comp=Z,8.3nm,1.0s
ISA Isabella 76.18 46 *e*P **P** **05 38 27.7** **+1.2**
ISA pmax pmax
comp=Z,14nm,1.4s
ISA Isabella 76.18 46 *e*P **P** **05 38 27.7** **+1.2**
comp=Z,14nm,1.4s
ISA Isabella 76.18 46 ⇓ P **P** **05 38 26.4** **-

WCN **Washoe City** 77.29 42 *e*P P 05 38 32.8 0.0
comp=Z,14nm,1.2s
BC3 **Big Chuckawall** 77.29 49 ⇑P P 05 38 32.7 -0.2
baz=78
MDJ **Mudanjiang** 77.42 324 P P 05 38 33.4 +0.3
MDJ pmax pmax
comp=Z,1.0nm,0.5s
MDJ pmax pmax
comp=Z,36nm,4.0s
GLA **Glamis** 77.46 50 *e*P P 05 38 34.8 +1.1
GLA pmax pmax
comp=Z,13nm,1.4s
GLA **Glamis** 77.46 50 *e*P P 05 38 34.8 +1.1
comp=Z,13nm,1.4s
GLA **Glamis** 77.46 50 ⇓P P 05 38 33.6 -0.1
baz=78
NJ2 **Nanjing** 77.61 309 *e*P P 05 38 35.1 +0.6
NJ2 pP pP 05 38 38.0 -1.0
NJ2 sP sP 05 38 39.0 -1.7
NJ2 PP PP 05 41 29.0 -0.8
NJ2 S S 05 48 27.0 +1.0
NJ2 sS sS 05 48 32.0 -1.4
NJ2 pmax pmax
comp=Z,40nm,1.0s
NJ2 pmax pmax
comp=Z,350nm,4.2s
NJ2 LR LR
comp=N,200nm,25.1s
NJ2 LR LR
comp=E,810nm,21.9s
NJ2 LR LR
comp=Z,270nm,21.9s
GRAC **Grapevine Rang** 77.64 45 ⇑P P 05 38 34.8 +0.2
baz=78
GMRC **Granite Mounta** 77.70 48 ⇑P P 05 38 34.7 -0.5
baz=78
FURC **Furnace Creek,** 77.71 46 ⇑P P 05 38 34.9 -0.1
baz=78
IRM **Iron Mountain** 77.76 49 ⇓P P 05 38 35.4 0.0
baz=78
NVAR **Mina Array Bea** 77.77 44 P P 05 38 35.0 -0.5
NVAR **Mina Array Bea** 77.77 44 P P 05 38 35.0 -0.5
comp=Z,3.4nm,0.8s,baz=228,slow=9.1,SNR=14
TUQ **Turquoise Moun** 77.84 47 ⇑P P 05 38 35.7 -0.2
baz=78
NV11 **Mina Array Sit** 77.87 44 *e*P P 05 38 35.9 -0.1
Y12C **Blythe** 78.02 49 ⇓P P 05 38 36.7 -0.1
baz=78
LDFC **Landfair** 78.24 48 *e*P P 05 38 39.0 +0.9
comp=Z,26nm,1.3s
MOD **Modoc** 78.40 40 *e*P P 05 38 39.2 +0.3
comp=Z,15nm,1.2s
214A **Organ Pipe Nat** 78.44 52 ⇑P P 05 38 38.7 -0.5
baz=79
PDMCI **Parker Dam,Lak** 78.56 49 ⇑P P 05 38 39.9 +0.2
baz=79
Z14A **Wintersburg** 78.99 50 ⇑P P 05 38 42.3 +0.1
baz=79
W13A **Hualapai Mount** 79.13 48 ⇓P P 05 38 43.0 -0.1
baz=79
KLR **Kul'dur** 79.22 329 *e*P P 05 38 39.8 -3.2
CN2 **Changchun** 79.32 322 *e*P P 05 38 43.8 +0.1
CN2 *es*P sP 05 38 50.8 +0.9
SEW **Seward** 79.54 14 *e*P P 05 38 46.3 +1.8
comp=Z,16nm,1.1s
R11A **Troy Canyon, C** 79.55 45 ⇓P P 05 38 45.3 0.0
baz=80
SPU **Mount Spurr** 79.94 12 *e*P P 05 38 47.0 +0.2
TUC **Tucson** 80.13 52 *e*P P 05 38 49.3 +0.8
TUC pmax pmax
comp=Z,2.0nm,1.3s
TUC **Tucson** 80.13 52 *e*P P 05 38 49.3 +0.8
comp=Z,2.4nm,1.3s
WHN **Wuhan** 80.37 306 P P 05 38 46.6 -3.1
WHN S S 05 48 55.7 +0.2
WHN LR LR
comp=Z,400nm,21.1s
X16A **Lo Mia Camp, P** 80.59 50 ⇓P P 05 38 50.9 -0.1
baz=81
BBB **Bella Bella** 80.60 28 P P 05 38 50.1 -0.2
BBB **Bella Bella** 80.60 28 P P 05 38 50.1 -0.2
comp=Z,6.9nm,0.9s,baz=207,slow=4.5,SNR=3.5
CCUT **Cedar City** 80.68 46 *e*P P 05 38 51.9 +0.4
comp=Z,13nm,1.6s
ARUT **Antelope Range** 80.74 46 *e*P P 05 38 50.7 -1.0
ARUT pmax pmax
comp=Z,10.0nm,1.4s
ARUT **Antelope Range** 80.74 46 *e*P P 05 38 50.7 -1.0
comp=Z,10.0nm,1.4s
319A **Douglas** 80.87 54 ⇑P P 05 38 52.3 -0.2
baz=81
U15A **North Rim** 80.90 48 ⇑P P 05 38 52.4 -0.3
baz=81
PMR **Palmer** 80.94 13 *e*P P 05 38 52.4 +0.4
PMR pmax pmax
comp=Z,25nm,1.7s
PMR **Palmer** 80.94 13 *e*P P 05 38 52.4 +0.4
comp=Z,24nm,1.7s
ELK **Elko** 80.99 43 *e*P P 05 38 53.6 +0.4
comp=Z,9.4nm,1.4s
SML **Sawmill** 81.31 14 *e*P P 05 38 53.6 -0.4
SML pmax pmax
comp=Z,5.0nm,0.8s
SML **Sawmill** 81.31 14 *e*P P 05 38 53.6 -0.4
comp=Z,4.7nm,0.8s
HAWA **Hanford** 81.40 36 *e*P P 05 38 55.2 +0.4
comp=Z,12nm,1.1s
320A **Kipp Ranch, An** 81.44 54 ⇓P P 05 38 55.7 +0.1
baz=82
220A **Playas Peak, P** 81.68 53 ⇑P P 05 38 56.7 -0.1
baz=82,SNR=5.5
BMO **Blue Mountains** 81.85 39 *e*P P 05 38 56.8 -0.6
BMO pmax pmax
comp=Z,11nm,1.3s
BMO **Blue Mountains** 81.85 39 *e*P P 05 38 56.8 -0.6
comp=Z,11nm,1.3s
120A **U Bar Ranch, L** 81.87 53 ⇑P P 05 38 57.8 0.0
baz=82
MVU **Marysvale** 81.93 46 *e*P P 05 38 59.0 +0.8
comp=Z,13nm,1.5s
MSU **Marysvale** 81.96 46 *e*P P 05 38 59.2 +0.9
MSU **Marysvale** 81.96 46 *e*P P 05 38 59.2 +0.9
MFID **Camas Ranch** 81.99 40 *e*P P 05 38 58.1 -0.1
comp=Z,9.2nm,1.3s
MFID **Camas Ranch** 81.99 40 ⇓P P 05 38 58.1 -0.1
baz=82,SNR=7.4
Z20A **Nine Sixteen R** 82.14 52 ⇓P P 05 38 59.0 -0.3
baz=82
DUG **Dugway** 82.33 44 *e*P P 05 39 02.2 +2.1
DUG pmax pmax
comp=Z,11nm,1.4s
DUG **Dugway** 82.33 44 *e*P P 05 39 02.2 +2.1
comp=Z,11nm,1.4s
DUG **Dugway** 82.33 44 ⇓P P 05 39 00.3 +0.2
baz=83
TRF **Thorofare Moun** 82.36 12 *e*P P 05 39 00.7 +0.9
comp=Z,16nm,1.1s
SEY **Seymchan** 82.48 347 *i*P P 05 39 02.9 +2.8
121A **Cookes Peak, D** 82.51 53 ⇓P P 05 39 01.2 -0.1
baz=83
I12A **Atlanta** 82.62 40 ⇓P P 05 39 01.7 +0.1
baz=83,SNR=10
Y20A **Horse Springs,** 82.64 52 ⇓P P 05 39 02.5 +0.5
baz=83,SNR=9.9
X20A **Quemado** 82.82 51 ⇓P P 05 39 03.4 +0.5
baz=83,SNR=9.8
Q16A **Castle Valley** 82.84 46 ⇑P P 05 39 02.9 0.0
baz=83
MCK **McKinley** 82.88 12 *e*P P 05 39 02.8 +0.5
MCK pmax pmax
comp=Z,11nm,1.0s
MCK **McKinley** 82.88 12 *e*P P 05 39 02.8 +0.5
comp=Z,11nm,1.0s
Z21A **St. Cloud Mine** 82.92 52 ⇓P P 05 39 03.4 0.0
baz=83,SNR=9.5
HLID **Hailey** 82.95 41 *e*P P 05 39 03.4 +0.1
comp=Z,11nm,1.3s
HLID **Hailey** 82.95 41 ⇓P P 05 39 03.0 -0.3
baz=83,SNR=6.4
SKAG **Skagway** 82.99 20 *e*P P 05 39 02.6 -0.2
comp=Z,15nm,1.2s
J13A **Cove Ranch, Pi** 83.02 41 ⇑P P 05 39 03.3 -0.3
baz=83,SNR=7.6
W20A **Ramah** 83.07 50 ⇑P P 05 39 04.2 0.0
baz=83,SNR=9.1
S18A **Hurst Farm, Bl** 83.11 48 ⇓P P 05 39 04.0 -0.4
baz=83
HVU **Hansel Valley** 83.12 43 *e*P P 05 39 04.5 +0.3
HVU pmax pmax
comp=Z,23nm,1.6s
HVU **Hansel Valley** 83.12 43 *e*P P 05 39 04.5 +0.3
comp=Z,23nm,1.6s
H12A **Diamond D Ranc** 83.18 40 ⇑P P 05 39 03.7 -0.8
baz=83,SNR=8.5
G12A **Big Creek, Yel** 83.19 39 ⇓P P 05 39 04.2 -0.3
baz=83
Y21A **Point of Rocks** 83.21 52 ⇓P P 05 39 04.9 0.0
baz=84
BJI **Beijing** 83.28 315 P P 05 39 05.3 +0.5
BJI S S 05 49 26.6 +1.5
BJI pmax pmax
comp=Z,13nm,1.0s
BJI LR LR
comp=N,180nm,20.3s
BJI LR LR
comp=E,130nm,16.9s
BJI LR LR
comp=Z,120nm,20.3s
X21A **Alamocita Cree** 83.31 51 ⇑P P 05 39 04.7 -0.8
baz=84
I13A **Wildhorse Cree** 83.31 41 ⇑P P 05 39 05.2 0.0
baz=84
V20A **Brimhall** 83.38 50 ⇑P P 05 39 04.9 -0.8
baz=84
J14A **Carey** 83.40 41 ⇓P P 05 39 05.8 +0.2
baz=84
P17A **Butcher Ranch,** 83.40 46 ⇑P P 05 39 05.5 -0.2
baz=84
JLU **Jordanelle** 83.44 44 *e*P P 05 39 05.8 -0.1
comp=Z,5.0nm,1.1s
Z22A **Elephant Butte** 83.44 53 ⇓P P 05 39 06.0 -0.1
baz=84
DAU **Daniels Canyon** 83.48 45 *e*P P 05 39 06.6 +0.3
DAU **Daniels Canyon** 83.48 45 *e*P P 05 39 06.6 +0.3
H13A **Challis** 83.56 40 ⇑P P 05 39 05.8 -0.5
baz=84,SNR=6.2
F12A **Elk City** 83.56 39 ⇑P P 05 39 06.0 -0.3
baz=84,SNR=11
I14A **Mackay** 83.74 41 ⇑P P 05 39 07.5 +0.2
baz=84
LAZ **Ladron** 83.78 52 *e*P P 05 39 08.7 +0.9
comp=Z,7.8nm,1.6s
NEW **Newport** 83.80 36 P P 05 39 07.5 +0.1
NEW **Newport** 83.80 36 P P 05 39 07.5 +0.1
comp=Z,1.8nm,0.9s,baz=233,slow=5.1,SNR=2.6
NEW **Newport** 83.80 36 ⇓P P 05 39 08.1 +0.7
baz=84
HWUT **Hardware Ranch** 83.83 44 *e*P P 05 39 09.8 +1.9
comp=Z,14nm,1.4s
G13A **Cobalt** 83.84 40 ⇑P P 05 39 07.8 0.0
baz=84
324A **Moseley Ranch,** 83.86 55 ⇓P P 05 39 07.9 -0.3
baz=84
DOT **Dot Lake** 83.89 14 *e*P P 05 39 08.2 +0.8
comp=Z,13nm,1.1s
MVCO **Mesa Verde** 83.97 49 *e*P P 05 39 10.6 +1.9
comp=Z,17nm,1.5s
425A **Indio Mountain** 83.99 56 ⇓P P 05 39 08.3 -0.6
baz=84
Z23A **Rita Site, Whi** 84.00 53 ⇓P P 05 39 08.5 -0.4
baz=84
MNTX **Cornudas Mount** 84.04 55 *e*P P 05 39 09.3 +0.4
comp=Z,7.9nm,1.3s
BNM **Barren Site** 84.06 52 *e*P P 05 39 09.7 +0.4
comp=Z,3.4nm,0.8s
224A **Cornudas Mount** 84.08 54 ⇓P P 05 39 09.1 -0.2
baz=84,SNR=9.3
ENH **Enshi** 84.09 304 *e*P P 05 39 09.2 -0.1
comp=Z,33nm,1.3s
COLA **College** 84.12 12 *e*P P 05 39 08.4 -0.1
COLA pmax pmax
comp=Z,14nm,0.8s
COLA **College** 84.12 12 *e*P P 05 39 08.4 -0.1
comp=Z,14nm,0.8s
DLBC **Dease Lake** 84.12 23 *e*P P 05 39 10.7 +1.9
DLBC **Dease Lake** 84.12 23 P P 05 39 08.8 0.0
comp=Z,3.0nm,0.9s,baz=206,slow=5.7,SNR=3.5
LPM **Los Pinos Moun** 84.12 52 *e*P P 05 39 09.8 +0.3
F13A **Darby** 84.13 39 ⇑P P 05 39 08.9 -0.4
baz=84,SNR=6.4
D12A **Red Ives Fores** 84.17 37 ⇑P P 05 39 09.1 -0.3
baz=84
PV04 **Paradox Valley** 84.19 47 *e*P P 05 39 10.1 +0.3
ILAR **Eielson Array** 84.23 13 P P 05 39 08.1 -1.0
ILAR **Eielson Array** 84.23 13 P P 05 39 08.1 -1.0
comp=Z,8.1nm,1.1s,baz=224,slow=6.0,SNR=16
ILAR LR LR 06 11 07.0
comp=Z,248nm,19.4s,baz=230,slow=32
325A **Bean Ranch, Si** 84.23 55 ⇑P P 05 39 09.6 -0.5
baz=84
U21A **Nageezi** 84.24 50 ⇑P P 05 39 09.8 -0.4
baz=84,SNR=15
PV01 **Paradox Valley** 84.32 48 *e*P P 05 39 09.8 -0.7
comp=Z,808nm,1.1s
S20A **Disappointment** 84.33 48 ⇑P P 05 39 10.5 -0.1
baz=85
124A **Stringfield Ra** 84.38 54 ⇑P P 05 39 10.9 -0.1
baz=85
I15A **Monteview** 84.38 41 ⇓P P 05 39 10.5 0.0
baz=85
G14A **Jackson** 84.38 40 ⇓P P 05 39 10.5 -0.1
baz=85
K16A **Soda Springs** 84.39 42 ⇓P P 05 39 10.6 -0.1
baz=85,SNR=5.2
526A **Mary Lane Ranc** 84.43 57 ⇓P P 05 39 11.1 0.0
baz=85
R20A **Redvale** 84.48 48 ⇓P P 05 39 11.1 -0.2
baz=85
TXAR **Lajitas Array** 84.50 57 P P 05 39 12.2 +0.7
TXAR **Lajitas Array** 84.50 57 P P 05 39 12.2 +0.7
comp=Z,1.6nm,1.0s,baz=242,slow=2.7,SNR=12
TXAR LR LR 06 09 50.4
comp=Z,182nm,18.4s,baz=140,slow=31
ANMO **Albuquerque** 84.52 51 *e*P P 05 39 12.2 +0.6
comp=Z,8.0nm,1.1s
E13A **Victor** 84.55 38 ⇑P P 05 39 10.8 -0.5
baz=85,SNR=6.0
MCMT **McKenzie Canyo** 84.56 40 *e*P P 05 39 11.4 -0.1
comp=Z,3.7nm,1.2s
T21A **Navajo Lake** 84.57 49 ⇓P P 05 39 11.3 -0.5
baz=85
V22A **San Miguel Ran** 84.58 50 ⇑P P 05 39 12.1 +0.2
baz=85
H15A **Lima** 84.58 41 ⇑P P 05 39 11.2 -0.5
baz=85
225A **Deer Hill, Car** 84.64 54 ⇑P P 05 39 12.5 +0.4
baz=85
S21A **Coal Bank Pass** 84.67 48 ⇓P P 05 39 12.0 -0.3
baz=85
P19A **Cripple Cowboy** 84.68 46 ⇓P P 05 39 12.5 +0.2
baz=85
426A **McDonald Obser** 84.71 56 ⇓P P 05 39 12.1 -0.6
baz=85
D13A **Huson** 84.72 38 ⇑P P 05 39 11.9 -0.2
baz=85
M18A **Lyman** 84.75 44 ⇓P P 05 39 12.3 -0.3
baz=85
627A **Terlingua Ranc** 84.77 57 ⇑P P 05 39 13.0 +0.1
baz=85
K17A **Gardner Place,** 84.79 43 ⇓P P 05 39 12.9 +0.1
baz=85
U22A **Llaves** 84.81 50 ⇓P P 05 39 12.8 -0.3
baz=85
RRI2 **Red Ridge** 84.81 42 *e*P P 05 39 14.8 +1.8
comp=Z,12nm,1.1s
W23A **Werner Place,** 84.83 51 ⇑P P 05 39 13.0 -0.2
baz=85
527A **Woodward Ranch** 84.84 57 ⇑P P 05 39 12.9 -0.4
baz=85
Q20A **Ridgley Place,** 84.86 47 ⇓P P 05 39 12.5 -0.7
baz=85
Y24A **Capitan** 84.88 53 ⇓P P 05 39 12.5 -0.9
baz=85
O19A **Miners Draw (B** 84.88 46 ⇑P P 05 39 12.4 -0.8
baz=85
MSO **Missoula** 84.89 38 *e*P P 05 39 13.7 +0.7
comp=Z,8.2nm,1.4s
MSO **Missoula** 84.89 38 ⇓P P 05 39 12.3 -0.7
baz=85
BSMT **Bassoo Peak** 84.92 37 *e*P P 05 39 11.4 -1.8
G15A **Dillon** 84.94 40 ⇓P P 05 39 13.0 -0.5
baz=85,SNR=7.4
E14A **Clinton** 84.95 39 ⇑P P 05 39 13.5 +0.1
baz=85
C13A **Hot Springs** 84.95 37 ⇑P P 05 39 13.5 +0.2
baz=85
I16A **Newdale** 84.95 42 ⇓P P 05 39 13.3 -0.2
baz=85
DLMT **Dillon** 84.97 40 *e*P P 05 39 13.5 0.0
comp=Z,14nm,1.2s
125A **Gardner Draw,** 84.98 54 ⇓P P 05 39 14.1 +0.3
baz=85
L18A **Fontenelle, Gr** 84.99 44 ⇓P P 05 39 13.5 -0.3
baz=85
326A **Caldwell Ranch** 85.00 55 ⇓P P 05 39 14.1 +0.2
baz=85
GYA **Guiyang** 85.00 299 P P 05 39 15.0 +1.0
GYA PP PP 05 42 32.3 +1.1
GYA SKS S 05 49 35.8 -7.4
GYA S SKSac 05 49 41.0 +2.2
GYA SS SS 05 55 16.7 -0.1
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.3s
GYA LR LR
comp=N,470nm,20.5s
GYA LR LR
comp=E,480nm,21.2s
GYA LR LR
comp=Z,490nm,20.8s
BILL **Bilibino** 85.00 354 ⇑*i*P P 05 39 15.8 +2.8
BILL *e* 05 39 25.0
BILL pmax pmax
comp=Z,8.0nm,1.3s
GDL2 **Guadalupe Moun** 85.03 55 *e*P P 05 39 09.1 -5.0
P20A **De Beque** 85.03 47 ⇑P P 05 39 14.0 0.0
baz=85
T22A **Edith** 85.04 49 ⇑P P 05 39 13.9 -0.3
baz=85
V23A **Ortiz Mt. (NFS** 85.05 51 ⇑P P 05 39 13.8 -0.4
baz=85
TPAW **Teton Pass** 85.12 42 *e*P P 05 39 14.9 +0.4
comp=Z,6.5nm,1.0s
226B **Tecolote Peak,** 85.14 55 ⇓P P 05 39 14.3 -0.3
baz=85
R21A **Cimarron** 85.14 48 ⇑P P 05 39 14.4 -0.3
baz=85
Z25A **Roswell** 85.17 53 ⇓P P 05 39 14.4 -0.4
baz=85
628A **Black Gap, Mar** 85.18 58 ⇑P P 05 39 14.6 -0.3
baz=85
J17A **Brown Place, J** 85.21 42 ⇑P P 05 39 14.9 +0.1
baz=86,SNR=7.4
F15A **Butte** 85.27 40 ⇑P P 05 39 14.8 -0.2
baz=86
D14A **Greenough** 85.27 38 ⇓P P 05 39 14.6 -0.4
baz=86
427A **Hayter Ranch,** 85.28 56 ⇓P P 05 39 15.1 -0.2
baz=86
U23A **El Rito** 85.28 50 ⇑P P 05 39 15.5 +0.1
baz=86,SNR=8.6
LRM **Limekiln Ridge** 85.29 40 *e*P P 05 39 15.0 -0.3
K18A **Toltan Ranch,** 85.31 43 ⇓P P 05 39 15.0 -0.4
baz=86,SNR=14
Q21A **Lamborn Mesa,** 85.32 47 ⇑P P 05 39 15.5 0.0
baz=86
CHMT **Chamberlain Mo** 85.34 38 *e*P P 05 39 17.1 +1.7
B13A **Whitefish** 85.37 37 ⇓P P 05 39 15.5 +0.2
baz=86
MOOW **Moose Ponds** 85.37 42 *e*P P 05 39 16.0 +0.4
comp=Z,8.6nm,1.4s
LOHW **Long Hollow** 85.40 42 *e*P P 05 39 15.9 +0.1
comp=Z,22nm,1.8s
S22A **4UR Ranch, Cre** 85.40 49 ⇑P P 05 39 15.6 -0.5
baz=86,SNR=8.9
G16A **Moss Hill, Enn** 85.40 40 ⇑P P 05 39 15.7 0.0
baz=86
W24A **Lazy 6 Ranch,** 85.41 51 ⇓P P 05 39 15.4 -0.6
baz=86
O20A **White River Ci** 85.41 46 ⇓P P 05 39 15.6 -0.3
baz=86
QLMT **Earthquake Lak** 85.44 41 *e*P P 05 39 16.9 +0.9
E15A **Deer Lodge** 85.47 39 ⇓P P 05 39 15.8 -0.2
baz=86
126A **Clayton Basin,** 85.47 54 ⇓P P 05 39 16.0 -0.3
baz=86
H16A **Russell Place,** 85.50 41 ⇓P P 05 39 16.2 0.0
baz=86,SNR=16
528A **Cox Ranch, San** 85.51 57 ⇑P P 05 39 16.3 -0.2
baz=86
L19A **Farson** 85.52 44 ⇓P P 05 39 16.1 -0.3
baz=86
EGAK **Eagle** 85.54 15 *e*P P 05 39 16.4 +0.7
comp=Z,16nm,1.1s
MAW **Mawson** 85.56 200 P P 05 39 16.8 +0.8
MAW **Mawson** 85.56 200 P P 05 39 16.8 +0.8
comp=Z,9.7nm,1.2s,baz=117,slow=9.4,SNR=6.3
MAW LR LR 06 15 06.3
comp=Z,603nm,18.1s,baz=103,slow=34
J18A **Kendall Valley** 85.59 43 ⇑P P 05 39 16.6 -0.2
baz=86,SNR=16
R22A **Saguache, Gunn** 85.65 48 ⇑P P 05 39 16.9 -0.4
baz=86
YMR **Madison River** 85.66 41 *e*P P 05 39 18.0 +1.0
comp=Z,22nm,1.4s
BW06 **Boulder Array** 85.69 43 *e*P P 05 39 16.5 -0.8
comp=Z,5.5nm,1.2s
PDAR **Pinedale Array** 85.69 43 P P 05 39 16.6 -0.6
PDAR **Pinedale Array** 85.69 43 P P 05 39 16.6 -0.6
comp=Z,4.2nm,1.1s,baz=222,slow=2.0,SNR=10
PDAR LR LR 06 09 40.9
comp=Z,138nm,20.9s,baz=250,slow=30
N20A **Spence Gulch,** 85.70 45 ⇑P P 05 39 16.7 -0.7
baz=86
P21A **Newcastle** 85.70 47 ⇑P P 05 39 17.1 -0.4
baz=86
BOZ **Bozeman (W)** 85.71 40 *e*P P 05 39 17.4 +0.2
BOZ pmax pmax
comp=Z,7.0nm,1.4s
BOZ **Bozeman (W)** 85.71 40 *e*P P 05 39 17.4 +0.2
comp=Z,7.5nm,1.4s
COLD **Coldfoot** 85.77 10 *e*P P 05 39 16.5 -0.3
comp=Z,13nm,1.2s
F16A **Kennard Place,** 85.77 40 ⇓P P 05 39 17.2 -0.3
baz=86
H17A **Grant Village** 85.78 41 ⇓P P 05 39 17.4 -0.3
baz=86
428A **Kincaid Ranch,** 85.80 56 ⇓P P 05 39 17.4 -0.6
baz=86
D15A **Lincoln** 85.84 38 ⇑P P 05 39 17.3 -0.6
baz=86
SMCO **Snowmass** 85.89 47 *e*P P 05 39 19.4 +0.8
comp=Z,6.0nm,1.2s
I18A **Diamond G Ranc** 85.94 42 ⇑P P 05 39 17.6 -1.0
baz=86
328A **Wristen Ranch,** 85.95 56 ⇑P P 05 39 18.1 -0.5
baz=86
127A **Arkansas Junct** 86.00 54 ⇓P P 05 39 19.2 +0.3
baz=86
M20A **Sweetwater, Wa** 86.04 45 ⇑P P 05 39 18.9 -0.1
baz=86
B14A **Marquette Ranc** 86.05 37 ⇑P P 05 39 19.0 +0.2
baz=86
E16A **East Helena** 86.10 39 ⇑P P 05 39 18.6 -0.5
baz=86,SNR=6.0
G17A **Pierce Place,** 86.11 41 ⇓P P 05 39 19.3 +0.2
baz=86
W25A **X Bar L Ranch,** 86.12 52 ⇑P P 05 39 19.4 -0.1
baz=86
C15A **Salmond Ranch,** 86.15 38 ⇑P P 05 39 19.3 0.0
baz=86
L20A **Wamsutter** 86.16 44 ⇓P P 05 39 19.5 -0.1
baz=86
N21A **Black Mountain** 86.18 46 ⇑P P 05 39 20.1 +0.4
baz=86
K19A **Absolon Red Bu** 86.19 43 ⇓P P 05 39 19.8 +0.1
baz=86
P22A **Eagle** 86.22 47 ⇓P P 05 39 20.0 0.0
baz=86
J19A **Crowheart** 86.25 43 ⇓P P 05 39 19.9 0.0
baz=86
V25A **Rancho No Teng** 86.25 51 ⇑P P 05 39 19.8 -0.4
baz=86
A14A **Double T Ranch** 86.27 36 ⇓P P 05 39 20.0 +0.1
baz=86
Z27A **Tatum** 86.35 54 ⇓P P 05 39 20.5 -0.1
baz=87
SDCO **Great Sand Dun** 86.36 49 *e*P P 05 39 20.6 -0.2
comp=Z,28nm,2.8s
429A **Davenport Ranc** 86.40 57 ⇑P P 05 39 20.6 -0.3
baz=87
D16A **Dana Ranch, Ca** 86.42 39 ⇓P P 05 39 20.6 0.0

baz=87
T24A Torres, Weston 86.42 50 ⇑P P 05 39 20.8 -0.2
baz=87
F17A Fitzpatrick Pl 86.43 40 ⇓P P 05 39 20.5 -0.2
baz=87
B15A Bradely Ranch, 86.44 37 ⇑P P 05 39 20.7 0.0
baz=87
K20A Yellowstone Ra 86.44 44 ⇑P P 05 39 20.7 -0.3
baz=87
S24A Houchin Ranch, 86.52 49 ⇑P P 05 39 21.2 -0.4
baz=87
E17A Martinsdale 86.57 39 ⇑P P 05 39 21.2 -0.3
baz=87
O22A Kremmling 86.60 47 ⇓P P 05 39 21.8 -0.1
baz=87
Y27A Causey 86.60 53 ⇑P P 05 39 21.6 -0.2
baz=87
U25A Circle Dot Ran 86.63 51 ⇑P P 05 39 21.7 -0.3
baz=87
I19A Meeteetse 86.63 42 ⇑P P 05 39 21.9 +0.1
baz=87
329A Wagon Wheel Ra 86.64 56 ⇑P P 05 39 21.7 -0.3
baz=87
A15A Johnson Ranch, 86.67 37 ⇓P P 05 39 21.3 -0.5
baz=87
C16A Fuhringer Ranc 86.67 38 ⇑P P 05 39 21.3 -0.5
baz=87
530A J-C Ranch, Com 86.68 57 ⇓P P 05 39 22.8 +0.6
baz=87
P23A Jefferson 86.78 47 ⇑P P 05 39 22.9 +0.1
baz=87
HHC Hu-ho-hao-te 86.79 314⇑ eP P 05 39 22.5 -0.1
HHC pP pP 05 39 27.3 +0.1
HHC sP sP 05 39 29.5 +0.7
HHC PP PP 05 42 47.0 +1.5
HHC SKS SKSac 05 49 46.0 -3.4
HHC S SKKSac 05 49 57.7 -0.1
HHC sS sS 05 50 05.7 -2.1
HHC SS SS 05 55 42.2 -0.4
HHC pmax pmax
comp=Z,45nm,1.2s
HHC pmax pmax
comp=Z,150nm,5.3s
HHC LR LR
comp=N,190nm,21.1s
HHC LR LR
comp=E,320nm,25.0s
HHC LR LR
comp=Z,420nm,21.1s
L21A Rawlins 86.80 45 ⇑P P 05 39 23.3 +0.5
baz=87
R24A Sanders Place, 86.84 49 ⇓P P 05 39 23.7 +0.7
baz=87
T25A Trinidad 86.91 50 ⇓P P 05 39 24.0 +0.6
baz=87
H19A Powell 86.92 42 ⇑P P 05 39 24.2 +1.0
baz=87
J20A Shoshoni 86.92 43 ⇓P P 05 39 24.3 +1.1
baz=87
N22A Wattenberg Ran 86.93 46 ⇑P P 05 39 23.7 +0.2
baz=87
GCMT Greycliff 86.99 40 eP P 05 39 25.6 +2.1
comp=Z,8.9nm,1.4s
D17A Six Diamond Ra 86.99 39 ⇓P P 05 39 23.6 +0.2
baz=87
F18A Big Timber 87.01 40 ⇑P P 05 39 24.1 +0.6
baz=87
U26A Atchley Ranch, 87.12 51 ⇓P P 05 39 23.7 -0.7
baz=87
I20A Worland 87.15 43 ⇑P P 05 39 23.7 -0.6
baz=87
C17A Wharram Farm, 87.17 38 ⇓P P 05 39 23.9 -0.4
baz=87
A16A West Butte Ran 87.31 37 ⇓P P 05 39 24.3 -0.7
baz=88
N23A Red Feather La 87.32 46 ⇑P P 05 39 24.9 -0.5
baz=88
531A Rocksprings 87.32 58 ⇑P P 05 39 25.2 -0.2
baz=88
J21A Lysite 87.33 43 ⇓P P 05 39 24.6 -0.7
baz=88
431A Sonora 87.46 57 ⇓P P 05 39 25.9 -0.1
baz=88
L22A Ellis Ranch, M 87.46 45 ⇓P P 05 39 26.6 +0.6
baz=88
B17A L&G Farms, Che 87.46 38 ⇑P P 05 39 26.4 +0.8
baz=88
H20A Greybull 87.47 42 ⇓P P 05 39 26.5 +0.7
baz=88
F19A Roth Farm, Mol 87.47 41 ⇓P P 05 39 26.3 +0.5
baz=88
D18A Linhart Farms, 87.55 39 ⇑P P 05 39 26.8 +0.7
baz=88
I21A Big Trails, Te 87.64 43 ⇑P P 05 39 27.1 +0.4
baz=88
632A Uvalde 87.72 58 ⇑P P 05 39 27.7 +0.4
baz=88
U27A Thompson Grove 87.81 51 ⇑P P 05 39 27.4 -0.2
baz=88
A17A Triple J Farms 87.83 37 ⇑P P 05 39 27.2 -0.1
baz=88
E19A Rath Farm, Rou 87.84 40 ⇓P P 05 39 27.7 +0.2
baz=88
KMI Kunming 87.86 297 P P 05 39 28.6 +0.3
KMI pP pP 05 39 34.7 +1.8
KMI sP sP 05 39 37.0 +2.5
KMI PP PP 05 42 56.6 +2.0
KMI S S 05 50 09.7 -1.7
KMI SS SS 05 55 58.9 -0.2
KMI pmax pmax
comp=Z,7.0nm,1.3s
KMI pmax pmax
comp=Z,39nm,3.4s
KMI LR LR
comp=N,170nm,20.5s
KMI LR LR
comp=E,260nm,20.5s
KMI LR LR
comp=Z,420nm,20.0s
J22A Midwest 88.00 44 ⇓P P 05 39 28.6 +0.2
baz=88
P25A Willow Gulch B 88.02 48 ⇓P P 05 39 29.1 +0.5
baz=88
D19A Cripps Ranch, 88.09 39 ⇓P P 05 39 29.3 +0.6
baz=88
B18A Beardsley Farm 88.11 38 ⇓P P 05 39 29.3 +0.6
baz=88
432A Menard 88.18 57 ⇓P P 05 39 29.6 +0.1
baz=88
I22A 9 Mile Ranch, 88.20 43 ⇓P P 05 39 29.8 +0.5
baz=88
C19A Slack Wire Ran 88.25 39 ⇑P P 05 39 29.7 +0.3
baz=88
E20A Meyer Farm, Mu 88.26 40 ⇑P P 05 39 29.7 +0.2
baz=88
A18A Metzger Ranch, 88.31 38 ⇓P P 05 39 29.6 0.0
baz=89
D20A Manuel Ranch, 88.52 40 ⇑P P 05 39 31.6 +1.0
baz=89
H22A Clearmont 88.58 43 ⇑P P 05 39 31.2 +0.1
baz=89
B19A Brinkman Farms 88.63 38 ⇑P P 05 39 31.9 +0.7
baz=89
C20A Veseth Ranch, 88.87 39 ⇑P P 05 39 33.0 +0.7
baz=89
ABTX Abilene, Hawle 88.90 56 ⇓P P 05 39 32.8 +0.1
baz=89
CD2 Chengdu 88.93 303 P P 05 39 33.3 +0.3
CD2 pP pP 05 39 38.1 +0.5
CD2 sP sP 05 39 40.3 +1.1
CD2 PP PP 05 43 04.7 +1.9
CD2 SKS SKSac 05 50 00.5 -2.1
CD2 S S 05 50 18.5 -2.5
CD2 sS ScS 05 50 26.0 -0.2
CD2 SS SS 05 56 13.4 -0.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,80nm,5.6s
CD2 LR LR
comp=E,360nm,22.0s
CD2 LR LR
comp=Z,230nm,19.1s
CMAR Chiang Mai Arr 89.14 289 P P 05 39 33.2 -1.0
CMAR Chiang Mai Arr 89.14 289 P P 05 39 33.2 -1.0
comp=Z,0.8nm,0.4s,baz=174,slow=2.5,SNR=3.2
CMAR LR LR 06 19 16.6
comp=Z,185nm,18.3s,baz=284,slow=36
B20A Solberg Farm, 89.18 39 ⇓P P 05 39 34.2 +0.5
baz=89
Z32A Haskell 89.27 55 ⇑P P 05 39 34.8 +0.3
baz=90
R28A Tribune 89.28 50 ⇓P P 05 39 34.8 +0.3
baz=90
A20A Cobblestone Ra 89.43 38 ⇑P P 05 39 35.7 +0.8
baz=90
G23A Biddle 89.45 42 ⇓P P 05 39 35.4 +0.3
baz=90
C21A Desert Coulee 89.47 39 ⇓P P 05 39 35.6 +0.5
baz=90
W31A Holland Ranch, 89.55 53 ⇑P P 05 39 36.4 +0.6
baz=90
E22A Miles City 89.60 41 ⇑P P 05 39 36.6 +0.8
baz=90
F23A Volborg 89.65 42 ⇓P P 05 39 36.6 +0.5
baz=90
D22A Cohagen 89.75 40 ⇓P P 05 39 37.0 +0.6
baz=90
H24A Dirks Ranch, A 89.81 43 ⇑P P 05 39 37.6 +0.7
baz=90
V31A Spring Creek L 89.83 53 ⇓P P 05 39 37.9 +0.8
baz=90
C22A Vida 90.18 40 ⇑P P 05 39 39.1 +0.7
baz=90
F24A Ekalaka 90.32 42 ⇑P P 05 39 39.4 +0.2
baz=91
D23A Lindsay 90.37 41 ⇓P P 05 39 40.1 +0.8
baz=91
LZH Lanzhou 90.61 307 eP P 05 39 43.1 +2.2
LZH pP pP 05 39 46.5 +1.0
LZH sP sP 05 39 47.8 +0.7
LZH ePP PP 05 43 20.3 +4.1
LZH SKS SKSac 05 50 10.6 -1.9
LZH eS SKKSac 05 50 30.5 +3.8
LZH sS sS 05 50 42.7 -1.5
LZH pmax pmax
comp=Z,16nm,1.5s
LZH pmax pmax
comp=Z,110nm,6.7s
LZH LR LR
comp=N,340nm,17.4s
LZH LR LR
comp=E,360nm,18.5s
LZH LR LR
comp=Z,380nm,20.0s
C23A Lambert 90.64 40 ⇓P P 05 39 41.1 +0.6
baz=91
C24A Savage 91.00 40 ⇓P P 05 39 42.7 +0.4
baz=91
DGMT Dagmar 91.51 40 eP P 05 39 45.1 +0.5
comp=Z,14nm,1.1s
DGMT Dagmar 91.51 40 ⇑P P 05 39 45.1 +0.5
baz=92
PLCA Paso Flores 91.79 133 LR LR 06 12 08.8
comp=Z,218nm,19.8s,baz=237,slow=30
YKA Yellowknife Ar 92.61 24 P P 05 39 49.2 0.0
YKA Yellowknife Ar 92.61 24 P P 05 39 49.2 0.0
comp=Z,0.9nm,1.0s,baz=248,slow=4.6,SNR=8.1
SONM Songino Array 92.93 319 P P 05 39 50.1 -1.2
SONM Songino Array 92.93 319 P P 05 39 50.1 -1.2
comp=Z,0.5nm,0.7s,baz=172,slow=2.9,SNR=4.4
GTA Gaotai 94.69 310 eP P 05 40 05.1 +5.5
GTA pP pP 05 40 09.8 +5.6
GTA sP sP 05 40 12.1 +6.3
GTA pmax pmax
comp=Z,3.0nm,1.3s
GTA pmax pmax
comp=Z,73nm,4.7s
GTA LR LR
comp=N,170nm,19.0s
GTA LR LR
comp=E,300nm,18.8s
GTA LR LR
comp=Z,160nm,18.5s
ECSD EROS Data Cent 94.80 46 eP P 05 40 01.3 +1.4
comp=Z,13nm,1.5s
JTS JuntasAbangare 95.32 81 eP P 05 40 01.1 -1.9
comp=Z,2μm,1.1s
ULM Lac du Bonnet 97.23 40 LR LR 06 17 29.6
comp=Z,234nm,20.4s,baz=293,slow=31
SVE Sverdlovsk 120.81 327 ePKIKP PKPdf 05 45 36.1 +6.1
SVE pmax pmax
comp=Z,9.0nm,0.7s
OBN Obninsk 133.31 334 ePKIKP PKPdf 05 45 55.0 +1.2
OBN pmax pmax
comp=Z,3.0nm,0.7s
KMBO Kilima Mbogo 141.49 246 PKP PKPdf 05 46 09.7 -0.8
KMBO Kilima Mbogo 141.49 246 PKP PKPdf 05 46 09.7 -0.8
comp=Z,0.6nm,0.4s,baz=100,slow=6.1,SNR=3.2
BURAR Bucovina Array 143.63 334⇑ iP PKPdf 05 46 20.8 +7.7
KOLS Kolonicke sedl 143.72 338 ePKIKP PKPdf 05 46 15.2 +2.1
KOLS Kolonicke sedl 143.72 338 ePKP PKPdf 05 46 15.2 +2.1
UZH Uzhgorod 143.97 337 ePKIKP PKPdf 05 46 15.6 +2.1
CRVS Cervenica-Dubn 144.04 339 ePKIKP PKPdf 05 46 13.8 +0.1
CRVS Cervenica-Dubn 144.04 339 ePKP PKPdf 05 46 13.8 +0.1
CLL Collm 144.15 349 ePKIKP PKPdf 05 46 18.0 +4.2
CLL pmax pmax
comp=Z,4.0nm,0.5s
CLL Collm 144.15 349 ePKPdf PKPdf 05 46 18.0 +4.2
CLL eSS SS 06 08 18.0 +6.7
CLL L L 06 53 00.0
comp=Z,200nm,19.5s
BR131 Keskin Array S 144.26 317 ePKPdf PKPbc 05 46 13.2 +0.5
BRTR Keskin Array B 144.26 317 PKP PKPbc 05 46 12.8 0.0
BRTR Keskin Array B 144.26 317 PKP PKPbc 05 46 12.8 0.0
comp=Z,5.5nm,1.0s,baz=112,slow=1.3,SNR=18
TRPA Tarpa 144.29 337⇑ ePKPdf PKPab 05 46 08.7 -3.3
DPC Dobruska-Polom 144.31 345 ePKIKP PKPdf 05 46 17.5 +3.3
DPC Dobruska-Polom 144.31 345 ePKPdf PKPdf 05 46 17.5 +3.3
TIRR Tirgusor 144.45 327 ePKIKP PKPab 05 46 12.6 -0.1
TIRR Tirgusor 144.45 327 ePKPdf PKPab 05 46 12.6 -0.1
ANTO Ankara 144.73 318 ePKIKP PKPbc 05 46 14.4 +0.2
ANTO Ankara 144.73 318 ePKPdf PKPbc 05 46 14.4 +0.2
MLR Muntele Rosu 144.93 331⇓ iP PKPbc 05 46 15.1 +0.4
VRAC Vranov 145.19 344⇓ iP PKPdf 05 46 18.5 +2.8
VYHS Vyhne 145.27 341 ePKIKP PKPab 05 46 15.7 +0.1
VYHS e 05 46 20.5
VYHS Vyhne 145.27 341 ePKP PKPab 05 46 15.7 +0.1
VYHS e 05 46 20.5
DRGR 145.32 335⇓ iP PKPbc 05 46 14.9 -0.9
PSZ Piszkesteto 145.42 339 ePKIKP PKPbc 05 46 16.2 +0.1
PSZ Piszkesteto 145.42 339 ePKPbc PKPbc 05 46 16.2 +0.1
PSZ Piszkesteto 145.42 339⇑ iP PKPbc 05 46 16.2 +0.1
PSZ Piszkesteto 145.42 339⇓ ePKPbc PKPbc 05 46 16.0 -0.1
ARR Arges 145.62 332⇓ iP PKPab 05 46 18.2 +1.1
SMOL Smolenice 145.68 342 ePKIKP PKPdf 05 46 16.7 +0.2
SMOL Smolenice 145.68 342 ePKP PKPdf 05 46 16.7 +0.2
ROTZ Rotzenmuhle 145.77 349 ePKP PKPdf 05 46 16.6 -0.1
GRF Grafenberg Arr 146.02 350 ePKP2 PKPdf 05 46 17.2 +0.1
GRF Grafenberg Arr 146.02 350 ePKP PKPdf 05 46 17.2 +0.1
ZST Bratislava 146.06 342 ePKP2 PKPdf 05 46 17.3 +0.1
ZST Bratislava 146.06 342 ePKP PKPdf 05 46 17.3 +0.1
KHC Kasperske Hory 146.10 347 ePKP2 PKPbc 05 46 18.1 -0.1
KHC Kasperske Hory 146.10 347 ePKPbc PKPbc 05 46 18.1 -0.1
KHC Kasperske Hory 146.10 347 ePKP PKPbc 05 46 18.0 -0.1
WET Wettzell 146.23 348 ePKP2 PKPbc 05 46 18.1 -0.4
WET Wettzell 146.23 348 ePKP PKPbc 05 46 18.1 -0.4
DOU Dourbes 146.32 357 PKP PKPab 05 46 20.3 +0.8
GEC2 GERESS Array S 146.34 347 ePKP2 PKPab 05 46 20.6 +0.8
GEC2 GERESS Array S 146.34 347 ePKP PKPab 05 46 19.9 +0.2
GEC2 GERESS Array S 146.34 347 ePKPdf PKPab 05 46 20.6 +0.8
GERES GERESS Array B 146.34 347 PKPbc PKPdf 05 46 17.4 -0.4
GERES GERESS Array B 146.34 347 PKPbc PKPdf 05 46 17.4 -0.4
comp=Z,1.5nm,0.7s,baz=25,slow=4.4,SNR=7.7
CONA Conrad Observa 146.65 344⇑ iPKPab PKPbc 05 46 19.5 -0.4
comp=Z,12nm,0.9s
MOA Molln 147.14 345⇑ iPKPdf PKPdf 05 46 17.1 -2.0
comp=Z,12nm,1.3s
PKSM Moragy 147.33 339⇑ ePKPdf PKPbc 05 46 22.5 +0.8
BFO Black Forest 147.77 353 ePKIKP PKPdf 05 46 18.9 -1.2
BFO e 05 46 23.0
BFO Black Forest 147.77 353 ePKPdf PKPdf 05 46 18.9 -1.2
BFO ePKPbc PKPbc 05 46 22.9 0.0
SOKA Soboth 148.03 344⇑ iPKPbc PKPbc 05 46 23.2 -0.6
comp=Z,10nm,1.2s
KBA Koelnbreinsper 148.08 346⇓ iPKPbc PKPdf 05 46 22.3 +1.5
comp=Z,18nm,1.3s
FUORN Ofenpass-Fuorn 149.15 349 ePKPdf PKPdf 05 46 24.5 +1.8
TUE Stuetta 149.45 351 ePKPdf PKPdf 05 46 22.5 -0.6
TUE ePKPbc PKPbc 05 46 27.5 -0.1
TUE ePKPab PKPab 05 46 32.6 +0.3
SENIN Lac Senin/Sane 149.83 353 ePKPdf PKPdf 05 46 20.2 -3.6
SENIN ePKPab PKPab 05 46 33.2 -0.7
TORD Torodi Ar. Bea 176.71 167 PKP PKPdf 05 46 47.8 -1.6
TORD PKPab PKPab 05 48 35.5 +4.3
TORD PP PP 05 52 23.9 +1.3
TORD Torodi Ar. Bea 176.71 167 PKP PKPdf 05 46 47.8 -1.6
comp=Z,3.6nm,1.2s,baz=75,slow=0.6,SNR=4.2
TORD PKPab PKPab 05 48 35.5 +4.3
comp=Z,0.5nm,1.0s,baz=169,slow=2.7,SNR=2.5
TORD PP PP 05 52 23.9 +1.3
comp=Z,1.1nm,1.2s,baz=212,slow=5.1,SNR=2.9

MEX 11 05:27:25.8±0.5, 17.05N×96.46W, h75km±5km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VHO	Vista Hermosa	0.27	275	eP	Pn	05 27 36.4	-1.2
VHO				eS	Sn	05 27 44.3	-2.0
HUIG	Huatulco	1.32	165	i P	Pn	05 27 47.5	-1.1
HUIG				i S	Sn	05 28 03.7	-1.9
PNIG	Pinotepa	1.73	248	eP	Pn	05 27 52.3	-1.7
PNIG				i S	Sn	05 28 14.5	-0.9
PCIG		3.38	113	i P	Pn	05 28 16.1	-0.2
PCIG				i S	Sn	05 28 53.6	-1.7

KRSC 11 05:48:50.0±0.4, 55.53N×161.94E, h65km±64km, ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZLN	Zelenaya	0.81	308	eP	Pn	05 49 07.5	+1.5
ZLN				i S	Sn	05 49 20.4	+2.7
BZGR	Bezymyannyi-Gr	0.81	301	eP	Pn	05 49 07.3	+1.2
BZGR				i S	Sn	05 49 20.1	+2.2
KBTR	Krutoberegovo	0.84	36	eP	Pn	05 49 08.0	+1.8
KBTR				i S	Sn	05 49 21.3	+3.1
KBG	Krutoberegovo	0.84	30	eP	Pn	05 49 07.6	+1.4
KBG				i S	Sn	05 49 20.9	+2.6
CIRR	Tsirk	0.89	312	eP	Pn	05 49 08.5	+1.4
CIRR				i S	Sn	05 49 21.7	+2.0
LGNR	Loginova	0.90	309	P	Pn	05 49 09.0	+1.7
LGNR				i S	Sn	05 49 22.6	+2.5
BZMR	Bezymyannaya	0.92	297	eP	Pn	05 49 08.2	+0.8
BZMR				i S	Sn	05 49 21.5	+1.3
BZWR	Bezymyannyi-We	0.93	299	eP	Pn	05 49 08.8	+1.3
BZWR				i S	Sn	05 49 21.8	+1.3
MKZ	Mys Kozlova	0.98	187	P	Pn	05 49 09.0	+1.0
MKZ				i S	Sn	05 49 22.6	+1.3
KMNR	Kamenistaya	0.99	284	eP	Pn	05 49 09.8	+1.5
KMNR				i S	Sn	05 49 23.8	+2.0
KRSR	Krestovskiy	1.04	312	eP	Pn	05 49 09.8	+1.0
KRSR				i S	Sn	05 49 23.7	+0.9
TUMR	Tumrok	1.05	257	eP	Pn	05 49 10.7	+1.6
TUMR				i S	Sn	05 49 25.2	+2.0
KPT	Kopyto	1.06	295	eP	Pn	05 49 10.4	+1.2
KPT				i S	Sn	05 49 25.9	+2.4
KLY	Klyuchi	1.07	318	eP	Pn	05 49 09.4	+0.3
KLY				i S	Sn	05 49 23.2	-0.1
SMKR	Semkarok	1.09	346	eP	Pn	05 49 11.7	+1.6
SMKR				i S	Sn	05 49 26.9	+2.9
BDR	Baidarnaya	1.12	339	eP	Pn	05 49 11.7	+1.8
BDR				i S	Sn	05 49 27.5	+2.8
SRKR	Sorokina	1.21	339	eP	Pn	05 49 12.5	+1.5
SRKR				i S	Sn	05 49 29.0	+2.3
KOZ	Kozyrevsk	1.28	295	eP	Pn	05 49 13.6	+1.7
KOZ				i S	Sn	05 49 31.5	+3.2
SRDR	Sredinnyy	1.48	303	eP	Pn	05 49 15.8	+1.2
SRDR				i S	Sn	05 49 35.3	+2.2
ESO	Esso	1.88	284	eP	Pn	05 49 20.9	+1.0
ESO				i S	Sn	05 49 43.3	+0.8
BKI	Bering	2.33	96	eP	Pn	05 49 27.4	+1.5
BKI				i S	Sn	05 49 53.8	+0.5
SPN	Mys Shipunski	2.68	206	eP	Pn	05 49 31.8	+1.0
SPN				i S	Sn	05 50 02.8	+0.7
SDLR	Sedlovina	2.88	220	eP	Pn	05 49 35.5	+1.9
SDLR				i S	Sn	05 50 08.8	+1.6
KRER	Koryakskii	2.91	221	eP	Pn	05 49 36.6	+2.5
KRER				i S	Sn	05 50 10.3	+2.2
SMAR	Somma	2.92	220	eP	Pn	05 49 36.4	+2.1
SMAR				i S	Sn	05 50 10.5	+2.1
AVH	Avacha	2.94	221	eP	Pn	05 49 37.3	+2.9
AVH				i S	Sn	05 50 11.2	+2.6
UGLR	Uglovaya	2.96	219	eP	Pn	05 49 36.9	+2.3
UGLR				i S	Sn	05 50 11.3	+2.3
KOK	Koryaka	2.96	222	eP	Pn	05 49 37.5	+2.8
KOK				i S	Sn	05 50 11.3	+2.2
GNL	Ganaly	2.96	233	eP	Pn	05 49 36.9	+2.1
GNL				i S	Sn	05 50 11.5	+2.2
PET	Petropavlovsk	3.17	219	eP	Pn	05 49 38.9	+1.6
PET				i S	Sn	05 50 14.9	+1.1
RUS	Russkaya	3.70	215	eP	Pn	05 49 47.0	+2.3
RUS				i S	Sn	05 50 28.4	+1.4
MTVR	Mutnovka	3.77	218	eP	Pn	05 49 48.8	+3.0
MTVR				i S	Sn	05 50 31.1	+2.0
ASAK	Asacha	3.95	219	eP	Pn	05 49 51.4	+3.2

IDC 11 06:09:02.6±3.0, 16.12S×177.68W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.7/19, mbtmp3.8/3, MS3.7/4, Ms1 3.7/4, ms1mx3.2/29, Error ellipse: s-maj=178.4km s-min=33.1km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	22.80	284	LR	LR	06 21 27.2	
	comp=Z,153nm,21.1s,baz=155,slow=33						
PPT	Papeete	26.93	97	LR	LR	06 23 03.5	
	comp=Z,121nm,18.1s,baz=292,slow=31						
STKA	Stephens Creek	40.12	239	LR	LR	06 31 47.2	
	comp=Z,153nm,19.6s,baz=207,slow=34						
ASAR	Alice Springs	45.97	253	P	P	06 17 27.8	-0.1
	0.9nm,0.6s,baz=83,slow=8.3,SNR=11						
ILAR	Eielson Array	84.00	13	P	P	06 21 34.6	+0.2
	0.6nm,1.0s,baz=214,slow=6.2,SNR=3.8						
PDAR	Pinedale Array	85.58	43	P	P	06 21 43.2	0.0
	0.3nm,0.3s,baz=190,slow=4.6,SNR=5.9						
NNA	Nana	96.89	105	LR	LR	06 57 35.1	
	comp=Z,46nm,21.5s,baz=136,slow=30						
BRTR	Keskin Array B	143.99	317	PKP	PKPbc	06 28 39.2	+0.7
	0.4nm,0.7s,baz=53,slow=0.7,SNR=2.8						

IDC ***11*** *06:51:06.2±0.8, 16.19S×177.66W, h0km, mb4.0/9, mb1 4.3/9, mb1mx4.1/20, mbtmp4.0/9, MS4.0/16, Ms1 4.0/16, ms1mx3.8/32, Error ellipse: s-maj=42.0km s-min=18.4km az=139.0*

NEIC ***11*** *06:51:07.4±0.4, 16.33S×177.64W, h10km, mb4.4/7, Error ellipse: s-maj=20.2km s-min=7.8km az=146.0*

ISCJB ***11*** *06:51:09.7±0.5, 16.2S±0.2×177.8W±0.1, h33km, mb4.2/15, MS4.0/15, Error ellipse: s-maj=26.8km s-min=7.6km az=151.1*

ISC 11 06:51:11.3±0.7, 16.3S±0.2×177.8W±0.1, h35km, n50, o085/33, mb4.1/15, MS4.0/15, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	Nonsavu	4.26	250	ePn	Pn	06 52 12.7	-1.2
MSVF				eSn	Sn	06 53 01.5	-0.9
AFI	Afiamalu	6.24	69	LR	LR	06 54 14.7	
	comp=Z,341nm,19.4s,baz=254,slow=31						
DZM	Mont Dzumac	15.99	246	eLR	LR	06 58 51.9	
	438nm,25.0s						
RAR	Rarotonga	17.72	109	LR	LR	07 00 12.7	
	comp=Z,518nm,19.9s,baz=45,slow=31						
URZ	Urewera	22.36	191	eP	P	06 56 04.9	-1.4
	28nm,1.0s						
URZ	Urewera	22.36	191	P	P	06 56 07.1	+0.7
	8.1nm,0.7s,baz=349,slow=16,SNR=3.6						
URZ				LR	LR	07 02 54.3	
	comp=Z,501nm,20.5s,baz=209,slow=32						
HNR	Honiara	22.76	285	LR	LR	07 03 31.1	
	comp=Z,880nm,21.1s,baz=292,slow=33						
PPT2	Papeete2	26.98	97	eLR	LR	07 03 30.3	
	347nm,25.5s						
TBI	Tubuai	27.50	109	eLR	LR	07 03 50.3	
	593nm,29.0s,baz=278						
RPZ	Rata Peaks	28.96	197	LR	LR	07 07 27.2	
	comp=Z,531nm,18.5s,baz=175,slow=34						
CTA	Charters Tower	34.36	258	LR	LR	07 09 35.9	
	comp=Z,195nm,20.9s,baz=254,slow=32						

CTAO	**Charters Tower**	**34.36**	**258**	*eP*		**P**	**06 57 55.8**	**+0.6**
	18nm,1.3s							
STKA	**Stephens Creek**	**39.97**	**240**	*eP*		**P**	**06 58 43.7**	**+1.0**
	4.0nm,1.3s							
STKA	**Stephens Creek**	**39.97**	**240**	P		**P**	**06 58 43.7**	**+1.0**
	1.6nm,0.7s,baz=94,slow=9.8,SNR=3.9							
STKA				LR		LR	07 12 47.4	
	comp=Z,239nm,20.2s,baz=30,slow=32							
WRAB	**Tennant Creek**	**45.55**	**258**	*eP*		**P**	**06 59 29.1**	**+0.9**
	2.0nm,0.8s							
WRA	**Warramunga Arr**	**45.56**	**258**	P		**P**	**06 59 29.2**	**+1.0**
WRA	**Warramunga Arr**	**45.56**	**258**	P		**P**	**06 59 29.2**	**+1.0**
	0.5nm,1.0s,baz=101,slow=7.3,SNR=3.7							
AS31	**Alice Springs**	**45.85**	**253**	*eP*		**P**	**06 59 31.6**	**+1.1**
ASAR	**Alice Springs**	**45.85**	**253**	P		**P**	**06 59 30.0**	**-0.5**
ASAR	**Alice Springs**	**45.85**	**253**	P		**P**	**06 59 30.0**	**-0.5**
	1.9nm,0.5s,baz=85,slow=8.4,SNR=37							
ASAR				LR		LR	07 17 28.4	
	comp=Z,219nm,18.4s,baz=96,slow=34							
FITZ	**Fitzroy Crossi**	**53.92**	**259**	LR		LR	07 21 23.1	
	comp=Z,168nm,20.3s,baz=93,slow=34							
NWAO	**Narrogin (SRO)**	**60.53**	**241**	LR		LR	07 25 37.5	
	comp=Z,187nm,18.2s,baz=287,slow=34							
KSRS	**Korea Array**	**73.91**	**318**	LR		LR	07 28 00.0	
	comp=Z,54nm,21.0s,baz=23,slow=30							
PFO	**Pinyon Flat Ob**	**76.62**	**49**	LR		LR	07 28 31.9	
	comp=Z,73nm,20.4s,baz=134,slow=29							
YBH	**Yreka Blue Hor**	**76.87**	**39**	LR		LR	07 27 35.3	
	comp=Z,115nm,22.0s,baz=203,slow=28							
LPIG	**La Paz**	**77.09**	**60**	LR		LR	07 29 25.2	
	comp=Z,7.3nm,18.9s,baz=266,slow=30							
NVAR	**Mina Array Bea**	**77.82**	**44**	P		**P**	**07 03 05.2**	**-0.4**
NVAR	**Mina Array Bea**	**77.82**	**44**	P		**P**	**07 03 05.2**	**-0.4**
	1.8nm,1.0s,baz=228,slow=9.4,SNR=7.7							
ILAR	**Eielson Array**	**84.17**	**13**	P		**P**	**07 03 37.5**	**-1.0**
ILAR	**Eielson Array**	**84.17**	**13**	P		**P**	**07 03 37.5**	**-1.0**
	1.2nm,0.9s,baz=215,slow=5.9,SNR=8.3							
PV01	**Paradox Valley**	**84.39**	**48**	*eP*		**P**	**07 03 40.5**	**-0.1**
	453nm,1.3s							
ANMO	**Albuquerque**	**84.60**	**51**	*eP*		**P**	**07 03 42.2**	**+0.5**
	5.2nm,1.4s							
MCMT	**McKenzie Canyo**	**84.60**	**40**	*eP*		**P**	**07 03 41.5**	**0.0**
	1.1nm,1.1s							
TXAR	**Lajitas Array**	**84.60**	**58**	P		**P**	**07 03 41.7**	**0.0**
TXAR	**Lajitas Array**	**84.60**	**58**	P		**P**	**07 03 41.7**	**0.0**
	1.0nm,1.0s,baz=235,slow=4.4,SNR=7.5							
TXAR				LR		LR	07 34 15.6	
	comp=Z,51nm,20.0s,baz=0.0,slow=31							
EGAK	**Eagle**	**85.49**	**15**	*eP*		**P**	**07 03 45.2**	**+0.1**
	6.5nm,1.4s							
PDAR	**Pinedale Array**	**85.75**	**43**	P		**P**	**07 03 46.0**	**-1.2**
PDAR	**Pinedale Array**	**85.75**	**43**	P		**P**	**07 03 46.0**	**-1.2**
	0.5nm,0.8s,baz=204,slow=3.3,SNR=4.8							
CMAR	**Chiang Mai Arr**	**88.92**	**289**	LR		LR	07 41 04.6	
	comp=Z,43nm,18.9s,baz=215,slow=34							
YKA	**Yellowknife Ar**	**92.60**	**24**	P		**P**	**07 04 18.2**	**-0.7**
YKA	**Yellowknife Ar**	**92.60**	**24**	P		**P**	**07 04 18.2**	**-0.7**
	0.1nm,0.4s,baz=254,slow=3.8,SNR=2.4							
ULM	**Lac du Bonnet**	**97.27**	**40**	LR		LR	07 41 04.0	
	comp=Z,94nm,18.8s,baz=326,slow=31							
BRTR	**Keskin Array B**	**144.05**	**317**	PKP		PKPbc	07 10 42.5	+0.7
BRTR	**Keskin Array B**	**144.05**	**317**	PKP		PKPbc	07 10 42.5	+0.7
	4.3nm,1.0s,baz=109,slow=1.8,SNR=13							
MMAI	**Mount Meron Ar**	**145.75**	**305**	PKPbc		**PKPab**	**07 10 48.6**	**+1.0**
MMAI	**Mount Meron Ar**	**145.75**	**305**	PKPbc		**PKPab**	**07 10 48.6**	**+1.0**
	0.8nm,0.4s,baz=76,slow=6.1,SNR=2.5							
GERES	**GERESS Array B**	**146.19**	**346**	PKPbc		**PKPab**	**07 10 48.7**	**-0.1**
GERES	**GERESS Array B**	**146.19**	**346**	PKPbc		**PKPab**	**07 10 48.7**	**-0.1**
	0.5nm,0.5s,baz=345,slow=3.2,SNR=6.5							
DAVOX	**Davos/Dischmat**	**148.93**	**350**	PKPbc		**PKPbc**	**07 10 56.6**	**+0.8**
DAVOX	**Davos/Dischmat**	**148.93**	**350**	PKPbc		**PKPbc**	**07 10 56.6**	**+0.8**
	2.2nm,0.5s,baz=262,slow=3.3,SNR=2.4							

IDC 11 06:58:00.2±1.5, 15°40'S×69°92'W, h192km±13km, mb3.7/11, mb1 3.9/14, mb1mx3.7/24, mbtmp3.7/14, Error ellipse: s-maj=21.9km s-min=11.4km az=61.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**7.54**	**296**	P	Pn	06 59 47.0	-0.5
	4.6nm,0.3s,baz=132,slow=13,SNR=12						
NNA				S	Sn	07 01 08.1	-4.6
	3.7nm,0.3s,baz=212,slow=18,SNR=3.7						
SIV	**San Ignacio**	**8.54**	**95**	P	Pn	07 00 04.2	+3.5
	1.1nm,0.3s,baz=284,slow=12,SNR=23						
SIV				S	Sn	07 01 49.7	+13
	0.5nm,0.3s,baz=324,slow=18,SNR=2.3						
ATAH	**Atahualpa**	**11.68**	**314**	P	Pn	07 00 42.8	+0.9
	0.3nm,0.3s,baz=138,slow=9.6,SNR=4.7						
CPUP	**Villa Florida**	**16.01**	**135**	P	P	07 01 34.6	-0.1
	1.5nm,0.3s,baz=292,slow=10,SNR=21						
CFAA	**Coronel Fontan**	**16.20**	**175**	P	Pn	07 01 37.5	+0.1
	0.1nm,0.3s,baz=346,slow=11,SNR=20						
PLCA	**Paso Flores**	**25.25**	**181**	P	P	07 03 07.7	-0.9
	3.2nm,0.6s,baz=360,slow=13,SNR=12						
USHA	**Ushuaia**	**30.36**	**179**	P	P	07 05 10.7	0.0
	4.7nm,0.9s,baz=335,slow=14,SNR=3.0						
TEIG	**Tepich**	**39.74**	**332**	P	P	07 05 13.3	-0.9
	6.1nm,0.6s,baz=190,slow=6.1,SNR=4.8						
TXAR	**Lajitas Array**	**55.13**	**324**	P	P	07 07 12.5	-0.4
	1.1nm,0.7s,baz=148,slow=8.2,SNR=15						
DBIC	**Dimbokro**	**68.07**	**76**	P	P	07 08 39.8	+0.2
	2.1nm,0.6s,baz=207,slow=4.5,SNR=3.0						
PDAR	**Pinedale Array**	**68.38**	**330**	P	P	07 08 41.2	0.0
	0.6nm,0.4s,baz=127,slow=9.2,SNR=12						
ULM	**Lac du Bonnet**	**69.24**	**343**	P	P	07 08 44.9	-1.2
	4.5nm,0.4s,baz=157,slow=5.7,SNR=5.3						
NVAR	**Mina Array Bea**	**70.14**	**321**	P	P	07 08 52.6	+0.5
	0.8nm,0.8s,baz=149,slow=5.9,SNR=6.2						
TORD	**Torodi Ar. Bea**	**76.31**	**72**	P	P	07 09 28.0	-0.4
	1.1nm,0.7s,baz=274,slow=5.2,SNR=9.4						
YKA	**Yellowknife Ar**	**85.14**	**341**	P	P	07 10 14.0	-0.1
	5.3nm,0.7s,baz=136,slow=5.1,SNR=106						
ILAR	**Eielson Array**	**98.35**	**335**	P	Pdif	07 11 16.0	+0.5
	0.1nm,0.6s,baz=134,slow=2.6,SNR=4.3						
KURBB	**Kurchatov Arra**	**136.64**	**29**	PKP	PKPdf	07 17 00.0	+0.7
	0.2nm,0.6s,baz=306,slow=2.3,SNR=4.0						
KURBB				SKPbc	SKPbc	07 20 12.1	-1.7
	0.1nm,0.4s,baz=312,slow=4.0,SNR=5.1						
ZALV	**Zalesovo Beam**	**136.76**	**22**	PKP	PKPdf	07 17 00.3	+0.9
	2.3nm,0.6s,baz=286,slow=1.9,SNR=7.6						
ZALV				SKPbc	SKPbc	07 20 12.7	-1.4
	0.5nm,0.4s,baz=320,slow=3.9,SNR=4.7						
MKAR	**Makanchi Array**	**141.08**	**31**	PKP	PKPdf	07 17 08.6	+0.9
	0.3nm,0.7s,baz=0.0,slow=1.7,SNR=3.9						
MKAR				SKPbc	SKPbc	07 20 25.3	-1.1
	0.7nm,0.9s,baz=298,slow=2.6,SNR=6.0						
USRK	**Ussuriysk Arra**	**145.79**	**331**	PKPbc	PKPab	07 17 17.3	-0.1
	1.8nm,0.6s,baz=95,slow=2.1,SNR=4.6						
MJAR	**Matsushiro Arr**	**147.30**	**315**	PKPbc	PKPbc	07 17 21.6	+0.2
	3.1nm,0.6s,baz=103,slow=2.2,SNR=6.2						
SONM	**Songino Array**	**147.52**	**5**	PKPbc	PKPbc	07 17 22.5	+0.7
	2.8nm,0.7s,baz=321,slow=1.8,SNR=5.3						

IDC 11 07:07:44.7±6.2, 35°.93N×71°.62E, h90km±43km, mb3.5/6, mb1 3.6/11, mb1mx3.3/33, mbtmp3.5/11, Error ellipse: s-maj=62.6km s-min=28.1km az=155.0
ISCJB 11 07:07:48.9±0.5, 36°.40N±0°.03×71°.65E±0°.07, h114km, mb3.7/5, Error ellipse: s-maj=8.9km s-min=3.6km az=160.1
NNC 11 07:07:54.2±5.2, 36°.84N×70°.93E, h112km±57km, mb3.6, mpv4.6, Error ellipse: s-maj=52.7km s-min=26.2km az=38.0

ISC 11 07:07:49.6±0.7, 36°.42N±0°.06×71°.60E±0°.08, h114km, n44, σ1°45/48, mb3.8/5, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.60**	**174**	↑P	**Pn**	**07 08 32.3**	**+1.7**
CEP				S	**Sn**	**07 09 05.0**	**+3.0**
CHCP	**Chirah Chowk**	**3.07**	**153**	P	Pn	07 08 40.0	+3.4
THW	**Thamme Wali**	**3.61**	**178**	P	**Pn**	**07 08 45.0**	**+1.1**
SARP	**Sargodha**	**4.57**	**169**	P	**Pn**	**07 08 57.0**	**+0.4**
THN	**Thein Dam**	**5.23**	**138**	*e*PKP	**Pn**	**07 09 06.5**	**+1.0**
THN				*e*S	**Sn**	**07 10 05.0**	**+0.4**
DLH	**Dalhousie**	**5.28**	**136**	*e*PKP	**Pn**	**07 09 06.0**	**-0.5**
DLH				*e*S	**Sn**	**07 10 05.0**	**-1.3**
AML	**Almayashu**	**5.93**	**15**	P	**Pn**	**07 09 16.4**	**+1.1**
	SNR=133						
KZA	**Kyzart**	**6.32**	**25**	P	**Pn**	**07 09 22.3**	**+1.7**
	SNR=12						
EKS2	**Erkin-Say**	**6.46**	**14**	P	**Pn**	**07 09 23.4**	**+1.2**
	SNR=20						
AAK	**Ala-Archa**	**6.60**	**19**	P	**Pn**	**07 09 25.8**	**+1.7**
	SNR=27						
AAK	**Ala-Archa**	**6.60**	**19**	P	**Pn**	**07 09 25.5**	**+1.4**
	4.8nm,0.3s,baz=180,slow=6.2,SNR=64						
AAK				S	**Sn**	**07 10 37.8**	**-0.2**
	1.6nm,0.3s,baz=123,slow=23,SNR=5.8						
SDNR	**Sundarnagar**	**6.63**	**136**	*e*PKP	**Pn**	**07 09 25.0**	**+0.6**
KK31	**Karatay Array**	**6.73**	**353**	P	**Pn**	**07 09 25.0**	**-0.8**
	47nm,0.4s,baz=187,slow=16,SNR=456						
KK31				S	Sn	07 10 35.1	-5.8
	17nm,0.6s,baz=178,slow=18,SNR=6.8						
KBK	**Karagaybulak**	**6.75**	**21**	P	**Pn**	**07 09 28.2**	**+2.0**
	SNR=6.5						
CHMS	**Chumysh**	**7.01**	**19**	P	**Pn**	**07 09 30.9**	**+1.4**
	SNR=6.2						
SMLA	**Simla**	**7.02**	**137**	*i* P	**Pn**	**07 09 30.9**	**+1.2**
SMLA				*i* S	**Sn**	**07 10 45.1**	**-2.8**
SMLA				*i* S		07 10 45.7	
SMLA				⇓AML	AML	07 10 50.0	
	comp=N,518nm,0.2s						
SMLA				⇓AML	AML	07 10 51.2	
	comp=E,517nm,0.2s						
TKM2	**Tokmak 2**	**7.19**	**24**	⇑P	**Pn**	**07 09 33.7**	**+1.5**
	comp=E,11nm,0.6s						
TKM2	**Tokmak 2**	**7.19**	**24**	P	**Pn**	**07 09 33.8**	**+1.6**
	SNR=31						
USP	**Ospenovka**	**7.20**	**17**	P	**Pn**	**07 09 33.5**	**+1.4**
	SNR=20						
DANN	**Dangsing**	**13.04**	**125**	*e*P	**Pn**	**07 10 49.4**	**-1.4**
MK31	**Makanchi Array**	**13.08**	**34**	P	**P**	**07 10 56.6**	**-0.2**
	comp=E,0.5nm,0.6s,baz=208,slow=9.2,SNR=6.1						
MKAR	**Makanchi Array**	**13.08**	**34**	P	**Pn**	**07 10 52.5**	**+1.6**
	comp=E,0.1nm,0.3s,baz=213,slow=11,SNR=5.6						
KOLN	**Koldanda**	**13.32**	**127**	*e*P	**Pn**	**07 10 53.4**	**-1.0**
	comp=E,11nm,0.3s						
KOLN				*e*S	Sn	07 13 13.4	-7.8
DMN	**Daman**	**14.42**	**124**	*e*P	**Pn**	**07 11 06.9**	**-1.7**
KKN	**Kakani**	**14.42**	**123**	*e*P	**Pn**	**07 11 07.0**	**-1.5**
	comp=E,17nm,0.4s						
PKIN	**Phulchoki**	**14.64**	**123**	*e*P	**Pn**	**07 11 10.0**	**-1.3**
	comp=E,19nm,0.5s						
PKI	**Pulchoki**	**14.65**	**123**	*e*P	**Pn**	**07 11 10.3**	**-1.2**
	comp=E,16nm,0.4s						
GUN	**Gumba**	**14.76**	**121**	*e*P	**Pn**	**07 11 11.6**	**-1.3**
	comp=E,21nm,0.4s						
KURBB	**Kurchatov Arra**	**15.05**	**17**	P	**P**	**07 11 19.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=204,slow=11,SNR=14						
AB31	**Akbulak array**	**15.40**	**330**	P	**Pn**	**07 11 17.1**	**-3.3**
	comp=E,4.5nm,0.5s,baz=138,slow=11,SNR=172						
AB31				S	Sn	07 13 59.2	-11
	comp=E,2.8nm,0.5s,baz=161,slow=22,SNR=8.6						
RAMN	**Ramite**	**15.86**	**122**	*e*P	**Pn**	**07 11 25.9**	**-0.7**
	comp=E,21nm,0.5s						
VOSK	**Vostochnaya**	**16.31**	**359**	⇑P	**Pn**	**07 11 31.2**	**-0.5**
	comp=E,2.9nm,1.0s						
TAPN	**Taplejung**	**16.38**	**119**	*e*P	**Pn**	**07 11 32.4**	**-0.7**
	comp=E,51nm,0.7s						
ODAN	**Odare**	**16.46**	**121**	*e*P	**Pn**	**07 11 34.2**	**+0.2**
	comp=E,11nm,0.4s						
BVAR	**Borovoye Array**	**16.63**	**357**	P	**P**	**07 11 37.8**	**+1.6**
	comp=E,0.4nm,0.3s,baz=156,slow=6.9,SNR=5.9						
ZRNK	**Zerenda**	**16.64**	**355**	⇓P	**Pn**	**07 11 34.2**	**-1.5**
	comp=E,4.5nm,1.3s						
AKTO	**Aktyubinsk**	**17.10**	**329**	P	**P**	**07 11 41.1**	**-0.2**
	comp=E,1.6nm,0.3s,baz=134,slow=11,SNR=18						
ZALV	**Zalesovo Beam**	**19.80**	**24**	P	**P**	**07 12 11.9**	**+1.2**
	comp=E,1.9nm,0.3s,baz=208,slow=11,SNR=9.4						
GNI	**Garni**	**21.38**	**288**	P	**P**	**07 12 28.0**	**-0.1**
	comp=E,3.4nm,0.3s,baz=61,slow=17,SNR=3.1						
FINES	**FINESS Array B**	**37.83**	**326**	P	**P**	**07 14 55.9**	**+1.2**
	comp=E,0.6nm,0.3s,baz=117,slow=8.9,SNR=8.2						
NB2	**NORSAR Subarra**	**44.74**	**323**	P	**P**	**07 15 51.4**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=96,slow=8.6						
NOA	**NORSAR Array B**	**44.74**	**323**	P	**P**	**07 15 51.7**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=96,slow=7.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	**66.20**	**269**	P	**P**	**07 18 22.8**	**-2.6**
	comp=Z,0.4nm,0.5s,baz=52,slow=6.0,SNR=4.7						
YKA	**Yellowknife Ar**	**81.31**	**3**	P	**P**	**07 19 53.7**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=351,slow=5.3,SNR=5.2						

IDC 11 07:09:38.4±0.9, 5°.69S×133°.96E, h0km, mb3.9/7, mb1 4.2/9, mb1mx3.9/19, mbtmp4.0/9, ML4.0/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/30, Error ellipse: s-maj=45.0km s-min=19.8km az=67.0
ISCJB 11 07:09:40.9±0.6, 5°.95S±0°.05×133°.74E±0°.08, h33km, mb3.7/7, Error ellipse: s-maj=11.4km s-min=6.7km az=171.3
AUST 11 07:09:44.6, 5°.96S×133°.54E, h35km

ISC 11 07:09:43.4±0.8, 6°.07S±0°.07×133°.60E±0°.09, h33km, n25, σ2°58/23, mb3.9/7, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.40**	**337**	P	Pn	07 10 29.8	-4.4
	baz=3.3,SNR=4.1						
FAKI				S	Sn	07 11 02.9	-11
	baz=3.3,SNR=6.7						
AAI	**Ambon**	**5.88**	**293**	P	**Pn**	**07 11 08.3**	**+0.1**
	baz=5.8,SNR=4.2						
KDU	**Kakadu**	**6.67**	**189**	P	Pn	07 11 24.1	+5.0
	baz=6.8,SNR=54						
MTN	**Manton Dam**	**7.16**	**200**	P	Pn	07 11 33.6	+7.8
	baz=7.3,SNR=4.9						
JAY	**Jayapura**	**7.92**	**64**	P	Pn	07 11 32.1	-4.2
	baz=7.9,SNR=4.2						
KNRA	**Kununurra**	**10.66**	**206**	P	Pn	07 12 17.7	+3.9
	baz=11,SNR=17						
KNRA				S	**Sn**	**07 14 14.4**	**+2.2**
	baz=11,SNR=6.4						
COEN	**Coen**	**12.26**	**130**	P	**Pn**	**07 12 35.0**	**-0.8**
	baz=12,SNR=12						
WRA	**Warramunga Arr**	**13.81**	**177**	Pn	**Pn**	**07 12 57.5**	**+0.5**
	1.0nm,0.3s,baz=356,slow=13,SNR=25						
WRA				Sn	**Sn**	**07 15 23.4**	**-6.0**
	0.6nm,0.3s,baz=359,slow=23,SNR=3.4						
KAPI	**Kappang**	**13.82**	**274**	Pn	Pn	07 13 00.7	+3.7
	0.6nm,0.3s,baz=106,slow=4.9,SNR=5.3						
KAPI				LR	LR	07 19 21.9	
	comp=Z,104nm,18.8s,baz=302,slow=41						
FITZ	**Fitzroy Crossi**	**14.26**	**212**	Pn	**Pn**	**07 13 04.6**	**+1.5**
	1.8nm,0.3s,baz=33,slow=11,SNR=40						
FITZ				Sn	**Sn**	**07 15 35.7**	**-4.6**
	2.9nm,0.3s,baz=192,slow=15,SNR=7.0						
FITZ	**Fitzroy Crossi**	**14.26**	**212**	P	**Pn**	**07 13 04.6**	**+1.5**
	baz=14,SNR=28						
FITZ				S	**Sn**	**07 15 37.2**	**-3.0**
	baz=14,SNR=5.5						
MTSU	**Mount Surprise**	**15.92**	**140**	P	**P**	**07 13 30.9**	**+2.6**
	baz=16,SNR=8.1						
ASAR	**Alice Springs**	**17.50**	**179**	P	**P**	**07 13 47.0**	**+1.0**
	0.5nm,0.3s,baz=357,slow=9.8,SNR=27						
ASAR				S	**Sn**	**07 16 57.2**	**-1.8**
	0.3nm,0.3s,baz=357,slow=24,SNR=3.9						
QLP	**Quilpie**	**22.79**	**155**	P	**P**	**07 14 48.0**	**+4.7**
	baz=23,SNR=4.5						
STKA	**Stephens Creek**	**26.75**	**165**	P	**P**	**07 15 22.5**	**+2.5**
	3.9nm,0.5s,baz=334,slow=8.1,SNR=16						
STKA	**Stephens Creek**	**26.75**	**165**	P	**P**	**07 15 22.6**	**+2.5**
	baz=27,SNR=10						
ARPS	**Mount Arapiles**	**31.48**	**167**	P	P	07 16 05.6	+3.6
	baz=32,SNR=7.4						
CMAR	**Chiang Mai Arr**	**41.97**	**306**	P	**P**	**07 17 31.5**	**-0.2**
	0.8nm,0.4s,baz=125,slow=7.8,SNR=6.0						
MKAR	**Makanchi Array**	**69.46**	**325**	P	**P**	**07 20 47.9**	**-0.6**
	0.6nm,0.5s,baz=115,slow=8.2,SNR=11						
ZALV	**Zalesovo Beam**	**72.38**	**332**	P	**P**	**07 21 05.9**	**-0.1**
	0.5nm,0.4s,baz=104,slow=6.1,SNR=2.5						
KURBB	**Kurchatov Arra**	**73.63**	**327**	P	**P**	**07 21 12.2**	**-1.2**
	0.4nm,0.7s,baz=124,slow=5.1,SNR=3.9						
BVAR	**Borovoye Array**	**79.22**	**327**	P	**P**	**07 21 45.8**	**+0.7**
	0.3nm,0.4s,baz=122,slow=5.2,SNR=2.9						
ILAR	**Eielson Array**	**90.99**	**25**	P	**P**	**07 22 41.0**	**-2.9**
	0.2nm,0.8s,baz=276,slow=4.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**132.12**	**282**	PKP	**PKPdf**	**07 28 55.4**	**+0.6**
	0.4nm,0.8s,baz=122,slow=1.9,SNR=2.6						
CPUP	**Villa Florida**	**146.10**	**162**	PKPbc	**PKPab**	**07 29 21.9**	**+0.5**
	1.2nm,0.6s,baz=148,slow=4.5,SNR=5.2						

JMA 11 07:17:14.8±0.3, 24°.99N×122°.08E, h46km, M2.5
ISCJB 11 07:17:15.0±0.5, 24°.36N±0°.02×122°.06E±0°.02, h11km±3km, Error ellipse: s-maj=3.2km s-min=2.6km az=148.2
TAP 11 07:17:15.4, 24°.39N×121°.98E, h27km, ML3.5, C

ISC 11 07:17:15.8±1.0, 24°.40N±0°.02×122°.01E±0°.03, h23km±8km, n38, σ0°876/73, 3C-1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.25**	**277**	P	**Pb**	**07 17 21.8**	**-0.1**
	baz=286						
ENA				*e*S	**Sb**	**07 17 26.1**	**0.0**
	baz=286						
TWC	**Suao**	**0.26**	**325**	*i* P	**Pb**	**07 17 22.1**	**0.0**
	baz=339						
TWC				*i* S	**Sb**	**07 17 26.4**	**+0.1**
	baz=339						
ILA	**Ilan**	**0.44**	**327**	*e*P	**Pn**	**07 17 25.7**	**-0.9**
	baz=331						
ILA				*e*S	**Sn**	**07 17 32.1**	**-1.8**
	baz=331						
TWE	**Neicheng**	**0.45**	**316**	*i* P	**Pb**	**07 17 25.0**	**-0.1**
	baz=320						
TWE				*i* S	**Sb**	**07 17 31.6**	**+0.1**
	baz=320						
ENTT	**Nioudou**	**0.47**	**301**	P	**Pb**	**07 17 25.6**	**+0.1**
	baz=304						
ENTT				S	**Sb**	**07 17 32.2**	**+0.1**
	baz=304						
TWD	**Chiawan**	**0.49**	**230**	⇑*i* P	**Pb**	**07 17 25.5**	**-0.3**
	baz=236						
TWD				*e*S	**Sb**	**07 17 33.6**	**+1.0**
	baz=236						
HWA	**Hwalien**	**0.56**	**222**	*e*P	**Pb**	**07 17 26.9**	**0.0**
	baz=218						
HWA				*e*S	**Sb**	**07 17 35.4**	**+0.9**
	baz=218						
NNS	**Nan Shan**	**0.58**	**274**	⇓*i* P	**Pb**	**07 17 27.3**	**-0.2**
	baz=280						
NNS				S	**Sb**	**07 17 35.4**	**0.0**
	baz=280						
TWB1	**Santiao Chiao**	**0.61**	**358**	P	**Pn**	**07 17 28.5**	**-0.5**
	baz=357						
TWB1				S	**Sn**	**07 17 36.7**	**-1.4**
	baz=357						
NSK	**Sanguang**	**0.66**	**295**	P	**Pb**	**07 17 28.4**	**-0.2**
	baz=297						
NSK				S	**Sb**	**07 17 37.1**	**-0.3**
	baz=297						
NWF	**Wu-fen Shan**	**0.70**	**343**	P	**Pn**	**07 17 29.7**	**-0.7**
	baz=339						
NWF				S	**Sn**	**07 17 40.2**	**-0.3**
	baz=339						
WHF	**Hehuan Shan**	**0.73**	**250**	⇑*i* P	**Pb**	**07 17 29.6**	**-0.4**
	baz=249						
WHF				S	**Sb**	**07 17 40.0**	**+0.3**
	baz=249						
TWT	**Tachien**	**0.78**	**260**	*e*P	**Pb**	**07 17 30.6**	**-0.1**
	baz=259						
TWT				*e*S	**Sb**	**07 17 41.0**	**+0.1**
	baz=259						
TAP1	**Taipei**	**0.78**	**325**	*e*P	**Pn**	**07 17 31.1**	**-0.2**
	baz=321						
TAP1				*e*S	**Sn**	**07 17 42.3**	**0.0**
	baz=321						
ESL	**Shilin**	**0.79**	**223**	*e*P	**Pb**	**07 17 29.7**	**-1.1**
	baz=233						
ESL				*e*S	**Sb**	**07 17 41.7**	**+0.7**
	baz=233						
TWS1	**Kuangyinshan**	**0.89**	**322**	*e*P	**Pn**	**07 17 32.6**	**-0.2**
	baz=335						
TWS1				*e*S	**Sn**	**07 17 46.1**	**+1.2**
	baz=335						
YOJ	**Yonaguni jima**	**0.91**	**86**	P	**Pn**	**07 17 32.6**	**-0.5**
YOJ				*e*S	**Sn**	**07 17 45.7**	**+0.2**
NSTT	**Nanjuang**	**0.95**	**284**	*e*P	**Pb**	**07 17 33.8**	**+0.2**
	baz=285						
NSTT				S	**Sn**	**07 17 46.4**	**-0.2**
	baz=285						
TWY	**Chenhua**	**0.95**	**337**	*e*P	**Pb**	**07 17 34.2**	**+0.6**
	baz=340						
TWY				*e*S	**Sn**	**07 17 47.4**	**+0.9**
	baz=340						
EHY	**Hungye**	**1.09**	**216**	*e*P	**Pn**	**07 17 33.8**	**-1.8**
	baz=212						
EHY				*e*S	**Sn**	**07 17 49.0**	**-1.0**
	baz=212						
TWQ1	**Liyutan**	**1.13**	**268**	*e*P	**Pb**

0.8nm,1.0s,baz=90,slow=2.0,SNR=5.0
FINES FINESS Array B 145.91 340 PKPbc PKPdf 07 40 40.1 -0.6
0.7nm,0.5s,baz=71,slow=4.7,SNR=3.6

*IDC **11** 07:51:08.0±0.6,30°.82S×176°.62W,h0km,mb4.2/10, mb1 4.4/10,mb1mx4.2/19,mbtmp4.2/10,MS3.8/4, Ms1 3.8/4,ms1mx3.3/21,Error ellipse: s-maj=21.9km s-min=16.6km az=70.0*
*ISCJB **11** 07:51:11.6±0.5,31°.05S±0°.04×177°.01W±0°.09,h33km, mb4.2/13,MS3.8/4, Error ellipse: s-maj=11.6km s-min=5.3km az=14.5*
*NEIC **11** 07:51:13.4±0.4,30°.84S×176°.84W,h35km,mb4.3/6,Error ellipse: s-maj=13.1km s-min=10.0km az=104.0*

ISC 11 07:51:13.5±0.6,30°.99S±0°.06×176°.87W±0°.10,h35km,n58, σ1s71/58,mb4.2/13,MS3.7/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.95**	**332**	*e*Pn		**Pn**		**07 51 41.2**	**-2.9**
RAO	**Raoul Island**	**1.95**	**332**	Pn		**Pn**		**07 51 42.4**	**-1.7**
	247nm,0.3s,baz=261,slow=24,SNR=7.2								
RAO				Sn		**Sn**		**07 52 06.5**	**-0.8**
	566nm,0.3s,baz=245,slow=24,SNR=8.1								
CNGZ	**Carnagh Statio**	**8.51**	**207**	PN		**Pn**		**07 53 11.5**	**-2.6**
MWZ	**Matawai**	**8.66**	**211**	*e*PN		**Pn**		**07 53 14.3**	**-2.0**
MWZ				SN		**Sn**		**07 54 53.8**	**+1.1**
URZ	**Urewera**	**8.79**	**213**	*e*Pn		**Pn**		**07 53 17.9**	**-0.1**
URZ				Sn		**Sn**		**07 54 55.4**	**-0.4**
URZ	**Urewera**	**8.79**	**213**	Pn		**Pn**		**07 53 17.3**	**-0.7**
URZ				*e*SN		**Sn**		**07 54 55.0**	**-0.7**
URZ	**Urewera**	**8.79**	**213**	Pn		**Pn**		**07 53 17.0**	**-1.0**
	1.2nm,0.3s,baz=201,slow=16,SNR=12								
URZ				Sn		**Sn**		**07 54 55.4**	**-0.4**
	3.4nm,0.3s,baz=200,slow=20,SNR=8.6								
BKZ	**Black Stump Fm**	**9.80**	**212**	PN		**Pn**		**07 53 28.8**	**-3.2**
BKZ				SN		**Sn**		**07 55 19.8**	**-1.0**
MRZ	**Mangatainoka R**	**11.43**	**210**	*e*Pn		Pn		07 53 49.3	-4.9
MRZ				*e*SN		**Sn**		**07 55 55.3**	**-5.3**
THZ	**Tophouse**	**13.53**	**215**	*e*Pn		Pn		07 54 18.5	-4.4
RPZ	**Rata Peaks**	**15.90**	**214**	*e*Pn		**Pn**		**07 54 51.2**	**-3.3**
RPZ	**Rata Peaks**	**15.90**	**214**	Pn		**Pn**		**07 54 50.6**	**-3.9**
	1.8nm,0.3s,baz=307,slow=5.4,SNR=8.7								
DZM	**Mont Dzumac**	**17.35**	**297**	*e*LR		LR		07 59 01.8	
	510nm,28.7s								
DZM	**Mont Dzumac**	**17.35**	**297**	P		**P**		**07 55 17.9**	**+3.8**
DZM	**Mont Dzumac**	**17.35**	**297**	P		**P**		**07 55 17.9**	**+3.8**
	0.5nm,0.3s,baz=96,slow=18,SNR=5.0								
TBI	**Tubuai**	**25.50**	**79**	*e*LR		LR		08 02 24.2	
	150nm,27.8s								
PPT2	**Papeete2**	**28.14**	**68**	*e*LR		LR		08 03 32.9	
	84nm,23.7s								
PPT	**Papeete**	**28.15**	**68**	LR		LR		08 06 40.6	
	comp=Z,202nm,18.4s,baz=215,slow=34								
CTA	**Charters Tower**	**34.85**	**279**	LR		LR		08 10 16.9	
	comp=Z,119nm,19.6s,baz=306,slow=33								
STKA	**Stephens Creek**	**35.30**	**257**	*e*P		**P**		**07 58 05.4**	**+0.2**
	0.4nm,0.4s								
STKA	**Stephens Creek**	**35.30**	**257**	P		P		07 58 08.3	+3.1
	6.6nm,1.0s,baz=91,slow=9.4,SNR=10								
STKA				LR		LR		08 10 10.4	
	comp=Z,124nm,21.8s,baz=24,slow=32								
RKT	**Rikitea**	**37.95**	**89**	*e*LR		LR		08 08 13.1	
	193nm,29.0s								
ASAR	**Alice Springs**	**44.05**	**267**	P		**P**		**07 59 18.9**	**+0.8**
ASAR	**Alice Springs**	**44.05**	**267**	P		**P**		**07 59 18.9**	**+0.8**
	1.3nm,0.6s,baz=105,slow=7.5,SNR=24								
WRAB	**Tennant Creek**	**45.08**	**272**	*e*P		**P**		**07 59 27.8**	**+1.4**
	2.1nm,0.6s								
WRA	**Warramunga Arr**	**45.09**	**272**	P		**P**		**07 59 27.0**	**+0.5**
WRA	**Warramunga Arr**	**45.09**	**272**	P		**P**		**07 59 27.0**	**+0.5**
	3.0nm,0.7s,baz=112,slow=7.6,SNR=18								
VNDA	**Vanda**	**47.62**	**186**	*e*P		**P**		**07 59 45.4**	**-0.1**
	0.4nm,0.4s								
VNDA	**Vanda**	**47.62**	**186**	P		**P**		**07 59 45.1**	**-0.4**
	1.0nm,0.6s,baz=59,slow=14,SNR=5.5								
QSPA	**South Pole Qui**	**59.13**	**180**	*e*P		**P**		**08 01 12.7**	**+2.4**
	7.8nm,1.1s								
QSPA	**South Pole Qui**	**59.13**	**180**	P		**P**		**08 01 12.4**	**+2.1**
	4.8nm,0.9s,baz=57,slow=4.3,SNR=18								
MAW	**Mawson**	**72.10**	**200**	P		**P**		**08 02 35.9**	**+2.2**
MAW	**Mawson**	**72.10**	**200**	P		**P**		**08 02 35.9**	**+2.2**
	1.9nm,0.8s,baz=76,slow=3.4,SNR=3.5								
SNAA	**Sanae**	**77.54**	**178**	*e*P		**P**		**08 03 05.9**	**+0.6**
SNAA	**Sanae**	**77.54**	**178**	P		**P**		**08 03 05.6**	**+0.3**
SNAA	**Sanae**	**77.54**	**178**	P		**P**		**08 03 05.6**	**+0.3**
	1.3nm,0.9s,baz=166,slow=6.1,SNR=8.9								
VNA2	**Neumayer--Watz**	**78.10**	**176**	*e*P		**P**		**08 03 09.5**	**+1.1**
VNA1	**Neumayer--Stat**	**78.33**	**176**	*e*P		**P**		**08 03 10.9**	**+1.3**
PLCA	**Paso Flores**	**81.40**	**132**	LR		LR		08 34 05.0	
	comp=Z,74nm,19.8s,baz=82,slow=32								
NVAR	**Mina Array Bea**	**88.02**	**42**	P		**P**		**08 03 59.5**	**-0.7**
NVAR	**Mina Array Bea**	**88.02**	**42**	P		**P**		**08 03 59.5**	**-0.7**
	2.1nm,0.8s,baz=222,slow=8.3,SNR=13								
TXAR	**Lajitas Array**	**91.89**	**57**	P		**P**		**08 04 16.9**	**-1.5**
TXAR	**Lajitas Array**	**91.89**	**57**	P		**P**		**08 04 16.9**	**-1.5**
	1.1nm,0.9s,baz=206,slow=8.0,SNR=12								
MFID	**Camas Ranch**	**92.74**	**40**	*e*P		**P**		**08 04 21.6**	**-0.5**
	1.9nm,0.3s								
HLID	**Hailey**	**93.62**	**40**	*e*P		**P**		**08 04 25.9**	**-0.3**
	1.4nm,0.9s								
ILAR	**Eielson Array**	**98.28**	**13**	P		**P**		**08 04 45.7**	**-0.9**
ILAR	**Eielson Array**	**98.28**	**13**	P		**P**		**08 04 45.7**	**-0.9**
	0.2nm,0.8s,baz=225,slow=6.2,SNR=5.0								
MKAR	**Makanchi Array**	**118.89**	**310**	PKP		**PKPdf**		**08 09 58.1**	**+0.1**
MKAR	**Makanchi Array**	**118.89**	**310**	PKP		**PKPdf**		**08 09 58.1**	**+0.1**
	0.2nm,0.6s,baz=92,slow=3.3,SNR=3.0								
KAF	**Kangasniemi**	**145.42**	**341**	*e*p		PKPab		08 10 54.2	+7.0
FINES	**FINESS Array B**	**146.02**	**340**	PKPbc		**PKPdf**		**08 10 48.2**	**+0.2**
FINES	**FINESS Array B**	**146.02**	**340**	PKPbc		**PKPdf**		**08 10 48.2**	**+0.2**
	2.1nm,0.6s,baz=45,slow=4.1,SNR=10								
AKASG	**Malin Array Be**	**152.35**	**323**	PKPbc		**PKPbc**		**08 11 05.2**	**0.0**
AKASG				PKPab		**PKPab**		**08 11 14.7**	**-0.7**
AKASG	**Malin Array Be**	**152.35**	**323**	PKPbc		**PKPbc**		**08 11 05.2**	**0.0**
	1.9nm,0.8s,baz=50,slow=2.8,SNR=5.7								
AKASG				PKPab		**PKPab**		**08 11 14.7**	**-0.7**
	2.1nm,0.8s,baz=47,slow=2.6,SNR=4.0								
BRTR	**Keskin Array B**	**153.73**	**298**	PKPbc		**PKPbc**		**08 11 08.5**	**-0.4**
BRTR				PKPab		**PKPab**		**08 11 23.3**	**+1.4**
BRTR	**Keskin Array B**	**153.73**	**298**	PKPbc		**PKPbc**		**08 11 08.5**	**-0.4**
	0.2nm,0.4s,baz=186,slow=2.9,SNR=2.5								
BRTR				PKPab		**PKPab**		**08 11 23.3**	**+1.4**
	0.4nm,0.7s,baz=104,slow=6.1,SNR=2.4								
TORD	**Torodi Ar. Bea**	**162.20**	**175**	PKPab		**PKPab**		**08 11 58.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**162.20**	**175**	PKPab		**PKPab**		**08 11 58.9**	**+0.3**
	3.0nm,0.9s,baz=180,slow=3.9,SNR=12								

IDC 11 07:51:32.0±2.7,9°.44N×127°.38E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.5/25,mbtmp3.6/4,Error ellipse: s-maj=156.3km s-min=25.6km az=69.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**27.42**	**184**	P		P		07 57 19.8	+0.3
	2.0nm,0.9s,baz=350,slow=6.1,SNR=2.5								
WRA	**Warramunga Arr**	**29.99**	**167**	P		P		07 57 41.8	-0.7
	0.4nm,0.8s,baz=347,slow=8.9,SNR=3.4								
ASAR	**Alice Springs**	**33.52**	**169**	P		P		07 58 13.8	+0.4
	0.2nm,0.3s,baz=351,slow=6.8,SNR=6.9								
MKAR	**Makanchi Array**	**53.34**	**323**	P		P		08 00 53.1	-0.1
	0.5nm,0.7s,baz=122,slow=6.6,SNR=6.0								

IDC 11 08:10:08.4±3.1,6°.40S×154°.98E,h77km±27km,mb3.9/8, mb1 4.1/11,mb1mx3.7/22,mbtmp4.0/11,MS3.3/4, Ms1 3.2/4,ms1mx3.0/24,Error ellipse: s-maj=24.7km s-min=18.2km az=177.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.77**	**122**	P		Pn		08 11 31.4	-0.1
	7.5nm,0.3s,baz=282,slow=19,SNR=3.7								
HNR				LR		LR		08 13 36.3	
	comp=Z,74nm,21.2s,baz=343,slow=36								
PMG	**Port Moresby**	**8.30**	**248**	P		Pn		08 12 06.1	0.0
	1.6nm,0.3s,baz=75,slow=20,SNR=5.5								
PMG				S		Sn		08 13 39.8	+1.5
	1.5nm,0.3s,baz=150,slow=20,SNR=4.6								
CTA	**Charters Tower**	**16.03**	**211**	LR		LR		08 18 48.3	
	comp=Z,116nm,20.1s,baz=48,slow=32								
DZM	**Mont Dzumac**	**19.11**	**146**	P		P		08 14 25.8	+0.3
	0.3nm,0.3s,baz=301,slow=18,SNR=3.2								
WRA	**Warramunga Arr**	**24.14**	**234**	P		P		08 15 17.8	+0.3
	12nm,0.9s,baz=57,slow=9.5,SNR=37								
WRA				pP		pP		08 15 30.9	-4.2
	2.5nm,0.5s,baz=57,slow=9.5,SNR=7.2								
ASAR	**Alice Springs**	**26.55**	**228**	P		P		08 15 39.4	0.0
	2.8nm,0.7s,baz=60,slow=8.5,SNR=32								
ASAR				pP		pP		08 15 53.2	-4.0
	1.1nm,0.5s,baz=58,slow=8.5,SNR=9.7								
STKA	**Stephens Creek**	**28.26**	**205**	P		P		08 15 54.0	-0.5
	2.0nm,0.6s,baz=16,slow=12,SNR=11								
STKA				LR		LR		08 26 23.1	
	comp=Z,142nm,21.2s,baz=28,slow=34								
FITZ	**Fitzroy Crossi**	**30.88**	**245**	P		P		08 16 17.2	-0.7
	2.8nm,0.7s,baz=78,slow=12,SNR=5.2								
CMAR	**Chiang Mai Arr**	**60.52**	**295**	P		P		08 20 11.5	+0.4
	1.3nm,0.3s,baz=114,slow=5.3,SNR=7.5								
MKAR	**Makanchi Array**	**82.95**	**319**	P		P		08 22 24.6	-0.5
	0.3nm,0.6s,baz=91,slow=5.2,SNR=5.6								
MKAR				LR		LR		08 56 56.7	
	comp=Z,17nm,19.1s,baz=357,slow=34								
MAW	**Mawson**	**84.93**	**203**	P		P		08 22 35.2	+0.4
	1.6nm,0.5s,baz=67,slow=6.6,SNR=9.3								
YKA	**Yellowknife Ar**	**95.82**	**28**	P		P		08 23 25.9	-0.1
	0.3nm,0.9s,baz=268,slow=4.4,SNR=3.1								
TORD	**Torodi Ar. Bea**	**152.85**	**286**	PKPbc		PKPbc		08 29 57.7	-0.1
	0.3nm,0.8s,baz=81,slow=2.6,SNR=2.6								
TORD				PKPab		PKPab		08 30 08.6	-0.4
	0.9nm,0.9s,baz=62,slow=2.3,SNR=5.0								

*DDA **11** 08:10:54.9,37°.22N×28°.08E,h8km,MD2.8*
*ISK **11** 08:10:54.6,37°.25N×28°.15E,h7km,MD2.8*
*CSEM **11** 08:10:55.2±0.2,37°.23N×28°.16E,h1km,MD2.8,Error ellipse: s-maj=4.9km s-min=3.7km az=42.0*
*ISCJB **11** 08:10:55.1±0.5,37°.21N±0°.03×28°.12E±0°.04,h0km,Error ellipse: s-maj=5.9km s-min=4.0km az=135.2*

ISC 11 08:10:55.7±1.0,37°.24N±0°.03×28°.16E±0°.03,h0km,n28, σ0s95/37,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.14**	**136**	*e*PG		**Pg**		**08 10 57.9**	**-0.5**
YER				*e*SG		**Sg**		**08 11 01.1**	**+0.9**
YER	**Yerkesik**	**0.14**	**136**	*e*Pg		**Pg**		**08 10 57.9**	**-0.5**
YER				*e*Sg		**Sg**		**08 11 01.1**	**+0.9**
MLSB	**Milas**	**0.31**	**281**	*e*PG		**Pg**		**08 11 01.1**	**-0.5**
MLSB	**Milas**	**0.31**	**281**	*e*Pg		**Pg**		**08 11 01.1**	**-0.5**
AYDN	**Tasoluk**	**0.48**	**332**	*i* P		**Pg**		**08 11 05.1**	**+0.3**
AYDN				*i* S		**Sg**		**08 11 12.1**	**+1.1**
AYDN	**Tasoluk**	**0.48**	**332**	*i* P		**Pg**		**08 11 05.1**	**+0.3**
AYDN				*i* S		**Sg**		**08 11 12.1**	**+1.1**
TURN	**Turunc**	**0.51**	**136**	*i* P		**Pg**		**08 11 03.5**	**-1.9**
TURN	**Turunc**	**0.51**	**136**	*i* P		**Pg**		**08 11 03.5**	**-1.9**
DALY	**Dalyan (Mu˘la**	**0.58**	**137**	*e*PG		**Pg**		**08 11 06.6**	**-0.1**
DALY	**Dalyan (Mu˘la**	**0.58**	**137**	*e*Pg		**Pg**		**08 11 06.6**	**-0.1**
DAT	**Datca**	**0.69**	**223**	*e*PG		**Pg**		**08 11 08.7**	**-0.1**
DAT	**Datca**	**0.69**	**223**	*e*Pg		**Pg**		**08 11 08.7**	**-0.1**
BODT	**Bodrum**	**0.70**	**256**	*e*PG		**Pg**		**08 11 08.4**	**-0.6**
BODT	**Bodrum**	**0.70**	**256**	*e*Pg		**Pg**		**08 11 08.5**	**-0.6**
DNZL	**Cakiroluk**	**0.84**	**57**	*i* P		**Pg**		**08 11 12.0**	**+0.3**
DNZL	**Cakiroluk**	**0.84**	**57**	*i* P		**Pg**		**08 11 12.0**	**+0.3**
FETY	**Fethiye**	**0.95**	**129**	*e*PG		**Pg**		**08 11 14.3**	**+0.3**
FETY	**Fethiye**	**0.95**	**129**	*e*Pg		**Pg**		**08 11 14.3**	**+0.3**
GOLH	**Golhisar**	**1.12**	**90**	*i* P		**Pg**		**08 11 16.5**	**-0.6**
GOLH				*i* S		**Sn**		**08 11 34.9**	**0.0**
GOLH	**Golhisar**	**1.12**	**90**	*i* P		**Pg**		**08 11 16.5**	**-0.6**
GOLH				*i* S		**Sn**		**08 11 34.9**	**0.0**
MANT	**Manisa**	**1.29**	**14**	*i* P		**Pg**		**08 11 19.7**	**-0.7**
MANT				*i* S		**Sn**		**08 11 39.1**	**-0.2**
MANT	**Manisa**	**1.29**	**14**	*i* P		**Pg**		**08 11 19.7**	**-0.7**
MANT				*i* S		**Sn**		**08 11 39.1**	**-0.2**
KULA	**Kula-Manisa**	**1.33**	**17**	*e*PN		**Pg**		**08 11 20.1**	**-1.2**
KULA	**Kula-Manisa**	**1.33**	**17**	*e*Pn		**Pg**		**08 11 20.1**	**-1.2**
ELL	**Elmali**	**1.48**	**109**	*e*PN		**Pn**		**08 11 22.7**	**-1.0**
ELL	**Elmali**	**1.48**	**109**	*e*Pn		**Pn**		**08 11 22.7**	**-1.0**
AKAS	**Kas**	**1.54**	**130**	*i* P		**Pn**		**08 11 24.1**	**-0.3**
AKAS				*i* S		**Sg**		**08 11 48.1**	**+3.2**
AKAS	**Kas**	**1.54**	**130**	*i* P		**Pn**		**08 11 24.1**	**-0.3**

IDC 11 08:17:32.9±2.3,11°.69S×165°.98E,h0km,mb3.7/3, mb1 4.0/4,mb1mx3.6/20,mbtmp3.9/4,ML4.5/1,MS3.5/1, Ms1 3.4/1,ms1mx2.8/24,Error ellipse: s-maj=70.6km s-min=33.5km az=145.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.34**	**290**	Pn		Pn		08 19 07.8	+0.1
	11nm,0.3s,baz=72,slow=20,SNR=3.7								
STKA	**Stephens Creek**	**30.14**	**224**	LR		LR		08 36 12.7	
	comp=Z,81nm,18.2s,baz=207,slow=37								
WRA	**Warramunga Arr**	**31.48**	**251**	P		P		08 23 56.5	-0.3
	1.8nm,0.8s,baz=82,slow=9.0,SNR=11								
ASAR	**Alice Springs**	**32.72**	**244**	P		P		08 24 07.7	+0.2
	0.5nm,0.7s,baz=78,slow=8.7,SNR=5.6								

*IDC **11** 08:47:41.8±0.9,30°.76S×176°.63W,h0km,mb4.3/8, mb1 4.6/8,mb1mx4.2/18,mbtmp4.2/8,MS3.8/2,Ms1 3.8/2, ms1mx3.1/24,Error ellipse: s-maj=28.0km s-min=19.9km az=176.0*
*ISCJB **11** 08:47:44.3±0.7,31°.05S±0°.04×176°.8W±0°.1,h33km, mb4.2/8,MS3.8/2,Error ellipse: s-maj=13.7km s-min=5.6km az=13.7*

ISC 11 08:47:46.3±0.8,30°.95S±0°.07×176°.8W±0°.1,h35km,n19, σ1s44/19,mb4.3/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.97**	**329**	Pn		**Pn**		**08 48 15.7**	**-1.6**
	358nm,0.3s,baz=88,slow=22,SNR=12								
RAO				Sn		**Sn**		**08 48 40.1**	**-0.6**
	327nm,0.3s,baz=96,slow=23,SNR=4.8								
RAO				LR		LR		08 48 43.2	
	comp=Z,735nm,18.8s,baz=308,slow=33								
MWZ	**Matawai**	**8.74**	**211**	*e*PN		**Pn**		**08 49 48.9**	**-1.4**
MWZ				SN		**Sn**		**08 51 28.2**	**+0.6**
MWZ				SN				08 51 28.2	
URZ	**Urewera**	**8.87**	**213**	Pn		**Pn**		**08 49 50.8**	**-1.1**
	1.1nm,0.3s,baz=117,slow=22,SNR=8.4								
URZ				Sn		**Sn**		**08 51 30.5**	**-0.1**
	3.5nm,0.3s,baz=160,slow=22,SNR=8.6								
BKZ	**Black Stump Fm**	**9.89**	**212**	PN		**Pn**		**08 50 03.7**	**-2.2**
BKZ				SN		**Sn**		**08 51 54.6**	**-1.1**
RPZ	**Rata Peaks**	**15.99**	**214**	Pn		**Pn**		**08 51 25.4**	**-3.0**
	1.7nm,0.3s,baz=12,slow=15,SNR=11								
RPZ				Sn		Sn		08 54 13.4	-11
	0.4nm,0.3s,baz=315,slow=20,SNR=3.0								
DZM	**Mont Dzumac**	**17.43**	**296**	*e*LR		LR		08 55 39.8	
	335nm,28.9s								
TBI	**Tubuai**	**25.39**	**79**	*e*LR		LR		08 59 09.1	
	202nm,30.0s								
PPT2	**Papeete2**	**28.03**	**68**	*e*LR		LR		09 00 19.0	
	122nm,25.0s								
CTA	**Charters Tower**	**34.95**	**279**	P		**P**		**08 54 36.3**	**+1.2**
	4.2nm,0.6s,baz=111,slow=12,SNR=3.1								
STKA	**Stephens Creek**	**35.40**	**257**	P		**P**		**08 54 41.0**	**+2.1**
	4.8nm,0.8s,baz=89,slow=10,SNR=13								
ASAR	**Alice Springs**	**44.15**	**267**	P		**P**		**08 55 53.0**	**+1.2**
	2.3nm,0.7s,baz=107,slow=7.2,SNR=23								
WRA	**Warramunga Arr**	**45.19**	**272**	P		**P**		**08 56 01.0**	**+0.9**
	2.9nm,0.8s,baz=110,slow=8.1,SNR=12								
WRA				LR		LR		09 13 03.8	
	comp=Z,94nm,20.1s,baz=190,slow=34								
PSI	**Prapat**	**86.56**	**275**	LR		LR		09 39 34.4	
	comp=Z,51nm,18.4s,baz=143,slow=36								
NVAR	**Mina Array Bea**	**87.92**	**42**	P		**P**		**09 00 32.2**	**-0.4**
	2.4nm,0.9s,baz=217,slow=6.6,SNR=13								
TXAR	**Lajitas Array**	**91.79**	**57**	P		**P**		**09 00 51.1**	**+0.4**
	1.6nm,1.1s,baz=207,slow=5.2,SNR=11								
PDAR	**Pinedale Array**	**95.80**	**43**	P		**P**		**09 01 09.0**	**-0.1**
	0.4nm,0.7s,baz=208,slow=2.9,SNR=4.3								
ILAR	**Eielson Array**	**98.23**	**12**	P		**P**		**09 01 18.6**	**-0.6**
	0.4nm,0.9s,baz=228,slow=5.7,SNR=5.5								
FINES	**FINESS Array B**	**146.03**	**341**	PKPbc		**PKPab**		**09 07 21.9**	**-0.4**
	1.8nm,0.5s,baz=65,slow=3.1,SNR=10								
TORD	**Torodi Ar. Bea**	**162.22**	**175**	PKPab		**PKPab**		**09 08 33.0**	**+1.5**
	1.2nm,0.7s,baz=185,slow=3.8,SNR=8.7								

*ISCJB **11** 08:50:34.3±0.7,5°.97S±0°.07×149°.9E±0°.1,h52km,mb3.6/9, MS3.3/4,Error ellipse: s-maj=19.7km s-min=8.0km az=21.1*

*IDC **11** 08:50:36.0±2.4,6°.00S×149°.89E,h53km±19km,mb3.5/10, mb1 3.8/12,mb1mx3.7/20,mbtmp3.6/12,ML3.5/2,MS3.4/5, Ms1 3.4/5,ms1mx3.1/17,Error ellipse: s-maj=26.5km s-min=11.7km az=111.0*
*AUST **11** 08:50:35.6±4.5,6°.09S×149°.67E,h10km,Error ellipse: s-maj=2.0km s-min=1.5km az=351.0*

ISC 11 08:50:35.8±0.8,5°.95S±0°.09×149°.9E±0°.1,h52km,n27, σ0s96/24,mb3.7/9,MS3.3/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.37**	**218**	P		**Pn**		**08 51 39.9**	**+0.1**
	16nm,0.3s,baz=31,slow=8.6,SNR=28								
PMG				S		**Sn**		**08 52 28.8**	**-0.6**
	26nm,0.3s,baz=176,slow=21,SNR=11								
COEN	**Coen**	**10.34**	**219**	P		**Pn**		**08 53 01.0**	**-0.6**
	baz=10,SNR=3.7								
CTA	**Charters Tower**	**14.49**	**194**	P		**Pn**		**08 53 57.9**	**-0.2**
	0.1nm,0.3s,baz=23,slow=13,SNR=3.2								
CTA				LR		LR		08 58 27.0	
	comp=Z,106nm,20.6s,baz=55,slow=33								
KDU	**Kakadu**	**18.43**	**247**	P		**Pn**		**08 54 49.0**	**+1.3**
	baz=18,SNR=5.1								
MTN	**Manton Dam**	**19.72**	**248**	S		**Sn**		**08 58 43.5**	**-0.6**
	baz=20,SNR=5.5								
GUMO	**Guam**	**20.04**	**346**	LR		LR		09 00 57.6	
	comp=Z,90nm,18.9s,baz=100,slow=31								
RMQ	**Roma**	**20.45**	**183**	P		**P**		**08 55 10.2**	**+1.0**
	baz=20,SNR=5.5								
WRA	**Warramunga Arr**	**20.54**	**226**	P		**P**		**08 55 10.2**	**0.0**
	3.5nm,0.5s,baz=51,slow=11,SNR=44								
QLP	**Quilpie**	**21.22**	**194**	P		**P**		**08 55 20.5**	**+3.2**
	baz=21,SNR=5.6								
DZM	**Mont Dzumac**	**22.66**	**137**	LR		LR		09 03 22.4	
	comp=Z,196nm,18.7s,baz=0.0,slow=34								
ASAR	**Alice Springs**	**23.39**	**219**	P		**P**		**08 55 40.0**	**-0.2**
	1.4nm,0.8s,baz=57,slow=9.1,SNR=16								
ASAR				S		**S**		**08 59 50.0**	**+0.4**
	0.9nm,1.0s,baz=33,slow=21,SNR=4.3								
FITZ	**Fitzroy Crossi**	**26.57**	**241**	P		**P**		**08 56 09.0**	**-0.3**
	2.4nm,0.5s,baz=47,slow=11,SNR=11								
FITZ				LR		LR		09 07 13.0	
	comp=Z,58nm,20.8s,baz=33,slow=38								
FITZ	**Fitzroy Crossi**	**26.57**	**241**	P		**P**		**08 56 09.1**	**-0.1**
	baz=26,SNR=6.8								
STKA	**Stephens Creek**	**26.94**	**196**	P		**P**		**08 56 12.1**	**-0.3**
	0.9nm,0.6s,baz=22,slow=11,SNR=2.4								
STKA	**Stephens Creek**	**26.94**	**196**	P		P		08 56 23.1	+11
	baz=27,SNR=4.7								
MEEK	**Meekatharra**	**36.21**	**232**	P		**P**		**08 57 33.6**	**-0.3**
	baz=36,SNR=4.0								
NIUE	**Niue**	**41.23**	**112**	P		P		08 58 21.2	+5.1
	baz=41,SNR=3.3								
CISI	**Cisompet, Garu**	**41.79**	**265**	P		P		08 58 25.6	+4.8
	baz=42,SNR=3.8								
MJAR	**Matsushiro Arr**	**43.66**	**346**	P		**P**		**08 58 35.5**	**0.0**
	1.3nm,0.7s,baz=169,slow=11,SNR=4.0								
KSRS	**Korea Array**	**47.79**	**336**	P		**P**		**08 59 08.0**	**-0.1**
	0.9nm,0.7s,baz=153,slow=8.1,SNR=3.8								
USRK	**

BEY				*e*Sn	**Sg**	**09 06 34.9**	**+0.8**
IVA	**Berane**	**1.78**	**336**	⇑*i*Pn	**Pg**	**09 06 09.9**	**-1.2**
IVA				*e*Sn	**Sg**	**09 06 34.9**	**+0.8**
BUM	**Brajici-Budva**	**1.81**	**306**	⇓*i*Pn	**Pg**	**09 06 11.6**	**-0.1**
BUM				*e*Sn	**Sg**	**09 06 36.9**	**+1.7**
BUM	**Brajici-Budva**	**1.81**	**306**	⇓*i*Pn	**Pg**	**09 06 11.6**	**-0.1**
BUM				*e*Sn	**Sg**	**09 06 36.9**	**+1.7**
THL	**Klokotos Trika**	**1.90**	**152**	*e*PN	**Pb**	**09 06 11.3**	**-0.5**
THL	**Klokotos Trika**	**1.90**	**152**	*e*Pn	**Pb**	**09 06 11.3**	**-0.5**
NKY	**Niksic**	**2.09**	**319**	⇑*i*Pn	**Pg**	**09 06 15.5**	**-1.6**
NKY				*e*Sn	**Sg**	**09 06 43.6**	**-0.7**
NKY	**Niksic**	**2.09**	**319**	⇑*i*Pn	**Pg**	**09 06 15.5**	**-1.6**
NKY				*e*Sn	**Sg**	**09 06 43.6**	**-0.7**
HCY	**Herceg Novi**	**2.14**	**305**	⇑*i*Pn	**Pg**	**09 06 16.4**	**-1.6**
HCY				*e*Sn	**Sg**	**09 06 44.6**	**-1.1**
HCY	**Herceg Novi**	**2.14**	**305**	⇑*i*Pn	**Pg**	**09 06 16.4**	**-1.6**
HCY				*e*Sn	**Sg**	**09 06 44.6**	**-1.1**
PLG	**Polygyros**	**2.15**	**113**	*e*PN	**Pb**	**09 06 14.4**	**-1.7**
PLG	**Polygyros**	**2.15**	**113**	*e*Pn	**Pb**	**09 06 14.4**	**-1.7**
VTS	**Vitosha**	**2.21**	**52**	*e*Pn	**Pb**	**09 06 17.0**	**-0.2**
VTS				*e*Sn	**Sn**	**09 06 42.7**	**+1.2**
VTS	**Vitosha**	**2.21**	**52**	*e*Pn	**Pb**	**09 06 17.0**	**-0.2**
VTS				*e*Sn	**Sn**	**09 06 42.7**	**+1.2**
BRY	**Bratogost**	**2.39**	**314**	*e*Pn	**Pb**	**09 06 19.7**	**-0.6**
BRY				*e*Sn	**Sb**	**09 06 50.1**	**+0.1**
BRY	**Bratogost**	**2.39**	**314**	*e*Pn	**Pb**	**09 06 19.7**	**-0.6**
BRY				*e*Sn	**Sb**	**09 06 50.1**	**+0.1**
ZAPS	**Zavoj**	**2.41**	**32**	*e*Pn	**Pb**	**09 06 19.7**	**-1.0**
ZAPS				*e*Sg	**Sg**	**09 06 54.2**	**-0.3**
ZAPS	**Zavoj**	**2.41**	**32**	*e*Pn	**Pb**	**09 06 19.7**	**-1.0**
ZAPS				*e*Sg	**Sg**	**09 06 54.2**	**-0.3**
UPM	**Unac-Piva**	**2.44**	**324**	⇓*i*Pn	**Pb**	**09 06 20.2**	**-0.9**
UPM				*e*Sn	**Sb**	**09 06 51.1**	**-0.2**
UPM	**Unac-Piva**	**2.44**	**324**	⇓*i*Pn	**Pb**	**09 06 20.2**	**-0.9**
UPM				*e*Sn	**Sb**	**09 06 51.1**	**-0.2**
EVR	**Evrytania**	**2.44**	**162**	*e*PN	**Pb**	**09 06 19.9**	**-1.2**
EVR	**Evrytania**	**2.44**	**162**	*e*Pn	**Pb**	**09 06 19.9**	**-1.2**
LKD2	**Lefkada island**	**2.46**	**184**	*e*PN	**Pb**	**09 06 20.5**	**-0.9**
LKD2	**Lefkada island**	**2.46**	**184**	*e*Pn	**Pb**	**09 06 20.5**	**-0.9**
AGG	**Agios Georgios**	**2.49**	**153**	*e*PB	**Pn**	**09 06 18.9**	**+1.1**
AGG	**Agios Georgios**	**2.49**	**153**	*e*Pb	**Pn**	**09 06 18.9**	**+1.1**
PAIG	**Paliouri**	**2.52**	**121**	*e*PB	**Pn**	**09 06 18.7**	**+0.6**
PAIG	**Paliouri**	**2.52**	**121**	*e*Pb	**Pn**	**09 06 18.7**	**+0.6**
BBLS	**Lazići**	**2.83**	**338**	*e*Pn	**Pn**	**09 06 23.5**	**+1.0**
BBLS	**Lazići**	**2.83**	**338**	*e*Pn	**Pn**	**09 06 23.5**	**+1.0**
VLS	**Valsamata**	**3.07**	**184**	*e*PB	**Pb**	**09 06 29.5**	**-2.4**
VLS	**Valsamata**	**3.07**	**184**	*e*Pb	**Pb**	**09 06 29.5**	**-2.4**

*ISCJB **11** 09:20:10.1±0.4,27.˚48N±0.˚06×127.˚18E±0.˚07, h157km±4km, mb3.7/9, Error ellipse: s-maj=12.7km s-min=4.8km az=41.4*
*JMA **11** 09:20:11.3±0.2,27.˚66N×127.˚10E, h138km, M3.7*
*IDC **11** 09:20:14.4±2.2,27.˚66N×127.˚17E, h188km±22km, mb3.4/9, mb1 3.5/11, mb1mx3.4/28, mbtmp3.3/11, Error ellipse: s-maj=23.9km s-min=12.0km az=87.0*

ISC 11 09:20:10.8±0.8, 27.˚55N±0.˚07×127.˚12E±0.˚08, h153km±7km, n23, σ1§30/33, mb3.7/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIH	**Iheya**	**0.91**	**124**	P	**Pn**	**09 20 35.3**	**+0.2**
JIH				S	**Sn**	**09 20 52.8**	**-0.9**
JAGN	**Aguni-jima**	**0.96**	**173**	P	**Pn**	**09 20 35.8**	**+0.2**
JAGN				S	**Sn**	**09 20 54.6**	**+0.1**
JOW	**Kunigami**	**1.25**	**125**	P	**Pn**	**09 20 38.3**	**+0.1**
JOW				*e*S	**Sn**	**09 20 57.6**	**-1.4**
JKE	**Kume jima 2**	**1.26**	**194**	P	**Pn**	**09 20 38.4**	**+0.2**
JKE				*e*S	**Sn**	**09 20 59.3**	**+0.2**
JJT2	**Tamagusuku 2**	**1.52**	**158**	P	**Pn**	**09 20 41.9**	**+1.1**
JTK	**Tokunoshima**	**1.64**	**81**	P	**Pn**	**09 20 41.9**	**-0.2**
JTK				S	**Sn**	**09 21 04.7**	**-1.4**
JAMN	**Amaminishikomi**	**1.95**	**69**	P	**Pn**	**09 20 44.9**	**-0.5**
JAMN				*e*S	**Sn**	**09 21 10.6**	**-1.5**
JAM	**Amami Oshima**	**2.36**	**68**	P	**Pn**	**09 20 49.9**	**-0.4**
JAM				*e*S	**Sn**	**09 21 18.9**	**-1.9**
JZK	**Kikaishima**	**2.64**	**73**	S	**Sn**	**09 21 26.3**	**-0.6**
JOGS	**Gusukube**	**3.18**	**209**	P	**Pn**	**09 21 00.7**	**+0.2**
JOGS				*e*S	**Sn**	**09 21 38.1**	**-1.0**
JMJ	**Miyako jima 2**	**3.18**	**211**	*e*S	**Sn**	**09 21 37.8**	**-1.3**
JTJ	**Tarama**	**3.62**	**217**	P	**Pn**	**09 21 05.5**	**-0.7**
JTJ				*e*S	**Sn**	**09 21 46.7**	**-2.6**
JNU	**Nakatsue**	**6.43**	**29**	P	**Pn**	**09 21 44.8**	**+1.5**
	0.4nm,0.3s,baz=210,slow=20,SNR=4.1						
JNU				S	**Sn**	**09 22 59.2**	**+3.4**
	0.2nm,0.3s,baz=66,slow=20,SNR=1.9						
KSRS	**Korea Array**	**9.90**	**4**	P	**Pn**	**09 22 30.8**	**+1.5**
	0.2nm,0.3s,baz=186,slow=13,SNR=5.4						
SONM	**Songino Array**	**25.91**	**327**	P	**P**	**09 25 29.9**	**+1.2**
	1.8nm,0.9s,baz=142,slow=9.5,SNR=7.8						
MKAR	**Makanchi Array**	**39.92**	**311**	P	**P**	**09 27 28.7**	**-1.2**
	0.6nm,0.6s,baz=99,slow=9.9,SNR=6.7						
FITZ	**Fitzroy Crossi**	**45.41**	**182**	P	**P**	**09 28 15.1**	**+0.9**
	3.6nm,0.5s,baz=8.9,slow=12						
WRA	**Warramunga Arr**	**47.73**	**171**	P	**P**	**09 28 32.7**	**+0.3**
	1.2nm,0.6s,baz=353,slow=8.4,SNR=9.7						
ASAR	**Alice Springs**	**51.34**	**172**	P	**P**	**09 29 00.6**	**+1.0**
	0.8nm,0.4s,baz=360,slow=14,SNR=28						
STKA	**Stephens Creek**	**60.69**	**166**	P	**P**	**09 30 06.7**	**+0.8**
	1.1nm,0.7s,baz=329,slow=5.9,SNR=4.5						
ILAR	**Eielson Array**	**63.75**	**28**	P	**P**	**09 30 23.8**	**-2.1**
	0.3nm,0.6s,baz=263,slow=4.5,SNR=8.4						
YKA	**Yellowknife Ar**	**77.75**	**25**	P	**P**	**09 31 50.1**	**-0.4**
	0.6nm,0.5s,baz=302,slow=5.5,SNR=16						
PDAR	**Pinedale Array**	**92.75**	**38**	P	**P**	**09 33 06.2**	**+0.1**
	0.3nm,0.6s,baz=51,slow=3.6,SNR=4.0						

IDC 11 09:28:52.9±1.8, 3.˚95N×126.˚72E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=101.8km s-min=25.0km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.93**	**183**	P	P	09 33 48.3	+0.1
	1.0nm,0.3s,baz=9.4,slow=12,SNR=6.1						
WRA	**Warramunga Arr**	**24.89**	**163**	P	P	09 34 17.6	-0.1
	1.1nm,0.6s,baz=342,slow=11,SNR=6.7						
ASAR	**Alice Springs**	**28.33**	**166**	P	P	09 34 48.6	0.0
	0.3nm,0.5s,baz=349,slow=6.8,SNR=8.5						
STKA	**Stephens Creek**	**38.34**	**159**	P	P	09 36 15.5	-0.2
	2.0nm,0.7s,baz=338,slow=9.6,SNR=7.3						
MKAR	**Makanchi Array**	**57.37**	**325**		P	09 38 43.1	0.0
	0.2nm,0.4s,baz=112,slow=7.0,SNR=4.6						

*IDC **11** 09:50:12.0±0.9, 3.˚79S×130.˚33E, h0km, mb4.1/7, mb1 4.3/10, mb1mx4.1/23, mbtmp4.2/10, ML4.0/3, MS3.4/5, Ms1 3.4/5, ms1mx2.9/41, Error ellipse: s-maj=36.5km s-min=12.8km az=75.0*
*DJA **11** 09:50:14.8±1.4, 3.˚3S±6.˚6×13.˚1E±.˚, h4km±11km, M4.1/6, MLv4.1/6*
*ISCJB **11** 09:50:14.1±0.4, 3.˚71S±0.˚04×130.˚48E±0.˚06, h31km, mb4.0/7, MS3.4/4, Error ellipse: s-maj=9.0km s-min=5.3km az=159.2*
*AUST **11** 09:50:15.1±2.0, 3.˚68S×130.˚72E, h23km, Error ellipse: s-maj=0.9km s-min=0.9km az=317.0*
*NEIC **11** 09:50:17.2±0.5, 3.˚78S×130.˚29E, h35km, mb4.3/4, Error ellipse: s-maj=12.3km s-min=7.3km az=55.0*

ISC 11 09:50:15.9±0.6, 3.˚64S±0.˚05×130.˚63E±0.˚04, h31km, n53, σ1§97/52, mb4.0/7, MS3.2/4, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**1.77**	**66**	P	**Pn**	**09 50 44.2**	**-0.1**
FAKI	**Fak Fak**	**1.77**	**66**	P	**Pn**	**09 50 44.3**	**-0.1**
	baz=1.7,SNR=54						
AAI	**Ambon**	**2.43**	**269**	P	**Pn**	**09 50 54.8**	**+1.3**
AAI				S	**Sb**	**09 51 27.2**	**-1.3**
AAI	**Ambon**	**2.43**	**269**	P	**Pn**	**09 50 54.9**	**+1.4**
	baz=2.5,SNR=18						
SWI	**Sorong**	**2.83**	**13**	P	**Pn**	**09 50 57.4**	**-1.5**
SWI	**Sorong**	**2.83**	**13**	P	**Pn**	**09 50 57.5**	**-1.5**
	baz=2.9,SNR=11						
NLAI	**Namlea**	**3.55**	**276**	P	**Pn**	**09 51 11.0**	**+2.2**
NLAI				S	**Sn**	**09 51 53.6**	**+3.9**
LBMI	**Labuha**	**4.32**	**314**	P	**Pn**	**09 51 17.5**	**-2.0**
LBMI				S	**Sn**	**09 52 08.8**	**-0.1**
MTN	**Manton Dam**	**9.16**	**177**	P	**Pn**	**09 52 27.2**	**+1.2**
	baz=9.2,SNR=28						
KDU	**Kakadu**	**9.17**	**169**	P	**Pn**	**09 52 26.2**	**0.0**
	baz=9.2,SNR=32						
KAPI	**Kappang**	**10.93**	**262**	Pn	Pn	09 52 45.8	-4.6
KAPI	**Kappang**	**10.93**	**262**	Pn	Pn	09 52 45.8	-4.6
	0.3nm,0.3s,baz=130,slow=5.8,SNR=2.2						
KNRA	**Kununurra**	**12.10**	**189**	P	**Pn**	**09 53 05.1**	**-1.2**
	baz=12,SNR=23						
KNRA				S	**Sn**	**09 55 18.3**	**-2.0**
	baz=12,SNR=3.8						
FITZ	**Fitzroy Crossi**	**15.18**	**198**	Pn	**Pn**	**09 53 45.5**	**-2.7**
FITZ				Sn	**Sn**	**09 56 29.0**	**-6.4**
FITZ	**Fitzroy Crossi**	**15.18**	**198**	Pn	**Pn**	**09 53 45.5**	**-2.7**
	0.6nm,0.3s,baz=30,slow=14,SNR=12						
FITZ				Sn	**Sn**	**09 56 29.0**	**-6.4**
	0.2nm,0.3s,baz=252,slow=20,SNR=2.3						
FITZ				LR	LR	10 00 02.1	
	comp=Z,127nm,20.0s,baz=31,slow=40						
FITZ	**Fitzroy Crossi**	**15.18**	**198**	P	**Pn**	**09 53 49.2**	**+1.0**
	baz=15,SNR=4.2						
COEN	**Coen**	**16.07**	**130**	P	**Pn**	**09 53 59.3**	**-0.5**
	baz=16,SNR=8.2						
WRAB	**Tennant Creek**	**16.60**	**168**	*e*Pn	**Pn**	**09 54 05.5**	**-0.9**
	14nm,0.4s						
WRAB				*e*Sn	Sn	09 57 01.5	-8.4
WRA	**Warramunga Arr**	**16.60**	**168**	Pn	**Pn**	**09 54 06.0**	**-0.5**
WRA				Sn	Sn	09 57 01.9	-8.1
WRA	**Warramunga Arr**	**16.60**	**168**	Pn	**Pn**	**09 54 06.0**	**-0.5**
	0.8nm,0.3s,baz=346,slow=12,SNR=24						
WRA				Sn	Sn	09 57 01.9	-8.1
	0.5nm,0.3s,baz=348,slow=23,SNR=5.0						
QIS	**Mount Isa**	**18.95**	**153**	P	**Pn**	**09 54 36.2**	**+0.8**
	baz=19,SNR=8.3						
MTSU	**Mount Surprise**	**19.68**	**138**	P	**Pn**	**09 54 44.9**	**+0.7**
	baz=20,SNR=10						
AS31	**Alice Springs**	**20.16**	**171**	*e*P	Pn	09 54 49.1	-0.7
ASAR	**Alice Springs**	**20.16**	**171**	P	Pn	09 54 48.8	-1.1
ASAR				S	**S**	**09 58 32.6**	**-0.1**
ASAR	**Alice Springs**	**20.16**	**171**	P	Pn	09 54 48.8	-1.1
	19nm,0.4s,baz=351,slow=11,SNR=580						
ASAR				S	**S**	**09 58 32.6**	**-0.1**
	3.5nm,0.9s,baz=350,slow=25,SNR=7.4						
MBWA	**Marble Bar**	**20.39**	**210**	*e*P	**P**	**09 54 48.5**	**-1.8**
KSM	**Kuching**	**20.94**	**284**	*e*P	**P**	**09 54 53.2**	**-3.1**
	5.7nm,0.5s						
CTA	**Charters Tower**	**22.35**	**138**	P	**P**	**09 55 13.6**	**+2.2**
CTA	**Charters Tower**	**22.35**	**138**	P	**P**	**09 55 13.6**	**+2.2**
	3.2nm,0.5s,baz=329,slow=12,SNR=2.7						
CTAO	**Charters Tower**	**22.35**	**138**	*e*P	**P**	**09 55 13.2**	**+1.8**
MEEK	**Meekatharra**	**25.60**	**206**	P	**P**	**09 55 41.2**	**-1.4**
	baz=26,SNR=11						
MNAI	**Manna**	**27.62**	**268**	S	S	10 00 57.4	+17
	baz=28,SNR=4.0						
KMBL	**Kambalda**	**28.79**	**196**	P	**P**	**09 56 10.5**	**-0.6**
	baz=29,SNR=12						
MORW	**Morawa**	**28.84**	**207**	P	**P**	**09 56 10.5**	**-1.1**
	baz=29,SNR=4.5						
BBOO	**Buckleboo**	**29.46**	**171**	P	**P**	**09 56 17.7**	**+0.7**
	baz=30,SNR=5.0						
STKA	**Stephens Creek**	**29.92**	**161**	*e*P	**P**	**09 56 22.1**	**+1.0**
	0.5nm,0.8s						
STKA	**Stephens Creek**	**29.92**	**161**	P	**P**	**09 56 22.4**	**+1.2**
	2.0nm,0.4s,baz=345,slow=8.2,SNR=18						
STKA	**Stephens Creek**	**29.92**	**161**	P	**P**	**09 56 22.5**	**+1.3**
	baz=30,SNR=15						
IPM	**Ipoh**	**30.66**	**285**	*e*P	**P**	**09 56 27.3**	**-0.6**
	9.3nm,0.6s						
ARPS	**Mount Arapiles**	**34.55**	**164**	P	**P**	**09 57 04.0**	**+2.4**
	baz=35,SNR=5.7						
JNU	**Nakatsue**	**36.56**	**0**	LR	LR	10 11 13.7	
	comp=Z,32nm,19.5s,baz=51,slow=34						
KSRS	**Korea Array**	**40.96**	**357**	LR	LR	10 13 58.6	
	comp=Z,34nm,19.6s,baz=203,slow=35						
URZ	**Urewera**	**54.56**	**136**	LR	LR	10 22 52.0	
	comp=Z,129nm,18.1s,baz=14,slow=36						
SONM	**Songino Array**	**55.49**	**340**	P	**P**	**09 59 49.7**	**+1.7**
SONM	**Songino Array**	**55.49**	**340**	P	**P**	**09 59 49.7**	**+1.7**
	0.2nm,0.2s,baz=166,slow=6.7,SNR=2.9						
MKAR	**Makanchi Array**	**65.80**	**326**	P	**P**	**10 00 58.1**	**0.0**
MKAR	**Makanchi Array**	**65.80**	**326**	P	**P**	**10 00 58.1**	**0.0**
	1.1nm,0.5s,baz=116,slow=8.9,SNR=14						
MKAR				LR	LR	10 30 04.8	
	comp=Z,16nm,19.7s,baz=170,slow=36						
MAW	**Mawson**	**78.29**	**201**	P	**P**	**10 02 12.9**	**+0.4**
MAW	**Mawson**	**78.29**	**201**	P	**P**	**10 02 12.9**	**+0.4**
	2.1nm,0.7s,baz=91,slow=6.0,SNR=6.6						
ILAR	**Eielson Array**	**90.06**	**25**	P	**P**	**10 03 13.5**	**+1.1**
ILAR	**Eielson Array**	**90.06**	**25**	P	**P**	**10 03 13.5**	**+1.1**
	0.2nm,0.4s,baz=248,slow=4.8,SNR=5.9						
TORD	**Torodi Ar. Bea**	**128.70**	**284**	PKP	**PKPdf**	**10 09 21.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**128.70**	**284**	PKP	**PKPdf**	**10 09 21.5**	**+0.3**
	0.2nm,0.6s,baz=34,slow=2.3,SNR=2.8						

*KRSC **11** 10:05:06.2±2.8, 47.˚95N×156.˚30E, h10km±10km, ML4.1*
*MOS **11** 10:05:07.3±1.4, 48.˚33N×154.˚56E, h59km, mb4.0/4, Error ellipse: s-maj=25.1km s-min=9.9km az=63.5*
*IDC **11** 10:05:11.6±3.0, 48.˚39N×154.˚22E, h79km±27km, mb3.3/8, mb1 3.5/10, mb1mx3.3/27, mbtmp3.3/10, MS2.4/1, Ms1 2.4/1, ms1mx2.1/21, Error ellipse: s-maj=33.4km s-min=18.2km az=141.0*

ISC 11 10:05:07.2±0.9, 48.˚1N±0.˚1×155.˚1E±0.˚1, h33km, n32, σ2§03/39, mb3.6/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.70**	**13**	*e*PN	**Pn**	**10 05 48.5**	**+0.2**
SKR				S	**Sn**	**10 06 14.4**	**-5.4**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax	smax		
	comp=N,90nm,0.6s						
SKR				smax	smax		
	comp=E,110nm,0.5s						
SKR	**Severo-Kuril's**	**2.70**	**13**	P	**Pn**	**10 05 50.2**	**+1.9**
MIPR	**Malaya Ipel'ka**	**4.34**	**13**	P	**Pn**	**10 06 13.3**	**+2.4**
ASAK	**Asacha**	**4.67**	**21**	P	**Pn**	**10 06 17.4**	**+1.9**
MTVR	**Mutnovka**	**4.84**	**23**	P	**Pn**	**10 06 19.3**	**+1.5**
MTVR				*i* S	**Sn**	**10 07 12.6**	**-0.1**
RUS	**Russkaya**	**4.88**	**25**	PN	**Pn**	**10 06 18.7**	**+0.5**
RUS				S	**Sn**	**10 07 11.6**	**-1.9**
RUS	**Russkaya**	**4.88**	**25**	P	**Pn**	**10 06 18.7**	**+0.5**
RUS				*i* S	**Sn**	**10 07 11.6**	**-1.9**
APC	**Apacha**	**5.04**	**14**	P	**Pn**	**10 06 23.3**	**+2.9**
PETK	**Petropavlovsk-**	**5.31**	**17**	PN	**Pn**	**10 06 26.5**	**+2.4**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**5.31**	**17**	P	**Pn**	**10 06 26.5**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=183,slow=13,SNR=13						
UGLR	**Uglovaya**	**5.66**	**23**	P	**Pn**	**10 06 31.3**	**+2.2**
KOK	**Koryaka**	**5.69**	**22**	P	**Pn**	**10 06 31.9**	**+2.5**
KOK				*i* S	**Sn**	**10 07 33.9**	**+0.4**
AVH	**Avacha**	**5.69**	**22**	P	**Pn**	**10 06 31.4**	**+2.0**
AVH				*i* S	**Sn**	**10 07 33.6**	**+0.1**
SMAR	**Somma**	**5.70**	**23**	P	**Pn**	**10 06 32.2**	**+2.5**
KRER	**Koryakskii**	**5.73**	**22**	P	**Pn**	**10 06 32.3**	**+2.3**
KRER				*i* S	**Sn**	**10 07 34.7**	**0.0**
SDLR	**Sedlovina**	**5.74**	**23**	P	**Pn**	**10 06 31.7**	**+1.6**
SDLR				*i* S	**Sn**	**10 07 33.9**	**-0.9**
KUR	**Kuril'sk**	**5.75**	**243**	PN	**Pn**	**10 06 29.0**	**-1.2**
KUR				S	**Sn**	**10 07 37.0**	**+2.0**
KUR				pmax	pmax		
	comp=Z,80nm,0.6s						
KUR				smax	smax		
	comp=N,140nm,0.9s						
KUR				smax	smax		
	comp=E,160nm,0.9s						
GNL	**Ganaly**	**5.91**	**16**	P	**Pn**	**10 06 34.9**	**+2.4**
SPN	**Mys Shipunski**	**5.92**	**30**	PN	**Pn**	**10 06 32.7**	**+0.2**
SPN	**Mys Shipunski**	**5.92**	**30**	P	**Pn**	**10 06 32.7**	**+0.2**
SPN				*i* S	**Sn**	**10 07 36.0**	**-3.2**
MKZ	**Mys Kozlova**	**7.70**	**30**	PN	**Pn**	**10 06 56.6**	**-0.3**
MKZ	**Mys Kozlova**	**7.70**	**30**	P	**Pn**	**10 06 56.6**	**-0.3**
YSS	**Yuzh-Sakhalins**	**8.46**	**267**	*e*PN	**Pn**	**10 07 06.0**	**-1.3**
ASAJ	**Asahikawa**	**9.56**	**250**	P	**Pn**	**10 07 20.5**	**-2.0**
	comp=E,0.3nm,0.3s,baz=85,slow=13,SNR=3.8						
ASAJ				LR	LR	10 10 41.8	
	comp=E,24nm,18.7s,baz=321,slow=36						
KSRS	**Korea Array**	**22.51**	**252**	P	**P**	**10 10 00.0**	**-3.8**
	comp=E,1.8nm,0.8s,baz=56,slow=9.3,SNR=5.6						
YKA	**Yellowknife Ar**	**49.05**	**38**	P	**P**	**10 13 51.4**	**+0.8**
	comp=E,0.3nm,0.8s,baz=295,slow=6.7,SNR=4.1						
PDAR	**Pinedale Array**	**62.87**	**55**	P	**P**	**10 15 31.5**	**+1.5**
	comp=E,0.5nm,0.9s,baz=28,slow=4.1,SNR=4.1						
FINES	**FINESS Array B**	**63.43**	**335**	P	P	10 15 28.4	-4.7
	comp=E,1.8nm,1.0s,baz=45,slow=8.1,SNR=2.8						
ASAR	**Alice Springs**	**73.90**	**200**	P	**P**	**10 16 38.3**	**-0.5**
	comp=E,0.3nm,0.6s,baz=16,slow=5.6,SNR=4.5						
TXAR	**Lajitas Array**	**75.66**	**62**	P	**P**	**10 16 50.5**	**+1.3**
	comp=E,0.4nm,0.7s,baz=291,slow=4.0,SNR=6.8						
GERES	**GERESS Array B**	**77.86**	**335**	P	P	10 16 57.4	-3.9
	comp=E,0.7nm,0.6s,baz=327,slow=7.0,SNR=4.0						
BRTR	**Keskin Array B**	**78.36**	**318**	P	P	10 16 59.7	-4.6
	comp=E,0.7nm,0.6s,baz=56,slow=5.4,SNR=4.9						

*IDC **11** 10:21:44.0±0.8, 30.˚87S×176.˚65W, h0km, mb4.2/6, mb1 4.5/7, mb1mx4.2/18, mbtmp4.2/7, ML3.7/1, MS3.8/9, Ms1 3.8/9, ms1mx3.5/22, Error ellipse: s-maj=25.2km s-min=21.1km az=158.0*
*ISCJB **11** 10:21:46.9±0.8, 31.˚12S±0.˚04×176.˚8W±0.˚1, h33km, mb4.3/8, MS3.8/8, Error ellipse: s-maj=14.1km s-min=5.6km az=11.0*
*NEIC **11** 10:21:49.4±0.6, 30.˚86S×176.˚75W, h35km, mb4.3/1, Error ellipse: s-maj=15.5km s-min=13.8km az=136.0*

ISC 11 10:21:48.9±0.7, 31.˚00S±0.˚06×176.˚8W±0.˚1, h35km, n46, σ1§17/40, mb4.3/7, MS3.8/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.00**	**330**	Pn	**Pn**	**10 22 18.0**	**-2.2**
RAO				Sn	**Sn**	**10 22 44.7**	**+0.7**
RAO	**Raoul Island**	**2.00**	**330**	Pn	**Pn**	**10 22 18.0**	**-2.2**
	110nm,0.3s,baz=99,slow=19,SNR=3.4						
RAO				Sn	**Sn**	**10 22 44.7**	**+0.7**
	353nm,0.3s,baz=81,slow=22,SNR=8.1						
RAO				LR	LR	10 22 46.1	
	comp=Z,662nm,19.6s,baz=254,slow=32						
MWZ	**Matawai**	**8.68**	**211**	PN	**Pn**	**10 23 49.6**	**-2.4**
MWZ				SN	**Sn**	**10 25 27.9**	**-0.8**
URZ	**Urewera**	**8.81**	**213**	Pn	**Pn**	**10 23 54.6**	**+0.8**
URZ				Sn	**Sn**	**10 25 32.1**	**+0.3**
URZ				*e*Sn	Sn	10 25 33.3	+1.5
URZ	**Urewera**	**8.81**	**213**	PN	**Pn**	**10 23 51.8**	**-1.9**
URZ				SN	**Sn**	**10 25 30.6**	**-1.2**
URZ	**Urewera**	**8.81**	**213**	Pn	**Pn**	**10 23 54.6**	**+0.8**
	0.8nm,0.3s,baz=100,slow=16,SNR=10						
URZ				Sn	**Sn**	**10 25 32.1**	**+0.3**
	2.1nm,0.3s,baz=49,slow=20,SNR=8.1						
BKZ	**Black Stump Fm**	**9.83**	**212**	*e*PN	**Pn**	**10 24 05.7**	**-2.1**
BKZ				SN	**Sn**	**10 25 55.5**	**-1.3**
DZM	**Mont Dzumac**	**17.42**	**297**	*e*LR	LR	10 29 07.8	
	607nm,28.1s						
DZM	**Mont Dzumac**	**17.42**	**297**	Pn	**Pn**	**10 25 48.4**	**-1.0**
DZM	**Mont Dzumac**	**17.42**	**297**	LR	LR	10 31 06.4	
	comp=Z,470nm,20.6s,baz=210,slow=32						
TBI	**Tubuai**	**25.44**	**79**	*e*LR	LR	10 32 56.2	
	340nm,29.2s						
PPT2	**Papeete2**	**28.08**	**68**	*e*LR	LR	10 34 09.7	
	200nm,26.0s						
HNR	**Honiara**	**30.48**	**310**	LR	LR	10 38 10.8	
	comp=Z,121nm,19.2s,baz=193,slow=32						
STKA	**Stephens Creek**	**35.36**	**258**	P	**P**	**10 28 43.6**	**+2.5**
STKA	**Stephens Creek**	**35.36**	**258**	P	**P**	**10 28 43.6**	**+2.5**
	6.6nm,0.9s,baz=87,slow=9.2,SNR=13						
STKA				LR	LR	10 41 33.7	
	comp=Z,144nm,21.4s,baz=27,slow=34						
RKT	**Rikitea**	**37.88**	**88**	*e*LR	LR	10 38 51.3	
	260nm,31.0s						
AS31	**Alice Springs**	**44.12**	**267**	*e*P	**P**	**10 29 55.5**	**+1.4**
**

baz=290
HATJ Hateruma jima 1.67 36 P **Pn** **10 41 01.6 +1.2**
HATJ S **Sn** **10 41 21.6 -0.1**
EAST Anshuo 1.77 260 *eP* **Pn** **10 41 03.3 +1.4**
baz=250
EAST *eS* **Sn** **10 41 23.9 -0.4**
baz=250
YOJ Yonaguni jima 1.77 8 P **Pb** **10 41 03.9 +0.1**
YOJ S **Sn** **10 41 25.1 +0.9**
IRIF Iriomote-Funau 1.87 29 P **Pn** **10 41 04.3 +1.2**
IRIF S **Sn** **10 41 26.9 +0.4**
TSEB Hengchuen, Pin 1.88 245 *eP* **Pb** **10 41 05.8 +0.3**
baz=253
TSEB *eS* **Sn** **10 41 28.1 +1.3**
baz=253
JKRS Kuro-shima 1.93 37 P **Pn** **10 41 05.6 +1.7**
JKRS S **Sn** **10 41 27.6 -0.4**
TWK1 Hengchun 1.94 248 *eP* **Pb** **10 41 06.0 -0.7**
baz=247
TWK1 *eS* **Sn** **10 41 27.5 -0.8**
baz=247
SSD Sandimen 1.94 272 *eP* **Pb** **10 41 06.2 -0.5**
baz=273
HEN Hengchun 1.97 250 *eP* **Pn** **10 41 05.5 +0.9**
baz=249
WHF Hehuan Shan 1.98 317 *eP* **Pn** **10 41 06.1 +1.2**
baz=321
WHF *eS* **Sn** **10 41 28.4 -1.4**
baz=321
SCZT Fangliau 1.98 261 *eP* **Pn** **10 41 06.2 +1.5**
baz=251
SCZT *eS* **Sn** **10 41 29.9 +0.5**
baz=251
WTP Ta-pu 2.03 286 *i* P **Pb** **10 41 08.4 +0.1**
baz=288
WTP *eS* **Sn** **10 41 32.6 +1.9**
baz=288
SMLT Sun Moon Lake 2.06 305 *eP* **Pn** **10 41 06.2 +0.3**
baz=315
TWC Suao 2.07 337 *eP* **Pb** **10 41 08.1 -0.8**
baz=341
TWC *eS* **Sn** **10 41 32.0 +0.5**
baz=341
CHN4 Tsaushan 2.08 289 P **Pb** **10 41 09.3 +0.3**
baz=286
CHN4 *eS* **Sn** **10 41 33.7 +2.0**
baz=286
CHN1 Nanshi 2.09 284 *eP* **Pb** **10 41 08.5 -0.8**
baz=291
CHN1 *eS* **Sb** **10 41 34.7 -0.5**
baz=291
CHN5 Tsauling 2.10 296 *eP* **Pn** **10 41 08.5 +2.2**
baz=305
JIJ Ishigaki jima 2.10 38 P **Pn** **10 41 06.9 +0.6**
JIJ S **Sn** **10 41 30.6 -1.7**
TYC Yuchr 2.10 305 *eP* **Pn** **10 41 08.4 +2.0**
baz=315
TWT Tachien 2.11 318 *eP* **Pn** **10 41 08.2 +1.6**
baz=321
TWT *eS* **Sn** **10 41 32.5 -0.3**
baz=321
NNS Nan Shan 2.14 324 *eP* **Pn** **10 41 08.3 +1.4**
baz=335
NNS *eS* **Sn** **10 41 33.1 -0.3**
baz=335
TWM1 Shoushan 2.14 274 *eP* **Pb** **10 41 10.1 0.0**
baz=272
TWK Hsinying 2.15 286 *eP* **Pb** **10 41 10.3 +0.1**
baz=288
TWK *eS* **Sn** **10 41 35.0 +1.5**
baz=288
TWE Neicheng 2.24 334 *eP* **Pn** **10 41 09.7 +1.5**
baz=330
NSK Sanguang 2.34 328 *eP* **Pn** **10 41 11.5 +1.8**
baz=331
NSTT Nanjuang 2.50 321 *eP* **Pb** **10 41 14.9 -1.3**
baz=310
JTJ Tarama 2.64 43 P **Pn** **10 41 14.8 +1.0**
JTJ S **Sn** **10 41 45.0 -0.7**
JOGS Gusukube 3.19 49 S **Sn** **10 41 58.8 -0.5**

*NNC **11** 10:51:00.8±13.0, 35°.17N×69°.45E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=164.8km s-min=112.4km az=75.0*
ISC 11 10:51:04.2±3.8,**35°.1N**±0°.2×**69°.3E**±0°.3,**h49**km,**n13,**
σ1s32/13,**1C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AML	**Almayashu**	**7.87**	**25**	P		**Pn**	**10 52 54.1**	**-2.2**
	SNR=30							
KK31	**Karatay Array**	**8.10**	**7**	⇑P		Pn	10 52 54.7	-4.4
	0.4nm,0.2s,baz=196,slow=15,SNR=17							
KK31				S		**Sn**	**10 54 30.3**	**+1.1**
	12nm,0.6s,baz=168,slow=15,SNR=11							
EKS2	**Erkin-Say**	**8.37**	**24**	P		**Pn**	**10 53 01.9**	**-1.1**
	SNR=15							
KZA	**Kyzart**	**8.44**	**32**	P		**Pn**	**10 53 04.0**	**-0.2**
	SNR=18							
AAK	**Ala-Archa**	**8.60**	**27**	P		**Pn**	**10 53 05.4**	**-0.7**
	SNR=47							
KBK	**Karagaybulak**	**8.79**	**29**	P		**Pn**	**10 53 08.9**	**+0.1**
	SNR=14							
CHMS	**Chumysh**	**9.01**	**27**	P		**Pn**	**10 53 10.4**	**-1.2**
	SNR=23							
ULHL	**Ulahol**	**9.02**	**35**	P		**Pn**	**10 53 12.8**	**+0.9**
	SNR=14							
USP	**Ospenovka**	**9.15**	**25**	P		**Pn**	**10 53 11.4**	**-2.2**
	SNR=14							
TKM2	**Tokmak 2**	**9.27**	**30**	⇓P		**Pn**	**10 53 14.7**	**-0.7**
	5.7nm,0.5s							
TKM2	**Tokmak 2**	**9.27**	**30**	P		**Pn**	**10 53 14.9**	**-0.5**
	SNR=18							
MK31	**Makanchi Array**	**15.29**	**36**	P		**Pn**	**10 54 36.0**	**-0.8**
	0.8nm,0.7s,baz=230,slow=13,SNR=9.3							
AB31	**Akbulak array**	**15.76**	**337**	P		**P**	**10 54 47.0**	**+1.1**
	0.1nm,0.2s,baz=165,slow=12,SNR=4.8							

IDC 11 11:01:22.3±3.2,**32°.60S×178°.25W,h0**km,**mb3.7**/2,
mb1 4.0/3,**mb1mx3.7**/17,**mbtmp3.8**/3,**ML3.7**/1,**Error ellipse: s-maj=71.6km s-min=36.5km az=115.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.79**	**213**	Pn		Pn	11 03 03.8	+0.6
	1.5nm,0.3s,baz=316,slow=21,SNR=11							
URZ				Sn		Sn	11 04 20.0	-1.3
	1.9nm,0.3s,baz=109,slow=23,SNR=9.6							
ASAR	**Alice Springs**	**42.82**	**269**	P		P	11 09 22.3	+0.1
	0.5nm,0.6s,baz=112,slow=7.7,SNR=9.6							
WRA	**Warramunga Arr**	**44.01**	**275**	P		P	11 09 31.6	-0.2
	0.5nm,0.3s,baz=115,slow=7.7,SNR=24							
FINES	**FINESS Array B**	**147.12**	**339**	PKPbc		PKPbc	11 21 05.6	-0.9
	0.7nm,0.4s,baz=48,slow=2.8,SNR=4.8							

MEX 11 11:12:39.2±0.6,**15°.76N×93°.53W,h99**km±6km,**MD3.5,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PCIG		**0.30**	**100**	*eP*		Pn	11 12 52.1	-1.6
PCIG				*i* S		Sn	11 13 02.8	-1.6
TGIG		**1.08**	**21**	*eP*		Pn	11 12 59.8	-0.8
TGIG				*eS*		Sn	11 13 14.8	-1.9
CCIG	**Comitan**	**1.44**	**69**	*eP*		Pn	11 13 03.5	-1.4
CCIG				*eS*		Sn	11 13 22.7	-1.6

*MOS **11** 11:37:58.9±0.8, 45°.29N×142°.87E, h280km, mb4.2/10, Error ellipse: s-maj=16.8km s-min=11.3km az=72.5*
*ISCJB **11** 11:37:59.5±0.2, 45°.14N±0°.03×142°.93E±0°.05, h290km±2km, mb3.8/20, Error ellipse: s-maj=5.9km s-min=5.3km az=160.2*
*NIED **11** 11:38:00, 45°.10N×142°.90E, h270km, Mw4.0 Best double couple: $M_0$1.23000×10^{15} NP1:φs184.00000°, δ66.00000°, λ110.00000°. NP2:φs323.00000°, δ31.00000°, λ53.00000°.*
*IDC **11** 11:38:00.4±0.4, 45°.21N×142°.89E, h281km±4km, mb3.5/16, mb1 3.6/21, mb1mx3.5/31, mbtmp3.4/21, Error ellipse: s-maj=12.7km s-min=9.8km az=145.0*
*JMA **11** 11:38:00.3±0.2, 45°.12N×142°.91E, h287km±2km, M4.0*

2009 MAY

*NEIC **11** 11:38:00.4, 45°.12N×142°.92E, h287km, mb4.0/2, After JMA.*
*SKHL **11** 11:38:00.6±0.9, 45°.20N×143°.03E, h273km±13km, mb4.8/7, msh5.0/3*
ISC 11 11:38:00.1±0.5,**45°.08N**±0°.04×**142°.98E**±0°.05,**h286**km±4km,
n74,σ1s19/95,mb3.8/20,**10C-4D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**0.31**	**246**	⇑P		**Pn**	**11 38 37.0**	**+0.3**
JSE				*eS*		**S**	**11 39 05.1**	**-0.6**
JWK2	**Keihoku**	**0.80**	**287**	⇑P		**Pn**	**11 38 38.6**	**+0.6**
JWK2				*eS*		**S**	**11 39 07.6**	**-0.5**
ASAJ	**Asahikawa**	**1.00**	**196**	*e*Pn		**Pn**	**11 38 39.6**	**+0.6**
ASAJ	**Asahikawa**	**1.00**	**196**	⇑P		**Pn**	**11 38 39.9**	**+0.8**
ASAJ				*eS*		**S**	**11 39 10.4**	**+0.5**
ASAJ	**Asahikawa**	**1.00**	**196**	P		**Pn**	**11 38 39.6**	**+0.6**
	40nm,0.3s,baz=4.2,slow=4.3,SNR=400							
ASAJ				S		**S**	**11 39 10.6**	**+0.6**
	3.5nm,0.3s,baz=53,slow=20,SNR=11							
JSS	**Shosan**	**1.05**	**230**	⇑P		**Pn**	**11 38 39.9**	**+0.7**
JSS				*eS*		**S**	**11 39 10.8**	**+0.5**
JMP	**Maruseppu**	**1.11**	**166**	⇑P		**Pn**	**11 38 40.4**	**+0.8**
JMP				*eS*		**S**	**11 39 11.3**	**+0.3**
JRR	**Rishiri**	**1.18**	**273**	P		**Pn**	**11 38 40.0**	**+0.2**
JKK2	**Kamakawa 2**	**1.22**	**188**	⇑P		**Pn**	**11 38 41.1**	**+0.9**
JKK2				*eS*		**S**	**11 39 13.0**	**+0.9**
JYG	**Yagishiri**	**1.29**	**240**	⇑P		**Pn**	**11 38 40.8**	**+0.3**
JYG				*eS*		**S**	**11 39 12.4**	**-0.2**
JTKR	**Abashiri--Toko**	**1.30**	**149**	⇓P		**Pn**	**11 38 41.6**	**+1.0**
JTKR				*eS*		**S**	**11 39 13.6**	**+0.9**
JHR	**Hokuryu**	**1.61**	**214**	P		**Pn**	**11 38 43.5**	**+0.8**
JAR	**Ashorobuto**	**1.88**	**162**	⇓P		**Pn**	**11 38 45.7**	**+1.0**
JAR				*eS*		**S**	**11 39 20.0**	**-0.1**
YSS	**Yuzh-Sakhalins**	**1.88**	**355**	⇑ *i*PN		**Pn**	**11 38 45.0**	**+0.5**
YSS				*i* S		**S**	**11 39 18.3**	**-1.5**
YSS				pmax	pmax			
	comp=N,280nm,0.5s							
YSS				pmax	pmax			
	comp=Z,410nm,0.5s							
YSS				smax	smax			
	comp=N,260nm,0.8s							
YSS				smax	smax			
	comp=E,400nm,1.0s							
YSS	**Yuzh-Sakhalins**	**1.88**	**355**	⇑ *i*P		**Pn**	**11 38 45.0**	**+0.5**
YSS				AMB	AMB		11 38 46.0	
	comp=E,280nm,0.5s							
YSS				AMB	AMB		11 38 46.0	
	comp=E,410nm,0.5s							
YSS				*i* S		**S**	**11 39 18.3**	**-1.5**
YSS				A	A		11 39 19.9	
	comp=E,400nm,1.0s							
YSS				A	A		11 39 19.9	
	comp=E,260nm,0.8s							
JRA	**Rausu**	**1.91**	**126**	⇓P		**Pn**	**11 38 46.2**	**+1.3**
JRA				*eS*		**S**	**11 39 22.4**	**+1.9**
JFR	**Furan**	**1.94**	**188**	P		**Pn**	**11 38 45.9**	**+0.7**
JFR				*eS*		**S**	**11 39 20.8**	**-0.3**
YUK	**Yuzh-Kuril'sk**	**2.31**	**116**	*eP*		**Pn**	**11 38 49.5**	**+1.2**
YUK				AMB	AMB		11 38 50.0	
	comp=E,151nm,0.5s							
YUK				*eS*		**S**	**11 39 28.3**	**+1.7**
YUK				A	A		11 39 29.0	
	comp=E,610nm,0.9s							
JAK	**Akkeshi**	**2.43**	**149**	P		**Pn**	**11 38 48.9**	**-0.5**
JAK				*eS*		**S**	**11 39 26.5**	**-2.1**
JCH	**Churui**	**2.48**	**173**	⇓P		**Pn**	**11 38 49.3**	**-0.6**
JCH				*eS*		**S**	**11 39 26.0**	**-3.6**
JSK	**Shakotan**	**2.50**	**227**	P		**Pn**	**11 38 50.5**	**+0.5**
JEW	**Eniwo**	**2.50**	**207**	P		**Pn**	**11 38 51.1**	**+1.0**
JEW				*eS*		**S**	**11 39 29.5**	**-0.3**
NEM2	**Nemuro 2**	**2.63**	**130**	P		**Pn**	**11 38 50.3**	**-0.9**
NEM2				*eS*		**S**	**11 39 29.2**	**-2.7**
JNBK	**Urakawa-nobuka**	**2.81**	**183**	P		**Pn**	**11 38 53.0**	**0.0**
JNBK				*eS*		**S**	**11 39 31.7**	**-3.5**
ERM	**Erimo**	**3.07**	**178**	*e*Pn		**Pn**	**11 38 55.8**	**+0.2**
KUR	**Kuril'sk**	**3.46**	**86**	*eP*		**Pn**	**11 39 00.5**	**+0.9**
KUR				AMB	AMB		11 39 02.0	
	comp=E,280nm,0.9s							
JKB	**Kayabe**	**3.49**	**205**	⇑P		**Pn**	**11 38 59.6**	**-0.5**
JKB				*eS*		**S**	**11 39 43.4**	**-4.5**
UGL	**Uglegorsk**	**4.04**	**351**	*eP*		**Pn**	**11 39 06.0**	**+0.1**
UGL				AMB	AMB		11 39 06.5	
	comp=E,107nm,0.9s							
UGL				*eS*		**S**	**11 39 58.0**	**-0.6**
TEV	**Ternei**	**4.52**	**272**	*eP*		**Pn**	**11 39 12.5**	**+1.1**
TEY				AMB	AMB		11 39 13.3	
	comp=E,18nm,0.5s							
TEY				*eS*		**S**	**11 40 09.5**	**+1.0**
TEY				A	A		11 40 10.5	
	comp=E,43nm,1.0s							
TYV	**Tymovskoe**	**5.79**	**358**	*eP*		**Pn**	**11 39 26.0**	**-0.3**
TYV				AMB	AMB		11 39 26.5	
	comp=E,12nm,0.8s							
GRNR	**Gornyy**	**7.19**	**325**	*eP*		**Pn**	**11 39 41.5**	**-1.9**
GRNR				AMB	AMB		11 39 42.0	
	comp=E,6.0nm,0.5s							
USRK	**Ussuriysk Arra**	**7.88**	**267**	P		**Pn**	**11 39 52.0**	**+0.1**
	comp=E,1.5nm,0.3s,baz=75,slow=12,SNR=52							
KLR	**Kul'dur**	**8.70**	**302**	*e*PN		Pn	11 39 51.2	-11
MAJO	**Matsushiro**	**9.27**	**205**	*e*Pn		**Pn**	**11 40 08.7**	**-0.6**
MJAR	**Matsushiro Arr**	**9.27**	**205**	P		**Pn**	**11 40 10.8**	**+1.6**
	comp=E,0.3nm,0.3s,baz=16,slow=13,SNR=5.9							
EKMR	**Ekimchan**	**10.34**	**324**	*eP*		Pn	11 40 17.5	-4.9
EKMR				AMB	AMB		11 40 18.8	
	comp=E,12nm,0.6s							
EKMR				*eS*		S	11 42 11.5	-7.0
EKMR				A	A		11 42 11.8	
	comp=E,4.0nm,0.5s							
SKR	**Severo-Kuril's**	**10.45**	**53**	*e*PN		**Pn**	**11 40 20.9**	**-2.7**
SKR	**Severo-Kuril's**	**10.45**	**53**	*eP*		**Pn**	**11 40 23.0**	**-0.6**
SKR				AMB	AMB		11 40 24.0	
	comp=E,93nm,0.7s							
PETK	**Petropavlovsk-**	**12.53**	**45**	PN		**P**	**11 40 49.7**	**-0.7**
PETK	**Petropavlovsk-**	**12.53**	**45**	P		**P**	**11 40 49.7**	**-0.7**
	comp=E,0.2nm,0.3s,baz=213,slow=10,SNR=12							
BMKR	**Bomnak**	**13.24**	**322**	*eP*		Pn	11 40 52.5	-5.1
BMKR				AMB	AMB		11 40 55.0	
	comp=E,3.0nm,0.8s							
ZEA	**Zeya**	**13.39**	**316**	*eP*		**Pn**	**11 40 56.8**	**-2.7**
ZEA				AMB	AMB		11 40 57.3	
	comp=E,20nm,0.8s							
KSRS	**Korea Array**	**13.64**	**241**	*eP*		**P**	**11 41 04.0**	**+1.2**
KSRS	**Korea Array**	**13.64**	**241**	P		**P**	**11 41 04.0**	**+1.2**
	comp=E,0.8nm,0.3s,baz=52,slow=11,SNR=27							
KROS	**Kirovskiy**	**13.92**	**318**	*eP*		Pn	11 41 02.0	-3.9
KROS				AMB	AMB		11 41 02.7	
	comp=E,10.0nm,0.9s							
JNU	**Nakatsue**	**15.17**	**222**	P		**P**	**11 41 20.7**	**+0.9**
JNU	**Nakatsue**	**15.17**	**222**	P		**Pn**	**11 41 21.7**	**+0.6**
	comp=E,0.6nm,0.3s,baz=35,slow=4.4,SNR=6.5							
ULN	**Ulaanbaatar**	**24.76**	**289**	*eP*		**P**	**11 42 55.7**	**-0.4**
	comp=E,4.2nm,0.8s							
SONM	**Songino Array**	**25.20**	**289**	P		**P**	**11 43 00.3**	**+0.2**
	comp=E,3.7nm,0.4s,baz=83,slow=8.9,SNR=46							
ZAK	**Zakamensk**	**26.98**	**296**	*eP*		**P**	**11 43 15.1**	**-0.8**
ZALV	**Zalesovo Beam**	**37.80**	**305**	P		**P**	**11 44 48.9**	**-0.1**
ZALV	**Zalesovo Beam**	**37.80**	**305**	P		**P**	**11 44 48.9**	**-0.1**
	comp=E,0.7nm,0.4s,baz=68,slow=8.2,SNR=4.2							
KDAK	**Kodiak Island**	**40.56**	**48**	P		**P**	**11 45 12.1**	**+0.4**
	comp=E,2.3nm,0.4s,baz=247,slow=9.6,SNR=7.5							
MK31	**Makanchi Array**	**41.31**	**295**	*eP*		**P**	**11 45 17.3**	**-0.8**
MK31				pmax	pmax			
	comp=Z,4.0nm,0.5s							
MK31	**Makanchi Array**	**41.31**	**295**	*eP*		**P**	**11 45 18.1**	**+0.1**
MKAR	**Makanchi Array**	**41.31**	**295**	P		**P**	**11 45 18.3**	**+0.2**
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.6s							
MKAR				pmax	pmax			
	comp=N,1.0nm,0.7s							
MKAR	**Makanchi Array**	**41.31**	**295**	P		**P**	**11 45 18.3**	**+0.2**
	comp=N,3.2nm,0.6s,baz=79,slow=8.5,SNR=47							
MKAR				ScP		**ScP**	**11 50 34.0**	**+1.5**
	comp=N,0.5nm,0.7s,baz=70,slow=4.0,SNR=7.0							
ILAR	**Eielson Array**	**42.20**	**37**	P		**P**	**11 45 24.4**	**-0.4**
	comp=N,0.5nm,0.5s,baz=291,slow=7.6,SNR=18							
INK	**Inuvik**	**46.77**	**30**	P		**P**	**11 46 00.2**	**-0.4**
	comp=N,1.5nm,0.3s,baz=262,slow=7.8,SNR=8.5							
AB31	**Akbulak array**	**53.88**	**306**	*eP*		**P**	**11 46 53.9**	**-0.1**
AB31				pmax	pmax			
	comp=Z,1.0nm,0.2s							
ABKAR	**Akbulak array**	**53.88**	**306**	*eP*		**P**	**11 46 53.7**	**-0.3**
	comp=Z,2.4nm,0.3s							
YKA	**Yellowknife Ar**	**56.33**	**33**	P		**P**	**11 47 11.7**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=305,slow=6.7,SNR=33							
YKA				PcP		**PcP**	**11 48 05.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=305,slow=3.8,SNR=4.9							
FINES	**FINESS Array B**	**62.30**	**331**	P		**P**	**11 47 50.7**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=52,slow=9.1,SNR=5.5							
WRA	**Warramunga Arr**	**65.19**	**189**	P		**P**	**11 48 12.0**	**+1.0**
	comp=Z,1.1nm,0.6s,baz=9.8,slow=6.9,SNR=12							
KBZ	**Khabaz**	**66.66**	**309**	P		**P**	**11 48 20.2**	**+0.1**
KBZ				pmax	pmax			
	comp=Z,2.0nm,0.5s							
KBZ	**Khabaz**	**66.66**	**309**	P		**P**	**11 48 20.1**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=80,slow=6.1,SNR=5.3							
NOA	**NORSAR Array B**	**67.24**	**337**	P		**P**	**11 48 23.4**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=36,slow=6.2,SNR=2.8							
AKASG	**Malin Array Be**	**68.70**	**321**	P		**P**	**11 48 32.2**	**-0.5**
AKASG	**Malin Array Be**	**68.70**	**321**	P		**P**	**11 48 32.2**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=47,slow=7.0,SNR=3.5							
ASAR	**Alice Springs**	**68.92**	**189**	P		**P**	**11 48 36.0**	**+1.6**
	comp=Z,2.9nm,0.6s,baz=0.5,slow=4.9,SNR=77							
NVAR	**Mina Array Bea**	**69.36**	**56**	P		**P**	**11 48 38.5**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=292,slow=6.3,SNR=10							
PDAR	**Pinedale Array**	**71.28**	**48**	P		**P**	**11 48 49.5**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=316,slow=2.5,SNR=9.0							
TXAR	**Lajitas Array**	**84.33**	**54**	P		**P**	**11 50 01.8**	**+1.4**
	comp=Z,1.0nm,0.5s,baz=291,slow=4.2,SNR=25							
TORD	**Torodi Ar. Bea**	**112.27**	**319**	PKIKP		**PKiKP**	**11 56 01.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=30,slow=1.9,SNR=4.4							

MEX 11 11:57:19.4±0.7,**15°.31N×91°.88W,h29**km±21km,**MD3.6,**
Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.00**	**346**	*eP*		Pn	11 57 35.4	-2.2
CCIG				*eS*		Sn	11 57 47.4	-3.5
PCIG		**1.35**	**287**	*eP*		Pn	11 57 39.8	-2.5
PCIG				*eS*		Sn	11 57 56.8	-2.4
TGIG		**1.89**	**321**	*i* P		Pn	11 57 48.7	-1.1
TGIG				*eS*		Sn	11 58 09.2	-3.4

*IDC **11** 12:38:57.7±0.7, 13°.06N×145°.70E, h0km, mb4.2/21, mb1 4.3/21, mb1mx4.2/31, mbtmp4.2/21, MS3.5/6, Ms1 3.6/6, ms1mx3.1/33, Error ellipse: s-maj=17.5km s-min=15.2km az=69.0*
*NEIC **11** 12:38:59.4±0.4, 13°.05N×145°.59E, h10km, mb4.5/7, Error ellipse: s-maj=11.6km s-min=8.4km az=91.0*
*ISCJB **11** 12:39:02.4±0.5, 13°.04N±0°.07×145°.48E±0°.10, h43km, mb4.2/28, MS3.5/6, Error ellipse: s-maj=13.7km s-min=9.7km az=176.1*
ISC 11 12:39:04.1±0.6,**13°.1N**±0°.1×**145°.62E**±0°.10,**h43**km,**n61,**
σ1s02/64,mb4.2/28,**MS3.6**/6,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.91**	**306**	Pn		**Pn**	**12 39 18.9**	**-1.4**
GUMO				Sn		**Sn**	**12 39 34.2**	**+1.8**
GUMO	**Guam**	**0.91**	**306**	Pn		**Pn**	**12 39 18.9**	**-1.4**
	1μm,0.3s,baz=125,slow=12,SNR=569							
GUMO				Sn		**Sn**	**12 39 34.2**	**+1.8**
	1μm,0.3s,baz=0.0,slow=20,SNR=17							
JNU	**Nakatsue**	**24.09**	**328**	P		**P**	**12 44 14.8**	**-0.9**
JNU	**Nakatsue**	**24.09**	**328**	P		**P**	**12 44 14.8**	**-0.9**
	8.8nm,1.0s,baz=135,slow=8.6,SNR=3.3							
JNU				LR		LR	12 53 11.4	
	comp=Z,36nm,19.7s,baz=229,slow=35							
MJAR	**Matsushiro Arr**	**24.32**	**345**	P		**P**	**12 44 16.0**	**-1.7**
MJAR	**Matsushiro Arr**	**24.32**	**345**	P		**P**	**12 44 16.0**	**-1.7**
	4.6nm,0.9s,baz=173,slow=11,SNR=11							
MAJO	**Matsushiro**	**24.32**	**345**	*eP*		**P**	**12 44 16.2**	**-1.6**
	11nm,1.0s							
KSRS	**Korea Array**	**28.99**	**330**	P		**P**	**12 44 58.9**	**-0.9**
	1.6nm,0.8s,baz=153,slow=9.4,SNR=3.7							
KSAR	**Wonju Array Be**	**29.00**	**330**	P		**P**	**12 44 58.9**	**-1.0**
ASAJ	**Asahikawa**	**31.07**	**356**	LR		LR	12 57 41.6	
	comp=Z,70nm,20.1s,baz=166,slow=36							
USRK	**Ussuriysk Arra**	**33.17**	**342**	P		**P**	**12 45 36.3**	**-0.1**
	1.8nm,0.7s,baz=98,slow=6.6,SNR=6.1							
WRAB	**Tennant Creek**	**34.60**	**199**	*eP*		**P**	**12 45 48.0**	**-1.2**
WRA	**Warramunga Arr**	**34.61**	**199**	P		**P**	**12 45 48.5**	**-0.8**
WRA	**Warramunga Arr**	**34.61**	**199**	P		**P**	**12 45 48.5**	**-0.8**
	2.7nm,0.7s,baz=22,slow=9.7,SNR=28							
AS31	**Alice Springs**	**38.24**	**198**	*eP*		**P**	**12 46 19.8**	**-0.5**
ASAR	**Alice Springs**	**38.25**	**198**	P		**P**	**12 46 19.8**	**-0.5**
ASAR	**Alice Springs**	**38.25**	**198**	P		**P**	**12 46 19.8**	**-0.5**
	1.3nm,0.7s,baz=24,slow=9.3,SNR=28							
PETK	**Petropavlovsk-**	**41.11**	**11**	P		**P**	**12 46 43.1**	**-0.5**
PETK	**Petropavlovsk-**	**41.11**	**11**	P		**P**	**12 46 43.1**	**-0.5**
	3.1nm,0.9s,baz=169,slow=8.9,SNR=4.1							
CMAR	**Chiang Mai Arr**	**45.15**	**283**	P		**P**	**12 47 16.9**	**0.0**
CMAR				PcP		**PcP**	**12 48 58.1**	**+1.2**
CMAR	**Chiang Mai Arr**	**45.15**	**283**	P		**P**	**12 47 16.9**	**0.0**
	1.9nm,0.5s,baz=81,slow=6.7,SNR=14							
CMAR				PcP		**PcP**	**12 48 58.1**	**+1.2**
	1.1nm,0.7s,baz=110,slow=1.6,SNR=5.3							
CMAR				LR		LR	13 07 15.8	
	comp=Z,58nm,18.1s,baz=65,slow=38							
SONM	**Songino Array**	**47.59**	**325**	P		**P**	**12 47 35.7**	**-0.1**
SONM				PcP		**PcP**	**12 49 06.2**	**+1.2**
SONM	**Songino Array**	**47.59**	**325**	P		**P**	**12 47 35.7**	**-0.1**
	0.7nm,0.6s,baz=130,slow=7.9,SNR=5.5							
SONM				PcP		**PcP**	**12 49 06.2**	**+1.2**
	1.0nm,0.6s,baz=152,slow=2.8,SNR=6.0							
BILL	**Bilibino**	**56.57**	**9**	*eP*		**P**	**12 48 41.3**	**-0.8**
	5.2nm,1.0s							
MKAR	**Makanchi Array**	**62.38**	**316**	P		**P**	**12 49 22.4**	**-0.2**
MKAR	**Makanchi Array**	**62.38**	**316**	P		**P**	**12 49 22.4**	**-0.2**
	1.0nm,0.5s,baz=85,slow=8.5,SNR=9.2							
MKAR				LR		LR	13 16 33.3	
	comp=Z,43nm,19.2s,baz=251,slow=36							
ZALV	**Zalesovo Beam**	**62.49**	**324**	P		**P**	**12 49 24.9**	**+1.9**
ZALV				PcP		**PcP**	**12 50 01.9**	**-0.1**
ZALV	**Zalesovo Beam**	**62.49**	**324**	P		**P**	**12 49 24.9**	**+1.9**
	0.6nm,0.6s,baz=113,slow=6.6,SN

ULM	**Lac du Bonnet**	**97.27**	**35**	LR	LR	13 36 55.0			
	comp=Z,86nm,19.0s,baz=331,slow=36								
TORD	**Torodi Ar. Bea**	**135.77**	**305**	PKP	**PKPdf**	**12 58 22.9**	**+1.9**		
TORD	**Torodi Ar. Bea**	**135.77**	**305**	PKP	**PKPdf**	**12 58 22.9**	**+1.9**		
	1.0nm,1.0s,baz=59,slow=1.4,SNR=4.5								
DBIC	**Dimbokro**	**144.73**	**302**	*e*PKPdf	PKPbc	12 58 36.1	0.0		
DBIC				PKP	**PKPdf**	**12 58 37.0**	**-0.3**		
DBIC	**Dimbokro**	**144.73**	**302**	PKP	**PKPdf**	**12 58 37.0**	**-0.3**		
	12nm,0.7s,baz=30,slow=3.6,SNR=18								

IDC ***11*** *12:39:17.5±0.7,30°.02S×13°.77W,h0km,mb4.2/11, mb1 4.3/11,mb1mx4.1/22,mbtmp4.2/11,MS4.0/15, Ms1 4.0/15,ms1mx3.9/22,Error ellipse: s-maj=22.6km s-min=18.9km az=180.0*

ISCJB ***11*** *12:39:17.6±0.5,29°.94S±0°.09×13°.77W±0°.09,h10km, mb4.3/14,MS4.0/15,Error ellipse: s-maj=13.4km s-min=10.7km az=146.6*

NEIC ***11*** *12:39:19.0±0.3,30°.01S×13°.77W,h10km,mb4.2/3,Error ellipse: s-maj=11.7km s-min=8.8km az=157.0*

ISC 11 12:39:19.1±0.5,30°.0S±0°.1×13°.79W±0°.10,h10km,n58, σ0s88/49,mb4.3/14,MS4.1/15,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**15.79**	**30**	Pn	**Pn**	**12 43 01.4**	**-0.2**
SUR	**Sutherland**	**29.63**	**104**	LR	LR	12 54 14.0	
	comp=Z,416nm,21.2s,baz=254,slow=30						
TSUM	**Tsumeb**	**30.39**	**77**	*e*P	**P**	**12 45 30.9**	**-0.8**
RCBR	**Riachuelo**	**31.80**	**315**	LR	LR	12 55 07.0	
	comp=Z,139nm,18.9s,baz=296,slow=30						
BOSA	**Boshof**	**33.97**	**98**	P	**P**	**12 46 01.6**	**-1.4**
BOSA	**Boshof**	**33.97**	**98**	P	**P**	**12 46 01.6**	**-1.4**
	8.7nm,1.1s,baz=260,slow=10,SNR=7.0						
BOSA				LR	LR	12 58 14.9	
	comp=Z,350nm,18.8s,baz=272,slow=34						
BDFB	**Brasilia**	**34.47**	**287**	P	**P**	**12 46 07.0**	**-0.5**
BDFB	**Brasilia**	**34.47**	**287**	P	**P**	**12 46 07.0**	**-0.5**
	6.7nm,0.8s,baz=104,slow=6.2,SNR=5.8						
BDFB				LR	LR	12 57 26.0	
	comp=Z,291nm,20.9s,baz=332,slow=32						
LBTB	**Lobatse**	**35.17**	**92**	P	**P**	**12 46 13.1**	**-0.3**
LBTB	**Lobatse**	**35.17**	**92**	P	**P**	**12 46 13.1**	**-0.3**
	2.8nm,0.8s,baz=261,slow=11,SNR=3.1						
LBTB				LR	LR	12 58 27.9	
	comp=Z,321nm,19.4s,baz=248,slow=33						
DBIC	**Dimbokro**	**37.43**	**15**	P	**P**	**12 46 31.1**	**-1.5**
DBIC	**Dimbokro**	**37.43**	**15**	P	**P**	**12 46 31.1**	**-1.5**
	1.4nm,0.5s,baz=169,slow=4.9,SNR=3.5						
CPUP	**Villa Florida**	**38.39**	**265**	LR	LR	13 00 16.7	
	comp=Z,473nm,20.4s,baz=106,slow=33						
TRQA	**Tornquist**	**40.38**	**245**	*e*P	**P**	**12 46 56.7**	**-0.5**
VNA2	**Neumayer--Watz**	**41.17**	**177**	*e*P	**P**	**12 47 04.7**	**+1.6**
LSZ	**Lusaka**	**41.17**	**79**	P	**P**	**12 47 05.1**	**+1.0**
LSZ	**Lusaka**	**41.17**	**79**	P	**P**	**12 47 05.1**	**+1.0**
	1.1nm,0.5s,baz=221,slow=11,SNR=4.0						
SNAA	**Sanae**	**42.17**	**175**	*e*P	**P**	**12 47 12.2**	**+0.6**
SNAA	**Sanae**	**42.17**	**175**	P	**P**	**12 47 11.5**	**-0.1**
SNAA	**Sanae**	**42.17**	**175**	P	**P**	**12 47 11.5**	**-0.1**
	1.4nm,1.1s,baz=326,slow=7.1,SNR=5.1						
SIV	**San Ignacio**	**45.39**	**277**	P	**P**	**12 47 39.0**	**+0.8**
SIV	**San Ignacio**	**45.39**	**277**	P	**P**	**12 47 39.0**	**+0.8**
	4.5nm,0.9s,baz=122,slow=8.8,SNR=9.0						
SIV				LR	LR	13 04 12.6	
	comp=Z,270nm,20.7s,slow=33						
TOA0	**Torodi Ar. Sit**	**45.40**	**21**	*e*P	**P**	**12 47 37.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**45.40**	**21**	P	**P**	**12 47 38.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**45.40**	**21**	P	**P**	**12 47 38.1**	**+0.1**
	3.0nm,0.9s,baz=200,slow=7.3,SNR=17						
TORD				LR	LR	13 02 31.4	
	comp=Z,202nm,19.4s,baz=190,slow=31						
CFAA	**Coronel Fontan**	**46.39**	**253**	LR	LR	13 05 19.6	
	comp=Z,37nm,20.4s,baz=140,slow=34						
PLCA	**Paso Flores**	**46.80**	**241**	LR	LR	13 03 30.5	
	comp=Z,152nm,19.3s,baz=9,slow=31						
SAML	**Samuel**	**50.60**	**284**	*e*P	**P**	**12 48 19.0**	**+0.6**
	8.4nm,1.1s						
TAM	**Tamanrasset**	**55.65**	**22**	*e*P	**P**	**12 48 56.6**	**+1.0**
	1.0nm,0.4s						
KMBO	**Kilima Mbogo**	**56.28**	**69**	LR	LR	13 11 26.1	
	comp=Z,283nm,21.8s,baz=154,slow=34						
MAW	**Mawson**	**57.59**	**154**	LR	LR	13 08 48.6	
	comp=Z,91nm,21.0s,baz=94,slow=31						
ATAH	**Atahualpa**	**64.49**	**277**	LR	LR	13 14 41.9	
	comp=Z,123nm,21.3s,baz=20,slow=33						
KEST	**Kesra**	**68.89**	**20**	*e*P	**P**	**12 50 24.9**	**+0.9**
KEST	**Kesra**	**68.89**	**20**	P	**P**	**12 50 25.1**	**+1.1**
	2.7nm,0.9s,baz=197,slow=2.2,SNR=6.6						
KEST				LR	LR	13 18 20.0	
	comp=Z,87nm,18.3s,baz=134,slow=34						
VNDA	**Vanda**	**72.72**	**179**	LR	LR	13 21 27.1	
	comp=Z,142nm,20.4s,baz=159,slow=35						
BR131	**Keskin Array S**	**82.17**	**35**	*e*P	**P**	**12 51 40.9**	**+0.7**
	1.1nm,0.7s						
BRTR	**Keskin Array B**	**82.17**	**35**	P	**P**	**12 51 41.4**	**+1.1**
BRTR	**Keskin Array B**	**82.17**	**35**	P	**P**	**12 51 41.4**	**+1.1**
	2.6nm,0.9s,baz=196,slow=4.1,SNR=16						
VYHS	**Vyhne**	**83.40**	**21**	*e*P	**P**	**12 51 47.0**	**+0.7**
CRVS	**Cervenica-Dubn**	**84.61**	**22**	*e*P	**P**	**12 51 52.5**	**+0.1**
AKASG	**Malin Array Be**	**88.87**	**26**	P	**P**	**12 52 13.3**	**+0.2**
AKASG	**Malin Array Be**	**88.87**	**26**	P	**P**	**12 52 13.3**	**+0.2**
	1.6nm,0.9s,baz=224,slow=4.6,SNR=4.8						
EMMW	**East Machias**	**88.97**	**325**	*e*P	**P**	**12 52 13.0**	**-0.7**
	240nm,1.3s						
ASAR	**Alice Springs**	**118.29**	**146**	PKP	**PKPdf**	**12 58 06.8**	**-0.6**
ASAR	**Alice Springs**	**118.29**	**146**	PKP	**PKPdf**	**12 58 06.8**	**-0.6**
	0.7nm,0.7s,baz=215,slow=1.4,SNR=9.2						
YKA	**Yellowknife Ar**	**121.06**	**328**	PKP	**PKPdf**	**12 58 09.9**	**-1.3**
YKA	**Yellowknife Ar**	**121.06**	**328**	PKP	**PKPdf**	**12 58 09.9**	**-1.3**
	0.3nm,0.7s,baz=100,slow=2.6,SNR=4.4						
WRA	**Warramunga Arr**	**121.64**	**144**	PKP	**PKPdf**	**12 58 12.4**	**-1.4**
WRA	**Warramunga Arr**	**121.64**	**144**	PKP	**PKPdf**	**12 58 12.4**	**-1.4**
	0.6nm,0.9s,baz=219,slow=0.9,SNR=3.2						
INK	**Inuvik**	**128.42**	**336**	PKP	**PKPdf**	**12 58 24.9**	**-0.3**
INK	**Inuvik**	**128.42**	**336**	PKP	**PKPdf**	**12 58 24.9**	**-0.3**
	1.3nm,0.9s,baz=106,slow=3.5,SNR=3.6						
SONM	**Songino Array**	**131.40**	**51**	PKP	**PKPdf**	**12 58 32.6**	**+0.9**
SONM	**Songino Array**	**131.40**	**51**	PKP	**PKPdf**	**12 58 32.6**	**+0.9**
	0.4nm,0.7s,baz=288,slow=0.5,SNR=3.5						
ILAR	**Eielson Array**	**134.69**	**334**	PKP	**PKPdf**	**12 58 38.0**	**+0.8**
ILAR	**Eielson Array**	**134.69**	**334**	PKP	**PKPdf**	**12 58 38.0**	**+0.8**
	0.7nm,0.8s,baz=15,slow=1.7,SNR=9.0						
KSAR	**Wonju Array Be**	**147.43**	**66**	PKPbc	**PKPbc**	**12 59 03.8**	**+0.5**
KSRS	**Korea Array**	**147.46**	**66**	PKPbc	**PKPbc**	**12 59 03.8**	**+0.4**
	4.7nm,0.8s,baz=266,slow=3.1,SNR=17						
USRK	**Ussuriysk Arra**	**149.48**	**53**	PKPbc	**PKPbc**	**12 59 07.9**	**-0.4**
	1.1nm,0.6s,baz=242,slow=4.2,SNR=4.9						

IDC 11 12:41:22.9±0.8,30°.08S×13°.84W,h0km,mb4.1/7, mb1 4.1/7,mb1mx3.9/21,mbtmp4.1/7,Error ellipse: s-maj=30.1km s-min=21.6km az=5.0,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**34.00**	**97**	P	P	12 48 08.6	-0.2
	3.6nm,1.0s,baz=225,slow=5.7,SNR=4.1						
BDFB	**Brasilia**	**34.46**	**287**	P	P	12 48 12.0	-0.8
	4.8nm,0.9s,baz=146,slow=4.9,SNR=4.5						
LBTB	**Lobatse**	**35.21**	**91**	P	P	12 48 19.7	+0.5
	3.5nm,0.9s,baz=259,slow=9.2,SNR=4.8						
VNA2	**Neumayer--Watz**	**41.05**	**177**	*e*	P	12 49 10.0	+2.3
SNAA	**Sanae**	**42.07**	**175**	*e*	P	12 49 17.5	+1.3
SNAA	**Sanae**	**42.07**	**175**	P	P	12 49 15.4	-0.8
	0.7nm,1.0s,baz=347,slow=9.8,SNR=3.7						
SIV	**San Ignacio**	**45.36**	**277**	P	P	12 49 44.0	+0.7
	3.7nm,0.9s,baz=119,slow=8.6,SNR=7.2						
TORD	**Torodi Ar. Bea**	**45.51**	**21**	P	P	12 49 43.2	-1.2
	1.3nm,0.7s,baz=203,slow=6.9,SNR=7.6						
BRTR	**Keskin Array B**	**82.28**	**35**	P	P	12 53 47.0	+0.6
	1.1nm,0.9s,baz=191,slow=6.6,SNR=4.4						
ASAR	**Alice Springs**	**118.23**	**146**	PKP	PKPdf	13 00 12.2	-0.6
	0.5nm,0.7s,baz=196,slow=1.5,SNR=9.0						
ILAR	**Eielson Array**	**134.76**	**334**	PKP	PKPdf	13 00 43.3	+0.5
	0.6nm,0.8s,baz=209,slow=1.7,SNR=5.0						
KSRS	**Korea Array**	**147.54**	**67**	PKPbc	PKPbc	13 01 08.6	-0.6
	2.0nm,0.7s,baz=264,slow=3.5,SNR=8.8						

ISCJB ***11*** *12:53:11.3±0.8,22°.60S±0°.05×68°.4W±0°.1,h135km±8km, mb3.2/2,Error ellipse: s-maj=17.6km s-min=8.9km az=4.8*

GUC ***11*** *12:53:12.6±0.8,22°.62S×68°.56W,h125km±5km,ML3.8*

IDC ***11*** *12:53:16.5±5.9,21°.88S×68°.28W,h145km±45km,mb3.4/3, mb1 3.5/5,mb1mx3.3/17,mbtmp3.4/5,Error ellipse: s-maj=47.3km s-min=37.5km az=82.0*

ISC 11 12:53:12.4±1.0,22°.60S±0°.06×68°.4W±0°.1,h128km±9km, n14,σ0s88/18,1C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.44**	**268**	*e*P	**Pn**	**12 53 31.1**	**-0.2**
LVC				*i* S	**Sn**	**12 53 45.0**	**-0.5**
PB09	**Plate Boundary**	**1.10**	**317**	*e*P	**Pn**	**12 53 37.1**	**+0.8**
PB09				*i* S	**Sn**	**12 53 55.2**	**+0.8**
PB09				AML	AML	12 53 57.7	
	comp=E,3μm,0.4s						
CEN1	**Los Morros**	**1.81**	**244**	⇓*i*P	**Pn**	**12 53 45.4**	**+1.3**
CEN1				AML	AML	12 54 11.0	
	comp=N,429nm,0.6s						
PB01	**Plate Boundary**	**1.83**	**328**	⇓*i*P	**Pn**	**12 53 44.8**	**+0.4**
PB01				*i* S	**Sn**	**12 54 09.0**	**+0.2**
PB01				AML	AML	12 54 09.7	
	comp=E,513nm,0.3s						
ANCH	**Antofagasta**	**2.11**	**239**	*e*P	**Pn**	**12 53 46.9**	**-0.7**
ANCH				*i* S	**Sn**	**12 54 13.4**	**-1.3**
HMBC	**Humberstone**	**2.68**	**329**	⇑*i*P	**Pn**	**12 53 54.4**	**-0.6**
HMBC				*e*S	**Sn**	**12 54 26.6**	**-1.1**
HMBC				AML	AML	12 54 29.9	
	comp=N,426nm,0.6s						
MNMC	**Minimini**	**3.62**	**342**	*e*P	**Pn**	**12 54 07.1**	**-0.2**
MNMC				*i* S	**Sn**	**12 54 49.5**	**-0.4**
MNMC				AML	AML	12 54 52.1	
	comp=N,195nm,0.2s						
SIV	**San Ignacio**	**9.57**	**48**	P	Pn	12 55 23.2	-3.8
	comp=N,1.5nm,0.3s,baz=238,slow=10,SNR=35						
SIV				S	Sn	12 57 02.7	-10
	comp=N,0.8nm,0.3s,baz=152,slow=23,SNR=9.8						
CPUP	**Villa Florida**	**10.78**	**112**	P	Pn	12 55 49.6	+6.5
	comp=N,0.5nm,0.3s,baz=270,slow=12,SNR=4.5						
BDFB	**Brasilia**	**20.49**	**74**	P	**P**	**12 57 39.9**	**-0.5**
	comp=N,2.4nm,0.5s,baz=255,slow=12,SNR=4.2						
TORD	**Torodi Ar. Bea**	**77.31**	**70**	P	**P**	**13 04 53.4**	**+0.1**
	comp=N,0.5nm,0.6s,baz=249,slow=5.1,SNR=9.2						
YKA	**Yellowknife Ar**	**92.37**	**340**	P	**P**	**13 06 07.3**	**-0.5**
	comp=N,0.1nm,0.4s,baz=126,slow=4.6,SNR=6.5						
WRA	**Warramunga Arr**	**132.22**	**209**	PKP	**PKPdf**	**13 12 13.6**	**+1.6**
	comp=N,0.2nm,0.5s,baz=159,slow=1.7,SNR=3.9						
MKAR	**Makanchi Array**	**146.25**	**37**	PKPbc	**PKPbc**	**13 12 38.0**	**+0.2**
	comp=N,0.4nm,0.6s,baz=316,slow=4.1,SNR=3.7						

ISCJB ***11*** *13:06:53.4±0.7,20°.2N±0°.1×94°.8E±0°.1,h52km,mb3.9/7, MS2.8/1,Error ellipse: s-maj=20.3km s-min=6.3km az=41.2*

IDC ***11*** *13:06:57.2±4.0,20°.31N×94°.85E,h76km±35km,mb3.6/7, mb1 3.7/8,mb1mx3.4/18,mbtmp3.6/8,MS2.8/1,Ms1 2.8/1, ms1mx2.4/36,Error ellipse: s-maj=39.8km s-min=15.2km az=58.0*

ISC 11 13:06:54.6±0.8,20°.1N±0°.1×94°.6E±0°.1,h52km,n15, σ2s39/16,mb4.0/7,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**4.46**	**111**	P	**Pn**	**13 08 01.1**	**+1.5**
	3.0nm,0.3s,baz=290,slow=15,SNR=54						
CMAR				S	**Sn**	**13 08 48.6**	**-1.7**
	4.8nm,0.3s,baz=86,slow=20,SNR=7.7						
SHL	**Shillong**	**5.95**	**336**	*e*PKP	Pn	13 08 25.0	+4.8
SHL				*e*S	**Sn**	**13 09 30.0**	**+2.9**
ODAN	**Odare**	**9.39**	**317**	*e*Pn	**Pn**	**13 09 10.3**	**+2.8**
ODAN				*e*Sn	**Sn**	**13 10 47.5**	**-4.2**
	30nm,0.3s						
TAPN	**Taplejung**	**9.54**	**320**	*e*Pn	**Pn**	**13 09 12.0**	**+2.4**
TAPN				*e*Sn	**Sn**	**13 10 51.6**	**-3.9**
	49nm,0.6s						
RAMN	**Ramite**	**9.97**	**314**	*e*Pn	Pn	13 09 19.1	+3.7
GUN	**Gumba**	**11.08**	**316**	*e*Pn	**Pn**	**13 09 33.4**	**+2.6**
PKI	**Pulchoki**	**11.18**	**313**	*e*Pn	Pn	13 09 36.4	+4.4
MKAR	**Makanchi Array**	**28.42**	**342**	P	**P**	**13 12 44.2**	**-0.1**
	0.5nm,0.6s,baz=159,slow=8.7,SNR=9.6						
KSRS	**Korea Array**	**33.71**	**52**	LR	LR	13 26 41.4	
	comp=Z,16nm,18.2s,baz=100,slow=36						
ZALV	**Zalesovo Beam**	**34.57**	**350**	P	**P**	**13 13 38.0**	**-0.1**
	0.9nm,0.4s,baz=166,slow=9.2,SNR=6.1						
WRA	**Warramunga Arr**	**55.71**	**133**	P	**P**	**13 16 25.7**	**-0.4**
	0.8nm,0.5s,baz=318,slow=7.7,SNR=25						
WRA				PcP	**PcP**	**13 17 24.8**	**-0.2**
	0.4nm,0.6s,baz=295,slow=4.5,SNR=7.1						
ASAR	**Alice Springs**	**58.01**	**137**	P	**P**	**13 16 42.5**	**+0.1**
	0.6nm,0.6s,baz=315,slow=7.1,SNR=18						
ARCES	**ARCESS Array B**	**63.99**	**339**	P	**P**	**13 17 21.4**	**-0.9**
	3.1nm,1.0s,baz=102,slow=7.6,SNR=5.6						
BOSA	**Boshof**	**82.60**	**236**	P	**P**	**13 19 13.6**	**+0.9**
	1.1nm,0.4s,baz=90,slow=3.0,SNR=3.1						
ILAR	**Eielson Array**	**83.30**	**22**	P	**P**	**13 19 13.3**	**-2.2**
	0.3nm,0.7s,baz=294,slow=5.2,SNR=6.1						

IDC ***11*** *14:32:28.7±0.5,30°.01S×13°.91W,h0km,mb4.3/23, mb1 4.4/23,mb1mx4.3/30,mbtmp4.3/23,MS4.5/25, Ms1 4.5/25,ms1mx4.5/26,Error ellipse: s-maj=16.6km s-min=12.5km az=158.0*

BJI ***11*** *14:32:28.7,29°.42S×14°.74W,h10km,mB5.5/18,Ms5.2/16, Ms7 4.9/17*

ISCJB ***11*** *14:32:29.0±0.3,29°.99S±0°.06×13°.89W±0°.07,h10km, mb4.8/59,MS4.7/37,Error ellipse: s-maj=9.7km s-min=7.8km az=35.8*

NEIC ***11*** *14:32:30.4±0.2,30°.05S×13°.90W,h10km,mb5.2/22,Error ellipse: s-maj=6.8km s-min=5.1km az=148.0*

GCMT ***11*** *14:32:34.6±0.2,30°.01S×13°.75W,h12km,MW5.2, Moment Tensor Solution. s49,c60; s86,c142; Moment tensor: Scale 10¹⁶Nm; Mrr-6.51±.16; Mθθ-0.60±.16; Mφφ7.11±.13; Mrθ-0.69±.55; Mθφ-2.02±.13; Mφr0.72±.41; Best double couple: M₀7.10000×10¹⁶ NP1:φs351.00000°, δ42.00000°,λ-82.00000°. NP2:φs161.00000°,δ49.00000°, λ-97.00000°. Principal axes: T 7.6600, Plg4.0000°, Azm256.0000°; N -1.0500, Plg5.0000°, Azm166.0000°; P -6.6100, Plg84.0000°, Azm20.0000°; Data Used: II IU IC G CN.*

ISC 11 14:32:30.4±0.3,30°.04S±0°.09×13°.99W±0°.07,h10km,n200, σ1s08/218,mb5.0/59,MS4.7/38,43C-2D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**29.78**	**104**	LR	LR	14 47 36.7	
	comp=Z,2μm,20.8s,baz=87,slow=30						
TSUM	**Tsumeb**	**30.57**	**77**	*e*P	**P**	**14 38 43.0**	**-1.6**
	14nm,1.0s						
RCBR	**Riachuelo**	**31.72**	**315**	LR	LR	14 49 11.0	
	comp=Z,550nm,18.2s,baz=128,slow=32						
BOSA	**Boshof**	**34.13**	**98**	*e*P	**P**	**14 39 14.8**	**-0.9**
	86nm,1.5s						
BOSA	**Boshof**	**34.13**	**98**	P	**P**	**14 39 14.8**	**-0.9**
	7.6nm,0.9s,baz=254,slow=8.2,SNR=10						
BOSA				LR	LR	14 50 59.0	
	comp=Z,2μm,18.4s,baz=262,slow=33						
BDFB	**Brasilia**	**34.33**	**287**	P	**P**	**14 39 16.6**	**-0.9**
BDFB	**Brasilia**	**34.33**	**287**	P	**P**	**14 39 16.6**	**-0.9**
	5.5nm,0.5s,baz=121,slow=7.6,SNR=9.9						
BDFB				LR	LR	14 50 48.1	
	comp=Z,1μm,20.8s,baz=105,slow=32						
LBTB	**Lobatse**	**35.34**	**92**	*e*P	**P**	**14 39 24.8**	**-1.4**
	26nm,1.0s						
LBTB				*e*		14 39 30.9	
LBTB	**Lobatse**	**35.34**	**92**	P	**P**	**14 39 25.1**	**-1.0**
	18nm,0.9s,baz=264,slow=8.6,SNR=10						
DBIC	**Dimbokro**	**37.53**	**15**	P	**P**	**14 39 43.0**	**-1.8**
DBIC	**Dimbokro**	**37.53**	**15**	P	**P**	**14 39 43.0**	**-1.8**
	1.5nm,0.8s,baz=192,slow=6.9,SNR=4.0						
DBIC				LR	LR	14 51 58.8	
	comp=Z,245nm,18.3s,baz=175,slow=31						
CPUP	**Villa Florida**	**38.22**	**265**	LR	LR	14 53 37.4	
	comp=Z,2μm,18.7s,baz=99,slow=33						
VNA1	**Neumayer--Stat**	**40.79**	**177**	*e*P	**P**	**14 40 13.3**	**+1.9**
VNA2	**Neumayer--Watz**	**41.10**	**177**	*e*P	**P**	**14 40 15.4**	**+1.4**
LSZ	**Lusaka**	**41.35**	**79**	*e*P	**P**	**14 40 17.1**	**+0.1**
	30nm,1.3s						
LSZ	**Lusaka**	**41.35**	**79**	P	**P**	**14 40 16.5**	**-0.4**
	0.9nm,0.3s,baz=7.5,slow=9.9,SNR=4.5						
SNAA	**Sanae**	**42.13**	**175**	*e*P	**P**	**14 40 22.9**	**+0.4**
SNAA	**Sanae**	**42.13**	**175**	*e*P	**P**	**14 40 22.8**	**+0.2**
	22nm,1.4s						
SNAA	**Sanae**	**42.13**	**175**	P	**P**	**14 40 22.4**	**-0.2**
	1.8nm,1.1s,baz=329,slow=9.6,SNR=7.9						
BBTS	**Babate**	**44.50**	**356**	P	**P**	**14 40 41.5**	**-0.6**
BBTS	**Babate**	**44.50**	**356**	P	**P**	**14 40 41.5**	**-0.6**
	23nm,0.8s,baz=162,slow=6.4,SNR=3.9						
BBTS				LR	LR	14 55 30.7	
	comp=Z,367nm,19.0s,baz=129,slow=31						
SIV	**San Ignacio**	**45.23**	**277**	P	**P**	**14 40 49.9**	**+1.8**
SIV	**San Ignacio**	**45.23**	**277**	P	**P**	**14 40 49.9**	**+1.8**
	8.0nm,1.0s,baz=126,slow=8.5,SNR=19						
TOA0	**Torodi Ar. Sit**	**45.52**	**22**	*e*P	**P**	**14 40 49.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**45.52**	**22**	P	**P**	**14 40 49.2**	**-1.1**
TORD	**Torodi Ar. Bea**	**45.52**	**22**	P	**P**	**14 40 49.2**	**-1.1**
	3.5nm,0.9s,baz=200,slow=8.6,SNR=18						
TORD				LR	LR	14 56 22.8	
	comp=Z,926nm,18.9s,baz=190,slow=32						
USHA	**Ushuaia**	**45.74**	**221**	LR	LR	14 55 56.5	
	comp=Z,956nm,21.6s,baz=50,slow=31						
CFAA	**Coronel Fontan**	**46.21**	**254**	P	**P**	**14 40 55.9**	**+0.1**
CFAA	**Coronel Fontan**	**46.21**	**254**	P	**P**	**14 40 55.9**	**+0.1**
	0.6nm,0.9s,baz=91,slow=11,SNR=4.9						
PMSA	**Palmer Station**	**46.49**	**207**	LR	LR	14 55 48.7	
	comp=Z,433nm,21.5s,baz=244,slow=30						
PLCA	**Paso Flores**	**46.62**	**241**	P	**P**	**14 41 00.1**	**+1.2**
PLCA	**Paso Flores**	**46.62**	**241**	P	**P**	**14 41 00.1**	**+1.2**
	3.0nm,0.9s,baz=135,slow=5.7,SNR=4.3						
PLCA				LR	LR	14 56 40.9	
	comp=Z,734nm,21.3s,baz=90,slow=31						
SYO	**Syowa Base**	**49.45**	**158**	⇑*e*P	**P**	**14 41 18.5**	**-1.8**
SAML	**Samuel**	**50.45**	**284**	*e*P	**P**	**14 41 29.7**	**+1.1**
	24nm,1.1s						
SAML				*e*		14 41 35.2	
LPAZ	**La Paz**	**51.20**	**273**	P	**P**	**14 41 35.0**	**0.0**
LPAZ	**La Paz**	**51.20**	**273**	P	**P**	**14 41 35.0**	**0.0**
	7.0nm,1.0s,baz=122,slow=3.9,SNR=9.8						
LPAZ				LR	LR	15 01 22.1	
	comp=Z,1μm,21.5s,baz=106,slow=34						
MBAR	**Mbarara**	**51.59**	**64**	P	**P**	**14 41 37.1**	**-0.3**
MBAR	**Mbarara**	**51.59**	**64**	P	**P**	**14 41 37.1**	**-0.3**
	1.7nm,0.2s,baz=238,slow=6.8,SNR=6.3						
MBAR				LR	LR	15 01 35.6	
	comp=Z,781nm,20.2s,baz=243,slow=34						
ARE	**Arequipa**	**54.04**	**271**	*e*P	**P**	**14 41 57.0**	**+1.4**
TAM	**Tamanrasset**	**55.77**	**22**	*e*P	**P**	**14 42 08.5**	**+0.7**
	4.9nm,1.0s						
KMBO	**Kilima Mbogo**	**56.46**	**69**	P	**P**	**14 42 14.3**	**+1.2**
KMBO	**Kilima Mbogo**	**56.46**	**69**	P	**P**	**14 42 14.3**	**+1.2**
	0.5nm,0.2s,baz=237,slow=12,SNR=3.8						
KMBO				LR	LR	15 04 26.9	
	comp=Z,1μm,21.3s,baz=96,slow=34						
MAW	**Mawson**	**57.62**	**154**	LR	LR	15 02 07.3	
	comp=Z,520nm,18.3s,baz=288,slow=31						
MDT	**Midelt**	**63.14**	**9**	P	**P**	**14 42 58.5**	**+0.1**
MDT	**Midelt**	**63.14**	**9**	P	**P**	**14 42 58.5**	**+0.1**
	3.2nm,1.1s,baz=225,slow=7.1,SNR=8.2						
MDT				LR	LR	15 07 24.7	
	comp=Z,276nm,18.5s,baz=145,slow=33						
ATAH	**Atahualpa**	**64.33**	**277**	P	**P**	**14 43 07.9**	**+0.7**
ATAH	**Atahualpa**	**64.33**	**277**	P	**P**	**14 43 07.9**	**+0.7**
	6.4nm,0.9s,baz=125,slow=5.2,SNR=6.0						
EVOP	**Sao Brissos**	**68.43**	**5**	*e*P	**P**	**14 43 32.8**	**+0.5**
	75nm,1.5s						
EVO	**Evora**	**68.44**	**5**	*e*P	**P**	**14 43 32.8**	**+0.4**
	75nm,1.5s						
EVO				*e*R			
	421nm,21.5s						
KEST	**Kesra**	**69.00**	**20**	*e*P	**P**	**14 43 36.5**	**+0.5**
KEST	**Kesra**	**69.00**	**20**	P	**P**	**14 43 36.0**	**-0.1**
	1.9nm,0.8s,baz=146,slow=3.2,SNR=11						
KEST				LR	LR	15 11 23.3	
	comp=Z,343nm,19.6s,baz=192,slow=34						
ESDC	**Sonseca Array**	**69.98**	**8**	P

LDF	La Druitiere	79.25	9	eP	P		14 44 35.5	0.0
LDF	La Druitiere	79.25	9	eP	P		14 44 35.5	0.0
FLN	La Foliniere	79.37	9	eP	P		14 44 36.8	+0.7
	98nm,1.4s							
FLN				eR				
	370nm,20.8s							
FLN	La Foliniere	79.37	9	eP	P		14 44 36.8	+0.7
	98nm,1.4s							
BOJS	Bojanci	79.74	20	eP	P		14 44 38.4	+0.2
FETA	Feichten	79.88	17	⇓iP	P		14 44 38.5	-0.7
	14nm,1.9s							
DAVA	Damuels	79.92	16	⇓iP	P		14 44 38.3	-1.1
	20nm,1.6s							
CRNS	Crni Vrh	79.97	20	eP	P		14 44 39.5	0.0
ABTA	Abfaltersbach	80.09	18	⇑iP	P		14 44 40.5	+0.3
	10nm,1.0s							
PAGF	Fort de Pagny	80.20	13	eP	P		14 44 41.0	+0.3
PAGF	Fort de Pagny	80.20	13	eP	P		14 44 41.0	+0.3
WTTA	Wattenberg	80.34	17	⇑iP	P		14 44 41.4	-0.2
	13nm,1.3s							
BFO	Black Forest	80.54	15	eP	P		14 44 41.1	-1.4
	comp=Z,24nm,1.7s							
PERS	Pernice	80.72	20	eP	P		14 44 43.9	+0.3
BAIF	Baives	81.36	12	⇑iP	P		14 44 47.0	+0.2
BAIF	Baives	81.36	12	⇑iP	P		14 44 47.0	+0.2
GIVF	Givet	81.51	12	⇑iP	P		14 44 47.7	+0.1
GIVF	Givet	81.51	12	⇑iP	P		14 44 47.7	+0.1
CONA	Conrad Observa	82.11	20	⇑iP	P		14 44 50.2	-0.8
	comp=Z,11nm,1.4s							
BR131	Keskin Array S	82.31	35	eP	P		14 44 52.5	+0.2
	comp=Z,3.7nm,0.9s							
BRTR	Keskin Array B	82.31	35	P	P		14 44 52.3	0.0
BRTR	Keskin Array B	82.31	35	P	P		14 44 52.3	0.0
	comp=Z,3.5nm,1.0s,baz=203,slow=3.3,SNR=21							
GEC2	GERESS Array S	82.33	18	eP	P		14 44 51.2	-0.9
	comp=Z,41nm,2.4s							
GERES	GERESS Array B	82.33	18	LR	LR		15 18 24.0	
	comp=Z,220nm,22.0s,baz=346,slow=34							
TNS	Taunus Mts	82.35	14	eP	P		14 44 51.9	-0.2
	comp=Z,40nm,1.9s							
WET	Wettzell	82.39	17	eP	P		14 44 51.6	-0.7
	comp=Z,45nm,1.8s							
GRF	Grafenberg Arr	82.48	16	eP	P		14 44 52.2	-0.6
	comp=Z,51nm,1.5s							
GRF				eL	L		15 20 08.7	
	comp=Z,230nm,19.1s							
KHC	Kasperske Hory	82.56	18	⇑iP	P		14 44 52.6	-0.7
KHC				epP	PcP		14 44 58.4	+0.1
KHC				AMS	AMS		15 20 40.0	
	comp=Z,300nm,20.6s							
ZST	Bratislava	82.72	20	eP	P		14 44 53.6	-0.4
ROTZ	Rotzenmuhle	82.80	17	eP	P		14 44 53.7	-0.7
	comp=Z,48nm,1.8s							
UBBA	Unterbreizbach	83.25	15	eP	P		14 44 56.5	-0.1
	comp=Z,29nm,1.8s							
BUG	Bochum--Univer	83.26	13	eP	P		14 44 56.6	-0.1
	comp=Z,35nm,1.6s							
NKC	Novy Kostel	83.28	17	⇑iP	P		14 44 57.5	+0.6
PSZ	Piszkesteto	83.35	22	eP	P		14 44 57.1	-0.3
	comp=Z,16nm,1.2s							
TANN	Tannenbergstha	83.46	17	eP	P		14 44 57.2	-0.7
	comp=Z,14nm,1.3s							
MOX	Moxa	83.46	16	eL	L		15 20 47.2	
	comp=Z,248nm,18.6s							
VYHS	Vyhne	83.52	21	eP	P		14 44 57.8	-0.4
PRU	Pruhonice	83.60	18	⇑iP	P		14 44 58.4	-0.1
PRU				AMS	AMS		15 19 00.0	
	comp=Z,300nm,18.1s							
TIRR	Tirgusor	83.63	29	eP	P		14 44 57.7	-1.1
	comp=Z,71nm,2.0s							
BRG	Berggiesshubel	84.25	17	eP	P		14 45 01.9	+0.1
	comp=Z,17nm,1.6s							
KRLC	Kraliky	84.31	19	eP	P		14 45 03.1	+0.9
CLL	Collm	84.41	17	eP	P		14 45 02.3	-0.3
	comp=Z,36nm,1.8s							
CLL	Collm	84.41	17	iP	P		14 45 02.8	+0.2
	comp=Z,36nm,1.8s							
CLL				Lm	MLR		15 21 00.0	
	comp=Z,200nm,18.0s							
DPC	Dobruska-Polom	84.42	19	⇑iP	P		14 45 02.9	+0.1
DPC				epP	PcP		14 45 08.4	+2.0
UPC	Upice	84.48	19	iP	P		14 45 02.9	-0.1
UPC				ex	x		14 45 13.8	
CRVS	Cervenica-Dubn	84.72	23	eP	P		14 45 03.5	-0.8
NRDL	Niedersach Rie	84.84	15	eP	P		14 45 05.6	+0.9
	comp=Z,35nm,1.5s							
BUR08	Bucovina Ar. S	84.97	25	eP	P		14 45 06.2	+0.4
KOLS	Kolonicke sedl	85.03	23	eP	P		14 45 06.2	+0.4
EKA	Eskdalemuir Ar	85.53	6	P	P		14 45 08.5	+0.4
EKA	Eskdalemuir Ar	85.53	6	P	P		14 45 08.5	+0.4
	comp=Z,5.3nm,1.0s,baz=211,slow=4.0,SNR=4.6							
BSEG	Bad Segeberg	86.23	14	eP	P		14 45 12.3	+0.7
	comp=Z,24nm,0.6s							
AKASG	Malin Array Be	88.99	26	P	P		14 45 24.9	-0.1
AKASG	Malin Array Be	88.99	26	P	P		14 45 24.9	-0.1
	comp=Z,1.3nm,0.7s,baz=215,slow=5.8,SNR=8.5							
AKASG				LR	LR		15 26 23.6	
	comp=Z,109nm,18.4s,baz=235,slow=36							
KBZ	Khabaz	89.98	37	LR	LR		15 25 54.9	
	comp=Z,88nm,19.8s,baz=307,slow=36							
NOA	NORSAR Array B	93.05	12	LR	LR		15 26 38.5	
	comp=Z,105nm,18.8s,baz=180,slow=35							
SCHQ	Schefferville	95.92	332	LR	LR		15 20 56.6	
	comp=Z,145nm,18.3s,baz=81,slow=30							
FINES	FINESS Array B	96.77	18	LR	LR		15 27 59.1	
	comp=Z,171nm,19.5s,baz=270,slow=34							
TBI	Tubuai	111.83	224	eSS	SS		15 07 33.2	+9.0
	comp=Z,94nm,31.5s							
TBI				eLR	LR		15 24 21.9	
	comp=Z,311nm,32.0s							
PPT2	Papeete2	116.19	228	eSS	SS		15 08 33.1	+11
	comp=Z,143nm,26.5s							
PPT2				eLR	LR		15 26 22.1	
	comp=Z,182nm,22.2s							
WMQ	Urumqi	118.08	53	ePKP	PKPdf		14 51 18.8	+1.3
WMQ				PP	PP		14 52 38.0	+5.2
WMQ				PKS	PKSdf		14 54 54.3	+0.2
WMQ				SKS	SKSdf		14 58 29.9	+0.3
WMQ				SKKS	SKKSac		14 59 30.0	-3.0
WMQ				SS	SS		15 08 49.0	+1.1
WMQ				LR	LR			
	comp=N,160nm,28.8s							
WMQ				LR	LR			
	comp=E,200nm,26.4s							
WMQ				LR	LR			
	comp=Z,180nm,27.4s							
ASAR	Alice Springs	118.34	146	PKP	PKPdf		14 51 17.4	-1.3
ASAR	Alice Springs	118.34	146	PKP	PKPdf		14 51 17.4	-1.3
	comp=Z,0.6nm,0.7s,baz=194,slow=1.9,SNR=15							
YKA	Yellowknife Ar	121.02	328	PKP	PKPdf		14 51 21.8	-0.7
YKA	Yellowknife Ar	121.02	328	PKP	PKPdf		14 51 21.7	-0.7
	comp=Z,0.7nm,0.8s,baz=94,slow=1.8,SNR=4.2							
WRA	Warramunga Arr	121.70	145	PKP	PKPdf		14 51 23.8	-1.4
WRA	Warramunga Arr	121.70	145	PKP	PKPdf		14 51 23.8	-1.4
	comp=Z,1.6nm,1.0s,baz=249,slow=1.5,SNR=4.6							
KMI	Kunming	124.32	79	PKP	PKPdf		14 51 29.8	-0.5
KMI				PP	PP		14 53 18.6	+2.6
KMI				SS	SS		15 10 07.9	-0.9
KMI				AMB	AMB			
	comp=Z,64nm,4.9s							
KMI				LR	LR			
	comp=N,180nm,17.0s							
KMI				LR	LR			
	comp=E,200nm,17.8s							
KMI				LR	LR			
	comp=Z,200nm,19.5s							
GTA	Gaotai	125.88	61	ePKP	PKPdf		14 51 33.4	+0.7
GTA				PP	PP		14 53 31.0	+5.0
GTA				PKS	PKSdf		14 55 08.9	-0.5
GTA				SKS	SKSdf		14 58 43.6	-1.1
GTA				SKKS	SKKSac		15 00 23.4	-0.6
GTA				SS	SS		15 10 32.3	+4.6
GTA				AMB	AMB			
	comp=Z,140nm,5.5s							
GTA				LR	LR			
	comp=N,130nm,17.6s							
GTA				LR	LR			
	comp=E,200nm,18.1s							
GTA				LR	LR			
	comp=Z,210nm,18.5s							
CD2	Chengdu	126.98	72	PKP	PKPdf		14 51 34.5	-0.5
CD2				PP	PP		14 53 36.3	+2.8
CD2				PKS	PKSdf		14 55 09.8	-1.9
CD2				SKS	SKSdf		14 58 43.8	-3.2
CD2				SKKS	SKKSac		15 00 27.1	-4.1
CD2				SS	SS		15 10 41.2	-0.5
CD2				AMB	AMB			
	comp=Z,120nm,5.8s							
CD2				LR	LR			
	comp=N,220nm,17.6s							
CD2				LR	LR			
	comp=E,370nm,21.1s							
CD2				LR	LR			
	comp=Z,260nm,21.1s							
GYA	Guiyang	128.10	79	ePdif	Pdif		14 48 21.3	+0.2
GYA				PKP	PKiKP		14 51 37.8	-0.1
GYA				PP	PP		14 53 44.0	+3.0
GYA				PKS	PKSdf		14 55 12.7	-1.4
GYA				SKKS			15 00 35.2	
GYA				SS	SS		15 10 55.8	-0.1
GYA				AMB	AMB			
	comp=Z,120nm,7.9s							
GYA				LR	LR			
	comp=N,190nm,23.9s							
GYA				LR	LR			
	comp=E,140nm,25.0s							
GYA				LR	LR			
	comp=Z,170nm,24.6s							
DZM	Mont Dzumac	128.19	181	eLR	LR		15 32 00.6	
	comp=Z,345nm,23.1s							
LZH	Lanzhou	128.31	66	ePKP	PKPdf		14 51 37.5	0.0
LZH				sPKP			14 51 42.1	
LZH				LR	LR			
	comp=N,130nm,18.0s							
LZH				LR	LR			
	comp=E,140nm,18.3s							
LZH				LR	LR			
	comp=Z,190nm,20.1s							
SONM	Songino Array	131.57	51	PKP	PKPdf		14 51 42.9	-0.3
SONM	Songino Array	131.57	51	PKP	PKPdf		14 51 42.9	-0.3
	comp=Z,0.7nm,0.7s,baz=205,slow=2.2,SNR=7.5							
XAN	Xi'an	131.97	70	PKP	PKPdf		14 51 44.8	+0.5
ILAR	Eielson Array	134.66	334	PKP	PKPdf		14 51 48.9	+0.5
ILAR	Eielson Array	134.66	334	PKP	PKPdf		14 51 48.9	+0.5
	comp=Z,0.9nm,0.8s,baz=8.6,slow=1.5,SNR=8.0							
HHC	Hu-ho-hao-te	134.99	61	⇑ePKP	PKPdf		14 51 51.4	+1.5
HHC				PP	PP		14 54 30.0	+4.9
HHC				PKS	PKSdf		14 55 26.3	+0.1
HHC				SKS	SKSdf		14 59 00.8	-0.3
HHC				SKKS	SKKSac		15 01 21.0	+0.7
HHC				SS	SS		15 12 22.0	+2.6
HHC				AMB	AMB			
	comp=Z,180nm,6.7s							
HHC				LR	LR			
	comp=N,370nm,20.6s							
HHC				LR	LR			
	comp=E,810nm,21.2s							
HHC				LR	LR			
	comp=Z,480nm,21.4s							
BJI	Beijing	138.46	62	PKP	PKPdf		14 51 55.6	-0.6
BJI				PP	PP		14 54 46.6	-0.1
BJI				AMB	AMB			
	comp=Z,66nm,4.0s							
BJI				LR	LR			
	comp=N,130nm,16.2s							
BJI				LR	LR			
	comp=E,210nm,18.6s							
BJI				LR	LR			
	comp=Z,250nm,26.2s							
NJ2	Nanjing	139.79	75	ePKP	PKPdf		14 51 59.0	+0.1
NJ2				sPKP			14 52 03.0	
NJ2				PP	PP		14 54 55.0	-0.2
NJ2				PKS	PKSdf		14 55 35.0	+0.1
NJ2				AMB	AMB			
	comp=Z,400nm,10.2s							
NJ2				LR	LR			
	comp=N,240nm,24.1s							
NJ2				LR	LR			
	comp=E,410nm,23.3s							
NJ2				LR	LR			
	comp=Z,340nm,25.3s							
CN2	Changchun	145.13	55	ePKPbc	PKPbc		14 52 06.6	-0.9
CN2				ePP	PP		14 55 28.4	+1.3
CN2				SKS	SKSdf		14 59 14.6	-2.6
CN2				SKKS	SKKSac		15 02 17.4	-1.9
CN2				eSS	SS		15 14 15.9	-1.9
CN2				AMB	AMB			
	comp=Z,200nm,5.0s							
CN2				LR	LR			
	comp=N,200nm,24.0s							
CN2				LR	LR			
	comp=E,200nm,24.0s							
CN2				LR	LR			
	comp=Z,200nm,25.0s							
KSAR	Wonju Array Be	147.61	67	PKPbc	PKPbc		14 52 14.3	-0.8
KSRS	Korea Array	147.64	67	PKPbc	PKPbc		14 52 14.3	-0.9
	comp=Z,4.2nm,0.7s,baz=265,slow=3.0,SNR=15							
MDJ	Mudanjiang	147.88	53	PKPbc	PKPbc		14 52 15.2	-0.4
USRK	Ussuriysk Arra	149.65	53	PKPbc	PKPbc		14 52 18.6	-1.5
	comp=Z,1.4nm,0.7s,baz=270,slow=1.9,SNR=8.4							

*IDC **11** 14:40:37.3±1.7, 23°.08S×66°.41W, h200km±17km, mb3.7/2, mb1 3.7/7, mb1mx3.4/19, mbtmp3.5/7, Error ellipse: s-maj=26.2km s-min=15.8km az=95.0*
*ISCJB **11** 14:40:37.3±0.8, 23°.05S±0°.06×66°.5W±0°.1, h222km±13km, mb3.6/2, Error ellipse: s-maj=15.8km s-min=8.9km az=16.3*
*GUC **11** 14:40:39.4±0.6, 22°.99S×66°.99W, h241km±10km, ML4.7*

ISC 11 14:40:38.5±1.2, 23°.03S±0°.07×66°.7W±0°.2, h227km±18km, n20, σ0°.54/22, 8C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	Limon Verde	2.13	281	⇑iP		Pn	14 41 21.5	+0.9
LVC	Limon Verde	2.13	281	⇑iP		Pn	14 41 21.5	+0.9
LVC				iS		S	14 41 53.3	-0.1
PB09	Plate Boundary	2.69	297	⇑iP		Pn	14 41 27.9	+1.5
PB09				iS		S	14 42 04.5	+0.6
PB09				AML		AML	14 42 10.1	
	comp=E,2μm,0.2s							
PB04	Plate Boundary	2.73	286	⇑iP		Pn	14 41 33.9	+7.3
PB04				iS		S	14 42 14.9	+11
PB04				AML		AML	14 42 17.6	
	comp=N,617nm,0.2s							
PB07	Plate Boundary	3.26	293	⇑iP		Pn	14 41 33.6	+0.7
PB07				iS		S	14 42 13.9	-1.4
PB07				AML		AML	14 42 15.9	
	comp=N,2μm,0.1s							
CEN1	Los Morros	3.28	263	⇓iP		Pn	14 41 34.6	+1.6
CEN1				iS		S	14 42 17.3	+1.6
CEN1				AML		AML	14 42 20.1	
	comp=E,387nm,0.2s							
PB01	Plate Boundary	3.29	306	⇑iP		Pn	14 41 33.9	+0.8
PB01				iS		S	14 42 15.6	-0.3
PB01				AML		AML	14 42 17.1	
	comp=E,663nm,0.3s							
ANCH	Antofagasta	3.51	259	⇑iP		Pn	14 41 36.4	+0.8
ANCH				iS		S	14 42 18.9	-1.4
PSGC	Pisagua	4.71	316	⇑iP		Pn	14 41 49.5	-0.7
PSGC				iS		S	14 42 43.8	-2.9
LPAZ	La Paz	6.85	348	P		Pn	14 42 19.4	+1.7
	comp=E,2.2nm,0.3s,baz=160,slow=14,SNR=36							
LPAZ				S		S	14 43 34.5	-2.2
	baz=270,slow=20,SNR=2.0							
CFAA	Coronel Fontan	8.66	189	P		Pn	14 42 38.4	-1.8
	comp=E,0.2nm,0.3s,baz=3.1,slow=12,SNR=8.9							
CFAA				S		S	14 44 08.6	-9.4
	comp=E,0.2nm,0.3s,baz=241,slow=15,SNR=13							
SIV	San Ignacio	8.76	38	P		Pn	14 42 39.7	-1.9
	comp=E,1.5nm,0.3s,baz=236,slow=12,SNR=16							
SIV				S		S	14 44 12.6	-8.1
	baz=197,slow=15,SNR=2.8							
PLCA	Paso Flores	17.95	190	P		Pn	14 44 33.0	-1.6
	comp=E,0.2nm,0.3s,baz=6.1,slow=12,SNR=8.8							
BDFB	Brasilia	19.05	71	P		P	14 44 43.9	-0.2
	comp=E,1.0nm,0.3s,baz=230,slow=11,SNR=14							
TORD	Torodi Ar. Bea	75.92	69	P		P	14 52 00.2	-0.5
	comp=E,0.9nm,0.4s,baz=254,slow=5.4,SNR=21							
YKA	Yellowknife Ar	93.33	340	P		P	14 53 28.7	+1.6
	comp=E,0.1nm,0.3s,baz=138,slow=4.3,SNR=3.4							
KURBB	Kurchatov Arra	141.41	36	PKhKP		PKPpre	14 59 38.9	
	comp=E,0.3nm,0.6s,baz=295,slow=2.0,SNR=3.7							
ZALV	Zalesovo Beam	142.39	28	PKhKP		PKPpre	14 59 42.0	
	comp=E,0.3nm,0.4s,baz=320,slow=4.3,SNR=4.4							
MKAR	Makanchi Array	145.57	39	PKPbc		PKPab	14 59 52.2	+1.3
	comp=E,1.6nm,0.5s,baz=316,slow=3.2,SNR=30							
SONM	Songino Array	154.63	11	PKPab		PKPab	15 00 30.4	+2.3
	comp=E,0.5nm,0.6s,baz=1.1,slow=2.7,SNR=4.0							

*DDA **11** 14:57:58.6, 37°.57N×35°.71E, h7km, MD2.9*
*ISK **11** 14:57:59.6, 37°.54N×35°.71E, h7km, MD2.9*
*CSEM **11** 14:57:59.6±0.2, 37°.55N×35°.68E, h5km, MD2.9, Error ellipse: s-maj=3.7km s-min=3.1km az=69.0*
*ISCJB **11** 14:57:59.6±0.5, 37°.53N±0°.03×35°.70E±0°.03, h8km±4km, Error ellipse: s-maj=4.8km s-min=4.2km az=155.1*

ISC 11 14:57:59.3±0.9, 37°.54N±0°.03×35°.68E±0°.02, h10km±7km, n29, σ0°.52/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KOZT	Kozan	0.13	116	ePG		Pg	14 58 02.5	+0.1
KOZT				eSG		Sg	14 58 04.8	+0.2
KOZT	Kozan	0.13	116	ePg		Pg	14 58 02.5	+0.1
KOZT				eSg		Sg	14 58 04.8	+0.2
CEYT	Ceyhan	0.53	174	ePG		Pg	14 58 09.8	+0.2
CEYT				eSG		Sb	14 58 18.3	0.0
CEYT	Ceyhan	0.53	174	ePg		Pg	14 58 09.8	+0.2
CEYT				eSg		Sb	14 58 18.3	0.0
ANDN	Andirin	0.53	85	iP		Pg	14 58 09.1	-0.5
ANDN				iS		Sg	14 58 17.1	+0.4
YURE	YUREGIR	0.71	183	iP		Pg	14 58 12.8	-0.2
YURE				iS		Sb	14 58 24.2	+0.6
YURE	YUREGIR	0.71	183	iP		Pg	14 58 12.8	-0.2
YURE				iS		Sb	14 58 24.2	+0.6
GULE	Gulek	0.76	251	iP		Pg	14 58 13.8	-0.2
GULE				iS		Sb	14 58 25.4	+0.2
GULE	Gulek	0.76	251	iP		Pg	14 58 13.8	-0.2
AYKD	Aykdinkavak	0.91	97	iP		Pg	14 58 15.9	-0.8
AYKD				iS		Sg	14 58 28.0	-0.6
KMRS	Kahramanmaras	0.97	92	ePG		Pg	14 58 18.2	+0.2
KMRS				eSG		Sb	14 58 31.6	+0.4
KMRS	Kahramanmaras	0.97	92	ePg		Pg	14 58 18.2	+0.2
KMRS				eSg		Sb	14 58 31.6	+0.4
KRTS	Karatas	0.99	194	ePG		Pn	14 58 19.3	+0.1
KRTS	Karatas	0.99	194	ePg		Pn	14 58 19.3	+0.1
NIG	Nigde	1.02	304	ePG		Pn	14 58 20.1	+0.3
NIG	Nigde	1.02	304	ePg		Pn	14 58 20.2	+0.3
SARI	SarD1z-Kayseri	1.05	34	ePG		Pg	14 58 19.6	+0.1
PINB	Pinarbasi	1.27	26	iP		Pn	14 58 23.1	-0.3
PINB				iS		Sn	14 58 42.4	+1.7
PINB	Pinarbasi	1.27	26	iP		Pn	14 58 23.1	-0.3
GAZ	Gaziantep	1.28	106	ePN		Pg	14 58 24.1	+0.3
GAZ	Gaziantep	1.28	106	ePn		Pg	14 58 24.1	+0.3
BNN	Bunyan	1.32	6	ePN		Pb	14 58 24.2	0.0
BNN	Bunyan	1.32	6	ePn		Pb	14 58 24.2	0.0
AVNT	Avonos	1.40	333	iP		Pg	14 58 26.0	-0.1
AVNT				iS		Sg	14 58 44.7	+0.4
AVNT	Avonos	1.40	333	iP		Pg	14 58 26.0	-0.1
AVNT				iS		Sg	14 58 44.7	+0.4
GZT	Gaziantep	1.51	96	iP		Pn	14 58 26.5	-0.1
GZT				iS		Sn	14 58 45.9	-0.5
DARE	Darende-Malaty	1.76	54	ePN		Pb	14 58 31.2	-0.5
YOZ	Yozgat	2.12	353	ePN		Pb	14 58 36.5	-1.3
YOZ	Yozgat	2.12	353	ePn		Pb	14 58 36.5	-1.3

IDC 11 14:59:31.6±1.4, 14°.41S×178°.52W, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/20, mbtmp3.9/5, ML1.7/1, Error ellipse: s-maj=67.8km s-min=25.2km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	Afiamalu	6.56	86	Pn		Pn	15 01 09.5	0.0
	0.8nm,0.3s,baz=276,slow=22,SNR=2.6							
STKA	Stephens Creek	40.31	237	P		P	15 07 11.6	+0.6
	0.6nm,0.4s,baz=79,slow=9.1,SNR=5.9							
WRA	Warramunga Arr	45.26	256	P		P	15 07 50.8	-0.4
	0.2nm,0.3s,baz=93,slow=8.5,SNR=34							
ASAR	Alice Springs	45.73	251	P		P	15 07 54.5	-0.4
	5.9nm,0.5s,baz=84,slow=8.5,SNR=274							
ILAR	Eielson Array	82.52	13	P		P	15 11 55.8	-0.1
	0.2nm,0.4s,baz=233,slow=5.4,SNR=5.3							

IDC 11 15:16:00.2±0.9, 12°.96N×145°.60E, h0km, mb3.5/7, mb1 3.8/7, mb1mx3.6/25, mbtmp3.5/7, Error ellipse: s-maj=23.6km s-min=17.8km az=59.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	Guam	0.94	311	Pn		Pn	15 16 21.0	+0.2
	205nm,0.3s,baz=145,slow=16,SNR=135							
GUMO				Sn		Sn	15 16 35.6	+0.5
	238nm,0.3s,baz=221,slow=19,SNR=23							
WRA	Warramunga Arr	34.52	199	P		P	15 22 50.4	-0.1
	0.5nm,0.6s,baz=22,slow=9.7,SNR=7.1							
ASAR	Alice Springs	38.16	198	P		P	15 23 21.6	0.0
	0.3nm,0.8s,baz=18,slow=8.9,SNR=7.6							
CMAR	Chiang Mai Arr	45.15	283	P		P	15 24 18.2	-0.9
	0.4nm,0.6s,baz=80,slow=7.2,SNR=5.2							
MKAR	Makanchi Array	62.43	316	P		P	15 26 26.1	+0.8
	0.1nm,0.4s,baz=100,slow=7.7,SNR=4.4							
ILAR	Eielson Array	68.83	25	P		P	15 27 06.4	+0.2
	0.2nm,0.5s,baz=252,slow=6.3,SNR=4.4							
YKA	Yellowknife Ar	83.09	27	P		P	15 28 27.1	-0.5
	0.2nm,0.5s,baz=286,slow=5.2,SNR=3.7							
NVAR	Mina Array Bea	86.75	51	P		P	15 28 47.0	+0.1
	0.4nm,0.6s,baz=266,slow=3.6,SNR=3.1							

IDC 11 15:26:20.1±1.1, 12°.95N×145°.53E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, Error ellipse: s-maj=27.2km s-min=17.4km az=67.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	Guam	0.91	314	Pn		Pn	15 26 40.7	+0.5
	189nm,0.3s,baz=123,slow=11,SNR=141							
GUMO				Sn		Sn	15 26 54.9	+0.9
	230nm,0.3s,baz=0.0,slow=20,SNR=14							
WRA	Warramunga Arr	34.49	199	P		P	15 33 09.8	-0.4
	0.4nm,0.6s,baz=22,slow=9.6,SNR=7.2							
ASAR	Alice Springs	38.13	197	P		P	15 33 41.8	+0.5
	0.3nm,0.6s,baz=17,slow=7.7,SNR=8.3							
CMAR	Chiang Mai Arr	45.09	283	P		P	15 34 38.4	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DPC	Dobruska-Polom	1.19	175	ePG	Pg	15 31 24.9	+0.6
DPC				eSG	Sg	15 31 38.7	-1.1
	comp=Z,47nm,0.2s						
DPC	Dobruska-Polom	1.19	175	Pg	Pg	15 31 24.9	+0.6
DPC				Sg	Sg	15 31 40.2	+0.4
PVCC	Panska Ves	1.43	226	ePG	Pb	15 31 29.4	+0.4
PVCC				eSG	Sn	15 31 48.3	+0.1
	comp=Z,188nm,0.2s						
PVCC	Panska Ves	1.43	226	Pg	Pb	15 31 29.4	+0.4
PVCC				Sg	Sn	15 31 48.3	+0.1
	188nm,0.2s						
KRLC	Kraliky	1.51	165	ePG	Pn	15 31 30.5	+0.6
KRLC				eSG	Sb	15 31 49.8	-0.4
KRLC	Kraliky	1.51	165	Pg	Pn	15 31 30.5	+0.6
KRLC				Sg	Sb	15 31 49.8	-0.4
BRG	Berggiesshubel	1.55	246	PN	Pn	15 31 30.3	-0.1
BRG				PG	Pg	15 31 31.9	+0.7
BRG				SG	Sg	15 31 52.3	+1.0
	81nm,0.4s						
BRG	Berggiesshubel	1.55	246	ePn	Pn	15 31 30.5	+0.1
BRG				eSg	Sg	15 31 52.1	+0.7
BRG	Berggiesshubel	1.55	246	Pn	Pn	15 31 30.5	+0.1
BRG				Sg	Sg	15 31 52.1	+0.7
PRU	Pruhonice	1.86	214	ePN	Pn	15 31 34.8	+0.1
PRU				ePG	Pb	15 31 36.7	+0.3
PRU				eSG	Sb	15 32 00.2	-0.1
	comp=Z,60nm,0.4s						
PRU	Pruhonice	1.86	214	Pn	Pn	15 31 34.8	+0.1
PRU	Pruhonice	1.86	214	Pg	Pb	15 31 36.7	+0.3
PRU				Sg	Sb	15 32 00.2	-0.1
	60nm,0.4s						
FBE	Freiberg	1.88	252	eSg	Sg	15 32 01.8	0.0
FBE	Freiberg	1.88	252	Sg	Sg	15 32 01.8	0.0
MORC	Moravsky Berou	1.97	153	ePn	Pn	15 31 36.3	+0.1
MORC	Moravsky Berou	1.97	153	Pn	Pn	15 31 36.3	+0.1
MORC				eSg	Sb	15 32 03.5	+0.2
	29nm,0.2s,baz=335						
CLL	Collm	2.00	265	ePn	Pn	15 31 36.6	+0.1
CLL	Collm	2.00	265	i Pn	Pn	15 31 36.6	+0.1
	comp=Z,10.0nm,0.4s						
CLL				i Pg	Pg	15 31 39.9	+0.1
CLL				i		15 31 43.0	
CLL				i Sg	Sg	15 32 05.7	0.0
	comp=Z,67nm,0.6s						
CLL	Collm	2.00	265	Pn	Pn	15 31 36.6	+0.1
OKC	Ostrava-Krasne	2.12	143	ePn	Pn	15 31 38.7	+0.5
OKC	Ostrava-Krasne	2.12	143	ePN	Pn	15 31 38.3	+0.2
OKC				ePG	Pg	15 31 42.6	+0.5
OKC				eSG	Sb	15 32 08.3	+0.8
OKC	Ostrava-Krasne	2.12	143	Pn	Pn	15 31 38.3	+0.2
VRAC	Vranov	2.25	173	Pn	Pn	15 31 41.7	+1.7
	comp=Z,2.3nm,0.3s,baz=347,slow=17,SNR=12						
VRAC				Pg	Pg	15 31 46.1	+1.5
	comp=Z,5.7nm,0.3s,baz=347,slow=15,SNR=12						
VRAC				Lg	Lg	15 32 12.6	
	comp=Z,6.9nm,0.3s,baz=90,slow=20,SNR=12						
VRAC	Vranov	2.25	173	ePn	Pn	15 31 40.7	+0.7
	baz=354						
VRAC				eSg	Sb	15 32 12.4	+1.1
	comp=Z,24nm,0.2s,baz=354						
TREC	Trest	2.29	191	ePN	Pn	15 31 41.3	+0.8
TREC				ePG	Pg	15 31 45.1	-0.2
TREC	Trest	2.29	191	Pn	Pn	15 31 41.3	+0.8
TREC	Trest	2.29	191	Pg	Pg	15 31 45.1	-0.2
KRUC	Moravsky	2.48	177	ePn	Pn	15 31 43.9	+0.7
	baz=357						
KRUC	Moravsky	2.48	177	ePg	Pb	15 31 47.6	+0.6
	baz=357						
KRUC				eSg	Sb	15 32 19.6	+1.5
	comp=Z,38nm,0.7s,baz=357						
TANN	Tannenbergstha	2.60	246	ePn	Pn	15 31 45.6	+0.7
TANN	Tannenbergstha	2.60	246	Pn	Pn	15 31 45.6	+0.7
OJC	Ojcow	2.65	118	ePn	Pn	15 31 45.6	+0.1
OJC				ePg	Pg	15 31 53.2	+0.9
OJC				eSg	Sg	15 32 28.3	+1.7
OJC	Ojcow	2.65	118	ePn	Pn	15 31 45.6	+0.1
OJC	Ojcow	2.65	118	ePg	Pg	15 31 53.2	+0.9
OJC				Sg	Sg	15 32 27.9	+1.3
WERD	Werda	2.67	247	ePn	Pn	15 31 46.8	+0.9
WERD	Werda	2.67	247	Pn	Pn	15 31 46.8	+0.9
NKC	Novy Kostel	2.69	242	ePN	Pn	15 31 47.2	+1.0
NKC				ePG	Pg	15 31 53.9	+0.7
NKC				eSG	Sg	15 32 28.1	0.0
	comp=Z,42nm,0.3s						
NKC	Novy Kostel	2.69	242	Pn	Pn	15 31 47.2	+1.0
NKC	Novy Kostel	2.69	242	Pg	Pg	15 31 53.9	+0.7
NKC				Sg	Sg	15 32 28.1	0.0
	comp=Z,42nm,0.3s						
KHC	Kasperske Hory	2.92	216	ePN	Pn	15 31 50.0	+0.7
KHC				ePG	Pb	15 31 56.0	+1.4
KHC				eSN	Sn	15 32 24.1	-1.1
KHC				eSG	Sg	15 32 33.6	-1.9
	comp=Z,23nm,0.5s						
KHC	Kasperske Hory	2.92	216	Pn	Pn	15 31 50.0	+0.7
KHC	Kasperske Hory	2.92	216	Pg	Pb	15 31 56.0	+1.4
KHC				Sn	Sn	15 32 24.1	-1.1
KHC				Sg	Sg	15 32 33.6	-1.9
	comp=Z,23nm,0.5s						
MOX	Moxa	3.01	255	eSg	Sg	15 32 39.0	+0.9
MOX	Moxa	3.01	255	Sg	Sg	15 32 39.0	+0.9
MANZ	Manzenberg	3.01	241	ePn	Pn	15 31 51.5	+1.0
MANZ	Manzenberg	3.01	241	Pn	Pn	15 31 51.5	+1.0
ROTZ	Rotzenmuhle	3.08	236	ePn	Pn	15 31 52.6	+1.1
ROTZ	Rotzenmuhle	3.08	236	Pn	Pn	15 31 52.6	+1.1
GERES	GERESS Array B	3.13	211	Pn	Pn	15 31 52.9	+0.7
	comp=Z,1.6nm,0.3s,baz=29,slow=15,SNR=35						
GERES				Pg	Pb	15 31 59.8	+1.8
	comp=Z,4.7nm,0.3s,baz=40,slow=14,SNR=38						
GERES				Sn	Sn	15 32 28.4	-1.9
	comp=Z,2.7nm,0.3s,baz=38,slow=27,SNR=6.4						
GERES				Lg	Lg	15 32 39.6	
	comp=Z,6.3nm,0.3s,baz=32,slow=27,SNR=7.8						
SMOL	Smolenice	3.13	165	e	Pg	15 32 01.7	+0.2
SMOL	Smolenice	3.13	165	eSG	Sg	15 32 43.6	+1.5
NIE	Niedzica	3.39	127	eP	Pg	15 32 06.8	+0.3
NIE				eS	Sg	15 32 50.8	+0.4
ZST	Bratislava	3.40	169	eSG	Sg	15 32 48.5	-2.1
VYHS	Vyhne	3.50	150	ePN	Pn	15 31 57.7	+0.5
VYHS				e		15 32 08.0	
VYHS	Vyhne	3.50	150	eSG	Sg	15 32 52.6	-1.2
CONA	Conrad Observa	3.62	183⇑	iPn	Pn	15 31 58.7	-0.2
CONA			⇑	iSg	Sg	15 32 55.6	-2.1
	comp=Z,21nm,0.4s						
CONA	Conrad Observa	3.62	183	Pn	Pn	15 31 58.7	-0.2
CONA				Sg	Sg	15 32 55.6	-2.1
	comp=Z,21nm,0.4s						
GRA1	Grafenberg Arr	3.65	242	Sg	Sg	15 32 58.4	-0.4
GRF	Grafenberg Arr	3.65	242	eSg	Sg	15 32 58.4	-0.4
MOA	Molln	3.89	199⇑	iPn	Pn	15 32 02.4	-0.2
MOA			⇑	iSg	Sg	15 33 05.2	-1.3
	comp=Z,13nm,0.4s						
MOA	Molln	3.89	199	Pn	Pn	15 32 02.4	-0.2
MOA				Sg	Sg	15 33 05.2	-1.3
	comp=Z,13nm,0.4s						
CRVS	Cervenica-Dubn	4.30	126	ePN	Pn	15 32 09.8	+1.6
CRVS				e		15 32 23.9	
CRVS	Cervenica-Dubn	4.30	126	eSG	Sg	15 33 17.1	-2.5
ARSA	Arzberg	4.31	186⇑	iPn	Pn	15 32 08.0	-0.4
ARSA			⇑	iSg	Sg	15 33 18.5	-1.5
	comp=Z,18nm,0.7s						
ARSA	Arzberg	4.31	186	Pn	Pn	15 32 08.0	-0.4
ARSA				Sg	Sg	15 33 18.5	-1.5
	comp=Z,18nm,0.7s						
KOLS	Kolonicke sedl	4.70	121	ePN	Pn	15 32 14.2	+0.5
KOLS				e		15 32 32.6	
KOLS	Kolonicke sedl	4.70	121	eSG	Sg	15 33 31.3	-1.3
KBA	Koelnbreinsper	4.83	204⇑	iPn	Pn	15 32 15.6	0.0
KBA			⇑	iSg	Sg	15 33 36.4	-0.2
	comp=Z,11nm,0.6s						
KBA	Koelnbreinsper	4.83	204	Pn	Pn	15 32 15.6	0.0
KBA				Sg	Sg	15 33 36.4	-0.2
	comp=Z,11nm,0.6s						
AKASG	Malin Array Be	8.26	91	Pn	Pn	15 33 02.1	-0.4
	comp=Z,1.3nm,0.3s,baz=279,slow=12,SNR=4.8						
FINES	FINESS Array B	11.32	25	Pn	Pn	15 33 43.6	-0.8
	comp=Z,0.2nm,0.3s,baz=212,slow=9.9,SNR=4.3						
FINES				Sn	Sn	15 35 45.1	-6.4
	comp=Z,0.1nm,0.3s,baz=213,slow=20,SNR=2.2						
ARCES	ARCESS Array B	18.59	10	Pn	P	15 35 17.6	-2.4
	comp=Z,0.1nm,0.3s,baz=197,slow=9.1,SNR=4.8						
TORD	Torodi Ar. Bea	40.04	202	P	P	15 38 39.5	+1.2
	comp=Z,0.2nm,0.6s,baz=1.9,slow=7.1,SNR=2.1						

*IDC **11** 15:44:49.3±0.7, 6°.64S×155°.22E, h0km, mb4.1/11, mb1 4.2/13, mb1mx4.1/20, mbtmp4.1/13, ML3.8/2, MS3.5/2, Ms1 3.5/2, ms1mx3.0/34, Error ellipse: s-maj=23.7km s-min=17.1km az=130.0*

*ISCJB **11** 15:44:55.3±0.7, 6°.7S±0°.1×155°.15E±0°.10, h56km, mb4.0/11, MS3.9/1, Error ellipse: s-maj=20.2km s-min=9.2km az=143.7*

ISC 11 15:44:56.5±0.6**, 6°.8S**±0°.1×**155°.26E**±0°.09**, h56**km**, n27,** σ**1.00**/28**, mb3.9**/11**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	5.34	120	Pn	Pn	15 46 12.5	-1.1
	8.6nm,0.3s,baz=230,slow=7.9,SNR=2.5						
HNR				Sn	Sn	15 47 32.7	+19
	9.8nm,0.3s,baz=303,slow=20,SNR=4.6						
PMG	Port Moresby	8.44	251	Pn	Pn	15 46 54.9	-1.3
	2.6nm,0.3s,baz=68,slow=11,SNR=8.9						
PMG				Sn	Sn	15 48 30.2	+0.2
	1.5nm,0.3s,baz=72,slow=19,SNR=3.7						
CTA	Charters Tower	15.86	213	LR	LR	15 53 02.0	
	comp=Z,63nm,18.9s,baz=210,slow=31						
WRA	Warramunga Arr	24.16	235	P	P	15 50 07.5	-0.2
	1.4nm,0.5s,baz=60,slow=9.5,SNR=37						
WRA				PcP	PcP	15 53 48.3	+0.8
	1.3nm,0.7s,baz=60,slow=2.5,SNR=8.1						
ASAR	Alice Springs	26.51	228	P	P	15 50 28.6	-0.4
	0.5nm,0.5s,baz=58,slow=9.4,SNR=21						
STKA	Stephens Creek	28.04	205	P	P	15 50 44.4	+1.8
	1.0nm,0.7s,baz=29,slow=13,SNR=3.7						
PETK	Petropavlovsk-	59.69	2	P	P	15 54 56.0	+0.9
	0.9nm,0.5s,baz=161,slow=8.8,SNR=7.9						
CMAR	Chiang Mai Arr	60.93	295	P	P	15 55 05.3	+1.1
	6.1nm,0.7s,baz=119,slow=5.2,SNR=53						
SONM	Songino Array	69.30	327	P	P	15 55 58.3	+0.3
	0.8nm,0.5s,baz=137,slow=5.7,SNR=8.2						
TAPN	Taplejung	73.52	301	eP	P	15 56 24.9	+0.7
	15nm,1.0s						
ODAN	Odare	73.65	300	eP	P	15 56 25.1	+0.2
	27nm,0.6s						
RAMN	Ramite	74.35	300	eP	P	15 56 28.5	-0.5
	12nm,0.7s						
GUN	Gumba	75.23	301	eP	P	15 56 34.4	+0.2
	19nm,0.7s						
PKI	Pulchoki	75.54	301	eP	P	15 56 36.1	+0.1
	5.7nm,0.5s						
PKIN	Phulchoki	75.55	301	eP	P	15 56 35.6	-0.4
	5.5nm,0.4s						
KKN	Kakani	75.71	301	eP	P	15 56 35.8	-1.0
	13nm,0.7s						
DMN	Daman	75.81	301	eP	P	15 56 36.8	-0.6
	19nm,0.7s						
KOLN	Koldanda	77.14	300	eP	P	15 56 42.6	-2.3
	6.9nm,0.7s						
DANN	Dangsing	77.15	301	eP	P	15 56 44.4	-0.6
	5.2nm,0.5s						
PYUN	Piuthan	77.75	301	eP	P	15 56 46.7	-1.6
ILAR	Eielson Array	83.08	21	P	P	15 57 15.4	-0.4
	0.6nm,0.4s,baz=241,slow=5.6,SNR=14						
MKAR	Makanchi Array	83.42	319	P	P	15 57 16.9	-1.1
	1.0nm,0.8s,baz=96,slow=7.5,SNR=11						
MKAR				LR	LR	16 34 06.4	
	comp=Z,59nm,21.4s,baz=9.8,slow=36						
ZALV	Zalesovo Beam	84.15	326	P	P	15 57 19.9	-1.6
	0.3nm,0.4s,baz=117,slow=5.2,SNR=2.9						
NVAR	Mina Array Bea	91.38	52	P	P	15 57 57.2	+0.3
	1.8nm,1.0s,baz=266,slow=4.4,SNR=4.8						
YKA	Yellowknife Ar	96.02	28	P	P	15 58 17.9	+0.5
	1.8nm,0.9s,baz=267,slow=4.5,SNR=17						
BDFB	Brasilia	147.94	134	PKPbc	PKPbc	16 04 38.0	+1.2
	5.2nm,0.8s,baz=191,slow=3.1,SNR=7.3						
TORD	Torodi Ar. Bea	153.22	286	PKPbc	PKPbc	16 04 49.1	-0.2
	1.7nm,0.7s,baz=89,slow=2.5,SNR=11						

IDC 11 16:03:55.3±1.3**, 30°.97S**×**176°.72W, h0**km**, mb3.7**/4**, mb1 4.1**/7**, mb1mx3.9**/21**, mbtmp3.9**/7**, ML3.8**/3**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx3.0**/23**, Error ellipse: s-maj=28.5km s-min=24.1km az=100.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.01	328	Pn	Pn	16 04 29.9	-0.5
	118nm,0.3s,baz=107,slow=19,SNR=3.0						
RAO				Sn	Sn	16 04 55.9	-0.3
	204nm,0.3s,baz=93,slow=22,SNR=4.3						
RAO				LR	LR	16 05 00.0	
	comp=Z,1μm,18.4s,baz=323,slow=32						
URZ	Urewera	8.87	213	Pn	Pn	16 06 02.8	-1.9
	0.2nm,0.3s,baz=320,slow=7.9,SNR=4.3						
RPZ	Rata Peaks	15.99	214	Pn	Pn	16 07 39.7	-1.9
	0.4nm,0.3s,baz=38,slow=12,SNR=2.7						
STKA	Stephens Creek	35.43	257	P	P	16 10 54.6	+1.4
	0.9nm,0.7s,baz=88,slow=8.6,SNR=3.3						
ASAR	Alice Springs	44.18	267	P	P	16 12 06.5	+0.3
	0.7nm,0.7s,baz=103,slow=7.3,SNR=13						
WRA	Warramunga Arr	45.22	272	P	P	16 12 14.0	-0.6
	0.8nm,0.5s,baz=111,slow=8.0,SNR=9.9						
NVAR	Mina Array Bea	87.91	42	P	P	16 16 46.9	-0.2
	0.4nm,0.6s,baz=234,slow=7.7,SNR=3.0						
FINES	FINESS Array B	146.06	341	PKPbc	PKPdf	16 23 35.7	+0.1
	1.5nm,0.9s,baz=346,slow=2.9,SNR=3.2						
TORD	Torodi Ar. Bea	162.20	175	PKPab	PKPab	16 24 45.9	-0.1
	0.5nm,0.8s,baz=182,slow=4.0,SNR=3.7						

*BJI **11** 16:09:28.8, 51°.24N×156°.62E, h140km, mB4.6/21, mb4.5/29*

*KRSC **11** 16:09:29.9±0.6, 50°.90N×157°.22E, h141km±39km, ML4.6*

*ISCJB **11** 16:09:30.9±0.4, 51°.15N±0°.04×156°.41E±0°.06, h149km±2km, mb4.4/113, Error ellipse: s-maj=8.1km s-min=4.0km az=138.8*

*MOS **11** 16:09:30.3±1.0, 51°.24N×156°.33E, h140km, mb4.9/36, Error ellipse: s-maj=8.1km s-min=4.6km az=88.6*

*NEIC **11** 16:09:32.7±0.2, 51°.24N×156°.36E, mb4.8/52, Error ellipse: s-maj=6.5km s-min=3.9km az=148.0*

*IDC **11** 16:09:33.0±0.7, 51°.29N×156°.26E, h151km±4km, mb3.9/38, mb1 4.1/41, mb1mx4.0/44, mbtmp3.9/41, MS3.6/1, Ms1 3.7/1, ms1mx2.5/50, Error ellipse: s-maj=11.0km s-min=6.7km az=142.0*

ISC 11 16:09:31.4±0.4**, 51°.06N**±0°.05×**156°.57E**±0°.04**, h145**km±2km**, h144**km**:pP-P, n357,** σ**1.24**/447**, mb4.5**/113**, 46C-11D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.43	20	PN	Pn	16 09 50.6	-1.3
PAU				S	Sn	16 10 05.3	-2.2
PAU	Pauzhetka	0.43	20	eP	Pn	16 09 50.6	-1.3
PAU				i S	Sn	16 10 05.3	-2.2
SKR	Severo-Kuril's	0.48	217⇓	iPN	Pn	16 09 48.4	-3.7
SKR				i S	Sn	16 10 02.7	-5.0
SKR				pmax	pmax		
	comp=E,2μm,0.4s						
SKR				pmax	pmax		
	comp=Z,7μm,0.4s						
SKR				pmax	pmax		
	comp=N,4μm,0.3s						
SKR				smax	smax		
	comp=N,20μm,1.0s						
SKR				smax	smax		
	comp=E,26μm,1.0s						
SKR	Severo-Kuril's	0.48	217	eP	Pn	16 09 50.4	-1.7
SKR				i S	Sn	16 10 04.8	-2.9
MIPR	Malaya Ipel'ka	1.22	5	eP	Pn	16 09 57.5	-0.3
MIPR				i S	Sn	16 10 17.6	-0.3
ASAK	Asacha	1.56	31	P	Pn	16 10 01.1	-0.2
ASAK				i S	Sn	16 10 24.1	-0.1
MTVR	Mutnovka	1.74	34	eP	Pn	16 10 03.2	-0.2
MTVR				i S	Sn	16 10 27.4	-0.5
GRL	Gorelyy	1.76	31	eP	Pn	16 10 03.8	+0.2
GRL				i S	Sn	16 10 28.7	+0.4
RUS	Russkaya	1.83	41	PN	Pn	16 10 03.1	-1.1
RUS				S	Sn	16 10 27.3	-2.1
RUS	Russkaya	1.83	41	P	Pn	16 10 03.1	-1.1
RUS				i S	Sn	16 10 27.3	-2.1
APC	Apacha	1.90	11	eP	Pn	16 10 05.0	0.0
APC				i S	Sn	16 10 31.2	+0.3
PEA0B	Petropavlovsk-	2.17	18	ePn	Pn	16 10 08.3	+0.1
PETK	Petropavlovsk-	2.17	18	PN	Pn	16 10 08.1	-0.1
PETK				S	Sn	16 10 36.5	0.0
PETK	Petropavlovsk-	2.17	18	P	Pn	16 10 08.1	-0.1
PETK				S	Sn	16 10 36.5	0.0
PETK	Petropavlovsk-	2.17	18	P	Pn	16 10 08.1	-0.1
	comp=E,27nm,0.3s,baz=169,slow=12,SNR=1237						
PETK				S	Sn	16 10 36.5	0.0
	comp=E,13nm,0.3s,baz=184,slow=20,SNR=4.9						
PET	Petropavlovsk	2.35	32⇓	iPN	Pn	16 10 09.8	-0.6
PET				eS	Sn	16 10 39.8	-0.6
PET				pmax	pmax		
	comp=Z,132nm,0.4s						
PET				smax	smax		
	comp=N,1μm,0.8s						
PET				smax	smax		
	comp=E,850nm,0.6s						
PET	Petropavlovsk	2.35	32	eP	Pn	16 10 10.1	-0.3
PET				i S	Sn	16 10 40.1	-0.3
UGLR	Uglovaya	2.56	32	eP	Pn	16 10 13.9	+0.8
UGLR				i S	Sn	16 10 46.3	+1.0
KOK	Koryaka	2.57	29	eP	Pn	16 10 14.3	+1.1
KOK				i S	Sn	16 10 47.1	+1.6
AVH	Avacha	2.58	30	P	Pn	16 10 14.3	+1.0
AVH				i S	Sn	16 10 46.6	+1.0
SMAR	Somma	2.60	31	P	Pn	16 10 14.4	+0.7
SMAR				i S	Sn	16 10 47.2	+0.9
KRER	Koryakskii	2.62	30	P	Pn	16 10 14.7	+0.8
KRER				i S	Sn	16 10 48.1	+1.5
SDLR	Sedlovina	2.64	32	eP	Pn	16 10 14.2	+0.1
SDLR				i S	Sn	16 10 47.0	0.0
GNL	Ganaly	2.77	17	eP	Pn	16 10 16.3	+0.6
GNL				i S	Sn	16 10 50.3	+0.4
SPN	Mys Shipunski	2.95	45	PN	Pn	16 10 17.0	-0.9
SPN				S	Sn	16 10 50.5	-3.3
SPN	Mys Shipunski	2.95	45	P	Pn	16 10 17.0	-0.9
SPN				i S	Sn	16 10 50.5	-3.3
KII	Karymskiy	3.46	29	eP	Pn	16 10 26.6	+2.1
MKZ	Mys Kozlova	4.70	40	PN	Pn	16 10 39.1	-1.5
MKZ				S	Sn	16 11 28.6	-5.8
MKZ	Mys Kozlova	4.70	40	eP	Pn	16 10 39.1	-1.5
MKZ				i S	Sn	16 11 28.6	-5.8
ESO	Esso	5.04	14	PN	Pn	16 10 46.1	+1.0
ESO	Esso	5.04	14	eP	Pn	16 10 46.1	+1.0
ZLN	Zelenaya	5.57	25	eP	Pn	16 10 53.2	+0.9
KRSR	Krestovskiy	5.69	23	eP	Pn	16 10 54.5	+0.7
KLY	Klyuchi	5.79	23	PN	Pn	16 10 56.5	+1.4
KLY				S	Sn	16 12 00.5	-0.1
KLY	Klyuchi	5.79	23	eP	Pn	16 10 56.5	+1.4
KLY				i S	Sn	16 12 00.5	-0.1
BDR	Baidarnaya	6.16	25	eP	Pn	16 11 01.8	+1.6
SRKR	Sorokina	6.23	24	eP	Pn	16 11 00.6	-0.4
SMKR	Semkarok	6.24	26	eP	Pn	16 11 00.6	-0.7
SMKR				i S	Sn	16 12 07.3	-4.2
KBG	Krutoberegovo	6.35	33	PN	Pn	16 11 01.8	-0.8
KBG				S	Sn	16 12 07.6	-6.4
KBG	Krutoberegovo	6.35	33	eP	Pn	16 11 01.8	-0.8
KBG				i S	Sn	16 12 07.6	-6.4
KBTR	Krutoberegovo	6.35	33	PN	Pn	16 11 01.4	-1.2
KBTR				S	Sn	16 12 07.4	-6.6
KBTR	Krutoberegovo	6.35	33	eP	Pn	16 11 01.4	-1.2
KBTR				i S	Sn	16 12 07.4	-6.6
BKI	Bering	7.01	50	PN	Pn	16 11 09.9	-1.5
BKI	Bering	7.01	50	eP	Pn	16 11 09.9	-1.5
BKI				i S	Sn	16 12 20.3	-10
KUR	Kuril'sk	8.23	228	PN	Pn	16 11 45.0	+17
KUR				S	Sn	16 13 03.5	+4.1
KUR				smax	smax		
	comp=N,80nm,0.6s						
KUR				smax	smax		
	comp=E,80nm,0.6s						
YSS	Yuzh-Sakhalins	9.96	251	ePN	Pn	16 11 53.0	+2.1
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YUK	Yuzh-Kuril'sk	10.08	230	i PN	Pn	16 11 51.3	-1.2
YUK				pmax	pmax		
	comp=N,19nm,0.5s						
YUK				pmax	pmax		
	comp=E,34nm,0.5s						
YUK				pmax	pmax		
	comp=Z,57nm,0.5s						
FX1	Attu Island--F	10.40	73	P	Pn	16 11 56.7	0.0
FX1				S	Sn	16 13 44.8	-6.7
FX1	Attu Island--F	10.40	73	P	Pn	16 11 56.7	0.0
	comp=Z,4.4nm,0.3s,baz=223,slow=1.0,SNR=9.6						
FX1				S	Sn	16 13 44.8	-6.7
	comp=Z,28nm,0.3s,baz=71,slow=23,SNR=14						
ASAJ	Asahikawa	11.71	239	eP	Pn	16 12 14.6	+0.7
	comp=Z,3.8nm,0.6s						
ASAJ	Asahikawa	11.71	239	P	Pn	16 12 14.7	+0.7
	comp=Z,1.7nm,0.3s,baz=76,slow=14,SNR=20						
SEY	Seymchan	12.12	351⇓	iPN	Pn	16 12 18.3	-0.8
ERM	Erimo	12.91	231	ePN	Pn	16 12 25.9	-3.6
ERM				pmax	pmax		
	comp=Z,21nm,0.6s						
ERM	Erimo	12.91	231	eP	Pn	16 12 25.9	-3.6
	comp=Z,21nm,0.6s						
KLR	Kul'dur	16.00	273	eP	Pn	16 13 06.5	-1.7
BILL	Bilibino	17.68	12d	iP	P	16 13 26.4	-0.7
BILL				pmax	pmax		
	comp=Z,29nm,1.1s						
USRK	Ussuriysk Arra	17.88	257	P	P	16 13 26.8	-2.6
	comp=Z,0.4nm,0.3s,baz=72,slow=12,SNR=7.2						
YAK	Yakutsk	18.29	317d	iP	P	16 13 33.2	-0.6
YAK				eS	S	16 16 52.9	-2.2
YAK				pmax	pmax		
	comp=Z,87nm,0.8s						
YAK				pmax	pmax		
	comp=E,50nm,1.4s						
YAK				pmax	pmax		
	comp=N,24nm,1.3s						
YAK				smax	smax		
	comp=E,50nm,2.9s						
YAK				smax	smax		
	comp=N,16nm,1.4s						
MDJ	Mudanjiang	19.16	261	P	P	16 13 42.2	-1.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,59nm,6.5s						
MAJO	Matsushiro	19.57	229	eP	P	16 13 48.8	+0.8
MAJO				pmax	pmax		
	comp=Z,12nm,0.6s						
MAJO	Matsushiro	19.57	229	eP	P	16 13 48.8	+0.8
	comp=Z,12nm,0.6s						
MAT	Matsushiro	19.57	229	P	P	16 13 48.6	+0.6
MJAR	Matsushiro Arr	19.57	229	P	P	16 13 48.8	+0.8
MJAR	Matsushiro Arr	19.57	229	P	P	16 13 48.8	+0.8
	comp=Z,1.7nm,0.3s,baz=33,slow=7.4,SNR=32						
KSRS	Korea Array	24.43	247	P	P	16 14 37.7	+1.3
	comp=Z,3.4nm,0.6s,baz=46,slow=9.3,SNR=17						
KSAR	Wonju Array Be	24.46	247	P	P	16 14 37.7	+1.0
JNU	Nakatsue	25.96	236	eP	P	16 14 51.6	+1.3
JNU	Nakatsue	25.96	236	P	P	16 14 51.5	+1.1
	comp=Z,6.1nm,0.8s,baz=90,slow=9.1,SNR=4.3						
COLD	Coldfoot	30.50	38	eP	P	16 15 30.8	+0.6
	comp=Z,3.8nm,0.6s						
COLA	College	31.37	43	eP	P	16 15 38.1	+0.2
ILAR	Eielson Array	31.79	43	P	P	16 15 41.7	+0.1
ILAR	Eielson Array	31.79	43	P	P	16 15 41.7	+0.1
	comp=Z,1.8nm,0.7s,baz=262,slow=5.9,SNR=22						
ULN	Ulaanbaatar	31.86	284	eP	P	16 15 41.8	-0.8
	comp=Z,3.3nm,1.0s						
SONM	Songino Array	32.27	284	P	P	16 15 45.4	-0.8
SONM				pP	pP	16 16 17.7	+0.5
SONM				PcP	PcP	16 18 30.4	-0.3
SONM				ScP	ScP	16 22 01.4	+0.8
SONM	Songino Array	32.27	284	P	P	16 15 45.4	-0.8
	comp=Z,0.6nm,0.3s,baz=65,slow=7.6,SNR=11						
SONM				pP	pP	16 16 17.7	+0.5
	comp=Z,0.5nm,0.6s,baz=62,slow=7.2,SNR=2.3						
SONM				PcP	PcP	16 18 30.4	-0.3
	comp=Z,0.6nm,0.5s,baz=119,slow=3.1,SNR=5.1						
SONM				ScP	ScP	16 22 01.4	+0.8
	comp=Z,0.5nm,0.9s,baz=90,slow=3.0,SNR=2.4						
HHC	Hu-ho-hao-te	32.45	269⇑	eP	P	16 15 48.8	+1.1
HHC				pP	pP	16 16 19.0	+0.3
HHC				sP	sP	16 16 35.5	+0.1
HHC				PP	PnPn	16 17 01.5	+1.0
HHC				S	S	16 20 50.2	-1.4
HHC				sS	sS	16 21 43.4	-2.5
HHC				SS	SnSn	16 22 54.8	-7.2
HHC				ScS	ScS	16 26 01.1	+0.1
HHC				pmax	pmax		
	comp=Z,42nm,1.2s						
HHC				pmax	pmax		
	comp=Z,61nm,5.1s						

HHC LR LR
comp=N,180nm,23.2s
HHC LR LR
comp=E,340nm,21.4s
HHC LR LR
comp=Z,280nm,21.4s
TLY Talaya 32.45 292 *e*P **P** **16 15 48.4 +0.9**
TLY pmax pmax
comp=Z,5.0nm,0.9s
ZAK Zakamensk 33.13 290 *e*P **P** **16 15 54.3 +0.7**
ZAK *e* 16 16 24.8
ZAK pmax pmax
comp=Z,3.0nm,1.0s
NJ2 Nanjing 33.53 250 *e*P **P** **16 15 57.2 +0.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
MOY Mondy 33.99 293 *e*P **P** **16 16 01.8 +0.7**
EGAK Eagle 34.23 42 *e*P **P** **16 16 02.5 -0.3**
comp=Z,2.9nm,0.7s
INK Inuvik 36.80 36 P **P** **16 16 25.6 +0.9**
INK Inuvik 36.80 36 P **P** **16 16 25.6 +0.9**
comp=Z,9.8nm,0.5s,baz=301,slow=6.9,SNR=64
HVS Khovu-Aksy 38.40 295 *e*P **P** **16 16 37.6 -0.8**
HVS pmax pmax
comp=Z,15nm,1.0s
LZH Lanzhou 40.14 269 *e*P **P** **16 16 55.2 +2.1**
LZH pP **pP** **16 17 27.0 +2.0**
LZH sP **sP** **16 17 43.5 +2.1**
LZH PP **PnPn** **16 18 33.6 +0.4**
LZH pmax pmax
comp=Z,16nm,1.4s
LZH pmax pmax
comp=Z,67nm,5.5s
LZH LR LR
comp=N,130nm,14.5s
LZH LR LR
comp=E,110nm,14.1s
LZH LR LR
comp=Z,140nm,18.0s
GTA Gaotai 40.67 276 *e*P **P** **16 16 58.4 +1.0**
GTA pP **pP** **16 17 30.1 +0.8**
GTA sP **sP** **16 17 45.9 +0.2**
GTA pmax pmax
comp=Z,3.0nm,1.2s
DLBC Dease Lake 41.01 50 P **P** **16 17 01.2 +1.3**
DLBC Dease Lake 41.01 50 P **P** **16 17 01.2 +1.3**
comp=Z,1.0nm,0.6s,baz=314,slow=10,SNR=3.3
ZAA0 Zalesovo Array 42.05 303 *e*P **P** **16 17 06.9 -1.4**
ZALV Zalesovo Beam 42.05 303 P **P** **16 17 07.0 -1.3**
ZALV *PP **pP** **16 17 39.9 -0.5**
ZALV 16 19 00.3
ZALV Zalesovo Beam 42.05 303 P **P** **16 17 07.0 -1.3**
ZALV pP **pP** **16 17 39.9 -0.5**
ZALV PcP **PcP** **16 19 00.2 0.0**
ZALV Zalesovo Beam 42.05 303 P **P** **16 17 07.0 -1.3**
comp=Z,1.4nm,0.5s,baz=60,slow=7.3,SNR=16
ZALV pP **pP** **16 17 39.9 -0.5**
comp=Z,1.5nm,0.9s,baz=75,slow=6.4,SNR=2.2
ZALV PcP **PcP** **16 19 00.2 0.0**
comp=Z,1.7nm,0.4s,baz=85,slow=3.4,SNR=9.7
NVS Novosibirsk 42.48 305 *i* P **P** **16 17 10.3 -1.5**
NVS *i* 16 17 43.2
NVS *e* 16 18 54.7
NVS *e* 16 19 27.8
NVS pmax pmax
comp=Z,18nm,0.8s
NVS pmax pmax
comp=N,4.0nm,0.8s
NVS pmax pmax
comp=E,13nm,1.1s
GYA Guiyang 44.92 256 *e*P **P** **16 17 33.2 +1.5**
GYA pP **pP** **16 18 05.6 +1.4**
GYA sP **sP** **16 18 23.2 +2.7**
GYA PP **PP** **16 19 20.0 +0.6**
GYA ScP **ScP** **16 22 48.9 -0.2**
GYA PcS **PcS** **16 23 05.3 +0.5**
GYA S **S** **16 23 57.5 -1.3**
GYA pmax pmax
comp=Z,10.0nm,0.8s
WMQ Urumqi 45.58 289 *e*P **P** **16 17 37.4 +0.7**
WMQ pP **pP** **16 18 09.1 -0.2**
WMQ sP **sP** **16 18 25.2 -0.4**
WMQ pmax pmax
comp=Z,14nm,0.4s
WMQ pmax pmax
comp=Z,130nm,4.0s
WMQ LR LR
comp=Z,42nm,19.2s
RES Resolute Bay 46.01 21 *e*P **P** **16 17 39.9 +0.4**
comp=Z,2.5nm,0.8s
RES PcP **PcP** **16 19 14.0 +0.6**
RES Resolute Bay 46.01 21 P **P** **16 17 39.9 +0.4**
comp=Z,0.9nm,0.3s,baz=322,slow=6.7,SNR=11
RES PcP **PcP** **16 19 14.0 +0.6**
comp=Z,0.9nm,0.5s,baz=150,slow=1.7,SNR=4.8
YKW3 Yellowknife Ar 46.09 40 *e*P **P** **16 17 41.4 +1.1**
YKA Yellowknife Ar 46.12 40 P **P** **16 17 41.6 +1.0**
YKA PcP **PcP** **16 19 14.8 +0.7**
YKA Yellowknife Ar 46.12 40 P **P** **16 17 41.6 +1.0**
comp=Z,1.7nm,0.5s,baz=299,slow=7.8,SNR=22
YKA PcP **PcP** **16 19 14.8 +0.7**
comp=Z,0.6nm,0.5s,baz=308,slow=3.7,SNR=8.1
KURK Kurchatov 46.96 302*d* *i*P **P** **16 17 46.3 -0.9**
KURK pmax pmax
comp=Z,15nm,1.3s
KURK Kurchatov 46.96 302 *e*P **P** **16 17 46.0 -1.2**
comp=Z,9.7nm,0.6s
KURK pP **pP** **16 18 20.6 +0.6**
KURK PcP **PcP** **16 19 17.4 +0.1**
KURBB Kurchatov Arra 47.05 302 P **P** **16 17 46.9 -1.1**
comp=Z,3.4nm,0.4s,baz=59,slow=7.2,SNR=79
KURBB pP **pP** **16 18 20.6 -0.2**
comp=Z,3.0nm,0.7s,baz=59,slow=7.4,SNR=5.4
KURBB PcP **PcP** **16 19 17.4 -0.2**
comp=Z,2.4nm,0.7s,baz=61,slow=3.4,SNR=9.4
MK31 Makanchi Array 47.07 295 P **P** **16 17 47.4 -0.8**
MK31 pmax pmax
comp=Z,4.0nm,0.3s
MK31 Makanchi Array 47.07 295 *e*P **P** **16 17 47.4 -0.8**
MKAR Makanchi Array 47.07 295 P **P** **16 17 47.4 -0.8**
MKAR *PP **pP** **16 18 20.5 -0.5**
MKAR 16 19 17.5
MKAR Makanchi Array 47.07 295 P **P** **16 17 47.4 -0.8**
MKAR pP **pP** **16 18 20.5 -0.5**
MKAR PcP **PcP** **16 19 17.5 -0.2**
MKAR Makanchi Array 47.07 295 P **P** **16 17 47.4 -0.8**
comp=Z,3.0nm,0.3s,baz=62,slow=7.1,SNR=158
MKAR pP **pP** **16 18 20.5 -0.5**
comp=Z,1.4nm,0.6s,baz=65,slow=8.6,SNR=3.7
MKAR PcP **PcP** **16 19 17.5 -0.2**
comp=Z,0.8nm,0.5s,baz=65,slow=4.6,SNR=3.0
KMI Kunming 48.31 259 P **P** **16 17 59.0 +0.8**
KMI pP **pP** **16 18 34.3 +3.1**
KMI S **S** **16 24 44.7 -2.5**
KMI pmax pmax
comp=Z,6.0nm,0.9s
KMI pmax pmax
comp=Z,47nm,8.0s
KMI LR LR
comp=N,88nm,15.0s
KMI LR LR
comp=E,100nm,16.5s
KMI LR LR
comp=Z,71nm,19.4s
SPITS Spitsbergen Ar 48.77 350 P **P** **16 17 59.0 -1.9**
SPITS Spitsbergen Ar 48.77 350 P **P** **16 17 59.0 -1.9**
comp=Z,2.1nm,0.4s,baz=55,slow=7.2,SNR=9.5
BVAR Borovoye Array 49.94 308 P **P** **16 18 08.7 -1.3**
BVAR *PP **pP** **16 18 42.5 -0.6**
BVAR 16 19 27.8
BVAR Borovoye Array 49.94 308 P **P** **16 18 08.7 -1.3**
BVAR pP **pP** **16 18 42.5 -0.6**
BVAR PcP **PcP** **16 19 27.8 -0.2**
BVAR Borovoye Array 49.94 308 P **P** **16 18 08.7 -1.3**
comp=Z,4.6nm,0.6s,baz=62,slow=7.8,SNR=21
BVAR pP **pP** **16 18 42.5 -0.6**
comp=Z,2.5nm,0.6s,baz=57,slow=11,SNR=4.7
BVAR PcP **PcP** **16 19 27.8 -0.2**
comp=Z,3.2nm,0.5s,baz=29,slow=3.4,SNR=6.9
BRVK Borovoye 49.97 308*d* *i*P **P** **16 18 08.9 -1.4**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
ZRNK Zerenda 50.67 309 P **P** **16 18 13.9 -1.6**
ZRNK pmax pmax
comp=Z,5.0nm,0.6s

SVE Sverdlovsk 52.26 316 *e*P **P** **16 18 24.8 -2.4**
SVE pmax pmax
comp=Z,16nm,1.2s
TKM2 Tokmak 2 53.20 295 P **P** **16 18 33.9 -0.7**
TKM2 pmax pmax
comp=Z,2.0nm,0.5s
TKM2 Tokmak 2 53.20 295 *e*P **P** **16 18 33.8 -0.9**
comp=Z,2.9nm,0.4s
TKM2 Tokmak 2 53.20 295 P **P** **16 18 34.2 -0.4**
SNR=9.7
ARU Arti 53.40 317*d* *i*P **P** **16 18 34.0 -1.6**
ARU *PP **pP** **16 19 07.9 -1.2**
ARU 16 19 39.5
ARU 16 20 33.9
ARU S **S** **16 25 55.3 -0.8**
ARU SS **SKiKP** **16 29 33.0 -2.4**
ARU pmax pmax
comp=Z,16nm,1.2s
USP Ospenovka 53.60 296 *i* P **P** **16 18 37.1 -0.3**
USP Ospenovka 53.60 296 P **P** **16 18 37.1 -0.3**
SNR=14
YBH Yreka Blue Hor 53.80 66 P **P** **16 18 40.5 +1.6**
YBH Yreka Blue Hor 53.80 66 P **P** **16 18 40.5 +1.6**
comp=Z,0.5nm,0.3s,baz=236,slow=4.3,SNR=3.8
AAK Ala-Archa 54.01 295 *i* P **P** **16 18 40.2 -0.3**
AAK pmax pmax
comp=Z,6.0nm,0.9s
AAK Ala-Archa 54.01 295 *e*P **P** **16 18 39.7 -0.7**
comp=Z,4.9nm,0.4s
AAK pP **pP** **16 19 14.1 0.0**
AAK Ala-Archa 54.01 295 P **P** **16 18 40.2 -0.3**
SNR=6.3
AAK Ala-Archa 54.01 295 P **P** **16 18 39.9 -0.6**
comp=Z,4.8nm,0.3s,baz=110,slow=4.5,SNR=40
AAK pP **pP** **16 19 14.1 0.0**
comp=Z,1.8nm,0.6s,baz=132,slow=5.8,SNR=2.0
KEV Kevo 54.03 341 *e*P **P** **16 18 38.0 -2.0**
KEV pmax pmax
comp=Z,3.0nm,0.7s
KEV Kevo 54.03 341 *e*p **P** **16 18 38.0 -2.0**
comp=Z,3.1nm,0.7s
BSMT Bassoo Peak 54.30 56 *e*P **P** **16 18 44.3 +1.8**
comp=Z,1.6nm,0.6s
EKS2 Erkin-Say 54.40 296 *e*P **P** **16 18 42.9 -0.3**
EKS2 pmax pmax
comp=Z,6.0nm,0.4s
EKS2 Erkin-Say 54.40 296 *e*P **P** **16 18 42.9 -0.3**
comp=Z,6.2nm,0.4s
EKS2 Erkin-Say 54.40 296 P **P** **16 18 43.1 -0.2**
SNR=9.1
ARCES ARCESS Array B 54.52 341 P **P** **16 18 41.5 -2.1**
ARCES ARCESS Array B 54.52 341 P **P** **16 18 41.5 -2.1**
comp=Z,1.1nm,0.3s,baz=37,slow=7.9,SNR=30
AML Almayashu 54.78 295 *i* P **P** **16 18 46.5 +0.1**
AML Almayashu 54.78 295 P **P** **16 18 46.5 +0.1**
SNR=5.7
KSH Kashi 55.15 292 *e*P P 16 18 53.3 +4.6
KSH *e*pP pP 16 19 26.1 +3.7
KSH *e*sP sP 16 19 41.0 +2.6
KSH *e*PcP **PcP** **16 19 52.1 +4.0**
KSH *e*PP PP 16 20 59.8 +6.5
KSH *e*PcS **PcS** **16 23 50.9 +2.6**
KSH *e*S **S** **16 26 23.0 +2.6**
KSH *e*sS sS 16 27 20.2 +1.5
KSH *e*ScS **ScS** **16 28 24.2 +0.9**
KSH *e*SS **SS** **16 30 09.6 +3.7**
KSH pmax pmax
comp=Z,6.0nm,0.4s
KSH pmax pmax
comp=Z,73nm,4.0s
KSH LR LR
comp=N,74nm,6.1s
KSH LR LR
comp=E,62nm,6.0s
KSH LR LR
comp=Z,64nm,3.8s
CHTO Chiang Mai 55.34 257 *e*P **P** **16 18 51.2 +1.1**
CHTO pmax pmax
comp=Z,15nm,0.6s
CHTO Chiang Mai 55.34 257 *e*P **P** **16 18 51.2 +1.1**
comp=Z,15nm,0.6s
CM31 Chiang Mai Arr 55.61 256 *e*P **P** **16 18 53.7 +1.6**
comp=Z,18nm,0.8s
CMAR Chiang Mai Arr 55.61 256 P **P** **16 18 53.6 +1.6**
CMAR Chiang Mai Arr 55.61 256 P **P** **16 18 53.6 +1.6**
comp=Z,12nm,0.7s,baz=29,slow=7.1,SNR=89
TAPN Taplejung 56.16 273 *e*P **P** **16 18 57.5 +1.3**
comp=Z,7.9nm,0.3s
SUMG Summit 56.21 5 *e*P **P** **16 18 56.1 0.0**
SUMG pmax pmax
comp=Z,15nm,0.9s
SUMG Summit 56.21 5 *e*P **P** **16 18 56.1 0.0**
comp=Z,15nm,0.9s
ODAN Odare 56.70 273 *e*P **P** **16 19 01.8 +1.8**
comp=Z,7.3nm,0.7s
GUN Gumba 56.92 275 *e*P **P** **16 19 01.4 -0.3**
comp=Z,16nm,0.5s
RAMN Ramite 57.14 273 *e*P **P** **16 19 03.8 +0.7**
comp=Z,26nm,0.5s
KKN Kakani 57.38 275 *e*P **P** **16 19 04.6 -0.1**
comp=Z,26nm,0.5s
AB31 Akbulak array 57.43 309 P **P** **16 19 02.9 -1.6**
AB31 pmax pmax
comp=Z,2.0nm,0.4s
ABKAR Akbulak array 57.43 309 *e*P **P** **16 19 02.9 -1.6**
comp=Z,1.6nm,0.4s
PKI Pulchoki 57.45 275 *e*P **P** **16 19 05.8 +0.4**
comp=Z,13nm,0.6s
PKIN Phulchoki 57.45 275 *e*P **P** **16 19 06.0 +0.7**
comp=Z,9.0nm,0.6s
AKTO Aktyubinsk 57.56 311 PcP **PcP** **16 19 56.5 -0.7**
AKTO Aktyubinsk 57.56 311 PcP **PcP** **16 19 56.5 -0.7**
comp=Z,2.8nm,0.5s,baz=81,slow=4.0,SNR=5.5
DMN Daman 57.61 275 *e*P **P** **16 19 07.4 +1.0**
comp=Z,36nm,0.7s
DANN Dangsing 57.94 277 *e*P **P** **16 19 08.8 0.0**
comp=Z,39nm,0.6s
KOLN Koldanda 58.45 276 *e*P **P** **16 19 12.1 -0.1**
comp=Z,17nm,0.3s
JOF Joensuu 58.47 334 *e*P **P** **16 19 09.4 -2.1**
JOF pmax pmax
comp=Z,2.0nm,0.4s
JOF Joensuu 58.47 334 *e*p **P** **16 19 09.4 -2.1**
comp=Z,1.8nm,0.4s
NVAR Mina Array Bea 58.51 67 P **P** **16 19 14.5 +2.0**
NVAR Mina Array Bea 58.51 67 P **P** **16 19 14.5 +2.0**
comp=Z,1.1nm,0.6s,baz=297,slow=7.4,SNR=6.9
NVAR LR LR 16 41 29.0
comp=Z,57nm,21.3s,baz=353,slow=33
PYUN Piuthan 58.60 277 *e*P **P** **16 19 13.0 -0.2**
ELK Elko 58.70 63 P **P** **16 19 15.8 +1.9**
ELK Elko 58.70 63 P **P** **16 19 15.8 +1.9**
comp=Z,0.9nm,0.7s,baz=217,slow=5.6,SNR=4.3
KAF Kangasniemi 60.47 336 *e*P **P** **16 19 22.8 -2.4**
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 60.47 336 *e*p **P** **16 19 22.8 -2.4**
comp=Z,2.2nm,0.5s
FINES FINESS Array B 61.09 335 P **P** **16 19 27.6 -1.8**
FINES PcP **PcP** **16 20 10.3 -0.6**
FINES FINESS Array B 61.09 335 P **P** **16 19 27.6 -1.8**
comp=Z,2.1nm,0.4s,baz=35,slow=7.4,SNR=25
FINES PcP **PcP** **16 20 10.3 -0.6**
comp=Z,2.1nm,0.7s,baz=79,slow=4.1,SNR=5.3
OBN Obninsk 63.02 326 *e*P **P** **16 19 39.8 -2.6**
OBN pmax pmax
comp=Z,7.0nm,0.8s
NB2 NORSAR Subarra 64.85 342 P **P** **16 19 52.7 -1.6**
comp=Z,1.2nm,0.3s,baz=25,slow=6.5
NOA NORSAR Array B 64.85 342 P **P** **16 19 53.0 -1.3**
NOA PcP **PcP** **16 20 25.8 -0.7**
NOA NORSAR Array B 64.85 342 P **P** **16 19 53.0 -1.3**
comp=Z,1.6nm,0.5s,baz=24,slow=6.5,SNR=16
NOA PcP **PcP** **16 20 25.8 -0.7**
comp=Z,0.8nm,0.6s,baz=26,slow=3.4,SNR=3.3
HFS Hagfors 65.18 341 P **P** **16 19 54.9 -1.5**
HFS Hagfors 65.18 341 P **P** **16 19 54.9 -1.5**
comp=Z,3.1nm,0.3s,baz=34,slow=3.8,SNR=40
SCHQ Schefferville 68.44 25 P **P** **16 20 17.1 -0.1**
SCHQ Schefferville 68.44 25 P **P** **16 20 17.1 -0.1**
comp=Z,5.0nm,0.4s,baz=345,slow=4.8,SNR=32
HYB Hyderabad 69.15 272 *i* P **P** **16 20 21.0 -1.2**
AKASG Malin Array Be 69.19 327 *i* P **P** **16 20 20.0 -1.8**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 69.19 327 P **P** **16 20 19.7 -2.1**

AKASG Malin Array Be 69.19 327 P **P** **16 20 19.7 -2.1**
comp=Z,1.9nm,0.5s,baz=30,slow=6.5,SNR=6.5
KIEV Kiev 69.20 327 *e*P **P** **16 20 21.8 -0.1**
AK02 Malin Array Si 69.23 327 *e*P **P** **16 20 19.8 -2.3**
KIV Kislovodsk 69.39 315 *e*P **P** **16 20 22.5 -0.8**
KIV pmax pmax
comp=Z,4.0nm,0.9s
KIV MLR MLR
comp=Z,26nm,18.0s
KBZ Khabaz 69.47 315 P **P** **16 20 22.9 -0.7**
KBZ Khabaz 69.47 315 P **P** **16 20 22.9 -0.7**
KBZ Khabaz 69.47 315 P **P** **16 20 22.9 -0.7**
comp=Z,3.2nm,0.5s,baz=90,slow=4.1,SNR=13
ZEI Tsey 69.77 314 *e*P **P** **16 20 23.5 -2.4**
ZEI pmax pmax
comp=Z,3.0nm,0.9s
EKA Eskdalemuir Ar 72.64 348 P **P** **16 20 42.2 -0.4**
EKA Eskdalemuir Ar 72.64 348 P **P** **16 20 42.2 -0.4**
comp=Z,5.6nm,0.3s,baz=18,slow=5.2,SNR=58
BUR08 Bucovina Ar. S 73.17 328 *e*P **P** **16 20 44.9 -1.1**
BURAR Bucovina Array 73.19 328⇑ *i*P **P** **16 20 44.9 -1.2**
CRVS Cervenica-Dubn 73.27 331 *e*P **P** **16 20 44.0 -2.4**
CRVS Cervenica-Dubn 73.27 331 *e*P **P** **16 20 44.0 -2.4**
WRA Warramunga Arr 73.35 202 P **P** **16 20 47.5 +0.4**
WRA Warramunga Arr 73.35 202 P **P** **16 20 47.5 +0.4**
comp=Z,1.7nm,0.4s,baz=16,slow=6.4,SNR=36
CLL Collm 73.43 337 *e*P **P** **16 20 47.0 -0.3**
CLL pmax pmax
comp=Z,3.0nm,0.7s
CLL Collm 73.43 337 *e*P **P** **16 20 47.0 -0.3**
TXAR Lajitas Array 73.46 64 P **P** **16 20 50.0 +2.0**
TXAR Lajitas Array 73.46 64 P **P** **16 20 50.0 +2.0**
comp=Z,0.7nm,0.5s,baz=277,slow=3.8,SNR=7.8
TRPA Tarpa 73.61 330⇑ *i*P **P** **16 20 48.2 -0.2**
VYHS Vyhne 74.42 332 *e*P **P** **16 20 52.9 -0.2**
VYHS Vyhne 74.42 332 *e*P **P** **16 20 52.9 -0.2**
DRGR 74.74 329⇓ *i*P **P** **16 20 53.7 -1.4**
MLR Muntele Rosu 74.79 326 P **P** **16 20 55.2 -0.2**
MLR Muntele Rosu 74.79 326⇓ *i*P **P** **16 20 55.2 -0.2**
MLR Muntele Rosu 74.79 326 P **P** **16 20 55.2 -0.2**
comp=Z,0.6nm,0.4s,baz=196,slow=5.9,SNR=11
KHC Kasperske Hory 75.29 336 *e*P **P** **16 20 59.0 +0.9**
KHC *e* 16 21 04.5
KHC Kasperske Hory 75.29 336 *e*P **P** **16 20 59.0 +0.9**
KHC *ex* x 16 21 04.5
GERES GERESS Array B 75.52 336 P **P** **16 20 58.8 -0.8**
GERES GERESS Array B 75.52 336 P **P** **16 20 58.8 -0.8**
comp=Z,0.5nm,0.3s,baz=35,slow=5.4,SNR=10
GIVF Givet 76.38 342⇑ *i*P **P** **16 21 04.0 -0.2**
GIVF Givet 76.38 342⇑ *i*P **P** **16 21 04.0 -0.2**
GIVF Givet 76.38 342⇑ *i*P **P** **16 21 04.0 -0.2**
BAIF Baives 76.54 342⇑ *i*P **P** **16 21 05.0 -0.1**
BAIF Baives 76.54 342⇑ *i*P **P** **16 21 05.0 -0.1**
BAIF Baives 76.54 342⇑ *i*P **P** **16 21 05.0 -0.1**
BRTR Keskin Array B 76.75 318 P **P** **16 21 05.9 -0.8**
BRTR Keskin Array B 76.75 318 P **P** **16 21 05.9 -0.8**
comp=Z,1.1nm,0.6s,baz=28,slow=3.5,SNR=6.4
ASAR Alice Springs 77.04 201 P **P** **16 21 09.6 +1.4**
ASAR Alice Springs 77.04 201 P **P** **16 21 09.6 +1.4**
comp=Z,1.4nm,0.4s,baz=14,slow=5.1,SNR=79
SOKA Soboth 77.15 334⇑ *i*P **P** **16 21 09.1 +0.4**
comp=Z,7.1nm,0.5s
KBA Koelnbreinsper 77.24 335⇑ *i*P **P** **16 21 09.5 +0.2**
comp=Z,14nm,1.0s
CDF Champ du Feu 77.47 340⇑ *i*P **P** **16 21 10.3 -0.2**
comp=Z,12nm,0.9s
CDF Champ du Feu 77.47 340⇑ *i*P **P** **16 21 10.3 -0.2**
CDF pmax pmax
comp=Z,12nm,0.9s
CDF Champ du Feu 77.47 340⇑ *i*P **P** **16 21 10.3 -0.2**
comp=Z,12nm,0.9s
WTTA Wattenberg 77.51 336⇓ *i*P **P** **16 21 10.3 -0.6**
comp=Z,7.6nm,0.5s
PAGF Fort de Pagny 77.66 341⇑ *i*P **P** **16 21 11.8 +0.3**
comp=Z,5.4nm,0.6s
PAGF Fort de Pagny 77.66 341⇑ *i*P **P** **16 21 11.8 +0.3**
comp=Z,5.4nm,0.6s
MEZF Maizieres J'vi 77.85 341⇑ *i*P **P** **16 21 12.7 +0.2**
MEZF Maizieres J'vi 77.85 341⇑ *i*P **P** **16 21 12.7 +0.2**
HAU Haudompre 78.05 340 *e*P **P** **16 21 13.3 -0.4**
comp=Z,9.2nm,0.6s
HAU *e*R
comp=Z,51nm,19.8s
HAU Haudompre 78.05 340 *e*P **P** **16 21 13.3 -0.4**
HAU pmax pmax
comp=Z,9.0nm,0.6s
HAU Haudompre 78.05 340 *e*P **P** **16 21 13.3 -0.4**
comp=Z,9.2nm,0.6s
SWET Sewanee 78.07 48 *e*P **P** **16 21 14.1 +0.1**
comp=Z,4.4nm,0.6s
SFTF Sexfontaines 78.14 341⇑ *i*P **P** **16 21 14.0 -0.1**
comp=Z,25nm,0.5s
SFTF Sexfontaines 78.14 341⇑ *i*P **P** **16 21 14.0 -0.1**
comp=Z,25nm,0.5s
FLN La Foliniere 78.63 345 *e*P **P** **16 21 16.6 -0.2**
comp=Z,15nm,0.5s
FLN *e*R
comp=Z,54nm,18.8s
FLN La Foliniere 78.63 345 *e*P **P** **16 21 16.6 -0.2**
FLN pmax pmax
comp=Z,15nm,0.5s
FLN La Foliniere 78.63 345 *e*P **P** **16 21 16.6 -0.2**
comp=Z,15nm,0.5s
LDF La Druitiere 78.73 344 *e*P **P** **16 21 17.0 -0.3**
comp=Z,10nm,0.4s
LDF La Druitiere 78.73 344 *e*P **P** **16 21 17.0 -0.3**
LDF pmax pmax
comp=Z,10.0nm,0.4s
LDF La Druitiere 78.73 344 *e*P **P** **16 21 17.0 -0.3**
comp=Z,10nm,0.4s
TUE Stuetta 78.82 338 *e*P **P** **16 21 17.8 -0.3**
comp=Z,8.2nm,0.8s
GRR Gorron 79.06 345 *e*P **P** **16 21 18.6 -0.5**
comp=Z,22nm,0.6s
GRR Gorron 79.06 345 *e*P **P** **16 21 18.6 -0.5**
GRR pmax pmax
comp=Z,22nm,0.6s
GRR Gorron 79.06 345 *e*P **P** **16 21 18.6 -0.5**
comp=Z,22nm,0.6s
LOR Lormes 79.27 341⇑ *i*P **P** **16 21 20.1 -0.2**
comp=Z,21nm,0.7s
LOR *e*R
comp=Z,43nm,18.8s
LOR Lormes 79.27 341⇑ *i*P **P** **16 21 20.1 -0.2**
comp=Z,21nm,0.7s
CABF La Chapelle 79.43 340 *e*P **P** **16 21 21.4 +0.1**
comp=Z,9.1nm,0.7s
CABF La Chapelle 79.43 340 *e*P **P** **16 21 21.4 +0.1**
CABF pmax pmax
comp=Z,9.0nm,0.7s
CABF La Chapelle 79.43 340 *e*P **P** **16 21 21.4 +0.1**
comp=Z,9.1nm,0.7s
SGMF Saint Gilles 79.45 346 *e*P **P** **16 21 21.5 +0.2**
comp=Z,36nm,0.6s
SGMF Saint Gilles 79.45 346 *e*P **P** **16 21 21.5 +0.2**
SGMF pmax pmax
comp=Z,36nm,0.6s
SGMF Saint Gilles 79.45 346 *e*P **P** **16 21 21.5 +0.2**
comp=Z,36nm,0.6s
ROSF Rostrenen 79.48 346 *e*P **P** **16 21 21.4 0.0**
comp=Z,53nm,0.7s
ROSF Rostrenen 79.48 346 *e*P **P** **16 21 21.4 0.0**
ROSF pmax pmax
comp=Z,53nm,0.7s
ROSF Rostrenen 79.48 346 *e*P **P** **16 21 21.4 0.0**
comp=Z,53nm,0.7s
HYF Humbligny 79.51 342 *e*P **P** **16 21 21.9 +0.3**
HYF Humbligny 79.51 342 *e*P **P** **16 21 21.9 +0.3**
SSF Saint Saulge 79.54 342⇑ *i*P **P** **16 21 21.6 -0.2**
comp=Z,11nm,0.6s
SSF Saint Saulge 79.54 342⇑ *i*P **P** **16 21 21.6 -0.2**
SSF pmax pmax
comp=Z,11nm,0.6s
SSF Saint Saulge 79.54 342⇑ *i*P **P** **16 21 21.6 -0.2**
comp=Z,11nm,0.6s
AVF Avril sur Loir 79.83 342⇑ *i*P **P** **16 21 23.5 +0.2**
comp=Z,22nm,0.6s
AVF Avril sur Loir 79.83 342⇑ *i*P **P** **16 21 23.5 +0.2**
AVF pmax pmax
comp=Z,22nm,0.6s
AVF Avril sur Loir 79.83 342⇑ *i*P **P** **16 21 23.5 +0.2**
comp=Z,22nm,0.6s
SMF Signal de Mont 79.87 341⇑ *i*P **P** **16 21 23.7 +0.1**
comp=Z,33nm,0.8s
SMF Signal de Mont 79.87 341⇑ *i*P **P** **16 21 23.7 +0.1**
SMF pmax pmax

	comp=Z,33nm,0.8s							
SMF	**Signal de Mont**	**79.87**	**341**	⇑*iP*	**P**	**16**	**21**	**23.7 +0.1**
	comp=Z,33nm,0.8s							
QUIF	**Quistinic**	**79.88**	**346**	*eP*	**P**	**16**	**21**	**23.1 -0.4**
	comp=Z,13nm,0.5s							
QUIF	**Quistinic**	**79.88**	**346**	*eP*	**P**	**16**	**21**	**23.1 -0.4**
QUIF				pmax	pmax			
	comp=Z,13nm,0.5s							
QUIF	**Quistinic**	**79.88**	**346**	*eP*	**P**	**16**	**21**	**23.1 -0.4**
	comp=Z,13nm,0.5s							
BGF	**Bois d'Agland**	**80.15**	**342**	*eP*	**P**	**16**	**21**	**25.1 0.0**
	comp=Z,11nm,0.5s							
BGF	**Bois d'Agland**	**80.15**	**342**	*eP*	**P**	**16**	**21**	**25.1 0.0**
BGF				pmax	pmax			
	comp=Z,11nm,0.5s							
BGF	**Bois d'Agland**	**80.15**	**342**	*eP*	**P**	**16**	**21**	**25.1 0.0**
	comp=Z,11nm,0.5s							
LPL	**La Plagne**	**80.33**	**339**	⇑*iP*	**P**	**16**	**21**	**27.0 +0.7**
	comp=Z,19nm,0.6s							
LPL	**La Plagne**	**80.33**	**339**	⇑*iP*	**P**	**16**	**21**	**27.0 +0.7**
LPL				pmax	pmax			
	comp=Z,19nm,0.6s							
LPL	**La Plagne**	**80.33**	**339**	⇑*iP*	**P**	**16**	**21**	**27.0 +0.7**
	comp=Z,19nm,0.6s							
LPG	**La Plagne**	**80.34**	**339**	⇑*iP*	**P**	**16**	**21**	**27.2 +0.7**
	comp=Z,18nm,0.6s							
LPG	**La Plagne**	**80.34**	**339**	⇑*iP*	**P**	**16**	**21**	**27.2 +0.7**
LPG				pmax	pmax			
	comp=Z,18nm,0.6s							
LPG	**La Plagne**	**80.34**	**339**	⇑*iP*	**P**	**16**	**21**	**27.2 +0.7**
	comp=Z,18nm,0.6s							
TCF	**Toulx Ste Croi**	**80.54**	**342**	⇑*iP*	**P**	**16**	**21**	**27.4 +0.2**
	comp=Z,18nm,0.8s							
TCF	**Toulx Ste Croi**	**80.54**	**342**	⇑*iP*	**P**	**16**	**21**	**27.4 +0.2**
TCF				pmax	pmax			
	comp=Z,19nm,0.8s							
TCF	**Toulx Ste Croi**	**80.54**	**342**	⇑*iP*	**P**	**16**	**21**	**27.4 +0.2**
	comp=Z,19nm,0.8s							
MFF	**Saint Martin d**	**80.67**	**344**	*eP*	**P**	**16**	**21**	**28.0 +0.2**
	comp=Z,29nm,0.6s							
MFF	**Saint Martin d**	**80.67**	**344**	*eP*	**P**	**16**	**21**	**28.0 +0.2**
MFF				pmax	pmax			
	comp=Z,29nm,0.6s							
MFF	**Saint Martin d**	**80.67**	**344**	*eP*	**P**	**16**	**21**	**28.0 +0.2**
	comp=Z,29nm,0.6s							
MBDF	**Montbardon**	**81.07**	**339**	*eP*	**P**	**16**	**21**	**30.3 +0.1**
MBDF	**Montbardon**	**81.07**	**339**	*eP*	**P**	**16**	**21**	**30.3 +0.1**
MBDF	**Montbardon**	**81.07**	**339**	*eP*	**P**	**16**	**21**	**30.3 +0.1**
ORIF	**Oris-en-Rattie**	**81.09**	**339**	*eP*	**P**	**16**	**21**	**30.7 +0.5**
	comp=Z,21nm,0.8s							
ORIF				*eR*				
	comp=Z,55nm,20.0s							
ORIF	**Oris-en-Rattie**	**81.09**	**339**	*eP*	**P**	**16**	**21**	**30.7 +0.5**
ORIF				pmax	pmax			
	comp=Z,21nm,0.8s							
ORIF	**Oris-en-Rattie**	**81.09**	**339**	*eP*	**P**	**16**	**21**	**30.7 +0.5**
	comp=Z,21nm,0.8s							
VIVF	**Saint-Julien-l**	**81.41**	**340**	⇑*iP*	**P**	**16**	**21**	**32.4 +0.6**
	comp=Z,25nm,0.9s							
VIVF	**Saint-Julien-l**	**81.41**	**340**	⇑*iP*	**P**	**16**	**21**	**32.4 +0.6**
VIVF				pmax	pmax			
	comp=Z,25nm,0.9s							
VIVF	**Saint-Julien-l**	**81.41**	**340**	⇑*iP*	**P**	**16**	**21**	**32.4 +0.6**
	comp=Z,25nm,0.9s							
MMAI	**Mount Meron Ar**	**81.59**	**313**	P	**P**	**16**	**21**	**32.6 -0.4**
MMAI	**Mount Meron Ar**	**81.59**	**313**	P	**P**	**16**	**21**	**32.6 -0.4**
	comp=Z,3.6nm,0.5s,baz=46,slow=7.3,SNR=8.4							
ASF	**Jabal al Asfar**	**81.60**	**312**	P	**P**	**16**	**21**	**32.7 -0.4**
ASF	**Jabal al Asfar**	**81.60**	**312**	P	**P**	**16**	**21**	**32.7 -0.4**
	comp=Z,4.2nm,0.8s,baz=300,slow=1.9,SNR=6.5							
RJF	**Les Rejaudoux**	**81.62**	**342**	*eP*	**P**	**16**	**21**	**33.5 +0.6**
	comp=Z,13nm,0.6s							
RJF				*eR*				
	comp=Z,54nm,21.8s							
RJF	**Les Rejaudoux**	**81.62**	**342**	*eP*	**P**	**16**	**21**	**33.5 +0.6**
RJF				pmax	pmax			
	comp=Z,13nm,0.6s							
RJF	**Les Rejaudoux**	**81.62**	**342**	*eP*	**P**	**16**	**21**	**33.5 +0.6**
	comp=Z,13nm,0.6s							
SBF	**Sospel**	**81.73**	**338**	*eP*	**P**	**16**	**21**	**34.2 +0.7**
	comp=Z,26nm,0.6s							
SBF	**Sospel**	**81.73**	**338**	*eP*	**P**	**16**	**21**	**34.2 +0.7**
SBF				pmax	pmax			
	comp=Z,26nm,0.6s							
SBF	**Sospel**	**81.73**	**338**	*eP*	**P**	**16**	**21**	**34.2 +0.7**
	comp=Z,26nm,0.6s							
CAF	**Calviac**	**81.87**	**342**	*eP*	**P**	**16**	**21**	**35.1 +0.8**
	comp=Z,17nm,0.5s							
CAF	**Calviac**	**81.87**	**342**	*eP*	**P**	**16**	**21**	**35.1 +0.8**
CAF				pmax	pmax			
	comp=Z,17nm,0.5s							
CAF	**Calviac**	**81.87**	**342**	*eP*	**P**	**16**	**21**	**35.1 +0.8**
	comp=Z,17nm,0.5s							
SMRF	**Simiane la Rot**	**82.05**	**339**	*eP*	**P**	**16**	**21**	**35.2 0.0**
	comp=Z,14nm,0.7s							
SMRF	**Simiane la Rot**	**82.05**	**339**	*eP*	**P**	**16**	**21**	**35.2 0.0**
	comp=Z,14nm,0.7s							
LFF	**La Frestale**	**82.11**	**343**	*eP*	**P**	**16**	**21**	**36.2 +0.8**
	comp=Z,18nm,0.5s							
LFF	**La Frestale**	**82.11**	**343**	*eP*	**P**	**16**	**21**	**36.2 +0.8**
LFF				pmax	pmax			
	comp=Z,18nm,0.5s							
LFF	**La Frestale**	**82.11**	**343**	*eP*	**P**	**16**	**21**	**36.2 +0.8**
	comp=Z,18nm,0.5s							
FRF	**La Foret Royal**	**82.20**	**338**	*eP*	**P**	**16**	**21**	**35.6 -0.3**
FRF	**La Foret Royal**	**82.20**	**338**	*eP*	**P**	**16**	**21**	**35.6 -0.3**
FRF	**La Foret Royal**	**82.20**	**338**	*eP*	**P**	**16**	**21**	**35.6 -0.3**
LASF	**Ste Croix**	**82.33**	**341**	*eP*	**P**	**16**	**21**	**36.8 +0.2**
LASF	**Ste Croix**	**82.33**	**341**	*eP*	**P**	**16**	**21**	**36.8 +0.2**
LMR	**La Mourre**	**82.45**	**338**	*eP*	**P**	**16**	**21**	**36.4 -0.8**
	comp=Z,12nm,0.6s							
LMR	**La Mourre**	**82.45**	**338**	*eP*	**P**	**16**	**21**	**36.4 -0.8**
LMR				pmax	pmax			
	comp=Z,12nm,0.6s							
LMR	**La Mourre**	**82.45**	**338**	*eP*	**P**	**16**	**21**	**36.4 -0.8**
	comp=Z,12nm,0.6s							
PGF	**Pioggiola**	**82.58**	**336**	*eP*	**P**	**16**	**21**	**37.8 -0.3**
	comp=Z,21nm,0.7s							
PGF	**Pioggiola**	**82.58**	**336**	*eP*	**P**	**16**	**21**	**37.8 -0.3**
PGF				pmax	pmax			
	comp=Z,21nm,0.7s							
PGF	**Pioggiola**	**82.58**	**336**	*eP*	**P**	**16**	**21**	**37.8 -0.3**
	comp=Z,21nm,0.7s							
MTLF	**Montolieu**	**83.37**	**341**	⇑*iP*	**P**	**16**	**21**	**42.6 +0.6**
	comp=Z,16nm,0.8s							
MTLF	**Montolieu**	**83.37**	**341**	⇑*iP*	**P**	**16**	**21**	**42.6 +0.6**
MTLF				pmax	pmax			
	comp=Z,16nm,0.8s							
MTLF	**Montolieu**	**83.37**	**341**	⇑*iP*	**P**	**16**	**21**	**42.6 +0.6**
	comp=Z,16nm,0.8s							
TIP	**Timpagrande**	**83.49**	**330**	*eP*	**P**	**16**	**21**	**42.4 -0.3**
	comp=Z,11nm,0.9s							
STKA	**Stephens Creek**	**83.63**	**193**	P	**P**	**16**	**21**	**44.5 +1.3**
STKA	**Stephens Creek**	**83.63**	**193**	P	**P**	**16**	**21**	**44.5 +1.3**
	comp=Z,0.6nm,0.5s,baz=27,slow=6.8,SNR=2.5							
EPF	**Esparros**	**84.03**	**343**	*eP*	**P**	**16**	**21**	**45.3 -0.1**
	comp=Z,16nm,0.6s							
EPF	**Esparros**	**84.03**	**343**	*eP*	**P**	**16**	**21**	**45.3 -0.1**
EPF				pmax	pmax			
	comp=Z,16nm,0.6s							
EPF	**Esparros**	**84.03**	**343**	*eP*	**P**	**16**	**21**	**45.3 -0.1**
	comp=Z,16nm,0.6s							
SJPF	**Ste Jean**	**84.23**	**344**	*eP*	**P**	**16**	**21**	**47.4 +1.0**
	comp=Z,10.0nm,0.5s							
SJPF	**Ste Jean**	**84.23**	**344**	*eP*	**P**	**16**	**21**	**47.4 +1.0**
SJPF				pmax	pmax			
	comp=Z,10.0nm,0.5s							
SJPF	**Ste Jean**	**84.23**	**344**	*eP*	**P**	**16**	**21**	**47.4 +1.0**
	comp=Z,10.0nm,0.5s							
ETSF	**Etsaut**	**84.33**	**343**	*eP*	**P**	**16**	**21**	**47.7 +0.8**
	comp=Z,18nm,0.6s							
ETSF	**Etsaut**	**84.33**	**343**	*eP*	**P**	**16**	**21**	**47.7 +0.8**
ETSF				pmax	pmax			
	comp=Z,18nm,0.6s							
ETSF	**Etsaut**	**84.33**	**343**	*eP*	**P**	**16**	**21**	**47.7 +0.8**
	comp=Z,18nm,0.6s							
EIL	**Elat**	**84.60**	**312**	P	**P**	**16**	**21**	**48.1 -0.3**
EIL	**Elat**	**84.60**	**312**	P	**P**	**16**	**21**	**48.1 -0.3**
	comp=Z,6.5nm,0.7s,baz=8.0,slow=7.3,SNR=5.9							
ESDC	**Sonseca Array**	**88.05**	**345**	P	**P**	**16**	**22**	**04.4 -0.8**
ESDC	**Sonseca Array**	**88.05**	**345**	P	**P**	**16**	**22**	**04.4 -0.8**
	comp=Z,1.7nm,0.5s,baz=6.1,slow=4.5,SNR=13							
KEST	**Kesra**	**88.89**	**334**	*eP*	**P**	**16**	**22**	**09.5 +0.2**
KEST	**Kesra**	**88.89**	**334**	P	**P**	**16**	**22**	**09.2 0.0**
	comp=Z,3.1nm,0.6s,baz=266,slow=2.1,SNR=14							
TORD	**Torodi Ar. Bea**	**112.41**	**333**	PKiKP	**PKiKP**	**16**	**27**	**49.9 -0.5**
TORD	**Torodi Ar. Bea**	**112.41**	**333**	PKiKP	**PKiKP**	**16**	**27**	**49.9 -0.5**
	comp=Z,0.2nm,0.7s,baz=27,slow=2.9,SNR=6.0							
DBIC	**Dimbokro**	**120.31**	**339**	PKP	**PKPdf**	**16**	**28**	**04.9 -0.6**
DBIC	**Dimbokro**	**120.31**	**339**	PKP	**PKPdf**	**16**	**28**	**04.9 -0.6**
	comp=Z,1.9nm,0.6s,baz=36,slow=2.0,SNR=5.0							
CPUP	**Villa Florida**	**144.32**	**59**	PKP	PKPbc	16	28	48.8 +0.1
CPUP	**Villa Florida**	**144.32**	**59**	PKP	PKPbc	16	28	48.8 +0.1
	comp=Z,1.3nm,0.4s,baz=289,slow=4.6,SNR=7.3							
PLCA	**Paso Flores**	**146.16**	**91**	PKPbc	**PKPab**	**16**	**28**	**55.0 0.0**
PLCA	**Paso Flores**	**146.16**	**91**	PKPbc	**PKPab**	**16**	**28**	**55.0 0.0**
	comp=Z,2.2nm,0.9s,baz=300,slow=4.2,SNR=4.3							

*CSEM **11** 16:22:24.0, 40.82N×30.76E, h5km, MD2.7, After ISK*
*ISK **11** 16:22:24.0, 40.82N×30.76E, h5km, MD2.7, Turkey*

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
SPNC	**Sapanca-Adapaz**	**0.37**	**249**	*e*PG	Pb	16	22	32.6 -0.4
SPNC	**Sapanca-Adapaz**	**0.37**	**249**	*e*Pg	Pb	16	22	32.6 -0.4
GULT	**Gulveren**	**0.43**	**206**	*e*PG	Pg	16	22	33.2 +0.9
GULT	**Gulveren**	**0.43**	**206**	*e*Pg	Pb	16	22	33.3 -0.9
MDUB	**Mudurnu**	**0.48**	**136**	*e*PG	Pb	16	22	34.3 -0.8
MDUB				*e*SG	Sb	16	22	42.0 -0.5
MDUB	**Mudurnu**	**0.48**	**136**	*e*Pg	Pb	16	22	34.3 -0.8
MDUB				*e*Sg	Sb	16	22	42.0 -0.5
ADVT	**Abdulvahap**	**0.87**	**244**	*e*PG	Pb	16	22	41.5 -0.1
ADVT	**Abdulvahap**	**0.87**	**244**	*e*Pg	Pb	16	22	41.5 -0.1
SILT	**Sile**	**0.91**	**292**	*e*PG	Pb	16	22	42.5 +0.2
SILT	**Sile**	**0.91**	**292**	*e*Pg	Pb	16	22	42.5 +0.2
IZI	**Iznik**	**1.09**	**244**	*e*PN	Pn	16	22	46.4 +0.3
IZI	**Iznik**	**1.09**	**244**	*e*Pn	Pn	16	22	46.4 +0.3
ARMT	**Armutlu**	**1.47**	**261**	*e*PN	Pg	16	22	52.2 0.0
ARMT	**Armutlu**	**1.47**	**261**	*e*Pn	Pg	16	22	52.2 0.0
TVSB	**Tavsanli**	**1.69**	**217**	*e*PN	Pb	16	22	55.8 +0.1
TVSB	**Tavsanli**	**1.69**	**217**	*e*Pn	Pb	16	22	55.8 +0.1

*CSEM **11** 16:24:13.3±0.6, 37.67N×40.42E, h3km±2km, MD2.6, Error ellipse: s-maj=20.1km s-min=9.6km az=47.0*
*ISK **11** 16:24:14.4, 37.74N×40.39E, h8km, MD2.6*
*DDA **11** 16:24:15.9, 37.79N×39.94E, h7km, MD2.8*
*ISCJB **11** 16:24:17.6±1.1, 37.77N±0.06×40.19E±0.07, h6km±7km, Error ellipse: s-maj=12.4km s-min=6.9km az=42.5*
ISC 11 16:24:15.8±2.0, **37.71N**±0.08×**40.15E**±0.05, **h1**km±14km, **n10**,σ0**9**69/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
DIY	**Diyarbakir**	**0.20**	**17**	*e*PG	**Pg**	**16**	**24**	**19.0 -0.7**
DIY				*e*SG	**Sg**	**16**	**24**	**22.5 +0.2**
DIY	**Diyarbakir**	**0.20**	**17**	*e*Pg	**Pg**	**16**	**24**	**19.0 -0.7**
DIY				*e*Sg	**Sg**	**16**	**24**	**22.5 +0.2**
DIYA	**Diyarbakir**	**0.22**	**353**	*i*P	**Pg**	**16**	**24**	**19.9 -0.1**
DIYA				*i*S	**Sg**	**16**	**24**	**24.1 +1.2**
DIYA	**Diyarbakir**	**0.22**	**353**	*i*P	**Pg**	**16**	**24**	**19.9 -0.1**
DIYA				*i*S	**Sg**	**16**	**24**	**24.1 +1.2**
MARD	**Mardin**	**0.63**	**128**	*i*P	**Pn**	**16**	**24**	**31.5 -0.6**
MARD				*i*S	**Sn**	**16**	**24**	**44.1 +1.2**
BEST	**Besiri**	**0.91**	**78**	*i*P	**Pb**	**16**	**24**	**33.9 -0.4**
BEST				*i*S	**Sn**	**16**	**24**	**50.7 +1.1**
SVRC	**Sivrice-ELAZID**	**0.95**	**315**	*e*PG	**Pb**	**16**	**24**	**35.3 +0.2**
SVRC				*e*SG	**Sn**	**16**	**24**	**50.4 -0.3**
SVRC	**Sivrice-ELAZID**	**0.95**	**315**	*e*Pg	**Pb**	**16**	**24**	**35.3 +0.2**
SVRC				*e*Sg	**Sn**	**16**	**24**	**50.4 -0.3**
PTK	**Pertek**	**1.33**	**333**	*e*Pn	**Pg**	**16**	**24**	**41.0 -0.3**
PTK				*e*SN	**Sn**	**16**	**25**	**00.1 0.0**
PTK	**Pertek**	**1.33**	**333**	*e*Pn	**Pg**	**16**	**24**	**41.0 -0.3**
PTK				*e*Sn	**Sn**	**16**	**25**	**00.1 0.0**

*IDC **11** 16:27:54.2±4.0, 22.7S×69.90W, h0km, mb3.9/1, mb1 3.6/2, mb1mx3.4/16, mbtmp3.6/2, ML3.2/1, Error ellipse: s-maj=133.0km s-min=61.3km az=87.0*
*GUC **11** 16:27:58.4±0.8, 22.53S×70.33W, h37km±3km, ML3.3*
*ISCJB **11** 16:27:58.6±1.0, 22.51S±0.05×70.41W±0.10, h49km±12km, mb3.8/1, Error ellipse: s-maj=15.7km s-min=6.7km az=18.1*
ISC 11 16:27:59.9±1.4, **22.49S**±0.05×**70.35W**±0.10, **h42**km±15km, **n10**,σ1**9**61/17, **3C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
MACH	**Maria Elena**	**0.62**	**62**	⇓*i*P	**Pn**	**16**	**28**	**11.2 -1.3**
MACH				*i*S	**Sn**	**16**	**28**	**20.3 -1.1**
PB07	**Plate Boundary**	**0.87**	**29**	⇓*i*P	**Pn**	**16**	**28**	**15.1 -0.8**
PB07				*i*S	**Sn**	**16**	**28**	**27.3 -0.2**
PB07				AML	AML	16	28	29.9
	comp=E,2μm,0.8s							
CEN1	**Los Morros**	**0.91**	**172**	*i*P	**Pn**	**16**	**28**	**17.9 +1.5**
CEN1				*i*S	**Sn**	**16**	**28**	**31.5 +3.1**
CEN1				AML	AML	16	28	33.4
	comp=E,653nm,0.6s							
ANCH	**Antofagasta**	**1.19**	**183**	⇓*i*P	**Pn**	**16**	**28**	**18.6 -1.5**
ANCH				*i*S	**Sn**	**16**	**28**	**33.6 -1.5**
ANCH				AML	AML	16	28	38.6
	comp=E,789nm,0.4s							
PB09	**Plate Boundary**	**1.23**	**56**	⇑*i*P	**Pn**	**16**	**28**	**20.8 0.0**
PB09				*i*S	**Sn**	**16**	**28**	**38.6 +2.2**
PB09				AML	AML	16	28	43.8
	comp=E,3μm,0.5s							
LVC	**Limon Verde**	**1.33**	**96**	⇑*i*P	**Pn**	**16**	**28**	**21.9 -0.3**
LVC				*i*S	**Sn**	**16**	**28**	**39.5 +0.6**
PB01	**Plate Boundary**	**1.64**	**29**	⇑*i*P	**Pn**	**16**	**28**	**27.0 +0.6**
PB01				*i*S	**Sn**	**16**	**28**	**49.0 +2.6**
PB01				AML	AML	16	28	51.3
	comp=E,460nm,0.3s							
LPAZ	**La Paz**	**6.51**	**19**	Pn	**Pn**	**16**	**29**	**34.0 +0.2**
	comp=E,0.2nm,0.3s,baz=198,slow=3.9,SNR=7.5							
TORD	**Torodi Ar. Bea**	**78.94**	**71**	P	**P**	**16**	**39**	**58.6 -0.9**
	comp=E,1.4nm,1.1s,baz=252,slow=5.7,SNR=6.4							
MKAR	**Makanchi Array**	**147.21**	**36**	PKPbc	**PKPbc**	**16**	**47**	**38.6 +0.1**
	comp=E,0.3nm,0.8s,baz=287,slow=3.6,SNR=3.0							

IDC 11 16:28:44.7±51.0, **16.79S**×**179.31W**, **h0**km, **mb3.9**/3, **mb1 4.1**/3, **mb1mx3.6**/19, **mbtmp3.9**/3, **Error ellipse: s-maj=928.7km s-min=147.1km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
STKA	**Stephens Creek**	**38.43**	**240**	P	P	16	36	08.4 +0.1
	1.4nm,1.0s,baz=81,slow=10,SNR=6.9							
WRA	**Warramunga Arr**	**44.00**	**259**	P	P	16	36	54.1 -0.2
	0.3nm,0.5s,baz=93,slow=8.0,SNR=10							
ASAR	**Alice Springs**	**44.27**	**253**	P	P	16	36	56.2 -0.3
	3.1nm,0.5s,baz=90,slow=8.1,SNR=58							

*ISK **11** 16:51:46.9, 37.86N×27.50E, h5km, MD3.2*
*DDA **11** 16:51:47.7, 37.84N×27.54E, h9km, MD3.0*
*ISCJB **11** 16:51:47.9±0.5, 37.86N±0.02×27.53E±0.03, h4km±5km, Error ellipse: s-maj=4.6km s-min=3.0km az=151.0*
*CSEM **11** 16:51:48.2±0.1, 37.84N×27.53E, h2km, MD3.0, Error ellipse: s-maj=3.0km s-min=2.0km az=65.0*
ISC 11 16:51:48.0±1.0, **37.85N**±0.02×**27.55E**±0.02, **h5**km±9km, **n81**,σ0**8**82/101, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m	s ISC
GCAM	**G?zelcaml?**	**0.29**	**239**	*i*P	**Pg**	**16**	**51**	**53.6 -0.1**
GCAM				*i*S	**Sg**	**16**	**51**	**57.2 -0.3**
GCAM	**G?zelcaml?**	**0.29**	**239**	*i*P	**Pg**	**16**	**51**	**53.6 -0.1**
GCAM				*i*S	**Sg**	**16**	**51**	**57.2 -0.3**
AYDN	**Tasoluk**	**0.32**	**126**	*i*P	**Pg**	**16**	**51**	**54.8 +0.5**
AYDN				*i*S	**Sg**	**16**	**51**	**59.0 +0.4**
AYDN	**Tasoluk**	**0.32**	**126**	*i*P	**Pg**	**16**	**51**	**54.8 +0.5**
AYDN				*i*S	**Sg**	**16**	**51**	**59.0 +0.4**
MLSB	**Milas**	**0.58**	**162**	*e*PG	**Pg**	**16**	**51**	**59.3 +0.1**
MLSB				*e*SG	**Sb**	**16**	**52**	**09.9 +0.6**
MLSB	**Milas**	**0.58**	**162**	*e*Pg	**Pg**	**16**	**51**	**59.3 +0.1**
MLSB				*e*Sg	**Sb**	**16**	**52**	**09.9 +0.6**
IZM	**Izmir**	**0.59**	**338**	*e*PG	**Pg**	**16**	**51**	**59.3 -0.1**
IZM				*e*SG	**Sg**	**16**	**52**	**07.3 +0.2**
IZM	**Izmir**	**0.59**	**338**	*e*Pg	**Pg**	**16**	**51**	**59.3 -0.1**
IZM				*e*Sg	**Sg**	**16**	**52**	**07.3 +0.2**
BLCB	**Balcova**	**0.67**	**323**	*e*PG	**Pg**	**16**	**52**	**00.7 -0.1**
BLCB	**Balcova**	**0.67**	**323**	*e*Pg	**Pg**	**16**	**52**	**00.7 -0.1**
BODT	**Bodrum**	**0.81**	**194**	*e*PG	**Pg**	**16**	**52**	**03.1 -0.4**
BODT	**Bodrum**	**0.81**	**194**	*e*Pg	**Pg**	**16**	**52**	**03.1 -0.4**
URLA	**Izmir**	**0.91**	**304**	*i*P	**Pb**	**16**	**52**	**06.0 -0.3**
URLA				*i*S	**Sg**	**16**	**52**	**17.6 +0.4**
URLA	**Izmir**	**0.91**	**304**	*i*P	**Pb**	**16**	**52**	**06.0 -0.3**
URLA				*i*S	**Sg**	**16**	**52**	**17.6 +0.4**
YER	**Yerkesik**	**0.92**	**140**	*e*PG	**Pb**	**16**	**52**	**06.4 -0.2**
YER	**Yerkesik**	**0.92**	**140**	*e*Pg	**Pb**	**16**	**52**	**06.4 -0.2**
MANT	**Manisa**	**1.02**	**51**	*i*P	**Pg**	**16**	**52**	**07.4 -0.3**
MANT				*i*S	**Sg**	**16**	**52**	**18.8 -2.1**
MANT	**Manisa**	**1.02**	**51**	*i*P	**Pg**	**16**	**52**	**07.4 -0.3**
AKHS	**Akhisar**	**1.05**	**11**	*i*P	**Pg**	**16**	**52**	**08.0 -0.1**
AKHS				*i*S	**Sb**	**16**	**52**	**22.6 -0.1**
AKHS	**Akhisar**	**1.05**	**11**	*i*P	**Pg**	**16**	**52**	**08.0 -0.1**
AKHS				*i*S	**Sb**	**16**	**52**	**22.6 -0.1**
AKS	**Akhisar**	**1.05**	**11**	*e*PG	**Pg**	**16**	**52**	**07.8 -0.4**
AKS				*e*SG	**Sb**	**16**	**52**	**23.1 +0.4**
AKS	**Akhisar**	**1.05**	**11**	*e*Pg	**Pg**	**16**	**52**	**07.8 -0.4**
AKS				*e*Sg	**Sb**	**16**	**52**	**23.1 +0.4**
KULA	**Kula-Manisa**	**1.10**	**53**	*e*PN	**Pg**	**16**	**52**	**08.9 -0.2**
KULA	**Kula-Manisa**	**1.10**	**53**	*e*Pn	**Pg**	**16**	**52**	**08.9 -0.2**
DAT	**Datca**	**1.12**	**179**	*e*PN	**Pg**	**16**	**52**	**09.5 0.0**
DAT	**Datca**	**1.12**	**179**	*e*Pn	**Pg**	**16**	**52**	**09.5 0.0**
DENT	**Denizli**	**1.18**	**94**	*e*PN	**Pn**	**16**	**52**	**11.8 +0.5**
DENT	**Denizli**	**1.18**	**94**	*e*Pn	**Pn**	**16**	**52**	**11.8 +0.5**
DNZL	**Cakiroluk**	**1.20**	**97**	*i*P	**Pg**	**16**	**52**	**11.1 +0.1**
DNZL				*i*S	**Sn**	**16**	**52**	**28.6 +0.2**
DNZL	**Cakiroluk**	**1.20**	**97**	*i*P	**Pg**	**16**	**52**	**11.1 +0.1**
DNZL				*i*S	**Sn**	**16**	**52**	**28.6 +0.2**
TURN	**Turunc**	**1.29**	**139**	*i*P	**Pn**	**16**	**52**	**10.2 -2.4**
TURN				*i*S	**Sg**	**16**	**52**	**27.7 -1.7**
DALY	**Dalyan (Mu¨la**	**1.36**	**139**	*e*PN	**Pg**	**16**	**52**	**14.5 +0.5**
DALY	**Dalyan (Mu¨la**	**1.36**	**139**	*e*Pn	**Pg**	**16**	**52**	**14.5 +0.5**
DEMI	**Demirci**	**1.50**	**37**	*i*P	**Pb**	**16**	**52**	**16.5 0.0**
DEMI	**Demirci**	**1.50**	**37**	*i*P	**Pb**	**16**	**52**	**16.5 0.0**
KHAL	**Karahalli**	**1.62**	**71**	*i*P	**Pn**	**16**	**52**	**17.5 +0.1**
KHAL				*i*S	**Sn**	**16**	**52**	**37.7 -0.9**
KHAL	**Karahalli**	**1.62**	**71**	*i*P	**Pn**	**16**	**52**	**17.5 +0.1**
KHL	**Karahalli**	**1.63**	**73**	*e*PN	**Pb**	**16**	**52**	**18.6 0.0**
KHL	**Karahalli**	**1.63**	**73**	*e*Pn	**Pb**	**16**	**52**	**18.6 0.0**
GLHS	**Glhisar (BURDU**	**1.70**	**113**	*e*PN	**Pb**	**16**	**52**	**19.4 -0.4**
GLHS	**Glhisar (BURDU**	**1.70**	**113**	*e*Pn	**Pb**	**16**	**52**	**19.4 -0.4**
FETY	**Fethiye**	**1.73**	**134**	*e*PN	**Pb**	**16**	**52**	**19.6 -0.6**
FETY	**Fethiye**	**1.73**	**134**	*e*Pn	**Pb**	**16**	**52**	**19.6 -0.6**
APE	**Apeiranthos**	**1.78**	**245**	*e*PN	**Pn**	**16**	**52**	**20.1 +0.6**
APE	**Apeiranthos**	**1.78**	**245**	*e*Pn	**Pn**	**16**	**52**	**20.1 +0.6**
BALB	**Balikesir**	**1.81**	**8**	*e*PN	**Pb**	**16**	**52**	**21.2 -0.4**
BALB	**Balikesir**	**1.81**	**8**	*e*Pn	**Pb**	**16**	**52**	**21.2 -0.4**
BALY	**Balya**	**1.89**	**2**	*i*P	**Pn**	**16**	**52**	**19.9 -1.1**
BALY				*i*S	**Sn**	**16**	**52**	**43.8 -1.3**
BALY	**Balya**

417nm,0.6s
CESX Cesi 0.58 282 Pg **Pg 16 59 15.4 -0.4**
CESX Sg **Sb 16 59 25.0 +0.2**
777nm,0.5s
CESX Cesi 0.58 282 Pg **Pg 16 59 15.4 -0.4**
CERT Cerreto 0.61 207 Pg **Pg 16 59 15.5 -0.7**
CERT Sg **Sb 16 59 25.5 0.0**
2µm,0.4s
CERT Cerreto 0.61 207 Pg **Pg 16 59 15.5 -0.7**
CERT Sg **Sb 16 59 25.5 0.0**
2µm,0.4s
CESI CESI - Serrava 0.61 327 Pg **Pg 16 59 16.2 -0.1**
CESI Sg **Sb 16 59 25.8 +0.1**
CESI CESI - Serrava 0.61 327 Pg **Pg 16 59 16.2 -0.1**
CESI Sg **Sb 16 59 25.8 +0.1**
INTR Introdacqua 0.63 139 Pg **Pg 16 59 15.7 -1.0**
INTR Sg **Sg 16 59 25.1 +0.1**
INTR Introdacqua 0.63 139 Pg **Pg 16 59 15.7 -1.0**
INTR Sg **Sg 16 59 25.1 +0.1**
MTCE Montecelio 0.65 224 Pg **Pg 16 59 16.4 -0.7**
MTCE Montecelio 0.65 224 Pg **Pg 16 59 16.4 -0.7**
VVLD Villa Vallelon 0.65 162 Pg **Pg 16 59 16.3 -0.8**
VVLD Villa Vallelon 0.65 162 Pg **Pg 16 59 16.3 -0.8**
GUAR Guarcino 0.70 182 Pg **Pb 16 59 17.8 -0.7**
GUAR Guarcino 0.70 182 Pg **Pb 16 59 17.8 -0.7**
GUMA Gualdo di Mace 0.71 37 Pg **Pg 16 59 15.6 -2.7**
GUMA Sg **Sg 16 59 23.8 -3.9**
3µm,0.4s
LPEL Lama dei Pelig 0.76 125 Pg **Pg 16 59 17.6 -1.5**
LPEL Sg **Sg 16 59 28.9 -0.2**
LPEL Lama dei Pelig 0.76 125 Pg **Pg 16 59 17.6 -1.5**
LPEL Sg **Sg 16 59 28.9 -0.2**
CAFR Castel Frentan 0.78 109 Pg **Pg 16 59 18.5 -1.1**
CAFR Castel Frentan 0.78 109 Pg **Pg 16 59 18.5 -1.1**
POFI Posta Fibreno 0.82 161 Pg **Pg 16 59 19.5 -0.7**
POFI Posta Fibreno 0.82 161 Pg **Pg 16 59 19.5 -0.7**
SNTG Esanatoglia 0.82 339 Pg **Pg 16 59 19.9 -0.4**
SNTG Esanatoglia 0.82 339 Pg **Pg 16 59 19.9 -0.4**
RMP Rome, Mte Porz 0.83 216 Pg **Pb 16 59 20.3 -0.5**
RMP Rome, Mte Porz 0.83 216 Pg **Pb 16 59 20.3 -0.5**
SDI San Donato 0.85 156 Pg **Pg 16 59 19.5 -1.4**
SDI San Donato 0.85 156 Pg **Pg 16 59 19.5 -1.4**
RDP Rocca di Papa 0.87 213 Pg **Pb 16 59 21.6 +0.1**
RDP Rocca di Papa 0.87 213 Pg **Pb 16 59 21.6 +0.1**
CING Cingoli 0.89 353 Pg **Pg 16 59 20.9 -0.8**
CING Cingoli 0.89 353 Pg **Pg 16 59 20.9 -0.8**
GIUL Giuliano Di Ro 0.93 184 Pg **Pb 16 59 22.2 -0.4**
GIUL Giuliano Di Ro 0.93 184 Pg **Pb 16 59 22.2 -0.4**
MURB Monte Urbino 0.98 322 Pg **Pg 16 59 22.8 -0.6**
MURB Monte Urbino 0.98 322 Pg **Pg 16 59 22.8 -0.6**
MGAB Montegabbione 1.01 295 Pg **Pg 16 59 23.2 -0.6**
MGAB Montegabbione 1.01 295 Pg **Pg 16 59 23.2 -0.6**
CERA Filignano 1.02 151 Pg **Pg 16 59 22.0 -2.1**
CERA Filignano 1.02 151 Pg **Pg 16 59 22.0 -2.1**
AOI Ancona 1.07 10 Pg **Pg 16 59 24.3 -0.8**
AOI Ancona 1.07 10 Pg **Pg 16 59 24.3 -0.8**
MIDA Miranda 1.08 141 Pg **Pg 16 59 23.0 -2.2**
MIDA Miranda 1.08 141 Pg **Pg 16 59 23.0 -2.2**
TOLF Tolfa 1.09 247 Pg **Pg 16 59 24.2 -1.2**
TOLF Tolfa 1.09 247 Pg **Pg 16 59 24.2 -1.2**
SACS San Casciano d 1.12 289 Pg **Pg 16 59 25.3 -0.7**
PIEI Pieia 1.21 330 Pg **Pg 16 59 26.7 -0.9**
PIEI Pieia 1.21 330 Pg **Pg 16 59 26.7 -0.9**
FSSB Fossombrone 1.27 341 Pg **Pn 16 59 27.9 -0.2**
FSSB Fossombrone 1.27 341 Pg **Pn 16 59 27.9 -0.2**
CAFI Castiglion Fio 1.32 310 Pg **Pn 16 59 29.0 +0.3**
CAFI Castiglion Fio 1.32 310 Pg **Pn 16 59 29.0 +0.3**
PARC Parchiule 1.42 325 Pg **Pb 16 59 30.8 0.0**
PARC Parchiule 1.42 325 Pg **Pb 16 59 30.8 0.0**
MAIM Mastiano 2.53 305 P **Pn 16 59 45.4 +0.1**
SKDS Skadanscina 3.09 9 *i* Pn **Pn 16 59 54.1 +1.0**
SKDS *i* Sn **Sn 17 00 30.4 +0.4**
SKDS Skadanscina 3.09 9 Pn **Pn 16 59 54.1 +1.0**
SKDS *i* Sn **Sn 17 00 30.4 +0.4**
STON Ston 3.23 82 *e*Pn **Pn 16 59 55.8 +0.9**
STON Sn **Sn 17 00 34.1 +0.9**
STON Ston 3.23 82 *e*Pn **Pn 16 59 55.8 +0.9**
STON Sn **Sn 17 00 34.1 +0.9**
VISS Visnje 3.48 17 *i* Pn **Pn 17 00 00.1 +1.7**
VISS *i* Sn **Sn 17 00 40.5 +1.0**
VISS Visnje 3.48 17 *i* Pn **Pn 17 00 00.1 +1.7**
VISS *i* Sn **Sn 17 00 40.5 +1.0**
VOY Vojsko 3.56 6 *e* **Pn 17 00 02.4 +2.8**
VOY *e* 17 00 18.9
VOY *e*Sn **Sn 17 00 41.6 -0.1**
VOY Vojsko 3.56 6 *e*Pn **Pn 17 00 02.4 +2.8**
VOY *e*Sn **Sn 17 00 41.6 -0.1**
HCY Herceg Novi 3.80 89 ⇓*i*Pn **Pn 17 00 03.6 +0.8**
HCY *e*Sn **Sn 17 00 48.8 +1.3**
HCY Herceg Novi 3.80 89 ⇓*i*Pn **Pn 17 00 03.6 +0.8**
HCY *e*Sn **Sn 17 00 48.8 +1.3**
BRY Bratogost 3.84 82 ⇓*i*Pn **Pn 17 00 05.1 +1.6**
BRY *e*Sn **Sn 17 00 51.0 +2.3**
BRY Bratogost 3.84 82 ⇓*i*Pn **Pn 17 00 05.1 +1.6**
BRY *e*Sn **Sn 17 00 51.0 +2.3**
BUM Brajici-Budva 4.11 91 ⇓*i*Pn **Pn 17 00 09.1 +2.0**
BUM *e*Sn **Sn 17 00 56.8 +1.7**
BUM Brajici-Budva 4.11 91 ⇓*i*Pn **Pn 17 00 09.1 +2.0**
BUM *e*Sn **Sn 17 00 56.8 +1.7**
UPM Unac-Piva 4.14 78 ⇓*i*Pn **Pn 17 00 09.1 +1.4**
UPM *e*Sn **Sn 17 00 58.4 +2.2**
UPM Unac-Piva 4.14 78 ⇓*i*Pn **Pn 17 00 09.1 +1.4**
UPM *e*Sn **Sn 17 00 58.4 +2.2**
NKY Niksic 4.17 84 *e*Pn **Pn 17 00 09.8 +1.8**
NKY *e*Sn **Sn 17 00 57.8 +1.0**
NKY Niksic 4.17 84 *e*Pn **Pn 17 00 09.8 +1.8**
NKY *e*Sn **Sn 17 00 57.8 +1.0**
ABTA Abfaltersbach 4.30 352 ⇓*i*Pn **Pn 17 00 08.6 -1.1**
ABTA Abfaltersbach 4.30 352 Pn **Pn 17 00 08.6 -1.1**
PDG Podgorica 4.37 89 *e*Pn **Pn 17 00 12.3 +1.7**
PDG *e*Sn **Sn 17 00 12.3 +1.2**
PDG Podgorica 4.37 89 *e*Pn **Pn 17 00 12.3 +1.7**
PDG *e*Sn **Sn 17 01 02.6 +1.2**
TTG Podgorica 4.37 89 ⇑*i*Pn **Pn 17 00 12.4 +1.8**
TTG *e*Sn **Sn 17 01 02.5 +1.1**
ULC Ulcinj 4.41 95 ⇓*i*Pn **Pn 17 00 12.1 +0.9**
ULC *e*Sn **Sn 17 01 03.3 +0.9**
ULC Ulcinj 4.41 95 ⇓*i*Pn **Pn 17 00 12.1 +0.9**
ULC *e*Sn **Sn 17 01 03.3 +0.9**
BBLS Lazići 4.63 71 *e*Pn **Pn 17 00 15.8 +1.5**
BBLS *e*Sn **Sn 17 01 09.1 +1.0**
BBLS Lazići 4.63 71 *e*Pn **Pn 17 00 15.8 +1.5**
BBLS *e*Sn **Sn 17 01 09.1 +1.0**
BEY Berane 4.84 83 *e*Pn **Pn 17 00 19.6 +2.5**
BEY *e*Sn **Sn 17 01 14.9 +1.8**
IVA Berane 4.84 83 *e*Pn **Pn 17 00 19.6 +2.4**
IVA *e*Sn **Sn 17 01 14.9 +1.7**
PVY Plav 4.88 87 *e*Pn **Pn 17 00 19.9 +2.1**
PVY *e*Sn **Sn 17 01 16.3 +2.0**
DIVS Divibare 5.11 69 *e*Pn **Pn 17 00 20.9 +0.1**
DIVS *e*Sn **Sn 17 01 22.2 +2.5**
DIVS Divibare 5.11 69 *e*Pn **Pn 17 00 20.9 +0.1**
DIVS *e*Sn **Sn 17 01 22.2 +2.5**
BARS Barje 6.25 84 *e*Sn **Sn 17 01 47.8 0.0**
BARS Barje 6.25 84 *e*Sn **Sn 17 01 47.8 0.0**
KHC Kasperske Hory 6.64 1 *e*PG Pb 17 01 05.5 +5.6
KHC *ex* x 17 01 36.0
ZAPS Zavoj 6.86 80 *e*Pn **Pn 17 00 46.9 +2.0**
ZAPS *e*Sn **Sn 17 02 02.0 -0.9**

NIED ***11*** *17:02:00,39.°80N×143.°80E,h44km,Mw3.8 Best double couple: M*o*5.33000×10^14 NP1:*ϕ*s127.00000°,*δ*89.00000°, λ-37.00000°. NP2:*ϕ*s218.00000°,*δ*53.00000°, λ-178.00000°.*

IDC ***11*** *17:02:28.1±1.9,39.°53N×144.°64E,h0km,mb3.5/4, mb1 3.8/8,mb1mx3.5/27,mbtmp3.7/8,ML3.8/4,MS2.8/1, Ms1 2.8/1,ms1mx2.2/34,Error ellipse: s-maj=44.6km s-min=21.5km az=72.0*

JMA ***11*** *17:02:34.7±0.1,39.°84N×143.°83E,h49km,M4.0*

ISC 11 17:02:33.1±2.2,39.°78N±0.°06×144.°04E±0.°09,h36km±5km, n24,σ1ᵎ31/34,mb3.5/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**1.68**	**276**	P	**Pn**	**17 02 59.9**	**0.0**
JTH				S	**Sn**	**17 03 18.8**	**-1.4**
MIYJ	**Miyakonagasawa**	**1.72**	**264**	P	**Pn**	**17 03 01.0**	**+0.5**
MIYJ				S	**Sn**	**17 03 20.3**	**-1.0**
JANG	**Nango**	**2.03**	**288**	P	**Pn**	**17 03 04.8**	**+0.1**
JANG				*e*S	**Sn**	**17 03 26.4**	**-2.3**
JOM	**Ohasama**	**2.14**	**263**	P	**Pn**	**17 03 07.3**	**+1.0**
JOM				S	**Sn**	**17 03 31.3**	**-0.3**
JMK	**Ichinoseki**	**2.33**	**250**	P	**Pn**	**17 03 09.4**	**+0.5**
JMK				*e*S	**Sn**	**17 03 35.0**	**-1.3**
JNBK	**Urakawa-nobuka**	**2.68**	**339**	P	**Pn**	**17 03 15.3**	**+1.6**
JNBK				*e*S	**Sn**	**17 03 45.4**	**+0.5**
JOT	**Ohata**	**2.79**	**306**	P	**Pn**	**17 03 15.9**	**+0.8**
JOT				*e*S	**Sn**	**17 03 46.5**	**-0.9**
JCH	**Churui**	**2.88**	**350**	P	**Pn**	**17 03 17.6**	**+1.2**
JCH				*e*S	**Sn**	**17 03 49.9**	**+0.1**
JKB	**Kayabe**	**3.11**	**314**	P	**Pn**	**17 03 20.6**	**+1.1**
JKB				*e*S	**Sn**	**17 03 54.4**	**-0.9**
NEM2	**Nemuro 2**	**3.81**	**19**	P	**Pn**	**17 03 29.1**	**0.0**
NEM2				*e*S	**Sn**	**17 04 10.1**	**-2.5**
JOSM	**Okushiri--Mats**	**4.15**	**305**	P	**Pn**	**17 03 34.6**	**+0.7**
JOSM				*e*S	**Sn**	**17 04 19.2**	**-2.0**
JTKR	**Abashiri--Toko**	**4.19**	**359**	P	**Pn**	**17 03 35.3**	**+0.9**
JTKR				*e*S	**Sn**	**17 04 21.2**	**-0.9**
JHR	**Hokuryu**	**4.33**	**337**	P	Pn	17 03 39.3	+3.0
JHR				*e*S	**Sn**	**17 04 27.7**	**+2.3**
ASAJ	**Asahikawa**	**4.47**	**347**	Pn	**Pn**	**17 03 40.0**	**+1.7**
	7.6nm,0.3s,baz=192,slow=10,SNR=95						
ASAJ				Sn	**Sn**	**17 04 29.4**	**+0.4**
	2.6nm,0.3s,baz=107,slow=33,SNR=3.8						
MJAR	**Matsushiro Arr**	**5.61**	**237**	Pn	**Pn**	**17 03 55.2**	**+1.2**
	0.7nm,0.3s,baz=38,slow=14,SNR=9.2						
MJAR				Sn	**Sn**	**17 04 58.7**	**+1.4**
	0.9nm,0.3s,baz=48,slow=18,SNR=3.4						
MJAR				LR	LR	17 06 18.2	
	comp=Z,87nm,20.1s,baz=50,slow=39						
MAT	**Matsushiro**	**5.62**	**237**	P	**Pn**	**17 03 55.7**	**+1.7**
MAT				S	**Sn**	**17 04 58.7**	**+1.4**
JHJ	**Hachijo jima 2**	**7.47**	**209**	Pn	**Pn**	**17 04 18.0**	**-1.6**
	7.0nm,0.3s,baz=68,slow=19,SNR=5.4						
JHJ				Sn	Sn	17 05 34.4	-8.6
	24nm,0.3s,baz=56,slow=22,SNR=14						
USRK	**Ussuriysk Arra**	**9.99**	**300**	Pn	Pn	17 04 57.0	+3.0
	0.3nm,0.3s,baz=95,slow=12,SNR=4.8						
KSRS	**Korea Array**	**12.82**	**265**	Pn	P	17 05 38.3	-4.8
	0.2nm,0.3s,baz=74,slow=14,SNR=4.4						
SONM	**Songino Array**	**28.11**	**299**	P	P	17 08 26.1	+4.5
	0.2nm,0.4s,baz=91,slow=8.8,SNR=3.3						
ZALV	**Zalesovo Beam**	**41.66**	**310**	P	P	17 10 25.6	+7.9
	0.3nm,0.3s,baz=84,slow=7.0,SNR=3.2						
MKAR	**Makanchi Array**	**44.47**	**300**	P	P	17 10 46.2	+5.6
	0.2nm,0.6s,baz=88,slow=9.4,SNR=2.9						
WRA	**Warramunga Arr**	**60.09**	**191**	P	**P**	**17 12 35.9**	**-0.8**
	0.8nm,0.5s,baz=8.0,slow=7.0,SNR=24						
ASAR	**Alice Springs**	**63.82**	**190**	P	**P**	**17 13 01.4**	**-0.3**
	0.5nm,0.7s,baz=18,slow=6.7,SNR=7.4						

ISCJB ***11*** *17:03:09.1±1.2,37.°7N±0.°1×72.°5E±0.°3,h176km,Error ellipse: s-maj=33.9km s-min=8.3km az=148.3*

NNC ***11*** *17:03:23.5±1.2,38.°91N×72.°63E,h225km±7km,mb2.1, mpv3.0,Error ellipse: s-maj=17.0km s-min=5.4km az=6.0*

ISC 11 17:03:08.9±1.4,37.°6N±0.°2×72.°4E±0.°2,h176km,n11, σ1ᵎ04/11,2C-3D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.67**	**346**	⇓Pn	**Pn**	**17 04 32.1**	**+0.6**
	1.4nm,0.4s,baz=158,slow=11,SNR=76						
KK31				⇑Sn	Sn	17 05 27.0	-9.4
	32nm,0.5s,baz=143,slow=28,SNR=50						
TKM2	**Tokmak 2**	**5.84**	**24**	⇑Pn	**Pn**	**17 04 33.6**	**-0.3**
	2.4nm,1.1s						
TKM2				⇓Sn	Sn	17 05 29.4	-11
	1.4nm,0.6s						
PYUN	**Piuthan**	**13.00**	**134**	*e*P	**Pn**	**17 06 06.7**	**-0.8**
	8.1nm,0.3s						
DANN	**Dangsing**	**13.27**	**131**	*e*P	**Pn**	**17 06 10.6**	**-0.3**
	17nm,0.4s						
KKN	**Kakani**	**14.60**	**128**	*e*P	**Pn**	**17 06 27.9**	**+0.4**
	5.1nm,0.4s						
AB31	**Akbulak array**	**14.71**	**326**	P	**P**	**17 06 29.5**	**-0.5**
	1.0nm,0.6s,baz=138,slow=12,SNR=20						
AB31				⇓S	Sn	17 09 02.8	-9.5
	1.3nm,0.6s,baz=141,slow=23,SNR=15						
PKIN	**Phulchoki**	**14.82**	**129**	*e*P	**P**	**17 06 31.6**	**-0.1**
	5.9nm,0.4s						
PKI	**Pulchoki**	**14.84**	**129**	*e*P	**P**	**17 06 31.9**	**0.0**
	7.2nm,0.5s						
GUN	**Gumba**	**14.89**	**127**	*e*P	**P**	**17 06 32.0**	**-0.6**
	10nm,0.4s						
RAMN	**Ramite**	**16.02**	**127**	*e*P	**P**	**17 06 46.5**	**+1.5**
	6.5nm,0.3s						
ODAN	**Odare**	**16.59**	**126**	*e*P	**Pn**	**17 06 53.8**	**+2.0**
	8.9nm,0.6s						

IDC 11 17:10:33.1±58.0,16.°53S×176.°45W,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.5/19,mbtmp3.7/3,Error ellipse: s-maj=1075.0km s-min=177.9km az=78.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.94**	**240**	P	P	17 18 17.8	+0.2
	0.9nm,0.8s,baz=82,slow=7.1,SNR=4.6						
WRA	**Warramunga Arr**	**46.74**	**258**	P	P	17 19 04.6	+0.1
	0.3nm,0.4s,baz=94,slow=7.1,SNR=2.7						
ASAR	**Alice Springs**	**46.98**	**253**	P	P	17 19 05.8	-0.6
	1.5nm,0.5s,baz=88,slow=8.6,SNR=38						

IDC 11 17:46:36.4±9.2,18.°43S×169.°98E,h256km±52km,mb3.3/3, mb1 3.4/4,mb1mx3.0/19,mbtmp3.3/4,Error ellipse: s-maj=114.6km s-min=79.8km az=110.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.91**	**222**	P	Pn	17 47 51.3	-0.1
	0.7nm,0.3s,baz=63,slow=16,SNR=3.2						
DZM				S	S	17 48 51.6	+0.3
	0.5nm,0.3s,baz=239,slow=18,SNR=1.9						
STKA	**Stephens Creek**	**28.87**	**237**	P	P	17 52 11.8	+0.2
	0.7nm,0.6s,baz=77,slow=14,SNR=5.5						
WRA	**Warramunga Arr**	**33.66**	**262**	P	P	17 52 53.2	-0.4
	0.3nm,0.3s,baz=96,slow=8.5,SNR=14						
ASAR	**Alice Springs**	**34.01**	**255**	P	P	17 52 56.7	+0.1
	2.8nm,0.4s,baz=83,slow=8.8,SNR=158						

IDC 11 17:59:35.5±1.5,2.°19N×125.°21E,h0km,mb3.5/5, mb1 3.7/5,mb1mx3.4/25,mbtmp3.5/5,Error ellipse: s-maj=119.5km s-min=19.9km az=68.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.17**	**179**	P	Pn	18 04 12.8	-0.8
	2.6nm,1.0s,baz=17,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**23.75**	**158**	P	P	18 04 49.7	0.0
	1.1nm,0.4s,baz=335,slow=10,SNR=30						
ASAR	**Alice Springs**	**27.06**	**162**	P	P	18 05 19.3	-0.6
	0.3nm,0.5s,baz=339,slow=7.5,SNR=6.9						
MKAR	**Makanchi Array**	**57.97**	**327**	P	P	18 09 30.4	+0.5
	0.1nm,0.3s,baz=126,slow=7.9,SNR=6.4						
KURBB	**Kurchatov Arra**	**62.23**	**328**	P	P	18 09 58.3	-0.7
	0.1nm,0.3s,baz=133,slow=4.5,SNR=4.0						

IDC 11 18:00:31.4±11.0,8.°26S×127.°56E,h251km±135km, mb2.5/1,mb1 2.9/4,mb1mx2.7/20,mbtmp2.7/4,Error ellipse: s-maj=116.6km s-min=50.6km az=37.0,Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.96**	**191**	P	Pn	18 02 50.5	+1.0
	0.2nm,0.3s,baz=13,slow=10,SNR=11						
WRA	**Warramunga Arr**	**13.34**	**151**	P	Pn	18 03 31.8	+0.2
	0.1nm,0.3s,baz=320,slow=13,SNR=4.8						
ASAR	**Alice Springs**	**16.48**	**159**	P	P	18 04 06.3	-1.3
	0.2nm,0.3s,baz=334,slow=11,SNR=34						
MKAR	**Makanchi Array**	**67.98**	**328**	P	P	18 11 03.6	0.0
	0.1nm,0.4s,baz=133,slow=6.1,SNR=3.7						

MAN 11 18:11:46,12.°92N×122.°85E,h1km,mb3.7,ML2.4,MS1.9, Luzon

IDC 11 18:14:53.9±680.0,29.°02N×79.°97W,h0km,Error ellipse: s-maj=244.7km s-min=102.2km az=71.0,Off east coast of United States

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I51GB	**BERMUDA INFRAS**	**3.56**	**72**	*i*		19 31 50.0	
	baz=261,slow=314,SNR=1.8						
I18DK	**QAANAAQ INFRAS**	**18.79**	**3**	*i*		23 04 50.0	
	baz=190,slow=325,SNR=3.2						
I09BR	**BRASILIA INFRA**	**54.08**	**141**	*i*		23 47 30.0	
	baz=323,slow=321,SNR=1.1						

IDC ***11*** *18:16:33.9±3.3,31.°22S×176.°90W,h0km,mb3.8/3, mb1 4.0/4,mb1mx3.7/19,mbtmp3.8/4,ML3.4/1,MS3.6/1, Ms1 3.6/1,ms1mx2.8/32,Error ellipse: s-maj=80.5km s-min=45.0km az=125.0*

ISC 11 18:16:36.0±2.7,31.°6S±0.°2×176.°5W±0.°4,h35km,n14, σ1ᵎ88/15,mb3.9/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.62**	**331**	LR	LR	18 17 41.3	
	comp=Z,1µm,19.7s,baz=177,slow=31						
CNGZ	**Carnagh Statio**	**8.17**	**211**	*e*PN	**Pn**	**18 18 31.5**	**-0.5**
CNGZ				SN	**Sn**	**18 20 05.9**	**+2.8**
MWZ	**Matawai**	**8.36**	**214**	*e*PN	**Pn**	**18 18 33.9**	**-0.8**
MWZ				SN	**Sn**	**18 20 09.1**	**+1.3**
URZ	**Urewera**	**8.51**	**216**	*e*PN	**Pn**	**18 18 33.7**	**-3.0**
URZ				SN	**Sn**	**18 20 11.4**	**0.0**
URZ	**Urewera**	**8.51**	**216**	Pn	**Pn**	**18 18 37.6**	**+0.9**
	0.4nm,0.3s,baz=118,slow=19,SNR=10						
URZ				Sn	**Sn**	**18 20 11.1**	**-0.3**
	1.7nm,0.3s,baz=143,slow=22,SNR=8.7						
BKZ	**Black Stump Fm**	**9.51**	**215**	*e*PN	**Pn**	**18 18 49.1**	**-1.4**
MRZ	**Mangatainoka R**	**11.12**	**213**	*e*PN	**Pn**	**18 19 10.0**	**-2.5**
QRZ	**Quartz Range**	**12.81**	**221**	*e*PN	**Pn**	**18 19 32.4**	**-3.1**
THZ	**Tophouse**	**13.27**	**217**	*e*PN	Pn	18 19 38.3	-3.5
MQZ	**McQueen's Vall**	**14.86**	**212**	SN	Sn	18 22 35.6	-11
STKA	**Stephens Creek**	**35.51**	**258**	P	**P**	**18 23 31.4**	**+1.9**
	0.8nm,0.5s,baz=103,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**44.36**	**267**	P	**P**	**18 24 43.0**	**-0.1**
	0.7nm,0.6s,baz=106,slow=7.4,SNR=6.9						
WRA	**Warramunga Arr**	**45.45**	**272**	P	**P**	**18 24 51.3**	**-0.5**
	0.9nm,0.5s,baz=111,slow=7.9,SNR=2.6						
FINES	**FINESS Array B**	**146.68**	**340**	PKPbc	**PKPab**	**18 36 14.7**	**+0.3**
	1.0nm,0.6s,baz=29,slow=3.2,SNR=4.3						

IDC ***11*** *18:17:29.2±2.3,0.°87S×133.°11E,h0km,mb3.7/2, mb1 3.9/4,mb1mx3.5/22,mbtmp3.7/4,ML3.5/2,Error ellipse: s-maj=95.1km s-min=24.2km az=78.0*

AUST ***11*** *18:19:05.2±0.0,7.°72S×132.°64E,h183km±1km,Error ellipse: s-maj=2.8km s-min=1.1km az=315.0*

ISC 11 18:17:42.3±9.2,1.°5S±0.°8×133.°5E±0.°4,h35km,n10, σ3ᵎ37/7,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**7.29**	**98**	P	Sn	18 21 18.3	+30
	baz=9.6,SNR=4.3						
KDU	**Kakadu**	**11.15**	**185**	P	**Pn**	**18 20 19.3**	**0.0**
	baz=5.0,SNR=14						
MTN	**Manton Dam**	**11.50**	**192**	P	**Pn**	**18 20 23.6**	**-0.6**
	baz=5.3,SNR=24						
KNRA	**Kununurra**	**14.83**	**198**	P	**Pn**	**18 21 07.5**	**-2.0**
	baz=8.8,SNR=5.2						
WSI	**Waingapu**	**15.41**	**238**	S	Sn	18 23 44.6	-22
	baz=12,SNR=3.7						
FITZ	**Fitzroy Crossi**	**18.20**	**205**	P	**Pn**	**18 21 48.6**	**-3.7**
	0.1nm,0.3s,baz=38,slow=14,SNR=6.3						
FITZ	**Fitzroy Crossi**	**18.20**	**205**	P	**P**	**18 21 57.1**	**+4.7**
	baz=12,SNR=4.2						
WRA	**Warramunga Arr**	**18.34**	**177**	P	**Pn**	**18 21 52.3**	**-1.8**
	0.2nm,0.3s,baz=356,slow=12,SNR=9.9						
ASAR	**Alice Springs**	**22.03**	**179**	P	**P**	**18 22 32.6**	**-1.3**
	1.6nm,0.5s,baz=359,slow=9.0,SNR=41						
MKAR	**Makanchi Array**	**65.70**	**324**	P	P	18 28 11.0	-12
	0.4nm,0.6s,baz=115,slow=8.0,SNR=8.8						

IDC 11 18:26:44.3±0.7,4.°16S×76.°36W,h108km±6km,mb3.6/6, mb1 3.6/10,mb1mx3.5/24,mbtmp3.5/10,Error ellipse: s-maj=23.8km s-min=16.8km az=61.0,Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.58**	**214**	P	Pn	18 27 38.5	-0.1
	31nm,0.3s,baz=23,slow=11,SNR=116						
ATAH				S	Sn	18 28 09.6	-11
	16nm,0.3s,baz=357,slow=13,SNR=7.2						
NNA	**Nana**	**7.79**	**183**	P	Pn	18 28 34.6	-0.6
	2.0nm,0.3s,baz=333,slow=11,SNR=3.8						
NNA				S	Sn	18 29 54.1	-7.7
	2.2nm,0.3s,baz=58,slow=23,SNR=6.4						
LPAZ	**La Paz**	**14.51**	**147**	P	Pn	18 30 06.8	+1.4
	0.2nm,0.3s,baz=330,slow=8.4,SNR=2.9						
SIV	**San Ignacio**	**19.08**	**129**	P	Pn	18 31 00.4	-0.1
	0.2nm,0.3s,baz=342,slow=20,SNR=2.9						
PDAR	**Pinedale Array**	**55.54**	**331**	P	P	18 36 09.3	+0.5
	0.6nm,0.9s,baz=140,slow=10.0,SNR=3.6						
PDAR				pP	pP	18 36 36.6	+1.7
	0.3nm,0.6s,baz=142,slow=8.9,SNR=2.1						
NVAR	**Mina Array Bea**	**57.45**	**321**	pP	pP	18 36 48.1	-0.5
	0.3nm,0.5s,baz=131,slow=9.7,SNR=2.6						
SCHQ	**Schefferville**	**59.31**	**6**	P	P	18 36 35.1	+0.4
	1.8nm,0.6s,baz=146,slow=10,SNR=5.8						
DBIC	**Dimbokro**	**72.18**	**82**	P	P	18 37 57.5	-0.6
	3.6nm,0.7s,baz=247,slow=6.0,SNR=6.3						
YKA	**Yellowknife Ar**	**72.55**	**342**	P	P	18 37 58.9	-0.4
	0.3nm,0.5s,baz=137,slow=6.0,SNR=6.7						
TORD	**Torodi Ar Bea**	**79.35**	**76**	P	P	18 38 38.9	0.0
	0.5nm,0.4s,baz=279,slow=5.9,SNR=20						
TORD				pP	pP	18 39 05.8	-0.9
	0.6nm,0.4s,baz=286,slow=5.7,SNR=4.4						
ILAR	**Eielson Array**	**85.56**	**336**	P	P	18 39 08.7	-1.5
	0.5nm,0.8s,baz=138,slow=4.2,SNR=5.0						
ZALV	**Zalesovo Beam**	**128.04**	**14**	PKP	PKPdf	18 45

PKVZ	Pokaka	0.47	103	⇑PN		Pn	18 31 31.5	-0.2
PKVZ				SN		S	18 31 52.0	-2.2
PKVZ				SN			18 31 52.3	
PKVZ	Pokaka	0.47	103	⇑Pn		Pn	18 31 31.5	-0.2
PKVZ				Sn		S	18 31 52.0	-2.2
PKVZ				Sn			18 31 52.3	
NEZ	North Egmont	0.52	260	⇓PN		Pn	18 31 32.5	+0.6
NEZ	North Egmont	0.52	260	⇓Pn		Pn	18 31 32.5	+0.6
TWVZ	Taurewa	0.55	78	⇑PN		Pn	18 31 31.5	-0.5
TWVZ	Taurewa	0.55	78	⇑Pn		Pn	18 31 31.6	-0.5
MTVZ	Mangateitei	0.59	110	⇑PN		Pn	18 31 32.1	-0.1
MTVZ	Mangateitei	0.59	110	⇑Pn		Pn	18 31 32.1	-0.1
PKE	Pukeiti	0.59	269	PN		Pn	18 31 32.3	+0.2
PKE	Pukeiti	0.59	269	Pn		Pn	18 31 32.3	+0.2
WAZ	Wanganui	0.60	162	⇑PN		Pn	18 31 32.5	+0.5
WAZ	Wanganui	0.60	162	⇑Pn		Pn	18 31 32.5	+0.5
WPVZ	Whakapapa	0.62	92	⇑PN		Pn	18 31 32.2	-0.1
WPVZ	Whakapapa	0.62	92	⇑Pn		Pn	18 31 32.2	-0.1
FWVZ	Far West T-bar	0.62	97	⇑PN		Pn	18 31 32.3	-0.2
FWVZ	Far West T-bar	0.62	97	⇑Pn		Pn	18 31 32.3	-0.2
TRVZ	Turoa	0.63	101	⇑PN		Pn	18 31 32.4	-0.1
TRVZ	Turoa	0.63	101	⇑Pn		Pn	18 31 32.4	-0.1
DRZ	Dome Shelter	0.64	98	⇓PN		Pn	18 31 32.5	-0.1
DRZ				SN		S	18 31 53.5	-2.3
DRZ	Dome Shelter	0.64	98	⇓Pn		Pn	18 31 32.5	-0.1
DRZ				Sn		S	18 31 53.5	-2.3
NRZ	Ngariki Road	0.65	256	PN		Pn	18 31 32.8	+0.5
NRZ	Ngariki Road	0.65	256	Pn		Pn	18 31 32.8	+0.5
WTVZ	West Tongariro	0.66	84	PN		Pn	18 31 32.2	-0.2
WTVZ				SN		S	18 31 52.9	-2.6
WTVZ	West Tongariro	0.66	84	Pn		Pn	18 31 32.2	-0.2
WTVZ				Sn		S	18 31 52.9	-2.6
NGZ	Ngauruhoe	0.66	89	⇑PN		Pn	18 31 32.4	-0.1
NGZ	Ngauruhoe	0.66	89	⇑Pn		Pn	18 31 32.4	-0.1
WNVZ	Wahianoa	0.67	102	PN		Pn	18 31 32.5	-0.1
WNVZ	Wahianoa	0.67	102	Pn		Pn	18 31 32.5	-0.1
HIZ	Hauiti	0.68	7	⇑PN		Pn	18 31 31.7	-0.8
HIZ	Hauiti	0.68	7	⇑Pn		Pn	18 31 31.7	-0.8
NWEZ	Newall Road	0.69	262	PN		Pn	18 31 33.0	+0.6
NWEZ	Newall Road	0.69	262	Pn		Pn	18 31 33.0	+0.6
KRVZ	Karewarewa	0.70	83	⇑PN		Pn	18 31 32.5	-0.2
KRVZ	Karewarewa	0.70	83	⇑Pn		Pn	18 31 32.5	-0.2
TUVZ	Tukino	0.70	97	⇑PN		Pn	18 31 32.8	+0.1
TUVZ	Tukino	0.70	97	⇑Pn		Pn	18 31 32.8	+0.1
OTVZ	Oturere	0.71	89	PN		Pn	18 31 32.6	-0.2
OTVZ	Oturere	0.71	89	Pn		Pn	18 31 32.6	-0.2
MOVZ	Moawhango	0.81	106	⇑PN		Pn	18 31 32.8	-0.4
MOVZ	Moawhango	0.81	106	⇑Pn		Pn	18 31 32.8	-0.4
RITZ	Rihia Road	0.89	77	⇓PN		Pn	18 31 33.4	-0.2
RITZ	Rihia Road	0.89	77	⇓Pn		Pn	18 31 33.4	-0.2
WAIZ	Wairara	0.90	58	PN		Pn	18 31 33.4	-0.3
WAIZ	Wairara	0.90	58	Pn		Pn	18 31 33.4	-0.3
BHHZ	Black Hill Sta	1.06	107	⇑PN		Pn	18 31 34.3	-0.3
BHHZ	Black Hill Sta	1.06	107	⇑Pn		Pn	18 31 34.3	-0.3
TSZ	Takapari Road	1.28	133	⇑PN		Pn	18 31 36.5	+0.3
TSZ	Takapari Road	1.28	133	⇑Pn		Pn	18 31 36.5	+0.3
PNHZ	Pukenui	1.33	123	⇑PN		Pn	18 31 36.8	+0.2
PNHZ	Pukenui	1.33	123	⇑Pn		Pn	18 31 36.8	+0.2
BKZ	Black Stump Fm	1.35	90	⇑PN		Pn	18 31 36.2	-0.6
BKZ	Black Stump Fm	1.35	90	⇑Pn		Pn	18 31 36.2	-0.6
POWZ	Post Office Ro	1.44	147	PN		Pn	18 31 37.5	+0.2
POWZ	Post Office Ro	1.44	147	Pn		Pn	18 31 37.5	+0.2
MCHZ	McNeill Hill	1.53	100	⇑PN		Pn	18 31 38.8	+0.7
MCHZ	McNeill Hill	1.53	100	⇑Pn		Pn	18 31 38.8	+0.7
DVHZ	Dannevirke	1.56	136	⇑PN		Pn	18 31 38.5	+0.2
DVHZ	Dannevirke	1.56	136	⇑Pn		Pn	18 31 38.5	+0.2
TOZ	Tahuroa Road	1.57	22	PN		Pn	18 31 37.6	-0.9
TOZ	Tahuroa Road	1.57	22	Pn		Pn	18 31 37.6	-0.9
WPHZ	Waipukurau	1.57	124	⇑PN		Pn	18 31 38.9	+0.4
WPHZ	Waipukurau	1.57	124	⇑Pn		Pn	18 31 38.9	+0.4
NMHZ	Naumai	1.60	88	⇑PN		Pn	18 31 39.3	+0.5
NMHZ	Naumai	1.60	88	⇑Pn		Pn	18 31 39.3	+0.5
MRZ	Mangatainoka R	1.61	157	⇑PN		Pn	18 31 38.9	+0.1
MRZ	Mangatainoka R	1.61	157	⇑Pn		Pn	18 31 38.9	+0.1
RRRZ	Republican Roa	1.62	59	PN		Pn	18 31 38.0	-0.9
RRRZ	Republican Roa	1.62	59	Pn		Pn	18 31 38.0	-0.9
OGWZ	Otaki Gorge	1.66	169	⇑PN		Pn	18 31 39.7	+0.5
OGWZ	Otaki Gorge	1.66	169	⇑Pn		Pn	18 31 39.8	+0.5
KIW	Kapiti Island	1.68	176	⇑PN		Pn	18 31 39.6	+0.2
KIW	Kapiti Island	1.68	176	⇑Pn		Pn	18 31 39.6	+0.2
DUWZ	D'Urville Isla	1.74	201	⇑PN		Pn	18 31 40.3	+0.4
DUWZ	D'Urville Isla	1.74	201	⇑Pn		Pn	18 31 40.3	+0.4
KAHZ	Kahuranaki	1.75	111	⇑PN		Pn	18 31 40.7	+0.5
KAHZ	Kahuranaki	1.75	111	⇑Pn		Pn	18 31 40.7	+0.5
HOWZ	Holdsworth Sta	1.81	161	⇑PN		Pn	18 31 40.6	0.0
HOWZ	Holdsworth Sta	1.81	161	⇑Pn		Pn	18 31 40.6	0.0
PRHZ	Porangahau	1.81	127	⇑PN		Pn	18 31 41.1	+0.5
PRHZ	Porangahau	1.81	127	⇑Pn		Pn	18 31 41.1	+0.5
TIWZ	Tintock	1.81	152	⇑PN		Pn	18 31 40.8	+0.2
TIWZ	Tintock	1.81	152	⇑Pn		Pn	18 31 40.8	+0.2
PXZ	Pawanui	1.84	118	PN		Pn	18 31 41.2	+0.3
PXZ	Pawanui	1.84	118	Pn		Pn	18 31 41.2	+0.3
RAHZ	Arahi	1.84	82	PN		Pn	18 31 40.8	-0.2
RAHZ	Arahi	1.84	82	Pn		Pn	18 31 40.8	-0.2
CKHZ	Cape Kidnapper	1.86	105	PN		Pn	18 31 41.7	+0.6
CKHZ	Cape Kidnapper	1.86	105	Pn		Pn	18 31 41.7	+0.6
BFZ	Birch Farm	1.88	143	⇓PN		Pn	18 31 41.3	0.0
BFZ	Birch Farm	1.88	143	⇓Pn		Pn	18 31 41.4	0.0
MARZ	Manawahe	1.93	52	PN		Pn	18 31 40.7	-1.1
MARZ	Manawahe	1.93	52	Pn		Pn	18 31 40.7	-1.1
CAW	Cannon Point	1.94	173	PN		Pn	18 31 42.1	+0.4
CAW	Cannon Point	1.94	173	Pn		Pn	18 31 42.1	+0.4
TCW	Tory Channel	2.06	190	⇑PN		Pn	18 31 43.4	+0.5
TCW	Tory Channel	2.06	190	⇑Pn		Pn	18 31 43.4	+0.5
URZ	Urewera	2.06	64	PN		Pn	18 31 41.4	-1.7
URZ	Urewera	2.06	64	Pn		Pn	18 31 41.4	-1.7
URZ	Urewera	2.06	64	P		Pn	18 31 41.5	-1.6
	42nm,0.3s,baz=255,slow=6.8,SNR=270							
URZ				S		S	18 32 08.8	-5.4
	38nm,0.3s,baz=125,slow=23,SNR=27							
WEL	Wellington	2.10	180	PN		Pn	18 31 43.5	+0.1
WEL	Wellington	2.10	180	Pn		Pn	18 31 43.5	+0.1
TMWZ	Te Maipa	2.11	156	⇑PN		Pn	18 31 43.5	0.0
TMWZ	Te Maipa	2.11	156	⇑Pn		Pn	18 31 43.5	0.0
SNZO	South Karori	2.12	181	⇑PN		Pn	18 31 43.6	0.0
SNZO	South Karori	2.12	181	⇑Pn		Pn	18 31 43.6	0.0
BHW	Baring Head	2.22	178	PN		Pn	18 31 44.6	0.0
BHW	Baring Head	2.22	178	Pn		Pn	18 31 44.6	0.0
PAWZ	Paruwai Farm	2.25	167	⇑PN		Pn	18 31 44.9	-0.1
PAWZ	Paruwai Farm	2.25	167	⇑Pn		Pn	18 31 44.9	-0.1
MSWZ	Moikau Station	2.26	170	⇑PN		Pn	18 31 44.9	-0.1
MSWZ	Moikau Station	2.26	170	⇑Pn		Pn	18 31 44.9	-0.1
KNZ	Kokohu	2.28	87	⇓PN		Pn	18 31 44.9	-0.4
KNZ	Kokohu	2.28	87	⇓Pn		Pn	18 31 44.9	-0.4
NNZ	Nelson	2.29	207	⇓PN		Pn	18 31 45.3	0.0
NNZ	Nelson	2.29	207	⇓Pn		Pn	18 31 45.3	0.0
TRWZ	Traveller	2.32	162	⇑PN		Pn	18 31 45.7	0.0
TRWZ	Traveller	2.32	162	⇑Pn		Pn	18 31 45.7	0.0
TUWZ	Tuamarina	2.33	195	⇓PN		Pn	18 31 46.0	+0.3
TUWZ	Tuamarina	2.33	195	⇓Pn		Pn	18 31 46.0	+0.3
MWZ	Matawai	2.33	69	PN		Pn	18 31 44.8	-1.1
MWZ	Matawai	2.33	69	Pn		Pn	18 31 44.8	-1.1
QRZ	Quartz Range	2.37	225	⇓PN		Pn	18 31 45.6	-0.6
QRZ	Quartz Range	2.37	225	⇓Pn		Pn	18 31 45.5	-0.6
PLWZ	Palliser	2.41	171	PN		Pn	18 31 46.4	-0.3
PLWZ	Palliser	2.41	171	Pn		Pn	18 31 46.4	-0.3
PRGZ	Paritu Road	2.45	85	PN		Pn	18 31 46.8	-0.3
PRGZ	Paritu Road	2.45	85	Pn		Pn	18 31 46.8	-0.3
MHGZ	Mahia Peninsul	2.45	90	PN		Pn	18 31 47.1	0.0
MHGZ	Mahia Peninsul	2.45	90	Pn		Pn	18 31 47.1	0.0
CMWZ	Cape Campbell	2.59	189	SN		S	18 32 23.8	-0.5
CMWZ	Cape Campbell	2.59	189	Sn		S	18 32 23.8	-0.5
BSWZ	Blackbirch Sta	2.61	195	PN		Pn	18 31 49.4	+0.6
BSWZ	Blackbirch Sta	2.61	195	Pn		Pn	18 31 49.5	+0.6
CNGZ	Carnagh Statio	2.79	77	PN		Pn	18 31 50.5	-0.3
CNGZ	Carnagh Statio	2.79	77	Pn		Pn	18 31 50.5	-0.3
THZ	Tophouse	2.94	208	PN		Pn	18 31 52.2	-0.3
THZ	Tophouse	2.94	208	Pn		Pn	18 31 52.2	-0.3
PUZ	Puketiti	2.96	69	PN		Pn	18 31 51.4	-1.5
PUZ	Puketiti	2.96	69	Pn		Pn	18 31 51.4	-1.5
MXZ	Matakaoa Point	3.23	61	PN		Pn	18 31 54.6	-1.3
MXZ	Matakaoa Point	3.23	61	Pn		Pn	18 31 54.6	-1.3
KHZ	Kahutara	3.36	196	PN		Pn	18 31 57.7	+0.4
KHZ	Kahutara	3.36	196	Pn		Pn	18 31 57.7	+0.4
LTZ	Lake Taylor	4.05	207	PN		Pn	18 32 05.0	-0.7
LTZ	Lake Taylor	4.05	207	Pn		Pn	18 32 05.0	-0.7
CRLZ	Canterbury Las	4.67	199	PN		Pn	18 32 12.2	-1.0
CRLZ	Canterbury Las	4.67	199	Pn		Pn	18 32 12.2	-1.0
MQZ	McQueen's Vall	4.79	199	PN		Pn	18 32 13.3	-1.4
MQZ	McQueen's Vall	4.79	199	Pn		Pn	18 32 13.3	-1.4
WVZ	Waitaha Valley	4.93	217	PN		Pn	18 32 15.0	-1.5
WVZ	Waitaha Valley	4.93	217	Pn		Pn	18 32 15.0	-1.5
RPZ	Rata Peaks	5.31	210	PN		Pn	18 32 19.9	-1.5
RPZ	Rata Peaks	5.31	210	Pn		Pn	18 32 19.9	-1.5
RPZ	Rata Peaks	5.31	210	P		Pn	18 32 20.4	-1.0
	8.7nm,0.3s,baz=37,slow=2.2,SNR=60							
RPZ				S		S	18 33 18.0	-5.6
	30nm,0.3s,baz=2.2,slow=10,SNR=30							
FOZ	Fox Glacier	5.80	219	⇓PN		Pn	18 32 24.3	-3.3
FOZ	Fox Glacier	5.80	219	⇓Pn		Pn	18 32 24.3	-3.3
LBZ	Lake Benmore	6.22	212	PN		Pn	18 32 31.3	-1.6
LBZ	Lake Benmore	6.22	212	Pn		Pn	18 32 31.3	-1.6
ODZ	Otahua Downs	6.60	206	PN		Pn	18 32 36.8	-1.1
ODZ	Otahua Downs	6.60	206	Pn		Pn	18 32 36.8	-1.1
JCZ	Jackson Bay	6.63	221	PN		Pn	18 32 35.9	-2.5
JCZ	Jackson Bay	6.63	221	Pn		Pn	18 32 35.9	-2.5
WKZ	Wanaka	7.07	215	PN		Pn	18 32 41.2	-2.8
WKZ	Wanaka	7.07	215	Pn		Pn	18 32 41.2	-2.8
EAZ	Earnscleugh	7.27	212	PN		Pn	18 32 44.5	-1.9
EAZ	Earnscleugh	7.27	212	Pn		Pn	18 32 44.5	-1.9
MSZ	Milford Sound	7.48	221	PN		Pn	18 32 47.1	-2.0
MSZ	Milford Sound	7.48	221	Pn		Pn	18 32 47.1	-2.0
TUZ	Tuapeka	7.75	208	PN		Pn	18 32 50.8	-1.8
TUZ	Tuapeka	7.75	208	Pn		Pn	18 32 50.8	-1.8
CTZ	Chatham Island	7.91	128	*e*PN		Pn	18 33 03.7	+8.9
CTZ	Chatham Island	7.91	128	*e*Pn		Pn	18 33 03.7	+8.9
ASAR	Alice Springs	37.80	282	P		P	18 38 00.4	+1.9
	0.1nm,0.3s,baz=116,slow=5.8,SNR=8.6							
ASAR				PcP		PcP	18 40 10.5	+0.1
	0.2nm,0.5s,baz=123,slow=3.9,SNR=5.0							
WRA	Warramunga Arr	39.64	287	P		P	18 38 15.4	+1.7
	0.6nm,1.0s,baz=129,slow=6.9,SNR=6.1							
ARCES	ARCESS Array B	145.49	341	PKPbc		PKPbc	18 50 14.8	+0.5
	0.9nm,0.5s,baz=63,slow=2.7,SNR=13							
BRTR	Keskin Array B	150.13	284	PKPbc		PKPbc	18 50 29.2	+1.3
	0.2nm,0.4s,baz=172,slow=3.9,SNR=2.7							
BRTR				PKPab		PKPab	18 50 35.7	+1.0
	1.0nm,0.7s,baz=137,slow=4.0,SNR=6.2							
FINES	FINESS Array B	150.56	329	PKPbc		PKPbc	18 50 30.3	+2.4
	0.3nm,0.5s,baz=341,slow=7.3,SNR=2.9							
FINES				PKPab		PKPab	18 50 35.6	+0.1
	1.2nm,0.5s,baz=58,slow=4.5,SNR=10							
TORD	Torodi Ar. Bea	153.35	195	PKPbc		PKPbc	18 50 37.1	+1.5
	0.3nm,0.8s,baz=134,slow=1.5,SNR=2.7							

*NIED **11** 18:55:00,30.70N×129.10E,h14km,Mw3.8 Best double couple: M₀5.80000×10¹⁴ NP1:φ=179.00000°,δ=83.00000°,λ=-168.00000°. NP2:φ=88.00000°,δ=78.00000°,λ=-8.00000°.*

JMA 11 18:55:48.0±0.2,30.68N×129.13E,h19km±2km,M3.9, 2C-5D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKC	Kuchinoerabu	0.94	103	⇑P	Pb	18 56 05.4	-0.4
JKC				*e*S	Sb	18 56 17.8	-0.1
JNN	Nakanoshima	1.05	142	⇑P	Pb	18 56 07.2	-0.5
JNN				*e*S	Sg	18 56 22.9	+0.5
JSJ	Shimokoshiki	1.11	27	⇓P	Pn	18 56 08.3	-0.3
JSJ				*e*S	Sn	18 56 23.0	-0.2
JSU	Suzuyama	1.40	54	P	Pn	18 56 12.5	-0.1
JSU				*e*S	Sb	18 56 32.1	+0.9
JTN	Tanegashima 3	1.59	90	⇓P	Pn	18 56 15.5	+0.3
JTN				*e*S	Sn	18 56 34.5	-0.8
JTSR	Tashiro 2	1.61	72	P	Pn	18 56 15.5	0.0
JTSR				*e*S	Sb	18 56 37.3	0.0
JZO	Okuchi	1.92	40	⇓P	Pn	18 56 20.2	+0.4
JZO				*e*S	Sg	18 56 48.6	-1.5
JNAR	Kushima--Naru	2.02	65	⇓P	Pn	18 56 21.9	+0.8
JTZ	Takazaki	2.07	54	⇓P	Pn	18 56 22.5	+0.7

DDA 11 18:56:06.5,38.55N×26.49E,h7km,MD2.8,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.20	157	*i* P	Pg	18 56 10.7	+0.1
URLA				*i* S	Sg	18 56 14.5	+1.2

*CSEM **11** 18:56:34.6,39.78N×27.03E,h22km,MD2.6,After ISK*

ISK 11 18:56:34.6,39.78N×27.03E,h22km,MD2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EZN	Ezine	0.55	275	*e*PG	Pb	18 56 46.0	+0.5
EZN	Ezine	0.55	275	*e*Pg	Pb	18 56 46.0	+0.5
GONE	Gonen-Balikesi	0.57	62	*e*PG	Pb	18 56 46.4	+0.5
GONE	Gonen-Balikesi	0.57	62	*e*Pg	Pb	18 56 46.4	+0.4
LPK	Lapseki	0.63	341	*e*PG	Pn	18 56 47.6	-0.6
LPK	Lapseki	0.63	341	*e*Pg	Pb	18 56 47.6	+0.6
KRBG	Karabiga-Canak	0.65	18	*e*PG	Pb	18 56 47.8	+0.6
KRBG	Karabiga-Canak	0.65	18	*e*Pg	Pb	18 56 47.8	+0.5
BALB	Balikesir	0.67	102	*e*PG	Pn	18 56 48.4	-0.4
BALB				*e*SG	Sn	18 56 58.3	-0.2
BALB	Balikesir	0.67	102	*e*Pg	Pn	18 56 48.4	-0.3
BALB				*e*Sg	Sn	18 56 58.3	-0.2
GELI	Tayfur-Gelibol	0.75	326	*e*PG	Pn	18 56 49.9	0.0
GELI	Tayfur-Gelibol	0.75	326	*e*Pg	Pn	18 56 49.9	0.0
RKY	Sarkoy-Tekirda	0.92	7	*e*PG	Pn	18 56 52.4	+0.1
RKY	Sarkoy-Tekirda	0.92	7	*e*Pg	Pn	18 56 52.4	+0.2
MRMT	Marmara Adasi	0.93	27	*e*PG	Pn	18 56 52.6	+0.1
MRMT	Marmara Adasi	0.93	27	*e*Pg	Pn	18 56 52.6	+0.1
ERIK	Erikli-Kesan	0.98	336	*e*PG	Pn	18 56 53.4	+0.4
ERIK	Erikli-Kesan	0.98	336	*e*Pg	Pn	18 56 53.4	+0.4
KCTX	Karacabey (Bur	1.13	64	*e*PN	Pn	18 56 55.0	-0.1
KCTX	Karacabey (Bur	1.13	64	*e*Pn	Pn	18 56 55.0	-0.1
DST	Dursunbey	1.24	98	*e*PN	Pb	18 56 57.1	-0.3
DST	Dursunbey	1.24	98	*e*Pn	Pb	18 56 57.1	-0.3
SLVT	Silivri	1.71	31	*e*PN	Pn	18 57 04.0	+1.0
SLVT	Silivri	1.71	31	*e*Pn	Pn	18 57 04.0	+1.0

*IDC **11** 19:30:27.6±3.4,38.64N×72.17E,h0km,mb3.7/2, mb1 3.7/4,mb1mx3.3/29,mbtmp3.6/4,ML3.4/2,Error ellipse: s-maj=90.5km s-min=24.0km az=145.0*
*NNC **11** 19:30:35.1±2.5,39.46N×71.68E,h4km±9km,mb3.7, mpv3.3,Error ellipse: s-maj=18.1km s-min=10.1km az=10.0*

ISC 11 19:30:35.6±2.5,39.4N±0.2×71.65E±0.10,h10km,n16,
σ1°17/16,**5C-2D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	3.13	29	P	Pn	19 31 24.3	-1.0
	SNR=44						
EKS2	Erin-Say	3.62	26	P	Pn	19 31 31.1	-0.8
	SNR=8.6						
KK31	Karatay Array	3.79	347	Pn	Pn	19 31 34.4	+0.4
	2.4nm,0.4s,baz=152,slow=11,SNR=99						
KK31				Pg	Pb	19 31 44.0	+1.4
	2.6nm,0.4s,baz=158,slow=11,SNR=9.6						
KK31				⇑Sn	Sn	19 32 19.6	+0.9
	1.9nm,0.3s,baz=171,slow=25,SNR=3.9						
KK31				⇑Lg	Lg	19 32 33.0	
	11nm,0.5s,baz=165,slow=29,SNR=9.7						
KZA	Kyzart	3.81	45	P	Pn	19 31 33.8	-1.0
	SNR=10						
AAK	Ala-Archa	3.87	33	P	Pn	19 31 34.8	-0.5
	SNR=23						
KBK	Karagaybulak	4.09	37	P	Pn	19 31 38.8	+0.4
	SNR=13						
CHMS	Chumysh	4.28	32	P	Pn	19 31 40.4	-0.4
	SNR=36						
USP	Ospenovka	4.41	28	P	Pn	19 31 41.8	-0.8
	SNR=20						
ULHL	Ulahol	4.49	49	P	Pn	19 31 42.2	-1.7
	SNR=8.1						
TKM2	Tokmak 2	4.60	39	⇑Pn	Pn	19 31 44.1	-1.3
	2.9nm,0.4s						
TKM2				⇑Sn	Sn	19 32 39.6	+0.7
	5.4nm,0.7s						
TKM2				⇓Lg	Lg	19 32 58.7	
	7.9nm,0.8s						
TKM2	Tokmak 2	4.60	39	P	Pn	19 31 45.1	-0.3
	SNR=5.6						
MKAR	Makanchi Array	10.71	43	Pn	Pn	19 33 08.2	-0.8
	0.1nm,0.3s,baz=226,slow=12,SNR=5.8						
AB31	Akbulak array	12.91	323	⇑P	Pn	19 33 38.9	-0.1
	1.8nm,0.8s,baz=131,slow=13,SNR=15						
AB31				⇓S	Sn	19 35 60.0	-2.7
	2.7nm,0.9s,baz=131,slow=25,SNR=6.8						
ZALV	Zalesovo Beam	17.07	27	Pn	Pn	19 34 32.7	-1.5
	0.7nm,0.3s,baz=216,slow=11,SNR=16						
FINES	FINESS Array B	35.40	324	P	P	19 37 32.3	+1.0
	2.2nm,1.0s,baz=108,slow=12,SNR=3.4						
TORD	Torodi Ar. Bea	66.33	268	P	P	19 41 20.6	-4.0
	0.5nm,0.9s,baz=43,slow=6.2,SNR=2.7						

IDC 11 19:31:47.5±1.3,27.10S×13.36W,h0km,mb3.9/4, mb1 4.0/4,mb1mx3.7/20,mbtmp3.9/4,MS3.2/6,Ms1 3.2/6, ms1mx3.0/22,Error ellipse: s-maj=47.6km s-min=31.3km az=162.0,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOSA	Boshof	34.08	102	P	P	19 38 33.5	-0.5
	2.3nm,0.9s,baz=257,slow=11,SNR=2.7						
BOSA				LR	LR	19 50 02.4	
	comp=Z,57nm,20.6s,baz=343,slow=32						
BDFB	Brasilia	34.11	282	LR	LR	19 49 42.5	
	comp=Z,48nm,18.2s,baz=45,slow=32						
CPUP	Villa Florida	39.13	261	P	P	19 39 16.5	-0.4
	0.5nm,0.4s,baz=113,slow=6.1,SNR=3.0						
CPUP				LR	LR	19 53 02.8	
	comp=Z,32nm,19.2s,baz=172,slow=33						
TORD	Torodi Ar. Bea	42.59	22	P	P	19 39 44.7	-0.7
	3.0nm,1.0s,baz=198,slow=8.2,SNR=12						
CFAA	Coronel Fontan	47.63	251	LR	LR	19 56 39.7	
	comp=Z,9.7nm,19.8s,baz=219,slow=31						
PLCA	Paso Flores	48.58	238	LR	LR	19 58 19.0	
	comp=Z,42nm,18.2s,baz=176,slow=33						
LPAZ	La Paz	51.67	270	LR	LR	19 59 58.1	
	comp=Z,30nm,21.1s,baz=210,slow=33						
BRTR	Keskin Array B	79.60	35	P	P	19 43 57.4	+0.7
	0.6nm,0.6s,baz=217,slow=5.9,SNR=6.6						
ILAR	Eielson Array	132.26	335	PKP	PKPdf	19 51 02.8	+0.1
	0.6nm,0.8s,baz=316,slow=0.9,SNR=6.3						
KSRS	Korea Array	145.88	63	PKPbc	PKPdf	19 51 28.1	-0.2
	1.9nm,0.9s,baz=284,slow=4.5,SNR=6.3						

*IDC **11** 19:33:24.3±1.8,6.55S×130.34E,h0km,mb3.5/2, mb1 3.9/4,mb1mx3.5/19,mbtmp3.7/4,ML4.1/2,Error ellipse: s-maj=130.7km s-min=25.5km az=67.0*
*ISCJB **11** 19:33:35.0±0.9,7.00S±0.04×129.9E±0.2,h104km, mb3.3/2,Error ellipse: s-maj=25.6km s-min=6.0km az=176.2

*ISCJB **11** 20:43:17.0±0.6, 13°.94S±0°.08×71°.27W±0°.07, h33km, mb4.0/6, Error ellipse: s-maj=12.7km s-min=8.7km az=22.4*

*NEIC **11** 20:43:20.1±0.8, 13°.88S×71°.25W, h46km±8km, mb3.8/1, Error ellipse: s-maj=15.2km s-min=8.1km az=205.0*

NEIC Felt [III] at Yanaoca and [II] at Sicuani.

*IDC **11** 20:43:20.4±1.9, 13°.91S×71°.22W, h48km±20km, mb3.8/6, mb1 3.9/10, mb1mx3.7/26, mbtmp3.8/10, ML3.5/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/30, Error ellipse: s-maj=34.6km s-min=18.3km az=31.0*

ISC 11 20:43:19.4±0.7, 13°.76S±0°.10×71°.35W±0°.08, h35km, n26, σ1°68/27, mb4.0/6, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	**2.69**	**183**	*eP*	Pn	20 43 56.0	-4.4
LPAZ	**La Paz**	**3.99**	**129**	P	**Pn**	**20 44 18.6**	**-0.1**
LPAZ				S	**Sn**	**20 45 07.8**	**+3.2**
LPAZ	**La Paz**	**3.99**	**129**	P	**Pn**	**20 44 18.6**	**-0.1**
	2.8nm,0.3s,baz=294,slow=13,SNR=26						
LPAZ				S	**Sn**	**20 45 07.8**	**+3.2**
	1.0nm,0.3s,baz=281,slow=19,SNR=2.4						
NNA	**Nana**	**5.64**	**288**	P	**Pn**	**20 44 42.5**	**+1.6**
NNA				S	Sn	20 45 56.4	+12
NNA	**Nana**	**5.64**	**288**	P	**Pn**	**20 44 42.5**	**+1.6**
	1.7nm,0.3s,baz=106,slow=15,SNR=2.7						
NNA				S	Sn	20 45 56.4	+12
	1.4nm,0.3s,baz=210,slow=16,SNR=2.5						
SAML	**Samuel**	**9.32**	**60**	*eP*	**Pn**	**20 45 31.9**	**+0.5**
	10nm,0.5s						
ATAH	**Atahualpa**	**9.56**	**313**	P	Pn	20 45 39.3	+4.3
ATAH	**Atahualpa**	**9.56**	**313**	P	Pn	20 45 39.3	+4.3
	0.2nm,0.3s,baz=104,slow=12,SNR=2.4						
SIV	**San Ignacio**	**10.18**	**104**	P	**Pn**	**20 45 41.1**	**-2.0**
SIV				S	**Sn**	**20 47 38.6**	**+2.5**
SIV	**San Ignacio**	**10.18**	**104**	P	**Pn**	**20 45 41.1**	**-2.0**
	0.5nm,0.3s,baz=293,slow=11,SNR=11						
SIV				S	**Sn**	**20 47 38.6**	**+2.5**
	0.6nm,0.3s,baz=251,slow=18,SNR=3.7						
SIV				LR	LR	20 49 56.0	
	comp=Z,39nm,20.8s,slow=40						
PLCA	**Paso Flores**	**26.88**	**179**	*eP*	**P**	**20 48 55.2**	**-1.7**
	3.4nm,1.2s						
PLCA	**Paso Flores**	**26.88**	**179**	P	**P**	**20 48 55.1**	**-1.9**
	1.5nm,1.0s,baz=18,slow=6.4,SNR=2.9						
RCBR	**Riachuelo**	**35.77**	**81**	P	**P**	**20 50 14.4**	**-1.1**
RCBR	**Riachuelo**	**35.77**	**81**	P	**P**	**20 50 14.4**	**-1.1**
	3.0nm,1.0s,baz=225,slow=4.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**77.14**	**73**	P	**P**	**20 55 08.1**	**-1.9**
TORD	**Torodi Ar. Bea**	**77.14**	**73**	P	**P**	**20 55 08.1**	**-1.9**
	1.2nm,0.9s,baz=264,slow=5.1,SNR=6.9						
YKA	**Yellowknife Ar**	**83.16**	**341**	P	**P**	**20 55 42.6**	**+1.2**
YKA	**Yellowknife Ar**	**83.16**	**341**	P	**P**	**20 55 42.6**	**+1.2**
	0.8nm,0.8s,baz=134,slow=5.4,SNR=13						
DLBC	**Dease Lake**	**86.30**	**333**	P	**P**	**20 55 56.6**	**-0.9**
DLBC	**Dease Lake**	**86.30**	**333**	P	**P**	**20 55 56.6**	**-0.9**
	0.6nm,0.3s,baz=124,slow=7.3,SNR=2.6						
INK	**Inuvik**	**92.92**	**341**	P	**P**	**20 56 28.7**	**+0.4**
INK	**Inuvik**	**92.92**	**341**	P	**P**	**20 56 28.7**	**+0.4**
	0.3nm,0.4s,baz=135,slow=7.1,SNR=3.3						
MJAR	**Matsushiro Arr**	**145.17**	**316**	PKPbc	**PKPbc**	**21 02 53.5**	**+0.2**
MJAR	**Matsushiro Arr**	**145.17**	**316**	PKPbc	**PKPbc**	**21 02 53.5**	**+0.2**
	0.9nm,0.7s,baz=39,slow=0.3,SNR=5.9						
SONM	**Songino Array**	**145.98**	**3**	PKPbc	**PKPbc**	**21 02 56.0**	**+0.3**
SONM	**Songino Array**	**145.98**	**3**	PKPbc	**PKPbc**	**21 02 56.0**	**+0.3**
	0.2nm,0.5s,baz=338,slow=3.1,SNR=3.5						

IDC 11 20:43:22.7±0.9, 13°.90N×145°.52E, h99km±7km, mb3.7/19, mb1 3.8/19, mb1mx3.8/29, mbtmp3.7/19, Error ellipse: s-maj=20.9km s-min=12.3km az=96.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.70**	**244**	P	Pn	20 43 41.5	+1.5
	814nm,0.3s,baz=114,slow=3.8,SNR=453						
GUMO				S	Sn	20 43 54.1	+1.0
	4µm,0.3s,baz=114,slow=23,SNR=190						
JNU	**Nakatsue**	**23.32**	**328**	P	P	20 48 22.1	-0.1
	5.6nm,0.6s,baz=152,slow=6.0,SNR=7.1						
MJAR	**Matsushiro Arr**	**23.48**	**345**	P	P	20 48 23.3	-0.2
	1.0nm,0.5s,baz=148,slow=9.4,SNR=7.8						
MAT	**Matsushiro**	**23.48**	**345**	P	P	20 48 23.4	-0.1
KSRS	**Korea Array**	**28.21**	**329**	P	P	20 49 06.5	+0.5
	2.0nm,0.7s,baz=141,slow=10,SNR=8.8						
USRK	**Ussuriysk Arra**	**32.33**	**342**	P	P	20 49 42.5	+0.1
	2.0nm,0.8s,baz=164,slow=8.6,SNR=8.0						
WRA	**Warramunga Arr**	**35.38**	**198**	P	P	20 50 09.4	+0.4
	2.0nm,0.6s,baz=23,slow=9.0,SNR=25						
ASAR	**Alice Springs**	**39.02**	**197**	P	P	20 50 39.0	-0.9
	0.5nm,0.6s,baz=22,slow=11,SNR=12						
PETK	**Petropavlovsk-**	**40.30**	**11**	P	P	20 50 50.6	+0.5
	1.2nm,0.6s,baz=168,slow=10,SNR=3.2						
CMAR	**Chiang Mai Arr**	**44.87**	**282**	P	P	20 51 27.9	+0.3
	0.3nm,0.3s,baz=88,slow=6.0,SNR=4.8						
CMAR				PcP	PcP	20 53 09.2	+1.5
	1.0nm,0.8s,baz=88,slow=1.2,SNR=8.4						
STKA	**Stephens Creek**	**45.67**	**185**	P	P	20 51 33.6	+0.1
	1.6nm,0.7s,baz=357,slow=10,SNR=5.7						
SONM	**Songino Array**	**46.85**	**324**	P	P	20 51 44.7	+1.8
	0.5nm,0.6s,baz=134,slow=8.5,SNR=5.4						
MKAR	**Makanchi Array**	**61.71**	**316**	P	P	20 53 30.5	-0.1
	0.2nm,0.3s,baz=95,slow=9.1,SNR=6.6						
ZALV	**Zalesovo Beam**	**61.74**	**324**	P	P	20 53 29.0	-1.5
	0.2nm,0.3s,baz=105,slow=4.9,SNR=2.3						
ZALV				PcP	PcP	20 54 10.3	-0.6
	0.4nm,0.4s,baz=131,slow=4.2,SNR=2.6						
KDAK	**Kodiak Island**	**63.47**	**32**	P	P	20 53 41.8	-0.2
	10nm,1.1s,baz=235,slow=8.7,SNR=3.8						
ILAR	**Eielson Array**	**68.02**	**25**	P	P	20 54 10.3	-0.8
	1.0nm,0.5s,baz=251,slow=5.6,SNR=21						
INK	**Inuvik**	**73.84**	**22**	P	P	20 54 46.3	+0.1
	1.6nm,0.8s,baz=276,slow=7.2,SNR=8.5						
DLBC	**Dease Lake**	**75.38**	**33**	P	P	20 54 56.8	+1.4
	4.0nm,0.9s,baz=265,slow=4.8,SNR=5.1						
YKA	**Yellowknife Ar**	**82.29**	**27**	P	P	20 55 32.8	-0.2
	1.4nm,0.6s,baz=288,slow=5.3,SNR=17						
ARCES	**ARCESS Array B**	**86.98**	**342**	P	P	20 55 56.0	-0.5
	2.0nm,0.8s,baz=53,slow=4.7,SNR=3.6						
FINES	**FINESS Array B**	**91.15**	**335**	P	P	20 56 14.3	-1.9
	0.6nm,0.5s,baz=68,slow=3.6,SNR=12						
TORD	**Torodi Ar. Bea**	**135.21**	**305**	PKP	PKPdf	21 02 32.3	+0.6
	0.3nm,0.7s,baz=20,slow=2.2,SNR=5.1						
DBIC	**Dimbokro**	**144.19**	**303**	PKP	PKPbc	21 02 46.2	-0.1
	1.7nm,0.6s,baz=27,slow=4.3,SNR=3.5						

*DDA **11** 20:59:09.0, 37°.85N×27°.53E, h7km, MD2.8*

*ISK **11** 20:59:09.1, 37°.87N×27°.43E, h6km, MD2.7*

*CSEM **11** 20:59:09.4±0.2, 37°.88N×27°.50E, h5km, MD2.7, Error ellipse: s-maj=6.2km s-min=3.6km az=67.0*

*ISCJB **11** 20:59:09.2±0.6, 37°.88N±0°.03×27°.51E±0°.05, h3km±10km, Error ellipse: s-maj=7.3km s-min=4.7km az=159.3*

ISC 11 20:59:09.4±1.0, 37°.87N±0°.03×27°.51E±0°.03, h9km±11km, n20, σ0°40/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.27**	**233**	*i* P	**Pg**	**20 59 15.1**	**+0.2**
GCAM				*i* S	**Sg**	**20 59 18.8**	**+0.3**
GCAM	**G?zelcaml?**	**0.27**	**233**	*i* P	**Pg**	**20 59 15.1**	**+0.2**
GCAM				*i* S	**Sg**	**20 59 18.8**	**+0.3**
AYDN	**Tasoluk**	**0.36**	**124**	*i* P	**Pg**	**20 59 16.4**	**-0.1**
AYDN				*i* S	**Sg**	**20 59 20.6**	**-0.6**
AYDN	**Tasoluk**	**0.36**	**124**	*i* P	**Pg**	**20 59 16.4**	**-0.1**
AYDN				*i* S	**Sg**	**20 59 20.6**	**-0.6**
IZM	**Izmir**	**0.57**	**340**	*e*PG	**Pg**	**20 59 20.4**	**0.0**
IZM				*e*SG	**Sg**	**20 59 28.2**	**+0.3**
IZM	**Izmir**	**0.57**	**340**	*e*Pg	**Pg**	**20 59 20.4**	**0.0**
IZM				*e*Sg	**Sg**	**20 59 28.2**	**+0.3**
MLSB	**Milas**	**0.61**	**159**	*e*PG	**Pg**	**20 59 21.0**	**-0.2**
MLSB				*e*SG	**Sb**	**20 59 31.4**	**+0.4**
MLSB	**Milas**	**0.61**	**159**	*e*Pg	**Pg**	**20 59 21.0**	**-0.2**
MLSB				*e*Sg	**Sb**	**20 59 31.4**	**+0.4**
BLCB	**Balcova**	**0.64**	**325**	*e*PG	**Pg**	**20 59 21.1**	**-0.7**
BLCB	**Balcova**	**0.64**	**325**	*e*Pg	**Pg**	**20 59 21.1**	**-0.7**
BODT	**Bodrum**	**0.82**	**191**	*e*PG	**Pg**	**20 59 25.4**	**+0.2**
BODT				*e*SG	**Sb**	**20 59 36.9**	**-0.1**
BODT	**Bodrum**	**0.82**	**191**	*e*Pg	**Pg**	**20 59 25.4**	**+0.2**
BODT				*e*Sg	**Sb**	**20 59 36.9**	**-0.1**
YER	**Yerkesik**	**0.95**	**139**	*e*PG	**Pn**	**20 59 28.9**	**-0.2**
YER	**Yerkesik**	**0.95**	**139**	*e*Pg	**Pn**	**20 59 28.9**	**-0.2**
KULA	**Kula-Manisa**	**1.12**	**54**	*e*PN	**Pg**	**20 59 31.6**	**+0.7**
KULA	**Kula-Manisa**	**1.12**	**54**	*e*Pn	**Pg**	**20 59 31.6**	**+0.7**
DAT	**Datca**	**1.14**	**177**	*e*PN	**Pb**	**20 59 31.2**	**-0.1**
DAT	**Datca**	**1.14**	**177**	*e*Pn	**Pb**	**20 59 31.2**	**-0.1**
DALY	**Dalyan (Mu˘la**	**1.39**	**138**	*e*PN	**Pg**	**20 59 36.4**	**+0.3**
DALY	**Dalyan (Mu˘la**	**1.39**	**138**	*e*Pn	**Pg**	**20 59 36.4**	**+0.3**

*ISK **11** 20:59:35.9, 37°.89N×27°.48E, h14km, MD2.6*

*DDA **11** 20:59:35.7, 37°.86N×27°.52E, h7km, MD2.8*

*ISCJB **11** 20:59:35.8±0.6, 37°.88N±0°.03×27°.52E±0°.05, h10km, Error ellipse: s-maj=6.2km s-min=4.3km az=149.6*

*CSEM **11** 20:59:36.1±0.2, 37°.88N×27°.51E, h8km, MD2.6, Error ellipse: s-maj=5.4km s-min=3.4km az=71.0*

ISC 11 20:59:35.9±0.9, 37°.89N±0°.03×27°.52E±0°.03, h10km, n18, σ0°46/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.30**	**230**	*i* P	**Pg**	**20 59 41.7**	**-0.1**
GCAM				*i* S	**Sg**	**20 59 45.4**	**-0.4**
GCAM	**G?zelcaml?**	**0.30**	**230**	*i* P	**Pg**	**20 59 41.7**	**-0.1**
GCAM				*i* S	**Sg**	**20 59 45.4**	**-0.4**
AYDN	**Tasoluk**	**0.37**	**129**	*i* P	**Pg**	**20 59 42.9**	**-0.3**
AYDN				*i* S	**Sg**	**20 59 47.0**	**-1.1**
AYDN	**Tasoluk**	**0.37**	**129**	*i* P	**Pg**	**20 59 42.9**	**-0.3**
AYDN				*i* S	**Sg**	**20 59 47.0**	**-1.1**
BLCB	**Balcova**	**0.62**	**323**	*e*PG	**Pg**	**20 59 48.2**	**+0.3**
BLCB				*e*SG	**Sb**	**20 59 57.1**	**-0.4**
BLCB	**Balcova**	**0.62**	**323**	*e*Pg	**Pg**	**20 59 48.2**	**+0.3**
BLCB				*e*Sg	**Sb**	**20 59 57.1**	**-0.4**
MLSB	**Milas**	**0.63**	**161**	*e*PG	**Pg**	**20 59 48.3**	**+0.2**
MLSB				*e*SG	**Sb**	**20 59 58.4**	**+0.5**
MLSB	**Milas**	**0.63**	**161**	*e*Pg	**Pg**	**20 59 48.3**	**+0.2**
MLSB				*e*Sg	**Sb**	**20 59 58.4**	**+0.5**
BODT	**Bodrum**	**0.84**	**191**	*e*PG	**Pb**	**20 59 52.5**	**-0.1**
BODT	**Bodrum**	**0.84**	**191**	*e*Pg	**Pb**	**20 59 52.6**	**-0.1**
YER	**Yerkesik**	**0.97**	**141**	*e*PG	**Pb**	**20 59 55.1**	**+0.3**
YER	**Yerkesik**	**0.97**	**141**	*e*Pg	**Pb**	**20 59 55.1**	**+0.3**
AKS	**Akhisar**	**1.01**	**13**	*e*PG	**Pn**	**20 59 56.2**	**0.0**
AKS	**Akhisar**	**1.01**	**13**	*e*Pg	**Pn**	**20 59 56.2**	**0.0**
KULA	**Kula-Manisa**	**1.09**	**55**	*e*PN	**Pn**	**20 59 58.0**	**+0.6**
KULA	**Kula-Manisa**	**1.09**	**55**	*e*Pn	**Pn**	**20 59 58.0**	**+0.6**
DAT	**Datca**	**1.16**	**178**	*e*PN	**Pb**	**20 59 58.3**	**+0.2**
DAT	**Datca**	**1.16**	**178**	*e*Pn	**Pb**	**20 59 58.3**	**+0.2**

*IDC **11** 21:01:39.8±14.0, 0°.46S×132°.95E, h0km, mb3.9/2, mb1 3.8/4, mb1mx3.4/22, mbtmp3.7/4, ML3.4/2, Error ellipse: s-maj=212.8km s-min=78.6km az=167.0*

*AUST **11** 21:01:52.9, 0°.99S×132°.50E, h100km*

ISC 11 21:01:43.6±3.2, 0°.4S±0°.3×133°.1E±0°.1, h35km, n9, σ0°89/9, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.88**	**256**	P	**Pn**	**21 02 12.9**	**-0.4**
	baz=1.2,SNR=57						
SWI				S	**Sn**	**21 02 36.9**	**+1.0**
	baz=1.2,SNR=4.9						
FAKI	**Fak Fak**	**2.64**	**198**	P	**Pn**	**21 02 23.8**	**0.0**
	baz=1.9,SNR=88						
KDU	**Kakadu**	**12.23**	**183**	P	**Pn**	**21 04 35.2**	**-0.1**
	baz=12,SNR=7.4						
MTN	**Manton Dam**	**12.52**	**189**	P	Pn	21 04 28.1	-11
	baz=12,SNR=5.0						
KNRA	**Kununurra**	**15.77**	**195**	P	**Pn**	**21 05 21.8**	**-1.4**
	baz=15,SNR=6.0						
FITZ	**Fitzroy Crossi**	**19.06**	**202**	P	**P**	**21 06 02.3**	**-0.8**
	0.1nm,0.3s,baz=29,slow=13,SNR=3.6						
WRA	**Warramunga Arr**	**19.47**	**176**	P	**Pn**	**21 06 08.4**	**-0.5**
	0.2nm,0.3s,baz=355,slow=11,SNR=14						
ASAR	**Alice Springs**	**23.15**	**178**	P	**P**	**21 06 47.4**	**+0.4**
	1.4nm,0.6s,baz=356,slow=11,SNR=22						
STKA	**Stephens Creek**	**32.33**	**166**	P	**P**	**21 08 10.3**	**+0.7**
	1.4nm,0.4s,baz=338,slow=8.5,SNR=10						

MEX 11 21:19:16.7±0.3, 18°.29N×100°.11W, h60km±4km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.23**	**267**	*i* P	Pn	21 19 25.0	-1.4
ARIG				*i* S	Sn	21 19 31.6	-1.9
MEIG	**Mezcala**	**0.59**	**128**	*e*P	Pn	21 19 28.4	-1.4
MEIG				*e*S	Sn	21 19 37.3	-2.0
YAIG	**Yautepec**	**1.14**	**60**	*e*P	Pn	21 19 34.8	-2.0
YAIG				*e*S	Sn	21 19 50.0	-1.6
CAIG	**El Cayaco**	**1.25**	**187**	*e*P	Pn	21 19 36.6	-1.5
CAIG				*e*S	Sn	21 19 52.2	-1.8
ZIIG	**Zihuatanejo**	**1.46**	**242**	*e*P	Pn	21 19 39.7	-1.2
ZIIG				*e*S	Sn	21 19 57.1	-2.0
UTMO	**Huajuapan**	**2.24**	**102**	*i* P	Pn	21 19 50.6	-1.1
UTMO				*i* S	Sn	21 20 16.6	-1.9

IDC 11 21:28:18.8±2.6, 1°.52S×130°.97E, h0km, mb3.1/2, mb1 3.4/3, mb1mx3.2/21, mbtmp3.2/3, ML3.0/1, Error ellipse: s-maj=310.3km s-min=26.0km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.61**	**170**	P	P	21 32 37.5	-0.4
	0.1nm,0.3s,baz=351,slow=12,SNR=7.3						
ASAR	**Alice Springs**	**22.20**	**173**	P	P	21 33 17.1	+0.1
	0.3nm,0.5s,baz=350,slow=11,SNR=5.2						
SONM	**Songino Array**	**53.62**	**340**	P	P	21 37 42.0	-0.1
	0.2nm,0.6s,baz=126,slow=7.3,SNR=2.4						

CASC 11 21:35:57.8±4.2, 12°.87N×90°.82W, h35km±999km, MD3.6, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**1.34**	**15**	*e*P	Pn	21 36 18.8	-1.5
IXG				*e*S	Sn	21 36 40.0	+2.9
SBLS	**San Blas**	**1.51**	**50**	*e*P	Pn	21 36 23.4	+0.8
RTR	**El Retiro**	**1.53**	**48**	*e*P	Pn	21 36 23.4	+0.5
RTR				*e*S	Sn	21 36 40.1	-1.5
SNJE	**San Jose**	**1.54**	**50**	*e*P	Pn	21 36 23.4	+0.3
SNJE				*e*S	Sn	21 36 41.1	-0.9
FUG	**Fuego 3**	**1.57**	**359**	*e*P	Pn	21 36 21.9	-1.4
FUG				*e*S	Sn	21 36 44.7	+2.1
JAT	**Jato**	**1.64**	**331**	*e*P	Pn	21 36 21.7	-2.5
JAT				*e*S	Sn	21 36 44.9	+0.7
RBDL	**Robledal**	**1.65**	**42**	*e*P	Pn	21 36 24.8	+0.2
BOQS	**Boqueron**	**1.72**	**60**	*e*P	Pn	21 36 27.5	+1.9
NBG	**Las Nubes**	**1.77**	**15**	*e*P	Pn	21 36 26.3	+0.1
NBG				*e*S	Sn	21 36 50.7	+3.0
MTO2	**Montecristo 2**	**2.08**	**43**	*e*P	Pn	21 36 31.5	+1.0

*IDC **11** 21:37:04.5±0.5, 17°.22S×66°.63E, h0km, mb4.1/20, mb1 4.3/21, mb1mx4.1/28, mbtmp4.1/21, ML3.9/1, MS4.2/28, Ms1 4.3/28, ms1mx4.1/47, Error ellipse: s-maj=16.9km s-min=14.6km az=9.0*

*BJI **11** 21:37:05.8, 17°.20S×66°.60E, h10km, mB5.0/6, mb4.5/13, Ms4.6/3, Ms7 4.3/3*

*NEIC **11** 21:37:05.8±0.3, 17°.25S×66°.64E, h10km, mb4.7/10, Error ellipse: s-maj=9.0km s-min=7.6km az=165.0*

*ISCJB **11** 21:37:05.7±0.4, 17°.25S±0°.07×66°.62E±0°.07, h21km, mb4.3/32, MS4.3/29, Error ellipse: s-maj=10.5km s-min=8.1km az=140.4*

*GCMT **11** 21:37:09.0±0.2, 17°.22S×66°.49E, h12km, MW5.0, Moment Tensor Solution. s24,c29; s80,c127; Moment tensor: Scale 10^16 Nm; Mrr=0.05±.10; Mθθ=3.24±.10; Mϕϕ 3.29±.09; Mrθ=0.67±.28; Mϕϕ 1.38±.08; Mϕr=1.58±.27; Best double couple: M=3.90000×10^16 NP1:κ=144.00000°, δ70.00000°, λ169.00000°. NP2:κ=238.00000°, δ80.00000°, λ20.00000°. Principal axes: T 4.2300, Plg22.0000°, Azm102.0000°; N -0.6800, Plg67.0000°, Azm264.0000°; P -3.5600, Plg6.0000°, Azm10.0000°; Data Used: II G IU CN IC.*

ISC 11 21:37:07.8±0.4, 17°.30S±0°.09×66°.58E±0°.09, h21km, n91, σ0°96/86, mb4.3/32, MS4.3/29, Mauritius - Reunion region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ABPO	**Ambohimpanom**	**18.47**	**262**	*e*P	**Pn**	**21 41 23.0**	**+0.2**
	24nm,1.4s						
OPO	**Ambohidratompo**	**18.50**	**263**	P	**Pn**	**21 41 23.2**	**+0.1**
OPO	**Ambohidratompo**	**18.50**	**263**	P	**Pn**	**21 41 23.2**	**+0.1**
	0.4nm,0.3s,baz=95,slow=13,SNR=5.6						
OPO				LR	LR	21 46 41.6	
	comp=Z,925nm,19.7s,baz=71,slow=31						
KMBO	**Kilima Mbogo**	**33.02**	**296**	LR	LR	21 54 32.8	
	comp=Z,807nm,18.9s,baz=98,slow=32						
LSZ	**Lusaka**	**36.87**	**267**	P	**P**	**21 44 15.0**	**-0.2**
	1.1nm,0.7s,baz=52,slow=12,SNR=2.9						
PSI	**Prapat**	**37.64**	**61**	LR	LR	21 57 01.3	
	comp=Z,422nm,18.5s,baz=204,slow=32						
LBTB	**Lobatse**	**38.87**	**251**	*e*P	**P**	**21 44 31.6**	**-0.5**
	9.8nm,0.8s						
LBTB	**Lobatse**	**38.87**	**251**	P	**P**	**21 44 31.6**	**-0.5**
	5.8nm,0.8s,baz=94,slow=8.7,SNR=10.0						
CMAR	**Chiang Mai Arr**	**47.70**	**43**	P	**P**	**21 45 43.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**47.70**	**43**	P	**P**	**21 45 43.1**	**-0.1**
	2.3nm,0.8s,baz=236,slow=8.6,SNR=16						
CMAR				LR	LR	22 03 08.0	
	comp=Z,174nm,18.1s,baz=226,slow=33						
KOLN	**Koldanda**	**47.74**	**21**	*e*P	**P**	**21 45 43.7**	**+0.1**
	12nm,0.8s						
PYUN	**Piuthan**	**47.84**	**20**	*e*P	**P**	**21 45 44.4**	**0.0**
	28nm,1.0s						
NWAO	**Narrogin (SRO)**	**47.99**	**119**	LR	LR	22 03 10.9	
	comp=Z,390nm,18.5s,baz=296,slow=33						
RAMN	**Ramite**	**48.09**	**24**	*e*P	**P**	**21 45 46.5**	**+0.1**
	22nm,0.9s						
DMN	**Daman**	**48.12**	**22**	*e*P	**P**	**21 45 46.8**	**+0.2**
PKI	**Pulchoki**	**48.19**	**23**	*e*P	**P**	**21 45 46.7**	**-0.6**
PKIN	**Phulchoki**	**48.19**	**23**	*e*P	**P**	**21 45 46.3**	**-0.9**
	22nm,1.4s						
ODAN	**Odare**	**48.32**	**25**	*e*P	**P**	**21 45 47.8**	**-0.4**
DANN	**Dangsing**	**48.33**	**20**	*e*P	**P**	**21 45 47.9**	**-0.4**
	12nm,0.8s						
KKN	**Kakani**	**48.34**	**22**	*e*P	**P**	**21 45 48.2**	**-0.1**
	14nm,0.9s						
GUN	**Gumba**	**48.67**	**23**	*e*P	**P**	**21 45 51.0**	**0.0**
	18nm,0.6s						
TAPN	**Taplejung**	**48.88**	**25**	*e*P	**P**	**21 45 52.5**	**-0.1**
	17nm,1.2s						
MAW	**Mawson**	**50.34**	**182**	P	**P**	**21 46 03.5**	**+0.8**
	4.0nm,0.9s,baz=14,slow=8.3,SNR=7.1						
MAW				LR	LR	22 02 00.7	
	comp=Z,479nm,21.3s,baz=346,slow=30						
EIL	**Elat**	**55.78**	**326**	LR	LR	22 07 09.8	
	comp=Z,219nm,19.5s,baz=271,slow=32						
FITZ	**Fitzroy Crossi**	**56.05**	**100**	P	**P**	**21 46 44.7**	**-0.9**
	3.3nm,0.8s,baz=298,slow=10.0,SNR=3.4						
ASF	**Jabal al Asfar**	**56.82**	**330**	LR	LR	22 09 23.7	
	comp=Z,125nm,18.4s,baz=174,slow=34						
MMAI	**Mount Meron Ar**	**58.23**	**329**	LR	LR	22 08 02.6	
	comp=Z,115nm,19.1s,baz=150,slow=32						
EKS2	**Erkin-Say**	**60.02**	**6**	*e*P	**P**	**21 47 12.3**	**-0.8**
	14nm,1.9s						
AAK	**Ala-Archa**	**60.07**	**7**	*e*P	**P**	**21 47 13.1**	**-0.5**
	2.8nm,1.1s						
AAK	**Ala-Archa**	**60.07**	**7**	P	**P**	**21 47 13.5**	**0.0**
	0.4nm,0.4s,baz=187,slow=9.1,SNR=2.9						
TKM2	**Tokmak 2**	**60.49**	**8**	*e*P	**P**	**21 47 16.0**	**-0.4**
	3.7nm,0.8s						
GNI	**Garni**	**60.66**	**341**	*e*P	**P**	**21 47 16.8**	**-0.8**
	58nm,1.8s						
ASAR	**Alice Springs**	**62.89**	**108**	P	**P**	**21 47 32.3**	**-0.6**
ASAR	**Alice Springs**	**62.89**	**108**	P	**P**	**21 47 32.3**	**-0.6**
	3.9nm,0.8s,baz=267,slow=6.2,SNR=32						
ASAR				LR	LR	22 11 48.8	
	comp=Z,1µm,18.2s,baz=278,slow=33						
LZH	**Lanzhou**	**63.73**	**33**	*e*P	**P**	**21 47 37.5**	**-0.8**
LZH				pP	**pP**	**21 47 45.1**	**+0.1**
LZH				sP	**sP**	**21 47 48.5**	**+0.9**
LZH				pmax	pmax		
	comp=Z,17nm,1.4s						
LZH				pmax	pmax		
	comp=Z,73nm,4.6s						
LZH				LR	LR		
	comp=N,170nm,14.5s						
LZH				LR	LR		
	comp=E,110nm,14.1s						
LZH				LR	LR		
	comp=Z,180nm,18.0s						
WMQ	**Urumqi**	**63.82**	**17**	*e*P	**P**	**21 47 39.4**	**+0.8**
WRA	**Warramunga Arr**	**63.87**	**104**	P	**P**	**21 47 39.3**	**-0.2**
WRA

	comp=Z,0.9nm,0.6s,baz=126,slow=4.7,SNR=2.9							
AKASG				LR	LR	22 21 18.9		
	comp=Z,56nm,20.6s,baz=65,slow=35							
KEST	**Kesra**	**75.59**	**315**	LR	LR	22 20 15.4		
	comp=Z,85nm,20.9s,baz=201,slow=34							
KSRS	**Korea Array**	**79.30**	**45**	LR	LR	22 22 12.1		
	comp=Z,69nm,20.4s,baz=35,slow=34							
GERES	**GERESS Array B**	**80.85**	**328**	P	P	21 49 26.1	+5.9	
GERES	**GERESS Array B**	**80.85**	**328**	P	P	21 49 26.1	+5.9	
	comp=Z,0.1nm,0.3s,baz=160,slow=8.1,SNR=4.2							
MDT	**Midelt**	**84.27**	**307**	LR	LR	22 26 59.5		
	comp=Z,180nm,20.2s,baz=308,slow=36							
USRK	**Ussuriysk Arra**	**85.38**	**41**	P	**P**	**21 49 40.4**	**-3.1**	
	comp=Z,1.3nm,0.8s,baz=197,slow=2.0,SNR=5.0							
MJAR	**Matsushiro Arr**	**86.14**	**50**	P	**P**	**21 49 47.5**	**-0.1**	
MJAR	**Matsushiro Arr**	**86.14**	**50**	P	**P**	**21 49 47.5**	**-0.1**	
	comp=Z,2.7nm,0.9s,baz=231,slow=5.7,SNR=8.5							
MJAR				LR	LR	22 28 07.0		
	comp=Z,49nm,21.6s,baz=120,slow=36							
ESDC	**Sonseca Array**	**86.69**	**313**	LR	LR	22 31 31.2		
	comp=Z,119nm,18.4s,baz=140,slow=38							
ARCES	**ARCESS Array B**	**91.34**	**347**	P	**P**	**21 50 11.1**	**-0.3**	
ARCES	**ARCESS Array B**	**91.34**	**347**	P	**P**	**21 50 11.1**	**-0.3**	
	comp=Z,1.9nm,1.0s,baz=145,slow=3.3,SNR=4.7							
ARCES				LR	LR	22 33 24.3		
	comp=Z,103nm,18.1s,baz=252,slow=37							
INK	**Inuvik**	**127.44**	**9**	PKP	**PKPdf**	**21 56 09.7**	**-0.8**	
INK	**Inuvik**	**127.44**	**9**	PKP	**PKPdf**	**21 56 09.7**	**-0.8**	
	comp=Z,0.9nm,1.0s,baz=1.2,slow=2.9,SNR=3.1							
ILAR	**Eielson Array**	**127.48**	**17**	PKP	**PKPdf**	**21 56 11.4**	**+0.7**	
ILAR	**Eielson Array**	**127.48**	**17**	PKP	**PKPdf**	**21 56 11.4**	**+0.7**	
	comp=Z,0.6nm,1.0s,baz=295,slow=2.6,SNR=4.6							
YKA	**Yellowknife Ar**	**134.84**	**1**	PKP	**PKPdf**	**21 56 25.3**	**+0.7**	
YKA	**Yellowknife Ar**	**134.84**	**1**	PKP	**PKPdf**	**21 56 25.3**	**+0.7**	
	comp=Z,0.3nm,0.7s,baz=351,slow=2.3,SNR=5.0							
COWI	**Conover**	**144.90**	**330**	*e*PKPdf	**PKPdf**	**21 56 43.4**	**-0.1**	
BSMT	**Bassoo Peak**	**149.51**	**2**	*e*PKPab	**PKPab**	**21 57 00.6**	**-0.1**	
SWMT	**Swartz Lake**	**149.87**	**1**	*e*PKPdf	**PKPdf**	**21 56 51.1**	**-0.6**	
SWMT				*e*PKPab	**PKPab**	**21 57 03.1**	**+1.0**	
SLMT	**Seeley Lake**	**150.14**	**0**	*e*PKPdf	**PKPdf**	**21 56 51.9**	**-0.4**	
RSSD	**Black Hills**	**152.11**	**345**	*e*PKPdf	**PKPdf**	**21 56 55.1**	**-0.4**	
PDAR	**Pinedale Array**	**154.40**	**353**	PKPbc	**PKPbc**	**21 57 07.9**	**+0.7**	
PDAR	**Pinedale Array**	**154.40**	**353**	PKPbc	**PKPbc**	**21 57 07.9**	**+0.7**	
	comp=Z,0.7nm,0.9s,baz=104,slow=3.1,SNR=4.2							

*IDC **11** 22:00:49.4±1.8,37.7ˇ73N×36.4ˇ40E, h0km, mb2.9/2, mb1 2.9/4, mb1mx2.9/25, mbtmp2.9/4, ML3.0/2, Error ellipse: s-maj=25.5km s-min=16.7km az=62.0*
*DDA **11** 22:00:51.8,37.5ˇ52N×35.7ˇ0E, h29km, MD3.4*
*ISK **11** 22:00:52.1,37.6ˇ56N×35.6ˇ8E, h5km, MD3.6*
*CSEM **11** 22:00:52.5±0.1,37.5ˇ4N×35.7ˇ1E, h2km, MD3.6, Error ellipse: s-maj=3.4km s-min=3.2km az=61.0*
*ISCJB **11** 22:00:52.3±0.5,37.5ˇ4N±0.0ˇ2×35.6ˇ9E±0.0ˇ2, h4km±4km, mb2.9/2, Error ellipse: s-maj=3.5km s-min=3.1km az=25.1*

ISC 11 22:00:53.1±1.0,37.5ˇ2N±0.0ˇ2×35.0ˇ7E±0.0ˇ2, h8km±8km, n85,σ0.099/111, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.11**	**109**	*e*Pg	**Pg**	**22 00 55.6**	**0.0**
KOZT	**Kozan**	**0.11**	**109**	*e*Pg	**Pg**	**22 00 55.6**	**0.0**
CEYT	**Ceyhan**	**0.51**	**176**	*e*PG	**Pg**	**22 01 03.2**	**+0.3**
CEYT				*e*SG	**Sb**	**22 01 11.7**	**0.0**
CEYT	**Ceyhan**	**0.51**	**176**	*e*Pg	**Pg**	**22 01 03.2**	**+0.3**
CEYT				*e*Sg	**Sb**	**22 01 11.7**	**0.0**
ANDN	**Andirin**	**0.52**	**83**	*i* P	**Pg**	**22 01 02.3**	**-0.8**
ANDN				*i* S	**Sb**	**22 01 11.7**	**-0.5**
ANDN	**Andirin**	**0.52**	**83**	*i* P	**Pg**	**22 01 02.3**	**-0.8**
ANDN				*i* S	**Sb**	**22 01 11.7**	**-0.5**
YURE	**YUREGIR**	**0.69**	**184**	*i* P	**Pg**	**22 01 06.2**	**-0.2**
YURE				*i* S	**Sb**	**22 01 17.1**	**0.0**
YURE	**YUREGIR**	**0.69**	**184**	*i* P	**Pg**	**22 01 06.2**	**-0.2**
YURE				*i* S	**Sb**	**22 01 17.1**	**0.0**
GULE	**Gulek**	**0.77**	**253**	*i* P	**Pg**	**22 01 06.5**	**-1.4**
GULE				*i* S	**Sg**	**22 01 18.8**	**+0.8**
GULE	**Gulek**	**0.77**	**253**	*i* P	**Pg**	**22 01 06.5**	**-1.4**
GULE				*i* S	**Sg**	**22 01 18.8**	**+0.8**
AYKD	**Aykdinkavak**	**0.89**	**96**	*i* P	**Pg**	**22 01 08.4**	**-1.7**
AYKD				*i* S	**Sg**	**22 01 22.1**	**+0.5**
KMRS	**Kahramanmaras**	**0.95**	**90**	*e*PG	**Pg**	**22 01 10.5**	**+1.0**
KMRS	**Kahramanmaras**	**0.95**	**90**	*e*Pg	**Pg**	**22 01 10.5**	**-1.0**
KRTS	**Karatas**	**0.97**	**196**	*e*PG	**Pb**	**22 01 12.0**	**-0.2**
KRTS	**Karatas**	**0.97**	**196**	*e*Pg	**Pb**	**22 01 12.0**	**-0.2**
NIG	**Nigde**	**1.05**	**305**	*e*PG	**Pg**	**22 01 11.7**	**-1.5**
NIG	**Nigde**	**1.05**	**305**	*e*Pg	**Pg**	**22 01 11.7**	**-1.5**
SARI	**SarD1z-Kayseri**	**1.06**	**32**	*e*PG	**Pg**	**22 01 12.4**	**-1.0**
COBT	**Iskenderun**	**1.09**	**156**	*i* P	**Pg**	**22 01 12.3**	**-1.7**
COBT				*i* S	**Sg**	**22 01 27.2**	**-1.0**
COBT	**Iskenderun**	**1.09**	**156**	*i* P	**Pg**	**22 01 12.3**	**-1.7**
COBT				*i* S	**Sg**	**22 01 27.2**	**-1.0**
GAZ	**Gaziantep**	**1.25**	**105**	*e*PN	**Pb**	**22 01 16.8**	**-0.2**
GAZ	**Gaziantep**	**1.25**	**105**	*e*Pn	**Pb**	**22 01 16.8**	**-0.2**
PINB	**Pinarbasi**	**1.29**	**25**	*i* P	**Pn**	**22 01 16.0**	**-1.6**
PINB				*i* S	**Sn**	**22 01 36.4**	**+1.2**
PINB	**Pinarbasi**	**1.29**	**25**	*i* P	**Pn**	**22 01 16.0**	**-1.6**
PINB				*i* S	**Sn**	**22 01 36.4**	**+1.2**
KUZU	**Kuzuini**	**1.32**	**124**	*i* P	**Pn**	**22 01 16.6**	**-1.4**
KUZU				*i* S	**Sb**	**22 01 34.3**	**-1.1**
KUZU	**Kuzuini**	**1.32**	**124**	*i* P	**Pn**	**22 01 16.6**	**-1.4**
KUZU				*i* S	**Sb**	**22 01 34.3**	**-1.1**
BNN	**Bunyan**	**1.34**	**5**	*e*PN	**Pn**	**22 01 17.3**	**-1.0**
BNN	**Bunyan**	**1.34**	**5**	*e*Pn	**Pn**	**22 01 17.3**	**-1.0**
AVNT	**Avonos**	**1.43**	**332**	*i* P	**Pn**	**22 01 18.4**	**-1.1**
AVNT				*i* S	**Sb**	**22 01 37.2**	**-1.3**
AVNT	**Avonos**	**1.43**	**332**	*i* P	**Pn**	**22 01 18.4**	**-1.1**
AVNT				*i* S	**Sb**	**22 01 37.2**	**-1.3**
GZT	**Gaziantep**	**1.49**	**96**	*i* P	**Pn**	**22 01 19.2**	**-1.2**
GZT				*i* S	**Sg**	**22 01 41.0**	**-0.1**
YAYL	**Yayladag**	**1.51**	**167**	*i* P	**Pn**	**22 01 18.9**	**-1.7**
YAYL				*i* S	**Sn**	**22 01 39.7**	**-0.9**
YAYL	**Yayladag**	**1.51**	**167**	*i* P	**Pn**	**22 01 18.9**	**-1.7**
YAYL				*i* S	**Sn**	**22 01 39.7**	**-0.9**
DARE	**Darende-Malaty**	**1.76**	**53**	*e*PN	**Pn**	**22 01 24.0**	**0.0**
SULT	**Sultanhani-AKS**	**1.86**	**292**	*e*PN	**Pn**	**22 01 24.9**	**-0.5**
SULT	**Sultanhani-AKS**	**1.86**	**292**	*e*Pn	**Pn**	**22 01 24.9**	**-0.5**
AKCD	**Akcadag**	**1.92**	**65**	*i* P	**Pn**	**22 01 25.6**	**-0.7**
AKCD				*i* S	**Sn**	**22 01 51.1**	**+0.4**
AKCD	**Akcadag**	**1.92**	**65**	*i* P	**Pn**	**22 01 25.6**	**-0.7**
AKCD				*i* S	**Sn**	**22 01 51.1**	**+0.4**
ATAB	**Bozova**	**2.06**	**90**	*i* P	**Pn**	**22 01 29.4**	**+1.3**
ATAB				*i* S	**Sb**	**22 01 56.8**	**+0.1**
ATAB	**Bozova**	**2.06**	**90**	*i* P	**Pn**	**22 01 29.4**	**+1.3**
ATAB				*i* S	**Sb**	**22 01 56.8**	**+0.1**
YOZ	**Yozgat**	**2.14**	**352**	*e*PN	**Pn**	**22 01 29.0**	**-0.3**
YOZ	**Yozgat**	**2.14**	**352**	*e*Pn	**Pn**	**22 01 29.0**	**-0.3**
MYA	**Malataya**	**2.30**	**69**	*e*PN	**Pn**	**22 01 31.8**	**+0.3**
MYA	**Malataya**	**2.30**	**69**	*e*Pn	**Pn**	**22 01 31.8**	**+0.3**
EREN	**Erenkoy**	**2.33**	**212**	*e*PN	**Pn**	**22 01 32.5**	**+0.7**
EREN	**Erenkoy**	**2.33**	**212**	*e*Pn	**Pn**	**22 01 32.5**	**+0.7**
ERMK	**Ermenek**	**2.39**	**249**	*i* P	**Pb**	**22 01 35.2**	**-1.4**
ERMK				*i* S	**Sg**	**22 02 09.2**	**-0.8**
ERMK	**Ermenek**	**2.39**	**249**	*i* P	**Pb**	**22 01 35.2**	**-1.4**
URFA	**Urfa**	**2.48**	**91**	*e*PN	**Pn**	**22 01 34.8**	**+0.9**
URFA	**Urfa**	**2.48**	**91**	*e*Pn	**Pn**	**22 01 34.8**	**+0.9**
KONT	**Konya--Tatoy**	**2.68**	**280**	*e*PN	**Pn**	**22 01 36.9**	**+0.3**
KONT	**Konya--Tatoy**	**2.68**	**280**	*e*Pn	**Pn**	**22 01 36.9**	**+0.3**
LADK	**Ladik-KONYA**	**2.73**	**286**	*e*PN	**Pn**	**22 01 37.4**	**+0.1**
LADK	**Ladik-KONYA**	**2.73**	**286**	*e*Pn	**Pn**	**22 01 37.4**	**+0.1**
BRTR	**Keskin Array B**	**2.73**	**324**	Pn	**Pn**	**22 01 38.0**	**+0.5**
	0.7nm,0.3s,baz=161,slow=14,SNR=19						
BRTR				Pg	**Pb**	**22 01 42.9**	**+0.6**
	1.3nm,0.3s,baz=136,slow=18,SNR=25						
BRTR				Lg	Lg	22 02 22.4	
	1.8nm,0.3s,baz=72,slow=33,SNR=8.0						
CORM	**Corum**	**2.79**	**343**	*e*PN	**Pn**	**22 01 37.8**	**-0.4**
CORM	**Corum**	**2.79**	**343**	*e*Pn	**Pn**	**22 01 37.8**	**-0.4**
AFSR	**Afˇar-Bala (A**	**2.83**	**314**	*e*PN	**Pn**	**22 01 38.5**	**-0.1**
AFSR	**Afˇar-Bala (A**	**2.83**	**314**	*e*Pn	**Pn**	**22 01 38.5**	**-0.1**
LFK	**Lefkose**	**2.83**	**219**	*e*PN	**Pn**	**22 01 39.9**	**+1.2**
LFK	**Lefkose**	**2.83**	**219**	*e*Pn	**Pn**	**22 01 39.9**	**+1.2**
ILIC	**ilic-Erzincan**	**2.97**	**48**	*e*PN	**Pn**	**22 01 40.8**	**+0.2**
ILIC	**ilic-Erzincan**	**2.97**	**48**	*e*Pn	**Pn**	**22 01 40.8**	**+0.2**
RSDY	**Resadiye-TOKAT**	**3.15**	**23**	*e*PN	**Pn**	**22 01 43.4**	**+0.4**
RSDY	**Resadiye-TOKAT**	**3.15**	**23**	*e*Pn	**Pn**	**22 01 43.4**	**+0.4**
CSS	**Prodhromos**	**3.19**	**218**	*e*PN	**Pn**	**22 01 44.5**	**+0.9**
CSS	**Prodhromos**	**3.19**	**218**	*e*Pn	**Pn**	**22 01 44.5**	**+0.9**
ANTO	**Ankara**	**3.27**	**317**	*e*PN	**Pn**	**22 01 45.0**	**+0.2**
ANTO	**Ankara**	**3.27**	**317**	*e*Pn	**Pn**	**22 01 45.0**	**+0.2**
LEF	**Lefka**	**3.30**	**224**	*e*PN	**Pn**	**22 01 46.4**	**+1.4**
LEF	**Lefka**	**3.30**	**224**	*e*Pn	**Pn**	**22 01 46.4**	**+1.4**
LOD	**Lodumlu**	**3.30**	**317**	*e*PN	**Pn**	**22 01 45.0**	**-0.2**
LOD	**Lodumlu**	**3.30**	**317**	*e*Pn	**Pn**	**22 01 45.0**	**-0.2**
CANT	**Cankiri**	**3.49**	**333**	*e*PN	**Pn**	**22 01 48.0**	**+0.3**
ERZN	**Erzincan**	**3.77**	**56**	*e*PN	**Pn**	**22 01 52.6**	**+0.9**
DIKM	**Dikmen**	**4.14**	**355**	*e*PN	**Pn**	**22 01 57.2**	**+0.5**
DIKM	**Dikmen**	**4.14**	**355**	*e*Pn	**Pn**	**22 01 57.2**	**+0.5**
MMAI	**Mount Meron Ar**	**4.50**	**183**	Pn	**Pn**	**22 02 01.4**	**-0.2**
	2.3nm,0.3s,baz=356,slow=12,SNR=6.3						
MMAI				Sn	**Sn**	**22 02 52.8**	**-1.4**
	4.1nm,0.3s,baz=349,slow=28,SNR=2.2						
MMAI				Lg	Lg	22 03 22.2	
	2.8nm,0.3s,baz=16,slow=28,SNR=2.0						
BAYT	**Ayd¨–ntepe-Bay**	**4.50**	**49**	*e*PN	**Pn**	**22 02 03.0**	**+1.2**
BAYT	**Ayd¨–ntepe-Bay**	**4.50**	**49**	*e*Pn	**Pn**	**22 02 03.0**	**+1.2**
ELL	**Elmali**	**4.69**	**262**	*e*PN	**Pn**	**22 02 05.7**	**+1.4**
ELL	**Elmali**	**4.69**	**262**	*e*Pn	**Pn**	**22 02 05.7**	**+1.4**
ASF	**Jabal al Asfar**	**5.42**	**169**	Pg	**Pb**	**22 02 27.7**	**-0.4**
	0.2nm,0.3s,baz=213,slow=23,SNR=2.5						
ASF				Lg	Lg	22 03 42.0	
	0.1nm,0.3s,baz=187,slow=18,SNR=2.7						
KEST	**Kesra**	**21.21**	**273**	P	**P**	**22 05 43.1**	**+3.8**
	0.5nm,0.9s,baz=72,slow=20,SNR=1.0						
MKAR	**Makanchi Array**	**35.31**	**60**	P	P	22 07 40.9	-7.7
	0.1nm,0.6s,baz=266,slow=10.0,SNR=1.2						

*IDC **11** 22:10:21.9±1.0,37.6ˇ60N×21.6ˇ60E, h0km, mb3.6/10, mb1 3.7/13, mb1mx3.5/32, mbtmp3.5/13, ML3.1/3, Error ellipse: s-maj=21.4km s-min=17.2km az=108.0*
*THE **11** 22:10:25.7,37.6ˇ68N×21.4ˇ42E, h0km±2km, ML3.5/4, Error ellipse: s-maj=2.5km s-min=0.8km az=247.0*
*ATH **11** 22:10:25.7,37.7ˇ0N×21.4ˇ40E, h23km±1km, MD3.5/31, ML3.2*
*CSEM **11** 22:10:25.1±0.2,37.6ˇ69N×21.3ˇ8E, h2km, MD3.5, Error ellipse: s-maj=3.6km s-min=2.3km az=56.0*
*ISCJB **11** 22:10:25.6±0.4,37.6ˇ68N±0.0ˇ2×21.3ˇ4E±0.0ˇ3, h21km±3km, mb3.6/11, Error ellipse: s-maj=3.6km s-min=2.6km az=147.4*

ISC 11 22:10:25.4±1.0,37.7ˇ0N±0.0ˇ2×21.3ˇ7E±0.0ˇ2, h14km±7km, n196,σ1.916/251, mb3.7/11, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.37**	**12**	P	**Pb**	**22 10 33.5**	**-0.3**
RLS				S	**Sb**	**22 10 39.7**	**+0.3**
RLS	**Riolos of Patr**	**0.37**	**12**	*e*PB	**Pb**	**22 10 33.7**	**-0.1**
RLS				*e*SB	**Sb**	**22 10 39.9**	**+0.5**
RLS	**Riolos of Patr**	**0.37**	**12**	P	**Pb**	**22 10 33.5**	**-0.3**
RLS				S	**Sb**	**22 10 39.7**	**+0.3**
KFL	**Anninata**	**0.62**	**312**	P	**Pb**	**22 10 37.9**	**-0.1**
KFL	**Anninata**	**0.62**	**312**	P	**Pb**	**22 10 37.9**	**-0.1**
KFL				S	**Sb**	**22 10 48.4**	**+1.8**
UPR	**University Cam**	**0.67**	**29**	P	**Pb**	**22 10 39.0**	**+0.1**
UPR	**University Cam**	**0.67**	**29**	*e*PN	**Pb**	**22 10 39.0**	**+0.1**
UPR	**University Cam**	**0.67**	**29**	P	**Pb**	**22 10 38.8**	**-0.1**
UPR				S	**Sb**	**22 10 48.5**	**+0.4**
ITM	**Ithomi**	**0.68**	**139**	P	**Pg**	**22 10 38.4**	**-0.2**
ITM	**Ithomi**	**0.68**	**139**	*e*PN	**Pg**	**22 10 38.5**	**-0.2**
ITM				*e*SN	**Sb**	**22 10 49.1**	**+0.8**
ITM	**Ithomi**	**0.68**	**139**	*e*Pn	**Pg**	**22 10 38.4**	**-0.2**
ITM				*e*Sn	**Sb**	**22 10 49.1**	**+0.8**
KLV	**Kalavryta, Ach**	**0.71**	**60**	*e*PN	**Pg**	**22 10 38.8**	**-0.4**
KLV	**Kalavryta, Ach**	**0.71**	**60**	*e*Pn	**Pg**	**22 10 38.8**	**-0.4**
LAKA	**Lakka**	**0.73**	**41**	P	**Pg**	**22 10 38.9**	**-0.6**
LAKA				S	**Sg**	**22 10 49.0**	**-0.1**
LAKA	**Lakka**	**0.73**	**41**	*e*PN	**Pg**	**22 10 39.4**	**-0.1**
LAKA				*e*SN	**Sb**	**22 10 50.2**	**+0.5**
LAKA	**Lakka**	**0.73**	**41**	P	**Pg**	**22 10 38.9**	**-0.6**
LAKA	**Lakka**	**0.73**	**41**	*e*Pn	**Pg**	**22 10 39.4**	**-0.1**
LAKA				S	**Sg**	**22 10 49.0**	**-0.1**
LAKA				*e*Sn	**Sb**	**22 10 50.2**	**+0.5**
PSA1	**Psathopyrgos**	**0.75**	**33**	*e*PN	**Pb**	**22 10 40.0**	**-0.2**
VLS	**Valsamata**	**0.78**	**308**	P	**Pg**	**22 10 40.3**	**-0.3**
VLS	**Valsamata**	**0.78**	**308**	*e*PB	**Pb**	**22 10 40.5**	**-0.3**
VLS				*e*SN	**Sn**	**22 10 54.1**	**+0.4**
VLS	**Valsamata**	**0.78**	**308**	*e*Pb	**Pb**	**22 10 40.5**	**-0.3**
VLS				S	**Sb**	**22 10 52.5**	**+1.1**
VLS				*e*Sn	**Sn**	**22 10 54.1**	**+0.4**
GUR	**Goura**	**0.81**	**72**	P	**Pg**	**22 10 40.0**	**-1.0**
GUR	**Goura**	**0.81**	**72**	*e*PN	**Pg**	**22 10 40.3**	**-0.7**
GUR				*e*SN	**Sb**	**22 10 52.1**	**0.0**
GUR	**Goura**	**0.81**	**72**	P	**Pg**	**22 10 40.1**	**-1.0**
GUR				*e*Sn	**Sb**	**22 10 52.1**	**0.0**
EFP	**Efpalio**	**0.84**	**30**	P	**Pg**	**22 10 41.2**	**-0.5**
EFP				S	**Sb**	**22 10 54.8**	**+1.7**
EFP	**Efpalio**	**0.84**	**30**	*e*PB	**Pg**	**22 10 41.3**	**-0.5**
EFP				*e*SN	**Sb**	**22 10 53.1**	**0.0**
EFP	**Efpalio**	**0.84**	**30**	P	**Pg**	**22 10 41.2**	**-0.5**
EFP				*e*Sn	**Sb**	**22 10 53.1**	**0.0**
EFP				S	**Sg**	**22 10 53.8**	**+1.0**
PYL	**PYLOS**	**0.85**	**160**	P	**Pg**	**22 10 41.2**	**-0.6**
PYL	**PYLOS**	**0.85**	**160**	*e*PB	**Pg**	**22 10 41.5**	**-0.3**
PYL				*e*SN	**Sb**	**22 10 54.9**	**+1.7**
PYL	**PYLOS**	**0.85**	**160**	P	**Pg**	**22 10 41.2**	**-0.6**
PYL	**PYLOS**	**0.85**	**160**	*e*Pb	**Pg**	**22 10 41.5**	**-0.3**
PYL				S	**Sg**	**22 10 53.1**	**+0.1**
PYL				*e*Sn	**Sb**	**22 10 54.9**	**+1.7**
VLX	**Vlachokerasia**	**0.86**	**112**	P	**Pg**	**22 10 41.6**	**-0.5**
VLX				S	**Sg**	**22 10 51.5**	**-2.0**
VLX	**Vlachokerasia**	**0.86**	**112**	*e*PN	**Pg**	**22 10 41.8**	**-0.3**
VLX				*e*SN	**Sb**	**22 10 54.6**	**+0.9**
VLX	**Vlachokerasia**	**0.86**	**112**	P	**Pg**	**22 10 41.6**	**-0.5**
VLX				S	**Sg**	**22 10 52.5**	**-1.0**
VLX				*e*Sn	**Sb**	**22 10 54.6**	**+0.9**
TRIZ	**Trizonia**	**0.87**	**39**	P	**Pg**	**22 10 41.1**	**-1.1**
TRIZ	**Trizonia**	**0.87**	**39**	*e*PB	**Pg**	**22 10 41.7**	**-0.5**
TRIZ				*e*SN	**Sb**	**22 10 54.7**	**+0.9**
TRIZ	**Trizonia**	**0.87**	**39**	P	**Pg**	**22 10 41.1**	**-1.1**
TRIZ	**Trizonia**	**0.87**	**39**	*e*Pb	**Pg**	**22 10 41.7**	**-0.5**
TRIZ				*e*Sn	**Sb**	**22 10 54.7**	**+0.9**
KALE	**Kalithea**	**0.92**	**41**	P	**Pg**	**22 10 42.4**	**-0.8**
KALE				S	**Sb**	**22 10 56.3**	**+0.9**
KALE	**Kalithea**	**0.92**	**41**	*e*PN	**Pb**	**22 10 43.0**	**-0.2**
KALE				*e*SN	**Sb**	**22 10 57.1**	**+1.7**
KALE	**Kalithea**	**0.92**	**41**	P	**Pg**	**22 10 42.4**	**-0.8**
KALE	**Kalithea**	**0.92**	**41**	*e*Pn	**Pb**	**22 10 43.0**	**-0.2**
KALE				S	**Sb**	**22 10 55.9**	**+0.5**
KALE				*e*Sn	**Sb**	**22 10 57.1**	**+1.7**
DSF	**Desfina**	**1.16**	**52**	P	**Pg**	**22 10 47.0**	**-0.7**
DSF	**Desfina**	**1.16**	**52**	P	**Pg**	**22 10 47.0**	**-0.7**
DYR	**Agios Nikonas**	**1.21**	**140**	P	**Pg**	**22 10 48.0**	**-0.6**
DYR	**Agios Nikonas**	**1.21**	**140**	*e*PN	**Pg**	**22 10 48.1**	**-0.6**
DYR				*e*SN	**Sb**	**22 11 04.4**	**+0.9**
DYR	**Agios Nikonas**	**1.21**	**140**	P	**Pg**	**22 10 48.0**	**-0.6**
DYR				S	**Sb**	**22 11 04.4**	**+0.9**
LKD2	**Lefkada island**	**1.23**	**333**	P	**Pg**	**22 10 48.0**	**-1.1**
LKD2	**Lefkada island**	**1.23**	**333**	*e*PB	**Pg**	**22 10 48.4**	**-0.7**
LKD2	**Lefkada island**	**1.23**	**333**	P	**Pg**	**22 10 48.0**	**-1.1**
LKD2	**Lefkada island**	**1.23**	**333**	*e*Pb	**Pg**	**22 10 48.4**	**-0.7**
LKD2				S	**Sn**	**22 11 07.3**	**+2.6**
EVR	**Evrytania**	**1.27**	**16**	P	**Pg**	**22 10 49.0**	**-0.8**
EVR	**Evrytania**	**1.27**	**16**	*e*PN	**Pb**	**22 10 49.2**	**+0.1**
EVR	**Evrytania**	**1.27**	**16**	P	**Pb**	**22 10 49.2**	**+0.1**
LTK	**Loutraki**	**1.30**	**75**	P	**Pg**	**22 10 49.2**	**-1.3**
LTK	**Loutraki**	**1.30**	**75**	*e*PN	**Pg**	**22 10 49.5**	**-1.0**
LTK	**Loutraki**	**1.30**	**75**	P	**Pg**	**22 10 49.2**	**-1.3**
LTK	**Loutraki**	**1.30**	**75**	*e*Pn	**Pg**	**22 10 49.5**	**-1.0**
MAKR	**Makrakomi, Fth**	**1.45**	**24**	P	**Pg**	**22 10 52.8**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.45**	**24**	P	**Pg**	**22 10 52.8**	**-0.4**
AXAR	**Agios Charalam**	**1.47**	**43**	P	**Pb**	**22 10 52.9**	**+0.3**
AXAR				S	**Sg**	**22 11 13.8**	**+0.9**
AXAR	**Agios Charalam**	**1.47**	**43**	P	**Pb**	**22 10 52.9**	**+0.3**
AXAR				S	**Sg**	**22 11 13.8**	**+0.9**
DIDY	**Didyma**	**1.48**	**98**	P	**Pn**	**22 10 52.4**	**+0.7**
DIDY				S	**Sg**	**22 11 13.3**	**+0.3**
DIDY	**Didyma**	**1.48**	**98**	P	**Pn**	**22 10 52.4**	**+0.7**
DIDY				S	**Sg**	**22 11 13.3**	**+0.3**
DID	**Didima**	**1.49**	**97**	P	**Pn**	**22 10 52.4**	**+0.6**
DID	**Didima**	**1.49**	**97**	*e*PN	**Pn**	**22 10 52.9**	**+1.1**
DID				*e*SN	**Sg**	**22 11 14.2**	**+0.7**
DID	**Didima**	**1.49**	**97**	*e*Pn	**Pn**	**22 10 52.9**	**+1.1**
DID				*e*Sn	**Sg**	**22 11 14.2**	**+0.7**
AGG	**Agios Georgios**	**1.52**	**29**	P	**Pg**	**22 10 54.1**	**-0.6**
AGG	**Agios Georgios**	**1.52**	**29**	*e*PN	**Pg**	**22 10 54.9**	**+0.2**
AGG	**Agios Georgios**	**1.52**	**29**	P	**Pg**	**22 10 54.1**	**-0.6**
AGG	**Agios Georgios**	**1.52**	**29**	*e*Pn	**Pg**	**22 10 54.9**	**+0.2**
VLI	**Veliai**	**1.58**	**127**	P	**Pb**	**22 10 54.7**	**+0.3**
VLI	**Veliai**	**1.58**	**127**	*e*PN	**Pb**	**22 10 54.8**	**+0.3**
VLI				*e*Sn	**Sn**	**22 11 14.5**	**+1.1**
VLI	**Veliai**	**1.58**	**127**	P	**Pb**	**22 10 54.7**	**+0.3**
VLI				*e*Sn	**Sn**	**22 11 14.5**	**+1.1**
LKR	**Lokris**	**1.60**	**53**	P	**Pn**	**22 10 54.0**	**+0.7**
LKR	**Lokris**	**1.60**	**53**	*e*PN	**Pn**	**22 10 54.2**	**+0.9**
LKR				*e*SN	**Sb**	**22 11 15.6**	**+0.8**
LKR	**Lokris**	**1.60**	**53**	*e*Pn	**Pn**	**22 10 54.2**	**+0.9**
LKR				*e*Sn	**Sb**	**22 11 15.6**	**+0.8**
ATAL	**Atalanti**	**1.64**	**52**	P	**Pn**	**22 10 54.4**	**+0.6**
ATAL	**Atalanti**	**1.64**	**52**	P	**Pn**	**22 10 54.4**	**+0.6**
NAIG	**Nisos Aigina**	**1.68**	**87**	*e*PN	**Pb**	**22 10 55.9**	**-0.2**
NAIG	**Nisos Aigina**	**1.68**	**87**	*e*Pn	**Pb**	**22 10 55.9**	**-0.2**
SMIA	**Simia**	**1.87**	**50**	P	**Pn**	**22 10 58.1**	**+1.1**
SMIA	**Simia**	**1.87**	**50**	P	**Pn**	**22 10 58.1**	**+1.1**
ATH	**Athens Observa**	**1.88**	**81**	P	**Pn**	**22 10 57.9**	**+0.8**
ATH	**Athens Observa**	**1.88**	**81**	*e*PB	**Pn**	**22 10 57.7**	**+0.6**
ATH	**Athens Observa**	**1.88**	**81**	P	**Pn**	**22 10 57.9**	**+0.8**
ATHU	**Athens Univers**	**1.93**	**81**	P	**Pn

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.05**	**239**	P	P	22 21 55.8	-1.0
	0.4nm,0.4s,baz=90,slow=10,SNR=2.9						
WRA	**Warramunga Arr**	**45.32**	**257**	P	P	22 22 40.2	+0.4
	0.7nm,1.0s,baz=90,slow=8.3,SNR=3.3						
ASAR	**Alice Springs**	**45.70**	**252**	P	P	22 22 42.7	-0.1
	0.8nm,0.5s,baz=88,slow=8.2,SNR=14						

IDC 11 22:29:37.2±5.1, 30°19S×178°55W, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.4/17, mbtmp3.2/2, Error ellipse: s-maj=299.0km s-min=73.4km az=167.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.64**	**267**	P	P	22 37 35.3	-0.3
	0.2nm,0.5s,baz=102,slow=7.3,SNR=3.7						
WRA	**Warramunga Arr**	**43.61**	**272**	P	P	22 37 43.5	0.0
	0.2nm,0.4s,baz=111,slow=8.1,SNR=7.0						
FINES	**FINESS Array B**	**144.79**	**340**	PKP	PKPbc	22 49 14.7	+0.5
	0.9nm,0.8s,baz=48,slow=2.8,SNR=4.5						

*ISCJB **11** 22:34:15.0±1.4, 31°.66N±0°.04×114°.50W±0°.09, h17km±20km, Error ellipse: s-maj=12.3km s-min=7.0km az=6.0*
*ECX **11** 22:34:17.4±0.7, 31°.68N×114°.63W, h15km, MD3.4, ML3.6*
ISC 11 22:34:14.9±1.5, 31°.64N±0°.04×114°.55W±0°.05, h18km±8km, n21, σ0°73/30, 4C-4D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.46**	**248**	⇑*eP*	**Pb**	**22 34 24.9**	**+0.4**
ECBX				*eS*	**Sb**	**22 34 31.2**	**+0.2**
ECBX				⇑*e*		22 34 32.5	
	comp=E,2μm,0.6s						
EMX	**El Mayor**	**0.68**	**300**	⇓*eP*	**Pb**	**22 34 28.2**	**0.0**
EMX				*eS*	**Sg**	**22 34 37.1**	**-0.3**
EMX				*e*		22 34 39.5	
	comp=N,2μm,0.2s						
EMX				⇓*e*		22 34 39.8	
	comp=E,3μm,0.4s						
SPX	**San Pedro Mart**	**0.98**	**233**	*eP*	**Pg**	**22 34 34.1**	**0.0**
SPX				*eS*	**Sn**	**22 34 47.7**	**-0.1**
SPX				⇓*e*		22 34 59.6	
	comp=N,842nm,0.6s						
SPX				⇑*e*		22 35 03.5	
	comp=E,949nm,0.9s						
CPBX	**Cerro Prieto**	**1.00**	**321**	*eP*	**Pb**	**22 34 33.8**	**0.0**
CPBX				*eS*	**Sb**	**22 34 46.4**	**-0.2**
RDX	**Rancho Dawling**	**1.22**	**284**	⇑*eP*	**Pn**	**22 34 37.2**	**-0.1**
RDX				*eS*	**Sb**	**22 34 52.3**	**-0.8**
RDX				⇓*e*		22 35 16.1	
	comp=N,622nm,0.8s						
GLA	**Glamis**	**1.42**	**351**	P	**Pn**	**22 34 40.1**	**+0.1**
	baz=1.5						
GLA				S	**Sn**	**22 34 57.7**	**-0.6**
	baz=1.5						
GLA	**Glamis**	**1.42**	**351**	P	**Pn**	**22 34 40.1**	**+0.1**
	baz=1.5						
GLA				S	**Sn**	**22 34 57.7**	**-0.6**
	baz=1.5						
214A	**Organ Pipe Nat**	**1.51**	**78**	P	**Pn**	**22 34 41.0**	**-0.2**
	baz=1.6						
214A	**Organ Pipe Nat**	**1.51**	**78**	P	**Pn**	**22 34 41.0**	**-0.2**
	baz=1.6						
DVTC	**Desert V Tower**	**1.66**	**308**	Sb	**Sg**	**22 35 09.1**	**+0.7**
	baz=1.7						
DVTC	**Desert V Tower**	**1.66**	**308**	Sb	**Sg**	**22 35 09.1**	**+0.7**
	baz=1.7						
MONP	**Monument Peak**	**2.01**	**309**	Sb	**Sg**	**22 35 19.6**	**-0.2**
	baz=2.0						
MONP	**Monument Peak**	**2.01**	**309**	Sb	**Sg**	**22 35 19.6**	**-0.2**
	baz=2.0						
BC3	**Big Chuckawall**	**2.15**	**339**	P	**Pn**	**22 34 50.5**	**+0.5**
	baz=2.2						
BC3	**Big Chuckawall**	**2.15**	**339**	P	**Pn**	**22 34 50.5**	**+0.5**
	baz=2.2						
Z14A	**Wintersburg**	**2.19**	**38**	P	**Pn**	**22 34 50.8**	**+0.4**
	baz=2.3						
Z14A	**Wintersburg**	**2.19**	**38**	P	**Pn**	**22 34 50.8**	**+0.4**
	baz=2.3						
109C	**Camp Elliot, M**	**2.49**	**301**	Pb	**Pb**	**22 35 00.5**	**+1.3**
	baz=2.5						
109C				Sb	**Sg**	**22 35 33.4**	**-1.7**
	baz=2.5						
109C	**Camp Elliot, M**	**2.49**	**301**	Pb	**Pb**	**22 35 00.5**	**+1.3**
	baz=2.5						
109C				Sb	**Sg**	**22 35 33.4**	**-1.7**
	baz=2.5						
IRM	**Iron Mountain**	**2.56**	**349**	P	**Pn**	**22 34 56.2**	**+0.6**
	baz=2.6						
IRM	**Iron Mountain**	**2.56**	**349**	P	**Pn**	**22 34 56.2**	**+0.6**
	baz=2.6						

*ISCJB **11** 22:35:47.9±0.6, 31°.70N±0°.04×114°.48W±0°.04, h11km, mb3.1/1, Error ellipse: s-maj=6.7km s-min=4.4km az=157.3*
*NEIC **11** 22:35:49.8, 31°.71N×114°.54W, h5km, ML4.1(ECX), After ECX.*
*ECX **11** 22:35:49.8±0.6, 31°.71N×114°.54W, h15km, MD4.0, ML4.1*
*IDC **11** 22:35:51.8±1.6, 31°.80N×114°.15W, h0km, mb3.3/1, mb1 3.8/6, mb1mx3.6/28, mbtmp3.5/6, ML3.8/4, Error ellipse: s-maj=28.3km s-min=11.2km az=33.0*
ISC 11 22:35:49.3±0.8, 31°.69N±0°.04×114°.53W±0°.03, h11km, n29, σ1°51/34, 12C-4D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ECBX	**El Chinero**	**0.50**	**244**	⇑*eP*	**Pg**	**22 35 58.9**	**0.0**
ECBX				*eS*	**Sg**	**22 36 05.7**	**+0.1**
ECBX				⇑*e*		22 36 06.5	
	comp=E,9μm,0.7s						
ECBX				⇑*e*		22 36 23.4	
	comp=N,8μm,0.6s						
EMX	**El Mayor**	**0.68**	**296**	*eP*	**Pg**	**22 36 01.6**	**-0.8**
EMX				*eS*	**Sg**	**22 36 11.0**	**-0.4**
EMX	**El Mayor**	**0.68**	**296**	⇑*eP*	**Pg**	**22 36 01.6**	**-0.8**
EMX				*eS*	**Sg**	**22 36 11.0**	**-0.4**
EMX				⇓*e*		22 36 14.1	
	comp=N,4μm,0.6s						
EMX				⇑*e*		22 36 32.5	
	comp=E,12μm,0.5s						
CPBX	**Cerro Prieto**	**0.98**	**318**	*eP*	**Pg**	**22 36 06.5**	**-1.7**
CPBX				*eS*	**Sg**	**22 36 19.0**	**-2.0**
CPBX				⇑*e*		22 36 54.5	
	comp=N,11μm,0.6s						
CPBX				⇑*e*		22 37 00.2	
	comp=E,15μm,0.9s						
SPX	**San Pedro Mart**	**1.03**	**232**	⇑*eP*	**Pg**	**22 36 07.9**	**-1.2**
SPX				*eS*	**Sb**	**22 36 22.1**	**-0.8**
SPX				⇓*e*		22 36 33.5	
	comp=N,3μm,0.7s						
SPX				⇓*e*		22 36 37.0	
	comp=E,4μm,0.7s						
RDX	**Rancho Dawling**	**1.23**	**282**	*eP*	**Pn**	**22 36 11.0**	**-1.6**
RDX	**Rancho Dawling**	**1.23**	**282**	⇑*eP*	**Pn**	**22 36 11.0**	**-1.6**
RDX				⇑*e*		22 36 40.7	
	comp=E,5μm,0.5s						
RDX				⇑*e*		22 36 41.4	
	comp=N,2μm,0.6s						
ZAX	**El Zacaton**	**1.50**	**264**	⇓*eP*	**Pn**	**22 36 15.2**	**-1.1**
RMX	**La Rumorosa**	**1.60**	**305**	*eP*	**Pn**	**22 36 16.5**	**-1.2**
RMX	**La Rumorosa**	**1.60**	**305**	*eP*	**Pn**	**22 36 16.5**	**-1.2**
ECNX	**Esteban Cantu**	**1.77**	**270**	*ePN*	**Pn**	**22 36 19.6**	**-0.3**
PBX	**Punta Banda**	**1.87**	**272**	*ePn*	**Pn**	**22 36 21.1**	**-0.3**
PBX	**Punta Banda**	**1.87**	**272**	⇑*ePN*	**Pn**	**22 36 21.1**	**-0.3**
CBX	**Cerro Bola**	**1.92**	**290**	*ePN*	**Pn**	**22 36 21.8**	**-0.3**
PFO	**Pinyon Flat Ob**	**2.51**	**320**	Pn	**Pb**	**22 36 34.6**	**+0.1**
PFO				Pg	**Pg**	**22 36 39.5**	**+2.0**
PFO				Lg	Lg	22 37 10.9	
PFO	**Pinyon Flat Ob**	**2.51**	**320**	Pn	**Pb**	**22 36 34.6**	**+0.1**
	baz=125,slow=12,SNR=1.8						
PFO				Pg	**Pg**	**22 36 39.5**	**+2.0**
	comp=N,3.3nm,0.3s,baz=140,slow=12,SNR=2.9						
PFO				Lg	Lg	22 37 10.9	
	comp=N,9.3nm,0.3s,baz=191,slow=5.5,SNR=4.9						
BNM	**Barren Site**	**7.08**	**68**	*ePn*	**Pn**	**22 37 33.2**	**+0.1**
BNM				*ePg*	**Pg**	**22 38 05.4**	**+0.5**
BNM				*eSg*	**Sg**	**22 39 34.5**	**-2.1**
MVCO	**Mesa Verde**	**7.42**	**40**	*ePn*	**Pn**	**22 37 37.9**	**+0.1**
MVCO				*eSg*	**Sg**	**22 39 46.3**	**-1.3**
PV04	**Paradox Valley**	**8.12**	**33**	*ePn*	**Pn**	**22 37 47.9**	**+0.6**
PV04				*eSg*	**Sg**	**22 40 05.3**	**-4.6**
ELK	**Elko**	**9.06**	**357**	Pn	Pn	22 38 03.6	+3.5
ELK				Lg	Lg	22 40 37.4	
ELK	**Elko**	**9.06**	**357**	Pn	Pn	22 38 03.6	+3.5
	comp=N,0.1nm,0.3s,baz=196,slow=15,SNR=2.8						
ELK				Lg	Lg	22 40 37.4	
	comp=N,0.1nm,0.3s,baz=179,slow=7.0,SNR=2.8						
TXAR	**Lajitas Array**	**9.66**	**101**	Pn	**Pn**	**22 38 09.6**	**+1.3**
TXAR				Lg	Lg	22 40 52.8	
TXAR	**Lajitas Array**	**9.66**	**101**	Pn	**Pn**	**22 38 09.6**	**+1.3**
	comp=N,0.5nm,0.3s,baz=280,slow=13,SNR=9.9						
TXAR				Lg	Lg	22 40 52.8	
	comp=N,0.2nm,0.3s,baz=277,slow=31,SNR=7.4						
PDAR	**Pinedale Array**	**11.74**	**18**	Pn	Pn	22 38 40.8	+3.8
PDAR	**Pinedale Array**	**11.74**	**18**	Pn	Pn	22 38 40.8	+3.8
	comp=N,0.1nm,0.3s,baz=186,slow=15,SNR=2.5						
NEW	**Newport**	**16.67**	**354**	Pn	**P**	**22 39 47.8**	**+2.5**
NEW	**Newport**	**16.67**	**354**	Pn	**P**	**22 39 47.8**	**+2.5**
	comp=N,0.2nm,0.3s,baz=174,slow=12,SNR=5.1						
ILAR	**Eielson Array**	**38.66**	**338**	P	P	22 43 16.4	+3.9
ILAR	**Eielson Array**	**38.66**	**338**	P	P	22 43 16.4	+3.9
	comp=N,0.3nm,0.7s,baz=146,slow=7.8,SNR=4.2						

*IDC **11** 22:49:05.3±0.8, 7°.71S×128°.42E, h0km, mb3.9/9, mb1 4.2/12, mb1mx4.0/21, mbtmp4.0/12, ML4.4/3, MS3.7/2, Ms1 3.7/2, ms1mx2.7/3, Error ellipse: s-maj=41.0km s-min=15.9km az=87.0*
*NEIC **11** 22:49:10.0±0.3, 7°.82S×128°.36E, h35km, mb4.6/4, Error ellipse: s-maj=13.9km s-min=6.1km az=75.0*
*AUST **11** 22:49:19.7, 8°.48S×128°.55E, h35km*
ISC 11 22:49:10.7±0.6, 7°.90S±0°.06×128°.5E±0°.1, h44km, n49, σ1°77/43, mb3.9/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.54**	**153**	P	Pn	22 50 37.3	+6.5
	baz=5.0,SNR=38						
MTN				S	Sn	22 51 41.0	+7.7
	baz=5.0,SNR=6.8						
KDU	**Kakadu**	**6.14**	**141**	P	Pn	22 50 45.3	+6.3
	baz=5.7,SNR=23						
FAKI	**Fak Fak**	**6.18**	**37**	P	Pn	22 50 46.3	+6.8
	baz=6.7,SNR=10						
KNRA	**Kununurra**	**7.74**	**178**	P	Pn	22 51 04.8	+3.9
	baz=7.2,SNR=38						
KNRA				S	**Sn**	**22 52 27.7**	**+0.4**
	baz=7.2,SNR=8.1						
FITZ	**Fitzroy Crossi**	**10.53**	**195**	Pn	**Pn**	**22 51 39.8**	**+0.7**
	2.9nm,0.3s,baz=30,slow=11,SNR=50						
FITZ				Sn	**Sn**	**22 53 34.5**	**-1.3**
	2.8nm,0.3s,baz=330,slow=20,SNR=6.3						
FITZ				LR	LR	22 56 32.3	
	comp=Z,73nm,20.1s,baz=281,slow=42						
FITZ	**Fitzroy Crossi**	**10.53**	**195**	P	**Pn**	**22 51 39.9**	**+0.7**
	baz=10.0,SNR=39						
WRAB	**Tennant Creek**	**13.23**	**155**	*ePn*	**Pn**	**22 52 17.9**	**+1.7**
	9.2nm,0.6s						
WRAB				*eSn*	**Sn**	**22 54 39.4**	**-2.6**
WRA	**Warramunga Arr**	**13.23**	**155**	Pn	**Pn**	**22 52 17.0**	**+0.8**
WRA				Sn	**Sn**	**22 54 40.2**	**-1.8**
WRA	**Warramunga Arr**	**13.23**	**155**	Pn	**Pn**	**22 52 17.0**	**+0.8**
	2.1nm,0.3s,baz=325,slow=13,SNR=48						
WRA				Sn	**Sn**	**22 54 40.2**	**-1.8**
	4.0nm,0.3s,baz=326,slow=25,SNR=12						
JAY	**Jayapura**	**13.25**	**67**	S	S	22 55 22.3	+17
	baz=14,SNR=3.2						
COEN	**Coen**	**15.59**	**114**	P	Pn	22 52 36.4	-11
	baz=15,SNR=13						
MBWA	**Marble Bar**	**15.69**	**212**	*ePn*	**Pn**	**22 52 47.5**	**-1.4**
	60nm,1.4s						
MBWA				*eSn*	Sn	22 55 30.8	-11
PALU	**Palau**	**16.26**	**22**	S	S	22 56 16.9	+10
	baz=17,SNR=3.3						
AS31	**Alice Springs**	**16.51**	**162**	*ePn*	**P**	**22 53 00.5**	**-0.9**
AS31				*eSn*	**Sn**	**22 55 58.2**	**-3.4**
ASAR	**Alice Springs**	**16.51**	**162**	Pn	**Pn**	**22 52 59.8**	**+0.5**
ASAR				Sn	**Sn**	**22 55 59.4**	**-2.3**
ASAR	**Alice Springs**	**16.51**	**162**	Pn	**Pn**	**22 52 59.8**	**+0.5**
	1.3nm,0.3s,baz=334,slow=9.3,SNR=53						
ASAR				Sn	**Sn**	**22 55 59.4**	**-2.3**
	0.9nm,0.3s,baz=329,slow=16,SNR=5.8						
QIS	**Mount Isa**	**16.53**	**141**	S	**Sn**	**22 55 57.2**	**-5.1**
	baz=16,SNR=7.0						
MTSU	**Mount Surprise**	**18.43**	**125**	P	Pn	22 53 30.2	+7.2
	baz=18,SNR=6.7						
MEEK	**Meekatharra**	**20.89**	**206**	P	Pn	22 53 51.4	-0.9
	baz=20,SNR=7.0						
FORT	**Forrest**	**22.77**	**181**	P	P	22 54 18.5	+9.0
	baz=22,SNR=6.8						
QLP	**Quilpie**	**23.83**	**143**	P	P	22 54 25.0	+5.1
	baz=23,SNR=4.8						
MORW	**Morawa**	**24.12**	**208**	P	**P**	**22 54 24.7**	**+2.2**
	baz=24,SNR=5.5						
BBOO	**Buckleboo**	**25.76**	**165**	P	**P**	**22 54 40.8**	**+3.4**
	baz=25,SNR=5.0						
STKA	**Stephens Creek**	**26.79**	**155**	*ePn*	**P**	**22 54 48.7**	**+2.0**
	0.5nm,0.7s						
STKA	**Stephens Creek**	**26.79**	**155**	P	**P**	**22 54 50.1**	**+3.4**
	1.0nm,0.5s,baz=319,slow=13,SNR=4.5						
NWAO	**Narrogin (SRO)**	**27.02**	**201**	*eP*	**P**	**22 54 50.0**	**+1.2**
	16nm,1.1s						
NWAO	**Narrogin (SRO)**	**27.02**	**201**	P	**P**	**22 54 50.2**	**+1.4**
	7.4nm,0.8s,baz=16,slow=7.4,SNR=3.2						
CMSA	**Cobar Meteorol**	**28.45**	**148**	P	P	22 55 06.3	+4.7
	baz=28,SNR=5.8						
DZM	**Mont Dzumac**	**39.11**	**115**	*eP*	**P**	**22 56 35.8**	**+1.5**
	10nm,0.9s						
CHTO	**Chiang Mai**	**39.44**	**313**	*eP*	**P**	**22 56 34.9**	**-2.0**
	1.8nm,0.9s						
KSAR	**Wonju Array Be**	**45.10**	**359**	P	**P**	**22 57 22.9**	**+0.2**
KSRS	**Korea Array**	**45.11**	**359**	P	**P**	**22 57 22.9**	**+0.1**
	0.7nm,0.4s,baz=177,slow=9.1,SNR=4.7						
MJAR	**Matsushiro Arr**	**45.13**	**11**	P	**P**	**22 57 21.4**	**-1.6**
MJAR	**Matsushiro Arr**	**45.13**	**11**	P	**P**	**22 57 21.4**	**-1.6**
	1.4nm,0.8s,baz=192,slow=10,SNR=3.4						
RAO	**Raoul Island**	**54.51**	**120**	LR	LR	23 20 31.2	
	comp=Z,469nm,19.5s,baz=299,slow=34						
SONM	**Songino Array**	**58.84**	**343**	P	**P**	**22 59 05.1**	**+0.1**
SONM	**Songino Array**	**58.84**	**343**	P	**P**	**22 59 05.1**	**+0.1**
	0.7nm,0.7s,baz=153,slow=7.5,SNR=5.8						
PETK	**Petropavlovsk-**	**65.63**	**19**	P	**P**	**22 59 49.6**	**-0.6**
PETK	**Petropavlovsk-**	**65.63**	**19**	P	**P**	**22 59 49.6**	**-0.6**
	2.4nm,0.6s,baz=183,slow=8.6,SNR=4.5						
MK31	**Makanchi Array**	**68.18**	**328**	*eP*	**P**	**23 00 05.6**	**-1.0**
MKAR	**Makanchi Array**	**68.18**	**328**	P	**P**	**23 00 06.8**	**+0.2**
MKAR	**Makanchi Array**	**68.18**	**328**	P	**P**	**23 00 06.8**	**+0.2**
	0.3nm,0.6s,baz=124,slow=7.0,SNR=6.4						
KBL	**Kabul**	**70.23**	**311**	P	P	23 00 33.8	+14
	baz=71,SNR=21						
ZALV	**Zalesovo Beam**	**71.75**	**335**	P	**P**	**23 00 27.0**	**-1.3**
ZALV	**Zalesovo Beam**	**71.75**	**335**	P	**P**	**23 00 27.0**	**-1.3**
	0.3nm,0.4s,baz=113,slow=6.9,SNR=3.6						
ILAR	**Eielson Array**	**94.77**	**25**	P	**P**	**23 02 28.6**	**+1.2**
ILAR	**Eielson Array**	**94.77**	**25**	P	**P**	**23 02 28.5**	**+1.2**
	0.1nm,0.5s,baz=260,slow=5.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**127.54**	**280**	PKP	**PKPdf**	**23 08 12.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**127.54**	**280**	PKP	**PKPdf**	**23 08 12.3**	**+0.2**
	0.4nm,1.1s,baz=70,slow=1.7,SNR=2.7						

IDC 11 22:54:52.4±1.5, 4°.09N×127°.57E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/23, mbtmp3.5/5, MS3.0/1, Ms1 3.2/1, ms1mx2.2/22, Error ellipse: s-maj=142.1km s-min=21.0km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.79**	**165**	P	P	23 00 17.2	+1.0
	1.2nm,0.8s,baz=345,slow=10,SNR=3.4						
ASAR	**Alice Springs**	**28.27**	**168**	P	P	23 00 48.2	+0.6
	0.3nm,0.6s,baz=347,slow=7.9,SNR=2.6						
CMAR	**Chiang Mai Arr**	**31.42**	**299**	LR	LR	23 13 34.0	
	comp=Z,26nm,20.6s,baz=105,slow=36						
STKA	**Stephens Creek**	**38.18**	**161**	P	P	23 02 11.7	-2.1
	1.0nm,0.6s,baz=337,slow=9.1,SNR=2.9						
SONM	**Songino Array**	**47.23**	**341**	P	P	23 03 27.8	+0.5
	0.1nm,0.4s,baz=151,slow=6.3,SNR=2.8						
MKAR	**Makanchi Array**	**57.74**	**325**	P	P	23 04 44.7	-0.5
	0.4nm,0.6s,baz=124,slow=8.1,SNR=5.5						

*VIE **11** 22:59:15.9, 18°.39S×177°.91W, h497km, mb3.0 388 km E of Suva*
*IDC **11** 22:59:18.7±1.8, 19°.07S×177°.63W, h558km, 18km, mb3.0/7, mb1 3.3/8, mb1mx3.1/20, mbtmp3.0/8, Error ellipse: s-maj=39.0km s-min=14.2km az=148.0*
ISC 11 22:59:19.3±0.8, 19°.05±0°.3×177°.6W±0°.2, h570km, n16, σ0°90/20, mb3.5/7, 3C-1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.57**	**49**	P	**P**	**23 01 13.8**	**+0.1**
	3.3nm,0.3s,baz=243,slow=16,SNR=3.9						
AFI				S	**S**	**23 02 45.8**	**-1.5**
	4.4nm,0.3s,baz=219,slow=18,SNR=3.0						
STKA	**Stephens Creek**	**38.76**	**243**	P	**P**	**23 05 55.0**	**-0.7**
	2.9nm,1.2s,baz=82,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**45.17**	**261**	P	**P**	**23 06 46.4**	**+0.1**
	0.3nm,0.3s,baz=98,slow=7.6,SNR=5.3						
WRA				PcP	**PcP**	**23 08 14.9**	**+0.5**
	0.3nm,0.3s,baz=92,slow=3.2,SNR=3.8						
ASAR	**Alice Springs**	**45.22**	**255**	P	**P**	**23 06 46.8**	**+0.2**
	0.9nm,0.6s,baz=89,slow=8.1,SNR=11						
ASAR				PcP	**PcP**	**23 08 14.4**	**-0.1**
	0.8nm,0.5s,baz=104,slow=3.9,SNR=6.6						
NVAR	**Mina Array Bea**	**79.71**	**43**	P	**P**	**23 10 28.4**	**-0.5**
	0.4nm,0.5s,baz=234,slow=8.4,SNR=3.5						
TXAR	**Lajitas Array**	**85.97**	**57**	P	**P**	**23 11 02.6**	**+2.4**
	1.0nm,0.6s,baz=218,slow=6.7,SNR=11						
ILAR	**Eielson Array**	**86.80**	**13**	P	**P**	**23 11 03.5**	**+0.3**
	0.4nm,0.5s,baz=226,slow=4.9,SNR=15						
YKA	**Yellowknife Ar**	**95.03**	**25**	P	**P**	**23 11 40.6**	**-0.5**
	0.1nm,0.3s,baz=282,slow=3.7,SNR=4.6						
ARCES	**ARCESS Array B**	**127.53**	**350**	PKP	**PKPdf**	**23 17 19.8**	**+0.4**
	0.7nm,0.4s,baz=48,slow=1.3,SNR=15						
BRTR	**Keskin Array B**	**146.09**	**314**	PKPbc	**PKPbc**	**23 17 56.6**	**+0.1**
	1.0nm,0.5s,baz=22,slow=1.6,SNR=8.4						
GERES	**GERESS Array B**	**148.87**	**345**	PKPbc	**PKPbc**	**23 18 03.9**	**+0.5**
	1.4nm,0.7s,baz=48,slow=2.0,SNR=14						
CONA	**Conrad Observa**	**149.14**	**342**	⇓*i*PKPbc	**PKPbc**	**23 18 05.0**	**+0.9**
	2.7nm,0.7s						
WTTA	**Wattenberg**	**150.83**	**347**	⇑*i*PKPbc	**PKPbc**	**23 18 08.3**	**+0.2**
	5.2nm,0.5s						
MYKA	**Terra Mystica**	**150.94**	**344**	⇑*i*PKPbc	**PKPbc**	**23 18 08.0**	**-0.3**
	2.0nm,0.5s						
ABTA	**Abfaltersbach**	**151.12**	**345**	⇑*i*PKPbc	**PKPbc**	**23 18 08.5**	**-0.1**
	4.6nm,0.6s						
TORD	**Torodi Ar. Bea**	**174.12**	**174**	PKP	**PKPdf**	**23 18 23.1**	**-1.7**
	0.5nm,1.0s,baz=222,slow=1.8,SNR=2.7						
TORD				PKPab	**PKPab**	**23 19 59.9**	**-0.3**
	1.1nm,1.2s,baz=176,slow=3.6,SNR=3.2						

*ISCJB **11** 23:11:34.5±0.4, 18°.15S±0°.08×175°.53W±0°.07, h254km, mb4.2/20, Error ellipse: s-maj=11.4km s-min=8.5km az=146.0*
*NEIC **11** 23:11:35.1±1.2, 18°.19S×175°.39W, h247km, 11km, mb4.7/10, Error ellipse: s-maj=15.9km s-min=10.4km az=136.0*
*AUST **11** 23:11:35.7±0.0, 17°.88S×175°.19W, h278km, Error ellipse: s-maj=2.1km s-min=1.3km az=355.0*
*IDC **11** 23:11:40.7±1.9, 18°.25S×175°.60W, h293km±18km, mb3.9/14, mb1 4.1/15, mb1mx3.9/22, mbtmp3.9/15, Error ellipse: s-maj=14.0km s-min=10.0km az=123.0*
ISC 11 23:11:36.3±0.5, 18°.22S±0°.09×175°.64W±0°.10, h254km, n69, σ1°90/75, mb4.2/19, 2C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.48**	**100**	P	Pn	23 12 53.9	-4.1
	baz=5.1,SNR=19						
AFI	**Afiamalu**	**5.67**	**41**	P	Pn	23 12 54.8	-5.7
AFI				S	S	23 13 54.1	-14
AFI	**Afiamalu**	**5.67**	**41**	P	Pn	23 12 54.8	-5.7
	12nm,0.3s,baz=246,slow=10.0,SNR=11						
AFI				S	S	23 13 54.1	-14
	42nm,0.3s,baz=32,slow=22,SNR=18						
MSVF	**Nonsavu**	**6.03**	**274**	*ePn*	Pn	23 13 09.8	+4.9
	260nm,0.8s						
DZM	**Mont Dzumac**	**17.26**	**254**	*eP*	**Pn**	**23 15 22.5**	**-0.6**
	23nm,0.7s						
DZM	**Mont Dzumac**	**17.26**	**254**	P	**Pn**	**23 15 24.0**	**+0.9**
	0.9nm,0.3s,baz=80,slow=15,SNR=8.0						
URZ	**Urewera**	**20.95**	**196**	*eP*	**P**	**23 15 58.7**	**-1.2**
	22nm,0.6s						
URZ	**Urewera**	**20.95**	**196**	P	**P**	**23 15 59.9**	**0.0**
	18nm,0.5s,baz=15,slow=3.7,SNR=23						
URZ				S	**S**	**23 19 35.0**	**-1.8**
	15nm,0.9s,baz=41,slow=20,SNR=5.0						
RPZ	**Rata Peaks**	**27.79**	**201**	P	**P**	**23 17 03.2**	**+1.3**
RPZ	**Rata Peaks**	**27.79**	**201**	P	**P**	**23 17 03.2**	**+1.3**
	14nm,0.7s,baz=15,slow=5.2,SNR=8.4						
MGCD	**Mangrove Creek**	**33.30**	**237**	P	**P**	**23 17 49.5**	**-0.9**
	baz=34,SNR=9.0						
RMQ	**Roma**	**33.86**	**249**	P	**P**	**23 17 57.1**	**+1.9**
	baz=34,SNR=4.2						
CTAO	**Charters Tower**	**36.00**	**261**	*eP*	**P**	**23 18 13.3**	**-0.2**
	12nm,0.9s						
CMSA	**Cobar Meteorol**	**37.31**	**242**	P	**P**	**23 18 25.7**	**+1.3**
	baz=38,SNR=11						
QLP	**Quilpie**	**37.90**	**250**	P	**P**	**23 18 30.1**	**+0.6

YKA	**Yellowknife Ar**	**93.53**	**24**	P		**P**	**23 24 21.8**	**-1.0**
	0.5nm,0.8s,baz=242,slow=4.5,SNR=5.6							
ZALV	**Zalesovo Beam**	**110.11**	**322**	PKiKP		**PKiKP**	**23 29 36.5**	**-0.9**
ZALV	**Zalesovo Beam**	**110.11**	**322**	PKiKP		**PKiKP**	**23 29 36.5**	**-0.9**
	0.4nm,0.4s,baz=105,slow=1.7,SNR=3.9							
MKAR	**Makanchi Array**	**111.25**	**314**	PKiKP		**PKiKP**	**23 29 39.1**	**-0.7**
MKAR	**Makanchi Array**	**111.25**	**314**	PKiKP		**PKiKP**	**23 29 39.1**	**-0.7**
	0.4nm,0.6s,baz=113,slow=1.9,SNR=6.4							
BOSA	**Boshof**	**129.25**	**204**	PKP		**PKPdf**	**23 30 16.4**	**+1.3**
BOSA	**Boshof**	**129.25**	**204**	PKP		**PKPdf**	**23 30 16.4**	**+1.3**
	1.7nm,0.8s,baz=153,slow=2.3,SNR=3.0							
FINES	**FINESS Array B**	**134.18**	**346**	PKP		**PKPdf**	**23 30 24.1**	**+0.9**
FINES	**FINESS Array B**	**134.18**	**346**	PKP		**PKPdf**	**23 30 24.1**	**+0.9**
	0.5nm,0.4s,baz=0.0,slow=0.4,SNR=5.4							
BUR08	**Bucovina Ar. S**	**146.06**	**334**	*e*PKPdf		**PKPdf**	**23 30 45.0**	**-0.2**
BUR08				PKPab		**PKPab**	**23 30 47.9**	**+0.3**
CLL	**Collm**	**146.28**	**350**	*i* PKPbc		**PKPbc**	**23 30 46.8**	**0.0**
	comp=Z,5.0nm,0.9s							
BR131	**Keskin Array S**	**146.85**	**316**	*e*PKPbc		**PKPbc**	**23 30 49.4**	**+0.3**
BRTR	**Keskin Array B**	**146.85**	**316**	PKPbc		**PKPbc**	**23 30 49.1**	**+0.1**
BRTR	**Keskin Array B**	**146.85**	**316**	PKPbc		**PKPbc**	**23 30 49.1**	**+0.1**
	comp=Z,2.6nm,0.9s,baz=140,slow=3.7,SNR=19							
KHC	**Kasperske Hory**	**148.28**	**348**	*e*PKP		**PKPbc**	**23 30 52.5**	**+0.1**
GERES	**GERESS Array B**	**148.53**	**348**	PKPbc		**PKPbc**	**23 30 53.1**	**0.0**
GERES	**GERESS Array B**	**148.53**	**348**	PKPbc		**PKPbc**	**23 30 53.1**	**0.0**
	comp=Z,1.7nm,0.9s,baz=27,slow=3.3,SNR=14							
WTTA	**Wattenberg**	**150.42**	**350**	⇑*i* PKiKP		**PKiKP**	**23 30 57.8**	**-0.8**
	comp=Z,5.9nm,0.6s							
ABTA	**Abfaltersbach**	**150.77**	**348**	⇑*i* PKPbc		**PKPbc**	**23 30 57.8**	**-0.8**
	comp=Z,4.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**174.34**	**153**	PKP		**PKPdf**	**23 31 14.2**	**-2.2**
TORD				PKPab		**PKPab**	**23 32 49.2**	**-0.8**
TORD	**Torodi Ar. Bea**	**174.34**	**153**	PKP		**PKPdf**	**23 31 14.2**	**-2.2**
	comp=Z,0.8nm,1.0s,baz=290,slow=0.6,SNR=3.8							
TORD				PKPab		**PKPab**	**23 32 49.2**	**-0.8**
	comp=Z,1.1nm,1.0s,baz=195,slow=4.0,SNR=5.3							

ATH ***11*** *23:48:28.0,39.˝58N×23.˝86E,h27km±1km,MD2.8/5*
CSEM ***11*** *23:48:28.9±0.3,39.˝59N×23.˝87E,h24km±4km,MD2.8, Error ellipse: s-maj=9.3km s-min=5.9km az=97.0*
THE ***11*** *23:48:29.3,39.˝59N×23.˝91E,h2km±14km,ML1.3/3, Error ellipse: s-maj=14.7km s-min=0.3km az=102.0*
ISCJB ***11*** *23:48:28.1±0.6,39.˝59N±0.˝03×23.˝85E±0.˝06,h27km±6km, Error ellipse: s-maj=8.4km s-min=5.6km az=4.4*

ISC 11 23:48:28.7±1.0,39˚59.˝59N±0.˝02×23˚84.˝84E±0.˝04,h27km±9km, n18,σ0˚50.˝32,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAIG	**Paliouri**	**0.36**	**341**	P	**Pb**	**23 48 36.7**	**0.0**
PAIG				S	**Sb**	**23 48 42.4**	**+0.2**
PAIG	**Paliouri**	**0.36**	**341**	*e*PB	**Pb**	**23 48 36.7**	**0.0**
PAIG				*e*SB	**Sb**	**23 48 42.6**	**+0.4**
PAIG	**Paliouri**	**0.36**	**341**	P	**Pb**	**23 48 36.7**	**0.0**
PAIG				*e*Sb	**Sb**	**23 48 42.6**	**+0.4**
AOS	**Alonnisos**	**0.42**	**175**	P	**Pb**	**23 48 37.2**	**-0.5**
AOS				S	**Sb**	**23 48 43.5**	**-0.2**
AOS	**Alonnisos**	**0.42**	**175**	*e*PB	**Pb**	**23 48 37.2**	**-0.5**
AOS				*e*SB	**Sb**	**23 48 43.7**	**0.0**
AOS	**Alonnisos**	**0.42**	**175**	P	**Pb**	**23 48 37.2**	**-0.5**
AOS				S	**Sb**	**23 48 43.5**	**-0.2**
XOR	**Xorichti**	**0.55**	**246**	P	**Pn**	**23 48 40.8**	**+0.1**
XOR				S	**Sn**	**23 48 49.3**	**+0.3**
XOR	**Xorichti**	**0.55**	**246**	P	**Pn**	**23 48 40.8**	**+0.1**
XOR				S	**Sn**	**23 48 49.3**	**+0.3**
OUR	**Ouranopolis**	**0.75**	**9**	P	**Pn**	**23 48 43.5**	**-0.1**
OUR				S	**Sn**	**23 48 54.1**	**0.0**
OUR	**Ouranopolis**	**0.75**	**9**	P	**Pn**	**23 48 43.5**	**-0.1**
OUR				S	**Sn**	**23 48 54.1**	**0.0**
PLG	**Polygyros**	**0.84**	**339**	*e*PN	**Pb**	**23 48 44.0**	**-0.7**
PLG				*e*SN	**Sb**	**23 48 55.9**	**+0.3**
PLG	**Polygyros**	**0.84**	**339**	*e*Pn	**Pb**	**23 48 44.0**	**-0.7**
PLG				*e*Sn	**Sb**	**23 48 55.9**	**+0.3**
LIA	**Limnos Island**	**1.08**	**73**	*e*PN	**Pn**	**23 48 48.0**	**-0.1**
LIA				*e*SN	**Sb**	**23 49 03.7**	**+1.2**
LIA	**Limnos Island**	**1.08**	**73**	*e*Pn	**Pn**	**23 48 48.0**	**-0.1**
LIA				*e*Sn	**Sb**	**23 49 03.7**	**+1.2**
LKR	**Lokris**	**1.14**	**215**	*e*PN	**Pb**	**23 48 49.8**	**+0.1**
LKR	**Lokris**	**1.14**	**215**	*e*Pn	**Pb**	**23 48 49.8**	**+0.1**
NVR	**Nevrokopi**	**1.76**	**1**	*e*PN	**Pb**	**23 48 59.4**	**-0.9**
NVR	**Nevrokopi**	**1.76**	**1**	*e*Pn	**Pb**	**23 48 59.4**	**-0.9**

THE ***11*** *23:49:02.7,35.˝23N×26.˝39E,h0km±3km,Error ellipse: s-maj=5.2km s-min=1.4km az=97.0*
ATH ***11*** *23:49:02.7,35.˝28N×26.˝43E,h11km±1km,MD3.3/9*
CSEM ***11*** *23:49:02.5±0.3,35.˝26N×26.˝43E,h0km,MD3.3,Error ellipse: s-maj=7.8km s-min=3.1km az=154.0*
ISCJB ***11*** *23:49:02.4±0.8,35.˝26N±0.˝06×26.˝44E±0.˝04,h2km±7km, Error ellipse: s-maj=10.6km s-min=4.0km az=162.5*

ISC 11 23:49:02.6±1.1,35˚27.˝N±0.˝04×26˚42.˝E±0.˝03,h2km±11km, n35,σ0˚74.˝57,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.23**	**227**	P	**Pg**	**23 49 06.5**	**-0.5**
ZKR				S	**Sg**	**23 49 11.3**	**+1.3**
ZKR	**Zakros**	**0.23**	**227**	P	**Pg**	**23 49 06.5**	**-0.5**
ZKR				S	**Sg**	**23 49 11.3**	**+1.3**
NPS	**Neapolis**	**0.66**	**270**	P	**Pg**	**23 49 15.6**	**+0.3**
NPS				S	**Sb**	**23 49 25.6**	**-0.9**
NPS	**Neapolis**	**0.66**	**270**	*e*PB	**Pg**	**23 49 15.1**	**-0.2**
NPS				*e*SB	**Sg**	**23 49 24.1**	**+0.2**
NPS	**Neapolis**	**0.66**	**270**	*e*Pb	**Pg**	**23 49 15.1**	**-0.2**
NPS	**Neapolis**	**0.66**	**270**	P	**Pg**	**23 49 15.6**	**+0.3**
NPS				*e*Sb	**Sg**	**23 49 24.1**	**+0.2**
NPS				S	**Sb**	**23 49 25.6**	**-0.9**
KARP	**Karpathos**	**0.66**	**65**	*e*PB	**Pg**	**23 49 15.7**	**+0.4**
KARP				*e*SB	**Sg**	**23 49 23.9**	**-0.1**
KARP	**Karpathos**	**0.66**	**65**	*e*Pb	**Pg**	**23 49 15.7**	**+0.4**
KARP				*e*Sb	**Sg**	**23 49 23.9**	**-0.1**
LAST	**Lasithi**	**0.78**	**262**	P	**Pg**	**23 49 16.8**	**-0.7**
LAST				S	**Sb**	**23 49 29.5**	**-0.5**
LAST	**Lasithi**	**0.78**	**262**	*e*PG	**Pg**	**23 49 17.2**	**-0.3**
LAST				*e*SB	**Sg**	**23 49 28.5**	**+0.8**
LAST	**Lasithi**	**0.78**	**262**	P	**Pg**	**23 49 16.8**	**-0.7**
LAST	**Lasithi**	**0.78**	**262**	*e*Pg	**Pg**	**23 49 17.2**	**-0.3**
LAST				*e*Sb	**Sg**	**23 49 28.5**	**+0.8**
LAST				S	**Sb**	**23 49 29.5**	**-0.5**
SIVA	**Sivas**	**1.34**	**260**	P	**Pg**	**23 49 26.7**	**-1.7**
SIVA	**Sivas**	**1.34**	**260**	*e*PB	**Pn**	**23 49 28.1**	**-0.2**
SIVA				*e*SB	**Sn**	**23 49 46.8**	**0.0**
SIVA	**Sivas**	**1.34**	**260**	P	**Pg**	**23 49 26.7**	**-1.7**
SIVA	**Sivas**	**1.34**	**260**	*e*Pb	**Pn**	**23 49 28.1**	**-0.2**
SIVA				*e*Sb	**Sn**	**23 49 46.8**	**0.0**
SANT	**Santorini**	**1.35**	**325**	P	**Pn**	**23 49 28.0**	**-0.4**
SANT	**Santorini**	**1.35**	**325**	*e*PB	**Pn**	**23 49 28.1**	**-0.4**
SANT				*e*SB	**Sg**	**23 49 46.6**	**+0.7**
SANT	**Santorini**	**1.35**	**325**	P	**Pn**	**23 49 28.0**	**-0.4**
SANT				*e*Sb	**Sg**	**23 49 46.6**	**+0.7**
NIS1	**Nisyros Isl.**	**1.46**	**25**	*e*PB	**Pn**	**23 49 30.0**	**0.0**
NIS1	**Nisyros Isl.**	**1.46**	**25**	*e*Pb	**Pn**	**23 49 30.0**	**0.0**
ARG	**Arkhangelos**	**1.68**	**55**	*e*PB	**Pg**	**23 49 34.3**	**-0.4**
ARG				*e*SB	**Sg**	**23 49 56.7**	**+0.2**
ARG	**Arkhangelos**	**1.68**	**55**	*e*Pb	**Pg**	**23 49 34.3**	**-0.4**
ARG				*e*Sb	**Sg**	**23 49 56.7**	**+0.2**
VAM	**Vamos**	**1.82**	**275**	*e*PN	**Pb**	**23 49 36.3**	**-0.3**
VAM				*e*SN	**Sg**	**23 50 01.5**	**+0.4**
VAM	**Vamos**	**1.82**	**275**	*e*Pn	**Pb**	**23 49 36.3**	**-0.3**
VAM				*e*Sn	**Sg**	**23 50 01.5**	**+0.4**
APE	**Apeiranthos**	**1.93**	**338**	P	**Pn**	**23 49 36.5**	**0.0**
APE	**Apeiranthos**	**1.93**	**338**	*e*PN	**Pn**	**23 49 36.8**	**+0.3**
APE	**Apeiranthos**	**1.93**	**338**	P	**Pn**	**23 49 36.5**	**0.0**
APE	**Apeiranthos**	**1.93**	**338**	*e*Pn	**Pn**	**23 49 36.8**	**+0.3**
ANKY	**Antikythira Is**	**2.61**	**284**	*e*PN	**Pn**	**23 49 47.3**	**+1.5**
ANKY	**Antikythira Is**	**2.61**	**284**	*e*Pn	**Pn**	**23 49 47.3**	**+1.5**
KYTH	**Kithira**	**2.93**	**291**	*e*PN	**Pn**	**23 49 51.5**	**+1.3**
KYTH	**Kithira**	**2.93**	**291**	*e*Pn	**Pn**	**23 49 51.5**	**+1.3**
VLI	**Veliai**	**3.17**	**298**	*e*PN	**Pn**	**23 49 54.6**	**+1.1**
VLI				*e*SN	**Sn**	**23 50 32.7**	**+0.8**
VLI	**Veliai**	**3.17**	**298**	*e*Pn	**Pn**	**23 49 54.6**	**+1.1**
VLI				*e*Sn	**Sn**	**23 50 32.7**	**+0.8**

IDC 12 00:06:16.3±0.9,2˚02N×126˚98E,h0km,mb3.6/7, mb1 3.9/7,mb1mx3.6/22,mbtmp3.7/7,MS3.2/1,Ms1 3.2/1, ms1mx2.3/31,Error ellipse: s-maj=61.0km s-min=16.5km az=78.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.04**	**184**	P	**P**	00 10 51.3	+0.3
	1.3nm,0.5s,baz=240,slow=23,SNR=7.7						
WRA	**Warramunga Arr**	**22.99**	**162**	P	**P**	00 11 21.8	-1.0
	1.4nm,0.3s,baz=340,slow=11,SNR=8.7						
ASAR	**Alice Springs**	**26.41**	**166**	P	**P**	00 11 55.2	+0.4
	0.5nm,0.3s,baz=346,slow=12,SNR=9.7						
MJAR	**Matsushiro Arr**	**35.89**	**16**	P	**P**	00 13 17.9	-0.3
	0.6nm,0.3s,baz=191,slow=10.0,SNR=3.8						
STKA	**Stephens Creek**	**36.45**	**159**	P	**P**	00 13 23.2	+0.2
	1.2nm,0.7s,baz=355,slow=9.9,SNR=3.9						
SONM	**Songino Array**	**48.99**	**342**	P	**P**	00 15 05.5	+0.7
	0.2nm,0.7s,baz=160,slow=11,SNR=2.3						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	00 16 17.9	-0.7
	0.1nm,0.4s,baz=144,slow=8.7,SNR=4.2						
MKAR				LR	LR	00 43 28.8	
	comp=Z,20nm,21.4s,baz=352,slow=38						

DDA ***12*** *00:12:51.7,38.˝84N×26.˝40E,h7km,MD2.8*
ISCJB ***12*** *00:12:52.6±0.9,38.˝83N±0.˝03×26.˝6E±0.˝1,h11km,Error ellipse: s-maj=14.0km s-min=4.4km az=173.7*
CSEM ***12*** *00:12:53.2±0.5,38.˝83N×26.˝64E,h15km,MD2.6,Error ellipse: s-maj=21.6km s-min=7.7km az=82.0*
ISK ***12*** *00:12:54.4,38.˝89N×26.˝89E,h20km,MD2.6*

ISC 12 00:12:51.1±1.3,38˚83N±0.˝03×26˚4E±0.˝1,h11km,n14, σ0˚81/20,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.49**	**165**	*e*P	**Pb**	**00 13 01.7**	**+0.1**
URLA				*e*S	**Sb**	**00 13 08.2**	**-0.6**
URLA	**Izmir**	**0.49**	**165**	*e*P	**Pb**	**00 13 01.7**	**+0.1**
URLA				*e*S	**Sb**	**00 13 08.2**	**-0.6**
AYVA	**Ayvalik**	**0.52**	**22**	*e*P	**Pb**	**00 13 02.0**	**-0.1**
AYVA				*e*S	**Sb**	**00 13 09.1**	**-0.5**
AYVA	**Ayvalik**	**0.52**	**22**	*e*P	**Pb**	**00 13 02.0**	**-0.1**
AYVA				*e*S	**Sb**	**00 13 09.1**	**-0.5**
BLCB	**Balcova**	**0.65**	**133**	*e*PG	**Pb**	**00 13 05.2**	**+0.8**
BLCB				*e*SG	**Sg**	**00 13 13.2**	**+1.0**
BLCB	**Balcova**	**0.65**	**133**	*e*Pg	**Pb**	**00 13 05.2**	**+0.8**
BLCB				*e*Sg	**Sg**	**00 13 13.2**	**+1.0**
GONE	**Gonen-Balikesi**	**1.55**	**38**	*e*PN	**Pn**	**00 13 18.2**	**-0.4**
GONE	**Gonen-Balikesi**	**1.55**	**38**	*e*Pn	**Pn**	**00 13 18.2**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.56**	**1**	*e*PN	**Pg**	**00 13 21.7**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.56**	**1**	*e*Pn	**Pg**	**00 13 21.7**	**+0.6**
KULA	**Kula-Manisa**	**1.77**	**100**	*e*PN	**Pn**	**00 13 20.1**	**-1.6**
KULA	**Kula-Manisa**	**1.77**	**100**	*e*Pn	**Pn**	**00 13 20.1**	**-1.6**
ERIK	**Erikli-Kesan**	**1.84**	**2**	*e*PN	**Pb**	**00 13 25.2**	**+0.5**
ERIK	**Erikli-Kesan**	**1.84**	**2**	*e*Pn	**Pb**	**00 13 25.2**	**+0.5**

MAN 12 00:24:34,7˚20N×123˚41E,h31km,mb3.9,ML2.7,MS2.3, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAGZ	**Pagadian**	**0.64**	**357**	*e*P	Pn	00 24 47.2	+0.2
PAGZ				*e*S	Sb	00 24 51.9	-3.7
CTBH	**Cotabato--PC H**	**0.83**	**89**	⇑*i* P	Pn	00 24 49.7	+0.2
CTBH				*i* S	Sb	00 25 01.3	+0.5
IPIL	**Ipil**	**1.02**	**305**	*e*P	Pn	00 24 47.3	-4.9
IPIL				*e*S	Sn	00 24 52.3	-13

IDC 12 00:28:46.4±2.3,2˚99S×130˚16E,h0km,mb3.7/2, mb1 4.0/4,mb1mx3.6/22,mbtmp3.8/4,ML3.7/2,MS3.6/1, Ms1 3.6/1,ms1mx2.4/39,Error ellipse: s-maj=111.7km s-min=27.5km az=74.0,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.66**	**196**	Pn	Pn	00 32 30.0	+1.5
	0.2nm,0.3s,baz=36,slow=14,SNR=5.3						
WRA	**Warramunga Arr**	**17.33**	**167**	P	P	00 32 50.8	-0.7
	0.3nm,0.3s,baz=349,slow=13,SNR=4.1						
PMG	**Port Moresby**	**18.05**	**111**	LR	LR	00 40 47.3	
	comp=Z,195nm,20.5s,baz=8.7,slow=40						
ASAR	**Alice Springs**	**20.87**	**170**	P	P	00 33 29.4	-0.8
	2.6nm,0.4s,baz=350,slow=11,SNR=48						
MKAR	**Makanchi Array**	**65.00**	**326**	P	P	00 39 28.4	0.0
	0.3nm,0.6s,baz=128,slow=9.5,SNR=4.1						

IDC 12 00:33:53.9±2.0,3˚53N×126˚70E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.5/24,mbtmp3.6/4,Error ellipse: s-maj=118.1km s-min=24.1km az=69.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.52**	**183**	P	P	00 38 43.7	-1.0
	3.0nm,1.0s,baz=0.0,slow=7.1,SNR=3.3						
WRA	**Warramunga Arr**	**24.50**	**162**	P	P	00 39 15.0	-0.2
	0.9nm,0.4s,baz=344,slow=9.7,SNR=4.5						
ASAR	**Alice Springs**	**27.93**	**166**	P	P	00 39 46.9	+0.8
	0.3nm,0.6s,baz=335,slow=6.9,SNR=4.1						
MKAR	**Makanchi Array**	**57.70**	**325**	P	P	00 43 46.4	-0.1
	0.3nm,0.5s,baz=126,slow=7.8,SNR=6.7						

IDC 12 00:56:24.1±1.4,3˚21S×148˚37E,h0km,mb4.0/8, mb1 4.3/8,mb1mx3.9/19,mbtmp4.0/8,MS3.7/6,Ms1 3.6/6, ms1mx3.2/39,Error ellipse: s-maj=52.6km s-min=19.8km az=119.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**17.04**	**348**	LR	LR	01 05 15.1	
	comp=Z,98nm,19.7s,baz=114,slow=31						
WRA	**Warramunga Arr**	**21.55**	**218**	P	P	01 01 14.4	-0.8
	7.5nm,0.9s,baz=43,slow=10,SNR=11						
ASAR	**Alice Springs**	**24.68**	**213**	P	P	01 01 47.2	+0.2
	1.3nm,0.8s,baz=41,slow=8.4,SNR=11						
DZM	**Mont Dzumac**	**25.68**	**138**	LR	LR	01 08 23.3	
	comp=Z,336nm,22.0s,baz=0.5,slow=28						
FITZ	**Fitzroy Crossi**	**26.74**	**235**	P	P	01 02 05.7	+0.1
	11nm,1.0s,baz=39,slow=3.2,SNR=5.7						
FITZ				LR	LR	01 13 10.0	
	comp=Z,159nm,18.9s,baz=61,slow=38						
STKA	**Stephens Creek**	**29.22**	**192**	LR	LR	01 14 15.1	
	comp=Z,114nm,19.5s,baz=23,slow=37						
JNU	**Nakatsue**	**39.74**	**337**	LR	LR	01 19 27.9	
	comp=Z,48nm,19.3s,baz=238,slow=35						
NWAO	**Narrogin (SRO)**	**41.51**	**221**	LR	LR	01 22 30.7	
	comp=Z,173nm,19.4s,baz=14,slow=38						
CMAR	**Chiang Mai Arr**	**53.20**	**296**	P	P	01 05 46.0	+1.4
	1.1nm,0.3s,baz=118,slow=7.2,SNR=4.5						
PETK	**Petropavlovsk-**	**56.66**	**7**	P	P	01 06 08.7	-0.3
	1.2nm,0.5s,baz=183,slow=11,SNR=2.5						
KURBB	**Kurchatov Arra**	**79.84**	**323**	P	P	01 08 33.1	-1.3
	0.1nm,0.3s,baz=110,slow=4.3,SNR=2.4						
ILAR	**Eielson Array**	**82.39**	**23**	P	P	01 08 47.5	-0.2
	0.6nm,0.9s,baz=243,slow=4.3,SNR=4.2						
YKA	**Yellowknife Ar**	**96.08**	**28**	P	P	01 09 54.4	+1.1
	0.4nm,0.7s,baz=274,slow=4.8,SNR=8.2						

IDC 12 01:01:58.6±2.3,40˚22N×113˚17E,h0km,mb3.4/5, mb1 3.4/6,mb1mx3.3/26,mbtmp3.3/6,ML3.1/1,Error ellipse: s-maj=49.1km s-min=34.9km az=20.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**9.04**	**330**	Pn	Pn	01 04 11.3	+0.8
	0.2nm,0.3s,baz=161,slow=16,SNR=5.0						
SONM				Lg	Lg	01 06 46.0	
	0.1nm,0.3s,baz=170,slow=34,SNR=6.0						
MKAR	**Makanchi Array**	**23.24**	**297**	P	P	01 07 06.3	-1.0
	0.4nm,0.7s,baz=96,slow=8.7,SNR=3.8						
ZALV	**Zalesovo Beam**	**23.49**	**315**	P	P	01 07 09.9	+0.2
	0.2nm,0.3s,baz=123,slow=7.3,SNR=3.8						
KURBB	**Kurchatov Arra**	**26.22**	**305**	P	P	01 07 34.1	-0.8
	0.8nm,0.8s,baz=100,slow=11,SNR=6.7						
BRTR	**Keskin Array B**	**58.88**	**298**	P	P	01 12 00.3	+0.9
	0.2nm,0.5s,baz=50,slow=5.4,SNR=2.9						
YKA	**Yellowknife Ar**	**70.69**	**21**	P	P	01 13 15.6	-0.2
	0.3nm,0.5s,baz=327,slow=6.2,SNR=5.5						

MOS ***12*** *01:03:57.1±1.0,22.˝07S×66.˝85W,h169km,mb5.2/39, Error ellipse: s-maj=10.8km s-min=6.5km az=110.2*
ISCJB ***12*** *01:03:57.5±0.4,22.˝30S±0.˝03×66.˝90W±0.˝04,h180km±3km, mb5.1/161,Error ellipse: s-maj=5.7km s-min=4.3km az=145.9*
IDC ***12*** *01:03:58.6±0.9,22.˝37S×66.˝81W,h179km±7km,mb4.7/16, mb1 4.7/23,mb1mx4.7/24,mbtmp4.7/23,MS3.8/2, Ms1 3.8/2,ms1mx3.3/31,Error ellipse: s-maj=9.3km s-min=7.2km az=76.0*
NEIC ***12*** *01:03:58.1±0.4,22.˝32S×66.˝81W,h175km±3km,mb5.2/129, Error ellipse: s-maj=4.8km s-min=3.6km az=57.0*
BJI ***12*** *01:03:58.2,22.˝20S×66.˝70W,h165km,mB5.1/19*
GUC ***12*** *01:04:00.9±0.5,22.˝42S×67.˝39W,h207km±7km,ML5.6*
GCMT ***12*** *01:04:05.3±0.3,22.˝36S×67.˝01W,h193km±2km,MW5.2, Moment Tensor Solution. s30,c36; s43,c66; Moment tensor: Scale 10¹⁶Nm; Mrr-2.28±.26; Mθθ0.75±.35; Mϕϕ1.54±.39; Mrθ0.16±.23; Mrϕ0.72±.30; Mθϕ-6.94±.23; Best double couple: M₀7.20000×10¹⁶ NP1:ϕs218.00000°, δ10.00000°,λ-53.00000°. NP2:ϕs0.00000°,δ82.00000°, λ-96.00000°. Principal axes: T 6.8700, Plg37.0000°, Azm96.0000°; N 0.7500, Plg6.0000°, Azm1.0000°; P -7.6100, Plg52.0000°, Azm264.0000°; Data Used: IU II G CN.*

ISC 12 01:03:57.7±0.5,22˚38S±0.˝03×66˚88W±0.˝04,h176km±3km, n870,σ1˚17/959,mb5.2/161,236C-206D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.89**	**263**	⇑*i* P	**Pn**	**01 04 35.7**	**+2.1**
LVC				*i* S	**Sn**	**01 05 02.8**	**+1.5**
LVC	**Limon Verde**	**1.89**	**263**	⇑*i* P	**Pn**	**01 04 35.7**	**+2.1**
LVC				*i* S	**Sn**	**01 05 02.8**	**+1.5**
PB09	**Plate Boundary**	**2.27**	**284**	⇑*i* P	**Pn**	**01 04 39.8**	**+2.1**
PB09				*i* S	**Sn**	**01 05 09.1**	**+0.5**
PB09	**Plate Boundary**	**2.27**	**284**	⇑*i* P	**Pn**	**01 04 39.8**	**+2.1**
PB09				*i* S	**Sn**	**01 05 09.1**	**+0.5**
PB09				AML	AML	01 05 14.7	
	comp=E,26μm,0.5s						
PB04	**Plate Boundary**	**2.42**	**272**	⇑*i* P	Pn	01 04 47.0	+7.9
PB04				*i* S	Sn	01 05 22.4	+11
PB04	**Plate Boundary**	**2.42**	**272**	⇑*i* P	Pn	01 04 47.0	+7.9
PB04				*i* S	Sn	01 05 22.4	+11
PB04				AML	AML	01 05 25.6	
	comp=N,17μm,0.1s						
PB01	**Plate Boundary**	**2.77**	**298**	⇑*i* P	**Pn**	**01 04 44.7**	**+1.3**
PB01				*i* S	**Sn**	**01 05 18.6**	**-0.4**
PB01	**Plate Boundary**	**2.77**	**298**	⇑*i* P	**Pn**	**01 04 44.7**	**+1.3**
PB01				*i* S	**Sn**	**01 05 18.6**	**-0.4**
PB01				AML	AML	01 05 22.1	
	comp=N,8μm,0.4s						
MECH	**Mejillones**	**3.37**	**257**	⇑*i* P	**Pn**	**01 04 51.5**	**+0.8**
MECH				*i* S	**Sn**	**01 05 30.0**	**-2.1**
MECH	**Mejillones**	**3.37**	**257**	⇑*i* P	**Pn**	**01 04 51.5**	**+0.8**
MECH				*i* S	**Sn**	**01 05 30.0**	**-2.1**
MECH				AML	AML	01 05 33.1	
	comp=N,15μm,0.3s						
HMBC	**Humberstone**	**3.50**	**306**	⇑*i* P	**Pn**	**01 04 52.6**	**+0.2**
HMBC				*i* S	**Sn**	**01 05 33.5**	**-1.7**
HMBC	**Humberstone**	**3.50**	**306**	⇑*i* P	**Pn**	**01 04 52.6**	**+0.2**
HMBC				*i* S	**Sn**	**01 05 33.5**	**-1.7**
ANCH	**Antofagasta**	**3.50**	**248**	*i* P	**Pn**	**01 04 53.1**	**+0.8**
ANCH				*i* S	**Sn**	**01 05 32.8**	**-2.2**
ANCH	**Antofagasta**	**3.50**	**248**	*i* P	**Pn**	**01 04 53.1**	**+0.8**
ANCH				*i* S	**Sn**	**01 05 32.8**	**-2.2**
PSGC	**Pisagua**	**4.11**	**312**	*i* P	**Pn**	**01 04 59.4**	**-0.7**
PSGC				*i* S	**Sn**	**01 05 46.2**	**-2.8**
PSGC	**Pisagua**	**4.11**	**312**	*i* P	**Pn**	**01 04 59.4**	**-0.7**
PSGC				*i* S	**Sn**	**01 05 46.2**	**-2.8**
LPAZ	**La Paz**	**6.17**	**349**

USHA Ushuaia 32.43 182 P P 01 10 12.2 +1.4
comp=Z,5.9nm,0.8s,baz=351,slow=14,SNR=5.1
BCIP Isla Barro Col 33.83 337 eP P 01 10 24.8 +1.4
comp=Z,67nm,0.7s
RCBR Riachuelo 34.14 66 eP P 01 10 25.8 -0.5
comp=Z,78nm,1.1s
GRGR Grenville 34.68 9 ePn P 01 10 30.7 0.0
comp=Z,338nm,1.1s
JTS JuntasAbangare 36.99 330 eP P 01 10 51.2 +0.7
comp=Z,500nm,1.2s
FDF Fort de France 37.31 9 eP P 01 10 52.3 -0.8
FDF pmax pmax
comp=Z,197nm,0.5s
FDF Fort de France 37.31 9 eP P 01 10 52.3 -0.8
comp=Z,197nm,0.5s
FDF Fort de France 37.31 9 eP P 01 10 52.4 -0.8
ANWB Willy Bob 40.11 8 eP P 01 11 13.3 -3.0
comp=Z,207nm,0.6s
LRS Lares 40.42 0 eP P 01 11 17.6 -1.3
AOPR Arecibo Observ 40.48 0 eP P 01 11 17.0 -2.3
comp=Z,51nm,0.5s
TGUH Tegucigalpa,Un 41.36 329 eP P 01 11 26.9 +0.3
comp=Z,94nm,1.0s
TEIG Tepich 47.22 332 eP P 01 12 13.0 -0.1
comp=Z,104nm,1.1s
TIGA Tifton 55.86 343 ⇓P P 01 13 16.5 -0.4
baz=56
BRAL Brewton 56.51 339 eP P 01 13 22.7 +1.1
comp=Z,183nm,0.8s
GOGA Godfrey 57.69 344 eP P 01 13 28.6 -1.2
GOGA pmax pmax
comp=Z,32nm,1.0s
GOGA Godfrey 57.69 344 eP P 01 13 28.6 -1.2
comp=Z,32nm,1.0s
JSC Jenkinsville 57.98 346 eP P 01 13 31.9 +0.1
JSC Jenkinsville 57.98 346 eP P 01 13 31.9 +0.1
LRAL Lakeview Retre 58.36 340 eP P 01 13 33.5 -1.0
comp=Z,59nm,0.9s
KMSC Kings Mountain 58.83 346 ⇑P P 01 13 37.9 +0.3
baz=59,SNR=10
HKT Hockley 59.01 331 eP P 01 13 39.5 +0.5
HKT pmax pmax
comp=Z,51nm,1.3s
HKT Hockley 59.01 331 eP P 01 13 39.5 +0.5
comp=Z,51nm,1.3s
CPCT Cooper Cave 59.90 343 eP P 01 13 44.7 -0.3
TKL Tuckaleechee C 59.90 344 eP P 01 13 44.4 -0.6
732A Laxson Ranch, 60.00 326 ⇓P P 01 13 45.9 +0.1
baz=60,SNR=23
NATX Nacogdoches 60.05 333 eP P 01 13 47.0 +0.9
comp=Z,177nm,1.1s
SWET Sewanee 60.06 342 eP P 01 13 45.8 -0.5
comp=Z,118nm,0.7s
PLAL Pickwick Lake 60.49 340 eP P 01 13 47.9 -1.1
comp=Z,58nm,1.0s
OXF Oxford 60.50 339 eP P 01 13 48.1 -1.0
OXF pmax pmax
comp=Z,75nm,0.6s
OXF Oxford 60.50 339 eP P 01 13 48.1 -1.0
comp=Z,75nm,0.6s
632A Uvalde 60.54 327 ⇓P P 01 13 49.8 +0.3
baz=61,SNR=22
BLA Blacksburg 60.63 348 eP P 01 13 50.1 +0.1
BLA pmax pmax
comp=Z,33nm,1.0s
BLA Blacksburg 60.63 348 eP P 01 13 50.1 +0.1
comp=Z,33nm,1.0s
SNAA Sanae 60.84 161 eP P 01 13 52.1 +1.1
comp=Z,18nm,0.9s
631A Perdido Creek 60.86 326 ⇓P P 01 13 51.5 -0.2
baz=61,SNR=5.2
532A Rocksprings 61.10 327 ⇑P P 01 13 53.6 +0.2
baz=61,SNR=48
JCT Junction City 61.34 328 eP P 01 13 54.9 0.0
JCT pmax pmax
comp=Z,71nm,0.8s
JCT Junction City 61.34 328 eP P 01 13 54.9 0.0
comp=Z,71nm,0.8s
JCT Junction City 61.34 328 ⇓P P 01 13 54.8 0.0
baz=62,SNR=44
531A Rocksprings 61.45 327 ⇓P P 01 13 56.2 +0.4
baz=62,SNR=82
WVT Waverly 61.48 341 eP P 01 13 54.6 -1.1
WVT pmax pmax
comp=Z,93nm,0.6s
WVT Waverly 61.48 341 eP P 01 13 54.5 -1.1
comp=Z,93nm,0.6s
WHTX Lake Whitney 61.48 331 ⇑P P 01 13 55.9 +0.1
baz=62,SNR=17
432A Menard 61.66 328 ⇑P P 01 13 57.0 -0.1
baz=62,SNR=31
UALR University of 61.77 336 eP P 01 13 57.0 -0.7
comp=Z,60nm,1.3s
530A J-C Ranch, Com 61.84 326 ⇓P P 01 13 58.7 +0.4
baz=62,SNR=69
431A Sonora 61.90 327 ⇑P P 01 13 58.6 -0.1
baz=62,SNR=40
UTMT University of 61.99 340 eP P 01 13 59.0 -0.1
comp=Z,212nm,1.1s
RFTA Plano 62.00 332 eP P 01 13 59.7 +0.5
GNAR Gosnell 62.02 339 eP P 01 13 59.2 -0.1
comp=Z,1μm,0.6s
MIAR Mount Ida 62.04 335 eP P 01 13 59.3 -0.2
MIAR pmax pmax
comp=Z,90nm,1.2s
MIAR Mount Ida 62.04 335 eP P 01 13 59.3 -0.2
comp=Z,90nm,1.2s
332A Millersview 62.05 328 ⇑P P 01 13 59.6 0.0
baz=62,SNR=62
628A Black Gap, Mar 62.13 325 ⇑P P 01 14 01.1 +0.8
baz=62,SNR=58
529A Stev Forest Ra 62.28 326 ⇓P P 01 14 01.7 +0.4
baz=62,SNR=92
430A Baggett Ranch, 62.30 327 ⇑P P 01 14 01.4 0.0
baz=62,SNR=55
331A San Angelo 62.32 328 ⇓P P 01 14 01.3 -0.2
baz=63,SNR=38
627A Terlingua Ranc 62.38 324 ⇓P P 01 14 02.3 +0.3
baz=63,SNR=28
232A Coleman 62.42 329 ⇑P P 01 14 02.2 +0.1
baz=63,SNR=83
429A Davenport Ranc 62.51 326 ⇓P P 01 14 03.0 +0.2
baz=63,SNR=56
PARMO Parma 62.57 339 eP P 01 14 02.7 -0.2
528A Cox Ranch, San 62.61 325 ⇓P P 01 14 03.5 0.0
baz=63,SNR=24
MVL Millersville 62.68 352 eP P 01 14 04.0 +0.4
comp=Z,13nm,0.8s
330A Mertzon 62.77 327 ⇑P P 01 14 04.2 -0.3
baz=63,SNR=31
231A Bronte 62.78 328 ⇑P P 01 14 04.1 -0.4
baz=63,SNR=17
626A Big Bend Ranch 62.86 324 ⇑P P 01 14 05.9 +0.8
baz=63,SNR=18
WCI Wyandotte Cave 62.99 343 eP P 01 14 04.0 -1.7
WCI pmax pmax
comp=Z,21nm,0.8s
WCI Wyandotte Cave 62.99 343 eP P 01 14 04.0 -1.7
comp=Z,21nm,0.8s
428A Kincaid Ranch, 63.00 326 ⇑P P 01 14 06.5 +0.4
baz=63,SNR=20
ABTX Abilene, Hawle 63.02 329 ⇑P P 01 14 05.9 -0.1
baz=63,SNR=25
527A Woodward Ranch 63.04 324 ⇓P P 01 14 06.5 +0.2
baz=63,SNR=52
USIN University of 63.13 342 eP P 01 14 05.1 -1.4
comp=Z,28nm,0.7s
230A Sterling City 63.13 328 ⇓P P 01 14 06.5 -0.3
baz=63,SNR=23
526A Mary Lane Ranc 63.23 324 ⇑P P 01 14 08.2 +0.6
baz=64,SNR=88
329A Wagon Wheel Ra 63.25 327 ⇓P P 01 14 07.6 -0.1
baz=64,SNR=61
SIUC Southern Illin 63.36 340 eP P 01 14 07.5 -0.7
comp=Z,27nm,0.6s
131A Roby 63.42 329 ⇑P P 01 14 08.8 +0.1
baz=64,SNR=48
427A Hayter Ranch, 63.48 325 ⇑P P 01 14 09.5 +0.3
baz=64,SNR=32
229A Bryant Ranch, 63.55 327 ⇓P P 01 14 09.3 -0.3
baz=64,SNR=18
328A Wristen Ranch, 63.59 326 ⇓P P 01 14 10.1 +0.2
baz=64,SNR=57
130A Snyder 63.63 328 ⇓P P 01 14 10.1 0.0
baz=64,SNR=51
426A McDonald Obser 63.67 325 ⇓P P 01 14 11.0 +0.4
baz=64,SNR=54

BLO Bloomington 63.93 343 eP P 01 14 10.4 -1.4
BLO pmax pmax
comp=Z,57nm,0.5s
BLO Bloomington 63.93 343 eP P 01 14 10.4 -1.4
comp=Z,57nm,0.5s
228A UT Block 9, Go 64.06 327 ⇑P P 01 14 12.7 -0.3
baz=64,SNR=19
Y32A R-V Farms, Ver 64.07 330 ⇑P P 01 14 13.0 +0.1
baz=64,SNR=24
ACSO Alum Creek Sta 64.07 346 eP P 01 14 11.8 -1.0
comp=Z,53nm,0.8s
129A Stewart Farms, 64.11 327 ⇑P P 01 14 13.1 -0.2
baz=64,SNR=48
TUL1 Tulsa 64.11 334 ⇑P P 01 14 13.0 -0.1
baz=64,SNR=15
326A Caldwell Ranch 64.15 325 ⇓P P 01 14 13.8 +0.2
baz=64,SNR=18
425A Indio Mountain 64.28 324 ⇓P P 01 14 14.8 +0.3
baz=64,SNR=89
227A Bennet, Jal 64.34 326 ⇑P P 01 14 15.2 +0.5
baz=65,SNR=19
WMOK Wichita Mounta 64.38 331 eP P 01 14 14.0 -0.9
WMOK pmax pmax
comp=Z,11nm,0.8s
WMOK Wichita Mounta 64.38 331 eP P 01 14 14.0 -0.9
comp=Z,11nm,0.8s
128A Castleberry Fa 64.41 327 ⇓P P 01 14 15.0 -0.3
baz=65
Y31A Rekieta Farm, 64.41 330 ⇑P P 01 14 15.3 +0.2
baz=65,SNR=28
HRV Adam Dziewonsk 64.70 356 eP P 01 14 17.1 +0.3
HRV pmax pmax
comp=Z,13nm,0.9s
HRV Adam Dziewonsk 64.70 356 eP P 01 14 17.1 +0.3
comp=Z,13nm,0.9s
325A Bean Ranch, Si 64.72 324 ⇓P P 01 14 17.7 +0.3
baz=65,SNR=171
BINY Binghamton 64.80 353 eP P 01 14 17.4 -0.1
comp=Z,103nm,1.6s
X31A McDonald Ranch 64.83 330 ⇓P P 01 14 17.9 0.0
baz=65,SNR=74
CLNB Carlsbad 64.84 326 eP P 01 14 18.8 +0.8
comp=Z,2.8nm,0.9s
226B Tecolote Peak, 64.84 325 ⇑P P 01 14 18.9 +0.8
baz=65,SNR=51
ALLY Alegheny Colle 64.88 349 eP P 01 14 18.2 +0.2
comp=Z,36nm,0.7s
127A Arkansas Junct 64.90 326 ⇑P P 01 14 18.3 -0.1
baz=65,SNR=13
Y29A Porterfield Fa 65.00 328 ⇓P P 01 14 18.8 -0.3
baz=65,SNR=56
GDL2 Guadalupe Moun 65.05 325 eP P 01 14 19.9 +0.6
324A Moseley Ranch, 65.06 324 ⇑P P 01 14 19.1 -0.4
baz=65,SNR=66
X30A Coker Ranch, T 65.10 329 ⇑P P 01 14 19.4 -0.2
baz=65,SNR=38
MNTX Cornudas Mount 65.20 324 eP P 01 14 19.6 -0.7
comp=Z,46nm,1.1s
126A Clayton Basin, 65.21 326 ⇑P P 01 14 20.8 +0.3
baz=65,SNR=51
SFIN Scholer Farm 65.22 343 ⇓P P 01 14 18.6 -1.6
baz=66,SNR=11
225A Deer Hill, Car 65.22 325 ⇑P P 01 14 20.8 +0.2
baz=65,SNR=61
W31A Holland Ranch, 65.28 331 ⇓P P 01 14 20.3 -0.5
baz=66,SNR=10
ERPA Erie 65.31 349 eP P 01 14 20.7 0.0
comp=Z,71nm,0.6s
Y28A McKinney Farm, 65.32 328 ⇓P P 01 14 20.7 -0.4
baz=66,SNR=31
Z27A Tatum 65.33 327 ⇑P P 01 14 20.8 -0.4
baz=66,SNR=90
X29A Tulia 65.49 329 ⇑P P 01 14 21.8 -0.3
baz=66,SNR=25
125A Gardner Draw, 65.56 325 ⇑P P 01 14 22.5 -0.2
baz=66,SNR=46
224A Cornudas Mount 65.57 324 ⇑P P 01 14 22.7 -0.1
baz=66,SNR=102
W30A Crocket Farms 65.57 330 ⇓P P 01 14 22.6 0.0
baz=66
MSTX Muleshoe 65.63 328 ⇓P P 01 14 23.0 -0.1
baz=66,SNR=91
Z26A Caprock 65.69 326 ⇑P P 01 14 23.5 +0.1
baz=66,SNR=64
V31A Spring Creek L 65.72 331 ⇑P P 01 14 24.2 +0.6
baz=66,SNR=26
Y27A Causey 65.76 327 ⇓P P 01 14 23.7 -0.2
baz=66,SNR=47
X28A Dimmitt 65.79 328 ⇑P P 01 14 24.0 -0.2
baz=66,SNR=11
AMTX Amarillo 65.84 329 eP P 01 14 23.7 -0.7
comp=Z,21nm,0.5s
HNH Hanover 65.95 356 eP P 01 14 25.8 +1.0
223A Chaparral, Ant 66.00 324 ⇓P P 01 14 25.8 +0.3
baz=66
124A Stringfield Ra 66.01 325 ⇑P P 01 14 26.0 +0.3
baz=66,SNR=80
W29A Amraillo 66.02 329 ⇓P P 01 14 25.3 -0.3
baz=66,SNR=19
Z25A Roswell 66.07 326 ⇑P P 01 14 25.9 0.0
baz=66,SNR=50
V30A Spur Ranch, Mi 66.10 330 ⇑P P 01 14 26.7 +0.7
baz=66
Y26A Elida 66.12 327 ⇑P P 01 14 26.6 +0.4
baz=66,SNR=9.6
U31A Nine Bar Ranch 66.22 331 ⇓P P 01 14 27.0 +0.3
baz=66
X27A F and S Farms, 66.33 328 ⇓P P 01 14 27.4 -0.2
baz=67,SNR=8.1
123A Bell Site, Whi 66.39 324 ⇓P P 01 14 28.5 +0.5
baz=67,SNR=5.5
W28A Vega 66.39 329 ⇑P P 01 14 28.1 +0.2
baz=67,SNR=12
222A Williams Famil 66.45 323 ⇑P P 01 14 29.5 +1.1
baz=67,SNR=49
Z24A Sheeppen Canyo 66.45 325 ⇑P P 01 14 28.8 +0.3
baz=67
Y25A Mesa, Roswell 66.56 326 ⇑P P 01 14 28.9 -0.2
baz=67
V29A Stinnett 66.57 330 ⇑P P 01 14 29.0 0.0
baz=67
X26A CR and CF Fran 66.61 327 ⇓P P 01 14 29.6 +0.2
baz=67,SNR=42
W27A Bowe Ranch, En 66.65 328 ⇓P P 01 14 29.6 0.0
baz=67,SNR=35
320A Kipp Ranch, An 66.68 322 ⇑P P 01 14 31.1 +1.2
baz=67,SNR=35
U30A WK&E Inc. Balk 66.71 331 ⇑P P 01 14 30.2 +0.3
baz=67,SNR=12
T31A Randall Ranch, 66.75 332 ⇓P P 01 14 30.6 +0.5
baz=67,SNR=25
221A Mesquite Ranch 66.75 323 ⇓P P 01 14 31.7 +1.4
baz=67
V28A Channing 66.80 329 ⇓P P 01 14 31.0 +0.4
baz=67,SNR=6.0
LIC Lamto 66.84 72 eP P 01 14 30.2 -0.9
comp=Z,11nm,0.5s
LIC Lamto 66.84 72 eP P 01 14 30.2 -0.9
comp=Z,11nm,0.5s
122A Conniff Cattle 66.84 324 ⇓P P 01 14 32.3 +1.4
baz=67,SNR=19
Z23A Rita Site, Whi 66.86 325 ⇑P P 01 14 32.0 +1.0
baz=67,SNR=48
U29A Oasis Ranch, S 66.93 330 ⇓P P 01 14 31.7 +0.4
baz=67,SNR=12
Y24A Capitan 66.95 326 ⇓P P 01 14 31.6 0.0
baz=67,SNR=26
W26A Owens Ranch, T 67.02 328 ⇑P P 01 14 32.3 +0.4
baz=67,SNR=28
X25A Clemmons Ranch 67.02 327 ⇓P P 01 14 31.9 -0.1
baz=67,SNR=18
LONY Lake Ozonia 67.04 354 eP P 01 14 32.1 +0.4
comp=Z,38nm,0.8s
220A Playas Peak, P 67.10 322 ⇑P P 01 14 33.7 +1.1
baz=67,SNR=55
V27A Dan Oppiter Fa 67.10 329 ⇑P P 01 14 32.7 +0.3
baz=67,SNR=12
S31A Mullinville 67.11 332 ⇓P P 01 14 32.7 +0.4
baz=67,SNR=15
319A Douglas 67.14 321 ⇓P P 01 14 34.0 +1.2
baz=67,SNR=19
121A Cookes Peak, D 67.15 323 ⇑P P 01 14 34.4 +1.5
baz=67,SNR=78
FRNY Flat Rock 67.17 355 eP P 01 14 32.5 +0.1
DBIC Dimbokro 67.19 72 eP P 01 14 32.6 -0.6
DBIC S S 01 23 09.5 -4.6
DBIC Dimbokro 67.19 72 P P 01 14 32.7 -0.6
comp=Z,25nm,0.9s,baz=220,slow=7.5,SNR=18

DBIC S S 01 23 09.5 -4.6
comp=Z,2.5nm,1.0s,baz=100,slow=17,SNR=2.5
KSU1 Kansas State U 67.19 335 eP P 01 14 32.5 -0.3
comp=Z,91nm,0.9s
Z22A Elephant Butte 67.25 324 ⇓P P 01 14 34.8 +1.4
baz=68,SNR=72
Y23A Lovelace Mesa, 67.28 325 ⇓P P 01 14 34.3 +0.6
baz=68,SNR=52
U28A Mallet 67.31 330 ⇑P P 01 14 33.9 +0.2
baz=68,SNR=33
X24A Lazy VL Ranch, 67.45 326 ⇓P P 01 14 35.1 +0.3
baz=68,SNR=20
W25A X Bar L Ranch, 67.47 327 ⇑P P 01 14 35.1 +0.3
baz=68,SNR=78
T29A Hugoton 67.52 331 ⇓P P 01 14 35.5 +0.5
baz=68,SNR=23
S30A Montezuma 67.55 332 ⇑P P 01 14 35.5 +0.4
baz=68,SNR=9.4
V26A Tequesquite Ra 67.59 328 ⇓P P 01 14 35.9 +0.4
baz=68,SNR=51
U27A Thompson Grove 67.63 329 ⇑P P 01 14 36.0 +0.3
baz=68,SNR=18
120A U Bar Ranch, L 67.64 323 ⇑P P 01 14 37.2 +1.3
baz=68,SNR=39
Z21A St. Cloud Mine 67.67 324 ⇓P P 01 14 37.7 +1.5
baz=68,SNR=55
BNM Barren Site 67.75 325 eP P 01 14 37.8 +1.1
comp=Z,42nm,1.0s
Y22A Socorro 67.77 325 ⇓P P 01 14 37.6 +0.9
baz=68
QSPA South Pole Qui 67.82 180 S S 01 23 21.4 +1.2
comp=Z,1.1nm,1.0s,baz=0.9,slow=21,SNR=6.9
S29A Ulysses 67.82 331 ⇓P P 01 14 37.6 +0.8
baz=68,SNR=30
X23A Hourglass Bar 67.85 326 ⇑P P 01 14 38.3 +1.0
baz=68,SNR=31
T28A Walsh 67.86 330 ⇑P P 01 14 37.2 0.0
baz=68,SNR=25
LPM Los Pinos Moun 67.88 325 eP P 01 14 38.3 +0.9
W24A Lazy 6 Ranch, 67.94 327 ⇑P P 01 14 38.1 +0.3
baz=68,SNR=30
LENM Lemitar 67.95 325 eP P 01 14 39.1 +1.3
R30A Dighton 68.00 332 ⇓P P 01 14 38.3 +0.4
baz=68,SNR=12
V25A Rancho No Teng 68.03 328 ⇓P P 01 14 38.8 +0.4
baz=68,SNR=70
Z20A Nine Sixteen R 68.03 323 ⇓P P 01 14 39.9 +1.5
baz=68,SNR=71
U26A Atchley Ranch, 68.05 329 ⇑P P 01 14 39.0 +0.5
baz=68,SNR=86
T27A Campo 68.10 330 ⇑P P 01 14 39.1 +0.5
baz=68,SNR=53
S28A Manter 68.15 331 ⇓P P 01 14 39.3 +0.4
baz=68,SNR=80
Y21A Point Rocks 68.20 324 ⇓P P 01 14 41.2 +1.6
baz=68,SNR=53
LAZ Ladron 68.22 325 eP P 01 14 40.7 +1.2
comp=Z,24nm,1.3s
X22A Bernardo 68.23 325 ⇑P P 01 14 41.4 +1.9
baz=68,SNR=14
V24A Rampart Ranch, 68.27 327 ⇑P P 01 14 40.5 +0.6
baz=68,SNR=33
ANMO Albuquerque 68.27 326 eP P 01 14 40.9 +1.0
comp=Z,45nm,0.7s
W23A Werner Place, 68.28 326 ⇓P P 01 14 41.0 +1.0
baz=68,SNR=36
U25A Circle Dot Ran 68.38 328 ⇑P P 01 14 41.2 +0.7
baz=69,SNR=52
JFWS Jewell Farm 68.45 342 eP P 01 14 39.9 -0.6
JFWS pmax pmax
comp=Z,67nm,0.6s
JFWS Jewell Farm 68.45 342 eP P 01 14 39.9 -0.6
comp=Z,67nm,0.6s
SCIA State Center 68.45 339 eP P 01 14 40.3 -0.2
comp=Z,76nm,0.8s
R29A Marienthal 68.50 332 ⇑P P 01 14 41.5 +0.4
baz=69,SNR=10
Y20A Horse Springs, 68.51 324 ⇑P P 01 14 42.9 +1.5
baz=69,SNR=48
W22A Albuquerque 68.58 326 ⇓P P 01 14 43.4 +1.6
baz=69,SNR=34
X21A Alamocita Cree 68.59 324 ⇑P P 01 14 43.5 +1.6
baz=69,SNR=62
T26A Comanche Natio 68.60 329 ⇓P P 01 14 42.6 +0.8
baz=69,SNR=35
TUC Tucson 68.70 321 eP P 01 14 43.3 +0.9
TUC pmax pmax
comp=Z,11nm,1.2s
TUC Tucson 68.70 321 eP P 01 14 43.3 +0.9
comp=Z,11nm,1.2s
R28A Tribune 68.73 331 ⇑P P 01 14 42.8 +0.3
baz=69,SNR=11
V23A Ortiz Mt. (NFS 68.75 326 ⇓P P 01 14 44.2 +1.4
baz=69,SNR=29
U24A Moreno Valley 68.81 327 ⇓P P 01 14 44.7 +1.4
baz=69,SNR=7.4
S26A Kim 68.90 330 ⇑P P 01 14 44.6 +1.0
baz=69,SNR=82
T25A Trinidad 68.96 329 ⇑P P 01 14 45.2 +1.1
baz=69,SNR=44
W21A San Fidel 69.03 325 ⇑P P 01 14 46.0 +1.4
baz=69,SNR=16
X20A Quemado 69.05 324 ⇑P P 01 14 46.3 +1.5
baz=69,SNR=16
R27A Eads 69.13 330 ⇓P P 01 14 45.3 +0.4
baz=69,SNR=9.8
U23A El Rito 69.21 327 ⇑P P 01 14 46.8 +1.1
baz=69,SNR=14
T24A Torres, Weston 69.22 328 ⇑P P 01 14 47.2 +1.4
baz=70,SNR=31
V22A San Miguel Ran 69.25 326 ⇑P P 01 14 47.5 +1.6
baz=70,SNR=54
S25A Robets Cordova 69.39 329 ⇓P P 01 14 47.7 +1.0
baz=70,SNR=113
R26A Arlington 69.44 330 ⇑P P 01 14 47.7 +0.8
baz=70,SNR=57
W20A Ramah 69.49 324 ⇑P P 01 14 48.7 +1.3
baz=70,SNR=45
V21A Milan 69.55 326 ⇑P P 01 14 49.2 +1.4
baz=70,SNR=20
U22A Llaves 69.58 326 ⇓P P 01 14 49.5 +1.6
baz=70,SNR=13
KSCO Kaye Shedlock' 69.64 331 ⇓P P 01 14 49.1 +1.0
baz=70,SNR=8.2
214A Organ Pipe Nat 69.65 319 ⇓P P 01 14 49.8 +1.6
baz=70
T23A Casias Ranch, 69.68 327 ⇓P P 01 14 49.8 +1.2
baz=70,SNR=14
R25A Fountain Ranch 69.71 329 ⇑P P 01 14 49.3 +0.7
baz=70,SNR=33
S24A Houchin Ranch, 69.75 328 ⇑P P 01 14 50.4 +1.3
baz=70,SNR=76
BGNE Belgrade 69.78 335 ⇓P P 01 14 49.1 +0.4
baz=70,SNR=29
X18A Snowflake 69.84 323 ⇑P P 01 14 50.9 +1.4
baz=70,SNR=8.4
SDCO Great Sand Dun 69.97 328 eP P 01 14 51.4 +1.0
comp=Z,83nm,0.9s
Q26A Hugo 69.97 330 ⇑P P 01 14 51.2 +1.0
baz=70,SNR=34
V20A Brimhall 69.98 325 ⇑P P 01 14 51.6 +1.2
baz=70,SNR=26
U21A Nageezi 70.03 326 ⇓P P 01 14 51.9 +1.1
baz=70,SNR=43
P27A Ficken Ranch, 70.06 331 ⇓P P 01 14 51.6 +0.9
baz=70
T22A Edith 70.10 327 ⇑P P 01 14 52.5 +1.4
baz=70,SNR=38
W18A Petrified Fore 70.16 324 ⇓P P 01 14 52.8 +1.3
baz=70,SNR=20
R24A Sanders Place, 70.17 329 ⇑P P 01 14 52.8 +1.3
baz=70,SNR=88
S23A Nye Farm, Mont 70.19 328 ⇓P P 01 14 53.0 +1.4
baz=70
Q25A Bedland, Calha 70.30 330 ⇑P P 01 14 52.8 +0.5
baz=70,SNR=15
T21A Navajo Lake 70.40 326 ⇓P P 01 14 54.1 +1.1
baz=71,SNR=31
P26A Davis Ranch, A 70.41 331 ⇑P P 01 14 53.8 +0.9
baz=71
U20A Newcomb 70.45 325 ⇑P P 01 14 54.3 +1.2
baz=71,SNR=57
R23A Moffat 70.48 328 ⇑P P 01 14 54.7 +1.2
baz=71,SNR=50
O27A Beecher Island 70.54 332 ⇓P P 01 14 54.7 +1.2
baz=71,SNR=12
X16A Lo Mia Camp, P 70.60 322 ⇓P P 01 14 55.7 +1.6
baz=71,SNR=35

S22A 4UR Ranch, Cre 70.63 327 ⇓P P 01 14 55.5 +1.1
baz=71,SNR=44
Z14A Wintersburg 70.72 320 ⇑P P 01 14 55.8 +1.2
baz=71
P25A Willow Gulch B 70.75 330 ⇓P P 01 14 56.2 +1.3
baz=71,SNR=29
Q24A Divide 70.77 329 ⇓P P 01 14 56.4 +1.2
baz=71,SNR=98
O26A Horse Wrangler 70.95 331 ⇑P P 01 14 57.2 +1.1
baz=71,SNR=7.5
R22A Saguache, Gunn 70.97 328 ⇑P P 01 14 57.7 +1.3
baz=71,SNR=25
OGNE Ogallala 70.97 333 eP P 01 14 56.6 +0.5
comp=Z,64nm,0.7s
OGNE Ogallala 70.97 333 ⇑P P 01 14 56.8 +0.8
baz=71,SNR=18
Q23A Hartsel 71.05 329 ⇓P P 01 14 57.8 +0.9
baz=71,SNR=14
S21A Coal Bank Pass 71.05 327 ⇓P P 01 14 58.2 +1.3
baz=71,SNR=14
MVCO Mesa Verde 71.07 326 eP P 01 14 58.1 +1.2
comp=Z,62nm,0.8s
MVCO Mesa Verde 71.07 326 ⇑P P 01 14 58.2 +1.2
baz=71,SNR=54
N27A Anderson Farm, 71.07 332 ⇑P P 01 14 57.6 +0.8
baz=71,SNR=5.4
COWI Conover 71.09 344 eP P 01 14 55.9 -0.7
comp=Z,12nm,0.6s
COWI ePP PP 01 17 35.6 -1.4
P24A Kohler Place, 71.09 330 ⇑P P 01 14 58.3 +1.3
baz=71,SNR=11
Y14A Wickenburg 71.16 321 ⇓P P 01 14 58.7 +1.4
baz=71
O25A Wiggins 71.21 331 ⇑P P 01 14 58.9 +1.2
baz=72,SNR=12
ECSD EROS Data Cent 71.23 338 eP P 01 14 57.1 -0.4
comp=Z,92nm,1.4s
WUAZ Wupatki 71.36 323 eP P 01 15 00.2 +1.5
comp=Z,58nm,1.0s
WUAZ Wupatki 71.36 323 ⇑P P 01 15 00.2 +1.5
baz=72,SNR=19
N26A Koester Ranch, 71.39 332 ⇓P P 01 14 59.7 +1.1
baz=72
P23A Jefferson 71.42 329 ⇓P P 01 15 00.4 +1.3
baz=72,SNR=26
S20A Disappointment 71.47 326 ⇑P P 01 15 01.0 +1.6
baz=72,SNR=63
R21A Cimarron 71.47 327 ⇓P P 01 15 00.7 +1.4
baz=72,SNR=30
Q22A Crested Butte, 71.53 328 ⇑P P 01 15 01.0 +1.2
baz=72,SNR=22
M27A Reverse DX Ran 71.60 333 ⇑P P 01 15 00.9 +1.0
baz=72,SNR=7.8
GLA Glamis 71.63 319 ⇑P P 01 15 01.4 +1.2
baz=72
ISCO Idaho Springs 71.65 329 eP P 01 15 01.5 +1.0
ISCO pmax pmax
comp=Z,48nm,1.0s
ISCO Idaho Springs 71.65 329 eP P 01 15 01.5 +1.0
comp=Z,48nm,1.0s
ISCO Idaho Springs 71.65 329 ⇑P P 01 15 01.5 +1.0
baz=72,SNR=62
O24A Longmont 71.65 330 ⇓P P 01 15 01.5 +1.2
baz=72,SNR=10
R20A Redvale 71.75 327 ⇑P P 01 15 02.8 +1.8
baz=72,SNR=103
N25A Grover 71.76 331 ⇓P P 01 15 02.4 +1.4
baz=72
PV01 Paradox Valley 71.81 326 eP P 01 15 02.7 +1.4
comp=Z,4µm,1.0s
Q21A Lamborn Mesa, 71.84 328 ⇑P P 01 15 02.8 +1.3
baz=72,SNR=18
M26A McRoberts Ranc 71.87 332 ⇑P P 01 15 02.8 +1.2
baz=72
Y12C Blythe 71.93 320 ⇓P P 01 15 03.4 +1.5
baz=72
L27A T5 Ranch, Ells 72.03 333 ⇓P P 01 15 03.5 +1.1
baz=72
P22A Eagle 72.03 329 ⇓P P 01 15 04.1 +1.4
baz=72
PDMCI Parker Dam,Lak 72.08 320 ⇑P P 01 15 04.0 +1.2
baz=72
O23A Lake Granby, G 72.11 330 ⇓P P 01 15 04.5 +1.3
baz=72,SNR=53
N24A Carr 72.13 331 ⇑P P 01 15 04.5 +1.4
baz=72,SNR=13
DVTC Desert V Tower 72.14 318 ⇓P P 01 15 04.8 +1.5
baz=72
SWSC Sam W. Stewart 72.15 318 ⇑P P 01 15 04.7 +1.5
baz=72
PV04 Paradox Valley 72.17 326 eP P 01 15 04.7 +1.2
S18A Hurst Farm, Bl 72.21 325 ⇑P P 01 15 05.3 +1.5
baz=72,SNR=96
Q20A Ridgley Place, 72.29 327 ⇑P P 01 15 05.1 +1.0
baz=72,SNR=8.2
L26A Underwood Farm 72.31 332 ⇓P P 01 15 05.4 +1.2
baz=73,SNR=9.3
P21A Newcastle 72.31 328 ⇑P P 01 15 05.9 +1.6
baz=73,SNR=76
O22A Kremmling 72.37 329 ⇓P P 01 15 05.7 +0.9
baz=73,SNR=81
BC3 Big Chuckawall 72.42 319 ⇑P P 01 15 06.2 +1.2
baz=73,SNR=6.3
W13A Hualapai Mount 72.49 321 ⇓P P 01 15 07.1 +1.6
baz=73,SNR=6.7
MONP Monument Peak 72.50 318 ⇓P P 01 15 06.9 +1.3
baz=73
K27A Flueckinger Fa 72.50 333 ⇑P P 01 15 06.5 +1.3
baz=73,SNR=15
U15A North Rim 72.53 323 ⇓P P 01 15 07.6 +1.9
baz=73,SNR=51
IRM Iron Mountain 72.59 320 ⇑P P 01 15 07.2 +1.4
baz=73,SNR=7.4
M24A Cheyenne 72.61 331 ⇑P P 01 15 07.6 +1.6
baz=73,SNR=70
N23A Red Feather La 72.67 330 ⇓P P 01 15 07.7 +1.2
baz=73,SNR=50
BRSD Miller 72.69 337 ⇓P P 01 15 05.9 -0.2
baz=73
NEE2 Needles Airpor 72.69 320 ⇑P P 01 15 07.8 +1.4
baz=73
P20A De Beque 72.76 328 ⇓P P 01 15 08.2 +1.3
baz=73,SNR=15
PHWY Pilot Hill 72.77 331 eP P 01 15 07.7 +0.6
comp=Z,98nm,1.4s
L25A Engebretsen Ra 72.79 332 ⇑P P 01 15 08.3 +1.3
baz=73
N22A Wattenberg Ran 72.83 330 ⇓P P 01 15 08.9 +1.5
baz=73,SNR=47
O21A Pagoda 72.86 329 ⇑P P 01 15 09.1 +1.5
baz=73,SNR=11
K26A Motz Farm, Whi 72.90 333 ⇑P P 01 15 08.6 +1.1
baz=73
109C Camp Elliot, M 72.92 317 ⇑P P 01 15 09.0 +1.3
baz=73
BELC Belle Mtn. Jos 72.99 319 ⇓P P 01 15 09.8 +1.4
baz=73,SNR=7.3
PFO Pinyon Flat Ob 73.00 318 P P 01 15 09.9 +1.5
comp=Z,102nm,1.1s,SNR=5.9
PFO Pinyon Flat Ob 73.00 318 eP P 01 15 09.4 +0.9
comp=Z,26nm,1.3s
PFO Pinyon Flat Ob 73.00 318 ⇑P P 01 15 09.9 +1.5
baz=73,SNR=8.0
M23A Laramie 73.02 330 ⇓P P 01 15 09.6 +1.1
baz=73,SNR=26
K25A Mack Ranch, Ha 73.12 332 ⇓P P 01 15 10.2 +1.3
baz=73,SNR=6.3
L24A Wheatland 73.12 331 ⇓P P 01 15 10.1 +1.2
baz=73
P19A Cripple Cowboy 73.15 327 ⇑P P 01 15 10.8 +1.5
baz=73,SNR=183
O20A White River Ci 73.17 328 ⇑P P 01 15 10.7 +1.3
baz=73,SNR=74
N21A Black Mountain 73.30 329 ⇓P P 01 15 11.7 +1.5
baz=74,SNR=16
GMRC Granite Mounta 73.32 320 ⇓P P 01 15 11.9 +1.7
baz=74,SNR=38
M22A Cedar Creek Ra 73.37 330 ⇑P P 01 15 11.7 +1.1
baz=74,SNR=19
EYMN Ely 73.41 343 eP P 01 15 09.4 -1.0
comp=Z,17nm,0.6s
MURC Murrieta 73.46 318 ⇑P P 01 15 12.2 +1.3
baz=74,SNR=6.4
L23A Garrett 73.52 331 ⇓P P 01 15 12.1 +0.7
baz=74,SNR=17
K24A Anderson Ranch 73.62 332 ⇑P P 01 15 13.3 +1.5
baz=74,SNR=14
N20A Spence Gulch, 73.72 328 ⇑P P 01 15 13.7 +1.2
baz=74,SNR=39
BBRC Big Bear Solar 73.73 319 ⇑P P 01 15 14.3 +1.5
baz=74
O19A Miners Draw (B 73.73 328 ⇑P P 01 15 13.8 +1.2
baz=74,SNR=47
Q16A Castle Valley 73.74 325 ⇑P P 01 15 14.0 +1.3
baz=74,SNR=15
HEC Hector,Ludlow 73.75 319 ⇓P P 01 15 14.4 +1.7
baz=74,SNR=6.5
P18A Preston Nutter 73.79 326 ⇑P P 01 15 14.6 +1.4
baz=74,SNR=94
L22A Ellis Ranch, M 73.79 330 ⇑P P 01 15 14.3 +1.4
baz=74,SNR=7.1
M21A Separation Pea 73.89 330 ⇓P P 01 15 14.7 +1.2
baz=74,SNR=47
TUQ Turquoise Moun 73.92 320 ⇑P P 01 15 15.5 +1.7
baz=74
P17A Butcher Ranch, 73.93 326 ⇑P P 01 15 15.0 +1.2
baz=74,SNR=14
CCUT Cedar City 73.93 323 eP P 01 15 16.0 +2.1
comp=Z,70nm,0.8s
MSU Marysvale 73.98 325 eP P 01 15 15.8 +1.6
MSU Marysvale 73.98 325 eP P 01 15 15.8 +1.6
MVU Marysvale 73.99 325 eP P 01 15 16.0 +1.8
comp=Z,57nm,0.9s
K23A Bowen Ranch, D 74.00 331 ⇑P P 01 15 15.2 +1.2
baz=74,SNR=33
J24A Dixon Ranch, L 74.04 332 ⇑P P 01 15 15.8 +1.5
baz=74,SNR=33
ARUT Antelope Range 74.14 323 eP P 01 15 16.9 +1.9
ARUT pmax pmax
comp=Z,58nm,0.9s
ARUT Antelope Range 74.14 323 eP P 01 15 16.9 +1.9
comp=Z,58nm,0.9s
BFSC Mount Baldy Ra 74.17 318 ⇓P P 01 15 16.4 +1.2
baz=74,SNR=10
L21A Rawlins 74.17 330 ⇑P P 01 15 16.1 +0.9
baz=74
M20A Sweetwater, Wa 74.19 329 ⇓P P 01 15 16.5 +1.2
baz=74,SNR=19
RRX Edison Barstow 74.19 319 ⇓P P 01 15 16.9 +1.7
baz=74
K22A Casper 74.32 331 ⇑P P 01 15 17.0 +1.1
baz=75,SNR=25
GSC Goldstone 74.36 319 ⇑P P 01 15 17.7 +1.5
baz=75,SNR=8.1
MWC Mount Wilson 74.41 318 eP P 01 15 18.1 +1.4
MWC Mount Wilson 74.41 318 eP P 01 15 18.1 +1.4
RSSD Black Hills 74.42 333 eP P 01 15 17.2 +0.7
RSSD pmax pmax
comp=Z,41nm,1.0s
RSSD Black Hills 74.42 333 eP P 01 15 17.2 +0.7
comp=Z,41nm,1.0s
PASC Pasadena Art C 74.45 318 eP P 01 15 18.0 +1.3
comp=Z,50nm,1.2s
SHOC Shoshone 74.45 320 ⇓P P 01 15 18.2 +1.5
baz=75
I24A Kuemmerle Ranc 74.45 333 ⇓P P 01 15 17.7 +1.1
baz=75,SNR=16
J23A Dilts Ranch, B 74.49 332 ⇑P P 01 15 18.0 +1.2
baz=75
DECC Green Verdugo 74.59 318 ⇑P P 01 15 18.9 +1.4
baz=75
L20A Wamsutter 74.66 329 ⇑P P 01 15 19.0 +1.1
baz=75,SNR=45
M19A Rock Springs 74.67 328 ⇑P P 01 15 18.7 +0.6
baz=75,SNR=9.9
MPU Maple Canyon 74.79 326 eP P 01 15 19.9 +1.1
comp=Z,57nm,1.0s
EDW2 Edwards Air Fo 74.80 318 ⇓P P 01 15 19.7 +0.9
baz=75,SNR=10
DAU Daniels Canyon 74.89 326 eP P 01 15 20.9 +1.4
DAU Daniels Canyon 74.89 326 eP P 01 15 20.9 +1.4
I23A Meade Ranch, G 74.89 332 ⇓P P 01 15 19.9 +0.7
baz=75
J22A Midwest 74.90 331 ⇓P P 01 15 20.0 +0.8
baz=75
BLG Laguna Peak 74.96 317 ⇓P P 01 15 20.7 +1.1
baz=75
AGMN Agassiz Nation 75.00 340 eP P 01 15 19.3 -0.2
comp=Z,26nm,0.8s
LRMC Laurel Mountai 75.01 319 ⇓P P 01 15 21.5 +1.5
baz=75
SYO Syowa Base 75.01 159 ⇑jP P 01 15 19.4 0.0
SYO Syowa Base 75.01 159 ⇓eX P 01 15 26.0 +6.6
M18A Lyman 75.05 328 ⇑P P 01 15 21.0 +0.7
baz=75,SNR=27
OSI Osito Adit 75.08 318 ⇑P P 01 15 21.2 +0.9
baz=75
JLU Jordanelle 75.13 326 eP P 01 15 22.2 +1.4
comp=Z,49nm,0.9s
H24A Dirks Ranch, A 75.14 333 ⇓P P 01 15 21.0 +0.5
baz=75,SNR=77
K20A Yellowstone Ra 75.16 330 ⇓P P 01 15 21.5 +0.7
baz=75,SNR=14
FURC Furnace Creek, 75.18 320 ⇑P P 01 15 22.5 +1.8
baz=75,SNR=38
L19A Farson 75.22 329 ⇑P P 01 15 22.4 +1.2
baz=76,SNR=25
MPMC Manual Prospec 75.28 320 ⇓P P 01 15 22.7 +1.0
baz=76,SNR=27
I22A 9 Mile Ranch, 75.28 332 ⇑P P 01 15 22.2 +0.7
baz=76,SNR=57
J21A Lysite 75.28 331 ⇑P P 01 15 22.6 +1.1
baz=76,SNR=41
SBA Scott Base 75.30 190 eP P 01 15 23.7 +2.8
SBA Scott Base 75.30 190 eP P 01 15 23.7 +2.8
H23A Clabaugh Cattl 75.35 333 ⇑P P 01 15 22.4 +0.7
baz=76,SNR=6.9
M17A Scullys Gap (B 75.38 327 ⇑P P 01 15 22.8 +0.6
baz=76,SNR=13
L18A Fontenelle, Gr 75.41 328 ⇓P P 01 15 23.3 +1.0
baz=76,SNR=58
ARVC Arvin 75.48 318 ⇑P P 01 15 24.0 +1.5
baz=76
DAC Darwin (Calif) 75.49 320 eP P 01 15 23.8 +1.0
DAC pmax pmax
comp=Z,35nm,1.0s
DAC Darwin (Calif) 75.49 320 eP P 01 15 23.8 +1.0
comp=Z,35nm,1.0s
K19A Absolon Red Bu 75.53 329 ⇓P P 01 15 23.5 +0.6
baz=76,SNR=22
DUG Dugway 75.54 325 eP P 01 15 24.2 +1.3
DUG pmax pmax
comp=Z,32nm,0.9s
DUG Dugway 75.54 325 eP P 01 15 24.2 +1.3
comp=Z,32nm,0.9s
DUG Dugway 75.54 325 ⇑P P 01 15 24.4 +1.5
baz=76,SNR=41
G24A Alzada 75.56 334 ⇑P P 01 15 23.4 +0.6
baz=76,SNR=12
I21A Big Trails, Te 75.58 331 ⇓P P 01 15 23.8 +0.7
baz=76,SNR=101
J20A Shoshoni 75.58 330 ⇑P P 01 15 24.3 +1.2
baz=76,SNR=20
SBC Santa Barbara 75.58 317 ⇓P P 01 15 24.1 +1.0
baz=76
ISA Isabella 75.61 319 eP P 01 15 24.6 +1.2
ISA pmax pmax
comp=Z,35nm,0.9s
ISA Isabella 75.61 319 eP P 01 15 24.6 +1.2
comp=Z,35nm,0.9s
ISA Isabella 75.61 319 ⇓P P 01 15 25.0 +1.6
baz=76,SNR=18
R11A Troy Canyon, C 75.74 322 ⇑P P 01 15 25.8 +1.6
baz=76,SNR=30
H22A Clearmont 75.78 332 ⇑P P 01 15 24.7 +0.5
baz=76,SNR=5.3
BW06 Boulder Array 75.82 329 eP P 01 15 24.9 +0.3
comp=Z,14nm,0.7s
PDAR Pinedale Array 75.82 329 P P 01 15 25.0 +0.4
PDAR Pinedale Array 75.82 329 P P 01 15 25.0 +0.4
comp=Z,12nm,0.6s,baz=128,slow=7.7,SNR=83
MDND Maddock 75.84 338 ⇓P P 01 15 24.9 +0.6
baz=76,SNR=15
GRAC Grapevine Rang 75.84 320 ⇓P P 01 15 26.2 +1.6
baz=76,SNR=13
G23A Biddle 75.86 333 ⇓P P 01 15 25.2 +0.7
baz=76,SNR=6.4
TOA0 Torodi Ar. Sit 75.89 69 eP P 01 15 24.9 -0.4
TORD Torodi Ar. Bea 75.89 69 P P 01 15 24.9 -0.4
TORD S S 01 24 47.8 -5.9
TORD Torodi Ar. Bea 75.89 69 P P 01 15 24.9 -0.4
comp=Z,68nm,0.7s,baz=256,slow=5.5,SNR=1254
TORD S S 01 24 47.8 -5.9
comp=Z,1.5nm,0.9s,baz=250,slow=11,SNR=6.3
CWC Cottonwood Cre 75.89 320 ⇑P P 01 15 26.4 +1.4
baz=76,SNR=6.1
HWUT Hardware Ranch 75.93 327 eP P 01 15 25.6 +0.4
comp=Z,37nm,0.8s
PKM Peak Mountain 75.94 317 ⇓P P 01 15 26.7 +1.3
baz=76,SNR=8.7
K18A Toltan Ranch, 75.95 329 ⇑P P 01 15 26.7 +1.4
baz=76,SNR=57
J19A Crowheart 75.96 330 ⇓P P 01 15 26.2 +0.8
baz=76,SNR=45
F24A Ekalaka 75.99 334 ⇑P P 01 15 25.9 +0.6
baz=76,SNR=27
I20A Worland 76.07 331 ⇓P P 01 15 26.6 +0.8
baz=76,SNR=39
VES Vestal, Richgr 76.10 319 ⇓P P 01 15 27.3 +1.3
baz=76,SNR=6.0
H21A Big Horn, Sher 76.11 332 ⇑P P 01 15 26.4 +0.3
baz=76,SNR=28
G22A Birney 76.25 332 ⇑P P 01 15 27.2 +0.4
baz=76,SNR=10
F23A Volborg 76.28 333 ⇓P P 01 15 27.5 +0.6
baz=76,SNR=46
VNDA Vanda 76.31 190 eP P 01 15 28.9 +2.2
comp=Z,6.2nm,1.0s
VNDA Vanda 76.31 190 P P 01 15 28.8 +2.2
comp=Z,4.4nm,0.8s,baz=131,slow=5.4,SNR=15
SMMC Simmler 76.32 318 ⇓P P 01 15 29.1 +1.7
baz=76,SNR=6.9
J18A Kendall Valley 76.38 329 ⇓P P 01 15 28.6 +0.8
baz=77,SNR=74
TIN Tinemaha 76.39 320 ⇑P P 01 15 29.5 +1.7
baz=77
H20A Greybull 76.43 331 ⇓P P 01 15 28.3 +0.5
baz=77,SNR=59
K17A Gardner Place, 76.47 328 ⇑P P 01 15 29.1 +0.9
baz=77,SNR=36
RCTC Rector, Farmer 76.50 319 ⇓P P 01 15 28.8 +0.5
baz=77
E24A Baker 76.52 334 ⇑P P 01 15 29.1 +0.9
baz=77,SNR=43
I19A Meeteetse 76.53 330 ⇓P P 01 15 29.6 +1.0
baz=77,SNR=39
AHID Auburn Hatcher 76.56 328 eP P 01 15 29.7 +1.0
comp=Z,83nm,0.8s
G21A Lodge Grass 76.66 332 ⇓P P 01 15 29.8 +0.7
baz=77,SNR=20
I18A Diamond G Ranc 76.66 329 ⇓P P 01 15 30.5 +1.2
baz=77,SNR=47
HVU Hansel Valley 76.67 326 eP P 01 15 30.2 +0.9
HVU pmax pmax
comp=Z,29nm,0.8s
HVU Hansel Valley 76.67 326 eP P 01 15 30.2 +0.9
comp=Z,28nm,0.8s
F22A Rosebud 76.69 333 ⇑P P 01 15 29.7 +0.5
baz=77,SNR=23
ULM Lac du Bonnet 76.73 341 eP P 01 15 28.8 -0.4
comp=Z,62nm,0.6s
ULM Lac du Bonnet 76.73 341 P P 01 15 28.9 -0.4
comp=Z,75nm,0.5s,baz=155,slow=6.4,SNR=74
MTUM Tungsten Hills 76.79 320 eP P 01 15 31.5 +1.3
J17A Brown Place, J 76.82 329 ⇑P P 01 15 31.5 +1.3
baz=77,SNR=22
K16A Soda Springs 76.85 328 ⇑P P 01 15 31.8 +1.4
baz=77,SNR=23
E23A Ismay 76.87 334 ⇓P P 01 15 30.5 +0.3
baz=77,SNR=20
SCHQ Schefferville 76.90 0 eP P 01 15 29.8 -0.3
comp=Z,21nm,0.8s
SCHQ Schefferville 76.90 0 P P 01 15 29.9 -0.1
comp=Z,17nm,0.7s,baz=180,slow=4.6,SNR=38
SNOW Snow King Moun 76.92 329 eP P 01 15 32.0 +1.2
D24A Glendive 76.98 335 ⇑P P 01 15 31.8 +1.0
baz=77,SNR=14
H19A Powell 77.01 331 ⇑P P 01 15 31.9 +0.8
baz=77,SNR=21
TPAW Teton Pass 77.03 329 eP P 01 15 32.2 +0.8
comp=Z,33nm,0.8s
F21A Absaloka Mine, 77.09 332 ⇑P P 01 15 32.2 +0.7
baz=77
G20A Bridger 77.09 331 ⇑P P 01 15 32.0 +0.5
baz=77,SNR=66
RRI2 Red Ridge 77.11 328 eP P 01 15 32.6 +0.7
comp=Z,82nm,1.1s
MOOW Moose Ponds 77.13 329 eP P 01 15 32.9 +1.0
comp=Z,114nm,1.9s
MLAC Mammoth Lakes 77.13 320 ⇑P P 01 15 33.6 +1.5
baz=77
I17A Pilgrim Ck. 77.18 329 ⇑P P 01 15 33.8 +1.6
baz=77,SNR=19
ELK Elko 77.22 324 eP P 01 15 33.6 +1.1
comp=Z,279nm,0.9s
NV11 Mina Array Sit 77.27 321 eP P 01 15 33.8 +1.0
H18A Shoshone NF, C 77.33 330 ⇓P P 01 15 33.8 +0.8
baz=78,SNR=70
IMW Indian Meadow 77.33 329 eP P 01 15 34.3 +1.2
comp=Z,42nm,0.8s
NVAR Mina Array Bea 77.35 321 P P 01 15 34.1 +0.8
NVAR Mina Array Bea 77.35 321 P P 01 15 34.1 +0.8
comp=Z,12nm,0.8s,baz=152,slow=6.2,SNR=62
C24A Savage 77.35 335 ⇑P P 01 15 34.0 +1.1
baz=78,SNR=8.0
D23A Lindsay 77.37 334 ⇑P P 01 15 34.1 +1.1
baz=78,SNR=14
RLMT Red Lodge 77.49 331 eP P 01 15 34.9 +1.0
comp=Z,40nm,0.6s
F20A Billings 77.52 332 ⇑P P 01 15 34.5 +0.6
baz=78,SNR=17
H17A Grant Village 77.54 330 ⇑P P 01 15 36.1 +1.9
baz=78,SNR=6.4
I16A Newdale 77.58 329 ⇓P P 01 15 35.6 +1.3
baz=78
E21A Keefer Ranch, 77.64 333 ⇑P P 01 15 35.3 +0.8
baz=78,SNR=12
D22A Cohagen 77.75 334 ⇓P P 01 15 36.1 +1.0
baz=78,SNR=35
G18A Lazy EL Ranch, 77.77 331 ⇑P P 01 15 36.2 +0.8
baz=78,SNR=18
C23A Lambert 77.88 335 ⇓P P 01 15 36.6 +0.8
baz=78,SNR=14
F19A Roth Farm, Mol 77.91 331 ⇑P P 01 15 36.9 +0.8
baz=78,SNR=70
YMR Madison River 77.93 329 eP P 01 15 38.0 +1.7
comp=Z,124nm,1.4s
TSUM Tsumeb 77.98 106 eP P 01 15 37.6 +0.4
comp=Z,24nm,1.1s
D21A La Casta Ranch 78.02 333 ⇓P P 01 15 37.5 +0.9
baz=78,SNR=21
DGMT Dagmar 78.03 336 eP P 01 15 37.5 +0.9
comp=Z,96nm,0.8s
DGMT Dagmar 78.03 336 ⇓P P 01 15 37.7 +1.1
baz=78,SNR=11
E20A Meyer Farm, Mu 78.06 332 ⇓P P 01 15 37.7 +0.9
baz=78,SNR=37
H16A Russell Place, 78.09 329 ⇓P P 01 15 38.6 +1.4
baz=78,SNR=9.2
BMN Battle Mountai 78.09 323 eP P 01 15 36.9 -0.4
BMN pmax pmax
comp=Z,12nm,1.0s
BMN Battle Mountai 78.09 323 eP P 01 15 36.9 -0.4
comp=Z,12nm,1.0s
C22A Vida 78.11 334 ⇑P P 01 15 37.5 +0.5
baz=78,SNR=17
I15A Monteview 78.16 328 ⇓P P 01 15 39.2 +1.7
baz=78,SNR=14
J14A Carey 78.17 327 ⇓P P 01 15 39.1 +1.5
baz=78,SNR=24
GCMT Greycliff 78.18 331 eP P 01 15 38.3 +0.7
comp=Z,39nm,0.9s
QLMT Earthquake Lak 78.27 329 eP P 01 15 38.5 +0.3
F18A Big Timber 78.29 331 ⇓P P 01 15 39.1 +1.0
baz=78,SNR=80
E19A Rath Farm, Rou 78.31 332 ⇓P P 01 15 39.1 +0.9
baz=79,SNR=66
G17A Pierce Place, 78.31 330 ⇓P P 01 15 39.8 +1.4
baz=79,SNR=8.2
CMB Columbia Colle 78.32 320 eP P 01 15 39.0 +0.5
CMB pmax pmax
comp=Z,191nm,2.8s
CMB Columbia Colle 78.32 320 eP P 01 15 39.0 +0.5
comp=Z,191nm,2.8s
A24A Westby 78.33 336 ⇑P P 01 15 39.4 +1.2
baz=79,SNR=25
B23A Brockton 78.34 335 ⇓P P 01 15 39.2 +1.0
baz=79,SNR=20
D20A Manuel Ranch, 78.52 333 ⇑P P 01 15 39.8 +0.5
baz=79,SNR=31
J13A Cove Ranch, Pi 78.56 327 ⇓P P 01 15 41.2 +1.4
baz=79,SNR=21
I14A Mackay 78.58 328 ⇑P P 01 15 41.6 +1.7

baz=79,SNR=28
B22A Reddig Ranch S 78.60 335 ⇓P P 01 15 40.6 +0.9
baz=79
C21A Desert Coulee 78.67 334 ⇑P P 01 15 40.6 +0.5
baz=79,SNR=22
H15A Lima 78.69 329 ⇑P P 01 15 42.0 +1.5
baz=79,SNR=18
A23A Redstone 78.69 336 ⇓P P 01 15 41.1 +0.9
baz=79
F17A Fitzpatrick Pl 78.72 330 ⇓P P 01 15 41.8 +1.2
baz=79,SNR=43
G16A Moss Hill, Enn 78.74 329 ⇓P P 01 15 41.6 +0.9
baz=79,SNR=15
WCN Washoe City 78.78 321 *e*P P 01 15 41.9 +0.8
WCN pmax pmax
comp=Z,13nm,1.0s
WCN Washoe City 78.78 321 *e*P P 01 15 41.9 +0.8
comp=Z,13nm,1.0s
HLID Hailey 78.80 327 *e*P P 01 15 42.7 +1.6
comp=Z,56nm,0.8s
HLID Hailey 78.80 327 ⇓P P 01 15 42.7 +1.6
baz=79,SNR=121
E18A Harlowton 78.89 331 ⇓P P 01 15 42.2 +0.8
baz=79,SNR=16
D19A Cripps Ranch, 78.90 332 ⇑P P 01 15 41.9 +0.5
baz=79,SNR=36
I13A Wildhorse Cree 78.90 327 ⇓P P 01 15 43.5 +1.8
baz=79,SNR=43
MCMT McKenzie Canyo 78.94 329 *e*P P 01 15 43.5 +1.5
comp=Z,21nm,0.8s
C20A Veseth Ranch, 78.95 333 ⇓P P 01 15 42.0 +0.3
baz=79,SNR=31
BOZ Bozeman (W) 78.97 330 *e*P P 01 15 42.3 +0.3
BOZ pmax pmax
comp=Z,18nm,1.2s
BOZ Bozeman (W) 78.97 330 *e*P P 01 15 42.3 +0.3
comp=Z,18nm,1.2s
G15A Dillon 79.02 329 ⇓P P 01 15 43.3 +1.1
baz=79,SNR=28
H14A Leadore 79.04 328 ⇑P P 01 15 43.9 +1.5
baz=79,SNR=21
F16A Kennard Place, 79.07 330 ⇑P P 01 15 43.3 +0.8
baz=79,SNR=8.0
B21A Ellsworth Farm 79.11 334 ⇑P P 01 15 43.3 +0.8
baz=79
A22A Carney Farms, 79.12 335 ⇓P P 01 15 43.5 +0.9
baz=79,SNR=33
DLMT Dillon 79.22 329 *e*P P 01 15 44.1 +0.8
comp=Z,23nm,0.9s
E17A Martinsdale 79.23 331 ⇑P P 01 15 44.3 +0.9
baz=80,SNR=48
D18A Linhart Farms, 79.32 332 ⇓P P 01 15 44.5 +0.8
baz=80,SNR=25
I12A Atlanta 79.33 327 ⇑P P 01 15 45.4 +1.5
baz=80,SNR=47
C19A Slack Wire Ran 79.41 333 ⇓P P 01 15 44.8 +0.6
baz=80,SNR=28
MFID Camas Ranch 79.42 326 ⇓P P 01 15 45.7 +1.3
baz=80,SNR=24
H13A Challis 79.44 328 ⇓P P 01 15 46.0 +1.5
baz=80,SNR=47
LRM Limekiln Ridge 79.49 329 *e*P P 01 15 45.6 +0.7
BEKR Beckworth 79.50 321 *e*P P 01 15 46.0 +1.0
comp=Z,26nm,1.2s
F15A Butte 79.52 329 ⇓P P 01 15 46.1 +1.1
baz=80,SNR=38
B20A Solberg Farm, 79.53 334 ⇑P P 01 15 45.3 +0.5
baz=80,SNR=18
G14A Jackson 79.54 329 ⇓P P 01 15 46.2 +1.0
baz=80,SNR=5.5
E16A East Helena 79.66 330 ⇓P P 01 15 46.6 +1.0
baz=80,SNR=6.2
D17A Six Diamond Ra 79.68 331 ⇓P P 01 15 46.5 +0.7
baz=80,SNR=51
H12A Diamond D Ranc 79.73 327 ⇑P P 01 15 47.6 +1.5
baz=80,SNR=41
G13A Cobalt 79.81 328 ⇓P P 01 15 48.0 +1.6
baz=80,SNR=168
OHCM Honcut 79.82 320 *e*P P 01 15 47.9 +1.5
A20A Cobblestone Ra 79.84 334 ⇓P P 01 15 47.3 +0.8
baz=80
F14A Wisdom 79.91 329 ⇓P P 01 15 48.6 +1.5
baz=80,SNR=6.0
B19A Brinkman Farms 79.93 333 ⇓P P 01 15 47.5 +0.6
baz=80,SNR=19
EGMT Eagleton 79.94 332 *e*P P 01 15 47.4 +0.4
comp=Z,53nm,0.9s
EGMT Eagleton 79.94 332 ⇓P P 01 15 47.4 +0.4
baz=80,SNR=27
D16A Dana Ranch, Ca 79.97 331 ⇓P P 01 15 48.5 +1.2
baz=80,SNR=114
E15A Deer Lodge 80.02 330 ⇑P P 01 15 48.6 +1.0
baz=80,SNR=29
C17A Wharram Farm, 80.08 332 ⇓P P 01 15 48.2 +0.4
baz=80,SNR=23
A19A Klindworth Far 80.21 333 ⇑P P 01 15 48.7 +0.2
baz=80,SNR=7.0
B18A Beardsley Farm 80.23 333 ⇓P P 01 15 49.2 +0.7
baz=80,SNR=55
F13A Darby 80.36 328 ⇓P P 01 15 50.5 +1.1
baz=81,SNR=123
G12A Big Creek, Yel 80.37 327 ⇓P P 01 15 50.4 +0.9
baz=81
E14A Clinton 80.41 329 ⇑P P 01 15 51.0 +1.3
baz=81,SNR=30
D15A Lincoln 80.42 330 ⇓P P 01 15 51.0 +1.3
baz=81,SNR=45
B17A L&G Farms, Che 80.59 332 ⇑P P 01 15 50.8 +0.3
baz=81,SNR=8.4
C16A Fuhringer Ranc 80.64 331 ⇓P P 01 15 51.4 +0.6
baz=81,SNR=20
A18A Metzger Ranch, 80.66 333 ⇓P P 01 15 51.1 +0.2
baz=81,SNR=37
CHMT Chamberlain Mo 80.67 330 *e*P P 01 15 51.7 +0.6
E13A Victor 80.76 329 ⇑P P 01 15 52.8 +1.3
baz=81,SNR=64
F12A Elk City 80.79 328 ⇑P P 01 15 52.4 +0.8
baz=81,SNR=26
MORF Marmelete 80.79 43 *e*P P 01 15 53.4 +1.6
comp=Z,66nm,1.6s
MOD Modoc 80.80 323 *e*P P 01 15 52.2 +0.3
comp=Z,87nm,1.3s
MDT Midelt 80.88 49 P P 01 15 53.7 +1.3
MDT Midelt 80.88 49 P P 01 15 53.7 +1.3
comp=Z,41nm,0.9s,baz=242,slow=4.6,SNR=81
PTEO Sao Teotonio 80.88 43 *e*P P 01 15 54.3 +2.1
comp=Z,89nm,1.7s
D14A Greenough 80.91 330 ⇓P P 01 15 53.1 +0.8
baz=81,SNR=21
MSO Missoula 80.93 329 *e*P P 01 15 52.7 +0.4
comp=Z,27nm,1.4s
MSO Missoula 80.93 329 ⇑P P 01 15 53.4 +1.1
baz=81,SNR=15
C15A Salmond Ranch, 81.01 331 ⇓P P 01 15 53.8 +1.1
baz=81,SNR=136
SLMT Seeley Lake 81.02 330 *e*P P 01 15 53.8 +0.9
A17A Triple J Farms 81.05 332 ⇓P P 01 15 53.4 +0.5
baz=81,SNR=38
B16A M & M Farms, S 81.08 332 ⇓P P 01 15 53.2 +0.1
baz=81,SNR=11
BMO Blue Mountains 81.18 326 *e*P P 01 15 54.3 +0.6
comp=Z,39nm,1.1s
PBDV Barranco-do-Ve 81.21 44 *e*P P 01 15 55.6 +1.6
comp=Z,60nm,2.0s
WDC Whiskeytown Da 81.24 320 *e*P P 01 15 53.3 -0.7
WDC pmax pmax
comp=Z,19nm,0.6s
WDC Whiskeytown Da 81.24 320 *e*P P 01 15 53.2 -0.7
comp=Z,19nm,0.6s
PNCL Nicolau / Gran 81.35 43 *e*P P 01 15 55.6 +1.0
comp=Z,32nm,2.3s
D13A Huson 81.36 329 ⇑P P 01 15 55.6 +1.0
baz=82,SNR=64
PCVE Castro Verde 81.37 43 *e*P P 01 15 56.5 +1.7
comp=Z,47nm,1.6s
BOSA Boshof 81.37 117 *e*P P 01 15 55.0 -0.3
comp=Z,18nm,0.3s
BOSA Boshof 81.37 117 P P 01 15 55.4 +0.1
comp=Z,16nm,0.4s,baz=252,slow=4.5,SNR=130
B15A Bradely Ranch, 81.39 331 ⇑P P 01 15 54.7 0.0
baz=82,SNR=44
A16A West Butte Ran 81.44 332 ⇑P P 01 15 55.6 +0.6
baz=82
PVAQ Vaqueiros 81.44 44 *e*P P 01 15 56.3 +1.2
comp=Z,48nm,1.6s
SWMT Swartz Lake 81.45 330 *e*P P 01 15 55.5 +0.4
C14A Swan Lake 81.52 330 ⇑P P 01 15 56.5 +1.1
baz=82

YBMT Yellow Bay 81.71 330 *e*P P 01 15 57.5 +1.0
comp=Z,44nm,1.0s
PBEJ Beja 81.72 43 *e*P P 01 15 57.8 +1.2
comp=Z,30nm,1.0s
B14A Marquette Ranc 81.74 331 ⇓P P 01 15 56.8 +0.2
baz=82
JTMT Jette 81.75 330 *e*P P 01 15 57.6 +0.9
D12A Red Ives Fores 81.76 329 ⇓P P 01 15 57.5 +0.8
baz=82
C13A Hot Springs 81.84 330 ⇑P P 01 15 58.0 +0.9
baz=82,SNR=53
EVOP Sao Brissos 81.85 43 ⇑*i*P P 01 15 58.3 +1.1
EVOP pmax pmax
comp=Z,27nm,0.9s
EVOP Sao Brissos 81.85 43 ⇑*i*P P 01 15 58.3 +1.1
comp=Z,26nm,0.9s
EVO Evora 81.92 43 ⇑*i*P P 01 15 58.3 +0.7
comp=Z,26nm,0.9s
EVO Evora 81.92 43 *e*P P 01 15 58.8 +1.2
comp=Z,27nm,1.6s
A15A Johnson Ranch, 81.95 331 ⇓P P 01 15 57.6 -0.1
baz=82
BLMT Blacktail Moun 81.98 330 *e*P P 01 15 59.0 +0.9
BSMT Bassoo Peak 82.06 330 *e*P P 01 15 59.1 +0.7
YBH Yreka Blue Hor 82.07 321 *e*P P 01 15 57.8 -0.6
comp=Z,6.0nm,0.7s
PMTG Montargil 82.11 42 *e*P P 01 16 00.0 +1.4
comp=Z,60nm,1.6s
KHMM Horse Mountain 82.12 320 *e*P P 01 15 59.7 +0.9
comp=Z,14nm,0.8s
A14A Double T Ranch 82.26 331 ⇑P P 01 15 59.4 +0.1
baz=82,SNR=11
C12B Naegeli Ranch, 82.29 329 ⇑P P 01 16 00.2 +0.8
baz=82,SNR=18
B13A Whitefish 82.29 330 ⇓P P 01 16 00.1 +0.7
baz=82,SNR=35
PTOM Tomar 82.33 42 *e*P P 01 16 00.8 +1.1
comp=Z,57nm,1.0s
PESTR Estremoz 82.39 43 *e*P P 01 16 01.6 +1.5
comp=Z,44nm,2.1s
WALA Waterton Lakes 82.54 331 *e*P P 01 16 01.2 +0.5
comp=Z,1.0nm,0.8s
KRMB Red Mountain 82.63 321 *e*P P 01 16 02.9 +1.5
A13A Flathead Natio 82.67 331 ⇓P P 01 16 02.5 +1.0
baz=83
VIPM Ingram Point 82.69 324 P P 01 16 03.1 +1.4
VIPM Ingram Point 82.69 324 P P 01 16 03.1 +1.4
C11A Tepee Creek (N 82.75 329 ⇑P P 01 16 02.4 +0.7
baz=83
HUMO Hull Mountain 82.76 322 *e*P P 01 16 01.9 -0.1
comp=Z,7.2nm,0.5s
PMRV Marv??o 82.85 42 *e*P P 01 16 03.2 +0.8
comp=Z,23nm,2.0s
B12A Libby 82.88 330 ⇓P P 01 16 03.4 +0.9
baz=83,SNR=15
LBTB Lobatse 82.94 114 *e*P P 01 16 03.9 +0.4
comp=Z,84nm,1.3s
MAW Mawson 82.94 163 P P 01 16 03.8 +1.3
MAW Mawson 82.94 163 P P 01 16 03.8 +1.3
comp=Z,4.2nm,0.6s,baz=179,slow=5.5,SNR=6.1
PCBR Castelo Branco 83.04 42 *e*P P 01 16 04.2 +0.8
comp=Z,24nm,1.7s
A12A Yaak River Ran 83.24 330 ⇓P P 01 16 04.9 +0.6
baz=84,SNR=6.9
MTE Manteigas 83.33 41 *e*P P 01 16 05.7 +0.7
comp=Z,34nm,2.0s
HAWA Hanford 83.37 326 *e*P P 01 16 05.4 +0.4
comp=Z,29nm,0.7s
NEW Newport 83.46 329 *e*P P 01 16 04.6 -0.8
comp=Z,11nm,0.8s
NEW Newport 83.46 329 ⇑P P 01 16 05.1 -0.3
baz=84
BROR Big Rock Looko 83.53 323 P P 01 16 06.0 +0.2
TAM Tamanrasset 83.55 62 *e*P P 01 16 07.3 +0.7
TAM pmax pmax
comp=Z,64nm,1.1s
TAM Tamanrasset 83.55 62 *e*P P 01 16 07.3 +0.7
comp=Z,64nm,1.1s
OD2 Odessa Site #2 83.64 327 P P 01 16 07.0 +0.7
KEBM Edson Butte 83.72 321 *e*P P 01 16 08.1 +1.2
comp=Z,66nm,1.1s
PVRL Vila Real 83.75 41 *e*P P 01 16 08.1 +1.0
comp=Z,62nm,2.0s
POLO Lamas de Olo 83.77 41 *e*P P 01 16 08.3 +1.1
comp=Z,24nm,1.6s
PCAB Cabril 83.83 40 *e*P P 01 16 08.4 +1.0
comp=Z,59nm,2.1s
PGAV Gavieira, Arco 83.84 40 *e*P P 01 16 08.6 +1.1
comp=Z,38nm,1.8s
MVO Moncorvo 84.10 41 *e*P P 01 16 09.8 +0.9
comp=Z,40nm,1.0s
ASR Mount Adams--S 84.29 325 P P 01 16 10.9 +1.1
ETW Entiat 84.59 327 P P 01 16 11.9 +0.7
PBRG Braganca 84.66 41 *e*P P 01 16 12.8 +1.2
comp=Z,27nm,1.8s
LON Longmire 84.79 326 *e*P P 01 16 11.9 -0.3
LON pmax pmax
comp=Z,11nm,0.9s
LON Longmire 84.79 326 *e*P P 01 16 11.9 -0.3
comp=Z,10nm,0.9s
PAB San Pablo 84.83 44 *e*P P 01 16 13.4 +0.8
PAB pmax pmax
comp=Z,39nm,0.9s
PAB San Pablo 84.83 44 *e*P P 01 16 13.4 +0.8
comp=Z,39nm,0.9s
ESDC Sonseca Array 85.15 44 P P 01 16 15.0 +0.9
ESDC Sonseca Array 85.15 44 P P 01 16 15.0 +0.9
comp=Z,15nm,0.9s,baz=245,slow=4.6,SNR=65
ESLA Sonseca Array 85.15 44 *e*P P 01 16 15.1 +0.9
comp=Z,22nm,1.5s
JCW Jim Creek 85.79 327 P P 01 16 16.8 -0.3
MBW Mount Baker 86.16 327 P P 01 16 18.6 -0.4
VDB Vedder Mountai 86.42 327 P P 01 16 19.9 -0.1
SJPF Ste Jean 88.76 42 *e*P P 01 16 33.5 +2.1
comp=Z,16nm,0.8s
SJPF Ste Jean 88.76 42 *e*P P 01 16 33.5 +2.1
SJPF pmax pmax
comp=Z,16nm,0.8s
SJPF Ste Jean 88.76 42 *e*P P 01 16 33.5 +2.1
comp=Z,16nm,0.8s
LSZ Lusaka 88.84 106 *e*P P 01 16 34.8 +2.1
comp=Z,76nm,1.3s
DRV Dumont d'Urvil 88.95 190 PP PP 01 19 28.0 -35
DRV SKS **SKSac** 01 **26 38.0 -6.6**
DRV S **S** 01 **27 03.0 -1.6**
DRV SP SP 01 28 26.0 +17
EPF Esparros 89.69 43 *e*P P 01 16 36.5 +0.7
comp=Z,8.5nm,0.9s
EPF Esparros 89.69 43 *e*P P 01 16 36.5 +0.7
EPF pmax pmax
comp=Z,9.0nm,0.9s
EPF Esparros 89.69 43 *e*P P 01 16 36.5 +0.7
comp=Z,8.5nm,0.9s
LFF La Frestale 90.93 41 *e*P P 01 16 41.0 -0.4
comp=Z,26nm,1.1s
LFF La Frestale 90.93 41 *e*P P 01 16 41.0 -0.4
LFF pmax pmax
comp=Z,26nm,1.1s
LFF La Frestale 90.93 41 *e*P P 01 16 41.0 -0.4
comp=Z,26nm,1.1s
MTLF Montolieu 91.03 43 *e*P P 01 16 41.6 -0.4
comp=Z,9.5nm,0.8s
MTLF Montolieu 91.03 43 *e*P P 01 16 41.6 -0.4
MTLF pmax pmax
comp=Z,10.0nm,0.8s
MTLF Montolieu 91.03 43 *e*P P 01 16 41.6 -0.4
comp=Z,9.5nm,0.8s
RJF Les Rejaudoux 91.59 41 *e*P P 01 16 45.3 +0.8
RJF Les Rejaudoux 91.59 41 *e*P P 01 16 45.3 +0.8
RJF Les Rejaudoux 91.59 41 *e*P P 01 16 45.3 +0.8
CASY Casey 91.60 179 *e*P P 01 16 45.9 +1.6
comp=Z,23nm,0.9s
CAF Calviac 91.73 42 *e*P P 01 16 45.5 +0.3
CAF Calviac 91.73 42 *e*P P 01 16 45.5 +0.3
CAF Calviac 91.73 42 *e*P P 01 16 45.5 +0.3
GRR Gorron 91.80 38 *e*P P 01 16 45.8 +0.4
GRR Gorron 91.80 38 *e*P P 01 16 45.8 +0.4
GRR Gorron 91.80 38 *e*P P 01 16 45.8 +0.4
LDF La Druitiere 92.33 38 *e*P P 01 16 48.3 +0.5
LDF La Druitiere 92.33 38 *e*P P 01 16 48.3 +0.5
LDF La Druitiere 92.33 38 *e*P P 01 16 48.3 +0.5
KEST Kesra 92.34 52 P P 01 16 50.0 +1.7
KEST Kesra 92.34 52 P P 01 16 50.0 +1.7
comp=Z,1.2nm,0.9s,baz=117,slow=6.8,SNR=4.0
TCF Toulx Ste Croi 92.50 40 *e*P P 01 16 49.4 +0.7
TCF Toulx Ste Croi 92.50 40 *e*P P 01 16 49.4 +0.7

TCF Toulx Ste Croi 92.50 40 *e*P P 01 16 49.4 +0.7
YKA Yellowknife Ar 92.65 340 P P 01 16 49.1 +0.2
YKA Yellowknife Ar 92.65 340 P P 01 16 49.1 +0.2
comp=Z,8.5nm,0.5s,baz=131,slow=4.5,SNR=192
YKW3 Yellowknife Ar 92.70 340 *e*P P 01 16 49.2 0.0
comp=Z,0.4nm,0.9s
SMF Signal de Mont 93.66 41 *e*P P 01 16 55.0 +1.0
comp=Z,17nm,1.1s
SMF Signal de Mont 93.66 41 *e*P P 01 16 55.0 +1.0
SMF pmax pmax
comp=Z,17nm,1.1s
SMF Signal de Mont 93.66 41 *e*P P 01 16 55.0 +1.0
comp=Z,17nm,1.1s
SSF Saint Saulge 93.66 40 *e*P P 01 16 54.4 +0.4
comp=Z,6.2nm,0.8s
SSF Saint Saulge 93.66 40 *e*P P 01 16 54.4 +0.4
SSF pmax pmax
comp=Z,6.0nm,0.8s
SSF Saint Saulge 93.66 40 *e*P P 01 16 54.4 +0.4
comp=Z,6.2nm,0.8s
ORIF Oris-en-Rattie 94.10 43 *e*P P 01 16 56.4 +0.2
comp=Z,6.5nm,0.7s
ORIF Oris-en-Rattie 94.10 43 *e*P P 01 16 56.4 +0.2
ORIF pmax pmax
comp=Z,7.0nm,0.7s
ORIF Oris-en-Rattie 94.10 43 *e*P P 01 16 56.4 +0.2
comp=Z,6.5nm,0.7s
LPL La Plagne 94.91 43 *e*P P 01 17 00.3 +0.2
LPL La Plagne 94.91 43 *e*P P 01 17 00.3 +0.2
LPL La Plagne 94.91 43 *e*P P 01 17 00.3 +0.2
LPG La Plagne 94.91 43 *e*P P 01 17 00.4 +0.2
LPG La Plagne 94.91 43 *e*P P 01 17 00.4 +0.2
LPG La Plagne 94.91 43 *e*P P 01 17 00.4 +0.2
HAU Haudompre 95.81 40 *e*P P 01 17 04.5 +0.7
HAU Haudompre 95.81 40 *e*P P 01 17 04.5 +0.7
HAU Haudompre 95.81 40 *e*P P 01 17 04.5 +0.7
DLBC Dease Lake 95.86 332 *e*P P 01 17 04.4 +0.5
CDF Champ du Feu 96.54 40 *e*P P 01 17 07.8 +0.6
CDF Champ du Feu 96.54 40 *e*P P 01 17 07.8 +0.6
CDF Champ du Feu 96.54 40 *e*P P 01 17 07.8 +0.6
DAVOX Davos/Dischmat 97.43 42 P P 01 17 11.6 +0.2
DAVOX Davos/Dischmat 97.43 42 P P 01 17 11.6 +0.2
comp=Z,2.9nm,0.8s,baz=110,slow=1.5,SNR=4.7
GERES GERESS Array B 100.61 42 PKKPbc PKKPbc 01 33 40.1 -0.8
GERES GERESS Array B 100.61 42 PKKPbc PKKPbc 01 33 40.1 -0.8
comp=Z,0.1nm,0.3s,baz=151,slow=3.0,SNR=3.8
CLL Collm 101.11 39 *i* P **Pdif** 01 **17 32.3 +4.9**
ILAR Eielson Array 105.86 334 Pdif **Pdif** 01 **17 47.2 -1.0**
ILAR PP **PKiKP** 01 **21 58.4 -1.4**
ILAR Eielson Array 105.86 334 Pdiff **Pdif** 01 **17 47.2 -1.0**
comp=Z,0.5nm,0.7s,baz=146,slow=2.8,SNR=6.3
ILAR PP **PKiKP** 01 **21 58.4 -1.4**
comp=Z,1.3nm,1.1s,baz=97,slow=6.8,SNR=6.8
FINES FINESS Array B 110.79 31 PKKPbc PKKPbc 01 33 08.4 -1.4
FINES PKKP **PKKPdf** 01 **33 27.2 -0.1**
FINES FINESS Array B 110.79 31 PKKPbc PKKPbc 01 33 08.4 -1.4
comp=Z,1.5nm,0.8s,baz=48,slow=5.7,SNR=5.5
FINES PKKP **PKKPdf** 01 **33 27.2 -0.1**
comp=Z,0.6nm,0.7s,baz=96,slow=3.8,SNR=3.7
ARCES ARCESS Array B 111.59 22 PKKPbc PKKPbc 01 33 05.5 -2.0
ARCES PKKPab **PKKPab** 01 **33 15.1 +1.8**
ARCES ARCESS Array B 111.59 22 PKKPbc PKKPbc 01 33 05.5 -2.0
comp=Z,2.5nm,1.0s,baz=64,slow=2.8,SNR=5.1
ARCES PKKPab **PKKPab** 01 **33 15.1 +1.8**
comp=Z,0.7nm,0.6s,baz=63,slow=3.0,SNR=6.3
BRTR Keskin Array B 111.80 55 PKiKP **PKiKP** 01 **22 12.1 +0.2**
BRTR PP **PP** 01 **22 53.4 -4.2**
BRTR Keskin Array B 111.80 55 PKiKP **PKiKP** 01 **22 12.1 +0.2**
comp=Z,1.3nm,0.7s,baz=198,slow=2.1,SNR=8.8
BRTR PP **PP** 01 **22 53.4 -4.2**
comp=Z,0.7nm,0.8s,baz=275,slow=4.3,SNR=4.8
BR131 Keskin Array S 111.80 55 *e*PKPdf **PKiKP** 01 **22 12.1 +0.2**
STKA Stephens Creek 119.55 208 PKP **PKPdf** 01 **22 26.9 -0.1**
STKA Stephens Creek 119.55 208 PKP **PKPdf** 01 **22 26.9 -0.1**
comp=Z,2.5nm,0.7s,baz=121,slow=2.0,SNR=7.1
ZEI Tsey 119.87 53 *i* PKIKP **PKPdf** 01 **22 26.7 -0.7**
ZEI pmax pmax
comp=Z,4.0nm,0.9s
GNI Garni 120.30 56 *e*PKPdf **PKPdf** 01 **22 28.8 +0.5**
GNI PKP **PKPdf** 01 **22 29.2 +1.0**
GNI Garni 120.30 56 PKP **PKPdf** 01 **22 29.2 +1.0**
comp=Z,4.6nm,0.6s,baz=250,slow=0.3,SNR=9.2
NWAO Narrogin (SRO) 124.86 184 PKP **PKPdf** 01 **22 37.5 +0.4**
NWAO Narrogin (SRO) 124.86 184 PKP **PKPdf** 01 **22 37.5 +0.4**
comp=Z,3.6nm,0.5s,baz=118,slow=9.3,SNR=3.5
CTA Charters Tower 126.81 220 PKP **PKPdf** 01 **22 41.8 +0.6**
CTA Charters Tower 126.81 220 PKP **PKPdf** 01 **22 41.8 +0.6**
comp=Z,6.5nm,0.8s,baz=196,slow=2.0,SNR=5.1
ARU Arti 127.80 35 *i* PKIKP **PKPdf** 01 **22 42.8 +0.9**
ARU 01 24 43.3
ARU 01 29 32.7
AKTO Aktyubinsk 129.03 42 PKIKP **PKPdf** 01 **22 45.3 +0.9**
AKTO Aktyubinsk 129.03 42 PKP **PKPdf** 01 **22 45.3 +0.9**
AKTO SKPbc SKPab 01 25 48.2 -0.1
AKTO Aktyubinsk 129.03 42 PKP **PKPdf** 01 **22 45.3 +0.9**
comp=Z,4.2nm,0.7s,baz=354,slow=2.4,SNR=7.9
AKTO SKPbc SKPab 01 25 48.2 -0.1
comp=Z,2.9nm,0.9s,baz=299,slow=6.6,SNR=8.6
TIXI Tiksi 129.88 354 *i* PKIKP **PKPdf** 01 **22 44.9 -0.5**
AS31 Alice Springs 129.97 205 *e*PKPdf **PKPdf** 01 **22 47.2 0.0**
ASAR Alice Springs 129.97 205 PKP **PKPdf** 01 **22 47.2 0.0**
ASAR PP **PP** 01 **24 57.5 -2.3**
ASAR SKPbc SKPab 01 25 51.7 -1.5
ASAR Alice Springs 129.97 205 PKP **PKPdf** 01 **22 47.2 0.0**
comp=Z,8.5nm,0.7s,baz=145,slow=2.2,SNR=69
ASAR PP **PP** 01 **24 57.5 -2.3**
comp=Z,0.9nm,1.0s,baz=146,slow=6.1,SNR=4.2
ASAR SKPbc SKPab 01 25 51.7 -1.5
comp=Z,13nm,1.0s,baz=150,slow=4.1,SNR=31
AB31 Akbulak array 130.50 44 *i* PKIKP **PKPdf** 01 **22 48.0 +0.8**
AB31 pmax pmax
comp=Z,6.0nm,0.7s
ABKAR Akbulak array 130.50 44 *e*PKPdf **PKPdf** 01 **22 48.2 +1.0**
SEY Seymchan 131.64 337 ⇑*i*PKIKP **PKPdf** 01 **22 49.2 +0.2**
WRA Warramunga Arr 133.11 208 PKPpre PKPpre 01 22 40.9
WRA PKP **PKPdf** 01 **22 53.5 +0.3**
WRA SKPbc **SKPbc** 01 **26 03.1 -1.6**
WRA Warramunga Arr 133.11 208 PKhKP PKPpre 01 22 40.9
comp=Z,6.0nm,0.5s,baz=134,slow=2.7,SNR=6.7
WRA PKP **PKPdf** 01 **22 53.5 +0.3**
comp=Z,9.4nm,0.6s,baz=162,slow=1.8,SNR=46
WRA SKPbc **SKPbc** 01 **26 03.1 -1.6**
comp=Z,20nm,1.2s,baz=144,slow=3.8,SNR=17
PMG Port Moresby 134.05 230 SKPbc **SKPbc** 01 **26 07.7 -0.2**
PMG Port Moresby 134.05 230 SKPbc **SKPbc** 01 **26 07.7 -0.2**
comp=Z,21nm,0.9s,baz=231,slow=6.7,SNR=4.6
PETK Petropavlovsk- 134.39 324 PKHKP PKPpre 01 22 45.7
PETK 01 22 54.9
PETK Petropavlovsk- 134.39 324 PKPpre PKPpre 01 22 45.7
PETK PKP **PKPdf** 01 **22 54.9 +0.4**
PETK SKPbc **SKPbc** 01 **26 06.6 -1.2**
PETK Petropavlovsk- 134.39 324 PKhKP PKPpre 01 22 45.7
comp=Z,3.2nm,0.8s,baz=149,slow=4.0,SNR=6.3
PETK PKP **PKPdf** 01 **22 54.9 +0.4**
comp=Z,4.3nm,0.6s,baz=126,slow=4.5,SNR=9.9
PETK SKPbc **SKPbc** 01 **26 06.6 -1.2**
comp=Z,4.1nm,0.8s,baz=106,slow=5.2,SNR=6.2
ZRNK Zerenda 134.71 36 PKIKP **PKPdf** 01 **22 55.9 +0.8**
ZRNK pmax pmax
comp=Z,17nm,0.7s
BRVK Borovoye 135.36 36 *c i*PKIKP **PKPdf** 01 **22 57.6 +1.3**
BRVK pmax pmax
comp=Z,4.0nm,0.7s
BRVK Borovoye 135.36 36 *e*PKPdf **PKPdf** 01 **22 57.5 +1.3**
BVAR Borovoye Array 135.43 36 PKIKP **PKPdf** 01 **22 56.9 +0.5**
BVAR Borovoye Array 135.43 36 PKP **PKPdf** 01 **22 56.9 +0.5**
BVAR Borovoye Array 135.43 36 PKP **PKPdf** 01 **22 56.9 +0.5**
comp=Z,4.5nm,0.6s,baz=294,slow=2.6,SNR=18
VOSK Vostochnaya 135.88 36 PKIKP **PKPdf** 01 **22 58.2 +0.9**
VOSK pmax pmax
comp=Z,8.0nm,0.9s
FITZ Fitzroy Crossi 137.94 198 PKPpre PKPpre 01 22 54.3
FITZ PKP **PKPdf** 01 **23 02.9 +0.7**
FITZ Fitzroy Crossi 137.94 198 PKhKP PKPpre 01 22 54.3
comp=Z,1.4nm,0.5s,baz=288,slow=1.7,SNR=5.5
FITZ PKP **PKPdf** 01 **23 02.9 +0.7**
comp=Z,5.4nm,0.9s,baz=201,slow=4.9,SNR=8.5
KK31 Karatay Array 139.17 49 *i* PKIKP **PKPdf** 01 **23 04.4 +0.7**
KK31 pmax pmax
comp=Z,1.0nm,0.4s
KKAR Karatay Array 139.17 49 *e*PKIKP **PKPdf** 01 **23 04.7 +1.0**
KKAR Karatay Array 139.17 49 *e*PKPdf **PKPdf** 01 **23 04.7 +1.0**
NVS Novosibirsk 140.62 27 ⇑*i*PKIKP **PKPdf** 01 **23 06.1 +0.2**
NVS pmax pmax

	comp=Z,10.0nm,0.9s							
NVS					pmax	pmax		
	comp=E,4.0nm,1.0s							
KURK	**Kurchatov**	**141.00**	**35**		PKHKP	PKPpre	01 23 02.3	
KURK				*e*			01 23 06.9	
KURK							01 26 17.4	
KURK	**Kurchatov**	**141.00**	**35**		PKPpre	PKPpre	01 23 02.3	
KURK					*e*PKPdf	**PKPdf**	**01 23 06.9**	**+0.2**
KURK					PKP	**PKiKP**	**01 23 07.7**	**-1.7**
KURK					PP	PP	01 26 17.4	+7.8
KURK					SKP		01 26 24.1	
KURBB	**Kurchatov Arra**	**141.00**	**35**		PKhKP	PKPpre	01 23 02.3	
	comp=E,4.4nm,0.6s,baz=309,slow=2.5,SNR=14							
KURBB					PKP	**PKPdf**	**01 23 07.7**	**+1.0**
	comp=E,7.3nm,0.8s,baz=304,slow=2.5,SNR=30							
KURBB					PP	PP	01 26 17.4	+7.8
	comp=E,5.1nm,1.0s,baz=288,slow=7.1,SNR=7.4							
KURBB					SKP		01 26 24.1	
	comp=E,0.7nm,0.8s,baz=280,slow=3.0,SNR=4.2							
EKS2	**Erkin-Say**	**141.59**	**49**	*e*	PKIKP	**PKPdf**	**01 23 09.4**	**+1.2**
EKS2	**Erkin-Say**	**141.59**	**49**	*e*	PKPdf	**PKPdf**	**01 23 09.4**	**+1.2**
ZALV	**Zalesovo Beam**	**141.91**	**27**		PKHKP	PKPpre	01 23 04.3	
ZALV							01 23 08.9	
ZALV	**Zalesovo Beam**	**141.91**	**27**		PKPpre	PKPpre	01 23 04.3	
ZALV					PKP	**PKPdf**	**01 23 08.9**	**+0.7**
ZALV					SKPbc	**SKPbc**	**01 26 28.5**	**-0.6**
ZALV	**Zalesovo Beam**	**141.91**	**27**		PKhKP	PKPpre	01 23 04.3	
	comp=E,13nm,0.6s,baz=320,slow=3.5,SNR=17							
ZALV					PKP	**PKPdf**	**01 23 08.9**	**+0.7**
	comp=E,16nm,0.5s,baz=295,slow=3.0,SNR=27							
ZALV					SKPbc	**SKPbc**	**01 26 28.5**	**-0.6**
	comp=E,5.3nm,0.6s,baz=309,slow=3.2,SNR=11							
AAK	**Ala-Archa**	**142.10**	**49**	*e*	PKIKP	**PKPdf**	**01 23 08.5**	**-0.7**
AAK	**Ala-Archa**	**142.10**	**49**		PKPpre	PKPpre	01 23 06.2	
AAK					SKPbc	**SKPbc**	**01 26 27.9**	**-2.4**
AAK	**Ala-Archa**	**142.10**	**49**		PKhKP	PKPpre	01 23 06.2	
	comp=E,3.1nm,0.6s,baz=115,slow=0.2,SNR=9.5							
AAK					SKPbc	**SKPbc**	**01 26 27.9**	**-2.4**
	comp=E,1.5nm,0.7s,baz=202,slow=7.8,SNR=4.5							
TKM2	**Tokmak 2**	**142.76**	**48**	*e*	PKIKP	**PKPdf**	**01 23 08.1**	**-2.3**
TKM2	**Tokmak 2**	**142.76**	**48**	*e*	PKPdf	**PKPdf**	**01 23 08.1**	**-2.3**
KSH	**Kashi**	**144.16**	**53**	*e*	PKP	PKPbc	01 23 11.6	+0.2
KSH				*es*	PKP		01 24 11.3	
KSH				*e*	PKS	**PKSdf**	**01 26 46.2**	**-2.3**
KSH				*e*	SKS	**SKSdf**	**01 30 05.1**	**-0.7**
KSH					AMB	AMB		
	comp=Z,380nm,4.9s							
KSH					LR	LR		
	comp=N,670nm,6.6s							
KSH					LR	LR		
	comp=E,940nm,12.1s							
KSH					LR	LR		
	comp=Z,360nm,8.6s							
MK31	**Makanchi Array**	**145.20**	**38**	*i*	PKIKP	**PKPbc**	**01 23 14.8**	**+0.5**
MK31					pmax	pmax		
	comp=Z,14nm,0.5s							
MK31	**Makanchi Array**	**145.20**	**38**	*e*	PKPdf	**PKPab**	**01 23 14.9**	**+0.4**
MKAR	**Makanchi Array**	**145.20**	**38**		PKIKP	**PKPdf**	**01 23 14.4**	**+0.1**
MKAR							01 26 36.5	
MKAR	**Makanchi Array**	**145.20**	**38**		PKPbc	**PKPdf**	**01 23 14.4**	**+0.1**
MKAR					SKPbc	**SKPbc**	**01 26 36.5**	**-0.8**
MKAR	**Makanchi Array**	**145.20**	**38**		PKPbc	**PKPdf**	**01 23 14.4**	**+0.1**
	comp=Z,28nm,0.7s,baz=319,slow=2.8,SNR=183							
MKAR					SKPbc	**SKPbc**	**01 26 36.5**	**-0.8**
	comp=Z,1.9nm,0.9s,baz=298,slow=2.6,SNR=4.3							
YSS	**Yuzh-Sakhalins**	**145.78**	**323**	*e*	PKP2	**PKPab**	**01 23 16.8**	**+0.1**
YSS					pmax	pmax		
	comp=Z,50nm,0.8s							
HYB	**Hyderabad**	**147.17**	**92**	*i*	PKP	**PKPdf**	**01 23 18.5**	**0.0**
HYB				*e*			01 23 21.0	
ASAJ	**Asahikawa**	**147.46**	**319**	*e*	PKPdf	**PKPdf**	**01 23 19.2**	**+1.1**
ASAJ					PKPbc	**PKPdf**	**01 23 19.5**	**+1.4**
ASAJ				*e*	PKPbc	**PKiKP**	**01 23 21.4**	**-1.5**
ASAJ	**Asahikawa**	**147.46**	**319**		PKPbc	**PKPdf**	**01 23 19.5**	**+1.4**
	comp=Z,72nm,0.9s,baz=191,slow=1.9,SNR=20							
ERM	**Erimo**	**148.16**	**315**	*e*	PKP2	**PKPbc**	**01 23 24.4**	**+1.6**
ERM	**Erimo**	**148.16**	**315**	*e*	PKPbc	**PKPbc**	**01 23 24.4**	**+1.6**
GUMO	**Guam**	**148.62**	**259**		PKPbc	**PKPbc**	**01 23 24.5**	**-0.3**
GUMO	**Guam**	**148.62**	**259**		PKPbc	**PKPbc**	**01 23 24.5**	**-0.3**
	comp=Z,74nm,0.6s,baz=186,slow=9.2,SNR=6.4							
MOY	**Mondy**	**149.29**	**15**	*e*	PKP2	**PKPbc**	**01 23 26.7**	**+1.2**
MOY					pmax	pmax		
	comp=Z,24nm,1.6s							
KLR	**Kul'dur**	**149.41**	**336**	*e*	PKHKP	PKPpre	01 23 21.8	
TLY	**Talaya**	**149.84**	**12**	*e*	PKP2	**PKPbc**	**01 23 27.6**	**+0.8**
TLY					pmax	pmax		
	comp=Z,10.0nm,0.9s							
WMQ	**Urumqi**	**150.03**	**38**	*e*	PKPbc	**PKPbc**	**01 23 28.5**	**+1.0**
ZAK	**Zakamensk**	**151.00**	**13**⇓	*e*	PKIKP	**PKPdf**	**01 23 24.6**	**+0.9**
ZAK				*e*			01 24 29.9	
ZAK					pmax	pmax		
	comp=Z,8.0nm,0.8s							
KAPI	**Kappang**	**152.01**	**194**		PKPbc	**PKPbc**	**01 23 32.2**	**-0.7**
KAPI	**Kappang**	**152.01**	**194**		PKPbc	**PKPbc**	**01 23 32.2**	**-0.7**
	comp=Z,14nm,0.5s,baz=279,slow=2.0,SNR=9.7							
PYUN	**Piuthan**	**152.20**	**72**	*e*	P	**PKPdf**	**01 23 27.2**	**+0.8**
	comp=Z,37nm,0.5s							
DANN	**Dangsing**	**152.85**	**71**	*e*	P	**PKPdf**	**01 23 28.3**	**+0.9**
	comp=Z,50nm,0.6s							
USRK	**Ussuriysk Arra**	**153.25**	**329**		PKP	**PKPdf**	**01 23 26.9**	**-0.2**
	comp=Z,1.2nm,0.5s,baz=23,slow=1.2,SNR=2.7							
USRK					PKPbc	**PKPbc**	**01 23 35.0**	**+0.2**
	comp=Z,7.9nm,0.6s,baz=38,slow=1.4,SNR=23							
USRK					PKPab	**PKPab**	**01 23 46.5**	**-0.7**
	comp=Z,4.2nm,0.7s,baz=14,slow=0.7,SNR=7.1							
SONM	**Songino Array**	**154.03**	**10**		PKP	**PKPdf**	**01 23 29.2**	**+0.9**
SONM					PKPbc	**PKiKP**	**01 23 37.1**	**+0.5**
SONM					PKPab	**PKPab**	**01 23 51.5**	**+0.9**
SONM	**Songino Array**	**154.03**	**10**		PKP	**PKPdf**	**01 23 29.2**	**+0.9**
	comp=Z,3.4nm,0.8s,baz=326,slow=1.0,SNR=21							
SONM					PKPbc	**PKiKP**	**01 23 37.1**	**+0.5**
	comp=Z,6.2nm,0.5s,baz=303,slow=1.3,SNR=29							
SONM					PKPab	**PKPab**	**01 23 51.5**	**+0.9**
	comp=Z,5.0nm,0.7s,baz=333,slow=5.2,SNR=9.6							
MJAR	**Matsushiro Arr**	**154.09**	**309**		PKP	**PKPdf**	**01 23 30.0**	**+1.4**
MJAR					PKPbc	**PKPbc**	**01 23 37.0**	**+0.2**
MJAR					PKPab	**PKPab**	**01 23 51.3**	**+0.1**
MJAR	**Matsushiro Arr**	**154.09**	**309**		PKP	**PKPdf**	**01 23 30.0**	**+1.4**
	comp=Z,1.2nm,0.6s,baz=148,slow=0.5,SNR=5.2							
MJAR					PKPbc	**PKPbc**	**01 23 37.0**	**+0.2**
	comp=Z,9.8nm,0.7s,baz=99,slow=2.0,SNR=17							
MJAR					PKPab	**PKPab**	**01 23 51.3**	**+0.1**
	comp=Z,5.4nm,0.8s,baz=55,slow=1.0,SNR=8.9							
MAJO	**Matsushiro**	**154.09**	**309**	*e*	PKIKP	**PKPbc**	**01 23 36.9**	**+0.1**
MAJO				*e*			01 23 50.9	
MAJO	**Matsushiro**	**154.09**	**309**	*e*	PKPbc	**PKPbc**	**01 23 36.9**	**+0.1**
MAJO				*e*	PKPab	**PKPab**	**01 23 50.9**	**-0.2**
MAT	**Matsushiro**	**154.09**	**309**		PKP	**PKPbc**	**01 23 36.4**	**-0.4**
GUN	**Gumba**	**154.76**	**72**	*e*	P	**PKPdf**	**01 23 30.2**	**0.0**
	comp=Z,47nm,1.0s							
RAMN	**Ramite**	**155.49**	**74**	*e*	P	**PKPdf**	**01 23 31.2**	**+0.1**
	comp=Z,31nm,0.8s							
CN2	**Changchun**	**156.32**	**337**	*e*	PKP	**PKPdf**	**01 23 31.8**	**+0.5**
CN2					PP	**PP**	**01 27 42.0**	**+4.0**
CN2					SS	SS	01 47 15.4	+2.4
CN2					LR	LR		
	comp=N,1μm,23.0s							
CN2					LR	LR		
	comp=E,500nm,23.0s							
CN2					LR	LR		
	comp=Z,200nm,21.0s							
GTA	**Gaotai**	**159.58**	**31**	*e*	PKP	**PKPdf**	**01 23 36.8**	**+1.1**
GTA					PKPab	**PKPab**	**01 24 16.2**	**+1.4**
GTA					pPKP	**pPKPdf**	**01 24 19.7**	**-2.3**
GTA					sPKP		01 24 36.4	
GTA					PKS	**PKSdf**	**01 27 09.2**	**0.0**
GTA					SKS	**SKSdf**	**01 30 24.4**	**-0.3**
GTA					SKKS	**SKKSac**	**01 34 28.4**	**-0.1**
GTA					SS	**SS**	**01 47 46.5**	**-1.9**
GTA					AMB	AMB		
	comp=Z,41nm,5.5s							
GTA					LR	LR		
	comp=N,190nm,19.0s							
GTA					LR	LR		
	comp=E,230nm,18.1s							
GTA					LR	LR		
	comp=Z,210nm,19.0s							
KSRS	**Korea Array**	**160.28**	**323**		PKP	**PKPdf**	**01 23 36.9**	**+0.6**
	comp=Z,2.1nm,0.8s,baz=79,slow=1.4,SNR=9.0							
KSRS					PKPab	**PKPab**	**01 24 18.6**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=48,slow=3.9,SNR=9.0							
KSAR	**Wonju Array Be**	**160.31**	**323**		PKP	**PKPdf**	**01 23 36.9**	**+0.6**
KSAR					PKPab	**PKPab**	**01 24 18.6**	**+0.7**
HHC	**Hu-ho-hao-te**	**161.54**	**4**⇑	*e*	PKP	**PKPdf**	**01 23 37.8**	**+0.1**
HHC					pPKP	**PKPab**	**01 24 20.4**	**-2.8**
HHC					sPKP		01 24 37.1	
HHC					PKS	**PKSdf**	**01 27 09.8**	**-1.2**
HHC					PP	**PP**	**01 28 09.5**	**+3.4**
HHC					SKS	**SKSdf**	**01 30 25.3**	**-1.0**
HHC					SS	**SS**	**01 48 06.3**	**-1.4**
HHC					AMB	AMB		
	comp=Z,110nm,5.4s							
HHC					LR	LR		
	comp=N,360nm,17.8s							
HHC					LR	LR		
	comp=E,300nm,17.8s							
HHC					LR	LR		
	comp=Z,250nm,17.8s							
BJI	**Beijing**	**162.20**	**352**		PKP	**PKPdf**	**01 23 38.7**	**+0.5**
LZH	**Lanzhou**	**164.14**	**29**	*e*	PKP	**PKPdf**	**01 23 40.7**	**+0.2**
LZH					pPKP	**pPKPdf**	**01 24 23.2**	**-3.6**
LZH					sPKP		01 24 40.1	
LZH					PKS	**PKSdf**	**01 27 11.0**	**-2.6**
LZH					PP	**PP**	**01 28 22.0**	**+1.6**
LZH					SKS	**SKSdf**	**01 30 25.0**	**-3.6**
LZH					SKKS	**SKKSac**	**01 34 52.1**	**+0.1**
LZH				*e*	SS	**SS**	**01 48 35.2**	**-0.4**
LZH					AMB	AMB		
	comp=Z,120nm,7.5s							
CMAR	**Chiang Mai Arr**	**166.15**	**104**		PKP	**PKPdf**	**01 23 43.1**	**+0.7**
CMAR					PKPab	**PKPab**	**01 24 44.2**	**0.0**
CMAR					PP	**PP**	**01 28 34.0**	**+1.7**
CMAR	**Chiang Mai Arr**	**166.15**	**104**		PKP	**PKPdf**	**01 23 43.1**	**+0.7**
	comp=Z,0.9nm,0.4s,baz=267,slow=2.8,SNR=7.3							
CMAR					PKPab	**PKPab**	**01 24 44.2**	**0.0**
	comp=Z,3.6nm,0.8s,baz=250,slow=5.4,SNR=14							
CMAR					PP	**PP**	**01 28 34.0**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=260,slow=3.2,SNR=6.2							
XAN	**Xi'an**	**167.81**	**17**		P	**PKPab**	**01 24 50.8**	**-0.1**
XAN					pP		01 24 58.0	
XAN					sP		01 25 01.5	
XAN					pmax	pmax		
	comp=Z,2.0nm,1.0s							
CD2	**Chengdu**	**168.08**	**43**		PKP	**PKPdf**	**01 23 43.0**	**-0.6**
CD2					pPKP	**pPKPdf**	**01 24 26.1**	**-3.9**
CD2					sPKP		01 24 42.7	
CD2					PKPab	**PKPab**	**01 24 52.7**	**+0.4**
CD2					PKS	**PKSdf**	**01 27 14.2**	**-2.1**
CD2					PP	**PP**	**01 28 42.4**	**+1.3**
CD2					SKS	**SKSdf**	**01 30 29.0**	**-2.0**
CD2					SKKS	**SKKSac**	**01 35 11.3**	**-0.4**
CD2					SS	**SS**	**01 49 14.2**	**-2.0**
CD2					AMB	AMB		
	comp=Z,180nm,5.6s							
KMI	**Kunming**	**170.11**	**72**		PKP	**PKPdf**	**01 23 45.2**	**0.0**
GYA	**Guiyang**	**172.85**	**54**		PKP	**PKPdf**	**01 23 45.0**	**-1.4**
GYA					PKPab	**PKPab**	**01 25 13.2**	**-0.6**
GYA					PKS	**PKSdf**	**01 27 16.0**	**-2.9**
GYA					PP	**PP**	**01 29 05.4**	**0.0**
GYA					AMB	AMB		
	comp=Z,120nm,8.0s							

NEIC ***12*** *01:10:57.5, 19.08N×66.80W, h24km, MD3.0(RSPR), After RSPR.*

RSPR 12 01:10:57.5, 19.08N×66.80W, h24km±20km, MD3.0/4, 8C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AGPR	**Aguadilla, PR**	**0.68**	**206**	*e*	S	Sb	01 11 17.1	-2.6
AGPR	**Aguadilla, PR**	**0.68**	**206**	*e*	Pg	Pb	01 11 09.5	-1.1
AGPR				*e*	S	Sb	01 11 18.7	-0.9
AOPR	**Arecibo Observ**	**0.73**	**176**	*e*	S	Sb	01 11 19.5	-1.8
AOPR	**Arecibo Observ**	**0.73**	**176**⇑	*e*	P	Pb	01 11 10.0	-1.6
AOPR	**Arecibo Observ**	**0.73**	**176**⇑	*e*	P	Pb	01 11 10.0	-1.6
AOPR				*e*	S	Sb	01 11 19.5	-1.8
MPR	**Mayaguez**	**0.92**	**200**	*e*	P	Pn	01 11 16.6	+1.6
	53nm,0.6s							
CELP	**Cerrillos**	**1.02**	**168**⇓	*e*	P	Pn	01 11 15.4	-0.9
CELP	**Cerrillos**	**1.02**	**168**⇓	*e*	P	Pn	01 11 15.4	-0.9
OBIP	**Obispado Ponce**	**1.05**	**170**⇑	*e*	P	Pn	01 11 15.2	-1.5
	50nm,0.6s							
CRPR	**Cabo Rojo, PR**	**1.11**	**195**⇑	*e*	P	Pn	01 11 15.3	-2.2
CRPR	**Cabo Rojo, PR**	**1.11**	**195**	*e*	S	Sb	01 11 29.1	-2.8
CRPR	**Cabo Rojo, PR**	**1.11**	**195**⇑	*e*	P	Pn	01 11 15.3	-2.2
CRPR				*e*	S	Sb	01 11 29.1	-2.8
CRPR	**Cabo Rojo, PR**	**1.11**	**195**	*e*	Pg	Pn	01 11 15.2	-2.2
SJG	**San Juan**	**1.15**	**147**⇑	*i*	P	Pn	01 11 15.6	-2.4
SJG	**San Juan**	**1.15**	**147**	*i*	Pu	Pn	01 11 15.6	-2.4
SJG	**San Juan**	**1.15**	**147**	*e*	Pg	Pn	01 11 15.6	-2.4
CBYP	**Canovanas**	**1.21**	**132**⇑	*e*	P	Pn	01 11 17.0	-1.9
CBYP	**Canovanas**	**1.21**	**132**	*e*	S	Sn	01 11 31.0	-3.6
CBYP	**Canovanas**	**1.21**	**132**⇑	*e*	P	Pn	01 11 17.0	-1.9
CBYP				*e*	S	Sn	01 11 31.0	-3.6
CBYP	**Canovanas**	**1.21**	**132**	*e*	Pn	Pn	01 11 16.6	-2.3
HUMP	**Col San Antoni**	**1.30**	**136**⇑	*e*	P	Pn	01 11 17.8	-2.3
HUMP	**Col San Antoni**	**1.30**	**136**	*e*	S	Sn	01 11 34.2	-2.5
HUMP	**Col San Antoni**	**1.30**	**136**⇑	*e*	P	Pn	01 11 17.8	-2.3
HUMP				*e*	S	Sn	01 11 34.2	-2.5

THE ***12*** *01:15:10.6, 45.62N×26.29E, h144km±9km, Error ellipse: s-maj=9.3km s-min=1.6km az=33.0*

MOS ***12*** *01:15:11.4±1.1, 45.54N×26.40E, h117km, mb4.1/11, Error ellipse: s-maj=7.0km s-min=5.1km az=130.8*

BUC ***12*** *01:15:12.1±0.7, 45.55N×26.39E, h134km±8km, MD4.9/2, Error ellipse: s-maj=5.3km s-min=4.2km az=117.0*

CSEM ***12*** *01:15:12.6±0.1, 45.57N×26.42E, h126km±1km, mb3.8/8, Error ellipse: s-maj=2.5km s-min=2.1km az=12.0*

IDC ***12*** *01:15:13.1±0.4, 45.54N×26.22E, h124km±3km, mb3.4/12, mb1 3.5/19, mb1mx3.4/33, mbtmp3.4/19, MS2.6/2, Ms1 2.6/2, ms1mx2.1/39, Error ellipse: s-maj=15.4km s-min=11.2km az=153.0*

SOF ***12*** *01:15:15.4, 45.19N×26.22E, h18km, MD3.6*

ISC 12 01:15:13.1±0.6, 45.55N±0.03×26.39E±0.02, h132km±4km, n364, σ1§29/447, mb3.8/16, 92C-46D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MLR	**Muntele Rosu**	**0.32**	**260**⇑	*i*	P	**Pn**	**01 15 31.1**	**-0.6**
MLR				*i*	S	**Sn**	**01 15 45.0**	**-0.7**
MLR	**Muntele Rosu**	**0.32**	**260**⇑	*i*	P	**Pn**	**01 15 31.1**	**-0.6**
MLR	**Muntele Rosu**	**0.32**	**260**	P		**Pn**	**01 15 31.1**	**-0.6**
	102nm,0.3s,baz=324,slow=2.0,SNR=5925							
MLR				S		**Sn**	**01 15 44.6**	**-1.1**
	118nm,0.3s,baz=236,slow=22,SNR=16							
MLR	**Muntele Rosu**	**0.32**	**260**⇑	*i*	P	**Pn**	**01 15 31.1**	**-0.6**
MLR					S	**Sn**	**01 15 44.6**	**-1.1**
	118nm,0.3s							
PLOR	**Plostina**	**0.35**	**31**⇑	*i*	P	**Pn**	**01 15 31.0**	**-0.7**
PLOR				*i*	S	**Sn**	**01 15 44.5**	**-1.3**
PLOR	**Plostina**	**0.35**	**31**⇑	*i*	P	**Pn**	**01 15 31.0**	**-0.7**
PLOR	**Plostina**	**0.35**	**31**⇑	*i*	P	**Pn**	**01 15 31.0**	**-0.7**
PLOR				*i*	S	**Sn**	**01 15 44.5**	**-1.3**
VRI	**Vrincioaia**	**0.40**	**36**⇑	*i*	P	**Pn**	**01 15 31.4**	**-0.4**
VRI				*i*	S	**Sn**	**01 15 44.6**	**-1.5**
VRI	**Vrincioaia**	**0.40**	**36**⇑	*i*	P	**Pn**	**01 15 31.4**	**-0.4**
VRI	**Vrincioaia**	**0.40**	**36**⇑	*i*	P	**Pn**	**01 15 31.4**	**-0.4**
VRI				*i*	S	**Sn**	**01 15 44.6**	**-1.5**
ISR	**Istrita**	**0.44**	**166**⇑	*i*	P	**Pn**	**01 15 31.8**	**-0.3**
ISR	**Istrita**	**0.44**	**166**⇑	*i*	P	**Pn**	**01 15 31.8**	**-0.3**
ISR	**Istrita**	**0.44**	**166**⇑	*i*	P	**Pn**	**01 15 31.8**	**-0.3**
GRER		**0.44**	**112**⇑	*i*	P	**Pn**	**01 15 32.6**	**+0.6**
GRER		**0.44**	**112**⇑	*i*	P	**Pn**	**01 15 32.6**	**+0.6**
GRER		**0.44**	**112**⇑	*i*	P	**Pn**	**01 15 32.6**	**+0.6**
ODBI	**Odobesti**	**0.51**	**65**⇑	*i*	P	**Pn**	**01 15 32.9**	**+0.5**
ODBI				*i*	S	**Sn**	**01 15 47.7**	**+0.7**
ODBI	**Odobesti**	**0.51**	**65**⇑	*i*	P	**Pn**	**01 15 32.9**	**+0.5**
ODBI	**Odobesti**	**0.51**	**65**⇑	*i*	P	**Pn**	**01 15 32.9**	**+0.5**
ODBI				*i*	S	**Sn**	**01 15 47.7**	**+0.7**
PETR	**Petresti**	**0.61**	**73**⇑	*i*	P	**Pn**	**01 15 33.1**	**+0.1**
PETR				*i*	S	**Sn**	**01 15 47.8**	**-0.3**
PETR	**Petresti**	**0.61**	**73**⇑	*i*	P	**Pn**	**01 15 33.1**	**+0.1**
PETR	**Petresti**	**0.61**	**73**⇑	*i*	P	**Pn**	**01 15 33.1**	**+0.1**
PETR				*i*	S	**Sn**	**01 15 47.8**	**-0.3**
PLAR	**PLOIESTI**	**0.68**	**202**⇑	*i*	P	**Pn**	**01 15 33.6**	**+0.1**
PLAR				*i*	S	**Sn**	**01 15 49.3**	**+0.4**
PLAR	**PLOIESTI**	**0.68**	**202**⇑	*i*	P	**Pn**	**01 15 33.6**	**+0.1**
PLAR	**PLOIESTI**	**0.68**	**202**⇑	*i*	P	**Pn**	**01 15 33.6**	**+0.1**
PLAR				*i*	S	**Sn**	**01 15 49.3**	**+0.4**
PGOR	**Pogoanele**	**0.76**	**147**⇑	*i*	P	**Pn**	**01 15 34.1**	**0.0**
PGOR				*i*	S	**Sn**	**01 15 50.5**	**+0.5**
PGOR	**Pogoanele**	**0.76**	**147**⇑	*i*	P	**Pn**	**01 15 34.1**	**0.0**
PGOR	**Pogoanele**	**0.76**	**147**⇑	*i*	P	**Pn**	**01 15 34.1**	**0.0**
PGOR				*i*	S	**Sn**	**01 15 50.5**	**+0.5**
DOPR	**Dopca**	**0.82**	**301**⇑	*i*	P	**Pn**	**01 15 33.8**	**-0.8**
DOPR				*i*	S	**Sn**	**01 15 49.5**	**-1.4**
DOPR	**Dopca**	**0.82**	**301**⇑	*i*	P	**Pn**	**01 15 33.8**	**-0.8**
DOPR	**Dopca**	**0.82**	**301**⇑	*i*	P	**Pn**	**01 15 33.8**	**-0.8**
DOPR				*i*	S	**Sn**	**01 15 49.5**	**-1.4**
VOIR		**0.95**	**264**	*i*	S	**Sn**	**01 15 50.9**	**-2.1**
VOIR		**0.95**	**264**	S		**Sn**	**01 15 50.9**	**-2.1**
VOIR		**0.95**	**264**	*i*	S	**Sn**	**01 15 50.9**	**-2.1**
TESR	**Tescani**	**0.98**	**10**⇑	*i*	P	**Pn**	**01 15 35.2**	**-0.7**
TESR				*i*	S	**Sn**	**01 15 51.2**	**-2.2**
TESR	**Tescani**	**0.98**	**10**⇑	*i*	P	**Pn**	**01 15 35.2**	**-0.7**
TESR	**Tescani**	**0.98**	**10**⇑	*i*	P	**Pn**	**01 15 35.2**	**-0.7**
TESR				*i*	S	**Sn**	**01 15 51.2**	**-2.2**
MTUR	**Matau**	**0.99**	**252**⇑	*i*	P	**Pn**	**01 15 35.8**	**-0.3**
MTUR				*i*	S	**Sn**	**01 15 54.0**	**+0.4**
MTUR	**Matau**	**0.99**	**252**⇑	*i*	P	**Pn**	**01 15 35.8**	**-0.3**
MTUR	**Matau**	**0.99**	**252**⇑	*i*	P	**Pn**	**01 15 35.8**	**-0.3**
MTUR				*i*	S	**Sn**	**01 15 54.0**	**+0.4**
BSTR	**Bucharest-Scie**	**1.12**	**191**⇑	*i*	P	**Pn**	**01 15 36.9**	**-0.4**
BSTR				*i*	S	**Sn**	**01 15 54.3**	**-1.3**
BSTR	**Bucharest-Scie**	**1.12**	**191**⇑	*i*	P	**Pn**	**01 15 36.9**	**-0.4**
BSTR	**Bucharest-Scie**	**1.12**	**191**⇑	*i*	P	**Pn**	**01 15 36.9**	**-0.4**
BSTR				*i*	S	**Sn**	**01 15 54.3**	**-1.3**
AMRR	**Amara**	**1.15**	**144**⇓	*i*	P	**Pn**	**01 15 37.5**	**0.0**
AMRR				*i*	S	**Sn**	**01 15 55.6**	**-0.5**
AMRR	**Amara**	**1.15**	**144**⇓	*i*	P	**Pn**	**01 15 37.5**	**0.0**
AMRR	**Amara**	**1.15**	**144**⇓	*i*	P	**Pn**	**01 15 37.5**	**0.0**
AMRR				*i*	S	**Sn**	**01 15 55.6**	**-0.5**
BUC	**Bucharest**	**1.15**	**191**⇑	*i*	P	**Pn**	**01 15 37.4**	**-0.2**
BUC				*i*	S	**Sn**	**01 15 55.6**	**-0.6**
BUC	**Bucharest**	**1.15**	**191**⇑	*i*	P	**Pn**	**01 15 37.4**	**-0.2**
CIOR	**Ciorogarla**	**1.16**	**199**⇑	*i*	P	**Pn**	**01 15 37.3**	**-0.3**
CIOR				*i*	S	**Sn**	**01 15 55.6**	**-0.7**
CIOR	**Ciorogarla**	**1.16**	**199**⇑	*i*	P	**Pn**	**01 15 37.3**	**-0.3**
CIOR	**Ciorogarla**	**1.16**	**199**⇑	*i*	P	**Pn**	**01 15 37.3**	**-0.3**
CIOR				*i*	S	**Sn**	**01 15 55.6**	**-0.7**
BUC1	**Bucharest**	**1.23**	**192**⇑	*i*	P	**Pn**	**01 15 38.1**	**-0.2**
BUC1				*i*	S	**Sn**	**01 15 57.0**	**-0.5**
BUC1	**Bucharest**	**1.23**	**192**⇑	*i*	P	**Pn**	**01 15 38.1**	**-0.2**
BUC1	**Bucharest**	**1.23**	**192**⇑	*i*	P	**Pn**	**01 15 38.1**	**-0.2**
BUC1				*i*	S	**Sn**	**01 15 57.0**	**-0.5**
GOLR		**1.23**	**236**⇑	*i*	P	**Pn**	**01 15 38.3**	**-0.1**
GOLR				*i*	S	**Sn**	**01 15 57.4**	**-0.3**
GOLR		**1.23**	**236**⇑	*i*	P	**Pn**	**01 15 38.3**	**-0.1**
GOLR		**1.23**	**236**⇑	*i*	P	**Pn**	**01 15 38.3**	**-0.1**
GOLR				*i*	S	**Sn**	**01 15 57.

BZS	Buzias	3.35	273	⇑	*i* P	Pn	01 16 03.4	-0.9
BZS	Buzias	3.35	273	⇑	*i* P	Pn	01 16 03.4	-0.9
PGB	Panagyurishte	3.40	209		*i* P	Pn	01 16 04.7	-0.3
PGB	Panagyurishte	3.40	209		*i* P	Pn	01 16 04.7	-0.3
BOLS	Boljevac	3.60	243		*e*Pn	Pn	01 16 04.5	-3.1
PLD	Plovdiv	3.65	200		P	Pn	01 16 07.6	-0.6
PLD	Plovdiv	3.65	200		*i* P	Pn	01 16 05.9	-2.3
PLD	Plovdiv	3.65	200		P	Pn	01 16 07.6	-0.6
TRPA	Tarpa	3.70	316	⇓	*e*	Pn	01 16 08.2	-0.5
EDRB	Edirne	3.71	176		*e*P	Pn	01 16 07.3	-1.7
VTS	Vitosha	3.74	219		P	Pn	01 16 08.6	-1.0
VTS	Vitosha	3.74	219	⇑	*i* P	Pn	01 16 08.8	-0.8
VTS	Vitosha	3.74	219	⇑	*i* P	Pn	01 16 08.8	-0.8
VTS	Vitosha	3.74	219		*e*P	Pn	01 16 08.8	-0.8
VTS	Vitosha	3.74	219	⇑	*i* P	Pn	01 16 08.8	-0.8
KDZ	Kurdzhali	3.96	191		*e*P	Pn	01 16 12.0	-0.3
KDZ	Kurdzhali	3.96	191		*e*P	Pn	01 16 12.0	-0.3
RZN	Rozhen	4.04	198		*e*P	Pn	01 16 13.2	-0.4
RZN	Rozhen	4.04	198		*e*P	Pn	01 16 13.2	-0.4
UZH	Uzhgorod	4.17	319	⇑	*i* P	Pn	01 16 14.1	-0.8
UZH					*e*S	Sn	01 17 01.1	-1.9
UZH					smax	smax		
	comp=N,49nm,0.8s							
UZH					smax	smax		
	comp=E,44nm,0.8s							
UZH	Uzhgorod	4.17	319		*i* P	Pn	01 16 14.1	-0.8
UZH					*e*S	Sn	01 17 01.1	-1.9
CTYL	Yal??k??y-??at	4.30	161		*e*P	Pn	01 16 15.0	-1.8
KKB	Krupnik	4.39	214		*e*P	Pn	01 16 18.1	0.0
KKB	Krupnik	4.39	214		*e*P	Pn	01 16 18.1	0.0
KOLS	Kolonicke sedl	4.40	322		*e*P	Pn	01 16 18.3	+0.2
KOLS	Kolonicke sedl	4.40	322		*e*P	Pn	01 16 18.3	+0.2
KOLS	Kolonicke sedl	4.40	322		*e*P	Pn	01 16 18.3	+0.2
MMB	Musomiste	4.41	207		*i* P	Pn	01 16 18.6	+0.4
MMB	Musomiste	4.41	207		*i* P	Pn	01 16 18.6	+0.4
SELS	Selova	4.44	240		*e*Pn	Pn	01 16 16.7	-2.0
SLVT	Silivri	4.51	162		*e*P	Pn	01 16 17.9	-1.8
CRLT	Corlu	4.52	167		*e*P	Pn	01 16 18.2	-1.6
LVV	L'vov	4.56	340		*e*P	Pn	01 16 21.0	+0.8
LVV					*e*S	Sn	01 17 13.0	+0.5
LVV	L'vov	4.56	340		*e*P	Pn	01 16 21.0	+0.8
LVV					*e*S	Sn	01 17 13.0	+0.5
CTKS	Kestanelik-??a	4.58	160		*e*P	Pn	01 16 19.0	-1.5
NVR	Nevrokopi	4.58	205		P	Pn	01 16 20.6	0.0
NVR	Nevrokopi	4.58	205		P	Pn	01 16 20.6	0.0
ALN	Alexandroupoli	4.66	183		P	Pn	01 16 21.4	-0.1
ALN	Alexandroupoli	4.66	183		P	Pn	01 16 21.4	-0.1
BGKT	Bogazkoy	4.70	157		*e*P	Pn	01 16 20.0	-2.1
CRVS	Cervenica-Dubn	4.75	317		*e*P	Pn	01 16 21.2	-1.5
CRVS	Cervenica-Dubn	4.75	317		*e*P	Pn	01 16 21.2	-1.5
CRVS	Cervenica-Dubn	4.75	317		*e*P	Pn	01 16 21.2	-1.5
KAVA	Kavala	4.75	197		P	Pn	01 16 22.5	-0.3
KAVA	Kavala	4.75	197		P	Pn	01 16 22.5	-0.3
DIVS	Divibare	4.78	255		P	Pn	01 16 21.9	-1.3
DIVS	Divibare	4.78	255		P	Pn	01 16 21.9	-1.3
KWP	Kalwaria Pacla	4.79	330		*e*Pn	Pn	01 16 23.9	+0.7
ENEZ	Enez	4.81	182		*e*P	Pn	01 16 22.4	-1.2
ERIK	Erikli-Kesan	4.88	179		*e*P	Pn	01 16 23.2	-1.3
SRS	Serrai	4.88	206		P	Pn	01 16 24.6	+0.1
SRS	Serrai	4.88	206		P	Pn	01 16 24.6	+0.1
ISK	Istanbul-Kandi	4.88	156		*e*P	Pn	01 16 22.9	-1.6
RKY	Sarkoy-Tekirda	4.89	173		*e*P	Pn	01 16 23.2	-1.6
SILT	Sile	4.99	151		*e*P	Pn	01 16 24.2	-1.7
MRMT	Marmara Adasi	5.02	169		*e*P	Pn	01 16 24.8	-1.7
PSZ	Piszkesteto	5.06	300	⇑	*i* P	Pn	01 16 26.1	-0.8
PSZ	Piszkesteto	5.06	300	⇑	*i* P	Pn	01 16 26.1	-0.8
PSZ	Piszkesteto	5.06	300	⇑	*e*	Pn	01 16 25.6	-1.3
PSZ	Piszkesteto	5.06	300	⇑	*i* P	Pn	01 16 26.1	-0.8
KNT	Kendrikon	5.07	211		P	Pn	01 16 26.9	-0.2
KNT	Kendrikon	5.07	211		P	Pn	01 16 26.9	-0.2
GELI	Tayfur-Gelibol	5.15	179		*e*P	Pn	01 16 26.6	-1.5
LPK	Lapseki	5.18	177		*e*P	Pn	01 16 27.2	-1.4
KRBG	Karabiga-Canak	5.19	172		*e*P	Pn	01 16 27.2	-1.6
SEV	Sevastopol'	5.25	98	⇑	*e*P	Pn	01 16 27.8	-1.6
SEV					*e*S	Sn	01 17 26.6	-2.4
SEV	Sevastopol'	5.25	98		*e*P	Pn	01 16 27.8	-1.6
SEV					*e*S	Sn	01 17 26.6	-2.4
BBLS	Lazići	5.26	254		*e*Pn	Pn	01 16 28.8	-0.8
HRT	Hereke	5.29	152		*e*P	Pn	01 16 28.2	-1.9
ARMT	Armutlu	5.30	159		*e*P	Pn	01 16 28.5	-1.7
EDC	Edincik	5.31	168		*e*P	Pn	01 16 28.6	-1.3
BUD	Budapest	5.44	293		*e*	Pn	01 16 32.2	+0.2
PKSM	Moragy	5.45	280	⇓	*e*	Pn	01 16 32.1	0.0
KCTX	Karacabey (Bur	5.47	164		*e*P	Pn	01 16 30.9	-1.6
SIM	Simferopol'	5.49	94	⇑	*e*P	Pn	01 16 29.4	-3.2
SIM					*e*S	Sn	01 17 30.3	-4.3
SIM	Simferopol'	5.49	94		*e*P	Pn	01 16 29.4	-3.2
AKASG	Malin Array Be	5.49	19		P	Pn	01 16 32.1	-0.6
AKASG					S	Sn	01 17 30.5	-4.3
AKASG					pmax	pmax		
	comp=Z,3.0nm,0.3s							
AKASG					smax	smax		
	comp=N,12nm,0.3s							
AKASG	Malin Array Be	5.49	19		P	Pn	01 16 32.1	-0.6
	comp=N,2.5nm,0.3s,baz=199,slow=12,SNR=6.2							
AKASG					S	Sn	01 17 30.5	-4.3
	comp=N,12nm,0.3s,baz=196,slow=18,SNR=4.9							
AKASG	Malin Array Be	5.49	19		P	Pn	01 16 32.1	-0.6
	comp=N,3.0nm,0.3s							
GONE	Gonen-Balikesi	5.58	170		*e*P	Pn	01 16 32.5	-1.4
PLG	Polygyros	5.60	204		P	Pn	01 16 34.7	+0.4
PLG	Polygyros	5.60	204		P	Pn	01 16 34.7	+0.4
YAL	Yalta	5.60	98	⇑	*e*P	Pn	01 16 33.6	-0.6
YAL					*e*S	Sn	01 17 33.2	-4.2
YAL	Yalta	5.60	98		*e*P	Pn	01 16 33.6	-0.6
NIE	Niedzica	5.65	315		*e*P	Pn	01 16 35.3	+0.4
NIE	Niedzica	5.65	315		*e*Pn	Pn	01 16 35.3	+0.4
NIE	Niedzica	5.65	315		*e*P	Pn	01 16 35.3	+0.4
ADVT	Abdulvahap	5.67	153		*e*P	Pn	01 16 33.2	-1.9
IZI	Iznik	5.68	155		*e*P	Pn	01 16 33.5	-1.8
ALU	Alushta	5.74	96		*e*P	Pn	01 16 35.0	-0.9
ALU					*e*S	Sn	01 17 39.1	-1.5
ALU	Alushta	5.74	96		*e*P	Pn	01 16 35.0	-0.9
ALU					*e*S	Sn	01 17 39.1	-1.5
BIA	Bitola	5.84	221		*e*Pn	Pn	01 16 35.0	-2.5
GULT	Gulveren	5.94	148		*e*P	Pn	01 16 37.0	-1.8
VYHS	Vyhne	5.95	302		*e*P	Pn	01 16 38.3	-0.5
VYHS	Vyhne	5.95	302		*e*P	Pn	01 16 38.3	-0.5
VYHS	Vyhne	5.95	302		*e*P	Pn	01 16 38.3	-0.5
PAIG	Paliouri	5.96	201		P	Pn	01 16 39.1	+0.1
PAIG	Paliouri	5.96	201		P	Pn	01 16 39.1	+0.1
BALB	Balikesir	6.00	169		*e*P	Pn	01 16 38.3	-1.3
SUDU	Sudak	6.12	93	⇓	*e*	Pn	01 16 39.3	-1.7
SUDU					*e*S	Sn	01 17 45.7	-4.1
SUDU	Sudak	6.12	93		*e*P	Pn	01 16 39.3	-1.7
MDUB	Mudurnu	6.17	144		*e*P	Pn	01 16 41.3	-0.7
SAFT	Safranbolu	6.29	131		*e*P	Pn	01 16 41.5	-2.0
PRK	Paraskevi	6.30	181		P	Pn	01 16 44.6	+1.1
PRK	Paraskevi	6.30	181		P	Pn	01 16 44.6	+1.1
SIGR	SIGRI	6.34	184		P	Pn	01 16 45.0	+0.8
SIGR	SIGRI	6.34	184		P	Pn	01 16 45.0	+0.8
FEO	Feodosiya	6.37	92		*e*P	Pn	01 16 42.8	-1.7
FEO	Feodosiya	6.37	92		*e*P	Pn	01 16 42.8	-1.7
TVSB	Tavsanli	6.50	159		*e*P	Pn	01 16 45.8	-0.6
BZK	Bozkurt	6.57	120		*e*P	Pn	01 16 44.6	-2.6
XOR	Xorichti	6.61	202		P	Pn	01 16 47.7	-0.1
XOR	Xorichti	6.61	202		P	Pn	01 16 47.7	-0.1
STON	Ston	6.79	250		*e*Pn	Pn	01 16 51.2	+1.0
STON					Sn	Sn	01 18 04.4	-1.7
STON	Ston	6.79	250		*e*Pn	Pn	01 16 51.1	+1.0
STON					Sn	Sn	01 18 04.4	-1.7
SMOL	Smolenice	6.81	299		*e*P	Pn	01 16 50.0	-0.3
SMOL	Smolenice	6.81	299		*e*P	Pn	01 16 50.0	-0.3
SMOL	Smolenice	6.81	299		*e*P	Pn	01 16 50.0	-0.3
ZST	Bratislava	6.90	296		*e*P	Pn	01 16 50.2	-1.3
ZST	Bratislava	6.90	296		*e*P	Pn	01 16 50.2	-1.3
ZST	Bratislava	6.90	296		*e*P	Pn	01 16 50.2	-1.3
OKC	Ostrava-Krasne	7.03	311		*e*P	Pn	01 16 52.3	-0.9
OKC	Ostrava-Krasne	7.03	311		*e*PN	Pn	01 16 52.3	-0.9
OKC	Ostrava-Krasne	7.03	311		*e*P	Pn	01 16 52.3	-0.9
ALT	Altintas	7.05	156		*e*P	Pn	01 16 52.6	-1.2
SOP	Sopron	7.10	291	⇓	*e*	Pn	01 16 53.8	-0.5
SVRH	Sivrihisar-ESK	7.18	146		*e*P	Pn	01 16 53.9	-1.6
KULA	Kula-Manisa	7.23	166		*e*P	Pn	01 16 55.2	-0.9
CANT	Cankiri	7.24	130		*e*P	Pn	01 16 53.9	-2.3
MORC	Moravsky Berou	7.32	308		*e*Pn	Pn	01 16 57.0	-0.3
BYBT	Boyabat	7.33	121		*e*P	Pn	01 16 55.0	-2.4
DIKM	Dikmen	7.52	118		*e*P	Pn	01 16 57.3	-2.6
CONA	Conrad Observa	7.62	292	⇑	*i* Pn	Pn	01 17 01.0	-0.3
CONA	Conrad Observa	7.62	292		Pn	Pn	01 17 01.0	-0.3

VRAC	Vranov	7.63	303		P	Pn	01 17 01.7	+0.2
	comp=N,0.3nm,0.3s,baz=117,slow=12,SNR=22							
VRAC	Vranov	7.63	303		*e*Pn	Pn	01 17 01.2	-0.3
VRAC	Vranov	7.63	303		P	Pn	01 17 01.7	+0.2
KIZT	Kizilcal	7.81	147		*e*P	Pn	01 17 02.1	-1.9
BOJS	Bojanci	7.83	274		*i* P	Pn	01 17 04.7	+0.7
BOJS	Bojanci	7.83	274		*i* P	Pn	01 17 04.7	+0.7
ANN	Anapa	7.84	92		*e*P	Pn	01 17 01.7	-2.5
ANN					*e*S	Sn	01 18 27.6	-3.7
ANN					pmax	pmax		
	comp=Z,21nm,1.4s							
ANN	Anapa	7.84	92		*e*P	Pn	01 17 01.7	-2.5
	comp=Z,21nm,1.4s							
AFSR	Af˘ar-Bala (A	7.84	139		*e*P	Pn	01 17 01.8	-2.6
BRTR	Keskin Array B	7.90	135		P	Pn	01 17 04.4	-0.8
	comp=Z,0.3nm,0.3s,baz=321,slow=11,SNR=26							
BRTR	Keskin Array B	7.90	135		P	Pn	01 17 04.4	-0.8
PERS	Pernice	7.92	282		*i* P	Pn	01 17 05.5	+0.2
PERS	Pernice	7.92	282		*i* P	Pn	01 17 05.5	+0.2
SOKA	Soboth	7.98	282	⇑	*i* Pn	Pn	01 17 06.9	+0.7
SOKA	Soboth	7.98	282		Pn	Pn	01 17 06.9	+0.7
CORM	Corum	8.08	129		*e*P	Pn	01 17 05.0	-2.7
VISS	Visnje	8.10	276		*i* P	Pn	01 17 09.0	+1.3
VISS	Visnje	8.10	276		*i* P	Pn	01 17 09.0	+1.3
TREC	Trest	8.29	301		*e*P	Pn	01 17 10.3	0.0
TREC	Trest	8.29	301		*e*PN	Pn	01 17 10.3	0.0
TREC	Trest	8.29	301		*e*P	Pn	01 17 10.3	0.0
DPC	Dobruska-Polom	8.29	309		*e*P	Pn	01 17 09.5	-0.8
DPC	Dobruska-Polom	8.29	309		*e*PN	Pn	01 17 09.5	-0.8
DPC	Dobruska-Polom	8.29	309		*e*P	Pn	01 17 09.5	-0.8
KVT	Kavak	8.33	119		*e*P	Pn	01 17 08.2	-2.8
KSP	Ksiaz	8.57	312		*e*Pn	Pn	01 17 13.2	-0.9
LADK	Ladik-KONYA	8.58	147		*e*P	Pn	01 17 12.4	-2.0
KONT	Konya--Tatoy	8.80	148		*e*P	Pn	01 17 15.1	-2.2
PRU	Pruhonice	9.13	303		*e*PN	Pn	01 17 21.4	-0.2
PRU	Pruhonice	9.13	303		*e*P	Pn	01 17 21.4	-0.2
GERES	GERESS Array B	9.25	295		P	Pn	01 17 24.6	+1.3
	comp=Z,0.1nm,0.3s,baz=101,slow=14,SNR=13							
GERES	GERESS Array B	9.25	295		P	Pn	01 17 24.6	+1.3
PVCC	Panska Ves	9.35	306		*e*PN	Pn	01 17 22.6	-1.9
PVCC	Panska Ves	9.35	306		*e*P	Pn	01 17 22.6	-1.9
KHC	Kasperske Hory	9.41	297		*e*PN	Pn	01 17 26.1	+0.8
KHC					*ex*	x	01 17 55.1	
KHC	Kasperske Hory	9.41	297		*e*P	Pn	01 17 26.1	+0.8
VSR	Storozhevoye	10.21	52		*e*P	Pn	01 17 34.5	-1.5
VSR					*e*S	Sn	01 19 26.0	-2.6
VSR					pmax	pmax		
	comp=N,5.0nm,0.4s							
VSR					pmax	pmax		
	comp=E,4.0nm,0.4s							
VSR					pmax	pmax		
	comp=Z,10.0nm,0.4s							
VSR					smax	smax		
	comp=N,190nm,1.0s							
VSR					smax	smax		
	comp=Z,10.0nm,0.3s							
VSR					smax	smax		
	comp=E,50nm,0.5s							
VSR	Storozhevoye	10.21	52		*e*P	Pn	01 17 34.5	-1.5
	comp=E,190nm,1.0s							
VSR					*e*S	Sn	01 19 26.0	-2.6
	comp=E,10.0nm,0.3s							
NKC	Novy Kostel	10.47	302		*e*PN	Pn	01 17 40.0	+0.5
NKC	Novy Kostel	10.47	302		*e*P	Pn	01 17 40.0	+0.5
CLL	Collm	10.60	308		*e*P	Pn	01 17 44.0	+2.9
GUMT	Gumushane	10.85	113		*e*P	Pn	01 17 41.8	-2.9
BAYT	Ayd˘ntepe-Bay	11.31	112		*e*P	Pn	01 17 47.9	-3.0
DAVOX	Davos/Dischmat	11.52	282		LR	LR	01 22 56.2	
	comp=E,43nm,19.9s,baz=256,slow=41							
VRHR	Novokhopersk	11.55	56		*e*P	Pn	01 17 52.7	-1.1
VRHR					*e*S	Sn	01 19 58.6	-2.4
VRHR					pmax	pmax		
	comp=N,10.0nm,0.6s							
VRHR					pmax	pmax		
	comp=E,10.0nm,0.6s							
VRHR					pmax	pmax		
	comp=Z,20nm,0.6s							
VRHR					smax	smax		
	comp=N,40nm,0.7s							
VRHR					smax	smax		
	comp=Z,9.0nm,0.5s							
VRHR					smax	smax		
	comp=E,30nm,0.7s							
VRHR	Novokhopersk	11.55	56		*e*P	Pn	01 17 52.7	-1.1
VRHR					*e*S	Sn	01 19 58.6	-2.4
	comp=E,9.0nm,0.5s							
OBN	Obninsk	11.56	30		*e*P	Pn	01 17 51.3	-2.6
OBN					*e*		01 19 58.2	
OBN					pmax	pmax		
	comp=Z,8.0nm,1.2s							
OBN	Obninsk	11.56	30		*e*P	Pn	01 17 51.3	-2.6
	comp=Z,8.0nm,1.2s							
OBN					*e*S	Sn	01 19 58.2	-2.9
KIV	Kislovodsk	11.70	92		*e*P	Pn	01 17 55.6	-0.3
KIV					pmax	pmax		
	comp=Z,5.0nm,1.1s							
KIV	Kislovodsk	11.70	92		*e*P	Pn	01 17 55.6	-0.3
	comp=Z,5.0nm,1.1s							
BEYR	Belyy Ugol+	11.78	92		*e*P	Pn	01 17 58.8	+1.9
BEYR	Belyy Ugol+	11.78	92		*e*P	Pn	01 17 58.8	+1.9
MOS	Moscow	12.43	31		*e*P	P	01 18 12.4	+0.7
MOS					pmax	pmax		
	comp=Z,35nm,1.0s							
DIGR	Digorskoe uzhe	12.61	96		*e*P	Pn	01 18 09.8	+1.9
DIGR	Digorskoe uzhe	12.61	96		*e*P	Pn	01 18 09.8	+1.9
ZEI	Tsey	12.87	96		*e*P	Pn	01 18 11.0	-0.4
ZEI					pmax	pmax		
	comp=Z,2.0nm,0.7s							
ZEI	Tsey	12.87	96		*e*P	Pn	01 18 11.0	-0.4
	comp=Z,2.0nm,0.7s							
VSU	Vasula	12.94	1		*e*P	Pn	01 18 13.4	+1.6
GNI	Garni	14.49	105		P	P	01 18 35.5	+0.6
	comp=Z,0.2nm,0.3s,baz=0.4,slow=6.0,SNR=14							
GNI					LR	LR	01 25 12.7	
	comp=Z,18nm,21.6s,baz=139,slow=41							
GNI	Garni	14.49	105		*i* P	P	01 18 33.9	-1.0
	comp=Z,26nm,1.7s							
FINES	FINESS Array B	15.93	359		P	P	01 18 51.0	+0.6
	comp=Z,0.2nm,0.3s,baz=167,slow=12,SNR=6.1							
FINES	FINESS Array B	15.93	359		P	P	01 18 51.0	+0.6
HFS	Hagfors	16.45	337		P	P	01 18 56.3	0.0
	comp=Z,0.2nm,0.3s,baz=141,slow=15,SNR=4.4							
HFS	Hagfors	16.45	337		P	P	01 18 56.3	0.0
NB2	NORSAR Subarra	17.90	336		P	P	01 19 12.6	+0.4
	comp=Z,1.2nm,0.6s,baz=140,slow=11							
NB2	NORSAR Subarra	17.90	336		P	P	01 19 12.6	+0.4
	comp=Z,1.2nm,0.6s,SNR=6.0							
NOA	NORSAR Array B	17.90	336		P	P	01 19 10.9	-1.2
	comp=Z,0.2nm,0.3s,baz=145,slow=9.6,SNR=6.4							
NOA	NORSAR Array B	17.90	336		P	P	01 19 11.0	-1.2
AKTK	Aktyubinsk	21.62	65		P	P	01 19 54.2	+1.7
	comp=Z,2.0nm,0.7s							
AKTO	Aktyubinsk	21.62	65		P	P	01 19 54.2	+1.7
AKTO					pmax	pmax		
	comp=Z,2.0nm,0.7s							
AKTO	Aktyubinsk	21.62	65		P	P	01 19 54.2	+1.7
	comp=Z,1.8nm,0.7s,baz=273,slow=8.4,SNR=8.8							
ARU	Arti	22.77	50	*d*	*i* P	P	01 20 07.4	+3.4
ARU							01 20 35.6	
ARU					SS	Sn	01 24 50.8	+21
ARU					pmax	pmax		
	comp=Z,27nm,5.0s							
LVZ	Lovozero	22.82	8		*e*P	P	01 20 07.1	+2.8
LVZ					pmax	pmax		
	comp=Z,25nm,1.2s							
ESDC	Sonseca Array	23.02	266		P	P	01 20 05.1	-1.4
	comp=Z,0.1nm,0.3s,baz=63,slow=9.0,SNR=3.3							
ARCES	ARCESS Array B	24.06	359		P	P	01 20 15.6	0.0
	comp=Z,1.4nm,0.8s,baz=179,slow=9.9,SNR=3.2							
ARCES	ARCESS Array B	24.06	359		P	P	01 20 15.6	0.0
	comp=Z,1.0nm,0.8s							
BRVK	Borovoye	29.20	59		*e*P	P	01 21 03.4	+1.6
BRVK					pmax	pmax		
	comp=Z,3.0nm,1.2s							
BRVK	Borovoye	29.20	59		*e*P	P	01 21 03.4	+1.6
	comp=Z,3.0nm,1.2s							
BVAR	Borovoye Array	29.27	59		P	P	01 21 04.0	+1.6
BVAR					pmax	pmax		
	comp=Z,1.0nm,0.8s							
BVAR	Borovoye Array	29.27	59		P	P	01 21 04.0	+1.6
	comp=Z,0.9nm,0.8s,baz=269,slow=7.4,SNR=6.0							
BVAR	Borovoye Array	29.27	59		P	P	01 21 04.0	+1.6
	comp=Z,1.0nm,0.8s							
AAK	Ala-Archa	34.27	77	*d*	*i* P	P	01 21 49.3	+2.8
AAK					pmax	pmax		
	comp=Z,15nm,1.7s							
AAK	Ala-Archa	34.27	77		P	P	01 21 49.5	+3.0
	comp=Z,0.8nm,0.5s,baz=275,slow=4.8,SNR=11							
KURBB	Kurchatov Arra	34.59	62		P	P	01 21 50.2	+1.3
	comp=Z,1.1nm,0.6s,baz=287,slow=9.1,SNR=13							
KURK	Kurchatov	34.63	62	⇑	*i* P	P	01 21 50.9	+1.6
KURK					pmax	pmax		
	comp=Z,4.0nm,2.5s							
KURK	Kurchatov	34.63	62		*i* P	P	01 21 50.9	+1.6
	comp=Z,4.0nm,2.5s							
ZALV	Zalesovo Beam	37.69	55		P	P	01 22 16.6	+1.4
ZALV					pmax	pmax		
	comp=Z,3.0nm,0.7s							
ZALV	Zalesovo Beam	37.69	55		P	P	01 22 16.6	+1.4
	comp=Z,3.4nm,0.7s,baz=283,slow=8.9,SNR=21							
ZALV	Zalesovo Beam	37.69	55		P	P	01 22 16.6	+1.4
	comp=Z,3.0nm,0.7s							
MKAR	Makanchi Array	38.03	67		P	P	01 22 19.7	+1.4
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
MKAR	Makanchi Array	38.03	67		P	P	01 22 19.7	+1.4
	comp=Z,0.8nm,0.6s,baz=287,slow=7.6,SNR=11							
MKAR	Makanchi Array	38.03	67		P	P	01 22 19.7	+1.4
	comp=Z,1.0nm,0.6s							
TORD	Torodi Ar. Bea	38.49	221		P	P	01 22 22.9	+0.6
	comp=Z,0.8nm,0.5s,baz=24,slow=8.3,SNR=15							
DBIC	Dimbokro	47.25	225		P	P	01 23 32.5	-0.4
	comp=Z,1.2nm,0.3s,baz=18,slow=9.0,SNR=9.0							
DBIC	Dimbokro	47.25	225		P	P	01 23 32.5	-0.4
	comp=Z,1.0nm,0.3s							
CMAR	Chiang Mai Arr	64.92	89		P	P	01 25 39.6	+1.1
	comp=Z,1.0nm,0.3s,baz=144,slow=8.4,SNR=4.6							
ILAR	Eielson Array	69.90	357		P	P	01 26 10.6	+1.4
	comp=Z,0.2nm,0.7s,baz=358,slow=4.5,SNR=3.3							

ATH **12** *01:20:07.1, 35˚.58N×26˚.45E, h31km, MD3.3/14*
CSEM **12** *01:20:07.8±0.2, 35˚.53N×26˚.48E, h20km, MD3.3, Error ellipse: s-maj=5.2km s-min=3.4km az=157.0*
ISCJB **12** *01:20:07.5±1.1, 35˚.56N±0˚.03×26˚.44E±0˚.03, h23km±11km, Error ellipse: s-maj=5.3km s-min=3.5km az=158.7*
ISK **12** *01:20:08.0, 35˚.50N×26˚.42E, h32km, MD3.5*
ISC 12 01:20:08.3±1.1, 35˚.55N±0˚.03×26˚.46E±0˚.02, h23km±13km, n56, σ0˚72/91, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ZKR	Zakros	0.47	205	*e*PN	Pb	Pb	01 20 17.8	-0.2
ZKR				*e*SN	Sn	Sn	01 20 26.2	-1.1
ZKR	Zakros	0.47	205	*e*Pn	Pb	Pb	01 20 17.8	-0.2
ZKR				*e*Sn	Sn	Sn	01 20 26.2	-1.1
KARP	Karpathos	0.57	90	*e*PN	Pb	Pb	01 20 18.9	-0.8
KARP				*e*SN	Sb	Sb	01 20 28.2	+0.7
KARP	Karpathos	0.57	90	*e*Pn	Pb	Pb	01 20 18.9	-0.8
KARP				*e*Sn	Sb	Sb	01 20 28.2	+

synthetics of broadband displacement seismograms. Energy computed from BB mechanism.

NEIC Felt at Kimbe and Port Moresby.

AUST **12** *01:26:27.7±0.2, 5°.75S×149°.57E, h93km Error ellipse: s-maj=0.7km s-min=0.5km az=236.0*

IDC **12** *01:26:27.1±0.3, 5°.67S×149.47E, h96km±2km, mb5.4/29, mb1 5.5/32, mb1mx5.5/32, mbtmp5.4/32, MS5.1/31, Ms1 5.1/31, ms1mx5.1/36, Error ellipse: s-maj=7.6km s-min=6.4km az=96.0*

MOS **12** *01:26:28.0±1.0, 5°.68S×149°.53E, h111km, mb5.8/40, MS5.6/14, Error ellipse: s-maj=8.2km s-min=5.5km az=98.9*

GCMT **12** *01:26:31.7±0.1, 5°.83S×149°.62E, h91km, MW6.1, Moment Tensor Solution. s113,c269; s73,c104; Moment tensor: Scale 10¹⁸Nm; Mrr0.07±.01; Mθθ 0.37±.01; Mϕϕ -0.44±.01; Mrθ -1.19±.01; Mθϕ -0.26±.01; Mϕr -1.17±.01; Best double couple: Mo1.70000×10¹⁸ NP1:ϕs328.00000°, δ14.00000°, λ11.00000°. NP2:ϕs227.00000°, δ87.00000°, λ104.00000°. Principal axes: T 1.6300, Plg46.0000°, Azm152.0000°; N 0.2100, Plg14.0000°, Azm47.0000°; P -1.8300, Plg41.0000°, Azm304.0000°; Data Used: II IU CN IC G. Surface waves: sta=113, comp=265, per= 50.*

DJA **12** *01:26:33.1±0.6, 6°S×3°×15°E, h145km±6km, M6.1/29, mB6.3/28, mb5.9/29, MLv6.9/1, Mw(mB)6.0/28, Mwp6.0/5*

NEIC **12** *01:26:44.2±0.0, 5°.47S×149°.35E, h81km, Moment Tensor Solution. s132 Moment tensor: Scale 10¹⁸Nm; Mrr0.25; Mθθ0.12; Mϕϕ -0.37; Mrθ -1.09; Mθϕ -0.04; Mϕr -1.14; Best double couple: Mo1.60000×10¹⁸ NP1:ϕs337.00000°, δ9.00000°, λ25.00000°. NP2:ϕs222.00000°, δ86.00000°, λ99.00000°. Principal axes: T 1.6500, Plg48.0000°, Azm141.0000°; N -0.0700, Plg8.0000°, Azm41.0000°; P -1.5700, Plg40.0000°, Azm304.0000°;*

ISC 12 01:26:27.7±0.2, 5°.69S±0°.02×149°.57E±0°.03, h100km±1km, h99km:pP-P, n965, σ1§58/1219, mb5.9/165, 85C-82D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.40**	**213**	*e*Pn		**Pn**		**01 27 33.6**	**+1.3**
PMG				*e*S		**Sn**		**01 28 22.3**	**-0.1**
PMG	**Port Moresby**	**4.40**	**213**	P		**Pn**		**01 27 34.1**	**+1.8**
PMG	**Port Moresby**	**4.40**	**213**	P		**Pn**		**01 27 33.0**	**+0.7**
	684nm,0.3s,baz=26,slow=8.3,SNR=445								
PMG				S		**Sn**		**01 28 22.2**	**-0.1**
	2µm,0.3s,baz=351,slow=17,SNR=19								
JAY	**Jayapura**	**9.39**	**289**	P		Pn		01 28 43.9	+3.6
	749nm,1.5s,18µm								
JAY	**Jayapura**	**9.39**	**289**	P		**Pn**		**01 28 39.5**	**-0.8**
	baz=9.4,SNR=5.6								
MMPI	**Merauke**	**9.53**	**253**	P		Pn		01 28 47.8	+5.8
	1µm,1.5s,31µm								
HNR	**Honiara**	**10.93**	**110**	*e*Pn		**Pn**		**01 29 01.4**	**+0.2**
HNR				S		**Sn**		**01 31 01.9**	**+0.4**
HNR				*e*S				01 31 02.4	
HNR				*e*ScP		**ScP**		**01 38 15.7**	**-0.1**
HNR	**Honiara**	**10.93**	**110**	P		**Pn**		**01 29 01.4**	**+0.2**
	23nm,0.3s,baz=219,slow=2.4,SNR=96								
HNR				S		**Sn**		**01 31 01.9**	**+0.4**
	42nm,0.3s,baz=309,slow=18,SNR=3.5								
HNR				LR		LR		01 32 39.5	
	comp=Z,17µm,20.4s,baz=274,slow=34								
MTSU	**Mount Surprise**	**13.39**	**202**	P		**Pn**		**01 29 35.5**	**+1.7**
	baz=13,SNR=195								
SRPI	**Serui, Papua**	**13.84**	**285**	P		**P**		**01 29 47.5**	**+2.8**
BAKI	**Biak**	**14.16**	**288**	P		**P**		**01 29 47.7**	**-0.6**
	632nm,0.9s,13µm								
CTA	**Charters Tower**	**14.67**	**192**	P		**Pn**		**01 29 51.2**	**+0.9**
CTA				S		**Sn**		**01 32 32.4**	**+0.2**
CTA				ScP		**ScP**		**01 38 20.9**	**-0.6**
CTA	**Charters Tower**	**14.67**	**192**	P		**Pn**		**01 29 51.2**	**+0.9**
	1.7nm,0.3s,baz=16,slow=14,SNR=52								
CTA				S		**Sn**		**01 32 32.4**	**+0.2**
	1.5nm,0.3s,baz=304,slow=18,SNR=2.1								
CTA				LR		LR		01 34 59.4	
	comp=Z,6µm,18.2s,baz=5.8,slow=35								
CTA				ScP		**ScP**		**01 38 20.9**	**-0.6**
	0.4nm,0.3s,baz=12,slow=9.3,SNR=4.2								
CTAO	**Charters Tower**	**14.67**	**192**	*e*P		**Pn**		**01 29 51.0**	**+0.7**
CTAO	**Charters Tower**	**14.67**	**192**	*e*Pn		**Pn**		**01 29 51.0**	**+0.7**
PATS	**Pohnpei**	**15.20**	**35**	P		**P**		**01 30 00.3**	**+0.5**
	baz=15,SNR=6.8								
RKPI	**Ransiki, Papua**	**15.91**	**285**	P		**P**		**01 30 10.5**	**+2.7**
	633nm,1.8s,8µm								
FAKI	**Fak Fak**	**17.49**	**278**	P		**Pn**		**01 30 27.5**	**+1.9**
	328nm,1.1s,7µm49µm								
FAKI	**Fak Fak**	**17.49**	**278**	P		**Pn**		**01 30 27.4**	**+1.9**
	baz=18,SNR=31								
QIS	**Mount Isa**	**17.66**	**212**	P		**Pn**		**01 30 28.6**	**+1.1**
	baz=18,SNR=149								
QIS				S		S		01 34 02.3	+17
	baz=18,SNR=5.8								
KDU	**Kakadu**	**18.25**	**246**	P		**P**		**01 30 33.6**	**+0.1**
	baz=18,SNR=599								
KDU				S		**S**		**01 33 54.8**	**-2.4**
	baz=18,SNR=7.0								
MTN	**Manton Dam**	**19.53**	**247**	P		**P**		**01 30 48.0**	**+0.5**
	baz=20,SNR=369								
MTN				S		**S**		**01 34 20.9**	**-2.0**
	baz=20,SNR=18								
EIDS	**Eidsvold**	**19.62**	**176**	*e*P		**Pn**		**01 30 49.8**	**-0.9**
	3µm,0.8s								
EIDS	**Eidsvold**	**19.62**	**176**	P		**Pn**		**01 30 49.7**	**-0.9**
	baz=20,SNR=891								
GUMO	**Guam**	**19.72**	**346**	*e*Pn		**Pn**		**01 30 51.6**	**-0.3**
	1µm,1.6s								
GUMO				S		**S**		**01 34 26.9**	**+0.3**
GUMO	**Guam**	**19.72**	**346**	P		**Pn**		**01 30 52.8**	**+0.9**
	48nm,0.3s,baz=181,slow=6.2,SNR=35								
GUMO				S		**S**		**01 34 26.9**	**+0.3**
	2.8nm,0.3s,baz=167,slow=18,SNR=1.4								
GUMO				LR		LR		01 37 16.0	
	comp=Z,6µm,20.3s,baz=162,slow=33								
PALU	**Palau**	**19.87**	**311**	P		**Pn**		**01 30 53.7**	**0.0**
	baz=20,SNR=123								
WRAB	**Tennant Creek**	**20.48**	**225**	*e*P		**P**		**01 30 58.4**	**+0.6**
WRAB				*e*S		**S**		**01 34 41.1**	**-0.6**
WRAB				pmax		pmax			
	comp=Z,866nm,0.9s								
WRAB	**Tennant Creek**	**20.48**	**225**	*e*P		**P**		**01 30 58.4**	**+0.6**
	comp=Z,866nm,0.9s								
WRAB				*e*S		**S**		**01 34 41.1**	**-0.6**
WRAB				*e*ScP		**ScP**		**01 38 34.7**	**+1.0**
WRAB	**Tennant Creek**	**20.48**	**225**	P		**P**		**01 30 58.3**	**+0.5**
	comp=Z,4µm,0.6s								
WRA	**Warramunga Arr**	**20.50**	**225**	P		**P**		**01 30 58.2**	**+0.3**
WRA				pP		**pP**		**01 31 19.3**	**+2.3**
WRA				S		**S**		**01 34 40.7**	**-1.3**
WRA				ScP		**ScP**		**01 38 33.2**	**-0.5**
WRA	**Warramunga Arr**	**20.50**	**225**	P		**P**		**01 30 58.2**	**+0.3**
	comp=Z,109nm,0.6s,baz=50,slow=11,SNR=272								
WRA				pP		**pP**		**01 31 19.3**	**+2.3**
	comp=Z,442nm,0.8s,baz=51,slow=11,SNR=11								
WRA				S		**S**		**01 34 40.7**	**-1.3**
	comp=Z,117nm,1.0s,baz=44,slow=22,SNR=28								
WRA				ScP		**ScP**		**01 38 33.2**	**-0.5**
	comp=Z,134nm,1.1s,baz=44,slow=2.4,SNR=15								
WRA				LR		LR		01 39 16.5	
	comp=Z,4µm,20.2s,baz=50,slow=38								
RMQ	**Roma**	**20.69**	**182**	P		**P**		**01 31 01.6**	**+1.7**
	baz=21,SNR=568								
QLP	**Quilpie**	**21.39**	**193**	P		**P**		**01 31 08.4**	**+1.0**
	baz=21,SNR=603								
NLAI	**Namlea**	**22.54**	**275**	P		**P**		**01 31 24.2**	**+4.5**
LBMI	**Labuha**	**22.60**	**282**	P		**P**		**01 31 20.1**	**-0.2**
	comp=Z,387nm,1.1s,comp=Z,15µm								
KNRA	**Kununurra**	**22.70**	**242**	P		**P**		**01 31 20.7**	**-0.6**
	baz=23,SNR=464								
KNRA				S		**S**		**01 35 22.9**	**+0.4**
	baz=23,SNR=21								
NOUC	**Port Laguerre**	**22.97**	**137**	*e*P		**P**		**01 31 24.2**	**+0.2**
GAMI	**Galela, Maluku**	**23.01**	**288**	P		**P**		**01 31 26.8**	**+2.4**
	comp=Z,422nm,1.2s,comp=Z,12µm								
DZM	**Mont Dzumac**	**23.05**	**137**	*e*P		**P**		**01 31 24.8**	**0.0**
	comp=Z,11µm,1.4s								
DZM				*e*S		**S**		**01 35 25.8**	**-2.3**
	comp=Z,7µm,25.4s								
DZM				*e*LQ		LQ		01 36 12.3	
	comp=Z,19µm,26.1s								
DZM				*e*LR		LR		01 37 09.5	
	comp=Z,57µm,29.1s								
DZM	**Mont Dzumac**	**23.05**	**137**	*e*P		**P**		**01 31 23.0**	**-1.8**
DZM	**Mont Dzumac**	**23.05**	**137**	*e*P		**P**		**01 31 24.6**	**-0.2**
	comp=Z,8µm,1.4s								
DZM				ScP		**ScP**		**01 38 42.6**	**+2.4**
DZM	**Mont Dzumac**	**23.05**	**137**	P		**P**		**01 31 24.7**	**0.0**
	comp=Z,4µm,1.2s,baz=337,slow=8.5,SNR=289								
DZM				ScP		**ScP**		**01 38 42.6**	**+2.4**
	comp=Z,26nm,0.9s,baz=61,slow=11,SNR=4.5								
TNTI	**Ternate**	**23.09**	**285**	P		**P**		**01 31 29.7**	**+4.6**
AS31	**Alice Springs**	**23.39**	**219**	*e*P		**P**		**01 31 28.7**	**+0.8**
AS31				*e*S		**S**		**01 35 37.0**	**+3.6**
AS31				*e*ScP		**ScP**		**01 38 41.0**	**0.0**
ASAR	**Alice Springs**	**23.39**	**219**	P		**P**		**01 31 28.6**	**+0.7**
ASAR				S		**S**		**01 35 31.6**	**-1.9**
ASAR				ScP		**ScP**		**01 38 41.3**	**+0.3**
ASAR	**Alice Springs**	**23.39**	**219**	P		**P**		**01 31 28.6**	**+0.7**
	comp=Z,66nm,0.5s,baz=51,slow=8.3,SNR=718								
ASAR				S		**S**		**01 35 31.6**	**-1.9**
	comp=Z,41nm,0.8s,baz=39,slow=15,SNR=4.5								
ASAR				ScP		**ScP**		**01 38 41.3**	**+0.3**
	comp=Z,43nm,0.8s,baz=48,slow=3.1,SNR=11								
ASAR				LR		LR		01 41 14.5	
	comp=Z,7µm,18.1s,baz=37,slow=38								
TARA	**Tarawa**	**24.35**	**74**	*e*P		**P**		**01 31 35.6**	**-0.9**
	comp=Z,557nm,2.1s								
ARMA	**Armidale**	**24.67**	**176**	*e*P		**P**		**01 31 40.2**	**+0.7**
	comp=Z,2µm,1.4s								
ARMA	**Armidale**	**24.67**	**176**	P		**P**		**01 31 40.1**	**+0.7**
	baz=25,SNR=104								
MNI	**Manado**	**25.70**	**285**	P		**P**		**01 31 53.0**	**+4.1**
	comp=Z,352nm,0.9s,comp=Z,9µm								
CMSA	**Cobar Meteorol**	**25.97**	**188**	P		**P**		**01 31 51.1**	**+0.1**
	baz=26,SNR=236								
FITZ	**Fitzroy Crossi**	**26.42**	**240**	P		**P**		**01 31 55.6**	**+0.3**
FITZ				S		**S**		**01 36 20.2**	**-1.7**
FITZ	**Fitzroy Crossi**	**26.42**	**240**	P		**P**		**01 31 55.6**	**+0.3**
	comp=Z,3µm,0.9s,baz=70,slow=8.5,SNR=792								
FITZ				S		**S**		**01 36 20.2**	**-1.7**
	comp=Z,68nm,1.0s,baz=168,slow=20,SNR=2.0								
FITZ				LR		LR		01 43 01.2	
	comp=Z,4µm,18.4s,baz=57,slow=38								
FITZ	**Fitzroy Crossi**	**26.42**	**240**	P		**P**		**01 31 55.7**	**+0.3**
	baz=26,SNR=1000								
FITZ				S		**S**		**01 36 24.5**	**+2.6**
	baz=26,SNR=4.3								
BBSI	**Bau Bau**	**26.88**	**269**	P		**P**		**01 32 01.3**	**+1.8**
	comp=Z,158nm,1.0s,comp=Z,5µm								
DAV	**Davao City (W)**	**27.09**	**298**	P		**P**		**01 32 00.4**	**-1.0**
DAV	**Davao City (W)**	**27.09**	**298**	*e*P		**P**		**01 31 59.4**	**-2.1**
DAV	**Davao City (W)**	**27.09**	**298**	P		**P**		**01 32 00.4**	**-1.0**
	comp=Z,145nm,0.3s,baz=67,slow=7.7,SNR=2.6								
STKA	**Stephens Creek**	**27.10**	**195**	*e*P		**P**		**01 32 00.8**	**-0.4**
	comp=Z,0.1nm,0.5s								
STKA				pP		**pP**		**01 32 23.9**	**+0.5**
STKA				ScP		**ScP**		**01 38 52.3**	**+0.9**
STKA	**Stephens Creek**	**27.10**	**195**	P		**P**		**01 32 01.1**	**-0.2**
	comp=Z,170nm,0.6s,baz=5.0,slow=8.0,SNR=190								
STKA				pP		**pP**		**01 32 23.9**	**+0.5**
	comp=Z,119nm,0.6s,baz=21,slow=9.2,SNR=6.3								
STKA				ScP		**ScP**		**01 38 52.3**	**+0.9**
	comp=Z,20nm,0.9s,baz=12,slow=9.3,SNR=4.2								
STKA				LR		LR		01 42 52.8	
	comp=Z,4µm,19.5s,baz=23,slow=36								
STKA	**Stephens Creek**	**27.10**	**195**	P		**P**		**01 32 00.9**	**-0.4**
	baz=27,SNR=367								
LUWI	**Luwuk**	**27.14**	**279**	P		P		01 32 12.8	+11
LHI	**Lord Howe Isla**	**27.19**	**162**	P		**P**		**01 32 02.8**	**+0.8**
	baz=27,SNR=5.9								
MMRI	**Maumere**	**27.28**	**262**	P		**P**		**01 32 02.1**	**-1.0**
	comp=Z,523nm,0.9s,comp=Z,7µm								
MGCD	**Mangrove Creek**	**27.41**	**177**	P		**P**		**01 32 05.2**	**+1.1**
	baz=28,SNR=28								
CTBH	**Otabato--PC H**	**28.34**	**297**	↑*i*P		pP		01 32 36.3	+1.6
YNG	**Young**	**28.48**	**182**	P		**P**		**01 32 14.2**	**+0.6**
	baz=29,SNR=52								
BASI	**Baing, Sumba**	**29.06**	**259**	P		P		01 32 28.2	+9.3
WSI	**Waingapu**	**29.27**	**260**	P		P		01 32 32.5	+12
BKSI	**Bulukumba**	**29.32**	**269**	P		**P**		**01 32 21.2**	**0.0**
	comp=Z,47nm,1.0s,comp=Z,2µm								
CNB	**Canberra Magne**	**29.48**	**180**	P		**P**		**01 32 23.2**	**+0.8**
	baz=30,SNR=36								
CAN	**Canberra**	**29.49**	**181**	*e*P		**P**		**01 32 23.2**	**+0.7**
CAN				pmax		pmax			
	comp=Z,574nm,1.4s								
CAN	**Canberra**	**29.49**	**181**	*e*P		**P**		**01 32 23.1**	**+0.7**
	comp=Z,574nm,1.4s								
CAN				*e*ScP		**ScP**		**01 39 02.3**	**+3.5**
FUNA	**Funafuti**	**29.52**	**97**	*e*P		**P**		**01 32 22.9**	**-0.1**
	comp=Z,464nm,1.0s								
PLP	**Palo**	**29.66**	**304**	↓*e*P		**P**		**01 32 21.2**	**-3.0**
KAPI	**Kappang**	**29.70**	**270**	*e*P		**P**		**01 32 22.5**	**-2.1**
KAPI				*e*ScP		**ScP**		**01 38 57.8**	**-2.1**
KAPI	**Kappang**	**29.70**	**270**	P		**P**		**01 32 23.6**	**-1.0**
	comp=Z,47nm,0.9s,comp=Z,3µmcomp=Z,24µm								
KAPI	**Kappang**	**29.70**	**270**	P		**P**		**01 32 23.3**	**-1.3**
	comp=Z,33nm,0.8s,baz=114,slow=7.8,SNR=12								
KAPI				ScP		**ScP**		**01 38 58.7**	**-1.1**
	comp=Z,69nm,1.0s,baz=151,slow=4.2,SNR=13								
SPSI	**Sidrap Palu**	**29.75**	**272**	P		**P**		**01 32 23.8**	**-1.2**
	comp=Z,50nm,1.1s,comp=Z,2µm								
BBOO	**Buckleboo**	**29.78**	**203**	*e*P		**P**		**01 32 24.6**	**-0.5**
	comp=Z,3µm,0.9s								
BBOO	**Buckleboo**	**29.78**	**203**	P		**P**		**01 32 25.3**	**+0.2**
	baz=30,SNR=44								
WBSI	**Waikabubak, Su**	**30.16**	**261**	P		**P**		**01 32 29.2**	**+0.5**
	comp=Z,459nm,0.9s,comp=Z,7µmcomp=Z,128µm								
MSVF	**Nonsavu**	**30.29**	**116**	*e*P		**P**		**01 32 30.4**	**+0.6**
MSVF				*e*				01 39 03.8	
MSVF				pmax		pmax			
	comp=Z,2µm,1.4s								
MSVF	**Nonsavu**	**30.29**	**116**	*e*P		**P**		**01 32 30.4**	**+0.6**
	comp=Z,2µm,1.4s								
MSVF				*e*ScP		**ScP**		**01 39 03.8**	**+2.0**
MSVF	**Nonsavu**	**30.29**	**116**	P		**P**		**01 32 30.6**	**+0.8**
	comp=Z,4µm,1.2s,SNR=26								
MILA	**Mila**	**31.22**	**181**	P		**P**		**01 32 38.8**	**+1.0**
	baz=31,SNR=13								
ARPS	**Mount Arapiles**	**31.73**	**192**	P		**P**		**01 32 42.7**	**+0.5**
	baz=32,SNR=328								
ARPS				S		**S**		**01 37 45.5**	**+0.7**
	baz=32,SNR=4.7								
TOO	**Toolangi**	**31.95**	**186**	P		**P**		**01 32 45.0**	**+0.8**
	baz=32,SNR=96								
FORT	**Forrest**	**32.12**	**216**	P		**P**		**01 32 46.1**	**+0.5**
	baz=32,SNR=209								
FORT				S		**S**		**01 37 50.6**	**-0.3**
	baz=32,SNR=10								
MBWA	**Marble Bar**	**32.75**	**239**	*e*P		**P**		**01 32 51.5**	**+0.2**
	comp=Z,1µm,0.9s								
MBWA				*e*S		**S**		**01 38 01.9**	**+0.8**
MBWA				*e*ScP		**ScP**		**01 39 10.3**	**+0.4**
MBWA	**Marble Bar**	**32.75**	**239**	P		**P**		**01 32 51.8**	**+0.4**
	SNR=34								
MYLDM	**Lahad Datu**	**32.85**	**289**	P		**P**		**01 32 52.5**	**+0.2**
TSM	**Tawau**	**33.18**	**287**	P		**P**		**01 32 54.9**	**-0.3**
GQP	**Guinayangan**	**33.23**	**306**	↓*e*P		**P**		**01 32 55.9**	**+0.3**
KHKI	**Kahang-Kahang**	**33.81**	**264**	P		**P**		**01 32 58.5**	**-2.1**
SDKM	**Sandakan**	**34.23**	**289**	P		**P**		**01 33 04.5**	**+0.1**
TGY	**Tagaytay City**	**34.56**	**305**	P		**P**		**01 33 06.8**	**-0.3**
TGY	**Tagaytay City**	**34.56**	**305**	P		**P**		**01 33 06.8**	**-0.3**
	comp=Z,318nm,0.5s,baz=167,slow=1.8,SNR=13								
TGY				LR		LR		01 45 10.1	
	comp=Z,12nm,19.9s,baz=108,slow=33								
KDM	**Kudat**	**34.99**	**291**	P		**P**		**01 33 10.9**	**0.0**
KKM	**Kota Kinabalu**	**35.28**	**289**	P		**P**		**01 33 13.3**	**-0.2**
MEEK	**Meekatharra**	**36.12**	**231**	P		**P**		**01 33 20.9**	**+0.4**
	baz=36,SNR=564								
MEEK				S		**S**		**01 38 52.6**	**-0.3**
	baz=36,SNR=5.3								
KMBL	**Kambalda**	**36.41**	**222**	P		**P**		**01 33 23.2**	**+0.4**
	baz=36,SNR=35								
MOO	**Moorlands**	**36.66**	**183**	P		**P**		**01 33 26.1**	**+1.5**
	baz=37,SNR=53								
OUZ	**Omahuta**	**36.80**	**146**	*e*P		**P**		**01 33 27.6**	**+1.6**
	comp=Z,718nm,1.2s								
OUZ				*e*		**pP**		**01 33 48.7**	**-0.1**
OUZ				*e*ScP		**ScP**		**01 39 29.0**	**+4.9**
TAU	**Tasmania Unive**	**37.12**	**183**	*e*P		**P**		**01 33 29.4**	**+0.8**
TAU				*e**PP		**pP**		**01 33 51.2**	**-0.2**
TAU				*e*				01 34 58.6	
TAU				pmax		pmax			
	comp=Z,759nm,1.3s								
TAU	**Tasmania Unive**	**37.12**	**183**	*e*P		**P**		**01 33 29.4**	**+0.8**
	comp=Z,759nm,1.3s								
TAU				*e*pP		**pP**		**01 33 51.2**	**-0.2**
TAU				*e*PP		**PnPn**		**01 34 58.6**	**+1.9**
TAU				*e*ScP		**ScP**		**01 39 28.0**	**+2.9**
TAU	**Tasmania Unive**	**37.12**	**183**	P		**P**		**01 33 29.0**	**+0.4**
	comp=Z,2µm,1.3s,SNR=27								
BTM	**Bintulu**	**37.50**	**283**	P		**P**		**01 33 31.9**	**-0.3**
GIRL	**Giralia**	**38.03**	**240**	P		**P**		**01 33 38.0**	**+1.4**
	baz=38,SNR=115								
SBUM	**Sibu**	**38.17**	**281**	P		**P**		**01 33 37.6**	**-0.3**
JOW	**Kunigami**	**38.35**	**328**	*e*P		**P**		**01 33 41.8**	**+2.5**
	comp=Z,516nm,0.8s								
RAO	**Raoul Island**	**38.62**	**131**	*e*P		**P**		**01 33 42.3**	**+0.8**
	comp=Z,1µm,1.0s								
RAO	**Raoul Island**	**38.62**	**131**	P		**P**		**01 33 41.4**	**0.0**
	comp=Z,672nm,0.8s,baz=90,slow=20,SNR=4.9								
RAO				LR		LR		01 46 24.1	
	comp=Z,3µm,21.7s,baz=302,slow=31								
UGM	**Wanagama**	**38.83**	**264**	P		**P**		**01 33 44.9**	**+1.4**
	baz=39,SNR=9.5								
AFI	**Afiamalu**	**38.90**	**105**	*e*P		**P**		**01 33 44.5**	**+0.4**
	comp=Z,835nm,1.1s								
AFI				*e*pP		**pP**		**01 34 05.5**	**-1.5**
AFI				pP		**pP**		**01 34 05.8**	**-1.2**
AFI	**Afiamalu**	**38.90**	**105**	P		**P**		**01 33 44.5**	**+0.4**
	comp=Z,449nm,0.9s,baz=220,slow=1.2,SNR=53								
AFI				pP		**pP**		**01 34 05.8**	**-1.2**
	comp=Z,443nm,1.1s,baz=7.5,slow=0.1,SNR=5.9								
AFI				LR		LR		01 47 16.2	
	comp=Z,2µm,21.0s,baz=273,slow=32								
MORW	**Morawa**	**39.30**	**230**	P		**P**		**01 33 47.2**	**0.0**
	baz=39,SNR=45								
KLBR	**Kellerberrin**	**39.38**	**225**	P		**P**		**01 33 47.5**	**-0.3**
	baz=39,SNR=30								
BLDU	**Ballidu**	**39.60**	**227**	P		**P**		**01 33 49.6**	**0.0**
	baz=40,SNR=30								
TWG	**Pinlang**	**39.75**	**316**	*e*P		**P**		**01 33 50.9**	**0.0**
	comp=Z,442nm,0.7s								
KSM	**Kuching**	**39.85**	**279**	P		**P**		**01 33 51.5**	**-0.4**
KSM	**Kuching**	**39.85**	**279**	P		**P**		**01 33 51.4**	**-0.6**
	baz=40,SNR=3.2								
YULB	**Yu-li**	**39.98**	**317**	*e*P		**P**		**01 33 52.9**	**+0.1**
	comp=Z,250nm,0.8s								
YULB				*e*PP		**PnPn**		**01 35 30.1**	**-1.0**
NACB	**Ninganchiao**	**40.31**	**319**	*e*P		**P**		**01 33 56.6**	**+1.1**
TPUB	**Ta-pu**	**40.37**	**317**	*e*P		**P**		**01 33 56.3**	**+0.2**
	comp=Z,355nm,0.8s								
SSLB	**Suanglung**	**40.48**	**317**	*e*P		**P**		**01 33 58.0**	**+1.1**
	comp=Z,216nm,0.8s								
SSLB				*e*S		**S**		**01 40 03.3**	**+4.7**
NWAO	**Narrogin (SRO)**	**40.50**	**224**	*e*P		**P**		**01 33 57.2**	**+0.2**
	comp=Z,83nm,0.9s								
NWAO				*e*ScP		**ScP**		**01 39 40.4**	**+2.0**
NWAO	**Narrogin (SRO)**	**40.50**	**224**	LR		LR		01 51 19.4	
	comp=Z,2µm,19.9s,baz=48,slow=37								
QRZ	**Quartz Range**	**40.58**	**153**	PN		**P**		**01 33 58.7**	**+1.2**
YHNB	**Yeheng**	**40.80**	**319**	*e*P		**P**		**01 34 01.1**	**+1.4**
	comp=Z,1µm,0.9s								
FWVZ	**Far West T-bar**	**40.83**	**149**	PN		**P**		**01 34 01.3**	**+1.4**
TRVZ	**Turoa**	**40.86**	**149**	⇑PN		**P**		**01 34 01.6**	**+1.4**
WHVZ	**Whangaehu Hut**	**40.87**	**149**	PN		**P**		**01 34 01.6**	**+1.4**
URZ	**Urewera**	**40.94**	**146**	P		**P**		**01 34 00.7**	**+0.2**
URZ				ScP		**ScP**		**01 39 40.1**	**+0.1**
URZ				*e*ScP		**ScP**		**01 39 41.7**	**+1.7**
URZ	**Urewera**	**40.94**	**146**	P		**P**		**01 34 00.7**	**+0.2**
	comp=Z,121nm,0.7s,baz=320,slow=3.0,SNR=42								
URZ				ScP		**ScP**		**01 39 40.1**	**+0.1**
	comp=Z,29nm,0.9s,baz=343,slow=1.4,SNR=7.7								
TATO	**Taipei**	**40.94**	**319**	*e*P		**P**		**01 34 02.0**	**+1.3**
	comp=Z,298nm,1.0s								
TATO	**Taipei**	**40.94**	**319**	P		**P**		**01 34 02.4**	**+1.8**
	SNR=47								
BKZ	**Black Stump Fm**	**41.26**	**148**	PN		**P**		**01 34 03.6**	**+0.4**
NNZ	**Nelson**	**41.28**	**153**	PN		**P**		**01 34 03.6**	**+0.4**
PUZ	**Puketiti**	**41.45**	**145**	PN

SSE LR LR
comp=Z,6μm,24.0s
QIZ Qiongzhong 46.21 303 P **P** **01 34 43.2 +0.1**
QIZ pP **pP** **01 35 05.1 -1.5**
QIZ sP **sP** **01 35 15.9 -2.0**
QIZ S **S** **01 41 19.6 -2.8**
QIZ pmax pmax
comp=Z,59nm,0.8s
QIZ pmax pmax
comp=Z,2μm,10.9s
QIZ LR LR
comp=N,2μm,19.0s
QIZ LR LR
comp=Z,10μm,34.0s
MYKOM **Kota Tinggi 46.27 278** P **P** **01 34 43.2 -0.4**
KGM Kluang 46.83 278 P **P** **01 34 47.6 -0.4**
KSRS Korea Array 47.44 337 P **P** **01 34 54.0 +1.7**
comp=Z,302nm,0.8s,baz=155,slow=8.1,SNR=459
KSRS ScP **ScP** **01 40 05.7 -0.8**
comp=Z,5.4nm,0.8s,baz=142,slow=5.3,SNR=4.1
KSRS LR LR 01 51 16.8
comp=Z,2μm,19.9s,baz=149,slow=31
KSAR Wonju Array Be 47.44 336 P **P** **01 34 54.0 +1.7**
KSAR ScP **ScP** **01 40 05.7 -0.9**
NJ2 Nanjing 47.59 324 *e*P **P** **01 34 55.4 +1.8**
NJ2 pP **pP** **01 35 15.9 -1.4**
NJ2 S **S** **01 41 38.0 -3.7**
NJ2 pmax pmax
comp=Z,300nm,0.8s
NJ2 pmax pmax
comp=Z,4μm,8.3s
NJ2 LR LR
comp=N,11μm,24.9s
NJ2 LR LR
comp=E,8μm,20.8s
NJ2 LR LR
comp=Z,16μm,23.1s
KTGM Kuala Trenggan 47.64 282 P **P** **01 34 54.3 -0.1**
ERM Erimo 47.84 354*c i*P **P** **01 34 55.9 +0.5**
ERM pmax pmax
comp=Z,229nm,1.7s
ERM Erimo 47.84 354 *e*P **P** **01 34 57.5 +2.2**
ERM Erimo 47.84 354 P **P** **01 34 57.8 +2.4**
comp=Z,801nm,1.1s,SNR=14
INCN Inchon 47.99 335 *e*P **P** **01 34 58.5 +1.9**
comp=Z,957nm,2.2s
INCN Inchon 47.99 335 P **P** **01 34 59.3 +2.6**
SNR=19
FRIM Kepong 48.70 279 P **P** **01 35 02.0 -0.5**
MCQ Macquarie Isla 49.25 173 P **P** **01 35 08.4 +2.4**
baz=49,SNR=3.3
WHN Wuhan 49.34 319⇓*i*P **P** **01 35 09.2 +2.1**
WHN pP **pP** **01 35 33.3 +2.4**
WHN sP **sP** **01 35 44.3 +2.2**
WHN PP **PP** **01 37 02.3 +0.2**
WHN S **S** **01 42 06.1 -0.3**
WHN sS **sS** **01 42 52.2 +4.9**
WHN pmax pmax
comp=Z,490nm,1.0s
WHN pmax pmax
comp=Z,4μm,4.8s
WHN LR LR
comp=N,4μm,19.0s
WHN LR LR
comp=E,7μm,18.1s
WHN LR LR
comp=Z,10μm,19.8s
PPI Padang Panjang 49.36 274 P **P** **01 35 08.8 +1.3**
baz=49,SNR=5.4
IPM Ipoh 49.52 281 *e*P **P** **01 35 07.7 -1.2**
IPM *e*ScP **ScP** **01 40 17.1 +1.1**
IPM Ipoh 49.52 281 P **P** **01 35 08.4 -0.4**
YUK Yuzh-Kuril'sk 49.61 356*d i*P P 01 35 02.6 -6.3
YUK *i* *SP sP 01 35 41.2 -2.7
YUK *i* 01 37 09.9
YUK *i* PPP PPP 01 38 06.2
YUK *i* S S 01 42 02.3 -7.3
YUK *i* SS SS 01 45 31.2 -12
YUK *i* SSS SSS 01 47 05.6
YUK pmax pmax
comp=Z,606nm,1.2s
YUK pmax pmax
comp=N,199nm,1.2s
YUK pmax pmax
comp=E,612nm,1.2s
YUK MLR MLR
comp=N,708nm,22.0s
YUK MLR MLR
comp=Z,1μm,22.0s
ASAJ Asahikawa 49.98 353 *e*P **P** **01 35 14.1 +2.5**
comp=Z,137nm,1.0s
ASAJ ScP **ScP** **01 40 17.0 -0.2**
ASAJ *e*ScP ScP 01 40 17.8 +0.6
ASAJ S **S** **01 42 12.3 -2.4**
ASAJ Asahikawa 49.98 353 ScP **ScP** **01 40 17.0 -0.2**
comp=Z,17nm,0.9s,baz=252,slow=16,SNR=4.5
ASAJ S **S** **01 42 12.3 -2.4**
comp=Z,1.1nm,0.3s,baz=207,slow=18,SNR=1.7
ASAJ LR LR 01 53 03.0
comp=Z,997nm,20.3s,baz=173,slow=32
VLA Vladivostok 51.17 343*d i*P **P** **01 35 23.4 +2.8**
VLA pmax pmax
comp=Z,486nm,1.3s
PSI Prapat 51.29 278 P **P** **01 35 19.5 -2.7**
PSI Prapat 51.29 278 P **P** **01 35 19.5 -2.7**
comp=Z,13nm,0.3s,baz=24,slow=5.6,SNR=9.4
PSI Prapat 51.29 278 P **P** **01 35 20.2 -2.1**
baz=51,SNR=6.8
DL2 Dalian 51.37 332⇓*i*P **P** **01 35 24.1 +1.8**
DL2 pP **pP** **01 35 47.0 +0.8**
DL2 PP **PP** **01 37 24.2 +3.8**
DL2 ScP **ScP** **01 40 22.6 -0.7**
DL2 S **S** **01 42 38.1 +3.9**
DL2 sS **sS** **01 43 16.3 +0.9**
DL2 pmax pmax
comp=Z,560nm,0.9s
DL2 pmax pmax
comp=Z,2μm,6.0s
DL2 LR LR
comp=N,1μm,17.9s
DL2 LR LR
comp=E,1μm,20.0s
DL2 LR LR
comp=Z,2μm,20.0s
RAR Rarotonga 51.38 113 *e*P **P** **01 35 23.1 +0.5**
comp=Z,156nm,1.0s
TIA Tai'an 51.60 326 P **P** **01 35 24.6 +0.6**
TIA S **S** **01 42 35.5 -2.0**
TIA pmax pmax
comp=Z,420nm,0.8s
TIA LR LR
comp=N,8μm,32.1s
TIA LR LR
comp=E,5μm,19.6s
TIA LR LR
comp=Z,9μm,31.3s
USRK Ussuriysk Arra 52.13 344 P **P** **01 35 30.2 +2.4**
comp=Z,228nm,0.7s,baz=174,slow=7.0,SNR=352
USRK ScP **ScP** **01 40 25.9 -0.5**
comp=Z,11nm,0.8s,baz=196,slow=2.4,SNR=6.9
USRK LR LR 01 54 41.4
comp=Z,2μm,21.9s,baz=135,slow=32
GSI Gunungsitoli 52.39 276 P **P** **01 35 30.2 -0.1**
baz=52,SNR=6.8
GYA Guiyang 52.43 310⇑*i*P **P** **01 35 31.8 +1.3**
GYA pP **pP** **01 35 55.0 +0.4**
GYA sP **sP** **01 36 06.3 +0.6**
GYA PcP **PcP** **01 36 41.2 +1.1**
GYA PP **PP** **01 37 33.6 +3.2**
GYA ScP **ScP** **01 40 28.9 +0.5**
GYA PcS **PcS** **01 40 39.4 +0.5**
GYA S **S** **01 42 48.2 -1.3**
GYA SS **SS** **01 46 28.9 0.0**
GYA pmax pmax
comp=Z,90nm,0.8s
GYA pmax pmax
comp=Z,2μm,10.5s
GYA LR LR
comp=N,1μm,20.4s
GYA LR LR
comp=E,2μm,21.7s
GYA LR LR
comp=Z,3μm,23.2s
YSS Yuzh-Sakhalins 52.77 354⇓*i*P **P** **01 35 35.0 +2.6**
YSS *e**PP pP 01 35 58.0 +1.5
YSS *e* SS **S** **01 42 54.0 +1.0**
YSS *e*PS PKiKP 01 43 06.0 -13
YSS *e**SS **sS** **01 43 36.0 +1.7**
YSS *e*SS **SS** **01 46 35.0 +1.8**
YSS *e*SSS SSS 01 48 18.0
YSS pmax pmax
comp=Z,150nm,1.2s
YSS pmax pmax
comp=Z,2μm,7.0s
YSS smax smax
comp=N,4μm,8.0s
YSS MLR MLR
comp=Z,1μm,16.0s
YSS MLR MLR
comp=N,1μm,17.0s
SNY Shenyang 52.91 336⇓P **P** **01 35 35.2 +1.6**
SNY pmax pmax
comp=Z,140nm,1.9s
SNY pmax pmax
comp=Z,3μm,8.2s
SNY LR LR
comp=N,3μm,28.0s
SNY LR LR
comp=E,1μm,27.4s
SNY LR LR
comp=Z,7μm,38.4s
MDJ Mudanjiang 53.21 342 P **P** **01 35 37.8 +2.1**
MDJ pP **pP** **01 35 59.8 0.0**
MDJ sP **sP** **01 36 10.1 -0.8**
MDJ S **S** **01 42 59.2 +0.1**
MDJ ScS **ScS** **01 45 17.7 +2.1**
MDJ SS **SKiKP** **01 46 43.7 +0.4**
MDJ pmax pmax
comp=Z,420nm,1.1s
MDJ pmax pmax
comp=Z,2μm,9.2s
MDJ LR LR
comp=N,5μm,35.6s
MDJ LR LR
comp=E,3μm,36.3s
MDJ LR LR
comp=Z,8μm,34.7s
CN2 Changchun 53.87 339⇓P **P** **01 35 42.0 +1.4**
CN2 *e*pP **pP** **01 36 05.6 +0.9**
CN2 *e*sP **sP** **01 36 16.8 +1.0**
CN2 *e*S **S** **01 43 08.6 +0.5**
CN2 LR LR
comp=N,2μm,20.0s
CN2 LR LR
comp=E,2μm,20.0s
CN2 LR LR
comp=Z,2μm,21.0s
KMI Kunming 54.87 306⇓P **P** **01 35 49.0 +0.5**
KMI pP **pP** **01 36 13.7 +1.0**
KMI sP **sP** **01 36 25.3 +1.6**
KMI PP **PP** **01 37 50.3 -2.1**
KMI S **S** **01 43 18.8 -3.8**
KMI sS **sS** **01 44 01.7 -2.4**
KMI pmax pmax
comp=Z,170nm,1.1s
KMI pmax pmax
comp=Z,1μm,9.6s
KMI LR LR
comp=N,2μm,26.7s
KMI LR LR
comp=E,3μm,25.9s
KMI LR LR
comp=Z,8μm,37.9s
BJI Beijing 54.92 329 P **P** **01 35 49.4 +1.1**
BJI pP **pP** **01 36 13.8 +1.3**
BJI sP **sP** **01 36 22.3 -1.3**
BJI S **S** **01 43 22.2 -0.2**
BJI SS **SS** **01 47 08.7 +1.2**
BJI pmax pmax
comp=Z,190nm,1.7s
BJI pmax pmax
comp=Z,3μm,7.2s
BJI LR LR
comp=N,3μm,24.5s
BJI LR LR
comp=E,2μm,21.1s
BJI LR LR
comp=Z,9μm,34.7s
XAN Xi'an 55.11 319 P **P** **01 35 49.8 0.0**
XAN pP **pP** **01 36 13.4 -0.7**
XAN sP **sP** **01 36 25.0 -0.1**
XAN S **S** **01 43 19.5 -5.7**
XAN ScS **ScS** **01 45 28.6 -1.2**
XAN pmax pmax
comp=Z,74nm,1.1s
XAN pmax pmax
comp=Z,590nm,9.3s
XAN LR LR
comp=N,3μm,36.9s
XAN LR LR
comp=E,2μm,32.8s
XAN LR LR
comp=Z,2μm,37.9s
TIY Taiyuan 55.31 324 *e*P **P** **01 35 51.9 +0.6**
TIY S **S** **01 43 27.7 -0.2**
TIY pmax pmax
comp=Z,2μm,7.4s
TIY LR LR
comp=N,2μm,13.5s
TIY LR LR
comp=E,1μm,15.5s
TIY LR LR
comp=Z,6μm,27.9s
CMAR Chiang Mai Arr 55.38 297 P **P** **01 35 52.6 +0.6**
CMAR pP **pP** **01 36 16.9 +0.7**
CMAR ScP **ScP** **01 40 42.5 +1.2**
CMAR P'P' 02 05 54.6
CMAR Chiang Mai Arr 55.38 297 P **P** **01 35 52.6 +0.6**
comp=Z,28nm,0.8s,baz=127,slow=5.7,SNR=91
CMAR pP **pP** **01 36 16.9 +0.7**
comp=Z,46nm,0.9s,baz=125,slow=4.1,SNR=7.4
CMAR ScP **ScP** **01 40 42.5 +1.2**
comp=Z,2.3nm,0.7s,baz=104,slow=2.5,SNR=4.2
CMAR LR LR 02 02 08.3
comp=Z,901nm,18.6s,baz=110,slow=39
CMAR PKPPKP **P'P'df** **02 05 54.6 -2.8**
comp=Z,1.1nm,0.4s,baz=284,slow=3.6,SNR=4.8
HABR Khabarovsk 55.42 348*d i*P **P** **01 35 54.2 +2.5**
HABR *e**PP **pP** **01 36 16.5 +0.5**
HABR *e* 01 36 52.5
HABR *e* 01 37 56.5
HABR *e*S **S** **01 43 30.7 +2.0**
HABR *e* 01 45 31.3
HABR *e*SS **SS** **01 47 14.4 -0.7**
HABR pmax pmax
comp=Z,2μm,1.7s
HABR pmax pmax
comp=N,587nm,1.7s
HABR pmax pmax
comp=E,262nm,1.3s
HABR MLR MLR
comp=Z,1μm,16.0s
CHTO Chiang Mai 55.51 297 *e*P **P** **01 35 52.3 -0.6**
CHTO pmax pmax
comp=Z,1μm,2.9s
CHTO Chiang Mai 55.51 297 *e*P **P** **01 35 52.3 -0.6**
comp=Z,331nm,2.9s
CHTO Chiang Mai 55.51 297 P **P** **01 35 53.1 +0.2**
SNR=20
SKR Severo-Kuril's 56.44 5 *e*P **P** **01 35 58.0 -0.9**
SKR *e* 01 36 24.0
SKR *e* 01 36 54.0
SKR *e* 01 38 04.0
SKR *e*S **S** **01 43 42.0 0.0**
SKR *e*PS PKiKP 01 43 55.0 +32
SKR pmax pmax
comp=Z,230nm,0.9s
SKR pmax pmax
comp=N,770nm,1.4s
SKR pmax pmax
comp=E,770nm,1.4s
SKR pmax pmax
comp=N,3μm,8.0s
SKR pmax pmax
comp=E,3μm,8.0s
SKR pmax pmax
comp=Z,3μm,8.0s
SKR smax smax
comp=N,3μm,14.0s
SKR smax smax
comp=E,5μm,14.0s
SKR MLR MLR
comp=N,2μm,16.0s
SKR MLR MLR
comp=E,3μm,16.0s
SKR MLR MLR
comp=Z,3μm,16.0s
KLR Kul'dur 56.87 346 *e*P **P** **01 36 00.0 -2.0**
KLR *e*S S 01 43 40.0 -7.9
KLR *e*SS **SS** **01 47 37.0 -0.8**
KLR pmax pmax
comp=Z,4μm,8.0s
KLR MLR MLR
comp=Z,2μm,12.5s
CD2 Chengdu 56.92 313⇓P **P** **01 36 04.3 +1.5**
CD2 pP **pP** **01 36 27.4 +0.2**
CD2 sP **sP** **01 36 38.0 -0.2**
CD2 PcP **PcP** **01 36 58.2 +1.0**
CD2 PP **PP** **01 38 13.6 +3.1**
CD2 ScP **ScP** **01 40 47.7 -0.2**
CD2 PcS **PcS** **01 40 57.7 -0.6**
CD2 S **S** **01 43 49.5 +0.1**
CD2 sS **sS** **01 44 29.6 -1.6**
CD2 ScS **ScS** **01 45 40.7 -2.3**
CD2 SS **SS** **01 47 40.6 +1.1**
CD2 pmax pmax
comp=Z,190nm,0.9s
CD2 pmax pmax
comp=Z,2μm,9.3s
CD2 LR LR
comp=N,4μm,12.7s
CD2 LR LR
comp=E,3μm,17.6s
CD2 LR LR
comp=Z,8μm,29.4s
HHC Hu-ho-hao-te 57.96 327⇓*e*P **P** **01 36 11.2 +1.2**
HHC pP **pP** **01 36 35.2 +0.8**
HHC sP **sP** **01 36 46.2 +0.8**
HHC PP **PP** **01 38 22.6 +3.1**
HHC PcS **PcS** **01 41 01.5 -1.1**
HHC S **S** **01 44 02.7 0.0**
HHC sS **sS** **01 44 44.7 +0.1**
HHC ScS **ScS** **01 45 47.6 -2.7**
HHC SS **SS** **01 47 57.1 +1.6**
HHC pmax pmax
comp=Z,260nm,1.0s
HHC pmax pmax
comp=Z,2μm,8.5s
HHC LR LR
comp=N,5μm,19.6s
HHC LR LR
comp=E,7μm,17.8s
HHC LR LR
comp=Z,16μm,35.7s
BTO Baotou 58.65 325 *e*P **P** **01 36 15.2 +0.4**
PEA0B Petropavlovsk- 58.98 6 *e*P **P** **01 36 18.1 +1.4**
PETK Petropavlovsk- 58.98 6 P **P** **01 36 17.8 +1.1**
PETK Petropavlovsk- 58.98 6 P **P** **01 36 17.8 +1.1**
PETK Petropavlovsk- 58.98 6 P **P** **01 36 17.8 +1.1**
comp=Z,159nm,0.7s,baz=165,slow=8.3,SNR=327
PETK LR LR 01 58 31.8
comp=Z,1μm,21.6s,baz=194,slow=33
PET Petropavlovsk 59.00 6*d i*P **P** **01 36 17.8 +1.0**
PET *e*S **S** **01 44 14.7 -0.8**
PET *e* 01 45 54.3
PET *e*SS **SS** **01 48 05.2 -6.0**
PET pmax pmax
comp=Z,1μm,10.8s
PET pmax pmax
comp=Z,245nm,0.9s
PET pmax pmax
comp=Z,900nm,10.7s
PBA Port Blair 59.10 287 *e*PKP P 01 36 18.2 0.0
DGPR DIGLIPUR 59.30 289 *e*PKP **P** **01 36 18.1 -1.5**
LZH Lanzhou 59.68 318⇓P **P** **01 36 22.9 +0.8**
LZH pP **pP** **01 36 46.5 -0.1**
LZH sP **sP** **01 36 58.0 +0.4**
LZH PP **PP** **01 38 38.1 +3.1**
LZH S **S** **01 44 25.2 -0.1**
LZH sS **sS** **01 45 07.0 -0.4**
LZH SS **SS** **01 48 23.0 +0.2**
LZH pmax pmax
comp=Z,440nm,1.3s
LZH pmax pmax
comp=Z,2μm,9.6s
LZH LR LR
comp=N,2μm,16.0s
LZH LR LR
comp=E,2μm,16.3s
LZH LR LR
comp=Z,4μm,19.8s
PPT Papeete 60.53 107 P **P** **01 36 29.7 +1.6**
PPT pP **pP** **01 36 55.3 +2.6**
PPT Papeete 60.53 107 P **P** **01 36 29.7 +1.6**
comp=Z,123nm,0.7s,baz=220,slow=3.6,SNR=9.8
PPT pP **pP** **01 36 55.3 +2.6**
comp=Z,85nm,0.8s,baz=58,slow=16,SNR=3.0
PPT LR LR 01 58 56.9
comp=Z,616nm,18.1s,baz=272,slow=32
PPT2 Papeete2 60.53 107 *e*P **P** **01 36 29.8 +1.7**
comp=Z,316nm,1.5s
PPT2 *e*S **S** **01 44 35.1 -1.5**
comp=Z,4μm,26.0s
PPT2 *e*LQ LQ 01 51 50.3
comp=Z,5μm,34.2s
PPT2 *e*LR LR 01 54 26.4
comp=Z,4μm,29.2s
PAE Paea 60.53 107 *e*P **P** **01 36 29.4 +1.4**
comp=Z,58nm,1.4s
TIAR Tiarei 60.75 107 *e*P **P** **01 36 31.2 +1.7**
comp=Z,478nm,1.1s
TIAR *e*pP **pP** **01 36 52.2 -2.0**
comp=Z,254nm,1.0s
TVO Taravao 60.85 107 *e*P **P** **01 36 32.0 +1.7**
comp=Z,604nm,1.4s
TBI Tubuai 61.14 113 *e*P **P** **01 36 33.3 +1.3**
comp=Z,686nm,1.3s
TBI *e*S **S** **01 44 44.8 +0.8**
comp=Z,2μm,26.2s
TBI *e*LQ LQ 01 52 09.1
comp=Z,4μm,33.0s
TBI *e*LR LR 01 54 43.3
comp=Z,18μm,38.2s
DRV Dumont d'Urvil 61.23 184 PP PP 01 38 40.0 -7.7
DRV S S 01 44 17.0 -27
DRV SS SS 01 48 55.0 +10
DRV L L 01 51 00.0
DRV R 01 55 00.0
FX1 Attu Island--F 61.69 16 *e*P **P** **01 36 36.0 +0.9**
FX1 *e*pP **pP** **01 37 01.1 +1.2**
MEH Mehetia 61.98 107 *e*P **P** **01 36 39.1 +1.2**
comp=Z,258nm,0.9s
MEH *e*pP **pP** **01 37 01.3 -1.3**
comp=Z,193nm,1.0s
PMOR Pomariorio Ree 62.04 104 *e*P **P** **01 36 39.8 +1.6**
comp=Z,1μm,1.1s
PMOR *e*pP **pP** **01 37 02.0 -0.9**
comp=Z,808nm,1.2s
AGT Agartala 63.98 300 *ex* P 01 36 59.0 +8.1
AGT *ex* x 01 38 00.0
SHL Shillong 64.02 302 *e*PKP **P** **01 36 50.0 -1.4**
SHL *ex* x 01 37 16.0
SHL *e*S **S** **01 45 19.0 -1.4**
GTA Gaotai 64.17 319⇓P **P** **01 36 52.6 +0.5**
GTA pP **pP** **01 37 18.9 +2.0**
GTA sP **sP** **01 37 28.9 +1.1**
GTA PP **PP** **01 39 18.1 +3.6**
GTA S **S** **01 45 22.7 +1.0**
GTA sS **sS** **01 46 05.3 +1.0**
GTA SS **SS** **01 49 37.1 +4.1**
GTA pmax pmax
comp=Z,36nm,1.0s
GTA pmax pmax
comp=Z,2μm,6.9s
GTA LR LR
comp=N,2μm,20.9s
GTA LR LR
comp=E,2μm,19.5s
GTA LR LR
comp=Z,3μm,21.4s
ULN Ulaanbaatar 65.10 330 *e*P **P** **01 36 59.1 +1.1**
ULN *e*pP **pP** **01 37 24.5 +1.6**
ULN Ulaanbaatar 65.10 330 P **P** **01 36 59.4 +1.5**
SNR=111
CIT Chita 65.17 336 *e*P **P** **01 37 00.5 +2.3**

CIT pmax pmax
comp=Z,555nm,2.3s
SONM Songino Array 65.41 330 P **P** **01 37 00.8 +0.8**
SONM pP **pP** **01 37 26.5 +1.6**
SONM ⇑*e* 02 05 42.1
SONM Songino Array 65.41 330 P **P** **01 37 00.8 +0.8**
comp=Z,73nm,0.8s,baz=143,slow=6.8,SNR=142
SONM pP **pP** **01 37 26.5 +1.6**
comp=Z,115nm,1.1s,baz=131,slow=4.5,SNR=11
SONM PKP2bc 02 05 42.1
comp=Z,5.5nm,1.0s,baz=296,slow=2.2,SNR=10
SONM LR LR 02 05 59.5
comp=Z,1μm,20.3s,baz=138,slow=36
LSA Lhasa 66.12 306 P **P** **01 37 05.1 -0.2**
LSA S **S** **01 45 46.6 0.0**
LSA LR LR
comp=N,660nm,26.1s
LSA LR LR
comp=E,2μm,30.4s
LSA LR LR
comp=Z,1μm,31.5s
TAPN Taplejung 68.14 302 *e*P **P** **01 37 16.3 -1.6**
comp=Z,246nm,0.9s
ODAN Odare 68.25 302 *e*P **P** **01 37 17.6 -0.9**
comp=Z,354nm,0.7s
SEY Seymchan 68.47 1 ‖ *j*P **P** **01 37 20.3 +1.5**
BOK Bokaro 68.62 298 *e*PKP **P** **01 37 20.9 +0.3**
ZAK Zakamensk 68.62 330 *e*P **P** **01 37 20.8 +0.6**
ZAK *e* 01 37 46.3
ZAK pmax pmax
comp=Z,99nm,1.4s
RAMN Ramite 68.95 302 *e*P **P** **01 37 21.5 -1.4**
comp=Z,166nm,0.5s
YAK Yakutsk 69.25 350 *d* iP **P** **01 37 25.0 +1.3**
YAK *e**PP **pP** **01 37 50.0 +1.2**
YAK *e* 01 39 59.7
YAK *e*PPP PPP 01 41 39.9
YAK *e*S **S** **01 46 20.7 -1.1**
YAK *e**SS **sS** **01 47 06.7 +1.8**
YAK *e* 01 47 12.3
YAK *e*SS **SS** **01 50 49.8 -0.7**
YAK *e*SSS SSS 01 54 00.9
YAK pmax pmax
comp=Z,126nm,1.5s
YAK pmax pmax
comp=N,72nm,1.5s
YAK pmax pmax
comp=E,26nm,1.6s
YAK pmax pmax
comp=Z,345nm,3.5s
YAK pmax pmax
comp=E,79nm,2.1s
YAK pmax pmax
comp=N,169nm,2.8s
YAK smax smax
comp=E,521nm,2.3s
YAK smax smax
comp=N,2μm,4.9s
TLY Talaya 69.28 331 *e*P **P** **01 37 24.6 +0.5**
TLY *e* 01 37 50.1
TLY *e* 01 39 57.4
TLY *e*S **S** **01 46 24.2 +1.6**
TLY *e*PS PnS 01 46 47.3 -15
TLY *e*PPS PPS 01 47 11.6
TLY *e*SS **SS** **01 50 44.7 -6.8**
TLY pmax pmax
comp=Z,147nm,1.8s
TLY Talaya 69.28 331 P **P** **01 37 25.5 +1.4**
comp=Z,353nm,1.3s,SNR=17
VIS Vishakhapatnam 69.38 291 *e*PKP **P** **01 37 25.3 0.0**
UNV Unalaska Valle 69.80 26 *e*P **P** **01 37 27.6 +0.4**
comp=Z,70nm,1.2s
GUN Gumba 69.86 302 *e*P **P** **01 37 27.5 -1.1**
comp=Z,336nm,0.5s
PALK Pallekele 69.91 280 *e*P **P** **01 37 30.4 +1.6**
comp=Z,32nm,0.9s
PKI Pulchoki 70.15 302 *e*P **P** **01 37 29.1 -1.3**
comp=Z,120nm,0.5s
PKIN Phulchoki 70.16 302 *e*P **P** **01 37 29.6 -0.8**
comp=Z,89nm,0.5s
AKUT Akutan 70.31 26 *e*P **P** **01 37 31.1 +0.8**
comp=Z,266nm,1.4s
KKN Kakani 70.32 302 *e*P **P** **01 37 30.1 -1.2**
comp=Z,231nm,0.6s
DMN Daman 70.42 302 *e*P **P** **01 37 30.8 -1.1**
comp=Z,312nm,0.6s
MOY Mondy 70.56 330 *e*P **P** **01 37 32.7 +0.6**
MOY *e* 01 37 58.0
MOY pmax pmax
comp=Z,280nm,1.7s
KOLN Koldanda 71.74 302 *e*P **P** **01 37 38.5 -1.3**
comp=Z,177nm,0.7s
DANN Dangsing 71.77 302 *e*P **P** **01 37 39.1 -1.0**
comp=Z,276nm,0.8s
VNDA Vanda 72.08 177 *e*P **P** **01 37 41.6 +0.9**
comp=Z,709nm,1.8s
VNDA *e*pP **pP** **01 38 04.5 -1.6**
VNDA pP **pP** **01 38 04.7 -1.3**
VNDA Vanda 72.08 177 P **P** **01 37 41.5 +0.9**
comp=Z,77nm,0.7s,baz=333,slow=6.6,SNR=282
VNDA pP **pP** **01 38 04.7 -1.3**
comp=Z,79nm,0.7s,baz=326,slow=7.1,SNR=15
VNDA LR LR 02 03 51.1
comp=Z,1μm,21.4s,baz=345,slow=31
PYUN Piuthan 72.35 302 *e*P **P** **01 37 42.4 -1.1**
comp=Z,613nm,0.9s
SBA Scott Base 72.68 176 *e*P **P** **01 37 46.1 +1.9**
SBA pmax pmax
comp=Z,334nm,1.4s
SBA Scott Base 72.68 176 *e*P **P** **01 37 46.1 +1.9**
comp=Z,334nm,1.4s
SDPT Sand Point 73.45 27 *e*P **P** **01 37 49.2 +0.1**
comp=Z,96nm,1.0s
HYB Hyderabad 73.76 290 *i* P **P** **01 37 49.5 -2.3**
HYB *e* 01 38 08.0
HYB *e* 01 38 18.0
HYB *e*S **SKiKP** **01 47 10.0 -1.9**
HYB *e*SKS **SKSac** **01 47 46.0 -4.2**
HYB Hyderabad 73.76 290 *e*PKP **P** **01 37 49.2 -2.5**
TRD Trivandrum 73.76 281 ‖ *j*P **P** **01 37 52.5 +0.7**
TRD *i* x x 01 46 52.5
HVS Khovu-Aksy 74.03 327 *d* iP **P** **01 37 52.5 -0.2**
HVS pmax pmax
comp=Z,465nm,1.3s
NGP Nagpur 74.08 294 *e*PKP **P** **01 37 50.7 -2.8**
NGP *ex* x 01 47 13.4
WMQ Urumqi 74.25 318 P **P** **01 37 55.2 +1.1**
WMQ PcP **PcP** **01 38 09.9 +1.4**
WMQ pP **pP** **01 38 20.3 +0.7**
WMQ sP **sP** **01 38 31.1 +0.7**
WMQ PP **PP** **01 40 44.1 +2.8**
WMQ S **S** **01 47 19.3 -0.8**
WMQ ScS **SKKSac** **01 47 53.3 +0.1**
WMQ sS **sS** **01 48 02.8 -0.9**
WMQ SS **SS** **01 52 08.8 +0.9**
WMQ pmax pmax
comp=Z,230nm,1.8s
WMQ LR LR
comp=N,2μm,18.4s
WMQ LR LR
comp=E,2μm,17.6s
WMQ LR LR
comp=Z,2μm,18.0s
RKT Rikitea 74.42 112 *e*P **P** **01 37 57.0 +1.5**
comp=Z,202nm,1.4s
RKT *ep*P **pP** **01 38 20.3 -0.6**
comp=Z,501nm,1.2s
RKT *e*S **S** **01 47 23.5 +0.9**
comp=Z,1μm,26.0s
RKT *e*LQ LQ 01 57 47.6
comp=Z,1μm,34.8s
RKT *e*LR LR 02 00 52.7
comp=Z,12μm,38.0s
BILL Bilibino 74.50 6 ↯ *j*P **P** **01 37 55.8 +0.8**
BILL *i* *PP **pP** **01 38 19.8 -0.7**
BILL *e* 01 40 41.1
BILL *e*S **S** **01 47 24.3 +2.5**
BILL *i* 01 47 55.2
BILL *i* 01 48 11.3
BILL SSS SSS 01 55 32.0
BILL pmax pmax
comp=Z,664nm,1.1s
CHGN Chignik 74.95 27 *e*P **P** **01 37 57.3 -0.5**
GAMB Gambell 75.13 17 *e*P **P** **01 37 59.6 +1.0**
comp=Z,64nm,1.5s
GAMB *ep*P **pP** **01 38 25.2 +1.0**
BHPL Bhopal 76.00 296 *e*PKP **P** **01 38 03.7 -0.9**
BHPL AMB AMB 01 38 06.8
comp=Z,44nm,0.5s
DDI Dehra Dun 77.10 303 *e*PKP **P** **01 38 10.2 -0.4**
DDI AMB AMB 01 38 13.5
comp=Z,357nm,1.1s
DDI *ex* x 01 47 37.0
TNA Tin City 77.55 17 *e*P **P** **01 38 12.9 +0.6**
comp=Z,66nm,1.5s
OHAK Old Harbor 77.82 28 *e*P **P** **01 38 13.8 -0.1**
comp=Z,416nm,2.0s
SMLA Simla 78.04 303 *e*PKP **P** **01 38 15.1 -0.7**
SMLA AMB AMB 01 38 42.7
comp=Z,137nm,2.7s
SDNR Sundarnagar 78.29 304 *e*PKP **P** **01 38 17.0 -0.3**
POO Poona 78.36 290 *e*PKP **P** **01 38 18.1 +0.1**
TIXI Tiksi 78.38 353 *d* iP **P** **01 38 16.5 -0.3**
TIXI pmax pmax
comp=Z,42nm,1.7s
KDAK Kodiak Island 78.43 28 *e*P **P** **01 38 17.5 +0.1**
comp=Z,77nm,1.4s
KDAK Kodiak Island 78.43 28 LR LR 02 09 37.8
comp=Z,818nm,18.2s,baz=258,slow=33
MK31 Makanchi Array 78.91 320 *i* P **P** **01 38 19.5 -0.8**
MK31 pmax pmax
comp=Z,18nm,0.7s
MK31 Makanchi Array 78.91 320 *e*P **P** **01 38 19.4 -0.8**
MKAR Makanchi Array 78.91 320 P **P** **01 38 19.5 -0.8**
MKAR *PP **pP** **01 38 45.3 -0.7**
MKAR 01 41 20.1
MKAR Makanchi Array 78.91 320 P **P** **01 38 19.4 -0.8**
MKAR pP **pP** **01 38 45.2 -0.7**
MKAR PP **PP** **01 41 20.1 -0.3**
MKAR PKKPbc **PKKPbc** **01 57 13.1 -2.2**
MKAR *e* 01 57 37.3
MKAR P'P' 02 05 16.4
MKAR Makanchi Array 78.91 320 P **P** **01 38 19.4 -0.8**
comp=Z,6.4nm,0.4s,baz=105,slow=5.8,SNR=84
MKAR pP **pP** **01 38 45.2 -0.7**
comp=Z,40nm,1.1s,baz=115,slow=5.8,SNR=5.2
MKAR PP **PP** **01 41 20.1 -0.3**
comp=Z,15nm,0.9s,baz=106,slow=8.7,SNR=4.0
MKAR PKKPbc **PKKPbc** **01 57 13.1 -2.2**
comp=Z,0.8nm,0.6s,baz=317,slow=1.9,SNR=7.9
MKAR pPKKPbc 01 57 37.3
comp=Z,1.2nm,0.6s,baz=315,slow=1.7,SNR=8.4
MKAR PKPPKP **P'P'df** **02 05 16.4 -0.1**
comp=Z,0.5nm,0.7s,baz=278,slow=1.8,SNR=4.6
MKAR LR LR 02 12 54.3
comp=Z,2μm,19.8s,baz=104,slow=35
SVW2 Sparrevohn 78.92 24 *e*P **P** **01 38 21.7 +1.7**
comp=Z,54nm,1.4s
DHRM DHARAMSHALA 79.03 304 *e*PKP **P** **01 38 19.6 -1.9**
RSO Redoubt South 79.74 25 *e*P P 01 38 19.4 -5.4
comp=Z,20nm,0.5s
ZAA0 Zalesovo Array 80.13 327 *e*P **P** **01 38 25.0 -1.7**
ZAA0 *ep*P **PP** **01 41 28.5 -1.8**
ZAA0 *e*S **S** **01 48 24.8 +1.6**
ZALV Zalesovo Beam 80.13 327 P **P** **01 38 25.1 -1.6**
ZALV pP **pP** **01 38 51.4 -1.1**
ZALV PP **PP** **01 41 29.1 -1.2**
ZALV S **S** **01 48 19.9 -3.4**
ZALV PKKPbc **PKKPbc** **01 57 10.9 -1.8**
ZALV *e* 01 57 36.0
ZALV Zalesovo Beam 80.13 327 P **P** **01 38 25.1 -1.6**
comp=Z,21nm,0.5s,baz=117,slow=6.1,SNR=63
ZALV pP **pP** **01 38 51.4 -1.1**
comp=Z,24nm,0.7s,baz=111,slow=5.6,SNR=5.2
ZALV PP **PP** **01 41 29.1 -1.2**
comp=Z,14nm,1.0s,baz=109,slow=6.8,SNR=4.1
ZALV S **S** **01 48 19.9 -3.4**
comp=Z,2.7nm,0.9s,baz=108,slow=13,SNR=4.0
ZALV PKKPbc **PKKPbc** **01 57 10.9 -1.8**
comp=Z,1.5nm,0.5s,baz=300,slow=1.9,SNR=6.3
ZALV pPKKPbc 01 57 36.0
comp=Z,3.6nm,0.7s,baz=305,slow=2.4,SNR=10
ZALV LR LR 02 12 58.3
comp=Z,1μm,21.6s,baz=121,slow=35
SPU Mount Spurr 80.41 25 *e*P **P** **01 38 27.5 -0.6**
SEW Seward 80.99 26 *e*P **P** **01 38 31.2 0.0**
KSH Kashi 81.09 311 *e*P **P** **01 38 33.2 +0.8**
KSH pP **pP** **01 38 58.9 +0.7**
KSH sP **sP** **01 39 09.3 +0.4**
KSH *e*PP **PP** **01 41 40.8 +2.0**
KSH S **S** **01 48 31.0 -3.2**
KSH *e*SKS **SKSac** **01 48 38.3 -4.3**
KSH *e*ScS **SKKSac** **01 48 46.4 +1.1**
KSH pmax pmax
comp=Z,79nm,0.9s
KSH pmax pmax
comp=Z,2μm,7.6s
KSH LR LR
comp=N,3μm,21.1s
KSH LR LR
comp=E,5μm,24.8s
KSH LR LR
comp=Z,1μm,13.2s
PPLA Purkeypile 81.24 23 *e*P **P** **01 38 32.2 -0.4**
comp=Z,180nm,1.7s
NVS Novosibirsk 81.34 328 ‖ *j*P **P** **01 38 31.8 -1.3**
NVS *j* *PP **pP** **01 38 57.1 -1.8**
NVS *j* 01 41 37.5
NVS *j*S **S** **01 48 34.8 -0.9**
NVS *j* *SS **sS** **01 49 16.9 -3.2**
NVS pmax pmax
comp=N,45nm,2.5s
NVS pmax pmax
comp=Z,182nm,2.5s
NVS pmax pmax
comp=E,93nm,2.4s
NVS pmax pmax
comp=N,91nm,2.3s
NVS pmax pmax
comp=E,160nm,2.3s
NVS pmax pmax
comp=Z,266nm,2.3s
NVS smax smax
comp=N,35nm,1.5s
NVS smax smax
comp=E,158nm,2.0s
ULHL Ulahol 81.61 314 P **P** **01 38 35.8 +0.6**
SNR=18
PMR Palmer 81.84 25 *e*P **P** **01 38 35.3 -0.3**
PMR pmax pmax
comp=Z,185nm,1.8s
PMR Palmer 81.84 25 *e*P **P** **01 38 35.3 -0.3**
comp=Z,185nm,1.8s
TKM2 Tokmak 2 82.25 315 P **P** **01 38 37.5 -1.0**
TKM2 pmax pmax
comp=Z,34nm,0.8s
TKM2 Tokmak 2 82.25 315 *e*P **P** **01 38 37.7 -0.7**
comp=Z,86nm,1.1s
TKM2 *ep*P **pP** **01 39 03.9 -0.4**
TKM2 Tokmak 2 82.25 315 P **P** **01 38 37.9 -0.6**
SNR=63
TRF Thorofare Moun 82.26 23 *e*P **P** **01 38 36.6 -1.5**
SML Sawmill 82.27 25 *e*P **P** **01 38 38.7 +0.8**
SML Sawmill 82.27 25 *e*P **P** **01 38 38.7 +0.8**
KZA Kyzart 82.28 314 P **P** **01 38 39.0 +0.1**
SNR=161
KURK Kurchatov 82.51 323 *d* iP **P** **01 38 38.2 -1.1**
KURK pmax pmax
comp=Z,105nm,1.7s
KURK Kurchatov 82.51 323 *e*P **P** **01 38 38.3 -1.0**
comp=Z,1μm,2.5s
KURK pP **pP** **01 39 03.9 -1.4**
KURK *ep*P **pwP** **01 39 04.3 -1.0**
KURK PKKPbc **PKKPbc** **01 57 04.7 -2.5**
KURK *e* 01 57 30.3
KURK P'P' 02 05 11.3
KURK Kurchatov 82.51 323 P **P** **01 38 39.9 +0.5**
SNR=36
KURK Kurchatov 82.51 323 P **P** **01 38 38.5 -0.8**
comp=Z,311nm,0.9s,SNR=26
KURBB Kurchatov Arra 82.53 323 P **P** **01 38 38.3 -1.2**
comp=Z,18nm,0.8s,baz=115,slow=4.5,SNR=120
KURBB pP **pP** **01 39 03.9 -1.5**
comp=Z,28nm,0.9s,baz=105,slow=5.1,SNR=6.7
KURBB PKKPbc **PKKPbc** **01 57 04.7 -2.4**
comp=Z,0.8nm,0.6s,baz=300,slow=3.0,SNR=8.5
KURBB pPKKPbc 01 57 30.3
comp=Z,0.8nm,0.6s,baz=298,slow=3.0,SNR=8.2
KURBB PKPPKP **P'P'df** **02 05 11.3 +1.7**
comp=Z,2.4nm,0.9s,baz=289,slow=2.8,SNR=16
KURBB LR LR 02 14 46.7
comp=Z,2μm,20.8s,baz=105,slow=35
KBK Karagaybulak 82.64 314 P **P** **01 38 40.8 +0.3**
SNR=22
UCH Uchtor 82.85 314 P **P** **01 38 42.8 +0.9**
SNR=12
CHMS Chumysh 82.87 314 P **P** **01 38 41.8 +0.4**
SNR=33
FRU Bishkek 82.92 314 *e*P **P** **01 38 40.0 -1.7**
FRU *i* 01 39 08.0
FRU *e* 01 39 23.0
FRU *e*S **S** **01 48 50.0 -2.6**
FRU pmax pmax
comp=Z,130nm,2.0s
FRU pmax pmax
comp=Z,310nm,2.0s
FRU MLR MLR
comp=Z,2μm,22.0s
MCK McKinley 82.93 23 *e*P **P** **01 38 40.2 -1.1**
MCK pmax pmax
comp=Z,148nm,1.0s
MCK McKinley 82.93 23 *e*P **P** **01 38 40.2 -1.1**
comp=Z,148nm,1.0s
AAK Ala-Archa 82.96 314 *i* P **P** **01 38 41.6 -0.5**
AAK pmax pmax
comp=Z,89nm,0.9s
AAK Ala-Archa 82.96 314 *e*P **P** **01 38 41.4 -0.8**
comp=Z,40nm,0.8s
AAK *ep*P **pP** **01 39 08.0 0.0**
AAK S **S** **01 48 52.5 -0.7**
AAK Ala-Archa 82.96 314 P **P** **01 38 42.9 +0.8**
SNR=24
AAK Ala-Archa 82.96 314 P **P** **01 38 41.6 -0.5**
SNR=43
AAK Ala-Archa 82.96 314 P **P** **01 38 41.3 -0.8**
comp=Z,321nm,0.7s,SNR=26
AAK Ala-Archa 82.96 314 P **P** **01 38 41.5 -0.5**
comp=Z,41nm,0.8s,baz=115,slow=4.1,SNR=69
AAK S **S** **01 48 52.5 -0.7**
comp=Z,0.7nm,0.4s,baz=222,slow=23,SNR=5.7
AAK LR LR 02 15 47.8
comp=Z,2μm,20.4s,baz=83,slow=36
BHJ Bhuj 83.02 294 *e*PKP **P** **01 38 40.5 -2.1**
DIV Divide 83.08 26 *e*P **P** **01 38 42.6 +0.5**
comp=Z,53nm,1.0s
USP Ospenovka 83.11 315 P **P** **01 38 41.9 -0.8**
SNR=88
AML Almayashu 83.41 313 P **P** **01 38 44.5 -0.3**
SNR=182
EKS2 Erkin-Say 83.48 314 *e*P **P** **01 38 44.3 -0.4**
EKS2 pmax pmax
comp=Z,82nm,0.8s
EKS2 Erkin-Say 83.48 314 *e*P **P** **01 38 44.3 -0.4**
comp=Z,82nm,0.8s
EKS2 Erkin-Say 83.48 314 P **P** **01 38 45.6 +0.9**
SNR=97
MAW Mawson 83.51 203 *e*P **P** **01 38 44.6 +0.3**
comp=Z,11nm,1.0s
MAW pP **pP** **01 39 08.3 -1.9**
MAW Mawson 83.51 203 P **P** **01 38 44.9 +0.7**
comp=Z,31nm,0.8s,baz=96,slow=6.1,SNR=50
MAW pP **pP** **01 39 08.3 -1.9**
comp=Z,48nm,0.8s,baz=92,slow=8.9,SNR=9.3
MAW LR LR 02 14 07.7
comp=Z,2μm,21.5s,baz=85,slow=34
MAW Mawson 83.51 203 P **P** **01 38 44.5 +0.3**
baz=83,SNR=29
COLA College 83.88 22 *e*P **P** **01 38 45.1 -1.0**
COLA pmax pmax
comp=Z,82nm,0.9s
COLA College 83.88 22 *e*P **P** **01 38 45.1 -1.0**
comp=Z,22nm,0.9s
COLD Coldfoot 84.17 20 *e*P **P** **01 38 48.0 +0.5**
ILAR Eielson Array 84.20 23 P **P** **01 38 45.9 -1.9**
ILAR pP **pP** **01 39 10.4 -3.3**
ILAR PKKPbc **PKKPdf** **01 56 55.7 +0.6**
ILAR *e* 01 57 25.4
ILAR P'P' 02 04 52.0
ILAR Eielson Array 84.20 23 P **P** **01 38 45.9 -1.9**
comp=Z,45nm,0.8s,baz=253,slow=4.5,SNR=288
ILAR pP **pP** **01 39 10.4 -3.3**
comp=Z,27nm,0.7s,baz=256,slow=4.9,SNR=7.6
ILAR PKKPbc **PKKPdf** **01 56 55.7 +0.6**
comp=Z,0.6nm,0.8s,baz=228,slow=0.9,SNR=5.0
ILAR pPKKPbc 01 57 25.4
comp=Z,1.0nm,0.8s,baz=16,slow=1.8,SNR=4.7
ILAR PKPPKP P'P'df 02 04 52.0 -14
comp=Z,0.6nm,0.9s,baz=116,slow=0.9,SNR=4.2
ILAR LR LR 02 12 34.5
comp=Z,1μm,21.5s,baz=251,slow=33
QSPA South Pole Qui 84.27 180 P **P** **01 38 48.6 +0.3**
QSPA pP **pP** **01 39 12.9 -1.3**
QSPA S S 01 48 59.4 -6.1
QSPA South Pole Qui 84.27 180 P **P** **01 38 48.6 +0.3**
comp=Z,115nm,0.7s,baz=339,slow=1.6,SNR=457
QSPA pP **pP** **01 39 12.9 -1.3**
comp=Z,133nm,0.8s,baz=331,slow=2.2,SNR=10
QSPA S S 01 48 59.3 -6.1
comp=Z,3.5nm,0.8s,baz=100,slow=6.8,SNR=21
MENT Mentasta 84.70 25 *e*P **P** **01 38 50.7 +0.4**
DOT Dot Lake 84.84 24 *e*P **P** **01 38 50.6 -0.4**
KBL Kabul 85.44 305 *e*P **P** **01 38 53.2 -1.7**
KBL Kabul 85.44 305 *e*P **P** **01 38 53.2 -1.7**
KBL Kabul 85.44 305 P **P** **01 38 54.6 -0.3**
baz=86,SNR=5.7
PNL Peninsula 85.45 29 *e*P **P** **01 38 54.2 0.0**
comp=Z,45nm,1.1s
KK31 Karatay Array 85.92 314 P **P** **01 38 55.3 -1.5**
KK31 pmax pmax
comp=Z,296nm,1.3s
KKAR Karatay Array 85.92 314 *e*P **P** **01 38 55.6 -1.2**
KKAR *e**PP **pP** **01 39 24.5 +1.6**
KKAR Karatay Array 85.92 314 *e*P **P** **01 38 55.6 -1.2**
KKAR *ep*P **pP** **01 39 24.5 +1.6**
EGAK Eagle 86.45 24 *e*P **P** **01 38 58.8 -0.2**
comp=Z,86nm,1.0s
SKAG Skagway 87.37 30 *e*P **P** **01 39 04.3 +0.9**
BVAR Borovoye Array 88.04 324 P **P** **01 39 05.0 -1.8**
BVAR *PP **pP** **01 39 30.5 -2.6**
BVAR 01 42 38.1
BVAR S **SKSac** **01 49 22.7 -3.5**
BVAR Borovoye Array 88.04 324 P **P** **01 39 05.0 -1.8**
BVAR pP **pP** **01 39 30.5 -2.6**
BVAR PP **PP** **01 42 38.1 +3.4**
BVAR S **SKSac** **01 49 22.7 -3.5**
BVAR Borovoye Array 88.04 324 P **P** **01 39 05.0 -1.8**
comp=Z,36nm,0.7s,baz=113,slow=3.9,SNR=95
BVAR pP **pP** **01 39 30.5 -2.6**
comp=Z,39nm,1.0s,baz=108,slow=4.8,SNR=4.7
BVAR PP **PP** **01 42 38.1 +3.4**
comp=Z,8.4nm,0.9s,baz=104,slow=3.1,SNR=3.6
BVAR S **SKSac** **01 49 22.7 -3.5**
comp=Z,3.0nm,1.0s,baz=114,slow=3.5,SNR=3.7
BVAR LR LR 02 17 50.4
comp=Z,846nm,21.2s,baz=92,slow=35
BRVK Borovoye 88.11 324 *d* iP **P** **01 39 05.7 -1.4**
BRVK pmax pmax
comp=Z,48nm,1.7s
BRVK Borovoye 88.11 324 *e*P **P** **01 39 05.5 -1.6**
BRVK Borovoye 88.11 324 P **P** **01 39 06.6 -0.5**
SNR=14
BRVK Borovoye 88.11 324 P **P** **01 39 05.7 -1.4**
comp=Z,168nm,0.7s,SNR=10
WRAK Wrangell Islan 88.15 33 *e*P **P** **01 39 08.3 +1.1**
comp=Z,34nm,1.3s
DLBC Dease Lake 89.80 31 *e*P **P** **01 39 15.2 +0.1**
MRIV Mauritius Mete 89.99 250 *e*P **P** **01 39 17.0 +0.2**
INK Inuvik 90.44 21 LR LR 02 18 46.0
comp=Z,1μm,21.8s,baz=259,slow=35
RER Riviere de l'E 91.53 249 *e*P **P** **01 39 23.9 -0.1**
comp=Z,55nm,0.8s
SYO Syowa Base 91.75 200 ‖ *e*P **P** **01 39 23.6 -0.3**
SYO Syowa Base 91.75 200 ⇑ *e*X pP 01 39 46.6 -3.5
HUMO Hull Mountain 91.95 48 *e*P **P** **01 39 25.9 +0.5**
comp=Z,20nm,0.9s
YBH Yreka Blue Hor 92.04 48 *e*P **P** **01 39 26.3 +0.3**
comp=Z,36nm,1.4s
CMB Columbia Colle 93.50 52 *e*P **P** **01 39 33.0 +0.3**
CMB pmax pmax
comp=Z,14nm,1.1s
CMB Columbia Colle 93.50 52 *e*P **P** **01 39 33.0 +0.3**
comp=Z,14nm,1.1s
BEKR Beckworth 93.66 50 *e*P **P** **01 39 33.7 +0.1**
comp=Z,16nm,1.5s
PKM Peak Mountain 93.72 55 ⇑P **P** **01 39 34.5 +0.6**
baz=94

MOD	Modoc	93.85	48	eP	P	01 39 34.0	-0.3	
	comp=Z,14nm,1.4s							
AB31	Akbulak array	94.03	319	P	P	01 39 32.7	-2.0	
AB31				pmax	pmax			
	comp=Z,17nm,0.8s							
ABKAR	Akbulak array	94.03	319	eP	P	01 39 33.1	-1.6	
	comp=Z,12nm,0.7s							
SVE	Sverdlovsk	94.14	327	eP	P	01 39 33.4	-1.7	
SVE				e		01 43 21.2		
SVE				ePPP	PPP	01 45 22.9		
SVE				eS	SKSac	01 49 57.1	-3.7	
SVE				eSS	SS	01 57 09.3	+9.0	
SVE				pmax	pmax			
	comp=Z,23nm,1.2s							
SVE				MLR	MLR			
	comp=Z,5μm,22.0s							
ARVC	Arvin	94.54	55	⇑P	P	01 39 37.7	+0.2	
	baz=95							
ISA	Isabella	94.86	55	eP	P	01 39 38.9	-0.1	
ISA				pmax	pmax			
	comp=Z,14nm,1.0s							
ISA	Isabella	94.86	55	eP	P	01 39 38.9	-0.1	
	comp=Z,3.4nm,1.0s							
ISA	Isabella	94.86	55	⇓P	P	01 39 39.6	+0.6	
	baz=95							
MTUM	Tungsten Hills	94.89	53	eP	P	01 39 40.0	+0.8	
MWC	Mount Wilson	95.12	56	eP	P	01 39 39.7	-0.7	
MWC				pmax	pmax			
	comp=Z,57nm,1.0s							
MWC	Mount Wilson	95.12	56	eP	P	01 39 39.7	-0.7	
	comp=Z,57nm,1.0s							
WVOR	Wild Horse Val	95.12	48	eP	P	01 39 39.8	-0.3	
WVOR				pmax	pmax			
	comp=Z,11nm,1.1s							
WVOR	Wild Horse Val	95.12	48	eP	P	01 39 39.8	-0.3	
	comp=Z,11nm,1.1s							
NVAR	Mina Array Bea	95.16	52	P	P	01 39 41.0	+0.5	
NVAR				PKKP	PKKPbc	01 56 38.5	+2.9	
NVAR	Mina Array Bea	95.16	52	P	P	01 39 41.0	+0.5	
	comp=Z,3.7nm,0.8s,baz=257,slow=6.8,SNR=23							
NVAR				PKKP	PKKPbc	01 56 38.5	+2.9	
	comp=Z,2.1nm,0.7s,baz=68,slow=4.5,SNR=8.6							
NVAR				LR	LR	02 23 02.0		
	comp=Z,883nm,18.4s,baz=91,slow=36							
EDW2	Edwards Air Fo	95.21	56	⇓P	P	01 39 41.1	+0.4	
	baz=95							
CWC	Cottonwood Cre	95.23	54	⇓P	P	01 39 41.2	+0.4	
	baz=95							
ARU	Arti	95.26	326	c iP	P	01 39 38.7	-1.5	
ARU				*PP	pP	01 40 04.2	-2.3	
ARU						01 43 31.4		
ARU				S	SKSac	01 50 05.2	-1.7	
ARU				*SS	ScS	01 50 49.9	+1.8	
ARU				SP	SP	01 52 03.3	-1.4	
ARU				PS	PS	01 52 12.8	-5.0	
ARU				pmax	pmax			
	comp=Z,16nm,1.7s							
NV11	Mina Array Sit	95.28	52	eP	P	01 39 41.2	+0.2	
AKTO	Aktyubinsk	95.34	320	P	P	01 39 39.2	-1.5	
AKTO				*PP	pP	01 40 04.7	-2.4	
AKTO	Aktyubinsk	95.34	320	P	P	01 39 39.2	-1.5	
AKTO				pP	pP	01 40 04.7	-2.4	
AKTO	Aktyubinsk	95.34	320	P	P	01 39 39.2	-1.5	
	comp=Z,3.0nm,0.4s,baz=103,slow=7.1,SNR=12							
AKTO				pP	pP	01 40 04.7	-2.4	
	comp=Z,12nm,1.0s,baz=75,slow=4.6,SNR=8.4							
BFSC	Mount Baldy Ra	95.45	56	⇓P	P	01 39 41.9	+0.1	
	baz=96							
DAC	Darwin (Calif)	95.61	54	eP	P	01 39 43.1	+0.5	
DAC				pmax	pmax			
	comp=Z,29nm,1.3s							
DAC	Darwin (Calif)	95.61	54	eP	P	01 39 43.1	+0.5	
	comp=Z,29nm,1.3s							
MPMC	Manual Prospec	95.69	54	⇑P	P	01 39 43.4	+0.5	
	baz=96							
GRAC	Grapevine Rang	95.83	53	⇑P	P	01 39 43.9	+0.5	
	baz=96							
109C	Camp Elliot, M	95.84	58	⇓P	P	01 39 44.4	+1.0	
	baz=96							
BAR	Barrett	96.19	58	eP	P	01 39 46.6	+1.5	
	comp=Z,26nm,1.5s							
GSC	Goldstone	96.21	55	⇑P	P	01 39 45.2	0.0	
	baz=96							
FURC	Furnace Creek,	96.21	54	⇑P	P	01 39 45.8	+0.8	
	baz=96							
NEW	Newport	96.41	42	eP	P	01 39 45.7	0.0	
	comp=Z,16nm,1.4s							
NEW	Newport	96.41	42	LR	LR	02 18 26.7		
	comp=Z,663nm,18.4s,baz=267,slow=32							
NEW	Newport	96.41	42	⇓P	P	01 39 45.4	-0.3	
	baz=96							
MONP	Monument Peak	96.42	58	⇑P	P	01 39 47.4	+1.1	
	baz=96,SNR=8.8							
PFO	Pinyon Flat Ob	96.42	57	eP	P	01 39 47.0	+0.8	
	comp=Z,8.4nm,1.1s							
PFO	Pinyon Flat Ob	96.42	57	⇓P	P	01 39 46.7	+0.5	
	baz=96							
HEC	Hector,Ludlow	96.58	56	⇑P	P	01 39 47.3	+0.5	
	baz=97							
DVTC	Desert V Tower	96.67	58	⇑P	P	01 39 47.8	+0.4	
	baz=97							
BELC	Belle Mtn. Jos	96.82	57	⇑P	P	01 39 48.4	+0.4	
	baz=97							
SWSC	Sam W. Stewart	96.94	58	⇑P	P	01 39 49.0	+0.6	
	baz=97							
C11A	Tepee Creek (N	96.98	43	⇓P	P	01 39 48.8	+0.4	
	baz=97							
GMRC	Granite Mounta	97.12	56	⇑P	Pdif	01 39 49.7	+0.2	
	baz=97,SNR=8.5							
MFID	Camas Ranch	97.22	47	⇑P	Pdif	01 39 49.8	+0.1	
	baz=97							
BC3	Big Chuckawall	97.26	57	⇓P	Pdif	01 39 50.4	+0.3	
	baz=97							
R11A	Troy Canyon, C	97.29	52	⇓P	Pdif	01 39 50.6	+0.4	
	baz=97,SNR=7.0							
B12A	Libby	97.44	42	⇑P	Pdif	01 39 51.1	+0.7	
	baz=98							
C12B	Naegeli Ranch,	97.51	43	⇓P	Pdif	01 39 50.8	+0.1	
	baz=98							
IRM	Iron Mountain	97.53	56	⇑P	Pdif	01 39 52.0	+0.9	
	baz=98,SNR=6.2							
D12A	Red Ives Fores	97.59	43	⇓P	Pdif	01 39 51.2	0.0	
	baz=98							
G12A	Big Creek, Yel	97.60	45	⇑P	Pdif	01 39 51.1	-0.3	
	baz=98							
F12A	Elk City	97.65	45	⇑P	Pdif	01 39 51.5	-0.1	
	baz=98							
YKW3	Yellowknife Ar	97.70	28	eP	Pdif	01 39 51.2	+0.1	
	comp=Z,0.2nm,1.0s							
YKA	Yellowknife Ar	97.71	28	P	P	01 39 50.5	-0.6	
YKA				PKKP	PKKPbc	01 56 24.2	-5.0	
YKA				e		01 56 50.5		
YKA				SKKP		01 59 56.3		
YKA	Yellowknife Ar	97.71	28	P	P	01 39 50.5	-0.6	
	comp=Z,2.2nm,0.7s,baz=279,slow=4.9,SNR=32							
YKA				PKKP	PKKPbc	01 56 24.2	-5.0	
	comp=Z,4.0nm,0.7s,baz=88,slow=2.9,SNR=31							
YKA				pPKKPbc		01 56 50.5		
	comp=Z,2.5nm,0.7s,baz=88,slow=2.9,SNR=8.9							
YKA				SKKP		01 59 56.3		
	comp=Z,0.6nm,0.9s,baz=100,slow=2.7,SNR=3.9							
I12A	Atlanta	97.73	47	⇓P	Pdif	01 39 52.3	+0.3	
	baz=98							
H12A	Diamond D Ranc	97.93	46	⇓P	Pdif	01 39 53.1	+0.2	
	baz=98							
BSMT	Bassoo Peak	97.97	43	eP	Pdif	01 39 53.1	+0.1	
B13A	Whitefish	98.18	42	⇑Pdiff	Pdif	01 39 54.2	+0.4	
	baz=98							
A13A	Flathead Natio	98.21	41	⇑Pdiff	Pdif	01 39 54.5	+0.5	
	baz=98							
HLID	Hailey	98.25	47	eP	Pdif	01 39 54.6	+0.3	
	comp=Z,3.4nm,1.1s							
HLID	Hailey	98.25	47	⇓Pdiff	Pdif	01 39 54.8	+0.4	
	baz=98							
F13A	Darby	98.30	45	⇑Pdiff	Pdif	01 39 54.6	+0.1	
	baz=98							
H13A	Challis	98.36	46	⇑Pdiff	Pdif	01 39 55.4	+0.6	
	baz=98							
PDMCI	Parker Dam,Lak	98.37	56	⇑Pdiff	Pdif	01 39 55.1	+0.2	
	baz=98							
G13A	Cobalt	98.37	45	⇑Pdiff	Pdif	01 39 55.3	+0.5	
	baz=98							
E13A	Victor	98.39	44	⇑Pdiff	Pdif	01 39 55.4	+0.6	
	baz=98							
I13A	Wildhorse Cree	98.46	47	⇑Pdiff	Pdif	01 39 56.0	+0.6	
	baz=98							
W13A	Hualapai Mount	98.59	55	⇑Pdiff	Pdif	01 39 56.5	+0.4	
	baz=99							
C14A	Swan Lake	98.67	43	⇓Pdiff	Pdif	01 39 56.1	+0.1	
	baz=99							
MAIT	Maitri	98.70	193	eP	P	01 39 45.5	-10	
A14A	Double T Ranch	98.86	41	⇓Pdiff	Pdif	01 39 57.7	+0.8	
	baz=99							
E14A	Clinton	98.88	44	⇑Pdiff	Pdif	01 39 57.0	0.0	
	baz=99							
B14A	Marquette Ranc	98.98	42	⇑Pdiff	Pdif	01 39 57.6	+0.2	
	baz=99							
CCUT	Cedar City	99.04	53	eP	Pdif	01 39 58.4	+0.4	
C15A	Salmond Ranch,	99.44	43	⇑Pdiff	Pdif	01 39 59.3	-0.2	
	baz=100							
B15A	Bradely Ranch,	99.45	42	⇑Pdiff	Pdif	01 39 59.5	0.0	
	baz=100							
DUG	Dugway	99.46	50	⇑Pdiff	Pdif	01 39 59.6	-0.1	
	baz=100							
E15A	Deer Lodge	99.46	44	⇑Pdiff	Pdif	01 39 59.4	-0.2	
	baz=100							
H15A	Lima	99.51	46	⇓Pdiff	Pdif	01 40 00.1	+0.1	
	baz=100							
F15A	Butte	99.58	45	⇑Pdiff	Pdif	01 40 00.2	-0.1	
	baz=100							
G15A	Dillon	99.61	45	⇑Pdiff	Pdif	01 40 00.3	-0.1	
	baz=100							
OPO	Ambohidratompo	99.86	250	PP	PP	01 44 05.6	-2.4	
OPO	Ambohidratompo	99.86	250	PP	PP	01 44 05.6	-2.4	
	comp=Z,4.7nm,0.9s,baz=117,slow=5.5,SNR=4.1							
U15A	North Rim	99.89	54	⇑Pdiff	Pdif	01 40 01.5	-0.5	
	baz=100							
A16A	West Butte Ran	100.07	41	⇑Pdiff	Pdif	01 40 02.4	+0.2	
	baz=100							
G16A	Moss Hill, Enn	100.09	45	⇑Pdiff	Pdif	01 40 02.6	+0.2	
	baz=100							
D16A	Dana Ranch, Ca	100.19	43	⇓Pdiff	Pdif	01 40 03.2	+0.4	
	baz=100							
F16A	Kennard Place,	100.19	45	⇑Pdiff	Pdif	01 40 03.2	+0.4	
	baz=100							
H16A	Russell Place,	100.50	46	⇓Pdiff	Pdif	01 40 04.2	-0.2	
	baz=100							
B17A	L&G Farms, Che	100.63	42	⇑Pdiff	Pdif	01 40 04.9	+0.2	
	baz=101							
SNAA	Sanae	100.69	189	ePdif	Pdif	01 40 02.9	-1.6	
SNAA				PP	PP	01 44 10.2	-2.1	
SNAA	Sanae	100.69	189	PP	PP	01 44 10.2	-2.1	
	comp=Z,11nm,1.1s,baz=164,slow=6.9,SNR=9.0							
E17A	Martinsdale	100.69	44	⇓Pdiff	Pdif	01 40 04.9	-0.2	
	baz=101							
C17A	Wharram Farm,	100.69	43	⇑Pdiff	Pdif	01 40 04.8	-0.2	
	baz=101							
TPAW	Teton Pass	100.77	47	ePdif	Pdif	01 40 06.7	+1.0	
D17A	Six Diamond Ra	100.77	43	⇓Pdiff	Pdif	01 40 05.4	0.0	
	baz=101							
F17A	Fitzpatrick Pl	100.86	44	⇓Pdiff	Pdif	01 40 05.8	0.0	
	baz=101							
J17A	Brown Place, J	100.95	47	⇓Pdiff	Pdif	01 40 06.7	+0.3	
	baz=101							
P17A	Butcher Ranch,	101.07	51	⇓Pdiff	Pdif	01 40 06.6	-0.3	
	baz=101							
A18A	Metzger Ranch,	101.22	41	⇓Pdiff	Pdif	01 40 07.8	+0.5	
	baz=101							
B18A	Beardsley Farm	101.31	42	⇓Pdiff	Pdif	01 40 08.1	+0.5	
	baz=101							
E18A	Harlowton	101.34	44	⇑Pdiff	Pdif	01 40 08.0	+0.1	
	baz=101							
EGMT	Eagleton	101.35	42	ePdif	Pdif	01 40 08.1	+0.2	
EGMT	Eagleton	101.35	42	⇑Pdiff	Pdif	01 40 07.7	-0.2	
	baz=101							
P18A	Preston Nutter	101.45	51	⇓Pdiff	Pdif	01 40 08.4	-0.4	
	baz=102							
J18A	Kendall Valley	101.46	47	⇓Pdiff	Pdif	01 40 08.2	-0.5	
	baz=102							
K18A	Toltan Ranch,	101.47	48	⇑Pdiff	Pdif	01 40 08.4	-0.3	
	baz=102							
M18A	Lyman	101.51	49	⇑Pdiff	Pdif	01 40 08.5	-0.5	
	baz=102							
F18A	Big Timber	101.52	44	⇑Pdiff	Pdif	01 40 08.6	-0.1	
	baz=102							
I18A	Diamond G Ranc	101.58	47	⇑Pdiff	Pdif	01 40 08.9	-0.4	
	baz=102							
S18A	Hurst Farm, BI	101.71	53	⇓Pdiff	Pdif	01 40 09.5	-0.5	
	baz=102							
PDAR	Pinedale Array	101.82	48	P	Pdif	01 40 09.6	-0.7	
PDAR				PKKPbc	PKKPbc	01 56 16.1	-1.0	
PDAR	Pinedale Array	101.82	48	P	Pdif	01 40 09.6	-0.7	
	comp=Z,2.5nm,0.9s,baz=236,slow=2.6,SNR=16							
PDAR				PKKPbc	PKKPbc	01 56 16.1	-1.0	
	comp=Z,0.9nm,0.5s,baz=98,slow=5.2,SNR=8.8							
C19A	Slack Wire Ran	101.84	43	⇑Pdiff	Pdif	01 40 09.9	-0.2	
	baz=102							
L19A	Farson	102.01	48	⇓Pdiff	Pdif	01 40 11.0	-0.1	
	baz=102							
I19A	Meeteetse	102.15	46	⇑Pdiff	Pdif	01 40 11.3	-0.4	
	baz=102							
J19A	Crowheart	102.16	47	⇑Pdiff	Pdif	01 40 11.8	+0.1	
	baz=102							
P19A	Cripple Cowboy	102.42	51	⇓Pdiff	Pdif	01 40 12.9	-0.2	
	baz=102							
B20A	Solberg Farm,	102.47	42	⇓Pdiff	Pdif	01 40 13.0	+0.2	
	baz=102							
C20A	Veseth Ranch,	102.55	43	⇓Pdiff	Pdif	01 40 13.5	+0.3	
	baz=102							
MAK	Makhachkala	102.69	313	eP	Pdif	01 40 11.8	-2.0	
MAK				i		01 44 32.4		
MAK				eS	SKSac	01 50 42.0	-2.5	
MAK				eSP	SP	01 53 23.5	-1.9	
MAK				ePS	PS	01 53 32.3	-5.8	
MAK				eSS	SS	01 59 12.9	+12	
MAK				pmax	pmax			
	comp=Z,45nm,1.7s							
MAK				MLR	MLR			
	comp=Z,1μm,17.0s							
L20A	Wamsutter	102.77	48	⇑Pdiff	Pdif	01 40 14.3	-0.2	
	baz=103							
J20A	Shoshoni	102.86	47	⇓Pdiff	Pdif	01 40 14.7	-0.1	
	baz=103							
N20A	Spence Gulch,	102.90	50	⇓Pdiff	Pdif	01 40 14.9	-0.3	
	baz=103							
M20A	Sweetwater, Wa	102.92	49	⇑Pdiff	Pdif	01 40 14.8	-0.4	
	baz=103							
O20A	White River Ci	102.96	50	⇑Pdiff	Pdif	01 40 15.5	+0.1	
	baz=103							
R20A	Redvale	102.96	52	⇓Pdiff	Pdif	01 40 15.4	-0.1	
	baz=103							
Q20A	Ridgley Place,	102.99	51	⇓Pdiff	Pdif	01 40 15.9	+0.4	
	baz=103							
V20A	Brimhall	103.00	55	⇓Pdiff	Pdif	01 40 15.7	0.0	
	baz=103							
J21A	Lysite	103.33	47	⇓Pdiff	Pdif	01 40 16.6	-0.3	
	baz=103							
I21A	Big Trails, Te	103.40	46	⇑Pdiff	Pdif	01 40 17.0	-0.2	
	baz=103							
N21A	Black Mountain	103.47	50	⇓Pdiff	Pdif	01 40 17.6	-0.1	
	baz=104							
L21A	Rawlins	103.49	48	⇓Pdiff	Pdif	01 40 18.0	+0.2	
	baz=104							
M21A	Separation Pea	103.53	49	⇓Pdiff	Pdif	01 40 17.9	-0.1	
	baz=104							
Q21A	Lamborn Mesa,	103.56	52	⇓Pdiff	Pdif	01 40 18.2	+0.1	
	baz=104							
R21A	Cimarron	103.61	52	⇑Pdiff	Pdif	01 40 18.4	0.0	
	baz=104							
U21A	Nageezi	103.63	54	⇑Pdiff	Pdif	01 40 18.7	+0.2	
	baz=104							
KBS	Kingsbay	103.82	352	ePP	PP	01 44 38.2	+2.4	
I22A	9 Mile Ranch,	103.97	46	⇓Pdiff	Pdif	01 40 20.0	+0.2	
	baz=104							
J22A	Midwest	104.02	47	⇓Pdiff	Pdif	01 40 20.1	+0.1	
	baz=104							
K22A	Casper	104.06	48	⇑Pdiff	Pdif	01 40 20.2	0.0	
	baz=104							
S22A	4UR Ranch, Cre	104.21	53	⇑Pdiff	Pdif	01 40 21.4	+0.3	
	baz=104							
O22A	Kremmling	104.26	50	⇓Pdiff	Pdif	01 40 21.5	+0.2	
	baz=104							
DGRG	David-gareji	104.39	311	P	PP	01 44 39.3	-2.0	
N23A	Red Feather La	104.65	49	⇓Pdiff	Pdif	01 40 23.0	0.0	
	baz=105							
L23A	Garrett	104.72	48	⇓Pdiff	Pdif	01 40 23.4	+0.2	
	baz=105							
TBLG	Delisi	104.84	312	P	PKiKP	01 44 30.4	-7.9	
GUDG	Gudauri	104.96	312	P	PP	01 44 48.2	+2.6	
GNI	Garni	104.98	310	eP	PP	01 44 50.6	+4.7	
APA	Apatity	105.04	339	⇑eP	Pdif	01 40 24.6	+0.9	
APA				i		01 50 50.0		
APA				i		01 51 38.0		
APA				eS	Sdif	01 52 06.0	-3.2	
APA				i SS	SS	01 59 36.0	+4.6	
GOR	Gori	105.28	312	P	PP	01 44 57.9	+10	
PMSA	Palmer Station	105.43	166	Pdif	Pdif	01 40 24.0	-1.5	
PMSA	Palmer Station	105.43	166	Pdiff	Pdif	01 40 24.0	-1.5	
	comp=Z,30nm,1.0s,baz=166,slow=8.3,SNR=4.5							
ONI	Oni	105.69	313	P	PP	01 44 51.4	+0.5	
CLDR	Caldiran	105.71	309	eP	PP	01 44 54.6	+3.2	
AKH	Akhalkalaki	105.80	311	P	PP	01 45 13.9	+22	
KIV	Kislovodsk	106.08	314	i P	Pdif	01 40 28.0	-1.0	
KIV				e		01 44 52.1		
KIV				ePPP	PPP	01 47 05.6		
KIV				e		01 50 57.3		
KIV				ePS	PS	01 54 11.5	-2.1	
KIV				eSS	SS	01 59 45.1	-2.2	
KIV				pmax	pmax			
	comp=Z,11nm,1.1s							
KIV				MLR	MLR			
	comp=Z,1μm,20.0s							
CUKT	Cukurca	106.13	307	eP	PP	01 44 55.5	+1.1	
KEV	Kevo	106.19	342	eP	Pdif	01 40 28.5	-0.3	
KEV				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KEV	Kevo	106.19	342	ep	Pdif	01 40 28.5	-0.3	
	comp=Z,0.6nm,0.4s							
KARS	Kars	106.20	311	eP	PP	01 44 49.3	-5.5	
CHVG	Ch'k'valeri	106.68	313	P	PP	01 45 00.2	+2.2	
ARCES	ARCESS Array B	106.76	342	Pdif	Pdif	01 40 31.6	+0.2	
ARCES				PKiKP	PKiKP	01 44 40.3	-0.7	
ARCES				PKKPbc	PKKPbc	01 55 59.1	-3.8	
ARCES	ARCESS Array B	106.76	342	Pdiff	Pdif	01 40 31.6	+0.2	
	comp=Z,1.8nm,0.4s,baz=77,slow=8.4,SNR=23							
ARCES				PKiKP	PKiKP	01 44 40.3	-0.7	
	comp=Z,3.8nm,0.9s,baz=48,slow=1.8,SNR=6.2							
ARCES				PKKPbc	PKKPbc	01 55 59.1	-3.8	
	comp=Z,3.0nm,0.4s,baz=257,slow=2.5,SNR=44							
ARE0	ARCESS Array S	106.76	342	eP	PP	01 45 06.0	+8.3	
ARE0				eSKS	SKSac	01 51 01.6	-0.4	
VRTB	Varto-Mus	107.61	309	eP	PP	01 45 08.6	+3.4	
JOF	Joensuu	107.66	335	eP	Pdif	01 40 33.3	-2.1	
JOF				pmax	pmax			
	comp=Z,6.0nm,0.7s							
JOF	Joensuu	107.66	335	ep	Pdif	01 40 33.3	-2.1	
	comp=Z,6.4nm,0.7s							
KTK1	Kautokeino	107.72	342	ePP	PP	01 45 11.0	+6.3	
KTK1				eSKS	SKSac	01 51 04.9	-1.3	
BNGB	Bingˆ¶l	108.23	309	eP	PP	01 45 13.0	+3.3	
SOC	Sochi	108.26	314	d iP	Pdif	01 40 29.1	-9.5	
SOC				e		01 45 08.2		
SOC				e		01 51 08.0		
SOC				ePS	PS	01 54 24.2	-11	
SOC				eSS	SS	02 00 14.4	-2.2	
SOC				pmax	pmax			
	comp=Z,4.0nm,0.6s							
SOC				MLR	MLR			
	comp=Z,1μm,16.0s							
BAYT	Ayd¨ntepe-Bay	108.45	311	eP	PP	01 44 57.6	-14	
TRO	Tromso	108.62	344	ePP	PP	01 45 16.3	+5.2	
TRO				eSKS	SKSac	01 51 10.1	+0.2	
TRO				eSS	SS	02 00 18.0	-1.7	
DAG	Danmarks Havn	108.68	357	i P	PP	01 45 08.8	-2.7	
DAG				i		01 51 02.4		
DAG								
	comp=Z,750nm,26.0s							
PTK	Pertek	109.24	309	eP	PP	01 45 18.6	+1.5	
ESPY	Espiye-Giresun	109.43	311	eP	PP	01 45 10.3	-7.8	
URFA	Urfa	109.90	308	eP	PP	01 45 20.0	-1.8	
ULM	Lac du Bonnet	109.94	38	PKKPbc	PKKPbc	01 55 49.1	-3.0	
ULM	Lac du Bonnet	109.94	38	PKKPbc	PKKPbc	01 55 49.1	-3.0	
	comp=Z,5.7nm,0.7s,baz=103,slow=3.0,SNR=5.6							
KAF	Kangasniemi	110.10	335	eP	Pdif	01 40 44.0	-2.3	
KAF				pmax	pmax			
	comp=Z,4.0nm,0.7s							
KAF	Kangasniemi	110.10	335	ep	Pdif	01 40 44.0	-2.3	
	comp=Z,3.6nm,0.7s							
FINES	FINESS Array B	110.51	335	Pdif	Pdif	01 40 47.0	-1.2	
FINES				PP	PP	01 45 28.9	+3.8	
FINES	FINESS Array B	110.51	335	Pdiff	Pdif	01 40 47.0	-1.2	
	comp=Z,4.0nm,0.6s,baz=61,slow=4.6,SNR=18							
FINES				PP	PP	01 45 28.9	+3.8	
	comp=Z,15nm,0.9s,baz=66,slow=6.5,SNR=13							
RSDY	Resadiye-TOKAT	110.57	311	eP	PP	01 45 11.7	-15	
DARE	Darende-Malaty	110.77	309	eP	PP	01 45 30.4	+2.5	
GAZ	Gaziantep	111.21	308	eP	PP	01 45 34.0	+2.8	
KMRS	Kahramanmaras	111.40	308	eP	PP	01 45 33.1	+0.6	
KVT	Kavak	111.40	312	eP	PP	01 45 29.6	-2.8	
SARI	SarD1z-Kayseri	111.62	309	eP	PP	01 45 33.5	-0.7	
DIKM	Dikmen	111.86	313	eP	PP	01 45 34.8	-0.7	
SIM	Simferopol'	111.91	316	eP	Pdif	01 40 51.0	-3.8	
SIM				i		01 45 34.6		
SIM				e		01 51 24.0		
SIM				ePS	PS	01 54 54.0	-16	
SIM				pmax	pmax			
	comp=Z,260nm,9.3s							
SIM				MLR	MLR			
	comp=Z,1μm,20.0s							
BNN	Bunyan	111.98	310	eP	PP	01 45 37.5	+0.7	
KOZT	Kozan	112.24	308	eP	PP	01 45 39.6	+1.2	
CEYT	Ceyhan	112.39	308	eP	PP	01 46 02.4	+23	
CORM	Corum	112.64	311	eP	PP	01 45 32.6	-8.7	
MICGM	Minsk	112.64	327	e	PP	01 45 12.0	-29	
SUMG	Summit	113.01	3	i P	PP	01 45 43.1	+0.1	
SUMG								
	comp=Z,1μm,23.0s							
NACGM	Naroch	113.06	328	e	PP	01 45 25.0

comp=Z,1.9nm,0.5s,baz=220,slow=1.6,SNR=13
BOSA PP **PP** **01 46 10.7 +1.9**
comp=Z,9.7nm,1.0s,baz=113,slow=9.4,SNR=4.6
ISK Istanbul-Kandi 116.52 313 *e*P **PP** **01 46 10.2 +1.8**
GEMT Gemlik 116.61 313 *e*P **PP** **01 46 12.4 +3.4**
NB2 NORSAR Subarra116.62 339 PKPdf **PKPdf** **01 44 59.3 -0.7**
comp=Z,1.4nm,1.0s,baz=44,slow=1.9
NB2 NORSAR Subarra116.62 339 PKPdf **PKPdf** **01 44 59.3 -0.7**
baz=44,slow=1.9
NOA NORSAR Array B116.62 339 PKP **PKPdf** **01 44 58.1 -1.8**
NOA PP **PP** **01 46 10.5 +2.2**
NOA SKP 01 48 24.4
NOA PKKPbc **PKKPbc** **01 55 28.4 -1.7**
NOA PKKP **PKKPdf** **01 55 52.4 -3.5**
NOA NORSAR Array B116.62 339 PKP **PKPdf** **01 44 58.1 -1.8**
comp=Z,2.6nm,0.9s,baz=51,slow=1.9,SNR=7.7
NOA PP **PP** **01 46 10.5 +2.2**
comp=Z,6.0nm,0.8s,baz=45,slow=6.6,SNR=11
NOA SKP 01 48 24.4
comp=Z,1.4nm,0.7s,baz=83,slow=2.1,SNR=4.2
NOA PKKPbc **PKKPbc** **01 55 28.4 -1.7**
comp=Z,2.4nm,0.8s,baz=40,slow=3.6,SNR=11
NOA PKKP **PKKPdf** **01 55 52.4 -3.5**
comp=Z,4.5nm,0.8s,baz=51,slow=3.6,SNR=8.5
NOA NORSAR Array B116.62 339 P **PKPdf** **01 44 58.2 -1.8**
PLOR Plostina 116.65 319⇑ *i*P **PP** **01 46 04.6 -4.6**
TVSB Tavsanli 116.67 311 *e*P PP 01 46 18.1 +8.4
BGKT Bogazkoy 116.70 313 *e*P **PP** **01 46 12.0 +2.3**
NC602 NORSAR Array S 116.70 338 *e*PP PP 01 46 06.5 -2.4
MOL Molde 116.78 341 *e*PP PP 01 46 13.2 +3.9
ARMT Armutlu 116.81 313 *e*P **PP** **01 46 13.3 +2.8**
MDNY Mudanya-Bursa 116.85 313 *e*P PP 01 46 19.0 +8.2
CTKS Kestanelik-??a 116.87 314 *e*P **PP** **01 46 09.4 -1.5**
CTYL Yal??k??y-??at 116.96 314 *e*P **PP** **01 46 15.1 +3.6**
ELL Elmali 117.02 308 *e*P PP 01 46 04.2 -8.1
SLVT Silivri 117.09 314 *e*P **PP** **01 46 14.6 +2.2**
SFJD Kangerlussuaq 117.24 9 *i* P **PP** **01 46 14.7 +2.4**
SFJD *e* 01 56 02.1
MLR Muntele Rosu 117.24 319 PKP **PKPdf** **01 45 01.2 -0.5**
MLR PKKPbc **PKKPbc** **01 55 26.8 -0.7**
MLR PKKP **PKKPdf** **01 55 49.7 -4.9**
MLR Muntele Rosu 117.24 319 PKP **PKPdf** **01 45 01.2 -0.5**
comp=Z,0.5nm,0.7s,baz=171,slow=14,SNR=3.2
MLR PKKPbc **PKKPbc** **01 55 26.8 -0.7**
comp=Z,0.9nm,0.7s,baz=226,slow=7.0,SNR=4.5
MLR PKKP **PKKPdf** **01 55 49.7 -4.9**
comp=Z,0.9nm,0.8s,baz=194,slow=9.4,SNR=3.5
KCTX Karacabey (Bur 117.27 313 *e*P **PP** **01 46 13.8 0.0**
CRLT Corlu 117.46 314 *e*P **PP** **01 46 18.1 +3.1**
KWP Kalwaria Pacla 117.59 324⇑ *i*P **PKPdf** **01 45 01.3 -0.9**
KWP Kalwaria Pacla 117.59 324 *e*PKPdf **PKPdf** **01 45 02.5 +0.3**
LBTB Lobatse 117.59 238 *e*PKPdf **PKPdf** **01 45 03.4 +0.4**
EDC Edincik 117.60 313 *e*P **PP** **01 46 20.8 +4.7**
TKR Tekirdag 117.65 314 *e*P **PP** **01 46 17.2 +1.0**
MRMT Marmara Adasi 117.72 313 *e*P **PP** **01 46 17.7 +0.8**
BALB Balikesir 117.80 312 *e*P **PP** **01 46 19.4 +2.1**
GONE Gonen-Balikesi 117.82 313 *e*P **PP** **01 46 19.4 +1.9**
EDRB Edirne 117.94 315 *e*P **PP** **01 46 20.3 +2.0**
RKY Sarkoy-Tekirda 118.00 313 *e*P **PP** **01 46 21.2 +2.4**
KRBG Karabiga-Canak 118.00 313 *e*P **PP** **01 46 20.8 +2.0**
KOLS Kolonicke sedl 118.15 323 *e*PKIKP **PKPdf** **01 45 03.4 +0.1**
KOLS Kolonicke sedl 118.15 323 *e*PKP **PKPdf** **01 45 03.4 +0.1**
KONO Kongsberg 118.16 338 *e*PP PP 01 46 16.6 -2.3
HUMR Humele 118.23 318 *i*P **PP** **01 45 03.6 +0.1**
UZH Uzhgorod 118.27 323 *e*P **Pdif** **01 41 29.3 +6.3**
UZH *e* 01 46 20.0
UZH *e*PPP PPP 01 49 00.0
UZH *e* 01 51 59.3
UZH *e*PS PKKPdf 01 55 59.0 +6.6
UZH *e*SS SS 02 02 39.3 +11
LSZ Lusaka 118.32 249 *e*PKPdf **PKPdf** **01 45 04.6 -0.1**
SUR Sutherland 118.34 229 *e*PKPdf **PKPdf** **01 45 03.8 -0.6**
LPK Lapseki 118.40 313 *e*P **PP** **01 46 25.6 +4.1**
ERIK Erikli-Kesan 118.48 314 *e*P **PP** **01 46 24.2 +2.2**
MLSB Milas 118.53 310 *e*P **PP** **01 46 27.3 +4.7**
GELI Tayfur-Gelibol 118.60 313 *e*P **PP** **01 46 25.6 +2.7**
CRVS Cervenica-Dubn 118.64 324 *e*PKIKP **PKPdf** **01 45 04.0 -0.2**
CRVS Cervenica-Dubn 118.64 324 *e*PKP **PKPdf** **01 45 04.0 -0.2**
ENEZ Enez 118.72 314 *e*P **PP** **01 46 26.4 +2.7**
BSD Bornholm Skovb 118.85 332 *i*P **PP** **01 46 28.2 +4.3**
BSD
comp=Z,2μm,16.0s
EZN Ezine 118.89 313 *e*P **PP** **01 46 27.8 +2.9**
ODD1 Odda 119.03 340 *e*PP PP 01 46 23.9 -1.1
BER Bergen 119.12 341 *e*PP PP 01 46 21.4 -4.1
SMTH Samothraki Isl 119.26 314 *e*P **PKPdf** **01 45 04.6 -1.1**
HOMB Homborsund 119.52 338 *e*PP PP 01 46 28.1 -0.2
COP Copenhagen 119.63 334 *i* P **PP** **01 46 32.7 +3.5**
COP *e* 01 56 16.7
COP
comp=Z,600nm,24.0s
BZS Buzias 119.99 320⇑ *i*P **PKPdf** **01 45 06.3 -0.6**
OKC Ostrava-Krasne 120.09 326 *e*PKIKP **PKPdf** **01 45 06.9 -0.1**
OKC *e* 01 46 35.1
OKC *e* 01 56 16.3
OKC MLR MLR
comp=Z,2μm,20.1s
OKC Ostrava-Krasne 120.09 326 *e*PKPdf **PKPdf** **01 45 06.9 -0.1**
OKC *e*PP **PP** **01 46 35.1 +2.4**
OKC *e*SP SP 01 56 16.3 +4.6
OKC AMS AMS 02 35 30.0
comp=Z,2μm,20.1s
VTS Vitosha 120.14 317‖ *i*P **PKPdf** **01 45 07.8 +0.3**
APE Apeiranthos 120.31 310 *e*P **PP** **01 46 36.8 +1.9**
VYHS Vyhne 120.37 324 *e*PKIKP **PKPdf** **01 45 07.6 0.0**
VYHS Vyhne 120.37 324 *e*PKP **PKPdf** **01 45 07.6 0.0**
MORC Moravsky Berou 120.46 326 *e*PKIKP **PKPdf** **01 45 06.6 -1.1**
MORC Moravsky Berou 120.46 326 *e*PKPdf **PKPdf** **01 45 06.6 -1.1**
MORC Moravsky Berou 120.46 326⇑ *i*P **PKPdf** **01 45 05.5 -2.2**
MUD Monsted U'grnd 120.51 336 *i*P **PP** **01 46 33.8 -1.3**
MUD
comp=Z,2μm,25.0s
SANT Santorini 120.57 309 *e*PKPdf **PKPdf** **01 45 08.8 +0.4**
KSP Ksiaz 120.58 328 *e*PKIKP **PKPdf** **01 45 08.1 +0.2**
KSP *e* 01 46 36.0
KSP *e*SP SP 01 56 16.0 0.0
KSP *e*SS **SS** **02 02 57.0 -0.6**
KSP Ksiaz 120.58 328 *e*PKPdf **PKPdf** **01 45 08.2 +0.3**
DPC Dobruska-Polom 120.83 327 *e*PKIKP **PKPdf** **01 45 08.7 +0.3**
DPC *e* 01 46 39.9
DPC *e* 01 56 24.6
DPC MLR MLR
comp=Z,3μm,32.5s
DPC Dobruska-Polom 120.83 327 *e*PKPdf **PKPdf** **01 45 08.7 +0.3**
DPC *e*SPKP 01 45 44.0
DPC *ex* x 01 46 32.9
DPC *e*PP **PP** **01 46 39.9 +2.2**
DPC *e*SP SP 01 56 24.6 +6.3
DPC AMS AMS 02 30 10.0
comp=Z,3μm,32.5s
UPC Upice 120.91 327 *e*PKIKP **PKPdf** **01 45 08.4 -0.1**
UPC *e* 01 46 37.7
UPC Upice 120.91 327 *e*PKPdf **PKPdf** **01 45 08.4 -0.1**
UPC *e*PP **PP** **01 46 37.7 -0.5**
PLCA Paso Flores 120.94 145 *e*PKPdf **PKPdf** **01 45 09.5 +0.5**
PLCA PKP **PKPdf** **01 45 09.6 +0.6**
PLCA pPKP **pPKPdf** **01 45 34.7 -1.7**
PLCA SKP 01 48 34.0
PLCA PKKPbc **PKKPbc** **01 55 13.6 -0.3**
PLCA PKKP PKKPdf 01 55 39.0 -8.1
PLCA Paso Flores 120.94 145 PKP **PKPdf** **01 45 09.6 +0.6**
comp=Z,4.5nm,0.5s,baz=194,slow=2.9,SNR=14
PLCA pPKP **pPKPdf** **01 45 34.7 -1.7**
comp=Z,7.7nm,0.6s,baz=246,slow=2.1,SNR=6.9
PLCA SKP 01 48 34.0
comp=Z,3.2nm,0.9s,baz=289,slow=2.7,SNR=2.4
PLCA PKKPbc **PKKPbc** **01 55 13.6 -0.3**
comp=Z,1.3nm,0.5s,baz=35,slow=3.3,SNR=6.4
PLCA PKKP PKKPdf 01 55 39.0 -8.1
comp=Z,2.3nm,0.9s,baz=306,slow=4.4,SNR=3.6
VRAC Vranov 121.23 326 PKP **PKPdf** **01 45 09.2 0.0**
VRAC pPKP **pPKPdf** **01 45 34.4 -2.1**
VRAC Vranov 121.23 326⇑ *i*P **PKPdf** **01 45 08.3 -0.9**
VRAC Vranov 121.23 326 PKP **PKPdf** **01 45 09.2 0.0**
comp=Z,2.8nm,1.0s,baz=232,slow=1.4,SNR=4.7
VRAC pPKP **pPKPdf** **01 45 34.4 -2.1**
comp=Z,3.1nm,0.8s,baz=304,slow=3.6,SNR=3.1
PTL Penteli 121.27 311 *e*P **PKPdf** **01 45 08.3 -1.3**
GRG Griva 121.32 315 *e*P **PKPdf** **01 45 08.6 -1.0**
PKSM Moragy 121.58 322‖ *i*P **PKPdf** **01 45 09.0 -0.9**
NAIG Nisos Aigina 121.64 311 *e*P **PKPdf** **01 45 07.7 -2.6**
PVCC Panska Ves 121.67 328 *e*PP PP 01 46 46.9 +3.6
PVCC *e*SP SP 01 56 29.9 +4.3
BSEG Bad Segeberg 121.69 333 *e*SP SP 01 56 24.4 -1.0
LKR Lokris 121.71 312 *e*P **PKPdf** **01 45 08.7 -1.7**
LKR Lokris 121.71 312 *e*P **PKPdf** **01 45 09.1 -1.3**
ACSO Alum Creek Sta 121.78 46 *e*PKPdf **PKPdf** **01 45 10.6 +0.1**
BRG Berggiesshubel 121.80 329 PDIFF **Pdif** **01 41 41.0 +2.3**
BRG Berggiesshubel 121.80 329 PKP **PKPdf** **01 45 08.0 -2.2**
BRG *es*PKP 01 45 45.9
comp=Z,2.6nm,0.9s
BRG PP **PP** **01 46 41.0 -3.2**
BRG *e* 01 48 38.1
comp=Z,26nm,1.5s
BRG SS SS 02 03 09.0 -4.1
BRG
comp=N,848nm,22.5s
BRG
comp=E,2μm,21.6s
BRG
comp=Z,2μm,21.0s
BRG Berggiesshubel 121.80 329 PKIKP **PKPdf** **01 45 08.0 -2.2**
BRG *e* 01 45 45.8
BRG 01 46 41.0
BRG SS SS 02 03 09.0 -4.1
BRG pmax pmax
comp=N,3.0nm,0.9s
BRG pmax pmax
comp=Z,26nm,1.5s
BRG MLR MLR
comp=N,848nm,22.5s
BRG MLR MLR
comp=E,2μm,21.6s
BRG MLR MLR
comp=Z,2μm,21.0s
BRG Berggiesshubel 121.80 329 *e*SP SP 01 56 26.8 +0.1
TREC Trest 121.86 326 *e*PKIKP **PKPdf** **01 45 10.0 -0.4**
TREC *e* 01 46 44.8
TREC *e* 01 56 34.2
TREC MLR MLR
comp=Z,4μm,30.0s
TREC Trest 121.86 326 *e*PKPdf **PKPdf** **01 45 10.0 -0.4**
TREC *es*PKP 01 45 45.5
TREC *e*PP **PP** **01 46 44.8 +0.1**
TREC *e*SP SP 01 56 34.2 +6.8
TREC AMS AMS 02 31 10.0
comp=Z,4μm,30.0s
DID Didima 121.92 311 *e*P **PKPdf** **01 45 09.2 -1.7**
PRU Pruhonice 121.99 327 *e*PKIKP **PKPdf** **01 45 10.2 -0.4**
PRU *e* 01 45 37.8
PRU *e* 01 46 46.9
PRU *e* 01 56 35.6
PRU MLR MLR
comp=Z,3μm,35.2s
PRU Pruhonice 121.99 327 *e*PKPdf **PKPdf** **01 45 10.2 -0.4**
PRU *ep*PKP **pPKPdf** **01 45 37.8 -0.2**
PRU *e*PP **PP** **01 46 46.9 +1.4**
PRU *e*SP SP 01 56 35.6 +7.1
PRU AMS AMS 02 30 40.0
comp=Z,3μm,35.2s
PRA Prague 122.00 328 PP PP 01 46 45.0 -0.6
PRA *ex* x 01 52 15.0
PRA AMS AMS 02 26 00.0
CLL Collm 122.03 329 *e*P **Pdif** **01 41 38.0 -1.7**
CLL *i* 01 45 09.7
CLL *e* 01 51 54.0
CLL pmax pmax
comp=Z,11nm,0.9s
CLL MLR MLR
comp=Z,2μm,21.2s
CLL Collm 122.03 329 *e*PKPdf **PKPdf** **01 45 09.7 -0.9**
CLL *e*SP SP 01 56 27.7 -1.0
CLL Collm 122.03 329 *e*Pdif **Pdif** **01 41 38.0 -1.7**
CLL *i* PKPdf **PKPdf** **01 45 09.7 -0.9**
comp=Z,11nm,0.9s
CLL *ep*PKPdf **pPKPdf** **01 45 37.0 -1.0**
CLL *e*PP **PP** **01 46 47.0 +1.3**
CLL *ep*PP 01 47 09.0
CLL *es*PP 01 47 22.0
CLL *e*PPP PPP 01 49 18.0
CLL *e*SKSac **SKSac** **01 52 00.0 -1.6**
CLL *ep*PKKPbc 01 55 33.0
comp=Z,10.0nm,1.3s
CLL *e*SP **SP** **01 56 29.0 +0.3**
CLL *e*PS **PS** **01 56 38.0 -3.3**
CLL *ep*PS 01 56 59.0
CLL *e*PPS PPS 01 58 01.0
CLL *es*PPS 01 58 34.0
CLL *e*SKKPdf **SKKPdf** **01 59 13.0 +1.2**
CLL *e*SS **SS** **02 03 21.0 +5.0**
CLL *e* 02 04 36.0
CLL *e*SSS SSS 02 07 48.0
CLL *e* 02 09 00.0
CLL *e*SSSS 02 11 18.0
CLL *e* 02 12 24.0
CLL L L 02 39 00.0
comp=Z,2μm,21.2s
AGG Agios Georgios 122.07 313 *e*P **PKPdf** **01 45 08.8 -2.3**
FNA Florina 122.10 315 *e*P **PKPdf** **01 45 09.5 -1.7**
THL Klokotos Trika 122.10 314 *e*P **PKPdf** **01 45 08.2 -2.9**
BCI Bajram Curri 122.37 317 *e*P **PKPdf** **01 45 11.0 -0.6**
CONA Conrad Observa 122.37 325⇑ *i*PKIKP **PKPdf** **01 45 11.6 0.0**
comp=Z,3.2nm,1.0s
ANKY Antikythira Is 122.39 309 *e*P **PKPdf** **01 45 11.9 +0.1**
PHP Peshkopia 122.39 317 *e*P **PKPdf** **01 45 10.4 -1.3**
VLI Veliai 122.40 310 *e*P **PKPdf** **01 45 10.7 -1.1**
KALE Kalithea 122.43 312 *e*P **PKPdf** **01 45 07.9 -4.0**
GUR Goura 122.44 312 *e*P **PKPdf** **01 45 11.3 -0.7**
EVR Evrytania 122.49 313 *e*P **PKPdf** **01 45 11.3 -0.7**
EVR Evrytania 122.49 313 *e*P **PKPdf** **01 45 12.0 0.0**
KLV Kalavryta, Ach 122.55 312 *e*P **PKPdf** **01 45 11.7 -0.4**
EFP Efpalio 122.59 312 *e*P **PKPdf** **01 45 13.2 +1.1**
LAKA Lakka 122.60 312 *e*P **PKPdf** **01 45 10.8 -1.4**
VLX Vlachokerasia 122.61 311 *e*P **PKPdf** **01 45 12.2 -0.1**
PUK Puka 122.62 317 *e*P **PKPdf** **01 45 11.7 -0.5**
NRDL Niedersach Rie 122.71 332 *e*SP SP 01 56 32.8 -1.7
TKL Tuckaleechee C 122.75 51 *e*PKPdf **PKPdf** **01 45 13.0 +0.4**
TANN Tannenbergstha 122.83 329 *e*SP SP 01 56 35.8 -0.2
DYR Agios Nikonas 122.84 310 *e*P **PKPdf** **01 45 10.1 -2.6**
WERD Werda 122.89 329 *e*PKPdf **PKPdf** **01 45 11.6 -0.8**
JAN Janina 122.90 314 *e*P **PKPdf** **01 45 11.4 -1.3**
SCHQ Schefferville 122.94 24 PKP **PKPdf** **01 45 13.3 +1.0**
SCHQ PKKPbc **PKKPab** **01 55 04.7 -0.1**
SCHQ PKKP PKKPdf 01 55 29.4 -14
SCHQ Schefferville 122.94 24 PKP **PKPdf** **01 45 13.3 +1.0**
comp=Z,2.1nm,0.7s,baz=30,slow=4.8,SNR=5.6
SCHQ PKKPbc **PKKPab** **01 55 04.7 -0.1**
comp=Z,6.8nm,1.0s,baz=153,slow=4.2,SNR=12
SCHQ PKKP PKKPdf 01 55 29.4 -14
comp=Z,3.8nm,0.7s,baz=116,slow=4.1,SNR=6.2
NKC Novy Kostel 122.95 329 *e*PKIKP **PKPdf** **01 45 11.8 -0.7**
NKC *e* 01 46 52.5
NKC *e* 01 56 36.7
NKC MLR MLR
comp=Z,2μm,24.6s
NKC Novy Kostel 122.95 329 *e*PKPdf **PKPdf** **01 45 12.7 +0.2**
NKC Novy Kostel 122.95 329 *e*PKPdf **PKPdf** **01 45 11.8 -0.7**
NKC *e*PP **PP** **01 46 52.5 +0.5**
NKC *e*SP SP 01 56 36.7 -0.3
NKC AMS AMS 02 35 10.0
comp=Z,2μm,24.6s
KHC Kasperske Hory 122.99 327 *e*PKIKP **PKPdf** **01 45 11.7 -0.9**
KHC *e* 01 45 39.6
KHC *e* 01 46 51.8
KHC *e*SP SP 01 56 38.4 +1.0
KHC MLR MLR
comp=Z,3μm,24.5s
KHC Kasperske Hory 122.99 327 *e*PKPdf **PKPdf** **01 45 11.5 -1.1**
KHC Kasperske Hory 122.99 327 *e*PKPdf **PKPdf** **01 45 11.7 -0.9**
KHC *ep*PKP **pPKPdf** **01 45 39.6 -0.4**
KHC *e*PP **PP** **01 46 51.8 -0.6**
KHC *e*PKKP **PKKPbc** **01 55 05.5 -0.7**
KHC *ex* x 01 55 30.0
KHC *e*SP SP 01 56 38.4 +1.0
KHC AMS AMS 02 34 50.0
comp=Z,3μm,24.5s
ITM Ithomi 123.01 311 *e*P **PKPdf** **01 45 12.1 -0.9**
RLS Riolos of Patr 123.05 312 *e*P **PKPdf** **01 45 13.6 +0.6**
GEC2 GERESS Array S 123.08 327 *e*PKIKP **PKPdf** **01 45 12.1 -0.8**
GEC2 *e*SP SP 01 56 38.1 -0.2
GEC2 GERESS Array S 123.08 327 *e*PKPdf **PKPdf** **01 45 12.1 -0.8**
GEC2 *e*SP SP 01 56 38.1 -0.2
GERES GERESS Array B 123.08 327 PKP **PKPdf** **01 45 11.0 -1.9**
GERES PKKPbc **PKKPab** **01 55 04.6 +0.2**
GERES PKKP PKKPdf 01 55 28.9 -14
GERES GERESS Array B 123.08 327 PKP **PKPdf** **01 45 11.0 -1.9**
comp=Z,4.9nm,0.7s,baz=75,slow=1.1,SNR=24
GERES PKKPbc **PKKPab** **01 55 04.6 +0.2**
comp=Z,1.0nm,0.7s,baz=197,slow=4.1,SNR=8.2
GERES PKKP PKKPdf 01 55 28.9 -14
comp=Z,1.3nm,0.7s,baz=207,slow=2.7,SNR=6.2
MOX Moxa 123.13 329 *e*SP SP 01 56 37.7 -0.8
PYL PYLOS 123.25 311 *e*P **PKPdf** **01 45 12.5 -0.9**
ROTZ Rotzenmuhle 123.35 328 *e*SP SP 01 56 41.1 +0.6
WET Wettzell 123.36 327 *e*SP SP 01 56 40.9 +0.2
LKD2 Lefkada island 123.37 313 *e*P **PKPdf** **01 45 13.2 -0.4**
PERS Pernice 123.48 324 *i* PKPdf **PKPdf** **01 45 13.2 -0.5**
VLS Valsamata 123.65 313 *e*P **PKPdf** **01 45 13.7 -0.5**
UBBA Unterbreizbach 123.83 330 *e*SP SP 01 56 42.9 -1.5
GRF Grafenberg Arr 123.91 329 *e*SP SP 01 56 45.2 -0.2
IBBN Ibbenburen 123.92 333 *e*SP SP 01 56 43.0 -2.2
BOJS Bojanci 123.99 323 *i* PKPdf **PKPdf** **01 45 15.0 +0.4**
VISS Visnje 124.08 323 *i* PKPdf **PKPdf** **01 45 14.5 -0.2**
RJOB Jochberg 124.21 326 *e*SP SP 01 56 46.8 -1.5
JAVS Javornik 124.50 324 *i* PKPdf **PKPdf** **01 45 15.6 -0.1**
VOY Vojsko 124.52 324 *e*PKPdf **PKPdf** **01 45 15.5 -0.2**
VOY *e* 01 45 49.3
VOY *e* 01 46 11.1
BUG Bochum--Univer 124.73 332 *e*SP SP 01 56 50.2 -2.2
ABTA Abfaltersbach 124.93 325⇑ *i*PKPdf **PKPdf** **01 45 15.8 -0.7**
comp=Z,9.3nm,0.9s
TNS Taunus Mts 124.97 331 *e*SP SP 01 56 53.6 -1.1
WATA Walderalm 125.12 326⇑ *i*PKPdf **PKPdf** **01 45 15.5 -1.4**
comp=Z,5.1nm,0.5s
WTTA Wattenberg 125.12 326‖ *i*PKPdf **PKPdf** **01 45 16.2 -0.7**
comp=Z,12nm,0.8s
SSPA Standing Stone 125.17 43 *e*PKPdf **PKPdf** **01 45 17.4 +0.4**
MOTA Moosalm 125.37 326⇑ *i*PKPdf **PKPdf** **01 45 16.7 -0.7**
comp=Z,19nm,1.0s
STU Stuttgart 125.52 329 *e*SP SP 01 56 57.6 -2.0
FETA Feichten 125.77 326⇑ *i*PKIKP **PKPdf** **01 45 18.3 +0.2**
comp=Z,9.9nm,0.8s
MEM Membach 125.88 332 PKP **PKPdf** **01 45 18.5 +0.5**
EKA Eskdalemuir Ar 125.90 341 PKP **PKPdf** **01 45 17.4 -0.5**
EKA SKPbc SKiKP 01 48 26.3 -19
EKA PKKPab **PKKPab** **01 54 52.7 +0.6**
EKA Eskdalemuir Ar 125.90 341 PKP **PKPdf** **01 45 17.4 -0.5**
comp=Z,2.2nm,0.5s,baz=18,slow=3.0,SNR=12
EKA SKPbc SKiKP 01 48 26.3 -19
comp=Z,3.4nm,0.7s,baz=57,slow=3.1,SNR=4.9
EKA PKKPab **PKKPab** **01 54 52.7 +0.6**
comp=Z,2.4nm,0.7s,baz=212,slow=2.4,SNR=4.3
TIP Timpagrande 125.99 315 *e*PKPdf **PKPdf** **01 45 20.1 +1.4**
DAVA Damuels 126.07 327⇑ *i*PKPdf **PKPdf** **01 45 16.8 -2.0**
comp=Z,9.3nm,0.8s
BFO Black Forest 126.25 329 *e*SP SP 01 57 04.1 -1.9
BCLA Clavier 126.34 332 PKP **PKPdf** **01 45 19.1 +0.2**
DAVOX Davos/Dischmat 126.38 326 PKP **PKPdf** **01 45 17.6 -1.8**
DAVOX Davos/Dischmat 126.38 326 PKP **PKPdf** **01 45 17.6 -1.8**
comp=Z,10nm,0.8s,baz=108,slow=3.2,SNR=10
WLF Walferdange 126.45 331 PKP **PKPdf** **01 45 19.0 -0.1**
WLF Walferdange 126.45 331 *e*SP SP 01 57 06.3 -1.3
TSUM Tsumeb 126.65 241 *e*PKPdf **PKPdf** **01 45 21.4 +0.8**
FELD Feldberg im Sc 126.70 329 PKP SKPdf 01 48 30.4 -16
CDF Champ du Feu 126.73 329 *e*PKIKP **PKPdf** **01 45 18.9 -1.0**
comp=Z,9.4nm,0.9s
CDF Champ du Feu 126.73 329 *e*PKIKP **PKPdf** **01 45 18.9 -1.0**
CDF Champ du Feu 126.73 329 *e*PKPdf **PKPdf** **01 45 18.9 -1.0**
GIVF Givet 126.78 332 *e*PKIKP **PKPdf** **01 45 19.7 -0.1**
comp=Z,74nm,1.3s
GIVF Givet 126.78 332 *e*PKIKP **PKPdf** **01 45 19.7 -0.1**
GIVF Givet 126.78 332 *e*PKPdf **PKPdf** **01 45 19.7 -0.1**
TUE Stuetta 126.86 326 *e*PKPdf **PKPdf** **01 45 19.8 -0.5**
DOU Dourbes 126.89 332 PKP **PKPdf** **01 45 20.6 +0.7**
BAIF Baives 127.09 333 *e*PKIKP **PKPdf** **01 45 20.2 -0.2**
comp=Z,20nm,1.0s
BAIF Baives 127.09 333 *e*PKIKP **PKPdf** **01 45 20.2 -0.2**
BAIF Baives 127.09 333 *e*PKPdf **PKPdf** **01 45 20.2 -0.2**
HINF Hinteralfeld 127.34 329 *e*PKIKP **PKPdf** **01 45 20.3 -0.7**
comp=Z,14nm,0.9s
HINF Hinteralfeld 127.34 329 *e*PKIKP **PKPdf** **01 45 20.3 -0.7**
HINF Hinteralfeld 127.34 329 *e*PKPdf **PKPdf** **01 45 20.3 -0.7**
PAGF Fort de Pagny 127.41 330 *e*PKIKP **PKPdf** **01 45 20.8 -0.2**
PAGF Fort de Pagny 127.41 330 *e*PKPdf **PKPdf** **01 45 20.8 -0.2**
HAU Haudompre 127.47 330 *e*PKIKP **PKPdf** **01 45 20.6 -0.6**
comp=Z,14nm,0.8s
HAU *e*R
comp=Z,2μm,22.8s
HAU Haudompre 127.47 330 *e*PKIKP **PKPdf** **01 45 20.6 -0.6**
HAU Haudompre 127.47 330 *e*PKPdf **PKPdf** **01 45 20.6 -0.6**
TRQA Tornquist 127.51 149 *e*PKPdf **PKPdf** **01 45 21.3 -0.4**
MEZF Maizieres J'vi 127.78 331 *e*PKIKP **PKPdf** **01 45 21.7 0.0**
comp=Z,20nm,0.9s
MEZF Maizieres J'vi 127.78 331 *e*PKPdf **PKPdf** **01 45 21.7 0.0**
SFTF Sexfontaines 127.98 330 *e*PKIKP **PKPdf** **01 45 21.6 -0.6**
SFTF Sexfontaines 127.98 330 *e*PKPdf **PKPdf** **01 45 21.6 -0.6**
CFAA Coronel Fontan 128.27 138 PKP **PKPdf** **01 45 23.5 +0.2**
CFAA pPKP **pPKPdf** **01 45 48.8 -1.9**
CFAA PP **PP** **01 47 27.1 -0.7**
CFAA SKPbc SKiKP 01 48 37.2 -14
CFAA Coronel Fontan 128.27 138 PKP **PKPdf** **01 45 23.5 +0.2**
comp=Z,2.3nm,0.7s,baz=235,slow=2.8,SNR=13
CFAA pPKP **pPKPdf** **01 45 48.8 -1.9**
comp=Z,1.8nm,0.6s,baz=227,slow=3.0,SNR=6.2
CFAA PP **PP** **01 47 27.1 -0.7**
comp=Z,0.5nm,0.8s,baz=224,slow=3.2,SNR=5.4
CFAA SKPbc SKiKP 01 48 37.2 -14
comp=Z,1.2nm,0.9s,baz=277,slow=2.7,SNR=4.0
CABF La Chapelle 128.52 328 *e*PKIKP **PKPdf** **01 45 23.3 0.0**
comp=Z,34nm,1.0s
CABF La Chapelle 128.52 328 *e*PKIKP **PKPdf** **01 45 23.3 0.0**
CABF La Chapelle 128.52 328 *e*PKPdf **PKPdf** **01 45 23.3 0.0**
LPL La Plagne 128.88 327 *e*PKIKP **PKPdf** **01 45 23.2 -1.0**
LPL La Plagne 128.88 327 *e*PKPdf **PKPdf** **01 45 23.2 -1.0**
LPL La Plagne 128.88 327 *e*PKPdf **PKPdf** **01 45 23.2 -1.0**
LPG La Plagne 128.88 327 *e*PKIKP **PKPdf** **01 45 23.8 -0.5**
LPG La Plagne 128.88 327 *e*PKIKP **PKPdf** **01 45 23.8 -0.5**
LPG La Plagne 128.88 327 *e*PKPdf **PKPdf** **01 45 23.8 -0.5**
PGF Pioggiola 129.38 323 *e*PKIKP **PKPdf** **01 45 24.5 -0.6**
PGF Pioggiola 129.38 323 *e*PKIKP **PKPdf** **01 45 24.5 -0.6**
PGF Pioggiola 129.38 323 *e*PKPdf **PKPdf** **01 45 24.5 -0.6**
SBF Sospel 129.52 325 *e*PKIKP **PKPdf** **01 45 24.4 -0.9**
comp=Z,94nm,1.5s
SBF Sospel 129.52 325 *e*PKIKP **PKPdf** **01 45 24.4 -0.9**
SBF Sospel 129.52 325 *e*PKPdf **PKPdf** **01 45 24.4 -0.9**
SSF Saint Saulge 129.52 330 *e*PKIKP **PKPdf** **01 45 25.2 +0.1**
comp=Z,21nm,1.0s
SSF Saint Saulge 129.52 330 *e*PKPdf **PKPdf** **01 45 25.2 +0.1**
TOUF Mont Tournerai 129.53 325 PKP SKPbc 01 48 37.8 -0.8
REVF Revere 129.63 325 PKP SKPbc 01 48 37.8 -1.0
SMF Signal de Mont 129.65 330 *e*PKIKP **PKPdf** **01 45 25.1 -0.3**
comp=Z,45nm,1.3s
SMF Signal de Mont 129.65 330 *e*PKPdf **PKPdf** **01 45 25.1 -0.3**
ORIF Oris-en-Rattie 129.73 327 *e*PKIKP **PKPdf** **01 45 24.7 -1.0**
ORIF *e*R
comp=Z,848nm,22.2s
ORIF Oris-en-Rattie 129.73 327 *e*PKIKP **PKPdf** **01 45 24.7 -1.0**
ORIF Oris-en-Rattie 129.73 327 *e*PKPdf **PKPdf** **01 45 24.7 -1.0**
CALN Calern 129.90 325 PKP SKPbc 01 48 38.9 -0.9
FRF La Foret Royal 130.16 325 *e*PKIKP **PKPdf** **01 45 26.1 -0.3**
FRF La Foret Royal 130.16 325 *e*PKIKP **PKPdf** **01 45 26.1 -0.3**
FRF La Foret Royal 130.16 325 *e*PKPdf **PKPdf** **01 45 26.1 -0.3**
BGF Bois d'Agland 130.20 330 *e*PKIKP **PKPdf** **01 45 26.5 +0.1**
comp=Z,27nm,1.1s
BGF Bois d'Agland 130.20 330 *e*PKPdf **PKPdf** **01 45 26.5 +0.1**
LMR La Mourre 130.38 325 *e*PKIKP **PKPdf** **01 45 26.6 -0.2**
LMR La Mourre 130.38 325 *e*PKPdf **PKPdf** **01 45 26.6 -0.2**
LMR La Mourre 130.38 325 *e*PKPdf **PKPdf** **01 45 26.6 -0.2**
AGO Saint Agoulin 130.41 330 PKP **SKPbc** **01 48 41.6 +0.2**
VIVF Saint-Julien-l 130.42 328 *e*PKIKP **PKPdf** **01 45 25.9 -1.0**
comp=Z,30nm,1.1s
VIVF Saint-Julien-l 130.42 328 *e*PKIKP **PKPdf** **01 45 25.9 -1.0**
VIVF Saint-Julien-l 130.42 328 *e*PKPdf **PKPdf** **01 45 25.9 -1.0**
ATAH Atahualpa 130.47 104 PKP **PKPdf** **01 45 29.5 +1.1**
ATAH pPKP **pPKPdf** **01 45 55.2 -0.5**
ATAH SKPab **SKPbc** **01 48 46.2 +3.1**
ATAH Atahualpa 130.47 104 PKP **PKPdf** **01 45 29.5 +1.1**
comp=Z,28nm,0.9s,baz=153,slow=2.3,SNR=15
ATAH pPKP **pPKPdf** **01 45 55.2 -0.5**
comp=Z,24nm,1.0s,baz=180,slow=1.8,SNR=4.7
ATAH SKPab **SKPbc** **01 48 46.2 +3.1**
comp=Z,77nm,

NNA	**Nana**	**130.61**	**111**	PKP	**PKPdf**	**01 45 29.3**	**+1.1**
	comp=Z,22nm,0.9s,baz=217,slow=10,SNR=6.5							
NNA				SKPbc	**SKPab**	**01 48 44.4**	**+1.2**
	comp=Z,19nm,0.8s,baz=245,slow=5.7,SNR=5.7							
PYM	**Petit Puy Mans**	**130.68**	**329**	PKP	**SKPbc**	**01 48 42.5**	**0.0**
TCF	**Toulx Ste Croi**	**130.70**	**330**	*e*PKIKP	**PKPdf**	**01 45 26.8**	**-0.6**
	comp=Z,25nm,0.9s							
TCF	**Toulx Ste Croi**	**130.70**	**330**	*e*PKPdf	**PKPdf**	**01 45 26.8**	**-0.6**
TCF	**Toulx Ste Croi**	**130.70**	**330**	*e*P	**PKPdf**	**01 45 26.8**	**-0.6**
LBL	**Lubilhac**	**130.91**	**329**	PKP	**SKPbc**	**01 48 43.2**	**-0.2**
VERF	**Verneugheol**	**130.94**	**330**	PKP	**SKPbc**	**01 48 43.6**	**+0.2**
FRNF	**Fournols**	**131.16**	**329**	PKP	**SKPbc**	**01 48 44.9**	**+0.7**
OTAV	**Otavalo**	**131.75**	**95**	*e*PKPdf	**PKPdf**	**01 45 31.5**	**+0.7**
KEST	**Kesra**	**132.81**	**315**	PKP	**PKPdf**	**01 45 33.8**	**+2.0**
KEST				SKP		01 48 53.5		
KEST	**Kesra**	**132.81**	**315**	PKP	**PKPdf**	**01 45 33.8**	**+2.0**
	comp=Z,2.6nm,0.9s,baz=227,slow=0.7,SNR=8.7							
KEST				SKP		01 48 53.5		
	comp=Z,9.5nm,0.9s,baz=311,slow=2.9,SNR=8.4							
LRDF	**Laroque-de-Fa**	**132.85**	**327**	PKP	**SKPbc**	**01 48 51.3**	**+1.1**
MLS	**Moulis**	**133.61**	**328**	PKP	**SKPbc**	**01 48 54.4**	**+1.6**
CMAH	**Djebel Manchou**	**133.69**	**317**	P	**SKPbc**	**01 48 52.0**	**-1.3**
ABSA	**Djebel Ababsia**	**133.83**	**317**	P	**SKPbc**	**01 48 51.0**	**-2.9**
EPF	**Esparros**	**133.95**	**329**	*e*PKIKP	**PKPdf**	**01 45 32.0**	**-1.7**
EPF	**Esparros**	**133.95**	**329**	*e*PKPdf	**PKPdf**	**01 45 32.0**	**-1.7**
CAEH	**'Ain El Ouahch**	**133.99**	**317**	P	**SKPbc**	**01 48 54.0**	**-0.3**
CKFL	**Kef-Lekhel**	**134.28**	**317**	P	**SKPbc**	**01 48 55.0**	**-0.4**
CASM	**Ain Smara**	**134.51**	**317**	P	**SKPbc**	**01 48 57.0**	**+1.0**
SJPF	**Ste Jean**	**134.69**	**330**	*e*PKIKP	**PKPdf**	**01 45 33.8**	**-1.2**
SJPF	**Ste Jean**	**134.69**	**330**	*e*PKIKP	**PKPdf**	**01 45 33.8**	**-1.2**
SJPF	**Ste Jean**	**134.69**	**330**	*e*PKPdf	**PKPdf**	**01 45 33.8**	**-1.2**
SET	**Setif**	**135.28**	**318**	P	**SKPbc**	**01 48 58.0**	**-0.5**
ROSC	**El Rosal**	**136.28**	**89**	PKPpre	PKPpre	01 45 33.9		
ROSC				PKP	**PKiKP**	**01 45 40.1**	**-0.9**
ROSC				SKP		01 49 05.2		
ROSC	**El Rosal**	**136.28**	**89**	PKhKP	PKPpre	01 45 33.9		
	comp=Z,4.9nm,0.4s,baz=100,slow=11,SNR=3.6							
ROSC				PKP	**PKiKP**	**01 45 40.1**	**-0.9**
	comp=Z,18nm,0.7s,baz=81,slow=9.6,SNR=11							
ROSC				SKP		01 49 05.2		
	comp=Z,50nm,1.0s,baz=100,slow=1.5,SNR=17							
LPAZ	**La Paz**	**136.77**	**121**	*e*PKPpre	PKPpre	01 45 27.4		
LPAZ				*e*PKPdf	**PKPdf**	**01 45 40.0**	**-0.4**
LPAZ				PKP	**PKiKP**	**01 45 41.5**	**-0.6**
LPAZ				SKP		01 49 04.0		
LPAZ	**La Paz**	**136.77**	**121**	PKhKP	PKPpre	01 45 27.4		
	comp=Z,3.8nm,0.9s,baz=38,slow=2.5,SNR=8.4							
LPAZ				PKP	**PKiKP**	**01 45 41.5**	**-0.6**
	comp=Z,12nm,0.8s,baz=104,slow=4.3,SNR=16							
LPAZ				SKP		01 49 04.0		
	comp=Z,23nm,0.9s,baz=289,slow=3.1,SNR=4.2							
EMHD	**Djebel Mahouad**	**136.89**	**319**	P	**SKPbc**	**01 49 03.5**	**0.0**
EBNR	**Beni Rached**	**137.75**	**321**	P	**SKPbc**	**01 49 09.0**	**+3.1**
ESDC	**Sonseca Array**	**138.61**	**329**	PKPpre	PKPpre	01 45 33.3		
ESDC				PP	**PP**	**01 48 33.3**	**0.0**
ESDC				SKPbc	**SKPbc**	**01 49 07.3**	**-1.0**
ESDC	**Sonseca Array**	**138.61**	**329**	PKhKP	PKPpre	01 45 33.3		
	comp=Z,0.6nm,0.6s,baz=30,slow=2.0,SNR=6.7							
ESDC				PP	**PP**	**01 48 33.3**	**0.0**
	comp=Z,1.7nm,0.8s,baz=32,slow=7.2,SNR=3.2							
ESDC				SKPbc	**SKPbc**	**01 49 07.3**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=28,slow=3.6,SNR=6.6							
CPUP	**Villa Florida**	**138.84**	**142**	PKPpre	PKPpre	01 45 35.4		
CPUP				SKPbc	**SKPbc**	**01 49 10.6**	**+1.3**	
CPUP	**Villa Florida**	**138.84**	**142**	PKhKP	PKPpre	01 45 35.4		
	comp=Z,2.0nm,0.5s,baz=202,slow=1.4,SNR=8.3							
CPUP				SKPbc	**SKPbc**	**01 49 10.6**	**+1.3**	
	comp=Z,6.5nm,0.7s,baz=251,slow=7.3,SNR=5.0							
PGAV	**Gavieira, Arco**	**138.85**	**335**	*e*LR	LR	02 33 33.1		
	comp=Z,1μm,20.0s							
MVO	**Moncorvo**	**138.95**	**333**	*e*PKP	PKPdf	01 45 34.1	-8.9	
MVO				*e*SS	SS	02 07 24.3	+41	
MVO				*e*LR	LR	02 33 25.6		
	comp=Z,929nm,20.0s							
POLO	**Lamas de Olo**	**139.13**	**334**	*e*PKP	PKPdf	01 45 34.8	-8.6	
PVIS	**Viseu**	**139.71**	**333**	*e*PP	PP	01 49 11.4	+32	
MTE	**Manteigas**	**139.80**	**333**	*e*SS	SS	02 07 39.7	+47	
MTE				*e*LR	LR	02 33 57.5		
	comp=Z,1μm,20.0s							
SDV	**Santo Domingo**	**140.01**	**83**	*e*PKPdf	**PKPdf**	**01 45 47.0**	**+1.2**
PMRV	**Marv??o**	**140.50**	**332**	*e*PKP	PKPdf	01 45 40.4	-5.4	
PMRV				*e*LR	LR	02 33 55.6		
	comp=Z,652nm,22.0s							
PTOM	**Tomar**	**140.82**	**333**	*e*PP	PP	01 49 14.1	+27	
PESTR	**Estremoz**	**141.04**	**331**	*e*PP	PP	01 49 13.5	+25	
TAM	**Tamanrasset**	**141.39**	**000**	*e*PKPdf	**PKPdf**	**01 45 43.7**	**-4.3**
EVO	**Evora**	**141.50**	**331**	*e*PKIKP	**PKPdf**	**01 45 44.2**	**-3.4**
	comp=Z,57nm,1.4s							
EVO				*e*R				
	comp=Z,1μm,21.8s							
EVO	**Evora**	**141.50**	**331**	*e*PKP	PKPdf	01 45 41.6	-6.0	
EVO	**Evora**	**141.50**	**331**	*e*PP	PP	01 49 15.6	+25	
EVOP	**Sao Brissos**	**141.56**	**331**	*e*PKIKP	**PKPdf**	**01 45 44.2**	**-3.5**
EVOP	**Sao Brissos**	**141.56**	**331**	*e*PKPdf	**PKPdf**	**01 45 44.2**	**-3.5**
PBEJ	**Beja**	**141.83**	**331**	*e*PKP	**PKPdf**	**01 45 43.9**	**-4.4**
PBEJ	**Beja**	**141.83**	**331**	*e*PP	PP	01 48 55.9	+3.1	
PBEJ	**Beja**	**141.83**	**331**	*e*PP	PP	01 49 17.6	+25	
LIS	**Lisbon**	**141.89**	**333**	*e*P	**PKPdf**	**01 45 48.5**	**+0.2**
LIS				*e*PP	**PP**	**01 48 53.5**	**+0.4**
LIS				*e*SS	SS	02 07 20.1	+2.9	
LIS				AMS	AMS	02 53 57.1		
	comp=E,1μm,20.1s							
LIS	**Lisbon**	**141.89**	**333**	*e*PKIKP	**PKPdf**	**01 45 48.5**	**+0.2**
LIS				*e*		01 48 53.4		
PNCL	**Nicolau / Gran**	**142.09**	**331**	*e*PKP	PKPdf	01 45 39.1	-10	
PNCL	**Nicolau / Gran**	**142.09**	**331**	*e*PP	PP	01 48 58.4	+4.1	
MESJ	**Messejana**	**142.15**	**331**	*e*P	**PKPdf**	**01 45 47.4**	**-1.4**
MESJ				*e*PP	**PP**	**01 48 55.2**	**+0.5**
MESJ				*e*SS	SS	02 07 23.2	+2.7	
MESJ				AMS	AMS	02 40 12.7		
	comp=N,627nm,20.7s							
MESJ	**Messejana**	**142.15**	**331**	*e*P	**PKPdf**	**01 45 47.4**	**-1.4**
MESJ	**Messejana**	**142.15**	**331**	*e*PKIKP	**PKPdf**	**01 45 47.4**	**-1.4**
MESJ				*e*		01 48 55.2		
PCVE	**Castro Verde**	**142.23**	**330**	*e*PKP	**PKPdf**	**01 45 44.6**	**-4.4**
PCVE	**Castro Verde**	**142.23**	**330**	*e*PP	PP	01 48 56.4	+1.2	
PVAQ	**Vaqueiros**	**142.25**	**330**	*e*PP	PP	01 48 56.4	+1.0	
PVAQ				*e*SS	SS	02 07 37.6	+16	
PVAQ				*e*LR	LR	02 34 48.5		
	comp=N,1μm,20.0s							
PBDV	**Barranco-do-Ve**	**142.48**	**330**	*e*PP	PP	01 49 19.7	+23	
MORF	**Marmelete**	**142.78**	**331**	*e*PP	PP	01 49 02.8	+4.1	
SIV	**San Ignacio**	**142.79**	**126**	PKPpre	PKPpre	01 45 46.3		
SIV				SKPbc	**SKiKP**	**01 49 21.6**	**+0.4**
SIV	**San Ignacio**	**142.79**	**126**	PKhKP	PKPpre	01 45 46.3		
	comp=N,26nm,0.6s,baz=244,slow=4.3,SNR=101							
SIV				SKPbc	**SKiKP**	**01 49 21.6**	**+0.4**
	comp=N,85nm,1.2s,baz=239,slow=3.1,SNR=16							
SJG	**San Juan**	**143.02**	**67**	*e*PKPdf	**PKPdf**	**01 45 48.1**	**-2.7**
MDT	**Midelt**	**143.85**	**322**	PKP	PKPbc	01 45 50.1	0.0	
MDT				SKPbc	**SKiKP**	**01 49 23.2**	**+0.3**
MDT	**Midelt**	**143.85**	**322**	PKP	PKPbc	01 45 50.1	0.0	
	comp=N,19nm,0.9s,baz=74,slow=4.0,SNR=29							
MDT				SKPbc	**SKiKP**	**01 49 23.2**	**+0.3**
	comp=N,27nm,1.0s,baz=33,slow=5.4,SNR=6.8							
SAML	**Samuel**	**144.25**	**114**	*e*PKPdf	**PKPab**	**01 45 50.5**	**-0.8**
SAML				*e*SKPdf	**SKPdf**	**01 49 19.4**	**+0.7**
RTC	**Rabat Centre**	**144.36**	**325**	*e*PKPdf	**PKPdf**	**01 45 52.5**	**-0.3**
SKI	**Saint Kitts**	**146.36**	**67**	*e*P	**PKPab**	**01 45 58.6**	**-0.5**
SPB	**Sao Paulo**	**146.49**	**151**	*e*PKPbc	**PKPab**	**01 45 59.2**	**-0.1**
SHEL	**Horse Pasture**	**147.45**	**228**	*e*PKP2	**PKPab**	**01 46 02.3**	**-1.0**
SHEL	**Horse Pasture**	**147.45**	**228**	*e*PKPbc	**PKPab**	**01 46 02.3**	**-1.0**
TOA0	**Torodi Ar. Sit**	**147.49**	**285**	*e*PKPdf	**PKPdf**	**01 45 58.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**147.49**	**285**	PKPbc	**PKPdf**	**01 45 59.1**	**+0.5**
TORD				SKP		01 49 27.2		
TORD	**Torodi Ar. Bea**	**147.49**	**285**	PKPbc	**PKPdf**	**01 45 59.1**	**+0.5**
	comp=N,56nm,0.6s,baz=83,slow=2.4,SNR=126							
TORD				SKP		01 49 27.2		
	comp=N,23nm,1.0s,baz=56,slow=2.2,SNR=3.8							
LZG	**Guadaloupe-1**	**147.56**	**69**	*e*P	**PKPbc**	**01 46 01.5**	**0.0**
HMG	**Houelmont**	**147.68**	**69**	*e*P	**PKPbc**	**01 46 01.6**	**-0.2**
SCG	**Saint Claude**	**147.68**	**69**	*e*P	**PKPbc**	**01 46 02.8**	**+0.9**
PHG	**Guadaloupe-2**	**147.72**	**69**	*e*P	**PKPab**	**01 46 03.1**	**-1.5**
DOG	**Dongo Capester**	**147.74**	**69**	*e*P	**PKPab**	**01 46 04.0**	**-0.5**
SEG	**Port Louis**	**147.75**	**68**	*e*P	**PKPbc**	**01 46 02.4**	**+0.5**
TBG	**Guadaloupe-3**	**147.76**	**69**	*e*P	**PKPbc**	**01 46 02.9**	**+1.0**
MGG	**Marie-Galante**	**148.05**	**69**	*e*P	**PKPbc**	**01 46 02.5**	**-0.3**
FDF	**Fort de France**	**148.49**	**71**	*e*PKP2	**PKPbc**	**01 46 04.5**	**+0.5**
FDF	**Fort de France**	**148.49**	**71**	*e*PKPbc	**PKPbc**	**01 46 04.5**	**+0.5**
FDF	**Fort de France**	**148.49**	**71**	*e*P	**PKPbc**	**01 46 05.1**	**+1.1**
SVB	**Belmont**	**148.70**	**74**	*e*P	**PKPbc**	**01 46 03.6**	**-0.9**
TRN	**Trinidad (W)**	**148.96**	**79**	*e*P	**PKPbc**	**01 46 05.1**	**-0.1**
TBH	**Brigand Hill**	**149.31**	**79**	*e*P	**PKPbc**	**01 46 07.5**	**+1.5**
CAM4	**Nova Friburgo**	**149.69**	**157**	*i*P	**PKPdf**	**01 46 03.3**	**+0.9**
CAM4				*i*		01 46 08.0		
CAM4				*i*		01 46 14.2		
CAM4				*i*		01 46 17.4		
CAM4				*i*		01 46 33.4		
CAM4				*i*		01 46 37.5		
CAM4				*i*		01 46 50.0		
CAM4				*i*		01 47 03.6		
TOSP	**Speyside**	**149.72**	**77**	*e*P	**PKPbc**	**01 46 08.8**	**+1.8**
BDFB	**Brasilia**	**152.56**	**141**	PKP	**PKPdf**	**01 46 07.5**	**+0.7**
BDFB				PKPbc	**PKiKP**	**01 46 14.3**	**+0.4**
BDFB				PKPab	**PKPab**	**01 46 24.4**	**0.0**
BDFB				pPKPbc	**pPKPbc**	**01 46 38.6**	**-2.4**
BDFB	**Brasilia**	**152.56**	**141**	PKP	**PKPdf**	**01 46 07.5**	**+0.7**
	comp=N,16nm,0.9s,baz=186,slow=3.2,SNR=22							
BDFB				PKPbc	**PKiKP**	**01 46 14.3**	**+0.4**
	comp=N,46nm,0.6s,baz=162,slow=1.3,SNR=64							
BDFB				PKPab	**PKPab**	**01 46 24.4**	**0.0**
	comp=N,52nm,0.8s,baz=242,slow=2.1,SNR=12							
BDFB				pPKPbc	**pPKPbc**	**01 46 38.6**	**-2.4**
	comp=N,61nm,0.6s,baz=200,slow=1.9,SNR=7.7							
DBIC	**Dimbokro**	**154.56**	**274**	PKP	**PKPdf**	**01 46 08.5**	**-1.0**
DBIC				*e*PKPdf	PKPbc	01 46 08.7	-9.3	
DBIC				PKPbc	**PKiKP**	**01 46 18.0**	**0.0**
DBIC				*e*PKPbc	PKPab	01 46 18.9	-14	
DBIC	**Dimbokro**	**154.56**	**274**	PKP	**PKPdf**	**01 46 08.5**	**-1.0**
	comp=N,8.0nm,1.0s,baz=238,slow=0.1,SNR=6.7							
DBIC				PKPbc	**PKiKP**	**01 46 18.0**	**0.0**
	comp=N,15nm,0.8s,baz=56,slow=2.7,SNR=13							
LIC	**Lamto**	**154.73**	**273**	*e*PKIKP	**PKPdf**	**01 46 05.8**	**-4.0**
	comp=N,33nm,0.8s							
LIC				*e*R				
	comp=N,640nm,21.2s							
LIC	**Lamto**	**154.73**	**273**	*e*PKPdf	**PKPdf**	**01 46 05.8**	**-4.0**

*CSEM **12** 01:28:19.5, 40°.82N×15°.24E, h10km, MD1.6/5, After ROM*
ROM 12 01:28:19.5±0.1, 40°.82N×15°.24E, h10km±1km, Md1.6/5, MI0.6/2, Error ellipse: s-maj=1.8km s-min=1.4km az=2.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCRV	**Calabrutti - M**	**0.07**	**237**	Pg	Pg	01 28 22.1	+0.2
MCRV				Sg	Sg	01 28 23.9	+0.2
	86nm,0.1s						
MCRV	**Calabrutti - M**	**0.07**	**237**	Pg	Pg	01 28 22.1	+0.2
MCRV				Sg	Sg	01 28 23.9	+0.2
	86nm,0.1s						
SNAL	**S. Angelo Dei**	**0.11**	**347**	Pg	Pg	01 28 23.0	+0.6
SNAL				Sg	Sg	01 28 24.9	+0.4
	23nm,0.5s						
SNAL	**S. Angelo Dei**	**0.11**	**347**	Pg	Pg	01 28 23.0	+0.6
SNAL				Sg	Sg	01 28 24.9	+0.4
	23nm,0.5s						
CSSN	**Cassano Irpino**	**0.17**	**284**	Pg	Pg	01 28 24.0	+0.7
CSSN				Sg	Sg	01 28 27.4	+1.4
CSSN	**Cassano Irpino**	**0.17**	**284**	Pg	Pg	01 28 24.0	+0.7
CSSN				Sg	Sg	01 28 27.4	+1.4
MRLC	**Muro Lucano**	**0.20**	**108**	Pg	Pg	01 28 24.3	+0.5
MRLC				Sg	Sg	01 28 28.3	+1.6
	7.0nm,0.2s						
MRLC	**Muro Lucano**	**0.20**	**108**	Pg	Pg	01 28 24.3	+0.5
MRLC				Sg	Sg	01 28 28.3	+1.6
	7.0nm,0.2s						
SGO	**Sicignano**	**0.26**	**169**	Pg	Pg	01 28 25.1	+0.1
SGO				Sg	Sb	01 28 30.2	-0.8
	3.0nm,0.2s						
SGO	**Sicignano**	**0.26**	**169**	Pg	Pg	01 28 25.1	+0.1
SGO				Sg	Sb	01 28 30.2	-0.8
	3.0nm,0.2s						

*IDC **12** 01:36:24.3±0.6, 35°.76N×26°.24E, h0km, mb4.2/23, mb1 4.3/29, mb1mx4.2/37, mbtmp4.2/29, ML4.2/5, MS4.4/2, Ms1 4.4/2, ms1mx3.0/47, Error ellipse: s-maj=14.1km s-min=11.6km az=10.0*
*MOS **12** 01:36:25.9±1.3, 35°.34N×26°.17E, h33km, mb4.5/13, Error ellipse: s-maj=7.0km s-min=3.9km az=113.1*
*HLW **12** 01:36:27.5, 35°.90N×26°.56E, h22km±42km, Md4.2, Ml4.3*
*DDA **12** 01:36:28.2, 35°.79N×26°.53E, h8km, ML4.7*
*NEIC **12** 01:36:28.4, 35°.67N×26°.34E, h34km, mb4.3/19, ML3.9(ATH), After ATH.*
*ATH **12** 01:36:28.4, 35°.66N×26°.34E, h34km±1km, MD3.9/21, ML3.9*
*ISK **12** 01:36:29.2, 35°.71N×26°.28E, h68km, MD4.3*
*CSEM **12** 01:36:29.7±0.1, 35°.54N×26°.37E, h55km±1km, mb4.5/9, Ms3.7, Mw3.8, Error ellipse: s-maj=2.5km s-min=1.8km az=22.0*
*NSSC **12** 01:36:29.6±1.6, 36°.04N×26°.86E, h172km±323km, ML3.2*
*THE **12** 01:36:30.4, 35°.63N×26°.33E, h31km±8km, ML4.2/5, Error ellipse: s-maj=8.0km s-min=0.7km az=118.0*
*NIC **12** 01:36:34.3±0.2, 35°.67N×26°.92E, h60km, mb4.5, ML4.0, MW3.4*
ISC 12 01:36:28.8±0.7, 35°.63N±0°.02×26°.36E±0°.02, h33km±3km, n771, σ1§55/823, mb4.3/35, 11C-7D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.53**	**193**	P	**Pn**	**01 36 40.7**	**+0.8**
ZKR				S	**Sn**	**01 36 48.5**	**+0.7**
ZKR	**Zakros**	**0.53**	**193**	*e*PN	**Pn**	**01 36 40.8**	**+0.8**
ZKR				*e*SN	**Sn**	**01 36 48.4**	**+0.7**
ZKR	**Zakros**	**0.53**	**193**	P	**Pn**	**01 36 40.7**	**+0.8**
ZKR				*e*Sn	**Sn**	**01 36 48.4**	**+0.7**
KARP	**Karpathos**	**0.66**	**97**	*e*PN	**Pb**	**01 36 42.6**	**+0.7**
KARP				*e*SN	**Sn**	**01 36 52.0**	**+1.0**
KARP	**Karpathos**	**0.66**	**97**	*e*Pn	**Pb**	**01 36 42.6**	**+0.7**
KARP				*e*Sn	**Sn**	**01 36 52.0**	**+1.0**
NPS	**Neapolis**	**0.71**	**240**	P	**Pb**	**01 36 43.1**	**+0.3**
NPS				S	**Sb**	**01 36 52.3**	**-0.2**
NPS	**Neapolis**	**0.71**	**240**	*e*PN	**Pb**	**01 36 43.1**	**+0.3**
NPS				*e*SN	**Sb**	**01 36 52.2**	**-0.2**
NPS	**Neapolis**	**0.71**	**240**	P	**Pb**	**01 36 43.1**	**+0.3**
NPS				*e*Sn	**Sb**	**01 36 52.2**	**-0.2**
LAST	**Lasithi**	**0.86**	**238**	P	**Pb**	**01 36 45.1**	**-0.2**
LAST				S	**Sn**	**01 36 56.2**	**+0.1**
LAST	**Lasithi**	**0.86**	**238**	*e*PN	**Pb**	**01 36 45.3**	**0.0**
LAST	**Lasithi**	**0.86**	**238**	P	**Pb**	**01 36 45.1**	**-0.2**
LAST				S	**Sn**	**01 36 56.2**	**+0.1**
SANT	**Santorini**	**1.04**	**316**	P	**Pn**	**01 36 47.3**	**+0.2**
SANT				S	**Sn**	**01 37 00.6**	**0.0**
SANT	**Santorini**	**1.04**	**316**	*e*Pg	**Pn**	**01 36 47.3**	**+0.2**
SANT				*e*S	**Sn**	**01 37 00.2**	**-0.4**
SANT	**Santorini**	**1.04**	**316**	*e*PN	**Pn**	**01 36 47.6**	**+0.4**
SANT				*e*SN	**Sn**	**01 37 00.9**	**+0.3**
SANT	**Santorini**	**1.04**	**316**	P	**Pn**	**01 36 47.3**	**+0.2**
SANT	**Santorini**	**1.04**	**316**	*e*Pn	**Pn**	**01 36 47.6**	**+0.4**
SANT				*e*S	**Sn**	**01 37 00.2**	**-0.4**
SANT				*e*Sn	**Sn**	**01 37 00.9**	**+0.3**
NIS1	**Nisyros Isl.**	**1.18**	**34**	P	**Pb**	**01 36 50.0**	**-0.5**
NIS1	**Nisyros Isl.**	**1.18**	**34**	*e*PN	**Pb**	**01 36 50.1**	**-0.5**
NIS1	**Nisyros Isl.**	**1.18**	**34**	*e*Pn	**Pb**	**01 36 50.1**	**-0.5**
SIVA	**Sivas**	**1.41**	**245**	P	**Pb**	**01 36 53.4**	**-1.1**
SIVA				S	**Sn**	**01 37 09.8**	**+0.3**
SIVA	**Sivas**	**1.41**	**245**	*e*PN	**Pb**	**01 36 53.7**	**-0.8**
SIVA	**Sivas**	**1.41**	**245**	P	**Pb**	**01 36 53.4**	**-1.1**
SIVA	**Sivas**	**1.41**	**245**	*e*Pn	**Pb**	**01 36 53.7**	**-0.8**
SIVA				S	**Sn**	**01 37 09.8**	**+0.3**
DAT	**Datca**	**1.47**	**41**	*e*PN	**Pn**	**01 36 54.0**	**+0.9**
DAT				*e*SN	**Sn**	**01 37 12.7**	**+1.3**
DAT	**Datca**	**1.47**	**41**	*e*Pn	**Pn**	**01 36 54.1**	**+0.9**
DAT				*e*Sn	**Sn**	**01 37 12.7**	**+1.3**
ARG	**Arkhangelos**	**1.55**	**67**	P	**Pb**	**01 36 55.5**	**-1.3**
ARG				S	**Sn**	**01 37 14.2**	**+1.2**
ARG	**Arkhangelos**	**1.55**	**67**	*e*PN	**Pb**	**01 36 55.7**	**-1.1**
ARG				*e*SN	**Sb**	**01 37 15.4**	**-0.6**
ARG	**Arkhangelos**	**1.55**	**67**	P	**Pb**	**01 36 55.5**	**-1.3**
ARG				S	**Sn**	**01 37 14.2**	**+1.2**
ARG				*e*Sn	**Sb**	**01 37 15.4**	**-0.6**
APE	**Apeiranthos**	**1.59**	**335**	*e*PN	**Pn**	**01 36 55.2**	**+0.5**
APE				*e*SN	**Sn**	**01 37 13.1**	**-1.0**
APE	**Apeiranthos**	**1.59**	**335**	P	**Pn**	**01 36 55.2**	**+0.5**
APE				S	**Sn**	**01 37 13.5**	**-0.5**
APE	**Apeiranthos**	**1.59**	**335**	*e*PB	**Pn**	**01 36 55.3**	**+0.6**
APE				*e*SN	**Sn**	**01 37 13.6**	**-0.5**
APE	**Apeiranthos**	**1.59**	**335**	*e*Pb	**Pn**	**01 36 55.3**	**+0.6**
APE				*e*Sn	**Sn**	**01 37 13.1**	**-1.0**
BODT	**Bodrum**	**1.62**	**28**	*e*PN	**Pn**	**01 36 56.2**	**+1.1**
BODT	**Bodrum**	**1.62**	**28**	*e*Pn	**Pn**	**01 36 56.2**	**+1.1**
VAM	**Vamos**	**1.78**	**264**	P	**Pn**	**01 36 57.2**	**0.0**
VAM	**Vamos**	**1.78**	**264**	*e*PN	**Pn**	**01 36 57.3**	**0.0**
VAM	**Vamos**	**1.78**	**264**	*e*Pn	**Pn**	**01 36 57.3**	**0.0**
MLSB	**Milas**	**2.02**	**34**	*e*PN	**Pn**	**01 37 02.1**	**+1.6**
MLSB	**Milas**	**2.02**	**34**	*e*Pn	**Pn**	**01 37 02.1**	**+1.6**
GVD	**Gavdhos**	**2.02**	**248**	P	**Pb**	**01 37 03.0**	**-1.9**
GVD	**Gavdhos**	**2.02**	**248**	*e*Pn	**Pb**	**01 37 03.3**	**-1.6**
GVD				*e*S	**Sn**	**01 37 25.6**	**+0.8**
GVD	**Gavdhos**	**2.02**	**248**	*e*PB	**Pb**	**01 37 03.3**	**-1.6**
GVD	**Gavdhos**	**2.02**	**248**	P	**Pb**	**01 37 03.0**	**-1.9**
GVD	**Gavdhos**	**2.02**	**248**	*e*Pb	**Pb**	**01 37 03.3**	**-1.6**
GVD				*e*S	**Sn**	**01 37 25.5**	**+0.8**
YER	**Yerkesik**	**2.16**	**45**	*e*PN	**Pn**	**01 37 04.1**	**+1.6**
YER	**Yerkesik**	**2.16**	**45**	*e*Pn	**Pn**	**01 37 04.1**	**+1.6**
GCAM	**G?zelcaml?**	**2.18**	**18**	*e*P	**Pn**	**01 37 04.2**	**+1.4**
GCAM				*e*S	**Sn**	**01 37 28.3**	**-0.4**
GCAM	**G?zelcaml?**	**2.18**	**18**	*e*P	**Pn**	**01 37 04.2**	**+1.4**
GCAM				*e*S	**Sn**	**01 37 28.3**	**-0.4**
TURN	**Turunc**	**2.20**	**55**	*i* P	**Pn**	**01 37 00.2**	**-2.7**
TURN				*i* S	**Sn**	**01 37 24.0**	**-4.9**
TURN	**Turunc**	**2.20**	**55**	*i* P	**Pn**	**01 37 00.2**	**-2.7**
DALY	**Dalyan (Mu¨la**	**2.20**	**57**	*e*PN	**Pn**	**01 37 04.9**	**+1.9**
DALY	**Dalyan (Mu¨la**	**2.20**	**57**	*e*Pn	**Pn**	**01 37 04.9**	**+1.9**
AYDN	**Tasoluk**	**2.37**	**31**	*i* P	**Pn**	**01 37 07.2**	**+1.8**
AYDN				*i* S	**Sn**	**01 37 30.2**	**-3.1**
AYDN	**Tasoluk**	**2.37**	**31**	*i* P	**Pn**	**01 37 07.2**	**+1.8**
FETY	**Fethiye**	**2.42**	**65**	*e*PN	**Pn**	**01 37 08.4**	**+2.3**
FETY	**Fethiye**	**2.42**	**65**	*e*Pn	**Pn**	**01 37 08.4**	**+2.3**
ANKY	**Antikythira Is**	**2.50**	**276**	*e*PN	**Pn**	**01 37 07.5**	**+0.3**
ANKY				*e*SN	**Sn**	**01 37 37.8**	**+1.2**
ANKY	**Antikythira Is**	**2.50**	**276**	*e*Pn	**Pn**	**01 37 07.5**	**+0.3**
ANKY				*e*Sn	**Sn**	**01 37 37.8**	**+1.2**
KSL	**Kastellorizon**	**2.67**	**78**	*e*PN	**Pn**	**01 37 11.8**	**+2.4**
KSL	**Kastellorizon**	**2.67**	**78**	*e*Pn	**Pn**	**01 37 11.8**	**+2.4**
AKAS	**Kas**	**2.70**	**76**	*i* P	**Pn**	**01

ATAL Atalanti 4.06 320 P Pn 01 37 30.4 +1.8
LTBQ Tobruq 4.10 210 *i* P Pn 01 37 31.6 +2.4
SNR=36
SMIA Simia 4.11 323 P Pn 01 37 31.4 +2.1
SMIA Simia 4.11 323 P Pn 01 37 31.4 +2.1
DSF Desfina 4.14 313 P Pn 01 37 31.8 +2.1
DSF Desfina 4.14 313 P Pn 01 37 31.8 +2.1
KLV Kalavryta, Ach 4.15 307 *e*PN Pn 01 37 32.2 +2.3
KLV Kalavryta, Ach 4.15 307 *e*Pn Pn 01 37 32.2 +2.3
BALB Balikesir 4.18 16 *e*PN Pn 01 37 32.1 +1.9
BALB Balikesir 4.18 16 *e*Pn Pn 01 37 32.1 +1.9
EZN Ezine 4.19 360 *e*PN Pn 01 37 31.1 +0.7
EZN Ezine 4.19 360 *e*Pn Pn 01 37 31.1 +0.7
SKIA Skiathos 4.22 328 P Pn 01 37 32.7 +1.9
SKIA Skiathos 4.22 328 P Pn 01 37 32.7 +1.9
AXAR Agios Charalam 4.31 318 P Pn 01 37 34.4 +2.4
AXAR Agios Charalam 4.31 318 P Pn 01 37 34.4 +2.4
KALE Kalithea 4.36 310 P Pn 01 37 35.2 +2.4
KALE Kalithea 4.36 310 *e*PN Pn 01 37 35.5 +2.7
KALE Kalithea 4.36 310 P Pn 01 37 35.2 +2.4
KALE Kalithea 4.36 310 *e*Pn Pn 01 37 35.5 +2.7
LIA Limnos Island 4.37 348 P Pn 01 37 33.4 +0.7
LIA Limnos Island 4.37 348 *e*PN Pn 01 37 33.7 +1.0
LIA Limnos Island 4.37 348 P Pn 01 37 33.4 +0.7
LIA Limnos Island 4.37 348 *e*Pn Pn 01 37 33.7 +1.0
LAKA Lakka 4.38 308 P Pn 01 37 35.5 +2.6
LAKA Lakka 4.38 308 *e*PN Pn 01 37 35.9 +3.0
LAKA Lakka 4.38 308 P Pn 01 37 35.5 +2.6
LAKA Lakka 4.38 308 *e*Pn Pn 01 37 35.9 +3.0
TRIZ Trizonia 4.39 310 P Pn 01 37 36.6 +3.5
TRIZ Trizonia 4.39 310 *e*PN Pn 01 37 36.6 +3.5
TRIZ Trizonia 4.39 310 P Pn 01 37 36.6 +3.5
SHUT Suhut-Afyon 4.44 48 *e*PN Pn 01 37 36.2 +2.2
SHUT Suhut-Afyon 4.44 48 *e*Pn Pn 01 37 36.2 +2.2
PSA1 Psathopyrgos 4.49 308 *e*PN Pn 01 37 36.9 +2.5
XOR Xorichti 4.50 327 P Pn 01 37 36.5 +1.8
XOR Xorichti 4.50 327 P Pn 01 37 36.5 +1.8
EFP Efpalio 4.53 309 P Pn 01 37 38.0 +3.0
EFP Efpalio 4.53 309 *e*PN Pn 01 37 38.1 +3.0
EFP Efpalio 4.53 309 P Pn 01 37 38.0 +3.0
GONE Gonen-Balikesi 4.53 13 *e*PN Pn 01 37 36.4 +1.3
GONE Gonen-Balikesi 4.53 13 *e*Pn Pn 01 37 36.4 +1.3
ALT Altintas 4.54 40 *e*PN Pn 01 37 37.3 +2.0
ALT Altintas 4.54 40 *e*Pn Pn 01 37 37.3 +2.0
TVSB Tavsanli 4.54 32 *e*PN Pn 01 37 37.2 +1.9
TVSB Tavsanli 4.54 32 *e*Pn Pn 01 37 37.2 +1.9
HMAT Matruh 4.56 172 P Pn 01 37 36.7 +1.2
baz=174
HMAT S Sn 01 38 24.7 -2.7
baz=174
HMAT Matruh 4.56 172 P Pn 01 37 33.7 -1.8
HMAT S Sn 01 38 24.7 -2.7
RLS Riolos of Patr 4.62 303 P Pn 01 37 40.0 +3.8
RLS Riolos of Patr 4.62 303 *e*PN Pn 01 37 39.5 +3.3
RLS Riolos of Patr 4.62 303 *e*Pn Pn 01 37 39.5 +3.3
RLS Riolos of Patr 4.62 303 P Pn 01 37 40.0 +3.8
AGG Agios Georgios 4.67 318 P Pn 01 37 39.8 +2.7
AGG Agios Georgios 4.67 318 *e*PN Pn 01 37 39.7 +2.7
AGG Agios Georgios 4.67 318 *e*Pn Pn 01 37 39.7 +2.7
LPK Lapseki 4.75 4 *e*PN Pn 01 37 39.3 +1.3
LPK Lapseki 4.75 4 *e*Pn Pn 01 37 39.3 +1.3
GELI Tayfur-Gelibol 4.76 1 *e*PN Pn 01 37 39.4 +1.2
GELI Tayfur-Gelibol 4.76 1 *e*Pn Pn 01 37 39.4 +1.2
MAKR Makrakomi, Fth 4.77 316 P Pn 01 37 41.7 +3.3
MAKR Makrakomi, Fth 4.77 316 *e*Pn Pn 01 37 41.7 +3.3
PAIG Paliouri 4.79 334 P Pn 01 37 40.4 +1.8
PAIG Paliouri 4.79 334 *e*PN Pn 01 37 40.4 +1.8
PAIG Paliouri 4.79 334 *e*Pn Pn 01 37 40.4 +1.8
KRBG Karabiga-Canak 4.81 9 *e*PN Pn 01 37 40.2 +1.3
KRBG Karabiga-Canak 4.81 9 *e*Pn Pn 01 37 40.2 +1.3
EDC Edincik 4.86 14 *e*PN Pn 01 37 40.9 +1.4
EDC Edincik 4.86 14 *e*Pn Pn 01 37 40.9 +1.4
GAZI Gazipasa 4.87 81 *i* P Pn 01 37 40.2 +0.5
GAZI *i* S Sn 01 38 30.1 -4.8
GAZI Gazipasa 4.87 81 *i* P Pn 01 37 40.2 +0.5
BNT Bandirma 4.88 14 *e*PN Pn 01 37 41.1 +1.3
BNT Bandirma 4.88 14 *e*Pn Pn 01 37 41.1 +1.3
SMTH Samothraki Isl 4.88 353 *e*PN Pn 01 37 40.3 +0.4
SMTH Samothraki Isl 4.88 353 *e*Pn Pn 01 37 40.3 +0.4
KCTX Karacabey (Bur 4.89 18 *e*PN Pn 01 37 41.4 +1.4
KCTX Karacabey (Bur 4.89 18 *e*Pn Pn 01 37 41.4 +1.4
EVR Evrytania 4.90 313 P Pn 01 37 43.3 +3.1
EVR Evrytania 4.90 313 *e*PN Pn 01 37 43.4 +3.2
EVR Evrytania 4.90 313 P Pn 01 37 43.3 +3.1
AKMC Akamas 4.91 95 P Pn 01 37 40.3 -0.1
AKMC S Sn 01 38 32.4 -3.7
AKMC Akamas 4.91 95 P Pn 01 37 40.3 -0.1
AKMC S Sn 01 38 32.4 -3.7
PPCY Paphos 4.95 97 P Pn 01 37 41.2 +0.4
PPCY Paphos 4.95 97 P Pn 01 37 41.2 +0.4
ERIK Erikli-Kesan 5.04 1 *e*PN Pn 01 37 43.2 +1.2
ERIK Erikli-Kesan 5.04 1 *e*Pn Pn 01 37 43.2 +1.2
MRMT Marmara Adasi 5.06 11 *e*PN Pn 01 37 43.4 +1.0
MRMT Marmara Adasi 5.06 11 *e*Pn Pn 01 37 43.4 +1.0
OUR Ouranopolis 5.06 339 P Pn 01 37 43.6 +1.3
OUR Ouranopolis 5.06 339 P Pn 01 37 43.6 +1.3
RKY Sarkoy-Tekirda 5.09 7 *e*PN Pn 01 37 43.8 +1.0
RKY Sarkoy-Tekirda 5.09 7 *e*Pn Pn 01 37 43.8 +1.0
ENEZ Enez 5.10 358 *e*PN Pn 01 37 43.8 +0.9
ENEZ Enez 5.10 358 *e*Pn Pn 01 37 43.8 +0.9
ALFC Alevga 5.12 93 ⇓P Pn 01 37 43.0 -0.1
7.0nm,0.2s
ALFC S Sn 01 38 37.3 -3.8
ALFC Alevga 5.12 93 ⇓P Pn 01 37 43.0 -0.1
7.0nm,0.2s
ALFC S Sn 01 38 37.3 -3.8
MDNY Mudanya-Bursa 5.13 22 *e*PN Pn 01 37 45.0 +1.6
MDNY Mudanya-Bursa 5.13 22 *e*Pn Pn 01 37 45.0 +1.6
THL Klokotos Trika 5.23 320 P Pn 01 37 47.1 +2.4
THL Klokotos Trika 5.23 320 *e*PN Pn 01 37 47.5 +2.8
THL Klokotos Trika 5.23 320 P Pn 01 37 47.1 +2.4
THL Klokotos Trika 5.23 320 *e*Pn Pn 01 37 47.5 +2.8
ALN Alexandroupoli 5.27 357 P Pn 01 37 46.1 +0.9
ALN Alexandroupoli 5.27 357 *e*PN Pn 01 37 46.0 +0.9
ALN Alexandroupoli 5.27 357 P Pn 01 37 46.1 +0.9
PLG Polygyros 5.27 335 P Pn 01 37 47.0 +1.8
PLG Polygyros 5.27 335 *e*PN Pn 01 37 47.0 +1.8
PLG Polygyros 5.27 335 P Pn 01 37 47.0 +1.8
ESKT Eskisehir 5.27 41 *e*PN Pn 01 37 47.1 +1.8
ESKT Eskisehir 5.27 41 *e*Pn Pn 01 37 47.1 +1.8
VLS Valsamata 5.28 301 P Pn 01 37 46.6 +1.2
VLS Valsamata 5.28 301 *e*PN Pn 01 37 47.3 +1.9
VLS Valsamata 5.28 301 P Pn 01 37 46.6 +1.2
VLS Valsamata 5.28 301 *e*Pn Pn 01 37 47.3 +1.9
IZI Iznik 5.30 27 *e*PN Pn 01 37 47.4 +1.7
IZI Iznik 5.30 27 *e*Pn Pn 01 37 47.4 +1.7
ARMT Armutlu 5.31 21 *e*PN Pn 01 37 47.4 +1.7
ARMT Armutlu 5.31 21 *e*Pn Pn 01 37 47.4 +1.7
KONT Konya--Tatoy 5.34 63 *e*PN Pn 01 37 48.6 +2.4
KONT Konya--Tatoy 5.34 63 *e*Pn Pn 01 37 48.6 +2.4
LEF Lefka 5.36 94 *e*PN Pn 01 37 46.8 +0.4
LEF Lefka 5.36 94 *e*Pn Pn 01 37 46.8 +0.4
ERMK Ermenek 5.40 77 *e*P Pn 01 37 49.7 +2.6
ERMK *e*S Sn 01 38 48.5 +0.3
ERMK Ermenek 5.40 77 *e*P Pn 01 37 49.7 +2.6
ERMK *e*S Sn 01 38 48.5 +0.3
LIT Litokhoron 5.42 327 P Pn 01 37 49.2 +2.0
LIT Litokhoron 5.42 327 *e*PN Pn 01 37 49.0 +1.8
LIT Litokhoron 5.42 327 *e*Pn Pn 01 37 49.0 +1.8
LADK Ladik-KONYA 5.45 60 *e*PN Pn 01 37 50.1 +2.3
LADK Ladik-KONYA 5.45 60 *e*Pn Pn 01 37 50.1 +2.3
KIZT Kizilcal 5.47 52 *e*PN Pn 01 37 50.1 +2.1
KIZT Kizilcal 5.47 52 *e*Pn Pn 01 37 50.1 +2.1
ADVT Abdulvahap 5.49 28 *e*PN Pn 01 37 49.7 +1.5
ADVT Abdulvahap 5.49 28 *e*Pn Pn 01 37 49.7 +1.5
LKD2 Lefkada island 5.54 306 P Pn 01 37 51.3 +2.4
LKD2 Lefkada island 5.54 306 *e*PN Pn 01 37 50.7 +1.8
LKD2 Lefkada island 5.54 306 *e*Pn Pn 01 37 50.7 +1.8
LKD2 Lefkada island 5.54 306 P Pn 01 37 51.3 +2.4
CRLT Corlu 5.60 11 *e*PN Pn 01 37 50.8 +1.1
CRLT Corlu 5.60 11 *e*Pn Pn 01 37 50.8 +1.1
SVRH Sivrihisar-ESK 5.60 46 *e*PN Pn 01 37 51.5 +1.7
SVRH Sivrihisar-ESK 5.60 46 *e*Pn Pn 01 37 51.5 +1.7
MAMC Mammari 5.62 93 P Pn 01 37 50.7 +0.7
MAMC Mammari 5.62 93 P Pn 01 37 50.7 +0.7
SOH Sokhos 5.70 336 *e*PN Pn 01 37 53.0 +1.8
SOH Sokhos 5.70 336 *e*Pn Pn 01 37 53.0 +1.8
CSS Prodhromos 5.74 95 P Pn 01 37 51.9 +0.3
1.7nm,0.2s
CSS S Sn 01 38 52.8 -3.5

CSS Prodhromos 5.74 95 *e*PN Pn 01 37 52.6 +0.9
CSS Prodhromos 5.74 95 P Pn 01 37 52.8 +1.2
CSS Prodhromos 5.74 95 *e*Pn Pn 01 37 52.0 +0.3
CSS *e*S Sn 01 38 45.5 -11
CSS Prodhromos 5.74 95 P Pn 01 37 51.9 +0.3
1.7nm,0.2s
CSS *e*S Sn 01 38 45.5 -11
SLVT Silivri 5.78 14 *e*PN Pn 01 37 53.3 +1.1
SLVT Silivri 5.78 14 *e*Pn Pn 01 37 53.3 +1.1
GULT Gulveren 5.81 33 *e*PN Pn 01 37 54.6 +1.9
GULT Gulveren 5.81 33 *e*Pn Pn 01 37 54.6 +1.9
HBRG Burj al 'Arab 5.82 149 P Pn 01 37 53.1 +0.3
baz=151
HBRG Burj al 'Arab 5.82 149 P Pn 01 37 53.1 +0.3
ISK Istanbul-Kandi 5.83 20 *e*PN Pn 01 37 54.2 +1.3
ISK Istanbul-Kandi 5.83 20 *e*Pn Pn 01 37 54.2 +1.3
CTKS Kestanelik-??a 5.85 16 *e*PN Pn 01 37 54.4 +1.3
CTKS Kestanelik-??a 5.85 16 *e*Pn Pn 01 37 54.4 +1.3
LFK Lefkose 5.86 91 *e*PN Pn 01 37 55.8 +2.4
LFK Lefkose 5.86 91 *e*Pn Pn 01 37 55.8 +2.4
KZN Kozani 5.91 324 *e*PN Pn 01 37 57.2 +3.1
KZN Kozani 5.91 324 *e*Pn Pn 01 37 57.2 +3.1
JAN Janina 5.94 314 *e*PN Pn 01 37 57.3 +2.8
JAN Janina 5.94 314 *e*Pn Pn 01 37 57.3 +2.8
CTYL Yal??k??y-??at 6.03 14 *e*PN Pn 01 37 56.9 +1.3
CTYL Yal??k??y-??at 6.03 14 *e*Pn Pn 01 37 56.9 +1.3
NVR Nevrokopi 6.04 342 *e*PN Pn 01 37 57.5 +1.7
NVR Nevrokopi 6.04 342 *e*Pn Pn 01 37 57.5 +1.7
KDZ Kurdzhali 6.06 353 *i* P Pn 01 37 56.9 +0.8
SILT Sile 6.09 24 *e*PN Pn 01 37 57.7 +1.3
SILT Sile 6.09 24 *e*Pn Pn 01 37 57.7 +1.3
MDUB Mudurnu 6.16 37 *e*PN Pn 01 37 59.1 +1.6
MDUB Mudurnu 6.16 37 *e*Pn Pn 01 37 59.1 +1.6
GRG Griva 6.17 331 *e*PN Pn 01 38 00.2 +2.7
RZN Rozhen 6.19 348 *i* P Pn 01 37 59.5 +1.5
EDRB Edirne 6.22 3 *e*PN Pn 01 37 58.8 +0.6
EDRB Edirne 6.22 3 *e*Pn Pn 01 37 58.8 +0.6
SULT Sultanhani-AKS 6.28 64 *e*PN Pn 01 38 00.9 +1.8
SULT Sultanhani-AKS 6.28 64 *e*Pn Pn 01 38 00.9 +1.8
MMB Musomiste 6.30 342 *i* P Pn 01 38 00.7 +1.3
PHNC Paralimni 6.30 93 P Pn 01 38 01.7 +2.3
2.9nm,0.6s
PHNC S Sn 01 39 10.0 -0.2
PHNC Paralimni 6.30 93 P Pn 01 38 01.7 +2.3
2.9nm,0.6s
PHNC S Sn 01 39 10.0 -0.2
SWA2 6.41 187 P Pn 01 38 02.2 +1.3
baz=189
SWA2 AMP 01 39 00.0
comp=N,220µm,0.3s,logA/T=5.8,baz=189
SWA2 S Sn 01 39 08.8 -4.2
baz=189
SWA2 6.41 187 P Pn 01 38 02.2 +1.3
SWA2 S Sn 01 39 08.8 -4.2
FNA Florina 6.47 324 *e*PN Pn 01 38 05.1 +3.3
AFSR Af'ar-Bala (A 6.55 52 *e*PN Pn 01 38 04.8 +1.9
AFSR Af'ar-Bala (A 6.55 52 *e*Pn Pn 01 38 04.8 +1.9
KEK Kerkira 6.61 310 *e*PN Pn 01 38 05.0 +1.4
LOD Lodumlu 6.62 48 *e*PN Pn 01 38 05.2 +1.4
LOD Lodumlu 6.62 48 *e*Pn Pn 01 38 05.2 +1.4
ANTO Ankara 6.62 48 *e*PN Pn 01 38 05.8 +2.0
ANTO Ankara 6.62 48 *e*P Pn 01 38 06.9 +3.0
ANTO Ankara 6.62 48 *e*Pn Pn 01 38 06.9 +3.0
ANTO Ankara 6.62 48 *e*Pn Pn 01 38 05.8 +2.0
ANTO Ankara 6.62 48 *e*P Pn 01 38 06.9 +3.0
KBN Korca 6.65 320 *e*PN Pn 01 38 07.9 +3.7
KBN Korca 6.65 320 *e*Pn Pn 01 38 07.9 +3.7
BIA Bitola 6.68 325 *e*Pn Pn 01 38 08.7 +4.0
KKB Krupnik 6.74 339 *i* P Pn 01 38 09.6 +4.2
JMB Yambol 6.83 1 *e*P Pn 01 38 10.5 +3.9
HMYD Mayadein 6.91 146 P Pn 01 38 06.7 -1.1
baz=148
HMYD Mayadein 6.91 146 P Pn 01 38 06.7 -1.1
HNAT Natroun 6.97 148 P Pn 01 38 08.6 0.0
baz=150
HNAT Natroun 6.97 148 P Pn 01 38 08.6 0.0
LJBD Adjabya 6.98 229 *i* P Pn 01 38 10.3 +1.6
SNR=34
LJBD *e*S Sn 01 39 24.1 -2.9
SNR=34
NIG Nigde 7.06 67 *e*PN Pn 01 38 11.5 +1.5
NIG Nigde 7.06 67 *e*Pn Pn 01 38 11.5 +1.5
BR131 Keskin Array S 7.07 52 *e*Pn Pn 01 38 12.2 +2.1
comp=N,6.3nm,0.4s
BR131 Keskin Array S 7.07 52 *e*Pn Pn 01 38 12.2 +2.1
comp=N,6.3nm,0.4s
BRTR Keskin Array B 7.07 53 Pn Pn 01 38 12.0 +1.9
BRTR Sn Sn 01 39 31.7 +2.3
BRTR Keskin Array B 7.07 53 Pn Pn 01 38 12.0 +1.9
comp=N,2.5nm,0.3s,baz=217,slow=14,SNR=141
BRTR Sn Sn 01 39 31.7 +2.3
baz=206,slow=22,SNR=2.8
BRTR Keskin Array B 7.07 53 Pn Pn 01 38 12.0 +1.9
BRTR Keskin Array B 7.07 53 *i* P Pn 01 38 12.3 +2.2
comp=N,9.0nm,0.5s
BRTR Sn Sn 01 39 31.7 +2.3
KOT Kottamia 7.31 139 P Pn 01 38 12.4 -0.9
baz=141
KOT Kottamia 7.31 139 P Pn 01 38 12.4 -0.9
VTS Vitosha 7.37 342 ⇑*i*P Pn 01 38 17.5 +3.3
VTS Vitosha 7.37 342 *i* P Pn 01 38 17.1 +2.9
VTS Vitosha 7.37 342 ⇑*i*P Pn 01 38 17.5 +3.3
HSAF As Saff 7.42 142 P Pn 01 38 14.3 -0.5
baz=144
HSAF As Saff 7.42 142 P Pn 01 38 14.3 -0.5
HHAG Hagoal 7.44 138 P Pn 01 38 13.7 -1.3
baz=140
HHAG Hagoal 7.44 138 P Pn 01 38 13.7 -1.3
SAFT Safranbolu 7.48 40 *e*PN Pn 01 38 16.9 +1.3
SAFT Safranbolu 7.48 40 *e*Pn Pn 01 38 16.9 +1.3
PRD Provadia 7.61 6 *i* P Pn 01 38 19.5 +2.3
PHP Peshkopia 7.62 324 *e*PN Pn 01 38 21.1 +3.6
PHP Peshkopia 7.62 324 *e*Pn Pn 01 38 21.1 +3.6
HNTI Hanita 7.71 107 Pn Pn 01 38 18.1 -0.7
LUJL Ujela 7.77 215 *i* P Pn 01 38 20.3 +0.7
SNR=34
ARNB Al Arnab 7.82 85 *e*P Pn 01 38 19.5 -0.8
ARNB *e*S Sn 01 39 39.6 -8.1
ARNB AML AML 01 39 53.7
comp=N,17nm,0.6s
ARNB AML AML 01 39 55.1
comp=E,31nm,0.4s
ARNB Al Arnab 7.82 85 *e*P Pn 01 38 17.9 -2.4
ARNB *e*S Sn 01 39 34.8 -13
ARNB *e*S Sn 01 39 36.4 -11
ARNB Al Arnab 7.82 85 *e*P Pn 01 38 19.5 -0.8
SNR=45
ARNB *e*S Sn 01 39 39.6 -8.1
comp=E,31nm,0.4s,SNR=40
BHL Bhannes 7.84 100 *e*P Pn 01 38 21.7 +1.1
MMA0 Mount Meron ar 7.92 107 Pn Pn 01 38 20.3 -1.4
MMAI Mount Meron ar 7.92 107 Pn Pn 01 38 20.5 -1.2
MMAI Sn Sn 01 39 47.4 -2.7
MMAI Mount Meron Ar 7.92 107 Pn Pn 01 38 20.5 -1.2
comp=E,8.2nm,0.3s,baz=302,slow=13,SNR=43
MMAI Sn Sn 01 39 47.4 -2.7
comp=E,15nm,0.3s,baz=296,slow=15,SNR=8.0
MMAI Mount Meron Ar 7.92 107 Pn Pn 01 38 20.5 -1.2
MMAI Sn Sn 01 39 47.4 -2.7
SLTI Sal'it 7.96 113 Pn Pn 01 38 21.0 -1.2
HWQ Hawqa 7.98 97 *e*P Pn 01 38 22.6 0.0
KSDI Kefar Szold 8.06 105 Pn Pn 01 38 22.5 -1.0
RCY Rachaya 8.10 102 *e*P Pn 01 38 23.1 -1.1
PUK Puka 8.15 324 *e*PN Pn 01 38 28.6 +3.7
PUK Puka 8.15 324 *e*Pn Pn 01 38 28.6 +3.7
PSN Preselentsi 8.17 9 *i* P Pn 01 38 26.2 +1.3
KZIT Kziot 8.21 123 Pn Pn 01 38 24.6 -1.0
BTCH Batrach 8.21 84 *e*P Pn 01 38 25.1 -0.5
BTCH *e*S Sn 01 39 49.7 -7.6
BTCH AML AML 01 40 00.3
comp=N,36nm,0.4s
BTCH AML AML 01 40 03.8
comp=E,24nm,0.6s
BTCH Batrach 8.21 84 *e*P Pn 01 38 23.9 -1.8
BTCH *e*S Sn 01 39 44.6 -13
BTCH AML AML 01 40 00.2
comp=N,36nm,0.4s
BTCH AML AML 01 40 03.8
comp=E,24nm,0.6s
BTCH Batrach 8.21 84 *e*P Pn 01 38 25.1 -0.5
SNR=45
BTCH *e*S Sn 01 39 49.7 -7.6
comp=E,24nm,0.6s,SNR=40

BRBR Barbar 8.21 103 *e*P Pn 01 38 25.1 -0.8
BRBR *e*S Sn 01 39 50.6 -7.1
BRBR AML AML 01 39 59.1
comp=E,27nm,0.5s
BRBR AML AML 01 39 59.5
comp=N,58nm,0.5s
BRBR Barbar 8.21 103 *e*P Pn 01 38 25.1 -0.8
BRBR *e*S Sn 01 39 50.0 -7.6
BRBR AML AML 01 39 59.4
comp=N,60nm,0.5s
BRBR AML AML 01 40 10.2
comp=E,580nm,9.5s
BRBR Barbar 8.21 103 *e*P Pn 01 38 25.0 -0.8
SNR=45
BRBR *e*S Sn 01 39 50.6 -7.1
comp=E,58nm,0.5s,SNR=40
KSHT Keshet 8.25 106 Pn Pn 01 38 26.0 -0.2
HAWK Haweek 8.31 95 *e*P Pn 01 38 25.6 -1.4
HAWK *e*S Sn 01 39 51.4 -8.3
HAWK AML AML 01 39 57.7
comp=E,26nm,0.5s
HAWK AML AML 01 39 59.6
comp=N,50nm,0.7s
HAWK Haweek 8.31 95 *e*P Pn 01 38 25.6 -1.4
SNR=45
HAWK *e*S Sn 01 39 51.4 -8.3
comp=N,50nm,0.7s,SNR=40
BCI Bajram Curri 8.32 326 *e*PN Pn 01 38 31.1 +4.0
BCI Bajram Curri 8.32 326 *e*Pn Pn 01 38 31.1 +4.0
HMDT Nahal Hemdat 8.32 111 Pn Pn 01 38 26.7 -0.4
RTMI Retamim 8.32 121 Pn Pn 01 38 26.0 -1.2
TIP Timpagrande 8.43 298 *e*Pn Pn 01 38 28.8 +0.2
TIP *e*S Sn 01 39 54.7 -7.9
TIP Timpagrande 8.43 298 *e*Pn Pn 01 38 28.8 +0.2
TIP *e*S Sn 01 39 54.7 -7.9
YTIR Yattir 8.46 118 Pn Pn 01 38 28.9 -0.1
TCHB Talchebab 8.49 108 *e*P Pn 01 38 28.9 -0.6
TCHB *e*S Sn 01 39 55.5 -8.6
TCHB AML AML 01 40 08.1
comp=N,64nm,0.3s
TCHB AML AML 01 40 16.9
comp=E,25nm,0.6s
DSI Dead Sea 8.54 116 Pn Pn 01 38 29.3 -0.8
HNKL Nakhl 8.56 129 P Pn 01 38 29.7 -0.8
baz=131
HNKL Nakhl 8.56 129 P Pn 01 38 29.7 -0.8
TOTH TOTAH 8.61 102 *e*P Pn 01 38 29.9 -1.2
TOTH *e*S Sn 01 39 57.4 -10
TOTH AML AML 01 40 08.0
comp=N,24nm,0.7s
HFRF Wahat Farafira 8.62 168 P Pn 01 38 31.9 +0.8
baz=169
HFRF Wahat Farafira 8.62 168 P Pn 01 38 31.9 +0.8
RMNI Mount Ramon 8.65 123 Pn Pn 01 38 31.0 -0.7
CEL Celeste 8.78 290 *e*PN Pn 01 38 33.2 -0.3
CEL Celeste 8.78 290 *e*Pn Pn 01 38 33.2 -0.3
KRMI Kfaran Flat 8.92 126 Pn Pn 01 38 34.6 -0.8
ZFRI Zfri 8.96 122 Pn Pn 01 38 34.4 -1.4
TIRR Tirgusor 8.96 9 *e*P Pn 01 38 37.0 +1.2
TIRR Tirgusor 8.96 9 *e*Pn Pn 01 38 37.0 +1.2
TIRR Tirgusor 8.96 9 ⇑*i*P Pn 01 38 37.4 +1.6
TIRR Tirgusor 8.96 9 *e*P Pn 01 38 37.0 +1.2
PRNI Paran 8.96 124 Pn Pn 01 38 34.8 -1.1
SALA Sala 9.07 106 ⇑*e*P Pn 01 38 35.5 -2.1
SALA Sala 9.07 106 ⇑*e*P Pn 01 38 35.5 -2.1
SNR=45
HRFI Mount Harif 9.18 125 Pn Pn 01 38 38.0 -0.9
MBRI Mt Berech 9.26 127 Pn Pn 01 38 39.5 -0.5
EIL Elat 9.36 127 Pn Pn 01 38 41.4 0.0
EIL Sn Sn 01 40 19.0 -6.5
EIL Elat 9.36 127 Pn Pn 01 38 41.4 0.0
comp=N,1.8nm,0.3s,baz=342,slow=7.5,SNR=19
EIL Sn Sn 01 40 19.0 -6.5
comp=N,5.8nm,0.3s,baz=25,slow=15,SNR=8.7
EIL Elat 9.36 127 Pn Pn 01 38 41.4 0.0
EIL Sn Sn 01 40 19.0 -6.5
ASF Jabal al Asfar 9.41 108 Pn Pn 01 38 43.0 +0.9
ASF Sn Sn 01 40 25.6 -1.2
ASF Jabal al Asfar 9.41 108 Pn Pn 01 38 43.0 +0.9
comp=N,1.0nm,0.3s,baz=155,slow=8.8,SNR=9.1
ASF Sn Sn 01 40 25.6 -1.2
comp=N,0.6nm,0.3s,baz=326,slow=18,SNR=2.8
CUC Castrococco 9.41 301 *e*Pn Pn 01 38 42.1 0.0
CUC *e*S Sn 01 40 14.6 -12
CUC Castrococco 9.41 301 *e*Pn Pn 01 38 42.1 0.0
CUC *e*S Sn 01 40 14.6 -12
ZALF Zalf 9.47 103 *e*P Pn 01 38 42.4 -0.5
ZALF *e*S Sn 01 40 19.7 -8.6
ZALF AML AML 01 40 40.1
comp=E,7.2nm,0.5s
ZALF AML AML 01 40 57.5
comp=N,5.8nm,0.7s
ZALF Zalf 9.47 103 *e*P Pn 01 38 42.4 -0.5
SNR=45
ZALF *e*S Sn 01 40 19.7 -8.6
comp=N,5.8nm,0.7s,SNR=40
CFR Carcaliu 9.63 8⇑*i*P Pn 01 38 47.2 +2.2
MLR Muntele Rosu 9.86 358 Pn Pn 01 38 51.0 +2.7
MLR Muntele Rosu 9.86 358 Pn Pn 01 38 51.0 +2.7
comp=N,0.0nm,0.3s,baz=146,slow=5.3,SNR=8.2
MLR Muntele Rosu 9.86 358 P Pn 01 38 51.0 +2.7
STON Ston 9.87 320 *e*Pn Pn 01 38 47.7 -0.6
STON Sn Sn 01 40 30.2 -7.6
STON Ston 9.87 320 *e*Pn Pn 01 38 47.6 -0.6
PLOR Plostina 10.22 1 ⇓*i*P Pn 01 38 58.0 +4.9
VRI Vrincioaia 10.23 1 ⇓*i*P Pn 01 38 57.8 +4.5
LZLA Zalla 10.27 229 *i* P Pn 01 38 53.6 -0.2
SNR=34
TESR Tescani 10.88 1 ⇓*i*P Pn 01 39 03.4 +1.3
LJFR Jufra 11.04 237 *i* P Pn 01 39 03.8 -0.6
SNR=34
LKFR Kufra 11.75 194 *i* P Pn 01 39 13.6 -0.5
SNR=34
BUR08 Bucovina Ar. S 12.04 356 *e*Pn Pn 01 39 23.9 +5.8
BUR08 Bucovina Ar. S 12.04 356 *e*Pn Pn 01 39 23.9 +5.8
KOLS Kolonicke sedl 13.63 348 *e*P P 01 39 47.8 -0.4
KOLS Kolonicke sedl 13.63 348 *e*PN P 01 39 47.8 -0.4
KOLS Kolonicke sedl 13.63 348 *e*P P 01 39 47.8 -0.4
CRVS Cervenica-Dubn 13.75 346 *e*P P 01 39 46.1 -3.3
CRVS Cervenica-Dubn 13.75 346 *e*PN P 01 39 46.1 -3.3
KEST Kesra 13.84 275 *e*Pn Pn 01 39 43.6 +1.0
KEST Kesra 13.84 275 Pn Pn 01 39 44.3 +1.7
comp=N,0.0nm,0.3s,baz=332,slow=9.3,SNR=4.5
KEST Kesra 13.84 275 *e*Pn Pn 01 39 43.6 +1.0
VYHS Vyhne 14.01 339 *e*P Pn 01 39 47.2 +2.3
VYHS Vyhne 14.01 339 *e*PN Pn 01 39 47.2 +2.3
KWP Kalwaria Pacla 14.25 350 *e*P Pn 01 39 51.1 +3.0
KWP pmax pmax
comp=Z,8.0nm,0.8s
KWP Kalwaria Pacla 14.25 350 *e*Pn Pn 01 39 51.1 +3.0
comp=Z,8.2nm,0.8s
KWP Kalwaria Pacla 14.25 350 ⇓*i*P P 01 39 57.0 +2.0
KWP Kalwaria Pacla 14.25 350 *e*Pn Pn 01 39 51.1 +3.0
comp=Z,8.2nm,0.8s
KWP Kalwaria Pacla 14.25 350 ⇓*i*P P 01 39 57.0 +2.0
SMOL Smolenice 14.47 336 *e*P Pn 01 39 48.4 -2.7
SMOL Smolenice 14.47 336 *e*PN Pn 01 39 48.4 -2.7
KIV Kislovodsk 15.04 51 *e*P P 01 40 04.0 +0.1
KIV *e*S S 01 42 58.2 -2.8
KIV pmax pmax
comp=Z,10.0nm,0.8s
KIV Kislovodsk 15.04 51 *e*P P 01 40 04.0 +0.1
comp=Z,10.0nm,0.8s
KBZ Khabaz 15.07 53 P P 01 40 06.6 +2.5
KBZ Khabaz 15.07 53 Pn P 01 40 06.6 +2.5
KBZ Khabaz 15.07 53 Pn P 01 40 06.6 +2.5
comp=Z,0.2nm,0.3s,baz=240,slow=8.8,SNR=46
KBZ Khabaz 15.07 53 Pn P 01 40 06.6 +2.5
PGF Pioggiola 15.14 302 *e*P Pn 01 40 01.2 +1.0
PGF Pioggiola 15.14 302 *e*P Pn 01 40 01.2 +1.0
PGF Pioggiola 15.14 302 *e*P Pn 01 40 01.2 +1.0
PGF Pioggiola 15.14 302 *e*P Pn 01 40 01.2 +1.0
AK02 Malin Array Si 15.16 7 *e*Pn P 01 40 05.2 +0.1
GNI Garni 15.19 67 *e*Pn P 01 40 03.5 -2.1
GNI Garni 15.19 67 Pn P 01 40 04.4 -1.3
comp=Z,0.3nm,0.3s,baz=90,slow=2.0,SNR=3.4
GNI LR LR 01 45 41.9
comp=Z,680nm,19.9s,baz=281,slow=37
GNI Garni 15.19 67 *e*P P 01 40 03.6 -2.1
AK01 Malin Array Si 15.20 7 *e*Pn P 01 40 05.8 +0.3
AK01 Malin Array Si 15.20 7 *e*Pn P 01 40 05.8 +0.3
KIEV Kiev 15.20 7 *e*P P 01 40 04.2 -1.3
KIEV pmax pmax

comp=Z,12nm,0.5s
KIEV Kiev 15.20 7 *e*Pn **P 01 40 04.2 -1.3**
comp=Z,12nm,0.5s
KIEV Kiev 15.20 7 *e*P **P 01 40 04.2 -1.3**
comp=Z,12nm,0.5s
AKASG Malin Array Be 15.21 7 P **P 01 40 06.1 +0.5**
AKASG Malin Array Be 15.21 7 Pn **P 01 40 06.1 +0.5**
AKASG Malin Array Be 15.21 7 Pn **P 01 40 06.1 +0.5**
comp=Z,5.5nm,0.3s,baz=200,slow=10,SNR=19
AKASG Malin Array Be 15.21 7 P **P 01 40 06.1 +0.5**
ABTA Abfaltersbach 15.21 321 ⇑*i*Pn **Pn 01 40 02.2 +1.1**
ABTA Abfaltersbach 15.21 321 Pn **Pn 01 40 02.2 +1.1**
LGHD Ghdames 15.28 253 *i* P **Pn 01 40 03.8 +1.7**
SNR=43
ZEI Tsey 15.34 57 *e*P **P 01 40 09.6 +2.2**
ZEI pmax pmax
comp=Z,8.0nm,1.0s
OJC Ojcow 15.35 344 *e*P **P 01 40 07.5 +0.3**
OJC pmax pmax
comp=Z,8.0nm,0.8s
OJC Ojcow 15.35 344 *e*Pn **P 01 40 07.5 +0.3**
comp=Z,8.3nm,0.8s
OJC Ojcow 15.35 344 *e*P **P 01 40 07.5 +0.3**
comp=Z,8.0nm,0.8s
OKC Ostrava-Krasne 15.42 340 *e*P **P 01 40 08.6 +0.7**
OKC Ostrava-Krasne 15.42 340 *e*P **P 01 40 08.6 +0.7**
OKC *es*P **sP 01 40 22.0 +1.3**
OKC Ostrava-Krasne 15.42 340 *e*P **P 01 40 08.6 +0.7**
VRAC Vranov 15.44 335 Pn **Pn 01 40 03.9 -0.1**
VRAC Vranov 15.44 335 ⇑*i*P **P 01 40 08.0 -0.2**
VRAC Vranov 15.44 335 Pn **Pn 01 40 03.9 -0.1**
comp=Z,0.4nm,0.3s,baz=132,slow=12,SNR=5.9
VRAC Vranov 15.44 335 Pn **Pn 01 40 03.9 -0.1**
VRAC Vranov 15.44 335 ⇑*i*P **P 01 40 08.0 -0.2**
MORC Moravsky Berou 15.54 338 *e*P **P 01 40 08.4 -1.0**
MORC Moravsky Berou 15.54 338 *e*Pn **P 01 40 08.4 -1.0**
MORC Moravsky Berou 15.54 338 ⇑*i*P **P 01 40 09.1 -0.3**
MORC Moravsky Berou 15.54 338 *e*P **P 01 40 08.4 -1.0**
TREC Trest 15.82 333 *e*P **P 01 40 12.1 -0.3**
TREC Trest 15.82 333 *e*P **P 01 40 12.1 -0.3**
TREC Trest 15.82 333 *e*P **P 01 40 12.1 -0.3**
GERES GERESS Array B 16.17 329 Pn **Pn 01 40 13.1 -0.4**
GERES GERESS Array B 16.17 329 Pn **Pn 01 40 13.1 -0.4**
comp=Z,0.3nm,0.3s,baz=139,slow=12,SNR=15
GERES GERESS Array B 16.17 329 Pn **Pn 01 40 13.1 -0.4**
FETA Feichten 16.32 319 ⇑*i*P **P 01 40 19.4 +1.3**
DPC Dobruska-Polom 16.42 337 *e*P **P 01 40 19.2 +0.1**
DPC pmax pmax
comp=Z,171nm,3.0s
DPC Dobruska-Polom 16.42 337 *e*Pn **P 01 40 19.2 +0.1**
comp=Z,171nm,3.0s
DPC Dobruska-Polom 16.42 337 *e*P **P 01 40 19.5 +0.3**
DPC Dobruska-Polom 16.42 337 *e*P **P 01 40 19.2 +0.1**
comp=Z,171nm,3.0s
KHC Kasperske Hory 16.44 329 *e*P **P 01 40 19.3 0.0**
KHC Kasperske Hory 16.44 329 *e*Pn **P 01 40 19.0 -0.3**
comp=Z,29nm,2.0s
KHC Kasperske Hory 16.44 329 *e*P **P 01 40 19.3 0.0**
KHC *ep*P **pP 01 40 27.1 -0.8**
KHC Kasperske Hory 16.44 329 *e*Pn **P 01 40 19.0 -0.3**
comp=Z,29nm,2.0s
KHC Kasperske Hory 16.44 329 *e*P **P 01 40 19.3 0.0**
UPC Upice 16.66 336 *e*P **P 01 40 23.3 +1.6**
UPC Upice 16.66 336 *e*P **P 01 40 23.3 +1.6**
UPC Upice 16.66 336 *e*P **P 01 40 23.3 +1.6**
SBF Sospel 16.70 305 *e*Pn **P 01 40 19.5 -0.7**
SBF Sospel 16.70 305 *e*Pn **P 01 40 19.5 -0.7**
SBF Sospel 16.70 305 *e*Pn **P 01 40 19.5 -0.7**
SBF Sospel 16.70 305 *e*Pn **P 01 40 19.5 -0.7**
PRU Pruhonice 16.74 333 *e*P **P 01 40 22.8 +0.2**
PRU Pruhonice 16.74 333 *e*P **P 01 40 22.8 +0.2**
PRU Pruhonice 16.74 333 *e*P **P 01 40 22.8 +0.2**
FRF La Foret Royal 17.11 304 *e*P **P 01 40 26.1 -0.7**
FRF La Foret Royal 17.11 304 *e*P **P 01 40 26.1 -0.7**
FRF La Foret Royal 17.11 304 *e*P **P 01 40 26.1 -0.7**
FRF La Foret Royal 17.11 304 *e*P **P 01 40 26.1 -0.7**
NKC Novy Kostel 17.76 330 *e*P **P 01 40 34.7 +0.8**
NKC Novy Kostel 17.76 330 *e*P **P 01 40 34.7 +0.8**
NKC Novy Kostel 17.76 330 *e*P **P 01 40 34.7 +0.8**
LPG La Plagne 17.83 310 *e*P **Pn 01 40 33.8 -0.7**
LPG La Plagne 17.83 310 *e*P **Pn 01 40 33.8 -0.7**
LPG La Plagne 17.83 310 *e*P **Pn 01 40 33.8 -0.7**
LPG La Plagne 17.83 310 *e*P **Pn 01 40 33.8 -0.7**
LPL La Plagne 17.85 310 *e*P **Pn 01 40 34.5 -0.2**
LPL La Plagne 17.85 310 *e*P **Pn 01 40 34.5 -0.2**
LPL La Plagne 17.85 310 *e*P **Pn 01 40 34.5 -0.2**
LPL La Plagne 17.85 310 *e*P **Pn 01 40 34.5 -0.2**
SENIN Lac Senin/Sane 17.90 313 *e*Pn **P 01 40 37.3 +1.6**
comp=Z,28nm,1.7s
SENIN Lac Senin/Sane 17.90 313 *e*Pn **P 01 40 37.3 +1.6**
comp=Z,28nm,1.7s
VSR Storozhevoye 18.10 27 *e*P **P 01 40 39.2 +1.6**
VSR pmax pmax
comp=N,10.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=E,2.0nm,0.3s
VSR Storozhevoye 18.10 27 *e*P **P 01 40 39.2 +1.6**
ORIF Oris-en-Rattie 18.14 307 *e*P **P 01 40 38.3 +0.1**
ORIF *e*R
comp=E,253nm,22.6s
ORIF Oris-en-Rattie 18.14 307 *e*P **P 01 40 38.3 +0.1**
ORIF Oris-en-Rattie 18.14 307 *e*P **P 01 40 38.3 +0.1**
ORIF Oris-en-Rattie 18.14 307 *e*P **P 01 40 38.3 +0.1**
CLL Collm 18.38 333 *e*P **P 01 40 38.0 -2.7**
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL MLR MLR
comp=Z,700nm,20.5s
CLL Collm 18.38 333 *e*(P) **Pn 01 40 42.0 +1.1**
CLL *ep*P **PnPn 01 40 51.0 -1.7**
BFO Black Forest 18.41 319 *e*P **Pn 01 40 41.5 +0.2**
BFO Black Forest 18.41 319 *e*P **Pn 01 40 41.5 +0.2**
BFO Black Forest 18.41 319 *e*P **Pn 01 40 41.5 +0.2**
SUW Suwalki 18.52 354 *e*P **P 01 40 41.9 -0.3**
SUW Suwalki 18.52 354 *e*P **P 01 40 41.9 -0.3**
CABF La Chapelle 18.75 312 *e*P **P 01 40 44.3 -0.7**
comp=Z,8.3nm,0.7s
CABF La Chapelle 18.75 312 *e*P **P 01 40 44.3 -0.7**
CABF pmax pmax
comp=Z,8.0nm,0.7s
CABF La Chapelle 18.75 312 *e*P **P 01 40 44.3 -0.7**
comp=Z,8.3nm,0.7s
CABF La Chapelle 18.75 312 *e*P **P 01 40 44.3 -0.7**
comp=Z,4.2nm,0.7s
GKP Gorka Klasztor 18.78 343 *e*P **P 01 40 44.8 -0.2**
GKP Gorka Klasztor 18.78 343 *e*P **P 01 40 44.9 -0.1**
VIVF Saint-Julien-l 18.91 306 *e*P **P 01 40 46.6 0.0**
VIVF Saint-Julien-l 18.91 306 *e*P **P 01 40 46.6 0.0**
VIVF Saint-Julien-l 18.91 306 *e*P **P 01 40 46.6 0.0**
VIVF Saint-Julien-l 18.91 306 *e*P **P 01 40 46.6 0.0**
HINF Hinteralfeld 18.92 316 *e*P **Pn 01 40 47.2 -0.3**
comp=Z,5.5nm,0.6s
HINF Hinteralfeld 18.92 316 *e*P **Pn 01 40 47.2 -0.3**
HINF pmax pmax
comp=Z,6.0nm,0.6s
HINF Hinteralfeld 18.92 316 *e*P **Pn 01 40 47.2 -0.3**
comp=Z,5.5nm,0.6s
HINF Hinteralfeld 18.92 316 *e*P **Pn 01 40 47.2 -0.3**
comp=Z,2.8nm,0.6s
VRHR Novokhopersk 18.97 31 *e*P **Pn 01 40 49.3 +1.3**
VRHR pmax pmax
comp=N,3.0nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR Novokhopersk 18.97 31 *e*P **Pn 01 40 49.3 +1.3**
CDF Champ du Feu 19.02 318 *e*P **Pn 01 40 49.5 +0.7**
comp=Z,5.9nm,0.7s
CDF Champ du Feu 19.02 318 *e*P **Pn 01 40 49.5 +0.7**
CDF pmax pmax
comp=Z,6.0nm,0.7s
CDF Champ du Feu 19.02 318 *e*P **Pn 01 40 49.5 +0.7**
comp=Z,5.9nm,0.7s
CDF Champ du Feu 19.02 318 *e*P **Pn 01 40 49.5 +0.7**
comp=Z,3.0nm,0.7s
HAU Haudompre 19.31 316 *e*P **P 01 40 51.2 +0.2**
HAU *e*R
comp=Z,1μm,20.0s
HAU Haudompre 19.31 316 *e*P **P 01 40 51.2 +0.2**
HAU Haudompre 19.31 316 *e*P **P 01 40 51.2 +0.2**
HAU Haudompre 19.31 316 *e*P **P 01 40 51.2 +0.2**

IDID Didziasalis 19.69 1 *e*P **P 01 40 54.0 -1.0**
IDID AMB AMB 01 40 56.1
comp=Z,5.5nm,0.8s
IDID Didziasalis 19.69 1 *e*P **P 01 40 54.0 -1.0**
comp=Z,5.5nm,0.8s,SNR=35
IIGN Ignalina 19.73 360 *e*P **P 01 40 54.4 -1.0**
IIGN AMB AMB 01 40 55.8
comp=Z,7.0nm,0.9s
IIGN Ignalina 19.73 360 *e*P **P 01 40 54.4 -1.0**
comp=Z,7.0nm,0.9s,SNR=35
ISAL Salakas 19.95 360 *e*P **P 01 40 56.7 -1.1**
ISAL AMB AMB 01 40 58.8
comp=Z,4.3nm,0.6s
IZAR Zarasai 20.12 360 *e*P **P 01 40 58.8 -1.0**
IZAR AMB AMB 01 41 00.1
comp=Z,7.1nm,0.8s
SMF Signal de Mont 20.15 310 *e*P **P 01 40 59.2 -0.9**
comp=Z,7.0nm,0.5s
SMF Signal de Mont 20.15 310 *e*P **P 01 40 59.2 -0.9**
SMF pmax pmax
comp=Z,7.0nm,0.5s
SMF Signal de Mont 20.15 310 *e*P **P 01 40 59.2 -0.9**
comp=Z,7.0nm,0.5s
SMF Signal de Mont 20.15 310 *e*P **P 01 40 59.2 -0.9**
comp=Z,7.0nm,0.5s
SFTF Sexfontaines 20.16 315 *e*P **P 01 41 00.1 -0.1**
SFTF Sexfontaines 20.16 315 *e*P **P 01 41 00.1 -0.1**
SFTF Sexfontaines 20.16 315 *e*P **P 01 41 00.1 -0.1**
MEZF Maizieres J'vi 20.31 316 *e*P **P 01 41 01.8 0.0**
MEZF Maizieres J'vi 20.31 316 *e*P **P 01 41 01.8 0.0**
MEZF Maizieres J'vi 20.31 316 *e*P **P 01 41 01.8 0.0**
WLF Walferdange 20.35 320 P Pn 01 41 03.9 -0.5
LOR Lormes 20.41 312 *e*P **P 01 41 02.3 -0.7**
LOR *e*R
comp=Z,448nm,22.5s
LOR Lormes 20.41 312 *e*P **P 01 41 02.3 -0.7**
LOR Lormes 20.41 312 *e*P **P 01 41 02.3 -0.7**
AVF Avril sur Loir 20.52 310 *e*P **P 01 41 02.8 -1.3**
comp=Z,8.7nm,0.7s
AVF Avril sur Loir 20.52 310 *e*P **P 01 41 02.8 -1.3**
AVF pmax pmax
comp=Z,9.0nm,0.7s
AVF Avril sur Loir 20.52 310 *e*P **P 01 41 02.8 -1.3**
comp=Z,8.7nm,0.7s
AVF Avril sur Loir 20.52 310 *e*P **P 01 41 02.8 -1.3**
comp=Z,8.7nm,0.7s
SSF Saint Saulge 20.54 311 *e*P **P 01 41 03.6 -0.7**
comp=Z,12nm,0.6s
SSF Saint Saulge 20.54 311 *e*P **P 01 41 03.6 -0.7**
SSF pmax pmax
comp=Z,12nm,0.6s
SSF Saint Saulge 20.54 311 *e*P **P 01 41 03.6 -0.7**
comp=Z,12nm,0.6s
SSF Saint Saulge 20.54 311 *e*P **P 01 41 03.6 -0.7**
comp=Z,12nm,0.6s
CAF Calviac 20.67 304 *e*P **P 01 41 05.7 -0.1**
CAF Calviac 20.67 304 *e*P **P 01 41 05.7 -0.1**
CAF Calviac 20.67 304 *e*P **P 01 41 05.7 -0.1**
CAF Calviac 20.67 304 *e*P **P 01 41 05.7 -0.1**
OBN Obninsk 20.72 17 P Pn 01 41 08.0 -0.7
OBN *e* 01 41 19.7
OBN pmax pmax
comp=Z,7.0nm,1.0s
BGF Bois d'Agland 20.74 309 *e*P **P 01 41 06.3 -0.2**
BGF Bois d'Agland 20.74 309 *e*P **P 01 41 06.3 -0.2**
BGF Bois d'Agland 20.74 309 *e*P **P 01 41 06.3 -0.2**
BGF Bois d'Agland 20.74 309 *e*P **P 01 41 06.3 -0.2**
MEM Membach 20.99 322 P Pn 01 41 10.5 -1.4
RJF Les Rejaudoux 21.16 305 *e*P **P 01 41 10.0 -1.0**
comp=Z,23nm,1.0s
RJF *e*R
comp=Z,537nm,21.0s
RJF Les Rejaudoux 21.16 305 *e*P **P 01 41 10.0 -1.0**
RJF pmax pmax
comp=Z,23nm,1.0s
RJF Les Rejaudoux 21.16 305 *e*P **P 01 41 10.0 -1.0**
comp=Z,23nm,1.0s
RJF Les Rejaudoux 21.16 305 *e*P **P 01 41 10.0 -1.0**
comp=Z,23nm,1.0s
BCLA Clavier 21.24 321 P **P 01 41 10.3 -1.5**
comp=Z,12nm,1.8s
GIVF Givet 21.31 319 *e*P **P 01 41 10.9 -1.7**
comp=Z,16nm,0.8s
GIVF Givet 21.31 319 *e*P **P 01 41 10.9 -1.7**
GIVF pmax pmax
comp=Z,16nm,0.8s
GIVF Givet 21.31 319 *e*P **P 01 41 10.9 -1.7**
comp=Z,16nm,0.8s
GIVF Givet 21.31 319 *e*P **P 01 41 10.9 -1.7**
comp=Z,16nm,0.8s
DOU Dourbes 21.42 319 P **P 01 41 13.0 -0.8**
LFF La Frestale 21.57 303 *e*P **P 01 41 15.1 -0.4**
comp=Z,23nm,0.9s
LFF La Frestale 21.57 303 *e*P **P 01 41 15.1 -0.4**
LFF pmax pmax
comp=Z,23nm,0.9s
LFF La Frestale 21.57 303 *e*P **P 01 41 15.1 -0.4**
comp=Z,23nm,0.9s
LFF La Frestale 21.57 303 *e*P **P 01 41 15.1 -0.4**
comp=Z,23nm,0.9s
BAIF Baives 21.61 319 *e*P **P 01 41 14.6 -1.2**
comp=Z,11nm,0.6s
BAIF Baives 21.61 319 *e*P **P 01 41 14.6 -1.2**
BAIF pmax pmax
comp=Z,11nm,0.6s
BAIF Baives 21.61 319 *e*P **P 01 41 14.6 -1.2**
comp=Z,11nm,0.6s
BAIF Baives 21.61 319 *e*P **P 01 41 14.6 -1.2**
comp=Z,11nm,0.6s
TAM Tamanrasset 22.18 240 *e*P **P 01 41 24.5 +2.2**
TAM Tamanrasset 22.18 240 *e*P **P 01 41 24.5 +2.2**
comp=Z,2.6nm,0.9s
TAM Tamanrasset 22.18 240 *e*P **P 01 41 24.5 +2.2**
comp=Z,2.6nm,0.9s
SJPF Ste Jean 22.53 298 *e*P **P 01 41 24.3 -1.5**
SJPF Ste Jean 22.53 298 *e*P **P 01 41 24.3 -1.5**
SJPF Ste Jean 22.53 298 *e*P **P 01 41 24.3 -1.5**
SJPF Ste Jean 22.53 298 *e*P **P 01 41 24.3 -1.5**
MFF Saint Martin d 22.68 307 *e*P **P 01 41 25.9 -1.4**
comp=Z,24nm,1.0s
MFF Saint Martin d 22.68 307 *e*P **P 01 41 25.9 -1.4**
MFF pmax pmax
comp=Z,25nm,1.0s
MFF Saint Martin d 22.68 307 *e*P **P 01 41 25.9 -1.4**
comp=Z,24nm,1.0s
MFF Saint Martin d 22.68 307 *e*P **P 01 41 25.9 -1.4**
comp=Z,24nm,1.0s
LDF La Druitiere 23.40 312 *e*P **P 01 41 32.8 -1.8**
LDF La Druitiere 23.40 312 *e*P **P 01 41 32.8 -1.8**
LDF La Druitiere 23.40 312 *e*P **P 01 41 32.8 -1.8**
LDF La Druitiere 23.40 312 *e*P **P 01 41 32.8 -1.8**
FLN La Foliniere 23.68 312 *e*P **P 01 41 36.0 -1.3**
FLN *e*R
comp=Z,764nm,22.2s
FLN La Foliniere 23.68 312 *e*P **P 01 41 36.0 -1.3**
FLN La Foliniere 23.68 312 *e*P **P 01 41 36.0 -1.3**
FLN La Foliniere 23.68 312 *e*P **P 01 41 36.0 -1.3**
GRR Gorron 23.77 311 *e*P **P 01 41 36.2 -1.9**
comp=Z,8.8nm,0.4s
GRR Gorron 23.77 311 *e*P **P 01 41 36.2 -1.9**
GRR pmax pmax
comp=Z,9.0nm,0.4s
GRR Gorron 23.77 311 *e*P **P 01 41 36.2 -1.9**
comp=Z,8.8nm,0.4s
GRR Gorron 23.77 311 *e*P **P 01 41 36.2 -1.9**
comp=Z,8.8nm,0.4s
ESDC Sonseca Array 24.29 289 P **P 01 41 42.9 -0.3**
ESDC Sonseca Array 24.29 289 P **P 01 41 42.9 -0.3**
comp=Z,0.8nm,0.4s,baz=81,slow=10.0,SNR=16
ESDC Sonseca Array 24.29 289 P **P 01 41 42.9 -0.3**
SGMF Saint Gilles 24.78 310 *e*P **P 01 41 46.8 -0.6**
SGMF Saint Gilles 24.78 310 *e*P **P 01 41 46.8 -0.6**
SGMF Saint Gilles 24.78 310 *e*P **P 01 41 46.8 -0.6**
SGMF Saint Gilles 24.78 310 *e*P **P 01 41 46.8 -0.6**
QUIF Quistinic 25.05 308 *e*P **P 01 41 48.8 -1.1**
comp=Z,5.7nm,0.3s
QUIF Quistinic 25.05 308 *e*P **P 01 41 48.8 -1.1**
QUIF pmax pmax
comp=Z,6.0nm,0.3s
QUIF Quistinic 25.05 308 *e*P **P 01 41 48.8 -1.1**
comp=Z,5.7nm,0.3s
QUIF Quistinic 25.05 308 *e*P **P 01 41 48.8 -1.1**
comp=Z,5.7nm,0.3s
ROSF Rostrenen 25.25 309 *e*P **P 01 41 49.5 -2.2**
comp=Z,32nm,0.8s

ROSF Rostrenen 25.25 309 *e*P **P 01 41 49.5 -2.2**
ROSF pmax pmax
comp=Z,32nm,0.8s
ROSF Rostrenen 25.25 309 *e*P **P 01 41 49.5 -2.2**
comp=Z,32nm,0.8s
ROSF Rostrenen 25.25 309 *e*P **P 01 41 49.5 -2.2**
comp=Z,32nm,0.8s
MDT Midelt 25.72 273 P **P 01 41 56.3 +0.1**
MDT Midelt 25.72 273 P **P 01 41 56.3 +0.1**
comp=Z,2.1nm,0.8s,baz=83,slow=9.4,SNR=6.6
MDT Midelt 25.72 273 P **P 01 41 56.3 +0.1**
FINES FINESS Array B 25.84 360 P **P 01 41 56.9 0.0**
FINES FINESS Array B 25.84 360 P **P 01 41 56.9 0.0**
comp=Z,2.4nm,0.6s,baz=161,slow=10,SNR=13
FINES FINESS Array B 25.84 360 P **P 01 41 56.8 0.0**
HFS Hagfors 25.86 345 P **P 01 41 55.7 -1.4**
HFS Hagfors 25.86 345 P **P 01 41 55.7 -1.4**
comp=Z,0.8nm,0.3s,baz=151,slow=11,SNR=14
HFS Hagfors 25.86 345 P **P 01 41 55.7 -1.4**
KAF Kangasniemi 26.51 360 *e*P **P 01 42 04.1 +1.2**
KAF pmax pmax
comp=Z,2.0nm,0.4s
KAF Kangasniemi 26.51 360 *ep* **P 01 42 04.1 +1.2**
comp=Z,2.3nm,0.4s
NB2 NORSAR Subarra 27.21 344 P **P 01 42 07.7 -1.6**
comp=Z,4.4nm,1.2s,baz=156,slow=9.3
NB2 NORSAR Subarra 27.21 344 P **P 01 42 07.7 -1.6**
comp=Z,4.4nm,1.2s,SNR=5.6
NOA NORSAR Array B 27.21 344 P **P 01 42 07.5 -1.9**
NOA NORSAR Array B 27.21 344 P **P 01 42 07.5 -1.9**
comp=Z,0.7nm,0.7s,baz=143,slow=6.7,SNR=4.6
NOA NORSAR Array B 27.21 344 P **P 01 42 07.4 -1.9**
EKA Eskdalemuir Ar 28.24 323 P **P 01 42 17.2 -1.3**
EKA Eskdalemuir Ar 28.24 323 P **P 01 42 17.2 -1.3**
comp=Z,4.9nm,0.4s,baz=121,slow=9.2,SNR=24
EKA Eskdalemuir Ar 28.24 323 P **P 01 42 17.2 -1.3**
TOA0 Torodi Ar. Sit 31.54 231 *e*P **P 01 42 48.6 +0.5**
TOA0 Torodi Ar. Sit 31.54 231 *e*P **P 01 42 48.7 +0.5**
TORD Torodi Ar. Bea 31.54 231 P **P 01 42 48.8 +0.7**
TORD Torodi Ar. Bea 31.54 231 P **P 01 42 48.8 +0.7**
comp=Z,2.6nm,0.3s,baz=32,slow=8.8,SNR=255
TORD Torodi Ar. Bea 31.54 231 P **P 01 42 48.8 +0.7**
ARCES ARCESS Array B 33.97 359 P **P 01 43 07.1 -1.7**
ARCES ARCESS Array B 33.97 359 P **P 01 43 07.1 -1.7**
comp=Z,1.3nm,0.6s,baz=182,slow=8.3,SNR=9.8
ARCES ARCESS Array B 33.97 359 P **P 01 43 07.1 -1.7**
AAK Ala-Archa 37.57 64 P **P 01 43 42.3 +2.1**
AAK Ala-Archa 37.57 64 P **P 01 43 42.3 +2.1**
AAK Ala-Archa 37.57 64 P **P 01 43 42.3 +2.1**
comp=Z,5.1nm,0.6s,baz=245,slow=3.7,SNR=5.3
AAK Ala-Archa 37.57 64 P **P 01 43 42.3 +2.1**
KURBB Kurchatov Arra 40.06 51 P **P 01 44 01.9 +1.1**
comp=Z,2.6nm,0.4s,baz=273,slow=8.9,SNR=24
KURK Kurchatov 40.12 51 P **P 01 44 01.9 +0.6**
KURK Kurchatov 40.12 51 P **P 01 44 01.9 +0.6**
KURK Kurchatov 40.12 51 P **P 01 44 01.9 +0.6**
DBIC Dimbokro 40.63 232 P **P 01 44 05.9 +0.1**
DBIC Dimbokro 40.63 232 P **P 01 44 05.9 +0.1**
comp=Z,1.6nm,0.3s,baz=41,slow=8.3,SNR=17
DBIC Dimbokro 40.63 232 P **P 01 44 05.9 +0.1**
MKAR Makanchi Array 42.70 57 P **P 01 44 23.8 +1.3**
MKAR Makanchi Array 42.70 57 P **P 01 44 23.8 +1.3**
MKAR Makanchi Array 42.70 57 P **P 01 44 23.8 +1.3**
comp=Z,4.6nm,0.5s,baz=268,slow=8.8,SNR=24
MKAR Makanchi Array 42.70 57 P **P 01 44 23.8 +1.3**
BBTS Babate 43.66 253 LR LR 02 05 13.3
comp=Z,1μm,21.0s,baz=186,slow=40
ZALV Zalesovo Beam 43.97 47 P **P 01 44 32.6 0.0**
ZALV Zalesovo Beam 43.97 47 P **P 01 44 32.5 0.0**
ZALV Zalesovo Beam 43.97 47 P **P 01 44 32.5 0.0**
comp=Z,2.6nm,0.4s,baz=269,slow=9.0,SNR=13
ZALV Zalesovo Beam 43.97 47 P **P 01 44 32.5 0.0**
SFJD Kangerlussuaq 52.74 331 P **P 01 45 39.0 -1.0**
SFJD Kangerlussuaq 52.74 331 P **P 01 45 39.0 -1.0**
comp=Z,3.3nm,0.5s,baz=106,slow=7.4,SNR=2.8
SFJD Kangerlussuaq 52.74 331 P **P 01 45 39.0 -1.0**
OPO Ambohidratompo 57.40 156 P **P 01 46 16.8 +2.4**
OPO Ambohidratompo 57.40 156 P **P 01 46 16.8 +2.4**
comp=Z,2.5nm,0.8s,baz=259,slow=5.2,SNR=2.9
SONM Songino Array 58.43 51 P **P 01 46 22.6 +1.3**
SONM Songino Array 58.43 51 P **P 01 46 22.6 +1.3**
comp=Z,0.9nm,0.7s,baz=286,slow=7.9,SNR=5.5
SONM Songino Array 58.43 51 P **P 01 46 22.6 +1.3**
SCHQ Schefferville 63.47 320 P **P 01 46 54.6 -0.6**
SCHQ Schefferville 63.47 320 P **P 01 46 54.6 -0.6**
comp=Z,4.6nm,0.5s,baz=60,slow=7.4,SNR=12
SCHQ Schefferville 63.47 320 P **P 01 46 54.7 -0.6**
CMAR Chiang Mai Arr 65.54 84 P **P 01 47 10.3 +0.9**
CMAR Chiang Mai Arr 65.54 84 P **P 01 47 10.3 +0.9**
comp=Z,1.0nm,0.3s,baz=300,slow=7.6,SNR=4.7
CMAR Chiang Mai Arr 65.54 84 P **P 01 47 10.3 +0.9**
RCBR Riachuelo 71.42 248 P P 01 47 52.3 +6.2
RCBR Riachuelo 71.42 248 P P 01 47 52.3 +6.2
comp=Z,18nm,1.0s,baz=175,slow=5.4,SNR=6.2
USRK Ussuriysk Arra 75.82 46 P **P 01 48 11.3 -0.1**
comp=Z,2.1nm,0.7s,baz=296,slow=4.2,SNR=6.4
KSAR Wonju Array Be 77.20 53 P **P 01 48 20.3 +0.8**
KSAR Wonju Array Be 77.20 53 P **P 01 48 20.3 +0.8**
KSRS Korea Array 77.22 53 P **P 01 48 20.3 +0.8**
comp=Z,1.6nm,0.6s,baz=308,slow=4.4,SNR=7.1
YKA Yellowknife Ar 77.30 343 P **P 01 48 18.3 -1.2**
YKA Yellowknife Ar 77.30 343 P **P 01 48 18.3 -1.2**
comp=Z,0.4nm,0.3s,baz=31,slow=5.1,SNR=9.3
YKA Yellowknife Ar 77.30 343 P **P 01 48 18.3 -1.2**
ILAR Eielson Array 79.79 357 P **P 01 48 31.9 -1.3**
ILAR Eielson Array 79.79 357 P **P 01 48 31.9 -1.3**
comp=Z,0.3nm,0.6s,baz=335,slow=4.3,SNR=6.5
ILAR Eielson Array 79.79 357 P **P 01 48 32.0 -1.3**
MJAR Matsushiro Arr 84.28 49 P **P 01 48 57.6 +0.2**
MJAR Matsushiro Arr 84.28 49 P **P 01 48 57.6 +0.2**
comp=Z,1.5nm,0.4s,baz=308,slow=3.7,SNR=4.8
MJAR Matsushiro Arr 84.28 49 P **P 01 48 57.6 +0.2**
ASAR Alice Springs 117.17 101 PKP **PKPdf 01 55 10.9 0.0**
ASAR Alice Springs 117.17 101 PKP **PKPdf 01 55 10.9 0.0**
comp=Z,0.4nm,0.4s,baz=280,slow=1.4,SNR=6.6
ASAR Alice Springs 117.17 101 PKIKP **PKPdf 01 55 10.9 0.0**

IDC ***12*** *01:37:05.0±1.2, 32°.21N×59°.11E, h0km, mb4.1/17, mb1 4.3/18, mb1mx4.1/33, mbtmp4.1/18, ML4.0/1, Error ellipse: s-maj=29.1km s-min=14.9km az=12.0*
BJI ***12*** *01:37:04.0, 32°.30N×59°.10E, h5km, mB5.2/9, mb4.7/15, Ms5.0/8, Ms7 4.6/8*
ISCJB ***12*** *01:37:05.4±0.8, 32°.33N±0°.03×59°.04E±0°.03, h5km±4km, mb4.3/40, MS4.7/4, Error ellipse: s-maj=5.9km s-min=3.8km az=163.8*
THR ***12*** *01:37:06.3±0.9, 32°.38N×58°.99E, h15km±7km, ML4.5*
NEIC ***12*** *01:37:06.3, 32°.38N×59°.00E, h14km, mb4.5/8, ML4.5(THR), MN4.3(TEH), After THR.*
CSEM ***12*** *01:37:06.1±0.2, 32°.34N×59°.10E, h2km, mb4.5/12, Error ellipse: s-maj=7.2km s-min=5.3km az=149.0*
TEH ***12*** *01:37:07.5, 32°.40N×59°.01E, h3km, ML4.3*
MOS ***12*** *01:37:08.3±1.6, 32°.19N×59°.17E, h33km, mb4.6/6, Error ellipse: s-maj=12.2km s-min=7.5km az=125.8*
ISC 12 01:37:08.0±0.5,**32°.33N**±0°.03×**59°.02E**±0°.03,**h12**km±2km, **h11**km**:pP-P, n226,** σ1$**69**/258,**mb4.4**/39,**MS4.5**/4,**8C-8D**,
Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IKOO	**Kooshah**	**0.09**	**351**	*e*		**Pg**	**Pg**	**01 37 10.0**	**-1.0**
	comp=Z,4059μm,0.2s								
IKOO				⇑*e*	Pg		**Pg**	**01 37 08.1**	**-2.9**
IKOO				*es*	Sg		**Sg**	**01 37 09.1**	**-4.1**
IKOO	**Kooshah**	**0.09**	**351**	Pg			**Pg**	**01 37 07.9**	**-3.1**
ITEG	**Tejag**	**0.61**	**338**	*e*	Pg		**Pg**	**01 37 17.3**	**-2.6**
ITEG				*es*	Sg		**Sg**	**01 37 25.2**	**-2.7**
ITEG				*e*				01 37 26.0	
	comp=Z,12μm,0.2s								
ITEG	**Tejag**	**0.61**	**338**	Pg			**Pg**	**01 37 17.3**	**-2.6**
ITEG	**Tejag**	**0.61**	**338**	*e*	Pg		**Pg**	**01 37 17.3**	**-2.6**
ITEG				*es*	Sg		**Sg**	**01 37 25.2**	**-2.7**
IDAH	**Dahanechah**	**0.82**	**60**	*e*	Pg		**Pg**	**01 37 21.9**	**-2.0**
IDAH				*es*	Sg		**Sg**	**01 37 34.3**	**-0.4**
IDAH				*e*				01 37 37.6	
	comp=Z,87μm,0.1s								
IDAH	**Dahanechah**	**0.82**	**60**	Pg			**Pg**	**01 37 21.1**	**-2.8**
IDAH	**Dahanechah**	**0.82**	**60**	*e*	Pg		**Pg**	**01 37 21.9**	**-2.0**
SHRT	**Shahrakht**	**1.69**	**39**	*e*	Pg		**Pn**	**01 37 37.0**	**-0.4**
SHRT					AML		AML	01 38 03.8	
	comp=E,5μm,0.7s								
SHRT	**Shahrakht**	**1.69**	**39**	*e*	Pg		**Pn**	**01 37 37.0**	**-0.4**

TABS	**Tabas**	**2.07**	**310**	*e*Pg	**Pn**	**01 37 42.4**	**-0.3**
TABS				*e*Sg	**Sn**	**01 38 10.0**	**+1.5**
TABS				AML	AML	01 38 16.0	
	comp=E,2μm,0.6s						
TABS				AML	AML	01 38 21.4	
	comp=N,3μm,0.5s						
TABS	**Tabas**	**2.07**	**310**	*e*Pg	**Pn**	**01 37 42.4**	**-0.3**
TABS				*e*Sg	**Sn**	**01 38 10.0**	**+1.5**
KRBR	**Kerman**	**3.04**	**220**	*e*Pn	**Pn**	**01 37 56.5**	**+0.3**
KRBR				*e*Sg	**Sb**	**01 38 42.2**	**+2.7**
KRBR				AML	AML	01 38 55.1	
	comp=N,2μm,0.5s						
KRBR				AML	AML	01 38 56.0	
	comp=E,2μm,0.5s						
KRBR	**Kerman**	**3.04**	**220**	*e*Pn	**Pn**	**01 37 56.5**	**+0.3**
KRBR				*e*Sg	**Sb**	**01 38 42.2**	**+2.7**
IMOG	**Moghan**	**3.77**	**4**	*e*	**Pg**	**01 38 20.5**	**+0.2**
	comp=Z,3μm,0.2s						
IMOG				*e*Pn	**Pn**	**01 38 06.0**	**-0.4**
IMOG	**Moghan**	**3.77**	**4**	Pn	**Pn**	**01 38 05.9**	**-0.4**
IMOG	**Moghan**	**3.77**	**4**	Pn	**Pn**	**01 38 05.9**	**-0.4**
IMEH	**Mehriz**	**3.87**	**257**	*e*Pn	**Pn**	**01 38 07.6**	**+0.1**
IMEH				*e*Sg	**Sb**	**01 39 07.4**	**+4.2**
IMEH				*e*		01 39 21.0	
	comp=Z,8μm,0.3s						
IMEH	**Mehriz**	**3.87**	**257**	Pn	**Pn**	**01 38 07.6**	**+0.1**
IMEH				Sn	**Sn**	**01 38 53.5**	**+0.4**
IMEH	**Mehriz**	**3.87**	**257**	*e*Pn	**Pn**	**01 38 07.6**	**+0.1**
IMEH				Sn	**Sn**	**01 38 53.5**	**+0.4**
ICHK	**Chekchek**	**3.91**	**270⇓**	*e*Pn	**Pn**	**01 38 07.9**	**-0.2**
ICHK				*e*		01 39 13.2	
	comp=Z,14μm,0.2s						
ICHK	**Chekchek**	**3.91**	**270**	Pn	**Pn**	**01 38 07.9**	**-0.2**
ICHK				Sn	**Sn**	**01 38 54.3**	**+0.2**
ICHK	**Chekchek**	**3.91**	**270⇓**	*e*Pn	**Pn**	**01 38 07.9**	**-0.2**
ICHK				Sn	**Sn**	**01 38 54.3**	**+0.2**
ISRO	**Mashad**	**3.98**	**5**	*e*Pn	**Pn**	**01 38 08.1**	**-0.9**
ISRO				*e*Sg	**Sb**	**01 39 10.1**	**+3.7**
ISRO	**Mashad**	**3.98**	**5**	*e*Pn	**Pn**	**01 38 08.1**	**-0.9**
MHI	**Mashad**	**3.98**	**5**	*e*Pn	**Pn**	**01 38 10.1**	**+1.1**
MHI	**Mashad**	**3.98**	**5**	*e*Pn	**Pn**	**01 38 10.1**	**+1.1**
IMYA	**Miami**	**4.10**	**12**	*e*Pn	**Pn**	**01 38 09.9**	**-0.8**
IMYA				*e*		01 39 33.5	
	comp=Z,5μm,0.6s						
IMYA	**Miami**	**4.10**	**12**	Pn	**Pn**	**01 38 09.9**	**-0.8**
IMYA	**Miami**	**4.10**	**12**	*e*Pn	**Pn**	**01 38 09.9**	**-0.8**
IPAY	**Payeh**	**4.11**	**360**	*e*Pn	**Pn**	**01 38 11.1**	**+0.3**
IPAY				*e*		01 38 18.1	
	comp=Z,2μm,0.2s						
IPAY	**Payeh**	**4.11**	**360**	Pn	**Pn**	**01 38 11.1**	**+0.3**
IPAY	**Payeh**	**4.11**	**360**	*e*Pn	**Pn**	**01 38 11.1**	**+0.3**
IAKL	**Akhelmad**	**4.26**	**357**	*e*	**Sn**	**01 39 07.7**	**+4.8**
	comp=Z,2μm,0.2s						
IAKL	**Akhelmad**	**4.26**	**357**	Pn	**Pn**	**01 38 13.3**	**+0.3**
IAKL				Sn	**Sn**	**01 39 00.6**	**-2.3**
IKRD	**Kardeh**	**4.45**	**355**	*e*Pn	**Pn**	**01 38 14.5**	**-1.1**
IKRD				*e*		01 38 36.0	
	comp=Z,2μm,0.3s						
IKRD	**Kardeh**	**4.45**	**355**	Pn	**Pn**	**01 38 15.2**	**-0.4**
IKRD	**Kardeh**	**4.45**	**355**	*e*Pn	**Pn**	**01 38 14.5**	**-1.1**
IQHU	**Qucahn**	**4.75**	**355**	*e*Pn	**Pn**	**01 38 18.7**	**-0.8**
IQHU	**Qucahn**	**4.75**	**355**	*e*Pn	**Pn**	**01 38 18.7**	**-0.8**
ISFR	**Sfrayin**	**4.78**	**350**	*e*Pn	**Pn**	**01 38 19.4**	**-0.8**
ISFR				*e*		01 38 55.4	
	comp=Z,2μm,0.3s						
ISFR	**Sfrayin**	**4.78**	**350**	Pn	**Pn**	**01 38 19.4**	**-0.8**
ISFR	**Sfrayin**	**4.78**	**350**	*e*Pn	**Pn**	**01 38 19.4**	**-0.8**
NASN	**Na'in**	**5.27**	**277**	*e*Pn	**Pn**	**01 38 26.4**	**-0.5**
NASN				AML	AML	01 39 57.1	
	comp=N,218nm,0.6s						
NASN				AML	AML	01 40 10.2	
	comp=E,184nm,0.5s						
NASN	**Na'in**	**5.27**	**277**	*e*Pn	**Pn**	**01 38 26.4**	**-0.5**
IANJ	**Anjilo**	**5.27**	**308**	*e*Pn	**Pn**	**01 38 26.7**	**-0.1**
IANJ				*e*		01 40 10.1	
	comp=Z,2μm,0.4s						
IANJ	**Anjilo**	**5.27**	**308**	Pn	**Pn**	**01 38 26.8**	**-0.1**
IANJ	**Anjilo**	**5.27**	**308**	*e*Pn	**Pn**	**01 38 26.7**	**-0.1**
ISHV	**Shirvan**	**5.30**	**349**	*e*Pn	**Pn**	**01 38 28.1**	**+0.8**
ISHV				*e*		01 38 58.1	
	comp=Z,1μm,0.1s						
ISHV	**Shirvan**	**5.30**	**349**	Pn	**Pn**	**01 38 28.0**	**+0.8**
ISHV	**Shirvan**	**5.30**	**349**	*e*Pn	**Pn**	**01 38 28.0**	**+0.8**
IBND	**Bandar-abas**	**5.32**	**205**	*e*Sg	**Sg**	**01 39 55.4**	**-3.5**
IBND	**Bandar-abas**	**5.32**	**205**	Pn	**Pn**	**01 38 25.7**	**-1.6**
IBND	**Bandar-abas**	**5.32**	**205**	Pn	**Pn**	**01 38 25.7**	**-1.6**
BNDS	**Bandar-Abbas**	**5.50**	**207**	*e*Pn	**Pn**	**01 38 30.2**	**+0.2**
BNDS	**Bandar-Abbas**	**5.50**	**207**	*e*Pn	**Pn**	**01 38 30.2**	**+0.2**
IZEF	**Zefreh**	**5.67**	**277**	*e*Pn	**Pn**	**01 38 32.0**	**-0.4**
IZEF				*e*		01 40 15.8	
	comp=Z,2μm,0.3s						
IZEF	**Zefreh**	**5.67**	**277**	Pn	**Pn**	**01 38 32.5**	**+0.1**
IZEF	**Zefreh**	**5.67**	**277**	Pn	**Pn**	**01 38 32.5**	**+0.1**
ISRV	**Sarvestan**	**5.87**	**241**	*e*Pn	**Pn**	**01 38 35.4**	**+0.2**
ISRV				*e*		01 40 36.0	
	comp=Z,4μm,0.5s						
ISRV	**Sarvestan**	**5.87**	**241**	Pn	**Pn**	**01 38 36.1**	**+0.9**
ISRV	**Sarvestan**	**5.87**	**241**	*e*Pn	**Pn**	**01 38 35.4**	**+0.2**
ISHM	**Shahmirzad**	**5.88**	**308**	*e*Pn	**Pn**	**01 38 34.9**	**-0.4**
ISHM				*e*		01 40 29.1	
	comp=Z,3μm,0.2s						
ISHM	**Shahmirzad**	**5.88**	**308**	Pn	**Pn**	**01 38 35.4**	**+0.1**
ISHM	**Shahmirzad**	**5.88**	**308**	*e*Pn	**Pn**	**01 38 34.9**	**-0.4**
ILAS	**Lasjerd**	**5.89**	**303**	*e*Pn	**Pn**	**01 38 34.4**	**-0.9**
ILAS				*e*		01 40 32.0	
	comp=Z,2μm,0.3s						
ILAS	**Lasjerd**	**5.89**	**303**	Pn	**Pn**	**01 38 36.1**	**+0.8**
ILAS	**Lasjerd**	**5.89**	**303**	*e*Pn	**Pn**	**01 38 34.4**	**-0.9**
IGAR	**Gharneh**	**5.91**	**273**	*e*Pn	**Pn**	**01 38 36.0**	**+0.4**
IGAR				*e*		01 40 23.4	
	comp=Z,1μm,0.3s						
IGLO	**Ghaloghah**	**5.97**	**316**	*e*Pn	**Pn**	**01 38 38.8**	**+2.3**
IGLO	**Ghaloghah**	**5.97**	**316**	Pn	**Pn**	**01 38 38.8**	**+2.3**
IKLH	**Kolahrood**	**6.34**	**281**	*e*Pn	**Pn**	**01 38 42.2**	**+0.6**
IKLH				*e*		01 40 51.3	
	comp=Z,2μm,0.4s						
IKLH	**Kolahrood**	**6.34**	**281**	Pn	**Pn**	**01 38 42.1**	**+0.5**
IKLH	**Kolahrood**	**6.34**	**281**	Pn	**Pn**	**01 38 42.1**	**+0.5**
IALA	**Alasht**	**6.36**	**308**	*e*Pn	**Pn**	**01 38 41.8**	**-0.1**
IALA				*e*		01 40 57.5	
	comp=Z,1μm,0.3s						
IALA	**Alasht**	**6.36**	**308**	Pn	**Pn**	**01 38 41.7**	**-0.1**
IALA	**Alasht**	**6.36**	**308**	Pn	**Pn**	**01 38 41.7**	**-0.1**
DAMV	**Damavand**	**6.72**	**301**	*e*Pn	**Pn**	**01 38 46.2**	**-0.5**
DAMV	**Damavand**	**6.72**	**301**	*e*Pn	**Pn**	**01 38 46.2**	**-0.5**
IPRN	**Peran**	**6.77**	**307**	*e*Pn	**Pn**	**01 38 48.1**	**+0.8**
IPRN				*e*		01 39 00.1	
	comp=Z,3μm,0.2s						
IPRN	**Peran**	**6.77**	**307**	Pn	**Pn**	**01 38 48.0**	**+0.8**
GHVR	**GHOM**	**6.81**	**290**	*e*Pn	**Pn**	**01 38 48.5**	**+0.7**
GHVR	**GHOM**	**6.81**	**290**	*e*Pn	**Pn**	**01 38 48.5**	**+0.7**
IPIR	**Pirpir**	**6.88**	**275**	*e*Pn	**Pn**	**01 38 51.9**	**+2.9**
IPIR				*e*		01 40 49.6	
	comp=Z,1μm,0.4s						
IPIR	**Pirpir**	**6.88**	**275**	Pn	**Pn**	**01 38 51.8**	**+2.8**
CHTH	**Charan**	**7.45**	**301**	*e*Pn	**Pn**	**01 38 56.5**	**-0.3**
CHTH	**Charan**	**7.45**	**301**	*e*Pn	**Pn**	**01 38 56.5**	**-0.3**
IVIS	**Veis**	**10.40**	**285**	*e*Pn	**Pn**	**01 39 36.2**	**-1.0**
IVIS				*e*		01 43 19.5	
	comp=E,250nm,0.6s						
IVIS	**Veis**	**10.40**	**285**	*e*Pn	**Pn**	**01 39 36.2**	**-1.0**
ISRB	**Sarab**	**10.79**	**304**	*e*Pn	**Pn**	**01 39 40.9**	**-1.6**
ISRB				*e*		01 39 56.2	
	comp=Z,149nm,0.4s						
ISRB	**Sarab**	**10.79**	**304**	Pn	**Pn**	**01 39 44.7**	**+2.1**
ISRB	**Sarab**	**10.79**	**304**	*e*Pn	**Pn**	**01 39 41.0**	**-1.6**
IDHR	**Dehrash**	**10.81**	**286**	*e*Pn	**Pn**	**01 39 41.2**	**-1.6**
IDHR				*e*		01 40 35.1	
	comp=N,147nm,0.3s						
IDHR	**Dehrash**	**10.81**	**286**	*e*Pn	**Pn**	**01 39 41.2**	**-1.6**
IHRS	**Heris**	**11.46**	**305**	*e*Pn	**Pn**	**01 39 49.8**	**-1.9**
IHRS	**Heris**	**11.46**	**305**	*e*Pn	**Pn**	**01 39 49.8**	**-1.9**
BHD	**Baghdad**	**12.36**	**278**	*ex*	Pn	01 40 08.0	+4.3
BHD				*i* x	x	01 45 07.0	
BHD				*ex*	x	01 51 57.0	
BHD				*i* x	x	01 54 06.0	
ZEI	**Tsey**	**15.86**	**315**	*e*P	**P**	**01 40 56.4**	**+1.3**
ZEI				pmax	pmax		
	comp=Z,11nm,0.9s						
ZEI	**Tsey**	**15.86**	**315**	*e*P	**P**	**01 40 56.4**	**+1.3**
	comp=Z,11nm,0.9s						
AKTK	**Aktyubinsk**	**18.10**	**358**	P	**P**	**01 41 19.8**	**+0.2**
AKTO	**Aktyubinsk**	**18.10**	**358**	P	**P**	**01 41 19.8**	**+0.2**
AKTO	**Aktyubinsk**	**18.10**	**358**	P	**P**	**01 41 19.8**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=166,slow=16,SNR=4.2						
AKTO	**Aktyubinsk**	**18.10**	**358**	P	**P**	**01 41 19.8**	**+0.2**
ASF	**Jabal al Asfar**	**18.71**	**275**	P	**Pn**	**01 41 28.8**	**+1.9**
ASF	**Jabal al Asfar**	**18.71**	**275**	P	**Pn**	**01 41 28.8**	**+1.9**
	baz=33,slow=2.6,SNR=6.7						
EIL	**Elat**	**20.79**	**269**	P	Pn	01 41 52.4	+0.8
EIL	**Elat**	**20.79**	**269**	P	Pn	01 41 52.4	+0.8
	comp=Z,26nm,1.0s,baz=34,slow=4.7,SNR=5.9						
CSS	**Prodhromos**	**21.53**	**284**	*e*P	**P**	**01 41 59.9**	**+2.8**
	comp=Z,25nm,1.1s						
BR131	**Keskin Array S**	**21.77**	**297**	*e*P	**P**	**01 42 02.2**	**+2.5**
BRTR	**Keskin Array B**	**21.77**	**297**	P	**P**	**01 42 01.3**	**+1.6**
BRTR	**Keskin Array B**	**21.77**	**297**	P	**P**	**01 42 01.3**	**+1.6**
	comp=Z,3.2nm,0.9s,baz=114,slow=12,SNR=11						
BRTR	**Keskin Array B**	**21.77**	**297**	P	**P**	**01 42 01.3**	**+1.6**
BVAR	**Borovoye Array**	**22.25**	**18**	P	**P**	**01 42 04.2**	**-0.4**
BVAR	**Borovoye Array**	**22.25**	**18**	P	**P**	**01 42 04.2**	**-0.4**
BVAR	**Borovoye Array**	**22.25**	**18**	P	**P**	**01 42 04.2**	**-0.4**
	comp=Z,5.4nm,0.5s,baz=196,slow=9.3,SNR=8.5						
BVAR	**Borovoye Array**	**22.25**	**18**	P	**P**	**01 42 04.2**	**-0.4**
ANTO	**Ankara**	**22.43**	**297**	*e*P	**P**	**01 42 08.8**	**+2.0**
ANTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ANTO	**Ankara**	**22.43**	**297**	*e*P	**P**	**01 42 08.8**	**+2.0**
	comp=Z,9.7nm,1.0s						
ANTO	**Ankara**	**22.43**	**297**	*e*P	**P**	**01 42 08.8**	**+2.0**
	comp=Z,9.7nm,1.0s						
VRHR	**Novokhopersk**	**22.70**	**331**	*e*P	**P**	**01 42 12.3**	**+2.9**
VRHR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MKAR	**Makanchi Array**	**22.91**	**44**	P	**P**	**01 42 10.9**	**-0.9**
MKAR	**Makanchi Array**	**22.91**	**44**	P	**P**	**01 42 10.9**	**-0.9**
MKAR	**Makanchi Array**	**22.91**	**44**	P	**P**	**01 42 10.9**	**-0.9**
	comp=Z,3.6nm,0.7s,baz=243,slow=7.2,SNR=2.5						
MKAR	**Makanchi Array**	**22.91**	**44**	P	**P**	**01 42 10.9**	**-0.9**
KURBB	**Kurchatov Arra**	**23.28**	**33**	P	**P**	**01 42 15.5**	**+0.2**
	comp=Z,7.1nm,1.0s,baz=234,slow=9.4,SNR=4.1						
KURK	**Kurchatov**	**23.38**	**33**	P	**P**	**01 42 15.5**	**-0.9**
KURK	**Kurchatov**	**23.38**	**33**	P	**P**	**01 42 15.5**	**-0.9**
KURK	**Kurchatov**	**23.38**	**33**	P	**P**	**01 42 15.5**	**-0.9**
VORD	**Divnogorie**	**23.62**	**328**	*e*P	**P**	**01 42 16.9**	**-1.8**
VORD				pmax	pmax		
	comp=N,20nm,0.6s						
VORD				pmax	pmax		
	comp=E,30nm,0.6s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD	**Divnogorie**	**23.62**	**328**	*e*P	**P**	**01 42 16.9**	**-1.8**
VSR	**Storozhevoye**	**23.85**	**328**	*e*P	**P**	**01 42 20.3**	**-0.7**
VSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VSR	**Storozhevoye**	**23.85**	**328**	*e*P	**P**	**01 42 20.3**	**-0.7**
WMQ	**Urumqi**	**25.19**	**55**	*e*P	**P**	**01 42 34.8**	**+1.3**
WMQ				pP	**pP**	**01 42 39.0**	**+2.0**
WMQ				sP	**sP**	**01 42 41.8**	**+3.3**
WMQ				PP	**PnPn**	**01 43 12.5**	**+5.0**
WMQ				PcP	**PcP**	**01 46 09.2**	**+2.2**
WMQ				S	**S**	**01 46 57.7**	**-0.8**
WMQ				sS	**sS**	**01 47 03.2**	**-1.2**
WMQ				SS	**SnSn**	**01 47 55.4**	**+6.7**
WMQ				PcS	**PcS**	**01 49 48.5**	**+1.2**
WMQ				ScS	**ScS**	**01 53 33.8**	**-0.8**
WMQ				pmax	pmax		
	comp=Z,26nm,1.4s						
WMQ				pmax	pmax		
	comp=Z,780nm,7.2s						
WMQ				LR	LR		
	comp=N,630nm,13.6s						
WMQ				LR	LR		
	comp=E,1μm,13.6s						
WMQ				LR	LR		
	comp=Z,630nm,24.0s						
TIRR	**Tirgusor**	**26.71**	**306**	⇑P	**P**	**01 42 48.4**	**+1.3**
TIRR	**Tirgusor**	**26.71**	**306**	*e*P	**P**	**01 42 47.6**	**+0.5**
	comp=Z,7.5nm,1.0s						
TIRR	**Tirgusor**	**26.71**	**306**	⇑*i*P	**P**	**01 42 48.4**	**+1.3**
TIRR	**Tirgusor**	**26.71**	**306**	*e*P	**P**	**01 42 47.6**	**+0.5**
	comp=Z,7.5nm,1.0s						
ZALV	**Zalesovo Beam**	**28.37**	**33**	P	**P**	**01 43 01.3**	**-0.6**
ZALV	**Zalesovo Beam**	**28.37**	**33**	P	**P**	**01 43 01.2**	**-0.6**
ZALV	**Zalesovo Beam**	**28.37**	**33**	P	**P**	**01 43 01.2**	**-0.6**
	comp=Z,5.5nm,0.7s,baz=238,slow=10,SNR=5.6						
ZALV	**Zalesovo Beam**	**28.37**	**33**	P	**P**	**01 43 01.3**	**-0.6**
AKASG	**Malin Array Be**	**28.60**	**319**	P	**P**	**01 43 02.3**	**-1.7**
AKASG	**Malin Array Be**	**28.60**	**319**	P	**P**	**01 43 02.3**	**-1.7**
AKASG	**Malin Array Be**	**28.60**	**319**	P	**P**	**01 43 02.3**	**-1.7**
	comp=Z,0.9nm,0.4s,baz=124,slow=8.0,SNR=3.6						
AKASG	**Malin Array Be**	**28.60**	**319**	P	**P**	**01 43 02.3**	**-1.7**
AK01	**Malin Array Si**	**28.60**	**319**	P	**P**	**01 43 01.7**	**-2.3**
AK01	**Malin Array Si**	**28.60**	**319**	P	**P**	**01 43 01.7**	**-2.3**
MLR	**Muntele Rosu**	**28.68**	**307**	P	**P**	**01 43 06.7**	**+1.8**
MLR	**Muntele Rosu**	**28.68**	**307**	P	**P**	**01 43 06.7**	**+1.8**
MLR	**Muntele Rosu**	**28.68**	**307⇓**	*i*P	**P**	**01 43 06.7**	**+1.8**
MLR	**Muntele Rosu**	**28.68**	**307**	P	**P**	**01 43 06.7**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=34,slow=1.6,SNR=8.6						
MLR	**Muntele Rosu**	**28.68**	**307**	P	**P**	**01 43 06.7**	**+1.8**
LOT	**Lotru**	**30.15**	**306⇓**	*i*P	**P**	**01 43 20.3**	**+2.4**
LOT	**Lotru**	**30.15**	**306⇓**	*i*P	**P**	**01 43 20.3**	**+2.4**
TRPA	**Tarpa**	**31.66**	**311⇓**	*i*P	**P**	**01 43 34.0**	**+3.0**
GTA	**Gaotai**	**33.58**	**66⇓**	*e*P	**P**	**01 43 49.2**	**+1.0**
GTA				pP	**pP**	**01 43 53.8**	**+2.0**
GTA				sP	**sP**	**01 43 56.3**	**+3.1**
GTA				S	**S**	**01 49 13.2**	**+2.7**
GTA				sS	**sS**	**01 49 20.6**	**+4.2**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,190nm,4.7s						
GTA				LR	LR		
	comp=N,1μm,15.2s						
GTA				LR	LR		
	comp=E,2μm,15.9s						
GTA				LR	LR		
	comp=Z,820nm,15.9s						
CUC	**Castrocucco**	**35.43**	**295**	*e*P	**P**	**01 44 06.5**	**+2.4**
	comp=Z,4.1nm,0.9s						
CUC	**Castrocucco**	**35.43**	**295**	*e*P	**P**	**01 44 06.5**	**+2.4**
	comp=Z,4.1nm,0.9s						
VRAC	**Vranov**	**35.77**	**311**	P	**P**	**01 44 08.2**	**+1.4**
VRAC	**Vranov**	**35.77**	**311**	P	**P**	**01 44 08.2**	**+1.4**
	comp=Z,1.3nm,0.7s,baz=74,slow=8.1,SNR=3.7						
VRAC	**Vranov**	**35.77**	**311**	P	**P**	**01 44 08.2**	**+1.4**
FINES	**FINESS Array B**	**36.08**	**334**	P	**P**	**01 44 08.0**	**-1.3**
FINES	**FINESS Array B**	**36.08**	**334**	P	**P**	**01 44 08.0**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=143,slow=6.7,SNR=3.9						
FINES	**FINESS Array B**	**36.08**	**334**	P	**P**	**01 44 08.0**	**-1.3**
DPC	**Dobruska-Polom**	**36.17**	**313**	*e*P	**P**	**01 44 10.8**	**+0.5**
DPC				pmax	pmax		
	comp=Z,12nn,1.2s						
DPC	**Dobruska-Polom**	**36.17**	**313**	*e*P	**P**	**01 44 10.8**	**+0.5**
	comp=Z,12nn,1.2s						
DPC	**Dobruska-Polom**	**36.17**	**313**	*e*P	**P**	**01 44 10.8**	**+0.5**
	comp=Z,12nn,1.2s						
LZH	**Lanzhou**	**37.01**	**72**	*e*P	**P**	**01 44 15.2**	**-2.6**
LZH				pP	**pP**	**01 44 18.5**	**-2.9**
LZH				sP	**sP**	**01 44 20.0**	**-2.8**
LZH				PP	**PP**	**01 45 40.3**	**-1.7**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,53nm,4.7s						
LZH				LR	LR		
	comp=N,320nm,13.5s						
LZH				LR	LR		
	comp=E,310nm,13.7s						
LZH				LR	LR		
	comp=Z,380nm,17.9s						
AQU	**L'Aquila**	**37.23**	**299**	*e*P	**P**	**01 44 21.3**	**+1.8**
	comp=Z,12nn,0.9s						
AQU	**L'Aquila**	**37.23**	**299**	*e*P	**P**	**01 44 21.3**	**+1.8**
	comp=Z,12nn,0.9s						
GEC2	**GERESS Array S**	**37.55**	**310**	*e*P	**P**	**01 44 24.0**	**+1.9**
GEC2	**GERESS Array S**	**37.55**	**310**	*e*P	**P**	**01 44 24.0**	**+1.9**
GEC2	**GERESS Array S**	**37.55**	**310**	*e*P	**P**	**01 44 24.0**	**+1.9**
GERES	**GERESS Array B**	**37.55**	**310**	P	**P**	**01 44 21.4**	**-0.6**
GERES	**GERESS Array B**	**37.55**	**310**	P	**P**	**01 44 21.4**	**-0.6**
	comp=Z,5.4nm,0.9s,baz=101,slow=7.1,SNR=23						
GERES	**GERESS Array B**	**37.55**	**310**	P	**P**	**01 44 21.5**	**-0.6**
KHC	**Kasperske Hory**	**37.67**	**310**	*e*P	**P**	**01 44 25.5**	**+2.4**
KHC	**Kasperske Hory**	**37.67**	**310**	*e*P	**P**	**01 44 25.5**	**+2.4**
KHC	**Kasperske Hory**	**37.67**	**310**	*e*P	**P**	**01 44 25.5**	**+2.4**
ABTA	**Abfaltersbach**	**38.08**	**306**	⇑*i*pP	pP	01 44 28.4	-1.8
	comp=Z,8.3nm,1.0s						
ABTA	**Abfaltersbach**	**38.08**	**306**	P	pP	01 44 28.4	-1.8
	comp=Z,8.3nm,1.0s						
CMAR	**Chiang Mai Arr**	**38.39**	**101**	P	**P**	**01 44 27.8**	**-1.6**
CMAR	**Chiang Mai Arr**	**38.39**	**101**	P	**P**	**01 44 27.8**	**-1.6**
	comp=Z,1.2nn,0.4s,baz=296,slow=8.1,SNR=4.8						
CMAR	**Chiang Mai Arr**	**38.39**	**101**	P	**P**	**01 44 27.8**	**-1.6**
CLL	**Collm**	**38.43**	**313**	*e*pP	**P**	**01 44 31.0**	**+1.6**
CLL				*e*sP	**sP**	**01 44 33.0**	**-1.4**
WTTA	**Wattenberg**	**38.73**	**307⇑**	*i*pP	**P**	**01 44 31.6**	**-0.5**
	comp=Z,17nm,1.1s						
WTTA	**Wattenberg**	**38.73**	**307**	P	**P**	**01 44 31.6**	**-0.5**
	comp=Z,17nm,1.1s						
WATA	**Walderalm**	**38.77**	**307⇑**	*i*pP	**P**	**01 44 33.0**	**+0.5**
	comp=Z,11nm,1.2s						
WATA	**Walderalm**	**38.77**	**307**	P	**P**	**01 44 33.0**	**+0.5**
	comp=Z,11nm,1.2s						
SONM	**Songino Array**	**38.78**	**52**	P	**P**	**01 44 32.7**	**+0.2**
SONM	**Songino Array**	**38.78**	**52**	P	**P**	**01 44 32.7**	**+0.2**
	comp=Z,2.3nm,1.2s,baz=274,slow=11,SNR=3.4						
SONM	**Songino Array**	**38.78**	**52**	P	**P**	**01 44 32.7**	**+0.2**
KMI	**Kunming**	**38.80**	**89**	P	**P**	**01 44 32.6**	**-0.4**
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
FETA	**Feichten**	**39.33**	**306⇑**	*i*pP	**P**	**01 44 36.2**	**-0.9**
	comp=Z,9.2nn,1.0s						
FETA	**Feichten**	**39.33**	**306**	P	**P**	**01 44 36.2**	**-0.9**
	comp=Z,9.2nn,1.0s						
DAVA	**Damuels**	**39.92**	**307⇑**	*i*P	**P**	**01 44 40.7**	**-1.4**
	comp=Z,9.3nn,0.7s						
DAVA	**Damuels**	**39.92**	**307**	P	**P**	**01 44 40.7**	**-1.4**
	comp=Z,9.3nn,0.7s						
HFS	**Hagfors**	**40.65**	**327**	P	**P**	**01 44 46.9**	**-0.8**
HFS	**Hagfors**	**40.65**	**327**	P	**P**	**01 44 46.9**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=139,slow=5.3,SNR=3.7						
HFS	**Hagfors**	**40.65**	**327**	P	**P**	**01 44 46.9**	**-0.8**
SBF	**Sospel**	**41.58**	**301**	*e*P	**P**	**01 44 54.1**	**-1.6**
	comp=Z,31nn,0.9s						
SBF	**Sospel**	**41.58**	**301**	*e*P	**P**	**01 44 54.1**	**-1.6**
SBF	**Sospel**	**41.58**	**301**	*e*P	**P**	**01 44 54.1**	**-1.6**
	comp=Z,31nn,0.9s						
SBF	**Sospel**	**41.58**	**301**	*e*P	**P**	**01 44 54.1**	**-1.6**
	comp=Z,31nn,0.9s						
GYA	**Guiyang**	**41.65**	**85**	*e*P	**P**	**01 44 55.0**	**-1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**42.49**	**63⇓**	*e*P	**P**	**01 45 04.0**	**+0.7**
HHC				PP	**PP**	**01 46 44.7**	**+3.1**
HHC				PcS	**PcS**	**01 50 49.0**	**+1.0**
HHC				S	**S**	**01 51 25.7**	**+0.4**
HHC				SS	SS	01 54 25.6	-8.9
HHC				ScS	**ScS**	**01 55 05.8**	**+0.7**
HHC				pmax	pmax		
	comp=Z,29nm,1.1s						
HHC				pmax	pmax		
	comp=Z,810nm,6.6s						
H

DDA ***12*** *02:02:08.2, 37.49N×35.72E, h7km, MD2.7*

ISC 12 02:02:06.6±1.6, 37.60N±0.09×35.65E±0.05, h13km±10km, n5, σ0s37/10, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.19**	**129**	*e*PG	**Pb**	**02 02 11.5**	**-0.3**
KOZT				*e*SG	**Sg**	**02 02 13.9**	**+0.2**
ANDN	**Andirin**	**0.56**	**92**	*i* P	**Pg**	**02 02 17.1**	**-0.4**
ANDN				*i* S	**Sb**	**02 02 26.4**	**+0.3**
CEYT	**Ceyhan**	**0.59**	**172**	*e*PG	**Pg**	**02 02 18.1**	**-0.1**
CEYT				*e*SG	**Sb**	**02 02 27.1**	**+0.1**
GULE	**Gulek**	**0.76**	**246**	*i* P	**Pb**	**02 02 21.8**	**+0.1**
GULE				*i* S	**Sn**	**02 02 34.2**	**-0.4**
AYKD	**Aykdinkavak**	**0.94**	**101**	*i* P	**Pn**	**02 02 25.8**	**+0.3**
AYKD				*i* S	**Sg**	**02 02 37.5**	**+0.4**

IDC 12 02:10:13.3±7.0, 5.75S×149.37E, h112km±51km, mb3.0/2, mb1 3.2/3, mb1mx3.0/18, mbtmp3.0/3, Error ellipse: s-maj=127.9km s-min=51.9km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.25**	**211**	P	Pn	02 11 16.3	+0.3
	1.4nm,0.3s,baz=197,slow=19,SNR=5.1						
PMG				S	Sn	02 12 05.1	+0.4
	13nm,0.3s,baz=345,slow=20,SNR=12						
WRA	**Warramunga Arr**	**20.31**	**225**	P	P	02 14 41.4	+0.7
	1.2nm,0.4s,baz=50,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**23.22**	**218**	P	P	02 15 10.7	-0.1
	0.3nm,0.3s,baz=53,slow=9.0,SNR=6.3						
TORD	**Torodi Ar. Bea**	**147.30**	**285**	PKPbc	PKPbc	02 29 43.9	-1.0
	0.3nm,0.9s,baz=54,slow=2.1,SNR=5.1						

TAP 12 02:25:21.5, 22.32N×121.27E, h65km, ML3.5, 5C-3D, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAW	**Tawu**	**0.35**	**277**	⇓*i* P	Pn	02 25 32.4	0.0
	baz=277						
TAW				*e*S	Sn	02 25 40.3	-0.1
	baz=277						
LAY	**Lan-yu**	**0.38**	**136**	⇓*i* P	Pn	02 25 32.6	-0.1
	baz=132						
LAY				S	Sn	02 25 40.5	-0.4
	baz=132						
EAST	**Anshuo**	**0.39**	**280**	⇓*i* P	Pn	02 25 33.1	+0.3
	baz=280						
EAST				S	Sn	02 25 41.1	0.0
	baz=280						
ECL	**Taimali**	**0.40**	**314**	P	Pn	02 25 33.0	+0.1
	baz=318						
ECL				S	Sn	02 25 40.8	-0.4
	baz=318						
TTN	**Taitung**	**0.45**	**346**	*e*P	Pn	02 25 34.2	+0.9
	baz=338						
TTN				*e*S	Sn	02 25 42.9	+0.9
	baz=338						
TSEB	**Hengchuen, Pin**	**0.54**	**220**	P	Pn	02 25 34.8	+0.7
	baz=224						
TSEB				S	Sn	02 25 44.8	+1.4
	baz=224						
TWK1	**Hengchun**	**0.57**	**229**	P	Pn	02 25 34.8	+0.3
	baz=230						
TWK1				S	Sn	02 25 44.8	+0.8
	baz=230						
HEN	**Hengchun**	**0.58**	**238**	P	Pn	02 25 35.4	+0.8
	baz=240						
HEN				*e*S	Sn	02 25 45.2	+0.9
	baz=240						
SCZT	**Fangliau**	**0.60**	**276**	P	Pn	02 25 35.4	+0.5
	baz=275						
SCZT				S	Sn	02 25 44.8	+0.1
	baz=275						
SSD	**Sandimen**	**0.73**	**306**	P	Pn	02 25 37.1	+0.8
	baz=306						
SSD				S	Sn	02 25 47.5	+0.3
	baz=306						
CHKT	**Chengkung**	**0.79**	**7**	*e*P	Pn	02 25 37.5	+0.5
	baz=6.0						
CHKT				*e*S	Sn	02 25 49.3	+0.8
	baz=6.0						
TWP	**Hsiaoliuchiu**	**0.84**	**272**	*e*P	Pn	02 25 39.4	+1.7
	baz=263						
TWP				*e*S	Sn	02 25 51.8	+2.2
	baz=263						
ELDTW	**Lidau**	**0.90**	**345**	*e*P	Pn	02 25 39.1	+0.5
	baz=344						
ELDTW				*e*S	Sn	02 25 51.7	+0.4
	baz=344						
KAU	**Kaohsiung**	**0.92**	**286**	*e*P	Pn	02 25 39.2	+0.5
	baz=285						
KAU				*e*S	Sn	02 25 53.6	+2.2
	baz=285						
TWM1	**Shoushan**	**0.93**	**303**	*e*P	Pn	02 25 40.5	+1.6
	baz=303						
TWM1				*e*S	Sn	02 25 54.7	+2.9
	baz=303						
TWF1	**Yuli**	**1.03**	**2**	⇑P	Pn	02 25 40.4	+0.2
	baz=354						
TWF1				*e*S	Sn	02 25 53.7	-0.3
	baz=354						
CHN1	**Nanshi**	**1.10**	**322**	⇑P	Pn	02 25 41.9	+0.9
	baz=321						
CHN1				*e*S	Sn	02 25 57.0	+1.3
	baz=321						
WTP	**Ta-pu**	**1.10**	**327**	⇑*i* P	Pn	02 25 42.2	+1.0
	baz=326						
WTP				*e*S	Sn	02 25 56.8	+1.0
	baz=326						
EHY	**Hungye**	**1.19**	**2**	P	Pn	02 25 42.5	+0.3
	baz=357						
EHY				*e*S	Sn	02 25 57.9	+0.3
	baz=357						
TWK	**Hsinying**	**1.19**	**323**	*e*P	Pn	02 25 43.0	+0.7
	baz=322						
TWK				*e*S	Sn	02 25 59.2	+1.5
	baz=322						
CHN4	**Tsaushan**	**1.20**	**329**	⇑P	Pn	02 25 43.3	+1.0
	baz=328						
CHN4				*e*S	Sn	02 25 59.9	+1.9
	baz=328						
ALS	**Alishan**	**1.26**	**340**	P	Pn	02 25 44.8	+1.2
	baz=340						
ALS				*e*S	Sn	02 26 01.2	+1.2
	baz=340						
SCLT	**Jiali**	**1.31**	**311**	*e*P	Pn	02 25 45.1	+1.3
	baz=310						
SCLT				*e*S	Sn	02 26 01.1	+0.7
	baz=310						
CHN5	**Tsauling**	**1.39**	**337**	P	Pn	02 25 45.9	+1.0
	baz=326						
CHN5				*e*S	Sn	02 26 03.9	+1.4
	baz=326						
CHY	**Chiayi**	**1.41**	**327**	*e*P	Pn	02 25 45.9	+0.8
	baz=326						
CHY				*e*S	Sn	02 26 03.8	+1.0
	baz=326						
SMLT	**Sun Moon Lake**	**1.60**	**348**	*e*P	Pn	02 25 48.7	+1.0
	baz=347						
TYC	**Yuchr**	**1.63**	**347**	⇑*i* P	Pn	02 25 49.1	+1.2
	baz=346						
TYC				*e*S	Sn	02 26 09.7	+1.8
	baz=346						
WDGT	**Dungji**	**1.76**	**303**	*e*P	Pn	02 25 49.2	-0.5
	baz=301						
WDGT				*e*S	Sn	02 26 09.1	-2.1
	baz=301						
TWD	**Chiawan**	**1.78**	**10**	*e*P	Pn	02 25 50.5	+0.4
	baz=3.0						
TWD				*e*S	Sn	02 26 11.3	-0.4
	baz=3.0						
WHF	**Hehuan Shan**	**1.82**	**360**	*e*P	Pn	02 25 52.5	+1.3
	baz=7.0						
WHF				*e*S	Sn	02 26 13.9	+0.2
	baz=7.0						
PNG	**Penghu**	**2.01**	**309**	*e*P	Pn	02 25 52.5	-0.6
	baz=306						
PNG				*e*S	Sn	02 26 15.7	-1.5
	baz=306						
TWQ1	**Liyutan**	**2.07**	**347**	*e*P	Pn	02 25 55.0	+1.0
	baz=335						
NNS	**Nan Shan**	**2.12**	**3**	*e*P	Pn	02 25 56.8	+2.0
	baz=6.0						
NNS				*e*S	Sn	02 26 21.5	+1.3
	baz=6.0						
ENA	**Nanau**	**2.15**	**12**	*e*P	Pn	02 25 56.1	+1.0
	baz=360						
ENA				*e*S	Sn	02 26 21.6	+0.9
	baz=360						
ENTT	**Nioudou**	**2.33**	**7**	*e*P	Pn	02 25 59.7	+2.1
	baz=13						
TWC	**Suao**	**2.34**	**13**	*e*P	Pn	02 25 59.6	+1.9
TWC				*e*S	Sn	02 26 26.7	+1.3
NSK	**Sanguang**	**2.35**	**2**	*e*P	Pn	02 26 00.2	+2.3
	baz=9.0						
NSK				*e*S	Sn	02 26 27.9	+2.1
	baz=9.0						
NWF	**Wu-fen Shan**	**2.78**	**10**	*e*P	Pn	02 26 06.5	+2.8
	baz=356						
NWF				*e*S	Sn	02 26 39.0	+2.7
	baz=356						

LDG ***12*** *02:27:31.9±0.1, 42.14N×84.63E, h10km, Mb4.8/10, Error ellipse: s-maj=5.0km s-min=4.0km az=123.0*

ISCJB ***12*** *02:27:32.6±0.3, 42.27N±0.03×84.85E±0.03, h10km, mb4.3/39, MS4.2/1, Error ellipse: s-maj=4.7km s-min=3.5km az=19.6*

IDC ***12*** *02:27:32.9±0.6, 42.35N×84.82E, h0km, mb4.0/20, mb1 4.2/25, mb1mx4.1/35, mbtmp4.0/25, ML3.7/5, MS3.6/1, Ms1 3.6/1, ms1mx2.8/48, Error ellipse: s-maj=14.8km s-min=10.2km az=47.0*

BJI ***12*** *02:27:35.4, 42.32N×84.78E, h11km, mB4.8/5, mb4.2/11, ML4.4/11, Ms4.1/5, Ms7 3.7/5*

MOS ***12*** *02:27:37.7±0.8, 42.39N×84.73E, h46km, mb5.0/10, Error ellipse: s-maj=8.0km s-min=5.6km az=134.9*

NNC ***12*** *02:27:37.3±4.1, 42.46N×84.88E, h8km±13km, mb4.1, mpv4.1, Error ellipse: s-maj=31.4km s-min=10.6km az=128.0*

NEIC ***12*** *02:27:39.1±0.7, 42.40N×84.78E, h42km±5km, mb4.9/14, Error ellipse: s-maj=7.5km s-min=4.7km az=179.0*

ISC 12 02:27:35.0±0.3, 42.24N±0.04×84.72E±0.03, h10km, n186, σ1s54/202, mb4.3/39, 53C-14D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**2.69**	**53**	Pn	**Pn**	**02 28 21.3**	**+2.8**
WMQ				Sg	**Sb**	**02 28 56.8**	**+0.3**
WMQ				*s*max	*s*max		
	comp=N,1μm,0.8s						
WMQ				*s*max	*s*max		
	comp=E,2μm,0.6s						
MK31	**Makanchi Array**	**4.87**	**340**	⇓Pn	**Pn**	**02 28 49.6**	**+1.2**
	comp=E,1.2nm,0.3s,baz=145,slow=9.3,SNR=586						
MK31				Pg	**Pb**	**02 29 02.9**	**+2.4**
	comp=E,68nm,0.7s,baz=150,slow=15,SNR=46						
MK31				⇓Lg	Lg	02 30 06.2	
	comp=E,228nm,0.4s,baz=147,slow=30,SNR=7.5						
MK31	**Makanchi Array**	**4.87**	**340**	*e*P	**Pn**	**02 28 50.5**	**+2.1**
MK31				*e*		02 29 45.4	
MK31	**Makanchi Array**	**4.87**	**340**	*e*Pn	**Pn**	**02 28 50.5**	**+2.1**
MK31				*e*Pg	Pb	02 29 04.2	+3.8
MK31				*e*Sn	**Sn**	**02 29 45.4**	**+0.6**
MK31				*e*Sg	**Sg**	**02 30 08.0**	**-3.4**
MKAR	**Makanchi Array**	**4.87**	**340**	*e*P	**Pn**	**02 28 49.4**	**+1.0**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	**Makanchi Array**	**4.87**	**340**	Pn	**Pn**	**02 28 49.1**	**+0.8**
MKAR				Pg	**Pb**	**02 29 02.6**	**+2.2**
MKAR				Sn	**Sn**	**02 29 45.1**	**+0.3**
MKAR				Lg	Lg	02 30 05.3	
MKAR	**Makanchi Array**	**4.87**	**340**	Pn	**Pn**	**02 28 49.1**	**+0.8**
	comp=Z,1.8nm,0.3s,baz=154,slow=14,SNR=53						
MKAR				Pg	**Pb**	**02 29 02.6**	**+2.2**
	comp=Z,20nm,0.3s,baz=152,slow=16,SNR=68						
MKAR				Sn	**Sn**	**02 29 45.1**	**+0.3**
	comp=Z,26nm,0.3s,baz=141,slow=16,SNR=6.8						
MKAR				Lg	Lg	02 30 05.3	
	comp=Z,59nm,0.3s,baz=144,slow=32,SNR=10						
KNDC	**Almaty**	**5.79**	**282**	⇑Pg	**Pg**	**02 29 25.3**	**-0.6**
KNDC				⇑Lg	Lg	02 30 44.2	
	comp=Z,690nm,1.1s						
AAA	**Alma-Ata**	**5.81**	**283**	*e*P	Pg	02 29 23.1	-3.2
ULHL	**Ulahol**	**6.29**	**273**	*i* P	**Pn**	**02 29 10.4**	**+2.4**
ULHL	**Ulahol**	**6.29**	**273**	P	**Pn**	**02 29 10.4**	**+2.4**
	SNR=20						
TKM2	**Tokmak 2**	**6.77**	**279**	⇓Pn	**Pn**	**02 29 17.5**	**+2.9**
	comp=Z,14nm,0.5s						
TKM2				⇑Lg	Lg	02 31 16.0	
	comp=Z,142nm,0.8s						
TKM2	**Tokmak 2**	**6.77**	**279**	*e*P	**Pn**	**02 29 16.6**	**+2.1**
TKM2				pmax	pmax		
	comp=Z,29nm,0.5s						
TKM2	**Tokmak 2**	**6.77**	**279**	*e*Pn	**Pn**	**02 29 16.6**	**+2.1**
	comp=Z,29nm,0.5s						
TKM2				*e*S	**Sg**	**02 31 10.7**	**-1.5**
TKM2	**Tokmak 2**	**6.77**	**279**	P	**Pn**	**02 29 16.7**	**+2.1**
	SNR=22						
KZA	**Kyzart**	**7.04**	**272**	*i* P	**Pn**	**02 29 20.6**	**+2.1**
KZA	**Kyzart**	**7.04**	**272**	P	**Pn**	**02 29 20.6**	**+2.1**
	SNR=14						
KSH	**Kashi**	**7.16**	**251**	P	Pb	02 29 35.9	-3.6
KSH				*e*pP	pP	02 29 40.9	
KSH				*e*sP	sP	02 29 43.8	
KSH				S	**Sb**	**02 31 06.6**	**+1.5**
KSH				sS	sS	02 31 12.4	
KSH				pmax	pmax		
	comp=Z,25nm,0.7s						
KSH				LR	LR		
	comp=N,610nm,1.6s						
KSH				LR	LR		
	comp=E,850nm,2.1s						
KSH				LR	LR		
	comp=Z,690nm,2.3s						
KBK	**Karagaybulak**	**7.24**	**277**	*i* P	**Pn**	**02 29 22.9**	**+1.9**
KBK	**Karagaybulak**	**7.24**	**277**	P	**Pn**	**02 29 22.9**	**+1.9**
	SNR=13						
FRU	**Bishkek**	**7.49**	**278**	*e*P	Pn	02 29 28.0	+3.7
AAK	**Ala-Archa**	**7.57**	**276**	*e*P	**Pn**	**02 29 27.5**	**+1.9**
AAK				pmax	pmax		
	comp=Z,16nm,1.2s						
AAK	**Ala-Archa**	**7.57**	**276**	Pn	**Pn**	**02 29 27.7**	**+2.1**
AAK				Lg	Lg	02 31 31.2	
AAK	**Ala-Archa**	**7.57**	**276**	Pn	**Pn**	**02 29 27.7**	**+2.1**
	comp=Z,1.3nm,0.3s,baz=103,slow=9.4,SNR=11						
AAK				Lg	Lg	02 31 31.2	
	comp=Z,3.0nm,0.3s,baz=298,slow=22,SNR=4.2						
USP	**Ospenovka**	**7.59**	**281**	*i* P	**Pn**	**02 29 27.8**	**+2.1**
USP	**Ospenovka**	**7.59**	**281**	P	**Pn**	**02 29 27.8**	**+2.1**
	SNR=7.1						
EKS2	**Erkin-Say**	**8.10**	**277**	*e*P	Pn	02 29 30.6	-2.2
EKS2				pmax	pmax		
	comp=Z,182nm,1.0s						
EKS2	**Erkin-Say**	**8.10**	**277**	*e*Pn	Pn	02 29 30.6	-2.2
	comp=Z,182nm,1.0s						
EKS2				*e*Pg	Pg	02 30 14.8	+4.8
EKS2				*e*S	**Sg**	**02 31 57.7**	**+2.7**
KURBB	**Kurchatov Arra**	**9.41**	**335**	Pn	**Pn**	**02 29 49.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=150,slow=2.1,SNR=16						
KURBB				Sn	**Sn**	**02 31 31.9**	**-4.3**
	comp=Z,0.6nm,0.3s,baz=159,slow=17,SNR=4.1						
KURBB				Lg	Lg	02 32 27.4	
	comp=Z,0.6nm,0.3s,baz=149,slow=42,SNR=5.5						
KUR16	**Kurchatov Arra**	**9.42**	**335**	⇑Pn	**Pn**	**02 29 51.9**	**+1.2**
	comp=Z,0.4nm,0.7s						
KUR16				⇑Pg		02 30 25.5	
	comp=Z,0.5nm,0.7s						
KUR16				⇓Sn	**Sn**	**02 31 39.0**	**+2.4**
	comp=Z,2.1nm,0.8s						
KUR16				⇓Lg	Lg	02 32 31.7	
	comp=Z,5.6nm,0.8s						
KURK	**Kurchatov**	**9.46**	**336**	⇓Pn	**Pn**	**02 29 51.9**	**+0.7**
	comp=Z,4.4nm,0.7s						
KURK				⇑Pg		02 30 27.5	
	comp=Z,9.3nm,0.8s						
KURK				⇑Sn	**Sn**	**02 31 39.4**	**+1.9**
	comp=Z,27nm,0.8s						
KURK				⇑Lg	Lg	02 32 32.2	
	comp=Z,153nm,0.9s						
KURK	**Kurchatov**	**9.46**	**336**	*e*P	**Pn**	**02 29 51.9**	**+0.7**
KURK	**Kurchatov**	**9.46**	**336**	*e*Pn	Pn	02 29 48.9	-2.3
	comp=Z,10nm,0.7s						
KURK				*e*S	Sn	02 31 44.5	+6.9
KURK				Lg	Lg	02 32 27.4	
KK31	**Karatay Array**	**10.50**	**279**	⇑Pn	Pn	02 30 08.7	+3.1
	comp=Z,2.3nm,0.7s,baz=85,slow=10,SNR=6.7						
KK31				⇓Pg		02 30 50.0	
	comp=Z,3.6nm,0.6s,baz=84,slow=15,SNR=2.8						
KK31				⇑Lg	Lg	02 33 15.1	
	comp=Z,46nm,1.1s,baz=88,slow=24,SNR=4.4						
KKAR	**Karatay Array**	**10.50**	**279**	*e*P	**Pn**	**02 30 07.2**	**+1.6**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KKAR	**Karatay Array**	**10.50**	**279**	*e*Pn	**Pn**	**02 30 07.2**	**+1.6**
	comp=Z,0.8nm,0.5s						
HVS	**Khovu-Aksy**	**10.82**	**32**	*e*P	**Pn**	**02 30 10.9**	**+0.9**
ZAA0	**Zalesovo Array**	**11.72**	**0**	*e*Pn	**Pn**	**02 30 20.4**	**-1.7**
ZAA0				*e*S	Sn	02 32 25.9	-7.0
ZALV	**Zalesovo Beam**	**11.72**	**0**	*e*P	**Pn**	**02 30 20.3**	**-1.8**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**11.72**	**0**	Pn	**Pn**	**02 30 20.4**	**-1.8**
ZALV				Sn	Sn	02 32 26.4	-6.4
ZALV	**Zalesovo Beam**	**11.72**	**0**	Pn	**Pn**	**02 30 20.4**	**-1.8**
	comp=Z,1.2nm,0.3s,baz=184,slow=13,SNR=12						
ZALV				Sn	Sn	02 32 26.4	-6.4
	comp=Z,2.1nm,0.3s,baz=178,slow=21,SNR=7.1						
ZALV				LR	LR	02 34 38.1	
	comp=Z,290nm,20.4s,baz=65,slow=37						
GTA	**Gaotai**	**11.78**	**99**	⇓*e*P	**Pn**	**02 30 24.0**	**+0.8**
GTA				pP		02 30 28.7	
GTA				sP		02 30 31.9	
GTA				S	**Sn**	**02 32 33.2**	**-1.6**
GTA				SS	**SnSn**	**02 32 47.7**	**+1.2**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,130nm,4.3s						
GTA				LR	LR		
	comp=N,310nm,9.3s						
GTA				LR	LR		
	comp=E,370nm,9.7s						
GTA				LR	LR		
	comp=Z,320nm,11.9s						
NVS	**Novosibirsk**	**12.65**	**356**	*e*P	Pn	02 30 38.5	+3.7
NVS				*e*		02 32 45.9	
DDI	**Dehra Dun**	**13.04**	**206**	*e*PKP	Pn	02 30 45.5	+5.1
DDI				*e*S	Sn	02 32 55.0	-11
CEP	**Cherat**	**13.12**	**234**	P	Pn	02 30 47.5	+5.9
CEP				S	**Sn**	**02 33 06.0**	**-1.7**
VOSK	**Vostochnaya**	**13.98**	**323**	⇑Pn	**Pn**	**02 30 52.8**	**-0.3**
	comp=Z,8.7nm,1.1s						
VOSK				⇑Sn	**Sn**	**02 33 31.4**	**+3.1**
	comp=Z,13nm,1.1s						
VOSK				⇑Lg	Lg	02 34 59.7	
	comp=Z,71nm,1.2s						
BVA0	**Borovoye Array**	**14.45**	**323**	⇓Pn	**Pn**	**02 31 00.7**	**+1.2**
	comp=Z,0.9nm,0.7s						
BVA0				⇑Sn	**Sn**	**02 33 42.3**	**+2.6**
	comp=Z,1.9nm,1.0s						
BVA0				⇓Lg	Lg	02 35 13.9	
	comp=Z,23nm,2.2s						
BVAR	**Borovoye Array**	**14.45**	**323**	P	**Pn**	**02 30 58.9**	**-0.6**
BVAR	**Borovoye Array**	**14.45**	**323**	Pn	**Pn**	**02 30 58.9**	**-0.6**
BVAR				Lg	Lg	02 35 10.1	
BVAR	**Borovoye Array**	**14.45**	**323**	Pn	**Pn**	**02 30 58.9**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=127,slow=12,SNR=18						
BVAR				Lg	Lg	02 35 10.1	
	comp=Z,0.4nm,0.3s,baz=124,slow=23,SNR=3.8						
BRVK	**Borovoye**	**14.52**	**323**	⇑Pn	**Pn**	**02 31 00.9**	**+0.5**
	comp=Z,20nm,0.9s						
BRVK				⇑Sn	**Sn**	**02 33 44.5**	**+3.2**
	comp=Z,25nm,1.1s						
BRVK				⇑Lg	Lg	02 35 14.8	
	comp=Z,65nm,1.0s						
BRVK	**Borovoye**	**14.52**	**323**	*e*P	**Pn**	**02 31 01.0**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**14.52**	**323**	*e*Pn	**Pn**	**02 31 00.2**	**-0.2**
	comp=Z,8.6nm,0.6s						
ZRNK	**Zerenda**	**15.04**	**321**	⇓Pn	**Pn**	**02 31 06.8**	**-0.6**
	comp=Z,5.4nm,0.6s						
ZRNK				⇑Sn	**Sn**	**02 33 55.8**	**+1.9**
	comp=Z,14nm,1.1s						
ZRNK				⇑Lg	Lg	02 35 31.6	
	comp=Z,38nm,1.1s						
ZAK	**Zakamensk**	**15.16**	**51**	*e*P	**Pn**	**02 31 09.0**	**-0.2**
ZAK				*e*		02 33 45.7	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	**Talaya**	**15.96**	**47**	*i* P	**Pn**	**02 31 20.3**	**+0.8**
LZH	**Lanzhou**	**16.04**	**106**	*e*P	**P**	**02 31 24.6**	**+0.3**
LZH				pP	**pP**	**02 31 29.3**	**+2.2**
LZH				sP	**sP**	**02 31 33.0**	**+4.6**
LZH				*e*S	**Sn**	**02 34 21.5**	**+2.7**
LZH				sS	**S**	**02 34 27.5**	**-5.1**
LZH				*e*SS	SnSn	02 34 42.0	+10
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
LZH				pmax	pmax		
	comp=Z,73nm,4.1s						
LZH				LR	LR		
	comp=N,220nm,7.8s						
LZH				LR	LR		
	comp=E,290nm,9.0s						
LZH				LR	LR		
	comp=Z,330nm,10.5s						
SONM	**Songino Array**	**16.29**	**63**	Pn	**Pn**	**02 31 23.6**	**-0.3**
SONM				Lg	Lg	02 36 08.0	
SONM	**Songino Array**	**16.29**	**63**	Pn	**Pn**	**02 31 23.6**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=251,slow=12,SNR=25						
SONM				Lg	Lg	02 36 08.0	
	comp=Z,0.1nm,0.3s,baz=234,slow=25,SNR=3.8						
ULN	**Ulaanbaatar**	**16.73**	**63**	Pn	**Pn**	**02 31 30.1**	**+0.6**
	comp=Z,4.2nm,0.8s						
AB31	**Akbulak array**	**18.61**	**301**	⇑Pn	**P**	**02 31 50.3**	**-2.1**
	comp=Z,2.1nm,0.7s,baz=95,slow=10,SNR=24						
AB31				⇑Lg	Lg	02 37 29.0	
	comp=Z,9.2nm,1.2s,baz=100,slow=28,SNR=3.5						
ABKAR	**Akbulak array**	**18.61**	**301**	*e*Pn	**P**	**02 31 50.5**	**-1.9**
	comp=Z,1.7nm,0.5s						
AKTO	**Aktyubinsk**	**20.09**	**303**	P	**P**	**02 32 08.5**	**-0.1**
AKTO	**Aktyubinsk**	**20.09**	**303**	P	**P**	**02 32 08.4**	**-0.1**
AKTO	**Aktyubinsk**	**20.09**	**303**	P	**P**	**02 32 08.4**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=101,slow=11,SNR=16						
HHC	**Hu-ho-hao-te**	**20.12**	**85**	*e*P	Pn	02 32 11.5	+0.6
HHC				sP	sP	02 32 19.6	+6.4
HHC				PP	**PnPn**	**02 32 30.7**	**+5.5**
HHC				S	**S**	**02 35 52.6**	**-2.4**
HHC				sS	Sn	02 35 57.3	0.0
HHC				SS	**SnSn**	**02 36 18.7**	**+7.2**
HHC				PcP	**PcP**	**02 36 26.5**	**+2.6**
HHC				pmax	pmax		
	comp=Z,45nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,4.4s						
HHC				LR	LR		
	comp=N,350nm,17.8s						
HHC				LR	LR		
	comp=E,2μm,16.7s						
HHC				LR	LR		
	comp=Z,500nm,18.4s						
XAN	**Xi'an**	**20.67**	**105**	P	**P**	**02 32 15.2**	**+0.1**
XAN				pP	pP	02 32 24.3	+6.4
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	**Arti**	**22.00**	**319**	*c* *i*P	**P**	**02 32 29.1**	**0.0**
ARU						02 32 47.9	
ARU				S	**S**	**02 36 29.8**	**-1.9**
ARU				SS	Sn	02 36 50.2	+8.1
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						

VORD					pmax	pmax			
	comp=N,10.0nm,0.7s								
VORD					pmax	pmax			
	comp=E,10.0nm,0.7s								
VORD					pmax	pmax			
	comp=Z,7.0nm,0.7s								
VSR	**Storozhevoye**	**32.03**	**302**	*e*P		**P**	02 33 59.9	-1.6	
VSR					pmax	pmax			
	comp=Z,10.0nm,1.5s								
VSR					pmax	pmax			
	comp=N,9.0nm,0.7s								
VSR					pmax	pmax			
	comp=E,9.0nm,0.7s								
KLR	**Kul'dur**	**33.12**	**61**	*e*P		P	02 34 05.7	-5.3	
KSAR	**Wonju Array Be**	**33.22**	**84**	P		**P**	**02 34 11.0**	**-1.1**	
KSRS	**Korea Array**	**33.25**	**84**	P		**P**	**02 34 11.0**	**-1.3**	
	comp=E,1.9nm,0.6s,baz=278,slow=8.5,SNR=7.1								
TIXI	**Tiksi**	**36.48**	**22**	⇑*i*P		**P**	**02 34 37.9**	**-1.9**	
TIXI					pmax	pmax			
	comp=Z,3.0nm,1.0s								
BR131	**Keskin Array S**	**38.17**	**284**	*e*P		**P**	**02 34 55.0**	**+0.3**	
	comp=Z,1.7nm,0.6s								
BRTR	**Keskin Array B**	**38.17**	**284**	P		**P**	**02 34 54.9**	**+0.1**	
BRTR	**Keskin Array B**	**38.17**	**284**	P		**P**	**02 34 54.9**	**+0.1**	
	comp=Z,2.8nm,0.8s,baz=98,slow=8.9,SNR=23								
AKASG	**Malin Array Be**	**38.34**	**302**	P		**P**	**02 34 55.2**	**-0.5**	
AKASG	**Malin Array Be**	**38.34**	**302**	P		**P**	**02 34 55.2**	**-0.5**	
AKASG	**Malin Array Be**	**38.34**	**302**	P		**P**	**02 34 55.2**	**-0.5**	
	comp=Z,1.0nm,0.5s,baz=81,slow=5.7,SNR=3.6								
KIEV	**Kiev**	**38.35**	**302**	*e*P		**P**	**02 34 54.2**	**-1.6**	
AK02	**Malin Array Si**	**38.35**	**302**	*e*P		**P**	**02 34 54.9**	**-1.0**	
FINES	**FINESS Array B**	**39.37**	**320**	P		**P**	**02 35 03.5**	**-0.8**	
FINES	**FINESS Array B**	**39.37**	**320**	P		**P**	**02 35 03.5**	**-0.8**	
	comp=Z,0.5nm,0.3s,baz=94,slow=9.9,SNR=9.0								
MMAI	**Mount Meron Ar**	**39.65**	**273**	P		**P**	**02 35 07.1**	**0.0**	
MMAI	**Mount Meron Ar**	**39.65**	**273**	P		**P**	**02 35 07.1**	**0.0**	
	comp=Z,0.4nm,0.3s,baz=80,slow=9.7,SNR=4.2								
CFR	**Carcaliu**	**40.29**	**294**	⇑*i*P		**P**	**02 35 11.9**	**-0.3**	
ARCES	**ARCESS Array B**	**40.48**	**332**	P		**P**	**02 35 13.0**	**-0.5**	
ARCES	**ARCESS Array B**	**40.48**	**332**	P		**P**	**02 35 13.0**	**-0.5**	
	comp=Z,2.2nm,0.5s,baz=90,slow=8.0,SNR=30								
TESR	**Tescani**	**40.92**	**297**	⇓*i*P		**P**	**02 35 17.0**	**-0.4**	
VRI	**Vrincioaia**	**41.05**	**296**	⇑*i*P		**P**	**02 35 16.9**	**-1.6**	
PLOR	**Plostina**	**41.10**	**296**	⇑*i*P		**P**	**02 35 19.9**	**+0.9**	
BUR08	**Bucovina Ar. S**	**41.57**	**299**	*e*P		**P**	**02 35 22.6**	**-0.3**	
EIL	**Elat**	**41.64**	**269**	P		**P**	**02 35 24.3**	**+0.8**	
EIL	**Elat**	**41.64**	**269**	P		**P**	**02 35 24.3**	**+0.8**	
	comp=Z,3.8nm,0.9s,baz=63,slow=11,SNR=2.9								
MLR	**Muntele Rosu**	**41.68**	**295**	⇑*i*P		**P**	**02 35 24.6**	**+0.8**	
KWP	**Kalwaria Pacla**	**42.66**	**302**	*e*P		**P**	**02 35 29.9**	**-1.7**	
KWP					pmax	pmax			
	comp=Z,16nm,1.0s								
KWP	**Kalwaria Pacla**	**42.66**	**302**	*e*P		**P**	**02 35 29.9**	**-1.7**	
	comp=Z,16nm,1.0s								
KWP	**Kalwaria Pacla**	**42.66**	**302**	⇓*i*P		**P**	**02 35 31.9**	**+0.4**	
LOT	**Lotru**	**43.15**	**296**	⇑*i*P		**P**	**02 35 35.2**	**-0.6**	
TRPA	**Tarpa**	**43.16**	**300**	⇑*i*P		**P**	**02 35 36.5**	**+0.9**	
VTS	**Vitosha**	**44.51**	**292**	⇓*i*P		**P**	**02 35 47.5**	**+0.8**	
NB2	**NORSAR Subarra**	**46.55**	**320**	P		**P**	**02 36 01.0**	**-1.5**	
	comp=Z,1.3nm,0.5s,baz=77,slow=7.9								
NOA	**NORSAR Array B**	**46.55**	**320**	P		**P**	**02 36 01.7**	**-0.8**	
NOA	**NORSAR Array B**	**46.55**	**320**	P		**P**	**02 36 01.7**	**-0.8**	
	comp=Z,1.9nm,0.6s,baz=79,slow=7.9,SNR=11								
NAO01	**NORSAR Array S**	**46.75**	**320**	*e*P		**P**	**02 36 02.8**	**-1.2**	
	comp=Z,1.1nm,0.4s								
CLL	**Collm**	**48.12**	**307**	*i*P		**P**	**02 36 14.3**	**-0.5**	
CLL					pmax	pmax			
	comp=Z,7.0nm,1.3s								
CLL	**Collm**	**48.12**	**307**	*i*P		**P**	**02 36 14.3**	**-0.5**	
	comp=Z,7.0nm,1.3s								
GERES	**GERESS Array B**	**48.52**	**304**	P		**P**	**02 36 18.1**	**0.0**	
GERES	**GERESS Array B**	**48.52**	**304**	P		**P**	**02 36 18.1**	**0.0**	
	comp=Z,0.3nm,0.4s,baz=64,slow=7.6,SNR=6.5								
CUC	**Castrocucco**	**50.65**	**292**	*e*P		**P**	**02 36 34.0**	**-0.4**	
	comp=Z,7.6nm,0.8s								
CDF	**Champ du Feu**	**52.62**	**305**	*e*P		**P**	**02 36 48.1**	**-1.0**	
CDF	**Champ du Feu**	**52.62**	**305**	*e*P		**P**	**02 36 48.1**	**-1.0**	
CDF	**Champ du Feu**	**52.62**	**305**	*e*P		**P**	**02 36 48.1**	**-1.0**	
PGF	**Pioggiola**	**54.08**	**298**	⇑*i*P		**P**	**02 36 59.5**	**-0.4**	
	comp=Z,14nm,0.8s								
PGF	**Pioggiola**	**54.08**	**298**	⇑*i*P		**P**	**02 36 59.5**	**-0.4**	
PGF					pmax	pmax			
	comp=Z,14nm,0.8s								
PGF	**Pioggiola**	**54.08**	**298**	⇑*i*P		**P**	**02 36 59.5**	**-0.4**	
	comp=Z,14nm,0.8s								
LPG	**La Plagne**	**54.20**	**302**	⇑*i*P		**P**	**02 37 00.9**	**0.0**	
	comp=Z,24nm,0.6s								
LPG	**La Plagne**	**54.20**	**302**	⇑*i*P		**P**	**02 37 00.9**	**0.0**	
LPG	**La Plagne**	**54.20**	**302**	⇑*i*P		**P**	**02 37 00.9**	**0.0**	
	comp=Z,24nm,0.6s								
LPL	**La Plagne**	**54.20**	**302**	⇑*i*P		**P**	**02 37 00.9**	**0.0**	
	comp=Z,29nm,0.6s								
LPL	**La Plagne**	**54.20**	**302**	⇑*i*P		**P**	**02 37 00.9**	**0.0**	
LPL	**La Plagne**	**54.20**	**302**	⇑*i*P		**P**	**02 37 00.9**	**0.0**	
	comp=Z,29nm,0.6s								
SBF	**Sospel**	**54.50**	**300**	*e*P		**P**	**02 37 02.4**	**-0.5**	
	comp=Z,30nm,0.7s								
SBF	**Sospel**	**54.50**	**300**	*e*P		**P**	**02 37 02.4**	**-0.5**	
SBF	**Sospel**	**54.50**	**300**	*e*P		**P**	**02 37 02.4**	**-0.5**	
	comp=Z,30nm,0.7s								
ORIF	**Oris-en-Rattie**	**55.01**	**302**	*e*P		**P**	**02 37 05.7**	**-0.9**	
	comp=Z,14nm,0.6s								
ORIF	**Oris-en-Rattie**	**55.01**	**302**	*e*P		**P**	**02 37 05.7**	**-0.9**	
ORIF					pmax	pmax			
	comp=Z,14nm,0.6s								
ORIF	**Oris-en-Rattie**	**55.01**	**302**	*e*P		**P**	**02 37 05.7**	**-0.9**	
	comp=Z,14nm,0.6s								
FRF	**La Foret Royal**	**55.15**	**300**	*e*P		**P**	**02 37 07.2**	**-0.3**	
FRF	**La Foret Royal**	**55.15**	**300**	*e*P		**P**	**02 37 07.2**	**-0.3**	
FRF	**La Foret Royal**	**55.15**	**300**	*e*P		**P**	**02 37 07.2**	**-0.3**	
SMF	**Signal de Mont**	**55.49**	**304**	⇑*i*P		**P**	**02 37 08.9**	**-1.0**	
	comp=Z,9.7nm,0.7s								
SMF	**Signal de Mont**	**55.49**	**304**	⇑*i*P		**P**	**02 37 08.9**	**-1.0**	
SMF					pmax	pmax			
	comp=Z,10.0nm,0.7s								
SMF	**Signal de Mont**	**55.49**	**304**	⇑*i*P		**P**	**02 37 08.9**	**-1.0**	
	comp=Z,9.7nm,0.7s								
AVF	**Avril sur Loir**	**55.72**	**305**	⇑*i*P		**P**	**02 37 10.6**	**-0.9**	
AVF	**Avril sur Loir**	**55.72**	**305**	⇑*i*P		**P**	**02 37 10.6**	**-0.9**	
AVF	**Avril sur Loir**	**55.72**	**305**	⇑*i*P		**P**	**02 37 10.6**	**-0.9**	
VIVF	**Saint-Julien-l**	**55.80**	**302**	⇑*i*P		**P**	**02 37 11.6**	**-0.6**	
	comp=Z,4.7nm,0.6s								
VIVF	**Saint-Julien-l**	**55.80**	**302**	⇑*i*P		**P**	**02 37 11.6**	**-0.6**	
VIVF					pmax	pmax			
	comp=Z,5.0nm,0.6s								
VIVF	**Saint-Julien-l**	**55.80**	**302**	⇑*i*P		**P**	**02 37 11.6**	**-0.6**	
	comp=Z,4.7nm,0.6s								
TCF	**Toulx Ste Croi**	**56.65**	**305**	*e*P		**P**	**02 37 17.6**	**-0.7**	
	comp=Z,6.0nm,0.6s								
TCF	**Toulx Ste Croi**	**56.65**	**305**	*e*P		**P**	**02 37 17.6**	**-0.7**	
TCF					pmax	pmax			
	comp=Z,6.0nm,0.6s								
TCF	**Toulx Ste Croi**	**56.65**	**305**	*e*P		**P**	**02 37 17.6**	**-0.7**	
	comp=Z,6.0nm,0.6s								
LASF	**Ste Croix**	**56.68**	**302**	*e*P		**P**	**02 37 18.3**	**-0.2**	
LASF	**Ste Croix**	**56.68**	**302**	*e*P		**P**	**02 37 18.3**	**-0.2**	
KEST	**Kesra**	**57.18**	**290**	P		**P**	**02 37 22.0**	**-0.2**	
KEST	**Kesra**	**57.18**	**290**	P		**P**	**02 37 22.0**	**-0.2**	
	comp=Z,1.0nm,0.8s,baz=329,slow=5.9,SNR=4.1								
GRR	**Gorron**	**57.49**	**308**	*e*P		**P**	**02 37 23.4**	**-0.7**	
GRR	**Gorron**	**57.49**	**308**	*e*P		**P**	**02 37 23.4**	**-0.7**	
GRR	**Gorron**	**57.49**	**308**	*e*P		**P**	**02 37 23.4**	**-0.7**	
RJF	**Les Rejaudoux**	**57.55**	**304**	*e*P		**P**	**02 37 24.4**	**-0.2**	
RJF	**Les Rejaudoux**	**57.55**	**304**	*e*P		**P**	**02 37 24.4**	**-0.2**	
RJF	**Les Rejaudoux**	**57.55**	**304**	*e*P		**P**	**02 37 24.4**	**-0.2**	
LFF	**La Frestale**	**58.21**	**304**	⇑*i*P		**P**	**02 37 29.0**	**-0.2**	
	comp=Z,16nm,0.8s								
LFF	**La Frestale**	**58.21**	**304**	⇑*i*P		**P**	**02 37 29.0**	**-0.2**	
LFF					pmax	pmax			
	comp=Z,16nm,0.8s								
LFF	**La Frestale**	**58.21**	**304**	⇑*i*P		**P**	**02 37 29.0**	**-0.2**	
	comp=Z,16nm,0.8s								
EPF	**Esparros**	**59.42**	**302**	⇑*i*P		**P**	**02 37 36.5**	**-1.2**	
EPF	**Esparros**	**59.42**	**302**	⇑*i*P		**P**	**02 37 36.5**	**-1.2**	
EPF	**Esparros**	**59.42**	**302**	⇑*i*P		**P**	**02 37 36.5**	**-1.2**	
COLD	**Coldfoot**	**63.21**	**21**	*e*P		**P**	**02 38 01.8**	**-1.1**	
	comp=Z,2.6nm,0.9s								
ESDC	**Sonseca Array**	**63.95**	**301**	P		**P**	**02 38 07.7**	**-0.7**	
ESDC	**Sonseca Array**	**63.95**	**301**	P		**P**	**02 38 07.7**	**-0.7**	
	comp=Z,1.0nm,0.6s,baz=53,slow=6.6,SNR=8.9								
ILAR	**Eielson Array**	**65.95**	**22**	P		**P**	**02 38 19.2**	**-1.7**	
ILAR	**Eielson Array**	**65.95**	**22**	P		**P**	**02 38 19.2**	**-1.7**	
	comp=Z,1.6nm,0.8s,baz=314,slow=4.8,SNR=23								
YKA	**Yellowknife Ar**	**74.46**	**9**	P		P	02 39 10.9	-2.1	
YKA	**Yellowknife Ar**	**74.46**	**9**	P		P	02 39 10.9	-2.1	
	comp=Z,0.6nm,0.6s,baz=344,slow=4.8,SNR=9.9								
TORD	**Torodi Ar. Bea**	**76.16**	**275**	P		**P**	**02 39 22.2**	**-1.3**	
TORD	**Torodi Ar. Bea**	**76.16**	**275**	P		**P**	**02 39 22.2**	**-1.3**	
	comp=Z,1.2nm,0.5s,baz=42,slow=5.2,SNR=41								
WRA	**Warramunga Arr**	**76.97**	**133**	P		**P**	**02 39 27.5**	**-0.4**	
WRA	**Warramunga Arr**	**76.97**	**133**	P		**P**	**02 39 27.5**	**-0.4**	
	comp=Z,1.8nm,0.6s,baz=331,slow=5.5,SNR=11								
ASAR	**Alice Springs**	**79.77**	**135**	P		**P**	**02 39 43.0**	**-0.4**	
ASAR	**Alice Springs**	**79.77**	**135**	P		**P**	**02 39 43.0**	**-0.4**	
	comp=Z,0.9nm,0.6s,baz=330,slow=5.8,SNR=9.2								
PDAR	**Pinedale Array**	**94.41**	**10**	P		**P**	**02 40 53.7**	**-1.7**	
PDAR	**Pinedale Array**	**94.41**	**10**	P		**P**	**02 40 53.7**	**-1.7**	
	comp=Z,0.2nm,0.5s,baz=358,slow=8.1,SNR=3.0								
CPUP	**Villa Florida**	**145.18**	**285**	PKPbc		**PKPbc**	**02 47 11.4**	**-1.0**	
CPUP	**Villa Florida**	**145.18**	**285**	PKPbc		**PKPbc**	**02 47 11.4**	**-1.0**	
	comp=Z,1.3nm,0.5s,baz=38,slow=4.5,SNR=12								
LPAZ	**La Paz**	**145.21**	**310**	PKPbc		**PKPbc**	**02 47 12.0**	**-1.5**	
LPAZ	**La Paz**	**145.21**	**310**	PKPbc		**PKPbc**	**02 47 12.0**	**-1.5**	
	comp=Z,1.4nm,0.6s,baz=8.6,slow=2.2,SNR=11								

IDC 12 02:39:33.8±0.9, 12°.05N×143°.10E, h0km, mb3.7/6, mb1 4.0/7, mb1mx3.7/26, mbtmpg3.7/7, ML4.1/1, Error ellipse: s-maj=38.4km s-min=18.5km az=118.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.30**	**48**	Pn		Pn	02 40 13.9	+0.8
	55nm,0.3s,baz=197,slow=5.1,SNR=22							
GUMO						Sn	02 40 41.3	-0.8
	60nm,0.3s,baz=348,slow=22,SNR=8.0							
WRA	**Warramunga Arr**	**32.94**	**195**	P		P	02 46 10.2	-0.2
	2.1nm,0.7s,baz=20,slow=9.9,SNR=8.4							
ASAR	**Alice Springs**	**36.62**	**194**	P		P	02 46 41.9	-0.2
	0.4nm,0.5s,baz=19,slow=12,SNR=7.0							
KURBB	**Kurchatov Arra**	**64.69**	**320**	P		P	02 50 13.5	-0.1
	0.1nm,0.3s,baz=105,slow=6.1,SNR=3.0							
ILAR	**Eielson Array**	**70.68**	**25**	P		P	02 50 50.2	-1.0
	0.6nm,0.6s,baz=250,slow=6.0,SNR=8.4							
YKA	**Yellowknife Ar**	**85.01**	**27**	P		P	02 52 11.7	+0.7
	0.1nm,0.5s,baz=294,slow=5.5,SNR=3.3							
NVAR	**Mina Array Bea**	**89.22**	**51**	P		P	02 52 33.3	+1.0
	0.7nm,0.5s,baz=258,slow=3.6,SNR=3.9							

*TAP **12** 02:48:59.2, 23°.05N×120°.59E, h10km, ML3.8, B*
*JMA **12** 02:49:00.3±0.4, 22°.77N×120°.60E, h103km, M3.5*
*ISCJB **12** 02:49:00.8±0.2, 23°.05N±0°.01×120°.61E±0°.02, h9km±2km, Error ellipse: s-maj=2.6km s-min=1.8km az=173.1*
ISC 12 02:49:00.8±0.8, 23°.05N±0°.01×120°.59E±0°.02, h12km±6km, n62, σ0s75/116, 9C-10D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CHN1	**Nanshi**	**0.14**	**335**	⇑*i*P		**Pg**	**02 49 03.5**	**-0.8**
	baz=336							
CHN1					*e*S	**Sg**	02 49 06.8	0.0
	baz=336							
WTP	**Ta-pu**	**0.19**	**6**	⇓*i*P		**Pg**	**02 49 04.4**	**-0.7**
	baz=9.0							
WTP					*e*S	**Sg**	02 49 08.0	-0.1
	baz=9.0							
CHN3	**Shinhua**	**0.21**	**276**	P		**Pg**	**02 49 05.5**	**+0.2**
	baz=275							
CHN3					*e*S	**Sg**	02 49 10.4	+1.9
	baz=275							
TWK	**Hsinying**	**0.23**	**335**	⇑*i*P		**Pg**	**02 49 05.3**	**-0.5**
	baz=339							
TWK					*e*S	**Sg**	02 49 10.2	+1.0
	baz=339							
TWM1	**Shoushan**	**0.28**	**214**	*e*P		**Pg**	**02 49 06.9**	**+0.3**
	baz=203							
CHN4	**Tsaushan**	**0.29**	**360**	P		**Pg**	**02 49 06.5**	**-0.4**
CHN4					S	**Sg**	**02 49 11.9**	**+1.0**
SSD	**Sandimen**	**0.31**	**173**	⇑*i*P		**Pg**	**02 49 06.5**	**-0.6**
	baz=163							
SSD					S	**Sg**	02 49 11.4	0.0
	baz=163							
TAI1	**Yung-k'ang**	**0.34**	**268**	P		**Pg**	**02 49 08.1**	**+0.5**
	baz=275							
TAI1					*e*S	**Sb**	02 49 14.7	+0.7
	baz=275							
SGLT	**Jiouru**	**0.34**	**196**	*e*P		**Pg**	**02 49 07.9**	**+0.3**
	baz=183							
SCLT	**Jiali**	**0.39**	**288**	*e*P		**Pg**	**02 49 08.7**	**+0.2**
	baz=302							
SCLT					*e*S	**Sb**	02 49 16.0	+0.5
	baz=302							
ELDTW	**Lidau**	**0.41**	**71**	*i*P		**Pg**	**02 49 08.7**	**-0.3**
	baz=72							
ELDTW					*e*S	**Sg**	02 49 14.5	-0.1
	baz=72							
CHN8	**Yiju**	**0.46**	**310**	P		**Pg**	**02 49 09.8**	**0.0**
	baz=327							
CHN8					*e*S	**Sb**	02 49 17.9	+0.5
	baz=327							
CHY	**Chiayi**	**0.47**	**341**	⇑*i*P		**Pg**	**02 49 09.9**	**-0.1**
	baz=343							
CHY					S	**Sb**	02 49 17.8	0.0
	baz=343							
CHN2	**Minshiung**	**0.49**	**347**	P		**Pg**	**02 49 10.4**	**+0.1**
	baz=349							
CHN2					*i*S	**Sb**	02 49 18.7	+0.3
	baz=349							
ALS	**Alishan**	**0.49**	**23**	⇓*i*P		**Pg**	**02 49 10.2**	**-0.4**
	baz=25							
ALS					*e*S	**Sg**	02 49 16.9	-0.3
	baz=25							
CHN5	**Tsauling**	**0.55**	**8**	⇓*i*P		**Pg**	**02 49 10.8**	**-0.7**
	baz=10.0							
CHN5					S	**Sb**	02 49 20.0	-0.2
	baz=10.0							
KAU	**Kaohsiung**	**0.55**	**209**	*e*P		**Pb**	**02 49 12.7**	**+0.4**
	baz=223							
ECL	**Taimali**	**0.56**	**144**	⇑*i*P		**Pg**	**02 49 11.0**	**-0.8**
	baz=137							
ECL					*e*S	**Sg**	02 49 19.6	+0.3
	baz=137							
TTN	**Taitung**	**0.59**	**120**	*e*P		**Pg**	**02 49 12.0**	**-0.4**
	baz=120							
TTN					*e*S	**Sb**	02 49 21.7	+0.4
	baz=120							
WGK	**Gukeng**	**0.63**	**357**	*e*P		**Pg**	**02 49 13.1**	**0.0**
	baz=359							
WGK					*e*S	**Sb**	02 49 23.2	+0.8
	baz=359							
WSF	**Szhu**	**0.67**	**330**	*e*P		**Pg**	**02 49 13.5**	**-0.4**
	baz=332							
WSF					S	**Sb**	02 49 24.3	+0.6
	baz=332							
SCZT	**Fangliau**	**0.68**	**178**	⇑*i*P		**Pg**	**02 49 13.3**	**-0.7**
	baz=165							
SCZT					*e*S	**Sb**	02 49 24.0	+0.2
	baz=165							
EAST	**Anshuo**	**0.71**	**161**	⇑*i*P		**Pg**	**02 49 13.8**	**-0.7**
	baz=151							
EAST					S	**Sb**	02 49 24.7	-0.1
	baz=151							
CHKT	**Chengkung**	**0.71**	**86**	⇓P		**Pg**	**02 49 14.8**	**+0.2**
	baz=78							
CHKT					*e*S	**Sb**	02 49 26.0	+1.1
	baz=78							
TWF1	**Yuli**	**0.71**	**65**	⇓*i*P		**Pg**	**02 49 13.9**	**-0.7**
	baz=66							
TWF1					*e*S	**Sg**	02 49 24.0	0.0
	baz=66							
TWP	**Hsiaoliuchiu**	**0.74**	**197**	*e*P		**Pn**	**02 49 16.4**	**-0.6**
	baz=197							
TAW	**Tawu**	**0.75**	**158**	*i*P		**Pg**	**02 49 14.5**	**-0.8**
	baz=157							
TAW					S	**Sb**	02 49 26.0	+0.2
	baz=157							
EHY	**Hungye**	**0.81**	**56**	⇓P		**Pg**	**02 49 15.5**	**-0.9**
	baz=65							
EHY					*e*S	**Sb**	02 49 28.0	+0.5
	baz=65							
WNT	**Mingjian**	**0.82**	**6**	P		**Pg**	**02 49 16.2**	**-0.5**
	baz=8.0							
WNT					S	**Sb**	02 49 28.6	+0.5
	baz=8.0							
WTCT	**Ta-ch'eng**	**0.85**	**340**	*e*P		**Pg**	**02 49 16.4**	**-0.9**
	baz=343							
WTCT					*e*S	**Sb**	02 49 29.0	+0.1
	baz=343							
SMLT	**Sun Moon Lake**	**0.87**	**19**	⇓P		**Pg**	**02 49 17.0**	**-0.7**
	baz=20							
SMLT					S	**Sb**	02 49 30.1	+0.5
	baz=20							
TYC	**Yuchr**	**0.88**	**16**	⇓*i*P		**Pg**	**02 49 17.0**	**-0.8**
	baz=18							
TYC					S	**Sb**	02 49 30.5	+0.9
	baz=18							
WDGT	**Dungji**	**0.88**	**284**	⇑*i*P		**Pg**	**02 49 16.5**	**-1.4**
	baz=282							
WDGT					*e*S	**Sb**	02 49 29.8	0.0
	baz=282							
HEN	**Hengchun**	**1.05**	**173**	*e*P		**Pb**	**02 49 20.6**	**-0.3**
	baz=159							
HEN					*e*S	**Sn**	02 49 35.6	-0.2
	baz=159							
ESL	**Shilin**	**1.08**	**45**	*e*P		**Pb**	**02 49 20.6**	**-0.8**
	baz=46							
ESL					*e*S	**Sb**	02 49 35.2	-0.2
	baz=46							
PNG	**Penghu**	**1.08**	**298**	⇑P		**Pb**	**02 49 19.3**	**-2.1**
	baz=298							
PNG					*e*S	**Sb**	02 49 34.1	-1.3
	baz=298							
TCU	**Taichung**	**1.09**	**4**	*e*P		**Pb**	**02 49 20.5**	**-1.0**
	baz=6.0							
TCU					*e*S	**Sb**	02 49 35.8	+0.1
	baz=6.0							
TWK1	**Hengchun**	**1.12**	**170**	*e*P		**Pb**	**02 49 21.4**	**-0.7**
	baz=169							
TWK1					*e*S	**Sn**	02 49 38.5	+0.9
	baz=169							
TSEB	**Hengchuen, Pin**	**1.18**	**166**	*e*P		**Pn**	**02 49 21.1**	**-1.9**
	baz=167							
TSEB					*e*S	**Sn**	02 49 40.1	+1.0
	baz=167							
WHF	**Hehuan Shan**	**1.25**	**29**	⇓P		**Pn**	**02 49 23.4**	**-1.0**
	baz=31							
WHF					*e*S	**Sb**	02 49 41.2	+0.6
	baz=31							
TWQ1	**Liyutan**	**1.30**	**7**	⇓*i*P		**Pn**	**02 49 24.2**	**-0.5**
	baz=356							
TWQ1					*e*S	**Sg**	02 49 42.8	+0.1
	baz=356							
HWA	**Hwalien**	**1.31**	**45**	*e*P		**Pn**	**02 49 24.9**	**+0.1**
	baz=46							
HWA					*e*S	**Sg**	02 49 42.8	-0.1
	baz=46							
TWT	**Tachien**	**1.31**	**24**	P		**Pn**	**02 49 24.2**	**-0.8**
	baz=25							
TWT					*e*S	**Sb**	02 49 42.3	+0.2
	baz=25							
NSY	**Sanyi**	**1.36**	**6**	*e*P		**Pn**	**02 49 25.2**	**-0.4**
	baz=357							
NSY					*e*S	**Sg**	02 49 44.8	0.0
	baz=357							
TWD	**Chiawan**	**1.37**	**42**	*e*P		**Pn**	**02 49 25.4**	**-0.3**
	baz=42							
TWD					*e*S	**Sn**	02 49 43.8	0.0
	baz=42							
NNS	**Nan Shan**	**1.55**	**27**	*e*P		**Pn**	**02 49 28.4**	**+0.1**
	baz=28							
NNS					*e*S	**Sb**	02 49 49.2	0.0
	baz=28							
NSTT	**Nanjuang**	**1.61**	**13**	*e*P		**Pn**	**02 49 28.6**	**-0.5**
	baz=15							
NSTT					*e*S	**Sn**	02 49 50.3	+0.5
	baz=15							
ENA	**Nanau**	**1.73**	**37**	*e*P		**Pn**	**02 49 30.4**	**-0.1**
	baz=49							
NSK	**Sanguang**	**1.76**	**23**	*e*P		**Pn**	**02 49 31.3**	**+0.2**
	baz=25							
NSK					*e*S	**Sb**	02 49 54.9	-0.2
	baz=25							
ENTT	**Nioudou**	**1.81**	**29**	*e*P		**Pn**	**02 49 31.6**	**-0.1**
	baz=20							
ENTT					*e*S	**Sb**	02 49 56.9	+0.3
	baz=20							
TWC	**Suao**	**1.93**	**36**	*e*P		**Pn**	**02 49 33.5**	**+0.1**
	baz=50							
TWC					*e*S	**Sb**	02 49 59.7	-0.2
	baz=50							
TWE	**Neicheng**	**1.93**	**30**	*e*P		**Pn**	**02 49 34.2**	**+0.9**
	baz=31

YOZ Yozgat 2.55 314 *e*Pn **Pn 03 07 01.9 +0.1**

CSEM ***12*** *03:27:51.1, 42°.40N×13°.33E, h10km, MD2.1/9, After ROM*
ROM 12 03:27:51.1±0.1, 42°.40N×13°.33E, h10km, Md2.1/9, Ml1.2/2, Error ellipse: s-maj=1.4km s-min=1.0km az=106.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AQU	**L'Aquila**	**0.07**	**131**	Pg	Pg		03 27 53.8	+0.4
AQU				Sg	Sg		03 27 55.3	+0.2
	225nm,0.3s							
AQU	**L'Aquila**	**0.07**	**131**	Pg	Pg		03 27 53.8	+0.4
AQU				Sg	Sg		03 27 55.3	+0.2
	225nm,0.3s							
CAMP	**Campotosto**	**0.15**	**22**	Pg	Pg		03 27 55.2	+0.5
CAMP				Sg	Sg		03 27 57.8	+0.7
	48nm,0.5s							
CAMP	**Campotosto**	**0.15**	**22**	Pg	Pg		03 27 55.2	+0.5
CAMP				Sg	Sg		03 27 57.8	+0.7
	48nm,0.5s							
FIAM	**Fiamignano**	**0.21**	**231**	Pg	Pg		03 27 56.3	+0.7
FIAM				Sg	Sg		03 27 59.8	+1.2
FIAM	**Fiamignano**	**0.21**	**231**	Pg	Pg		03 27 56.3	+0.7
FIAM				Sg	Sg		03 27 59.8	+1.2
FAGN	**Fagnano**	**0.23**	**125**	Pg	Pg		03 27 56.6	+0.7
FAGN				Sg	Sg		03 28 01.0	+1.8
FAGN	**Fagnano**	**0.23**	**125**	Pg	Pg		03 27 56.6	+0.7
FAGN				Sg	Sg		03 28 01.0	+1.8
TERO	**Teramo**	**0.30**	**42**	Pg	Pg		03 27 57.5	+0.2
TERO				Sg	Sg		03 28 02.1	+0.7
	25nm,0.2s							
TERO	**Teramo**	**0.30**	**42**	Pg	Pg		03 27 57.5	+0.2
TERO				Sg	Sg		03 28 02.1	+0.7
	25nm,0.2s							
VCEL	**Villa Celiera**	**0.38**	**90**	Pg	Pb		03 27 59.8	-0.2
VCEL	**Villa Celiera**	**0.38**	**90**	Pg	Pb		03 27 59.8	-0.2
PTQR	**Pietraquaria**	**0.38**	**172**	Pg	Pg		03 27 59.1	+0.3
PTQR				Sg	Sb		03 28 05.0	-1.1
PTQR	**Pietraquaria**	**0.38**	**172**	Pg	Pg		03 27 59.1	+0.3
PTQR				Sg	Sb		03 28 05.0	-1.1
NRCA	**Norcia**	**0.46**	**340**	Pg	Pg		03 28 00.8	+0.5
NRCA				Sg	Sb		03 28 07.8	-0.7
	5.0nm,0.1s							
NRCA	**Norcia**	**0.46**	**340**	Pg	Pg		03 28 00.8	+0.5
NRCA				Sg	Sb		03 28 07.8	-0.7
	5.0nm,0.1s							

ISCJB ***12*** *03:30:27.9±0.9, 13°.19N±0°.03×145°.41E±0°.02, h16km±6km, mb5.3/226, MS5.0/67, Error ellipse: s-maj=5.3km s-min=3.7km az=152.9*
BJI ***12*** *03:30:30.0, 13°.23N×145°.50E, h33km, mB5.3/46, mb5.0/54, Ms5.1/63, Ms7 5.0/61*
MOS ***12*** *03:30:30.0±1.1, 13°.13N×145°.34E, h33km, mb5.5/63, MS5.1/16, Error ellipse: s-maj=8.7km s-min=5.0km az=108.7*
DJA ***12*** *03:30:30.1±1.1, 13°.N±5°×14°.6E±°, h33km±9km, M5.7/58, mb5.6/58, mB6.1/43, MLv5.5/1, Mw(mB)5.8/43*
NEIC ***12*** *03:30:31.8±0.1, 13°.08N×145°.41E, h35km, mb5.3/93, Error ellipse: s-maj=4.9km s-min=4.3km az=154.0*
NEIC Felt at Barrigada, Dededo, Hagatna, Santa Rita and Tamuning.
TEH ***12*** *03:30:32.0, 13°.07N×145°.38E, h35km, ML5.3*
IDC ***12*** *03:30:33.0±1.1, 13°.14N×145°.50E, h47km±8km, mb4.8/32, mb1 4.9/32, mb1mx4.8/35, mbtmp4.8/32, MS5.0/29, Ms1 5.0/29, ms1mx4.9/36, Error ellipse: s-maj=14.7km s-min=9.2km az=78.0*
GCMT ***12*** *03:30:33.3±0.2, 13°.01N×145°.66E, h15km, MW5.5, Moment Tensor Solution. s59,c79; s88,c169; Moment tensor: Scale 10^17Nm; Mrr 1.12±.05; Mθθ-0.03±.03; Mφφ-1.09±.04; Mrθ 0.34±.10; Mθφ-0.66±.02; Mφr 1.37±.13; Best double couple: M0 1.90000×10^17 NP1:φs219.00000°, δ22.00000°, λ111.00000°. NP2:φs16.00000°, δ69.00000°, λ82.00000°. Principal axes: T 1.7800, Plg65.0000°, Azm272.0000°; N 0.2400, Plg8.0000°, Azm19.0000°; P -2.0200, Plg24.0000°, Azm113.0000°; Data Used: ll lU lC G CN.*
ISC 12 03:30:31.7±0.3, 13°.13N±0°.03×145°.45E±0°.03, h35km±2km, h35km:pP-P,n701,σ1§21/821, mb5.3/237, MS5.0/68, 147C-105D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
GUMO	**Guam**	**0.73**	**309**	*e*Pg	**Pn**		**03 30 47.0**	**+1.4**
GUMO				S	**Sn**		**03 30 59.8**	**+4.3**
GUMO	**Guam**	**0.73**	**309**	P	**Pn**		**03 30 47.1**	**+1.4**
	5μm,0.3s,baz=151,slow=8.0,SNR=819							
GUMO				S	**Sn**		**03 30 59.8**	**+4.3**
	5μm,0.3s,baz=3.6,slow=19,SNR=21							
RKPI	**Ransiki, Papua**	**18.35**	**218**	P	**Pn**		**03 34 44.6**	**+1.0**
	95nm,1.5s,4μm							
PLP	**Palo**	**20.11**	**267**	*e*P	Pn		03 35 03.9	-0.8
DAV	**Davao City (W)**	**20.46**	**255**	*e*Pn	Pn		03 35 08.3	-0.6
DAV	**Davao City (W)**	**20.46**	**255**	P	Pn		03 35 08.4	-0.5
	187nm,0.4s,baz=38,slow=10,SNR=8.2							
DAV				LR	LR		03 41 37.5	
	comp=Z,2μm,19.1s,baz=73,slow=32							
JHJ	**Hachijo jima 2**	**20.56**	**346**	LR	LR		03 42 09.8	
	comp=Z,2μm,18.8s,baz=1.0,slow=34							
FAKI	**Fak Fak**	**20.64**	**220**	P	Pn		03 35 10.1	-0.8
	226nm,1.4s,3μm							
GAMI	**Galela, Maluku**	**20.77**	**239**	P	**P**		**03 35 10.7**	**+0.8**
	407nm,1.6s,6μm							
WAKE	**Wake Island**	**21.25**	**70**	*e*P	**P**		**03 35 13.8**	**-1.1**
	516nm,1.7s							
WAKE				*e*S	**S**		**03 39 08.7**	**-0.7**
CTBH	**Cotabato--PC H**	**21.68**	**256**	*e*P	**P**		**03 35 20.1**	**+0.5**
TNTI	**Ternate**	**21.72**	**237**	P	**P**		**03 35 20.1**	**0.0**
	245nm,1.8s,4μm							
KWAJ	**Kwajalein Atol**	**22.17**	**99**	*e*P	**P**		**03 35 23.6**	**-1.3**
KWAJ				pmax	pmax			
	comp=Z,37nm,0.4s							
KWAJ	**Kwajalein Atol**	**22.17**	**99**	*e*P	**P**		**03 35 23.6**	**-1.3**
	comp=Z,36nm,0.4s							
RCP	**Roxas**	**22.24**	**268**	*e*P	**P**		**03 35 25.9**	**+0.2**
LBMI	**Labuha**	**22.45**	**234**	P	**P**		**03 35 29.5**	**+1.6**
	comp=Z,168nm,1.3s,comp=Z,3μm							
PMG	**Port Moresby**	**22.45**	**176**	*e*P	**P**		**03 35 26.0**	**-1.9**
	comp=Z,63nm,0.9s							
PMG	**Port Moresby**	**22.45**	**176**	P	**P**		**03 35 27.1**	**-0.8**
	comp=Z,83nm,1.0s,comp=Z,1μm							
PMG	**Port Moresby**	**22.45**	**176**	P	**P**		**03 35 27.1**	**-0.8**
	comp=Z,48nm,0.8s,baz=14,slow=5.4,SNR=11							
MNI	**Manado**	**23.48**	**242**	P	**P**		**03 35 42.6**	**+4.1**
	comp=Z,366nm,1.2s,comp=Z,7μm							
TGY	**Tagaytay City**	**23.85**	**275**	P	**P**		**03 35 42.5**	**+0.5**
TGY	**Tagaytay City**	**23.85**	**275**	P	**P**		**03 35 42.5**	**+0.5**
	comp=Z,267nm,0.5s,baz=222,slow=1.6,SNR=12							
JNU	**Nakatsue**	**23.94**	**329**	*e*P	**P**		**03 35 43.0**	**+0.3**
	comp=Z,84nm,1.3s							
JNU	**Nakatsue**	**23.94**	**329**	P	**P**		**03 35 42.0**	**-0.7**
	comp=Z,73nm,1.1s,baz=208,slow=19,SNR=16							
MJAR	**Matsushiro Arr**	**24.21**	**346**	P	**P**		**03 35 43.3**	**-1.8**
MJAR				S	**S**		**03 39 59.7**	**-1.6**
MJAR	**Matsushiro Arr**	**24.21**	**346**	P	**P**		**03 35 43.3**	**-1.8**
	comp=Z,54nm,1.0s,baz=176,slow=11,SNR=56							
MJAR				S	**S**		**03 39 59.7**	**-1.6**
	comp=Z,0.8nm,0.5s,baz=0.7,slow=6.8,SNR=2.9							
MJAR				LR	LR		03 44 48.2	
	comp=Z,3μm,18.4s,baz=155,slow=35							
MAJO	**Matsushiro**	**24.21**	**346**	*e*P	**P**		**03 35 43.8**	**-1.4**
MAJO				pmax	pmax			
	comp=Z,125nm,1.1s							
MAJO	**Matsushiro**	**24.21**	**346**	*e*P	**P**		**03 35 43.8**	**-1.4**
	comp=Z,125nm,1.1s							
MAT	**Matsushiro**	**24.21**	**346**	P	**P**		**03 35 43.4**	**-1.7**
MAT				S	**S**		**03 40 03.6**	**+2.3**
ABRA	**Dolores**	**24.27**	**284**	*e*S	**P**		**03 35 45.6**	**-0.2**
PIP	**Pasuquin**	**24.45**	**285**	*i*P	**P**		**03 35 46.9**	**-0.6**
YULB	**Yu-li**	**25.07**	**297**	*e*P	**P**		**03 35 52.5**	**-0.6**
	comp=Z,63nm,1.2s							
NACB	**Ninganchiao**	**25.09**	**299**	*e*P	**P**		**03 35 51.9**	**-1.4**
YHNB	**Yeheng**	**25.46**	**300**	*e*P	**P**		**03 35 57.2**	**+0.5**
	comp=Z,109nm,1.5s							
SSLB	**Suanglung**	**25.50**	**298**	*e*P	**P**		**03 35 57.3**	**+0.2**
	comp=Z,62nm,0.8s							
TPUB	**Ta-pu**	**25.62**	**297**	*e*P	**P**		**03 35 57.5**	**-0.7**
	comp=Z,283nm,2.0s							
LUWI	**Luwuk**	**26.54**	**240**	P	**P**		**03 36 06.7**	**+0.2**
	comp=Z,354nm,1.1s,comp=Z,3μm							
MYLDM	**Lahad Datu**	**27.73**	**256**	P	**P**		**03 36 20.4**	**+3.2**
MYLDM	**Lahad Datu**	**27.73**	**256**	P	**P**		**03 36 19.8**	**+2.6**
	comp=Z,201nm,1.5s,comp=Z,3μm							
QZH	**Quanzhou**	**27.92**	**299**	*i*P	P		03 36 11.6	-7.2
QZH				S	**S**		**03 40 55.2**	**-5.2**
QZH				LR	LR			
	comp=N,3μm,15.4s							
QZH				LR	LR			
	comp=E,2μm,11.7s							
QZH				LR	LR			
	comp=Z,4μm,17.2s							
TSM	**Tawau**	**28.61**	**255**	P	**P**		**03 36 26.0**	**+0.9**
SSE	**Sheshan**	**28.62**	**313**	*e*P	**P**		**03 36 25.2**	**+0.3**
SSE				sP	**sP**		**03 36 41.2**	**+1.9**
SSE				PcP	**PcP**		**03 39 37.4**	**+1.9**
SSE				S	**S**		**03 41 09.9**	**-1.3**
SSE				sS	**sS**		**03 41 28.0**	**+0.1**
SSE				pmax	pmax			
	comp=Z,6.0nm,0.5s							
SSE				pmax	pmax			
	comp=Z,300nm,7.6s							
SSE				LR	LR			
	comp=N,630nm,17.2s							
SSE				LR	LR			
	comp=E,2μm,17.2s							
SSE				LR	LR			
	comp=Z,2μm,17.4s							
SDKM	**Sandakan**	**28.83**	**258**	P	**P**		**03 36 27.7**	**+0.6**
KDM	**Kudat**	**28.83**	**260**	P	**P**		**03 36 25.6**	**-1.5**
KSRS	**Korea Array**	**28.85**	**330**	P	**P**		**03 36 26.6**	**-0.3**
	comp=Z,13nm,0.8s,baz=151,slow=9.1,SNR=22							
KSRS				PcP	**PcP**		**03 39 37.9**	**+1.9**
	comp=Z,26nm,1.1s,baz=174,slow=1.9,SNR=21							
ERM	**Erimo**	**28.85**	**356**	*e*P	**P**		**03 36 28.2**	**+1.4**
ERM				pmax	pmax			
	comp=Z,30nm,1.3s							
KSAR	**Wonju Array Be**	**28.86**	**330**	P	**P**		**03 36 26.6**	**-0.4**
KSAR				PcP	**PcP**		**03 39 37.9**	**+1.9**
KKM	**Kota Kinabalu**	**29.66**	**259**	P	**P**		**03 36 35.3**	**+0.8**
SGKI	**Sangatta, Kali**	**30.77**	**246**	P	**P**		**03 36 42.8**	**-1.4**
	comp=Z,244nm,1.3s,comp=Z,3μm							
YUK	**Yuzh-Kuril'sk**	**30.80**	**1d**	*i*P	**P**		**03 36 42.2**	**-1.9**
YUK				*i* PPP	PPP		03 38 00.6	
YUK				*i* S	**S**		**03 41 48.3**	**+3.1**
YUK				MLR	MLR			
	comp=Z,1μm,18.0s							
YUK				MLR	MLR			
	comp=N,541nm,18.0s							
NJ2	**Nanjing**	**30.81**	**312**	*e*P	**P**		**03 36 45.0**	**+0.7**
NJ2				pP	**pP**		**03 36 53.5**	**-0.9**
NJ2				sP	**sP**		**03 36 59.0**	**+0.3**
NJ2				PP	**PnPn**		**03 37 47.5**	**+2.2**
NJ2				S	**S**		**03 41 48.5**	**+2.9**
NJ2				sS	**sS**		**03 42 02.5**	**+0.2**
NJ2				pmax	pmax			
	comp=Z,20nm,1.0s							
NJ2				pmax	pmax			
	comp=Z,380nm,10.5s							
NJ2				LR	LR			
	comp=N,1μm,19.2s							
NJ2				LR	LR			
	comp=E,2μm,16.1s							
NJ2				LR	LR			
	comp=Z,3μm,15.4s							
ASAJ	**Asahikawa**	**30.98**	**356**	*e*P	**P**		**03 36 45.4**	**-0.2**
	comp=Z,13nm,1.1s							
ASAJ				PcP	**PcP**		**03 39 42.5**	**+1.2**
ASAJ	**Asahikawa**	**30.98**	**356**	P	**P**		**03 36 45.0**	**-0.6**
	comp=Z,33nm,1.1s,baz=205,slow=12,SNR=9.2							
ASAJ				PcP	**PcP**		**03 39 42.5**	**+1.2**
	comp=Z,9.7nm,0.8s,baz=202,slow=11,SNR=2.3							
ASAJ				LR	LR		03 48 37.4	
	comp=Z,1μm,20.6s,baz=340,slow=35							
SMKI	**Samarinda**	**31.08**	**246**	P	**P**		**03 36 49.2**	**+2.3**
	comp=Z,200nm,1.2s							
BKSI	**Bulukumba**	**31.13**	**235**	P	P		03 36 50.8	+3.5
	comp=Z,17nm,1.1s							
KAPI	**Kappang**	**31.25**	**236**	P	**P**		**03 36 48.1**	**-0.3**
	comp=Z,37nm,1.2s,comp=Z,566nm							
GZH	**Guangzhou**	**32.02**	**293**	P	**P**		**03 36 54.4**	**-0.7**
GZH				PP	**PnPn**		**03 37 57.8**	**-3.3**
GZH				S	S		03 42 11.1	+6.3
GZH				LR	LR			
	comp=N,1μm,21.7s							
GZH				LR	LR			
	comp=E,4μm,18.6s							
GZH				LR	LR			
	comp=Z,6μm,19.3s							
VLA	**Vladivostok**	**32.10**	**341**	*i*P	**P**		**03 36 56.2**	**+0.7**
VLA				S	**S**		**03 42 05.3**	**-0.2**
VLA				pmax	pmax			
	comp=Z,106nm,1.2s							
CTAO	**Charters Tower**	**33.02**	**179**	*e*P	**P**		**03 37 02.6**	**-1.2**
CTAO				pmax	pmax			
	comp=Z,14nm,1.0s							
CTAO	**Charters Tower**	**33.02**	**179**	*e*P	**P**		**03 37 02.6**	**-1.2**
	comp=Z,14nm,1.0s							
USRK	**Ussuriysk Arra**	**33.05**	**342**	P	**P**		**03 37 03.2**	**-0.7**
	comp=Z,13nm,0.9s,baz=160,slow=6.1,SNR=26							
USRK				PcP	**PcP**		**03 39 46.8**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=108,slow=0.6,SNR=4.1							
USRK				LR	LR		03 49 18.7	
	comp=Z,1μm,18.9s,baz=146,slow=34							
DL2	**Dalian**	**33.23**	**325**	P	**P**		**03 37 05.3**	**-0.2**
DL2				sP	**sP**		**03 37 20.5**	**+0.6**
DL2				PcP	**PcP**		**03 39 49.3**	**+1.8**
DL2				*e*S	**S**		**03 42 23.5**	**+0.3**
DL2				sS	**sS**		**03 42 42.4**	**+2.5**
DL2				pmax	pmax			
	comp=Z,38nm,0.9s							
DL2				pmax	pmax			
	comp=Z,260nm,6.7s							
DL2				LR	LR			
	comp=N,820nm,16.8s							
DL2				LR	LR			
	comp=E,710nm,17.7s							
DL2				LR	LR			
	comp=Z,1μm,17.3s							
MTKI	**Muara Teweh, K**	**33.37**	**248**	P	**P**		**03 37 08.6**	**+1.5**
	comp=Z,165nm,1.2s,comp=Z,9μm							
BTM	**Bintulu**	**33.48**	**256**	P	**P**		**03 37 08.7**	**+0.7**
WHN	**Wuhan**	**33.51**	**306**	*i*P	**P**		**03 37 07.8**	**-0.3**
WHN				PP	**PnPn**		**03 38 18.5**	**-1.5**
WHN				S	**S**		**03 42 29.4**	**+1.6**
WHN				pmax	pmax			
	comp=Z,450nm,6.1s							
WHN				LR	LR			
	comp=N,3μm,14.1s							
WHN				LR	LR			
	comp=E,3μm,17.4s							
WHN				LR	LR			
	comp=Z,6μm,20.8s							
YSS	**Yuzh-Sakhalins**	**33.80**	**357**	*e*P	**P**		**03 37 08.0**	**-2.3**
YSS				*e*			03 37 17.8	
YSS				MLR	MLR			
	comp=Z,2μm,17.0s							
YSS				MLR	MLR			
	comp=N,1μm,16.0s							
MDJ	**Mudanjiang**	**34.19**	**340**	P	**P**		**03 37 14.5**	**+0.8**
MDJ				pP	**pP**		**03 37 23.2**	**-0.7**
MDJ				sP	**sP**		**03 37 27.2**	**-0.9**
MDJ				PP	**PP**		**03 38 32.3**	**+0.7**
MDJ				S	**S**		**03 42 37.3**	**-0.6**
MDJ				pmax	pmax			
	comp=Z,15nm,1.6s							
MDJ				pmax	pmax			
	comp=Z,240nm,8.1s							
MDJ				LR	LR			
	comp=N,1μm,15.8s							
MDJ				LR	LR			
	comp=E,1μm,18.0s							
MDJ				LR	LR			
	comp=Z,2μm,16.9s							
SBUM	**Sibu**	**34.54**	**255**	P	**P**		**03 37 18.0**	**+0.8**
SBUM	**Sibu**	**34.54**	**255**	P	**P**		**03 37 18.6**	**+1.4**
	comp=Z,120nm,1.4s,comp=Z,2μm							
WRAB	**Tennant Creek**	**34.62**	**199**	*e*P	**P**		**03 37 17.0**	**-0.8**
WRAB				pmax	pmax			
	comp=Z,21nm,0.7s							
WRAB	**Tennant Creek**	**34.62**	**199**	*e*P	**P**		**03 37 17.0**	**-0.8**
	comp=Z,21nm,0.7s							
WRAB	**Tennant Creek**	**34.62**	**199**	P	**P**		**03 37 17.9**	**+0.1**
	comp=Z,201nm,0.7s,SNR=28							
WRA	**Warramunga Arr**	**34.63**	**199**	P	**P**		**03 37 16.9**	**-0.9**
WRA	**Warramunga Arr**	**34.63**	**199**	P	**P**		**03 37 16.9**	**-0.9**
	comp=Z,15nm,0.7s,baz=22,slow=9.8,SNR=78							
WRA				LR	LR		03 51 05.4	
	comp=Z,2μm,18.9s,baz=15,slow=36							
QIZ	**Qiongzhong**	**34.67**	**284**	P	**P**		**03 37 17.8**	**-0.5**
QIZ				sP	**sP**		**03 37 31.4**	**-1.3**
QIZ				PP	**PnPn**		**03 38 33.2**	**-1.5**
QIZ				S	**S**		**03 42 44.7**	**-1.4**
QIZ				sS	**sS**		**03 43 01.0**	**-1.8**
QIZ				pmax	pmax			
	comp=Z,23nm,1.9s							
QIZ				pmax	pmax			
	comp=Z,320nm,6.6s							
QIZ				LR	LR			
	comp=E,1μm,19.4s							
QIZ				LR	LR			
	comp=Z,4μm,19.3s							
CN2	**Changchun**	**35.07**	**334**	*e*P	**P**		**03 37 22.0**	**+0.6**
CN2				*e*pP	**pP**		**03 37 31.7**	**+0.1**
CN2				*e*sP	**sP**		**03 37 35.6**	**-0.2**
CN2				PP	**PP**		**03 38 41.9**	**+0.6**
CN2				*e*S	**S**		**03 42 52.3**	**+0.8**
CN2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
CN2				LR	LR			
	comp=N,1μm,20.0s							
CN2				LR	LR			
	comp=E,2μm,20.0s							
CN2				LR	LR			
	comp=Z,2μm,18.0s							
STKI	**Sintang**	**36.09**	**252**	P	**P**		**03 37 31.5**	**+1.0**
	comp=Z,108nm,1.5s,comp=Z,11μm							
HABR	**Khabarovsk**	**36.28**	**348**	*e*P	**P**		**03 37 30.2**	**-1.5**
HABR				*e**PP	**pP**		**03 37 39.9**	**-2.0**
HABR				*e**SP	**sP**		**03 37 44.2**	**-2.0**
HABR							03 38 52.7	
HABR				S	**S**		**03 43 09.5**	**-0.5**
HABR				*e**SS	**sS**		**03 43 26.1**	**-0.7**
HABR				*e*SS	**SnSn**		**03 45 39.3**	**+0.6**
HABR				*e*SSS	SSS		03 45 56.4	
HABR				*e*			03 47 44.1	
HABR				pmax	pmax			
	comp=E,40nm,1.7s							
HABR				pmax	pmax			
	comp=Z,83nm,2.0s							
HABR				pmax	pmax			
	comp=N,41nm,2.0s							
HABR				MLR	MLR			
	comp=Z,961nm,18.0s							
KHKI	**Kahang-Kahang**	**36.53**	**236**	P	**P**		**03 37 34.0**	**-0.3**
	comp=Z,79nm,1.4s,comp=Z,2μm							
KSM	**Kuching**	**36.67**	**255**	*e*P	**P**		**03 37 35.5**	**+0.1**
	comp=Z,142nm,1.1s							
KSM	**Kuching**	**36.67**	**255**	P	**P**		**03 37 36.1**	**+0.6**
KSM	**Kuching**	**36.67**	**255**	P	**P**		**03 37 36.1**	**+0.6**
	comp=Z,131nm,1.2s,comp=Z,2μm							
SRBI	**Singaraja**	**36.69**	**237**	P	**P**		**03 37 36.1**	**+0.5**
	comp=Z,64nm,2.2s,comp=Z,1μm							
DNP	**Denpasar**	**37.03**	**236**	P	**P**		**03 37 40.7**	**+2.2**
	comp=Z,273nm,0.9s,comp=Z,32μm							
PBKI	**Pangkalan Bun**	**37.04**	**247**	P	**P**		**03 37 40.0**	**+1.4**
	comp=Z,620nm,1.3s,comp=Z,7μm							
BJI	**Beijing**	**37.16**	**322**	P	**P**		**03 37 39.2**	**-0.1**
BJI				PP	**PP**		**03 39 04.4**	**0.0**
BJI				S	**S**		**03 43 23.2**	**-0.4**
BJI				pmax	pmax			
	comp=Z,30nm,1.3s							
BJI				pmax	pmax			
	comp=Z,410nm,9.9s							
BJI				LR	LR			
	comp=N,2μm,18.1s							
BJI				LR	LR			
	comp=E,730nm,18.5s							
BJI				LR	LR			
	comp=Z,970nm,21.7s							
BYJI	**Banyuwangi**	**37.47**	**237**	P	**P**		**03 37 44.3**	**+2.1**
	comp=Z,375nm,1.5s,comp=Z,12μm							
KLR	**Kul'dur**	**37.73**	**345**	*e*P	P		03 37 39.3	-4.8
KLR				*e*			03 39 58.2	
KLR				*e*S	S		03 43 25.0	-7.1
KLR				pmax	pmax			
	comp=E,28nm,1.6s							
KLR				pmax	pmax			
	comp=Z,74nm,1.6s							
KLR				MLR	MLR			
	comp=Z,2μm,13.0s							
BLJI	**Banyuglugur**	**37.84**	**239**	P	**P**		**03 37 47.2**	**+1.9**
	comp=Z,146nm,1.6s,comp=Z,3μm							
GMJI	**Gumukmas**	**38.25**	**238**	P	**P**		**03 37 49.3**	**+0.5**
	comp=Z,96nm,1.2s							
TIY	**Taiyuan**	**38.25**	**316**	*e*P	**P**		**03 37 49.2**	**+0.5**
TIY				S	**S**		**03 43 42.8**	**+2.3**
TIY				pmax	pmax			
	comp=Z,320nm,5.7s							
TIY				LR	LR			
	comp=N,2μm,16.3s							
TIY				LR	LR			
	comp=E,2μm,17.0s							
TIY				LR	LR			
	comp=Z,2μm,17.3s							
AS31	**Alice Springs**	**38.27**	**197**	*e*P	**P**		**03 37 48.6**	**-0.3**
ASAR	**Alice Springs**	**38.27**	**197**	P	**P**		**03 37 48.2**	**-0.7**
ASAR	**Alice Springs**	**38.27**	**197**	P	**P**		**03 37 48.2**	**-0.7**
	comp=Z,8.3nm,0.7s,baz=23,slow=10,SNR=79							
SKR	**Severo-Kuril's**	**38.45**	**11**	*e*P	P		03 37 46.5	-3.5
SKR				pmax	pmax			
	comp=Z,220nm,1.0s							
GYA	**Guiyang**	**38.67**	**296**	P	**P**		**03 37 53.2**	**+0.7**
GYA				pP	**pP**		**03 38 02.8**	**+0.1**
GYA				PP	**PnPn**		**03 39 25.6**	**+1.9**
GYA				PcP	**PcP**		**03 40 06.3**	**+2.1**
GYA				S	**S**		**03 43 45.9**	**-1.3**
GYA				ScP	**ScP**		**03 43 50.0**	**+0.2**
GYA				SS	**SnSn**		**03 46 29.5**	**-7.7**
GYA				pmax	pmax			
	comp=Z,20nm,0.8s							
GYA				pmax	pmax			
	comp=Z,130nm,4.8s							
GYA				LR	LR			
	comp=N,1μm,17.4s							
GYA				LR	LR			
	comp=E,1μm,18.7s							
GYA				LR	LR			
	comp=Z,1μm,17.2s							
UBPT	**Khong Chiam**	**38.78**	**278**	P	**P**		**03 37 54.6**	**+1.2**
	comp=Z,26nm,1.9s,comp=Z,779nm							
XAN	**Xi'an**	**39.13**	**308**	P	**P**		**03 37 55.5**	**-0.6**
XAN				pP	**pP**		**03 38 05.0**	**-1.3**
XAN				sP	**sP**		**03 38 09.9**	**-0.7**
XAN				PP	**PnPn**		**03 39 30.1**	**+1.2**
XAN				PcP	**PcP**		**03 40 06.5**	**+1.2**
XAN				S	**S**		**03 43 55.4**	**+1.7**
XAN				SS	**SS**		**03 46 43.3**	**-3.8**
XAN				pmax	pmax			
	comp=Z,91nm,9.4s							
X

HHC LR LR
comp=N,1μm,16.1s
HHC LR LR
comp=E,3μm,17.7s
HHC LR LR
comp=Z,4μm,17.9s
UGM Wanagama 40.51 241 P **P 03 38 08.3 +0.6**
comp=Z,288nm,1.6s
DZM Mont Dzumac 40.59 149 *e*S **S 03 44 14.6 -1.2**
comp=Z,1μm,24.2s
DZM *e*LR LR 03 49 20.2
comp=Z,2μm,22.4s
YOGI Yogyakarta 40.65 241 P **P 03 38 09.7 +0.8**
comp=Z,612nm,1.4s,comp=Z,10μm
BJII Banjamegara 40.91 242 P **P 03 38 13.3 +2.2**
comp=Z,227nm,1.8s,comp=Z,5μm
PEA0B Petropavlovsk- 41.06 11 *e*P **P 03 38 10.4 -1.3**
PEA0B *e*PP **PP 03 39 46.5 -0.4**
PETK Petropavlovsk- 41.06 11 P **P 03 38 11.1 -0.7**
PETK 03 39 46.3
PETK Petropavlovsk- 41.06 11 P **P 03 38 11.1 -0.7**
PETK PP **PP 03 39 46.2 -0.6**
PETK Petropavlovsk- 41.06 11 P **P 03 38 11.1 -0.7**
comp=Z,37nm,1.1s,baz=188,slow=8.8,SNR=21
PETK PP **PP 03 39 46.2 -0.6**
comp=Z,14nm,1.1s,baz=191,slow=7.2,SNR=3.8
PET Petropavlovsk 41.17 12 *e*P **P 03 38 12.7 +0.1**
PET *e*S **S 03 44 23.6 +0.1**
PET pmax pmax
comp=Z,300nm,6.3s
PET pmax pmax
comp=Z,82nm,1.0s
TGJI Tegal 41.20 243 P **P 03 38 14.7 +1.3**
comp=Z,107nm,1.5s
BTO Baotou 41.35 318 *e*P **P 03 38 14.2 -0.3**
KMI Kunming 41.91 293 P **P 03 38 20.9 +1.4**
KMI PcP **PcP 03 40 16.9 +2.2**
KMI S **S 03 44 35.4 -0.5**
KMI sS **sS 03 44 53.9 +1.1**
KMI pmax pmax
comp=Z,17nm,0.8s
KMI pmax pmax
comp=Z,330nm,9.7s
KMI LR LR
comp=N,420nm,14.6s
KMI LR LR
comp=E,1μm,20.9s
KMI LR LR
comp=E,1μm,21.7s
CHBT CHBT 41.99 275 P **P 03 38 21.3 +1.4**
CD2 Chengdu 42.22 302 P **P 03 38 21.4 -0.3**
CD2 pP **pP 03 38 31.6 -0.4**
CD2 sP **sP 03 38 35.9 -0.3**
CD2 PP **PP 03 40 02.7 +2.9**
CD2 PcP **PcP 03 40 15.6 +0.2**
CD2 ScP **ScP 03 44 02.1 -1.4**
CD2 S **S 03 44 39.2 -0.7**
CD2 sS **sS 03 44 56.2 -0.7**
CD2 SS **SS 03 47 42.3 -6.5**
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 pmax pmax
comp=Z,550nm,7.1s
CD2 LR LR
comp=N,2μm,17.1s
CD2 LR LR
comp=E,1μm,18.6s
CD2 LR LR
comp=Z,2μm,19.4s
MBWA Marble Bar 42.42 217 *e*P **P 03 38 22.8 -0.4**
comp=Z,29nm,1.0s
KTGM Kuala Trenggan 42.43 264 P **P 03 38 25.3 +1.8**
MYKOM Kota Tinggi 42.68 258 P **P 03 38 25.7 +0.1**
MYKOM Kota Tinggi 42.68 258 P **P 03 38 26.4 +0.8**
comp=Z,137nm,1.1s,comp=Z,2μm
BTDF Bukit Timah Da 42.89 258 P **P 03 38 28.3 +1.1**
comp=Z,62nm,1.1s,comp=Z,936nm
KGM Kluang 43.12 259 P **P 03 38 29.4 +0.3**
DBJI Dramaga 43.13 245 P **P 03 38 29.3 +0.1**
comp=Z,101nm,1.5s,comp=Z,5μm
SBJI Serang 43.49 246 P **P 03 38 33.0 +0.9**
comp=Z,202nm,1.6s,comp=Z,8μm
LZH Lanzhou 43.75 309 ⇑P **P 03 38 34.5 +0.4**
LZH pP **pP 03 38 46.0 +1.5**
LZH PP **PP 03 40 18.0 +1.7**
LZH ScP **ScP 03 44 09.7 -0.1**
LZH *e*S **S 03 45 01.6 -0.9**
LZH sS **sS 03 45 18.3 -1.2**
LZH SS SS 03 48 10.5 -8.4
LZH ScS **ScS 03 48 28.3 -2.8**
LZH pmax pmax
comp=Z,76nm,1.5s
LZH pmax pmax
comp=Z,380nm,7.0s
LZH LR LR
comp=N,880nm,14.0s
LZH LR LR
comp=E,900nm,13.1s
LZH LR LR
comp=Z,2μm,17.6s
FRIM Kepong 44.41 261 P **P 03 38 39.5 0.0**
MSVF Nonsavu 44.45 133 *e*P **P 03 38 37.5 -2.2**
MSVF pmax pmax
comp=Z,9.0nm,1.0s
MSVF Nonsavu 44.45 133 *e*P **P 03 38 37.5 -2.2**
comp=Z,9.0nm,1.0s
IPM Ipoh 44.67 263 *e*P **P 03 38 42.1 +0.5**
comp=Z,50nm,1.4s
IPM Ipoh 44.67 263 P **P 03 38 41.6 0.0**
IPM Ipoh 44.67 263 P **P 03 38 42.0 +0.4**
comp=Z,34nm,1.4s,comp=Z,787nm
KASI Kota Agung 44.70 248 P **P 03 38 41.6 -0.2**
comp=Z,166nm,1.2s,comp=Z,2μm
KULM Kulim 44.85 264 *e*P **P 03 38 43.5 +0.5**
comp=Z,137nm,1.5s
KULM Kulim 44.85 264 P **P 03 38 43.1 +0.1**
KULM Kulim 44.85 264 P **P 03 38 44.2 +1.2**
comp=Z,57nm,1.5s,comp=Z,1μm
LWLI Liwa 44.89 249 P **P 03 38 43.4 -0.1**
comp=Z,285nm,1.0s
STKA Stephens Creek 44.90 185 P **P 03 38 42.1 -1.0**
STKA Stephens Creek 44.90 185 P **P 03 38 42.1 -1.0**
comp=Z,12nm,1.1s,baz=358,slow=8.0,SNR=20
STKA LR LR 03 59 01.8
comp=Z,2μm,18.1s,baz=5.5,slow=38
CMMT Chiang Mai 44.97 284 P **P 03 38 44.8 +0.9**
comp=Z,12nm,1.4s,comp=Z,431nm
CHTO Chiang Mai 44.97 284 P **P 03 38 44.3 +0.3**
SNR=6.2
CHTO Chiang Mai 44.97 284 P **P 03 38 44.6 +0.6**
comp=Z,13nm,1.4s,comp=Z,356nm
CMAR Chiang Mai Arr 44.98 283 P **P 03 38 44.4 +0.4**
CMAR PcP **PcP 03 40 26.6 +1.7**
CMAR Chiang Mai Arr 44.98 283 P **P 03 38 44.4 +0.4**
comp=Z,16nm,0.6s,baz=80,slow=6.5,SNR=72
CMAR PcP **PcP 03 40 26.6 +1.7**
comp=Z,12nm,0.9s,baz=92,slow=3.2,SNR=10
CMAR LR LR 03 59 23.7
comp=Z,1μm,18.1s,baz=269,slow=38
FX1 Attu Island--F 45.40 23 *e*P **P 03 38 48.9 +2.1**
FX1 Attu Island--F 45.40 23 P **P 03 38 49.0 +2.2**
comp=Z,18nm,0.6s,baz=120,slow=18,SNR=5.6
MNAI Manna 45.64 250 P **P 03 38 48.8 -0.5**
comp=Z,804nm,1.2s,comp=Z,7μm
KSI Kapahiang 45.70 252 P **P 03 38 49.5 -0.3**
comp=Z,312nm,1.0s
MASI Maura Aman, Be 45.84 252 P **P 03 38 51.6 +0.7**
comp=Z,511nm,1.4s,comp=Z,6μm
BBOO Buckleboo 46.55 191 *e*P **P 03 38 55.6 -0.5**
comp=Z,292nm,0.8s
PPI Padang Panjang 46.66 257 P **P 03 38 56.9 -0.4**
comp=Z,872nm,0.9s
FORT Forrest 46.75 201 *e*P **P 03 38 57.6 -0.1**
comp=Z,146nm,1.7s
ULN Ulaanbaatar 47.08 325 *e*P **P 03 39 01.5 +1.2**
comp=Z,13nm,0.9s
ULN *e*PcP **PcP 03 40 33.5 +1.5**
ULN Ulaanbaatar 47.08 325 P **P 03 39 01.8 +1.5**
SNR=16
ULN Ulaanbaatar 47.08 325 P **P 03 39 01.2 +0.8**
comp=Z,20nm,1.3s,comp=Z,427nm
PSI Prapat 47.13 262 P **P 03 39 01.4 +0.3**
comp=Z,45nm,1.1s,comp=Z,665nm
SONM Songino Array 47.44 325 P **P 03 39 03.6 +0.5**
SONM PcP **PcP 03 40 33.9 +0.8**
SONM Songino Array 47.44 325 P **P 03 39 03.6 +0.5**
comp=Z,4.4nm,0.7s,baz=139,slow=8.6,SNR=32
SONM PcP **PcP 03 40 33.9 +0.8**
comp=Z,9.8nm,0.7s,baz=137,slow=4.4,SNR=8.6
SONM LR LR 03 59 08.4
comp=Z,2μm,20.2s,baz=123,slow=36
GTA Gaotai 47.90 312 P **P 03 39 07.1 +0.3**
GTA PcP **PcP 03 40 36.6 +1.6**
GTA PP **PP 03 40 58.7 -0.3**
GTA ScP **ScP 03 44 25.5 -1.4**
GTA PcS **PcS 03 44 30.0 -0.7**
GTA S **S 03 46 01.6 -0.5**
GTA sS **sS 03 46 18.4 -0.9**
GTA ScS **ScS 03 49 00.0 +2.2**
GTA SS **SS 03 49 25.6 -5.4**
GTA pmax pmax
comp=Z,14nm,1.6s
GTA pmax pmax
comp=Z,470nm,11.4s
GTA LR LR
comp=N,910nm,19.0s
GTA LR LR
comp=E,1μm,17.6s
GTA LR LR
comp=Z,1μm,19.5s
GSI Gunungsitoli 48.83 260 P **P 03 39 13.2 -0.9**
SEY Seymchan 49.98 4⇑*i*P **P 03 39 22.0 -0.1**
YAK Yakutsk 50.13 350 *e*P **P 03 39 22.7 -0.6**
YAK *e**PP **pP 03 39 32.5 -1.3**
YAK *e* 03 40 47.8
YAK *e* 03 41 19.2
YAK *e*PPP PPP 03 42 09.0
YAK *e*S S 03 46 25.2 -7.1
YAK *e**SS sS 03 46 39.7 -10
YAK *e* 03 49 07.7
YAK pmax pmax
comp=Z,45nm,0.9s
YAK pmax pmax
comp=N,15nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.1s
YAK pmax pmax
comp=Z,32nm,1.3s
YAK pmax pmax
comp=E,28nm,2.2s
YAK pmax pmax
comp=N,23nm,1.8s
YAK smax smax
comp=E,100nm,2.3s
YAK smax smax
comp=N,57nm,2.1s
YAK MLR MLR
comp=Z,2μm,22.0s
YAK MLR MLR
comp=N,915nm,15.0s
YAK MLR MLR
comp=E,645nm,16.0s
ZAK Zakamensk 50.54 326⇑*i*P **P 03 39 26.8 +0.1**
ZAK *e* 03 40 46.1
ZAK *e* 03 49 17.2
ZAK pmax pmax
comp=Z,14nm,1.4s
ATKA Atka Island 50.59 31 *e*P **P 03 39 28.6 +1.7**
comp=Z,199nm,1.5s
IRK Irkutsk 51.04 329 *e*P **P 03 39 30.7 +0.3**
IRK *e* 03 40 46.9
IRK *e*S S 03 46 50.7 +5.4
IRK pmax pmax
comp=Z,67nm,1.9s
TLY Talaya 51.05 328 *e*P **P 03 39 30.6 +0.1**
TLY *e* 03 40 46.6
TLY *e*S **S 03 46 46.7 +1.2**
TLY pmax pmax
comp=Z,47nm,1.7s
TLY MLR MLR
comp=Z,1μm,16.0s
TLY Talaya 51.05 328 P **P 03 39 31.4 +0.9**
comp=Z,114nm,1.6s,SNR=6.4
SHL Shillong 51.73 292 *e*PKP **P 03 39 35.0 -1.2**
SHL *ex* x 03 40 50.0
SHL *e*S S 03 47 10.0 +14
MOY Mondy 52.44 327 *e*P **P 03 39 41.6 +0.6**
MOY pmax pmax
comp=Z,45nm,1.7s
LSA Lhasa 52.71 297 P P 03 39 48.5 +4.7
LSA pmax pmax
comp=Z,30nm,0.9s
RAO Raoul Island 55.01 140 LR LR 04 01 07.8
comp=Z,2μm,20.9s,baz=358,slow=33
UNV Unalaska Valle 55.41 32 *e*P **P 03 40 03.0 +0.6**
comp=Z,64nm,1.0s
TAPN Taplejung 55.56 294 *e*P **P 03 40 04.6 +0.2**
comp=Z,131nm,1.2s
ODAN Odare 55.82 294 *e*P **P 03 40 06.3 +0.1**
comp=Z,105nm,1.3s
HVS Khovu-Aksy 56.27 323*c i*P **P 03 40 09.7 +0.9**
HVS pmax pmax
comp=Z,172nm,1.3s
BILL Bilibino 56.52 9*α i*P **P 03 40 09.4 -0.8**
BILL *e* 03 40 19.9
BILL *e* 03 40 23.5
BILL *e* 03 41 08.7
BILL *e*S **S 03 47 58.1 -0.9**
BILL pmax pmax
comp=Z,48nm,1.0s
BILL MLR MLR
comp=Z,200nm,16.0s
RAMN Ramite 56.53 294 *e*P **P 03 40 11.3 0.0**
comp=Z,87nm,1.1s
GUN Gumba 57.20 295 *e*P **P 03 40 15.9 -0.3**
comp=Z,213nm,1.2s
PKI Pulchoki 57.61 294 *e*P **P 03 40 18.9 -0.1**
comp=Z,55nm,1.0s
PKIN Phulchoki 57.62 294 *e*P **P 03 40 18.7 -0.3**
comp=Z,23nm,0.7s
KKN Kakani 57.73 295 *e*P **P 03 40 19.7 0.0**
comp=Z,53nm,0.9s
WMQ Urumqi 57.87 314 P **P 03 40 21.4 +1.2**
WMQ pP **pP 03 40 31.5 +0.6**
WMQ sP **sP 03 40 35.4 +0.4**
WMQ PcP **PcP 03 41 13.6 +1.2**
WMQ PP **PP 03 42 31.2 +2.6**
WMQ ScP **ScP 03 45 09.6 -0.4**
WMQ S **S 03 48 16.6 -1.1**
WMQ sS **sS 03 48 33.3 -1.9**
WMQ ScS **ScS 03 50 04.6 -2.7**
WMQ SS **SS 03 52 08.8 +0.1**
WMQ pmax pmax
comp=Z,66nm,0.8s
WMQ LR LR
comp=N,1μm,16.4s
WMQ LR LR
comp=E,1μm,19.2s
WMQ LR LR
comp=Z,1μm,23.0s
DMN Daman 57.88 294 *e*P **P 03 40 20.9 +0.1**
comp=Z,54nm,0.9s
GAMB Gambell 58.70 21 *e*P **P 03 40 26.0 +0.5**
comp=Z,70nm,1.1s
DANN Dangsing 59.09 295 *e*P **P 03 40 29.3 0.0**
comp=Z,113nm,0.8s
URZ Urewera 59.09 151 LR LR 04 04 24.6
comp=Z,1μm,18.3s,baz=11,slow=34
KOLN Koldanda 59.22 295 *e*P **P 03 40 30.0 -0.1**
comp=Z,57nm,0.8s
SDPT Sand Point 59.22 33 *e*P **P 03 40 29.6 +0.3**
comp=Z,145nm,1.0s
TIXI Tiksi 59.35 354⇓*i*P **P 03 40 28.5 -1.4**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
PYUN Piuthan 59.76 295 *e*P **P 03 40 33.3 -0.5**
comp=Z,174nm,1.0s
TNA Tin City 61.08 20 *e*P **P 03 40 42.3 +0.4**
comp=Z,72nm,1.2s
RPZ Rata Peaks 61.21 159 LR LR 04 04 51.5
comp=Z,1μm,19.6s,baz=267,slow=34
MK31 Makanchi Array 62.22 316 P **P 03 40 50.1 +0.1**
MK31 pmax pmax
comp=Z,61nm,1.4s
MK31 Makanchi Array 62.22 316 *e*P **P 03 40 50.1 +0.1**
MKAR Makanchi Array 62.22 316*ce*P **P 03 40 51.0 +1.0**
MKAR pmax pmax
comp=Z,5.0nm,0.5s
MKAR Makanchi Array 62.22 316 P **P 03 40 50.2 +0.2**
MKAR PcP **PcP 03 41 30.6 +0.9**
MKAR ⇑*e* 04 10 01.6
MKAR Makanchi Array 62.22 316 P **P 03 40 50.2 +0.2**
comp=Z,5.0nm,0.5s,baz=91,slow=7.6,SNR=72
MKAR PcP **PcP 03 41 30.6 +0.9**
comp=Z,9.4nm,0.7s,baz=90,slow=7.6,SNR=7.6
MKAR LR LR 04 09 33.3
comp=Z,835nm,18.4s,baz=240,slow=38
MKAR PKP2bc 04 10 01.6
comp=Z,1.0nm,0.9s,baz=308,slow=2.9,SNR=5.2
ZAA0 Zalesovo Array 62.33 324 *e*P **P 03 40 50.4 -0.2**
ZALV Zalesovo Beam 62.33 324 P **P 03 40 50.1 -0.4**
ZALV 03 41 30.0
ZALV Zalesovo Beam 62.33 324 P **P 03 40 50.1 -0.4**
ZALV PcP **PcP 03 41 29.9 0.0**
ZALV Zalesovo Beam 62.33 324 P **P 03 40 50.1 -0.4**
comp=Z,14nm,1.0s,baz=104,slow=6.3,SNR=40
ZALV PcP **PcP 03 41 29.9 0.0**
comp=Z,33nm,1.0s,baz=106,slow=3.8,SNR=15
ZALV LR LR 04 08 42.9
comp=Z,1μm,19.6s,baz=244,slow=37
NVS Novosibirsk 63.47 325⇑*i*P **P 03 40 57.0 -1.0**
NVS *e* 03 41 31.7
NVS *i*S **S 03 49 27.8 -0.8**
NVS smax smax
comp=N,78nm,3.3s
NVS smax smax
comp=E,34nm,2.9s
OHAK Old Harbor 63.63 32 *e*P **P 03 40 59.4 +0.4**
comp=E,80nm,1.1s
RAR Rarotonga 63.70 122 LR LR 04 05 52.5
comp=E,1μm,18.8s,baz=315,slow=33
PALK Pallekele 63.86 272 *e*P **P 03 41 02.0 +0.6**
comp=E,67nm,1.3s
KDAK Kodiak Island 64.16 32 *e*P **P 03 41 03.6 +1.0**
comp=E,39nm,1.0s
KDAK Kodiak Island 64.16 32 P **P 03 41 04.0 +1.5**
comp=E,18nm,0.8s,baz=353,slow=4.5,SNR=9.7
KDAK LR LR 04 06 08.4
comp=E,518nm,20.8s,baz=257,slow=33
HYB Hyderabad 64.40 283 *i*P **P 03 41 04.0 -0.9**
comp=E,120nm,1.0s
RSO Redoubt South 64.90 29 *e*P **P 03 41 07.7 0.0**
KURK Kurchatov 65.30 320*c i*P **P 03 41 09.8 -0.3**
KURK pmax pmax
comp=Z,180nm,1.2s
KURK Kurchatov 65.30 320 *e*P **P 03 41 09.9 -0.2**
comp=Z,181nm,1.2s
KURK Kurchatov 65.30 320 P **P 03 41 10.4 +0.3**
SNR=55
KURK Kurchatov 65.30 320 P **P 03 41 10.6 +0.5**
comp=Z,693nm,1.1s,SNR=59
KURBB Kurchatov Arra 65.34 320 P **P 03 41 10.2 -0.2**
comp=Z,86nm,1.0s,baz=101,slow=6.6,SNR=397
SPU Mount Spurr 65.45 28 *e*P **P 03 41 13.0 +1.9**
ULHL Ulahol 65.93 311 P P 03 41 17.7 +3.1
SNR=6.7
PPLA Purkeypile 65.94 26 *e*P **P 03 41 14.8 +0.5**
comp=Z,55nm,0.8s
KSH Kashi 65.97 308 P P 03 41 18.1 +3.2
KSH pP pP 03 41 28.4 +2.7
KSH sP sP 03 41 32.6 +2.8
KSH *e*PcP **PcP 03 41 48.4 +2.9**
KSH PP PP 03 43 45.0 +4.7
KSH *e*ScP 03 45 48.5
KSH *e*PcS 03 45 52.2
KSH S **S 03 50 01.2 +0.8**
KSH sS sS 03 50 18.1 -0.1
KSH *e*ScS **SKSac 03 51 08.1 -0.5**
KSH pmax pmax
comp=Z,14nm,0.7s
KSH pmax pmax
comp=Z,230nm,4.2s
KSH LR LR
comp=N,350nm,9.7s
KSH LR LR
comp=E,630nm,15.1s
KSH LR LR
comp=Z,580nm,13.7s
SEW Seward 66.37 30 *e*P **P 03 41 16.7 -0.1**
comp=Z,65nm,1.1s
TKM2 Tokmak 2 66.45 311 *i*P **P 03 41 19.0 +1.0**
TKM2 Tokmak 2 66.45 311 *e*P **P 03 41 18.6 +0.6**
comp=Z,9.0nm,0.8s
TKM2 Tokmak 2 66.45 311 P **P 03 41 19.0 +1.0**
SNR=7.3
KZA Kyzart 66.65 310 P **P 03 41 21.3 +1.7**
SNR=16
KBK Karagaybulak 66.91 311 P **P 03 41 21.9 +1.0**
SNR=6.0
PMR Palmer 66.92 28 *e*P **P 03 41 19.6 -0.7**
PMR pmax pmax
comp=Z,44nm,1.0s
PMR Palmer 66.92 28 *e*P **P 03 41 19.6 -0.7**
comp=Z,44nm,1.0s
TRF Thorofare Moun 66.94 26 *e*P **P 03 41 19.6 -1.1**
comp=Z,33nm,0.9s
FRU Bishkek 67.16 311 *i*P **P 03 41 23.0 +0.7**
FRU *e* 03 41 45.0
FRU pmax pmax
comp=Z,40nm,2.0s
FRU MLR MLR
comp=Z,1μm,20.0s
AAK Ala-Archa 67.24 311*d i*P **P 03 41 23.7 +0.7**
AAK pmax pmax
comp=Z,29nm,1.7s
AAK Ala-Archa 67.24 311 *e*P **P 03 41 23.6 +0.5**
comp=Z,11nm,1.1s
AAK Ala-Archa 67.24 311⇓P **P 03 41 22.7 -0.3**
SNR=5.6
AAK Ala-Archa 67.24 311 P **P 03 41 22.9 -0.1**
comp=Z,2.8nm,0.7s,baz=79,slow=5.1,SNR=10
USP Ospenovka 67.27 312 P **P 03 41 23.8 +0.8**
SNR=6.8
SML Sawmill 67.34 28 *e*P **P 03 41 23.9 +0.8**
SML pmax pmax
comp=Z,15nm,0.9s
SML Sawmill 67.34 28 *e*P **P 03 41 23.9 +0.8**
comp=Z,15nm,0.9s
MCK McKinley 67.60 26 *e*P **P 03 41 23.7 -1.0**
MCK pmax pmax
comp=Z,52nm,1.2s
MCK McKinley 67.60 26 *e*P **P 03 41 23.7 -1.0**
comp=Z,52nm,1.2s
EKS2 Erkin-Say 67.77 311 *e*P **P 03 41 26.4 +0.1**
EKS2 pmax pmax
comp=Z,27nm,1.3s
EKS2 Erkin-Say 67.77 311 *e*P **P 03 41 26.4 +0.1**
comp=Z,27nm,1.3s
AML Almayashu 67.81 310 P **P 03 41 28.3 +1.4**
SNR=20
COLD Coldfoot 68.16 22 *e*P **P 03 41 29.1 +1.1**
comp=Z,90nm,1.3s
COLA College 68.37 25 *e*P **P 03 41 28.5 -0.9**
COLA pmax pmax
comp=Z,46nm,1.2s
COLA College 68.37 25 *e*P **P 03 41 28.5 -0.9**
comp=Z,46nm,1.2s
DIV Divide 68.38 29 *e*P **P 03 41 30.4 +0.7**
comp=Z,74nm,1.1s
ILAR Eielson Array 68.74 25 P **P 03 41 30.8 -1.0**
ILAR P'P' 04 09 49.9
ILAR Eielson Array 68.74 25 P **P 03 41 30.8 -1.0**
comp=Z,18nm,1.0s,baz=259,slow=4.9,SNR=61
ILAR PKPPKP **P'P'df 04 09 49.9 +1.7**
comp=Z,0.8nm,1.1s,baz=8.3,slow=1.0,SNR=4.3
ILAR LR LR 04 11 20.4
comp=Z,922nm,19.7s,baz=270,slow=36
RAGM Ragged Mountai 68.75 30 *e*P **P 03 41 33.7 +1.8**
DOT Dot Lake 69.69 27 *e*P **P 03 41 37.6 -0.1**
comp=Z,38nm,0.8s
KK31 Karatay Array 70.18 311 *i*P **P 03 41 41.7 +0.6**
KK31 pmax pmax
comp=Z,38nm,1.1s
KKAR Karatay Array 70.18 311 *e*P **P 03 41 41.3 +0.2**
KKAR pmax pmax
comp=Z,21nm,1.0s
KKAR Karatay Array 70.18 311 *e*P **P 03 41 41.3 +0.2**
comp=Z,21nm,1.0s
BVA0 Borovoye Array 70.64 322 P **P 03 41 44.1 +0.4**
BVA0 pmax pmax
comp=Z,17nm,1.2s
BVAR Borovoye Array 70.64 322 P **P 03 41 44.5 +0.8**
BVAR Borovoye Array 70.64 322 P **P 03 41 44.5 +0.8**
BVAR Borovoye Array 70.64 322 P **P 03 41 44.5 +0.8**
comp=Z,38nm,0.7s,baz=99,slow=7.7,SNR=148
BRVK Borovoye 70.71 322*c i*P **P 03 41 43.9 -0.2**
BRVK pmax pmax

comp=Z,117nm,1.2s
BRVK Borovoye 70.71 322 *e*P **P 03 41 44.4 +0.3**
comp=Z,105nm,1.1s
BRVK Borovoye 70.71 322 P **P 03 41 44.6 +0.6**
SNR=32
BRVK Borovoye 70.71 322 P **P 03 41 44.4 +0.3**
comp=Z,452nm,0.9s,SNR=21
PPT Papeete 71.00 114 LR LR 04 08 48.3
comp=Z,1µm,18.5s,baz=18,slow=32
PPT2 Papeete2 71.01 114 *e*S **S 03 50 59.8 -0.9**
comp=Z,2µm,26.2s
PPT2 *e*LR LR 04 03 09.5
comp=Z,2µm,22.2s,baz=299
EGAK Eagle 71.14 26 *e*P **P 03 41 47.0 +0.5**
comp=Z,128nm,1.6s
KBL Kabul 71.56 302 *e*P **P 03 41 50.3 +0.4**
KBL pmax pmax
comp=Z,11nm,1.0s
KBL Kabul 71.56 302 *e*P **P 03 41 50.3 +0.4**
comp=Z,11nm,1.0s
TBI Tubuai 73.25 119 *e*S **S 03 51 23.9 -2.1**
comp=Z,863nm,30.5s
TBI *e*LR LR 04 04 00.9
comp=Z,1µm,31.8s,baz=301
SKAG Skagway 73.32 32 *e*P **P 03 41 59.0 -0.5**
comp=Z,51nm,1.2s
SVE Sverdlovsk 76.30 326 *d*iP **P 03 42 17.4 +0.5**
SVE *e*S **S 03 52 01.2 +2.1**
SVE *e*SS **SS 03 56 52.1 -1.0**
SVE pmax pmax
comp=Z,83nm,1.2s
SVE MLR MLR
comp=Z,2µm,18.0s
AB31 Akbulak array 77.27 318 P **P 03 42 22.1 -0.4**
AB31 pmax pmax
comp=Z,5.0nm,0.4s
ABKAR Akbulak array 77.27 318 *e*P **P 03 42 22.8 +0.3**
comp=Z,39nm,1.0s
ARU Arti 77.47 325 *c*iP **P 03 42 23.1 -0.4**
ARU 03 45 15.6
ARU S **S 03 52 13.1 +1.3**
ARU pmax pmax
comp=Z,106nm,1.7s
SOKR Solikamsk 78.12 329 *e*P **P 03 42 27.8 +0.8**
SOKR SS SS 03 57 25.7 +5.4
SOKR pmax pmax
comp=Z,70nm,1.3s
SOKR MLR MLR
comp=Z,1µm,18.0s
AKTO Aktyubinsk 78.39 319 P **P 03 42 28.4 -0.3**
AKTO Aktyubinsk 78.39 319 P **P 03 42 28.4 -0.3**
AKTO Aktyubinsk 78.39 319 P **P 03 42 28.4 -0.3**
comp=Z,17nm,0.9s,baz=86,slow=6.9,SNR=25
IMYA Miami 78.64 305 *e*P **P 03 42 30.8 +0.1**
ISRO Mashad 79.16 305 *e*P **P 03 42 33.2 -0.2**
IMOG Moghan 79.29 305 *e*P **P 03 42 35.0 +0.6**
IDAH Dahanechah 79.36 301 *e*P **P 03 42 35.6 +0.8**
IPAY Payeh 79.51 305 *e*P **P 03 42 36.2 +0.7**
DRV Dumont d'Urvil 79.67 182 S **SKiKP 03 51 33.0 -4.8**
DRV SS SS 03 58 02.0 +18
DRV L L 04 03 00.0
DRV R 04 09 00.0
IKRD Kardeh 79.85 305 *e*P P 03 42 33.7 -3.6
ABKT Ailbek 79.98 307 P **P 03 42 39.9 +2.1**
comp=Z,165nm,1.2s,SNR=7.8
IKOO Kooshah 80.13 301 *e*P **P 03 42 38.8 -0.2**
ITEG Tejag 80.27 302 *e*P **P 03 42 39.6 0.0**
NLWA Neilton Lookou 80.92 43 *e*P **P 03 42 41.3 -1.3**
comp=Z,76nm,1.4s
KHMM Horse Mountain 82.15 50 *e*P **P 03 42 51.4 +2.0**
comp=Z,21nm,0.8s
HUMO Hull Mountain 82.40 48 *e*P **P 03 42 51.2 +0.7**
comp=Z,27nm,1.2s
LON Longmire 82.42 44 *e*P P 03 42 53.3 +2.7
LON pmax pmax
comp=Z,18nm,1.1s
LON Longmire 82.42 44 *e*P P 03 42 53.3 +2.7
comp=Z,18nm,1.1s
YBH Yreka Blue Hor 82.74 49 *e*P **P 03 42 53.6 +1.2**
comp=Z,19nm,0.9s
YKW3 Yellowknife Ar 82.98 27 *e*P **P 03 42 53.3 +0.2**
comp=Z,0.8nm,1.2s
YKA Yellowknife Ar 83.00 27 P **P 03 42 53.4 +0.2**
YKA Yellowknife Ar 83.00 27 P **P 03 42 53.3 +0.2**
comp=Z,22nm,0.9s,baz=288,slow=5.3,SNR=88
NAC Naches 83.09 44 P **P 03 42 55.6 +1.6**
WDC Whiskeytown Da 83.09 50 *e*P **P 03 42 55.5 +1.4**
WDC pmax pmax
comp=Z,10.0nm,0.9s
WDC Whiskeytown Da 83.09 50 *e*P **P 03 42 55.5 +1.4**
comp=Z,9.7nm,0.9s
HOQ Hoqain 83.18 293 P **P 03 42 55.9 +1.0**
SNR=9.7
EBG Ellensburg 83.23 44 P **P 03 42 56.5 +1.8**
ALE Alert 83.65 4 P **P 03 42 57.0 +0.8**
comp=Z,144nm,1.4s,SNR=11
IANJ Anjilo 83.74 305 *e*P **P 03 42 57.8 -0.1**
LTIM Timbered Crate 83.75 49 P **P 03 42 58.9 +1.2**
IKIA Kiasar 83.78 306 *e*P **P 03 42 59.1 +1.0**
UOSS Wadi Hilu 83.90 294 P **P 03 42 59.1 +0.5**
comp=Z,99nm,0.9s,SNR=5.2
LBCM Butte Creek Ri 83.93 50 P **P 03 42 59.7 +1.1**
ARQ Araqi 83.94 292 P **P 03 43 00.1 +1.3**
SNR=7.0
HATD Hatta, Dubai 83.99 294 P **P 03 43 00.3 +1.2**
SNR=6.5
HAWA Hanford 84.03 44 *e*P **P 03 42 59.1 +0.3**
comp=Z,12nm,0.9s
ASHO Ashiyiah 84.08 294 P P 03 43 02.2 +2.6
SNR=5.8
OD2 Odessa Site #2 84.36 43 P **P 03 43 01.3 +0.8**
MOD Modoc 84.47 48 *e*P **P 03 43 01.9 +0.5**
comp=Z,26nm,1.0s
RES Resolute Bay 84.87 13 *e*P **P 03 43 02.4 0.0**
comp=Z,74nm,1.4s
BEKR Beckworth 84.88 50 *e*P **P 03 43 03.7 +0.3**
comp=Z,11nm,0.9s
NEW Newport 85.19 42 *e*P **P 03 43 05.1 +0.4**
comp=Z,15nm,0.8s
NEW Newport 85.19 42 ⇑P **P 03 43 05.4 +0.7**
baz=85
CMB Columbia Colle 85.26 52 *e*P **P 03 43 05.8 +0.6**
CMB pmax pmax
comp=Z,26nm,1.1s
CMB Columbia Colle 85.26 52 *e*P **P 03 43 05.8 +0.6**
comp=Z,26nm,1.1s
LVZ Lovozero 85.53 339 *e*P **P 03 43 05.1 -0.9**
LVZ pmax pmax
comp=Z,108nm,2.5s
WVOR Wild Horse Val 85.56 48 *e*P **P 03 43 07.4 +0.7**
WVOR pmax pmax
comp=Z,87nm,1.8s
WVOR Wild Horse Val 85.56 48 *e*P **P 03 43 07.4 +0.7**
comp=Z,86nm,1.8s
IZEF Zefreh 85.57 303 *e*P **P 03 43 07.6 +0.4**
IVRN Varamin 85.59 305 *e*P **P 03 43 06.0 -1.0**
RKT Rikitea 85.74 115 *e*S **S 03 53 38.3 -0.1**
comp=Z,626nm,26.5s
RKT *e*LR LR 04 09 43.1
comp=Z,1µm,31.8s,baz=286
C11A Tepee Creek (N 85.86 42 ⇑P **P 03 43 08.5 +0.4**
baz=86,SNR=12
BMO Blue Mountains 85.91 45 *e*P **P 03 43 08.6 +0.2**
BMO pmax pmax
comp=Z,28nm,1.0s
BMO Blue Mountains 85.91 45 *e*P **P 03 43 08.6 +0.2**
comp=Z,28nm,1.0s
A12A Yaak River Ran 85.97 41 ⇓P **P 03 43 09.1 +0.5**
baz=86
IR3 Iran Long-Peri 86.05 305 *e*P **P 03 43 08.5 -0.8**
IKLH Kolahrood 86.09 303 *e*P **P 03 43 10.1 +0.4**
APA Apatity 86.10 339 ⇑*i*P **P 03 43 09.0 +0.3**
APA *i* 03 53 30.0
APA *i*S **S 03 53 40.0 -0.4**
APA pmax pmax
comp=Z,162nm,1.4s
APA MLR MLR
comp=Z,1µm,18.0s
B12A Libby 86.13 41 ⇓P **P 03 43 09.9 +0.5**
baz=86
C12B Naegeli Ranch, 86.41 42 ⇓P **P 03 43 11.1 +0.4**
baz=86
PKM Peak Mountain 86.42 55 ⇑P **P 03 43 11.3 +0.1**
baz=86
D12A Red Ives Fores 86.66 43 ⇓P **P 03 43 12.6 +0.6**
baz=87
A13A Flathead Natio 86.75 41 ⇓P **P 03 43 13.4 +1.0**
baz=87,SNR=14
NVAR Mina Array Bea 86.76 51 P **P 03 43 13.8 +0.8**
NVAR Mina Array Bea 86.76 51 P **P 03 43 13.8 +0.8**
comp=Z,5.0nm,0.7s,baz=267,slow=6.4,SNR=25
NVAR LR LR 04 18 50.5
comp=Z,376nm,18.5s,baz=284,slow=33
VES Vestal, Richgr 86.78 54 ⇓P **P 03 43 13.0 +0.3**
BSMT Bassoo Peak 86.81 42 *e*P **P 03 43 13.6 +0.7**
comp=Z,65nm,1.1s
NV11 Mina Array Sit 86.87 51 *e*P **P 03 43 13.8 +0.4**
B13A Whitefish 86.88 41 ⇓P **P 03 43 13.9 +0.9**
baz=87,SNR=20
MAK Makhachkala 86.89 313 *e*P **P 03 43 10.8 -2.3**
MAK *e* 03 46 35.4
MAK *e*S **SKSac 03 53 34.3 -3.4**
MAK *e* 03 53 52.6
MAK pmax pmax
comp=Z,4.0nm,0.2s
MAK MLR MLR
comp=Z,1µm,21.0s
C13A Hot Springs 87.00 42 ⇑P **P 03 43 14.1 +0.5**
baz=87,SNR=9.8
WALA Waterton Lakes 87.04 40 *e*P **P 03 43 14.7 +0.8**
comp=Z,3.2nm,1.5s
F12A Elk City 87.08 44 ⇑P **P 03 43 14.7 +0.5**
baz=87,SNR=11
KEV Kevo 87.13 342 *e*P **P 03 43 11.8 -1.9**
KEV pmax pmax
comp=Z,12nm,0.8s
KEV Kevo 87.13 342 *e*P **P 03 43 12.8 -0.9**
KEV Kevo 87.13 342 *e*p **P 03 43 11.8 -1.9**
comp=Z,12nm,0.8s
KEV Kevo 87.13 342 *e*P **P 03 43 12.8 -0.9**
ARVC Arvin 87.15 55 ⇑P **P 03 43 15.2 +0.6**
baz=87
JTMT Jette 87.17 42 *e*P **P 03 43 14.2 -0.4**
comp=Z,14nm,1.2s
G12A Big Creek, Yel 87.20 44 ⇑P **P 03 43 15.4 +0.5**
baz=87
BLG Laguna Peak 87.21 56 ⇑P **P 03 43 15.4 +0.5**
baz=87
D13A Huson 87.24 42 ⇑P **P 03 43 14.8 0.0**
baz=87,SNR=9.0
ISA Isabella 87.30 54 ⇑P **P 03 43 16.0 +0.6**
baz=87
MFID Camas Ranch 87.31 46 *e*P **P 03 43 16.2 +0.9**
comp=Z,30nm,1.0s
MFID *e*PP **PP 03 46 40.1 +0.6**
MFID Camas Ranch 87.31 46 ⇓P **P 03 43 15.9 +0.6**
baz=87,SNR=36
A14A Double T Ranch 87.37 40 ⇓P **P 03 43 16.5 +1.0**
baz=87,SNR=20
CWC Cottonwood Cre 87.42 53 ⇓P **P 03 43 16.0 -0.1**
baz=87
SWMT Swartz Lake 87.42 42 *e*P **P 03 43 16.1 +0.4**
comp=Z,10nm,1.1s
C14A Swan Lake 87.51 42 ⇓P **P 03 43 16.6 +0.4**
baz=88
E13A Victor 87.60 43 ⇓P **P 03 43 16.7 0.0**
baz=88
B14A Marquette Ranc 87.64 41 ⇓P **P 03 43 17.6 +0.7**
baz=88,SNR=11
MSO Missoula 87.65 42 *e*P **P 03 43 16.6 -0.3**
comp=Z,6.1nm,1.1s
MSO Missoula 87.65 42 ⇓P **P 03 43 17.2 +0.3**
baz=88
H12A Diamond D Ranc 87.68 45 ⇑P **P 03 43 17.7 +0.5**
baz=88,SNR=10
F13A Darby 87.69 44 ⇓P **P 03 43 17.3 +0.2**
baz=88,SNR=16
I12A Atlanta 87.69 46 ⇓P **P 03 43 18.0 +0.7**
baz=88,SNR=13
ARCES ARCESS Array B 87.70 342 P **P 03 43 16.4 -0.1**
ARCES ARCESS Array B 87.70 342 P **P 03 43 16.4 -0.1**
comp=Z,32nm,0.9s,baz=38,slow=6.6,SNR=39
ARCES LR LR 04 27 02.9
comp=Z,760nm,19.5s,baz=64,slow=39
ARE0 ARCESS Array S 87.70 342 *e*P **P 03 43 15.6 -0.9**
A15A Johnson Ranch, 87.80 40 ⇓P **P 03 43 18.5 +0.9**
baz=88,SNR=18
SLMT Seeley Lake 87.83 42 *e*P **P 03 43 17.2 -0.6**
comp=Z,20nm,1.2s
SLMT *e*PP **PP 03 46 45.3 +1.7**
GRAC Grapevine Rang 87.83 53 ⇑P **P 03 43 18.6 +0.7**
baz=88,SNR=6.7
DAC Darwin (Calif) 87.84 53 *e*P **P 03 43 19.3 +1.1**
DAC pmax pmax
comp=Z,19nm,1.1s
DAC Darwin (Calif) 87.84 53 *e*P **P 03 43 19.3 +1.1**
comp=Z,19nm,1.1s
D14A Greenough 87.86 42 ⇑P **P 03 43 18.0 +0.1**
baz=88
EDW2 Edwards Air Fo 87.88 55 ⇑P **P 03 43 18.7 +0.5**
baz=88
CIS Catalina Islan 87.91 56 ⇓P **P 03 43 18.9 +0.6**
baz=88
FMP Fort Macarthur 87.92 56 ⇓P **P 03 43 19.2 +0.9**
baz=88
G13A Cobalt 87.95 44 ⇑P **P 03 43 19.0 +0.5**
baz=88,SNR=33
LRMC Laurel Mountai 87.97 54 ⇓P **P 03 43 19.3 +0.6**
baz=88
MPMC Manual Prospec 87.98 54 ⇓P **P 03 43 19.5 +0.7**
baz=88,SNR=19
CHMT Chamberlain Mo 88.08 42 *e*P **P 03 43 19.1 +0.1**
comp=Z,11nm,1.2s
CHMT *e*PP **PP 03 46 45.2 -0.5**
H13A Challis 88.09 45 ⇑P **P 03 43 19.7 +0.7**
baz=88,SNR=28
B15A Bradely Ranch, 88.11 41 ⇑P **P 03 43 19.7 +0.6**
baz=88,SNR=12
C15A Salmond Ranch, 88.24 41 ⇑P **P 03 43 20.4 +0.7**
baz=88,SNR=9.9
HLID Hailey 88.26 46 *e*P **P 03 43 20.8 +0.9**
comp=Z,16nm,0.9s
HLID Hailey 88.26 46 ⇓P **P 03 43 20.8 +0.9**
baz=88,SNR=21
BFSC Mount Baldy Ra 88.30 55 ⇑P **P 03 43 20.5 +0.2**
baz=88
FURC Furnace Creek, 88.36 53 ⇓P **P 03 43 21.3 +1.0**
baz=88,SNR=6.6
I13A Wildhorse Cree 88.36 45 ⇓P **P 03 43 21.3 +0.8**
baz=88,SNR=21
VRHR Novokhopersk 88.38 322 *e*P **P 03 43 18.3 -1.8**
VRHR *e* 03 53 57.1
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,70nm,0.8s
VRHR MLR MLR
comp=N,380nm,19.0s
VRHR MLR MLR
comp=E,490nm,19.0s
VRHR MLR MLR
comp=Z,820nm,19.0s
G14A Jackson 88.43 44 ⇓P **P 03 43 20.8 +0.1**
baz=88
ELK Elko 88.45 49 *e*P **P 03 43 21.7 +0.7**
J13A Cove Ranch, Pi 88.47 46 ⇑P **P 03 43 21.9 +1.0**
baz=88,SNR=16
D15A Lincoln 88.52 42 ⇓P **P 03 43 21.0 -0.1**
baz=88
B16A M & M Farms, S 88.62 41 ⇑P **P 03 43 22.0 +0.5**
baz=89
E15A Deer Lodge 88.63 43 ⇑P **P 03 43 22.4 +0.8**
baz=89,SNR=14
H14A Leadore 88.68 44 ⇑P **P 03 43 22.8 +0.8**
baz=89,SNR=9.4
GSC Goldstone 88.71 54 *e*P **P 03 43 23.7 +1.5**
GSC pmax pmax
comp=Z,21nm,1.0s
GSC Goldstone 88.71 54 *e*P **P 03 43 23.7 +1.5**
comp=Z,22nm,1.0s
GSC Goldstone 88.71 54 ⇓P **P 03 43 22.7 +0.6**
baz=89,SNR=6.3
C16A Fuhringer Ranc 88.79 41 ⇑P **P 03 43 22.5 +0.2**
baz=89
DGRG David-gareji 88.82 312 P **P 03 43 22.8 +0.3**
I14A Mackay 88.82 45 ⇓P **P 03 43 23.7 +1.1**
baz=89,SNR=16
MURC Murrieta 88.83 56 ⇑P **P 03 43 22.7 +0.1**
baz=89
R11A Troy Canyon, C 88.85 51 ⇓P **P 03 43 23.6 +0.8**
baz=89,SNR=16
F15A Butte 88.90 43 ⇑P **P 03 43 23.5 +0.6**
baz=89,SNR=14
LRM Limekiln Ridge 88.94 43 *e*P **P 03 43 23.8 +0.6**
comp=Z,89nm,0.9s
J14A Carey 88.95 46 ⇓P **P 03 43 24.1 +0.9**
baz=89
JOF Joensuu 88.95 335 *e*P **P 03 43 20.0 -2.5**
JOF pmax pmax
comp=Z,14nm,0.8s
JOF Joensuu 88.95 335 *e*p **P 03 43 20.0 -2.5**
comp=Z,14nm,0.8s
SHOC Shoshone 88.97 53 ⇑P **P 03 43 23.6 +0.3**
baz=89
MCMT McKenzie Canyo 88.97 44 *e*P **P 03 43 24.4 +1.0**
comp=Z,5.4nm,0.9s
DLMT Dillon 88.98 44 *e*P **P 03 43 24.3 +1.1**
comp=Z,12nm,0.9s
MOS Moscow 89.00 327 *e*P **P 03 43 21.6 -1.3**
MOS pmax pmax
comp=Z,111nm,1.3s
MOS MLR MLR
comp=Z,2µm,20.0s
HRY Holter Researc 89.07 42 *e*P **P 03 43 24.8 +1.2**
comp=Z,8.1nm,0.6s
A17A Triple J Farms 89.08 40 ⇑P **P 03 43 24.1 +0.5**
baz=89
109C Camp Elliot, M 89.09 57 ⇓P **P 03 43 23.8 0.0**
baz=89
G15A Dillon 89.11 44 ⇓P **P 03 43 24.6 +0.7**
baz=89,SNR=9.3
D16A Dana Ranch, Ca 89.16 42 ⇑P **P 03 43 25.5 +1.4**
baz=89,SNR=8.0
H15A Lima 89.17 44 ⇓P **P 03 43 25.4 +1.2**
baz=89,SNR=8.5
TBLG Delisi 89.19 313 P **P 03 43 23.2 -0.9**
HEC Hector,Ludlow 89.21 55 ⇓P **P 03 43 25.3 +0.8**
baz=89
E16A East Helena 89.23 42 ⇓P **P 03 43 25.1 +0.7**
baz=89
B17A L&G Farms, Che 89.23 40 ⇑P **P 03 43 25.4 +1.2**
baz=89
PFO Pinyon Flat Ob 89.43 56 *e*P **P 03 43 26.3 +0.7**
comp=Z,9.5nm,1.0s
PFO Pinyon Flat Ob 89.43 56 ⇑P **P 03 43 26.4 +0.8**
baz=89,SNR=5.9
I15A Monteview 89.47 45 ⇓P **P 03 43 26.2 +0.6**
baz=89
C17A Wharram Farm, 89.47 41 ⇓P **P 03 43 26.3 +0.9**
baz=89,SNR=7.2
ZEI Tsey 89.48 314 *e*P P 03 43 22.6 -3.1
ZEI pmax pmax
comp=Z,52nm,1.5s
F16A Kennard Place, 89.50 43 ⇑P **P 03 43 26.4 +0.8**
baz=89
BAR Barrett 89.50 57 *e*P **P 03 43 23.6 -2.2**
comp=Z,15nm,1.1s
BOZ Bozeman (W) 89.54 43 *e*P **P 03 43 26.8 +0.9**
BOZ pmax pmax
comp=Z,14nm,1.4s
BOZ Bozeman (W) 89.54 43 *e*P **P 03 43 26.8 +0.9**
comp=Z,14nm,1.4s
G16A Moss Hill, Enn 89.55 44 ⇓P **P 03 43 26.8 +0.8**
baz=90,SNR=12
GOR Gori 89.57 313 P **P 03 43 25.5 -0.4**
A18A Metzger Ranch, 89.62 40 ⇓P **P 03 43 27.4 +1.3**
baz=90
GNI Garni 89.65 311 *e*P **P 03 43 27.1 +0.5**
comp=Z,63nm,1.5s
GNI Garni 89.65 311 P **P 03 43 27.1 +0.5**
SNR=14
GNI Garni 89.65 311 P **P 03 43 26.4 -0.1**
comp=Z,2.3nm,0.4s,baz=354,slow=14,SNR=13
MONP Monument Peak 89.65 56 ⇑P **P 03 43 27.4 +0.6**
baz=90,SNR=8.3
D17A Six Diamond Ra 89.67 42 ⇑P **P 03 43 27.5 +1.0**
baz=90
BELC Belle Mtn. Jos 89.69 55 ⇑P **P 03 43 27.2 +0.4**
baz=90
GMRC Granite Mounta 89.75 54 ⇑P **P 03 43 27.9 +0.8**
baz=90,SNR=10.0
DAG Danmarks Havn 89.78 356 ⇑*i*P **P 03 43 25.4 -0.8**
DAG pmax pmax
comp=Z,15nm,1.0s
DAG Danmarks Havn 89.78 356 ⇑*i*P **P 03 43 25.4 -0.8**
comp=Z,15nm,1.0s
E17A Martinsdale 89.79 42 ⇑P **P 03 43 27.5 +0.5**
baz=90
VSR Storozhevoye 89.79 323 *e*P **P 03 43 25.5 -1.2**
VSR pmax pmax
comp=N,40nm,1.1s
VSR pmax pmax
comp=E,100nm,1.1s
VSR pmax pmax
comp=Z,140nm,1.1s
VSR pmax pmax
comp=N,50nm,1.3s
VSR pmax pmax
comp=E,120nm,1.3s
VSR pmax pmax
comp=Z,170nm,1.3s
OBN Obninsk 89.80 327 α*i*P **P 03 43 24.6 -2.0**
OBN *PP **pP 03 43 36.0 -1.8**
OBN 03 53 58.0
OBN SS SS 04 00 17.0 +4.2
OBN pmax pmax
comp=Z,169nm,1.7s
OBN MLR MLR
comp=Z,1µm,19.0s
VORD Divnogorie 89.81 323 *e*P **P 03 43 25.6 -1.2**
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,60nm,1.0s
VORD pmax pmax
comp=Z,70nm,1.0s
VORD MLR MLR
comp=N,380nm,22.0s
VORD MLR MLR
comp=E,660nm,22.0s
VORD MLR MLR
comp=Z,550nm,22.0s
B18A Beardsley Farm 89.84 40 ⇑P **P 03 43 28.3 +1.1**
baz=90
ONI Oni 89.85 314 P **P 03 43 27.2 -0.1**
KBZ Khabaz 89.89 315 P **P 03 43 27.0 -0.3**
KBZ Khabaz 89.89 315 P **P 03 43 26.9 -0.3**
KBZ Khabaz 89.89 315 P **P 03 43 26.9 -0.3**
comp=Z,23nm,1.1s,baz=118,slow=2.9,SNR=41
KBZ LR LR 04 28 54.8
comp=Z,926nm,18.5s,baz=56,slow=39
HVU Hansel Valley 89.93 47 *e*P **P 03 43 29.3 +1.5**
HVU pmax pmax
comp=Z,23nm,1.1s
HVU Hansel Valley 89.93 47 *e*P **P 03 43 29.3 +1.5**
comp=Z,23nm,1.1s
KIV Kislovodsk 89.97 315 *c*iP **P 03 43 27.0 -0.8**
KIV *e* 03 53 54.5
KIV *e*SS SS 04 00 18.3 +2.0
KIV pmax pmax
comp=Z,41nm,1.1s
KIV pmax pmax
comp=Z,58nm,5.3s
KIV Kislovodsk 89.97 315 P **P 03 43 27.7 -0.1**
comp=Z,212nm,0.9s,SNR=6.2
EGMT Eagleton 89.98 40 ⇓P **P 03 43 28.2 +0.4**
baz=90
H16A Russell Place, 90.09 44 ⇓P **P 03 43 30.0 +1.4**
baz=90,SNR=7.4
F17A Fitzpatrick Pl 90.10 43 ⇑P **P 03 43 29.2 +0.8**
baz=90
AKH Akhalkalaki 90.18 313 P **P 03 43 29.3 +0.3**
I16A Newdale 90.19 45 ⇑P **P 03 43 29.7 +0.7**
baz=90
BC3 Big Chuckawall 90.22 55 ⇑P **P 03 43 30.3 +1.0**
baz=90,SNR=5.2
G17A Pierce Place, 90.23 43 ⇑P **P 03 43 29.9 +0.7**
baz=90
A19A Klindworth Far 90.31 39 ⇑P **P 03 43 29.9 +0.6**
baz=90
IRM Iron Mountain 90.33 55 ⇓P **P 03 43 30.6 +0.9**
baz=90,SNR=5.5
B19A Brinkman Farms 90.34 40 ⇑P **P 03 43 29.4 -0.1**
baz=90
E18A Harlowton 90.37 42 ⇑P **P 03 43 29.9 +0.1**
baz=90
DUG Dugway 90.38 49 *e*P **P 03 43 30.5 +0.6**

DUG pmax pmax
comp=Z,16nm,1.0s
DUG Dugway 90.38 49 *e*P **P 03 43 30.5 +0.6**
comp=Z,16nm,1.0s
DUG Dugway 90.38 49 ⇓P **P 03 43 31.1 +1.2**
baz=90,SNR=17
K16A Soda Springs 90.45 46 ⇑P **P 03 43 31.3 +1.0**
baz=90,SNR=5.5
C19A Slack Wire Ran 90.53 41 ⇓P **P 03 43 31.5 +1.1**
baz=90
H17A Grant Village 90.64 44 ⇓P **P 03 43 32.0 +0.8**
baz=91
F18A Big Timber 90.72 42 ⇑P **P 03 43 32.1 +0.8**
baz=91
CHVG Ch'k'valeri 90.77 314 P **P 03 43 32.2 +0.7**
GCMT Greycliff 90.79 43 *e*P **P 03 43 31.9 +0.2**
comp=Z,18nm,1.6s
D19A Cripps Ranch, 90.83 41 ⇑P **P 03 43 32.3 +0.5**
baz=91
HWUT Hardware Ranch 90.85 47 *e*P **P 03 43 32.5 +0.4**
comp=Z,11nm,1.0s
J17A Brown Place, J 90.89 45 ⇓P **P 03 43 32.7 +0.4**
baz=91
GLA Glamis 90.89 56 ⇑P **P 03 43 33.1 +0.7**
baz=91
B20A Solberg Farm, 90.93 40 ⇑P **P 03 43 32.9 +0.8**
baz=91
Y12C Blythe 90.94 55 ⇑P **P 03 43 33.0 +0.6**
baz=91
VNDA Vanda 90.97 176 P **P 03 43 32.5 +0.9**
VNDA Vanda 90.97 176 P **P 03 43 32.5 +0.9**
comp=Z,1.3nm,0.9s,baz=294,slow=8.7,SNR=4.7
VNDA LR LR 04 25 22.4
comp=Z,453nm,19.7s,baz=344,slow=36
G18A Lazy EL Ranch, 91.02 43 ⇓P **P 03 43 33.1 +0.3**
baz=91
W13A Hualapai Mount 91.07 54 ⇑P **P 03 43 34.3 +1.0**
baz=91,SNR=14
PDMCI Parker Dam,Lak 91.09 55 ⇓P **P 03 43 34.3 +1.2**
baz=91,SNR=6.5
E19A Rath Farm, Rou 91.14 42 ⇓P **P 03 43 33.8 +0.6**
baz=91
HAKT HAKKARI 91.18 309 *i*P **P 03 43 33.4 -0.5**
C20A Veseth Ranch, 91.20 40 ⇓P **P 03 43 34.6 +1.1**
baz=91,SNR=12
F19A Roth Farm, Mol 91.25 42 ⇑P **P 03 43 34.4 +0.6**
baz=91
JLU Jordanelle 91.25 48 *e*P **P 03 43 35.1 +1.0**
comp=Z,25nm,1.3s
D20A Manuel Ranch, 91.33 41 ⇑P **P 03 43 34.7 +0.6**
baz=91,SNR=5.7
MVU Marysvale 91.34 50 *e*P **P 03 43 35.5 +1.0**
comp=Z,7.1nm,0.9s
ARTV Artvin 91.37 313 *i*P **P 03 43 33.8 -0.8**
KAF Kangasniemi 91.37 336 *e*P **P 03 43 31.7 -2.1**
KAF pmax pmax
comp=Z,13nm,0.9s
KAF Kangasniemi 91.37 336 *e*p **P 03 43 31.7 -2.1**
comp=Z,13nm,0.9s
I18A Diamond G Ranc 91.39 45 ⇑P **P 03 43 35.0 +0.3**
baz=91
J18A Kendall Valley 91.42 45 ⇑P **P 03 43 35.6 +0.8**
baz=91,SNR=10
DAGI Agillar 91.42 313 *i*P **P 03 43 33.6 -1.1**
M17A Scullys Gap (B 91.53 47 ⇑P **P 03 43 35.2 -0.2**
baz=92
E20A Meyer Farm, Mu 91.55 42 ⇑P **P 03 43 35.6 +0.5**
baz=92
B21A Ellsworth Farm 91.55 39 ⇓P **P 03 43 35.4 +0.4**
baz=92
K18A Toltan Ranch, 91.59 46 ⇓P **P 03 43 36.3 +0.7**
baz=92,SNR=8.2
DBAD Bademkaya 91.59 313 *i*P **P 03 43 35.1 -0.4**
H19A Powell 91.62 43 ⇓P **P 03 43 36.6 +1.0**
baz=92
C21A Desert Coulee 91.73 40 ⇑P **P 03 43 36.6 +0.7**
baz=92
FIA1 FINESS Array S 91.82 335 *e*P **P 03 43 34.5 -1.3**
FINES FINESS Array B 91.82 335 P **P 03 43 34.5 -1.4**
FINES FINESS Array B 91.82 335 P **P 03 43 34.5 -1.4**
comp=Z,16nm,0.8s,baz=72,slow=6.2,SNR=40
FINES LR LR 04 30 02.1
comp=Z,917nm,18.5s,baz=90,slow=39
L18A Fontenelle, Gr 91.83 46 ⇓P **P 03 43 36.9 +0.2**
baz=92
I19A Meeteetse 91.84 44 ⇑P **P 03 43 37.2 +0.5**
baz=92
PDAR Pinedale Array 91.88 45 P **P 03 43 36.4 -0.6**
PDAR PP **PP 03 47 18.2 +2.1**
PDAR Pinedale Array 91.88 45 P **P 03 43 36.4 -0.6**
comp=Z,1.1nm,0.6s,baz=264,slow=1.5,SNR=12
PDAR PP **PP 03 47 18.2 +2.1**
comp=Z,0.3nm,0.7s,baz=286,slow=14,SNR=3.0
PDAR LR LR 04 21 36.3
comp=Z,842nm,19.8s,baz=306,slow=33
U15A North Rim 91.91 52 ⇑P **P 03 43 38.0 +0.7**
baz=92,SNR=5.5
BHD Baghdad 91.92 305 *i*x P 03 43 33.0 -4.0
BHD *i*x **SKSac 03 54 03.0 -4.7**
G20A Bridger 91.95 43 ⇓P **P 03 43 37.5 +0.5**
baz=92
M18A Lyman 91.97 47 ⇓P **P 03 43 37.7 +0.3**
baz=92
A22A Carney Farms, 92.02 39 ⇑P **P 03 43 38.2 +1.0**
baz=92
J19A Crowheart 92.06 45 ⇓P **P 03 43 38.6 +0.9**
baz=92,SNR=11
D21A La Casta Ranch 92.07 41 ⇓P **P 03 43 38.3 +0.8**
baz=92
Y14A Wickenburg 92.10 55 ⇓P **P 03 43 38.7 +0.8**
baz=92,SNR=12
SOC Sochi 92.12 316*c i*P **P 03 43 36.1 -1.6**
SOC *e*S **SKSac 03 54 06.1 -2.3**
SOC pmax pmax
comp=Z,20nm,1.0s
SOC MLR MLR
comp=Z,1μm,22.0s
B22A Reddig Ranch S 92.23 39 ⇓P **P 03 43 38.7 +0.5**
baz=92
L19A Farson 92.25 46 ⇓P **P 03 43 38.9 +0.3**
baz=92
Z14A Wintersburg 92.32 55 ⇓P **P 03 43 39.4 +0.5**
baz=92
H20A Greybull 92.35 43 ⇓P **P 03 43 39.6 +0.7**
baz=92
K19A Absolon Red Bu 92.36 45 ⇓P **P 03 43 39.6 +0.5**
baz=92
I20A Worland 92.45 44 ⇑P **P 03 43 40.1 +0.7**
baz=92
C22A Vida 92.51 40 ⇓P **P 03 43 40.5 +1.0**
baz=92
D22A Cohagen 92.56 40 ⇓P **P 03 43 40.8 +1.1**
baz=92,SNR=7.1
G21A Lodge Grass 92.61 42 ⇑P **P 03 43 40.6 +0.5**
baz=92
J20A Shoshoni 92.69 44 ⇓P **P 03 43 41.1 +0.5**
baz=93
K20A Yellowstone Ra 92.76 45 ⇑P **P 03 43 41.8 +0.9**
baz=93,SNR=9.1
KOPT Kop Dagi 92.78 312 *i*P **P 03 43 41.7 +0.4**
B23A Brockton 92.79 39 ⇓P **P 03 43 41.6 +0.8**
baz=93
214A Organ Pipe Nat 92.84 56 ⇑P **P 03 43 41.9 +0.6**
baz=93
WUAZ Wupatki 92.90 53 *e*P **P 03 43 43.0 +1.3**
comp=Z,15nm,0.9s
WUAZ Wupatki 92.90 53 ⇑P **P 03 43 42.9 +1.2**
baz=93,SNR=6.2
C23A Lambert 92.93 40 ⇓P **P 03 43 42.4 +1.0**
baz=93,SNR=7.6
H21A Big Horn, Sher 92.94 43 ⇓P **P 03 43 42.7 +1.1**
baz=93,SNR=6.1
L20A Wamsutter 92.99 46 ⇓P **P 03 43 42.5 +0.4**
baz=93
F22A Rosebud 93.02 42 ⇑P **P 03 43 43.0 +1.0**
baz=93
O19A Miners Draw (B 93.03 48 ⇑P **P 03 43 42.5 +0.3**
baz=93
I21A Big Trails, Te 93.07 44 ⇑P **P 03 43 43.1 +0.8**
baz=93,SNR=7.2
VSU Vasula 93.10 333*c i*P **P 03 43 41.1 -0.8**
VSU pmax pmax
comp=Z,36nm,1.2s
J21A Lysite 93.13 44 ⇑P **P 03 43 43.5 +0.8**
baz=93,SNR=6.9
D23A Lindsay 93.16 40 ⇑P **P 03 43 43.4 +0.9**
baz=93,SNR=5.5

X16A Lo Mia Camp, P 93.19 54 ⇓P **P 03 43 44.5 +1.4**
baz=93,SNR=6.2
A24A Westby 93.20 38 ⇑P **P 03 43 43.1 +0.5**
baz=93
ANN Anapa 93.22 317 *e*P **P 03 43 40.6 -2.1**
ANN *e* 03 54 11.9
ANN *e*SP SP 03 56 03.2 +3.8
ANN pmax pmax
comp=Z,71nm,1.3s
ANN MLR MLR
comp=N,440nm,18.0s
ANN MLR MLR
comp=E,538nm,18.0s
ANN MLR MLR
comp=Z,494nm,18.0s
S18A Hurst Farm, Bl 93.25 50 ⇓P **P 03 43 43.6 +0.2**
baz=93
M20A Sweetwater, Wa 93.28 46 ⇑P **P 03 43 44.1 +0.6**
baz=93
P19A Cripple Cowboy 93.35 48 ⇑P **P 03 43 44.5 +0.7**
baz=93
E23A Ismay 93.36 41 ⇑P **P 03 43 44.1 +0.7**
baz=93
H22A Clearmont 93.41 43 ⇑P **P 03 43 44.9 +1.1**
baz=93
N20A Spence Gulch, 93.46 47 ⇑P **P 03 43 44.6 +0.4**
baz=93
F23A Volborg 93.60 42 ⇓P **P 03 43 45.7 +1.1**
baz=94
KELT Kelkit 93.63 312 *i*P **P 03 43 45.0 -0.1**
L21A Rawlins 93.68 46 ⇓P **P 03 43 46.0 +0.8**
baz=94
O20A White River Ci 93.72 48 ⇑P **P 03 43 45.6 +0.1**
baz=94
J22A Midwest 93.76 44 ⇑P **P 03 43 46.5 +1.0**
baz=94
G23A Biddle 93.81 42 ⇑P **P 03 43 46.3 +0.7**
baz=94
M21A Separation Pea 93.82 46 ⇓P **P 03 43 46.3 +0.3**
baz=94,SNR=12
N21A Black Mountain 94.01 47 ⇓P **P 03 43 46.9 +0.1**
baz=94
Q20A Ridgley Place, 94.09 49 ⇑P **P 03 43 47.5 +0.4**
baz=94,SNR=5.4
F24A Ekalaka 94.17 41 ⇑P **P 03 43 47.8 +0.6**
baz=94
PV01 Paradox Valley 94.17 49 *e*P **P 03 43 48.0 +0.4**
comp=Z,354nm,0.9s
R20A Redvale 94.29 49 ⇑P **P 03 43 48.3 +0.2**
baz=94
X18A Snowflake 94.32 53 ⇓P **P 03 43 49.1 +0.8**
baz=94
TUC Tucson 94.37 56 *e*P **P 03 43 49.8 +1.3**
TUC Tucson 94.37 56 *e*P **P 03 43 49.8 +1.3**
comp=Z,1.2nm,1.2s
S20A Disappointment 94.43 50 ⇑P **P 03 43 49.1 +0.3**
baz=94
SUMG Summit 94.45 1 *e*P **P 03 43 48.6 +0.2**
SUMG pmax pmax
comp=Z,6.0nm,0.9s
SUMG Summit 94.45 1 *e*P **P 03 43 48.6 +0.2**
comp=Z,6.3nm,0.9s
SUMG Summit 94.45 1 *i*P **P 03 43 48.5 +0.2**
comp=Z,6.3nm,1.0s
H24A Dirks Ranch, A 94.53 42 ⇓P **P 03 43 48.9 -0.1**
baz=94
MVCO Mesa Verde 94.54 50 ⇓P **P 03 43 49.6 +0.3**
baz=94
Q21A Lamborn Mesa, 94.66 49 ⇓P **P 03 43 50.2 +0.5**
baz=95
N22A Wattenberg Ran 94.75 46 ⇑P **P 03 43 50.9 +0.6**
baz=95
L23A Garrett 94.78 45 ⇑P **P 03 43 50.9 +0.6**
baz=95
R21A Cimarron 94.84 49 ⇑P **P 03 43 51.1 +0.4**
baz=95
SMCO Snowmass 94.97 48 *e*P **P 03 43 51.9 +0.5**
comp=Z,6.0nm,1.0s
P22A Eagle 94.97 48 ⇑P **P 03 43 51.9 +0.7**
baz=95
M23A Laramie 95.01 46 ⇑P **P 03 43 52.1 +0.7**
baz=95
J24A Dixon Ranch, L 95.02 44 ⇑P **P 03 43 52.0 +0.7**
baz=95
N23A Red Feather La 95.07 46 ⇓P **P 03 43 52.5 +0.8**
baz=95
RSSD Black Hills 95.12 43 *e*P **P 03 43 52.7 +0.9**
RSSD pmax pmax
comp=Z,3.0nm,0.6s
RSSD Black Hills 95.12 43 *e*P **P 03 43 52.7 +0.9**
comp=Z,3.0nm,0.6s
Q22A Crested Butte, 95.13 48 ⇑P **P 03 43 52.5 +0.4**
baz=95
W20A Ramah 95.25 52 ⇑P **P 03 43 53.2 +0.6**
baz=95
SIM Simferopol' 95.33 318 *e*P P 03 43 48.9 -3.5
SIM *e* 03 54 30.0
SIM *e*S S 03 54 56.0 -10
SIM pmax pmax
comp=Z,14nm,0.9s
U21A Nageezi 95.44 51 ⇓P **P 03 43 53.5 0.0**
baz=95
X20A Quemado 95.45 53 ⇑P **P 03 43 54.4 +0.9**
baz=95
S22A 4UR Ranch, Cre 95.59 49 ⇓P **P 03 43 54.7 +0.5**
baz=96
ISCO Idaho Springs 95.72 47 ⇑P **P 03 43 54.9 +0.2**
baz=96
AKASG Malin Array Be 95.72 325*ce*P **P 03 43 52.7 -1.4**
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKASG Malin Array Be 95.72 325 P **P 03 43 52.4 -1.7**
AKASG Malin Array Be 95.72 325 P **P 03 43 52.4 -1.7**
comp=Z,6.0nm,0.8s,baz=51,slow=4.6,SNR=25
AKASG LR LR 04 30 04.2
comp=Z,1μm,18.2s,baz=80,slow=37
AK01 Malin Array Si 95.73 325 *e*P **P 03 43 52.9 -1.2**
AK02 Malin Array Si 95.75 325 *e*P **P 03 43 52.9 -1.3**
Y20A Horse Springs, 95.76 53 ⇓P **P 03 43 55.9 +0.9**
baz=96
Z20A Nine Sixteen R 95.86 54 ⇓P **P 03 43 56.2 +0.9**
baz=96
SCO Scoresbysund 96.14 356 *i*P **P 03 43 55.1 -0.5**
SCO pmax pmax
comp=Z,6.0nm,1.0s
SCO Scoresbysund 96.14 356 *i*P **P 03 43 55.1 -0.5**
comp=Z,5.6nm,1.0s
220A Playas Peak, P 96.31 55 ⇓P **P 03 43 57.8 +0.4**
baz=96
320A Kipp Ranch, An 96.50 56 ⇓P **P 03 43 59.3 +1.0**
baz=96
Z21A St. Cloud Mine 96.52 54 ⇓P **P 03 43 59.0 +0.6**
baz=96
121A Sookes Peak, D 96.69 55 ⇓P **P 03 43 59.8 +0.6**
baz=97
ANMO Albuquerque 96.88 52 *e*P **P 03 44 01.1 +1.1**
comp=Z,0.9nm,0.8s
Z22A Elephant Butte 97.09 54 ⇑P Pdif 03 44 01.5 +0.5
baz=97
BALT Daday 97.22 315 *i*P **P 03 44 00.3 -1.1**
ULM Lac du Bonnet 97.30 35 LR LR 04 27 45.0
comp=Z,1μm,18.7s,baz=315,slow=35
AVNT Avonos 97.30 312 *i*P **P 03 44 01.2 -0.6**
ELDT Eldivan 97.63 314 *i*P **P 03 44 02.5 -0.7**
NB2 NORSAR Subarra 97.68 339 P **P 03 44 01.6 -1.2**
comp=Z,0.7nm,0.8s,baz=55,slow=5.1
NOA NORSAR Array B 97.68 339 P **P 03 44 01.6 -1.2**
NOA NORSAR Array B 97.68 339 P **P 03 44 01.6 -1.2**
comp=Z,8.8nm,0.9s,baz=52,slow=4.4,SNR=22
NOA LR LR 04 32 58.6
comp=Z,556nm,19.4s,baz=30,slow=38
KIS Kishinev 97.73 322 *e*P Pdif 03 44 12.0 +8.7
KIS Kishinev 97.73 322 *e*P Pdif 03 44 12.0 +8.7
KIS LRM MLR 04 32 50.0
comp=Z,400nm,20.0s
BRTR Keskin Array B 97.79 314 P **P 03 44 03.0 -1.0**
BRTR Keskin Array B 97.79 314 P **P 03 44 03.0 -1.0**
comp=Z,9.6nm,1.1s,baz=85,slow=3.1,SNR=49
BRTR LR LR 04 32 50.9
comp=Z,299nm,19.4s,baz=130,slow=38
ANTO Ankara 98.32 314 *e*P **P 03 44 05.5 -0.7**
ANTO pmax pmax
comp=Z,30nm,1.4s
ANTO Ankara 98.32 314 *e*P **P 03 44 05.5 -0.7**
comp=Z,30nm,1.4s
ANTO Ankara 98.32 314 P **P 03 44 05.7 -0.5**
SNR=8.1

124A Stringfield Ra 98.47 54 ⇓Pdiff **P 03 44 07.4 +0.2**
baz=98
224A Cornudas Mount 98.64 54 ⇑Pdiff Pdif 03 44 08.6 +0.6
baz=99
324A Moseley Ranch, 98.91 55 ⇓Pdiff Pdif 03 44 09.8 +0.6
baz=99
125A Gardner Draw, 99.11 53 ⇑Pdiff **Pdif 03 44 10.2 +0.2**
baz=99
MAW Mawson 99.22 203 LR LR 04 24 46.9
comp=Z,331nm,21.0s,baz=84,slow=33
TESR Tescani 99.26 322 ⇑*i*P **Pdif 03 44 09.8 -0.4**
325A Bean Ranch, Si 99.34 55 ⇑Pdiff **Pdif 03 44 11.2 +0.1**
baz=99
KDHN Kadinhani 99.37 313 *i*P **Pdif 03 44 09.5 -1.4**
VRI Vrincioaia 99.54 322 ⇑P **Pdif 03 44 12.3 +0.9**
VRI Vrincioaia 99.54 322 ⇑*i*P **Pdif 03 44 12.3 +0.9**
PLOR Plostina 99.59 322 ⇑P **Pdif 03 44 11.0 -0.7**
PLOR Plostina 99.59 322 ⇑*i*P **Pdif 03 44 11.0 -0.7**
226B Tecolote Peak, 99.72 54 ⇑Pdiff **Pdif 03 44 12.5 -0.2**
baz=100
KWP Kalwaria Pacla 99.86 326 ⇑P **Pdif 03 44 13.3 +0.5**
KWP Kalwaria Pacla 99.86 326 ⇑*i*P **Pdif 03 44 13.3 +0.5**
KWP Kalwaria Pacla 99.86 326 *e*P **Pdif 03 44 12.7 -0.1**
326A Caldwell Ranch 100.15 54 ⇓Pdiff **Pdif 03 44 15.1 +0.6**
baz=100
MLR Muntele Rosu 100.20 322 ⇓*i*P **Pdif 03 44 13.5 -1.1**
426A McDonald Obser 100.35 55 ⇑Pdiff **Pdif 03 44 16.2 +0.5**
baz=100
KOLS Kolonicke sedl 100.48 326 *e*P **Pdif 03 44 15.5 -0.1**
KOLS pmax pmax
comp=Z,7.0nm,1.1s
KOLS Kolonicke sedl 100.48 326 PDIF **Pdif 03 44 15.5 -0.1**
UZH Uzhgorod 100.64 326 ⇑*i*P **Pdif 03 44 16.3 +0.1**
626A Big Bend Ranch 100.68 56 ⇓Pdiff **Pdif 03 44 17.4 +0.4**
baz=101
VOIR 100.77 322 ⇑P **Pdif 03 44 17.8 +0.8**
VOIR 100.77 322 ⇑*i*P **Pdif 03 44 17.8 +0.8**
427A Hayter Ranch, 100.78 55 ⇑Pdiff **Pdif 03 44 17.6 +0.2**
baz=101
TRPA Tarpa 100.78 325 ⇑*i*P **Pdif 03 44 17.5 +0.6**
CRVS Cervenica-Dubn 100.94 326 *e*P **Pdif 03 44 16.1 -1.5**
CRVS pmax pmax
comp=Z,15nm,1.1s
CRVS Cervenica-Dubn 100.94 326 PDIF **Pdif 03 44 16.1 -1.5**
LOT Lotru 101.53 322 ⇑*i*P **Pdif 03 44 20.9 +0.5**
PSZ Piszkesteto 102.36 326 ⇑P **Pdif 03 44 23.7 -0.3**
PSZ Piszkesteto 102.36 326 ⇑*i*P **Pdif 03 44 23.7 -0.3**
VYHS Vyhne 102.59 327 *e*P **Pdif 03 44 24.8 -0.2**
VYHS pmax pmax
comp=Z,10.0nm,1.3s
VYHS Vyhne 102.59 327 PDIF **Pdif 03 44 24.8 -0.2**
VTS Vitosha 103.40 320 ⇑P **Pdif 03 44 29.1 +0.3**
VTS Vitosha 103.40 320 ⇑*i*P **Pdif 03 44 29.1 +0.3**
BRG Berggiesshubel 103.56 331 *e*PDIFF **Pdif 03 44 29.2 0.0**
comp=Z,8.4nm,1.5s
BRG Berggiesshubel 103.56 331 *e*P **Pdif 03 44 29.2 0.0**
BRG pmax pmax
comp=Z,8.0nm,1.5s
CLL Collm 103.71 332 *i*P **Pdif 03 44 29.0 -0.8**
CLL *e* 03 55 11.0
CLL pmax pmax
comp=Z,14nm,1.4s
CLL MLR MLR
comp=Z,900nm,19.7s
CLL Collm 103.71 332 *i*Pdif **Pdif 03 44 29.0 -0.8**
comp=Z,14nm,1.4s
CLL *i*pPP 03 48 52.9
CLL *e*SKSac **SKSac 03 55 11.0 +3.8**
CLL *e*Sdif **Sdif 03 56 18.0 +1.5**
CLL *e*PS **PS 03 58 04.0 +6.9**
CLL *e*PPS PPS 03 58 45.0
CLL LmV 04 39 00.0
comp=Z,900nm,19.7s
PKSM Moragy 104.06 325 ⇓P **Pdif 03 44 30.1 -1.4**
PKSM Moragy 104.06 325 ⇓*i*P **Pdif 03 44 30.1 -1.4**
CONA Conrad Observa 104.51 328 ⇑*i*Pdiff **Pdif 03 44 31.8 -1.8**
comp=Z,5.9nm,1.0s
KHC Kasperske Hory 104.89 330 *e*P **Pdif 03 44 35.5 +0.3**
KHC Kasperske Hory 104.89 330 *e*PDIFF **Pdif 03 44 35.5 +0.3**
KHC *ex* x 03 48 10.0
KHC *ex* x 03 49 54.0
GERES GERESS Array B 105.02 329 Pdif **Pdif 03 44 35.1 -0.8**
GERES PKiKP **PKiKP 03 48 50.8 +0.3**
GERES GERESS Array B 105.02 329 Pdiff **Pdif 03 44 35.1 -0.8**
comp=Z,0.7nm,0.7s,baz=57,slow=4.9,SNR=6.6
GERES PKiKP **PKiKP 03 48 50.8 +0.3**
comp=Z,0.6nm,0.9s,baz=46,slow=3.9,SNR=3.7
SOKA Soboth 105.74 327 ⇑*i*Pdiff **Pdif 03 44 38.1 -1.0**
comp=Z,7.4nm,1.7s
KEST Kesra 116.10 321 PKP **PKPdf 03 49 12.4 +0.6**
KEST Kesra 116.10 321 PKP **PKPdf 03 49 12.4 +0.6**
comp=Z,1.3nm,0.8s,baz=315,slow=7.1,SNR=2.7
LSZ Lusaka 119.33 260 *e*PKPdf **PKPdf 03 49 20.0 +1.5**
ESDC Sonseca Array 120.25 333 PKP **PKPdf 03 49 20.1 +0.5**
ESDC PP **PP 03 50 41.3 -3.1**
ESDC Sonseca Array 120.25 333 PKP **PKPdf 03 49 20.1 +0.5**
comp=Z,0.2nm,0.3s,baz=39,slow=1.6,SNR=5.3
ESDC PP **PP 03 50 41.3 -3.1**
comp=Z,4.5nm,1.1s,baz=26,slow=7.3,SNR=10
TAM Tamanrasset 126.95 312 *e*PKiKP **PKPdf 03 49 34.7 +1.6**
TAM Tamanrasset 126.95 312 *e*PKPdf **PKPdf 03 49 34.7 +1.6**
TOA0 Torodi Ar. Sit 135.59 305 *e*PKPdf **PKPdf 03 49 49.9 +0.6**
TORD Torodi Ar. Bea 135.59 305 PKPpre PKPpre 03 49 37.3
TORD PKP **PKPdf 03 49 49.4 +0.1**
TORD SKPbc **SKPbc 03 53 16.1 -2.1**
TORD Torodi Ar. Bea 135.59 305 PKiKP PKPpre 03 49 37.3
comp=Z,1.4nm,0.9s,baz=56,slow=2.6,SNR=5.8
TORD PKP **PKPdf 03 49 49.4 +0.1**
comp=Z,4.5nm,1.0s,baz=48,slow=3.1,SNR=9.1
TORD SKPbc **SKPbc 03 53 16.1 -2.1**
comp=Z,1.6nm,1.0s,baz=20,slow=2.8,SNR=4.4
PLCA Paso Flores 138.21 138 PKP **PKPdf 03 49 53.9 +0.3**
PLCA SKPbc **SKPbc 03 53 24.7 -0.6**
PLCA Paso Flores 138.21 138 PKP **PKPdf 03 49 53.9 +0.3**
comp=Z,3.1nm,0.8s,baz=238,slow=5.9,SNR=7.2
PLCA SKPbc **SKPbc 03 53 24.7 -0.6**
comp=Z,4.2nm,1.2s,baz=223,slow=7.4,SNR=2.2
DBIC Dimbokro 144.55 302 *e*PKPdf PKPbc 03 50 04.7 +0.5
DBIC PKP **PKPab 03 50 05.0 +1.0**
DBIC Dimbokro 144.55 302 PKP PKPbc 03 50 05.0 +0.7
comp=Z,118nm,0.9s,baz=37,slow=4.1,SNR=134
TRQA Tornquist 145.19 140 *e*PKPdf **PKPbc 03 50 04.5 -1.2**
LPAZ La Paz 147.38 100 *e*PKPdf **PKPdf 03 50 11.7 +0.6**
LPAZ PKPbc **PKPdf 03 50 12.0 +0.9**
LPAZ *e*PKPbc **PKPab 03 50 14.6 -1.0**
LPAZ La Paz 147.38 100 PKPbc **PKPdf 03 50 12.0 +0.9**
comp=Z,2.2nm,0.5s,baz=358,slow=2.6,SNR=11
SACV Santiago Islan 150.06 338 *e*PKPbc **PKPbc 03 50 20.7 +1.0**
SAML Samuel 151.60 85 *e*PKPdf **PKPdf 03 50 17.5 +0.4**
SAML *e*PKPbc **PKPbc 03 50 23.6 +0.2**
CPUP Villa Florida 154.91 125 PKPab **PKPab 03 50 45.9 +0.3**
CPUP Villa Florida 154.91 125 PKPab **PKPab 03 50 45.9 +0.3**
comp=Z,0.9nm,0.6s,baz=212,slow=5.9,SNR=3.0
BDFB Brasilia 166.71 102 PKP **PKPdf 03 50 35.9 +1.2**
BDFB Brasilia 166.71 102 PKP **PKPdf 03 50 35.9 +1.2**
comp=Z,1.7nm,0.6s,baz=48,slow=3.9,SNR=5.0

MAN 12 03:35:40,18.43N×120.67E,h27km,mb3.9,ML2.6,MS2.2, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.54**	**202**	⇓*i*P		03 35 52.6	+0.7
APYP	**Conner**	**0.79**	**136**	*e*P		03 35 55.7	+0.3
APYP				*e*S		03 36 02.6	-2.8

IDC 12 03:40:06.7±2.7,13.23N×145.02E,h71km±30km,mb3.4/5, mb1 3.8/5,mb1mx3.3/25,mbtmp3.4/5,Error ellipse: s-maj=123.7km s-min=19.6km az=109.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.39**	**338**	P		03 40 19.9	+1.2
GUMO	148nm,0.3s,baz=116,slow=8.0,SNR=4.4			S		03 40 29.7	+2.3
WRA	263nm,0.3s,baz=3.4,slow=23,SNR=7.4 **Warramunga Arr**	**34.60**	**198**	P		03 46 48.9	-0.2
ASAR	0.9nm,0.6s,baz=21,slow=9.7,SNR=6.5 **Alice Springs**	**38.24**	**197**	P		03 47 20.0	-0.2
ILAR	0.6nm,0.6s,baz=23,slow=10,SNR=10 **Eielson Array**	**68.83**	**25**	P		03 51 02.5	-0.8
	0.4nm,0.7s,baz=260,slow=5.6,SNR=4.9						

YKA	**Yellowknife Ar**	**83.11**	**27**	P	P	03 52 25.0	+0.4	
	0.6nm,0.6s,baz=287,slow=5.2,SNR=6.5							
NVAR	**Mina Array Bea**	**87.03**	**51**	P	P	03 52 45.5	+0.4	
	0.5nm,0.6s,baz=270,slow=4.4,SNR=3.8							
DBIC	**Dimbokro**	**144.14**	**302**	PKP	PKPdf	03 59 35.8	+0.3	
	2.2nm,0.8s,baz=109,slow=5.7,SNR=4.4							

IDC ***12*** *04:13:27.0±7.1, 48°.15N×142°.40E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.6/22, mbtmp3.7/5, Error ellipse: s-maj=174.9km s-min=39.5km az=4.0*
MOS ***12*** *04:13:29.8±1.4, 48°.63N×142°.45E, h14km, mb4.0/4, Error ellipse: s-maj=71.5km s-min=19.8km az=98.1*
MOS Felt (II-III) at Makarov.
SKHL ***12*** *04:13:29.9±1.4, 48°.59N×142°.60E, h10km, mb4.1/4*
SKHL Felt (II-III) at Makarov.
ISCJB ***12*** *04:13:29.8±0.5, 48°.57N±0°.03×142°.40E±0°.08, h9km, mb3.7/5, Error ellipse: s-maj=7.5km s-min=3.4km az=166.9*

ISC 12 04:13:31.3±0.7, 48°.58N±0°.03×142°.50E±0°.05, h9km, n17, σ1s94/28, mb3.9/5, 2D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGL	**Uglegorsk**	**0.57**	**330**	⇓*i*	PN	**Pg**	**04 13 42.3**	**-0.1**
UGL				*i*	S	**Sg**	**04 13 50.0**	**0.0**
UGL				pmax	pmax			
	comp=Z,490nm,0.5s							
UGL				smax	smax			
	comp=N,5μm,0.4s							
UGL				smax	smax			
	comp=E,6μm,0.5s							
UGL				smax	smax			
	comp=Z,3μm,0.5s							
UGL	**Uglegorsk**	**0.57**	**330**	⇓*i*	Pg	**Pg**	**04 13 42.3**	**-0.1**
UGL				AMB	AMB	04 13 44.0		
	comp=Z,490nm,0.5s							
UGL				*i*	Sg	**Sb**	**04 13 51.0**	**-0.8**
UGL				A	A	04 13 55.0		
	comp=Z,5μm,0.5s							
UGL				A	A	04 13 55.0		
	comp=Z,6μm,0.5s							
UGL				A	A	04 13 55.0		
	comp=Z,3μm,0.5s							
UGL				AMS	AMS	04 14 11.0		
	comp=Z,12μm,4.0s							
YSS	**Yuzh-Sakhalins**	**1.64**	**174**	*e*PN	**Pn**	**04 14 00.0**	**-0.2**
YSS				*e*		04 14 21.0		
YSS				smax	smax			
	comp=N,510nm,0.7s							
YSS	**Yuzh-Sakhalins**	**1.64**	**174**	*e*Pb	**Pn**	**04 14 00.0**	**-0.2**
YSS				*e*Pg	**Pg**	**04 14 02.5**	**-0.2**
YSS				*e*Sb	**Sn**	**04 14 20.0**	**-1.4**
YSS				*e*Sg	**Sg**	**04 14 25.8**	**+1.9**
YSS				A	A	04 14 27.0		
	comp=N,510nm,0.7s							
TYV	**Tymovskoe**	**2.29**	**2**	*e*P	**Pn**	**04 14 08.5**	**-0.7**
TYV				AMB	AMB	04 14 10.0		
	comp=N,13nm,0.8s							
TYV				*e*Pg	**Pg**	**04 14 15.3**	**+0.2**
TYV				AMB	AMB	04 14 17.3		
	comp=N,58nm,0.4s							
TYV				*e*Sg	**Sg**	**04 14 48.2**	**+3.5**
TYV				A	A	04 14 53.5		
	comp=N,161nm,0.8s							
GRNR	**Gornyy**	**4.51**	**301**	*e*P	**Pn**	**04 14 39.3**	**-0.5**
GRNR				*e*Pg	**Pg**	**04 14 57.5**	**-0.2**
GRNR				AMB	AMB	04 15 04.0		
	comp=N,14nm,0.8s							
GRNR				*e*Sg	**Sg**	**04 15 57.5**	**+1.3**
GRNR				A	A	04 15 58.5		
	comp=N,74nm,0.6s							
NKL	**Nikolayevsk**	**4.72**	**347**	*e*Pg	**Pg**	**04 15 00.5**	**-1.1**
NKL				AMB	AMB	04 15 02.0		
	comp=N,23nm,0.7s							
NKL				*e*Sg	**Sg**	**04 16 08.2**	**+5.5**
NKL				A	A	04 16 12.0		
	comp=N,36nm,0.8s							
NKL				A	A	04 16 12.0		
	comp=N,31nm,0.8s							
OKH	**Okha**	**4.98**	**3**	*e*Sg	Sg	04 16 20.7	+10	
OKH				A	A	04 16 21.4		
	comp=N,71nm,0.4s							
TEY	**Ternei**	**5.38**	**231**	*e*P	**Pn**	**04 14 53.7**	**+2.0**
TEY				*e*S	**Sn**	**04 15 56.8**	**+3.1**
TEY				A	A	04 15 57.9		
	comp=N,32nm,0.7s							
TEY				A	A	04 15 57.9		
	comp=N,18nm,0.7s							
KLR	**Kul'dur**	**7.12**	**279**	*e*Pg	**Pg**	**04 15 47.2**	**-0.3**
EKMR	**Ekimchan**	**7.53**	**310**	*e*P	**Pn**	**04 15 23.3**	**+2.1**
EKMR				AMB	AMB	04 15 28.0		
	comp=N,3.0nm,0.5s							
EKMR				*e*Sg	**Sg**	**04 17 28.5**	**-4.4**
EKMR				A	A	04 17 28.8		
	comp=N,9.0nm,0.7s							
EKMR				A	A	04 17 28.8		
	comp=N,4.0nm,0.7s							
EKMR				A	A	04 17 28.8		
	comp=N,5.0nm,0.7s							
ILAR	**Eielson Array**	**39.65**	**39**	P	**P**	**04 21 02.9**	**-0.1**	
	comp=N,0.6nm,0.8s,baz=282,slow=8.5,SNR=9.3							
MKAR	**Makanchi Array**	**39.65**	**291**	PcP	**PcP**	**04 23 08.2**	**-1.8**	
	comp=N,0.4nm,0.7s,baz=51,slow=0.8,SNR=4.8							
YKA	**Yellowknife Ar**	**53.60**	**34**	P	**P**	**04 22 51.9**	**-0.3**	
	comp=N,0.5nm,0.6s,baz=304,slow=6.7,SNR=6.6							
FINES	**FINESS Array B**	**59.09**	**330**	P	**P**	**04 23 30.9**	**-0.5**	
	comp=N,2.0nm,0.8s,baz=53,slow=7.4,SNR=4.9							
NOA	**NORSAR Array B**	**63.90**	**336**	P	**P**	**04 24 03.4**	**-0.6**	
	comp=N,0.6nm,0.7s,baz=34,slow=6.6,SNR=3.5							
PDAR	**Pinedale Array**	**69.19**	**49**	P	**P**	**04 24 38.2**	**-0.2**	
	comp=N,0.6nm,0.6s,baz=301,slow=2.6,SNR=5.5							

IDC 12 04:46:45.6±6.1, 15°.62S×172°.94W, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/21, mbtmp3.7/4, Error ellipse: s-maj=303.7km s-min=23.3km az=135.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.03**	**34**	Pn	Pn	04 47 19.1	-2.2
	13nm,0.3s,baz=240,slow=1.3,SNR=12						
AFI				Sn	Sn	04 47 40.9	-6.6
	48nm,0.3s,baz=90,slow=19,SNR=11						
STKA	**Stephens Creek**	**44.32**	**240**	P	P	04 54 57.4	-0.3
	0.7nm,0.6s,baz=101,slow=14,SNR=2.8						
ASAR	**Alice Springs**	**50.47**	**252**	P	P	04 55 44.8	-0.9
	1.3nm,0.6s,baz=89,slow=8.1,SNR=15						
ILAR	**Eielson Array**	**82.57**	**11**	P	P	04 59 11.1	+1.0
	0.3nm,0.6s,baz=229,slow=6.4,SNR=7.4						
BRTR	**Keskin Array B**	**146.60**	**321**	PKPbc	PKPbc	05 06 29.8	+0.1
	0.5nm,0.6s,baz=18,slow=0.5,SNR=2.7						

AUST ***12*** *05:05:53.8, 4°.50N×124°.00E, h600km*
IDC ***12*** *05:05:57.4±2.9, 2°.95N×123°.40E, h448km±31km, mb3.2/5, mb1 3.4/6, mb1mx3.0/25, mbtmp3.3/6, Error ellipse: s-maj=59.3km s-min=15.7km az=62.0*
ISCJB ***12*** *05:05:57.3±1.5, 3°.2N±0°.2×123°.3E±0°.2, h500km, mb3.7/5, Error ellipse: s-maj=34.8km s-min=14.7km az=36.2*

ISC 12 05:05:58.9±1.6, 3°.1N±0°.2×123°.3E±0°.2, h500km, n16, σ2s01/14, mb3.9/5, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**7.65**	**292**	P	**P**	**05 07 51.0**	**-0.9**
	baz=7.9,SNR=4.1						
KAPI	**Kappang**	**8.85**	**204**	P	P	05 07 59.5	-4.7
	4.0nm,0.3s,baz=66,slow=5.7,SNR=12						
FAKI	**Fak Fak**	**10.76**	**124**	P	**P**	**05 08 23.3**	**-1.1**
	baz=11,SNR=4.6						
WSI	**Waingapu**	**13.07**	**193**	S	S	05 11 32.5	+23
	baz=15,SNR=3.3						
MTN	**Manton Dam**	**17.67**	**154**	P	**P**	**05 09 34.8**	**-1.5**
	baz=19,SNR=6.8						
KDU	**Kakadu**	**18.16**	**150**	P	**P**	**05 09 39.5**	**-1.3**
	baz=19,SNR=6.3						
FITZ	**Fitzroy Crossi**	**21.22**	**174**	P	**P**	**05 10 08.5**	**-0.3**
	1.5nm,0.5s,baz=343,slow=12,SNR=28						
FITZ	**Fitzroy Crossi**	**21.22**	**174**	P	**P**	**05 10 08.4**	**-0.3**
	baz=23,SNR=6.7						
WRA	**Warramunga Arr**	**25.36**	**155**	P	**P**	**05 10 44.8**	**-0.9**
	2.9nm,0.3s,baz=338,slow=9.8,SNR=25						
ASAR	**Alice Springs**	**28.56**	**159**	P	**P**	**05 11 13.7**	**-0.2**
	0.7nm,0.3s,baz=334,slow=7.2,SNR=12						
ASAR				ScP	**ScP**	**05 17 09.2**	**+5.8**
	0.3nm,0.4s,baz=342,slow=2.6,SNR=4.2						
MORW	**Morawa**	**32.77**	**192**	P	**P**	**05 11 49.8**	**-0.2**
	baz=34,SNR=4.1						
BLDU	**Ballidu**	**34.15**	**190**	P	**P**	**05 12 01.2**	**-0.5**
	baz=36,SNR=4.9						
BBOO	**Buckleboo**	**37.73**	**162**	P	**P**	**05 12 32.0**	**+0.6**
	baz=39,SNR=7.0						
STKA	**Stephens Creek**	**38.91**	**155**	P	**P**	**05 12 42.3**	**+1.3**
	1.4nm,0.3s,baz=317,slow=6.7,SNR=9.5						
STKA	**Stephens Creek**	**38.91**	**155**	P	**P**	**05 12 42.3**	**+1.3**
	baz=40,SNR=8.4						
MKAR	**Makanchi Array**	**56.15**	**327**	P	P	05 14 54.5	+3.9
	0.7nm,0.5s,baz=119,slow=8.9,SNR=10						

ISCJB ***12*** *05:07:03.2±0.4, 19°.96S±0°.03×68°.92W±0°.04, h87km±4km, mb5.0/166, Error ellipse: s-maj=6.9km s-min=4.0km az=150.4*
MOS ***12*** *05:07:03.9±0.9, 19°.90S×68°.91W, h92km, mb5.3/35, Error ellipse: s-maj=10.8km s-min=6.9km az=106.8*
IDC ***12*** *05:07:06.0±0.5, 20°.10S×69°.03W, h100km±3km, mb4.8/18, mb1 4.8/21, mb1mx4.8/22, mbtmp4.8/21, MS4.0/10, Ms1 4.0/10, ms1mx3.7/28, Error ellipse: s-maj=13.3km s-min=11.3km az=71.0*
GUC ***12*** *05:07:05.5±0.6, 20°.18S×69°.31W, h103km±6km, ML5.3*
BJI ***12*** *05:07:06.4, 20°.00S×68°.70W, h104km, mB5.2/16*
NEIC ***12*** *05:07:06.2±0.2, 20°.06S×68°.91W, mb5.1/127, Error ellipse: s-maj=5.4km s-min=3.9km az=66.0*
NEIC Felt [IV] at Alto Hospicio, Camina, Huara and Pozo Almonte and [III] at Cuya, Iquique, Pica and Pisagua.
GCMT ***12*** *05:07:11.7±0.3, 20°.14S×69°.32W, h121km±4km, MW5.1, Moment Tensor Solution. s30,c31; s68,c95; Moment tensor: Scale 10^16Nm; Mrr=2.77±.23; Mθθ=0.83±.26; Mφφ 1.95±.33; Mrθ=2.99±.13; Mrφ=-1.77±.20; Mθφ=-3.11±.18; Best double couple: M0=5.30000×10^16 NP1:φs153.00000°, δ18.00000°, λ-75.00000°. NP2:φs317.00000°, δ73.00000°, λ-95.00000°. Principal axes: T 5.4800, Plg28.0000°, Azm51.0000°; N -0.4200, Plg4.0000°, Azm319.0000°; P -5.0500, Plg62.0000°, Azm220.0000°; Data Used: IU II G CN IC.*

ISC 12 05:07:05.7±0.3, 20°.08S±0°.03×69°.05W±0°.05, h102km±2km, h101km:pP-P, n743, σ1s24/787, mb5.1/166, 185C-160D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberstone**	**0.81**	**255**	⇑*i*	P	05 07 22.6	-1.9
HMBC				*i*	S	**05 07 35.4**	**-3.2**
HMBC	**Humberstone**	**0.81**	**255**	⇑*i*	P	05 07 22.6	-1.9
HMBC				*i*	S	**05 07 35.4**	**-3.2**
HMBC				AML	AML	05 07 36.6	
	comp=N,138μm,0.2s						
PB01	**Plate Boundary**	**1.05**	**203**	⇑*i*	P	**05 07 25.5**	**-1.4**
PB01				*i*	S	**05 07 40.4**	**-2.5**
PB01	**Plate Boundary**	**1.05**	**203**	⇑*i*	P	**05 07 25.5**	**-1.4**
PB01				*i*	S	**05 07 40.4**	**-2.5**
PB01				AML	AML	05 07 41.0	
	comp=E,91μm,0.3s						
MNMC	**Minimini**	**1.07**	**331**	⇓*i*	P	**05 07 28.0**	**+0.6**
MNMC				*i*	S	**05 07 44.7**	**+1.1**
MNMC	**Minimini**	**1.07**	**331**	⇓*i*	P	**05 07 28.0**	**+0.6**
MNMC				*i*	S	**05 07 44.7**	**+1.1**
MNMC				AML	AML	05 07 46.3	
	comp=E,121μm,0.5s						
PSGC	**Pisagua**	**1.12**	**295**	⇑*i*	P	**05 07 26.3**	**-1.4**
PSGC				*i*	S	**05 07 41.7**	**-2.5**
PSGC	**Pisagua**	**1.12**	**295**	⇑*i*	P	**05 07 26.3**	**-1.4**
PSGC				*i*	S	**05 07 41.7**	**-2.5**
PSGC				AML	AML	05 07 43.7	
	comp=N,57μm,0.6s						
PB09	**Plate Boundary**	**1.72**	**186**	⇑*i*	P	**05 07 34.2**	**-0.8**
PB09				*i*	S	**05 07 55.8**	**-1.5**
PB09	**Plate Boundary**	**1.72**	**186**	⇑*i*	P	**05 07 34.2**	**-0.8**
PB09				*i*	S	**05 07 55.8**	**-1.5**
PB09				AML	AML	05 08 02.2	
	comp=E,65μm,0.8s						
PB04	**Plate Boundary**	**2.22**	**191**	*i*	P	**05 07 42.0**	**+0.8**
PB04				*i*	S	**05 08 10.7**	**+2.3**
PB04	**Plate Boundary**	**2.22**	**191**	*i*	P	**05 07 42.0**	**+0.8**
PB04				*i*	S	**05 08 10.7**	**+2.3**
PB04				AML	AML	05 08 27.8	
	comp=E,13μm,0.7s						
LVC	**Limon Verde**	**2.53**	**177**	*i*	P	**05 07 45.5**	**-0.1**
LVC				*i*	S	**05 08 15.8**	**-0.2**
LVC	**Limon Verde**	**2.53**	**177**	*i*	P	**05 07 45.5**	**-0.1**
LVC				*i*	S	**05 08 15.8**	**-0.2**
SPCH	**San Pedro de A**	**2.93**	**164**	AML	AML	05 09 04.3	
	comp=E,7μm,0.8s						
LPAZ	**La Paz**	**3.87**	**13**	*e*Pn	Pn	05 08 07.3	+3.6
LPAZ	**La Paz**	**3.87**	**13**	P	Pn	05 08 07.5	+3.7
	comp=E,148nm,0.3s,baz=187,slow=7.1,SNR=1724						
LPAZ				S	**Sn**	**05 08 47.7**	**-0.9**
	comp=E,16nm,0.3s,baz=195,slow=13,SNR=1.5						
LPAZ				LR	LR	05 09 39.0	
	comp=E,1μm,19.3s,baz=208,slow=39						
ARE	**Arequipa**	**4.28**	**327**	*e*P	**Pn**	**05 08 08.0**	**-1.0**
ARE				*e*S	**Sn**	**05 08 56.0**	**-2.0**
ARE	**Arequipa**	**4.28**	**327**	*e*P	**Pn**	**05 08 08.0**	**-1.0**
ARE				*e*		05 08 12.0	
ARE				*e*S	**Sn**	**05 08 56.0**	**-2.0**
SIV	**San Ignacio**	**8.61**	**63**	P	**Pn**	**05 09 07.0**	**-0.5**
SIV	**San Ignacio**	**8.61**	**63**	P	**Pn**	**05 09 07.0**	**-0.5**
	comp=E,48nm,0.3s,baz=258,slow=13,SNR=988						
LCO	**Las Campanas**	**9.02**	**189**	*e*Pn	Pn	05 09 07.8	-5.6
NNA	**Nana**	**10.98**	**316**	*e*Pn	Pn	05 09 38.1	-1.8
NNA	**Nana**	**10.98**	**316**	P	Pn	05 09 37.3	-2.6
	comp=E,1.6nm,0.3s,baz=209,slow=4.4,SNR=4.8						
NNA				S	**Sn**	**05 11 40.4**	**-0.5**
	comp=E,3.7nm,0.3s,baz=216,slow=18,SNR=3.7						
CFAA	**Coronel Fontan**	**11.51**	**177**	P	Pn	05 09 41.5	-5.3
CFAA				S	Sn	05 11 41.1	-12
CFAA	**Coronel Fontan**	**11.51**	**177**	P	Pn	05 09 41.5	-5.3
	comp=E,0.2nm,0.3s,baz=347,slow=13,SNR=35						
CFAA				S	Sn	05 11 41.1	-12
	comp=E,0.4nm,0.3s,baz=261,slow=23,SNR=6.3						
SAML	**Samuel**	**12.43**	**28**	*e*Pn	**Pn**	**05 09 56.6**	**-2.5**
	comp=E,2μm,0.7s						
CPUP	**Villa Florida**	**12.44**	**122**	P	**Pn**	**05 09 58.5**	**-0.8**
CPUP	**Villa Florida**	**12.44**	**122**	P	**Pn**	**05 09 58.5**	**-0.8**
	comp=E,1.5nm,0.3s,baz=287,slow=11,SNR=68						
ATAH	**Atahualpa**	**15.73**	**324**	P	**Pn**	**05 10 43.8**	**+1.7**
ATAH	**Atahualpa**	**15.73**	**324**	P	**Pn**	**05 10 43.8**	**+1.7**
	comp=E,0.4nm,0.3s,baz=158,slow=10,SNR=8.3						
TRQA	**Tornquist**	**18.94**	**163**	*e*P	**P**	**05 11 18.1**	**-0.6**
	comp=E,37nm,1.1s						
SPB	**Sao Paulo**	**20.37**	**104**	*e*P	**P**	**05 11 33.4**	**-0.9**
	comp=E,30nm,0.6s						
BDFB	**Brasilia**	**20.50**	**81**	P	**P**	**05 11 35.8**	**-0.2**
BDFB	**Brasilia**	**20.50**	**81**	P	**P**	**05 11 35.8**	**-0.2**
	comp=E,129nm,0.7s,baz=255,slow=11,SNR=174						
BDFB				LR	LR	05 20 30.2	
	comp=E,556nm,19.1s,baz=262,slow=39						
PLCA	**Paso Flores**	**20.63**	**183**	*e*P	**P**	**05 11 36.5**	**-0.6**
	comp=E,220nm,1.0s						
PLCA	**Paso Flores**	**20.63**	**183**	P	**P**	**05 11 36.6**	**-0.4**
	comp=E,137nm,0.8s,baz=5.2,slow=12,SNR=239						
OTAV	**Otavalo**	**22.19**	**334**	*e*P	**P**	**05 11 56.5**	**+2.2**
	comp=E,15nm,0.8s						
OTAV				*e*ScP	**ScP**	**05 19 17.8**	**+2.0**
CAM4	**Nova Friburgo**	**24.79**	**100**	⇑*i*	P	**05 12 15.4**	**-3.1**
CAM4				*i*		05 12 18.0	
CAM4				*i*		05 12 21.3	
CAM4				*i*		05 12 27.9	
CAM4				*i*		05 12 31.7	
CAM4				*i*		05 12 38.2	
CAM4				*i*		05 12 56.0	
CAM4				*i*		05 13 15.0	
ROSC	**El Rosal**	**25.31**	**348**	P	**P**	**05 12 24.5**	**+1.0**
ROSC	**El Rosal**	**25.31**	**348**	P	**P**	**05 12 24.5**	**+1.0**
	comp=E,28nm,0.6s,baz=324,slow=0.6,SNR=19						
ROSC				LR	LR	05 23 25.5	
	comp=E,295nm,19.2s,baz=198,slow=39						
SDV	**Santo Domingo**	**28.82**	**357**	*e*P	**P**	**05 12 54.0**	**-0.7**
	comp=E,47nm,0.7s						
BCIP	**Isla Barro Col**	**30.94**	**339**	*e*P	**P**	**05 13 15.1**	**+1.9**
	comp=E,22nm,0.6s						
GRGR	**Grenville**	**32.82**	**13**	*e*P	**P**	**05 13 29.0**	**-0.7**
	comp=E,107nm,0.5s						

JTS	**JuntasAbangare**	**33.99**	**331**	*e*P	**P**	**05 13 42.2**	**+2.3**
	comp=E,100nm,1.0s						
USHA	**Ushuaia**	**34.70**	**179**	P	**P**	**05 13 45.9**	**+0.3**
USHA	**Ushuaia**	**34.70**	**179**	P	**P**	**05 13 45.9**	**+0.3**
	comp=E,25nm,0.7s,baz=12,slow=7.7,SNR=12						
RCBR	**Riachuelo**	**35.17**	**71**	*e*P	**P**	**05 13 49.8**	**-0.5**
	comp=E,83nm,0.8s						
RCBR	**Riachuelo**	**35.17**	**71**	LR	LR	05 27 23.4	
	comp=E,322nm,19.4s,baz=247,slow=35						
FDF	**Fort de France**	**35.45**	**13**	*e*P	**P**	**05 13 50.8**	**-1.6**
FDF				pmax	pmax		
	comp=Z,129nm,0.6s						
FDF	**Fort de France**	**35.45**	**13**	*e*P	**P**	**05 13 50.8**	**-1.6**
	comp=Z,129nm,0.6s						
FDF	**Fort de France**	**35.45**	**13**	*e*P	**P**	**05 13 51.0**	**-1.5**
CRPR	**Cabo Rojo, PR**	**37.89**	**3**	*e*P	**P**	**05 14 12.2**	**-0.8**
	comp=Z,510nm,0.9s						
OBIP	**Obispado Ponce**	**37.96**	**4**	*e*P	**P**	**05 14 12.3**	**-1.3**
	comp=Z,260nm,0.6s						
CELP	**Cerrillos**	**37.99**	**4**	*e*P	**P**	**05 14 12.8**	**-1.1**
LSP	**Las Mesas**	**38.06**	**3**	*e*P	**P**	**05 14 13.7**	**-0.9**
MTP	**Monte Pirata**	**38.09**	**5**	*e*P	**P**	**05 14 12.7**	**-2.1**
	comp=Z,118nm,0.9s						
MPR	**Mayaguez**	**38.09**	**3**	*e*P	**P**	**05 14 13.6**	**-1.2**
	comp=Z,194nm,0.8s						
HUMP	**Col San Antoni**	**38.11**	**5**	*e*P	**P**	**05 14 13.0**	**-1.9**
	comp=Z,50nm,0.6s						
LRS	**Lares**	**38.19**	**3**	*e*P	**P**	**05 14 14.3**	**-1.3**
CBYP	**Canovanas**	**38.24**	**5**	*e*P	**P**	**05 14 14.2**	**-1.9**
	comp=Z,293nm,0.9s						
AOPR	**Arecibo Observ**	**38.25**	**4**	*e*P	**P**	**05 14 14.5**	**-1.6**
	comp=Z,129nm,0.8s						
TGUH	**Tegucigalpa,Un**	**38.36**	**331**	*e*P	**P**	**05 14 18.6**	**+1.5**
	comp=Z,36nm,0.9s						
STVI	**Saint Thomas**	**38.40**	**6**	*e*P	**P**	**05 14 15.7**	**-1.7**
	comp=Z,64nm,0.8s						
MTDJ	**Mount Denham**	**38.96**	**347**	*e*P	**P**	**05 14 21.9**	**-0.3**
	comp=Z,97nm,0.9s						
TEIG	**Tepich**	**44.26**	**334**	*e*P	**P**	**05 15 05.8**	**+0.6**
	comp=Z,24nm,0.7s						
BBSR	**BB Station**	**52.31**	**5**	*e*P	**P**	**05 16 06.3**	**-0.7**
	comp=Z,40nm,0.8s						
TIGA	**Tifton**	**53.09**	**344**	⇓P	**P**	**05 16 13.0**	**+0.3**
	baz=53						
BRAL	**Brewton**	**53.66**	**341**	*e*P	**P**	**05 16 18.6**	**+1.7**
	comp=Z,87nm,0.8s						
NHSC	**New Hope**	**53.94**	**348**	*e*P	**P**	**05 16 19.8**	**+0.9**
	comp=Z,337nm,0.9s						
JSC	**Jenkinsville**	**55.29**	**348**	*e*P	**P**	**05 16 29.0**	**+0.4**
JSC				*e*		05 17 05.2	
JSC	**Jenkinsville**	**55.29**	**348**	*e*P	**P**	**05 16 29.0**	**+0.4**
JSC				*e*		05 17 05.2	
LRAL	**Lakeview Retre**	**55.52**	**342**	*e*P	**P**	**05 16 29.3**	**-1.0**
	comp=Z,8.9nm,0.7s						
HKT	**Hockley**	**56.03**	**332**	*e*P	**P**	**05 16 34.4**	**+0.5**
HKT				*e*		05 16 59.9	
HKT				pmax	pmax		
	comp=Z,13nm,1.1s						
HKT	**Hockley**	**56.03**	**332**	*e*P	**P**	**05 16 34.4**	**+0.5**
	comp=Z,13nm,1.1s						
HKT				*e*	**pP**	**05 16 59.9**	**+1.2**
KMSC	**Kings Mountain**	**56.14**	**348**	⇓P	**P**	**05 16 35.3**	**+0.6**
	baz=56						
732A	**Laxson Ranch,**	**56.97**	**327**	⇑P	**P**	**05 16 41.1**	**+0.3**
	baz=57						
CPCT	**Cooper Cave**	**57.14**	**345**	*e*P	**P**	**05 16 41.5**	**-0.3**
TKL	**Tuckaleechee C**	**57.16**	**346**	*e*P	**P**	**05 16 41.5**	**-0.4**
TKL				*e*	**pP**	**05 17 08.0**	**+1.2**
SWET	**Sewanee**	**57.27**	**344**	*e*P	**P**	**05 16 42.0**	**-0.8**
	comp=Z,34nm,0.7s						
SWET				*e*	**pP**	**05 17 06.0**	**-1.6**
632A	**Uvalde**	**57.51**	**328**	⇓P	**P**	**05 16 44.8**	**+0.2**
	baz=58,SNR=5.1						
OXF	**Oxford**	**57.64**	**340**	*e*P	**P**	**05 16 44.3**	**-1.0**
OXF				pmax	pmax		
	comp=Z,57nm,0.9s						
OXF	**Oxford**	**57.64**	**340**	*e*P	**P**	**05 16 44.3**	**-1.0**
	comp=Z,57nm,0.9s						
PLAL	**Pickwick Lake**	**57.66**	**342**	*e*P	**P**	**05 16 44.4**	**-1.0**
	comp=Z,32nm,1.0s						
631A	**Perdido Creek**	**57.83**	**327**	⇓P	**P**	**05 16 47.1**	**+0.3**
	baz=58,SNR=5.5						
TZTN	**Tazewell**	**57.95**	**346**	*e*P	**P**	**05 16 47.5**	**0.0**
	comp=Z,27nm,1.0s						
BLA	**Blacksburg**	**57.98**	**349**	*e*P	**P**	**05 16 48.2**	**+0.5**
BLA				pmax	pmax		
	comp=Z,45nm,0.8s						
BLA	**Blacksburg**	**57.98**	**349**	*e*P	**P**	**05 16 48.1**	**+0.5**
	comp=Z,45nm,0.8s						
532A	**Rocksprings**	**58.08**	**328**	⇓P	**P**	**05 16 49.0**	**+0.4**
	baz=58						
JCT	**Junction City**	**58.32**	**329**	*e*P	**P**	**05 16 50.5**	**+0.3**
JCT				pmax	pmax		
	comp=Z,11nm,0.8s						
JCT	**Junction City**	**58.32**	**329**	*e*P	**P**	**05 16 50.5**	**+0.3**
	comp=Z,10nm,0.8s						
JCT	**Junction City**	**58.32**	**329**	⇑P	**P**	**05 16 50.8**	**+0.5**
	baz=59						
WHTX	**Lake Whitney**	**58.49**	**332**	⇑P	**P**	**05 16 51.9**	**+0.6**
	baz=59						
432A	**Menard**	**58.64**	**329**	⇑P	**P**	**05 16 52.5**	**0.0**
	baz=59,SNR=11						
WVT	**Waverly**	**58.66**	**342**	*e*P	**P**	**05 16 51.2**	**-1.2**
WVT				pmax	pmax		
	comp=Z,36nm,0.7s						
WVT	**Waverly**	**58.66**	**342**	*e*P	**P**	**05 16 51.2**	**-1.2**
	comp=Z,36nm,0.7s						
530A	**J-C Ranch, Com**	**58.82**	**327**	⇓P	**P**	**05 16 54.0**	**+0.3**
	baz=59,SNR

comp=Z,26nm,0.8s
131A **Roby** 60.41 330 ⇑P P 05 17 04.9 +0.3
baz=61,SNR=6.8
427A **Hayter Ranch,** 60.44 326 ⇓P P 05 17 04.9 0.0
baz=61,SNR=7.4
229A **Bryant Ranch,** 60.52 328 ⇑P P 05 17 05.3 -0.1
baz=61
SIUC **Southern Illin** 60.53 342 *e*P P 05 17 05.0 -0.2
comp=Z,40nm,0.8s
328A **Wristen Ranch,** 60.56 327 ⇓P P 05 17 05.6 0.0
baz=61,SNR=6.8
130A **Snyder** 60.62 329 ⇑P P 05 17 06.1 +0.1
baz=61,SNR=11
426A **McDonald Obser** 60.63 325 ⇓P P 05 17 06.7 +0.3
baz=61,SNR=7.2
RKT **Rikitea** 60.90 254 *e*LR LR 05 35 32.6
comp=Z,310nm,34.5s
SSPA **Standing Stone** 60.95 352 *e*P P 05 17 08.4 +0.4
comp=Z,17nm,0.8s
228A **UT Block 9, Go** 61.03 328 ⇓P P 05 17 08.9 0.0
baz=61
Y32A **R-V Farms, Ver** 61.08 331 ⇓P P 05 17 09.3 +0.2
baz=61,SNR=7.9
129A **Stewart Farms,** 61.09 329 ⇑P P 05 17 09.4 +0.1
baz=61
326A **Caldwell Ranch** 61.11 326 ⇓P P 05 17 09.5 +0.1
baz=61,SNR=10
BLO **Bloomington** 61.16 345 *e*P P 05 17 08.8 -0.7
BLO pmax pmax
comp=Z,44nm,0.7s
BLO **Bloomington** 61.16 345 *e*P P 05 17 08.8 -0.7
comp=Z,44nm,0.7s
OLIL **Olney** 61.16 343 *e*P P 05 17 08.4 -1.1
comp=Z,23nm,0.7s
TUL1 **Tulsa** 61.17 335 ⇑P P 05 17 09.6 0.0
baz=62,SNR=7.7
YLE **Yale** 61.18 357 *e*P P 05 17 10.3 +0.8
comp=Z,50nm,0.9s
425A **Indio Mountain** 61.24 325 ⇓P P 05 17 10.6 +0.3
baz=62,SNR=12
Z30A **Sanderson Ranc** 61.27 330 ⇑P P 05 17 10.4 0.0
baz=62,SNR=5.7
227A **Bennet, Jal** 61.31 327 ⇑P P 05 17 11.0 +0.3
baz=62
ACSO **Alum Creek Sta** 61.38 348 *e*P P 05 17 10.8 -0.2
comp=Z,78nm,1.0s
128A **Castleberry Fa** 61.39 328 ⇑P P 05 17 11.1 -0.1
baz=62
WMOK **Wichita Mounta** 61.40 332 *e*P P 05 17 10.2 -1.0
WMOK pmax pmax
comp=Z,4.0nm,0.9s
WMOK **Wichita Mounta** 61.40 332 *e*P P 05 17 10.2 -1.0
comp=Z,3.8nm,0.9s
Y31A **Rekieta Farm,** 61.42 331 ⇑P P 05 17 11.7 +0.3
baz=62,SNR=6.8
Z29A **Hungry Hill Ra** 61.52 329 ⇑P P 05 17 12.0 -0.1
baz=62
Y30A **Stafford Cattl** 61.64 330 ⇓P P 05 17 12.7 -0.2
baz=62
325A **Bean Ranch, Si** 61.68 325 ⇓P P 05 17 13.5 +0.1
baz=62,SNR=18
BRYW **Bryant College** 61.72 358 *e*P P 05 17 13.4 +0.2
comp=Z,138nm,0.9s
226B **Tecolote Peak,** 61.81 326 ⇑P P 05 17 14.6 +0.5
baz=62,SNR=6.6
X31A **McDonald Ranch** 61.84 331 ⇑P P 05 17 14.3 +0.1
baz=62,SNR=17
127A **Arkansas Junct** 61.87 327 ⇑P P 05 17 14.7 +0.2
baz=62
Z28A **Tucker Farm, M** 61.88 329 ⇓P P 05 17 14.4 -0.1
baz=62
Y29A **Porterfield Fa** 61.99 329 ⇓P P 05 17 15.1 -0.2
baz=62,SNR=6.8
GDL2 **Guadalupe Moun** 62.01 326 *e*P P 05 17 16.4 +0.9
comp=Z,7.1nm,0.9s
324A **Moseley Ranch,** 62.01 325 ⇑P P 05 17 15.2 -0.3
baz=62,SNR=13
X30A **Coker Ranch, T** 62.10 330 ⇑P P 05 17 15.6 -0.3
baz=62,SNR=7.4
BBTS **Babate** 62.11 60 P P 05 17 16.9 +0.6
BBTS **Babate** 62.11 60 P P 05 17 16.9 +0.6
comp=Z,145nm,0.7s,baz=228,slow=0.8,SNR=25
QUA2 **Belchertown** 62.11 357 *e*P P 05 17 15.6 -0.2
comp=Z,8.9nm,0.8s
WES **Weston** 62.18 358 *e*P P 05 17 16.1 -0.1
WES pmax pmax
comp=Z,31nm,0.9s
WES **Weston** 62.18 358 *e*P P 05 17 16.1 -0.1
comp=Z,31nm,0.9s
126A **Clayton Basin,** 62.18 327 ⇓P P 05 17 16.7 +0.1
baz=62
ALLY **Allegheny Colle** 62.27 351 *e*P P 05 17 17.4 +0.5
comp=Z,179nm,0.9s
BINY **Binghamton** 62.29 354 *e*P P 05 17 17.4 +0.4
comp=Z,69nm,0.9s
W31A **Holland Ranch,** 62.29 332 ⇑P P 05 17 17.0 -0.2
baz=63
Z27A **Tatum** 62.31 328 ⇓P P 05 17 16.8 -0.6
baz=63,SNR=8.1
HRV **Adam Dziewonsk** 62.31 358 *e*P P 05 17 17.3 +0.2
HRV pmax pmax
comp=Z,49nm,0.9s
HRV **Adam Dziewonsk** 62.31 358 *e*P P 05 17 17.3 +0.2
comp=Z,49nm,0.9s
Y28A **McKinney Farm,** 62.31 329 ⇑P P 05 17 17.0 -0.4
baz=63
SFIN **Scholer Farm** 62.45 345 ⇑P P 05 17 16.9 -1.2
baz=63,SNR=19
X29A **Tulia** 62.49 330 ⇓P P 05 17 18.3 -0.2
baz=63
125A **Gardner Draw,** 62.52 326 ⇑P P 05 17 18.6 -0.3
baz=63
224A **Cornudas Mount** 62.52 325 ⇑P P 05 17 18.8 -0.2
baz=63,SNR=11
MSTX **Muleshoe** 62.61 329 ⇑P P 05 17 19.6 +0.1
baz=63,SNR=13
TRY **Troy** 62.63 356 *e*P P 05 17 19.9 +0.7
comp=Z,57nm,0.8s
Z26A **Caprock** 62.66 327 ⇑P P 05 17 19.6 -0.1
baz=63
ERPA **Erie** 62.70 351 *e*P P 05 17 20.1 +0.4
comp=Z,181nm,0.7s
ERPA *e* pP 05 17 45.7 +0.8
Y27A **Causey** 62.74 328 ⇓P P 05 17 19.9 -0.4
baz=63,SNR=7.9
V31A **Spring Creek L** 62.74 332 ⇓P P 05 17 20.5 +0.3
baz=63
X28A **Dimmitt** 62.78 329 ⇓P P 05 17 20.4 -0.1
baz=63
124A **Stringfield Ra** 62.97 326 ⇓P P 05 17 22.3 +0.3
baz=63,SNR=6.1
Z25A **Roswell** 63.04 327 ⇑P P 05 17 22.2 -0.2
baz=63,SNR=6.6
HDIL **Hopedale** 63.19 343 *e*P P 05 17 22.0 -1.0
comp=Z,47nm,0.7s
FFD **Franklin Falls** 63.27 358 *e*P P 05 17 24.3 +0.9
comp=Z,8.6nm,0.6s
ACCN **Adirondack Com** 63.29 356 *e*P P 05 17 24.2 +0.6
comp=Z,25nm,1.1s
222A **Williams Famil** 63.40 324 ⇓P P 05 17 25.4 +0.7
baz=64
Z24A **Sheeppen Canyo** 63.41 326 ⇑P P 05 17 25.0 +0.1
baz=64
Y25A **Mesa, Roswell** 63.53 327 ⇓P P 05 17 25.4 -0.2
baz=64
X26A **CR and CF Fran** 63.59 328 ⇑P P 05 17 26.1 +0.2
baz=64,SNR=5.8
320A **Kipp Ranch, An** 63.62 323 ⇑P P 05 17 27.0 +0.8
baz=64
W27A **Bowe Ranch, En** 63.64 329 ⇑P P 05 17 26.6 +0.4
baz=64
SNAA **Sanae** 63.66 161 *e*P P 05 17 26.0 +0.2
comp=Z,42nm,0.8s
SNAA *e* pP 05 17 53.0 +1.8
SNAA **Sanae** 63.66 161 LR LR 05 43 02.8
comp=Z,49nm,21.7s,baz=28,slow=34
T31A **Randall Ranch,** 63.78 333 ⇓P P 05 17 27.8 +0.8
baz=64
V28A **Channing** 63.80 330 ⇑P P 05 17 28.0 +0.7
baz=64
Z23A **Rita Site, Whi** 63.82 326 ⇑P P 05 17 28.3 +0.8
baz=64
NCB **Newcomb** 63.91 356 *e*P P 05 17 28.1 +0.5
comp=Z,66nm,1.5s
W26A **Owens Ranch, T** 64.00 329 ⇓P P 05 17 28.9 +0.3
baz=64
220A **Playas Peak, P** 64.05 323 ⇓P P 05 17 30.2 +1.2
baz=64,SNR=6.7

LBNH **Lisbon** 64.05 358 *e*P P 05 17 29.0 +0.4
LBNH pmax pmax
comp=Z,30nm,0.9s
LBNH **Lisbon** 64.05 358 *e*P P 05 17 29.0 +0.4
comp=Z,30nm,0.9s
319A **Douglas** 64.09 322 ⇓P P 05 17 30.6 +1.3
baz=64
V27A **Dan Oppiter Fa** 64.09 330 ⇓P P 05 17 30.2 +1.0
baz=64
121A **Cookes Peak, D** 64.10 324 ⇑P P 05 17 30.8 +1.4
baz=64
Z22A **Elephant Butte** 64.20 325 ⇓P P 05 17 31.1 +1.0
baz=64,SNR=11
Y23A **Lovelace Mesa,** 64.24 326 ⇑P P 05 17 31.3 +1.0
baz=64
U28A **Mallet** 64.31 331 ⇓P P 05 17 31.2 +0.6
baz=65
X24A **Lazy VL Ranch,** 64.42 327 ⇓P P 05 17 32.1 +0.6
baz=65
W25A **X Bar L Ranch,** 64.44 328 ⇑P P 05 17 31.6 +0.1
baz=65,SNR=5.1
T29A **Hugoton** 64.53 332 ⇑P P 05 17 32.3 +0.3
baz=65
LONY **Lake Ozonia** 64.58 356 *e*P P 05 17 32.5 +0.5
comp=Z,39nm,0.8s
V26A **Tequesquite Ra** 64.58 329 ⇓P P 05 17 32.6 +0.2
baz=65,SNR=8.7
120A **U Bar Ranch, L** 64.58 323 ⇑P P 05 17 33.7 +1.1
baz=65
Z21A **St. Cloud Mine** 64.63 325 ⇓P P 05 17 34.2 +1.3
baz=65,SNR=6.2
BNM **Barren Site** 64.71 326 *e*P P 05 17 34.3 +0.9
comp=Z,7.3nm,1.3s
FRNY **Flat Rock** 64.73 356 *e*P P 05 17 33.5 +0.6
comp=Z,33nm,1.0s
Y22A **Socorro** 64.73 326 ⇓P P 05 17 34.7 +1.3
baz=65
S29A **Ulysses** 64.84 332 ⇑P P 05 17 34.5 +0.5
baz=65
T28A **Walsh** 64.87 331 ⇑P P 05 17 34.6 +0.4
baz=65
W24A **Lazy 6 Ranch,** 64.91 328 ⇑P P 05 17 35.4 +0.7
baz=65
MSNY **Massena** 64.97 355 *e*P P 05 17 35.4 +0.8
comp=Z,590nm,0.8s
MSNY *e* pP 05 18 01.5 +1.6
Z20A **Nine Sixteen R** 64.99 324 ⇑P P 05 17 36.8 +1.6
baz=65,SNR=6.4
V25A **Rancho No Teng** 65.02 329 ⇑P P 05 17 35.9 +0.6
baz=65,SNR=6.9
R30A **Dighton** 65.04 333 ⇓P P 05 17 35.9 +0.7
baz=65
U26A **Atchley Ranch,** 65.04 330 ⇓P P 05 17 35.9 +0.5
baz=65,SNR=7.9
T27A **Campo** 65.10 331 ⇑P P 05 17 35.8 +0.1
baz=65
Y21A **Point of Rocks** 65.16 325 ⇓P P 05 17 37.6 +1.3
baz=66
S28A **Manter** 65.16 332 ⇑P P 05 17 36.5 +0.4
baz=66,SNR=8.3
LAZ **Ladron** 65.18 326 *e*P P 05 17 37.8 +1.4
comp=Z,8.5nm,1.4s
ANMO **Albuquerque** 65.24 327 *e*P P 05 17 37.4 +0.6
comp=Z,58nm,2.6s
V24A **Rampart Ranch,** 65.25 328 ⇑P P 05 17 37.3 +0.4
baz=66,SNR=5.1
W23A **Werner Place,** 65.25 327 ⇓P P 05 17 37.7 +0.8
baz=66
U25A **Circle Dot Ran** 65.36 329 ⇑P P 05 17 38.1 +0.6
baz=66,SNR=12
Y20A **Horse Springs,** 65.47 325 ⇓P P 05 17 39.2 +0.9
baz=66
X21A **Alamocita Cree** 65.55 325 ⇓P P 05 17 39.7 +0.8
baz=66
T26A **Comanche Natio** 65.60 330 ⇑P P 05 17 39.8 +0.8
baz=66,SNR=5.5
SCIA **State Center** 65.60 340 *e*P P 05 17 38.8 +0.1
comp=Z,36nm,0.7s
TUC **Tucson** 65.64 322 *e*P P 05 17 40.7 +1.4
TUC **Tucson** 65.64 322 *e*P P 05 17 40.7 +1.4
comp=Z,0.9nm,1.2s
JFWS **Jewell Farm** 65.65 343 *e*P P 05 17 38.8 -0.2
JFWS pmax pmax
comp=Z,82nm,1.4s
JFWS **Jewell Farm** 65.65 343 *e*P P 05 17 38.8 -0.2
comp=Z,82nm,1.4s
V23A **Ortiz Mt. (NFS** 65.72 327 ⇑P P 05 17 41.0 +1.1
baz=66
R28A **Tribune** 65.75 332 ⇑P P 05 17 40.2 +0.4
baz=66
U24A **Moreno Valley** 65.79 328 ⇑P P 05 17 40.8 +0.4
baz=66
S26A **Kim** 65.90 331 ⇑P P 05 17 41.7 +0.8
baz=66,SNR=12
T25A **Trinidad** 65.95 330 ⇓P P 05 17 42.1 +0.7
baz=66
X20A **Quemado** 66.01 325 ⇑P P 05 17 43.1 +1.3
baz=66
GLMI **Grayling** 66.13 348 *e*P P 05 17 42.1 +0.1
comp=Z,26nm,0.7s
U23A **El Rito** 66.18 328 ⇓P P 05 17 44.2 +1.3
baz=66
T24A **Torres, Weston** 66.21 329 ⇓P P 05 17 43.8 +0.8
baz=66
V22A **San Miguel Ran** 66.22 327 ⇓P P 05 17 44.3 +1.2
baz=66,SNR=10.0
S25A **Robets Cordova** 66.38 330 ⇓P P 05 17 44.8 +0.8
baz=67,SNR=5.4
R26A **Arlington** 66.44 331 ⇑P P 05 17 45.3 +1.0
baz=67,SNR=5.2
W20A **Ramah** 66.45 325 ⇑P P 05 17 45.8 +1.2
baz=67
U22A **Llaves** 66.55 327 ⇑P P 05 17 46.8 +1.6
baz=67
214A **Organ Pipe Nat** 66.59 320 ⇓P P 05 17 47.2 +1.9
baz=67
KSCO **Kaye Shedlock'** 66.66 332 ⇑P P 05 17 46.5 +0.8
baz=67,SNR=5.4
R25A **Fountain Ranch** 66.70 330 ⇓P P 05 17 46.8 +0.8
baz=67
S24A **Houchin Ranch,** 66.74 329 ⇓P P 05 17 47.4 +1.0
baz=67
X18A **Snowflake** 66.79 324 ⇑P P 05 17 48.1 +1.4
baz=67
BGNE **Belgrade** 66.86 337 ⇑P P 05 17 47.4 +0.6
baz=67,SNR=13
V20A **Brimhall** 66.94 326 ⇓P P 05 17 48.1 +0.5
baz=67
SDCO **Great Sand Dun** 66.96 329 *e*P P 05 17 48.9 +1.0
comp=Z,8.5nm,0.9s
Q26A **Hugo** 66.98 331 ⇑P P 05 17 48.6 +0.8
baz=67
U21A **Nageezi** 67.00 327 ⇓P P 05 17 49.6 +1.6
baz=67
T22A **Edith** 67.07 328 ⇓P P 05 17 50.1 +1.5
baz=67
R24A **Sanders Place,** 67.16 330 ⇓P P 05 17 49.8 +0.9
baz=68,SNR=6.1
Q25A **Bedland, Calha** 67.31 331 ⇑P P 05 17 50.5 +0.6
baz=68
T21A **Navajo Lake** 67.37 327 ⇓P P 05 17 51.3 +1.0
baz=68
U20A **Newcomb** 67.41 326 ⇑P P 05 17 51.5 +0.9
baz=68,SNR=5.6
P26A **Davis Ranch, A** 67.43 332 ⇑P P 05 17 51.7 +1.2
baz=68
R23A **Moffat** 67.47 329 ⇑P P 05 17 51.9 +0.9
baz=68
X16A **Lo Mia Camp, P** 67.55 323 ⇑P P 05 17 53.4 +2.0
baz=68,SNR=8.9
O27A **Beecher Island** 67.57 333 ⇑P P 05 17 52.6 +1.2
baz=68,SNR=7.3
S22A **4UR Ranch, Cre** 67.61 328 ⇓P P 05 17 53.0 +1.1
baz=68
P25A **Willow Gulch B** 67.75 331 ⇓P P 05 17 54.1 +1.4
baz=68,SNR=9.9
Q24A **Divide** 67.76 330 ⇑P P 05 17 54.3 +1.3
baz=68,SNR=8.9
R22A **Saguache, Gunn** 67.95 329 ⇓P P 05 17 55.3 +1.2
baz=68
OGNE **Ogallala** 68.00 334 ⇑P P 05 17 55.1 +1.0
baz=68
MVCO **Mesa Verde** 68.03 327 *e*P P 05 17 55.9 +1.3
comp=Z,7.3nm,0.8s
MVCO **Mesa Verde** 68.03 327 ⇑P P 05 17 55.6 +1.1
baz=68
P24A **Kohler Place,** 68.09 331 ⇑P P 05 17 56.1 +1.2
baz=68

Y14A **Wickenburg** 68.10 322 ⇓P P 05 17 56.8 +2.0
baz=68
LIC **Lamto** 68.12 74⇑*i*P P 05 17 54.7 -0.6
comp=Z,48nm,0.6s,baz=254
LIC **Lamto** 68.12 74⇑*i*P P 05 17 54.7 -0.6
comp=Z,48nm,0.6s
MAIT **Maitri** 68.17 159 *e*P P 05 17 44.2 -10
O25A **Wiggins** 68.22 332 ⇑P P 05 17 57.1 +1.6
baz=68
WUAZ **Wupatki** 68.31 324 *e*P P 05 17 58.1 +2.0
comp=Z,4.9nm,0.8s
WUAZ **Wupatki** 68.31 324 ⇓P P 05 17 58.2 +2.0
baz=69
COWI **Conover** 68.33 345 *e*P P 05 17 55.6 -0.3
comp=Z,12nm,0.9s
ECSD **EROS Data Cent** 68.35 339 *e*P P 05 17 55.9 -0.2
comp=Z,8.5nm,0.8s
P23A **Jefferson** 68.41 330 ⇑P P 05 17 58.4 +1.4
baz=69
S20A **Disappointment** 68.44 327 ⇑P P 05 17 58.5 +1.4
baz=69
DBIC **Dimbokro** 68.46 74 *e*P P 05 17 57.1 -0.3
comp=Z,78nm,0.8s
DBIC *e* pP 05 18 23.9 +0.9
DBIC **Dimbokro** 68.46 74 P P 05 17 57.1 -0.3
comp=Z,56nm,0.7s,baz=223,slow=6.4,SNR=126
DBIC pP 05 18 23.7 +0.7
comp=Z,27nm,0.9s,baz=214,slow=7.5,SNR=4.5
DBIC sP sP 05 18 34.6 +0.5
comp=Z,17nm,0.8s,baz=192,slow=7.4,SNR=2.5
DBIC LR LR 05 46 11.1
comp=Z,98nm,21.9s,baz=269,slow=34
SPMN **St. Paul** 68.49 342 ⇑P P 05 17 56.5 -0.4
baz=69,SNR=9.5
GLA **Glamis** 68.57 320 ⇑P P 05 17 59.7 +2.0
baz=69
ISCO **Idaho Springs** 68.65 330 *e*P P 05 17 59.7 +1.3
ISCO pmax pmax
comp=Z,63nm,2.3s
ISCO **Idaho Springs** 68.65 330 *e*P P 05 17 59.7 +1.3
comp=Z,63nm,2.3s
ISCO **Idaho Springs** 68.65 330 ⇑P P 05 17 59.5 +1.1
baz=69,SNR=9.4
R20A **Redvale** 68.72 328 ⇓P P 05 18 00.4 +1.6
baz=69,SNR=9.0
PV01 **Paradox Valley** 68.78 327 *e*P P 05 18 00.6 +1.4
comp=Z,634nm,0.9s
SMCO **Snowmass** 68.80 329 *e*P P 05 18 00.8 +1.3
comp=Z,6.5nm,0.9s
O23A **Lake Granby, G** 69.12 331 ⇑P P 05 18 02.8 +1.5
baz=69,SNR=17
S18A **Hurst Farm, Bl** 69.17 326 ⇓P P 05 18 03.0 +1.4
baz=70,SNR=8.6
M25A **Palm-Egli Farm** 69.27 333 ⇓P P 05 18 03.2 +1.2
baz=70
P21A **Newcastle** 69.30 329 ⇓P P 05 18 03.7 +1.3
baz=70,SNR=7.2
BC3 **Big Chuckawall** 69.36 320 ⇑P P 05 18 04.3 +1.5
baz=70
O22A **Kremmling** 69.37 330 ⇑P P 05 18 03.8 +1.0
baz=70,SNR=13
W13A **Hualapai Mount** 69.44 322 ⇑P P 05 18 05.4 +2.2
baz=70,SNR=7.8
MONP **Monument Peak** 69.44 319 ⇓P P 05 18 04.9 +1.5
baz=70
BAR **Barrett** 69.45 318 *e*P P 05 18 05.7 +2.5
comp=Z,12nm,0.9s
U15A **North Rim** 69.48 324 ⇓P P 05 18 05.6 +2.0
baz=70,SNR=9.9
IRM **Iron Mountain** 69.53 320 ⇑P P 05 18 05.5 +1.8
baz=70,SNR=5.3
K27A **Flueckinger Fa** 69.56 334 ⇓P P 05 18 05.0 +1.4
baz=70,SNR=5.7
M24A **Cheyenne** 69.63 332 ⇑P P 05 18 05.9 +1.6
baz=70,SNR=11
N23A **Red Feather La** 69.67 331 ⇓P P 05 18 06.1 +1.4
baz=70,SNR=7.1
PHWY **Pilot Hill** 69.78 332 *e*P P 05 18 06.5 +1.2
comp=Z,53nm,2.1s
BRSD **Miller** 69.78 338 ⇑P P 05 18 05.5 +0.6
baz=70
N22A **Wattenberg Ran** 69.83 331 ⇓P P 05 18 06.9 +1.3
baz=70,SNR=6.2
PFO **Pinyon Flat Ob** 69.94 319 *e*P P 05 18 08.0 +1.7
comp=Z,3.3nm,1.0s
QSPA **South Pole Qui** 70.11 180 *e*P P 05 18 07.3 +0.4
comp=Z,56nm,1.1s
QSPA **South Pole Qui** 70.11 180 LR LR 05 47 23.5
comp=Z,124nm,20.4s,baz=201,slow=34
P19A **Cripple Cowboy** 70.13 328 ⇓P P 05 18 08.6 +1.2
baz=70,SNR=10
K25A **Mack Ranch, Ha** 70.15 333 ⇓P P 05 18 09.1 +1.7
baz=70
O20A **White River Ci** 70.16 329 ⇑P P 05 18 08.8 +1.2
baz=70,SNR=6.3
GMRC **Granite Mounta** 70.26 321 ⇑P P 05 18 10.0 +1.8
baz=71,SNR=6.2
N21A **Black Mountain** 70.30 330 ⇓P P 05 18 10.1 +1.7
baz=71
M22A **Cedar Creek Ra** 70.38 331 ⇓P P 05 18 10.2 +1.3
baz=71
L23A **Garrett** 70.54 332 ⇓P P 05 18 11.1 +1.2
baz=71
EYMN **Ely** 70.64 344 *e*P P 05 18 09.5 -0.6
comp=Z,15nm,0.7s
Q16A **Castle Valley** 70.70 326 ⇑P P 05 18 12.5 +1.6
baz=71
N20A **Spence Gulch,** 70.71 329 ⇑P P 05 18 11.9 +0.9
baz=71,SNR=5.2
O19A **Miners Draw (B** 70.71 329 ⇓P P 05 18 12.0 +1.1
baz=71,SNR=10
P18A **Preston Nutter** 70.76 327 ⇓P P 05 18 13.1 +1.7
baz=71,SNR=8.3
L22A **Ellis Ranch, M** 70.80 331 ⇓P P 05 18 12.9 +1.5
baz=71
CCUT **Cedar City** 70.88 324 *e*P P 05 18 14.2 +2.2
comp=Z,20nm,1.0s
M21A **Separation Pea** 70.89 331 ⇑P P 05 18 13.2 +1.2
baz=71
P17A **Butcher Ranch,** 70.90 327 ⇓P P 05 18 13.5 +1.5
baz=71
MSU **Marysvale** 70.94 325 *e*P P 05 18 14.5 +2.1
MSU **Marysvale** 70.94 325 *e*P P 05 18 14.5 +2.1
MVU **Marysvale** 70.95 325 *e*P P 05 18 14.2 +1.8
comp=Z,5.1nm,0.8s
K23A **Bowen Ranch, D** 71.02 332 ⇑P P 05 18 14.0 +1.3
baz=71
J24A **Dixon Ranch, L** 71.08 333 ⇓P P 05 18 14.7 +1.7
baz=71
ARUT **Antelope Range** 71.10 324 *e*P P 05 18 16.0 +2.7
ARUT pmax pmax
comp=Z,8.0nm,0.7s
ARUT **Antelope Range** 71.10 324 *e*P P 05 18 16.0 +2.7
comp=Z,7.6nm,0.7s
BFSC **Mount Baldy Ra** 71.11 319 ⇑P P 05 18 15.2 +1.8
baz=71
L21A **Rawlins** 71.17 331 ⇑P P 05 18 14.7 +0.9
baz=72
M20A **Sweetwater, Wa** 71.18 330 ⇓P P 05 18 15.2 +1.4
baz=72
K22A **Casper** 71.33 332 ⇑P P 05 18 15.5 +0.9
baz=72,SNR=6.0
RSSD **Black Hills** 71.46 334 *e*P P 05 18 16.4 +1.0
RSSD pmax pmax
comp=Z,10.0nm,0.8s
RSSD **Black Hills** 71.46 334 *e*P P 05 18 16.4 +1.0
comp=Z,9.9nm,0.8s
L20A **Wamsutter** 71.66 330 ⇓P P 05 18 17.4 +0.8
baz=72,SNR=5.6
EDW2 **Edwards Air Fo** 71.74 319 ⇑P P 05 18 18.6 +1.6
baz=72
MPU **Maple Canyon** 71.76 327 *e*P P 05 18 18.4 +1.1
comp=Z,5.4nm,0.9s
DAU **Daniels Canyon** 71.86 327 *e*P P 05 18 19.8 +1.8
DAU *e* 05 18 46.6
DAU **Daniels Canyon** 71.86 327 *e*P P 05 18 19.8 +1.8
DAU *e* pP 05 18 46.6 +2.7
J22A **Midwest** 71.92 332 ⇓P P 05 18 19.1 +1.0
baz=72
M18A **Lyman** 72.04 329 ⇑P P 05 18 19.8 +0.9
baz=72,SNR=6.1
JLU **Jordanelle** 72.10 327 *e*P P 05 18 21.1 +1.8
comp=Z,12nm,1.1s
FURC **Furnace Creek,** 72.13 321 ⇑P P 05 18 21.2 +2.0
baz=72
K20A **Yellowstone Ra** 72.17 331 ⇑P P 05 18 20.5 +0.9
baz=72,SNR=5.8
AGMN **Agassiz Nation** 72.17 342 *e*P P 05 18 19.2 -0.1

comp=Z,25nm,0.8s
H24A **Dirks Ranch, A** 72.19 334 ⇓P P 05 18 20.3 +0.7
baz=72,SNR=14
L19A **Farson** 72.21 330 ⇑P P 05 18 21.1 +1.2
baz=72,SNR=6.6
MPMC **Manual Prospec** 72.22 320 ⇓P P 05 18 21.6 +1.5
baz=72
PMOZ **Porto Moniz, M** 72.25 44 eP P 05 18 23.1 +2.9
J21A **Lysite** 72.30 332 ⇓P P 05 18 21.5 +1.1
baz=73,SNR=5.5
I22A **9 Mile Ranch,** 72.31 333 ⇓P P 05 18 21.4 +1.0
baz=73,SNR=11
L18A **Fontenelle, Gr** 72.40 329 ⇓P P 05 18 22.2 +1.2
baz=73,SNR=6.2
DUG **Dugway** 72.50 326 eP P 05 18 23.5 +1.9
DUG pmax pmax
comp=Z,8.0nm,1.1s
DUG **Dugway** 72.50 326 eP P 05 18 23.5 +1.9
comp=Z,7.9nm,1.1s
DUG **Dugway** 72.50 326 ⇓P P 05 18 23.5 +1.9
baz=73,SNR=7.1
K19A **Absolon Red Bu** 72.53 330 ⇑P P 05 18 22.2 +0.5
baz=73,SNR=6.5
ISA **Isabella** 72.55 320 eP P 05 18 23.0 +1.0
ISA pmax pmax
comp=Z,15nm,0.9s
ISA **Isabella** 72.55 320 eP P 05 18 22.9 +1.0
comp=Z,15nm,0.9s
ISA **Isabella** 72.55 320 ⇑P P 05 18 23.6 +1.7
baz=73
J20A **Shoshoni** 72.59 331 ⇓P P 05 18 23.3 +1.3
baz=73
I21A **Big Trails, Te** 72.60 332 ⇓P P 05 18 22.9 +0.8
baz=73,SNR=18
G24A **Alzada** 72.61 335 ⇑P P 05 18 22.9 +0.8
baz=73,SNR=11
R11A **Troy Canyon, C** 72.69 323 ⇑P P 05 18 24.7 +1.9
baz=73,SNR=6.9
H22A **Clearmont** 72.81 333 ⇓P P 05 18 24.4 +1.1
baz=73
BW06 **Boulder Array** 72.82 330 eP P 05 18 24.3 +0.8
comp=Z,2.2nm,0.6s
PDAR **Pinedale Array** 72.82 330 P P 05 18 23.7 +0.2
PDAR **Pinedale Array** 72.82 330 P P 05 18 23.7 +0.2
comp=Z,2.0nm,0.9s,baz=159,slow=6.3,SNR=13
G23A **Biddle** 72.90 334 ⇑P P 05 18 24.5 +0.7
baz=73,SNR=12
HWUT **Hardware Ranch** 72.91 328 eP P 05 18 24.5 +0.5
comp=Z,5.6nm,0.8s
K18A **Toltan Ranch,** 72.94 330 ⇑P P 05 18 25.6 +1.3
baz=73,SNR=7.4
MDND **Maddock** 72.96 339 ⇓P P 05 18 25.0 +1.1
baz=73,SNR=14
J19A **Crowheart** 72.97 331 ⇑P P 05 18 25.4 +1.1
baz=73
PMPS **Porto Santo** 72.97 44 eP P 05 18 24.6 +0.3
comp=Z,182nm,1.6s
PMPST **Porto Santo, M** 72.98 44 eP P 05 18 23.7 -0.7
comp=Z,219nm,1.7s
VES **Vestal, Richgr** 73.04 319 ⇓P P 05 18 26.4 +1.6
baz=73
F24A **Ekalaka** 73.05 335 ⇓P P 05 18 25.3 +0.7
baz=73,SNR=21
I20A **Worland** 73.08 332 ⇑P P 05 18 25.8 +0.9
baz=73
H21A **Big Horn, Sher** 73.14 333 ⇑P P 05 18 26.0 +0.8
baz=73,SNR=6.1
SMMC **Simmler** 73.26 318 ⇑P P 05 18 27.3 +1.2
baz=74
G22A **Birney** 73.29 333 ⇑P P 05 18 27.1 +0.9
baz=74
F23A **Volborg** 73.33 334 ⇑P P 05 18 27.3 +1.0
baz=74,SNR=13
J18A **Kendall Valley** 73.37 330 ⇓P P 05 18 27.8 +1.0
baz=74,SNR=19
H20A **Greybull** 73.44 332 ⇓P P 05 18 27.7 +0.7
baz=74,SNR=11
K17A **Gardner Place,** 73.45 329 ⇑P P 05 18 28.3 +1.1
baz=74
I19A **Meeteetse** 73.54 331 ⇓P P 05 18 28.6 +0.9
baz=74,SNR=5.2
E24A **Baker** 73.58 335 ⇓P P 05 18 29.0 +1.2
baz=74,SNR=18
I18A **Diamond G Ranc** 73.66 330 ⇑P P 05 18 29.7 +1.2
baz=74,SNR=13
G21A **Lodge Grass** 73.68 333 ⇓P P 05 18 29.6 +1.2
baz=74
F22A **Rosebud** 73.73 334 ⇓P P 05 18 29.5 +0.9
baz=74,SNR=6.7
TBI **Tubuai** 73.84 251 eLR LR 05 41 10.9
comp=Z,216nm,33.8s
K16A **Soda Springs** 73.84 329 ⇓P P 05 18 31.2 +1.7
baz=74,SNR=14
SNOW **Snow King Moun** 73.91 330 eP P 05 18 31.5 +1.5
comp=Z,9.2nm,0.9s
E23A **Ismay** 73.92 335 ⇑P P 05 18 30.7 +1.0
baz=74,SNR=12
ULM **Lac du Bonnet** 73.92 342 eP P 05 18 29.3 -0.3
comp=Z,21nm,0.6s
ULM **Lac du Bonnet** 73.92 342 P P 05 18 29.2 -0.3
comp=Z,21nm,0.6s,baz=156,slow=6.1,SNR=27
LOHW **Long Hollow** 73.95 330 eP P 05 18 31.3 +1.1
comp=Z,5.1nm,0.7s
H19A **Powell** 74.03 332 ⇑P P 05 18 31.6 +1.1
baz=74
TPAW **Teton Pass** 74.03 330 eP P 05 18 30.9 +0.3
comp=Z,5.7nm,0.8s
D24A **Glendive** 74.05 336 ⇓P P 05 18 31.5 +1.1
baz=74
RRI2 **Red Ridge** 74.09 329 eP P 05 18 32.1 +1.0
comp=Z,9.1nm,0.8s
G20A **Bridger** 74.11 332 ⇓P P 05 18 31.4 +0.4
baz=74,SNR=6.3
MOOW **Moose Ponds** 74.12 330 eP P 05 18 32.2 +1.0
comp=Z,6.1nm,0.9s
E22A **Miles City** 74.13 334 ⇑P P 05 18 31.8 +0.9
baz=74
I17A **Pilgrim Ck.** 74.18 330 ⇓P P 05 18 33.0 +1.5
baz=74
ELK **Elko** 74.18 325 eP P 05 18 32.9 +1.3
comp=Z,95nm,1.1s
ELK e pP 05 19 00.3 +2.8
NVAR **Mina Array Bea** 74.30 322 P P 05 18 33.7 +1.4
NVAR **Mina Array Bea** 74.30 322 P P 05 18 33.7 +1.4
comp=Z,2.3nm,0.8s,baz=156,slow=7.0,SNR=18
IMW **Indian Meadow** 74.33 330 eP P 05 18 34.0 +1.5
comp=Z,18nm,1.4s
H18A **Shoshone NF, C** 74.34 331 ⇓P P 05 18 33.9 +1.5
baz=75,SNR=11
C24A **Savage** 74.43 336 ⇑P P 05 18 33.7 +1.1
baz=75
D23A **Lindsay** 74.44 335 ⇓P P 05 18 34.0 +1.4
baz=75,SNR=8.6
H17A **Grant Village** 74.54 330 ⇑P P 05 18 35.7 +2.1
baz=75
F20A **Billings** 74.54 333 ⇑P P 05 18 34.3 +0.9
baz=75
I16A **Newdale** 74.57 330 ⇑P P 05 18 35.4 +1.7
baz=75
SCHQ **Schefferville** 74.62 1 eP P 05 18 33.8 +0.2
comp=Z,46nm,0.9s
SCHQ **Schefferville** 74.62 1 P P 05 18 33.7 +0.2
comp=Z,39nm,0.8s,baz=186,slow=4.1,SNR=65
E21A **Keefer Ranch,** 74.68 334 ⇓P P 05 18 35.5 +1.4
baz=75,SNR=7.9
G18A **Lazy EL Ranch,** 74.79 332 ⇑P P 05 18 36.1 +1.2
baz=75,SNR=16
D22A **Cohagen** 74.80 335 ⇑P P 05 18 36.2 +1.4
baz=75,SNR=14
F19A **Roth Farm, Mol** 74.93 332 ⇓P P 05 18 36.9 +1.3
baz=75,SNR=9.8
C23A **Lambert** 74.94 336 ⇑P P 05 18 36.8 +1.3
baz=75,SNR=6.9
D21A **La Casta Ranch** 75.06 334 ⇑P P 05 18 37.7 +1.3
baz=75,SNR=6.6
H16A **Russell Place,** 75.08 330 ⇑P P 05 18 38.6 +1.9
baz=75,SNR=12
E20A **Meyer Farm, Mu** 75.09 333 ⇓P P 05 18 37.7 +1.2
baz=75,SNR=12
DGMT **Dagmar** 75.12 337 eP P 05 18 38.1 +1.6
comp=Z,29nm,0.8s
DGMT **Dagmar** 75.12 337 ⇑P P 05 18 37.9 +1.4
baz=75,SNR=8.1
I15A **Monteview** 75.14 329 ⇑P P 05 18 39.4 +2.5
baz=75,SNR=7.6
J14A **Carey** 75.15 328 ⇑P P 05 18 39.2 +2.2
baz=76
C22A **Vida** 75.17 335 ⇑P P 05 18 37.9 +1.0
baz=76,SNR=14
GCMT **Greycliff** 75.20 332 eP P 05 18 38.7 +1.4
comp=Z,10.0nm,1.0s
F18A **Big Timber** 75.31 332 ⇑P P 05 18 39.3 +1.5
baz=76,SNR=23
G17A **Pierce Place,** 75.32 331 ⇓P P 05 18 39.3 +1.4
baz=76
E19A **Rath Farm, Rou** 75.34 333 ⇑P P 05 18 39.2 +1.3
baz=76,SNR=36
B23A **Brockton** 75.41 336 ⇓P P 05 18 39.6 +1.4
baz=76,SNR=14
A24A **Westby** 75.42 337 ⇑P P 05 18 40.0 +1.7
baz=76,SNR=12
PPT2 **Papeete2** 75.52 256 eS S 05 28 37.5 +25
comp=Z,90nm,28.2s
PPT2 eLR LR 05 42 20.2
comp=Z,207nm,30.2s
PPT **Papeete** 75.52 256 LR LR 05 41 56.3
comp=Z,131nm,20.1s,baz=128,slow=28
J13A **Cove Ranch, Pi** 75.53 328 ⇑P P 05 18 40.9 +1.7
baz=76,SNR=5.0
D20A **Manuel Ranch,** 75.56 334 ⇓P P 05 18 40.2 +1.1
baz=76,SNR=11
I14A **Mackay** 75.56 329 ⇓P P 05 18 41.6 +2.2
baz=76,SNR=9.1
B22A **Reddig Ranch S** 75.66 336 ⇓P P 05 18 40.8 +1.1
baz=76
H15A **Lima** 75.68 329 ⇓P P 05 18 41.9 +1.8
baz=76
C21A **Desert Coulee** 75.72 335 ⇑P P 05 18 41.0 +1.0
baz=76,SNR=14
F17A **Fitzpatrick Pl** 75.73 331 ⇓P P 05 18 41.7 +1.5
baz=76,SNR=9.6
G16A **Moss Hill, Enn** 75.74 330 ⇑P P 05 18 41.8 +1.4
baz=76,SNR=6.0
HLID **Hailey** 75.77 328 eP P 05 18 41.9 +1.3
comp=Z,9.9nm,1.0s
HLID **Hailey** 75.77 328 ⇓P P 05 18 43.1 +2.5
baz=76,SNR=16
A23A **Redstone** 75.78 337 ⇑P P 05 18 41.6 +1.3
baz=76
I13A **Wildhorse Cree** 75.88 328 ⇑P P 05 18 43.1 +1.9
baz=76,SNR=9.6
E18A **Harlowton** 75.91 332 ⇓P P 05 18 42.6 +1.4
baz=76,SNR=7.9
D19A **Cripps Ranch,** 75.93 333 ⇑P P 05 18 42.2 +0.9
baz=76,SNR=14
MCMT **McKenzie Canyo** 75.93 329 eP P 05 18 43.5 +1.9
comp=Z,4.2nm,1.0s
C20A **Veseth Ranch,** 76.00 334 ⇓P P 05 18 42.5 +0.9
baz=76,SNR=10
G15A **Dillon** 76.01 330 ⇑P P 05 18 43.2 +1.3
baz=76,SNR=8.9
H14A **Leadore** 76.03 329 ⇑P P 05 18 43.7 +1.6
baz=76,SNR=8.6
F16A **Kennard Place,** 76.08 331 ⇓P P 05 18 43.3 +1.1
baz=76
A22A **Carney Farms,** 76.20 336 ⇑P P 05 18 44.1 +1.3
baz=76,SNR=17
DLMT **Dillon** 76.21 330 eP P 05 18 44.8 +1.8
comp=Z,4.6nm,1.0s
E17A **Martinsdale** 76.24 332 ⇓P P 05 18 44.6 +1.4
baz=76,SNR=17
I12A **Atlanta** 76.30 328 ⇓P P 05 18 45.9 +2.3
baz=77,SNR=8.3
D18A **Linhart Farms,** 76.35 333 ⇓P P 05 18 44.8 +1.2
baz=77,SNR=10
MFID **Camas Ranch** 76.38 327 eP P 05 18 45.9 +1.9
comp=Z,12nm,1.1s
MFID **Camas Ranch** 76.38 327 ⇑P P 05 18 45.9 +1.9
baz=77,SNR=9.6
H13A **Challis** 76.42 329 ⇓P P 05 18 46.3 +2.1
baz=77,SNR=12
C19A **Slack Wire Ran** 76.45 333 ⇓P P 05 18 45.4 +1.2
baz=77,SNR=11
LRM **Limekiln Ridge** 76.49 330 eP P 05 18 46.3 +1.7
F15A **Butte** 76.52 330 ⇓P P 05 18 46.1 +1.3
baz=77,SNR=5.6
G14A **Jackson** 76.53 329 ⇑P P 05 18 46.4 +1.5
baz=77
E16A **East Helena** 76.67 331 ⇓P P 05 18 47.1 +1.6
baz=77
D17A **Six Diamond Ra** 76.70 332 ⇓P P 05 18 46.9 +1.2
baz=77,SNR=17
H12A **Diamond D Ranc** 76.70 328 ⇓P P 05 18 47.5 +1.7
baz=77,SNR=6.8
G13A **Cobalt** 76.79 329 ⇑P P 05 18 48.4 +2.1
baz=77,SNR=24
HRY **Holter Researc** 76.87 331 eP P 05 18 48.4 +1.7
comp=Z,6.9nm,0.8s
A20A **Colestone Ra** 76.89 335 ⇑P P 05 18 47.6 +1.0
baz=77,SNR=8.5
F14A **Wisdom** 76.91 330 ⇓P P 05 18 49.0 +2.0
baz=77
B19A **Brinkman Farms** 76.97 334 ⇓P P 05 18 48.4 +1.3
baz=77,SNR=14
EGMT **Eagleton** 76.97 333 eP P 05 18 47.9 +0.7
comp=Z,12nm,0.8s
EGMT **Eagleton** 76.97 333 ⇑P P 05 18 48.1 +0.9
baz=77,SNR=8.8
D16A **Dana Ranch, Ca** 76.99 332 ⇓P P 05 18 49.0 +1.7
baz=77,SNR=20
TOA0 **Torodi Ar. Sit** 77.01 71 eP P 05 18 47.1 -0.9
TORD **Torodi Ar. Bea** 77.01 71 P P 05 18 47.3 -0.7
TORD pP pP 05 19 14.6 +0.5
TORD sP sP 05 19 24.9 -0.1
TORD **Torodi Ar. Bea** 77.01 71 P P 05 18 47.3 -0.7
comp=Z,26nm,0.5s,baz=254,slow=5.0,SNR=337
TORD pP pP 05 19 14.6 +0.5
comp=Z,16nm,0.8s,baz=255,slow=4.9,SNR=3.6
TORD sP sP 05 19 24.9 -0.1
comp=Z,16nm,0.9s,baz=256,slow=5.4,SNR=2.5
E15A **Deer Lodge** 77.02 331 ⇑P P 05 18 49.4 +1.8
baz=77
C17A **Wharram Farm,** 77.10 333 ⇑P P 05 18 48.8 +0.9
baz=77,SNR=7.1
SBA **Scott Base** 77.20 190 eP P 05 18 49.6 +1.6
SBA pmax pmax
comp=Z,20nm,1.1s
SBA **Scott Base** 77.20 190 eP P 05 18 49.6 +1.6
comp=Z,20nm,1.1s
A19A **Klindworth Far** 77.26 334 ⇑P P 05 18 49.5 +0.8
baz=78,SNR=8.1
B18A **Beardsley Farm** 77.27 334 ⇑P P 05 18 49.8 +1.1
baz=78
F13A **Darby** 77.35 329 ⇑P P 05 18 51.2 +1.8
baz=78,SNR=21
G12A **Big Creek, Yel** 77.35 328 ⇓P P 05 18 50.9 +1.4
baz=78
E14A **Clinton** 77.41 330 ⇑P P 05 18 51.7 +1.9
baz=78,SNR=8.3
D15A **Lincoln** 77.43 331 ⇑P P 05 18 51.9 +2.1
baz=78,SNR=12
B17A **L&G Farms, Che** 77.62 333 ⇓P P 05 18 51.6 +0.8
baz=78
C16A **Fuhringer Ranc** 77.66 332 ⇑P P 05 18 52.3 +1.2
baz=78,SNR=11
A18A **Metzger Ranch,** 77.70 334 ⇑P P 05 18 52.0 +0.8
baz=78,SNR=8.4
MOD **Modoc** 77.75 323 eP P 05 18 53.7 +2.0
comp=Z,14nm,1.2s
E13A **Victor** 77.76 330 ⇑P P 05 18 53.7 +2.1
baz=78,SNR=11
F12A **Elk City** 77.77 329 ⇑P P 05 18 53.3 +1.6
baz=78,SNR=6.4
SYO **Syowa Base** 77.88 160 eP P 05 18 51.0 -0.8
D14A **Greenough** 77.91 331 ⇓P P 05 18 53.9 +1.5
baz=78
MSO **Missoula** 77.93 330 eP P 05 18 54.1 +1.6
comp=Z,5.7nm,1.2s
MSO **Missoula** 77.93 330 ⇑P P 05 18 54.3 +1.7
baz=78,SNR=7.4
C15A **Salmond Ranch,** 78.02 332 ⇑P P 05 18 54.9 +1.8
baz=78,SNR=26
SLMT **Seeley Lake** 78.02 331 eP P 05 18 54.7 +1.6
A17A **Triple J Farms** 78.08 333 ⇓P P 05 18 54.3 +1.0
baz=78,SNR=11
B16A **M & M Farms, S** 78.11 333 ⇓P P 05 18 54.5 +1.0
baz=78
BMO **Blue Mountains** 78.15 327 eP P 05 18 55.2 +1.4
comp=Z,15nm,1.0s
VNDA **Vanda** 78.22 190 eP P 05 18 55.0 +1.3
comp=Z,11nm,1.0s
VNDA **Vanda** 78.22 190 P P 05 18 55.2 +1.5
comp=Z,7.0nm,0.8s,baz=127,slow=4.2,SNR=38
D13A **Huson** 78.36 330 ⇑P P 05 18 56.4 +1.5
baz=79,SNR=12
B15A **Bradely Ranch,** 78.40 332 ⇓P P 05 18 55.9 +0.7
baz=79,SNR=14
SWMT **Swartz Lake** 78.45 331 eP P 05 18 57.1 +1.7
A16A **West Butte Ran** 78.47 333 ⇑P P 05 18 56.7 +1.2
baz=79,SNR=16
C14A **Swan Lake** 78.53 331 ⇓P P 05 18 57.4 +1.6
baz=79
D12A **Red Ives Fores** 78.75 330 ⇓P P 05 18 58.3 +1.2
baz=79
B14A **Marquette Ranc** 78.75 332 ⇑P P 05 18 58.3 +1.2
baz=79,SNR=5.2
JTMT **Jette** 78.76 331 eP P 05 18 58.9 +1.7
C13A **Hot Springs** 78.84 331 ⇓P P 05 18 59.3 +1.8
baz=79,SNR=12
A15A **Johnson Ranch,** 78.98 332 ⇓P P 05 18 58.7 +0.5
baz=79
BSMT **Bassoo Peak** 79.07 331 eP P 05 19 00.6 +1.7
A14A **Double T Ranch** 79.28 332 ⇓P P 05 19 00.9 +0.9
baz=80,SNR=5.5
C12B **Naegeli Ranch,** 79.28 330 ⇓P P 05 19 01.5 +1.6
baz=80
B13A **Whitefish** 79.30 331 ⇑P P 05 19 01.5 +1.5
baz=80,SNR=7.4
WALA **Waterton Lakes** 79.56 332 eP P 05 19 02.4 +1.0
comp=Z,0.2nm,0.8s
A13A **Flathead Natio** 79.69 332 ⇓P P 05 19 03.8 +1.7
baz=80
C11A **Tepee Creek (N** 79.74 330 ⇓P P 05 19 03.8 +1.4
baz=80,SNR=11
B12A **Libby** 79.88 331 ⇓P P 05 19 04.5 +1.4
baz=80,SNR=5.6
A12A **Yaak River Ran** 80.25 331 ⇓P P 05 19 06.7 +1.6
baz=80
MORF **Marmelete** 80.54 45 eP P 05 19 08.4 +1.5
comp=Z,52nm,1.5s
MORF **Marmelete** 80.54 45 eP P 05 19 07.9 +1.0
MDT **Midelt** 80.94 50 P P 05 19 10.3 +1.1
MDT **Midelt** 80.94 50 P P 05 19 10.3 +1.1
comp=Z,8.9nm,0.9s,baz=256,slow=5.4,SNR=20
PBDV **Barranco-do-Ve** 80.99 45 eP P 05 19 10.7 +1.4
comp=Z,41nm,1.3s
PNCL **Nicolau / Gran** 81.07 44 eP P 05 19 10.8 +1.2
comp=Z,35nm,1.5s
MESJ **Messejana** 81.12 44 eP P 05 19 10.1 +0.1
MESJ AMb AMB 05 19 16.3
comp=Z,32nm,1.3s
MESJ **Messejana** 81.12 44 eP P 05 19 10.1 +0.1
comp=Z,32nm,1.3s
MESJ **Messejana** 81.12 44 eP P 05 19 10.0 +0.1
PCVE **Castro Verde** 81.13 45 eP P 05 19 11.0 +1.0
comp=Z,27nm,1.3s
PVAQ **Vaqueiros** 81.22 45 eP P 05 19 11.4 +1.0
comp=Z,30nm,2.0s
PBEJ **Beja** 81.46 44 eP P 05 19 12.9 +1.2
comp=Z,22nm,2.3s
EVOP **Sao Brissos** 81.57 44 eP P 05 19 11.0 -1.3
EVOP pmax pmax
comp=Z,40nm,1.2s
EVOP **Sao Brissos** 81.57 44 eP P 05 19 11.0 -1.3
comp=Z,40nm,1.2s
EVO **Evora** 81.64 44 eP P 05 19 11.0 -1.7
comp=Z,40nm,1.2s
EVO **Evora** 81.64 44 eP P 05 19 13.4 +0.7
comp=Z,19nm,1.9s
PMTG **Montargil** 81.81 43 eP P 05 19 14.0 +0.5
comp=Z,42nm,1.7s
PCBR **Castelo Branco** 82.72 43 eP P 05 19 18.6 +0.4
comp=Z,23nm,1.9s
PVIS **Viseu** 82.94 42 eP P 05 19 20.5 +1.1
comp=Z,30nm,1.3s
MTE **Manteigas** 82.98 43 eP P 05 19 22.1 +2.4
comp=Z,30nm,1.5s
PVRL **Vila Real** 83.36 42 eP P 05 19 22.3 +0.7
comp=Z,27nm,1.5s
POLO **Lamas de Olo** 83.37 42 eP P 05 19 21.7 0.0
comp=Z,15nm,1.3s
PGAV **Gavieira, Arco** 83.40 41 eP P 05 19 22.2 +0.3
PCAB **Cabril** 83.41 41 eP P 05 19 22.3 +0.5
comp=Z,52nm,1.8s
MVO **Moncorvo** 83.73 42 eP P 05 19 24.2 +0.7
comp=Z,34nm,1.6s
BOSA **Boshof** 84.23 118 P P 05 19 26.9 +0.3
BOSA **Boshof** 84.23 118 P P 05 19 26.9 +0.3
comp=Z,6.5nm,0.9s,baz=296,slow=1.9,SNR=6.1
PBRG **Braganca** 84.26 42 eP P 05 19 26.8 +0.6
comp=Z,44nm,1.8s
TAM **Tamanrasset** 84.30 63 eP P 05 19 27.3 +0.3
TAM pmax pmax
comp=Z,25nm,1.1s
TAM **Tamanrasset** 84.30 63 eP P 05 19 27.3 +0.3
comp=Z,25nm,1.1s
PAB **San Pablo** 84.59 45 eP P 05 19 27.7 -0.2
PAB pmax pmax
comp=Z,17nm,0.8s
PAB **San Pablo** 84.59 45 eP P 05 19 27.7 -0.2
comp=Z,17nm,0.8s
ESDC **Sonseca Array** 84.92 45 P P 05 19 30.4 +0.9
ESDC **Sonseca Array** 84.92 45 P P 05 19 30.4 +0.9
comp=Z,9.1nm,1.0s,baz=239,slow=5.3,SNR=24
ESDC LR LR 05 52 27.1
comp=Z,69nm,19.3s,baz=235,slow=32
ESLA **Sonseca Array** 84.92 45 eP P 05 19 29.9 +0.4
comp=Z,3.1nm,1.0s
MAW **Mawson** 85.73 163 P P 05 19 33.8 +0.7
MAW **Mawson** 85.73 163 P P 05 19 33.8 +0.7
comp=Z,7.2nm,0.5s,baz=211,slow=5.9,SNR=31
LBTB **Lobatse** 85.73 115 eP P 05 19 34.5 +0.4
comp=Z,9.3nm,0.9s
SJPF **Ste Jean** 88.43 43 eP P 05 19 46.8 +0.3
comp=Z,10nm,0.8s
SJPF **Ste Jean** 88.43 43 eP P 05 19 46.8 +0.3
SJPF pmax pmax
comp=Z,10.0nm,0.8s
SJPF **Ste Jean** 88.43 43 eP P 05 19 46.8 +0.3
comp=Z,10nm,0.8s
ETSF **Etsaut** 88.75 43 eP P 05 19 48.2 +0.1
ETSF **Etsaut** 88.75 43 eP P 05 19 48.2 +0.1
ETSF **Etsaut** 88.75 43 eP P 05 19 48.2 +0.1
EPF **Esparros** 89.39 43 eP P 05 19 50.9 -0.1
comp=Z,12nm,0.8s
EPF **Esparros** 89.39 43 eP P 05 19 50.9 -0.1
EPF pmax pmax
comp=Z,12nm,0.8s
EPF **Esparros** 89.39 43 eP P 05 19 50.9 -0.1
comp=Z,12nm,0.8s
QUIF **Quistinic** 89.66 38 eP P 05 19 51.3 -0.8
QUIF **Quistinic** 89.66 38 eP P 05 19 51.3 -0.8
QUIF **Quistinic** 89.66 38 eP P 05 19 51.3 -0.8
YKA **Yellowknife Ar** 89.81 341 P P 05 19 52.9 +0.5
YKA pP pP 05 20 20.0 +0.8
YKA sP sP 05 20 29.1 -0.9
YKA **Yellowknife Ar** 89.81 341 P P 05 19 52.9 +0.5
comp=Z,15nm,0.8s,baz=134,slow=4.6,SNR=218
YKA pP pP 05 20 20.0 +0.8
comp=Z,6.9nm,0.8s,baz=134,slow=4.6,SNR=4.1
YKA sP sP 05 20 29.0 -0.9
comp=Z,16nm,0.8s,baz=134,slow=4.7,SNR=7.1
ROSF **Rostrenen** 89.82 37 eP P 05 19 52.2 -0.6
ROSF **Rostrenen** 89.82 37 eP P 05 19 52.2 -0.6
ROSF **Rostrenen** 89.82 37 eP P 05 19 52.2 -0.6
YKW3 **Yellowknife Ar** 89.86 341 eP P 05 19 53.0 +0.4
comp=Z,0.3nm,0.8s
SGMF **Saint Gilles** 90.19 38 eP P 05 19 53.5 -1.0
SGMF **Saint Gilles** 90.19 38 eP P 05 19 53.5 -1.0
SGMF **Saint Gilles** 90.19 38 eP P 05 19 53.5 -1.0
LFF **La Frestale** 90.55 42 eP P 05 19 56.2 -0.1
comp=Z,49nm,0.7s
LFF **La Frestale** 90.55 42 eP P 05 19 56.2 -0.1
LFF pmax pmax
comp=Z,49nm,0.7s
LFF **La Frestale** 90.55 42 eP P 05 19 56.2 -0.1
comp=Z,49nm,0.7s
MTLF **Montolieu** 90.75 44 eP P 05 19 56.6 -0.7
MTLF **Montolieu** 90.75 44 eP P 05 19 56.6 -0.7
MTLF **Montolieu** 90.75 44 eP P 05 19 56.6 -0.7
MFF **Saint Martin d** 90.80 40 eP P 05 19 57.0 -0.4
comp=Z,16nm,0.8s
MFF **Saint Martin d** 90.80 40 eP P 05 19 57.0 -0.4
MFF pmax pmax
comp=Z,17nm,0.8s
MFF **Saint Martin d** 90.80 40 eP P 05 19 57.0 -0.4
comp=Z,16nm,0.8s
GRR **Gorron** 91.24 38 eP P 05 19 58.6 -0.8
comp=Z,22nm,0.7s
GRR **Gorron** 91.24 38 eP P 05 19 58.6 -0.8
GRR pmax pmax
comp=Z,22nm,0.7s

GRR	**Gorron**	**91.24**	**38**	*e*P		**P**		**05 19 58.6**	**-0.8**
	comp=Z,22nm,0.7s								
CAF	**Calviac**	**91.38**	**42**	*e*P		**P**		**05 19 59.8**	**-0.4**
	comp=Z,9.7nm,0.7s								
CAF	**Calviac**	**91.38**	**42**	*e*P		**P**		**05 19 59.8**	**-0.4**
CAF					pmax	pmax			
	comp=Z,10.0nm,0.7s								
CAF	**Calviac**	**91.38**	**42**	*e*P		**P**		**05 19 59.8**	**-0.4**
	comp=Z,9.7nm,0.7s								
FLN	**La Foliniere**	**91.64**	**38**	*e*P		**P**		**05 19 59.7**	**-1.6**
FLN	**La Foliniere**	**91.64**	**38**	*e*P		**P**		**05 19 59.7**	**-1.6**
FLN	**La Foliniere**	**91.64**	**38**	*e*P		**P**		**05 19 59.7**	**-1.6**
LDF	**La Druitiere**	**91.77**	**38**	*e*P		**P**		**05 20 01.2**	**-0.7**
LDF	**La Druitiere**	**91.77**	**38**	*e*P		**P**		**05 20 01.2**	**-0.7**
LDF	**La Druitiere**	**91.77**	**38**	*e*P		**P**		**05 20 01.2**	**-0.7**
TCF	**Toulx Ste Croi**	**92.09**	**41**	*e*P		**P**		**05 20 01.9**	**-1.6**
TCF	**Toulx Ste Croi**	**92.09**	**41**	*e*P		**P**		**05 20 01.9**	**-1.6**
TCF	**Toulx Ste Croi**	**92.09**	**41**	*e*P		**P**		**05 20 01.9**	**-1.6**
LASF	**Ste Croix**	**92.14**	**44**	*e*P		**P**		**05 20 03.3**	**-0.5**
LASF	**Ste Croix**	**92.14**	**44**	*e*P		**P**		**05 20 03.3**	**-0.5**
KEST	**Kesra**	**92.55**	**53**	*e*P		**P**		**05 20 05.7**	**-0.2**
KEST	**Kesra**	**92.55**	**53**	P		**P**		**05 20 06.5**	**+0.6**
	comp=Z,2.3nm,0.9s,baz=32,slow=3.7,SNR=6.5								
BGF	**Bois d'Agland**	**92.60**	**41**	*e*P		**P**		**05 20 05.1**	**-0.7**
	comp=Z,12nm,0.8s								
BGF	**Bois d'Agland**	**92.60**	**41**	*e*P		**P**		**05 20 05.1**	**-0.7**
BGF					pmax	pmax			
	comp=Z,12nm,0.8s								
BGF	**Bois d'Agland**	**92.60**	**41**	*e*P		**P**		**05 20 05.1**	**-0.7**
	comp=Z,12nm,0.8s								
AVF	**Avril sur Loir**	**93.02**	**41**	*e*P		**P**		**05 20 06.8**	**-0.9**
AVF	**Avril sur Loir**	**93.02**	**41**	*e*P		**P**		**05 20 06.8**	**-0.9**
AVF	**Avril sur Loir**	**93.02**	**41**	*e*P		**P**		**05 20 06.8**	**-0.9**
SSF	**Saint Saulge**	**93.23**	**41**	*e*P		**P**		**05 20 07.6**	**-1.1**
SSF	**Saint Saulge**	**93.23**	**41**	*e*P		**P**		**05 20 07.6**	**-1.1**
SSF	**Saint Saulge**	**93.23**	**41**	*e*P		**P**		**05 20 07.6**	**-1.1**
SMF	**Signal de Mont**	**93.26**	**41**	*e*P		**P**		**05 20 08.3**	**-0.5**
	comp=Z,18nm,1.0s								
SMF	**Signal de Mont**	**93.26**	**41**	*e*P		**P**		**05 20 08.3**	**-0.5**
SMF					pmax	pmax			
	comp=Z,18nm,1.0s								
SMF	**Signal de Mont**	**93.26**	**41**	*e*P		**P**		**05 20 08.3**	**-0.5**
	comp=Z,18nm,1.0s								
LOR	**Lormes**	**93.54**	**41**	*e*P		**P**		**05 20 09.1**	**-1.0**
LOR	**Lormes**	**93.54**	**41**	*e*P		**P**		**05 20 09.1**	**-1.0**
ORIF	**Oris-en-Rattie**	**93.81**	**43**	*e*P		**P**		**05 20 11.7**	**+0.2**
ORIF	**Oris-en-Rattie**	**93.81**	**43**	*e*P		**P**		**05 20 11.7**	**+0.2**
ORIF	**Oris-en-Rattie**	**93.81**	**43**	*e*P		**P**		**05 20 11.7**	**+0.2**
CASY	**Casey**	**93.91**	**180**	*e*P		**P**		**05 20 12.7**	**+1.1**
	comp=Z,25nm,0.9s								
SUMG	**Summit**	**94.68**	**9**	*e*P		**P**		**05 20 16.2**	**+0.9**
SUMG					pmax	pmax			
	comp=Z,14nm,0.9s								
SUMG	**Summit**	**94.68**	**9**	*e*P		**P**		**05 20 16.2**	**+0.9**
	comp=Z,14nm,0.9s								
SUMG	**Summit**	**94.68**	**9**	*i* P		**P**		**05 20 16.1**	**+0.9**
	comp=Z,6.1nm,1.0s								
SUMG				*i*				05 20 24.1	
HAU	**Haudompre**	**95.38**	**41**	*e*P		**P**		**05 20 17.6**	**-0.9**
	comp=Z,5.3nm,0.6s								
HAU	**Haudompre**	**95.38**	**41**	*e*P		**P**		**05 20 17.6**	**-0.9**
HAU					pmax	pmax			
	comp=Z,5.0nm,0.6s								
HAU	**Haudompre**	**95.38**	**41**	*e*P		**P**		**05 20 17.6**	**-0.9**
	comp=Z,5.3nm,0.6s								
CDF	**Champ du Feu**	**96.11**	**41**	*e*P		**P**		**05 20 21.4**	**-0.5**
CDF	**Champ du Feu**	**96.11**	**41**	*e*P		**P**		**05 20 21.4**	**-0.5**
CDF	**Champ du Feu**	**96.11**	**41**	*e*P		**P**		**05 20 21.4**	**-0.5**
DAVOX	**Davos/Dischmat**	**97.11**	**43**	LR		LR		06 02 43.2	
	comp=Z,79nm,19.9s,baz=245,slow=34								
CLL	**Collm**	**100.61**	**39**	*e*PP		PP		05 24 46.0	-4.5
BRG	**Berggiesshubel**	**101.03**	**40**	*e*(P)		**PP**		**05 24 49.9**	**-3.8**
	comp=Z,16nm,1.8s								
ILAR	**Eielson Array**	**102.91**	**335**		PP	PP		05 24 59.3	-8.1
ILAR	**Eielson Array**	**102.91**	**335**		PP	PP		05 24 59.3	-8.1
	comp=Z,0.4nm,0.8s,baz=103,slow=6.1,SNR=4.6								
AKASG	**Malin Array Be**	**110.45**	**42**		PP	PP		05 26 07.2	+4.1
AKASG	**Malin Array Be**	**110.45**	**42**		PP	PP		05 26 07.2	+4.1
	comp=Z,3.2nm,0.7s,baz=250,slow=9.5,SNR=5.2								
BRTR	**Keskin Array B**	**112.11**	**54**		PP	PP		05 26 12.8	-2.9
BRTR					PKKPab	**PKKPab**		**05 36 29.9**	**+0.7**
BRTR	**Keskin Array B**	**112.11**	**54**		PP	PP		05 26 12.8	-2.9
	comp=Z,1.8nm,0.9s,baz=248,slow=6.5,SNR=8.5								
BRTR					PKKPab	**PKKPab**		**05 36 29.9**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=89,slow=5.1,SNR=6.4								
KBZ	**Khabaz**	**119.32**	**50**		PKIKP	**PKPdf**		**05 25 44.3**	**+1.2**
KBZ	**Khabaz**	**119.32**	**50**		PKP	**PKPdf**		**05 25 44.3**	**+1.2**
KBZ	**Khabaz**	**119.32**	**50**		PKP	**PKPdf**		**05 25 44.3**	**+1.2**
	comp=Z,2.4nm,1.0s,baz=124,slow=2.1,SNR=4.7								
ZEI	**Tsey**	**120.05**	**52**	*i* PKIKP		**PKPdf**		**05 25 44.8**	**-0.1**
ZEI				*e*				05 26 13.8	
ZEI					pmax	pmax			
	comp=Z,3.0nm,1.1s								
STKA	**Stephens Creek**	**120.58**	**210**		PKP	**PKPdf**		**05 25 44.8**	**-1.3**
STKA	**Stephens Creek**	**120.58**	**210**		PKP	**PKPdf**		**05 25 44.8**	**-1.3**
	comp=Z,2.0nm,0.9s,baz=150,slow=5.4,SNR=5.2								
ARU	**Arti**	**127.04**	**33**	*i* PKIKP		**PKPdf**		**05 25 57.0**	**-0.6**
ARU								05 27 54.1	
ARU								05 32 52.3	
SEY	**Seymchan**	**128.74**	**337**	*i* PKIKP		**PKPdf**		**05 26 02.2**	**+1.6**
ABKAR	**Akbulak array**	**130.19**	**42**	*e*PKPdf		**PKPdf**		**05 26 05.3**	**+1.5**
ASAR	**Alice Springs**	**131.10**	**208**		PKPpre	PKPpre		05 26 02.5	
ASAR					PKP	**PKPdf**		**05 26 05.6**	**-0.9**
ASAR					pPKP	pPKPdf		05 26 33.1	-1.2
ASAR					PP	**PP**		**05 28 20.2**	**-3.1**
ASAR					SKPbc	**SKPbc**		**05 29 21.2**	**-0.8**
ASAR	**Alice Springs**	**131.10**	**208**		PKhKP	PKPpre		05 26 02.5	
	comp=Z,2.8nm,0.5s,baz=126,slow=1.6,SNR=9.3								
ASAR					PKP	**PKPdf**		**05 26 05.6**	**-0.9**
	comp=Z,5.8nm,1.0s,baz=221,slow=0.8,SNR=6.2								
ASAR					pPKP	pPKPdf		05 26 33.1	-1.2
	comp=Z,2.4nm,0.9s,baz=150,slow=1.8,SNR=4.1								
ASAR					PP	**PP**		**05 28 20.2**	**-3.1**
	comp=Z,2.1nm,1.2s,baz=120,slow=5.1,SNR=5.4								
ASAR					SKPbc	**SKPbc**		**05 29 21.2**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=134,slow=4.1,SNR=8.0								
AS31	**Alice Springs**	**131.10**	**208**	*e*PKPdf		**PKPdf**		**05 26 05.8**	**-0.6**
WRA	**Warramunga Arr**	**134.10**	**211**		PKPpre	PKPpre		05 25 59.8	
WRA					PKP	**PKPdf**		**05 26 12.3**	**+0.2**
WRA					SKPbc	**SKPbc**		**05 29 30.3**	**-2.2**
WRA	**Warramunga Arr**	**134.10**	**211**		PKhKP	PKPpre		05 25 59.8	
	comp=Z,0.5nm,0.5s,baz=125,slow=3.0,SNR=8.6								
WRA					PKP	**PKPdf**		**05 26 12.3**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=157,slow=1.8,SNR=21								
WRA					SKPbc	**SKPbc**		**05 29 30.3**	**-2.2**
	comp=Z,2.8nm,1.0s,baz=145,slow=2.7,SNR=5.0								
BVAR	**Borovoye Array**	**134.69**	**34**		SKPbc	**SKPab**		**05 29 35.6**	**-1.1**
BVAR	**Borovoye Array**	**134.69**	**34**		SKPbc	**SKPab**		**05 29 35.6**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=316,slow=4.1,SNR=3.7								
NVS	**Novosibirsk**	**139.44**	**24**	*e*PKIKP		PKPdf		05 26 15.3	-5.5
KURK	**Kurchatov**	**140.20**	**32**		PP	PP		05 29 12.1	-8.7
KURK					SKP			05 29 50.9	
KURBB	**Kurchatov Arra**	**140.22**	**32**		PP	PP		05 29 12.1	-8.8
	comp=Z,0.8nm,1.0s,baz=299,slow=5.0,SNR=3.5								
KURBB					SKP			05 29 50.9	
	comp=Z,1.4nm,0.9s,baz=303,slow=3.7,SNR=4.9								
ZAA0	**Zalesovo Array**	**140.72**	**24**	*e*PKPdf		**PKPdf**		**05 26 19.2**	**-4.1**
ZALV	**Zalesovo Beam**	**140.72**	**24**	PKHKP		PKPpre		05 26 14.7	
ZALV	**Zalesovo Beam**	**140.72**	**24**	PKPpre		PKPpre		05 26 14.7	
ZALV					SKP			05 29 49.8	
ZALV	**Zalesovo Beam**	**140.72**	**24**	PKhKP		PKPpre		05 26 14.7	
	comp=Z,2.1nm,0.6s,baz=323,slow=4.3,SNR=5.0								
ZALV					SKP			05 29 49.8	
	comp=Z,8.0nm,1.0s,baz=295,slow=4.6,SNR=8.9								
EKS2	**Erkin-Say**	**141.53**	**46**	*e*PKIKP		**PKPdf**		**05 26 24.9**	**-0.4**
EKS2	**Erkin-Say**	**141.53**	**46**	*e*PKPdf		**PKPdf**		**05 26 24.9**	**-0.4**
AAK	**Ala-Archa**	**142.02**	**45**	PKIKP		**PKPdf**		**05 26 22.3**	**-3.9**
AAK	**Ala-Archa**	**142.02**	**45**	PKPpre		PKPpre		05 26 22.3	
AAK				*e*PKPdf		**PKPdf**		**05 26 23.3**	**-2.9**
AAK	**Ala-Archa**	**142.02**	**45**	PKhKP		PKPpre		05 26 22.3	
	comp=Z,2.1nm,0.6s,baz=179,slow=6.6,SNR=6.2								
TKM2	**Tokmak 2**	**142.63**	**44**	*e*PKIKP		**PKPdf**		**05 26 26.7**	**-0.6**
TKM2	**Tokmak 2**	**142.63**	**44**	*e*PKPdf		**PKPdf**		**05 26 26.7**	**-0.6**
KSH	**Kashi**	**144.29**	**49**	*i* PKP		**PKPdf**		**05 26 29.8**	**-0.4**
KSH					sPKP			05 27 07.7	
KSH				*e*	PKS	**PKSdf**		**05 30 05.2**	**-0.7**
KSH					SKS	**SKSdf**		**05 33 29.2**	**-1.4**
KSH					AMB	AMB			
	comp=Z,390nm,4.3s								
KSH					LR	LR			
	comp=N,88nm,4.1s								
KSH					LR	LR			
	comp=E,160nm,9.3s								
KSH					LR	LR			
	comp=Z,160nm,5.5s								
MK31	**Makanchi Array**	**144.55**	**35**	*e*PKIKP		PKPbc		05 26 29.5	+0.3
MK31	**Makanchi Array**	**144.55**	**35**	*e*PKPdf		PKPbc		05 26 29.5	+0.3
MKAR	**Makanchi Array**	**144.55**	**35**	PKIKP		PKPbc		05 26 29.6	+0.4
MKAR	**Makanchi Array**	**144.55**	**35**	PKP		PKPbc		05 26 29.6	+0.4
MKAR					SKP			05 29 56.3	
MKAR	**Makanchi Array**	**144.55**	**35**	PKP		PKPbc		05 26 29.6	+0.4
	comp=Z,19nm,0.8s,baz=317,slow=4.1,SNR=182								
MKAR					SKP			05 29 56.3	
	comp=Z,1.0nm,0.8s,baz=299,slow=3.6,SNR=3.6								
KLR	**Kul'dur**	**146.48**	**335**	*e*PKHKP		PKPpre		05 26 29.7	
GUMO	**Guam**	**146.94**	**264**	PKPbc		**PKPdf**		**05 26 35.2**	**0.0**
GUMO	**Guam**	**146.94**	**264**	PKPbc		**PKPdf**		**05 26 35.2**	**0.0**
	comp=Z,133nm,0.9s,baz=236,slow=7.3,SNR=6.1								
MOY	**Mondy**	**147.52**	**12**	*e*PKP2		**PKPab**		**05 26 39.3**	**-1.0**
MOY					pmax	pmax			
	comp=Z,21nm,2.2s								
TLY	**Talaya**	**147.94**	**9**	*e*PKP2		**PKPab**		**05 26 40.9**	**-0.9**
TLY					pmax	pmax			
	comp=Z,25nm,0.8s								
ZAK	**Zakamensk**	**149.15**	**10**	⇑*i*PKP2		**PKPbc**		**05 26 42.9**	**+0.6**
ZAK				*e*				05 30 10.8	
ZAK					pmax	pmax			
	comp=Z,5.0nm,1.3s								
WMQ	**Urumqi**	**149.38**	**34**	*e*PKPbc		**PKPdf**		**05 26 39.5**	**+1.0**
WMQ					LR	LR			
	comp=N,82nm,28.6s								
WMQ					LR	LR			
	comp=E,190nm,30.0s								
WMQ					LR	LR			
	comp=Z,52nm,22.0s								
USRK	**Ussuriysk Arra**	**150.24**	**329**	PKPbc		**PKPbc**		**05 26 45.8**	**+0.8**
	comp=Z,4.0nm,0.7s,baz=50,slow=4.9,SNR=6.8								
USRK					pPKPbc	**pPKPbc**		**05 27 12.8**	**0.0**
	comp=Z,7.1nm,0.6s,baz=344,slow=2.1,SNR=5.2								
MJAR	**Matsushiro Arr**	**151.07**	**310**	PKPbc		**PKPbc**		**05 26 47.6**	**+0.3**
MJAR					pPKPbc	**pPKPbc**		**05 27 14.8**	**-0.2**
MJAR	**Matsushiro Arr**	**151.07**	**310**	PKPbc		**PKPbc**		**05 26 47.6**	**+0.3**
	comp=Z,4.4nm,0.7s,baz=130,slow=0.9,SNR=12								
MJAR					pPKPbc	**pPKPbc**		**05 27 14.8**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=109,slow=0.8,SNR=3.6								
MAJO	**Matsushiro**	**151.07**	**310**	*e*PKIKP		**PKPbc**		**05 26 47.6**	**+0.4**
MAJO	**Matsushiro**	**151.07**	**310**	*e*PKPbc		**PKPbc**		**05 26 47.6**	**+0.4**
MAT	**Matsushiro**	**151.07**	**310**	PKP		**PKPbc**		**05 26 47.0**	**-0.2**
SONM	**Songino Array**	**152.06**	**7**	PKP		**PKPdf**		**05 26 44.1**	**+1.5**
SONM					PKPbc	**PKiKP**		**05 26 50.0**	**+0.4**
SONM					PKPab	**PKPab**		**05 27 00.2**	**+1.2**
					pPKP	**pPKPdf**		**05 27 09.8**	**-0.9**
SONM	**Songino Array**	**152.06**	**7**	PKP		**PKPdf**		**05 26 44.1**	**+1.5**
	comp=Z,0.9nm,0.8s,baz=343,slow=3.0,SNR=4.3								
SONM					PKPbc	**PKiKP**		**05 26 50.0**	**+0.4**
	comp=Z,3.5nm,0.6s,baz=151,slow=3.4,SNR=8.9								
SONM					PKPab	**PKPab**		**05 27 00.2**	**+1.2**
	comp=Z,6.7nm,0.7s,baz=331,slow=3.5,SNR=12								
SONM					pPKP	**pPKPdf**		**05 27 09.8**	**-0.9**
	comp=Z,6.0nm,0.7s,baz=319,slow=2.5,SNR=6.4								
ULN	**Ulaanbaatar**	**152.10**	**6**	*e*PKPbc		**PKPbc**		**05 26 49.5**	**+0.1**
ULN				*e*PKPab		**PKPab**		**05 27 00.2**	**+1.0**
CN2	**Changchun**	**153.42**	**336**	*e*PKPbc		**PKPdf**		**05 26 46.0**	**+1.5**
KSRS	**Korea Array**	**157.23**	**323**	PKPab		**PKPab**		**05 27 20.4**	**-0.8**
	comp=Z,2.1nm,1.1s,baz=331,slow=1.5,SNR=4.6								
KSRS					pPKPab	**pPKPab**		**05 27 45.0**	**-3.1**
	comp=Z,1.5nm,0.5s,baz=35,slow=3.8,SNR=4.9								
KSAR	**Wonju Array Be**	**157.26**	**323**	PKPab		**PKPab**		**05 27 20.4**	**-0.9**
KSAR					pPKPab	**pPKPab**		**05 27 45.0**	**-3.3**
GTA	**Gaotai**	**158.47**	**24**	*e*PKP		**PKPdf**		**05 26 54.3**	**+2.7**
GTA					PKPab	**PKPab**		**05 27 31.0**	**+4.3**
GTA					PKS	**PKSdf**		**05 30 26.7**	**+1.4**
GTA					PP	PP		05 31 13.2	+6.8
GTA					SKS	**SKSdf**		**05 33 49.1**	**+0.9**
GTA					SKKS	**SKKSac**		**05 37 48.7**	**+1.9**
GTA					AMB	AMB			
	comp=Z,84nm,5.5s								
GTA					LR	LR			
	comp=N,91nm,16.6s								
GTA					LR	LR			
	comp=E,130nm,16.4s								
GTA					LR	LR			
	comp=Z,86nm,15.2s								
PSI	**Prapat**	**159.20**	**144**	PKPab		**PKPab**		**05 27 30.4**	**0.0**
PSI	**Prapat**	**159.20**	**144**	PKPab		**PKPab**		**05 27 30.4**	**0.0**
	comp=Z,11nm,0.9s,baz=273,slow=2.2,SNR=9.1								
HHC	**Hu-ho-hao-te**	**159.28**	**359**	⇑*e*PKP		**PKPdf**		**05 26 52.4**	**0.0**
HHC					pPKP	**pPKPdf**		**05 27 19.2**	**-1.3**
HHC					sPKP			05 27 29.9	
HHC					PKS	**PKSdf**		**05 30 24.6**	**-1.4**
HHC					PP	**PP**		**05 31 14.0**	**+3.6**
HHC					SKS	**SKSdf**		**05 33 46.3**	**-2.6**
HHC					SKKS	**SKKSac**		**05 37 50.9**	**+0.1**
HHC					SS	**SS**		**05 51 09.1**	**+2.2**
HHC					AMB	AMB			
	comp=Z,160nm,5.5s								
HHC					LR	LR			
	comp=N,170nm,14.3s								
HHC					LR	LR			
	comp=E,450nm,14.3s								
HHC					LR	LR			
	comp=Z,110nm,17.8s								
LZH	**Lanzhou**	**162.87**	**20**	*e*PKP		**PKPdf**		**05 26 55.8**	**-0.7**
LZH					pPKP	**pPKPdf**		**05 27 23.3**	**-1.3**
LZH					sPKP			05 27 33.5	
LZH				*e*PP		**PP**		**05 31 32.0**	**+2.1**
LZH					SKKS			05 38 09.0	
LZH				*e*SS		**SS**		**05 51 45.0**	**0.0**
LZH					AMB	AMB			
	comp=Z,140nm,5.4s								
LZH					LR	LR			
	comp=N,200nm,18.0s								
LZH					LR	LR			
	comp=E,150nm,19.3s								
LZH					LR	LR			
	comp=Z,220nm,20.2s								
CD2	**Chengdu**	**167.41**	**30**	PKP		**PKPdf**		**05 26 59.0**	**-1.3**
CD2					pPKP	**pPKPdf**		**05 27 28.1**	**-0.3**
CD2					sPKP			05 27 39.5	
CD2					PKPab	**PKPab**		**05 28 06.0**	**0.0**
CD2					PKS	**PKSdf**		**05 30 30.3**	**-2.8**
CD2					PP	**PP**		**05 31 55.0**	**+1.3**
CD2					SKS	**SKSdf**		**05 33 50.4**	**-4.8**
CD2					SKKS	**SKKSac**		**05 38 29.9**	**-2.6**
CD2					SS	**SS**		**05 52 29.0**	**-2.6**
CD2					AMB	AMB			
	comp=Z,230nm,6.2s								
CMAR	**Chiang Mai Arr**	**168.55**	**96**	PKPab		**PKPab**		**05 28 11.7**	**+0.2**
CMAR	**Chiang Mai Arr**	**168.55**	**96**	PKPab		**PKPab**		**05 28 11.7**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=256,slow=5.4,SNR=5.7								
WHN	**Wuhan**	**169.13**	**344**	PKP		**PKPdf**		**05 27 00.7**	**-0.7**
KMI	**Kunming**	**170.90**	**55**	PKP		**PKPdf**		**05 27 00.5**	**-2.4**
GYA	**Guiyang**	**172.52**	**31**	PKP		**PKPdf**		**05 27 01.2**	**-2.3**
GYA					pPKP	**pPKPdf**		**05 27 31.0**	**-0.6**
GYA					sPKP			05 27 42.7	
GYA					PKS	**PKSdf**		**05 30 32.6**	**-3.4**
GYA					PP	**PP**		**05 32 20.9**	**+1.4**
GYA					SKKS			05 38 55.4	
GYA					SS	**SS**		**05 53 19.0**	**-3.5**
GYA					AMB	AMB			
	comp=Z,120nm,8.0s								
GYA					LR	LR			
	comp=N,190nm,22.4s								
GYA					LR	LR			
	comp=E,160nm,23.7s								
GYA					LR	LR			
	comp=Z,130nm,21.2s								

NIED **12** *05:09:00,23˚50N×122˚10E,h32km,Mw3.8 Best double couple: M₀4.89000×10¹⁴ NP1:φs220.00000°,δ85.00000°, λ-136.00000°. NP2:φs125.00000°,δ47.00000°, λ-6.00000°.*

ISCJB **12** *05:09:02.8₀0.4,23˚43N₀0˚02×122˚12E₀0˚02,h16km±3km, Error ellipse: s-maj=3.2km s-min=2.3km az=44.4*

TAP **12** *05:09:04.9,23˚46N×122.05E,h36km,ML4.2,C*

JMA **12** *05:09:05.0±0.3,23˚54N×122˚11E,h79km,M3.7*

ISC 12 05:09:03.3±1.3,23.44N±0˚02×122.08E±0˚03,h21km±4km, n70,σ0°80/126,13C-7D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.56**	**299**	P	**Pn**	**05 09 15.4**	**-0.7**
	baz=298						
TEGC				*e*S	**Sb**	**05 09 23.2**	**+1.0**
	baz=298						
ESF	**Shoufeng Towns**	**0.68**	**309**	*e*P	**Pb**	**05 09 16.7**	**+0.2**
	baz=310						
ESF				*e*S	**Sb**	**05 09 25.1**	**-0.4**
	baz=310						
HWA	**Hwalien**	**0.69**	**321**	P	**Pb**	**05 09 17.0**	**+0.3**
	baz=329						
HWA				*e*S	**Sb**	**05 09 26.1**	**+0.3**
	baz=329						
EHY	**Hungye**	**0.70**	**276**	⇑*i*P	**Pb**	**05 09 17.4**	**+0.5**
	baz=274						
EHY				S	**Sb**	**05 09 26.6**	**+0.5**
	baz=274						
ESL	**Shilin**	**0.70**	**302**	P	**Pb**	**05 09 16.8**	**-0.1**
	baz=296						
ESL				*e*S	**Sb**	**05 09 25.4**	**-0.7**
	baz=296						
TWF1	**Yuli**	**0.72**	**263**	⇑*i*P	**Pb**	**05 09 17.7**	**+0.4**
	baz=261						
TWF1				S	**Sn**	**05 09 28.0**	**-0.8**
	baz=261						
CHKT	**Chengkung**	**0.74**	**243**	P	**Pb**	**05 09 17.4**	**0.0**
	baz=232						
CHKT				*e*S	**Sb**	**05 09 26.5**	**-0.6**
	baz=232						
TWD	**Chiawan**	**0.78**	**325**	⇓*i*P	**Pb**	**05 09 18.2**	**0.0**
	baz=327						
TWD				S	**Sb**	**05 09 27.7**	**-0.6**
	baz=327						
EHP	**Heping Village**	**0.92**	**340**	*e*P	**Pb**	**05 09 20.4**	**-0.2**
	baz=342						
ELDTW	**Lidau**	**1.01**	**256**	P	**Pb**	**05 09 21.6**	**-0.5**
	baz=244						
ELDTW				*e*S	**Sb**	**05 09 33.2**	**-1.8**
	baz=244						
WHF	**Hehuan Shan**	**1.02**	**313**	⇓*i*P	**Pb**	**05 09 22.2**	**-0.4**
	baz=314						
WHF				*e*S	**Sb**	**05 09 34.2**	**-1.6**
	baz=314						
ENA	**Nanau**	**1.03**	**343**	⇓*i*P	**Pb**	**05 09 22.3**	**-0.2**
	baz=344						
ENA				*e*S	**Sb**	**05 09 35.2**	**-0.4**
	baz=344						
TTN	**Taitung**	**1.10**	**232**	*e*P	**Pn**	**05 09 21.9**	**-1.5**
	baz=230						
TTN				*e*S	**Sb**	**05 09 36.8**	**-0.6**
	baz=230						
TWG	**Pinlang**	**1.11**	**237**	⇑*i*P	**Pn**	**05 09 23.2**	**-0.5**
	baz=247						
TWG				*e*S	**Sb**	**05 09 36.5**	**-1.4**
	baz=247						
TWT	**Tachien**	**1.16**	**315**	P	**Pn**	**05 09 24.6**	**+0.2**
	baz=314						
TWT				*e*S	**Sb**	**05 09 38.4**	**-1.0**
	baz=314						
SMLT	**Sun Moon Lake**	**1.17**	**292**	⇑*i*P	**Pn**	**05 09 24.7**	**+0.1**
	baz=298						
SMLT				*e*S	**Sb**	**05 09 39.5**	**-0.1**
	baz=298						
ALS	**Alishan**	**1.17**	**274**	⇑*i*P	**Pb**	**05 09 25.4**	**+0.4**
	baz=273						
ALS				*e*S	**Sb**	**05 09 39.6**	**-0.3**
	baz=273						
TWC	**Suao**	**1.18**	**350**	⇓*i*P	**Pb**	**05 09 25.0**	**-0.1**
	baz=1.0						
TWC				S	**Sb**	**05 09 39.9**	**-0.1**
	baz=1.0						
NNS	**Nan Shan**	**1.19**	**327**	⇓P	**Pn**	**05 09 24.8**	**0.0**
	baz=318						
NNS				*e*S	**Sb**	**05 09 39.1**	**-1.1**
	baz=318						
TYC	**Yuchr**	**1.21**	**293**	⇑*i*P

baz=352
TAP1 Taipei 1.67 342 *e*P Pb 05 09 32.5 -0.9
baz=332
TAP1 *e*S Sn 05 09 52.6 +0.4
baz=332
HSN Hsinchu 1.69 323 *e*P Pb 05 09 32.9 -0.9
baz=326
HSN *e*S Sb 05 09 54.9 +0.3
baz=326
HATJ Hateruma jima 1.70 68 P Pn 05 09 32.2 +0.5
HATJ *e*S Sn 05 09 52.6 -0.2
WTCT Ta-ch'eng 1.70 285 *e*P Pb 05 09 33.5 -0.5
baz=274
WTCT *e*S Sb 05 09 55.4 +0.5
baz=274
SCZT Fangliau 1.71 232 *e*P Pn 05 09 32.4 +0.4
baz=225
CHN8 Yiju 1.72 267 *e*P Pb 05 09 33.4 -0.8
baz=267
CHN8 *e*S Sb 05 09 55.2 -0.2
baz=267
NCU National Centr 1.73 332 *e*P Pb 05 09 33.5 -0.9
baz=333
NCU *e*S Sb 05 09 55.1 -0.5
baz=333
SCLT Jiali 1.75 262 *e*P Pb 05 09 34.4 -0.4
baz=274
IRIF Iriomote-Funau 1.75 59 P Pn 05 09 33.3 +0.8
IRIF *e*S Sn 05 09 54.9 +0.7
TWS1 Kuangyinshan 1.76 340 *e*P Pn 05 09 33.5 +0.9
baz=341
TWS1 *e*S Sn 05 09 55.1 +0.7
baz=341
TSEB Hengchuen, Pin 1.88 216 *e*P Pn 05 09 34.6 +0.4
baz=224
TSEB *e*S Sn 05 09 58.1 +0.8
baz=224
TWY Chenhua 1.88 347 *e*P Pn 05 09 34.5 +0.3
baz=334
HEN Hengchun 1.89 221 *e*P Pb 05 09 36.9 -0.2
baz=220
HEN *e*S Sn 05 09 56.4 -1.2
baz=220
TWK1 Hengchun 1.90 219 *e*P Pn 05 09 34.6 +0.1
baz=217
TWK1 *e*S Sn 05 09 55.9 -1.8
baz=217
TWP Hsiaoliuchiu 1.92 236 *e*P Pb 05 09 39.3 +1.6
baz=235
JKRS Kuro-shima 1.94 65 P Pn 05 09 35.8 +0.8
JKRS *e*S Sn 05 09 59.0 +0.2
JIJ Ishigaki jima 2.10 64 P Pn 05 09 37.6 +0.3
JIJ *e*S Sn 05 10 01.9 -0.9
WDGT Dungji 2.23 266 ⇑*i*P Pn 05 09 39.9 +0.8
baz=266
WDGT *e*S Sn 05 10 05.1 -0.9
baz=266
PNG Penghu 2.32 274 P Pn 05 09 41.1 +0.8
baz=273
PNG *e*S Sn 05 10 08.1 -0.1
baz=273
JTJ Tarama 2.68 63 P Pn 05 09 45.5 +0.2
JTJ *e*S Sn 05 10 17.2 +0.1
QZH Quanzhou 3.52 296 ⇓*i*Pn Pn 05 09 58.2 +1.4
QZH Sn Sn 05 10 36.1 -1.7
QZH smax smax
comp=N,270nm,0.7s
QZH smax smax
comp=E,120nm,0.5s

CASC 12 05:31:40.7±2.3, 14°26N×92°25W, h107km±14km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.60**	**84**	*e*P	Pn	05 31 57.2	-0.8
JAT				*e*S	Sn	05 32 13.0	+2.2
FUG	**Fuego 3**	**1.38**	**82**	*e*P	Pn	05 32 05.5	-0.7
FUG				*e*S	Sn	05 32 26.6	+1.2
PCG	**Pacaya**	**1.60**	**85**	*e*P	Pn	05 32 08.9	0.0
PCG				*e*S	Sn	05 32 31.0	+0.7
NBG	**Las Nubes**	**1.87**	**80**	*e*P	Pn	05 32 14.1	+1.8
NBG				*e*S	Sn	05 32 37.6	+1.2
RBDL	**Robledal**	**2.49**	**93**	*e*P	Pn	05 32 20.9	+0.7
RTR	**El Retiro**	**2.55**	**98**	*e*P	Pn	05 32 21.6	+0.6
SBLS	**San Blas**	**2.58**	**99**	*e*P	Pn	05 32 22.2	+0.8
SNJE	**San Jose**	**2.59**	**98**	*e*P	Pn	05 32 22.1	+0.6
MRL	**Marmol**	**2.60**	**72**	*e*P	Pn	05 32 22.1	+0.5
MRL				*e*S	Sn	05 32 55.3	+2.2
BOQS	**Boqueron**	**2.93**	**100**	*e*P	Pn	05 32 26.9	+0.9
LFRS	**El Faro**	**3.16**	**101**	*e*P	Pn	05 32 30.0	+1.1
SNVI	**San Vicente**	**3.37**	**101**	*e*P	Pn	05 32 33.2	+1.4

*ISCJB **12** 05:34:52.9±0.4, 23°.02S±0°.04×66°.26W±0°.04, h218km±3km, mb4.4/72, Error ellipse: s-maj=7.0km s-min=5.6km az=142.8*
*NEIC **12** 05:34:53.9±0.4, 23°.03S×66°.22W, h215km±3km, mb4.5/61, Error ellipse: s-maj=6.1km s-min=4.6km az=54.0*
*BJI **12** 05:34:53.8, 23°.00S×66°.20W, h214km, mB5.1/4*
*GUC **12** 05:34:55.5±0.3, 22°.90S×66°.80W, h252km±6km, ML5.7*
*IDC **12** 05:34:55.0±1.3, 23°.00S×66°.17W, h224km±11km, mb4.0/10, mb1 4.1/17, mb1mx4.0/22, mbtmp3.9/17, Error ellipse: s-maj=13.9km s-min=10.5km az=66.0*
ISC 12 05:34:53.8±0.5, 22°.98S±0°.04×66°.25W±0°.05, h220km±4km, n500, σ1$36/533, mb4.5/72, 173C-180D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.48**	**278**	*i* P	Pn	**05 35 40.0**	**+0.9**
LVC				*i* S	S	**05 36 13.9**	**-0.4**
LVC	**Limon Verde**	**2.48**	**278**	*i* P	Pn	**05 35 40.0**	**+0.9**
LVC				*i* S	S	**05 36 13.9**	**-0.4**
PB09	**Plate Boundary**	**3.01**	**293**	⇑*i*P	Pn	**05 35 46.0**	**+1.2**
PB09				*i* S	S	**05 36 23.8**	**-0.8**
PB09	**Plate Boundary**	**3.01**	**293**	⇑*i*P	Pn	**05 35 46.0**	**+1.2**
PB09				*i* S	S	**05 36 23.8**	**-0.8**
PB09				AML	AML	05 36 28.2	
comp=E,11μm,0.3s							
PB04	**Plate Boundary**	**3.08**	**283**	⇑*i*P	Pn	05 35 52.3	+6.9
PB04				*e*S	S	05 36 35.5	+10
PB01	**Plate Boundary**	**3.57**	**302**	⇑*i*P	Pn	**05 35 51.7**	**+0.4**
PB01				*i* S	S	**05 36 34.6**	**-1.7**
PB01	**Plate Boundary**	**3.57**	**302**	⇑*i*P	Pn	**05 35 51.7**	**+0.4**
PB01				*i* S	S	**05 36 34.6**	**-1.7**
CEN1	**Los Morros**	**3.66**	**263**	⇓*i*P	Pn	**05 35 53.9**	**+1.5**
CEN1				*i* S	S	**05 36 38.6**	**+0.4**
CEN1	**Los Morros**	**3.66**	**263**	⇓*i*P	Pn	**05 35 53.9**	**+1.5**
CEN1				*i* S	S	**05 36 38.6**	**+0.4**
MECH	**Mejillones**	**3.87**	**267**	⇑*i*P	Pn	**05 35 54.9**	**+0.1**
MECH				*i* S	S	**05 36 39.6**	**-2.9**
MECH	**Mejillones**	**3.87**	**267**	⇑*i*P	Pn	**05 35 54.9**	**+0.1**
MECH				*i* S	S	**05 36 39.6**	**-2.9**
ANCH	**Antofagasta**	**3.89**	**259**	⇓*i*P	Pn	**05 35 55.2**	**+0.2**
ANCH				*e*S	S	**05 36 40.3**	**-2.6**
ANCH	**Antofagasta**	**3.89**	**259**	⇓*i*P	Pn	**05 35 55.2**	**+0.2**
ANCH				*e*S	S	**05 36 40.3**	**-2.6**
HMBC	**Humberstone**	**4.32**	**308**	*e*P	Pn	**05 35 59.9**	**-0.6**
HMBC				*i* S	S	**05 36 49.5**	**-3.4**
HMBC	**Humberstone**	**4.32**	**308**	*e*P	Pn	**05 35 59.9**	**-0.6**
HMBC				*i* S	S	**05 36 49.5**	**-3.4**
PSGC	**Pisagua**	**4.94**	**312**	*e*P	Pn	**05 36 06.8**	**-1.3**
PSGC				*i* S	S	**05 37 02.5**	**-4.2**
PSGC	**Pisagua**	**4.94**	**312**	*e*P	Pn	**05 36 06.8**	**-1.3**
PSGC				*i* S	S	**05 37 02.5**	**-4.2**
MNMC	**Minimini**	**4.95**	**320**	⇓*i*P	Pn	**05 36 08.9**	**+0.5**
MNMC				*i* S	S	**05 37 05.2**	**-1.9**
MNMC	**Minimini**	**4.95**	**320**	⇓*i*P	Pn	**05 36 08.9**	**+0.5**
MNMC				*i* S	S	**05 37 05.2**	**-1.9**
LPAZ	**La Paz**	**6.89**	**345**	*e*Pn	Pn	**05 36 35.1**	**+1.5**
LPAZ				S	S	**05 37 50.4**	**-2.3**
LPAZ				*e*Sn		05 37 54.2	
LPAZ	**La Paz**	**6.89**	**345**	P	Pn	**05 36 35.0**	**+1.5**
comp=E,13nm,0.3s,baz=157,slow=8.5,SNR=351							
LPAZ				S	S	**05 37 50.4**	**-2.3**
comp=E,0.4nm,0.3s,baz=246,slow=19,SNR=3.1							
LCO	**Las Campanas**	**7.22**	**213**	*e*Pn	Pn	**05 36 34.4**	**-2.8**
LCO				*e*Sn	S	05 37 47.0	-13
ARE	**Arequipa**	**8.15**	**322**	*e*P	Pn	**05 36 48.0**	**-1.4**
ARE				*e*S	S	05 38 14.0	-7.8
SIV	**San Ignacio**	**8.50**	**36**	P	Pn	**05 36 54.8**	**+1.2**
SIV	**San Ignacio**	**8.50**	**36**	P	Pn	**05 36 54.8**	**+1.2**
comp=E,3.3nm,0.3s,baz=229,slow=13,SNR=103
CFAA Coronel Fontan 8.77 191 P Pn 05 36 55.2 -1.7
CFAA S S 05 38 27.6 -8.3
CFAA Coronel Fontan 8.77 191 P Pn 05 36 55.2 -1.7
comp=E,0.4nm,0.3s,baz=12,slow=8.7,SNR=99
CFAA S S 05 38 27.6 -8.3
comp=E,3.4nm,0.3s,baz=277,slow=22,SNR=38
CPUP Villa Florida 8.77 114 P Pn 05 36 55.9 -1.1
CPUP Villa Florida 8.77 114 P Pn 05 36 55.9 -1.1
comp=E,0.4nm,0.3s,baz=268,slow=9.6,SNR=8.1
SAML Samuel 14.26 12 *e*Pn P 05 38 07.3 -0.1
comp=E,10nm,0.7s
NNA Nana 14.88 316 *e*Pn Pn 05 38 14.8 +0.9
NNA Nana 14.88 316 P P 05 38 15.1 +0.8
comp=E,3.5nm,0.3s,baz=164,slow=11,SNR=21
TRQA Tornquist 15.47 167 *e*P Pn 05 38 20.3 -0.5
comp=E,15nm,2.1s
SPB Sao Paulo 17.30 96 *e*P Pn 05 38 42.4 -0.3
comp=E,21nm,0.6s
PLCA Paso Flores 18.07 191 *e*P P 05 38 49.3 +0.3
comp=E,136nm,2.8s
PLCA Paso Flores 18.07 191 P P 05 38 49.4 +0.3
comp=E,0.4nm,0.3s,baz=14,slow=12,SNR=17
BDFB Brasilia 18.68 70 P Pn 05 38 58.0 -1.1
BDFB Brasilia 18.68 70 P Pn 05 38 58.0 -1.1
comp=E,3.8nm,0.3s,baz=247,slow=10,SNR=109
ATAH Atahualpa 19.62 322 P P 05 39 08.6 +2.3
ATAH Atahualpa 19.62 322 P P 05 39 08.6 +2.3
comp=E,0.8nm,0.3s,baz=156,slow=9.4,SNR=6.1
CAM4 Nova Friburgo 21.86 93 ⇑*i*P P 05 39 29.6 +0.2
CAM4 *i* 05 39 32.7
CAM4 *i* 05 39 46.3
CAM4 *i* 05 40 00.1
OTAV Otavalo 25.95 331 *e*P P 05 40 09.6 +2.7
comp=E,2.0nm,1.0s
RCBR Riachuelo 33.86 64 *e*P P 05 41 16.2 +0.3
comp=E,50nm,1.1s
TGUH Tegucigalpa,Un 42.18 329 *e*P P 05 42 26.3 +1.2
comp=E,13nm,0.8s
TEIG Tepich 48.02 332 *e*P P 05 43 11.1 +0.1
comp=E,24nm,1.0s
BRAL Brewton 57.27 339 *e*P P 05 44 19.8 +1.2
comp=E,16nm,0.7s
JSC Jenkinsville 58.71 345 *e*P P 05 44 29.0 +0.6
KMSC Kings Mountain 59.55 346 ⇑P P 05 44 35.2 +1.0
baz=60
HKT Hockley 59.82 330 *e*P P 05 44 37.0 +1.0
comp=E,14nm,1.5s
SNAA Sanae 60.08 161 P P 05 44 38.6 +1.2
SNAA Sanae 60.08 161 P P 05 44 38.6 +1.2
comp=E,0.5nm,0.5s,baz=249,slow=9.2,SNR=11
CPCT Cooper Cave 60.64 343 *e*P P 05 44 41.2 -0.4
SWET Sewanee 60.82 342 *e*P P 05 44 42.6 -0.2
comp=E,21nm,0.9s
732A Laxson Ranch, 60.82 326 ⇓P P 05 44 43.1 +0.2
baz=61,SNR=10
PLAL Pickwick Lake 61.26 340 *e*P P 05 44 44.9 -0.8
comp=E,12nm,1.3s
OXF Oxford 61.27 338 *e*P P 05 44 44.9 -0.8
comp=E,24nm,1.0s
632A Uvalde 61.36 327 ⇑P P 05 44 46.9 +0.4
baz=62,SNR=8.3
631A Perdido Creek 61.68 326 ⇓P P 05 44 49.3 +0.6
baz=62
532A Rocksprings 61.92 327 ⇓P P 05 44 50.7 +0.4
baz=62,SNR=10
JCT Junction City 62.16 327 *e*P P 05 44 52.1 +0.3
comp=E,14nm,0.8s
JCT Junction City 62.16 327 ⇑P P 05 44 52.1 +0.3
baz=62,SNR=10
WVT Waverly 62.23 340 *e*P P 05 44 51.4 -0.8
comp=E,24nm,1.2s
432A Menard 62.47 328 ⇑P P 05 44 54.2 +0.2
baz=63,SNR=13
530A J-C Ranch, Com 62.67 326 ⇓P P 05 44 55.7 +0.4
baz=63,SNR=11
431A Sonora 62.72 327 ⇓P P 05 44 55.7 0.0
baz=63,SNR=9.8
MIAR Mount Ida 62.83 335 *e*P P 05 44 56.0 -0.2
comp=E,2.8nm,0.6s
332A Millersview 62.86 328 ⇑P P 05 44 56.7 +0.2
baz=63,SNR=15
628A Black Gap, Mar 62.96 324 ⇑P P 05 44 58.2 +1.0
baz=63,SNR=15
529A Stev Forest Ra 63.11 325 ⇑P P 05 44 58.8 +0.6
baz=63,SNR=25
430A Baggett Ranch, 63.13 326 ⇑P P 05 44 58.4 +0.1
baz=63,SNR=12
331A San Angelo 63.14 327 ⇓P P 05 44 58.4 +0.1
baz=64,SNR=13
627A Terlingua Ranc 63.20 324 ⇑P P 05 44 59.3 +0.4
baz=64,SNR=10
232A Coleman 63.23 328 ⇓P P 05 44 59.1 +0.1
baz=64,SNR=15
429A Davenport Ranc 63.34 326 ⇓P P 05 45 00.1 +0.4
baz=64,SNR=15
PARMO Parma 63.34 339 *e*P P 05 44 59.5 +0.1
528A Cox Ranch, San 63.44 325 ⇓P P 05 45 00.6 +0.2
baz=64,SNR=8.7
330A Mertzon 63.59 327 ⇓P P 05 45 01.4 0.0
baz=64,SNR=5.2
231A Bronte 63.59 328 ⇑P P 05 45 01.5 +0.1
baz=64
626A Big Bend Ranch 63.69 323 ⇓P P 05 45 03.0 +1.0
baz=64,SNR=28
428A Kincaid Ranch, 63.83 325 ⇑P P 05 45 03.6 +0.7
baz=64,SNR=6.0
ABTX Abilene, Hawle 63.83 329 ⇑P P 05 45 02.9 +0.1
baz=64
527A Woodward Ranch 63.87 324 ⇓P P 05 45 03.6 +0.3
baz=64,SNR=5.7
230A Sterling City 63.95 327 ⇑P P 05 45 04.1 +0.5
baz=64
526A Mary Lane Ranc 64.06 324 ⇓P P 05 45 05.2 +0.6
baz=64,SNR=18
329A Wagon Wheel Ra 64.07 326 ⇑P P 05 45 04.6 +0.1
baz=64,SNR=12
SIUC Southern Illin 64.12 340 *e*P P 05 45 03.6 -0.9
comp=E,6.8nm,0.7s
131A Roby 64.23 328 ⇓P P 05 45 05.8 +0.3
baz=64,SNR=6.4
427A Hayter Ranch, 64.30 325 ⇓P P 05 45 06.3 +0.3
baz=65,SNR=10
229A Bryant Ranch, 64.36 327 ⇑P P 05 45 06.3 -0.1
baz=65
328A Wristen Ranch, 64.41 326 ⇑P P 05 45 07.1 +0.5
baz=65,SNR=14
130A Snyder 64.45 328 ⇓P P 05 45 07.0 +0.1
baz=65,SNR=9.9
426A McDonald Obser 64.50 324 ⇓P P 05 45 08.0 +0.6
baz=65,SNR=13
Z31A Sharp Cattle R 64.64 329 ⇓P P 05 45 08.3 +0.2
baz=65,SNR=11
BLO Bloomington 64.68 343 *e*P P 05 45 07.2 -1.0
comp=E,12nm,0.6s
ACSO Alum Creek Sta 64.79 346 *e*P P 05 45 08.3 -0.6
comp=E,15nm,0.8s
Y32A R-V Farms, Ver 64.88 330 ⇑P P 05 45 09.9 +0.3
baz=65,SNR=6.6
228A UT Block 9, Go 64.88 326 ⇑P P 05 45 09.4 -0.4
baz=65
TUL1 Tulsa 64.90 334 ⇑P P 05 45 09.9 +0.3
baz=65
129A Stewart Farms, 64.92 327 ⇑P P 05 45 10.0 0.0
baz=65,SNR=6.4
326A Caldwell Ranch 64.97 325 ⇑P P 05 45 10.9 +0.6
baz=65,SNR=9.2
Z30A Sanderson Ranc 65.09 328 ⇑P P 05 45 10.9 -0.1
baz=65,SNR=9.7
425A Indio Mountain 65.11 324 ⇓P P 05 45 11.7 +0.4
baz=65,SNR=21
227A Bennet, Jal 65.16 326 ⇓P P 05 45 11.9 +0.4
baz=66
Y31A Rekieta Farm, 65.23 329 ⇓P P 05 45 12.1 +0.3
baz=66,SNR=8.2
128A Castleberry Fa 65.23 327 ⇓P P 05 45 12.0 0.0
baz=66
Z29A Hungry Hill Ra 65.35 328 ⇓P P 05 45 12.5 -0.2
baz=66,SNR=5.6
Y30A Stafford Cattl 65.46 329 ⇑P P 05 45 13.5 +0.1
baz=66
325A Bean Ranch, Si 65.55 324 ⇑P P 05 45 14.5 +0.3
baz=66,SNR=41
X31A McDonald Ranch 65.65 330 ⇓P P 05 45 14.6 +0.1
baz=66,SNR=14
226B Tecolote Peak, 65.67 325 ⇓P P 05 45 15.5 +0.7
baz=66,SNR=14
Z28A Tucker Farm, M 65.71 327 ⇓P P 05 45 14.8 -0.3
baz=66,SNR=6.0
127A Arkansas Junct 65.72 326 ⇓P P 05 45 15.5 +0.4
baz=66
Y29A Porterfield Fa 65.82 328 ⇑P P 05 45 15.6 -0.1
baz=66,SNR=9.7
324A Moseley Ranch, 65.88 324 ⇑P P 05 45 16.0 -0.2
baz=66,SNR=26
X30A Coker Ranch, T 65.91 329 ⇑P P 05 45 16.3 0.0
baz=66,SNR=9.6
ERPA Erie 66.01 349 *e*P P 05 45 17.3 +0.7
comp=E,20nm,0.8s
MNTX Cornudas Mount 66.03 324 *e*P P 05 45 16.6 -0.4
comp=E,8.9nm,1.1s
126A Clayton Basin, 66.04 326 ⇓P P 05 45 17.6 +0.5
baz=66,SNR=8.1
225A Deer Hill, Car 66.04 325 ⇓P P 05 45 18.1 +0.8
baz=66
W31A Holland Ranch, 66.09 330 ⇓P P 05 45 17.6 +0.2
baz=66
Y28A McKinney Farm, 66.14 328 ⇓P P 05 45 17.6 -0.2
baz=66,SNR=5.0
Z27A Tatum 66.15 327 ⇓P P 05 45 17.7 -0.1
baz=66,SNR=15
125A Gardner Draw, 66.38 325 ⇓P P 05 45 19.3 -0.1
baz=67,SNR=10
224A Cornudas Mount 66.39 324 ⇑P P 05 45 19.5 0.0
baz=67,SNR=28
MSTX Muleshoe 66.45 327 ⇓P P 05 45 19.9 +0.1
baz=67,SNR=20
Z26A Caprock 66.51 326 ⇓P P 05 45 20.4 +0.3
baz=67,SNR=15
V31A Spring Creek L 66.53 331 ⇓P P 05 45 20.6 +0.5
baz=67
Y27A Causey 66.58 327 ⇑P P 05 45 20.3 -0.2
baz=67,SNR=9.3
X28A Dimmitt 66.61 328 ⇑P P 05 45 20.7 -0.1
baz=67
DBIC Dimbokro 66.83 72 *e*P P 05 45 22.3 -0.1
comp=E,15nm,1.0s
DBIC Dimbokro 66.83 72 P P 05 45 22.2 -0.2
comp=E,11nm,0.8s,baz=213,slow=6.5,SNR=13
W29A Amraillo 66.83 329 ⇓P P 05 45 22.7 +0.6
baz=67
124A Stringfield Ra 66.84 325 ⇑P P 05 45 22.8 +0.4
baz=67,SNR=13
Z25A Roswell 66.90 325 ⇓P P 05 45 22.6 0.0
baz=67,SNR=13
X27A F and S Farms, 67.15 328 ⇓P P 05 45 24.8 +0.6
baz=68
QSPA South Pole Qui 67.22 180 *e*P P 05 45 25.6 +1.4
comp=E,110nm,2.8s
QSPA South Pole Qui 67.22 180 P P 05 45 25.1 +0.9
comp=E,3.2nm,0.5s,baz=153,slow=1.5,SNR=45
Z24A Sheeppen Canyo 67.28 325 ⇑P P 05 45 26.0 +0.9
baz=68
222A Williams Famil 67.28 323 ⇑P P 05 45 26.2 +1.2
baz=68,SNR=16
Y25A Mesa, Roswell 67.39 326 ⇑P P 05 45 26.1 +0.4
baz=68
X26A CR and CF Fran 67.43 327 ⇓P P 05 45 26.3 +0.3
baz=68,SNR=10
W27A Bowe Ranch, En 67.47 328 ⇓P P 05 45 26.4 +0.3
baz=68,SNR=6.5
320A Kipp Ranch, An 67.51 321 ⇑P P 05 45 27.8 +1.3
baz=68,SNR=7.8
U30A WK&E Inc. Balk 67.52 330 ⇓P P 05 45 27.8 +1.4
baz=68
T31A Randall Ranch, 67.56 332 ⇑P P 05 45 27.4 +0.9
baz=68
V28A Channing 67.61 329 ⇑P P 05 45 27.7 +0.7
baz=68,SNR=5.9
122A Conniff Cattle 67.67 323 ⇓P P 05 45 29.1 +1.6
baz=68,SNR=8.3
Z23A Rita Site, Whi 67.69 324 ⇑P P 05 45 28.7 +1.2
baz=68,SNR=9.9
U29A Oasis Ranch, S 67.74 330 ⇓P P 05 45 29.0 +1.3
baz=68
Y24A Capitan 67.78 325 ⇑P P 05 45 30.0 +1.8
baz=68
W26A Owens Ranch, T 67.83 327 ⇓P P 05 45 29.3 +0.8
baz=68,SNR=6.9
X25A Clemmons Ranch 67.84 326 ⇓P P 05 45 28.6 +0.1
baz=68,SNR=5.9
V27A Dan Oppiter Fa 67.91 328 ⇑P P 05 45 30.5 +1.6
baz=68
220A Playas Peak, P 67.93 322 ⇓P P 05 45 30.3 +1.2
baz=68,SNR=6.8
319A Douglas 67.97 321 ⇑P P 05 45 30.8 +1.4
baz=68,SNR=9.8
121A Cookes Peak, D 67.98 323 ⇑P P 05 45 31.0 +1.5
baz=68,SNR=16
Z22A Elephant Butte 68.08 324 ⇑P P 05 45 31.6 +1.5
baz=68,SNR=36
Y23A Lovelace Mesa, 68.10 325 ⇑P P 05 45 31.1 +0.8
baz=68,SNR=8.5
X24A Lazy VL Ranch, 68.27 326 ⇑P P 05 45 32.1 +0.8
baz=69,SNR=5.7
W25A X Bar L Ranch, 68.28 327 ⇑P P 05 45 31.7 +0.4
baz=69,SNR=13
V26A Tequesquite Ra 68.41 328 ⇑P P 05 45 32.4 +0.4
baz=69,SNR=11
U27A Thompson Grove 68.44 329 ⇑P P 05 45 34.1 +1.9
baz=69
120A U Bar Ranch, L 68.47 322 ⇑P P 05 45 33.9 +1.4
baz=69,SNR=9.3
Z21A St. Cloud Mine 68.50 323 ⇑P P 05 45 34.4 +1.7
baz=69,SNR=11
BNM Barren Site 68.58 325 *e*P P 05 45 34.5 +1.2
comp=E,11nm,1.3s
Y22A Socorro 68.59 324 ⇓P P 05 45 34.9 +1.7
baz=69
S29A Ulysses 68.63 331 ⇓P P 05 45 34.7 +1.4
baz=69
T28A Walsh 68.67 330 ⇑P P 05 45 34.1 +0.5
baz=69
X23A Hourglass Bar 68.67 325 ⇓P P 05 45 35.0 +1.2
baz=69,SNR=6.7
LPM Los Pinos Mtn 68.70 325 *e*P P 05 45 35.3 +1.4
W24A Lazy 6 Ranch, 68.76 326 ⇑P P 05 45 34.9 +0.6
baz=69,SNR=5.7
V25A Rancho No Teng 68.85 327 ⇓P P 05 45 35.7 +0.9
baz=69,SNR=14
U26A Atchley Ranch, 68.86 328 ⇓P P 05 45 35.7 +0.8
baz=69,SNR=16
Z20A Nine Sixteen R 68.86 323 ⇑P P 05 45 36.4 +1.5
baz=69,SNR=12
T27A Campo 68.91 329 ⇓P P 05 45 35.5 +0.4
baz=69,SNR=7.3
S28A Manter 68.96 330 ⇓P P 05 45 35.9 +0.6
baz=69,SNR=8.3
Y21A Point of Rocks 69.03 324 ⇑P P 05 45 37.9 +1.9
baz=69,SNR=16
LAZ Ladron 69.04 325 *e*P P 05 45 37.6 +1.6
comp=E,4.2nm,1.3s
V24A Rampart Ranch, 69.09 327 ⇑P P 05 45 37.9 +1.6
baz=69
ANMO Albuquerque 69.10 325 *e*P P 05 45 37.3 +1.0
comp=E,12nm,1.0s
W23A Werner Place, 69.10 326 ⇓P P 05 45 37.5 +1.1
baz=69,SNR=6.3
U25A Circle Dot Ran 69.19 328 ⇓P P 05 45 38.0 +1.1
baz=70,SNR=14
JFWS Jewell Farm 69.20 341 *e*P P 05 45 36.7 +0.1
comp=E,12nm,0.8s
Y20A Horse Springs, 69.34 323 ⇓P P 05 45 39.6 +1.6
baz=70,SNR=11
W22A Albuquerque 69.41 325 ⇓P P 05 45 40.2 +2.0
baz=70
T26A Comanche Natio 69.41 329 ⇑P P 05 45 39.1 +0.9
baz=70,SNR=9.7
X21A Alamocita Cree 69.42 324 ⇑P P 05 45 39.8 +1.5
baz=70,SNR=14
TUC Tucson 69.53 321 *e*P P 05 45 40.0 +1.1
comp=E,1.9nm,1.1s
R28A Tribune 69.53 331 ⇑P P 05 45 39.7 +0.9
baz=70
V23A Ortiz Mt. (NFS 69.57 326 ⇑P P 05 45 41.0 +1.7
baz=70
U24A Moreno Valley 69.63 327 ⇑P P 05 45 41.4 +1.7
baz=70
S26A Kim 69.71 329 ⇓P P 05 45 41.2 +1.2
baz=70,SNR=11
T25A Trinidad 69.78 328 ⇑P P 05 45 41.7 +1.2
baz=70,SNR=8.2
W21A San Fidel 69.86 325 ⇑P P 05 45 42.6 +1.6
baz=70,SNR=8.6
X20A Quemado 69.88 324 ⇑P P 05 45 42.7 +1.5
baz=70,SNR=8.7

U23A	**El Rito** baz=70,SNR=6.4	70.03	327	⇓P	P 05 45 43.5 +1.5
T24A	**Torres, Weston** baz=70,SNR=8.4	70.04	328	⇑P	P 05 45 43.8 +1.7
V22A	**San Miguel Ran** baz=70,SNR=9.8	70.08	326	⇑P	P 05 45 43.9 +1.5
S25A	**Robets Cordova** baz=70,SNR=12	70.20	329	⇓P	P 05 45 44.3 +1.2
R26A	**Arlington** baz=71,SNR=6.4	70.25	330	⇓P	P 05 45 44.1 +0.9
W20A	**Ramah** baz=71,SNR=7.3	70.32	324	⇑P	P 05 45 45.2 +1.4
V21A	**Milan** baz=71	70.37	325	⇓P	P 05 45 46.2 +2.0
U22A	**Llaves** baz=71,SNR=6.7	70.40	326	⇑P	P 05 45 46.1 +1.8
KSCO	**Kaye Shedlock'** baz=71	70.45	331	⇓P	P 05 45 45.9 +1.5
214A	**Organ Pipe Nat** baz=71,SNR=5.4	70.48	319	⇓P	P 05 45 46.3 +1.6
T23A	**Casias Ranch,** baz=71	70.50	327	⇑P	P 05 45 46.4 +1.4
S24A	**Houchin Ranch,** baz=71,SNR=11	70.56	328	⇓P	P 05 45 47.0 +1.6
BGNE	**Belgrade** baz=71	70.57	335	⇑P	P 05 45 45.6 +0.6
X18A	**Snowflake** baz=71,SNR=5.3	70.67	323	⇓P	P 05 45 47.6 +1.7
Q26A	**Hugo** baz=71,SNR=6.1	70.78	330	⇑P	P 05 45 47.8 +1.4
SDCO	**Great Sand Dun** comp=E,6.5nm,0.8s	70.79	328	eP	P 05 45 47.8 +1.1
V20A	**Brimhall** baz=71,SNR=5.5	70.81	325	⇓P	P 05 45 48.2 +1.4
U21A	**Nageezi** baz=71,SNR=9.6	70.86	326	⇓P	P 05 45 48.5 +1.4
T22A	**Edith** baz=71,SNR=8.1	70.92	327	⇓P	P 05 45 49.0 +1.6
R24A	**Sanders Place,** baz=71,SNR=6.6	70.98	328	⇓P	P 05 45 49.2 +1.4
W18A	**Petrified Fore** baz=71	70.99	323	⇓P	P 05 45 49.2 +1.4
Q25A	**Bedland, Calha** baz=71	71.11	329	⇑P	P 05 45 49.6 +1.1
P26A	**Davis Ranch, A** baz=72	71.22	330	⇑P	P 05 45 50.5 +1.4
T21A	**Navajo Lake** baz=72	71.22	326	⇑P	P 05 45 50.9 +1.7
U20A	**Newcomb** baz=72	71.27	325	⇓P	P 05 45 50.8 +1.4
R23A	**Moffat** baz=72,SNR=7.0	71.30	328	⇓P	P 05 45 51.1 +1.4
O27A	**Beecher Island** baz=72	71.34	331	⇓P	P 05 45 50.9 +1.2
X16A	**Lo Mia Camp, P** baz=72,SNR=14	71.43	322	⇓P	P 05 45 52.2 +1.7
S22A	**4UR Ranch, Cre** baz=72,SNR=7.2	71.45	327	⇑P	P 05 45 52.0 +1.4
P25A	**Willow Gulch B** baz=72	71.56	330	⇓P	P 05 45 52.6 +1.5
Q24A	**Divide** baz=72,SNR=5.6	71.58	329	⇓P	P 05 45 52.7 +1.3
R22A	**Saguache, Gunn** baz=72	71.78	327	⇓P	P 05 45 54.4 +1.8
S21A	**Coal Bank Pass** baz=72	71.87	326	⇑P	P 05 45 54.7 +1.5
MVCO	**Mesa Verde** comp=E,14nm,1.0s	71.89	326	eP	P 05 45 54.5 +1.3
MVCO	**Mesa Verde** baz=72,SNR=9.0	71.89	326	⇓P	P 05 45 54.7 +1.4
P24A	**Kohler Place,** baz=72	71.90	329	⇓P	P 05 45 54.8 +1.6
Y14A	**Wickenburg** baz=72,SNR=6.6	71.99	320	⇑P	P 05 45 55.0 +1.4
O25A	**Wiggins** baz=72	72.02	330	⇓P	P 05 45 55.7 +2.0
SPMN	**St. Paul** baz=72	72.07	341	⇑P	P 05 45 54.0 +0.2
WUAZ	**Wupatki** comp=E,15nm,1.0s	72.19	323	eP	P 05 45 56.6 +1.7
WUAZ	**Wupatki** baz=72,SNR=6.0	72.19	323	⇓P	P 05 45 56.9 +1.9
P23A	**Jefferson** baz=73	72.23	329	⇑P	P 05 45 57.5 +2.1
R21A	**Cimarron** baz=73	72.29	327	⇑P	P 05 45 57.6 +2.1
S20A	**Disappointment** baz=73,SNR=8.3	72.29	326	⇑P	P 05 45 57.6 +2.0
Q22A	**Crested Butte,** baz=73	72.35	328	⇓P	P 05 45 58.0 +2.0
M27A	**Reverse DX Ran** baz=73	72.40	332	⇓P	P 05 45 57.2 +1.2
ISCO	**Idaho Springs** comp=E,7.0nm,1.2s	72.46	329	eP	P 05 45 57.7 +1.0
ISCO	**Idaho Springs** baz=73,SNR=5.9	72.46	329	⇓P	P 05 45 58.1 +1.5
O24A	**Longmont** baz=73	72.46	330	⇓P	P 05 45 58.5 +2.0
GLA	**Glamis** baz=73	72.46	319	⇑P	P 05 45 58.1 +1.6
R20A	**Redvale** baz=73,SNR=17	72.57	326	⇓P	P 05 45 59.2 +2.0
PV01	**Paradox Valley** comp=E,187nm,0.5s	72.63	326	eP	P 05 45 59.1 +1.5
SMCO	**Snowmass**	72.63	328	eP	P 05 45 59.4 +1.6
Q21A	**Lamborn Mesa,** baz=73	72.66	327	⇑P	P 05 45 59.3 +1.6
Y12C	**Blythe** baz=73	72.76	319	⇑P	P 05 46 00.2 +2.1
L27A	**T5 Ranch, Ells** baz=73	72.83	333	⇑P	P 05 46 00.8 +2.3
P22A	**Eagle** baz=73,SNR=5.4	72.85	328	⇓P	P 05 46 00.5 +1.7
O23A	**Lake Granby, G** baz=73,SNR=5.5	72.93	329	⇑P	P 05 46 01.2 +1.9
PV04	**Paradox Valley**	73.00	326	eP	P 05 46 01.0 +1.3
S18A	**Hurst Farm, Bl** baz=73,SNR=15	73.03	325	⇓P	P 05 46 01.8 +1.8
PV10	**Paradox Valley** comp=E,96nm,0.8s	73.05	326	eP	P 05 46 00.9 +0.9
L26A	**Underwood Farm** baz=73	73.11	332	⇓P	P 05 46 02.1 +1.9
Q20A	**Ridgley Place,** baz=73	73.11	327	⇑P	P 05 46 01.7 +1.4
P21A	**Newcastle** baz=73,SNR=10	73.13	328	⇑P	P 05 46 02.3 +1.9
O22A	**Kremmling** baz=74,SNR=7.3	73.19	329	⇑P	P 05 46 02.2 +1.3
BC3	**Big Chuckawall** baz=74,SNR=6.0	73.26	319	⇓P	P 05 46 02.8 +1.6
K27A	**Flueckinger Fa** baz=74	73.30	333	⇑P	P 05 46 03.1 +1.8
W13A	**Hualapai Mount** baz=74,SNR=6.7	73.32	321	⇓P	P 05 46 03.4 +1.8
MONP	**Monument Peak** baz=74	73.33	318	⇑P	P 05 46 03.3 +1.5
BAR	**Barrett** comp=E,16nm,1.5s	73.35	317	eP	P 05 46 02.7 +1.1
U15A	**North Rim** baz=74,SNR=15	73.36	323	⇓P	P 05 46 03.9 +2.0
IRM	**Iron Mountain** baz=74	73.42	319	⇓P	P 05 46 03.8 +1.8
M24A	**Cheyenne** baz=74,SNR=8.4	73.42	331	⇓P	P 05 46 04.0 +1.9
N23A	**Red Feather La** baz=74	73.48	330	⇑P	P 05 46 04.3 +1.8
P20A	**De Beque** baz=74	73.58	327	⇓P	P 05 46 04.8 +1.8
N22A	**Wattenberg Ran** baz=74,SNR=7.3	73.64	329	⇑P	P 05 46 05.3 +1.8
BELC	**Belle Mtn. Jos** baz=74	73.82	319	⇓P	P 05 46 06.2 +1.6
L24A	**Wheatland** baz=74	73.93	331	⇑P	P 05 46 06.5 +1.6
P19A	**Cripple Cowboy** baz=74,SNR=27	73.97	327	⇓P	P 05 46 07.2 +1.8
O20A	**White River Ci** baz=74,SNR=8.8	73.99	328	⇑P	P 05 46 07.1 +1.7
N21A	**Black Mountain** baz=74	74.12	329	⇑P	P 05 46 08.2 +2.0
GMRC	**Granite Mounta** baz=74,SNR=13	74.15	319	⇓P	P 05 46 08.2 +1.8
EYMN	**Ely** comp=E,4.7nm,0.9s	74.16	343	eP	P 05 46 05.2 -0.7
M22A	**Cedar Creek Ra** baz=74	74.18	330	⇑P	P 05 46 08.5 +1.9
SYO	**Syowa Base**	74.25	159	⇑eP	pP 05 47 02.6 +4.3
MURC	**Murrieta**	74.29	318	⇑P	P 05 46 08.8 +1.7
L23A	**Garrett** baz=75	74.33	331	⇑P	P 05 46 08.7 +1.3
N20A	**Spence Gulch,** baz=75	74.53	328	⇑P	P 05 46 10.2 +1.6
O19A	**Miners Draw (B** baz=75,SNR=6.8	74.55	327	⇑P	P 05 46 10.1 +1.5
Q16A	**Castle Valley** baz=75,SNR=6.4	74.56	325	⇓P	P 05 46 10.2 +1.4
HEC	**Hector,Ludlow** baz=75,SNR=6.1	74.59	319	⇓P	P 05 46 10.8 +1.9
P18A	**Preston Nutter** baz=75	74.61	326	⇓P	P 05 46 10.9 +1.7
M21A	**Separation Pea** baz=75,SNR=8.6	74.70	329	⇓P	P 05 46 11.1 +1.6
P17A	**Butcher Ranch,** baz=75,SNR=7.1	74.75	326	⇑P	P 05 46 11.3 +1.5
CCUT	**Cedar City** comp=E,15nm,0.9s	74.76	323	eP	P 05 46 12.2 +2.3
MSU	**Marysvale**	74.80	324	eP	P 05 46 12.0 +1.8
K23A	**Bowen Ranch, D** baz=75	74.81	331	⇓P	P 05 46 11.8 +1.8
MVU	**Marysvale** comp=E,12nm,0.9s	74.82	324	eP	P 05 46 12.1 +1.8
J24A	**Dixon Ranch, L** baz=75	74.84	332	⇑P	P 05 46 12.1 +1.9
CIS	**Catalina Islan** baz=75	74.92	317	⇑P	P 05 46 12.0 +1.3
ARUT	**Antelope Range** comp=E,11nm,1.1s	74.97	323	eP	P 05 46 13.4 +2.3
L21A	**Rawlins** baz=75	74.98	329	⇓P	P 05 46 12.4 +1.3
BFSC	**Mount Baldy Ra** baz=75	75.00	318	⇑P	P 05 46 13.0 +1.7
M20A	**Sweetwater, Wa** baz=75	75.00	329	⇓P	P 05 46 13.0 +1.8
K22A	**Casper** baz=76	75.13	330	⇑P	P 05 46 13.6 +1.8
GSC	**Goldstone** comp=E,4.5nm,0.7s	75.19	319	eP	P 05 46 14.0 +1.7
GSC	**Goldstone** baz=76	75.19	319	⇓P	P 05 46 14.0 +1.7
SHOC	**Shoshone** baz=76	75.29	320	⇓P	P 05 46 14.8 +2.1
L20A	**Wamsutter** baz=76,SNR=6.3	75.47	329	⇓P	P 05 46 15.3 +1.4
TOA0	**Torodi Ar. Sit**	75.56	69	eP	P 05 46 14.1 -0.6
TORD	**Torodi Ar. Bea**	75.56	69	P	P 05 46 14.5 -0.2
TORD	**Torodi Ar. Bea** comp=E,6.3nm,0.5s,baz=258,slow=5.7,SNR=176	75.56	69	P	P 05 46 14.5 -0.2
MPU	**Maple Canyon** comp=E,11nm,1.0s	75.61	326	eP	P 05 46 16.6 +1.8
EDW2	**Edwards Air Fo** baz=76	75.63	318	⇓P	P 05 46 15.5 +0.7
J22A	**Midwest** baz=76	75.71	331	⇓P	P 05 46 16.2 +1.1
DAU	**Daniels Canyon**	75.71	326	eP	P 05 46 17.1 +1.7
VNDA	**Vanda**	75.81	190	P	P 05 46 16.4 +1.2
VNDA	**Vanda** comp=E,1.2nm,0.9s,baz=342,slow=1.5,SNR=5.5	75.81	190	P	P 05 46 16.4 +1.2
M18A	**Lyman** baz=76,SNR=6.8	75.87	328	⇓P	P 05 46 17.2 +1.1
H24A	**Dirks Ranch, A** baz=76,SNR=5.5	75.94	333	⇑P	P 05 46 17.1 +0.7
JLU	**Jordanelle** comp=E,9.2nm,0.8s	75.95	326	eP	P 05 46 18.3 +1.6
K20A	**Yellowstone Ra** baz=76,SNR=5.9	75.97	329	⇑P	P 05 46 17.5 +0.8
FURC	**Furnace Creek,** baz=76,SNR=7.9	76.02	320	⇓P	P 05 46 18.9 +2.1
L19A	**Farson** baz=76,SNR=8.1	76.03	328	⇑P	P 05 46 18.5 +1.5
I22A	**9 Mile Ranch,** baz=76,SNR=5.3	76.09	331	⇓P	P 05 46 18.2 +0.9
J21A	**Lysite** baz=76,SNR=6.3	76.09	330	⇓P	P 05 46 18.6 +1.3
MPMC	**Manual Prospec** baz=76,SNR=6.1	76.12	319	⇓P	P 05 46 19.0 +1.3
M17A	**Scullys Gap (B** baz=76	76.20	327	⇓P	P 05 46 19.3 +1.2
L18A	**Fontenelle, Gr** baz=76,SNR=16	76.23	328	⇑P	P 05 46 19.5 +1.3
ARVC	**Arvin** baz=77	76.31	318	⇑P	P 05 46 20.4 +1.9
K19A	**Absolon Red Bu** baz=77,SNR=5.2	76.34	329	⇓P	P 05 46 19.7 +1.0
DUG	**Dugway** comp=E,8.6nm,0.9s	76.36	325	eP	P 05 46 20.8 +1.8
DUG	**Dugway** baz=77,SNR=11	76.36	325	⇓P	P 05 46 20.7 +1.8
I21A	**Big Trails, Te** baz=77,SNR=14	76.39	331	⇓P	P 05 46 19.7 +0.7
J20A	**Shoshoni** baz=77	76.39	330	⇑P	P 05 46 20.5 +1.5
ISA	**Isabella** comp=E,7.1nm,0.7s	76.45	319	eP	P 05 46 21.1 +1.7
ISA	**Isabella** baz=77,SNR=5.3	76.45	319	⇓P	P 05 46 21.2 +1.9
R11A	**Troy Canyon, C** baz=77,SNR=15	76.57	322	⇓P	P 05 46 22.0 +1.8
MDND	**Maddock** baz=77	76.61	338	⇑P	P 05 46 21.6 +1.7
BW06	**Boulder Array** comp=E,1.3nm,0.6s	76.64	329	eP	P 05 46 21.0 +0.5
PDAR	**Pinedale Array**	76.64	329	P	P 05 46 21.1 +0.6
PDAR	**Pinedale Array** comp=E,1.6nm,0.7s,baz=134,slow=7.7,SNR=16	76.64	329	P	P 05 46 21.1 +0.6
G23A	**Biddle** baz=77	76.66	333	⇓P	P 05 46 21.2 +0.8
GRAC	**Grapevine Rang** baz=77	76.68	320	⇓P	P 05 46 22.2 +1.6
CWC	**Cottonwood Cre** baz=77	76.72	319	⇑P	P 05 46 22.6 +1.6
HWUT	**Hardware Ranch** comp=E,6.0nm,0.7s	76.75	327	eP	P 05 46 22.0 +0.9
K18A	**Toltan Ranch,** baz=77,SNR=9.1	76.77	328	⇑P	P 05 46 22.9 +1.7
J19A	**Crowheart** baz=77,SNR=7.1	76.78	329	⇑P	P 05 46 22.5 +1.4
PKM	**Peak Mountain** baz=77	76.78	317	⇓P	P 05 46 22.8 +1.5
F24A	**Ekalaka** baz=77	76.78	334	⇑P	P 05 46 22.1 +1.1
I20A	**Worland** baz=77,SNR=5.9	76.87	330	⇓P	P 05 46 22.6 +1.0
H21A	**Big Horn, Sher** baz=77	76.92	331	⇑P	P 05 46 22.3 +0.5
VES	**Vestal, Richgr** baz=77	76.94	318	⇑P	P 05 46 23.5 +1.6
F23A	**Volborg** baz=77,SNR=7.4	77.08	333	⇑P	P 05 46 23.5 +0.8
J18A	**Kendall Valley** baz=78,SNR=25	77.19	329	⇓P	P 05 46 24.6 +1.0
H20A	**Greybull** baz=78,SNR=7.6	77.23	331	⇓P	P 05 46 24.3 +0.7
K17A	**Gardner Place,** baz=78,SNR=16	77.28	328	⇑P	P 05 46 25.3 +1.2
E24A	**Baker** baz=78	77.31	334	⇑P	P 05 46 24.8 +0.9
I19A	**Meeteetse** baz=78,SNR=6.0	77.34	330	⇓P	P 05 46 25.4 +1.1
G21A	**Lodge Grass** baz=78	77.46	332	⇓P	P 05 46 26.3 +1.5
I18A	**Diamond G Ranc** baz=78,SNR=12	77.47	329	⇓P	P 05 46 26.5 +1.4
HVU	**Hansel Valley** comp=E,5.8nm,0.7s	77.49	326	eP	P 05 46 26.3 +1.2
SCHQ	**Schefferville**	77.50	360	P	P 05 46 25.2 +0.6
SCHQ	**Schefferville** comp=E,1.3nm,0.8s,baz=236,slow=3.6,SNR=4.0	77.50	360	P	P 05 46 25.2 +0.6
K16A	**Soda Springs** baz=78,SNR=24	77.67	328	⇓P	P 05 46 28.1 +1.9
SNOW	**Snow King Moun** comp=E,8.1nm,1.0s	77.73	329	eP	P 05 46 27.9 +1.4
D24A	**Glendive** baz=78	77.77	334	⇓P	P 05 46 27.9 +1.5
LOHW	**Long Hollow** comp=E,4.4nm,0.8s	77.77	329	eP	P 05 46 28.0 +1.2
H19A	**Powell** baz=78	77.82	330	⇓P	P 05 46 28.2 +1.3
TPAW	**Teton Pass** comp=E,8.2nm,1.2s	77.85	328	eP	P 05 46 28.6 +1.3
G20A	**Bridger** baz=78,SNR=6.4	77.90	331	⇑P	P 05 46 28.0 +0.8
RRI2	**Red Ridge** comp=E,9.5nm,1.1s	77.92	328	eP	P 05 46 28.9 +1.3
MLAC	**Mammoth Lakes** baz=78	77.97	320	⇓P	P 05 46 29.1 +1.1
I17A	**Pilgrim Ck.** baz=78	77.99	329	⇑P	P 05 46 29.7 +1.7
ELK	**Elko** comp=E,4.3nm,0.7s	78.05	324	eP	P 05 46 29.9 +1.5
NV11	**Mina Array Sit**	78.10	321	eP	P 05 46 29.6 +1.0
H18A	**Shoshone NF, C** baz=78	78.14	330	⇓P	P 05 46 29.8 +1.0
IMW	**Indian Meadow** comp=E,5.1nm,0.6s	78.15	329	eP	P 05 46 30.2 +1.3
D23A	**Lindsay** baz=78	78.17	334	⇓P	P 05 46 30.0 +1.4
NVAR	**Mina Array Bea**	78.19	321	P	P 05 46 30.4 +1.3
NVAR	**Mina Array Bea** comp=E,4.7nm,0.9s,baz=153,slow=6.1,SNR=18	78.19	321	P	P 05 46 30.4 +1.3
F20A	**Billings** baz=79	78.32	332	⇓P	P 05 46 30.4 +0.9
H17A	**Grant Village** baz=79	78.35	329	⇓P	P 05 46 31.8 +1.8
I16A	**Newdale** baz=79	78.40	328	⇑P	P 05 46 31.4 +1.3
E21A	**Keefer Ranch,** baz=79	78.44	333	⇓P	P 05 46 31.3 +1.2
D22A	**Cohagen** baz=79	78.55	333	⇑P	P 05 46 32.0 +1.4
G18A	**Lazy EL Ranch,** baz=79,SNR=5.8	78.58	330	⇑P	P 05 46 32.1 +1.0
F19A	**Roth Farm, Mol** baz=79,SNR=5.7	78.71	331	⇑P	P 05 46 32.6 +0.9
DGMT	**Dagmar** baz=79	78.82	335	⇓P	P 05 46 33.4 +1.3
E20A	**Meyer Farm, Mu** baz=79,SNR=6.4	78.86	332	⇓P	P 05 46 33.4 +1.0
H16A	**Russell Place,** baz=79	78.90	329	⇓P	P 05 46 34.9 +2.0
C22A	**Vida** baz=79	78.90	334	⇓P	P 05 46 33.3 +0.7
I15A	**Monteview** baz=79,SNR=7.9	78.97	328	⇑P	P 05 46 35.3 +2.1
GCMT	**Greycliff** comp=E,9.5nm,1.4s	78.99	331	eP	P 05 46 34.3 +1.0
J14A	**Carey** baz=79	78.99	327	⇑P	P 05 46 35.2 +1.9
F18A	**Big Timber** baz=79,SNR=9.4	79.10	331	⇑P	P 05 46 34.9 +1.1
E19A	**Rath Farm, Rou** baz=79,SNR=9.2	79.11	332	⇓P	P 05 46 34.8 +0.9
A24A	**Westby** baz=80	79.12	336	⇓P	P 05 46 35.4 +1.7
B23A	**Brockton** baz=80	79.12	335	⇑P	P 05 46 35.4 +1.6
CMB	**Columbia Colle** comp=E,1.8nm,0.7s	79.16	319	eP	P 05 46 35.1 +0.9
D20A	**Manuel Ranch,** baz=80,SNR=5.6	79.32	332	⇓P	P 05 46 35.6 +0.7
J13A	**Cove Ranch, Pi** baz=80,SNR=8.4	79.38	327	⇑P	P 05 46 37.2 +1.8
I14A	**Mackay** baz=80,SNR=14	79.40	327	⇓P	P 05 46 37.7 +2.1
C21A	**Desert Coulee** baz=80,SNR=5.1	79.46	333	⇑P	P 05 46 36.4 +0.8
H15A	**Lima** baz=80	79.50	328	⇑P	P 05 46 38.1 +2.0
F17A	**Fitzpatrick Pl** baz=80,SNR=8.0	79.53	330	⇓P	P 05 46 37.8 +1.6
G16A	**Moss Hill, Enn** baz=80	79.55	329	⇓P	P 05 46 37.8 +1.4
HLID	**Hailey** comp=E,13nm,0.8s	79.62	327	eP	P 05 46 38.5 +1.8
HLID	**Hailey** baz=80,SNR=30	79.62	327	⇓P	P 05 46 38.7 +2.0
E18A	**Harlowton** baz=80	79.69	331	⇓P	P 05 46 38.7 +1.6
D19A	**Cripps Ranch,** baz=80	79.70	332	⇑P	P 05 46 37.8 +0.9
I13A	**Wildhorse Cree** baz=80,SNR=11	79.72	327	⇓P	P 05 46 39.2 +1.9
C20A	**Veseth Ranch,** baz=80	79.75	333	⇑P	P 05 46 38.0 +0.8
MCMT	**McKenzie Canyo** comp=E,5.8nm,1.2s	79.76	328	eP	P 05 46 39.2 +1.7
G15A	**Dillon** baz=80	79.83	329	⇑P	P 05 46 39.2 +1.4
H14A	**Leadore** baz=80,SNR=8.5	79.86	328	⇓P	P 05 46 39.7 +1.7
F16A	**Kennard Place,** baz=80	79.88	330	⇑P	P 05 46 39.5 +1.5
B21A	**Ellsworth Farm** baz=80	79.90	334	⇑P	P 05 46 39.1 +1.1
A22A	**Carney Farms,** baz=80,SNR=5.0	79.91	335	⇓P	P 05 46 39.2 +1.1
DLMT	**Dillon** comp=E,4.7nm,1.1s	80.03	329	eP	P 05 46 40.3 +1.4
E17A	**Martinsdale** baz=80,SNR=6.1	80.04	330	⇑P	P 05 46 39.9 +1.0
D18A	**Linhart Farms,** baz=80	80.12	332	⇑P	P 05 46 40.5 +1.2
I12A	**Atlanta** baz=80,SNR=14	80.15	326	⇑P	P 05 46 41.3 +1.7
C19A	**Slack Wire Ran** baz=80,SNR=6.9	80.21	332	⇓P	P 05 46 40.5 +0.8
MFID	**Camas Ranch** comp=E,33nm,2.0s	80.24	326	eP	P 05 46 41.8 +1.8
MFID	**Camas Ranch** baz=80,SNR=6.8	80.24	326	⇑P	P 05 46 41.6 +1.6
H13A	**Challis** baz=81,SNR=23	80.26	327	⇓P	P 05 46 42.0 +1.9
LRM	**Limekiln Ridge**	80.30	329	eP	P 05 46 41.9 +1.5
B20A	**Solberg Farm,** baz=81,SNR=7.6	80.33	333	⇑P	P 05 46 41.0 +0.7
F15A	**Butte** baz=81,SNR=5.2	80.33	329	⇑P	P 05 46 42.5 +1.9
E16A	**East Helena** baz=81	80.47	330	⇓P	P 05 46 42.2 +1.1
D17A	**Six Diamond Ra** baz=81,SNR=6.6	80.48	331	⇑P	P 05 46 42.2 +1.0
H12A	**Diamond D Ranc** baz=81,SNR=11	80.55	327	⇓P	P 05 46 43.3 +1.6
BOSA	**Boshof**	80.58	117	P	P 05 46 41.6 -0.7
BOSA	**Boshof** comp=E,1.7nm,0.5s,baz=254,slow=7.2,SNR=6.2	80.58	117	P	P 05 46 41.6 -0.7
G13A	**Cobalt** baz=81,SNR=28	80.63	328	⇑P	P 05 46 44.0 +2.0
A20A	**Cobblestone Ra** baz=81,SNR=5.3	80.63	334	⇓P	P 05 46 42.7 +0.8
B19A	**Brinkman Farms** baz=81	80.72	333	⇑P	P 05 46 43.3 +0.9
F14A	**Wisdom** baz=81	80.73	329	⇑P	P 05 46 44.6 +2.0
EGMT	**Eagleton** comp=E,21nm,1.6s	80.74	332	eP	P 05 46 42.8 +0.3
EGMT	**Eagleton** baz=81	80.74	332	⇑P	P 05 46 43.3 +0.8
D16A	**Dana Ranch, Ca** baz=81,SNR=12	80.78	330	⇑P	P 05 46 44.3 +1.5
E15A	**Deer Lodge** baz=81	80.83	330	⇓P	P 05 46 44.5 +1.4
C17A	**Wharram Farm,** baz=81	80.88	331	⇑P	P 05 46 43.8 +0.6
A19A	**Klindworth Far** baz=81	81.01	333	⇓P	P 05 46 44.1 +0.3
B18A	**Beardsley Farm** baz=81,SNR=6.3	81.03	332	⇓P	P 05 46 44.8 +0.7
F13A	**Darby** baz=82,SNR=14	81.17	328	⇑P	P 05 46 46.2 +1.3
G12A	**Big Creek, Yel** baz=82	81.19	327	⇑P	P 05 46 46.3 +1.2
E14A	**Clinton** baz=82	81.23	329	⇑P	P 05 46 46.6 +1.4
D15A	**Lincoln** baz=82	81.23	330	⇓P	P 05 46 46.6 +1.4
B17A	**L&G Farms, Che** baz=82	81.39	332	⇓P	P 05 46 46.8 +0.8
PCVE	**Castro Verde**	81.41	43	eP	P 05 46 47.8 +1.6
C16A	**Fuhringer Ranc** baz=82	81.44	331	⇓P	P 05 46 47.3 +1.0
A18A	**Metzger Ranch,** baz=82	81.46	333	⇓P	P 05 46 46.8 +0.5
E13A	**Victor** baz=82,SNR=11	81.58	329	⇑P	P 05 46 48.5 +1.5
F12A	**Elk City** baz=82,SNR=5.8	81.60	328	⇑P	P 05 46 48.2 +1.1
MOD	**Modoc** comp=E,14nm,1.0s	81.63	322	eP	P 05 46 48.5 +1.1
D14A	**Greenough** baz=82	81.72	330	⇓P	P 05 46 48.9 +1.2
MSO	**Missoula** baz=82	81.74	329	⇑P	P 05 46 49.3 +1.4
C15A	**Salmond Ranch,**	81.81	330	⇓P	P 05 46 49.3 +1.1

baz=82,SNR=8.9
LTIM Timbered Crate 81.84 321 P P 05 46 49.4 +0.9
A17A Triple J Farms 81.85 332 ⇑P P 05 46 48.9 +0.7
baz=82,SNR=5.8
D13A Huson 82.18 329 ⇓P P 05 46 51.3 +1.2
baz=82
B15A Bradely Ranch, 82.19 331 ⇑P P 05 46 50.2 +0.1
baz=82
A16A West Butte Ran 82.24 332 ⇑P P 05 46 51.2 +0.8
baz=83,SNR=9.6
C14A Swan Lake 82.33 330 ⇓P P 05 46 51.8 +1.0
baz=83
D12A Red Ives Fores 82.57 329 ⇑P P 05 46 53.0 +0.9
baz=83
C13A Hot Springs 82.65 329 ⇑P P 05 46 53.6 +1.1
baz=83
B13A Whitefish 83.10 330 ⇑P P 05 46 55.9 +1.1
baz=83
TAM Tamanrasset 83.31 62 *e*P **P 05 46 57.6 +1.0**
comp=E,5.9nm,1.0s
A13A Flathead Natio 83.48 330 ⇓P P 05 46 58.2 +1.4
baz=84
VIPM Ingram Point 83.52 324 P **P 05 46 58.8 +1.6**
PVRL Vila Real 83.83 40 *e*P **P 05 47 00.1 +1.5**
comp=E,44nm,1.4s
PCAB Cabril 83.91 40 *e*P **P 05 47 00.2 +1.2**
comp=E,42nm,1.5s
MVO Moncorvo 84.17 41 *e*P **P 05 47 01.6 +1.2**
comp=E,26nm,1.7s
OD2 Odessa Site #2 84.45 327 P **P 05 47 02.6 +1.0**
PBRG Braganca 84.73 40 *e*P **P 05 47 04.6 +1.5**
comp=E,22nm,2.1s
PAB San Pablo 84.87 43 *e*P **P 05 47 05.1 +1.2**
comp=E,12nm,1.0s
ESDC Sonseca Array 85.19 43 P **P 05 47 06.1 +0.7**
ESDC Sonseca Array 85.19 43 P **P 05 47 06.1 +0.7**
comp=E,5.6nm,0.9s,baz=238,slow=4.6,SNR=13
ETW Entiat 85.41 327 P **P 05 47 07.5 +1.0**
YKA Yellowknife Ar 93.41 340 P **P 05 47 43.9 +0.4**
YKA Yellowknife Ar 93.41 340 P **P 05 47 43.9 +0.4**
comp=E,2.4nm,0.7s,baz=130,slow=4.4,SNR=50
ILAR Eielson Array 106.65 334 PP PP 05 53 10.5 -0.7
ILAR Eielson Array 106.65 334 PP PP 05 53 10.5 -0.7
comp=E,0.2nm,0.7s,baz=115,slow=6.1,SNR=4.4
ASAR Alice Springs 129.66 204 PKP **PKPdf 05 53 37.3 -0.1**
ASAR SKPbc SKPab 05 56 37.5 -0.9
ASAR Alice Springs 129.66 204 PKP **PKPdf 05 53 37.3 -0.1**
comp=E,0.9nm,0.8s,baz=150,slow=3.2,SNR=7.7
ASAR SKPbc SKPab 05 56 37.5 -0.9
comp=E,0.9nm,0.8s,baz=145,slow=5.9,SNR=7.3
WRA Warramunga Arr 132.84 207 PKP **PKPdf 05 53 43.2 -0.2**
WRA SKPbc **SKPbc 05 56 49.1 -1.1**
WRA Warramunga Arr 132.84 207 PKP **PKPdf 05 53 43.2 -0.2**
comp=E,0.6nm,0.5s,baz=158,slow=1.7,SNR=8.8
WRA SKPbc **SKPbc 05 56 49.1 -1.1**
comp=E,4.9nm,1.1s,baz=148,slow=3.5,SNR=9.3
ZALV Zalesovo Beam 142.18 28 PKPpre PKPpre 05 53 56.1
ZALV SKPbc **SKPbc 05 57 16.6 +0.5**
ZALV Zalesovo Beam 142.18 28 PKhKP PKPpre 05 53 56.1
comp=E,0.5nm,0.3s,baz=323,slow=2.2,SNR=3.2
ZALV SKPbc **SKPbc 05 57 16.6 +0.5**
comp=E,1.2nm,0.7s,baz=270,slow=2.7,SNR=3.7
KSH Kashi 144.04 54 *e*PKP **PKPab 05 54 02.4 +0.9**
KSH *es*PKP 05 55 23.2
KSH *e*PKS **PKSdf 05 57 37.1 -2.0**
KSH *e*SKS **SKSdf 06 00 50.3 -1.7**
KSH AMB AMB
comp=Z,300nm,5.4s
KSH LR LR
comp=N,96nm,8.8s
KSH LR LR
comp=E,110nm,4.3s
KSH LR LR
comp=Z,69nm,3.7s
MKAR Makanchi Array 145.30 39 PKPbc **PKPab 05 54 06.7 +0.8**
MKAR SKPbc **SKPbc 05 57 24.2 +0.3**
MKAR Makanchi Array 145.30 39 PKPbc **PKPab 05 54 06.7 +0.8**
comp=Z,2.0nm,0.6s,baz=309,slow=3.5,SNR=21
MKAR SKPbc **SKPbc 05 57 24.2 +0.3**
comp=Z,1.6nm,0.9s,baz=327,slow=2.0,SNR=7.1
WMQ Urumqi 150.13 40 *e*PKPbc **PKPdf 05 54 11.6 -1.7**
MJAR Matsushiro Arr 154.92 308 PKPab **PKPab 05 54 45.9 +0.2**
MJAR Matsushiro Arr 154.92 308 PKPab **PKPab 05 54 45.9 +0.2**
comp=E,1.0nm,0.3s,baz=80,slow=2.5,SNR=4.2
CN2 Changchun 157.10 338 *e*PKP **PKPdf 05 54 22.2 -0.9**
GTA Gaotai 159.79 33 *e*PKP **PKPdf 05 54 25.4 -1.3**
GTA PKPab **PKPab 05 55 09.3 +2.6**
GTA pPKP **pPKPdf 05 55 24.6 +0.9**
GTA sPKP 05 55 49.5
HHC Hu-ho-hao-te 162.09 5⇓ *e*PKP **PKPdf 05 54 26.8 -2.2**
HHC pPKP **pPKPdf 05 54 28.8 -1.3**
HHC sPKP 05 55 47.8
HHC PKS **PKSdf 05 57 58.8 -3.4**
HHC PP **PP 05 59 02.0 +1.7**
HHC SKS **SKSdf 06 01 07.9 -5.1**
HHC SKKS **SKKSac 06 05 25.5 -2.1**
HHC AMB AMB
comp=Z,120nm,5.4s
HHC LR LR
comp=N,270nm,21.8s
HHC LR LR
comp=E,1μm,21.6s
HHC LR LR
comp=Z,260nm,21.4s
LZH Lanzhou 164.37 31 *e*PKP PKPdf 05 54 27.0 -4.4
LZH pPKP **PKPab 05 55 24.9 -2.0**
LZH sPKP 05 55 46.5
CMAR Chiang Mai Arr 165.44 105 PKPab **PKPab 05 55 32.7 +0.6**
CMAR Chiang Mai Arr 165.44 105 PKPab **PKPab 05 55 32.7 +0.6**
comp=Z,1.3nm,0.5s,baz=257,slow=5.0,SNR=8.1
CD2 Chengdu 168.10 46 PKP **PKPdf 05 54 32.5 -1.8**
GYA Guiyang 172.69 60 *e*PKP **PKPdf 05 54 35.9 -1.2**
GYA pPKP **pPKPdf 05 55 31.0 -3.3**
GYA sPKP 05 55 54.0
GYA PKPab **PKPab 05 56 05.0 +0.9**
GYA PKS **PKSdf 05 58 07.4 -2.2**
GYA PP **PP 05 59 57.9 +1.9**
GYA AMB AMB
comp=Z,80nm,8.0s

IDC ***12*** *05:57:37.6±1.6,38.°66N×21.°23E,h0km,mb3.6/5, mb1 3.6/6,mb1mx3.4/27,mbtmp3.5/6,ML3.2/1,MS2.7/1, Ms1 2.8/1,ms1mx2.2/42,Error ellipse: s-maj=47.7km s-min=21.0km az=117.0*

CSEM ***12*** *05:57:39.9±0.1,38.°75N×21.°31E,h2km,ML3.6,Error ellipse: s-maj=2.7km s-min=1.7km az=48.0*

ISCJB ***12*** *05:57:39.7±0.5,38.°74N±0.°02×21.°27E±0.°02,h10km±3km, mb3.5/5,MS2.6/1,Error ellipse: s-maj=3.0km s-min=2.1km az=135.3*

ATH ***12*** *05:57:40.0,38.°73N×21.°31E,h18km±1km,MD3.5/19, ML3.3*

PDG ***12*** *05:57:40.3±0.5,38.°77N×21.°32E,h9km±1km,ML3.3/7, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0*

THE ***12*** *05:57:40.0,38.°74N×21.°30E,h0km±1km,ML3.4/6,Error ellipse: s-maj=1.5km s-min=0.4km az=273.0*

ISC 12 05:57:40.0±0.9,38.°74N±0.°01×21.°30E±0.°02,h12km±7km, n137,σ1°17/207,mb3.5/5,10C-10D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
EVR	**Evrytania**	**0.43**	**66**	P		**Pg**	**05 57 48.3**	**-0.3**
EVR				S		**Sg**	**05 57 55.1**	**+0.6**
EVR	**Evrytania**	**0.43**	**66**	*e*PB		**Pg**	**05 57 48.3**	**-0.3**
EVR				*e*SB		**Sg**	**05 57 55.0**	**+0.6**
EVR	**Evrytania**	**0.43**	**66**	P		**Pg**	**05 57 48.3**	**-0.3**
EVR				S		**Sg**	**05 57 54.5**	**+0.1**
EVR				*e*Sb		**Sg**	**05 57 55.0**	**+0.6**
LKD2	**Lefkada island**	**0.51**	**276**	P		**Pg**	**05 57 49.9**	**-0.1**
LKD2				S		**Sb**	**05 57 58.7**	**+0.5**
LKD2	**Lefkada island**	**0.51**	**276**	*e*PN		**Pg**	**05 57 50.2**	**+0.2**
LKD2				*e*SN		**Sb**	**05 57 58.2**	**0.0**
LKD2	**Lefkada island**	**0.51**	**276**	P		**Pg**	**05 57 49.9**	**-0.1**
LKD2	**Lefkada island**	**0.51**	**276**	*e*Pn		**Pg**	**05 57 50.2**	**+0.2**
LKD2				*e*Sn		**Sb**	**05 57 58.2**	**0.0**
EFP	**Efpalio**	**0.56**	**123**	P		**Pg**	**05 57 50.9**	**-0.1**
EFP				S		**Sb**	**05 57 59.7**	**-0.1**
EFP	**Efpalio**	**0.56**	**123**	*e*PN		**Pg**	**05 57 50.9**	**-0.1**
EFP				*e*SN		**Sg**	**05 57 59.4**	**+0.9**
EFP	**Efpalio**	**0.56**	**123**	P		**Pg**	**05 57 50.7**	**-0.3**
EFP				S		**Sg**	**05 57 59.0**	**+0.5**
EFP				*e*Sn		**Sg**	**05 57 59.4**	**+0.9**
UPR	**University Cam**	**0.59**	**140**	P		**Pg**	**05 57 51.5**	**0.0**
UPR				S		**Sb**	**05 58 00.3**	**-0.3**
UPR	**University Cam**	**0.59**	**140**	*e*PN		**Pg**	**05 57 51.2**	**-0.3**
UPR				*e*SN		**Sg**	**05 57 59.8**	**+0.4**
UPR	**University Cam**	**0.59**	**140**	P		**Pg**	**05 57 51.2**	**-0.3**
UPR				*e*Sn		**Sg**	**05 57 59.8**	**+0.4**
UPR				S		**Sb**	**05 58 00.3**	**-0.3**
RLS	**Riolos of Patr**	**0.69**	**169**	P		**Pg**	**05 57 53.2**	**-0.2**
RLS				S		**Sb**	**05 58 03.8**	**+0.4**
RLS	**Riolos of Patr**	**0.69**	**169**	*e*PN		**Pg**	**05 57 53.2**	**-0.2**
RLS	**Riolos of Patr**	**0.69**	**169**	P		**Pg**	**05 57 53.1**	**-0.3**
RLS				S		**Sb**	**05 58 03.6**	**+0.2**
MAKR	**Makrakomi, Fth**	**0.70**	**67**	P		**Pg**	**05 57 53.5**	**-0.2**
MAKR				S		**Sb**	**05 58 04.0**	**+0.1**
MAKR	**Makrakomi, Fth**	**0.70**	**67**	P		**Pg**	**05 57 53.5**	**-0.2**
MAKR				S		**Sb**	**05 58 04.0**	**+0.1**
TRIZ	**Trizonia**	**0.71**	**121**	P		**Pg**	**05 57 53.0**	**-0.8**
TRIZ				S		**Sb**	**05 58 04.0**	**0.0**
TRIZ	**Trizonia**	**0.71**	**121**	*e*PN		**Pg**	**05 57 53.6**	**-0.2**
TRIZ				*e*SN		**Sb**	**05 58 04.0**	**0.0**
TRIZ	**Trizonia**	**0.71**	**121**	P		**Pg**	**05 57 53.0**	**-0.8**
TRIZ	**Trizonia**	**0.71**	**121**	*e*Pn		**Pg**	**05 57 53.6**	**-0.2**
TRIZ				S		**Sb**	**05 58 04.0**	**0.0**
LAKA	**Lakka**	**0.73**	**133**	P		**Pg**	**05 57 53.6**	**-0.5**
LAKA	**Lakka**	**0.73**	**133**	*e*PN		**Pg**	**05 57 53.7**	**-0.4**
LAKA	**Lakka**	**0.73**	**133**	P		**Pg**	**05 57 53.6**	**-0.5**
LAKA				S		**Sb**	**05 58 04.6**	**+0.1**
KALE	**Kalithea**	**0.74**	**118**	P		**Pg**	**05 57 53.6**	**-0.8**
KALE	**Kalithea**	**0.74**	**118**	*e*PN		**Pg**	**05 57 54.2**	**-0.2**
KALE				*e*SN		**Sg**	**05 58 04.8**	**+0.7**
KALE	**Kalithea**	**0.74**	**118**	P		**Pg**	**05 57 53.6**	**-0.8**
KALE	**Kalithea**	**0.74**	**118**	*e*Pn		**Pg**	**05 57 54.2**	**-0.2**
KALE				*e*Sn		**Sg**	**05 58 04.8**	**+0.7**
KALE				S		**Sb**	**05 58 05.4**	**+0.4**
KFL	**Anninata**	**0.75**	**213**	P		**Pg**	**05 57 53.8**	**-0.7**
KFL	**Anninata**	**0.75**	**213**	P		**Pg**	**05 57 53.8**	**-0.7**
KFL				S		**Sb**	**05 58 06.1**	**+1.0**
VLS	**Valsamata**	**0.79**	**225**	P		**Pg**	**05 57 54.1**	**-1.2**
VLS				S		**Sb**	**05 58 06.8**	**+0.4**
VLS	**Valsamata**	**0.79**	**225**	*e*PN		**Pg**	**05 57 54.2**	**-1.1**
VLS	**Valsamata**	**0.79**	**225**	*e*Pn		**Pg**	**05 57 54.2**	**-1.1**
VLS	**Valsamata**	**0.79**	**225**	P		**Pg**	**05 57 54.6**	**-0.7**
VLS				S		**Sb**	**05 58 06.8**	**+0.4**
AGG	**Agios Georgios**	**0.85**	**70**	P		**Pg**	**05 57 56.0**	**-0.5**
AGG	**Agios Georgios**	**0.85**	**70**	*e*PN		**Pg**	**05 57 56.2**	**-0.3**
AGG				*e*SN		**Sg**	**05 58 07.6**	**0.0**
AGG	**Agios Georgios**	**0.85**	**70**	*e*Pn		**Pg**	**05 57 56.2**	**-0.3**
AGG				*e*Sn		**Sg**	**05 58 07.6**	**0.0**
AGG				S		**Sb**	**05 58 08.3**	**+0.2**
JAN	**Janina**	**0.98**	**339**	P		**Pg**	**05 57 58.7**	**-0.3**
JAN				S		**Sb**	**05 58 12.8**	**+0.9**
JAN	**Janina**	**0.98**	**339**	*e*PN		**Pg**	**05 57 59.0**	**0.0**
JAN				*e*SN		**Sb**	**05 58 12.8**	**+0.9**
JAN	**Janina**	**0.98**	**339**	P		**Pg**	**05 57 58.7**	**-0.3**
JAN	**Janina**	**0.98**	**339**	*e*Pn		**Pg**	**05 57 59.0**	**0.0**
JAN				S		**Sb**	**05 58 12.8**	**+0.9**
THL	**Klokotos Trika**	**0.99**	**34**	P		**Pg**	**05 57 58.2**	**-1.0**
THL				S		**Sb**	**05 58 13.0**	**+0.8**
THL	**Klokotos Trika**	**0.99**	**34**	*e*PN		**Pg**	**05 57 58.5**	**-0.7**
THL				*e*SN		**Sb**	**05 58 13.1**	**+0.8**
THL	**Klokotos Trika**	**0.99**	**34**	P		**Pg**	**05 57 58.2**	**-1.0**
THL	**Klokotos Trika**	**0.99**	**34**	*e*Pn		**Pg**	**05 57 58.5**	**-0.7**
THL				S		**Sb**	**05 58 13.0**	**+0.8**
DSF	**Desfina**	**1.01**	**108**	P		**Pg**	**05 57 58.1**	**-1.4**
DSF				S		**Sn**	**05 58 14.5**	**+0.2**
DSF	**Desfina**	**1.01**	**108**	P		**Pg**	**05 57 58.1**	**-1.4**
DSF				S		**Sn**	**05 58 14.5**	**+0.2**
AXAR	**Agios Charalam**	**1.06**	**88**	P		**Pb**	**05 58 00.2**	**-0.1**
AXAR				S		**Sn**	**05 58 15.2**	**-0.2**
AXAR	**Agios Charalam**	**1.06**	**88**	P		**Pb**	**05 58 00.2**	**-0.1**
AXAR				S		**Sn**	**05 58 15.2**	**-0.2**
GUR	**Goura**	**1.14**	**134**	P		**Pb**	**05 58 01.1**	**-0.7**
GUR				S		**Sn**	**05 58 18.6**	**+1.0**
GUR	**Goura**	**1.14**	**134**	*e*PN		**Pb**	**05 58 01.0**	**-0.7**
GUR				*e*SN		**Sg**	**05 58 17.3**	**+0.4**
GUR	**Goura**	**1.14**	**134**	P		**Pb**	**05 58 01.1**	**-0.7**
GUR				S		**Sg**	**05 58 17.3**	**+0.4**
LKR	**Lokris**	**1.33**	**93**	P		**Pb**	**05 58 05.1**	**+0.2**
LKR	**Lokris**	**1.33**	**93**	*e*PN		**Pb**	**05 58 05.2**	**+0.3**
LKR	**Lokris**	**1.33**	**93**	P		**Pb**	**05 58 05.1**	**+0.2**
LKR				S		**Sb**	**05 58 22.2**	**+0.3**
ATAL	**Atalanti**	**1.34**	**91**	P		**Pn**	**05 58 04.9**	**+0.4**
ATAL	**Atalanti**	**1.34**	**91**	P		**Pn**	**05 58 05.0**	**+0.4**
LTK	**Loutraki**	**1.49**	**118**	P		**Pn**	**05 58 07.3**	**+0.7**
LTK	**Loutraki**	**1.49**	**118**	*e*PN		**Pb**	**05 58 07.7**	**+0.1**
LTK				*e*SN		**Sg**	**05 58 28.0**	**0.0**
LTK	**Loutraki**	**1.49**	**118**	P		**Pn**	**05 58 07.3**	**+0.7**
LTK	**Loutraki**	**1.49**	**118**	*e*Pn		**Pb**	**05 58 07.7**	**+0.1**
LTK				*e*Sn		**Sg**	**05 58 28.0**	**0.0**
SMIA	**Simia**	**1.50**	**84**	P		**Pn**	**05 58 07.3**	**+0.6**
SMIA	**Simia**	**1.50**	**84**	P		**Pn**	**05 58 07.3**	**+0.6**
KEK	**Kerkira**	**1.52**	**310**	P		**Pb**	**05 58 07.8**	**-0.3**
KEK	**Kerkira**	**1.52**	**310**	P		**Pb**	**05 58 07.8**	**-0.3**
XOR	**Xorichti**	**1.60**	**66**	P		**Pn**	**05 58 08.9**	**+0.8**
XOR	**Xorichti**	**1.60**	**66**	P		**Pn**	**05 58 08.9**	**+0.8**
KZN	**Kozani**	**1.61**	**13**	*e*PN		**Pb**	**05 58 09.4**	**-0.3**
KZN				*e*SN		**Sg**	**05 58 31.2**	**-0.6**
KZN	**Kozani**	**1.61**	**13**	*e*Pn		**Pb**	**05 58 09.4**	**-0.3**
KZN				*e*Sn		**Sg**	**05 58 31.2**	**-0.6**
VLX	**Vlachokerasia**	**1.61**	**148**	P		**Pn**	**05 58 09.3**	**+1.0**
VLX	**Vlachokerasia**	**1.61**	**148**	*e*PN		**Pb**	**05 58 10.0**	**+0.3**
VLX	**Vlachokerasia**	**1.61**	**148**	P		**Pn**	**05 58 09.3**	**+1.0**
VLX	**Vlachokerasia**	**1.61**	**148**	*e*Pn		**Pb**	**05 58 10.0**	**+0.3**
LIT	**Litokhoron**	**1.64**	**34**	P		**Pn**	**05 58 09.2**	**+0.5**
LIT	**Litokhoron**	**1.64**	**34**	*e*PN		**Pb**	**05 58 09.8**	**-0.4**
LIT	**Litokhoron**	**1.64**	**34**	P		**Pn**	**05 58 09.2**	**+0.5**
LIT	**Litokhoron**	**1.64**	**34**	*e*Pn		**Pb**	**05 58 09.8**	**-0.4**
PYL	**PYLOS**	**1.87**	**169**	*e*PN		**Pb**	**05 58 14.0**	**-0.1**
PYL	**PYLOS**	**1.87**	**169**	*e*Pn		**Pb**	**05 58 14.0**	**-0.1**
DID	**Didima**	**1.96**	**128**	*e*PN		**Pn**	**05 58 14.1**	**+1.0**
DID	**Didima**	**1.96**	**128**	*e*Pn		**Pn**	**05 58 14.1**	**+1.0**
FNA	**Florina**	**2.04**	**2**	*e*PN		**Pb**	**05 58 16.5**	**-0.6**
FNA	**Florina**	**2.04**	**2**	*e*Pn		**Pb**	**05 58 16.5**	**-0.6**
ATH	**Athens Observa**	**2.05**	**111**	*e*PN		**Pn**	**05 58 15.8**	**+1.6**
ATH	**Athens Observa**	**2.05**	**111**	*e*Pn		**Pn**	**05 58 15.8**	**+1.6**
AOS	**Alonnisos**	**2.06**	**77**	*e*PN		**Pn**	**05 58 15.8**	**+1.4**
AOS	**Alonnisos**	**2.06**	**77**	*e*Pn		**Pn**	**05 58 15.8**	**+1.4**
DYR	**Agios Nikonas**	**2.13**	**157**	*e*PN		**Pb**	**05 58 17.4**	**-1.2**
DYR	**Agios Nikonas**	**2.13**	**157**	*e*Pn		**Pb**	**05 58 17.4**	**-1.2**
PAIG	**Paliouri**	**2.19**	**56**	*e*PN		**Pn**	**05 58 17.7**	**+1.5**
PAIG	**Paliouri**	**2.19**	**56**	*e*Pn		**Pn**	**05 58 17.7**	**+1.5**
BIA	**Bitola**	**2.28**	**0**	*e*Pn		**Pn**	**05 58 19.4**	**+1.9**
BIA	**Bitola**	**2.28**	**0**	*e*Pn		**Pn**	**05 58 19.4**	**+1.9**
GRG	**Griva**	**2.37**	**21**	*e*PN		**Pn**	**05 58 19.9**	**+1.1**
GRG	**Griva**	**2.37**	**21**	*e*Pn		**Pn**	**05 58 19.9**	**+1.1**
PHP	**Peshkopia**	**3.02**	**348**	*e*PN		**Pn**	**05 58 28.6**	**+1.0**
PHP				*i* SN		**Sb**	**05 59 07.4**	**-3.1**
PHP	**Peshkopia**	**3.02**	**348**	*e*Pn		**Pn**	**05 58 28.6**	**+1.0**
PHP				*i* Sn		**Sb**	**05 59 07.4**	**-3.1**
PUK	**Puka**	**3.47**	**342**	*e*PN		**Pn**	**05 58 35.3**	**+1.4**
PUK				*i* SN		**Sn**	**05 59 18.9**	**+3.9**
PUK	**Puka**	**3.47**	**342**	*e*Pn		**Pn**	**05 58 35.3**	**+1.4**
PUK				*i* Sn		**Sn**	**05 59 18.9**	**+3.9**
ULC	**Ulcinj**	**3.58**	**335**	⇑*i*Pn		**Pn**	**05 58 35.8**	**+0.4**
ULC				*e*Sn		**Sn**	**05 59 20.1**	**+2.4**
ULC	**Ulcinj**	**3.58**	**335**	⇑*i*Pn		**Pn**	**05 58 35.8**	**+0.4**
ULC				*e*Sn		**Sn**	**05 59 20.1**	**+2.4**
APE	**Apeiranthos**	**3.74**	**115**	⇑*i*P		**Pn**	**05 58 40.7**	**+3.2**
APE	**Apeiranthos**	**3.74**	**115**	⇑*i*P		**Pn**	**05 58 40.7**	**+3.2**
BCI	**Bajram Curri**	**3.75**	**346**	*e*PN		**Pn**	**05 58 38.9**	**+1.3**
BCI				*i* SN		**Sn**	**05 59 20.3**	**-1.3**
BCI	**Bajram Curri**	**3.75**	**346**	*e*Pn		**Pn**	**05 58 38.9**	**+1.3**
BCI				*i* Sn		**Sn**	**05 59 20.3**	**-1.3**
PVY	**Plav**	**3.99**	**346**	⇓*i*Pn		**Pn**	**05 58 42.6**	**+1.6**
PVY				*e*Sn		**Sn**	**05 59 30.3**	**+2.6**
PVY	**Plav**	**3.99**	**346**	⇓*i*Pn		**Pn**	**05 58 42.6**	**+1.6**
PVY				*e*Sn		**Sn**	**05 59 30.3**	**+2.6**
PDG	**Podgorica**	**4.00**	**338**	⇑*i*Pn		**Pn**	**05 58 42.5**	**+1.4**
PDG				*e*Sn		**Sn**	**05 59 30.5**	**+2.5**
TTG	**Podgorica**	**4.00**	**338**	⇑*i*Pn		**Pn**	**05 58 42.5**	**+1.4**
TTG				*e*Sn		**Sn**	**05 59 30.5**	**+2.5**
BUM	**Brajici-Budva**	**4.00**	**333**	⇑*i*Pn		**Pn**	**05 58 41.9**	**+0.7**
BUM				*e*Sn		**Sn**	**05 59 30.0**	**+1.9**
BUM	**Brajici-Budva**	**4.00**	**333**	⇑*i*Pn		**Pn**	**05 58 41.9**	**+0.7**
BUM				*e*Sn		**Sn**	**05 59 30.0**	**+1.9**
BARS	**Barje**	**4.09**	**5**	*e*Pn		**Pn**	**05 58 43.6**	**+1.2**
VTS	**Vitosha**	**4.11**	**20**	⇓*i*P		Pb	05 58 48.9	-3.5
BEY	**Berane**	**4.27**	**346**	⇑*i*Pn		**Pn**	**05 58 45.8**	**+1.0**
IVA	**Berane**	**4.27**	**346**	⇑*i*Pn		**Pn**	**05 58 45.8**	**+1.0**
HCY	**Herceg Novi**	**4.28**	**331**	⇓*i*Pn		**Pn**	**05 58 46.1**	**+1.2**
HCY				*e*Sn		**Sn**	**05 59 36.6**	**+1.9**
HCY	**Herceg Novi**	**4.28**	**331**	⇓*i*Pn		**Pn**	**05 58 46.1**	**+1.2**
HCY				*e*Sn		**Sn**	**05 59 36.6**	**+1.9**
NKY	**Niksic**	**4.43**	**337**	*e*Pn		**Pn**	**05 58 48.8**	**+1.7**
NKY				*e*Sn		**Sn**	**05 59 40.8**	**+2.1**
NKY	**Niksic**	**4.43**	**337**	*e*Pn		**Pn**	**05 58 48.8**	**+1.7**
NKY				*e*Sn		**Sn**	**05 59 40.8**	**+2.1**
BRY	**Bratogost**	**4.66**	**334**	⇓*i*Pn		**Pn**	**05 58 51.4**	**+1.1**
BRY				*e*Sn		**Sn**	**05 59 45.8**	**+1.5**
BRY	**Bratogost**	**4.66**	**334**	⇓*i*Pn		**Pn**	**05 58 51.4**	**+1.1**
BRY				*e*Sn		**Sn**	**05 59 45.8**	**+1.5**
UPM	**Unac-Piva**	**4.82**	**339**	⇓*i*Pn		**Pn**	**05 58 54.4**	**+1.9**
UPM				*e*Sn		**Sn**	**05 59 49.6**	**+1.3**
UPM	**Unac-Piva**	**4.82**	**339**	⇓*i*Pn		**Pn**	**05 58 54.4**	**+1.9**
UPM				*e*Sn		**Sn**	**05 59 49.6**	**+1.3**
STON	**Ston**	**4.95**	**328**	*i* Pn		**Pn**	**05 58 53.4**	**-0.8**
STON				Sn		**Sn**	**05 59 47.6**	**-3.7**
STON	**Ston**	**4.95**	**328**	*i* Pn		**Pn**	**05 58 53.3**	**-0.8**
GRUS	**Gruza**	**5.17**	**355**	*e*Pn		**Pn**	**05 58 59.2**	**+2.1**
BBLS	**Lazići**	**5.32**	**345**	*e*Pn		**Pn**	**05 58 58.4**	**-0.9**
DIVS	**Divibare**	**5.45**	**350**	*e*Pn		**Pn**	**05 59 01.0**	**0.0**
MLR	**Muntele Rosu**	**7.58**	**26**	Pn		Pn	05 59 34.3	+4.0
	0.1nm,0.3s,baz=240,slow=9.5,SNR=4.6							
VRI	**Vrincioaia**	**8.18**	**28**	⇓*i*P		Pn	05 59 42.7	+4.2
HFS	**Hagfors**	**21.95**	**350**	P		**P**	**06 02 32.7**	**-0.6**
	1.2nm,0.5s,baz=156,slow=15,SNR=5.1							
FINES	**FINESS Array B**	**22.02**	**6**	P		**P**	**06 02 43.4**	**-0.2**
	3.1nm,0.9s,baz=156,slow=9.8,SNR=3.8							
NB2	**NORSAR Subarra**	**23.20**	**348**	P		**P**	**06 02 44.8**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=155,slow=10							
NOA	**NORSAR Array B**	**23.20**	**348**	P		**P**	**06 02 45.2**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=155,slow=9.5,SNR=5.1							
NOA				LR		LR	06 11 42.8	
	comp=Z,21nm,21.5s,baz=245,slow=36							
TORD	**Torodi Ar. Bea**	**30.85**	**220**	P		**P**	**06 03 55.4**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=34,slow=9.0,SNR=3.1							
ZALV	**Zalesovo Beam**	**44.86**	**49**	P		**P**	**06 05 52.6**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=294,slow=8.0,SNR=4.3							

WEL 12 06:00:47.9±0.2,39.°29S×177.°91E,h58km±1km,ML3.9/19, 12C-16D,Error ellipse: s-maj=2.3km s-min=0.9km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MHGZ	**Mahia Peninsul**	**0.13**	**359**	⇑PN		Pn	06 00 57.5	+0.7
MHGZ				SN		Sn	06 01 04.0	+0.8
KNZ	**Kokohu**	**0.32**	**325**	⇑PN		Pn	06 00 57.5	-0.4
KNZ				SN		Sn	06 01 04.0	-1.2
PRGZ	**Paritu Road**	**0.36**	**357**	⇑PN		Pn	06 00 58.6	+0.2
PRGZ				SN		Sn	06 01 05.5	-0.4
RAHZ	**Arahi**	**0.74**	**300**	⇑PN		Pn	06 01 02.1	-0.4
CKHZ	**Cape Kidnapper**	**0.74**	**240**	⇑PN		Pn	06 01 02.7	+0.1
CNGZ	**Carnagh Statio**	**0.83**	**16**	⇓PN		Pn	06 01 04.7	+1.0
NMHZ	**Naumai**	**0.88**	**282**	⇑PN		Pn	06 01 04.1	-0.3
KAHZ	**Kahuranaki**	**0.95**	**237**	PN		Pn	06 01 05.2	-0.1
MCHZ	**McNeill Hill**	**0.95**	**260**	⇑PN		Pn	06 01 05.3	0.0
MWZ	**Matawai**	**1.00**	**342**	⇓PN		Pn	06 01 05.5	-0.4
PXZ	**Pawanui**	**1.10**	**227**	⇑PN		Pn	06 01 06.8	-0.3
BKZ	**Black Stump Fm**	**1.11**	**276**	⇑PN		Pn	06 01 06.9	-0.5
URZ	**Urewera**	**1.20**	**328**	⇑PN		Pn	06 01 08.0	-0.6
PUZ	**Puketiti**	**1.24**	**13**	⇑PN		Pn	06 01 09.2	0.0
WPHZ	**Waipukurau**	**1.38**	**235**	PN		Pn	06 01 10.6	-0.3
PRHZ	**Porangahau**	**1.39**	**225**	⇓PN		Pn	06 01 10.6	-0.5

CFAA				S	S	06 15 21.8	-9.4	
	0.5nm,0.3s,baz=156,slow=16,SNR=20							
BDFB	**Brasilia**	**18.29**	**71**	P	Pn	06 15 37.2	-0.5	
	0.5nm,0.3s,baz=242,slow=12,SNR=16							
PLCA	**Paso Flores**	**18.53**	**191**	P	P	06 15 37.6	+0.5	
	0.1nm,0.3s,baz=20,slow=12,SNR=2.6							
RCBR	**Riachuelo**	**33.44**	**65**	P	P	06 17 55.8	+0.9	
	6.3nm,0.9s,baz=224,slow=9.3,SNR=3.6							
SNAA	**Sanae**	**60.39**	**161**	P	P	06 21 22.0	+0.1	
	0.5nm,0.7s,baz=261,slow=13,SNR=5.2							
DBIC	**Dimbokro**	**66.44**	**72**	P	P	06 22 02.0	-0.3	
	1.7nm,0.8s,baz=231,slow=9.1,SNR=3.5							
QSPA	**South Pole Qui**	**67.64**	**180**	P	P	06 22 09.6	+0.4	
	0.9nm,0.4s,baz=176,slow=1.5,SNR=15							
TORD	**Torodi Ar. Bea**	**75.15**	**69**	P	P	06 22 54.1	-0.6	
	2.4nm,0.4s,baz=254,slow=5.9,SNR=52							
YKA	**Yellowknife Ar**	**93.11**	**340**	P	P	06 24 24.1	-0.3	
	0.1nm,0.5s,baz=133,slow=6.0,SNR=3.4							
MKAR	**Makanchi Array**	**144.80**	**39**	PKP	PKPdf	06 30 46.5	0.0	
	1.5nm,0.7s,baz=316,slow=3.3,SNR=14							

THE ***12*** *06:14:33.7,37.82N×21.36E,h13km±1km,ML2.5/5, Error ellipse: s-maj=1.3km s-min=0.3km az=353.0*
CSEM ***12*** *06:14:33.9±0.2,37.85N×21.35E,h10km,ML2.6, Error ellipse: s-maj=3.9km s-min=3.6km az=62.0*
ATH ***12*** *06:14:34.0,37.84N×21.31E,h5km±3km,MD3.1/13*

ISC 12 06:14:34.1±0.9,37.86N±0.03×21.34E±0.02,h15km±7km, n46,σ0s77/76,4D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.22**	**26**	P	**Pg**	**06 14 38.7**	**-0.5**
RLS				S	**Sg**	**06 14 42.9**	**+0.4**
RLS	**Riolos of Patr**	**0.22**	**26**	⇓*i*Pg	**Pg**	**06 14 38.9**	**-0.3**
RLS				*e*Sg	**Sg**	**06 14 43.0**	**+0.4**
RLS	**Riolos of Patr**	**0.22**	**26**	⇓*i*Pg	**Pg**	**06 14 38.9**	**-0.3**
RLS				S	**Sg**	**06 14 42.9**	**+0.4**
KFL	**Anninata**	**0.51**	**300**	P	**Pg**	**06 14 44.1**	**0.0**
KFL	**Anninata**	**0.51**	**300**	P	**Pg**	**06 14 43.9**	**-0.2**
KFL				S	**Sg**	**06 14 51.6**	**+0.7**
LAKA	**Lakka**	**0.63**	**53**	P	**Pg**	**06 14 46.0**	**-0.5**
LAKA				S	**Sg**	**06 14 55.7**	**+0.8**
LAKA	**Lakka**	**0.63**	**53**	*e*PB	**Pg**	**06 14 46.0**	**-0.5**
LAKA				*e*SB	**Sb**	**06 14 56.5**	**+1.0**
LAKA	**Lakka**	**0.63**	**53**	P	**Pg**	**06 14 46.0**	**-0.5**
LAKA				S	**Sg**	**06 14 55.3**	**+0.4**
LAKA				*e*Sb	**Sb**	**06 14 56.5**	**+1.0**
PSA1	**Psathopyrgos**	**0.63**	**42**	*e*PG	**Pg**	**06 14 46.4**	**-0.1**
PSA1				*e*SB	**Sb**	**06 14 56.8**	**+1.3**
KLV	**Kalavryta, Ach**	**0.67**	**73**	*e*PB	**Pg**	**06 14 46.6**	**-0.6**
KLV	**Kalavryta, Ach**	**0.67**	**73**	*e*Pb	**Pg**	**06 14 46.6**	**-0.6**
VLS	**Valsamata**	**0.68**	**299**	P	**Pg**	**06 14 47.2**	**-0.1**
VLS				S	**Sb**	**06 14 57.4**	**+0.6**
VLS	**Valsamata**	**0.68**	**299**	*e*PB	**Pg**	**06 14 47.4**	**+0.1**
VLS	**Valsamata**	**0.68**	**299**	P	**Pg**	**06 14 47.2**	**-0.1**
VLS				S	**Sb**	**06 14 57.4**	**+0.6**
EFP	**Efpalio**	**0.72**	**38**	P	**Pg**	**06 14 47.5**	**-0.7**
EFP				S	**Sg**	**06 14 58.4**	**+0.6**
EFP	**Efpalio**	**0.72**	**38**	*e*PB	**Pg**	**06 14 47.7**	**-0.5**
EFP				*e*SB	**Sb**	**06 14 59.8**	**+1.7**
EFP	**Efpalio**	**0.72**	**38**	P	**Pg**	**06 14 47.7**	**-0.5**
EFP				S	**Sg**	**06 14 58.4**	**+0.6**
EFP				*e*Sb	**Sb**	**06 14 59.8**	**+1.7**
TRIZ	**Trizonia**	**0.77**	**48**	P	**Pg**	**06 14 48.4**	**-0.6**
TRIZ				S	**Sb**	**06 15 00.1**	**+0.7**
TRIZ	**Trizonia**	**0.77**	**48**	*e*PB	**Pg**	**06 14 48.5**	**-0.6**
TRIZ				*e*SB	**Sb**	**06 15 00.9**	**+1.5**
TRIZ	**Trizonia**	**0.77**	**48**	*e*Pb	**Pg**	**06 14 48.5**	**-0.6**
TRIZ				S	**Sb**	**06 15 00.1**	**+0.7**
TRIZ				*e*Sb	**Sb**	**06 15 00.9**	**+1.5**
GUR	**Goura**	**0.80**	**84**	P	**Pg**	**06 14 48.5**	**-1.1**
GUR				S	**Sg**	**06 15 00.0**	**-0.1**
GUR	**Goura**	**0.80**	**84**	*e*PG	**Pg**	**06 14 49.5**	**-0.1**
GUR				*e*SB	**Sb**	**06 15 01.9**	**+1.6**
GUR	**Goura**	**0.80**	**84**	P	**Pg**	**06 14 48.5**	**-1.1**
GUR	**Goura**	**0.80**	**84**	*e*Pg	**Pg**	**06 14 49.5**	**-0.1**
GUR				S	**Sg**	**06 15 00.0**	**-0.1**
GUR				*e*Sb	**Sb**	**06 15 01.9**	**+1.6**
ITM	**Ithomi**	**0.82**	**145**	P	**Pg**	**06 14 49.9**	**-0.2**
ITM	**Ithomi**	**0.82**	**145**	*e*PB	**Pb**	**06 14 50.4**	**+0.3**
ITM	**Ithomi**	**0.82**	**145**	P	**Pg**	**06 14 49.9**	**-0.2**
ITM	**Ithomi**	**0.82**	**145**	*e*Pb	**Pb**	**06 14 50.4**	**+0.3**
ITM				S	**Sb**	**06 15 01.5**	**+0.8**
KALE	**Kalithea**	**0.82**	**49**	P	**Pg**	**06 14 49.3**	**-0.9**
KALE				S	**Sb**	**06 15 01.9**	**+0.8**
KALE	**Kalithea**	**0.82**	**49**	⇓*i*PB	**Pg**	**06 14 50.4**	**+0.2**
KALE				*e*SB	**Sn**	**06 15 03.2**	**0.0**
KALE	**Kalithea**	**0.82**	**49**	P	**Pg**	**06 14 49.3**	**-0.9**
KALE	**Kalithea**	**0.82**	**49**	⇓*i*Pb	**Pg**	**06 14 50.4**	**+0.2**
KALE				S	**Sg**	**06 15 01.6**	**+0.6**
KALE				*e*Sb	**Sn**	**06 15 03.2**	**0.0**
VLX	**Vlachokerasia**	**0.96**	**120**	*e*PG	**Pg**	**06 14 52.2**	**-0.4**
VLX	**Vlachokerasia**	**0.96**	**120**	*e*Pg	**Pg**	**06 14 52.2**	**-0.4**
PYL	**PYLOS**	**1.01**	**161**	*e*PG	**Pg**	**06 14 52.6**	**-1.1**
PYL	**PYLOS**	**1.01**	**161**	*e*Pg	**Pg**	**06 14 52.6**	**-1.1**
DSF	**Desfina**	**1.09**	**59**	P	**Pb**	**06 14 53.9**	**-0.7**
DSF	**Desfina**	**1.09**	**59**	P	**Pb**	**06 14 54.1**	**-0.5**
DYR	**Agios Nikonas**	**1.35**	**144**	*e*PB	**Pg**	**06 15 00.3**	**+0.2**
DYR	**Agios Nikonas**	**1.35**	**144**	*e*Pb	**Pg**	**06 15 00.3**	**+0.2**
DID	**Didima**	**1.54**	**103**	P	**Pn**	**06 14 59.9**	**-1.2**
DID				S	**Sn**	**06 15 03.3**	**-0.6**
DID	**Didima**	**1.54**	**103**	*e*PB	**Pg**	**06 15 04.7**	**+0.9**
DID	**Didima**	**1.54**	**103**	P	**Pn**	**06 14 59.9**	**-1.2**
DID	**Didima**	**1.54**	**103**	*e*Pb	**Pg**	**06 15 04.7**	**+0.9**
DID				S	**Sn**	**06 15 20.3**	**-0.6**
VLI	**Veliai**	**1.71**	**131**	*e*PN	**Pg**	**06 15 07.6**	**+0.7**
VLI	**Veliai**	**1.71**	**131**	*e*Pn	**Pg**	**06 15 07.6**	**+0.7**

IDC 12 06:15:04.7±2.8,29.96S×138.37E,h0km,mb1 3.4/4, mb1mx3.3/17,mbtmp3.2/4,ML2.8/4, Error ellipse: s-maj=75.9km s-min=21.2km az=47.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.37**	**125**	Pn	Pn	06 15 58.4	-0.2
	0.3nm,0.3s,baz=312,slow=12,SNR=3.0						
STKA				Sn	Sn	06 16 41.2	+1.9
	2.2nm,0.3s,baz=57,slow=20,SNR=3.8						
ASAR	**Alice Springs**	**7.43**	**326**	Pn	Pn	06 16 54.9	+0.5
	0.1nm,0.3s,baz=147,slow=12,SNR=5.7						
ASAR				Sn	Sn	06 18 20.9	+1.4
	0.1nm,0.3s,baz=149,slow=22,SNR=2.6						
WRA	**Warramunga Arr**	**10.62**	**339**	Pn	Pn	06 17 38.1	-0.1
	0.1nm,0.3s,baz=155,slow=14,SNR=3.0						
WRA				Sn	Sn	06 19 40.2	+2.3
	0.1nm,0.3s,baz=162,slow=24,SNR=3.2						
FITZ	**Fitzroy Crossi**	**16.55**	**313**	Pn	Pn	06 18 57.2	-1.1
	0.1nm,0.3s,baz=145,slow=16,SNR=2.5						

IDC ***12*** *06:22:44.8±0.6, 13.03N×145.57E,h0km,mb4.0/13, mb1 4.3/13,mb1mx4.0/28,mbtmp4.0/13,MS3.8/3, Ms1 3.8/3,ms1mx3.1/38, Error ellipse: s-maj=18.9km s-min=13.2km az=66.0*
ISCJB ***12*** *06:22:49.3±0.5, 12.96N±0.07×145.5E±0.1, h43km, mb4.1/17,MS3.8/3, Error ellipse: s-maj=15.0km s-min=8.0km az=155.4*
NEIC ***12*** *06:22:50.2±0.4, 13.00N×145.51E, h35km,mb4.4/3, Error ellipse: s-maj=15.0km s-min=8.9km az=83.0*

ISC 12 06:22:51.1±0.6,13.0N±0.1×145.5E±0.1,h43km,n42, σ1s00/39,mb4.1/17,MS3.6/3,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.85**	**315**	*e*Pn	**Pn**	**06 23 04.6**	**-2.1**
GUMO				Sn	**Sn**	**06 23 18.3**	**+0.2**
GUMO	**Guam**	**0.85**	**315**	Pn	**Pn**	**06 23 05.3**	**-1.4**
	490nm,0.3s,baz=137,slow=11,SNR=158						
GUMO				Sn	**Sn**	**06 23 18.3**	**+0.2**
	1µm,0.3s,baz=198,slow=19,SNR=27						
MJAR	**Matsushiro Arr**	**24.35**	**346**	P	**P**	**06 28 04.8**	**-0.3**
MJAR	**Matsushiro Arr**	**24.35**	**346**	P	**P**	**06 28 04.8**	**-0.3**
	0.6nm,0.3s,baz=173,slow=8.1,SNR=3.1						
USRK	**Ussuriysk Arra**	**33.19**	**342**	LR	LR	06 42 02.5	
	comp=Z,71nm,18.1s,baz=183,slow=35						
WRAB	**Tennant Creek**	**34.50**	**199**	*e*P	**P**	**06 29 35.3**	**0.0**
	3.9nm,0.6s						
WRA	**Warramunga Arr**	**34.51**	**199**	P	**P**	**06 29 35.5**	**+0.1**
WRA	**Warramunga Arr**	**34.51**	**199**	P	**P**	**06 29 35.5**	**+0.1**
	2.6nm,0.6s,baz=21,slow=9.8,SNR=25						

FITZ	**Fitzroy Crossi**	**36.58**	**213**	P	**P**	**06 29 53.2**	**+0.1**	
FITZ	**Fitzroy Crossi**	**36.58**	**213**	P	**P**	**06 29 53.2**	**+0.1**	
	2.3nm,0.8s,baz=36,slow=8.7,SNR=2.1							
AS31	**Alice Springs**	**38.15**	**197**	*e*P	**P**	**06 30 06.7**	**+0.3**	
ASAR	**Alice Springs**	**38.15**	**197**	P	**P**	**06 30 06.8**	**+0.3**	
ASAR	**Alice Springs**	**38.15**	**197**	P	**P**	**06 30 06.8**	**+0.3**	
	1.6nm,0.6s,baz=25,slow=9.3,SNR=29							
DZM	**Mont Dzumac**	**40.45**	**149**	P	**P**	**06 30 24.7**	**-1.0**	
DZM	**Mont Dzumac**	**40.45**	**149**	P	**P**	**06 30 24.7**	**-1.0**	
	6.2nm,0.7s,baz=288,slow=6.4,SNR=2.6							
CMAR	**Chiang Mai Arr**	**45.04**	**283**	P	**P**	**06 31 02.8**	**-0.2**	
CMAR	**Chiang Mai Arr**	**45.04**	**283**	P	**P**	**06 31 02.8**	**-0.2**	
	0.8nm,0.3s,baz=90,slow=6.0,SNR=7.4							
SONM	**Songino Array**	**47.57**	**325**	P	**P**	**06 31 25.5**	**+2.9**	
SONM	**Songino Array**	**47.57**	**325**	P	**P**	**06 31 25.5**	**+2.9**	
	0.6nm,0.5s,baz=133,slow=12,SNR=3.3							
MKAR	**Makanchi Array**	**62.34**	**316**	P	**P**	**06 33 10.1**	**+0.8**	
MKAR	**Makanchi Array**	**62.34**	**316**	P	**P**	**06 33 10.1**	**+0.8**	
	0.4nm,0.5s,baz=96,slow=8.7,SNR=4.5							
KURK	**Kurchatov**	**65.43**	**320**	*e*P	**P**	**06 33 28.6**	**-0.9**	
	1.8nm,0.8s							
KURBB	**Kurchatov Arra**	**65.47**	**320**	P	**P**	**06 33 29.3**	**-0.5**	
	1.1nm,0.4s,baz=101,slow=6.7,SNR=16							
ILAR	**Eielson Array**	**68.85**	**25**	P	**P**	**06 33 49.8**	**-1.2**	
ILAR	**Eielson Array**	**68.85**	**25**	P	**P**	**06 33 49.8**	**-1.2**	
	0.6nm,0.4s,baz=252,slow=5.6,SNR=26							
BVAR	**Borovoye Array**	**70.77**	**322**	P	**P**	**06 34 02.7**	**-0.2**	
BVAR	**Borovoye Array**	**70.77**	**322**	P	**P**	**06 34 02.7**	**-0.2**	
	1.2nm,0.3s,baz=108,slow=9.5,SNR=6.7							
PPT	**Papeete**	**70.91**	**114**	LR	LR	06 59 04.5		
	comp=Z,268nm,19.0s,baz=93,slow=31							
YKA	**Yellowknife Ar**	**83.11**	**27**	P	**P**	**06 35 11.9**	**-0.3**	
YKA	**Yellowknife Ar**	**83.11**	**27**	P	**P**	**06 35 11.9**	**-0.3**	
	0.8nm,0.5s,baz=285,slow=5.1,SNR=15							
RES	**Resolute Bay**	**85.00**	**13**	*e*P	**P**	**06 35 21.9**	**+0.4**	
	3.4nm,1.3s							
NVAR	**Mina Array Bea**	**86.82**	**51**	P	**P**	**06 35 32.5**	**+0.8**	
NVAR	**Mina Array Bea**	**86.82**	**51**	P	**P**	**06 35 32.5**	**+0.8**	
	0.4nm,0.5s,baz=260,slow=8.0,SNR=3.5							
ARCES	**ARCESS Array B**	**87.84**	**342**	P	**P**	**06 35 35.1**	**-0.5**	
ARCES	**ARCESS Array B**	**87.84**	**342**	P	**P**	**06 35 35.1**	**-0.5**	
	1.8nm,0.9s,baz=80,slow=5.6,SNR=3.6							
NOA	**NORSAR Array B**	**97.83**	**339**	LR	LR	07 21 38.7		
	comp=Z,19nm,19.7s,baz=40,slow=36							
TORD	**Torodi Ar. Bea**	**135.70**	**305**	PKP	**PKPdf**	**06 42 08.9**	**+1.0**	
TORD	**Torodi Ar. Bea**	**135.70**	**305**	PKP	**PKPdf**	**06 42 08.9**	**+1.0**	
	0.3nm,0.6s,baz=22,slow=2.4,SNR=4.1							
DBIC	**Dimbokro**	**144.66**	**302**	PKP	PKPbc	06 42 23.4	+0.4	
DBIC	**Dimbokro**	**144.66**	**302**	PKP	PKPbc	06 42 23.4	+0.4	
	4.3nm,0.6s,baz=49,slow=4.8,SNR=8.7							
LPAZ	**La Paz**	**147.33**	**100**	PKPbc	**PKPbc**	**06 42 32.4**	**+0.6**	
LPAZ	**La Paz**	**147.33**	**100**	PKPbc	**PKPbc**	**06 42 32.4**	**+0.6**	
	0.6nm,0.7s,baz=252,slow=3.2,SNR=3.6							

CASC 12 06:27:37.2±6.1,11.40N×87.30W,h35km±999km,MD3.7, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NY14	**Universidad de**	**1.88**	**113**	*i*P	Pn	06 28 05.8	-1.1
CNCH	**Conchagua**	**1.94**	**344**	*e*P	Pn	06 28 10.5	+2.6
CNCH				*e*S	Sn	06 28 30.4	-0.7
BUEV	**Buena Vista**	**1.95**	**108**	*i*P	Pn	06 28 07.1	-0.9
GB1A	**Boringuen Arri**	**1.95**	**107**	*i*P	Pn	06 28 07.1	-0.9
GPS1	**Guardaparques**	**2.01**	**108**	*i*P	Pn	06 28 07.2	-1.5
BLLM	**Bellamira**	**2.23**	**336**	*e*P	Pn	06 28 13.7	+1.9
VSM	**San Miguel**	**2.23**	**335**	*e*P	Pn	06 28 14.7	+2.6
CAHU	**Cacaquatique**	**2.52**	**339**	*e*P	Pn	06 28 19.2	+3.2
SNVI	**San Vicente**	**2.67**	**326**	*e*P	Pn	06 28 19.7	+1.8
LFRS	**El Faro**	**2.81**	**322**	*e*P	Pn	06 28 21.5	+1.8
LFRS				*e*S	Sn	06 28 49.4	-3.1
SBLS	**San Blas**	**3.32**	**317**	*e*P	Pn	06 28 28.9	+1.9
SBLS				*e*S	Sn	06 29 01.6	-3.9
RTR	**El Retiro**	**3.38**	**318**	*e*P	Pn	06 28 29.2	+1.5

IDC ***12*** *06:30:47.7±2.0,29.77N×57.81E,h0km,mb3.8/10, mb1 4.0/12,mb1mx3.7/33,mbtmp3.8/12,ML3.6/2,MS3.0/4, Ms1 3.0/4,ms1mx2.7/40, Error ellipse: s-maj=46.4km s-min=18.9km az=160.0*
CSEM ***12*** *06:30:50.8±0.3,30.17N×57.62E,h2km,ML3.7, Error ellipse: s-maj=8.9km s-min=5.1km az=135.0*
ISCJB ***12*** *06:30:50.8±0.5,30.18N±0.05×57.61E±0.06,h10km, mb3.8/9,MS2.8/2, Error ellipse: s-maj=9.3km s-min=4.9km az=141.4*
NEIC ***12*** *06:30:51.3,30.19N×57.45E,h7km,mb4.0/2,ML3.7(THR), MN4.3(TEH),After THR.*
THR ***12*** *06:30:51.3±0.4,30.19N×57.45E,h7km±5km,ML3.7*
TEH ***12*** *06:30:51.9,30.16N×57.65E,h3km,ML4.3*

ISC 12 06:30:50.5±0.6,30.12N±0.03×57.63E±0.03,h10km,n93, σ1s84/102,mb3.8/9,8C,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.77**	**260**	*e*Pg	**Pg**	**06 31 03.8**	**-1.6**
KRBR				*e*Sg	**Sg**	**06 31 13.1**	**-2.5**
KRBR	**Kerman**	**0.77**	**260**	Pg	**Pg**	**06 31 03.0**	**-2.4**
KRBR				Sg	**Sg**	**06 31 13.0**	**-2.5**
KRBR	**Kerman**	**0.77**	**260**	Pg	**Pg**	**06 31 03.0**	**-2.4**
KRBR				Sg	**Sg**	**06 31 13.0**	**-2.5**
IKOO	**Kooshah**	**2.58**	**27**	⇑*e*Pn	**Pn**	**06 31 33.1**	**+0.5**
IKOO				*e*Sg	**Sg**	**06 32 11.0**	**-2.4**
IKOO				*e*		06 32 20.7	
	comp=Z,21µm,0.2s						
IKOO	**Kooshah**	**2.58**	**27**	Pn	**Pn**	**06 31 33.3**	**+0.7**
IKOO				Sg	**Sg**	**06 32 10.6**	**-2.8**
IKOO	**Kooshah**	**2.58**	**27**	⇑*e*Pn	**Pn**	**06 31 33.1**	**+0.5**
IKOO				*e*Sg	**Sg**	**06 32 11.0**	**-2.4**
ZHSF	**Zahedan**	**2.78**	**100**	AML	AML	06 32 24.6	
	comp=E,248nm,0.5s						
ZHSF				AML	AML	06 32 27.3	
	comp=N,240nm,0.7s						
IBND	**Bandar-abas**	**2.83**	**200**	*e*Pn	**Pb**	**06 31 39.0**	**-2.2**
IBND				*e*Sg	**Sg**	**06 32 21.1**	**-0.4**
IBND				*e*		06 32 39.2	
	comp=Z,9µm,0.3s						
IBND	**Bandar-abas**	**2.83**	**200**	*e*Pn	**Pb**	**06 31 39.0**	**-2.2**
IBND				*e*Sg	**Sg**	**06 32 21.1**	**-0.4**
IMEH	**Mehriz**	**2.89**	**297**	⇑*e*Pn	**Pn**	**06 31 38.5**	**+1.6**
IMEH				*e*Sg	**Sg**	**06 32 21.3**	**-2.1**
IMEH				*e*		06 32 27.4	
	comp=Z,8µm,0.2s						
IMEH	**Mehriz**	**2.89**	**297**	Pn	**Pn**	**06 31 38.4**	**+1.6**
IMEH				Sg	**Sg**	**06 32 21.0**	**-2.5**
IMEH	**Mehriz**	**2.89**	**297**	⇑*e*Pn	**Pn**	**06 31 38.5**	**+1.6**
IMEH				*e*Sg	**Sg**	**06 32 21.3**	**-2.1**
ITEG	**Tejag**	**2.93**	**19**	⇑*e*Pn	**Pn**	**06 31 37.8**	**+0.5**
ITEG				*e*Sg	**Sg**	**06 32 22.3**	**-2.3**
ITEG				*e*		06 32 35.0	
	comp=Z,13µm,0.2s						
ITEG	**Tejag**	**2.93**	**19**	Pn	**Pn**	**06 31 37.5**	**+0.2**
ITEG				Sg	**Sg**	**06 32 22.1**	**-2.5**
ITEG	**Tejag**	**2.93**	**19**	⇑*e*Pn	**Pn**	**06 31 37.8**	**+0.5**
ITEG				*e*Sg	**Sg**	**06 32 22.3**	**-2.3**
BNDS	**Bandar-Abbas**	**3.00**	**206**	*e*Pn	**Pb**	**06 31 41.4**	**-2.8**
BNDS	**Bandar-Abbas**	**3.00**	**206**	Pn	**Pb**	**06 31 41.0**	**-3.2**
BNDS	**Bandar-Abbas**	**3.00**	**206**	*e*Pn	**Pb**	**06 31 41.4**	**-2.8**
IDAH	**Dahanechah**	**3.23**	**36**	⇑*e*Pn	**Pn**	**06 31 42.8**	**+1.2**
IDAH				*e*		06 32 43.8	
	comp=Z,6µm,0.2s						
IDAH	**Dahanechah**	**3.23**	**36**	Pn	**Pn**	**06 31 43.0**	**+1.4**
IDAH	**Dahanechah**	**3.23**	**36**	⇑*e*Pn	**Pn**	**06 31 42.8**	**+1.2**
ICHK	**Chekchek**	**3.48**	**308**	*e*Pn	**Pn**	**06 31 46.5**	**+1.5**
ICHK				*e*Sg	**Sg**	**06 32 40.2**	**-2.2**
ICHK				*e*		06 32 47.3	
	comp=Z,6µm,0.2s						
ICHK	**Chekchek**	**3.48**	**308**	Pn	**Pn**	**06 31 46.7**	**+1.7**
ICHK				Sg	**Sg**	**06 32 39.9**	**-2.5**
ICHK	**Chekchek**	**3.48**	**308**	*e*Pn	**Pn**	**06 31 46.5**	**+1.5**
ICHK				*e*Sg	**Sg**	**06 32 40.2**	**-2.2**
TABS	**Tabas**	**3.54**	**353**	*e*Pn	**Pn**	**06 31 47.5**	**+1.8**
TABS	**Tabas**	**3.54**	**353**	*e*Pn	**Pn**	**06 31 47.5**	**+1.8**
IPAR	**Pars**	**3.99**	**267**	*e*Pn	**Pn**	**06 31 53.9**	**+1.9**
IPAR				*e*		06 33 03.1	
	comp=Z,2µm,0.4s						
IPAR	**Pars**	**3.99**	**267**	Pn	**Pb**	**06 32 00.4**	**-0.7**
IPAR	**Pars**	**3.99**	**267**	*e*Pn	**Pn**	**06 31 53.9**	**+1.9**
ISRV	**Sarvestan**	**4.00**	**260**	*e*Pn	**Pn**	**06 31 54.0**	**+1.8**
ISRV				*e*		06 33 16.3	
	comp=Z,3µm,0.6s						
ISRV	**Sarvestan**	**4.00**	**260**	Pn	**Pn**	**06 31 54.0**	**+1.8**

ISRV	**Sarvestan**	**4.00**	**260**	*e*Pn	**Pn**	**06 31 54.0**	**+1.8**	
GHIR	**Ghir-Karzin**	**4.46**	**247**	*e*Pn	**Pn**	**06 31 59.7**	**+1.4**	
GHIR	**Ghir-Karzin**	**4.46**	**247**	P	**Pn**	**06 31 59.0**	**+0.7**	
GHIR	**Ghir-Karzin**	**4.46**	**247**	P	**Pn**	**06 31 59.0**	**+0.7**	
GHIR	**Ghir-Karzin**	**4.46**	**247**	*e*Pn	**Pn**	**06 31 59.7**	**+1.4**	
NASN	**Na'in**	**4.91**	**304**	*e*Pn	**Pn**	**06 32 05.7**	**+1.0**	
NASN				AML	AML	06 33 33.9		
	comp=N,71nm,0.5s							
NASN				AML	AML	06 33 45.0		
	comp=E,62nm,0.5s							
NASN	**Na'in**	**4.91**	**304**	*e*Pn	**Pn**	**06 32 05.7**	**+1.0**	
IZEF	**Zefreh**	**5.31**	**303**	*e*Pn	**Pn**	**06 32 11.7**	**+1.6**	
IZEF				*e*		06 33 46.7		
	comp=Z,832nm,0.4s							
IZEF	**Zefreh**	**5.31**	**303**	Pn	**Pn**	**06 32 11.6**	**+1.5**	
IZEF	**Zefreh**	**5.31**	**303**	*e*Pn	**Pn**	**06 32 11.7**	**+1.6**	
IAKL	**Akhelmad**	**6.53**	**8**	*e*Pn	**Pn**	**06 32 27.5**	**+0.5**	
IAKL				*e*		06 34 23.6		
	comp=Z,302nm,0.3s							
IAKL	**Akhelmad**	**6.53**	**8**	Pn	**Pn**	**06 32 27.4**	**+0.5**	
IMYA	**Miami**	**6.54**	**18**	*e*Pn	**Pn**	**06 32 26.8**	**-0.1**	
IMYA				*e*		06 34 41.5		
	comp=Z,408nm,0.5s							
IMYA	**Miami**	**6.54**	**18**	*e*Pn	**Pn**	**06 32 26.8**	**-0.1**	
IKRD	**Kardeh**	**6.68**	**6**	*e*Pn	Pn	06 32 31.5	+2.6	
IKRD				*e*		06 34 42.4		
	comp=Z,220nm,0.4s							
IKRD	**Kardeh**	**6.68**	**6**	*e*Pn	Pn	06 32 31.5	+2.6	
MRVT	**Maraveh tapeh**	**7.63**	**351**	*e*Pn	**Pn**	**06 32 44.1**	**+2.4**	
MRVT	**Maraveh tapeh**	**7.63**	**351**	Pn	**Pn**	**06 32 44.0**	**+2.2**	
MRVT	**Maraveh tapeh**	**7.63**	**351**	Pn	**Pn**	**06 32 44.0**	**+2.2**	
GNI	**Garni**	**14.52**	**317**	*e*Pn	**P**	**06 34 23.1**	**+0.2**	
GNI	**Garni**	**14.52**	**317**	LR	LR	06 40 33.4		
	comp=Z,59nm,20.8s,baz=281,slow=39							
KKAR	**Karatay Array**	**16.55**	**35**	*e*P	**P**	**06 34 45.2**	**-0.1**	
	comp=Z,4.5nm,0.8s							
KKAR	**Karatay Array**	**16.55**	**35**	*e*P	**P**	**06 34 45.2**	**-0.1**	
	comp=Z,4.5nm,0.8s							
ASF	**Jabal al Asfar**	**17.87**	**282**	P	**P**	**06 35 02.4**	**+2.4**	
ASF	**Jabal al Asfar**	**17.87**	**282**	P	**P**	**06 35 02.4**	**+2.4**	
	comp=Z,0.2nm,0.3s,baz=354,slow=7.6,SNR=5.9							
KBZ	**Khabaz**	**17.94**	**323**	P	**P**	**06 35 04.4**	**+3.8**	
KBZ	**Khabaz**	**17.94**	**323**	P	**P**	**06 35 04.4**	**+3.8**	
	comp=Z,0.1nm,0.3s,baz=152,slow=14,SNR=3.0							
KBZ	**Khabaz**	**17.94**	**323**	P	**P**	**06 35 04.4**	**+3.8**	
AAK	**Ala-Archa**	**18.40**	**43**	LR	LR	06 43 11.3		
	comp=Z,66nm,18.0s,baz=280,slow=40							
AKTO	**Aktyubinsk**	**20.29**	**1**	P	Pn	06 35 27.4	-0.9	
AKTO	**Aktyubinsk**	**

	comp=E,2μm,0.8s						
SONM	**Songino Array**	**18.33**	**6**	P	**P**	**06 48 46.9**	**+1.3**
	baz=189,slow=8.6,SNR=4.1						
MKAR	**Makanchi Array**	**23.84**	**322**	P	**P**	**06 49 45.0**	**+0.6**
	comp=E,0.9nm,0.7s,baz=128,slow=11,SNR=6.8						
ZALV	**Zalesovo Beam**	**27.88**	**336**	P	**P**	**06 50 21.1**	**+0.2**
	comp=E,1.0nm,0.7s,baz=145,slow=8.8,SNR=4.3						
KURBB	**Kurchatov Arra**	**28.18**	**325**	P	**P**	**06 50 22.9**	**-0.7**
	comp=E,0.1nm,0.3s,baz=133,slow=9.0,SNR=4.6						
WRA	**Warramunga Arr**	**57.50**	**145**	P	**P**	**06 54 20.5**	**-0.2**
	comp=E,0.4nm,0.3s,baz=338,slow=7.8,SNR=3.2						
STKA	**Stephens Creek**	**71.02**	**146**	P	P	06 55 47.0	-2.1
	comp=E,0.3nm,0.3s,baz=322,slow=12,SNR=2.7						

*IDC **12** 06:44:47.0±1.3, 32.87S×178.86W, h0km, mb4.2/5, mb1 4.3/6, mb1mx4.0/19, mbtmp4.2/6, ML3.9/1, MS3.8/3, Ms1 3.8/3, ms1mx3.1/30, Error ellipse: s-maj=36.1km s-min=26.5km az=47.0*

ISC 12 06:44:51.1±1.9, 33.4S±0.1×178.6W±0.3, h41km, n22, σ2.9s16/21, mb4.2/5, MS3.8/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**5.33**	**208**	*e*PN	**Pn**	**06 46 09.0**	**+0.8**
PUZ				SN	**Sn**	**06 47 10.4**	**+2.2**
CNGZ	**Carnagh Statio**	**5.71**	**206**	*e*PN	**Pn**	**06 46 14.3**	**+1.0**
MWZ	**Matawai**	**5.85**	**211**	*e*PN	**Pn**	**06 46 16.8**	**+1.5**
MWZ				SN	**Sn**	**06 47 23.1**	**+2.0**
URZ	**Urewera**	**5.98**	**214**	*e*PN	**Pn**	**06 46 17.5**	**+0.5**
URZ				SN	**Sn**	**06 47 26.2**	**+2.0**
URZ	**Urewera**	**5.98**	**214**	Pn	**Pn**	**06 46 19.5**	**+2.5**
	2.4nm,0.3s,baz=300,slow=4.0,SNR=26						
URZ				Sn	**Sn**	**06 47 26.8**	**+2.6**
	3.6nm,0.3s,baz=147,slow=19,SNR=7.1						
BKZ	**Black Stump Fm**	**7.00**	**213**	*e*PN	**Pn**	**06 46 30.8**	**-0.2**
BFZ	**Birch Farm**	**8.36**	**208**	*e*PN	**Pn**	**06 46 51.1**	**+1.3**
BFZ				SN	**Sn**	**06 48 18.5**	**-4.3**
MRZ	**Mangatainoka R**	**8.62**	**211**	*e*PN	**Pn**	**06 46 51.0**	**-2.3**
MRZ				SN	**Sn**	**06 48 24.2**	**-5.0**
THZ	**Tophouse**	**10.73**	**216**	*e*PN	Pn	06 47 17.2	-5.0
THZ				SN	Sn	06 49 14.7	-6.3
RPZ	**Rata Peaks**	**13.10**	**215**	Sn	Sn	06 50 08.8	-10
	0.5nm,0.3s,baz=312,slow=23,SNR=1.1						
HNR	**Honiara**	**30.94**	**315**	LR	LR	07 01 14.1	
	comp=Z,100nm,18.3s,baz=116,slow=32						
STKA	**Stephens Creek**	**33.40**	**261**	LR	LR	07 04 04.1	
	comp=Z,176nm,20.2s,baz=212,slow=35						
CTA	**Charters Tower**	**33.88**	**284**	P	**P**	**06 51 30.3**	**+0.2**
	2.6nm,0.6s,baz=117,slow=11,SNR=3.7						
ASAR	**Alice Springs**	**42.51**	**270**	P	**P**	**06 52 42.9**	**+0.1**
	2.9nm,0.8s,baz=111,slow=7.5,SNR=23						
WRA	**Warramunga Arr**	**43.77**	**276**	P	**P**	**06 52 51.8**	**-1.1**
	4.3nm,0.8s,baz=117,slow=7.6,SNR=13						
FITZ	**Fitzroy Crossi**	**51.89**	**273**	P	**P**	**06 53 55.3**	**-0.5**
	3.1nm,0.8s,baz=104,slow=8.3,SNR=3.4						
QSPA	**South Pole Qui**	**56.74**	**180**	P	P	06 54 36.3	+5.8
	1.0nm,0.8s,baz=48,slow=6.8,SNR=5.2						
GUMO	**Guam**	**58.26**	**317**	LR	LR	07 14 07.1	
	comp=Z,113nm,18.9s,baz=342,slow=30						
FINES	**FINESS Array B**	**147.72**	**338**	PKPbc	**PKPbc**	**07 04 31.1**	**+0.6**
	2.8nm,0.6s,baz=45,slow=3.0,SNR=9.9						
NB2	**NORSAR Subarra**	**151.59**	**350**	PKP	**PKPbc**	**07 04 41.0**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=14,slow=2.6						
NOA	**NORSAR Array B**	**151.59**	**350**	PKPbc	**PKPbc**	**07 04 39.6**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=22,slow=4.7,SNR=5.2						
TORD	**Torodi Ar. Bea**	**159.86**	**181**	PKPab	PKPab	07 05 30.0	+4.7
	comp=Z,0.4nm,0.6s,baz=190,slow=3.2,SNR=2.6						

CASC 12 07:03:03.2±2.4, 13.11N×90.38W, h17km±8km, MD3.8, ML3.8, 1C-2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**1.03**	**46**	*e*P	Pb	07 03 21.9	-1.0
RTR	**El Retiro**	**1.06**	**42**	*e*P	Pb	07 03 22.5	-0.9
SNJE	**San Jose**	**1.06**	**45**	*e*P	Pb	07 03 22.5	-1.0
RBDL	**Robledal**	**1.20**	**34**	*e*P	Pn	07 03 24.6	-0.9
BOQS	**Boqueron**	**1.24**	**60**	*e*P	Pn	07 03 25.4	-0.6
BOQS				*e*S	Sb	07 03 41.9	-0.4
SNET	**Serv Nac Est T**	**1.26**	**63**	*e*P	Pn	07 03 25.5	-0.6
SNET				*e*S	Sb	07 03 41.3	-1.2
SNET				AML	AML	07 03 50.3	
	comp=Z,2μm,0.3s						
PCG	**Pacaya**	**1.29**	**350**	*e*P	Pn	07 03 25.5	-1.4
PCG				*e*S	Sg	07 03 46.1	+0.4
LFRS	**El Faro**	**1.38**	**68**	*e*P	Pn	07 03 27.1	-0.8
LFU	**La Fuente**	**1.39**	**63**	*e*P	Pn	07 03 27.8	-0.1
FUG	**Fuego 3**	**1.40**	**341**	*e*P	Pn	07 03 26.7	-1.5
FUG				*e*S	Sg	07 03 49.0	+0.1
LBRS	**Las Brisas**	**1.44**	**64**	*e*P	Pn	07 03 28.6	-0.1
NBG	**Las Nubes**	**1.47**	**1**	*e*P	Pn	07 03 28.3	-0.9
NBG				*e*S	Sn	07 03 47.6	-0.7
SNVI	**San Vicente**	**1.58**	**72**	*e*P	Pn	07 03 30.9	+0.2
MTO2	**Montecristo 2**	**1.62**	**38**	*e*P	Pn	07 03 31.0	-0.3
MTO2				*e*S	Sn	07 03 52.3	+0.3
JAT	**Jato**	**1.71**	**315**	*e*P	Pn	07 03 31.4	-0.9
JAT				*e*S	Sg	07 03 58.1	-0.3
MRL	**Marmol**	**2.05**	**19**	*e*P	Pn	07 03 38.1	+0.9
MRL				*e*S	Sn	07 03 58.1	-4.5
BLLM	**Bellamira**	**2.11**	**81**	*e*P	Pn	07 03 38.8	+0.9
CAHU	**Cacacuatique**	**2.21**	**73**	*e*P	Pn	07 03 39.5	+0.1
CNCH	**Conchagua**	**2.49**	**86**	*e*P	Pn	07 03 43.5	+0.4

*ISK **12** 07:11:40.6, 37.92N×29.11E, h5km, MD2.8*
*DDA **12** 07:11:41.8, 37.88N×29.08E, h7km, MD2.8*
*CSEM **12** 07:11:41.5±0.2, 37.89N×29.09E, h5km, MD2.8, Error ellipse: s-maj=4.5km s-min=3.2km az=90.0*
*ISCJB **12** 07:11:41.7±0.5, 37.90N±0.02×29.05E±0.05, h6km±9km, Error ellipse: s-maj=7.2km s-min=4.1km az=169.5*

ISC 12 07:11:41.9±1.2, 37.90N±0.02×29.09E±0.04, h1km±18km, n22, σ0.956/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.15**	**197**	*e*PG	**Pg**	**07 11 44.7**	**-0.2**
DENT	**Denizli**	**0.15**	**197**	*e*Pg	**Pg**	**07 11 44.7**	**-0.2**
DNZL	**Cakiroluk**	**0.21**	**190**	*i* P	**Pg**	**07 11 45.6**	**-0.4**
DNZL				*i* S	**Sg**	**07 11 49.4**	**+0.6**
DNZL	**Cakiroluk**	**0.21**	**190**	*i* P	**Pg**	**07 11 45.6**	**-0.4**
DNZL				*i* S	**Sg**	**07 11 49.4**	**+0.6**
KHL	**Karahalli**	**0.54**	**39**	*e*PG	**Pg**	**07 11 51.3**	**-1.0**
KHL	**Karahalli**	**0.54**	**39**	*e*Pg	**Pg**	**07 11 51.3**	**-1.0**
KHAL	**Karahalli**	**0.56**	**34**	*i* P	**Pg**	**07 11 53.1**	**+0.4**
KHAL				*i* S	**Sb**	**07 12 02.9**	**-0.3**
KHAL	**Karahalli**	**0.56**	**34**	*i* P	**Pg**	**07 11 53.1**	**+0.4**
KHAL				*i* S	**Sb**	**07 12 02.9**	**-0.3**
KULA	**Kula-Manisa**	**0.70**	**331**	*e*PG	**Pg**	**07 11 54.5**	**-0.8**
KULA				*e*SG	**Sg**	**07 12 04.5**	**+0.1**
KULA	**Kula-Manisa**	**0.70**	**331**	*e*Pg	**Pg**	**07 11 54.5**	**-0.8**
KULA				*e*Sg	**Sg**	**07 12 04.5**	**+0.1**
MANT	**Manisa**	**0.72**	**325**	*i* P	**Pg**	**07 11 56.1**	**+0.4**
MANT				*i* S	**Sg**	**07 12 06.2**	**+1.1**
MANT	**Manisa**	**0.72**	**325**	*i* P	**Pg**	**07 11 56.1**	**+0.4**
MANT				*i* S	**Sg**	**07 12 06.2**	**+1.1**
GOLH	**Golhisar**	**0.76**	**151**	*i* P	**Pg**	**07 11 56.7**	**+0.3**
GOLH				*i* S	**Sb**	**07 12 09.2**	**+0.3**
GOLH	**Golhisar**	**0.76**	**151**	*i* P	**Pg**	**07 11 56.7**	**+0.3**
GOLH				*i* S	**Sb**	**07 12 09.2**	**+0.3**
GLHS	**Glhisar (BURDU**	**0.81**	**156**	*e*PG	**Pg**	**07 11 56.9**	**-0.5**
GLHS	**Glhisar (BURDU**	**0.81**	**156**	*e*Pg	**Pg**	**07 11 56.9**	**-0.5**
AYDN	**Tasoluk**	**0.99**	**256**	*i* P	**Pg**	**07 12 00.7**	**-0.1**
AYDN				*i* S	**Sg**	**07 12 13.2**	**-0.5**
AYDN	**Tasoluk**	**0.99**	**256**	*i* P	**Pg**	**07 12 00.7**	**-0.1**
AYDN				*i* S	**Sg**	**07 12 13.2**	**-0.5**
YER	**Yerkesik**	**1.00**	**220**	*e*PG	**Pg**	**07 12 00.8**	**-0.2**
YER	**Yerkesik**	**1.00**	**220**	*e*Pg	**Pg**	**07 12 00.8**	**-0.2**
FETY	**Fethiye**	**1.26**	**180**	*e*PN	**Pg**	**07 12 05.6**	**-0.5**
FETY	**Fethiye**	**1.26**	**180**	*e*Pn	**Pg**	**07 12 05.6**	**-0.5**

*IDC **12** 07:13:13.6±0.6, 37.03S×52.39E, h0km, mb4.1/14, mb1 4.1/15, mb1mx4.0/26, mbtmp4.1/15, ML3.7/1, MS3.9/15, Ms1 3.9/15, ms1mx3.7/24, Error ellipse: s-maj=19.8km s-min=10.1km az=66.0*
*ISCJB **12** 07:13:13.3±0.5, 37.03S±0.08×52.4E±0.1, h10km, mb4.1/18, MS3.9/14, Error ellipse: s-maj=15.6km s-min=9.5km az=146.1*
*NEIC **12** 07:13:15.4±0.4, 37.03S×52.39E, h10km, mb4.4/9, Error ellipse: s-maj=13.4km s-min=8.3km az=55.0*

ISC 12 07:13:15.0±0.5, 36.99S±0.08×52.4E±0.1, h10km, n45, σ0.997/43, mb4.2/18, MS4.0/14, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABPO	**Ambohimpanom**	**18.47**	**344**	*e*P	**Pn**	**07 17 33.1**	**+1.7**
	7.1nm,0.7s						
OPO	**Ambohidratompo**	**18.91**	**345**	P	**Pn**	**07 17 37.0**	**+0.3**
OPO				S	**S**	**07 21 11.9**	**+0.7**
OPO	**Ambohidratompo**	**18.91**	**345**	P	**Pn**	**07 17 37.0**	**+0.3**
	0.3nm,0.3s,baz=166,slow=8.6,SNR=5.3						
OPO				S	**S**	**07 21 11.9**	**+0.7**
	0.5nm,0.3s,baz=238,slow=19,SNR=2.7						
OPO				LR	LR	07 22 56.2	
	comp=Z,238nm,19.3s,baz=165,slow=31						
BOSA	**Boshof**	**24.25**	**282**	*e*P	**P**	**07 18 32.1**	**-0.3**
	11nm,0.9s						
BOSA	**Boshof**	**24.25**	**282**	P	**P**	**07 18 32.0**	**-0.3**
	6.3nm,0.8s,baz=123,slow=8.9,SNR=8.2						
BOSA				LR	LR	07 25 26.0	
	comp=Z,232nm,21.4s,baz=326,slow=30						
LBTB	**Lobatse**	**25.81**	**290**	*e*P	**P**	**07 18 47.1**	**+0.6**
	7.1nm,1.1s						
LBTB	**Lobatse**	**25.81**	**290**	P	**P**	**07 18 45.5**	**-1.0**
	3.6nm,0.8s,baz=142,slow=12,SNR=5.0						
LBTB				LR	LR	07 27 23.0	
	comp=Z,210nm,18.9s,baz=14,slow=33						
SUR	**Sutherland**	**26.32**	**271**	LR	LR	07 27 32.3	
	comp=Z,119nm,20.7s,baz=6.2,slow=33						
LSZ	**Lusaka**	**30.51**	**309**	*e*P	**P**	**07 19 28.2**	**-0.4**
	13nm,1.4s						
MAW	**Mawson**	**31.23**	**172**	P	**P**	**07 19 35.8**	**+1.5**
MAW	**Mawson**	**31.23**	**172**	P	**P**	**07 19 35.8**	**+1.5**
	1.2nm,0.6s,baz=331,slow=9.6,SNR=6.9						
MAW				LR	LR	07 28 46.8	
	comp=Z,204nm,18.6s,baz=342,slow=30						
TSUM	**Tsumeb**	**35.22**	**291**	P	**P**	**07 20 09.3**	**-0.5**
TSUM	**Tsumeb**	**35.22**	**291**	P	**P**	**07 20 09.3**	**-0.5**
	1.9nm,0.8s,baz=81,slow=9.8,SNR=3.2						
KMBO	**Kilima Mbogo**	**38.34**	**335**	P	**P**	**07 20 37.2**	**+0.8**
KMBO	**Kilima Mbogo**	**38.34**	**335**	P	**P**	**07 20 37.2**	**+0.8**
	1.3nm,0.5s,baz=146,slow=14,SNR=3.1						
KMBO				LR	LR	07 34 27.4	
	comp=Z,183nm,19.0s,baz=96,slow=33						
SNAA	**Sanae**	**44.55**	**202**	P	**P**	**07 21 27.2**	**+0.6**
SNAA	**Sanae**	**44.55**	**202**	P	**P**	**07 21 27.2**	**+0.6**
	0.4nm,0.6s,baz=88,slow=8.0,SNR=9.7						
QSPA	**South Pole Qui**	**53.20**	**180**	*e*P	**P**	**07 22 32.6**	**-0.6**
	5.2nm,1.0s						
QSPA	**South Pole Qui**	**53.20**	**180**	P	**P**	**07 22 32.7**	**-0.6**
	4.1nm,0.7s,baz=257,slow=4.4,SNR=12						
VNDA	**Vanda**	**58.22**	**166**	P	**P**	**07 23 08.0**	**-0.9**
VNDA	**Vanda**	**58.22**	**166**	P	**P**	**07 23 08.0**	**-0.9**
	1.0nm,0.5s,baz=297,slow=4.7,SNR=12						
VNDA				LR	LR	07 45 43.6	
	comp=Z,153nm,20.4s,baz=241,slow=34						
DBIC	**Dimbokro**	**68.84**	**296**	P	**P**	**07 24 20.4**	**+0.5**
DBIC	**Dimbokro**	**68.84**	**296**	P	**P**	**07 24 20.4**	**+0.5**
	2.9nm,1.0s,baz=135,slow=7.1,SNR=3.6						
DBIC				LR	LR	07 51 03.9	
	comp=Z,105nm,19.0s,baz=125,slow=33						
TORD	**Torodi Ar. Bea**	**69.00**	**306**	P	**P**	**07 24 20.8**	**0.0**
TORD	**Torodi Ar. Bea**	**69.00**	**306**	P	**P**	**07 24 20.8**	**0.0**
	2.6nm,1.0s,baz=126,slow=5.2,SNR=14						
TORD				LR	LR	07 51 46.5	
	comp=Z,170nm,18.1s,baz=165,slow=34						
ASAR	**Alice Springs**	**69.65**	**105**	P	**P**	**07 24 24.9**	**-0.1**
ASAR	**Alice Springs**	**69.65**	**105**	P	**P**	**07 24 24.9**	**-0.1**
	0.9nm,0.6s,baz=232,slow=5.8,SNR=14						
ASAR				LR	LR	07 47 37.2	
	comp=Z,110nm,20.5s,baz=103,slow=30						
STKA	**Stephens Creek**	**71.06**	**116**	*e*P	**P**	**07 24 33.5**	**0.0**
	0.5nm,0.8s						
STKA	**Stephens Creek**	**71.06**	**116**	P	**P**	**07 24 33.6**	**+0.2**
	1.4nm,0.8s,baz=239,slow=3.4,SNR=3.7						
STKA				LR	LR	07 51 11.5	
	comp=Z,86nm,18.6s,baz=205,slow=32						
WRA	**Warramunga Arr**	**72.00**	**102**	P	**P**	**07 24 39.2**	**-0.1**
WRA	**Warramunga Arr**	**72.00**	**102**	P	**P**	**07 24 39.2**	**-0.1**
	1.3nm,0.7s,baz=231,slow=5.2,SNR=11						
WRAB	**Tennant Creek**	**72.02**	**102**	*e*P	**P**	**07 24 39.6**	**+0.2**
	5.8nm,1.0s						
BRTR	**Keskin Array B**	**78.27**	**345**	P	**P**	**07 25 13.8**	**-1.2**
BRTR	**Keskin Array B**	**78.27**	**345**	P	**P**	**07 25 13.8**	**-1.2**
	0.9nm,0.9s,baz=158,slow=3.6,SNR=4.0						
KKAR	**Karatay Array**	**81.40**	**13**	*e*P	**P**	**07 25 32.2**	**+0.5**
	3.0nm,0.9s						
AAK	**Ala-Archa**	**81.76**	**16**	*e*P	P	07 25 38.0	+4.1
	2.1nm,0.8s						
KEST	**Kesra**	**82.67**	**326**	LR	LR	07 59 10.0	
	comp=Z,46nm,21.9s,baz=195,slow=33						
PLCA	**Paso Flores**	**86.66**	**220**	LR	LR	07 57 16.0	
	comp=Z,95nm,20.8s,baz=165,slow=30						
MKAR	**Makanchi Array**	**87.61**	**20**	LR	LR	08 02 22.2	
	comp=Z,26nm,19.3s,baz=181,slow=34						
CPUP	**Villa Florida**	**88.77**	**238**	LR	LR	07 56 20.2	
	comp=Z,125nm,20.6s,baz=350,slow=29						
INK	**Inuvik**	**148.45**	**4**	PKPbc	**PKPab**	**07 33 02.9**	**-1.2**
INK	**Inuvik**	**148.45**	**4**	PKPbc	**PKPab**	**07 33 02.9**	**-1.2**
	0.8nm,0.7s,baz=344,slow=2.4,SNR=5.6						
EYMN	**Ely**	**151.46**	**304**	*e*PKPbc	**PKPbc**	**07 33 09.5**	**+0.8**
YKA	**Yellowknife Ar**	**153.23**	**347**	PKPbc	**PKPbc**	**07 33 13.8**	**+1.6**
YKA				PKPab	**PKPab**	**07 33 21.8**	**-2.3**
YKA	**Yellowknife Ar**	**153.23**	**347**	PKPbc	**PKPbc**	**07 33 13.8**	**+1.6**
	0.3nm,0.7s,baz=22,slow=2.1,SNR=4.3						
YKA				PKPab	**PKPab**	**07 33 21.7**	**-2.3**
	0.4nm,0.7s,baz=33,slow=1.7,SNR=6.5						

MEX 12 07:26:46.6±0.3, 17.95N×102.07W, h30km±13km, MD3.7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.66**	**120**	*i* P	Pb	07 26 57.5	-2.3
ZIIG				*e*S	Sb	07 27 06.2	-2.4
MMIG	**Aquila**	**1.27**	**286**	*e*P	Pn	07 27 06.2	-2.0
MMIG				*i* S	Sn	07 27 21.2	-3.1
ARIG	**Puente Sto Nin**	**1.67**	**78**	*e*P	Pn	07 27 11.5	-2.4
ARIG				*e*S	Sn	07 27 31.6	-2.7
CAIG	**El Cayaco**	**1.93**	**117**	*e*P	Pn	07 27 15.3	-2.2
CAIG				*e*S	Sn	07 27 38.2	-2.5
MEIG	**Mezcala**	**2.33**	**90**	*e*P	Pn	07 27 21.5	-1.5
MEIG				*e*S	Sn	07 27 47.9	-2.8

*ISCJB **12** 07:30:49.9±0.4, 57.25N±0.04×154.80W±0.05, h73km±4km, mb3.8/12, Error ellipse: s-maj=6.9km s-min=3.5km az=148.2*
*IDC **12** 07:30:51.4±2.5, 57.46N×155.12W, h52km±22km, mb3.6/13, mb1 3.8/16, mb1mx3.7/27, mbtmp3.6/16, ML3.6/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/36, Error ellipse: s-maj=23.3km s-min=16.1km az=21.0*
*NEIC **12** 07:30:52.4, 57.27N×154.88W, h37km, ML3.6(AEIC), After AEIC.*

ISC 12 07:30:51.8±0.7, 57.30N±0.05×154.90W±0.04, h65km±7km, n78, σ1.919/90, mb4.0/12, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAHL	**Cahill**	**0.78**	**344**	P	**Pn**	**07 31 06.7**	**-0.8**
KABR	**Katmai Barrier**	**0.83**	**357**	P	**Pn**	**07 31 07.2**	**-0.9**
OHAK	**Old Harbor**	**0.88**	**95**	P	**Pn**	**07 31 07.2**	**-1.3**
OHAK				S	**Sn**	**07 31 19.6**	**-1.3**
ACHA	**Angle Creek He**	**0.94**	**346**	P	**Pn**	**07 31 08.9**	**-0.5**
ACHA				S	**Sn**	**07 31 21.8**	**-0.6**
KCE	**Katmai Mt Cerb**	**0.95**	**351**	P	**Pn**	**07 31 09.2**	**-0.3**
KABU	**Katmai Buttres**	**0.99**	**348**	P	**Pn**	**07 31 09.9**	**-0.1**
KABU				S	**Sn**	**07 31 24.2**	**+0.6**
KAKN	**Katmai Knife C**	**1.00**	**355**	P	**Pn**	**07 31 09.6**	**-0.6**
KAKN				S	**Sn**	**07 31 23.0**	**-0.8**
KAWH	**Katmai**	**1.08**	**3**	P	**Pn**	**07 31 10.6**	**-0.6**
KELA	**Mount Kelaz**	**1.23**	**339**	P	**Pn**	**07 31 12.6**	**-0.5**
KDAK	**Kodiak Island**	**1.34**	**68**	P	**Pn**	**07 31 13.8**	**-0.6**
KDAK				S	**Sn**	**07 31 31.4**	**0.0**
KDAK	**Kodiak Island**	**1.34**	**68**	P	**Pn**	**07 31 13.7**	**-0.7**
	63nm,0.3s,baz=255,slow=10,SNR=301						
KDAK				S	**Sn**	**07 31 35.2**	**+3.9**
	146nm,0.3s,baz=76,slow=23,SNR=7.6						
FONW	**Fourpeaked Sta**	**1.62**	**18**	P	**Pn**	**07 31 18.5**	**+0.2**
FOSS	**Fourpeaked Sta**	**1.63**	**23**	P	**Pn**	**07 31 18.5**	**+0.1**
ANNE	**Aniakchak Nort**	**1.77**	**259**	P	**Pn**	**07 31 19.6**	**-0.6**
ANPK	**Aniakchak Peak**	**1.82**	**257**	P	**Pn**	**07 31 20.8**	**-0.2**
ANPK				S	**Sn**	**07 31 43.3**	**+0.2**

ANNW	**Aniakchak Nort**	**1.84**	**261**	P	**Pn**	**07 31 21.3**	**+0.1**
AZAC	**Aniakchak**	**1.86**	**259**	P	**Pn**	**07 31 21.4**	**-0.1**
CHGN	**Chignik**	**2.18**	**244**	P	**Pn**	**07 31 25.0**	**-0.7**
AUW	**Augustine West**	**2.21**	**19**	P	**Pn**	**07 31 27.1**	**+1.0**
AUNW	**Augustine NWes**	**2.21**	**19**	P	**Pn**	**07 31 27.1**	**+1.0**
OPT	**Oil Point**	**2.52**	**20**	P	**Pn**	**07 31 31.7**	**+1.4**
VNHG	**Veniaminof 1**	**2.59**	**247**	P	**Pn**	**07 31 32.1**	**+0.7**
ILS	**Iliamna Low So**	**2.83**	**19**	P	**Pn**	**07 31 35.5**	**+0.9**
INE	**Iliamna NE**	**2.93**	**18**	P	**Pn**	**07 31 37.0**	**+0.9**
BRLK	**Bradley Lake**	**3.24**	**39**	P	**Pn**	**07 31 39.8**	**-0.5**
BRLK				S	**Sn**	**07 32 15.6**	**-2.1**
RSO	**Redoubt South**	**3.36**	**18**	*e*Pn	**Pn**	**07 31 42.9**	**+1.0**
DFR	**Drift River**	**3.49**	**18**	P	**Pn**	**07 31 45.1**	**+1.4**
SDPT	**Sand Point**	**3.67**	**240**	P	**Pn**	**07 31 45.2**	**-0.8**
SDPT				S	**Sn**	**07 32 29.5**	**+1.4**
SVW2	**Sparrevohn**	**3.82**	**355**	P	**Pn**	**07 31 47.8**	**-0.3**
SEW	**Seward**	**4.00**	**43**	P	**Pn**	**07 31 49.3**	**-1.1**
CKL	**Chakachamna La**	**4.12**	**18**	P	**Pn**	**07 31 53.2**	**+0.9**
SPU	**Mount Spurr**	**4.16**	**19**	P	**Pn**	**07 31 53.3**	**+0.6**
BGL	**Barrier Glacie**	**4.18**	**17**	P	**Pn**	**07 31 54.6**	**+1.6**
PS4A	**Pavlof South-4**	**4.34**	**246**	P	**Pn**	**07 31 54.7**	**-0.5**
DT1	**Dutton Round H**	**4.67**	**245**	P	**Pn**	**07 31 58.7**	**-1.0**
PMR	**Palmer**	**5.21**	**32**	P	**Pn**	**07 32 06.5**	**-0.5**
SML	**Sawmill**	**5.62**	**34**	*e*Pn	**Pn**	**07 32 13.7**	**+1.0**
	4.1nm,0.8s						
TT01	**Tatalina**	**5.65**	**355**	P	**Pn**	**07 32 13.7**	**+0.6**
EYAK	**Cordova Ski Ar**	**5.75**	**52**	P	**Pn**	**07 32 13.4**	**-1.0**
PPLA	**Purkeypile**	**5.77**	**12**	P	**Pn**	**07 32 15.7**	**+0.8**
VLZ	**Valdez**	**5.84**	**45**	P	**Pn**	**07 32 15.3**	**-0.3**
RAGM	**Ragged Mountai**	**6.14**	**56**	P	**Pn**	**07 32 18.2**	**-1.6**
GOAT	**Goat Mountain**	**6.21**	**54**	P	**Pn**	**07 32 20.2**	**-0.5**
TRF	**Thorofare Moun**	**6.58**	**18**	P	**Pn**	**07 32 26.9**	**+1.0**
DHY	**Denali Highway**	**6.90**	**30**	P	**Pn**	**07 32 29.5**	**-0.7**
VRDI	**Verde Repeater**	**7.06**	**51**	P	**Pn**	**07 32 31.6**	**-0.9**
KIAG	**Kiagna River**	**7.40**	**55**	P	**Pn**	**07 32 36.7**	**-0.5**
UNV	**Unalaska Valle**	**7.43**	**247**	P	**Pn**	**07 32 36.1**	**-1.3**
BALM	**Baldy**	**7.46**	**55**	P	**Pn**	**07 32 37.5**	**-0.4**
MSW	**Makushin Switc**	**7.54**	**248**	P	**Pn**	**07 32 37.8**	**-1.1**
GRNC	**Granite Creek**	**7.60**	**58**	P	**Pn**	**07 32 39.2**	**-0.7**
BARN	**Barnard Glacie**	**7.77**	**55**	P	**Pn**	**07 32 41.5**	**-0.8**
COLA	**College**	**8.32**	**21**	P	**Pn**	**07 32 48.3**	**-1.2**
IL1	**Eielson Array**	**8.43**	**24**	P	**Pn**	**07 32 49.8**	**-1.3**
ILAR	**Eielson Array**	**8.43**	**24**	P	**Pn**	**07 32 49.7**	**-1.4**
	0.4nm,0.3s,baz=213,slow=13,SNR=34						
ILAR				S	**Sn**	**07 34 19.9**	**-4.7**
	0.4nm,0.3s,baz=217,slow=19,SNR=5.5						
PNL	**Peninsula**	**8.46**	**67**	P	**Pn**	**07 32 50.0**	**-1.5**
BCA3	**Beaver Creek A**	**8.71**	**43**	P	**Pn**	**07 32 54.0**	**-0.9**
IM3	**Indian Mountai**	**8.73**	**3**	P	**Pn**	**07 32 55.5**	**+0.4**
EGAK	**Eagle**	**10.01**	**36**	*e*Pn	**Pn**	**07 33 14.1**	**+1.5**
	3.4nm,0.8s						
TNA	**Tin City**	**10.34**	**329**	*e*Pn	**Pn**	**07 33 18.2**	**+1.1**
	12nm,0.5s						
INK	**Inuvik**	**14.63**	**

KOK	**Koryaka**	**0.39**	**120**	P	**Pn**	**07 51 17.6**	**+0.3**
PETK	**Petropavlovsk-**	**0.44**	**211**	PN	**Pn**	**07 51 16.9**	**-0.4**
PETK				S	**S**	**07 51 39.0**	**-0.2**
PETK				pmax	pmax		
	comp=Z,31nm,0.3s						
PETK	**Petropavlovsk-**	**0.44**	**211**	P	**Pn**	**07 51 16.9**	**-0.4**
	comp=Z,31nm,0.3s,baz=75,slow=7.4,SNR=455						
PETK				S	**S**	**07 51 39.0**	**-0.2**
	baz=114,slow=17,SNR=0.6						
KRER	**Koryakskii**	**0.44**	**114**	P	**Pn**	**07 51 17.9**	**+0.4**
AVH	**Avacha**	**0.45**	**119**	P	**Pn**	**07 51 17.8**	**+0.4**
SMAR	**Somma**	**0.49**	**117**	P	**Pn**	**07 51 17.8**	**+0.1**
SDLR	**Sedlovina**	**0.53**	**113**	P	**Pn**	**07 51 17.9**	**+0.2**
SDLR				S	**S**	**07 51 41.1**	**+1.2**
UGLR	**Uglovaya**	**0.53**	**121**	P	**Pn**	**07 51 18.0**	**+0.3**
UGLR				S	**S**	**07 51 40.3**	**+0.4**
PET	**Petropavlovsk**	**0.58**	**143**	*i* P	**Pn**	**07 51 17.6**	**-0.1**
PET				*eS*	**S**	**07 51 40.5**	**+0.5**
PET				pmax	pmax		
	comp=Z,199nm,0.4s						
PET				smax	smax		
	comp=E,97nm,0.7s						
PET				smax	smax		
	comp=N,132nm,0.8s						
PET	**Petropavlovsk**	**0.58**	**143**	P	**Pn**	**07 51 17.8**	**+0.1**
PET				S	**S**	**07 51 39.6**	**-0.4**
APC	**Apacha**	**0.79**	**225**	P	**Pn**	**07 51 18.2**	**-0.5**
APC				S	**S**	**07 51 40.5**	**-1.2**
NLC	**Nalytchevo**	**0.82**	**112**	P	**Pn**	**07 51 19.1**	**+0.2**
NLC				S	**S**	**07 51 42.7**	**+0.8**
MTVR	**Mutnovka**	**1.00**	**176**	P	**Pn**	**07 51 20.5**	**+0.3**
MTVR				S	**S**	**07 51 44.8**	**+0.6**
RUS	**Russkaya**	**1.08**	**166**	P	**Pn**	**07 51 20.1**	**-0.5**
RUS				S	**S**	**07 51 44.0**	**-0.8**
ASAK	**Asacha**	**1.11**	**186**	P	**Pn**	**07 51 21.2**	**+0.3**
ASAK				S	**S**	**07 51 45.6**	**+0.3**
SPN	**Mys Shipunski**	**1.23**	**108**	P	**Pn**	**07 51 21.1**	**-0.5**
SPN				S	**S**	**07 51 45.8**	**-0.8**
MIPR	**Malaya Ipel'ka**	**1.45**	**214**	P	**Pn**	**07 51 22.8**	**-0.6**
MIPR				S	**S**	**07 51 48.3**	**-1.4**
TUMR	**Tumrok**	**2.17**	**33**	P	**Pn**	**07 51 30.8**	**+0.6**
TUMR				S	**S**	**07 52 03.3**	**+1.3**
MKZ	**Mys Kozlova**	**2.41**	**62**	P	**Pn**	**07 51 32.1**	**-0.4**
MKZ				S	**S**	**07 52 03.5**	**-2.7**
ESO	**Esso**	**2.47**	**8**	P	**Pn**	**07 51 32.9**	**-0.4**
KMNR	**Kamenistaya**	**2.60**	**28**	P	**Pn**	**07 51 35.3**	**+0.5**
KMNR				S	**S**	**07 52 09.8**	**-0.4**
KPT	**Kopyto**	**2.78**	**26**	S	**S**	**07 52 11.1**	**-2.7**
SRDR	**Sredinnyy**	**2.99**	**18**	S	**S**	**07 52 18.9**	**+0.8**
SKR	**Severo-Kuril's**	**3.06**	**204**	S	**S**	**07 52 20.5**	**+1.3**
BDR	**Baidarnaya**	**3.58**	**29**	P	**Pn**	**07 51 46.9**	**+0.8**
SMKR	**Semkarok**	**3.67**	**31**	P	**Pn**	**07 51 47.8**	**+0.6**
SMKR				S	**S**	**07 52 33.7**	**+1.2**
KBTR	**Krutoberegovo**	**3.87**	**43**	P	**Pn**	**07 51 49.7**	**+0.2**
BKI	**Bering**	**4.93**	**66**	P	**Pn**	**07 52 02.5**	**-0.2**
BKI				S	**S**	**07 52 56.4**	**-4.2**
ILAR	**Eielson Array**	**29.40**	**46**	P	**P**	**07 56 33.1**	**+0.8**
	comp=N,0.2nm,0.6s,baz=261,slow=6.1,SNR=5.1						
YKA	**Yellowknife Ar**	**43.69**	**42**	P	**P**	**07 58 33.5**	**+0.9**
	comp=N,0.2nm,0.5s,baz=301,slow=7.2,SNR=3.7						
MKAR	**Makanchi Array**	**46.89**	**294**	P	**P**	**07 58 55.6**	**-2.4**
MKAR	**Makanchi Array**	**46.89**	**294**	P	**P**	**07 58 55.6**	**-2.4**
	comp=N,0.1nm,0.5s,baz=51,slow=4.7,SNR=2.5						
PDAR	**Pinedale Array**	**58.38**	**60**	P	**P**	**08 00 24.2**	**+1.8**
	comp=N,0.3nm,0.6s,baz=340,slow=1.7,SNR=3.5						
AKASG	**Malin Array Be**	**67.64**	**328**	*i* P	P	08 01 28.3	+5.5
WRA	**Warramunga Arr**	**75.95**	**203**	P	**P**	**08 02 12.2**	**-0.3**
	comp=N,0.2nm,0.4s,baz=11,slow=5.1,SNR=2.6						
ASAR	**Alice Springs**	**79.64**	**202**	P	**P**	**08 02 33.3**	**+0.5**
	comp=N,0.1nm,0.5s,baz=12,slow=5.0,SNR=3.6						

IDC 12 08:20:04.9±1.0, 11°26N×140°64E, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.6/25, mbtmp3.6/6, ML3.4/1, Error ellipse: s-maj=40.0km s-min=22.1km az=107.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.74**	**60**	Pn	Pn	08 21 19.8	+2.1
	1.7nm,0.3s,baz=30,slow=20,SNR=2.0						
WRA	**Warramunga Arr**	**31.62**	**191**	P	P	08 26 29.3	-0.5
	0.5nm,0.9s,baz=11,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**35.33**	**191**	P	P	08 27 02.6	+0.5
	0.2nm,0.6s,baz=8.9,slow=12,SNR=4.8						
MKAR	**Makanchi Array**	**60.35**	**318**	P	P	08 30 16.6	+0.7
	0.3nm,0.7s,baz=115,slow=6.5,SNR=3.5						
ILAR	**Eielson Array**	**72.43**	**25**	P	P	08 31 31.6	-1.3
	0.2nm,0.5s,baz=247,slow=6.1,SNR=7.2						
YKA	**Yellowknife Ar**	**86.80**	**27**	P	P	08 32 51.2	+0.2
	0.4nm,0.6s,baz=287,slow=5.2,SNR=5.1						

ISK 12 08:45:02.5, 37°27N×28°20E, h5km, MD2.6
DDA 12 08:45:03.0, 37°24N×28°23E, h7km, MD2.6
CSEM 12 08:45:03.7±0.2, 37°25N×28°23E, h1km, MD2.6, Error ellipse: s-maj=4.2km s-min=2.9km az=35.0
ISCJB 12 08:45:03.5±0.7, 37°26N±0°04×28°24E±0°05, h0km, Error ellipse: s-maj=7.4km s-min=4.4km az=135.7

ISC 12 08:45:03.6±1.1, 37°26N±0°03×28°26E±0°04, h0km, n16, o0s56/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**172**	*e*PG	**Pg**	**08 45 06.0**	**0.0**
YER				*e*SG	**Sg**	**08 45 08.8**	**+1.1**
YER	**Yerkesik**	**0.13**	**172**	*e*Pg	**Pg**	**08 45 06.0**	**0.0**
YER				*e*Sg	**Sg**	**08 45 08.8**	**+1.1**
MLSB	**Milas**	**0.39**	**275**	*e*PG	**Pg**	**08 45 10.4**	**-0.6**
MLSB				*e*SG	**Sg**	**08 45 16.3**	**+0.3**
MLSB	**Milas**	**0.39**	**275**	*e*Pg	**Pg**	**08 45 10.4**	**-0.6**
MLSB				*e*Sg	**Sg**	**08 45 16.3**	**+0.3**
TURN	**Turunc**	**0.48**	**145**	*i* P	**Pg**	**08 45 12.2**	**-0.5**
TURN	**Turunc**	**0.48**	**145**	*i* P	**Pg**	**08 45 12.2**	**-0.5**
AYDN	**Tasoluk**	**0.50**	**323**	*i* P	**Pg**	**08 45 13.2**	**+0.1**
AYDN				*i* S	**Sg**	**08 45 20.5**	**+0.9**
AYDN	**Tasoluk**	**0.50**	**323**	*i* P	**Pg**	**08 45 13.2**	**+0.1**
AYDN				*i* S	**Sg**	**08 45 20.5**	**+0.9**
DNZL	**Cakiroluk**	**0.76**	**56**	*i* P	**Pb**	**08 45 19.3**	**-0.4**
DNZL	**Cakiroluk**	**0.76**	**56**	*i* P	**Pb**	**08 45 19.3**	**-0.4**
DAT	**Datca**	**0.76**	**226**	*e*PG	**Pg**	**08 45 17.9**	**-0.2**
DAT	**Datca**	**0.76**	**226**	*e*Pg	**Pg**	**08 45 18.0**	**-0.2**
BODT	**Bodrum**	**0.79**	**255**	*e*PG	**Pg**	**08 45 18.4**	**-0.2**
BODT	**Bodrum**	**0.79**	**255**	*e*Pg	**Pg**	**08 45 18.4**	**-0.2**
FETY	**Fethiye**	**0.91**	**133**	*e*PG	**Pb**	**08 45 21.9**	**-0.3**
FETY	**Fethiye**	**0.91**	**133**	*e*Pg	**Pb**	**08 45 21.9**	**-0.3**

IDC 12 08:46:20.7±1.4, 24°08S×66°89W, h172km±11km, mb3.8/7, mb1 4.0/12, mb1mx3.9/19, mbtmp3.9/12, Error ellipse: s-maj=18.3km s-min=11.7km az=98.0
ISCJB 12 08:46:20.2±0.5, 24°09S±0°04×66°90W±0°06, h179km±6km, mb3.9/15, Error ellipse: s-maj=8.4km s-min=6.0km az=173.9
NEIC 12 08:46:21.5±0.4, 24°09S×66°88W, h178km±4km, mb4.2/15, Error ellipse: s-maj=7.1km s-min=6.0km az=82.0
GUC 12 08:46:23.6±0.5, 23°84S×67°36W, h212km±5km, ML5.2

ISC 12 08:46:21.6±0.7, 24°08S±0°05×66°93W±0°06, h181km±6km, n70, σ1s46/83, mb4.0/15, 13C, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.65**	**315**	*i* P	**Pn**	**08 46 57.3**	**+1.9**
SPCH				*i* S	**Sn**	**08 47 23.4**	**+1.9**
SPCH	**San Pedro de A**	**1.65**	**315**	*i* P	**Pn**	**08 46 57.3**	**+1.9**
SPCH				*i* S	**Sn**	**08 47 23.4**	**+1.9**
LVC	**Limon Verde**	**2.33**	**308**	*i* P	**Pn**	**08 47 03.4**	**+0.7**
LVC				*i* S	**Sn**	**08 47 33.7**	**-0.8**
LVC	**Limon Verde**	**2.33**	**308**	*i* P	**Pn**	**08 47 03.4**	**+0.7**
LVC				*i* S	**Sn**	**08 47 33.7**	**-0.8**
PB04	**Plate Boundary**	**2.96**	**307**	*i* P	Pn	08 47 15.1	+5.3
PB04				*i* S	Sn	08 47 54.6	+7.2
PB04	**Plate Boundary**	**2.96**	**307**	*i* P	Pn	08 47 15.1	+5.3
PB04				*i* S	Sn	08 47 54.6	+7.2
PB04				AML	AML	08 47 56.5	
	comp=N,5μm,0.4s						
CEN1	**Los Morros**	**3.07**	**282**	*e*P	**Pn**	**08 47 13.2**	**+2.0**
CEN1				*i* S	**Sn**	**08 47 50.3**	**+0.4**
CEN1	**Los Morros**	**3.07**	**282**	*e*P	**Pn**	**08 47 13.2**	**+2.0**
CEN1				*i* S	**Sn**	**08 47 50.3**	**+0.4**
CEN1				AML	AML	08 47 53.3	
	comp=N,1μm,0.6s						
PB09	**Plate Boundary**	**3.11**	**316**	*i* P	**Pn**	**08 47 12.3**	**+0.5**
PB09				*i* S	**Sn**	**08 47 48.9**	**-2.1**
PB09	**Plate Boundary**	**3.11**	**316**	*i* P	**Pn**	**08 47 12.3**	**+0.5**
PB09				*i* S	**Sn**	**08 47 48.9**	**-2.1**
PB09				AML	AML	08 47 51.0	
	comp=N,9μm,0.5s						
ANCH	**Antofagasta**	**3.21**	**276**	*i* P	**Pn**	**08 47 12.9**	**+0.1**
ANCH				*i* S	**Sn**	**08 47 50.6**	**-2.1**
ANCH	**Antofagasta**	**3.21**	**276**	*i* P	**Pn**	**08 47 12.9**	**+0.1**
ANCH				*i* S	**Sn**	**08 47 50.6**	**-2.1**
ANCH				AML	AML	08 47 52.0	
	comp=E,3μm,0.1s						
MECH	**Mejillones**	**3.37**	**286**	*i* P	**Pn**	**08 47 14.9**	**+0.1**
MECH				*i* S	**Sn**	**08 47 53.6**	**-2.6**
MECH	**Mejillones**	**3.37**	**286**	*i* P	**Pn**	**08 47 14.9**	**+0.1**
MECH				*i* S	**Sn**	**08 47 53.6**	**-2.6**
MECH				AML	AML	08 47 56.4	
	comp=N,4μm,0.2s						
PB01	**Plate Boundary**	**3.83**	**321**	*i* P	**Pn**	**08 47 19.9**	**-0.9**
PB01				*i* S	**Sn**	**08 48 03.3**	**-3.7**
PB01	**Plate Boundary**	**3.83**	**321**	*i* P	**Pn**	**08 47 19.9**	**-0.9**
PB01				*i* S	**Sn**	**08 48 03.3**	**-3.7**
LCO	**Las Campanas**	**5.96**	**214**	*e*Pn	**Pn**	**08 47 46.6**	**-1.7**
	comp=N,49nm,0.5s						
LCO				*e*Sn	Sn	08 48 46.1	-11
CFAA	**Coronel Fontan**	**7.59**	**188**	P	**Pn**	**08 48 08.3**	**-1.1**
CFAA				S	**Sn**	**08 49 31.6**	**-3.3**
CFAA	**Coronel Fontan**	**7.59**	**188**	P	**Pn**	**08 48 08.3**	**-1.1**
	comp=N,0.6nm,0.3s,baz=12,slow=12,SNR=116						
CFAA				S	**Sn**	**08 49 31.6**	**-3.3**
	comp=N,1.3nm,0.3s,baz=290,slow=22,SNR=12						
LPAZ	**La Paz**	**7.83**	**352**	*e*Pn	**Pn**	**08 48 12.9**	**-0.4**
	comp=N,22nm,0.5s						
LPAZ				S	**Sn**	**08 49 38.4**	**-3.3**
LPAZ	**La Paz**	**7.83**	**352**	P	**Pn**	**08 48 13.1**	**-0.2**
	comp=N,5.7nm,0.3s,baz=158,slow=9.9,SNR=174						
LPAZ				S	**Sn**	**08 49 38.4**	**-3.3**
	comp=N,0.8nm,0.3s,baz=60,slow=20,SNR=3.7						
ARE	**Arequipa**	**8.70**	**330**	*e*P	Pn	08 48 28.0	+3.6
ARE				*e*S	Sn	08 49 53.0	-8.9
CPUP	**Villa Florida**	**8.98**	**106**	P	**Pn**	**08 48 27.2**	**-0.6**
CPUP	**Villa Florida**	**8.98**	**106**	P	**Pn**	**08 48 27.2**	**-0.6**
	comp=N,1.5nm,0.3s,baz=265,slow=11,SNR=13						
SIV	**San Ignacio**	**9.75**	**35**	P	**Pn**	**08 48 36.7**	**-1.2**
SIV	**San Ignacio**	**9.75**	**35**	P	**Pn**	**08 48 36.7**	**-1.2**
	comp=N,7.1nm,0.3s,baz=234,slow=12,SNR=56						
TRQA	**Tornquist**	**14.56**	**164**	*e*Pn	**Pn**	**08 49 38.5**	**-0.6**
	comp=N,2.2nm,0.6s						
SAML	**Samuel**	**15.47**	**14**	*e*P	**Pn**	**08 49 49.7**	**-0.7**
	comp=N,5.3nm,1.0s						
PLCA	**Paso Flores**	**16.88**	**190**	*e*P	**P**	**08 50 07.1**	**+0.7**
	comp=N,11nm,0.8s						
PLCA	**Paso Flores**	**16.88**	**190**	P	**P**	**08 50 07.0**	**+0.5**
	comp=N,0.8nm,0.3s,baz=14,slow=12,SNR=15						
SPB	**Sao Paulo**	**17.85**	**92**	*e*P	**P**	**08 50 17.3**	**+0.2**
	comp=N,21nm,0.6s						
BDFB	**Brasilia**	**19.66**	**68**	P	**P**	**08 50 37.6**	**+0.7**
BDFB	**Brasilia**	**19.66**	**68**	P	**P**	**08 50 37.6**	**+0.7**
	comp=N,12nm,0.3s,baz=239,slow=11,SNR=179						
CAM4	**Nova Friburgo**	**22.45**	**91**	*i* P	**P**	**08 51 03.5**	**-2.5**
CAM4				*i*		08 51 06.8	
CAM4				*i*		08 51 08.9	
CAM4				*i*		08 51 18.9	
CAM4				*i*		08 52 02.3	
CAM4				*i*		08 52 37.7	
RCBR	**Riachuelo**	**34.90**	**64**	*e*P	**P**	**08 52 56.5**	**+0.3**
	comp=N,7.0nm,0.6s						
VNA2	**Neumayer--Watz**	**57.62**	**160**	*e*P	**P**	**08 55 54.3**	**+2.0**
VNA2	**Neumayer--Watz**	**57.62**	**160**	*e*	P	08 55 57.0	+4.7
SNAA	**Sanae**	**59.26**	**161**	*e*P	**P**	**08 56 05.2**	**+1.6**
SNAA	**Sanae**	**59.26**	**161**	*e*	P	08 56 07.4	+3.8
WVT	**Waverly**	**63.06**	**341**	*e*P	**P**	**08 56 28.7**	**-0.8**
	comp=N,1.7nm,0.5s						
QSPA	**South Pole Qui**	**66.13**	**180**	*e*P	**P**	**08 56 50.8**	**+1.6**
	comp=N,3.2nm,0.6s						
DBIC	**Dimbokro**	**67.77**	**71**	*e*P	**P**	**08 57 01.3**	**+1.0**
	comp=N,3.7nm,0.5s						
DBIC	**Dimbokro**	**67.77**	**71**	P	**P**	**08 56 59.0**	**-1.2**
	comp=N,2.7nm,0.4s,baz=222,slow=7.5,SNR=8.2						
ANMO	**Albuquerque**	**69.64**	**326**	*e*P	**P**	**08 57 12.5**	**+0.8**
	comp=N,4.4nm,1.6s						
SDCO	**Great Sand Dun**	**71.39**	**329**	*e*P	**P**	**08 57 23.3**	**+1.1**
	comp=N,1.0nm,0.8s						
VNDA	**Vanda**	**74.64**	**190**	P	**P**	**08 57 41.7**	**+1.3**
VNDA	**Vanda**	**74.64**	**190**	P	**P**	**08 57 41.7**	**+1.3**
	comp=N,1.0nm,0.8s,baz=147,slow=2.4,SNR=4.0						
TOAO	**Torodi Ar. Sit**	**76.54**	**69**	*e*P	**P**	**08 57 52.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**76.54**	**69**	P	**P**	**08 57 52.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**76.54**	**69**	P	**P**	**08 57 52.0**	**-0.3**
	comp=N,5.3nm,0.6s,baz=258,slow=5.5,SNR=69						
PDAR	**Pinedale Array**	**77.25**	**329**	P	**P**	**08 57 56.8**	**+0.9**
PDAR	**Pinedale Array**	**77.25**	**329**	P	**P**	**08 57 56.8**	**+0.9**
	comp=N,0.2nm,0.6s,baz=124,slow=5.7,SNR=3.4						
TSUM	**Tsumeb**	**77.57**	**106**	*e*P	**P**	**08 57 58.4**	**+0.2**
	comp=N,2.6nm,0.6s						
HLID	**Hailey**	**80.19**	**327**	*e*P	**P**	**08 58 13.1**	**+1.2**
	comp=N,1.4nm,0.7s						
BOSA	**Boshof**	**80.64**	**117**	P	**P**	**08 58 14.7**	**0.0**
BOSA	**Boshof**	**80.64**	**117**	P	**P**	**08 58 14.7**	**0.0**
	comp=N,2.8nm,0.8s,baz=201,slow=3.9,SNR=5.2						
MAW	**Mawson**	**81.34**	**163**	P	**P**	**08 58 17.8**	**+0.4**
MAW	**Mawson**	**81.34**	**163**	P	**P**	**08 58 17.8**	**+0.4**
	comp=N,1.6nm,0.5s,baz=228,slow=7.9,SNR=6.2						
LBTB	**Lobatse**	**82.30**	**114**	*e*P	**P**	**08 58 23.9**	**+0.5**
	comp=N,3.2nm,0.6s						
YKA	**Yellowknife Ar**	**94.22**	**340**	P	**P**	**08 59 19.3**	**-0.1**
YKA	**Yellowknife Ar**	**94.22**	**340**	P	**P**	**08 59 19.3**	**-0.1**
	comp=N,0.2nm,0.4s,baz=132,slow=4.9,SNR=6.0						
ASAR	**Alice Springs**	**128.40**	**205**	PKP	**PKPdf**	**09 05 07.6**	**+0.1**
ASAR	**Alice Springs**	**128.41**	**205**	PKP	**PKPdf**	**09 05 07.6**	**+0.1**
	comp=N,0.9nm,0.5s,baz=137,slow=2.1,SNR=14						
WRA	**Warramunga Arr**	**131.59**	**207**	PKP	**PKPdf**	**09 05 13.9**	**+0.4**
WRA				SKPbc	**SKPbc**	**09 08 21.1**	**-1.0**
WRA	**Warramunga Arr**	**131.59**	**207**	PKP	**PKPdf**	**09 05 13.9**	**+0.4**
	comp=N,0.8nm,0.5s,baz=153,slow=1.9,SNR=27						
WRA				SKPbc	**SKPbc**	**09 08 21.1**	**-1.0**
	comp=N,0.9nm,0.6s,baz=149,slow=3.5,SNR=14						
ZALV	**Zalesovo Beam**	**143.43**	**28**	PKP	PKPbc	09 05 31.9	+0.1
ZALV	**Zalesovo Beam**	**143.43**	**28**	PKP	PKPbc	09 05 31.9	+0.1
	comp=N,1.3nm,0.4s,baz=280,slow=4.6,SNR=5.3						
MK31	**Makanchi Array**	**146.54**	**40**	*e*PKPbc	**PKPbc**	**09 05 41.5**	**-0.1**
MKAR	**Makanchi Array**	**146.54**	**40**	PKPbc	**PKPbc**	**09 05 41.2**	**-0.4**
MKAR	**Makanchi Array**	**146.54**	**40**	PKPbc	**PKPbc**	**09 05 41.2**	**-0.4**
	comp=N,1.8nm,0.6s,baz=303,slow=3.3,SNR=30						

MEX 12 08:52:36.2±0.6, 16°70N×98°88W, h12km±9km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.79**	**113**	*e*P	Pg	08 52 48.9	-2.6
PNIG				*i* S	Sg	08 52 59.6	-2.2
CAIG	**El Cayaco**	**1.37**	**285**	*e*P	Pn	08 52 57.3	-3.8
CAIG				*e*S	Sn	08 53 13.7	-5.5
MEIG	**Mezcala**	**1.41**	**330**	*e*P	Pn	08 52 58.0	-3.7
MEIG				*i* S	Sn	08 53 15.0	-5.3
UTMO	**Huajuapan**	**1.52**	**42**	*e*P	Pn	08 52 59.0	-4.4
UTMO				*i* S	Sn	08 53 18.1	-5.3
VHO	**Vista Hermosa**	**2.09**	**80**	*e*P	Pn	08 53 08.5	-2.8
VHO				*e*S	Sn	08 53 33.0	-4.4
ARIG	**Puente Sto Nin**	**2.10**	**318**	*e*P	Pn	08 53 08.8	-2.4
ARIG				*e*S	Sn	08 53 32.8	-4.5
HUIG	**Huatulco**	**2.82**	**109**	*i* P	Pn	08 53 17.8	-3.3
HUIG				*i* S	Sn	08 53 52.0	-3.0

GUC 12 08:55:04.5±0.7, 30°01S×71°32W, h34km±3km, MD3.8, ML3.8, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.19**	**167**	*i* P	Pb	08 55 25.8	-0.9
CMCH				*i* S	Sb	08 55 41.2	-0.7
CMCH				AML	AML	08 55 43.5	
	comp=E,3μm,0.6s						
CHNG	**Los Chungos**	**1.87**	**185**	*i* P	Pn	08 55 35.4	+1.2
CHNG				*i* S	Sb	08 55 58.9	-2.2
CPCH	**Copiapo**	**2.78**	**18**	*i* P	Pn	08 55 47.5	+0.9
CPCH				*i* S	Sn	08 56 21.2	+2.2
ROCH	**El Roble**	**2.96**	**175**	*i* P	Pn	08 55 50.5	+1.0
ROCH				*i* S	Sn	08 56 25.7	+1.7
ROCH				AML	AML	08 56 39.8	
	comp=E,199nm,0.5s						
PEL	**Peldehue**	**3.17**	**170**	*i* P	Pn	08 55 53.6	+1.5
PEL				*i* S	Sn	08 56 30.5	+1.8
PEL				AML	AML	08 56 48.8	
	comp=E,205nm,0.6s						
CLCH	**Cerro Calan**	**3.44**	**169**	*e*P	Pn	08 55 57.4	+1.6
CLCH				*i* S	Sn	08 56 37.7	+2.2
CLCH				AML	AML	08 56 56.2	
	comp=E,153nm,0.4s						
ANTU	**Antumapu**	**3.59**	**171**	*i* S	Sn	08 56 40.9	+1.6
ANTU				AML	AML	08 56 57.1	
	comp=E,119nm,0.5s						
TACH	**Talagante**	**3.65**	**175**	*i* P	Pn	08 55 59.9	+1.3
TACH				*i* S	Sn	08 56 41.8	+1.3
PCH	**Pirque**	**3.66**	**169**	*i* P	Pn	08 56 00.6	+1.6
PCH				*i* S	Sn	08 56 42.8	+1.8

MOS 12 09:06:44.8±1.8, 52°49N×160°52E, h39km, mb4.2/1, Error ellipse: s-maj=36.7km s-min=30.2km az=2.8
IDC 12 09:06:45.9±1.5, 53°36N×160°66E, h45km±16km, mb3.1/5, mb1 3.4/6, mb1mx3.2/27, mbtmp3.2/6, ML3.1/1, Error ellipse: s-maj=31.7km s-min=10.8km az=171.0
ISCJB 12 09:06:45.7±0.5, 53°27N±0°03×160°64E±0°06, h46km±6km, mb3.2/5, Error ellipse: s-maj=6.6km s-min=2.7km az=36.6
KRSC 12 09:06:46.4±0.4, 53°30N×160°57E, h38km±27km, ML3.9

ISC 12 09:06:46.0±1.0, 53°25N±0°04×160°66E±0°04, h41km±12km, n47, σ1s26/83, mb3.4/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.41**	**248**	P	**Pn**	**09 06 55.5**	**-0.1**
SPN				*i* S	**Sn**	**09 07 01.8**	**-0.5**
NLC	**Nalytchevo**	**0.79**	**265**	*e*P	**Pn**	**09 07 00.3**	**-0.4**
NLC				*i* S	**Sn**	**09 07 10.5**	**-0.8**
KII	**Karymskiy**	**1.06**	**318**	*e*P	**Pn**	**09 07 03.6**	**-0.9**
KII				*i* S	**Sn**	**09 07 16.3**	**-1.8**
SDLR	**Sedlovina**	**1.07**	**272**	P	**Pn**	**09 07 04.3**	**-0.2**
SDLR				*i* S	**Sn**	**09 07 16.6**	**-1.6**
UGLR	**Uglovaya**	**1.10**	**268**	P	**Pn**	**09 07 05.2**	**+0.2**
UGLR				*i* S	**Sn**	**09 07 19.0**	**-0.1**
SMAR	**Somma**	**1.11**	**271**	P	**Pn**	**09 07 05.0**	**-0.3**
SMAR				*i* S	**Sn**	**09 07 18.2**	**-1.3**
KRER	**Koryakskii**	**1.15**	**273**	P	**Pn**	**09 07 05.7**	**0.0**
KRER				*i* S	**Sn**	**09 07 19.5**	**-0.8**
AVH	**Avacha**	**1.15**	**271**	P	**Pn**	**09 07 05.8**	**+0.1**
AVH				*i* S	**Sn**	**09 07 19.2**	**-1.1**
KOK	**Koryaka**	**1.22**	**273**	P	**Pn**	**09 07 06.4**	**-0.1**
KOK				*i* S	**Sn**	**09 07 20.1**	**-1.7**
PET	**Petropavlovsk**	**1.23**	**260**	*e*PN	**Pn**	**09 07 06.3**	**-0.3**
PET				*e*S	**Sn**	**09 07 20.9**	**-1.1**
PET				pmax	pmax		
	comp=Z,69nm,0.5s						
PET				smax	smax		
	comp=N,410nm,0.5s						
PET	**Petropavlovsk**	**1.23**	**260**	P	**Pn**	**09 07 06.8**	**+0.2**
PET				*i* S	**Sn**	**09 07 20.9**	**-1.1**
MKZ	**Mys Kozlova**	**1.45**	**25**	P	**Pn**	**09 07 09.0**	**-0.7**
MKZ				*i* S	**Sn**	**09 07 25.4**	**-2.1**
RUS	**Russkaya**	**1.54**	**239**	P	**Pn**	**09 07 10.9**	**0.0**
RUS				*i* S	**Sn**	**09 07 28.9**	**-0.7**
GNL	**Ganaly**	**1.68**	**286**	P	**Pn**	**09 07 13.2**	**+0.2**
MTVR	**Mutnovka**	**1.69**	**244**	*e*P	**Pn**	**09 07 13.4**	**+0.3**
MTVR				*i* S	**Sn**	**09 07 33.2**	**-0.3**
GRL	**Gorelyy**	**1.71**	**247**	P	**Pn**	**09 07 14.8**	**+1.4**
GRL				*i* S	**Sn**	**09 07 35.2**	**+1.0**
PETK	**Petropavlovsk-**	**1.79**	**267**	PN	**Pn**	**09 07 15.0**	**+0.7**
PETK				S	**Sn**	**09 07 36.1**	**+0.3**
PETK				pmax	pmax		
	comp=Z,17nm,0.3s						
PETK				smax	smax		
	comp=N,21nm,0.3s						
PETK	**Petropavlovsk-**	**1.79**	**267**

DAT	**Datca**	**1.45**	**38**	*e*PN	**Pb**	**09 30 17.4**	**+0.4**
DAT	**Datca**	**1.45**	**38**	*e*Pn	**Pb**	**09 30 17.4**	**+0.4**
SIVA	**Sivas**	**1.47**	**248**	*e*PN	**Pn**	**09 30 16.1**	**+0.6**
SIVA	**Sivas**	**1.47**	**248**	*e*Pn	**Pn**	**09 30 16.1**	**+0.6**
ARG	**Arkhangelos**	**1.48**	**65**	*e*PN	**Pb**	**09 30 16.8**	**-0.7**
ARG	**Arkhangelos**	**1.48**	**65**	*e*Pn	**Pb**	**09 30 16.8**	**-0.7**
BODT	**Bodrum**	**1.62**	**25**	*e*Pn	**Pb**	**09 30 19.5**	**-0.4**
BODT				*e*SN	**Sb**	**09 30 39.9**	**0.0**
BODT	**Bodrum**	**1.62**	**25**	*e*Pn	**Pb**	**09 30 19.5**	**-0.4**
BODT				*e*Sn	**Sb**	**09 30 39.9**	**0.0**
APE	**Apeiranthos**	**1.66**	**333**	PN	**Pb**	**09 30 19.4**	**-1.1**
APE	**Apeiranthos**	**1.66**	**333**	*e*PN	**Pn**	**09 30 18.6**	**+0.4**
APE				*e*SN	**Sn**	**09 30 39.1**	**+0.4**
APE	**Apeiranthos**	**1.66**	**333**	*i* Pn	**Pb**	**09 30 19.5**	**-1.1**
APE				*e*Sn	**Sn**	**09 30 39.1**	**+0.4**
VAM	**Vamos**	**1.86**	**265**	*e*PB	**Pn**	**09 30 21.0**	**+0.1**
VAM	**Vamos**	**1.86**	**265**	*e*Pb	**Pn**	**09 30 21.0**	**+0.1**
TURN	**Turunc**	**2.15**	**53**	*i* P	Pn	09 30 21.7	-3.2
TURN				*i* S	**Sn**	**09 30 46.3**	**-4.4**
TURN	**Turunc**	**2.15**	**53**	*i* P	Pn	09 30 21.7	-3.2
DALY	**Dalyan (Mu˘la**	**2.15**	**55**	*e*PN	**Pb**	**09 30 27.6**	**-1.3**
DALY	**Dalyan (Mu˘la**	**2.15**	**55**	*e*Pn	**Pb**	**09 30 27.6**	**-1.3**
AYDN	**Tasoluk**	**2.36**	**28**	*i* P	**Pb**	**09 30 31.7**	**-0.8**
AYDN	**Tasoluk**	**2.36**	**28**	*i* P	**Pb**	**09 30 31.7**	**-0.8**
FETY	**Fethiye**	**2.36**	**63**	*e*PN	**Pn**	**09 30 30.1**	**+2.3**
FETY	**Fethiye**	**2.36**	**63**	*e*Pn	**Pn**	**09 30 30.1**	**+2.3**
KYTH	**Kithira**	**2.87**	**285**	*e*PN	**Pn**	**09 30 35.7**	**+0.9**
KYTH	**Kithira**	**2.87**	**285**	*e*Pn	**Pn**	**09 30 35.7**	**+0.9**
DNZL	**Cakiroluk**	**2.95**	**44**	*e*P	**Pn**	**09 30 38.4**	**+2.4**
DNZL	**Cakiroluk**	**2.95**	**44**	*e*P	**Pn**	**09 30 38.4**	**+2.4**
GOLH	**Golhisar**	**2.99**	**56**	*i* P	**Pn**	**09 30 38.8**	**+2.3**
GOLH	**Golhisar**	**2.99**	**56**	*i* P	**Pn**	**09 30 38.8**	**+2.3**
ELL	**Elmali**	**3.02**	**66**	*e*PN	**Pn**	**09 30 39.9**	**+3.0**
ELL	**Elmali**	**3.02**	**66**	*e*Pn	**Pn**	**09 30 39.9**	**+3.0**
VLI	**Veliai**	**3.07**	**293**	*e*PN	**Pn**	**09 30 38.4**	**+0.9**
VLI	**Veliai**	**3.07**	**293**	*e*Pn	**Pn**	**09 30 38.4**	**+0.9**
DID	**Didima**	**3.23**	**307**	*e*PN	**Pn**	**09 30 40.7**	**+1.0**
DID	**Didima**	**3.23**	**307**	*e*Pn	**Pn**	**09 30 40.7**	**+1.0**
GAZI	**Gazipasa**	**4.79**	**81**	*i* P	**Pn**	**09 31 02.2**	**+1.0**
GAZI				*i* S	**Sn**	**09 31 53.8**	**-2.2**
GAZI	**Gazipasa**	**4.79**	**81**	*i* P	**Pn**	**09 31 02.2**	**+1.0**
GAZI				*i* S	**Sn**	**09 31 53.7**	**-2.2**

DDA 12 09:31:09.9, 37.67N × 38.13E, h6 km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYKD	**Aykdinkavak**	**1.08**	**257**	*i* P	Pg	09 31 30.7	0.0
AYKD				*i* S	Sb	09 31 45.9	+0.5
KUZU	**Kuzuini**	**1.23**	**223**	*e*P	Pg	09 31 33.2	-0.3
KUZU				*i* S	Sn	09 31 50.7	+0.1

*IDC **12** 09:35:13.4±1.8, 39.88N × 53.15E, h0 km, mb3.5/6, mb1 3.8/11, mb1mx3.5/33, mbtmp3.6/11, ML3.7/4, Error ellipse: s-maj=27.3km s-min=13.6km az=170.0*
*ISCJB **12** 09:35:15.9±0.5, 39.90N±0.05 × 53.24E±0.06, h45 km, mb3.5/5, Error ellipse: s-maj=8.2km s-min=6.0km az=152.7*
*CSEM **12** 09:35:16.5±0.2, 39.90N × 53.29E, h30 km, ML3.6, Error ellipse: s-maj=9.9km s-min=5.3km az=137.0*
*THR **12** 09:35:19.0±0.5, 39.58N × 52.81E, h15 km, ML3.6*
*NNC **12** 09:35:31.2±4.8, 40.52N × 54.11E, h99 km±46 km, mb3.0, Error ellipse: s-maj=36.4km s-min=28.2km az=62.0*

ISC 12 09:35:16.8±0.8, 40.02N±0.07 × 53.32E±0.06, h45 km, n32, σ2s11/33, mb3.6/5, 4C-3D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJRD	**Bojnurd**	**3.94**	**125**	*e*Pn	Pn	09 36 22.7	+7.9
BJRD	**Bojnurd**	**3.94**	**125**	*e*Pn	Pn	09 36 22.7	+7.9
GRMI	**Germi**	**4.38**	**256**	*e*Pn	**Pn**	**09 36 20.6**	**-0.2**
GRMI	**Germi**	**4.38**	**256**	*e*Pn	**Pn**	**09 36 20.6**	**-0.2**
CHTH	**Charan**	**4.46**	**204**	*e*Pn	**Pn**	**09 36 20.6**	**-1.4**
CHTH	**Charan**	**4.46**	**204**	*e*Pn	**Pn**	**09 36 20.6**	**-1.4**
DAMV	**Damavand**	**4.51**	**194**	*e*Pn	**Pn**	**09 36 22.4**	**-0.4**
DAMV	**Damavand**	**4.51**	**194**	*e*Pn	**Pn**	**09 36 22.4**	**-0.4**
THKV	**Tehran--Karaj**	**4.53**	**206**	*e*Pn	**Pn**	**09 36 21.5**	**-1.5**
THKV	comp=E,102nm,0.2s			AML	AML	09 37 15.3	
THKV	**Tehran--Karaj**	**4.53**	**206**	*e*Pn	**Pn**	**09 36 21.5**	**-1.5**
ZNJK	**Zanjan**	**4.95**	**229**	*e*Pn	**Pn**	**09 36 26.6**	**-2.2**
ZNJK	comp=E,61nm,0.2s			AML	AML	09 37 23.2	
ZNJK	**Zanjan**	**4.95**	**229**	*e*Pn	**Pn**	**09 36 26.6**	**-2.2**
DGRG	**David-gareji**	**6.21**	**286**	P	Pn	09 36 49.4	+3.5
DGRG				S	**Sn**	**09 37 56.4**	**+0.9**
KBZ	**Khabaz**	**8.62**	**299**	Pn	**Pn**	**09 37 20.2**	**+1.4**
KBZ	comp=E,0.8nm,0.3s,baz=126,slow=6.1,SNR=16			Sn	**Sn**	**09 38 50.4**	**-4.2**
AB31	**Akbulak array**	**10.37**	**25**	⇑P	**Pn**	**09 37 45.2**	**+2.4**
AB31	comp=E,0.5nm,0.3s,baz=206,slow=12,SNR=15			⇑S	**Sn**	**09 39 34.9**	**-2.5**
AB31	**Akbulak array**	**10.37**	**25**	P	**Pn**	**09 37 45.2**	**+2.4**
AB31	comp=E,0.5nm,0.3s,baz=206,SNR=15			S	**Sn**	**09 39 34.9**	**-2.5**
AKTO	**Aktyubinsk**	**10.93**	**16**	⇑P	Pn	09 37 56.2	+5.8
AKTO	comp=E,0.3nm,0.7s			⇓S	**Sn**	**09 39 48.3**	**-2.9**
AKTO	**Aktyubinsk**	**10.93**	**16**	Pn	**Pn**	**09 37 51.9**	**+1.5**
AKTO	comp=E,0.2nm,0.3s,baz=191,slow=11,SNR=4.0			Sn	**Sn**	**09 39 49.9**	**-1.3**
AKTO	**Aktyubinsk**	**10.93**	**16**	P	Pn	09 37 56.2	+5.8
AKTO	comp=E,0.3nm,0.7s			S	**Sn**	**09 39 48.3**	**-2.9**
KK31	**Karatay Array**	**13.24**	**71**	⇑P	**Pn**	**09 38 22.9**	**+0.9**
KK31	comp=E,0.4nm,0.3s,baz=264,slow=13,SNR=5.1			⇓S	**Sn**	**09 40 44.2**	**-3.5**
KK31	**Karatay Array**	**13.24**	**71**	P	**Pn**	**09 38 22.9**	**+0.9**
KK31	comp=E,0.4nm,0.3s,baz=271,slow=47,SNR=2.6			S	**Sn**	**09 40 44.2**	**-3.5**
AAK	**Ala-Archa**	**16.11**	**74**	Pn	**Pn**	**09 39 01.0**	**+0.7**
BVAR	comp=E,0.3nm,0.3s,baz=225,slow=4.5,SNR=4.2 **Borovoye Array**	**17.46**	**36**	P	**P**	**09 39 19.2**	**+1.6**
AKASG	comp=E,0.2nm,0.3s,baz=214,slow=13,SNR=5.4 **Malin Array Be**	**19.93**	**310**	P	**Pn**	**09 39 45.7**	**-0.9**
KURBB	comp=E,2.2nm,0.3s,baz=101,slow=8.7,SNR=5.6 **Kurchatov Arra**	**20.55**	**51**	P	Pn	09 39 56.0	+2.0
MLR	comp=E,0.4nm,0.4s,baz=252,slow=12,SNR=2.2 **Muntele Rosu**	**20.78**	**294**	P	Pn	09 39 56.8	-0.1
MK31	comp=E,0.5nm,0.5s,baz=7.7,slow=4.7,SNR=3.5 **Makanchi Array**	**22.03**	**63**	⇓P	**P**	**09 40 09.4**	**+2.1**
MK31	comp=E,0.9nm,0.7s **Makanchi Array**	**22.03**	**63**	P	**P**	**09 40 09.4**	**+2.1**
MKAR	comp=E,0.9nm,0.7s **Makanchi Array**	**22.03**	**63**	P	**P**	**09 40 10.0**	**+2.7**
FINES	comp=E,0.5nm,0.5s,baz=265,slow=8.4,SNR=10 **FINESS Array B**	**27.16**	**331**	P	**P**	**09 40 57.0**	**+1.5**
HFS	comp=E,0.6nm,0.3s,baz=134,slow=14,SNR=3.4 **Hagfors**	**31.73**	**323**	P	**P**	**09 41 37.3**	**+1.2**
ARCES	comp=E,0.5nm,0.3s,baz=98,slow=9.1,SNR=7.0 **ARCESS Array B**	**33.02**	**342**	P	P	09 41 51.3	+4.0

comp=E,1.1nm,0.8s,baz=131,slow=11,SNR=5.8

IDC 12 09:41:25.1±2.0, 14.50S × 167.93E, h0 km, mb3.9/4, mb1 4.1/5, mb1mx3.8/19, mbtmp3.9/5, ML3.8/1, Error ellipse: s-maj=58.5km s-min=31.2km az=125.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.66**	**190**	Pn	Pn	09 43 17.4	-0.9
STKA	1.4nm,0.3s,baz=290,slow=22,SNR=7.2 **Stephens Creek**	**29.63**	**230**	P	P	09 47 32.7	+0.3
WRA	3.0nm,0.4s,baz=55,slow=7.4,SNR=27 **Warramunga Arr**	**32.50**	**256**	P	P	09 47 57.5	-0.3
ASAR	0.3nm,0.5s,baz=85,slow=8.8,SNR=5.6 **Alice Springs**	**33.35**	**249**	P	P	09 48 05.2	-0.1
ILAR	1.4nm,0.5s,baz=79,slow=9.0,SNR=32 **Eielson Array**	**86.11**	**18**	P	P	09 54 07.7	0.0

0.2nm,0.7s,baz=232,slow=5.0,SNR=4.3

MEX 12 09:45:29.9±1.0, 16.63N × 95.26W, h112 km±15 km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.19**	**224**	*i* P	Pn	09 45 51.4	-1.8
HUIG				*i* S	Sn	09 46 09.8	-1.1
VHO	**Vista Hermosa**	**1.48**	**287**	*e*P	Pn	09 45 56.0	-0.8
VHO				*i* S	Sn	09 46 15.0	-2.3
TGIG		**2.05**	**86**	*e*P	Pn	09 46 02.8	-0.9
TGIG				*e*S	Sn	09 46 27.1	-2.4
PCIG		**2.16**	**115**	*e*P	Pn	09 46 04.7	-0.4
PCIG				*e*S	Sn	09 46 30.9	-1.1
TPIG	**Tehuac#an**	**2.68**	**312**	*e*P	Pn	09 46 10.5	-1.5
TPIG				*i* S	Sn	09 46 42.8	-1.6
UTMO	**Huajuapan**	**2.71**	**296**	*e*P	Pn	09 46 11.8	-0.6
UTMO				*i* S	Sn	09 46 43.8	-1.4
PNIG	**Pinotepa**	**2.77**	**265**	*e*P	Pn	09 46 11.0	-1.8
PNIG				*i* S	Sn	09 46 43.7	-2.2
CCIG	**Comitan**	**3.01**	**96**	*e*P	Pn	09 46 15.4	-0.9
CCIG				*e*S	Sn	09 46 49.9	-2.3
LVIG	**Laguna Verde**	**3.27**	**340**	*e*P	Pn	09 46 15.3	-4.1
LVIG				*i* S	Sn	09 46 50.8	-7.0

*IDC **12** 09:49:48.2±1.0, 31.86N × 104.31E, h0 km, mb3.7/8, mb1 3.8/10, mb1mx3.6/31, mbtmp3.7/10, ML3.8/2, Error ellipse: s-maj=36.4km s-min=17.2km az=56.0*
*ISCJB **12** 09:49:48.5±0.5, 31.87N±0.04 × 104.38E±0.08, h15 km, mb3.7/7, Error ellipse: s-maj=9.9km s-min=5.9km az=13.5*
*BJI **12** 09:49:49.5, 31.94N × 104.28E, h9 km, ML3.6/12, Ms3.4/2, Ms7 3.4/1*

ISC 12 09:49:49.9±0.7, 31.89N±0.04 × 104.32E±0.07, h15 km, n14, σ2s08/20, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.08**	**207**	Pn	**Pg**	**09 50 10.4**	**-0.4**
CD2				Sg	**Sn**	**09 50 25.0**	**-0.4**
CD2	comp=N,2μm,0.5s			smax	smax		
CD2	comp=E,2μm,0.5s			smax	smax		
LZH	**Lanzhou**	**4.21**	**355**	Pg	**Pg**	**09 51 07.7**	**-2.8**
LZH				Sn	**Sn**	**09 51 46.9**	**+4.2**
LZH				Sg	**Sg**	**09 52 01.5**	**-3.6**
LZH	comp=N,100nm,1.0s			smax	smax		
LZH	comp=E,170nm,1.0s			smax	smax		
LZH	comp=N,390nm,7.6s			LR	LR		
LZH	comp=E,630nm,6.9s			LR	LR		
LZH	comp=Z,390nm,8.0s			LR	LR		
XAN	**Xi'an**	**4.42**	**60**	Pn	**Pn**	**09 50 56.1**	**-0.4**
XAN				Pg	**Pb**	**09 51 07.5**	**+0.2**
XAN				Sn	Sn	09 51 41.6	-6.2
XAN				Sg	**Sb**	**09 52 02.6**	**+2.1**
XAN	comp=N,130nm,0.6s			smax	smax		
XAN	comp=E,53nm,0.5s			smax	smax		
GYA	**Guiyang**	**5.78**	**159**	Pn	Pn	09 51 20.7	+5.4
GYA				Sn	**Sn**	**09 52 22.4**	**+1.0**
GYA				Sg	**Sg**	**09 52 50.8**	**-4.7**
GYA	comp=N,90nm,0.6s			smax	smax		
GYA	comp=E,110nm,0.7s			smax	smax		
CMAR	**Chiang Mai Arr**	**14.22**	**201**	Pn	**Pn**	**09 53 12.1**	**+1.2**
SONM	comp=E,0.5nm,0.3s,baz=5.0,slow=9.7,SNR=2.8 **Songino Array**	**16.01**	**5**	Pn	**P**	**09 53 37.1**	**-0.9**
KSRS	comp=E,0.1nm,0.3s,baz=189,slow=14,SNR=4.3 **Korea Array**	**20.17**	**68**	P	**P**	**09 54 24.2**	**+0.5**
MKAR	comp=E,0.8nm,0.6s,baz=257,slow=10,SNR=4.7 **Makanchi Array**	**22.52**	**318**	P	**P**	**09 54 50.4**	**+1.4**
ZALV	comp=E,1.4nm,0.6s,baz=113,slow=12,SNR=19 **Zalesovo Beam**	**26.10**	**333**	P	**P**	**09 55 23.6**	**+0.7**
KURBB	comp=E,0.9nm,0.6s,baz=128,slow=9.7,SNR=3.6 **Kurchatov Arra**	**26.73**	**322**	P	**P**	**09 55 28.9**	**+0.3**
BVAR	comp=E,1.2nm,0.8s,baz=132,slow=8.4,SNR=9.9 **Borovoye Array**	**32.30**	**321**	P	**P**	**09 56 18.9**	**+0.8**
FINES	comp=E,0.4nm,0.4s,baz=93,slow=14,SNR=2.3 **FINESS Array B**	**57.02**	**326**	P	**P**	**09 59 34.7**	**0.0**
WRA	comp=E,0.6nm,0.5s,baz=94,slow=7.6,SNR=3.6 **Warramunga Arr**	**59.02**	**147**	P	**P**	**09 59 49.4**	**+0.2**
ASAR	comp=E,0.6nm,0.4s,baz=341,slow=7.6,SNR=5.0 **Alice Springs**	**62.06**	**149**	P	**P**	**10 00 10.8**	**+0.9**

comp=E,0.4nm,0.5s,baz=333,slow=6.3,SNR=6.0

IDC 12 09:51:48.8±3.6, 23.40S × 179.96W, h533 km±37 km, mb3.3/4, mb1 3.6/4, mb1mx3.1/17, mbtmp3.3/4, Error ellipse: s-maj=43.6km s-min=19.6km az=159.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**34.95**	**247**	P	P	09 57 56.6	+0.4
ASAR	2.4nm,0.4s,baz=90,slow=12,SNR=3.1 **Alice Springs**	**42.15**	**260**	P	P	09 58 55.2	+0.5
ASAR	2.0nm,0.4s,baz=98,slow=7.1,SNR=101			S	S	10 04 36.2	-0.1
WRA	0.3nm,0.6s,baz=98,slow=14,SNR=4.0 **Warramunga Arr**	**42.48**	**266**	P	P	09 58 56.3	-1.1
ILAR	3.0nm,0.4s,baz=91,slow=8.5,SNR=187 **Eielson Array**	**91.54**	**14**	P	P	10 03 56.8	-1.2
MKAR	0.2nm,0.4s,baz=222,slow=6.4,SNR=4.9 **Makanchi Array**	**111.84**	**313**	PKiKP	PKiKP	10 09 22.1	-1.0
ARCES	0.2nm,0.4s,baz=222,slow=1.7,SNR=4.4 **ARCESS Array B**	**131.41**	**348**	PKP	PKPdf	10 09 59.2	-0.6
NOA	1.1nm,0.6s,baz=48,slow=1.8,SNR=8.6 **NORSAR Array B**	**141.59**	**351**	PKhKP	PKPpre	10 10 14.4	
HFS	0.3nm,0.5s,baz=13,slow=4.1,SNR=3.9 **Hagfors**	**142.06**	**349**	PKhKP	PKPpre	10 10 15.5	
AKASG	3.6nm,0.3s,baz=74,slow=5.4,SNR=44 **Malin Array Be**	**144.57**	**328**	PKP	PKPdf	10 10 23.9	-0.4
BRTR	1.5nm,0.4s,baz=44,slow=4.3,SNR=11 **Keskin Array B**	**147.30**	**308**	PKPbc	PKPbc	10 10 32.9	+0.1
MMAI	0.4nm,0.4s,baz=154,slow=4.8,SNR=3.1 **Mount Meron Ar**	**147.53**	**295**	PKPbc	PKPbc	10 10 33.7	+0.2
EKA	2.4nm,0.5s,baz=82,slow=6.0,SNR=4.2 **Eskdalemuir Ar**	**148.02**	**3**	PKPbc	PKPbc	10 10 33.4	-0.5
TORD	0.7nm,0.4s,baz=342,slow=2.5,SNR=7.2 **Torodi Ar. Bea**	**169.68**	**189**	PKPab	PKPab	10 12 12.4	-1.0

0.3nm,0.7s,baz=156,slow=5.8,SNR=3.5

*ISCJB **12** 09:55:13.9±0.6, 28.82N±0.05 × 139.4E±0.1, h423 km, mb3.4/4, Error ellipse: s-maj=14.6km s-min=6.0km az=166.4*
*IDC **12** 09:55:15.3±3.7, 28.96N × 139.92E, h443 km±118 km, mb3.2/4, mb1 3.3/5, mb1mx2.8/24, mbtmp3.1/5, Error ellipse: s-maj=255.9km s-min=16.3km az=69.0*
*JMA **12** 09:55:15.4±0.1, 28.98N × 140.12E, h446 km, M3.5*

ISC 12 09:55:14.9±0.9, 28.88N±0.08 × 139.6E±0.2, h423 km, n15, σ1s42/19, mb3.4/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.92**	**127**	P	**P**	**09 56 19.7**	**+0.4**
CBIJ				*e*S	**S**	**09 57 10.6**	**-0.9**
JHHJ	**Haha-jima-NKT**	**3.23**	**133**	P	**P**	**09 56 22.2**	**+0.5**
JHHJ				S	**S**	**09 57 16.0**	**+0.2**
BSO1	**Boso 1**	**5.88**	**11**	*e*S	**S**	**09 58 01.5**	**+0.4**
BSO3	**Boso 3**	**5.96**	**8**	*e*S	**S**	**09 58 02.9**	**-0.2**
JNY	**Yasuok**	**6.62**	**348**	P	**P**	**09 56 57.2**	**+2.1**
JRY	**Ryogami san**	**7.14**	**356**	P	**P**	**09 57 01.5**	**+0.8**
JRY				*e*S	**S**	**09 58 25.8**	**-1.1**
JAG	**Ashikaga**	**7.53**	**359**	P	**P**	**09 57 04.4**	**-0.4**
JAG				*e*S	**S**	**09 58 30.4**	**-4.2**
MJAR	**Matsushiro Arr**	**7.72**	**352**	P	**P**	**09 57 07.2**	**+0.1**
JHO	0.4nm,0.3s,baz=170,slow=11,SNR=6.2 **Hitachi**	**7.76**	**6**	P	**P**	**09 57 08.1**	**+0.7**
JFK	**Kawauchi**	**8.54**	**7**	P	**P**	**09 57 17.0**	**+1.2**
JMK	**Ichinoseki**	**10.14**	**7**	P	**P**	**09 57 35.6**	**+2.1**
MKAR	**Makanchi Array**	**47.55**	**308**	P	**P**	**10 03 10.3**	**+0.1**
WRA	0.3nm,0.3s,baz=93,slow=8.6,SNR=7.3 **Warramunga Arr**	**48.80**	**187**	P	**P**	**10 03 19.5**	**-0.3**
KURBB	1.7nm,0.3s,baz=7.0,slow=8.6,SNR=76 **Kurchatov Arra**	**50.13**	**313**	P	**P**	**10 03 29.4**	**+0.1**

0.7nm,0.3s,baz=91,slow=7.2,SNR=7.5

ASAR	**Alice Springs**	**52.52**	**187**	P	**P**	**10 03 46.8**	**-0.4**

1.0nm,0.5s,baz=17,slow=12,SNR=29

ECX 12 09:56:15.3±0.4, 30.58N × 114.51W, h6 km, MD3.8, ML3.9, 3C-3D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**0.95**	**300**	*e*P	Pg	09 56 31.6	-2.3
SPX				*e*S	Sg	09 56 44.9	-1.6
SPX	comp=N,3μm,0.6s			⇑*e*		09 56 47.2	
SPX	comp=E,3μm,1.0s			⇑*e*		09 56 47.5	
ZAX	**El Zacaton**	**1.78**	**302**	*e*P	Pn	09 56 45.9	-0.8
ZAX				*e*S	Sn	09 57 09.4	-0.4
RDX	**Rancho Dawling**	**1.82**	**318**	*e*PN	Pn	09 56 47.0	-0.4
RDX				*e*S	Sn	09 57 10.9	-0.2
RDX	comp=N,938nm,0.7s			⇓*e*		09 57 21.3	
ECNX	**Esteban Cantu**	**2.09**	**302**	*e*PN	Pn	09 56 50.6	-0.4
ECNX				*e*S	Sn	09 57 18.2	+0.7
ECNX	comp=N,1μm,0.7s			⇓*e*		09 57 25.7	
PBX	**Punta Banda**	**2.23**	**302**	*e*PN	Pn	09 56 52.5	-0.3
PBX				⇑*e*		09 57 33.6	
PBX	comp=N,467nm,0.9s			⇓*e*		09 57 36.6	
RMX	comp=E,484nm,0.7s **La Rumorosa**	**2.42**	**327**	*e*PN	Pn	09 56 55.1	-0.6
RMX				*e*S	Sn	09 57 26.6	+0.8
CBX	**Cerro Bola**	**2.53**	**314**	*e*PN	Pn	09 56 57.0	-0.1
CBX				*e*S	Sn	09 57 29.3	+0.9

*AUST **12** 10:00:46.1, 13.50S × 170.51E, h100 km*
*IDC **12** 10:01:18.1±3.3, 14.58S × 167.36E, h153 km±28 km, mb3.9/13, mb1 4.0/14, mb1mx3.9/21, mbtmp3.8/14, Error ellipse: s-maj=20.2km s-min=17.7km az=96.0*
*ISCJB **12** 10:01:18.2±0.6, 14.59S±0.06 × 167.4E±0.1, h170 km, mb4.0/12, Error ellipse: s-maj=15.1km s-min=8.7km az=6.7*

ISC 12 10:01:19.6±0.7, 14.65S±0.08 × 167.4E±0.1, h170 km, n35, σ0s95/37, mb4.0/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.44**	**187**	P	**Pn**	**10 03 05.0**	**-0.7**
DZM	2.9nm,0.3s,baz=51,slow=22,SNR=11			S	**Sn**	**10 04 30.6**	**+1.3**
EIDS	1.4nm,0.3s,baz=119,slow=19,SNR=2.3 **Eidsvold**	**18.67**	**233**	P	**Pn**	**10 05 26.7**	**-0.6**
CTA	baz=22,SNR=12 **Charters Tower**	**20.91**	**252**	P	**P**	**10 05 48.5**	**-0.4**
RMQ	2.5nm,0.6s,baz=81,slow=14,SNR=3.5 **Roma**	**21.04**	**233**	P	**P**	**10 05 51.7**	**+1.4**
MTSU	baz=24,SNR=11 **Mount Surprise**	**22.43**	**258**	P	**P**	**10 06 04.7**	**+0.1**
MGCD	baz=26,SNR=5.4 **Mangrove Creek**	**23.68**	**216**	P	**P**	**10 06 17.7**	**+1.9**
QLP	baz=26,SNR=5.7 **Quilpie**	**24.69**	**238**	P	**P**	**10 06 25.6**	**+0.6**
CMSA	baz=28,SNR=7.2 **Cobar Meteorol**	**26.03**	**226**	P	**P**	**10 06 37.7**	**+0.5**
STKA	baz=29,SNR=7.8 **Stephens Creek**	**29.16**	**230**	P	**P**	**10 07 06.0**	**+1.1**
STKA	8.7nm,0.5s,baz=42,slow=8.0,SNR=47			PcP	**PcP**	**10 10 08.6**	**+0.3**
STKA	1.6nm,0.5s,baz=97,slow=3.2,SNR=8.3 **Stephens Creek**	**29.16**	**230**	P	**P**	**10 07 06.0**	**+1.1**
WRA	baz=32,SNR=30 **Warramunga Arr**	**31.99**	**256**	P	**P**	**10 07 28.3**	**-1.7**
ASAR	2.2nm,1.0s,baz=84,slow=9.0,SNR=15 **Alice Springs**	**32.84**	**249**	P	**P**	**10 07 36.0**	**-1.5**
ASAR	1.1nm,0.3s,baz=77,slow=9.3,SNR=34			PcP	**PcP**	**10 10 17.9**	**-0.5**
BBOO	0.8nm,0.7s,baz=93,slow=3.1,SNR=5.3 **Buckleboo**	**33.74**	**232**	P	**P**	**10 07 45.6**	**+0.5**
FORT	baz=37,SNR=137 **Forrest**	**39.46**	**239**	P	**P**	**10 08 33.5**	**0.0**
FITZ	baz=43,SNR=9.1 **Fitzroy Crossi**	**40.17**	**259**	P	**P**	**10 08 38.7**	**-0.8**
MCQ	0.9nm,0.4s,baz=81,slow=10,SNR=6.3 **Macquarie Isla**	**40.31**	**188**	S	**S**	**10 14 33.1**	**-1.6**
LUWI	baz=42,SNR=4.1 **Luwuk**	**46.13**	**283**	S	S	10 16 21.5	+21
MEEK	baz=49,SNR=4.3 **Meekatharra**	**46.95**	**247**	P	**P**	**10 09 33.3**	**-0.4**
MORW	baz=50,SNR=16 **Morawa**	**49.43**	**244**	P	**P**	**10 09 52.0**	**-0.6**
VNDA	baz=53,SNR=4.5 **Vanda**	**62.95**	**181**	P	**P**	**10 11 28.4**	**+0.9**
PETK	4.3nm,0.7s,baz=3.1,slow=6.0,SNR=33 **Petropavlovsk-**	**68.00**	**354**	P	**P**	**10 12 00.7**	**+0.6**
CMAR	4.9nm,0.8s,baz=152,slow=10,SNR=6.5 **Chiang Mai Arr**	**75.05**	**294**	P	**P**	**10 12 44.5**	**+1.3**
MAW	0.8nm,0.4s,baz=142,slow=5.4,SNR=4.8 **Mawson**	**82.01**	**202**	P	**P**	**10 13 20.5**	**+0.2**
SONM	4.5nm,0.8s,baz=109,slow=5.3,SNR=7.8 **Songino Array**	**82.52**	**324**	P	**P**	**10 13 24.6**	**+1.2**
ILAR	0.5nm,0.5s,baz=137,slow=7.0,SNR=3.8 **Eielson Array**	**86.41**	**18**	P	**P**	**10 13 40.6**	**-1.7**
SNAA	1.4nm,0.7s,baz=237,slow=5.1,SNR=23 **Sanae**	**93.64**	**183**	*e*P	**P**	**10 14 15.9**	**-0.4**
VNA2	**Neumayer--Watz**	**94.56**	**182**	*e*P	**P**	**10 14 20.5**	**0.0**
MKAR	**Makanchi Array**	**97.25**	**316**	P	Pdif	10 14 33.5	+0.3
YKA	0.5nm,0.7s,baz=96,slow=5.5,SNR=6.2 **Yellowknife Ar**	**97.41**	**27**	P	**P**	**10 14 32.6**	**-0.7**
ARCES	0.5nm,0.8s,baz=252,slow=4.9,SNR=4.2 **ARCESS Array B**	**120.21**	**345**	PKP	**PKPdf**	**10 19 49.9**	**+0.1**
BOSA	1.1nm,0.3s,baz=79,slow=2.2,SNR=31 **Boshof**	**123.53**	**220**	PKP	**PKPdf**	**10 19 58.0**	**+0.4**
FINES	0.2nm,1.3s,baz=216,slow

SARI	**SarD1z-Kayseri**	**0.64**	**14**	*e*PG	**Pg**	**10 20 30.2**	**-0.6**
SARI				*e*SG	**Sg**	**10 20 39.5**	**+0.3**
CEYT	**Ceyhan**	**0.86**	**206**	*e*PG	**Pg**	**10 20 35.1**	**+0.2**
PINB	**Pinarbasi**	**0.90**	**9**	*i* P	**Pg**	**10 20 34.6**	**-1.2**
PINB				*i* S	**Sb**	**10 20 49.0**	**-0.1**
PINB	**Pinarbasi**	**0.90**	**9**	*i* P	**Pg**	**10 20 34.6**	**-1.2**
PINB				*i* S	**Sb**	**10 20 49.0**	**-0.1**
GAZ	**Gaziantep**	**0.99**	**128**	*e*PG	**Pg**	**10 20 37.2**	**-0.3**
GAZ	**Gaziantep**	**0.99**	**128**	*e*Pg	**Pg**	**10 20 37.2**	**-0.3**
GZT	**Gaziantep**	**1.15**	**111**	*i* P	**Pg**	**10 20 40.2**	**-0.2**
GZT				*i* S	**Sn**	**10 20 57.7**	**+0.4**
KUZU	**Kuzuini**	**1.21**	**146**	*i* P	**Pn**	**10 20 42.2**	**+0.2**
KUZU				*i* S	**Sn**	**10 20 59.7**	**+0.9**
KUZU	**Kuzuini**	**1.21**	**146**	*i* P	**Pn**	**10 20 42.2**	**+0.2**
GULE	**Gulek**	**1.25**	**247**	*i* P	**Pn**	**10 20 42.7**	**0.0**
GULE				*i* S	**Sn**	**10 21 00.5**	**+0.5**
GULE	**Gulek**	**1.25**	**247**	*i* P	**Pn**	**10 20 42.7**	**0.0**
GULE				*i* S	**Sn**	**10 21 00.5**	**+0.5**
COBT	**Iskenderun**	**1.26**	**179**	*i* P	**Pn**	**10 20 42.0**	**-0.8**
COBT				*i* S	**Sg**	**10 20 59.1**	**+0.2**
COBT	**Iskenderun**	**1.26**	**179**	*i* P	**Pn**	**10 20 42.0**	**-0.8**
COBT				*i* S	**Sg**	**10 20 59.1**	**+0.2**
DARE	**Darende-Malaty**	**1.27**	**51**	*e*PN	**Pn**	**10 20 42.1**	**-0.7**
NIG	**Nigde**	**1.32**	**285**	*e*PN	**Pn**	**10 20 42.8**	**-0.8**
NIG	**Nigde**	**1.32**	**285**	*e*Pn	**Pn**	**10 20 42.8**	**-0.8**
AKCD	**Akcadag**	**1.44**	**69**	*i* P	**Pb**	**10 20 45.7**	**0.0**
AKCD				*i* S	**Sg**	**10 21 06.9**	**+2.3**
AKCD	**Akcadag**	**1.44**	**69**	*i* P	**Pb**	**10 20 45.7**	**0.0**
AKCD				*i* S	**Sg**	**10 21 06.9**	**+2.3**
AVNT	**Avonos**	**1.47**	**313**	*i* P	**Pb**	**10 20 46.4**	**+0.1**
AVNT				*i* S	**Sg**	**10 21 07.1**	**+1.5**
AVNT	**Avonos**	**1.47**	**313**	*i* P	**Pb**	**10 20 46.4**	**+0.1**
AVNT				*i* S	**Sg**	**10 21 07.1**	**+1.5**
MYA	**Malataya**	**1.82**	**72**	*e*PN	**Pn**	**10 20 50.4**	**0.0**

NIED **12** *10:40:00.37˚.10N×138˚.50E,h8km,Mw4.6 Best double couple: M₀9.34000×10¹⁵ NP1:φs27.00000°,δ58.00000°, λ.93.00000°. NP2:φs201.00000°,δ32.00000°,λ.85.00000°.*

IDC **12** *10:40:17.6±1.7,37˚.02N×138˚.35E,h19km±11km,mb4.0/24, mb1 4.1/27,mb1mx4.1/33,mbtmp4.0/27,ML2.8/2,MS3.9/23, Ms1 3.9/23,ms1mx3.7/39,Error ellipse: s-maj=15.1km s-min=11.8km az=98.0*

BJI **12** *10:40:17.4,37˚.00N×138˚.30E,h5km,mB4.9/31,mb4.5/39, Ms4.4/40,Ms7 4.1/37*

JMA **12** *10:40:17.5,37˚.07N×138˚.53E,h12km±2km,M4.8 Broadband fault plane solution: P waves. NP1: φs28.00000°,δ58.00000°,λ74.00000°. NP2:φs237.00000°, δ36.00000°,λ114.00000°. Principal axes: T Plg72.0000°, Azm258.0000°; N Plg14.0000°, Azm37.0000°; P Plg11.0000°, Azm130.0000°;*

JMA Felt IV J1.

ISCJB **12** *10:40:17.1±0.3,37˚.07N±0˚.02×138˚.47E±0˚.02,h23km±2km, mb4.5/72,MS4.0/43 Error ellipse: s-maj=3.4km s-min=2.9km az=140.4*

NEIC **12** *10:40:18.9±0.9,36˚.98N×138˚.36E,h24km±7km,mb4.8/22, MW4.6(NIED),Error ellipse: s-maj=8.1km s-min=6.1km az=142.0*

NEIC Recorded [4 JMA] at Gumma and Niigata; [3 JMA] at Nagano; [2 JMA] at Ishikawa; [1 JMA] at Toyama.

MOS **12** *10:40:18.0±1.2,36˚.95N×138˚.41E,h33km,mb4.9/30,Error ellipse: s-maj=9.1km s-min=5.5km az=99.7*

ISC 12 10:40:17.5±0.4,37˚.05N±0˚.02×138˚.50E±0˚.02,h16km±2km, h15km:pP-P,n209,σ1s55/269,mb4.7/72,MS4.1/43, 11C-15D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JJN	**Nakama**	**0.27**	**280**	⇓P	**Pg**	**10 40 23.4**	**0.0**
JJN				S	**Sb**	**10 40 28.3**	**-0.2**
JHK	**Hiroka**	**0.46**	**65**	⇓P	**Pg**	**10 40 25.6**	**-1.1**
JHK				*e*S	**Sg**	**10 40 32.1**	**-0.8**
JGK	**Kuni**	**0.51**	**167**	⇓P	**Pg**	**10 40 27.6**	**0.0**
JGK				S	**Sb**	**10 40 35.1**	**-0.1**
JIZZ	**Izumozaki**	**0.51**	**19**	⇑P	**Pg**	**10 40 27.2**	**-0.4**
JIZZ				*e*S	**Sb**	**10 40 35.3**	**+0.1**
MAJO	**Matsushiro**	**0.56**	**205**	*e*P	**Pg**	**10 40 28.5**	**-0.1**
MAJO				*e*		10 40 37.1	
MAJO	**Matsushiro**	**0.56**	**205**	*e*Pg	**Pg**	**10 40 28.5**	**-0.1**
MAJO				*e*Sg	**Sb**	**10 40 37.1**	**+0.2**
MAT	**Matsushiro**	**0.56**	**205**	P	**Pg**	**10 40 28.2**	**-0.4**
MAT				S	**Sg**	**10 40 36.3**	**+0.2**
MAT	**Matsushiro**	**0.56**	**205**	P	**Pg**	**10 40 28.3**	**-0.4**
MAT				S	**Sg**	**10 40 36.3**	**+0.2**
MJAR	**Matsushiro Arr**	**0.56**	**204**	Pg	**Pg**	**10 40 27.3**	**-1.3**
MJAR				Lg	Lg	10 40 35.5	
MJAR	**Matsushiro Arr**	**0.56**	**204**	Pg	**Pg**	**10 40 27.3**	**-1.3**
	358nm,0.3s,baz=292,slow=13,SNR=2708						
MJAR				Lg	Lg	10 40 35.5	
	2μm,0.3s,baz=354,slow=21,SNR=72						
JKT	**Katashina**	**0.67**	**115**	⇓P	**Pg**	**10 40 29.7**	**-0.9**
JKT				S	**Sg**	**10 40 39.1**	**-0.4**
JNG	**Nsakai**	**0.72**	**206**	⇑P	**Pg**	**10 40 31.3**	**-0.3**
JNG				S	**Sg**	**10 40 41.2**	**0.0**
JSZ	**Suzu**	**0.99**	**294**	⇑P	**Pb**	**10 40 35.5**	**-0.8**
JSZ				S	**Sg**	**10 40 49.5**	**-0.1**
JAG	**Ashikaga**	**0.99**	**129**	⇓P	**Pb**	**10 40 35.8**	**-0.6**
JAG				*e*S	**Sb**	**10 40 49.1**	**-0.1**
JSD	**Sado**	**1.00**	**349**	⇑P	**Pb**	**10 40 34.9**	**-1.6**
JSD				S	**Sb**	**10 40 48.3**	**-1.1**
JNS	**Sasagawa**	**1.00**	**40**	⇑P	**Pb**	**10 40 35.0**	**-1.6**
JNS				S	**Sb**	**10 40 48.5**	**-1.1**
JFY	**Yanaizu**	**1.03**	**70**	⇓P	**Pb**	**10 40 35.6**	**-1.4**
JFY				*e*S	**Sb**	**10 40 49.0**	**-1.2**
JHJ	**Hachijo jima 2**	**4.07**	**165**	Pn	**Pn**	**10 41 19.6**	**+0.5**
	36nm,0.3s,baz=70,slow=15,SNR=10						
ERM	**Erimo**	**6.12**	**35**	*d* iP	Pn	10 41 52.5	+5.1
ERM				pmax	pmax		
	comp=Z,60nm,1.2s						
ERM	**Erimo**	**6.12**	**35**	*e*Pn	**Pn**	**10 41 49.6**	**+2.2**
JNU	**Nakatsue**	**7.37**	**240**	*e*Pn	**Pn**	**10 42 07.6**	**+3.0**
JNU				*e*Sn	**Sb**	**10 43 52.7**	**-0.3**
JNU	**Nakatsue**	**7.37**	**240**	Pn	**Pn**	**10 42 06.1**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=46,slow=3.9,SNR=8.7						
JNU				LR	LR	10 44 53.3	
	comp=Z,590nm,20.5s,baz=50,slow=38						
ASAJ	**Asahikawa**	**7.71**	**23**	*e*Pn	**Pn**	**10 42 11.7**	**+2.5**
ASAJ	**Asahikawa**	**7.71**	**23**	Pn	**Pn**	**10 42 10.0**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=187,slow=13,SNR=4.9						
VLA	**Vladivostok**	**7.89**	**322**	*e*P	**Pn**	**10 42 09.8**	**-1.8**
KSRS	**Korea Array**	**8.44**	**276**	Pn	**Pn**	**10 42 20.9**	**+1.7**
	comp=Z,3.1nm,0.3s,baz=89,slow=14,SNR=47						
KSRS				Sn	**Sn**	**10 43 54.8**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=86,slow=25,SNR=7.9						
KSRS				LR	LR	10 45 25.7	
	comp=Z,706nm,18.6s,baz=93,slow=37						
KSAR	**Wonju Array Be**	**8.47**	**276**	Pn	**Pn**	**10 42 20.9**	**+1.3**
KSAR				Sn	**Sn**	**10 43 54.8**	**-0.1**
USRK	**Ussuriysk Arra**	**8.68**	**327**	Pn	**Pn**	**10 42 22.4**	**0.0**
	comp=Z,0.4nm,0.3s,baz=151,slow=11,SNR=7.6						
MDJ	**Mudanjiang**	**10.12**	**321**	P	Pn	10 42 46.1	+3.9
MDJ				S	Sn	10 44 42.5	+7.1
MDJ				PcP	**PcP**	**10 48 51.2**	**-0.1**
MDJ				ScP	**ScP**	**10 52 24.3**	**+1.4**
MDJ				ScS	**ScS**	**10 55 57.4**	**-0.1**
MDJ				pmax	pmax		
	comp=Z,18nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,82nm,6.2s						
MDJ				LR	LR		
	comp=N,750nm,12.9s						
MDJ				LR	LR		
	comp=E,1μm,14.2s						
MDJ				LR	LR		
	comp=Z,940nm,16.5s						
YSS	**Yuzh-Sakhalins**	**10.38**	**16**	*e*P	**Pn**	**10 42 48.0**	**+2.2**
YSS				*e*		10 44 49.0	
YSS				MLR	MLR		
	comp=N,500nm,11.0s						
YSS				MLR	MLR		
	comp=Z,700nm,11.0s						
YSS				MLR	MLR		
	comp=E,500nm,12.0s						
HABR	**Khabarovsk**	**11.69**	**349**	P	**Pn**	**10 43 02.7**	**-0.9**
CN2	**Changchun**	**12.01**	**308**	*e*P	**Pn**	**10 43 09.0**	**+1.0**
CN2				*es*P		10 43 15.4	
CN2				*e*S	**Sn**	**10 45 21.7**	**+0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,600nm,12.0s						
CN2				LR	LR		
	comp=E,400nm,12.0s						
CN2				LR	LR		
	comp=Z,600nm,12.0s						
KLR	**Kul'dur**	**13.12**	**340**	*e*P	**Pn**	**10 43 23.2**	**0.0**
KLR				pmax	pmax		
	comp=E,40nm,1.6s						
KLR				pmax	pmax		
	comp=Z,80nm,1.6s						
KLR				MLR	MLR		
	comp=E,700nm,12.5s						
KLR				MLR	MLR		
	comp=Z,4μm,12.5s						
DL2	**Dalian**	**13.44**	**283**	P	**P**	**10 43 36.7**	**-0.2**
DL2				*e*S	S	10 46 12.7	-7.6
DL2				pmax	pmax		
	comp=Z,29nm,0.8s						
DL2				pmax	pmax		
	comp=Z,140nm,6.4s						
DL2				LR	LR		
	comp=N,520nm,11.7s						
DL2				LR	LR		
	comp=E,600nm,11.2s						
DL2				LR	LR		
	comp=Z,720nm,11.1s						
NJ2	**Nanjing**	**16.93**	**259**	*e*P	**Pn**	**10 44 10.9**	**-2.9**
NJ2				pP	**P**	**10 44 16.8**	**+1.1**
NJ2				sP	**sP**	**10 44 19.9**	**-2.2**
NJ2				S	**Sn**	**10 47 22.0**	**+0.4**
NJ2				sS	**S**	**10 47 33.0**	**+1.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,260nm,8.2s						
NJ2				LR	LR		
	comp=N,430nm,12.7s						
NJ2				LR	LR		
	comp=E,490nm,14.0s						
NJ2				LR	LR		
	comp=Z,490nm,13.5s						
BJI	**Beijing**	**17.71**	**287**	P	**P**	**10 44 26.1**	**+1.9**
BJI				S	**Sn**	**10 47 43.0**	**+2.6**
BJI				pmax	pmax		
	comp=Z,27nm,1.5s						
BJI				pmax	pmax		
	comp=Z,320nm,5.9s						
BJI				LR	LR		
	comp=N,460nm,11.2s						
BJI				LR	LR		
	comp=E,280nm,11.2s						
QZH	**Quanzhou**	**20.85**	**240**	P	Pn	10 45 00.8	-0.5
QZH				S	**S**	**10 48 48.3**	**-2.6**
QZH				LR	LR		
	comp=N,470nm,10.2s						
QZH				LR	LR		
	comp=E,490nm,12.3s						
QZH				LR	LR		
	comp=Z,460nm,13.8s						
PETK	**Petropavlovsk-**	**20.91**	**34**	P	**P**	**10 45 00.1**	**+0.9**
PETK	**Petropavlovsk-**	**20.91**	**34**	P	**P**	**10 45 00.1**	**+0.9**
PETK	**Petropavlovsk-**	**20.91**	**34**	P	**P**	**10 45 00.1**	**+0.9**
	comp=Z,5.1nm,1.1s,baz=195,slow=20,SNR=3.3						
PETK				LR	LR	10 53 55.4	
	comp=Z,105nm,18.5s,baz=215,slow=39						
WHN	**Wuhan**	**21.06**	**259**	P	**P**	**10 45 03.1**	**+2.1**
WHN				LR	LR		
	comp=N,660nm,12.2s						
WHN				LR	LR		
	comp=E,1μm,11.9s						
WHN				LR	LR		
	comp=Z,1μm,11.7s						
HHC	**Hu-ho-hao-te**	**21.25**	**289**	⇑*e*P	**P**	**10 45 03.9**	**+0.8**
HHC				pP	**pP**	**10 45 08.0**	**+0.4**
HHC				sP	**sP**	**10 45 10.9**	**+1.3**
HHC				PP	**PnPn**	**10 45 25.2**	**+2.6**
HHC				S	**S**	**10 48 53.5**	**-5.4**
HHC				sS	sS	10 49 00.0	-5.9
HHC				SS	**SnSn**	**10 49 26.3**	**+5.3**
HHC				PcS	**PcS**	**10 52 46.8**	**+0.9**
HHC				pmax	pmax		
	comp=Z,36nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
HHC				LR	LR		
	comp=N,670nm,13.1s						
HHC				LR	LR		
	comp=E,660nm,14.3s						
HHC				LR	LR		
	comp=Z,830nm,11.9s						
PET	**Petropavlovsk**	**21.28**	**35**	*e*P	P	10 45 11.0	+7.9
PET				*e*S	Sn	10 49 05.9	-0.4
PET				MLR	MLR		
	comp=Z,300nm,19.0s						
GUMO	**Guam**	**24.05**	**165**	LR	LR	10 55 20.3	
	comp=Z,153nm,18.1s,baz=90,slow=38						
XAN	**Xi'an**	**24.21**	**272**	P	**P**	**10 45 32.5**	**-1.0**
XAN				pP	**pP**	**10 45 38.9**	**+0.6**
XAN				S	**S**	**10 49 57.0**	**+5.7**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
XAN				LR	LR		
	comp=N,250nm,13.3s						
XAN				LR	LR		
	comp=Z,110nm,11.3s						
ULN	**Ulaanbaatar**	**25.42**	**305**	*e*P	**P**	**10 45 44.5**	**-0.1**
	comp=Z,16nm,1.2s						
YAK	**Yakutsk**	**25.60**	**350**	*e*P	**P**	**10 45 44.8**	**-1.0**
YAK				*e**PP	**pP**	**10 45 54.5**	**+4.0**
YAK				*e*		10 46 23.9	
YAK				*e*		10 49 11.5	
YAK				*e*S	**S**	**10 50 14.6**	**+1.7**
YAK				*e**SS	sS	10 50 31.4	+11
YAK				*e*SS	**SnSn**	**10 51 10.2**	**+3.4**
YAK				*e*SSS	SSS	10 51 27.7	
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,16nm,1.3s						
YAK				pmax	pmax		
	comp=N,12nm,1.3s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				smax	smax		
	comp=N,187nm,3.5s						
YAK				smax	smax		
	comp=E,47nm,3.0s						
YAK				MLR	MLR		
	comp=Z,403nm,16.0s						
YAK				MLR	MLR		
	comp=N,315nm,15.0s						
YAK				MLR	MLR		
	comp=E,146nm,15.0s						
SONM	**Songino Array**	**25.85**	**305**	P	**P**	**10 45 48.2**	**-0.2**
SONM	**Songino Array**	**25.85**	**305**	P	**P**	**10 45 48.2**	**-0.2**
	comp=E,5.4nm,1.0s,baz=108,slow=7.8,SNR=24						
SONM				LR	LR	10 56 16.2	
	comp=E,415nm,18.8s,baz=104,slow=37						
SEY	**Seymchan**	**27.28**	**14**	⇓*i*P	**P**	**10 46 03.3**	**+2.4**
LZH	**Lanzhou**	**27.76**	**279**	*e*P	**P**	**10 46 04.0**	**-1.8**
LZH				pP	**pP**	**10 46 09.7**	**-0.8**
LZH				sP	**sP**	**10 46 12.9**	**+0.4**
LZH				PP	**PnPn**	**10 46 52.5**	**+0.8**
LZH				*e*S	**S**	**10 50 43.0**	**-5.0**
LZH				sS	**sS**	**10 50 53.1**	**-2.7**
LZH				*e*SS	**SnSn**	**10 52 02.0**	**+1.6**
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.9s						
LZH				LR	LR		
	comp=N,440nm,11.8s						
LZH				LR	LR		
	comp=E,670nm,14.0s						
LZH				LR	LR		
	comp=Z,850nm,16.0s						
ZAK	**Zakamensk**	**28.44**	**309**	*e*P	**P**	**10 46 09.8**	**-1.8**
TLY	**Talaya**	**28.57**	**312**	*e*P	**P**	**10 46 12.8**	**+0.2**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,233nm,15.0s						
FX1	**Attu Island--F**	**28.83**	**46**	LR	LR	10 55 15.5	
	comp=Z,41nm,21.0s,baz=264,slow=31						
GYA	**Guiyang**	**28.93**	**258**	P	**P**	**10 46 15.4**	**-0.9**
GYA				PP	**PnPn**	**10 47 08.9**	**+1.1**
GYA				S	**S**	**10 51 03.2**	**-3.3**
GYA				SS	**SnSn**	**10 52 29.5**	**+0.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.6s						
GYA				LR	LR		
	comp=N,490nm,15.4s						
GYA				LR	LR		
	comp=E,360nm,16.7s						
GYA				LR	LR		
	comp=Z,430nm,15.2s						
CD2	**Chengdu**	**29.34**	**268**	P	**P**	**10 46 19.2**	**-0.6**
CD2				pP	**pP**	**10 46 24.2**	**-0.3**
CD2				sP	**sP**	**10 46 27.1**	**+0.7**
CD2				PP	**PnPn**	**10 47 13.6**	**+0.4**
CD2				PcP	**PcP**	**10 49 26.9**	**+0.9**
CD2				S	**S**	**10 51 09.2**	**-3.5**
CD2				sS	**sS**	**10 51 17.6**	**-2.9**
CD2				SS	**SnSn**	**10 52 39.0**	**+0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,180nm,5.2s						
CD2				LR	LR		
	comp=N,680nm,13.2s						
CD2				LR	LR		
	comp=E,350nm,13.7s						
CD2				LR	LR		
	comp=Z,250nm,17.6s						
GTA	**Gaotai**	**30.32**	**286**	*e*P	P	10 46 33.1	+4.6
GTA				pP	pP	10 46 37.4	+4.2
GTA				sP	sP	10 46 40.1	+4.9
GTA				S	S	10 51 36.6	+8.5
GTA				sS	sS	10 51 43.9	+7.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,58nm,4.5s						
GTA				LR	LR		
	comp=N,230nm,13.1s						
GTA				LR	LR		
	comp=E,220nm,14.3s						
GTA				LR	LR		
	comp=Z,200nm,14.3s						
QIZ	**Qiongzhong**	**30.84**	**242**	P	**P**	**10 46 31.3**	**-1.7**
QIZ				S	**S**	**10 51 36.8**	**+0.5**
QIZ				LR	LR		
	comp=N,260nm,14.4s						
QIZ				LR	LR		
	comp=Z,230nm,13.3s						
KMI	**Kunming**	**32.67**	**259**	P	**P**	**10 46 49.2**	**-0.1**
KMI				S	**S**	**10 52 01.6**	**-3.5**
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI				pmax	pmax		
	comp=Z,57nm,5.0s						
KMI				LR	LR		
	comp=N,270nm,12.9s						
KMI				LR	LR		
	comp=E,470nm,15.2s						
KMI				LR	LR		
	comp=Z,460nm,14.5s						
HVS	**Khovu-Aksy**	**34.55**	**308**	*i* P	**P**	**10 47 04.9**	**-0.4**
HVS				pmax	pmax		
	comp=Z,21nm,1.3s						
BILL	**Bilibino**	**34.70**	**18**	⇓*i*P	**P**	**10 47 06.3**	**+0.1**
BILL				*e*		10 47 13.3	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
WMQ	**Urumqi**	**38.74**	**296**	P	**P**	**10 47 42.2**	**+1.1**
WMQ				pP	**pP**	**10 47 46.2**	**+0.3**
WMQ				sP	**sP**	**10 47 49.2**	**+1.3**
WMQ				PP	**PnPn**	**10 49 14.4**	**+2.5**
WMQ				PcP	**PcP**	**10 49 55.0**	**+2.4**
WMQ				S	**S**	**10 53 37.7**	**0.0**
WMQ				ScP	**ScP**	**10 53 42.0**	**+1.9**
WMQ				sS	**sS**	**10 53 45.1**	**-0.5**
WMQ				SS	**SnSn**	**10 56 18.4**	**-8.2**
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.4s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.8s						
WMQ				LR	LR		
	comp=N,260nm,8.6s						
WMQ				LR	LR		
	comp=E,210nm,9.6s						
WMQ				LR	LR		
	comp=Z,130nm,20.8s						
CMAR	**Chiang Mai Arr**	**39.26**	**253**	P	**P**	**10 47 43.8**	**-1.8**
CMAR	**Chiang Mai Arr**	**39.26**	**253**	P	**P**	**10 47 43.8**	**-1.8**
	comp=Z,1.9nm,0.8s,baz=46,slow=6.6,SNR=12						
CMAR				LR	LR	11 04 50.9	
	comp=Z,111nm,18.8s,baz=239,slow=38						
ZALV	**Zalesovo Beam**	**40.18**	**312**	P	**P**	**10 47 52.5**	**-0.4**
ZALV						10 49 56.5	
ZALV	**Zalesovo Beam**	**40.18**	**312**	P	**P**	**10 47 52.5**	**-0.4**
ZALV				PcP	**PcP**	**10 49 56.5**	**-0.3**
ZALV	**Zalesovo Beam**	**40.18**	**312**	P	**P**	**10 47 52.5**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=61,slow=12,SNR=3.3						
ZALV				PcP	**PcP**	**10 49 56.5**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=77,slow=3.4,SNR=4.0						
ZALV				LR	LR	11 03 29.0	
	comp=Z,80nm,19.9s,baz=73,slow=35						
MKAR	**Makanchi Array**	**42.13**	**302**	PcP	**PcP**	**10 50 03.3**	**0.0**
MKAR	**Makanchi Array**	**42.13**	**302**	PcP	**PcP**	**10 50 03.3**	**0.0**
	comp=Z,0.5nm,0.8s,baz=52,slow=2.4,SNR=3.4						
MKAR				LR	LR	11 06 10.8	
	comp=Z,282nm,18.7s,baz=85,slow=37						
KURK	**Kurchatov**	**44.08**	**308**	⇓*i*P	**P**	**10 48 23.7**	**-1.0**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KURK	**Kurchatov**	**44.08**	**308**	*e*P	**P**	**10 48 23.9**	**-0.8**
	comp=Z,26nm,1.9s						
KSH	**Kashi**	**48.26**	**293**	*e*P	P	10 49 01.5	+3.6
KSH				*e*pP	pP	10 49 07.7	+4.9
KSH				*e*sP	sP	10 49 10.7	+5.9
KSH				*e*PcP	**PcP**	**10 50 27.8**	**+3.0**
KSH				*e*PP	**PP**	**10 50 54.1**	**+3.9**
KSH				*e*ScP	**ScP**	**10 54 19.6**	**+0.8**
KSH				*e*PcS	**PcS**	**10 54 21.8**	**+1.0**
KSH				*e*S	**S**	**10 56 00.2**	**+3.1**
KSH				*es*S	sS	10 56 10.1	+5.0
KSH				*e*ScS	**ScS**	**10 58 50.6**	**+0.1**
KSH				*e*SS	**SS**	**10 59 26.4**	**+0.2**
KSH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,190nm,5.1s						
KSH				LR	LR		
	comp=N,300nm,5.8s						
KSH				LR	LR		
	comp=E,210nm,5.8s						
KSH				LR	LR		
	comp=Z,220nm,5.3s						
RSO	**Redoubt South**	**48.33**	**38**	*e*P	**P**	**10 49 00.3**	**+2.0**
AAK	**Ala-Archa**	**48.42**	**298**	*d* iP	**P**	**10 48 59.5**	**+0.3**
AAK				pmax	pmax		
	comp=Z,15nm,2.2s						
KDAK	**Kodiak Island**	**48.64**	**42**	*e*P	**P**	**10 49 00.8**	**+0.5**
	comp=Z,91nm,1.9s						
BRVK	**Borovoye**	**48.88**	**312**	⇓*e*P	**P**	**10 49 02.5**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,11nm,2.3s						
PMR	**Palmer**	**50.00**	**37**	*e*P	**P**	**10 49 12.6**	**+1.8**
PMR				pmax	pmax		
	comp=Z,30nm,2.2s						
PMR	**Palmer**	**50.00**	**37**	*e*P	**P**	**10 49 12.6**	**+1.8**
	comp=Z,30nm,2.2s						
SML	**Sawmill**	**50.36**	**36**	*e*P	**P**	**10 49 14.9**	**+1.4**
SML				pmax	pmax		
	comp=Z,13nm,2.1s						
SML	**Sawmill**	**50.36**	**36**	*e*P	**P**	**10 49 14.9**	**+1.4**
	comp=Z,13nm,2.1s						
HNR	**Honiara**	**50.43**	**152**	LR	LR	11 09 12.8	
	comp=Z,81nm,18.2s,baz=299,slow=34						
ILAR	**Eielson Array**	**50.72**	**32**	P	**P**	**10 49 16.4**	**+0.1**
ILAR	**Eielson Array**	**50.72**	**32**	P

KKAR	Karatay Array	51.09	299	eP		P		10 49 19.2	0.0
EGAK	Eagle	53.16	32	eP		P		10 49 35.3	+1.0
	comp=Z,27nm,2.1s								
SVE	Sverdlovsk	53.58	318	eP		P		10 49 38.0	+0.4
SVE					pmax	pmax			
	comp=Z,27nm,1.3s								
SVE					MLR	MLR			
	comp=Z,386nm,18.0s								
ARU	Arti	54.79	318	c iP		P		10 49 46.0	-0.4
ARU								10 51 48.1	
ARU					S	S		10 57 26.1	-0.3
ARU					SS	SS		11 01 03.0	-6.0
ARU					pmax	pmax			
	comp=Z,30nm,1.7s								
ARU					MLR	MLR			
	comp=Z,258nm,18.0s								
SOKR	Solikamsk	54.89	322	eP		P		10 49 47.9	+0.9
SOKR					pmax	pmax			
	comp=Z,9.0nm,0.7s								
SOKR					MLR	MLR			
	comp=Z,230nm,19.0s								
INK	Inuvik	55.43	27	P		P		10 49 50.2	-0.5
INK	Inuvik	55.43	27	P		P		10 49 50.2	-0.5
	comp=Z,1.7nm,0.7s,baz=317,slow=5.7,SNR=9.0								
HYB	Hyderabad	55.87	267	i P		P		10 49 55.0	+0.2
ABKAR	Akbulak array	56.13	309	eP		P		10 49 55.5	-0.6
FITZ	Fitzroy Crossi	56.18	195	LR		LR		11 11 53.1	
	comp=Z,64nm,19.2s,baz=0.8,slow=34								
WRAB	Tennant Creek	56.81	185	eP		P		10 50 01.0	-0.2
WRAB					pmax	pmax			
	comp=Z,8.0nm,0.8s								
WRAB	Tennant Creek	56.81	185	eP		P		10 50 01.0	-0.2
	comp=Z,7.8nm,0.8s								
WRA	Warramunga Arr	56.83	185	P		P		10 50 00.6	-0.7
WRA				PcP		PcP		10 50 57.4	+0.5
WRA	Warramunga Arr	56.83	185	P		P		10 50 00.6	-0.7
	comp=Z,6.5nm,0.7s,baz=1.1,slow=7.3,SNR=55								
WRA				PcP		PcP		10 50 57.4	+0.5
	comp=Z,1.6nm,0.7s,baz=359,slow=4.5,SNR=4.5								
CTA	Charters Tower	57.30	171	LR		LR		11 11 12.1	
	comp=Z,116nm,21.9s,baz=50,slow=32								
AS31	Alice Springs	60.55	185	eP		P		10 50 27.1	-0.1
ASAR	Alice Springs	60.55	185	P		P		10 50 26.1	-1.1
ASAR	Alice Springs	60.55	185	P		P		10 50 26.1	-1.1
	comp=Z,2.3nm,0.9s,baz=359,slow=6.3,SNR=18								
ARCES	ARCESS Array B	63.14	339	P		P		10 50 44.2	0.0
ARCES	ARCESS Array B	63.14	339	P		P		10 50 44.2	0.0
	comp=Z,2.0nm,0.7s,baz=46,slow=8.7,SNR=5.3								
ARCES				LR		LR		11 20 46.4	
	comp=Z,130nm,20.4s,baz=256,slow=38								
RES	Resolute Bay	63.15	14	eP		P		10 50 43.5	-0.6
	comp=Z,1.6nm,0.7s								
RES	Resolute Bay	63.15	14	P		P		10 50 42.6	-1.5
	comp=Z,1.5nm,0.7s,baz=286,slow=7.8,SNR=6.3								
DZM	Mont Dzumac	64.44	151	eLR		LR		11 10 01.3	
	comp=Z,147nm,24.4s								
DZM	Mont Dzumac	64.44	151	LR		LR		11 16 36.4	
	comp=Z,352nm,20.5s,baz=26,slow=34								
YKA	Yellowknife Ar	64.95	29	P		P		10 50 55.8	-0.3
YKA	Yellowknife Ar	64.95	29	P		P		10 50 55.7	-0.3
	comp=Z,0.4nm,0.7s,baz=308,slow=7.0,SNR=4.6								
MOS	Moscow	65.83	322	eP		P		10 51 01.8	-0.1
VRHR	Novokhopersk	66.09	317	eP		P		10 51 01.3	-2.3
VRHR					pmax	pmax			
	comp=N,10.0nm,0.9s								
VRHR					pmax	pmax			
	comp=E,8.0nm,0.9s								
VRHR					pmax	pmax			
	comp=Z,6.0nm,0.9s								
MAK	Makhachkala	66.59	307	eP		P		10 51 01.0	-6.0
MAK					MLR	MLR			
	comp=Z,157nm,11.0s								
OBN	Obninsk	66.67	322	P		P		10 51 06.0	-1.2
OBN				eSS		SS		11 04 14.9	+0.2
OBN					pmax	pmax			
	comp=Z,23nm,1.5s								
OBN					MLR	MLR			
	comp=Z,200nm,15.0s								
VSR	Storozhevoye	67.36	318	eP		P		10 51 11.1	-0.7
VSR					pmax	pmax			
	comp=N,10.0nm,1.4s								
VSR					pmax	pmax			
	comp=E,20nm,1.4s								
VSR					pmax	pmax			
	comp=Z,20nm,1.4s								
VORD	Divnogorie	67.42	317	eP		P		10 51 11.5	-0.7
VORD					pmax	pmax			
	comp=Z,10.0nm,1.4s								
VORD					pmax	pmax			
	comp=N,10.0nm,0.7s								
VORD					pmax	pmax			
	comp=E,9.0nm,0.7s								
FINES	FINESS Array B	67.69	331	P		P		10 51 11.4	-2.3
FINES	FINESS Array B	67.69	331	P		P		10 51 11.4	-2.3
	comp=E,5.1nm,0.8s,baz=57,slow=7.0,SNR=9.4								
FINES					LR	LR		11 23 14.0	
	comp=E,98nm,18.7s,baz=90,slow=38								
STKA	Stephens Creek	68.64	177	P		P		10 51 17.8	-2.0
	comp=E,2.1nm,0.7s,baz=153,slow=6.8,SNR=5.8								
STKA					LR	LR		11 20 41.7	
	comp=E,88nm,19.7s,baz=26,slow=35								
KBZ	Khabaz	69.10	309	P		P		10 51 21.3	-1.5
KBZ	Khabaz	69.10	309	P		P		10 51 21.3	-1.5
KBZ	Khabaz	69.10	309	P		P		10 51 21.3	-1.5
	comp=E,3.6nm,1.0s,baz=34,slow=2.8,SNR=9.0								
KBZ					LR	LR		11 27 00.6	
	comp=E,94nm,18.3s,baz=32,slow=41								
KIV	Kislovodsk	69.11	310	eP		P		10 51 24.0	+1.0
KIV					pmax	pmax			
	comp=Z,13nm,1.1s								
KIV					MLR	MLR			
	comp=Z,103nm,20.0s								
VSU	Vasula	69.24	329	i P		P		10 51 24.1	+0.7
VSU					pmax	pmax			
	comp=Z,10.0nm,1.5s								
SUMG	Summit	70.64	359	eP		P		10 51 33.2	+0.9
SUMG					pmax	pmax			
	comp=Z,11nm,1.1s								
SUMG	Summit	70.64	359	eP		P		10 51 33.2	+0.9
	comp=Z,11nm,1.1s								
NEW	Newport	71.72	43	P		P		10 51 39.3	+0.5
NEW	Newport	71.72	43	P		P		10 51 39.3	+0.5
	comp=Z,1.9nm,0.8s,baz=84,slow=5.3,SNR=2.5								
AKASG	Malin Array Be	72.83	321	i P		P		10 51 45.0	-0.3
AKASG					pmax	pmax			
	comp=Z,4.0nm,0.6s								
AKASG	Malin Array Be	72.83	321	P		P		10 51 44.2	-1.2
AKASG	Malin Array Be	72.83	321	P		P		10 51 44.2	-1.2
	comp=Z,4.1nm,0.6s,baz=45,slow=6.0,SNR=18								
AKASG					LR	LR		11 26 17.0	
	comp=Z,290nm,18.4s,baz=50,slow=38								
AK01	Malin Array Si	72.85	321	eP		P		10 51 45.1	-0.3
KIEV	Kiev	72.85	321	eP		P		10 51 45.1	-0.3
KIEV					pmax	pmax			
	comp=Z,8.0nm,0.8s								
KIEV	Kiev	72.85	321	eP		P		10 51 45.1	-0.3
	comp=Z,7.8nm,0.8s								
AK02	Malin Array Si	72.87	321	eP		P		10 51 45.4	-0.2
NB2	NORSAR Subarra	73.25	336	P		P		10 51 47.2	-0.5
	comp=Z,5.1nm,0.9s,baz=41,slow=6.2								
NOA	NORSAR Array B	73.25	336	P		P		10 51 46.9	-0.8
NOA	NORSAR Array B	73.25	336	P		P		10 51 46.9	-0.8
	comp=Z,2.2nm,0.7s,baz=40,slow=5.9,SNR=6.3								
NOA					LR	LR		11 26 27.5	
	comp=Z,74nm,18.1s,baz=35,slow=38								
SWMT	Swartz Lake	73.86	42	eP		P		10 51 53.1	+1.4
SLMT	Seeley Lake	74.30	42	eP		P		10 51 54.9	+0.7
CMB	Columbia Colle	75.74	53	eP		P		10 52 11.3	+8.7
CMB					pmax	pmax			
	comp=Z,7.0nm,1.1s								
CMB	Columbia Colle	75.74	53	eP		P		10 52 11.3	+8.7
	comp=Z,7.3nm,1.1s								
LRM	Limekiln Ridge	75.74	43	eP		P		10 52 04.2	+1.5
EGMT	Eagleton	75.78	40	eP		P		10 52 03.8	+1.1
	comp=Z,27nm,1.8s								
DLMT	Dillon	75.95	43	eP		P		10 52 05.1	+1.3
	comp=Z,8.1nm,1.3s								
KWP	Kalwaria Pacla	76.73	323	eP		P		10 52 08.9	+0.9
BUR08	Bucovina Ar. S	76.82	320	eP		P		10 52 09.2	+0.5
NVAR	Mina Array Bea	76.83	52	P		P		10 52 09.3	+0.4
NVAR	Mina Array Bea	76.83	52	P		P		10 52 09.3	+0.4
	comp=Z,1.7nm,0.9s,baz=294,slow=5.0,SNR=7.1								
BRTR	Keskin Array B	77.07	310	P		P		10 52 10.4	+0.2
BRTR	Keskin Array B	77.07	310	P		P		10 52 10.4	+0.2
	comp=Z,1.1nm,0.7s,baz=97,slow=5.0,SNR=12								
BRTR					LR	LR		11 29 44.5	
	comp=Z,37nm,19.6s,baz=193,slow=38								
FRB	Frobisher Bay	77.26	12	P		P		10 52 10.5	-0.1
FRB	Frobisher Bay	77.26	12	P		P		10 52 10.5	-0.1
	comp=Z,2.6nm,0.9s,baz=335,slow=8.4,SNR=3.8								
ELK	Elko	77.30	48	P		P		10 52 13.1	+1.4
ELK	Elko	77.30	48	P		P		10 52 13.1	+1.4
	comp=Z,0.3nm,0.2s,baz=211,slow=18,SNR=1.9								
KOLS	Kolonicke sedl	77.41	323	eP		P		10 52 12.8	+1.0
KOLS					pmax	pmax			
	comp=Z,11nm,1.5s								
KOLS	Kolonicke sedl	77.41	323	eP		P		10 52 12.8	+1.0
OJC	Ojcow	77.70	325	eP		P		10 52 14.1	+0.7
OJC	Ojcow	77.70	325	eP		P		10 52 14.3	+0.9
	comp=Z,32nm,1.3s								
OJC	Ojcow	77.70	325	eP		P		10 52 14.1	+0.7
IMW	Indian Meadow	77.79	44	eP		P		10 52 16.6	+2.2
	comp=Z,19nm,1.9s								
CRVS	Cervenica-Dubn	77.83	323	eP		P		10 52 13.5	-0.6
CRVS					pmax	pmax			
	comp=Z,11nm,1.5s								
CRVS	Cervenica-Dubn	77.83	323	eP		P		10 52 13.5	-0.6
CRVS					ePP	PP		10 55 06.5	-2.7
TRPA	Tarpa	77.83	322	eP		P		10 52 15.0	+0.9
MOOW	Moose Ponds	78.00	44	eP		P		10 52 17.5	+2.1
	comp=Z,7.2nm,1.6s								
NIE	Niedzica	78.02	324	eP		P		10 52 16.8	+1.6
NIE	Niedzica	78.02	324	eP		P		10 52 16.8	+1.6
OKC	Ostrava-Krasne	78.72	325	eP		P		10 52 20.2	+1.1
OKC	Ostrava-Krasne	78.72	325	eP		P		10 52 20.2	+1.1
KSP	Ksiaz	78.83	327	eP		P		10 52 20.3	+0.7
MORC	Moravsky Berou	79.04	326	eP		P		10 52 21.1	+0.2
MORC					pmax	pmax			
	comp=Z,14nm,1.2s								
MORC	Moravsky Berou	79.04	326	eP		P		10 52 21.1	+0.2
	comp=Z,14nm,1.2s								
DPC	Dobruska-Polom	79.18	326	eP		P		10 52 22.6	+1.0
DPC	Dobruska-Polom	79.18	326	eP		P		10 52 22.7	+1.0
	comp=Z,56nm,1.8s								
DPC	Dobruska-Polom	79.18	326	eP		P		10 52 22.6	+1.0
UPC	Upice	79.20	327	eP		P		10 52 22.8	+1.1
UPC	Upice	79.20	327	eP		P		10 52 22.8	+1.1
PSZ	Piszkesteto	79.26	323	eP		P		10 52 23.4	+1.2
PSZ					pmax	pmax			
	comp=Z,13nm,1.0s								
PSZ	Piszkesteto	79.26	323	eP		P		10 52 23.4	+1.2
	comp=Z,13nm,1.0s								
PSZ	Piszkesteto	79.26	323	eP		P		10 52 23.0	+0.9
PDAR	Pinedale Array	79.29	44	P		P		10 52 22.9	+0.2
PDAR	Pinedale Array	79.29	44	P		P		10 52 22.9	+0.2
	comp=Z,0.7nm,0.8s,baz=255,slow=4.5,SNR=6.6								
VYHS	Vyhne	79.36	324	eP		P		10 52 23.3	+0.7
VYHS					pmax	pmax			
	comp=Z,7.0nm,1.3s								
VYHS	Vyhne	79.36	324	eP		P		10 52 23.3	+0.7
BRG	Berggiesshubel	79.82	328	eP		P		10 52 25.0	0.0
	comp=Z,10nm,1.3s								
BRG	Berggiesshubel	79.82	328	eP		P		10 52 25.0	0.0
BRG					pmax	pmax			
	comp=Z,11nm,1.3s								
CLL	Collm	79.89	329	i P		P		10 52 25.9	+0.5
CLL					pmax	pmax			
	comp=Z,28nm,1.6s								
CLL	Collm	79.89	329	i P		P		10 52 25.9	+0.5
	comp=Z,28nm,1.6s								
CLL				i				10 52 28.8	
PRU	Pruhonice	80.22	327	eP		P		10 52 28.2	+1.0
PRU	Pruhonice	80.22	327	eP		P		10 52 28.2	+1.0
TREC	Trest	80.32	326	eP		P		10 52 28.9	+1.1
TREC					MLR	MLR			
	comp=Z,200nm,11.8s								
TREC	Trest	80.32	326	eP		P		10 52 28.9	+1.1
TREC					AMS	AMS		11 31 50.0	
	comp=Z,200nm,11.8s								
NKC	Novy Kostel	80.93	328	eP		P		10 52 30.5	-0.6
NKC	Novy Kostel	80.93	328	eP		P		10 52 30.5	-0.6
SOP	Sopron	81.01	325	eP		P		10 52 33.1	+1.6
PKSM	Moragy	81.07	322	eP		P		10 52 32.9	+1.1
KHC	Kasperske Hory	81.28	327	eP		P		10 52 33.7	+0.8
KHC					MLR	MLR			
	comp=Z,200nm,11.9s								
KHC	Kasperske Hory	81.28	327	eP		P		10 52 33.8	+0.8
	comp=Z,12nm,1.4s								
KHC	Kasperske Hory	81.28	327	eP		P		10 52 33.7	+0.8
KHC					AMS	AMS		11 32 40.0	
	comp=Z,200nm,11.9s								
GERES	GERESS Array B	81.44	327	P		P		10 52 32.7	-1.2
GERES	GERESS Array B	81.44	327	P		P		10 52 32.7	-1.2
	comp=Z,1.2nm,0.8s,baz=45,slow=5.8,SNR=7.6								
GERES					LR	LR		11 30 41.3	
	comp=Z,62nm,18.8s,baz=86,slow=37								
FUORN	Ofenpass-Fuorn	84.64	327	eP		P		10 52 50.8	+0.1
	comp=Z,13nm,1.2s								
ANMO	Albuquerque	86.34	48	eP		P		10 53 01.6	+2.3
	comp=Z,29nm,2.7s								
ANMO	Albuquerque	86.34	48	P		P		10 53 00.1	+0.8
	comp=Z,0.9nm,0.9s,baz=40,slow=7.9,SNR=2.7								
PPT	Papeete	86.75	115	LR		LR		11 22 47.4	
	comp=Z,57nm,20.7s,baz=346,slow=29								
PPT2	Papeete2	86.76	115	eLR		LR		11 20 25.5	
	comp=Z,132nm,31.8s								
SAML	Samuel	145.81	41	ePKPdf		PKPab		10 59 56.9	0.0
LPAZ	La Paz	148.66	56	PKPbc		PKPdf		11 00 03.1	+1.6
LPAZ	La Paz	148.66	56	PKPbc		PKPdf		11 00 03.1	+1.6
	comp=Z,1.0nm,0.8s,baz=14,slow=3.7,SNR=3.7								

*IDC **12** 10:56:19.8±2.3, 1.°76S×133.°03E, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.5/21, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=91.0km s-min=25.1km az=79.0*
*AUST **12** 10:56:26.4, 1.°98S×133.°01E, h60km*
ISC 12 10:56:27.1±2.3, 2.°0S±0.°1×133.°1E±0.°2, h35km, n10, σ1s57/11, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FAKI	Fak Fak	1.21	221	P		Pn	10 56 48.3	+0.7
	baz=1.2,SNR=211							
SWI	Sorong	2.11	302	P		Pn	10 56 59.6	-0.3
	baz=2.1,SNR=6.9							
PALU	Palau	9.39	9	S		Sn	11 00 02.6	-22
	baz=9.4,SNR=5.0							
KDU	Kakadu	10.63	183	P		Pn	10 58 57.0	-0.1
	baz=11,SNR=5.3							
KDU				S		Sn	11 00 52.9	-2.1
	baz=11,SNR=5.4							
MTN	Manton Dam	10.94	190	P		Pn	10 59 03.6	+2.3
	baz=11,SNR=7.5							
MTN				S		Sn	11 01 01.4	-1.1
	baz=11,SNR=8.8							
KNRA	Kununurra	14.23	197	P		Pn	10 59 48.2	+1.9
	baz=14,SNR=3.6							
KNRA				S		Sn	11 02 21.3	-1.8
	baz=14,SNR=4.4							
FITZ	Fitzroy Crossi	17.58	204	P		Pn	11 00 28.2	-1.3
	0.1nm,0.3s,baz=22,slow=11,SNR=6.2							
FITZ				S		Sn	11 03 32.1	-12
	0.1nm,0.3s,baz=294,slow=20,SNR=3.9							
WRA	Warramunga Arr	17.88	176	P		Pn	11 00 33.2	0.0
	0.1nm,0.3s,baz=356,slow=12,SNR=12							
ASAR	Alice Springs	21.56	178	P		P	11 01 13.9	+0.3
	1.5nm,0.7s,baz=358,slow=11,SNR=20							
MKAR	Makanchi Array	65.84	324	P		P	11 07 05.9	-3.2
	0.2nm,0.6s,baz=116,slow=6.6,SNR=2.7							

IDC 12 11:12:23.3±0.9, 11.°08N×140.°73E, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.7/25, mbtmp3.6/8, ML3.4/1, Error ellipse: s-maj=31.0km s-min=20.2km az=110.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GUMO	Guam	4.76	58	Pn		Pn	11 13 37.8	+1.5
	1.5nm,0.3s,baz=195,slow=20,SNR=2.3							
GUMO				Sn		Sn	11 14 33.8	+1.5
	2.3nm,0.3s,baz=37,slow=20,SNR=1.7							
WRA	Warramunga Arr	31.46	192	P		P	11 18 46.1	-0.7
	1.0nm,1.0s,baz=11,slow=9.2,SNR=3.4							
ASAR	Alice Springs	35.17	191	P		P	11 19 19.6	+0.5
	0.3nm,0.6s,baz=18,slow=12,SNR=4.9							
SONM	Songino Array	46.59	328	P		P	11 20 53.9	+0.6
	0.4nm,0.8s,baz=133,slow=4.6,SNR=2.9							
MKAR	Makanchi Array	60.55	318	P		P	11 22 35.7	+0.1
	0.3nm,0.6s,baz=105,slow=8.0,SNR=4.5							
ILAR	Eielson Array	72.56	25	P		P	11 23 50.1	-1.9
	0.3nm,0.5s,baz=247,slow=6.2,SNR=9.9							
YKA	Yellowknife Ar	86.92	27	P		P	11 25 10.0	0.0
	0.4nm,0.5s,baz=291,slow=5.5,SNR=7.7							
NVAR	Mina Array Bea	91.64	50	P		P	11 25 34.6	+1.5
	0.3nm,0.6s,baz=270,slow=3.6,SNR=3.1							

IDC 12 11:17:21.3±1.0, 11.°16N×140.°65E, h0km, mb3.4/6, mb1 3.7/7, mb1mx3.5/26, mbtmp3.5/7, ML3.4/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/23, Error ellipse: s-maj=34.2km s-min=22.0km az=101.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GUMO	Guam	4.78	59	Pn		Pn	11 18 36.4	+1.8
	1.5nm,0.3s,baz=155,slow=19,SNR=2.7							
WRA	Warramunga Arr	31.52	191	P		P	11 23 45.3	-0.1
	0.4nm,0.6s,baz=13,slow=9.7,SNR=4.9							
CTA	Charters Tower	31.54	170	LR		LR	11 33 50.8	
	comp=Z,99nm,21.2s,baz=54,slow=31							
ASAR	Alice Springs	35.23	191	P		P	11 24 17.7	0.0
	0.3nm,0.6s,baz=19,slow=12,SNR=5.6							
MKAR	Makanchi Array	60.43	318	P		P	11 27 32.1	-0.7
	0.2nm,0.6s,baz=98,slow=9.3,SNR=2.5							
KURBB	Kurchatov Arra	63.86	321	P		P	11 27 56.9	+1.2
	0.3nm,0.5s,baz=109,slow=7.1,SNR=3.5							
ILAR	Eielson Array	72.52	25	P		P	11 28 49.0	-0.8
	0.2nm,0.5s,baz=245,slow=6.0,SNR=7.1							
YKA	Yellowknife Ar	86.89	27	P		P	11 30 07.6	-0.2
	0.4nm,0.6s,baz=293,slow=5.6,SNR=5.9							

MEX 12 11:20:22.2±0.5, 16.°15N×97.°64W, h11km±6km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PNIG	Pinotepa	0.52	297	i P		Pg	11 20 31.4	-1.1
PNIG				eS		Sg	11 20 38.9	-0.5
VHO	Vista Hermosa	1.26	43	eP		Pn	11 20 42.2	-3.9
VHO				eS		Sb	11 20 57.7	-5.1
HUIG	Huatulco	1.52	104	eP		Pn	11 20 46.2	-3.2
HUIG				eS		Sn	11 21 04.3	-5.0
UTMO	Huajuapan	1.68	355	eP		Pn	11 20 48.9	-2.9
UTMO				i S		Sn	11 21 08.7	-4.8

*ISK **12** 11:29:53.8, 40.°00N×33.°51E, h8km, MD2.9*
*DDA **12** 11:29:54.3, 39.°97N×33.°52E, h7km, MD2.8*
*CSEM **12** 11:29:54.2±0.1, 39.°98N×33.°53E, h5km, MD2.8, Error ellipse: s-maj=3.4km s-min=2.8km az=122.0*
ISC 12 11:29:54.3±1.1, 39.°99N±0.°02×33.°53E±0.°02, h7km±10km, n31, σ0s73/49, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ELDT	Eldivan	0.51	351	i P		Pg	11 30 04.2	0.0
ELDT				i S		Sb	11 30 12.7	-0.7
ELDT	Eldivan	0.51	351	i P		Pg	11 30 04.2	0.0
ELDT				i S		Sb	11 30 12.7	-0.7
BBAL	Bala	0.55	216	i P		Pg	11 30 04.5	-0.3
BBAL				i S		Sg	11 30 12.9	+0.9
BBAL	Bala	0.55	216	i P		Pg	11 30 04.5	-0.3
BBAL				i S		Sg	11 30 12.9	+0.9
ANTO	Ankara	0.58	258	ePG		Pg	11 30 05.1	-0.4
ANTO				eSG		Sg	11 30 13.5	+0.4
ANTO	Ankara	0.58	258	ePg		Pg	11 30 05.1	-0.4
ANTO				eSg		Sg	11 30 13.5	+0.4
LOD	Lodumlu	0.60	261	ePG		Pg	11 30 05.5	-0.3
LOD	Lodumlu	0.60	261	ePg		Pg	11 30 05.6	-0.3
CANT	Cankiri	0.62	6	ePG		Pg	11 30 06.2	-0.1
AFSR	Af ar-Bala (A	0.65	214	ePG		Pg	11 30 06.7	-0.1
AFSR				eSG		Sb	11 30 16.5	-0.8
AFSR	Af ar-Bala (A	0.65	214	ePg		Pg	11 30 06.7	-0.1
AFSR				eSg		Sb	11 30 16.5	-0.8
CDAG	Cicekdag	0.74	119	i P		Pg	11 30 07.8	-0.8
CDAG				i S		Sg	11 30 16.6	-1.6
CDAG	Cicekdag	0.74	119	i P		Pg	11 30 07.8	-0.8
CDAG				i S		Sg	11 30 16.6	-1.6
CORM	Corum	0.86	77	ePG		Pg	11 30 10.9	0.0
CORM				eSG		Sb	11 30 23.7	+0.1
CORM	Corum	0.86	77	ePg		Pg	11 30 10.9	0.0
CORM				eSg		Sb	11 30 23.7	+0.1
ILGA	Ilgaz	1.07	7	i P		Pg	11 30 14.5	-0.4
ILGA				i S		Sn	11 30 31.6	+0.3
ILGA	Ilgaz	1.07	7	i P		Pg	11 30 14.5	-0.4
ILGA				i S		Sn	11 30 31.6	+0.3
YOZ	Yozgat	1.42	104	ePN		Pb	11 30 21.1	-0.1
YOZ	Yozgat	1.42	104	ePn		Pb	11 30 21.1	-0.1
BALT	Daday	1.55	356	i P		Pb	11 30 23.7	+0.2
BALT				i S		Sn	11 30 43.3	+0.3
BALT	Daday	1.55	356	i P		Pb	11 30 23.7	+0.2
BALT				i S		Sn	11 30 43.3	+0.3
AVNT	Avonos	1.58	139	i P		Pb	11 30 23.9	-0.1
AVNT				i S		Sg	11 30 47.5	+2.3
AVNT	Avonos	1.58	139	i P		Pb	11 30 23.9	-0.1
AVNT				i S		Sg	11 30 47.5	+2.3
SVRH	Sivrihisar-ESK	1.64	251	ePN		Pn	11 30 23.3	-0.4
SVRH	Sivrihisar-ESK	1.64	251	ePn		Pn	11 30

AKAS				*i* S		**Sn**	**12 14 08.3**	**+0.4**
FETY	**Fethiye**	**0.54**	**341**	PG		**Pn**	**12 14 04.5**	**-0.4**
FETY				*e*SG		**Sn**	**12 14 12.3**	**-0.8**
FETY	**Fethiye**	**0.54**	**341**	*i* Pg		**Pn**	**12 14 04.5**	**-0.4**
FETY				*e*Sg		**Sn**	**12 14 12.3**	**-0.8**
ELL	**Elmali**	**0.79**	**38**	*e*PG		**Pn**	**12 14 09.0**	**+0.7**
ELL				*e*SG		**Sn**	**12 14 20.7**	**+1.6**
ELL	**Elmali**	**0.79**	**38**	*e*Pg		**Pn**	**12 14 09.0**	**+0.7**
ELL				*e*Sg		**Sn**	**12 14 20.7**	**+1.6**
DALY	**Dalyan (Mu˘la**	**0.87**	**323**	*e*PG		**Pn**	**12 14 09.5**	**+0.3**
DALY	**Dalyan (Mu˘la**	**0.87**	**323**	*e*Pg		**Pn**	**12 14 09.5**	**+0.3**
TURN	**Turunc**	**0.94**	**323**	*i* P		**Pn**	**12 14 12.6**	**+2.4**
TURN				*i* S		**Sn**	**12 14 22.4**	**0.0**
TURN	**Turunc**	**0.94**	**323**	*i* P		**Pn**	**12 14 12.6**	**+2.4**
TURN				*i* S		**Sn**	**12 14 22.4**	**0.0**
ARG	**Arkhangelos**	**0.96**	**276**	*e*PN		**Pn**	**12 14 10.6**	**+0.2**
ARG				*e*SN		**Sn**	**12 14 22.2**	**-0.8**
ARG	**Arkhangelos**	**0.96**	**276**	*e*Pn		**Pn**	**12 14 10.6**	**+0.2**
ARG				*e*Sn		**Sn**	**12 14 22.2**	**-0.8**
GLHS	**Glhisar (BURDU**	**1.04**	**8**	*e*PG		**Pn**	**12 14 12.3**	**+0.6**
GLHS	**Glhisar (BURDU**	**1.04**	**8**	*e*Pg		**Pn**	**12 14 12.3**	**+0.6**
GOLH	**Golhisar**	**1.13**	**10**	*i* P		**Pn**	**12 14 14.8**	**+1.9**
GOLH				*i* S		**Sn**	**12 14 28.6**	**+1.3**
GOLH	**Golhisar**	**1.13**	**10**	*i* P		**Pn**	**12 14 14.8**	**+1.9**
GOLH				*i* S		**Sn**	**12 14 28.6**	**+1.3**
KORT	**Korkueli**	**1.21**	**44**	*i* P		**Pn**	**12 14 13.3**	**-0.8**
KORT	**Korkueli**	**1.21**	**44**	*i* P		**Pn**	**12 14 13.3**	**-0.8**
YER	**Yerkesik**	**1.30**	**321**	*e*PN		**Pn**	**12 14 16.7**	**+1.5**
YER	**Yerkesik**	**1.30**	**321**	*e*Pn		**Pn**	**12 14 16.7**	**+1.5**
DAT	**Datca**	**1.52**	**294**	*e*PN		**Pn**	**12 14 18.8**	**+0.6**
DAT	**Datca**	**1.52**	**294**	*e*Pn		**Pn**	**12 14 18.8**	**+0.6**
DNZL	**Cakiroluk**	**1.58**	**352**	*i* P		**Pn**	**12 14 20.8**	**+1.7**
DNZL				*i* S		**Sn**	**12 14 40.0**	**+1.6**
DNZL	**Cakiroluk**	**1.58**	**352**	*i* P		**Pn**	**12 14 20.8**	**+1.7**
DNZL				*i* S		**Sn**	**12 14 40.0**	**+1.6**
DENT	**Denizli**	**1.64**	**352**	*e*PN		**Pn**	**12 14 21.2**	**+1.3**
DENT	**Denizli**	**1.64**	**352**	*e*Pn		**Pn**	**12 14 21.2**	**+1.3**
BCK	**Bucak**	**1.69**	**37**	*e*PN		**Pn**	**12 14 21.2**	**+0.7**
BCK	**Bucak**	**1.69**	**37**	*e*Pn		**Pn**	**12 14 21.2**	**+0.7**
MLSB	**Milas**	**1.70**	**314**	*e*PN		**Pn**	**12 14 21.4**	**+0.8**
MLSB	**Milas**	**1.70**	**314**	*e*Pn		**Pn**	**12 14 21.4**	**+0.8**
KARP	**Karpathos**	**1.84**	**252**	*e*PN		**Pn**	**12 14 23.8**	**+1.3**
KARP	**Karpathos**	**1.84**	**252**	*e*Pn		**Pn**	**12 14 23.8**	**+1.3**
BODT	**Bodrum**	**1.86**	**301**	*e*PN		**Pn**	**12 14 23.1**	**+0.3**
BODT	**Bodrum**	**1.86**	**301**	*e*Pn		**Pn**	**12 14 23.1**	**+0.3**
AYDN	**Tasoluk**	**1.91**	**324**	*i* P		**Pn**	**12 14 25.0**	**+1.4**
AYDN				*i* S		**Sn**	**12 14 45.1**	**-1.4**
AYDN	**Tasoluk**	**1.91**	**324**	*i* P		**Pn**	**12 14 25.0**	**+1.4**
AYDN				*i* S		**Sn**	**12 14 45.1**	**-1.4**
KHL	**Karahalli**	**2.20**	**4**	*e*PN		**Pn**	**12 14 29.0**	**+1.4**
KHL	**Karahalli**	**2.20**	**4**	*e*Pn		**Pn**	**12 14 29.0**	**+1.4**
KHAL	**Karahalli**	**2.25**	**4**	*i* P		**Pn**	**12 14 27.1**	**-1.1**
KHAL	**Karahalli**	**2.25**	**4**	*i* P		**Pn**	**12 14 27.1**	**-1.1**
GAZI	**Gazipasa**	**2.44**	**86**	*i* P		**Pn**	**12 14 30.9**	**+0.2**
GAZI	**Gazipasa**	**2.44**	**86**	*i* P		**Pn**	**12 14 30.9**	**+0.2**
KULA	**Kula-Manisa**	**2.44**	**348**	*e*PN		**Pn**	**12 14 31.3**	**+0.5**
KULA	**Kula-Manisa**	**2.44**	**348**	*e*Pn		**Pn**	**12 14 31.3**	**+0.5**
ZKR	**Zakros**	**2.71**	**249**	*e*PN		**Pn**	**12 14 36.3**	**+1.8**
ZKR				*e*SN		**Sn**	**12 15 07.1**	**+1.1**
ZKR	**Zakros**	**2.71**	**249**	*e*Pn		**Pn**	**12 14 36.3**	**+1.8**
ZKR				*e*Sn		**Sn**	**12 15 07.1**	**+1.1**
KONT	**Konya--Tatoy**	**3.05**	**52**	*e*PN		**Pn**	**12 14 41.0**	**+1.9**
KONT	**Konya--Tatoy**	**3.05**	**52**	*e*Pn		**Pn**	**12 14 41.0**	**+1.9**
NPS	**Neapolis**	**3.13**	**255**	*e*PN		**Pn**	**12 14 41.5**	**+1.3**
NPS	**Neapolis**	**3.13**	**255**	*e*Pn		**Pn**	**12 14 41.5**	**+1.3**
XRY	**Khrisi**	**3.20**	**248**	*e*PN		**Pn**	**12 14 42.7**	**+1.6**
XRY	**Khrisi**	**3.20**	**248**	*e*Pn		**Pn**	**12 14 42.7**	**+1.6**
LAST	**Lasithi**	**3.26**	**254**	*e*PN		**Pn**	**12 14 43.5**	**+1.4**
LAST	**Lasithi**	**3.26**	**254**	*e*Pn		**Pn**	**12 14 43.5**	**+1.4**
VAM	**Vamos**	**4.21**	**262**	*e*PN		**Pn**	**12 14 57.1**	**+2.0**
VAM	**Vamos**	**4.21**	**262**	*e*Pn		**Pn**	**12 14 57.1**	**+2.0**
ANKY	**Antikythira Is**	**4.88**	**269**	*e*PN		**Pn**	**12 15 05.1**	**+0.9**
ANKY	**Antikythira Is**	**4.88**	**269**	*e*Pn		**Pn**	**12 15 05.1**	**+0.9**
VLI	**Veliai**	**5.17**	**278**	*e*PN		**Pn**	**12 15 09.4**	**+1.2**
VLI	**Veliai**	**5.17**	**278**	*e*Pn		**Pn**	**12 15 09.4**	**+1.2**
AMAG	**Maghara**	**6.37**	**148**	P		**Pn**	**12 15 24.8**	**+0.1**
	baz=146							
AMAG	**Maghara**	**6.37**	**148**	P		**Pn**	**12 15 24.8**	**+0.1**
KOT	**Kottamia**	**6.53**	**160**	P		**Pn**	**12 15 27.5**	**+0.5**
	baz=159							
KOT				AMP			12 16 00.0	
	comp=N,10µm,0.2s,logA/T=4.6,baz=159							
KOT	**Kottamia**	**6.53**	**160**	P		**Pn**	**12 15 27.5**	**+0.5**
HNAT	**Natroun**	**6.56**	**170**	P		**Pn**	**12 15 27.5**	**+0.1**
	baz=169							
HNAT	**Natroun**	**6.56**	**170**	P		**Pn**	**12 15 27.5**	**+0.1**
HHAG	**Hagoal**	**6.58**	**158**	P		**Pn**	**12 15 28.3**	**+0.6**
	baz=157							
HHAG				S		Sn	12 16 34.2	-7.3
	baz=157							
HHAG	**Hagoal**	**6.58**	**158**	P		**Pn**	**12 15 28.3**	**+0.6**
HHAG				S		Sn	12 16 34.2	-7.3
HSAF	**As Saff**	**6.76**	**163**	P		**Pn**	**12 15 30.2**	**+0.2**
	baz=162							
HSAF	**As Saff**	**6.76**	**163**	P		**Pn**	**12 15 30.2**	**+0.2**
GLL	**Jalalah**	**6.83**	**162**	P		**Pn**	**12 15 31.6**	**+0.5**
	baz=161							
GLL	**Jalalah**	**6.83**	**162**	P		**Pn**	**12 15 31.6**	**+0.5**
SUZ		**6.93**	**154**	P		**Pn**	**12 15 32.9**	**+0.5**
	baz=152							
SUZ		**6.93**	**154**	P		**Pn**	**12 15 32.9**	**+0.5**
HFRF	**Wahat Farafira**	**8.99**	**186**	P		**Pn**	**12 16 00.2**	**-0.4**
	baz=186							
HFRF	**Wahat Farafira**	**8.99**	**186**	P		**Pn**	**12 16 00.2**	**-0.4**

ISCJB ***12*** *12:19:32.7±0.2,3˘.18N±0˘.03×122˘.69E±0˘.03,h554km±3km, mb4.5/66,Error ellipse: s-maj=5.2km s-min=4.3km az=22.5*

IDC ***12*** *12:19:34.0±0.7,3˘.16N×122˘.60E,h556km±7km, mb3.9/25, mb1 3.9/27,mb1mx3.8/35,mbtmp3.9/27, Error ellipse: s-maj=11.4km s-min=6.4km az=83.0*

NEIC ***12*** *12:19:33.7±0.4,3˘.18N×122˘.63E,h555km±6km,mb4.6/24, Error ellipse: s-maj=7.2km s-min=5.2km az=91.0*

BJI ***12*** *12:19:33.9,3˘.20N×122˘.60E,h552km,mB4.6/22,mb4.8/35*

DJA ***12*** *12:19:33.6±0.2,3˘N±3˘×12˘3E±˘,h545km±3km,M4.7/54, mb4.9/54,mB5.1/32,MLv5.4/15,Mw(mB)4.5/32*

ISC 12 12:19:33.6±0.3,3˘.14N±0˘.04×122˘.61E±0˘.06,h549km±2km, n200,σ1§29/289,mb4.6/65,3C-3D,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**2.73**	**194**	P	**P**	**12 20 46.7**	**-0.3**
MNI	**Manado**	**2.80**	**127**	P	**P**	**12 20 47.0**	**-0.4**
KMSI	**Cibinong**	**2.90**	**152**	P	**P**	**12 20 47.1**	**-0.9**
LUWI	**Luwuk**	**4.16**	**178**	P	**P**	**12 20 54.7**	**-2.0**
CTBH	**Cotabato--PC H**	**4.37**	**22**	*i*P	**P**	**12 20 58.3**	**+0.1**
MYLDM	**Lahad Datu**	**4.57**	**296**	P	**P**	**12 21 01.2**	**+1.4**
MYLDM	**Lahad Datu**	**4.57**	**296**	P	**P**	**12 21 00.9**	**+1.1**
TSM	**Tawau**	**4.86**	**284**	P	**P**	**12 21 02.1**	**-0.1**
DAV	**Davao City (W)**	**4.90**	**37**	*e*P	**P**	**12 21 04.2**	**+1.6**
DAV				S	**S**	**12 22 17.1**	**+1.9**
DAV	**Davao City (W)**	**4.90**	**37**	P	**P**	**12 21 04.7**	**+2.1**
DAV	**Davao City (W)**	**4.90**	**37**	P	**P**	**12 21 03.3**	**+0.7**
	133nm,0.3s,baz=50,slow=0.9,SNR=32						
DAV				S	**S**	**12 22 17.1**	**+1.9**
	32nm,0.3s,baz=249,slow=22,SNR=9.2						
TNTI	**Ternate**	**5.31**	**116**	P	**P**	**12 21 05.1**	**-1.0**
	413nm,0.9s,16µm5.2nm						
GAMI	**Galela, Maluku**	**5.34**	**104**	P	**P**	**12 21 04.9**	**-1.4**
	1µm,0.8s,15µm5.7nm						
SKSI	**Soroako, Sulaw**	**5.78**	**193**	P	**P**	**12 21 09.1**	**-1.2**
	802nm,0.9s,7µm2.6nm						
SDKM	**Sandakan**	**5.94**	**295**	P	**P**	**12 21 11.0**	**-0.7**
LBMI	**Labuha**	**6.17**	**127**	P	**P**	**12 21 12.7**	**-1.1**
	225nm,0.7s,11µm6.7nm						
SGKI	**Sangatta, Kali**	**6.19**	**234**	P	P	12 21 10.3	-3.7
	428nm,1.1s,6µm1.6nm						
SMKI	**Samarinda**	**6.47**	**237**	P	**P**	**12 21 18.8**	**+2.3**
	440nm,1.0s,1.6nm						
TTSI	**Tana Toraja**	**6.75**	**204**	P	**P**	**12 21 18.8**	**-0.4**
	601nm,0.9s,5µm2.1nm						
KDM	**Kudat**	**6.86**	**303**	P	**P**	**12 21 19.6**	**-0.7**
KKM	**Kota Kinabalu**	**6.99**	**295**	*e*P	**P**	**12 21 21.0**	**-0.6**
KKM	**Kota Kinabalu**	**6.99**	**295**	P	**P**	**12 21 21.5**	**-0.1**
KKM	**Kota Kinabalu**	**6.99**	**295**	P	**P**	**12 21 21.2**	**-0.4**
	122nm,0.7s,2µm0.5nm						
SPSI	**Sidrap Palu**	**7.61**	**202**	P	**P**	**12 21 27.7**	**+0.2**
	462nm,0.8s,4µm1.6nm						
PLP	**Palo**	**8.31**	**16**	*e*P	**P**	**12 21 36.3**	**+1.9**
BBSI	**Bau Bau**	**8.57**	**180**	P	**P**	**12 21 38.2**	**+1.1**
	122nm,1.0s						
KAPI	**Kappang**	**8.59**	**199**	*e*P	**P**	**12 21 36.6**	**-0.6**
KAPI				*e*S	**S**	**12 23 14.0**	**-4.6**
KAPI				S	S	12 23 20.8	+2.2
KAPI	**Kappang**	**8.59**	**199**	P	**P**	**12 21 36.6**	**-0.6**
	94nm,1.0s,920nm						
KAPI	**Kappang**	**8.59**	**199**	P	P	**12 21 36.5**	**-0.7**
	4.4nm,0.3s,baz=12,slow=6.6,SNR=16						
KAPI				S	**S**	**12 23 20.8**	**+2.2**
	baz=180,slow=21,SNR=13						
BKSI	**Bulukumba**	**8.77**	**196**	P	**P**	**12 21 39.0**	**0.0**
	52nm,0.8s,428nm						
BSSI	**Bau Bau, Buton**	**9.46**	**193**	P	**P**	**12 21 48.8**	**+2.7**
	148nm,0.8s,1µm						
BTM	**Bintulu**	**9.51**	**271**	P	**P**	**12 21 47.6**	**+1.1**
SWI	**Sorong**	**9.52**	**115**	P	**P**	**12 21 46.9**	**+0.2**
	169nm,0.9s,2µm						
BBKI	**Banjar Baru**	**10.16**	**230**	P	P	12 21 58.5	+5.3
	59nm,0.7s						
SBUM	**Sibu**	**10.40**	**266**	P	**P**	**12 21 56.7**	**+1.1**
SBUM	**Sibu**	**10.40**	**266**	P	**P**	**12 21 56.6**	**+1.0**
	127nm,1.2s,1µm						
FAKI	**Fak Fak**	**11.37**	**122**	P	**P**	**12 22 05.9**	**+0.3**
	70nm,1.1s,1µm						
STKI	**Sintang**	**11.54**	**255**	P	**P**	**12 22 07.5**	**+0.1**
	97nm,0.9s,6µm						
PBKI	**Pangkalan Bun**	**12.38**	**242**	P	**P**	**12 22 16.4**	**+0.3**
	174nm,1.1s						
KSM	**Kuching**	**12.40**	**263**	*e*P	**P**	**12 22 16.2**	**-0.1**
	27nm,0.5s						
KSM	**Kuching**	**12.40**	**263**	P	**P**	**12 22 16.5**	**+0.2**
KSM	**Kuching**	**12.40**	**263**	P	**P**	**12 22 16.5**	**+0.2**
	83nm,0.9s,910nm						
BALP	**Baler**	**12.56**	**355**	*e*P	**P**	**12 22 16.3**	**-1.6**
BOLP	**Bolinao**	**13.42**	**349**	*e*P	**P**	**12 22 24.1**	**-2.6**
CAUP	**Cauayan**	**13.74**	**357**	*e*P	**P**	**12 22 29.7**	**-0.4**
PALP	**Palanan**	**13.84**	**359**	*e*P	**P**	**12 22 30.8**	**-0.2**
ABRA	**Dolores**	**14.54**	**353**	*e*P	P	12 22 33.5	-4.7
GMJI	**Gumukmas**	**14.56**	**219**	P	**P**	**12 22 39.9**	**+1.3**
	77nm,1.1s						
APYP	**Conner**	**14.69**	**355**	*e*P	**P**	**12 22 38.0**	**-1.9**
KRKI	**Karangkates**	**15.12**	**222**	P	**P**	**12 22 46.3**	**+1.9**
	455nm,0.7s,16µm						
SJI	**Sawahan**	**15.29**	**225**	P	**P**	**12 22 46.4**	**+0.2**
	137nm,0.8s						
PWJI	**Pagerwojo**	**15.46**	**224**	P	**P**	**12 22 47.7**	**-0.2**
	87nm,1.0s,6µm						
WOJI	**Wonogiri, Jawa**	**15.96**	**227**	P	**P**	**12 22 53.0**	**+0.1**
	157nm,0.8s						
TPI	**Tanjungpandan**	**16.05**	**249**	P	**P**	**12 22 53.4**	**-0.4**
	91nm,1.0s,908nm						
UGM	**Wanagama**	**16.31**	**228**	*e*P	**P**	**12 22 58.4**	**+2.2**
	79nm,0.8s						
UGM	**Wanagama**	**16.31**	**228**	P	**P**	**12 22 54.6**	**-1.6**
	123nm,0.9s						
BJII	**Banjamegara**	**16.55**	**231**	P	**P**	**12 22 58.8**	**+0.3**
	147nm,1.0s						
TGJI	**Tegal**	**16.74**	**234**	P	**P**	**12 23 00.9**	**+0.9**
	83nm,1.1s,1µm						
PPBI	**Pangkal Pinang**	**17.29**	**252**	P	**P**	**12 23 05.0**	**-0.1**
	69nm,1.0s,2µm						
LEM	**Lembang**	**17.94**	**236**	P	**P**	**12 23 12.0**	**+0.7**
	173nm,1.1s,2µm						
CISI	**Cisompet, Garu**	**18.19**	**234**	P	**P**	**12 23 13.1**	**-0.3**
	163nm,1.0s						
DBJI	**Dramaga**	**18.53**	**239**	P	**P**	**12 23 17.3**	**+0.8**
	160nm,0.6s,2µm						
MYKOM	**Kota Tinggi**	**18.79**	**266**	P	**P**	**12 23 19.9**	**+1.1**
MYKOM	**Kota Tinggi**	**18.79**	**266**	P	**P**	**12 23 19.4**	**+0.6**
	95nm,0.8s,841nm						
SBJI	**Serang**	**18.85**	**241**	P	**P**	**12 23 20.3**	**+0.9**
	195nm,1.1s						
BTDF	**Bukit Timah Da**	**18.90**	**265**	P	**P**	**12 23 20.4**	**+0.5**
	138nm,0.9s,1µm						
JAY	**Jayapura**	**18.94**	**107**	P	**P**	**12 23 22.6**	**+2.3**
	23nm,0.9s						
KGM	**Kluang**	**19.30**	**267**	P	**P**	**12 23 24.1**	**+0.6**
CGJI	**Cibinong**	**19.47**	**240**	P	**P**	**12 23 24.4**	**-0.6**
	150nm,0.8s,2µm						
KTGM	**Kuala Trenggan**	**19.54**	**277**	P	**P**	**12 23 26.5**	**+0.9**
TWG	**Pinlang**	**19.62**	**356**	*e*P	**P**	**12 23 25.7**	**-0.5**
	126nm,1.0s						
KASI	**Kota Agung**	**20.03**	**245**	P	**P**	**12 23 31.1**	**+1.0**
	143nm,0.9s,1µm						
TPUB	**Ta-pu**	**20.13**	**355**	*e*P	**P**	**12 23 30.3**	**-0.6**
	29nm,0.7s						
YULB	**Yu-li**	**20.17**	**357**	*e*P	**P**	**12 23 30.0**	**-1.2**
	20nm,0.6s						
LWLI	**Liwa**	**20.22**	**246**	P	**P**	**12 23 32.9**	**+0.9**
	220nm,0.9s,5µm						
RGRI	**Rengat**	**20.56**	**261**	P	**P**	**12 23 34.5**	**-0.4**
	337nm,0.5s,89µm						
SSLB	**Suanglung**	**20.59**	**356**	*e*P	**P**	**12 23 35.0**	**-0.1**
	28nm,0.8s						
UBPT	**Khong Chiam**	**20.75**	**307**	P	**P**	**12 23 37.0**	**+0.4**
	12nm,0.9s						
FRIM	**Kepong**	**20.95**	**271**	P	**P**	**12 23 39.0**	**+0.6**
KSI	**Kapahiang**	**21.11**	**252**	P	**P**	**12 23 43.0**	**+3.1**
	68nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.32**	**172**	P	**P**	**12 23 41.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**21.32**	**172**	P	**P**	**12 23 41.8**	**+0.1**
	1.1nm,0.3s,baz=51,slow=22,SNR=28						
YHNB	**Yeheng**	**21.43**	**357**	*e*P	**P**	**12 23 41.7**	**-1.0**
	18nm,0.8s						
IPM	**Ipoh**	**21.57**	**274**	*e*P	**P**	**12 23 43.9**	**-0.1**
	22nm,0.7s						
IPM	**Ipoh**	**21.57**	**274**	P	**P**	**12 23 44.4**	**+0.3**
IPM	**Ipoh**	**21.57**	**274**	P	**P**	**12 23 44.0**	**-0.1**
	16nm,0.8s						
BKNI	**Bangkinang**	**21.73**	**263**	P	**P**	**12 23 45.9**	**+0.4**
	142nm,1.0s,1µm						
CHBT	**CHBT**	**22.21**	**297**	P	**P**	**12 23 50.4**	**+0.7**
	58nm,0.9s						
PPI	**Padang Panjang**	**22.48**	**261**	P	**P**	**12 23 53.0**	**+0.8**
	843nm,1.6s,34µm						
MNSI	**Mandailing Nat**	**23.13**	**265**	P	**P**	**12 23 58.0**	**0.0**
	32nm,0.7s						
PSI	**Prapat**	**23.65**	**270**	P	**P**	**12 24 02.6**	**-0.2**
PSI				ScP	**ScP**	**12 30 13.4**	**-1.3**
PSI	**Prapat**	**23.65**	**270**	P	**P**	**12 24 02.7**	**-0.1**
	34nm,1.2s						
PSI	**Prapat**	**23.65**	**270**	P	**P**	**12 24 02.6**	**-0.2**
	34nm,1.1s,baz=91,slow=3.2,SNR=15						
PSI				ScP	**ScP**	**12 30 13.4**	**-1.3**
	12nm,0.9s,baz=182,slow=3.8,SNR=6.2						
JOW	**Kunigami**	**24.17**	**12**	*e*P	**P**	**12 24 07.2**	**+0.1**
	11nm,0.5s						
PHET	**Kaeng Krachan**	**24.71**	**294**	P	**P**	**12 24 12.5**	**+0.6**
	60nm,0.7s						
GSI	**Gunungsitoli**	**25.08**	**266**	P	**P**	**12 24 14.2**	**-1.1**
	81nm,0.8s						
WRAB	**Tennant Creek**	**25.67**	**154**	*e*P	**P**	**12 24 20.0**	**-0.4**
	1.3nm,0.3s						
WRA	**Warramunga Arr**	**25.67**	**154**	P	**P**	**12 24 20.0**	**-0.5**
WRA				ScP	**ScP**	**12 30 19.5**	**-0.6**
WRA	**Warramunga Arr**	**25.67**	**154**	P	**P**	**12 24 20.0**	**-0.5**
	0.8nm,0.2s,baz=339,slow=9.4,SNR=26						
WRA				ScP	**ScP**	**12 30 19.5**	**-0.6**
	3.3nm,0.7s,baz=338,slow=2.9,SNR=17						
CMAR	**Chiang Mai Arr**	**27.72**	**305**	P	**P**	**12 24 39.1**	**+0.7**
CMAR				ScP	**ScP**	**12 30 25.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**27.72**	**305**	P	**P**	**12 24 39.1**	**+0.7**
	3.6nm,0.8s,baz=135,slow=7.9,SNR=32						
CMAR				ScP	**ScP**	**12 30 25.9**	**-0.4**
	3.1nm,0.9s,baz=158,slow=2.3,SNR=18						
GYA	**Guiyang**	**27.77**	**328**	P	**P**	**12 24 39.8**	**+0.9**
GYA				sP	**sP**	**12 27 14.2**	**+1.5**
GYA				PcP	**PcP**	**12 27 38.9**	**+1.5**
GYA				S	**S**	**12 28 45.3**	**+1.8**
GYA				ScP	**ScP**	**12 30 27.6**	**+1.1**
GYA				PcS	**PcS**	**12 31 20.0**	**-0.4**
GYA				ScS	**ScS**	**12 34 18.9**	**-1.2**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.7s						
CMMT	**Chiang Mai**	**27.90**	**306**	P	**P**	**12 24 41.0**	**+1.0**
	comp=Z,18nm,0.9s,comp=Z,366nm						
CHTO	**Chiang Mai**	**27.90**	**306**	*e*P	**P**	**12 24 40.5**	**+0.6**
	comp=Z,13nm,1.0s						
CHTO	**Chiang Mai**	**27.90**	**306**	P	**P**	**12 24 40.6**	**+0.6**
WHN	**Wuhan**	**28.35**	**345**	*i*P	**P**	**12 24 45.3**	**+1.6**
ASAR	**Alice Springs**	**28.83**	**158**	P	**P**	**12 24 48.4**	**+0.3**
ASAR				S	**S**	**12 28 58.9**	**-1.0**
ASAR				ScP	**ScP**	**12 30 29.1**	**-0.7**
ASAR	**Alice Springs**	**28.83**	**158**	P	**P**	**12 24 48.4**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=337,slow=7.1,SNR=11						
ASAR				S	**S**	**12 28 58.9**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=339,slow=18,SNR=4.8						
ASAR				ScP	**ScP**	**12 30 29.1**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=350,slow=2.3,SNR=9.7						
NJ2	**Nanjing**	**28.97**	**353**	*e*P	**P**	**12 24 50.2**	**+1.1**
NJ2				sP	**sP**	**12 27 20.0**	**-3.4**
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s						
KMI	**Kunming**	**29.04**	**321**	P	**P**	**12 24 50.5**	**+0.4**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
JNU	**Nakatsue**	**30.81**	**14**	*e*P	**P**	**12 25 04.1**	**-0.9**
	comp=Z,7.0nm,0.9s						
JNU	**Nakatsue**	**30.81**	**14**	P	**P**	**12 25 03.9**	**-1.1**
	comp=Z,20nm,0.8s,baz=83,slow=5.6,SNR=8.2						
CD2	**Chengdu**	**32.86**	**329**	P	**P**	**12 25 23.2**	**+0.7**
CD2				PP	**pP**	**12 26 57.9**	**+3.2**
CD2				PcP	**PcP**	**12 27 51.5**	**+0.6**
CD2				sP	**sP**	**12 27 59.7**	**+1.6**
CD2				S	**S**	**12 30 03.7**	**+2.2**
CD2				PcS	**PcS**	**12 31 36.7**	**-0.6**
CD2				sS	**sS**	**12 32 52.0**	**-0.6**
CD2				SS	SS	12 32 56.2	-17
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
XAN	**Xi'an**	**33.28**	**339**	P	**P**	**12 25 26.0**	**-0.1**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSAR	**Wonju Array Be**	**34.48**	**7**	P	**P**	**12 25 36.1**	**+0.2**
KSAR				PcP	**PcP**	**12 27 55.7**	**+0.3**
KSAR				ScP	**ScP**	**12 30 47.5**	**-1.2**
KSRS	**Korea Array**	**34.49**	**7**	P	**P**	**12 25 36.1**	**0.0**
	comp=Z,17nm,0.7s,baz=185,slow=9.8,SNR=70						
KSRS				PcP	**PcP**	**12 27 55.7**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=181,slow=3.3,SNR=4.6						
KSRS				ScP	**ScP**	**12 30 47.5**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=174,slow=3.5,SNR=5.2						
MAJO	**Matsushiro**	**36.22**	**22**	*e*P	**P**	**12 25 48.5**	**-2.0**
	comp=Z,25nm,1.0s						
MAT	**Matsushiro**	**36.22**	**22**	P	**P**	**12 25 48.9**	**-1.5**
MJAR	**Matsushiro Arr**	**36.22**	**22**	P	**P**	**12 25 49.2**	**-1.3**
MJAR				ScP	**ScP**	**12 30 54.7**	**-0.5**
MJAR	**Matsushiro Arr**	**36.22**	**22**	P	**P**	**12 25 49.2**	**-1.3**
	comp=Z,22nm,0.9s,baz=198,slow=9.5,SNR=42						
MJAR				ScP	**ScP**	**12 30 54.7**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=312,slow=9.8,SNR=5.6						
NWAO	**Narrogin (SRO)**	**36.23**	**188**	P	**P**	**12 25 50.9**	**+0.3**
NWAO	**Narrogin (SRO)**	**36.23**	**188**	P	**P**	**12 25 50.9**	**+0.3**
	comp=Z,12nm,0.6s,baz=7.3,slow=5.3,SNR=10.0						
LZH	**Lanzhou**	**37.08**	**334**	⇑P	**P**	**12 25 58.5**	**+0.7**
LZH				pP	**pP**	**12 27 35.6**	**+3.3**
LZH				PP	**PP**	**12 27 41.3**	**+0.9**
LZH				sP	**sP**	**12 28

KSH				*e*pP	**pP**	12 30 05.1	+1.2
KSH				*e*PP	**PP**	12 30 33.9	+3.6
KSH				*e*sP	**sP**	12 31 02.6	-0.7
KSH				*e*ScP	**ScP**	12 32 19.5	+3.6
KSH				*e*PcS	**PcS**	12 33 12.6	+2.0
KSH				S	**S**	12 35 22.4	-0.1
KSH				*e*ScS	**ScS**	12 37 10.1	-0.5
KSH				*e*SS	**SS**	12 39 19.3	+0.1
KSH				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,130nm,3.8s						
MK31	**Makanchi Array**	**55.76**	**327**	*e*P	**P**	12 28 18.5	-0.2
MKAR	**Makanchi Array**	**55.76**	**327**	P	**P**	12 28 19.1	+0.4
MKAR				PcP	**PcP**	12 29 09.2	-0.5
MKAR				ScP	**ScP**	12 32 15.5	-0.7
MKAR				S	**S**	12 35 24.4	+0.3
MKAR	**Makanchi Array**	**55.76**	**327**	P	**P**	12 28 19.1	+0.4
	comp=Z,5.4nm,0.3s,baz=125,slow=8.0,SNR=127						
MKAR				PcP	**PcP**	12 29 09.2	-0.5
	comp=Z,3.7nm,0.7s,baz=128,slow=4.1,SNR=12						
MKAR				ScP	**ScP**	12 32 15.5	-0.7
	comp=Z,1.7nm,0.7s,baz=120,slow=5.0,SNR=6.9						
MKAR				S	**S**	12 35 24.4	+0.3
	comp=Z,1.7nm,1.2s,baz=103,slow=10,SNR=3.7						
PETK	**Petropavlovsk-**	**57.59**	**24**	P	**P**	12 28 31.6	+0.6
PETK	**Petropavlovsk-**	**57.59**	**24**	P	**P**	12 28 31.6	+0.6
	comp=Z,9.1nm,0.6s,baz=212,slow=8.0,SNR=12						
KBL	**Kabul**	**58.65**	**309**	*e*P	**P**	12 28 39.0	+0.2
	comp=Z,8.7nm,0.6s						
ZAA0	**Zalesovo Array**	**59.31**	**335**	*e*P	**P**	12 28 41.7	-0.9
ZALV	**Zalesovo Beam**	**59.31**	**335**	P	**P**	12 28 41.7	-0.9
ZALV				S	**S**	12 36 06.6	-2.4
ZALV	**Zalesovo Beam**	**59.31**	**335**	P	**P**	12 28 41.7	-0.9
	comp=Z,4.3nm,0.3s,baz=126,slow=5.5,SNR=16						
ZALV				S	**S**	12 36 06.6	-2.4
	comp=Z,8.0nm,1.1s,baz=134,slow=13,SNR=7.5						
KURBB	**Kurchatov Arra**	**60.07**	**329**	ScP	**ScP**	12 32 33.5	-1.6
	comp=Z,0.6nm,0.7s,baz=128,slow=5.3,SNR=5.0						
KURBB				S	**S**	12 36 17.4	-1.2
	comp=Z,1.4nm,1.0s,baz=134,slow=12,SNR=10						
KURK	**Kurchatov**	**60.08**	**329**	*e*P	**P**	12 28 47.8	0.0
	comp=Z,23nm,0.6s						
KURK				ScP	**ScP**	12 32 33.5	-1.7
KURK				S	**S**	12 36 17.4	-1.3
ABKAR	**Akbulak array**	**70.03**	**322**	*e*P	**P**	12 29 49.7	-0.6
	comp=Z,1.2nm,0.4s						
BILL	**Bilibino**	**71.21**	**16**	*e*P	**P**	12 29 55.7	-1.3
	comp=Z,11nm,1.2s						
AKTO	**Aktyubinsk**	**71.59**	**322**	P	**P**	12 29 59.3	-0.2
AKTO	**Aktyubinsk**	**71.59**	**322**	P	**P**	12 29 59.3	-0.2
	comp=Z,3.7nm,0.4s,baz=103,slow=7.3,SNR=16						
SDPT	**Sand Point**	**79.99**	**34**	*e*P	**P**	12 30 45.0	-0.8
	comp=Z,66nm,0.9s						
KDAK	**Kodiak Island**	**84.58**	**32**	P	**P**	12 31 08.8	-0.2
KDAK	**Kodiak Island**	**84.58**	**32**	P	**P**	12 31 08.8	-0.2
	comp=Z,6.5nm,0.6s,baz=223,slow=6.1,SNR=11						
RSO	**Redoubt South**	**84.63**	**30**	*e*P	**P**	12 31 09.0	-0.6
	comp=Z,10nm,0.8s						
ASF	**Jabal al Asfar**	**84.71**	**302**	P	**P**	12 31 10.2	-0.1
ASF	**Jabal al Asfar**	**84.71**	**302**	P	**P**	12 31 10.2	-0.1
	comp=Z,0.9nm,0.4s,baz=347,slow=9.7,SNR=3.8						
KMBO	**Kilima Mbogo**	**85.42**	**269**	*e*P	**P**	12 31 15.2	+0.8
	comp=Z,3.5nm,0.8s						
KMBO	**Kilima Mbogo**	**85.42**	**269**	P	**P**	12 31 14.1	-0.3
	comp=Z,3.4nm,0.8s,baz=90,slow=22,SNR=7.2						
TRF	**Thorofare Moun**	**85.91**	**27**	*e*P	**P**	12 31 14.5	-1.1
	comp=Z,3.5nm,0.8s						
COLD	**Coldfoot**	**86.03**	**23**	*e*P	**P**	12 31 16.7	+0.9
	comp=Z,6.0nm,0.9s						
MCK	**McKinley**	**86.52**	**26**	*e*P	**P**	12 31 17.4	-0.9
	comp=Z,12nm,0.9s						
ILAR	**Eielson Array**	**87.40**	**25**	P	**P**	12 31 20.7	-1.6
ILAR	**Eielson Array**	**87.40**	**25**	P	**P**	12 31 20.7	-1.6
	comp=Z,1.6nm,0.6s,baz=246,slow=5.1,SNR=49						
JOF	**Joensuu**	**87.82**	**333**	*e*p	**P**	12 31 21.5	-2.8
	comp=Z,6.4nm,0.5s						
MENT	**Mentasta**	**88.90**	**27**	*e*P	**P**	12 31 29.7	+0.2
ARCES	**ARCESS Array B**	**89.57**	**340**	P	**P**	12 31 31.0	-1.4
ARCES	**ARCESS Array B**	**89.57**	**340**	P	**P**	12 31 31.0	-1.4
	comp=Z,2.4nm,0.6s,baz=92,slow=4.1,SNR=16						
KAF	**Kangasniemi**	**90.20**	**332**	*e*p	**P**	12 31 32.9	-2.5
	comp=Z,4.6nm,0.6s						
SPITS	**Spitsbergen Ar**	**90.25**	**349**	P	**P**	12 31 34.7	-0.7
SPITS	**Spitsbergen Ar**	**90.25**	**349**	P	**P**	12 31 34.7	-0.7
	comp=Z,5.5nm,0.3s,baz=100,slow=9.7,SNR=92						
FINES	**FINESS Array B**	**90.39**	**331**	P	**P**	12 31 34.7	-1.5
FINES	**FINESS Array B**	**90.39**	**331**	P	**P**	12 31 34.7	-1.5
	comp=Z,2.4nm,0.6s,baz=87,slow=4.2,SNR=6.9						
INK	**Inuvik**	**92.20**	**21**	P	**P**	12 31 44.0	-0.4
INK	**Inuvik**	**92.20**	**21**	P	**P**	12 31 44.0	-0.4
	comp=Z,2.3nm,0.5s,baz=298,slow=4.5,SNR=34						
CRVS	**Cervenica-Dubn**	**94.96**	**319**	*e*P	**P**	12 31 56.6	-0.9
DLBC	**Dease Lake**	**96.34**	**30**	P	**P**	12 32 03.1	-0.5
DLBC	**Dease Lake**	**96.34**	**30**	P	**P**	12 32 03.1	-0.5
	comp=Z,0.9nm,0.6s,baz=317,slow=21,SNR=4.6						
NOA	**NORSAR Array B**	**97.45**	**333**	P	Pdif	12 32 06.4	-2.0
NOA	**NORSAR Array B**	**97.45**	**333**	P	Pdif	12 32 06.4	-2.1
	comp=Z,0.4nm,0.6s,baz=70,slow=4.7,SNR=3.3						
YKA	**Yellowknife Ar**	**101.70**	**23**	P	**Pdif**	12 32 27.9	+0.6
YKA				PKiKP	**PP**	12 36 46.4	+0.4
YKA	**Yellowknife Ar**	**101.70**	**23**	P	**Pdif**	12 32 27.9	+0.6
	comp=Z,0.2nm,0.5s,baz=303,slow=4.8,SNR=3.7						
YKA				PKiKP	**PP**	12 36 46.4	+0.4
	comp=Z,0.2nm,0.4s,baz=300,slow=1.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**119.17**	**287**	PKP	**PKPdf**	12 37 20.5	-0.9
TORD	**Torodi Ar. Bea**	**119.17**	**287**	PKP	**PKPdf**	12 37 20.5	-0.9
	comp=Z,0.5nm,0.3s,baz=84,slow=1.6,SNR=24						
SCHQ	**Schefferville**	**121.70**	**6**	PKP	**PKPdf**	12 37 25.2	0.0
SCHQ	**Schefferville**	**121.70**	**6**	PKP	**PKPdf**	12 37 25.2	0.0
	comp=Z,1.8nm,0.4s,baz=5.6,slow=4.8,SNR=7.1						

IDC 12 12:21:02.0±2.1, 4°82N×124°62E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/24, mbtmp3.9/3, Error ellipse: s-maj=207.5km s-min=26.2km az=64.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.40**	**159**	P	P	12 26 40.2	-0.2
	2.6nm,0.7s,baz=338,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**29.73**	**163**	P	P	12 27 10.5	+0.3
	0.8nm,0.6s,baz=342,slow=7.9,SNR=4.8						
MKAR	**Makanchi Array**	**55.47**	**326**	P	P	12 30 38.5	-0.1
	0.6nm,0.6s,baz=127,slow=8.9,SNR=2.8						

ISK ***12*** *12:21:24.9, 37°09N×29°75E, h5km, MD2.7*
DDA ***12*** *12:21:26.0, 37°19N×29°87E, h7km, MD2.7*
CSEM ***12*** *12:21:26.0±0.2, 37°11N×29°76E, h5km, MD2.7, Error ellipse: s-maj=6.4km s-min=4.7km az=172.0*

ISC 12 12:21:26.6±1.1, 37°13N±0°03×29°78E±0°02, h5km±9km, n38, σ1°32/54, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLH	**Golhisar**	**0.20**	**302**	*i* P	**Pg**	12 21 30.4	-0.2
GOLH				*i* S	**Sg**	12 21 35.9	+2.6
GOLH	**Golhisar**	**0.20**	**302**	*i* P	**Pg**	12 21 30.4	-0.2
GOLH				*i* S	**Sg**	12 21 35.9	+2.6
GLHS	**Glhisar (BURDU**	**0.22**	**276**	*e*PG	**Pg**	12 21 29.7	-1.3
GLHS				*e*SG	**Sg**	12 21 34.2	+0.2
GLHS	**Glhisar (BURDU**	**0.22**	**276**	*e*Pg	**Pg**	12 21 29.7	-1.3
GLHS				*e*Sg	**Sg**	12 21 34.2	+0.2
KORT	**Korkueli**	**0.48**	**106**	*i* P	**Pg**	12 21 34.6	-1.2
KORT				*i* S	**Sb**	12 21 44.3	-0.7
KORT	**Korkueli**	**0.48**	**106**	*i* P	**Pg**	12 21 34.6	-1.2
KORT				*i* S	**Sb**	12 21 44.3	-0.7
BCK	**Bucak**	**0.73**	**63**	*e*PG	**Pg**	12 21 40.4	-0.2
BCK	**Bucak**	**0.73**	**63**	*e*Pg	**Pg**	12 21 40.4	-0.2
ANTB	**Antalya**	**0.74**	**108**	*e*PG	**Pg**	12 21 40.7	-0.1
ANTB	**Antalya**	**0.74**	**108**	*e*Pg	**Pg**	12 21 40.7	-0.1
FETY	**Fethiye**	**0.74**	**229**	*e*PG	**Pg**	12 21 39.8	-1.1
FETY	**Fethiye**	**0.74**	**229**	*e*Pg	**Pg**	12 21 39.8	-1.1
DNZL	**Cakiroluk**	**0.81**	**314**	*i* P	**Pg**	12 21 42.7	+0.6
DNZL				*i* S	**Sn**	12 21 58.6	+1.3
DNZL	**Cakiroluk**	**0.81**	**314**	*i* P	**Pg**	12 21 42.7	+0.6
AKAS	**Kas**	**0.91**	**189**	*i* P	**Pg**	12 21 43.8	-0.2
AKAS				*i* S	**Sn**	12 21 59.9	+0.2
AKAS	**Kas**	**0.91**	**189**	*i* P	**Pg**	12 21 43.8	-0.2
ISP	**Isparta**	**0.91**	**40**	*e*PG	**Pg**	12 21 43.6	-0.5
ISP				*e*SG	**Sn**	12 21 58.9	-0.9
ISP	**Isparta**	**0.91**	**40**	*e*Pg	**Pg**	12 21 43.6	-0.5
ISP				*e*Sg	**Sn**	12 21 58.9	-0.9
DALY	**Dalyan (Mu˘la**	**0.95**	**251**	*e*PG	**Pg**	12 21 43.1	-1.8
DALY	**Dalyan (Mu˘la**	**0.95**	**251**	*e*Pg	**Pg**	12 21 43.1	-1.8
TURN	**Turunc**	**0.97**	**255**	*i* P	**Pn**	12 21 48.1	+1.2
TURN				*i* S	**Sn**	12 22 05.8	+4.6
TURN	**Turunc**	**0.97**	**255**	*i* P	**Pn**	12 21 48.1	+1.2
YER	**Yerkesik**	**1.19**	**271**	*e*PN	**Pg**	12 21 48.1	-1.3
YER	**Yerkesik**	**1.19**	**271**	*e*Pn	**Pg**	12 21 48.2	-1.3
KHL	**Karahalli**	**1.21**	**350**	*e*PN	**Pg**	12 21 49.6	-0.2
KHL	**Karahalli**	**1.21**	**350**	*e*Pn	**Pg**	12 21 49.6	-0.2
KHAL	**Karahalli**	**1.26**	**350**	*i* P	**Pg**	12 21 48.2	-2.5
KHAL				*i* S	**Sn**	12 22 09.1	+0.7
KHAL	**Karahalli**	**1.26**	**350**	*i* P	**Pg**	12 21 48.2	-2.5
KHAL				*i* S	**Sn**	12 22 09.1	+0.7
AYDN	**Tasoluk**	**1.60**	**290**	*i* P	**Pb**	12 21 56.4	-0.3
AYDN				*i* S	**Sg**	12 22 18.2	+0.1
AYDN	**Tasoluk**	**1.60**	**290**	*i* P	**Pb**	12 21 56.4	-0.3
AYDN				*i* S	**Sg**	12 22 18.2	+0.1
MLSB	**Milas**	**1.60**	**276**	*e*PN	**Pn**	12 21 54.8	-0.9
MLSB	**Milas**	**1.60**	**276**	*e*Pn	**Pn**	12 21 54.8	-0.9
DAT	**Datca**	**1.81**	**258**	*e*PN	**Pn**	12 21 57.8	-0.7
DAT	**Datca**	**1.81**	**258**	*e*Pn	**Pn**	12 21 57.8	-0.7
BODT	**Bodrum**	**1.97**	**269**	*e*PN	**Pn**	12 22 00.3	-0.5
BODT	**Bodrum**	**1.97**	**269**	*e*Pn	**Pn**	12 22 00.3	-0.5
GAZI	**Gazipasa**	**2.23**	**113**	*i* P	**Pb**	12 22 06.9	-0.5
GAZI				*i* S	**Sg**	12 22 40.8	+2.6
GAZI	**Gazipasa**	**2.23**	**113**	*i* P	**Pb**	12 22 06.9	-0.5

NIED ***12*** *12:25:00, 45°80N×151°80E, h32km, Mw4.2 Best double couple: M₀2.48000×10¹⁵ NP1:φs131.00000°, δ76.00000°, λ-26.00000°. NP2:φs227.00000°, δ64.00000°, λ-164.00000°.*
ISCJB ***12*** *12:25:46.9±0.6, 45°83N±0°05×151°68E±0°06, h41km±5km, mb4.3/47, MS3.8/5, Error ellipse: s-maj=9.9km s-min=3.9km az=145.2*
SKHL ***12*** *12:25:47.1±0.9, 45°98N×151°74E, h55km±25km, mb4.7/4*
MOS ***12*** *12:25:47.9±0.9, 46°02N×151°62E, h45km, mb4.6/10, Error ellipse: s-maj=10.2km s-min=7.2km az=75.5*
IDC ***12*** *12:25:48.4±0.7, 45°95N×151°54E, h35km±5km, mb3.9/22, mb1 4.1/26, mb1mx4.0/32, mbtmp3.9/26, ML3.9/4, MS3.1/5, Ms1 3.1/5, ms1mx2.8/45, Error ellipse: s-maj=14.3km s-min=10.5km az=137.0*
NEIC ***12*** *12:25:48.8±0.3, 46°02N×151°59E, h35km, mb4.6/10, Error ellipse: s-maj=9.9km s-min=5.8km az=142.0*
JMA ***12*** *12:25:48.1±0.7, 45°83N×151°83E, h30km, M4.7*
BJI ***12*** *12:25:50.0, 45°66N×151°65E, h63km, mB4.7/19, mb4.5/27, Ms3.8/8, Ms7 3.9/13*

ISC 12 12:25:49.3±0.5, 45°81N±0°06×151°76E±0°05, h48km±4km, h47km: pP-P, n185, σ1°48/217, mb4.3/47, MS4.0/5, 3C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.80**	**259**	*e*PN	**Pn**	12 26 31.0	-0.5
KUR				*i* S	**Sn**	12 27 03.4	-0.5
KUR				pmax	pmax		
	comp=E,340nm,0.5s						
KUR				pmax	pmax		
	comp=N,170nm,0.7s						
KUR				pmax	pmax		
	comp=E,150nm,0.4s						
KUR				smax	smax		
	comp=N,2μm,0.8s						
KUR				smax	smax		
	comp=E,860nm,0.7s						
KUR				smax	smax		
	comp=N,4μm,1.0s						
KUR				smax	smax		
	comp=E,2μm,1.0s						
KUR	**Kuril'sk**	**2.80**	**259**	*e*P	**Pn**	12 26 31.0	-0.5
KUR				AMB	AMB	12 26 38.8	
	comp=E,150nm,0.4s						
KUR				AMB	AMB	12 26 38.8	
	comp=E,340nm,0.5s						
KUR				AMB	AMB	12 26 38.8	
	comp=E,170nm,0.7s						
KUR				*i* S	**Sn**	12 27 03.4	-0.5
KUR				A	A	12 27 07.6	
	comp=E,4μm,1.0s						
KUR				A	A	12 27 07.6	
	comp=E,2μm,1.0s						
KUR				A	A	12 27 07.6	
	comp=E,2μm,0.7s						
KUR				A	A	12 27 07.6	
	comp=E,860nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**4.55**	**249**	*d* iPN	**Pn**	12 26 56.6	+1.1
YUK				*i* S	**Sn**	12 27 48.1	+1.0
YUK				pmax	pmax		
	comp=E,49nm,0.2s						
YUK				pmax	pmax		
	comp=Z,172nm,0.4s						
YUK				pmax	pmax		
	comp=N,55nm,0.2s						
YUK				smax	smax		
	comp=N,307nm,0.4s						
YUK				smax	smax		
	comp=E,488nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.55**	**249**	↓*i* P	**Pn**	12 26 56.6	+1.1
YUK				AMB	AMB	12 27 00.8	
	comp=E,55nm,0.2s						
YUK				AMB	AMB	12 27 00.8	
	comp=E,49nm,0.2s						
YUK				*i* S	**Sn**	12 27 48.1	+1.0
YUK				A	A	12 28 04.8	
	comp=E,307nm,0.5s						
YUK				A	A	12 28 04.8	
	comp=E,488nm,0.5s						
NEM2	**Nemuro 2**	**4.94**	**242**	P	**Pn**	12 26 59.8	-1.1
NEM2				*e*S	**Sn**	12 27 53.1	-3.7
JRA	**Rausu**	**5.07**	**251**	P	**Pn**	12 27 04.9	+2.2
JNK	**Nakash**	**5.49**	**249**	P	**Pn**	12 27 09.0	+0.6
JNK				*e*S	**Sn**	12 28 09.5	-0.7
SKR	**Severo-Kuril's**	**5.68**	**29**	*e*PN	**Pn**	12 27 09.0	-2.0
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR	**Severo-Kuril's**	**5.68**	**29**	*e*P	**Pn**	12 27 09.0	-2.0
SKR				AMB	AMB	12 27 11.0	
	comp=Z,80nm,0.5s						
SKR				*e*S	**Sn**	12 28 11.0	-3.8
SKR				A	A	12 28 29.0	
	comp=Z,120nm,0.8s						
SKR				A	A	12 28 29.0	
	comp=Z,100nm,0.8s						
JAK	**Akkeshi**	**5.79**	**243**	P	**Pn**	12 27 11.6	-0.9
JAK				*e*S	**Sn**	12 28 14.5	-3.1
JTKR	**Abashiri--Toko**	**5.87**	**255**	P	**Pn**	12 27 15.7	+2.0
JMP	**Maruseppu**	**6.23**	**256**	P	**Pn**	12 27 20.7	+2.0
JAR	**Ashorobuto**	**6.24**	**249**	P	**Pn**	12 27 19.7	+1.0
JAR				*e*S	**Sn**	12 28 29.5	+0.9
YSS	**Yuzh-Sakhalins**	**6.33**	**284**	*e*PN	**Pn**	12 27 20.6	+0.6
YSS	**Yuzh-Sakhalins**	**6.33**	**284**	*e*P	Pn	12 27 15.8	-4.2
YSS				*e*S	Sn	12 28 22.8	-8.1
YSS				eLR	LR	12 29 19.0	
YSS				AMS	AMS	12 29 44.0	
	comp=Z,300nm,16.0s						
JOB	**Onbets**	**6.38**	**246**	P	**Pn**	12 27 20.8	+0.1
JOB				*e*S	**Sn**	12 28 30.0	-2.1
JSE	**Soyaes**	**6.52**	**266**	P	Pn	12 27 26.8	+4.3
JKK2	**Kamakawa 2**	**6.69**	**256**	P	**Pn**	12 27 27.0	+2.0
ASAJ	**Asahikawa**	**6.72**	**259**	*e*Pn	Pn	12 27 28.0	+2.7
ASAJ	**Asahikawa**	**6.72**	**259**	P	Pn	12 27 27.9	+2.6
ASAJ	**Asahikawa**	**6.72**	**259**	Pn	**Pn**	12 27 24.4	-0.8
	comp=Z,3.8nm,0.3s,baz=90,slow=17,SNR=12						
ASAJ				LR	LR	12 30 01.7	
	comp=Z,246nm,20.4s,baz=52,slow=38						
JCH	**Churui**	**6.83**	**245**	P	**Pn**	12 27 26.1	-0.7
JCH				*e*S	**Sn**	12 28 39.5	-3.6
JEM	**Erimo**	**7.28**	**242**	P	**Pn**	12 27 33.7	+0.8
ERM	**Erimo**	**7.28**	**242**	*d* iPN	**Pn**	12 27 33.9	+1.0
ERM				pmax	pmax		
	comp=Z,20nm,0.3s						
ERM	**Erimo**	**7.28**	**242**	*e*Pn	**Pn**	12 27 34.6	+1.7
ERM				*e*Sn	**Sn**	12 28 55.9	+1.7
UGL	**Uglegorsk**	**7.34**	**300**	*e*P	Pn	12 27 28.0	-5.8
UGL				AMB	AMB	12 27 29.0	
	comp=Z,60nm,0.8s						
JNBK	**Urakawa-nobuka**	**7.38**	**245**	P	**Pn**	12 27 33.3	-1.1
JNBK				*e*S	**Sn**	12 28 52.5	-4.3
JBT2	**Biratori 2**	**7.39**	**249**	P	**Pn**	12 27 33.9	-0.6
TYV	**Tymovskoe**	**7.89**	**313**	*e*P	**Pn**	12 27 41.0	-0.4
TYV				AMB	AMB	12 27 42.2	
	comp=Z,4.0nm,0.6s						
TYV				AMB	AMB	12 27 42.2	
	comp=Z,5.0nm,0.6s						
PEA0B	**Petropavlovsk-**	**8.26**	**26**	*e*Pn	**Pn**	12 27 48.5	+2.1
PEA0B				*e*Sn	**Sn**	12 29 20.9	+2.6
PETK	**Petropavlovsk-**	**8.26**	**26**	PN	**Pn**	12 27 46.0	-0.4
PETK	**Petropavlovsk-**	**8.26**	**26**	Pn	**Pn**	12 27 46.0	-0.4
PETK	**Petropavlovsk-**	**8.26**	**26**	Pn	**Pn**	12 27 46.0	-0.4
	comp=Z,0.4nm,0.3s,baz=180,slow=13,SNR=26						
JNB	**Noboribetsu**	**8.40**	**250**	P	**Pn**	12 27 48.2	-0.2
JNB				*e*S	**Sn**	12 29 19.7	-2.1
PET	**Petropavlovsk**	**8.50**	**29**	*e*PN	**Pn**	12 27 48.3	-1.4
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
JKB	**Kayabe**	**8.69**	**247**	P	**Pn**	12 27 51.1	-1.1
JKB				*e*S	Sn	12 29 22.5	-6.2
JYM2	**Yakumo 2**	**9.00**	**250**	P	**Pn**	12 27 56.2	-0.4
JANG	**Nango**	**9.25**	**238**	P	**Pn**	12 27 57.0	-3.0
JANG				*e*S	Sn	12 29 33.6	-9.1
JSR	**Shiriuchi**	**9.26**	**247**	P	**Pn**	12 27 58.5	-1.7
JTM	**Tenmabayashi**	**9.27**	**241**	P	**Pn**	12 27 58.2	-2.0
JTM				*e*S	Sn	12 29 35.2	-7.9
JTH	**Tanohata**	**9.33**	**235**	*e*S	Sn	12 29 34.2	-10
JOSM	**Okushiri--Mats**	**9.61**	**252**	P	**Pn**	12 28 04.2	-0.7
JRG	**Rokugo**	**10.40**	**236**	P	**Pn**	12 28 13.4	-2.4
JRG				*e*S	Sn	12 30 00.4	-10
JIO	**Ouri**	**10.66**	**230**	P	**Pn**	12 28 16.7	-2.6
JIO				*e*S	Sn	12 30 06.5	-11
MJAR	**Matsushiro Arr**	**13.76**	**232**	Pn	Pn	12 28 58.2	-3.5
MJAR	**Matsushiro Arr**	**13.76**	**232**	Pn	Pn	12 28 58.2	-3.5
	comp=Z,0.3nm,0.3s,baz=26,slow=13,SNR=4.7						
MAJO	**Matsushiro**	**13.76**	**232**	*e*P	Pn	12 29 04.0	+2.3
MAJO	**Matsushiro**	**13.76**	**232**	*e*Pn	Pn	12 29 04.0	+2.3
MAT	**Matsushiro**	**13.76**	**232**	P	**P**	12 29 08.7	-0.3
USRK	**Ussuriysk Arra**	**14.07**	**271**	LR	LR	12 34 37.9	
	comp=Z,131nm,20.1s,baz=239,slow=38						
FX1	**Attu Island--F**	**15.61**	**55**	LR	LR	12 34 19.3	
	comp=Z,45nm,21.1s,baz=90,slow=33						
MDJ	**Mudanjiang**	**15.66**	**274**	P	**Pn**	12 29 26.9	+0.3
MDJ				S	**Sn**	12 32 16.2	-2.8
MDJ				PcP	**PcP**	12 34 24.5	-0.5
MDJ				ScP	**ScP**	12 37 55.3	+0.2
MDJ				ScS	**ScS**	12 41 32.7	-0.7
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,43nm,4.4s						
MDJ				LR	LR		
	comp=Z,120nm,19.6s						
CN2	**Changchun**	**18.75**	**273**	*e*P	**Pn**	12 30 07.6	+2.7
CN2				*e*pP	**pP**	12 30 19.1	+3.9
CN2				*e*S	**Sn**	12 33 29.5	-4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
KSRS	**Korea Array**	**19.62**	**253**	P	**P**	12 30 12.3	-1.3
	comp=Z,0.5nm,0.3s,baz=56,slow=11,SNR=17						
KSRS				LR	LR	12 37 35.7	
	comp=Z,48nm,18.3s,baz=55,slow=36						
KSAR	**Wonju Array Be**	**19.65**	**253**	P	**P**	12 30 12.3	-1.7
JNU	**Nakatsue**	**20.43**	**239**	LR	LR	12 38 35.7	
	comp=Z,56nm,22.0s,baz=236,slow=38						
YAK	**Yakutsk**	**20.63**	**330**	*e*P	Pn	12 30 38.9	+12
YAK				pmax	pmax		
	comp=Z,32nm,1.1s						
YAK				pmax	pmax		
	comp=E,14nm,1.3s						
YAK				pmax	pmax		
	comp=N,13nm,1.1s						
BILL	**Bilibino**	**23.52**	**14**	*e*P	P	12 31 11.2	+17
BJI	**Beijing**	**26.53**	**270**	P	**P**	12 31 22.1	-0.2
BJI				S	**S**	12 35 50.7	-2.5
BJI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,58nm,5.7s						
BJI				LR	LR		
	comp=N,93nm,25.9s						
BJI				LR	LR		
	comp=E,120nm,22.1s						
BJI				LR	LR		
	comp=Z,62nm,20.7s						
HHC	**Hu-ho-hao-te**	**29.43**	**275**	↓*e*P	**P**	12 31 50.0	+1.7
HHC				pP	**pP**	12 32 04.7

WMQ	**Urumqi**	**44.39**	**291**	*e*P		**P**	**12 33 56.0**	**+1.0**	
WMQ				pP		**pP**	**12 34 11.4**	**+3.5**	
WMQ				sP		sP	12 34 18.6	+5.1	
WMQ				PP		**PP**	**12 35 41.2**	**+2.2**	
WMQ				pmax	pmax				
	comp=Z,9.0nm,0.4s								
WMQ				pmax	pmax				
	comp=Z,93nm,4.6s								
WMQ				LR	LR				
	comp=Z,170nm,20.2s								
MK31	**Makanchi Array**	**46.54**	**298**	*e*P		**P**	**12 34 11.1**	**-0.8**	
MK31	**Makanchi Array**	**46.54**	**298**	*e*P		**P**	**12 34 11.1**	**-0.8**	
MKAR	**Makanchi Array**	**46.54**	**298**	*i* P		**P**	**12 34 10.8**	**-1.1**	
MKAR				pmax	pmax				
	comp=Z,2.0nm,0.5s								
MKAR	**Makanchi Array**	**46.54**	**298**	*e*P		**P**	**12 34 11.3**	**-0.6**	
MKAR				PcP		**PcP**	**12 35 45.6**	**+0.1**	
MKAR	**Makanchi Array**	**46.54**	**298**	P		**P**	**12 34 10.9**	**-1.0**	
	comp=Z,1.6nm,0.5s,baz=74,slow=6.6,SNR=20								
MKAR				PcP		**PcP**	**12 35 45.6**	**+0.1**	
	comp=Z,1.8nm,0.7s,baz=65,slow=3.6,SNR=9.1								
DLBC	**Dease Lake**	**46.92**	**45**	P		**P**	**12 34 15.2**	**+0.4**	
DLBC	**Dease Lake**	**46.92**	**45**	P		**P**	**12 34 15.2**	**+0.4**	
	comp=Z,1.6nm,0.8s,baz=284,slow=11,SNR=4.7								
KURK	**Kurchatov**	**47.10**	**304**	P		**P**	**12 34 15.6**	**-0.6**	
KURK							12 35 47.4		
KURK	**Kurchatov**	**47.10**	**304**	P		**P**	**12 34 15.6**	**-0.6**	
KURK				PcP		**PcP**	**12 35 47.4**	**0.0**	
KURBB	**Kurchatov Arra**	**47.20**	**304**	P		**P**	**12 34 15.6**	**-1.4**	
	comp=Z,1.4nm,0.5s,baz=72,slow=8.7,SNR=9.2								
KURBB				PcP		**PcP**	**12 35 47.4**	**-0.3**	
	comp=Z,1.0nm,0.8s,baz=71,slow=3.3,SNR=8.3								
CHTO	**Chiang Mai**	**50.98**	**256**	*e*P		**P**	**12 34 47.2**	**+0.9**	
CHTO				pmax	pmax				
	comp=Z,9.0nm,1.1s								
CHTO	**Chiang Mai**	**50.98**	**256**	*e*P		**P**	**12 34 47.2**	**+0.9**	
	comp=Z,8.7nm,1.1s								
CMAR	**Chiang Mai Arr**	**51.23**	**256**	P		**P**	**12 34 49.5**	**+1.3**	
CMAR	**Chiang Mai Arr**	**51.23**	**256**	P		**P**	**12 34 49.5**	**+1.3**	
	comp=Z,2.3nm,0.8s,baz=35,slow=7.7,SNR=17								
RES	**Resolute Bay**	**52.02**	**18**	*e*P		**P**	**12 34 52.8**	**-0.5**	
	comp=Z,0.8nm,0.6s								
YKA	**Yellowknife Ar**	**52.24**	**36**	P		**P**	**12 34 55.3**	**+0.2**	
YKA				pP		**pP**	**12 35 05.5**	**-2.7**	
YKA	**Yellowknife Ar**	**52.24**	**36**	P		**P**	**12 34 55.3**	**+0.2**	
	comp=Z,2.1nm,0.8s,baz=297,slow=7.0,SNR=22								
YKA				pP		**pP**	**12 35 05.5**	**-2.7**	
	comp=Z,0.7nm,0.6s,baz=301,slow=7.0,SNR=5.8								
KSH	**Kashi**	**54.14**	**292**	*e*P		P	12 35 17.4	+7.8	
KSH				*ep*P		pP	12 35 33.3	+10	
KSH				*es*P		sP	12 35 39.9	+12	
KSH				*e*PcP		PcP	12 36 19.5	+5.8	
KSH				*e*PP		PP	12 37 21.5	+10	
KSH				*e*ScP		**ScP**	**12 40 11.0**	**+3.3**	
KSH				*e*PcS		**PcS**	**12 40 17.5**	**+4.2**	
KSH				*e*S		S	12 42 50.5	+7.6	
KSH				*es*S		sS	12 43 17.2	+12	
KSH				*e*ScS		**ScS**	**12 44 57.1**	**+2.3**	
KSH				*e*SS		SS	12 46 33.2	+8.6	
KSH				pmax	pmax				
	comp=Z,4.0nm,0.4s								
KSH				pmax	pmax				
	comp=Z,120nm,5.3s								
KSH				LR	LR				
	comp=Z,110nm,5.9s								
GUN	**Gumba**	**54.14**	**275**	*e*P		**P**	**12 35 10.3**	**+0.3**	
	comp=Z,13nm,0.5s								
RAMN	**Ramite**	**54.23**	**273**	*e*P		**P**	**12 35 10.2**	**-0.4**	
	comp=Z,20nm,0.4s								
PMG	**Port Moresby**	**55.12**	**186**	*e*P		P	12 35 19.9	+3.3	
	comp=Z,31nm,0.8s								
PMG	**Port Moresby**	**55.12**	**186**	P		**P**	**12 35 18.6**	**+2.0**	
	comp=Z,17nm,0.3s,baz=343,slow=19,SNR=11								
DANN	**Dangsing**	**55.35**	**277**	*e*P		**P**	**12 35 19.0**	**+0.3**	
	comp=Z,26nm,0.5s								
KKAR	**Karatay Array**	**55.63**	**299**	*e*P		**P**	**12 35 19.9**	**-0.3**	
KKAR	**Karatay Array**	**55.63**	**299**	*e*P		**P**	**12 35 19.9**	**-0.3**	
KOLN	**Koldanda**	**55.82**	**276**	*e*P		**P**	**12 35 22.0**	**+0.1**	
	comp=Z,24nm,0.9s								
PYUN	**Piuthan**	**56.04**	**277**	*e*P		**P**	**12 35 24.0**	**+0.5**	
	comp=Z,46nm,1.0s								
ARCES	**ARCESS Array B**	**58.43**	**341**	P		**P**	**12 35 39.2**	**-0.4**	
ARCES	**ARCESS Array B**	**58.43**	**341**	P		**P**	**12 35 39.2**	**-0.4**	
	comp=Z,1.5nm,0.8s,baz=22,slow=7.0,SNR=3.6								
NEW	**Newport**	**58.49**	**52**	P		**P**	**12 35 41.9**	**+1.5**	
NEW	**Newport**	**58.49**	**52**	P		**P**	**12 35 41.9**	**+1.5**	
	comp=Z,2.3nm,0.7s,baz=319,slow=5.5,SNR=4.3								
CHMT	**Chamberlain Mo**	**61.41**	**51**	*e*P		**P**	**12 36 01.5**	**+0.9**	
SUMG	**Summit**	**61.70**	**3**	*e*P		**P**	**12 36 02.5**	**+0.1**	
SUMG				pmax	pmax				
	comp=Z,15nm,0.7s								
SUMG	**Summit**	**61.70**	**3**	*e*P		**P**	**12 36 02.5**	**+0.1**	
	comp=Z,15nm,0.7s								
LRM	**Limekiln Ridge**	**62.51**	**52**	*e*P		**P**	**12 36 09.4**	**+1.3**	
NVAR	**Mina Array Bea**	**63.71**	**61**	P		**P**	**12 36 16.8**	**+0.7**	
NVAR	**Mina Array Bea**	**63.71**	**61**	P		**P**	**12 36 16.8**	**+0.7**	
	comp=Z,1.3nm,0.7s,baz=291,slow=6.8,SNR=11								
FINES	**FINESS Array B**	**64.48**	**334**	P		**P**	**12 36 18.6**	**-1.9**	
FINES	**FINESS Array B**	**64.48**	**334**	P		**P**	**12 36 18.6**	**-1.9**	
	comp=Z,2.8nm,0.6s,baz=41,slow=6.1,SNR=7.9								
PDAR	**Pinedale Array**	**66.06**	**53**	P		**P**	**12 36 32.0**	**+0.7**	
PDAR	**Pinedale Array**	**66.06**	**53**	P		**P**	**12 36 32.0**	**+0.7**	
	comp=Z,1.4nm,0.8s,baz=311,slow=1.6,SNR=13								
WRA	**Warramunga Arr**	**67.32**	**198**	P		**P**	**12 36 39.3**	**+0.1**	
WRA				pP		**pP**	**12 36 50.5**	**-2.3**	
WRA	**Warramunga Arr**	**67.32**	**198**	P		**P**	**12 36 39.3**	**+0.1**	
	comp=Z,1.7nm,0.8s,baz=18,slow=6.8,SNR=8.9								
WRA				pP		**pP**	**12 36 50.5**	**-2.3**	
	comp=Z,1.0nm,0.7s,baz=17,slow=6.8,SNR=4.9								
NB2	**NORSAR Subarra**	**68.81**	**341**	P		**P**	**12 36 46.7**	**-1.4**	
	comp=Z,0.8nm,0.5s,baz=28,slow=6.5								
NOA	**NORSAR Array B**	**68.81**	**341**	P		**P**	**12 36 46.9**	**-1.2**	
NOA	**NORSAR Array B**	**68.81**	**341**	P		**P**	**12 36 46.9**	**-1.2**	
	comp=Z,1.1nm,0.6s,baz=28,slow=6.4,SNR=7.1								
HFS	**Hagfors**	**69.00**	**339**	P		**P**	**12 36 48.0**	**-1.3**	
HFS	**Hagfors**	**69.00**	**339**	P		**P**	**12 36 48.0**	**-1.3**	
	comp=Z,1.8nm,0.4s,baz=57,slow=5.5,SNR=16								
KIV	**Kislovodsk**	**70.78**	**314**	*e*P		**P**	**12 36 58.7**	**-1.8**	
KIV				pmax	pmax				
	comp=Z,6.0nm,1.0s								
KBZ	**Khabaz**	**70.83**	**313**	P		**P**	**12 37 00.0**	**-0.7**	
KBZ	**Khabaz**	**70.83**	**313**	P		**P**	**12 36 60.0**	**-0.7**	
KBZ	**Khabaz**	**70.83**	**313**	P		**P**	**12 36 60.0**	**-0.7**	
	comp=Z,3.3nm,0.8s,baz=199,slow=9.6,SNR=9.3								
ASAR	**Alice Springs**	**71.03**	**197**	P		**P**	**12 37 03.2**	**+1.2**	
ASAR				pP		**pP**	**12 37 13.8**	**-1.9**	
ASAR	**Alice Springs**	**71.03**	**197**	P		**P**	**12 37 03.2**	**+1.2**	
	comp=Z,0.5nm,0.8s,baz=13,slow=5.6,SNR=4.7								
ASAR				pP		**pP**	**12 37 13.8**	**-1.9**	
	comp=Z,0.5nm,0.8s,baz=359,slow=8.0,SNR=2.6								
AKASG	**Malin Array Be**	**71.80**	**326**	P		**P**	**12 37 05.1**	**-1.4**	
AKASG	**Malin Array Be**	**71.80**	**326**	P		**P**	**12 37 05.1**	**-1.4**	
AKASG	**Malin Array Be**	**71.80**	**326**	P		**P**	**12 37 05.1**	**-1.4**	
	comp=Z,1.6nm,0.4s,baz=36,slow=6.1,SNR=8.2								
KWP	**Kalwaria Pacla**	**75.14**	**329**	*e*P		**P**	**12 37 26.2**	**0.0**	
BUR08	**Bucovina Ar. S**	**75.83**	**326**	*e*P		**P**	**12 37 29.4**	**-0.9**	
KOLS	**Kolonicke sedl**	**75.88**	**328**	*e*P		**P**	**12 37 30.1**	**-0.4**	
KOLS				pmax	pmax				
	comp=Z,3.0nm,0.7s								
KOLS	**Kolonicke sedl**	**75.88**	**328**	*e*P		**P**	**12 37 30.0**	**-0.4**	
CRVS	**Cervenica-Dubn**	**76.20**	**329**	*e*P		**P**	**12 37 30.7**	**-1.5**	
CRVS	**Cervenica-Dubn**	**76.20**	**329**	*e*P		**P**	**12 37 30.7**	**-1.5**	
UPC	**Upice**	**76.69**	**333**	*e*P		**P**	**12 37 34.4**	**-0.6**	
UPC	**Upice**	**76.69**	**333**	*e*P		**P**	**12 37 34.4**	**-0.6**	
DPC	**Dobruska-Polom**	**76.73**	**332**	*e*P		**P**	**12 37 35.0**	**-0.3**	
DPC				*e*			12 37 56.5		
DPC	**Dobruska-Polom**	**76.73**	**332**	*e*P		**P**	**12 37 35.0**	**-0.3**	
DPC				*ex*		x	12 37 56.5		
MORC	**Moravsky Berou**	**76.82**	**331**	*e*P		**P**	**12 37 34.5**	**-1.3**	
MORC				pmax	pmax				
	comp=Z,4.0nm,0.9s								
MORC	**Moravsky Berou**	**76.82**	**331**	*e*P		**P**	**12 37 34.5**	**-1.3**	
	comp=Z,4.5nm,0.9s								
CLL	**Collm**	**76.92**	**335**	*i* P		**P**	**12 37 36.0**	**-0.2**	
CLL	**Collm**	**76.92**	**335**	*i* P		**P**	**12 37 36.0**	**-0.2**	
VYHS	**Vyhne**	**77.48**	**330**	*e*P		**P**	**12 37 39.0**	**-0.4**	
VYHS				pmax	pmax				
	comp=Z,2.0nm,0.8s								
VYHS	**Vyhne**	**77.48**	**330**	*e*P		**P**	**12 37 39.0**	**-0.4**	
BR131	**Keskin Array S**	**78.42**	**316**	*e*P		**P**	**12 37 44.5**	**-0.5**	
	comp=Z,1.2nm,0.8s								
BRTR	**Keskin Array B**	**78.42**	**316**	P		**P**	**12 37 43.8**	**-1.3**	
BRTR	**Keskin Array B**	**78.42**	**316**	P		**P**	**12 37 43.8**	**-1.3**	
	comp=Z,2.3nm,0.8s,baz=66,slow=4.3,SNR=13								
KHC	**Kasperske Hory**	**78.67**	**333**	*e*P		**P**	**12 37 46.1**	**+0.1**	
KHC	**Kasperske Hory**	**78.67**	**333**	*e*P		**P**	**12 37 46.0**	**-0.1**	
	comp=Z,6.8nm,1.0s								
KHC	**Kasperske Hory**	**78.67**	**333**	*e*P		**P**	**12 37 46.1**	**+0.1**	
GERES	**GERESS Array B**	**78.88**	**333**	P		**P**	**12 37 46.8**	**-0.5**	
GERES	**GERESS Array B**	**78.88**	**333**	P		**P**	**12 37 46.8**	**-0.5**	
	comp=Z,1.2nm,0.5s,baz=38,slow=6.8,SNR=11								
SOKA	**Soboth**	**80.35**	**331**	⇑ *i* P		**P**	**12 37 54.6**	**-0.7**	
	comp=Z,5.8nm,0.9s								
KBA	**Keelnbreinsper**	**80.55**	**333**	⇑ *i* P		**P**	**12 37 56.5**	**0.0**	
	comp=Z,11nm,1.1s								
CDF	**Champ du Feu**	**81.16**	**337**	*e*P		**P**	**12 37 59.1**	**-0.5**	
	comp=Z,9.6nm,0.8s								
LOR	**Lormes**	**83.12**	**339**	*e*P		**P**	**12 38 09.5**	**-0.3**	
LOR	**Lormes**	**83.12**	**339**	*e*P		**P**	**12 38 09.5**	**-0.3**	
SSF	**Saint Saulge**	**83.40**	**339**	*e*P		**P**	**12 38 11.7**	**+0.5**	
SSF	**Saint Saulge**	**83.40**	**339**	*e*P		**P**	**12 38 11.7**	**+0.5**	
SSF	**Saint Saulge**	**83.40**	**339**	*e*P		**P**	**12 38 11.7**	**+0.5**	
AVF	**Avril sur Loir**	**83.69**	**339**	*e*P		**P**	**12 38 12.6**	**-0.1**	
	comp=Z,5.3nm,0.7s								
AVF	**Avril sur Loir**	**83.69**	**339**	*e*P		**P**	**12 38 12.6**	**-0.1**	
AVF				pmax	pmax				
	comp=Z,5.0nm,0.6s								
AVF	**Avril sur Loir**	**83.69**	**339**	*e*P		**P**	**12 38 12.6**	**-0.1**	
	comp=Z,5.3nm,0.6s								
SMF	**Signal de Mont**	**83.70**	**338**	*e*P		**P**	**12 38 12.8**	**0.0**	
	comp=Z,20nm,0.9s								
SMF	**Signal de Mont**	**83.70**	**338**	*e*P		**P**	**12 38 12.8**	**0.0**	
SMF				pmax	pmax				
	comp=Z,20nm,0.9s								
SMF	**Signal de Mont**	**83.70**	**338**	*e*P		**P**	**12 38 12.8**	**0.0**	
	comp=Z,20nm,0.9s								
LPL	**La Plagne**	**83.96**	**336**	*e*P		**P**	**12 38 14.6**	**+0.2**	
LPG	**La Plagne**	**83.97**	**336**	*e*P		**P**	**12 38 14.8**	**+0.3**	
PLCA	**Paso Flores**	**149.05**	**96**	PKPbc		**PKPbc**	**12 45 31.9**	**+0.2**	
PLCA	**Paso Flores**	**149.05**	**96**	PKPbc		**PKPbc**	**12 45 31.9**	**+0.2**	
	comp=Z,1.1nm,0.7s,baz=202,slow=10,SNR=3.6								
CPUP	**Villa Florida**	**149.75**	**60**	PKPbc		**PKPbc**	**12 45 33.8**	**0.0**	
CPUP	**Villa Florida**	**149.75**	**60**	PKPbc		**PKPbc**	**12 45 33.8**	**0.0**	
	comp=Z,0.4nm,0.4s,baz=319,slow=2.0,SNR=4.2								
SNAA	**Sanae**	**151.39**	**196**	*e*P		**PKPbc**	**12 45 36.2**	**-0.2**	
SNAA	**Sanae**	**151.39**	**196**	PKPbc		**PKPbc**	**12 45 36.4**	**0.0**	
SNAA	**Sanae**	**151.39**	**196**	PKPbc		**PKPbc**	**12 45 36.4**	**0.0**	
	comp=Z,0.4nm,0.5s,baz=147,slow=4.5,SNR=7.2								
VNA2	**Neumayer--Watz**	**152.85**	**195**	*e*P		PKPdf	12 45 24.2	-8.2	
VNA1	**Neumayer--Stat**	**153.24**	**195**	*e*P		PKPdf	12 45 25.4	-7.5	

IDC ***12*** *12:33:05.5±0.5,3°.74N×126°.86E, h0km, mb4.2/19, mb1 4.4/19, mb1mx4.3/27, mbtmp4.2/19, MS5.0/3, Ms1 5.0/3, ms1mx3.6/40, Error ellipse: s-maj=33.0km s-min=9.1km az=72.0*
ISCJB ***12*** *12:33:09.9±0.3,3°.79N×0°.05×126°.97E±0°.08, h48km, mb4.3/22, MS5.1/3, Error ellipse: s-maj=12.3km s-min=4.8km az=157.6*
NEIC ***12*** *12:33:10.6±0.3,3°.78N×126°.96E, h35km, mb4.4/7, Error ellipse: s-maj=14.3km s-min=6.4km az=73.0*
AUST ***12*** *12:33:10.5±3.3,3°.57N×126°.49E, h40km, Error ellipse: s-maj=2.8km s-min=1.1km az=261.0*
DJA ***12*** *12:33:18.7±1.1,3°N±9°×12°7E±°, h10km, M4.3/3, mb4.8/1, mB4.7/1, MLv4.0/3, Mw(mB)4.0/1*

ISC 12 12:33:12.0±0.4,3.79N±0°.06×126°.95E±0°.08,h48km,n73,
σ1§11/75,mb4.2/22,MS5.1/3,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
GAMI	**Galela, Maluku**	**2.11**	**157**	P	**Pn**	**12 33 44.1**			**-0.8**
TNTI	**Ternate**	**3.02**	**172**	P	**Pn**	**12 33 57.2**			**-0.3**
TNTI				S	Sn	12 34 23.6			-8.8
MNI	**Manado**	**3.14**	**222**	P	**Pn**	**12 34 00.7**			**+1.6**
DAV	**Davao City (W)**	**3.54**	**337**	LR	LR	12 35 41.6			
	comp=Z,860nm,18.1s,baz=176,slow=44								
CTBH	**Cotabato--PC H**	**4.35**	**322**	*i* P	Pn	12 34 19.3			+3.7
LBMI	**Labuha**	**4.43**	**173**	P	**Pn**	**12 34 17.0**			**+0.2**
SWI	**Sorong**	**6.31**	**137**	P	**Pn**	**12 34 42.7**			**+0.1**
SWI	**Sorong**	**6.31**	**137**	P	**Pn**	**12 34 42.9**			**+0.3**
	baz=6.5,SNR=10								
JAY	**Jayapura**	**15.10**	**114**	P	P	**12 36 47.7**			**+0.8**
	baz=16,SNR=6.6								
KSM	**Kuching**	**16.78**	**263**	*e*Pn	P	**12 37 03.9**			**-1.6**
	12nm,0.9s								
MTN	**Manton Dam**	**17.04**	**166**	P	**Pn**	**12 37 04.3**			**-2.7**
	baz=17,SNR=7.2								
KDU	**Kakadu**	**17.26**	**162**	P	**Pn**	**12 37 09.1**			**-0.7**
	baz=17,SNR=5.6								
KNRA	**Kununurra**	**19.42**	**175**	P	P	**12 37 33.4**			**-1.0**
	baz=19,SNR=17								
YULB	**Yu-li**	**20.24**	**345**	*e*P	P	**12 37 41.0**			**-2.4**
	6.7nm,0.5s								
TPUB	**Ta-pu**	**20.34**	**343**	*e*P	P	**12 37 42.7**			**-1.8**
	18nm,0.6s								
FITZ	**Fitzroy Crossi**	**21.79**	**183**	P	P	**12 37 58.9**			**-1.2**
FITZ	**Fitzroy Crossi**	**21.79**	**183**	P	P	**12 37 58.9**			**-1.2**
	2.7nm,0.6s,baz=33,slow=2.0,SNR=18								
FITZ	**Fitzroy Crossi**	**21.79**	**183**	P	P	**12 37 59.1**			**-0.9**
	baz=22,SNR=13								
WRAB	**Tennant Creek**	**24.67**	**163**	*e*P	P	**12 38 27.7**			**-0.8**
	54nm,1.1s								
WRA	**Warramunga Arr**	**24.67**	**163**	P	P	**12 38 27.3**			**-1.3**
WRA				S	S	**12 42 50.4**			**+3.2**
WRA	**Warramunga Arr**	**24.67**	**163**	P	P	**12 38 27.3**			**-1.3**
	26nm,0.8s,baz=343,slow=10,SNR=70								
WRA				S	S	**12 42 50.4**			**+3.2**
	1.6nm,0.9s,baz=341,slow=18,SNR=5.1								
AS31	**Alice Springs**	**28.11**	**166**	*e*P	P	**12 38 59.5**			**-0.1**
ASAR	**Alice Springs**	**28.12**	**166**	P	P	**12 38 59.0**			**-0.7**
ASAR				PcP	**PcP**	**12 42 13.7**			**+0.5**
ASAR				S	S	12 43 48.5			+6.9
ASAR	**Alice Springs**	**28.12**	**166**	P	P	**12 38 59.0**			**-0.7**
	1.2nm,0.6s,baz=340,slow=6.1,SNR=16								
ASAR				PcP	**PcP**	**12 42 13.7**			**+0.5**
	0.8nm,0.7s,baz=333,slow=0.7,SNR=5.5								
ASAR				S	S	12 43 48.5			+6.9
	0.4nm,0.9s,baz=355,slow=20,SNR=3.3								
CMAR	**Chiang Mai Arr**	**31.04**	**300**	P	P	**12 39 25.6**			**0.0**
CMAR	**Chiang Mai Arr**	**31.04**	**300**	P	P	**12 39 25.6**			**0.0**
	1.6nm,0.8s,baz=115,slow=7.0,SNR=10								
KSAR	**Wonju Array Be**	**33.51**	**1**	P	P	**12 39 47.4**			**+0.4**
KSRS	**Korea Array**	**33.52**	**1**	P	P	**12 39 47.4**			**+0.3**
	0.9nm,0.5s,baz=180,slow=10.0,SNR=6.8								
FORT	**Forrest**	**34.39**	**178**	P	P	**12 39 54.8**			**+0.1**
	baz=34,SNR=6.3								
QLP	**Quilpie**	**34.51**	**152**	P	P	**12 39 55.0**			**-0.9**
	baz=35,SNR=6.1								
QLP				S	S	12 44 55.9			-25
	baz=35,SNR=4.6								
BBOO	**Buckleboo**	**37.41**	**167**	P	P	**12 40 20.2**			**-0.3**
	baz=38,SNR=7.1								
STKA	**Stephens Creek**	**38.10**	**160**	*e*P	P	**12 40 26.3**			**-0.2**
	3.6nm,0.6s								
STKA	**Stephens Creek**	**38.10**	**160**	P	P	**12 40 26.3**			**-0.2**
	18nm,0.6s,baz=333,slow=8.4,SNR=64								
STKA	**Stephens Creek**	**38.10**	**160**	P	P	**12 40 26.1**			**-0.3**
	baz=38,SNR=46								
TAPN	**Taplejung**	**44.16**	**306**	*e*P	P	**12 41 15.5**			**-1.2**
	27nm,1.2s								
ODAN	**Odare**	**44.22**	**305**	*e*P	P	**12 41 16.2**			**-0.9**
	12nm,0.7s								
RAMN	**Ramite**	**44.90**	**305**	*e*P	P	**12 41 22.1**			**-0.5**
	16nm,0.6s								
GUN	**Gumba**	**45.87**	**306**	*e*P	P	**12 41 28.9**			**-1.5**
	14nm,0.7s								
SONM	**Songino Array**	**47.31**	**341**	P	P	**12 41 41.4**			**+0.3**
SONM				PcP	**PcP**	**12 43 13.0**			**+1.6**
SONM	**Songino Array**	**47.31**	**341**	P	P	**12 41 41.4**			**+0.3**
	1.2nm,0.5s,baz=160,slow=8.4,SNR=4.4								
SONM				PcP	**PcP**	**12 43 13.0**			**+1.6**
	1.2nm,0.7s,baz=163,slow=5.8,SNR=4.5								
KOLN	**Koldanda**	**47.67**	**305**	*e*P	P	**12 41 43.4**			**-0.9**
	20nm,0.6s								
DANN	**Dangsing**	**47.76**	**305**	*e*P	P	**12 41 44.0**			**-1.1**
	19nm,0.5s								
PYUN	**Piuthan**	**48.30**	**305**	*e*P	P	**12 41 48.2**			**-0.9**
	9.8nm,0.4s								
PETK	**Petropavlovsk-**	**55.29**	**22**	P	P	**12 42 41.2**			**+0.6**
PETK	**Petropavlovsk-**	**55.29**	**22**	P	P	**12 42 41.2**			**+0.6**
	2.0nm,0.8s,baz=170,slow=4.0,SNR=7.6								
MK31	**Makanchi Array**	**57.64**	**325**	*e*P	P	**12 42 57.5**			**0.0**
MKAR	**Makanchi Array**	**57.64**	**325**	P	P	**12 42 57.5**			**+0.1**
MKAR	**Makanchi Array**	**57.64**	**325**	P	P	**12 42 57.5**			**+0.1**
	3.1nm,0.5s,baz=118,slow=7.3,SNR=26								
ZALV	**Zalesovo Beam**	**60.64**	**333**	P	P	**12 43 18.1**			**+0.1**
ZALV	**Zalesovo Beam**	**60.64**	**333**	P	P	**12 43 18.1**			**+0.1**
	1.3nm,0.6s,baz=123,slow=6.4,SNR=4.4								
KURBB	**Kurchatov Arra**	**61.81**	**327**	P	P	**12 43 26.4**			**+0.4**
	3.5nm,0.5s,baz=131,slow=6.4,SNR=32								
KURK	**Kurchatov**	**61.81**	**327**	P	P	**12 43 26.4**			**+0.3**
KKAR	**Karatay Array**	**63.34**	**317**	*e*P	P	**12 43 36.5**			**+0.1**
	2.8nm,0.8s								
BVAR	**Borovoye Array**	**67.39**	**327**	P	P	**12 44 02.6**			**+0.2**
BVAR	**Borovoye Array**	**67.39**	**327**	P	P	**12 44 02.6**			**+0.2**
	1.0nm,0.5s,baz=149,slow=6.3,SNR=6.2								
ABKAR	**Akbulak array**	**72.25**	**321**	*e*P	P	**12 44 32.5**			**+0.2**
	1.2nm,0.6s								
AKTO	**Aktyubinsk**	**73.75**	**322**	P	P	**12 44 41.1**			**-0.1**
AKTO	**Aktyubinsk**	**73.75**	**322**	P	P	**12 44 41.1**			**-0.1**
	1.2nm,0.4s,baz=98,slow=10.0,SNR=7.5								
VNDA	**Vanda**	**83.45**	**173**	P	P	**12 45 35.0**			**+1.0**
VNDA	**Vanda**	**83.45**	**173**	P	P	**12 45 35.0**			**+1.0**
	1.0nm,0.7s,baz=333,slow=5.3,SNR=4.7								
ILAR	**Eielson Array**	**84.96**	**25**	P	P	**12 45 43.2**			**+1.3**
ILAR	**Eielson Array**	**84.96**	**25**	P	P	**12 45 43.2**			**+1.3**
	0.4nm,0.8s,baz=232,slow=4.8,SNR=4.9								
BRTR	**Keskin Array B**	**90.16**	**310**	P	P	**12 46 06.7**			**-1.0**
BRTR	**Keskin Array B**	**90.16**	**310**	P	P	**12 46 06.7**			**-1.0**
	1.3nm,0.8s,baz=126,slow=6.4,SNR=5.7								
ARCES	**ARCESS Array B**	**90.47**	**340**	P	P	**12 46 07.6**			**-0.7**
ARCES	**ARCESS Array B**	**90.47**	**340**	P	P	**12 46 07.6**			**-0.7**
	3.3nm,0.6s,baz=81,slow=7.5,SNR=11								
FINES	**FINESS Array B**	**91.89**	**332**	P	P	**12 46 17.2**			**+2.2**
FINES	**FINESS Array B**	**91.89**	**332**	P	P	**12 46 17.2**			**+2.2**
	1.0nm,0.6s,baz=46,slow=5.5,SNR=3.5								
FINES				LR	LR	13 28 40.4			
	comp=Z,749nm,21.5s,baz=90,slow=36								
AKASG	**Malin Array Be**	**91.99**	**321**	P	P	**12 46 15.0**			**-0.7**
AKASG	**Malin Array Be**	**91.99**	**321**	P	P	**12 46 15.0**			**-0.7**
	0.5nm,0.4s,baz=69,slow=5.0,SNR=7.0								
BUR08	**Bucovina Ar. S**	**95.11**	**318**	*e*P	P	**12 46 30.9**			**+0.6**
HFS	**Hagfors**	**98.07**	**332**	LR	LR	13 33 42.5			
	comp=Z,794nm,19.8s,baz=118,slow=37								
NOA	**NORSAR Array B**	**98.83**	**334**	LR	LR	13 34 05.1			
	comp=Z,484n

mb1 5.3/36,mb1mx5.3/36,mbtmp5.2/36,MS5.1/31, Ms1 5.1/31,ms1mx4.9/45,Error ellipse: s-maj=12.3km s-min=10.0km az=38.0

MOS ***12*** *12:38:29.4±1.1, 12°.34S×65°.20E, h10km, mb5.7/87, MS5.1/53,Error ellipse: s-maj=7.3km s-min=4.3km az=110.8*

ISCJB ***12*** *12:38:29.2±0.9, 12°.45S±0°.03×65°.08E±0°.02, h9km±5km, mb5.5/290,MS5.2/203,Error ellipse: s-maj=4.9km s-min=3.1km az=8.1*

NEIC ***12*** *12:38:30.9±0.1, 12°.43S×65°.14E, h10km, mb5.5/77, MS5.3/125,MW5.8,MW5.8,Error ellipse: s-maj=5.8km s-min=4.8km az=6.0,Moment Tensor Solution. s37 Moment tensor: Scale 10^{17}Nm; M_{rr}=5.02; $M_{\theta\theta}$4.35; $M_{\phi\phi}$0.67; $M_{r\theta}$5.44; $M_{\theta\phi}$-1.65; $M_{\phi r}$-0.74; Best double couple: M_o7.40000×10^{17} NP1:ϕ_s120.00000°,δ22.00000°, λ-73.00000°. NP2:ϕ_s281.00000°,δ69.00000°, λ-97.00000°. Principal axes: T 7.3300, Plg23.0000°, Azm16.0000°; N 0.1800, Plg6.0000°, Azm283.0000°; P -7.5100, Plg65.0000°, Azm179.0000°;*

DJA ***12*** *12:38:31.8±0.2, 13°.S±4°×6°.5E±°, h10km, M5.8/65, mb5.7/65, mB6.2/48, Mw(mB)5.8/48, Mwp6.4/1*

SZGRF ***12*** *12:38:32.7, 12°.09S×65°.64E, h33km, mb5.6, MS4.7, Mid-Indian Ridge*

GCMT ***12*** *12:38:33.6±0.1, 12°.46S×65°.24E, h12km, MW5.7, Moment Tensor Solution. s89,c166; s65,c76; Moment tensor: Scale 10^{17}Nm; M_{rr}=4.67±.04; $M_{\theta\theta}$4.45±.04; $M_{\phi\phi}$0.22±.04; $M_{r\theta}$0.63±.11; $M_{\theta\phi}$-2.46±.03; $M_{\phi r}$-0.14±.12; Best double couple: M_o5.20000×10^{17} NP1:ϕ_s117.00000°,δ42.00000°, λ-87.00000°. NP2:ϕ_s293.00000°,δ49.00000°, λ-93.00000°. Principal axes: T 5.6200, Plg3.0000°, Azm25.0000°; N -0.9100, Plg2.0000°, Azm294.0000°; P -4.7100, Plg86.0000°, Azm174.0000°; Data Used: II IU CN IC G. Surface waves: sta=108, comp=248, per= 50.*

NEIC ***12*** *12:38:46.5±0.0, 12°.27S×64°.70E, h10km, Moment Tensor Solution. s121 Moment tensor: Scale 10^{17}Nm; M_{rr}-5.01; $M_{\theta\theta}$4.50; $M_{\phi\phi}$0.51; $M_{r\theta}$0.60; $M_{\theta\phi}$-3.04; $M_{\phi r}$1.87; Best double couple: M_o6.00000×10^{17} NP1:ϕ_s139.00000°, δ51.00000°, λ-60.00000°. NP2:ϕ_s277.00000°, δ47.00000°, λ-120.00000°. Principal axes: T 6.1500, Plg1.0000°, Azm208.0000°; N -0.3400, Plg22.0000°, Azm299.0000°; P -5.8200, Plg67.0000°, Azm114.0000°;*

ISC 12 12:38:31.5±0.3, 12°.43S±0°.04×65°.13E±0°.04, h14km±1km, h13km:pP-P,n1484,σ1s32/1582,mb5.5/302,MS5.2/207, 258C-259D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**8.77**	**56**	*c*	*i*	**P**	Pn	12 40 33.3	-4.7
DGAR	**Diego Garcia**	**8.77**	**56**	*e*	Pn		Pn	12 40 34.6	-3.4
	291nm,0.9s								
MRIV	**Mauritius Mete**	**10.72**	**222**	*e*	Pn		**Pn**	**12 41 03.7**	**-1.1**
MSEY	**Mahe Island**	**12.26**	**308**	*e*	Pn		**Pn**	**12 41 27.0**	**+1.1**
MSEY	**Mahe Island**	**12.26**	**308**		P		Pn	12 41 29.7	+3.8
	SNR=9.9								
RER	**Riviere de l'E**	**12.49**	**225**	*e*	Pn		**Pn**	**12 41 26.9**	**-2.2**
	56nm,0.6s								
OPO	**Ambohidratompo**	**18.33**	**248**		P		**P**	**12 42 47.3**	**+1.5**
OPO	**Ambohidratompo**	**18.33**	**248**		P		**P**	**12 42 47.3**	**+1.5**
	4.9nm,0.3s,baz=64,slow=10,SNR=26								
OPO					LR		LR	12 47 56.8	
	comp=Z,12μm,20.5s,baz=76,slow=31								
ABPO	**Ambohimpanom**	**18.43**	**247**	*e*	P		**Pn**	**12 42 48.5**	**+1.5**
ABPO					pmax		pmax		
	comp=Z,370nm,1.5s								
ABPO	**Ambohimpanom**	**18.43**	**247**	*e*	P		**Pn**	**12 42 48.5**	**+1.5**
	comp=Z,370nm,1.5s								
HMDM	**Hanimaadhoo**	**20.68**	**23**		P		Pn	12 43 15.2	+1.5
	comp=Z,582nm,2.2s,comp=Z,15μm								
TRD	**Trivandrum**	**23.89**	**30**	*e*	PKP		**P**	**12 43 45.2**	**+0.2**
TRD					AMb		AMB	12 43 52.7	
	comp=Z,348nm,1.8s								
TRD				*e*	S		**S**	**12 48 02.8**	**+1.8**
PALK	**Pallekele**	**24.95**	**39**	*e*	P		**P**	**12 43 57.0**	**+2.1**
	comp=Z,293nm,1.7s								
PALK	**Pallekele**	**24.95**	**39**		P		**P**	**12 43 56.9**	**+2.1**
	SNR=8.2								
PALK	**Pallekele**	**24.95**	**39**		P		**P**	**12 43 57.1**	**+2.3**
	comp=Z,96nm,0.8s,comp=Z,6μm								
GOA	**Goa**	**29.04**	**17**	*i*	P		**P**	**12 44 32.3**	**+0.9**
GOA					AMB		AMB	12 45 27.8	
	comp=Z,45nm,0.3s								
KMBO	**Kilima Mbogo**	**29.83**	**290**		P		**P**	**12 44 38.7**	**-0.1**
KMBO	**Kilima Mbogo**	**29.83**	**290**		P		P	12 44 42.5	+3.7
	SNR=8.6								
KMBO	**Kilima Mbogo**	**29.83**	**290**		P		**P**	**12 44 38.7**	**-0.1**
	comp=Z,7.6nm,0.2s,baz=52,slow=18,SNR=14								
KMBO					LR		LR	12 55 39.9	
	comp=Z,2μm,18.7s,baz=98,slow=35								
COCO	**West Island**	**30.97**	**93**		PFAKE			12 45 00.0	+11
COCO					LR		LR		
	comp=Z,3μm,22.0s								
POO	**Poona**	**31.94**	**16**	*e*	PKP		**P**	**12 44 58.4**	**+1.3**
POO					AMb		AMB	12 45 01.4	
POO				*i*	S		**S**	**12 50 10.0**	**+1.9**
HYB	**Hyderabad**	**32.48**	**24**		P		**P**	**12 45 02.0**	**+0.1**
HYB					S		**S**	**12 50 18.0**	**+1.4**
HYB	**Hyderabad**	**32.48**	**24**	*i*	P		**P**	**12 45 02.0**	**+0.1**
	comp=Z,86nm,1.2s								
HYB				*e*	S		**S**	**12 50 18.0**	**+1.4**
HYB					LR		LR	12 54 32.0	
	comp=Z,13nm,24.0s								
HYB	**Hyderabad**	**32.48**	**24**		P		**P**	**12 45 02.0**	**+0.1**
HYB					S		**S**	**12 50 18.0**	**+1.4**
HYB	**Hyderabad**	**32.48**	**24**	*e*	PKP		**P**	**12 45 04.2**	**+2.3**
WNDE	**Wendo Genet**	**32.71**	**305**	*e*	P		**P**	**12 45 07.4**	**+3.2**
CNG	**Changalane**	**33.88**	**241**	*e*	P		**P**	**12 45 16.9**	**+2.8**
CNG					AMB		AMB	12 45 24.2	
	comp=Z,35nm,4.3s								
CMBY	**CAMPBELL BAY**	**34.53**	**58**	*e*	PKP		**P**	**12 45 21.7**	**+1.9**
CMBY					AMB		AMB	12 45 23.3	
	comp=Z,172nm,1.5s								
POGA	**Pongola**	**34.71**	**240**	*e*	P		**P**	**12 45 19.9**	**-1.3**
POGA					AMB		AMB	12 45 22.5	
	comp=Z,47nm,2.4s								
MSNA	**Messina**	**34.84**	**249**	*e*	P		**P**	**12 45 20.6**	**-2.0**
MSNA					AMB		AMB	12 45 25.7	
	comp=Z,51nm,2.0s								
BSI	**Banda Aceh**	**34.88**	**61**		P		**P**	**12 45 24.0**	**+1.2**
	comp=Z,93nm,0.9s,comp=Z,2μm								
VIS	**Vishakhapatnam**	**34.93**	**31**	*e*	PKP		**P**	**12 45 23.1**	**-0.1**
VIS					AMb		AMB	12 45 30.1	
	comp=Z,87nm,1.3s								
BSY	**Bisya**	**35.80**	**347**		P		**P**	**12 45 32.0**	**+1.3**
	SNR=12								
SMDO	**Samad**	**35.94**	**349**		P		**P**	**12 45 33.0**	**+1.1**
	SNR=10								
LSZ	**Lusaka**	**35.95**	**261**	*e*	P		**P**	**12 45 30.2**	**-2.0**
LSZ	**Lusaka**	**35.95**	**261**	*e*	P		**P**	**12 45 31.8**	**-0.4**
	comp=Z,226nm,1.6s								
LSZ					LR		LR		
	comp=Z,3μm,22.0s								
LSZ	**Lusaka**	**35.95**	**261**		P		**P**	**12 45 35.1**	**+2.8**
	SNR=35								
NGP	**Nagpur**	**36.06**	**22**	*e*	PKP		**P**	**12 45 33.4**	**+0.5**
LHMI	**Lhok Sumawe**	**36.17**	**63**		P		P	12 45 38.3	+4.4
	comp=Z,145nm,1.0s,comp=Z,3μm								
PBA	**Port Blair**	**36.38**	**50**	*e*	PKP		P	12 45 37.8	+2.1
PBA					AMB		AMB	12 45 39.8	
	comp=Z,133nm,2.2s								
HOQ	**Hoqain**	**36.59**	**348**		P		**P**	**12 45 38.2**	**+0.8**
	SNR=11								
TSI	**Tuntungan**	**36.80**	**67**		P		**P**	**12 45 41.3**	**+2.0**
	comp=Z,171nm,1.3s,comp=Z,5μm								
PSI	**Prapat**	**36.82**	**68**		P		**P**	**12 45 38.6**	**-1.1**
PSI	**Prapat**	**36.82**	**68**		P		**P**	**12 45 40.2**	**+0.5**
	comp=Z,51nm,1.0s,comp=Z,1μm								
PSI	**Prapat**	**36.82**	**68**		P		**P**	**12 45 40.5**	**+0.8**
	comp=Z,51nm,1.0s,comp=Z,1μm								
PSI	**Prapat**	**36.82**	**68**		P		**P**	**12 45 38.6**	**-1.1**
	comp=Z,29nm,0.9s,baz=279,slow=8.0,SNR=23								
PSI					LR		LR	12 57 27.3	
	comp=Z,4μm,20.8s,baz=239,slow=31								
PAF	**Port-aux-Franc**	**37.06**	**174**		PFAKE			12 45 50.0	+9.0
PAF					LR		LR		
	comp=Z,9μm,20.0s								
SLR	**Silverton**	**37.12**	**244**	*e*	P		**P**	**12 45 39.6**	**-2.5**
SLR					AMB		AMB	12 45 44.9	
	comp=Z,153nm,2.6s								
ERPM	**east rand prop**	**37.30**	**243**	*e*	P		**P**	**12 45 43.8**	**+0.1**
ERPM					AMB		AMB	12 45 46.9	
	comp=Z,79nm,1.4s								
BHPL	**Bhopal**	**37.44**	**19**	*e*	PKP		**P**	**12 45 45.7**	**+1.1**
BHPL					AMB		AMB	12 45 52.7	
	comp=Z,67nm,2.4s								
DGPR	**DIGLIPUR**	**37.51**	**48**	*e*	PKP		**P**	**12 45 46.5**	**+1.2**
DGPR					AMB		AMB	12 45 49.1	
	comp=Z,120nm,1.5s								
KSD	**Kokstad**	**37.59**	**236**	*e*	P		**P**	**12 45 48.0**	**+1.9**
KSD					AMB		AMB	12 45 49.6	
	comp=Z,169nm,2.1s								
ASHO	**Ashiyiah**	**37.93**	**347**		P		**P**	**12 45 50.0**	**+1.2**
	SNR=22								
HATD	**Hatta, Dubai**	**38.05**	**347**		P		**P**	**12 45 50.5**	**+0.8**
	SNR=15								
UOSS	**Wadi Hilu**	**38.15**	**347**		P		**P**	**12 45 51.8**	**+1.2**
	comp=Z,106nm,1.2s,SNR=7.6								
PRYS	**Parys**	**38.21**	**242**	*e*	P		**P**	**12 45 50.1**	**-1.3**
PRYS					AMB		AMB	12 45 54.4	
	comp=Z,64nm,1.3s								
JBP	**Jabalpur**	**38.25**	**22**	*e*	PKP		**P**	**12 45 52.8**	**+1.4**
JBP				*eS*			**S**	**12 51 46.1**	**+1.1**
NAZ	**Nazwa, Dubai**	**38.32**	**346**		P		**P**	**12 45 53.1**	**+1.1**
	SNR=9.4								
SEK	**Senekal**	**38.36**	**240**	*e*	P		**P**	**12 45 53.2**	**+0.5**
SEK					AMB		AMB	12 45 57.3	
	comp=Z,89nm,1.5s								
RGRI	**Rengat**	**38.80**	**75**		P		P	12 45 59.9	+3.6
	comp=Z,269nm,1.2s,comp=Z,140μm								
RGRI	**Rengat**	**38.80**	**75**		P		P	12 45 59.9	+3.6
	comp=Z,269nm,1.2s,comp=Z,140μm								
BANOM	**Banah**	**39.07**	**347**		P		**P**	**12 45 58.8**	**+0.4**
	SNR=9.3								
LWLI	**Liwa**	**39.14**	**83**		P		**P**	**12 46 01.8**	**+2.5**
	comp=Z,109nm,0.9s,comp=Z,6μm								
LBTB	**Lobatse**	**39.33**	**246**	*e*	P		P	12 45 57.3	-3.4
LBTB					AMB		AMB	12 46 03.0	
	comp=Z,73nm,2.3s								
LBTB	**Lobatse**	**39.33**	**246**	*e*	P		**P**	**12 46 00.4**	**-0.4**
	comp=Z,46nm,0.9s								
IPM	**Ipoh**	**39.43**	**67**	*e*	P		**P**	**12 46 02.2**	**+0.6**
IPM	**Ipoh**	**39.43**	**67**		P		**P**	**12 46 03.0**	**+1.4**
IPM	**Ipoh**	**39.43**	**67**		P		**P**	**12 46 02.2**	**+0.6**
	comp=Z,72nm,0.9s,comp=Z,2μm								
IPM	**Ipoh**	**39.43**	**67**		P		**P**	**12 46 02.5**	**+0.9**
	comp=Z,72nm,0.9s,comp=Z,2μm								
KASI	**Kota Agung**	**39.45**	**84**		P		**P**	**12 46 02.8**	**+1.1**
	comp=Z,156nm,1.4s,comp=Z,3μm								
FRIM	**Kepong**	**39.46**	**69**		P		**P**	**12 46 02.2**	**+0.4**
SWZ	**Schweizer**	**40.03**	**242**	*e*	P		**P**	**12 46 04.6**	**-2.0**
SWZ					AMB		AMB	12 46 09.6	
	comp=Z,159nm,2.1s								
CGJI	**Cibinong**	**40.39**	**86**		P		**P**	**12 46 10.4**	**+0.9**
	comp=Z,358nm,1.3s,comp=Z,4μm								
BOSA	**Boshof**	**40.45**	**240**	*e*	P		**P**	**12 46 11.5**	**+1.5**
BOSA	**Boshof**	**40.45**	**240**		P		**P**	**12 46 10.2**	**+0.3**
	comp=Z,15nm,0.8s,baz=83,slow=7.1,SNR=5.0								
BOSA					LR		LR	13 00 51.8	
	comp=Z,5μm,19.0s,baz=76,slow=33								
KGM	**Kluang**	**40.55**	**72**		P		**P**	**12 46 12.2**	**+1.3**
RAYN	**Ar Rayn**	**40.56**	**332**		P		**P**	**12 46 09.8**	**-1.0**
	comp=Z,106nm,0.8s,SNR=7.6								
GRM	**Grahamstown**	**40.89**	**233**	*e*	P		**P**	**12 46 14.6**	**+1.1**
GRM					AMB		AMB	12 46 17.1	
	comp=Z,150nm,2.1s								
SBJI	**Serang**	**40.91**	**85**		P		**P**	**12 46 16.7**	**+2.9**
	comp=Z,197nm,1.4s,comp=Z,4μm								
MYKOM	**Kota Tinggi**	**40.96**	**73**		P		**P**	**12 46 15.0**	**+0.7**
MYKOM	**Kota Tinggi**	**40.96**	**73**		P		**P**	**12 46 14.6**	**+0.3**
	comp=Z,95nm,1.0s,comp=Z,2μm								
MYKOM	**Kota Tinggi**	**40.96**	**73**		P		**P**	**12 46 14.5**	**+0.3**
	comp=Z,95nm,1.0s,comp=Z,2μm								
SKJI	**Sukabumi**	**41.15**	**86**		P		P	12 46 21.8	+5.9
BOK	**Bokaro**	**41.33**	**29**	*e*	PKP		**P**	**12 46 20.0**	**+2.9**
DBJI	**Dramaga**	**41.43**	**86**		P		**P**	**12 46 19.8**	**+1.7**
	comp=Z,232nm,1.7s,comp=Z,4μm								
KTGM	**Kuala Trenggan**	**41.69**	**67**		P		**P**	**12 46 21.0**	**+0.7**
PPBI	**Pangkal Pinang**	**41.87**	**79**		P		**P**	**12 46 22.0**	**+0.3**
	comp=Z,52nm,1.9s,comp=Z,1μm								
PPBI	**Pangkal Pinang**	**41.87**	**79**		P		**P**	**12 46 22.0**	**+0.3**
	comp=Z,52nm,1.9s,comp=Z,1μm								
LEM	**Lembang**	**42.22**	**86**		P		**P**	**12 46 26.8**	**+2.0**
	comp=Z,421nm,1.1s,comp=Z,4μm								
CISI	**Cisompet, Garu**	**42.28**	**88**		P		**P**	**12 46 26.8**	**+1.6**
	comp=Z,250nm,1.4s,comp=Z,5μm								
BUFB	**Buffelsbos**	**42.56**	**233**	*e*	P		**P**	**12 46 26.7**	**-0.4**
BUFB					AMB		AMB	12 46 31.5	
	comp=Z,223nm,1.7s								
TPI	**Tanjungpandan**	**43.17**	**81**		P		**P**	**12 46 32.4**	**+0.1**
	comp=Z,72nm,1.1s,comp=Z,1μm								
TPI	**Tanjungpandan**	**43.17**	**81**		P		**P**	**12 46 32.4**	**+0.1**
	comp=Z,72nm,1.1s,comp=Z,1μm								
CLJI	**Cilicap**	**43.42**	**88**		P		**P**	**12 46 37.1**	**+2.7**
	comp=Z,277nm,1.1s								
TGJI	**Tegal**	**43.68**	**87**		P		**P**	**12 46 38.2**	**+1.8**
	comp=Z,243nm,1.2s,comp=Z,4μm								
KOLN	**Koldanda**	**43.78**	**24**	*e*	P		**P**	**12 46 37.4**	**+0.1**
	comp=Z,81nm,0.9s								
PYUN	**Piuthan**	**43.84**	**23**	*e*	P		**P**	**12 46 38.0**	**+0.3**
	comp=Z,161nm,0.8s								
BJII	**Banjamegara**	**44.17**	**88**		P		**P**	**12 46 42.0**	**+1.5**
	comp=Z,97nm,1.5s,comp=Z,3μm								
DMN	**Daman**	**44.26**	**26**	*e*	P		**P**	**12 46 42.0**	**+0.9**
	comp=Z,127nm,1.0s								
DDI	**Dehra Dun**	**44.28**	**16**	*e*	PKP		**P**	**12 46 41.9**	**+0.9**
DDI					AMB		AMB	12 46 44.4	
	comp=Z,232nm,1.9s								
RAMN	**Ramite**	**44.35**	**28**	*e*	P		**P**	**12 46 43.0**	**+1.2**
	comp=Z,301nm,1.1s								
PKI	**Pulchoki**	**44.36**	**26**	*e*	P		**P**	**12 46 42.9**	**+0.9**
	comp=Z,196nm,1.3s								
PKIN	**Phulchoki**	**44.36**	**26**	*e*	P		**P**	**12 46 42.7**	**+0.8**
	comp=Z,1μm,2.5s								
DANN	**Dangsing**	**44.37**	**24**	*e*	P		**P**	**12 46 42.9**	**+0.9**
	comp=Z,177nm,1.1s								
RDF	**Al-Radifah**	**44.48**	**338**	*e*	P		**P**	**12 46 41.7**	**-0.9**
RDF					AMb		AMB	12 46 47.8	
	comp=Z,61nm,1.6s								
KKN	**Kakani**	**44.49**	**26**	*e*	P		**P**	**12 46 44.0**	**+1.0**
	comp=Z,197nm,1.1s								
ODAN	**Odare**	**44.64**	**29**	*e*	P		**P**	**12 46 45.0**	**+0.8**
	comp=Z,284nm,1.1s								
YOGI	**Yogyakarta**	**44.66**	**89**		P		**P**	**12 46 45.8**	**+1.5**
	comp=Z,2μm,1.1s,comp=Z,20μm								
SMLA	**Simla**	**44.82**	**15**	*i*	P		**P**	**12 46 45.5**	**+0.2**
SMLA					AMb		AMB	12 46 47.8	
	comp=Z,41nm,0.1s								
SMLA				*i*	x		x	12 53 19.7	
GUN	**Gumba**	**44.86**	**26**	*e*	P		**P**	**12 46 47.0**	**+1.0**
	comp=Z,1μm,1.8s								
UGM	**Wanagama**	**44.87**	**89**	*e*	P		**P**	**12 46 47.8**	**+1.8**
UGM	**Wanagama**	**44.87**	**89**		P		**P**	**12 46 48.2**	**+2.2**
	comp=Z,506nm,1.1s,comp=Z,7μm								
NAY	**Al-Naaiem**	**44.89**	**338**	*e*	P		**P**	**12 46 44.3**	**-1.5**
NAY					AMb		AMB	12 46 51.4	
	comp=Z,34nm,1.4s								
SMRI	**Semarang**	**44.93**	**88**		P		**P**	**12 46 48.5**	**+2.0**
SUR	**Sutherland**	**45.14**	**237**	*e*	P		**P**	**12 46 47.0**	**-1.3**
SUR					AMB		AMB	12 47 06.8	
	comp=Z,85nm,2.8s								
SUR	**Sutherland**	**45.14**	**237**	*e*	P		**P**	**12 46 46.9**	**-1.3**
	comp=Z,115nm,1.3s								
SUR					LR		LR		
	comp=Z,6μm,20.0s								
TAPN	**Taplejung**	**45.20**	**29**	*e*	P		**P**	**12 46 50.1**	**+1.4**
	comp=Z,243nm,1.1s								
CMAR	**Chiang Mai Arr**	**45.32**	**48**		P		**P**	**12 46 47.9**	**-1.6**
CMAR					PcP		**PcP**	**12 48 29.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**45.32**	**48**		P		**P**	**12 46 47.9**	**-1.6**
	comp=Z,15nm,1.0s,baz=241,slow=7.9,SNR=50								
CMAR					PcP		**PcP**	**12 48 29.8**	**+0.6**
	comp=Z,11nm,1.0s,baz=235,slow=4.9,SNR=14								
CMAR					LR		LR	13 02 59.0	
	comp=Z,2μm,20.9s,baz=226,slow=32								
MIB	**Mutribah**	**45.35**	**338**	*e*	P		**P**	**12 46 48.0**	**-1.4**
MIB					AMb		AMB	12 46 55.1	
	comp=Z,50nm,1.5s								
CHTO	**Chiang Mai**	**45.55**	**48**	*e*	P		**P**	**12 46 52.1**	**+0.8**
CHTO				*e*				12 48 32.0	
CHTO					pmax		pmax		
	comp=Z,71nm,1.5s								
CHTO					MLR		MLR		
	comp=Z,2μm,19.0s								
CHTO	**Chiang Mai**	**45.55**	**48**	*e*	P		**P**	**12 46 52.1**	**+0.8**
	comp=Z,71nm,1.5s								
CHTO				*e*	PcP		**PcP**	**12 48 32.0**	**+2.1**
CHTO					LR		LR		
	comp=Z,2μm,19.0s								
CHTO	**Chiang Mai**	**45.55**	**48**		P		**P**	**12 46 52.4**	**+1.1**
	SNR=26								
CHTO	**Chiang Mai**	**45.55**	**48**		P		**P**	**12 46 51.6**	**+0.3**
	comp=Z,40nm,1.0s,comp=Z,1μm								
CMMT	**Chiang Mai**	**45.55**	**48**		P		**P**	**12 46 52.1**	**+0.8**
	comp=Z,35nm,1.0s,comp=Z,1μm								
DHRM	**DHARAMSHALA**	**45.69**	**13**	*e*	PKP		**P**	**12 46 53.3**	**+0.9**
DHRM					AMB		AMB	12 46 57.8	
	comp=Z,182nm,1.5s								
CVNA	**Calvinia**	**45.78**	**238**	*e*	P		**P**	**12 46 52.7**	**-0.3**
CVNA					AMB		AMB	12 46 56.0	
	comp=Z,153nm,2.4s								
SHL	**Shillong**	**45.88**	**34**	*e*	PKP		**P**	**12 46 54.9**	**+0.9**
SHL					AMB		AMB	12 46 59.0	
	comp=Z,129nm,1.3s								
SHL				*ex*			x	12 53 34.0	
PWJI	**Pagerwojo**	**46.10**	**89**		P		**P**	**12 46 56.1**	**+0.4**
	comp=Z,283nm,1.1s,comp=Z,6μm								
SJI	**Sawahan**	**46.11**	**89**		P		**P**	**12 46 56.8**	**+0.9**
	comp=Z,230nm,1.2s,comp=Z,5μm								
TSUM	**Tsumeb**	**46.13**	**255**	*e*	P		**P**	**12 46 57.9**	**+1.8**
TSUM	**Tsumeb**	**46.13**	**255**	*e*	P		**P**	**12 46 58.0**	**+2.0**
	comp=Z,16nm,0.9s								
TSUM					LR		LR		
	comp=Z,4μm,19.0s								
ELIM	**Elim**	**46.62**	**234**	*e*	P		**P**	**12 46 59.4**	**-0.2**
ELIM					AMB		AMB	12 47 02.2	
	comp=Z,232nm,2.5s								
KRKI	**Karangkates**	**46.71**	**90**		P		**P**	**12 47 02.0**	**+1.5**
	comp=Z,453nm,1.3s,comp=Z,14μm								
KBL	**Kabul**	**46.85**	**4**	*e*	P		**P**	**12 47 02.9**	**+1.4**
KBL					pmax		pmax		
	comp=Z,108nm,1.4s								
KBL	**Kabul**	**46.85**	**4**	*e*	P		**P**	**12 47 02.9**	**+1.4**
	comp=Z,108nm,1.4s								
KSM	**Kuching**	**46.93**	**76**	*e*	P		**P**	**12 47 02.3**	**+0.1**
KSM					LR		LR		
	comp=Z,2μm,20.0s								
KSM	**Kuching**	**46.93**	**76**		P		**P**	**12 47 03.0**	**+0.8**
KSM	**Kuching**	**46.93**	**76**		P		**P**	**12 47 02.5**	**+0.3**
	comp=Z,104nm,1.1s,comp=Z,2μm								
PBKI	**Pangkalan Bun**	**47.06**	**82**		P		**P**	**12 47 05.0**	**+1.7**
	comp=Z,122nm,1.0s,comp=Z,2μm								
STKI	**Sintang**	**47.62**	**78**		P		**P**	**12 47 08.4**	**+0.8**
	comp=Z,103nm,1.4s,comp=Z,47μm								
GMJI	**Gumukmas**	**47.66**	**90**		P		**P**	**12 47 10.5**	**+2.6**
	comp=Z,151nm,1.0s,comp=Z,2μm								
BLJI	**Banyuglugur**	**47.89**	**89**		P		**P**	**12 47 11.1**	**+1.4**
	comp=Z,156nm,1.3s,comp=Z,3μm								
KMMI	**Kalianget**	**48.38**	**88**		P		**P**	**12 47 15.0**	**+1.5**
	comp=Z,364nm,1.2s,comp=Z,5μm								
UBPT	**Khong Chiam**	**48.50**	**57**		P		**P**	**12 47 14.5**	**+0.1**
	comp=Z,82nm,1.3s								
LSA	**Lhasa**	**48.82**	**30**		P		**P**	**12 47 18.9**	**+1.7**
LSA					S		**S**	**12 54 17.8**	**-2.8**
LSA					pmax		pmax		
	comp=Z,80nm,1.5s								
LSA					pmax		pmax		
	comp=Z,820nm,4.7s								
LSA					LR		LR		
	comp=N,4μm,22.6s								
LSA					LR		LR		
	comp=E,4μm,22.6s								
LSA					LR		LR		
	comp=Z,12μm,23.0s								
SBUM	**Sibu**	**49.05**	**76**		P		**P**	**12 47 19.3**	**+0.7**
SBUM	**Sibu**	**49.05**	**76**		P		**P**	**12 47 18.6**	**-0.1**
	comp=Z,138nm,0.9s,comp=Z,2μm								
IGBI	**Denpasar**	**49.24**	**91**		P		**P**	**12 47 21.1**	**+1.0**
	comp=Z,395nm,1.2s								
DNP	**Denpasar**	**49.32**	**91**		P		**P**	**12 47 23.1**	**+2.4**
	comp=Z,766nm,1.4s								
SRBI	**Singaraja**	**49.42**	**90**		P		**P**	**12 47 22.7**	**+1.2**
	comp=Z,257nm,1.0s,comp=Z,3μm								
KHKI	**Kahang-Kahang**	**49.76**	**90**		P		**P**	**12 47 24.8**	**+0.7**
	comp=Z,116nm,1.2s,comp=Z,2μm								
BBKI	**Banjar Baru**

SNR=15
TTSI Tana Toraja 54.89 85 P **P** 12 48 03.0 +0.7
comp=Z,121nm,1.4s,comp=Z,2µm
BSSI Bau Bau, Buton 54.91 89 P **P** 12 48 04.6 +2.2
comp=Z,172nm,1.0s,comp=Z,3µmcomp=Z,36µm
TSM Tawau 54.98 76 P **P** 12 48 03.1 +0.2
KZA Kyzart 55.03 9 P **P** 12 48 04.3 +1.2
SNR=23
MAW Mawson 55.14 181 *e*P **P** 12 48 02.0 -1.2
comp=Z,15nm,1.0s
MAW P **P** 12 48 02.4 -0.8
MAW Mawson 55.14 181 P **P** 12 48 02.4 -0.8
comp=Z,28nm,0.8s,baz=352,slow=8.1,SNR=26
MAW LR LR 13 05 23.4
comp=Z,4µm,21.3s,baz=356,slow=29
ULHL Ulahol 55.35 10 P **P** 12 48 06.7 +1.4
SNR=12
EKS2 Erkin-Say 55.39 8 *e*P **P** 12 48 06.6 +1.2
EKS2 MLR MLR
comp=Z,3µm,22.0s
EKS2 Erkin-Say 55.39 8 *e*P **P** 12 48 06.6 +1.2
EKS2 LR LR
comp=Z,3µm,22.0s
AAK Ala-Archa 55.46 8*d i*P **P** 12 48 07.0 +1.0
AAK pmax pmax
comp=Z,255nm,2.5s
AAK Ala-Archa 55.46 8 P **P** 12 48 05.3 -0.6
AAK *e*P **pP** 12 48 06.3 -4.1
AAK LR LR
comp=Z,2µm,20.0s
AAK Ala-Archa 55.46 8 P **P** 12 48 07.1 +1.1
SNR=32
AAK Ala-Archa 55.46 8 P **P** 12 48 05.3 -0.6
comp=Z,32nm,1.1s,baz=187,slow=5.4,SNR=25
KK31 Karatay Array 55.48 5 *i* P **P** 12 48 04.8 -1.1
KK31 pmax pmax
comp=Z,66nm,1.8s
KKAR Karatay Array 55.48 5 *e*P **P** 12 48 06.4 +0.5
KKAR Karatay Array 55.48 5 *e*P **P** 12 48 06.4 +0.5
GNI Garni 55.63 341 *e*P **P** 12 48 07.5 +0.3
comp=Z,64nm,0.9s
GNI LR LR
comp=Z,2µm,21.0s
GNI Garni 55.63 341 P **P** 12 48 09.4 +2.2
SNR=25
FRU Bishkek 55.67 8 *i* P **P** 12 48 08.0 +0.7
FRU *i* S S 12 56 06.0 +13
FRU pmax pmax
comp=Z,230nm,2.2s
FRU MLR MLR
comp=Z,2µm,16.0s
MYLDM Lahad Datu 55.85 75 P **P** 12 48 09.8 +0.6
GYA Guiyang 55.89 46⇑*i*P **P** 12 48 09.3 -0.1
GYA PcP **PcP** 12 49 10.2 +2.1
GYA ScP **ScP** 12 53 08.7 +1.7
GYA S **S** 12 55 52.7 -4.2
GYA SS **SS** 12 59 46.3 +3.2
GYA pmax pmax
comp=Z,80nm,1.0s
GYA pmax pmax
comp=Z,560nm,8.4s
GYA LR LR
comp=N,1µm,22.9s
GYA LR LR
comp=E,1µm,21.1s
GYA LR LR
comp=Z,1µm,21.4s
TKM2 Tokmak 2 55.90 9 *e*P **P** 12 48 09.3 +0.1
TKM2 MLR MLR
comp=Z,4µm,20.0s
TKM2 Tokmak 2 55.90 9 *e*P **P** 12 48 09.3 +0.1
TKM2 LR LR
comp=Z,4µm,20.0s
TKM2 Tokmak 2 55.90 9 P **P** 12 48 09.3 +0.1
SNR=20
CSS Prodhromos 55.95 329 PFAKE 12 48 20.0 +11
CSS LR LR
comp=Z,835nm,19.0s
USP Ospenovka 56.08 8 P **P** 12 48 10.6 +0.3
SNR=17
MMRI Maumere 56.19 92 P **P** 12 48 11.6 0.0
comp=Z,224nm,1.6s,comp=Z,5µm
SKSI Soroako, Sulaw 56.48 85 P **P** 12 48 14.1 +0.3
comp=Z,105nm,1.1s,comp=Z,2µm
CD2 Chengdu 56.86 40 P P 12 48 20.0 +3.9
CD2 pP pP 12 48 24.6 +4.0
CD2 sP sP 12 48 27.0 +4.7
CD2 PcP **PcP** 12 49 14.6 +2.9
CD2 PP PP 12 50 28.4 +5.6
CD2 PcS **PcS** 12 53 14.0 +1.4
CD2 S **S** 12 56 13.3 +3.8
CD2 sS sS 12 56 20.7 +3.8
CD2 SS **SS** 13 00 03.3 +5.1
CD2 pmax pmax
comp=Z,110nm,0.6s
CD2 pmax pmax
comp=Z,650nm,4.0s
CD2 LR LR
comp=N,2µm,17.6s
CD2 LR LR
comp=E,2µm,21.1s
CD2 LR LR
comp=Z,3µm,24.5s
BBSI Bau Bau 57.07 89 P **P** 12 48 19.7 +1.8
comp=Z,235nm,1.1s
MIR Mirnyy 57.22 167⇑*i*P **P** 12 48 19.5 +1.5
MIR pmax pmax
comp=Z,273nm,2.0s
MAK Makhachkala 57.43 345 *e*P P 12 48 16.2 -3.6
MAK *e* 12 49 09.4
MAK *i* 12 50 24.5
MAK *e*PPP PPP 12 51 52.0
MAK *e*S **S** 12 56 13.8 -2.6
MAK *e* 12 58 06.1
MAK *e*SS **SS** 13 00 00.4 -6.1
MAK pmax pmax
comp=Z,166nm,1.4s
MAK MLR MLR
comp=Z,1µm,19.0s
MRSI Marisa 57.80 81 P **P** 12 48 21.6 -1.4
comp=Z,62nm,1.1s,comp=Z,715nm
LUWI Luwuk 58.23 83 P **P** 12 48 27.0 +1.0
comp=Z,157nm,1.2s,comp=Z,3µm
ZEI Tsey 58.29 342 *e*P **P** 12 48 23.2 -2.9
ZEI *e* 12 50 32.6
ZEI *e*PPP PPP 12 51 53.3
ZEI *e*S **S** 12 56 27.8 -0.3
ZEI *e* 12 58 09.8
ZEI *e*SS **SS** 13 00 25.0 +4.5
ZEI pmax pmax
comp=Z,56nm,2.0s
ZEI MLR MLR
comp=Z,1µm,18.0s
FITZ Fitzroy Crossi 58.44 104 P **P** 12 48 26.9 -0.5
FITZ PcP **PcP** 12 49 18.7 +0.6
FITZ Fitzroy Crossi 58.44 104 P **P** 12 48 26.9 -0.5
comp=Z,74nm,1.0s,baz=263,slow=6.6,SNR=27
FITZ PcP **PcP** 12 49 18.7 +0.6
comp=Z,20nm,1.0s,baz=243,slow=3.6,SNR=3.0
SYO Syowa Base 58.87 190⇑*e*P P 12 48 25.0 -4.5
GZH Guangzhou 58.93 53 P P 12 48 35.0 +4.3
GZH S S 12 56 45.6 +8.9
GZH LR LR
comp=N,1µm,21.0s
GZH LR LR
comp=E,1µm,18.6s
GZH LR LR
comp=Z,2µm,17.8s
KBZ Khabaz 59.45 341 P **P** 12 48 33.1 -0.8
KBZ Khabaz 59.45 341 P **P** 12 48 33.0 -0.8
KBZ ⇑*e* 13 18 17.6
KBZ Khabaz 59.45 341 P **P** 12 48 33.0 -0.8
comp=Z,10nm,1.0s,baz=180,slow=6.7,SNR=18
KBZ LR LR 13 14 16.1
comp=Z,919nm,19.8s,baz=157,slow=36
KBZ PKP2bc 13 18 17.6
comp=Z,0.5nm,0.3s,baz=249,slow=8.6,SNR=5.0
BRTR Keskin Array B 59.58 332 P **P** 12 48 34.0 -1.1
BRTR ⇑*e* 13 18 17.4
BRTR Keskin Array B 59.58 332 P **P** 12 48 34.0 -1.1
comp=Z,3.2nm,0.9s,baz=169,slow=8.8,SNR=13
BRTR LR LR 13 13 39.5
comp=Z,807nm,18.1s,baz=134,slow=35
BRTR PKP2bc 13 18 17.4
comp=Z,0.8nm,0.9s,baz=341,slow=2.6,SNR=4.9

BR131 Keskin Array S 59.58 332 *e*P **P** 12 48 36.2 +1.1
comp=Z,15nm,1.3s
ISP Isparta 59.59 329 PFAKE 12 48 50.0 +15
ISP LR LR
comp=Z,700nm,21.0s
WMQ Urumqi 59.64 19 P **P** 12 48 36.8 +1.5
WMQ pP **pP** 12 48 41.4 +1.6
WMQ sP **sP** 12 48 43.8 +2.3
WMQ PP **PP** 12 50 50.5 +3.3
WMQ ScP **ScP** 12 53 22.4 -0.7
WMQ S **S** 12 56 45.4 0.0
WMQ ScS **ScS** 12 58 23.0 -2.4
WMQ SS **SS** 13 00 42.4 +1.0
WMQ pmax pmax
comp=Z,91nm,1.4s
WMQ pmax pmax
comp=Z,2µm,3.6s
WMQ LR LR
comp=N,2µm,20.8s
WMQ LR LR
comp=E,2µm,17.2s
WMQ LR LR
comp=Z,4µm,25.6s
ARG Arkhangelos 59.66 326 *e*P **P** 12 48 37.7 +2.2
KARP Karpathos 59.72 324 *e*P **P** 12 48 37.9 +1.9
KIV Kislovodsk 59.72 341 *e*P **P** 12 48 37.4 +1.5
KIV *e*S **S** 12 56 48.1 +1.6
KIV *e*SS **SS** 13 00 38.9 -3.9
KIV pmax pmax
comp=Z,14nm,1.0s
ZKR Zakros 59.95 323 P **P** 12 48 37.0 -0.5
ZKR Zakros 59.95 323 *e*P **P** 12 48 39.9 +2.4
ANTO Ankara 60.08 332 PFAKE 12 48 50.0 +12
ANTO LR LR
comp=Z,758nm,22.0s
ANTO Ankara 60.08 332 P **P** 12 48 40.2 +1.8
SNR=7.6
XRY Khrisi 60.09 323 *e*P **P** 12 48 39.8 +1.3
SOC Sochi 60.37 339 *e*P **P** 12 48 39.8 -0.4
SOC *e* 12 49 25.0
SOC *e* 12 50 52.7
SOC *e*S **S** 12 56 56.3 +1.7
SOC *e*SSS SSS 13 03 30.1
SOC pmax pmax
comp=Z,6.0nm,0.4s
NPS Neapolis 60.41 323 P **P** 12 48 41.7 +1.0
NPS Neapolis 60.41 323 *e*P **P** 12 48 43.2 +2.5
LAST Lasithi 60.41 323 P **P** 12 48 40.7 -0.1
LAST Lasithi 60.41 323 *e*P **P** 12 48 42.4 +1.6
LZH Lanzhou 60.53 36 ⇓P **P** 12 48 42.3 +0.6
LZH pP **pP** 12 48 45.6 -0.6
LZH sP **sP** 12 48 50.3 +2.4
LZH PP **PP** 12 50 59.0 +3.7
LZH S **S** 12 56 57.1 -0.1
LZH sS **sS** 12 57 04.9 +0.3
LZH SS **SS** 13 00 57.2 +1.4
LZH pmax pmax
comp=Z,81nm,1.2s
LZH pmax pmax
comp=Z,1µm,6.2s
LZH LR LR
comp=N,2µm,16.0s
LZH LR LR
comp=E,3µm,18.3s
LZH LR LR
comp=Z,4µm,19.1s
FORT Forrest 60.56 118 *e*P **P** 12 48 42.8 +0.9
comp=Z,244nm,1.0s
SIVA Sivas 60.71 322 P **P** 12 48 43.5 +0.8
SIVA Sivas 60.71 322 *e*P **P** 12 48 44.2 +1.5
GTA Gaotai 60.85 30 ⇓P **P** 12 48 43.2 -0.6
GTA pP **pP** 12 48 47.9 -0.4
GTA sP **sP** 12 48 50.2 +0.2
GTA PP **PP** 12 50 59.6 +1.5
GTA S **S** 12 56 59.7 -1.5
GTA SS **SS** 13 01 00.3 -0.4
GTA pmax pmax
comp=Z,61nm,1.7s
GTA pmax pmax
comp=Z,1µm,5.2s
GTA LR LR
comp=N,3µm,20.4s
GTA LR LR
comp=E,4µm,21.4s
GTA LR LR
comp=Z,5µm,20.7s
MK31 Makanchi Array 60.92 13 *e*P **P** 12 48 43.4 -0.6
MK31 Makanchi Array 60.92 13 *e*P **P** 12 48 43.4 -0.6
MKAR Makanchi Array 60.92 13*ce*P **P** 12 48 43.2 -0.8
MKAR pmax pmax
comp=Z,7.0nm,0.9s
MKAR Makanchi Array 60.92 13 P **P** 12 48 43.2 -0.8
MKAR PcP **PcP** 12 49 27.7 +0.3
MKAR ⇑*e* 13 18 11.6
MKAR Makanchi Array 60.92 13 P **P** 12 48 43.2 -0.8
comp=Z,6.7nm,0.9s,baz=198,slow=7.4,SNR=18
MKAR PcP **PcP** 12 49 27.7 +0.3
comp=Z,12nm,0.9s,baz=220,slow=3.0,SNR=6.6
MKAR LR LR 13 14 00.6
comp=Z,2µm,20.9s,baz=197,slow=35
MKAR PKP2bc 13 18 11.6
comp=Z,0.5nm,0.9s,baz=151,slow=1.2,SNR=3.6
GVD Gavdhos 61.02 322 P **P** 12 48 45.9 +1.0
GVD Gavdhos 61.02 322 *e*P **P** 12 48 46.5 +1.6
TGY Tagaytay City 61.26 66 P **P** 12 48 48.7 +1.8
TGY Tagaytay City 61.26 66 P **P** 12 48 48.7 +1.8
comp=Z,318nm,0.3s,baz=194,slow=9.6,SNR=8.3
SANT Santorini 61.27 324 PFAKE 12 49 00.0 +13
SANT LR LR
comp=Z,347nm,20.0s
VAM Vamos 61.34 322 P **P** 12 48 47.9 +0.9
VAM Vamos 61.34 322 *e*P **P** 12 48 48.4 +1.4
AB31 Akbulak array 61.58 356 *i* P **P** 12 48 45.8 -2.5
AB31 pmax pmax
comp=Z,78nm,1.5s
ABKAR Akbulak array 61.58 356 *e*P **P** 12 48 46.0 -2.3
comp=Z,42nm,1.0s
APE Apeiranthos 61.72 325 P **P** 12 48 50.4 +0.8
APE Apeiranthos 61.72 325 *e*P **P** 12 48 50.9 +1.3
APE Apeiranthos 61.72 325‖*i*P **P** 12 48 49.7 +0.1
CASY Casey 61.77 161 *e*P **P** 12 48 49.8 +0.4
CASY LR LR
comp=Z,2µm,22.0s
CTBH Cotabato--PC H 61.91 75⇑*i*P **P** 12 48 50.5 -0.9
ANKY Antikythira Is 62.19 322 *e*P **P** 12 48 54.4 +1.7
XAN Xi'an 62.20 41 P **P** 12 48 52.6 -0.3
XAN pP **pP** 12 48 58.3 +0.9
XAN PP PP 12 51 15.9 +5.9
XAN S S 12 57 09.0 -9.3
XAN ScS **SKSac** 12 58 43.9 -1.0
XAN pmax pmax
comp=Z,32nm,1.6s
XAN pmax pmax
comp=Z,180nm,3.8s
XAN LR LR
comp=N,1µm,20.4s
XAN LR LR
comp=E,340nm,20.4s
XAN LR LR
comp=Z,660nm,21.4s
ANN Anapa 62.25 338 *e*P **P** 12 48 54.5 +1.6
ANN *e**PP **pP** 12 48 57.7 +0.3
ANN *e*PPP PPP 12 52 37.0
ANN *e*S **S** 12 57 20.1 +1.7
ANN pmax pmax
comp=Z,64nm,1.5s
ANN MLR MLR
comp=N,372nm,14.0s
ANN MLR MLR
comp=E,181nm,14.0s
ANN MLR MLR
comp=Z,642nm,14.0s
CHOS Chios island 62.37 326 P **P** 12 48 54.1 +0.1
CHOS Chios island 62.37 326 *e*P **P** 12 48 56.0 +2.0
KYTH Kithira 62.63 322 *e*P P 12 48 50.7 -5.0
PRK Paraskevi 62.87 327 P **P** 12 48 58.2 +1.0
PRK Paraskevi 62.87 327 *e*P **P** 12 48 59.3 +2.1
AKTO Aktyubinsk 62.90 355 P **P** 12 48 56.1 -1.1
AKTO pmax pmax
comp=Z,22nm,2.0s
AKTO Aktyubinsk 62.90 355 P **P** 12 48 55.8 -1.4
AKTO Aktyubinsk 62.90 355 P **P** 12 48 55.8 -1.4
comp=Z,22nm,1.0s,baz=172,slow=6.6,SNR=36
VLI Veliai 62.98 323 P **P** 12 48 58.2 +0.2

VLI Veliai 62.98 323 *e*P **P** 12 48 58.6 +0.6
MRMA Marmari 63.07 325 P **P** 12 48 59.1 +0.6
SIGR SIGRI 63.07 327 P **P** 12 48 59.0 +0.5
DAV Davao City (W) 63.13 75 P **P** 12 48 58.8 -0.7
DAV LR LR
comp=Z,1µm,19.0s
DAV Davao City (W) 63.13 75 P **P** 12 48 58.8 -0.7
comp=Z,128nm,0.4s,baz=62,slow=14,SNR=5.0
DIDY Didyma 63.33 324 P **P** 12 48 58.7 -1.8
DID Didima 63.34 324 P **P** 12 48 59.4 -1.0
DID Didima 63.34 324 *e*P **P** 12 49 00.0 -0.4
ATHU Athens Univers 63.34 324 P **P** 12 49 00.8 +0.4
PTL Penteli 63.35 324 P **P** 12 49 01.1 +0.6
PTL Penteli 63.35 324 *e*P **P** 12 49 01.5 +1.0
NAIG Nisos Aigina 63.37 324 *e*P **P** 12 49 00.1 -0.4
DYR Agios Nikonas 63.37 322 P **P** 12 49 02.1 +1.5
DYR Agios Nikonas 63.37 322 *e*P **P** 12 49 01.7 +1.1
ATH Athens Observa 63.38 324 *e*P **P** 12 49 01.5 +0.9
SIM Simferopol' 63.64 336 *e*P **P** 12 49 00.6 -1.6
SIM *e*S **S** 12 57 37.0 +1.1
SIM *e*SS **SS** 13 01 45.0 +1.1
SIM pmax pmax
comp=Z,360nm,3.4s
SIM MLR MLR
comp=Z,420nm,17.0s
WHN Wuhan 63.75 47⇓*i*P **P** 12 49 03.8 +0.6
WHN S **S** 12 57 36.3 -1.4
WHN pmax pmax
comp=Z,170nm,1.3s
WHN pmax pmax
comp=Z,2µm,5.8s
WHN LR LR
comp=N,3µm,17.4s
WHN LR LR
comp=E,5µm,18.8s
WHN LR LR
comp=Z,7µm,19.4s
VLX Vlachokerasia 63.75 323 P **P** 12 49 03.3 +0.1
VLX Vlachokerasia 63.75 323 *e*P **P** 12 49 04.8 +1.6
PYL PYLOS 63.81 322 P **P** 12 49 02.1 -1.4
PYL PYLOS 63.81 322 *e*P **P** 12 49 03.7 +0.2
LTK Loutraki 63.85 324 P **P** 12 49 03.2 -0.5
LTK Loutraki 63.85 324 *e*P **P** 12 49 03.5 -0.2
KURBB Kurchatov Arra 63.87 9 P **P** 12 49 03.1 -0.4
comp=Z,17nm,1.0s,baz=205,slow=6.9,SNR=48
KURBB LR LR 13 14 55.0
comp=Z,3µm,21.4s,baz=150,slow=34
KURBB PKP2bc 13 18 02.6
comp=Z,1.3nm,0.9s,baz=352,slow=2.5,SNR=10
PLP Palo 63.87 71‖*e*P **P** 12 49 04.1 -0.2
ITM Ithomi 63.89 322 P **P** 12 49 03.7 -0.3
ITM Ithomi 63.89 322 *e*P **P** 12 49 04.6 +0.6
LIA Limnos Island 63.92 327 P **P** 12 49 03.7 -0.4
LIA Limnos Island 63.92 327 *e*P **P** 12 49 05.9 +1.8
MRKA Markates 63.96 325 P **P** 12 49 04.4 -0.1
KURK Kurchatov 63.97 10*d i*P **P** 12 49 03.9 -0.3
KURK pmax pmax
comp=Z,130nm,2.5s
KURK Kurchatov 63.97 10 P **P** 12 49 03.1 -1.1
KURK *e*P **P** 12 49 04.0 -0.3
KURK ⇑*e* 13 18 02.6
KURK Kurchatov 63.97 10 P **P** 12 49 04.3 +0.1
SNR=33
QZH Quanzhou 64.00 54⇑*i*P **P** 12 49 07.6 +2.6
QZH S **S** 12 57 40.6 -0.5
QZH pmax pmax
comp=Z,2µm,5.6s
QZH LR LR
comp=N,3µm,18.0s
QZH LR LR
comp=E,3µm,18.8s
QZH LR LR
comp=Z,4µm,19.9s
AOS Alonnisos 64.12 325 P **P** 12 49 05.3 -0.2
AOS Alonnisos 64.12 325 *e*P **P** 12 49 06.2 +0.7
SMTH Samothraki Isl 64.15 327 *e*P **P** 12 49 06.2 +0.5
GUR Goura 64.15 323 P **P** 12 49 05.4 -0.5
GUR Goura 64.15 323 *e*P **P** 12 49 05.9 0.0
ALN Alexandroupoli 64.19 328 P **P** 12 49 06.2 +0.3
ALN Alexandroupoli 64.19 328 *e*P **P** 12 49 07.3 +1.4
LKR Lokris 64.26 324 P **P** 12 49 04.9 -1.5
LKR Lokris 64.26 324 *e*P **P** 12 49 06.4 0.0
ATAL Atalanti 64.28 324 P **P** 12 49 05.7 -0.8
SMIA Simia 64.30 325 P **P** 12 49 06.4 -0.3
KLV Kalavryta, Ach 64.34 323 *e*P **P** 12 49 07.2 +0.2
SKIA Skiathos 64.35 325 P **P** 12 49 06.5 -0.5
DSF Desfina 64.37 324 P **P** 12 49 06.2 -1.0
AXAR Agios Charalam 64.53 324 P **P** 12 49 08.8 +0.6
LAKA Lakka 64.57 323 P **P** 12 49 08.9 +0.4
LAKA Lakka 64.57 323 *e*P **P** 12 49 09.7 +1.2
KALE Kalithea 64.58 324 P **P** 12 49 08.1 -0.5
KALE Kalithea 64.58 324 *e*P **P** 12 49 09.7 +1.1
NEO Neokhori 64.58 325 *e*P **P** 12 49 08.2 -0.4
TRIZ Trizonia 64.60 324 P **P** 12 49 07.7 -0.9
XOR Xorichti 64.64 325 P **P** 12 49 08.3 -0.6
EFP Efpalio 64.74 324 P **P** 12 49 10.3 +0.8
RLS Riolos of Patr 64.75 323 P **P** 12 49 08.8 -0.8
RLS Riolos of Patr 64.75 323 *e*P **P** 12 49 11.3 +1.7
PAIG Paliouri 64.76 326 P **P** 12 49 08.4 -1.2
PAIG Paliouri 64.76 326 *e*P **P** 12 49 10.6 +1.0
TPUB Ta-pu 64.87 57 *e*P **P** 12 49 12.8 +2.0
comp=Z,130nm,1.3s
OUR Ouranopolis 64.88 326 P **P** 12 49 10.2 -0.2
AGG Agios Georgios 64.89 324 P **P** 12 49 09.8 -0.8
AGG Agios Georgios 64.89 324 *e*P **P** 12 49 10.4 -0.2
MAKR Makrakomi, Fth 65.00 324 P **P** 12 49 10.7 -0.6
TWG Pinlang 65.02 57 *e*P **P** 12 49 13.6 +1.9
comp=Z,503nm,1.3s
KDZ Kurdzhali 65.06 328 *i* P **P** 12 49 11.2 -0.4
KAVA Kavala 65.06 327 P **P** 12 49 11.0 -0.6
JMB Yambol 65.07 329 P **P** 12 49 12.9 +1.3
EVR Evrytania 65.12 324 P **P** 12 49 11.9 -0.3
PLG Polygyros 65.20 326 P **P** 12 49 13.6 +1.0
PLG Polygyros 65.20 326 *e*P **P** 12 49 13.4 +0.8
PRD Provadia 65.22 330 *i* P **P** 12 49 12.4 -0.1
BVA0 Borovoye Array 65.34 3 P **P** 12 49 11.4 -1.8
BVA0 pmax pmax
comp=Z,15nm,2.1s
BVAR Borovoye Array 65.34 3 P **P** 12 49 11.6 -1.5
BVAR Borovoye Array 65.34 3 P **P** 12 49 11.6 -1.5
BVAR Borovoye Array 65.34 3 P **P** 12 49 11.6 -1.5
comp=Z,8.7nm,0.9s,baz=166,slow=6.9,SNR=29
BVAR LR LR 13 17 25.0
comp=Z,1µm,20.6s,baz=187,slow=36
VLS Valsamata 65.34 323 P **P** 12 49 13.5 0.0
VLS Valsamata 65.34 323 *e*P **P** 12 49 14.8 +1.3
SSLB Suanglung 65.36 56 *e*P **P** 12 49 16.1 +2.2
comp=Z,67nm,1.2s
BRVK Borovoye 65.37 3 *e*P **P** 12 49 13.0 -0.3
BRVK pmax pmax
comp=Z,142nm,1.7s
BRVK MLR MLR
comp=Z,1µm,21.0s
BRVK Borovoye 65.37 3 *e*P **P** 12 49 13.0 -0.3
comp=Z,142nm,1.7s
BRVK LR LR
comp=Z,1µm,21.0s
BRVK Borovoye 65.37 3 P **P** 12 49 13.5 +0.2
SNR=37
THL Klokotos Trika 65.44 324 P **P** 12 49 13.7 -0.4
THL Klokotos Trika 65.44 324 *e*P **P** 12 49 13.9 -0.2
RZN Rozhen 65.45 328 *i* P **P** 12 49 15.0 +0.6
YULB Yu-li 65.46 57 *e*P **P** 12 49 15.7 +1.1
comp=Z,110nm,1.2s
LIT Litokhoron 65.54 325 P **P** 12 49 14.2 -0.6
LIT Litokhoron 65.54 325 *e*P **P** 12 49 15.3 +0.5
HORT Hortiatis 65.55 326 P **P** 12 49 14.6 -0.3
SOH Sokhos 65.56 326 P **P** 12 49 13.7 -1.2
SOH Sokhos 65.56 326 *e*P **P** 12 49 15.8 +0.9
SRS Serrai 65.64 327 P **P** 12 49 14.3 -1.1
NVR Nevrokopi 65.66 327 P **P** 12 49 15.5 0.0
NVR Nevrokopi 65.66 327 *e*P **P** 12 49 16.6 +1.1
TIRR Tirgusor 65.70 332 *e*P **P** 12 49 15.4 -0.2
TIRR pmax pmax
comp=Z,18nm,0.8s
TIRR Tirgusor 65.70 332 *e*P **P** 12 49 15.3 -0.2
comp=Z,18nm,0.8s
TIRR Tirgusor 65.70 332⇑*i*P **P** 12 49 15.6 0.0
LKD2 Lefkada island 65.71 323 P **P** 12 49 16.5 +0.6
LKD2 Lefkada island 65.71 323 *e*P **P** 12 49 17.5 +1.6
PLD Plovdiv 65.76 328 P **P** 12 49 16.8 +0.7
PLD Plovdiv 65.76 328 *i* P **P** 12 49 18.0 +1.9
ASAR Alice Springs 65.82 110 P **P** 12 49 16.0 -1.0

ASAR ⇑e 13 17 58.0
ASAR Alice Springs 65.82 110 P P 12 49 16.0 -1.0
comp=Z,106nm,1.0s,baz=271,slow=5.5,SNR=137
ASAR LR LR 13 17 48.4
comp=Z,916nm,18.5s,baz=278,slow=36
ASAR PKP2bc 13 17 58.0
comp=Z,1.0nm,1.0s,baz=111,slow=2.6,SNR=5.5
AS31 Alice Springs 65.82 110 eP P 12 49 16.4 -0.6
MMB Musomiste 65.90 327 *i* P **P 12 49 16.3 -0.8**
KNT Kendrikon 66.05 326 P P 12 49 18.0 0.0
NACB Ninganchiao 66.06 56 eP P 12 49 20.4 +2.0
comp=Z,90nm,1.2s
KZN Kozani 66.08 325 P P 12 49 17.7 -0.6
KZN Kozani 66.08 325 eP P 12 49 19.0 +0.7
HARR Harsova 66.10 332 ⇓*i* P **P 12 49 19.2 +1.0**
YHNB Yeheng 66.11 56 eP P 12 49 18.0 -0.8
comp=Z,74nm,1.3s
YHNB LR LR
comp=Z,2μm,19.0s
JAN Janina 66.17 324 P P 12 49 19.3 +0.5
JAN Janina 66.17 324 eP P 12 49 20.9 +2.1
GRG Griva 66.18 326 P P 12 49 18.4 -0.5
GRG Griva 66.18 326 eP P 12 49 19.9 +1.0
TATO Taipei 66.34 56 PFAKE 12 49 30.0 +10
TATO LR LR
comp=Z,2μm,20.0s
VAY Valandovo 66.34 326 P P 12 49 18.7 -1.1
VAY Valandovo 66.34 326 eP P 12 49 20.2 +0.4
CFR Carcaliu 66.38 332 ⇓*i* P **P 12 49 20.7 +0.7**
KKB Krupnik 66.44 327 *i* P **P 12 49 20.1 -0.4**
VRHR Novokhopersk 66.49 344 eP P 12 49 21.2 +0.7
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s
VRHR pmax pmax
comp=E,7.0nm,0.3s
VRHR MLR MLR
comp=N,940nm,23.0s
VRHR MLR MLR
comp=E,3μm,23.0s
VRHR MLR MLR
comp=Z,1μm,23.0s
WRA Warramunga Arr 66.50 106 P P 12 49 20.9 -0.5
WRA Warramunga Arr 66.50 106 P P 12 49 20.9 -0.5
comp=Z,105nm,0.9s,baz=276,slow=5.7,SNR=154
WRA LR LR 13 16 38.8
comp=Z,1μm,18.6s,baz=290,slow=34
WRAB Tennant Creek 66.52 106 eP P 12 49 20.0 -1.5
WRAB pmax pmax
comp=Z,160nm,0.9s
WRAB MLR MLR
comp=Z,1μm,21.0s
WRAB Tennant Creek 66.52 106 eP P 12 49 20.0 -1.5
comp=Z,160nm,0.9s
WRAB LR LR
comp=Z,1μm,21.0s
NEST Nestorio 66.56 325 P P 12 49 21.3 -0.1
FNA Florina 66.63 325 P P 12 49 22.0 +0.2
FNA Florina 66.63 325 eP P 12 49 22.6 +0.8
TIY Taiyuan 66.73 39 eP P 12 49 23.3 +0.8
TIY S **S** **12 58 14.3 0.0**
TIY pmax pmax
comp=Z,970nm,6.3s
TIY LR LR
comp=N,310nm,11.9s
TIY LR LR
comp=E,1μm,16.9s
TIY LR LR
comp=Z,2μm,21.3s
MAIT Maitri 66.75 197 eP P 12 49 11.6 -10
KBN Korca 66.85 325 P P 12 49 23.6 +0.4
VTS Vitosha 66.88 328 P P 12 49 23.0 -0.5
VTS Vitosha 66.88 328 ⇓*i* P **P 12 49 23.9 +0.5**
VTS Vitosha 66.88 328 *i* P **P 12 49 24.0 +0.5**
VORD Divnogorie 67.02 343 eP P 12 49 22.7 -1.3
VORD *e**PP **pP** **12 49 26.0 -2.5**
VORD *e**SP **sP** **12 49 27.3 -2.9**
VORD *e*S **S** **12 58 17.7 +0.6**
VORD pmax pmax
comp=Z,40nm,1.3s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,9.0nm,0.6s
VORD smax smax
comp=N,140nm,2.4s
VORD smax smax
comp=Z,20nm,2.4s
VORD smax smax
comp=E,20nm,0.8s
GRER 67.06 332 ⇓*i* P **P 12 49 26.6 +2.2**
BTO Baotou 67.15 36 eP P 12 49 25.3 +0.1
VSR Storozhevoye 67.28 343 eP P 12 49 24.7 -0.9
VSR *e**PP **pP** **12 49 27.9 -2.3**
VSR *e**SP **sP** **12 49 29.2 -2.6**
VSR *e*S **S** **12 58 19.7 -0.5**
VSR *e*SS **SS** **13 02 43.3 +2.9**
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,30nm,1.0s
VSR smax smax
comp=N,180nm,3.0s
VSR smax smax
comp=Z,60nm,3.0s
VSR smax smax
comp=E,10.0nm,1.0s
VSR MLR MLR
comp=N,270nm,16.0s
VSR MLR MLR
comp=E,300nm,16.0s
VSR MLR MLR
comp=Z,730nm,16.0s
BBOO Buckleboo 67.41 120 eP P 12 49 26.4 -0.6
comp=Z,2μm,1.0s
KIS Kishinev 67.48 334 ⇑*i* P **P 12 49 27.0 0.0**
KIS *e* 12 49 50.0
KIS *e*S **S** **12 58 24.0 +1.2**
KIS *e*SS **SS** **13 02 50.0 +6.3**
KIS pmax pmax
comp=N,500nm,3.0s
KIS pmax pmax
comp=Z,900nm,3.0s
KIS pmax pmax
comp=Z,1μm,4.0s
KIS pmax pmax
comp=N,400nm,3.0s
KIS MLR MLR
comp=Z,600nm,20.0s
KIS MLR MLR
comp=Z,600nm,22.0s
KIS Kishinev 67.48 334 ⇑*i* P **P 12 49 27.0 0.0**
comp=Z,900nm,3.0s
KIS Kishinev 67.48 334 *e*PcP **PcP** **12 49 50.0 -4.3**
KIS *e*S **S** **12 58 24.0 +1.2**
KIS *e*SS **SS** **13 02 50.0 +6.3**
KIS LRM MLR 13 20 28.0
comp=Z,600nm,22.0s
VRI Vrincioaia 67.54 332 ⇑*i* P **P 12 49 26.7 -0.7**
PLOR Plostina 67.57 332 ⇓*i* P **P 12 49 29.3 +1.7**
MLR Muntele Rosu 67.62 331 LR LR 13 17 17.1
comp=Z,173nm,18.8s,baz=342,slow=34
WDD Wield Dalam 67.74 317 PFAKE 12 49 40.0 +11
WDD LR LR
comp=Z,630nm,21.0s
PHP Peshkopia 67.75 325 P P 12 49 28.6 -0.3
NJ2 Nanjing 67.80 48 eP P 12 49 28.6 -0.7
NJ2 pP **pP** **12 49 35.4 +1.6**
NJ2 S **S** **12 58 26.5 -0.7**
NJ2 pmax pmax
comp=Z,450nm,1.1s
NJ2 pmax pmax
comp=Z,980nm,5.3s
NJ2 LR LR
comp=N,2μm,20.7s
NJ2 LR LR
comp=E,2μm,22.3s
NJ2 LR LR
comp=Z,3μm,25.3s
TOA0 Torodi Ar. Sit 67.83 290 eP P 12 49 31.0 +1.1
TORD Torodi Ar. Bea 67.83 290 P P 12 49 29.0 -0.9
TORD ⇑e 13 17 52.1
TORD Torodi Ar. Bea 67.83 290 P P 12 49 29.0 -0.9
comp=Z,7.1nm,1.1s,baz=122,slow=2.3,SNR=20
TORD LR LR 13 16 30.9
comp=Z,891nm,19.2s,baz=105,slow=34
TORD PKP2bc 13 17 52.1
comp=Z,0.7nm,1.1s,baz=336,slow=1.6,SNR=4.2
TIR Tirane 67.85 325 PFAKE 12 49 40.0 +11
TIR LR LR
comp=Z,735nm,22.0s
HVS Khovu-Aksy 68.01 19*c i*P **P 12 49 29.5 -0.8**
HVS pmax pmax
comp=Z,391nm,1.8s
TAM Tamanrasset 68.05 301 *e*P **P 12 49 31.7 +0.4**
TAM pmax pmax
comp=Z,104nm,2.2s
TAM MLR MLR
comp=Z,1μm,19.0s
TAM Tamanrasset 68.05 301 *e*P **P 12 49 31.7 +0.4**
comp=Z,104nm,2.2s
TAM LR LR
comp=Z,1μm,19.0s
TESR Tescani 68.07 332 ⇓*i* P **P 12 49 32.4 +1.7**
ARR Arges 68.16 330 ⇓*i* P **P 12 49 32.0 +0.6**
HHC Hu-ho-hao-te 68.20 36 ⇓*i* P **P 12 49 33.2 +1.4**
HHC pP **pP** **12 49 37.9 +1.6**
HHC sP **sP** **12 49 40.2 +2.2**
HHC PP **PP** **12 52 06.3 +3.8**
HHC PcS 12 54 02.2
HHC S **S** **12 58 30.0 -1.9**
HHC sS **sS** **12 58 40.6 +1.2**
HHC ScS **SKSac** **12 59 28.6 -1.7**
HHC SS **SS** **13 02 57.7 +2.5**
HHC pmax pmax
comp=Z,890nm,4.9s
HHC LR LR
comp=N,2μm,22.5s
HHC LR LR
comp=E,3μm,18.6s
HHC LR LR
comp=Z,3μm,20.6s
ZAA0 Zalesovo Array 68.21 12 *e*P **P 12 49 30.5 -0.9**
ZALV Zalesovo Beam 68.21 12 P P 12 49 30.7 -0.7
ZALV Zalesovo Beam 68.21 12 P P 12 49 30.7 -0.7
ZALV ⇑e 13 17 49.9
ZALV Zalesovo Beam 68.21 12 P P 12 49 30.7 -0.7
comp=Z,32nm,1.0s,baz=212,slow=5.3,SNR=39
ZALV PKP2bc 13 17 49.9
comp=Z,0.5nm,0.5s,baz=20,slow=4.7,SNR=4.2
ZALV LR LR 13 18 15.0
comp=Z,2μm,19.2s,baz=220,slow=35
DOPR Dopca 68.24 331 ⇓*i* P **P 12 49 32.2 +0.4**
CEL Celeste 68.27 320 *e*P **P 12 49 33.1 +0.9**
comp=Z,20nm,1.1s
CEL LR LR
comp=Z,348nm,20.0s
TIP Timpagrande 68.29 321 *e*P **P 12 49 32.9 +0.5**
comp=Z,148nm,2.2s
TIP LR LR
comp=Z,492nm,20.0s
NVS Novosibirsk 68.73 11 ⇓*i* P **P 12 49 33.0 -1.7**
NVS *e*S S 12 58 27.4 -10
NVS pmax pmax
comp=N,236nm,2.6s
NVS pmax pmax
comp=Z,458nm,2.6s
NVS pmax pmax
comp=E,77nm,2.7s
NVS smax smax
comp=E,515nm,4.6s
NVS smax smax
comp=N,226nm,4.4s
ARU Arti 68.81 356*d i*P **P 12 49 34.8 -0.4**
ARU 12 52 05.4
ARU S **S** **12 58 37.6 -0.8**
ARU SSS SSS 13 06 11.3
ARU pmax pmax
comp=Z,121nm,2.5s
ARU MLR MLR
comp=Z,1μm,19.0s
ARU Arti 68.81 356 P **P 12 49 34.7 -0.4**
comp=Z,248nm,1.2s,SNR=14
TIA Tai'an 68.86 43 P **P 12 49 36.3 +0.4**
TIA S **S** **12 58 37.2 -2.5**
TIA pmax pmax
comp=Z,80nm,1.3s
TIA pmax pmax
comp=Z,1μm,3.9s
TIA LR LR
comp=N,2μm,21.6s
TIA LR LR
comp=E,2μm,22.5s
TIA LR LR
comp=Z,2μm,18.6s
SSE Sheshan 69.02 50 ⇓P **P 12 49 37.9 +0.9**
SSE pP **pP** **12 49 41.3 -0.2**
SSE S **S** **12 58 42.1 +0.3**
SSE pmax pmax
comp=Z,99nm,1.4s
SSE pmax pmax
comp=Z,520nm,5.9s
SSE LR LR
comp=N,340nm,24.1s
SSE LR LR
comp=E,1μm,24.1s
SSE LR LR
comp=Z,2μm,25.0s
SVE Sverdlovsk 69.10 357 ⇑*e*P **P 12 49 36.6 -0.3**
SVE *e*PPP PPP 12 53 53.5
SVE *e*S **S** **12 58 38.6 -3.1**
SVE *e* 12 59 19.5
SVE pmax pmax
comp=Z,119nm,1.7s
SVE MLR MLR
comp=Z,1μm,19.0s
CUC Castrocucco 69.37 322 *e*P **P 12 49 38.8 -0.2**
comp=Z,10nm,0.8s
CUC LR LR
comp=Z,479nm,22.0s
BURAR Bucovina Array 69.54 332 ⇓*i* P **P 12 49 41.3 +1.3**
BUR08 Bucovina Ar. S 69.57 332 *e*P **P 12 49 41.4 +1.2**
DIVS Divibare 69.62 327 P **P 12 49 40.9 +0.4**
BZS Buzias 69.82 329 ⇑*i* P **P 12 49 42.6 +1.0**
DRGR 70.11 330 ⇓*i* P **P 12 49 44.7 +1.2**
AK02 Malin Array Si 70.21 337 *e*P **P 12 49 43.6 -0.3**
AK01 Malin Array Si 70.23 337 *e*P **P 12 49 43.6 -0.4**
AKASG Malin Array Be 70.23 337*c e*P **P 12 49 43.5 -0.5**
AKASG *e**SP sP 12 50 11.0 +21
AKASG pmax pmax
comp=Z,18nm,0.9s
AKASG Malin Array Be 70.23 337 P **P 12 49 42.7 -1.4**
AKASG Malin Array Be 70.23 337 P **P 12 49 42.7 -1.4**
comp=Z,18nm,0.9s,baz=140,slow=5.3,SNR=41
AKASG LR LR 13 20 37.1
comp=Z,698nm,22.0s,baz=145,slow=36
KIEV Kiev 70.23 337 *e*P **P 12 49 41.8 -2.2**
KIEV Kiev 70.23 337 *e*P **P 12 49 41.8 -2.2**
SONM Songino Array 70.32 28 P **P 12 49 44.6 -0.3**
SONM ⇑e 13 17 43.5
SONM Songino Array 70.32 28 P **P 12 49 44.6 -0.3**
comp=Z,52nm,1.1s,baz=219,slow=6.5,SNR=49
SONM PKP2bc 13 17 43.5
comp=Z,9.6nm,1.3s,baz=50,slow=1.0,SNR=14
SONM LR LR 13 19 27.9
comp=Z,8μm,21.4s,baz=217,slow=35
BJI Beijing 70.46 39 P **P 12 49 46.9 +1.3**
BJI PP **PP** **12 52 22.5 +0.6**
BJI S S 12 59 04.5 +6.2
BJI SS **SS** **13 03 32.9 +3.1**
BJI pmax pmax
comp=Z,1μm,5.4s
BJI LR LR
comp=N,1μm,24.0s
BJI LR LR
comp=E,1μm,26.8s
BJI LR LR
comp=Z,1μm,40.6s
ULN Ulaanbaatar 70.65 28 *e*P **P 12 49 46.4 -0.5**
ULN LR LR
comp=Z,6μm,21.0s
ULN Ulaanbaatar 70.65 28 P **P 12 49 48.0 +1.2**
SNR=36
ZAK Zakamensk 70.88 25 *e*P **P 12 49 46.9 -1.2**
ZAK pmax pmax
comp=Z,14nm,1.3s
MOY Mondy 70.99 23 *e*P **P 12 49 50.0 +1.2**
MOY pmax pmax
comp=Z,124nm,2.5s
TRPA Tarpa 71.15 331 ⇑*e*P **P 12 49 51.1 +1.4**
KEST Kesra 71.18 315 *e*P **P 12 49 49.7 -0.6**
KEST P **P** **12 49 51.0 +0.7**
KEST Kesra 71.18 315 P **P 12 49 51.0 +0.7**
comp=Z,1.5nm,0.8s,baz=74,slow=5.9,SNR=5.9
KEST LR LR 13 21 06.7
comp=Z,379nm,18.7s,baz=28,slow=36
SNAA Sanae 71.41 198 *e*P **P 12 49 51.8 +0.7**
SNAA Sanae 71.41 198 P **P 12 49 49.4 -1.7**
SNAA *e*P pP 12 49 49.6 -6.1
SNAA Sanae 71.41 198 P **P 12 49 49.4 -1.7**
comp=Z,4.2nm,0.9s,baz=86,slow=4.4,SNR=36
OBN Obninsk 71.46 343 ⇓*e*P **P 12 49 50.2 -1.2**
OBN *e* 12 49 52.7
OBN 12 50 14.0
OBN S **S** **12 59 07.0 -2.3**
OBN *e* 12 59 45.9
OBN pmax pmax
comp=Z,25nm,0.7s
OBN MLR MLR
comp=Z,900nm,19.0s
OBN Obninsk 71.46 343 P **P 12 49 51.0 -0.4**
comp=Z,262nm,1.3s,SNR=5.5
UZH Uzhgorod 71.62 332 *e*P **P 12 49 52.9 +0.4**
UZH *i* 12 49 56.9
UZH *e* 12 50 15.7
UZH *e* 12 52 34.5
UZH *e*PPP PPP 12 54 12.1
UZH *e*S **S** **12 59 09.9 -1.6**
UZH *e* 12 59 54.1
LVV L'vov 71.70 333 *e*P P 12 49 56.3 +3.3
MOS Moscow 71.72 344 *e*P **P 12 49 52.5 -0.4**
MOS pmax pmax
comp=Z,1μm,2.5s
MOS pmax pmax
comp=Z,326nm,1.7s
PKSM Moragy 71.75 328 ⇑*i*P **P 12 49 53.9 +0.6**
PKSM Moragy 71.75 328 ⇓*e* **P 12 49 53.6 +0.3**
KOLS Kolonicke sedl 71.85 332 *e*P **P 12 49 54.9 +1.0**
KOLS pmax pmax
comp=Z,116nm,2.1s
KOLS Kolonicke sedl 71.85 332 *e*P **P 12 49 54.9 +1.0**
TLY Talaya 72.03 24 *e*P **P 12 49 56.1 +1.2**
TLY *e* 12 50 14.6
TLY *e* 12 52 37.2
TLY *e*S **S** **12 59 15.9 -0.2**
TLY *e* 12 59 46.9
TLY *e*SS **SS** **13 03 52.1 -1.5**
TLY pmax pmax
comp=Z,57nm,1.8s
TLY Talaya 72.03 24 P P 12 49 50.6 -4.3
comp=Z,149nm,1.1s,SNR=20
PKS7 Kunszentmiklos 72.04 329 ⇓*e* **P 12 49 57.6 +2.5**
SOKR Solikamsk 72.09 356*d i*P **P 12 49 55.4 +0.4**
SOKR 12 52 43.3
SOKR pmax pmax
comp=Z,120nm,1.8s
SOKR MLR MLR
comp=Z,960nm,19.0s
DBIC Dimbokro 72.09 281 P **P 12 49 54.8 -1.3**
DBIC *e*P pP 12 49 56.1 -4.6
DBIC Dimbokro 72.09 281 P **P 12 49 54.8 -1.3**
comp=Z,18nm,0.9s,baz=88,slow=7.0,SNR=20
DBIC LR LR 13 18 47.7
comp=Z,1μm,21.3s,baz=89,slow=34
STKA Stephens Creek 72.13 120 *e*P **P 12 49 55.7 -0.3**
STKA *e*P **P** **12 49 55.8 -0.3**
STKA SKKP 13 13 02.5
STKA Stephens Creek 72.13 120 P **P 12 49 54.8 -1.3**
comp=Z,45nm,0.9s,baz=274,slow=6.0,SNR=28
STKA SKKP 13 13 02.5
comp=Z,1.5nm,0.9s,baz=238,slow=3.0,SNR=3.9
LIC Lamto 72.14 281 *e*P **P 12 49 56.0 -0.4**
comp=Z,30nm,0.6s,baz=105
LIC *e*R
comp=Z,874nm,23.0s
LIC Lamto 72.14 281 *e*P **P 12 49 56.0 -0.4**
comp=Z,30nm,0.6s
KWP Kalwaria Pacla 72.15 333 *e*P **P 12 49 55.7 0.0**
KWP pmax pmax
comp=Z,58nm,1.1s
KWP MLR MLR
comp=Z,570nm,21.0s
KWP Kalwaria Pacla 72.15 333 *e*P **P 12 49 55.7 0.0**
comp=Z,58nm,1.1s
KWP LR LR
comp=Z,570nm,21.0s
KWP Kalwaria Pacla 72.15 333 ⇓*i*P **P 12 49 56.0 +0.3**
KWP Kalwaria Pacla 72.15 333 *e*P **P 12 49 55.8 0.0**
CRVS Cervenica-Dubn 72.20 331 *e*P **P 12 49 56.2 +0.2**
CRVS pmax pmax
comp=Z,55nm,1.6s
CRVS Cervenica-Dubn 72.20 331 *e*P **P 12 49 56.2 +0.2**
CRVS *e*pP **pP** **12 49 59.6 -1.0**
CRVS *e*PP **PP** **12 52 38.7 +1.9**
AQU L'Aquila 72.24 322 PFAKE 12 50 10.0 +14
AQU LR LR
comp=Z,541nm,19.0s
PSZ Piszkesteto 72.27 330 *e*P **P 12 49 55.8 -0.7**
PSZ *e* 12 49 56.0
PSZ pmax pmax
comp=Z,81nm,1.8s
PSZ MLR MLR
comp=Z,416nm,20.0s
PSZ Piszkesteto 72.27 330 *e*P **P 12 49 55.8 -0.7**
comp=Z,81nm,1.8s
PSZ *e*P **P** **12 49 56.0 -0.6**
PSZ LR LR
comp=Z,416nm,20.0s
PSZ Piszkesteto 72.27 330 ⇓*i*P **P 12 49 55.9 -0.6**
PSZ Piszkesteto 72.27 330 ⇓*e* **P 12 49 54.9 -1.6**
VNA2 Neumayer--Watz 72.64 199 *e*P **P 12 49 58.6 +0.2**
VNA2 Neumayer--Watz 72.64 199 *e*PcP **PcP** **12 50 14.4 -1.4**
JOW Kunigami 72.64 57 *e*P **P 12 49 59.8 +0.6**
comp=Z,22nm,1.0s
PKSG 72.66 329 ⇓*e* **P 12 49 59.0 +0.2**
DRV Dumont d'Urvil 72.69 156 P P 12 49 46.0 -13
DRV S S 12 59 11.0 -12
DRV SP ScS 13 00 13.0 +7.6
DRV SS SS 13 03 41.0 -21
DRV L L 13 09 00.0
DRV R 13 13 00.0
IRK Irkutsk 72.71 24 *e*P **P 12 49 59.6 +0.6**
IRK pmax pmax
comp=Z,193nm,2.7s
PKST T''s 72.75 329 ⇑*e* **P 12 49 59.5 +0.1**
BEHE Becsehely 72.89 327 ⇓*e* **P 12 50 01.5 +1.3**
BOJS Bojanci 73.10 326 *i* P **P 12 50 02.2 +0.8**
NIE Niedzica 73.10 331 *e*P **P 12 50 02.5 +1.1**
NIE Niedzica 73.10 331 *e*P **P 12 50 02.5 +1.1**
VSL Villasalto 73.14 318 PFAKE 12 50 10.0 +8.1
VSL LR LR
comp=Z,467nm,19.0s
VYHS Vyhne 73.18 330 *e*P **P 12 50 00.1 -1.8**
VYHS pmax pmax
comp=Z,53nm,1.7s
VYHS Vyhne 73.18 330 *e*P **P 12 50 00.1 -1.8**
VYHS *e*pP **pP** **12 50 06.1 -0.3**
VYHS *e*PP **PP** **12 52 42.2 -2.9**
DL2 Dalian 73.32 43 ⇓*i*P **P 12 50 02.7 -0.2**
DL2 S **S** **12 59 31.7 +0.3**
DL2 pmax pmax
comp=Z,63nm,1.8s
DL2 pmax pmax
comp=Z,680nm,5.4s
DL2 LR LR
comp=N,480nm,17.3s
DL2 LR LR
comp=E,570nm,16.8s
DL2 LR LR
comp=Z,770nm,17.9s
VISS Visnje 73.51 326 *i* P **P 12 50 04.0 +0.1**
MICGM Minsk 73.74 338 *e* **P 12 50 03.0 -2.0**
MNK Minsk 73.76 338 *e*P **P 12 50 03.0 -2.1**
SOP Sopron 73.79 328 ⇓*e* **P 12 50 04.8 -0.6**
ZST Bratislava 73.84 329 *e*P **P 12 50 04.4 -1.4**
ZST pmax pmax
comp=Z,96nm,2.0s
ZST Bratislava 73.84 329 *e*P **P 12 50 04.4 -1.4**
ZST *e*pP **pP** **12 50 08.7 -1.6**
PERS Pernice 73.88 327 *i* P **P 12 50 06.1 0.0**
OJC Ojcow 73.90 332 *e*P **P 12 50 06.0 0.0**

OJC **Ojcow** 73.90 332 *e*P **P** 12 50 06.0 0.0
OJC **Ojcow** 73.90 332 *e*P **P** 12 50 05.5 -0.5
SOKA **Soboth** 73.95 327⇓*e*P **P** 12 50 07.0 +0.5
comp=Z,28nm,1.5s
JAVS **Javornik** 73.99 326 *i* P **P** 12 50 08.0 +1.2
ARSA **Arzberg** 74.05 327⇓*e*P **P** 12 50 07.8 +0.7
comp=Z,46nm,1.4s,SNR=16
OBKA **Obir** 74.11 326⇓*i*P **P** 12 50 08.1 +0.7
comp=Z,37nm,1.4s,SNR=6.7
VOY **Vojsko** 74.17 326 *e*P **P** 12 50 07.8 -0.1
CONA **Conrad Observa** 74.31 328⇑*i*P **P** 12 50 08.8 +0.2
comp=Z,62nm,1.4s,SNR=8.1
OKC **Ostrava-Krasne** 74.42 331 *e*P **P** 12 50 09.2 +0.1
OKC *e* 12 50 12.5
OKC *e* 12 52 53.8
OKC *e*S **S** 12 59 41.5 -1.8
OKC *e*SS **SS** 13 04 32.0 +1.9
OKC MLR MLR
comp=Z,400nm,22.1s
OKC **Ostrava-Krasne** 74.42 331 *e*P **P** 12 50 09.2 +0.1
OKC *e*pP **pP** 12 50 12.5 -1.2
OKC *e*PP **PP** 12 52 53.8 -1.8
OKC *e*S **S** 12 59 41.5 -1.8
OKC *e*SS **SS** 13 04 32.0 +1.9
OKC AMS AMS 13 16 00.0
comp=Z,400nm,22.1s
NACGM **Naroch** 74.46 338 *e* P 12 50 14.0 +4.8
BEL **Belsk** 74.58 333 *e*P **P** 12 50 11.4 +1.4
MORC **Moravsky Berou** 74.67 330 *e*P **P** 12 50 10.5 -0.1
MORC pmax pmax
comp=Z,18nm,1.0s
MORC **Moravsky Berou** 74.67 330 *e*P **P** 12 50 10.5 -0.1
comp=Z,18nm,1.0s
MORC **Moravsky Berou** 74.67 330⇓*i*P **P** 12 50 11.2 +0.6
MYKA **Terra Mystica** 74.67 326⇓*e*P **P** 12 50 10.8 0.0
comp=Z,23nm,1.3s
IDID **Didziasalis** 74.79 338 *e*P **P** 12 50 10.7 -0.4
IDID AMB AMB 12 50 16.9
comp=Z,20nm,1.7s
VRAC **Vranov** 74.83 329⇑*i*P **P** 12 50 12.3 +0.8
IIGN **Ignalina** 75.01 338 *e*P **P** 12 50 11.8 -0.6
IIGN AMB AMB 12 50 18.3
comp=Z,29nm,1.6s
PGF **Pioggiola** 75.03 321 *e*P **P** 12 50 12.0 -0.9
PGF **Pioggiola** 75.03 321 *e*P **P** 12 50 12.0 -0.9
PGF **Pioggiola** 75.03 321 *e*P **P** 12 50 12.0 -0.9
VLC **Villacollemand** 75.08 323 PFAKE 12 50 20.0 +6.9
VLC LR LR
comp=Z,466nm,22.0s
MOA **Molln** 75.09 327⇓*e*P **P** 12 50 13.4 +0.4
comp=Z,63nm,1.3s,SNR=19
KBA **Koelnbreinsper** 75.11 326⇓*e*P **P** 12 50 13.4 0.0
comp=Z,25nm,1.1s,SNR=6.0
SUW **Suwalki** 75.15 336 *e*P **P** 12 50 13.5 +0.3
ISAL **Salakas** 75.21 338 *e*P **P** 12 50 13.1 -0.5
ISAL AMB AMB 12 50 19.2
comp=Z,25nm,1.4s
IZAR **Zarasai** 75.31 338 *e*P **P** 12 50 13.7 -0.4
IZAR AMB AMB 12 50 19.8
comp=Z,26nm,1.4s
ABTA **Abfaltersbach** 75.37 326⇓*e*P **P** 12 50 15.2 +0.5
comp=Z,47nm,1.3s,SNR=15
TREC **Trest** 75.37 329 *e*P **P** 12 50 15.0 +0.4
TREC *e* 12 50 18.9
TREC *e*S **S** 12 59 52.8 -1.2
TREC MLR MLR
comp=Z,400nm,16.0s
TREC **Trest** 75.37 329 *e*P **P** 12 50 15.0 +0.4
TREC *e*pP **pP** 12 50 18.9 -0.3
TREC *e*S **S** 12 59 52.8 -1.2
TREC *ex* x 13 04 32.6
TREC AMS AMS 13 24 40.0
comp=Z,400nm,16.0s
DPC **Dobruska-Polom** 75.64 330 *e*P **P** 12 50 16.6 +0.4
DPC *e* 12 50 19.9
DPC *e* 12 50 31.5
DPC *e*S **S** 12 59 55.4 -1.6
DPC *e*SS **SS** 13 04 43.3 -5.5
DPC **Dobruska-Polom** 75.64 330 *e*P **P** 12 50 16.5 +0.4
DPC **Dobruska-Polom** 75.64 330 *e*P **P** 12 50 16.6 +0.4
DPC *e*pP **pP** 12 50 19.9 -0.9
DPC *e*PCP **PcP** 12 50 31.5 +2.5
DPC *e*S **S** 12 59 55.4 -1.6
DPC *e*SS **SS** 13 04 43.3 -5.5
UPC **Upice** 75.89 330 *e*P **P** 12 50 18.0 +0.4
UPC *e* 12 50 22.1
UPC *e* 12 50 26.8
UPC **Upice** 75.89 330 *e*P **P** 12 50 18.0 +0.4
UPC *e*pP **pP** 12 50 22.1 -0.1
UPC *ex* x 12 50 26.8
KSP **Ksiaz** 75.97 331⇑*e*P **P** 12 50 20.2 +2.2
KSP *e* 12 53 09.5
KSP *e*S **S** 13 00 01.0 +0.4
KSP **Ksiaz** 75.97 331 *e*P **P** 12 50 20.5 +2.5
GERES **GERESS Array B** 76.00 328 P **P** 12 50 16.5 -1.9
GERES **GERESS Array B** 76.00 328 P **P** 12 50 16.5 -1.9
comp=Z,4.9nm,0.8s,baz=132,slow=5.6,SNR=26
INCN **Inchon** 76.04 46 *e*P **P** 12 50 18.9 +0.1
comp=Z,85nm,1.2s
INCN LR LR
comp=Z,3μm,20.0s
SNY **Shenyang** 76.11 41 ⇓P **P** 12 50 19.2 +0.2
SNY pmax pmax
comp=Z,75nm,1.7s
SNY pmax pmax
comp=Z,1μm,5.2s
SNY LR LR
comp=N,220nm,10.4s
SNY LR LR
comp=E,210nm,9.0s
SNY LR LR
comp=Z,380nm,9.6s
WTTA **Wattenberg** 76.16 326⇓*e*P **P** 12 50 19.1 -0.2
comp=Z,54nm,1.1s,SNR=8.7
WATA **Walderalm** 76.23 326⇓*i*P **P** 12 50 20.2 +0.4
comp=Z,15nm,0.7s
KHC **Kasperske Hory** 76.24 328 *e*P **P** 12 50 18.0 -1.7
KHC *e* 12 50 21.9
KHC *e* 12 50 26.0
KHC *e*S **S** 13 00 01.6 -2.1
KHC MLR MLR
comp=Z,500nm,25.1s
KHC **Kasperske Hory** 76.24 328 *e*P **P** 12 50 17.8 -1.9
comp=Z,23nm,1.1s
KHC **Kasperske Hory** 76.24 328 *e*P **P** 12 50 18.0 -1.7
KHC *e*pP **pP** 12 50 21.9 -2.3
KHC *e*sP **sP** 12 50 26.0 +0.1
KHC *e*S **S** 13 00 01.6 -2.1
KHC *ex* x 13 04 40.8
KHC AMS AMS 13 16 30.0
comp=Z,500nm,25.1s
PRU **Pruhonice** 76.29 329 *e*P **P** 12 50 20.7 +0.9
PRU *e* 12 50 24.3
PRU *e* 12 53 05.5
PRU *e*S **S** 13 00 03.5 -0.5
PRU MLR MLR
comp=Z,300nm,20.4s
PRU **Pruhonice** 76.29 329 *e*P **P** 12 50 20.7 +0.9
PRU *e*pP **pP** 12 50 24.3 -0.1
PRU *e*PP PP 12 53 05.5 -6.0
PRU *e*S **S** 13 00 03.5 -0.5
PRU *ex* x 13 04 47.9
PRU AMS AMS 13 16 50.0
comp=Z,300nm,20.4s
PRA **Prague** 76.39 329 P **P** 12 50 21.0 +0.6
MOTA **Moosalm** 76.50 326⇓*i*P **P** 12 50 21.0 -0.3
comp=Z,16nm,0.7s,SNR=7.7
FETA **Feichten** 76.52 325⇓*e*P **P** 12 50 21.6 +0.2
comp=Z,33nm,1.0s,SNR=7.7
CIT **Chita** 76.56 28 *e*P **P** 12 50 21.8 +0.4
CIT pmax pmax
comp=Z,286nm,2.8s
PVCC **Panska Ves** 76.61 330 *e*P **P** 12 50 21.2 -0.5
PVCC *e* 12 50 26.7
PVCC **Panska Ves** 76.61 330 *e*P **P** 12 50 21.2 -0.5
PVCC *e*pP **pP** 12 50 26.7 +0.4
SBF **Sospel** 76.70 321 *e*P **P** 12 50 22.3 -0.1
comp=Z,65nm,1.0s
SBF **Sospel** 76.70 321 *e*P **P** 12 50 22.3 -0.1
SBF pmax pmax
comp=Z,65nm,1.0s
SBF **Sospel** 76.70 321 *e*P **P** 12 50 22.3 -0.1
comp=Z,65nm,1.0s
RETA **Reutte** 76.77 326⇓*e*P **P** 12 50 22.6 -0.1
comp=Z,22nm,1.1s
KSAR **Wonju Array Be** 76.91 47 P **P** 12 50 23.5 -0.1
KSRS **Korea Array** 76.94 47 P **P** 12 50 23.5 -0.3
comp=Z,56nm,1.1s,baz=247,slow=5.0,SNR=45
KSRS LR LR 13 23 36.8
comp=Z,2μm,21.1s,baz=241,slow=35
TUE **Stuetta** 76.99 324 *e*P **P** 12 50 24.1 -0.1
comp=Z,33nm,1.3s
TUE LR LR
comp=Z,440nm,19.0s
LMR **La Mourre** 77.00 320 *e*P **P** 12 50 24.1 +0.1
comp=Z,55nm,1.1s
LMR **La Mourre** 77.00 320 *e*P **P** 12 50 24.1 +0.1
LMR pmax pmax
comp=Z,55nm,1.1s
LMR **La Mourre** 77.00 320 *e*P **P** 12 50 24.1 +0.1
comp=Z,55nm,1.1s
FRF **La Foret Royal** 77.03 321 *e*P **P** 12 50 24.2 0.0
comp=Z,73nm,1.4s
FRF **La Foret Royal** 77.03 321 *e*P **P** 12 50 24.2 0.0
FRF pmax pmax
comp=Z,73nm,1.4s
FRF **La Foret Royal** 77.03 321 *e*P **P** 12 50 24.2 0.0
comp=Z,73nm,1.4s
BRG **Berggiesshubel** 77.14 330 *e*P **P** 12 50 26.3 +1.7
comp=Z,43nm,1.4s
BRG *i* 12 50 29.6
comp=Z,228nm,2.1s
BRG S **S** 13 00 16.0 +2.7
BRG SS SS 13 05 03.0 -8.4
BRG
comp=N,441nm,21.8s
BRG
comp=E,394nm,34.5s
BRG
comp=Z,450nm,25.3s
BRG **Berggiesshubel** 77.14 330 *e*P **P** 12 50 26.3 +1.7
BRG *i* 12 50 29.5
BRG S **S** 13 00 16.0 +2.7
BRG pmax pmax
comp=Z,43nm,1.4s
BRG MLR MLR
comp=Z,450nm,25.3s
DAVA **Damuels** 77.14 325⇓*e*P **P** 12 50 25.1 +0.1
comp=Z,30nm,0.9s,SNR=7.0
VSU **Vasula** 77.26 340*c* *i*P **P** 12 50 25.9 +0.8
VSU pmax pmax
comp=Z,34nm,0.9s
JNU **Nakatsue** 77.27 52 P **P** 12 50 25.6 -0.1
JNU **Nakatsue** 77.27 52 P **P** 12 50 25.6 -0.1
comp=Z,129nm,1.1s,baz=251,slow=2.4,SNR=21
JNU LR LR 13 26 36.2
comp=Z,1μm,18.7s,baz=243,slow=37
NKC **Novy Kostel** 77.50 328 *e*P **P** 12 50 26.6 -0.1
NKC *e* 12 50 30.3
NKC *e*S **S** 13 00 20.2 +2.9
NKC **Novy Kostel** 77.50 328 *e*P **P** 12 50 26.6 -0.1
NKC *e*pP **pP** 12 50 30.3 -1.0
NKC *e*S **S** 13 00 20.2 +2.9
MBDF **Montbardon** 77.56 322 *e*P **P** 12 50 27.9 +0.6
comp=Z,30nm,0.8s
MBDF **Montbardon** 77.56 322 *e*P **P** 12 50 27.9 +0.6
MBDF pmax pmax
comp=Z,30nm,0.8s
MBDF **Montbardon** 77.56 322 *e*P **P** 12 50 27.9 +0.6
comp=Z,30nm,0.8s
CTAO **Charters Tower** 77.61 108 *e*P **P** 12 50 28.9 +0.9
CTAO pmax pmax
comp=Z,176nm,1.1s
CTAO **Charters Tower** 77.61 108 *e*P **P** 12 50 28.9 +0.9
comp=Z,176nm,1.1s
QSPA **South Pole Qui** 77.64 180 *e*P **P** 12 50 25.6 -1.9
comp=Z,386nm,1.9s
QSPA LR LR
comp=Z,3μm,21.0s
GRF **Grafenberg Arr** 77.81 328 *e*P **P** 12 50 28.1 -0.3
GRF pmax pmax
comp=Z,78nm,1.7s
GRF **Grafenberg Arr** 77.81 328 *e*P **P** 12 50 28.1 -0.3
comp=Z,78nm,1.7s
GRF *e*L L 13 35 09.5
comp=Z,304nm,18.1s
GRFO **Grafenberg** 77.81 328 *e*P **P** 12 50 28.7 +0.3
GRFO pmax pmax
comp=Z,29nm,0.8s
GRFO **Grafenberg** 77.81 328 *e*P **P** 12 50 28.7 +0.3
comp=Z,29nm,0.8s
CLL **Collm** 77.88 330⇑*i*P **P** 12 50 30.8 +2.1
CLL *e*S **S** 13 00 24.0 +2.7
CLL pmax pmax
comp=Z,167nm,2.0s
CLL MLR MLR
comp=Z,400nm,19.5s
CLL **Collm** 77.88 330⇑*i*P **P** 12 50 30.8 +2.1
comp=Z,167nm,2.0s
CLL *e*Plp 12 50 31.0
CLL *e*Plp 12 50 31.0
CLL *e*Plp 12 50 31.0
CLL *e*PP PP 12 53 18.0 -6.8
CLL *e*S **S** 13 00 24.0 +2.7
CLL *e*SS **SS** 13 05 26.0 +3.6
CLL LmV 13 32 00.0
comp=Z,400nm,19.5s
SMRF **Simiane la Rot** 77.91 320 *e*P **P** 12 50 29.9 +0.8
comp=Z,36nm,1.0s
SMRF **Simiane la Rot** 77.91 320 *e*P **P** 12 50 29.9 +0.8
comp=Z,36nm,1.0s
CAN **Canberra** 77.97 124 *e*P **P** 12 50 30.5 +0.7
CAN pmax pmax
comp=Z,122nm,1.4s
CAN **Canberra** 77.97 124 *e*P **P** 12 50 30.5 +0.7
comp=Z,122nm,1.4s
LPG **La Plagne** 77.98 322 *e*P **P** 12 50 29.7 -0.1
comp=Z,18nm,0.8s
LPG **La Plagne** 77.98 322 *e*P **P** 12 50 29.7 -0.1
LPG pmax pmax
comp=Z,18nm,0.8s
LPG **La Plagne** 77.98 322 *e*P **P** 12 50 29.7 -0.1
comp=Z,18nm,0.8s
LPL **La Plagne** 78.00 322 *e*P **P** 12 50 29.7 -0.1
comp=Z,36nm,1.1s
LPL **La Plagne** 78.00 322 *e*P **P** 12 50 29.7 -0.1
LPL pmax pmax
comp=Z,37nm,1.1s
LPL **La Plagne** 78.00 322 *e*P **P** 12 50 29.7 -0.1
comp=Z,36nm,1.1s
MOX **Moxa** 78.17 328 *e*L L 13 29 12.9
comp=Z,358nm,21.9s
ORIF **Oris-en-Rattie** 78.20 321 *e*P **P** 12 50 30.9 +0.1
comp=Z,48nm,1.0s
ORIF *e*R
comp=Z,386nm,20.8s
ORIF **Oris-en-Rattie** 78.20 321 *e*P **P** 12 50 30.9 +0.1
ORIF pmax pmax
comp=Z,48nm,1.0s
ORIF **Oris-en-Rattie** 78.20 321 *e*P **P** 12 50 30.9 +0.1
comp=Z,48nm,1.0s
SPAK **Spaichingen-Ko** 78.21 325 *e*P **P** 12 50 31.8 +1.0
CN2 **Changchun** 78.30 40 *e*P **P** 12 50 31.0 -0.3
CN2 *es*P **sP** 12 50 38.0 +0.5
CN2 *e*S **S** 13 00 26.0 -0.2
CN2 SS **SS** 13 05 32.6 +3.5
CN2 pmax pmax
comp=Z,40nm,1.3s
CN2 pmax pmax
comp=Z,500nm,10.0s
CN2 LR LR
comp=N,1μm,21.0s
CN2 LR LR
comp=E,600nm,21.0s
CN2 LR LR
comp=Z,500nm,21.0s
FELD **Feldberg im Sc** 78.53 325 *e*P **P** 12 50 33.1 +0.5
FELD **Feldberg im Sc** 78.53 325 *e*P **P** 12 50 33.1 +0.5
BBS **Basel-Blauen** 78.58 324 *e*P **P** 12 50 33.6 +0.8
BBS **Basel-Blauen** 78.58 324 *e*P **P** 12 50 33.6 +0.8
BFO **Black Forest** 78.59 325 *e*P **P** 12 50 33.3 +0.5
BFO pmax pmax
comp=Z,92nm,1.9s
BFO MLR MLR
comp=Z,337nm,20.0s
BFO **Black Forest** 78.59 325 *e*P **P** 12 50 33.3 +0.5
comp=Z,92nm,1.9s
BFO LR LR
comp=Z,337nm,20.0s
VIVF **Saint-Julien-l** 78.91 321 *e*P **P** 12 50 34.9 +0.2
comp=Z,38nm,0.9s
VIVF **Saint-Julien-l** 78.91 321 *e*P **P** 12 50 34.9 +0.2
VIVF pmax pmax
comp=Z,38nm,0.9s
VIVF **Saint-Julien-l** 78.91 321 *e*P **P** 12 50 34.9 +0.2
comp=Z,38nm,0.9s
LOMF **Lomont** 78.91 324 *e*P **P** 12 50 34.3 -0.4
LOMF **Lomont** 78.91 324 *e*P **P** 12 50 34.3 -0.4
LOMF **Lomont** 78.91 324 *e*P **P** 12 50 34.3 -0.4
CABF **La Chapelle** 78.95 323 *e*P **P** 12 50 35.0 +0.1
comp=Z,60nm,1.3s
CABF **La Chapelle** 78.95 323 *e*P **P** 12 50 35.0 +0.1
CABF pmax pmax
comp=Z,60nm,1.3s
CABF **La Chapelle** 78.95 323 *e*P **P** 12 50 35.0 +0.1
comp=Z,60nm,1.3s
LASF **Ste Croix** 79.03 320 *e*P **P** 12 50 35.9 +0.6
comp=Z,36nm,1.1s
LASF **Ste Croix** 79.03 320 *e*P **P** 12 50 35.9 +0.6
comp=Z,36nm,1.1s
TOD **Tromm** 79.05 327 *e*P **P** 12 50 36.0 +0.7
TOD **Tromm** 79.05 327 *e*P **P** 12 50 36.0 +0.7
HINF **Hinteralfeld** 79.15 324 *e*P **P** 12 50 36.2 +0.3
HINF **Hinteralfeld** 79.15 324 *e*P **P** 12 50 36.2 +0.3
HINF **Hinteralfeld** 79.15 324 *e*P **P** 12 50 36.2 +0.3
ECH **Echery** 79.19 325 *e*P **P** 12 50 36.3 +0.3
ECH *e* 12 50 36.4
ECH MLR MLR
comp=Z,442nm,21.0s
ECH **Echery** 79.19 325 *e*P **P** 12 50 36.3 +0.3
ECH *e*P **P** 12 50 36.4 +0.3
ECH LR LR
comp=Z,442nm,21.0s
ECH **Echery** 79.19 325 *e*P **P** 12 50 36.4 +0.3
SSB **Saint Sauveur** 79.20 321 *e*P **P** 12 50 35.3 -1.0
SSB pmax pmax
comp=Z,32nm,1.0s
SSB MLR MLR
comp=Z,411nm,19.0s
SSB **Saint Sauveur** 79.20 321 *e*P **P** 12 50 35.3 -1.0
comp=Z,32nm,1.0s
SSB LR LR
comp=Z,411nm,19.0s
CDF **Champ du Feu** 79.23 325 *e*P **P** 12 50 36.8 +0.4
CDF **Champ du Feu** 79.23 325 *e*P **P** 12 50 36.8 +0.4
CDF **Champ du Feu** 79.23 325 *e*P **P** 12 50 36.8 +0.4
BSD **Bornholm Skovb** 79.39 333⇓*i*P **P** 12 50 37.6 +0.7
BSD pmax pmax
comp=Z,17nm,0.9s
BSD MLR MLR
comp=Z,430nm,26.0s
BSD **Bornholm Skovb** 79.39 333⇓*i*P **P** 12 50 37.6 +0.7
comp=Z,17nm,0.8s
BSD
comp=Z,420nm,26.0s
VNDA **Vanda** 79.41 167 P **P** 12 50 35.4 -1.5
VNDA **Vanda** 79.41 167 P **P** 12 50 35.4 -1.5
comp=Z,12nm,1.0s,baz=270,slow=5.6,SNR=31
HAU **Haudompre** 79.54 324 *e*P **P** 12 50 38.3 +0.3
HAU *e*R
comp=Z,316nm,20.8s
HAU **Haudompre** 79.54 324 *e*P **P** 12 50 38.3 +0.3
HAU **Haudompre** 79.54 324 *e*P **P** 12 50 38.3 +0.3
JOF **Joensuu** 79.55 345 *e*P **P** 12 50 36.0 -1.7
JOF pmax pmax
comp=Z,46nm,0.7s
JOF **Joensuu** 79.55 345 *ep* **P** 12 50 36.0 -1.7
comp=Z,46nm,0.7s
MTLF **Montolieu** 79.73 319 *e*P **P** 12 50 39.5 +0.4
comp=Z,174nm,1.7s
MTLF **Montolieu** 79.73 319 *e*P **P** 12 50 39.5 +0.4
MTLF pmax pmax
comp=Z,174nm,1.7s
MTLF **Montolieu** 79.73 319 *e*P **P** 12 50 39.5 +0.4
comp=Z,174nm,1.7s
FIA1 **FINESS Array S** 79.80 342 *e*P **P** 12 50 39.4 +0.3
FINES **FINESS Array B** 79.80 342 P **P** 12 50 38.4 -0.7
FINES **FINESS Array B** 79.80 342 P **P** 12 50 38.4 -0.7
comp=Z,12nm,0.8s,baz=108,slow=6.2,SNR=26
THEF **They Montfort** 79.86 324 *e*P **P** 12 50 40.4 +0.7
THEF **They Montfort** 79.86 324 *e*P **P** 12 50 40.4 +0.7
THEF **They Montfort** 79.86 324 *e*P **P** 12 50 40.4 +0.7
LBL **Lubilhac** 79.98 321 *e*P **P** 12 50 41.5 +1.0
LBL **Lubilhac** 79.98 321 *e*P **P** 12 50 41.5 +1.0
LBL **Lubilhac** 79.98 321 *e*P **P** 12 50 41.5 +1.0
RUP **Ruppelstein** 80.05 326 *e*P **P** 12 50 40.9 +0.2
RUP **Ruppelstein** 80.05 326 *e*P **P** 12 50 40.9 +0.2
PAGF **Fort de Pagny** 80.18 325 *e*P **P** 12 50 41.6 +0.2
comp=Z,9.5nm,0.8s
PAGF **Fort de Pagny** 80.18 325 *e*P **P** 12 50 41.6 +0.2
comp=Z,9.5nm,0.8s
MDT **Midelt** 80.24 307 LR LR 13 26 13.8
comp=Z,1μm,19.3s,baz=1.7,slow=36
KAF **Kangasniemi** 80.26 343 *e*P **P** 12 50 40.9 -0.6
KAF pmax pmax
comp=Z,29nm,0.7s
KAF **Kangasniemi** 80.26 343 *ep* **P** 12 50 40.9 -0.6
comp=Z,29nm,0.7s
SMF **Signal de Mont** 80.31 322 *e*P **P** 12 50 41.9 -0.3
comp=Z,14nm,0.7s
SMF **Signal de Mont** 80.31 322 *e*P **P** 12 50 41.9 -0.3
SMF pmax pmax
comp=Z,14nm,0.7s
SMF **Signal de Mont** 80.31 322 *e*P **P** 12 50 41.9 -0.3
comp=Z,14nm,0.7s
PMG **Port Moresby** 80.31 98 P **P** 12 50 42.0 -0.9
PMG *e*P **P** 12 50 43.2 +0.3
PMG **Port Moresby** 80.31 98 P **P** 12 50 42.0 -0.9
comp=Z,94nm,1.1s,baz=297,slow=4.5,SNR=11
SBA **Scott Base** 80.37 168 *e*P **P** 12 50 42.9 +0.8
SBA pmax pmax
comp=Z,75nm,1.4s
SBA **Scott Base** 80.37 168 *e*P **P** 12 50 42.9 +0.8
comp=Z,75nm,1.4s
SFTF **Sexfontaines** 80.39 324 *e*P **P** 12 50 42.7 +0.1
comp=Z,151nm,1.4s
SFTF **Sexfontaines** 80.39 324 *e*P **P** 12 50 42.7 +0.1
comp=Z,151nm,1.4s
WLF **Walferdange** 80.52 326 P **P** 12 50 44.2 +1.0
WLF **Walferdange** 80.52 326 PFAKE 12 50 50.0 +6.8
WLF LR LR
comp=Z,364nm,20.0s
MEZF **Maizieres J'vi** 80.53 324 *e*P **P** 12 50 43.6 +0.3
MEZF **Maizieres J'vi** 80.53 324 *e*P **P** 12 50 43.6 +0.3
CAF **Calviac** 80.57 320 *e*P **P** 12 50 44.1 +0.4
comp=Z,22nm,0.9s
CAF **Calviac** 80.57 320 *e*P **P** 12 50 44.1 +0.4
CAF pmax pmax
comp=Z,22nm,0.9s
CAF **Calviac** 80.57 320 *e*P **P** 12 50 44.1 +0.4
comp=Z,22nm,0.9s
LOR **Lormes** 80.61 323 *e*P **P** 12 50 43.6 -0.2
comp=Z,23nm,1.0s
LOR *e*R
comp=Z,275nm,21.2s
LOR **Lormes** 80.61 323 *e*P **P** 12 50 43.6 -0.2
comp=Z,23nm,1.0s
AVF **Avril sur Loir** 80.67 322 *e*P **P** 12 50 44.7 +0.6
comp=Z,54nm,1.4s
AVF **Avril sur Loir** 80.67 322 *e*P **P** 12 50 44.7 +0.6
AVF pmax pmax
comp=Z,54nm,1.4s
AVF **Avril sur Loir** 80.67 322 *e*P **P** 12 50 44.7 +0.6
comp=Z,54nm,1.4s
SSF **Saint Saulge** 80.71 322 *e*P **P** 12 50 44.3 0.0
comp=Z,58nm,1.1s
SSF **Saint Saulge** 80.71 322 *e*P **P** 12 50 44.3 0.0
SSF pmax pmax
comp=Z,58nm,1.1s
SSF **Saint Saulge** 80.71 322 *e*P **P** 12 50 44.3 0.0
comp=Z,58nm,1.1s
EPF **Esparros** 80.81 318 *e*P **P** 12 50 45.7 +0.7
EPF **Esparros** 80.81 318 *e*P **P** 12 50 45.7 +0.7
EPF **Esparros** 80.81 318 *e*P **P** 12 50 45.7 +0.7
COP **Copenhagen** 80.85 333 *i* P **P** 12 50 46.5 +1.7
COP MLR MLR
comp=Z,200nm,25.0s
COP **Copenhagen** 80.85 333 *i* P **P** 12 50 46.5 +1.7
COP
comp=Z,200nm,24.0s
BGF **Bois d'Agland** 80.86 322 *e*P **P** 12 50 45.7 +0.5
comp=Z,186nm,1.5s
BGF **Bois d'Agland** 80.86 322 *e*P **P** 12 50 45.7 +0.5
BGF pmax pmax
comp=Z,186nm,1.5s

BGF Bois d'Agland 80.86 322 *e*P **P** **12 50 45.7 +0.5**
comp=Z,186nm,1.5s
RJF Les Rejaudoux 81.09 320 *e*P **P** **12 50 46.9 +0.5**
comp=Z,44nm,0.9s
RJF *e*R
comp=Z,511nm,19.2s
RJF Les Rejaudoux 81.09 320 *e*P **P** **12 50 46.9 +0.5**
RJF pmax pmax
comp=Z,44nm,0.9s
RJF Les Rejaudoux 81.09 320 *e*P **P** **12 50 46.9 +0.5**
comp=Z,44nm,0.9s
TCF Toulx Ste Croi 81.12 321 *e*P **P** **12 50 47.5 +0.9**
TCF Toulx Ste Croi 81.12 321 *e*P **P** **12 50 47.5 +0.9**
TCF Toulx Ste Croi 81.12 321 *e*P **P** **12 50 47.5 +0.9**
MDJ Mudanjiang 81.31 41 P **P** **12 50 47.8 +0.2**
MDJ pP **pP** **12 50 51.0 -1.2**
MDJ sP **sP** **12 50 52.2 -1.6**
MDJ S S 13 00 50.6 -7.3
MDJ pmax pmax
comp=Z,33nm,1.5s
MDJ pmax pmax
comp=Z,700nm,4.7s
MDJ LR LR
comp=N,800nm,24.7s
MDJ LR LR
comp=E,620nm,24.7s
MDJ LR LR
comp=Z,1µm,22.7s
ETSF Etsaut 81.34 317 *e*P **P** **12 50 48.5 +0.6**
ETSF Etsaut 81.34 317 *e*P **P** **12 50 48.5 +0.6**
ETSF Etsaut 81.34 317 *e*P **P** **12 50 48.5 +0.6**
BEBN Eben Emael 81.38 326 P **P** **12 50 50.2 +2.5**
BCLA Clavier 81.39 326 P **P** **12 50 48.9 +1.0**
LFF La Frestale 81.41 320 *e*P **P** **12 50 48.7 +0.6**
comp=E,66nm,1.1s
LFF La Frestale 81.41 320 *e*P **P** **12 50 48.7 +0.6**
LFF pmax pmax
comp=E,66nm,1.1s
LFF La Frestale 81.41 320 *e*P **P** **12 50 48.7 +0.6**
comp=E,66nm,1.1s
GIVF Givet 81.48 326 *e*P **P** **12 50 48.9 +0.5**
comp=E,39nm,0.9s
GIVF Givet 81.48 326 *e*P **P** **12 50 48.9 +0.5**
GIVF pmax pmax
comp=E,39nm,0.9s
GIVF Givet 81.48 326 *e*P **P** **12 50 48.9 +0.5**
comp=E,39nm,0.9s
BAIF Baives 81.80 325 *e*P **P** **12 50 50.6 +0.6**
comp=E,181nm,1.5s
BAIF Baives 81.80 325 *e*P **P** **12 50 50.6 +0.6**
BAIF pmax pmax
comp=E,181nm,1.5s
BAIF Baives 81.80 325 *e*P **P** **12 50 50.6 +0.6**
comp=E,181nm,1.5s
SJPF Ste Jean 81.88 317 *e*P **P** **12 50 51.4 +0.8**
comp=E,40nm,0.9s
SJPF Ste Jean 81.88 317 *e*P **P** **12 50 51.4 +0.8**
SJPF pmax pmax
comp=E,41nm,0.9s
SJPF Ste Jean 81.88 317 *e*P **P** **12 50 51.4 +0.8**
comp=E,40nm,0.9s
VLA Vladivostok 82.14 43 ⇓ *i*P **P** **12 50 51.6 -0.4**
VLA *i* 12 50 56.5
VLA S **S** **13 01 04.8 -1.8**
VLA pmax pmax
comp=E,98nm,1.1s
ESDC Sonseca Array 82.35 313 P **P** **12 50 52.1 -1.1**
ESDC Sonseca Array 82.35 313 P **P** **12 50 52.1 -1.1**
comp=Z,4.2nm,0.6s,baz=104,slow=4.2,SNR=24
ESDC LR LR 13 26 08.0
comp=Z,411nm,20.6s,baz=80,slow=35
ESLA Sonseca Array 82.35 313 *e*P **P** **12 50 52.4 -0.9**
comp=Z,24nm,1.6s
RTC Rabat Centre 82.41 307 PFAKE 12 51 00.0 +6.4
RTC LR LR
comp=Z,1µm,20.0s
PAB San Pablo 82.57 313 *e*P **P** **12 50 54.9 +0.4**
PAB pmax pmax
comp=Z,29nm,1.3s
PAB San Pablo 82.57 313 *e*P **P** **12 50 54.9 +0.4**
comp=Z,29nm,1.3s
USRK Ussuriysk Arra 82.67 42 P **P** **12 50 53.5 -1.2**
comp=Z,46nm,1.1s,baz=252,slow=5.4,SNR=28
USRK LR LR 13 27 43.6
comp=Z,943nm,19.4s,baz=238,slow=36
MFF Saint Martin d 82.71 321 *e*P **P** **12 50 55.1 +0.2**
comp=Z,43nm,1.0s
MFF Saint Martin d 82.71 321 *e*P **P** **12 50 55.1 +0.2**
MFF pmax pmax
comp=Z,43nm,1.0s
MFF Saint Martin d 82.71 321 *e*P **P** **12 50 55.1 +0.2**
comp=Z,43nm,1.0s
MUD Monsted U'grnd 82.77 332 *i*P **P** **12 50 56.9 +2.0**
MUD pmax pmax
comp=Z,24nm,0.9s
MUD Monsted U'grnd 82.77 332 *i*P **P** **12 50 56.9 +2.0**
comp=Z,24nm,0.9s
LVZ Lovozero 83.07 349 ⇑ *i*P **P** **12 50 56.8 +0.5**
LVZ pmax pmax
comp=Z,72nm,1.0s
GUMO Guam 83.15 75 P **P** **12 50 57.1 -0.7**
GUMO Guam 83.15 75 P **P** **12 50 57.1 -0.7**
comp=Z,90nm,0.9s,baz=56,slow=0.9,SNR=4.9
LDF La Druitiere 83.59 323 *e*P **P** **12 50 59.5 +0.1**
comp=Z,42nm,0.9s
LDF La Druitiere 83.59 323 *e*P **P** **12 50 59.5 +0.1**
LDF pmax pmax
comp=Z,42nm,0.9s
LDF La Druitiere 83.59 323 *e*P **P** **12 50 59.5 +0.1**
comp=Z,42nm,0.9s
FLN La Foliniere 83.88 323 *e*P **P** **12 51 00.9 0.0**
FLN *e*R
comp=Z,589nm,20.8s
FLN La Foliniere 83.88 323 *e*P **P** **12 51 00.9 0.0**
FLN La Foliniere 83.88 323 *e*P **P** **12 51 00.9 0.0**
GRR Gorron 83.94 322 *e*P **P** **12 51 01.3 +0.1**
GRR Gorron 83.94 322 *e*P **P** **12 51 01.3 +0.1**
GRR Gorron 83.94 322 *e*P **P** **12 51 01.3 +0.1**
MAJO Matsushiro 84.13 51 *e*P **P** **12 51 02.9 +0.4**
MAJO pmax pmax
comp=Z,158nm,1.4s
MAJO Matsushiro 84.13 51 *e*P **P** **12 51 02.9 +0.4**
comp=Z,158nm,1.4s
MAT Matsushiro 84.13 51 P **P** **12 51 02.3 -0.2**
MAT S **S** **13 01 24.6 -2.6**
MJAR Matsushiro Arr 84.13 51 P **P** **12 51 01.9 -0.6**
MJAR Matsushiro Arr 84.13 51 P **P** **12 51 01.9 -0.6**
comp=Z,117nm,1.2s,baz=248,slow=5.0,SNR=48
MJAR LR LR 13 30 46.8
comp=Z,1µm,19.1s,baz=270,slow=37
JHJ Hachijo jima 2 84.22 54 LR LR 13 28 27.0
comp=Z,810nm,19.1s,baz=235,slow=36
PVAQ Vaqueiros 84.25 310 *e*P **P** **12 51 04.5 +1.5**
comp=Z,26nm,1.8s
PVAQ *e*S S 13 01 35.7 +7.4
PVAQ *e*LQ LQ 13 13 41.4
PVAQ *e*LR LR 13 22 36.2
comp=Z,620nm,18.0s
NC602 NORSAR Array S 84.33 337 *e*P **P** **12 51 03.3 +0.4**
PBDV Barranco-do-Ve 84.36 310 *e*P **P** **12 51 06.0 +2.4**
comp=Z,31nm,1.5s
KONO Kongsberg 84.46 335 *e*P **P** **12 51 05.5 +2.0**
KONO *e*SS SS 13 07 01.5 +1.3
KONO Kongsberg 84.46 335 *e*P **P** **12 51 04.0 +0.5**
KONO pmax pmax
comp=Z,267nm,2.1s
KONO Kongsberg 84.46 335 *e*P **P** **12 51 04.0 +0.5**
comp=Z,267nm,2.1s
PCVE Castro Verde 84.57 310 *e*P **P** **12 51 05.2 +0.5**
comp=E,41nm,1.8s
PCVE Castro Verde 84.57 310 *e*PP PP 12 54 24.0 +3.5
PBEJ Beja 84.58 311 *e*P **P** **12 51 06.0 +1.3**
comp=Z,21nm,1.7s
NB2 NORSAR Subarra 84.65 337 P **P** **12 51 04.8 +0.3**
comp=Z,181nm,2.0s,baz=127,slow=5.1
NB2 NORSAR Subarra 84.65 337 P **P** **12 51 04.8 +0.3**
baz=127,slow=5.1
NOA NORSAR Array B 84.65 337 P **P** **12 51 03.0 -1.6**
NOA NORSAR Array B 84.65 337 P **P** **12 51 03.0 -1.6**
comp=Z,4.2nm,0.7s,baz=117,slow=4.9,SNR=11
NAO01 NORSAR Array S 84.66 336 *e*P **P** **12 51 06.0 +1.4**
comp=Z,64nm,1.6s
PESTR Estremoz 84.67 312 *e*P **P** **12 51 07.1 +2.0**
comp=Z,22nm,1.3s
PESTR Estremoz 84.67 312 *e*PP PP 12 54 24.9 +3.6
KLR Kul'dur 84.68 37 *e*P P 12 51 00.0 -4.9
KLR *e*S **SKSac** **13 01 22.0 -6.7**
KLR pmax pmax
comp=E,230nm,2.8s
KLR pmax pmax
comp=Z,500nm,2.8s
PMRV Marv??o 84.72 312 *e*P **P** **12 51 07.7 +2.3**
comp=Z,33nm,1.7s
PMRV Marv??o 84.72 312 *e*PP PP 12 54 23.1 +1.4
PMRV *e*S **S** **13 01 37.9 +5.0**
PMRV *e*LR LR 13 23 26.0
comp=E,886nm,18.0s
MESJ Messejana 84.78 310 *e*P **P** **12 51 05.7 0.0**
MESJ AMS AMS 13 31 23.8
comp=E,606nm,20.7s
MESJ Messejana 84.78 310 *e*P **P** **12 51 05.7 0.0**
MESJ Messejana 84.78 310 *e*P **P** **12 51 05.6 0.0**
EVO Evora 84.86 311 *e*P **P** **12 51 07.9 +1.8**
comp=E,16nm,0.8s
EVO *e*R
comp=E,896nm,22.5s
EVO Evora 84.86 311 *e*P **P** **12 51 07.7 +1.6**
comp=E,23nm,1.1s
EVO Evora 84.86 311 *e*PP PP 12 54 27.1 +4.3
SGMF Saint Gilles 84.90 322 *e*P **P** **12 51 06.3 +0.2**
comp=E,136nm,1.6s
SGMF Saint Gilles 84.90 322 *e*P **P** **12 51 06.3 +0.2**
SGMF pmax pmax
comp=Z,136nm,1.6s
SGMF Saint Gilles 84.90 322 *e*P **P** **12 51 06.3 +0.2**
comp=Z,136nm,1.6s
MORF Marmelete 84.92 310 *e*P **P** **12 51 08.2 +1.7**
comp=Z,38nm,1.6s
MORF Marmelete 84.92 310 *e*P **P** **12 51 06.3 -0.2**
EVOP Sao Brissos 84.94 311 *e*P **P** **12 51 07.9 +1.4**
EVOP pmax pmax
comp=Z,16nm,0.8s
EVOP Sao Brissos 84.94 311 *e*P **P** **12 51 07.9 +1.4**
comp=Z,16nm,0.8s
PFVI Vila Bisbo 84.99 310 *e*P **P** **12 51 09.9 +3.1**
comp=Z,26nm,1.9s
MVO Moncorvo 85.08 314 *e*P **P** **12 51 08.1 +0.9**
comp=Z,31nm,1.5s
MVO *e*S **S** **13 01 36.9 +0.4**
MVO *e*LR LR 13 17 36.5
comp=Z,308nm,18.0s
PNCL Nicolau / Gran 85.10 311 *e*P **P** **12 51 08.8 +1.5**
comp=Z,19nm,2.0s
PBRG Braganca 85.11 315 *e*P **P** **12 51 10.0 +2.7**
comp=Z,24nm,1.5s
QUIF Quistinic 85.13 321 *e*P **P** **12 51 06.9 -0.3**
QUIF Quistinic 85.13 321 *e*P **P** **12 51 06.9 -0.3**
QUIF Quistinic 85.13 321 *e*P **P** **12 51 06.9 -0.3**
MTE Manteigas 85.17 313 *e*P **P** **12 51 07.7 0.0**
comp=Z,22nm,1.1s
MTE *e*S **S** **13 01 39.4 +1.9**
MTE *e*LR LR 13 18 01.4
comp=Z,463nm,16.0s
MTE Manteigas 85.17 313 PFAKE 12 51 20.0 +12
MTE LR LR
comp=Z,630nm,20.0s
PMTG Montargil 85.20 312 *e*P **P** **12 51 09.9 +2.1**
comp=Z,42nm,1.4s
BBTS Babate 85.22 286 LR LR 13 26 42.8
comp=Z,460nm,20.2s,baz=89,slow=34
PVRL Vila Real 85.60 314 *e*P **P** **12 51 11.7 +1.9**
comp=Z,44nm,1.7s
LIS Lisbon 85.76 311 *e*P **P** **12 51 10.6 0.0**
LIS AMS AMS 13 36 51.0
comp=E,1µm,19.2s
LIS Lisbon 85.76 311 *e*P **P** **12 51 10.6 0.0**
LIS Lisbon 85.76 311 *e*P **P** **12 51 10.5 0.0**
KEV Kevo 86.15 348 *e*P **P** **12 51 11.5 -0.3**
KEV pmax pmax
comp=Z,10.0nm,0.7s
KEV Kevo 86.15 348 *e*p **P** **12 51 11.5 -0.3**
comp=Z,9.5nm,0.7s
KEV Kevo 86.15 348 PFAKE 12 51 20.0 +8.2
KEV LR LR
comp=Z,2µm,20.0s
PGAV Gavieira, Arco 86.23 314 *e*LR LR 13 20 34.5
comp=Z,371nm,18.0s
ARCES ARCESS Array B 86.30 347 P **P** **12 51 11.2 -1.4**
ARCES ARCESS Array B 86.30 347 P **P** **12 51 11.2 -1.4**
comp=Z,22nm,0.7s,baz=131,slow=3.7,SNR=50
ARE0 ARCESS Array S 86.30 347 *e*P **P** **12 51 15.5 +2.9**
ARE0 ARCESS Array S 86.30 347 *e*P **P** **12 51 11.8 -0.7**
HABR Khabarovsk 86.35 39 *d i*P **P** **12 51 13.0 -0.3**
HABR *e**PP **PcP** **12 51 14.1 -1.6**
HABR *e**SP **sP** **12 51 15.2 -4.4**
HABR 12 54 30.4
HABR *e*S **SKSac** **13 01 35.5 -3.7**
HABR *e**SS **SKKSac** **13 01 41.5 -5.5**
HABR *e*SS **SS** **13 07 23.5 -5.1**
HABR *e*SSS SSS 13 10 55.5
HABR MLR MLR
comp=Z,1µm,16.0s
KTK1 Kautokeino 86.41 346 *e*P **P** **12 51 11.0 -2.2**
KTK1 *e*SS SS 13 07 30.8 +2.1
BER Bergen 86.64 335 *e*P **P** **12 51 13.8 -0.6**
TRO Tromso 87.91 345 *e*P P 12 51 24.1 +3.8
TRO *e*PP **PP** **12 54 49.8 +3.1**
TRO *e*SS SS 13 07 47.5 -3.0
ESK Eskdalemuir 88.24 328 PFAKE 12 51 30.0 +7.8
ESK LR LR
comp=Z,583nm,19.0s
YAK Yakutsk 89.46 25 *c i*P **P** **12 51 28.5 +0.7**
YAK *e**PP **pP** **12 51 36.0 +3.5**
YAK *e* 12 54 54.5
YAK *e*S **SKSac** **13 01 56.0 -1.4**
YAK *e**SS **S** **13 02 14.1 -3.5**
YAK pmax pmax
comp=Z,26nm,0.9s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.0s
YAK pmax pmax
comp=Z,205nm,4.4s
YAK pmax pmax
comp=E,67nm,3.0s
YAK pmax pmax
comp=N,48nm,4.4s
YAK smax smax
comp=E,197nm,14.4s
YAK smax smax
comp=N,77nm,12.6s
YAK MLR MLR
comp=Z,3µm,20.0s
YAK MLR MLR
comp=E,2µm,20.0s
YAK MLR MLR
comp=N,2µm,20.0s
ERM Erimo 89.52 47 *e*P **P** **12 51 28.9 +0.4**
ERM pmax pmax
comp=Z,101nm,1.3s
ERM MLR MLR
comp=Z,722nm,20.0s
ERM Erimo 89.52 47 *e*P **P** **12 51 28.9 +0.4**
comp=Z,101nm,1.3s
ERM LR LR
comp=Z,722nm,20.0s
ASAJ Asahikawa 89.75 45 *e*P **P** **12 51 29.0 -0.6**
comp=Z,18nm,1.1s
ASAJ Asahikawa 89.75 45 P **P** **12 51 28.4 -1.2**
comp=Z,36nm,1.2s,baz=263,slow=17,SNR=6.1
YSS Yuzh-Sakhalins 90.71 42 *e*P **P** **12 51 33.0 -1.0**
YSS *e* 13 02 06.0
YSS *e*S **S** **13 02 25.0 -4.8**
YSS *e*PS **PS** **13 03 34.0 -4.9**
YSS *e*PPS PPS 13 04 06.0
YSS pmax pmax
comp=Z,900nm,3.0s
YSS pmax pmax
comp=Z,60nm,1.2s
YSS smax smax
comp=E,900nm,6.0s
YSS MLR MLR
comp=Z,1µm,20.0s
YSS MLR MLR
comp=N,900nm,18.0s
SACV Santiago Islan 91.95 285 PFAKE 12 51 50.0 +9.5
SACV LR LR
comp=Z,520nm,19.0s
YUK Yuzh-Kuril'sk 91.98 45 *i*P P 12 51 36.1 -3.9
YUK *i* 12 55 18.2
YUK *i* S **SKSac** **13 02 05.9 -6.8**
YUK *i* 13 02 32.7
YUK *i* SS **SS** **13 08 44.8 -5.8**
YUK *i* SSS SSS 13 12 19.6
YUK pmax pmax
comp=N,155nm,1.1s
YUK pmax pmax
comp=Z,432nm,1.1s
YUK pmax pmax
comp=E,61nm,0.6s
YUK MLR MLR
comp=N,318nm,22.0s
YUK MLR MLR
comp=E,532nm,22.0s
YUK MLR MLR
comp=Z,1µm,22.0s
HNR Honiara 92.65 100 PFAKE 12 51 50.0 +6.2
HNR LR LR
comp=Z,553nm,20.0s
SPITS Spitsbergen Ar 94.38 351 LR LR 13 37 34.5
comp=Z,785nm,20.2s,baz=145,slow=38
KBS Kingsbay 95.54 351 *e*P P 12 52 00.3 +4.7
DZM Mont Dzumac 95.62 114 *e*SP SP 13 04 33.0 +0.8
comp=Z,138nm,26.4s
DZM *e*SS **SS** **13 09 46.6 +3.3**
comp=Z,299nm,28.4s
DZM *e*LR LR 13 22 47.6
comp=Z,635nm,22.9s
RCBR Riachuelo 99.46 262 LR LR 13 35 37.4
comp=Z,750nm,18.3s,baz=89,slow=34
EFI East Falkland 99.54 212 PFAKE 12 52 30.0 +16
EFI LR LR
comp=Z,2µm,21.0s
BORG Borgarnes 99.63 334 LR LR 13 41 16.4
comp=Z,729nm,18.3s,baz=106,slow=38
SEY Seymchan 99.71 28 *c e*P **Pdif** **12 52 15.0 +0.3**
DAG Danmarks Havn 100.58 347 *e*P **Pdif** **12 52 20.9 +2.6**
DAG Danmarks Havn 100.58 347 *i*P **Pdif** **12 52 20.9 +2.6**
PETK Petropavlovsk- 101.36 38 PP PP 12 56 36.0 +4.2
PETK Petropavlovsk- 101.36 38 PP PP 12 56 36.0 +4.2
comp=Z,4.4nm,1.1s,baz=174,slow=6.0,SNR=4.1
PET Petropavlovsk 101.93 38 *e*P **Pdif** **12 52 20.3 -4.5**
PET *e* 12 56 33.9
PET *e*PPP PPP 12 58 43.9
PET *e* 13 03 02.1
PET *e*S Sdif 13 03 53.9 -13
PET *e*PS **PS** **13 05 32.8 -8.4**
PET *e*SSS SSS 13 14 55.2
PET pmax pmax
comp=Z,100nm,10.4s
PET MLR MLR
comp=Z,1µm,20.0s
PET MLR MLR
comp=Z,1µm,19.0s
SPB Sao Paulo 105.00 241 PFAKE 12 57 10.0
SPB LR LR
comp=Z,2µm,22.0s
BILL Bilibino 105.61 23 P **Pdif** **12 52 44.0 +3.1**
BILL 12 57 12.0
BILL *e*PPP PPP 12 59 27.0
BILL *i* PS **PS** **13 06 22.6 +3.2**
BILL *i* PS PS 13 07 11.9 +53
BILL *i* SS SS 13 12 17.2 +17
BILL pmax pmax
comp=Z,20nm,1.3s
BILL Bilibino 105.61 23 PFAKE 12 57 10.0
BILL LR LR
comp=Z,1µm,21.0s
FUNA Funafuti 111.26 104 PFAKE 12 57 20.0
FUNA LR LR
comp=Z,17µm,21.0s
SFJD Kangerlussuaq 111.31 338 PFAKE 12 57 20.0
SFJD LR LR
comp=Z,724nm,21.0s
RES Resolute Bay 116.75 354 *e*PKPdf **PKPdf** **12 57 15.7 +0.8**
COLA College 122.90 16 *e*PKIKP **PKPdf** **12 57 25.2 -1.7**
COLA College 122.90 16 *e*PKPdf **PKPdf** **12 57 25.2 -1.7**
LVC Limon Verde 123.08 232 PFAKE 12 57 40.0 +11
LVC LR LR
comp=Z,576nm,21.0s
PPLA Purkeypile 123.09 19 *e*PKPdf **PKPdf** **12 57 28.4 +0.8**
ILAR Eielson Array 123.24 16 PKP **PKPdf** **12 57 24.4 -3.2**
ILAR Eielson Array 123.24 16 PKP **PKPdf** **12 57 24.4 -3.2**
comp=Z,2.4nm,0.8s,baz=310,slow=2.6,SNR=24
TRF Thorofare Moun 123.28 18 *e*PKPdf **PKPdf** **12 57 27.3 -0.7**
SCHQ Schefferville 123.52 329 PKP **PKPdf** **12 57 27.6 -0.8**
SCHQ Schefferville 123.52 329 PKP **PKPdf** **12 57 27.6 -0.8**
comp=Z,4.1nm,0.8s,baz=55,slow=6.5,SNR=6.3
SAML Samuel 124.42 250 *e*PKPdf **PKPdf** **12 57 31.3 -0.1**
EGAK Eagle 124.64 13 *e*PKPdf **PKPdf** **12 57 30.0 -0.3**
EGAK LR LR
comp=Z,1µm,21.0s
DOT Dot Lake 124.88 15 *e*PKPdf **PKPdf** **12 57 31.4 +0.5**
PMR Palmer 125.02 19 *e*PKIKP **PKPdf** **12 57 30.8 -0.3**
PMR Palmer 125.02 19 *e*PKPdf **PKPdf** **12 57 30.8 -0.3**
MENT Mentasta 125.55 16 *e*PKPdf **PKPdf** **12 57 33.5 +1.3**
LPAZ La Paz 125.69 239 PKP **PKPdf** **12 57 32.5 -2.0**
LPAZ *e*PKPdf **PKiKP** **12 57 34.6 -0.2**
LPAZ La Paz 125.69 239 PKP **PKPdf** **12 57 32.5 -2.0**
comp=Z,8.8nm,1.0s,baz=138,slow=2.2,SNR=23
SEW Seward 126.01 21 *e*PKPdf **PKPdf** **12 57 33.7 +0.7**
DIV Divide 126.42 18 *e*PKPdf **PKPdf** **12 57 35.0 +1.1**
KDAK Kodiak Island 126.48 24 *e*PKPdf **PKPdf** **12 57 34.0 +0.1**
KDAK LR LR
comp=Z,2µm,20.0s
JOHN Johnston Islan 127.06 78 PFAKE 12 57 50.0 +14
JOHN LR LR
comp=Z,60nm,21.0s
FDF Fort de France 127.83 279 PFAKE 12 57 50.0 +12
FDF LR LR
comp=Z,255nm,21.0s
GRGR Grenville 128.07 276 PFAKE 12 57 50.0 +12
GRGR LR LR
comp=Z,305nm,22.0s
ANWB Willy Bob 128.60 283 PFAKE 12 57 50.0 +11
ANWB LR LR
comp=Z,375nm,21.0s
PNL Peninsula 129.44 16 *e*PKPdf **PKPdf** **12 57 41.9 +2.2**
YKW3 Yellowknife Ar 129.94 360 *e*PKPdf **PKPdf** **12 57 39.1 -1.3**
YKA Yellowknife Ar 130.01 360 PKP **PKPdf** **12 57 39.0 -1.5**
YKA PP **PP** **12 59 51.0 -1.0**
YKA PKKP **PKKPdf** **13 07 48.6 +3.3**
YKA Yellowknife Ar 130.01 360 PKP **PKPdf** **12 57 39.0 -1.5**
comp=Z,12nm,1.1s,baz=347,slow=2.0,SNR=37
YKA PP **PP** **12 59 51.0 -1.0**
comp=Z,2.0nm,0.9s,baz=359,slow=7.0,SNR=8.8
YKA PKKP **PKKPdf** **13 07 48.6 +3.3**
comp=Z,0.2nm,0.9s,baz=196,slow=1.3,SNR=4.2
BBSR BB Station 130.04 302 PFAKE 12 57 50.0 +8.5
BBSR LR LR
comp=Z,1µm,20.0s
SKAG Skagway 130.63 14 *e*PKPdf **PKPdf** **12 57 43.3 +1.4**
TBI Tubuai 130.91 136 *e*LR LR 13 39 11.9
comp=Z,485nm,30.2s
LBNH Lisbon 131.50 319 PFAKE 12 58 00.0 +16
LBNH LR LR
comp=Z,431nm,19.0s
LONY Lake Ozonia 132.98 321 PFAKE 12 58 00.0 +13
LONY LR LR
comp=Z,754nm,21.0s
NCB Newcomb 133.08 320 *e*PKPdf **PKPdf** **12 57 47.7 +0.7**
NCB LR LR
comp=Z,614nm,19.0s
WRAK Wrangell Islan 134.07 13 PFAKE 12 58 00.0 +12
WRAK LR LR
comp=Z,668nm,20.0s
PPT2 Papeete2 134.57 130 *e*PP PP 13 00 20.4 -2.4
comp=Z,100nm,26.0s
PPT2 *e*LR LR 13 40 56.6
comp=Z,720nm,29.2s
BINY Binghamton 135.08 319 PFAKE 12 58 00.0 +9.2
BINY LR LR
comp=Z,630nm,19.0s
NNA Nana 135.14 239 PFAKE 12 58 00.0 +8.2
NNA LR LR
comp=Z,735nm,19.0s
SDDR Presa de Saban 137.62 285 PFAKE 12 58 10.0 +14
SDDR LR LR
comp=Z,465nm,22.0s
ERPA Erie 137.65 321 PFAKE 12 58 10.0 +14
ERPA LR LR
comp=Z,685nm,19.0s
ULM Lac du Bonnet 139.19 341 PKP **PKPdf** **12 57 57.5 -0.6**
ULM Lac du Bonnet 139.19 341 PKP **PKPdf** **12 57 57.5 -0.6**
comp=Z,6.0nm,0.8s,baz=106,slow=2.3,SNR=6.8

RKT	Rikitea	139.56	151	*e*SS	SS	13 19 18.6	+6.9			
	comp=Z,358nm,32.2s									
RKT				*e*LR	LR	13 43 12.7				
	comp=Z,1µm,25.5s									
EYMN	Ely	139.56	336	*e*PKPdf	PKPdf	12 57 57.4	-1.6			
EYMN				LR	LR					
	comp=Z,729nm,20.0s									
CNNC	Cliffs of the	139.60	311	PFAKE		12 58 10.0	+11			
CNNC				LR	LR					
	comp=Z,618nm,22.0s									
BLA	Blacksburg	140.52	315	*e*PKIKP	PKPdf	12 58 02.1	+1.1			
BLA				MLR	MLR					
	comp=Z,622nm,20.0s									
BLA	Blacksburg	140.52	315	*e*PKPdf	PKPdf	12 58 02.1	+1.1			
BLA				LR	LR					
	comp=Z,622nm,20.0s									
ACSO	Alum Creek Sta	140.58	320	PFAKE		12 58 10.0	+9.0			
ACSO				LR	LR					
	comp=Z,518nm,22.0s									
AGMN	Agassiz Nation	140.88	340	PFAKE		12 58 10.0	+8.7			
AGMN				LR	LR					
	comp=Z,966nm,20.0s									
GTBY	Guantanamo Bay	141.17	286	PFAKE		12 58 10.0	+7.4			
GTBY				LR	LR					
	comp=Z,549nm,19.0s									
OTAV	Otavalo	141.90	254	*e*PKPdf	PKPdf	12 58 05.1	+0.4			
OTAV				LR	LR					
	comp=Z,1µm,20.0s									
KMSC	Kings Mountain	142.17	312	⇑PKPdf	PKPdf	12 58 00.4	-3.5			
	baz=142									
NHSC	New Hope	142.22	309	PFAKE		12 58 20.0	+16			
NHSC				LR	LR					
	comp=Z,513nm,19.0s									
SPMN	St. Paul	142.28	334	⇓PKPdf	PKPdf	12 58 01.0	-2.9			
	baz=142									
MDND	Maddock	142.45	343	⇓PKPdf	PKPdf	12 58 01.0	-3.1			
	baz=142									
A24A	Westby	142.51	348	⇓PKPdf	PKPdf	12 58 01.2	-3.0			
	baz=142									
JSC	Jenkinsville	142.51	311	*e*PKIKP	PKPdf	12 58 05.5	+0.9			
JSC	Jenkinsville	142.51	311	*e*PKPdf	PKPdf	12 58 05.5	+0.9			
A23A	Redstone	142.64	349	⇑PKPdf	PKPdf	12 58 01.7	-2.7			
	baz=142									
A22A	Carney Farms,	142.79	350	⇑PKPdf	PKPdf	12 58 01.4	-3.4			
	baz=143									
JFWS	Jewell Farm	142.89	330	PFAKE		12 58 20.0	+15			
JFWS				LR	LR					
	comp=Z,779nm,19.0s									
SFIN	Scholer Farm	142.96	324	⇓PKPdf	PKPdf	12 58 02.1	-3.2			
	baz=143									
DGMT	Dagmar	142.98	348	*e*PKPdf	PKPdf	12 58 03.2	-1.9			
DGMT				LR	LR					
	comp=Z,1µm,22.0s									
DGMT	Dagmar	142.98	348	⇑PKPdf	PKPdf	12 58 02.1	-3.0			
	baz=143									
TZTN	Tazewell	143.01	316	*e*PKPdf	PKPdf	12 58 06.0	+0.5			
B23A	Brockton	143.14	349	⇑PKPdf	PKPbc	12 58 02.5	+0.3			
	baz=143									
A20A	Cobblestone Ra	143.20	352	⇑PKPdf	PKPbc	12 58 02.7	+0.3			
	baz=143									
A19A	Klindworth Far	143.25	353	⇑PKPdf	PKPbc	12 58 02.5	0.0			
	baz=143									
A18A	Metzger Ranch,	143.38	354	⇓PKPdf	PKPbc	12 58 03.1	+0.3			
	baz=143									
A17A	Triple J Farms	143.43	355	⇓PKPdf	PKPbc	12 58 03.3	+0.3			
	baz=143									
WALA	Waterton Lakes	143.47	359	*e*PKPdf	PKPdf	12 58 06.9	+0.9			
B22A	Reddig Ranch S	143.48	350	⇑PKPdf	PKPbc	12 58 03.8	+0.6			
	baz=143									
A16A	West Butte Ran	143.49	356	⇓PKPdf	PKPbc	12 58 03.6	+0.3			
	baz=143									
A15A	Johnson Ranch,	143.51	358	⇓PKPdf	PKPbc	12 58 03.7	+0.4			
	baz=143									
B21A	Ellsworth Farm	143.51	351	⇑PKPdf	PKPbc	12 58 03.6	+0.4			
	baz=143									
A14A	Double T Ranch	143.54	358	⇑PKPdf	PKPbc	12 58 03.9	+0.5			
	baz=143									
MTDJ	Mount Denham	143.58	284	PFAKE		12 58 20.0	+13			
MTDJ				LR	LR					
	comp=Z,449nm,22.0s									
A13A	Flathead Natio	143.60	359	⇑PKPdf	PKPbc	12 58 04.0	+0.4			
	baz=144									
B20A	Solberg Farm,	143.65	352	⇓PKPdf	PKPbc	12 58 04.0	+0.3			
	baz=144									
B19A	Brinkman Farms	143.74	353	⇑PKPdf	PKPbc	12 58 04.4	+0.4			
	baz=144									
C23A	Lambert	143.81	349	⇑PKPdf	PKPbc	12 58 04.9	+0.7			
	baz=144									
WCI	Wyandotte Cave	143.84	320	*e*PKIKP	PKPbc	12 58 04.9	+0.4			
WCI	Wyandotte Cave	143.84	320	*e*PKPdf	PKPbc	12 58 04.9	+0.4			
B18A	Beardsley Farm	143.89	354	⇓PKPdf	PKPbc	12 58 04.9	+0.5			
	baz=144									
C24A	Savage	143.92	348	⇑PKPdf	PKPbc	12 58 04.9	+0.4			
	baz=144									
C22A	Vida	143.99	350	⇓PKPdf	PKPbc	12 58 05.3	+0.6			
	baz=144									
B16A	M & M Farms, S	144.03	356	⇑PKPdf	PKPbc	12 58 05.5	+0.7			
	baz=144									
B12A	Libby	144.06	1	⇑PKPdf	PKPbc	12 58 05.5	+0.7			
	baz=144									
HDIL	Hopedale	144.08	326	PFAKE		12 58 20.0	+13			
HDIL				LR	LR					
	comp=Z,698nm,20.0s									
B17A	L&G Farms, Che	144.08	355	⇓PKPdf	PKPbc	12 58 05.3	+0.4			
	baz=144									
C21A	Desert Coulee	144.11	351	⇓PKPdf	PKPbc	12 58 05.8	+0.7			
	baz=144									
B14A	Marquette Ranc	144.15	358	⇓PKPdf	PKPbc	12 58 05.2	-0.1			
	baz=144									
B15A	Bradely Ranch,	144.17	357	⇑PKPdf	PKPbc	12 58 05.2	-0.1			
	baz=144									
NEW	Newport	144.22	3	*e*PKPdf	PKPbc	12 58 06.4	+1.0			
NEW				LR	LR					
	comp=Z,885nm,22.0s									
NEW	Newport	144.22	3	⇑PKPdf	PKPbc	12 58 05.7	+0.3			
	baz=144									
EGMT	Eagleton	144.25	354	*e*PKPdf	PKPbc	12 58 06.6	+1.0			
EGMT				LR	LR					
	comp=Z,993nm,21.0s									
EGMT	Eagleton	144.25	354	⇓PKPdf	PKPbc	12 58 06.0	+0.4			
	baz=144									
CPCT	Cooper Cave	144.26	315	*e*PKPdf	PKPbc	12 58 06.5	+0.6			
D24A	Glendive	144.30	348	⇓PKPdf	PKPbc	12 58 06.2	+0.5			
	baz=144									
NLWA	Neilton Lookou	144.33	10	*e*PKPdf	PKPdf	12 58 07.3	-0.2			
NLWA				LR	LR					
	comp=Z,751nm,22.0s									
C20A	Veseth Ranch,	144.35	352	⇓PKPdf	PKPbc	12 58 05.9	+0.1			
	baz=144									
D23A	Lindsay	144.42	349	⇑PKPdf	PKPbc	12 58 06.3	+0.2			
	baz=144									
C19A	Slack Wire Ran	144.47	353	⇓PKPdf	PKPbc	12 58 06.5	+0.3			
	baz=144									
BLMT	Blacktail Moun	144.52	359	*e*PKPdf	PKPdf	12 58 07.6	-0.5			
D22A	Cohagen	144.62	350	⇓PKPdf	PKPab	12 58 06.3	-0.3			
	baz=144									
OLIL	Olney	144.62	323	*e*PKPdf	PKPab	12 58 06.5	-0.2			
C16A	Fuhringer Ranc	144.64	356	⇑PKPdf	PKPab	12 58 06.1	-0.6			
	baz=144									
YBMT	Yellow Bay	144.66	359	*e*PKPdf	PKPbc	12 58 07.5	+0.5			
C11A	Tepee Creek (N	144.68	2	⇓PKPdf	PKPab	12 58 05.8	-0.9			
	baz=145									
BSMT	Bassoo Peak	144.69	360	P	PKPab	12 58 05.5	-1.4			
C15A	Salmond Ranch,	144.71	357	⇓PKPdf	PKPab	12 58 06.2	-0.8			
	baz=145									
C17A	Wharram Farm,	144.73	355	⇓PKPdf	PKPab	12 58 06.8	-0.2			
	baz=145									
JTMT	Jette	144.79	359	*e*PKPdf	PKPab	12 58 05.5	-1.8			
C12B	Naegeli Ranch,	144.82	1	⇓PKPdf	PKPab	12 58 07.2	-0.1			
	baz=145									
E24A	Baker	144.82	347	⇑PKPdf	PKPab	12 58 07.2	-0.1			
	baz=145									
D21A	La Casta Ranch	144.84	351	⇑PKPdf	PKPbc	12 58 07.7	+0.3			
	baz=145									
C13A	Hot Springs	144.86	360	⇓PKPdf	PKPab	12 58 06.7	-0.7			
	baz=145									
D20A	Manuel Ranch,	144.98	352	⇓PKPdf	PKPab	12 58 07.5	-0.4			
	baz=145									
OD2	Odessa Site #2	145.00	5	P	PKPab	12 58 06.2	-1.6			
D19A	Cripps Ranch,	145.01	353	⇓PKPdf	PKPab	12 58 07.2	-0.8			
	baz=145									
SWMT	Swartz Lake	145.02	359	*e*PKPbc	PKPab	12 58 06.2	-1.8			
ECSD	EROS Data Cent	145.06	337	*e*PKPbc	PKPbc	12 58 05.8	-2.4			
ECSD				LR	LR					
	comp=Z,804nm,22.0s									
D18A	Linhart Farms,	145.08	354	⇑PKPdf	PKPbc	12 58 07.9	-0.3			
	baz=145									
SCIA	State Center	145.08	331	*e*PKPbc	PKPbc	12 58 08.4	+0.1			
SCIA				LR	LR					
	comp=Z,750nm,19.0s									
E23A	Ismay	145.09	348	⇓PKPdf	PKPbc	12 58 08.1	-0.2			
	baz=145									
RCS	Mount Rainier-	145.18	8	P	PKPdf	12 58 09.7	+0.4			
D17A	Six Diamond Ra	145.21	355	⇑PKPdf	PKPbc	12 58 08.3	-0.4			
	baz=145									
E22A	Miles City	145.27	349	⇑PKPdf	PKPab	12 58 09.0	+0.1			
	baz=145									
SLMT	Seeley Lake	145.28	358	*e*PKPbc	PKPbc	12 58 07.2	-1.8			
LON	Longmire	145.29	8	*e*PKP2	PKPbc	12 58 07.1	-1.8			
LON	Longmire	145.29	8	*e*PKPbc	PKPbc	12 58 07.1	-1.8			
BRSD	Miller	145.29	340	⇓PKPdf	PKPbc	12 58 08.9	0.0			
	baz=145									
SWET	Sewanee	145.36	316	*e*PKPbc	PKPbc	12 58 07.8	-1.7			
E21A	Keefer Ranch,	145.36	351	⇑PKPdf	PKPbc	12 58 09.1	0.0			
	baz=145									
WPW	White Pass	145.38	8	P	PKPdf	12 58 10.3	+0.9			
D16A	Dana Ranch, Ca	145.39	356	⇑PKPdf	PKPbc	12 58 08.9	-0.4			
	baz=145									
D14A	Greenough	145.44	358	⇑PKPdf	PKPbc	12 58 09.1	-0.4			
	baz=145									
D15A	Lincoln	145.44	357	⇓PKPdf	PKPbc	12 58 09.2	-0.3			
	baz=145									
D13A	Huson	145.44	360	⇑PKPdf	PKPbc	12 58 09.1	-0.3			
	baz=145									
BCIP	Isla Barro Col	145.45	268	*e*PKPdf	PKPab	12 58 12.3	+1.8			
BCIP				LR	LR					
	comp=Z,849nm,19.0s									
D12A	Red Ives Fores	145.48	1	⇑PKPdf	PKPbc	12 58 09.3	-0.2			
	baz=145									
F24A	Ekalaka	145.53	347	⇑PKPdf	PKPdf	12 58 09.6	-0.1			
	baz=145									
TIGA	Tifton	145.54	308	⇑PKPdf	PKPdf	12 58 09.9	-0.1			
	baz=146									
E20A	Meyer Farm, Mu	145.56	352	⇑PKPdf	PKPdf	12 58 09.6	-0.1			
	baz=146									
CHMT	Chamberlain Mo	145.59	358	*e*PKPdf	PKPdf	12 58 08.2	-1.8			
MXC	Moxie City	145.65	7	P	PKPab	12 58 11.2	+0.9			
E19A	Roth Farm, Rou	145.69	353	⇓PKPdf	PKPdf	12 58 09.9	0.0			
	baz=146									
MSO	Missoula	145.70	359	*e*PKPdf	PKPdf	12 58 08.2	-1.8			
MSO				LR	LR					
	comp=Z,554nm,21.0s									
MSO	Missoula	145.70	359	⇓PKPdf	PKPdf	12 58 09.7	-0.3			
	baz=146									
E18A	Harlowton	145.71	354	⇑PKPdf	PKPdf	12 58 10.1	+0.1			
	baz=146									
HRY	Holter Researc	145.73	356	*e*PKPdf	PKPdf	12 58 09.2	-0.8			
F23A	Volborg	145.85	348	⇓PKPdf	PKPbc	12 58 10.8	+0.1			
	baz=146									
E17A	Martinsdale	145.91	355	⇓PKPdf	PKPdf	12 58 10.8	+0.4			
	baz=146									
HAWA	Hanford	145.91	6	*e*PKPdf	PKPdf	12 58 10.3	+0.1			
HAWA				*e*PKPbc	PKPab	12 58 11.6	+0.3			
HAWA				LR	LR					
	comp=Z,750nm,19.0s									
SIUC	Southern Illin	145.95	322	*e*PKPdf	PKPbc	12 58 11.2	+0.1			
F22A	Rosebud	145.96	349	⇑PKPdf	PKPdf	12 58 10.6	+0.3			
	baz=146									
G24A	Alzada	146.02	347	⇑PKPdf	PKPdf	12 58 10.6	+0.1			
	baz=146									
E15A	Deer Lodge	146.06	357	⇑PKPdf	PKPdf	12 58 10.8	+0.2			
	baz=146									
F21A	Absaloka Mine,	146.07	350	⇑PKPdf	PKPbc	12 58 11.2	-0.2			
	baz=146									
WVT	Waverly	146.09	319	*e*PKIKP	PKPdf	12 58 08.9	-1.9			
WVT	Waverly	146.09	319	*e*PKPdf	PKPdf	12 58 08.9	-1.9			
E13A	Victor	146.09	359	⇑PKPdf	PKPdf	12 58 11.1	+0.5			
	baz=146									
E14A	Clinton	146.10	358	⇑PKPdf	PKPdf	12 58 11.2	+0.5			
	baz=146									
F20A	Billings	146.25	352	⇑PKPdf	PKPbc	12 58 11.6	-0.3			
	baz=146									
F19A	Roth Farm, Mol	146.30	353	⇑PKPdf	PKPdf	12 58 11.5	+0.4			
	baz=146									
F18A	Big Timber	146.35	353	⇓PKPdf	PKPbc	12 58 12.2	-0.1			
	baz=146									
G23A	Biddle	146.35	348	⇓PKPdf	PKPdf	12 58 11.5	+0.5			
	baz=146									
F17A	Fitzpatrick Pl	146.44	355	⇓PKPdf	PKPdf	12 58 11.4	+0.1			
	baz=146									
GCMT	Greycliff	146.45	353	*e*PKPbc	PKPab	12 58 13.7	+0.2			
G22A	Birney	146.51	349	⇓PKPdf	PKPdf	12 58 11.9	+0.6			
	baz=146									
H24A	Dirks Ranch, A	146.60	347	⇓PKPdf	PKPdf	12 58 11.7	+0.2			
	baz=146									
F15A	Butte	146.63	357	⇑PKPdf	PKPbc	12 58 12.6	-0.6			
	baz=146									
F16A	Kennard Place,	146.64	356	⇓PKPdf	PKPbc	12 58 12.8	-0.4			
	baz=146									
LRM	Limekiln Ridge	146.65	357	*e*PKPab	PKPab	12 58 14.2	-0.1			
G21A	Lodge Grass	146.66	350	⇓PKPdf	PKPbc	12 58 12.8	-0.4			
	baz=147									
F14A	Wisdom	146.70	358	⇑PKPdf	PKPdf	12 58 12.6	+0.8			
	baz=147									
VFP	Flag Point	146.74	8	P	PKPab	12 58 14.6	0.0			
F13A	Darby	146.74	359	⇑PKPdf	PKPbc	12 58 13.2	-0.3			
	baz=147									
BOZ	Bozeman (W)	146.78	356	*e*PKP2	PKPbc	12 58 13.4	-0.2			
BOZ				MLR	MLR					
	comp=Z,837nm,19.0s									
BOZ	Bozeman (W)	146.78	356	*e*PKPbc	PKPbc	12 58 13.4	-0.2			
BOZ				LR	LR					
	comp=Z,837nm,19.0s									
F12A	Elk City	146.78	0	⇑PKPdf	PKPdf	12 58 11.8	-0.1			
	baz=147									
G20A	Bridger	146.83	351	⇓PKPdf	PKPdf	12 58 12.1	+0.1			
	baz=147									
G18A	Lazy EL Ranch,	146.91	353	⇓PKPdf	PKPdf	12 58 11.8	-0.3			
	baz=147									
PLAL	Pickwick Lake	146.93	317	*e*PKPdf	PKPdf	12 58 10.7	-1.6			
PLAL				*e*PKPbc	PKPbc	12 58 13.5	-0.7			
PLAL				LR	LR					
	comp=Z,692nm,20.0s									
H23A	Clabaugh Cattl	146.96	348	⇑PKPdf	PKPdf	12 58 11.7	-0.5			
	baz=147									
PARMO	Parma	146.96	321	*e*PKPbc	PKPab	12 58 15.3	-0.3			
G17A	Pierce Place,	147.03	355	⇓PKPdf	PKPdf	12 58 12.4	+0.1			
	baz=147									
RLMT	Red Lodge	147.06	353	*e*PKPbc	PKPbc	12 58 13.9	-0.6			
RLMT				*e*PKPab	PKPab	12 58 15.7	-0.3			
RLMT				LR	LR					
	comp=Z,854nm,21.0s									
DLMT	Dillon	147.12	357	*e*PKPbc	PKPbc	12 58 13.7	-0.9			
H22A	Clearmont	147.12	349	⇑PKPdf	PKPdf	12 58 12.5	0.0			
	baz=147									
G16A	Moss Hill, Enn	147.20	356	⇓PKPdf	PKPdf	12 58 12.7	+0.1			
	baz=147									
H21A	Big Horn, Sher	147.21	350	⇑PKPdf	PKPdf	12 58 12.5	-0.1			
	baz=147									
G14A	Jackson	147.27	358	⇓PKPdf	PKPdf	12 58 12.8	0.0			
	baz=147									
LRAL	Lakeview Retre	147.29	313	*e*PKPbc	PKPbc	12 58 14.6	-0.6			
LRAL				LR	LR					
	comp=Z,608nm,21.0s									
G15A	Dillon	147.31	357	⇑PKPdf	PKPdf	12 58 13.0	+0.2			
	baz=147									
G12A	Big Creek, Yel	147.41	1	⇑PKPdf	PKPdf	12 58 13.8	+0.8			
	baz=147									
G13A	Cobalt	147.44	359	⇑PKPdf	PKPdf	12 58 13.3	+0.3			
	baz=147									
I24A	Kuemmerle Ranc	147.46	346	⇓PKPdf	PKPdf	12 58 13.0	0.0			
	baz=147									
H19A	Powell	147.47	352	⇑PKPdf	PKPdf	12 58 13.7	+0.6			
	baz=147									
H20A	Greybull	147.51	351	⇓PKPdf	PKPdf	12 58 13.3	+0.3			
	baz=147									
I23A	Meade Ranch, G	147.55	347	⇑PKPdf	PKPdf	12 58 14.0	+0.8			
	baz=147									
H18A	Shoshone NF, C	147.55	353	⇓PKPdf	PKPdf	12 58 14.3	+1.0			
	baz=147									
QLMT	Earthquake Lak	147.57	355	*e*PKPbc	PKPbc	12 58 15.6	-0.3			
QLMT				*e*PKPab	PKiKP	12 58 19.0	+0.9			
BMO	Blue Mountains	147.62	3	*e*PKIKP	PKPdf	12 58 13.5	+0.2			
BMO				*e*		12 58 16.3				
BMO				*e*		12 58 17.8				
BMO				MLR	MLR					
	comp=Z,761nm,21.0s									
BMO	Blue Mountains	147.62	3	*e*PKPdf	PKPdf	12 58 13.5	+0.2			
BMO				*e*PKPbc	PKPbc	12 58 16.3	+0.4			
BMO				*e*PKPab	PKPab	12 58 17.8	-0.2			
BMO				LR	LR					
	comp=Z,761nm,21.0s									
BGNE	Belgrade	147.63	336	⇓PKPdf	PKPdf	12 58 13.6	+0.3			
	baz=148									
VIPM	Ingram Point	147.65	8	PKP2	PKPbc	12 58 15.0	-1.1			
VIPM	Ingram Point	147.65	8	P	PKPbc	12 58 15.0	-1.1			
MCMT	McKenzie Canyo	147.66	357	*e*PKPbc	PKPbc	12 58 15.1	-1.1			
MCMT				P	PKPdf	12 58 15.3	+1.8			
H16A	Russell Place,	147.68	355	⇓PKPdf	PKPdf	12 58 14.4	+0.9			
	baz=148									
YMR	Madison River	147.69	355	*e*PKPbc	PKPbc	12 58 16.2	-0.1			
I22A	9 Mile Ranch,	147.82	349	⇓PKPdf	PKPdf	12 58 14.1	+0.4			
	baz=148									
H15A	Lima	147.86	357	⇑PKPdf	PKPdf	12 58 14.5	+0.7			
	baz=148									
H14A	Leadore	147.89	358	⇓PKPdf	PKPdf	12 58 14.6	+0.8			
	baz=148									
K27A	Flueckinger Fa	147.90	342	⇓PKPdf	PKPdf	12 58 14.6	+0.8			
	baz=148									
H17A	Grant Village	147.93	354	⇑PKPdf	PKPdf	12 58 15.1	+1.2			
	baz=148									
J24A	Dixon Ranch, L	147.97	346	⇓PKPdf	PKPdf	12 58 14.3	+0.4			
	baz=148									
H13A	Challis	147.97	359	⇓PKPdf	PKPdf	12 58 14.3	+0.4			
	baz=148									
H12A	Diamond D Ranc	147.99	360	⇓PKPdf	PKPdf	12 58 14.5	+0.5			
	baz=148									
I21A	Big Trails, Te	148.05	350	⇓PKPdf	PKPdf	12 58 14.5	+0.4			
	baz=148									
I20A	Worland	148.05	351	⇓PKPdf	PKPdf	12 58 14.9	+0.8			
	baz=148									
OXF	Oxford	148.09	318	*e*PKP2	PKPbc	12 58 16.4	-1.0			
OXF				MLR	MLR					
	comp=Z,570nm,19.0s									
OXF	Oxford	148.09	318	*e*PKPbc	PKPbc	12 58 16.4	-1.0			
OXF				LR	LR					
	comp=Z,570nm,19.0s									
I19A	Meeteetse	148.10	352	⇓PKPdf	PKPdf	12 58 13.9	-0.3			
	baz=148									
J23A	Dilts Ranch, B	148.10	347	⇑PKPdf	PKPdf	12 58 14.1	-0.1			
	baz=148									
K26A	Motz Farm, Whi	148.17	344	⇑PKPdf	PKPdf	12 58 13.8	-0.4			
	baz=148									
HBAR	Harrisburg	148.24	321	*e*PKPbc	PKPbc	12 58 18.7	+1.0			
J22A	Midwest	148.28	348	⇑PKPdf	PKPdf	12 58 14.4	-0.1			
	baz=148									
BRAL	Brewton	148.37	310	PFAKE		12 58 30.0	+8.7			
BRAL				LR	LR					
	comp=Z,879nm,22.0s									
I17A	Pilgrim Ck.	148.40	354	⇑PKPdf	PKPdf	12 58 13.7	-1.1			
	baz=148									
K25A	Mack Ranch, Ha	148.44	344	⇓PKPdf	PKPdf	12 58 14.7	0.0			
	baz=148									
IMW	Indian Meadow	148.46	355	*e*PKPbc	PKPbc	12 58 17.4	-1.0			
I15A	Monteview	148.47	357	⇑PKPdf	PKPdf	12 58 15.0	+0.3			
	baz=148									
L27A	T5 Ranch, Ells	148.49	342	⇑PKPdf	PKPdf	12 58 13.6	-1.2			
	baz=148									
I16A	Newdale	148.53	355	⇓PKPdf	PKPdf	12 58 14.0	-0.9			
	baz=148									
J21A	Lysite	148.53	350	⇑PKPdf	PKPdf	12 58 15.1	+0.2			
	baz=148									
I18A	Diamond G Ranc	148.53	353	⇑PKPdf	PKPdf	12 58 15.0	0.0			
	baz=148									
KEBM	Edson Butte	148.57	13	*e*PKPbc	PKPbc	12 58 19.9	+1.4			
K24A	Anderson Ranch	148.58	346	⇓PKPdf	PKPdf	12 58 14.3	-0.6			
	baz=148									
I14A	Mackay	148.58	358	⇑PKPdf	PKPdf	12 58 14.7	-0.3			
	baz=148									
MOOW	Moose Ponds	148.59	354	*e*PKPbc	PKPbc	12 58 17.9	-0.8			
I13A	Wildhorse Cree	148.62	359	⇓PKPdf	PKPdf	12 58 15.3	+0.2			
	baz=148									
J20A	Shoshoni	148.63	350	⇑PKPdf	PKPdf	12 58 15.2	+0.1			
	baz=148									
LOHW	Long Hollow	148.71	354	*e*PKPbc	PKPdf	12 58 17.1	+1.9			
K23A	Bowen Ranch, D	148.73	347	⇑PKPdf	PKPdf	12 58 15.2

comp=Z,587nm,20.0s
WVOR Wild Horse Val 149.92 6 *e*PKPdf **PKPdf** 12 58 18.9 +1.9
WVOR *e*PKPbc **PKiKP** 12 58 22.8 -0.1
WVOR *e*PKPab **PKPab** 12 58 27.7 +0.3
WVOR LR LR
comp=Z,587nm,20.0s
KRMB Red Mountain 149.95 14 *e*PKPbc **PKPbc** 12 58 23.6 +1.5
KRMB *e*PKPab **PKPab** 12 58 27.4 -0.2
M23A Laramie 149.98 346 ⇑PKPdf **PKPdf** 12 58 17.2 -0.2
baz=150
L20A Wamsutter 149.98 350 ⇑PKPdf **PKPdf** 12 58 17.4 +0.1
baz=150
YBH Yreka Blue Hor 150.01 12 *e*PKPbc **PKPbc** 12 58 21.1 -1.0
YBH *e*PKPab **PKPab** 12 58 26.6 -1.1
L19A Farson 150.05 352 ⇑PKPdf **PKPdf** 12 58 17.9 +0.5
baz=150
PHWY Pilot Hill 150.07 346 *e*PKPbc **PKPbc** 12 58 21.1 -1.5
PHWY *e*PKPab **PKPab** 12 58 27.6 -0.7
N25A Grover 150.18 343 ⇑PKPdf **PKPdf** 12 58 17.6 0.0
baz=150
M21A Separation Pea 150.20 349 ⇑PKPdf **PKPdf** 12 58 17.3 -0.4
baz=150
VBMS Vicksburg 150.20 315 PFAKE 12 58 30.0 +1.3
VBMS LR LR
comp=Z,697nm,20.0s
M22A Cedar Creek Ra 150.24 347 ⇑PKPdf **PKPdf** 12 58 17.5 -0.3
baz=150
MOD Modoc 150.25 8 *e*PKPdf **PKPdf** 12 58 19.5 +1.9
MOD *e*PKPbc **PKPbc** 12 58 22.6 -0.2
MOD *e*PKPab **PKPab** 12 58 28.6 -0.2
O27A Beecher Island 150.26 341 ⇓PKPdf **PKPdf** 12 58 18.1 +0.5
baz=150
L18A Fontenelle, Gr 150.31 353 ⇑PKPdf **PKPdf** 12 58 18.2 +0.4
baz=150
N24A Carr 150.38 345 ⇑PKPdf **PKPdf** 12 58 18.3 +0.4
baz=150
M20A Sweetwater, Wa 150.46 350 ⇑PKPdf **PKPdf** 12 58 18.2 +0.1
baz=150
O26A Horse Wrangler 150.48 342 ⇑PKPdf **PKPdf** 12 58 18.2 +0.2
baz=150
N23A Red Feather La 150.58 346 ⇑PKPdf **PKPdf** 12 58 18.2 -0.1
baz=150
JTS JuntasAbangare 150.60 269 PFAKE 12 58 30.0 -1.0
JTS LR LR
comp=Z,2µm,20.0s
M19A Rock Springs 150.60 351 ⇑PKPdf **PKPdf** 12 58 18.3 0.0
baz=150
KHMM Horse Mountain 150.61 14 *e*PKPbc **PKPbc** 12 58 24.4 +0.8
KHMM *e*PKPab **PKPab** 12 58 29.6 -0.7
MIAR Mount Ida 150.69 322 *e*PKIKP **PKPdf** 12 58 19.3 +0.9
MIAR *e* 12 58 23.5
MIAR *e* 12 58 29.7
MIAR MLR MLR
comp=Z,663nm,19.0s
MIAR Mount Ida 150.69 322 *e*PKPdf **PKPdf** 12 58 19.3 +0.9
MIAR *e*PKPbc **PKPbc** 12 58 23.5 -0.4
MIAR *e*PKPab **PKPab** 12 58 29.7 -1.0
MIAR LR LR
comp=Z,663nm,19.0s
HVU Hansel Valley 150.70 357 *e*PKIKP **PKPbc** 12 58 24.0 +0.1
HVU Hansel Valley 150.70 357 *e*PKPbc **PKPbc** 12 58 23.9 +0.1
N22A Wattenberg Ran 150.78 347 ⇑PKPdf **PKPdf** 12 58 18.6 -0.1
baz=151
HWUT Hardware Ranch 150.78 355 *e*PKPdf **PKPdf** 12 58 18.7 +0.2
HWUT *e*PKPbc **PKPbc** 12 58 23.9 -0.2
HWUT *e*PKPab **PKPab** 12 58 30.1 -0.9
HWUT LR LR
comp=Z,594nm,21.0s
M18A Lyman 150.80 353 ⇑PKPdf **PKPdf** 12 58 18.2 -0.4
baz=151
M17A Scullys Gap (B 150.83 354 ⇓PKPdf **PKPdf** 12 58 18.4 -0.3
baz=151
O25A Wiggins 150.84 343 ⇑PKPdf **PKPdf** 12 58 18.3 -0.3
baz=151
P27A Ficken Ranch, 150.87 340 ⇑PKPdf **PKPdf** 12 58 17.9 -0.7
baz=151
TUL1 Tulsa 150.96 327 ⇑PKPdf **PKPdf** 12 58 17.9 -0.9
baz=151
N21A Black Mountain 151.04 348 ⇑PKPdf **PKPdf** 12 58 17.7 -1.3
baz=151
O24A Longmont 151.09 344 ⇑PKPdf **PKPdf** 12 58 18.7 -0.4
baz=151
N20A Spence Gulch, 151.11 350 ⇓PKPdf **PKPdf** 12 58 18.6 -0.6
baz=151
P26A Davis Ranch, A 151.11 341 ⇑PKPdf **PKPdf** 12 58 19.2 +0.1
baz=151
R30A Dighton 151.15 336 ⇑PKPdf **PKPdf** 12 58 18.6 -0.4
baz=151
O23A Lake Granby, G 151.22 346 ⇑PKPdf **PKPdf** 12 58 18.6 -0.8
baz=151
R29A Marienthal 151.36 337 ⇓PKPdf **PKPdf** 12 58 18.8 -0.6
baz=151
KSCO Kaye Shedlock' 151.38 340 ⇑PKPdf **PKPdf** 12 58 18.9 -0.6
baz=151
S31A Mullinville 151.38 334 ⇓PKPdf **PKPdf** 12 58 19.0 -0.4
baz=151
P25A Willow Gulch B 151.41 343 ⇓PKPdf **PKPdf** 12 58 19.0 -0.5
baz=151
O22A Kremmling 151.41 347 ⇓PKPdf **PKPdf** 12 58 19.0 -0.7
baz=151
ISCO Idaho Springs 151.53 345 *e*PKIKP **PKPdf** 12 58 21.1 +1.2
ISCO *e* 12 58 25.7
ISCO *e* 12 58 33.6
ISCO MLR MLR
comp=Z,648nm,20.0s
ISCO Idaho Springs 151.53 345 *e*PKPdf **PKPdf** 12 58 21.1 +1.2
ISCO *e*PKPbc **PKPbc** 12 58 25.6 -0.4
ISCO *e*PKPab **PKPab** 12 58 33.6 -0.7
ISCO LR LR
comp=Z,648nm,20.0s
ISCO Idaho Springs 151.53 345 ⇓PKPdf **PKPdf** 12 58 19.2 -0.7
baz=151
O21A Pagoda 151.56 348 ⇑PKPdf **PKPdf** 12 58 19.2 -0.6
baz=152
P24A Kohler Place, 151.61 344 ⇓PKPdf **PKPdf** 12 58 19.5 -0.4
baz=152
KIPM Iron Peak 151.68 14 *e*PKPbc **PKPbc** 12 58 28.3 +2.1
R28A Tribune 151.69 338 ⇑PKPdf **PKPdf** 12 58 19.8 -0.1
baz=152
Q26A Hugo 151.75 341 ⇑PKPdf **PKPdf** 12 58 19.7 -0.4
baz=152
JLU Jordanelle 151.77 354 *e*PKPdf **PKPdf** 12 58 21.9 +1.8
JLU *e*PKPbc **PKPbc** 12 58 25.9 -0.6
JLU *e*PKPab **PKPab** 12 58 34.9 -0.4
KCPM Cahto Peak 151.78 14 *e*PKPdf **PKPdf** 12 58 20.1 +0.1
KCPM *e*PKPbc **PKPbc** 12 58 24.9 -1.4
KCPM *e*PKPab **PKPab** 12 58 35.4 +0.3
S30A Montezuma 151.78 335 ⇓PKPdf **PKPdf** 12 58 18.8 -1.2
baz=152
O19A Miners Draw (B 151.78 351 ⇓PKPdf **PKPdf** 12 58 19.1 -1.0
baz=152
O20A White River Ci 151.79 349 ⇑PKPdf **PKPdf** 12 58 20.2 +0.1
baz=152
ELK Elko 151.79 1 *e*PKPdf **PKPdf** 12 58 21.9 +1.8
ELK *e*PKPbc **PKPbc** 12 58 26.6 +0.1
T31A Randall Ranch, 151.90 334 ⇓PKPdf **PKPdf** 12 58 20.5 +0.3
baz=152
DAU Daniels Canyon 151.94 354 *e*PKIKP **PKPdf** 12 58 20.5 0.0
DAU *e* 12 58 28.8
DAU Daniels Canyon 151.94 354 *e*PKPdf **PKPdf** 12 58 20.5 0.0
DAU *e*PKPbc **PKiKP** 12 58 28.8 +1.5
DAU *e*PKPab **PKPab** 12 58 35.9 -0.1
Q25A Bedland, Calha 151.98 342 ⇓PKPdf **PKPdf** 12 58 20.8 +0.3
baz=152
P23A Jefferson 151.99 345 ⇓PKPdf **PKPdf** 12 58 21.1 +0.5
baz=152
P22A Eagle 152.00 347 ⇑PKPdf **PKPdf** 12 58 21.0 +0.5
baz=152
BMN Battle Mountai 152.03 4 *e*PKIKP **PKPdf** 12 58 21.6 +1.2
BMN *e* 12 58 26.3
BMN MLR MLR
comp=Z,534nm,20.0s
BMN Battle Mountai 152.03 4 *e*PKPdf **PKPdf** 12 58 21.6 +1.2
BMN *e*PKPbc **PKPbc** 12 58 26.3 -0.7
BMN *e*PKPab **PKPab** 12 58 36.3 +0.1
BMN LR LR
comp=Z,534nm,20.0s
S29A Ulysses 152.06 336 ⇑PKPdf **PKPdf** 12 58 19.6 -0.8
baz=152
R27A Eads 152.09 339 ⇓PKPdf **PKPdf** 12 58 20.3 -0.2
baz=152
Q24A Divide 152.19 344 ⇑PKPdf **PKPdf** 12 58 20.4 -0.5
baz=152
P21A Newcastle 152.22 348 ⇓PKPdf **PKPdf** 12 58 19.7 -1.1
baz=152

BEKR Beckworth 152.24 9 *e*PKPbc **PKPbc** 12 58 28.7 +1.2
DUG Dugway 152.28 357 *e*PKIKP **PKPbc** 12 58 28.9 +1.4
DUG *e* 12 58 36.0
DUG MLR MLR
comp=Z,516nm,20.0s
DUG Dugway 152.28 357 *e*PKPbc **PKPbc** 12 58 28.9 +1.4
DUG *e*PKPab **PKPab** 12 58 36.0 -1.2
DUG LR LR
comp=Z,516nm,20.0s
DUG Dugway 152.28 357 ⇓PKPdf **PKPdf** 12 58 20.9 +0.1
baz=152
R26A Arlington 152.29 340 ⇑PKPdf **PKPdf** 12 58 21.0 +0.1
baz=152
T30A Plains 152.30 335 ⇑PKPdf **PKPdf** 12 58 20.2 -0.6
baz=152
MPU Maple Canyon 152.37 355 *e*PKPdf **PKPdf** 12 58 21.9 +0.9
MPU *e*PKPbc **PKiKP** 12 58 28.2 +0.1
S28A Manter 152.38 337 ⇓PKPdf **PKPdf** 12 58 21.0 0.0
baz=152
P19A Cripple Cowboy 152.40 350 ⇓PKPdf **PKPdf** 12 58 20.8 -0.4
baz=152
P20A De Beque 152.43 349 ⇓PKPdf **PKPdf** 12 58 20.4 -0.7
baz=152
Q23A Hartsel 152.43 345 ⇓PKPdf **PKPdf** 12 58 20.8 -0.5
baz=152
SMCO Snowmass 152.45 347 *e*PKPdf **PKPdf** 12 58 22.9 +1.5
SMCO *e*PKPbc **PKiKP** 12 58 29.1 +0.5
SMCO *e*PKPab **PKPab** 12 58 38.2 -0.2
T29A Hugoton 152.53 336 ⇑PKPdf **PKPdf** 12 58 21.3 +0.2
baz=152
HOPS Hopland 152.56 14 *e*PKPbc **PKPbc** 12 58 27.3 -0.7
U31A Nine Bar Ranch 152.59 333 ⇑PKPdf **PKPdf** 12 58 20.4 -0.8
baz=152
P18A Preston Nutter 152.60 352 ⇓PKPdf **PKPdf** 12 58 21.3 -0.2
baz=152
S27A Las Animas 152.66 339 ⇓PKPdf **PKPdf** 12 58 21.5 +0.1
baz=153
R25A Fountain Ranch 152.70 342 ⇑PKPdf **PKPdf** 12 58 20.8 -0.7
baz=153
Q22A Crested Butte, 152.74 346 ⇑PKPdf **PKPdf** 12 58 21.4 -0.4
baz=153
U30A WK&E Inc. Balk 152.80 334 ⇑PKPdf **PKPdf** 12 58 21.5 -0.1
baz=153
P17A Butcher Ranch, 152.81 353 ⇑PKPdf **PKPdf** 12 58 20.9 -0.8
baz=153
R24A Sanders Place, 152.87 343 ⇑PKPdf **PKPdf** 12 58 20.8 -1.0
baz=153
T28A Walsh 152.88 337 ⇑PKPdf **PKPdf** 12 58 21.1 -0.6
baz=153
WCN Washoe City 152.88 8 *e*PKIKP **PKPdf** 12 58 21.9 +0.2
WCN *e* 12 58 28.3
WCN Washoe City 152.88 8 *e*PKPdf **PKPdf** 12 58 21.9 +0.2
WCN *e*PKPbc **PKPbc** 12 58 28.3 -0.6
WCN *e*PKPab **PKPab** 12 58 39.8 -0.1
Q21A Lamborn Mesa, 152.91 347 ⇑PKPdf **PKPdf** 12 58 21.3 -0.6
baz=153
S26A Kim 152.91 340 ⇓PKPdf **PKPdf** 12 58 21.3 -0.5
baz=153
Q20A Ridgley Place, 152.94 349 ⇑PKPdf **PKPdf** 12 58 21.4 -0.4
baz=153
V31A Spring Creek L 153.08 332 ⇑PKPdf **PKPdf** 12 58 22.3 +0.3
baz=153
TGUH Tegucigalpa,Un 153.09 277 *e*PKPdf **PKPdf** 12 58 22.1 -0.4
TGUH *e*PKPbc **PKiKP** 12 58 30.3 +0.4
TGUH *e*PKPab **PKPab** 12 58 40.6 -0.6
TGUH LR LR
comp=Z,834nm,21.0s
R23A Moffat 153.10 344 ⇓PKPdf **PKPdf** 12 58 21.4 -0.8
baz=153
U29A Oasis Ranch, S 153.12 335 ⇓PKPdf **PKPdf** 12 58 21.5 -0.6
baz=153
T27A Campo 153.15 338 ⇑PKPdf **PKPdf** 12 58 21.6 -0.5
baz=153
S25A Robets Cordova 153.19 341 ⇑PKPdf **PKPdf** 12 58 21.7 -0.6
baz=153
NATX Nacogdoches 153.24 319 PFAKE 12 58 30.0 +0.3
NATX LR LR
comp=Z,743nm,22.0s
R22A Saguache, Gunn 153.30 346 ⇑PKPdf **PKPdf** 12 58 22.0 -0.6
baz=153
R21A Cimarron 153.35 347 ⇓PKPdf **PKPdf** 12 58 22.6 +0.1
baz=153
TEIG Tepich 153.35 290 PFAKE 12 58 30.0 -0.3
TEIG LR LR
comp=Z,543nm,22.0s
T26A Comanche Natio 153.36 340 ⇓PKPdf **PKPdf** 12 58 21.3 -1.2
baz=153
Q16A Castle Valley 153.41 354 ⇓PKPdf **PKPdf** 12 58 21.7 -0.8
baz=153
WMOK Wichita Mounta 153.41 329 PFAKE 12 58 30.0 -0.1
WMOK LR LR
comp=Z,764nm,20.0s
SDCO Great Sand Dun 153.43 343 *e*PKPdf **PKPdf** 12 58 23.8 +1.1
SDCO *e*PKPbc **PKiKP** 12 58 31.8 +1.3
SDCO *e*PKPab **PKPab** 12 58 42.6 +0.2
SDCO LR LR
comp=Z,585nm,20.0s
S24A Houchin Ranch, 153.44 343 ⇑PKPdf **PKPdf** 12 58 21.4 -1.4
baz=153
V30A Spur Ranch, Mi 153.47 334 ⇓PKPdf **PKPdf** 12 58 21.1 -1.5
baz=153
U28A Mallet 153.57 337 ⇓PKPdf **PKPdf** 12 58 21.2 -1.5
baz=154
S23A Nye Farm, Mont 153.60 344 ⇑PKPdf **PKPdf** 12 58 23.3 +0.3
baz=154
W31A Holland Ranch, 153.61 332 ⇑PKPdf **PKPdf** 12 58 22.7 -0.1
baz=154
T25A Trinidad 153.66 341 ⇑PKPdf **PKPdf** 12 58 21.7 -1.3
baz=154
R20A Redvale 153.70 348 ⇑PKPdf **PKPdf** 12 58 22.5 -0.5
baz=154
V29A Stinnett 153.72 335 ⇑PKPdf **PKPdf** 12 58 22.2 -0.8
baz=154
U27A Thompson Grove 153.76 338 ⇑PKPdf **PKPdf** 12 58 23.0 -0.1
baz=154
S22A 4UR Ranch, Cre 153.78 345 ⇑PKPdf **PKPdf** 12 58 23.0 -0.3
baz=154
PV01 Paradox Valley 153.79 349 *e*PKPdf **PKPdf** 12 58 24.5 +1.3
W30A Crocket Farms 153.90 333 ⇑PKPdf **PKPdf** 12 58 23.0 -0.3
baz=154
MSU Marysvale 153.91 355 *e*PKIKP **PKPdf** 12 58 25.6 +2.2
MSU Marysvale 153.91 355 *e*P **PKPdf** 12 58 25.6 +2.2
MVU Marysvale 153.92 355 PFAKE 12 58 30.0 -1.3
MVU LR LR
comp=Z,555nm,21.0s
T24A Torres, Weston 153.92 342 ⇑PKPdf **PKPdf** 12 58 23.3 -0.1
baz=154
NVAR Mina Array Bea 153.92 6 PKP **PKPdf** 12 58 23.4 +0.1
NVAR PKPbc **PKiKP** 12 58 32.3 +0.9
NVAR PP **PP** 13 02 22.0 +4.5
NVAR Mina Array Bea 153.92 6 PKP **PKPdf** 12 58 23.4 +0.1
comp=Z,12nm,1.1s,baz=247,slow=2.3,SNR=21
NVAR PKPbc **PKiKP** 12 58 32.3 +0.9
comp=Z,26nm,1.0s,baz=329,slow=1.1,SNR=37
NVAR PP **PP** 13 02 22.0 +4.5
comp=Z,6.5nm,1.2s,baz=303,slow=3.7,SNR=6.8
S20A Disappointment 154.04 348 ⇓PKPdf **PKPdf** 12 58 23.3 -0.3
baz=154
S21A Coal Bank Pass 154.08 347 ⇓PKPdf **PKPdf** 12 58 23.2 -0.5
baz=154
X31A McDonald Ranch 154.08 331 ⇑PKPdf **PKPdf** 12 58 23.0 -0.5
baz=154
U26A Atchley Ranch, 154.12 339 ⇓PKPdf **PKPdf** 12 58 23.0 -0.7
baz=154
V28A Channing 154.12 336 ⇑PKPdf **PKPdf** 12 58 21.9 -1.7
baz=154
R11A Troy Canyon, C 154.18 1 ⇓PKPdf **PKPdf** 12 58 23.3 -0.3
baz=154
T23A Casias Ranch, 154.24 344 ⇓PKPdf **PKPdf** 12 58 24.2 +0.3
baz=154
Y32A R-V Farms, Ver 154.33 329 ⇑PKPdf **PKPdf** 12 58 23.4 -0.3
baz=154
U25A Circle Dot Ran 154.34 340 ⇑PKPdf **PKPdf** 12 58 23.4 -0.5
baz=154
V27A Dan Oppiter Fa 154.35 337 ⇓PKPdf **PKPdf** 12 58 23.6 -0.3
baz=154
TPH Tonopah 154.37 4 PFAKE 12 58 40.0 -6.2
TPH LR LR
comp=Z,674nm,22.0s
W29A Amraillo 154.42 334 ⇓PKPdf **PKPdf** 12 58 23.7 -0.3
baz=154
S18A Hurst Farm, Bl 154.47 351 ⇑PKPdf **PKPdf** 12 58 24.0 -0.2
baz=154
T22A Edith 154.49 345 ⇓PKPdf **PKPdf** 12 58 24.0 -0.2
baz=154
W28A Vega 154.54 335 ⇓PKPdf **PKPdf** 12 58 24.1 -0.1
baz=154

U24A Moreno Valley 154.60 342 ⇓PKPdf **PKPdf** 12 58 23.6 -0.9
baz=154
AMTX Amarillo 154.64 334 PFAKE 12 58 40.0 +7.2
AMTX LR LR
comp=Z,852nm,20.0s
MLAC Mammoth Lakes 154.65 7 ⇓PKPdf **PKPdf** 12 58 23.7 -0.7
baz=155
X30A Coker Ranch, T 154.65 332 ⇓PKPdf **PKPdf** 12 58 24.1 -0.1
baz=155
MVCO Mesa Verde 154.67 348 *e*PKPdf **PKPdf** 12 58 25.0 +0.6
MVCO LR LR
comp=Z,484nm,22.0s
MVCO Mesa Verde 154.67 348 ⇓PKPdf **PKPdf** 12 58 24.1 -0.3
baz=155
T21A Navajo Lake 154.67 346 ⇑PKPdf **PKPdf** 12 58 23.9 -0.5
baz=155
V26A Tequesquite Ra 154.67 339 ⇓PKPdf **PKPdf** 12 58 23.9 -0.5
baz=155
ARUT Antelope Range 154.71 357 *e*PKIKP **PKPdf** 12 58 25.3 +0.9
ARUT *e* 12 58 30.8
ARUT Antelope Range 154.71 357 *e*PKPdf **PKPdf** 12 58 25.3 +0.9
ARUT *e*PKPbc **PKPbc** 12 58 30.8 -2.2
Y31A Rekieta Farm, 154.76 331 ⇓PKPdf **PKPdf** 12 58 24.0 -0.4
baz=155
WHTX Lake Whitney 154.79 323 ⇓PKPdf **PKPdf** 12 58 24.1 -0.4
baz=155
Z32A Haskell 154.90 328 ⇑PKPdf **PKPdf** 12 58 24.2 -0.4
baz=155
V25A Rancho No Teng 154.92 340 ⇓PKPdf **PKPdf** 12 58 24.2 -0.5
baz=155
CCUT Cedar City 154.94 357 *e*P **PKPdf** 12 58 27.4 +2.5
U23A El Rito 154.95 343 ⇑PKPdf **PKPdf** 12 58 24.9 +0.1
baz=155
X29A Tulia 155.02 334 ⇓PKPdf **PKPdf** 12 58 24.5 -0.3
baz=155
W27A Bowe Ranch, En 155.05 337 ⇓PKPdf **PKPdf** 12 58 24.4 -0.5
baz=155
U22A Llaves 155.08 345 ⇑PKPdf **PKPdf** 12 58 23.2 -1.8
baz=155
Y30A Stafford Cattl 155.13 331 ⇑PKPdf **PKPdf** 12 58 24.3 -0.7
baz=155
X28A Dimmitt 155.17 334 ⇑PKPdf **PKPdf** 12 58 25.1 0.0
baz=155
HKT Hockley 155.18 318 *e*PKIKP **PKPdf** 12 58 27.1 +2.2
HKT Hockley 155.18 318 *e*PKPdf **PKPdf** 12 58 27.1 +2.2
Z31A Sharp Cattle R 155.23 329 ⇓PKPdf **PKPdf** 12 58 25.0 0.0
baz=155
V24A Rampart Ranch, 155.23 341 ⇑PKPdf **PKPdf** 12 58 24.4 -0.8
baz=155
U21A Nageezi 155.23 346 ⇓PKPdf **PKPdf** 12 58 25.7 +0.4
baz=155
TIN Tinemaha 155.29 6 ⇓PKPdf **PKPdf** 12 58 24.9 -0.3
baz=155
W26A Owens Ranch, T 155.29 338 ⇑PKPdf **PKPdf** 12 58 24.9 -0.3
baz=155
W25A X Bar L Ranch, 155.43 339 ⇓PKPdf **PKPdf** 12 58 25.8 +0.4
baz=155
GRAC Grapevine Rang 155.43 5 ⇓PKPdf **PKPdf** 12 58 25.2 0.0
baz=155
X27A F and S Farms, 155.43 336 ⇓PKPdf **PKPdf** 12 58 25.1 -0.4
baz=155
U20A Newcomb 155.47 348 ⇑PKPdf **PKPdf** 12 58 24.9 -0.6
baz=155
V23A Ortiz Mt. (NFS 155.49 343 ⇑PKPdf **PKPdf** 12 58 25.6 +0.1
baz=155
Y29A Porterfield Fa 155.50 333 ⇑PKPdf **PKPdf** 12 58 25.5 +0.1
baz=155
ABTX Abilene, Hawle 155.52 328 ⇓PKPdf **PKPdf** 12 58 25.3 -0.1
baz=156
V22A San Miguel Ran 155.53 344 ⇑PKPdf **PKPdf** 12 58 26.1 +0.4
baz=155
Y28A McKinney Farm, 155.71 334 ⇓PKPdf **PKPdf** 12 58 25.5 -0.3
baz=156
Z30A Sanderson Ranc 155.73 331 ⇑PKPdf **PKPdf** 12 58 25.5 -0.3
baz=156
W24A Lazy 6 Ranch, 155.75 341 ⇓PKPdf **PKPdf** 12 58 25.5 -0.4
baz=156
X26A CR and CF Fran 155.79 337 ⇓PKPdf **PKPdf** 12 58 25.8 -0.1
baz=156
V21A Milan 155.82 346 ⇓PKPdf **PKPdf** 12 58 26.1 0.0
baz=156
131A Roby 155.87 329 ⇓PKPdf **PKPdf** 12 58 26.0 +0.1
baz=156
MSTX Muleshoe 155.88 335 ⇓PKPdf **PKPdf** 12 58 26.2 +0.2
baz=156
RCTC Reactor Farmer 155.89 9 ⇓PKPdf **PKPdf** 12 58 25.0 -0.8
baz=156
CWC Cottonwood Cre 155.91 6 ⇑PKPdf **PKPdf** 12 58 26.8 +0.8
baz=156
U15A North Rim 155.99 355 ⇓PKPdf **PKPdf** 12 58 26.8 +0.5
baz=156
FURC Furnace Creek, 155.99 4 ⇓PKPdf **PKPdf** 12 58 26.6 +0.7
baz=156
V20A Brimhall 156.02 347 ⇑PKPdf **PKPdf** 12 58 26.6 +0.3
baz=156
Z29A Hungry Hill Ra 156.02 332 ⇓PKPdf **PKPdf** 12 58 26.2 0.0
baz=156
W23A Werner Place, 156.02 342 ⇑PKPdf **PKPdf** 12 58 26.5 +0.2
baz=156
232A Coleman 156.10 327 ⇑PKPdf **PKPdf** 12 58 26.6 +0.3
baz=156
X25A Clemmons Ranch 156.12 339 ⇑PKPdf **PKPdf** 12 58 27.1 +0.7
baz=156
Y27A Causey 156.12 335 ⇓PKPdf **PKPdf** 12 58 27.0 +0.6
baz=156
DAC Darwin (Calif) 156.12 5 PFAKE 12 58 40.0 +14
DAC LR LR
comp=Z,677nm,19.0s
130A Snyder 156.21 330 ⇓PKPdf **PKPdf** 12 58 26.6 +0.2
baz=156
Z28A Tucker Farm, M 156.30 333 ⇑PKPdf **PKPdf** 12 58 27.5 +0.9
baz=156
W22A Albuquerque 156.31 343 ⇑PKPdf **PKPdf** 12 58 26.6 -0.1
baz=156
ANMO Albuquerque 156.31 343 *e*PKPdf **PKPdf** 12 58 28.6 +2.0
ANMO LR LR
comp=Z,795nm,21.0s
Y26A Elida 156.35 337 ⇓PKPdf **PKPdf** 12 58 27.3 +0.6
baz=156
MPMC Manual Prospec 156.35 5 ⇑PKPdf **PKPdf** 12 58 27.8 +1.1
baz=156
X24A Lazy VL Ranch, 156.35 340 ⇓PKPdf **PKPdf** 12 58 27.4 +0.7
baz=156
VES Vestal, Richgr 156.38 9 ⇑PKPdf **PKPdf** 12 58 27.2 +0.8
baz=156
231A Bronte 156.41 328 ⇓PKPdf **PKPdf** 12 58 27.3 +0.6
baz=156
W21A San Fidel 156.48 345 ⇓PKPdf **PKPdf** 12 58 27.3 +0.4
baz=156
332A Millersview 156.54 326 ⇓PKPdf **PKPdf** 12 58 26.4 -0.4
baz=156
X23A Hourglass Bar 156.57 342 ⇑PKPdf **PKPdf** 12 58 27.5 +0.4
baz=156
SHOC Shoshone 156.59 3 ⇓PKPdf **PKPdf** 12 58 27.0 +0.2
baz=156
129A Stewart Farms, 156.62 331 ⇓PKPdf **PKPdf** 12 58 26.4 -0.6
baz=157
Z27A Tatum 156.63 335 ⇓PKPdf **PKPdf** 12 58 27.0 0.0
baz=157
ISA Isabella 156.64 7 ⇑PKPdf **PKPdf** 12 58 27.7 +0.8
baz=156
W20A Ramah 156.67 347 ⇑PKPdf **PKPdf** 12 58 27.8 +0.6
baz=157
Y25A Mesa, Roswell 156.67 338 ⇑PKPdf **PKPdf** 12 58 27.2 +0.1
baz=157
SMMC Simmler 156.75 11 ⇓PKPdf **PKPdf** 12 58 25.9 -1.1
baz=157
WUAZ Wupatki 156.79 353 *e*PKPdf **PKPdf** 12 58 27.1 -0.1
WUAZ LR LR
comp=Z,668nm,20.0s
WUAZ Wupatki 156.79 353 ⇓PKPdf **PKPdf** 12 58 28.0 +0.7
baz=157
230A Sterling City 156.86 329 ⇓PKPdf **PKPdf** 12 58 27.5 +0.2
baz=157
X22A Bernardo 156.88 343 ⇓PKPdf **PKPdf** 12 58 29.0 +1.6
baz=157
LRMC Laurel Mountai 156.91 6 ⇑PKPdf **PKPdf** 12 58 27.9 +0.6
baz=157
128A Castleberry Fa 156.91 333 ⇓PKPdf **PKPdf** 12 58 27.7 +0.3
baz=157
W18A Petrified Fore 156.93 349 ⇑PKPdf **PKPdf** 12 58 28.3 +0.8
baz=157
Y24A Capitan 156.93 340 ⇑PKPdf **PKPdf** 12 58 28.1 +0.5
baz=157
432A Menard 156.95 325 ⇓PKPdf **PKPdf** 12 58 26.8 -0.6
baz=157
331A San Angelo 156.96 327 ⇓PKPdf **PKPdf** 12 58 27.7 +0.3
baz=157

Z26A	**Caprock** baz=157	156.98	336	⇓PKPdf	**PKPdf**	12 58 27.7	+0.3
LAZ	**Ladron**	157.02	343	*e*PKPdf	**PKPdf**	12 58 27.1	-0.5
TUQ	**Turquoise Moun** baz=157	157.07	2	⇑PKPdf	**PKPdf**	12 58 28.7	+1.2
BNM	**Barren Site**	157.11	342	*e*PKPdf	**PKPdf**	12 58 28.7	+1.0
ARVC	**Arvin** baz=157	157.12	8	⇑PKPdf	**PKPdf**	12 58 28.7	+1.2
Y23A	**Lovelace Mesa,** baz=157	157.13	341	⇓PKPdf	**PKPdf**	12 58 28.2	+0.4
229A	**Bryant Ranch,** baz=157	157.14	330	⇑PKPdf	**PKPdf**	12 58 27.7	0.0
X21A	**Alamocita Cree** baz=157	157.15	345	⇓PKPdf	**PKPdf**	12 58 28.8	+1.0
GSC	**Goldstone** baz=157	157.16	4	⇓PKPdf	**PKPdf**	12 58 29.0	+1.3
PKM	**Peak Mountain** baz=157	157.18	11	⇑PKPdf	**PKPdf**	12 58 28.6	+0.9
LENM	**Lemitar**	157.19	343	*e*PKPdf	**PKPdf**	12 58 29.5	+1.7
X20A	**Quemado** baz=157	157.23	346	⇑PKPdf	**PKPdf**	12 58 29.1	+1.1
127A	**Arkansas Junct** baz=157	157.25	334	⇓PKPdf	**PKPdf**	12 58 28.3	+0.5
JCT JCT	**Junction City** comp=Z,765nm,21.0s	157.25	325	*e*PKIKP MLR	**PKPdf** MLR	12 58 29.0	+1.2
JCT JCT	**Junction City** comp=Z,765nm,21.0s	157.25	325	*e*PKPdf LR	**PKPdf** LR	12 58 29.0	+1.2
JCT	**Junction City** baz=157	157.25	325	⇑PKPdf	**PKPdf**	12 58 28.2	+0.4
Z25A	**Roswell** baz=157	157.26	338	⇓PKPdf	**PKPdf**	12 58 28.7	+0.9
Y22D	**IRIS PASSCAL I** baz=157	157.26	343	⇑PKPdf	**PKPdf**	12 58 29.0	+1.1
330A	**Mertzon** baz=157	157.28	328	⇑PKPdf	**PKPdf**	12 58 28.1	+0.3
228A	**UT Block 9, Go** baz=157	157.38	332	⇓PKPdf	**PKPdf**	12 58 28.8	+0.8
Y22A	**Socorro** baz=157	157.41	343	⇑PKPdf	**PKPdf**	12 58 29.2	+1.1
W13A	**Hualapai Mount** baz=157	157.41	358	⇑PKPdf	**PKPdf**	12 58 29.6	+1.5
Z24A	**Sheeppen Canyo** baz=157	157.45	339	⇑PKPdf	**PKPdf**	12 58 29.1	+0.9
EDW2	**Edwards Air Fo** baz=157	157.47	7	⇓PKPdf	**PKPdf**	12 58 29.4	+1.4
Y21A	**Point of Rocks** baz=157	157.53	344	⇑PKPdf	**PKPdf**	12 58 29.3	+1.0
X18A	**Snowflake** baz=158	157.54	349	⇑PKPdf	**PKPdf**	12 58 29.7	+1.4
126A	**Clayton Basin,** baz=158	157.55	335	⇓PKPdf	**PKPdf**	12 58 28.2	0.0
431A	**Sonora** baz=158	157.55	326	⇓PKPdf	**PKPdf**	12 58 28.0	-0.2
RRX	**Edison Barstow** baz=158	157.56	5	⇓PKPdf	**PKPdf**	12 58 28.4	+0.3
532A	**Rocksprings** baz=158	157.58	324	⇓PKPdf	**PKPdf**	12 58 28.4	+0.1
329A	**Wagon Wheel Ra** baz=158	157.62	330	⇓PKPdf	**PKPdf**	12 58 28.4	+0.2
OSI	**Osito Adit** baz=158	157.63	8	⇑PKPdf	**PKPdf**	12 58 28.8	+0.6
SBC	**Santa Barbara** baz=158	157.65	11	⇓PKPdf	**PKPdf**	12 58 28.3	+0.3
HEC	**Hector Ludlow** baz=158	157.66	3	⇑PKPdf	**PKPdf**	12 58 29.5	+1.2
GMRC	**Granite Mounta** baz=158	157.73	2	⇓PKPdf	**PKPdf**	12 58 29.4	+1.0
NEE2	**Needles Airpor** baz=158	157.76	359	⇑PKPdf	**PKPdf**	12 58 29.0	+0.7
227A	**Bennet, Jal** baz=158	157.79	333	⇑PKPdf	**PKPdf**	12 58 29.0	+0.5
125A	**Gardner Draw,** baz=158	157.79	337	⇓PKPdf	**PKPdf**	12 58 28.8	+0.2
430A	**Baggett Ranch,** baz=158	157.80	328	⇓PKPdf	**PKPdf**	12 58 29.2	+0.6
Z23A	**Rita Site, Whi** baz=158	157.80	341	⇑PKPdf	**PKPdf**	12 58 29.9	+1.4
Y20A	**Horse Springs,** baz=158	157.81	346	⇑PKPdf	**PKPdf**	12 58 29.8	+1.1
X16A	**Lo Mia Camp, P** baz=158	157.88	352	⇑PKPdf	**PKPdf**	12 58 29.3	+0.6
531A	**Rocksprings** baz=158	157.91	325	⇑PKPdf	**PKPdf**	12 58 28.9	+0.3
632A	**Uvalde**	157.97	323	⇓PKPdf	**PKPdf**	12 58 29.5	+0.8
Z22A	**Elephant Butte** baz=158	158.04	342	⇑PKPdf	**PKPdf**	12 58 29.7	+0.8
DECC	**Green Verdugo** baz=158	158.05	8	⇓PKPdf	**PKPdf**	12 58 29.5	+0.8
124A	**Stringfield Ra** baz=158	158.05	338	⇓PKPdf	**PKPdf**	12 58 29.5	+0.5
GDL2	**Guadalupe Moun**	158.08	336	*e*PKPdf	**PKPdf**	12 58 30.8	+1.9
BLG	**Laguna Peak** baz=158	158.08	9	⇓PKPdf	**PKPdf**	12 58 29.4	+0.7
328A	**Wristen Ranch,** baz=158	158.10	331	⇑PKPdf	**PKPdf**	12 58 29.3	+0.4
226B	**Tecolote Peak,** baz=158	158.10	335	⇓PKPdf	**PKPdf**	12 58 29.3	+0.4
BFSC	**Mount Baldy Ra** baz=158	158.14	6	⇓PKPdf	**PKPdf**	12 58 29.7	+0.8
BBRC	**Big Bear Solar** baz=158	158.18	5	⇓PKPdf	**PKPdf**	12 58 29.9	+0.8
Z21A	**St. Cloud Mine** baz=158	158.19	344	⇓PKPdf	**PKPdf**	12 58 29.8	+0.6
PDMCI	**Parker Dam,Lak** baz=158	158.21	358	⇑PKPdf	**PKPdf**	12 58 29.7	+0.9
429A	**Davenport Ranc** baz=158	158.27	328	⇑PKPdf	**PKPdf**	12 58 29.6	+0.5
225A	**Deer Hill, Car** baz=158	158.34	336	⇓PKPdf	**PKPdf**	12 58 29.4	+0.2
530A	**J-C Ranch, Com** baz=158	158.36	327	⇓PKPdf	**PKPdf**	12 58 30.4	+1.2
IRM	**Iron Mountain** baz=158	158.36	1	⇓PKPdf	**PKPdf**	12 58 30.1	+1.0
123A	**Bell Site, Whi** baz=158	158.39	340	⇓PKPdf	**PKPdf**	12 58 29.1	-0.1
327A	**Balmorhea Ranc** baz=158	158.42	333	⇓PKPdf	**PKPdf**	12 58 30.1	+0.8
631A	**Perdido Creek** baz=158	158.50	324	⇑PKPdf	**PKPdf**	12 58 29.7	+0.3
BELC	**Belle Mtn. Jos** baz=158	158.50	3	⇓PKPdf	**PKPdf**	12 58 29.9	+0.5
Y14A	**Wickenburg** baz=158	158.52	356	⇑PKPdf	**PKPdf**	12 58 29.7	+0.4
122A	**Conniff Cattle** baz=158	158.57	342	⇑PKPdf	**PKPdf**	12 58 29.7	+0.2
FMP	**Fort Macarthur** baz=158	158.58	8	⇓PKPdf	**PKPdf**	12 58 28.8	-0.5
428A	**Kincaid Ranch,** baz=158	158.58	330	⇑PKPdf	**PKPdf**	12 58 29.3	-0.3
Z20A	**Nine Sixteen R** baz=158	158.62	345	⇑PKPdf	**PKPdf**	12 58 30.5	+1.0
224A	**Cornudas Mount** baz=159	158.64	338	⇓PKPdf	**PKPdf**	12 58 30.4	+0.8
732A	**Laxson Ranch,** baz=159	158.64	322	⇓PKPdf	**PKPdf**	12 58 29.6	+0.1
326A	**Caldwell Ranch** baz=159	158.68	334	⇑PKPdf	**PKPdf**	12 58 29.5	-0.1
Y12C	**Blythe** baz=159	158.77	359	⇓PKPdf	**PKPdf**	12 58 30.6	+1.1
MURC	**Murrieta** baz=159	158.81	5	⇑PKPdf	**PKPdf**	12 58 31.0	+1.4
427A	**Hayter Ranch,** baz=159	158.82	332	⇓PKPdf	**PKPdf**	12 58 30.7	+0.9
529A	**Stev Forest Ra** baz=159	158.84	328	⇑PKPdf	**PKPdf**	12 58 30.1	+0.3
BC3	**Big Chuckawall** baz=159	158.86	1	⇑PKPdf	**PKPdf**	12 58 30.8	+1.0
PFO PFO	**Pinyon Flat Ob** comp=Z,944nm,20.0s	158.86	4	*e*PKPdf LR	**PKPdf** LR	12 58 32.3	+2.5
PFO	**Pinyon Flat Ob** baz=159	158.86	4	⇓PKPdf	**PKPdf**	12 58 30.1	+0.3
CIS	**Catalina Islan** baz=159	158.87	8	⇑PKPdf	**PKPdf**	12 58 30.0	+0.3
MNTX MNTX	**Cornudas Mount** comp=Z,745nm,22.0s	158.92	337	*e*PKPdf LR	**PKPdf** LR	12 58 31.3	+1.5
121A	**Cookes Peak, D** baz=159	158.96	343	⇓PKPdf	**PKPdf**	12 58 30.9	+0.9
223A	**Chaparral, Ant** baz=159	159.02	340	⇑PKPdf	**PKPdf**	12 58 30.6	+0.6
325A	**Bean Ranch, Si** baz=159	159.05	336	⇑PKPdf	**PKPdf**	12 58 30.1	-0.1
Z14A	**Wintersburg** baz=159	159.08	355	⇑PKPdf	**PKPdf**	12 58 30.8	+0.9
528A	**Cox Ranch, San** baz=159	159.10	329	⇓PKPdf	**PKPdf**	12 58 30.5	+0.3
222A	**Williams Famil** baz=159	159.15	341	⇓PKPdf	**PKPdf**	12 58 31.3	+1.1
120A	**U Bar Ranch, L** baz=159	159.17	345	⇑PKPdf	**PKPdf**	12 58 31.6	+1.3
324A	**Moseley Ranch,** baz=159	159.19	337	⇓PKPdf	**PKPdf**	12 58 30.7	+0.4
426A	**McDonald Obser** baz=159	159.26	333	⇓PKPdf	**PKPdf**	12 58 30.6	+0.1
SCI	**San Clemente I** baz=159	159.26	9	⇑PKPdf	**PKPdf**	12 58 30.9	+0.8
221A	**Mesquite Ranch** baz=159	159.44	343	⇑PKPdf	**PKPdf**	12 58 31.4	+0.9
GLA	**Glamis**	159.47	360	*e*PKIKP	**PKPdf**	12 58 32.9	+2.5
GLA	**Glamis**	159.47	360	*e*PKPdf	**PKPdf**	12 58 32.9	+2.5
GLA	**Glamis** baz=159	159.47	360	⇑PKPdf	**PKPdf**	12 58 32.2	+1.7
527A	**Woodward Ranch** baz=159	159.51	331	⇑PKPdf	**PKPdf**	12 58 31.7	+1.0
109C	**Camp Elliot, M** baz=159	159.53	5	⇓PKPdf	**PKPdf**	12 58 31.6	+1.2
SWSC	**Sam W. Stewart** baz=160	159.56	2	⇑PKPdf	**PKPdf**	12 58 32.3	+1.8
425A	**Indio Mountain** baz=160	159.57	335	⇓PKPdf	**PKPdf**	12 58 31.4	+0.7
MONP	**Monument Peak** baz=160	159.58	4	⇓PKPdf	**PKPdf**	12 58 31.8	+1.0
628A	**Black Gap, Mar** baz=160	159.69	329	⇑PKPdf	**PKPdf**	12 58 31.2	+0.4
220A	**Playas Peak, P** baz=160	159.75	344	⇓PKPdf	**PKPdf**	12 58 32.0	+1.1
526A	**Mary Lane Ranc** baz=160	159.80	332	⇑PKPdf	**PKPdf**	12 58 32.1	+1.0
DVTC	**Desert V Tower** baz=160	159.83	3	⇑PKPdf	**PKPdf**	12 58 32.2	+1.3
TUC	**Tucson**	159.85	350	*e*PKIKP	**PKPdf**	12 58 31.5	+0.6
TUC	**Tucson**	159.85	350	*e*PKPdf	**PKPdf**	12 58 31.5	+0.6
627A	**Terlingua Ranc** baz=160	159.97	330	⇑PKPdf	**PKPdf**	12 58 32.0	+0.8
626A	**Big Bend Ranch** baz=160	160.25	331	⇓PKPdf	**PKPdf**	12 58 32.0	+0.5
320A	**Kipp Ranch, An** baz=160	160.29	344	⇑PKPdf	**PKPdf**	12 58 33.1	+1.6
319A	**Douglas** baz=160	160.45	346	⇓PKPdf	**PKPdf**	12 58 33.8	+2.1
214A	**Organ Pipe Nat** baz=160	160.47	355	⇑PKPdf	**PKPdf**	12 58 32.9	+1.4

ISK ***12*** *12:51:20.6,40˚.28N×39˚.62E,h5km,MD2.7*
ISCJB ***12*** *12:51:21.0±0.5,40˚.28N±0˚.03×39˚.61E±0˚.05,h4km±6km, Error ellipse: s-maj=6.0km s-min=4.5km az=12.4*
CSEM ***12*** *12:51:21.2±0.2,40˚.28N×39˚.59E,h5km,MD2.7,Error ellipse: s-maj=4.0km s-min=3.5km az=137.0*

ISC 12 12:51:21.2±0.9,40˚.29N±0˚.02×39˚.61E±0˚.03,h11km±8km, n33,σ0s54/43,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMT	**Gumushane**	0.20	329	*e*PG	**Pg**	12 51 25.7	+0.1
GUMT				*e*SG	**Sg**	12 51 28.6	0.0
GUMT	**Gumushane**	0.20	329	*e*Pg	**Pg**	12 51 25.7	+0.1
GUMT				*e*Sg	**Sg**	12 51 28.6	0.0
BAYT	**Ayd¯–ntepe-Bay**	0.42	75	*e*PG	**Pg**	12 51 29.1	-0.4
BAYT				*e*SG	**Sg**	12 51 35.5	+0.5
BAYT	**Ayd¯–ntepe-Bay**	0.42	75	*e*Pg	**Pg**	12 51 29.1	-0.4
BAYT				*e*Sg	**Sg**	12 51 35.5	+0.5
EZC	**Erzincan**	0.57	201	*e*PG	**Pg**	12 51 32.3	-0.1
EZC	**Erzincan**	0.57	201	*e*Pg	**Pg**	12 51 32.3	-0.1
MACK	**Trabzon**	0.67	10	*i* P	**Pg**	12 51 34.2	0.0
MACK				*i* S	**Sg**	12 51 42.9	0.0
MACK	**Trabzon**	0.67	10	*i* P	**Pg**	12 51 34.2	0.0
MACK				*i* S	**Sg**	12 51 42.9	0.0
ERZN	**Erzincan**	0.70	173	*e*PG	**Pg**	12 51 34.5	-0.4
ERZN				*e*SG	**Sg**	12 51 43.8	-0.3
ESPY	**Espiye-Giresun**	0.92	313	*e*PG	**Pg**	12 51 38.8	-0.2
ESPY	**Espiye-Giresun**	0.92	313	*e*Pg	**Pg**	12 51 38.8	-0.2
SUSE	**Susehri**	1.08	266	*i* P	**Pb**	12 51 41.3	-0.9
SUSE	**Susehri**	1.08	266	*i* P	**Pb**	12 51 41.3	-0.9
ILIC	**ilic-Erzincan**	1.16	224	*e*PN	**Pg**	12 51 44.1	+0.5
ILIC	**ilic-Erzincan**	1.16	224	*e*Pn	**Pg**	12 51 44.1	+0.5
PZAR	**Pazar-Rize**	1.32	47	*e*PN	**Pn**	12 51 45.7	0.0
PZAR	**Pazar-Rize**	1.32	47	*e*Pn	**Pn**	12 51 45.7	0.0
EZM	**Erzurum**	1.39	105	*e*PN	**Pb**	12 51 47.6	+0.1
PTK	**Pertek**	1.40	187	*e*PN	**Pb**	12 51 47.5	-0.1
PTK	**Pertek**	1.40	187	*e*Pn	**Pb**	12 51 47.5	-0.1
BNGB	**Bing¨l**	1.53	147	*e*PN	**Pn**	12 51 48.9	+0.2
BINT	**Bingol**	1.56	154	*e*Pn	**Pn**	12 51 48.9	-0.2
DDEM	**Demirkent**	1.74	69	*i* P	**Pn**	12 51 52.5	+1.0
DDEM				*i* S	**Sn**	12 52 13.5	-0.2
DDEM	**Demirkent**	1.74	69	*i* P	**Pn**	12 51 52.5	+1.0
DDEM				*i* S	**Sn**	12 52 13.5	-0.2
DBAD	**Bademkaya**	1.74	65	*i* P	**Pb**	12 51 52.9	-0.5
DBAD	**Bademkaya**	1.74	65	*i* P	**Pb**	12 51 52.9	-0.5
DBOC	**Borcka**	1.88	55	*i* P	**Pn**	12 51 54.5	+1.1
DBOC	**Borcka**	1.88	55	*i* P	**Pn**	12 51 54.5	+1.1
BCA	**Borcka**	1.91	52	*e*PN	**Pn**	12 51 54.9	+1.1
BCA	**Borcka**	1.91	52	*e*Pn	**Pn**	12 51 54.9	+1.1
DAGI	**Agillar**	1.92	65	*i* P	**Pb**	12 51 56.0	-0.3
DAGI				*i* S	**Pg**	12 51 57.2	-0.8
ARTV	**Artvin**	1.97	62	*i* P	**Pb**	12 51 57.0	-0.4
ARTV	**Artvin**	1.97	62	*i* P	**Pb**	12 51 57.0	-0.4

GUC 12 12:58:58.1±0.5,23˚.64S×67˚.25W,h232km±8km,ML3.5, 2C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	1.84	303	⇓*i*P	Pn	12 59 39.4	+1.4
LVC				*i* S	S	13 00 11.0	+2.0
PB04	**Plate Boundary**	2.48	303	⇑*i*P	Pn	12 59 52.1	+8.3
PB04				*i* S	S	13 00 32.3	+13
CEN1	**Los Morros**	2.72	275	⇑*i*P	Pn	12 59 49.6	+3.0
CEN1				*i* S	S	13 00 28.7	+4.1
CEN1				AML	AML	13 00 33.6	
	comp=E,66nm,0.8s						
PB07	**Plate Boundary**	3.09	307	*i* P	Pn	12 59 52.7	+1.9
PB07				*e*S	S	13 00 34.2	+2.1
PB01	**Plate Boundary**	3.31	321	⇓*i*P	Pn	12 59 55.4	+2.2
PB01				*i* S	S	13 00 35.2	+2.7
PSGC	**Pisagua**	4.83	326	*e*P	Pn	13 00 13.7	+2.3
PSGC				*e*S	S	13 01 11.9	+2.4

CSEM ***12*** *13:06:58.7,40˚.53N×35˚.01E,h7km,MD2.7,After DDA*

DDA 12 13:06:58.7,40˚.53N×35˚.01E,h7km,MD2.7,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAVZ	**Havza**	0.76	45	*i* P	Pg	13 07 13.3	-0.2
HAVZ				*i* S	Sb	13 07 24.8	-0.3
HAVZ	**Havza**	0.76	45	*i* P	Pg	13 07 13.3	-0.2
HAVZ				*i* S	Sb	13 07 24.7	-0.4
CDAG	**Cicekdag**	1.03	208	*i* P	Pg	13 07 17.8	-0.9
CDAG				*i* S	Sn	13 07 34.0	-0.6
CDAG	**Cicekdag**	1.03	208	*i* P	Pg	13 07 17.8	-0.9
CDAG				*i* S	Sn	13 07 34.0	-0.6
ILGA	**Ilgaz**	1.11	298	*i* P	Pb	13 07 20.5	-0.1
ILGA				*i* S	Sg	13 07 35.1	+0.1
ILGA	**Ilgaz**	1.11	298	*i* P	Pb	13 07 20.5	-0.1
ILGA				*i* S	Sg	13 07 35.1	+0.1
BALT	**Daday**	1.58	310	*i* P	Pg	13 07 29.2	-0.2
BALT				*i* S	Sb	13 07 49.5	+0.5
BALT	**Daday**	1.58	310	*i* P	Pg	13 07 29.2	-0.2
BALT				*i* S	Sb	13 07 49.5	+0.5
AVNT	**Avonos**	1.75	184	*i* P	Pb	13 07 31.9	+0.4
AVNT				*i* S	Sg	13 07 56.0	+0.5
AVNT	**Avonos**	1.75	184	*i* P	Pb	13 07 31.9	+0.4
AVNT				*i* S	Sg	13 07 56.0	+0.4

DDA ***12*** *13:09:03.5,39˚.73N×30˚.22E,h6km,MD2.7*
ISCJB ***12*** *13:09:04.0±0.5,39˚.72N±0˚.03×30˚.20E±0˚.03,h3km±6km, Error ellipse: s-maj=4.7km s-min=3.9km az=157.8*
ISK ***12*** *13:09:04.5,39˚.74N×30˚.12E,h8km,MD2.4*
CSEM ***12*** *13:09:04.3±0.1,39˚.73N×30˚.20E,h5km,MD2.7,Error ellipse: s-maj=2.6km s-min=2.4km az=177.0*

ISC 12 13:09:04.3±1.0,39.74N±0˚.02×30˚.20E±0˚.02,h5km±10km, n34,σ0s41/52,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORA	**Eskisehir**	0.24	54	*i* P	**Pg**	13 09 08.8	-0.2
BORA				*i* S	**Sg**	13 09 12.3	+0.1
BORA	**Eskisehir**	0.24	54	*i* P	**Pg**	13 09 08.8	-0.2
BORA				*i* S	**Sg**	13 09 12.3	+0.1
CAVI	**Cavuskoy**	0.54	329	*e*PG	**Pg**	13 09 14.0	-0.7
CAVI				*e*SG	**Sg**	13 09 22.4	+0.7
CAVI	**Cavuskoy**	0.54	329	*e*Pg	**Pg**	13 09 14.0	-0.7
CAVI				*e*Sg	**Sg**	13 09 22.4	+0.7
SEYT	**Eskypehyr**	0.55	113	*i* P	**Pg**	13 09 14.7	-0.1
SEYT				*i* S	**Sg**	13 09 21.0	-0.9
SEYT	**Eskypehyr**	0.55	113	*i* P	**Pg**	13 09 14.7	-0.1
SEYT				*i* S	**Sg**	13 09 21.0	-0.9
TVSB	**Tavsanli**	0.64	243	*e*PG	**Pg**	13 09 16.4	-0.2
TVSB				*e*SG	**Sg**	13 09 25.1	+0.1
TVSB	**Tavsanli**	0.64	243	*e*Pg	**Pg**	13 09 16.4	-0.2
TVSB				*e*Sg	**Sg**	13 09 25.1	+0.1
ALT	**Altintas**	0.69	186	*e*PG	**Pg**	13 09 18.0	+0.5
ALT	**Altintas**	0.69	186	*e*Pg	**Pg**	13 09 18.0	+0.5
GULT	**Gulveren**	0.73	19	*e*PG	**Pb**	13 09 19.6	0.0
GULT				*e*SG	**Sb**	13 09 30.6	+0.6
GULT	**Gulveren**	0.73	19	*e*Pg	**Pb**	13 09 19.6	0.0
GULT				*e*Sg	**Sb**	13 09 30.6	+0.6
ADVT	**Abdulvahap**	0.78	333	*e*PG	**Pg**	13 09 19.6	+0.3
ADVT	**Abdulvahap**	0.78	333	*e*Pg	**Pg**	13 09 19.6	+0.3
IZI	**Iznik**	0.82	317	*e*PG	**Pg**	13 09 20.2	+0.2
IZI	**Iznik**	0.82	317	*e*Pg	**Pg**	13 09 20.2	+0.2
GDZ	**Gediz**	0.86	221	*i* P	**Pg**	13 09 20.7	0.0
GDZ				*i* S	**Sg**	13 09 32.6	+0.7
GDZ	**Gediz**	0.86	221	*i* P	**Pg**	13 09 20.7	0.0
GDZ				*i* S	**Sg**	13 09 32.6	+0.7
ULDT	**Uludag**	0.91	296	*i* P	**Pb**	13 09 22.4	-0.3
ULDT				*i* S	**Sb**	13 09 35.0	-0.2
ULDT	**Uludag**	0.91	296	*i* P	**Pb**	13 09 22.4	-0.3
ULDT				*i* S	**Sb**	13 09 35.0	-0.2
YLV	**Yalova**	1.04	323	*e*PG	**Pg**	13 09 24.3	0.0
YLV	**Yalova**	1.04	323	*e*Pg	**Pg**	13 09 24.3	0.0
MDUB	**Mudurnu**	1.06	46	*e*PN	**Pn**	13 09 26.2	+0.3
MDUB	**Mudurnu**	1.06	46	*e*Pn	**Pn**	13 09 26.2	+0.3
SVRH	**Sivrihisar-ESK**	1.06	106	*e*PN	**Pn**	13 09 26.2	+0.3
SVRH	**Sivrihisar-ESK**	1.06	106	*e*Pn	**Pn**	13 09 26.2	+0.3
ARMT	**Armutlu**	1.32	309	*e*PN	**Pn**	13 09 29.2	-0.2
ARMT	**Armutlu**	1.32	309	*e*Pn	**Pn**	13 09 29.2	-0.2
DURS	**Dursunbey**	1.34	265	*i* P	**Pn**	13 09 29.7	0.0
DURS				*i* S	**Sn**	13 09 47.9	-0.1
DURS	**Dursunbey**	1.34	265	*i* P	**Pn**	13 09 29.7	0.0
DURS				*i* S	**Sn**	13 09 47.9	-0.1
KCTX	**Karacabey (Bur**	1.51	291	*e*PN	**Pn**	13 09 31.9	-0.1
KCTX	**Karacabey (Bur**	1.51	291	*e*Pn	**Pn**	13 09 31.9	-0.1
BALY	**Balya**	1.99	271	*i* P	**Pn**	13 09 38.7	0.0
BALY				*i* S	**Sn**	13 10 03.4	-0.6
BALY	**Balya**	1.99	271	*i* P	**Pn**	13 09 38.7	0.0
BALY				*i* S	**Sn**	13 10 03.4	-0.6

IDC ***12*** *13:12:11.1±1.0,44˚.44N×152˚.22E,h0km,mb3.6/7, mb1 3.9/9,mb1mx3.7/26,mbtmp3.7/9,ML3.6/2,Error ellipse: s-maj=30.9km s-min=19.4km az=155.0*
MOS ***12*** *13:12:15.4±1.6,44˚.62N×152˚.13E,h49km,mb4.0/4,Error ellipse: s-maj=27.3km s-min=21.2km az=51.5*
JMA ***12*** *13:12:17.7±0.6,44˚.92N×151˚.71E,h30km,M4.3*

ISC 12 13:12:13.4±1.2,44˚.0N±0˚.1×151˚.97E±0˚.0,h13km,n32, σ2s36/34,mb3.9/8,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	4.41	273	*i* PN	**Pn**	13 13 22.7	+2.7
YUK				pmax	pmax		
	comp=N,12nm,0.1s						
YUK				pmax	pmax		
	comp=E,13nm,0.1s						
YUK				pmax	pmax		
	comp=Z,35nm,0.1s						
NEM2	**Nemuro 2**	4.56	264	P	**Pn**	13 13 24.2	+2.1
NEM2				*e*S	**Sn**	13 14 12.3	-2.6
JRA	**Rausu**	4.95	272	P	**Pn**	13 13 29.9	+2.5
JRA				*e*S	**Sn**	13 14 24.3	-0.1
JNK	**Nakash**	5.27	268	P	**Pn**	13 13 33.9	+2.1
JNK				*e*S	**Sn**	13 14 31.3	-1.0
JAK	**Akkeshi**	5.38	262	P	**Pn**	13 13 35.4	+2.0
JAK				*e*S	**Sn**	13 14 33.9	-1.3
JTKR	**Abashiri~Toko**	5.82	273	P	**Pn**	13 13 41.9	+2.5
JAR	**Ashorobuto**	5.99	266	P	**Pn**	13 13 44.3	+2.5
JAR				*e*S	**Sn**	13 14 50.6	+0.4
JOB	**Onbets**	6.02	263	P	**Pn**	13 13 44.7	+2.6
JOB				*e*S	**Sn**	13 14 50.0	-0.9
JMP	**Maruseppu**	6.21	273	P	**Pn**	13 13 47.4	+2.6
JCH	**Churui**	6.43	261	*e*S	**Sn**	13 15 00

55nm,0.9s,baz=12,slow=2.9,SNR=5.3
SIV San Ignacio 28.43 24 P P 13 38 20.9 -1.3
1.0nm,0.8s,baz=206,slow=4.6,SNR=4.3
SNAA Sanae 43.81 155 P P 13 40 32.1 -0.9
0.9nm,1.1s,baz=273,slow=8.9,SNR=3.5
QSPA South Pole Qui 47.53 180 P P 13 41 02.6 +0.1
4.3nm,1.1s,baz=142,slow=6.0,SNR=4.2
VNDA Vanda 55.48 192 P P 13 42 02.8 +1.2
2.3nm,1.1s,baz=104,slow=2.1,SNR=4.0
TORD Torodi Ar. Bea 87.67 70 P P 13 45 15.3 -1.0
0.7nm,1.1s,baz=233,slow=5.0,SNR=2.3
PDAR Pinedale Array 91.33 334 P P 13 45 33.6 +0.4
0.4nm,0.7s,baz=141,slow=5.0,SNR=4.3
ILAR Eielson Array 121.66 331 PKP PKPdf 13 51 19.6 -0.6
0.4nm,0.8s,baz=156,slow=3.6,SNR=4.9
MKAR Makanchi Array 161.78 68 PKPab PKPab 13 53 13.5 -0.3
0.4nm,0.8s,baz=251,slow=2.6,SNR=4.5

MAN 12 13:35:27,17°.76N×122°.06E,h12km,mb4.4,ML3.2,MS3.0, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.77**	**154**	*e*P	Pg	13 35 42.1	+0.1
PALP				*e*S	Sn	13 35 58.0	+2.7
APYP	**Conner**	**0.79**	**278**	*e*P	Pb	13 35 42.7	+0.1
APYP				*e*S	Sn	13 35 59.6	+3.9
CAUP	**Cauayan**	**0.84**	**196**	*e*P	Pn	13 35 46.6	+1.9
ABRA	**Dolores**	**1.29**	**265**	*e*P	Pb	13 35 51.2	-0.1

CSEM 12 13:46:02.8±0.4,39°.13N×27°.52E,h1km,MD2.7,Error ellipse: s-maj=9.5km s-min=6.3km az=95.0
DDA 12 13:46:02.9,39°.13N×27°.55E,h7km,MD2.7
ISCJB 12 13:46:02.7±0.5,39°.11N±0°.02×27°.53E±0°.04,h0km,Error ellipse: s-maj=4.0km s-min=3.3km az=166.7
ISK 12 13:46:03.0,39°.05N×27°.59E,h25km,MD2.7
ISC 12 13:46:02.8±0.9,39°.14N±0°.02×27°.55E±0°.03,h0km,n27, σ0:86/38,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.33**	**141**	*i* P	**Pg**	**13 46 09.3**	**+0.2**
AKHS				*i* S	**Sg**	**13 46 15.2**	**+1.7**
AKHS	**Akhisar**	**0.33**	**141**	*e*P	**Pg**	**13 46 09.3**	**+0.2**
AKS	**Akhisar**	**0.33**	**141**	*e*PG	**Pg**	**13 46 09.8**	**+0.7**
AKS				*e*SG	**Sg**	**13 46 14.3**	**+0.9**
AKS	**Akhisar**	**0.33**	**141**	*e*Pg	**Pg**	**13 46 09.8**	**+0.7**
AKS				*e*Sg	**Sg**	**13 46 14.3**	**+0.9**
BALY	**Balya**	**0.61**	**5**	*i* P	**Pg**	**13 46 15.4**	**+1.0**
BALY				*i* S	**Sb**	**13 46 24.7**	**-0.8**
BALY	**Balya**	**0.61**	**5**	*i* P	**Pg**	**13 46 15.4**	**+1.0**
IZM	**Izmir**	**0.77**	**197**	*e*PG	**Pg**	**13 46 17.4**	**-0.2**
IZM				*e*SG	**Sg**	**13 46 27.8**	**+0.3**
IZM	**Izmir**	**0.77**	**197**	*e*Pg	**Pg**	**13 46 17.4**	**-0.2**
IZM				*e*Sg	**Sg**	**13 46 27.8**	**+0.3**
DURS	**Dursunbey**	**0.86**	**57**	*i* P	**Pg**	**13 46 19.4**	**+0.2**
DURS				*i* S	**Sb**	**13 46 32.9**	**+0.2**
DURS	**Dursunbey**	**0.86**	**57**	*i* P	**Pg**	**13 46 19.4**	**+0.2**
DEMI	**Demirci**	**0.92**	**95**	*i* P	**Pg**	**13 46 22.1**	**+0.5**
DEMI				*i* S	**Sg**	**13 46 31.0**	**-1.3**
DEMI	**Demirci**	**0.92**	**95**	*i* P	**Pb**	**13 46 22.1**	**+0.5**
GONE	**Gonen-Balikesi**	**0.92**	**7**	*e*PG	**Pb**	**13 46 22.0**	**+0.4**
GONE	**Gonen-Balikesi**	**0.92**	**7**	*e*Pg	**Pb**	**13 46 22.0**	**+0.4**
DST	**Dursunbey**	**0.95**	**60**	*e*PG	**Pb**	**13 46 22.0**	**-0.3**
DST	**Dursunbey**	**0.95**	**60**	*e*Pg	**Pb**	**13 46 22.0**	**-0.3**
MANT	**Manisa**	**1.02**	**129**	*i* P	**Pb**	**13 46 23.4**	**-0.1**
MANT				*i* S	**Sg**	**13 46 36.8**	**+1.2**
MANT	**Manisa**	**1.02**	**129**	*i* P	**Pb**	**13 46 23.4**	**-0.1**
KULA	**Kula-Manisa**	**1.07**	**125**	*e*PG	**Pg**	**13 46 21.6**	**-1.7**
KULA	**Kula-Manisa**	**1.07**	**125**	*e*Pg	**Pg**	**13 46 21.6**	**-1.7**
URLA	**Izmir**	**1.07**	**224**	*i* P	**Pg**	**13 46 23.3**	**-0.1**
URLA				*i* S	**Sg**	**13 46 35.2**	**-2.1**
URLA	**Izmir**	**1.07**	**224**	*i* P	**Pg**	**13 46 23.3**	**-0.1**
BNT	**Bandirma**	**1.25**	**13**	*e*PN	**Pg**	**13 46 26.1**	**-0.7**
BNT	**Bandirma**	**1.25**	**13**	*e*Pn	**Pg**	**13 46 26.1**	**-0.7**
KCTX	**Karacabey (Bur**	**1.29**	**29**	*e*PN	**Pg**	**13 46 26.5**	**-1.1**
KCTX	**Karacabey (Bur**	**1.29**	**29**	*e*Pn	**Pg**	**13 46 26.5**	**-1.1**
BOZC	**Bozcaada**	**1.35**	**302**	*i* P	**Pg**	**13 46 28.8**	**0.0**
BOZC				*i* S	**Sn**	**13 46 48.2**	**+0.5**

CSEM 12 13:47:00.5±0.1,39°.12N×29°.06E,h5km,MD2.5,Error ellipse: s-maj=2.1km s-min=1.7km az=170.0
ISK 12 13:47:00.0,39°.11N×29°.08E,h7km,MD2.5,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.31**	**94**	*i* P	Pg	13 47 07.1	+0.7
GDZ				*i* S	Sg	13 47 12.1	+1.4
GDZ	**Gediz**	**0.31**	**94**	*i* P	Pg	13 47 07.1	+0.7
GDZ				*i* S	Sg	13 47 12.1	+1.4
TVSB	**Tavsanli**	**0.45**	**41**	*e*PG	Pg	13 47 09.4	+0.5
TVSB				*e*SG	Sg	13 47 15.8	+0.8
TVSB	**Tavsanli**	**0.45**	**41**	*e*Pg	Pg	13 47 09.4	+0.5
TVSB				*e*Sg	Sg	13 47 15.8	+0.8
KULA	**Kula-Manisa**	**0.68**	**209**	*e*PG	Pg	13 47 13.2	0.0
KULA	**Kula-Manisa**	**0.68**	**209**	*e*Pg	Pg	13 47 13.2	0.0
ALT	**Altintas**	**0.80**	**94**	*e*PG	Pb	13 47 16.2	-0.3
ALT				*e*SG	Sb	13 47 27.4	-0.2
ALT	**Altintas**	**0.80**	**94**	*e*Pg	Pb	13 47 16.2	-0.3
ALT				*e*Sg	Sb	13 47 27.4	-0.3
KHL	**Karahalli**	**0.86**	**156**	*e*PG	Pb	13 47 17.7	+0.3
KHL	**Karahalli**	**0.86**	**156**	*e*Pg	Pb	13 47 17.7	+0.3
AKS	**Akhisar**	**1.01**	**257**	*e*PG	Pb	13 47 20.0	+0.1
AKS	**Akhisar**	**1.01**	**257**	*e*Pg	Pb	13 47 20.0	+0.1
BALB	**Balikesir**	**1.07**	**300**	*e*PG	Pb	13 47 20.8	0.0
BALB	**Balikesir**	**1.07**	**300**	*e*Pg	Pb	13 47 20.8	0.0
CAVI	**Cavuskoy**	**1.24**	**28**	*e*PN	Pg	13 47 24.5	+0.6
CAVI	**Cavuskoy**	**1.24**	**28**	*e*Pn	Pg	13 47 24.5	+0.6
IZI	**Iznik**	**1.26**	**14**	*e*PN	Pg	13 47 24.6	+0.3
IZI	**Iznik**	**1.26**	**14**	*e*Pn	Pg	13 47 24.7	+0.3
GONE	**Gonen-Balikesi**	**1.43**	**311**	*e*PN	Pb	13 47 27.0	+0.1
GONE	**Gonen-Balikesi**	**1.43**	**311**	*e*Pn	Pb	13 47 27.0	+0.1

IDC 12 13:56:52.0±1.7,2°.10N×128°.04E,h0km,mb3.7/4, mb1 3.9/4,mb1mx3.5/21,mbtmp3.7/4,Error ellipse: s-maj=125.5km s-min=21.8km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.76**	**165**	P	P	14 01 56.5	+0.4
	1.0nm,0.4s,baz=344,slow=11,SNR=22						
ASAR	**Alice Springs**	**26.24**	**168**	P	P	14 02 29.2	+0.2
	0.2nm,0.3s,baz=351,slow=7.6,SNR=15						
STKA	**Stephens Creek**	**36.16**	**160**	P	P	14 03 55.1	-1.2
	1.0nm,0.7s,baz=326,slow=12,SNR=3.9						
MKAR	**Makanchi Array**	**59.63**	**325**	P	P	14 06 58.1	+0.1
	1.1nm,0.5s,baz=116,slow=8.5,SNR=25						

IDC 12 14:00:48.8±2.1,2°.20N×128°.21E,h0km,mb3.2/3, mb1 3.4/3,mb1mx3.2/21,mbtmp3.3/3,Error ellipse: s-maj=147.5km s-min=25.6km az=68.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.82**	**165**	P	P	14 05 53.5	0.0
	0.2nm,0.4s,baz=345,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**26.30**	**168**	P	P	14 06 26.2	-0.3
	0.2nm,0.7s,baz=355,slow=8.4,SNR=2.9						
MKAR	**Makanchi Array**	**59.65**	**325**	P	P	14 10 55.1	+0.1
	0.4nm,0.5s,baz=117,slow=8.4,SNR=7.0						

DDA 12 14:01:42.5,37°.44N×35°.43E,h5km,MD2.9
ISK 12 14:01:43.8,37°.44N×35°.43E,h7km,MD2.5
CSEM 12 14:01:43.9±0.3,37°.43N×35°.42E,h8km,MD2.5,Error ellipse: s-maj=6.6km s-min=4.4km az=54.0
ISCJB 12 14:01:43.7±0.8,37°.41N±0°.04×35°.41E±0°.04,h2km±7km, Error ellipse: s-maj=7.5km s-min=4.7km az=38.9
ISC 12 14:01:44.3±1.1,37°.44N±0°.03×35°.45E±0°.03,h13km±10km, n17,σ0:69/28,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.30**	**82**	*e*PG	**Pg**	**14 01 50.1**	**-0.5**
KOZT				*e*SG	**Sb**	**14 01 55.7**	**-0.9**
KOZT	**Kozan**	**0.30**	**82**	*e*Pg	**Pg**	**14 01 50.1**	**-0.5**
KOZT				*e*Sg	**Sb**	**14 01 55.7**	**-0.9**
CEYT	**Ceyhan**	**0.49**	**151**	*e*PG	**Pg**	**14 01 54.1**	**+0.1**
CEYT	**Ceyhan**	**0.49**	**151**	*e*Pg	**Pg**	**14 01 54.1**	**+0.1**
ANDN	**Andirin**	**0.73**	**79**	*e*P	**Pg**	**14 01 57.8**	**-0.7**
ANDN				*e*S	**Sb**	**14 02 10.0**	**+1.2**
ANDN	**Andirin**	**0.73**	**79**	*e*P	**Pg**	**14 01 57.8**	**-0.7**
ANDN				*e*S	**Sb**	**14 02 10.0**	**+1.2**
KRTS	**Karatas**	**0.87**	**184**	*e*PG	**Pg**	**14 02 00.7**	**-0.4**
KRTS	**Karatas**	**0.87**	**184**	*e*Pg	**Pg**	**14 02 00.7**	**-0.4**
NIG	**Nigde**	**0.94**	**315**	*e*PG	**Pg**	**14 02 01.6**	**-1.0**
NIG				*e*SG	**Sb**	**14 02 15.7**	**+0.6**
NIG	**Nigde**	**0.94**	**315**	*e*Pg	**Pg**	**14 02 01.6**	**-1.0**
NIG				*e*Sg	**Sb**	**14 02 15.7**	**+0.6**
AYKD	**Aykdinkavak**	**1.08**	**91**	*e*P	**Pg**	**14 02 05.1**	**-0.1**
AYKD				*e*S	**Sn**	**14 02 20.0**	**-0.1**
COBT	**Iskenderun**	**1.12**	**145**	*e*P	**Pb**	**14 02 05.2**	**-0.5**
COBT				*e*S	**Sb**	**14 02 20.7**	**+0.4**
COBT	**Iskenderun**	**1.12**	**145**	*e*P	**Pb**	**14 02 05.2**	**-0.5**
COBT				*e*S	**Sb**	**14 02 20.7**	**+0.4**
AVNT	**Avonos**	**1.42**	**341**	*e*P	**Pn**	**14 02 09.9**	**0.0**
AVNT				*e*S	**Sg**	**14 02 31.0**	**+1.0**
AVNT	**Avonos**	**1.42**	**341**	*e*P	**Pn**	**14 02 09.9**	**0.0**
AVNT				*e*S	**Sg**	**14 02 31.0**	**+1.0**
BNN	**Bunyan**	**1.44**	**12**	*e*PN	**Pb**	**14 02 11.1**	**0.0**
BNN	**Bunyan**	**1.44**	**12**	*e*Pn	**Pb**	**14 02 11.1**	**0.0**

IDC 12 14:13:14.0±1.7,2°.30N×128°.35E,h0km,mb3.6/4, mb1 3.7/4,mb1mx3.5/21,mbtmp3.6/4,Error ellipse: s-maj=171.1km s-min=20.7km az=71.0
DJA 12 14:13:15.0±2.5,2°.N±25°.×12°.9E±°,h10km,M3.7/4, MLv3.7/4
ISCJB 12 14:13:16.0±1.0,2°.47N±0°.10×128°.98E±0°.08,h33km, mb3.5/4,Error ellipse: s-maj=14.0km s-min=11.4km az=164.9
ISC 12 14:13:18.1±1.1,2°.4N±0°.1×128°.92E±0°.09,h35km,n8, σ0:86/9,mb3.5/4,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.27**	**242**	P	**Pn**	**14 13 38.1**	**-1.4**
GAMI				S	**Sn**	**14 13 56.1**	**+0.7**
TNTI	**Ternate**	**2.26**	**223**	P	**Pn**	**14 13 53.1**	**0.0**
LBMI	**Labuha**	**3.36**	**205**	P	**Pn**	**14 14 07.5**	**-0.7**
SWI	**Sorong**	**4.02**	**144**	P	**Pn**	**14 14 16.6**	**-0.7**
WRA	**Warramunga Arr**	**22.86**	**167**	P	**P**	**14 18 19.6**	**+0.9**
	0.7nm,0.5s,baz=343,slow=9.7,SNR=3.6						
ASAR	**Alice Springs**	**26.39**	**170**	P	**P**	**14 18 51.3**	**-0.2**
	0.3nm,0.5s,baz=355,slow=8.3,SNR=6.6						
SONM	**Songino Array**	**49.24**	**340**	P	**P**	**14 22 03.8**	**+0.4**
	0.4nm,0.7s,baz=154,slow=5.9,SNR=2.6						
MKAR	**Makanchi Array**	**59.87**	**325**	P	**P**	**14 23 20.3**	**-0.1**
	1.0nm,0.5s,baz=115,slow=8.3,SNR=19						

MEX 12 14:19:32.4±0.3,17°.65N×95°.46W,h118km±11km,MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**1.34**	**245**	*e*P	Pn	14 19 56.8	-1.4
VHO				*e*S	Sn	14 20 15.9	-1.8
HUIG	**Huatulco**	**1.97**	**199**	*e*P	Pn	14 20 03.9	-1.5
HUIG				*i* S	Sn	14 20 29.0	-1.6
UTMO	**Huajuapan**	**2.24**	**275**	*e*P	Pn	14 20 08.0	-1.1
UTMO				*i* S	Sn	14 20 35.3	-1.9
PCIG		**2.89**	**132**	*e*P	Pn	14 20 16.0	-1.1
PCIG				*i* S	Sn	14 20 50.1	-1.5

MEX 12 14:28:37.2±0.5,15°.15N×91°.92W,h174km±4km,MD4.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.41**	**234**	*e*P	Pn	14 28 59.0	-1.8
THIG				*i* S	Sn	14 29 17.0	-2.0
CCIG	**Comitan**	**1.14**	**350**	*e*P	Pn	14 29 04.5	-1.1
CCIG				*i* S	Sn	14 29 25.2	-2.4
PCIG		**1.37**	**294**	*e*P	Pn	14 29 06.3	-1.0
PCIG				*e*S	Sn	14 29 28.5	-2.1
TGIG		**1.99**	**325**	*e*P	Pn	14 29 12.8	-0.9
TGIG				*i* S	Sn	14 29 39.7	-2.4
HUIG	**Huatulco**	**4.08**	**279**	*i* P	Pn	14 29 37.5	-1.7
HUIG				*i* S	Sn	14 30 46.9	-2.6
VHO	**Vista Hermosa**	**5.00**	**293**	*i* P	Pn	14 29 49.5	-1.8
VHO				*i* S	Sn	14 30 46.9	-2.6
PNIG	**Pinotepa**	**6.10**	**282**	*e*P	Pn	14 30 05.5	0.0
PNIG				*i* S	Sn	14 31 13.4	-1.6

WEL 12 14:47:20.0±0.3,39°.10S×174°.94E,h222km±2km,ML4.1/18, 24C-9D,Error ellipse: s-maj=1.9km s-min=1.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRZ	**Vera Road**	**0.15**	**259**	↑P	Pn	14 47 48.1	-0.7
PKVZ	**Pokaka**	**0.37**	**122**	↑P	Pn	14 47 49.1	-0.2
PKVZ					SN	14 48 11.2	-1.0
TWVZ	**Taurewa**	**0.39**	**86**	↑P	Pn	14 47 49.0	-0.5
TWVZ					SN	14 48 11.0	-1.4
RAEZ	**Rainy Point**	**0.47**	**246**	P	PN	14 47 49.2	-0.3
WPVZ	**Whakapapa**	**0.48**	**103**	P	PN	14 47 49.3	-0.4
MHEZ	**Mangahewa**	**0.48**	**272**	P	PN	14 47 49.6	0.0
FWVZ	**Far West T-bar**	**0.50**	**109**	↑P	Pn	14 47 49.6	-0.3
MTVZ	**Mangateitei**	**0.50**	**125**	P	PN	14 47 49.5	-0.2
TRVZ	**Turoa**	**0.51**	**113**	P	PN	14 47 49.4	-0.5
DRZ	**Dome Shelter**	**0.51**	**110**	SN	S	14 48 11.8	-1.7
NGZ	**Ngauruhoe**	**0.52**	**99**	↑P	Pn	14 47 49.6	-0.3
KRVZ	**Karewarewa**	**0.54**	**90**	SN	S	14 48 12.1	-1.1
WNVZ	**Wahianoa**	**0.56**	**115**	P	PN	14 47 50.0	0.0
TUVZ	**Tukino**	**0.58**	**107**	P	PN	14 47 50.0	-0.1
DREZ	**Durham Road**	**0.58**	**261**	P	PN	14 47 49.7	-0.2
HIZ	**Hauiti**	**0.59**	**353**	↑P	PN	14 47 49.1	-0.9
WAZ	**Wanganui**	**0.66**	**177**	P	PN	14 47 50.5	+0.3
NEZ	**North Egmont**	**0.68**	**255**	↓P	PN	14 47 50.4	0.0
DFE	**Dawson Falls**	**0.69**	**250**	P	PN	14 47 50.3	-0.1
MOVZ	**Moawhango**	**0.70**	**116**	P	PN	14 47 50.0	-0.5
PKE	**Pukeiti**	**0.75**	**262**	P	PN	14 47 50.4	-0.3
NRZ	**Ngariki Road**	**0.82**	**253**	P	PN	14 47 50.8	-0.2
NWEZ	**Newall Road**	**0.86**	**258**	P	PN	14 47 51.1	-0.1
BHHZ	**Black Hill Sta**	**0.95**	**115**	↑P	PN	14 47 51.3	-0.5
BKZ	**Black Stump Fm**	**1.21**	**94**	↓P	PN	14 47 52.8	-0.7
TSZ	**Takapari Road**	**1.24**	**141**	↑P	PN	14 47 53.8	+0.1
PNHZ	**Pukenui**	**1.27**	**130**	P	PN	14 47 53.9	0.0
MCHZ	**McNeill Hill**	**1.40**	**105**	P	PN	14 47 55.3	+0.5
POWZ	**Post Office Ro**	**1.44**	**154**	P	PN	14 47 55.1	0.0
NMHZ	**Naumai**	**1.45**	**91**	P	PN	14 47 55.5	+0.1
WPHZ	**Waipukurau**	**1.51**	**130**	P	PN	14 47 55.8	+0.1
DVHZ	**Dannevirke**	**1.53**	**142**	P	PN	14 47 56.0	-0.2
MRZ	**Mangatainoka R**	**1.64**	**163**	↑P	PN	14 47 56.3	-0.4
KAHZ	**Kahuranaki**	**1.65**	**116**	↓P	PN	14 47 57.2	+0.2
RAHZ	**Arahi**	**1.68**	**85**	Pn	PN	14 47 56.7	-0.5
RAHZ					SN	14 48 24.7	-1.3
OGWZ	**Otaki Gorge**	**1.73**	**174**	↑P	PN	14 47 57.4	-0.1
CKHZ	**Cape Kidnapper**	**1.75**	**109**	P	PN	14 47 58.0	+0.2
PRHZ	**Porangahau**	**1.75**	**132**	P	PN	14 47 57.7	-0.1
PXZ	**Pawanui**	**1.75**	**123**	↓P	PN	14 47 57.6	-0.1
KIW	**Kapiti Island**	**1.76**	**181**	↑P	PN	14 47 57.4	-0.5
TIWZ	**Tintock**	**1.83**	**157**	↑P	PN	14 47 58.1	-0.4
HOWZ	**Holdsworth Sta**	**1.85**	**166**	↑P	PN	14 47 58.1	-0.6
BFZ	**Birch Farm**	**1.87**	**148**	P	PN	14 47 58.5	-0.4
DUWZ	**D'Urville Isla**	**1.88**	**204**	↑P	PN	14 47 58.4	-0.5
URZ	**Urewera**	**1.89**	**64**	P	PN	14 47 57.0	-2.1
URZ					SN	14 48 25.1	-4.4
CAW	**Cannon Point**	**2.01**	**177**	↑P	PN	14 47 59.7	-0.5
MTW	**Mount Morrison**	**2.10**	**168**	↑P	PN	14 48 00.3	-0.8
KNZ	**Kokohu**	**2.13**	**89**	↓P	PN	14 48 00.5	-0.8
TMWZ	**Te Maipa**	**2.13**	**160**	P	PN	14 48 00.8	-0.7
MWZ	**Matawai**	**2.16**	**70**	↓P	PN	14 48 00.0	-1.8
MWZ					SN	14 48 30.0	-4.3
TCW	**Tory Channel**	**2.17**	**193**	↑P	PN	14 48 01.3	-0.5
WEL	**Wellington**	**2.19**	**183**	P	PN	14 48 01.3	-0.7
SNZO	**South Karori**	**2.22**	**185**	↑P	PN	14 48 01.4	-0.8
PRGZ	**Paritu Road**	**2.30**	**87**	P	PN	14 48 02.3	-0.8
MHGZ	**Mahia Peninsul**	**2.31**	**92**	P	PN	14 48 02.6	-0.6
BHW	**Baring Head**	**2.31**	**181**	P	PN	14 48 02.3	-0.9
PAWZ	**Paruwai Farm**	**2.31**	**171**	P	PN	14 48 02.4	-0.8
MSWZ	**Moikau Station**	**2.33**	**174**	↑P	PN	14 48 02.6	-0.9
TRWZ	**Traveller**	**2.37**	**166**	P	PN	14 48 03.1	-0.8
NNZ	**Nelson**	**2.43**	**209**	↑P	PN	14 48 03.5	-1.0
TUWZ	**Tuamarina**	**2.45**	**198**	P	PN	14 48 04.0	-0.7
PLWZ	**Palliser**	**2.48**	**175**	↑P	PN	14 48 04.0	-1.1
QRZ	**Quartz Range**	**2.54**	**226**	↑P	PN	14 48 03.7	-1.9
CNGZ	**Carnagh Station**	**2.62**	**78**	PN	Pn	14 48 05.7	-0.9
CMWZ	**Cape Campbell**	**2.71**	**192**	PN	Pn	14 48 07.1	-0.3
BSWZ	**Blackbirch Sta**	**2.74**	**197**	PN	Pn	14 48 07.1	-0.7
PUZ	**Puketiti**	**2.79**	**70**	PN	Pn	14 48 06.3	-2.2
THZ	**Tophouse**	**3.08**	**210**	↑P	PN	14 48 10.2	-1.5
KHZ	**Kahutara**	**3.48**	**197**	↑P	PN	14 48 15.0	-1.3
LTZ	**Lake Taylor**	**4.20**	**208**	PN	Pn	14 48 22.9	-2.1
CRLZ	**Canterbury Las**	**4.80**	**201**	↓P	PN	14 48 29.5	-2.8
MQZ	**McQueen's Vall**	**4.92**	**200**	PN	Pn	14 48 30.8	-3.0
WVZ	**Waitaha Valley**	**5.09**	**217**	↓P	PN	14 48 33.2	-2.8
RPZ	**Rata Peaks**	**5.46**	**211**	PN	Pn	14 48 37.8	-3.0
FOZ	**Fox Glacier**	**5.96**	**220**	PN	Pn	14 48 42.3	-4.6
LBZ	**Lake Benmore**	**6.37**	**212**	↓P	PN	14 48 49.3	-3.0
ODZ	**Otahua Downs**	**6.75**	**207**	PN	Pn	14 48 54.9	-2.1
WKZ	**Wanaka**	**7.23**	**216**	PN	Pn	14 48 59.6	-3.7
TUZ	**Tuapeka**	**7.89**	**208**	PN	Pn	14 49 09.7	-2.0

IDC 12 14:51:41.3±3.8,7°.69S×127°.64E,h112km±36km,mb3.4/6, mb1 3.7/9,mb1mx3.6/20,mbtmp3.6/9,Error ellipse: s-maj=43.9km s-min=15.7km az=65.0
ISCJB 12 14:51:43.7±0.7,7°.79S±0°.04×127°.88E±0°.05,h100km, mb3.6/6,Error ellipse: s-maj=7.1km s-min=5.7km az=20.4
AUST 12 14:51:49.0,7°.99S×128°.04E,h100km
ISC 12 14:51:46.3±1.1,7°.85S±0°.08×127°.91E±0°.07,h100km,n23, σ3:13/18,mb3.7/6,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTN	**Manton Dam**	**5.89**	**148**	P	Pn	14 53 15.9	+4.8
	baz=5.7,SNR=32						
MTN				S	**Sn**	**14 54 21.2**	**+3.8**
	baz=5.7,SNR=6.3						
FAKI	**Fak Fak**	**6.53**	**42**	P	Pn	14 53 18.8	-1.0
	baz=6.6,SNR=50						
FAKI				S	**Sn**	**14 54 30.4**	**-2.4**
	baz=6.6,SNR=6.1						
KDU	**Kakadu**	**6.58**	**137**	P	Pn	14 53 24.6	+4.2
	baz=6.4,SNR=60						
KDU				S	**Sn**	**14 54 37.0**	**+2.9**
	baz=6.4,SNR=11						
SWI	**Sorong**	**7.70**	**26**	P	Pn	14 53 35.6	-0.1
	baz=7.8,SNR=16						
WSI	**Waingapu**	**7.74**	**256**	S	**Sn**	**14 55 01.4**	**-1.0**
	baz=7.8,SNR=3.5						
KNRA	**Kununurra**	**7.83**	**174**	P	**Pn**	**14 53 40.3**	**+2.8**
	baz=7.7,SNR=33						
KNRA				S	**Sn**	**14 55 04.3**	**-0.2**
	baz=7.7,SNR=13						
FITZ	**Fitzroy Crossi**	**10.43**	**192**	P	Pn	14 54 10.7	-2.3
	3.4nm,0.3s,baz=30,slow=11,SNR=73						
FITZ				S	**Sn**	**14 56 05.1**	**-2.8**
	1.3nm,0.3s,baz=307,slow=20,SNR=5.1						
FITZ	**Fitzroy Crossi**	**10.43**	**192**	P	**Pn**	**14 54 12.5**	**-0.4**
	baz=10,SNR=61						
WRA	**Warramunga Arr**	**13.54**	**153**	P	**Pn**	**14 54 53.6**	**-0.8**
	0.7nm,0.3s,baz=324,slow=14,SNR=49						
WRA				S	**Sn**	**14 57 19.3**	**-4.2**
	2.3nm,0.3s,baz=326,slow=24,SNR=16						
COEN	**Coen**	**16.16**	**113**	S	**Sn**	**14 58 21.9**	**-5.0**
	baz=16,SNR=3.9						
ASAR	**Alice Springs**	**16.75**	**161**	P	**Pn**	**14 55 33.8**	**-1.2**
	0.8nm,0.3s,baz=333,slow=10,SNR=96						
ASAR				S	**Sn**	**14 58 36.4**	**-4.6**
	0.6nm,0.3s,baz=319,slow=13,SNR=6.1						
MEEK	**Meekatharra**	**20.67**	**204**	P	**P**	**14 56 19.5**	**+1.1**
	baz=21,SNR=5.8						
STKA	**Stephens Creek**	**27.09**	**154**	P	P	14 57 15.9	-3.9
	1.2nm,0.6s,baz=321,slow=7.4,SNR=4.2						
STKA	**Stephens Creek**	**27.09**	**154**	P	**P**	**14 57 18.2**	**-1.5**
	baz=27,SNR=3.7						
MGCD	**Mangrove Creek**	**33.13**	**143**	S	**S**	**15 03 29.8**	**+4.5**
	baz=33,SNR=15				

Ms1 3.1/2,ms1mx2.5/39,Error ellipse: s-maj=42.8km s-min=17.7km az=66.0
AUST ***12*** *15:30:20.2±4.1,5.56S×133.32E,h14km, Error ellipse: s-maj=1.3km s-min=0.7km az=265.0*
ISCJB ***12*** *15:30:21.7±0.5,5.71S±0.04×133.53E±0.08,h33km, mb3.7/5, Error ellipse: s-maj=11.0km s-min=5.9km az=177.7*

ISC 12 15:30:23.1±0.7,**5.70S**±0.06×**133.52E**±0.07,**h35**km,**n24,** σ2§**25**/**22**,**mb3.9**/**5**,**Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.04**	**335**	P	Pn	15 30 59.8	-9.0
	baz=2.8,SNR=14						
FAKI				S	**Sn**	**15 31 42.1**	**-1.8**
	baz=2.8,SNR=5.7						
SWI	**Sorong**	**5.31**	**335**	P	**Pn**	**15 31 40.9**	**+0.9**
	baz=5.1,SNR=11						
SWI				S	**Sn**	**15 32 36.7**	**-3.2**
	baz=5.1,SNR=7.3						
KDU	**Kakadu**	**7.02**	**188**	P	**Pn**	**15 32 05.4**	**+1.9**
	baz=7.2,SNR=24						
MTN	**Manton Dam**	**7.48**	**198**	P	Pn	15 32 13.2	+3.3
	baz=7.6,SNR=16						
MTN				S	**Sn**	**15 33 35.4**	**+1.8**
	baz=7.6,SNR=4.5						
JAY	**Jayapura**	**7.83**	**66**	P	**Pn**	**15 32 16.6**	**+1.9**
	baz=8.0,SNR=3.5						
KNRA	**Kununurra**	**10.96**	**205**	P	**Pn**	**15 32 59.0**	**+1.4**
	baz=11,SNR=9.0						
KNRA				S	**Sn**	**15 34 56.3**	**-2.8**
	baz=11,SNR=3.5						
KAPI	**Kappang**	**13.73**	**272**	LR	LR	15 39 31.1	
	comp=Z,100nm,18.5s,baz=337,slow=40						
PMG	**Port Moresby**	**14.01**	**106**	Pn	**Pn**	**15 33 38.2**	**-1.1**
	0.4nm,0.3s,baz=257,slow=21,SNR=2.3						
PMG				Sn	**Sn**	**15 36 09.7**	**-3.9**
	0.6nm,0.3s,baz=96,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**14.18**	**177**	Pn	**Pn**	**15 33 39.4**	**-2.3**
	0.6nm,0.3s,baz=7.5,slow=13,SNR=33						
WRA				Sn	Sn	15 36 08.7	-9.2
	0.6nm,0.3s,baz=352,slow=24,SNR=3.1						
FITZ	**Fitzroy Crossi**	**14.54**	**211**	Pn	**Pn**	**15 33 45.0**	**-1.5**
	0.9nm,0.3s,baz=61,slow=14,SNR=22						
FITZ				Sn	Sn	15 36 16.8	-10
	1.2nm,0.3s,baz=218,slow=17,SNR=4.3						
FITZ	**Fitzroy Crossi**	**14.54**	**211**	P	**Pn**	**15 33 46.0**	**-0.5**
	baz=15,SNR=13						
FITZ				S	**Sn**	**15 36 22.6**	**-3.9**
	baz=15,SNR=3.1						
QIS	**Mount Isa**	**15.91**	**159**	P	**P**	**15 34 09.5**	**+1.6**
	baz=16,SNR=6.6						
ASAR	**Alice Springs**	**17.87**	**179**	P	**Pn**	**15 34 27.9**	**-1.2**
	0.1nm,0.3s,baz=353,slow=12,SNR=5.1						
ASAR				S	Sn	15 37 36.8	-11
	0.1nm,0.3s,baz=0.9,slow=28,SNR=2.6						
CTA	**Charters Tower**	**18.92**	**140**	LR	LR	15 41 29.3	
	comp=Z,46nm,21.4s,baz=52,slow=35						
QLP	**Quilpie**	**23.15**	**155**	P	**P**	**15 35 28.8**	**+2.3**
	baz=24,SNR=5.6						
KSM	**Kuching**	**24.25**	**286**	P	P	15 35 48.9	+12
	baz=24,SNR=3.5						
STKA	**Stephens Creek**	**27.12**	**165**	P	**P**	**15 36 04.4**	**+1.5**
	1.3nm,0.5s,baz=325,slow=9.9,SNR=11						
STKA	**Stephens Creek**	**27.12**	**165**	P	**P**	**15 36 04.5**	**+1.5**
	baz=27,SNR=10.0						
CMAR	**Chiang Mai Arr**	**41.70**	**306**	P	P	15 38 11.3	+2.4
	0.6nm,0.8s,baz=137,slow=7.6,SNR=3.7						
SONM	**Songino Array**	**58.41**	**339**	P	P	15 40 17.4	+2.0
	0.3nm,0.5s,baz=151,slow=4.7,SNR=4.0						
MKAR	**Makanchi Array**	**69.12**	**325**	P	P	15 41 28.3	+2.5
	0.8nm,0.6s,baz=121,slow=7.6,SNR=13						
ZALV	**Zalesovo Beam**	**72.02**	**332**	P	**P**	**15 41 44.5**	**+1.1**
	1.2nm,0.7s,baz=115,slow=5.7,SNR=6.2						
CPUP	**Villa Florida**	**146.47**	**162**	PKPbc	**PKPab**	**15 50 04.2**	**+1.9**
	0.2nm,0.3s,baz=346,slow=4.2,SNR=2.5						
LPAZ	**La Paz**	**149.40**	**136**	PKPbc	**PKPab**	**15 50 13.2**	**-1.8**
	0.4nm,0.4s,baz=273,slow=3.1,SNR=2.9						

MOS ***12*** *15:41:53.6±1.2,48.11N×152.98E,h121km, mb4.1/5, Error ellipse: s-maj=27.8km s-min=12.5km az=62.9*
ISCJB ***12*** *15:41:54.2±0.7,48.1N±0.1×153.0E±0.2, h128km, mb3.7/9, Error ellipse: s-maj=21.4km s-min=6.0km az=138.1*
IDC ***12*** *15:41:56.6±2.5,48.10N×152.91E,h130km±23km, mb3.4/9, mb1 3.7/11,mb1mx3.4/26,mbtmp3.4/11, Error ellipse: s-maj=22.5km s-min=13.6km az=153.0*

ISC 12 15:41:55.7±0.9,**48.1N**±0.1×**153.1E**±0.1,**h128**km,**n17,** σ1§**32**/**20**,**mb3.8**/**9**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.29**	**36**	*e*P	**Pn**	**15 42 43.0**	**-2.9**
SKR				*e*S	**Sn**	**15 43 22.3**	**-2.5**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=N,110nm,0.2s						
SKR				pmax	pmax		
	comp=E,110nm,0.2s						
SKR				smax	smax		
	comp=E,160nm,0.4s						
SKR				smax	smax		
	comp=N,120nm,0.5s						
KUR	**Kuril'sk**	**4.56**	**233**	PN	**Pn**	**15 43 00.5**	**-2.4**
KUR				*e*S	**Sn**	**15 43 54.0**	**-1.0**
KUR				smax	smax		
	comp=N,140nm,0.7s						
KUR				smax	smax		
	comp=E,90nm,0.7s						
PETK	**Petropavlovsk-**	**5.84**	**29**	PN	**Pn**	**15 43 20.4**	**+0.4**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	**Petropavlovsk-**	**5.84**	**29**	P	**Pn**	**15 43 20.4**	**+0.4**
	comp=Z,2.4nm,0.3s,baz=193,slow=15,SNR=30						
PET	**Petropavlovsk**	**6.10**	**34**	*e*PN	**Pn**	**15 43 22.6**	**-0.8**
PET				pmax	pmax		
	comp=Z,11nm,0.5s						
ASAJ	**Asahikawa**	**8.27**	**245**	P	**Pn**	**15 43 53.5**	**+0.7**
	comp=Z,2.1nm,0.3s,baz=74,slow=16,SNR=21						
SONM	**Songino Array**	**30.87**	**287**	P	**P**	**15 48 00.2**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=58,slow=10.0,SNR=3.1						
ILAR	**Eielson Array**	**35.54**	**40**	P	**P**	**15 48 40.9**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=261,slow=6.2,SNR=18						
ZALV	**Zalesovo Beam**	**41.81**	**305**	P	**P**	**15 49 32.2**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**41.81**	**305**	P	**P**	**15 49 32.2**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=55,slow=7.6,SNR=5.8						
MKAR	**Makanchi Array**	**46.30**	**296**	P	**P**	**15 50 08.2**	**-0.1**
MKAR						15 51 41.9	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**46.30**	**296**	P	**P**	**15 50 08.2**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=72,slow=7.3,SNR=13						
MKAR				PcP	**PcP**	**15 51 41.9**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=56,slow=3.6,SNR=3.4						
YKA	**Yellowknife Ar**	**49.89**	**37**	P	**P**	**15 50 36.9**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=298,slow=7.2,SNR=21						
NVAR	**Mina Array Bea**	**61.86**	**63**	P	**P**	**15 52 02.7**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=303,slow=8.1,SNR=4.3						
FINES	**FINESS Array B**	**62.82**	**334**	P	**P**	**15 52 06.5**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=28,slow=8.6,SNR=7.7						
PDAR	**Pinedale Array**	**64.00**	**54**	P	**P**	**15 52 17.0**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=318,slow=2.0,SNR=6.8						
ASAR	**Alice Springs**	**73.46**	**198**	P	**P**	**15 53 14.2**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=8.5,slow=5.8,SNR=23						

IDC ***12*** *16:01:37.3±1.7,4.60S±0.03×152.89E,h21km±9km, mb5.0/27, mb1 5.0/27,mb1mx5.0/28,mbtmp5.0/27,MS4.4/23, Ms1 4.4/23,ms1mx4.3/27, Error ellipse: s-maj=14.8km s-min=9.3km az=92.0*
MOS ***12*** *16:01:38.2±0.9,4.44S×152.85E,h33km, mb5.4/34, MS4.6/10, Error ellipse: s-maj=9.9km s-min=6.2km az=100.4*
ISCJB ***12*** *16:01:40.5±0.7,4.63S±0.03×152.96E±0.04, h64km±6km, mb5.2/100, Error ellipse: s-maj=6.4km s-min=5.0km az=20.4*
BJI ***12*** *16:01:42.1,4.37S×153.24E,h80km, mB5.2/43, mb5.3/61, Ms4.8/58, Ms7 4.7/54*
NEIC ***12*** *16:01:43.6±0.9,4.64S×152.89E,h76km±7km, mb5.1/39, MW5.4, Error ellipse: s-maj=6.2km s-min=5.2km az=81.0,*

Moment Tensor Solution. s19 Moment tensor: Scale 10¹⁷Nm; Mrr 1.47; Mθθ -0.94; Mϕϕ -0.53; Mrθ 0.60; Mrϕ -0.48; Mθϕ 0.02; Best double couple: M₀1.50000×10¹⁷ NP1: ϕs67.00000°,δ56.00000°,λ101.00000°. NP2: ϕs228.00000°,δ35.00000°,λ74.00000°. Principal axes: T 1.6100, Plg76.0000°, Azm10.0000°; N -0.2600, Plg8.0000°, Azm240.0000°; P -1.3500, Plg10.0000°, Azm149.0000°;
NEIC Felt at Rabaul.
AUST ***12*** *16:01:43.4±0.3,4.61S×153.03E,h81km Error ellipse: s-maj=0.8km s-min=0.6km az=259.0*
GCMT ***12*** *16:01:44.8±0.1,4.82S×152.88E,h58km,MW5.3,Moment Tensor Solution. s90,c147; s81,c143; Moment tensor: Scale 10¹⁷Nm; Mrr1.14±.02; Mθθ-1.25±.02; Mϕϕ0.11±.02; Mrθ0.33±.02; Mθϕ-0.25±.02; Mrϕ0.10±.02; Best double couple: M₀1.30000×10¹⁷ NP1:ϕs263.00000°,δ37.00000°, λ94.00000°. NP2:ϕs78.00000°,δ53.00000°,λ87.00000°. Principal axes: T 1.1900, Plg82.0000°, Azm333.0000°; N 0.1500, Plg2.0000°, Azm79.0000°; P -1.3400, Plg8.0000°, Azm170.0000°; Data Used: II IU CN IC G.*
DJA ***12*** *16:01:48.9±1.9,5.5S±10.1×15.3E±1.1,h183km±25km, M5.1/13,mB5.5/10,mb5.4/13,Mw(mB)5.0/10*

ISC 12 16:01:44.4±0.3,**4.67S**±0.03×**152.95E**±0.04,**h81**km±1km,
h81km:**pP-P,n488,**σ1§**62**/622,**mb5.2**/100,**18C-8D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.43**	**230**	*e*P	**Pn**	**16 03 29.3**	**-0.8**
	150nm,0.8s						
PMG				Sn	**Sn**	**16 04 49.6**	**-3.3**
PMG	**Port Moresby**	**7.43**	**230**	P	**Pn**	**16 03 29.1**	**-1.0**
PMG	**Port Moresby**	**7.43**	**230**	Pn	**Pn**	**16 03 29.9**	**-0.2**
	7.6nm,0.3s,baz=29,slow=11,SNR=36						
PMG				Sn	**Sn**	**16 04 49.6**	**-3.3**
	22nm,0.3s,baz=76,slow=8.4,SNR=4.7						
HNR	**Honiara**	**8.41**	**125**	*e*P	**Pn**	**16 03 42.8**	**-0.7**
	338nm,0.8s						
HNR	**Honiara**	**8.41**	**125**	Pn	**Pn**	**16 03 42.5**	**-1.0**
	19nm,0.3s,baz=188,slow=3.6,SNR=14						
JAY	**Jayapura**	**12.40**	**279**	P	**Pn**	**16 04 38.9**	**+0.9**
	baz=12,SNR=4.6						
JAY				S	Sn	16 06 35.0	-20
	baz=12,SNR=9.9						
PATS	**Pohnpei**	**12.62**	**25**	P	**Pn**	**16 04 38.7**	**-2.1**
	baz=13,SNR=6.5						
PATS				S	Sn	16 06 51.6	-8.0
	baz=13,SNR=4.5						
COEN	**Coen**	**13.34**	**226**	P	**P**	**16 04 59.1**	**+1.9**
	baz=14,SNR=4.5						
MTSU	**Mount Surprise**	**15.82**	**212**	P	**P**	**16 05 25.8**	**+1.0**
	baz=16,SNR=13						
CTA	**Charters Tower**	**16.66**	**202**	Pn	**Pn**	**16 05 33.4**	**+0.5**
CTA	**Charters Tower**	**16.66**	**202**	Pn	**Pn**	**16 05 33.4**	**+0.5**
	0.4nm,0.3s,baz=27,slow=13,SNR=8.5						
CTAO	**Charters Tower**	**16.66**	**202**	*e*P	**Pn**	**16 05 32.8**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,16nm,0.9s						
CTAO	**Charters Tower**	**16.66**	**202**	*e*P	**Pn**	**16 05 32.8**	**-0.1**
	comp=Z,16nm,0.9s						
SRPI	**Serui, Papua**	**16.91**	**279**	P	**P**	**16 05 40.6**	**+3.8**
	comp=Z,88nm,0.6s,comp=Z,2μm						
RKPI	**Ransiki, Papua**	**19.00**	**279**	P	**Pn**	**16 06 01.6**	**+0.2**
	comp=Z,271nm,0.8s,comp=Z,3μm						
GUMO	**Guam**	**19.83**	**336**	*e*P	**Pn**	**16 06 10.8**	**-0.3**
GUMO	**Guam**	**19.83**	**336**	P	**P**	**16 06 09.6**	**+0.8**
	comp=Z,4.4nm,0.3s,baz=168,slow=9.9,SNR=7.2						
GUMO				LR	LR	16 13 00.7	
	comp=Z,773nm,19.0s,baz=142,slow=35						
QIS	**Mount Isa**	**20.44**	**218**	P	**P**	**16 06 15.2**	**-0.3**
	baz=21,SNR=27						
QIS				S	**S**	**16 10 01.7**	**+1.7**
	baz=21,SNR=6.2						
EIDS	**Eidsvold**	**20.66**	**185**	P	**P**	**16 06 17.7**	**0.0**
	baz=21,SNR=16						
FAKI	**Fak Fak**	**20.72**	**274**	P	**P**	**16 06 17.2**	**-1.3**
	comp=Z,83nm,1.0s,comp=Z,1μm						
FAKI	**Fak Fak**	**20.72**	**274**	P	**P**	**16 06 17.6**	**-1.0**
	baz=21,SNR=15						
NOUC	**Port Laguerre**	**21.63**	**144**	*e*P	**P**	**16 06 28.9**	**+0.8**
DZM	**Mont Dzumac**	**21.69**	**144**	*e*P	**P**	**16 06 28.3**	**-0.5**
	comp=Z,160nm,0.9s						
DZM				*e*S	**S**	**16 10 27.8**	**+3.2**
	comp=Z,3μm,27.9s						
DZM				*e*LR	LR	16 11 56.4	
	comp=Z,5μm,26.4s						
DZM	**Mont Dzumac**	**21.69**	**144**	*e*P	**P**	**16 06 27.1**	**-1.8**
DZM	**Mont Dzumac**	**21.69**	**144**	P	**P**	**16 06 28.6**	**-0.3**
DZM	**Mont Dzumac**	**21.69**	**144**	P	**P**	**16 06 28.6**	**-0.3**
	comp=Z,70nm,0.8s,baz=351,slow=12,SNR=26						
KDU	**Kakadu**	**21.74**	**247**	P	**P**	**16 06 27.3**	**-2.0**
	baz=22,SNR=255						
KDU				S	**S**	**16 10 22.7**	**-2.8**
	baz=22,SNR=4.1						
PALU	**Palau**	**21.96**	**303**	P	**P**	**16 06 31.8**	**+0.1**
	baz=22,SNR=10.0						
SWI	**Sorong**	**21.98**	**279**	P	**P**	**16 06 31.7**	**-0.3**
	comp=Z,287nm,0.8s,comp=Z,3μm						
SWI	**Sorong**	**21.98**	**279**	P	**P**	**16 06 32.4**	**+0.4**
	baz=22,SNR=59						
RMQ	**Roma**	**22.07**	**190**	P	**P**	**16 06 32.6**	**-0.1**
	baz=22,SNR=19						
MTN	**Manton Dam**	**23.02**	**248**	P	**P**	**16 06 40.8**	**-2.0**
	baz=23,SNR=34						
QLP	**Quilpie**	**23.33**	**200**	P	**P**	**16 06 45.3**	**-0.4**
	baz=24,SNR=40						
QLP				S	S	16 10 32.7	-19
	baz=24,SNR=7.3						
WRAB	**Tennant Creek**	**23.63**	**228**	*e*P	**P**	**16 06 47.0**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,81nm,0.6s						
WRAB	**Tennant Creek**	**23.63**	**228**	*e*P	**P**	**16 06 47.0**	**-1.5**
	comp=Z,81nm,0.6s						
WRAB	**Tennant Creek**	**23.63**	**228**	P	**P**	**16 06 47.0**	**-1.5**
	comp=Z,879nm,0.5s,SNR=84						
WRA	**Warramunga Arr**	**23.64**	**228**	P	**P**	**16 06 47.4**	**-1.2**
WRA				PcP	**PcP**	**16 10 31.9**	**+0.6**
WRA				S	**S**	**16 10 55.9**	**-1.5**
WRA				ScP	**ScP**	**16 14 09.5**	**+7.0**
WRA	**Warramunga Arr**	**23.64**	**228**	P	**P**	**16 06 47.4**	**-1.2**
	comp=Z,123nm,0.8s,baz=51,slow=9.9,SNR=439						
WRA				PcP	**PcP**	**16 10 31.9**	**+0.6**
	comp=Z,5.4nm,0.6s,baz=55,slow=2.9,SNR=4.7						
WRA				S	**S**	**16 10 55.9**	**-1.5**
	comp=Z,8.7nm,1.1s,baz=50,slow=15,SNR=4.9						
WRA				ScP	**ScP**	**16 14 09.5**	**+7.0**
	comp=Z,4.4nm,1.0s,baz=49,slow=3.1,SNR=3.5						
WRA				LR	LR	16 16 15.1	
	comp=Z,814nm,20.1s,baz=60,slow=37						
ARMA	**Armidale**	**25.65**	**183**	P	**P**	**16 07 07.9**	**+1.2**
	baz=26,SNR=4.7						
LBMI	**Labuha**	**25.73**	**278**	P	**P**	**16 07 07.8**	**+0.3**
	comp=Z,178nm,1.0s,comp=Z,2μm						
TNTI	**Ternate**	**26.12**	**281**	P	**P**	**16 07 10.6**	**-0.5**
	comp=Z,118nm,0.9s,comp=Z,1μm						
KNRA	**Kununurra**	**26.16**	**244**	P	**P**	**16 07 10.3**	**-1.1**
	baz=26,SNR=177						
AS31	**Alice Springs**	**26.34**	**222**	*e*P	**P**	**16 07 11.7**	**-1.3**
ASAR	**Alice Springs**	**26.35**	**222**	P	**P**	**16 07 11.8**	**-1.3**
ASAR				PcP	**PcP**	**16 10 37.6**	**+0.4**
ASAR				S	**S**	**16 11 45.6**	**+5.2**
ASAR				ScP	ScP	16 14 18.1	+8.0
ASAR	**Alice Springs**	**26.35**	**222**	P	**P**	**16 07 11.8**	**-1.3**
	comp=Z,8.7nm,0.6s,baz=55,slow=8.8,SNR=192						
ASAR				PcP	**PcP**	**16 10 37.7**	**+0.4**
	comp=Z,3.0nm,0.7s,baz=66,slow=3.2,SNR=3.4						
ASAR				S	**S**	**16 11 45.6**	**+5.2**
	comp=Z,3.3nm,1.1s,baz=45,slow=14,SNR=2.5						
ASAR				ScP	ScP	16 14 18.1	+8.0
	comp=Z,1.3nm,0.8s,baz=47,slow=2.7,SNR=2.9						
ASAR				LR	LR	16 17 24.2	
	comp=Z,792nm,21.2s,baz=34,slow=36						
CMSA	**Cobar Meteorol**	**27.59**	**193**	P	**P**	**16 07 24.1**	**+0.1**
	baz=28,SNR=8.0						
MNI	**Manado**	**28.73**	**282**	P	**P**	**16 07 34.0**	**-0.4**
	comp=Z,141nm,0.6s,comp=Z,2μm						
STKA	**Stephens Creek**	**29.09**	**200**	*e*P	**P**	**16 07 36.4**	**-1.0**
STKA				PcP	**PcP**	**16 10 46.8**	**+3.1**
STKA	**Stephens Creek**	**29.09**	**200**	P	**P**	**16 07 35.8**	**-1.6**
	comp=Z,7.3nm,0.7s,baz=18,slow=11,SNR=21						
STKA				PcP	**PcP**	**16 10 46.8**	**+3.1**
	comp=Z,14nm,1.1s,baz=351,slow=5.7,SNR=2.8						
STKA				LR	LR	16 19 03.9	
	comp=Z,2μm,19.2s,baz=18,slow=36						
STKA	**Stephens Creek**	**29.09**	**200**	P	**P**	**16 07 36.4**	**-1.0**
	baz=29,SNR=20						
FITZ	**Fitzroy Crossi**	**29.85**	**241**	P	**P**	**16 07 42.7**	**-1.6**
FITZ	**Fitzroy Crossi**	**29.85**	**241**	P	**P**	**16 07 42.7**	**-1.6**
	comp=Z,88nm,0.6s,baz=59,slow=7.9,SNR=228						
FITZ				LR	LR	16 21 04.2	
	comp=Z,665nm,19.5s,baz=57,slow=39						
FITZ	**Fitzroy Crossi**	**29.85**	**241**	P	**P**	**16 07 42.5**	**-1.8**
	baz=30,SNR=209						
FITZ				S	S	16 12 50.3	+15
	baz=30,SNR=3.2						
LUWI	**Luwuk**	**30.35**	**276**	P	**P**	**16 07 48.7**	**-0.1**
	baz=30,SNR=3.4						
BBOO	**Buckleboo**	**32.14**	**207**	P	**P**	**16 08 05.1**	**+0.8**
	baz=32,SNR=6.5						
KAPI	**Kappang**	**33.08**	**268**	*e*P	**P**	**16 08 10.1**	**-2.6**
	comp=Z,46nm,0.9s						
FORT	**Forrest**	**34.98**	**219**	P	**P**	**16 08 27.9**	**-1.2**
	baz=35,SNR=26						
MYLDM	**Lahad Datu**	**35.77**	**285**	P	**P**	**16 08 37.1**	**+1.1**
AFI	**Afiamalu**	**35.96**	**107**	LR	LR	16 21 28.2	
	comp=Z,575nm,19.9s,baz=275,slow=33						
TSM	**Tawau**	**36.15**	**284**	P	**P**	**16 08 38.9**	**-0.4**
MBWA	**Marble Bar**	**36.16**	**240**	*e*P	**P**	**16 08 38.1**	**-1.2**
	comp=Z,73nm,0.6s						
SDKM	**Sandakan**	**37.14**	**286**	P	**P**	**16 08 46.4**	**-1.3**
SDKM	**Sandakan**	**37.14**	**286**	P	**P**	**16 08 46.5**	**-1.3**
KKM	**Kota Kinabalu**	**38.19**	**286**	*e*P	**P**	**16 08 55.9**	**-0.8**
	comp=Z,66nm,0.9s						
KKM	**Kota Kinabalu**	**38.19**	**286**	P	**P**	**16 08 55.8**	**-0.8**
KKM	**Kota Kinabalu**	**38.19**	**286**	P	**P**	**16 08 56.1**	**-0.5**
	baz=38,SNR=22						
JOW	**Kunigami**	**39.37**	**324**	*e*P	**P**	**16 09 06.8**	**+0.6**
	comp=Z,32nm,0.8s						
MEEK	**Meekatharra**	**39.40**	**233**	P	**P**	**16 09 05.1**	**-1.4**
	baz=40,SNR=194						
KMBL	**Kambalda**	**39.45**	**224**	P	**P**	**16 09 05.4**	**-1.4**
	baz=40,SNR=10						
JHJ	**Hachijo jima 2**	**39.60**	**343**	LR	LR	16 24 40.1	
	comp=Z,626nm,19.6s,baz=65,slow=35						
URZ	**Urewera**	**40.03**	**150**	*e*P	**P**	**16 09 12.1**	**+0.6**
	comp=Z,19nm,0.8s						
URZ	**Urewera**	**40.03**	**150**	P	**P**	**16 09 12.4**	**+0.9**
	comp=Z,14nm,0.6s,baz=309,slow=6.5,SNR=14						
URZ				LR	LR	16 23 53.0	
	comp=Z,395nm,20.4s,baz=331,slow=33						
BTM	**Bintulu**	**40.59**	**280**	P	**P**	**16 09 17.6**	**+1.1**
SBUM	**Sibu**	**41.30**	**279**	P	**P**	**16 09 22.7**	**+0.3**
GIRL	**Giralia**	**41.46**	**241**	P	**P**	**16 09 23.6**	**+0.1**
	baz=42,SNR=16						
YULB	**Yu-li**	**41.61**	**313**	*e*P	**P**	**16 09 24.0**	**-0.8**
	comp=Z,30nm,0.6s						
NACB	**Ninganchiao**	**41.88**	**315**	*e*P	**P**	**16 09 26.9**	**0.0**
	comp=Z,47nm,0.8s						
TPUB	**Ta-pu**	**42.04**	**313**	*e*P	**P**	**16 09 27.1**	**-1.1**
	comp=Z,28nm,0.6s						
RPZ	**Rata Peaks**	**42.05**	**160**	P	**P**	**16 09 29.4**	**+1.3**
RPZ	**Rata Peaks**	**42.05**	**160**	P	**P**	**16 09 29.4**	**+1.3**
	comp=Z,39nm,0.8s,baz=353,slow=4.8,SNR=10						
RPZ				LR	LR	16 25 41.1	
	comp=Z,1μm,18.4s,baz=282,slow=34						
SSLB	**Suanglung**	**42.10**	**314**	*e*P	**P**	**16 09 28.1**	**-0.7**
	comp=Z,16nm,0.6s						
YHNB	**Yeheng**	**42.35**	**315**	*e*P	**P**	**16 09 30.4**	**-0.4**
	comp=Z,58nm,0.8s						
TATO	**Taipei**	**42.46**	**315**	*e*P	**P**	**16 09 31.7**	**+0.1**
	comp=Z,34nm,0.8s						
KLBR	**Kellerberrin**	**42.50**	**227**	P	**P**	**16 09 30.1**	**-1.8**
	baz=43,SNR=27						
MORW	**Morawa**	**42.54**	**231**	P	**P**	**16 09 31.1**	**-1.2**
	baz=43,SNR=99						
BLDU	**Ballidu**	**42.78**	**229**	P	**P**	**16 09 32.7**	**-1.4**
	baz=43,SNR=18						
JNU	**Nakatsue**	**43.01**	**332**	*e*P	**P**	**16 09 35.5**	**-0.5**
	comp=Z,20nm,0.8s						
JNU	**Nakatsue**	**43.01**	**332**	P	**P**	**16 09 35.7**	**-0.3**
	comp=Z,58nm,0.8s,baz=100,slow=4.4,SNR=34						
JNU				LR	LR	16 24 18.6	
	comp=Z,261nm,22.0s,baz=207,slow=32						
KSM	**Kuching**	**43.03**	**277**	*e*P	**P**	**16 09 35.6**	**-0.9**
	comp=Z,49nm,0.8s						
KSM	**Kuching**	**43.03**	**277**	P	**P**	**16 09 36.1**	**-0.4**
KSM	**Kuching**	**43.03**	**277**	P	**P**	**16 09 36.1**	**-0.4**
	baz=43,SNR=44						
MJAR	**Matsushiro Arr**	**43.25**	**343**	P	**P**	**16 09 35.9**	**-1.9**
MJAR				PcP	**PcP**	**16 11 26.0**	**+0.3**
MJAR				ScP	**ScP**	**16 15 14.4**	**+4.5**
MJAR	**Matsushiro Arr**	**43.25**	**343**	P	**P**	**16 09 35.9**	**-1.9**
	comp=Z,3.1nm,0.5s,baz=160,slow=5.3,SNR=13						
MJAR				PcP	**PcP**	**16 11 26.0**	**+0.3**
	comp=Z,3.1nm,0.6s,baz=178,slow=4.4,SNR=4.9						
MJAR				ScP	**ScP**	**16 15 14.4**	**+4.5**
	comp=Z,1.5nm,0.7s,baz=188,slow=3.7,SNR=4.2						
MJAR				LR	LR	16 25 53.3	
	comp=Z,489nm,21.3s,baz=175,slow=34						
MAJO	**Matsushiro**	**43.25**	**343**	*e*P	**P**	**16 09 35.6**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.4s						
MAJO	**Matsushiro**	**43.25**	**343**

NJ2				S	**S**	**16 17 22.5**	**+3.3**		
NJ2				sS	**sS**	**16 17 56.0**	**+2.7**		
NJ2				pmax	pmax				
	comp=Z,30nm,0.6s								
NJ2				pmax	pmax				
	comp=Z,250nm,5.7s								
NJ2				LR	LR				
	comp=N,490nm,22.3s								
NJ2				LR	LR				
	comp=E,970nm,23.8s								
NJ2				LR	LR				
	comp=Z,970nm,21.5s								
YUK	**Yuzh-Kuril'sk**	**48.90**	**353**	*d* *i*P	**P**	**16 10 19.5**	**-2.5**		
YUK				*i*		16 11 52.5			
YUK				*i* PPP	PPP	16 13 02.4			
YUK				*i* S	**S**	**16 17 20.3**	**+0.7**		
YUK				*i* SSS	SSS	16 22 05.1			
YUK				pmax	pmax				
	comp=N,194nm,0.8s								
YUK				pmax	pmax				
	comp=Z,715nm,1.6s								
YUK				pmax	pmax				
	comp=E,100nm,0.8s								
ASAJ	**Asahikawa**	**49.45**	**350**	*e*P	**P**	**16 10 26.2**	**0.0**		
	comp=E,9.2nm,0.8s								
ASAJ	**Asahikawa**	**49.45**	**350**	P	**P**	**16 10 26.2**	**0.0**		
	comp=E,14nm,0.7s,baz=211,slow=12,SNR=17								
ASAJ				LR	LR	16 29 23.0			
	comp=E,742nm,20.2s,baz=175,slow=34								
MYKOM	**Kota Tinggi**	**49.47**	**276**	P	**P**	**16 10 26.5**	**-0.5**		
KGM	**Kluang**	**50.03**	**277**	P	**P**	**16 10 30.5**	**-0.8**		
KTGM	**Kuala Trenggan**	**50.73**	**281**	P	**P**	**16 10 36.5**	**0.0**		
WHN	**Wuhan**	**50.86**	**316**	⇑*i*P	**P**	**16 10 36.4**	**-0.8**		
WHN				S	**S**	**16 17 49.8**	**+2.3**		
WHN				LR	LR				
	comp=Z,1μm,23.5s								
FRIM	**Kepong**	**51.87**	**278**	P	**P**	**16 10 44.3**	**-0.8**		
DL2	**Dalian**	**52.13**	**329**	⇑P	**P**	**16 10 45.6**	**-0.9**		
DL2				pP	**pP**	**16 11 04.7**	**-2.0**		
DL2				sP	**sP**	**16 11 15.8**	**0.0**		
DL2				S	**S**	**16 18 05.6**	**+0.9**		
DL2				pmax	pmax				
	comp=Z,33nm,0.8s								
DL2				pmax	pmax				
	comp=Z,120nm,6.1s								
DL2				LR	LR				
	comp=N,190nm,19.9s								
DL2				LR	LR				
	comp=E,160nm,21.6s								
DL2				LR	LR				
	comp=Z,260nm,27.2s								
USRK	**Ussuriysk Arra**	**52.16**	**341**	P	**P**	**16 10 46.6**	**0.0**		
	comp=Z,27nm,0.7s,baz=174,slow=7.4,SNR=55								
USRK				LR	LR	16 29 15.1			
	comp=Z,225nm,19.8s,baz=141,slow=32								
YSS	**Yuzh-Sakhalins**	**52.18**	**351**	*e*P	**P**	**16 10 46.0**	**-0.7**		
YSS				*e*		16 10 52.8			
YSS				*e*S	**S**	**16 18 05.0**	**-0.1**		
PPI	**Padang Panjang**	**52.65**	**273**	P	**P**	**16 10 49.6**	**-1.2**		
	baz=53,SNR=5.8								
IPM	**Ipoh**	**52.66**	**279**	*e*P	**P**	**16 10 49.1**	**-1.8**		
	comp=Z,13nm,0.6s								
IPM	**Ipoh**	**52.66**	**279**	P	**P**	**16 10 49.8**	**-1.0**		
MDJ	**Mudanjiang**	**53.35**	**339**	P	**P**	**16 10 55.0**	**-0.4**		
MDJ				pP	**pP**	**16 11 14.6**	**-1.0**		
MDJ				sP	**sP**	**16 11 24.0**	**-0.7**		
MDJ				PP	**PP**	**16 12 56.0**	**-0.5**		
MDJ				S	**S**	**16 18 19.1**	**-2.0**		
MDJ				sS	**sS**	**16 18 54.2**	**-1.5**		
MDJ				pmax	pmax				
	comp=Z,21nm,0.7s								
MDJ				pmax	pmax				
	comp=Z,140nm,6.7s								
MDJ				LR	LR				
	comp=N,360nm,28.1s								
MDJ				LR	LR				
	comp=E,210nm,30.7s								
MDJ				LR	LR				
	comp=Z,520nm,31.2s								
CN2	**Changchun**	**54.24**	**336**	*e*P	**P**	**16 11 02.0**	**+0.1**		
CN2				*e*pP	**pP**	**16 11 25.7**	**+3.5**		
CN2				*e*S	**S**	**16 18 31.0**	**-2.2**		
CN2				pmax	pmax				
	comp=Z,10.0nm,0.8s								
CN2				pmax	pmax				
	comp=Z,200nm,10.0s								
CN2				LR	LR				
	comp=N,200nm,20.0s								
CN2				LR	LR				
	comp=E,200nm,20.0s								
CN2				LR	LR				
	comp=Z,200nm,20.0s								
GYA	**Guiyang**	**54.43**	**307**	⇑*i*P	**P**	**16 11 04.3**	**+0.5**		
GYA				pP	**pP**	**16 11 25.4**	**+1.3**		
GYA				sP	**sP**	**16 11 36.0**	**+2.8**		
GYA				PcP	**PcP**	**16 12 06.3**	**-0.3**		
GYA				PP	**PP**	**16 13 08.9**	**+2.1**		
GYA				ScP	**ScP**	**16 15 55.4**	**-2.4**		
GYA				S	**S**	**16 18 35.6**	**-1.0**		
GYA				sS	**sS**	**16 19 12.0**	**+0.7**		
GYA				SS	**SS**	**16 22 18.9**	**-1.3**		
GYA				pmax	pmax				
	comp=Z,20nm,0.8s								
GYA				pmax	pmax				
	comp=Z,140nm,5.0s								
GYA				LR	LR				
	comp=N,650nm,19.9s								
GYA				LR	LR				
	comp=E,590nm,20.1s								
GYA				LR	LR				
	comp=Z,620nm,19.4s								
PSI	**Prapat**	**54.48**	**277**	P	**P**	**16 11 02.6**	**-1.8**		
	baz=54,SNR=6.7								
HABR	**Khabarovsk**	**55.19**	**346**	*e*P	**P**	**16 11 07.1**	**-1.5**		
HABR				*e*		16 12 06.4			
HABR				*e*		16 13 10.4			
HABR				PPP	PPP	16 14 23.8			
HABR				*e*S	**S**	**16 18 44.8**	**-0.9**		
HABR				*e*		16 20 47.6			
HABR				*e*SS	**SS**	**16 22 30.3**	**-0.8**		
HABR				pmax	pmax				
	comp=E,35nm,2.1s								
HABR				pmax	pmax				
	comp=N,24nm,2.1s								
HABR				pmax	pmax				
	comp=Z,98nm,2.1s								
HABR				MLR	MLR				
	comp=Z,132nm,17.0s								
BJI	**Beijing**	**55.86**	**326**	P	**P**	**16 11 12.5**	**-1.1**		
BJI				PP	**PP**	**16 13 23.8**	**+4.6**		
BJI				S	**S**	**16 18 55.3**	**+0.3**		
BJI				SS	**SS**	**16 22 41.5**	**-0.6**		
BJI				pmax	pmax				
	comp=Z,12nm,2.2s								
BJI				pmax	pmax				
	comp=Z,250nm,6.1s								
BJI				LR	LR				
	comp=N,310nm,28.1s								
BJI				LR	LR				
	comp=E,470nm,27.0s								
BJI				LR	LR				
	comp=Z,700nm,27.0s								
XAN	**Xi'an**	**56.62**	**316**	P	**P**	**16 11 19.0**	**-0.3**		
XAN				pP	**pP**	**16 11 42.4**	**+2.7**		
XAN				S	**S**	**16 19 02.4**	**-3.1**		
XAN				ScS	**ScS**	**16 20 59.8**	**-1.5**		
XAN				pmax	pmax				
	comp=Z,15nm,0.6s								
XAN				pmax	pmax				
	comp=Z,53nm,7.8s								
XAN				LR	LR				
	comp=N,270nm,22.5s								
XAN				LR	LR				
	comp=E,120nm,21.4s								
XAN				LR	LR				
	comp=Z,180nm,22.5s								
KLR	**Kul'dur**	**56.76**	**344**	*e*P	P	16 11 15.4	-4.5		
KLR				*e*		16 11 26.7			
KLR				pmax	pmax				
	comp=Z,72nm,1.4s								
LHMI	**Lhok Sumawe**	**56.78**	**279**	P	**P**	**16 11 21.1**	**+0.4**		
	baz=57,SNR=4.8								
KMI	**Kunming**	**57.03**	**304**	P	**P**	**16 11 23.4**	**+0.8**		
KMI				sP	**sP**	**16 11 55.4**	**+3.3**		
KMI				S	**S**	**16 19 11.0**	**-0.5**		
KMI				sS	**sS**	**16 19 47.7**	**+1.3**		
KMI				SS	**SS**	**16 23 00.8**	**-0.7**		
KMI				pmax	pmax				
	comp=Z,14nm,1.0s								
KMI				pmax	pmax				
	comp=Z,160nm,7.9s								
KMI				LR	LR				
	comp=N,210nm,19.4s								
KMI				LR	LR				
	comp=E,330nm,20.3s								
KMI				LR	LR				
	comp=Z,730nm,25.7s								
PPT	**Papeete**	**57.63**	**108**	LR	LR	16 33 32.5			
	comp=Z,258nm,18.6s,baz=359,slow=33								
PPT2	**Papeete2**	**57.63**	**108**	*e*S	S	16 19 27.6	+8.3		
	comp=Z,258nm,28.5s								
PPT2				*e*LR	LR	16 28 44.0			
	comp=Z,300nm,24.2s								
PET	**Petropavlovsk**	**57.67**	**4**	⇑*i*P	**P**	**16 11 25.8**	**-0.4**		
PET				*e*		16 12 18.4			
PET				*e*S	**S**	**16 19 18.9**	**+0.5**		
PET				pmax	pmax				
	comp=Z,21nm,0.7s								
PET				pmax	pmax				
	comp=Z,200nm,4.8s								
PET				pmax	pmax				
	comp=Z,100nm,6.8s								
PET				MLR	MLR				
	comp=Z,300nm,20.0s								
PEA0B	**Petropavlovsk-**	**57.70**	**3**	*e*P	**P**	**16 11 26.2**	**-0.2**		
PETK	**Petropavlovsk-**	**57.70**	**3**	P	**P**	**16 11 26.2**	**-0.2**		
PETK	**Petropavlovsk-**	**57.70**	**3**	P	**P**	**16 11 26.1**	**-0.2**		
PETK	**Petropavlovsk-**	**57.70**	**3**	P	**P**	**16 11 26.1**	**-0.2**		
	comp=Z,11nm,0.5s,baz=171,slow=8.1,SNR=115								
PETK				LR	LR	16 31 42.4			
	comp=Z,438nm,21.6s,baz=212,slow=31								
CMAR	**Chiang Mai Arr**	**57.95**	**295**	P	**P**	**16 11 29.4**	**+0.6**		
CMAR	**Chiang Mai Arr**	**57.95**	**295**	P	**P**	**16 11 29.4**	**+0.6**		
	comp=Z,28nm,0.8s,baz=118,slow=5.4,SNR=218								
CHTO	**Chiang Mai**	**58.06**	**295**	*e*P	**P**	**16 11 29.3**	**-0.3**		
CHTO				pmax	pmax				
	comp=Z,12nm,0.8s								
CHTO	**Chiang Mai**	**58.06**	**295**	*e*P	**P**	**16 11 29.3**	**-0.3**		
	comp=Z,12nm,0.8s								
TBI	**Tubuai**	**58.48**	**114**	*e*LQ	LQ	16 26 30.4			
	comp=Z,1μm,34.0s								
TBI				*e*LR	LR	16 29 06.7			
	comp=Z,1μm,32.5s								
CD2	**Chengdu**	**58.76**	**310**	P	**P**	**16 11 34.9**	**+0.6**		
CD2				pP	**pP**	**16 11 56.9**	**+2.0**		
CD2				sP	**sP**	**16 12 07.0**	**+3.1**		
CD2				PcP	**PcP**	**16 12 23.1**	**-0.2**		
CD2				PP	**PP**	**16 13 47.8**	**+2.6**		
CD2				ScP	**ScP**	**16 16 14.2**	**-2.5**		
CD2				PcS	**PcS**	**16 16 23.5**	**-1.8**		
CD2				S	**S**	**16 19 32.0**	**-1.6**		
CD2				sS	**sS**	**16 20 10.1**	**+1.5**		
CD2				SS	**SS**	**16 23 28.5**	**+0.3**		
CD2				pmax	pmax				
	comp=Z,140nm,0.7s								
CD2				pmax	pmax				
	comp=Z,210nm,5.1s								
CD2				LR	LR				
	comp=N,450nm,27.5s								
CD2				LR	LR				
	comp=E,600nm,22.0s								
CD2				LR	LR				
	comp=Z,800nm,24.5s								
HHC	**Hu-ho-hao-te**	**59.02**	**324**	⇑*e*P	**P**	**16 11 37.2**	**+1.2**		
HHC				pP	**pP**	**16 12 01.2**	**+4.6**		
HHC				PP	**PP**	**16 13 50.9**	**+3.5**		
HHC				PcS	**PcS**	**16 16 24.9**	**-1.3**		
HHC				S	**S**	**16 19 35.5**	**-1.2**		
HHC				ScS	**ScS**	**16 21 14.1**	**-4.6**		
HHC				SS	**SS**	**16 23 33.0**	**+0.9**		
HHC				pmax	pmax				
	comp=Z,140nm,1.0s								
HHC				pmax	pmax				
	comp=Z,160nm,6.2s								
HHC				LR	LR				
	comp=N,580nm,23.2s								
HHC				LR	LR				
	comp=E,560nm,25.0s								
HHC				LR	LR				
	comp=Z,1μm,19.6s								
BTO	**Baotou**	**59.78**	**323**	*e*P	**P**	**16 11 41.1**	**-0.2**		
FX1	**Attu Island--F**	**59.83**	**14**	*e*P	**P**	**16 11 40.8**	**-0.4**		
FX1	**Attu Island--F**	**59.83**	**14**	P	**P**	**16 11 41.0**	**-0.1**		
	comp=Z,22nm,0.8s,baz=248,slow=19,SNR=5.8								
LZH	**Lanzhou**	**61.24**	**316**	⇑P	**P**	**16 11 52.2**	**+0.9**		
LZH				pP	**pP**	**16 12 13.6**	**+1.6**		
LZH				sP	**sP**	**16 12 23.5**	**+2.5**		
LZH				PP	**PP**	**16 14 10.3**	**+3.1**		
LZH				S	**S**	**16 20 03.2**	**-2.2**		
LZH				sS	**sS**	**16 20 41.5**	**+0.9**		
LZH				SS	**SS**	**16 24 06.0**	**-1.1**		
LZH				pmax	pmax				
	comp=Z,43nm,1.5s								
LZH				pmax	pmax				
	comp=Z,190nm,9.0s								
LZH				LR	LR				
	comp=N,710nm,19.0s								
LZH				LR	LR				
	comp=E,720nm,18.3s								
LZH				LR	LR				
	comp=Z,880nm,19.7s								
DRV	**Dumont d'Urvil**	**62.54**	**186**	P	P	16 12 14.0	+15		
DRV	**Dumont d'Urvil**	**62.54**	**186**	PP	PP	16 14 07.0	-11		
DRV				S	S	16 19 55.0	-25		
DRV				SS	SS	16 24 47.0	+21		
DRV				L	L	16 27 00.0			
DRV				R		16 30 00.0			
GTA	**Gaotai**	**65.66**	**317**	⇑P	**P**	**16 12 21.3**	**+0.9**		
GTA				pP	**pP**	**16 12 43.0**	**+1.7**		
GTA				sP	**sP**	**16 12 53.7**	**+3.4**		
GTA				S	**S**	**16 21 01.4**	**+1.2**		
GTA				sS	**sS**	**16 21 40.6**	**+4.7**		
GTA				pmax	pmax				
	comp=Z,34nm,1.8s								
GTA				pmax	pmax				
	comp=Z,280nm,4.3s								
GTA				LR	LR				
	comp=N,230nm,19.5s								
GTA				LR	LR				
	comp=E,360nm,19.5s								
GTA				LR	LR				
	comp=Z,420nm,21.4s								
ULN	**Ulaanbaatar**	**65.96**	**328**	*e*P	**P**	**16 12 22.5**	**+0.3**		
	comp=Z,8.6nm,0.8s								
SONM	**Songino Array**	**66.29**	**328**	P	**P**	**16 12 24.4**	**+0.1**		
SONM				⇑*e*		16 41 03.5			
SONM	**Songino Array**	**66.29**	**328**	P	**P**	**16 12 24.4**	**+0.1**		
	comp=Z,9.8nm,0.6s,baz=145,slow=5.2,SNR=50								
SONM				LR	LR	16 39 30.4			
	comp=Z,462nm,21.6s,baz=145,slow=34								
SONM				PKP2bc		16 41 03.5			
	comp=Z,1.2nm,1.0s,baz=305,slow=2.1,SNR=5.7								
SHL	**Shillong**	**66.36**	**300**	*e*PKP	**P**	**16 12 25.0**	**-0.3**		
SEY	**Seymchan**	**67.41**	**360**	⇓*i*P	**P**	**16 12 30.9**	**0.0**		
LSA	**Lhasa**	**68.28**	**304**	P	**P**	**16 12 38.5**	**+0.8**		
LSA				pmax	pmax				
	comp=Z,20nm,0.7s								
YAK	**Yakutsk**	**68.87**	**348**	*e*P	**P**	**16 12 38.7**	**-1.3**		
YAK				*e*		16 13 03.3			
YAK				*e*S	**S**	**16 21 34.3**	**-3.3**		
YAK				*e**SS	**sS**	**16 22 10.0**	**-3.5**		
YAK				*e*		16 22 30.6			
YAK				*e*SSS	SSS	16 29 07.1			
YAK				pmax	pmax				
	comp=N,4.0nm,1.0s								
YAK				pmax	pmax				
	comp=Z,14nm,1.1s								
YAK				pmax	pmax				
	comp=E,4.0nm,1.3s								
YAK				smax	smax				
	comp=N,111nm,4.8s								
YAK				smax	smax				
	comp=E,56nm,3.8s								
ZAK	**Zakamensk**	**69.45**	**329**	⇑*i*P	**P**	**16 12 43.9**	**-0.2**		
ZAK				pmax	pmax				
	comp=Z,11nm,0.8s								
TLY	**Talaya**	**70.04**	**330**	*e*P	**P**	**16 12 48.4**	**+0.9**		
TLY				*e*		16 22 34.7			
TLY				pmax	pmax				
	comp=Z,5.0nm,0.7s								
TLY				MLR	MLR				
	comp=Z,158nm,19.0s								
IRK	**Irkutsk**	**70.06**	**331**	*e*P	**P**	**16 12 47.0**	**-0.6**		
IRK				pmax	pmax				
	comp=Z,22nm,0.7s								
TAPN	**Taplejung**	**70.46**	**301**	*e*P	**P**	**16 12 50.8**	**-0.2**		
	comp=Z,55nm,0.7s								
ODAN	**Odare**	**70.60**	**300**	*e*P	**P**	**16 12 51.7**	**0.0**		
	comp=Z,107nm,0.7s								
RAMN	**Ramite**	**71.30**	**300**	*e*P	**P**	**16 12 55.5**	**-0.5**		
	comp=Z,24nm,0.6s								
MOY	**Mondy**	**71.38**	**329**	*e*P	**P**	**16 12 56.0**	**+0.2**		
MOY				pmax	pmax				
	comp=Z,38nm,2.9s								
RKT	**Rikitea**	**71.71**	**113**	*e*LQ	LQ	16 31 57.1			
	comp=Z,469nm,38.2s								
RKT				*e*LR	LR	16 35 16.6			
	comp=Z,1μm,28.8s								
GUN	**Gumba**	**72.18**	**301**	*e*P	**P**	**16 13 01.1**	**-0.3**		
	comp=Z,91nm,0.6s								
PKI	**Pulchoki**	**72.49**	**301**	*e*P	**P**	**16 13 02.8**	**-0.4**		
	comp=Z,50nm,0.6s								
PKIN	**Phulchoki**	**72.50**	**301**	*e*P	**P**	**16 13 02.6**	**-0.6**		
	comp=Z,35nm,0.6s								
KKN	**Kakani**	**72.66**	**301**	*e*P	**P**	**16 13 03.5**	**-0.6**		
	comp=Z,53nm,0.6s								
DMN	**Daman**	**72.76**	**301**	*e*P	**P**	**16 13 04.5**	**-0.2**		
	comp=Z,107nm,0.7s								
VNDA	**Vanda**	**72.96**	**178**	*e*P	**P**	**16 13 05.1**	**+0.5**		
	comp=Z,7.3nm,0.7s								
VNDA	**Vanda**	**72.96**	**178**	P	**P**	**16 13 05.1**	**+0.5**		
	comp=Z,9.6nm,0.8s,baz=327,slow=6.3,SNR=31								
VNDA				LR	LR	16 41 13.3			
	comp=Z,246nm,19.3s,baz=336,slow=32								
BILL	**Bilibino**	**73.14**	**5**	κ*e*P	**P**	**16 13 05.7**	**-0.1**		
BILL						16 13 18.0			
BILL				*PP	**pP**	**16 13 25.0**	**-2.1**		
BILL				S	**SKiKP**	**16 22 34.0**	**+3.8**		
BILL				*e*		16 23 10.0			
BILL				pmax	pmax				
	comp=Z,32nm,1.2s								
KOLN	**Koldanda**	**74.09**	**300**	*e*P	**P**	**16 13 11.9**	**-0.6**		
	comp=Z,78nm,0.7s								
DANN	**Dangsing**	**74.10**	**301**	*e*P	**P**	**16 13 11.5**	**-1.1**		
	comp=Z,39nm,0.5s								
MIR	**Mirnyy**	**74.10**	**201**	⇓*i*P	**P**	**16 13 13.0**	**+1.5**		
MIR				*e*		16 13 21.0			
MIR				*e*		16 13 26.0			
MIR				pmax	pmax				
	comp=Z,42nm,1.0s								
PYUN	**Piuthan**	**74.70**	**301**	*e*P	**P**	**16 13 15.1**	**-0.9**		
	comp=Z,128nm,0.8s								
HVS	**Khovu-Aksy**	**75.03**	**326**	⇓*i*P	**P**	**16 13 17.4**	**+0.2**		
HVS				pmax	pmax				
	comp=Z,140nm,1.7s								
TNA	**Tin City**	**75.63**	**16**	*e*P	**P**	**16 13 17.4**	**-2.8**		
	comp=Z,15nm,0.5s								
WMQ	**Urumqi**	**75.74**	**317**	P	**P**	**16 13 22.1**	**+0.6**		
WMQ				PcP	**PcP**	**16 13 34.7**	**+0.9**		
WMQ				pP	**pP**	**16 13 42.2**	**-0.7**		
WMQ				sP	**sP**	**16 13 50.7**	**-1.0**		
WMQ				PP	**PP**	**16 16 15.0**	**+2.6**		
WMQ				S	**S**	**16 22 56.7**	**-0.3**		
WMQ				SKS	**SKSac**	**16 23 20.5**	**-4.2**		
WMQ				ScS	**SKKSac**	**16 23 26.0**	**+0.9**		
WMQ				SS	**SS**	**16 27 52.7**	**+2.2**		
WMQ				pmax	pmax				
	comp=Z,27nm,0.6s								
WMQ				pmax	pmax				
	comp=Z,250nm,4.0s								
WMQ				LR	LR				
	comp=N,220nm,26.2s								
WMQ				LR	LR				
	comp=E,290nm,25.0s								
WMQ				LR	LR				
	comp=Z,380nm,28.8s								
KDAK	**Kodiak Island**	**75.99**	**27**	P	**P**	**16 13 22.1**	**-0.3**		
KDAK	**Kodiak Island**	**75.99**	**27**	P	**P**	**16 13 22.1**	**-0.3**		
	comp=Z,6.3nm,0.8s,baz=179,slow=4.9,SNR=6.4								
HYB	**Hyderabad**	**76.59**	**289**	*i* P	**P**	**16 13 25.0**	**-1.8**		
	comp=Z,90nm,1.0s								
TRF	**Thorofare Moun**	**80.02**	**22**	*e*P	**P**	**16 13 42.7**	**-2.2**		
	comp=Z,7.5nm,0.8s								
MK31	**Makanchi Array**	**80.32**	**319**	*e*P	**P**	**16 13 46.4**	**-0.3**		
MK31				pmax	pmax				
	comp=Z,10.0nm,0.6s								
MK31	**Makanchi Array**	**80.32**	**319**	*e*P	**P**	**16 13 46.1**	**-0.7**		
MKAR	**Makanchi Array**	**80.32**	**319**	P	**P**	**16 13 46.4**	**-0.3**		
MKAR						16 32 29.9			
MKAR	**Makanchi Array**	**80.32**	**319**	P	**P**	**16 13 46.4**	**-0.3**		
MKAR				PKiKP	**PKiKP**	**16 19 16.5**	**+1.3**		
MKAR				PKKPbc	**PKKPbc**	**16 32 29.9**	**-1.0**		
MKAR	**Makanchi Array**	**80.32**	**319**	P	**P**	**16 13 46.4**	**-0.3**		
	comp=Z,10nm,0.5s,baz=97,slow=6.4,SNR=121								
MKAR				PKiKP	**PKiKP**	**16 19 16.5**	**+1.3**		
	comp=Z,0.3nm,0.5s,baz=245,slow=2.6,SNR=6.5								
MKAR				PKKPbc	**PKKPbc**	**16 32 29.9**	**-1.0**		
	comp=Z,1.0nm,0.7s,baz=309,slow=1.4,SNR=13								
MCK	**McKinley**	**80.68**	**23**	*e*P	**P**	**16 13 46.1**	**-2.2**		
MCK				pmax	pmax				
	comp=Z,30nm,1.0s								
MCK	**McKinley**	**80.68**	**23**	*e*P	**P**	**16 13 46.1**	**-2.2**		
	comp=Z,30nm,1.0s								
DIV	**Divide**	**80.69**	**26**	P	**P**	**16 13 47.4**	**-1.0**		
	comp=Z,27nm,1.1s								
ZAA0	**Zalesovo Array**	**81.12**	**326**	*e*P	**P**	**16 13 49.6**	**-1.2**		
ZALV	**Zalesovo Beam**	**81.12**	**326**	P	**P**	**16 13 49.7**	**-1.1**		
ZALV						16 32 29.4			
ZALV	**Zalesovo Beam**	**81.12**	**326**	P	**P**	**16 13 49.7**	**-1.1**		
ZALV				PKKPbc	**PKKPbc**	**16 32 29.4**	**0.0**		
ZALV				P'P'		16 40 36.3			
ZALV	**Zalesovo Beam**	**81.12**	**326**	P	**P**	**16 13 49.7**	**-1.1**		
	comp=Z,15nm,0.6s,baz=112,slow=6.1,SNR=103								
ZALV				PKKPbc	**PKKPbc**	**16 32 29.4**	**0.0**		
	comp=Z,0.2nm,0.3s,baz=44,slow=4.9,SNR=4.0								
ZALV				PKPPKP	P'P'df	16 40 36.3	+5.5		
	comp=Z,0.4nm,0.5s,baz=232,slow=7.2,SNR=4.4								
ZALV				LR	LR	16 48 34.8			
	comp=Z,195nm,21.8s,baz=70,slow=35								
POO	**Poona**	**81.18**	**289**	*ex*	P	16 13 48.0	-3.9		
COLA	**College**	**81.67**	**22**	*e*P	**P**	**16 13 51.3**	**-2.1**		
COLA				pmax	pmax				
	comp=Z,13nm,0.9s								
COLA	**College**	**81.67**	**22**	*e*P	**P**	**16 13 51.3**	**-2.1**		
	comp=Z,13nm,0.9s								
ILAR	**Eielson Array**	**81.98**	**22**	P	**P**	**16 13 53.3**	**-1.8**		
ILAR				PKKPbc	**PKKPbc**	**16 32 25.1**	**-2.8**		
ILAR	**Eielson Array**	**81.98**	**22**	P	**P**	**16 13 53.3**	**-1.8**		
	comp=Z,4.3nm,0.6s,baz=241,slow=5.5,SNR=76								
ILAR				PKKPbc	**PKKPbc**	**16 32 25.1**	**-2.8**		
	comp=Z,0.6nm,0.6s,baz=287,slow=0.5,SNR=11								
ILAR				LR	LR	16 51 45.9			
	comp=Z,138nm,18.5s,baz=49,slow=37								
COLD	**Coldfoot**	**82.08**	**19**	*e*P	**P**	**16 13 55.6**	**0.0**		
	comp=Z,3.4nm,0.8s								
NVS	**Novosibirsk**	**82.30**	**327**	⇑*i*P	**P**	**16 13 55.1**	**-1.8**		
NVS				*e*S	**S**	**16 24 06.2**	**+0.2**		
NVS				pmax	pmax				
	comp=Z,76nm,2.1s								
NVS				pmax	pmax				

KURK pmax pmax
comp=Z,9.0nm,0.6s
KURK Kurchatov 83.75 322 *e*P **P** **16 14 03.5 -1.0**
comp=Z,13nm,0.7s
KURK PKiKP **PKiKP** **16 19 21.9 +1.5**
KURK PKKPbc **PKKPbc** **16 32 22.2 -0.9**
KURK Kurchatov 83.75 322 P **P** **16 14 04.0 -0.5**
comp=Z,119nm,0.6s,SNR=20
KURBB Kurchatov Arra 83.78 322 P **P** **16 14 04.4 -0.3**
comp=Z,8.9nm,0.6s,baz=108,slow=3.9,SNR=131
KURBB PKiKP **PKiKP** **16 19 21.9 +1.4**
comp=Z,0.5nm,0.6s,baz=117,slow=1.4,SNR=4.7
KURBB PKKPbc **PKKPbc** **16 32 22.2 -0.8**
comp=Z,0.8nm,0.7s,baz=288,slow=2.7,SNR=13
TKM2 Tokmak 2 83.94 314 *i* P **P** **16 14 06.3 +0.3**
TKM2 Tokmak 2 83.94 314 *e*P **P** **16 14 05.9 -0.1**
comp=Z,16nm,0.6s
TKM2 Tokmak 2 83.94 314 P **P** **16 14 06.3 +0.3**
SNR=24
KZA Kyzart 84.02 313 P **P** **16 14 07.6 +0.9**
SNR=18
EGAK Eagle 84.18 23 *e*P **P** **16 14 05.5 -0.9**
comp=Z,11nm,0.9s
KBK Karagaybulak 84.36 314 P **P** **16 14 09.1 +1.0**
SNR=14
DIB Dawson Inlet, 84.55 36 T T 17 47 27.9
SNR=28
CHMS Chumysh 84.57 314 P **P** **16 14 09.5 +0.6**
SNR=27
FRU Bishkek 84.63 314⇑ *i*P **P** **16 14 08.0 -1.3**
FRU *e* 16 14 22.0
FRU pmax pmax
comp=Z,140nm,2.2s
AAK Ala-Archa 84.68 313 P **P** **16 14 10.4 +0.7**
AAK pmax pmax
comp=Z,28nm,0.8s
AAK Ala-Archa 84.68 313 *e*P **P** **16 14 09.5 -0.2**
comp=Z,20nm,0.6s
AAK Ala-Archa 84.68 313 P **P** **16 14 10.5 +0.8**
SNR=39
AAK Ala-Archa 84.68 313 P **P** **16 14 10.0 +0.3**
comp=Z,212nm,0.5s,SNR=22
AAK Ala-Archa 84.68 313 P **P** **16 14 10.4 +0.7**
comp=Z,28nm,0.8s,baz=116,slow=5.0,SNR=97
USP Ospenovka 84.80 314 P **P** **16 14 10.6 +0.5**
SNR=17
AML Almayashu 85.17 313 P **P** **16 14 13.1 +0.7**
SNR=57
EKS2 Erkin-Say 85.20 313 *e*P **P** **16 14 12.3 0.0**
EKS2 pmax pmax
comp=Z,23nm,0.8s
EKS2 Erkin-Say 85.20 313 *e*P **P** **16 14 12.3 0.0**
comp=Z,23nm,0.8s
EKS2 Erkin-Say 85.20 313 P **P** **16 14 12.7 +0.4**
SNR=31
MAW Mawson 85.75 203 *e*P **P** **16 14 14.2 -0.1**
comp=Z,2.3nm,0.7s
MAW Mawson 85.75 203 P **P** **16 14 14.5 +0.2**
comp=Z,8.8nm,0.6s,baz=106,slow=6.6,SNR=38
MAW LR LR 16 49 45.7
comp=Z,245nm,20.9s,baz=84,slow=34
MAW Mawson 85.75 203 P **P** **16 14 14.4 +0.1**
baz=86,SNR=20
KBL Kabul 87.61 305 *e*P **P** **16 14 22.8 -1.5**
KBL pmax pmax
comp=Z,8.0nm,0.6s
KBL Kabul 87.61 305 *e*P **P** **16 14 22.8 -1.5**
comp=Z,7.6nm,0.6s
KBL Kabul 87.61 305 P **P** **16 14 24.3 0.0**
baz=88,SNR=4.1
KK31 Karatay Array 87.64 313 *i* P **P** **16 14 23.4 -0.6**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
BVA0 Borovoye Array 89.22 323 *i* P **P** **16 14 30.1 -1.1**
BVA0 pmax pmax
comp=Z,5.0nm,0.6s
BVAR Borovoye Array 89.22 323 P **P** **16 14 30.1 -1.1**
BVAR Borovoye Array 89.22 323 P **P** **16 14 30.1 -1.1**
BVAR PKKPbc **PKKPbc** **16 32 07.8 -2.3**
BVAR Borovoye Array 89.22 323 P **P** **16 14 30.1 -1.1**
comp=Z,45nm,0.6s,baz=105,slow=5.7,SNR=287
BVAR PKKPbc **PKKPbc** **16 32 07.8 -2.3**
comp=Z,0.4nm,0.6s,baz=207,slow=3.0,SNR=3.5
BRVK Borovoye 89.29 323*d i*P **P** **16 14 30.6 -0.9**
BRVK pmax pmax
comp=Z,31nm,0.8s
BRVK Borovoye 89.29 323 *e*P **P** **16 14 29.9 -1.6**
comp=Z,26nm,0.6s
BRVK Borovoye 89.29 323 P **P** **16 14 30.1 -1.4**
comp=Z,287nm,0.6s,SNR=20
NVAR Mina Array Bea 91.89 52 P **P** **16 14 44.8 +0.5**
NVAR Mina Array Bea 91.89 52 P **P** **16 14 44.8 +0.5**
comp=Z,0.7nm,0.7s,baz=248,slow=6.5,SNR=4.0
NVAR LR LR 16 48 55.6
comp=Z,367nm,21.0s,baz=114,slow=31
SVE Sverdlovsk 95.14 327⇑ *e*P **P** **16 14 57.4 -1.1**
SVE *e* 16 18 52.5
SVE *e*SS SS 16 32 35.4 +1.0
SVE pmax pmax
comp=Z,6.0nm,0.6s
SVE MLR MLR
comp=Z,346nm,20.0s
YKA Yellowknife Ar 95.24 28 P **P** **16 14 59.0 +0.1**
YKA PKiKP **PKiKP** **16 19 38.6 -0.7**
YKA PKKPbc **PKKPbc** **16 31 55.0 +0.1**
YKA Yellowknife Ar 95.24 28 P **P** **16 14 58.9 +0.1**
comp=Z,1.3nm,0.6s,baz=269,slow=4.6,SNR=23
YKA PKiKP **PKiKP** **16 19 38.6 -0.7**
comp=Z,0.4nm,0.6s,baz=274,slow=1.5,SNR=7.0
YKA PKKPbc **PKKPbc** **16 31 54.9 +0.1**
comp=Z,0.5nm,0.7s,baz=86,slow=2.8,SNR=5.8
ABKAR Akbulak array 95.47 319 *e*P **P** **16 14 57.5 -2.7**
comp=Z,4.2nm,0.6s
ARU Arti 96.29 326 P **P** **16 15 01.6 -2.1**
ARU 16 18 55.3
ARU S **SKSac** **16 25 30.5 -2.4**
ARU SP **SP** **16 27 41.0 +4.8**
ARU PS **PS** **16 27 51.9 +4.9**
AKTO Aktyubinsk 96.71 320 P **P** **16 15 03.9 -1.9**
AKTO Aktyubinsk 96.71 320 P **P** **16 15 03.9 -1.9**
AKTO Aktyubinsk 96.71 320 P **P** **16 15 03.9 -1.9**
comp=Z,4.3nm,0.7s,baz=101,slow=6.1,SNR=20
PDAR Pinedale Array 98.65 48 PP PP 16 19 19.1 +2.2
PDAR Pinedale Array 98.65 48 PP PP 16 19 19.1 +2.2
comp=Z,1.1nm,1.1s,baz=278,slow=4.2,SNR=4.2
PDAR LR LR 16 52 21.9
comp=Z,205nm,20.6s,baz=249,slow=31
SNAA Sanae 102.18 188 *e*P **Pdif** **16 15 32.0 +2.1**
VNA2 Neumayer--Watz 103.43 187 *e*P **Pdif** **16 15 35.9 +0.5**
VNA2 Neumayer--Watz 103.43 187 *e*PKP **PKiKP** **16 19 52.3 -1.5**
KBD Kabd 105.58 299 *e*P **Pdif** **16 15 43.3 -2.5**
MIB Mutribah 105.84 300 *e*P **Pdif** **16 15 45.2 -1.8**
MIB AMb AMB 16 15 47.3
comp=Z,16nm,1.5s
NAY Al-Naaiem 105.96 299 *e*P **Pdif** **16 15 45.6 -2.0**
NAY AMb AMB 16 15 47.1
comp=Z,8.6nm,0.9s
ARCES ARCESS Array B 106.78 343 PKiKP **PKiKP** **16 20 00.8 +0.8**
ARCES ARCESS Array B 106.78 343 PKiKP **PKiKP** **16 20 00.8 +0.8**
comp=Z,2.3nm,0.7s,baz=60,slow=1.6,SNR=11
JOF Joensuu 108.12 336 *e*pkp **PKiKP** **16 20 04.3 +1.7**
comp=Z,2.2nm,0.6s
KAF Kangasniemi 110.55 336 *e*PKIKP **PKiKP** **16 20 06.9 -0.3**
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 110.55 336 *e*pkp **PKiKP** **16 20 06.9 -0.3**
comp=Z,1.5nm,0.5s
FINES FINESS Array B 110.99 336 Pdif **Pdif** **16 16 07.2 -2.0**
FINES PKiKP **PKiKP** **16 20 08.7 +0.6**
FINES PKKPbc **PKKPbc** **16 31 05.6 -2.4**
FINES FINESS Array B 110.99 336 Pdiff **Pdif** **16 16 07.2 -2.0**
comp=Z,1.0nm,0.5s,baz=64,slow=6.6,SNR=7.2
FINES PKiKP **PKiKP** **16 20 08.7 +0.6**
comp=Z,2.2nm,0.6s,baz=81,slow=6.0,SNR=9.0
FINES PKKPbc **PKKPbc** **16 31 05.6 -2.4**
comp=Z,0.6nm,0.4s,baz=232,slow=2.2,SNR=4.1
ASF Jabal al Asfar 114.46 303 PKP PKPdf 16 20 14.9 -0.8
ASF Jabal al Asfar 114.46 303 PKP PKPdf 16 20 14.9 -0.8
comp=Z,1.1nm,0.3s,baz=82,slow=3.8,SNR=3.6
AKASG Malin Array Be 114.47 324 PKiKP PKPdf 16 20 14.5 -0.5
AKASG Malin Array Be 114.47 324 PKP PKPdf 16 20 14.4 -0.6
AKASG Malin Array Be 114.47 324 PKP PKPdf 16 20 14.4 -0.6
comp=Z,2.6nm,0.4s,baz=49,slow=2.6,SNR=15
AK01 Malin Array Si 114.48 324 *e*PKiKP PKPdf 16 20 14.1 -0.9
KIEV Kiev 114.48 324 *e*PKIKP PKPdf 16 20 14.7 -0.3
KIEV Kiev 114.48 324 *e*PKiKP PKPdf 16 20 14.7 -0.3
AK02 Malin Array Si 114.50 324 *e*PKiKP **PKiKP** **16 20 14.2 -0.8**
BR131 Keskin Array S 115.32 312 PKPdf **PKPdf** **16 20 16.2 -1.1**
BRTR Keskin Array B 115.32 312 PKP **PKPdf** **16 20 16.4 -0.9**
BRTR PKKPbc **PKKPbc** **16 30 53.5 +0.6**
BRTR Keskin Array B 115.32 312 PKP **PKPdf** **16 20 16.4 -0.9**
comp=Z,2.0nm,0.5s,baz=135,slow=3.3,SNR=14
BRTR PKKPbc **PKKPbc** **16 30 53.5 +0.6**
comp=Z,0.8nm,0.7s,baz=219,slow=3.2,SNR=5.4
EIL Elat 116.55 301 PKP **PKPdf** **16 20 19.8 +0.1**
EIL Elat 116.55 301 PKP **PKPdf** **16 20 19.8 +0.1**
comp=Z,6.7nm,0.8s,baz=109,slow=6.7,SNR=6.2
NB2 NORSAR Subarra 116.84 340 PKPdf **PKPdf** **16 20 18.8 -0.6**
comp=Z,1.2nm,0.7s,baz=44,slow=1.9
NOA NORSAR Array B 116.84 340 PKP **PKPdf** **16 20 19.0 -0.4**
NOA NORSAR Array B 116.84 340 PKP **PKPdf** **16 20 19.0 -0.4**
comp=Z,2.2nm,0.6s,baz=47,slow=1.9,SNR=16
KOLS Kolonicke sedl 119.28 325 *e*PKIKP **PKPdf** **16 20 24.5 +0.1**
KOLS Kolonicke sedl 119.28 325 *e*PKP **PKPdf** **16 20 24.5 +0.1**
CRVS Cervenica-Dubn 119.76 325 *e*PKIKP **PKPdf** **16 20 26.1 +0.7**
CRVS Cervenica-Dubn 119.76 325 *e*PKP **PKPdf** **16 20 26.0 +0.7**
PLCA Paso Flores 119.80 143 PKKPbc PKKPbc 16 30 36.1 -0.8
PLCA Paso Flores 119.80 143 PKKPbc PKKPbc 16 30 36.1 -0.8
comp=Z,1.8nm,0.6s,baz=64,slow=7.5,SNR=7.0
BOSA Boshof 119.82 233 PKP **PKPdf** **16 20 26.6 +0.4**
BOSA Boshof 119.82 233 PKP **PKPdf** **16 20 26.6 +0.4**
comp=Z,4.4nm,0.7s,baz=107,slow=3.5,SNR=8.2
SCHQ Schefferville 120.60 25 PKP **PKPdf** **16 20 26.4 -0.3**
SCHQ Schefferville 120.60 25 PKP **PKPdf** **16 20 26.4 -0.3**
comp=Z,2.6nm,0.6s,baz=20,slow=3.6,SNR=8.6
MORC Moravsky Berou 121.44 328 PKIKP **PKPdf** **16 20 28.3 -0.3**
MORC Moravsky Berou 121.44 328 PKPdf **PKPdf** **16 20 28.3 -0.3**
VYHS Vyhne 121.45 326 *e*PKIKP **PKPdf** **16 20 28.1 -0.5**
VYHS Vyhne 121.45 326 *e*PKP **PKPdf** **16 20 28.0 -0.5**
KRLC Kraliky 121.67 328 *e*PKIKP **PKPdf** **16 20 29.3 +0.3**
KRLC Kraliky 121.67 328 *e*PKPdf **PKPdf** **16 20 29.3 +0.3**
KRLC *ex* x 16 20 30.7
DPC Dobruska-Polom 121.75 329 *e*PKIKP **PKPdf** **16 20 30.9 +1.8**
DPC *e* 16 20 47.5
DPC Dobruska-Polom 121.75 329 *e*PKPdf **PKPdf** **16 20 30.9 +1.8**
DPC *ex* x 16 20 31.7
DPC *ep*PKP **pPKPdf** **16 20 47.5 -4.5**
UPC Upice 121.81 329 *e*PKIKP **PKPdf** **16 20 30.8 +1.6**
UPC Upice 121.81 329 *e*PKPdf **PKPdf** **16 20 30.8 +1.6**
SSPA Standing Stone 122.11 44 *e*PKPdf **PKPdf** **16 20 29.9 -0.2**
PVCC Panska Ves 122.53 330 *e*PKIKP **PKPdf** **16 20 32.2 +1.6**
PVCC *e* 16 20 47.3
PVCC Panska Ves 122.53 330 *e*PKPdf **PKPdf** **16 20 32.2 +1.6**
PVCC *ep*PKP **pPKPdf** **16 20 47.3 -6.1**
ZST Bratislava 122.58 326 *e*PKIKP **PKPdf** **16 20 30.4 -0.3**
ZST Bratislava 122.58 326 *e*PKP **PKPdf** **16 20 30.3 -0.4**
BRG Berggiesshubel 122.62 330 *e*PKP **PKPdf** **16 20 32.2 +1.5**
comp=Z,11nm,0.6s
BRG
comp=N,208nm,24.3s
BRG
comp=E,156nm,20.9s
BRG
comp=Z,227nm,22.2s
BRG Berggiesshubel 122.62 330 *e*PKIKP **PKPdf** **16 20 32.2 +1.5**
BRG pmax pmax
comp=Z,11nm,0.6s
BRG MLR MLR
comp=N,208nm,24.3s
BRG MLR MLR
comp=E,156nm,20.9s
BRG MLR MLR
comp=Z,227nm,22.2s
CLL Collm 122.80 331 *i* PKIKP **PKPdf** **16 20 31.1 +0.1**
CLL pmax pmax
comp=Z,15nm,0.7s
CLL MLR MLR
comp=Z,300nm,21.1s
CLL Collm 122.80 331 *i* PKPdf **PKPdf** **16 20 31.1 +0.1**
comp=Z,15nm,0.7s
CLL *e*PP PP 16 22 16.0 +6.5
CLL *e*PS **PS** **16 32 01.0 -5.5**
CLL *e*PPS PPS 16 33 38.0
CLL *es*SS 16 39 20.0
CLL L L 17 16 00.0
comp=Z,300nm,21.1s
TREC Trest 122.81 328 *e*PKIKP **PKPdf** **16 20 33.0 +1.8**
TREC MLR MLR
comp=Z,300nm,20.4s
TREC Trest 122.81 328 *e*PKPdf **PKPdf** **16 20 33.0 +1.8**
TREC AMS AMS 17 12 10.0
comp=Z,300nm,20.4s
PRU Pruhonice 122.88 329 *e*PKIKP **PKPdf** **16 20 31.3 +0.1**
PRU MLR MLR
comp=Z,200nm,15.4s
PRU Pruhonice 122.88 329 *e*PKPdf **PKPdf** **16 20 31.3 +0.1**
PRU *ex* x 16 20 33.1
PRU *ex* x 16 39 55.6
PRU AMS AMS 17 12 40.0
comp=Z,200nm,15.4s
CONA Conrad Observa 123.42 327⇑ *i*PKiKP **PKPdf** **16 20 32.5 0.0**
comp=Z,5.5nm,0.5s
NKC Novy Kostel 123.77 331 *e*PKIKP **PKPdf** **16 20 34.2 +1.2**
NKC Novy Kostel 123.77 331 *e*PKPdf **PKPdf** **16 20 34.2 +1.2**
NKC *ex* x 16 20 35.1
KHC Kasperske Hory 123.90 329 *e*PKIKP **PKPdf** **16 20 33.6 +0.3**
KHC Kasperske Hory 123.90 329 *e*PKPdf **PKPdf** **16 20 33.2 -0.1**
KHC Kasperske Hory 123.90 329 *e*PKPdf **PKPdf** **16 20 33.6 +0.3**
KHC *ex* x 16 20 35.3
KHC *ep*PKP **pPKPdf** **16 20 54.0 -2.2**
KHC *ex* x 16 40 07.3
GERES GERESS Array B 124.02 329 PKP **PKPdf** **16 20 33.9 +0.2**
GERES PKKPbc **PKKPbc** **16 30 20.4 -0.7**
GERES GERESS Array B 124.02 329 PKP **PKPdf** **16 20 33.9 +0.2**
comp=Z,6.7nm,0.5s,baz=64,slow=1.9,SNR=58
GERES PKKPbc **PKKPbc** **16 30 20.4 -0.7**
comp=Z,0.3nm,0.6s,baz=224,slow=3.7,SNR=3.6
GRF Grafenberg Arr 124.72 331 *e*PKIKP **PKPdf** **16 20 34.3 -0.5**
GRF Grafenberg Arr 124.72 331 *e*PKPdf **PKPdf** **16 20 34.3 -0.5**
KBA Koelnbreinsper 125.29 327⇓ *i*PKiKP **PKPdf** **16 20 35.6 -0.6**
comp=Z,4.5nm,0.6s
WTTA Wattenberg 126.09 328⇑ *i*PKiKP **PKPdf** **16 20 37.8 +0.1**
comp=Z,11nm,0.6s
MOTA Moosalm 126.31 329⇑ *i*PKiKP **PKPdf** **16 20 37.9 -0.2**
comp=Z,13nm,0.5s
MEM Membach 126.48 334 PKP **PKPdf** **16 20 38.8 +0.6**
FETA Feichten 126.72 328⇑ *i*PKiKP **PKPdf** **16 20 38.3 -0.6**
comp=Z,8.1nm,0.6s
DAVA Damuels 126.98 329⇑ *i*PKiKP **PKiKP** **16 20 40.1 +0.1**
comp=Z,9.2nm,0.6s
WLF Walferdange 127.11 333 PKP **PKPdf** **16 20 42.6 +3.2**
GIVF Givet 127.36 335 *e*PKIKP **PKPdf** **16 20 39.8 0.0**
comp=Z,15nm,0.7s
GIVF Givet 127.36 335 *e*PKIKP **PKPdf** **16 20 39.8 0.0**
GIVF Givet 127.36 335 *e*PKPdf **PKPdf** **16 20 39.8 0.0**
DOU Dourbes 127.46 335 PKP **PKPdf** **16 20 41.9 +1.9**
CDF Champ du Feu 127.49 332 *e*PKIKP **PKPdf** **16 20 39.6 -0.7**
comp=Z,8.5nm,0.8s
CDF Champ du Feu 127.49 332 *e*PKIKP **PKPdf** **16 20 39.6 -0.7**
CDF Champ du Feu 127.49 332 *e*PKPdf **PKPdf** **16 20 39.6 -0.7**
TIP Timpagrande 127.58 317 PKPdf **PKPdf** **16 20 39.2 -1.5**
BAIF Baives 127.66 335 *e*PKIKP **PKPdf** **16 20 40.3 -0.1**
BAIF Baives 127.66 335 *e*PKIKP **PKPdf** **16 20 40.3 -0.1**
BAIF Baives 127.66 335 *e*PKPdf **PKPdf** **16 20 40.3 -0.1**
TUE Stuetta 127.80 329 PKPdf **PKPdf** **16 20 40.8 -0.3**
HINF Hinteralfeld 128.11 331 *e*PKIKP **PKPdf** **16 20 40.9 -0.5**
comp=Z,10nm,0.6s
HINF Hinteralfeld 128.11 331 *e*PKIKP **PKPdf** **16 20 40.9 -0.5**
HINF Hinteralfeld 128.11 331 *e*PKPdf **PKPdf** **16 20 40.9 -0.5**
HAU Haudompre 128.22 332 *e*PKIKP **PKPdf** **16 20 41.3 -0.3**
comp=Z,23nm,0.6s
HAU Haudompre 128.22 332 *e*PKIKP **PKPdf** **16 20 41.3 -0.3**
HAU Haudompre 128.22 332 *e*PKPdf **PKPdf** **16 20 41.3 -0.3**
MEZF Maizieres J'vi 128.45 333 *e*PKIKP **PKPdf** **16 20 42.2 +0.2**
comp=Z,21nm,0.6s
MEZF Maizieres J'vi 128.45 333 *e*PKPdf **PKPdf** **16 20 42.2 +0.2**
SFTF Sexfontaines 128.68 333 *e*PKIKP **PKPdf** **16 20 42.3 -0.1**
SFTF Sexfontaines 128.68 333 *e*PKPdf **PKPdf** **16 20 42.3 -0.1**
CABF La Chapelle 129.34 331 *e*PKIKP **PKPdf** **16 20 44.1 +0.3**
comp=Z,22nm,0.6s
CABF La Chapelle 129.34 331 *e*PKIKP **PKPdf** **16 20 44.1 +0.3**
CABF La Chapelle 129.34 331 *e*PKPdf **PKPdf** **16 20 44.1 +0.3**
LPL La Plagne 129.78 329 *e*PKIKP **PKPdf** **16 20 44.5 -0.4**
comp=Z,10.0nm,0.5s
LPL La Plagne 129.78 329 *e*PKIKP **PKPdf** **16 20 44.5 -0.4**
LPL La Plagne 129.78 329 *e*PKPdf **PKPdf** **16 20 44.5 -0.4**
LPG La Plagne 129.79 329 *e*PKIKP **PKPdf** **16 20 44.7 -0.3**
comp=Z,9.4nm,0.5s
LPG La Plagne 129.79 329 *e*PKIKP **PKPdf** **16 20 44.7 -0.3**
LPG La Plagne 129.79 329 *e*PKPdf **PKPdf** **16 20 44.7 -0.3**
LOR Lormes 129.91 333 *e*PKIKP **PKPdf** **16 20 45.0 +0.2**
comp=Z,11nm,0.6s
LOR Lormes 129.91 333 *e*PKPdf **PKPdf** **16 20 45.0 +0.2**
SSF Saint Saulge 130.22 333 *e*PKIKP **PKPdf** **16 20 45.5 +0.1**
comp=Z,28nm,1.1s
SSF Saint Saulge 130.22 333 *e*PKIKP **PKPdf** **16 20 45.5 +0.1**
SSF Saint Saulge 130.22 333 *e*PKPdf **PKPdf** **16 20 45.5 +0.1**
MBDF Montbardon 130.31 329 *e*PKIKP **PKPdf** **16 20 45.5 -0.3**
comp=Z,7.7nm,0.6s
MBDF Montbardon 130.31 329 *e*PKIKP **PKPdf** **16 20 45.5 -0.3**
MBDF Montbardon 130.31 329 *e*PKPdf **PKPdf** **16 20 45.5 -0.3**
SMF Signal de Mont 130.38 332 *e*PKIKP **PKPdf** **16 20 45.4 -0.3**
comp=Z,11nm,0.7s
SMF Signal de Mont 130.38 332 *e*PKIKP **PKPdf** **16 20 45.4 -0.3**
SMF Signal de Mont 130.38 332 *e*PKPdf **PKPdf** **16 20 45.4 -0.3**
AVF Avril sur Loir 130.49 333 *e*PKIKP **PKPdf** **16 20 45.2 -0.7**
AVF Avril sur Loir 130.49 333 *e*PKIKP **PKPdf** **16 20 45.2 -0.7**
AVF Avril sur Loir 130.49 333 *e*PKPdf **PKPdf** **16 20 45.2 -0.7**
PGF Pioggiola 130.53 325 *e*PKIKP **PKPdf** **16 20 45.6 -0.7**
comp=Z,18nm,0.5s
PGF Pioggiola 130.53 325 *e*PKIKP **PKPdf** **16 20 45.6 -0.7**
PGF Pioggiola 130.53 325 *e*PKPdf **PKPdf** **16 20 45.6 -0.7**
SBF Sospel 130.54 327 *e*PKIKP **PKPdf** **16 20 45.4 -0.8**
SBF Sospel 130.54 327 *e*PKIKP **PKPdf** **16 20 45.4 -0.8**
SBF Sospel 130.54 327 *e*PKPdf **PKPdf** **16 20 45.4 -0.8**
LDF La Druitiere 130.57 337 *e*PKIKP **PKPdf** **16 20 45.7 -0.3**
comp=Z,12nm,0.7s
LDF La Druitiere 130.57 337 *e*PKIKP **PKPdf** **16 20 45.7 -0.3**
LDF La Druitiere 130.57 337 *e*PKPdf **PKPdf** **16 20 45.7 -0.3**
FLN La Foliniere 130.57 337 *e*PKIKP **PKPdf** **16 20 46.0 0.0**
comp=Z,19nm,0.7s
FLN La Foliniere 130.57 337 *e*PKIKP **PKPdf** **16 20 46.0 0.0**
FLN La Foliniere 130.57 337 *e*PKPdf **PKPdf** **16 20 46.0 0.0**
ORIF Oris-en-Rattie 130.63 329 *e*PKIKP **PKPdf** **16 20 45.9 -0.5**
comp=Z,10nm,0.5s
ORIF Oris-en-Rattie 130.63 329 *e*PKIKP **PKPdf** **16 20 45.9 -0.5**
ORIF Oris-en-Rattie 130.63 329 *e*PKPdf **PKPdf** **16 20 45.9 -0.5**
BGF Bois d'Agland 130.90 333 *e*PKIKP **PKPdf** **16 20 46.8 +0.1**
comp=Z,20nm,0.8s
BGF Bois d'Agland 130.90 333 *e*PKIKP **PKPdf** **16 20 46.8 +0.1**
BGF Bois d'Agland 130.90 333 *e*PKPdf **PKPdf** **16 20 46.8 +0.1**
GRR Gorron 131.02 337 *e*PKIKP **PKPdf** **16 20 46.4 -0.4**
comp=Z,17nm,0.7s
GRR Gorron 131.02 337 *e*PKIKP **PKPdf** **16 20 46.4 -0.4**
GRR Gorron 131.02 337 *e*PKPdf **PKPdf** **16 20 46.4 -0.4**
FRF La Foret Royal 131.17 328 *e*PKIKP **PKPdf** **16 20 47.2 -0.1**
comp=Z,17nm,0.7s
FRF La Foret Royal 131.17 328 *e*PKIKP **PKPdf** **16 20 47.2 -0.1**
FRF La Foret Royal 131.17 328 *e*PKPdf **PKPdf** **16 20 47.2 -0.1**
VIVF Saint-Julien-l 131.28 330 *e*PKIKP **PKPdf** **16 20 47.1 -0.4**
comp=Z,8.2nm,0.6s
VIVF Saint-Julien-l 131.28 330 *e*PKIKP **PKPdf** **16 20 47.1 -0.4**
VIVF Saint-Julien-l 131.28 330 *e*PKPdf **PKPdf** **16 20 47.1 -0.4**
TCF Toulx Ste Croi 131.39 333 *e*PKIKP **PKPdf** **16 20 47.8 +0.1**
comp=Z,20nm,0.8s
TCF Toulx Ste Croi 131.39 333 *e*PKIKP **PKPdf** **16 20 47.8 +0.1**
TCF Toulx Ste Croi 131.39 333 *e*PKPdf **PKPdf** **16 20 47.8 +0.1**
LMR La Mourre 131.40 327 *e*PKIKP **PKPdf** **16 20 47.3 -0.4**
comp=Z,11nm,0.5s
LMR La Mourre 131.40 327 *e*PKIKP **PKPdf** **16 20 47.3 -0.4**
LMR La Mourre 131.40 327 *e*PKPdf **PKPdf** **16 20 47.3 -0.4**
SMRF Simiane la Rot 131.45 329 *e*PKIKP **PKPdf** **16 20 47.0 -0.9**
SMRF Simiane la Rot 131.45 329 *e*PKPdf **PKPdf** **16 20 47.0 -0.9**
SGMF Saint Gilles 131.78 338 *e*PKIKP **PKPdf** **16 20 48.1 -0.2**
SGMF Saint Gilles 131.78 338 *e*PKIKP **PKPdf** **16 20 48.1 -0.2**
SGMF Saint Gilles 131.78 338 *e*PKPdf **PKPdf** **16 20 48.1 -0.2**
ROSF Rostrenen 131.97 339 *e*PKIKP **PKPdf** **16 20 48.5 -0.1**
ROSF Rostrenen 131.97 339 *e*PKIKP **PKPdf** **16 20 48.5 -0.1**
ROSF Rostrenen 131.97 339 *e*PKPdf **PKPdf** **16 20 48.5 -0.1**
MFF Saint Martin d 132.17 335 *e*PKIKP **PKPdf** **16 20 48.6 -0.5**
comp=Z,16nm,0.8s
MFF Saint Martin d 132.17 335 *e*PKIKP **PKPdf** **16 20 48.6 -0.5**
MFF Saint Martin d 132.17 335 *e*PKPdf **PKPdf** **16 20 48.6 -0.5**
LASF Ste Croix 132.25 330 *e*PKIKP **PKPdf** **16 20 49.8 +0.4**
comp=Z,14nm,0.7s
LASF Ste Croix 132.25 330 *e*PKPdf **PKPdf** **16 20 49.8 +0.4**
QUIF Quistinic 132.29 338 *e*PKIKP **PKPdf** **16 20 49.1 -0.1**
QUIF Quistinic 132.29 338 *e*PKIKP **PKPdf** **16 20 49.1 -0.1**
QUIF Quistinic 132.29 338 *e*PKPdf **PKPdf** **16 20 49.1 -0.1**
RJF Les Rejaudoux 132.45 333 *e*PKIKP **PKPdf** **16 20 49.1 -0.6**
RJF Les Rejaudoux 132.45 333 *e*PKIKP **PKPdf** **16 20 49.1 -0.6**
RJF Les Rejaudoux 132.45 333 *e*PKPdf **PKPdf** **16 20 49.1 -0.6**
CAF Calviac 132.49 332 *e*PKIKP **PKPdf** **16 20 49.3 -0.5**
comp=Z,2.9nm,0.5s
CAF Calviac 132.49 332 *e*PKIKP **PKPdf** **16 20 49.3 -0.5**
CAF Calviac 132.49 332 *e*PKPdf **PKPdf** **16 20 49.3 -0.5**
LFF La Frestale 133.09 333 *e*PKIKP **PKPdf** **16 20 50.4 -0.4**
LFF La Frestale 133.09 333 *e*PKIKP **PKPdf** **16 20 50.4 -0.4**
LFF La Frestale 133.09 333 *e*PKPdf **PKPdf** **16 20 50.4 -0.4**
MTLF Montolieu 133.60 330 *e*PKIKP **PKPdf** **16 20 51.8 -0.1**
comp=Z,9.4nm,0.7s
MTLF Montolieu 133.60 330 *e*PKIKP **PKPdf** **16 20 51.8 -0.1**
MTLF Montolieu 133.60 330 *e*PKPdf **PKPdf** **16 20 51.8 -0.1**
LPAZ La Paz 134.35 118 *e*PKPpre PKPpre 16 20 44.0
LPAZ PKP **PKPdf** **16 20 56.6 +1.8**
LPAZ SKPbc **SKPab** **16 24 22.8 +2.1**
LPAZ La Paz 134.35 118 PKP **PKPdf** **16 20 56.6 +1.8**
comp=Z,6.4nm,0.6s,baz=273,slow=2.0,SNR=20
LPAZ SKPbc **SKPab** **16 24 22.8 +2.1**
comp=Z,19nm,1.3s,baz=294,slow=1.8,SNR=18
KEST Kesra 134.40 317 PKP **PKPdf** **16 20 56.4 +2.6**
KEST SKPbc **SKiKP** **16 24 22.4 -1.8**
KEST Kesra 134.40 317 PKP **PKPdf** **16 20 56.4 +2.6**
comp=Z,1.7nm,0.6s,baz=114,slow=1.5,SNR=10
KEST SKPbc **SKiKP** **16 24 22.4 -1.8**
comp=Z,2.5nm,1.0s,baz=295,slow=6.9,SNR=4.7
EPF Esparros 134.74 332 *e*PKIKP **PKPdf** **16 20 53.6 -0.5**
EPF Esparros 134.74 332 *e*PKIKP **PKPdf** **16 20 53.6 -0.5**
EPF Esparros 134.74 332 *e*PKPdf **PKPdf** **16 20 53.6 -0.5**
ETSF Etsaut 135.26 332 *e*PKIKP **PKPdf** **16 20 56.6 +1.5**
comp=Z,20nm,0.6s
ETSF Etsaut 135.26 332 *e*PKIKP **PKPdf** **16 20 56.6 +1.5**
ETSF Etsaut 135.26 332 *e*PKPdf **PKPdf** **16 20 56.6 +1.5**
SJPF Ste Jean 135.40 333 *e*PKIKP **PKPdf** **16 20 56.1 +0.8**
comp=Z,11nm,0.7s
SJPF Ste Jean 135.40 333 *e*PKIKP **PKPdf** **16 20 56.1 +0.8**
SJPF Ste Jean 135.40 333 *e*PKPdf **PKPdf** **16 20 56.1 +0.8**
CPUP Villa Florida 137.46 138 PKP **PKPdf** **16 21 00.7 +1.2**
CPUP Villa Florida 137.46 138 PKP **PKPdf** **16 21 00.7 +1.2**
comp=Z,9.0nm,0.7s,baz=267,slow=1.5,SNR=22
PBRG Braganca 138.81 337 *e*PKP **PKPdf** **16 21 05.3 +3.6**
PGAV Gavieira, Arco 139.25 338 *e*PKP **PKPdf** **16 21 05.5 +3.0**
ESDC Sonseca Array 139.38 332 PKP **PKPdf** **16 21 04.9 +2.1**
ESDC Sonseca Array 139.38 332 PKP **PKPdf** **16 21 04.9 +2.1**
comp=Z,1.1nm,0.5s,baz=25,slow=3.2,SNR=5.5
MVO Moncorvo 139.47 337 *e*PKP **PKPdf** **16 21 06.5 +3.6**
POLO Lamas de Olo 139.58 337 *e*PKP **PKPdf** **16 21 06.6 +3.4**
PVIS Viseu 140.19 337 *e*PKP **PKPdf** **16 21 09.4 +5.2**
MTE Manteigas 140.32 336 *e*PKP **PKPdf** **16 21 07.2 +2.7**
PCBR Castelo Branco 140.77 336 *e*PKP **PKPdf** **16 21 09.9 +4.7**
SAML Samuel 141.53 111 *e*PKPdf **PKPdf** **16 21 07.2 -0.1**
EVO Evora 142.10 335 *e*PKIKP **PKPdf** **16 21 06.8 -0.9**
comp=Z,12nm,0.7s
EVOP Sao Brissos 142.15 336 *e*PKIKP **PKPdf** **16 21 06.8 -0.9**
EVOP Sao Brissos 142.15 336 *e*PKPdf **PKPdf** **16 21 06.8 -0.9**
**PBEJ

*ISK **12** 16:07:00.3,38°.54N×28°.75E,h6km,MD2.8*
*DDA **12** 16:07:00.5,38°.58N×28°.65E,h7km,MD2.8*
*CSEM **12** 16:07:00.8±0.2,38°.57N×28°.68E,h2km,MD2.8,Error ellipse: s-maj=4.5km s-min=3.5km az=48.0*
ISC 12 16:07:00.9±0.9,**38°.57N**±0°.03×**28°.68E**±0°.03,**h6**km±8km,
n22,σ**958**/36,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULA	**Kula-Manisa**	**0.05**	**194**	*e*PG	**Pg**	**16 07 02.2**	**-0.2**
KULA				*e*SG	**Sg**	**16 07 04.0**	**+0.5**
KULA	**Kula-Manisa**	**0.05**	**194**	*e*Pg	**Sg**	**16 07 02.2**	**-0.2**
KULA				*e*Sg	**Sg**	**16 07 04.0**	**+0.5**
MANT	**Manisa**	**0.12**	**231**	*i* P	**Pg**	**16 07 03.0**	**-0.6**
MANT				*i* S	**Sg**	**16 07 05.4**	**0.0**
MANT	**Manisa**	**0.12**	**231**	*i* P	**Pg**	**16 07 03.0**	**-0.6**
MANT				*i* S	**Sg**	**16 07 05.4**	**0.0**
DEMI	**Demirci**	**0.48**	**4**	*i* P	**Pg**	**16 07 09.8**	**-0.3**
DEMI				*i* S	**Sg**	**16 07 15.9**	**-0.4**
DEMI	**Demirci**	**0.48**	**4**	*i* P	**Pg**	**16 07 09.8**	**-0.3**
DEMI				*i* S	**Sg**	**16 07 15.9**	**-0.4**
KHAL	**Karahalli**	**0.67**	**107**	*i* P	**Pg**	**16 07 14.5**	**+0.7**
KHAL				*i* S	**Sb**	**16 07 24.1**	**-0.5**
KHAL	**Karahalli**	**0.67**	**107**	*i* P	**Pg**	**16 07 14.5**	**+0.7**
KHAL				*i* S	**Sb**	**16 07 24.1**	**-0.5**
KHL	**Karahalli**	**0.71**	**110**	*e*PG	**Pg**	**16 07 13.3**	**-1.1**
KHL	**Karahalli**	**0.71**	**110**	*e*Pg	**Pg**	**16 07 13.4**	**-1.1**
AKHS	**Akhisar**	**0.74**	**295**	*i* P	**Pg**	**16 07 14.7**	**-0.5**
AKHS				*i* S	**Sg**	**16 07 25.6**	**+0.8**
AKHS	**Akhisar**	**0.74**	**295**	*i* P	**Pg**	**16 07 14.7**	**-0.5**
AKHS				*i* S	**Sg**	**16 07 25.6**	**+0.8**
DURS	**Dursunbey**	**1.04**	**351**	*i* P	**Pg**	**16 07 20.8**	**-0.2**
DURS				*i* S	**Sg**	**16 07 34.5**	**0.0**
DURS	**Dursunbey**	**1.04**	**351**	*i* P	**Pg**	**16 07 20.8**	**-0.2**
DURS				*i* S	**Sg**	**16 07 34.5**	**0.0**
TVSB	**Tavsanli**	**1.07**	**35**	*e*PG	**Pg**	**16 07 21.1**	**-0.4**
TVSB				*e*SG	**Sb**	**16 07 36.5**	**+0.3**
TVSB	**Tavsanli**	**1.07**	**35**	*e*Pg	**Pg**	**16 07 21.1**	**-0.4**
TVSB				*e*Sg	**Sb**	**16 07 36.5**	**+0.3**
BALB	**Balikesir**	**1.24**	**330**	*e*PN	**Pn**	**16 07 25.4**	**+0.7**
BALB	**Balikesir**	**1.24**	**330**	*e*Pn	**Pn**	**16 07 25.4**	**+0.7**
GONE	**Gonen-Balikesi**	**1.67**	**333**	*e*PN	**Pb**	**16 07 31.4**	**-0.5**
GONE	**Gonen-Balikesi**	**1.67**	**333**	*e*Pn	**Pb**	**16 07 31.4**	**-0.5**
ARMT	**Armutlu**	**2.00**	**4**	*e*PN	**Pn**	**16 07 36.1**	**+0.8**
ARMT	**Armutlu**	**2.00**	**4**	*e*Pn	**Pn**	**16 07 36.1**	**+0.8**

*ISK **12** 16:13:01.8,37°.76N×29°.20E,h12km,MD2.7*
*DDA **12** 16:13:03.0,37°.76N×29°.13E,h10km,MD2.9*
*CSEM **12** 16:13:02.4±0.2,37°.76N×29°.18E,h10km,MD2.9,Error ellipse: s-maj=4.3km s-min=3.6km az=123.0*
*ISCJB **12** 16:13:02.4±0.5,37°.76N±0°.03×29°.19E±0°.04,h9km±5km, Error ellipse: s-maj=6.1km s-min=5.2km az=38.0*
ISC 12 16:13:02.6±1.0,**37°.76N**±0°.03×**29°.20E**±0°.03,**h6**km±9km,
n31,σ**1**§**01/43**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.13**	**267**	PG	**Pg**	**16 13 05.4**	**0.0**
DENT	**Denizli**	**0.13**	**267**	*i* Pg	**Pg**	**16 13 05.4**	**0.0**
DNZL	**Cakiroluk**	**0.14**	**239**	*i* P	**Pg**	**16 13 05.9**	**+0.3**
DNZL				*i* S	**Sg**	**16 13 07.9**	**+0.2**
DNZL	**Cakiroluk**	**0.14**	**239**	*i* P	**Pg**	**16 13 05.9**	**+0.3**
DNZL				*i* S	**Sg**	**16 13 07.9**	**+0.2**
GOLH	**Golhisar**	**0.60**	**151**	*i* P	**Pb**	**16 13 15.6**	**+0.1**
GOLH				*i* S	**Sn**	**16 13 26.4**	**-1.3**
GOLH	**Golhisar**	**0.60**	**151**	*i* P	**Pb**	**16 13 15.6**	**+0.1**
KHL	**Karahalli**	**0.61**	**24**	*e*PG	**Pg**	**16 13 14.6**	**+0.1**
KHL	**Karahalli**	**0.61**	**24**	*e*Pg	**Pg**	**16 13 14.6**	**+0.1**
KHAL	**Karahalli**	**0.65**	**21**	*i* P	**Pg**	**16 13 15.6**	**+0.5**
KHAL				*i* S	**Sb**	**16 13 25.3**	**-0.5**
KHAL	**Karahalli**	**0.65**	**21**	*i* P	**Pg**	**16 13 15.6**	**+0.5**
KHAL				*i* S	**Sb**	**16 13 25.3**	**-0.5**
KULA	**Kula-Manisa**	**0.86**	**331**	*e*PG	**Pg**	**16 13 18.6**	**-0.6**
KULA				*e*SG	**Sb**	**16 13 31.7**	**-0.2**
KULA	**Kula-Manisa**	**0.86**	**331**	*e*Pg	**Pg**	**16 13 18.6**	**-0.6**
KULA				*e*Sg	**Sb**	**16 13 31.7**	**-0.2**
MANT	**Manisa**	**0.89**	**325**	*i* P	**Pg**	**16 13 18.7**	**-0.9**
MANT				*i* S	**Sb**	**16 13 32.3**	**-0.4**
MANT	**Manisa**	**0.89**	**325**	*i* P	**Pg**	**16 13 18.7**	**-0.9**
MANT				*i* S	**Sb**	**16 13 32.3**	**-0.4**
YER	**Yerkesik**	**0.96**	**230**	*e*PG	**Pg**	**16 13 20.5**	**-0.6**
YER	**Yerkesik**	**0.96**	**230**	*e*Pg	**Pg**	**16 13 20.5**	**-0.6**
TURN	**Turunc**	**1.01**	**208**	*i* P	**Pn**	**16 13 25.9**	**+2.6**
TURN				*i* S	Sn	16 13 44.9	+7.2
ISP	**Isparta**	**1.05**	**86**	*e*PG	**Pg**	**16 13 22.4**	**-0.3**
ISP	**Isparta**	**1.05**	**86**	*e*Pg	**Pg**	**16 13 22.5**	**-0.3**
AYDN	**Tasoluk**	**1.05**	**265**	*i* P	**Pg**	**16 13 22.4**	**-0.4**
AYDN				*i* S	**Sg**	**16 13 35.7**	**-0.8**
AYDN	**Tasoluk**	**1.05**	**265**	*i* P	**Pg**	**16 13 22.4**	**-0.4**
AYDN				*i* S	**Sg**	**16 13 35.7**	**-0.8**
FETY	**Fethiye**	**1.13**	**185**	*e*PN	**Pg**	**16 13 23.9**	**-0.3**
FETY	**Fethiye**	**1.13**	**185**	*e*Pn	**Pg**	**16 13 23.9**	**-0.3**
SHUT	**Suhut-Afyon**	**1.32**	**53**	*e*PN	**Pn**	**16 13 26.8**	**-1.0**
SHUT	**Suhut-Afyon**	**1.32**	**53**	*e*Pn	**Pn**	**16 13 26.8**	**-1.0**
GDZ	**Gediz**	**1.34**	**9**	*i* P	**Pg**	**16 13 28.6**	**+0.3**
GDZ				*i* S	**Sn**	**16 13 50.8**	**+4.5**
GDZ	**Gediz**	**1.34**	**9**	*i* P	**Pg**	**16 13 28.6**	**+0.3**
ALT	**Altintas**	**1.48**	**29**	*e*PN	**Pn**	**16 13 28.9**	**-0.9**
ALT	**Altintas**	**1.48**	**29**	*e*Pn	**Pn**	**16 13 28.9**	**-0.9**
BODT	**Bodrum**	**1.66**	**246**	*e*PN	**Pn**	**16 13 31.7**	**-0.5**
BODT	**Bodrum**	**1.66**	**246**	*e*Pn	**Pn**	**16 13 31.7**	**-0.5**

MAN 12 16:14:12,8°.14N×123°.39E,h12km,mb3.9,ML2.7,MS2.3, 2C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**0.29**	**182**	*e*P	Pb	16 14 18.8	-0.5
PAGZ				*e*S	Sg	16 14 22.5	+0.5
DCPH	**Dipolog City**	**0.44**	**355**⇓	*e*P	Pb	16 14 21.7	-0.1
IPIL	**Ipil**	**0.89**	**247**	*e*P	Pb	16 14 29.6	+0.3
IPIL				*e*S	Sb	16 14 41.9	+0.7
SNPH	**Sibulan**	**1.20**	**353**⇑	*i*P	Pn	16 14 23.1	-12
SNPH				*i* S	Sb	16 14 42.8	-7.6
CTBH	**Cotabato--PC H**	**1.25**	**137**⇑	*i*P	Pn	16 14 34.9	-0.4

*IDC **12** 16:16:15.0±1.2,9°.33N×127°.01E,h0km,mb3.6/7, mb1 3.8/8,mb1mx3.6/28,mbtmp3.7/8,ML4.4/1,MS4.1/4, Ms1 4.0/4,ms1mx3.4/39,Error ellipse: s-maj=59.0km s-min=15.6km az=75.0*
*MAN **12** 16:16:22,9°.03N×126°.10E,h3km,mb4.9,ML3.8,MS3.8*
ISC 12 16:16:20.5±1.6,**9°.16N**±0°.04×**126°.43E**±0°.08,**h28**km±12km,
n24,σ**1**§**44/26**,**mb3.8/7**,**MS4.1/4**,**1C-5D**,**Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.83**	**302**	*e*P	**Pb**	**16 16 54.0**	**+0.7**
MSLP				*e*S	**Sb**	**16 17 16.4**	**+0.6**
CGP	**Cagayan de Oro**	**1.86**	**248**⇓	*e*P	**Pn**	**16 16 50.5**	**0.0**
CGP				*i* S	**Sn**	**16 17 10.2**	**-2.9**
MATI	**Mati**	**2.21**	**185**	*e*P	**Pb**	**16 16 58.7**	**-1.1**
MATI				*e*S	**Sb**	**16 17 27.8**	**+1.1**
DAV	**Davao City (W)**	**2.24**	**202**	Pn	**Pb**	**16 17 00.6**	**+0.2**
	74nm,0.3s,baz=45,slow=1.4,SNR=2.4						
DAV				Sn	**Sn**	**16 17 24.7**	**+2.2**
	103nm,0.3s,baz=327,slow=20,SNR=3.8						
PLP	**Palo**	**2.45**	**324**⇓	*e*P	**Pb**	**16 17 03.9**	**0.0**
PLP				*e*S	**Sb**	**16 17 33.7**	**0.0**
TBP	**Tagbilaran**	**2.59**	**282**	*e*P	**Pn**	**16 17 03.0**	**+2.4**
OCLP	**Ormoc**	**2.60**	**316**	*e*P	**Pb**	**16 17 05.6**	**-0.8**
BESP	**Borongan**	**2.62**	**338**	*e*P	**Pb**	**16 17 05.3**	**-1.4**
LLP	**Lapu-Lapu**	**2.69**	**295**⇓	*e*P	**Pb**	**16 17 05.5**	**-2.5**
LLP				*i* S	**Sn**	**16 17 35.9**	**+2.3**
CTBH	**Cotabato--PC H**	**2.90**	**228**⇑	*i*P	**Pn**	**16 17 05.6**	**+0.8**
DCPH	**Dipolog City**	**3.10**	**260**⇓	*e*P	**Pn**	**16 17 08.7**	**+1.1**
DCPH				*e*S	**Sn**	**16 17 42.5**	**-1.2**
SNPH	**Sibulan**	**3.16**	**274**⇓	*i*P	Pb	16 17 32.7	+17
GUIM	**Jordan**	**4.06**	**291**	*e*P	**Pn**	**16 17 22.0**	**+1.2**
FITZ	**Fitzroy Crossi**	**27.10**	**182**	P	**P**	**16 22 01.1**	**0.0**
	1.9nm,0.8s,baz=355,slow=11,SNR=6.3						
WRA	**Warramunga Arr**	**29.95**	**165**	P	**P**	**16 22 25.1**	**-1.4**
	0.4nm,0.6s,baz=344,slow=8.0,SNR=13						
ASAR	**Alice Springs**	**33.43**	**168**	P	**P**	**16 22 56.1**	**-1.0**
	0.5nm,0.4s,baz=350,slow=6.8,SNR=29						
SONM	**Songino Array**	**42.11**	**340**	P	**P**	**16 24 11.2**	**+0.9**
	0.2nm,0.5s,baz=140,slow=7.0,SNR=2.7						
MKAR	**Makanchi Array**	**53.01**	**323**	P	**P**	**16 25 34.3**	**-0.6**
	0.4nm,0.5s,baz=126,slow=6.8,SNR=8.8						
KURBB	**Kurchatov Arra**	**57.07**	**326**	P	**P**	**16 26 03.2**	**-0.9**
	0.8nm,0.7s,baz=126,slow=6.6,SNR=11						
BVAR	**Borovoye Array**	**62.67**	**326**	P	**P**	**16 26 43.0**	**+0.4**
	0.5nm,0.7s,baz=78,slow=7.5,SNR=4.2						
KBZ	**Khabaz**	**79.08**	**313**	LR	LR	17 08 33.6	
	comp=Z,124nm,20.9s,baz=246,slow=40						
BRTR	**Keskin Array B**	**86.36**	**309**	LR	LR	17 16 09.2	
	comp=Z,60nm,21.5s,baz=226,slow=42						
AKASG	**Malin Array Be**	**87.52**	**321**	LR	LR	17 13 15.3	
	comp=Z,201nm,21.6s,baz=60,slow=39						
KMBO	**Kilima Mbogo**	**89.37**	**269**	LR	LR	17 11 26.0	
	comp=Z,53nm,19.2s,baz=96,slow=37						

*IDC **12** 16:28:42.7±0.7,13°.09N×145°.72E,h0km,mb3.9/13, mb1 4.1/13,mb1mx4.0/25,mbtmp3.9/13,MS3.4/1, Ms1 3.4/1,ms1mx2.5/46,Error ellipse: s-maj=20.1km s-min=16.3km az=65.0*
*ISCJB **12** 16:28:46.6±0.5,13°.05N±0°.07×145°.73E±0°.09,h43km, mb4.0/17,MS3.3/1,Error ellipse: s-maj=13.3km s-min=9.1km az=147.8*
*NEIC **12** 16:28:48.0±0.4,13°.07N×145°.64E,h35km,mb4.5/4,Error ellipse: s-maj=11.9km s-min=7.6km az=85.0*
ISC 12 16:28:49.0±0.7,**13°.1N**±0°.1×**145°.7E**±0°.1,**h43**km,**n40**, σ**0**§**92**/48,**mb4.0**/17,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.92**	**304**	*e*P	**Pn**	**16 29 04.5**	**-1.1**
GUMO				Sn	**Sn**	**16 29 18.9**	**+1.3**
GUMO	**Guam**	**0.92**	**304**	Pn	**Pn**	**16 29 04.5**	**-1.1**
	330nm,0.3s,baz=139,slow=5.9,SNR=121						
GUMO				Sn	**Sn**	**16 29 18.9**	**+1.3**
	602nm,0.3s,baz=339,slow=16,SNR=16						
MJAR	**Matsushiro Arr**	**24.30**	**345**	P	**P**	**16 34 01.2**	**-1.3**
MJAR	**Matsushiro Arr**	**24.30**	**345**	P	**P**	**16 34 01.2**	**-1.3**
	2.9nm,0.9s,baz=182,slow=12,SNR=5.1						
YULB	**Yu-li**	**25.27**	**297**	*e*P	**P**	**16 34 10.9**	**-0.5**
KSRS	**Korea Array**	**28.98**	**330**	P	**P**	**16 34 43.9**	**-0.8**
	0.9nm,0.8s,baz=145,slow=8.7,SNR=3.1						
KSRS				LR	LR	16 46 10.1	
	comp=Z,71nm,18.7s,baz=100,slow=36						
KSAR	**Wonju Array Be**	**29.00**	**330**	P	**P**	**16 34 43.9**	**-0.9**
WRAB	**Tennant Creek**	**34.64**	**199**	*e*P	**P**	**16 35 34.1**	**-0.4**
WRA	**Warramunga Arr**	**34.65**	**199**	P	**P**	**16 35 33.8**	**-0.8**
WRA	**Warramunga Arr**	**34.65**	**199**	P	**P**	**16 35 33.8**	**-0.8**
	1.1nm,0.6s,baz=21,slow=9.7,SNR=16						
AS31	**Alice Springs**	**38.28**	**198**	*e*P	**P**	**16 36 04.7**	**-0.8**
ASAR	**Alice Springs**	**38.29**	**198**	P	**P**	**16 36 05.2**	**-0.4**
ASAR	**Alice Springs**	**38.29**	**198**	P	**P**	**16 36 05.2**	**-0.4**
	0.7nm,0.6s,baz=24,slow=8.1,SNR=18						
CMAR	**Chiang Mai Arr**	**45.18**	**283**	P	**P**	**16 37 01.9**	**-0.1**
CMAR				PcP	**PcP**	**16 38 44.0**	**+2.0**
CMAR	**Chiang Mai Arr**	**45.18**	**283**	P	**P**	**16 37 01.9**	**-0.1**
	1.5nm,0.5s,baz=82,slow=6.7,SNR=29						
CMAR				PcP	**PcP**	**16 38 44.0**	**+2.0**
	0.4nm,0.6s,baz=83,slow=1.9,SNR=4.9						
SONM	**Songino Array**	**47.59**	**325**	P	**P**	**16 37 20.7**	**0.0**
SONM				PcP	**PcP**	**16 38 51.1**	**+1.1**
SONM	**Songino Array**	**47.59**	**325**	P	**P**	**16 37 20.7**	**0.0**
	0.3nm,0.5s,baz=135,slow=7.6,SNR=4.9						
SONM				PcP	**PcP**	**16 38 51.1**	**+1.1**
	0.5nm,0.6s,baz=144,slow=4.0,SNR=6.2						
BILL	**Bilibino**	**56.54**	**9**	*e*P	**P**	**16 38 26.7**	**0.0**
	22nm,2.0s						
MK31	**Makanchi Array**	**62.39**	**316**	*e*P	**P**	**16 39 07.4**	**-0.1**
MKAR	**Makanchi Array**	**62.39**	**316**	P	**P**	**16 39 07.5**	**-0.1**
MKAR	**Makanchi Array**	**62.39**	**316**	P	**P**	**16 39 07.5**	**-0.1**
	0.6nm,0.4s,baz=89,slow=8.5,SNR=13						
ZALV	**Zalesovo Beam**	**62.48**	**324**	P	**P**	**16 39 07.8**	**-0.1**
ZALV				PcP	**PcP**	**16 39 47.2**	**+0.3**
ZALV	**Zalesovo Beam**	**62.48**	**324**	P	**P**	**16 39 07.8**	**-0.1**
	0.5nm,0.5s,baz=109,slow=7.9,SNR=3.9						
ZALV				PcP	**PcP**	**16 39 47.2**	**+0.3**
	1.0nm,0.5s,baz=117,slow=5.5,SNR=5.2						
KURK	**Kurchatov**	**65.47**	**320**	*e*P	**P**	**16 39 27.4**	**-0.2**
	5.1nm,1.0s						
ILAR	**Eielson Array**	**68.70**	**25**	P	**P**	**16 39 47.8**	**-0.2**
ILAR	**Eielson Array**	**68.70**	**25**	P	**P**	**16 39 47.8**	**-0.2**
	0.4nm,0.6s,baz=246,slow=6.2,SNR=10.0						
BRVK	**Borovoye**	**70.87**	**322**	*e*P	**P**	**16 40 01.3**	**-0.2**
	2.2nm,0.6s						
ABKAR	**Akbulak array**	**77.43**	**318**	*e*P	**P**	**16 40 39.6**	**-0.2**
	0.9nm,0.6s						
YKA	**Yellowknife Ar**	**82.95**	**27**	P	**P**	**16 41 10.4**	**+1.2**
YKA	**Yellowknife Ar**	**82.95**	**27**	P	**P**	**16 41 10.4**	**+1.2**
	0.7nm,0.6s,baz=284,slow=5.4,SNR=9.3						
NVAR	**Mina Array Bea**	**86.64**	**51**	P	**P**	**16 41 28.2**	**-0.4**
NVAR	**Mina Array Bea**	**86.64**	**51**	P	**P**	**16 41 28.2**	**-0.4**
	0.5nm,0.7s,baz=237,slow=9.5,SNR=4.1						
ARCES	**ARCESS Array B**	**87.80**	**342**	P	**P**	**16 41 33.0**	**-0.4**
ARCES	**ARCESS Array B**	**87.80**	**342**	P	**P**	**16 41 33.0**	**-0.4**
	2.9nm,0.9s,baz=46,slow=3.5,SNR=3.7						
FINES	**FINESS Array B**	**91.94**	**335**	P	**P**	**16 41 51.5**	**-1.3**
FINES	**FINESS Array B**	**91.94**	**335**	P	**P**	**16 41 51.5**	**-1.3**
	0.8nm,0.6s,baz=94,slow=5.7,SNR=7.9						
TORD	**Torodi Ar. Bea**	**135.78**	**305**	PKP	**PKPdf**	**16 48 08.0**	**+1.9**
TORD	**Torodi Ar. Bea**	**135.78**	**305**	PKP	**PKPdf**	**16 48 08.0**	**+1.9**
	0.3nm,0.6s,baz=19,slow=2.9,SNR=2.5						
DBIC	**Dimbokro**	**144.74**	**302**	PKP	**PKPdf**	**16 48 21.8**	**-0.4**
DBIC				*e*PKP	PKPbc	16 48 22.0	+0.8
DBIC	**Dimbokro**	**144.74**	**302**	PKP	**PKPdf**	**16 48 21.8**	**-0.4**
	5.4nm,0.5s,baz=41,slow=4.0,SNR=13						

*ISK **12** 16:58:01.1,37°.78N×29°.07E,h9km,MD2.8*
*DDA **12** 16:58:01.6,37°.78N×29°.10E,h3km,MD2.9*
*CSEM **12** 16:58:01.3±0.1,37°.78N×29°.05E,h8km,MD2.8,Error ellipse: s-maj=4.3km s-min=2.9km az=92.0*
*ISCJB **12** 16:58:01.4±0.5,37°.79N±0°.03×29°.08E±0°.05,h6km±5km, Error ellipse: s-maj=6.7km s-min=4.3km az=4.3*
ISC 12 16:58:01.3±0.9,**37°.78N**±0°.02×**29°.08E**±0°.03,**h10**km±6km,
n26,σ**0**§**55**/38,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.04**	**240**	PG	**Pg**	**16 58 03.6**	**+0.2**
DENT	**Denizli**	**0.04**	**240**	*i* Pg	**Pg**	**16 58 03.6**	**+0.2**
DNZL	**Cakiroluk**	**0.09**	**198**	*i* P	**Pg**	**16 58 03.9**	**-0.1**
DNZL				*i* S	**Sg**	**16 58 05.9**	**0.0**
DNZL	**Cakiroluk**	**0.09**	**198**	*i* P	**Pg**	**16 58 03.9**	**-0.1**
DNZL				*i* S	**Sg**	**16 58 05.9**	**0.0**
KHL	**Karahalli**	**0.65**	**32**	*e*PG	**Pg**	**16 58 14.3**	**+0.4**
KHL				*e*SG	**Sb**	**16 58 23.3**	**-0.6**
KHL	**Karahalli**	**0.65**	**32**	*e*Pg	**Pg**	**16 58 14.3**	**+0.4**
KHL				*e*Sg	**Sb**	**16 58 23.3**	**-0.6**
GOLH	**Golhisar**	**0.66**	**145**	*i* P	**Pg**	**16 58 14.2**	**+0.1**
GOLH				*i* S	**Sb**	**16 58 24.4**	**+0.1**
GOLH	**Golhisar**	**0.66**	**145**	*i* P	**Pg**	**16 58 14.2**	**+0.1**
GOLH				*i* S	**Sb**	**16 58 24.4**	**+0.1**
KHAL	**Karahalli**	**0.68**	**28**	*i* P	**Pg**	**16 58 13.5**	**-0.9**
KHAL				*i* S	**Sg**	**16 58 22.7**	**-0.7**
KHAL	**Karahalli**	**0.68**	**28**	*i* P	**Pg**	**16 58 13.5**	**-0.9**
KHAL				*i* S	**Sg**	**16 58 22.7**	**-0.7**
GLHS	**Glhisar (BURDU**	**0.70**	**152**	*e*PG	**Pb**	**16 58 15.7**	**-0.1**
GLHS				*e*SG	**Sb**	**16 58 25.2**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.70**	**152**	*e*Pg	**Pb**	**16 58 15.7**	**-0.1**
GLHS				*e*Sg	**Sb**	**16 58 25.2**	**-0.3**
KULA	**Kula-Manisa**	**0.81**	**336**	*e*PG	**Pg**	**16 58 16.5**	**-0.5**
KULA	**Kula-Manisa**	**0.81**	**336**	*e*Pg	**Pg**	**16 58 16.5**	**-0.5**
MANT	**Manisa**	**0.82**	**330**	*i* P	**Pg**	**16 58 17.8**	**+0.5**
MANT				*i* S	**Sb**	**16 58 30.4**	**+1.2**
MANT	**Manisa**	**0.82**	**330**	*i* P	**Pg**	**16 58 17.8**	**+0.5**
MANT				*i* S	**Sb**	**16 58 30.4**	**+1.2**
YER	**Yerkesik**	**0.90**	**225**	*e*PG	**Pg**	**16 58 18.6**	**-0.2**
YER	**Yerkesik**	**0.90**	**225**	*e*Pg	**Pg**	**16 58 18.6**	**-0.2**
FETY	**Fethiye**	**1.14**	**180**	*e*PN	**Pb**	**16 58 23.1**	**0.0**
FETY	**Fethiye**	**1.14**	**180**	*e*Pn	**Pb**	**16 58 23.1**	**0.0**
ISP	**Isparta**	**1.14**	**87**	*e*PN	**Pg**	**16 58 24.4**	**+1.1**
ISP	**Isparta**	**1.14**	**87**	*e*Pn	**Pg**	**16 58 24.4**	**+1.1**
ALT	**Altintas**	**1.51**	**32**	*e*PN	**Pb**	**16 58 29.7**	**+0.2**
ALT	**Altintas**	**1.51**	**32**	*e*Pn	**Pb**	**16 58 29.7**	**+0.2**
BODT	**Bodrum**	**1.58**	**244**	*e*PN	**Pn**	**16 58 29.4**	**0.0**
BODT	**Bodrum**	**1.58**	**244**	*e*Pn	**Pn**	**16 58 29.4**	**0.0**

*TAP **12** 17:08:58.0,24°.02N×121°.68E,h45km,ML3.5,C*
*JMA **12** 17:08:58.5±0.2,24°.18N×121°.77E,h76km±4km,M2.6*
*ISCJB **12** 17:08:58.3±0.2,24°.01N±0°.02×121°.76E±0°.02,h41km±5km, Error ellipse: s-maj=3.1km s-min=2.0km az=44.3*
ISC 12 17:09:00.2±1.8,**24°.01N**±0°.02×**121°.74E**±0°.02,**h36**km±1km,
n64,σ**1**§**54**/111,**11C-3D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.13**	**254**	P	Pn	17 09 05.7	-5.7
	baz=243						
HWA				*e*S	Sn	17 09 12.1	-10
	baz=243						
TWD	**Chiawan**	**0.15**	**296**⇓	*i*P	Pn	17 09 05.4	-5.3
	baz=299						
TWD				S	Sn	17 09 10.8	-10
	baz=299						
ESF	**Shoufeng Towns**	**0.26**	**237**	*e*P	**Pn**	**17 09 05.4**	**-2.9**
	baz=238						
EHP	**Heping Village**	**0.29**	**360**	*e*P	**Pn**	**17 09 05.3**	**-3.1**
	baz=16						
ESL	**Shilin**	**0.35**	**235**⇑	*i*P	**Pn**	**17 09 06.5**	**-2.0**
	baz=236						
ESL				*e*S	**Sn**	**17 09 12.7**	**-2.6**
	baz=236						
ENA	**Nanau**	**0.41**	**360**⇓	P	**Pn**	**17 09 08.0**	**-1.4**
	baz=12						
ENA				*e*S	**Sn**	**17 09 15.6**	**-0.5**
	baz=12						
WHF	**Hehuan Shan**	**0.46**	**287**⇑	*i*P	**Pn**	**17 09 08.3**	**-2.2**
	baz=285						
WHF				S	**Sn**	**17 09 15.8**	**-2.0**
	baz=285						
NNS	**Nan Shan**	**0.54**	**322**⇑	*i*P	**Pn**	**17 09 09.4**	**-2.2**
	baz=332						
NNS				*e*S	**Sn**	**17 09 17.3**	**-2.2**
	baz=332						
TWT	**Tachien**	**0.57**	**295**⇑	*i*P	**Pn**	**17 09 10.2**	**-1.9**
	baz=293						
TWT				S	**Sn**	**17 09 18.5**	**-1.7**
	baz=293						
TWC	**Suao**	**0.60**	**9**	P	**Pn**	**17 09 10.9**	**-1.4**
	baz=22						
TWC				*e*S	**Sn**	**17 09 20.5**	**-0.3**
	baz=22						
EHY	**Hungye**	**0.64**	**217**	*e*P	Pn	17 09 09.4	-3.4
	baz=213						
EHY				*e*S	**Sn**	**17 09 18.0**	**-3.6**
	baz=213						
ENTT	**Nioudou**	**0.64**	**346**⇑	*i*P	**Pn**	**17 09 10.9**	**-2.0**
	baz=350						
ENTT				S	**Sn**	**17 09 19.9**	**-2.0**
	baz=350						
TWE	**Neicheng**	**0.71**	**354**⇑	*i*P	**Pn**	**17 09 11.9**	**-1.7**
	baz=351						
TWE				*e*S	**Sn**	**17 09 21.7**	**-1.6**
	baz=351						
NSK	**Sanguang**	**0.75**	**332**⇑	*i*P	**Pn**	**17 09 12.4**	**-1.9**
	baz=336						
NSK				S	**Sn**	**17 09 22.1**	**-2.3**
	baz=336						
ILA	**Ilan**	**0.75**	**0**	*e*P	**Pn**	**17 09 13.5**	**-0.7**
	baz=355						
ILA				*e*S	**Sn**	**17 09 23.4**	**-0.9**
	baz=355						
TWF1	**Yuli**	**0.78**	**212**⇑	P	Pn	17 09 11.5	-3.1
	baz=218						
TWF1				*e*S	**Sn**	**17 09 21.9**	**-3.1**
	baz=218						
SMLT	**Sun Moon Lake**	**0.78**	**261**⇑	*i*P	**Pn**	**17 09 12.7**	**-2.1**
	baz=256						
SMLT				*e*S	**Sn**	**17 09

	baz=234								
WSF	**Szhu**	**1.44**	**255**	*e*P		**Pn**	**17 09 22.8**	**-0.9**
	baz=244								
WSF				*e*S		**Sn**	**17 09 41.5**	**+0.1**
	baz=244								
CHN8	**Yiju**	**1.55**	**245**	*e*P		**Pn**	**17 09 24.0**	**-1.2**
	baz=234								
CHN8				*e*S		**Sn**	**17 09 44.8**	**+0.6**
	baz=234								
CHN3	**Shinhua**	**1.57**	**234**	*e*P		**Pn**	**17 09 24.9**	**-0.6**
	baz=245								
CHN3				*e*S		**Sn**	**17 09 47.1**	**+2.6**
	baz=245								
ECL	**Taimali**	**1.59**	**207**	*e*P		Pn	17 09 23.2	-2.5
	baz=200								
ECL				*e*S		**Sn**	**17 09 41.9**	**-3.1**
	baz=200								
SCLT	**Jiali**	**1.65**	**240**	*e*P		**Pn**	**17 09 26.0**	**-0.5**
	baz=240								
SCLT				*e*S		**Sn**	**17 09 46.6**	**+0.1**
	baz=240								
TAI1	**Yung-k'ang**	**1.69**	**235**	*e*P		**Pn**	**17 09 26.4**	**-0.8**
	baz=236								
TAI1				*e*S		**Sn**	**17 09 47.5**	**-0.1**
	baz=236								
TWM1	**Shoushan**	**1.70**	**226**	*e*P		**Pn**	**17 09 26.2**	**-1.1**
	baz=227								
TWM1				*e*S		**Sn**	**17 09 48.5**	**+0.8**
	baz=227								
EAST	**Anshuo**	**1.82**	**207**	*e*P		**Pn**	**17 09 27.4**	**-1.6**
	baz=201								
IRIF	**Iriomote-Funau**	**1.84**	**80**	P		**Pn**	**17 09 28.0**	**-1.2**
IRIF				*e*S		**Sn**	**17 09 50.2**	**-1.1**
HATJ	**Hateruma jima**	**1.89**	**88**	P		**Pn**	**17 09 28.9**	**-0.9**
HATJ				*e*S		**Sn**	**17 09 51.9**	**-0.5**
SCZT	**Fangliau**	**1.93**	**213**	*e*P		**Pn**	**17 09 30.9**	**+0.4**
	baz=224								
SCZT				*e*S		**Sn**	**17 09 53.8**	**+0.2**
	baz=224								
LAY	**Lan-yu**	**1.97**	**185**	*e*P		**Pn**	**17 09 28.9**	**-2.1**
	baz=180								
LAY				*e*S		**Sn**	**17 09 52.1**	**-2.5**
	baz=180								
WDGT	**Dungji**	**2.05**	**249**	*e*P		**Pn**	**17 09 30.4**	**-1.7**
	baz=249								
WDGT				*e*S		**Sn**	**17 09 53.8**	**-2.6**
	baz=249								
PNG	**Penghu**	**2.05**	**258**	*e*P		Pn	17 09 29.8	-2.3
	baz=257								
PNG				*e*S		**Sn**	**17 09 54.0**	**-2.5**
	baz=257								
JKRS	**Kuro-shima**	**2.08**	**83**	P		**Pn**	**17 09 31.8**	**-0.7**
JKRS				*e*S		**Sn**	**17 09 56.4**	**-0.8**
TWP	**Hsiaoliuchiu**	**2.09**	**218**	*e*P		**Pn**	**17 09 33.0**	**+0.3**
	baz=222								
TWP				*e*S		**Sn**	**17 09 57.4**	**0.0**
	baz=222								
JIJ	**Ishigaki jima**	**2.22**	**80**	P		**Pn**	**17 09 33.0**	**-1.4**
JIJ				S		**Sn**	**17 09 58.7**	**-1.9**
TWK1	**Hengchun**	**2.23**	**203**	*e*P		**Pn**	**17 09 32.5**	**-2.1**
	baz=195								
JTJ	**Tarama**	**2.77**	**76**	P		**Pn**	**17 09 40.7**	**-1.3**
JTJ				S		**Sn**	**17 10 13.2**	**-1.0**
JOGS	**Gusukube**	**3.42**	**77**	P		**Pn**	**17 09 50.3**	**-0.7**
JOGS				*e*S		**Sn**	**17 10 29.6**	**-0.7**

IDC **12** *17:12:50.3±0.7, 13°.25N×50°.91E, h0km, mb4.0/15, mb1 4.1/16, mb1mx3.9/30, mbtmp4.0/16, ML3.5/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/39, Error ellipse: s-maj=18.2km s-min=15.9km az=119.0*

NEIC **12** *17:12:51.7±0.4, 13°.26N×50°.87E, h10km, mb4.1/9, Error ellipse: s-maj=11.0km s-min=8.5km az=133.0*

ISCJB **12** *17:12:51.4±0.4, 13°.35N±0°.07×50°.69E±0°.04, h21km, mb4.0/23, MS3.3/2, Error ellipse: s-maj=9.9km s-min=4.9km az=173.3*

CSEM **12** *17:12:52.0±0.3, 13°.34N×50°.71E, h10km, mb4.1/6, Error ellipse: s-maj=11.3km s-min=7.9km az=157.0*

DHMR **12** *17:12:53.8±2.8, 13°.49N×50°.32E, h2km±999km, ML3.7*

ISC 12 17:12:53.5±0.6, 13°.33N±0°.08×50°.71E±0.06, h21km, n92, σ1°.26/92, mb4.2/23, 3C-1D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
MUKL	**Al Mukalla**	**1.99**	**305**	⇑	*i*P	**Pn**	**17 13 22.9**	**-3.1**
MUKL					*i* S	**Sn**	**17 13 45.4**	**-4.8**
MUKL					AML	AML	17 13 47.0	
	comp=N,1μm,0.5s							
BDHA	**Al Bayda'**	**5.04**	**278**	⇑	*i*P	**Pn**	**17 14 07.9**	**-0.3**
BDHA					*e*		17 14 08.1	
	baz=120,slow=16							
BDHA					*i* S	**Sn**	**17 15 05.0**	**-0.9**
BDHA	**Al Bayda'**	**5.04**	**278**	⇑	*i*P	**Pn**	**17 14 07.9**	**-0.3**
BDHA					*i* S	**Sn**	**17 15 05.1**	**-0.9**
LBOS		**5.34**	**276**	⇓	*i*P	**Pn**	**17 14 11.9**	**-0.4**
LBOS					*i* S	**Sn**	**17 15 11.9**	**-1.5**
TRBA	**At Turbah**	**6.42**	**270**	*i*	P	**Pn**	**17 14 25.2**	**-2.0**
TRBA	**At Turbah**	**6.42**	**270**	*i*	P	**Pn**	**17 14 25.2**	**-2.0**
QRN	**Al-Qurain**	**15.56**	**351**	*e*	P	**P**	**17 16 37.0**	**+1.1**
RDF	**Al-Radifah**	**15.80**	**350**	*e*	P	**P**	**17 16 39.4**	**+0.8**
RDF					AMb	AMB	17 16 40.5	
	comp=Z,41nm,1.0s							
RDF	**Al-Radifah**	**15.80**	**350**	*e*	P	**P**	**17 16 39.4**	**+0.8**
	comp=E,41nm,1.0s							
MIB	**Mutribah**	**16.69**	**350**	*e*	P	**P**	**17 16 49.0**	**+0.6**
MIB					AMb	AMB	17 16 52.0	
	comp=Z,55nm,0.7s							
MIB	**Mutribah**	**16.69**	**350**	*e*	P	**P**	**17 16 49.0**	**+0.6**
	comp=Z,55nm,0.7s							
KMBO	**Kilima Mbogo**	**19.61**	**224**	P		**Pn**	**17 17 21.7**	**-0.6**
	comp=Z,7.1nm,1.2s							
KMBO	**Kilima Mbogo**	**19.61**	**224**	P		**Pn**	**17 17 21.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=56,slow=21,SNR=5.7							
KMBO					LR	LR	17 24 45.7	
	comp=Z,120nm,18.7s,baz=92,slow=36							
KMBO	**Kilima Mbogo**	**19.61**	**224**	P		**Pn**	**17 17 21.7**	**-0.6**
	comp=Z,7.1nm,1.2s							
EIL	**Elat**	**21.85**	**321**	P		**P**	**17 17 47.7**	**+2.8**
EIL	**Elat**	**21.85**	**321**	P		**P**	**17 17 47.7**	**+2.8**
	comp=Z,1.4nm,0.4s,baz=90,slow=17,SNR=2.4							
ASF	**Jabal al Asfar**	**22.63**	**328**	P		**P**	**17 17 56.1**	**+2.8**
ASF	**Jabal al Asfar**	**22.63**	**328**	P		**P**	**17 17 56.1**	**+2.8**
	comp=Z,1.4nm,0.5s,baz=179,slow=2.6,SNR=3.3							
KBL	**Kabul**	**26.87**	**35**	P		**P**	**17 18 33.5**	**+0.3**
	comp=Z,6.8nm,0.8s							
KBL	**Kabul**	**26.87**	**35**	P		**P**	**17 18 33.5**	**+0.3**
	comp=Z,6.8nm,0.8s							
GNI	**Garni**	**27.23**	**350**	P		**P**	**17 18 38.1**	**+1.8**
GNI	**Garni**	**27.23**	**350**	P		**P**	**17 18 38.1**	**+1.8**
	comp=Z,4.8nm,0.6s,baz=70,slow=2.6,SNR=8.4							
GNI					LR	LR	17 30 47.5	
	comp=Z,42nm,18.7s,baz=80,slow=39							
GNI	**Garni**	**27.23**	**350**	P		**P**	**17 18 38.1**	**+1.8**
KBZ	**Khabaz**	**31.03**	**349**	P		**P**	**17 19 11.2**	**+1.4**
KBZ	**Khabaz**	**31.03**	**349**	P		**P**	**17 19 11.2**	**+1.4**
	comp=Z,3.1nm,0.8s,baz=187,slow=7.5,SNR=10.0							
KBZ	**Khabaz**	**31.03**	**349**	P		**P**	**17 19 11.1**	**+1.4**
PYUN	**Piuthan**	**33.45**	**59**	*e*P		**P**	**17 19 31.2**	**-0.3**
	comp=Z,54nm,1.4s							
KOLN	**Koldanda**	**33.85**	**60**	*e*P		**P**	**17 19 34.0**	**-1.0**
	comp=Z,30nm,1.3s							
DANN	**Dangsing**	**34.17**	**59**	*e*P		**P**	**17 19 37.4**	**-0.5**
	comp=Z,59nm,1.5s							
DMN	**Daman**	**35.08**	**61**	*e*P		**P**	**17 19 44.7**	**-1.0**
	comp=Z,11nm,0.8s							
KKN	**Kakani**	**35.28**	**61**	*e*P		**P**	**17 19 46.7**	**-0.7**
	comp=Z,15nm,0.7s							
PKIN	**Phulchoki**	**35.31**	**61**	*e*P		**P**	**17 19 46.6**	**-1.2**
	comp=Z,6.6nm,0.7s							
EKS2	**Erkin-Say**	**35.39**	**30**	P		**P**	**17 19 48.7**	**+0.7**
	comp=Z,2.5nm,0.9s							
EKS2	**Erkin-Say**	**35.39**	**30**	P		**P**	**17 19 48.7**	**+0.7**
	comp=Z,2.5nm,0.9s							
AAK	**Ala-Archa**	**35.72**	**31**	*e*P		P	17 19 47.1	-3.8
	comp=Z,5.2nm,1.4s							
GUN	**Gumba**	**35.82**	**61**	*e*P		**P**	**17 19 51.2**	**-1.0**
	comp=Z,42nm,1.2s							
ABKAR	**Akbulak array**	**36.62**	**10**	*e*P		**P**	**17 19 57.9**	**-0.4**
	comp=Z,5.4nm,1.0s							
ABKAR	**Akbulak array**	**36.62**	**10**	*e*P		**P**	**17 19 57.9**	**-0.4**
	comp=Z,5.3nm,1.0s							
AK02	**Malin Array Si**	**41.14**	**339**	P		**P**	**17 20 35.9**	**-0.2**
AK02	**Malin Array Si**	**41.14**	**339**	P		**P**	**17 20 35.9**	**-0.2**
AK01	**Malin Array Si**	**41.17**	**339**	P		**P**	**17 20 35.5**	**-0.8**
AK01	**Malin Array Si**	**41.17**	**339**	P		**P**	**17 20 35.5**	**-0.8**
AKASG	**Malin Array Be**	**41.17**	**339**	P		**P**	**17 20 35.6**	**-0.8**
AKASG	**Malin Array Be**	**41.17**	**339**	P		**P**	**17 20 35.6**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=139,slow=7.4,SNR=4.3							
AKASG	**Malin Array Be**	**41.17**	**339**	P		**P**	**17 20 35.6**	**-0.8**
KIEV	**Kiev**	**41.17**	**339**	*e*P		P	17 20 32.0	-4.4
	comp=Z,7.2nm,1.4s							
BRVK	**Borovoye**	**42.59**	**17**	*e*P		**P**	**17 20 47.6**	**-0.4**
	comp=Z,2.2nm,0.6s							
BRVK	**Borovoye**	**42.59**	**17**	*e*P		**P**	**17 20 47.6**	**-0.4**
	comp=Z,2.2nm,0.6s							
MK31	**Makanchi Array**	**42.59**	**32**	*e*P		**P**	**17 20 47.6**	**-0.6**
MK31	**Makanchi Array**	**42.59**	**32**	*e*P		**P**	**17 20 47.6**	**-0.6**
MKAR	**Makanchi Array**	**42.59**	**32**	P		**P**	**17 20 47.8**	**-0.3**
MKAR	**Makanchi Array**	**42.59**	**32**	P		**P**	**17 20 47.8**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=220,slow=8.0,SNR=20							
MKAR	**Makanchi Array**	**42.59**	**32**	P		**P**	**17 20 47.8**	**-0.3**
KURK	**Kurchatov**	**43.64**	**26**	P		**P**	**17 20 55.8**	**-0.7**
	comp=Z,1.7nm,0.8s							
KURK	**Kurchatov**	**43.64**	**26**	P		**P**	**17 20 55.8**	**-0.7**
	comp=Z,1.7nm,0.8s							
TAM	**Tamanrasset**	**43.84**	**289**	*e*P		**P**	**17 21 00.0**	**+1.3**
	comp=Z,1.6nm,0.6s							
TAM	**Tamanrasset**	**43.84**	**289**	*e*P		**P**	**17 21 00.0**	**+1.3**
	comp=Z,1.6nm,0.6s							
LBTB	**Lobatse**	**45.30**	**213**	P		**P**	**17 21 11.0**	**+0.8**
LBTB	**Lobatse**	**45.30**	**213**	P		**P**	**17 21 11.0**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=50,slow=8.9,SNR=4.9							
LBTB	**Lobatse**	**45.30**	**213**	P		**P**	**17 21 11.0**	**+0.8**
VLC	**Villacollemand**	**46.12**	**320**	P		P	17 21 09.5	-6.9
CMAR	**Chiang Mai Arr**	**46.56**	**77**	P		**P**	**17 21 19.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**46.56**	**77**	P		**P**	**17 21 19.4**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=273,slow=8.5,SNR=11							
CMAR	**Chiang Mai Arr**	**46.56**	**77**	P		**P**	**17 21 19.4**	**-0.9**
TOA0	**Torodi Ar. Sit**	**47.65**	**276**	*e*P		**P**	**17 21 28.1**	**-0.7**
TOA0	**Torodi Ar. Sit**	**47.65**	**276**	*e*P		**P**	**17 21 28.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**47.65**	**276**	P		**P**	**17 21 29.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**47.65**	**276**	P		**P**	**17 21 29.8**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=90,slow=6.7,SNR=17							
TORD	**Torodi Ar. Bea**	**47.65**	**276**	P		**P**	**17 21 29.8**	**+1.1**
BOSA	**Boshof**	**48.42**	**210**	P		**P**	**17 21 34.4**	**-0.2**
BOSA	**Boshof**	**48.42**	**210**	P		**P**	**17 21 34.4**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=56,slow=8.5,SNR=5.5							
BOSA	**Boshof**	**48.42**	**210**	P		**P**	**17 21 34.4**	**-0.2**
ZAA0	**Zalesovo Array**	**48.61**	**26**	*e*P		**P**	**17 21 34.1**	**-1.5**
ZAA0	**Zalesovo Array**	**48.61**	**26**	*e*P		**P**	**17 21 34.1**	**-1.5**
ZALV	**Zalesovo Beam**	**48.61**	**26**	P		**P**	**17 21 34.2**	**-1.4**
ZALV	**Zalesovo Beam**	**48.61**	**26**	P		**P**	**17 21 34.2**	**-1.4**
	comp=Z,2.0nm,0.6s,baz=234,slow=7.7,SNR=14							
ZALV	**Zalesovo Beam**	**48.61**	**26**	P		**P**	**17 21 34.2**	**-1.4**
RGN	**Rugen**	**50.45**	**333**	P		P	17 21 56.0	+6.5
ESDC	**Sonseca Array**	**54.55**	**309**	P		**P**	**17 22 21.8**	**+1.4**
ESDC	**Sonseca Array**	**54.55**	**309**	P		**P**	**17 22 21.8**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=74,slow=6.4,SNR=5.0							
ESDC	**Sonseca Array**	**54.55**	**309**	P		**P**	**17 22 21.8**	**+1.4**
ESLA	**Sonseca Array**	**54.55**	**309**	P		**P**	**17 22 20.8**	**+0.5**
ESLA	**Sonseca Array**	**54.55**	**309**	P		**P**	**17 22 20.8**	**+0.5**
SONM	**Songino Array**	**57.38**	**41**	P		**P**	**17 22 40.8**	**+0.2**
SONM	**Songino Array**	**57.38**	**41**	P		**P**	**17 22 40.8**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=254,slow=7.1,SNR=9.4							
SONM					LR	LR	17 50 07.3	
	comp=Z,55nm,21.1s,baz=334,slow=39							
SONM	**Songino Array**	**57.38**	**41**	P		**P**	**17 22 40.8**	**+0.2**
WRA	**Warramunga Arr**	**88.63**	**111**	P		**P**	**17 25 45.0**	**-0.8**
WRA	**Warramunga Arr**	**88.63**	**111**	P		**P**	**17 25 45.0**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=299,slow=3.9,SNR=5.6							
WRA	**Warramunga Arr**	**88.63**	**111**	P		**P**	**17 25 45.0**	**-0.8**
ASAR	**Alice Springs**	**89.18**	**114**	P		**P**	**17 25 47.6**	**-0.7**
ASAR	**Alice Springs**	**89.18**	**114**	P		**P**	**17 25 47.6**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=290,slow=5.3,SNR=8.1							
ASAR	**Alice Springs**	**89.18**	**114**	P		**P**	**17 25 47.6**	**-0.7**

IDC **12** *17:20:25.3±2.0, 20°.30S×71°.05W, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.7/18, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=67.8km s-min=34.9km az=177.0*

GUC **12** *17:20:31.5±0.7, 19°.49S×70°.96W, h37km±4km, ML3.7*

ISCJB **12** *17:20:32.6±1.5, 19°.46S±0°.04×71°.0W±0°.1, h43km±15km, mb3.6/3, Error ellipse: s-maj=18.0km s-min=7.2km az=176.3*

ISC 12 17:20:34.4±2.3, 19°.44S±0°.05×70°.9W±0°.2, h42km±21km, n14, σ1°.16/19, mb3.7/3, 3C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PSGC	**Pisagua**	**0.71**	**103**	⇓	*i*P	**Pn**	**17 20 46.0**	**-2.1**
PSGC					*i* S	**Sn**	**17 20 57.3**	**-0.6**
PSGC					AML	AML	17 21 01.0	
	comp=N,2μm,0.4s							
ARCH	**Arica**	**1.08**	**29**	*e*P		**Pn**	**17 20 51.9**	**-1.2**
ARCH					*i* S	**Sn**	**17 21 08.0**	**+1.1**
ARCH					AML	AML	17 21 10.4	
	comp=E,3μm,0.2s							
MNMC	**Minimini**	**1.23**	**76**	⇓	*i*P	**Pn**	**17 20 54.9**	**-0.5**
MNMC					*i* S	**Sn**	**17 21 13.4**	**+2.5**
MNMC					AML	AML	17 21 19.7	
	comp=E,5μm,0.3s							
HMBC	**Humberstone**	**1.23**	**133**	⇑	*i*P	**Pn**	**17 20 54.4**	**-0.9**
HMBC					*i* S	**Sn**	**17 21 10.9**	**+0.1**
HMBC					AML	AML	17 21 18.5	
	comp=E,2μm,0.5s							
PB01	**Plate Boundary**	**2.05**	**141**	⇑	*i*P	**Pn**	**17 21 05.8**	**-0.7**
PB01					*i* S	**Sn**	**17 21 31.6**	**+0.8**
PB01					AML	AML	17 21 41.1	
	comp=E,441nm,0.6s							
PB09	**Plate Boundary**	**2.79**	**148**	⇑	*i*P	**Pn**	**17 21 16.6**	**-0.1**
PB09					AML	AML	17 22 06.1	
	comp=N,1μm,0.6s							
LVC	**Limon Verde**	**3.64**	**150**	*e*P		**Pn**	**17 21 28.4**	**-0.2**
LVC					*i* S	**Sn**	**17 22 11.2**	**+0.8**
LPAZ	**La Paz**	**4.07**	**40**	Pn		Pn	17 21 40.8	+6.1
	comp=N,1.1nm,0.3s,baz=202,slow=11,SNR=19							
SIV	**San Ignacio**	**9.93**	**71**	Pn		**Pn**	**17 22 56.0**	**+1.3**
	comp=N,0.3nm,0.3s,baz=265,slow=13,SNR=3.9							
NVAR	**Mina Array Bea**	**72.76**	**323**	P		**P**	**17 31 58.9**	**+0.2**
	comp=N,0.2nm,0.5s,baz=90,slow=4.7,SNR=3.8							
TORD	**Torodi Ar. Bea**	**78.41**	**72**	P		**P**	**17 32 30.0**	**-1.3**
	comp=N,0.4nm,0.5s,baz=250,slow=6.4,SNR=5.6							
YKA	**Yellowknife Ar**	**88.66**	**341**	P		**P**	**17 33 22.7**	**0.0**
	comp=N,0.4nm,0.6s,baz=135,slow=4.5,SNR=11							
MKAR	**Makanchi Array**	**144.97**	**33**	PKPbc		**PKPab**	**17 40 06.4**	**-0.1**
	comp=N,0.5nm,0.7s,baz=330,slow=4.2,SNR=4.5							
SONM	**Songino Array**	**151.59**	**4**	PKPbc		**PKPbc**	**17 40 24.8**	**+0.5**
	comp=N,0.5nm,0.5s,baz=336,slow=1.7,SNR=4.7							

IDC **12** *17:24:22.2±1.0, 9°.99S×160°.63E, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.2/19, mbtmp4.1/12, ML4.2/1, MS3.5/4, Ms1 3.5/4, ms1mx3.1/29, Error ellipse: s-maj=22.3km s-min=17.9km az=101.0*

ISCJB **12** *17:24:26.1±0.5, 10°.04S±0°.07×160°.55E±0°.08, h37km, mb4.2/18, MS3.4/3, Error ellipse: s-maj=11.9km s-min=8.7km az=154.7*

NEIC **12** *17:24:28.0±1.6, 9°.98S×160°.51E, h37km±14km, mb4.5/7, Error ellipse: s-maj=13.3km s-min=8.8km az=100.0*

ISC 12 17:24:27.9±0.6, 9°.97S±0°.09×160°.6E±0°.1, h37km, n39, σ0°.78/38, mb4.2/18, MS3.3/3, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**0.80**	**312**	*e*Pg		**Pn**	**17 24 42.3**	**-0.3**
HNR				*e*Sg		**Sn**	**17 24 53.0**	**-0.3**
HNR					Sn	Sn	17 24 54.3	+1.0
HNR	**Honiara**	**0.80**	**312**		Pn	**Pn**	**17 24 42.5**	**-0.1**
	1μm,0.3s,baz=141,slow=7.4,SNR=1169							
HNR					Sn	**Sn**	**17 24 54.3**	**+1.0**
	3μm,0.3s,baz=203,slow=23,SNR=32							
DZM	**Mont Dzumac**	**13.29**	**156**	LR		LR	17 31 32.7	
	comp=Z,336nm,18.3s,baz=20,slow=32							
CTA	**Charters Tower**	**17.07**	**232**	P		**Pn**	**17 28 24.4**	**+0.6**
CTA	**Charters Tower**	**17.07**	**232**	P		**Pn**	**17 28 24.4**	**+0.6**
	0.6nm,0.3s,baz=57,slow=13,SNR=11							
WRAB	**Tennant Creek**	**27.14**	**246**	*e*P		**P**	**17 30 05.9**	**-1.9**
	3.6nm,0.8s							
WRAB				*e*PcP		**PcP**	**17 33 26.3**	**-1.7**
WRA	**Warramunga Arr**	**27.15**	**246**	P		**P**	**17 30 08.1**	**+0.1**
WRA	**Warramunga Arr**	**27.15**	**246**	P		**P**	**17 30 08.1**	**+0.1**
	1.1nm,0.5s,baz=72,slow=9.6,SNR=14							
RAO	**Raoul Island**	**27.82**	**137**	*e*P		**P**	**17 30 13.2**	**-0.6**
STKA	**Stephens Creek**	**27.99**	**216**	*e*P		**P**	**17 30 15.2**	**0.0**
	0.5nm,0.6s							
STKA	**Stephens Creek**	**27.99**	**216**	P		**P**	**17 30 15.3**	**+0.1**
	1.5nm,0.5s,baz=47,slow=14,SNR=9.4							
GUMO	**Guam**	**28.11**	**326**	LR		LR	17 39 56.0	
	comp=Z,80nm,20.1s,baz=96,slow=33							
ASAR	**Alice Springs**	**28.84**	**238**	P		**P**	**17 30 22.6**	**-0.4**
ASAR	**Alice Springs**	**28.84**	**238**	P		**P**	**17 30 22.6**	**-0.4**
	0.2nm,0.3s,baz=62,slow=10,SNR=14							
KKM	**Kota Kinabalu**	**46.94**	**288**	*e*P		**P**	**17 32 55.0**	**-0.6**
	11nm,0.8s							
MJAR	**Matsushiro Arr**	**50.82**	**337**	P		P	**17 33 23.7**	**-1.1**
MJAR	**Matsushiro Arr**	**50.82**	**337**	P		P	**17 33 23.7**	**-1.1**
	1.0nm,0.4s,baz=168,slow=7.5,SNR=5.1							
KSRS	**Korea Array**	**56.22**	**329**	P		P	**17 34 05.1**	**+0.8**
	1.9nm,0.7s,baz=155,slow=8.1,SNR=8.8							
KSAR	**Wonju Array Be**	**56.23**	**329**	P		P	**17 34 05.1**	**+0.7**
ASAJ	**Asahikawa**	**56.24**	**345**	LR		LR	17 56 55.4	
	comp=Z,57nm,18.9s,baz=182,slow=35							
USRK	**Ussuriysk Arra**	**59.81**	**337**	P		P	**17 34 30.2**	**+0.8**
	1.9nm,0.7s,baz=125,slow=5.6,SNR=5.0							
PETK	**Petropavlovsk-**	**62.88**	**358**	LR		LR	17 57 26.4	
	comp=Z,20nm,20.2s,baz=314,slow=32							
CMAR	**Chiang Mai Arr**	**67.01**	**295**	P		P	**17 35 18.4**	**+0.7**
CMAR	**Chiang Mai Arr**	**67.01**	**295**	P		P	**17 35 18.4**	**+0.7**
	2.2nm,0.7s,baz=125,slow=5.3,SNR=27							
VNDA	**Vanda**	**67.53**	**180**	P		P	**17 35 20.0**	**+0.1**
	2.5nm,1.2s							
SONM	**Songino Array**	**74.84**	**326**	P		P	**17 36 05.4**	**+0.7**
SONM	**Songino Array**	**74.84**	**326**	P		P	**17 36 05.4**	**+0.7**
	1.8nm,0.6s,baz=140,slow=5.7,SNR=24							
BILL	**Bilibino**	**77.92**	**2**	*e*P		P	**17 36 22.0**	**+0.4**
	4.8nm,1.0s							
QSPA	**South Pole Qui**	**80.02**	**180**	*e*P		P	**17 36 34.5**	**+1.0**
	2.0nm,0.8s							
MCK	**McKinley**	**82.84**	**20**	*e*P		P	**17 36 48.4**	**+0.3**
	11nm,1.0s							
ILAR	**Eielson Array**	**84.19**	**20**	P		P	**17 36 54.9**	**-0.1**
ILAR	**Eielson Array**	**84.19**	**20**	P		P	**17 36 54.9**	**-0.1**
	1.6nm,0.7s,baz=249,slow=4.8,SNR=20							
EGAK	**Eagle**	**86.19**	**21**	*e*P		P	**17 37 06.2**	**+1.2**
	4.6nm,0.9s							
MKAR	**Makanchi Array**	**89.27**	**318**	P		P	**17 37 19.7**	**-0.6**
MKAR	**Makanchi Array**	**89.27**	**318**	P		P	**17 37 19.7**	**-0.6**
	0.4nm,0.7s,baz=123,slow=4.5,SNR=5.1							
YKA	**Yellowknife Ar**	**96.39**	**28**	P		P	**17 37 52.9**	**+0.2**
YKA	**Yellowknife Ar**	**96.39**	**28**	P		P	**17 37 52.8**	**+0.2**
	1.1nm,0.6s,baz=260,slow=4.5,SNR=22							
TORD	**Torodi Ar. Bea**	**159.04**	**281**	PKPab		**PKPab**	**17 44 58.8**	**-0.9**
TORD	**Torodi Ar. Bea**	**159.04**	**281**	PKPab		**PKPab**	**17 44 58.8**	**-0.9**
	0.6nm,0.7s,baz=60,slow=6.6,SNR=3.8							

DDA 12 17:47:51.2, 37°.90N×29°.37E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DNZL	**Cakiroluk**	**0.21**	**186**	*i*	P	Pg	17 47 55.6	0.0
DNZL				*i*	S	Sg	17 47 59.3	+0.6
KHAL	**Karahalli**	**0.57**	**35**	*i*	P	Pg	17 48 02.5	0.0
KHAL				*i*	S	Sg	17 48 10.9	+0.7
MANT	**Manisa**	**0.72**	**326**	*i*	P	Pg	17 48 04.5	-0.8
MANT				*i*	S	Sb	17 48 16.3	-0.3

**IDC 12 17:48:52.4±1.1, 5°.72S×152°.24E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.6/22, mbtmp3.8/8, ML2.8/1, Error ellipse

DST	Dursunbey	1.50	76	ePN	Pb	18 01 43.7	-0.2
DST	Dursunbey	1.50	76	ePn	Pb	18 01 43.7	-0.2
ENEZ	Enez	1.53	344	ePN	Pb	18 01 44.1	-0.2
ENEZ	Enez	1.53	344	ePn	Pb	18 01 44.1	-0.2
MFT	Murefte	1.58	15	ePN	Pb	18 01 44.8	-0.4
MFT	Murefte	1.58	15	ePn	Pb	18 01 44.8	-0.4
KCTX	Karacabey (Bur	1.61	51	ePN	Pn	18 01 44.8	+0.5
KCTX	Karacabey (Bur	1.61	51	ePn	Pn	18 01 44.8	+0.5
KULA	Kula-Manisa	1.69	116	ePN	Pb	18 01 46.3	-0.7
KULA	Kula-Manisa	1.69	116	ePn	Pb	18 01 46.3	-0.7
ARMT	Armutlu	2.09	51	ePN	Pn	18 01 51.8	+0.8
ARMT	Armutlu	2.09	51	ePn	Pn	18 01 51.8	+0.8
TVSB	Tavsanli	2.13	84	ePN	Pn	18 01 52.4	+0.9
TVSB	Tavsanli	2.13	84	ePn	Pn	18 01 52.4	+0.9
IZI	Iznik	2.37	62	ePN	Pn	18 01 56.0	+1.1
IZI	Iznik	2.37	62	ePn	Pn	18 01 56.0	+1.1
EDRB	Edirne	2.58	0	ePN	Pn	18 01 58.7	+1.1
EDRB	Edirne	2.58	0	ePn	Pn	18 01 58.7	+1.1

AUST 12 18:02:50.4, 6.99S×128.53E, h100km, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**5.48**	**43**	P	Pn	18 04 10.5	+0.7
	baz=5.5,SNR=14						
FAKI				S	Sn	18 05 06.3	-5.3
	baz=5.5,SNR=11						
MTN	**Manton Dam**	**6.36**	**156**	P	Pn	18 04 25.4	+3.7
	baz=6.4,SNR=13						
MTN				S	Sn	18 05 31.7	-1.2
	baz=6.4,SNR=7.2						
SWI	**Sorong**	**6.67**	**24**	P	Pn	18 04 28.1	+2.3
	baz=6.7,SNR=6.0						
SWI				S	Sn	18 05 38.9	-1.5
	baz=6.7,SNR=3.3						
KDU	**Kakadu**	**6.87**	**146**	P	Pn	18 04 30.8	+2.2
	baz=6.9,SNR=15						
KDU				S	Sn	18 05 41.2	-4.0
	baz=6.9,SNR=9.4						
KNRA	**Kununurra**	**8.64**	**179**	P	Pn	18 04 56.8	+4.2
	baz=8.7,SNR=17						
KNRA				S	Sn	18 06 29.2	+0.8
	baz=8.7,SNR=4.8						
FITZ	**Fitzroy Crossi**	**11.40**	**194**	P	Pn	18 05 34.3	+4.1
	baz=12,SNR=8.8						
JAY	**Jayapura**	**12.92**	**70**	P	Pn	18 05 53.6	+3.1
	baz=13,SNR=3.5						
JAY				S	Sn	18 08 00.4	-12
	baz=13,SNR=3.1						
MILA	**Mila**	**35.34**	**151**	S	S	18 14 53.9	-9.4
	baz=35,SNR=8.4						

IDC 12 18:06:43.7±1.8, 15.94S×174.59W, h296km±13km, mb3.2/7, mb1 3.5/8, mb1mx3.3/18, mbtmp3.2/8, Error ellipse: s-maj=98.5km s-min=15.3km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.39**	**54**	P	Pn	18 07 42.4	-0.9
	4.4nm,0.3s,baz=238,slow=4.0,SNR=6.4						
AFI				S	S	18 08 31.5	+0.7
	7.9nm,0.3s,baz=232,slow=18,SNR=5.9						
WRA	**Warramunga Arr**	**48.60**	**257**	P	P	18 14 58.2	-0.3
	0.3nm,0.3s,baz=86,slow=7.9,SNR=16						
ASAR	**Alice Springs**	**48.85**	**252**	P	P	18 15 00.5	+0.1
	1.9nm,0.4s,baz=90,slow=7.8,SNR=74						
NVAR	**Mina Array Bea**	**75.50**	**42**	P	P	18 17 56.0	-0.2
	1.3nm,0.9s,baz=227,slow=12,SNR=5.3						
ILAR	**Eielson Array**	**83.20**	**12**	P	P	18 18 36.5	-0.2
	0.3nm,0.3s,baz=212,slow=5.4,SNR=9.6						
PDAR	**Pinedale Array**	**83.43**	**42**	P	P	18 18 39.0	+0.3
	0.8nm,0.8s,baz=224,slow=2.5,SNR=4.3						
YKA	**Yellowknife Ar**	**91.05**	**24**	P	P	18 19 14.7	+0.3
	0.1nm,0.5s,baz=231,slow=5.5,SNR=4.5						
SONM	**Songino Array**	**94.48**	**318**	P	P	18 19 30.6	-0.1
	0.1nm,0.3s,baz=94,slow=4.3,SNR=2.5						

*IDC **12** 18:14:48.4±4.9, 28.24N×129.14E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/27, mbtmp3.8/9, ML3.7/1, MS2.6/1, Ms1 2.6/1, ms1mx1.9/44, Error ellipse: s-maj=100.5km s-min=49.7km az=143.0*
*JMA **12** 18:14:52.9±0.2, 28.31N×129.65E, h45km±2km, M3.9*
JMA Felt II J1.
*ISCJB **12** 18:14:52.1±0.6, 28.26N±0.05×129.65E±0.08, h56km±3km, mb3.5/8, Error ellipse: s-maj=13.9km s-min=4.1km az=35.2*
*NIED **12** 18:15:00, 28.30N×129.70E, h59km, Mw3.8 Best double couple: M0 5.51000×10^14 NP1:φs=273.00000°, δ75.00000°, λ-41.00000°. NP2:φs16.00000°, δ51.00000°, λ-161.00000°.*

ISC 12 18:14:53.0±0.8, 28.24N±0.06×129.65E±0.07, h44km±6km, n28, σ1§18/36, mb3.7/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**0.18**	**347**	P	Pn	18 15 00.0	-0.6
JAM				S	Sn	18 15 05.0	-0.9
JZK	**Kikaishima**	**0.29**	**75**	P	Pn	18 15 01.2	-0.4
JZK				S	Sn	18 15 08.1	+0.6
JAMN	**Amaminishikomi**	**0.42**	**271**	P	Pn	18 15 03.0	0.0
JAMN				S	Sn	18 15 10.4	+0.4
JTK	**Tokunoshima**	**0.77**	**234**	P	Pn	18 15 07.6	+0.1
JTK				S	Sn	18 15 19.3	+1.4
JNN	**Nakanoshima**	**1.61**	**7**	P	Pn	18 15 19.5	+0.5
JNN				S	Sn	18 15 40.0	+1.4
JOW	**Kunigami**	**1.86**	**221**	P	Pn	18 15 22.6	+0.2
JOW				eS	Sn	18 15 46.1	+1.4
JIH	**Iheya**	**1.92**	**232**	P	Pn	18 15 23.6	+0.4
JKC	**Kuchinoerabu**	**2.27**	**12**	P	Pn	18 15 28.6	+0.6
JKC				S	Sn	18 15 54.8	+0.1
JTN	**Tanegashima 3**	**2.67**	**25**	P	Pn	18 15 34.0	+0.4
JTN				S	Sn	18 16 05.2	+0.5
JJT2	**Tamagusuku 2**	**2.69**	**219**	P	Pn	18 15 34.0	+0.2
JAGN	**Aguni-jima**	**2.70**	**233**	P	Pn	18 15 34.3	+0.4
JAGN				S	Sn	18 16 07.1	+1.7
JKE	**Kume jima 2**	**3.18**	**234**	P	Pn	18 15 40.9	+0.3
JKE				eS	Sn	18 16 17.2	-0.1
JNU	**Nakatsue**	**4.98**	**12**	Pn	Pn	18 16 07.1	+1.8
	3.4nm,0.3s,baz=208,slow=9.8,SNR=55						
JNU				Sn	Sn	18 17 01.6	0.0
	1.6nm,0.3s,baz=204,slow=19,SNR=3.1						
KSRS	**Korea Array**	**9.31**	**351**	LR	LR	18 21 01.0	
	comp=Z,35nm,18.8s,baz=343,slow=40						
SONM	**Songino Array**	**26.63**	**324**	P	**P**	**18 20 26.6**	**-0.9**
	0.2nm,0.6s,baz=120,slow=10,SNR=2.7						
ODAN	**Odare**	**37.36**	**278**	eP	**P**	**18 22 02.4**	**+0.6**
	8.9nm,0.6s						
RAMN	**Ramite**	**38.03**	**278**	eP	**P**	**18 22 04.8**	**-2.7**
	11nm,0.5s						
GUN	**Gumba**	**38.47**	**280**	eP	**P**	**18 22 09.9**	**-1.4**
	2.6nm,0.3s						
PKIN	**Phulchoki**	**38.95**	**280**	eP	**P**	**18 22 12.6**	**-2.7**
	4.8nm,0.6s						
KKN	**Kakani**	**39.01**	**280**	eP	P	18 22 12.2	-3.5
	4.4nm,0.4s						
DMN	**Daman**	**39.20**	**280**	eP	P	18 22 13.7	-3.6
	60nm,1.9s						
MKAR	**Makanchi Array**	**41.18**	**310**	P	**P**	**18 22 31.6**	**-1.7**
	0.1nm,0.4s,baz=93,slow=7.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**41.45**	**321**	P	**P**	**18 22 32.6**	**-2.7**
	0.4nm,0.3s,baz=115,slow=9.7,SNR=3.3						
KURBB	**Kurchatov Arra**	**44.31**	**315**	P	**P**	**18 22 57.6**	**-0.9**
	0.6nm,0.4s,baz=100,slow=7.4,SNR=5.0						
BVAR	**Borovoye Array**	**49.65**	**317**	P	**P**	**18 23 39.8**	**-0.3**
	0.5nm,0.4s,baz=88,slow=9.4,SNR=4.9						
ARCES	**ARCESS Array B**	**68.61**	**339**	P	**P**	**18 25 51.4**	**+0.3**
	2.5nm,1.0s,baz=78,slow=8.4,SNR=2.5						
FINES	**FINESS Array B**	**71.75**	**331**	P	**P**	**18 26 10.2**	**-0.2**
	1.2nm,0.4s,baz=63,slow=6.3,SNR=17						
BRTR	**Keskin Array B**	**76.80**	**308**	P	**P**	**18 26 41.3**	**+0.9**
	0.2nm,0.4s,baz=93,slow=6.2,SNR=4.4						

IDC 12 18:20:45.9±1.7, 4.91S×125.40E, h0km, mb3.1/2, mb1 3.6/3, mb1mx3.3/22, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=162.4km s-min=27.5km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.30**	**151**	P	Pn	18 24 48.2	-0.8
	0.1nm,0.3s,baz=327,slow=12,SNR=12						
ASAR	**Alice Springs**	**20.38**	**157**	P	P	18 25 24.4	+0.1
	1.0nm,1.0s,baz=338,slow=11,SNR=6.6						
MKAR	**Makanchi Array**	**64.02**	**329**	P	P	18 31 21.5	+0.1
	0.1nm,0.5s,baz=126,slow=7.3,SNR=2.3						

IDC 12 18:26:54.1±1.3, 12.94N×145.67E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.4/4, Error ellipse: s-maj=37.9km s-min=20.9km az=76.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.02**	**310**	Pn	Pn	18 27 15.4	-0.3
	52nm,0.3s,baz=137,slow=12,SNR=54						
GUMO				Sn	Sg	18 27 27.6	+0.7
	155nm,0.3s,baz=180,slow=20,SNR=18						
WRA	**Warramunga Arr**	**34.52**	**199**	P	P	18 33 44.4	0.0
	0.5nm,0.5s,baz=23,slow=9.9,SNR=6.7						
ASAR	**Alice Springs**	**38.16**	**198**	P	P	18 34 15.3	-0.1
	0.4nm,0.6s,baz=25,slow=8.7,SNR=11						
MKAR	**Makanchi Array**	**62.50**	**316**	P	P	18 37 20.0	+0.4
	0.1nm,0.5s,baz=107,slow=8.0,SNR=2.6						
YKA	**Yellowknife Ar**	**83.08**	**27**	P	P	18 39 21.2	-0.2
	0.1nm,0.6s,baz=270,slow=4.3,SNR=3.6						

*IDC **12** 18:34:28.8±2.5, 10.89N×60.90W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.7/23, mbtmp3.8/5, Error ellipse: s-maj=75.3km s-min=30.3km az=30.0*
*FUNV **12** 18:34:35.4, 11.46N×60.36W, h35km, MW3.6*
*ISCJB **12** 18:34:36.5±0.5, 11.30N±0.02×60.51W±0.05, h44km, mb3.8/5, Error ellipse: s-maj=6.4km s-min=3.4km az=8.0*
*TRN **12** 18:34:37.2, 11.40N×60.58W, h27km, MD3.6*

ISC 12 18:34:37.8±0.8, 11.33N±0.03×60.56W±0.05, h44km, n36, σ1§41/54, mb3.9/5, 2D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSP	**Speyside**	**0.04**	**141**	eP	**Pn**	**18 34 43.8**	**-0.9**
TOSP				eS	**Sn**	**18 34 47.4**	**-2.2**
BOT	**Bacolet**	**0.22**	**223**	j/P	**Pn**	**18 34 45.4**	**-0.2**
TPR	**Prospect**	**0.26**	**235**	j/P	**Pn**	**18 34 45.9**	**-0.1**
TBH	**Brigand Hill**	**0.98**	**210**	eP	**Pn**	**18 34 57.0**	**+1.9**
TBH				eS	**Sn**	**18 35 11.3**	**+3.5**
TRN	**Trinidad (W)**	**1.07**	**231**	eP	**Pn**	**18 34 58.1**	**+1.8**
TRN				eS	**Sn**	**18 35 13.8**	**+3.7**
GRGR	**Grenville**	**1.33**	**307**	eP	**Pn**	**18 34 59.2**	**-0.7**
TPP	**Pointe-a-Pierr**	**1.33**	**221**	eP	**Pn**	**18 35 01.4**	**+1.5**
GRW	**Mount Saint Ca**	**1.35**	**308**	eP	**Pn**	**18 35 01.0**	**+0.7**
GRHS	**Sauteurs**	**1.38**	**310**	eP	**Pn**	**18 35 00.4**	**-0.2**
GRHS				eS	**Sn**	**18 35 18.2**	**+0.6**
GRIC	**Isle de Caille**	**1.38**	**314**	eP	**Pn**	**18 35 00.6**	**0.0**
GRIC				eS	**Sn**	**18 35 19.3**	**+1.7**
GRSS	**Sisters**	**1.41**	**313**	eP	**Pn**	**18 35 00.8**	**-0.1**
GRSS				eS	**Sn**	**18 35 19.8**	**+1.5**
GUIV	**Guiria**	**1.77**	**247**	eP	**Pn**	**18 35 06.5**	**+0.6**
GUIV				eS	**Sn**	**18 35 28.5**	**+1.3**
FCV	**Fort Charlotte**	**1.93**	**340**	eP	**Pn**	**18 35 08.9**	**+0.7**
FCV				eS	**Sn**	**18 35 32.4**	**+1.1**
BHS	**Barnard House**	**2.03**	**344**	eP	**Pn**	**18 35 10.8**	**+1.3**
BHS				eS	**Sn**	**18 35 33.9**	**+0.2**
SVB	**Belmont**	**2.04**	**341**	eP	**Pn**	**18 35 09.7**	**0.0**
SVB				eS	**Sn**	**18 35 35.0**	**+1.0**
SVV	**Soufriere Volc**	**2.07**	**342**	eP	**Pn**	**18 35 10.8**	**+0.7**
SVV				eS	**Sn**	**18 35 35.8**	**+1.0**
MCLT	**Moule a Chique**	**2.39**	**351**	eP	**Pn**	**18 35 14.2**	**-0.3**
MCLT				eS	**Sn**	**18 35 41.2**	**-1.4**
SLDE	**Delcer**	**2.50**	**349**	eP	**Pn**	**18 35 16.4**	**+0.4**
SLDE				eS	**Sn**	**18 35 46.2**	**+0.8**
SLB	**Belfond**	**2.52**	**349**	eP	**Pn**	**18 35 18.2**	**+1.9**
SLB				eS	**Sn**	**18 35 47.9**	**+2.0**
SLPE	**Piton Saint Es**	**2.53**	**350**	eP	**Pn**	**18 35 17.8**	**+1.3**
SLPE				eS	**Sn**	**18 35 45.5**	**-0.6**
CRUV	**Carupano**	**2.70**	**256**	eP	**Pn**	**18 35 17.6**	**-1.2**
CRUV				eS	**Sn**	**18 35 49.3**	**-1.0**
MVM	**Montagne Vaucl**	**3.22**	**354**	eP	**Pn**	**18 35 26.1**	**+0.2**
FDF	**Fort de France**	**3.43**	**350**	eP	**Pn**	**18 35 30.3**	**+1.5**
FDF				eS	**Sn**	**18 36 09.1**	**+0.9**
RIOV	**Rio Grande**	**3.47**	**201**	eP	**Pn**	**18 35 28.7**	**-0.6**
ORIV	**Oritupano**	**3.59**	**232**	eP	**Pn**	**18 35 31.0**	**+0.1**
GURV	**El Guri**	**4.33**	**215**	eP	**Pn**	**18 35 40.9**	**-0.3**
LZG	**Guadaloupe-1**	**4.92**	**346**	eP	**Pn**	**18 35 49.8**	**+0.5**
CUPV	**Cœpira**	**5.29**	**257**	eP	**Pn**	**18 35 53.5**	**-0.9**
CUPV				eS	**Sn**	**18 36 51.5**	**-2.6**
LUEV	**Luepa**	**5.53**	**189**	eP	**Pn**	**18 35 55.1**	**-2.6**
BIRV	**Birongo**	**5.67**	**262**	eP	**Pn**	**18 35 58.7**	**-0.8**
BAUV	**El Baul**	**7.74**	**253**	eP	**Pn**	**18 36 25.1**	**-2.8**
TORD	**Torodi Ar. Bea**	**60.73**	**81**	P	**P**	**18 44 45.1**	**-0.4**
	0.8nm,0.4s,baz=278,slow=5.9,SNR=14						
YKA	**Yellowknife Ar**	**63.88**	**335**	P	**P**	**18 45 04.3**	**-1.3**
	1.1nm,0.8s,baz=111,slow=7.5,SNR=12						
GERES	**GERESS Array B**	**71.20**	**42**	P	**P**	**18 45 52.8**	**+0.5**
	0.4nm,0.6s,baz=258,slow=6.7,SNR=3.8						
ILAR	**Eielson Array**	**78.27**	**334**	P	**P**	**18 46 32.0**	**-0.8**
	0.3nm,0.6s,baz=87,slow=4.3,SNR=7.1						
BRTR	**Keskin Array B**	**86.05**	**50**	P	**P**	**18 47 15.7**	**+1.4**
	0.6nm,0.8s,baz=273,slow=3.8,SNR=4.6						

IDC 12 19:10:50.8±1.1, 13.19N×144.45E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.1/24, mbtmp3.1/3, Error ellipse: s-maj=37.1km s-min=14.0km az=130.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.57**	**45**	Pn	Pn	19 11 07.0	+0.8
	210nm,0.3s,baz=167,slow=16,SNR=405						
GUMO				Sn	Sn	19 11 15.2	-1.1
	686nm,0.3s,baz=163,slow=19,SNR=128						
WRA	**Warramunga Arr**	**34.39**	**197**	P	P	19 17 39.5	-0.5
	0.3nm,0.6s,baz=23,slow=9.2,SNR=5.2						
ASAR	**Alice Springs**	**38.05**	**196**	P	P	19 18 11.2	0.0
	0.3nm,0.5s,baz=16,slow=10,SNR=5.0						
MKAR	**Makanchi Array**	**61.50**	**316**	P	P	19 21 09.2	-0.4
	0.0nm,0.3s,baz=107,slow=5.0,SNR=2.7						

IDC 12 19:18:31.8±1.6, 2.20N×128.26E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.2/21, mbtmp3.2/4, Error ellipse: s-maj=130.2km s-min=22.4km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.80**	**165**	P	P	19 23 36.0	-0.4
	0.6nm,0.5s,baz=344,slow=11,SNR=7.5						
ASAR	**Alice Springs**	**26.29**	**168**	P	P	19 24 09.3	0.0
	0.2nm,0.4s,baz=355,slow=8.5,SNR=3.7						
SONM	**Songino Array**	**49.23**	**341**	P	P	19 27 21.6	-0.6
	0.2nm,0.6s,baz=147,slow=8.2,SNR=1.9						
MKAR	**Makanchi Array**	**59.67**	**325**	P	P	19 28 38.5	+0.4
	0.4nm,0.5s,baz=118,slow=8.2,SNR=8.9						

*IDC **12** 19:53:49.2±2.4, 48.38N×148.40E, h397km±45km, mb2.6/3, mb1 2.9/6, mb1mx2.6/25, mbtmp2.7/6, Error ellipse: s-maj=134.4km s-min=17.3km az=143.0*

ISC 12 19:53:51.7±2.7, 47.6N±0.2×148.6E±0.3, h391km, n17, σ1§78/21, mb2.9/3, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.71**	**206**	P	**Pn**	**19 55 19.0**	**-0.2**
NEM2				eS	**Sn**	**19 56 15.5**	**+1.8**
JTKR	**Abashiri--Toko**	**4.91**	**224**	P	**Pn**	**19 55 15.1**	**+1.8**
JMP	**Maruseppu**	**5.15**	**227**	P	**Pn**	**19 55 17.4**	**+2.6**
JAK	**Akkeshi**	**5.38**	**212**	P	**Pn**	**19 55 17.5**	**+0.2**
JAK				eS	**S**	**19 56 28.1**	**+1.2**
ASAJ	**Asahikawa**	**5.47**	**232**	P	**Pn**	**19 55 21.1**	**+2.9**
ASAJ	**Asahikawa**	**5.47**	**232**	P	**Pn**	**19 55 20.0**	**+1.8**
	1.1nm,0.3s,baz=79,slow=10,SNR=10						
JAR	**Ashorobuto**	**5.50**	**220**	P	**Pn**	**19 55 19.8**	**+1.2**
JOB	**Onbets**	**5.80**	**217**	P	**Pn**	**19 55 22.3**	**+0.6**
JOB				eS	**S**	**19 56 37.0**	**+2.0**
JCH	**Churui**	**6.23**	**218**	P	**Pn**	**19 55 26.4**	**-0.1**
JCH				eS	**S**	**19 56 43.6**	**-0.2**
JNBK	**Urakawa-nobuka**	**6.76**	**220**	P	**Pn**	**19 55 32.4**	**0.0**
JNBK				eS	**S**	**19 56 52.1**	**-2.6**
JEM	**Erimo**	**6.81**	**217**	P	**P**	**19 55 34.4**	**+0.7**
JKB	**Kayabe**	**7.87**	**226**	P	**Pn**	**19 55 44.9**	**0.0**
JKB				eS	**S**	**19 57 15.0**	**-2.6**

MJAR	**Matsushiro Arr**	**13.48**	**219**	P	**Pn**	**19 56 51.4**	**+1.3**
	0.1nm,0.3s,baz=21,slow=10,SNR=3.0							
KSRS	**Korea Array**	**18.26**	**244**	P	**P**	**19 57 39.4**	**+0.1**
	0.2nm,0.3s,baz=47,slow=9.4,SNR=4.4							
ILAR	**Eielson Array**	**37.80**	**39**	P	P	20 00 24.9	-7.0
	0.6nm,0.5s,baz=265,slow=6.8,SNR=14							
CMAR	**Chiang Mai Arr**	**49.65**	**252**	P	**P**	**20 02 03.2**	**-2.4**
	0.2nm,0.7s,baz=32,slow=7.2,SNR=4.5							
YKA	**Yellowknife Ar**	**52.04**	**36**	P	P	20 02 15.3	-7.1
	0.5nm,0.7s,baz=304,slow=7.6,SNR=5.0							

*ISCJB **12** 19:56:54.7±0.4, 43.45N±0.02×10.48E±0.04, h9km±4km, Error ellipse: s-maj=4.7km s-min=3.3km az=173.1*
*ROM **12** 19:56:55.6±0.2, 43.49N×10.56E, h8km±2km, Ml2.5/17, Error ellipse: s-maj=2.4km s-min=1.4km az=70.0*
*GEN **12** 19:56:55.1, 43.44N×10.63E, h1km, ML2.5*
*CSEM **12** 19:56:55.6±0.1, 43.48N×10.56E, h15km, ML2.7/10, Error ellipse: s-maj=2.6km s-min=2.2km az=16.0*
*LDG **12** 19:56:56.0±0.1, 43.46N×10.60E, h2km, Ml2.7/9, Error ellipse: s-maj=2.1km s-min=2.0km az=36.0*
*VIE **12** 19:56:58.0±0.9, 43.51N×10.56E, h5km, mb2.5/4, ML2.7/6, Error ellipse: s-maj=14.9km s-min=6.3km az=77.0 63 km WSW of Florence*

ISC 12 19:56:55.3±1.0, 43.44N±0.02×10.48E±0.02, h7km±9km, n91, σ1§37/128, 5C-4D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PII	**Pisa**	**0.29**	**7**	Pg	**Pg**	**19 57 00.9**	**0.0**
PII				Sg	**Sg**	**19 57 04.8**	**+0.1**
PII	**Pisa**	**0.29**	**7**	Pg	**Pg**	**19 57 00.9**	**0.0**
PII				Sg	**Sg**	**19 57 04.8**	**+0.1**
GROG	**Isola di Gorgo**	**0.43**	**269**	Pg	**Pb**	**19 57 05.6**	**+0.5**
GROG	**Isola di Gorgo**	**0.43**	**269**	Pg	**Pb**	**19 57 05.6**	**+0.5**
GRFL	**Gerfalco**	**0.47**	**128**	Pg	**Pg**	**19 57 04.7**	**+0.4**
	72nm,0.4s						
GRFL	**Gerfalco**	**0.47**	**128**	Pg	**Pg**	**19 57 04.7**	**+0.4**
	72nm,0.4s						
MAIM	**Mastiano**	**0.48**	**1**	Pg	**Pg**	**19 57 04.3**	**-0.2**
MAIM				Sg	**Sg**	**19 57 10.6**	**-0.2**
MAIM	**Mastiano**	**0.48**	**1**	P	**Pg**	**19 57 04.3**	**-0.2**
MAIM				S	**Sg**	**19 57 10.5**	**-0.2**
CRMI	**Carmignano**	**0.50**	**45**	Pg	**Pg**	**19 57 04.3**	**-0.7**
CRMI				Sg	**Sg**	**19 57 10.5**	**-1.1**
	183nm,0.5s						
CRMI	**Carmignano**	**0.50**	**45**	Pg	**Pg**	**19 57 04.3**	**-0.7**
CRMI				Sg	**Sg**	**19 57 10.5**	**-1.1**
	183nm,0.5s						
CRDM	**Cardoso**	**0.59**	**0**	P	**Pg**	**19 57 06.3**	**-0.3**
CRDM				S	**Sg**	**19 57 13.8**	**-0.5**
CSNT	**Castellina Chi**	**0.59**	**86**	Pg	**Pg**	**19 57 06.0**	**-0.7**
	159nm,0.6s						
CSNT	**Castellina Chi**	**0.59**	**86**	Pg	**Pg**	**19 57 06.0**	**-0.7**
	159nm,0.6s						
BDI	**Bagni Di Lucca**	**0.63**	**8**	Pg	**Pg**	**19 57 06.9**	**-0.6**
	257nm,0.4s						
BDI	**Bagni Di Lucca**	**0.63**	**8**	Pg	**Pg**	**19 57 06.9**	**-0.6**
	257nm,0.4s						
CASP	**Castiglione de**	**0.71**	**156**	Pg	**Pb**	**19 57 10.1**	**+0.2**
CASP				Sg	**Sb**	**19 57 20.5**	**+0.6**
	449nm,0.3s						
CASP	**Castiglione de**	**0.71**	**156**	Pg	**Pb**	**19 57 10.1**	**+0.2**
CASP				Sg	**Sb**	**19 57 20.5**	**+0.6**
	449nm,0.3s						
VLC	**Villacollemand**	**0.72**	**355**	Pg	**Pg**	**19 57 09.2**	**0.0**
VLC				Sg	**Sg**	**19 57 18.7**	**0.0**
	307nm,0.7s						
VLC	**Villacollemand**	**0.72**	**355**	Pg	**Pg**	**19 57 09.2**	**0.0**
VLC				Sg	**Sg**	**19 57 18.7**	**0.0**
	307nm,0.7s						
PZZT	**Monte Pizzetto**	**0.75**	**22**	Pg	**Pg**	**19 57 08.9**	**-0.8**
	297nm,0.4s						
PZZT	**Monte Pizzetto**	**0.75**	**22**	Pg	**Pg**	**19 57 08.9**	**-0.8**
	297nm,0.4s						
FNVD	**Fontana Vidola**	**0.87**	**32**	Pg	**Pg**	**19 57 11.2**	**-0.7**
	664nm,0.6s						
FNVD	**Fontana Vidola**	**0.87**	**32**	Pg	**Pg**	**19 57 11.2**	**-0.7**
	664nm,0.6s						
SEI	**Scarperia**	**0.89**	**46**	Pg	**Pg**	**19 57 11.7**	**-0.6**
	278nm,0.3s						
SEI	**Scarperia**	**0.89**	**46**	Pg	**Pg**	**19 57 11.7**	**-0.6**
	278nm,0.3s						
GSCL	**Gusciola**	**0.92**	**5**	Pg	**Pg**	**19 57 12.8**	**-0.1**
GSCL				Sg	**Sg**	**19 57 25.1**	**+0.3**
	1.0nm,0.2s						
GSCL	**Gusciola**	**0.92**	**5**	Pg	**Pg**	**19 57 12.8**	**-0.1**
GSCL				Sg	**Sg**	**19 57 25.1**	**+0.3**
	1.0nm,0.2s						
VMG	**Vicchio**	**0.93**	**56**	Pg	**Pg**	**19 57 12.4**	**-0.8**
	72nm,0.3s						
VMG	**Vicchio**	**0.93**	**56**	Pg	**Pg**	**19 57 12.4**	**-0.8**
	72nm,0.3s						
ARCI	**Arcidosso**	**0.94**	**128**	Pg	**Pg**	**19 57 13.6**	**+0.3**
	106nm,0.8s						
ARCI	**Arcidosso**	**0.94**	**128**	Pg	**Pg**	**19 57 13.6**	**+0.3**
	106nm,0.8s		

LPG	La Plagne	3.37 309	ePn	Pn	19 57 50.6	+2.0
LPL	La Plagne	3.39 309	ePn	Pn	19 57 48.8	0.0
LPL			eSn	Sn	19 58 28.1	-1.3
	2.6nm,0.5s					
LPL	La Plagne	3.39 309	ePn	Pn	19 57 48.8	0.0
LPL			eSn	Sn	19 58 28.1	-1.3
	1.3nm,0.5s					
FETA	Feichten	3.59 3	⇑iPn	Pn	19 57 54.5	+3.1
FETA			⇓iSn	Sn	19 58 36.5	+2.3
FETA	Feichten	3.59 3	Pn	Pn	19 57 54.5	+3.1
FETA			Sn	Sn	19 58 36.5	+2.3
SMRF	Simiane la Rot	3.59 280	ePn	Pn	19 57 53.0	+1.5
SMRF	Simiane la Rot	3.59 280	ePn	Pn	19 57 53.0	+1.5
ORIF	Oris-en-Rattie	3.62 296	ePn	Pn	19 57 53.3	+1.4
ORIF			eSn	Sn	19 58 34.0	-0.9
	7.6nm,0.6s					
ORIF	Oris-en-Rattie	3.62 296	ePn	Pn	19 57 53.3	+1.4
ORIF			eSn	Sn	19 58 34.0	-0.9
	3.8nm,0.6s					
DAVA	Damuels	3.87 354	⇓iPn	Pn	19 57 57.7	+2.3
DAVA			⇓iSn	Sn	19 58 44.9	+3.7
DAVA	Damuels	3.87 354	Pn	Pn	19 57 57.7	+2.3
WTTA	Wattenberg	3.91 12	⇑iPn	Pn	19 57 57.5	+1.5
WTTA			⇓iSn	Sn	19 58 44.5	+2.3
WTTA	Wattenberg	3.91 12	Pn	Pn	19 57 57.5	+1.5
MOTA	Moosalm	3.93 6	⇑iPn	Pn	19 57 58.5	+2.5
MOTA			⇑iSn	Sn	19 58 45.6	+2.9
MOTA	Moosalm	3.93 6	Pn	Pn	19 57 58.5	+2.3
WATA	Walderalm	3.97 11	⇑iPn	Pn	19 57 58.1	+1.4
WATA	Walderalm	3.97 11	Pn	Pn	19 57 58.1	+1.4
LASF	Ste Croix	4.84 280	ePn	Pn	19 58 08.6	+0.1
LASF	Ste Croix	4.84 280	ePn	Pn	19 58 08.6	+0.1
HINF	Hinteralfeld	5.06 331	ePn	Pn	19 58 11.5	-0.1
HINF			eSn	Sn	19 59 06.9	-3.5
	4.9nm,0.5s					
HINF	Hinteralfeld	5.06 331	ePn	Pn	19 58 11.5	-0.1
HINF			eSn	Sn	19 59 06.9	-3.5
	2.5nm,0.5s					
HAU	Haudompre	5.41 329	ePn	Pn	19 58 16.3	0.0
HAU			eSn	Sn	19 59 15.4	-3.4
	7.0nm,0.5s					
HAU	Haudompre	5.41 329	ePn	Pn	19 58 16.3	0.0
HAU			eSn	Sn	19 59 15.4	-3.4
	3.5nm,0.5s					
CDF	Champ du Feu	5.45 337	ePn	Pn	19 58 17.2	+0.2
CDF			eSn	Sn	19 59 16.2	-3.8
	2.9nm,0.4s					
CDF	Champ du Feu	5.45 337	ePn	Pn	19 58 17.2	+0.2
SMF	Signal de Mont	5.69 307	ePn	Pn	19 58 20.1	-0.1
SMF	Signal de Mont	5.69 307	ePn	Pn	19 58 20.1	-0.1
CAF	Calviac	6.23 287	ePn	Pn	19 58 28.5	+0.9
CAF	Calviac	6.23 287	ePn	Pn	19 58 28.5	+0.9

WEL 12 19:57:31.0±0.3, 38.78S×179.51E, h33km, ML3.5/12, 1C, Error ellipse: s-maj=2.7km s-min=1.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	Carnagh Statio	1.06	286	PN	Pn	19 57 49.3	-0.2
PUZ	Puketiti	1.21	305	PN	Pn	19 57 50.6	-1.0
PUZ				SN	Sn	19 58 05.7	-1.1
MHGZ	Mahia Peninsul	1.30	253	PN	Pn	19 57 51.8	-1.1
MHGZ				SN	Sn	19 58 08.3	-0.8
KNZ	Kokohu	1.45	260	PN	Pn	19 57 54.1	-0.8
MXZ	Matakaoa Point	1.54	322	PN	Pn	19 57 55.6	-0.5
MWZ	Matawai	1.61	285	PN	Pn	19 57 56.4	-0.8
MWZ				SN	Sn	19 58 15.9	-1.0
RAHZ	Arahi	1.90	265	PN	Pn	19 58 00.7	-0.3
URZ	Urewera	1.95	285	PN	Pn	19 58 01.6	-0.2
MCHZ	McNeill Hill	2.29	252	PN	Pn	19 58 05.8	-0.6
BKZ	Black Stump Fm	2.38	260	⇑PN	Pn	19 58 07.0	-0.8
PXZ	Pawanui	2.40	238	PN	Pn	19 58 05.5	-2.5
PRHZ	Porangahau	2.67	235	PN	Pn	19 58 08.9	-2.9
BHHZ	Black Hill Sta	2.77	254	PN	Pn	19 58 12.1	-1.1
PNHZ	Pukenui	2.80	245	PN	Pn	19 58 11.9	-1.7
TSZ	Takapari Road	3.03	244	PN	Pn	19 58 14.6	-2.1
FWTZ	Far West T-bar	3.12	260	PN	Pn	19 58 18.1	0.0
BFZ	Birch Farm	3.15	232	PN	Pn	19 58 14.9	-3.4
MRZ	Mangatainoka R	3.57	237	PN	Pn	19 58 20.6	-3.4
HOWZ	Holdsworth Sta	3.73	234	PN	Pn	19 58 23.0	-3.4
CTZ	Chatham Island	5.75	151	ePN	Pn	19 58 51.9	-2.1
CTZ				SN	Sn	19 59 50.1	-8.7
THZ	Tophouse	5.86	237	SN	Sn	19 59 58.1	-3.7
LTZ	Lake Taylor	6.79	232	ePN	Pn	19 59 04.4	-4.0
MQZ	McQueen's Vall	7.14	224	SN	Sn	20 00 22.4	-10

ISK 12 19:58:36.4, 39.08N×25.20E, h17km, MD3.0
THE 12 19:58:39.7, 38.85N×26.02E, h4km±18km, ML1.6/3, Error ellipse: s-maj=18.5km s-min=0.4km az=285.0
DDA 12 19:58:39.4, 38.86N×25.99E, h7km, MD2.8
CSEM 12 19:58:39.5±0.4, 38.87N×25.99E, h15km, ML1.6/3, Error ellipse: s-maj=14.9km s-min=5.7km az=89.0
ISCJB 12 19:58:39.6±0.6, 38.87N±0.02×26.00E±0.08, h12km±4km, Error ellipse: s-maj=10.7km s-min=3.8km az=178.6

ISC 12 19:58:39.2±1.1, 38.88N±0.02×26.00E±0.05, h14km±9km, n23, σ0°90/40, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.35	342	P	Pb	19 58 47.3	0.0
SIGR				S	Sb	19 58 52.8	+0.1
SIGR	SIGRI	0.35	342	P	Pb	19 58 47.3	0.0
SIGR				S	Sb	19 58 52.8	+0.1
PRK	Paraskevi	0.42	30	P	Pg	19 58 48.3	+0.6
PRK				S	Sb	19 58 54.8	0.0
PRK	Paraskevi	0.42	30	P	Pg	19 58 48.3	+0.6
PRK				S	Sb	19 58 54.8	0.0
CHOS	Chios island	0.49	175	P	Pg	19 58 48.9	-0.1
CHOS				S	Sg	19 58 55.4	-0.2
CHOS	Chios island	0.49	175	P	Pg	19 58 48.9	-0.1
CHOS				S	Sg	19 58 55.4	-0.2
URLA	Izmir	0.70	138	iP	Pg	19 58 52.5	-0.3
URLA				iS	Sb	19 59 02.5	-0.2
URLA	Izmir	0.70	138	iP	Pg	19 58 52.5	-0.3
URLA				iS	Sb	19 59 02.5	-0.2
BOZC	Bozcaada	0.96	3	iP	Pb	19 58 58.1	+0.4
BOZC				iS	Sn	19 59 12.2	+0.3
EZN	Ezine	0.98	15	ePN	Pg	19 58 58.3	+0.2
EZN				eSN	Sn	19 59 14.0	+1.7
EZN	Ezine	0.98	15	ePN	Pg	19 58 58.3	+0.2
EZN				eSn	Sn	19 59 14.0	+1.7
GELI	Tayfur-Gelibol	1.56	13	ePN	Pn	19 59 04.8	-1.8
GELI				eSN	Sn	19 59 26.6	0.0
GELI	Tayfur-Gelibol	1.56	13	ePn	Pn	19 59 04.8	-1.8
GELI				eSn	Sn	19 59 26.7	0.0
GONE	Gonen-Balikesi	1.75	48	ePN	Pg	19 59 12.5	-0.3
GONE	Gonen-Balikesi	1.75	48	ePn	Pg	19 59 12.5	-0.3
KRBG	Karabiga-Canak	1.81	33	ePN	Pb	19 59 11.8	-0.4
KRBG	Karabiga-Canak	1.81	33	ePn	Pb	19 59 11.9	-0.4
ERIK	Erikli-Kesan	1.83	12	ePN	Pn	19 59 08.8	-1.5
ERIK				eSN	Sn	19 59 32.2	-1.1
ERIK	Erikli-Kesan	1.83	12	ePn	Pn	19 59 08.8	-1.5
ERIK				eSn	Sn	19 59 32.2	-1.1
APE	Apeiranthos	1.84	192	ePN	Pn	19 59 11.1	+0.6
APE				eSN	Sb	19 59 35.8	+0.1
APE	Apeiranthos	1.84	192	ePn	Pn	19 59 11.1	+0.6
APE				eSn	Sb	19 59 35.8	+0.1
MRMT	Marmara Adasi	2.12	35	ePN	Pn	19 59 16.2	+1.9
MRMT	Marmara Adasi	2.12	35	ePn	Pn	19 59 16.2	+1.9

IDC 12 20:05:57.9±2.0, 6.71S×128.39E, h0km, mb3.6/1, mb1 3.5/4, mb1mx3.4/20, mbtmp3.4/4, ML3.2/2, Error ellipse: s-maj=82.6km s-min=27.2km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.64	193	Pn	Pn	20 08 44.6	-0.8
	0.2nm,0.3s,baz=20,slow=14,SNR=12						
FITZ				Sn	Sn	20 10 37.2	-19
	baz=6.0,slow=19						
WRA	Warramunga Arr	14.37	157	Pn	Pn	20 09 22.6	-0.2
	0.1nm,0.3s,baz=336,slow=14,SNR=7.2						
WRA				Sn	Sn	20 11 46.2	-17
	baz=334,slow=22						
ASAR	Alice Springs	17.68	163	P	P	20 10 06.3	-0.4
	0.1nm,0.3s,baz=338,slow=11,SNR=6.7						
MKAR	Makanchi Array	67.11	327	P	P	20 16 53.5	0.0
	0.3nm,0.5s,baz=124,slow=7.3,SNR=8.0						

IDC 12 20:14:42.4±1.8, 3.04N×128.74E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/23, mbtmp3.7/5, MS3.1/1, Ms1 3.1/1, ms1mx2.2/28, Error ellipse: s-maj=103.1km s-min=22.0km az=70.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.23	188	P	P	20 19 31.0	+0.9
	2.4nm,1.0s,baz=8.5,slow=13,SNR=3.8						
WRA	Warramunga Arr	23.49	167	P	P	20 19 54.3	+0.2
	0.8nm,0.3s,baz=343,slow=10,SNR=34						
ASAR	Alice Springs	27.02	170	P	P	20 20 26.2	-0.2
	0.7nm,0.5s,baz=352,slow=7.8,SNR=26						
PSI	Prapat	29.77	270	LR	LR	20 34 15.5	
	comp=Z,36nm,19.6s,baz=220,slow=39						
STKA	Stephens Creek	36.81	162	P	P	20 21 51.3	-0.9
	0.8nm,0.7s,baz=328,slow=8.1,SNR=6.2						
MKAR	Makanchi Array	59.27	325	P	P	20 24 46.0	+0.1
	0.5nm,0.5s,baz=119,slow=7.9,SNR=9.7						

IDC 12 20:22:21.9±2.1, 4.17N×127.70E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.3/24, mbtmp3.3/4, Error ellipse: s-maj=113.5km s-min=24.3km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	22.22	185	P	P	20 27 21.1	+0.8
	1.6nm,0.8s,baz=29,slow=7.4,SNR=11						
WRA	Warramunga Arr	24.83	165	P	P	20 27 44.4	-1.8
	0.8nm,0.7s,baz=343,slow=9.9,SNR=6.9						
ASAR	Alice Springs	28.32	168	P	P	20 28 18.7	+1.2
	0.2nm,0.6s,baz=344,slow=11,SNR=4.0						
MKAR	Makanchi Array	57.76	325	P	P	20 32 14.8	0.0
	0.1nm,0.5s,baz=127,slow=6.0,SNR=3.3						

IDC 12 20:26:54.5±9.6, 53.56S×132.24W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.7/14, mbtmp3.9/2, MS3.7/3, Ms1 3.7/3, ms1mx3.3/17, Error ellipse: s-maj=866.4km s-min=159.9km az=151.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	South Pole Qui	36.62	180	LR	LR	20 46 05.5	
	comp=Z,42nm,20.8s,baz=291,slow=31						
PPT	Papeete	38.37	333	LR	LR	20 46 57.1	
	comp=Z,192nm,18.9s,baz=2.3,slow=31						
STKA	Stephens Creek	62.89	252	LR	LR	21 00 48.0	
	comp=Z,84nm,19.6s,baz=27,slow=32						
ASAR	Alice Springs	73.53	253	P	P	20 38 29.1	-0.1
	1.1nm,0.8s,baz=142,slow=6.8,SNR=11						
WRA	Warramunga Arr	76.19	255	P	P	20 38 44.9	+0.2
	0.7nm,0.5s,baz=140,slow=5.6,SNR=17						
SONM	Songino Array	143.35	285	PKP	PKPdf	20 46 28.9	-1.1
	1.1nm,0.8s,baz=141,slow=3.4,SNR=9.2						

WEL 12 20:41:57.2±0.2, 37.02S×176.71E, h211km±2km, ML4.2/16, 1C-1D, Error ellipse: s-maj=4.1km s-min=4.0km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	1.28	166	PN	Pn	20 42 30.2	+0.2
URZ				SN	S	20 42 55.5	-0.1
MXZ	Matakaoa Point	1.39	113	PN	Pn	20 42 31.3	+0.4
MXZ				SN	S	20 42 57.4	+0.4
MWZ	Matawai	1.47	154	PN	Pn	20 42 31.8	+0.2
MWZ				SN	S	20 42 58.2	-0.1
PUZ	Puketiti	1.62	131	⇓PN	Pn	20 42 32.8	-0.1
CNGZ	Carnagh Statio	1.89	141	PN	Pn	20 42 35.7	+0.4
RAHZ	Arahi	1.92	171	PN	Pn	20 42 36.1	+0.3
RAHZ				SN	S	20 43 05.4	-0.2
NMHZ	Naumai	2.08	178	PN	Pn	20 42 37.7	+0.4
NMHZ				SN	S	20 43 09.8	+1.2
KNZ	Kokohu	2.14	159	PN	Pn	20 42 37.2	-0.7
BKZ	Black Stump Fm	2.15	184	⇑PN	Pn	20 42 37.5	-0.7
BKZ				SN	S	20 43 08.4	-1.4
FWVZ	Far West T-bar	2.41	202	PN	Pn	20 42 41.2	+0.1
FWVZ				SN	S	20 43 14.9	-0.2
MCHZ	McNeill Hill	2.42	180	PN	Pn	20 42 40.8	-0.1
TRVZ	Turoa	2.45	201	PN	Pn	20 42 41.2	-0.3
MOVZ	Moawhango	2.50	197	PN	Pn	20 42 41.3	-0.5
BHHZ	Black Hill Sta	2.52	191	PN	Pn	20 42 41.1	-0.9
CKHZ	Cape Kidnapper	2.65	174	PN	Pn	20 42 42.9	-0.5
KAHZ	Kahuranaki	2.77	177	PN	Pn	20 42 44.1	-0.8
PXZ	Pawanui	3.01	178	PN	Pn	20 42 46.0	-1.4
WPHZ	Waipukurau	3.05	184	ePN	Pn	20 42 46.7	-1.2
TSZ	Takapari Road	3.09	191	PN	Pn	20 42 47.0	-1.4
PRHZ	Porangahau	3.24	181	PN	Pn	20 42 48.3	-1.9
BFZ	Birch Farm	3.67	185	PN	Pn	20 42 53.4	-2.0
MRZ	Mangatainoka R	3.74	193	PN	Pn	20 42 53.2	-3.0
TIWZ	Tintock	3.81	188	PN	Pn	20 42 55.2	-1.8
OGWZ	Otaki Gorge	3.98	197	PN	Pn	20 42 56.5	-2.5
HOWZ	Holdsworth Sta	3.98	193	PN	Pn	20 42 56.2	-2.9
KIW	Kapiti Island	4.08	199	PN	Pn	20 42 57.5	-2.9
CAW	Cannon Point	4.28	197	PN	Pn	20 42 59.7	-3.1
DUWZ	D'Urville Isla	4.36	209	PN	Pn	20 43 01.1	-2.7
MSWZ	Moikau Station	4.53	194	PN	Pn	20 43 02.5	-3.5
TCW	Tory Channel	4.59	204	PN	Pn	20 43 03.6	-3.1
PLWZ	Palliser	4.68	193	PN	Pn	20 43 04.1	-3.7
TUWZ	Tuamarina	4.90	205	PN	Pn	20 43 07.2	-3.3
NNZ	Nelson	4.92	211	PN	Pn	20 43 07.5	-3.4
QRZ	Quartz Range	5.00	219	PN	Pn	20 43 08.6	-3.3
BSWZ	Blackbirch Sta	5.17	204	PN	Pn	20 43 11.0	-3.0
THZ	Tophouse	5.58	211	PN	Pn	20 43 16.2	-3.1
KHZ	Kahutara	5.92	203	PN	Pn	20 43 19.6	-3.8
LTZ	Lake Taylor	6.69	209	PN	Pn	20 43 28.9	-4.5
MQZ	McQueen's Vall	7.36	204	SN	S	20 44 56.5	-9.1
WVZ	Waitaha Valley	7.58	215	PN	Pn	20 43 40.4	-4.5

ISCJB 12 20:42:45.8±0.9, 36.85N±0.04×70.3E±0.1, h36km, Error ellipse: s-maj=17.0km s-min=5.3km az=176.6
NNC 12 20:42:48.4±11.0, 37.10N×70.27E, h6km±67km, mb3.7, mpv3.5, Error ellipse: s-maj=79.7km s-min=62.2km az=179.0

ISC 12 20:42:48.0±1.1, 36.82N±0.06×70.4E±0.1, h36km, n19, σ1°15/15, 5C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.24	157	⇑P	Pn	20 43 37.6	+1.2
CEP				S	Sn	20 44 14.0	+0.2
THW	Thamme Wali	4.17	164	P	Pn	20 43 50.1	+1.0
SARP	Sargodha	5.24	158	P	Pn	20 44 02.4	-1.4
AML	Almayashu	5.89	25	P	Pn	20 44 12.9	-0.1
	SNR=33						
KK31	Karatay Array	6.28	1	Pn	Pn	20 44 19.4	+1.4
	0.7nm,0.2s,baz=172,slow=11,SNR=121						
KK31				⇓Sn	Sn	20 45 27.6	-0.9
	3.4nm,0.4s,baz=188,slow=24,SNR=5.8						
KK31				⇑Lg	Lg	20 45 58.2	
	3.6nm,0.4s,baz=180,slow=26,SNR=5.4						
EKS2	Erkin-Say	6.40	23	P	Pn	20 44 20.4	+0.7
	SNR=15						
KZA	Kyzart	6.46	34	P	Pn	20 44 20.3	-0.7
	SNR=6.2						
AAK	Ala-Archa	6.62	27	P	Pn	20 44 22.5	-0.3
	SNR=10						
CHMS	Chumysh	7.03	27	P	Pn	20 44 27.6	-0.7
	SNR=6.0						
TKM2	Tokmak 2	7.30	32	⇑Pn	Pn	20 44 31.5	-0.7
	4.0nm,0.8s						
TKM2				⇓Sn	Sn	20 45 56.2	+2.3
	2.0nm,0.8s						
TKM2				⇑Lg	Lg	20 46 34.8	
	1.9nm,0.7s						
TKM2	Tokmak 2	7.30	32	P	Pn	20 44 31.3	-0.8
	SNR=7.9						
PYUN	Piuthan	13.73	126	eP	Pn	20 45 48.6	-12
	8.1nm,0.3s						
DANN	Dangsing	14.08	123	eP	Pn	20 45 55.1	-10
	6.5nm,0.3s						
AB31	Akbulak array	14.57	332	⇑P	Pn	20 46 10.6	-0.7
	0.3nm,0.5s,baz=79,slow=54,SNR=12						
KKN	Kakani	15.47	121	eP	Pn	20 46 12.8	-11
PKIN	Phulchoki	15.69	122	eP	Pn	20 46 16.3	-10
	3.2nm,0.3s						
PKI	Pulchoki	15.70	122	eP	Pn	20 46 16.4	-10
	4.0nm,0.4s						
RAMN	Ramite	16.91	121	eP	Pn	20 46 32.3	-10
TAPN	Taplejung	17.44	118	eP	Pn	20 46 40.0	-8.7

ISCJB 12 21:18:52.8±0.9, 36.42N±0.04×69.4E±0.1, h48km, Error ellipse: s-maj=14.7km s-min=5.4km az=169.9
NNC 12 21:19:00.7±4.5, 36.71N×69.54E, h157km±47km, mb2.9, mpv4.1, Error ellipse: s-maj=37.2km s-min=24.1km az=17.0

ISC 12 21:18:53.6±1.3, 36.40N±0.07×69.3E±0.1, h48km, n27, σ1°53/21, 5C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.34	140	⇑P	Pn	21 19 44.5	+1.1
CEP				S	Sn	21 20 21.0	-0.9
THW	Thamme Wali	4.12	150	P	Pn	21 19 54.4	+0.4
SARP	Sargodha	5.26	147	P	Pn	21 20 09.2	-0.5
AML	Almayashu	6.66	29	P	Pn	21 20 30.8	+1.7
	SNR=70						
KK31	Karatay Array	6.76	7	⇓Pn	Pn	21 20 33.7	+3.5
	5.0nm,0.5s,baz=197,slow=13,SNR=106						
KK31				⇑S	Sn	21 21 46.1	+0.4
	1.2nm,0.3s,baz=124,slow=11,SNR=5.5						
UCH	Uchtor	7.08	33	P	Pn	21 20 37.2	+2.2
	SNR=7.2						
EKS2	Erkin-Say	7.14	28	P	Pn	21 20 37.8	+2.3
	SNR=14						
KZA	Kyzart	7.30	37	P	Pn	21 20 38.6	+0.6
	SNR=11						
AAK	Ala-Archa	7.40	31	P	Pn	21 20 41.0	+1.8
	SNR=21						
KBK	Karagaybulak	7.61	33	P	Pn	21 20 44.1	+2.1
	SNR=7.3						
CHMS	Chumysh	7.81	31	P	Pn	21 20 45.9	+1.3
	SNR=13						
ULHL	Ulahol	7.93	40	P	Pn	21 20 46.9	+0.5
	SNR=6.0						
USP	Ospenovka	7.93	29	P	Pn	21 20 47.4	+1.1
	SNR=20						
TKM2	Tokmak 2	8.12	35	⇓P	Pn	21 20 49.6	+0.7
	7.4nm,0.5s						
TKM2				⇑S	Sn	21 22 18.7	-0.7
	4.0nm,0.8s						
TKM2	Tokmak 2	8.12	35	P	Pn	21 20 49.7	+0.8
	SNR=25						
MK31	Makanchi Array	14.20	39	⇓P	Pn	21 22 09.5	-2.2
	0.8nm,0.6s,baz=227,slow=15,SNR=20						
PYUN	Piuthan	14.22	122	eP	Pn	21 22 04.2	-8.1
	14nm,0.6s						
AB31	Akbulak array	14.55	335	⇑P	Pn	21 22 17.6	+1.2
	0.4nm,0.3s,baz=147,slow=12,SNR=29						
AB31				⇓S	Sn	21 24 53.5	-2.8
	2.5nm,0.5s,baz=158,slow=23,SNR=17						
DANN	Dangsing	14.60	119	eP	Pn	21 22 09.6	-7.9
	5.8nm,0.4s						
KOLN	Koldanda	14.84	121	eP	Pn	21 22 12.0	-8.6
	2.4nm,0.3s						
KKN	Kakani	16.01	118	eP	Pn	21 22 29.1	-6.6
	12nm,0.7s						
PKIN	Phulchoki	16.22	118	eP	Pn	21 22 30.5	-7.9
	4.7nm,0.4s						
VOSK	Vostochnaya	16.36	4	⇑P	Pn	21 22 35.3	-4.5
	1.6nm,0.9s						
GUN	Gumba	16.37	116	eP	Pn	21 22 34.2	-6.2
	9.3nm,0.5s						
ZRNK	Zerenda	16.55	359	⇓P	Pn	21 22 41.5	-0.6
	2.1nm,1.2s						
BVA0	Borovoye Array	16.64	2	⇓P	Pn	21 22 41.3	-2.0
	0.3nm,0.8s,baz=145,slow=23,SNR=4.0						
TAPN	Taplejung	18.02	115	eP	P	21 22 54.2	-6.6
	9.1nm,0.5s						

KRSC 12 21:56:30.5±1.1, 52.84N×158.80E, h120km±29km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PET	Petropavlovsk	0.20	334	eP	Pn	21 56 47.1	0.0
PET				iS	Sn	21 56 58.8	-0.8
UGLR	Uglovaya	0.37	2	eP	Pn	21 56 48.2	+0.3
UGLR				iS	Sn	21 57 01.4	+0.4
SMAR	Somma	0.42	0	eP	Pn	21 56 48.9	+0.6
SMAR				iS	Sn	21 57 02.0	+0.3
AVH	Avacha	0.43	355	eP	Pn	21 56 48.9	+0.8
AVH				iS	Sn	21 57 02.4	+1.0
SDLR	Sedlovina	0.44	7	eP	Pn	21 56 48.4	+0.1
SDLR				iS	Sn	21 57 01.6	-0.1
RUS	Russkaya	0.44	203	eP	Pn	21 56 48.3	+0.2
RUS				iS	Sn	21 57 01.2	-0.1
MTVR	Mutnovka	0.52	227	eP	Pn	21 56 49.5	+0.8
MTVR				iS	Sn	21 57 03.5	+1.0
GRL	Gorelyy	0.53	237	eP	Pn	21 56 49.4	+0.6
GRL				iS	Sn	21 57 03.9	+1.4
ASAK	Asacha	0.71	231	eP	Pn	21 56 50.9	+0.8
ASAK				iS	Sn	21 57 05.8	+1.0
SPN	Mys Shipunski	0.78	70	eP	Pn	21 56 51.3	+0.8
SPN				iS	Sn	21 57 06.7	+1.1
APC	Apacha	1.00	276	eP	Pn	21 56 52.7	+0.3
APC				iS	Sn	21 57 08.6	-0.5
GNL	Ganaly	1.00	329	eP	Pn	21 56 52.3	-0.3
GNL				iS	Sn	21 57 08.1	-1.3
MKZ	Mys Kozlova	2.45	44	eP	Pn	21 57 10.4	+0.9
MKZ				iS	Sn	21 57 39.9	+0.4
TUMR	Tumrok	2.57	17	eP	Pn	21 57 14.2	+2.9

ISK 12 22:35:01.6, 35.99N×29.16E, h20km, MD2.3
ISCJB 12 22:35:02.6±1.6, 35.94N±0.09×29.01E±0.06, h16km, Error ellipse: s-maj=13.2km s-min=7.3km az=5.2
CSEM 12 22:35:03.0±1.0, 35.99N×29.03E, h15km, MD2.8, Error ellipse: s-maj=20.6km s-min=10.8km az=7.0
DDA 12 22:35:06.8, 36.33N×29.07E, h7km, MD2.8

ISC 12 22:35:04.4±1.8, 36.09N±0.10×29.06E±0.06, h16km, n14, σ0°87/22, Turkey

| Code | Station Name | Δ° | AZ°

	11nm,0.2s							
TKM2	**Tokmak 2**	**0.89**	**339**	⇓P	**Pg**	**22**	**56**	**39.1 +0.2**
	31nm,0.2s,SNR=120							
TKM2				⇓S	**Sb**	**22**	**56**	**52.1 -0.1**
	62nm,0.1s							
AAK	**Ala-Archa**	**1.27**	**296**	⇑P	**Pg**	**22**	**56**	**45.9 -0.2**
	5.3nm,0.2s,SNR=15							
AAK				⇑S	**Sb**	**22**	**57**	**03.4 +0.5**
	29nm,0.2s							
CHMS	**Chumysh**	**1.31**	**314**	⇓P	**Pn**	**22**	**56**	**46.7 -0.1**
	3.7nm,0.1s,SNR=17							
CHMS				⇓S	**Sn**	**22**	**57**	**05.0 +0.2**
	21nm,0.2s							
KNDC	**Almaty**	**1.32**	**31**	⇑P	**Pn**	**22**	**56**	**46.3 -0.6**
	2.9nm,0.1s							
KNDC				⇑S	**Sn**	**22**	**57**	**04.1 -0.8**
	21nm,0.3s							
USP	**Ospenovka**	**1.63**	**317**	⇑P	**Pb**	**22**	**56**	**52.6 +0.3**
	14nm,0.2s,SNR=41							
AML	**Almayashu**	**1.75**	**272**	⇓P	**Pb**	**22**	**56**	**54.6 +0.2**
	4.5nm,0.2s,SNR=18							
AML				⇑S	**Sg**	**22**	**57**	**18.7 +0.9**
	18nm,0.2s							
KK31	**Karatay Array**	**4.20**	**286**	⇓Pg	**Pg**	**22**	**57**	**40.1 -2.1**
	0.2nm,0.3s,baz=104,slow=16,SNR=14							
KK31				⇓Lg	Lg	22	58	34.9
	0.7nm,0.4s,baz=100,slow=28,SNR=6.1							
MK31	**Makanchi Array**	**6.49**	**41**	⇓Pn	**Pn**	**22**	**57**	**59.2 +1.3**
	1.0nm,0.9s,baz=178,slow=22,SNR=4.6							
MK31				⇑Lg	Lg	22	59	47.1
	0.4nm,0.6s							

IDC 12 23:14:36.6±14.0, 11°49S×166°19E, h158km±151km, mb3.3/5, mb1 3.7/6, mb1mx3.4/19, mbtmp3.5/6, ML4.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.7/19, Error ellipse: s-maj=110.4km s-min=28.6km az=158.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.47**	**288**	LR	LR	23 18 34.7	
	comp=Z,118nm,18.4s,baz=146,slow=37						
DZM	**Mont Dzumac**	**10.53**	**179**	P	Pn	23 17 04.2	+0.6
	3.3nm,0.3s,baz=14,slow=21,SNR=17						
DZM				S	Sn	23 19 00.2	-0.2
	1.8nm,0.3s,baz=356,slow=21,SNR=5.5						
WRA	**Warramunga Arr**	**31.74**	**251**	P	P	23 20 45.8	-0.3
	0.8nm,0.5s,baz=81,slow=9.1,SNR=4.4						
ASAR	**Alice Springs**	**32.99**	**244**	P	P	23 20 56.5	-0.3
	0.5nm,0.7s,baz=66,slow=9.6,SNR=6.1						
ILAR	**Eielson Array**	**83.79**	**18**	P	P	23 26 48.4	+0.5
	0.3nm,0.6s,baz=240,slow=5.7,SNR=8.7						
MKAR	**Makanchi Array**	**94.14**	**317**	P	P	23 27 38.2	+0.8
	0.6nm,0.7s,baz=102,slow=6.0,SNR=7.6						
YKA	**Yellowknife Ar**	**95.16**	**27**	P	P	23 27 39.6	-2.1
	0.1nm,0.6s,baz=254,slow=4.6,SNR=3.2						

IDC 12 23:20:10.8±6.1, 35°.79S×178°.18E, h218km±37km, mb3.8/3, mb1 3.9/4, mb1mx3.5/16, mbtmp3.7/4, Error ellipse: s-maj=83.5km s-min=30.6km az=43.0
WEL 12 23:20:14.2±0.4, 35°.90S×177°.83E, h218km±4km, ML4.2/12, Error ellipse: s-maj=7.4km s-min=5.5km az=90.0
ISC 12 23:20:17.0±1.4, 36°.6S±0°.1×178°.0E±0°.1, h280km, n51, σ1°.9 40/54, mb3.9/3, 1C-1D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.01**	**165**	PN	Pn	23 20 51.3	-3.9
MXZ				SN	S	**23 21 19.9**	**-5.6**
PUZ	**Puketiti**	**1.50**	**171**	PN	**Pn**	**23 20 55.9**	**-2.2**
PUZ				SN	**S**	**23 21 28.0**	**-2.8**
MWZ	**Matawai**	**1.77**	**191**	PN	**Pn**	**23 20 59.0**	**-1.2**
URZ	**Urewera**	**1.80**	**202**	PN	**Pn**	**23 20 58.6**	**-1.7**
URZ				SN	**S**	**23 21 32.8**	**-1.9**
URZ	**Urewera**	**1.80**	**202**	P	**Pn**	**23 20 58.4**	**-1.9**
	5.0nm,0.3s,baz=77,slow=1.4,SNR=107						
URZ				S	**S**	**23 21 33.2**	**-1.5**
	18nm,0.3s,baz=172,slow=22,SNR=38						
CNGZ	**Carnagh Statio**	**1.90**	**174**	PN	**Pn**	**23 21 00.7**	**-0.4**
PRGZ	**Paritu Road**	**2.33**	**182**	PN	**Pn**	**23 21 05.1**	**+0.2**
RAHZ	**Arahi**	**2.42**	**197**	PN	**Pn**	**23 21 05.5**	**-0.3**
KNZ	**Kokohu**	**2.44**	**185**	PN	**Pn**	**23 21 05.7**	**0.0**
MHGZ	**Mahia Peninsul**	**2.56**	**181**	PN	**Pn**	**23 21 07.8**	**+0.9**
NMHZ	**Naumai**	**2.67**	**200**	PN	**Pn**	**23 21 08.6**	**+0.6**
BKZ	**Black Stump Fm**	**2.82**	**204**	PN	**Pn**	**23 21 09.3**	**-0.3**
MCHZ	**McNeill Hill**	**3.02**	**199**	PN	**Pn**	**23 21 12.1**	**+0.6**
CKHZ	**Cape Kidnapper**	**3.14**	**193**	PN	**Pn**	**23 21 13.9**	**+1.1**
BHHZ	**Black Hill Sta**	**3.26**	**207**	PN	**Pn**	**23 21 13.7**	**-0.4**
FWVZ	**Far West T-bar**	**3.27**	**215**	PN	**Pn**	**23 21 14.4**	**0.0**
KAHZ	**Kahuranaki**	**3.31**	**195**	PN	**Pn**	**23 21 15.5**	**+0.9**
MOVZ	**Moawhango**	**3.31**	**211**	PN	**Pn**	**23 21 14.2**	**-0.5**
PXZ	**Pawanui**	**3.54**	**194**	PN	**Pn**	**23 21 17.2**	**+0.2**
PNHZ	**Pukenui**	**3.60**	**202**	PN	**Pn**	**23 21 17.5**	**-0.2**
WPHZ	**Waipukurau**	**3.67**	**199**	PN	**Pn**	**23 21 18.8**	**+0.3**
TSZ	**Takapari Road**	**3.81**	**204**	⇑PN	**Pn**	**23 21 19.6**	**-0.4**
POWZ	**Post Office Ro**	**4.17**	**204**	PN	**Pn**	**23 21 24.0**	**-0.1**
BFZ	**Birch Farm**	**4.30**	**198**	PN	**Pn**	**23 21 25.9**	**+0.4**
MRZ	**Mangatainoka R**	**4.47**	**204**	PN	**Pn**	**23 21 27.1**	**-0.5**
TIWZ	**Tintock**	**4.49**	**201**	PN	**Pn**	**23 21 27.8**	**+0.1**
HOWZ	**Holdsworth Sta**	**4.71**	**203**	⇓PN	**Pn**	**23 21 29.7**	**-0.6**
OGWZ	**Otaki Gorge**	**4.75**	**207**	PN	**Pn**	**23 21 30.3**	**-0.5**
TMWZ	**Te Maipa**	**4.79**	**199**	PN	**Pn**	**23 21 31.4**	**+0.1**
KIW	**Kapiti Island**	**4.89**	**208**	PN	**Pn**	**23 21 31.8**	**-0.5**
MTW	**Mount Morrison**	**4.95**	**202**	PN	**Pn**	**23 21 32.6**	**-0.5**
CAW	**Cannon Point**	**5.05**	**206**	PN	**Pn**	**23 21 33.5**	**-0.7**
TRWZ	**Traveller**	**5.12**	**200**	PN	**Pn**	**23 21 35.3**	**+0.2**
DUWZ	**D'Urville Isla**	**5.26**	**216**	PN	**Pn**	**23 21 36.3**	**-0.5**
SNZO	**South Karori**	**5.35**	**207**	PN	**Pn**	**23 21 37.1**	**-0.8**
BHW	**Baring Head**	**5.38**	**206**	PN	**Pn**	**23 21 37.3**	**-0.9**
PLWZ	**Palliser**	**5.40**	**202**	PN	**Pn**	**23 21 37.9**	**-0.6**
TCW	**Tory Channel**	**5.44**	**211**	PN	**Pn**	**23 21 37.7**	**-1.2**
TUWZ	**Tuamarina**	**5.76**	**212**	PN	**Pn**	**23 21 41.8**	**-1.0**
NNZ	**Nelson**	**5.84**	**216**	*e*PN	**Pn**	**23 21 42.6**	**-1.1**
QRZ	**Quartz Range**	**6.00**	**224**	PN	**Pn**	**23 21 43.8**	**-1.9**
THZ	**Tophouse**	**6.49**	**216**	PN	**Pn**	**23 21 51.4**	**-0.3**
KHZ	**Kahutara**	**6.75**	**209**	PN	**Pn**	**23 21 54.3**	**-0.5**
LTZ	**Lake Taylor**	**7.58**	**214**	PN	**Pn**	**23 22 04.9**	**-0.3**
MQZ	**McQueen's Vall**	**8.19**	**208**	PN	**Pn**	**23 22 12.0**	**-0.6**
FOZ	**Fox Glacier**	**9.42**	**228**	PN	**Pn**	**23 22 26.6**	**-1.3**
ODZ	**Otahua Downs**	**10.10**	**211**	PN	**Pn**	**23 22 37.7**	**+1.3**
STKA	**Stephens Creek**	**30.32**	**268**	P	**P**	**23 26 05.5**	**+2.6**
	2.9nm,0.9s,baz=136,slow=11,SNR=3.4						
ASAR	**Alice Springs**	**39.90**	**276**	P	**P**	**23 27 24.3**	**-0.1**
	2.3nm,0.4s,baz=116,slow=7.8,SNR=33						
WRA	**Warramunga Arr**	**41.47**	**281**	P	**P**	**23 27 36.3**	**-0.9**
	3.4nm,0.4s,baz=119,slow=7.8,SNR=18						
TORD	**Torodi Ar. Bea**	**156.42**	**189**	PKPab	**PKPab**	**23 40 12.4**	**+3.8**
	0.2nm,0.4s,baz=163,slow=4.1,SNR=5.4						

IDC 12 23:21:15.2±0.9, 2°.39N×128°.69E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.8/22, mbtmp4.0/7, MS2.8/1, Ms1 2.8/1, ms1mx2.0/33, Error ellipse: s-maj=93.7km s-min=16.0km az=73.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.88**	**166**	P	P	23 26 21.0	+0.4
	1.6nm,0.5s,baz=344,slow=10,SNR=7.1						
ASAR	**Alice Springs**	**26.39**	**169**	P	P	23 26 53.3	-0.3
	0.7nm,0.5s,baz=356,slow=8.6,SNR=15						
KSRS	**Korea Array**	**34.90**	**359**	P	P	23 28 08.4	-0.1
	0.9nm,0.4s,baz=177,slow=8.6,SNR=3.9						
KSRS				LR	LR	23 41 43.6	
	comp=Z,16nm,20.8s,baz=30,slow=35						
STKA	**Stephens Creek**	**36.22**	**161**	P	P	23 28 19.9	-0.1
	1.4nm,0.5s,baz=336,slow=10.0,SNR=7.2						
SONM	**Songino Array**	**49.20**	**340**	P	P	23 30 05.5	+0.1
	0.9nm,0.7s,baz=151,slow=8.5,SNR=7.6						
MKAR	**Makanchi Array**	**59.77**	**325**	P	P	23 31 22.5	+0.3
	2.6nm,0.5s,baz=118,slow=8.4,SNR=46						
ZALV	**Zalesovo Beam**	**62.67**	**333**	P	P	23 31 40.8	-0.8
	0.7nm,0.5s,baz=134,slow=6.6,SNR=5.0						

DDA 12 23:48:17.2, 39°.45N×42°.11E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUTA	**Tutak**	**0.55**	**95**	*i* P	Pg	23 48 27.8	-0.3
TUTA				*i* S	Sn	23 48 40.5	-0.9
TATV	**Tatvan**	**0.95**	**173**	*i* P	Pg	23 48 34.9	-0.8
TATV				*i* S	Sg	23 48 45.7	-2.5
BEST	**Besiri**	**1.69**	**203**	*i* P	Pb	23 48 48.3	-0.5
BEST				*i* S	Sn	23 49 09.3	0.0

CSEM 13 00:25:05.9±0.5, 44°.88N×16°.03E, h0km±3km, ML3.0/4, Error ellipse: s-maj=13.2km s-min=5.1km az=55.0
VIE 13 00:25:09.8±0.6, 45°.00N×15°.80E, h10km±1km, mb1.7/2, ML2.0/2, Error ellipse: s-maj=3.3km s-min=3.2km az=51.0 58 km SSE of Karlovac
ISC 13 00:25:06.4±1.5, 44°.85N±0°.05×15°.91E±0°.07, h4km±12km, n14, σ0°.64/30, 4C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.80**	**325**	*i* Pg	**Pg**	**00 25 21.6**	**-0.2**
BOJS				*i* Sg	**Sb**	**00 25 33.3**	**-0.8**
BOJS							
	comp=Z,14nm,0.1s						
BOJS	**Bojanci**	**0.80**	**325**	*i* Pg	**Pg**	**00 25 21.6**	**-0.2**
BOJS				*i* Sg	**Sb**	**00 25 33.3**	**-0.8**
	comp=Z,14nm,0.1s						
GCIS	**Gornji Cirnik**	**1.04**	**349**	*i* Pg	**Pb**	**00 25 27.1**	**+0.2**
GCIS				*i* Sg	**Sn**	**00 25 43.9**	**+1.3**
GCIS							
	comp=Z,10.0nm,0.2s						
GCIS	**Gornji Cirnik**	**1.04**	**349**	*i* Pn	**Pb**	**00 25 27.1**	**+0.2**
GCIS				*i* Sn	**Sn**	**00 25 43.9**	**+1.3**
	comp=Z,10.0nm,0.2s						
SKDS	**Skadanscina**	**1.51**	**298**	*i* Pn	**Pn**	**00 25 34.5**	**+0.3**
SKDS				*i* Sn	**Sg**	**00 25 55.7**	**+0.9**
SKDS							
	comp=Z,15nm,0.2s						
SKDS	**Skadanscina**	**1.51**	**298**	*i* Pn	**Pn**	**00 25 34.5**	**+0.3**
SKDS				*i* Sn	**Sg**	**00 25 55.7**	**+0.9**
	comp=Z,15nm,0.2s						
VOY	**Vojsko**	**1.84**	**311**	*e*Pn	**Pb**	**00 25 40.6**	**-0.1**
VOY				*e*Sn	**Sg**	**00 26 05.8**	**+0.1**
VOY	**Vojsko**	**1.84**	**311**	*e*Pn	**Pb**	**00 25 40.6**	**-0.1**
VOY				*e*Sn	**Sg**	**00 26 05.8**	**+0.1**
OBKA	**Obir**	**1.91**	**331**	⇑*i*Pg	**Pg**	**00 25 43.0**	**-0.1**
OBKA				⇑*i*Sn	**Sn**	**00 26 03.7**	**-0.7**
OBKA				⇑*i*Sg	**Sg**	**00 26 07.6**	**-0.3**
	comp=Z,9.1nm,0.3s						
OBKA	**Obir**	**1.91**	**331**	Pg	**Pg**	**00 25 43.0**	**-0.1**
OBKA				Sn	**Sn**	**00 26 03.7**	**-0.7**
OBKA				Sg	**Sg**	**00 26 07.6**	**-0.3**
	comp=Z,9.1nm,0.3s						
SOKA	**Soboth**	**1.93**	**342**	⇓*i*Pn	**Pn**	**00 25 40.5**	**+0.5**
SOKA				⇑*i*Pg	**Pg**	**00 25 43.4**	**0.0**
SOKA				⇓*i*Sn	**Sn**	**00 26 03.7**	**-1.0**
SOKA	**Soboth**	**1.93**	**342**	Pn	**Pn**	**00 25 40.5**	**+0.5**
STON	**Ston**	**2.37**	**146**	*e*Pn	**Pn**	**00 25 45.4**	**-0.6**
STON				Sn	**Sn**	**00 26 16.1**	**+0.8**
STON	**Ston**	**2.37**	**146**	*e*Pn	**Pn**	**00 25 45.3**	**-0.6**
STON				Sn	**Sn**	**00 26 16.1**	**+0.8**

ISK 13 00:26:08.2, 35°.97N×29°.00E, h8km, MD2.7
DDA 13 00:26:09.8, 35°.98N×28°.87E, h7km, MD2.8
CSEM 13 00:26:09.0±0.9, 35°.93N×28°.88E, h8km, MD2.8, Error ellipse: s-maj=18.6km s-min=10.9km az=179.0
ISC 13 00:26:09.7±2.0, 35°.98N±0°.10×28°.90E±0°.05, h16km, n16, σ0°.82/24, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.62**	**65**	*i* P	**Pb**	**00 26 22.6**	**+0.3**
AKAS				*i* S	**Sn**	**00 26 33.1**	**-0.7**
AKAS	**Kas**	**0.62**	**65**	*i* P	**Pb**	**00 26 22.6**	**+0.3**
AKAS				*i* S	**Sn**	**00 26 33.1**	**-0.7**
FETY	**Fethiye**	**0.67**	**12**	*e*PG	**Pb**	**00 26 21.6**	**-1.5**
FETY				*e*SG	**Sg**	**00 26 31.4**	**-0.5**
FETY	**Fethiye**	**0.67**	**12**	*e*Pg	**Pb**	**00 26 21.6**	**-1.5**
FETY				*e*Sg	**Sg**	**00 26 31.4**	**-0.5**
TURN	**Turunc**	**0.93**	**345**	*i* P	**Pg**	**00 26 27.8**	**+0.1**
TURN				*i* S	**Sn**	**00 26 42.4**	**+1.4**
TURN	**Turunc**	**0.93**	**345**	*i* P	**Pg**	**00 26 27.8**	**+0.1**
TURN				*i* S	**Sn**	**00 26 42.4**	**+1.4**
YER	**Yerkesik**	**1.26**	**337**	*e*PN	**Pb**	**00 26 33.2**	**+0.1**
YER	**Yerkesik**	**1.26**	**337**	*e*Pn	**Pb**	**00 26 33.2**	**+0.1**
GLHS	**Glhisar (BURDU**	**1.27**	**22**	*e*PN	**Pn**	**00 26 32.6**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.27**	**22**	*e*Pn	**Pn**	**00 26 32.6**	**-0.3**
GOLH	**Golhisar**	**1.36**	**23**	*i* P	**Pn**	**00 26 34.4**	**+0.2**
GOLH				*i* S	**Sg**	**00 26 54.9**	**+1.1**
GOLH	**Golhisar**	**1.36**	**23**	*i* P	**Pn**	**00 26 34.4**	**+0.2**
GOLH				*i* S	**Sg**	**00 26 54.9**	**+1.1**
MLSB	**Milas**	**1.60**	**326**	*e*PN	**Pb**	**00 26 38.2**	**-0.7**
MLSB	**Milas**	**1.60**	**326**	*e*Pn	**Pb**	**00 26 38.2**	**-0.7**
BODT	**Bodrum**	**1.68**	**311**	*e*PN	**Pb**	**00 26 39.6**	**-0.6**
BODT	**Bodrum**	**1.68**	**311**	*e*Pn	**Pb**	**00 26 39.7**	**-0.6**

DDA 13 00:29:56.9, 38°.78N×26°.35E, h37km, MD2.9
CSEM 13 00:29:57.8±0.3, 38°.79N×26°.29E, h2km, MD2.9, Error ellipse: s-maj=9.0km s-min=5.1km az=79.0
ISCJB 13 00:29:57.8±0.7, 38°.78N±0°.02×26°.32E±0°.04, h6km±5km, Error ellipse: s-maj=5.9km s-min=3.4km az=170.1
ISK 13 00:29:58.3, 38°.81N×26°.33E, h5km, MD3.2
ATH 13 00:29:58.2, 38°.79N×26°.19E, h26km±2km, MD2.9/3
ISC 13 00:29:57.3±1.1, 38°.80N±0°.02×26°.35E±0°.03, h7km±10km, n54, σ1°.04/76, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.45**	**353**	*e*PB	**Pb**	**00 30 07.4**	**-0.2**
PRK				*e*SB	**Sb**	**00 30 15.2**	**+0.7**
CHOS	**Chios island**	**0.47**	**209**	*e*PB	**Pb**	**00 30 07.3**	**-1.0**
CHOS				*e*SB	**Sb**	**00 30 14.0**	**-1.0**
CHOS	**Chios island**	**0.47**	**209**	*e*Pb	**Pb**	**00 30 07.3**	**-0.6**
CHOS				*e*Sb	**Sb**	**00 30 14.0**	**-1.0**
URLA	**Izmir**	**0.48**	**156**	*i* P	**Pg**	**00 30 06.8**	**+0.3**
URLA				*i* S	**Sg**	**00 30 13.4**	**+0.7**
URLA	**Izmir**	**0.48**	**156**	*i* P	**Pg**	**00 30 06.8**	**+0.3**
URLA				*i* S	**Sg**	**00 30 13.4**	**+0.7**
AYVA	**Ayvalik**	**0.58**	**27**	*i* P	**Pb**	**00 30 09.2**	**-0.5**
AYVA				*i* S	**Sb**	**00 30 18.7**	**+0.6**
AYVA	**Ayvalik**	**0.58**	**27**	*i* P	**Pb**	**00 30 09.2**	**-0.5**
AYVA				*i* S	**Sb**	**00 30 18.7**	**+0.6**
BLCB	**Balcova**	**0.68**	**127**	*e*PG	**Pb**	**00 30 12.4**	**+1.0**
BLCB	**Balcova**	**0.68**	**127**	*e*Pg	**Pb**	**00 30 12.4**	**+1.0**
BOZC	**Bozcaada**	**1.07**	**348**	*i* P	**Pb**	**00 30 18.2**	**+0.1**
BOZC				*i* S	**Sb**	**00 30 32.5**	**+0.3**
AKS	**Akhisar**	**1.15**	**85**	*e*PN	**Pn**	**00 30 21.0**	**+1.3**
AKS	**Akhisar**	**1.15**	**85**	*e*Pn	**Pn**	**00 30 21.0**	**+1.3**
AKHS	**Akhisar**	**1.15**	**85**	*i* P	**Pn**	**00 30 19.9**	**+0.2**
AKHS				*i* S	**Sg**	**00 30 34.6**	**+0.4**
AKHS	**Akhisar**	**1.15**	**85**	*i* P	**Pn**	**00 30 19.9**	**+0.2**
AKHS				*i* S	**Sg**	**00 30 34.6**	**+0.4**
GCAM	**G?zelcaml?**	**1.30**	**147**	*i* P	**Pg**	**00 30 21.5**	**-0.6**
GCAM				*i* S	**Sb**	**00 30 39.0**	**+0.2**
GCAM	**G?zelcaml?**	**1.30**	**147**	*i* P	**Pg**	**00 30 21.5**	**-0.6**
GCAM				*i* S	**Sb**	**00 30 39.0**	**+0.2**
BALY	**Balya**	**1.36**	**46**	*i* P	**Pn**	**00 30 22.1**	**-0.7**
BALY				*i* S	**Sg**	**00 30 39.0**	**-2.2**
BALY	**Balya**	**1.36**	**46**	*i* P	**Pn**	**00 30 22.1**	**-0.7**
BALY				*i* S	**Sg**	**00 30 39.0**	**-2.2**
LIA	**Limnos Island**	**1.42**	**321**	*e*PN	**Pn**	**00 30 23.5**	**0.0**
LIA	**Limnos Island**	**1.42**	**321**	*e*Pn	**Pn**	**00 30 23.5**	**0.0**
GELI	**Tayfur-Gelibol**	**1.60**	**3**	*e*PN	**Pg**	**00 30 27.8**	**-0.2**
GELI				*e*SN	**Sg**	**00 30 49.3**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.60**	**3**	*e*Pn	**Pg**	**00 30 27.8**	**-0.2**
GELI				*e*Sn	**Sg**	**00 30 49.3**	**+0.5**
GONE	**Gonen-Balikesi**	**1.62**	**39**	*e*PN	**Pg**	**00 30 28.1**	**-0.3**
GONE				*e*SN	**Sg**	**00 30 50.2**	**+0.7**
GONE	**Gonen-Balikesi**	**1.62**	**39**	*e*Pn	**Pg**	**00 30 28.1**	**-0.3**
GONE				*e*Sn	**Sg**	**00 30 50.2**	**+0.7**
AYDN	**Tasoluk**	**1.66**	**133**	*i* P	**Pn**	**00 30 25.2**	**-1.6**
AYDN				*i* S	**Sn**	**00 30 48.9**	**+0.6**
AYDN	**Tasoluk**	**1.66**	**133**	*i* P	**Pn**	**00 30 25.2**	**-1.6**
AYDN				*i* S	**Sn**	**00 30 48.9**	**+0.6**
KRBG	**Karabiga-Canak**	**1.76**	**24**	*e*PN	**Pg**	**00 30 30.6**	**-0.3**
KRBG	**Karabiga-Canak**	**1.76**	**24**	*e*Pn	**Pg**	**00 30 30.6**	**-0.3**
SMTH	**Samothraki Isl**	**1.79**	**340**	*e*PB	**Pn**	**00 30 28.5**	**0.0**
SMTH	**Samothraki Isl**	**1.79**	**340**	*e*Pb	**Pn**	**00 30 28.5**	**0.0**
DURS	**Dursunbey**	**1.84**	**63**	*i* P	**Pn**	**00 30 30.1**	**+0.8**
DURS				*i* S	**Sn**	**00 30 51.7**	**-1.1**
DURS	**Dursunbey**	**1.84**	**63**	*i* P	**Pn**	**00 30 30.1**	**+0.8**
DURS				*i* S	**Sn**	**00 30 51.7**	**-1.1**
MLSB	**Milas**	**1.88**	**143**	*e*PN	**Pb**	**00 30 32.2**	**+0.4**
MLSB	**Milas**	**1.88**	**143**	*e*Pn	**Pb**	**00 30 32.2**	**+0.4**
ERIK	**Erikli-Kesan**	**1.88**	**4**	*e*PN	**Pb**	**00 30 31.6**	**-0.2**
ERIK	**Erikli-Kesan**	**1.88**	**4**	*e*Pn	**Pb**	**00 30 31.6**	**-0.2**
BODT	**Bodrum**	**1.89**	**156**	*e*PN	**Pb**	**00 30 32.5**	**+0.4**
BODT	**Bodrum**	**1.89**	**156**	*e*Pn	**Pb**	**00 30 32.5**	**+0.4**
ENEZ	**Enez**	**1.94**	**356**	*e*PN	**Pb**	**00 30 32.7**	**-0.3**
ENEZ	**Enez**	**1.94**	**356**	*e*Pn	**Pb**	**00 30 32.7**	**-0.3**
MRMT	**Marmara Adasi**	**2.05**	**28**	*e*PN	**Pb**	**00 30 34.0**	**-0.8**
MRMT	**Marmara Adasi**	**2.05**	**28**	*e*Pn	**Pb**	**00 30 34.0**	**-0.8**
ALN	**Alexandroupoli**	**2.11**	**354**	*e*PB	**Pn**	**00 30 34.0**	**+1.0**
ALN	**Alexandroupoli**	**2.11**	**354**	*e*Pb	**Pn**	**00 30 34.0**	**+1.0**
KCTX	**Karacabey (Bur**	**2.14**	**46**	*e*PN	**Pb**	**00 30 35.4**	**-0.9**
KCTX	**Karacabey (Bur**	**2.14**	**46**	*e*Pn	**Pb**	**00 30 35.4**	**-0.9**
DENT	**Denizli**	**2.35**	**115**	*e*PN	**Pb**	**00 30 39.2**	**-0.8**
DENT	**Denizli**	**2.35**	**115**	*e*Pn	**Pb**	**00 30 39.3**	**-0.8**
ARMT	**Armutlu**	**2.62**	**47**	*e*PN	**Pb**	**00 30 42.8**	**-1.8**
ARMT	**Armutlu**	**2.62**	**47**	*e*Pn	**Pb**	**00 30 42.8**	**-1.8**
CTKS	**Kestenalik-??a**	**2.95**	**34**	*e*PN	**Pn**	**00 30 47.4**	**+3.0**
CTKS	**Kestenalik-??a**	**2.95**	**34**	*e*Pn	**Pn**	**00 30 47.4**	**+3.0**
EDRB	**Edirne**	**3.06**	**6**	*e*PN	**Pn**	**00 30 48.5**	**+2.5**
EDRB	**Edirne**	**3.06**	**6**	*e*Pn	**Pn**	**00 30 48.5**	**+2.5**

IDC 13 00:49:56.5±2.0, 45°.94S×167°.36E, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.6/15, mbtmp3.6/3, ML3.8/1, MS3.3/2, Ms1 3.3/2, ms1mx2.9/24, Error ellipse: s-maj=49.8km s-min=18.8km az=154.0
WEL 13 00:49:58.6±0.1, 45°.86S×167°.20E, h12km, ML4.3/11, Error ellipse: s-maj=1.9km s-min=1.1km az=90.0
WEL Felt from Otago to Southland, maximum reported intensity MM 4.
NEIC 13 00:49:58.7, 45°.86S×167°.20E, h12km, ML4.4(WEL), After WEL.
NEIC Felt at Manapouri.
ISCJB 13 00:49:58.4±0.6, 45°.86S±0°.04×167°.22E±0°.06, h20km±7km, mb3.7/2, MS3.6/1, Error ellipse: s-maj=7.8km s-min=6.0km az=135.0
ISC 13 00:49:58.6±1.0, 45°.88S±0°.03×167°.24E±0°.04, h15km±8km, n41, σ0°.78/51, 7C-2D, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.41**	**352**	⇑P*	**Pg**	**00 50 06.6**	**-0.2**
DCZ				S*	**Sg**	**00 50 12.2**	**-0.1**
DCZ	**Deep Cove**	**0.41**	**352**	P*	**Pg**	**00 50 06.6**	**-0.2**
DCZ				S*	**Sg**	**00 50 12.2**	**-0.1**
PYZ	**Puysegur Point**	**0.48**	**233**	⇑P*	**Pg**	**00 50 08.0**	**-0.2**
PYZ				S*	**Sg**	**00 50 14.9**	**+0.1**
PYZ	**Puysegur Point**	**0.48**	**233**	P*	**Pg**	**00 50 08.0**	**-0.2**
PYZ				S*	**Sg**	**00 50 14.8**	**+0.1**
WHZ	**Wether Hill Ro**	**0.50**	**92**	⇑P*	**Pg**	**00 50 08.9**	**+0.4**
WHZ	**Wether Hill Ro**	**0.50**	**92**	P*	**Pg**	**00 50 08.9**	**+0.4**
MLZ	**Mavora Lakes**	**0.84**	**51**	⇓P*	**Pg**	**00 50 13.9**	**-1.1**
MLZ	**Mavora Lakes**	**0.84**	**51**	Pn	**Pg**	**00 50 13.9**	**-1.1**
APZ	**The Paps**	**1.09**	**152**	P*	**Pb**	**00 50 18.4**	**-0.8**
APZ	**The Paps**	**1.09**	**152**	P*	**Pb**	**00 50 18.4**	**-0.8**
MSZ	**Milford Sound**	**1.30**	**22**	⇑PN	**Pn**	**00 50 21.3**	**-1.0**

	comp=E,21nm,0.9s								
SYVR				*e*Sn	**Sn**	**00 55 12.2**	**+2.6**		
SYVR				*i* Sg	**Sg**	**00 55 34.6**	**+0.5**		
SYVR				Smax		00 55 39.8			
	comp=E,465nm,0.7s								
MXMB	**Maximikha**	**4.78**	**318**	*e*Pn	**Pn**	**00 54 20.7**	**+1.7**		
MXMB				Pg	**Pg**	**00 54 36.5**	**-2.0**		
MXMB				Pmax		00 54 38.0			
	comp=E,13nm,0.5s								
MXMB				*e*Sn	**Sn**	**00 55 18.6**	**+4.2**		
MXMB				*e*Sg	**Sg**	**00 55 42.9**	**+2.6**		
MXMB				Smax		00 55 49.5			
	comp=E,1µm,1.1s								
HRMR	**Khuramsha**	**4.88**	**294**	*e*Pn	**Pn**	**00 54 22.8**	**+2.4**		
HRMR				*e*Pg	Pg	00 54 36.8	-3.6		
HRMR				*e*		00 54 41.2			
HRMR				*e*		00 55 21.0			
HRMR				*e*Sg	**Sg**	**00 55 45.1**	**+1.6**		
HRMR				Smax		00 55 53.2			
	comp=E,1µm,1.1s								
ZRHB	**Zarechye**	**5.14**	**304**	Pg	Pg	00 54 41.4	-4.0		
ZRHB				*e*		00 54 47.0			
ZRHB				max		00 54 47.5			
	comp=E,1.0nm,0.3s								
ZRHB				*e*Sg	**Sg**	**00 55 52.4**	**+0.5**		
ZRHB				*e*		00 55 58.4			
ZRHB				max		00 56 09.8			
	comp=E,9.0nm,1.4s								
KAB	**Kabansk**	**5.20**	**298**	*e*PN	**Pg**	**00 54 44.2**	**-2.3**		
KAB	**Kabansk**	**5.20**	**298**	*e*Pn	**Pn**	**00 54 27.7**	**+2.9**		
KAB				*e*		00 54 35.2			
KAB				Pg	**Pg**	**00 54 44.3**	**-2.3**		
KAB				Pmax		00 54 51.7			
	comp=E,133nm,0.5s								
KAB				*e*		00 54 54.5			
KAB				*e*Sg	**Sg**	**00 55 55.2**	**+1.4**		
KAB				Smax		00 56 10.9			
	comp=E,3µm,1.4s								
YLYR	**Ulyunkhan**	**5.34**	**341**	*e*PN	**Pn**	**00 54 29.0**	**+2.2**		
YLYR				*e*		00 54 45.3			
YLYR	**Ulyunkhan**	**5.34**	**341**	*e*Pn	**Pn**	**00 54 27.5**	**+0.7**		
YLYR				*e*Pg	Pg	00 54 45.6	-3.7		
YLYR				*e*		00 54 49.2			
YLYR				max		00 54 51.5			
	comp=E,8.0nm,0.1s								
YLYR				*i* Sg	**Sg**	**00 56 00.9**	**+2.5**		
YLYR				Smax		00 56 07.2			
	comp=E,242nm,1.0s								
SONM	**Songino Array**	**5.48**	**251**	Pn	Pn	00 54 25.0	-3.8		
	comp=E,2.0nm,0.3s,baz=68,slow=13,SNR=60								
SONM				Pg	**Pg**	**00 54 43.0**	**+0.2**		
	comp=E,7.4nm,0.3s,baz=69,slow=16,SNR=17								
SONM				Sn	**Sn**	**00 55 26.7**	**-5.2**		
	comp=E,7.8nm,0.3s,baz=69,slow=24,SNR=10								
SONM				Lg	Lg	00 55 50.5			
	comp=E,17nm,0.3s,baz=64,slow=32,SNR=8.1								
OGRR	**Ongureny**	**5.54**	**316**	*e*Pn	**Pn**	**00 54 29.5**	**-0.1**		
OGRR				*e*Pg	Pg	00 54 49.7	-3.4		
OGRR				Pmax		00 54 54.7			
	comp=E,5.0nm,0.4s								
OGRR				*e*		00 55 28.2			
OGRR				*e*Sg	**Sg**	**00 56 05.1**	**+0.2**		
OGRR				Smax		00 56 13.3			
	comp=E,323nm,2.6s								
UKT	**Uakit**	**5.65**	**357**	*e*PN	**Pg**	**00 54 53.0**	**-2.2**		
UKT				*e*S	**Sn**	**00 55 38.3**	**+2.3**		
UKT				*e*		00 56 09.4			
UKT				pmax	pmax				
	comp=Z,27nm,0.6s								
UKT				smax	smax				
	comp=E,262nm,1.2s								
UKT	**Uakit**	**5.65**	**357**⇑	*i* Pn	**Pn**	**00 54 31.6**	**+0.5**		
UKT			⇑	*i* Pg	**Pg**	**00 54 52.6**	**-2.6**		
UKT				Pmax		00 54 58.3			
	comp=E,28nm,0.9s								
UKT				*e*Sg	**Sg**	**00 56 09.9**	**+1.6**		
UKT				*e*		00 56 11.3			
UKT				max		00 56 15.6			
	comp=E,294nm,1.5s								
TRG	**Tyrgan**	**5.67**	**304**	*e*PN	**Pg**	**00 54 53.8**	**-1.7**		
TRG				*e*		00 56 11.6			
TRG				pmax	pmax				
	comp=Z,8.0nm,0.3s								
TRG				smax	smax				
	comp=N,406nm,1.5s								
TRG	**Tyrgan**	**5.67**	**304**	*e*Pn	Pn	00 54 36.1	+4.8		
TRG				Pg	Pg	00 54 51.1	-4.4		
TRG				Pmax		00 54 58.3			
	comp=N,6.0nm,0.2s								
TRG				*e*Sg	**Sg**	**00 56 07.9**	**-0.9**		
TRG				*e*		00 56 11.3			
TRG				max		00 56 15.6			
	comp=N,405nm,1.2s								
TUP	**Tupik**	**5.82**	**36**	*e*PN	**Pn**	**00 54 33.1**	**-0.3**		
TUP				*e*		00 54 52.0			
TUP				*e*		00 56 09.9			
TUP				pmax	pmax				
	comp=Z,17nm,0.4s								
TUP				smax	smax				
	comp=E,661nm,0.9s								
TUP	**Tupik**	**5.82**	**36**⇓	*i* Pn	**Pn**	**00 54 33.0**	**-0.3**		
TUP				*e*Pg	Pb	00 54 52.7	+4.1		
TUP				*e*		00 55 00.6			
TUP				max		00 55 01.7			
	comp=E,17nm,0.4s								
TUP				*i* Sn	**Sn**	**00 55 37.4**	**-2.8**		
TUP				*e*Sg	**Sg**	**00 56 10.7**	**-3.1**		
TUP				Smax		00 56 19.6			
	comp=E,619nm,1.1s								
LSTR	**Listvyanka**	**6.21**	**292**	*e*	**Pn**	**00 54 37.1**	**-1.6**		
LSTR				*e*		00 54 43.1			
LSTR				*e*Pg	Pb	00 55 00.2	+5.0		
LSTR				Pmax		00 55 05.9			
	comp=E,4.0nm,0.3s								
LSTR				*e*Sg	**Sg**	**00 56 25.0**	**-1.2**		
LSTR				*e*		00 56 27.6			
LSTR				max		00 56 43.1			
	comp=E,354nm,1.5s								
KMO	**Kumora**	**6.29**	**345**	*e*Pn	**Pn**	**00 54 41.2**	**+1.4**		
KMO				*e*Pg	**Pg**	**00 55 04.3**	**-3.1**		
KMO				Pmax		00 55 11.0			
	comp=E,18nm,0.7s								
KMO				*e*		00 55 16.0			
KMO				*e*		00 55 57.3			
KMO				*e*Sg	**Sg**	**00 56 30.7**	**+1.9**		
KMO				Smax		00 56 45.8			
	comp=E,668nm,1.1s								
YOA	**Uoyan**	**6.45**	**348**	*e*Sg	**Sg**	**00 56 36.6**	**+2.7**		
YOA				Smax		00 57 04.2			
	comp=E,1µm,1.6s								
NIZ	**Nizh Angarsk**	**6.54**	**337**	*e*PN	Pn	00 54 47.7	+4.5		
NIZ				*e*		00 55 09.5			
NIZ				*e*		00 56 36.7			
NIZ				pmax	pmax				
	comp=Z,6.0nm,1.0s								
NIZ				smax	smax				
	comp=N,221nm,1.0s								
NIZ	**Nizh Angarsk**	**6.54**	**337**	*e*	Pb	00 55 05.4	+4.6		
NIZ				Pg	Pg	00 55 08.4	-3.8		
NIZ				Pmax		00 55 17.2			
	comp=N,5.0nm,0.8s								
NIZ				*e*		00 56 20.1			
NIZ				*e*Sg	**Sg**	**00 56 36.9**	**+0.1**		
NIZ				Smax		00 56 43.6			
	comp=N,221nm,1.2s								
IRK	**Irkutsk**	**6.64**	**295**	*e*Sg	**Sg**	**00 56 37.7**	**-2.5**		
IRK				Smax		00 56 41.4			
	comp=N,383nm,1.3s								
IRK				*e*		00 56 47.0			
NLYR	**Nelyaty**	**6.72**	**8**	*e*PG	Pg	00 55 10.8	-4.7		
NLYR				*e*		00 56 42.2			
NLYR				pmax	pmax				
	comp=Z,49nm,0.5s								
NLYR				smax	smax				
	comp=N,80nm,1.0s								
NLYR	**Nelyaty**	**6.72**	**8**	*e*Pn	**Pn**	**00 54 45.8**	**+0.1**		
NLYR				Pg	Pg	00 55 10.9	-4.6		
NLYR				Pmax		00 55 15.5			
	comp=N,50nm,0.6s								
NLYR				*e*		00 55 20.3			
NLYR				*e*Sg	**Sg**	**00 56 42.4**	**0.0**		
NLYR				*e*		00 56 52.6			
NLYR				max		00 56 54.9			
	comp=N,801nm,1.0s								
TLY	**Talaya**	**6.88**	**289**	*e*PN	**Pn**	**00 54 50.7**	**+2.7**		
TLY				*e*		00 55 13.8			
TLY				*e*		00 56 45.6			
TLY				pmax	pmax				
	comp=Z,2.0nm,0.4s								
TLY				smax	smax				
	comp=N,152nm,1.7s								
TLY	**Talaya**	**6.88**	**289**	*e*	**Pb**	**00 55 03.6**	**-3.1**		
TLY				*e*Pg	Pg	00 55 13.8	-4.9		
TLY				Pmax		00 55 19.6			
	comp=N,5.0nm,0.7s								
TLY				*e*Sg	**Sg**	**00 56 46.6**	**-1.2**		
TLY				Smax		00 56 49.9			
	comp=N,152nm,1.5s								
ZAK	**Zakamensk**	**6.98**	**278**	*e*PN	**Pb**	**00 55 10.9**	**+2.5**		
ZAK				*e*S	**Sg**	**00 56 49.6**	**-1.4**		
ZAK				pmax	pmax				
	comp=Z,7.0nm,0.5s								
ZAK				smax	smax				
	comp=N,70nm,1.9s								
ZAK	**Zakamensk**	**6.98**	**278**	*e*Sg	**Sg**	**00 56 48.6**	**-2.4**		
ZAK				Smax		00 56 52.0			
	comp=N,70nm,1.9s								
ZAK				*e*		00 56 55.0			
CRS	**Chara**	**7.48**	**18**	*e*PG	Pg	00 55 24.5	-5.7		
CRS	**Chara**	**7.48**	**18**	*e*Pn	**Pn**	**00 54 56.6**	**+0.4**		
CRS				*e*		00 55 05.2			
CRS			⇑	*i*Pg	Pg	00 55 26.2	-4.0		
CRS				Pmax		00 55 38.0			
	comp=N,19nm,2.1s								
CRS				*e*Sn	Sb	00 56 36.4	-10		
CRS				*e*		00 57 01.8			
CRS				*e*Sg	**Sg**	**00 57 06.7**	**-0.2**		
CRS				*e*		00 57 16.0			
CRS				max		00 57 24.4			
	comp=N,486nm,1.4s								
ARS	**Arshan**	**7.67**	**290**	*e*Pg	Pg	00 55 27.0	-6.8		
ARS				*e*		00 55 34.7			
ARS				*e*		00 55 41.8			
ARS				*e*Sg	**Sg**	**00 57 09.9**	**-3.2**		
ARS				Smax		00 57 30.1			
	comp=N,139nm,1.6s								
BOD	**Bodaibo**	**7.98**	**360**	*e*PG	Pg	00 55 35.3	-4.4		
BOD	**Bodaibo**	**7.98**	**360**	Pg	Pg	00 55 35.1	-4.6		
BOD				Pmax		00 55 45.1			
	comp=N,5.0nm,0.8s								
BOD				*i* Sg	**Sg**	**00 57 23.2**	**+0.3**		
BOD				Smax		00 57 30.6			
	comp=N,219nm,1.6s								
YKLR	**Yuktali**	**8.12**	**31**	*e*	Sb	00 57 03.2	-1.2		
YKLR				*e*Sg	**Sg**	**00 57 24.8**	**-2.6**		
TNDR	**Tynda**	**8.36**	**47**	*e*Sg	**Sg**	**00 57 29.8**	**-5.4**		
TNDR				*e*		00 57 34.3			
MOY	**Mondy**	**8.51**	**287**	*e*Pg	Pg	00 55 42.7	-7.2		
MOY				*e*		00 57 02.8			
MOY				*i* Sg	**Sg**	**00 57 36.5**	**-3.4**		
MOY				Smax		00 57 50.0			
	comp=N,149nm,1.6s								
ZEA	**Zeya**	**9.02**	**59**	*e*Sg	Sn	00 57 46.1	+47		
IENR	**Iengra**	**9.08**	**41**	*e*	**Sn**	**00 57 03.3**	**+2.9**		
IENR				*e*Sg	Sg	00 57 53.1			
HHC	**Hu-ho-hao-te**	**9.18**	**192**	*e*P	**Pn**	**00 55 20.3**	**+0.7**		
HHC				sP		00 55 25.9			
HHC				S	**Sn**	**00 57 03.7**	**+0.7**		
HHC				sS		00 57 07.9			
HHC				LR	LR				
	comp=N,160nm,8.3s								
HHC				LR	LR				
	comp=E,230nm,7.7s								
HHC				LR	LR				
	comp=E,120nm,8.9s								
ORL	**Orlik**	**9.37**	**292**	*e*Pn	Pn	00 55 26.5	+4.4		
ORL				*e*		00 55 42.6			
ORL				*e*Pg		00 55 58.2			
ORL				Pmax		00 55 59.6			
	comp=Z,1.0nm,0.1s								
ORL				*e*Sg	Sn	00 58 02.6	+55		
ORL				*e*		00 58 05.6			
ORL				max		00 58 23.0			
	comp=Z,89nm,2.5s								
CN2	**Changchun**	**9.85**	**124**	*e*P	**Pn**	**00 55 29.7**	**+1.1**		
CN2				LR	LR				
	comp=Z,200nm,10.0s								
MKAR	**Makanchi Array**	**21.29**	**274**	*i* P	**P**	**00 57 52.2**	**-1.4**		
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**21.29**	**274**	P	**P**	**00 57 52.0**	**-1.5**		
	comp=Z,0.8nm,0.8s,baz=76,slow=10,SNR=8.4								
KURK	**Kurchatov**	**22.56**	**286**	P	**P**	**00 58 06.4**	**-0.7**		
KURK				pmax	pmax				
	comp=Z,1.0nm,0.9s								
KURBB	**Kurchatov Arra**	**22.64**	**286**	P	**P**	**00 58 06.4**	**-1.5**		
	comp=Z,0.6nm,0.9s,baz=82,slow=11,SNR=6.2								
ILAR	**Eielson Array**	**49.81**	**34**	P	P	01 02 06.0	+6.5		
	comp=Z,0.2nm,0.6s,baz=297,slow=8.0,SNR=3.1								
YKA	**Yellowknife Ar**	**61.52**	**23**	P	P	01 03 28.7	+5.2		
	comp=Z,0.1nm,0.7s,baz=321,slow=6.5,SNR=3.3								

IDC 13 00:56:21.0±1.3, 1°.17N×125°.70E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.6/24, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=112.0km s-min=17.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.15**	**180**	P		P	Pn	01 00 46.6	-0.2
	0.1nm,0.3s,baz=20,slow=9.4,SNR=3.9								
WRA	**Warramunga Arr**	**22.62**	**158**	P		P		01 01 22.4	-1.3
	0.7nm,0.3s,baz=336,slow=12,SNR=5.8								
ASAR	**Alice Springs**	**25.94**	**163**	P		P		01 01 55.7	+0.4
	0.5nm,0.3s,baz=343,slow=8.3,SNR=10								
STKA	**Stephens Creek**	**36.15**	**157**	P		P		01 03 25.5	+0.2
	1.2nm,0.8s,baz=339,slow=8.6,SNR=2.8								
MKAR	**Makanchi Array**	**59.09**	**327**	P		P		01 06 22.9	-0.4
	0.4nm,0.4s,baz=125,slow=8.3,SNR=12								
KURBB	**Kurchatov Arra**	**63.35**	**328**	P		P		01 06 52.0	-0.1
	0.3nm,0.5s,baz=127,slow=6.4,SNR=3.3								
TORD	**Torodi Ar. Bea**	**122.69**	**286**	PKP		PKPdf		01 15 20.1	+0.1
	0.3nm,0.8s,baz=68,slow=2.4,SNR=3.3								

IDC 13 00:58:03.5±2.4, 18°.75S×169°.27E, h246km±31km, mb3.6/7, mb1 3.8/8, mb1mx3.5/18, mbtmp3.6/8, Error ellipse: s-maj=71.3km s-min=21.3km az=142.0
AUST 13 00:59:09.5±15.0, 19°.81S×164°.25E, h578km±1km, Error ellipse: s-maj=2.5km s-min=1.5km az=1.0

ISC 13 00:58:02.7±1.7, 18°.7S±0°.2×169°.3E±0°.3, h240km, n19, σ1°11/17, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.28**	**219**	*e*P		**P**	**Pn**	**00 59 08.5**	**-1.0**
DZM	**Mont Dzumac**	**4.28**	**219**	P		**P**	**Pn**	**00 59 09.5**	**0.0**
	4.9nm,0.3s,baz=191,slow=5.9,SNR=26								
DZM				S		**S**		**01 00 03.6**	**+1.1**
	baz=150,slow=20,SNR=2.4								
NOUC	**Port Laguerre**	**4.39**	**220**	*e*P		**P**	**Pn**	**00 59 12.8**	**+2.0**
NOUC				*e*S		**S**		**01 00 02.7**	**-1.9**
QLP	**Quilpie**	**24.41**	**247**	P		**P**		**01 03 00.2**	**+0.7**
	baz=20,SNR=5.1								
COEN	**Coen**	**25.54**	**277**	P		P		01 02 56.7	-13
	baz=21,SNR=4.3								
STKA	**Stephens Creek**	**28.19**	**237**	P		**P**		**01 03 33.5**	**+0.2**
	3.3nm,0.6s,baz=83,slow=8.5,SNR=9.7								
STKA	**Stephens Creek**	**28.19**	**237**	P		**P**		**01 03 34.5**	**+1.2**
	baz=24,SNR=4.7								
WRA	**Warramunga Arr**	**33.01**	**262**	P		**P**		**01 04 14.2**	**-1.5**
	0.5nm,0.5s,baz=99,slow=8.4,SNR=5.0								
ASAR	**Alice Springs**	**33.34**	**255**	P		**P**		**01 04 18.1**	**-0.5**
	8.6nm,0.5s,baz=83,slow=8.8,SNR=102								
KNRA	**Kununurra**	**38.82**	**268**	P		P		01 05 11.5	+6.6
	baz=34,SNR=3.7								
FITZ	**Fitzroy Crossi**	**41.39**	**264**	P		**P**		**01 05 25.6**	**-0.3**
	4.4nm,0.8s,baz=89,slow=10.0,SNR=7.5								
FITZ	**Fitzroy Crossi**	**41.39**	**264**	P		**P**		**01 05 26.2**	**+0.3**
	baz=36,SNR=4.0								
PALU	**Palau**	**43.06**	**304**	P		P		01 05 44.3	+4.9
	baz=40,SNR=8.0								
MEEK	**Meekatharra**	**47.20**	**251**	P		**P**		**01 06 11.8**	**-0.1**
	baz=42,SNR=7.6								
BKNI	**Bangkinang**	**69.60**	**278**	P		P		01 08 52.1	+5.5
	baz=65,SNR=7.3								
PETK	**Petropavlovsk-**	**72.26**	**353**	P		**P**		**01 09 02.3**	**+0.7**
	3.0nm,0.8s,baz=148,slow=8.5,SNR=5.5								
SONM	**Songino Array**	**86.88**	**323**	P		**P**		**01 10 20.9**	**+0.5**
	0.3nm,0.4s,baz=156,slow=5.5,SNR=4.3								
ILAR	**Eielson Array**	**89.73**	**17**	P		**P**		**01 10 32.0**	**-1.2**
	0.3nm,0.7s,baz=228,slow=5.5,SNR=5.2								
YKA	**Yellowknife Ar**	**100.19**	**27**	P		**Pdif**		**01 11 21.5**	**+0.6**
	0.3nm,0.7s,baz=256,slow=4.8,SNR=7.2								

ISK 13 01:01:22.8, 37°.06N×28°.55E, h13km, MD2.5
DDA 13 01:01:23.1, 37°.05N×28°.48E, h7km, MD2.5
CSEM 13 01:01:23.6±0.3, 37°.05N×28°.53E, h19km±4km, MD2.5, Error ellipse: s-maj=10.7km s-min=4.8km az=22.0
ISCJB 13 01:01:24.3±0.8, 37°.06N±0°.05×28°.52E±0°.05, h19km±13km, Error ellipse: s-maj=8.6km s-min=5.3km az=34.3

ISC 13 01:01:23.3±1.0, 37°.10N±0°.03×28°.53E±0°.03, h13km±9km, n14, σ0°69/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.20**	**279**	*e*PG		**Pg**		**01 01 28.0**	**+0.2**
YER				*e*SG		**Sb**		**01 01 31.9**	**-0.8**
YER	**Yerkesik**	**0.20**	**279**	*e*Pg		**Pg**		**01 01 28.0**	**+0.2**
YER				*e*Sg		**Sb**		**01 01 31.9**	**-0.8**
TURN	**Turunc**	**0.24**	**166**	*i* P		**Pb**		**01 01 29.5**	**0.0**
TURN				*i* S		**Sb**		**01 01 35.3**	**+1.7**
TURN	**Turunc**	**0.24**	**166**	*i* P		**Pb**		**01 01 29.5**	**0.0**
TURN				*i* S		**Sb**		**01 01 35.3**	**+1.7**
MLSB	**Milas**	**0.63**	**288**	*e*PG		**Pb**		**01 01 36.1**	**-0.2**
MLSB	**Milas**	**0.63**	**288**	*e*Pg		**Pb**		**01 01 36.1**	**-0.2**
FETY	**Fethiye**	**0.64**	**136**	*e*PG		**Pg**		**01 01 35.1**	**-0.7**
FETY				*e*SG		**Sg**		**01 01 44.0**	**-0.3**
FETY	**Fethiye**	**0.64**	**136**	*e*Pg		**Pg**		**01 01 35.1**	**-0.7**
FETY				*e*Sg		**Sg**		**01 01 44.0**	**-0.3**
DNZL	**Cakiroluk**	**0.71**	**35**	*i* P		**Pb**		**01 01 37.9**	**+0.1**
DNZL				*i* S		**Sn**		**01 01 50.2**	**-0.1**
DNZL	**Cakiroluk**	**0.71**	**35**	*i* P		**Pb**		**01 01 37.9**	**+0.1**
DNZL				*i* S		**Sn**		**01 01 50.2**	**-0.1**
AYDN	**Tasoluk**	**0.76**	**317**	*i* P		**Pb**		**01 01 39.0**	**+0.5**
AYDN				*i* S		**Sb**		**01 01 49.6**	**+0.7**
AYDN	**Tasoluk**	**0.76**	**317**	*i* P		**Pb**		**01 01 39.0**	**+0.5**
AYDN				*i* S		**Sb**		**01 01 49.6**	**+0.7**
BODT	**Bodrum**	**0.98**	**268**	*e*PG		**Pn**		**01 01 42.8**	**0.0**
BODT				*e*SG		**Sn**		**01 01 56.4**	**-0.2**
BODT	**Bodrum**	**0.98**	**268**	*e*Pg		**Pn**		**01 01 42.8**	**0.0**
BODT				*e*Sg		**Sn**		**01 01 56.4**	**-0.2**

MEX 13 01:02:34.3±0.4, 16°.00N×97°.47W, h16km±5km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.75**	**302**	*e*P			Pg	01 02 46.2	-2.8
PNIG				*i* S			Sg	01 02 55.9	-3.0
VHO	**Vista Hermosa**	**1.28**	**33**	*i* P			Pn	01 02 54.4	-3.4
VHO				*i* S			Sb	01 03 09.4	-5.4
HUIG	**Huatulco**	**1.33**	**100**	*e*P			Pn	01 02 54.7	-3.5
HUIG				*i* S			Sn	01 03 10.4	-5.2
YAIG	**Yautepec**	**3.23**	**332**	*i* P			Pn	01 03 22.2	-2.4
YAIG				*i* S			Sn	01 03 59.7	-3.3

ISCJB 13 01:15:18.8±0.8, 6°.32S±0°.03×154°.96E±0°.03, h79km±7km, mb5.2/138, Error ellipse: s-maj=5.0km s-min=4.4km az=179.3
MOS 13 01:15:18.1±1.0, 6°.26S×154°.89E, h68km, mb5.5/43, MS4.1/5, Error ellipse: s-maj=8.0km s-min=6.1km az=86.9
GCMT 13 01:15:19.7±0.2, 6°.56S×154°.98E, h58km, MW5.1, Moment Tensor Solution. s75,c97; s74,c111; Moment tensor: Scale 10^16 Nm; Mrr6.06±.16; Mθθ-3.29±.13; Mϕϕ-2.77±.14; Mrθ-1.05±.12; Mrϕ3.53±.11; Mθϕ0.17±.11; Best double couple: M◎6.40000×10^16 NP1:ϕs139.00000°, δ41.00000°, λ99.00000°. NP2:ϕs307.00000°, δ49.00000°, λ82.00000°. Principal axes: T 6.1800, Plg83.0000°, Azm167.0000°; N 0.4500, Plg6.0000°, Azm312.0000°; P -6.6300, Plg4.0000°, Azm43.0000°; Data Used: II IU IC G CN.
BJI 13 01:15:19.3, 6°.15S×155°.08E, h87km, mB5.0/36, mb5.2/53, Ms4.8/32, Ms7 4.3/31
AUST 13 01:15:20.2±0.4, 6°.30S×155°.06E, h80km, Error ellipse: s-maj=0.8km s-min=0.7km az=36.0
DJA 13 01:15:21.1±0.9, 6°.5S±5°×15°.5E±°, h70km±12km, M5.2/12, mB5.7/9, mb5.4/12, Mw(mB)5.2/9
NEIC 13 01:15:21.6±0.7, 6°.40S×154°.93E, h94km±6km, mb5.2/82, Error ellipse: s-maj=4.2km s-min=4.1km az=130.0
IDC 13 01:15:21.0±2.1, 6°.40S×154°.91E, h88km±18km, mb5.0/32, mb1 5.1/35, mb1mx5.1/36, mbtmp5.0/35, MS4.2/27, Ms1 4.2/27, ms1mx4.1/31, Error ellipse: s-maj=11.5km s-min=9.0km az=85.0

ISC 13 01:15:21.5±0.3, 6°.39S±0°.04×155°.00E±0°.04, h94km±2km, h94km:pP-P, n723, σ1°23/797, mb5.3/148, 78C-88D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.75**	**122**	*e*Pn		**Sn**		**01 16 43.0**	**-1.4**
HNR				*e*Sn		**Sn**		**01 17 53.0**	**+3.9**
HNR	**Honiara**	**5.75**	**122**	P		**Pn**		**01 16 43.8**	**-0.6**
	66nm,0.3s,baz=237,slow=2.2,SNR=18								
HNR				S		**Sn**		**01 17 51.9**	**+2.8**
	250nm,0.3s,baz=149,slow=20,SNR=11								
HNR				LR		LR		01 18 33.9	
	comp=Z,1µm,21.7s,baz=309,slow=33								
PMG	**Port Moresby**	**8.33**	**248**	*e*Pn		**Pn**		**01 17 18.5**	**-1.0**
PMG				*e*Sn		**Sn**		**01 18 48.6**	**-3.2**
PMG	**Port Moresby**	**8.33**	**248**	P		**Pn**		**01 17 18.8**	**-0.7**
	296nm,0.8s,3µm								
PMG	**Port Moresby**	**8.33**	**248**	P		**Pn**		**01 17 18.4**	**-1.0**
	30nm,0.3s,baz=54,slow=8.4,SNR=44								
PMG				S		**Sn**		**01 18 53.3**	**+1.4**
	7.1nm,0.3s,baz=342,slow=18,SNR=3.4								
PMG				LR		LR		01 20 24.1	
	comp=Z,2µm,20.2s,baz=233,slow=37								
PATS	**Pohnpei**	**13.55**	**14**	P		Pn		01 18 26.7	-3.2

FAKI Fak Fak 22.94 278 P **P** **01 20 17.8 -0.1**
baz=23,SNR=7.5
FAKI S **S** **01 24 28.1 +7.1**
baz=23,SNR=7.8
KDU Kakadu 23.07 253 P **P** **01 20 19.6 +0.4**
baz=23,SNR=7.3
ARMA Armidale 24.11 187 *e*P **P** **01 20 29.4 +0.8**
comp=Z,122nm,1.4s
ARMA Armidale 24.11 187 P **P** **01 20 29.5 +0.8**
baz=24,SNR=16
WRAB Tennant Creek 24.16 234 *e*P **P** **01 20 29.5 +0.5**
WRAB *e* 01 24 08.5
WRAB *e*S **S** **01 24 41.3 +0.7**
WRAB pmax pmax
comp=Z,331nm,1.4s
WRAB Tennant Creek 24.16 234 *e*P **P** **01 20 29.5 +0.5**
comp=Z,331nm,1.4s
WRAB *e*PcP **PcP** **01 24 08.5 +0.7**
WRAB *e*S **S** **01 24 41.3 +0.7**
WRAB Tennant Creek 24.16 234 P **P** **01 20 29.0 0.0**
comp=Z,820nm,0.9s,SNR=74
WRA Warramunga Arr 24.17 234 P **P** **01 20 29.6 +0.4**
WRA PcP **PcP** **01 24 08.5 +0.6**
WRA S **S** **01 24 42.0 +1.2**
WRA Warramunga Arr 24.17 234 P **P** **01 20 29.6 +0.4**
comp=Z,66nm,0.6s,baz=56,slow=9.5,SNR=76
WRA PcP **PcP** **01 24 08.5 +0.6**
comp=Z,17nm,0.6s,baz=57,slow=2.4,SNR=19
WRA S **S** **01 24 42.0 +1.2**
comp=Z,6.1nm,0.9s,baz=50,slow=17,SNR=4.8
WRA LR LR 01 29 25.4
comp=Z,817nm,21.8s,baz=55,slow=35
SWI Sorong 24.32 282 P **P** **01 20 30.6 +0.1**
comp=Z,160nm,1.1s,comp=Z,1μm
MTN Manton Dam 24.38 253 P **P** **01 20 31.9 +0.8**
baz=24,SNR=6.9
PALU Palau 24.61 303 P **P** **01 20 33.7 +0.5**
baz=25,SNR=8.4
PALU S S 01 24 29.1 -19
baz=25,SNR=3.8
MSVF Nonsavu 25.16 119 *e*P **P** **01 20 38.1 -0.2**
MSVF pmax pmax
comp=Z,20nm,0.6s
MSVF Nonsavu 25.16 119 *e*P **P** **01 20 38.1 -0.2**
comp=Z,20nm,0.6s
MSVF Nonsavu 25.16 119 P **P** **01 20 38.0 -0.2**
comp=Z,200nm,0.6s,SNR=7.0
CMSA Cobar Meteorol 26.49 198 P **P** **01 20 50.4 +0.4**
baz=27,SNR=11
AS31 Alice Springs 26.58 228 *e*P **P** **01 20 50.9 -0.1**
AS31 *e*PcP **PcP** **01 24 14.0 +0.7**
ASAR Alice Springs 26.58 228 P **P** **01 20 50.8 -0.3**
ASAR PcP **PcP** **01 24 13.9 +0.7**
ASAR S S 01 25 28.9 +10
ASAR *e* 01 53 33.7
ASAR Alice Springs 26.58 228 P **P** **01 20 50.8 -0.3**
comp=Z,12nm,0.9s,baz=58,slow=9.1,SNR=55
ASAR PcP **PcP** **01 24 13.9 +0.7**
comp=Z,13nm,0.6s,baz=61,slow=2.2,SNR=16
ASAR S S 01 25 28.9 +10
comp=Z,1.4nm,0.8s,baz=53,slow=14,SNR=4.1
ASAR LR LR 01 31 07.4
comp=Z,650nm,20.4s,baz=144,slow=36
ASAR P3KPbc 01 53 33.7
comp=Z,0.6nm,0.7s,baz=234,slow=4.2,SNR=4.8
MGCD Mangrove Creek 26.93 187 P **P** **01 20 55.5 +1.6**
baz=27,SNR=4.8
KNRA Kununurra 27.33 248 P P 01 21 05.1 +7.4
baz=27,SNR=6.3
LBMI Labuha 28.03 281 P **P** **01 21 05.4 +1.4**
STKA Stephens Creek 28.28 205 *e*P **P** **01 21 05.4 -0.6**
comp=Z,2.4nm,0.8s
STKA *e*PcP **PcP** **01 24 16.9 -0.3**
STKA Stephens Creek 28.28 205 P **P** **01 21 05.7 -0.4**
comp=Z,8.9nm,0.8s,baz=0.7,slow=6.9,SNR=15
STKA PcP **PcP** **01 24 17.0 -0.2**
comp=Z,12nm,1.0s,baz=324,slow=5.1,SNR=4.6
STKA LR LR 01 31 43.0
comp=Z,966nm,21.4s,baz=28,slow=35
STKA Stephens Creek 28.28 205 P **P** **01 21 06.2 +0.1**
baz=28,SNR=9.1
CNB Canberra Magne 29.25 189 P **P** **01 21 16.3 +1.6**
baz=30,SNR=5.3
FITZ Fitzroy Crossi 30.91 245 P **P** **01 21 28.8 -0.7**
FITZ PcP **PcP** **01 24 25.3 +1.1**
FITZ Fitzroy Crossi 30.91 245 P **P** **01 21 28.8 -0.7**
comp=Z,33nm,0.8s,baz=85,slow=7.3,SNR=27
FITZ PcP **PcP** **01 24 25.3 +1.1**
comp=Z,22nm,0.8s,baz=155,slow=3.0,SNR=8.4
FITZ LR LR 01 34 30.2
comp=Z,741nm,19.2s,baz=79,slow=37
FITZ Fitzroy Crossi 30.91 245 P **P** **01 21 29.1 -0.4**
baz=31,SNR=50
BBOO Buckleboo 31.65 211 *e*P **P** **01 21 35.6 -0.2**
comp=Z,486nm,0.9s
BBOO Buckleboo 31.65 211 P **P** **01 21 35.6 -0.2**
baz=32,SNR=11
ARPS Mount Arapiles 32.54 200 P P 01 21 34.6 -8.9
baz=33,SNR=6.0
LUWI Luwuk 32.59 278 S S 01 26 42.0 -11
baz=33,SNR=4.6
OUZ Omahuta 33.41 152 *e*P **P** **01 21 52.2 +1.0**
comp=Z,32nm,0.9s
AFI Afiamalu 33.51 106 LR LR 01 32 54.5
comp=Z,480nm,21.1s,baz=288,slow=31
CTBH Cotabato--PC H 33.53 293 ⇓*i*P **P** **01 21 53.2 +0.7**
MSLP Maasin 34.22 298 *e*P **P** **01 21 58.5 +0.1**
MSLP *e*S **pP** **01 22 15.9 -4.0**
WSI Waingapu 34.51 262 P **P** **01 21 58.4 -2.6**
baz=35,SNR=5.2
PAGZ Pagadian 34.56 294 *e*P **P** **01 22 02.5 +1.1**
PAGZ *e*S **pP** **01 22 18.5 -4.4**
FORT Forrest 35.03 223 *e*P **P** **01 22 04.2 -1.0**
comp=Z,75nm,0.6s
FORT *e*PcP **PcP** **01 24 35.6 +0.2**
FORT Forrest 35.03 223 P **P** **01 22 05.3 0.0**
baz=35,SNR=20
KAPI Kappang 35.10 270 *e*P **P** **01 22 05.1 -1.0**
comp=Z,23nm,0.9s
KAPI Kappang 35.10 270 P **P** **01 22 04.4 -1.6**
comp=Z,16nm,0.7s,baz=131,slow=4.4,SNR=3.9
TAU Tasmania Unive 37.00 189 *e*P **P** **01 22 23.7 +1.9**
TAU pmax pmax
comp=Z,86nm,1.0s
TAU Tasmania Unive 37.00 189 *e*P **P** **01 22 23.7 +1.9**
comp=Z,86nm,1.0s
MBWA Marble Bar 37.15 243 *e*P **P** **01 22 22.8 -0.7**
comp=Z,26nm,0.6s
MBWA *e*PcP **PcP** **01 24 42.4 +0.5**
URZ Urewera 37.53 151 *e*P **P** **01 22 27.3 +0.9**
comp=Z,46nm,0.8s
URZ Urewera 37.53 151 P **P** **01 22 26.6 +0.2**
comp=Z,39nm,0.6s,baz=320,slow=2.7,SNR=25
MYLDM Lahad Datu 38.21 287 P **P** **01 22 34.5 +2.0**
TSM Tawau 38.56 285 P **P** **01 22 34.3 -1.2**
SNZO South Karori 38.96 156 *e*P **P** **01 22 39.3 +0.9**
comp=Z,120nm,1.3s
KHZ Kahutara 39.46 158 *e*P **P** **01 22 42.2 -0.3**
comp=Z,46nm,0.9s
SDKM Sandakan 39.59 287 P **P** **01 22 43.6 -0.4**
KMBL Kambalda 39.71 227 P **P** **01 22 45.0 +0.2**
baz=40,SNR=8.3
RPZ Rata Peaks 39.76 162 *e*P **P** **01 22 45.8 +0.7**
comp=Z,68nm,0.6s
RPZ Rata Peaks 39.76 162 P **P** **01 22 45.1 0.0**
comp=Z,70nm,0.7s,baz=158,slow=6.0,SNR=20
MEEK Meekatharra 40.05 236 P **P** **01 22 47.9 +0.1**
baz=40,SNR=41
KKM Kota Kinabalu 40.64 287 *e*P **P** **01 22 52.8 0.0**
comp=Z,129nm,0.9s
KKM Kota Kinabalu 40.64 287 P **P** **01 22 53.3 +0.5**
KKM Kota Kinabalu 40.64 287 P **P** **01 22 53.4 +0.5**
baz=41,SNR=14
JOW Kunigami 41.97 323 *e*P **P** **01 23 04.0 +0.6**
comp=Z,15nm,0.8s
GIRL Giralia 42.46 243 P **P** **01 23 08.9 +1.4**
baz=43,SNR=4.0
KLBR Kellerberrin 42.88 229 P **P** **01 23 10.3 -0.5**
baz=43,SNR=49
BTM Bintulu 42.92 282 P **P** **01 23 13.2 +1.8**
MORW Morawa 43.12 234 P **P** **01 23 12.4 -0.3**
baz=43,SNR=25
BLDU Ballidu 43.24 231 P **P** **01 23 13.4 -0.3**
baz=43,SNR=16
SBUM Sibu 43.61 280 P **P** **01 23 18.3 +1.4**
UGM Wanagama 44.15 265 *e*P **P** **01 23 21.4 +0.1**
UGM Wanagama 44.15 265 P **P** **01 23 21.3 +0.1**
baz=44,SNR=6.2
YULB Yu-li 44.28 313 *e*P **P** **01 23 21.8 -0.3**
comp=Z,37nm,0.6s
NACB Ninganchiao 44.55 314 *e*P **P** **01 23 24.6 +0.4**
comp=Z,59nm,0.9s
TPUB Ta-pu 44.71 312 *e*P **P** **01 23 25.1 -0.5**
comp=Z,39nm,0.6s
YHNB Yeheng 45.01 315 *e*P **P** **01 23 28.1 +0.2**
comp=Z,48nm,0.7s
KSM Kuching 45.30 278 *e*P **P** **01 23 30.3 0.0**
comp=Z,68nm,0.8s
KSM Kuching 45.30 278 P **P** **01 23 30.9 +0.6**
KSM Kuching 45.30 278 P **P** **01 23 31.1 +0.7**
baz=45,SNR=25
JNU Nakatsue 45.49 331 *e*P **P** **01 23 30.9 -0.7**
comp=Z,17nm,0.8s
JNU Nakatsue 45.49 331 P **P** **01 23 30.7 -0.9**
comp=Z,42nm,0.7s,baz=88,slow=2.5,SNR=16
JNU LR LR 01 38 58.7
comp=Z,149nm,20.2s,baz=325,slow=31
MJAR Matsushiro Arr 45.52 341 P **P** **01 23 30.5 -1.2**
MJAR Matsushiro Arr 45.52 341 P **P** **01 23 30.5 -1.2**
comp=Z,9.4nm,0.7s,baz=169,slow=8.1,SNR=19
MJAR LR LR 01 42 19.6
comp=Z,21nm,18.9s,baz=155,slow=36
MAJO Matsushiro 45.52 341 *e*P **P** **01 23 31.2 -0.5**
MAJO pmax pmax
comp=Z,18nm,0.6s
MAJO Matsushiro 45.52 341 *e*P **P** **01 23 31.2 -0.5**
comp=Z,18nm,0.6s
MAT Matsushiro 45.52 341 P **P** **01 23 29.6 -2.1**
MAT S S 01 30 00.6 -6.1
CISI Cisompet, Garu 46.84 266 P **P** **01 23 45.0 +2.5**
baz=47,SNR=4.6
LEM Lembang 47.06 267 P **P** **01 23 45.2 +0.9**
baz=47,SNR=4.7
KSRS Korea Array 50.41 332 P **P** **01 24 09.1 -0.3**
comp=Z,14nm,0.6s,baz=148,slow=8.1,SNR=51
KSRS LR LR 01 44 41.0
comp=Z,76nm,20.4s,baz=159,slow=35
KSAR Wonju Array Be 50.42 332 P **P** **01 24 09.1 -0.4**
YUK Yuzh-Kuril'sk 50.87 352 P P 01 24 17.0 +4.3
YUK MLR MLR
comp=Z,259nm,20.0s
INCN Inchon 51.05 331 *e*P **P** **01 24 14.4 +0.2**
comp=Z,62nm,0.6s
QIZ Qiongzhong 51.16 301 P **P** **01 24 16.4 +1.0**
QIZ sP **sP** **01 24 46.2 -2.5**
QIZ S **S** **01 31 30.2 +3.5**
QIZ sS **sS** **01 32 01.7 -4.1**
QIZ pmax pmax
comp=Z,53nm,0.9s
QIZ pmax pmax
comp=Z,73nm,6.0s
QIZ LR LR
comp=N,92nm,18.9s
QIZ LR LR
comp=Z,200nm,32.8s
NJ2 Nanjing 51.46 320 *e*P **P** **01 24 18.0 +0.7**
NJ2 PP **PP** **01 26 18.1 +2.5**
NJ2 S S 01 31 25.0 -5.4
NJ2 pmax pmax
comp=Z,40nm,1.0s
NJ2 pmax pmax
comp=Z,110nm,9.4s
NJ2 LR LR
comp=N,250nm,29.3s
NJ2 LR LR
comp=E,520nm,18.4s
NJ2 LR LR
comp=Z,270nm,22.9s
ASAJ Asahikawa 51.51 349 P **P** **01 24 18.5 +1.0**
ASAJ Asahikawa 51.51 349 P **P** **01 24 18.5 +1.0**
comp=Z,35nm,0.6s,baz=218,slow=9.2,SNR=14
ASAJ LR LR 01 45 56.3
comp=Z,200nm,18.4s,baz=2.3,slow=36
MYKOM Kota Tinggi 51.71 277 P **P** **01 24 20.2 +0.7**
KGM Kluang 52.27 278 P **P** **01 24 24.4 +0.6**
KTGM Kuala Trenggan 53.07 282 P **P** **01 24 29.8 +0.2**
WHN Wuhan 53.52 316 P **P** **01 24 32.6 0.0**
WHN *e*S S 01 32 05.4 +6.9
WHN LR LR
comp=Z,500nm,23.5s
VLA Vladivostok 53.56 339 ⇓*e*P **P** **01 24 32.0 -0.6**
VLA *e*S S 01 31 51.8 -6.9
VLA pmax pmax
comp=Z,74nm,1.3s
FRIM Kepong 54.15 279 P **P** **01 24 37.6 +0.1**
YSS Yuzh-Sakhalins 54.21 350 *e*P **P** **01 24 38.3 +1.0**
YSS pmax pmax
comp=Z,40nm,0.8s
USRK Ussuriysk Arra 54.47 340 P **P** **01 24 39.1 -0.1**
comp=Z,20nm,0.7s,baz=171,slow=7.4,SNR=31
USRK sP **sP** **01 25 10.6 -2.2**
comp=Z,7.9nm,1.0s,baz=149,slow=7.9,SNR=2.4
USRK LR LR 01 44 22.2
comp=Z,120nm,21.2s,baz=280,slow=32
DL2 Dalian 54.66 328 P **P** **01 24 40.8 +0.1**
DL2 pmax pmax
comp=Z,66nm,0.8s
PPI Padang Panjang 54.80 274 P **P** **01 24 41.5 -0.7**
baz=55,SNR=13
IPM Ipoh 54.96 280 *e*P **P** **01 24 42.8 -0.6**
comp=Z,62nm,0.9s
IPM Ipoh 54.96 280 P **P** **01 24 43.4 0.0**
PPT Papeete 55.16 107 LR LR 01 43 09.2
comp=Z,153nm,18.4s,baz=301,slow=30
PPT2 Papeete2 55.16 107 *e*S **S** **01 32 18.5 -2.8**
comp=Z,141nm,27.8s
PPT2 *e*LR LR 01 40 56.8
comp=Z,272nm,28.2s
TIAR Tiarei 55.38 107 *e*P **P** **01 24 46.8 +0.4**
comp=Z,58nm,0.8s
MDJ Mudanjiang 55.69 338 P **P** **01 24 48.0 0.0**
MDJ pP **pP** **01 25 09.7 -1.4**
MDJ sP **sP** **01 25 20.0 -1.6**
MDJ PP **PP** **01 26 53.8 +0.4**
MDJ ScP **ScP** **01 29 37.0 +0.1**
MDJ PcS **PcS** **01 29 46.3 -0.2**
MDJ pmax pmax
comp=Z,19nm,1.3s
MDJ pmax pmax
comp=Z,51nm,6.1s
MDJ LR LR
comp=N,220nm,35.1s
MDJ LR LR
comp=E,160nm,41.8s
MDJ LR LR
comp=Z,100nm,28.4s
TBI Tubuai 55.91 114 *e*S **S** **01 32 29.4 -1.5**
comp=Z,146nm,31.5s
TBI *e*LR LR 01 41 21.0
comp=Z,912nm,30.5s
SNY Shenyang 55.92 332 ⇓P **P** **01 24 49.5 -0.2**
SNY pP **pP** **01 25 10.1 -2.8**
SNY S S 01 32 36.5 +6.2
SNY pmax pmax
comp=Z,9.0nm,0.7s
SNY pmax pmax
comp=Z,95nm,3.5s
SNY LR LR
comp=N,150nm,22.5s
SNY LR LR
comp=E,120nm,29.4s
SNY LR LR
comp=Z,210nm,35.2s
PMOR Pomariorio Ree 56.63 104 *e*P **P** **01 24 55.5 +0.3**
comp=Z,98nm,0.9s
CN2 Changchun 56.65 335 *e*P **P** **01 24 54.4 -0.5**
CN2 *e*pP **pP** **01 25 19.0 +0.9**
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
PSI Prapat 56.73 278 P **P** **01 24 54.6 -1.6**
PSI Prapat 56.73 278 P **P** **01 24 54.6 -1.6**
comp=Z,11nm,0.6s,baz=98,slow=9.2,SNR=11
PSI LR LR 01 49 48.1
comp=Z,124nm,19.8s,baz=218,slow=36
PSI Prapat 56.73 278 P **P** **01 24 55.6 -0.6**
baz=57,SNR=5.6
SKR Severo-Kuril's 56.85 1 *e*P **P** **01 24 54.4 -1.7**
GYA Guiyang 57.10 307 ⇑*i*P **P** **01 24 58.9 +0.3**
GYA pP **pP** **01 25 23.0 +1.2**
GYA sP **sP** **01 25 32.3 +0.1**
GYA PcP **PcP** **01 25 52.9 +0.5**
GYA PP **PP** **01 27 10.0 +3.5**
GYA ScP **ScP** **01 29 42.1 -1.7**
GYA S **S** **01 32 45.6 -1.1**
GYA sS **sS** **01 33 25.4 -1.1**
GYA SS **SS** **01 36 37.0 -0.2**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,610nm,19.8s
GYA LR LR
comp=E,560nm,20.4s
GYA LR LR
comp=Z,590nm,19.9s
HABR Khabarovsk 57.38 344 P **P** **01 24 58.8 -1.1**
HABR *e*SP sP 01 25 53.3 +20
HABR *e* 01 27 07.1
HABR *e*S S 01 32 42.3 -7.0
HABR *e*SS **SS** **01 36 35.0 -5.5**
COCO West Island 57.61 260 *i*P **P** **01 25 04.6 +2.4**
BJI Beijing 58.43 326 P **P** **01 25 08.1 +0.7**
BJI S **S** **01 33 05.6 +2.2**
BJI pmax pmax
comp=Z,22nm,0.7s
BJI pmax pmax
comp=Z,98nm,5.5s
BJI LR LR
comp=N,140nm,38.8s
BJI LR LR
comp=E,87nm,36.4s
BJI LR LR
comp=Z,160nm,39.1s
KLR Kul'dur 59.00 342 *e*P P 01 25 07.8 -3.4
PET Petropavlovsk 59.27 3 *e*P **P** **01 25 13.9 +0.9**
PET *e*PP **pP** **01 25 35.7 -0.6**
PET *e*S **S** **01 33 12.5 -1.2**
PET pmax pmax
comp=Z,76nm,0.7s
XAN Xi'an 59.28 316 P **P** **01 25 13.2 -0.4**
XAN pmax pmax
comp=Z,11nm,0.8s
XAN LR LR
comp=N,71nm,26.6s
XAN LR LR
comp=E,63nm,33.8s
XAN LR LR
comp=Z,52nm,29.7s
PETK Petropavlovsk- 59.32 2 P **P** **01 25 14.4 +1.1**
PETK Petropavlovsk- 59.32 2 P **P** **01 25 14.4 +1.1**
PETK Petropavlovsk- 59.32 2 P **P** **01 25 14.4 +1.1**
comp=Z,43nm,0.7s,baz=177,slow=10.0,SNR=102
PETK LR LR 01 46 42.0
comp=Z,146nm,20.2s,baz=179,slow=32
KMI Kunming 59.69 304 P **P** **01 25 16.7 0.0**
KMI sP **sP** **01 25 50.3 -0.2**
KMI S **S** **01 33 21.5 +0.8**
KMI pmax pmax
comp=Z,25nm,0.9s
KMI LR LR
comp=N,83nm,21.1s
KMI LR LR
comp=E,200nm,28.5s
KMI LR LR
comp=Z,230nm,25.3s
CMAR Chiang Mai Arr 60.53 295 P **P** **01 25 23.8 +1.4**
CMAR ⇑*e* 01 54 53.5
CMAR Chiang Mai Arr 60.53 295 P **P** **01 25 23.8 +1.4**
comp=Z,69nm,0.8s,baz=116,slow=5.0,SNR=252
CMAR LR LR 01 50 51.0
comp=Z,58nm,21.9s,baz=115,slow=35
CMAR PKP2bc 01 54 53.5
comp=Z,0.7nm,0.3s,baz=284,slow=4.3,SNR=6.1
CHTO Chiang Mai 60.65 296 *e*P **P** **01 25 24.0 +0.9**
CHTO pmax pmax
comp=Z,60nm,1.0s
CHTO Chiang Mai 60.65 296 *e*P **P** **01 25 24.0 +0.9**
comp=Z,60nm,1.0s
FX1 Attu Island--F 61.03 12 *e*P **P** **01 25 26.7 +1.7**
FX1 Attu Island--F 61.03 12 P **P** **01 25 26.4 +1.3**
comp=Z,137nm,0.5s,baz=193,slow=3.2,SNR=118
CD2 Chengdu 61.43 310 P **P** **01 25 30.2 +1.9**
CD2 pP **pP** **01 25 53.6 +1.8**
CD2 sP **sP** **01 26 04.3 +2.1**
CD2 PcP **PcP** **01 26 10.9 +1.3**
CD2 PP **PP** **01 27 48.8 +4.1**
CD2 PcS **PcS** **01 30 12.5 -0.2**
CD2 S **S** **01 33 42.5 +0.1**
CD2 sS **sS** **01 34 23.0 +0.4**
CD2 SS **SS** **01 37 46.5 +1.5**
CD2 pmax pmax
comp=Z,60nm,0.5s
CD2 pmax pmax
comp=Z,70nm,5.4s
CD2 LR LR
comp=N,150nm,18.6s
CD2 LR LR
comp=E,250nm,23.5s
CD2 LR LR
comp=Z,190nm,22.5s
HHC Hu-ho-hao-te 61.62 324 *e*P **P** **01 25 29.9 +0.5**
HHC pP **pP** **01 25 52.7 -0.2**
HHC sP **sP** **01 26 02.3 -1.0**
HHC PcP **PcP** **01 26 10.7 +0.6**
HHC PP **PP** **01 27 47.8 +1.6**
HHC ScP **ScP** **01 30 00.9 -2.6**
HHC S **S** **01 33 43.9 -0.6**
HHC sS **sS** **01 34 24.6 -0.1**
HHC ScS **SKKSac** **01 35 09.0 -3.4**
HHC SS **SS** **01 37 47.2 -0.4**
HHC pmax pmax
comp=Z,46nm,0.7s
HHC pmax pmax
comp=Z,140nm,4.8s
HHC LR LR
comp=N,370nm,19.2s
HHC LR LR
comp=E,340nm,19.2s
HHC LR LR
comp=Z,370nm,19.2s
LZH Lanzhou 63.89 315 *e*P **P** **01 25 45.1 +0.4**
LZH pP **pP** **01 26 09.0 +0.6**
LZH sP **sP** **01 26 20.1 +1.4**
LZH PP **PP** **01 28 10.0 +3.6**
LZH *e*S **S** **01 34 12.1 -1.2**
LZH sS **sS** **01 34 54.2 +0.4**
LZH pmax pmax
comp=Z,45nm,1.5s
LZH pmax pmax
comp=Z,120nm,7.1s
LZH LR LR
comp=N,250nm,17.0s
LZH LR LR
comp=E,220nm,18.1s
LZH LR LR
comp=Z,350nm,19.6s
CASY Casey 67.17 198 *e*P **P** **01 26 04.9 -0.1**
comp=Z,27nm,1.3s
UNV Unalaska Valle 68.17 23 *e*P **P** **01 26 11.8 +0.3**
comp=Z,20nm,0.5s
GTA Gaotai 68.31 317 *e*P **P** **01 26 14.1 +1.2**
GTA pmax pmax
comp=Z,32nm,1.0s
ULN Ulaanbaatar 68.50 327 *e*P **P** **01 26 14.2 +0.3**
comp=Z,27nm,0.8s
SONM Songino Array 68.84 327 P **P** **01 26 16.5 +0.5**
SONM ⇑*e* 01 54 30.6
SONM Songino Array 68.84 327 P **P** **01 26 16.5 +0.5**
comp=Z,29nm,0.7s,baz=136,slow=5.7,SNR=206
SONM PKP2bc 01 54 30.6
comp=Z,1.9nm,1.0s,baz=306,slow=2.3,SNR=7.9
SONM LR LR 01 54 32.7
comp=Z,80nm,21.5s,baz=314,slow=34
SHL Shillong 69.00 300 *e*PKP **P** **01 26 18.0 +0.5**
SEY Seymchan 69.16 359 *c i*P **P** **01 26 17.6 +0.2**
RKT Rikitea 69.16 112 *e*LR LR 01 47 28.4
comp=Z,460nm,30.2s
LSA Lhasa 70.94 304 P **P** **01 26 30.4 +0.7**
YAK Yakutsk 70.97 348 *e*P **P** **01 26 27.4 -1.1**
YAK pmax pmax
comp=Z,30nm,1.0s
VNDA Vanda 71.18 178 *e*P **P** **01 26 30.2 +0.6**
comp=Z,13nm,0.8s
VNDA Vanda 71.18 178 P **P** **01 26 30.3 +0.6**

comp=Z,10nm,0.8s,baz=331,slow=6.5,SNR=76
SBA Scott Base 71.69 177 *e*P **P 01 26 34.4 +1.7**
SBA pmax pmax
comp=Z,17nm,1.0s
SBA Scott Base 71.69 177 *e*P **P 01 26 34.4 +1.7**
comp=Z,17nm,1.0s
SDPT Sand Point 71.70 25 *e*P **P 01 26 33.0 -0.1**
comp=Z,22nm,0.5s
ZAK Zakamensk 71.99 328 *e*P **P 01 26 35.0 -0.1**
ZAK pmax pmax
comp=Z,35nm,0.8s
TLY Talaya 72.55 329 *e*P **P 01 26 38.5 +0.2**
TLY *e* 01 36 21.7
TLY pmax pmax
comp=Z,16nm,0.9s
TAPN Taplejung 73.10 301 *e*P **P 01 26 43.0 +0.6**
comp=Z,76nm,0.7s
CHGN Chignik 73.21 25 *e*P **P 01 26 41.7 -0.3**
ODAN Odare 73.23 300 *e*P **P 01 26 43.6 +0.5**
comp=Z,196nm,0.7s
MIR Mirnyy 73.25 202⇓*i*P **P 01 26 44.0 +1.9**
MIR *e* 01 26 53.0
MIR pmax pmax
comp=Z,81nm,1.5s
MOY Mondy 73.91 328 *e*P **P 01 26 46.6 +0.2**
RAMN Ramite 73.94 300 *e*P **P 01 26 47.9 +0.6**
comp=Z,36nm,0.5s
GAMB Gambell 74.34 15 *e*P **P 01 26 49.5 +1.1**
comp=Z,9.4nm,0.7s
BILL Bilibino 74.68 4*c i*P **P 01 26 51.5 +1.1**
BILL *i* 01 27 02.7
BILL *i* 01 29 44.9
BILL *e*S **S 01 36 22.7 +4.0**
BILL pmax pmax
comp=Z,75nm,0.7s
BILL Bilibino 74.68 4 *e*P **P 01 26 51.4 +1.0**
comp=Z,67nm,0.8s
GUN Gumba 74.82 301 *e*P **P 01 26 52.5 0.0**
comp=Z,108nm,0.6s
PKI Pulchoki 75.13 301 *e*P **P 01 26 54.0 -0.2**
comp=Z,30nm,0.5s
PKIN Phulchoki 75.14 301 *e*P **P 01 26 54.0 -0.2**
KKN Kakani 75.29 301 *e*P **P 01 26 55.1 0.0**
comp=Z,53nm,0.5s
PALK Pallekele 75.35 279 *e*P **P 01 26 55.8 +0.4**
comp=Z,61nm,0.8s
DMN Daman 75.39 301 *e*P **P 01 26 56.0 +0.3**
comp=Z,93nm,0.6s
OHAK Old Harbor 75.98 26 *e*P **P 01 26 58.7 +0.7**
comp=Z,48nm,0.8s
KDAK Kodiak Island 76.62 26 *e*P **P 01 27 02.5 +0.8**
comp=Z,39nm,0.8s
KDAK Kodiak Island 76.62 26 P **P 01 27 02.4 +0.7**
comp=Z,41nm,0.8s,baz=224,slow=3.3,SNR=44
KOLN Koldanda 76.73 300 *e*P **P 01 27 02.8 -0.4**
comp=Z,46nm,0.7s
DANN Dangsing 76.74 301 *e*P **P 01 27 02.7 -0.6**
comp=Z,56nm,0.6s
TNA Tin City 76.74 15 *e*P **P 01 27 02.9 +0.8**
comp=Z,8.5nm,0.8s
PYUN Piuthan 77.33 301 *e*P **P 01 27 06.0 -0.6**
comp=Z,71nm,0.9s
HVS Khovu-Aksy 77.60 326*c i*P **P 01 27 07.7 +0.3**
HVS pmax pmax
comp=Z,278nm,1.1s
RSO Redoubt South 78.14 24 *e*P **P 01 27 10.0 -0.3**
comp=Z,41nm,0.7s
WMQ Urumqi 78.39 317 P **P 01 27 12.3 +0.4**
WMQ pP **pP 01 27 37.5 +1.1**
WMQ sP **sP 01 27 48.3 +1.7**
WMQ PP **PP 01 30 12.7 +2.2**
WMQ S **S 01 36 58.1 -2.2**
WMQ SKS **SKSac 01 37 12.7 -5.6**
WMQ sS **sS 01 37 41.8 -0.3**
WMQ pmax pmax
comp=Z,28nm,0.5s
WMQ pmax pmax
comp=Z,120nm,3.4s
WMQ LR LR
comp=N,91nm,25.4s
WMQ LR LR
comp=E,140nm,24.0s
WMQ LR LR
comp=Z,100nm,24.0s
HYB Hyderabad 79.08 289 *i*P **P 01 27 14.0 -2.2**
SEW Seward 79.28 25 *e*P **P 01 27 17.1 +0.8**
comp=Z,36nm,0.8s
TIXI Tiksi 79.76 352*d i*P **P 01 27 18.5 -0.2**
TIXI pmax pmax
comp=Z,5.0nm,0.5s
PPLA Purkeypile 79.81 22 *e*P **P 01 27 19.5 +0.1**
comp=Z,11nm,0.7s
PMR Palmer 80.24 24 *e*P **P 01 27 21.9 +0.5**
PMR pmax pmax
comp=Z,48nm,0.8s
PMR Palmer 80.24 24 *e*P **P 01 27 21.9 +0.5**
comp=Z,48nm,0.8s
SML Sawmill 80.67 24 *e*P **P 01 27 25.0 +1.1**
SML pmax pmax
comp=Z,23nm,0.8s
SML Sawmill 80.67 24 *e*P **P 01 27 25.0 +1.1**
comp=Z,23nm,0.8s
TRF Thorofare Moun 80.84 22 *e*P **P 01 27 24.1 -0.8**
comp=Z,39nm,0.7s
DIV Divide 81.37 25 *e*P **P 01 27 28.4 +0.8**
comp=Z,42nm,0.8s
MCK McKinley 81.50 22 *e*P **P 01 27 28.0 -0.2**
MCK pmax pmax
comp=Z,56nm,0.8s
MCK McKinley 81.50 22 *e*P **P 01 27 28.0 -0.2**
comp=Z,56nm,0.8s
COLA College 82.52 21 *e*P **P 01 27 32.7 -0.7**
COLA pmax pmax
comp=Z,30nm,0.8s
COLA College 82.52 21 *e*P **P 01 27 32.7 -0.7**
comp=Z,30nm,0.8s
ILAR Eielson Array 82.81 22 P **P 01 27 34.4 -0.6**
ILAR PKKPbc **PKKPbc 01 45 58.6 -2.9**
ILAR Eielson Array 82.81 22 P **P 01 27 34.4 -0.6**
comp=Z,13nm,0.7s,baz=246,slow=5.2,SNR=118
ILAR PKKPbc **PKKPbc 01 45 58.6 -2.9**
comp=Z,0.3nm,0.6s,baz=351,slow=1.9,SNR=5.9
ILAR LR LR 02 02 16.9
comp=Z,285nm,19.2s,baz=56,slow=34
MK31 Makanchi Array 82.96 319 *i*P **P 01 27 35.8 -0.4**
MK31 pmax pmax
comp=Z,51nm,0.8s
MK31 Makanchi Array 82.96 319 *e*P **P 01 27 36.0 -0.2**
MKAR Makanchi Array 82.96 319*ce*P **P 01 27 36.4 +0.2**
MKAR pmax pmax
comp=Z,51nm,0.7s
MKAR Makanchi Array 82.96 319 P **P 01 27 36.1 -0.1**
MKAR PKKPbc **PKKPbc 01 45 58.0 -2.4**
MKAR Makanchi Array 82.96 319 P **P 01 27 36.1 -0.1**
comp=Z,51nm,0.7s,baz=102,slow=5.4,SNR=417
MKAR PKKPbc **PKKPbc 01 45 58.0 -2.4**
comp=Z,0.5nm,0.8s,baz=299,slow=1.2,SNR=4.9
MKAR LR LR 02 05 15.9
comp=Z,51nm,18.0s,baz=171,slow=36
COLD Coldfoot 83.04 19 *e*P **P 01 27 37.3 +1.2**
comp=Z,8.0nm,0.7s
MENT Mentasta 83.10 24 *e*P **P 01 27 37.4 +0.8**
DOT Dot Lake 83.31 23 *e*P **P 01 27 38.1 +0.4**
comp=Z,27nm,0.8s
PNL Peninsula 83.51 28 *e*P **P 01 27 39.8 +1.1**
comp=Z,83nm,0.9s
ZAA0 Zalesovo Array 83.69 326 *e*P **P 01 27 38.8 -0.9**
ZALV Zalesovo Beam 83.69 326 P **P 01 27 38.5 -1.2**
ZALV Zalesovo Beam 83.69 326 P **P 01 27 38.5 -1.2**
ZALV Zalesovo Beam 83.69 326 P **P 01 27 38.5 -1.2**
comp=Z,30nm,0.7s,baz=110,slow=5.5,SNR=120
ZALV LR LR 02 05 15.2
comp=Z,49nm,18.1s,baz=77,slow=36
NVS Novosibirsk 84.86 327 *e*P **P 01 27 43.1 -2.5**
NVS pmax pmax
comp=Z,30nm,1.3s
NVS pmax pmax
comp=N,10.0nm,1.5s
NVS pmax pmax
comp=E,17nm,1.4s
MAW Mawson 84.95 203 *e*P **P 01 27 46.4 +0.6**
comp=E,7.3nm,0.6s
MAW Mawson 84.95 203 P **P 01 27 46.4 +0.6**
comp=E,29nm,0.6s,baz=94,slow=6.1,SNR=131
MAW Mawson 84.95 203 P **P 01 27 46.7 +0.8**
baz=85,SNR=67

EGAK Eagle 84.96 23 *e*P **P 01 27 46.9 +1.0**
comp=E,39nm,0.9s
SKAG Skagway 85.34 29 *e*P **P 01 27 49.1 +1.2**
comp=E,12nm,0.6s
KSH Kashi 85.63 310 P **P 01 27 52.1 +2.1**
KSH pP **pP 01 28 17.1 +2.3**
KSH sP **sP 01 28 28.1 +3.2**
KSH PP **PP 01 31 13.1 +2.9**
KSH SKS **SKSac 01 38 05.0 -2.2**
KSH S **SKKSac 01 38 12.9 -1.5**
KSH sS **sS 01 38 57.9 +0.6**
KSH SS **SS 01 43 53.4 +0.3**
KSH pmax pmax
comp=Z,30nm,0.8s
KSH pmax pmax
comp=Z,280nm,5.2s
KSH LR LR
comp=N,170nm,4.9s
KSH LR LR
comp=E,90nm,3.9s
KSH LR LR
comp=Z,93nm,5.5s
WRAK Wrangell Islan 85.83 32 *e*P **P 01 27 51.8 +1.4**
comp=Z,30nm,1.2s
KURK Kurchatov 86.37 322*c i*P **P 01 27 52.2 -0.9**
KURK pmax pmax
comp=Z,4.0nm,0.4s
KURK Kurchatov 86.37 322 *e*P **P 01 27 51.9 -1.3**
comp=Z,6.9nm,0.4s
KURK PKKPbc **PKKPbc 01 45 50.2 -2.3**
KURK Kurchatov 86.37 322 P **P 01 27 52.3 -0.9**
comp=Z,94nm,0.4s,SNR=23
KURBB Kurchatov Arra 86.40 322 P **P 01 27 52.1 -1.3**
comp=Z,5.2nm,0.6s,baz=104,slow=4.6,SNR=98
KURBB PKKPbc **PKKPbc 01 45 50.2 -2.2**
comp=Z,0.2nm,0.4s,baz=290,slow=2.7,SNR=7.6
TKM2 Tokmak 2 86.61 314 P **P 01 27 54.1 -0.8**
TKM2 pmax pmax
comp=Z,6.0nm,0.6s
TKM2 Tokmak 2 86.61 314 *e*P **P 01 27 53.8 -1.0**
comp=Z,6.9nm,0.6s
BBB Bella Bella 87.04 37 LR LR 01 59 32.4
comp=Z,166nm,20.2s,baz=263,slow=30
AAK Ala-Archa 87.35 313*d i*P **P 01 27 58.9 +0.5**
AAK pmax pmax
comp=Z,12nm,0.7s
AAK Ala-Archa 87.35 313 *e*P **P 01 27 58.4 +0.1**
comp=Z,6.9nm,0.8s
DLBC Dease Lake 87.62 31 *e*P **P 01 28 00.6 +1.4**
DLBC Dease Lake 87.62 31 P **P 01 28 00.6 +1.4**
comp=Z,25nm,0.9s,baz=260,slow=3.9,SNR=38
DLBC LR LR 01 59 12.2
comp=Z,140nm,21.2s,baz=61,slow=30
EKS2 Erkin-Say 87.87 313 *e*P **P 01 28 01.1 +0.2**
EKS2 pmax pmax
comp=Z,5.0nm,0.6s
EKS2 Erkin-Say 87.87 313 *e*P **P 01 28 01.1 +0.2**
comp=Z,4.7nm,0.6s
HUMO Hull Mountain 88.45 47 *e*P **P 01 28 04.8 +1.4**
comp=Z,4.4nm,0.6s
YBH Yreka Blue Hor 88.48 48 P **P 01 28 04.7 +1.0**
YBH Yreka Blue Hor 88.48 48 P **P 01 28 04.7 +1.0**
comp=Z,6.4nm,0.9s,baz=272,slow=3.1,SNR=12
YBH LR LR 02 01 09.0
comp=Z,369nm,20.6s,baz=330,slow=31
INK Inuvik 89.16 21 P **P 01 28 06.6 +0.5**
INK Inuvik 89.16 21 P **P 01 28 06.6 +0.5**
comp=Z,4.8nm,0.5s,baz=268,slow=3.7,SNR=45
BEKR Beckworth 89.95 50 *e*P **P 01 28 12.0 +1.2**
comp=Z,5.8nm,1.0s
KBL Kabul 90.27 305 *e*P **P 01 28 11.5 -0.9**
KBL pmax pmax
comp=Z,5.0nm,0.7s
KBL Kabul 90.27 305 *e*P **P 01 28 11.4 -0.9**
comp=Z,5.3nm,0.7s
MOD Modoc 90.28 48 *e*P **P 01 28 13.6 +1.4**
comp=Z,13nm,0.9s
KKAR Karatay Array 90.31 313 *e*P **P 01 28 11.4 -0.8**
KKAR pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 90.31 313 *e*P **P 01 28 11.4 -0.8**
comp=Z,2.3nm,0.7s
VES Vestal, Richgr 90.40 54⇑P **P 01 28 13.9 +1.2**
baz=90
CIS Catalina Islan 90.64 57⇑P **P 01 28 15.2 +1.3**
baz=91
ISA Isabella 90.87 54⇓P **P 01 28 16.4 +1.4**
baz=91
MWC Mount Wilson 91.03 56 *e*P **P 01 28 17.0 +1.1**
MWC pmax pmax
comp=Z,12nm,0.6s
MWC Mount Wilson 91.03 56 *e*P **P 01 28 17.0 +1.1**
comp=Z,12nm,0.6s
CWC Cottonwood Cre 91.28 54⇓P **P 01 28 18.4 +1.5**
baz=91
NVAR Mina Array Bea 91.34 52 P **P 01 28 18.7 +1.4**
NVAR Mina Array Bea 91.34 52 P **P 01 28 18.7 +1.4**
comp=Z,14nm,0.8s,baz=253,slow=6.4,SNR=38
NVAR LR LR 02 01 03.0
comp=Z,143nm,21.2s,baz=23,slow=30
BFSC Mount Baldy Ra 91.36 56⇑P **P 01 28 18.6 +1.2**
baz=92
VOSK Vostochnaya 91.42 323 P **P 01 28 14.8 -2.3**
VOSK pmax pmax
comp=Z,8.0nm,0.8s
NV11 Mina Array Sit 91.46 52 *e*P **P 01 28 19.1 +1.3**
DAC Darwin (Calif) 91.65 54 *e*P **P 01 28 19.5 +0.8**
DAC pmax pmax
comp=Z,24nm,1.0s
DAC Darwin (Calif) 91.65 54 *e*P **P 01 28 19.5 +0.8**
comp=Z,24nm,1.0s
109C Camp Elliot, M 91.66 57⇑P **P 01 28 20.0 +1.4**
baz=92
MURC Murrieta 91.66 57⇑P **P 01 28 20.2 +1.6**
baz=92
MPMC Manual Prospec 91.71 54⇓P **P 01 28 20.2 +1.2**
baz=92,SNR=14
BVA0 Borovoye Array 91.82 323 *i*P **P 01 28 16.7 -2.2**
BVA0 pmax pmax
comp=Z,2.0nm,0.8s
BVAR Borovoye Array 91.82 323 P **P 01 28 17.0 -1.9**
BVAR Borovoye Array 91.82 323 P **P 01 28 17.0 -1.9**
BVAR Borovoye Array 91.82 323 P **P 01 28 17.0 -1.9**
comp=Z,5.4nm,0.4s,baz=106,slow=4.8,SNR=48
BRVK Borovoye 91.89 323*c i*P **P 01 28 18.1 -1.1**
BRVK pmax pmax
comp=Z,13nm,1.0s
BRVK Borovoye 91.89 323 *e*P **P 01 28 17.6 -1.5**
comp=Z,5.0nm,0.5s
GRAC Grapevine Rang 91.91 53⇓P **P 01 28 21.4 +1.6**
baz=92
GSC Goldstone 92.18 55 *e*P **P 01 28 21.3 +0.2**
GSC pmax pmax
comp=Z,4.0nm,0.7s
GSC Goldstone 92.18 55 *e*P **P 01 28 21.3 +0.2**
comp=Z,3.7nm,0.7s
GSC Goldstone 92.18 55⇓P **P 01 28 21.9 +0.9**
baz=92
MONP Monument Peak 92.23 57⇓P **P 01 28 23.0 +1.4**
baz=92,SNR=7.7
FURC Furnace Creek, 92.26 54⇑P **P 01 28 22.6 +1.4**
baz=92,SNR=18
PFO Pinyon Flat Ob 92.28 57 P **P 01 28 23.3 +1.7**
comp=Z,92nm,0.7s,SNR=5.5
PFO Pinyon Flat Ob 92.28 57 *e*P **P 01 28 23.4 +1.7**
comp=Z,10.0nm,0.7s
PFO Pinyon Flat Ob 92.28 57⇓P **P 01 28 22.8 +1.1**
baz=92
BMN Battle Mountai 92.41 50 *e*P **P 01 28 23.6 +1.5**
BMN pmax pmax
comp=Z,14nm,1.0s
BMN Battle Mountai 92.41 50 *e*P **P 01 28 23.6 +1.5**
comp=Z,14nm,1.0s
HEC Hector,Ludlow 92.51 55⇓P **P 01 28 24.0 +1.4**
baz=93
SHOC Shoshone 92.67 54⇑P **P 01 28 24.4 +1.2**
baz=93,SNR=6.0
BELC Belle Mtn. Jos 92.70 56⇑P **P 01 28 24.9 +1.3**
baz=93,SNR=16
SWSC Sam W. Stewart 92.76 57⇓P **P 01 28 24.8 +1.1**
baz=93
BMO Blue Mountains 92.82 45 *e*P **P 01 28 23.9 +0.1**
BMO pmax pmax
comp=Z,5.0nm,0.8s
BMO Blue Mountains 92.82 45 *e*P **P 01 28 23.9 +0.1**
comp=Z,4.6nm,0.8s
SYO Syowa Base 92.89 199⇓*e*P **P 01 28 22.0 -1.5**

TUQ Turquoise Moun 92.91 55⇑P **P 01 28 25.7 +1.2**
baz=93
GMRC Granite Mounta 93.06 56⇓P **P 01 28 26.4 +1.2**
baz=93,SNR=17
BC3 Big Chuckawall 93.12 57⇓P **P 01 28 26.9 +1.4**
baz=93,SNR=7.4
NEW Newport 93.31 42 *e*P **P 01 28 25.8 -0.1**
comp=Z,3.5nm,0.6s
NEW Newport 93.31 42 P **P 01 28 25.8 -0.1**
comp=Z,6.3nm,0.6s,baz=266,slow=5.2,SNR=12
NEW LR LR 02 03 09.8
comp=Z,406nm,21.7s,baz=351,slow=31
NEW Newport 93.31 42⇑P **P 01 28 26.0 +0.1**
baz=93,SNR=6.7
IRM Iron Mountain 93.42 56⇓P **P 01 28 27.4 +0.6**
baz=94,SNR=11
R11A Troy Canyon, C 93.46 52⇓P **P 01 28 28.4 +1.3**
baz=94,SNR=20
GLA Glamis 93.58 57 *e*P **P 01 28 29.6 +2.1**
GLA pmax pmax
comp=Z,14nm,0.9s
GLA Glamis 93.58 57 *e*P **P 01 28 29.6 +2.1**
comp=Z,14nm,0.9s
GLA Glamis 93.58 57⇓P **P 01 28 29.3 +1.7**
baz=94
MFID Camas Ranch 93.74 47⇑P **P 01 28 28.7 +0.6**
baz=94
C11A Tepee Creek (N 93.84 42⇓P **P 01 28 28.9 +0.5**
baz=94
ELK Elko 93.94 50 *e*P **P 01 28 30.4 +1.1**
comp=Z,7.4nm,1.1s
G12A Big Creek, Yel 94.25 45⇓P **P 01 28 30.4 -0.1**
baz=94
PDMCI Parker Dam,Lak 94.26 56⇑P **P 01 28 32.4 +1.8**
baz=94,SNR=5.3
F12A Elk City 94.35 45⇑P **P 01 28 31.9 +1.0**
baz=94
D12A Red Ives Fores 94.39 43⇑P **P 01 28 31.3 +0.3**
baz=94
H12A Diamond D Ranc 94.53 46⇑P **P 01 28 32.0 +0.2**
baz=95
W13A Hualapai Mount 94.54 55⇑P **P 01 28 33.5 +1.4**
baz=95,SNR=17
HLID Hailey 94.78 47 *e*P **P 01 28 33.9 +0.9**
comp=Z,1.8nm,0.6s
HLID Hailey 94.78 47⇓P **P 01 28 33.8 +0.9**
baz=95
BSMT Bassoo Peak 94.83 43 *e*P **P 01 28 33.7 +0.6**
comp=Z,3.8nm,1.0s
H13A Challis 94.97 46⇑P **P 01 28 34.4 +0.7**
baz=95
F13A Darby 95.00 45⇓P **P 01 28 34.2 +0.3**
baz=95
D13A Huson 95.00 43⇓P **P 01 28 33.7 -0.1**
baz=95
G13A Cobalt 95.02 45⇓P **P 01 28 34.4 +0.4**
baz=95
I13A Wildhorse Cree 95.02 47⇓P **P 01 28 34.3 +0.2**
baz=95
B13A Whitefish 95.08 42⇑P **P 01 28 34.7 +0.6**
baz=95
ARUT Antelope Range 95.10 53 *e*P **P 01 28 34.7 +0.1**
ARUT pmax pmax
comp=Z,8.0nm,0.4s
ARUT Antelope Range 95.10 53 *e*P **P 01 28 34.6 +0.1**
comp=Z,7.7nm,0.4s
CCUT Cedar City 95.14 53 *e*P **P 01 28 36.4 +1.6**
comp=Z,4.0nm,0.7s
A13A Flathead Natio 95.15 41⇓P **P 01 28 35.0 +0.6**
baz=95
I14A Mackay 95.50 47⇑P **P 01 28 37.1 +0.8**
baz=96
YKW3 Yellowknife Ar 95.80 28 *e*P **P 01 28 37.5 +0.6**
comp=Z,0.4nm,0.8s
YKW3 *e*pP pP 01 28 53.7 -8.3
YKA Yellowknife Ar 95.80 28 P **P 01 28 37.8 +0.8**
YKA PKiKP **PKiKP 01 33 15.4 -0.3**
YKA PKKPbc **PKKPbc 01 45 25.2 -3.6**
YKA Yellowknife Ar 95.80 28 P **P 01 28 37.7 +0.8**
comp=Z,12nm,0.5s,baz=265,slow=4.5,SNR=365
YKA PKiKP **PKiKP 01 33 15.4 -0.3**
comp=Z,0.6nm,0.7s,baz=253,slow=1.1,SNR=8.2
YKA PKKPbc **PKKPbc 01 45 25.2 -3.6**
comp=Z,1.0nm,0.7s,baz=88,slow=2.9,SNR=20
A14A Double T Ranch 95.81 41⇓P **P 01 28 38.1 +0.6**
baz=96
U15A North Rim 95.92 54⇓P **P 01 28 40.1 +1.6**
baz=96
H15A Lima 96.12 46⇑P **P 01 28 39.9 +0.8**
baz=96
MSU Marysvale 96.14 52 *e*P **P 01 28 41.4 +2.0**
MSU pmax pmax
comp=Z,3.0nm,1.2s
MSU Marysvale 96.14 52 *e*P **P 01 28 41.4 +2.0**
comp=Z,3.5nm,1.2s
E15A Deer Lodge 96.21 44⇑P **P 01 28 40.0 +0.7**
baz=96
G15A Dillon 96.25 45⇑P **P 01 28 40.1 +0.4**
baz=96
F16A Kennard Place, 96.89 45⇓P **P 01 28 43.2 +0.8**
baz=97
Q16A Castle Valley 96.94 52⇓P **P 01 28 43.6 +0.6**
baz=97
A16A West Butte Ran 97.01 42⇓P Pdif 01 28 43.3 +0.4
baz=97
H16A Russell Place, 97.12 46⇓P Pdif 01 28 44.2 +0.5
baz=97
P17A Butcher Ranch, 97.30 51⇓P Pdif 01 28 45.3 +0.7
baz=97
SRU San Rafael 97.46 51⇓P **P 01 28 45.1 -0.1**
baz=98
C17A Wharram Farm, 97.53 43⇑P **P 01 28 44.9 -0.3**
baz=98
F17A Fitzpatrick Pl 97.56 45⇑P Pdif 01 28 46.2 +0.6
baz=98
D17A Six Diamond Ra 97.57 43⇑P Pdif 01 28 46.0 +0.4
baz=98
A17A Triple J Farms 97.60 42⇑P Pdif 01 28 45.9 +0.3
baz=98
S18A Hurst Farm, Bl 97.82 53⇑P Pdif 01 28 47.5 +0.4
baz=98
K18A Toltan Ranch, 97.93 48⇑P Pdif 01 28 48.0 +0.6
baz=98
J18A Kendall Valley 97.96 47⇓P Pdif 01 28 47.7 +0.2
baz=98
E18A Harlowton 98.09 44⇓Pdiff Pdif 01 28 48.4 +0.5
baz=98
ABKAR Akbulak array 98.11 319 *e*P **P 01 28 45.5 -2.1**
comp=Z,0.7nm,0.4s
A18A Metzger Ranch, 98.16 42⇑Pdiff **P 01 28 48.1 +0.1**
baz=98
F18A Big Timber 98.22 45⇑Pdiff Pdif 01 28 48.9 +0.4
baz=98
H18A Shoshone NF, C 98.24 46⇓Pdiff Pdif 01 28 49.5 +0.7
baz=98
PDAR Pinedale Array 98.29 48 P **P 01 28 48.8 -0.2**
PDAR PKiKP **PKiKP 01 33 21.9 +0.7**
PDAR Pinedale Array 98.29 48 P **P 01 28 48.8 -0.2**
comp=Z,3.4nm,0.9s,baz=248,slow=2.4,SNR=21
PDAR PKiKP **PKiKP 01 33 21.9 +0.7**
comp=Z,0.8nm,0.7s,baz=191,slow=2.8,SNR=3.9
G18A Lazy EL Ranch, 98.32 45⇓Pdiff Pdif 01 28 49.7 +0.7
baz=98
O19A Miners Draw (B 98.57 50⇑Pdiff Pdif 01 28 50.7 +0.5
baz=99
P19A Cripple Cowboy 98.67 51⇓Pdiff Pdif 01 28 51.2 +0.5
baz=99
I19A Meeteetse 98.72 47⇓Pdiff Pdif 01 28 51.6 +0.7
baz=99
B19A Brinkman Farms 98.76 42⇑Pdiff Pdif 01 28 51.5 +0.8
baz=99
F19A Roth Farm, Mol 98.76 45⇓Pdiff Pdif 01 28 51.6 +0.8
baz=99
D19A Cripps Ranch, 98.81 43⇑Pdiff Pdif 01 28 51.8 +0.8
baz=99
Z20A Nine Sixteen R 98.81 58⇓Pdiff **P 01 28 50.9 -0.5**
baz=99
K19A Absolon Red Bu 98.81 48⇓Pdiff Pdif 01 28 51.4 +0.1
baz=99
ARU Arti 98.85 326*d i*P **P 01 28 49.1 -1.7**
ARU 01 32 51.1
ARU pmax pmax
comp=Z,4.0nm,1.0s
E19A Rath Farm, Rou 98.87 44⇑Pdiff Pdif 01 28 51.6 +0.3
baz=99
P20A De Beque 99.12 51⇑Pdiff **Pdif 01 28 53.6 +0.9**
baz=99
L20A Wamsutter 99.18 49⇑Pdiff **Pdif 01 28 53.4 +0.4**

baz=99
Q20A Ridgley Place, 99.19 52 ⇓Pdiff **Pdif 01 28 53.9 +0.9**
baz=99
N20A Spence Gulch, 99.23 50 ⇓Pdiff **Pdif 01 28 53.7 +0.5**
baz=99
O20A White River Ci 99.24 50 ⇑Pdiff **Pdif 01 28 54.0 +0.8**
baz=99
M20A Sweetwater, Wa 99.30 49 ⇓Pdiff **Pdif 01 28 53.5 0.0**
baz=99
D20A Manuel Ranch, 99.32 43 ⇓Pdiff **Pdif 01 28 53.7 +0.5**
baz=99
E20A Meyer Farm, Mu 99.33 44 ⇓Pdiff **Pdif 01 28 53.9 +0.6**
baz=99
C20A Veseth Ranch, 99.40 43 ⇑Pdiff **Pdif 01 28 54.1 +0.5**
baz=100
Q21A Lamborn Mesa, 99.75 52 ⇓Pdiff **Pdif 01 28 56.6 +1.1**
baz=100
N21A Black Mountain 99.80 50 ⇓Pdiff **Pdif 01 28 56.4 +0.6**
baz=100
Q22A Crested Butte, 100.27 52 ⇓Pdiff **Pdif 01 28 59.1 +1.1**
baz=100
U22A Llaves 100.31 54 ⇓Pdiff **Pdif 01 28 59.1 +1.0**
baz=100
S22A 4UR Ranch, Cre 100.33 53 ⇑Pdiff **Pdif 01 28 59.3 +1.1**
baz=100
P22A Eagle 100.38 51 ⇓Pdiff **Pdif 01 28 59.7 +1.3**
baz=100
M22A Cedar Creek Ra 100.49 49 ⇓Pdiff **Pdif 01 28 59.8 +1.0**
baz=101
O22A Kremmling 100.54 50 ⇑Pdiff **Pdif 01 29 00.0 +0.9**
baz=101
N22A Wattenberg Ran 100.61 50 ⇑Pdiff **Pdif 01 28 59.8 +0.4**
baz=101
H22A Clearmont 100.61 46 ⇑Pdiff **Pdif 01 28 59.7 +0.6**
baz=101
F22A Rosebud 100.64 45 ⇓Pdiff **Pdif 01 28 59.9 +0.8**
baz=101
SNAA Sanae 100.74 187 *e*P **Pdif 01 28 59.2 +0.1**
SNAA Sanae 100.74 187 *e*Pdif **Pdif 01 28 58.9 -0.2**
comp=Z,3.0nm,0.8s
F23A Volborg 101.24 45 ⇓Pdiff **Pdif 01 29 02.3 +0.5**
baz=101
ISCO Idaho Springs 101.27 51 ⇑Pdiff **Pdif 01 29 02.9 +0.5**
baz=101
G23A Biddle 101.27 45 ⇓Pdiff **Pdif 01 29 02.9 +0.9**
baz=101
E23A Ismay 101.28 44 ⇓Pdiff **Pdif 01 29 02.9 +0.9**
baz=101
C23A Lambert 101.30 43 ⇑Pdiff **Pdif 01 29 02.7 +0.7**
baz=101
D23A Lindsay 101.31 43 ⇑Pdiff **Pdif 01 29 02.8 +0.7**
baz=101
RES Resolute Bay 101.38 15 *e*Pdif **Pdif 01 29 02.1 +0.4**
RES Resolute Bay 101.38 15 P **Pdif 01 29 00.6 -1.1**
comp=Z,1.6nm,0.8s,baz=53,slow=1.2,SNR=4.7
H24A Dirks Ranch, A 101.89 46 ⇓Pdiff **Pdif 01 29 04.8 +0.1**
baz=102
VNA2 Neumayer--Watz 101.95 186 *e*P **Pdif 01 29 04.7 +0.3**
E24A Baker 101.96 44 ⇓Pdiff **Pdif 01 29 05.4 +0.4**
baz=102
S25A Robets Cordova 102.23 53 ⇑Pdiff **Pdif 01 29 07.4 +0.8**
baz=102
U25A Circle Dot Ran 102.28 54 ⇓Pdiff **Pdif 01 29 07.7 +0.9**
baz=102
FFC Flin Flon 102.71 35 *e*P **Pdif 01 29 08.9 +0.9**
FFC Flin Flon 102.71 35 *e*Pdif **Pdif 01 29 08.9 +0.9**
V26A Tequesquite Ra 102.80 55 ⇑Pdiff **Pdif 01 29 09.9 +0.8**
baz=103
Q26A Hugo 102.91 52 ⇓Pdiff **Pdif 01 29 10.9 +1.4**
baz=103
T26A Comanche Natio 102.92 53 ⇓Pdiff **Pdif 01 29 11.0 +1.4**
baz=103
R26A Arlington 102.99 52 ⇑Pdiff **Pdif 01 29 11.0 +1.1**
baz=103
S26A Kim 103.00 53 ⇓Pdiff **Pdif 01 29 11.3 +1.4**
baz=103
530A J-C Ranch, Com 104.98 61 ⇓Pdiff 01 33 33.7
baz=105
430A Baggett Ranch, 105.06 60 ⇑Pdiff 01 33 33.8
baz=105
330A Mertzon 105.09 59 ⇓Pdiff 01 33 33.4
baz=105
X30A Coker Ranch, T 105.23 56 ⇑Pdiff 01 33 33.8
baz=105
431A Sonora 105.60 60 ⇓Pdiff 01 33 34.2
baz=106
631A Perdido Creek 105.66 61 ⇑Pdiff 01 33 34.9
baz=106
531A Rocksprings 105.67 61 ⇓Pdiff 01 33 35.0
baz=106
331A San Angelo 105.73 59 ⇑Pdiff 01 33 34.8
baz=106
Y31A Rekieta Farm, 105.76 57 ⇑Pdiff 01 33 34.8
baz=106
231A Bronte 105.81 59 ⇓Pdiff 01 33 34.9
baz=106
Z31A Sharp Cattle R 105.89 57 ⇑Pdiff 01 33 35.4
baz=106
T31A Randall Ranch, 106.04 53 ⇑Pdiff 01 33 35.6
baz=106
732A Laxson Ranch, 106.21 62 ⇑Pdiff 01 33 35.8
baz=106
JCT Junction City 106.30 60 *e*PKP **PKiKP 01 33 35.7 -0.1**
JCT Junction City 106.30 60 ⇑Pdiff 01 33 35.7
baz=106
332A Millersview 106.32 59 ⇓Pdiff 01 33 35.7
baz=106
632A Uvalde 106.35 61 ⇓Pdiff 01 33 35.9
baz=106
232A Coleman 106.38 59 ⇓Pdiff 01 33 36.1
baz=106
Y32A R-V Farms, Ver 106.44 57 ⇓Pdiff 01 33 36.2
baz=106
Z32A Haskell 106.45 57 ⇓Pdiff 01 33 36.2
baz=106
BGNE Belgrade 106.83 49 ⇑Pdiff 01 33 36.7
baz=107
ECSD EROS Data Cent 107.66 46 *e*PKP **PKiKP 01 33 37.3 -0.6**
ARCES ARCESS Array B 109.02 343 Pdif **Pdif 01 29 35.2 -0.6**
ARCES PKiKP **PKiKP 01 33 39.6 -0.1**
ARCES PKKPbc **PKKPbc 01 44 46.6 -3.5**
ARCES ARCESS Array B 109.02 343 Pdiff **Pdif 01 29 35.2 -0.6**
comp=Z,2.3nm,1.0s,baz=64,slow=6.1,SNR=3.5
ARCES PKiKP **PKiKP 01 33 39.6 -0.1**
comp=Z,3.0nm,0.7s,baz=13,slow=0.8,SNR=10
ARCES PKKPbc **PKKPbc 01 44 46.6 -3.5**
comp=Z,1.5nm,0.6s,baz=264,slow=2.2,SNR=12
TUL1 Tulsa 109.27 54 ⇓Pdiff 01 33 41.5
baz=109
KIV Kislovodsk 110.43 315 *i* PKiKP **PKiKP 01 33 40.3 -2.9**
KIV pmax pmax
comp=Z,3.0nm,0.9s
JOF Joensuu 110.53 336 *ep* PKKPbc 01 44 37.9 -7.2
comp=Z,1.9nm,0.6s
MIAR Mount Ida 111.23 56 *e*PKiKP **PKiKP 01 33 45.0 +0.2**
MIAR Mount Ida 111.23 56 *e*PKP **PKiKP 01 33 45.0 +0.2**
JFWS Jewell Farm 112.38 46 *e*PKiKP **PKiKP 01 33 45.8 -1.0**
JFWS Jewell Farm 112.38 46 *e*PKP **PKiKP 01 33 45.8 -1.0**
KAF Kangasniemi 112.94 337 *ep* **PKKPbc 01 44 33.1 -4.0**
comp=Z,2.7nm,0.6s
FINES FINESS Array B 113.39 336 Pdif **Pdif 01 29 53.6 -1.8**
FINES PKiKP **PKiKP 01 33 47.8 -0.4**
FINES PKKPbc **PKKPbc 01 44 32.8 -2.7**
FINES PKKPab **PKKPab 01 44 40.6 -0.1**
FINES FINESS Array B 113.39 336 Pdiff **Pdif 01 29 53.6 -1.8**
comp=Z,1.3nm,0.9s,baz=74,slow=4.9,SNR=3.3
FINES PKiKP **PKiKP 01 33 47.8 -0.4**
comp=Z,1.3nm,0.5s,baz=11,slow=1.9,SNR=10
FINES PKKPbc **PKKPbc 01 44 32.8 -2.7**
comp=Z,1.2nm,0.4s,baz=187,slow=2.0,SNR=14
FINES PKKPab **PKKPab 01 44 40.6 -0.1**
comp=Z,2.4nm,0.6s,baz=142,slow=4.3,SNR=8.3
OLIL Olney 114.87 50 *e*PKP PKPdf 01 33 51.6 0.0
SFIN Scholer Farm 115.25 48 ⇑Pdiff **PKPdf 01 33 52.6 +0.2**
baz=115
WVT Waverly 115.61 53 *e*PKiKP **PKPdf 01 33 52.4 -0.8**
WVT Waverly 115.61 53 *e*PKPdf **PKPdf 01 33 52.4 -0.8**
WCI Wyandotte Cave 116.36 50 *e*PKiKP **PKPdf 01 33 54.4 -0.2**
WCI Wyandotte Cave 116.36 50 *e*PKPdf **PKPdf 01 33 54.4 -0.2**
LRAL Lakeview Retre 116.87 56 *e*PKPdf **PKPdf 01 33 55.5 -0.2**
AKASG Malin Array Be 117.06 325 *c i* PKiKP **PKPdf 01 33 55.0 -0.5**
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 117.06 325 PKP **PKPdf 01 33 54.6 -0.9**
AKASG PKKPbc **PKKPbc 01 44 20.7 -1.8**
AKASG Malin Array Be 117.06 325 PKP **PKPdf 01 33 54.6 -0.9**
comp=Z,4.0nm,0.6s,baz=54,slow=2.5,SNR=18
AKASG PKKPbc **PKKPbc 01 44 20.7 -1.8**
comp=Z,1.5nm,0.4s,baz=260,slow=4.2,SNR=7.5
AK01 Malin Array Si 117.07 325 *e*PKPdf **PKPdf 01 33 54.9 -0.6**
KIEV Kiev 117.07 325 *e*PKiKP **PKPdf 01 33 54.5 -1.0**
KIEV Kiev 117.07 325 *e*PKPdf **PKPdf 01 33 54.5 -1.0**
AK02 Malin Array Si 117.09 325 *e*PKPdf **PKPdf 01 33 54.9 -0.6**
PLCA Paso Flores 117.19 142 PKP **PKPdf 01 33 55.2 -1.0**
PLCA *e*PKPdf **PKiKP 01 33 56.2 -0.1**
PLCA PP **PP 01 35 07.8 +0.7**
PLCA Paso Flores 117.19 142 PKP **PKPdf 01 33 55.2 -1.0**
comp=Z,1.7nm,0.7s,baz=325,slow=2.2,SNR=7.2
PLCA PP **PP 01 35 07.8 +0.7**
comp=Z,1.8nm,0.7s,baz=344,slow=7.5,SNR=4.0
SWET Sewanee 117.31 54 *e*PKPdf **PKPdf 01 33 55.3 -1.2**
KMBO Kilima Mbogo 117.42 265 PKP **PKPdf 01 33 56.5 -1.1**
KMBO *e*PKPdf **PKiKP 01 33 58.1 +0.5**
KMBO Kilima Mbogo 117.42 265 PKP **PKPdf 01 33 56.5 -1.1**
comp=Z,1.8nm,0.9s,baz=4.2,slow=3.0,SNR=4.2
BR131 Keskin Array S 117.99 312 *e*PKPdf **PKPdf 01 33 56.6 -1.2**
BRTR Keskin Array B 117.99 312 PKP **PKPdf 01 33 57.0 -0.9**
BRTR PP **PP 01 35 13.0 -0.3**
BRTR PKKPbc **PKKPbc 01 44 18.9 -0.1**
BRTR Keskin Array B 117.99 312 PKP **PKPdf 01 33 57.0 -0.9**
comp=Z,1.8nm,0.6s,baz=130,slow=2.7,SNR=14
BRTR PP **PP 01 35 13.0 -0.3**
comp=Z,1.4nm,0.9s,baz=97,slow=6.3,SNR=5.4
BRTR PKKPbc **PKKPbc 01 44 18.9 -0.1**
comp=Z,0.5nm,0.5s,baz=213,slow=5.4,SNR=4.8
ACSO Alum Creek Sta 118.33 48 *e*PKPdf **PKPdf 01 33 58.0 -0.2**
SUW Suwalki 118.71 330 *e*PKP **PKPdf 01 33 58.7 +0.1**
TKL Tuckaleechee C 118.93 53 *e*PKPdf **PKPdf 01 33 59.6 +0.1**
NB2 NORSAR Subarra 119.14 341 PKPdf **PKPdf 01 33 58.6 -0.7**
comp=Z,1.9nm,0.6s,baz=41,slow=1.9
NOA NORSAR Array B 119.14 341 PKP **PKPdf 01 33 58.6 -0.7**
NOA PKKPbc **PKKPbc 01 44 13.8 -1.7**
NOA NORSAR Array B 119.14 341 PKP **PKPdf 01 33 58.6 -0.7**
comp=Z,2.2nm,0.6s,baz=46,slow=2.0,SNR=14
NOA PKKPbc **PKKPbc 01 44 13.8 -1.7**
comp=Z,1.2nm,0.6s,baz=214,slow=4.8,SNR=7.3
NAO01 NORSAR Array S 119.39 341 *e*PKPdf **PKPdf 01 34 00.1 +0.4**
CSS Prodhromos 119.45 307 *e*PKPdf **PKPdf 01 34 00.3 -0.3**
TLCR 119.55 319 ⇓*i*P **PKPdf 01 34 01.0 +0.6**
ERPA Erie 119.88 45 *e*PKPdf **PKPdf 01 34 00.8 -0.3**
CFR Carcaliu 120.00 319 ⇓*i*P **PKPdf 01 34 01.4 +0.1**
TIGA Tifton 120.01 57 ⇑Pdiff **PKPdf 01 34 02.1 +0.3**
baz=120
BOSA Boshof 120.40 232 *e*PKPdf **PKPdf 01 34 02.8 0.0**
BOSA PKKPbc **PKKPbc 01 44 09.7 -0.2**
BOSA Boshof 120.40 232 PKP **PKPdf 01 34 02.8 0.0**
comp=Z,8.8nm,0.6s,baz=117,slow=2.7,SNR=43
BOSA PKKPbc **PKKPbc 01 44 09.7 -0.2**
comp=Z,3.0nm,0.9s,baz=102,slow=9.4,SNR=5.8
JTS JuntasAbangare 120.62 82 *e*PKPdf **PKPdf 01 34 03.1 -0.3**
BUR08 Bucovina Ar. S 120.78 323 *e*PKPdf **PKPdf 01 34 03.6 +0.7**
BURAR Bucovina Array 120.78 323 ⇓*i*P **PKPdf 01 34 04.2 +1.3**
KMSC Kings Mountain 120.99 53 ⇑Pdiff **PKPdf 01 34 04.0 +0.5**
baz=121
BLA Blacksburg 121.12 50 *e*PKiKP **PKPdf 01 34 03.4 -0.4**
BLA Blacksburg 121.12 50 *e*PKPdf **PKPdf 01 34 03.4 -0.4**
SCHQ Schefferville 121.24 27 PKP **PKPdf 01 34 03.0 -0.4**
SCHQ pPKP **pPKPdf 01 34 27.7 -1.8**
SCHQ Schefferville 121.24 27 PKP **PKPdf 01 34 03.0 -0.4**
comp=Z,3.4nm,0.6s,baz=338,slow=6.8,SNR=7.7
SCHQ pPKP **pPKPdf 01 34 27.7 -1.8**
comp=Z,1.6nm,0.5s,baz=219,slow=16,SNR=1.9
KWP Kalwaria Pacla 121.26 326 *e*PKiKP **PKPdf 01 34 03.2 -0.5**
KWP Kalwaria Pacla 121.26 326 *e*PKPdf **PKPdf 01 34 03.2 -0.5**
KWP Kalwaria Pacla 121.26 326 ⇓*i*P **PKPdf 01 34 04.1 +0.5**
JSC Jenkinsville 121.27 54 *e*PKiKP **PKPdf 01 34 04.5 +0.4**
JSC Jenkinsville 121.27 54 *e*PKPdf **PKPdf 01 34 04.5 +0.4**
SECR 121.39 320 ⇓*i*P **PKPdf 01 34 04.9 +0.9**
LBTB Lobatse 121.73 236 *e*PKPdf **PKPdf 01 34 05.6 +0.2**
SUR Sutherland 121.82 226 *e*PKPdf **PKPdf 01 34 06.7 +1.1**
KOLS Kolonicke sedl 121.86 325 *e*PKiKP **PKPdf 01 34 05.2 +0.4**
KOLS Kolonicke sedl 121.86 325 *e*PKP **PKPdf 01 34 05.2 +0.4**
SSPA Standing Stone 121.88 46 *e*PKPdf **PKPdf 01 34 04.5 -0.6**
GKP Gorka Klasztor 122.03 332 *e*PKP **PKPdf 01 34 05.5 +0.5**
ARR Arges 122.16 321 ⇓*i*P **PKPdf 01 34 06.9 +1.3**
CRVS Cervenica-Dubn 122.33 326 *e*PKiKP **PKPdf 01 34 04.7 -1.0**
CRVS Cervenica-Dubn 122.33 326 *e*PKP **PKPdf 01 34 04.7 -1.0**
OJC Ojcow 122.53 328 *e*PKiKP **PKPdf 01 34 06.1 0.0**
OJC Ojcow 122.53 328 *e*PKPdf **PKPdf 01 34 06.1 0.0**
NCB Newcomb 123.03 41 *e*PKPdf **PKPdf 01 34 06.9 -0.4**
SDMD Soldier's Deli 123.07 47 *e*PKPdf **PKPdf 01 34 07.3 -0.1**
LSZ Lusaka 123.08 247 *e*PKPdf **PKPdf 01 34 08.7 +0.5**
OKC Ostrava-Krasne 123.63 328 *e*PKiKP **PKPdf 01 34 08.7 +0.5**
OKC MLR MLR
comp=Z,500nm,18.4s
OKC Ostrava-Krasne 123.63 328 *e*PKPdf **PKPdf 01 34 08.7 +0.5**
ACCN Adirondack Com 123.66 41 *e*PKPdf **PKPdf 01 34 07.6 -0.8**
CNNC Cliffs of the 123.67 52 *e*PKPdf **PKPdf 01 34 08.7 0.0**
LCO Las Campanas 123.68 131 *e*PKPdf **PKPdf 01 34 09.4 +0.1**
PSZ Piszkesteto 123.74 325 *e*PKiKP **PKPdf 01 34 08.7 +0.2**
PSZ Piszkesteto 123.74 325 *e*PKPdf **PKPdf 01 34 08.7 +0.2**
TRY Troy 123.94 42 *e*PKPdf **PKPdf 01 34 09.6 +0.6**
TRQA Tornquist 123.97 145 *e*PKPdf **PKPdf 01 34 09.0 -0.3**
MORC Moravsky Berou 123.98 328 *e*PKiKP **PKPdf 01 34 08.7 -0.2**
MORC Moravsky Berou 123.98 328 *e*PKPdf **PKPdf 01 34 08.7 -0.2**
MORC Moravsky Berou 123.98 328 ⇑*i*P **PKPdf 01 34 09.5 +0.6**
VYHS Vyhne 124.02 326 *e*PKiKP **PKPdf 01 34 09.0 0.0**
VYHS Vyhne 124.02 326 *e*PKP **PKPdf 01 34 09.0 0.0**
KRLC Kraliky 124.20 329 *e*PKiKP **PKPdf 01 34 09.7 +0.4**
KRLC Kraliky 124.20 329 *e*PKPdf **PKPdf 01 34 09.7 +0.4**
DPC Dobruska-Polom 124.27 329 *e*PKiKP **PKPdf 01 34 10.2 +0.7**
DPC Dobruska-Polom 124.27 329 *e*PKPdf **PKPdf 01 34 10.2 +0.7**
VTS Vitosha 124.31 318 ⇓*i*P **PKPdf 01 34 10.1 +0.2**
LBNH Lisbon 124.38 40 *e*PKiKP **PKPdf 01 34 10.0 +0.2**
LBNH Lisbon 124.38 40 *e*PKPdf **PKPdf 01 34 09.9 +0.2**
HNH Hanover 124.41 40 *e*PKPdf **PKPdf 01 34 10.2 +0.4**
FFD Franklin Falls 124.92 40 *e*PKPdf **PKPdf 01 34 11.6 +0.8**
PVCC Panska Ves 125.04 330 *e*PKiKP **PKPdf 01 34 11.5 +0.7**
PVCC Panska Ves 125.04 330 *e*PKPdf **PKPdf 01 34 11.5 +0.7**
BRG Berggiesshubel 125.12 131 *e*PKP **PKPdf 01 34 11.6 +0.6**
comp=Z,8.7nm,0.8s
BRG Berggiesshubel 125.12 131 *e*PKiKP **PKPdf 01 34 11.6 +0.6**
BRG pmax pmax
comp=Z,9.0nm,0.8s
CLL Collm 125.29 332 *i* PKiKP **PKPdf 01 34 11.2 -0.1**
CLL pmax pmax
comp=Z,10.0nm,0.8s
CLL Collm 125.29 332 *i* PKPdf **PKPdf 01 34 11.2 -0.1**
comp=Z,10.0nm,0.8s
CLL *e*(sPKPdf) 01 34 45.0
CLL *e*PP **PP 01 36 06.0 +4.1**
CLL L L 02 27 00.0
comp=Z,100nm,20.0s
TREC Trest 125.34 329 *e*PKiKP **PKPdf 01 34 12.0 +0.5**
TREC Trest 125.34 329 *e*PKPdf **PKPdf 01 34 12.0 +0.5**
PKSM Moragy 125.38 324 ⇓*i*P **PKPdf 01 34 11.9 +0.3**
PRU Pruhonice 125.39 330 *e*PKiKP **PKPdf 01 34 11.8 +0.3**
PRU Pruhonice 125.39 330 *e*PKPdf **PKPdf 01 34 11.8 +0.3**
BCIP Isla Barro Col 125.63 83 *e*PKPdf **PKPdf 01 34 12.6 -0.4**
WES Weston 125.65 41 *e*PKiKP **PKPdf 01 34 12.7 +0.5**
WES Weston 125.65 41 *e*PKPdf **PKPdf 01 34 12.7 +0.5**
CONA Conrad Observa 125.97 327 ⇑*i*PKPdf **PKPdf 01 34 12.2 -0.6**
comp=Z,3.5nm,0.7s
NKC Novy Kostel 126.27 331 *e*PKiKP **PKPdf 01 34 13.8 +0.6**
NKC Novy Kostel 126.27 331 *e*PKPdf **PKPdf 01 34 13.8 +0.6**
OTAV Otavalo 126.32 94 *e*PKPdf **PKPdf 01 34 15.1 +0.2**
KHC Kasperske Hory 126.42 329 *e*PKiKP **PKPdf 01 34 13.6 0.0**
KHC Kasperske Hory 126.42 329 *e*PKPdf **PKPdf 01 34 13.6 0.0**
GERES GERESS Array B 126.54 329 PKP **PKPdf 01 34 14.3 +0.4**
GERES GERESS Array B 126.54 329 PKP **PKPdf 01 34 14.3 +0.4**
comp=Z,6.0nm,0.7s,baz=73,slow=1.6,SNR=70
KOGS Kog 126.63 325 *i* PKPdf **PKPdf 01 34 14.1 +0.1**
GVD Gavdhos 126.75 309 *e*PKPdf **PKPdf 01 34 14.4 -0.2**
PERS Pericles 127.15 326 *i* PKPdf **PKPdf 01 34 15.0 -0.1**
GRF Grafenberg Arr 127.22 331 *e*PKiKP **PKPdf 01 34 15.4 +0.3**
GRF Grafenberg Arr 127.22 331 *e*PKP **PKPdf 01 34 15.4 +0.3**
BOJS Bojanci 127.74 325 *e*PKPdf **PKPdf 01 34 16.7 +0.6**
LJU Ljubljana 127.83 326 *i* PKPdf **PKPdf 01 34 17.0 +0.6**
ABFA Abfaltersbach 128.49 328 ⇑*i*PKPdf **PKPdf 01 34 15.0 -2.7**
comp=Z,7.3nm,0.9s
WATA Walderalm 128.61 329 ⇑*i*PKiKP **PKPdf 01 34 18.1 +0.1**
comp=Z,5.4nm,0.6s
WTTA Wattenberg 128.62 329 ⇑*i*PKPdf **PKPdf 01 34 17.5 -0.5**
comp=Z,9.5nm,0.7s
STU Stuttgart 128.81 332 *e*PKiKP **PKPdf 01 34 18.6 +0.5**
STU Stuttgart 128.81 332 *e*PKPdf **PKPdf 01 34 18.6 +0.5**
MOTA Moosalm 128.84 329 ⇑*i*PKPdf **PKPdf 01 34 18.0 -0.4**
comp=Z,7.9nm,0.6s
FETA Feichten 129.25 329 ⇑*i*PKiKP **PKPdf 01 34 19.3 +0.1**
comp=Z,10nm,1.0s
WLF Walferdange 129.55 334 *e*PKiKP **PKPdf 01 34 21.0 +1.5**
WLF Walferdange 129.55 334 *e*PKPdf **PKPdf 01 34 20.9 +1.5**
GIVF Givet 129.78 335 *e*PKiKP **PKPdf 01 34 20.7 +0.8**
GIVF Givet 129.78 335 *e*PKiKP **PKPdf 01 34 20.7 +0.8**
GIVF Givet 129.78 335 *e*PKPdf **PKPdf 01 34 20.7 +0.8**
CDF Champ du Feu 129.97 332 *e*PKiKP **PKPdf 01 34 20.7 +0.2**
CDF Champ du Feu 129.97 332 *e*PKiKP **PKPdf 01 34 20.7 +0.2**
CDF Champ du Feu 129.97 332 *e*PKPdf **PKPdf 01 34 20.7 +0.2**
BAIF Baives 130.07 336 *e*PKiKP **PKPdf 01 34 21.4 +1.0**
BAIF Baives 130.07 336 *e*PKiKP **PKPdf 01 34 21.4 +1.0**
BAIF Baives 130.07 336 *e*PKPdf **PKPdf 01 34 21.4 +1.0**
TIP Timpagrande 130.23 317 *e*PKPdf **PKPdf 01 34 22.0 +0.8**
HINF Hinteralfeld 130.59 332 *e*PKiKP **PKPdf 01 34 21.9 +0.3**
HINF Hinteralfeld 130.59 332 *e*PKiKP **PKPdf 01 34 21.9 +0.3**
HINF Hinteralfeld 130.59 332 *e*PKPdf **PKPdf 01 34 21.9 +0.3**
AQU L'Aquila 130.66 323 *e*PKPdf **PKPdf 01 34 21.0 -0.9**
HAU Haudompre 130.69 333 *e*PKiKP **PKPdf 01 34 22.3 +0.5**
comp=Z,12nm,0.6s
HAU Haudompre 130.69 333 *e*PKiKP **PKPdf 01 34 22.3 +0.5**
HAU Haudompre 130.69 333 *e*PKPdf **PKPdf 01 34 22.3 +0.5**
ROSC El Rosal 130.89 89 PKP **PKPdf 01 34 23.7 +0.2**
ROSC El Rosal 130.89 89 PKP **PKPdf 01 34 23.7 +0.2**
comp=Z,14nm,0.5s,baz=96,slow=17,SNR=13
MEZF Maizieres J'vi 130.90 334 *e*PKiKP **PKPdf 01 34 22.6 +0.5**
comp=Z,21nm,0.8s
MEZF Maizieres J'vi 130.90 334 *e*PKPdf **PKPdf 01 34 22.6 +0.5**
TSUM Tsumeb 130.95 238 *e*PKPdf **PKPdf 01 34 23.5 +0.3**
LPAZ La Paz 131.74 118 PKPpre PKPpre 01 34 12.2
LPAZ *e*PKPpre PKPpre 01 34 16.7
LPAZ *e*PKPdf **PKiKP 01 34 26.2 -0.1**
LPAZ PKP **PKiKP 01 34 26.4 +0.1**
LPAZ La Paz 131.74 118 PKhKP PKPpre 01 34 12.2
comp=Z,1.0nm,0.5s,baz=0.6,slow=5.8,SNR=5.1
LPAZ PKP **PKiKP 01 34 26.4 +0.1**
comp=Z,3.3nm,0.5s,baz=348,slow=1.7,SNR=11
CABF La Chapelle 131.83 331 *e*PKiKP **PKPdf 01 34 25.2 +1.2**
comp=Z,9.8nm,0.7s
CABF La Chapelle 131.83 331 *e*PKiKP **PKPdf 01 34 25.2 +1.2**
CABF La Chapelle 131.83 331 *e*PKPdf **PKPdf 01 34 25.2 +1.2**
LPL La Plagne 132.30 330 *e*PKiKP **PKPdf 01 34 25.4 +0.3**
comp=Z,9.2nm,0.8s
LPL La Plagne 132.30 330 *e*PKiKP **PKPdf 01 34 25.4 +0.3**
LPL La Plagne 132.30 330 *e*PKPdf **PKPdf 01 34 25.4 +0.3**
LPG La Plagne 132.30 330 *e*PKiKP **PKPdf 01 34 25.4 +0.2**
comp=Z,12nm,0.8s
LPG La Plagne 132.30 330 *e*PKiKP **PKPdf 01 34 25.4 +0.2**
LPG La Plagne 132.30 330 *e*PKPdf **PKPdf 01 34 25.4 +0.2**
LOR Lormes 132.36 334 *e*PKiKP **PKPdf 01 34 25.3 +0.4**
comp=Z,12nm,0.8s
LOR Lormes 132.36 334 *e*PKPdf **PKPdf 01 34 25.3 +0.4**
SSF Saint Saulge 132.67 334 *e*PKiKP **PKPdf 01 34 25.8 +0.3**
comp=Z,8.6nm,0.8s
SSF Saint Saulge 132.67 334 *e*PKiKP **PKPdf 01 34 25.8 +0.3**
SSF Saint Saulge 132.67 334 *e*PKPdf **PKPdf 01 34 25.8 +0.3**
HYF Humbligny 132.89 334 *e*PKiKP **PKPdf 01 34 27.4 +1.5**
HYF Humbligny 132.89 334 *e*PKPdf **PKPdf 01 34 27.4 +1.5**
FLN La Foliniere 132.94 338 *e*PKiKP **PKPdf 01 34 26.9 +1.0**
comp=Z,10.0nm,0.7s
FLN La Foliniere 132.94 338 *e*PKiKP **PKPdf 01 34 26.9 +1.0**
FLN La Foliniere 132.94 338 *e*PKPdf **PKPdf 01 34 26.9 +1.0**
LDF La Druitiere 132.95 338 *e*PKiKP **PKPdf 01 34 26.9 +0.9**
LDF La Druitiere 132.95 338 *e*PKiKP **PKPdf 01 34 26.9 +0.9**
LDF La Druitiere 132.95 338 *e*PKPdf **PKPdf 01 34 26.9 +0.9**
AVF Avril sur Loir 132.95 334 *e*PKiKP **PKPdf 01 34 26.6 +0.6**
AVF Avril sur Loir 132.95 334 *e*PKiKP **PKPdf 01 34 26.6 +0.6**
AVF Avril sur Loir 132.95 334 *e*PKPdf **PKPdf 01 34 26.6 +0.6**
SBF Sospel 133.09 328 *e*PKiKP **PKPdf 01 34 26.1 -0.4**
SBF Sospel 133.09 328 *e*PKiKP **PKPdf 01 34 26.1 -0.4**
SBF Sospel 133.09 328 *e*PKPdf **PKPdf 01 34 26.1 -0.4**
PGF Pioggiola 133.11 326 *e*PKiKP **PKPdf 01 34 26.7 +0.1**
comp=Z,26nm,1.0s
PGF Pioggiola 133.11 326 *e*PKiKP **PKPdf 01 34 26.7 +0.1**
PGF Pioggiola 133.11 326 *e*PKPdf **PKPdf 01 34 26.7 +0.1**
ORIF Oris-en-Rattie 133.15 330 *e*PKiKP **PKPdf 01 34 26.7 +0.1**
comp=Z,24nm,0.9s
ORIF Oris-en-Rattie 133.15 330 *e*PKiKP **PKPdf 01 34 26.7 +0.1**
ORIF Oris-en-Rattie 133.15 330 *e*PKPdf **PKPdf 01 34 26.7 +0.1**
SDDR Presa de Saban 133.28 70 *e*PKPdf **PKPdf 01 34 27.8 +0.3**
BGF Bois d'Agland 133.35 334 *e*PKiKP **PKPdf 01 34 28.0 +1.2**
comp=Z,8.1nm,0.7s
BGF Bois d'Agland 133.35 334 *e*PKiKP **PKPdf 01 34 28.0 +1.2**
BGF Bois d'Agland 133.35 334 *e*PKPdf **PKPdf 01 34 28.0 +1.2**
GRR Gorron 133.39 338 *e*PKiKP **PKPdf 01 34 28.0 +1.2**
comp=Z,5.7nm,0.6s
GRR Gorron 133.39 338 *e*PKiKP **PKPdf 01 34 28.0 +1.2**
GRR Gorron 133.39 338 *e*PKPdf **PKPdf 01 34 28.0 +1.2**
VIVF Saint-Julien-l 133.78 331 *e*PKiKP **PKPdf 01 34 28.1 +0.4**
comp=Z,27nm,1.2s
VIVF Saint-Julien-l 133.78 331 *e*PKiKP **PKPdf 01 34 28.1 +0.4**
VIVF Saint-Julien-l 133.78 331 *e*PKPdf **PKPdf 01 34 28.1 +0.4**
TCF Toulx Ste Croi 133.84 334 *e*PKiKP **PKPdf 01 34 29.0 +1.2**
comp=Z,12nm,0.8s
TCF Toulx Ste Croi 133.84 334 *e*PKiKP **PKPdf 01 34 29.0 +1.2**
TCF Toulx Ste Croi 133.84 334 *e*PKPdf **PKPdf 01 34 29.0 +1.2**
LMR La Mourre 133.94 328 *e*PKiKP **PKPdf 01 34 28.9 +0.9**
comp=Z,14nm,0.8s
LMR La Mourre 133.94 328 *e*PKiKP **PKPdf 01 34 28.9 +0.9**
LMR La Mourre 133.94 328 *e*PKPdf **PKPdf 01 34 28.9 +0.9**
SMRF Simiane la Rot 133.97 329 *e*PKiKP **PKPdf 01 34 28.7 +0.6**
comp=Z,20nm,1.1s
SMRF Simiane la Rot 133.97 329 *e*PKPdf **PKPdf 01 34 28.7 +0.6**
SGMF Saint Gilles 134.12 339 *e*PKiKP **PKPdf 01 34 29.2 +1.0**
comp=Z,6.9nm,0.6s
SGMF Saint Gilles 134.12 339 *e*PKiKP **PKPdf 01 34 29.2 +1.0**
SGMF Saint Gilles 134.12 339 *e*PKPdf **PKPdf 01 34 29.2 +1.0**
MFF Saint Martin d 134.58 336 *e*PKiKP **PKPdf 01 34 30.3 +1.2**
comp=Z,14nm,0.9s
MFF Saint Martin d 134.58 336 *e*PKiKP **PKPdf 01 34 30.3 +1.2**
MFF Saint Martin d 134.58 336 *e*PKPdf **PKPdf 01 34 30.3 +1.2**
LASF Ste Croix 134.75 331 *e*PKiKP **PKPdf 01 34 31.0 +1.5**
comp=Z,23nm,1.1s
LASF Ste Croix 134.75 331 *e*PKPdf **PKPdf 01 34 31.0 +1.5**
CPUP Villa Florida 134.82 137 PKP **PKPdf 01 34 29.8 -0.3**
CPUP Villa Florida 134.82 137 PKP **PKPdf 01 34 29.8 -0.3**
comp=Z,2.6nm,0.6s,baz=257,slow=1.2,SNR=7.6
MTLF Montolieu 136.09 331 *e*PKiKP **PKPdf 01 34 32.6 +0.6**
comp=Z,17nm,1.2s
MTLF Montolieu 136.09 331 *e*PKiKP **PKPdf 01 34 32.6 +0.6**
MTLF Montolieu 136.09 331 *e*PKPdf **PKPdf 01 34 32.6 +0.6**
KEST Kesra 137.05 318 P

PCVE	**Castro Verde**	**145.28**	**336**	*e*PKP	**PKPab**	**01 34 49.1**	**+0.3**
PVAQ	**Vaqueiros**	**145.35**	**335**	*e*PKP	**PKPdf**	**01 34 48.8**	**0.0**
PTEO	**Sao Teotonio**	**145.63**	**337**	*e*PKP	**PKPab**	**01 34 50.8**	**+0.7**
MORF	**Marmelete**	**145.81**	**336**	*e*PKP	**PKPab**	**01 34 52.4**	**+1.6**
PFVI	**Vila Bisbo**	**146.03**	**337**	*e*PKP	**PKPab**	**01 34 52.7**	**+1.1**
TAM	**Tamanrasset**	**146.38**	**302**	*e*PKP2	**PKPdf**	**01 34 52.0**	**+0.8**
TAM	**Tamanrasset**	**146.38**	**302**	*e*PKPbc	**PKPdf**	**01 34 52.0**	**+0.8**
CAM4	**Nova Friburgo**	**146.65**	**149** ⇑	*i* P	**PKPdf**	**01 34 51.7**	**-0.1**
CAM4				*i*		01 34 55.3	
CAM4				*i*		01 34 58.9	
CAM4				*i*		01 35 05.3	
CAM4				*i*		01 35 11.2	
CAM4				*i*		01 35 42.2	
CAM4				*i*		01 35 52.3	
CAM4				*i*		01 35 55.0	
CAM4				*i*		01 37 20.7	
CAM4				*i*		01 37 30.2	
BDFB	**Brasilia**	**148.39**	**134**	PKP	**PKPdf**	**01 34 54.5**	**-0.2**
BDFB				PKPbc	**PKPbc**	**01 34 57.7**	**-0.5**
BDFB	**Brasilia**	**148.39**	**134**	PKP	**PKPdf**	**01 34 54.5**	**-0.2**
	comp=Z,11nm,0.4s,baz=196,slow=1.1,SNR=20						
BDFB				PKPbc	**PKPbc**	**01 34 57.7**	**-0.5**
	comp=Z,11nm,0.4s,baz=205,slow=2.2,SNR=23						
TOA0	**Torodi Ar. Sit**	**152.87**	**286**	*e*PKPdf	**PKPdf**	**01 35 00.9**	**-0.6**
TOA0				*e*PKPbc	**PKPbc**	**01 35 07.8**	**-0.9**
TOA0				*e*PKPab	**PKPab**	**01 35 20.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**152.87**	**286**	PKP	**PKPdf**	**01 35 00.6**	**-0.9**
TORD				PKPbc	**PKPbc**	**01 35 08.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**152.87**	**286**	PKP	**PKPdf**	**01 35 00.6**	**-0.9**
	comp=Z,3.4nm,0.8s,baz=38,slow=1.7,SNR=24						
TORD				PKPbc	**PKPbc**	**01 35 08.1**	**-0.7**
	comp=Z,25nm,0.7s,baz=78,slow=2.0,SNR=190						
DBIC	**Dimbokro**	**159.99**	**272**	*e*PKPab	**PKPab**	**01 35 50.5**	**-0.2**
DBIC	**Dimbokro**	**159.99**	**272**	PKPab	**PKPab**	**01 35 50.6**	**-0.2**
	comp=Z,23nm,0.8s,baz=81,slow=5.0,SNR=21						
LIC	**Lamto**	**160.15**	**271**	*e*PKIKP	**PKPdf**	**01 35 10.7**	**-0.3**
	comp=Z,9.4nm,0.8s						
LIC	**Lamto**	**160.15**	**271**	*e*PKPdf	**PKPdf**	**01 35 10.7**	**-0.3**
RCBR	**Riachuelo**	**163.70**	**138**	*e*PKPdf	**PKPdf**	**01 35 14.5**	**-0.1**
RCBR				*e*PKPab	**PKPab**	**01 36 07.0**	**+0.1**

ISK ***13*** *01:16:59.0, 36˚.04N×28˚.84E, h2km, MD2.7*
CSEM ***13*** *01:17:00.6±0.6, 36˚.03N×28˚.92E, h15km, MD2.7, Error ellipse: s-maj=13.7km s-min=7.7km az=3.0*

ISC 13 01:16:59.4±2.2, 36˚.0N±0˚.1×28˚.85E±0˚.05, h16km, n14, σ0s35/17, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.66**	**68**	*i* P	**Pb**	**01 17 12.6**	**0.0**
AKAS				*i* S	**Sn**	**01 17 24.7**	**+0.3**
AKAS	**Kas**	**0.66**	**68**	*i* P	**Pb**	**01 17 12.6**	**0.0**
FETY	**Fethiye**	**0.67**	**16**	*e*PG	**Pg**	**01 17 12.1**	**-0.6**
FETY				*e*SG	**Sb**	**01 17 21.8**	**-0.2**
FETY	**Fethiye**	**0.67**	**16**	*e*Pg	**Pg**	**01 17 12.1**	**-0.6**
FETY				*e*Sg	**Sb**	**01 17 21.8**	**-0.2**
TURN	**Turunc**	**0.91**	**347**	*i* P	**Pn**	**01 17 18.0**	**+0.5**
TURN	**Turunc**	**0.91**	**347**	*i* P	**Pn**	**01 17 18.0**	**+0.5**
YER	**Yerkesik**	**1.23**	**338**	*e*PN	**Pb**	**01 17 22.5**	**+0.1**
YER	**Yerkesik**	**1.23**	**338**	*e*Pn	**Pb**	**01 17 22.5**	**+0.1**
GLHS	**Glhisar (BURDU**	**1.28**	**24**	*e*PN	**Pb**	**01 17 23.6**	**+0.4**
GLHS	**Glhisar (BURDU**	**1.28**	**24**	*e*Pn	**Pb**	**01 17 23.6**	**+0.4**
MLSB	**Milas**	**1.57**	**327**	*e*PN	**Pb**	**01 17 28.2**	**+0.1**
MLSB	**Milas**	**1.57**	**327**	*e*Pn	**Pb**	**01 17 28.2**	**+0.1**
BODT	**Bodrum**	**1.64**	**311**	*e*PN	**Pb**	**01 17 29.3**	**0.0**
BODT	**Bodrum**	**1.64**	**311**	*e*Pn	**Pb**	**01 17 29.3**	**0.0**

NEIC ***13*** *01:31:17.6, 24˚.19S×67˚.30W, h220km, MG4.5(GUC), After GUC.*
GUC ***13*** *01:31:17.6±0.7, 24˚.19S×67˚.30W, h220km±41km, ML4.5*
ISCJB ***13*** *01:31:19.7±0.9, 24˚.2S±0˚.1×67˚.3W±0˚.1, h220km±11km, mb3.1/2, Error ellipse: s-maj=18.3km s-min=14.9km az=10.6*
IDC ***13*** *01:31:27.5±4.9, 23˚.38S×66˚.44W, h246km±27km, mb3.0/2, mb1 3.2/4, mb1mx3.0/16, mbtmp2.9/4, Error ellipse: s-maj=97.8km s-min=26.0km az=41.0*

ISC 13 01:31:20.2±1.0, 24˚.1S±0˚.1×67˚.3W±0˚.1, h223km±12km, n21, σ0s75/29, 6C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.11**	**315** ⇑	*e*P	**Pn**	**01 32 01.2**	**-0.7**
LVC				S	**S**	**01 32 33.8**	**-0.3**
LVC	**Limon Verde**	**2.11**	**315** ⇑	*e*P	**Pn**	**01 32 01.2**	**-0.7**
LVC				*e*S	**S**	**01 32 33.8**	**-0.3**
PB06	**Plate Boundary**	**2.52**	**303** ⇑	*i* P	**Pn**	**01 32 05.7**	**-0.3**
PB06				S	**S**	**01 32 40.7**	**-0.9**
PB06	**Plate Boundary**	**2.52**	**303** ⇑	*i* P	**Pn**	**01 32 05.7**	**-0.3**
PB06				*i* S	**S**	**01 32 40.7**	**-0.9**
PB06				AML	AML	01 32 43.3	
	comp=N,872nm,0.1s						
PB04	**Plate Boundary**	**2.73**	**312**	*e*P	Pn	01 32 12.8	+4.8
PB04				*e*S	S	01 32 54.4	+9.1
PB04				AML	AML	01 32 56.6	
	comp=N,470nm,0.6s						
CEN1	**Los Morros**	**2.76**	**284** ⇓	*e*P	**Pn**	**01 32 08.4**	**-0.2**
CEN1				*e*S	**S**	**01 32 47.0**	**+0.9**
CEN1	**Los Morros**	**2.76**	**284** ⇓	*e*P	**Pn**	**01 32 08.4**	**-0.2**
CEN1				*e*S	**S**	**01 32 47.0**	**+0.9**
CEN1				AML	AML	01 32 49.5	
	comp=N,495nm,0.5s						
ANCH	**Antofagasta**	**2.88**	**278**	*e*P	**Pn**	**01 32 09.4**	**-0.3**
ANCH				*i* S	**S**	**01 32 47.4**	**-1.0**
ANCH	**Antofagasta**	**2.88**	**278**	*e*P	**Pn**	**01 32 09.4**	**-0.3**
ANCH				*i* S	**S**	**01 32 47.4**	**-1.0**
ANCH				AML	AML	01 32 49.6	
	comp=N,1μm,0.1s						
PB09	**Plate Boundary**	**2.92**	**322**	*e*P	**Pn**	**01 32 10.5**	**0.0**
PB09				*e*S	**S**	**01 32 50.4**	**+0.8**
PB09	**Plate Boundary**	**2.92**	**322**	*e*P	**Pn**	**01 32 10.5**	**0.0**
PB09				*e*S	**S**	**01 32 50.4**	**+0.8**
PB09				AML	AML	01 32 55.6	
	comp=E,794nm,0.3s						
MECH	**Mejillones**	**3.06**	**288** ⇑	*i* P	**Pn**	**01 32 12.1**	**+0.3**
MECH				*i* S	**S**	**01 32 53.5**	**+1.4**
MECH	**Mejillones**	**3.06**	**288** ⇑	*i* P	**Pn**	**01 32 12.1**	**+0.3**
MECH				*i* S	**S**	**01 32 53.5**	**+1.4**
MECH				AML	AML	01 33 00.6	
	comp=N,477nm,0.2s						
PB11	**Plate Boundary**	**4.85**	**333**	P	Pn	01 32 27.7	-5.9
PB11	**Plate Boundary**	**4.85**	**333**	*e*P	Pn	01 32 27.7	-5.9
LPAZ	**La Paz**	**7.82**	**354**	P	**Pn**	**01 33 11.8**	**-0.1**
	comp=N,0.2nm,0.3s,baz=146,slow=6.4,SNR=6.4						
CPUP	**Villa Florida**	**9.29**	**106**	P	**Pn**	**01 33 30.9**	**+0.9**
	comp=N,1.1nm,0.3s,baz=263,slow=14,SNR=11						
TORD	**Torodi Ar. Bea**	**76.86**	**69**	P	**P**	**01 42 47.1**	**-1.1**
	comp=N,0.2nm,0.3s,baz=258,slow=4.8,SNR=11						
YKA	**Yellowknife Ar**	**94.14**	**340**	P	P	01 44 15.5	+2.6
	comp=N,0.1nm,0.5s,baz=132,slow=3.8,SNR=3.3						
ZALV	**Zalesovo Beam**	**143.62**	**28**	PKP	**PKPdf**	**01 50 28.3**	**+0.2**
	comp=N,0.4nm,0.5s,baz=310,slow=3.2,SNR=4.0						
MKAR	**Makanchi Array**	**146.78**	**39**	PKPbc	**PKPab**	**01 50 37.9**	**+0.2**
	comp=N,0.9nm,0.6s,baz=308,slow=3.3,SNR=9.9						

IDC ***13*** *01:43:44.6±0.9, 2˚.40N×128˚.74E, h0km, mb3.8/8, mb1 4.0/8, mb1mx3.8/23, mbtmp3.9/8, Error ellipse: s-maj=57.5km s-min=16.4km az=81.0*
ISCJB ***13*** *01:43:47.4±0.5, 2˚.40N±0˚.09×128˚.9E±0˚.2, h35km, mb4.0/12, Error ellipse: s-maj=23.4km s-min=9.8km az=159.6*
NEIC ***13*** *01:43:49.0±7.3, 2˚.40N×128˚.89E, h32km±54km, mb4.3/5, Error ellipse: s-maj=17.6km s-min=10.0km az=77.0*

ISC 13 01:43:49.3±0.7, 2˚.4N±0˚.1×128˚.9E±0˚.2, h35km, n25, σ0s57/25, mb4.1/12, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.61**	**189**	P	**P**	**01 48 25.1**	**-0.5**
FITZ	**Fitzroy Crossi**	**20.61**	**189**	P	**P**	**01 48 25.1**	**-0.5**
	3.1nm,1.0s,baz=15,slow=16,SNR=2.9						
PMG	**Port Moresby**	**21.66**	**123**	*e*P	**P**	**01 48 35.9**	**-1.2**
	28nm,1.3s						
WRA	**Warramunga Arr**	**22.83**	**167**	P	**P**	**01 48 50.1**	**+0.6**
WRA	**Warramunga Arr**	**22.83**	**167**	P	**P**	**01 48 50.1**	**+0.6**
	1.3nm,0.4s,baz=344,slow=10,SNR=3.4						
ASAR	**Alice Springs**	**26.36**	**170**	P	**P**	**01 49 23.4**	**+1.0**
ASAR	**Alice Springs**	**26.36**	**170**	P	**P**	**01 49 23.4**	**+1.0**
	0.4nm,0.4s,baz=354,slow=8.1,SNR=7.4						

KSAR	**Wonju Array Be**	**34.90**	**359**	P	**P**	**01 50 37.9**	**+0.3**
KSRS	**Korea Array**	**34.91**	**359**	P	**P**	**01 50 37.9**	**+0.2**
	0.6nm,0.4s,baz=172,slow=10,SNR=4.0						
MJAR	**Matsushiro Arr**	**35.07**	**13**	P	**P**	**01 50 39.3**	**+0.2**
MJAR	**Matsushiro Arr**	**35.07**	**13**	P	**P**	**01 50 39.3**	**+0.2**
	1.0nm,0.4s,baz=192,slow=8.8,SNR=3.3						
DZM	**Mont Dzumac**	**44.02**	**126**	*e*P	**P**	**01 51 54.5**	**+0.5**
	3.1nm,0.8s						
SONM	**Songino Array**	**49.26**	**340**	P	**P**	**01 52 34.6**	**-0.1**
SONM	**Songino Array**	**49.26**	**340**	P	**P**	**01 52 34.6**	**-0.1**
	0.7nm,0.6s,baz=164,slow=8.9,SNR=5.3						
MK31	**Makanchi Array**	**59.87**	**325**	*e*P	**P**	**01 53 52.1**	**+0.5**
MKAR	**Makanchi Array**	**59.87**	**325**	P	**P**	**01 53 52.3**	**+0.6**
MKAR	**Makanchi Array**	**59.87**	**325**	P	**P**	**01 53 52.3**	**+0.6**
	2.2nm,0.5s,baz=118,slow=8.5,SNR=41						
TKM2	**Tokmak 2**	**62.16**	**318**	*e*P	**P**	**01 54 07.5**	**0.0**
	1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**62.75**	**332**	P	**P**	**01 54 10.4**	**-0.5**
ZALV	**Zalesovo Beam**	**62.75**	**332**	P	**P**	**01 54 10.4**	**-0.5**
	0.6nm,0.6s,baz=145,slow=7.9,SNR=3.7						
KURK	**Kurchatov**	**64.02**	**327**	*e*P	**P**	**01 54 19.0**	**-0.4**
	1.9nm,0.4s						
BRVK	**Borovoye**	**69.68**	**327**	*e*P	**P**	**01 54 55.4**	**0.0**
	2.5nm,0.7s						
ABKAR	**Akbulak array**	**74.53**	**321**	*e*P	**P**	**01 55 24.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**125.36**	**288**	PKP	**PKPdf**	**02 02 47.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**125.36**	**288**	PKP	**PKPdf**	**02 02 47.2**	**-0.5**
	0.1nm,0.3s,baz=140,slow=2.4,SNR=6.1						

IDC ***13*** *01:58:48.8±1.7, 34˚.95N×25˚.73E, h0km, mb3.5/2, mb1 3.2/4, mb1mx3.1/27, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=72.6km s-min=24.7km az=149.0*
THE ***13*** *01:58:49.7, 34˚.91N×25˚.77E, h0km, ML2.8/2, Error ellipse: s-maj=1.7km s-min=0.7km az=167.0*
ISCJB ***13*** *01:58:49.5±0.8, 34˚.89N±0˚.04×25˚.86E±0˚.03, h12km±4km, mb3.4/2, Error ellipse: s-maj=6.6km s-min=3.7km az=1.6*
ATH ***13*** *01:58:50.0, 34˚.89N×25˚.76E, h16km±1km, MD3.2/7*
ISK ***13*** *01:58:50.7, 34˚.94N×25˚.74E, h73km, MD4.0*
CSEM ***13*** *01:58:50.6±0.4, 34˚.93N×25˚.81E, h8km, ML2.8/2, Error ellipse: s-maj=10.1km s-min=4.4km az=172.0*

ISC 13 01:58:50.6±1.1, 34˚.94N±0˚.04×25˚.81E±0˚.02, h11km±8km, n74, σ0s99/99, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAST	**Lasithi**	**0.35**	**309**	P	**Pg**	**01 58 57.0**	**-0.6**
LAST				S	**Sg**	**01 59 02.8**	**+0.6**
LAST	**Lasithi**	**0.35**	**309**	P	**Pg**	**01 58 57.0**	**-0.6**
LAST				S	**Sg**	**01 59 02.8**	**+0.6**
NPS	**Neapolis**	**0.36**	**334**	P	**Pg**	**01 58 57.5**	**-0.3**
NPS				S	**Sb**	**01 59 03.6**	**-1.1**
NPS	**Neapolis**	**0.36**	**334**	*e*PB	**Pg**	**01 58 57.5**	**-0.3**
NPS				*e*SB	**Sg**	**01 59 03.3**	**+0.7**
NPS	**Neapolis**	**0.36**	**334**	P	**Pg**	**01 58 57.5**	**-0.3**
NPS				*e*Sb	**Sg**	**01 59 03.3**	**+0.7**
NPS				S	**Sb**	**01 59 03.6**	**-1.1**
ZKR	**Zakros**	**0.38**	**63**	P	**Pg**	**01 58 58.2**	**+0.1**
ZKR				S	**Sb**	**01 59 05.0**	**-0.3**
ZKR	**Zakros**	**0.38**	**63**	*e*PB	**Pg**	**01 58 58.3**	**+0.1**
ZKR				*e*SB	**Sb**	**01 59 05.0**	**-0.3**
ZKR	**Zakros**	**0.38**	**63**	P	**Pg**	**01 58 58.2**	**+0.1**
ZKR				S	**Sb**	**01 59 05.0**	**-0.3**
SIVA	**Sivas**	**0.82**	**276**	P	**Pg**	**01 59 05.0**	**-1.5**
SIVA				S	**Sb**	**01 59 17.2**	**-0.8**
SIVA	**Sivas**	**0.82**	**276**	P	**Pg**	**01 59 05.0**	**-1.5**
SIVA				S	**Sb**	**01 59 17.2**	**-0.8**
VAM	**Vamos**	**1.40**	**290**	P	**Pn**	**01 59 15.0**	**-1.0**
VAM				S	**Sg**	**01 59 35.1**	**-0.5**
VAM	**Vamos**	**1.40**	**290**	*e*PN	**Pn**	**01 59 16.1**	**+0.1**
VAM				*e*SN	**Sg**	**01 59 35.0**	**-0.5**
VAM	**Vamos**	**1.40**	**290**	P	**Pn**	**01 59 15.0**	**-1.0**
VAM	**Vamos**	**1.40**	**290**	*e*Pn	**Pn**	**01 59 16.1**	**+0.1**
VAM				*e*Sn	**Sg**	**01 59 35.0**	**-0.5**
GVD	**Gavdhos**	**1.42**	**266**	*e*PN	**Pb**	**01 59 16.4**	**-0.6**
GVD	**Gavdhos**	**1.42**	**266**	*e*Pn	**Pb**	**01 59 16.4**	**-0.6**
THR1	**Thera Island**	**1.45**	**349**	P	**Pn**	**01 59 16.4**	**-0.2**
THR1	**Thera Island**	**1.45**	**349**	P	**Pn**	**01 59 16.4**	**-0.2**
SANT	**Santorini**	**1.45**	**349**	P	**Pn**	**01 59 16.4**	**-0.5**
SANT				S	**Sg**	**01 59 37.1**	**-0.3**
SANT	**Santorini**	**1.45**	**349**	*e*PN	**Pg**	**01 59 18.2**	**-0.3**
SANT	**Santorini**	**1.45**	**349**	P	**Pn**	**01 59 16.4**	**-0.5**
SANT	**Santorini**	**1.45**	**349**	*e*Pn	**Pg**	**01 59 18.2**	**-0.3**
SANT				S	**Sg**	**01 59 37.1**	**-0.3**
THR3	**Thira Island,**	**1.50**	**347**	P	**Pn**	**01 59 17.3**	**-0.2**
THR3	**Thira Island,**	**1.50**	**347**	P	**Pn**	**01 59 17.3**	**-0.2**
APE	**Apeiranthos**	**2.13**	**354**	P	**Pn**	**01 59 26.3**	**0.0**
APE				S	**Sn**	**01 59 53.6**	**+0.8**
APE	**Apeiranthos**	**2.13**	**354**	*e*PB	**Pn**	**01 59 27.5**	**+1.2**
APE	**Apeiranthos**	**2.13**	**354**	P	**Pn**	**01 59 26.3**	**0.0**
APE	**Apeiranthos**	**2.13**	**354**	*e*Pb	**Pn**	**01 59 27.5**	**+1.2**
APE				S	**Sn**	**01 59 53.6**	**+0.8**
ANKY	**Antikythira Is**	**2.24**	**295**	*e*PN	**Pn**	**01 59 29.0**	**+1.3**
ANKY	**Antikythira Is**	**2.24**	**295**	*e*Pn	**Pn**	**01 59 29.0**	**+1.3**
ARG	**Arkhangelos**	**2.28**	**55**	*e*PN	**Pb**	**01 59 30.7**	**-1.1**
ARG	**Arkhangelos**	**2.28**	**55**	*e*Pn	**Pb**	**01 59 30.7**	**-1.1**
BODT	**Bodrum**	**2.44**	**30**	*e*PN	**Pn**	**01 59 30.9**	**+0.5**
BODT				*e*SN	**Sn**	**01 59 59.3**	**-1.1**
BODT	**Bodrum**	**2.44**	**30**	*e*Pn	**Pn**	**01 59 30.9**	**+0.5**
BODT				*e*Sn	**Sn**	**01 59 59.3**	**-1.1**
KYTH	**Kithira**	**2.62**	**301**	*e*PN	**Pn**	**01 59 33.8**	**+0.9**
KYTH	**Kithira**	**2.62**	**301**	*e*Pn	**Pn**	**01 59 33.8**	**+0.9**
MLSB	**Milas**	**2.84**	**34**	*e*PN	**Pn**	**01 59 35.3**	**-0.6**
MLSB	**Milas**	**2.84**	**34**	*e*Pn	**Pn**	**01 59 35.3**	**-0.6**
VLI	**Veliai**	**2.93**	**308**	P	**Pn**	**01 59 35.9**	**-1.2**
VLI				S	**Sn**	**02 00 12.9**	**+0.6**
VLI	**Veliai**	**2.93**	**308**	*e*PN	**Pn**	**01 59 37.8**	**+0.7**
VLI	**Veliai**	**2.93**	**308**	P	**Pn**	**01 59 35.9**	**-1.2**
VLI	**Veliai**	**2.93**	**308**	*e*Pn	**Pn**	**01 59 37.8**	**+0.7**
VLI				S	**Sn**	**02 00 12.9**	**+0.6**
YER	**Yerkesik**	**2.97**	**42**	*e*PN	**Pn**	**01 59 37.2**	**-0.5**
YER	**Yerkesik**	**2.97**	**42**	*e*Pn	**Pn**	**01 59 37.2**	**-0.5**
FETY	**Fethiye**	**3.16**	**57**	*e*PN	**Pn**	**01 59 40.8**	**+0.5**
FETY				*e*SN	**Sn**	**02 00 16.8**	**-1.1**
FETY	**Fethiye**	**3.16**	**57**	*e*Pn	**Pn**	**01 59 40.8**	**+0.5**
FETY				*e*Sn	**Sn**	**02 00 16.8**	**-1.1**
DID	**Didima**	**3.30**	**322**	P	**Pn**	**01 59 41.6**	**-0.6**
DID	**Didima**	**3.30**	**322**	*e*PN	**Pn**	**01 59 43.2**	**+1.0**
DID	**Didima**	**3.30**	**322**	P	**Pn**	**01 59 41.6**	**-0.6**
DID	**Didima**	**3.30**	**322**	*e*Pn	**Pn**	**01 59 43.2**	**+1.0**
DYR	**Agios Nikonas**	**3.35**	**304**	*e*PN	**Pn**	**01 59 45.0**	**+2.0**
DYR	**Agios Nikonas**	**3.35**	**304**	*e*Pn	**Pn**	**01 59 45.0**	**+2.0**
PTL	**Penteli**	**3.47**	**334**	*e*PN	**Pn**	**01 59 46.1**	**+1.5**
PTL	**Penteli**	**3.47**	**334**	*e*Pn	**Pn**	**01 59 46.1**	**+1.5**
BLCB	**Balcova**	**3.58**	**16**	*e*PN	**Pn**	**01 59 46.1**	**+0.1**
BLCB	**Balcova**	**3.58**	**16**	*e*Pn	**Pn**	**01 59 46.1**	**+0.1**
GLHS	**Glhisar (BURDU**	**3.72**	**52**	*e*PN	**Pn**	**01 59 48.8**	**+0.7**
GLHS	**Glhisar (BURDU**	**3.72**	**52**	*e*Pn	**Pn**	**01 59 48.8**	**+0.7**
PYL	**PYLOS**	**3.83**	**302**	*e*PN	**Pn**	**01 59 50.7**	**+1.2**
PYL	**PYLOS**	**3.83**	**302**	*e*Pn	**Pn**	**01 59 50.7**	**+1.2**
LTK	**Loutraki**	**3.83**	**324**	*e*PN	**Pn**	**01 59 51.9**	**+2.3**
LTK	**Loutraki**	**3.83**	**324**	*e*Pn	**Pn**	**01 59 51.9**	**+2.3**
ITM	**Ithomi**	**3.85**	**307**	*e*PN	**Pn**	**01 59 52.0**	**+2.1**
ITM	**Ithomi**	**3.85**	**307**	*e*Pn	**Pn**	**01 59 52.0**	**+2.1**
GUR	**Goura**	**4.09**	**318**	*e*PN	**Pn**	**01 59 54.7**	**+1.5**
GUR	**Goura**	**4.09**	**318**	*e*Pn	**Pn**	**01 59 54.7**	**+1.5**
KULA	**Kula-Manisa**	**4.24**	**32**	*e*PN	**Pn**	**01 59 55.1**	**-0.1**
KULA	**Kula-Manisa**	**4.24**	**32**	*e*Pn	**Pn**	**01 59 55.1**	**-0.1**
KLV	**Kalavryta, Ach**	**4.27**	**318**	*e*PN	**Pn**	**01 59 57.9**	**+2.2**
KLV	**Kalavryta, Ach**	**4.27**	**318**	*e*Pn	**Pn**	**01 59 57.9**	**+2.2**
BRTR	**Keskin Array B**	**7.86**	**50**	Pn	**Pn**	**02 00 45.2**	**+0.3**
	0.0nm,0.3s,baz=232,slow=11,SNR=2.6						
BRTR				Lg	Lg	02 03 02.6	
	0.0nm,0.3s,baz=213,slow=33,SNR=3.6						
MMAI	**Mount Meron Ar**	**8.20**	**101**	Pn	**Pn**	**02 00 50.1**	**+0.5**
	0.9nm,0.3s,baz=276,slow=13,SNR=6.8						
MMAI					Sn	**02 02 21.3**	**-1.0**
	0.4nm,0.3s,baz=281,slow=30,SNR=2.6						
TORD	**Torodi Ar. Bea**	**30.76**	**231**	P	**P**	**02 05 05.6**	**-0.5**
	0.3nm,0.5s,baz=35,slow=8.9,SNR=8.1						
MKAR	**Makanchi Array**	**43.45**	**56**	P	**P**	**02 06 53.7**	**+0.1**
	0.4nm,0.6s,baz=280,slow=6.3,SNR=4.8						

ISK ***13*** *02:22:03.2, 34˚.91N×27˚.67E, h10km, ML2.8*
CSEM ***13*** *02:22:08.7±0.6, 35˚.32N×27˚.82E, h2km, MD3.4, Error ellipse: s-maj=15.7km s-min=6.1km az=152.0*
ATH ***13*** *02:22:09.9, 35˚.34N×27˚.69E, h13km±1km, MD3.4/7*
DDA ***13*** *02:22:25.7, 36˚.52N×28˚.89E, h7km, MD2.8*

ISC 13 02:22:08.7±1.7, 35˚.28N±0˚.06×27˚.85E±0˚.05, h13km±11km, n44, σ1s31/53, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.63**	**296**	*e*PB	**Pg**	**02 22 19.4**	**-1.6**
KARP	**Karpathos**	**0.63**	**296**	*e*Pb	**Pg**	**02 22 19.4**	**-1.6**
ARG	**Arkhangelos**	**0.96**	**13**	*e*PB	**Pb**	**02 22 27.8**	**+0.5**
ARG	**Arkhangelos**	**0.96**	**13**	*e*Pb	**Pb**	**02 22 27.8**	**+0.5**
ZKR	**Zakros**	**1.35**	**264**	*e*PG	**Pn**	**02 22 32.9**	**-0.3**
ZKR	**Zakros**	**1.35**	**264**	*e*Pg	**Pn**	**02 22 32.9**	**-0.3**
NIS1	**Nisyros Isl.**	**1.43**	**338**	*e*PB	**Pn**	**02 22 34.8**	**+0.4**
NIS1	**Nisyros Isl.**	**1.43**	**338**	*e*Pb	**Pn**	**02 22 34.8**	**+0.4**
DAT	**Datca**	**1.47**	**351**	PN	**Pn**	**02 22 35.4**	**+0.4**
DAT				SN	**Sg**	**02 22 58.9**	**+2.9**
DAT	**Datca**	**1.47**	**351**	*i* Pn	**Pn**	**02 22 35.4**	**+0.4**
DALY	**Dalyan (Mu¨la**	**1.67**	**23**	*e*PN	**Pn**	**02 22 38.9**	**+1.3**
DALY	**Dalyan (Mu¨la**	**1.67**	**23**	*e*Pn	**Pn**	**02 22 38.9**	**+1.3**
FETY	**Fethiye**	**1.68**	**36**	*e*PN	**Pn**	**02 22 39.0**	**+1.1**
FETY	**Fethiye**	**1.68**	**36**	*e*Pn	**Pn**	**02 22 39.0**	**+1.1**
TURN	**Turunc**	**1.71**	**21**	*i* P	**Pn**	**02 22 37.1**	**-1.0**
TURN				*i* S	**Sn**	**02 22 58.2**	**-1.6**
TURN	**Turunc**	**1.71**	**21**	*i* P	**Pn**	**02 22 37.1**	**-1.0**
TURN				*i* S	**Sn**	**02 22 58.2**	**-1.6**
AKAS	**Kas**	**1.72**	**56**	*i* P	**Pn**	**02 22 38.3**	**-0.1**
AKAS				*i* S	**Sn**	**02 23 01.2**	**+0.9**
AKAS	**Kas**	**1.72**	**56**	*i* P	**Pn**	**02 22 38.3**	**-0.1**
AKAS				*i* S	**Sn**	**02 23 01.2**	**+0.9**
NPS	**Neapolis**	**1.83**	**270**	*e*PN	**Pn**	**02 22 41.2**	**+1.3**
NPS	**Neapolis**	**1.83**	**270**	*e*Pn	**Pn**	**02 22 41.2**	**+1.3**
BODT	**Bodrum**	**1.83**	**346**	*e*PN	**Pn**	**02 22 40.4**	**+0.4**
BODT	**Bodrum**	**1.83**	**346**	*e*Pn	**Pn**	**02 22 40.4**	**+0.4**
YER	**Yerkesik**	**1.89**	**11**	*e*PN	**Pn**	**02 22 42.0**	**+1.3**
YER	**Yerkesik**	**1.89**	**11**	*e*Pn	**Pn**	**02 22 42.0**	**+1.3**
LAST	**Lasithi**	**1.95**	**267**	*e*PN	**Pn**	**02 22 43.1**	**+1.6**
LAST	**Lasithi**	**1.95**	**267**	*e*Pn	**Pn**	**02 22 43.1**	**+1.6**
MLSB	**Milas**	**2.02**	**358**	*e*PN	**Pn**	**02 22 43.7**	**+1.2**
MLSB	**Milas**	**2.02**	**358**	*e*Pn	**Pn**	**02 22 43.7**	**+1.2**
GLHS	**Glhis

	44nm,1.3s							
MFF	**Saint Martin d**	**21.31**	**93**	*eP*	P	**P**	02 43 03.1	+5.0
	44nm,1.3s							
JMIC	**Jan Mayen**	**21.32**	**21**	LR	LR		02 49 16.1	
	comp=Z,108nm,19.0s,baz=226,slow=32							
FRB	**Frobisher Bay**	**22.05**	**315**	P		**P**	**02 43 05.2**	**-0.6**
	5.0nm,1.1s,baz=98,slow=13,SNR=3.5							
RJF	**Les Rejaudoux**	**22.95**	**95**	*eP*		**P**	**02 43 18.9**	**+3.3**
	19nm,1.3s							
RJF	**Les Rejaudoux**	**22.95**	**95**	*eP*		**P**	**02 43 18.9**	**+3.3**
	19nm,1.3s							
ESDC	**Sonseca Array**	**23.06**	**113**	P		**P**	**02 43 14.1**	**-2.7**
	0.2nm,0.4s,baz=316,slow=9.0,SNR=2.6							
SSF	**Saint Saulge**	**23.33**	**89**	*eP*		**P**	**02 43 24.0**	**+4.5**
SSF	**Saint Saulge**	**23.33**	**89**	*eP*		**P**	**02 43 24.0**	**+4.5**
LOR	**Lormes**	**23.45**	**89**	*eP*		P	02 43 26.0	+5.3
LOR	**Lormes**	**23.45**	**89**	*eP*		P	02 43 26.0	+5.3
MTLF	**Montolieu**	**24.42**	**98**	*eP*		**P**	**02 43 29.1**	**-0.8**
	8.3nm,0.8s							
MTLF	**Montolieu**	**24.42**	**98**	*eP*		**P**	**02 43 29.1**	**-0.8**
	8.3nm,0.8s							
NOA	**NORSAR Array B**	**24.69**	**53**	LR	LR		02 51 50.0	
	comp=Z,60nm,19.5s,baz=270,slow=33							
HFS	**Hagfors**	**25.94**	**55**	LR	LR		02 52 29.3	
	comp=Z,71nm,19.6s,baz=114,slow=33							
GERES	**GERESS Array B**	**28.75**	**79**	P		**P**	**02 44 07.5**	**-1.4**
	0.3nm,0.6s,baz=288,slow=9.7,SNR=4.5							
GERES				LR		LR	02 54 21.5	
	comp=Z,36nm,18.2s,baz=282,slow=34							
FINES	**FINESS Array B**	**31.81**	**51**	LR	LR		02 56 13.5	
	comp=Z,49nm,18.4s,baz=270,slow=34							
RES	**Resolute Bay**	**33.22**	**334**	*eP*		**P**	**02 44 48.4**	**+0.5**
	3.4nm,0.9s							
TIP	**Timpagrande**	**35.72**	**92**	*eP*		**P**	**02 45 10.9**	**+0.9**
	2.1nm,0.7s							
AKASG	**Malin Array Be**	**37.01**	**68**	P		**P**	**02 45 23.5**	**+2.8**
	0.3nm,0.3s,baz=302,slow=8.1,SNR=5.3							
FFC	**Flin Flon**	**40.06**	**302**	*eP*		**P**	**02 45 47.6**	**+1.2**
	2.9nm,0.8s							
YKA	**Yellowknife Ar**	**42.54**	**317**	P		**P**	**02 46 04.3**	**-2.3**
	1.4nm,1.0s,baz=60,slow=7.9,SNR=14							
YKA				PcP		**PcP**	**02 47 58.3**	**-0.5**
	0.4nm,0.7s,baz=60,slow=3.9,SNR=7.6							
GVD	**Gavdhos**	**42.99**	**91**	*eP*		**P**	**02 46 11.0**	**+0.4**
	17nm,0.7s							
BR131	**Keskin Array S**	**45.65**	**79**	*eP*		**P**	**02 46 31.9**	**-0.1**
	4.1nm,0.8s							
BRTR	**Keskin Array B**	**45.65**	**79**	P		**P**	**02 46 32.0**	**0.0**
	2.1nm,0.7s,baz=300,slow=5.6,SNR=12							
TOA0	**Torodi Ar. Sit**	**47.55**	**133**	*eP*		**P**	**02 46 46.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**47.55**	**133**	P		**P**	**02 46 46.6**	**-0.3**
	3.0nm,1.0s,baz=337,slow=8.4,SNR=14							
WALA	**Waterton Lakes**	**49.32**	**301**	*eP*		**P**	**02 47 01.1**	**+0.7**
BOZ	**Bozeman (W)**	**50.18**	**296**	*eP*		**P**	**02 47 08.4**	**+1.3**
	4.4nm,1.3s							
SLMT	**Seeley Lake**	**50.21**	**299**	*eP*		**P**	**02 47 08.4**	**+1.1**
SWMT	**Swartz Lake**	**50.31**	**299**	*eP*		**P**	**02 47 09.1**	**+1.1**
BW06	**Boulder Array**	**50.84**	**292**	*eP*		**P**	**02 47 12.2**	**0.0**
	3.1nm,1.1s							
PDAR	**Pinedale Array**	**50.84**	**292**	P		**P**	**02 47 12.6**	**+0.4**
	0.9nm,0.7s,baz=63,slow=7.5,SNR=7.5							
NEW	**Newport**	**51.49**	**302**	*eP*		**P**	**02 47 18.1**	**+1.4**
	4.8nm,1.1s							
AKTO	**Aktyubinsk**	**52.48**	**54**	P		**P**	**02 47 22.9**	**-1.2**
	0.3nm,0.3s,baz=349,slow=10,SNR=2.5							
HWUT	**Hardware Ranch**	**52.73**	**292**	*eP*		**P**	**02 47 26.4**	**+0.2**
	1.7nm,0.7s							
ILAR	**Eielson Array**	**52.83**	**331**	P		**P**	**02 47 26.9**	**+0.6**
	1.5nm,1.1s,baz=36,slow=6.6,SNR=10							
ILAR				PcP		**PcP**	**02 48 35.5**	**+0.1**
	0.5nm,0.8s,baz=19,slow=3.1,SNR=3.5							
HLID	**Hailey**	**53.04**	**296**	*eP*		**P**	**02 47 30.4**	**+1.9**
	5.1nm,1.4s							
MCK	**McKinley**	**54.20**	**331**	*eP*		**P**	**02 47 38.1**	**+1.6**
	7.7nm,1.1s							
DUG	**Dugway**	**54.37**	**291**	*eP*		**P**	**02 47 39.2**	**+0.9**
	6.0nm,1.3s							
MNTX	**Cornudas Mount**	**55.82**	**279**	*eP*		**P**	**02 47 49.0**	**+0.4**
BVAR	**Borovoye Array**	**56.49**	**45**	P		**P**	**02 47 50.5**	**-2.6**
	0.4nm,0.4s,baz=308,slow=5.3,SNR=4.7							
KURBB	**Kurchatov Arra**	**61.69**	**43**	P		**P**	**02 48 26.3**	**-2.9**
	0.2nm,0.4s,baz=315,slow=7.5,SNR=4.1							
EKS2	**Erkin-Say**	**65.64**	**51**	*eP*		**P**	**02 48 55.8**	**+0.3**
	3.1nm,0.9s							
MK31	**Makanchi Array**	**66.24**	**43**	*eP*		**P**	**02 48 58.6**	**-0.6**
MKAR	**Makanchi Array**	**66.24**	**43**	P		**P**	**02 48 58.0**	**-1.3**
	0.8nm,0.7s,baz=326,slow=5.9,SNR=7.8							
MKAR				LR		LR	03 16 57.0	
	comp=Z,27nm,21.2s,baz=356,slow=35							
TKM2	**Tokmak 2**	**66.30**	**50**	*eP*		**P**	**02 49 00.4**	**+0.5**
	3.4nm,1.1s							
SONM	**Songino Array**	**73.90**	**28**	P		**P**	**02 49 46.3**	**0.0**
	0.6nm,0.8s,baz=324,slow=6.2,SNR=6.7							
KMI	**Kunming**	**93.16**	**40**	P		**P**	**02 51 25.7**	**-0.3**
KMI				pP		**pP**	**02 51 29.3**	**-1.0**
KMI				sP		**sP**	**02 51 31.2**	**-0.7**
KMI				pmax		pmax		
	comp=Z,4.0nm,0.9s							
JNU	**Nakatsue**	**93.42**	**14**	LR	LR		03 31 38.8	
	comp=Z,36nm,18.9s,baz=69,slow=34							
WRA	**Warramunga Arr**	**145.78**	**23**	PKPbc		**PKPdf**	**02 57 50.0**	**0.0**
	comp=Z,3.0nm,0.9s,baz=337,slow=3.8,SNR=8.8							
ASAR	**Alice Springs**	**149.24**	**26**	PKPbc		**PKPbc**	**02 57 58.8**	**-1.2**
	comp=Z,0.8nm,1.0s,baz=347,slow=2.2,SNR=4.7							

ISK ***13*** *02:43:52.3, 37˚.90N×28˚.91E, h11km, MD2.7*
CSEM ***13*** *02:43:52.4±0.2, 37˚.90N×28˚.99E, h10km, MD2.7, Error ellipse: s-maj=5.0km s-min=3.7km az=96.0*
DDA ***13*** *02:43:52.1, 37˚.93N×29˚.07E, h12km, MD2.7*
ISCJB ***13*** *02:43:52.2±0.4, 37˚.90N±0˚.02×29˚.00E±0˚.04, h6km±5km, Error ellipse: s-maj=5.3km s-min=3.4km az=3.2*

ISC 13 02:43:52.3±0.9, 37˚.90N±0˚.02×29˚.01E±0˚.03, h14km±7km, n33, σ0s66/49, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DENT	**Denizli**	**0.15**	**174**	*ePG*		**Pg**	**02 43 56.9**	**+0.7**
DENT	**Denizli**	**0.15**	**174**	*ePg*		**Pg**	**02 43 56.9**	**+0.7**
DNZL	**Cakiroluk**	**0.21**	**173**	*iP*		**Pg**	**02 43 56.6**	**-0.6**
DNZL				*iS*		**Sg**	**02 44 00.1**	**-0.5**
DNZL	**Cakiroluk**	**0.21**	**173**	*iP*		**Pg**	**02 43 56.6**	**-0.6**
KHL	**Karahalli**	**0.58**	**43**	*ePG*		**Pb**	**02 44 05.0**	**+0.6**
KHL	**Karahalli**	**0.58**	**43**	*ePg*		**Pb**	**02 44 05.0**	**+0.6**
KHAL	**Karahalli**	**0.60**	**39**	*iP*		**Pg**	**02 44 02.8**	**-1.4**
KHAL				*iS*		**Sg**	**02 44 08.2**	**-1.7**
KHAL	**Karahalli**	**0.60**	**39**	*iP*		**Pg**	**02 44 02.8**	**-1.4**
KHAL				*iS*		**Sg**	**02 44 10.5**	**-1.7**
KULA	**Kula-Manisa**	**0.67**	**336**	*ePG*		**Pg**	**02 44 05.4**	**-0.1**
KULA				*eSG*		**Sg**	**02 44 14.6**	**+0.1**
KULA	**Kula-Manisa**	**0.67**	**336**	*ePg*		**Pg**	**02 44 05.4**	**-0.1**
KULA				*eSg*		**Sg**	**02 44 14.6**	**+0.1**
MANT	**Manisa**	**0.69**	**329**	*iP*		**Pg**	**02 44 05.8**	**-0.1**
MANT				*iS*		**Sb**	**02 44 16.0**	**+0.3**
MANT	**Manisa**	**0.69**	**329**	*iP*		**Pg**	**02 44 05.8**	**-0.1**
MANT				*iS*		**Sb**	**02 44 16.0**	**+0.3**
GOLH	**Golhisar**	**0.79**	**146**	*iP*		**Pg**	**02 44 07.1**	**-0.7**
GOLH				*iS*		**Sb**	**02 44 19.5**	**+1.0**
GOLH	**Golhisar**	**0.79**	**146**	*iP*		**Pg**	**02 44 07.1**	**-0.7**
GOLH				*iS*		**Sb**	**02 44 19.5**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.84**	**152**	*ePG*		**Pn**	**02 44 09.7**	**0.0**
GLHS	**Glhisar (BURDU**	**0.84**	**152**	*ePg*		**Pn**	**02 44 09.7**	**0.0**
AYDN	**Tasoluk**	**0.93**	**255**	*iP*		**Pn**	**02 44 11.0**	**0.0**
AYDN				*iS*		**Sb**	**02 44 22.9**	**+0.5**
AYDN	**Tasoluk**	**0.93**	**255**	*iP*		**Pn**	**02 44 11.0**	**0.0**
AYDN				*iS*		**Sb**	**02 44 23.0**	**+0.5**
YER	**Yerkesik**	**0.96**	**217**	*ePG*		**Pg**	**02 44 10.1**	**-0.8**
YER				*eSG*		**Sg**	**02 44 23.3**	**-0.2**
YER	**Yerkesik**	**0.96**	**217**	*ePg*		**Pg**	**02 44 10.1**	**-0.8**
YER				*eSg*		**Sg**	**02 44 23.3**	**-0.2**
MLSB	**Milas**	**1.15**	**239**	*ePN*		**Pb**	**02 44 13.6**	**-0.4**
MLSB	**Milas**	**1.15**	**239**	*ePn*		**Pb**	**02 44 13.6**	**-0.4**
DEMI	**Demirci**	**1.17**	**349**	*iP*		**Pg**	**02 44 14.6**	**-0.2**
DEMI				*iS*		**Sg**	**02 44 29.9**	**-0.1**
DEMI	**Demirci**	**1.17**	**349**	*iP*		**Pg**	**02 44 14.6**	**-0.2**
DEMI				*iS*		**Sg**	**02 44 29.9**	**-0.1**
GDZ	**Gediz**	**1.24**	**17**	*iP*		**Pn**	**02 44 15.6**	**+0.2**
GDZ				*iS*		**Sb**	**02 44 32.0**	**+0.4**
FETY	**Fethiye**	**1.26**	**177**	*ePN*		**Pg**	**02 44 16.5**	**-0.2**
FETY	**Fethiye**	**1.26**	**177**	*ePn*		**Pg**	**02 44 16.5**	**-0.2**
SHUT	**Suhut-Afyon**	**1.38**	**61**	*ePN*		**Pg**	**02 44 19.5**	**+0.7**
SHUT	**Suhut-Afyon**	**1.38**	**61**	*ePn*		**Pg**	**02 44 19.5**	**+0.7**
ALT	**Altintas**	**1.44**	**36**	*ePN*		**Pb**	**02 44 19.2**	**+0.2**
ALT	**Altintas**	**1.44**	**36**	*ePn*		**Pb**	**02 44 19.2**	**+0.2**
BODT	**Bodrum**	**1.59**	**239**	*ePN*		**Pn**	**02 44 20.3**	**+0.3**
BODT	**Bodrum**	**1.59**	**239**	*ePn*		**Pn**	**02 44 20.3**	**+0.3**

CSEM ***13*** *02:50:12.5, 36˚.02N×27˚.30E, h27km, MD3.1, After ATH*
ATH 13 02:50:12.5, 36˚.02N×27˚.30E, h27km±5km, MD3.1/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KARP	**Karpathos**	**0.48**	**193**	*ePB*		Pb	02 50 22.6	0.0
KARP				*eSB*		Sb	02 50 30.4	+0.9
KARP	**Karpathos**	**0.48**	**193**	*ePb*		Pb	02 50 22.6	0.0
KARP				*eSb*		Sb	02 50 30.4	+0.9
ARG	**Arkhangelos**	**0.70**	**73**	*ePN*		Pn	02 50 26.6	0.0
ARG				*eSN*		Sn	02 50 36.6	+0.1
ARG	**Arkhangelos**	**0.70**	**73**	*ePn*		Pn	02 50 26.6	0.0
ARG				*eSn*		Sn	02 50 36.6	+0.1
BODT	**Bodrum**	**1.04**	**0**	*ePG*		Pb	02 50 32.4	+0.5
BODT				*eSG*		Sb	02 50 46.7	+1.5
ZKR	**Zakros**	**1.26**	**225**	*ePN*		Pb	02 50 36.7	+1.0
ZKR	**Zakros**	**1.26**	**225**	*ePn*		Pb	02 50 36.7	+1.0
YER	**Yerkesik**	**1.36**	**35**	*ePN*		Pb	02 50 38.1	+0.7
FETY	**Fethiye**	**1.57**	**66**	*ePN*		Pb	02 51 41.1	+0.3
NPS	**Neapolis**	**1.57**	**242**	*ePB*		Pb	02 50 40.0	-0.9
NPS	**Neapolis**	**1.57**	**242**	*ePb*		Pb	02 50 40.0	-0.9
LAST	**Lasithi**	**1.71**	**241**	*ePN*		Pb	02 50 42.8	-0.7
LAST	**Lasithi**	**1.71**	**241**	*ePn*		Pb	02 50 42.8	-0.7

ISK ***13*** *02:51:18.0, 37˚.89N×34˚.85E, h8km, MD2.9*
CSEM ***13*** *02:51:21.4, 38˚.37N×35˚.91E, h7km, MD2.9, After DDA*
DDA ***13*** *02:51:21.4, 38˚.37N×35˚.91E, h7km, MD2.9*

ISC 13 02:51:21.6±1.2, 38˚.33N±0˚.03×35˚.91E±0˚.03, h7km±11km, n24, σ1s02/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PINB	**Pinarbasi**	**0.52**	**48**	*iP*		**Pg**	**02 51 30.6**	**-1.1**
PINB				*iS*		**Sg**	**02 51 38.5**	**0.0**
PINB	**Pinarbasi**	**0.52**	**48**	*iP*		**Pg**	**02 51 30.6**	**-1.1**
PINB				*iS*		**Sg**	**02 51 38.5**	**0.0**
KOZT	**Kozan**	**0.85**	**184**	*ePG*		Pg	02 51 35.2	-2.7
KOZT				*eSG*		**Sg**	**02 51 47.8**	**-1.0**
KOZT	**Kozan**	**0.85**	**184**	*ePg*		Pg	02 51 35.2	-2.7
KOZT				*eSg*		**Sg**	**02 51 47.8**	**-1.0**
AVNT	**Avonos**	**0.94**	**299**	*iP*		**Pb**	**02 51 40.3**	**0.0**
AVNT	**Avonos**	**0.94**	**299**	*iP*		**Pb**	**02 51 40.3**	**0.0**
KMRS	**Kahramanmaras**	**1.14**	**136**	*ePN*		Pn	02 51 48.4	+4.5
KMRS	**Kahramanmaras**	**1.14**	**136**	*ePn*		Pn	02 51 48.4	+4.5
AYKD	**Aykdinkavak**	**1.16**	**142**	*iP*		**Pn**	**02 51 44.4**	**+0.2**
AYKD				*iS*		**Sn**	**02 52 00.6**	**+0.3**
AYKD	**Aykdinkavak**	**1.16**	**142**	*iP*		**Pn**	**02 51 44.4**	**+0.2**
AYKD				*iS*		**Sn**	**02 52 00.6**	**+0.3**
CEYT	**Ceyhan**	**1.32**	**186**	*ePN*		Pn	02 51 40.1	-6.3
CEYT	**Ceyhan**	**1.32**	**186**	*ePn*		Pn	02 51 40.1	-6.3
GULE	**Gulek**	**1.38**	**221**	*iP*		**Pn**	**02 51 46.6**	**-0.8**
GULE				*iS*		**Sb**	**02 52 04.5**	**-1.1**
GULE	**Gulek**	**1.38**	**221**	*iP*		**Pn**	**02 51 46.6**	**-0.8**
GULE				*iS*		**Sb**	**02 52 04.5**	**-1.1**
YOZ	**Yozgat**	**1.39**	**341**	*ePN*		**Pg**	**02 51 50.1**	**+1.9**
YOZ	**Yozgat**	**1.39**	**341**	*ePn*		**Pg**	**02 51 50.1**	**+1.9**
GAZ	**Gaziantep**	**1.55**	**138**	*ePN*		**Pg**	**02 51 53.1**	**+1.9**
GAZ	**Gaziantep**	**1.55**	**138**	*ePn*		**Pg**	**02 51 53.2**	**+1.9**
AKCD	**Akcadag**	**1.58**	**91**	*iP*		**Pb**	**02 51 51.0**	**-0.3**
AKCD				*iS*		**Sb**	**02 52 11.6**	**0.0**
AKCD	**Akcadag**	**1.58**	**91**	*iP*		**Pb**	**02 51 51.0**	**-0.3**
AKCD				*iS*		**Sb**	**02 52 11.6**	**0.0**
CORM	**Corum**	**2.10**	**332**	*ePN*		**Pn**	**02 51 57.1**	**-0.2**
CORM	**Corum**	**2.10**	**332**	*ePn*		**Pn**	**02 51 57.1**	**-0.2**
LADK	**Ladik-KONYA**	**2.79**	**268**	*ePN*		Pn	02 51 52.8	-14
LADK	**Ladik-KONYA**	**2.79**	**268**	*ePn*		Pn	02 51 52.8	-14

CSEM ***13*** *02:55:04.9±0.1, 40˚.14N×23˚.98E, h10km, ML1.8/10, Error ellipse: s-maj=2.3km s-min=1.9km az=84.0*
THE ***13*** *02:55:05.3, 40˚.15N×23˚.97E, h8km±1km, ML1.8/10, Error ellipse: s-maj=1.5km s-min=0.5km az=231.0*
ATH ***13*** *02:55:05.0, 40˚.15N×23˚.98E, h19km±4km, MD2.6/5*
ISCJB ***13*** *02:55:05.0±0.6, 40˚.14N±0˚.02×23˚.97E±0˚.04, h9km±4km, Error ellipse: s-maj=4.6km s-min=3.4km az=0.1*

ISC 13 02:55:05.1±0.9, 40˚.14N±0˚.02×23˚.97E±0˚.03, h14km±6km, n33, σ0s30/58, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OUR	**Ouranopolis**	**0.19**	**2**	P		**Pg**	**02 55 09.5**	**0.0**
OUR				S		**Sg**	**02 55 12.4**	**-0.1**
OUR	**Ouranopolis**	**0.19**	**2**	P		**Pg**	**02 55 09.5**	**0.0**
OUR				S		**Sg**	**02 55 12.4**	**-0.1**
PAIG	**Paliouri**	**0.31**	**226**	P		**Pg**	**02 55 11.5**	**0.0**
PAIG				S		**Sg**	**02 55 15.8**	**-0.1**
PAIG	**Paliouri**	**0.31**	**226**	*ePB*		**Pg**	**02 55 11.6**	**0.0**
PAIG	**Paliouri**	**0.31**	**226**	P		**Pg**	**02 55 11.5**	**0.0**
PAIG				S		**Sg**	**02 55 15.8**	**-0.1**
PLG	**Polygyros**	**0.47**	**300**	P		**Pg**	**02 55 14.2**	**-0.2**
PLG				S		**Sg**	**02 55 20.6**	**-0.1**
PLG	**Polygyros**	**0.47**	**300**	*ePB*		**Pg**	**02 55 14.2**	**-0.2**
PLG				*eSB*		**Sg**	**02 55 20.5**	**-0.1**
PLG	**Polygyros**	**0.47**	**300**	P		**Pg**	**02 55 14.2**	**-0.2**
PLG				*eSb*		**Sg**	**02 55 20.5**	**-0.1**
HORT	**Hortiatis**	**0.81**	**304**	P		**Pg**	**02 55 20.3**	**-0.5**
HORT				S		**Sg**	**02 55 31.5**	**+0.1**
HORT	**Hortiatis**	**0.81**	**304**	P		**Pg**	**02 55 20.3**	**-0.5**
HORT				S		**Sg**	**02 55 31.5**	**+0.1**
SOH	**Sokhos**	**0.83**	**325**	P		**Pg**	**02 55 20.9**	**-0.3**
SOH				S		**Sg**	**02 55 32.0**	**0.0**
SOH	**Sokhos**	**0.83**	**325**	P		**Pg**	**02 55 20.9**	**-0.3**
SOH				S		**Sg**	**02 55 32.0**	**0.0**
KAVA	**Kavala**	**0.95**	**26**	P		**Pb**	**02 55 23.4**	**+0.1**
KAVA				S		**Sb**	**02 55 35.7**	**0.0**
KAVA	**Kavala**	**0.95**	**26**	P		**Pb**	**02 55 23.4**	**+0.1**
KAVA				S		**Sb**	**02 55 35.7**	**0.0**
LIA	**Limnos Island**	**0.96**	**104**	P		**Pg**	**02 55 23.5**	**-0.2**
LIA				S		**Sb**	**02 55 36.7**	**+0.6**
LIA	**Limnos Island**	**0.96**	**104**	*ePN*		**Pg**	**02 55 23.3**	**-0.4**
LIA				*eSN*		**Sb**	**02 55 36.7**	**+0.6**
LIA	**Limnos Island**	**0.96**	**104**	P		**Pg**	**02 55 23.5**	**-0.2**
LIA				S		**Sb**	**02 55 36.7**	**+0.6**
AOS	**Alonnisos**	**0.97**	**184**	P		**Pg**	**02 55 23.5**	**-0.5**
AOS				S		**Sn**	**02 55 37.8**	**-0.2**
AOS	**Alonnisos**	**0.97**	**184**	*ePN*		**Pg**	**02 55 23.4**	**-0.5**
AOS				*eSN*		**Sn**	**02 55 38.0**	**0.0**
AOS	**Alonnisos**	**0.97**	**184**	P		**Pg**	**02 55 23.5**	**-0.5**
AOS				*eSn*		**Sn**	**02 55 38.0**	**0.0**
XOR	**Xorichti**	**0.98**	**218**	P		**Pg**	**02 55 24.0**	**-0.1**
XOR				S		**Sn**	**02 55 38.5**	**+0.2**
XOR	**Xorichti**	**0.98**	**218**	P		**Pg**	**02 55 24.0**	**-0.1**
XOR				S		**Sn**	**02 55 38.5**	**+0.2**
SRS	**Serrai**	**1.01**	**343**	P		**Pg**	**02 55 24.2**	**-0.5**
SRS				S		**Sn**	**02 55 38.7**	**-0.4**
SRS	**Serrai**	**1.01**	**343**	P		**Pg**	**02 55 24.2**	**-0.5**
SRS				S		**Sn**	**02 55 38.7**	**-0.4**
NEO	**Neokhori**	**1.02**	**215**	*ePN*		**Pg**	**02 55 24.6**	**-0.2**
NEO	**Neokhori**	**1.02**	**215**	*ePn*		**Pg**	**02 55 24.6**	**-0.2**
NVR	**Nevrokopi**	**1.21**	**356**	P		**Pn**	**02 55 27.8**	**+0.1**
NVR				S		**Sn**	**02 55 44.5**	**+0.6**
NVR	**Nevrokopi**	**1.21**	**356**	*ePN*		**Pn**	**02 55 27.7**	**+0.1**
NVR	**Nevrokopi**	**1.21**	**356**	*ePn*		**Pn**	**02 55 27.7**	**+0.1**
NVR				S		**Sn**	**02 55 44.5**	**+0.6**
SMTH	**Samothraki Isl**	**1.23**	**74**	*ePN*		**Pn**	**02 55 27.7**	**-0.3**
SMTH	**Samothraki Isl**	**1.23**	**74**	*ePn*		**Pn**	**02 55 27.7**	**-0.3**
KNT	**Kendrikon**	**1.30**	**322**	P		**Pn**	**02 55 29.1**	**+0.1**
KNT	**Kendrikon**	**1.30**	**322**	P		**Pn**	**02 55 29.1**	**+0.1**

KRSC 13 02:56:07.2±1.0, 55˚.85N×161˚.39E, h110km±39km, ML3.9, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZLN	**Zelenaya**	**0.37**	**297**	*eP*		Pn	02 56 24.4	+1.0
ZLN				*eS*		Sn	02 56 36.6	+1.0
BZGR	**Bezymyannyi-Gr**	**0.40**	**283**	*eP*		Pn	02 56 24.0	+0.4
BZGR				*eS*		Sn	02 56 36.0	+0.1
CIRR	**Tsirk**	**0.45**	**307**	*eP*		Pn	02 56 24.6	+0.7
CIRR				*eS*		Sn	02 56 37.6	+1.2
LGNR	**Loginova**	**0.46**	**301**	P		Pn	02 56 24.9	+0.8
LGNR				*eS*		Sn	02 56 37.8	+0.9
BZMR	**Bezymyannaya**	**0.51**	**280**	*eP*		Pn	02 56 24.8	+0.5
BZMR				*eS*		Sn	02 56 38.0	+0.8
BZWR	**Bezymyannyi-We**	**0.52**	**283**	*eP*		Pn	02 56 24.9	+0.5
BZWR				*eS*		Sn	02 56 37.7	+0.4
KRSR	**Krestovskiy**	**0.59**	**309**	*eP*		Pn	02 56 24.9	+0.1
KRSR				*eS*		Sn	02 56 38.1	0.0
KIRR	**Kirishev**	**0.60**	**280**	*eP*		Pn	02 56 25.2	+0.3
KIRR				*eS*		Sn	02 56 38.5	+0.2
KLY	**Klyuchi**	**0.62**	**319**	*eP*		Pn	02 56 24.9	0.0
KLY				*eS*		Sn	02 56 37.8	-0.4
KMNR	**Kamenistaya**	**0.66**	**262**	P		Pn	02 56 25.8	+0.5
KMNR				*eS*		Sn	02 56 39.3	+0.3
KPT	**Kopyto**	**0.67**	**281**	*eP*		Pn	02 56 25.9	+0.5
KPT				*eS*		Sn	02 56 39.1	0.0
BDR	**Baidarnaya**	**0.73**	**352**	*eP*		Pn	02 56 26.6	+0.7
BDR				*eS*		Sn	02 56 41.0	+1.1
SMKR	**Semkarok**	**0.73**	**3**	*eP*		Pn	02 56 26.8	+0.9
SMKR				*eS*		Sn	02 56 41.3	+1.2
SRKR	**Sorokina**	**0.82**	**351**	*eP*		Pn	02 56 27.5	+0.9
SRKR				*eS*		Sn	02 56 42.0	+0.7
KBG	**Krutoberegovo**	**0.84**	**61**	*eP*		Pn	02 56 28.0	+1.3
KBG				*eS*		Sn	02 56 43.1	+1.6
KOZ	**Kozyrevsk**	**0.88**	**284**	*eP*		Pn	02 56 27.7	+0.5
KOZ				*eS*		Sn	02 56 42.2	0.0
KBTR	**Krutoberegovo**	**0.88**	**65**	P		Pn	02 56 28.3	+1.2
KBTR				*eS*		Sn	02 56 43.5	+1.3
TUMR	**Tumrok**	**0.91**	**232**	*eP*		Pn	02 56 28.6	+1.0
TUMR				*eS*		Sn	02 56 43.7	+0.8
SRDR	**Sredinnyy**	**1.05**	**297**	*eP*		Pn	02 56 29.3	+0.4
SRDR				*eS*		Sn	02 56 45.8	+0.4
MKZ	**Mys Kozlova**	**1.31**	**171**	*eP*		Pn	02 56 32.9	+1.2
MKZ				*eS*		Sn	02 56 51.6	+1.3
ESO	**Esso**	**1.52**	**274**	*eP*		Pn	02 56 34.8	+0.7
ESO				*eS*		Sn	02 56 55.2	+0.5
KII	**Karymskiy**	**2.13**	**212**	*eP*		Pn	02 56 43.7	+1.7
KII				*eS*		Sn	02 57 10.6	+2.0
BKI	**Bering**	**2.68**	**102**	*eP*		Pn	02 56 50.7	+1.8
BKI				*eS*		Sn	02 57 22.1	+1.1
SPN	**Mys Shipunski**	**2.87**	**197**	S		Sn	02 57 25.1	-0.4
NLC	**Nalytchevo**	**2.94**	**205**	*eP*		Pn	02 56 54.0	+1.7
NLC				*eS*		Sn	02 57 28.6	+1.6
GNL	**Ganaly**	**2.94**	**224**	*eP*		Pn	02 56 53.9	+1.4
GNL				*eS*		Sn	02 57 28.5	+1

11nm,0.3s,baz=198,slow=20,SNR=5.9
DZM Mont Dzumac 15.46 243 P **P 03 29 35.7 +1.2**
0.3nm,0.3s,baz=37,slow=20,SNR=2.5
URZ Urewera 23.02 188 P **P 03 30 48.2 -0.3**
6.8nm,0.6s,baz=308,slow=9.4,SNR=6.6
RPZ Rata Peaks 29.48 195 P **P 03 31 45.5 -0.4**
6.6nm,0.9s,baz=54,slow=14,SNR=2.9
MTSU Mount Surprise 35.39 260 P **P 03 32 37.9 +0.7**
baz=40,SNR=4.7
CMSA Cobar Meteorol 36.11 237 P **P 03 32 43.3 +0.4**
baz=40,SNR=5.4
QLP Quilpie 36.14 246 P **P 03 32 43.2 0.0**
baz=40,SNR=9.1
STKA Stephens Creek 39.55 238 P **P 03 33 11.4 0.0**
2.8nm,0.5s,baz=86,slow=8.3,SNR=11
STKA Stephens Creek 39.55 238 P **P 03 33 12.0 +0.6**
baz=44,SNR=11
BBOO Buckleboo 44.33 239 P **P 03 33 49.5 +0.1**
baz=48,SNR=7.5
WRA Warramunga Arr 44.78 257 P **P 03 33 52.1 -1.0**
1.3nm,0.4s,baz=95,slow=7.1,SNR=26
ASAR Alice Springs 45.16 252 P **P 03 33 56.0 -0.2**
20nm,0.3s,baz=84,slow=8.5,SNR=360
KDU Kakadu 47.29 267 P **P 03 34 12.7 +0.2**
baz=51,SNR=3.1
MTN Manton Dam 48.55 266 P **P 03 34 22.1 0.0**
baz=53,SNR=3.2
FORT Forrest 50.77 243 P **P 03 34 38.1 -0.3**
baz=55,SNR=19
PALU Palau 51.55 293 P P 03 34 37.1 -7.1
baz=55,SNR=5.6
FITZ Fitzroy Crossi 53.12 259 P **P 03 34 55.7 +0.2**
3.9nm,0.8s,baz=98,slow=3.8,SNR=6.1
MEEK Meekatharra 58.99 248 P **P 03 35 35.9 -0.7**
baz=63,SNR=5.3
WSI Waingapu 59.59 268 P P 03 35 30.9 -10
baz=64,SNR=3.5
KLBR Kellerberrin 59.63 242 P **P 03 35 40.4 -0.4**
baz=64,SNR=4.9
PETK Petropavlovsk- 71.22 345 P **P 03 36 53.5 -0.1**
1.6nm,0.7s,baz=141,slow=9.6,SNR=4.1
NVAR Mina Array Bea 77.91 44 P **P 03 37 32.8 +0.6**
2.3nm,0.7s,baz=231,slow=8.4,SNR=9.6
ILAR Eielson Array 83.58 13 P **P 03 38 00.4 -0.6**
1.9nm,0.5s,baz=231,slow=5.4,SNR=45
PDAR Pinedale Array 85.82 44 P **P 03 38 13.1 +0.2**
1.3nm,0.5s,baz=213,slow=2.4,SNR=14
YKA Yellowknife Ar 92.25 25 P **P 03 38 41.8 -0.3**
0.1nm,0.4s,baz=252,slow=4.1,SNR=4.6
GERES GERESS Array B 145.15 346 PKPbc **PKPdf 03 45 07.8 +0.2**
0.3nm,0.5s,baz=19,slow=4.5,SNR=5.4

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*ISK **13** 03:32:12.6, 37.44N×36.09E, h21km, MD2.6*
*DDA **13** 03:32:13.6, 37.4N×36.09E, h7km, MD2.6*
*CSEM **13** 03:32:14.0±0.2, 37.44N×36.09E, h2km, MD2.6, Error ellipse: s-maj=6.6km s-min=4.4km az=175.0*
ISC 13 03:32:13.9±1.0, 37.43N±0.04×36.12E±0.02, h7km±9km, n20, σ0s51/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.24**	**50**	*i* P	**Pg**	**03 32 17.9**	**-0.8**
ANDN				*i* S	**Sg**	**03 32 22.0**	**+0.1**
ANDN	**Andirin**	**0.24**	**50**	*i* P	**Pg**	**03 32 17.9**	**-0.8**
ANDN				*i* S	**Sg**	**03 32 22.0**	**+0.1**
KOZT	**Kozan**	**0.24**	**283**	*e*PG	**Pg**	**03 32 18.3**	**-0.3**
KOZT				*e*SG	**Sg**	**03 32 22.5**	**+0.7**
KOZT	**Kozan**	**0.24**	**283**	*e*Pg	**Pg**	**03 32 18.3**	**-0.3**
KOZT				*e*Sg	**Sg**	**03 32 22.5**	**+0.7**
CEYT	**Ceyhan**	**0.51**	**215**	*e*PG	**Pg**	**03 32 23.3**	**-0.5**
CEYT	**Ceyhan**	**0.51**	**215**	*e*Pg	**Pg**	**03 32 23.3**	**-0.5**
AYKD	**Aykdinkavak**	**0.55**	**91**	*i* P	**Pg**	**03 32 24.5**	**0.0**
AYKD				*i* S	**Sg**	**03 32 32.6**	**+0.8**
KMRS	**Kahramanmaras**	**0.63**	**83**	*e*PG	**Pg**	**03 32 25.8**	**-0.3**
KMRS				*e*SG	**Sb**	**03 32 35.6**	**-0.7**
KMRS	**Kahramanmaras**	**0.63**	**83**	*e*Pg	**Pg**	**03 32 25.8**	**-0.3**
KMRS				*e*Sg	**Sb**	**03 32 35.7**	**-0.7**
GAZ	**Gaziantep**	**0.91**	**106**	*e*PG	**Pg**	**03 32 30.9**	**-0.5**
GAZ	**Gaziantep**	**0.91**	**106**	*e*Pg	**Pg**	**03 32 30.9**	**-0.5**
KUZU	**Kuzuini**	**1.01**	**130**	*i* P	**Pn**	**03 32 34.6**	**0.0**
KUZU				*i* S	**Sn**	**03 32 49.0**	**-0.1**
KUZU	**Kuzuini**	**1.01**	**130**	*i* P	**Pn**	**03 32 34.6**	**0.0**
KUZU				*i* S	**Sn**	**03 32 49.0**	**-0.1**
GULE	**Gulek**	**1.08**	**263**	*i* P	**Pg**	**03 32 34.1**	**-0.5**
GULE				*i* S	**Sb**	**03 32 49.4**	**0.0**
GULE	**Gulek**	**1.08**	**263**	*i* P	**Pg**	**03 32 34.1**	**-0.5**
GULE				*i* S	**Sb**	**03 32 49.4**	**0.0**
GZT	**Gaziantep**	**1.16**	**93**	*i* P	**Pg**	**03 32 36.0**	**-0.2**
GZT				*i* S	**Sn**	**03 32 52.8**	**-0.1**
PINB	**Pinarbasi**	**1.27**	**10**	*i* P	**Pb**	**03 32 38.5**	**+0.2**
PINB				*i* S	**Sb**	**03 32 54.2**	**-0.8**
PINB	**Pinarbasi**	**1.27**	**10**	*i* P	**Pb**	**03 32 38.5**	**+0.2**
PINB				*i* S	**Sb**	**03 32 54.2**	**-0.8**
AKCD	**Akcadag**	**1.67**	**58**	*i* P	**Pg**	**03 32 46.1**	**+0.1**
AKCD				*i* S	**Sb**	**03 33 07.3**	**+0.8**
AKCD	**Akcadag**	**1.67**	**58**	*i* P	**Pg**	**03 32 46.1**	**+0.1**
AKCD				*i* S	**Sb**	**03 33 07.3**	**+0.8**

IDC 13 03:39:46.7±2.6, 0.90S×132.46E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=120.9km s-min=24.5km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.36**	**201**	P	P	03 44 04.3	+1.2
	0.1nm,0.3s,baz=15,slow=12,SNR=5.0						
WRA	**Warramunga Arr**	**19.01**	**175**	P	P	03 44 09.2	-1.1
	0.2nm,0.3s,baz=353,slow=11,SNR=5.0						
ASAR	**Alice Springs**	**22.67**	**177**	P	P	03 44 49.8	-0.2
	0.8nm,0.3s,baz=354,slow=9.0,SNR=11						
MKAR	**Makanchi Array**	**64.62**	**324**	P	P	03 50 26.3	+0.1
	0.3nm,0.7s,baz=104,slow=6.1,SNR=2.8						

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*ISCJB **13** 03:43:18.7±0.9, 22.97S×148.68E×0.08, h10km, mb3.6/1, Error ellipse: s-maj=11.6km s-min=7.9km az=157.2*
*IDC **13** 03:43:19.7±3.9, 22.90S×148.69E, h0km, mb3.6/1, mb1 3.7/5, mb1mx3.6/16, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=40.9km s-min=19.4km az=86.0*
*AUST **13** 03:43:21.8±99.0, 23.02S×148.77E, h22km, Error ellipse: s-maj=2.2km s-min=0.9km az=244.0*
ISC 13 03:43:19.9±1.1, 22.92S±0.06×148.75E±0.08, h10km, n12, σ2s02/18, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EIDS	**Eidsvold**	**3.24**	**139**	P	**Pn**	**03 44 10.2**	**-0.6**
	baz=3.2,SNR=96						
EIDS				S	**Sb**	**03 44 57.2**	**+0.2**
	baz=3.2,SNR=5.4						
RMQ	**Roma**	**3.55**	**180**	P	**Pn**	**03 44 14.5**	**-0.6**
	baz=3.5,SNR=5.2						
RMQ				S	**Sb**	**03 45 06.7**	**+0.7**
	baz=3.5,SNR=7.5						
CTA	**Charters Tower**	**3.65**	**320**	Pn	**Pn**	**03 44 17.9**	**+1.4**
	3.3nm,0.3s,baz=139,slow=16,SNR=15						
CTA				Pg	**Pb**	**03 44 23.8**	**-0.8**
	12nm,0.3s,baz=138,slow=17,SNR=31						
CTA				Sn	**Sn**	**03 45 02.8**	**+3.1**
	6.3nm,0.3s,baz=50,slow=21,SNR=4.3						
CTA				Lg	Lg	03 45 13.9	
	7.0nm,0.3s,baz=229,slow=22,SNR=5.8						
QLP	**Quilpie**	**5.49**	**227**	P	**Pn**	**03 44 42.5**	**+0.8**
	baz=5.4,SNR=12						
MTSU	**Mount Surprise**	**6.32**	**318**	P	**Pn**	**03 44 55.1**	**+2.0**
	baz=6.4,SNR=5.3						
STKA	**Stephens Creek**	**10.95**	**214**	Pn	**Pn**	**03 45 55.4**	**-1.3**
	0.3nm,0.3s,baz=36,slow=13,SNR=5.6						
STKA				Sn	**Sn**	**03 48 02.9**	**+3.6**
	0.2nm,0.3s,baz=230,slow=12,SNR=1.9						
STKA				Lg	Lg	03 49 06.8	
	0.3nm,0.3s,baz=295,slow=21,SNR=3.1						
STKA	**Stephens Creek**	**10.95**	**214**	P	**Pn**	**03 45 55.4**	**-1.3**
	baz=11,SNR=4.7						
ASAR	**Alice Springs**	**13.66**	**264**	Pn	**Pn**	**03 46 33.5**	**-0.3**
	0.1nm,0.3s,baz=86,slow=14,SNR=8.9						
ASAR				Sn	**Sn**	**03 49 03.9**	**-1.9**
	0.1nm,0.3s,baz=86,slow=24,SNR=3.7						
ASAR				Lg	Lg	03 50 31.5	
	0.1nm,0.3s,baz=89,slow=28,SNR=3.4						
WRA	**Warramunga Arr**	**13.74**	**280**	Pn	**Pn**	**03 46 33.7**	**-1.2**
	0.2nm,0.3s,baz=100,slow=12,SNR=3.2						
WRA				Sn	**Sn**	**03 49 03.7**	**-4.0**
	0.2nm,0.3s,baz=110,slow=23,SNR=3.0						
WRA				Lg	Lg	03 50 32.8	
	0.2nm,0.3s,baz=102,slow=29,SNR=4.3						
FITZ	**Fitzroy Crossi**	**22.16**	**278**	P	**P**	**03 48 18.0**	**+1.9**
	2.1nm,0.9s,baz=82,slow=10.0,SNR=2.7						
WSI	**Waingapu**	**30.25**	**291**	P	P	03 49 39.8	+8.6
	baz=30,SNR=7.0						
PALU	**Palau**	**33.16**	**333**	P	**P**	**03 49 55.1**	**-1.7**
	baz=33,SNR=4.9						

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*NAO **13** 04:01:47.9±0.9, 76.95N×18.40E, ML3.7*
*IDC **13** 04:01:48.8±0.8, 77.04N×18.69E, h0km, mb3.3/3, mb1 3.5/6, mb1mx3.3/26, mbtmp3.4/6, ML3.3/3, MS2.5/1, Ms1 2.5/1, ms1mx2.1/32, Error ellipse: s-maj=18.6km s-min=7.7km az=72.0*
*CSEM **13** 04:01:48.1±0.2, 77.00N×18.24E, h2km, ML3.5, Error ellipse: s-maj=11.1km s-min=3.7km az=60.0*
*ISCJB **13** 04:01:50.5±0.5, 76.93N±0.05×18.1E±0.2, h28km, mb3.2/3, Error ellipse: s-maj=8.1km s-min=5.2km az=136.6*
*BER **13** 04:01:51.8, 76.97N×18.03E, h13km, MD2.3, ML3.5, ML3.7(NAO)*
ISC 13 04:01:50.8±0.7, 76.87N±0.04×18.09E±0.05, h28km, n28, σ2s04/40, mb3.2/3, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**0.59**	**285**	*e*P	**Pb**	**04 02 02.5**	**-0.1**
HSP				*e*S	**Sb**	**04 02 10.9**	**+0.3**
SPA0	**Spitsbergen Ar**	**1.37**	**345**	Pg	**Pn**	**04 02 12.4**	**-1.5**
	baz=159,slow=22						
SPA0				Lg	Lg	04 02 29.4	
	baz=153,slow=28						
SPA0	**Spitsbergen Ar**	**1.37**	**345**	Pg	**Pn**	**04 02 12.4**	**-1.5**
	baz=159,slow=22						
SPA0				Lg	Lg	04 02 29.4	
	baz=153,slow=28						
SPA0	**Spitsbergen Ar**	**1.37**	**345**	Pg	**Pn**	**04 02 12.4**	**-1.5**
	baz=159,slow=21,SNR=91						
SPA0				Lg	Lg	04 02 29.4	
	baz=153,slow=27,SNR=1.6						
SPITS	**Spitsbergen Ar**	**1.37**	**345**	Pn	**Pn**	**04 02 12.5**	**-1.4**
	baz=152,slow=20,SNR=1875						
SPITS				Sn	**Sn**	**04 02 29.5**	**-1.6**
	baz=155,slow=34,SNR=22						
HOPEN	**Hopen**	**1.64**	**99**	*e*P	**Pn**	**04 02 18.0**	**+0.3**
HOPEN				*e*S	**Sb**	**04 02 40.6**	**+0.1**
HOPEN	**Hopen**	**1.64**	**99**	*e*P	**Pn**	**04 02 18.0**	**+0.3**
	SNR=55						
HOPEN				*e*S	**Sb**	**04 02 40.6**	**+0.1**
	SNR=55						
BJO	**Bjornoya**	**2.40**	**173**	*e*P	**Pb**	**04 02 31.2**	**-1.8**
BJO				*e*Sg	**Sb**	**04 03 04.2**	**+2.1**
BJO				AML	AML	04 03 07.8	
	comp=Z,256nm,0.5s						
BJO	**Bjornoya**	**2.40**	**173**	*e*P	**Pb**	**04 02 31.2**	**-1.8**
	SNR=55						
KBS	**Kingsbay**	**2.44**	**331**	Pn	**Pn**	**04 02 27.3**	**-1.3**
KBS				Pg	**Pb**	**04 02 32.9**	**-0.8**
KBS				Lg	Lg	04 03 03.0	
KBS	**Kingsbay**	**2.44**	**331**	*e*P	**Pn**	**04 02 27.3**	**-1.3**
KBS				*e*Pg	**Pb**	**04 02 33.0**	**-0.8**
KBS				*e*Sg	**Sb**	**04 03 02.8**	**-0.5**
KBS				AML	AML	04 03 11.1	
	comp=Z,945nm,0.4s						
KBS	**Kingsbay**	**2.44**	**331**	*e*P	**Pn**	**04 02 27.3**	**-1.3**
	SNR=55						
KBS	**Kingsbay**	**2.44**	**331**	*e*Pg	**Pb**	**04 02 33.0**	**-0.8**
	SNR=90						
KBS				*e*Sg	**Sb**	**04 03 02.8**	**-0.5**
	comp=Z,945nm,0.4s,SNR=90						
KBS				Lg	Lg	04 03 03.0	
KEV	**Kevo**	**7.58**	**156**	*e*p	**Pn**	**04 03 41.8**	**+2.6**
	comp=Z,1.2nm,0.3s						
KEV	**Kevo**	**7.58**	**156**	*e*P	**Pn**	**04 03 41.8**	**+2.6**
	comp=Z,1.2nm,0.3s						
ARA0	**ARCESS Array S**	**7.67**	**160**	Pn	**Pn**	**04 03 42.0**	**+1.6**
	baz=352,slow=14						
ARA0				Sn	**Sn**	**04 05 01.5**	**-4.7**
	baz=358,slow=28						
ARA0	**ARCESS Array S**	**7.67**	**160**	P	**Pn**	**04 03 42.0**	**+1.6**
	baz=352,slow=14						
ARA0				S	**Sn**	**04 05 01.5**	**-4.7**
	baz=358,slow=28						
ARA0	**ARCESS Array S**	**7.67**	**160**	P	**Pn**	**04 03 42.0**	**+1.6**
	baz=352,slow=13,SNR=51						
ARCES	**ARCESS Array B**	**7.67**	**160**	Pn	**Pn**	**04 03 42.4**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=351,slow=13,SNR=18						
ARCES				Sn	**Sn**	**04 05 04.8**	**-1.4**
	comp=Z,3.2nm,0.3s,baz=353,slow=8.0,SNR=7.7						
ARCES				LR	LR	04 06 38.5	
	comp=Z,38nm,21.6s,baz=244,slow=37						
APA0	**Apatity Array**	**10.31**	**147**	Pn	**Pn**	**04 04 16.6**	**+0.1**
	baz=333,slow=9.3						
APA0	**Apatity Array**	**10.31**	**147**	P	**Pn**	**04 04 16.6**	**+0.1**
	baz=333,slow=9.3						
APA0	**Apatity Array**	**10.31**	**147**	P	**Pn**	**04 04 16.5**	**+0.1**
	baz=333,slow=8.7,SNR=51						
FINES	**FINESS Array B**	**15.73**	**166**	Sn	**Sn**	**04 08 17.4**	**-5.7**
	comp=Z,0.1nm,0.3s,baz=180,slow=31,SNR=2.8						
NOA	**NORSAR Array B**	**16.07**	**192**	Pn	**P**	**04 05 36.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=358,slow=12,SNR=2.8						
HFS	**Hagfors**	**16.89**	**188**	P	**P**	**04 05 48.2**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=3.3,slow=10,SNR=5.8						
ILAR	**Eielson Array**	**38.28**	**350**	P	**P**	**04 09 09.7**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=359,slow=7.3,SNR=5.4						
MKAR	**Makanchi Array**	**39.13**	**101**	P	**P**	**04 09 17.6**	**+2.3**
	comp=Z,0.3nm,0.8s,baz=350,slow=6.3,SNR=2.9						
TORD	**Torodi Ar. Bea**	**64.30**	**198**	P	**P**	**04 12 26.1**	**+2.8**
	comp=Z,0.4nm,0.8s,baz=21,slow=6.9,SNR=6.2						

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*ISCJB **13** 04:07:15.6±0.2, 46.81N±0.01×7.10E±0.02, h10km±2km, Error ellipse: s-maj=2.1km s-min=1.7km az=164.8*
*CSEM **13** 04:07:16.7±0.1, 46.80N×7.17E, h15km, ML3.0/24, Error ellipse: s-maj=1.5km s-min=1.2km az=83.0*
*ZUR **13** 04:07:17.2, 46.81N×7.21E, h4km, ML2.4/12*
*STR **13** 04:07:17.7±0.2, 46.83N×7.22E, h10km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **13** 04:07:17.3±0.0, 46.81N×7.20E, h4km, Md2.8/2, Ml2.9/22, Error ellipse: s-maj=1.0km s-min=0.8km az=111.0*
*GEN **13** 04:07:18.1, 46.75N×7.20E, h3km, ML2.0*
*ROM **13** 04:07:20.0±0.6, 46.70N×7.31E, h10km, Ml2.2/2, Error ellipse: s-maj=7.1km s-min=3.8km az=128.0*
ISC 13 04:07:17.0±0.9, 46.80N±0.01×7.20E±0.01, h17km±2km, n124, σ1s33/200, 19C-7D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORNY	**Torny/Romont**	**0.17**	**260**	⇑*i*Pg	**Pg**	**04 07 21.0**	**-0.5**
	7μm,0.3s						
TORNY				*i* Sg	**Sg**	**04 07 24.3**	**-0.2**
	7μm,0.3s						
TORNY	**Torny/Romont**	**0.17**	**260**	⇑*i*Pg	**Pg**	**04 07 21.0**	**-0.5**
	7μm,0.3s						
TORNY				*i* Sg	**Sg**	**04 07 24.3**	**-0.2**
	7μm,0.3s						
WIMIS	**Wimmis**	**0.32**	**115**	⇓*i*Pg	**Pg**	**04 07 23.5**	**-0.5**
	357nm,0.5s						
WIMIS				*e*Sg	**Sg**	**04 07 28.7**	**0.0**
	357nm,0.5s						
WIMIS	**Wimmis**	**0.32**	**115**	*i* Pg	**Pg**	**04 07 23.5**	**-0.5**
	357nm,0.5s						
WIMIS				*e*Sg	**Sg**	**04 07 28.6**	**-0.1**
	357nm,0.5s						
SENIN	**Lac Senin/Sane**	**0.45**	**171**	⇑*i*Pg	**Pg**	**04 07 26.1**	**-0.1**
	277nm,0.4s						
SENIN				*e*Sg	**Sg**	**04 07 32.7**	**+0.4**
	277nm,0.4s						
SENIN	**Lac Senin/Sane**	**0.45**	**171**	⇑*i*Pg	**Pg**	**04 07 26.1**	**-0.1**
	277nm,0.4s						
SENIN				*e*Sg	**Sg**	**04 07 32.7**	**+0.4**
	277nm,0.4s						
AIGLE	**Aigle**	**0.49**	**200**	*e*Sg	Sg	04 07 27.2	-6.4
	491nm,0.3s						
AIGLE	**Aigle**	**0.49**	**200**	⇑*i*Pg	Pn	04 07 34.0	+4.7
	491nm,0.3s						
AIGLE	**Aigle**	**0.49**	**200**	⇑*e*Pg	**Pg**	**04 07 26.7**	**-0.2**
	491nm,0.3s						
AIGLE				*e*Sg	**Pn**	**04 07 34.1**	**+4.7**
	491nm,0.3s						
LKBD	**Leukerbad**	**0.51**	**145**	*e*Pg	**Pg**	**04 07 26.8**	**-0.5**
	116nm,0.5s						
LKBD	**Leukerbad**	**0.51**	**145**	*e*Pg	**Pg**	**04 07 27.1**	**-0.2**
	116nm,0.5s						
LKBD				*e*Sg	**Sg**	**04 07 34.8**	**+0.6**
	116nm,0.5s						
LKBD2	**Leukerbad 2**	**0.53**	**144**	⇑*i*Pg	**Pb**	**04 07 28.0**	**0.0**
	98nm,0.3s						
LKBD2				*e*Sg	**Sb**	**04 07 35.4**	**0.0**
	98nm,0.3s						
GRYON	**Gryon**	**0.56**	**186**	*e*Pg	**Pg**	**04 07 28.1**	**-0.1**
GRYON	**Gryon**	**0.56**	**186**	*i* Pg	**Pg**	**04 07 28.1**	**-0.1**
	62nm,0.3s						
BOURR	**Bourrignon**	**0.59**	**2**	⇑*i*Pg	**Pg**	**04 07 28.8**	**0.0**
	263nm,0.7s						
BOURR	**Bourrignon**	**0.59**	**2**	*e*P	**Pg**	**04 07 28.9**	**+0.1**
	263nm,0.7s						
OG01	**Vacheresse**	**0.59**	**217**	Pg	**Pg**	**04 07 29.2**	**+0.4**
OG01	**Vacheresse**	**0.59**	**217**	Pg	**Pg**	**04 07 29.2**	**+0.4**
LOMF	**Lomont**	**0.60**	**335**	Pg	**Pb**	**04 07 29.4**	**+0.2**
LOMF				Sg	**Sb**	**04 07 37.8**	**+0.4**
LOMF	**Lomont**	**0.60**	**335**	Pg	**Pb**	**04 07 29.4**	**+0.2**
LOMF				Sg	**Sb**	**04 07 37.8**	**+0.4**
BALST	**Balsthal**	**0.63**	**32**	⇑*i*Pg	**Pg**	**04 07 29.4**	**-0.1**
	250nm,0.5s						
BALST	**Balsthal**	**0.63**	**32**	⇑*i*Pg	**Pg**	**04 07 29.4**	**-0.1**
	250nm,0.5s						
HASLI	**Hasliberg/Brie**	**0.66**	**94**	⇓*i*Pg	**Pg**	**04 07 30.0**	**0.0**
	259nm,0.2s						
HASLI				*i* Sg	**Sb**	**04 07 39.2**	**+0.2**
	259nm,0.2s						
HASLI	**Hasliberg/Brie**	**0.66**	**94**	⇓*i*Pg	**Pg**	**04 07 30.0**	**0.0**
	259nm,0.2s						
HASLI				*i* Sg	**Sb**	**04 07 39.2**	**+0.2**
	259nm,0.2s						
BBS	**Basel-Blauen**	**0.69**	**18**	Pg	**Pg**	**04 07 30.7**	**0.0**
BBS				Sg	**Sg**	**04 07 39.7**	**-0.2**
GIMEL	**St. Georges /**	**0.70**	**248**	⇑*i*Pg	**Pg**	**04 07 30.9**	**+0.2**
	223nm,0.2s						
GIMEL	**St. Georges /**	**0.70**	**248**	⇑*i*P	**Pg**	**04 07 30.9**	**+0.2**
	223nm,0.2s						
DIX	**Grande Dixence**	**0.74**	**169**	Pg	**Pb**	**04 07 32.4**	**+0.8**
DIX				Sg	**Sg**	**04 07 41.7**	**+0.3**
DIX	**Grande Dixence**	**0.74**	**169**	⇓*i*P	**Pb**	**04 07 31.9**	**+0.3**
	67nm,0.4s						
DIX	**Grande Dixence**	**0.74**	**169**	Pg	**Pb**	**04 07 32.4**	**+0.8**
DIX				Sg	**Sg**	**04 07 41.7**	**+0.3**
CABF	**La Chapelle**	**0.79**	**256**	*e*Pg	**Pg**	**04 07 32.6**	**+0.1**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**04 07 42.7**	**-0.2**
CABF				*e*Sn	**Sb**	**04 07 45.3**	**+2.6**
	46nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**0.79**	**256**	*e*Pg	**Pg**	**04 07 32.6**	**+0.1**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**04 07 42.7**	**-0.2**
CABF				*e*Sn	**Sb**	**04 07 45.3**	**+2.6**
	23nm,0.2s,SNR=1.0						
BNALP	**Bannalp**	**0.84**	**85**	⇓*i*Pg	**Pb**	**04 07 33.9**	**+0.6**
	223nm,0.3s						
MMK	**Mattmark**	**0.92**	**145**	Pg	**Pb**	**04 07 35.1**	**+0.4**
MMK				Sg	**Sg**	**04 07 46.9**	**-0.2**
MMK	**Mattmark**	**0.92**	**145**	Pg	**Pb**	**04 07 35.1**	**+0.4**
MMK				Sg	**Sg**	**04 07 46.9**	**-0.2**
SULZ	**Cheisacher**	**0.95**	**40**	⇑*i*Pg	**Pg**	**04 07 35.4**	**-0.2**
	257nm,0.3s						
SULZ	**Cheisacher**	**0.95**	**40**	⇑*i*P	**Pg**	**04 07 35.4**	**-0.2**
	261nm,0.4s						
MRGE	**Morge**	**1.04**	**185**	Pg	**Pg**	**04 07 37.2**	**0.0**
MRGE				Sg	**Sb**	**04 07 51.0**	**+1.0**
	80nm,0.5s						
MRGE	**Morge**	**1.04**	**185**	Pg	**Pg**	**04 07 37.2**	**0.0**
MRGE				Sg	**Sb**	**04 07 51.0**	**+1.0**
	80nm,0.5s						
HINF	**Hinteralfeld**	**1.04**	**347**	*e*Pg	**Pg**	**04 07 36.9**	**-0.3**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**04 07 50.2**	**-0.7**
	72nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**1.04**	**347**	*e*Pg	**Pg**	**04 07 36.9**	**-0.3**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**04 07 50.2**	**-0.7**
	36nm,0.3s,SNR=1.0						
MOF	**Molkenrain**	**1.05**	**358**	Pg	**Pb**	**04 07 37.4**	**+0.6**
MOF				Sg	**Sn**	**04 07 51.9**	**+0.6**
MOF	**Molkenrain**	**1.05**	**358**	Pg	**Pb**	**04 07 37.4**	**+0.6**
FUSIO	**Fusio**	**1.07**	**109**	⇓*i*Pg	**Pg**	**04 07 36.9**	**-0.8**
	67nm,0.5s						
FUSIO	**Fusio**	**1.07**	**109**	Pg	**Pb**	**04 07 37.8**	**+0.7**
FUSIO	**Fusio**	**1.07**	**109**	Pg	**Pb**	**04 07 37.8**	**+0.7**
RSL	**Roselend**	**1.19**	**200**	Pn	**Pb**	**04 07 39.9**	**+0.8**
RSL	**Roselend**	**1.19**	**200**	Pn	**Pb**	**04 07 39.9**	**+0.8**
FELD	**Feldberg im Sc**	**1.21**	**27**	Pg	**Pb**	**04 07 40.0**	**+0.5**
FELD				Sg	**Sg**	**04 07 56.0**	**-0.1**
FELD	**Feldberg im Sc**	**1.21**	**27**	Pg	**Pb**	**04 07 40.0**	**+0.5**
FELD				Sg	**Sg**	**04 07 56.0**	**-0.1**
ORO	**Oropa**	**1.30**	**155**	Pg	**Pg**	**04 07 42.4**	**+0.3**
ORO				Sg	**Sb**	**04 07 56.6**	**-0.7**
	31nm,0.2s						
ORO	**Oropa**	**1.30**	**155**	Pg	**Pg**	**04 07 42.4**	**+0.3**
ORO				Sg	**Sb**	**04 07 56.6**	**-0.7**
	31nm,0.2s						
SLE	**Schleitheim**	**1.30**	**42**	*e*Pn	Pn	04 07 37.7	-2.8
	156nm,0.4s						
LPL	**La Plagne**	**1.33**	**194**	*e*Pn	**Pn**	**04 07 41.2**	**+0.2**
	SNR=1.0						
LPL	**La Plagne**	**1.33**	**194**	*e*Pg	**Pb**	**04 07 42.6**	**+1.0**
LPL				*e*Sg	**Sb**	**04 07 59.7**	**+1.3**
	22nm,0.3s,SNR=1.0						
LPL	**La

PAGF				*e*Sg	**Sb**	**04 08 20.2**	**+2.2**
	2.7nm,0.3s						
PAGF	**Fort de Pagny**	**2.02**	**331**	*e*P	**Pn**	**04 07 52.1**	**+1.9**
PAGF	**Fort de Pagny**	**2.02**	**331**	*e*Pg	**Pg**	**04 07 55.0**	**-0.7**
PAGF				*e*Sg	**Sb**	**04 08 20.2**	**+2.2**
	1.4nm,0.3s						
SFTF	**Sexfontaines**	**2.03**	**315**	*e*P	**Pn**	**04 07 52.7**	**+2.3**
SFTF	**Sexfontaines**	**2.03**	**315**	*e*Pg	**Pb**	**04 07 54.9**	**+1.5**
	baz=133						
SFTF				*e*Sg	**Sb**	**04 08 20.9**	**+2.6**
	37nm,0.4s						
SFTF	**Sexfontaines**	**2.03**	**315**	*e*Pg	**Pb**	**04 07 54.9**	**+1.5**
	baz=133						
SFTF				*e*Sg	**Sb**	**04 08 20.9**	**+2.6**
	18nm,0.4s						
MBDF	**Montbardon**	**2.10**	**188**	*e*Pg	**Pb**	**04 07 56.4**	**+1.7**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**04 08 23.8**	**-0.8**
	14nm,0.4s,SNR=1.0						
MBDF	**Montbardon**	**2.10**	**188**	*e*Pg	**Pb**	**04 07 56.4**	**+1.7**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**04 08 23.8**	**-0.8**
	6.8nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**2.10**	**207**	*e*Pg	**Pb**	**04 07 56.1**	**+1.4**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**04 08 16.7**	**-0.5**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**04 08 23.7**	**-0.9**
	14nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**2.10**	**207**	*e*Pg	**Pb**	**04 07 56.1**	**+1.4**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**04 08 16.7**	**-0.5**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**04 08 23.7**	**-0.9**
	6.8nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.23**	**320**	*e*Pg	**Pb**	**04 07 58.5**	**+1.6**
	baz=139,SNR=1.0						
MEZF				*e*Sg	**Sg**	**04 08 27.5**	**-1.4**
	17nm,0.4s,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.23**	**320**	*e*Pg	**Pb**	**04 07 58.5**	**+1.6**
	baz=139,SNR=1.0						
MEZF				*e*Sg	**Sg**	**04 08 27.5**	**-1.4**
	8.4nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**2.31**	**267**	*e*Pn	**Pn**	**04 07 54.7**	**+0.4**
	SNR=1.0						
SMF	**Signal de Mont**	**2.31**	**267**	*e*Pg	**Pg**	**04 08 00.5**	**-0.9**
SMF				*e*Sg	**Sb**	**04 08 29.2**	**+2.6**
	23nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.31**	**267**	*e*Pn	**Pn**	**04 07 54.7**	**+0.4**
	SNR=1.0						
SMF	**Signal de Mont**	**2.31**	**267**	*e*Pg	**Pg**	**04 08 00.5**	**-0.9**
SMF				*e*Sg	**Sb**	**04 08 29.2**	**+2.6**
	11nm,0.2s,SNR=1.0						
LOR	**Lormes**	**2.33**	**283**	*e*Pn	**Pn**	**04 07 54.9**	**+0.3**
	baz=99						
LOR	**Lormes**	**2.33**	**283**	*e*Pg	**Pg**	**04 08 00.9**	**-0.8**
	baz=100						
LOR				*e*Sg	**Sb**	**04 08 29.7**	**+2.6**
	21nm,0.2s						
LOR	**Lormes**	**2.33**	**283**	*e*Pn	**Pn**	**04 07 54.9**	**+0.3**
	baz=99						
FETA	**Feichten**	**2.43**	**84**	⇑ *i*Pg	**Pg**	**04 08 03.0**	**-0.6**
FETA				⇑ *i*Sg	**Sg**	**04 08 36.5**	**+1.3**
	3.7nm,0.4s						
FETA	**Feichten**	**2.43**	**84**	Pg	**Pg**	**04 08 03.0**	**-0.6**
FETA				Sg	**Sg**	**04 08 36.5**	**+1.3**
	3.7nm,0.4s						
SSF	**Saint Saulge**	**2.54**	**277**	*e*Pg	**Pb**	**04 08 04.2**	**+2.0**
	SNR=1.0						
SSF				*e*Sg	**Sb**	**04 08 35.8**	**+2.6**
	13nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.63**	**223**	*e*Pn	**Pn**	**04 07 59.1**	**+0.4**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.63**	**223**	*e*Pg	**Pb**	**04 08 06.1**	**+2.4**
VIVF				*e*Sn	**Sn**	**04 08 29.5**	**-0.7**
VIVF				*e*Sg	**Sg**	**04 08 40.0**	**-1.5**
	11nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.63**	**223**	*e*Pn	**Pn**	**04 07 59.1**	**+0.4**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.63**	**223**	*e*Pg	**Pb**	**04 08 06.1**	**+2.4**
VIVF				*e*Sn	**Sn**	**04 08 29.5**	**-0.7**
VIVF				*e*Sg	**Sg**	**04 08 40.0**	**-1.5**
	5.6nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.64**	**271**	*e*Pn	**Pn**	**04 07 59.2**	**+0.4**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.64**	**271**	*e*Pg	**Pb**	**04 08 06.0**	**+2.1**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**04 08 28.7**	**-1.7**
	SNR=1.0						
AVF				*e*Sg	**Sb**	**04 08 39.6**	**+3.6**
	5.6nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.64**	**271**	*e*Pn	**Pn**	**04 07 59.2**	**+0.4**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**04 08 28.7**	**-1.7**
	SNR=1.0						
BGF	**Bois d'Agland**	**3.01**	**267**	*e*Pn	**Pn**	**04 08 04.0**	**+0.2**
BGF	**Bois d'Agland**	**3.01**	**267**	*e*Pg	**Pb**	**04 08 12.8**	**+2.7**
BGF				*e*Sg	**Sb**	**04 08 50.5**	**+4.0**
	23nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**3.01**	**267**	*e*Pn	**Pn**	**04 08 04.0**	**+0.2**
BGF	**Bois d'Agland**	**3.01**	**267**	*e*Pg	**Pb**	**04 08 12.8**	**+2.7**
HYF	**Humbligny**	**3.15**	**280**	*e*Sg	**Sg**	**04 08 56.7**	**-1.6**
HYF	**Humbligny**	**3.15**	**280**	*e*Sg	**Sg**	**04 08 56.7**	**-1.6**
FRF	**La Foret Royal**	**3.27**	**187**	*e*Pg	**Pg**	**04 08 18.3**	**-1.3**
FRF				*e*Sg	**Sg**	**04 08 59.8**	**-2.1**
	1.0nm,0.2s						
FRF	**La Foret Royal**	**3.27**	**187**	*e*Pg	**Pg**	**04 08 18.3**	**-1.3**
TCF	**Toulx Ste Croi**	**3.48**	**263**	*e*Pn	**Pn**	**04 08 10.8**	**+0.4**
TCF				*e*Sn	**Sn**	**04 08 49.2**	**-2.0**
TCF				*e*Sg	**Sg**	**04 09 06.5**	**-2.3**
	5.4nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**3.60**	**222**	*e*Pn	**Pn**	**04 08 12.0**	**0.0**
	SNR=1.0						
LASF	**Ste Croix**	**3.60**	**222**	*e*Pg	**Pg**	**04 08 24.2**	**-1.8**
LASF				*e*Sn	**Sn**	**04 08 52.6**	**-1.5**
	SNR=1.0						
LASF				*e*Sg	**Sg**	**04 09 10.7**	**-2.0**
	4.1nm,0.3s						
LASF	**Ste Croix**	**3.60**	**222**	*e*Pn	**Pn**	**04 08 12.0**	**0.0**
	SNR=1.0						
LASF	**Ste Croix**	**3.60**	**222**	*e*Pg	**Pg**	**04 08 24.2**	**-1.8**
LASF				*e*Sn	**Sn**	**04 08 52.6**	**-1.5**
	SNR=1.0						
LDF	**La Druitiere**	**5.26**	**293**	*e*Sg	**Sg**	**04 10 00.4**	**-5.3**
	2.4nm,0.2s,SNR=1.0						
LDF	**La Druitiere**	**5.26**	**293**	*e*Sg	**Sg**	**04 10 00.4**	**-5.3**
	1.2nm,0.2s,SNR=1.0						
SUMG	**Summit**	**33.11**	**337**	*i* P	**P**	**04 13 51.7**	**-0.3**

*ISCJB **13** 04:10:17.4±0.3,2˚.95N±0˚.03×126˚.20E±0˚.04, h72km, mb4.2/23, Error ellipse: s-maj=5.5km s-min=3.8km az=163.8*
*AUST **13** 04:10:20.1±0.4,2˚.92N×126˚.26E, h89km, Error ellipse: s-maj=1.2km s-min=1.0km az=30.0*
*IDC **13** 04:10:20.6±2.1,2˚.83N×125˚.97E, h88km±18km, mb3.9/16, mb1 4.0/17, mb1mx3.8/27, mbtmp3.9/17, MS3.3/2, Ms1 3.3/2, ms1mx2.6/39, Error ellipse: s-maj=34.5km s-min=9.3km az=74.0*
*NEIC **13** 04:10:21.1±0.8,2˚.87N×126˚.10E, h94km±7km, mb4.4/8, Error ellipse: s-maj=10.7km s-min=5.2km az=76.0*
*DJA **13** 04:10:22.7±0.7,3˚N±5˚×12˚6E±˚, h53km±18km, M4.7/5, mb4.8/4, mB5.2/1, MLv4.7/5, Mw(mB)4.6/1*

ISC 13 04:10:19.3±0.4,2˚.86N±0˚.04×126˚.18E±0˚.05, h72km, n77, σ1ᵗ32/88, mb4.4/23, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.90**	**122**	P	**Pn**	**04 10 49.3**	**-0.3**
MNI	**Manado**	**1.94**	**224**	P	**Pn**	**04 10 49.7**	**-0.6**
TNTI	**Ternate**	**2.39**	**150**	P	**Pn**	**04 10 57.0**	**+0.8**
TNTI				S	**Sn**	**04 11 25.6**	**+1.1**
KMSI	**Cibinong**	**3.16**	**224**	P	**Pn**	**04 11 07.6**	**+0.9**
LBMI	**Labuha**	**3.71**	**159**	S	**Sn**	**04 11 58.2**	**+1.3**
MATI	**Mati**	**4.06**	**1**	*e*P	**Pn**	**04 11 18.2**	**-0.8**
MATI				*e*S	Sn	04 11 56.4	-9.0
DAV	**Davao City (W)**	**4.23**	**352**	P	**Pn**	**04 11 23.0**	**+1.7**
DAV				S	**Sn**	**04 12 11.7**	**+2.3**
DAV	**Davao City (W)**	**4.23**	**352**	P	**Pn**	**04 11 23.0**	**+1.7**
	68nm,0.3s,baz=299,slow=2.9,SNR=3.6						
DAV				S	**Sn**	**04 12 11.7**	**+2.3**
	49nm,0.3s,baz=79,slow=17,SNR=4.8						
CTBH	**Cotabato--PC H**	**4.74**	**336**	⇑ *i*P	**Pn**	**04 11 28.1**	**-0.3**
MRSI	**Marisa**	**4.86**	**241**	P	**Pn**	**04 11 30.6**	**+0.7**
MRSI				S	**Sn**	**04 12 23.0**	**-1.8**
LUWI	**Luwuk**	**5.16**	**221**	P	**Pn**	**04 11 36.1**	**+2.0**
LUWI	**Luwuk**	**5.16**	**221**	P	Pn	04 11 37.6	+3.6
	baz=5.3,SNR=8.0						
PAGZ	**Pagadian**	**5.69**	**331**	*e*P	**Pn**	**04 11 39.7**	**-1.5**
IPIL	**Ipil**	**6.08**	**324**	*e*P	**Pn**	**04 11 45.5**	**-1.1**
NLAI	**Namlea**	**6.12**	**171**	P	**Pn**	**04 11 47.1**	**-0.1**
	48nm,0.6s,2µm						
NLAI				S	**Sn**	**04 12 53.7**	**-2.2**
	48nm,0.6s,2µm						
MYLDM	**Lahad Datu**	**8.00**	**287**	P	**Pn**	**04 12 15.2**	**+2.3**
	59nm,0.9s						
FAKI	**Fak Fak**	**8.35**	**133**	P	**Pn**	**04 12 19.2**	**+1.5**
	baz=8.4,SNR=5.4						
TTSI	**Tana Toraja**	**8.65**	**227**	P	**Pn**	**04 12 23.7**	**+1.9**
	120nm,0.9s						
SPSI	**Sidrap Palu**	**9.33**	**223**	P	**Pn**	**04 12 34.1**	**+3.1**
PALU	**Palau**	**9.38**	**61**	P	**Pn**	**04 12 31.0**	**-0.8**
	baz=9.3,SNR=3.8						
PALU				S	**Sn**	**04 14 13.4**	**-2.3**
	baz=9.3,SNR=4.8						
KAPI	**Kappang**	**10.12**	**219**	*e*Pn	**Pn**	**04 12 41.8**	**-0.1**
KKM	**Kota Kinabalu**	**10.43**	**288**	*e*Pn	**Pn**	**04 12 48.2**	**+2.0**
	9.0nm,0.4s						
KKM	**Kota Kinabalu**	**10.43**	**288**	P	**Pn**	**04 12 48.7**	**+2.5**
	baz=10,SNR=5.3						
MTN	**Manton Dam**	**16.36**	**163**	P	**P**	**04 14 05.5**	**-0.7**
	baz=16,SNR=3.6						
KDU	**Kakadu**	**16.66**	**158**	P	**Pn**	**04 14 08.2**	**-0.1**
	baz=17,SNR=4.2						
FITZ	**Fitzroy Crossi**	**20.84**	**181**	P	**P**	**04 14 54.9**	**-0.3**
FITZ	**Fitzroy Crossi**	**20.84**	**181**	P	**P**	**04 14 54.9**	**-0.3**
	2.6nm,0.5s,baz=26,slow=14,SNR=13						
FITZ	**Fitzroy Crossi**	**20.84**	**181**	P	**P**	**04 14 55.2**	**0.0**
	baz=21,SNR=9.2						
WRAB	**Tennant Creek**	**24.03**	**161**	*e*P	**P**	**04 15 27.4**	**-0.3**
	8.8nm,0.5s						
WRA	**Warramunga Arr**	**24.03**	**161**	P	**P**	**04 15 27.4**	**-0.3**
WRA				S	**S**	**04 19 38.4**	**-1.7**
WRA	**Warramunga Arr**	**24.03**	**161**	P	**P**	**04 15 27.4**	**-0.3**
	10nm,0.4s,baz=338,slow=10,SNR=30						
WRA				S	**S**	**04 19 38.4**	**-1.7**
	1.9nm,0.9s,baz=337,slow=15,SNR=3.6						
PMG	**Port Moresby**	**24.19**	**120**	*e*P	**P**	**04 15 29.9**	**+0.6**
	13nm,0.9s						
MBWA	**Marble Bar**	**24.69**	**195**	*e*P	**P**	**04 15 33.0**	**-0.7**
	26nm,1.1s						
QIS	**Mount Isa**	**26.74**	**151**	P	**P**	**04 15 53.7**	**+1.4**
	baz=27,SNR=6.8						
AS31	**Alice Springs**	**27.41**	**164**	*e*P	**P**	**04 15 58.2**	**-0.1**
ASAR	**Alice Springs**	**27.42**	**164**	P	**P**	**04 15 58.5**	**+0.2**
ASAR				S	**S**	**04 20 34.6**	**+0.9**
ASAR	**Alice Springs**	**27.42**	**164**	P	**P**	**04 15 58.5**	**+0.2**
	1.8nm,0.5s,baz=346,slow=7.6,SNR=36						
ASAR				S	**S**	**04 20 34.6**	**+0.9**
	1.5nm,0.9s,baz=343,slow=21,SNR=7.7						
MTSU	**Mount Surprise**	**27.47**	**140**	P	**P**	**04 16 02.4**	**+3.5**
	baz=28,SNR=6.3						
MEEK	**Meekatharra**	**30.22**	**194**	P	**P**	**04 16 23.5**	**+0.3**
	baz=30,SNR=6.5						
KSAR	**Wonju Array Be**	**34.45**	**2**	P	**P**	**04 17 00.8**	**+0.6**
KSRS	**Korea Array**	**34.47**	**2**	P	**P**	**04 17 00.8**	**+0.5**
	4.6nm,0.8s,baz=181,slow=10,SNR=18						
KLBR	**Kellerberrin**	**35.19**	**193**	P	**P**	**04 17 07.3**	**+0.8**
	baz=36,SNR=4.8						
MJAR	**Matsushiro Arr**	**35.31**	**17**	P	**P**	**04 17 06.9**	**-0.6**
MJAR	**Matsushiro Arr**	**35.31**	**17**	P	**P**	**04 17 06.9**	**-0.6**
	4.6nm,0.9s,baz=203,slow=10.0,SNR=8.4						
MJAR				LR	LR	04 29 18.9	
	comp=Z,36nm,21.4s,baz=135,slow=32						
MAJO	**Matsushiro**	**35.31**	**17**	*e*P	**P**	**04 17 06.8**	**-0.7**
	8.3nm,0.9s						
BBOO	**Buckleboo**	**36.69**	**166**	P	**P**	**04 17 20.3**	**+1.0**
	baz=37,SNR=9.1						
STKA	**Stephens Creek**	**37.52**	**158**	P	**P**	**04 17 26.8**	**+0.3**
STKA	**Stephens Creek**	**37.52**	**158**	P	**P**	**04 17 26.8**	**+0.3**
	3.3nm,0.5s,baz=327,slow=7.1,SNR=13						
STKA	**Stephens Creek**	**37.52**	**158**	P	**P**	**04 17 27.1**	**+0.7**
	baz=38,SNR=8.4						
USRK	**Ussurijsk Arra**	**41.49**	**6**	P	**P**	**04 18 00.2**	**+1.0**
	2.8nm,0.8s,baz=213,slow=8.7,SNR=5.0						
SONM	**Songino Array**	**47.95**	**342**	P	**P**	**04 18 49.4**	**-1.4**
SONM				PcP	**PcP**	**04 20 18.2**	**+0.1**
SONM	**Songino Array**	**47.95**	**342**	P	**P**	**04 18 49.4**	**-1.4**
	1.6nm,0.8s,baz=152,slow=9.3,SNR=7.9						
SONM				PcP	**PcP**	**04 20 18.2**	**+0.1**
	0.5nm,0.3s,baz=147,slow=4.1,SNR=5.5						
NFK	**Norfolk Island**	**51.06**	**131**	P	P	04 19 02.1	-13
	baz=51,SNR=3.2						
MKAR	**Makanchi Array**	**57.96**	**326**	P	**P**	**04 20 02.8**	**-1.5**
MKAR				PcP	**PcP**	**04 20 56.3**	**+0.5**
MKAR	**Makanchi Array**	**57.96**	**326**	P	**P**	**04 20 02.8**	**-1.5**
	0.5nm,0.4s,baz=126,slow=8.3,SNR=8.0						
MKAR				PcP	**PcP**	**04 20 56.3**	**+0.5**
	2.2nm,0.7s,baz=119,slow=4.9,SNR=8.7						
TKM2	**Tokmak 2**	**60.04**	**319**	*e*P	**P**	**04 20 17.4**	**-1.6**
	1.5nm,0.8s						
AAK	**Ala-Archa**	**60.64**	**318**	LR	LR	04 46 59.4	
	comp=Z,32nm,18.0s,baz=40,slow=36						
EKS2	**Erkin-Say**	**61.12**	**318**	*e*P	**P**	**04 20 25.3**	**-1.1**
	2.0nm,0.7s						
KURBB	**Kurchatov Arra**	**62.18**	**328**	P	**P**	**04 20 31.4**	**-1.7**
	1.7nm,0.6s,baz=129,slow=6.2,SNR=15						
KURK	**Kurchatov**	**62.18**	**328**	*e*P	**P**	**04 20 31.6**	**-1.5**
	2.3nm,0.5s						
KKAR	**Karatay Array**	**63.50**	**317**	*e*P	**P**	**04 20 40.4**	**-1.7**
	1.6nm,0.8s						
BVAR	**Borovoye Array**	**67.75**	**327**	P	**P**	**04 21 07.4**	**-1.8**
BVAR	**Borovoye Array**	**67.75**	**327**	P	**P**	**04 21 07.4**	**-1.8**
	0.6nm,0.5s,baz=132,slow=8.2,SNR=4.9						
AKTO	**Aktyubinsk**	**74.00**	**322**	P	**P**	**04 21 46.4**	**-0.8**
AKTO	**Aktyubinsk**	**74.00**	**322**	P	**P**	**04 21 46.4**	**-0.8**
	0.7nm,0.2s,baz=88,slow=12,SNR=4.1						
VNDA	**Vanda**	**82.64**	**173**	P	**P**	**04 22 35.3**	**+1.1**
VNDA	**Vanda**	**82.64**	**173**	P	**P**	**04 22 35.3**	**+1.1**
	0.2nm,0.4s,baz=303,slow=6.2,SNR=3.5						
BRTR	**Keskin Array B**	**90.15**	**310**	P	**P**	**04 23 10.8**	**-1.4**
BRTR	**Keskin Array B**	**90.15**	**310**	P	**P**	**04 23 10.8**	**-1.4**
	0.4nm,0.7s,baz=138,slow=6.1,SNR=3.6						
ARCES	**ARCESS Array B**	**91.07**	**340**	P	**P**	**04 23 14.9**	**-0.6**
ARCES	**ARCESS Array B**	**91.07**	**340**	P	**P**	**04 23 14.9**	**-0.6**
	2.3nm,0.7s,baz=35,slow=3.0,SNR=5.9						
FINES	**FINESS Array B**	**92.34**	**332**	P	**P**	**04 23 19.7**	**-1.8**
FINES	**FINESS Array B**	**92.34**	**332**	P	**P**	**04 23 19.7**	**-1.8**
	2.4nm,0.8s,baz=204,slow=4.2,SNR=4.5						
BUR08	**Bucovina Ar. S**	**95.29**	**318**	*e*P	**P**	**04 23 35.0**	**-0.6**
TOA0	**Torodi Ar. Sit**	**122.66**	**287**	*e*PKPdf	**PKPdf**	**04 29 07.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**122.66**	**287**	PKP	**PKPdf**	**04 29 07.4**	**-0.5**
TORD	**Torodi Ar. Bea**	**122.66**	**287**	PKP	**PKPdf**	**04 29 07.4**	**-0.5**
	0.6nm,0.7s,baz=58,slow=1.9,SNR=7.5						

*ISK **13** 04:24:12.4, 39˚.98N×40˚.04E, h5km, MD2.6*
*CSEM **13** 04:24:12.4±0.4, 39˚.93N×40˚.01E, h2km, MD2.8, Error ellipse: s-maj=8.4km s-min=6.3km az=161.0*
*DDA **13** 04:24:13.9, 40˚.03N×39˚.99E, h7km, MD2.8*
*ISCJB **13** 04:24:13.1±0.7, 39˚.96N±0˚.04×39˚.99E±0˚.05, h6km±8km, Error ellipse: s-maj=7.3km s-min=5.8km az=170.0*

ISC 13 04:24:12.4±1.3, 39˚.95N±0˚.04×40˚.01E±0˚.03, h11km±14km, n15, σ0ᵗ54/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOPT	**Kop Dagi**	**0.38**	**80**	*i* P	**Pb**	**04 24 20.7**	**-0.6**
KOPT				*i* S	**Sb**	**04 24 28.0**	**+0.8**
KOPT	**Kop Dagi**	**0.38**	**80**	*i* P	**Pb**	**04 24 20.7**	**-0.6**
ERZN	**Erzincan**	**0.43**	**211**	*e*PG	**Pg**	**04 24 21.7**	**+0.9**
BAYT	**Ayd˘–ntepe-Bay**	**0.45**	**13**	*e*PG	**Pg**	**04 24 21.2**	**-0.1**
BAYT				*e*SG	**Sg**	**04 24 27.4**	**+0.1**
EZC	**Erzincan**	**0.54**	**249**	*e*Pg	**Pg**	**04 24 21.7**	**-1.3**
KELT	**Kelkit**	**0.61**	**289**	*i* P	**Pb**	**04 24 24.9**	**-0.3**
KELT				*i* S	**Sb**	**04 24 34.1**	**+0.2**
KELT	**Kelkit**	**0.61**	**289**	*i* P	**Pb**	**04 24 24.9**	**-0.3**
KELT				*i* S	**Sb**	**04 24 34.1**	**+0.2**
GUMT	**Gumushane**	**0.65**	**321**	*e*PG	**Pb**	**04 24 25.4**	**-0.4**
GUMT				*e*SG	**Sb**	**04 24 35.0**	**+0.1**
GUMT	**Gumushane**	**0.65**	**321**	*e*Pg	**Pb**	**04 24 25.4**	**-0.4**
GUMT				*e*Sg	**Sb**	**04 24 35.0**	**+0.1**
MACK	**Trabzon**	**1.01**	**350**	*i* P	**Pb**	**04 24 31.6**	**-0.2**
MACK				*i* S	**Sb**	**04 24 45.0**	**-0.1**
MACK	**Trabzon**	**1.01**	**350**	*i* P	**Pb**	**04 24 31.6**	**-0.2**
MACK				*i* S	**Sb**	**04 24 45.0**	**-0.1**
ESPY	**Espiye-Giresun**	**1.37**	**315**	*e*PN	**Pg**	**04 24 39.4**	**+0.6**
ESPY	**Espiye-Giresun**	**1.37**	**315**	*e*Pn	**Pg**	**04 24 39.4**	**+0.6**
SUSE	**Susehri**	**1.41**	**281**	*i* P	**Pg**	**04 24 39.8**	**+0.4**
SUSE	**Susehri**	**1.41**	**281**	*i* P	**Pg**	**04 24 39.8**	**+0.4**

*IDC **13** 04:34:10.5±1.4, 53˚.75N×165˚.29W, h0km, mb3.5/5, mb1 3.8/8, mb1mx3.5/32, mbtmp3.5/8, ML3.2/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/26, Error ellipse: s-maj=34.5km s-min=16.5km az=169.0*
*NEIC **13** 04:34:14.8, 53˚.53N×165˚.07W, h13km, ML3.6(AEIC), After AEIC.*

ISC 13 04:34:14.0±1.6, 53˚.65N±0˚.08×165˚.09W±0˚.04, h17km±11km, n32, σ0ᵗ75/36, mb3.4/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKSA	**Akutan Strait**	**0.61**	**324**	P	**Pn**	**04 34 27.8**	**0.0**
AKSA				S	**Sn**	**04 34 37.8**	**+0.6**
AKUT	**Akutan**	**0.63**	**321**	P	**Pn**	**04 34 28.4**	**+0.2**
AKUT				S	**Sn**	**04 34 39.0**	**+1.2**
ZRO	**Akutan Zero**	**0.69**	**311**	P	**Pn**	**04 34 29.0**	**+0.1**
AKLV	**Akutan Long Va**	**0.73**	**316**	P	**Pn**	**04 34 29.5**	**0.0**
AKLV				S	**Sn**	**04 34 41.0**	**+0.8**
AKRB	**Akutan Reef Bi**	**0.75**	**310**	P	**Pn**	**04 34 30.0**	**+0.2**
LVA	**Lava Point**	**0.76**	**313**	P	**Pn**	**04 34 30.1**	**+0.2**
AKGG	**Akutan Green G**	**0.77**	**316**	P	**Pn**	**04 34 30.2**	**+0.2**
AKGG				S	**Sn**	**04 34 41.9**	**+0.7**
UNV	**Unalaska Valle**	**0.86**	**284**	P	**Pb**	**04 34 30.4**	**-0.1**
UNV				S	**Sg**	**04 34 42.2**	**+0.2**
MTBL	**Makushin Table**	**0.99**	**290**	P	**Pb**	**04 34 32.9**	**+0.2**
MREP	**Makushin Rep't**	**1.00**	**280**	P	**Pb**	**04 34 33.0**	**+0.2**
MCIR	**Makushin Cirqu**	**1.11**	**287**	P	**Pb**	**04 34 34.7**	**0.0**
MSOM	**Makushin Julie**	**1.12**	**280**	P	**Pb**	**04 34 34.1**	**-0.7**
SSLW	**Shishaldin Wes**	**1.26**	**26**	P	**Pg**	**04 34 38.3**	**-0.1**
SSLN	**Shishaldin Nor**	**1.33**	**28**	P	**Pb**	**04 34 38.3**	**-0.2**
FALS	**False Pass**	**1.56**	**38**	P	**Pn**	**04 34 41.3**	**+0.4**
OKFG	**Isagazine Ridge**	**1.70**	**263**	P	**Pn**	**04 34 42.4**	**-0.4**
OKCE	**Okmok Cone E**	**1.85**	**264**	P	**Pn**	**04 34 44.7**	**-0.2**
OKSO	**Okmok South**	**1.85**	**262**	P	**Pn**	**04 34 44.8**	**-0.1**
OKSO				S	**Sn**	**04 35 08.1**	**+0.1**
OKSP	**Okmok Steeple**	**1.95**	**260**	P	**Pn**	**04 34 46.4**	**0.0**
DRIA	**Deer Island**	**2.12**	**50**	P	**Pn**	**04 34 49.9**	**+1.3**
DT1	**Dutton Round H**	**2.20**	**47**	P	**Pn**	**04 34 50.2**	**+0.5**
DTNA	**Dutton South F**	**2.24**	**47**	P	**Pn**	**04 34 50.9**	**+0.6**
SDPT	**Sand Point**	**3.19**	**56**	P	**Pn**	**04 35 04.0**	**+0.7**
KDAK	**Kodiak Island**	**8.19**	**55**	Pn	**Pn**	**04 36 11.4**	**-0.4**
	0.3nm,0.3s,baz=211,slow=5.9,SNR=3.9						
KDAK				Sn	Sn	04 37 36.7	-7.1
	baz=316,slow=18,SNR=2.4						
FX1	**Attu Island--F**	**13.03**	**275**	Pn	**Pn**	**04 37 19.1**	**+0.9**
	0.6nm,0.3s,baz=49,slow=19,SNR=3.1						
ILAR	**Eielson Array**	**14.46**	**32**	Pn	Pn	04 37 34.4	-3.2
	0.0nm,0.3s,baz=224,slow=13,SNR=2.4						
DLBC	**Dease Lake**	**20.01**	**62**	P	**P**	**04 38 45.9**	**+0.3**
	1.0nm,0.7s,baz=298,slow=18,SNR=3.0						
INK	**Inuvik**	**20.86**	**33**	P	**P**	**04 38 51.5**	**-3.1**
	0.5nm,0.4s,baz=261,slow=8.4,SNR=6.4						
YKA	**Yellowknife Ar**	**27.44**	**51**	P	**P**	**04 39 58.0**	**-0.5**
	0.5nm,0.6s,baz=275,slow=7.9,SNR=8.1						
NVAR	**Mina Array Bea**	**35.17**	**96**	P	**P**	**04 41 07.5**	**+0.5**
	2.2nm,0.7s,baz=299,slow=8.8,SNR=9.6						
PDAR	**Pinedale Array**	**37.66**	**

comp=Z,0.6nm,0.4s,baz=49,slow=5.8,SNR=39
INK Inuvik 73.90 9 P **P 04 48 55.6 -0.2**
comp=Z,0.4nm,0.7s,baz=323,slow=6.2,SNR=3.1
YKA Yellowknife Ar 81.23 3 P **P 04 49 36.4 -0.1**
comp=Z,0.2nm,0.4s,baz=351,slow=5.4,SNR=4.4
WRA Warramunga Arr 82.11 122 P **P 04 49 39.7 -2.1**
comp=Z,0.9nm,1.1s,baz=323,slow=5.4,SNR=3.8
ASAR Alice Springs 84.38 125 P **P 04 49 51.1 -2.2**
comp=Z,0.3nm,0.6s,baz=312,slow=5.7,SNR=3.4

DDA ***13*** *05:00:43.9, 40.74N×29.13E, h8km, MD3.0*
ISK ***13*** *05:00:43.0, 40.72N×29.13E, h11km, MD2.9*
CSEM ***13*** *05:00:43.6±0.1, 40.72N×29.13E, h8km, MD3.0, Error ellipse: s-maj=2.6km s-min=2.3km az=56.0*
ISCJB ***13*** *05:00:43.5±0.3, 40.74N±0.03×29.12E±0.03, h7km±4km, Error ellipse: s-maj=4.4km s-min=3.7km az=26.0*
ISC 13 05:00:43.6±0.9, 40.73N±0.02×29.12E±0.02, h9km±7km, n56, σ946/72, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BUY	**Buyukada**	**0.12**	**358**	*i* P		**Pg**	**05 00 46.6**	**+0.1**
BUY				*i* S		**Sg**	**05 00 48.7**	**+0.2**
BUY	**Buyukada**	**0.12**	**358**	*i* P		**Pg**	**05 00 46.6**	**+0.1**
BUY				*i* S		**Sg**	**05 00 48.7**	**+0.2**
ARMT	**Armutlu**	**0.26**	**230**	*e*PG		**Pg**	**05 00 48.4**	**-0.5**
ARMT				*e*SG		**Sg**	**05 00 53.2**	**+0.8**
ARMT	**Armutlu**	**0.26**	**230**	*e*Pg		**Pg**	**05 00 48.4**	**-0.5**
GEMT	**Gemlik**	**0.30**	**170**	*e*PG		**Pg**	**05 00 49.3**	**-0.3**
GEMT	**Gemlik**	**0.30**	**170**	*e*Pg		**Pg**	**05 00 49.3**	**-0.3**
ISK	**Istanbul-Kandi**	**0.34**	**352**	*e*PG		**Pg**	**05 00 50.5**	**+0.1**
ISK				*e*SG		**Sg**	**05 00 55.1**	**+0.2**
ISK	**Istanbul-Kandi**	**0.34**	**352**	*e*Pg		**Pg**	**05 00 50.5**	**+0.1**
ISK				*e*Sg		**Sg**	**05 00 55.1**	**+0.2**
MDNY	**Mudanya-Bursa**	**0.40**	**207**	*e*PG		**Pg**	**05 00 51.5**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.40**	**207**	*e*Pg		**Pg**	**05 00 51.5**	**-0.1**
HRT	**Hereke**	**0.42**	**77**	*e*PG		**Pg**	**05 00 51.8**	**-0.2**
HRT				*e*SG		**Sg**	**05 00 57.8**	**+0.2**
HRT	**Hereke**	**0.42**	**77**	*e*Pg		**Pg**	**05 00 51.8**	**-0.2**
HRT				*e*Sg		**Sg**	**05 00 57.8**	**+0.2**
BGKT	**Bogazkoy**	**0.52**	**330**	*e*PG		**Pb**	**05 00 54.5**	**-0.5**
BGKT	**Bogazkoy**	**0.52**	**330**	*e*Pg		**Pb**	**05 00 54.5**	**-0.5**
ADVT	**Abdulvahap**	**0.56**	**122**	*e*PG		**Pg**	**05 00 54.0**	**-0.4**
ADVT				*e*SG		**Sg**	**05 01 02.1**	**+0.4**
ADVT	**Abdulvahap**	**0.56**	**122**	*e*Pg		**Pg**	**05 00 54.0**	**-0.4**
SILT	**Sile**	**0.58**	**43**	*e*PG		**Pg**	**05 00 54.8**	**0.0**
SILT	**Sile**	**0.58**	**43**	*e*Pg		**Pg**	**05 00 54.8**	**0.0**
ELBA	**Catalca**	**0.67**	**309**	*i* P		**Pg**	**05 00 57.0**	**+0.4**
ELBA				*i* S		**Sb**	**05 01 06.3**	**-0.5**
ELBA	**Catalca**	**0.67**	**309**	*i* P		**Pg**	**05 00 57.0**	**+0.4**
ELBA				*i* S		**Sb**	**05 01 06.3**	**-0.5**
CTKS	**Kestanelik-??a**	**0.69**	**318**	*e*PG		**Pg**	**05 00 57.0**	**0.0**
CTKS	**Kestanelik-??a**	**0.69**	**318**	*e*Pg		**Pg**	**05 00 57.0**	**0.0**
KCTX	**Karacabey (Bur**	**0.75**	**232**	*e*PG		**Pg**	**05 00 57.8**	**-0.2**
KCTX	**Karacabey (Bur**	**0.75**	**232**	*e*Pg		**Pg**	**05 00 57.8**	**-0.2**
SLVT	**Silivri**	**0.85**	**306**	*e*PG		**Pg**	**05 01 00.3**	**+0.2**
SLVT	**Silivri**	**0.85**	**306**	*e*Pg		**Pg**	**05 01 00.3**	**+0.2**
CTYL	**Yal??k??y-??at**	**0.97**	**320**	*e*PG		**Pg**	**05 01 02.3**	**-0.1**
CTYL	**Yal??k??y-??at**	**0.97**	**320**	*e*Pg		**Pg**	**05 01 02.3**	**-0.1**
BNT	**Bandirma**	**0.99**	**248**	*e*PG		**Pg**	**05 01 02.8**	**+0.1**
BNT	**Bandirma**	**0.99**	**248**	*e*Pg		**Pg**	**05 01 02.8**	**+0.1**
GULT	**Gulveren**	**1.10**	**105**	*e*PN		**Pb**	**05 01 04.6**	**-0.3**
GULT	**Gulveren**	**1.10**	**105**	*e*Pn		**Pb**	**05 01 04.6**	**-0.3**
MRMT	**Marmara Adasi**	**1.17**	**264**	*e*PN		**Pb**	**05 01 06.0**	**0.0**
MRMT	**Marmara Adasi**	**1.17**	**264**	*e*Pn		**Pb**	**05 01 06.0**	**0.0**
DURS	**Dursunbey**	**1.23**	**204**	*i* P		**Pg**	**05 01 07.5**	**+0.2**
DURS				*i* S		**Sg**	**05 01 23.7**	**+0.4**
DURS	**Dursunbey**	**1.23**	**204**	*i* P		**Pg**	**05 01 07.5**	**+0.2**
DURS				*i* S		**Sg**	**05 01 23.7**	**+0.4**
GONE	**Gonen-Balikesi**	**1.29**	**239**	*e*PN		**Pn**	**05 01 06.9**	**-0.9**
GONE	**Gonen-Balikesi**	**1.29**	**239**	*e*Pn		**Pn**	**05 01 06.9**	**-0.9**
BORA	**Eskisehir**	**1.33**	**129**	*i* P		**Pg**	**05 01 09.5**	**+0.4**
BORA				*i* S		**Sg**	**05 01 27.9**	**+1.6**
BORA	**Eskisehir**	**1.33**	**129**	*i* P		**Pg**	**05 01 09.5**	**+0.4**
BORA				*i* S		**Sg**	**05 01 27.9**	**+1.6**
KRBG	**Karabiga-Canak**	**1.43**	**257**	*e*PN		**Pn**	**05 01 09.4**	**-0.3**
KRBG	**Karabiga-Canak**	**1.43**	**257**	*e*Pn		**Pn**	**05 01 09.4**	**-0.3**
BALY	**Balya**	**1.52**	**230**	*i* P		**Pb**	**05 01 12.2**	**+0.3**
BALY				*i* S		**Sg**	**05 01 32.8**	**+0.4**
BALY	**Balya**	**1.52**	**230**	*i* P		**Pb**	**05 01 12.2**	**+0.3**
BALY				*i* S		**Sg**	**05 01 32.8**	**+0.4**
ALT	**Altintas**	**1.84**	**155**	*e*PN		**Pn**	**05 01 15.2**	**-0.2**
ALT	**Altintas**	**1.84**	**155**	*e*Pn		**Pn**	**05 01 15.2**	**-0.2**
ERIK	**Erikli-Kesan**	**1.98**	**269**	*e*PN		**Pn**	**05 01 17.6**	**+0.3**
ERIK	**Erikli-Kesan**	**1.98**	**269**	*e*Pn		**Pn**	**05 01 17.6**	**+0.3**
GELI	**Tayfur-Gelibol**	**2.04**	**262**	*e*PN		**Pn**	**05 01 18.3**	**+0.1**
GELI	**Tayfur-Gelibol**	**2.04**	**262**	*e*Pn		**Pn**	**05 01 18.3**	**+0.1**
AKS	**Akhisar**	**2.11**	**209**	*e*PN		**Pn**	**05 01 18.1**	**-0.9**
AKS	**Akhisar**	**2.11**	**209**	*e*Pn		**Pn**	**05 01 18.1**	**-0.9**
EDRB	**Edirne**	**2.11**	**303**	*e*PN		**Pn**	**05 01 19.5**	**+0.4**
EDRB	**Edirne**	**2.11**	**303**	*e*Pn		**Pn**	**05 01 19.5**	**+0.4**
KULA	**Kula-Manisa**	**2.24**	**189**	*e*PN		**Pn**	**05 01 21.1**	**+0.2**
KULA	**Kula-Manisa**	**2.24**	**189**	*e*Pn		**Pn**	**05 01 21.1**	**+0.2**

ISCJB ***13*** *05:08:37.5±0.7, 40.29N±0.04×20.56E±0.06, h72km±7km, Error ellipse: s-maj=9.1km s-min=4.9km az=147.7*
TIR ***13*** *05:08:38.6±0.6, 41.06N×20.64E, h0km, ML3.8*
ATH ***13*** *05:08:38.2, 40.29N×20.65E, h65km±5km*
CSEM ***13*** *05:08:38.7±0.3, 40.27N×20.58E, h60km, ML2.4/6, Error ellipse: s-maj=7.3km s-min=4.1km az=57.0*
THE ***13*** *05:08:39.0, 40.28N×20.67E, h68km±1km, ML2.4/6, Error ellipse: s-maj=1.9km s-min=1.0km az=278.0*
ISC 13 05:08:38.5±1.3, 40.28N±0.03×20.59E±0.04, h65km±7km, n41, σ978/66, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KBN	**Korca**	**0.38**	**24**	*e*PG		**Pn**	**05 08 49.2**	**-0.7**
KBN				*i* SG		**Sn**	**05 08 57.9**	**-0.3**
KBN	**Korca**	**0.38**	**24**	P		**Pn**	**05 08 50.2**	**+0.3**
KBN	**Korca**	**0.38**	**24**	*e*Pg		**Pn**	**05 08 49.2**	**-0.7**
SNR=9.0								
KBN	**Korca**	**0.38**	**24**	P		**Pn**	**05 08 50.2**	**+0.3**
KBN				*i* Sg		**Sn**	**05 08 57.9**	**-0.3**
SNR=9.0								
NEST	**Nestorio**	**0.38**	**69**	P		**Pn**	**05 08 49.6**	**-0.4**
NEST				S		**Sn**	**05 08 58.6**	**+0.3**
NEST	**Nestorio**	**0.38**	**69**	P		**Pn**	**05 08 49.6**	**-0.4**
NEST				S		**Sn**	**05 08 58.6**	**+0.3**
JAN	**Janina**	**0.65**	**162**	P		**Pn**	**05 08 52.8**	**+0.1**
JAN				S		**Sn**	**05 09 03.2**	**+0.2**
JAN	**Janina**	**0.65**	**162**	*e*P		**Pn**	**05 08 52.6**	**-0.1**
JAN				*e*S		**Sn**	**05 09 03.2**	**+0.2**
JAN	**Janina**	**0.65**	**162**	P		**Pn**	**05 08 52.8**	**+0.1**
JAN				S		**Sn**	**05 09 03.2**	**+0.2**
FNA	**Florina**	**0.78**	**50**	P		**Pn**	**05 08 54.3**	**+0.1**
FNA				S		**Sn**	**05 09 06.0**	**+0.3**
FNA	**Florina**	**0.78**	**50**	*e*P		**Pn**	**05 08 54.3**	**+0.1**
FNA	**Florina**	**0.78**	**50**	P		**Pn**	**05 08 54.3**	**+0.1**
FNA				S		**Sn**	**05 09 06.0**	**+0.3**
KZN	**Kozani**	**0.91**	**88**	P		**Pn**	**05 08 55.4**	**-0.3**
KZN				S		**Sn**	**05 09 08.2**	**-0.2**
KZN	**Kozani**	**0.91**	**88**	*e*P		**Pn**	**05 08 55.6**	**-0.1**
KZN	**Kozani**	**0.91**	**88**	*e*P		**Pn**	**05 08 55.6**	**-0.1**
KZN				S		**Sn**	**05 09 08.2**	**-0.2**
BIA	**Bitola**	**0.93**	**37**	P		**Pn**	**05 08 55.6**	**-0.4**
BIA	**Bitola**	**0.93**	**37**	*i* Pg		**Pn**	**05 08 55.7**	**-0.2**
BIA				*e*Sg		**Sn**	**05 09 08.8**	**0.0**
BIA	**Bitola**	**0.93**	**37**	*i* Pg		**Pn**	**05 08 55.7**	**-0.2**
BIA				*e*Sg		**Sn**	**05 09 08.8**	**0.0**
THL	**Klokotos Trika**	**1.31**	**123**	P		**Pn**	**05 09 00.9**	**+0.1**
THL				S		**Sn**	**05 09 17.8**	**+0.3**
THL	**Klokotos Trika**	**1.31**	**123**	*e*P		**Pn**	**05 09 01.4**	**+0.6**
THL	**Klokotos Trika**	**1.31**	**123**	P		**Pn**	**05 09 00.9**	**+0.1**
THL				S		**Sn**	**05 09 17.8**	**+0.3**
PHP	**Peshkopia**	**1.41**	**355**	*e*PN		**Pn**	**05 09 03.8**	**+1.6**
PHP				*i* SN		**Sn**	**05 09 22.8**	**+2.8**
PHP	**Peshkopia**	**1.41**	**355**	*e*Pn		**Pn**	**05 09 03.8**	**+1.6**
PHP				*i* Sn		**Sn**	**05 09 22.8**	**+2.8**
LIT	**Litokhoron**	**1.47**	**96**	P		**Pn**	**05 09 03.0**	**+0.1**
LIT	**Litokhoron**	**1.47**	**96**	*e*P		**Pn**	**05 09 03.0**	**+0.1**
LIT	**Litokhoron**	**1.47**	**96**	P		**Pn**	**05 09 03.0**	**+0.1**
GRG	**Griva**	**1.54**	**63**	P		**Pn**	**05 09 03.5**	**-0.4**
GRG	**Griva**	**1.54**	**63**	*e*P		**Pn**	**05 09 03.7**	**-0.2**
GRG	**Griva**	**1.54**	**63**	*e*P		**Pn**	**05 09 03.7**	**-0.2**
PUK	**Puka**	**1.84**	**344**	*e*PN		**Pn**	**05 09 07.1**	**-0.9**
PUK				*i* SN		**Sn**	**05 09 29.8**	**-0.5**
PUK	**Puka**	**1.84**	**344**	*e*Pn		**Pn**	**05 09 07.1**	**-0.9**
PUK				*i* Sn		**Sn**	**05 09 29.8**	**-0.5**
AGG	**Agios Georgios**	**1.84**	**132**	P		**Pn**	**05 09 08.4**	**+0.4**
AGG				S		**Sn**	**05 09 30.6**	**+0.3**
AGG	**Agios Georgios**	**1.84**	**132**	P		**Pn**	**05 09 08.4**	**+0.4**
AGG				S		**Sn**	**05 09 30.6**	**+0.3**
HORT	**Hortiatis**	**1.94**	**80**	P		**Pn**	**05 09 08.8**	**-0.6**
HORT				S		**Sn**	**05 09 31.7**	**-1.1**
HORT	**Hortiatis**	**1.94**	**80**	P		**Pn**	**05 09 08.8**	**-0.6**
HORT				S		**Sn**	**05 09 31.7**	**-1.1**
KNT	**Kendrikon**	**1.96**	**63**	P		**Pn**	**05 09 09.2**	**-0.4**
KNT	**Kendrikon**	**1.96**	**63**	P		**Pn**	**05 09 09.2**	**-0.4**
BARS	**Barje**	**2.70**	**20**	*e*Pn		**Pn**	**05 09 20.7**	**+1.1**
STON	**Ston**	**3.38**	**321**	*e*Pn		**Pn**	**05 09 27.8**	**-1.0**
STON				Sn		**Sn**	**05 10 05.9**	**-1.7**
STON	**Ston**	**3.38**	**321**	*e*Pn		**Pn**	**05 09 27.8**	**-1.0**
DIVS	**Divibare**	**3.84**	**354**	*e*Pn		**Pn**	**05 09 36.1**	**+0.9**
DIVS				*e*Sg		**Sn**	**05 10 18.5**	**-0.7**

ISK ***13*** *05:23:18.9, 41.82N×34.70E, h9km, MD2.7*
CSEM ***13*** *05:23:19.6±0.6, 41.83N×34.72E, h5km, MD2.7, Error ellipse: s-maj=12.7km s-min=4.9km az=177.0*
DDA ***13*** *05:23:20.5, 41.85N×34.62E, h8km, MD2.9*
ISC 13 05:23:19.9±1.5, 41.83N±0.07×34.72E±0.03, h7km±10km, n18, σ990/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BYBT	**Boyabat**	**0.36**	**174**	PG		**Pg**	**05 23 26.3**	**-0.6**
BYBT				*e*SG		**Sg**	**05 23 31.7**	**+0.1**
BYBT	**Boyabat**	**0.36**	**174**	*i* Pg		**Pg**	**05 23 26.3**	**-0.6**
BYBT				*e*Sg		**Sg**	**05 23 31.7**	**+0.1**
DIKM	**Dikmen**	**0.44**	**114**	*e*PG		**Pg**	**05 23 28.1**	**-0.3**
DIKM				*e*SG		**Sg**	**05 23 35.1**	**+0.9**
DIKM	**Dikmen**	**0.44**	**114**	*e*Pg		**Pg**	**05 23 28.1**	**-0.3**
DIKM				*e*Sg		**Sg**	**05 23 35.1**	**+0.9**
TOS	**Tosya**	**0.95**	**214**	*e*PG		**Pg**	**05 23 37.5**	**-0.5**
TOS	**Tosya**	**0.95**	**214**	*e*Pg		**Pg**	**05 23 37.5**	**-0.5**
BALT	**Daday**	**1.04**	**254**	*i* P		**Pg**	**05 23 39.8**	**0.0**
BALT				*i* S		**Sg**	**05 23 53.0**	**-0.3**
BALT	**Daday**	**1.04**	**254**	*i* P		**Pg**	**05 23 39.8**	**0.0**
BALT				*i* S		**Sg**	**05 23 53.0**	**-0.3**
ILGA	**Ilgaz**	**1.08**	**224**	*i* P		**Pg**	**05 23 40.2**	**-0.4**
ILGA				*i* S		**Sb**	**05 23 55.8**	**+0.4**
ILGA	**Ilgaz**	**1.08**	**224**	*i* P		**Pg**	**05 23 40.2**	**-0.4**
ILGA				*i* S		**Sb**	**05 23 55.8**	**+0.4**
KVT	**Kavak**	**1.25**	**126**	*e*PN		**Pn**	**05 24 03.0**	**-0.8**
KVT				*e*SN		**Sn**	**05 24 21.0**	**+0.1**
KVT	**Kavak**	**1.25**	**126**	*e*Pn		**Pn**	**05 24 03.0**	**-0.8**
KVT				*e*Sn		**Sn**	**05 24 01.0**	**+0.1**
CORM	**Corum**	**1.65**	**182**	*e*PN		**Pn**	**05 23 48.4**	**-1.0**
CORM	**Corum**	**1.65**	**182**	*e*Pn		**Pn**	**05 23 48.4**	**-1.0**
ELDT	**Eldivan**	**1.65**	**217**	*i* P		**Pg**	**05 23 51.1**	**-0.5**
ELDT				*i* S		**Sg**	**05 24 16.7**	**+3.7**
ELDT	**Eldivan**	**1.65**	**217**	*i* P		**Pg**	**05 23 51.1**	**-0.5**
ERBA	**Erbaa**	**1.92**	**126**	*i* P		**Pn**	**05 23 53.5**	**+0.5**
ERBA				*i* S		**Sg**	**05 24 21.6**	**+0.2**
ERBA	**Erbaa**	**1.92**	**126**	*i* P		**Pn**	**05 23 53.5**	**+0.5**
ERBA				*i* S		**Sg**	**05 24 21.6**	**+0.2**

MEX 13 05:29:35.6±1.4, 18.80N×104.50W, h9km±22km, MD3.6, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
R15V		**0.61**	**53**	*e*P		Pg	05 29 45.6	-2.0
R15V				*i* S		Sg	05 29 54.0	-1.7
CJM	**Chamela**	**0.86**	**324**	*e*P		Pg	05 29 49.8	-2.4
CJM				*i* S		Sg	05 30 01.3	-2.2
EZ5V		**1.08**	**51**	*e*P		Pg	05 29 54.2	-2.6
EZ5V				*e*S		Sg	05 30 08.0	-3.2
MMIG	**Aquila**	**1.21**	**115**	*e*P		Pb	05 29 55.2	-3.5
MMIG				*e*S		Sb	05 30 09.6	-4.8

IDC 13 05:29:52.8±2.1, 13.65N×92.11E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/27, mbtmpg3.5/4, ML4.1/1, Error ellipse: s-maj=63.6km s-min=27.7km az=63.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.12**	**53**	Pn		Pn	05 31 52.4	+0.3
	0.7nm,0.3s,baz=240,slow=14,SNR=5.4							
MKAR	**Makanchi Array**	**34.06**	**348**	P		P	05 36 39.4	+0.7
	0.5nm,0.8s,baz=172,slow=9.8,SNR=5.3							
ZALV	**Zalesovo Beam**	**40.62**	**353**	P		P	05 37 33.0	-1.3
	0.2nm,0.3s,baz=179,slow=6.8,SNR=3.7							
ASAR	**Alice Springs**	**55.19**	**132**	P		P	05 39 27.8	+0.1
	0.9nm,1.1s,baz=280,slow=6.3,SNR=3.9							

IDC 13 05:35:21.6±3.6, 19.36S×70.54W, h91km±28km, mb3.7/2, mb1 3.7/5, mb1mx3.4/19, mbtmpg3.5/5, MS3.2/1, Ms1 3.2/1, ms1mx2.4/25, Error ellipse: s-maj=44.2km s-min=29.4km az=89.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.82**	**37**	P		Pn	05 36 19.1	+0.1
	1.2nm,0.3s,baz=197,slow=8.5,SNR=34							
SIV	**San Ignacio**	**9.62**	**71**	P		Pn	05 37 37.1	-0.2
	0.2nm,0.3s,baz=278,slow=11,SNR=6.8							
SIV				S		Sn	05 39 33.9	+10
	0.2nm,0.3s,baz=287,slow=19,SNR=1.6							
SIV				LR		LR	05 41 51.8	
	comp=Z,145nm,20.0s,slow=40							
CFAA	**Coronel Fontan**	**12.37**	**171**	P		Pn	05 38 14.3	-0.2
	0.0nm,0.3s,baz=344,slow=7.4,SNR=2.8							
CPUP	**Villa Florida**	**14.01**	**122**	P		Pn	05 38 36.1	+0.1
	0.3nm,0.3s,baz=288,slow=11,SNR=7.9							
TORD	**Torodi Ar. Bea**	**78.10**	**71**	P		P	05 47 11.1	-0.1
	1.5nm,0.8s,baz=254,slow=5.7,SNR=11							
YKA	**Yellowknife Ar**	**88.67**	**341**	P		P	05 48 03.7	-0.6
	0.6nm,0.7s,baz=135,slow=4.7,SNR=15							
MKAR	**Makanchi Array**	**144.74**	**33**	PKP	PKPdf		05 54 47.5	-0.3
	0.9nm,0.8s,baz=308,slow=4.0,SNR=7.2							
SONM	**Songino Array**	**151.48**	**4**	PKPbc	PKPbc		05 55 05.9	+0.7
	0.7nm,0.5s,baz=346,slow=0.6,SNR=3.6							

NNC ***13*** *05:39:22.5±9.5, 39.72N×75.64E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=90.8km s-min=56.2km az=138.0*
ISC 13 05:39:15.7±2.0, 39.44N±0.10×76.3E±0.2, h10km, n11, σ1965/10, 2C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**2.76**	**343**	P		**Pb**	**05 40 04.2**	**-1.2**
	SNR=14							
ULHL	**Ulahol**	**2.80**	**358**	P		**Pg**	**05 40 10.3**	**+1.0**
	SNR=13							
AML	**Almayashu**	**3.36**	**324**	P		**Pb**	**05 40 14.3**	**-1.2**
	SNR=9.2							
KBK	**Karagaybulak**	**3.38**	**342**	P		**Pb**	**05 40 18.0**	**+2.2**
	SNR=7.5							
TKM2	**Tokmak 2**	**3.52**	**351**	⇓Pn		**Pb**	**05 40 15.4**	**-2.8**
	6.8nm,0.5s							
TKM2				⇓Lg		Lg	05 41 08.5	
	160nm,0.9s							
TKM2	**Tokmak 2**	**3.52**	**351**	P		**Pb**	**05 40 18.2**	**0.0**
	SNR=8.7							
EKS2	**Erkin-Say**	**3.76**	**330**	P		**Pb**	**05 40 20.5**	**-1.6**
	SNR=6.5							
USP	**Ospenovka**	**4.07**	**341**	P		Pn	05 40 08.4	-10
	SNR=5.5							
KK31	**Karatay Array**	**5.72**	**312**	⇑Pn		Pn	05 40 37.3	-3.3
	0.3nm,0.3s,baz=133,slow=12,SNR=11							
KK31				⇓Pg		**Pb**	**05 40 55.7**	**+0.2**
	1.7nm,0.5s,baz=135,slow=16,SNR=8.3							
KK31				⇑Lg		Lg	05 42 05.4	
	4.3nm,0.5s,baz=123,slow=30							
CEP	**Cherat**	**6.64**	**214**	P		**Pn**	**05 40 53.5**	**0.0**
AB31	**Akbulak array**	**15.26**	**315**	⇓Pn		**Pn**	**05 42 51.0**	**-0.1**
	0.6nm,0.6s,baz=126,slow=13,SNR=4.0							

IDC ***13*** *05:42:28.4±0.7, 43.20N×45.99E, h0km, mb3.5/7, mb1 3.6/11, mb1mx3.5/30, mbtmpg3.6/11, ML3.7/3, Error ellipse: s-maj=12.2km s-min=8.8km az=116.0*
ISCJB ***13*** *05:42:28.8±0.4, 43.44N±0.02×46.27E±0.02, h0km±3km, mb3.5/8, Error ellipse: s-maj=3.6km s-min=2.4km az=17.3*
MOS ***13*** *05:42:30.7±1.2, 43.38N×46.18E, h12km, mb4.5/4, Error ellipse: s-maj=6.0km s-min=5.5km az=29.3*
MOS Felt (III) at Gudermes.
CSEM ***13*** *05:42:30.0±0.2, 43.40N×46.23E, h2km, mb3.7/4, Error ellipse: s-maj=4.4km s-min=3.2km az=15.0*
TIF ***13*** *05:42:30.2, 43.41N×46.04E, h13km±5km*
AZER ***13*** *05:42:31.0, 43.20N×45.82E, h0km*
NNC ***13*** *05:42:42.3±2.4, 43.09N×48.50E, h0km, mb3.8, Error ellipse: s-maj=77.9km s-min=16.5km az=139.0*
ISC 13 05:42:30.9±0.9, 43.31N±0.02×46.19E±0.02, h12km±6km, n132, σ1938/191, mb3.5/8, 27C-15D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GRO	**Groznyy**	**0.32**	**273**	⇑*i*PG		**Pg**	**05 42 37.6**	**+0.2**
GRO				*i* S		**Sg**	**05 42 43.0**	**+1.2**
GRO	**Groznyy**	**0.32**	**273**	*i* Pg		**Pg**	**05 42 37.6**	**+0.2**
GRO				*i* Sg		**Sg**	**05 42 43.0**	**+1.2**
KRNR	**Karanay**	**0.71**	**132**	⇓*i*PG		**Pg**	**05 42 44.0**	**-0.7**
KRNR				*i* S		**Sg**	**05 42 53.5**	**-0.5**
KRNR				pmax	pmax			
	comp=Z,286nm,0.2s							
KRNR	**Karanay**	**0.71**	**132**	*i* Pg		**Pg**	**05 42 44.0**	**-0.7**
	comp=Z,286nm,0.2s							
KRNR				*i* Sg		**Sg**	**05 42 53.5**	**-0.5**
UNCR	**Uncukul**	**0.74**	**143**	⇑*i*PG		**Pg**	**05 42 44.7**	**-0.5**
UNCR				*e*S		**Sg**	**05 42 54.5**	**-0.4**
UNCR				pmax	pmax			
	comp=Z,579nm,0.3s							
UNCR	**Uncukul**	**0.74**	**143**	*i* Pg		**Pg**	**05 42 44.7**	**-0.5**
	comp=Z,579nm,0.3s							
UNCR				*e*Sg		**Sg**	**05 42 54.5**	**-0.4**
MAK	**Makhachkala**	**1.02**	**109**	*e*PG		**Pn**	**05 42 51.5**	**+0.6**
MAK				*e*			05 43 08.0	
MAK				pmax	pmax			
	comp=Z,781nm,0.4s							
MAK				smax	smax			
	comp=N,5μm,0.4s							
MAK				smax	smax			
	comp=E,5μm,0.5s							
MAK	**Makhachkala**	**1.02**	**109**	*e*Pg		**Pn**	**05 42 51.5**	**+0.6**
	comp=E,781nm,0.4s							
MAK				*e*Sg		**Sn**	**05 43 08.0**	**+2.8**
	comp=E,5μm,0.4s							
SNJR	**Sundja**	**1.04**	**257**	⇑*i*PG		**Pb**	**05 42 51.2**	**+0.4**
SNJR				*e*S		**Sb**	**05 43 05.7**	**+1.4**
SNJR	**Sundja**	**1.04**	**257**	*i* Pg		**Pb**	**05 42 51.2**	**+0.4**
SNJR				*e*Sg		**Sb**	**05 43 05.7**	**+1.4**
GNBR	**Gunib**	**1.08**	**148**	PG		**Pg**	**05 42 51.4**	**-0.3**
GNBR				S		**Sg**	**05 43 06.2**	**+0.5**
GNBR	**Gunib**	**1.08**	**148**	Pg		**Pg**	**05 42 51.4**	**-0.3**
GNBR				Sg		**Sg**	**05 43 06.2**	**+0.5**
VLKR	**Vladikavkaz**	**1.14**	**257**	*e*PG		**Pg**	**05 42 52.5**	**-0.3**
VLKR				*e*S		**Sb**	**05 43 08.3**	**+1.1**
VLKR	**Vladikavkaz**	**1.14**	**257**	*e*Pg		**Pg**	**05 42 52.5**	**-0.3**
VLKR				*e*Sg		**Sb**	**05 43 08.3**	**+1.1**
TRKR	**Terskaya**	**1.14**	**292**	*e*PG		**Pn**	**05 42 54.1**	**+1.5**
TRKR				*i* S		**Sn**	**05 43 11.1**	**+3.0**
TRKR	**Terskaya**	**1.14**	**292**	*e*Pg		**Pn**	**05 42 54.1**	**+1.5**
TRKR				*i* Sg		**Sn**	**05 43 11.1**	**+3.0**
BTKR	**Batakoyurt**	**1.21**	**274**	⇑*i*PG		**Pg**	**05 42 54.8**	**+0.7**
BTKR				*e*S		**Sn**

KIV Kislovodsk 2.63 285 *e*Pn **Pn 05 43 13.9 +0.8**
GANJ Ganja 2.66 178 ⇑P **Pn 05 43 14.3 +0.7**
SNR=31
GANJ ⇓S **Sn 05 43 46.4 +0.7**
GANJ Ganja 2.66 178 P **Pn 05 43 14.3 +0.7**
SNR=31
GANJ S **Sn 05 43 46.4 +0.7**
AKH Akhalkalaki 2.76 227 PN Pn 05 43 18.2 +3.2
AKH S **Sb 05 43 53.7 -0.2**
AKH Akhalkalaki 2.76 227 P Pn 05 43 18.2 +3.2
AKH S **Sb 05 43 53.7 -0.2**
AKH Akhalkalaki 2.76 227 P Pn 05 43 18.2 +3.2
AKH S **Sb 05 43 53.7 -0.2**
IML Ismayilli 2.92 149 ⇑P **Pn 05 43 19.4 +2.3**
SNR=3.5
IML ⇑S **Sb 05 43 57.4 -1.0**
IML Ismayilli 2.92 149 P **Pn 05 43 19.4 +2.3**
SNR=3.5
IML S **Sb 05 43 57.4 -1.0**
SIZA Siyzn 3.00 137 ⇓P **Pb 05 43 22.2 -2.1**
SNR=6.1
SIZA ⇑S **Sb 05 44 01.6 +0.7**
SIZA Siyzn 3.00 137 P **Pb 05 43 22.2 -2.1**
SNR=6.1
CHVG Ch'k'valeri 3.07 260 P **Sn 05 43 56.8 +1.0**
PQL Pirkuli 3.09 144 P **Pn 05 43 22.4 +2.9**
SNR=11
PQL Pirkuli 3.09 144 P **Pn 05 43 22.4 +2.9**
SNR=11
BRDA Brd 3.13 166 ⇑P **Pn 05 43 22.1 +2.2**
SNR=9.3
BRDA ⇓S **Sn 05 44 01.8 +4.6**
BRDA Brd 3.13 166 P **Pn 05 43 22.1 +2.2**
SNR=9.3
BRDA S **Sn 05 44 01.8 +4.6**
GNI Garni 3.34 199 Pn **Pn 05 43 22.9 -0.1**
comp=Z,2.0nm,0.3s,baz=358,slow=3.4,SNR=5.7
GNI Pg **Pb 05 43 28.6 -1.5**
comp=Z,8.1nm,0.3s,baz=308,slow=5.9,SNR=12
GNI Lg Lg 05 44 10.0
comp=Z,8.0nm,0.3s,baz=273,slow=23,SNR=4.3
GNI Garni 3.34 199 *i* Pn **Pn 05 43 24.9 +1.9**
comp=Z,63nm,1.5s
GOBA Gobu 3.93 136 ⇑P Pb 05 43 36.2 -3.8
SNR=9.5
GOBA ⇓S **Sb 05 44 24.1 -3.3**
NDR Nardaran 3.93 133 ⇑P **Pb 05 43 37.5 -2.5**
SNR=3.2
NDR ⇑S **Sb 05 44 25.2 -2.2**
ALIB Äli-Bayra 3.96 147 P Pn 05 43 34.9 +3.6
SNR=3.9
ALIB Äli-Bayra 3.96 147 P Pn 05 43 34.9 +3.6
SNR=3.9
NAX Nakhchivan 4.16 187 ⇓P **Pn 05 43 34.0 -0.2**
SNR=3.7
NAX ⇑S Sn 05 44 29.7 +6.9
NAX Nakhchivan 4.16 187 P **Pn 05 43 34.0 -0.2**
SNR=3.7
NAX S Sn 05 44 29.7 +6.9
GLBA Clilabad 4.39 157 ⇑P **Pn 05 43 38.2 +1.0**
SNR=16
GLBA ⇓S **Sn 05 44 29.7 +1.5**
GLBA Clilabad 4.39 157 P **Pn 05 43 38.2 +1.0**
SNR=16
GLBA S **Sn 05 44 29.7 +1.5**
SOC Sochi 4.72 276 *e*PN Pg 05 44 05.4 +4.1
SOC pmax pmax
comp=Z,20nm,0.7s
SOC Sochi 4.72 276 *e*Pn Pg 05 44 05.4 +4.1
comp=Z,20nm,0.7s
LKRN Lenkeran, Azer 4.99 156 ⇓P **Pn 05 43 46.2 +0.7**
SNR=3.6
LKRN ⇑S **Sn 05 44 42.9 -0.2**
LKRN Lenkeran, Azer 4.99 156 P **Pn 05 43 46.2 +0.7**
SNR=3.6
LKRN S **Sn 05 44 42.9 -0.2**
ANN Anapa 6.49 286 *i* P **Pn 05 44 07.5 +1.5**
ANN Anapa 6.49 286 *i* P **Pn 05 44 07.5 +1.5**
AKTK Aktyubinsk 10.78 44 P **Pn 05 45 05.1 +0.2**
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 10.78 44 ⇑Pn **Pn 05 45 04.6 -0.3**
comp=Z,0.5nm,0.5s
AKTO ⇓Sn Sn 05 46 57.0 -8.4
comp=Z,2.3nm,0.7s
AKTO Aktyubinsk 10.78 44 P **Pn 05 45 05.1 +0.2**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 10.78 44 Pn **Pn 05 45 05.1 +0.2**
comp=Z,0.7nm,0.3s,baz=230,slow=9.2,SNR=9.3
AKTO Sn Sn 05 46 57.4 -8.0
comp=Z,2.3nm,0.3s,baz=81,slow=19,SNR=11
AKTO Aktyubinsk 10.78 44 Pn **Pn 05 45 04.6 -0.3**
comp=Z,0.5nm,0.5s
AB31 Akbulak array 11.22 53 ⇑Pn **Pn 05 45 09.8 -1.0**
comp=Z,0.5nm,0.2s,baz=243,slow=11,SNR=58
AB31 ⇑Sn Sn 05 47 04.2 -12
comp=Z,4.8nm,0.3s,baz=158,slow=16,SNR=12
AB31 Akbulak array 11.22 53 Pn **Pn 05 45 09.8 -1.0**
comp=Z,0.5nm,0.2s,SNR=58
AKASG Malin Array Be 13.72 309 *i* P **P 05 45 53.5 -0.2**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 13.72 309 Pn **Pn 05 45 43.2 -1.8**
comp=Z,0.2nm,0.3s,baz=118,slow=14,SNR=2.5
AKASG Malin Array Be 13.72 309 *i* P **P 05 45 53.5 -0.2**
comp=Z,1.0nm,0.4s
ARU Arti 15.33 27 P **P 05 46 10.4 -1.2**
ARU S Sn 05 49 03.3 +6.9
ARU Arti 15.33 27 P **P 05 46 10.4 -1.2**
ARU S Sn 05 49 03.3 +6.9
ZRNK Zerenda 17.95 50 ⇓Pn **Pn 05 46 38.8 -1.4**
comp=Z,4.8nm,0.9s
ZRNK ⇓Sn Sn 05 49 48.5 -12
comp=Z,4.5nm,0.9s
ZRNK Zerenda 17.95 50 Pn **Pn 05 46 38.8 -1.4**
comp=Z,4.8nm,0.9s
BRVK Borovoye 18.71 50 ⇑Pn **P 05 46 46.9 -2.1**
comp=Z,5.8nm,0.5s
BRVK ⇓Sn Sn 05 50 06.6 -12
comp=Z,4.3nm,0.5s
BRVK Borovoye 18.71 50 Pn **P 05 46 46.9 -2.1**
comp=Z,5.8nm,0.5s
BVA0 Borovoye Array 18.76 50 ⇓Pn **P 05 46 48.2 -1.3**
comp=Z,0.9nm,1.3s,baz=244,slow=11,SNR=6.5
BVA0 ⇑Sn Sn 05 50 06.5 -13
comp=Z,0.4nm,0.5s,baz=241,slow=25,SNR=5.0
BVA0 Borovoye Array 18.76 50 Pn **P 05 46 48.2 -1.3**
comp=Z,0.9nm,1.3s,baz=244,SNR=6.5
BVAR Borovoye Array 18.76 50 P **Pn 05 46 51.7 +1.8**
BVAR Borovoye Array 18.76 50 P **Pn 05 46 51.7 +1.8**
comp=Z,0.3nm,0.3s,baz=244,slow=12,SNR=4.2
BVAR Borovoye Array 18.76 50 P **Pn 05 46 51.7 +1.8**
VOSK Vostochnaya 18.99 52 ⇑Pn **Pn 05 46 52.6 -0.1**
comp=Z,2.7nm,0.6s
VOSK ⇑Sn Sn 05 50 11.4 -14
comp=Z,2.9nm,0.6s
FINES FINESS Array B 21.76 334 P **P 05 47 22.7 +0.8**
comp=Z,1.8nm,0.5s,baz=134,slow=11,SNR=4.8
FINES FINESS Array B 21.76 334 P **P 05 47 22.7 +0.8**
comp=Z,2.0nm,0.5s
KURBB Kurchatov Arra 23.11 60 P **P 05 47 38.0 +1.6**
comp=Z,1.4nm,0.8s,baz=271,slow=11,SNR=6.1
KURK Kurchatov 23.18 60 P **P 05 47 38.1 +1.0**
KURK pmax pmax
comp=Z,1.0nm,0.8s
KURK Kurchatov 23.18 60 P **P 05 47 38.1 +1.0**
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 25.60 70 P **P 05 47 59.8 0.0**
MKAR Makanchi Array 25.60 70 P **P 05 47 59.8 0.0**
comp=Z,0.2nm,0.6s,baz=263,slow=8.3,SNR=3.3
MKAR Makanchi Array 25.60 70 P **P 05 47 59.8 0.0**
HFS Hagfors 25.86 322 P **P 05 48 01.3 -0.7**
comp=Z,1.2nm,0.5s,baz=119,slow=9.2,SNR=5.7
HFS Hagfors 25.86 322 P **P 05 48 01.3 -0.7**
comp=Z,1.0nm,0.5s
ARCES ARCESS Array B 28.36 345 P **P 05 48 23.8 -0.6**
comp=Z,1.5nm,0.8s,baz=152,slow=10,SNR=7.5
ARCES ARCESS Array B 28.36 345 P **P 05 48 23.8 -0.6**
comp=Z,2.0nm,0.8s
TORD Torodi Ar. Bea 48.57 246 P **P 05 51 12.1 -2.1**
comp=Z,0.2nm,0.5s,baz=42,slow=7.8,SNR=2.6
YKA Yellowknife Ar 73.43 351 P **P 05 54 02.2 -0.2**
comp=Z,0.1nm,0.5s,baz=12,slow=5.8,SNR=3.6
YKA Yellowknife Ar 73.43 351 P **P 05 54 02.2 -0.2**

IDC 13 05:48:58.3±1.0, 14.95S×172.85W, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.9/21, mbtmp3.9/7, Error ellipse: s-maj=51.5km s-min=17.0km az=136.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
AFI	**Afiamalu**	**1.47**	**45**	Pn	P	Pn	05 49 25.1	-1.1
	98nm,0.3s,baz=211,slow=12,SNR=98							
AFI				Sn		Sg	05 49 41.3	-4.4
	169nm,0.3s,baz=217,slow=20,SNR=27							
URZ	**Urewera**	**24.86**	**199**	P	P	P	05 54 23.0	+0.4
	8.6nm,0.6s,baz=9.3,slow=13,SNR=5.7							
STKA	**Stephens Creek**	**44.72**	**240**	P	P	P	05 57 12.3	-1.2
	1.0nm,0.4s,baz=121,slow=8.2,SNR=4.1							
WRA	**Warramunga Arr**	**50.47**	**256**	P	P	P	05 57 58.1	-0.3
	0.4nm,0.4s,baz=96,slow=6.6,SNR=6.2							
ASAR	**Alice Springs**	**50.76**	**252**	P	P	P	05 58 00.6	-0.1
	1.9nm,0.4s,baz=89,slow=7.6,SNR=34							
PDAR	**Pinedale Array**	**81.58**	**42**	P	P	P	06 01 18.3	-0.2
	0.2nm,0.6s,baz=246,slow=5.8,SNR=2.5							
ILAR	**Eielson Array**	**81.91**	**11**	P	P	P	06 01 19.8	+0.4
	0.3nm,0.6s,baz=217,slow=5.9,SNR=5.0							
YKA	**Yellowknife Ar**	**89.48**	**23**	P	P	P	06 01 57.7	+0.7
	0.3nm,0.7s,baz=237,slow=4.4,SNR=5.0							
BRTR	**Keskin Array B**	**146.14**	**322**	PKPbc		PKPdf	06 08 40.6	+0.4
	0.6nm,0.6s,baz=28,slow=6.5,SNR=3.9							

IDC 13 06:13:08.1±0.6, 6.85N×76.33W, h0km, mb4.1/18, mb1 4.2/18, mb1mx4.2/23, mbtmp4.1/18, MS3.6/8, Ms1 3.6/8, ms1mx3.3/29, Error ellipse: s-maj=24.5km s-min=13.4km az=72.0
ISCJB 13 06:13:10.7±0.2, 7.01N±0.03×76.27W±0.03, h18km, mb4.4/39, MS4.0/8, Error ellipse: s-maj=5.0km s-min=4.8km az=10.8
NEIC 13 06:13:12.0, 6.97N×76.36W, h9km, mb4.8/21, ML4.1(RSNC), After RSNC.
NEIC Felt at Medellin.
BJI 13 06:13:14.4, 7.10N×76.30W, h25km, mB5.1/2, Ms5.3/2, Ms7 4.8/2

ISC 13 06:13:11.3±0.4, 6.86N±0.05×76.27W±0.05, h18km, n146, σ1928/150, mb4.5/39, MS3.7/8, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SOLC	**Bahia Solano**	**1.28**	**248**	*i* P	P	Pn	06 13 33.7	-0.5
SOLC				*e*S		Sg	06 13 52.6	-0.1
TOLC	**Tolima**	**2.44**	**158**	*e*P	P	Pb	06 13 54.4	-0.5
ROSC	**El Rosal**	**2.77**	**136**	Pn	P	Pb	06 13 59.5	-1.1
ROSC				Pg		Pg	06 14 05.2	+0.6
ROSC				Lg		Lg	06 14 39.3	
ROSC	**El Rosal**	**2.77**	**136**	Pn	P	Pb	06 13 59.5	-1.1
	37nm,0.3s,baz=304,slow=3.6,SNR=160							
ROSC				Pg		Pg	06 14 05.2	+0.6
	121nm,0.3s,baz=72,slow=6.4,SNR=64							
ROSC				Lg		Lg	06 14 39.3	
	46nm,0.3s,baz=276,slow=23,SNR=3.9							
ROSC				LR		LR	06 14 45.5	
	comp=Z,368nm,19.2s,baz=180,slow=34							
MALC	**Bahia Malaga**	**3.02**	**201**	*e*P	P	Pn	06 14 01.2	+2.9
BARC	**Barichara**	**3.08**	**94**	*e*P	P	Pn	06 14 01.4	+2.1
CHIC	**Chingaza**	**3.36**	**131**	*e*P	P	Pn	06 14 06.5	+3.2
PRAC	**Prado**	**3.43**	**157**	*e*P	P	Pn	06 14 06.8	+2.9
BCIP	**Isla Barro Col**	**4.21**	**303**	*e*Pn	P	Pn	06 14 14.8	+0.2
BETC	**Betania**	**4.24**	**169**	*e*P	P	Pn	06 14 17.4	+2.4
SDV	**Santo Domingo**	**5.94**	**70**	*e*Pn	P	Pn	06 14 40.8	+2.3
OTAV	**Otavalo**	**6.93**	**198**	*e*Pn	P	Pn	06 14 57.3	+4.8
JTS	**JuntasAbangare**	**9.24**	**292**	Pn	P	Pn	06 15 25.1	+1.4
JTS	**JuntasAbangare**	**9.24**	**292**	Pn	P	Pn	06 15 25.1	+1.4
	1.2nm,0.3s,baz=161,slow=11,SNR=4.5							
JTS				LR		LR	06 19 10.8	
	comp=Z,593nm,18.5s,baz=289,slow=40							
TGUH	**Tegucigalpa,Un**	**12.96**	**304**	*e*Pn	P	Pn	06 16 15.1	+0.3
SDDR	**Presa de Saban**	**12.98**	**21**	*e*Pn	P	Pn	06 16 15.7	+0.6
LMGC	**Las Mercedes**	**13.14**	**357**	*e*	P	Pn	06 16 17.7	+0.6
CELP	**Cerrillos**	**14.61**	**39**	Pn	P	Pn	06 16 36.6	-0.7
SJG	**San Juan**	**14.91**	**41**	*e*Pn	P	Pn	06 16 42.0	+0.6
MGV	**Manicaragua**	**15.58**	**347**	*e*	P	Pn	06 16 51.3	+1.2
SAML	**Samuel**	**20.42**	**140**	*e*P	P	P	06 17 46.1	-1.5
	11nm,0.6s							
LPAZ	**La Paz**	**24.37**	**161**	*e*P	P	P	06 18 33.5	+4.2
LPAZ	**La Paz**	**24.37**	**161**	P	P	P	06 18 30.5	+1.2
	1.4nm,0.6s,baz=314,slow=6.3,SNR=5.2							
SIV	**San Ignacio**	**27.24**	**147**	P	P	P	06 18 55.2	+0.6
SIV	**San Ignacio**	**27.24**	**147**	P	P	P	06 18 55.2	+0.6
	0.8nm,0.5s,baz=337,slow=15,SNR=3.1							
SIV				LR		LR	06 29 59.3	
	comp=Z,203nm,19.3s,slow=37							
TKL	**Tuckaleechee C**	**29.48**	**348**	LR		LR	06 31 48.7	
	comp=Z,56nm,18.5s,baz=112,slow=38							
USIN	**University of**	**32.64**	**343**	*e*P	P	P	06 19 42.5	+0.3
	19nm,0.6s							
BLO	**Bloomington**	**33.47**	**345**	*e*P	P	P	06 19 50.1	+0.7
	7.5nm,0.6s							
BDFB	**Brasilia**	**35.82**	**129**	P	P	P	06 20 09.7	-0.5
BDFB	**Brasilia**	**35.82**	**129**	P	P	P	06 20 09.7	-0.5
	1.6nm,0.5s,baz=308,slow=5.5,SNR=4.3							
BDFB				LR		LR	06 34 42.0	
	comp=Z,67nm,19.6s,baz=64,slow=36							
CPUP	**Villa Florida**	**37.77**	**152**	LR		LR	06 37 05.3	
	comp=Z,93nm,20.2s,baz=117,slow=38							
CFAA	**Coronel Fontan**	**39.01**	**169**	P	P	P	06 20 37.4	+0.4
CFAA	**Coronel Fontan**	**39.01**	**169**	P	P	P	06 20 37.4	+0.4
	0.4nm,0.6s,baz=354,slow=5.9,SNR=10							
ANMO	**Albuquerque**	**39.40**	**319**	*e*P	P	P	06 20 41.1	+0.8
	10nm,1.7s							
SDCO	**Great Sand Dun**	**40.60**	**324**	*e*P	P	P	06 20 51.9	+1.4
	8.4nm,1.3s							
ISCO	**Idaho Springs**	**42.06**	**326**	*e*P	P	P	06 21 03.5	+1.1
	12nm,1.7s							
PV01	**Paradox Valley**	**42.71**	**322**	*e*P	P	P	06 21 09.0	+1.4
MVU	**Marysvale**	**45.23**	**320**	*e*P	P	P	06 21 28.6	+0.7
	5.0nm,1.2s							
PDAR	**Pinedale Array**	**46.25**	**326**	P	P	P	06 21 36.2	+0.3
PDAR	**Pinedale Array**	**46.25**	**326**	P	P	P	06 21 36.2	+0.3
	0.4nm,0.6s,baz=123,slow=9.2,SNR=3.8							
ULM	**Lac Bonnet**	**46.25**	**344**	LR		LR	06 41 17.6	
	comp=Z,73nm,18.4s,baz=259,slow=36							
SNOW	**Snow King Moun**	**47.37**	**326**	*e*P	P	P	06 21 44.8	+0.1
	7.7nm,1.3s							
PLCA	**Paso Flores**	**47.65**	**174**	*e*P	P	P	06 21 50.2	+3.6
PLCA	**Paso Flores**	**47.65**	**174**	P	P	P	06 21 45.3	-1.3
	3.0nm,0.9s,baz=358,slow=10,SNR=6.3							
SCHQ	**Schefferville**	**48.43**	**7**	*e*P	P	P	06 21 53.1	+0.8
	7.8nm,1.0s							
SCHQ	**Schefferville**	**48.43**	**7**	P	P	P	06 21 53.2	+0.8
	2.2nm,1.0s,baz=172,slow=5.9,SNR=8.7							
NVAR	**Mina Array Bea**	**49.25**	**316**	P	P	P	06 21 59.9	+0.6
NVAR	**Mina Array Bea**	**49.25**	**316**	P	P	P	06 21 59.9	+0.6
	0.5nm,0.3s,baz=124,slow=7.0,SNR=4.7							
BOZ	**Bozeman (W)**	**49.26**	**328**	*e*P	P	P	06 21 58.7	-0.4
	1.5nm,0.3s							
HLID	**Hailey**	**49.52**	**324**	*e*P	P	P	06 22 01.7	+0.5
	13nm,1.9s							
MFID	**Camas Ranch**	**50.27**	**323**	*e*P	P	P	06 22 07.2	+0.3
	55nm,2.9s							
WVOR	**Wild Horse Val**	**51.47**	**320**	*e*P	P	P	06 22 16.5	+0.6
	12nm,1.2s							
YKA	**Yellowknife Ar**	**62.18**	**341**	P	P	P	06 23 30.6	-0.8
YKA	**Yellowknife Ar**	**62.18**	**341**	P	P	P	06 23 30.5	-0.8
	2.3nm,0.7s,baz=132,slow=6.9,SNR=56							
YKW3	**Yellowknife Ar**	**62.23**	**341**	*e*P	P	P	06 23 30.9	-0.8
EVOP	**Sao Brissos**	**68.68**	**51**	*e*P	P	P	06 24 14.5	+0.6
	29nm,1.2s							
EVO	**Evora**	**68.77**	**51**	*e*P	P	P	06 24 14.5	0.0
	29nm,1.2s							
SUMG	**Summit**	**69.54**	**11**	*e*P	P	P	06 24 19.3	+0.2
	10.0nm,0.6s							
SUMG	**Summit**	**69.54**	**11**	*i*P	P	P	06 24 19.5	+0.4
	10nm,0.7s							
DBIC	**Dimbokro**	**70.85**	**85**	P	P	P	06 24 26.7	-1.0
DBIC	**Dimbokro**	**70.85**	**85**	P	P	P	06 24 26.7	-1.0
	1.3nm,0.6s,baz=259,slow=6.7,SNR=3.2							
ESDC	**Sonseca Array**	**72.04**	**51**	P	P	P	06 24 35.0	+0.5
ESDC	**Sonseca Array**	**72.04**	**51**	P	P	P	06 24 35.0	+0.5
	1.5nm,0.6s,baz=276,slow=5.5,SNR=9.5							
ROSF	**Rostrenen**	**73.61**	**42**	*e*P	P	P	06 24 44.2	+0.6
ROSF	**Rostrenen**	**73.61**	**42**	*e*P	P	P	06 24 44.2	+0.6
SGMF	**Saint Gilles**	**74.07**	**42**	*e*P	P	P	06 24 46.7	+0.4
SGMF	**Saint Gilles**	**74.07**	**42**	*e*P	P	P	06 24 46.7	+0.4
DOT	**Dot Lake**	**74.11**	**335**	*e*P	P	P	06 24 47.2	+0.9
	5.1nm,0.9s							
SJPF	**Ste Jean**	**74.43**	**47**	*e*P	P	P	06 24 49.6	+1.1
	23nm,0.9s							
SJPF	**Ste Jean**	**74.43**	**47**	*e*P	P	P	06 24 49.6	+1.1
	23nm,0.9s							
ETSF	**Etsaut**	**74.89**	**48**	*e*P	P	P	06 24 51.5	+0.2
ETSF	**Etsaut**	**74.89**	**48**	*e*P	P	P	06 24 51.5	+0.2
GRR	**Gorron**	**75.22**	**42**	*e*P	P	P	06 24 53.5	+0.6
	11nm,0.6s							
GRR	**Gorron**	**75.22**	**42**	*e*P	P	P	06 24 53.5	+0.6
	11nm,0.6s							
FLN	**La Foliniere**	**75.50**	**41**	*e*P	P	P	06 24 55.3	+0.7
FLN	**La Foliniere**	**75.50**	**41**	*e*P	P	P	06 24 55.3	+0.7
MFF	**Saint Martin d**	**75.51**	**44**	*e*P	P	P	06 24 55.4	+0.7
	17nm,0.7s							
MFF	**Saint Martin d**	**75.51**	**44**	*e*P	P	P	06 24 55.4	+0.7
	17nm,0.7s							
EPF	**Esparros**	**75.56**	**47**	*e*P	P	P	06 24 56.1	+0.9
EPF	**Esparros**	**75.56**	**47**	*e*P	P	P	06 24 56.1	+0.9
ILAR	**Eielson Array**	**75.61**	**335**	P	P	P	06 24 53.8	-1.2
ILAR	**Eielson Array**	**75.61**	**335**	P	P	P	06 24 53.8	-1.2
	0.6nm,0.6s,baz=106,slow=5.0,SNR=9.4							
LDF	**La Druitiere**	**75.72**	**42**	*e*P	P	P	06 24 56.4	+0.5
LDF	**La Druitiere**	**75.72**	**42**	*e*P	P	P	06 24 56.4	+0.5
PPT	**Papeete**	**76.32**	**250**	LR	LR		06 49 49.0	
	comp=Z,164nm,19.5s,baz=162,slow=29							
RJF	**Les Rejaudoux**	**76.56**	**45**	*e*P	P	P	06 25 01.2	+0.4
RJF	**Les Rejaudoux**	**76.56**	**45**	*e*P	P	P	06 25 01.2	+0.4
TORD	**Torodi Ar. Bea**	**76.79**	**78**	P	P	P	06 25 01.9	-0.7
TORD	**Torodi Ar. Bea**	**76.79**	**78**	P	P	P	06 25 01.9	-0.7
	0.4nm,0.5s,baz=289,slow=6.7,SNR=11							
CAF	**Calviac**	**76.93**	**46**	*e*P	P	P	06 25 03.3	+0.4
	9.2nm,0.9s							
CAF	**Calviac**	**76.93**	**46**	*e*P	P	P	06 25 03.3	+0.4
	9.2nm,0.9s							
MTLF	**Montolieu**	**76.95**	**47**	*e*P	P	P	06 25 03.4	+0.4
MTLF	**Montolieu**	**76.95**	**47**	*e*P	P	P	06 25 03.4	+0.4
TCF	**Toulx Ste Croi**	**77.11**	**44**	*e*P	P	P	06 25 04.0	+0.1
TCF	**Toulx Ste Croi**	**77.11**	**44**	*e*P	P	P	06 25 04.0	+0.1
AVF	**Avril sur Loir**	**77.93**	**44**	*e*P	P	P	06 25 08.5	+0.2
AVF	**Avril sur Loir**	**77.93**	**44**	*e*P	P	P	06 25 08.5	+0.2
SSF	**Saint Saulge**	**78.05**	**43**	*e*P	P	P	06 25 09.0	0.0
	13nm,1.0s							
SSF	**Saint Saulge**	**78.05**	**43**	*e*P	P	P	06 25 09.0	0.0
	13nm,1.0s							
LASF	**Ste Croix**	**78.17**	**47**	*e*P	P	P	06 25 10.0	+0.2
LASF	**Ste Croix**	**78.17**	**47**	*e*P	P	P	06 25 10.0	+0.2
SMF	**Signal de Mont**	**78.26**	**44**	*e*P	P	P	06 25 10.3	+0.1
SMF	**Signal de Mont**	**78.26**	**44**	*e*P	P	P	06 25 10.3	+0.1
LOR	**Lormes**	**78.30**	**43**	*e*P	P	P	06 25 10.4	0.0
LOR	**Lormes**	**78.30**	**43**	*e*P	P	P	06 25 10.4	0.0
VIVF	**Saint-Julien-l**	**78.78**	**46**	*e*P	P	P	06 25 11.7	-1.5
VIVF	**Saint-Julien-l**	**78.78**	**46**	*e*P	P	P	06 25 11.7	-1.5
GIVF	**Givet**	**79.06**	**40**	*e*P	P	P	06 25 15.1	+0.6
GIVF	**Givet**	**79.06**	**40**	*e*P	P	P	06 25 15.1	+0.6
SFTF	**Sexfontaines**	**79.13**	**42**	*e*P	P	P	06 25 15.3	+0.3
SFTF	**Sexfontaines**	**79.13**	**42**	*e*P	P	P	06 25 15.3	+0.3
PAGF	**Fort de Pagny**	**79.60**	**42**	*e*P	P	P	06 25 17.9	+0.4
PAGF	**Fort de Pagny**	**79.60**	**42**	*e*P	P	P	06 25 17.9	+0.4
ORIF	**Oris-en-Rattie**	**79.64**	**46**	*e*P	P	P	06 25 19.1	+1.2
ORIF	**Oris-en-Rattie**	**79.64**	**46**	*e*P	P	P	06 25 19.1	+1.2
LPG	**La Plagne**	**80.26**	**45**	*e*P	P	P	06 25 22.7	+1.2
LPG	**La Plagne**	**80.26**	**45**	*e*P	P	P	06 25 22.7	+1.2
CDF	**Champ du Feu**	**80.63**	**42**	*e*P	P	P	06 25 23.4	+0.2
CDF	**Champ du Feu**	**80.63**	**42**	*e*P	P	P	06 25 23.4	+0.2
NB2	**NORSAR Subarra**	**82.83**	**29**	P	P	P	06 25 35.2	+0.7
	comp=Z,3.5nm,0.7s,baz=271,slow=5.3							
NOA	**NORSAR Array B**	**82.83**	**29**	P	P	P	06 25 35.7	+1.2
NOA	**NORSAR Array B**	**82.83**	**29**	P	P	P	06 25 35.7	+1.2
	comp=Z,2.5nm,0.7s,baz=274,slow=5.3,SNR=11							
CLL	**Collm**	**84.24**	**39**	*e*P	P	P	06 25 44.0	+2.1
BRG	**Berggiesshubel**	**84.86**	**40**	*e*P	P	P	06 25 46.8	+1.8
	comp=Z,4.4nm,0.8s							
GERES	**GERESS Array B**	**84.87**	**42**	P	P	P	06 25 45.8	+0.5
GERES	**GERESS Array B**	**84.87**	**42**	P	P	P	06 25 45.8	+0.5
	comp=Z,1.1nm,0.7s,baz=257,slow=3.9,SNR=8.0							
ARCES	**ARCESS Array B**	**87.72**	**20**	P	P	P	06 25 57.8	-0.9
ARCES	**ARCESS Array B**	**87.72**	**20**	P	P	P	06 25 57.8	-0.9
	comp=Z,1.2nm,0.5s,baz=268,slow=3.7,SNR=18							
FINES	**FINESS Array B**	**89.88**	**28**	P	P	P	06 26 08.9	-0.1
FINES	**FINESS Array B**	**89.88**	**28**	P	P	P	06 26 08.9	-0.1
	comp=Z,1.4nm,0.6s,baz=204,slow=6.1,SNR=3.6							
SNAA	**Sanae**	**91.32**	**162**	P	P	P	06 26 14.8	-0.8
SNAA	**Sanae**	**91.32**	**162**	P	P	P	06 26 14.8	-0.8
	comp=Z,0.4nm,0.3s,baz=248,slow=19,SNR=64							
MKAR	**Makanchi Array**	**123.28**	**17**	PKP		**PKPdf**	06 32 07.6	+0.1
MKAR	**Makanchi Array**	**123.28**	**17**	PKP		**PKPdf**	06 32 07.6	+0.1
	comp=Z,0.2nm,0.4s,baz=276,slow=4.7,SNR=2.8							
SONM	**Songino Array**	**125.49**	**358**	PKP		**PKPdf**	06 32 11.0	-0.8
SONM	**Songino Array**	**125.49**	**358**	PKP		**PKPdf**	06 32 11.0	-0.8
	comp=Z,0.4nm,0.5s,baz=51,slow=4.6,SNR=2.9							
CN2	**Changchun**	**125.88**	**341**	*e*PKP		**PKPdf**	06 32 10.8	-1.7
HHC	**Hu-ho-hao-te**	**131.98**	**352**	*e*PKP		**PKPdf**	06 32 23.8	-0.5
HHC				sPKP			06 32 37.3	
HHC				PP		**PP**	06 34 47.8	+3.8
HHC				PKS		**PKSdf**	06 35 57.4	-3.5
HHC				SKS		**SKSdf**	06 39 30.8	-4.5
HHC				SKKS		**SKKSac**	06 41 34.3	-6.8
HHC				SS		**SS**	06 52 17.0	-2.0
HHC				AMB		AMB		
	comp=Z,120nm,7.2s

comp=N,0.6nm,0.3s,baz=233,slow=11,SNR=7.2
CFAA Coronel Fontan 8.97 188 P **Pn 06 17 22.6 -1.7**
comp=N,0.0nm,0.3s,baz=5.9,slow=10,SNR=7.0
BDFB Brasilia 19.05 72 P **P 06 19 24.1 +0.4**
comp=N,0.7nm,0.3s,baz=241,slow=11,SNR=11
TORD Torodi Ar. Bea 75.91 69 P **P 06 26 40.1 +0.2**
comp=N,0.4nm,0.4s,baz=258,slow=5.6,SNR=8.9

IDC ***13*** *06:24:09.4±2.5, 6°.54S×129°.27E, h0km, mb3.7/1, mb1 4.2/3, mb1mx3.7/19, mbtmp3.9/3, ML4.1/2, Error ellipse: s-maj=201.2km s-min=31.2km az=68.0*
AUST ***13*** *06:24:21.8, 6°.98S×129°.54E, h200km*
ISCJB ***13*** *06:24:23.0±0.9, 7°.03S±0°.06×129°.41E±0°.10, h139km,*
mb3.5/1, Error ellipse: s-maj=14.2km s-min=8.0km az=162.3

ISC 13 06:24:23.0±0.9, 7°.08S±0°.06×129°.56E±0°.10, h139km, n9, σ3$22/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FAKI	**Fak Fak**	**4.92**	**33**	P		**Pn**	**06 25 36.9**	**+1.6**
	baz=4.9,SNR=13							
FAKI				S		**Sn**	**06 26 28.3**	**-3.3**
	baz=4.9,SNR=4.3							
MTN	**Manton Dam**	**5.94**	**165**	P		Pn	06 25 53.0	+4.2
	baz=6.1,SNR=23							
MTN				S		**Sn**	**06 26 57.2**	**+1.3**
	baz=6.1,SNR=8.7							
KDU	**Kakadu**	**6.27**	**153**	P		Pn	06 25 57.7	+4.5
	baz=6.4,SNR=33							
KDU				S		**Sn**	**06 27 07.1**	**+3.3**
	baz=6.4,SNR=9.4							
KNRA	**Kununurra**	**8.58**	**185**	P		**Pn**	**06 26 26.0**	**+1.7**
	baz=8.7,SNR=12							
KNRA				S		**Sn**	**06 27 56.0**	**-3.6**
	baz=8.7,SNR=6.8							
WSI	**Waingapu**	**9.52**	**254**	P		**Pn**	**06 26 36.1**	**-0.7**
	baz=9.5,SNR=5.8							
FITZ	**Fitzroy Crossi**	**11.60**	**199**	P		**Pn**	**06 27 05.4**	**+0.9**
	baz=12,SNR=5.6							
WRA	**Warramunga Arr**	**13.60**	**161**	Pn		**Pn**	**06 27 31.2**	**+0.8**
	0.8nm,0.3s,baz=334,slow=14,SNR=24							
WRA				Sn		**Sn**	**06 29 55.9**	**-5.1**
	1.8nm,0.3s,baz=329,slow=22,SNR=8.7							
ASAR	**Alice Springs**	**17.02**	**166**	P		**Pn**	**06 28 16.8**	**+4.0**
	0.7nm,0.3s,baz=346,slow=9.8,SNR=43							
ASAR				S		**S**	**06 31 18.5**	**-4.2**
	0.5nm,0.3s,baz=324,slow=17,SNR=6.4							
MKAR	**Makanchi Array**	**68.05**	**327**	P		**P**	**06 35 07.0**	**-0.5**
	0.3nm,0.3s,baz=132,slow=8.0,SNR=6.2							

DMN ***13*** *06:52:48.9±0.1, 28°.20N×84°.72E, h10km, Ml4.6/6, Error ellipse: s-maj=3.9km s-min=1.1km az=14.0*
IDC ***13*** *06:52:49.1±1.9, 28°.25N×84°.23E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.5/29, mbtmp3.7/6, ML4.0/2, Error ellipse: s-maj=46.6km s-min=33.6km az=89.0*

ISC 13 06:52:48.2±1.3, 28°.22N±0°.05×84°.76E±0°.03, h2km±10km, n19, σ1$46/31, mb3.6/4, 1C, Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KKN	**Kakani**	**0.63**	**133**	*e*Pg		**Pb**	**06 53 01.7**	**-0.3**
KKN				*e*Sg		**Sb**	**06 53 10.7**	**-0.7**
	3µm,0.4s							
DMN	**Daman**	**0.68**	**153**	*e*Pg		**Pg**	**06 53 02.4**	**+1.2**
DMN				*e*Sg		**Sg**	**06 53 11.6**	**+1.6**
	2µm,0.5s							
PKI	**Pulchoki**	**0.86**	**138**	*e*Pg		**Pg**	**06 53 05.8**	**+1.1**
PKI				*e*Sg		**Sg**	**06 53 16.5**	**+0.6**
	1µm,0.2s							
DANN	**Dangsing**	**0.89**	**279**	*e*Pg		**Pg**	**06 53 05.5**	**+0.3**
DANN				*e*Sg		**Sg**	**06 53 16.8**	**0.0**
	2µm,0.3s							
GUN	**Gumba**	**1.04**	**107**	*e*Pg		**Pn**	**06 53 09.7**	**-0.4**
GUN				*e*Sg		**Sb**	**06 53 23.6**	**+0.3**
	2µm,0.4s							
KOLN	**Koldanda**	**1.12**	**247**	*e*Pg		**Pb**	**06 53 09.2**	**-1.2**
KOLN				*e*Sg		**Sg**	**06 53 23.7**	**-0.4**
	3µm,0.2s							
PYUN	**Piuthan**	**1.56**	**266**	*e*Pg		**Pb**	**06 53 17.8**	**-0.2**
PYUN				*e*Sg		**Sb**	**06 53 37.3**	**-1.1**
	4µm,0.4s							
RAMN	**Ramite**	**2.06**	**127**	*e*Pg		**Pb**	**06 53 26.9**	**+0.3**
RAMN				*e*Sg		**Sg**	**06 53 54.5**	**-0.1**
ODAN	**Odare**	**2.70**	**119**	*e*Pg		**Pg**	**06 53 39.8**	**-0.1**
ODAN				*e*Sg		**Sg**	**06 54 14.7**	**-0.3**
	338nm,0.3s							
TAPN	**Taplejung**	**2.75**	**108**	*e*Pg		**Pg**	**06 53 40.6**	**-0.4**
TAPN				*e*Sg		**Sg**	**06 54 16.5**	**-0.2**
	333nm,0.5s							
PTH	**Pithoragarh**	**4.20**	**290**	*e*PKP		**Pg**	**06 54 08.9**	**+0.3**
PTH				*e*S		**Sb**	**06 54 57.7**	**+3.5**
JBP	**Jabalpur**	**6.62**	**222**	*i*x		**Pg**	**06 54 53.7**	**-1.3**
JBP				*i*x		x	06 54 55.6	
	comp=Z,9.1nm,0.3s							
JBP				*e*x		**Sn**	**06 55 42.8**	**+0.1**
SHL	**Shillong**	**6.89**	**111**	*e*x		Pn	06 54 35.0	+4.6
SHL				*e*x		**Sg**	**06 56 25.0**	**-4.5**
CMAR	**Chiang Mai Arr**	**16.24**	**124**	Pn		**P**	**06 56 44.0**	**+3.2**
	comp=Z,0.3nm,0.3s,baz=311,slow=12,SNR=5.2							
MKAR	**Makanchi Array**	**16.85**	**355**	P		**Pn**	**06 57 07.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=176,slow=12,SNR=13							
KURBB	**Kurchatov Arra**	**22.87**	**350**	P		**P**	**06 57 53.0**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=176,slow=9.6,SNR=15							
ZALV	**Zalesovo Beam**	**25.71**	**0**	P		**P**	**06 58 20.6**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=178,slow=7.4,SNR=3.6							
ARCES	**ARCESS Array B**	**53.20**	**338**	P		**P**	**07 02 06.8**	**-0.8**
	comp=Z,3.4nm,1.0s,baz=96,slow=7.3,SNR=3.5							
TORD	**Torodi Ar. Bea**	**77.87**	**278**	P		**P**	**07 04 46.7**	**-1.3**
	comp=Z,0.1nm,0.4s,baz=58,slow=4.2,SNR=2.8							

IDC 13 06:53:43.5±1.4, 15°.26S×174°.86W, h253km±18km, mb3.5/6, mb1 3.7/7, mb1mx3.4/19, mbtmp3.6/7, Error ellipse: s-maj=36.2km s-min=13.8km az=133.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**3.27**	**66**	P		Pn	06 54 38.5	-0.9
	22nm,0.3s,baz=28,slow=1.3,SNR=24							
AFI				S		S	06 55 24.4	+0.9
	13nm,0.3s,baz=229,slow=20,SNR=3.0							
URZ	**Urewera**	**23.99**	**196**	P		P	06 58 35.0	-0.2
	14nm,1.0s,baz=17,slow=6.9,SNR=5.5							
STKA	**Stephens Creek**	**42.89**	**239**	P		P	07 01 17.5	0.0
	1.2nm,0.5s,baz=54,slow=7.9,SNR=7.2							
WRA	**Warramunga Arr**	**48.50**	**257**	P		P	07 02 01.0	-0.5
	1.3nm,0.5s,baz=91,slow=6.9,SNR=19							
ASAR	**Alice Springs**	**48.81**	**252**	P		P	07 02 04.1	+0.3
	25nm,0.5s,baz=89,slow=7.8,SNR=312							
PETK	**Petropavlovsk-**	**72.07**	**343**	P		P	07 04 40.0	0.0
	2.2nm,0.6s,baz=125,slow=7.2,SNR=6.1							
ILAR	**Eielson Array**	**82.58**	**12**	P		P	07 05 37.4	-0.5
	0.5nm,0.4s,baz=213,slow=5.2,SNR=20							
PDAR	**Pinedale Array**	**83.11**	**42**	P		P	07 05 41.5	+0.1
	0.7nm,0.7s,baz=227,slow=2.9,SNR=6.1							
MKAR	**Makanchi Array**	**109.72**	**315**	PKiKP		PKiKP	07 11 43.7	-0.6
	0.3nm,0.7s,baz=73,slow=2.1,SNR=3.2							
BRTR	**Keskin Array B**	**145.15**	**320**	PKPbc		PKPdf	07 12 51.0	-0.3
	1.0nm,0.8s,baz=90,slow=1.4,SNR=4.3							
GERES	**GERESS Array B**	**145.77**	**350**	PKPbc		PKPbc	07 12 53.3	+0.4
	0.4nm,0.5s,baz=28,slow=2.3,SNR=3.2							

CASC 13 07:22:14.8±2.5, 9°.39N×83°.87W, h6km±9km, MD3.7, 1C-2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BUS	**Buena Vista**	**0.20**	**34**	*e*P		Pg	07 22 19.4	0.0
BUS				*e*S		Sg	07 22 23.6	+1.1
QCR	**Quepos**	**0.29**	**277**	*i*P		Pg	07 22 20.5	0.0
QCR				*e*S		Sg	07 22 24.2	-0.2
SJS	**Escuela Geolog**	**0.57**	**342**	*e*P		Pg	07 22 25.7	-0.4
SJS				*e*S		Sg	07 22 33.7	-0.1
ACR	**Cerro Adams**	**1.01**	**136**	*e*P		Pg	07 22 32.6	-1.7
ACR				*e*S		Sg	07 22 46.2	-1.2
FORC	**Fortuna**	**1.33**	**324**	*e*P		Pn	07 22 38.5	-1.4
FORC				*e*S		Sb	07 22 56.5	-1.0
TBS2		**1.34**	**116**	*e*P		Pn	07 22 38.4	-1.8
TBS2				*e*S		Sb	07 22 56.9	-1.2
BRU	**Baru**	**1.42**	**114**	*i*P		Pn	07 22 40.7	-1.0
BRU				*e*S		Sg	07 23 01.6	+0.2
PTEN	**Parque Tenorio**	**1.71**	**320**	*i*P		Pn	07 22 44.9	-0.4
PTEN				*i*S		Sn	07 23 07.9	+0.2
CUI	**Cuipilapa**	**1.79**	**315**	*i*P		Pn	07 22 45.6	-0.7
COLC	**Colonia**	**1.82**	**314**	*i*P		Pn	07 22 47.2	+0.4
MESS	**Mesas**	**1.87**	**316**	*i*P		Pn	07 22 47.0	-0.5
PTP	**Ponta Puerca**	**19.77**	**62**	*e*P		x	07 22 44.0	
PTP				*e*S		x	07 23 06.9	

IDC 13 07:30:50.2±1.0, 13°.00N×145°.73E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.5/25, mbtmp3.4/5, Error ellipse: s-maj=25.2km s-min=18.6km az=67.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**1.02**	**305**	Pn		Pn	07 31 12.5	+0.7
	99nm,0.3s,baz=128,slow=8.1,SNR=35							
GUMO				Sn		Sn	07 31 26.4	-0.5
	218nm,0.3s,baz=12,slow=20,SNR=24							
WRA	**Warramunga Arr**	**34.60**	**199**	P		P	07 37 40.8	-0.4
	0.7nm,0.6s,baz=21,slow=9.7,SNR=8.3							
ASAR	**Alice Springs**	**38.23**	**198**	P		P	07 38 12.3	+0.1
	0.3nm,0.5s,baz=23,slow=9.2,SNR=9.4							
MKAR	**Makanchi Array**	**62.49**	**316**	P		P	07 41 15.7	0.0
	0.1nm,0.3s,baz=110,slow=6.4,SNR=2.8							
ILAR	**Eielson Array**	**68.74**	**25**	P		P	07 41 55.1	-0.6
	0.2nm,0.6s,baz=252,slow=5.3,SNR=3.1							
YKA	**Yellowknife Ar**	**82.99**	**27**	P		P	07 43 17.7	+0.6
	0.3nm,0.7s,baz=286,slow=5.4,SNR=4.6							

CSEM ***13*** *07:34:12.7±0.2, 59°.71N×22°.46E, h2km, ML2.1, Error ellipse: s-maj=4.4km s-min=3.2km az=171.0, Mining explosion.*
ISCJB ***13*** *07:34:12.2±0.4, 59°.68N±0°.04×22°.34E±0°.05, h0km, Error ellipse: s-maj=5.2km s-min=3.6km az=173.6*
HEL ***13*** *07:34:13.5±0.1, 59°.67N×22°.32E, h0km, ML2.1, ML2.1(UPP), Explosion*
IDC ***13*** *07:34:14.3±1.9, 59°.65N×22°.37E, h0km, mb1 2.9/4, mb1mx2.8/28, mbtmp2.9/4, ML2.7/4, Error ellipse: s-maj=24.7km s-min=7.6km az=163.0*
UPP ***13*** *07:34:16.4, 59°.72N×21°.88E, h0km, ML2.1, Suspected Mining explosion.*

ISC 13 07:34:12.3±0.8, 59°.71N±0°.04×22°.36E±0°.03, h0km, n45, σ1$12/56, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MEF	**Metsahovi**	**1.14**	**63**	*e*P		**Pg**	**07 34 34.5**	**+0.3**
MEF	**Metsahovi**	**1.14**	**63**	P		**Pg**	**07 34 34.4**	**+0.3**
MTSE	**Matsula**	**1.25**	**143**	*e*P		**Pg**	**07 34 35.5**	**-0.7**
MTSE				*e*S		**Sg**	**07 34 51.1**	**-1.3**
MTSE	**Matsula**	**1.25**	**143**	P		**Pg**	**07 34 35.5**	**-0.7**
MTSE				S		**Sg**	**07 34 51.1**	**-1.3**
AAL	**Aland**	**1.28**	**292**	*e*P		**Pg**	**07 34 36.2**	**-0.6**
AAL				*e*S		**Sg**	**07 34 52.4**	**-0.9**
AAL	**Aland**	**1.28**	**292**	P		**Pg**	**07 34 36.1**	**-0.6**
AAL				S		**Sg**	**07 34 52.4**	**-0.9**
RAF	**Rauma**	**1.35**	**348**	*e*P		**Pg**	**07 34 37.9**	**-0.2**
RAF				*e*S		**Sb**	**07 34 56.2**	**+0.1**
RAF	**Rauma**	**1.35**	**348**	P		**Pg**	**07 34 37.9**	**-0.2**
RAF				S		**Sb**	**07 34 56.2**	**+0.1**
NRTU	**Norrtaelje**	**1.89**	**271**	*e*P		**Pn**	**07 34 46.2**	**+0.4**
NRTU	**Norrtaelje**	**1.89**	**271**	P		**Pn**	**07 34 46.2**	**+0.4**
	baz=86							
PVF	**Pernaja**	**1.94**	**63**	*e*PG		**Pb**	**07 34 48.9**	**+0.3**
PVF				*e*S		**Sb**	**07 35 13.6**	**+0.3**
PVF	**Pernaja**	**1.94**	**63**	Pg		**Pb**	**07 34 48.8**	**+0.3**
PVF				S		**Sb**	**07 35 13.5**	**+0.3**
GRAU	**Graesoe**	**2.02**	**290**	*e*P		**Pn**	**07 34 47.8**	**+0.3**
GRAU	**Graesoe**	**2.02**	**290**	P		**Pn**	**07 34 47.8**	**+0.3**
FORU	**Forsmark**	**2.20**	**290**	*e*P		**Pn**	**07 34 51.3**	**+1.3**
FORU	**Forsmark**	**2.20**	**290**	P		**Pn**	**07 34 51.3**	**+1.3**
FLYU	**Flymyra**	**2.29**	**282**	*e*P		**Pn**	**07 34 52.1**	**+0.8**
FLYU	**Flymyra**	**2.29**	**282**	P		**Pn**	**07 34 52.1**	**+0.8**
NYNU	**Nynaeshamn**	**2.34**	**254**	*e*P		**Pn**	**07 34 53.5**	**+1.6**
NYNU	**Nynaeshamn**	**2.34**	**254**	P		**Pn**	**07 34 53.5**	**+1.6**
FIA0	**FINESS Array S**	**2.53**	**45**	*e*PB		**Pb**	**07 34 58.2**	**-0.3**
FIA0				*e*SB		**Sb**	**07 35 31.1**	**+1.0**
FIA0	**FINESS Array S**	**2.53**	**45**	Pb		**Pb**	**07 34 58.2**	**-0.3**
FIA0				Sb		**Sb**	**07 35 31.1**	**+1.0**
FINES	**FINESS Array B**	**2.53**	**45**	Pn		**Pb**	**07 34 57.9**	**-0.6**
	1.7nm,0.3s,baz=234,slow=14,SNR=15							
FINES				Sn		**Sb**	**07 35 30.7**	**+0.6**
	3.1nm,0.3s,baz=240,slow=25,SNR=15							
BACU	**Backbrunna**	**2.66**	**275**	*e*P		**Pn**	**07 34 57.7**	**+1.4**
BACU	**Backbrunna**	**2.66**	**275**	P		**Pn**	**07 34 57.7**	**+1.4**
OSTU	**Oestervaala**	**2.68**	**283**	*e*P		**Pn**	**07 34 58.0**	**+1.4**
OSTU	**Oestervaala**	**2.68**	**283**	P		**Pn**	**07 34 58.0**	**+1.4**
KEF	**Keuruu**	**2.75**	**25**	MSG			07 35 41.0	
	comp=Z,7.0nm,0.1s							
IGGU	**Iggoen**	**2.77**	**297**	*e*P		**Pn**	**07 34 58.8**	**+1.0**
IGGU	**Iggoen**	**2.77**	**297**	P		**Pn**	**07 34 58.8**	**+1.0**
GOTU	**Gotland**	**2.83**	**226**	*e*P		**Pn**	**07 35 00.2**	**+1.4**
GOTU	**Gotland**	**2.83**	**226**	P		**Pn**	**07 35 00.1**	**+1.4**
ESKU	**Eskilstuna**	**3.08**	**264**	*e*P		**Pn**	**07 35 03.3**	**+1.2**
ESKU	**Eskilstuna**	**3.08**	**264**	P		**Pn**	**07 35 03.3**	**+1.2**
KAF	**Kangasniemi**	**3.08**	**37**	MSG			07 35 51.0	
	comp=Z,4.6nm,0.2s							
ARNU	**Arnoeviken**	**3.15**	**311**	*e*P		**Pn**	**07 35 04.6**	**+1.4**
ARNU	**Arnoeviken**	**3.15**	**311**	P		**Pn**	**07 35 04.5**	**+1.4**
VIKU	**Vikbolandet**	**3.16**	**250**	*e*P		**Pn**	**07 35 04.1**	**+0.9**
VIKU	**Vikbolandet**	**3.16**	**250**	P		**Pn**	**07 35 04.1**	**+0.9**
FALU	**Falun**	**3.36**	**286**	*e*P		**Pn**	**07 35 07.3**	**+1.3**
FALU	**Falun**	**3.36**	**286**	P		**Pn**	**07 35 07.2**	**+1.3**
SUF	**Sumiainen**	**3.53**	**30**	MSG			07 36 02.4	
	comp=Z,2.5nm,0.1s							
HFS	**Hagfors**	**4.38**	**279**	Pn		**Pn**	**07 35 21.4**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=116,slow=13,SNR=10							
HFS				Sn		**Sn**	**07 36 14.2**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=96,slow=26,SNR=5.2							
HFS				Lg		Lg	07 36 30.3	
	comp=Z,0.7nm,0.3s,baz=92,slow=29,SNR=7.6							
NOA	**NORSAR Array B**	**5.69**	**288**	Pn		**Pn**	**07 35 38.2**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=100,slow=12,SNR=9.2							
NOA				Sn		**Sn**	**07 36 43.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=113,slow=21,SNR=3.1							
NOA				Lg		Lg	07 37 09.4	
	comp=Z,0.5nm,0.3s,baz=94,slow=11,SNR=3.4							
ARCES	**ARCESS Array B**	**9.95**	**6**	Pn		**Pn**	**07 36 36.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=191,slow=12,SNR=11							
ARCES				Sn		**Sn**	**07 38 25.2**	**-3.4**
	comp=Z,0.1nm,0.3s,baz=189,slow=23,SNR=2.7							

SOF ***13*** *07:36:34.9, 41°.17N×23°.21E, h7km, MD2.6*
SKO ***13*** *07:36:35.0, 41°.21N×23°.23E, h15km, M1.7, ML2.3*
ATH ***13*** *07:36:35.5, 41°.17N×23°.24E, h16km±2km, MD3.0/5*
ISCJB ***13*** *07:36:35.2±0.3, 41°.19N±0°.02×23°.19E±0°.03, h8km±4km, Error ellipse: s-maj=3.4km s-min=2.9km az=166.5*
CSEM ***13*** *07:36:35.7±0.1, 41°.18N×23°.23E, h5km, ML2.4/8, Error ellipse: s-maj=2.1km s-min=1.8km az=84.0*
THE ***13*** *07:36:35.9, 41°.18N×23°.22E, h2km±2km, ML2.4/8, Error ellipse: s-maj=2.1km s-min=0.5km az=329.0*
BEO ***13*** *07:36:36.7±0.8, 41°.14N×23°.16E, h4km±3km, ML2.3/7*

ISC 13 07:36:35.7±0.9, 41°.18N±0°.02×23°.21E±0°.02, h10km±7km, n52, σ0$66/84, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KNT	**Kendrikon**	**0.24**	**266**	P		**Pg**	**07 36 40.7**	**+0.1**
KNT				S		**Sg**	**07 36 44.1**	**+0.1**
KNT	**Kendrikon**	**0.24**	**266**	P		**Pg**	**07 36 40.7**	**+0.1**
KNT				S		**Sg**	**07 36 44.1**	**+0.1**
SRS	**Serrai**	**0.29**	**102**	P		**Pg**	**07 36 41.3**	**-0.3**
SRS				S		**Sg**	**07 36 45.7**	**+0.2**
SRS	**Serrai**	**0.29**	**102**	P		**Pg**	**07 36 41.3**	**-0.3**
SRS				S		**Sg**	**07 36 45.7**	**+0.2**
SOH	**Sokhos**	**0.37**	**163**	P		**Pg**	**07 36 43.2**	**+0.1**
SOH				S		**Sg**	**07 36 48.2**	**+0.2**
SOH	**Sokhos**	**0.37**	**163**	*e*PB		**Pg**	**07 36 43.2**	**+0.1**
SOH				*e*SB		**Sg**	**07 36 48.4**	**+0.4**
SOH	**Sokhos**	**0.37**	**163**	P		**Pg**	**07 36 43.2**	**+0.1**
SOH				S		**Sg**	**07 36 48.2**	**+0.2**
VAY	**Valandovo**	**0.51**	**287**	P		**Pg**	**07 36 45.3**	**-0.3**
VAY	**Valandovo**	**0.51**	**287**	*i*Pg		**Pg**	**07 36 45.1**	**-0.5**
VAY				*i*Sg		**Sg**	**07 36 52.5**	**+0.2**
VAY				*e*Lg		Lg	07 36 53.7	
	comp=N,119nm,0.6s							
VAY				*e*Lg		Lg	07 36 53.7	
	comp=E,93nm,0.3s							
VAY	**Valandovo**	**0.51**	**287**	*e*Pg		**Pg**	**07 36 45.1**	**-0.5**
VAY				*e*Sg		**Sg**	**07 36 52.5**	**+0.2**
VAY	**Valandovo**	**0.51**	**287**	*i*Pg		**Pg**	**07 36 45.5**	**-0.1**
VAY				*e*Sg		**Sg**	**07 36 52.5**	**+0.2**
VAY				*e*Lg		Lg	07 36 54.2	
	comp=E,93nm,0.3s							
NVR	**Nevrokopi**	**0.52**	**70**	P		**Pg**	**07 36 45.3**	**-0.5**
NVR				S		**Sg**	**07 36 52.6**	**0.0**
NVR	**Nevrokopi**	**0.52**	**70**	*e*PN		**Pg**	**07 36 45.5**	**-0.3**
NVR				*e*SN		**Sg**	**07 36 52.8**	**+0.2**
NVR	**Nevrokopi**	**0.52**	**70**	*e*Pn		**Pg**	**07 36 45.5**	**-0.3**
NVR				S		**Sg**	**07 36 52.6**	**0.0**
MMB	**Musomiste**	**0.56**	**43**	*i*P		**Pg**	**07 36 45.9**	**-0.8**
MMB	**Musomiste**	**0.56**	**43**	*i*P		**Pg**	**07 36 45.9**	**-0.8**
THE	**Thessaloniki**	**0.58**	**199**	P		**Pg**	**07 36 47.0**	**+0.1**
THE				S		**Sb**	**07 36 55.4**	**-0.7**
THE	**Thessaloniki**	**0.58**	**199**	P		**Pg**	**07 36 47.0**	**+0.1**
THE				S		**Sb**	**07 36 55.4**	**-0.7**
HORT	**Hortiatis**	**0.59**	**189**	P		**Pg**	**07 36 47.3**	**+0.2**
HORT				S		**Sg**	**07 36 55.4**	**+0.6**
HORT	**Hortiatis**	**0.59**	**189**	P		**Pg**	**07 36 47.3**	**+0.2**
HORT				S		**Sg**	**07 36 55.4**	**+0.6**
GRG	**Griva**	**0.65**	**250**	P		**Pg**	**07 36 48.5**	**+0.1**
GRG	**Griva**	**0.65**	**250**	*e*PN		**Pg**	**07 36 48.5**	**+0.1**
GRG				*e*SN		**Sb**	**07 36 57.9**	**-0.5**
GRG	**Griva**	**0.65**	**250**	P		**Pg**	**07 36 48.5**	**+0.1**
GRG				*e*Sn		**Sb**	**07 36 57.9**	**-0.5**
KKB	**Krupnik**	**0.69**	**352**	*i*P		**Pg**	**07 36 48.5**	**-0.7**
KKB	**Krupnik**	**0.69**	**352**	*i*P		**Pg**	**07 36 48.5**	**-0.7**
PLG	**Polygyros**	**0.82**	**168**	P		**Pg**	**07 36 51.3**	**-0.3**
PLG				S		**Sg**	**07 37 02.6**	**+0.3**
PLG	**Polygyros**	**0.82**	**168**	*e*PN		**Pg**	**07 36 51.3**	**-0.3**
PLG	**Polygyros**	**0.82**	**168**	*e*Pn		**Pg**	**07 36 51.3**	**-0.3**
PLG				S		**Sg**	**07 37 02.6**	**+0.3**
KAVA	**Kavala**	**1.00**	**100**	P		**Pg**	**07 36 54.0**	**-0.9**
KAVA				S		**Sn**	**07 37 09.3**	**-0.6**
KAVA	**Kavala**	**1.00**	**100**	P		**Pg**	**07 36 54.0**	**-0.9**
KAVA				S		**Sn**	**07 37 09.3**	**-0.6**
OUR	**Ouranopolis**	**1.02**	**145**	P		**Pg**	**07 36 55.2**	**-0.2**
OUR				S		**Sn**	**07 37 10.5**	**0.0**
OUR	**Ouranopolis**	**1.02**	**145**	P		**Pg**	**07 36 55.2**	**-0.2**
OUR				S		**Sn**	**07 37 10.5**	**0.0**
RZN	**Rozhen**	**1.24**	**65**	*i*P		**Pb**	**07 36 59.4**	**+0.1**
RZN	**Rozhen**	**1.24**	**65**	*i*P		**Pb**	**07 36 59.4**	**+0.1**
PAIG	**Paliouri**	**1.30**	**164**	*e*PN		**Pn**	**07 36 59.8**	**-0.1**
PAIG				*e*SN		**Sb**	**07 37 17.1**	**+0.2**
PAIG	**Paliouri**	**1.30**	**164**	*e*Pn		**Pn**	**07 36 59.8**	**-0.1**
PAIG				*e*Sn		**Sb**	**07 37 17.1**	**+0.2**
VTS	**Vitosha**	**1.41**	**360**	P		**Pn**	**07 37 01.9**	**+0.3**
VTS	**Vitosha**	**1.41**	**360**	*e*Pg		**Pb**	**07 37 02.6**	**+0.4**
VTS				*e*Sg		**Sg**	**07 37 21.3**	**+0.1**
VTS	**Vitosha**	**1.41**	**360**	*i*P		**Pb**	**07 37 02.6**	**+0.4**
VTS	**Vitosha**	**1.41**	**360**	P		**Pn**	**07 37 01.9**	**+0.3**
VTS	**Vitosha**	**1.41**	**360**	*e*Pg		**Pb**	**07 37 02.6**	**+0.4**
VTS				*e*Sg		**Sg**	**07 37 21.3**	**+0.1**
PLD	**Plovdiv**	**1.45**	**50**	*e*Pg		**Pg**	**07 37 04.0**	**+0.5**
PLD				*e*Sg		**Sg**	**07 37 25.2**	**+2.8**
PLD	**Plovdiv**	**1.45**	**50**	*e*Pg		**Pg**	**07 37 04.0**	**+0.5**
PLD				*e*Sg		**Sg**	**07 37 25.2**	**+2.8**
PGB	**Panagyurishte**	**1.54**	**27**	*i*P		**Pb**	**07 37 04.1**	**-0.3**
PGB	**Panagyurishte**	**1.54**	**27**	*i*P		**Pb**	**07 37 04.1**	**-0.3**
BARS	**Barje**	**1.94**	**328**	*e*Sg		**Sg**	**07 37 38.4**	**+0.3**
BARS	**Barje**	**1.94**

comp=Z,0.3nm,0.3s,baz=186,slow=13,SNR=13

IDC 13 07:39:03.0±2.5, 59.74N×22.28E, h0km, mb1 3.1/4, mb1mx2.9/28, mbtmp3.0/4, ML2.7/4, Error ellipse: s-maj=38.3km s-min=9.3km az=162.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FINES	**FINESS Array B**	**2.53**	**46**	Pn	Pn	07 39 45.5	+0.1
	1.1nm,0.3s,baz=232,slow=14,SNR=7.9						
FINES				Sn	Sb	07 40 19.1	-2.0
	2.5nm,0.3s,baz=239,slow=26,SNR=9.4						
HFS	**Hagfors**	**4.34**	**279**	Pn	Pn	07 40 10.1	-0.1
	0.2nm,0.3s,baz=110,slow=12,SNR=8.0						
HFS				Lg	Lg	07 41 16.6	
	1.4nm,0.3s,baz=93,slow=30,SNR=5.4						
NOA	**NORSAR Array B**	**5.64**	**288**	Pn	Pn	07 40 26.2	-2.0
	0.3nm,0.3s,baz=94,slow=12,SNR=7.6						
ARCES	**ARCESS Array B**	**9.93**	**7**	Pn	Pn	07 41 24.4	-2.4
	0.3nm,0.3s,baz=187,slow=12,SNR=6.9						

JMA 13 07:48:27.6, 34.96N×135.45E, h10km, M3.0, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JWT	**Wachi**	**0.32**	**353**	P	Pg	07 48 34.2	+0.1
JWT				S	Sg	07 48 38.6	+0.1
JHE	**Heguri**	**0.36**	**148**	P	Pg	07 48 34.6	-0.2
JHE				S	Sg	07 48 39.8	+0.2
JKS	**Kasai**	**0.50**	**273**	P	Pg	07 48 37.2	-0.1
JKS				S	Sg	07 48 43.8	-0.1
JAJ2	**Tsuna**	**0.71**	**221**	P	Pg	07 48 41.0	-0.4
JAJ2				S	Sg	07 48 50.6	-0.1
JKY	**Yasaka**	**0.72**	**337**	P	Pg	07 48 41.5	-0.2
JKY				eS	Sg	07 48 51.5	+0.3
JWY	**Kouya**	**0.75**	**171**	P	Pg	07 48 41.6	-0.6
JWY				eS	Sg	07 48 51.4	-0.7
TSUJ	**Tsu 2**	**0.84**	**107**	P	Pg	07 48 43.3	-0.4
TSUJ				S	Sg	07 48 54.2	-0.4
JKSM	**Kasumi**	**0.90**	**314**	P	Pg	07 48 44.5	-0.4
JKSM				S	Sg	07 48 56.4	-0.2
JKN2	**Miekihoku**	**0.99**	**136**	P	Pg	07 48 46.1	-0.5
JKN2				S	Sg	07 48 58.7	-0.8
MAT	**Matsushiro**	**2.74**	**54**	P	Pn	07 49 10.2	-1.5
MAT				eS	Sn	07 49 46.0	+1.1

CSEM ***13*** *08:11:27.8±0.3, 50.29N×19.04E, h2km, ML2.8/6, Error ellipse: s-maj=8.9km s-min=3.7km az=7.0*
IPEC ***13*** *08:11:27.9±0.2, 50.29N×19.09E, h0km±1km, ML2.2/3, Error ellipse: s-maj=3.0km s-min=1.2km az=174.0*
ISCJB ***13*** *08:11:27.8±0.5, 50.20N±0.04×19.05E±0.03, h0km, Error ellipse: s-maj=6.0km s-min=2.8km az=11.4*
PRU ***13*** *08:11:28.6, 50.25N×19.03E, h0km*
WAR ***13*** *08:11:28.6, 50.20N×19.14E*
ISC 13 08:11:28.8±0.8, 50.19N±0.05×19.08E±0.02, h0km, n23, σ1s28/36, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.46**	**86**	*i* Pg	**Pg**	**08 11 37.1**	**-0.5**
OJC				*i* Sg	**Sg**	**08 11 43.5**	**-0.1**
OJC	**Ojcow**	**0.46**	**86**	*i* Pg	**Pg**	**08 11 37.1**	**-0.5**
OJC				*i* Sg	**Sg**	**08 11 43.5**	**-0.1**
OKC	**Ostrava-Krasne**	**0.70**	**240**	*e*SG	**Sg**	**08 11 51.6**	**+0.4**
	comp=Z,42nm,0.9s						
OKC	**Ostrava-Krasne**	**0.70**	**240**	Sg	**Sg**	**08 11 51.6**	**+0.4**
	42nm,0.9s						
MORC	**Moravsky Berou**	**1.07**	**248**	*e*Pg	**Pg**	**08 11 49.1**	**-0.3**
MORC				*e*Sg	**Sg**	**08 12 03.0**	**-0.3**
	46nm,0.6s,baz=62						
NIE	**Niedzica**	**1.11**	**134**	*e*Pg	**Pb**	**08 11 50.9**	**0.0**
NIE				*e*Sg	**Sb**	**08 12 07.2**	**+1.3**
NIE	**Niedzica**	**1.11**	**134**	*e*Pg	**Pb**	**08 11 50.9**	**0.0**
NIE				*e*Sg	**Sb**	**08 12 07.2**	**+1.3**
VYHS	**Vyhne**	**1.71**	**185**	*e*PN	**Pn**	**08 11 58.9**	**-0.9**
VYHS				*e*SN	**Sn**	**08 12 21.1**	**-1.2**
DPC	**Dobruska-Polom**	**1.78**	**276**	*e*PG	**Pn**	**08 11 59.8**	**-1.0**
DPC				*e*SG	**Sn**	**08 12 23.6**	**-0.5**
	comp=Z,23nm,0.7s						
DPC	**Dobruska-Polom**	**1.78**	**276**	Pg	**Pn**	**08 11 59.8**	**-1.0**
DPC				Sg	**Sn**	**08 12 23.6**	**-0.5**
	23nm,0.7s						
VRAC	**Vranov**	**1.84**	**242**	*e*Pn	**Pn**	**08 12 01.4**	**-0.2**
VRAC				*e*Sg	**Sn**	**08 12 27.0**	**+1.4**
KSP	**Ksiaz**	**1.90**	**291**	*e*Pn	**Pb**	**08 12 03.7**	**-0.5**
KSP				*e*Sn	**Sn**	**08 12 27.6**	**+0.6**
KSP				*e*Sg	**Sg**	**08 12 30.6**	**+1.0**
KSP	**Ksiaz**	**1.90**	**291**	*e*Pg	**Pb**	**08 12 03.8**	**-0.5**
KSP				*e*Sg	**Sg**	**08 12 29.2**	**-0.4**
CRVS	**Cervenica-Dubn**	**2.02**	**129**	*e*PN	**Pn**	**08 12 05.0**	**+0.9**
CRVS				*e*SN	**Sn**	**08 12 29.9**	**-0.1**
KRUC	**Moravsky**	**2.08**	**238**	*e*Sn	**Sn**	**08 12 33.0**	**+1.5**
	7.7nm,0.4s,baz=54						
KOLS	**Kolonicke sedl**	**2.43**	**120**	*e*PN	**Pn**	**08 12 08.9**	**-0.8**
KOLS				*e*		08 12 17.1	
KOLS	**Kolonicke sedl**	**2.43**	**120**	*e*SN	**Sn**	**08 12 40.1**	**-0.1**
PRU	**Pruhonice**	**2.93**	**268**	*e*SG	**Sb**	**08 12 59.8**	**+1.6**
	comp=Z,5.6nm,0.5s						
PRU	**Pruhonice**	**2.93**	**268**	Sg	**Sb**	**08 12 59.8**	**+1.6**
	5.6nm,0.5s						
BRG	**Berggiesshubel**	**3.35**	**284**	SG	**Sg**	**08 13 13.6**	**-2.7**
	6.2nm,0.6s						
KHC	**Kasperske Hory**	**3.73**	**256**	*e*SG	**Sg**	**08 13 26.6**	**-1.9**
	comp=Z,6.5nm,0.5s						
KHC	**Kasperske Hory**	**3.73**	**256**	Sg	**Sg**	**08 13 26.6**	**-1.9**
	6.5nm,0.5s						
CLL	**Collm**	**4.02**	**288**	*e*Sg	**Sg**	**08 13 42.0**	**+4.2**

MEX 13 08:26:58.3±0.6, 15.74N×95.10W, h20km±20km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.97**	**272**	*e*P	Pb	08 27 13.5	-3.1
HUIG				*e*S	Sb	08 27 25.5	-3.6
PCIG		**1.81**	**91**	*e*P	Pn	08 27 25.3	-3.1
PCIG				*i* S	Sn	08 27 46.4	-4.3
VHO	**Vista Hermosa**	**2.05**	**310**	*e*P	Pn	08 27 29.8	-2.3
VHO				*e*S	Sn	08 27 52.8	-4.5
TGIG		**2.16**	**61**	*e*P	Pn	08 27 30.7	-2.5
TGIG				*e*S	Sn	08 27 55.6	-4.0
CCIG	**Comitan**	**2.90**	**79**	*e*P	Pn	08 27 41.8	-1.8
CCIG				*e*S	Sn	08 28 14.5	-3.5
PNIG	**Pinotepa**	**2.98**	**283**	*i* P	Pn	08 27 41.5	-3.1
PNIG				*i* S	Sn	08 28 16.3	-3.7

ATH ***13*** *08:41:49.4, 40.86N×23.02E, h23km±7km, MD2.8/3*
CSEM ***13*** *08:41:49.5±0.1, 40.79N×22.97E, h15km, ML1.7/5, Error ellipse: s-maj=2.0km s-min=1.7km az=31.0*
ISCJB ***13*** *08:41:49.2±1.0, 40.78N±0.04×23.00E±0.05, h26km±7km, Error ellipse: s-maj=7.3km s-min=6.6km az=33.8*
THE ***13*** *08:41:50.2, 40.82N×22.99E, h13km±3km, ML1.7/5, Error ellipse: s-maj=3.4km s-min=0.5km az=197.0*
ISC 13 08:41:49.8±1.1, 40.80N±0.03×22.98E±0.03, h17km±8km, n15, σ0s21/29, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THE	**Thessaloniki**	**0.17**	**184**	P	**Pg**	**08 41 54.0**	**-0.1**
THE				S	**Sb**	**08 41 57.5**	**0.0**
THE	**Thessaloniki**	**0.17**	**184**	P	**Pg**	**08 41 54.0**	**-0.1**
THE				S	**Sb**	**08 41 57.5**	**0.0**
HORT	**Hortiatis**	**0.22**	**156**	P	**Pg**	**08 41 55.0**	**0.0**
HORT				S	**Sb**	**08 41 59.2**	**+0.1**
HORT	**Hortiatis**	**0.22**	**156**	P	**Pg**	**08 41 55.0**	**0.0**
HORT				S	**Sb**	**08 41 59.2**	**+0.1**
SOH	**Sokhos**	**0.28**	**85**	P	**Pg**	**08 41 56.1**	**+0.1**
SOH				S	**Sg**	**08 42 00.4**	**+0.1**
SOH	**Sokhos**	**0.28**	**85**	*e*PB	**Pg**	**08 41 56.0**	**+0.1**
SOH				*e*SB	**Sg**	**08 42 00.1**	**-0.2**
SOH	**Sokhos**	**0.28**	**85**	P	**Pg**	**08 41 56.1**	**+0.1**
SOH				*e*Sb	**Sg**	**08 42 00.1**	**-0.2**
SOH				S	**Sg**	**08 42 00.4**	**+0.1**
KNT	**Kendrikon**	**0.37**	**350**	P	**Pg**	**08 41 57.2**	**-0.3**
KNT				S	**Sg**	**08 42 02.8**	**+0.1**
GRG	**Griva**	**0.47**	**290**	*e*PB	**Pg**	**08 41 59.0**	**-0.2**
GRG				*e*SB	**Sb**	**08 42 06.7**	**+0.5**
GRG	**Griva**	**0.47**	**290**	*e*Pb	**Pg**	**08 41 59.0**	**-0.2**
GRG				*e*Sb	**Sb**	**08 42 06.7**	**+0.5**
PLG	**Polygyros**	**0.55**	**140**	*e*PN	**Pg**	**08 42 00.6**	**-0.2**
PLG	**Polygyros**	**0.55**	**140**	*e*Pn	**Pg**	**08 42 00.6**	**-0.2**
SRS	**Serrai**	**0.56**	**55**	P	**Pg**	**08 42 00.9**	**-0.1**
SRS				S	**Sg**	**08 42 08.2**	**-0.3**
SRS	**Serrai**	**0.56**	**55**	P	**Pg**	**08 42 00.9**	**-0.1**
SRS				S	**Sg**	**08 42 08.2**	**-0.3**

IDC 13 08:43:21.4±1.8, 1.38S×14.71W, h0km, mb4.1/6, mb1 4.2/7, mb1mx3.8/26, mbtmp4.2/7, ML4.0/1, MS3.9/17, Ms1 3.9/17, ms1mx3.7/50, Error ellipse: s-maj=53.7km s-min=26.5km az=99.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**12.68**	**51**	Pn	Pn	08 46 22.9	-0.2
	0.8nm,0.3s,baz=211,slow=13,SNR=8.9						
DBIC				Sn	Sn	08 48 38.5	-6.8
	1.9nm,0.3s,baz=157,slow=7.0,SNR=4.6						
DBIC				LR	LR	08 50 26.9	
	comp=Z,862nm,18.9s,baz=211,slow=34						
BBTS	**Babate**	**16.04**	**354**	LR	LR	08 52 43.7	
	comp=Z,556nm,18.6s,baz=319,slow=35						
RCBR	**Riachuelo**	**21.60**	**258**	LR	LR	08 54 29.0	
	comp=Z,92nn,19.1s,baz=74,slow=31						
TORD	**Torodi Ar. Bea**	**21.75**	**48**	P	P	08 48 14.4	-0.4
	15nm,1.0s,baz=232,slow=9.8,SNR=30						
TORD				S	S	08 52 10.4	-6.2
	1.1nm,0.6s,baz=228,slow=22,SNR=4.7						
TORD				LR	LR	08 55 53.3	
	comp=Z,809nm,18.8s,baz=220,slow=35						
BDFB	**Brasilia**	**35.77**	**245**	LR	LR	09 01 26.9	
	comp=Z,90nm,21.0s,baz=288,slow=30						
ESDC	**Sonseca Array**	**42.03**	**12**	LR	LR	09 09 04.8	
	comp=Z,178nm,18.4s,baz=135,slow=37						
KEST	**Kesra**	**43.22**	**29**	LR	LR	09 10 04.5	
	comp=Z,73nm,18.9s,baz=177,slow=37						
BOSA	**Boshof**	**46.76**	**129**	P	P	08 51 53.1	+0.1
	3.8nm,0.7s,baz=307,slow=7.4,SNR=11						
CPUP	**Villa Florida**	**47.87**	**235**	LR	LR	09 09 25.4	
	comp=Z,152nm,18.6s,baz=56,slow=33						
SIV	**San Ignacio**	**47.92**	**250**	LR	LR	09 10 23.0	
	comp=Z,179nm,18.3s,slow=34						
GERES	**GERESS Array B**	**55.75**	**22**	P	P	08 53 01.2	+1.1
	1.1nm,0.7s,baz=216,slow=6.6,SNR=5.8						
CFAA	**Coronel Fontan**	**58.70**	**233**	LR	LR	09 15 34.1	
	comp=Z,35nm,21.1s,baz=63,slow=33						
BRTR	**Keskin Array B**	**60.19**	**42**	P	P	08 53 31.4	-0.1
	0.9nm,0.8s,baz=232,slow=6.1,SNR=4.9						
PLCA	**Paso Flores**	**63.76**	**225**	LR	LR	09 16 35.4	
	comp=Z,135nm,21.8s,baz=158,slow=31						
HFS	**Hagfors**	**65.21**	**15**	LR	LR	09 21 33.7	
	comp=Z,144nm,20.1s,baz=37,slow=35						
NOA	**NORSAR Array B**	**65.38**	**14**	LR	LR	09 20 05.7	
	comp=Z,84nm,21.5s,baz=210,slow=34						
USHA	**Ushuaia**	**68.79**	**210**	LR	LR	09 22 05.5	
	comp=Z,215nm,18.1s,baz=71,slow=34						
FINES	**FINESS Array B**	**69.96**	**20**	P	P	08 54 33.4	-1.0
	1.1nm,0.6s,baz=223,slow=9.3,SNR=2.7						
SNAA	**Sanae**	**70.59**	**176**	LR	LR	09 18 17.1	
	comp=Z,34nm,18.7s,baz=10.0,slow=30						
JMIC	**Jan Mayen**	**72.36**	**2**	LR	LR	09 23 22.2	
	comp=Z,121nm,18.6s,baz=118,slow=33						
PMSA	**Palmer Station**	**72.49**	**200**	LR	LR	09 18 06.4	
	comp=Z,157nm,19.2s,baz=148,slow=29						
QSPA	**South Pole Qui**	**88.69**	**180**	P	P	08 56 16.4	-0.2
	2.0nm,1.0s,baz=194,slow=8.3,SNR=4.4						

ISCJB ***13*** *08:50:16.9±0.7, 8.1S±0.1×113.7E±0.1, h159km, mb3.9/7, Error ellipse: s-maj=22.1km s-min=10.8km az=135.7*
IDC ***13*** *08:50:18.5±7.2, 7.85S×114.05E, h159km±64km, mb3.6/7, mb1 3.7/8, mb1mx3.5/23, mbtmp3.6/8, Error ellipse: s-maj=56.9km s-min=15.5km az=64.0*
DJA ***13*** *08:50:27.0±0.5, 8.5S±6.1×114.4E±, h31km±12km, M3.5/7, MLv3.5/7*
ISC 13 08:50:18.1±0.7, 8.1S±0.1×113.8E±0.1, h159km, n18, σ0s69/19, mb3.9/7, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLJI	**Banyuglugur**	**0.39**	**323**	P	**Pn**	**08 50 40.5**	**+0.5**
GMJI	**Gumukmas**	**0.44**	**241**	P	**Pn**	**08 50 39.7**	**-0.5**
KMMI	**Kalianget**	**1.01**	**8**	P	Pn	08 50 45.7	+1.8
KRKI	**Karangkates**	**1.37**	**266**	P	Pn	08 50 54.0	+7.0
SRBI	**Singaraja**	**1.37**	**91**	P	**Pn**	**08 50 47.5**	**+0.4**
DNP	**Denpasar**	**1.50**	**114**	P	**Pn**	**08 50 48.4**	**+0.1**
IGBI	**Denpasar**	**1.50**	**120**	P	**Pn**	**08 50 47.4**	**-1.0**
KHKI	**Kahang-Kahang**	**1.79**	**100**	P	**Pn**	**08 50 51.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**15.22**	**132**	P	**P**	**08 53 45.2**	**-1.0**
	0.6nm,0.3s,baz=312,slow=11,SNR=10						
FITZ				S	Sn	08 56 23.2	-11
	0.4nm,0.3s,baz=18,slow=20,SNR=9.6						
WRA	**Warramunga Arr**	**23.11**	**123**	P	**P**	**08 55 09.8**	**-0.5**
	2.0nm,0.3s,baz=298,slow=12,SNR=60						
WRA				PcP	**PcP**	**08 58 54.0**	**-0.4**
	0.1nm,0.3s,baz=320,slow=2.1,SNR=5.7						
ASAR	**Alice Springs**	**24.72**	**131**	P	**P**	**08 55 25.0**	**+0.1**
	4.1nm,0.4s,baz=305,slow=9.0,SNR=51						
ASAR				PcP	**PcP**	**08 58 57.7**	**-0.1**
	0.5nm,0.3s,baz=308,slow=1.7,SNR=7.0						
STKA	**Stephens Creek**	**35.05**	**136**	P	**P**	**08 56 56.5**	**+0.6**
	3.7nm,0.4s,baz=316,slow=8.2,SNR=28						
STKA				PcP	**PcP**	**08 59 24.1**	**-0.3**
	1.5nm,0.7s,baz=315,slow=1.4,SNR=2.5						
SONM	**Songino Array**	**56.04**	**354**	P	**P**	**08 59 39.6**	**-0.9**
	0.4nm,0.3s,baz=168,slow=8.1,SNR=3.8						
MKAR	**Makanchi Array**	**61.40**	**336**	P	**P**	**09 00 16.8**	**-0.6**
	0.7nm,0.5s,baz=156,slow=7.1,SNR=8.7						
ZALV	**Zalesovo Beam**	**66.45**	**342**	P	**P**	**09 00 50.3**	**+0.1**
	0.7nm,0.4s,baz=143,slow=5.0,SNR=2.6						
QSPA	**South Pole Qui**	**81.93**	**180**	P	**P**	**09 02 20.6**	**+0.7**
	0.4nm,0.5s,baz=299,slow=8.5,SNR=7.7						
CPUP	**Villa Florida**	**144.75**	**194**	PKPbc	**PKPdf**	**09 09 37.5**	**+0.6**
	1.0nm,0.5s,baz=267,slow=18,SNR=4.6						
LPAZ	**La Paz**	**155.73**	**175**	PKPab	**PKPab**	**09 10 23.2**	**+1.4**
	0.5nm,0.4s,baz=202,slow=5.4,SNR=3.3						

TIR ***13*** *08:50:31.1, 42.16N×19.61E, h25km, ML3.0*
PDG ***13*** *08:50:32.2±0.2, 42.15N×19.65E, h15km, ML1.9/9, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
CSEM ***13*** *08:50:32.4±0.2, 42.15N×19.64E, h10km, ML3.0, Error ellipse: s-maj=4.6km s-min=3.3km az=17.0*
ISCJB ***13*** *08:50:32.3±0.5, 42.15N±0.03×19.64E±0.03, h13km±6km, Error ellipse: s-maj=4.6km s-min=3.5km az=14.5*
BEO ***13*** *08:50:33.8±1.4, 42.26N×19.63E, h12km±9km, ML1.8/3*
ISC 13 08:50:32.7±0.9, 42.15N±0.03×19.63E±0.02, h15km±7km, n31, σ0s94/58, 6C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUK	**Puka**	**0.23**	**119**	*e*PG	**Pg**	**08 50 37.8**	**0.0**
PUK				*i* SG	**Sg**	**08 50 42.2**	**+0.9**
PUK	**Puka**	**0.23**	**119**	*e*Pg	**Pg**	**08 50 37.8**	**0.0**
PUK				*i* Sg	**Sg**	**08 50 42.2**	**+0.9**
ULC	**Ulcinj**	**0.34**	**237**	||*i* Pg	**Pg**	**08 50 39.3**	**-0.4**
ULC				*e*Sg	**Sb**	**08 50 45.4**	**-0.3**
ULC	**Ulcinj**	**0.34**	**237**	||*i* Pg	**Pg**	**08 50 39.3**	**-0.4**
ULC				*e*Sg	**Sb**	**08 50 45.4**	**-0.3**
BCI	**Bajram Curri**	**0.39**	**57**	*e*PG	**Pg**	**08 50 40.1**	**-0.5**
BCI				*i* SG	**Sb**	**08 50 46.4**	**-0.7**
BCI	**Bajram Curri**	**0.39**	**57**	*e*Pg	**Pg**	**08 50 40.1**	**-0.5**
BCI				*i* Sg	**Sb**	**08 50 46.4**	**-0.7**
PDG	**Podgorica**	**0.39**	**315**	*e*Pg	**Pg**	**08 50 40.0**	**-0.7**
PDG				*e*Sg	**Sb**	**08 50 46.4**	**-0.7**
PDG	**Podgorica**	**0.39**	**315**	*e*Pg	**Pg**	**08 50 40.0**	**-0.7**
PDG				*e*Sg	**Sb**	**08 50 46.4**	**-0.7**
TTG	**Podgorica**	**0.39**	**315**	||*i* Pg	**Pg**	**08 50 39.9**	**-0.7**
TTG				*e*Sg	**Sb**	**08 50 46.8**	**-0.3**
PVY	**Plav**	**0.51**	**29**	*e*Pg	**Pg**	**08 50 41.9**	**-0.9**
PVY				*e*Sg	**Sb**	**08 50 50.7**	**+0.1**
PVY	**Plav**	**0.51**	**29**	*e*Pg	**Pg**	**08 50 41.9**	**-0.9**
PVY				*e*Sg	**Sb**	**08 50 50.7**	**+0.1**
BUM	**Brajici-Budva**	**0.56**	**286**	||*i* Pg	**Pg**	**08 50 43.0**	**-0.8**
BUM				*e*Sg	**Sb**	**08 50 52.0**	**-0.2**
BUM	**Brajici-Budva**	**0.56**	**286**	||*i* Pg	**Pg**	**08 50 43.0**	**-0.8**
BUM				*e*Sg	**Sb**	**08 50 52.0**	**-0.2**
BEY	**Berane**	**0.75**	**15**	⇑*i* Pg	**Pg**	**08 50 46.6**	**-0.7**
BEY				*e*Sg	**Sb**	**08 50 58.3**	**+0.9**
IVA	**Berane**	**0.75**	**15**	⇑*i* Pg	**Pg**	**08 50 46.6**	**-0.7**
IVA				*e*Sg	**Sb**	**08 50 58.3**	**+0.9**
PHP	**Peshkopia**	**0.77**	**127**	*e*PG	**Pg**	**08 50 45.7**	**-1.9**
PHP				*i* SG	**Sb**	**08 50 58.5**	**+0.6**
PHP	**Peshkopia**	**0.77**	**127**	*e*Pg	**Pg**	**08 50 45.7**	**-1.9**
PHP				*i* Sg	**Sb**	**08 50 58.5**	**+0.6**
NKY	**Niksic**	**0.81**	**325**	||*i* Pg	**Pg**	**08 50 47.5**	**-1.0**
NKY				*e*Sg	**Sb**	**08 51 00.2**	**+0.9**
NKY	**Niksic**	**0.81**	**325**	||*i* Pg	**Pg**	**08 50 47.5**	**-1.0**
NKY				*e*Sg	**Sb**	**08 51 00.2**	**+0.9**
HCY	**Herceg Novi**	**0.89**	**290**	⇑*i* Pg	**Pg**	**08 50 49.1**	**-0.9**
HCY				*e*Sg	**Sb**	**08 51 02.5**	**+1.0**
HCY	**Herceg Novi**	**0.89**	**290**	⇑*i* Pg	**Pg**	**08 50 49.1**	**-0.9**
HCY				*e*Sg	**Sb**	**08 51 02.5**	**+1.0**
BRY	**Bratogost**	**1.10**	**313**	⇑*i* Pg	**Pb**	**08 50 53.2**	**-0.2**
BRY				*e*Sg	**Sn**	**08 51 10.2**	**+1.6**
BRY	**Bratogost**	**1.10**	**313**	⇑*i* Pg	**Pb**	**08 50 53.2**	**-0.2**
BRY				*e*Sg	**Sn**	**08 51 10.2**	**+1.6**
UPM	**Unac-Piva**	**1.18**	**333**	*e*Pg	**Pb**	**08 50 54.7**	**-0.1**
UPM				*e*Sg	**Sn**	**08 51 13.0**	**+2.4**
UPM	**Unac-Piva**	**1.18**	**333**	*e*Pg	**Pb**	**08 50 54.7**	**-0.1**
UPM				*e*Sg	**Sn**	**08 51 13.0**	**+2.4**
STON	**Ston**	**1.60**	**297**	*e*Pn	**Pb**	**08 51 01.3**	**-0.6**
STON				Sn	**Sg**	**08 51 23.2**	**-0.9**
STON	**Ston**	**1.60**	**297**	*e*Pn	**Pb**	**08 51 01.2**	**-0.6**
STON				Sn	**Sg**	**08 51 23.1**	**-0.9**
BBLS	**Lazići**	**1.72**	**355**	*e*Sg	**Sb**	**08 51 25.2**	**-0.3**
BBLS	**Lazići**	**1.72**	**355**	*e*Sg	**Sb**	**08 51 25.2**	**-0.3**
BARS	**Barje**	**1.75**	**67**	*e*Sg	**Sg**	**08 51 28.0**	**-1.0**
BARS	**Barje**	**1.75**	**67**	*e*Sg	**Sg**	**08 51 28.0**	**-1.0**

IDC ***13*** *08:54:52.3±2.1, 4.41N×126.90E, h23km±13km, mb4.9/34, mb1 5.0/35, mb1mx5.0/36, mbtmp4.9/35, ML4.9/1, MS4.8/25, Ms1 4.9/25, ms1mx4.8/32, Error ellipse: s-maj=15.4km s-min=8.8km az=75.0*
MOS ***13*** *08:54:52.2±1.0, 4.43N×126.92E, h33km, mb5.7/55, MS5.1/22, Error ellipse: s-maj=9.1km s-min=4.8km az=113.1*
NEIC ***13*** *08:54:54.0±0.1, 4.43N×126.93E, h35km, mb5.3/72, MW5.6, Error ellipse: s-maj=4.3km s-min=2.9km az=74.0, Moment Tensor Solution. s42 Moment tensor: Scale 10^{17}Nm; M_{rr}1.47; $M_{\theta\theta}$-0.65; $M_{\phi\phi}$-0.82; $M_{r\theta}$0.14; $M_{\theta\phi}$1.39; $M_{r\phi}$2.32; Best double couple: $M_0$3.00000×10^{17} NP1: ϕ_s350.00000°, δ74.00000°, λ117.00000°. NP2: ϕ_s108.00000°, δ32.00000°, λ32.00000°. Principal axes: T 3.1200, Plg53.0000°, Azm292.0000°; N -0.2600, Plg26.0000°, Azm161.0000°; P -2.8500, Plg23.0000°, Azm59.0000°;*
BJI ***13*** *08:54:55.7, 4.09N×126.92E, h92km, mB5.3/45, mb5.2/61*
MAN ***13*** *08:54:55, 4.12N×126.61E, h14km, mb6.1, ML5.1, MS5.7*
AUST ***13*** *08:54:56.4±0.2, 4.41N×127.17E, h54km, Error ellipse: s-maj=0.7km s-min=0.5km az=44.0*
ISCJB ***13*** *08:54:56.8±0.4, 4.40N±0.02×127.01E±0.02, h75km±3km, mb5.2/168, Error ellipse: s-maj=3.8km s-min=2.8km az=162.5*
GCMT ***13*** *08:54:57.9±0.1, 4.48N×126.95E, h25km, MW5.7, Moment Tensor Solution. s88,c150; s18,c18; Moment tensor: Scale 10^{17}Nm; M_{rr}0.34±.03; $M_{\theta\theta}$0.14±.03; $M_{\phi\phi}$-0.48±.03; $M_{r\theta}$0.62±.06; $M_{\theta\phi}$-0.36±.02; $M_{r\phi}$5.20±.11; Best double couple: $M_0$5.30000×10^{17} NP1: ϕ_s238.00000°, δ4.00000°, λ141.00000°. NP2: ϕ_s7.00000°, δ88.00000°, λ87.00000°. Principal axes: T 5.1600, Plg47.0000°, Azm274.0000°; N 0.2200, Plg3.0000°, Azm7.0000°; P -5.3700, Plg42.0000°, Azm100.0000°; Data Used: II IU IC G CN. Surface waves: sta=103, comp=198, per= 50.*
TEH ***13*** *08:54:58.0, 4.41N×126.87E, h73km, ML5.3*
DJA ***13*** *08:54:59.4±0.4, 4.7N±3.3×12.7E±, h68km±4km, M5.4/59, mb5.5/59, mB5.8/52, MLv5.9/10, Mw(mB)5.4/52, Mwp5.8/3*
ISC 13 08:54:58.5±0.3, 4.46N±0.03×126.94E±0.04, h72km±2km, h72km:pP-P, n697, σ1s71/785, mb5.4/174, 30C-19D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**2.74**	**162**	P	Pn	08 55 36.7	-3.6
DAV	**Davao City (W)**	**2.92**	**333**	Pn	**Pn**	**08 55 42.9**	**+0.2**
DAV				Sn	Sn	08 56 26.3	+10
DAV	**Davao City (W)**	**2.92**	**333**	P	**Pn**	**08 55 45.2**	**+2.5**
DAV	**Davao City (W)**	**2.92**	**333**	Pn	**Pn**	**08 55 42.9**	**+0.2**
	392nm,0.3s,baz=74,

BBSI Bau Bau 10.80 204 P Pn 08 57 42.9 +12
SMKI Samarinda 10.87 244 P Pn 08 57 35.1 +3.7
294nm,0.8s
SPSI Sidrap Palu 11.02 221 P **Pn** **08 57 32.9 -0.4**
115nm,0.8s,2µm
SRPI Serui, Papua 11.22 124 P Pn 08 57 40.2 +4.0
690nm,1.6s,13µm
TGY Tagaytay City 11.26 329 Pn **Pn** **08 57 35.6 -1.1**
TGY Tagaytay City 11.26 329 Pn **Pn** **08 57 35.6 -1.1**
24nm,0.3s,baz=140,slow=4.1,SNR=1.8
TGY LR LR 09 03 08.9
comp=Z,19nm,19.9s,baz=152,slow=44
KAPI Kappang 11.84 217 *e*Pn **Pn** **08 57 41.9 -2.6**
KAPI Sn **Sn** **08 59 55.4 +0.5**
KAPI Kappang 11.84 217 P **Pn** **08 57 46.5 +2.0**
104nm,1.2s,1µm
KAPI Kappang 11.84 217 Pn **Pn** **08 57 42.6 -1.9**
3.8nm,0.3s,baz=42,slow=8.1,SNR=14
KAPI Sn **Sn** **08 59 55.4 +0.5**
1.3nm,0.3s,baz=36,slow=19,SNR=2.2
KAPI LR LR 09 02 55.3
comp=Z,7µm,19.4s,baz=53,slow=41
BKSI Bulukumba 11.87 215 P **Pn** **08 57 43.5 -1.4**
108nm,1.5s,1µm
BSSI Bau Bau, Buton 12.35 211 P **Pn** **08 57 49.7 -1.8**
147nm,0.9s,3µm
KBKI Kotabaru 13.24 235 P **Pn** **08 58 03.7 +0.2**
163nm,1.3s,6µm
BCPH Baguio City Da 13.39 333 *i*P **P** **08 58 10.4 -2.2**
MMRI Maumere 13.83 200 P **P** **08 58 19.1 +1.7**
978nm,0.8s,7µm
BTM Bintulu 13.88 265 P **Pn** **08 58 13.7 +1.7**
BBKI Banjar Baru 14.42 237 P **Pn** **08 58 19.7 +0.6**
616nm,1.4s,10µm
SBUM Sibu 14.82 263 P **Pn** **08 58 25.8 +1.4**
JAY Jayapura 15.40 116 P **P** **08 58 35.7 +0.7**
148nm,1.3s,7µm
JAY Jayapura 15.40 116 P **Pn** **08 58 30.1 -1.7**
baz=15,SNR=18
BASI Baing, Sumba 15.90 203 P P 08 58 46.2 +5.8
376nm,0.8s,5µm
PBKI Pangkalan Bun 16.83 245 P **P** **08 58 53.7 +2.9**
454nm,1.0s,7µm
KSM Kuching 16.87 260 *e*Pn **Pn** **08 58 49.6 -0.6**
141nm,0.7s
KSM Kuching 16.87 260 P **P** **08 58 51.3 +0.2**
KSM Kuching 16.87 260 P **P** **08 58 51.4 +0.3**
316nm,0.9s,4µm
KSM Kuching 16.87 260 P **P** **08 58 51.9 +0.8**
baz=17,SNR=54
KHKI Kahang-Kahang 17.03 222 P **Pn** **08 58 51.2 -0.9**
134nm,1.0s,2µm
SRBI Singaraja 17.09 223 P **Pn** **08 58 52.8 -0.1**
123nm,1.1s,2µm
KMMI Kalianget 17.27 229 P P 08 59 02.0 +6.4
129nm,1.1s,3µm
DNP Denpasar 17.52 222 P **P** **08 59 02.1 +3.7**
427nm,1.3s
IGBI Denpasar 17.67 222 P **Pn** **08 59 00.6 +0.6**
56nm,1.1s
MTN Manton Dam 17.69 166 P **P** **08 58 56.5 -3.7**
baz=18,SNR=8.2
BYJI Banyuwangi 17.78 225 P Pn 08 59 13.8 +13
KDU Kakadu 17.90 162 P **P** **08 58 58.5 -4.0**
baz=18,SNR=23
BLJI Banyuglugur 18.01 228 P Pn 08 59 14.9 +11
GMJI Gumukmas 18.47 227 P **Pn** **08 59 13.5 +3.8**
171nm,0.9s
TWG Pinlang 19.11 343 *e*P **P** **08 59 14.3 -1.4**
287nm,0.5s
KRKI Karangkates 19.13 229 P Pn 08 59 30.0 +12
SJI Sawahan 19.39 231 P **P** **08 59 19.3 +0.4**
162nm,0.9s,7µm
PWJI Pagerwojo 19.54 231 P **Pn** **08 59 22.0 -0.4**
128nm,0.9s,24µm
YULB Yu-li 19.59 344 *e*P **P** **08 59 18.6 -2.4**
49nm,0.4s
TPUB Ta-pu 19.69 343 *e*P **P** **08 59 21.4 -0.7**
175nm,0.8s
GUMO Guam 19.88 62 *e*P **P** **08 59 23.5 -0.7**
GUMO Guam 19.88 62 P **P** **08 59 23.0 -1.2**
3.8nm,0.3s,baz=243,slow=6.6,SNR=3.6
GUMO LR LR 09 05 43.0
comp=Z,4µm,20.5s,baz=230,slow=33
SMRI Semarang 20.05 235 P Pn 08 59 27.4 -1.0
184nm,1.1s,5µm
SSLB Suanglung 20.06 344 *e*P **P** **08 59 24.5 -1.6**
84nm,0.6s
KNRA Kununurra 20.09 175 P **P** **08 59 24.4 -2.0**
baz=20,SNR=20
WOJI Wonogiri, Jawa 20.11 233 P Pn 08 59 28.6 -0.5
90nm,1.8s,3µm
PCJI Pacitan 20.13 231 P Pn 08 59 31.5 +2.2
204nm,0.7s
NACB Ninganchiao 20.26 346 *e*P **P** **08 59 27.1 -1.1**
42nm,1.0s
UGM Wanagama 20.48 233 P Pn 08 59 42.3 +8.9
UGM Wanagama 20.48 233 P Pn 08 59 37.4 +3.9
baz=21,SNR=5.2
TPI Tanjungpandan 20.56 250 P **P** **08 59 32.5 +0.9**
46nm,1.1s,1µm
YHNB Yeheng 20.79 346 *e*P **P** **08 59 33.3 -0.7**
122nm,0.6s
BJII Banjamegara 20.80 236 P **P** **08 59 34.2 -0.1**
182nm,1.5s,3µm
PPBI Pangkal Pinang 21.80 253 P **P** **08 59 45.6 +0.7**
98nm,1.4s,3µm
QZH Quanzhou 21.89 339⇑ *i*P **P** **08 59 45.6 0.0**
QZH S **S** **09 03 46.3 +2.8**
QZH pmax pmax
comp=Z,110nm,0.6s
QZH LR LR
comp=N,7µm,17.2s
QZH LR LR
comp=E,3µm,14.9s
QZH LR LR
comp=Z,8µm,19.4s
QIZ Qiongzhong 22.09 312 P **P** **08 59 46.9 -1.0**
QIZ S **S** **09 03 43.8 -3.7**
QIZ sS **sS** **09 04 13.4 +0.8**
QIZ pmax pmax
comp=Z,39nm,0.8s
QIZ pmax pmax
comp=Z,850nm,10.0s
QIZ LR LR
comp=N,3µm,14.9s
QIZ LR LR
comp=Z,7µm,27.0s
QIZ Qiongzhong 22.09 312 *e*P **P** **08 59 46.6 -1.3**
comp=Z,80nm,1.1s
JOW Kunigami 22.28 3 *e*P **P** **08 59 50.1 +0.2**
LEM Lembang 22.31 240 P **P** **08 59 50.5 0.0**
comp=Z,150nm,1.1s,comp=Z,2µm
LEM Lembang 22.31 240 P **P** **08 59 51.1 +0.7**
baz=22,SNR=4.1
FITZ Fitzroy Crossi 22.46 183 P **P** **08 59 49.0 -2.9**
FITZ S **S** **09 03 51.3 -2.3**
FITZ Fitzroy Crossi 22.46 183 P **P** **08 59 49.0 -2.9**
comp=Z,58nm,0.8s,baz=18,slow=9.0,SNR=33
FITZ S **S** **09 03 51.3 -2.3**
comp=Z,59nm,1.2s,baz=343,slow=17,SNR=5.2
FITZ Fitzroy Crossi 22.46 183 P **P** **08 59 50.8 -1.0**
baz=23,SNR=30
FITZ S S 09 03 43.5 -10
baz=23,SNR=3.4
CISI Cisompet, Garu 22.51 238 P **P** **08 59 50.8 -1.7**
comp=Z,119nm,1.0s
GZH Guangzhou 22.70 326 P **P** **08 59 54.9 +0.5**
GZH S **S** **09 04 01.9 +4.3**
GZH LR LR
comp=N,4µm,20.5s
GZH LR LR
comp=E,4µm,22.5s
DBJI Dramaga 22.93 242 P **P** **08 59 56.4 -0.5**
comp=E,267nm,1.2s,comp=E,5µm
MYKOM Kota Tinggi 23.20 264 P **P** **08 59 58.7 -0.8**
SBJI Serang 23.28 243 P **P** **09 00 00.8 +0.5**
comp=E,386nm,1.1s,comp=E,12µm
SKJI Sukabumi 23.31 241 P **P** **09 00 04.2 +3.6**
comp=E,195nm,0.8s,comp=E,4µm
UBPT Khong Chiam 23.69 298 P **P** **09 00 02.0 -2.0**
comp=E,217nm,0.9s,comp=E,3µm
KGM Kluang 23.70 265 P **P** **09 00 03.5 -0.6**
KTGM Kuala Trenggan 23.73 273 P **P** **09 00 04.7 +0.4**
CGJI Cibinong 23.89 243 P **P** **09 00 04.1 -1.7**
comp=E,153nm,1.3s,comp=E,5µm
COEN Coen 24.38 139 *e*P **P** **09 00 08.5 -1.7**
comp=E,164nm,0.8s
COEN Coen 24.38 139 P **P** **09 00 08.4 -1.8**
baz=24,SNR=5.3
PMG Port Moresby 24.41 124 P **P** **09 00 08.2 -2.3**
comp=E,18nm,0.8s
PMG Port Moresby 24.41 124 LR LR 09 10 07.8
comp=E,4µm,20.1s,baz=348,slow=38
KASI Kota Agung 24.51 246 P **P** **09 00 10.6 -0.8**
comp=E,114nm,0.8s,comp=E,2µm
LWLI Liwa 24.72 248 P **P** **09 00 13.1 -0.3**
comp=E,227nm,0.8s,comp=E,5µm
WRAB Tennant Creek 25.32 164 *e*P **P** **09 00 17.0 -1.7**
WRAB pmax pmax
comp=Z,136nm,0.8s
WRAB Tennant Creek 25.32 164 *e*P **P** **09 00 17.0 -1.7**
comp=Z,136nm,0.8s
WRA Warramunga Arr 25.32 164 P **P** **09 00 16.5 -2.2**
WRA S **S** **09 04 38.0 -1.9**
WRA PKiKP **PKiKP** **09 11 30.0 -1.1**
WRA *e* 09 33 22.1
WRA Warramunga Arr 25.32 164 P **P** **09 00 16.5 -2.2**
comp=Z,31nm,0.5s,baz=344,slow=10.0,SNR=114
WRA S **S** **09 04 38.0 -1.9**
comp=Z,1.7nm,0.8s,baz=339,slow=19,SNR=2.8
WRA PKiKP **PKiKP** **09 11 30.0 -1.1**
comp=Z,0.3nm,0.5s,baz=310,slow=1.4,SNR=5.0
WRA P3KPbc 09 33 22.1
comp=Z,0.3nm,0.6s,baz=157,slow=4.0,SNR=5.6
KSI Kapahiang 25.62 252 P **P** **09 00 25.2 +3.6**
comp=Z,167nm,0.9s,comp=Z,5µm
IPM Ipoh 25.83 271 *e*P **P** **09 00 21.9 -1.6**
IPM Ipoh 25.83 271 P **P** **09 00 22.7 -0.7**
IPM Ipoh 25.83 271 P **P** **09 00 22.5 -1.0**
comp=Z,100nm,1.4s,comp=Z,2µm
BKNI Bangkinang 26.19 262 P **P** **09 00 26.8 +0.1**
comp=Z,198nm,1.4s,comp=Z,3µm
KULM Kulim 26.20 273 *e*P **P** **09 00 25.6 -1.2**
comp=Z,134nm,1.3s
KULM Kulim 26.20 273 P **P** **09 00 26.1 -0.7**
MBWA Marble Bar 26.43 195 *e*P **P** **09 00 28.2 -0.5**
comp=Z,274nm,1.5s
PPI Padang Panjang 26.96 260 P **P** **09 00 33.7 +0.1**
comp=Z,66nm,1.0s,comp=Z,8µm
SSE Sheshan 27.04 349 P **P** **09 00 34.9 +0.8**
SSE S **S** **09 05 09.4 +2.7**
SSE pmax pmax
comp=Z,71nm,0.8s
SSE pmax pmax
comp=Z,520nm,8.0s
SSE LR LR
comp=N,1µm,26.1s
SSE LR LR
comp=E,1µm,26.1s
SSE LR LR
comp=Z,2µm,24.4s
QIS Mount Isa 27.80 154 P **P** **09 00 39.9 -1.2**
baz=28,SNR=68
PSI Prapat 28.00 268 P **P** **09 00 41.8 -1.3**
PSI Prapat 28.00 268 P **P** **09 00 41.8 -1.3**
comp=Z,18nm,0.9s,baz=68,slow=3.5,SNR=5.4
PSI Prapat 28.00 268 P **P** **09 00 43.6 +0.5**
baz=28,SNR=3.6
MTSU Mount Surprise 28.25 143 P **P** **09 00 43.8 -1.3**
baz=28,SNR=15
NJ2 Nanjing 28.47 345 *e*P **P** **09 00 47.8 +0.9**
NJ2 PP **PnPn** **09 01 40.6 +0.5**
NJ2 S **S** **09 05 32.0 +2.7**
NJ2 pmax pmax
comp=Z,100nm,1.0s
NJ2 pmax pmax
comp=Z,540nm,9.8s
NJ2 LR LR
comp=N,2µm,22.2s
NJ2 LR LR
comp=E,3µm,34.8s
NJ2 LR LR
comp=Z,2µm,18.6s
WHN Wuhan 28.53 337 P **P** **09 00 47.9 +0.5**
WHN S **S** **09 05 35.3 +5.1**
WHN LR LR
comp=N,16µm,24.8s
WHN LR LR
comp=E,11µm,23.6s
WHN LR LR
comp=Z,20µm,24.0s
JNU Nakatsue 28.75 7 P **P** **09 00 49.0 -0.4**
JNU Nakatsue 28.75 7 P **P** **09 00 49.0 -0.4**
comp=Z,8.4nm,0.5s,baz=195,slow=4.3,SNR=9.2
AS31 Alice Springs 28.77 167 *e*P **P** **09 00 48.5 -1.2**
ASAR Alice Springs 28.77 167 P **P** **09 00 47.9 -1.8**
ASAR PcP **PcP** **09 03 58.4 +0.1**
ASAR S **S** **09 05 35.4 +1.1**
ASAR *e* 09 33 08.8
ASAR Alice Springs 28.77 167 P **P** **09 00 47.9 -1.8**
comp=Z,9.8nm,0.4s,baz=344,slow=6.7,SNR=44
ASAR PcP **PcP** **09 03 58.4 +0.1**
comp=Z,5.4nm,0.5s,baz=346,slow=2.1,SNR=6.2
ASAR S **S** **09 05 35.4 +1.1**
comp=Z,3.7nm,1.1s,baz=344,slow=26,SNR=2.3
ASAR P3KPbc 09 33 08.8
comp=Z,0.3nm,0.7s,baz=168,slow=4.6,SNR=4.2
GYA Guiyang 29.23 321⇑ *i*P **P** **09 00 54.8 +0.9**
GYA pP **pP** **09 01 12.3 +1.3**
GYA PP **PnPn** **09 01 53.0 +2.8**
GYA PcP **PcP** **09 04 01.0 +1.4**
GYA S **S** **09 05 41.9 +0.2**
GYA SS **SnSn** **09 07 17.6 +3.8**
GYA ScP **ScP** **09 07 33.3 -1.8**
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,160nm,4.9s
GYA LR LR
comp=N,6µm,15.8s
GYA LR LR
comp=E,5µm,17.4s
GYA LR LR
comp=Z,8µm,16.9s
GIRL Giralia 29.66 204 P **P** **09 00 59.1 +1.6**
baz=30,SNR=7.9
ENH Enshi 30.50 329 *e*P **P** **09 01 04.7 -0.2**
comp=Z,55nm,0.9s
CMAR Chiang Mai Arr 30.69 299 P **P** **09 01 05.8 -1.0**
CMAR PcP **PcP** **09 04 07.1 +3.8**
CMAR ScP **ScP** **09 07 45.0 +5.1**
CMAR Chiang Mai Arr 30.69 299 P **P** **09 01 05.8 -1.0**
comp=Z,16nm,0.9s,baz=120,slow=7.6,SNR=45
CMAR PcP **PcP** **09 04 07.1 +3.8**
comp=Z,1.9nm,0.6s,baz=108,slow=1.3,SNR=4.1
CMAR ScP **ScP** **09 07 45.0 +5.1**
comp=Z,1.7nm,0.7s,baz=107,slow=1.2,SNR=6.7
CMAR LR LR 09 13 19.0
comp=Z,3µm,21.6s,baz=116,slow=36
CMMT Chiang Mai 30.83 300 P **P** **09 01 07.8 -0.1**
comp=Z,33nm,0.9s,comp=Z,761nm
CHTO Chiang Mai 30.83 300 *e*P **P** **09 01 06.7 -1.3**
CHTO pmax pmax
comp=Z,25nm,1.0s
CHTO Chiang Mai 30.83 300 *e*P **P** **09 01 06.7 -1.3**
comp=Z,25nm,1.0s
CHTO Chiang Mai 30.83 300 P **P** **09 01 07.7 -0.3**
SNR=14
CHTO mb 09 01 26.0
SNR=24
CHTO Chiang Mai 30.83 300 P **P** **09 01 07.3 -0.7**
comp=Z,35nm,1.1s,comp=Z,652nm
CTAO Charters Tower 30.91 143 *e*P **P** **09 01 08.3 -0.3**
CTAO pmax pmax
comp=Z,19nm,0.9s
CTAO Charters Tower 30.91 143 *e*P **P** **09 01 08.3 -0.3**
comp=Z,19nm,0.9s
KMI Kunming 31.02 314 P **P** **09 01 09.9 +0.1**
KMI pP **pP** **09 01 29.6 +2.7**
KMI sP **sP** **09 01 39.8 +4.4**
KMI PP **PP** **09 02 18.3 -2.7**
KMI S **S** **09 06 06.3 -3.6**
KMI pmax pmax
comp=Z,57nm,1.4s
KMI pmax pmax
comp=Z,280nm,6.7s
KMI LR LR
comp=N,2µm,21.0s
KMI LR LR
comp=E,3µm,23.7s
KMI LR LR
comp=Z,6µm,25.4s
MEEK Meekatharra 31.95 194 P **P** **09 01 16.4 -1.3**
baz=32,SNR=49
KSAR Wonju Array Be 32.84 1 P **P** **09 01 25.8 +0.5**
KSRS Korea Array 32.85 1 P **P** **09 01 25.8 +0.4**
comp=Z,7.7nm,0.6s,baz=179,slow=10.0,SNR=34
KSRS LR LR 09 14 55.7
comp=Z,1µm,21.2s,baz=32,slow=37
MAJO Matsushiro 33.57 17 *e*P **P** **09 01 30.8 -0.9**
MAJO pmax pmax
comp=Z,18nm,0.9s
MAJO Matsushiro 33.57 17 *e*P **P** **09 01 30.8 -0.9**
comp=Z,18nm,0.9s
MAT Matsushiro 33.57 17 P **P** **09 01 29.6 -2.1**
MAT S **S** **09 06 45.0 -3.9**
MJAR Matsushiro Arr 33.57 17 P **P** **09 01 29.8 -2.0**
MJAR Matsushiro Arr 33.57 17 P **P** **09 01 29.8 -2.0**
comp=Z,2.3nm,0.5s,baz=194,slow=8.4,SNR=8.5
MJAR LR LR 09 14 42.7
comp=Z,2µm,20.3s,baz=195,slow=35
XAN Xi'an 33.86 333 P **P** **09 01 33.4 -1.0**
XAN pP **pP** **09 01 54.8 +3.2**
XAN sP sP 09 02 05.3 +5.3
XAN PP **PnPn** **09 02 46.9 -2.5**
XAN S **S** **09 06 50.4 -3.2**
XAN pmax pmax
comp=Z,14nm,1.3s
XAN pmax pmax
comp=Z,82nm,6.7s
XAN LR LR
comp=N,4µm,27.6s
XAN LR LR
comp=Z,1µm,26.6s
CD2 Chengdu 34.18 323 P **P** **09 01 37.3 +0.1**
CD2 pP **pP** **09 01 54.9 +0.4**
CD2 PcP **PcP** **09 04 12.4 -0.4**
CD2 S **S** **09 06 58.1 -0.5**
CD2 PcS **PcS** **09 07 57.8 -1.4**
CD2 SS **SnSn** **09 09 11.8 -1.9**
CD2 pmax pmax
comp=Z,110nm,0.5s
CD2 pmax pmax
comp=Z,240nm,5.1s
CD2 LR LR
comp=N,4µm,23.0s
CD2 LR LR
comp=E,3µm,20.6s
CD2 LR LR
comp=Z,4µm,21.4s
DL2 Dalian 34.62 353⇑ *i*P **P** **09 01 41.1 +0.3**
DL2 pP **pP** **09 02 00.5 +2.4**
DL2 S **S** **09 07 06.9 +1.8**
DL2 pmax pmax
comp=Z,59nm,0.8s
DL2 pmax pmax
comp=Z,260nm,4.8s
DL2 LR LR
comp=N,500nm,15.5s
DL2 LR LR
comp=E,520nm,18.9s
DL2 LR LR
comp=Z,700nm,17.0s
MORW Morawa 34.94 197 P **P** **09 01 43.0 -0.7**
baz=35,SNR=36
FORT Forrest 35.06 178 *e*P **P** **09 01 43.4 -1.2**
comp=Z,84nm,0.7s
FORT Forrest 35.06 178 P **P** **09 01 43.5 -1.2**
baz=35,SNR=14
QLP Quilpie 35.11 152 P **P** **09 01 43.9 -1.3**
baz=35,SNR=70
TIY Taiyuan 35.65 340 *e*P **P** **09 01 49.0 -0.8**
TIY S **S** **09 07 21.4 +0.3**
TIY pmax pmax
comp=Z,470nm,4.9s
TIY LR LR
comp=N,2µm,21.4s
TIY LR LR
comp=E,1µm,16.1s
TIY LR LR
comp=Z,3µm,22.9s
KMBL Kambalda 35.95 187 P **P** **09 01 51.3 -1.1**
baz=36,SNR=31
BLDU Balidu 36.23 195 P **P** **09 01 54.3 -0.4**
baz=36,SNR=22
BJT Baijiatuan 36.71 346 *e*P **P** **09 01 59.0 +0.4**
comp=Z,309nm,0.8s
BJI Beijing 36.73 346 P **P** **09 01 58.8 0.0**
BJI S **S** **09 07 38.6 +1.3**
BJI pmax pmax
comp=Z,310nm,0.9s
BJI pmax pmax
comp=Z,1µm,3.7s
BJI LR LR
comp=N,2µm,19.7s
BJI LR LR
comp=E,1µm,25.8s
BJI LR LR
comp=Z,2µm,26.4s
KLBR Kellerberrin 36.91 193 P **P** **09 02 00.8 +0.4**
baz=37,SNR=5.2
RMQ Roma 37.32 147 P **P** **09 02 04.0 -0.1**
baz=37,SNR=8.1
RMQ S S 09 08 09.7 +23
baz=37,SNR=4.2
SNY Shenyang 37.33 356⇑ *i*P **P** **09 02 04.6 +0.8**
SNY pP **pP** **09 02 22.5 +1.2**
SNY S **S** **09 07 48.8 +2.5**
SNY pmax pmax
comp=Z,41nm,1.5s
SNY pmax pmax
comp=Z,400nm,10.9s
SNY LR LR
comp=N,1µm,20.6s
SNY LR LR
comp=E,2µm,23.3s
SNY LR LR
comp=Z,2µm,21.8s
EIDS Eidsvold 37.80 143 *e*P **P** **09 02 07.1 -1.0**
comp=Z,40nm,0.8s
EIDS Eidsvold 37.80 143 P **P** **09 02 07.0 -1.0**
baz=38,SNR=13
LZH Lanzhou 37.98 329⇑ *i*P **P** **09 02 10.3 +0.6**
LZH pP **pP** **09 02 28.3 +1.1**
LZH PP **PnPn** **09 03 42.4 +2.5**
LZH S **S** **09 07 57.0 +0.2**
LZH ScP **ScP** **09 08 01.5 -4.2**
LZH SS **SnSn** **09 10 37.6 -8.0**
LZH ScS **ScS** **09 12 13.0 -2.2**
LZH pmax pmax
comp=Z,230nm,1.5s
LZH pmax pmax
comp=Z,640nm,6.0s
LZH LR LR
comp=N,4µm,18.0s
LZH LR LR
comp=E,2µm,17.1s
LZH LR LR
comp=Z,5µm,19.5s
BBOO Buckleboo 38.07 167 *e*P **P** **09 02 09.2 -1.1**
comp=Z,1µm,0.8s
BBOO Buckleboo 38.07 167 P **P** **09 02 09.1 -1.1**
baz=38,SNR=28
NWAO Narrogin (SRO) 38.31 193 *e*P **P** **09 02 12.2 0.0**
comp=Z,29nm,0.9s
NWAO Narrogin (SRO) 38.31 193 P **P** **09 02 10.8 -1.5**
comp=Z,25nm,0.6s,baz=27,slow=9.5,SNR=17
STKA Stephens Creek 38.74 160 *e*P **P** **09 02 15.1 -0.8**
comp=Z,20nm,0.8s
STKA Stephens Creek 38.74 160 P **P** **09 02 14.7 -1.2**
comp=Z,87nm,0.7s,baz=336,slow=8.0,SNR=138
STKA LR LR 09 19 35.5
comp=Z,2µm,21.4s,baz=332,slow=38
STKA Stephens Creek 38.74 160 P **P** **09 02 15.1 -0.8**
baz=39,SNR=150
VLA Vladivostok 38.74 6⇓ *e*P **P** **09 02 17.0 +1.2**
VLA S **S** **09 08 13.2 +5.5**
VLA pmax pmax
comp=Z,104nm,1.3s
HHC Hu-ho-hao-te 38.77 341 *e*P **P** **09 02 16.3 +0.1**
HHC pP **pP** **09 02 33.6 -0.1**
HHC PP **PnPn** **09 03 50.3 +1.1**
HHC PcP **PcP** **09 04 23.3 -3.2**
HHC S **S** **09 08 10.4 +1.9**
HHC pmax pmax
comp=Z,170nm,1.4s
HHC pmax pmax
comp=Z,2µm,5.4s

HHC LR LR
comp=N,3μm,24.0s
HHC LR LR
comp=E,3μm,20.4s
HHC LR LR
comp=Z,4μm,24.0s
BTO Baotou 39.07 339 *e*P **P** **09 02 17.5 -1.2**
CN2 Changchun 39.20 358 *e*P **P** **09 02 18.3 -1.3**
CN2 *e*pP **pP** **09 02 37.1 0.0**
CN2 *e*S **S** **09 08 13.6 -1.0**
CN2 SS **SS** **09 11 02.5 -7.7**
CN2 pmax pmax
comp=Z,20nm,1.3s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,900nm,18.0s
CN2 LR LR
comp=E,900nm,18.0s
SHL Shillong 39.62 306 *e*PKP **P** **09 02 22.0 -1.5**
SHL *ex* x 09 08 20.0
USRK Ussuriysk Arra 39.83 6 P **P** **09 02 25.1 +0.3**
comp=E,2.6nm,0.4s,baz=183,slow=7.9,SNR=11
USRK LR LR 09 18 26.2
comp=E,809nm,20.9s,baz=177,slow=36
CMSA Cobar Meteorol 40.02 155 P **P** **09 02 26.4 -0.1**
baz=40,SNR=6.0
MDJ Mudanjiang 40.06 3 P **P** **09 02 27.3 +0.6**
MDJ pP **pP** **09 02 43.8 -0.5**
MDJ PP **PP** **09 04 01.4 +1.3**
MDJ S **S** **09 08 28.8 +1.4**
MDJ SS **SS** **09 11 27.3 -0.1**
MDJ pmax pmax
comp=Z,42nm,1.6s
MDJ pmax pmax
comp=Z,190nm,6.1s
MDJ LR LR
comp=E,1μm,34.5s
MDJ LR LR
comp=Z,2μm,24.9s
MDJ Mudanjiang 40.06 3 *e*P **P** **09 02 27.1 +0.4**
comp=Z,46nm,0.9s
ARMA Armidale 41.97 147 *e*P **P** **09 02 42.7 0.0**
comp=Z,47nm,0.8s
ARMA Armidale 41.97 147 P **P** **09 02 42.6 -0.1**
baz=42,SNR=49
LSA Lhasa 42.12 311 P **P** **09 02 44.9 +0.5**
LSA S **S** **09 09 00.8 +1.4**
LSA pmax pmax
comp=Z,30nm,0.9s
LSA pmax pmax
comp=Z,280nm,10.5s
LSA LR LR
comp=E,8μm,26.2s
LSA LR LR
comp=Z,2μm,24.6s
LSA Lhasa 42.12 311 *e*P **P** **09 02 43.2 -1.2**
LSA pmax pmax
comp=Z,39nm,0.6s
LSA Lhasa 42.12 311 *e*P **P** **09 02 43.1 -1.2**
comp=Z,40nm,0.6s
GTA Gaotai 42.58 329 *e*P **P** **09 02 47.6 0.0**
GTA pP **pP** **09 03 05.6 +0.2**
GTA S **S** **09 09 05.3 0.0**
GTA SS **SS** **09 12 10.9 -6.8**
GTA pmax pmax
comp=Z,24nm,1.6s
GTA pmax pmax
comp=Z,340nm,7.1s
GTA LR LR
comp=N,2μm,26.8s
GTA LR LR
comp=E,3μm,26.4s
GTA LR LR
comp=Z,3μm,29.0s
YUK Yuzh-Kuril'sk 42.80 20*c i*P P 09 02 57.1 +8.0
YUK *i* 09 04 29.5
YUK *i* PPP PPP 09 05 00.7
YUK *i* S **S** **09 09 06.7 -1.3**
YUK *i* SS **SS** **09 12 18.9 -2.6**
YUK *i* SSS SSS 09 12 40.0
ARPS Mount Arapiles 43.32 162 P **P** **09 02 53.2 -0.2**
baz=43,SNR=41
YNG Young 43.55 154 P **P** **09 02 55.3 0.0**
baz=44,SNR=22
TAPN Taplejung 43.76 306 *e*P **P** **09 02 56.6 -0.9**
comp=Z,73nm,0.4s
ODAN Odare 43.82 305 *e*P **P** **09 02 57.3 -0.7**
comp=Z,210nm,0.7s
HABR Khabarovsk 44.40 8 *e*P **P** **09 03 01.5 -0.4**
HABR *e**PP pP 09 03 11.2 -8.5
HABR *e**SP sP 09 03 15.4 -13
HABR *e* 09 04 45.6
HABR S **S** **09 09 36.3 +5.2**
HABR *e*SS **ScS** **09 12 57.8 +4.8**
HABR MLR MLR
comp=Z,940nm,20.0s
YSS Yuzh-Sakhalins 44.49 15 *e*P **P** **09 03 04.0 +1.4**
YSS MLR MLR
comp=Z,600nm,18.0s
RAMN Ramite 44.50 304 *e*P **P** **09 03 03.1 -0.3**
comp=Z,126nm,0.8s
VIS Vishakhapatnam 44.65 291 *e*PKP **P** **09 03 03.8 -0.6**
CAN Canberra 44.67 154 *e*P **P** **09 03 03.3 -1.1**
CAN pmax pmax
comp=Z,38nm,0.9s
CAN Canberra 44.67 154 *e*P **P** **09 03 03.3 -1.1**
comp=Z,38nm,0.9s
KLR Kul'dur 44.80 4 *e*P P 09 03 01.2 -3.9
KLR *e*S **S** **09 09 31.5 -5.5**
KLR pmax pmax
comp=Z,50nm,1.8s
KLR MLR MLR
comp=Z,2μm,12.0s
CNB Canberra Magne 44.83 154 P **P** **09 03 08.2 +2.6**
baz=45,SNR=9.9
HIA Hailar 45.06 353 *e*P **P** **09 03 07.4 +0.1**
comp=Z,83nm,1.2s
TOO Toolangi 45.24 159 P **P** **09 03 09.6 +0.7**
baz=45,SNR=28
GUN Gumba 45.47 305 *e*P **P** **09 03 10.2 -1.0**
comp=Z,128nm,0.5s
PKI Pulchoki 45.72 305 *e*P **P** **09 03 12.0 -1.2**
PKIN Phulchoki 45.73 305 *e*P **P** **09 03 11.8 -1.4**
KKN Kakani 45.91 305 *e*P **P** **09 03 13.6 -0.9**
comp=Z,32nm,0.4s
DMN Daman 45.98 305 *e*P **P** **09 03 14.1 -1.1**
comp=Z,54nm,0.7s
PALK Pallekele 46.06 276 *e*P **P** **09 03 15.0 -0.8**
comp=Z,123nm,1.6s
MILA Mila 46.21 155 P **P** **09 03 18.5 +2.0**
baz=46,SNR=8.7
ULN Ulaanbaatar 46.49 342 *e*P **P** **09 03 19.2 +0.5**
comp=Z,276nm,1.6s
ULN Ulaanbaatar 46.49 342 P **P** **09 03 19.4 +0.7**
SNR=65
SONM Songino Array 46.67 341 P **P** **09 03 20.7 +0.6**
SONM ScP **ScP** **09 08 44.4 +4.2**
SONM Songino Array 46.67 341 P **P** **09 03 20.7 +0.6**
comp=Z,22nm,0.5s,baz=159,slow=9.0,SNR=103
SONM ScP **ScP** **09 08 44.4 +4.2**
comp=Z,1.4nm,1.0s,baz=151,slow=3.4,SNR=3.5
SONM LR LR 09 24 06.8
comp=Z,2μm,21.6s,baz=155,slow=38
DZM Mont Dzumac 46.79 126 *e*P **P** **09 03 20.1 -1.2**
DZM *e*S **S** **09 10 09.5 +2.9**
comp=Z,2μm,29.5s
DZM *e*LR LR 09 16 39.3
comp=Z,4μm,26.6s
DZM Mont Dzumac 46.79 126 *e*P **P** **09 03 19.8 -1.5**
DZM Mont Dzumac 46.79 126 P **P** **09 03 20.5 -0.8**
DZM Mont Dzumac 46.79 126 P **P** **09 03 20.5 -0.8**
comp=Z,30nm,0.6s,baz=254,slow=10,SNR=50
DZM LR LR 09 23 15.7
comp=Z,862nm,18.7s,baz=310,slow=36
KOLN Koldanda 47.28 304 *e*P **P** **09 03 23.9 -1.4**
DANN Dangsing 47.36 305 *e*P **P** **09 03 24.6 -1.4**
comp=Z,229nm,0.5s
PYUN Piuthan 47.90 304 *e*P **P** **09 03 28.9 -1.2**
CIT Chita 48.69 349 *e*P **P** **09 03 36.8 +1.3**
CIT *e* 09 03 46.2
JBP Jabalpur 48.96 297 *ex* **P** **09 03 37.9 -0.1**
HYB Hyderabad 49.07 289 *i* P **P** **09 03 37.0 -2.0**
comp=Z,65nm,1.0s
HYB *e*pP pP 09 03 51.0 -6.1
HYB *e*PcP **PcP** **09 05 03.5 +1.7**
HYB *e*S **S** **09 10 40.0 +1.1**
TRD Trivandrum 49.79 277 *e*PKP **P** **09 03 42.8 -1.7**
TRD AMB AMB 09 03 44.6
comp=Z,911nm,0.0s
ZAK Zakamensk 49.91 340 *e*P **P** **09 03 44.4 -0.5**
ZAK *e* 09 05 11.1
ZAK pmax pmax
comp=Z,24nm,1.5s
TLY Talaya 50.90 342 *e*P **P** **09 03 53.4 +1.1**
TLY *e*S **S** **09 11 06.8 +3.4**
TLY pmax pmax
comp=Z,124nm,1.7s
TLY MLR MLR
comp=Z,1μm,22.0s
TLY Talaya 50.90 342 P **P** **09 03 53.2 +0.9**
comp=Z,284nm,1.0s,SNR=13
IRK Irkutsk 51.20 342 *e*P **P** **09 03 55.4 +0.9**
IRK *e*S **S** **09 11 11.6 +4.2**
IRK pmax pmax
comp=Z,200nm,2.0s
MOY Mondy 51.77 340 *e*P **P** **09 04 00.5 +1.6**
MOY pmax pmax
comp=Z,234nm,2.3s
AGRA Agra 51.85 301 *e*PKP **P** **09 03 58.0 -1.7**
AGRA AMb AMB 09 04 01.8
comp=Z,137nm,1.6s
WMQ Urumqi 52.25 325 P **P** **09 04 03.3 +0.8**
WMQ pP **pP** **09 04 22.3 +1.5**
WMQ PcP **PcP** **09 05 14.0 +0.9**
WMQ PP **PP** **09 06 03.6 +1.9**
WMQ ScP ScP 09 08 52.8 -11
WMQ S **S** **09 11 20.6 -1.7**
WMQ ScS **ScS** **09 13 42.6 -3.3**
WMQ SS **SS** **09 14 57.3 -3.5**
WMQ pmax pmax
comp=Z,43nm,0.8s
WMQ pmax pmax
comp=Z,470nm,2.8s
WMQ LR LR
comp=N,3μm,21.0s
WMQ LR LR
comp=E,2μm,18.2s
WMQ LR LR
comp=Z,3μm,28.0s
ASOR Ausora 52.45 303 *e*PKP **P** **09 04 02.3 -1.9**
ASOR AMb AMB 09 04 04.3
AYAN Aya Nagar 52.91 303 *e*PKP **P** **09 04 06.2 -1.4**
BHGR Bahadurgarh 53.13 303 *e*PKP P 09 04 05.7 -3.5
KUDL Kundal 53.35 302 AMb AMB 09 04 12.3
comp=Z,87nm,1.9s
KKR Kurukshetra 53.62 304 *e*PKP **P** **09 04 11.2 -1.6**
KKR AMb AMB 09 04 13.9
comp=Z,83nm,2.2s
POO Poona 53.66 290 *e*PKP **P** **09 04 10.2 -3.1**
POO AMb AMB 09 04 13.4
comp=Z,74nm,2.2s
RTK Rohtak 53.67 303 *e*PKP **P** **09 04 10.4 -2.8**
KHET Khetri 53.91 302 *e*PKP **P** **09 04 13.6 -1.4**
KHET AMb AMB 09 04 15.8
comp=Z,95nm,2.0s
HVS Khovu-Aksy 54.17 335*d i*P **P** **09 04 17.7 +1.2**
HVS pmax pmax
comp=Z,436nm,2.1s
AJM Ajmer 54.49 299 *e*PKP **P** **09 04 17.0 -2.3**
PEA0B Petropavlovsk- 54.68 22 *e*P **P** **09 04 20.1 +0.1**
PETK Petropavlovsk- 54.68 22 P **P** **09 04 20.3 +0.2**
PETK Petropavlovsk- 54.68 22 P **P** **09 04 20.3 +0.2**
PETK Petropavlovsk- 54.68 22 P **P** **09 04 20.3 +0.2**
comp=Z,11nm,0.5s,baz=178,slow=4.4,SNR=80
PETK LR LR 09 24 19.4
comp=Z,473nm,21.8s,baz=214,slow=32
PET Petropavlovsk 54.98 23 *e*P **P** **09 04 22.1 -0.1**
PET *e**PP **pP** **09 04 40.7 +0.1**
PET *e*S **S** **09 11 59.8 +1.1**
PET pmax pmax
comp=Z,37nm,1.1s
PET MLR MLR
comp=Z,400nm,18.0s
MSVF Nonsavu 55.03 115 *e*P **P** **09 04 23.1 -0.2**
MSVF pmax pmax
comp=Z,62nm,1.2s
MSVF Nonsavu 55.03 115 *e*P **P** **09 04 23.1 -0.2**
comp=Z,62nm,1.2s
MK31 Makanchi Array 57.08 325 *e*P **P** **09 04 37.1 -0.3**
MK31 Makanchi Array 57.08 325 *e*P **P** **09 04 37.0 -0.3**
MKAR Makanchi Array 57.08 325 P **P** **09 04 37.1 -0.3**
MKAR Makanchi Array 57.08 325 P **P** **09 04 37.1 -0.3**
MKAR ScP **ScP** **09 09 32.1 +7.1**
MKAR Makanchi Array 57.08 325 P **P** **09 04 37.1 -0.3**
comp=Z,16nm,0.4s,baz=118,slow=7.4,SNR=204
MKAR ScP **ScP** **09 09 32.1 +7.1**
comp=Z,3.1nm,0.8s,baz=129,slow=4.1,SNR=4.5
MKAR LR LR 09 30 46.5
comp=Z,2μm,21.0s,baz=114,slow=38
YAK Yakutsk 57.48 2 *e*P **P** **09 04 39.5 -0.3**
YAK *e* 09 05 36.4
YAK *e* 09 06 51.8
YAK *e*S **S** **09 12 29.3 -2.2**
YAK *e**SS **sS** **09 12 58.8 -4.2**
YAK *e* 09 14 20.8
YAK pmax pmax
comp=Z,45nm,0.9s
YAK pmax pmax
comp=N,13nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=N,92nm,2.1s
YAK pmax pmax
comp=E,26nm,1.8s
YAK smax smax
comp=N,38nm,1.3s
YAK smax smax
comp=E,67nm,1.8s
YAK MLR MLR
comp=E,876nm,27.0s
KSH Kashi 57.68 315‖ *i*P **P** **09 04 42.5 +0.6**
KSH pP **pP** **09 05 01.8 +1.4**
KSH PcP **PcP** **09 05 35.8 +1.6**
KSH PcS **PcS** **09 09 35.3 -0.3**
KSH S **S** **09 12 31.9 -3.3**
KSH ScS **ScS** **09 14 21.1 -4.0**
KSH SS **SS** **09 16 23.8 -2.8**
KSH pmax pmax
comp=Z,100nm,1.3s
KSH LR LR
comp=N,660nm,13.5s
KSH LR LR
comp=E,2μm,20.2s
KSH LR LR
comp=Z,750nm,11.2s
AAA Alma-Ata 58.60 319 *e*P **P** **09 04 48.6 +0.4**
AAA *e*S **S** **09 12 48.6 +1.6**
AAA pmax pmax
comp=Z,600nm,4.5s
AAA smax smax
comp=E,600nm,10.3s
AAA MLR MLR
comp=Z,2μm,21.0s
ULHL Ulahol 58.62 318 P **P** **09 04 48.9 +0.4**
SNR=6.8
KZA Kyzart 59.22 317 P **P** **09 04 53.8 +0.9**
SNR=32
TKM2 Tokmak 2 59.34 318 *e*P **P** **09 04 53.0 -0.5**
TKM2 pmax pmax
comp=Z,31nm,0.7s
TKM2 Tokmak 2 59.34 318 *e*P **P** **09 04 53.0 -0.5**
comp=Z,31nm,0.7s
TKM2 Tokmak 2 59.34 318 P **P** **09 04 53.1 -0.5**
SNR=21
KBK Karagaybulak 59.66 318 P P 09 04 59.3 +3.6
SNR=17
UCH Uchtor 59.78 317 P **P** **09 04 57.6 +0.8**
SNR=8.6
CHMS Chumysh 59.94 318 P **P** **09 04 57.2 -0.1**
SNR=9.6
AAK Ala-Archa 59.96 317 *i* P **P** **09 04 58.1 +0.4**
AAK Ala-Archa 59.96 317 *e*P **P** **09 04 57.0 -0.6**
AAK Ala-Archa 59.96 317 P **P** **09 04 58.5 +0.8**
SNR=30
AAK Ala-Archa 59.96 317 P **P** **09 04 58.1 +0.4**
SNR=16
AAK Ala-Archa 59.96 317 P **P** **09 04 57.2 -0.5**
comp=Z,3.6nm,0.4s,baz=94,slow=6.0,SNR=32
FRU Bishkek 59.96 318 *e*P **P** **09 04 55.5 -2.0**
FRU pmax pmax
comp=Z,90nm,2.0s
FRU MLR MLR
comp=Z,3μm,23.0s
ZAA0 Zalesovo Array 60.03 333 *e*P **P** **09 04 57.5 -0.2**
ZALV Zalesovo Beam 60.03 333 P **P** **09 04 57.0 -0.7**
ZALV Zalesovo Beam 60.03 333 P **P** **09 04 57.0 -0.7**
ZALV Zalesovo Beam 60.03 333 P **P** **09 04 57.0 -0.7**
comp=Z,6.5nm,0.3s,baz=120,slow=5.9,SNR=26
ZALV LR LR 09 32 36.6
comp=Z,567nm,22.0s,baz=322,slow=38
USP Ospenovka 60.21 318 P **P** **09 04 58.8 -0.4**
SNR=25
AML Almayashu 60.30 317 P **P** **09 05 00.1 -0.2**
SNR=37
EKS2 Erkin-Say 60.45 317 *e*P **P** **09 05 00.7 -0.3**
EKS2 pmax pmax
comp=Z,26nm,0.8s
EKS2 Erkin-Say 60.45 317 *e*P **P** **09 05 00.7 -0.3**
comp=Z,26nm,0.8s
EKS2 Erkin-Say 60.45 317 P **P** **09 05 01.1 +0.1**
SNR=20
KURK Kurchatov 61.24 327*c i*P **P** **09 05 05.8 -0.2**
KURK pmax pmax
comp=Z,72nm,1.3s
KURK Kurchatov 61.24 327 *e*P **P** **09 05 05.3 -0.7**
comp=Z,126nm,0.9s
KURK Kurchatov 61.24 327 P **P** **09 05 05.5 -0.5**
SNR=40
KBL Kabul 61.24 307 *e*P **P** **09 05 05.7 -1.0**
KBL Kabul 61.24 307 *e*P **P** **09 05 05.7 -1.0**
KBL Kabul 61.24 307 P **P** **09 05 06.5 -0.1**
baz=62,SNR=6.4
SEY Seymchan 61.28 13⇑ *i*P **P** **09 05 06.2 +0.2**
NVS Novosibirsk 61.32 333⇑ *i*P **P** **09 05 04.9 -1.5**
NVS *e* 09 05 15.7
NVS *e*S **S** **09 13 19.6 -1.7**
NVS pmax pmax
comp=Z,143nm,1.9s
NVS pmax pmax
comp=N,57nm,1.8s
NVS pmax pmax
comp=E,86nm,2.0s
NVS smax smax
comp=E,96nm,2.5s
NVS smax smax
comp=N,63nm,2.8s
FX1 Attu Island--F 61.35 30 *e*P **P** **09 05 06.2 -0.5**
RPZ Rata Peaks 62.24 145 *e*P **P** **09 05 12.5 -0.4**
comp=N,25nm,0.9s
RPZ Rata Peaks 62.24 145 P **P** **09 05 12.4 -0.5**
comp=N,34nm,0.8s,baz=324,slow=5.1,SNR=13
RPZ LR LR 09 31 43.7
comp=N,2μm,20.0s,baz=305,slow=36
KKAR Karatay Array 62.84 317 *e*P **P** **09 05 16.0 -1.0**
KKAR pmax pmax
comp=Z,19nm,0.8s
KKAR Karatay Array 62.84 317 *e*P **P** **09 05 16.0 -1.0**
comp=Z,19nm,0.8s
KHZ Kahutara 62.92 143 *e*P **P** **09 05 16.1 -1.3**
URZ Urewera 62.93 137 *e*P **P** **09 05 16.6 -1.0**
URZ Urewera 62.93 137 P **P** **09 05 16.4 -1.1**
comp=Z,8.8nm,0.6s,baz=319,slow=19,SNR=7.4
BRVK Borovoye 66.89 327*ce*P **P** **09 05 42.7 -0.4**
BRVK pmax pmax
comp=Z,84nm,1.2s
BRVK Borovoye 66.89 327 *e*P **P** **09 05 42.3 -0.7**
comp=Z,58nm,0.8s
BRVK Borovoye 66.89 327 P **P** **09 05 42.7 -0.4**
SNR=38
JMDO Jabal Madar 68.75 292 P **P** **09 05 54.9 -0.4**
SNR=5.1
IMYA Miami 68.76 307 *e*P **P** **09 05 55.3 -0.1**
BILL Bilibino 68.80 15*d i*P **P** **09 05 57.2 +2.5**
BILL *e* 09 06 18.8
BILL *e* 09 08 33.4
BILL *i* S **S** **09 14 54.1 +1.5**
BILL pmax pmax
comp=Z,19nm,1.6s
BILL MLR MLR
comp=Z,100nm,19.0s
BILL Bilibino 68.80 15 *e*P **P** **09 05 54.4 -0.3**
comp=Z,19nm,0.9s
ISRO Mashad 69.26 307 *e*P **P** **09 05 57.7 -0.6**
IMOG Moghan 69.33 307 *e*P **P** **09 05 58.5 -0.5**
IAKL Akhelmad 69.87 307 *e*P **P** **09 06 02.2 -0.2**
ISFR Sfrayin 70.55 308 *e*P **P** **09 06 06.5 0.0**
ABKT Ailbek 70.60 309 P **P** **09 06 07.2 +0.7**
comp=Z,156nm,1.3s,SNR=7.5
ISHV Shirvan 70.86 308 *e*P **P** **09 06 08.7 +0.4**
CASY Casey 71.56 187 *e*P **P** **09 06 11.7 +0.1**
comp=Z,30nm,0.8s
DRV Dumont d'Urvil 71.58 175 P P 09 06 01.0 -11
DRV S S 09 15 09.0 -16
DRV SP ScS 09 16 18.0 +7.9
DRV SS SS 09 19 54.0 -7.6
DRV L L 09 23 00.0
DRV R 09 29 00.0
ABKAR Akbulak array 71.72 321 *e*P **P** **09 06 12.1 -0.8**
comp=Z,10nm,0.5s
UNV Unalaska Valle 72.71 35 *e*P **P** **09 06 18.5 -0.2**
comp=Z,44nm,1.0s
SVE Sverdlovsk 73.45 328*d i*P **P** **09 06 23.5 +0.5**
SVE *e*S **S** **09 15 45.2 -1.6**
SVE pmax pmax
comp=Z,191nm,1.4s
SVE MLR MLR
comp=Z,1μm,23.0s
GAMB Gambell 73.65 24 *e*P **P** **09 06 24.5 +0.4**
comp=Z,26nm,0.9s
ARU Arti 74.43 328*c i*P **P** **09 06 27.8 -1.0**
ARU 09 09 13.3
ARU PPP PPP 09 10 55.1
ARU S **S** **09 15 57.9 +0.1**
ARU pmax pmax
comp=Z,120nm,1.0s
ARU MLR MLR
comp=Z,754nm,26.0s
ARU Arti 74.43 328 P **P** **09 06 28.9 +0.1**
comp=Z,598nm,0.6s,SNR=29
MIR Mirnyy 74.92 193‖ *i*P **P** **09 06 33.5 +2.2**
MIR pmax pmax
comp=Z,42nm,1.0s
TNA Tin City 75.84 23 *e*P **P** **09 06 36.9 +0.2**
comp=Z,4.6nm,0.8s
SOKR Solikamsk 76.19 330*c i*P **P** **09 06 39.0 +0.3**
SOKR S **S** **09 16 15.7 -1.3**
SOKR pmax pmax
comp=Z,90nm,1.5s
SOKR MLR MLR
comp=Z,2μm,37.0s
SDPT Sand Point 76.48 34 *e*P **P** **09 06 40.0 -0.5**
comp=Z,52nm,0.6s
UMR Umm Al-Rimmam 78.44 299 *e*P **P** **09 06 49.7 -2.3**
UMR AMb AMB 09 06 52.4
comp=Z,94nm,1.6s
RDF Al-Radifah 78.57 298 *e*P **P** **09 06 49.8 -3.0**
RDF AMb AMB 09 06 53.4
comp=Z,83nm,1.0s
NAY Al-Naaiem 78.85 299 *e*P **P** **09 06 51.6 -2.7**
NAY AMb AMB 09 06 54.0
comp=Z,36nm,1.0s
MAK Makhachkala 79.24 313 *e*P **P** **09 06 54.1 -2.0**
MAK *e* 09 07 01.3
MAK *e* 09 09 50.2
MAK *e*PPP PPP 09 11 43.9
MAK *e*S **S** **09 16 49.3 -1.4**
MAK *e* 09 17 12.7
MAK pmax pmax
comp=Z,15nm,0.2s
MAK MLR MLR
comp=Z,981nm,23.0s
RAYN Ar Rayn 80.39 293 P **P** **09 07 01.9 -0.9**
comp=Z,171nm,0.7s,SNR=10
OHAK Old Harbor 80.73 33 *e*P **P** **09 07 04.0 +0.2**
comp=Z,28nm,0.9s
DGRG David-gareji 80.74 311 P **P** **09 07 05.3 +1.0**
KDAK Kodiak Island 81.17 32 *e*P **P** **09 07 06.4 +0.3**
comp=Z,33nm,0.8s
GNI Garni 81.17 310 *e*P **P** **09 07 06.3 -0.5**
comp=Z,23nm,1.0s
GNI Garni 81.17 310 P **P** **09 07 08.8 +2.0**
SNR=8.4

SEAG Tbilisi Sea 81.18 311 P **P** 09 07 06.6 -0.1
TBLG Delisi 81.22 311 P **P** 09 07 07.2 +0.3
RSO Redoubt South 81.36 30 *eP* **P** 09 07 06.7 -0.7
comp=Z,54nm,0.8s
GUDG Gudauri 81.44 312 P **P** 09 07 09.2 +0.9
KZR Kazreti 81.46 311 P **P** 09 07 08.9 +0.8
GOR Gori 81.70 312 P **P** 09 07 10.4 +1.0
OPO Ambohidratompo 81.73 251 P **P** 09 07 09.8 -0.4
OPO Ambohidratompo 81.73 251 P **P** 09 07 09.8 -0.4
comp=Z,32nm,1.2s,baz=66,slow=5.1,SNR=10
ABPO Ambohimpanom 81.75 250 *eP* **P** 09 07 09.4 -0.9
ABPO pmax pmax
comp=Z,11nm,0.7s
ABPO Ambohimpanom 81.75 250 *eP* **P** 09 07 09.3 -0.9
comp=Z,11nm,0.7s
CLDR Caldiran 81.79 309 *eP* **P** 09 07 10.9 +0.7
ZEI Tsey 81.88 312 *eP* P 09 07 06.6 -3.9
ZEI *eS* **S** 09 17 15.6 -3.2
ZEI pmax pmax
comp=Z,47nm,1.4s
PPLA Purkeypile 81.89 27 *eP* **P** 09 07 09.5 -0.6
comp=Z,32nm,1.1s
HAKT HAKKARI 81.93 307 *i* P **P** 09 07 10.7 -0.3
CUKT Cukurca 82.01 307 *eP* **P** 09 07 11.1 -0.1
AKH Akhalkalaki 82.15 311 P **P** 09 07 13.0 +1.0
ONI Oni 82.20 312 P **P** 09 07 12.3 +0.3
GEVA Gevas 82.45 308 *i* P **P** 09 07 14.2 +0.6
KBZ Khabaz 82.63 313 P **P** 09 07 13.9 -0.2
KBZ Khabaz 82.63 313 P **P** 09 07 13.9 -0.2
KBZ Khabaz 82.63 313 P **P** 09 07 13.9 -0.2
comp=Z,23nm,1.1s,baz=98,slow=2.8,SNR=28
KBZ LR LR 09 51 53.4
comp=Z,515nm,19.8s,baz=188,slow=41
KIV Kislovodsk 82.78 314 *eP* **P** 09 07 15.4 +0.3
KIV *eS* **S** 09 17 31.3 +3.5
KIV pmax pmax
comp=Z,28nm,1.1s
KIV MLR MLR
comp=Z,518nm,18.0s
KIV Kislovodsk 82.78 314 P **P** 09 07 16.4 +1.3
comp=Z,153nm,0.8s,SNR=6.3
TRF Thorofare Moun 82.80 27 *eP* **P** 09 07 13.9 -1.0
comp=Z,21nm,0.9s
SEW Seward 82.97 30 *eP* **P** 09 07 15.2 -0.3
comp=Z,30nm,1.0s
COLD Coldfoot 83.14 23 *eP* **P** 09 07 17.4 +1.1
comp=Z,26nm,1.0s
PMR Palmer 83.21 29 *eP* **P** 09 07 15.9 -0.9
PMR pmax pmax
comp=Z,28nm,0.9s
PMR Palmer 83.21 29 *eP* **P** 09 07 15.8 -0.9
comp=Z,28nm,0.9s
DAGI Agillar 83.34 311 *i* P **P** 09 07 18.8 +0.8
MCK McKinley 83.42 26 *eP* **P** 09 07 17.6 -0.3
MCK pmax pmax
comp=Z,103nm,1.4s
MCK McKinley 83.42 26 *eP* **P** 09 07 17.6 -0.3
comp=Z,103nm,1.4s
DDEM Demirkent 83.46 311 *i* P **P** 09 07 19.4 +0.7
DBAD Bademkaya 83.50 311 *i* P **P** 09 07 19.4 +0.5
DBOC Borcka 83.53 311 *i* P **P** 09 07 19.1 +0.2
BCA Borcka 83.56 311 *eP* **P** 09 07 19.4 +0.3
SML Sawmill 83.60 28 P **P** 09 07 17.6 -1.2
SML pmax pmax
comp=Z,15nm,0.9s
SML Sawmill 83.60 28 P **P** 09 07 17.6 -1.2
comp=Z,15nm,0.9s
VRHR Novokhopersk 83.61 321 *eP* **P** 09 07 18.3 -0.7
VRHR *eS* **S** 09 17 32.7 -2.8
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,50nm,0.7s
VRHR pmax pmax
comp=Z,80nm,0.7s
VRHR smax smax
comp=N,180nm,1.8s
VRHR smax smax
comp=E,180nm,1.8s
VRHR smax smax
comp=Z,10.0nm,0.6s
VRHR MLR MLR
comp=N,2μm,25.0s
VRHR MLR MLR
comp=E,4μm,25.0s
VRHR MLR MLR
comp=Z,1μm,25.0s
VRTB Varto-Mus 83.70 309 *eP* **P** 09 07 20.5 +0.5
COLA College 83.95 25 *eP* **P** 09 07 19.9 -0.6
COLA pmax pmax
comp=Z,9.0nm,0.8s
COLA College 83.95 25 *eP* **P** 09 07 19.9 -0.6
comp=Z,9.2nm,0.8s
VNDA Vanda 84.12 173 *eP* **P** 09 07 20.9 -0.3
comp=Z,11nm,0.9s
VNDA Vanda 84.12 173 P **P** 09 07 20.8 -0.3
comp=Z,6.1nm,0.8s,baz=311,slow=5.8,SNR=39
VNDA LR LR 09 44 30.7
comp=Z,737nm,21.9s,baz=351,slow=35
MARD Mardin 84.27 307 *i* P **P** 09 07 22.6 -0.3
BNGB Bing¶ll 84.31 309 *eP* **P** 09 07 23.4 +0.4
ILAR Eielson Array 84.36 25 P **P** 09 07 21.7 -0.9
ILAR PKKPbc **PKKPbc** 09 25 39.1 +2.0
ILAR Eielson Array 84.36 25 P **P** 09 07 21.7 -0.9
comp=Z,5.2nm,0.8s,baz=252,slow=4.1,SNR=53
ILAR PKKPbc **PKKPbc** 09 25 39.1 +2.0
comp=Z,0.4nm,0.8s,baz=50,slow=3.6,SNR=4.8
ILAR LR LR 09 46 45.5
comp=Z,238nm,19.3s,baz=263,slow=37
KOPT Kop Dagi 84.43 310 *i* P **P** 09 07 24.8 +0.9
MAW Mawson 84.51 200 P **P** 09 07 22.8 -0.4
MAW Mawson 84.51 200 P **P** 09 07 22.8 -0.4
comp=Z,3.5nm,0.6s,baz=69,slow=8.3,SNR=11
MAW LR LR 09 43 39.3
comp=Z,257nm,20.3s,baz=63,slow=35
BAYT Ayd¯ntepe-Bay 84.69 310 *eP* **P** 09 07 25.8 +0.8
DIV Divide 84.81 29 *eP* **P** 09 07 25.5 +0.5
comp=Z,71nm,1.1s
SOC Sochi 84.94 313 *c* P **P** 09 07 25.3 -0.6
SOC *e**SP sP 09 07 38.7 -15
SOC *e* 09 10 47.8
SOC *eS* **SKSac** 09 17 37.6 -6.7
SOC *eS* **S** 09 17 46.0 -3.1
SOC pmax pmax
comp=Z,43nm,0.9s
SOC MLR MLR
comp=Z,574nm,20.0s
PAX Paxson 84.96 27 *eP* **P** 09 07 26.0 +0.2
PAX pmax pmax
comp=Z,53nm,1.5s
PAX Paxson 84.96 27 *eP* **P** 09 07 25.9 +0.2
comp=Z,53nm,1.5s
SBA Scott Base 85.03 172 *eP* **P** 09 07 25.4 -0.2
SBA pmax pmax
comp=Z,23nm,1.2s
SBA Scott Base 85.03 172 *eP* **P** 09 07 25.4 -0.2
comp=Z,23nm,1.2s
VORD Divnogorie 85.08 321 *eP* **P** 09 07 25.9 -0.6
VORD *e**SP sP 09 07 40.3 -14
VORD *eS* **SKSac** 09 17 47.3 +2.5
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,50nm,0.9s
VORD pmax pmax
comp=Z,100nm,0.9s
VORD smax smax
comp=N,50nm,1.0s
VORD smax smax
comp=E,30nm,1.0s
VORD smax smax
comp=Z,5.0nm,0.4s
VORD MLR MLR
comp=N,1μm,22.0s
VORD MLR MLR
comp=E,940nm,22.0s
VORD MLR MLR
comp=Z,940nm,22.0s
PPT Papeete 85.14 108 LR LR 09 39 56.2
comp=Z,669nm,18.6s,baz=0.0,slow=32
PPT2 Papeete2 85.14 108 *eS* **S** 09 17 54.6 +2.4
comp=Z,343nm,24.5s
PPT2 *eSS* **SS** 09 23 32.7 +5.0
comp=Z,339nm,29.8s
PPT2 *eLQ* LQ 09 30 46.2
comp=Z,469nm,28.8s
PPT2 *eLR* LR 09 34 20.4
comp=Z,3μm,29.5s
VSR Storozhevoye 85.15 321 *eP* **P** 09 07 26.1 -0.7
VSR *e**SP sP 09 07 40.7 -14
VSR *eS* **SKSac** 09 17 47.5 +2.2
VSR pmax pmax
comp=E,120nm,1.1s
VSR pmax pmax
comp=Z,140nm,1.1s
VSR pmax pmax
comp=N,5.0nm,0.7s
VSR smax smax
comp=N,130nm,3.0s
VSR smax smax
comp=Z,100nm,3.0s
VSR MLR MLR
comp=N,420nm,20.0s
VSR MLR MLR
comp=E,710nm,20.0s
VSR MLR MLR
comp=Z,860nm,20.0s
GUMT Gumushane 85.20 310 *eP* **P** 09 07 28.2 +0.7
PTK Pertek 85.32 309 *eP* **P** 09 07 27.7 -0.5
EZC Erzincan 85.32 309 *eP* **P** 09 07 29.6 +1.4
KELT Kelkit 85.38 310 *i* P **P** 09 07 28.7 +0.1
DOT Dot Lake 85.59 27 *eP* **P** 09 07 29.3 +0.4
comp=Z,12nm,1.1s
ELZG Elazig 85.65 308 *i* P **P** 09 07 30.5 +0.7
ESPY Espiye-Giresun 85.75 311 *eP* **P** 09 07 29.8 -0.3
MENT Mentasta 85.76 27 *eP* **P** 09 07 29.9 +0.3
URFA Urfa 85.82 307 *eP* **P** 09 07 30.1 -0.5
TBI Tubuai 85.89 114 *eS* **S** 09 18 01.6 +2.4
comp=Z,385nm,31.8s
TBI *eLQ* LQ 09 31 04.0
comp=Z,469nm,32.8s
TBI *eLR* LR 09 34 40.1
comp=Z,3μm,29.2s
ILIC ilic-Erzincan 85.94 309 *eP* **P** 09 07 32.3 +1.1
MOS Moscow 85.96 325 *eP* **P** 09 07 30.0 -0.7
MOS *eS* **S** 09 17 53.6 -5.0
MOS pmax pmax
comp=Z,339nm,1.5s
MOS pmax pmax
comp=N,200nm,1.5s
MOS pmax pmax
comp=Z,900nm,2.2s
MOS MLR MLR
comp=Z,1μm,20.0s
KEMA Kemaliye 86.00 309 *i* P **P** 09 07 31.8 +0.4
MYA Malataya 86.09 308 *eP* **P** 09 07 33.5 +1.5
SUSE Susehri 86.18 310 *i* P **P** 09 07 32.9 +0.4
AKCD Akcadag 86.49 308 *i* P **P** 09 07 34.4 +0.4
ANN Anapa 86.54 315 *eP* **P** 09 07 32.7 -1.1
ANN *e* 09 10 55.8
ANN *eS* S 09 17 57.3 -7.4
ANN pmax pmax
comp=Z,215nm,1.2s
OBN Obninsk 86.58 325 *c* iP **P** 09 07 33.6 -0.2
OBN *i* 09 07 39.0
OBN *i* S **SKSac** 09 17 52.8 -1.3
OBN pmax pmax
comp=Z,452nm,1.9s
OBN MLR MLR
comp=Z,1μm,20.0s
OBN Obninsk 86.58 325 P **P** 09 07 34.2 +0.4
comp=Z,782nm,1.0s,SNR=13
EGAK Eagle 86.81 25 *eP* **P** 09 07 34.9 +0.1
comp=Z,6.3nm,0.8s
DARE Darende-Malaty 86.82 308 *eP* **P** 09 07 36.0 +0.4
GZT Gaziantep 86.82 307 *i* P **P** 09 07 35.5 -0.1
RSDY Resadiye-TOKAT 86.84 310 *eP* **P** 09 07 35.7 +0.2
GAZ Gaziantep 87.12 307 *eP* **P** 09 07 37.5 +0.6
APA Apatity 87.26 337 ||| *iP* **P** 09 07 35.4 -1.5
APA MLR MLR
comp=Z,2μm,23.0s
ERBA Erbaa 87.26 310 *i* P **P** 09 07 38.0 +0.5
KMRS Kahramanmaras 87.34 307 *eP* **P** 09 07 37.8 -0.2
TOKA Tokat 87.49 310 *i* P **P** 09 07 39.4 +0.7
PINB Pinarbasi 87.66 308 *i* P **P** 09 07 39.5 -0.3
KVT Kavak 87.77 311 *eP* **P** 09 07 40.4 +0.5
ANDN Andirin 87.78 307 *i* P **P** 09 07 41.1 +0.9
HAVZ Havza 88.02 311 *i* P **P** 09 07 41.9 +0.8
PNL Peninsula 88.04 30 *eP* **P** 09 07 40.6 -0.2
comp=Z,12nm,1.0s
YAYL Yayladag 88.08 306 *i* P **P** 09 07 41.6 -0.1
BNN Bunyan 88.08 309 *eP* **P** 09 07 41.0 -0.6
KOZT Kozan 88.20 307 *eP* **P** 09 07 42.6 +0.5
CEYT Ceyhan 88.29 307 *eP* **P** 09 07 42.9 +0.4
DIKM Dikmen 88.32 311 *eP* **P** 09 07 41.8 -0.7
JOF Joensuu 88.62 333 *eP* **P** 09 07 41.6 -1.8
JOF pmax pmax
comp=Z,17nm,0.6s
JOF Joensuu 88.62 333 *ep* **P** 09 07 41.6 -1.8
comp=Z,17nm,0.6s
KRTS Karatas 88.63 306 *eP* **P** 09 07 44.4 +0.4
CTKT Corum 88.76 310 *i* P **P** 09 07 44.5 -0.3
AVNT Avonos 88.86 309 *i* P **P** 09 07 44.8 -0.5
SIM Simferopol' 88.88 315 *deP* P 09 07 41.4 -3.6
SIM pmax pmax
comp=Z,22nm,0.7s
SIM MLR MLR
comp=Z,330nm,18.3s
CORM Corum 88.92 310 *eP* **P** 09 07 45.8 +0.3
GULE Gulek 89.05 307 *i* P **P** 09 07 46.0 -0.3
NIG Nigde 89.11 308 *eP* **P** 09 07 46.5 -0.1
CDAG Cicekdag 89.16 309 *i* P **P** 09 07 46.4 -0.3
BZK Bozkurt 89.23 312 *eP* **P** 09 07 46.0 -0.7
KEV Kevo 89.28 340 *eP* **P** 09 07 43.7 -2.7
KEV pmax pmax
comp=Z,6.0nm,0.9s
KEV Kevo 89.28 340 *ep* **P** 09 07 43.7 -2.7
comp=Z,5.5nm,0.9s
TOS Tosya 89.30 311 *eP* **P** 09 07 46.8 -0.4
EIL Elat 89.54 300 P **P** 09 07 49.2 +0.7
baz=90,SNR=6.2
EREN Erenkoy 89.69 305 *eP* **P** 09 07 47.9 -1.1
BR131 Keskin Array S 89.72 310 *eP* **P** 09 07 47.8 -1.5
comp=Z,18nm,0.9s
BRTR Keskin Array B 89.72 310 P **P** 09 07 48.1 -1.2
BRTR Keskin Array B 89.72 310 P **P** 09 07 48.1 -1.2
comp=Z,20nm,0.9s,baz=120,slow=4.4,SNR=74
BRTR LR LR 09 56 49.2
comp=Z,329nm,21.6s,baz=233,slow=41
BALT Daday 89.73 311 *i* P **P** 09 07 48.8 -0.6
KMBO Kilima Mbogo 89.77 269 *eP* **P** 09 07 50.2 0.0
comp=Z,45nm,1.4s
KMBO Kilima Mbogo 89.77 269 P **P** 09 07 51.5 +1.3
SNR=7.0
KMBO Kilima Mbogo 89.77 269 P **P** 09 07 50.4 +0.2
comp=Z,19nm,1.1s,baz=56,slow=7.0,SNR=19
KMBO LR LR 09 47 47.7
comp=Z,292nm,20.0s,baz=275,slow=35
ARCES ARCESS Array B 89.84 340 P **P** 09 07 47.9 -1.1
ARCES ARCESS Array B 89.84 340 P **P** 09 07 47.9 -1.1
comp=Z,11nm,0.8s,baz=83,slow=6.6,SNR=26
ARCES LR LR 09 51 25.7
comp=Z,608nm,20.2s,baz=89,slow=38
ARE0 ARCESS Array S 89.84 340 *eP* **P** 09 07 48.3 -0.8
SKAG Skagway 90.12 30 *eP* **P** 09 07 50.7 +0.2
comp=Z,7.8nm,0.9s
BBAL Bala 90.13 310 *i* P **P** 09 07 50.9 -0.3
AFSR Af˙ar-Bala (A 90.18 309 *eP* **P** 09 07 51.1 -0.3
LFK Lefkose 90.23 305 *eP* **P** 09 07 51.6 -0.1
ANTO Ankara 90.35 310 *eP* **P** 09 07 51.3 -0.9
ANTO Ankara 90.35 310 *eP* **P** 09 07 51.3 -0.9
ANTO pmax pmax
comp=Z,37nm,1.3s
ANTO Ankara 90.35 310 *eP* **P** 09 07 51.3 -0.9
comp=Z,37nm,1.3s
ANTO Ankara 90.35 310 P **P** 09 07 51.9 -0.3
SNR=6.1
CSS Prodhromos 90.42 305 *eP* **P** 09 07 51.4 -1.1
CSS Prodhromos 90.42 305 *eP* **P** 09 07 51.8 -0.7
comp=Z,20nm,0.9s
LEF Lefka 90.77 305 *eP* **P** 09 07 53.5 -0.6
KDHN Kadinhani 91.02 309 *i* P **P** 09 07 53.5 -1.8
KAF Kangasniemi 91.05 332 *eP* **P** 09 07 53.2 -1.6
KAF pmax pmax
comp=Z,10.0nm,0.4s
KAF Kangasniemi 91.05 332 *ep* **P** 09 07 53.2 -1.6
comp=Z,10nm,0.4s
GAZI Gazipasa 91.11 306 *i* P **P** 09 07 54.4 -1.3
KIZT Kizilcal 91.16 309 *eP* **P** 09 07 54.5 -1.5
FIA1 FINESS Array S 91.29 332 *eP* **P** 09 07 56.3 +0.4
FINES FINESS Array B 91.29 332 P **P** 09 07 55.1 -0.8
FINES FINESS Array B 91.29 332 P **P** 09 07 55.1 -0.8
comp=Z,5.6nm,0.4s,baz=56,slow=5.9,SNR=16
FINES LR LR 09 52 28.8
comp=Z,1μm,21.5s,baz=90,slow=38
SVRH Sivrihisar-ESK 91.37 310 *eP* **P** 09 07 55.9 -1.0
AKASG Malin Array Be 91.46 321 *i* P **P** 09 07 57.0 +0.1
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 91.46 321 P **P** 09 07 55.5 -1.4
AKASG Malin Array Be 91.46 321 P **P** 09 07 55.5 -1.4
comp=Z,2.7nm,0.4s,baz=68,slow=4.4,SNR=26
AKASG LR LR 09 55 43.6
comp=Z,448nm,19.7s,baz=85,slow=40
AK01 Malin Array Si 91.47 321 *eP* **P** 09 07 56.3 -0.6
KIEV Kiev 91.47 321 *eP* **P** 09 07 56.4 -0.5
KIEV pmax pmax
comp=Z,52nm,1.5s
KIEV Kiev 91.47 321 *eP* **P** 09 07 56.4 -0.5
comp=Z,52nm,1.5s
AK02 Malin Array Si 91.48 321 *eP* **P** 09 07 56.2 -0.8
MDUB Mudurnu 91.50 311 *eP* **P** 09 07 56.6 -0.8
BOLV Bolvadin 91.90 309 *i* P P 09 08 06.9 +7.5
GULT Gulveren 92.02 311 *eP* **P** 09 07 58.5 -1.4
ISP Isparta 92.35 308 *eP* **P** 09 07 59.8 -1.7
CAVI Cavuskoy 92.56 310 *eP* **P** 09 08 01.1 -1.2
TLCR 92.58 316 ||| *iP* **P** 09 08 03.4 +1.2
KORT Korkueli 92.59 307 *i* P **P** 09 08 00.9 -1.8
IZI Iznik 92.82 311 *eP* **P** 09 08 02.0 -1.6
YLV Yalova 92.86 311 *eP* **P** 09 08 02.2 -1.5
TVSB Tavsanli 92.95 310 *eP* **P** 09 08 03.0 -1.2
TIRR Tirgusor 92.97 315 ||| *iP* **P** 09 08 03.7 -0.4
CFR Carcaliu 93.05 316 ||| *iP* **P** 09 08 04.3 -0.1
KHAL Karahalli 93.08 309 *i* P **P** 09 08 04.0 -0.9
ARMT Armutlu 93.25 311 *eP* **P** 09 08 04.1 -1.4
FETY Fethiye 93.65 307 *eP* **P** 09 08 06.2 -1.2
KULA Kula-Manisa 93.71 309 *eP* **P** 09 08 06.2 -1.5
TESR Tescani 93.85 317 ||| *iP* **P** 09 08 08.1 0.0
VRI Vrincioaia 93.91 316 ||| *iP* **P** 09 08 09.5 +1.1
PLOR Plostina 93.97 316 ||| *iP* **P** 09 08 09.2 +0.5
BALB Balikesir 94.13 310 *eP* **P** 09 08 08.3 -1.2
ISR Istrita 94.17 316 ||| *iP* **P** 09 08 11.1 +1.4
MRMT Marmara Adasi 94.19 311 *eP* **P** 09 08 08.6 -1.3
YER Yerkesik 94.21 308 *eP* **P** 09 08 09.4 -0.6
GONE Gonen-Balikesi 94.22 311 *eP* **P** 09 08 08.3 -1.6
BALY Balya 94.31 310 *i* P **P** 09 08 09.6 -0.9
QSPA South Pole Qui 94.36 180 *eP* **P** 09 08 10.1 0.0
comp=Z,16nm,1.1s
QSPA South Pole Qui 94.36 180 P **P** 09 08 10.2 +0.1
comp=Z,4.9nm,0.7s,baz=344,slow=2.9,SNR=32
AYDN Tasoluk 94.45 308 *i* P **P** 09 08 10.2 -0.9
RKY Sarkoy-Tekirda 94.49 311 *eP* **P** 09 08 09.4 -1.8
MLR Muntele Rosu 94.52 316 ||| *iP* **P** 09 08 11.9 +0.5
BURAR Bucovina Array 94.59 318 ||| *iP* **P** 09 08 12.1 +0.5
BUR08 Bucovina Ar. S 94.60 318 *eP* **P** 09 08 11.3 -0.3
IZM Izmir 94.81 309 *eP* **P** 09 08 11.8 -0.9
ALN Alexandroupoli 95.30 312 *eP* **P** 09 08 13.4 -1.4
KARP Karpathos 95.35 306 *eP* **P** 09 08 14.1 -1.2
ARR Arges 95.45 316 ||| *iP* **P** 09 08 15.7 +0.2
BOZC Bozcaada 95.49 311 *i* P **P** 09 08 14.0 -1.7
LOT Lotru 96.03 316 ||| *iP* **P** 09 08 18.6 +0.4
KOLS Kolonicke sedl 96.22 320 *eP* **P** 09 08 19.5 +0.6
KOLS pmax pmax
comp=Z,55nm,2.4s
KOLS Kolonicke sedl 96.22 320 *eP* **P** 09 08 19.5 +0.6
TRPA Tarpa 96.24 319 ||| *eP* **P** 09 08 19.9 +1.0
UZH Uzhgorod 96.28 320 ||| *iP* **P** 09 08 20.2 +1.1
UZH *e* 09 12 13.8
UZH *eS* **S** 09 19 34.0 +0.9
UZH *ePS* PS 09 21 30.8 +29
UZH *eSS* SS 09 26 19.0 +13
UZH MLR MLR
comp=N,280nm,20.0s
UZH MLR MLR
comp=E,450nm,20.0s
UZH MLR MLR
comp=Z,190nm,20.0s
DRGR 96.44 318 ||| *iP* **P** 09 08 21.2 +1.2
DAG Danmarks Havn 96.56 352 *eP* **P** 09 08 20.2 +0.4
DAG pmax pmax
comp=Z,14nm,0.9s
DAG Danmarks Havn 96.56 352 *i* P **P** 09 08 20.2 +0.4
comp=Z,17nm,0.9s
CRVS Cervenica-Dubn 96.75 320 *eP* **P** 09 08 21.3 0.0
CRVS pmax pmax
comp=Z,34nm,1.3s
CRVS Cervenica-Dubn 96.75 320 *eP* **P** 09 08 21.3 0.0
NVR Nevrokopi 96.83 312 *eP* **P** 09 08 20.6 -1.3
VTS Vitosha 97.04 314 ||| *iP* **P** 09 08 22.6 -0.3
RES Resolute Bay 97.06 10 *eP* **P** 09 08 22.1 0.0
comp=Z,3.7nm,0.9s
PAIG Paliouri 97.26 311 *eP* **P** 09 08 22.5 -1.3
AOS Alonnisos 97.27 310 *eP* **P** 09 08 22.3 -1.5
PLG Polygyros 97.34 311 *eP* **P** 09 08 22.3 -1.9
BZS Buzias 97.46 317 ||| *iP* **P** 09 08 24.2 -0.3
HFS Hagfors 97.47 332 P **P** 09 08 23.0 -1.2
HFS Hagfors 97.47 332 P **P** 09 08 23.0 -1.2
comp=Z,4.3nm,0.8s,baz=64,slow=9.8,SNR=11
VAM Vamos 97.76 306 *eP* Pdif 09 08 26.3 +0.1
GVD Gavdhos 97.96 306 *eP* **P** 09 08 25.8 -1.2
comp=Z,27nm,0.7s
GRG Griva 97.99 312 *eP* **P** 09 08 25.4 -1.7
PSZ Piszkesteto 98.01 319 ||| *eP* Pdif 09 08 28.0 +0.9
DID Didima 98.10 309 *eP* **P** 09 08 26.1 -1.6
LIT Litokhoron 98.12 311 *eP* **P** 09 08 26.2 -1.5
NB2 NORSAR Subarra 98.23 334 P **P** 09 08 26.2 -1.5
comp=Z,7.8nm,0.9s,baz=67,slow=4.8
NB2 NORSAR Subarra 98.23 334 P **P** 09 08 26.2 -1.5
baz=67,slow=4.8
NOA NORSAR Array B 98.23 334 P **P** 09 08 26.4 -1.2
NOA NORSAR Array B 98.23 334 P **P** 09 08 26.4 -1.2
comp=Z,3.2nm,0.8s,baz=66,slow=4.6,SNR=11
NOA LR LR 09 59 13.6
comp=Z,688nm,20.6s,baz=65,slow=39
ANKY Antikythira Is 98.39 307 *eP* **P** 09 08 27.4 -1.5
VYHS Vyhne 98.53 320 *eP* Pdif 09 08 29.7 +0.4
VYHS pmax pmax
comp=Z,10.0nm,1.7s
VYHS Vyhne 98.53 320 PDIF Pdif 09 08 29.7 +0.4
OKC Ostrava-Krasne 98.57 322 *e*SKS **SKSac** 09 19 07.0 +5.8
OKC AMS AMS 09 54 50.0
comp=Z,500nm,18.4s
GUR Goura 98.70 309 *eP* **P** 09 08 27.9 -2.5
YKA Yellowknife Ar 98.75 24 P **P** 09 08 29.8 -0.1
YKA PKKPbc PKKPdf 09 25 15.8 +13
YKA Yellowknife Ar 98.75 24 P **P** 09 08 29.8 -0.1
comp=Z,0.9nm,0.6s,baz=299,slow=4.4,SNR=12
YKA PKKPbc PKKPdf 09 25 15.8 +13
comp=Z,0.4nm,0.8s,baz=116,slow=2.6,SNR=4.2
TRIZ Trizonia 98.82 310 *eP* **P** 09 08 29.1 -1.7
LAKA Lakka 98.92 310 *eP* **P** 09 08 29.8 -1.5
EFP Efpalio 98.93 310 *eP* **P** 09 08 29.3 -2.0
DYR Agios Nikonas 98.96 308 *eP* **P** 09 08 30.5 -1.0
RKT Rikitea 99.17 113 *e*SKSac **SKSac** 09 19 08.7 +3.5
comp=Z,520nm,31.2s
RKT *eLR* LR 09 40 56.6
comp=Z,2μm,42.8s
ITM Ithomi 99.19 309 *eP* **Pdif** 09 08 31.9 -0.6
PKSM Moragy 99.31 318 ||| *iP* **Pdif** 09 08 33.5 +0.7
PKSM Moragy 99.31 318 ||| *ePdiff* **Pdif** 09 08 33.7 +0.9
RLS Riolos of Patr 99.35 310 *eP* **Pdif** 09 08 32.6 -0.6
KSP Ksiaz 99.39 323 *eP* **Pdif** 09 08 33.5 +0.4
KSP MLR MLR
comp=Z,2μm,20.9s
PYL PYLOS 99.40 308 *eP* **Pdif** 09 08 31.1 -2.3
DPC Dobruska-Polom 99.53 323 *eP* **Pdif** 09 08 34.9 +1.1
DPC *e* 09 19 59.9
DPC MLR MLR
comp=Z,1μm,22.2s
DPC Dobruska-Polom 99.53 323 *e*PDIFF **Pdif** 09 08 34.9 +1.1
DPC *eS* **S** 09 19 59.9 -0.9
DPC AMS AMS 09 56 10.0
comp=Z,1μm,22.2s
LSZ Lusaka 99.59 255 P **Pdif** 09 08 34.3 -0.6
LSZ Lusaka 99.59 255 P **Pdif** 09 08 34.3 -0.6
comp=Z,4.8nm,0.7s,baz=56,slow=6.4
UPC Upice 99.66 323 *eP* **Pdif** 09 08 35.0 +0.7
UPC Upice 99.66 323 *e*PDIFF **Pdif** 09 08 35.0 +0.7
VLS Valsamata 100.00 310 *eP* **Pdif** 09 08 37.8 +1.7
TREC Trest 100.39 322 AMS AMS 09 56 10.0
comp=Z,600nm,20.8s
PVCC Panska Ves 100.52 323 AMS AMS 09 56 10.0
comp=Z,1μm,22.6s

PRU	Pruhonice	100.73	323	*e*P	Pdif	09 08 39.8	+0.8
PRU				MLR	MLR		
	comp=Z,900nm,21.1s						
PRU	Pruhonice	100.73	323	*e*PDIFF	Pdif	09 08 39.8	+0.8
PRU				AMS	AMS	09 58 40.0	
	comp=Z,900nm,21.1s						
BRG	Berggiesshubel	100.78	324	*e*PDIF	Pdif	09 08 39.8	+0.6
	comp=Z,10nm,1.1s						
BRG				SDIF		09 20 18.0	
BRG	Berggiesshubel	100.78	324	*e*P	Pdif	09 08 39.8	+0.6
BRG				S	Sdif	09 20 18.0	+6.9
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KOGS	Kog	100.82	319	*e*Pdiff	Pdif	09 08 39.6	+0.1
CLL	Collm	101.17	324	*e*P	Pdif	09 08 43.0	+2.0
CLL				*e*		09 12 52.0	
CLL				*e*S	Sdif	09 20 20.0	+5.7
CLL				MLR	MLR		
	comp=Z,800nm,21.1s						
CLL	Collm	101.17	324	*e*Pdif	Pdif	09 08 43.0	+2.0
CLL				*e*PP	PP	09 12 52.0	+1.8
CLL				*e*SKSac	SKSac	09 19 23.0	+9.1
CLL				*e*Sdif	Sdif	09 20 20.0	+5.7
CLL				*e*SS	SS	09 27 21.0	+6.4
CLL				*e*SSS	SSS	09 31 18.0	
CLL				L	L	09 57 00.0	
	comp=Z,800nm,21.1s						
KHC	Kasperske Hory	101.62	322	*e*P	Pdif	09 08 44.4	+1.3
KHC				*e*		09 19 18.4	
KHC				MLR	MLR		
	comp=Z,800nm,20.4s						
KHC	Kasperske Hory	101.62	322	*e*PDIFF	Pdif	09 08 44.4	+1.3
KHC				*e*SKS		09 19 18.4	
KHC				AMS	AMS	09 56 50.0	
	comp=Z,800nm,20.4s						
GERES	GERESS Array B	101.64	322	P	Pdif	09 08 43.4	+0.1
GERES	GERESS Array B	101.64	322	P	Pdif	09 08 43.4	+0.1
	comp=Z,1.7nm,0.8s,baz=77,slow=5.9,SNR=8.3						
BOJS	Bojanci	101.78	318	*e*Pdiff	Pdif	09 08 44.4	+0.6
LJU	Ljubljana	102.08	319	*e*Pdiff	Pdif	09 08 45.6	+0.4
SNAA	Sanae	105.97	195	Pdif	Pdif	09 09 03.4	+1.5
SNAA	Sanae	105.97	195	Pdiff	Pdif	09 09 03.4	+1.5
	comp=Z,0.2nm,0.7s,baz=176,slow=13,SNR=4.4						
NVAR	Mina Array Bea	106.27	48	PKKPbc	PKKPbc	09 24 39.1	+1.4
NVAR	Mina Array Bea	106.27	48	PKKPbc	PKKPbc	09 24 39.1	+1.4
	comp=Z,0.3nm,0.3s,baz=132,slow=5.0,SNR=3.7						
LPG	La Plagne	107.31	320	*e*PP	PP	09 13 34.1	-2.3
	comp=Z,68nm,1.6s						
LPL	La Plagne	107.32	320	*e*PP	PP	09 13 33.9	-2.4
	comp=Z,38nm,1.3s						
PDAR	Pinedale Array	110.67	41	PKKPbc	PKKPbc	09 24 22.4	-1.6
PDAR				PKKPab	**PKKPab**	**09 24 31.9**	**-2.3**
PDAR	Pinedale Array	110.67	41	PKKPbc	PKKPbc	09 24 22.4	-1.6
	comp=Z,0.4nm,0.8s,baz=119,slow=5.2,SNR=2.4						
PDAR				PKKPab	**PKKPab**	**09 24 31.9**	**-2.3**
	comp=Z,1.4nm,0.8s,baz=122,slow=4.5,SNR=9.7						
P25A	Willow Gulch B	115.81	42	P	PKPdf	09 13 33.7	+0.2
	baz=116						
Z22A	Elephant Butte	116.75	49	P	PKPdf	09 13 36.0	+0.5
	baz=117						
V24A	Rampart Ranch,	116.89	46	P	PKPdf	09 13 35.7	-0.1
	baz=117						
V25A	Rancho No Teng	117.30	46	P	PKPdf	09 13 36.2	-0.4
	baz=117						
V26A	Tequesquite Ra	117.91	45	P	PKPdf	09 13 38.2	+0.6
	baz=118						
R28A	Tribune	117.98	42	P	PKPdf	09 13 37.7	+0.1
	baz=118						
MVO	Moncorvo	118.16	322	*i* P	PKKPdf	09 24 28.1	+1.5
224A	Cornudas Mount	118.35	50	P	PKPdf	09 13 38.3	-0.3
	baz=118						
PGAV	Gavieira, Arco	118.44	323	*i* P	PKKPdf	09 24 31.8	+5.7
MTE	Manteigas	118.92	322	*i* P	PKKPdf	09 24 20.7	-4.4
325A	Bean Ranch, Si	119.08	50	P	PKPdf	09 13 40.7	+0.6
	baz=119						
425A	Indio Mountain	119.33	51	P	PKPdf	09 13 40.2	-0.2
	baz=119						
PMRV	Marv??o	119.39	321	*i* P	PKKPdf	09 24 28.1	+3.9
Z27A	Tatum	119.52	48	P	PKPdf	09 13 41.0	+0.3
	baz=119						
SCHQ	Schefferville	119.82	9	*e*PKPdf	PKPdf	09 13 41.0	+0.4
SCHQ				PKP	PKPdf	09 13 41.2	+0.7
SCHQ	Schefferville	119.82	9	PKP	PKPdf	09 13 41.2	+0.7
	comp=Z,3.0nm,0.6s,baz=354,slow=2.6,SNR=10						
X29A	Tulia	120.06	46	P	PKPdf	09 13 42.3	+0.5
	baz=120						
Z28A	Tucker Farm, M	120.14	47	P	PKPdf	09 13 42.0	0.0
	baz=120						
526A	Mary Lane Ranc	120.34	51	P	PKPdf	09 13 42.8	+0.3
	baz=120						
626A	Big Bend Ranch	120.53	52	P	PKPdf	09 13 42.4	-0.4
	baz=120						
527A	Woodward Ranch	120.67	51	P	PKPdf	09 13 43.6	+0.5
	baz=121						
328A	Wristen Ranch,	120.73	49	P	PKPdf	09 13 43.7	+0.7
	baz=121						
PVAQ	Vaqueiros	120.75	319	*i* P	SP	09 24 54.1	-0.6
129A	Stewart Farms,	120.84	48	P	PKPdf	09 13 43.5	+0.2
	baz=121						
428A	Kincaid Ranch,	121.12	50	P	PKPdf	09 13 44.6	+0.7
	baz=121						
528A	Cox Ranch, San	121.30	51	P	PKPdf	09 13 45.3	+1.0
	baz=121						
429A	Davenport Ranc	121.78	50	P	PKPdf	09 13 45.8	+0.7
	baz=122						
430A	Baggett Ranch,	122.20	49	P	PKPdf	09 13 46.7	+0.8
	baz=122						
Z32A	Haskell	122.23	46	P	PKPdf	09 13 46.4	+0.5
	baz=122						
530A	J-C Ranch, Com	122.42	50	P	PKPdf	09 13 47.0	+0.7
	baz=122						
331A	San Angelo	122.55	48	P	PKPdf	09 13 47.3	+0.7
	baz=122						
431A	Sonora	122.72	49	P	PKPdf	09 13 47.4	+0.5
	baz=123						
TOA0	Torodi Ar. Sit	122.88	289	*e*PKPdf	PKPdf	09 13 47.2	-0.3
TORD	Torodi Ar. Bea	122.88	289	PKP	PKPdf	09 13 46.7	-0.8
TORD				PKKPbc	PKKPbc	09 23 39.1	-0.6
TORD	Torodi Ar. Bea	122.88	289	PKP	PKPdf	09 13 46.7	-0.8
	comp=Z,6.3nm,0.9s,baz=51,slow=1.4,SNR=26						
TORD				PKKPbc	PKKPbc	09 23 39.1	-0.6
	comp=Z,1.0nm,0.6s,baz=275,slow=3.4,SNR=15						
531A	Rocksprings	123.02	50	P	PKPdf	09 13 47.9	+0.4
	baz=123						
631A	Perdido Creek	123.35	50	P	PKPdf	09 13 48.1	0.0
	baz=123						
JCT	Junction City	123.43	49	*e*PKIKP	PKPdf	09 13 48.9	+0.6
JCT	Junction City	123.43	49	*e*PKPdf	PKPdf	09 13 48.9	+0.6
JCT	Junction City	123.43	49	P	PKPdf	09 13 48.6	+0.4
	baz=123						
532A	Rocksprings	123.52	49	P	PKPdf	09 13 48.8	+0.3
	baz=123						
MIAR	Mount Ida	125.60	41	*e*PKIKP	PKPdf	09 13 52.8	+0.6
MIAR	Mount Ida	125.60	41	*e*PKPdf	PKPdf	09 13 52.8	+0.6
PLAL	Pickwick Lake	128.79	37	*e*PKPdf	PKPdf	09 13 59.6	+1.3
BINY	Binghamton	129.09	22	*e*PKPdf	PKPdf	09 13 59.2	+0.5
SSPA	Standing Stone	129.68	25	*e*PKPdf	PKPdf	09 14 01.4	+1.5
DBIC	Dimbokro	130.62	283	PKP	PKPdf	09 14 02.2	-0.1
DBIC				SKPbc	SKPab	09 17 23.1	+3.0
DBIC	Dimbokro	130.62	283	PKP	PKPdf	09 14 02.2	-0.1
	comp=Z,9.4nm,1.0s,baz=63,slow=2.0,SNR=5.9						
DBIC				SKPbc	SKPab	09 17 23.1	+3.0
	comp=Z,13nm,1.0s,baz=91,slow=3.7,SNR=7.9						
TKL	Tuckaleechee C	130.78	33	*e*PKPdf	PKPdf	09 14 01.6	-0.5
LIC	Lamto	130.88	282	*e*PKIKP	PKPdf	09 14 04.2	+1.4
LIC	Lamto	130.88	282	*e*PKPdf	PKPdf	09 14 04.2	+1.4
PLCA	Paso Flores	140.61	159	PKPpre	PKPpre	09 14 16.2	
PLCA	Paso Flores	140.61	159	PKhKP	PKPpre	09 14 16.2	
	comp=Z,3.4nm,0.9s,baz=225,slow=13,SNR=4.6						
JTS	JuntasAbangare	145.02	65	*e*PKPbc	PKPdf	09 14 28.7	0.0
TRQA	Tornquist	145.59	167	*e*PKPdf	PKPdf	09 14 29.1	0.0
LMGC	Las Mercedes	146.12	43	*e*	PKPab	09 14 32.8	+0.7
RCC	Rio Carpintero	147.05	42	*e*	PKPbc	09 14 34.9	+0.8
CFAA	Coronel Fontan	149.47	154	PKPbc	PKPbc	09 14 40.6	+0.3
CFAA	Coronel Fontan	149.47	154	PKPbc	PKPbc	09 14 40.6	+0.3
	comp=Z,2.2nm,0.5s,baz=210,slow=2.8,SNR=49						
BCIP	Isla Barro Col	150.07	63	*e*PKPdf	PKPdf	09 14 35.9	-1.2
LCO	Las Campanas	150.40	147	*e*PKPbc	PKPbc	09 14 43.5	+0.7
SDDR	Presa de Saban	150.59	37	*e*PKPbc	PKPbc	09 14 43.7	+0.4
OTAV	Otavalo	154.21	80	*e*PKPdf	PKPdf	09 14 43.5	-0.3
OTAV				*e*PKPbc	PKPbc	09 14 52.1	0.0
CPUP	Villa Florida	157.88	170	PKP	PKPdf	09 14 48.8	+1.1
CPUP				PKPab	PKPab	09 15 18.6	-2.0
CPUP	Villa Florida	157.88	170	PKP	PKPdf	09 14 48.8	+1.1
	comp=Z,1.2nm,0.6s,baz=270,slow=20,SNR=5.1						
CPUP				PKPab	PKPab	09 15 18.6	-2.0
	comp=Z,5.1nm,0.8s,baz=171,slow=3.9,SNR=7.0						
LPAZ	La Paz	161.11	130	PKP	PKPdf	09 14 53.3	+0.9
LPAZ				*e*PKPdf	PKPdf	09 14 53.8	+1.4
LPAZ	La Paz	161.11	130	PKP	PKPdf	09 14 53.3	+0.9
	comp=Z,2.7nm,0.9s,baz=41,slow=3.4,SNR=8.2						
RCBR	Riachuelo	162.85	265	PKPab	PKPab	09 15 43.1	+0.1
RCBR	Riachuelo	162.85	265	PKPab	PKPab	09 15 43.1	+0.1
	comp=Z,6.3nm,0.7s,baz=100,slow=7.3,SNR=4.7						
SIV	San Ignacio	166.10	146	PKP	PKPdf	09 14 57.8	+1.4
SIV	San Ignacio	166.10	146	PKP	PKPdf	09 14 57.8	+1.4
	comp=Z,3.5nm,1.0s,baz=202,slow=1.6,SNR=7.3						
SAML	Samuel	169.01	114	*e*PKPdf	PKPdf	09 14 59.0	+0.5

IDC 13 09:03:34.9±31.0, 20°.64S×177°.78W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.8/18, mbtmp4.2/4, Error ellipse: s-maj=599.7km s-min=151.4km az=89.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	37.91	244	P	P	09 10 54.0	-0.1
	5.0nm,0.9s,baz=92,slow=12,SNR=4.5						
ASAR	Alice Springs	44.69	257	P	P	09 11 49.8	-0.2
	2.8nm,0.8s,baz=95,slow=8.3,SNR=16						
WRA	Warramunga Arr	44.79	262	P	P	09 11 50.9	+0.1
	1.0nm,0.3s,baz=98,slow=7.7,SNR=53						
FITZ	Fitzroy Crossi	53.22	262	P	P	09 12 55.0	-0.4
	3.6nm,1.0s,baz=118,slow=9.1,SNR=5.3						

IDC 13 09:13:54.4±1.8, 2°.24N×128°.45E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/21, mbtmp3.7/4, Error ellipse: s-maj=128.0km s-min=22.5km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.79	166	P	P	09 18 58.6	-0.3
	0.8nm,0.6s,baz=345,slow=11,SNR=16						
ASAR	Alice Springs	26.29	169	P	P	09 19 32.1	+0.2
	0.3nm,0.6s,baz=354,slow=7.8,SNR=8.6						
STKA	Stephens Creek	36.15	161	P	P	09 20 58.2	-0.4
	0.8nm,0.5s,baz=344,slow=13,SNR=3.7						
MKAR	Makanchi Array	59.76	325	P	P	09 24 01.3	+0.1
	1.0nm,0.5s,baz=116,slow=8.5,SNR=12						

*ISK **13** 09:28:07.7, 39°.04N×42°.05E, h9km, MD3.0*
*DDA **13** 09:28:09.0, 39°.12N×42°.08E, h25km, MD2.8*
*CSEM **13** 09:28:08.5±0.2, 39°.13N×42°.06E, h12km, MD3.0, Error ellipse: s-maj=5.6km s-min=3.9km az=29.0*
*ISCJB **13** 09:28:08.5±0.6, 39°.14N±0°.03×42°.05E±0°.04, h3km±6km, Error ellipse: s-maj=5.2km s-min=4.8km az=16.9*

ISC 13 09:28:08.7±1.1, 39°.11N±0°.03×42°.06E±0°.03, h11km±10km, n26, σ0s55/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRTB	Varto-Mus	0.47	276	*e*PG	Pg	09 28 17.6	-0.4
VRTB				*e*SG	Sg	09 28 24.6	+0.4
VRTB	Varto-Mus	0.47	276	*e*Pg	Pg	09 28 17.6	-0.4
VRTB				*e*Sg	Sg	09 28 24.6	+0.4
TATV	Tatvan	0.62	165	*i* P	Pg	09 28 20.8	-0.1
TATV				*i* S	Sb	09 28 31.5	+0.9
TATV	Tatvan	0.62	165	*i* P	Pg	09 28 20.8	-0.1
TATV				*i* S	Sb	09 28 31.5	+0.9
TUTA	Tutak	0.65	64	*i* P	Pg	09 28 21.3	-0.1
TUTA				*i* S	Sb	09 28 31.5	0.0
TUTA	Tutak	0.65	64	*i* P	Pg	09 28 21.3	-0.1
TUTA				*i* S	Sb	09 28 31.5	0.0
ERZM	Erzurum	0.96	326	*i* P	Pb	09 28 27.3	-0.2
ERZM	Erzurum	0.96	326	*i* P	Pb	09 28 27.3	-0.2
EZM	Erzurum	0.96	326	*e*PG	Pg	09 28 27.3	+0.1
BTMT	Batman	1.02	206	*e*PN	Pn	09 28 29.0	0.0
BTMT	Batman	1.02	206	*e*Pn	Pn	09 28 29.0	0.0
BNGB	Bing¶ll	1.08	264	*e*PG	Pb	09 28 28.4	-1.1
GEVA	Gevas	1.12	135	*e*P	Pb	09 28 29.9	-0.3
GEVA				*i* S	Sn	09 28 46.1	+0.1
GEVA	Gevas	1.12	135	*e*P	Pb	09 28 29.9	-0.3
GEVA				*i* S	Sn	09 28 46.1	+0.1
VANB	Van	1.16	116	*e*PN	Pb	09 28 30.1	-0.7
VANB	Van	1.16	116	*e*Pn	Pb	09 28 30.1	-0.7
BEST	Besiri	1.37	207	*i* P	Pg	09 28 34.9	-0.1
BEST				*i* S	Sg	09 28 54.0	+1.2
CLDR	Caldiran	1.45	88	*e*PN	Pn	09 28 34.8	-0.3
CLDR	Caldiran	1.45	88	*e*Pn	Pn	09 28 34.8	-0.3
DDEM	Demirkent	1.79	352	*e*P	Pb	09 28 41.4	-0.3
BAYT	Ayd¨–ntepe-Bay	1.96	311	*e*PN	Pn	09 28 42.8	+0.8
BAYT	Ayd¨–ntepe-Bay	1.96	311	*e*Pn	Pn	09 28 42.8	+0.8
DAGI	Agillar	1.97	357	*e*P	Pb	09 28 43.7	-0.9
MARD	Mardin	2.06	210	*i* P	Pb	09 28 45.2	-1.0
MARD				*i* S	Sb	09 29 11.8	0.0
PTK	Pertek	2.09	265	*e*PN	Pn	09 28 43.6	-0.3
PTK	Pertek	2.09	265	*e*Pn	Pn	09 28 43.6	-0.3

*ISK **13** 09:37:25.4, 39°.89N×28°.80E, h10km, MD2.9*
*ISCJB **13** 09:37:25.9±0.4, 39°.94N±0°.02×28°.80E±0°.03, h3km±4km, Error ellipse: s-maj=4.4km s-min=3.5km az=136.4*
*DDA **13** 09:37:26.7, 39°.91N×28°.85E, h9km, MD2.8*
*CSEM **13** 09:37:26.2±0.1, 39°.92N×28°.82E, h10km, MD2.9, Error ellipse: s-maj=2.9km s-min=2.5km az=139.0*

ISC 13 09:37:26.4±1.0, 39°.91N±0°.02×28°.80E±0°.02, h7km±9km, n76, σ0s74/88, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORLT	Orhaneli	0.15	27	*e*PG	Pg	09 37 29.4	-0.2
ORLT	Orhaneli	0.15	27	*e*Pg	Pg	09 37 29.4	-0.2
DST	Dursunbey	0.34	205	*e*PG	Pg	09 37 31.9	-1.0
DST				*e*SG	Sg	09 37 37.2	-0.2
DST	Dursunbey	0.34	205	*e*Pg	Pg	09 37 31.9	-1.0
DST				*e*Sg	Sg	09 37 37.2	-0.2
ULDT	Uludag	0.35	47	*i* P	Pg	09 37 32.6	-0.6
ULDT	Uludag	0.35	47	*i* P	Pg	09 37 32.6	-0.6
DURS	Dursunbey	0.40	220	*i* P	Pg	09 37 34.4	+0.3
DURS				*i* S	Sg	09 37 40.8	+1.4
DURS	Dursunbey	0.40	220	*i* P	Pg	09 37 34.4	+0.3
DURS				*i* S	Sg	09 37 40.8	+1.4
MDNY	Mudanya-Bursa	0.47	8	*e*PG	Pg	09 37 35.4	0.0
MDNY	Mudanya-Bursa	0.47	8	*e*Pg	Pg	09 37 35.4	0.0
KCTX	Karacabey (Bur	0.49	316	*e*PG	Pg	09 37 35.6	-0.3
KCTX	Karacabey (Bur	0.49	316	*e*Pg	Pg	09 37 35.7	-0.3
GEMT	Gemlik	0.60	29	*e*PG	Pg	09 37 38.0	0.0
GEMT	Gemlik	0.60	29	*e*Pg	Pg	09 37 38.0	0.0
ARMT	Armutlu	0.66	4	*e*PG	Pg	09 37 38.3	-0.8
ARMT	Armutlu	0.66	4	*e*Pg	Pg	09 37 38.3	-0.8
IZI	Iznik	0.67	50	*e*PG	Pg	09 37 38.6	-0.7
IZI	Iznik	0.67	50	*e*Pg	Pg	09 37 38.6	-0.7
TVSB	Tavsanli	0.68	132	*e*PG	Pg	09 37 39.1	-0.4
TVSB	Tavsanli	0.68	132	*e*Pg	Pg	09 37 39.1	-0.4
YLV	Yalova	0.79	33	*e*PG	Pg	09 37 41.5	-0.1
YLV	Yalova	0.79	33	*e*Pg	Pg	09 37 41.5	-0.1
BNT	Bandirma	0.81	304	*e*PG	Pb	09 37 42.8	0.0
BNT	Bandirma	0.81	304	*e*Pg	Pb	09 37 42.8	0.0
CAVI	Cavuskoy	0.85	69	*e*PG	Pg	09 37 42.0	-0.7
CAVI	Cavuskoy	0.85	69	*e*Pg	Pg	09 37 42.0	-0.7
DEMI	Demirci	0.87	185	*i* P	Pn	09 37 44.9	-0.2
DEMI				*i* S	Sn	09 37 59.6	+1.6
DEMI	Demirci	0.87	185	*i* P	Pn	09 37 44.9	-0.2
GONE	Gonen-Balikesi	0.87	280	*e*PG	Pg	09 37 42.8	-0.3
GONE	Gonen-Balikesi	0.87	280	*e*Pg	Pg	09 37 42.8	-0.3
ADVT	Abdulvahap	0.89	53	*e*PG	Pg	09 37 43.6	+0.2
ADVT	Abdulvahap	0.89	53	*e*Pg	Pg	09 37 43.6	+0.2
BALY	Balya	0.93	260	*i* P	Pb	09 37 44.7	-0.1
BALY				*i* S	Sn	09 37 58.8	-0.7
BALY	Balya	0.93	260	*i* P	Pb	09 37 44.7	-0.1
BALY				*i* S	Sn	09 37 58.8	-0.7
GDZ	Gediz	0.97	147	*i* P	Pb	09 37 45.6	0.0
GDZ				*i* S	Sn	09 38 02.1	+1.4
GDZ	Gediz	0.97	147	*i* P	Pb	09 37 45.6	0.0
GDZ				*i* S	Sn	09 38 02.1	+1.4
BUY	Buyukada	0.97	14	*e*PG	Pg	09 37 45.2	+0.1
BUY	Buyukada	0.97	14	*e*Pg	Pg	09 37 45.2	+0.1
HRT	Hereke	1.13	36	*e*PN	Pb	09 37 48.1	-0.1
HRT	Hereke	1.13	36	*e*Pn	Pb	09 37 48.1	-0.1
MRMT	Marmara Adasi	1.16	307	*e*PN	Pg	09 37 48.1	-0.5
MRMT	Marmara Adasi	1.16	307	*e*Pn	Pg	09 37 48.1	-0.5
ISK	Istanbul-Kandi	1.17	9	*e*PN	Pg	09 37 48.4	-0.5
ISK	Istanbul-Kandi	1.17	9	*e*Pn	Pg	09 37 48.4	-0.5
KRBG	Karabiga-Canak	1.25	293	*e*PN	Pn	09 37 49.7	-0.6
KRBG	Karabiga-Canak	1.25	293	*e*Pn	Pn	09 37 49.7	-0.6
BORA	Eskisehir	1.27	91	*i* P	Pn	09 37 49.5	-1.1
BORA				*i* S	Sn	09 38 08.2	+0.3
BORA	Eskisehir	1.27	91	*i* P	Pn	09 37 49.5	-1.1
BORA				*i* S	Sn	09 38 08.2	+0.3
BGKT	Bogazkoy	1.27	359	PN	Pn	09 37 50.0	-0.6
BGKT	Bogazkoy	1.27	359	*i* Pn	Pn	09 37 50.0	-0.6
AKHS	Akhisar	1.28	217	*i* P	Pg	09 37 51.1	+0.1
AKHS	Akhisar	1.28	217	*i* P	Pg	09 37 51.1	+0.1
ALT	Altintas	1.32	130	*e*PN	Pn	09 37 49.4	-1.9
ALT	Altintas	1.32	130	*e*Pn	Pn	09 37 49.4	-1.9
CTKS	Kestanelik-??a	1.35	350	*e*PN	Pn	09 37 51.3	-0.3
CTKS	Kestanelik-??a	1.35	350	*e*Pn	Pn	09 37 51.3	-0.3
KULA	Kula-Manisa	1.40	185	*e*PN	Pn	09 37 51.3	-1.1
KULA	Kula-Manisa	1.40	185	*e*Pn	Pn	09 37 51.3	-1.1
SILT	Sile	1.40	27	*e*PN	Pn	09 37 51.8	-0.5
SILT	Sile	1.40	27	*e*Pn	Pn	09 37 51.8	-0.5
GULT	Gulveren	1.41	68	*e*PN	Pn	09 37 51.8	-0.8
GULT	Gulveren	1.41	68	*e*Pn	Pn	09 37 51.8	-0.8
MFT	Murefte	1.46	308	*e*PN	Pn	09 37 53.1	-0.1
MFT	Murefte	1.46	308	*e*Pn	Pn	09 37 53.1	-0.1
CRLT	Corlu	1.47	327	*e*PN	Pn	09 37 52.3	-0.9
CRLT	Corlu	1.47	327	*e*Pn	Pn	09 37 52.3	-0.9
RKY	Sarkoy-Tekirda	1.47	303	*e*PN	Pn	09 37 52.6	-0.7
RKY	Sarkoy-Tekirda	1.47	303	*e*Pn	Pn	09 37 52.6	-0.7
SEYT	Eskypehyr	1.62	103	*i* P	Pb	09 37 56.6	-0.1
SEYT				*i* S	Sg	09 38 21.0	+2.4
SEYT	Eskypehyr	1.62	103	*i* P	Pb	09 37 56.6	-0.1
LPK	Lapseki	1.63	287	*e*PN	Pn	09 37 54.7	-0.8
LPK	Lapseki	1.63	287	*e*Pn	Pn	09 37 54.7	-0.8
GELI	Tayfur-Gelibol	1.85	286	*e*PN	Pn	09 37 58.2	-0.3
GELI	Tayfur-Gelibol	1.85	286	*e*Pn	Pn	09 37 58.2	-0.3
MDUB	Mudurnu	1.92	72	*e*PN	Pn	09 37 59.2	-0.3
MDUB	Mudurnu	1.92	72	*e*Pn	Pn	09 37 59.2	-0.3

*CSEM **13** 09:54:58.2, 34°.45N×36°.77E, h0km, ML1.9, After NSSC*

NSSC 13 09:54:58.2±1.1, 34°.45N×36°.77E, h0km±5km, MD1.3, ML1.8, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HAWK	Haweek	0.31	283	*e*P	Pg	09 55 03.0	-1.3
HAWK				*e*S	Sg	09 55 08.2	-0.3
HAWK				AML	AML	09 55 10.5	
	comp=E,880nm,0.4s						
HAWK				AML	AML	09 55 10.5	
	comp=N,472nm,0.4s						
HAWK	Haweek	0.31	283	*e*P	Pg	09 55 03.0	-1.4
	SNR=93						
HAWK				*e*S	Sg	09 55 08.2	-0.3
	comp=N,472nm,0.4s,SNR=59						
BIDA	Albida	0.68	327	*e*P	Pg	09 55 11.8	+0.5
BIDA				*e*S	Sb	09 55 21.9	-1.1
BIDA				AML	AML	09 55 25.1	
	comp=N,38nm,0.3s						
BIDA				AML	AML	09 55 27.6	
	comp=E,144nm,0.4s						
BIDA	Albida	0.68	327	*e*P	Pb	09 55 12.2	-0.8
BIDA				*e*S	Sb	09 55 22.0	-1.0
BIDA				AML	AML	09 55 25.1	
	comp=N,36nm,0.3s						
BIDA				AML	AML	09 55 27.6	
	comp=E,143nm,0.4s						
BIDA	Albida	0.68	327	*e*P	Pg	09 55 11.8	+0.5
	SNR=75						
BIDA				*e*S	Sb	09 55 21.9	-1.1
	comp=E,144nm,0.4s,SNR=59						
BIDA	Albida	0.68	327	*e*P	Pb	09 55 12.2	-0.8
	SNR=75						
BIDA				*e*S	Sb	09 55 22.0	-1.0
	comp=E,143nm,0.4s,SNR=59						
BRBR	Barbar	1.24	214	*e*P	Pg	09 55 21.2	-1.1
BRBR				*e*S	Sb	09 55

CIRR				*i* S		Sn	10 30 42.4	+2.8
LGNR	**Loginova**	**0.90**	**305**	*e*P		Pn	10 30 28.8	+1.5
LGNR				*i* S		Sn	10 30 42.6	+2.5
BZMR	**Bezymannaya**	**0.93**	**294**	*e*P		Pn	10 30 28.6	+1.1
BZMR				*i* S		Sn	10 30 42.2	+1.8
BZWR	**Bezymannyi-We**	**0.94**	**296**	*e*P		Pn	10 30 28.9	+1.3
BZWR				*i* S		Sn	10 30 42.5	+1.8
KIRR	**Kirishev**	**1.01**	**293**	*e*P		Pn	10 30 29.9	+1.3
KIRR				*i* S		Sn	10 30 44.6	+2.3
KMNR	**Kamenistaya**	**1.02**	**281**	*e*P		Pn	10 30 30.1	+1.6
KMNR				*i* S		Sn	10 30 44.2	+1.9
MKZ	**Mys Kozlova**	**1.03**	**189**	*e*P		Pn	10 30 29.5	+1.0
MKZ				*i* S		Sn	10 30 43.8	+1.6
KRSR	**Krestovskiy**	**1.04**	**309**	*e*P		Pn	10 30 29.8	+1.0
KRSR				*i* S		Sn	10 30 44.2	+1.4
SMKR	**Semkarok**	**1.06**	**344**	*e*P		Pn	10 30 30.6	+1.6
SMKR				*i* S		Sn	10 30 45.6	+2.4
KLY	**Klyuchi**	**1.06**	**315**	*e*P		Pn	10 30 29.3	+0.3
KLY				*i* S		Sn	10 30 43.6	+0.5
KPT	**Kopyto**	**1.08**	**292**	*e*P		Pn	10 30 30.8	+1.5
KPT				*i* S		Sn	10 30 46.3	+2.6
BDR	**Baidarnaya**	**1.09**	**336**	*e*P		Pn	10 30 31.4	+1.9
BDR				*i* S		Sn	10 30 46.3	+2.2
TUMR	**Tumrok**	**1.09**	**256**	*e*P		Pn	10 30 31.1	+1.5
TUMR				*i* S		Sn	10 30 46.1	+2.0
SRKR	**Sorokina**	**1.18**	**337**	*e*P		Pn	10 30 32.4	+1.7
SRKR				*i* S		Sn	10 30 48.1	+2.0
KOZ	**Kozyrevsk**	**1.30**	**293**	*e*P		Pn	10 30 34.1	+2.0
KOZ				*i* S		Sn	10 30 51.9	+3.3
SRDR	**Sredinnyy**	**1.49**	**301**	*e*P		Pn	10 30 36.1	+1.4
SRDR				*i* S		Sn	10 30 55.8	+2.6
ESO	**Esso**	**1.90**	**282**	*e*P		Pn	10 30 41.0	+0.8
KII	**Karymskiy**	**2.13**	**225**	*e*P		Pn	10 30 45.3	+1.9
KII				*i* S		Sn	10 31 11.0	+2.2
BKI	**Bering**	**2.30**	**98**	*e*P		Pn	10 30 47.1	+1.6
BKI				*i* S		Sn	10 31 13.2	+0.6
SPN	**Mys Shipunski**	**2.73**	**206**	*e*P		Pn	10 30 52.3	+0.8
SPN				*i* S		Sn	10 31 23.2	-0.1
NLC	**Nalytchevo**	**2.86**	**214**	*e*P		Pn	10 30 55.2	+2.0
NLC				*i* S		Sn	10 31 28.1	+1.7
SDLR	**Sedlovina**	**2.93**	**220**	*e*P		Pn	10 30 56.4	+2.1
SDLR				*i* S		Sn	10 31 30.3	+1.9
KRER	**Koryakskii**	**2.96**	**221**	*e*P		Pn	10 30 57.5	+2.7
KRER				*i* S		Sn	10 31 31.3	+2.0
SMAR	**Somma**	**2.97**	**220**	*e*P		Pn	10 30 57.2	+2.2
SMAR				*i* S		Sn	10 31 31.8	+2.1
AVH	**Avacha**	**2.99**	**221**	*e*P		Pn	10 30 57.7	+2.6
AVH				*i* S		Sn	10 31 32.2	+2.3
UGLR	**Uglovaya**	**3.01**	**219**	*e*P		Pn	10 30 57.8	+2.5
UGLR				*i* S		Sn	10 31 32.2	+1.9
KOK	**Koryaka**	**3.01**	**222**	*e*P		Pn	10 30 58.1	+2.7
KOK				*i* S		Sn	10 31 33.3	+2.9
GNL	**Ganaly**	**3.02**	**233**	*e*P		Pn	10 30 57.7	+2.2
PET	**Petropavlovsk**	**3.22**	**219**	*e*P		Pn	10 31 01.0	+3.0
PET				*i* S		Sn	10 31 38.0	+2.9
RUS	**Russkaya**	**3.76**	**215**	*e*P		Pn	10 31 07.9	+2.5
RUS				*i* S		Sn	10 31 50.1	+1.8
MTVR	**Mutnovka**	**3.83**	**218**	*e*P		Pn	10 31 09.4	+2.8
MTVR				*i* S		Sn	10 31 52.7	+2.3
ASAK	**Asacha**	**4.01**	**219**	*e*P		Pn	10 31 12.3	+3.3
ASAK				*i* S		Sn	10 31 56.7	+2.0

IDC 13 10:31:48.1±2.8, 19°56S×178°08W, h459km±42km, mb3.1/4, mb1 3.3/5, mb1mx3.1/19, mbtmp3.2/5, Error ellipse: s-maj=133.8km s-min=19.7km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.25**	**48**	P	P	10 33 47.6	+1.1
	5.2nm,0.3s,baz=225,slow=5.7,SNR=11						
AFI				S	S	10 35 22.7	-0.8
	5.5nm,0.3s,baz=209,slow=15,SNR=7.1						
URZ	**Urewera**	**19.10**	**192**	S	S	10 38 55.2	+4.9
	1.7nm,0.3s,baz=276,slow=22,SNR=12						
STKA	**Stephens Creek**	**38.14**	**243**	P	P	10 38 25.9	-0.8
	3.8nm,1.0s,baz=78,slow=10.0,SNR=5.8						
WRA	**Warramunga Arr**	**44.66**	**261**	P	P	10 39 18.9	0.0
	0.6nm,0.4s,baz=96,slow=7.7,SNR=34						
ASAR	**Alice Springs**	**44.67**	**256**	P	P	10 39 18.9	0.0
	2.4nm,0.7s,baz=88,slow=8.6,SNR=24						
ILAR	**Eielson Array**	**87.42**	**13**	P	P	10 43 45.1	0.0
	0.3nm,0.6s,baz=214,slow=5.9,SNR=3.4						

IDC 13 11:18:55.0±2.1, 17°74S×176°54W, h440km±39km, mb2.9/4, mb1 3.1/5, mb1mx2.9/19, mbtmp3.0/5, Error ellipse: s-maj=134.9km s-min=23.6km az=140.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.96**	**51**	P	P	11 20 29.0	+0.2
	2.4nm,0.3s,baz=229,slow=9.3,SNR=3.9						
AFI				S	S	11 21 45.5	+0.3
	1.1nm,0.3s,baz=197,slow=19,SNR=2.4						
STKA	**Stephens Creek**	**40.27**	**241**	P	P	11 25 51.9	-0.4
	1.1nm,0.6s,baz=90,slow=11,SNR=2.5						
WRA	**Warramunga Arr**	**46.41**	**259**	P	P	11 26 40.2	-0.5
	0.2nm,0.3s,baz=96,slow=7.6,SNR=17						
ASAR	**Alice Springs**	**46.54**	**254**	P	P	11 26 42.1	+0.4
	1.8nm,0.5s,baz=89,slow=7.8,SNR=46						
ILAR	**Eielson Array**	**85.34**	**12**	P	P	11 30 43.8	-0.1
	0.1nm,0.6s,baz=224,slow=5.3,SNR=4.4						

IDC 13 11:55:59.6±3.3, 4°61S×152°94E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/19, mbtmp3.6/5, Error ellipse: s-maj=103.2km s-min=27.1km az=110.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.68**	**228**	P	P	12 01 13.5	+0.4
	0.4nm,0.3s,baz=52,slow=9.6,SNR=8.7						
ASAR	**Alice Springs**	**26.39**	**222**	P	P	12 01 38.0	0.0
	0.3nm,0.8s,baz=55,slow=8.7,SNR=2.9						
FITZ	**Fitzroy Crossi**	**29.88**	**241**	P	P	12 02 09.3	+0.1
	2.5nm,0.9s,baz=71,slow=8.2,SNR=9.3						
SONM	**Songino Array**	**66.24**	**328**	P	P	12 06 50.0	+0.3
	0.2nm,0.5s,baz=147,slow=5.3,SNR=2.5						
MKAR	**Makanchi Array**	**80.28**	**319**	P	P	12 08 12.7	+0.2
	0.4nm,0.6s,baz=93,slow=5.8,SNR=4.6						
TORD	**Torodi Ar. Bea**	**150.38**	**289**	PKPbc	PKPbc	12 15 52.7	-1.4
	0.8nm,0.7s,baz=75,slow=2.8,SNR=5.5						

IDC 13 12:09:34.7±2.1, 7°22S×156°83E, h0km, mb4.1/6, mb1 4.3/7, mb1mx3.9/19, mbtmp4.1/7, ML3.7/1, MS3.4/2, Ms1 3.3/2, ms1mx2.8/24, Error ellipse: s-maj=61.8km s-min=26.6km az=115.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**9.81**	**257**	Pn	Pn	12 11 59.2	+2.0
	3.3nm,0.3s,baz=70,slow=12,SNR=11						
CTA	**Charters Tower**	**16.39**	**218**	LR	LR	12 18 14.4	
	comp=Z,81nm,18.2s,baz=228,slow=32						
WRA	**Warramunga Arr**	**25.21**	**238**	P	P	12 15 02.0	-0.5
	4.8nm,0.7s,baz=60,slow=9.8,SNR=40						
ASAR	**Alice Springs**	**27.41**	**231**	P	P	12 15 22.4	-0.1
	0.9nm,0.6s,baz=58,slow=9.8,SNR=16						
ASAR				PcP	PcP	12 18 42.9	+1.4
	0.6nm,0.9s,baz=55,slow=2.8,SNR=4.8						
STKA	**Stephens Creek**	**28.35**	**208**	LR	LR	12 25 33.1	
	comp=Z,92nm,19.9s,baz=25,slow=34						
CMAR	**Chiang Mai Arr**	**62.53**	**295**	P	P	12 20 00.1	-0.8
	0.8nm,0.6s,baz=122,slow=5.8,SNR=6.1						
SONM	**Songino Array**	**70.52**	**327**	P	P	12 20 52.2	+0.6
	1.2nm,0.5s,baz=133,slow=6.0,SNR=13						
MKAR	**Makanchi Array**	**84.78**	**318**	P	P	12 22 11.6	+0.5
	1.2nm,0.7s,baz=100,slow=5.7,SNR=13						
ZALV	**Zalesovo Beam**	**85.39**	**326**	P	P	12 22 13.2	-0.7
	0.8nm,0.5s,baz=124,slow=6.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**154.84**	**286**	PKPbc	PKPbc	12 29 37.7	-1.6
	0.3nm,0.6s,baz=44,slow=2.9,SNR=3.5						
DBIC	**Dimbokro**	**161.81**	**269**	PKPab	PKPab	12 30 23.9	-0.7
	2.7nm,1.0s,baz=181,slow=2.0,SNR=4.0						

*CSEM **13** 12:14:02.9±0.2, 43°57N×7°86E, h19km, ML3.0/9, Error ellipse: s-maj=3.4km s-min=3.1km az=112.0*
*ISCJB **13** 12:14:03.2±0.6, 43°56N±0°03×7°84E±0°04, h30km±3km, Error ellipse: s-maj=5.3km s-min=5.1km az=146.5*
*LDG **13** 12:14:03.7±0.1, 43°61N×7°89E, h18km, Md2.9/1, Ml2.7/11, Error ellipse: s-maj=2.6km s-min=2.0km az=45.0*
*ROM **13** 12:14:04.8±0.6, 44°44N×8°50E, h4km, Ml2.6/3, Error ellipse: s-maj=6.5km s-min=3.7km az=71.0*
*GEN **13** 12:14:04.0, 43°52N×7°85E, h28km, ML2.5*
*STR **13** 12:14:04.5±0.3, 43°60N×7°85E, h5km, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 13 12:14:02.2±1.1, 43°54N±0°03×7°87E±0°02, h19km±3km, n66, σ0s99/111, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REVF	**Revere**	**0.42**	**300**	Pg	Pb	12 14 12.5	+1.3
REVF				Sg	Sb	12 14 17.8	+0.6
REVF	**Revere**	**0.42**	**300**	Pg	Pb	12 14 12.5	+1.3
REVF				Sg	Sb	12 14 17.8	+0.6
SBF	**Sospel**	**0.45**	**316**	*e*Pg	Pb	12 14 12.3	+0.5
	SNR=1.0						
SBF				*e*Sg	Sg	12 14 17.8	-0.1
	351nm,0.2s,SNR=1.0						
SBF	**Sospel**	**0.45**	**316**	*e*Pg	Pb	12 14 12.3	+0.5
	SNR=1.0						
SBF				*e*Sg	Sg	12 14 17.8	-0.1
	176nm,0.2s,SNR=1.0						
SAOF	**Saorge**	**0.51**	**333**	Pg	Pb	12 14 13.1	+0.5
SAOF				Sg	Sg	12 14 19.3	-0.1
SAOF	**Saorge**	**0.51**	**333**	Pg	Pb	12 14 13.1	+0.5
SAOF				Sg	Sg	12 14 19.3	-0.1
AUTN	**L'Aution**	**0.56**	**325**	Pg	Pb	12 14 14.1	+0.6
AUTN				Sg	Sg	12 14 21.1	-0.1
AUTN	**L'Aution**	**0.56**	**325**	Pg	Pb	12 14 14.1	+0.6
AUTN				Sg	Sg	12 14 21.1	-0.1
RORO	**Rocca Rossa**	**0.59**	**14**	Pg	Pg	12 14 14.8	+0.7
RORO				Sg	Sb	12 14 22.0	0.0
	251nm,0.1s						
RORO	**Rocca Rossa**	**0.59**	**14**	P	Pg	12 14 14.8	+0.7
RORO				Sg	Sb	12 14 22.0	0.0
	251nm,0.1s						
RORO				S	Sg	12 14 22.8	+0.7
MVIF	**Mont Vial**	**0.63**	**305**	Pg	Pg	12 14 15.7	+0.8
MVIF				Sg	Sb	12 14 24.0	+0.8
MVIF	**Mont Vial**	**0.63**	**305**	Pg	Pg	12 14 15.7	+0.8
MVIF				Sg	Sb	12 14 24.0	+0.8
TOUF	**Mont Tournerai**	**0.66**	**317**	Pg	Pg	12 14 15.9	+0.6
TOUF				Sg	Sb	12 14 24.0	0.0
TOUF	**Mont Tournerai**	**0.66**	**317**	Pg	Pg	12 14 15.9	+0.6
TOUF				Sg	Sb	12 14 24.0	0.0
CALN	**Calern**	**0.74**	**287**	Pg	Pg	12 14 17.8	+0.9
CALN				Sg	Sb	12 14 27.4	+0.9
CALN	**Calern**	**0.74**	**287**	Pg	Pg	12 14 17.8	+0.9
CALN				Sg	Sb	12 14 27.4	+0.9
ENR	**Entracque**	**0.76**	**335**	P	Pb	12 14 17.5	+0.5
ENR				S	Sb	12 14 26.6	-0.5
STV	**Sant Anna di V**	**0.81**	**331**	P	Pb	12 14 18.4	+0.6
STV				Sg	Sb	12 14 28.2	-0.2
FRF	**La Foret Royal**	**0.89**	**272**	*e*Pn	Pb	12 14 19.8	+0.7
	SNR=1.0						
FRF				*e*Sn	Sb	12 14 31.1	+0.6
	50nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**0.89**	**272**	*e*Pn	Pb	12 14 19.8	+0.7
	SNR=1.0						
FRF				*e*Sn	Sb	12 14 31.1	+0.6
	25nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.01**	**259**	*e*Pn	Pb	12 14 21.5	+0.4
	SNR=1.0						
LMR				*e*Sn	Sb	12 14 33.7	-0.3
	24nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.01**	**259**	*e*Pn	Pb	12 14 21.5	+0.4
	SNR=1.0						
DOI	**San Damiano**	**1.07**	**335**	Pg	Pb	12 14 22.5	+0.3
DOI				Sg	Sb	12 14 35.9	+0.1
	201nm,0.2s						
DOI	**San Damiano**	**1.07**	**335**	Pg	Pb	12 14 22.5	+0.3
DOI				Sg	Sb	12 14 35.9	+0.1
	201nm,0.2s						
PZZ	**Stroppo**	**1.11**	**331**	Pg	Pb	12 14 23.8	+0.8
PZZ				Sg	Sb	12 14 37.4	+0.2
	140nm,0.4s						
PZZ	**Stroppo**	**1.11**	**331**	P	Pn	12 14 23.1	+0.1
PZZ	**Stroppo**	**1.11**	**331**	Pg	Pb	12 14 23.8	+0.8
PZZ				S	Sb	12 14 36.0	-1.2
PZZ				Sg	Sb	12 14 37.4	+0.2
	140nm,0.4s						
PCP	**Piancastagn**	**1.12**	**26**	P	Pn	12 14 23.0	0.0
PCP				S	Sb	12 14 36.0	-1.2
SURF	**Saint Ours**	**1.21**	**322**	Pg	Pg	12 14 25.9	+0.1
SURF	**Saint Ours**	**1.21**	**322**	Pg	Pg	12 14 25.9	+0.1
PGF	**Pioggiola**	**1.29**	**140**	*e*Pn	Pb	12 14 26.1	+0.2
	SNR=1.0						
PGF				*e*Sn	Sn	12 14 41.7	-0.4
	4.2nm,0.2s,SNR=1.0						
PGF	**Pioggiola**	**1.29**	**140**	*e*Pn	Pb	12 14 26.1	+0.2
	SNR=1.0						
PGF				*e*Sn	Sn	12 14 41.7	-0.4
	2.1nm,0.2s,SNR=1.0						
MBDF	**Montbardon**	**1.43**	**327**	*e*Pn	Pn	12 14 26.8	-0.6
	SNR=1.0						
MBDF	**Montbardon**	**1.43**	**327**	*e*P	Pb	12 14 28.5	+0.1
MBDF	**Montbardon**	**1.43**	**327**	*e*Pg	Pb	12 14 29.7	+1.3
	SNR=1.0						
MBDF				*e*Sn	Sn	12 14 43.3	-2.4
	SNR=1.0						
MBDF				*e*Sg	Sb	12 14 47.4	+1.1
	81nm,0.5s,SNR=1.0						
MBDF	**Montbardon**	**1.43**	**327**	*e*Pn	Pn	12 14 26.8	-0.6
	SNR=1.0						
MBDF	**Montbardon**	**1.43**	**327**	*e*P	Pb	12 14 28.5	+0.1
MBDF	**Montbardon**	**1.43**	**327**	*e*Pg	Pb	12 14 29.7	+1.3
	SNR=1.0						
MBDF				*e*Sn	Sn	12 14 43.3	-2.4
	SNR=1.0						
MBDF				*e*Sg	Sb	12 14 47.4	+1.1
	40nm,0.5s,SNR=1.0						
OG22	**Abries**	**1.45**	**333**	Pn	Pb	12 14 29.0	+0.3
OG22	**Abries**	**1.45**	**333**	Pn	Pb	12 14 29.0	+0.3
RSP	**Reno Superiore**	**1.67**	**345**	P	Pn	12 14 30.9	+0.3
SMRF	**Simiane la Rot**	**1.72**	**286**	*e*Pn	Pn	12 14 31.5	+0.3
	SNR=1.0						
SMRF	**Simiane la Rot**	**1.72**	**286**	*e*P	Pb	12 14 33.2	-0.1
SMRF	**Simiane la Rot**	**1.72**	**286**	*e*Pg	Pg	12 14 35.6	+0.3
SMRF				*e*Sg	Sg	12 14 57.7	0.0
	34nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.72**	**286**	*e*Pn	Pn	12 14 31.5	+0.3
	SNR=1.0						
SMRF	**Simiane la Rot**	**1.72**	**286**	*e*P	Pb	12 14 33.2	-0.1
SMRF	**Simiane la Rot**	**1.72**	**286**	*e*Pg	Pg	12 14 35.6	+0.3
SMRF				*e*Sg	Sg	12 14 57.7	0.0
	17nm,0.3s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.99**	**315**	*e*Pn	Pn	12 14 34.4	-0.6
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.99**	**315**	*e*Pg	Pb	12 14 39.5	+1.6
ORIF				*e*Sg	Sb	12 15 04.6	+2.3
	14nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.99**	**315**	*e*Pn	Pn	12 14 34.4	-0.6
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**1.99**	**315**	*e*Pg	Pb	12 14 39.5	+1.6
ORIF				*e*Sg	Sb	12 15 04.6	+2.3
	7.2nm,0.4s,SNR=1.0						
LSD	**Lago del Serru**	**2.00**	**345**	P	Pn	12 14 35.8	+0.6
LSD				S	Sn	12 14 58.0	-1.8
LPG	**La Plagne**	**2.12**	**338**	*e*Pn	Pn	12 14 36.4	-0.6
LPG	**La Plagne**	**2.12**	**338**	*e*Pg	Pb	12 14 41.8	+1.6
	SNR=1.0						
LPG				*e*Sg	Sb	12 15 08.7	+2.4
	5.9nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**2.12**	**338**	*e*Pn	Pn	12 14 36.4	-0.6
LPG	**La Plagne**	**2.12**	**338**	*e*Pg	Pb	12 14 41.8	+1.6
	SNR=1.0						
LPG				*e*Sg	Sb	12 15 08.7	+2.4
	3.0nm,0.3s,SNR=1.0						
LPL	**La Plagne**	**2.14**	**338**	*e*Pg	Pb	12 14 41.9	+1.3
	SNR=1.0						
LPL	**La Plagne**	**2.14**	**338**	*e*Pg	Pb	12 14 41.9	+1.3
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.65**	**301**	*e*Pn	Pn	12 14 44.4	+0.4
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.65**	**301**	*e*Pg	Pg	12 14 52.1	-1.0
VIVF				*e*Sn	Sn	12 15 13.3	-2.4
	3.8nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**2.65**	**301**	*e*Pn	Pn	12 14 44.4	+0.4
	SNR=1.0						
VIVF	**Saint-Julien-l**	**2.65**	**301**	*e*Pg	Pg	12 14 52.1	-1.0
VIVF				*e*Sn	Sn	12 15 13.3	-2.4
	1.9nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**2.95**	**282**	*e*Pn	Pn	12 14 47.9	-0.3
	SNR=1.0						
LASF				*e*Sn	Sn	12 15 21.0	-2.1
	2.4nm,0.3s						
LASF	**Ste Croix**	**2.95**	**282**	*e*Pn	Pn	12 14 47.9	-0.3
	SNR=1.0						
LASF				*e*Sn	Sn	12 15 21.0	-2.1
	1.2nm,0.3s						
MTLF	**Montolieu**	**4.12**	**269**	*e*Pn	Pn	12 15 04.4	+0.2
MTLF	**Montolieu**	**4.12**	**269**	*e*Pn	Pn	12 15 04.4	+0.2

*ISK **13** 13:07:24.9, 37°77N×27°48E, h6km, MD2.8*
*CSEM **13** 13:07:25.5±0.2, 37°76N×27°43E, h10km, MD2.8, Error ellipse: s-maj=5.1km s-min=3.6km az=67.0*
*ISCJB **13** 13:07:25.5±0.6, 37°77N±0°04×27°47E±0°05, h2km±9km, Error ellipse: s-maj=7.8km s-min=5.4km az=34.2*
*DDA **13** 13:07:26.1, 37°74N×27°46E, h7km, MD2.8*

ISC 13 13:07:25.9±1.0, 37°77N±0°03×27°49E±0°03, h6km±11km, n24, σ0s59/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.22**	**253**	*i* P	Pg	13 07 30.5	+0.3
GCAM				*i* S	Sg	13 07 33.2	+0.1
GCAM	**G?zelcaml?**	**0.22**	**253**	*i* P	Pg	13 07 30.5	+0.3
GCAM				*i* S	Sg	13 07 33.2	+0.1
AYDN	**Tasoluk**	**0.32**	**109**	*i* P	Pb	13 07 33.3	-0.8
AYDN				*i* S	Sg	13 07 37.5	+1.0
AYDN	**Tasoluk**	**0.32**	**109**	*i* P	Pb	13 07 33.3	-0.8
AYDN				*i* S	Sg	13 07 37.5	+1.0
MLSB	**Milas**	**0.52**	**154**	*e*PG	Pg	13 07 35.2	-0.7
MLSB				*e*SG	Sg	13 07 43.1	+0.3
MLSB	**Milas**	**0.52**	**154**	*e*Pg	Pg	13 07 35.2	-0.7
MLSB				*e*Sg	Sg	13 07 43.1	+0.3
IZM	**Izmir**	**0.66**	**344**	PG	Pg	13 07 37.9	-0.7
IZM	**Izmir**	**0.66**	**344**	*i* Pg	Pg	13 07 37.9	-0.7
BLCB	**Balcova**	**0.71**	**330**	*e*PG	Pg	13 07 38.8	-0.9
BLCB	**Balcova**	**0.71**	**330**	*e*Pg	Pg	13 07 38.8	-0.9
BODT	**Bodrum**	**0.72**	**192**	*e*PG	Pg	13 07 39.4	-0.3
BODT	**Bodrum**	**0.72**	**192**	*e*Pg	Pg	13 07 39.4	-0.3
YER	**Yerkesik**	**0.89**	**135**	*e*PG	Pg	13 07 42.5	-0.5
YER	**Yerkesik**	**0.89**	**135**	*e*Pg	Pg	13 07 42.5	-0.5
MANT	**Manisa**	**1.11**	**49**	*i* P	Pn	13 07 49.0	+0.8
MANT				*i* S	Sg	13 08 01.8	+0.2
MANT	**Manisa**	**1.11**	**49**	*i* P	Pn	13 07 49.0	+0.8
MANT				*i* S	Sg	13 08 01.8	+0.2
AKS	**Akhisar**	**1.14**	**13**	*e*PN	Pg	13 07 47.3	-0.5
AKS	**Akhisar**	**1.14**	**13**	*e*Pn	Pg	13 07 47.3	-0.5
KULA	**Kula-Manisa**	**1.19**	**51**	*e*PN	Pg	13 07 48.4	-0.3
KULA	**Kula-Manisa**	**1.19**	**51**	*e*Pn	Pg	13 07 48.4	-0.3
DNZL	**Cakiroluk**	**1.23**	**93**	*i* P	Pb	13 07 49.8	+0.1
DNZL				*i* S	Sn	13 08 07.3	+0.4
DNZL	**Cakiroluk**	**1.23**	**93**	*i* P	Pb	13 07 49.8	+0.1
DNZL				*i* S	Sn	13 08 07.3	+0.4
DALY	**Dalyan (Mu¯la**	**1.32**	**135**	*e*PN	Pn	13 07 50.7	-0.2
DALY	**Dalyan (Mu¯la**	**1.32**	**135**	*e*Pn	Pn	13 07 50.7	-0.2

IDC 13 13:27:22.8±9.7, 7°81S×115°38E, h193km±97km, mb2.9/4, mb1 3.1/5, mb1mx3.0/22, mbtmp3.0/5, Error ellipse: s-maj=111.2km s-min=25.0km az=60.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.30**	**137**	P	P	13 30 37.8	-0.6
	0.1nm,0.3s,baz=324,slow=11,SNR=4.3						
FITZ				S	Sn	13 33 11.0	-5.5
	0.1nm,0.3s,baz=184,slow=19,SNR=5.6						
WRA	**Warramunga Arr**	**21.98**	**125**	P	P	13 32 00.5	-1.0
	0.3nm,0.4s,baz=300,slow=12,SNR=11						
ASAR	**Alice Springs**	**23.75**	**134**	P	P	13 32 18.4	+0.7
	0.5nm,0.4s,baz=306,slow=9.1,SNR=12						
STKA	**Stephens Creek**	**34.19**	**138**	P	P	13 33 49.8	-0.2
	0.8nm,0.6s,baz=318,slow=12,SNR=3.9						
SONM	**Songino Array**	**55.97**	**353**	P	P	13 36 41.0	-0.1
	0.4nm,0.6s,baz=168,slow=9.4,SNR=3.1						

*BJI **13** 13:28:58.4, 4°60N×94°90E, h15km, mB4.8/5, mb4.8/11, Ms4.4/4, Ms7 4.2/4*
*ISCJB **13** 13:29:04.7±0.3, 4°72N±0°05×94°98E±0°04, h48km, mb4.4/31, MS3.3/4, Error ellipse: s-maj=8.1km s-min=3.9km az=40.2*
*IDC **13** 13:29:06.8±0.7, 4°76N×95°10E, h57km±6km, mb4.0/18, mb1 4.2/20, mb1mx4.0/30, mbtmp4.0/20, MS3.3/6, Ms1 3.4/6, ms1mx3.0/33, Error ellipse: s-maj=21.8km s-min=9.7km az=41.0*
*NEIC **13** 13:29:06.3±0.4, 4°63N×94°97E, mb4.5/8

comp=Z,100nm,4.0s
NJ2 LR LR
comp=N,200nm,30.5s
NJ2 LR LR
comp=E,240nm,23.7s
NJ2 LR LR
comp=Z,90nm,16.3s
KSH Kashi 38.66 336⇑ *i*P **P 13 36 24.9 -0.6**
KSH pmax pmax
comp=Z,21nm,0.6s
KSH pmax pmax
comp=Z,170nm,5.1s
KSH LR LR
comp=N,110nm,7.1s
KSH LR LR
comp=E,100nm,4.1s
KSH LR LR
comp=Z,88nm,4.0s
ULHL Ulahol 40.91 339 P **P 13 36 45.2 +0.9**
SNR=8.0
KZA Kyzart 41.14 338 P **P 13 36 47.5 +1.2**
SNR=8.7
TKM2 Tokmak 2 41.73 338 *e*P **P 13 36 51.5 +0.5**
comp=Z,6.6nm,0.7s
TKM2 Tokmak 2 41.73 338 P **P 13 36 52.0 +1.0**
SNR=13
KBK Karagaybulak 41.75 338 P **P 13 36 52.9 +1.8**
SNR=19
AML Almayashu 41.79 336 P **P 13 36 53.5 +1.8**
SNR=8.2
AAK Ala-Archa 41.90 337 P **P 13 36 53.9 +1.6**
AAK Ala-Archa 41.90 337 P **P 13 36 54.9 +2.6**
SNR=12
AAK Ala-Archa 41.90 337 P **P 13 36 53.9 +1.6**
comp=Z,8.2nm,0.7s,baz=143,slow=8.4,SNR=24
CHMS Chumysh 42.12 338 P **P 13 36 54.9 +1.1**
SNR=5.2
EKS2 Erkin-Say 42.21 337 *e*P **P 13 36 55.9 +1.2**
comp=Z,8.0nm,0.7s
EKS2 Erkin-Say 42.21 337 P **P 13 36 56.4 +1.7**
SNR=8.9
USP Ospenovka 42.44 338 P **P 13 36 57.5 +0.9**
SNR=19
MKAR Makanchi Array 43.31 347 P **P 13 37 02.9 -0.6**
MKAR Makanchi Array 43.31 347 P **P 13 37 02.9 -0.6**
comp=Z,2.5nm,0.4s,baz=167,slow=7.6,SNR=52
MKAR LR LR 13 58 15.7
comp=Z,29nm,18.4s,baz=160,slow=40
KKAR Karatay Array 43.93 334 *e*P **P 13 37 09.5 +0.9**
comp=Z,5.4nm,0.8s
SONM Songino Array 44.03 11 P **P 13 37 08.1 -1.3**
SONM PcP **PcP 13 38 53.7 -0.6**
SONM Songino Array 44.03 11 P **P 13 37 08.1 -1.3**
comp=Z,0.9nm,0.7s,baz=189,slow=7.0,SNR=5.9
SONM PcP **PcP 13 38 53.7 -0.6**
comp=Z,1.4nm,0.7s,baz=198,slow=3.4,SNR=6.1
SONM LR LR 13 56 06.5
comp=Z,47nm,20.8s,baz=274,slow=37
ULN Ulaanbaatar 44.19 12 *e*P **P 13 37 10.3 -0.4**
KSAR Wonju Array Be 44.28 38 P **P 13 37 10.3 -1.1**
KSRS Korea Array 44.31 38 P **P 13 37 10.3 -1.3**
comp=Z,2.1nm,0.7s,baz=221,slow=8.0,SNR=7.4
WRA Warramunga Arr 45.78 124 P **P 13 37 22.5 -1.1**
WRA Warramunga Arr 45.78 124 P **P 13 37 22.5 -1.1**
comp=Z,18nm,0.9s,baz=302,slow=9.2,SNR=87
WRAB Tennant Creek 45.79 124 *e*P **P 13 37 22.7 -0.9**
comp=Z,5nm,1.0s
ASAR Alice Springs 47.28 128 P **P 13 37 33.9 -1.5**
ASAR PcP **PcP 13 39 05.8 -0.2**
ASAR Alice Springs 47.28 128 P **P 13 37 33.9 -1.5**
comp=Z,2.7nm,0.7s,baz=299,slow=7.8,SNR=35
ASAR PcP **PcP 13 39 05.8 -0.2**
comp=Z,0.7nm,0.6s,baz=296,slow=4.2,SNR=3.2
KURK Kurchatov 47.84 346 *e*P **P 13 37 39.0 -0.1**
comp=Z,2.8nm,0.7s
ZAA0 Zalesovo Array 49.75 352 *e*P **P 13 37 53.2 -0.6**
ZALV Zalesovo Beam 49.75 352 P **P 13 37 53.2 -0.6**
ZALV PcP **PcP 13 39 12.3 -1.9**
ZALV Zalesovo Beam 49.75 352 P **P 13 37 53.2 -0.6**
comp=Z,5.0nm,0.6s,baz=168,slow=7.8,SNR=23
ZALV PcP **PcP 13 39 12.3 -1.9**
comp=Z,0.7nm,0.4s,baz=194,slow=5.5,SNR=3.3
ZALV LR LR 14 02 07.0
comp=Z,30nm,20.0s,baz=75,slow=40
USRK Ussuriysk Arra 50.98 34 P **P 13 38 01.9 -1.3**
comp=Z,2.7nm,0.7s,baz=239,slow=8.8,SNR=4.9
BRVK Borovoye 52.27 341 *e*P **P 13 38 12.7 -0.1**
comp=Z,19nm,1.0s
ABKAR Akbulak array 53.38 332 *e*P **P 13 38 21.2 +0.2**
comp=Z,5.2nm,0.8s
STKA Stephens Creek 57.35 133 P **P 13 38 48.8 -1.0**
STKA Stephens Creek 57.35 133 P **P 13 38 48.8 -1.0**
comp=Z,1.9nm,0.7s,baz=320,slow=7.9,SNR=3.5
KBZ Khabaz 59.98 319 P **P 13 39 07.8 -0.1**
KBZ Khabaz 59.98 319 P **P 13 39 07.8 -0.1**
comp=Z,2.3nm,0.9s,baz=127,slow=5.1,SNR=5.3
BRTR Keskin Array B 65.13 312 P **P 13 39 42.1 -0.5**
BRTR pP **pP 13 39 57.5 +1.2**
BRTR Keskin Array B 65.13 312 P **P 13 39 42.1 -0.5**
comp=Z,3.4nm,0.8s,baz=122,slow=5.5,SNR=17
BRTR pP **pP 13 39 57.5 +1.2**
comp=Z,2.2nm,0.6s,baz=123,slow=7.6,SNR=8.7
TLCR 69.97 316⇑ *i*P pP 13 40 24.2 -2.4
CFR Carcaliu 70.43 316⇑ *i*P **P 13 40 15.9 +0.3**
AKASG Malin Array Be 71.13 322 P **P 13 40 18.8 -1.0**
AKASG Malin Array Be 71.13 322 P **P 13 40 18.8 -1.0**
comp=Z,2.6nm,0.5s,baz=94,slow=5.2,SNR=9.7
VRI Vrincioaia 71.55 317⇓ *i*P **P 13 40 23.4 +0.9**
PLOR Plostina 71.60 317⇑ *i*P **P 13 40 23.0 +0.2**
TESR Tescani 71.74 317⇑ *i*P **P 13 40 24.0 +0.4**
MLR Muntele Rosu 72.01 316⇑ *i*P **P 13 40 25.0 -0.4**
VOIR 72.61 316⇑ *i*P P 13 40 21.6 -7.3
ARR Arges 72.89 316⇑ *i*P **P 13 40 28.8 -1.8**
BURAR Bucovina Array 72.94 318⇑ *i*P **P 13 40 31.9 +1.1**
JOF Joensuu 74.03 335 *e*p **P 13 40 34.9 -1.9**
comp=Z,4.5nm,0.6s
KOLS Kolonicke sedl 75.12 319 *e*P **P 13 40 44.3 +0.9**
CRVS Cervenica-Dubn 75.64 319 *e*P **P 13 40 46.9 +0.4**
FINES FINESS Array B 75.86 332 P **P 13 40 46.9 -0.5**
FINES FINESS Array B 75.86 332 P **P 13 40 46.9 -0.5**
comp=Z,2.6nm,0.4s,baz=107,slow=7.2,SNR=14
KAF Kangasniemi 75.95 333 *e*p **P 13 40 46.6 -1.3**
comp=Z,4.3nm,0.6s
ARCES ARCESS Array B 78.48 340 P **P 13 41 01.6 -0.3**
ARCES ARCESS Array B 78.48 340 P **P 13 41 01.6 -0.3**
comp=Z,3.1nm,0.6s,baz=96,slow=6.4,SNR=25
FX1 Attu Island--F 79.09 37 P **P 13 41 04.8 -0.9**
FX1 Attu Island--F 79.09 37 P **P 13 41 04.8 -0.9**
comp=Z,1.6nm,0.4s,baz=34,slow=7.3,SNR=7.9
GERES GERESS Array B 80.72 319 P **P 13 41 15.3 +0.6**
GERES pP **pP 13 41 30.8 +2.1**
GERES GERESS Array B 80.72 319 P **P 13 41 15.3 +0.6**
comp=Z,1.9nm,0.5s,baz=108,slow=6.3,SNR=16
GERES pP **pP 13 41 30.8 +2.1**
comp=Z,0.9nm,0.6s,baz=100,slow=6.9,SNR=2.9
NB2 NORSAR Subarra 82.86 331 P **P 13 41 24.5 -1.1**
comp=Z,2.6nm,1.0s,baz=95,slow=5.1
NOA NORSAR Array B 82.86 331 P **P 13 41 24.7 -0.9**
NOA NORSAR Array B 82.86 331 P **P 13 41 24.7 -0.9**
comp=Z,1.8nm,0.9s,baz=91,slow=5.8,SNR=4.1
ILAR Eielson Array 97.29 22 P **P 13 42 33.6 -0.4**
ILAR Eielson Array 97.29 22 P **P 13 42 33.6 -0.4**
comp=Z,0.2nm,0.5s,baz=297,slow=5.0,SNR=3.1
PDAR Pinedale Array 127.72 23 PKP **PKPdf 13 48 06.0 -1.2**
PDAR Pinedale Array 127.72 23 PKP **PKPdf 13 48 06.0 -1.2**
comp=Z,0.6nm,0.9s,baz=316,slow=3.8,SNR=3.9
CPUP Villa Florida 145.94 228 PKPbc **PKPbc 13 48 41.2 -0.2**
CPUP pPKPbc pPKPbc 13 48 57.0 +1.1
CPUP Villa Florida 145.94 228 PKPbc **PKPbc 13 48 41.2 -0.2**
comp=Z,0.5nm,0.4s,baz=117,slow=5.6,SNR=4.5
CPUP pPKPbc pPKPbc 13 48 57.0 +1.0
comp=Z,4.2nm,0.8s,baz=89,slow=2.8,SNR=5.0

*ISCJB **13** 13:43:59.9±0.4, 5.°77S±0.°04×146.°47E±0.°07, h52km,*
mb4.4/16, MS3.8/10, Error ellipse: s-maj=10.1km
s-min=5.5km az=169.7
*IDC **13** 13:44:02.6±2.3, 5.°84S×146.°46E, h61km±21km, mb4.1/15,*
mb1 4.4/19, mb1mx4.3/22, mbtmp4.2/19, ML4.2/4, MS3.8/13,
Ms1 3.8/13, ms1mx3.6/21, Error ellipse: s-maj=21.2km
s-min=11.2km az=80.0
*DJA **13** 13:44:03.7±1.2, 6°S±8°×14°7E±°, h79km±10km, M4.7/3,*
mB5.2/1, mb4.7/3, Mw(mB)4.5/1
*AUST **13** 13:44:08.9, 6.°26S×146.°61E, h100km*

ISC 13 13:44:01.6±0.5, 5.°78S±0.°06×146.°50E±0.°09, h52km, n48,
σ1°25/47, mb4.5/16, MS3.8/10, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.67**	**170**	P	**Pn**	**13 44 56.2**	**+0.4**
PMG	**Port Moresby**	**3.67**	**170**	P	**Pn**	**13 44 55.9**	**+0.1**
	27nm,0.3s,baz=349,slow=8.7,SNR=86						
PMG				S	**Sn**	**13 45 38.2**	**+0.4**
	32nm,0.3s,baz=342,slow=19,SNR=3.5						
JAY	**Jayapura**	**6.63**	**299**	P	Pn	13 45 53.4	+17
	baz=7.0,SNR=3.6						
COEN	**Coen**	**8.77**	**202**	P	**Pn**	**13 46 06.6**	**+0.8**
	baz=8.4,SNR=113						
MTSU	**Mount Surprise**	**12.47**	**190**	P	**Pn**	**13 46 56.8**	**+0.4**
	baz=12,SNR=13						
CTA	**Charters Tower**	**14.23**	**181**	P	**Pn**	**13 47 20.9**	**+0.6**
	1.3nm,0.3s,baz=356,slow=15,SNR=15						
CTA				LR	LR	13 52 31.2	
	comp=Z,457nm,21.9s,baz=11,slow=36						
FAKI	**Fak Fak**	**14.49**	**281**	P	**Pn**	**13 47 22.4**	**-1.5**
KDU	**Kakadu**	**15.45**	**243**	P	**Pn**	**13 47 36.5**	**+0.2**
	baz=15,SNR=20						
SWI	**Sorong**	**15.98**	**287**	P	**P**	**13 47 44.4**	**-1.4**
SWI	**Sorong**	**15.98**	**287**	P	**P**	**13 47 47.7**	**+2.0**
	baz=16,SNR=9.7						
MTN	**Manton Dam**	**16.71**	**244**	P	**P**	**13 47 53.6**	**-0.3**
	baz=17,SNR=16						
WRA	**Warramunga Arr**	**18.39**	**219**	P	**P**	**13 48 11.6**	**-0.8**
	1.0nm,0.3s,baz=39,slow=12,SNR=42						
WRA				PcP	**PcP**	**13 52 42.8**	**+0.8**
	0.2nm,0.3s,baz=22,slow=1.8,SNR=8.4						
WRA				LR	LR	13 55 54.8	
	comp=Z,435nm,21.3s,baz=40,slow=39						
GUMO	**Guam**	**19.31**	**355**	P	**Pn**	**13 48 24.6**	**+0.7**
	2.4nm,0.3s,baz=141,slow=6.5,SNR=3.6						
GUMO				LR	LR	13 55 27.7	
	comp=Z,127nm,18.3s,baz=218,slow=35						
EIDS	**Eidsvold**	**19.97**	**168**	P	**P**	**13 48 30.3**	**+0.7**
	baz=20,SNR=4.6						
KNRA	**Kununurra**	**20.00**	**239**	P	**P**	**13 48 30.1**	**+0.1**
	baz=20,SNR=11						
RMQ	**Roma**	**20.71**	**174**	P	Pn	13 48 40.8	+0.3
	baz=20,SNR=20						
QLP	**Quilpie**	**20.80**	**186**	P	**P**	**13 48 39.0**	**+0.4**
	baz=20,SNR=52						
ASAR	**Alice Springs**	**21.53**	**213**	P	**P**	**13 48 45.8**	**-0.8**
	10.0nm,0.7s,baz=48,slow=8.2,SNR=108						
FITZ	**Fitzroy Crossi**	**23.77**	**237**	P	**P**	**13 49 08.7**	**-0.8**
	14nm,0.6s,baz=82,slow=7.3,SNR=49						
FITZ				LR	LR	13 59 29.0	
	comp=Z,318nm,19.4s,baz=51,slow=39						
FITZ	**Fitzroy Crossi**	**23.77**	**237**	P	**P**	**13 49 09.1**	**-0.4**
	baz=24,SNR=41						
LUWI	**Luwuk**	**24.15**	**280**	P	**P**	**13 49 08.4**	**-4.6**
ARMA	**Armidale**	**24.98**	**169**	P	**P**	**13 49 20.7**	**+0.1**
	baz=25,SNR=5.8						
DZM	**Mont Dzumac**	**25.18**	**132**	P	**P**	**13 49 22.9**	**+0.4**
	5.1nm,0.9s,baz=211,slow=10,SNR=4.6						
SKSI	**Soroako, Sulaw**	**25.31**	**276**	P	**P**	**13 49 23.3**	**-0.4**
CMSA	**Cobar Meteorol**	**25.64**	**182**	P	**P**	**13 49 26.2**	**-0.2**
	25,SNR=11						
STKA	**Stephens Creek**	**26.37**	**189**	P	**P**	**13 49 32.4**	**-0.7**
	12nm,0.7s,baz=360,slow=8.6,SNR=30						
STKA				LR	LR	14 00 51.1	
	comp=Z,257nm,19.1s,baz=134,slow=38						
STKA	**Stephens Creek**	**26.37**	**189**	P	**P**	**13 49 32.7**	**-0.3**
	baz=26,SNR=25						
KAPI	**Kappang**	**26.64**	**270**	P	**P**	**13 49 39.8**	**+4.1**
	8.0nm,0.6s,baz=90,slow=7.2,SNR=5.1						
YNG	**Yong**	**28.44**	**177**	P	P	13 49 57.4	+5.8
	baz=28,SNR=13						
MEEK	**Meekatharra**	**33.73**	**229**	P	**P**	**13 50 38.1**	**-0.2**
	baz=34,SNR=12						
KMBL	**Kambalda**	**34.36**	**219**	P	**P**	**13 50 43.2**	**-0.4**
	baz=34,SNR=14						
MJAR	**Matsushiro Arr**	**42.81**	**350**	P	**P**	**13 51 54.6**	**+0.2**
	4.1nm,0.9s,baz=176,slow=8.5,SNR=6.8						
MJAR				LR	LR	14 06 58.5	
	comp=Z,51nm,20.7s,baz=175,slow=32						
KSRS	**Korea Array**	**46.37**	**339**	P	**P**	**13 52 23.4**	**+0.7**
	5.9nm,1.0s,baz=158,slow=8.6,SNR=14						
KSRS				LR	LR	14 09 55.0	
	comp=Z,77nm,20.1s,baz=322,slow=33						
USRK	**Ussuriysk Arra**	**51.44**	**347**	P	**P**	**13 53 02.5**	**+1.1**
	4.0nm,0.6s,baz=179,slow=6.3,SNR=9.5						
CMAR	**Chiang Mai Arr**	**52.71**	**298**	P	**P**	**13 53 12.4**	**+1.0**
	3.4nm,0.6s,baz=123,slow=6.0,SNR=30						
PETK	**Petropavlovsk-**	**59.42**	**8**	P	**P**	**13 53 59.8**	**+1.1**
	3.2nm,0.7s,baz=191,slow=6.8,SNR=6.4						
PETK				LR	LR	14 14 49.4	
	comp=Z,96nm,21.2s,baz=226,slow=31						
ULN	**Ulaanbaatar**	**63.68**	**331**	P	**P**	**13 54 26.8**	**-0.9**
SONM	**Songino Array**	**63.97**	**331**	P	**P**	**13 54 30.1**	**+0.4**
	2.4nm,0.8s,baz=153,slow=4.5,SNR=13						
SONM				LR	LR	14 20 34.0	
	comp=Z,35nm,20.2s,baz=111,slow=34						
VNDA	**Vanda**	**72.17**	**177**	P	**P**	**13 55 20.1**	**-0.3**
	3.1nm,0.7s,baz=330,slow=7.1,SNR=22						
VNDA				LR	LR	14 24 03.8	
	comp=Z,83nm,19.8s,baz=341,slow=33						
MKAR	**Makanchi Array**	**77.01**	**321**	P	**P**	**13 55 48.4**	**-0.6**
	1.3nm,0.6s,baz=103,slow=7.0,SNR=15						
ZALV	**Zalesovo Beam**	**78.56**	**328**	P	**P**	**13 55 56.0**	**-1.5**
	1.2nm,0.5s,baz=117,slow=5.6,SNR=6.9						
ZALV				LR	LR	14 30 55.1	
	comp=Z,40nm,19.7s,baz=71,slow=36						
MAW	**Mawson**	**82.27**	**203**	P	**P**	**13 56 16.5**	**-0.6**
	3.9nm,0.9s,baz=79,slow=9.5,SNR=3.8						
MAW				LR	LR	14 31 01.1	
	comp=Z,50nm,21.1s,baz=317,slow=34						
ILAR	**Eielson Array**	**85.47**	**23**	P	**P**	**13 56 32.1**	**-1.4**
	3.6nm,0.6s,baz=255,slow=4.6,SNR=78						
ILAR				LR	LR	14 32 41.6	
	comp=Z,55nm,18.2s,baz=193,slow=34						
PLCA	**Paso Flores**	**122.58**	**147**	PKP	**PKPdf**	**14 02 52.1**	**+0.2**
	1.4nm,0.6s,baz=279,slow=1.5,SNR=6.3						
CPUP	**Villa Florida**	**140.60**	**145**	PKP	**PKPdf**	**14 03 23.9**	**-2.1**
	0.6nm,0.5s,baz=239,slow=12,SNR=3.6						
TORD	**Torodi Ar. Bea**	**144.56**	**285**	PKP	**PKPab**	**14 03 31.4**	**-0.5**
	4.4nm,0.8s,baz=72,slow=3.2,SNR=26						
SIV	**San Ignacio**	**145.17**	**129**	PKPbc	**PKPbc**	**14 03 33.7**	**-0.4**
	14nm,0.8s,baz=243,slow=4.8,SNR=31						
DBIC	**Dimbokro**	**151.52**	**273**	PKPbc	**PKPbc**	**14 03 52.1**	**+1.1**
	4.6nm,0.7s,baz=71,slow=1.8,SNR=7.4						

*NEIC **13** 13:49:09.4, 31.°57N×115.°66W, h9km, ML2.8(PAS),*
ML2.6(ECX), After ECX.
ECX 13 13:49:09.4±0.6, 31.°57N×115.°66W, h9km, MD2.5, ML2.6,
4C-7D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RDX	**Rancho Dawling**	**0.43**	**327**⇓	*e*P	Pg	13 49 17.7	-0.5
RDX	**Rancho Dawling**	**0.43**	**327**⇓	*e*P	Pg	13 49 17.7	-0.5
RDX				*e*S	Sg	13 49 23.7	-0.3
RDX				*e*		13 49 24.5	
	comp=E,650nm,0.2s						
ZAX	**El Zacaton**	**0.52**	**265**⇑	*e*P	Pg	13 49 18.9	-0.8
ZAX				*e*S	Sg	13 49 26.2	-0.5
SPX	**San Pedro Mart**	**0.55**	**162**⇓	*e*P	Pg	13 49 19.7	-0.8
SPX				*e*S	Sg	13 49 26.7	-1.2
SPX				⇓*e*		13 49 28.0	
	comp=E,288nm,0.2s						
ECNX	**Esteban Cantu**	**0.80**	**277**⇓	*e*P	Pg	13 49 23.8	-1.2
ECNX				*e*S	Sg	13 49 34.4	-1.2
ECNX				⇓*e*		13 49 37.6	
	comp=N,131nm,0.7s						
PBX	**Punta Banda**	**0.92**	**281**⇑	*e*P	Pg	13 49 25.7	-1.5
PBX	**Punta Banda**	**0.92**	**281**⇑	*e*P	Pg	13 49 25.7	-1.5
PBX				*e*S	Sg	13 49 38.0	-1.3
RMX	**La Rumorosa**	**1.09**	**341**	*e*P	Pg	13 49 28.9	-1.8
RMX				*e*S	Sg	13 49 43.1	-2.0
RMX				⇑*e*		13 49 47.0	
	comp=E,160nm,0.2s						
CBX	**Cerro Bola**	**1.13**	**312**	*e*P	Pb	13 49 29.3	-2.1
CBX				*e*S	Sg	13 49 44.4	-1.8
CBX				⇓*e*		13 49 45.7	
	comp=N,356nm,0.2s						
BAR	**Barrett**	**1.40**	**323**	*e*Pn	Pn	13 49 34.0	-1.2
BAR				*e*S	Sb	13 49 51.2	-2.7
GLA	**Glamis**	**1.64**	**25**	*e*Pn	Pb	13 49 39.5	-0.5

DJA 13 14:26:13.6±1.2, 1°N±8°×12°3E±°, h10km, M3.9/4, mb3.9/1,

MLv3.9/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.05**	**147**	P	Pg	14 26 32.9	-0.9
KMSI				S	Sg	14 26 46.3	-1.1
MRSI	**Marisa**	**1.76**	**236**	P	Pn	14 26 44.0	-0.2
MRSI				S	Sn	14 27 06.2	-0.5
LUWI	**Luwuk**	**2.57**	**194**	P	Pn	14 26 55.8	+0.5
LUWI				S	Sb	14 27 32.0	+0.6
SKSI	**Soroako, Sulaw**	**4.47**	**208**	P	Pn	14 27 23.4	+1.8
TTSI	**Tana Toraja**	**5.74**	**219**	P	Pn	14 27 41.8	+2.9

IDC 13 14:34:11.5±1.6, 2.°17N×128.°21E, h0km, mb3.6/5,
mb1 3.7/5, mb1mx3.5/21, mbtmp3.6/5, MS3.0/1, Ms1 3.0/1,
ms1mx2.1/24, Error ellipse: s-maj=154.6km
s-min=19.6km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**20.00**	**55**	LR	LR	14 44 40.0	
	comp=Z,41nm,18.4s,baz=292,slow=31						
WRA	**Warramunga Arr**	**22.78**	**165**	P	P	14 39 15.7	-0.2
	0.8nm,0.5s,baz=344,slow=10,SNR=6.1						
ASAR	**Alice Springs**	**26.27**	**168**	P	P	14 39 49.0	+0.2
	0.2nm,0.4s,baz=350,slow=7.6,SNR=12						
STKA	**Stephens Creek**	**36.16**	**161**	P	P	14 41 15.2	-0.6
	1.1nm,0.6s,baz=0.0,slow=10,SNR=3.2						
SONM	**Songino Array**	**49.25**	**341**	P	P	14 43 01.6	-0.4
	0.4nm,0.8s,baz=147,slow=8.6,SNR=2.8						
MKAR	**Makanchi Array**	**59.68**	**325**	P	P	14 44 18.1	+0.3
	0.9nm,0.5s,baz=117,slow=7.9,SNR=19						

*CSEM **13** 15:32:31.2, 40.°76N×39.°02E, h9km, MD2.8, After ISK*
ISK 13 15:32:31.2, 40.°76N×39.°02E, h9km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESPY	**Espiye-Giresun**	**0.27**	**305**	*e*Pg	Pg	15 32 36.9	+0.3
ESPY				*e*Sg	Sg	15 32 41.5	+1.2
ESPY	**Espiye-Giresun**	**0.27**	**305**	*e*Pg	Pg	15 32 36.9	+0.2
ESPY				*e*Sg	Sg	15 32 41.5	+1.2
GUMT	**Gumushane**	**0.46**	**131**	*e*Pg	Pg	15 32 40.5	+0.1
GUMT				*e*Sg	Sg	15 32 47.5	+0.8
GUMT	**Gumushane**	**0.46**	**131**	*e*Pg	Pg	15 32 40.6	+0.1
GUMT				*e*Sg	Sg	15 32 47.5	+0.8
BAYT	**Ayd¨--ntepe-Bay**	**0.93**	**113**	*e*PG	Pb	15 32 49.6	-0.1
BAYT				*e*SG	Sb	15 33 02.9	+0.5
BAYT	**Ayd¨--ntepe-Bay**	**0.93**	**113**	*e*Pg	Pb	15 32 49.6	-0.2
BAYT				*e*Sg	Sb	15 33 02.9	+0.5
ILIC	**ilic-Erzincan**	**1.35**	**195**	*e*PN	Pb	15 32 57.1	+0.2
ILIC	**ilic-Erzincan**	**1.35**	**195**	*e*Pn	Pb	15 32 57.1	+0.2
PTK	**Pertek**	**1.89**	**171**	*e*PN	Pn	15 33 04.5	+0.5
PTK	**Pertek**	**1.89**	**171**	*e*Pn	Pn	15 33 04.5	+0.5

MEX 13 15:41:10.6±0.8, 16.°73N×95.°62W, h60km±18km, MD4.0,
Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.07**	**206**	*e*P	Pn	15 41 27.6	-2.0
HUIG				*e*S	Sn	15 41 42.1	-1.4
VHO	**Vista Hermosa**	**1.12**	**288**	*e*P	Pn	15 41 28.1	-2.4
VHO				*i* S	Sn	15 41 43.9	-1.4
TPIG	**Tehuac#an**	**2.36**	**316**	*i* P	Pn	15 41 46.3	-1.0
TPIG				*e*S	Sn	15 42 13.8	-1.5
TGIG		**2.39**	**89**	*e*P	Pn	15 41 46.1	-1.4
TGIG				*e*S	Sn	15 42 14.2	-1.6
PNIG	**Pinotepa**	**2.43**	**262**	*e*P	Pn	15 41 47.3	-0.6
PNIG				*e*S	Sn	15 42 15.7	-0.9
PCIG		**2.52**	**114**	*e*P	Pn	15 41 47.6	-1.5
PCIG				*e*S	Sn	15 42 17.9	-0.9
LVIG	**Laguna Verde**	**3.07**	**346**	*e*P	Pn	15 41 55.6	-1.1
LVIG				*e*S	Sn	15 42 30.7	-1.6
CCIG	**Comitan**	**3.37**	**97**	*e*P	Pn	15 42 00.0	-1.0
CCIG				*e*S	Sn	15 42 39.0	-1.0
PPM	**Popocatepetl**	**3.69**	**309**	*e*P	Pn	15 42 04.9	-0.9
PPM				*e*S	Sn	15 42 47.3	-1.2
YAIG	**Yautepec**	**3.91**	**303**	*e*P	Pn	15 42 06.8	-1.6
YAIG				*i* S	Sn	15 42 52.6	-0.6
MEIG	**Mezcala**	**4.00**	**288**	*i* P	Pn	15 42 08.0	-1.5
MEIG				*i* S	Sn	15 42 54.6	-0.7
CAIG	**El Cayaco**	**4.46**	**275**	*e*P	Pn	15 42 15.4	-0.4
CAIG				*i* S	Sn	15 43 05.8	-0.6

*ISCJB **13** 16:19:26.9±0.8, 57.°76N±0.°06×22.°68E±0.°06, h0km, Error*
ellipse: s-maj=8.6km s-min=4.2km az=164.8
*UPP **13** 16:19:26.8, 57.°68N×22.°74E, h0km, ML2.4, Suspected*
Mining explosion.
*IDC **13** 16:19:28.7±2.5, 57.°82N×22.°34E, h0km, mb1 3.1/4,*
mb1mx2.9/26, mbtmp3.0/4, ML2.6/4, Error ellipse:
s-maj=26.4km s-min=9.7km az=159.0
*BER **13** 16:19:28.9±4.7, 57.°71N×22.°33E, h0km, ML2.2(NAO),*
Suspected explosion
*CSEM **13** 16:19:29.4±0.5, 57.°85N×22.°45E, h2km, ML2.2, Error*
ellipse: s-maj=13.1km s-min=7.4km az=159.0, Mining
explosion.
*HEL **13** 16:19:29.4±0.3, 57.°86N×22.°56E, h0km, ML2.2,*
ML2.4(UPP), Explosion
*NAO **13** 16:19:29.2±2.5, 57.°86N×22.°29E, ML2.2*
ISC 13 16:19:28.8±1.1, 57.°86N±0.°06×22.°36E±0.°03, h0km, n39,
σ1°46/58, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTSE	**Matsula**	**1.15**	**41**	*e*P	**Pg**	**16 19 49.1**	**-1.6**
MTSE				*e*S	**Sg**	**16 20 04.2**	**-1.4**
GOTU	**Gotland**	**2.04**	**267**	*e*P	**Pn**	**16 20 03.8**	**-0.5**
GOTU				*e*S	**Sb**	**16 20 33.0**	**+0.5**
GOTU	**Gotland**	**2.04**	**267**	P	**Pn**	**16 20 03.8**	**-0.5**
GOTU				S	**Sb**	**16 20 33.0**	**+0.5**
VSU	**Vasula**	**2.39**	**74**	*e*P	**Pn**	**16 20 08.8**	**-0.4**
VSU				*e*SG	**Sn**	**16 20 40.7**	**+1.5**
VSU	**Vasula**	**2.39**	**74**	P	**Pn**	**16 20 08.7**	**-0.4**
NYNU	**Nynaeshamn**	**2.56**	**298**	*e*P	**Pn**	**16 20 13.2**	**+1.7**
NYNU				*e*S	**Sb**	**16 20 48.5**	**+1.0**
NYNU	**Nynaeshamn**	**2.56**	**298**	P	**Pn**	**16 20 13.1**	**+1.7**
NYNU				S	**Sb**	**16 20 48.5**	**+1.0**
MEF	**Metsahovi**	**2.58**	**23**	*e*PB	**Pn**	**16 20 13.1**	**+1.3**
MEF				*e*SG	**Sb**	**16 20 47.5**	**-0.

FIA0					Lg	Lg	16 21 37.1		
	baz=226,slow=28								
FIA0	**FINESS Array S**	**4.06**	**26**	MSG			16 21 41.9		
	comp=Z,4.8nm,0.3s								
FIA0	**FINESS Array S**	**4.06**	**26**	Pn	**Pn**		**16 20 32.7**	**+0.7**	
	baz=198,slow=13,SNR=4.9								
FIA0					Sn	**Sn**	**16 21 22.3**	**+2.2**	
	baz=206,slow=23,SNR=4.8								
FIA0					Lg	Lg	16 21 37.1		
	baz=226,slow=25,SNR=6.7								
FINES	**FINESS Array B**	**4.06**	**26**	Pn	**Pn**		**16 20 32.7**	**+0.7**	
	comp=Z,0.4nm,0.3s,baz=207,slow=12,SNR=17								
FINES					Pg	**Pb**	**16 20 41.6**	**+0.6**	
	comp=Z,0.9nm,0.3s,baz=206,slow=15,SNR=18								
FINES					Sn	**Sn**	**16 21 22.3**	**+2.2**	
	comp=Z,0.7nm,0.3s,baz=213,slow=21,SNR=5.5								
FINES					Lg	Lg	16 21 37.4		
	comp=Z,2.5nm,0.3s,baz=206,slow=28,SNR=12								
KAF	**Kangasniemi**	**4.70**	**23**	MSG			16 21 59.7		
	comp=Z,2.5nm,0.2s								
HFS	**Hagfors**	**5.03**	**301**	Pn	**Pn**		**16 20 44.8**	**-0.5**	
	baz=132,slow=14								
HFS					Sn	**Sn**	**16 21 42.9**	**-1.1**	
	baz=109,slow=28								
HFS					Lg	Lg	16 22 03.1		
	baz=104,slow=28								
HFS	**Hagfors**	**5.03**	**301**	Pn	**Pn**		**16 20 44.8**	**-0.5**	
	baz=132,slow=14								
HFS					Sn	**Sn**	**16 21 42.9**	**-1.1**	
	baz=109,slow=28								
HFS					Lg	Lg	16 22 03.1		
	baz=104,slow=28								
HFS	**Hagfors**	**5.03**	**301**	Pn	**Pn**		**16 20 44.5**	**-0.8**	
	comp=Z,0.4nm,0.3s,baz=119,slow=15,SNR=14								
HFS					Sn	**Sn**	**16 21 43.4**	**-0.6**	
	comp=Z,0.3nm,0.3s,baz=108,slow=23,SNR=3.9								
HFS					Lg	Lg	16 22 03.2		
	comp=Z,1.4nm,0.3s,baz=109,slow=32,SNR=5.6								
HFS	**Hagfors**	**5.03**	**301**	Pn	**Pn**		**16 20 44.8**	**-0.5**	
	baz=132,slow=13,SNR=5.6								
HFS					Sn	**Sn**	**16 21 42.9**	**-1.1**	
	baz=109,slow=26,SNR=3.6								
HFS					Lg	Lg	16 22 03.1		
	baz=104,slow=24,SNR=9.9								
NB2	**NORSAR Subarra**	**6.51**	**304**	Pn	**Pn**		**16 21 04.5**	**-1.3**	
	baz=117,slow=14								
NB2					Lg	Lg	16 22 53.4		
	baz=115,slow=28								
NB2	**NORSAR Subarra**	**6.51**	**304**	Pn	**Pn**		**16 21 04.5**	**-1.3**	
	baz=117,slow=14								
NB2					Lg	Lg	16 22 53.4		
	baz=115,slow=28								
NB2	**NORSAR Subarra**	**6.51**	**304**	Pn	**Pn**		**16 21 04.5**	**-1.3**	
	baz=117,slow=13,SNR=7.0								
NB2					Lg	Lg	16 22 53.4		
	baz=115,slow=25,SNR=3.5								
NOA	**NORSAR Array B**	**6.51**	**304**	Pn	**Pn**		**16 21 04.5**	**-1.3**	
	comp=Z,0.2nm,0.3s,baz=122,slow=16,SNR=5.1								
NOA					Lg	Lg	16 22 50.5		
	comp=Z,0.7nm,0.3s,baz=230,slow=20,SNR=7.3								
ARCES	**ARCESS Array B**	**11.80**	**5**	Pn	Pn		16 22 13.8	-4.2	
	comp=Z,0.1nm,0.3s,baz=179,slow=14,SNR=2.6								

IDC ***13*** *16:24:38.0±2.2, 20.00S×70.85W, h0km, mb3.9/2, mb1 3.9/4, mb1mx3.7/18, mbtmp3.7/4, ML3.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/20, Error ellipse: s-maj=72.0km s-min=43.2km az=171.0*

ISCJB ***13*** *16:24:43.2±1.7, 19.58S±0.04×70.85W±0.09, h26km±10km, mb3.8/2, Error ellipse: s-maj=13.5km s-min=6.8km az=173.7*

GUC ***13*** *16:24:44.5±0.7, 19.59S×70.73W, h41km±3km, ML3.9*

ISC 13 16:24:43.0±2.3, 19.63S±0.04×70.71W±0.10, h18km±11km, n12, σ1§67/18, 1C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PSGC	**Pisagua**	**0.56**	**87**	⇓*i*	P	**Pn**	**16 24 56.0**	**-0.3**
PSGC				*i*	S	**Sn**	**16 25 05.0**	**-0.2**
PSGC					AML	AML	16 25 05.9	
	comp=N,2μm,0.5s							
HMBC	**Humberstone**	**1.01**	**130**	⇓*i*	P	**Pn**	**16 25 03.5**	**+1.0**
HMBC				*i*	S	**Sn**	**16 25 18.5**	**+2.1**
HMBC					AML	AML	16 25 23.3	
	comp=N,4μm,0.6s							
MNMC	**Minimini**	**1.17**	**65**	⇓*i*	P	**Pg**	**16 25 05.8**	**+0.1**
MNMC				*i*	S	**Sg**	**16 25 21.6**	**+0.6**
MNMC					AML	AML	16 25 27.5	
	comp=E,5μm,0.4s							
ARCH	**Arica**	**1.20**	**19**	*e*	P	**Pb**	**16 25 05.0**	**-0.2**
ARCH				*e*	S	**Sb**	**16 25 20.9**	**+0.5**
ARCH					AML	AML	16 25 23.1	
	comp=E,7μm,0.5s							
PB01	**Plate Boundary**	**1.82**	**141**	*e*	P	**Pb**	**16 25 15.2**	**-0.7**
PB01				*i*	S	**Sb**	**16 25 39.1**	**+0.7**
PB01					AML	AML	16 25 48.1	
	comp=N,1μm,0.3s							
PB09	**Plate Boundary**	**2.56**	**148**	*e*	P	**Pb**	**16 25 26.4**	**-2.2**
PB09					AML	AML	16 26 13.0	
	comp=N,4μm,0.8s							
LVC	**Limon Verde**	**3.41**	**151**	⇑*i*	P	**Pn**	**16 25 38.2**	**+2.5**
LVC				*e*	S	**Sn**	**16 26 19.1**	**+3.2**
LPAZ	**La Paz**	**4.13**	**37**	Pn		**Pn**	**16 25 48.5**	**+2.6**
	comp=N,0.3nm,0.3s,baz=210,slow=8.4,SNR=12							
SIV	**San Ignacio**	**9.87**	**70**	Pn		**Pn**	**16 27 04.8**	**+0.6**
	comp=N,0.7nm,0.3s,baz=242,slow=17,SNR=8.2							
SIV					LR	LR	16 31 53.7	
	comp=N,64nm,18.7s,slow=43							
TORD	**Torodi Ar. Bea**	**78.34**	**71**	P		**P**	**16 36 41.6**	**-1.3**
	comp=N,0.8nm,0.7s,baz=256,slow=5.8,SNR=6.5							
YKA	**Yellowknife Ar**	**88.87**	**341**	P		**P**	**16 37 34.5**	**-1.3**
	comp=N,0.4nm,0.7s,baz=139,slow=4.9,SNR=9.3							
MKAR	**Makanchi Array**	**145.05**	**33**	PKPbc		**PKPab**	**16 44 18.7**	**-0.1**
	comp=N,0.7nm,0.7s,baz=314,slow=3.9,SNR=8.8							

ISCJB ***13*** *16:29:22.3±0.8, 14.82N±0.07×92.23W±0.06, h67km, mb3.9/6, Error ellipse: s-maj=11.3km s-min=6.3km az=42.9*

CASC ***13*** *16:29:24.8±1.9, 14.64N×92.02W, h103km±14km, MD3.9*

IDC ***13*** *16:29:30.9±3.7, 14.84N×91.51W, h141km±33km, mb3.6/6, mb1 4.0/8, mb1mx3.6/25, mbtmp3.7/8, MS2.9/1, Ms1 2.9/1, ms1mx2.2/28, Error ellipse: s-maj=39.6km s-min=16.3km az=66.0*

ISC 13 16:29:23.4±0.9, 14.75N±0.08×92.20W±0.08, h67km, n24, σ1§26/29, mb4.0/6, 2D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JAT	**Jato**	**0.69**	**128**	⇓*i*	P	**Pn**	**16 29 41.1**	**+3.1**
FUG	**Fuego 3**	**1.34**	**103**	*e*	P	**Pn**	**16 29 47.6**	**+1.2**
PCG	**Pacaya**	**1.58**	**103**	*e*	P	**Pn**	**16 29 51.0**	**+1.5**
PCG				*e*	S	**Sn**	**16 30 10.0**	**+0.7**
IXG	**Ixpaco**	**1.78**	**109**	*e*	P	**Pn**	**16 29 53.8**	**+1.7**
IXG				*e*	S	**Sn**	**16 30 13.5**	**-0.5**
NBG	**Las Nubes**	**1.80**	**95**	*e*	P	**Pn**	**16 29 54.6**	**+2.2**
MRL	**Marmol**	**2.44**	**82**	⇓*e*	P	**Pn**	**16 30 02.9**	**+1.8**
MRL				*e*	S	**Sn**	**16 30 30.1**	**+0.1**
RBDL	**Robledal**	**2.51**	**104**	*e*	P	**Pn**	**16 30 01.8**	**-0.2**
RTR	**El Retiro**	**2.61**	**109**	*e*	P	**Pn**	**16 30 03.2**	**-0.2**
SBLS	**San Blas**	**2.65**	**110**	*e*	P	**Pn**	**16 30 03.9**	**-0.2**
SBLS				*e*	S	**Sn**	**16 30 36.2**	**+1.0**
SNJE	**San Jose**	**2.66**	**109**	*e*	P	**Pn**	**16 30 03.7**	**-0.4**
MTO2	**Montecristo 2**	**2.77**	**97**	*e*	P	**Pn**	**16 30 05.3**	**-0.2**
BOQS	**Boqueron**	**3.00**	**109**	*e*	P	**Pn**	**16 30 07.9**	**-0.9**
LFRS	**El Faro**	**3.24**	**110**	*e*	P	**Pn**	**16 30 11.9**	**0.0**
SNVI	**San Vicente**	**3.45**	**109**	*e*	P	**Pn**	**16 30 14.7**	**-0.1**
TEIG	**Tepich**	**6.61**	**34**	P		**Pn**	**16 30 59.4**	**+1.5**
	112nm,0.3s,baz=213,slow=10,SNR=156							
TEIG					S	**Sn**	**16 32 11.2**	**-0.6**
	9.4nm,0.3s,baz=288,slow=20,SNR=3.8							
JTS	**JuntasAbangare**	**8.35**	**121**	P		**Pn**	**16 31 21.6**	**-0.1**
	3.5nm,0.3s,baz=307,slow=20,SNR=9.0							
TKL	**Tuckaleechee C**	**22.15**	**18**	P		**P**	**16 34 12.4**	**-1.2**
	3.3nm,0.5s,baz=199,slow=9.8,SNR=5.1							
TKL					LR	LR	16 44 12.2	
	comp=Z,31nm,21.3s,baz=79,slow=40							
PDAR	**Pinedale Array**	**31.66**	**335**	P		**P**	**16 35 42.3**	**+1.7**
	0.3nm,0.4s,baz=142,slow=10,SNR=3.7							
NVAR	**Mina Array Bea**	**32.97**	**321**	P		P	16 35 56.3	+4.2
	3.0nm,0.6s,baz=130,slow=8.4,SNR=28							
NVAR					PcP	**PcP**	**16 38 34.8**	**0.0**
	0.3nm,0.3s,baz=126,slow=4.6,SNR=3.2							
SIV	**San Ignacio**	**43.34**	**134**	P		P	16 37 15.9	-3.3
	1.6nm,0.6s,baz=322,slow=7.4,SNR=5.3							
YKA	**Yellowknife Ar**	**50.26**	**347**	P		**P**	**16 38 11.7**	**-0.9**
	1.8nm,0.5s,baz=147,slow=7.5,SNR=30							
YKA					PcP	**PcP**	**16 39 28.6**	**-2.0**
	0.2nm,0.4s,baz=155,slow=3.8,SNR=3.7							
ILAR	**Eielson Array**	**62.08**	**337**	P		**P**	**16 39 37.4**	**+0.6**
	0.7nm,0.7s,baz=144,slow=4.7,SNR=7.9							
WRA	**Warramunga Arr**	**135.39**	**256**	PKP		**PKPdf**	**16 48 36.3**	**-0.2**
	0.2nm,0.6s,baz=60,slow=1.3,SNR=3.3							
CMAR	**Chiang Mai Arr**	**145.22**	**341**	PKPbc		**PKPbc**	**16 48 52.5**	**-1.5**
	1.3nm,0.6s,baz=336,slow=3.3,SNR=12							

IDC 13 16:37:10.3±0.5, 18.25N×145.91E, h167km±4km, mb3.7/18, mb1 3.8/20, mb1mx3.7/29, mbtmp3.7/20, Error ellipse: s-maj=14.6km s-min=7.6km az=90.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**4.74**	**192**	P		Pn	16 38 21.4	+0.7
	23nm,0.3s,baz=27,slow=6.8,SNR=19							
GUMO					S	Sn	16 39 14.5	-1.2
	52nm,0.3s,baz=303,slow=21,SNR=11							
MJAR	**Matsushiro Arr**	**19.45**	**341**	P		P	16 41 24.7	+0.6
	0.4nm,0.3s,baz=166,slow=9.9,SNR=6.9							
KSRS	**Korea Array**	**24.80**	**324**	P		P	16 42 16.6	-0.2
	0.6nm,0.5s,baz=145,slow=9.4,SNR=2.8							
KSRS					pP	pP	16 42 49.0	-1.7
	4.0nm,0.8s,baz=150,slow=9.8,SNR=4.1							
PMG	**Port Moresby**	**27.50**	**177**	P		P	16 42 41.1	-0.2
	8.1nm,0.6s,baz=358,slow=9.2,SNR=5.8							
CTA	**Charters Tower**	**38.10**	**179**	P		P	16 44 13.2	0.0
	4.5nm,0.6s,baz=354,slow=12,SNR=4.4							
WRA	**Warramunga Arr**	**39.62**	**197**	P		P	16 44 25.9	+0.1
	3.9nm,0.4s,baz=18,slow=8.8,SNR=94							
WRA					PcP	PcP	16 46 29.1	-0.5
	0.5nm,0.6s,baz=9.3,slow=3.4,SNR=3.5							
ASAR	**Alice Springs**	**43.28**	**196**	P		P	16 44 55.4	-0.2
	2.1nm,0.5s,baz=19,slow=6.3,SNR=90							
ASAR					PcP	PcP	16 46 41.2	-0.3
	0.6nm,0.6s,baz=6.9,slow=3.8,SNR=4.0							
SONM	**Songino Array**	**43.62**	**322**	P		P	16 44 58.2	-0.1
	0.4nm,0.4s,baz=132,slow=9.1,SNR=3.7							
CMAR	**Chiang Mai Arr**	**44.48**	**278**	P		P	16 45 07.0	+1.7
	0.8nm,0.5s,baz=71,slow=6.1,SNR=7.7							
CMAR					pP	pP	16 45 43.4	+1.4
	0.5nm,0.3s,baz=67,slow=7.9,SNR=2.3							
DZM	**Mont Dzumac**	**44.83**	**153**	P		P	16 45 08.8	+0.9
	4.2nm,0.6s,baz=317,slow=7.9,SNR=5.2							
STKA	**Stephens Creek**	**50.01**	**185**	P		P	16 45 47.3	-0.4
	2.2nm,0.4s,baz=4.4,slow=9.1,SNR=16							
ZALV	**Zalesovo Beam**	**58.49**	**323**	P		P	16 46 48.0	-0.8
	0.8nm,0.6s,baz=96,slow=6.0,SNR=4.6							
MKAR	**Makanchi Array**	**58.92**	**311**	P		P	16 46 51.9	0.0
	0.3nm,0.5s,baz=97,slow=6.7,SNR=7.3							
ILAR	**Eielson Array**	**63.96**	**26**	P		P	16 47 25.2	-0.2
	0.5nm,0.5s,baz=247,slow=6.2,SNR=7.7							
ILAR					pP	pP	16 48 04.2	-0.5
	1.4nm,0.9s,baz=264,slow=5.4,SNR=7.5							
BVAR	**Borovoye Array**	**66.95**	**321**	P		P	16 47 44.6	-0.1
	3.4nm,0.5s,baz=96,slow=8.1,SNR=18							
INK	**Inuvik**	**69.71**	**23**	P		P	16 48 01.6	0.0
	1.6nm,0.7s,baz=257,slow=7.3,SNR=7.3							
INK					pP	pP	16 48 41.5	0.0
	1.7nm,0.7s,baz=286,slow=3.0,SNR=4.7							
YKA	**Yellowknife Ar**	**78.29**	**28**	P		P	16 48 52.2	+0.7
	1.1nm,0.6s,baz=290,slow=5.4,SNR=13							
YKA					pP	pP	16 49 32.2	-0.1
	2.8nm,0.7s,baz=288,slow=5.3,SNR=14							
ARCES	**ARCESS Array B**	**82.98**	**342**	P		P	16 49 16.2	-0.1
	0.9nm,0.5s,baz=72,slow=7.8,SNR=13							
ARCES					pP	pP	16 49 57.7	+0.1
	2.0nm,0.8s,baz=73,slow=8.1,SNR=2.5							
NVAR	**Mina Array Bea**	**83.26**	**52**	P		P	16 49 18.9	+0.2
	0.5nm,0.5s,baz=270,slow=6.3,SNR=6.0							
NVAR					pP	pP	16 50 01.1	+1.1
	1.1nm,0.7s,baz=271,slow=5.3,SNR=3.9							
JOF	**Joensuu**	**84.51**	**335**	*ep*		P	16 49 22.0	-2.2
	3.6nm,0.5s							
FINES	**FINESS Array B**	**87.38**	**335**	P		P	16 49 36.8	-1.5
	1.9nm,0.4s,baz=54,slow=4.7,SNR=15							
PDAR	**Pinedale Array**	**88.00**	**46**	pP		pP	16 50 23.4	-0.3
	0.6nm,0.7s,baz=252,slow=3.0,SNR=3.8							
SNAA	**Sanae**	**123.52**	**191**	*e*	P	PKPdf	16 55 47.0	-0.2
VNA2	**Neumayer--Watz**	**124.96**	**190**	*e*	P	PKPdf	16 55 50.4	+0.5
TORD	**Torodi Ar. Bea**	**132.90**	**309**	PKP		PKPdf	16 56 06.4	-0.2
	0.1nm,0.4s,baz=84,slow=1.3,SNR=4.4							
CFAA	**Coronel Fontan**	**146.45**	**120**	PKPbc		PKPdf	16 56 31.5	+0.8
	1.0nm,0.4s,baz=250,slow=2.8,SNR=24							
LPAZ	**La Paz**	**147.46**	**92**	PKPbc		PKPbc	16 56 35.0	-1.3
	2.0nm,0.4s,baz=264,slow=2.1,SNR=13							

MAN 13 16:54:53, 17.83N×120.32E, h18km, mb4.5, ML3.4, MS3.2, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.16**	**54**	⇓*i*	P	Pg	16 54 59.0	+1.6
SIPP				*e*	S	Sg	16 55 04.5	+4.0
ABRA	**Dolores**	**0.41**	**115**	*e*	P	Pn	16 55 03.6	-0.5
ABRA				*e*	S	Sn	16 55 12.8	+1.4
APYP	**Conner**	**0.88**	**88**	*e*	P	Pb	16 55 09.8	0.0
APYP				*e*	S	Sn	16 55 25.4	+2.5
BCPH	**Baguio City Da**	**1.46**	**170**	⇑*i*	P	Pn	16 55 19.0	+0.3
BCPH				*e*	S	Sn	16 55 37.5	0.0
CAUP	**Cauayan**	**1.68**	**121**	*e*	P	Pg	16 55 24.8	-0.6

NEIC ***13*** *16:55:07.4, 18.44N×68.58W, h160km, MD3.5(RSPR), After RSPR.*

RSPR 13 16:55:07.4, 18.44N×68.58W, h160km±4km, MD3.5/12, 19C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
IMO	**Isla Mona**	**0.72**	**117**	⇑*e*	P	Pn	16 55 30.3	-0.8
IMO	**Isla Mona**	**0.72**	**117**	⇓*e*	P	Pn	16 55 30.3	-0.8
DR12	**Loma Pena Alta**	**0.83**	**295**	⇓*e*	P	Pn	16 55 30.5	-1.5
DR12	**Loma Pena Alta**	**0.83**	**295**	⇓*e*	P	Pn	16 55 30.5	-1.5
SMN1	**Samana, DR**	**0.99**	**319**	⇑*e*	P	Pn	16 55 33.0	-0.1
SMN1				*e*	S	Sn	16 55 51.7	-1.2
AGPR	**Aguadilla, PR**	**1.40**	**89**	⇑*e*	P	Pn	16 55 37.5	+0.8
AGPR	**Aguadilla, PR**	**1.40**	**89**	*e*	S	Sn	16 56 00.1	+0.9
AGPR	**Aguadilla, PR**	**1.40**	**89**	⇓*e*	P	Pn	16 55 37.5	+0.8
AGPR				*e*	S	Sn	16 56 00.1	+0.9
LSP	**Las Mesas**	**1.45**	**100**	⇑*e*	P	Pn	16 55 38.3	+1.1
LSP	**Las Mesas**	**1.45**	**100**	⇓*e*	P	Pn	16 55 38.3	+1.1
CRPR	**Cabo Rojo, PR**	**1.46**	**107**	⇑*e*	P	Pn	16 55 36.4	-0.9
CRPR	**Cabo Rojo, PR**	**1.46**	**107**	⇓*e*	P	Pn	16 55 36.4	-0.9
LRS	**Lares**	**1.66**	**95**	⇑*e*	P	Pn	16 55 39.7	+0.3
LRS				*e*	S	Sn	16 56 05.3	+1.3
LRS	**Lares**	**1.66**	**95**	⇑*e*	P	Pn	16 55 39.7	+0.3
LRS				*e*	S	Sn	16 56 05.3	+1.3
GBPR	**Guanica, Bosqu**	**1.68**	**106**	⇓*e*	P	Pn	16 55 39.3	-0.3
GBPR	**Guanica, Bosqu**	**1.68**	**106**	⇓*e*	P	Pn	16 55 39.3	-0.3
AOPR	**Arecibo Observ**	**1.74**	**93**	⇑*e*	P	Pn	16 55 40.6	+0.3
AOPR	**Arecibo Observ**	**1.74**	**93**	*e*	S	Sn	16 56 05.9	+0.4
AOPR	**Arecibo Observ**	**1.74**	**93**	⇑*e*	P	Pn	16 55 40.6	+0.3
AOPR				*e*	S	Sn	16 56 05.9	+0.4
OBIP	**Obispado Ponce**	**1.92**	**102**	⇓*e*	P	Pn	16 55 42.0	-0.2
OBIP	**Obispado Ponce**	**1.92**	**102**	⇓*e*	P	Pn	16 55 42.0	-0.2
CELP	**Cerrillos**	**1.94**	**101**	⇑*i*	P	Pn	16 55 42.1	-0.3
CELP	**Cerrillos**	**1.94**	**101**	*i*	Pu	Pn	16 55 42.1	-0.3
SJG	**San Juan**	**2.33**	**98**	⇑*e*	P	Pn	16 55 47.0	+0.1
SJG	**San Juan**	**2.33**	**98**	⇑*e*	P	Pn	16 55 46.9	-0.1
SJG	**San Juan**	**2.33**	**98**	⇓*e*	P	Pn	16 55 47.0	+0.1
CPD	**Cerro la Pandu**	**2.57**	**99**	⇑*e*	P	Pn	16 55 50.5	+0.7
CPD	**Cerro la Pandu**	**2.57**	**99**	⇑*e*	P	Pn	16 55 50.5	+0.7
CBYP	**Canovanas**	**2.59**	**93**	⇓*e*	P	Pn	16 55 50.0	-0.3
CBYP	**Canovanas**	**2.59**	**93**	⇓*e*	P	Pn	16 55 50.0	-0.3
SDDR	**Presa de Saban**	**2.62**	**282**	⇑*e*	P	Pn	16 55 51.4	+0.9
SDDR	**Presa de Saban**	**2.62**	**282**	*e*	S	Sn	16 56 25.8	+1.9
SDDR	**Presa de Saban**	**2.62**	**282**	⇑*e*	P	Pn	16 55 51.4	+0.9
SDDR				*e*	S	Sn	16 56 25.8	+1.9

ISK ***13*** *17:03:31.5, 37.55N×35.70E, h10km, MD2.9*

CSEM ***13*** *17:03:31.6±0.2, 37.54N×35.69E, h15km, MD2.9, Error ellipse: s-maj=4.3km s-min=4.0km az=19.0*

ISCJB ***13*** *17:03:31.7±0.5, 37.55N±0.03×35.70E±0.03, h11km±4km, Error ellipse: s-maj=5.2km s-min=4.5km az=0.9*

DDA ***13*** *17:03:32.2, 37.56N×35.58E, h29km, MD3.0*

ISC 13 17:03:31.8±0.9, 37.53N±0.03×35.71E±0.02, h16km±5km, n27, σ0§90/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KOZT	**Kozan**	**0.10**	**120**	*e*	PG	**Pg**	**17 03 35.3**	**+0.1**
KOZT				*e*	SG	**Sg**	**17 03 37.4**	**0.0**
KOZT	**Kozan**	**0.10**	**120**	*e*	Pg	**Pg**	**17 03 35.3**	**+0.1**
KOZT				*e*	Sg	**Sg**	**17 03 37.4**	**0.0**
ANDN	**Andirin**	**0.50**	**84**	*i*	P	**Pg**	**17 03 41.5**	**-0.4**
ANDN				*i*	S	**Sb**	**17 03 50.1**	**+0.5**
ANDN	**Andirin**	**0.50**	**84**	*i*	P	**Pg**	**17 03 41.5**	**-0.4**
ANDN				*i*	S	**Sb**	**17 03 50.1**	**+0.5**
CEYT	**Ceyhan**	**0.52**	**177**	*e*	PG	**Pb**	**17 03 42.4**	**-0.2**
CEYT				*e*	SG	**Sb**	**17 03 50.5**	**+0.6**
CEYT	**Ceyhan**	**0.52**	**177**	*e*	Pg	**Pb**	**17 03 42.4**	**-0.2**
CEYT				*e*	Sg	**Sb**	**17 03 50.5**	**+0.6**
GULE	**Gulek**	**0.79**	**252**	*i*	P	**Pg**	**17 03 46.3**	**-0.8**
GULE				*i*	S	**Sb**	**17 03 59.1**	**+1.3**
GULE	**Gulek**	**0.79**	**252**	*i*	P	**Pg**	**17 03 46.3**	**-0.8**
GULE				*i*	S	**Sb**	**17 03 59.1**	**+1.3**
AYKD	**Aykdinkavak**	**0.88**	**97**	*i*	P	**Pg**	**17 03 47.7**	**-1.1**
AYKD				*i*	S	**Sb**	**17 04 00.3**	**+0.1**
KMRS	**Kahramanmaras**	**0.94**	**91**	*e*	PG	**Pb**	**17 03 49.6**	**-0.1**
KMRS				*e*	SG	**Sn**	**17 04 03.7**	**0.0**
KMRS	**Kahramanmaras**	**0.94**	**91**	*e*	Pg	**Pb**	**17 03 49.7**	**-0.1**
KMRS				*e*	Sg	**Sn**	**17 04 03.7**	**0.0**
KRTS	**Karatas**	**0.99**	**196**	*e*	PG	**Pn**	**17 03 51.0**	**-0.1**
KRTS	**Karatas**	**0.99**	**196**	*e*	Pg	**Pn**	**17 03 51.0**	**-0.1**
NIG	**Nigde**	**1.05**	**304**	*e*	PG	**Pn**	**17 03 52.0**	**-0.1**
NIG	**Nigde**	**1.05**	**304**	*e*	Pg	**Pn**	**17 03 52.0**	**-0.1**
GAZ	**Gaziantep**	**1.25**	**106**	*e*	PN	**Pg**	**17 03 56.1**	**+0.3**
GAZ	**Gaziantep**	**1.25**	**106**	*e*	Pn	**Pg**	**17 03 56.1**	**+0.3**
PINB	**Pinarbasi**	**1.27**	**25**	*i*	P	**Pg**	**17 03 55.6**	**-0.6**
PINB				*i*	S	**Sn**	**17 04 15.9**	**+4.0**
PINB	**Pinarbasi**	**1.27**	**25**	*i*	P	**Pg**	**17 03 55.6**	**-0.6**
BNN	**Bunyan**	**1.32**	**4**	*e*	PN	**Pn**	**17 03 55.5**	**-0.3**
BNN	**Bunyan**	**1.32**	**4**	*e*	Pn	**Pn**	**17 03 55.5**	**-0.3**
AVNT	**Avonos**	**1.42**	**332**	*i*	P	**Pn**	**17 03 56.7**	**-0.4**
AVNT				*i*	S	**Sn**	**17 04 15.2**	**-0.4**
AVNT	**Avonos**	**1.42**	**332**	*i*	P	**Pn**	**17 03 56.7**	**-0.4**
AVNT				*i*	S	**Sn**	**17 04 15.2**	**-0.4**
GZT	**Gaziantep**	**1.48**	**96**	*i*	P	**Pg**	**17 03 59.6**	**-0.8**
GZT				*i*	S	**Sb**	**17 04 18.5**	**+0.7**
YAYL	**Yayladag**	**1.53**	**168**	*i*	P	**Pn**	**17 03 57.3**	**-1.3**
YAYL				*i*	S	**Sn**	**17 04 19.2**	**+1.0**
YAYL	**Yayladag**	**1.53**	**168**	*i*	P	**Pn**	**17 03 57.3**	**-1.3**
YAYL				*i*	S	**Sn**	**17 04 19.2**	**+1.0**
DARE	**Darende-Malaty**	**1.74**	**53**	*e*	PN	**Pb**	**17 04 02.6**	**-0.8**

IDC ***13*** *17:51:19.9±1.3, 5.42S×153.22E, h0km, mb3.9/11, mb1 4.1/12, mb1mx3.9/21, mbtmp3.9/12, ML2.7/1, MS3.4/7, Ms1 3.4/7, ms1mx3.0/33, Error ellipse: s-maj=45.6km s-min=16.6km az=118.0*

ISCJB ***13*** *17:51:24.0±0.8, 5.45S±0.1×153.1E±0.1, h37km, mb3.8/11

CLJI	**Cilicap**	**1.44**	**283**	P	Pn	18 31 36.6	+0.1
TGJI	**Tegal**	**1.75**	**312**	P	Pn	18 31 40.7	0.0
KRKI	**Karangkates**	**2.00**	**93**	P	Pb	18 31 46.8	-0.1
CISI	**Cisompet, Garu**	**2.64**	**281**	P	Pn	18 31 53.1	+0.1
CISI				S	Sn	18 32 27.3	+2.1
GMJI	**Gumukmas**	**2.99**	**94**	P	Pn	18 32 00.0	+2.2
LEM	**Lembang**	**3.04**	**293**	P	Pn	18 32 01.6	+2.9
BLJI	**Banyuglugur**	**3.15**	**85**	P	Pb	18 32 06.4	0.0
KMMI	**Kalianget**	**3.64**	**74**	P	Pn	18 32 07.1	+0.3

CSEM 13 18:35:48.2±2.0, 25°28.N×37°45.E, h2km, ML3.7, Error ellipse: s-maj=52.4km s-min=10.4km az=121.0, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMRS	**Mersa Alam**	**2.38**	**264**	P	Pn	18 36 27.9	-0.3
HADB		**2.56**	**272**	P	Pn	18 36 30.8	+0.1
HQSR		**2.80**	**280**	P	Pn	18 36 34.4	+0.3
HSFG		**3.42**	**293**	P	Pn	18 36 42.9	+0.4
HHRG	**Al Ghardaqah**	**3.98**	**300**	P	Pn	18 36 49.6	-0.7
HDHB	**Dhahab**	**4.25**	**324**	P	Pn	18 36 51.4	-2.6
AAHD	**Abu Hadid**	**4.54**	**251**	P	Pn	18 36 58.2	+0.2
NNAL	**NNAL**	**4.79**	**247**	P	Pn	18 37 00.9	-0.5
NNAL				S	Sn	18 37 59.6	+2.0
EIL	**Elat**	**4.90**	**334**	Sn	Sg	18 38 22.9	-2.8
MBRI	**Mt Berech**	**5.03**	**334**	Pn	Pn	18 37 05.4	+0.6
MBRI				Sn	Sg	18 38 26.2	-3.7
HRFI	**Mount Harif**	**5.20**	**336**	Pn	Pn	18 37 08.1	+1.1
HRFI				Sn	Sg	18 38 31.5	-3.8
KRMI	**Paran Flat**	**5.39**	**334**	Sn	Sg	18 38 35.4	-6.0
PRNI	**Paran**	**5.49**	**337**	Pn	Pn	18 37 12.8	+1.7
PRNI				Sn	Sg	18 38 40.1	-4.7
ZFRI	**Zfri**	**5.62**	**340**	Pn	Pn	18 37 15.2	+2.4
ZFRI				Sn	Sg	18 38 45.0	-3.8
KZIT	**Kziot**	**6.22**	**335**	Sn	Sb	18 38 54.8	+2.7
RTMI	**Retamim**	**6.24**	**338**	Sn	Sb	18 38 56.5	+3.6
DSI	**Dead Sea**	**6.52**	**344**	Sn	Sg	18 39 09.4	-8.4

*ISK **13** 18:56:15.1, 39°.81N×30°.44E, h5km, MD3.0*
*CSEM **13** 18:56:15.4±0.1, 39°.80N×30°.44E, h2km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.7km az=41.0*
*DDA **13** 18:56:16.0, 39°.88N×30°.40E, h1km, MD2.9*
ISC 13 18:56:15.3±0.9, 39°.81N±0°.02×30°.45E±0°.02, h5km±8km, n79, σ0°53/95, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	**Eskisehir**	**0.08**	**4**	*i* P	**Pg**	**18 56 16.8**	**-0.2**
BORA				*i* S	**Sg**	**18 56 18.4**	**+0.1**
BORA	**Eskisehir**	**0.08**	**4**	*i* P	**Pg**	**18 56 16.8**	**-0.2**
BORA				*i* S	**Sg**	**18 56 18.4**	**+0.1**
ESKT	**Eskisehir**	**0.42**	**132**	*e*PG	**Pg**	**18 56 23.9**	**+0.4**
ESKT				*e*SG	**Sg**	**18 56 30.2**	**+1.2**
ESKT	**Eskisehir**	**0.42**	**132**	*e*Pg	**Pg**	**18 56 23.9**	**+0.4**
ESKT				*e*Sg	**Sg**	**18 56 30.2**	**+1.2**
SEYT	**Eskypehyr**	**0.42**	**132**	*i* P	**Pg**	**18 56 22.7**	**-0.7**
SEYT				*i* S	**Sg**	**18 56 28.9**	**-0.1**
SEYT	**Eskypehyr**	**0.42**	**132**	*i* P	**Pg**	**18 56 22.7**	**-0.7**
SEYT				*i* S	**Sg**	**18 56 28.9**	**-0.1**
GPA	**Golpazari**	**0.49**	**348**	*e*PG	**Pg**	**18 56 24.5**	**-0.3**
GPA	**Golpazari**	**0.49**	**348**	*e*Pg	**Pg**	**18 56 24.5**	**-0.3**
CAVI	**Cavuskoy**	**0.61**	**311**	*e*PG	**Pg**	**18 56 27.3**	**+0.2**
CAVI	**Cavuskoy**	**0.61**	**311**	*e*Pg	**Pg**	**18 56 27.3**	**+0.2**
GULT	**Gulveren**	**0.63**	**5**	*e*PG	**Pg**	**18 56 27.2**	**-0.2**
GULT				*e*SG	**Sg**	**18 56 36.6**	**+1.0**
GULT	**Gulveren**	**0.63**	**5**	*e*Pg	**Pg**	**18 56 27.2**	**-0.2**
GULT				*e*Sg	**Sg**	**18 56 36.6**	**+1.0**
ALT	**Altintas**	**0.79**	**199**	*e*PG	**Pg**	**18 56 30.4**	**-0.1**
ALT	**Altintas**	**0.79**	**199**	*e*Pg	**Pg**	**18 56 30.4**	**-0.1**
ADVT	**Abdulvahap**	**0.83**	**319**	*e*PG	**Pb**	**18 56 31.7**	**-0.5**
ADVT	**Abdulvahap**	**0.83**	**319**	*e*Pg	**Pb**	**18 56 31.7**	**-0.5**
TVSB	**Tavsanli**	**0.84**	**245**	*e*PG	**Pg**	**18 56 31.2**	**-0.2**
TVSB	**Tavsanli**	**0.84**	**245**	*e*Pg	**Pg**	**18 56 31.2**	**-0.2**
MDUB	**Mudurnu**	**0.88**	**41**	*e*PG	**Pb**	**18 56 32.6**	**-0.6**
MDUB	**Mudurnu**	**0.88**	**41**	*e*Pg	**Pb**	**18 56 32.6**	**-0.6**
SPNC	**Sapanca-Adapaz**	**0.89**	**353**	*e*PG	**Pb**	**18 56 32.7**	**-0.5**
SPNC	**Sapanca-Adapaz**	**0.89**	**353**	*e*Pg	**Pb**	**18 56 32.7**	**-0.5**
SVRH	**Sivrihisar-ESK**	**0.91**	**113**	*e*PG	**Pb**	**18 56 33.0**	**-0.5**
SVRH	**Sivrihisar-ESK**	**0.91**	**113**	*e*Pg	**Pb**	**18 56 33.1**	**-0.5**
IZI	**Iznik**	**0.92**	**306**	*e*PG	**Pb**	**18 56 33.5**	**-0.2**
IZI	**Iznik**	**0.92**	**306**	*e*Pg	**Pb**	**18 56 33.6**	**-0.2**
GDZ	**Gediz**	**1.03**	**227**	*i* P	**Pg**	**18 56 34.6**	**-0.5**
GDZ				*i* S	**Sg**	**18 56 48.9**	**+0.3**
GDZ	**Gediz**	**1.03**	**227**	*i* P	**Pg**	**18 56 34.6**	**-0.5**
GDZ				*i* S	**Sg**	**18 56 48.9**	**+0.3**
ULDT	**Uludag**	**1.06**	**289**	*i* P	**Pg**	**18 56 35.6**	**-0.1**
ULDT				*i* S	**Sn**	**18 56 51.6**	**-0.8**
ULDT	**Uludag**	**1.06**	**289**	*i* P	**Pg**	**18 56 35.6**	**-0.1**
ULDT				*i* S	**Sn**	**18 56 51.6**	**-0.8**
YLV	**Yalova**	**1.12**	**313**	*e*PN	**Pb**	**18 56 37.1**	**-0.1**
YLV	**Yalova**	**1.12**	**313**	*e*Pn	**Pb**	**18 56 37.1**	**-0.1**
GEMT	**Gemlik**	**1.15**	**304**	*e*PN	**Pn**	**18 56 38.4**	**+0.3**
GEMT	**Gemlik**	**1.15**	**304**	*e*Pn	**Pn**	**18 56 38.4**	**+0.3**
BOLV	**Bolvadin**	**1.15**	**160**	*i* P	Pn	18 56 44.0	+5.7
BOLV				*i* S	Sn	18 57 00.4	+5.9
HRT	**Hereke**	**1.18**	**330**	*e*PN	**Pg**	**18 56 37.2**	**-0.7**
HRT	**Hereke**	**1.18**	**330**	*e*Pn	**Pg**	**18 56 37.2**	**-0.7**
SHUT	**Suhut-Afyon**	**1.25**	**176**	*e*PN	**Pn**	**18 56 39.6**	**0.0**
SHUT	**Suhut-Afyon**	**1.25**	**176**	*e*Pn	**Pn**	**18 56 39.6**	**0.0**
MDNY	**Mudanya-Bursa**	**1.32**	**296**	*e*PN	**Pg**	**18 56 40.8**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.32**	**296**	*e*Pn	**Pg**	**18 56 40.8**	**+0.1**
DST	**Dursunbey**	**1.42**	**262**	*e*PN	**Pg**	**18 56 42.8**	**+0.2**
DST	**Dursunbey**	**1.42**	**262**	*e*Pn	**Pg**	**18 56 42.8**	**+0.2**
ARMT	**Armutlu**	**1.43**	**303**	*e*PN	**Pg**	**18 56 42.6**	**-0.2**
ARMT	**Armutlu**	**1.43**	**303**	*e*Pn	**Pg**	**18 56 42.6**	**-0.2**
KIZT	**Kizilcal**	**1.45**	**129**	*e*PN	**Pb**	**18 56 42.6**	**-0.2**
KIZT	**Kizilcal**	**1.45**	**129**	*e*Pn	**Pb**	**18 56 42.6**	**-0.2**
BUY	**Buyukada**	**1.46**	**316**	*e*PN	**Pg**	**18 56 43.0**	**-0.2**
BUY	**Buyukada**	**1.46**	**316**	*e*Pn	**Pg**	**18 56 43.0**	**-0.2**
SILT	**Sile**	**1.48**	**336**	*e*PN	**Pg**	**18 56 43.3**	**-0.4**
SILT	**Sile**	**1.48**	**336**	*e*Pn	**Pg**	**18 56 43.3**	**-0.4**
DURS	**Dursunbey**	**1.54**	**263**	*i* P	**Pn**	**18 56 43.4**	**-0.1**
DURS				*i* S	**Sg**	**18 57 05.8**	**+1.2**
DURS	**Dursunbey**	**1.54**	**263**	*i* P	**Pn**	**18 56 43.4**	**-0.1**
DURS				*i* S	**Sg**	**18 57 05.8**	**+1.2**
DEMI	**Demirci**	**1.54**	**241**	*i* P	**Pg**	**18 56 44.5**	**-0.4**
DEMI				*i* S	**Sb**	**18 57 04.0**	**-0.2**
DEMI	**Demirci**	**1.54**	**241**	*i* P	**Pg**	**18 56 44.5**	**-0.4**
DEMI				*i* S	**Sb**	**18 57 04.0**	**-0.2**
ISK	**Istanbul-Kandi**	**1.65**	**320**	*e*PN	**Pb**	**18 56 46.0**	**-0.2**
ISK	**Istanbul-Kandi**	**1.65**	**320**	*e*Pn	**Pb**	**18 56 46.0**	**-0.2**
KHL	**Karahalli**	**1.65**	**206**	*e*PN	**Pb**	**18 56 45.5**	**-0.7**
KHL	**Karahalli**	**1.65**	**206**	*e*Pn	**Pb**	**18 56 45.5**	**-0.7**
KCTX	**Karacabey (Bur**	**1.67**	**287**	*e*PN	**Pn**	**18 56 45.3**	**0.0**
KCTX	**Karacabey (Bur**	**1.67**	**287**	*e*Pn	**Pn**	**18 56 45.3**	**0.0**
ANTO	**Ankara**	**1.81**	**87**	*e*PN	**Pb**	**18 56 48.4**	**-0.6**
ANTO	**Ankara**	**1.81**	**87**	*e*Pn	**Pb**	**18 56 48.4**	**-0.6**
BGKT	**Bogazkoy**	**1.88**	**318**	*e*PN	**Pn**	**18 56 48.5**	**+0.4**
BGKT	**Bogazkoy**	**1.88**	**318**	*e*Pn	**Pn**	**18 56 48.5**	**+0.4**
KULA	**Kula-Manisa**	**1.89**	**228**	*e*PN	**Pn**	**18 56 48.9**	**+0.5**
KULA	**Kula-Manisa**	**1.89**	**228**	*e*Pn	**Pn**	**18 56 48.9**	**+0.5**
BALB	**Balikesir**	**1.99**	**266**	*e*PN	**Pn**	**18 56 50.2**	**+0.6**
BALB	**Balikesir**	**1.99**	**266**	*e*Pn	**Pn**	**18 56 50.2**	**+0.6**
CTKS	**Kestanelik-??a**	**2.06**	**315**	*e*PN	**Pn**	**18 56 51.2**	**+0.6**
CTKS	**Kestanelik-??a**	**2.06**	**315**	*e*Pn	**Pn**	**18 56 51.2**	**+0.6**
AFSR	**Af˙ar-Bala (A**	**2.06**	**99**	*e*PN	**Pn**	**18 56 51.6**	**+0.9**
AFSR	**Af˙ar-Bala (A**	**2.06**	**99**	*e*Pn	**Pn**	**18 56 51.6**	**+0.9**
GONE	**Gonen-Balikesi**	**2.14**	**277**	*e*PN	**Pn**	**18 56 52.4**	**+0.7**
GONE	**Gonen-Balikesi**	**2.14**	**277**	*e*Pn	**Pn**	**18 56 52.4**	**+0.7**
BALY	**Balya**	**2.18**	**269**	*i* P	**Pn**	**18 56 52.9**	**+0.6**
BALY				*i* S	**Sg**	**18 57 26.0**	**+0.7**
BALY	**Balya**	**2.18**	**269**	*i* P	**Pn**	**18 56 52.9**	**+0.6**
LADK	**Ladik-KONYA**	**2.19**	**136**	*e*PN	**Pn**	**18 56 53.4**	**+0.9**
LADK	**Ladik-KONYA**	**2.19**	**136**	*e*Pn	**Pn**	**18 56 53.4**	**+0.9**

MEX 13 19:06:36.4±0.7, 17°.85N×99°.10W, h61km±9km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.50**	**279**	*e*P	Pn	19 06 47.2	-1.3
MEIG				*i* S	Sn	19 06 55.5	-1.9
YAIG	**Yautepec**	**1.01**	**2**	*i* P	Pn	19 06 52.9	-1.9
YAIG				*i* S	Sn	19 07 06.3	-2.2
UTMO	**Huajuapan**	**1.23**	**91**	*e*P	Pn	19 06 56.6	-1.3
UTMO				*i* S	Sn	19 07 11.9	-2.0

ARIG	**Puente So Nin**	**1.26**	**290**	*i* P	Pn	19 06 57.1	-0.9
ARIG				*i* S	Sn	19 07 12.6	-1.6
PPM	**Popocatepetl**	**1.29**	**20**	*i* P	Pn	19 06 57.2	-1.9
PPM				*i* S	Sn	19 07 13.9	-2.0
CAIG	**El Cayaco**	**1.37**	**235**	*i* P	Pn	19 06 57.0	-2.3
CAIG				*e*S	Sn	19 07 15.2	-1.4
PNIG	**Pinotepa**	**1.72**	**147**	*i* P	Pn	19 07 02.6	-1.5
PNIG				*i* S	Sn	19 07 23.7	-1.4
TPIG	**Tehuac#an**	**1.75**	**71**	*e*P	Pn	19 07 02.3	-2.4
TPIG				*i* S	Sn	19 07 24.5	-1.7

*KRSC **13** 19:08:18.4±1.2, 52°.83N×154°.40E, h528km±57km, ML4.4*
*MOS **13** 19:08:23.9±1.2, 53°.31N×154°.66E, h493km, mb4.4/9, Error ellipse: s-maj=22.0km s-min=14.0km az=63.1*
*ISCJB **13** 19:08:24.4±0.3, 53°.16N±0°.07×154°.4E±0°.2, h475km±6km, mb3.4/13, Error ellipse: s-maj=17.2km s-min=6.4km az=32.3*
*IDC **13** 19:08:25.3±0.7, 53°.39N×154°.02E, h460km±9km, mb3.0/14, mb1 3.2/16, mb1mx3.1/28, mbtmp3.1/16, Error ellipse: s-maj=17.4km s-min=9.7km az=127.0*
ISC 13 19:08:25.0±0.6, 53°.11N±0°.08×154°.60E±0°.09, h476km±8km, n62, σ1°.43/86, mb3.5/13, 1D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**1.56**	**96**	P	**P**	**19 09 25.4**	**-0.3**
APC				S	**S**	**19 10 14.6**	**-0.6**
PETK	**Petropavlovsk-**	**1.87**	**89**	PN	**P**	**19 09 27.2**	**0.0**
PETK				S	**S**	**19 10 19.2**	**+1.4**
PETK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
PETK	**Petropavlovsk-**	**1.87**	**89**	P	**P**	**19 09 27.2**	**0.0**
	comp=Z,4.9nm,0.3s,baz=204,slow=1.6,SNR=34						
PETK				S	**S**	**19 10 19.1**	**+1.4**
	baz=246,slow=20,SNR=2.4						
GNL	**Ganaly**	**2.09**	**72**	P	**P**	**19 09 28.4**	**0.0**
GNL				S	**S**	**19 10 19.2**	**-0.9**
PAU	**Pauzhetka**	**2.13**	**140**	S	**S**	**19 10 18.7**	**-1.6**
ASAK	**Asacha**	**2.14**	**109**	P	**P**	**19 09 29.5**	**+0.8**
ASAK				S	**S**	**19 10 20.2**	**-0.3**
MTVR	**Mutnovka**	**2.27**	**105**	P	**P**	**19 09 29.5**	**0.0**
MTVR				S	**S**	**19 10 22.7**	**+0.8**
KOK	**Koryaka**	**2.44**	**84**	P	**P**	**19 09 31.5**	**+1.1**
PET	**Petropavlovsk**	**2.45**	**90**	*i*PN	**P**	**19 09 30.8**	**+0.5**
PET				*e*S	**S**	**19 10 23.3**	**-0.2**
PET				pmax	pmax		
	comp=Z,147nm,0.5s						
PET				smax	smax		
	comp=N,69nm,0.9s						
PET				smax	smax		
	comp=E,61nm,0.7s						
PET	**Petropavlovsk**	**2.45**	**90**	P	**P**	**19 09 31.0**	**+0.7**
RUS	**Russkaya**	**2.47**	**104**	PN	**P**	**19 09 30.4**	**-0.1**
RUS				S	**S**	**19 10 22.4**	**-1.4**
RUS	**Russkaya**	**2.47**	**104**	P	**P**	**19 09 30.4**	**-0.1**
RUS				S	**S**	**19 10 22.4**	**-1.4**
AVH	**Avacha**	**2.50**	**85**	P	**P**	**19 09 31.8**	**+1.1**
KRER	**Koryakskii**	**2.51**	**84**	P	**P**	**19 09 32.0**	**+1.1**
SMAR	**Somma**	**2.54**	**85**	P	**P**	**19 09 32.0**	**+0.9**
SMAR				S	**S**	**19 10 25.7**	**+0.7**
UGLR	**Uglovaya**	**2.55**	**86**	P	**P**	**19 09 31.4**	**+0.3**
UGLR				S	**S**	**19 10 24.8**	**-0.1**
SDLR	**Sedlovina**	**2.59**	**85**	P	**P**	**19 09 32.1**	**+0.8**
SDLR				S	**S**	**19 10 25.8**	**+0.4**
SKR	**Severo-Kuril's**	**2.61**	**158**	*e*	**S**	**19 10 23.0**	**-2.4**
SKR				pmax	pmax		
	comp=N,80nm,0.6s						
SKR				pmax	pmax		
	comp=Z,60nm,0.6s						
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR	**Severo-Kuril's**	**2.61**	**158**	P	**P**	**19 09 30.4**	**-1.0**
SKR				S	**S**	**19 10 23.9**	**-1.5**
NLC	**Nalytchevo**	**2.86**	**87**	PN	**P**	**19 09 33.0**	**+0.1**
NLC				S	**S**	**19 10 27.8**	**-0.6**
NLC	**Nalytchevo**	**2.86**	**87**	P	**P**	**19 09 33.0**	**+0.1**
NLC				S	**S**	**19 10 27.8**	**-0.6**
SPN	**Mys Shipunski**	**3.27**	**88**	PN	**P**	**19 09 35.5**	**-0.4**
SPN				S	**S**	**19 10 30.7**	**-3.1**
SPN	**Mys Shipunski**	**3.27**	**88**	P	**P**	**19 09 35.5**	**-0.4**
SPN				S	**S**	**19 10 30.7**	**-3.1**
ESO	**Esso**	**3.70**	**39**	PN	**P**	**19 09 39.4**	**+0.2**
ESO	**Esso**	**3.70**	**39**	P	**P**	**19 09 39.4**	**+0.2**
TUMR	**Tumrok**	**3.92**	**54**	P	**P**	**19 09 42.4**	**+1.3**
TUMR				S	**S**	**19 10 44.1**	**+0.8**
KMNR	**Kamenistaya**	**4.23**	**49**	P	**P**	**19 09 44.3**	**+0.6**
KPT	**Kopyto**	**4.35**	**47**	P	**P**	**19 09 45.2**	**+0.5**
SRDR	**Sredinnyy**	**4.38**	**41**	P	**P**	**19 09 45.5**	**+0.6**
KIRR	**Kirishev**	**4.40**	**47**	P	**P**	**19 09 45.5**	**+0.3**
BZMR	**Bezymyannaya**	**4.45**	**48**	P	**P**	**19 09 46.5**	**+0.8**
MKZ	**Mys Kozlova**	**4.47**	**68**	PN	**P**	**19 09 45.1**	**-0.5**
MKZ				S	**S**	**19 10 48.1**	**-3.5**
MKZ	**Mys Kozlova**	**4.47**	**68**	P	**P**	**19 09 45.1**	**-0.5**
MKZ				S	**S**	**19 10 48.1**	**-3.5**
BZWR	**Bezymyannyi-We**	**4.47**	**48**	P	**P**	**19 09 46.9**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**4.55**	**49**	P	**P**	**19 09 47.9**	**+1.4**
KRSR	**Krestovskiy**	**4.66**	**46**	P	**P**	**19 09 48.1**	**+0.6**
KRSR				S	**S**	**19 10 54.6**	**-0.3**
BDR	**Baidarnaya**	**5.16**	**45**	P	**P**	**19 09 54.0**	**+2.0**
BDR				S	**S**	**19 11 03.6**	**+0.3**
SRKR	**Sorokina**	**5.20**	**44**	P	**P**	**19 09 53.4**	**+1.0**
SMKR	**Semkarok**	**5.28**	**46**	S	**S**	**19 11 06.1**	**+0.7**
KBG	**Krutoberegovo**	**5.66**	**53**	S	**S**	**19 11 08.2**	**-3.7**
KBTR	**Krutoberegovo**	**5.69**	**54**	PN	**P**	**19 09 56.7**	**-0.4**
KBTR	**Krutoberegovo**	**5.69**	**54**	P	**P**	**19 09 56.7**	**-0.4**
BKI	**Bering**	**7.00**	**68**	PN	**P**	**19 10 10.8**	**+0.6**
BKI				S	**S**	**19 11 33.7**	**-2.9**
BKI	**Bering**	**7.00**	**68**	P	**P**	**19 10 10.8**	**+0.6**
BKI				S	**S**	**19 11 33.7**	**-2.9**
ASAJ	**Asahikawa**	**11.98**	**226**	P	**P**	**19 11 05.2**	**+1.8**
	comp=E,0.1nm,0.3s,baz=18,slow=20,SNR=2.5						
BILL	**Bilibino**	**15.99**	**16**	*e*P	**P**	**19 11 44.2**	**-1.3**
BILL				pmax	pmax		
	comp=Z,25nm,0.8s						
MAT	**Matsushiro**	**20.15**	**221**	P	**P**	**19 12 27.2**	**+1.0**
MJAR	**Matsushiro Arr**	**20.15**	**221**	P	**P**	**19 12 27.9**	**+1.6**
	comp=Z,4.7nm,0.6s,baz=9.7,slow=8.7,SNR=24						
KSRS	**Korea Array**	**24.24**	**240**	P	**P**	**19 13 03.0**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=32,slow=9.3,SNR=4.1						
JNU	**Nakatsue**	**26.22**	**230**	P	**P**	**19 13 20.5**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=27,slow=2.3,SNR=3.3						
SONM	**Songino Array**	**30.65**	**280**	P	**P**	**19 13 57.6**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=68,slow=7.0,SNR=5.1						
ILAR	**Eielson Array**	**31.15**	**45**	P	**P**	**19 14 05.5**	**+2.3**
	comp=Z,1.4nm,0.7s,baz=271,slow=8.8,SNR=24						
MKAR	**Makanchi Array**	**45.12**	**293**	P	**P**	**19 15 55.1**	**-2.4**
MKAR	**Makanchi Array**	**45.12**	**293**	P	**P**	**19 15 55.1**	**-2.4**
	comp=Z,0.1nm,0.5s,baz=63,slow=8.6,SNR=5.5						
YKA	**Yellowknife Ar**	**45.35**	**41**	P	**P**	**19 16 01.3**	**+2.3**
	comp=Z,1.3nm,0.6s,baz=303,slow=7.4,SNR=19						
ARCES	**ARCESS Array B**	**52.18**	**340**	P	**P**	**19 16 48.1**	**-1.6**
	comp=Z,2.9nm,1.0s,baz=38,slow=8.6,SNR=8.2						
CMAR	**Chiang Mai Arr**	**54.97**	**253**	P	**P**	**19 17 10.8**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=24,slow=7.2,SNR=12						
FINES	**FINESS Array B**	**58.72**	**334**	P	**P**	**19 17 33.6**	**-1.8**
	comp=Z,1.1nm,0.9s,baz=32,slow=9.0,SNR=4.7						
NOA	**NORSAR Array B**	**62.52**	**341**	P	**P**	**19 17 59.3**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=25,slow=7.0,SNR=2.8						
SCHQ	**Schefferville**	**67.09**	**25**	P	**P**	**19 18 30.1**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=0.0,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**74.84**	**200**	P	**P**	**19 19 17.7**	**+1.9**
	comp=Z,1.9nm,0.7s,baz=17,slow=6.0,SNR=17						
ASAR	**Alice Springs**	**78.54**	**199**	P	**P**	**19 19 38.6**	**+2.5**
	comp=Z,1.6nm,0.5s,baz=11,slow=5.0,SNR=65						

*IDC **13** 19:18:48.7±1.2, 13°.09N×120°.18E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/25, mbtmp3.3/4, MS2.7/1, Ms1 2.7/1, ms1mx2.3/23, Error ellipse: s-maj=25.8km s-min=13.6km az=116.0*
*ISCJB **13** 19:18:50.5±0.9, 13°.08N±0°.09×120°.19E±0°.10, h27km, mb3.3/4, MS2.6/1, Error ellipse: s-maj=15.9km s-min=9.9km az=40.6*
ISC 13 19:18:52.2±1.1, 13°.2N±0°.1×120°.26E±0°.09, h27km, n9, σ1°.29/10, mb3.3/4, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.76**	**64**	*e*P	**Pb**	**19 19 04.8**	**-1.9**
TGY	**Tagaytay City**	**1.14**	**35**	*i*P	**Pn**	**19 19 11.9**	**-0.6**
TGY				*e*S	**Sb**	**19 19 30.0**	**+2.2**
TGY	**Tagaytay City**	**1.14**	**35**	Pg	**Pn**	**19 19 11.9**	**-0.6**
	312nm,0.3s,baz=212,slow=3.3,SNR=24						
TGY				Lg	Lg	19 19 29.9	
	412nm,0.3s,baz=204,slow=19,SNR=14						
GQP	**Guinayangan**	**2.25**	**71**	*e*P	**Pn**	**19 19 28.5**	**+0.8**
GQP				*e*S	**Sb**	**19 20 00.7**	**+1.1**
CMAR	**Chiang Mai Arr**	**21.17**	**287**	P	**P**	**19 23 36.2**	**+0.7**
	0.9nm,0.9s,baz=104,slow=9.4,SNR=7.3						
KSRS	**Korea Array**	**25.14**	**14**	LR	LR	19 36 00.8	
	comp=Z,18nm,19.0s,baz=225,slow=41						
WRA	**Warramunga Arr**	**35.70**	**157**	P	**P**	**19 25 48.4**	**-0.2**
	0.2nm,0.5s,baz=332,slow=10,SNR=4.5						
SONM	**Songino Array**	**36.45**	**344**	P	**P**	**19 25 54.9**	**0.0**
	0.4nm,0.7s,baz=161,slow=9.1,SNR=4.5						
ASAR	**Alice Springs**	**38.96**	**160**	P	**P**	**19 26 16.8**	**+0.5**
	0.3nm,0.5s,baz=338,slow=7.0,SNR=8.9						

IDC 13 19:26:55.9±9.1, 5°.57S×153°.46E, h123km±62km, mb3.2/3, mb1 3.4/4, mb1mx3.1/20, mbtmp3.2/4, Error ellipse: s-maj=100.2km s-min=55.7km az=125.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.32**	**238**	P	Pn	19 28 39.4	-0.9
	0.4nm,0.3s,baz=32,slow=19,SNR=3.0						
PMG				S	Sn	19 30 04.1	+2.2
	2.7nm,0.3s,baz=122,slow=23,SNR=5.6						
WRA	**Warramunga Arr**	**23.45**	**231**	P	P	19 31 54.7	+0.2
	0.4nm,0.3s,baz=56,slow=9.9,SNR=8.0						
ASAR	**Alice Springs**	**26.05**	**224**	P	P	19 32 17.7	-0.3
	0.2nm,0.5s,baz=55,slow=9.4,SNR=6.4						
FITZ	**Fitzroy Crossi**	**29.89**	**243**	P	P	19 32 51.7	-0.5
	2.4nm,0.9s,baz=50,slow=10,SNR=6.9						
TORD	**Torodi Ar. Bea**	**151.17**	**287**	PKPbc	PKPbc	19 46 35.8	0.0
	0.3nm,0.9s,baz=123,slow=3.6,SNR=3.2						

*JMA **13** 19:34:47.2±0.2, 35°.88N×141°.65E, h34km±3km, M3.0*
*ISCJB **13** 19:34:47.0±0.9, 35°.82N±0°.04×141°.70E±0°.08, h42km±10km, mb3.3/5, Error ellipse: s-maj=11.4km s-min=6.8km az=175.6*
*IDC **13** 19:34:49.0±3.4, 35°.77N×141°.69E, h41km±27km, mb3.2/5, mb1 3.4/8, mb1mx3.2/27, mbtmp3.3/8, ML3.3/3, Error ellipse: s-maj=37.4km s-min=13.7km az=91.0*
ISC 13 19:34:47.4±1.2, 35°.87N±0°.04×141°.64E±0°.08, h29km±8km, n19, σ1°44/26, mb3.4/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.66**	**255**	P	**Pn**	**19 35 00.0**	**-0.8**
CHOJ				*e*S	**Sn**	**19 35 09.2**	**-1.0**
JHO	**Hitachi**	**1.14**	**311**	P	**Pn**	**19 35 07.0**	**-0.4**
JYT	**Yasato**	**1.23**	**287**

Ms5.1/3,Ms7 4.9/3
PRU ***13*** *19:46:47.1,36°.61N×21°.26E,h0km,M4.9*
MOS ***13*** *19:46:47.0±1.3,36°.40N×21°.84E,h33km,mb4.7/32,Error ellipse: s-maj=7.7km s-min=4.1km az=77.8*
HLW ***13*** *19:46:48.8,36°.28N×22°.26E,h33km×26km,Md0.0,Ml4.1*
ISCJB ***13*** *19:46:49.3±0.3,36°.36N±0°.02×21°.89E±0°.02,h63km±2km, mb4.5/55,Error ellipse: s-maj=4.5km s-min=2.3km az=29.7*
THE ***13*** *19:46:49.1,36°.22N×21°.84E,h24km±3km,ML4.4/28,Error ellipse: s-maj=3.7km s-min=1.4km az=35.0*
ATH ***13*** *19:46:49.0,36°.27N×21°.85E,h39km±2km,MD3.5/17, ML4.2*
CSEM ***13*** *19:46:49.5±0.2,36°.24N×21°.82E,h47km±2km,mb4.6/16, Ms2.9,Mw4.1,Error ellipse: s-maj=5.3km s-min=2.9km az=44.0*
PDG ***13*** *19:46:50.8±0.6,36°.75N×21°.57E,h2km±1km,ML4.5/8, Error ellipse: s-maj=6.4km s-min=3.2km az=90.0*
BEO ***13*** *19:46:50.6±1.0,36°.61N×21°.56E,h0km,ML4.4/7*
ISC 13 19:46:48.5±0.5,36°.27N±0°.04×21°.74E±0°.03,h36km±1km, n629,σ1§61/627,mb4.5/55,MS3.6/14,41C-32D,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.62**	**360**	P	**Pn**	**19 47 01.8**	**+0.9**
PYL				S	**Sn**	**19 47 12.2**	**+2.6**
PYL	**PYLOS**	**0.62**	**360**	*e*PN	**Pn**	**19 47 02.0**	**+1.1**
PYL				*e*SN	**Sn**	**19 47 11.4**	**+1.8**
PYL	**PYLOS**	**0.62**	**360**	*e*Pn	**Pn**	**19 47 02.0**	**+1.1**
PYL				S	**Sn**	**19 47 11.5**	**+1.8**
DYR	**Agios Nikonas**	**0.68**	**44**	P	**Pn**	**19 47 01.8**	**+0.1**
DYR				S	**Sn**	**19 47 12.6**	**+1.5**
DYR	**Agios Nikonas**	**0.68**	**44**	*e*PN	**Pn**	**19 47 01.8**	**+0.1**
DYR				*e*SN	**Sn**	**19 47 11.9**	**+0.8**
DYR	**Agios Nikonas**	**0.68**	**44**	P	**Pn**	**19 47 01.8**	**+0.1**
DYR				*e*Sn	**Sn**	**19 47 11.9**	**+0.8**
DYR				S		19 47 12.6	
ITM	**Ithomi**	**0.92**	**9**	S	**Sn**	**19 47 06.4**	**+1.5**
ITM				S	**Sn**	**19 47 20.2**	**+3.3**
ITM	**Ithomi**	**0.92**	**9**	*e*PN	**Pn**	**19 47 06.4**	**+1.5**
ITM				*e*SN	**Sn**	**19 47 19.5**	**+2.6**
ITM	**Ithomi**	**0.92**	**9**	*e*Pn	**Pn**	**19 47 06.4**	**+1.5**
ITM				*e*Sn	**Sn**	**19 47 19.5**	**+2.6**
ITM				S		19 47 19.8	
KYTH	**Kithira**	**1.04**	**89**	P	**Pn**	**19 47 07.8**	**+1.2**
KYTH	**Kithira**	**1.04**	**89**	*e*PN	**Pn**	**19 47 08.2**	**+1.6**
KYTH	**Kithira**	**1.04**	**89**	P	**Pn**	**19 47 07.8**	**+1.2**
KYTH	**Kithira**	**1.04**	**89**	*e*Pn	**Pn**	**19 47 08.2**	**+1.6**
VLI	**Veliai**	**1.06**	**65**	P	**Pn**	**19 47 07.8**	**+1.0**
VLI				S	**Sn**	**19 47 22.4**	**+2.1**
VLI	**Veliai**	**1.06**	**65**	*e*PN	**Pn**	**19 47 08.3**	**+1.5**
VLI				*e*SN	**Sn**	**19 47 22.2**	**+1.9**
VLI	**Veliai**	**1.06**	**65**	P	**Pn**	**19 47 07.8**	**+1.0**
VLI	**Veliai**	**1.06**	**65**	*e*Pn	**Pn**	**19 47 08.3**	**+1.5**
VLI				*e*Sn	**Sn**	**19 47 22.2**	**+1.9**
VLI				S		19 47 23.6	
VLX	**Vlachokerasia**	**1.21**	**25**	P	**Pn**	**19 47 10.9**	**+1.9**
VLX	**Vlachokerasia**	**1.21**	**25**	*e*PN	**Pn**	**19 47 11.1**	**+2.1**
VLX				*e*SN	**Sn**	**19 47 26.5**	**+2.4**
VLX	**Vlachokerasia**	**1.21**	**25**	P	**Pn**	**19 47 10.8**	**+1.8**
VLX	**Vlachokerasia**	**1.21**	**25**	*e*Pn	**Pn**	**19 47 11.1**	**+2.1**
VLX				*e*Sn	**Sn**	**19 47 26.5**	**+2.4**
VLX				S		19 47 28.4	
ANKY	**Antikythira Is**	**1.32**	**107**	*e*PN	**Pn**	**19 47 12.1**	**+1.6**
ANKY				*e*SN	**Sn**	**19 47 28.1**	**+1.2**
ANKY	**Antikythira Is**	**1.32**	**107**	*e*Pn	**Pn**	**19 47 12.1**	**+1.6**
ANKY				*e*Sn	**Sn**	**19 47 28.1**	**+1.2**
DIDY	**Didyma**	**1.68**	**44**	P	**Pn**	**19 47 16.3**	**+0.8**
DIDY	**Didyma**	**1.68**	**44**	P	**Pn**	**19 47 16.3**	**+0.8**
DIDY				S	**Sn**	**19 47 38.8**	**+3.0**
DID	**Didima**	**1.72**	**44**	P	**Pn**	**19 47 16.8**	**+0.9**
DID	**Didima**	**1.72**	**44**	*e*PN	**Pn**	**19 47 17.2**	**+1.3**
DID				*e*SN	**Sn**	**19 47 37.5**	**+0.9**
DID	**Didima**	**1.72**	**44**	P	**Pn**	**19 47 16.8**	**+0.9**
DID	**Didima**	**1.72**	**44**	*e*Pn	**Pn**	**19 47 17.2**	**+1.3**
DID				*e*Sn	**Sn**	**19 47 37.5**	**+0.9**
DID				S		19 47 40.7	
GUR	**Goura**	**1.73**	**16**	P	**Pn**	**19 47 18.4**	**+2.3**
GUR	**Goura**	**1.73**	**16**	*e*PB	Pn	19 47 19.6	+3.5
GUR	**Goura**	**1.73**	**16**	P	**Pn**	**19 47 18.4**	**+2.3**
GUR	**Goura**	**1.73**	**16**	*e*Pb	Pn	19 47 19.6	+3.5
RLS	**Riolos of Patr**	**1.79**	**353**	P	**Pn**	**19 47 19.6**	**+2.7**
RLS	**Riolos of Patr**	**1.79**	**353**	*e*PB	Pn	19 47 20.1	+3.2
RLS	**Riolos of Patr**	**1.79**	**353**	P	**Pn**	**19 47 19.6**	**+2.7**
RLS	**Riolos of Patr**	**1.79**	**353**	*e*Pb	Pn	19 47 20.1	+3.2
KLV	**Kalavryta, Ach**	**1.80**	**10**	*e*PB	**Pn**	**19 47 19.8**	**+2.8**
KLV	**Kalavryta, Ach**	**1.80**	**10**	*e*Pb	**Pn**	**19 47 19.8**	**+2.8**
LAKA	**Lakka**	**1.97**	**5**	P	**Pn**	**19 47 22.4**	**+3.0**
LAKA	**Lakka**	**1.97**	**5**	*e*PB	Pn	19 47 23.3	+3.9
LAKA	**Lakka**	**1.97**	**5**	P	**Pn**	**19 47 22.2**	**+2.8**
LAKA	**Lakka**	**1.97**	**5**	*e*Pb	Pn	19 47 23.3	+3.9
LAKA				S	**Sn**	**19 47 46.3**	**+3.4**
KFL	**Anninata**	**1.98**	**338**	P	**Pn**	**19 47 21.4**	**+1.8**
KFL	**Anninata**	**1.98**	**338**	P	**Pn**	**19 47 21.4**	**+1.8**
LTK	**Loutraki**	**2.00**	**29**	P	**Pn**	**19 47 20.9**	**+1.1**
LTK	**Loutraki**	**2.00**	**29**	*e*PN	**Pn**	**19 47 21.3**	**+1.5**
LTK	**Loutraki**	**2.00**	**29**	P	**Pn**	**19 47 20.9**	**+1.1**
LTK	**Loutraki**	**2.00**	**29**	*e*Pn	**Pn**	**19 47 21.3**	**+1.5**
NAIG	**Nisos Aigina**	**2.04**	**43**	*e*PN	**Pn**	**19 47 21.5**	**+1.3**
NAIG	**Nisos Aigina**	**2.04**	**43**	*e*Pn	**Pn**	**19 47 21.5**	**+1.3**
TRIZ	**Trizonia**	**2.10**	**7**	P	**Pn**	**19 47 24.0**	**+2.8**
TRIZ	**Trizonia**	**2.10**	**7**	*e*PB	Pn	19 47 25.2	+4.0
TRIZ	**Trizonia**	**2.10**	**7**	P	**Pn**	**19 47 24.0**	**+2.8**
TRIZ	**Trizonia**	**2.10**	**7**	*e*Pb	Pn	19 47 25.2	+4.0
VLS	**Valsamata**	**2.11**	**334**	P	**Pn**	**19 47 22.7**	**+1.4**
VLS	**Valsamata**	**2.11**	**334**	*e*PN	**Pn**	**19 47 23.7**	**+2.4**
VLS	**Valsamata**	**2.11**	**334**	P	**Pn**	**19 47 22.7**	**+1.4**
VLS	**Valsamata**	**2.11**	**334**	*e*Pn	**Pn**	**19 47 23.7**	**+2.4**
KALE	**Kalithea**	**2.14**	**8**	P	**Pn**	**19 47 24.2**	**+2.5**
KALE	**Kalithea**	**2.14**	**8**	*e*PN	**Pn**	**19 47 24.6**	**+2.9**
KALE	**Kalithea**	**2.14**	**8**	P	**Pn**	**19 47 24.2**	**+2.5**
KALE	**Kalithea**	**2.14**	**8**	*e*Pn	**Pn**	**19 47 24.6**	**+2.9**
EFP	**Efpalio**	**2.15**	**3**	P	Pn	19 47 25.4	+3.6
EFP	**Efpalio**	**2.15**	**3**	*e*PB	Pn	19 47 25.9	+4.1
EFP	**Efpalio**	**2.15**	**3**	P	Pn	19 47 25.4	+3.6
VAM	**Vamos**	**2.17**	**113**	P	**Pn**	**19 47 22.9**	**+0.7**
VAM	**Vamos**	**2.17**	**113**	*e*PN	**Pn**	**19 47 22.9**	**+0.7**
VAM	**Vamos**	**2.17**	**113**	*e*Pn	**Pn**	**19 47 22.9**	**+0.7**
DSF	**Desfina**	**2.22**	**16**	P	**Pn**	**19 47 24.4**	**+1.5**
DSF	**Desfina**	**2.22**	**16**	P	**Pn**	**19 47 24.4**	**+1.5**
ATH	**Athens Observa**	**2.31**	**42**	P	**Pn**	**19 47 25.0**	**+0.9**
ATH	**Athens Observa**	**2.31**	**42**	*e*PN	**Pn**	**19 47 25.3**	**+1.2**
ATH	**Athens Observa**	**2.31**	**42**	P	**Pn**	**19 47 25.0**	**+0.9**
ATH	**Athens Observa**	**2.31**	**42**	*e*Pn	**Pn**	**19 47 25.3**	**+1.2**
ATHU	**Athens Univers**	**2.35**	**43**	P	**Pn**	**19 47 24.9**	**+0.4**
ATHU	**Athens Univers**	**2.35**	**43**	P	**Pn**	**19 47 24.9**	**+0.4**
GVD	**Gavdhos**	**2.39**	**126**	*e*PN	**Pn**	**19 47 27.2**	**+2.1**
GVD	**Gavdhos**	**2.39**	**126**	*e*Pn	**Pn**	**19 47 27.2**	**+2.1**
PTL	**Penteli**	**2.45**	**43**	P	**Pn**	**19 47 26.4**	**+0.5**
PTL	**Penteli**	**2.45**	**43**	*e*PN	**Pn**	**19 47 26.5**	**+0.5**
PTL	**Penteli**	**2.45**	**43**	*e*Pn	**Pn**	**19 47 26.5**	**+0.5**
LKR	**Lokris**	**2.57**	**22**	P	**Pn**	**19 47 28.4**	**+0.8**
LKR	**Lokris**	**2.57**	**22**	*e*PN	**Pn**	**19 47 28.8**	**+1.2**
LKR	**Lokris**	**2.57**	**22**	P	**Pn**	**19 47 28.4**	**+0.8**
LKR	**Lokris**	**2.57**	**22**	*e*Pn	**Pn**	**19 47 28.8**	**+1.2**
AXAR	**Agios Charalam**	**2.59**	**16**	P	**Pn**	**19 47 30.0**	**+2.1**
AXAR	**Agios Charalam**	**2.59**	**16**	P	**Pn**	**19 47 30.0**	**+2.1**
ATAL	**Atalanti**	**2.62**	**22**	P	**Pn**	**19 47 28.9**	**+0.6**
ATAL	**Atalanti**	**2.62**	**22**	P	**Pn**	**19 47 28.9**	**+0.6**
EVR	**Evrytania**	**2.64**	**1**	P	Pn	19 47 33.0	+4.4
EVR	**Evrytania**	**2.64**	**1**	*e*PB	Pn	19 47 33.1	+4.4
EVR	**Evrytania**	**2.64**	**1**	P	Pn	19 47 33.0	+4.4
LKD2	**Lefkada island**	**2.66**	**341**	P	Pn	19 47 32.0	+3.2
LKD2	**Lefkada island**	**2.66**	**341**	*e*PN	Pn	19 47 32.2	+3.4
LKD2	**Lefkada island**	**2.66**	**341**	P	Pn	19 47 32.0	+3.2
MAKR	**Makrakomi, Fth**	**2.75**	**6**	P	Pn	19 47 33.5	+3.4
MAKR	**Makrakomi, Fth**	**2.75**	**6**	P	Pn	19 47 33.5	+3.4
MRMA	**Marmari**	**2.76**	**49**	P	**Pn**	**19 47 30.4**	**+0.2**
MRMA	**Marmari**	**2.76**	**49**	P	**Pn**	**19 47 30.4**	**+0.2**
AGG	**Agios Georgios**	**2.78**	**9**	P	**Pn**	**19 47 32.7**	**+2.1**
AGG	**Agios Georgios**	**2.78**	**9**	*e*PN	Pn	19 47 34.3	+3.7
AGG	**Agios Georgios**	**2.78**	**9**	P	**Pn**	**19 47 32.7**	**+2.1**
AGG	**Agios Georgios**	**2.78**	**9**	*e*Pn	Pn	19 47 34.3	+3.7
SIVA	**Sivas**	**2.79**	**116**	P	**Pn**	**19 47 32.5**	**+1.8**
SIVA	**Sivas**	**2.79**	**116**	*e*PN	**Pn**	**19 47 33.4**	**+2.7**
SIVA	**Sivas**	**2.79**	**116**	P	**Pn**	**19 47 32.5**	**+1.8**
SIVA	**Sivas**	**2.79**	**116**	*e*Pn	**Pn**	**19 47 33.4**	**+2.7**
MRKA	**Markates**	**2.83**	**31**	P	**Pn**	**19 47 31.9**	**+0.6**
MRKA	**Markates**	**2.83**	**31**	P	**Pn**	**19 47 31.9**	**+0.6**
THR3	**Thira Island,**	**2.96**	**86**	P	**Pn**	**19 47 33.0**	**+0.1**
THR3	**Thira Island,**	**2.96**	**86**	P	**Pn**	**19 47 33.0**	**+0.1**
THR2	**Thira island,**	**2.98**	**86**	P	**Pn**	**19 47 33.5**	**+0.2**
THR2	**Thira island,**	**2.98**	**86**	P	**Pn**	**19 47 33.5**	**+0.2**
SANT	**Santorini**	**3.00**	**87**	P	**Pn**	**19 47 33.3**	**-0.3**
SANT	**Santorini**	**3.00**	**87**	*e*PN	**Pn**	**19 47 33.5**	**-0.1**
SANT	**Santorini**	**3.00**	**87**	*e*Pn	**Pn**	**19 47 33.5**	**-0.1**
THR1	**Thera Island**	**3.00**	**87**	P	**Pn**	**19 47 33.3**	**-0.3**
THR1	**Thera Island**	**3.00**	**87**	P	**Pn**	**19 47 33.3**	**-0.3**
APE	**Apeiranthos**	**3.15**	**74**	*e*P	**Pn**	**19 47 35.0**	**-0.6**
APE	**Apeiranthos**	**3.15**	**74**	P	**Pn**	**19 47 35.5**	**0.0**
APE	**Apeiranthos**	**3.15**	**74**	*e*PN	**Pn**	**19 47 35.6**	**0.0**
APE	**Apeiranthos**	**3.15**	**74**	P	**Pn**	**19 47 35.5**	**0.0**
SKIA	**Skiathos**	**3.19**	**25**	P	**Pn**	**19 47 37.2**	**+1.0**
SKIA	**Skiathos**	**3.19**	**25**	P	**Pn**	**19 47 37.2**	**+1.0**
LAST	**Lasithi**	**3.23**	**109**	P	**Pn**	**19 47 36.9**	**+0.1**
LAST	**Lasithi**	**3.23**	**109**	*e*PN	**Pn**	**19 47 37.0**	**+0.1**
LAST	**Lasithi**	**3.23**	**109**	P	**Pn**	**19 47 36.9**	**+0.1**
NEO	**Neokhori**	**3.25**	**21**	*e*PN	**Pn**	**19 47 37.7**	**+0.8**
NEO	**Neokhori**	**3.25**	**21**	*e*Pn	**Pn**	**19 47 37.7**	**+0.8**
THL	**Klokotos Trika**	**3.29**	**4**	*e*PN	**Pn**	**19 47 40.0**	**+2.5**
THL	**Klokotos Trika**	**3.29**	**4**	*e*Pn	**Pn**	**19 47 40.0**	**+2.5**
XOR	**Xorichti**	**3.29**	**20**	P	**Pn**	**19 47 38.2**	**+0.6**
XOR	**Xorichti**	**3.29**	**20**	P	**Pn**	**19 47 38.2**	**+0.6**
NPS	**Neapolis**	**3.30**	**107**	P	**Pn**	**19 47 37.5**	**-0.2**
NPS	**Neapolis**	**3.30**	**107**	*e*PN	**Pn**	**19 47 37.5**	**-0.2**
NPS	**Neapolis**	**3.30**	**107**	P	**Pn**	**19 47 37.5**	**-0.2**
AOS	**Alonnisos**	**3.35**	**30**	P	**Pn**	**19 47 38.5**	**+0.2**
AOS	**Alonnisos**	**3.35**	**30**	*e*PN	**Pn**	**19 47 38.7**	**+0.4**
AOS	**Alonnisos**	**3.35**	**30**	*e*Pn	**Pn**	**19 47 38.7**	**+0.4**
JAN	**Janina**	**3.45**	**348**	P	**Pn**	**19 47 42.7**	**+3.0**
JAN	**Janina**	**3.45**	**348**	*e*PN	Pn	19 47 42.9	+3.2
JAN	**Janina**	**3.45**	**348**	P	**Pn**	**19 47 42.7**	**+3.0**
KEK	**Kerkira**	**3.76**	**336**	P	**Pn**	**19 47 45.4**	**+1.4**
KEK	**Kerkira**	**3.76**	**336**	*e*PN	**Pn**	**19 47 45.7**	**+1.7**
KEK	**Kerkira**	**3.76**	**336**	P	**Pn**	**19 47 45.4**	**+1.4**
KEK	**Kerkira**	**3.76**	**336**	*e*Pn	**Pn**	**19 47 45.7**	**+1.7**
ZKR	**Zakros**	**3.82**	**106**	*e*PN	**Pn**	**19 47 45.7**	**+0.9**
ZKR	**Zakros**	**3.82**	**106**	*e*Pn	**Pn**	**19 47 45.7**	**+0.9**
LIT	**Litokhoron**	**3.87**	**9**	P	**Pn**	**19 47 47.4**	**+2.0**
LIT	**Litokhoron**	**3.87**	**9**	*e*PN	**Pn**	**19 47 48.3**	**+2.9**
LIT	**Litokhoron**	**3.87**	**9**	P	**Pn**	**19 47 47.4**	**+2.0**
LIT	**Litokhoron**	**3.87**	**9**	*e*Pn	**Pn**	**19 47 48.3**	**+2.9**
PAIG	**Paliouri**	**3.95**	**22**	P	**Pn**	**19 47 47.9**	**+1.3**
PAIG	**Paliouri**	**3.95**	**22**	*e*PN	**Pn**	**19 47 47.8**	**+1.2**
PAIG	**Paliouri**	**3.95**	**22**	P	**Pn**	**19 47 47.9**	**+1.3**
KZN	**Kozani**	**4.03**	**0**	P	**Pn**	**19 47 49.9**	**+2.2**
KZN	**Kozani**	**4.03**	**0**	*e*PN	**Pn**	**19 47 50.7**	**+3.0**
KZN	**Kozani**	**4.03**	**0**	P	**Pn**	**19 47 49.9**	**+2.2**
KZN	**Kozani**	**4.03**	**0**	*e*Pn	**Pn**	**19 47 50.7**	**+3.0**
CHOS	**Chios island**	**4.03**	**57**	P	**Pn**	**19 47 47.6**	**-0.1**
CHOS	**Chios island**	**4.03**	**57**	P	**Pn**	**19 47 47.6**	**-0.1**
NEST	**Nestorio**	**4.17**	**353**	P	**Pn**	**19 47 52.8**	**+3.1**
NEST	**Nestorio**	**4.17**	**353**	P	**Pn**	**19 47 52.8**	**+3.1**
PLG	**Polygyros**	**4.31**	**18**	P	**Pn**	**19 47 52.9**	**+1.4**
PLG	**Polygyros**	**4.31**	**18**	*e*PN	**Pn**	**19 47 53.5**	**+2.0**
PLG	**Polygyros**	**4.31**	**18**	P	**Pn**	**19 47 52.9**	**+1.4**
PLG	**Polygyros**	**4.31**	**18**	*e*Pn	**Pn**	**19 47 53.5**	**+2.0**
SIGR	**SIGRI**	**4.38**	**47**	P	**Pn**	**19 47 52.9**	**+0.4**
SIGR	**SIGRI**	**4.38**	**47**	P	**Pn**	**19 47 52.9**	**+0.4**
KBN	**Korca**	**4.41**	**350**	*e*PN	**Pn**	**19 47 56.0**	**+3.1**
KBN				*i* SN	**Sn**	**19 48 39.1**	**-3.9**
KBN	**Korca**	**4.41**	**350**	P	**Pn**	**19 47 56.0**	**+3.1**
KBN	**Korca**	**4.41**	**350**	P	**Pn**	**19 47 56.0**	**+3.1**
OUR	**Ouranopolis**	**4.42**	**23**	P	**Pn**	**19 47 53.2**	**+0.2**
OUR	**Ouranopolis**	**4.42**	**23**	P	**Pn**	**19 47 53.2**	**+0.2**
HORT	**Hortiatis**	**4.45**	**13**	P	**Pn**	**19 47 55.1**	**+1.6**
HORT	**Hortiatis**	**4.45**	**13**	P	**Pn**	**19 47 55.1**	**+1.6**
FNA	**Florina**	**4.51**	**356**	P	**Pn**	**19 47 56.3**	**+2.0**
FNA	**Florina**	**4.51**	**356**	*e*PN	**Pn**	**19 47 56.3**	**+2.0**
FNA	**Florina**	**4.51**	**356**	P	**Pn**	**19 47 56.3**	**+2.0**
LIA	**Limnos Island**	**4.52**	**36**	P	**Pn**	**19 47 53.6**	**-0.8**
LIA	**Limnos Island**	**4.52**	**36**	P	**Pn**	**19 47 53.6**	**-0.8**
LTBQ	**Tobruq** SNR=76	**4.58**	**156**	*i* P	**Pn**	**19 47 56.5**	**+1.3**
PRK	**Paraskevi**	**4.66**	**49**	*e*PN	**Pn**	**19 47 58.0**	**+1.8**
PRK	**Paraskevi**	**4.66**	**49**	*e*Pn	**Pn**	**19 47 58.0**	**+1.8**
GRG	**Griva**	**4.70**	**6**	P	**Pn**	**19 47 58.4**	**+1.5**
GRG	**Griva**	**4.70**	**6**	*e*PN	**Pn**	**19 47 58.7**	**+1.8**
GRG	**Griva**	**4.70**	**6**	P	**Pn**	**19 47 58.4**	**+1.5**
GRG	**Griva**	**4.70**	**6**	*e*Pn	**Pn**	**19 47 58.7**	**+1.8**
SOH	**Sokhos**	**4.71**	**15**	P	**Pn**	**19 47 59.4**	**+2.3**
SOH	**Sokhos**	**4.71**	**15**	*e*PN	**Pn**	**19 47 59.7**	**+2.6**
SOH	**Sokhos**	**4.71**	**15**	P	**Pn**	**19 47 59.4**	**+2.3**
SOH	**Sokhos**	**4.71**	**15**	*e*Pn	**Pn**	**19 47 59.7**	**+2.6**
BIA	**Bitola**	**4.75**	**356**	P	**Pn**	**19 47 58.6**	**+1.0**
BIA	**Bitola**	**4.75**	**356**	*i* Pn	**Pn**	**19 47 59.0**	**+1.4**
BIA	**Bitola**	**4.75**	**356**	P	**Pn**	**19 47 58.6**	**+1.0**
BIA	**Bitola**	**4.75**	**356**	*i* Pn	**Pn**	**19 47 59.0**	**+1.4**
IZM	**Izmir**	**4.88**	**63**	*e*P	**Pn**	**19 47 59.9**	**+0.5**
MLSB	**Milas**	**4.95**	**76**	*e*P	**Pn**	**19 48 01.0**	**+0.7**
KNT	**Kendrikon**	**4.96**	**10**	P	**Pn**	**19 48 01.9**	**+1.4**
KNT	**Kendrikon**	**4.96**	**10**	P	**Pn**	**19 48 01.9**	**+1.4**
SRS	**Serrai**	**5.05**	**16**	P	**Pn**	**19 48 02.6**	**+1.0**
SRS	**Serrai**	**5.05**	**16**	P	**Pn**	**19 48 02.6**	**+1.0**
EZN	**Ezine**	**5.06**	**44**	*e*P	**Pn**	**19 48 01.7**	**-0.2**
VAY	**Valandovo**	**5.08**	**7**	P	**Pn**	**19 48 03.1**	**+1.0**
VAY	**Valandovo**	**5.08**	**7**	*i* Pn	**Pn**	**19 48 02.9**	**+0.9**
VAY	**Valandovo**	**5.08**	**7**	*i* Pn	**Pn**	**19 48 01.4**	**-0.7**
VAY	**Valandovo**	**5.08**	**7**	P	**Pn**	**19 48 03.1**	**+1.0**
ARG	**Arkhangelos**	**5.16**	**89**	P	**Pn**	**19 48 03.6**	**+0.4**
ARG	**Arkhangelos**	**5.16**	**89**	P	**Pn**	**19 48 03.6**	**+0.4**
TIR	**Tirane**	**5.27**	**344**	P	**Pn**	**19 48 06.4**	**+1.7**
TIR	**Tirane**	**5.27**	**344**	⇑*i* Pn	**Pn**	**19 48 06.3**	**+1.6**
TIR	**Tirane**	**5.27**	**344**	P	**Pn**	**19 48 06.4**	**+1.7**
YER	**Yerkesik**	**5.32**	**79**	*e*P	**Pn**	**19 48 06.4**	**+0.9**
NVR	**Nevrokopi**	**5.33**	**17**	P	**Pn**	**19 48 07.0**	**+1.4**
NVR	**Nevrokopi**	**5.33**	**17**	P	**Pn**	**19 48 07.0**	**+1.4**
PHP	**Peshkopia**	**5.50**	**350**	*e*PN	**Pn**	**19 48 09.0**	**+1.1**
PHP				*i* SN	Sn	19 49 03.3	-6.5
PHP	**Peshkopia**	**5.50**	**350**	P	**Pn**	**19 48 09.2**	**+1.3**
PHP	**Peshkopia**	**5.50**	**350**	*e*Pn	**Pn**	**19 48 09.0**	**+1.1**
MMB	**Musomiste**	**5.53**	**16**	*i* P	**Pn**	**19 48 10.0**	**+1.7**
GELI	**Tayfur-Gelibol**	**5.55**	**41**	*e*P	**Pn**	**19 48 08.5**	**0.0**
DALY	**Dalyan (Mu˘la**	**5.59**	**82**	*e*P	**Pn**	**19 48 10.3**	**+1.2**
KKB	**Krupnik**	**5.68**	**10**	*i* P	**Pn**	**19 48 12.3**	**+1.9**
LPK	**Lapseki**	**5.68**	**42**	*e*P	**Pn**	**19 48 10.4**	**+0.2**
ALN	**Alexandroupoli**	**5.71**	**45**	P	**Pn**	**19 48 10.0**	**-0.8**
ERIK	**Erikli-Kesan**	**5.77**	**39**	*e*P	**Pn**	**19 48 11.4**	**0.0**
BALB	**Balikesir**	**5.90**	**53**	*e*P	**Pn**	**19 48 13.8**	**+0.5**
PUK	**Puka**	**5.94**	**347**	*e*PN	**Pn**	**19 48 14.9**	**+1.0**
PUK				*i* SN	**Sn**	**19 49 17.2**	**-3.5**
PUK	**Puka**	**5.94**	**347**	*e*Pn	**Pn**	**19 48 14.9**	**+1.0**
KULA	**Kula-Manisa**	**5.94**	**66**	*e*P	**Pn**	**19 48 15.0**	**+1.0**
KRBG	**Karabiga-Canak**	**6.00**	**45**	*e*P	**Pn**	**19 48 15.0**	**+0.4**
ULC	**Ulcinj**	**6.00**	**342**	⇓*i* Pn	**Pn**	**19 48 14.9**	**+0.1**
ULC				*e*Sn	**Sn**	**19 49 19.4**	**-2.9**
ULC	**Ulcinj**	**6.00**	**342**	⇓*i* Pn	**Pn**	**19 48 14.9**	**+0.1**
ULC				*e*Sn	**Sn**	**19 49 19.4**	**-2.9**
GONE	**Gonen-Balikesi**	**6.01**	**49**	*e*P	**Pn**	**19 48 15.3**	**+0.5**
DENT	**Denizli**	**6.02**	**74**	*e*P	**Pn**	**19 48 16.2**	**+1.2**
RKY	**Sarkoy-Tekirda**	**6.13**	**42**	*e*P	**Pn**	**19 48 16.8**	**+0.2**
BCI	**Bajram Curri**	**6.22**	**348**	*e*PN	**Pn**	**19 48 19.4**	**+1.6**
BCI	**Bajram Curri**	**6.22**	**348**	*e*Pn	**Pn**	**19 48 19.4**	**+1.6**
MFT	**Murefte**	**6.25**	**42**	*e*P	**Pn**	**19 48 19.1**	**+0.8**
GLHS	**Gihisar (BURDU**	**6.29**	**80**	*e*P	**Pn**	**19 48 20.3**	**+1.5**
MRMT	**Marmara Adasi**	**6.30**	**45**	*e*P	**Pn**	**19 48 19.1**	**+0.2**
BNT	**Bandirma**	**6.34**	**48**	*e*P	**Pn**	**19 48 20.0**	**+0.7**
VTS	**Vitosha**	**6.41**	**10**	P	**Pn**	**19 48 22.1**	**+1.6**
VTS	**Vitosha**	**6.41**	**10**	⇑*i* Pn	**Pn**	**19 48 21.9**	**+1.4**
VTS	**Vitosha**	**6.41**	**10**	⇑*i* P	**Pn**	**19 48 22.1**	**+1.6**
VTS	**Vitosha**	**6.41**	**10**	*i* P	**Pn**	**19 48 22.0**	**+1.6**
VTS	**Vitosha**	**6.41**	**10**	*i* P	**Pn**	**19 48 22.0**	**+1.6**
BUM	**Brajici-Budva**	**6.41**	**341**	⇓*i* Pn	**Pn**	**19 48 20.5**	**+0.1**
BUM				*e*Sn	**Sn**	**19 49 29.5**	**-2.9**
BUM	**Brajici-Budva**	**6.41**	**341**	⇓*i* Pn	**Pn**	**19 48 20.5**	**+0.1**
BUM				*e*Sn	**Sn**	**19 49 29.5**	**-2.9**
PDG	**Podgorica**	**6.44**	**343**	⇑*i* Pn	**Pn**	**19 48 20.9**	**+0.2**
PDG				*e*Sn	**Sn**	**19 49 30.2**	**-2.8**
PDG	**Podgorica**	**6.44**	**343**	⇑*i* Pn	**Pn**	**19 48 21.0**	**+0.2**
PDG				*e*Sn	**Sn**	**19 49 30.2**	**-2.8**
TTG	**Podgorica**	**6.44**	**343**	⇑*i* Pn	**Pn**	**19 48 21.0**	**+0.2**
TTG				*e*Sn	**Sn**	**19 49 30.2**	**-2.8**
PVY	**Plav**	**6.46**	**348**	⇑*i* Pn	**Pn**	**19 48 22.5**	**+1.3**
PVY				*e*Sn	**Sn**	**19 49 29.6**	**-4.1**
PVY	**Plav**	**6.46**	**348**	⇑*i* Pn	**Pn**	**19 48 22.5**	**+1.3**
PVY				*e*Sn	**Sn**	**19 49 29.6**	**-4.1**
DIM	**Dimitrovgrad**	**6.47**	**26**	*i* P	**Pn**	**19 48 23.7**	**+2.5**
KHL	**Karahalli**	**6.53**	**69**	*e*P	**Pn**	**19 48 24.1**	**+2.0**
BARS	**Barje**	**6.53**	**0**	⇑*i* Pn	**Pn**	**19 48 22.8**	**+0.7**
KCTX	**Karacabey (Bur**	**6.55**	**51**	*e*P	**Pn**	**19 48 22.7**	**+0.4**
ELL	**Elmali**	**

VYHS Vyhne 12.40 351 *e*PN **Pn** 19 49 41.4 -1.0
VYHS Vyhne 12.40 351 *e*SN Sn 19 51 50.3 -8.8
CONA Conrad Observa 12.43 341 ⇓ *i*Pn **Pn** 19 49 42.2 -0.7
CONA Conrad Observa 12.43 341 Pn **Pn** 19 49 42.2 -0.7
ZFRI Zfri 12.59 113 Sn Sn 19 51 48.8 -15
CRVS Cervenica-Dubn 12.62 359 *e*P **Pn** 19 49 44.2 -1.2
CRVS Cervenica-Dubn 12.62 359 *e*PN **Pn** 19 49 44.2 -1.2
KOLS Kolonicke sedl 12.66 2 *e*P **Pn** 19 49 46.4 +0.5
KOLS Kolonicke sedl 12.66 2 *e*PN **Pn** 19 49 46.3 +0.4
HRFI Mount Harif 12.75 115 Sn Sn 19 51 54.0 -14
SIM Simferopol' 12.77 43 P **Pn** 19 49 45.0 -2.5
SIM pmax pmax
comp=Z,25nm,0.4s
SIM MLR MLR
comp=Z,260nm,21.1s
MBRI Mt Berech 12.79 117 Sn Sn 19 51 54.6 -15
MOA Molln 12.82 337 ⇓ *i*Pn **Pn** 19 49 46.9 -1.3
MOA ⇑ *i*Sn Sn 19 52 00.9 -8.6
EIL Elat 12.89 117 Pn **Pn** 19 49 48.5 -0.7
comp=Z,1.1nm,0.3s,baz=324,slow=11,SNR=11
EIL Sn Sn 19 51 57.6 -14
comp=Z,2.9nm,0.3s,baz=324,slow=17,SNR=8.2
HKAT Jabal Katrina 12.91 123 P **Pn** 19 49 48.3 -1.3
baz=124
HKAT Jabal Katrina 12.91 123 P **Pn** 19 49 48.3 -1.3
ASF Jabal al Asfar 13.19 104 Pn **Pn** 19 49 51.9 -1.4
comp=Z,0.2nm,0.3s,baz=330,slow=14,SNR=2.6
ASF Sn Sn 19 52 07.4 -11
comp=Z,0.3nm,0.3s,baz=292,slow=16,SNR=2.1
WTTA Wattenberg 13.31 329 ⇓ *i*Pn **Pn** 19 49 54.6 -0.4
WTTA ⇓ *i*Sn Sn 19 52 11.8 -10
WTTA Wattenberg 13.31 329 Pn **Pn** 19 49 54.6 -0.4
SBF Sospel 13.31 309 *e*P Pn 19 49 58.3 +3.4
comp=Z,52nm,1.1s
SBF Sospel 13.31 309 *e*P Pn 19 49 58.3 +3.4
comp=Z,26nm,1.1s
KWP Kalwaria Pacla 13.37 3 *e*P **Pn** 19 49 57.6 +2.0
KWP Kalwaria Pacla 13.37 3 *e*P **Pn** 19 49 57.6 +2.0
VRAC Vranov 13.56 345 ⇓ *i*P **Pn** 19 50 00.6 +2.4
VRAC Vranov 13.56 345 Pn **Pn** 19 49 57.2 -1.0
comp=Z,0.2nm,0.3s,baz=157,slow=15,SNR=4.9
MOTA Moosalm 13.60 328 ⇑ *i*Pn **Pn** 19 49 58.1 -0.7
LVV L'vov 13.64 6 *e*P **Pn** 19 50 01.0 +1.7
DAVOX Davos/Dischmat 13.74 323 Pn **Pn** 19 50 01.9 +1.1
comp=Z,0.2nm,0.3s,baz=139,slow=18,SNR=2.4
DAVOX Sn Sn 19 52 20.4 -12
comp=Z,0.2nm,0.3s,baz=345,slow=20,SNR=3.1
TREC Trest 13.79 343 AMS AMS 19 56 20.0
comp=Z,400nm,14.6s
OKC Ostrava-Krasne 13.81 350 *e*P **Pn** 19 50 01.0 -0.5
OKC Ostrava-Krasne 13.81 350 *e*P **Pn** 19 50 01.0 -0.5
OKC *ex* x 19 50 11.5
MORC Moravsky Berou 13.84 349 *e*PN **Pn** 19 50 01.5 -0.5
GERES GERESS Array B 13.88 337 Pn **Pn** 19 50 00.9 -1.7
comp=Z,0.4nm,0.3s,baz=150,slow=14,SNR=13
GERES Sn Sn 19 52 29.5 -5.9
comp=Z,0.5nm,0.3s,baz=157,slow=24,SNR=6.4
KHC Kasperske Hory 14.17 338 *e*P **Pn** 19 50 04.8 -1.8
KHC MLR MLR
comp=Z,600nm,12.3s
KHC Kasperske Hory 14.17 338 *e*P **Pn** 19 50 04.8 -1.8
KHC *ex* x 19 50 17.3
KHC *e*S Sn 19 52 32.0 -10
KHC *ex* x 19 53 02.0
KHC AMS AMS 19 56 20.0
comp=Z,600nm,12.3s
DPC Dobruska-Polom 14.61 346 *e*P **Pn** 19 50 11.4 -1.1
DPC MLR MLR
comp=Z,300nm,19.6s
DPC Dobruska-Polom 14.61 346 *e*P **Pn** 19 50 11.4 -1.1
DPC *e*pP **P** 19 50 19.5 +1.1
DPC AMS AMS 19 57 00.0
comp=Z,300nm,19.6s
LPL La Plagne 14.61 314 *e*P **P** 19 50 19.2 +0.5
LPL La Plagne 14.61 314 *e*P **P** 19 50 19.2 +0.5
ANN Anapa 14.64 50 ⇑ *i*P **P** 19 50 17.2 -1.5
ANN pmax pmax
comp=Z,51nm,0.9s
PRU Pruhonice 14.67 341 *e*P Pn 19 50 08.5 -4.8
PRU MLR MLR
comp=Z,500nm,18.1s
PRU Pruhonice 14.67 341 *e*P Pn 19 50 08.5 -4.8
PRU *ex* x 19 50 14.6
PRU AMS AMS 19 56 30.0
comp=Z,500nm,18.1s
ORIF Oris-en-Rattie 14.81 311 *e*P **Pn** 19 50 18.0 +2.8
ORIF *e*R
comp=Z,181nm,21.5s
UPC Upice 14.82 346 *e*P **P** 19 50 21.1 +0.4
UPC Upice 14.82 346 *e*P **P** 19 50 21.1 +0.4
UPC Upice 14.82 346 *e*P **P** 19 50 21.1 +0.4
KSP Ksiaz 15.08 347 *e*P **P** 19 50 25.5 +1.9
KSP Ksiaz 15.08 347 *e*P **P** 19 50 25.7 +2.1
KSP Ksiaz 15.08 347 *e*P **P** 19 50 25.5 +1.9
PVCC Panska Ves 15.16 342 AMS AMS 19 57 10.0
comp=Z,300nm,18.7s
AKASG Malin Array Be 15.39 18 *i* P **Pn** 19 50 19.2 -3.7
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 15.39 18 Pn **Pn** 19 50 19.9 -3.0
comp=Z,1.4nm,0.3s,baz=209,slow=12,SNR=8.0
AKASG Sn **Sn** 19 53 17.3 +5.2
comp=Z,0.7nm,0.3s,baz=199,slow=21,SNR=3.7
NKC Novy Kostel 15.49 337 AMS AMS 19 57 20.0
comp=Z,500nm,10.3s
VIVF Saint-Julien-l 15.53 309 *e*P **P** 19 50 27.2 -1.5
BEL Belsk 15.57 358 *e*P **P** 19 50 31.4 +2.3
BEL Belsk 15.57 358 *e*P **P** 19 50 31.4 +2.3
SOC Sochi 15.58 57 *e*P **Pn** 19 50 26.9 +1.5
SOC *e* 19 53 21.7
SOC pmax pmax
comp=Z,12nm,0.9s
SOC MLR MLR
comp=Z,35nm,7.0s
CABF La Chapelle 15.61 316 *e*P **P** 19 50 28.0 -1.6
BRG Berggiesshubel 15.63 341 *e*P **Pn** 19 50 26.4 +0.4
comp=Z,3.3nm,0.9s
BRG *e* 19 50 45.2
comp=Z,6.0nm,0.8s
BRG
comp=N,257nm,17.4s
BRG
comp=E,279nm,19.0s
BRG
comp=Z,417nm,17.7s
BRG Berggiesshubel 15.63 341 *e*P **Pn** 19 50 26.4 +0.4
BRG pmax pmax
comp=Z,3.0nm,0.9s
BRG MLR MLR
comp=N,257nm,17.4s
BRG MLR MLR
comp=E,279nm,19.0s
BRG MLR MLR
comp=Z,417nm,17.7s
HINF Hinteralfeld 15.95 321 *e*P **Pn** 19 50 31.8 +1.7
comp=Z,11nm,0.7s
CDF Champ du Feu 16.14 323 *e*P **P** 19 50 34.2 -1.3
comp=Z,10nm,0.7s
CLL Collm 16.28 340 *i* P **Pn** 19 50 34.1 -0.1
CLL pmax pmax
comp=Z,11nm,1.5s
CLL Collm 16.28 340 *i* (sP) **Pn** 19 50 34.1 -0.1
CLL *e*PP **Pn** 19 50 38.0 +3.8
comp=Z,11nm,1.5s
CLL *i* 19 50 55.3
comp=Z,11nm,1.0s
CLL Lm MLR 19 57 00.0
comp=Z,300nm,18.6s
HAU Haudompre 16.33 321 *e*P **Pn** 19 50 35.5 +0.6
comp=Z,23nm,0.9s
HAU *e*R
comp=Z,182nm,18.8s
SMF Signal de Mont 16.92 313 *e*P **P** 19 50 44.6 +0.6
SMF Signal de Mont 16.92 313 *e*P **P** 19 50 44.6 +0.6
CHVG Ch'k'valeri 16.95 61 P **P** 19 50 45.8 +1.4
CHVG Ch'k'valeri 16.95 61 P **P** 19 50 45.8 +1.4
CAF Calviac 17.23 306 *e*P **P** 19 50 49.0 +1.5
comp=Z,20nm,1.2s
CAF Calviac 17.23 306 *e*P **P** 19 50 49.0 +1.5
comp=Z,10.0nm,1.2s
LOR Lormes 17.24 315 *e*P **P** 19 50 48.4 +0.8
LOR *e*R
comp=Z,159nm,19.2s
LOR Lormes 17.24 315 *e*P **P** 19 50 48.4 +0.8
AVF Avril sur Loir 17.28 313 *e*P **P** 19 50 48.6 +0.6
AVF Avril sur Loir 17.28 313 *e*P **P** 19 50 48.6 +0.6
SSF Saint Saulge 17.33 314 *e*P **P** 19 50 48.9 +0.3
comp=Z,6.4nm,0.8s
SSF Saint Saulge 17.33 314 *e*P **P** 19 50 48.9 +0.3
comp=Z,3.2nm,0.8s
BGF Bois d'Agland 17.46 312 *e*P **P** 19 50 51.2 +1.1
BGF Bois d'Agland 17.46 312 *e*P **P** 19 50 51.2 +1.1
AKH Akhalkalaki 17.69 67 P **Pn** 19 50 51.1 -1.0
AKH Akhalkalaki 17.69 67 P **Pn** 19 50 51.1 -1.0
TCF Toulx Ste Croi 17.72 310 *e*P **Pn** 19 50 52.7 +0.3
TCF Toulx Ste Croi 17.72 310 *e*P **Pn** 19 50 52.7 +0.3
KIV Kislovodsk 17.73 58 *e*P **P** 19 50 52.8 -0.3
KIV pmax pmax
comp=Z,27nm,1.1s
KIV MLR MLR
comp=Z,49nm,13.0s
KIV Kislovodsk 17.73 58 *e*P **P** 19 50 52.8 -0.3
comp=Z,49nm,13.0s
SUW Suwalki 17.77 3 *e*P **Pn** 19 50 52.0 -0.8
KBZ Khabaz 17.81 59 P **P** 19 50 54.1 +0.3
KBZ pmax pmax
comp=Z,1.0nm,0.3s
KBZ MLR MLR
comp=Z,138nm,18.5s
KBZ Khabaz 17.81 59 Pn **P** 19 50 54.1 +0.3
comp=Z,1.3nm,0.3s,baz=264,slow=8.4,SNR=36
KBZ LR LR 19 59 05.4
comp=Z,138nm,18.5s,baz=117,slow=42
KBZ Khabaz 17.81 59 P **P** 19 50 54.1 +0.3
comp=Z,138nm,18.5s
ONI Oni 17.89 63 P **Pn** 19 50 53.6 -0.9
ONI Oni 17.89 63 P **Pn** 19 50 53.6 -0.9
LFF La Frestale 18.11 305 *e*P **P** 19 50 59.0 +1.9
LFF La Frestale 18.11 305 *e*P **P** 19 50 59.0 +1.9
GOR Gori 18.24 65 P **Pn** 19 50 58.8 0.0
GOR Gori 18.24 65 P **Pn** 19 50 58.8 0.0
ZEI Tsey 18.26 62 *e*P **P** 19 50 56.9 -2.2
ZEI pmax pmax
comp=Z,16nm,1.1s
ETSF Etsaut 18.39 298 *e*P **Pn** 19 51 02.4 +1.8
ETSF Etsaut 18.39 298 *e*P **Pn** 19 51 02.4 +1.8
GIVF Givet 18.46 324 *e*P **Pn** 19 51 02.9 +1.5
comp=Z,16nm,0.7s
GIVF Givet 18.46 324 *e*P **Pn** 19 51 02.9 +1.5
comp=Z,7.8nm,0.7s
GNI Garni 18.47 71 P **Pn** 19 51 01.8 +0.1
comp=Z,1.4nm,0.3s,baz=307,slow=2.7,SNR=17
GNI LR LR 19 59 02.2
comp=Z,158nm,19.5s,baz=3.2,slow=40
GNI Garni 18.47 71 *e*P **Pn** 19 51 02.3 +0.6
comp=Z,25nm,1.0s
GUDG Gudauri 18.61 64 P **Pn** 19 51 05.2 +1.8
GUDG Gudauri 18.61 64 P **Pn** 19 51 05.2 +1.8
TBLG Delisi 18.66 66 P **Pn** 19 51 04.3 +0.4
TBLG Delisi 18.66 66 P **Pn** 19 51 04.3 +0.4
SEAG Tbilisi Sea 18.71 66 P Pn 19 51 10.9 +6.4
BAIF Baives 18.73 323 *e*P **Pn** 19 51 04.6 0.0
BAIF Baives 18.73 323 *e*P **Pn** 19 51 04.6 0.0
BHD Baghdad 18.83 93 *ex* P 19 50 57.0 -8.2
BHD *ex* x 19 54 21.0
SJPF Ste Jean 18.92 298 *e*P **Pn** 19 51 09.0 +2.1
comp=Z,28nm,1.2s
SJPF Ste Jean 18.92 298 *e*P **Pn** 19 51 09.0 +2.1
comp=Z,14nm,1.2s
NACGM Naroch 18.95 9 *e* **P** 19 51 03.0 -3.3
DGRG David-gareji 19.09 67 P **Pn** 19 51 10.3 +1.2
DGRG David-gareji 19.09 67 P **Pn** 19 51 10.3 +1.2
IIGN Ignalina 19.32 8 *e*P **P** 19 51 09.8 -0.6
IIGN AMB AMB 19 51 11.4
comp=Z,13nm,0.7s
IIGN Ignalina 19.32 8 *e*P **P** 19 51 09.8 -0.6
comp=Z,13nm,0.7s,SNR=34
MFF Saint Martin d 19.33 309 *e*P **Pn** 19 51 13.2 +1.4
comp=Z,12nm,0.9s
MFF Saint Martin d 19.33 309 *e*P **Pn** 19 51 13.2 +1.4
comp=Z,5.9nm,0.9s
VORD Divnogorie 19.34 35 *e*P **P** 19 51 10.5 -0.1
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,30nm,0.8s
VORD pmax pmax
comp=Z,20nm,0.8s
VORD Divnogorie 19.34 35 *e*P **P** 19 51 10.5 -0.1
IDID Didziasalis 19.35 9 *e*P **P** 19 51 09.9 -0.8
IDID AMB AMB 19 51 11.5
comp=Z,10nm,1.1s
IDID Didziasalis 19.35 9 *e*P **P** 19 51 09.9 -0.8
comp=Z,10nm,1.1s,SNR=34
BSD Bornholm Skovb 19.42 348 *e*P **P** 19 51 10.7 -0.7
BSD pmax pmax
comp=Z,13nm,0.8s
BSD Bornholm Skovb 19.42 348 *i* P **P** 19 51 10.7 -0.7
comp=Z,13nm,0.8s
BSD Bornholm Skovb 19.42 348 *e*P **P** 19 51 10.7 -0.7
comp=Z,13nm,0.8s
VSR Storozhevoye 19.46 34 *e*P **P** 19 51 11.3 -0.6
VSR *e*S **S** 19 54 48.0 -1.7
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR smax smax
comp=N,60nm,2.9s
VSR smax smax
comp=E,80nm,2.9s
VSR smax smax
comp=Z,40nm,2.9s
VSR Storozhevoye 19.46 34 *e*P **P** 19 51 11.3 -0.6
ISAL Salakas 19.53 7 *e*P **P** 19 51 11.7 -0.9
ISAL AMB AMB 19 51 13.8
comp=Z,14nm,1.1s
ISAL Salakas 19.53 7 *e*P **P** 19 51 11.7 -0.9
comp=Z,14nm,1.1s,SNR=34
IZAR Zarasai 19.72 8 *e*P **P** 19 51 14.1 -0.7
IZAR AMB AMB 19 51 15.6
comp=Z,24nm,0.6s
LDF La Druitiere 20.21 314 *e*P **P** 19 51 21.2 +1.0
comp=Z,19nm,1.0s
LDF La Druitiere 20.21 314 *e*P **P** 19 51 21.2 +1.0
comp=Z,9.6nm,1.0s
FLN La Foliniere 20.50 314 *e*P Pn 19 51 25.3 -0.4
FLN *e*R
comp=Z,89nm,21.2s
FLN La Foliniere 20.50 314 *e*P Pn 19 51 25.3 -0.4
ESDC Sonseca Array 20.53 287 P Pn 19 51 25.7 -0.4
comp=Z,3.6nm,0.8s,baz=80,slow=10,SNR=8.8
GRR Gorron 20.55 313 *e*P Pn 19 51 26.1 0.0
GRR Gorron 20.55 313 *e*P Pn 19 51 26.1 0.0
VRHR Novokhopersk 20.55 38 *e*P **P** 19 51 24.4 +0.7
VRHR *e*S **S** 19 55 12.6 +1.2
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=E,8.0nm,0.5s
VRHR pmax pmax
comp=Z,60nm,0.5s
VRHR smax smax
comp=N,40nm,1.5s
VRHR smax smax
comp=E,160nm,1.5s
VRHR smax smax
comp=Z,70nm,3.0s
VRHR Novokhopersk 20.55 38 *e*P **P** 19 51 24.4 +0.7
MAK Makhachkala 20.89 63 *e*P **P** 19 51 25.5 -2.0
MAK *e*S **S** 19 55 17.1 -1.3
MAK *e*SS **SnSn** 19 55 40.7 +0.8
MAK *e*SSS SSS 19 55 55.9
MAK pmax pmax
comp=Z,82nm,1.1s
MAK MLR MLR
comp=Z,109nm,17.0s
OBN Obninsk 21.41 24 *c* *i*P **P** 19 51 30.2 -2.8
OBN *i* 19 51 43.9
OBN pmax pmax
comp=Z,37nm,0.9s
OBN MLR MLR
comp=Z,100nm,18.0s
SGMF Saint Gilles 21.50 311 *e*P **P** 19 51 36.7 +2.6
SGMF Saint Gilles 21.50 311 *e*P **P** 19 51 36.7 +2.6
QUIF Quistinic 21.74 310 *e*P **P** 19 51 37.8 +1.2
comp=Z,38nm,1.1s
QUIF Quistinic 21.74 310 *e*P **P** 19 51 37.8 +1.2
comp=Z,19nm,1.1s
MUD Monsted U'grnd 21.90 341 *i* P **P** 19 51 41.5 +3.3
MUD pmax pmax
comp=Z,12nm,0.8s
MUD Monsted U'grnd 21.90 341 *i* P **P** 19 51 41.5 +3.3
comp=Z,12nm,0.7s
MDT Midelt 21.96 269 P **P** 19 51 40.9 +1.7
comp=Z,5.7nm,0.9s,baz=82,slow=10,SNR=8.5
MDT LR LR 20 02 32.1
comp=Z,116nm,18.6s,baz=134,slow=43
ROSF Rostrenen 21.97 311 *e*P **P** 19 51 40.0 +0.9
comp=Z,17nm,0.9s
ROSF Rostrenen 21.97 311 *e*P **P** 19 51 40.0 +0.9
comp=Z,8.5nm,0.9s
MOS Moscow 22.27 24 *e*P **P** 19 51 41.8 -0.4
MOS pmax pmax
comp=Z,60nm,0.6s
MOS pmax pmax
comp=Z,100nm,1.4s
MOS Moscow 22.27 24 *e*P **P** 19 51 41.8 -0.4
comp=Z,100nm,1.4s
MIB Mutribah 22.37 99 *e*P **P** 19 51 41.6 -1.9
MIB AMb AMB 19 51 43.1
comp=Z,56nm,0.7s
MIB Mutribah 22.37 99 *e*P **P** 19 51 41.6 -1.9
comp=Z,56nm,0.7s
VSU Vasula 22.44 7 *d* *i*P **P** 19 51 42.8 -1.2
VSU pmax pmax
comp=Z,23nm,0.8s
NAY Al-Naaiem 22.52 101 *e*P **P** 19 51 43.3 -1.9
NAY AMb AMB 19 51 44.9
comp=Z,18nm,0.8s
NAY Al-Naaiem 22.52 101 *e*P **P** 19 51 43.3 -1.9
comp=Z,18nm,0.8s
UMR Umm Al-Rimmam 22.77 100 *e*P **P** 19 51 43.6 -4.2
UMR AMb AMB 19 51 48.0
comp=Z,48nm,0.7s
HFS Hagfors 24.43 350 P **P** 19 52 03.0 -0.5
comp=Z,6.9nm,0.5s,baz=155,slow=11,SNR=42
FINES FINESS Array B 25.34 5 P **P** 19 52 11.2 -0.5
comp=Z,8.1nm,0.8s,baz=172,slow=9.9,SNR=30
FINES LR LR 20 03 19.7
comp=Z,223nm,19.0s,baz=270,slow=39
EKA Eskdalemuir Ar 25.55 326 P **P** 19 52 14.5 +0.9
comp=Z,1.8nm,0.5s,baz=128,slow=9.2,SNR=9.2
NB2 NORSAR Subarra 25.68 348 P **P** 19 52 14.8 0.0
comp=Z,4.4nm,0.7s,baz=160,slow=10
NB2 NORSAR Subarra 25.68 348 P **P** 19 52 14.8 0.0
comp=Z,4.4nm,0.7s,SNR=8.8
NOA NORSAR Array B 25.68 348 P **P** 19 52 14.9 +0.1
comp=Z,3.5nm,0.6s,baz=159,slow=9.6,SNR=18
NOA LR LR 20 03 38.2
comp=Z,45nm,18.8s,baz=165,slow=40
KAF Kangasniemi 26.02 5 *e*P **P** 19 52 16.3 -1.6
KAF pmax pmax
comp=Z,4.0nm,0.6s
KAF Kangasniemi 26.02 5 *e*p **P** 19 52 16.3 -1.6
comp=Z,4.4nm,0.6s
JOF Joensuu 27.32 10 *e*P **P** 19 52 27.9 -1.7
JOF pmax pmax
comp=Z,3.0nm,0.5s
JOF Joensuu 27.32 10 *e*p **P** 19 52 27.9 -1.7
comp=Z,3.1nm,0.5s
TORD Torodi Ar. Bea 29.24 223 P **P** 19 52 48.1 +1.0
comp=Z,2.4nm,0.8s,baz=32,slow=9.0,SNR=19
TORD LR LR 20 06 33.7
comp=Z,116nm,19.1s,baz=85,slow=40
AKTO Aktyubinsk 29.60 50 P **P** 19 52 48.7 -1.3
AKTO pmax pmax
comp=Z,5.0nm,0.8s
AKTO MLR MLR
comp=Z,72nm,19.4s
AKTO Aktyubinsk 29.60 50 P **P** 19 52 48.7 -1.3
comp=Z,5.1nm,0.8s,baz=265,slow=9.5,SNR=18
AKTO LR LR 20 07 35.6
comp=Z,72nm,19.4s,baz=275,slow=42
AB31 Akbulak array 30.56 53 *i* P **P** 19 52 56.9 -1.6
AB31 pmax pmax
comp=Z,1.0nm,0.1s
ARU Arti 31.88 39 *c* *i*P **P** 19 53 08.6 -1.4
ARU 19 54 13.0
ARU S **S** 19 58 17.9 -0.3
ARU SS **SnSn** 20 00 03.9 -4.0
ARU pmax pmax
comp=Z,15nm,1.0s
SOKR Solikamsk 32.46 33 ⇑ *i*P **P** 19 53 14.0 -1.0
SOKR pmax pmax
comp=Z,20nm,1.0s
SVE Sverdlovsk 33.09 39 *c* *i*P **P** 19 53 20.1 -0.5
SVE pmax pmax
comp=Z,28nm,0.6s
SVE Sverdlovsk 33.09 39 *i* P **P** 19 53 20.1 -0.5
comp=Z,28nm,0.6s
ARCES ARCESS Array B 33.38 2 P **P** 19 53 22.5 -0.6
comp=Z,4.1nm,0.7s,baz=186,slow=9.4,SNR=22
ARCES LR LR 20 08 09.5
comp=Z,145nm,19.5s,baz=194,slow=39
ARCES ARCESS Array B 33.38 2 P **P** 19 53 22.5 -0.6
comp=Z,145nm,19.5s
KEV Kevo 33.66 3 *e*P **P** 19 53 24.6 -0.8
KEV pmax pmax
comp=Z,4.0nm,0.7s
KEV Kevo 33.66 3 *e*p **P** 19 53 24.6 -0.8
comp=Z,3.8nm,0.7s
KEV Kevo 33.66 3 *e*P **P** 19 53 24.6 -0.8
comp=Z,3.8nm,0.7s
BRVK Borovoye 37.57 48 *c* *e*P **P** 19 53 58.7 -0.5
BRVK pmax pmax
comp=Z,6.0nm,0.7s
BRVK Borovoye 37.57 48 *e*P **P** 19 53 58.7 -0.5
comp=Z,6.0nm,0.7s
KK31 Karatay Array 37.70 64 *i* P **P** 19 53 59.1 -1.4
KK31 pmax pmax
comp=Z,3.0nm,0.4s
DBIC Dimbokro 38.22 226 P **P** 19 54 06.1 +1.1
comp=Z,7.6nm,0.8s,baz=11,slow=9.7,SNR=7.9
DBIC Dimbokro 38.22 226 P **P** 19 54 06.1 +1.1
comp=Z,8.0nm,0.8s
LIC Lamto 38.67 226 *e*P **P** 19 54 09.4 +0.5
comp=Z,16nm,0.6s
LIC Lamto 38.67 226 *e*P **P** 19 54 09.4 +0.5
comp=Z,8.2nm,0.6s
EKS2 Erkin-Say 40.14 64 P **P** 19 54 20.9 -0.2
SNR=22
BBTS Babate 40.35 248 LR LR 20 12 38.2
comp=Z,184nm,19.0s,baz=79,slow=38
AAK Ala-Archa 40.67 64 ⇓ *i*P **P** 19 54 24.6 -0.9
AAK pmax pmax
comp=Z,29nm,1.0s
AAK Ala-Archa 40.67 64 P **P** 19 54 25.8 +0.3
SNR=12
AAK Ala-Archa 40.67 64 P **P** 19 54 25.5 +0.1
comp=Z,14nm,1.1s,baz=230,slow=3.5,SNR=32
AAK Ala-Archa 40.67 64 *i* P **P** 19 54 24.6 -0.9
comp=Z,29nm,1.0s
FRU Bishkek 40.73 64 *e*P **P** 19 54 25.0 -0.8
FRU pmax pmax
comp=Z,37nm,1.4s
FRU Bishkek 40.73 64 *e*P **P** 19 54 25.0 -0.8
comp=Z,37nm,1.4s
CHMS Chumysh 40.80 64 *i* P **P** 19 54 26.1 -0.3
CHMS Chumysh 40.80 64 P **P** 19 54 26.1 -0.3
SNR=14
CHMS Chumysh 40.80 64 *i* P **P** 19 54 26.1 -0.3
KBK Karagaybulak 40.99 64 *i* P **P** 19 54 28.5 +0.3
KBK Karagaybulak 40.99 64 P **P** 19 54 28.5 +0.3
SNR=10
KBK Karagaybulak 40.99 64 *i* P **P** 19 54 28.5 +0.3
SCO Scoresbysund 41.31 339 *i* P **P** 19 54 32.7 +2.6
SCO pmax pmax
comp=Z,5.0nm,0.9s
SCO Scoresbysund 41.31 339 *i* P **P** 19 54 32.7 +2.6
comp=Z,5.4nm,0.9s
SCO Scoresbysund 41.31 339 *i* P **P** 19 54 32.7 +2.6
comp=Z,5.0nm,0.9s
KZA Kyzart 41.31 65 *i* P **P** 19 54 31.3 +0.2
KZA Kyzart 41.31 65 P **P** 19 54 31.3 +0.2
SNR=8.8
KZA Kyzart 41.31 65 *i* P **P** 19 54 31.3 +0.2
TKM2 Tokmak 2 41.42 64 *i* P **P** 19 54 31.4 -0.3
TKM2 Tokmak 2 41.42 64 P **P** 19 54 31.5 -0.3
SNR=6.7
TKM2 Tokmak 2 41.42 64 *i* P **P** 19 54 31.4 -0.3
ULHL Ulahol 42.01 65 *i* P **P** 19 54 37.1 +0.6
ULHL Ulahol 42.01 65 P **P** 19 54 37.1 +0.6
SNR=19
ULHL Ulahol 42.01 65 *i* P **P** 19 54 37.1 +0.6

KURBB	**Kurchatov Arra**	**42.60**	**52**	P		**P**	**19 54 39.4**	**-1.5**
	comp=Z,4.1nm,0.6s,baz=277,slow=8.6,SNR=20							
KURK	**Kurchatov**	**42.66**	**52**	⇓*i*P		**P**	**19 54 39.1**	**-2.3**
KURK				pmax	pmax			
	comp=Z,7.0nm,1.7s							
NVS	**Novosibirsk**	**45.28**	**46**	⇓*i*P		**P**	**19 55 01.6**	**-0.8**
NVS				pmax	pmax			
	comp=Z,8.0nm,0.6s							
NVS				pmax	pmax			
	comp=N,1.0nm,0.4s							
NVS				pmax	pmax			
	comp=E,3.0nm,0.8s							
NVS	**Novosibirsk**	**45.28**	**46**	*i* P		**P**	**19 55 01.6**	**-0.8**
	comp=E,1.0nm,0.4s							
MK31	**Makanchi Array**	**45.49**	**57**	*i* P		**P**	**19 55 02.7**	**-1.5**
MK31				pmax	pmax			
	comp=Z,2.0nm,0.3s							
MKAR	**Makanchi Array**	**45.49**	**57**	P		**P**	**19 55 02.9**	**-1.3**
MKAR							19 56 43.0	
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.4s							
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
MKAR	**Makanchi Array**	**45.49**	**57**	P		**P**	**19 55 02.9**	**-1.3**
	comp=Z,3.1nm,0.4s,baz=270,slow=7.7,SNR=28							
MKAR				PcP		**PcP**	**19 56 43.0**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=268,slow=4.4,SNR=2.5							
ZALV	**Zalesovo Beam**	**46.26**	**47**	P		**P**	**19 55 08.7**	**-1.4**
ZALV				pmax	pmax			
	comp=Z,8.0nm,0.5s							
ZALV				MLR	MLR			
	comp=Z,35nm,21.0s							
ZALV	**Zalesovo Beam**	**46.26**	**47**	P		**P**	**19 55 08.7**	**-1.4**
	comp=Z,7.5nm,0.5s,baz=269,slow=8.9,SNR=52							
ZALV				LR	LR		20 14 58.4	
	comp=Z,35nm,21.0s,baz=250,slow=37							
PYUN	**Piuthan**	**51.73**	**81**	*e*P		**P**	**19 55 51.9**	**-0.7**
	comp=Z,59nm,0.7s							
DANN	**Dangsing**	**52.23**	**80**	*e*P		**P**	**19 55 55.9**	**-0.6**
	comp=Z,105nm,0.7s							
KOLN	**Koldanda**	**52.35**	**81**	*e*P		**P**	**19 55 56.3**	**-1.0**
	comp=Z,21nm,0.7s							
DMN	**Daman**	**53.62**	**80**	*e*P		**P**	**19 56 05.9**	**-0.8**
	comp=Z,60nm,0.7s							
KKN	**Kakani**	**53.68**	**80**	*e*P		**P**	**19 56 06.0**	**-1.1**
	comp=Z,28nm,0.6s							
PKIN	**Phulchoki**	**53.87**	**80**	*e*P		**P**	**19 56 07.3**	**-1.2**
	comp=Z,15nm,0.6s							
PKI	**Pulchoki**	**53.88**	**80**	*e*P		**P**	**19 56 07.5**	**-1.2**
	comp=Z,37nm,0.9s							
GUN	**Gumba**	**54.11**	**79**	*e*P		**P**	**19 56 09.4**	**-1.0**
	comp=Z,48nm,0.8s							
RAMN	**Ramite**	**55.11**	**80**	*e*P		**P**	**19 56 16.0**	**-1.5**
	comp=Z,39nm,0.8s							
ODAN	**Odare**	**55.78**	**80**	*e*P		**P**	**19 56 21.1**	**-1.2**
	comp=Z,7.7nm,0.5s							
TAPN	**Taplejung**	**55.81**	**79**	*e*P		**P**	**19 56 21.5**	**-1.1**
	comp=Z,19nm,0.7s							
LSA	**Lhasa**	**57.47**	**75**	P		**P**	**19 56 34.3**	**-0.3**
LSA				pmax	pmax			
	comp=Z,20nm,0.6s							
ZAK	**Zakamensk**	**58.08**	**48**	*e*P		P	19 56 33.6	-4.6
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.2s							
GTA	**Gaotai**	**59.88**	**61**	*e*P		**P**	**19 56 49.9**	**-0.9**
GTA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
SCHQ	**Schefferville**	**60.52**	**318**	P		**P**	**19 56 56.0**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=56,slow=7.2,SNR=9.0							
SONM	**Songino Array**	**60.92**	**50**	P		**P**	**19 56 56.9**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=281,slow=7.8,SNR=29							
BOSA	**Boshof**	**64.63**	**177**	P		**P**	**19 57 24.4**	**+2.0**
	comp=Z,2.7nm,0.9s,baz=357,slow=11,SNR=3.4							
BOSA				LR	LR		20 25 21.7	
	comp=Z,100nm,18.5s,baz=344,slow=36							
YAK	**Yakutsk**	**66.29**	**29**	*e*P		**P**	**19 57 30.3**	**-2.4**
YAK				pmax	pmax			
	comp=Z,16nm,0.9s							
CMAR	**Chiang Mai Arr**	**69.19**	**82**	P		**P**	**19 57 51.0**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=302,slow=8.3,SNR=18							
BILL	**Bilibino**	**72.65**	**13**	⇓*i*P		**P**	**19 58 12.2**	**+0.3**
BILL				*i*			19 58 27.2	
BILL				pmax	pmax			
	comp=Z,7.0nm,1.5s							
CN2	**Changchun**	**74.47**	**47**	*e*P		**P**	**19 58 22.9**	**-0.2**
CN2				pmax	pmax			
	comp=Z,20nm,0.8s							
YKA	**Yellowknife A**	**75.51**	**341**	P		**P**	**19 58 29.5**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=31,slow=5.5,SNR=18							
NJ2	**Nanjing**	**76.93**	**60**	*e*P		**P**	**19 58 36.8**	**-0.5**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
USRK	**Ussuriysk Arra**	**77.99**	**44**	P		**P**	**19 58 42.4**	**-0.6**
	comp=Z,5.6nm,0.8s,baz=284,slow=5.6,SNR=17							
ILAR	**Eielson Array**	**78.89**	**355**	P		**P**	**19 58 48.4**	**+0.7**
	comp=Z,0.8nm,0.9s,baz=354,slow=3.8,SNR=9.0							
KSRS	**Korea Array**	**79.77**	**51**	P		**P**	**19 58 52.6**	**-0.3**
	comp=Z,4.5nm,0.6s,baz=312,slow=4.4,SNR=16							
PETK	**Petropavlovsk-**	**83.12**	**25**	LR		LR	20 42 54.5	
	comp=Z,29nm,18.6s,baz=38,slow=41							
BDFB	**Brasilia**	**83.60**	**245**	LR		LR	20 35 37.1	
	comp=Z,138nm,18.4s,baz=237,slow=35							
ASAJ	**Asahikawa**	**83.67**	**38**	P		**P**	**19 59 13.3**	**-0.1**
	comp=Z,4.4nm,0.8s,baz=307,slow=15,SNR=3.8							
JNU	**Nakatsue**	**84.37**	**53**	P		**P**	**19 59 17.1**	**-0.2**
	comp=Z,2.9nm,0.7s,baz=0.0,slow=2.0,SNR=3.9							
MJAR	**Matsushiro Arr**	**86.61**	**46**	P		**P**	**19 59 28.0**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=308,slow=5.1,SNR=8.0							
LPAZ	**La Paz**	**99.35**	**257**	LR		LR	20 45 46.1	
	comp=Z,40nm,18.5s,baz=95,slow=36							
WRA	**Warramunga Arr**	**119.46**	**94**	PKP		**PKPdf**	**20 05 34.5**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=319,slow=1.9,SNR=7.7							
ASAR	**Alice Springs**	**120.97**	**98**	PKP		**PKPdf**	**20 05 37.5**	**0.0**
	comp=Z,0.6nm,0.6s,baz=321,slow=1.2,SNR=14							
DZM	**Mont Dzumac**	**146.29**	**75**	PKPbc		**PKPab**	**20 06 27.0**	**+0.4**
	comp=Z,2.6nm,0.5s,baz=166,slow=4.2,SNR=5.4							

IDC ***13*** *19:50:36.2±4.7,24°62′N×141°37′E,h103km±70km,mb3.0/3, mb1 3.4/6,mb1mx3.1/26,mbtmp3.4/6,ML3.6/2,MS3.0/1, Ms1 3.0/1,ms1mx2.3/9,Error ellipse: s-maj=85.7km s-min=27.6km az=71.0*

JMA ***13*** *19:50:40.1±0.2,25°00′N×141°42′E,h149km,M4.0*

ISC 13 19:50:38.7±1.4,24°83′N±0°10′×141°9′E±0°3,h149km,n17, σ1s17/19,mb3.1/3,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.81**	**8**	P		**Pn**	**19 51 12.6**	**+1.0**
JHHJ				S		**Sn**	**19 51 37.1**	**+0.2**
CBIJ	**Chichi jima**	**2.27**	**7**	P		**Pn**	**19 51 17.6**	**+0.6**
CBIJ				S		**Sn**	**19 51 47.1**	**+0.6**
CBIJ	**Chichi jima**	**2.27**	**7**	P		**Pn**	**19 51 17.8**	**+0.8**
	baz=276,slow=10							
CBIJ				S		**Sn**	**19 51 47.3**	**+0.8**
	baz=187,slow=0.3							
JHJ2	**Mitsune**	**8.45**	**348**	P		**Pn**	**19 52 37.7**	**-0.3**
JHJ	**Hachijo jima 2**	**8.46**	**348**	P		**Pn**	**19 52 37.0**	**-1.2**
	3.3nm,0.3s,baz=42,slow=14,SNR=5.6							
BSO1	**Boso 1**	**9.82**	**356**	P		**Pn**	**19 52 55.5**	**-0.3**
BSO3	**Boso 3**	**10.01**	**353**	P		**Pn**	**19 52 57.4**	**-1.1**
JOD2	**Odawara 2**	**10.68**	**348**	P		**Pn**	**19 53 06.8**	**-0.8**
JHU	**Hanno**	**11.21**	**349**	P		**Pn**	**19 53 13.7**	**-1.0**
JRY	**Ryogami san**	**11.44**	**348**	P		**Pn**	**19 53 16.9**	**-0.8**
JAG	**Ashikaga**	**11.74**	**350**	P		**Pn**	**19 53 19.3**	**-2.3**
JHO	**Hitachi**	**11.80**	**355**	P		**Pn**	**19 53 19.7**	**-2.6**
MJAR	**Matsushiro Arr**	**12.09**	**346**	P		**Pn**	**19 53 25.9**	**-0.3**
	0.3nm,0.3s,baz=159,slow=11,SNR=5.7							
ASAJ	**Asahikawa**	**19.25**	**2**	LR		LR	20 02 30.3	
	comp=Z,41nm,19.5s,baz=0.6,slow=37							
WRA	**Warramunga Arr**	**45.11**	**190**	P		**P**	**19 58 39.4**	**-0.8**
	0.3nm,0.3s,baz=8.9,slow=8.6,SNR=14							
ASAR	**Alice Springs**	**48.83**	**190**	P		**P**	**19 59 09.6**	**+0.6**
	0.3nm,0.8s,baz=354,slow=4.9,SNR=3.0							
MKAR	**Makanchi Array**	**51.73**	**311**	P		**P**	**19 59 31.5**	**+0.7**
	0.2nm,0.5s,baz=104,slow=6.1,SNR=2.7							

ISCJB ***13*** *19:58:01.8±0.6,77°12′N±0°05′×18°5′E±0°2,h10km,Error ellipse: s-maj=8.2km s-min=4.5km az=38.7*
NAO ***13*** *19:58:02.8±1.0,77°07′N×18°41′E,ML3.0*
CSEM ***13*** *19:58:02.3±0.2,77°03′N×17°92′E,h2km,ML3.0,Error ellipse: s-maj=9.2km s-min=3.5km az=59.0*
BER ***13*** *19:58:05.7,77°04′N×18°08′E,h15km,MD2.4,ML2.9, ML3.0(NAO)*

ISC 13 19:58:04.4±0.9,76°98′N±0°04×17°92′E±0°06,h10km,n18, σ1s01/24,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HSP	**Hornsund**	**0.54**	**274**	*e*P		**Pb**	**19 58 16.4**	**+0.5**
HSP				*e*S		**Sb**	**19 58 24.9**	**+1.3**
SPA0	**Spitsbergen Ar**	**1.25**	**345**	Pg		Pn	19 58 25.6	-2.3
	baz=155,slow=22							
SPA0				Lg		Lg	19 58 40.9	
	baz=162,slow=28							
SPA0	**Spitsbergen Ar**	**1.25**	**345**	Pg		Pn	19 58 25.6	-2.3
	baz=155,slow=22							
SPA0				Lg		Lg	19 58 40.9	
	baz=162,slow=28							
SPA0	**Spitsbergen Ar**	**1.25**	**345**	Pg		Pn	19 58 25.6	-2.3
	baz=155,slow=20,SNR=999							
SPA0				Lg		Lg	19 58 40.9	
	baz=162,slow=24,SNR=6.7							
HOPEN	**Hopen**	**1.70**	**103**	*e*P		**Pn**	**19 58 33.3**	**-0.7**
HOPEN				*e*Sg		**Sn**	**19 58 56.4**	**+0.6**
HOPEN	**Hopen**	**1.70**	**103**	*e*P		**Pn**	**19 58 33.3**	**-0.7**
	SNR=55							
HOPEN				*e*Sg		**Sn**	**19 58 56.4**	**+0.6**
	SNR=91							
KBS	**Kingsbay**	**2.32**	**330**	Pn		**Pn**	**19 58 40.9**	**-1.6**
KBS				Pg		**Pb**	**19 58 45.9**	**-0.4**
KBS				Lg		Lg	19 59 14.5	
KBS	**Kingsbay**	**2.32**	**330**	*e*P		**Pn**	**19 58 41.0**	**-1.6**
KBS				*e*Pg		**Pb**	**19 58 46.0**	**-0.2**
KBS				*e*Sg		**Sb**	**19 59 15.6**	**+0.7**
KBS				AML		AML	19 59 18.2	
	comp=Z,207nm,0.4s							
KBS	**Kingsbay**	**2.32**	**330**	*e*P		**Pn**	**19 58 41.0**	**-1.6**
	SNR=55							
KBS	**Kingsbay**	**2.32**	**330**	*e*Pg		**Pb**	**19 58 46.0**	**-0.2**
	SNR=91							
KBS				Lg		Lg	19 59 14.5	
KBS				*e*Sg		**Sb**	**19 59 15.6**	**+0.7**
	comp=Z,207nm,0.4s,SNR=91							
BJO	**Bjornoya**	**2.51**	**172**	*e*P		**Pn**	**19 58 43.4**	**-1.8**
BJO				*e*Sg		**Sb**	**19 59 20.3**	**-0.1**
BJO				AML		AML	19 59 24.7	
	comp=Z,74nm,0.6s							
BJO	**Bjornoya**	**2.51**	**172**	*e*P		**Pn**	**19 58 43.4**	**-1.8**
	SNR=55							
BJO				*e*Sg		**Sb**	**19 59 20.3**	**-0.1**
	comp=Z,74nm,0.6s,SNR=91							
KEV	**Kevo**	**7.70**	**156**	*e*p		**Pn**	**19 59 56.4**	**0.0**
	comp=Z,0.4nm,0.4s							
KEV	**Kevo**	**7.70**	**156**	*e*P		**Pn**	**19 59 56.4**	**0.0**
	comp=Z,0.4nm,0.4s							
ARA0	**ARCESS Array S**	**7.79**	**160**	Pn		**Pn**	**19 59 58.5**	**+0.9**
	baz=356,slow=12							
ARA0				Sn		Sn	20 01 18.5	-7.2
	baz=356,slow=22							
ARA0	**ARCESS Array S**	**7.79**	**160**	Pn		**Pn**	**19 59 58.5**	**+0.9**
	baz=356,slow=12							
ARA0				S		Sn	20 01 18.5	-7.2
	baz=356,slow=22							
ARA0	**ARCESS Array S**	**7.79**	**160**	Pn		**Pn**	**19 59 58.5**	**+0.9**
	baz=356,slow=12,SNR=2.7							
JOF	**Joensuu**	**14.78**	**155**	*e*p		**Pn**	**20 01 34.0**	**+0.8**

IDC ***13*** *20:09:15.8±0.8,33°16N×93°26′E,h0km,mb3.7/11, mb1 3.8/15,mb1mx3.7/30,mbtmp3.7/15,ML3.3/4,MS3.4/7, Ms1 3.4/7,ms1mx3.1/33,Error ellipse: s-maj=27.6km s-min=16.0km az=51.0*

BJI ***13*** *20:09:15.5,33°26′N×93°32′E,h13km,mB4.5/2,mb4.3/5, ML3.8/4,Ms4.3/2,Ms7 4.0/2*

ISCJB ***13*** *20:09:19.5±0.4,33°24′N±0°05×93°27′E±0°06,h33km, mb3.7/11,MS3.3/5,Error ellipse: s-maj=8.7km s-min=4.9km az=140.1*

ISC 13 20:09:21.6±0.6,33°24′N±0°08×93°21′E±0°07,h35km,n33, σ1s47/32,mb3.7/11,MS3.3/5,Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LSA	**Lhasa**	**3.95**	**207**	Pg		Pn	20 10 24.3	+4.2
LSA				smax	smax			
	comp=N,140nm,1.0s							
LSA				smax	smax			
	comp=E,140nm,0.8s							
TAPN	**Taplejung**	**7.56**	**220**	*e*P		**Pn**	**20 11 11.3**	**+1.8**
ODAN	**Odare**	**8.12**	**220**	*e*P		**Pn**	**20 11 18.7**	**+1.5**
GTA	**Gaotai**	**8.14**	**39**	*e*P		**Pn**	**20 11 18.1**	**+0.8**
GTA				pmax	pmax			
	comp=Z,5.0nm,1.0s							
GUN	**Gumba**	**8.26**	**232**	*e*P		**Pn**	**20 11 21.3**	**+2.1**
RAMN	**Ramite**	**8.49**	**224**	*e*P		**Pn**	**20 11 24.2**	**+1.9**
KKN	**Kakani**	**8.73**	**234**	*e*P		**Pn**	**20 11 27.6**	**+2.0**
PKI	**Pulchoki**	**8.79**	**232**	*e*P		**Pn**	**20 11 28.7**	**+2.2**
PKIN	**Phulchoki**	**8.80**	**232**	*e*P		**Pn**	**20 11 28.6**	**+2.1**
	comp=Z,14nm,0.6s							
DMN	**Daman**	**8.97**	**233**	*e*P		**Pn**	**20 11 30.0**	**+1.1**
	comp=Z,20nm,0.8s							
LZH	**Lanzhou**	**9.21**	**69**	*e*P		**Pn**	**20 11 33.4**	**+1.4**
LZH				pP			20 11 35.6	
LZH				sP			20 11 39.5	
LZH				*e*S		**Sn**	**20 13 17.0**	**+2.6**
LZH				sS			20 13 21.5	
LZH				pmax	pmax			
	comp=Z,19nm,1.1s							
LZH				pmax	pmax			
	comp=Z,53nm,4.0s							
LZH				LR	LR			
	comp=N,760nm,7.6s							
LZH				LR	LR			
	comp=E,580nm,8.8s							
LZH				LR	LR			
	comp=Z,460nm,8.0s							
DANN	**Dangsing**	**9.48**	**242**	*e*P		**Pn**	**20 11 37.2**	**+1.4**
KOLN	**Koldanda**	**9.92**	**239**	*e*P		**Pn**	**20 11 42.4**	**+0.5**
PYUN	**Piuthan**	**10.18**	**242**	*e*P		**Pn**	**20 11 45.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**15.60**	**159**	Pn		**Pn**	**20 12 56.5**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=342,slow=14,SNR=9.3							
MKAR	**Makanchi Array**	**15.89**	**332**	Pn		**Pn**	**20 13 01.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=141,slow=14,SNR=8.1							
AAK	**Ala-Archa**	**17.46**	**308**	P		**P**	**20 13 23.6**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=116,slow=12,SNR=4.9							
AAK				LR		LR	20 21 40.4	
	comp=Z,128nm,21.5s,baz=322,slow=42							
SONM	**Songino Array**	**17.65**	**30**	P		**Pn**	**20 13 23.3**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=215,slow=11,SNR=21							
SONM				PcP		**PcP**	**20 18 01.0**	**-1.2**
	baz=217,slow=4.5,SNR=2.6							
SONM				LR		LR	20 20 44.3	
	comp=Z,208nm,19.1s,baz=165,slow=39							
KURBB	**Kurchatov Arra**	**20.45**	**332**	P		**P**	**20 13 54.5**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=147,slow=12,SNR=12							
ZALV	**Zalesovo Beam**	**21.54**	**346**	P		**P**	**20 14 07.9**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=168,slow=9,SNR=6.4							
BVAR	**Borovoye Array**	**25.66**	**327**	P		**P**	**20 14 50.5**	**+2.6**
	comp=Z,0.4nm,0.5s,baz=139,slow=11,SNR=2.8							
BVAR				LR		LR	20 25 37.0	
	comp=Z,64nm,21.7s,baz=297,slow=38							
KSRS	**Korea Array**	**28.52**	**72**	P		**P**	**20 15 12.6**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=272,slow=8.6,SNR=4.3							
KSRS				LR		LR	20 26 57.0	
	comp=Z,40nm,20.4s,baz=288,slow=37							
BRTR	**Keskin Array B**	**47.57**	**296**	P		**P**	**20 17 54.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=81,slow=7.6,SNR=3.9							
FINES	**FINESS Array B**	**50.58**	**325**	P		**P**	**20 18 16.5**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=88,slow=8.6,SNR=5.7							
ARCES	**ARCESS Array B**	**51.50**	**335**	LR		LR	20 42 04.0	
	comp=Z,46nm,18.7s,baz=271,slow=38							
NB2	**NORSAR Subarra**	**57.76**	**325**	P		**P**	**20 19 09.3**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=78,slow=7.4							
NOA	**NORSAR Array B**	**57.76**	**325**	P		**P**	**20 19 09.4**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=78,slow=7.2,SNR=4.6							
NOA				LR		LR	20 45 55.2	
	comp=Z,20nm,18.8s,baz=200,slow=38							
GERES	**GERESS Array B**	**59.31**	**311**	LR		LR	20 49 32.4	
	comp=Z,48nm,18.4s,baz=58,slow=41							
WRA	**Warramunga Arr**	**65.87**	**137**	P		**P**	**20 20 02.9**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=330,slow=7.5,SNR=5.6							
ASAR	**Alice Springs**	**68.60**	**140**	P		**P**	**20 20 20.6**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=320,slow=6.1,SNR=19							
ILAR	**Eielson Array**	**71.70**	**23**	P		**P**	**20 20 39.2**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=302,slow=5.4,SNR=7.4							
YKA	**Yellowknife Ar**	**82.00**	**13**	P		**P**	**20 21 37.9**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=338,slow=4.7,SNR=3.6							
TORD	**Torodi Ar. Bea**	**84.16**	**282**	P		**P**	**20 21 48.4**	**-1.2**
	comp=Z,1.8nm,0.9s,baz=44,slow=4.2,SNR=6.6							

IDC ***13*** *20:18:52.0±1.8,7°79S×128°54E,h0km,mb3.4/2, mb1 3.9/5,mb1mx3.6/21,mbtmp3.7/5,ML3.9/3,Error ellipse: s-maj=93.3km s-min=25.9km az=75.0*

AUST ***13*** *20:19:00.1±0.0,7°99S×128°42E,h135km±1km,Error ellipse: s-maj=2.9km s-min=0.9km az=276.0*

ISC 13 20:18:59.7±1.0,8°06S±0°07×128°5E±0°1,h44km,n11, σ2s64/14,Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MTN	**Manton Dam**	**5.42**	**151**	P		Pn	20 20 20.9	+2.8
	baz=5.5,SNR=33							
MTN				S		**Sn**	**20 21 21.4**	**+2.1**
	baz=5.5,SNR=4.9							
KDU	**Kakadu**	**6.05**	**140**	P		**Pn**	**20 20 28.5**	**+1.9**
	baz=6.2,SNR=31							
FAKI	**Fak Fak**	**6.34**	**37**	P		**Pn**	**20 20 31.2**	**+0.5**
	baz=6.3,SNR=4.3							
KNRA	**Kununurra**	**7.58**	**178**	P		**Pn**	**20 20 50.2**	**+2.6**
	baz=7.7,SNR=39							
KNRA				S		**Sn**	**20 22 13.4**	**+1.2**
	baz=7.7,SNR=9.3							
SWI	**Sorong**	**7.67**	**21**	P		**Pn**	**20 20 50.8**	**+1.9**
	baz=7.7,SNR=5.0							
FITZ	**Fitzroy Crossi**	**10.36**	**195**	Pn		**Pn**	**20 21 27.4**	**+1.7**
	0.7nm,0.3s,baz=13,slow=12,SNR=76							
FITZ				Sn		**Sn**	**20 23 19.2**	**-1.4**
	2.3nm,0.3s,baz=156,slow=19,SNR=8.3							
FITZ	**Fitzroy Crossi**	**10.36**	**195**	P		**Pn**	**20 21 27.8**	**+2.1**
	baz=10,SNR=23							
WRA	**Warramunga Arr**	**13.11**	**155**	Pn		**Pn**	**20 22 01.2**	**-2.2**
	0.9nm,0.3s,baz=323,slow=14,SNR=31							
WRA				Sn		Sn	20 24 19.4	-8.5
	2.1nm,0.3s,baz=332,slow=22,SNR=13							
ASAR	**Alice Springs**	**16.37**	**162**	Pn		**Pn**	**20 22 45.8**	**-0.7**
	0.3nm,0.3s,baz=334,slow=9.7,SNR=16							
ASAR				Sn		**Sn**	**20 25 41.8**	**-5.4**
	0.7nm,0.3s,baz=330,slow=18,SNR=10							
MKAR	**Makanchi Array**	**68.29**	**328**	P		**P**	**20 29 54.4**	**-1.9**
	0.1nm,0.4s,baz=126,slow=7.5,SNR=5.0							
KURBB	**Kurchatov Arra**	**72.63**	**329**	P		**P**	**20 30 19.6**	**-3.0**
	0.3nm,0.6s,baz=138,slow=5.3,SNR=4.5							

IDC 13 20:21:11.3±1.0,2°48N×124°80E,h0km,mb3.7/6, mb1 3.8/6,mb1mx3.6/25,mbtmp3.7/6,Error ellipse: s-maj=155.9km s-min=19.0km az=65.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.17**	**158**	P		P	20 26 29.9	+0.3
	2.4nm,0.6s,baz=337,slow=10,SNR=3.1							
STKA	**Stephens Creek**	**37.71**	**156**	P		P	20 28 28.4	-0.4
	2.1nm,0.7s,baz=354,slow=10,SNR=5.5							
SONM	**Songino Array**	**47.90**	**343**	P		P	20 29 51.6	+0.2
	0.3nm,0.6s,baz=134,slow=6.2,SNR=3.0							
MKAR	**Makanchi Array**	**57.50**	**327**	P		P	20 31 03.2	+0.8
	0.6nm,0.5s,baz=121,slow=8.7,SNR=8.7							
MKAR				PcP		PcP	20 31 57.1	+1.0
	0.3nm,0.7s,baz=125,slow=3.3,SNR=2.8							
KURBB	**Kurchatov Arra**	**61.77**	**329**	P		P	20 31 30.9	-0.8
	0.7nm,0.5s,baz=133,slow=6.5,SNR=14							
BVAR	**Borovoye Array**	**67.33**	**328**	P		P	20 32 06.9	-1.1
	0.5nm,0.7s,baz=117,slow=8.3,SNR=3.5							

NEIC ***13*** *20:55:19.9,27°50S×70°33W,h2km,ML3.5(GUC),After GUC.*

NEIC Felt [II] at Copiapo.

GUC ***13*** *20:55:19.9±0.8,27°50S×70°33W,h2km±9km,ML3.5*

ISC 13 20:55:18.7±1.4,27°47S±0°04×70°19W±0°08,h8km±11km, n9,σ0s90/15,2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CPCH	**Copiapo**	**0.18**	**308**	⇓*i*P		**Pg**	**20 55 22.7**	**+0.2**
CPCH				*i* S		**Sg**	**20 55 25.0**	**-0.1**
CPCH	**Copiapo**	**0.18**	**308**	⇓*i*P		**Pg**	**20 55 22.7**	**+0.2**
CPCH				*i* S		**Sg**	**20 55 25.0**	**-0.1**
CPCH				AML		AML	20 55 26.0	
	comp=E,122μm,0.0s							
CDCH	**Caldera**	**0.69**	**306**	*e*P		**Pb**	**20 55 33.0**	**0.0**
CDCH				*i* S		**Sb**	**20 55 41.7**	**-1.0**
CDCH	**Caldera**	**0.69**	**306**	*e*P		**Pb**	**20 55 33.0**	**0.0**
CDCH				*i* S		**Sb**	**20 55 41.7**	**-1.0**

CGJI				S	Sn	20 59 00.0	-1.6
SBJI	**Serang**	**1.11**	**39**	P	Pn	20 59 01.7	-0.1
SKJI	**Sukabumi**	**1.12**	**91**	P	Pn	20 59 00.0	-1.9
SKJI				S	Sn	20 59 18.5	+2.1
DBJI	**Dramaga**	**1.38**	**72**	P	Pn	20 59 05.1	-0.3
DBJI				S	Sn	20 59 26.4	+3.7
TNG	**Tangerang**	**1.45**	**56**	P	Pn	20 59 07.1	+0.7
TNG	**Tangerang**	**1.45**	**56**	P	Pn	20 59 07.3	+0.9
BLSI	**Bandar Lampung**	**1.62**	**353**	P	Pn	20 59 08.5	-0.2
BLSI				S	Sn	20 59 31.4	+2.9
KASI	**Kota Agung**	**1.72**	**327**	P	Pn	20 59 11.1	+1.0
LEM	**Lembang**	**2.18**	**86**	P	Pn	20 59 18.9	+2.5
LWLI	**Liwa**	**2.38**	**325**	P	Pn	20 59 20.7	+1.5
CISI	**Cisompet, Garu**	**2.43**	**104**	P	Pn	20 59 19.0	-0.9
CMAR	**Chiang Mai Arr**	**26.08**	**346**	P	P	21 04 09.4	-1.6
	0.5nm,0.5s,baz=183,slow=7.8,SNR=5.9						
WRA	**Warramunga Arr**	**30.86**	**118**	P	P	21 04 54.0	+0.3
	0.5nm,0.5s,baz=296,slow=10,SNR=8.1						
ASAR	**Alice Springs**	**31.97**	**124**	P	P	21 05 05.5	+2.0
	0.3nm,0.8s,baz=284,slow=9.1,SNR=3.5						
STKA	**Stephens Creek**	**41.82**	**131**	P	P	21 06 27.4	+0.5
	3.3nm,0.9s,baz=299,slow=8.3,SNR=5.8						
SONM	**Songino Array**	**54.59**	**1**	P	P	21 08 04.3	-0.9
	0.1nm,0.5s,baz=177,slow=9.0,SNR=4.1						
USRK	**Ussuriysk Arra**	**56.31**	**23**	P	P	21 08 16.0	-1.5
	1.1nm,0.5s,baz=230,slow=5.7,SNR=3.6						
MKAR	**Makanchi Array**	**57.36**	**341**	P	P	21 08 23.6	-1.3
	0.4nm,0.5s,baz=153,slow=8.4,SNR=11						
KURBB	**Kurchatov Arra**	**61.92**	**341**	P	P	21 08 54.4	-1.7
	0.3nm,0.4s,baz=153,slow=6.0,SNR=2.4						
ZALV	**Zalesovo Beam**	**63.14**	**347**	P	P	21 09 02.8	-1.4
	0.9nm,0.3s,baz=150,slow=6.3,SNR=5.1						
BVAR	**Borovoye Array**	**66.75**	**338**	P	P	21 09 27.1	-0.7
	1.0nm,0.5s,baz=144,slow=8.6,SNR=12						
FINES	**FINESS Array B**	**91.02**	**332**	P	P	21 11 42.0	+1.6
	2.0nm,1.0s,baz=102,slow=5.8,SNR=5.4						

*ISK **13** 21:01:04.9,37.31N×37.05E,h9km,MD3.0*
*CSEM **13** 21:01:05.8±0.2,37.31N×37.08E,h10km,MD3.0, Error ellipse: s-maj=4.8km s-min=4.4km az=111.0*
*DDA **13** 21:01:05.5,37.31N×37.06E,h6km,MD3.1*
*ISCJB **13** 21:01:05.6±0.5,37.31N±0.02×37.08E±0.03,h7km±4km, Error ellipse: s-maj=4.5km s-min=3.7km az=176.9*
*NSSC **13** 21:01:10.3±2.4,37.07N×37.23E,h28km±9km,MD1.3, ML2.4*

ISC 13 21:01:05.3±0.8,**37°29N**±0.02×**37°08E**±0.02,**h12**km±6km, **n42,σ1§15/70,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	**Gaziantep**	**0.16**	**137**	*e*PG	**Pg**	**21 01 08.8**	**-0.2**
GAZ				*e*SG	**Sg**	**21 01 13.0**	**+1.3**
GAZ	**Gaziantep**	**0.16**	**137**	*e*Pg	**Pg**	**21 01 08.8**	**-0.2**
GAZ				*e*Sg	**Sg**	**21 01 13.0**	**+1.3**
AYKD	**Aykdinkavak**	**0.25**	**300**	*i* P	**Pg**	**21 01 10.3**	**-0.2**
AYKD				*i* S	**Sg**	**21 01 14.4**	**+0.3**
KMRS	**Kahramanmaras**	**0.26**	**327**	*e*PG	**Pg**	**21 01 10.0**	**-0.7**
KMRS				*e*SG	**Sg**	**21 01 14.1**	**-0.3**
KMRS	**Kahramanmaras**	**0.26**	**327**	*e*Pg	**Pg**	**21 01 10.0**	**-0.7**
KMRS				*e*Sg	**Sg**	**21 01 14.1**	**-0.3**
KUZU	**Kuzuini**	**0.51**	**180**	*i* P	**Pb**	**21 01 16.3**	**0.0**
KUZU				*i* S	**Sn**	**21 01 27.3**	**0.0**
KUZU	**Kuzuini**	**0.51**	**180**	*i* P	**Pb**	**21 01 16.3**	**0.0**
KUZU				*i* S	**Sn**	**21 01 27.3**	**0.0**
ANDN	**Andirin**	**0.65**	**297**	*i* P	**Pg**	**21 01 17.3**	**-0.7**
ANDN				*i* S	**Sg**	**21 01 26.7**	**+0.1**
ANDN	**Andirin**	**0.65**	**297**	*i* P	**Pg**	**21 01 17.3**	**-0.7**
ANDN				*i* S	**Sg**	**21 01 26.7**	**+0.1**
DRWC	**Darouich**	**0.74**	**206**	*e*P	**Pn**	**21 01 22.0**	**+0.3**
DRWC				*e*S	**Sn**	**21 01 32.2**	**-0.8**
DRWC				AML	AML	21 01 37.1	
	comp=E,151nm,0.4s						
DRWC				AML	AML	21 01 37.9	
	comp=N,241nm,0.4s						
DRWC	**Darouich**	**0.74**	**206**	*e*P	**Pn**	**21 01 22.0**	**+0.3**
	SNR=105						
DRWC				*e*S	**Sn**	**21 01 32.2**	**-0.8**
	comp=N,241nm,0.4s,SNR=104						
COBT	**Iskenderun**	**1.01**	**221**	*i* P	**Pn**	**21 01 25.4**	**-0.1**
COBT				*i* S	**Sn**	**21 01 41.5**	**+1.7**
COBT	**Iskenderun**	**1.01**	**221**	*i* P	**Pn**	**21 01 25.4**	**-0.1**
COBT				*i* S	**Sn**	**21 01 41.5**	**+1.7**
KOZT	**Kozan**	**1.01**	**281**	*e*PG	**Pb**	**21 01 25.0**	**+0.2**
KOZT	**Kozan**	**1.01**	**281**	*e*Pg	**Pb**	**21 01 25.0**	**+0.2**
CEYT	**Ceyhan**	**1.10**	**256**	*e*PG	**Pb**	**21 01 25.6**	**-0.6**
CEYT	**Ceyhan**	**1.10**	**256**	*e*Pg	**Pb**	**21 01 25.6**	**-0.6**
AKCD	**Akcadag**	**1.21**	**33**	*i* P	**Pg**	**21 01 29.3**	**+0.7**
AKCD				*i* S	**Sn**	**21 01 45.0**	**+0.4**
AKCD	**Akcadag**	**1.21**	**33**	*i* P	**Pg**	**21 01 29.3**	**+0.7**
AKCD				*i* S	**Sn**	**21 01 45.0**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.23**	**335**	*e*PN	**Pn**	**21 01 28.5**	**0.0**
SLMH	**Al Salmeh**	**1.27**	**147**	*e*P	**Pn**	**21 01 28.4**	**-0.6**
SLMH				*e*S	**Sb**	**21 01 42.8**	**-2.8**
SLMH	**Al Salmeh**	**1.27**	**147**	*e*P	**Pn**	**21 01 28.4**	**-0.6**
	SNR=97						
SLMH				*e*S	**Sb**	**21 01 42.8**	**-2.8**
	SNR=97						
BTCH	**Batrach**	**1.34**	**202**	*e*P	**Pg**	**21 01 32.5**	**+1.3**
BTCH				*e*S	**Sb**	**21 01 47.1**	**-0.6**
BTCH				AML	AML	21 01 54.4	
	comp=N,131nm,0.5s						
BTCH				AML	AML	21 01 54.6	
	comp=E,112nm,0.4s						
BTCH	**Batrach**	**1.34**	**202**	*e*P	**Pg**	**21 01 32.5**	**+1.3**
	SNR=57						
BTCH				*e*S	**Sb**	**21 01 47.1**	**-0.6**
	comp=E,112nm,0.4s,SNR=58						
HTY	**Hatay**	**1.39**	**213**	*e*PN	**Pb**	**21 01 31.1**	**-0.1**
HTY	**Hatay**	**1.39**	**213**	*e*Pn	**Pb**	**21 01 31.1**	**-0.1**
URFA	**Urfa**	**1.40**	**83**	*e*PN	**Pb**	**21 01 31.3**	**-0.1**
URFA	**Urfa**	**1.40**	**83**	*e*Pn	**Pb**	**21 01 31.3**	**-0.1**
YAYL	**Yayladag**	**1.48**	**212**	*i* P	**Pb**	**21 01 33.2**	**+0.4**
YAYL				*i* S	**Sg**	**21 01 54.1**	**+1.3**
YAYL	**Yayladag**	**1.48**	**212**	*i* P	**Pb**	**21 01 33.2**	**+0.4**
YAYL				*i* S	**Sg**	**21 01 54.1**	**+1.3**
PINB	**Pinarbasi**	**1.48**	**339**	*i* P	**Pg**	**21 01 34.1**	**+0.3**
PINB				*i* S	**Sg**	**21 01 55.4**	**+2.2**
PINB	**Pinarbasi**	**1.48**	**339**	*i* P	**Pg**	**21 01 34.1**	**+0.3**
PINB				*i* S	**Sg**	**21 01 55.4**	**+2.2**
MYA	**Malataya**	**1.49**	**45**	*e*PN	**Pb**	**21 01 33.0**	**0.0**
MYA	**Malataya**	**1.49**	**45**	*e*Pn	**Pb**	**21 01 33.0**	**0.0**
ARNB	**Al Arnab**	**1.68**	**212**	*e*P	**Pb**	**21 01 36.8**	**+0.6**
ARNB				*e*S	**Sn**	**21 01 55.9**	**-0.2**
ARNB				AML	AML	21 02 07.0	
	comp=E,39nm,0.8s						
ARNB				AML	AML	21 02 13.9	
	comp=N,30nm,0.4s						
ARNB	**Al Arnab**	**1.68**	**212**	*e*P	**Pb**	**21 01 36.8**	**+0.6**
	SNR=57						
ARNB				*e*S	**Sn**	**21 01 55.9**	**-0.2**
	comp=N,30nm,0.4s,SNR=58						
JHLN	**Al Jahlan**	**1.95**	**145**	*e*P	**Pn**	**21 01 38.5**	**+0.2**
JHLN				*e*S	**Sn**	**21 01 57.6**	**-5.2**
JHLN	**Al Jahlan**	**1.95**	**145**	*e*P	**Pn**	**21 01 38.5**	**+0.2**
	SNR=57						
SVRC	**Sivrice-ELAZID**	**2.07**	**58**	*e*PN	**Pn**	**21 01 40.9**	**+0.8**
SVRC	**Sivrice-ELAZID**	**2.07**	**58**	*e*Pn	**Pn**	**21 01 40.9**	**+0.8**
SFNV	**Sufian**	**2.58**	**109**	*e*P	**Pn**	**21 01 48.9**	**+1.8**
SFNV				*e*S	**Sn**	**21 02 17.4**	**-1.1**
SFNV				AML	AML	21 02 35.0	
	comp=E,84nm,0.5s						
SFNV	**Sufian**	**2.58**	**109**	*e*P	**Pn**	**21 01 48.9**	**+1.8**
	SNR=57						
SFNV				*e*S	**Sn**	**21 02 17.4**	**-1.1**
	comp=E,84nm,0.5s,SNR=58						

IDC 13 21:02:20.2±2.1,**6°62S**×**147°73E,h0km,mb3.9/5, mb1 4.0/7,mb1mx3.7/19,mbtmp3.9/7,ML3.6/2,MS3.1/2, Ms1 3.1/2,ms1mx2.5/43,Error ellipse: s-maj=67.2km s-min=20.9km az=96.0,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.83**	**191**	Pn	Pn	21 03 08.6	+2.0
	37nm,0.3s,baz=12,slow=10,SNR=53						
PMG				Sn	Sn	21 03 42.3	+0.9
	38nm,0.3s,baz=6.7,slow=17,SNR=5.1						
PMG				LR	LR	21 04 06.6	
	comp=Z,311nm,20.0s,baz=15,slow=38						
CTA	**Charters Tower**	**13.46**	**186**	LR	LR	21 09 58.5	
	comp=Z,71nm,18.9s,baz=69,slow=34						

WRA	**Warramunga Arr**	**18.56**	**223**	P	P	21 06 37.8	-0.9
	0.4nm,0.3s,baz=56,slow=12,SNR=15						
ASAR	**Alice Springs**	**21.54**	**217**	P	P	21 07 11.1	-0.2
	2.0nm,0.4s,baz=54,slow=8.8,SNR=64						
FITZ	**Fitzroy Crossi**	**24.37**	**240**	P	P	21 07 40.4	+0.1
	4.9nm,0.4s,baz=45,slow=9.2,SNR=53						
STKA	**Stephens Creek**	**25.77**	**192**	P	P	21 07 51.3	-1.6
	0.8nm,0.4s,baz=38,slow=12,SNR=3.1						
MKAR	**Makanchi Array**	**78.43**	**320**	P	P	21 14 23.3	+0.3
	0.3nm,0.5s,baz=102,slow=6.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**79.92**	**328**	P	P	21 14 29.6	-1.3
	0.3nm,0.3s,baz=134,slow=6.2,SNR=2.7						
TORD	**Torodi Ar. Bea**	**145.94**	**284**	PKPbc	PKPab	21 22 03.3	0.0
	0.2nm,0.4s,baz=76,slow=3.8,SNR=13						

*ISK **13** 21:06:08.9,37.08N×36.13E,h5km,MD2.7*
*CSEM **13** 21:06:09.9±0.1,37.05N×36.14E,h5km,MD2.7, Error ellipse: s-maj=3.0km s-min=2.7km az=14.0*
*DDA **13** 21:06:15.3,36.82N×36.33E,h7km,MD2.7*
ISC 13 21:06:09.0±1.0,**37.08N**±0.03×**36.15E**±0.03,**h17**km±10km, **n23,σ0§94/32,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEYT	**Ceyhan**	**0.33**	**259**	*e*PG	**Pg**	**21 06 16.0**	**+0.1**
CEYT				*e*SG	**Sb**	**21 06 21.7**	**+0.4**
CEYT	**Ceyhan**	**0.33**	**259**	*e*Pg	**Pg**	**21 06 16.0**	**+0.1**
CEYT				*e*Sg	**Sb**	**21 06 21.7**	**+0.4**
KOZT	**Kozan**	**0.48**	**328**	*e*PG	**Pg**	**21 06 19.2**	**+0.5**
KOZT				*e*SG	**Sb**	**21 06 26.7**	**+1.0**
KOZT	**Kozan**	**0.48**	**328**	*e*Pg	**Pg**	**21 06 19.2**	**+0.5**
KOZT				*e*Sg	**Sb**	**21 06 26.7**	**+1.0**
COBT	**Iskenderun**	**0.56**	**171**	*i* P	**Pg**	**21 06 20.1**	**-0.2**
COBT				*i* S	**Sg**	**21 06 27.3**	**-0.5**
COBT	**Iskenderun**	**0.56**	**171**	*i* P	**Pg**	**21 06 20.1**	**-0.2**
COBT				*i* S	**Sg**	**21 06 27.3**	**-0.5**
KMRS	**Kahramanmaras**	**0.74**	**54**	*e*PG	**Pb**	**21 06 24.5**	**+1.1**
KMRS	**Kahramanmaras**	**0.74**	**54**	*e*Pg	**Pb**	**21 06 24.5**	**+1.1**
KRTS	**Karatas**	**0.80**	**231**	*e*PG	**Pb**	**21 06 25.4**	**+1.0**
KRTS	**Karatas**	**0.80**	**231**	*e*Pg	**Pb**	**21 06 25.4**	**+1.0**
KUZU	**Kuzuini**	**0.80**	**112**	*i* P	**Pg**	**21 06 25.1**	**+0.4**
KUZU				*i* S	**Sb**	**21 06 35.9**	**+0.8**
KUZU	**Kuzuini**	**0.80**	**112**	*i* P	**Pg**	**21 06 25.1**	**+0.4**
KUZU				*i* S	**Sb**	**21 06 35.9**	**+0.8**
GAZ	**Gaziantep**	**0.86**	**83**	*e*PG	**Pb**	**21 06 26.7**	**+1.3**
GAZ	**Gaziantep**	**0.86**	**83**	*e*Pg	**Pb**	**21 06 26.7**	**+1.3**
YAYL	**Yayladag**	**1.04**	**182**	*i* P	**Pg**	**21 06 29.3**	**+0.1**
YAYL				*i* S	**Sb**	**21 06 43.3**	**+1.3**
YAYL	**Yayladag**	**1.04**	**182**	*i* P	**Pg**	**21 06 29.3**	**+0.1**
YAYL				*i* S	**Sb**	**21 06 43.3**	**+1.3**
NIG	**Nigde**	**1.60**	**311**	*e*PN	**Pb**	**21 06 38.9**	**+0.7**
NIG	**Nigde**	**1.60**	**311**	*e*Pn	**Pb**	**21 06 38.9**	**+0.7**
SARI	**SarD1z-Kayseri**	**1.66**	**15**	*e*PN	**Pn**	**21 06 35.5**	**-2.0**
SARI	**SarD1z-Kayseri**	**1.66**	**15**	*e*Pn	**Pn**	**21 06 35.5**	**-2.0**
URFA	**Urfa**	**2.16**	**79**	*e*PN	**Pb**	**21 06 47.7**	**-0.1**
URFA	**Urfa**	**2.16**	**79**	*e*Pn	**Pb**	**21 06 47.7**	**-0.1**
DARE	**Darende-Malaty**	**2.29**	**34**	*e*PN	Pn	21 06 43.0	-3.1

*IDC **13** 21:22:31.4±0.8,29.35S×178.54W,h220km±8km,mb3.0/2, mb1 3.4/3,mb1mx3.2/17,mbtmp3.3/3,Error ellipse: s-maj=33.2km s-min=24.8km az=109.0*
*ISCJB **13** 21:22:31.3±0.9,29.35S±0.08×179.0W±0.1,h204km, mb3.1/2,Error ellipse: s-maj=18.5km s-min=9.1km az=23.0*
ISC 13 21:22:32.0±1.2,**29.5S**±0.1×**178.8W**±0.2,**h204**km,**n9, σ1§42/13,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.79**	**75**	P	**Pn**	**21 23 00.9**	**0.0**
	342nm,0.3s,baz=112,slow=23,SNR=12						
RAO				S	**S**	**21 23 24.9**	**+1.8**
	118nm,0.3s,baz=90,slow=20,SNR=3.5						
PUZ	**Puketiti**	**8.93**	**195**	*e*PN	**Pn**	**21 24 34.7**	**-2.6**
PUZ				SN	**S**	**21 26 16.8**	**-0.8**
MWZ	**Matawai**	**9.36**	**198**	*e*PN	**Pn**	**21 24 42.3**	**-0.6**
MWZ				SN	**S**	**21 26 29.1**	**+1.2**
URZ	**Urewera**	**9.41**	**200**	*e*PN	**Pn**	**21 24 43.3**	**-0.2**
URZ				SN	**S**	**21 26 30.5**	**+1.5**
URZ	**Urewera**	**9.41**	**200**	P	**Pn**	**21 24 43.4**	**0.0**
	0.3nm,0.3s,baz=138,slow=8.6,SNR=3.8						
URZ				S	**S**	**21 26 31.2**	**+2.2**
	1.6nm,0.3s,baz=196,slow=20,SNR=13						
ASAR	**Alice Springs**	**42.48**	**266**	P	**P**	**21 30 07.0**	**-0.3**
	0.2nm,0.4s,baz=100,slow=6.6,SNR=6.9						
WRA	**Warramunga Arr**	**43.38**	**272**	P	**P**	**21 30 14.8**	**+0.3**
	0.6nm,0.4s,baz=108,slow=7.9,SNR=5.3						
FINES	**FINESS Array B**	**144.03**	**340**	PKP	PKPab	21 41 37.0	-3.5
	0.7nm,0.4s,baz=46,slow=3.3,SNR=10						
TORD	**Torodi Ar. Bea**	**163.76**	**182**	PKPab	**PKPab**	**21 43 03.4**	**-0.8**
	0.2nm,0.6s,baz=171,slow=4.6,SNR=3.6						

*IDC **13** 21:24:26.5±0.8,56.76S×25.46W,h0km,mb4.3/8, mb1 4.3/9,mb1mx4.1/19,mbtmp4.2/9,ML3.6/1,MS3.5/3, Ms1 3.5/3,ms1mx3.2/27,Error ellipse: s-maj=26.6km s-min=16.2km az=62.0*
*ISCJB **13** 21:24:29.5±0.5,56.77S±0.08×25.4W±0.2,h35km, mb4.2/13,MS3.4/3,Error ellipse: s-maj=16.3km s-min=8.9km az=147.9*
*NEIC **13** 21:24:31.4±0.4,56.78S×25.51W,h35km,mb4.3/6,Error ellipse: s-maj=12.6km s-min=8.8km az=53.0*
ISC 13 21:24:31.0±0.6,**56.93S**±0.08×**25.4W**±0.1,**h35**km,**n35, σ2§09/33,mb4.3/12,MS3.5/3,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**15.60**	**159**	*e*Pn	**Pn**	**21 28 08.5**	**+0.7**
VNA2	**Neumayer--Watz**	**16.00**	**158**	*e*Pn	**P**	**21 28 15.0**	**-1.1**
SNAA	**Sanae**	**17.53**	**156**	*e*Pn	**P**	**21 28 36.3**	**+3.2**
SNAA	**Sanae**	**17.53**	**156**	*e*Pn	**P**	**21 28 34.1**	**+1.1**
	5.6nm,0.7s						
SNAA				S	**Sn**	**21 31 39.9**	**-6.1**
SNAA	**Sanae**	**17.53**	**156**	P	**P**	**21 28 34.9**	**+1.9**
	0.2nm,0.3s,baz=325,slow=14,SNR=35						
SNAA				S	**Sn**	**21 31 39.9**	**-6.1**
	0.0nm,0.3s,baz=335,slow=19,SNR=3.1						
PMSA	**Palmer Station**	**20.11**	**231**	LR	LR	21 35 35.6	
	comp=Z,209nm,20.6s,baz=218,slow=33						
USHA	**Ushuaia**	**23.95**	**257**	P	**P**	**21 29 41.8**	**+0.2**
USHA	**Ushuaia**	**23.95**	**257**	P	**P**	**21 29 41.8**	**+0.2**
	9.3nm,0.7s,baz=86,slow=11,SNR=3.6						
TRQA	**Tornquist**	**30.59**	**292**	*e*P	**P**	**21 30 40.0**	**-1.2**
	0.4nm,0.6s						
QSPA	**South Pole Qui**	**33.32**	**180**	*e*P	**P**	**21 31 07.2**	**+2.1**
	6.9nm,0.6s						
QSPA	**South Pole Qui**	**33.32**	**180**	P	**P**	**21 31 07.4**	**+2.3**
	4.9nm,0.6s,baz=200,slow=3.4,SNR=62						
CPUP	**Villa Florida**	**38.15**	**310**	P	**P**	**21 31 45.8**	**-0.9**
CPUP	**Villa Florida**	**38.15**	**310**	P	**P**	**21 31 45.8**	**-0.9**
	5.3nm,0.6s,baz=129,slow=6.9,SNR=23						
CFAA	**Coronel Fontan**	**38.83**	**292**	P	**P**	**21 31 50.3**	**-2.1**
CFAA	**Coronel Fontan**	**38.83**	**292**	P	**P**	**21 31 50.3**	**-2.1**
	0.3nm,0.6s,baz=156,slow=9.2,SNR=6.3						
CFAA				LR	LR	21 44 55.1	
	comp=Z,17nm,19.5s,baz=146,slow=32						
BDFB	**Brasilia**	**44.64**	**328**	P	**P**	**21 32 39.9**	**-0.2**
BDFB	**Brasilia**	**44.64**	**328**	P	**P**	**21 32 39.9**	**-0.2**
	2.2nm,0.5s,baz=135,slow=5.7,SNR=4.2						
BOSA	**Boshof**	**45.23**	**73**	*e*P	**P**	**21 32 45.6**	**+0.8**
BOSA	**Boshof**	**45.23**	**73**	LR	LR	21 48 51.4	
	comp=Z,138nm,18.6s,baz=206,slow=32						
VNDA	**Vanda**	**45.73**	**182**	*e*P	**P**	**21 32 50.2**	**+2.2**
	2.5nm,0.7s						
VNDA	**Vanda**	**45.73**	**182**	P	**P**	**21 32 50.5**	**+2.5**
	1.6nm,0.6s,baz=187,slow=7.4,SNR=15						
SIV	**San Ignacio**	**48.91**	**312**	P	**P**	**21 33 12.8**	**-0.6**
SIV	**San Ignacio**	**48.91**	**312**	P	**P**	**21 33 12.8**	**-0.6**
	3.2nm,0.6s,baz=158,slow=7.8,SNR=13						
LPAZ	**La Paz**	**51.71**	**304**	*e*P	**P**	**21 33 35.7**	**+0.4**
	40nm,0.6s						
LPAZ	**La Paz**	**51.71**	**304**	P	**P**	**21 33 36.1**	**+0.9**
	43nm,0.6s,baz=143,slow=5.1,SNR=232						
DBIC	**Dimbokro**	**65.57**	**22**	*e*P	**P**	**21 35 09.5**	**-1.5**
	2.1nm,0.9s						
OTAV	**Otavalo**	**70.98**	**302**	*e*P	**P**	**21 35 45.1**	**-0.4**
	4.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.35**	**28**	P	**P**	**21 35 59.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**73.35**	**28**	P	**P**	**21 35 59.0**	**+0.1**
	0.8nm,0.5s,baz=200,slow=6.6,SNR=22						

ASAR	**Alice Springs**	**97.83**	**161**	P	Pdif	21 38 02.8	0.0
ASAR	**Alice Springs**	**97.83**	**161**	P	Pdif	21 38 02.8	0.0
	0.4nm,0.7s,baz=194,slow=3.8,SNR=2.7						
YKA	**Yellowknife Ar**	**137.50**	**317**	PKP	**PKPdf**	**21 43 50.1**	**+0.7**
YKA	**Yellowknife Ar**	**137.50**	**317**	PKP	**PKPdf**	**21 43 50.1**	**+0.7**
	1.5nm,0.8s,baz=124,slow=2.3,SNR=18						
SONM	**Songino Array**	**149.78**	**87**	PKPbc	**PKPbc**	**21 44 16.9**	**+0.6**
SONM	**Songino Array**	**149.78**	**87**	PKPbc	**PKPbc**	**21 44 16.9**	**+0.6**
	2.8nm,0.7s,baz=229,slow=3.1,SNR=27						

IDC 13 21:28:31.7±3.2,**32°45S**×**178°37W,h0km,mb3.5/2, mb1 3.8/3,mb1mx3.6/18,mbtmp3.6/3,ML3.7/1,Error ellipse: s-maj=73.2km s-min=46.9km az=118.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.88**	**211**	Pn	Pn	21 30 12.8	-0.9
	1.5nm,0.3s,baz=262,slow=0.5,SNR=6.4						
URZ				Sn	Sn	21 31 28.8	-4.0
	1.7nm,0.3s,baz=103,slow=23,SNR=8.1						
ASAR	**Alice Springs**	**42.73**	**269**	P	P	21 36 29.8	-1.1
	0.3nm,0.7s,baz=115,slow=8.5,SNR=4.2						
WRA	**Warramunga Arr**	**43.90**	**274**	P	P	21 36 41.0	+0.6
	0.3nm,0.3s,baz=114,slow=8.0,SNR=15						
FINES	**FINESS Array B**	**146.94**	**339**	PKPbc	PKPbc	21 48 14.8	-0.6
	1.3nm,0.8s,baz=48,slow=4.5,SNR=4.1						

*DJA **13** 21:31:13.5±3.0,16°S±9°×17°3W±°,h44km±28km,M5.3/3, mB5.7/1,mb5.3/3,Mw(mB)5.2/1*
*PDG **13** 21:31:13.5,15.60S×173.40W,h80km*
*MOS **13** 21:31:14.6±1.0,15.73S×173.42W,h61km,mb5.7/26, Error ellipse: s-maj=9.6km s-min=6.8km az=61.3*
*IDC **13** 21:31:16.1±2.1,15.80S×173.41W,h68km±18km,mb4.9/35, mb1 5.0/37,mb1mx5.0/37,mbtmp4.9/37,MS4.6/33, Ms1 4.7/33,ms1mx4.5/41,Error ellipse: s-maj=12.0km s-min=9.0km az=117.0*
*ISCJB **13** 21:31:17.0±0.1,15.74S±0.04×173.47W±0.03,h88km, mb5.1/133,Error ellipse: s-maj=5.8km s-min=4.0km az=145.8*
*NEIC **13** 21:31:18.0±0.1,15.75S×173.49W,h85km,mb5.3/75, MW5.8,MW5.7,Error ellipse: s-maj=5.2km s-min=3.1km az=140.0,Moment Tensor Solution. s56 Moment tensor: Scale 10^{17}Nm; M_{rr}=4.01; $M_{\theta\theta}$1.90; $M_{\phi\phi}$2.11; $M_{r\theta}$0.97; $M_{\theta\phi}$-0.19; $M_{r\phi}$3.91; Best double couple: M_{0}5.30000×10^{17} NP1:ϕ_s190.00000°,δ72.00000°,λ-87.00000°. NP2: ϕ_s0.00000°,δ19.00000°,λ-100.00000°. Principal axes: T 4.0500, Plg26.0000°, Azm277.0000°; N 1.9900, Plg3.0000°, Azm9.0000°; P -6.0300, Plg63.0000°, Azm105.0000°;*
NEIC Felt at Apia, Samoa and at Pago Pago and Utulei, American Samoa.
*SZGRF **13** 21:31:17.8,16.40S×174.90W,h89km,Tonga Islands*
*BJI **13** 21:31:17.5,15.42S×173.25W,h84km,mB5.3/35, mb5.1/40,Ms5.3/33,Ms7 4.9/36*
*GCMT **13** 21:31:21.9±0.1,15.76S×172.93W,h102km,MW5.8, Moment Tensor Solution. s106,c240; s47,c55; Moment tensor: Scale 10^{17}Nm; M_{rr}-3.37±.05; $M_{\theta\theta}$-1.19±.06; $M_{\phi\phi}$4.56±.06; $M_{r\theta}$1.11±.04; $M_{\theta\phi}$-0.62±.06; $M_{r\phi}$4.18±.04; Best double couple: M_{0}6.00000×10^{17} NP1:ϕ_s331.00000°, δ26.00000°,λ-127.00000°. NP2:ϕ_s191.00000°, δ70.00000°,λ-74.00000°. Principal axes: T 6.3600, Plg23.0000°, Azm269.0000°; N -0.8200, Plg15.0000°, Azm6.0000°; P -5.5400, Plg62.0000°, Azm126.0000°; Data Used: II IU CN IC G. Surface waves: sta=112, comp=249, per= 50.*
*NEIC **13** 21:31:38.1±0.0,15.53S×173.52W,h83km,Moment Tensor Solution. s53 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.76; $M_{\theta\theta}$0.00; $M_{\phi\phi}$3.76; $M_{r\theta}$1.15; $M_{\theta\phi}$-0.46; $M_{r\phi}$4.31; Best double couple: M_{0}5.80000×10^{17} NP1:

THZ Tophouse 28.48 202 PN **P** **21 37 05.3 +0.5**
RPZ Rata Peaks 30.84 202 P **P** **21 37 25.3 -0.4**
RPZ Rata Peaks 30.84 202 P **P** **21 37 25.3 -0.4**
13nm,0.7s,baz=53,slow=13,SNR=4.1
RPZ LR LR 21 48 52.9
comp=Z,1μm,21.9s,baz=258,slow=34
JCZ Jackson Bay 32.03 205 PN **P** **21 37 35.6 -0.6**
EIDS Eidsvold 34.51 248 *eP* **P** **21 37 56.2 -1.7**
25nm,1.1s
EIDS *epP* **pP** **21 38 21.9 +3.6**
ARMA Armidale 35.16 239 *eP* **P** **21 38 03.4 -0.1**
29nm,1.1s
RKT Rikitea 36.88 108 *e*LQ LQ 21 46 56.2
3μm,29.0s
RKT *e*LR LR 21 48 00.8
8μm,31.0s
CTA Charters Tower 38.56 257 LR LR 21 52 18.4
comp=Z,2μm,21.8s,baz=99,slow=33
PMG Port Moresby 38.96 275 *eP* **P** **21 38 36.5 +0.7**
71nm,1.2s
PMG Port Moresby 38.96 275 P **P** **21 38 35.6 -0.2**
PMG Port Moresby 38.96 275 LR LR 21 52 45.9
comp=Z,1μm,19.9s,baz=103,slow=33
KIP Kipapa 39.92 23 *eP* **P** **21 38 44.3 +0.7**
KIP *e* 21 40 16.2
KIP pmax pmax
comp=Z,46nm,0.8s
KIP Kipapa 39.92 23 *ceP* **P** **21 38 45.0 +1.4**
KIP pmax pmax
comp=Z,88nm,1.2s
KIP Kipapa 39.92 23 *eP* **P** **21 38 44.3 +0.7**
comp=Z,46nm,0.8s
KIP *e*PP **PP** **21 40 16.2 -1.0**
WAKE Wake Island 39.98 330 *eP* **P** **21 38 45.8 +1.7**
COEN Coen 41.96 267 *eP* **P** **21 39 01.6 +1.0**
comp=Z,586nm,0.8s
STKA Stephens Creek 43.85 240 *eP* **P** **21 39 15.5 -0.2**
STKA *epP* **pP** **21 39 35.8 -0.9**
STKA Stephens Creek 43.85 240 P **P** **21 39 15.2 -0.4**
comp=Z,48nm,0.9s,baz=90,slow=9.4,SNR=64
STKA LR LR 21 56 26.4
comp=Z,1μm,18.1s,baz=66,slow=34
BBOO Buckleboo 48.63 240 *eP* **P** **21 39 52.7 -0.4**
comp=Z,879nm,1.0s
WRAB Tennant Creek 49.75 257 *eP* **P** **21 40 01.0 -0.8**
WRAB pmax pmax
comp=Z,62nm,1.1s
WRAB Tennant Creek 49.75 257 *eP* **P** **21 40 01.0 -0.8**
comp=Z,62nm,1.1s
WRAB Tennant Creek 49.75 257 P **P** **21 40 01.9 0.0**
comp=Z,258nm,0.7s,SNR=27
WRA Warramunga Arr 49.76 257 P **P** **21 40 01.2 -0.7**
WRA S **S** **21 47 01.3 -3.6**
WRA Warramunga Arr 49.76 257 P **P** **21 40 01.2 -0.7**
comp=Z,28nm,0.8s,baz=93,slow=6.7,SNR=294
WRA S **S** **21 47 01.3 -3.6**
comp=Z,2.3nm,1.0s,baz=95,slow=12,SNR=5.3
WRA LR LR 21 59 24.6
comp=Z,2μm,20.7s,baz=75,slow=34
AS31 Alice Springs 50.00 252 *eP* **P** **21 40 03.0 -0.7**
AS31 *epP* **pP** **21 40 25.0 -0.3**
ASAR Alice Springs 50.00 252 P **P** **21 40 02.9 -0.9**
ASAR S **S** **21 47 03.9 -4.4**
ASAR Alice Springs 50.00 252 P **P** **21 40 02.9 -0.9**
comp=Z,154nm,0.7s,baz=86,slow=7.8,SNR=727
ASAR S **S** **21 47 03.9 -4.4**
comp=Z,7.0nm,1.0s,baz=87,slow=14,SNR=17
ASAR LR LR 21 59 51.4
comp=Z,2μm,21.3s,baz=88,slow=34
FORT Forrest 55.25 243 *eP* **P** **21 40 40.7 -1.6**
comp=Z,71nm,0.9s
FITZ Fitzroy Crossi 58.13 258 LR LR 22 04 27.5
comp=Z,1μm,19.5s,baz=96,slow=34
DRV Dumont d'Urvil 59.25 200 P P 21 40 58.0 -12
DRV S S 21 48 57.0 -14
DRV SS SS 21 53 21.0 +15
DRV L L 21 55 00.0
DRV R 21 59 00.0
SBA Scott Base 62.89 185 *eP* **P** **21 41 36.8 +2.5**
SBA *e* 21 42 11.5
SBA pmax pmax
comp=Z,51nm,1.0s
SBA Scott Base 62.89 185 *eP* **P** **21 41 36.8 +2.5**
comp=Z,51nm,1.0s
SBA *e*PcP **PcP** **21 42 11.5 -0.2**
VNDA Vanda 63.01 186 *eP* **P** **21 41 36.6 +1.5**
comp=Z,39nm,1.1s
VNDA *e*PcP **PcP** **21 42 13.1 +0.9**
VNDA Vanda 63.01 186 P **P** **21 41 36.8 +1.7**
comp=Z,26nm,1.0s,baz=7.9,slow=8.2,SNR=72
VNDA LR LR 22 05 52.0
comp=Z,184nm,18.5s,baz=283,slow=33
MBWA Marble Bar 63.26 254 *eP* **P** **21 41 37.7 0.0**
comp=Z,47nm,1.1s
MBWA *epP* **pP** **21 42 01.1 +1.0**
NWAO Narrogin (SRO) 64.44 241 *eP* **P** **21 41 45.3 0.0**
comp=Z,85nm,1.5s
DAV Davao City (W) 64.53 286 *epP* pP 21 42 13.1 +4.6
DAV Davao City (W) 64.53 286 ⇓*iP* **P** **21 41 45.3 -0.8**
DAV Davao City (W) 64.53 286 LR LR 22 03 57.0
comp=Z,350nm,20.4s,baz=358,slow=30
ATKA Atka Island 67.69 359 *eP* **P** **21 42 06.2 +0.7**
comp=Z,164nm,1.7s
MJAR Matsushiro Arr 69.22 320 P **P** **21 42 15.8 +0.4**
MJAR Matsushiro Arr 69.22 320 P **P** **21 42 15.8 +0.4**
comp=Z,7.8nm,0.8s,baz=151,slow=6.6,SNR=20
MJAR LR LR 22 06 57.3
comp=Z,331nm,21.0s,baz=125,slow=31
MAJO Matsushiro 69.22 320 *eP* **P** **21 42 15.1 -0.4**
MAJO pmax pmax
comp=Z,226nm,2.8s
MAJO Matsushiro 69.22 320 *eP* **P** **21 42 15.1 -0.4**
comp=Z,226nm,2.8s
MAT Matsushiro 69.22 320 P **P** **21 42 15.6 +0.1**
MAT S **S** **21 51 12.4 -2.3**
FX1 Attu Island--F 69.34 351 *eP* **P** **21 42 16.4 +0.6**
FX1 *epP* **pP** **21 42 37.9 -0.6**
FX1 Attu Island--F 69.34 351 P **P** **21 42 15.9 +0.1**
comp=Z,17nm,0.8s,baz=153,slow=4.5,SNR=7.6
CASY Casey 70.08 205 *eP* **P** **21 42 21.0 +0.7**
comp=Z,390nm,3.0s
YUK Yuzh-Kuril'sk 70.18 330 *ciP* **P** **21 42 22.3 +1.2**
YUK *i* *PP **PcP** **21 42 40.6 -1.9**
YUK *e*PPP PPP 21 46 47.5
YUK *i* S **S** **21 51 25.6 +0.1**
YUK *i* *SS **SKSac** **21 52 10.9 -3.5**
KBKI Kotabaru 70.28 272 P sP 21 42 52.1 -2.7
MYLDM Lahad Datu 70.52 281 P P 21 42 27.4 +3.5
comp=Z,24nm,1.0s,comp=Z,1μmcomp=Z,0.2nm
MYLDM Lahad Datu 70.52 281 P **P** **21 42 24.5 +0.6**
SCI San Clemente I 71.36 46 ⇓P **P** **21 42 29.7 +1.1**
baz=72
SBC Santa Barbara 71.38 45 ⇑P **P** **21 42 30.1 +1.4**
baz=72
BBKI Banjar Baru 71.52 272 P P 21 42 33.5 +3.5
comp=Z,41nm,0.7s,comp=Z,0.3nm
PKM Peak Mountain 71.57 44 ⇓P **P** **21 42 31.4 +1.3**
baz=72,SNR=9.2
BLG Laguna Peak 71.64 45 ⇓P **P** **21 42 30.9 +0.7**
baz=72
SMMC Simmler 71.69 44 ⇑P **P** **21 42 31.8 +1.2**
baz=72,SNR=5.9
CIS Catalina Islan 71.70 46 ⇑P **P** **21 42 31.2 +0.5**
baz=72
ASAJ Asahikawa 71.85 328 P **P** **21 42 31.7 +0.5**
ASAJ Asahikawa 71.85 328 P **P** **21 42 31.7 +0.5**
comp=Z,12nm,0.7s,baz=263,slow=8.1,SNR=7.8
FMP Fort Macarthur 71.94 46 ⇓P **P** **21 42 32.8 +0.8**
baz=72
HOPS Hopland 71.95 39 *eP* **P** **21 42 33.0 +1.0**
comp=Z,146nm,1.3s
JNU Nakatsue 72.05 313 *eP* **P** **21 42 32.4 -0.4**
comp=Z,71nm,2.5s
JNU Nakatsue 72.05 313 P **P** **21 42 32.9 +0.1**
comp=Z,12nm,0.8s,baz=105,slow=5.1,SNR=8.0
OSI Osito Adit 72.15 45 ⇓P **P** **21 42 34.3 +0.9**
baz=72
DECC Green Verdugo 72.22 45 ⇑P **P** **21 42 34.2 +0.5**
baz=72
KIPM Iron Peak 72.22 38 *eP* **P** **21 42 35.2 +1.5**
comp=Z,202nm,1.6s
PASC Pasadena Art C 72.27 46 *eP* **P** **21 42 34.3 +0.3**
comp=Z,70nm,1.3s
109C Camp Elliot, M 72.33 47 ⇓P **P** **21 42 34.9 +0.6**
baz=72
ARVC Arvin 72.37 44 ⇑P **P** **21 42 35.3 +0.7**
baz=73
MWC Mount Wilson 72.39 46 *eP* **P** **21 42 36.0 +1.0**
MWC *e* 21 42 52.1
MWC *e**PP **pP** **21 42 57.6 -0.2**
MWC Mount Wilson 72.39 46 *eP* **P** **21 42 36.0 +1.0**
MWC *e*PcP **PcP** **21 42 52.1 -0.3**
MWC *e*pP **pP** **21 42 57.6 -0.2**
MWC *e*sP **sP** **21 43 07.6 +0.1**
BAR Barrett 72.52 48 *eP* **P** **21 42 36.5 +0.9**
comp=Z,19nm,0.9s
VES Vestal, Richgr 72.61 44 ⇓P **P** **21 42 36.6 +0.7**
baz=73,SNR=8.7
PET Petropavlovsk 72.63 343 *eP* **P** **21 42 37.9 +2.3**
PET *e**PP **pP** **21 42 59.7 +1.2**
PET *i* S **S** **21 51 54.5 +1.1**
PET *e**SS **sS** **21 52 32.5 0.0**
PET *e*SS **SS** **21 56 36.9 +2.0**
PET *e*SSS SSS 21 59 50.0
PET pmax pmax
comp=Z,300nm,4.5s
PET pmax pmax
comp=Z,100nm,7.5s
PET MLR MLR
comp=Z,300nm,16.0s
MURC Murrieta 72.64 47 ⇑P **P** **21 42 36.9 +0.6**
baz=73
BFSC Mount Baldy Ra 72.67 46 ⇑P **P** **21 42 37.0 +0.4**
baz=73,SNR=11
KHMM Horse Mountain 72.75 37 *eP* **P** **21 42 37.7 +0.8**
RCTC Rector, Farmer 72.77 43 ⇑P **P** **21 42 37.4 +0.5**
baz=73
EDW2 Edwards Air Fo 72.80 45 ⇓P **P** **21 42 38.1 +0.9**
baz=73,SNR=31
MONP Monument Peak 72.81 48 ⇑P **P** **21 42 38.3 +0.7**
baz=73,SNR=25
CHGN Chignik 72.89 9 *eP* **P** **21 42 36.0 -1.1**
ISA Isabella 72.91 44 *eP* **P** **21 42 38.7 +0.8**
ISA pmax pmax
comp=Z,65nm,1.1s
ISA Isabella 72.91 44 *eP* **P** **21 42 38.7 +0.8**
comp=Z,65nm,1.1s
ISA *epP* pP 21 43 14.1 +13
ISA Isabella 72.91 44 ⇑P **P** **21 42 38.8 +0.9**
baz=73,SNR=17
DVTC Desert V Tower 72.92 48 ⇑P **P** **21 42 38.7 +0.7**
baz=73,SNR=12
PEA0B Petropavlovsk- 72.98 342 *eP* **P** **21 42 37.9 +0.1**
PETK Petropavlovsk- 72.98 342 P **P** **21 42 38.6 +0.8**
PETK Petropavlovsk- 72.98 342 P **P** **21 42 38.6 +0.8**
PETK Petropavlovsk- 72.98 342 P **P** **21 42 38.6 +0.8**
comp=Z,18nm,0.9s,baz=134,slow=8.3,SNR=14
PETK LR LR 22 16 17.6
comp=Z,95nm,18.2s,baz=148,slow=37
CMB Columbia Colle 73.04 41 *eP* **P** **21 42 39.1 +0.5**
CMB pmax pmax
comp=Z,32nm,0.8s
CMB Columbia Colle 73.04 41 *eP* **P** **21 42 39.1 +0.5**
comp=Z,32nm,0.8s
KRMB Red Mountain 73.06 37 *eP* **P** **21 42 40.9 +2.2**
comp=Z,152nm,1.3s
OHCM Honcut 73.14 40 *eP* **P** **21 42 39.7 +0.8**
OHCM *epP* pP 21 43 10.8 +8.9
PFO Pinyon Flat Ob 73.17 47 P **P** **21 42 40.6 +1.1**
comp=Z,173nm,1.0s,SNR=11
PFO Pinyon Flat Ob 73.17 47 *eP* **P** **21 42 40.2 +0.7**
PFO Pinyon Flat Ob 73.17 47 P **P** **21 42 40.1 +0.6**
comp=Z,30nm,1.1s,baz=258,slow=4.4,SNR=21
PFO LR LR 22 06 52.7
comp=Z,550nm,21.7s,baz=92,slow=29
PFO Pinyon Flat Ob 73.17 47 ⇑P **P** **21 42 40.2 +0.7**
baz=73,SNR=20
BBRC Big Bear Solar 73.20 46 ⇓P **P** **21 42 40.4 +0.6**
baz=73
LPIG La Paz 73.23 58 LR LR 22 05 53.6
comp=Z,68nm,21.5s,baz=278,slow=28
WDC Whiskeytown Da 73.27 38 *eP* **P** **21 42 40.0 +0.2**
WDC *e* 21 42 56.5
WDC pmax pmax
comp=Z,103nm,1.4s
WDC Whiskeytown Da 73.27 38 *eP* **P** **21 42 40.0 +0.2**
comp=Z,104nm,1.4s
WDC *e*PcP **PcP** **21 42 56.5 +0.8**
SWSC Sam W. Stewart 73.28 48 ⇑P **P** **21 42 40.6 +0.6**
baz=74,SNR=8.6
LRMC Laurel Mountai 73.34 45 ⇓P **P** **21 42 41.3 +0.9**
baz=74,SNR=23
SJI Sawahan 73.40 266 P sP 21 43 09.9 -3.8
RRX Edison Barstow 73.48 46 ⇑P **P** **21 42 42.0 +0.8**
baz=74
CWC Cottonwood Cre 73.61 44 ⇑P **P** **21 42 42.6 +0.5**
baz=74
KEBM Edson Butte 73.70 35 *eP* **P** **21 42 42.7 +0.3**
comp=Z,157nm,1.2s
BELC Belle Mtn. Jos 73.70 47 ⇓P **P** **21 42 43.3 +0.7**
baz=74,SNR=25
MLAC Mammoth Lakes 73.80 42 ⇑P **P** **21 42 44.6 +1.3**
baz=74
MPMC Manual Prospec 73.80 44 ⇑P **P** **21 42 44.1 +0.9**
baz=74,SNR=59
YSS Yuzh-Sakhalins 73.80 330 ⇑*eP* **P** **21 42 45.0 +2.3**
YSS pmax pmax
comp=Z,100nm,1.2s
MTUM Tungsten Hills 73.81 43 *eP* **P** **21 42 44.4 +1.1**
GSC Goldstone 73.84 45 *eP* **P** **21 42 43.9 +0.5**
GSC *e* 21 42 57.7
GSC pmax pmax
comp=Z,48nm,1.0s
GSC Goldstone 73.84 45 *eP* **P** **21 42 43.9 +0.5**
comp=Z,48nm,1.0s
GSC *e*PcP **PcP** **21 42 57.7 -0.8**
GSC Goldstone 73.84 45 ⇑P **P** **21 42 44.0 +0.5**
baz=74,SNR=15
DAC Darwin (Calif) 73.85 44 *eP* **P** **21 42 43.5 -0.1**
DAC *e* 21 43 00.5
DAC pmax pmax
comp=Z,7.0nm,0.8s
DAC Darwin (Calif) 73.85 44 *eP* **P** **21 42 43.5 -0.1**
comp=Z,6.8nm,0.8s
DAC *e*PcP **PcP** **21 43 00.5 +1.9**
PCJI Pacitan 73.85 266 P sP 21 43 12.6 -3.7
TIN Tinemaha 73.86 43 ⇓P **P** **21 42 44.5 +1.0**
baz=74
YBH Yreka Blue Hor 73.89 37 *eP* **P** **21 42 44.6 +1.1**
comp=Z,95nm,1.1s
YBH Yreka Blue Hor 73.89 37 P **P** **21 42 44.9 +1.4**
comp=Z,71nm,1.0s,baz=256,slow=4.0,SNR=102
BC3 Big Chuckawall 73.90 47 ⇑P **P** **21 42 44.5 +0.7**
baz=74,SNR=28
HEC Hector,Ludlow 73.92 46 ⇓P **P** **21 42 44.3 +0.5**
baz=74,SNR=20
GLA Glamis 74.03 48 *eP* **P** **21 42 45.2 +0.7**
GLA pmax pmax
comp=Z,63nm,1.1s
GLA Glamis 74.03 48 *eP* **P** **21 42 45.2 +0.7**
comp=Z,63nm,1.1s
GLA Glamis 74.03 48 ⇓P **P** **21 42 45.6 +1.1**
baz=74,SNR=6.4
BEKR Beckworth 74.15 40 *eP* **P** **21 42 45.5 +0.3**
comp=Z,32nm,1.1s
WOJI Wonogiri, Jawa 74.18 266 P sP 21 43 15.5 -2.7
WCN Washoe City 74.19 40 *eP* **P** **21 42 45.9 +0.5**
WCN pmax pmax
comp=Z,60nm,1.1s
WCN Washoe City 74.19 40 *eP* **P** **21 42 45.9 +0.5**
comp=Z,60nm,1.1s
HUMO Hull Mountain 74.30 36 *eP* **P** **21 42 47.2 +1.4**
comp=Z,71nm,1.1s
GMRC Granite Mounta 74.35 46 ⇓P **P** **21 42 47.0 +0.6**
baz=75,SNR=31
IRM Iron Mountain 74.38 47 ⇑P **P** **21 42 47.4 +0.9**
baz=75,SNR=54
GRAC Grapevine Rang 74.40 44 ⇑P **P** **21 42 48.0 +1.4**
baz=75
FURC Furnace Creek, 74.45 44 ⇑P **P** **21 42 47.7 +0.9**
baz=75
TUQ Turquoise Moun 74.52 46 ⇑P **P** **21 42 48.0 +0.6**
baz=75,SNR=29
SHOC Shoshone 74.53 45 ⇑P **P** **21 42 47.9 +0.7**
baz=75,SNR=20
NVAR Mina Array Bea 74.60 42 P **P** **21 42 48.7 +0.8**
NVAR Mina Array Bea 74.60 42 P **P** **21 42 48.7 +0.8**
comp=Z,30nm,0.9s,baz=227,slow=7.8,SNR=127
NVAR LR LR 22 11 46.9
comp=Z,653nm,18.4s,baz=126,slow=32
Y12C Blythe 74.61 48 ⇓P **P** **21 42 48.6 +0.8**
baz=75,SNR=15
OHAK Old Harbor 74.62 11 *eP* **P** **21 42 47.1 -0.1**
comp=Z,28nm,1.1s
NV11 Mina Array Sit 74.70 42 *eP* **P** **21 42 48.6 +0.3**
NV11 *es*P sP 21 43 12.4 -8.5
NV11 *es*P sP 21 43 21.2 +0.3
NACB Ninganchiao 74.83 301 *eP* **P** **21 42 49.6 +0.3**
comp=Z,46nm,1.1s
LDFC Landfair 74.89 46 *eP* **P** **21 42 50.5 +1.0**
comp=Z,138nm,1.1s
LDFC *es*P **sP** **21 43 22.5 +0.4**
214A Organ Pipe Nat 74.95 50 ⇓P **P** **21 42 50.6 +0.8**
baz=75
NEE2 Needles Airpor 75.07 47 ⇑P **P** **21 42 51.1 +0.7**
baz=75
PDMCI Parker Dam,Lak 75.17 47 ⇑P **P** **21 42 51.8 +0.8**
baz=75,SNR=17
SSLB Suanglung 75.20 300 *eP* **P** **21 42 50.5 -0.9**
comp=Z,40nm,1.3s
SSLB *e*PcP **PcP** **21 43 04.7 +0.2**
TPUB Ta-pu 75.27 300 *eP* **P** **21 42 51.4 -0.4**
comp=Z,50nm,1.1s
KDAK Kodiak Island 75.28 11 *eP* **P** **21 42 51.5 +0.5**
comp=Z,28nm,1.0s
KDAK *es*P **sP** **21 43 21.8 -1.7**
KDAK Kodiak Island 75.28 11 P **P** **21 42 51.7 +0.7**
comp=Z,22nm,0.9s,baz=208,slow=5.6,SNR=27
KDAK LR LR 22 08 33.5
comp=Z,367nm,21.5s,baz=319,slow=30
MOD Modoc 75.41 38 *eP* **P** **21 42 53.4 +1.0**
comp=Z,130nm,1.0s
Z14A Wintersburg 75.55 49 ⇑P **P** **21 42 54.1 +1.0**
baz=76,SNR=14
W13A Hualapai Mount 75.76 47 ⇓P **P** **21 42 55.6 +1.0**
baz=76,SNR=35
Y14A Wickenburg 75.80 48 ⇓P **P** **21 42 55.2 +0.6**
baz=76,SNR=20
R11A Troy Canyon, C 76.33 43 ⇑P **P** **21 42 58.4 +0.7**
baz=76
KSRS Korea Array 76.42 316 P **P** **21 42 59.5 +1.5**
comp=Z,4.4nm,0.9s,baz=130,slow=5.5,SNR=15
KSRS LR LR 22 10 04.0
comp=Z,266nm,21.7s,baz=115,slow=30
BMN Battle Mountai 76.43 41 *eP* **P** **21 42 58.5 +0.3**
BMN *e* 21 43 11.2
BMN pmax pmax
comp=Z,75nm,1.4s
BMN Battle Mountai 76.43 41 *eP* **P** **21 42 58.5 +0.3**
comp=Z,75nm,1.4s
BMN *e*PcP **PcP** **21 43 11.2 +1.6**
KSAR Wonju Array Be 76.44 316 P **P** **21 42 59.5 +1.4**
TUC Tucson 76.62 51 *eP* **P** **21 43 00.5 +1.1**
TUC *e**PP **pP** **21 43 24.3 +1.9**
TUC pmax pmax
comp=Z,49nm,2.0s
TUC Tucson 76.62 51 *eP* **P** **21 43 00.5 +1.1**
comp=Z,49nm,2.0s
TUC *epP* **pP** **21 43 24.3 +1.9**
WVOR Wild Horse Val 76.72 38 *eP* **P** **21 43 00.8 +1.0**
WVOR Wild Horse Val 76.72 38 *eP* **P** **21 43 00.8 +1.0**
NLWA Neilton Lookou 76.91 32 *eP* **P** **21 43 01.1 +0.5**
comp=Z,26nm,0.9s
NLWA *es*P **sP** **21 43 31.6 -1.6**
MIR Mirnyy 77.09 204 ⇓*iP* **P** **21 43 02.0 +0.7**
MIR *i* 21 43 07.0
MIR *i* 21 43 28.0
MIR pmax pmax
comp=Z,42nm,1.0s
X16A Lo Mia Camp, P 77.16 48 ⇑P **P** **21 43 03.7 +1.2**
baz=77,SNR=40
KSM Kuching 77.22 275 *eP* **P** **21 43 03.2 +0.1**
comp=Z,95nm,1.4s
KSM Kuching 77.22 275 P **P** **21 43 03.6 +0.5**
319A Douglas 77.32 52 ⇓P **P** **21 43 04.4 +1.0**
baz=78,SNR=21
CCUT Cedar City 77.39 45 *eP* **P** **21 43 05.0 +1.3**
CCUT *epP* **pP** **21 43 28.8 +1.9**
ARUT Antelope Range 77.46 45 *eP* **P** **21 43 04.8 +0.7**
ARUT pmax pmax
comp=Z,222nm,1.6s
ARUT Antelope Range 77.46 45 *eP* **P** **21 43 04.8 +0.7**
comp=Z,222nm,1.6s
U15A North Rim 77.55 46 ⇓P **P** **21 43 06.0 +1.2**
baz=78,SNR=72
LON Longmire 77.57 33 *eP* **P** **21 43 04.8 +0.5**
LON pmax pmax
comp=Z,15nm,1.0s
LON Longmire 77.57 33 *eP* **P** **21 43 04.8 +0.5**
comp=Z,15nm,1.0s
LEM Lembang 77.61 266 P P **P** **21 43 06.3 +0.9**
comp=Z,92nm,0.8s,comp=Z,1μm
USRK Ussuriysk Arra 77.67 323 P **P** **21 43 06.3 +1.4**
comp=Z,9.1nm,0.9s,baz=145,slow=4.5,SNR=16
USRK LR LR 22 15 26.3
comp=Z,321nm,19.8s,baz=116,slow=34
WUAZ Wupatki 77.74 47 *eP* **P** **21 43 05.8 +0.1**
comp=Z,85nm,1.4s
WUAZ *epP* **pP** **21 43 30.0 +1.2**
WUAZ Wupatki 77.74 47 ⇓P **P** **21 43 06.9 +1.2**
baz=78,SNR=14
RSO Redoubt South 77.77 10 *eP* **P** **21 43 05.3 0.0**
320A Kipp Ranch, An 77.87 52 ⇑P **P** **21 43 07.8 +1.3**
baz=78,SNR=19
SVW2 Sparrevohn 77.92 9 *eP* **P** **21 43 06.0 +0.1**
comp=Z,8.8nm,0.8s
SEW Seward 78.05 12 *eP* **P** **21 43 07.2 +0.7**
220A Playas Peak, P 78.13 52 ⇓P **P** **21 43 09.2 +1.3**
baz=78,SNR=48
SSE Sheshan 78.18 307 P **P** **21 43 09.0 +1.0**
SSE PP **PP** **21 46 05.0 -0.9**
SSE S **S** **21 52 54.9 -0.8**
SSE pmax pmax
comp=Z,20nm,0.7s
SSE pmax pmax
comp=Z,260nm,9.2s
SSE LR LR
comp=N,480nm,20.0s
SSE LR LR
comp=E,660nm,20.0s
SSE LR LR
comp=Z,960nm,20.0s
BBB Bella Bella 78.21 27 P **P** **21 43 08.3 +0.7**
BBB Bella Bella 78.21 27 P **P** **21 43 08.3 +0.7**
comp=Z,15nm,0.9s,baz=221,slow=9.3,SNR=6.4
X18A Snowflake 78.29 49 ⇓P **P** **21 43 09.8 +1.0**
baz=78,SNR=10
120A U Bar Ranch, L 78.34 51 ⇓P **P** **21 43 10.2 +1.2**
baz=78,SNR=20
DBJI Dramaga 78.51 266 P P **P** **21 43 12.2 +1.9**
comp=Z,69nm,1.0s
SPU Mount Spurr 78.56 10 *eP* **P** **21 43 09.0 -0.5**
Z20A Nine Sixteen R 78.63 51 ⇓P **P** **21 43 11.9 +1.3**
baz=79,SNR=44
MVU Marysvale 78.66 45 *eP* **P** **21 43 12.2 +1.4**
MSU Marysvale 78.69 45 *eP* **P** **21 43 12.3 +1.4**
MSU Marysvale 78.69 45 *eP* **P** **21 43 12.3 +1.4**
W18A Petrified Fore 78.72 49 ⇑P **P** **21 43 12.0 +0.8**
baz=79
221A Mesquite Ranch 78.74 52 ⇑P **P** **21 43 12.4 +1.1**
baz=79
MFID Camas Ranch 78.97 39 ⇑P **P** **21 43 13.2 +1.0**
baz=79
121A Cookes Peak, D 78.97 52 ⇑P **P** **21 43 13.7 +1.1**
baz=79,SNR=31
DUG Dugway 79.13 43 ⇓P **P** **21 43 13.7 +0.5**
baz=79
Y20A Horse Springs, 79.15 50 ⇓P **P** **21 43 15.0 +1.3**
baz=79,SNR=48
222A Williams Famil 79.30 52 ⇓P **P** **21 43 15.3 +1.0**
baz=80,SNR=5.6
GAMB Gambell 79.30 1 *eP* **P** **21 43 14.4 +1.1**
comp=Z,31nm,1.2s
GAMB *es*P **sP** **21 43 46.1 0.0**
MDJ Mudanjiang 79.31 322 P P **21 43 15.3 +1.4**
MDJ pP **pP** **21 43 35.8 -1.3**
MDJ sP **sP** **21 43 44.9 -1.7**
MDJ PP **PP** **21 46 12.6 -2.6**
MDJ S **S** **21 53 11.4 +4.1**
MDJ ScS **ScS** **21 53 30.6 +1.5**
MDJ SS **SS** **21 58 13.9 -2.6**
MDJ pmax pmax
comp=Z,16nm,1.4s
MDJ pmax pmax
comp=Z,400nm,8.9s
MDJ LR LR
comp=N,590nm,35.9s
MDJ LR LR

comp=E,790nm,39.0s
MDJ LR LR
comp=Z,1µm,35.9s
RAGM Ragged Mountai 79.34 14 *e*P **P 21 43 14.7 +1.0**
X20A Quemado 79.36 50 ⇓P **P 21 43 15.9 +1.3**
baz=80,SNR=21
Z21A St. Cloud Mine 79.41 51 ⇓P **P 21 43 16.5 +1.6**
baz=80,SNR=59
PMR Palmer 79.48 12 *e*P **P 21 43 13.9 -0.5**
PMR pmax pmax
comp=Z,40nm,1.0s
PMR Palmer 79.48 12 *e*P **P 21 43 13.9 -0.5**
comp=Z,40nm,1.0s
CGJI Cibinong 79.51 266 P **P 21 43 14.9 -0.8**
comp=Z,108nm,0.7s
Q16A Castle Valley 79.57 45 ⇓P **P 21 43 17.1 +1.4**
baz=80
I12A Atlanta 79.60 39 ⇑P **P 21 43 16.9 +1.2**
baz=80
W20A Ramah 79.62 49 ⇑P **P 21 43 17.4 +1.3**
baz=80,SNR=36
122A Conniff Cattle 79.64 52 ⇓P **P 21 43 17.7 +1.6**
baz=80
WRAK Wrangell Islan 79.69 22 *e*P **P 21 43 16.6 +0.9**
comp=Z,26nm,1.1s
Y21A Point of Rocks 79.72 50 ⇓P **P 21 43 18.1 +1.4**
baz=80,SNR=40
DIV Divide 79.75 13 *e*P **P 21 43 16.4 +0.4**
223A Chaparral, Ant 79.77 53 ⇑P **P 21 43 17.9 +1.0**
baz=80
S18A Hurst Farm, Bl 79.77 46 ⇓P **P 21 43 17.6 +0.6**
baz=80,SNR=16
MPU Maple Canyon 79.81 43 *e*P **P 21 43 18.3 +1.3**
MPU *e*pP pP 21 43 49.1 +8.9
SML Sawmill 79.83 12 *e*P **P 21 43 17.3 +0.9**
SML pmax pmax
comp=Z,10.0nm,1.3s
SML Sawmill 79.83 12 *e*P **P 21 43 17.3 +0.9**
comp=Z,10.0nm,1.3s
X21A Alamocita Cree 79.83 50 ⇑P **P 21 43 18.5 +1.2**
baz=80,SNR=24
HLID Hailey 79.91 39 ⇓P **P 21 43 18.6 +1.2**
baz=80
Z22A Elephant Butte 79.91 51 ⇓P **P 21 43 18.6 +1.0**
baz=80,SNR=49
V20A Brimhall 79.96 48 ⇑P **P 21 43 18.6 +0.8**
baz=80,SNR=7.5
J13A Cove Ranch, Pi 79.97 39 ⇑P **P 21 43 18.9 +1.2**
baz=80
PNL Peninsula 80.07 17 *e*P **P 21 43 17.2 -0.5**
comp=Z,57nm,1.0s
SRU San Rafael 80.10 45 ⇓P **P 21 43 19.5 +0.9**
baz=80,SNR=27
P17A Butcher Ranch, 80.14 44 ⇓P **P 21 43 19.9 +1.1**
baz=80,SNR=9.6
PPLA Purkeypile 80.15 10 *e*P **P 21 43 17.7 -0.5**
comp=Z,20nm,1.1s
123A Bell Site, Whi 80.17 52 ⇓P **P 21 43 20.1 +1.1**
baz=80
H12A Diamond D Ranc 80.19 38 ⇑P **P 21 43 19.7 +0.9**
baz=80
U20A Newcomb 80.19 48 ⇑P **P 21 43 20.0 +1.0**
baz=80,SNR=16
Y22A Socorro 80.21 51 ⇓P **P 21 43 20.2 +0.9**
baz=80
G12A Big Creek, Yel 80.23 38 ⇓P **P 21 43 20.1 +1.0**
baz=80
JLU Jordanelle 80.23 43 *e*P **P 21 43 20.4 +1.1**
comp=Z,28nm,1.2s
W21A San Fidel 80.24 49 ⇑P **P 21 43 20.7 +1.3**
baz=80,SNR=11
324A Moseley Ranch, 80.26 53 ⇑P **P 21 43 20.0 +0.5**
baz=80,SNR=50
DAU Daniels Canyon 80.26 43 *e*P **P 21 43 20.2 +0.6**
DAU Daniels Canyon 80.26 43 *e*P **P 21 43 20.2 +0.6**
I13A Wildhorse Cree 80.28 39 ⇓P **P 21 43 20.6 +1.2**
baz=80
LAZ Ladron 80.29 50 *e*P **P 21 43 20.3 +0.6**
comp=Z,60nm,1.9s
LAZ *e*pP **pP 21 43 43.6 +0.7**
Y22D IRIS PASSCAL I 80.31 51 ⇑P **P 21 43 21.1 +1.4**
baz=80
LENM Lemitar 80.31 50 *e*P **P 21 43 21.0 +1.2**
J14A Carey 80.33 40 ⇓P **P 21 43 20.8 +1.2**
baz=81
425A Indio Mountain 80.37 54 ⇑P **P 21 43 21.0 +0.9**
baz=81,SNR=79
NJ2 Nanjing 80.39 307 *e*P **P 21 43 23.1 +3.1**
NJ2 pP pP 21 43 49.0 +5.8
NJ2 PP **PP 21 46 29.3 +5.0**
NJ2 S **S 21 53 21.0 +1.9**
NJ2 sS **sS 21 54 02.0 +3.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 pmax pmax
comp=Z,80nm,8.0s
NJ2 LR LR
comp=N,290nm,21.8s
NJ2 LR LR
comp=E,430nm,22.1s
NJ2 LR LR
comp=Z,370nm,15.0s
X22A Bernardo 80.43 50 ⇑P **P 21 43 22.0 +1.6**
baz=81
MNTX Cornudas Mount 80.44 53 *e*P **P 21 43 21.0 +0.7**
comp=Z,42nm,1.1s
MNTX *es*P **sP 21 43 51.8 -1.3**
Z23A Rita Site, Whi 80.47 52 ⇑P **P 21 43 21.5 +1.0**
baz=81,SNR=14
224A Cornudas Mount 80.50 53 ⇑P **P 21 43 21.9 +1.1**
baz=81,SNR=34
626A Big Bend Ranch 80.53 56 ⇑P **P 21 43 21.8 +0.8**
baz=81,SNR=43
P18A Preston Nutter 80.55 44 ⇓P **P 21 43 21.9 +0.8**
baz=81,SNR=10.0
H13A Challis 80.55 38 ⇑P **P 21 43 21.7 +0.9**
baz=81
BNM Barren Site 80.56 51 *e*P **P 21 43 21.9 +0.7**
comp=Z,24nm,1.0s
BNM *es*P **sP 21 43 52.9 -1.0**
F12A Elk City 80.62 37 ⇑P **P 21 43 21.6 +0.5**
baz=81
325A Bean Ranch, Si 80.62 54 ⇑P **P 21 43 22.0 +0.5**
baz=81,SNR=73
LPM Los Pinos Moun 80.63 50 *e*P **P 21 43 22.4 +0.9**
HWUT Hardware Ranch 80.67 42 *e*P **P 21 43 21.7 +0.2**
comp=Z,22nm,1.0s
HWUT *es*P **sP 21 43 52.7 -1.6**
I14A Mackay 80.69 39 ⇓P **P 21 43 22.7 +1.1**
baz=81
526A Mary Lane Ranc 80.77 55 ⇓P **P 21 43 22.9 +0.6**
baz=81,SNR=48
W22A Albuquerque 80.79 50 ⇑P **P 21 43 23.8 +1.4**
baz=81
124A Stringfield Ra 80.81 52 ⇑P **P 21 43 23.3 +0.7**
baz=81,SNR=34
KLR Kul'dur 80.82 327 *e*P **P 21 43 19.7 -2.2**
KLR *e* 21 43 42.0
KLR *es*S **S 21 53 22.0 -1.0**
KLR *e*PS PnS 21 54 31.0 +10
U21A Nageezi 80.83 48 ⇓P **P 21 43 23.6 +1.0**
baz=81,SNR=78
G13A Cobalt 80.85 38 ⇑P **P 21 43 23.2 +0.8**
baz=81
PV04 Paradox Valley 80.86 46 *e*P **P 21 43 24.0 +1.3**
Y23A Lovelace Mesa, 80.89 51 ⇓P **P 21 43 23.6 +0.7**
baz=81,SNR=26
KASI Kota Agung 80.94 267 P **P 21 43 23.1 -0.3**
PV01 Paradox Valley 80.97 46 *e*P **P 21 43 24.2 +0.9**
PV01 *es*P **sP 21 43 56.0 -0.1**
S20A Disappointment 80.98 47 ⇑P **P 21 43 24.2 +0.9**
baz=81,SNR=29
TRF Thorofare Moun 80.98 10 *e*P **P 21 43 21.7 -1.0**
comp=Z,37nm,1.0s
ANMO Albuquerque 81.04 50 *e*P **P 21 43 24.1 +0.4**
ANMO Albuquerque 81.04 50 P **P 21 43 24.5 +0.9**
comp=Z,15nm,0.8s,baz=247,slow=7.7,SNR=40
426A McDonald Obser 81.07 55 ⇓P **P 21 43 24.7 +0.7**
baz=81,SNR=88
X23A Hourglass Bar 81.08 50 ⇑P **P 21 43 24.6 +0.7**
baz=81,SNR=7.9
627A Terlingua Ranc 81.08 56 ⇓P **P 21 43 24.8 +0.8**
baz=81,SNR=58
SKAG Skagway 81.09 19 *e*P **P 21 43 23.8 +0.7**
comp=Z,45nm,1.1s
H14A Leadore 81.11 39 ⇓P **P 21 43 24.6 +0.7**
baz=81
R20A Redvale 81.13 46 ⇑P **P 21 43 24.8 +0.7**
baz=81
V22A San Miguel Ran 81.14 49 ⇑P **P 21 43 25.0 +0.8**
baz=81,SNR=11
Z24A Sheeppen Canyo 81.15 52 ⇓P **P 21 43 24.9 +0.6**
baz=81,SNR=21
T21A Navajo Lake 81.17 48 ⇓P **P 21 43 25.4 +1.1**
baz=81,SNR=13
F13A Darby 81.18 37 ⇑P **P 21 43 24.6 +0.6**
baz=81
M17A Scullys Gap (B 81.18 43 ⇑P **P 21 43 24.5 +0.2**
baz=81
527A Woodward Ranch 81.19 55 ⇑P **P 21 43 25.0 +0.5**
baz=81,SNR=58
TNA Tin City 81.19 2 *e*P **P 21 43 24.4 +1.0**
comp=Z,64nm,1.1s
S21A Coal Bank Pass 81.30 47 ⇑P **P 21 43 26.2 +1.1**
baz=82,SNR=29
I15A Monteview 81.32 40 ⇑P **P 21 43 26.0 +1.0**
baz=82
Y24A Capitan 81.35 51 ⇑P **P 21 43 26.1 +0.7**
baz=82,SNR=58
W23A Werner Place, 81.36 50 ⇓P **P 21 43 26.2 +0.8**
baz=82,SNR=19
CN2 Changchun 81.37 320 ⇑P **P 21 43 26.0 +1.1**
CN2 *e*S **S 21 53 31.0 +2.2**
CN2 SS **SS 21 58 48.9 +1.7**
CN2 pmax pmax
comp=Z,30nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,16.0s
CN2 LR LR
comp=E,200nm,16.0s
CN2 LR LR
comp=Z,200nm,16.0s
326A Caldwell Ranch 81.37 54 ⇓P **P 21 43 25.8 +0.4**
baz=82,SNR=15
U22A Llaves 81.38 48 ⇑P **P 21 43 26.5 +1.0**
baz=82,SNR=5.6
G14A Jackson 81.39 38 ⇑P **P 21 43 26.2 +0.9**
baz=82
P19A Cripple Cowboy 81.40 45 ⇑P **P 21 43 26.1 +0.6**
baz=82,SNR=19
125A Gardner Draw, 81.41 53 ⇓P **P 21 43 26.2 +0.6**
baz=82,SNR=20
DL2 Dalian 81.44 314 ⇓P P 21 43 28.8 +3.4
DL2 pP pP 21 43 49.5 +0.8
DL2 S **S 21 53 33.0 +3.3**
DL2 pmax pmax
comp=Z,24nm,1.0s
DL2 pmax pmax
comp=Z,120nm,6.2s
DL2 LR LR
comp=N,160nm,19.6s
DL2 LR LR
comp=E,130nm,22.8s
DL2 LR LR
comp=Z,200nm,27.5s
GDL2 Guadalupe Moun 81.44 53 *e*P **P 21 43 26.7 +0.9**
GDL2 *e*pP **pP 21 43 52.4 +3.3**
MCK McKinley 81.48 11 *e*P **P 21 43 25.2 +0.1**
MCK *e**PP **pP 21 43 48.9 +0.5**
MCK McKinley 81.48 11 *e*P **P 21 43 25.2 +0.1**
MCK *e*pP **pP 21 43 48.9 +0.5**
MCK *es*P **sP 21 43 57.0 -0.9**
628A Black Gap, Mar 81.50 56 ⇓P **P 21 43 26.7 +0.7**
baz=82,SNR=30
226B Tecolote Peak, 81.54 53 ⇓P **P 21 43 27.0 +0.8**
baz=82,SNR=61
SNY Shenyang 81.55 318 ⇑P **P 21 43 27.4 +1.5**
SNY S **S 21 53 25.9 -4.8**
SNY pmax pmax
comp=Z,23nm,0.8s
SNY pmax pmax
comp=Z,160nm,7.3s
SNY LR LR
comp=N,120nm,12.0s
SNY LR LR
comp=E,200nm,18.8s
SNY LR LR
comp=Z,230nm,26.5s
M18A Lyman 81.55 43 ⇑P **P 21 43 26.6 +0.3**
baz=82,SNR=12
AHID Auburn Hatcher 81.55 41 *e*P **P 21 43 26.1 -0.1**
comp=Z,20nm,0.7s
H15A Lima 81.55 39 ⇓P **P 21 43 27.3 +1.1**
baz=82
V23A Ortiz Mt. (NFS 81.59 49 ⇑P **P 21 43 28.3 +1.6**
baz=82,SNR=23
C12B Naegeli Ranch, 81.59 35 ⇓P **P 21 43 26.4 +0.3**
baz=82
E13A Victor 81.62 37 ⇓P **P 21 43 26.6 +0.2**
baz=82
Z25A Roswell 81.62 52 ⇑P **P 21 43 27.7 +1.0**
baz=82,SNR=18
O19A Miners Draw (B 81.62 44 ⇓P **P 21 43 27.2 +0.5**
baz=82
X24A Lazy VL Ranch, 81.63 51 ⇑P **P 21 43 27.1 +0.2**
baz=82
T22A Edith 81.63 48 ⇑P **P 21 43 27.6 +0.8**
baz=82,SNR=17
427A Hayter Ranch, 81.64 55 ⇑P **P 21 43 27.5 +0.7**
baz=82,SNR=44
K17A Gardner Place, 81.66 41 ⇑P **P 21 43 27.1 +0.3**
baz=82
P20A De Beque 81.74 45 ⇑P **P 21 43 27.9 +0.6**
baz=82,SNR=21
F14A Wisdom 81.75 38 ⇓P **P 21 43 27.5 +0.3**
baz=82
327A Balmorhea Ranc 81.78 54 ⇓P **P 21 43 28.2 +0.7**
baz=82
R21A Cimarron 81.79 46 ⇓P **P 21 43 28.8 +1.1**
baz=82,SNR=27
MENT Mentasta 81.81 13 *e*P **P 21 43 27.3 +0.4**
L18A Fontenelle, Gr 81.81 42 ⇓P **P 21 43 27.9 +0.3**
baz=82
U23A El Rito 81.84 49 ⇑P **P 21 43 29.0 +1.0**
baz=82,SNR=12
528A Cox Ranch, San 81.85 56 ⇑P **P 21 43 28.7 +0.7**
baz=82,SNR=52
I16A Newdale 81.88 40 ⇑P **P 21 43 29.0 +1.1**
baz=82
126A Clayton Basin, 81.89 53 ⇑P **P 21 43 28.7 +0.6**
baz=82,SNR=24
Y25A Mesa, Roswell 81.91 51 ⇓P **P 21 43 28.9 +0.7**
baz=82,SNR=28
DCID1 Drake Creek 81.92 40 *e*P **P 21 43 29.6 +1.5**
W24A Lazy 6 Ranch, 81.93 50 ⇑P **P 21 43 28.9 +0.5**
baz=82,SNR=26
G15A Dillon 81.94 39 ⇑P **P 21 43 29.0 +0.8**
baz=82
B12A Libby 81.96 35 ⇓P **P 21 43 28.8 +0.7**
baz=82
MSO Missoula 81.97 37 ⇑P **P 21 43 28.5 +0.3**
baz=82
Q21A Lamborn Mesa, 81.99 46 ⇑P **P 21 43 29.8 +1.1**
baz=82,SNR=20
E14A Clinton 82.01 37 ⇓P **P 21 43 28.9 +0.4**
baz=82
REDW Red Top Meadow 82.01 41 *e*P **P 21 43 29.9 +1.3**
comp=Z,2.0nm,1.6s
S22A 4UR Ranch, Cre 82.02 47 ⇓P **P 21 43 30.1 +1.2**
baz=82,SNR=78
DLBC Dease Lake 82.04 21 P **P 21 43 29.1 +0.9**
DLBC Dease Lake 82.04 21 P **P 21 43 29.1 +0.9**
comp=Z,6.2nm,0.8s,baz=204,slow=5.7,SNR=17
DLBC LR LR 22 10 40.0
comp=Z,420nm,21.9s,baz=80,slow=29
C13A Hot Springs 82.08 36 ⇑P **P 21 43 28.7 -0.1**
baz=82
J17A Brown Place, J 82.10 41 ⇓P **P 21 43 29.9 +0.8**
baz=82
SNOW Snow King Moun 82.12 41 *e*P **P 21 43 30.8 +1.5**
O20A White River Ci 82.14 45 ⇓P **P 21 43 30.1 +0.7**
baz=82
428A Kincaid Ranch, 82.15 55 ⇓P **P 21 43 30.4 +0.9**
baz=82,SNR=28
K18A Toltan Ranch, 82.16 42 ⇓P **P 21 43 30.3 +0.8**
baz=82,SNR=31
Z26A Caprock 82.18 52 ⇓P **P 21 43 30.2 +0.6**
baz=82,SNR=59
M19A Rock Springs 82.18 43 ⇓P **P 21 43 29.9 +0.3**
baz=82,SNR=7.4
X25A Clemmons Ranch 82.19 51 ⇓P **P 21 43 29.9 +0.2**
baz=82,SNR=18
227A Bennet, Jal 82.19 54 ⇓P **P 21 43 30.2 +0.5**
baz=82
A12A Yaak River Ran 82.19 34 ⇑P **P 21 43 30.1 +0.8**
baz=82
V24A Rampart Ranch, 82.25 50 ⇑P **P 21 43 30.9 +0.8**
baz=82,SNR=34
T23A Casias Ranch, 82.26 48 ⇑P **P 21 43 31.1 +0.9**
baz=82,SNR=7.4
529A Stev Forest Ra 82.28 56 ⇓P **P 21 43 30.5 +0.4**
baz=82,SNR=40
R22A Saguache, Gunn 82.29 47 ⇓P **P 21 43 31.6 +1.3**
baz=82,SNR=46
F15A Butte 82.29 38 ⇓P **P 21 43 30.8 +0.7**
baz=82
LOHW Long Hollow 82.29 41 *e*P **P 21 43 31.2 +1.1**
328A Wristen Ranch, 82.31 54 ⇑P **P 21 43 30.4 +0.1**
baz=82,SNR=38
D14A Greenough 82.36 37 ⇓P **P 21 43 30.2 -0.1**
baz=83
DOT Dot Lake 82.36 13 *e*P **P 21 43 30.1 +0.3**
comp=Z,99nm,0.9s
G16A Moss Hill, Enn 82.38 39 ⇑P **P 21 43 31.1 +0.6**
baz=83
P21A Newcastle 82.40 45 ⇓P **P 21 43 31.5 +0.7**
baz=83,SNR=9.1
127A Arkansas Junct 82.41 53 ⇑P **P 21 43 31.2 +0.3**
baz=83,SNR=11
H16A Russell Place, 82.45 39 ⇑P **P 21 43 32.2 +1.3**
baz=83
N20A Spence Gulch, 82.46 44 ⇓P **P 21 43 31.6 +0.5**
baz=83,SNR=36
J18A Kendall Valley 82.46 41 ⇑P **P 21 43 31.6 +0.5**
baz=83,SNR=31
I17A Pilgrim Ck. 82.47 40 ⇑P **P 21 43 32.2 +1.2**
baz=83
Q22A Crested Butte, 82.47 46 ⇑P **P 21 43 32.0 +0.8**
baz=83,SNR=21
E15A Deer Lodge 82.51 38 ⇑P **P 21 43 31.5 +0.4**
baz=83
B13A Whitefish 82.53 35 ⇓P **P 21 43 30.9 -0.1**
baz=83
BW06 Boulder Array 82.54 42 *e*P **P 21 43 31.2 -0.2**
comp=Z,44nm,1.1s
BW06 *e*pP **pP 21 43 54.9 +0.1**
PDAR Pinedale Array 82.54 42 P **P 21 43 31.4 0.0**
PDAR Pinedale Array 82.54 42 P **P 21 43 31.4 0.0**
comp=Z,30nm,1.0s,baz=223,slow=3.7,SNR=106
PDAR LR LR 22 16 39.7
comp=Z,571nm,18.3s,baz=250,slow=33
U24A Moreno Valley 82.54 49 ⇑P **P 21 43 32.9 +1.3**
baz=83
SMCO Snowmass 82.56 46 *e*P **P 21 43 32.4 +0.6**
Y26A Elida 82.56 52 ⇑P **P 21 43 32.1 +0.5**
baz=83,SNR=9.7
S23A Nye Farm, Mont 82.58 48 ⇓P **P 21 43 32.6 +0.8**
baz=83
C14A Swan Lake 82.60 36 ⇑P **P 21 43 31.0 -0.4**
baz=83
W25A X Bar L Ranch, 82.63 50 ⇓P **P 21 43 32.3 +0.3**
baz=83,SNR=48
O21A Pagoda 82.70 45 ⇑P **P 21 43 32.8 +0.4**
baz=83,SNR=7.9
H17A Grant Village 82.70 40 ⇓P **P 21 43 34.1 +1.8**
baz=83,SNR=6.3
COLA College 82.72 11 *e*P **P 21 43 32.1 +0.6**
COLA pmax pmax
comp=Z,82nm,0.9s
COLA College 82.72 11 *e*P **P 21 43 32.1 +0.6**
comp=Z,82nm,0.9s
COLA *e*pP pP 21 44 04.0 +9.2
429A Davenport Ranc 82.74 55 ⇓P **P 21 43 32.8 +0.3**
baz=83,SNR=67
F16A Kennard Place, 82.78 38 ⇑P **P 21 43 33.4 +0.9**
baz=83
V25A Rancho No Teng 82.78 50 ⇓P **P 21 43 33.4 +0.6**
baz=83,SNR=79
228A UT Block 9, Go 82.78 54 ⇓P **P 21 43 33.0 +0.3**
baz=83,SNR=11
Z27A Tatum 82.78 53 ⇑P **P 21 43 32.9 +0.1**
baz=83,SNR=28
ILAR Eielson Array 82.80 11 P **P 21 43 31.8 -0.2**
ILAR Eielson Array 82.80 11 P **P 21 43 31.8 -0.2**
comp=Z,11nm,0.7s,baz=223,slow=5.7,SNR=107
ILAR LR LR 22 17 44.3
comp=Z,222nm,18.3s,baz=21,slow=34
M20A Sweetwater, Wa 82.82 43 ⇑P **P 21 43 33.5 +0.6**
baz=83,SNR=30
I18A Diamond G Ranc 82.83 41 ⇑P **P 21 43 33.5 +0.5**
baz=83,SNR=5.1
X26A CR and CF Fran 82.84 51 ⇑P **P 21 43 33.2 +0.1**
baz=83,SNR=32
SEY Seymchan 82.87 345 *ce*P **P 21 43 32.7 +0.4**
P22A Eagle 82.90 46 ⇓P **P 21 43 34.0 +0.6**
baz=83,SNR=8.2
D15A Lincoln 82.91 37 ⇑P **P 21 43 33.5 +0.4**
baz=83
N21A Black Mountain 82.92 44 ⇓P **P 21 43 34.2 +0.7**
baz=83,SNR=49
R23A Moffat 82.92 47 ⇑P **P 21 43 34.5 +0.9**
baz=83,SNR=28
SDCO Great Sand Dun 82.96 48 *e*P **P 21 43 34.0 +0.2**
comp=Z,48nm,1.2s
T24A Torres, Weston 82.99 49 ⇑P **P 21 43 34.8 +0.8**
baz=83,SNR=30
530A J-C Ranch, Com 83.00 56 ⇓P **P 21 43 34.2 +0.3**
baz=83,SNR=16
329A Wagon Wheel Ra 83.01 55 ⇑P **P 21 43 34.2 +0.2**
baz=83,SNR=27
K19A Absolon Red Bu 83.02 42 ⇑P **P 21 43 33.5 -0.4**
baz=83,SNR=14
QIZ Qiongzhong 83.04 292 P **P 21 43 34.5 +0.3**
QIZ S **S 21 53 47.3 +0.3**
QIZ pmax pmax
comp=Z,10.0nm,1.3s
QIZ pmax pmax
comp=Z,99nm,5.3s
QIZ LR LR
comp=N,300nm,24.3s
QIZ LR LR
comp=Z,780nm,31.9s
Y27A Causey 83.05 52 ⇑P **P 21 43 34.3 +0.2**
baz=83,SNR=41
128A Castleberry Fa 83.06 53 ⇑P **P 21 43 34.7 +0.5**
baz=83,SNR=31
G17A Pierce Place, 83.07 39 ⇓P **P 21 43 35.1 +1.1**
baz=83
W26A Owens Ranch, T 83.09 51 ⇑P **P 21 43 34.4 +0.1**
baz=83,SNR=11
J19A Crowheart 83.10 42 ⇓P **P 21 43 34.5 +0.2**
baz=83,SNR=19
S24A Houchin Ranch, 83.12 48 ⇓P **P 21 43 35.5 +0.9**
baz=83,SNR=45
E16A East Helena 83.14 38 ⇑P **P 21 43 34.8 +0.5**
baz=83
U25A Circle Dot Ran 83.17 49 ⇓P **P 21 43 35.3 +0.5**
baz=83,SNR=41
B14A Marquette Ranc 83.19 36 ⇓P **P 21 43 34.2 -0.3**
baz=83
Q23A Hartsel 83.23 47 ⇓P **P 21 43 35.8 +0.6**
baz=83,SNR=9.1
C15A Salmond Ranch, 83.25 36 ⇑P **P 21 43 34.8 -0.1**
baz=84,SNR=6.6
K20A Yellowstone Ra 83.27 42 ⇑P **P 21 43 35.2 0.0**
baz=84,SNR=24
O22A Kremmling 83.31 45 ⇑P **P 21 43 36.1 +0.5**
baz=84,SNR=41
430A Baggett Ranch, 83.32 56 ⇓P **P 21 43 35.5 -0.1**
baz=84,SNR=8.1
229A Bryant Ranch, 83.33 54 ⇑P **P 21 43 35.9 +0.3**
baz=84,SNR=9.9
631A Perdido Creek 83.33 57 ⇑P **P 21 43 35.9 +0.4**
baz=84,SNR=36
V26A Tequesquite Ra 83.37 50 ⇓P **P 21 43 35.7 -0.1**
baz=84,SNR=24
MSTX Muleshoe 83.38 52 ⇑P **P 21 43 36.4 +0.5**
baz=84,SNR=34
Z28A Tucker Farm, M 83.40 53 ⇑P **P 21 43 36.1 +0.2**
baz=84,SNR=5.5
H18A Shoshone NF, C 83.41 40 ⇓P **P 21 43 36.6 +0.7**
baz=84,SNR=14
X27A F and S Farms, 83.41 51 ⇓P **P 21 43 36.4 +0.4**
baz=84,SNR=14
M21A Separation Pea 83.42 44 ⇑P **P 21 43 36.4 +0.4**
baz=84,SNR=64
F17A Fitzpatrick Pl 83.42 39 ⇑P **P 21 43 36.7 +0.9**
baz=84
A14A Double T Ranch 83.44 35 ⇓P **P 21 43 35.9 +0.2**
baz=84

P23A **Jefferson** 83.44 46 ⇓P P 21 43 37.7 +1.4
baz=84,SNR=13
R24A **Sanders Place,** 83.45 47 ⇓P P 21 43 36.9 +0.7
baz=84,SNR=22
D16A **Dana Ranch, Ca** 83.47 37 ⇑P P 21 43 36.3 +0.3
baz=84
T25A **Trinidad** 83.48 49 ⇑P P 21 43 36.7 +0.3
baz=84,SNR=20
I19A **Meeteetse** 83.52 41 ⇑P P 21 43 37.0 +0.6
baz=84,SNR=13
129A **Stewart Farms,** 83.55 54 ⇑P P 21 43 37.0 +0.4
baz=84,SNR=9.8
B15A **Bradely Ranch,** 83.56 36 ⇑P P 21 43 35.9 -0.6
baz=84
732A **Laxson Ranch,** 83.57 58 ⇓P P 21 43 37.0 +0.2
baz=84
L21A **Rawlins** 83.58 43 ⇑P P 21 43 36.9 +0.1
baz=84,SNR=19
E17A **Martinsdale** 83.58 38 ⇓P P 21 43 37.0 +0.3
baz=84
W27A **Bowe Ranch, En** 83.61 51 ⇑P P 21 43 37.1 +0.2
baz=84,SNR=64
330A **Mertzon** 83.61 55 ⇑P P 21 43 36.8 -0.2
baz=84,SNR=9.9
U26A **Atchley Ranch,** 83.65 50 ⇑P P 21 43 37.6 +0.3
baz=84,SNR=42
N22A **Wattenberg Ran** 83.66 45 ⇓P P 21 43 37.9 +0.6
baz=84
S25A **Robets Cordova** 83.69 48 ⇓P P 21 43 37.9 +0.5
baz=84,SNR=40
Q24A **Divide** 83.74 47 ⇑P P 21 43 38.5 +0.7
baz=84,SNR=25
C16A **Fuhringer Ranc** 83.76 37 ⇑P P 21 43 37.4 0.0
baz=84,SNR=5.6
O23A **Lake Granby, G** 83.76 45 ⇑P P 21 43 38.4 +0.5
baz=84,SNR=15
Y28A **McKinney Farm,** 83.76 52 ⇑P P 21 43 37.7 0.0
baz=84
J20A **Shoshoni** 83.77 42 ⇓P P 21 43 38.2 +0.6
baz=84,SNR=38
431A **Sonora** 83.78 56 ⇑P P 21 43 37.7 -0.2
baz=84,SNR=6.6
ISCO **Idaho Springs** 83.78 46 *e*P P 21 43 39.0 +1.0
ISCO pmax pmax
comp=Z,36nm,1.3s
ISCO **Idaho Springs** 83.78 46 *e*P P 21 43 39.0 +1.0
comp=Z,36nm,1.3s
ISCO **Idaho Springs** 83.78 46 ⇑P P 21 43 38.5 +0.4
baz=84,SNR=14
G18A **Lazy EL Ranch,** 83.79 40 ⇑P P 21 43 38.4 +0.7
baz=84,SNR=5.2
H19A **Powell** 83.83 40 ⇓P P 21 43 38.8 +0.9
baz=84,SNR=10
M22A **Cedar Creek Ra** 83.83 44 ⇓P P 21 43 38.4 +0.2
baz=84
PMSA **Palmer Station** 83.84 156 P P 21 43 38.5 +1.0
PMSA **Palmer Station** 83.84 156 P P 21 43 38.5 +1.0
comp=Z,28nm,0.9s,baz=240,slow=4.2,SNR=3.6
230A **Sterling City** 83.84 55 ⇓P P 21 43 38.3 +0.1
baz=84,SNR=5.7
RLMT **Red Lodge** 83.88 40 *e*P P 21 43 38.5 +0.3
comp=Z,29nm,1.1s
Z29A **Hungry Hill Ra** 83.92 53 ⇑P P 21 43 38.4 -0.1
baz=84,SNR=21
K21A **Alcova** 83.97 43 ⇑P P 21 43 38.9 +0.1
baz=84,SNR=26
EGAK **Eagle** 83.97 13 *e*P P 21 43 38.5 +0.6
comp=Z,29nm,0.9s
F18A **Big Timber** 83.99 39 ⇓P P 21 43 39.6 +0.9
baz=84,SNR=5.1
R25A **Fountain Ranch** 84.00 48 ⇑P P 21 43 39.0 0.0
baz=84,SNR=15
632A **Uvalde** 84.00 57 ⇑P P 21 43 39.6 +0.6
baz=84,SNR=9.1
I20A **Worland** 84.02 41 ⇑P P 21 43 39.1 +0.3
baz=84,SNR=38
D17A **Six Diamond Ra** 84.03 38 ⇓P P 21 43 39.4 +0.5
baz=84,SNR=7.7
X28A **Dimmitt** 84.04 52 ⇑P P 21 43 39.1 -0.1
baz=84
N23A **Red Feather La** 84.05 45 ⇑P P 21 43 40.0 +0.7
baz=84,SNR=18
V27A **Dan Oppiter Fa** 84.06 50 ⇓P P 21 43 39.3 +0.1
baz=84,SNR=9.4
T26A **Comanche Natio** 84.09 49 ⇑P P 21 43 39.1 -0.4
baz=84,SNR=13
B16A **M & M Farms, S** 84.10 36 ⇓P P 21 43 38.6 -0.6
baz=84
532A **Rocksprings** 84.14 57 ⇓P P 21 43 39.9 +0.2
baz=84,SNR=14
P24A **Kohler Place,** 84.15 46 ⇓P P 21 43 40.4 +0.6
baz=84
331A **San Angelo** 84.16 55 ⇓P P 21 43 39.4 -0.4
baz=84,SNR=5.5
J21A **Lysite** 84.17 42 ⇑P P 21 43 40.2 +0.5
baz=84,SNR=41
Y29A **Porterfield Fa** 84.18 53 ⇓P P 21 43 40.2 +0.3
baz=84,SNR=8.9
E18A **Harlowton** 84.20 38 ⇓P P 21 43 40.5 +0.8
baz=84,SNR=9.5
L22A **Ellis Ranch, M** 84.23 44 ⇓P P 21 43 40.8 +0.7
baz=84,SNR=14
130A **Snyder** 84.23 54 ⇑P P 21 43 40.3 +0.1
baz=84,SNR=10
C17A **Wharram Farm,** 84.24 37 ⇓P P 21 43 40.1 +0.3
baz=84,SNR=11
O24A **Longmont** 84.30 46 ⇑P P 21 43 41.1 +0.7
baz=84
W28A **Vega** 84.33 51 ⇓P P 21 43 40.2 -0.4
baz=84,SNR=5.4
U27A **Thompson Grove** 84.34 50 ⇓P P 21 43 40.2 -0.5
baz=84,SNR=11
JCT **Junction City** 84.35 56 *e*P P 21 43 40.9 +0.1
JCT pmax pmax
comp=Z,15nm,0.8s
JCT **Junction City** 84.35 56 *e*P P 21 43 40.9 +0.1
comp=Z,15nm,0.8s
JCT **Junction City** 84.35 56 ⇓P P 21 43 40.3 -0.5
baz=84
Q25A **Bedland, Calha** 84.35 47 ⇑P P 21 43 40.5 -0.3
baz=85
H20A **Greybull** 84.36 41 ⇑P P 21 43 40.3 -0.2
baz=85,SNR=6.7
S26A **Kim** 84.36 49 ⇑P P 21 43 40.4 -0.4
baz=85,SNR=21
Z30A **Sanderson Ranc** 84.37 53 ⇓P P 21 43 40.8 -0.1
baz=85,SNR=48
X29A **Tulia** 84.39 52 ⇓P P 21 43 40.9 0.0
baz=85
F19A **Roth Farm, Mol** 84.43 39 ⇑P P 21 43 41.4 +0.5
baz=85,SNR=9.7
M23A **Laramie** 84.45 44 ⇑P P 21 43 41.4 +0.1
baz=85,SNR=13
K22A **Casper** 84.45 43 ⇑P P 21 43 41.1 0.0
baz=85,SNR=7.3
231A **Bronte** 84.49 55 ⇓P P 21 43 41.0 -0.4
baz=85,SNR=21
I21A **Big Trails, Te** 84.49 42 ⇑P P 21 43 41.2 -0.2
baz=85,SNR=34
COLD **Coldfoot** 84.50 9 *e*P P 21 43 42.0 +1.3
432A **Menard** 84.50 56 ⇑P P 21 43 41.4 -0.1
baz=85,SNR=13
V28A **Channing** 84.51 51 ⇑P P 21 43 41.4 -0.1
baz=85
B17A **L&G Farms, Che** 84.55 37 ⇑P P 21 43 41.3 -0.1
baz=85
PHWY **Pilot Hill** 84.56 45 *e*pP pP 21 44 13.3 +8.1
AMTX **Amarillo** 84.57 52 *e*P P 21 43 41.7 -0.1
AMTX *e*pP **pP** 21 44 07.5 +2.2
comp=Z,103nm,1.0s
G20A **Bridger** 84.57 40 ⇑P P 21 43 41.8 +0.1
baz=85
D18A **Linhart Farms,** 84.58 38 ⇓P P 21 43 42.4 +0.8
baz=85
R26A **Arlington** 84.66 48 ⇑P P 21 43 42.2 -0.1
baz=85,SNR=16
P25A **Willow Gulch B** 84.66 47 ⇓P P 21 43 42.7 +0.3
baz=85,SNR=6.0
T27A **Campo** 84.67 49 ⇑P P 21 43 42.0 -0.4
baz=85,SNR=20
W29A **Amraillo** 84.69 51 ⇑P P 21 43 42.7 +0.2
baz=85,SNR=5.7
131A **Roby** 84.71 54 ⇓P P 21 43 42.6 +0.1
baz=85,SNR=12
332A **Millersview** 84.73 56 ⇑P P 21 43 42.5 -0.1
baz=85,SNR=13
L23A **Garrett** 84.75 44 ⇓P P 21 43 42.8 0.0
baz=85,SNR=22

U28A **Mallet** 84.76 50 ⇓P P 21 43 42.5 -0.3
baz=85
Y30A **Stafford Cattl** 84.78 53 ⇑P P 21 43 42.8 -0.1
baz=85,SNR=15
S27A **Las Animas** 84.80 49 ⇑P P 21 43 42.7 -0.3
baz=85
E19A **Rath Farm, Rou** 84.82 39 ⇓P P 21 43 43.3 +0.4
baz=85
BILL **Bilibino** 84.87 352 *d* iP P 21 43 43.1 +0.7
BILL *e* 21 46 59.5
BILL *i* S **S** 21 53 58.0 -5.3
BILL pmax pmax
comp=Z,44nm,1.2s
Q26A **Hugo** 84.87 47 ⇑P P 21 43 43.1 -0.2
baz=85
F20A **Billings** 84.89 40 ⇑P P 21 43 43.6 +0.4
baz=85,SNR=5.1
A17A **Triple J Farms** 84.94 36 ⇑P P 21 43 43.6 +0.3
baz=85,SNR=12
O25A **Wiggins** 84.95 46 ⇓P P 21 43 44.1 +0.4
baz=85
232A **Coleman** 85.00 55 ⇓P P 21 43 44.0 0.0
baz=85,SNR=40
X30A **Coker Ranch, T** 85.02 52 ⇑P P 21 43 44.0 -0.1
baz=85,SNR=13
EGMT **Eagleton** 85.02 37 ⇑P P 21 43 43.9 +0.1
baz=85
H21A **Big Horn, Sher** 85.03 41 ⇓P P 21 43 44.1 +0.1
baz=85
I22A **9 Mile Ranch,** 85.05 42 ⇑P P 21 43 44.2 +0.1
baz=85,SNR=8.9
M24A **Cheyenne** 85.06 45 ⇑P P 21 43 44.5 +0.3
baz=85
V29A **Stinnett** 85.08 51 ⇑P P 21 43 44.3 -0.1
baz=85
K23A **Bowen Ranch, D** 85.09 43 ⇓P P 21 43 44.3 0.0
baz=85,SNR=5.7
D19A **Cripps Ranch,** 85.11 38 ⇓P P 21 43 44.9 +0.6
baz=85,SNR=7.4
R27A **Eads** 85.12 48 ⇑P P 21 43 44.1 -0.5
baz=85
Z31A **Sharp Cattle R** 85.14 54 ⇑P P 21 43 44.6 -0.1
baz=85,SNR=36
B18A **Beardsley Farm** 85.19 37 ⇑P P 21 43 44.9 +0.3
baz=85,SNR=6.3
G21A **Lodge Grass** 85.20 40 ⇓P P 21 43 44.8 0.0
baz=85
L24A **Wheatland** 85.23 44 ⇓P P 21 43 45.6 +0.5
baz=85
E20A **Meyer Farm, Mu** 85.24 39 ⇓P P 21 43 45.3 +0.4
baz=86
P26A **Davis Ranch, A** 85.26 47 ⇓P P 21 43 45.3 0.0
baz=86
ABTX **Abilene, Hawle** 85.27 54 ⇓P P 21 43 45.5 +0.2
baz=86,SNR=47
N25A **Grover** 85.28 45 ⇓P P 21 43 45.4 0.0
baz=86
C19A **Slack Wire Ran** 85.29 38 ⇑P P 21 43 45.9 +0.8
baz=86,SNR=11
Y31A **Rekieta Farm,** 85.30 53 ⇑P P 21 43 45.5 +0.1
baz=86,SNR=17
A18A **Metzger Ranch,** 85.42 36 ⇑P P 21 43 45.8 +0.1
baz=86
J23A **Dilts Ranch, B** 85.43 43 ⇑P P 21 43 45.9 -0.1
baz=86
H22A **Clearmont** 85.45 41 ⇓P P 21 43 46.0 0.0
baz=86
S28A **Manter** 85.49 49 ⇑P P 21 43 46.2 -0.1
baz=86
U29A **Oasis Ranch, S** 85.50 50 ⇑P P 21 43 45.9 -0.5
baz=86,SNR=5.2
D20A **Manuel Ranch,** 85.52 38 ⇓P P 21 43 46.8 +0.6
baz=86,SNR=8.0
W30A **Crocket Farms** 85.52 52 ⇓P P 21 43 46.5 0.0
baz=86
F21A **Absaloka Mine,** 85.53 40 ⇑P P 21 43 47.1 +0.7
baz=86
O26A **Horse Wrangler** 85.57 46 ⇑P P 21 43 46.9 +0.2
baz=86
K24A **Anderson Ranch** 85.61 43 ⇓P P 21 43 46.9 0.0
baz=86
USHA **Ushuaia** 85.62 146 P P 21 43 47.7 +1.1
USHA **Ushuaia** 85.62 146 P P 21 43 47.7 +1.1
comp=Z,21nm,0.9s,baz=243,slow=2.3,SNR=6.7
Z32A **Haskell** 85.66 54 ⇑P P 21 43 47.7 +0.5
baz=86
V30A **Spur Ranch, Mi** 85.66 51 ⇑P P 21 43 47.7 +0.4
baz=86,SNR=10
B19A **Brinkman Farms** 85.70 37 ⇓P P 21 43 47.4 +0.3
baz=86
BJI **Beijing** 85.72 314 P P 21 43 48.4 +1.1
BJI S S 21 54 03.0 -10
BJI SS **SS** 21 59 54.4 +2.7
BJI pmax pmax
comp=Z,30nm,1.3s
BJI pmax pmax
comp=Z,420nm,10.3s
BJI LR LR
comp=N,190nm,34.0s
BJI LR LR
comp=E,210nm,27.9s
BJI LR LR
comp=Z,580nm,43.6s
I23A **Meade Ranch, G** 85.73 42 ⇑P P 21 43 47.7 +0.2
baz=86
T29A **Hugoton** 85.76 50 ⇑P P 21 43 47.5 -0.2
baz=86
X31A **McDonald Ranch** 85.77 52 ⇑P P 21 43 47.5 -0.2
baz=86,SNR=9.2
G22A **Birney** 85.77 41 ⇓P P 21 43 47.8 +0.2
baz=86
P27A **Ficken Ranch,** 85.80 47 ⇓P P 21 43 47.6 -0.3
baz=86
UBPT **Khong Chiam** 85.84 287 P P 21 43 49.2 +0.8
R28A **Tribune** 85.85 48 ⇓P P 21 43 48.0 -0.1
baz=86,SNR=8.0
N26A **Koester Ranch,** 85.88 46 ⇓P P 21 43 48.2 -0.1
baz=86
C20A **Veseth Ranch,** 85.90 38 ⇓P P 21 43 48.7 +0.6
baz=86
E21A **Keefer Ranch,** 85.90 39 ⇓P P 21 43 49.0 +0.8
baz=86
L25A **Engebretsen Ra** 85.93 44 ⇑P P 21 43 48.8 +0.3
baz=86
Y32A **R-V Farms, Ver** 85.94 53 ⇑P P 21 43 48.8 +0.2
baz=86,SNR=14
J24A **Dixon Ranch, L** 85.98 43 ⇑P P 21 43 48.7 0.0
baz=86
U30A **WK&E Inc. Balk** 85.99 50 ⇓P P 21 43 48.5 -0.3
baz=86
W31A **Holland Ranch,** 86.00 52 ⇓P P 21 43 48.8 -0.1
baz=86,SNR=15
H23A **Clabaugh Cattl** 86.04 42 ⇑P P 21 43 48.4 -0.5
baz=86
F22A **Rosebud** 86.05 40 ⇓P P 21 43 49.0 +0.1
baz=86
A19A **Klindworth Far** 86.05 37 ⇓P P 21 43 49.1 +0.2
baz=86,SNR=9.9
S29A **Ulysses** 86.07 49 ⇑P P 21 43 49.0 -0.2
baz=86
O27A **Beecher Island** 86.13 47 ⇑P P 21 43 49.5 0.0
baz=86
K25A **Mack Ranch, Ha** 86.19 44 ⇑P P 21 43 50.0 +0.2
baz=86
D21A **La Casta Ranch** 86.19 39 ⇑P P 21 43 50.1 +0.5
baz=86,SNR=5.4
M26A **McRoberts Ranc** 86.20 45 ⇑P P 21 43 49.9 +0.1
baz=86
I24A **Kuemmerle Ranc** 86.23 43 ⇑P P 21 43 49.7 -0.2
baz=86
B20A **Solberg Farm,** 86.23 37 ⇑P P 21 43 50.1 +0.4
baz=86,SNR=7.4
T30A **Plains** 86.28 50 ⇑P P 21 43 49.8 -0.5
baz=86
V31A **Spring Creek L** 86.30 51 ⇑P P 21 43 50.9 +0.5
baz=86,SNR=10.0
G23A **Biddle** 86.33 41 ⇑P P 21 43 50.5 +0.1
baz=86
N27A **Anderson Farm,** 86.34 46 ⇓P P 21 43 50.6 +0.1
baz=86
R29A **Marienthal** 86.37 49 ⇑P P 21 43 50.8 +0.1
baz=87
L26A **Underwood Farm** 86.48 45 ⇓P P 21 43 51.6 +0.4
baz=87
C21A **Desert Coulee** 86.49 38 ⇓P P 21 43 51.6 +0.5
baz=87
A20A **Cobblestone Ra** 86.50 37 ⇑P P 21 43 51.1 0.0
baz=87

U31A **Nine Bar Ranch** 86.52 51 ⇓P P 21 43 51.3 -0.1
baz=87
E22A **Miles City** 86.54 40 ⇓P P 21 43 51.8 +0.5
baz=87
S30A **Montezuma** 86.56 49 ⇓P P 21 43 51.3 -0.3
baz=87
F23A **Volborg** 86.56 41 ⇓P P 21 43 51.7 +0.3
baz=87
H24A **Dirks Ranch, A** 86.67 42 ⇑P P 21 43 51.6 -0.4
baz=87,SNR=8.8
K26A **Motz Farm, Whi** 86.69 44 ⇓P P 21 43 52.3 +0.1
baz=87
D22A **Cohagen** 86.73 39 ⇓P P 21 43 52.9 +0.7
baz=87
M27A **Reverse DX Ran** 86.74 45 ⇑P P 21 43 52.5 0.0
baz=87
OGNE **Ogallala** 86.75 46 ⇑P P 21 43 53.1 +0.7
baz=87
WHTX **Lake Whitney** 86.77 56 ⇓P P 21 43 53.0 +0.3
baz=87
B21A **Ellsworth Farm** 86.82 38 ⇑P P 21 43 53.3 +0.7
baz=87
T31A **Randall Ranch,** 86.93 50 ⇓P P 21 43 53.6 +0.2
baz=87
R30A **Dighton** 86.94 49 ⇑P P 21 43 53.3 -0.1
baz=87
IPM **Ipoh** 86.95 275 *e*P P 21 43 54.0 0.0
comp=Z,28nm,1.0s
IPM **Ipoh** 86.95 275 P P 21 43 54.2 +0.2
E23A **Ismay** 86.97 40 ⇑P P 21 43 54.0 +0.7
baz=87
G24A **Alzada** 87.01 41 ⇑P P 21 43 53.6 -0.1
baz=87
L27A **T5 Ranch, Ells** 87.02 45 ⇓P P 21 43 54.0 +0.2
baz=87
C22A **Vida** 87.18 39 ⇓P P 21 43 54.8 +0.5
baz=87
F24A **Ekalaka** 87.22 41 ⇓P P 21 43 54.6 -0.1
baz=87
S31A **Mullinville** 87.27 50 ⇑P P 21 43 54.9 -0.1
baz=88
D23A **Lindsay** 87.33 39 ⇑P P 21 43 55.8 +0.7
baz=88
B22A **Reddig Ranch S** 87.36 38 ⇑P P 21 43 55.7 +0.4
baz=88
MAW **Mawson** 87.45 199 *e*P P 21 43 55.6 +0.3
comp=Z,9.5nm,1.2s
MAW **Mawson** 87.45 199 P P 21 43 56.1 +0.8
comp=Z,27nm,1.0s,baz=125,slow=6.6,SNR=19
MAW LR LR 22 17 30.3
comp=Z,344nm,21.5s,baz=120,slow=32
E24A **Baker** 87.61 40 ⇑P P 21 43 57.1 +0.6
baz=88
C23A **Lambert** 87.62 39 ⇑P P 21 43 56.9 +0.4
baz=88,SNR=8.7
A22A **Carney Farms,** 87.73 38 ⇑P P 21 43 57.4 +0.4
baz=88
D24A **Glendive** 87.84 40 ⇑P P 21 43 58.3 +0.7
baz=88
C24A **Savage** 87.96 39 ⇓P P 21 43 58.8 +0.7
baz=88
B23A **Brockton** 88.03 38 ⇓P P 21 43 59.4 +1.0
baz=88
GYA **Guiyang** 88.21 298 ⇑iP P 21 44 01.0 +1.1
GYA pP **pP** 21 44 23.8 +0.3
GYA sP **sP** 21 44 33.0 +0.1
GYA PP **PP** 21 47 31.4 +3.0
GYA SKS **SKSac** 21 54 18.3 -2.9
GYA S **S** 21 54 35.6 -2.1
GYA sS **sS** 21 55 15.9 -2.2
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,180nm,5.9s
GYA LR LR
comp=N,3μm,20.8s
GYA LR LR
comp=E,2μm,21.4s
GYA LR LR
comp=Z,3μm,20.9s
A23A **Redstone** 88.32 38 ⇑P P 21 44 00.4 +0.7
baz=88
DGMT **Dagmar** 88.51 38 *e*P P 21 44 00.2 -0.4
DGMT **Dagmar** 88.51 38 ⇑P P 21 44 01.5 +0.9
baz=89
PSI **Prapat** 88.52 273 P P 21 44 00.6 -1.0
INK **Inuvik** 88.62 14 P P 21 44 00.7 +0.1
INK **Inuvik** 88.62 14 P P 21 44 00.7 +0.1
comp=Z,9.6nm,0.9s,baz=216,slow=4.3,SNR=36
INK LR LR 22 17 08.0
comp=Z,219nm,21.2s,baz=125,slow=31
XAN **Xi'an** 88.84 306 P P 21 44 03.8 +1.2
XAN SS SS 22 00 38.3 +0.5
XAN pmax pmax
comp=Z,5.0nm,1.5s
XAN pmax pmax
comp=Z,24nm,5.0s
XAN LR LR
comp=N,340nm,36.0s
XAN LR LR
comp=Z,230nm,39.1s
NATX **Nacogdoches** 88.93 57 *e*P P 21 44 03.8 +0.9
PLCA **Paso Flores** 89.27 132 *e*P P 21 44 06.2 +1.6
PLCA **Paso Flores** 89.27 132 P P 21 44 05.8 +1.2
comp=Z,8.6nm,0.9s,baz=258,slow=6.7,SNR=17
PLCA LR LR 22 13 49.7
comp=Z,382nm,21.1s,baz=235,slow=29
HHC **Hu-ho-hao-te** 89.28 313 *e*P P 21 44 05.3 +0.8
HHC PP **PP** 21 47 39.3 +2.8
HHC SKS **SKSac** 21 54 25.8 -1.0
HHC S **SKKSac** 21 54 41.3 +2.2
HHC SS **SS** 22 00 42.1 -1.7
HHC pmax pmax
comp=Z,46nm,1.2s
HHC pmax pmax
comp=Z,240nm,7.2s
HHC LR LR
comp=N,390nm,20.4s
HHC LR LR
comp=E,360nm,22.8s
HHC LR LR
comp=Z,1μm,39.6s
TUL1 **Tulsa** 89.42 52 ⇓P P 21 44 05.5 +0.3
baz=90
YAK **Yakutsk** 89.45 337 *e*P P 21 44 02.3 -2.3
YAK *e**PP **pP** 21 44 28.1 -0.1
YAK *e* 21 54 43.1
YAK pmax pmax
comp=Z,16nm,1.0s
YKA **Yellowknife Ar** 90.43 23 P P 21 44 09.1 -0.1
YKA **Yellowknife Ar** 90.43 23 P P 21 44 09.1 -0.1
comp=Z,10nm,1.0s,baz=236,slow=4.3,SNR=64
MIAR **Mount Ida** 90.69 54 *e*P P 21 44 11.6 +0.5
MIAR **Mount Ida** 90.69 54 *e*P P 21 44 11.6 +0.5
TEIG **Tepich** 90.91 69 *e*P P 21 44 13.5 +1.0
KMI **Kunming** 91.18 296 P P 21 44 16.1 +2.2
KMI sP **sP** 21 44 44.6 -2.4
KMI PP **PP** 21 47 53.9 +1.7
KMI SKS **SKSac** 21 54 39.9 +1.1
KMI SS **SS** 22 01 14.0 +1.7
KMI pmax pmax
comp=Z,14nm,1.0s
KMI pmax pmax
comp=Z,78nm,6.3s
KMI LR LR
comp=N,190nm,27.6s
KMI LR LR
comp=E,330nm,32.5s
KMI LR LR
comp=Z,1μm,37.4s
JTS **JuntasAbangare** 91.28 80 *e*P P 21 44 15.3 +1.0
JTS **JuntasAbangare** 91.28 80 LR LR 22 14 27.1
comp=Z,755nm,19.8s,baz=94,slow=28
ECSD **EROS Data Cent** 91.52 45 *e*P P 21 44 14.2 -0.6
CD2 **Chengdu** 92.00 301 P P 21 44 17.5 +0.1
CD2 pP **pP** 21 44 40.8 -0.2
CD2 sP **sP** 21 44 50.0 -0.4
CD2 PP **PP** 21 48 00.3 +2.0
CD2 SKS **SKSac** 21 54 40.9 -1.9
CD2 S **S** 21 55 09.4 -2.9
CD2 sS **sS** 21 55 49.6 -3.4
CD2 SS **SS** 22 01 23.3 -0.2
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,360nm,5.4s

CD2 LR LR
comp=N,250nm,16.6s
CD2 LR LR
comp=E,510nm,19.6s
CD2 LR LR
comp=Z,850nm,35.0s
SYO Syowa Base 92.24 191 ⇓*eP* **P 21 44 16.4 -1.3**
FFC Flin Flon 92.41 33 *iP* **P 21 44 18.4 -0.2**
FFC Flin Flon 92.41 33 *eP* **P 21 44 18.3 -0.2**
SNAA Sanae 92.54 177 *eP* **P 21 44 19.8 +0.6**
SNAA Sanae 92.54 177 *es*P sP 21 44 48.5 -3.7
SNAA Sanae 92.54 177 *eP* **P 21 44 19.8 +0.6**
SNAA Sanae 92.54 177 P **P 21 44 19.6 +0.4**
comp=Z,15nm,1.0s,baz=199,slow=5.1,SNR=70
CMAR Chiang Mai Arr 92.73 288 P **P 21 44 22.9 +1.9**
CMAR PKKP **PKKPbc 22 01 32.7 +0.5**
CMAR Chiang Mai Arr 92.73 288 P **P 21 44 22.9 +1.9**
comp=Z,17nm,0.9s,baz=94,slow=2.7,SNR=69
CMAR PKKP **PKKPbc 22 01 32.7 +0.5**
comp=Z,0.5nm,0.8s,baz=285,slow=5.5,SNR=5.0
CMAR LR LR 22 24 30.7
comp=Z,250nm,20.5s,baz=116,slow=34
CHTO Chiang Mai 92.82 289 *eP* **P 21 44 23.0 +1.6**
CHTO Chiang Mai 92.82 289 *eP* **P 21 44 23.0 +1.6**
CHTO Chiang Mai 92.82 289 P **P 21 44 22.8 +1.4**
VNA2 Neumayer--Watz 92.99 175 *eP* **P 21 44 22.4 +1.3**
baz=171,slow=2.7
VNA2 Neumayer--Watz 92.99 175 *es*P sP 21 44 52.6 -1.6
baz=171,slow=2.7
LCO Las Campanas 93.16 121 *eP* **P 21 44 24.6 +1.5**
VNA1 Neumayer--Stat 93.19 175 *eP* **P 21 44 23.5 +1.5**
VNA1 Neumayer--Stat 93.19 175 *es*P sP 21 44 52.7 -2.4
LZH Lanzhou 93.44 306 *eP* **P 21 44 24.8 +0.8**
LZH pP **pP 21 44 48.1 +0.4**
LZH sP **sP 21 44 57.5 +0.4**
LZH PP **PP 21 48 13.0 +3.4**
LZH SKS **SKSac 21 54 49.1 -1.7**
LZH *eS* **S 21 55 22.1 -3.0**
LZH sS **sS 21 56 03.0 -2.9**
LZH SS **SS 22 01 45.0 +0.9**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,190nm,6.2s
LZH LR LR
comp=N,540nm,18.5s
LZH LR LR
comp=E,950nm,19.0s
LZH LR LR
comp=Z,2μm,20.0s
AGMN Agassiz Nation 93.57 41 *eP* **P 21 44 23.4 -0.7**
ULM Lac du Bonnet 94.22 39 P **P 21 44 25.9 -1.1**
ULM Lac du Bonnet 94.22 39 P **P 21 44 25.9 -1.1**
comp=Z,9.7nm,0.9s,baz=246,slow=5.9,SNR=5.1
ULM LR LR 22 24 07.5
comp=Z,510nm,18.1s,baz=70,slow=34
CFAA Coronel Fontan 94.25 124 P **P 21 44 29.1 +1.2**
CFAA Coronel Fontan 94.25 124 P **P 21 44 29.1 +1.2**
comp=Z,2.1nm,0.9s,baz=243,slow=4.9,SNR=29
SPMN St. Paul 94.58 44 ⇑P **P 21 44 28.8 0.0**
baz=95
SONM Songino Array 95.12 318 PP PP 21 48 19.1 -3.3
SONM Songino Array 95.12 318 PP PP 21 48 19.1 -3.3
comp=Z,1.2nm,1.1s,baz=124,slow=7.2,SNR=4.0
SONM LR LR 22 21 12.8
comp=Z,202nm,21.6s,baz=113,slow=32
JFWS Jewell Farm 95.67 47 *eP* **P 21 44 33.5 -0.4**
JFWS Jewell Farm 95.67 47 *eP* **P 21 44 33.5 -0.4**
GTA Gaotai 97.41 309 *eP* Pdif 21 44 42.9 +0.8
GTA pP pP 21 45 03.0 -2.7
GTA sP sP 21 45 12.8 -2.3
GTA pmax pmax
comp=Z,3.0nm,1.1s
TKL Tuckaleechee C 98.72 55 LR LR 22 25 53.8
comp=Z,361nm,18.2s,baz=258,slow=33
LPAZ La Paz 99.69 110 P **Pdif 21 44 54.6 +1.3**
LPAZ La Paz 99.69 110 P **Pdif 21 44 54.6 +1.3**
comp=Z,2.1nm,0.9s,baz=256,slow=4.2,SNR=7.9
LPAZ LR LR 22 20 10.2
comp=Z,296nm,20.1s,baz=201,slow=29
RES Resolute Bay 102.08 15 *ePdif* **Pdif 21 45 02.0 +0.2**
comp=Z,4.0nm,1.0s
WMQ Urumqi 107.11 312 *ePdif* **Pdif 21 45 24.4 -0.6**
WMQ PP **PP 21 49 54.3 +1.5**
WMQ S **Sdif 21 57 20.1 0.0**
WMQ SS **SS 22 04 55.3 +1.5**
WMQ AMB AMB
comp=Z,140nm,8.4s
WMQ LR LR
comp=N,260nm,17.0s
WMQ LR LR
comp=E,370nm,17.0s
WMQ LR LR
comp=Z,210nm,20.0s
ZALV Zalesovo Beam 109.51 322 PKiKP **PKiKP 21 49 37.3 -0.8**
ZALV PP **PP 21 50 07.8 -2.1**
ZALV PKKPab **PKKPab 22 00 54.5 +0.3**
ZALV Zalesovo Beam 109.51 322 PKiKP **PKiKP 21 49 37.3 -0.8**
comp=Z,0.5nm,0.5s,baz=70,slow=0.8,SNR=4.9
ZALV PP **PP 21 50 07.8 -2.1**
comp=Z,0.6nm,0.6s,baz=93,slow=4.6,SNR=2.3
ZALV PKKPab **PKKPab 22 00 54.5 +0.3**
comp=Z,0.4nm,0.4s,baz=272,slow=4.2,SNR=4.1
MK31 Makanchi Array 111.08 314 *ePKiKP* **PKiKP 21 49 40.7 -0.7**
MK31 *ePP* **PP 21 50 20.7 -0.8**
MKAR Makanchi Array 111.08 314 PKiKP **PKiKP 21 49 40.1 -1.2**
MKAR PP PP 21 50 16.2 -5.3
MKAR PKKPbc **PKKPbc 22 00 37.8 -1.9**
MKAR PKKPab **PKKPab 22 00 48.9 +1.4**
MKAR Makanchi Array 111.08 314 PKiKP **PKiKP 21 49 40.1 -1.2**
comp=Z,0.6nm,0.4s,baz=66,slow=1.7,SNR=9.0
MKAR PP PP 21 50 16.2 -5.3
comp=Z,0.6nm,0.6s,baz=66,slow=3.6,SNR=3.6
MKAR PKKPbc **PKKPbc 22 00 37.8 -1.9**
comp=Z,0.8nm,0.9s,baz=273,slow=3.3,SNR=6.0
MKAR PKKPab **PKKPab 22 00 48.9 +1.4**
comp=Z,1.7nm,0.8s,baz=260,slow=3.8,SNR=12
KURK Kurchatov 113.42 319*c iP*KIKP **PKiKP 21 49 45.7 +0.2**
KURK pmax pmax
comp=Z,7.0nm,1.2s
KURK Kurchatov 113.42 319 *ePKiKP* **PKiKP 21 49 45.0 -0.5**
KURK PKKPbc **PKKPbc 22 00 30.1 -1.9**
KURBB Kurchatov Arra 113.48 319 PKKPbc PKKPbc 22 00 30.1 -1.7
comp=Z,3.4nm,1.1s,baz=262,slow=4.2,SNR=15
KSH Kashi 115.69 307 *ePKP* **PKPdf 21 49 52.0 +1.5**
KSH *ePKS* **PKSdf 21 53 27.8 +0.5**
KSH *eSKS* **SKSdf 21 56 53.3 -1.6**
KSH AMB AMB
comp=Z,230nm,4.9s
KSH LR LR
comp=N,130nm,4.9s
KSH LR LR
comp=E,190nm,4.8s
KSH LR LR
comp=Z,310nm,5.5s
AAK Ala-Archa 116.72 310*c iP*KIKP **PKPdf 21 49 53.0 +0.6**
AAK pmax pmax
comp=Z,8.0nm,1.7s
AAK Ala-Archa 116.72 310 PKKPbc PKKPbc 22 00 21.4 +0.9
AAK Ala-Archa 116.72 310 PKKPbc PKKPbc 22 00 21.4 +0.9
comp=Z,2.8nm,0.8s,baz=255,slow=6.7,SNR=3.6
BRVK Borovoye 118.23 322*c iP*KIKP **PKPdf 21 49 54.4 -0.3**
BRVK pmax pmax
comp=Z,7.0nm,1.7s
KBL Kabul 121.34 301 *ePKIKP* **PKPdf 21 50 01.8 +0.2**
KBL Kabul 121.34 301 *ePKPdf* **PKPdf 21 50 01.8 +0.2**
SVE Sverdlovsk 122.44 328 *ePKIKP* **PKPdf 21 50 03.3 +0.6**
SVE pmax pmax
comp=Z,14nm,1.2s
ARU Arti 123.65 328 *i* PKIKP **PKPdf 21 50 04.8 -0.3**
ARU 21 51 45.9
ARU 21 56 56.1
KEV Kevo 124.56 352 *ePKIKP* **PKPdf 21 50 04.2 -2.2**
KEV Kevo 124.56 352 *epkp* **PKPdf 21 50 04.2 -2.2**
ARCES ARCESS Array B 124.97 352 PKP **PKPdf 21 50 07.0 -0.3**
ARCES ARCESS Array B 124.97 352 PKP **PKPdf 21 50 07.0 -0.3**
comp=Z,18nm,0.9s,baz=2.9,slow=1.8,SNR=33
APA Apatity 125.39 348 ⇓*iP*KIKP **PKPdf 21 50 10.0 +1.9**
APA *e* 21 57 12.0
ABKAR Akbulak array 125.50 320 *ePKPdf* **PKPdf 21 50 08.9 +0.1**
JOF Joensuu 129.82 346 *ePKIKP* **PKPdf 21 50 15.6 -1.1**
JOF pmax pmax
comp=Z,8.0nm,0.7s
JOF Joensuu 129.82 346 *epkp* **PKPdf 21 50 15.6 -1.1**
comp=Z,7.8nm,0.7s

KAF Kangasniemi 131.65 348 *ePKIKP* **PKPdf 21 50 18.4 -1.7**
KAF pmax pmax
comp=Z,8.0nm,0.8s
KAF Kangasniemi 131.65 348 *epkp* **PKPdf 21 50 18.4 -1.7**
comp=Z,7.6nm,0.8s
FINES FINESS Array B 132.30 347 PKPpre PKPpre 21 50 12.7
FINES PKP **PKPdf 21 50 21.6 +0.2**
FINES FINESS Array B 132.30 347 PKhKP PKPpre 21 50 12.7
comp=Z,1.9nm,0.9s,baz=29,slow=3.2,SNR=6.0
FINES PKP **PKPdf 21 50 21.6 +0.2**
comp=Z,10nm,0.9s,baz=29,slow=3.2,SNR=16
BOSA Boshof 132.33 202 PKP **PKPdf 21 50 23.3 +0.6**
BOSA Boshof 132.33 202 PKP **PKPdf 21 50 23.3 +0.6**
comp=Z,11nm,1.0s,baz=117,slow=2.3,SNR=8.0
MOS Moscow 133.58 336 *ePKHKP* PKPpre 21 50 09.8
OBN Obninsk 134.45 336*↑iP*KIKP **PKPdf 21 50 24.6 -1.0**
OBN *i* 21 53 06.5
OBN *i* PS **PS 22 03 12.0 -8.4**
OBN *i* SS SS 22 10 43.1 +1.5
OBN pmax pmax
comp=Z,17nm,1.1s
NB2 NORSAR Subarra 134.67 357 PKPdf **PKPdf 21 50 25.8 -0.1**
comp=Z,7.5nm,1.1s,baz=6.6,slow=1.8
NB2 NORSAR Subarra 134.67 357 PKPdf **PKPdf 21 50 25.8 -0.1**
baz=6.6,slow=1.8
NOA NORSAR Array B 134.67 357 PKP **PKPdf 21 50 25.9 0.0**
NOA NORSAR Array B 134.67 357 PKP **PKPdf 21 50 25.9 0.0**
comp=Z,1.2nm,0.9s,baz=8.0,slow=3.2,SNR=11
VRHR Novokhopersk 134.97 329 *ePKIKP* **PKPdf 21 50 25.8 -0.9**
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,8.0nm,0.9s
VRHR pmax pmax
comp=Z,7.0nm,0.9s
MAK Makhachkala 135.85 316 *i* P **Pdif 21 47 28.0 -4.8**
MAK *e* 21 50 27.8
MAK *e* 21 53 17.1
MAK *e*PPP PPP 21 56 03.8
MAK *e* 21 57 31.1
MAK pmax pmax
comp=Z,31nm,1.0s
MAK MLR MLR
comp=Z,228nm,21.0s
VSR Storozhevoye 136.08 331 *ePKIKP* **PKPdf 21 50 28.8 0.0**
VSR pmax pmax
comp=E,6.0nm,0.8s
VSR pmax pmax
comp=Z,6.0nm,0.8s
VSR pmax pmax
comp=N,3.0nm,0.6s
ZEI Tsey 138.29 318 *i* PKIKP **PKPdf 21 50 33.5 0.0**
ZEI pmax pmax
comp=Z,6.0nm,1.6s
KIV Kislovodsk 138.48 320 *i* PKIKP **PKPdf 21 50 36.4 +2.8**
KIV *e* 21 53 27.4
KIV *e*SS SS 22 11 31.9 +0.9
KIV pmax pmax
comp=Z,4.0nm,1.1s
SUW Suwalki 139.70 345 PKIKP **PKPdf 21 50 34.8 -0.6**
SUW Suwalki 139.70 345 PKPdf **PKPdf 21 50 34.8 -0.6**
CLDR Caldiran 139.93 313 *eP* **PKPdf 21 50 39.1 +2.5**
SOC Sochi 140.49 321 *i* PKIKP **PKPdf 21 50 39.0 +1.9**
SOC *e* 21 53 35.9
SOC *e*SS SS 22 11 50.2 -4.0
AKASG Malin Array Be 140.68 337 PKHKP PKPpre 21 50 30.4
AKASG Malin Array Be 140.68 337 PKPpre PKPpre 21 50 30.4
AKASG Malin Array Be 140.68 337 PKhKP PKPpre 21 50 30.4
comp=Z,4.1nm,0.8s,baz=34,slow=3.9,SNR=4.3
AK01 Malin Array Si 140.69 337 *ePKPdf* **PKPdf 21 50 37.5 +0.2**
CUKT Cukurca 140.92 310 *eP* PKPdf 21 50 32.8 -5.5
ANN Anapa 141.10 324 *i* PKHKP PKPpre 21 50 31.0
ANN pmax pmax
comp=Z,31nm,1.1s
BAYT Ayd¨–ntepe-Bay 141.93 317 *eP* **PKPdf 21 50 35.8 -4.3**
LSZ Lusaka 142.50 216 *ePKPdf* **PKPdf 21 50 39.7 -2.1**
PTK Pertek 143.18 315 *eP* PKPbc 21 50 39.5 -0.1
LVV L'vov 143.20 341 *ePKHKP* PKPab 21 50 38.2 +0.6
ILIC Ilic-Erzincan 143.45 317 *eP* PKPbc 21 50 39.9 -0.3
SVRC Sivrice-ELAZID 143.49 314 *eP* PKPbc 21 50 40.2 -0.2
TSUM Tsumeb 143.61 198 PKP PKPbc 21 50 41.9 +0.7
TSUM *e*PKPdf **PKPdf 21 50 42.4 -1.2**
TSUM Tsumeb 143.61 198 PKP PKPbc 21 50 41.9 +0.7
comp=Z,17nm,1.0s,baz=150,slow=4.8,SNR=5.9
KWP Kalwaria Pacla 143.77 342*↑iP*KIKP PKPbc 21 50 41.2 +0.6
KWP Kalwaria Pacla 143.77 342 *ePKPdf* PKPab 21 50 40.1 +0.3
KWP Kalwaria Pacla 143.77 342*↑iP* PKPbc 21 50 41.2 +0.6
KWP Kalwaria Pacla 143.77 342 *ePKP* PKPbc 21 50 40.4 -0.2
KIS Kishinev 143.80 334 LRM MLR 21 51 04.0
comp=Z,500nm,12.0s
WTSB Winterswijk 143.89 360 *ePKP* PKPab 21 50 40.0 -0.1
comp=Z,51nm,1.3s
OJC Ojcow 144.01 346 *ePKIKP* PKPbc 21 50 42.1 +0.8
OJC Ojcow 144.01 346 *ePKPdf* PKPbc 21 50 42.1 +0.8
OJC *e*PKIKP **PKiKP 21 50 45.6 -1.2**
KSP Ksiaz 144.15 349 *ePKIKP* PKPbc 21 50 42.1 +0.4
KSP *e* 21 51 07.7
KSP *e* 21 54 02.0
KSP Ksiaz 144.15 349 *ePKP* PKPbc 21 50 41.9 +0.2
KVT Kavak 144.16 321 *eP* **PKPab 21 50 41.7 0.0**
CLL Collm 144.18 353 *i* PKIKP PKPbc 21 50 41.8 0.0
CLL pmax pmax
comp=Z,29nm,0.9s
CLL Collm 144.18 353*⇑iP*KPdf PKPbc 21 50 41.8 0.0
comp=Z,29nm,0.9s
CLL *i* 21 50 48.6
CLL *ep*PKiKP pPKiKP 21 51 10.0 -1.6
CLL *es*PKiKP sPKiKP 21 51 21.0 +0.2
comp=Z,12nm,0.8s
CLL *e*PP **PP 21 54 03.0 +5.1**
DIKM Dikmen 144.29 322 *eP* **PKPab 21 50 38.4 -3.7**
AKCD Akcadag 144.47 315 *i* P **PKPdf 21 50 44.3 -0.3**
AKCD *i* S **sPKiKP 21 51 23.4 +1.4**
BRG Berggiesshubel 144.49 352 *ePKP* PKPbc 21 50 42.7 -0.1
comp=Z,12nm,1.3s
BRG *i* 21 50 47.5
comp=Z,21nm,1.1s
BRG *e* 21 51 18.8
comp=Z,27nm,1.6s
BRG *e*PP **PP 21 53 54.7 -5.1**
comp=Z,7.6nm,1.2s
BRG SS SS 22 12 34.0 -4.9
BRG
comp=N,184nm,19.9s
BRG
comp=E,136nm,22.1s
BRG
comp=Z,196nm,16.5s
BRG Berggiesshubel 144.49 352 *ePKIKP* PKPbc 21 50 42.7 0.0
BRG pmax pmax
comp=Z,12nm,1.3s
BRG MLR MLR
comp=N,184nm,19.9s
BRG MLR MLR
comp=E,136nm,22.1s
BRG MLR MLR
comp=Z,196nm,16.5s
KOLS Kolonicke sedl 144.52 342 *ePKIKP* PKPbc 21 50 43.1 +0.1
KOLS Kolonicke sedl 144.52 342 *ePKP* PKPbc 21 50 43.1 +0.1
UPC Upice 144.52 350 *ePKIKP* PKPbc 21 50 43.3 +0.4
UPC Upice 144.52 350 *ePKP* PKPbc 21 50 43.3 +0.4
DPC Dobruska-Polom 144.62 349 *ePKIKP* **PKPdf 21 50 44.2 -0.1**
DPC Dobruska-Polom 144.62 349 *ePKP* **PKPdf 21 50 44.2 -0.1**
DPC *ep*PKP pPKPdf 21 51 18.7 +10
NIE Niedzica 144.62 344 *ePKIKP* **PKPdf 21 50 44.2 -0.2**
NIE Niedzica 144.62 344 *ePKPdf* **PKPdf 21 50 44.2 -0.2**
NIE *e*PKiKP **PKiKP 21 50 47.3 -0.8**
DARE Darende-Malaty 144.63 316 *eP* **PKPab 21 50 41.7 -1.9**
BUR08 Bucovina Ar. S 144.69 338 *ePKPdf* **PKPdf 21 50 44.6 0.0**
BURAR Bucovina Array 144.71 338*↑iP* **PKPdf 21 50 44.5 -0.1**
PVCC Panska Ves 144.73 351 *ePKIKP* **PKPdf 21 50 44.5 0.0**
PVCC Panska Ves 144.73 351 *ePKP* **PKPdf 21 50 44.5 0.0**
OKC Ostrava-Krasne 144.75 347 *ePKIKP* **PKPdf 21 50 44.2 -0.3**
OKC Ostrava-Krasne 144.75 347 *ePKP* **PKPdf 21 50 44.2 -0.3**
OKC *ep*PKP pPKPdf 21 51 18.7 +10
CRVS Cervenica-Dubn 144.78 343 *ePKIKP* **PKPab 21 50 43.4 -0.3**
CRVS Cervenica-Dubn 144.78 343 *ePKP* **PKPab 21 50 43.4 -0.3**
CRVS *e* 21 51 17.7
UZH Uzhgorod 144.79 342⇓*iP*KIKP **PKPdf 21 50 44.9 +0.3**
UZH *e* 21 51 11.9
KRLC Kraliky 144.80 349 *ePKIKP* **PKPdf 21 50 44.5 -0.2**
KRLC Kraliky 144.80 349 *ePKP* **PKPdf 21 50 44.5 -0.2**
KRLC *ep*PKP pPKPdf 21 51 18.8 +10

BZK Bozkurt 144.83 323 *eP* **PKPab 21 50 42.8 -1.2**
MORC Moravsky Berou 144.93 348 *ePKIKP* PKPbc 21 50 44.3 0.0
MORC Moravsky Berou 144.93 348 *ePKPab* PKPbc 21 50 44.3 0.0
MORC Moravsky Berou 144.93 348*⇑iP* **PKPdf 21 50 44.8 -0.1**
MOX Moxa 144.97 354 *ePKIKP* PKPbc 21 50 44.2 -0.1
MOX Moxa 144.97 354 *ePKPbc* PKPbc 21 50 44.2 -0.1
BEBN Eben Emael 145.05 1 PKP **PKPdf 21 50 44.8 -0.1**
PLN Plauen 145.08 354 *ePKPbc* **PKPab 21 50 44.8 +0.1**
PLN *ep*PKPbc pPKPbc 21 51 09.3 +0.2
TESR Tescani 145.08 336*⇑iP* **PKPdf 21 50 45.5 +0.3**
HGN Heimansgroeve 145.09 1 *ePKP* **PKPdf 21 50 45.0 -0.1**
comp=Z,119nm,1.4s
HGN *eX* 21 51 10.1
WERD Werda 145.10 354 *ePKPbc* **PKPdf 21 50 45.1 0.0**
TANN Tannenbergstha 145.12 353 *ePKPbc* **PKPdf 21 50 45.3 +0.1**
TRPA Tarpa 145.16 341*⇓iP* **PKPdf 21 50 45.5 +0.3**
TRPA Tarpa 145.16 341*⇑ePKPbc* **PKPdf 21 50 45.7 +0.5**
GUNZ Gunzen 145.18 354 *ePKPbc* **PKPdf 21 50 45.4 +0.1**
CTKT Corum 145.19 321 *iP* **PKPdf 21 50 46.9 +1.1**
PRA Prague 145.20 351 PKP **PKPbc 21 50 44.0 -1.0**
PRA pPKP **pPKPdf 21 51 11.0 +1.1**
TLCR 145.21 332 ⇑PKIKP **PKPdf 21 50 46.3 +0.9**
TLCR 145.21 332*⇑iP* **PKPdf 21 50 46.3 +0.9**
MEM Membach 145.24 1 PKP **PKPdf 21 50 45.6 +0.3**
BMR Baia Mare 145.25 340 ⇑PKIKP **PKPab 21 50 46.1 +0.7**
BMR Baia Mare 145.25 340*⇑iP* **PKPab 21 50 46.1 +0.7**
WERN Wernitzgruen 145.25 353 *ePKPbc* **PKPdf 21 50 45.7 +0.3**
PRU Pruhonice 145.26 351 *ePKIKP* **PKPab 21 50 45.6 +0.2**
PRU Pruhonice 145.26 351 *ePKP* **PKPab 21 50 45.6 +0.2**
PRU *es*PKP 21 51 20.0
PINB Pinarbasi 145.29 317 *iP* **PKPbc 21 50 44.7 -1.3**
NKC Novy Kostel 145.30 353 *ePKPbc* **PKPab 21 50 46.0 +0.4**
BCLA Clavier 145.42 1 PKP **PKPab 21 50 46.0 0.0**
SARI SarD1z-Kayseri 145.42 316 *eP* **PKPdf 21 50 43.9 -2.3**
BALT Daday 145.46 323 *iP* **PKPab 21 50 46.8 +0.1**
PETR Petresti 145.48 334*⇑iP* **PKPab 21 50 47.9 +1.6**
GAZ Gaziantep 145.53 314 *eP* **PKPdf 21 50 45.8 -0.6**
BNN Bunyan 145.56 318 *eP* **PKPdf 21 50 46.5 +0.1**
CORM Corum 145.56 320 *eP* **PKPab 21 50 48.0 +1.0**
VRAC Vranov 145.57 348*⇓iP* **PKPab 21 50 47.1 +0.5**
KMRS Kahramanmaras 145.57 315 *eP* **PKPdf 21 50 44.7 -1.7**
VRI Vrincioaia 145.57 335 ⇑PKP2 **PKPab 21 50 47.2 +0.5**
VRI Vrincioaia 145.57 335*⇑iP* **PKPab 21 50 47.2 +0.5**
PLOR Plostina 145.62 335 ⇑PKP2 **PKPab 21 50 47.2 +0.3**
PLOR Plostina 145.62 335*⇑iP* **PKPab 21 50 47.2 +0.3**
AYKD Aykdinkavak 145.68 315 *iP* **PKPdf 21 50 45.5 -1.1**
DOU Dourbes 145.72 2 PKP **PKPab 21 50 47.1 0.0**
GIVF Givet 145.72 2 *ePKIKP* **PKPbc 21 50 46.8 +0.1**
GIVF Givet 145.72 2 *ePKP2* **PKPbc 21 50 46.8 +0.1**
GIVF Givet 145.72 2 *ePKPdf* **PKPbc 21 50 46.8 +0.1**
BAIF Baives 145.74 3 *ePKIKP* **PKPab 21 50 47.2 0.0**
BAIF Baives 145.74 3 *ePKP2* **PKPab 21 50 47.2 0.0**
BAIF Baives 145.74 3 *ePKPdf* **PKPab 21 50 47.2 0.0**
TREC Trest 145.78 350 *ePKP2* **PKPab 21 50 47.2 -0.2**
TREC Trest 145.78 350 *ePKP* **PKPab 21 50 47.2 -0.2**
ROTZ Rotzenmuhle 145.78 354 *ePKPbc* **PKPab 21 50 47.3 -0.1**
KUZU Kuzuini 145.82 314 *iP* **PKPbc 21 50 47.4 -0.1**
VYHS Vyhne 145.85 345 *ePKP2* **PKPbc 21 50 47.0 -0.1**
VYHS Vyhne 145.85 345 *ePKP* **PKPbc 21 50 47.0 -0.1**
VYHS *e* 21 51 22.4
ANDN Andirin 145.91 315 *iP* **PKPab 21 50 48.2 -0.3**
ANDN *iS* **sPKiKP 21 51 25.8 +0.7**
GRF Grafenberg Arr 145.96 355 *ePKP2* **PKPbc 21 50 47.6 +0.2**
GRF Grafenberg Arr 145.96 355 *ePKPbc* **PKPbc 21 50 47.6 +0.2**
GRFO Grafenberg 145.96 355 *ePKIKP* **PKPdf 21 50 46.5 -0.1**
GRFO Grafenberg 145.96 355 *ePKPdf* **PKPdf 21 50 46.5 -0.1**
TIRR Tirgusor 145.96 332 ⇑PKIKP **PKPdf 21 50 46.8 +0.1**
TIRR Tirgusor 145.96 332 *ePKPdf* **PKPbc 21 50 47.5 0.0**
TIRR Tirgusor 145.96 332*⇑iP* **PKPdf 21 50 46.8 +0.1**
ABH Alteburg 145.97 359 PKP **PKPab 21 50 48.2 +0.1**
CDAG Cicekdag 146.05 320 *iP* **PKPdf 21 50 43.4 -3.8**
PSZ Piszkesteto 146.11 344 *ePKIKP* **PKPdf 21 50 47.4 +0.4**
PSZ Piszkesteto 146.11 344 *ePKPdf* **PKPdf 21 50 47.4 +0.4**
PSZ Piszkesteto 146.11 344*⇑iP* **PKPab 21 50 48.7 -0.1**
PSZ Piszkesteto 146.11 344*⇓ePKPdf* **PKPbc 21 50 48.3 +0.3**
EFOR EFORIE 146.15 331*⇑iP* **PKPab 21 50 52.5 +3.6**
RUP Ruppelstein 146.15 359 PKP2 **PKPab 21 50 48.6 -0.2**
RUP Ruppelstein 146.15 359 PKP **PKPab 21 50 48.6 -0.2**
WLF Walferdange 146.19 1 PKP **PKPab 21 50 48.6 -0.3**
WLF Walferdange 146.19 1 *ePKIKP* **PKPdf 21 50 47.3 +0.3**
WLF Walferdange 146.19 1 *ePKPbc* **PKPab 21 50 48.8 -0.1**
WLF Walferdange 146.19 1 *ePKPdf* **PKPdf 21 50 47.3 +0.3**
MLR Muntele Rosu 146.20 335*⇑iP* **PKPab 21 50 48.5 0.0**
TOD Tromm 146.20 357 PKP2 **PKPab 21 50 48.6 -0.4**
TOD Tromm 146.20 357 PKP **PKPab 21 50 48.6 -0.4**
AVNT Avonos 146.24 318 *iP* **PKPdf 21 50 45.8 -1.8**
AVNT *iS* **sPKiKP 21 51 32.5 +6.8**
KHC Kasperske Hory 146.24 352 *ePKIKP* **PKPdf 21 50 47.5 +0.4**
KHC Kasperske Hory 146.24 352 *ePKPdf* **PKPdf 21 50 47.6 +0.4**
KHC Kasperske Hory 146.24 352 *ePKP* **PKPdf 21 50 47.5 +0.4**
KHC *ep*PKP **pPKPdf 21 51 15.6 +3.8**
KHC *ex* x 21 51 28.0
ISR Istrita 146.26 334*⇓iP*KP2 **PKPab 21 50 49.7 +0.3**
ISR Istrita 146.26 334*⇓iP* **PKPab 21 50 49.7 +0.3**
DRGR 146.28 340 ⇑PKP2 **PKPab 21 50 49.5 0.0**
DRGR 146.28 340*⇑iP* **PKPab 21 50 49.5 0.0**
KOZT Kozan 146.31 316 *eP* **PKPdf 21 50 48.0 +0.4**
WET Wettzell 146.32 353 *ePKIKP* **PKPdf 21 50 47.4 +0.1**
WET Wettzell 146.32 353 *ePKPbc* **PKPdf 21 50 47.4 +0.1**
MANR Mangalia 146.37 331*⇑iP* **PKPab 21 50 48.3 +0.6**
BR131 Keskin Array S 146.44 321 *ePKPdf* **PKPab 21 50 48.6 +0.6**
BRTR Keskin Array B 146.44 321 PKPbc **PKPab 21 50 50.0 -0.5**
BRTR Keskin Array B 146.44 321 PKPbc **PKPab 21 50 50.0 -0.5**
comp=Z,17nm,0.8s,baz=90,slow=2.7,SNR=48
GERES GERESS Array B 146.50 351 PKP **PKPdf 21 50 48.3 +0.6**
GERES PKPbc **PKPab 21 50 50.0 -0.3**
GERES GERESS Array B 146.50 351 PKP **PKPdf 21 50 48.3 +0.6**
comp=Z,13nm,0.9s,baz=11,slow=1.0,SNR=72
GERES PKPbc **PKPab 21 50 50.0 -0.3**
comp=Z,13nm,0.9s,baz=20,slow=3.1,SNR=69
KTD Kalmit 146.51 358 PKP2 **PKPab 21 50 50.0 -0.2**
KTD Kalmit 146.51 358 PKP **PKPab 21 50 50.0 -0.2**
COBT Iskenderun 146.52 314 *iP* **PKPdf 21 50 47.2 -1.0**
ROSF Rostrenen 146.52 12 *ePKIKP* **PKPbc 21 50 48.6 -0.5**
comp=Z,40nm,1.1s
ROSF Rostrenen 146.52 12 *ePKP2* **PKPbc 21 50 48.6 -0.5**
ROSF Rostrenen 146.52 12 *ePKPdf* **PKPbc 21 50 48.6 -0.5**
ZST Bratislava 146.52 347 *ePKP2* **PKPbc 21 50 49.1 0.0**
ZST Bratislava 146.52 347 *ePKP* **PKPbc 21 50 49.1 0.0**
ZST *e* 21 51 26.5
FLN La Foliniere 146.59 9 *ePKIKP* **PKPdf 21 50 47.7 0.0**
FLN *eR*
comp=Z,286nm,21.5s
FLN La Foliniere 146.59 9 *ePKIKP* **PKPdf 21 50 47.7 0.0**
FLN La Foliniere 146.59 9 *ePKPdf* **PKPdf 21 50 47.7 0.0**
CEYT Ceyhan 146.61 315 *eP* **PKPbc 21 50 50.2 +0.5**
SGMF Saint Gilles 146.74 11 *ePKIKP* **PKPbc 21 50 49.4 -0.3**
comp=Z,63nm,1.1s
SGMF Saint Gilles 146.74 11 *ePKP2* **PKPbc 21 50 49.4 -0.3**
SGMF Saint Gilles 146.74 11 *ePKPdf* **PKPbc 21 50 49.4 -0.3**
LDF La Druitiere 146.80 8 *ePKIKP* **PKPdf 21 50 48.0 0.0**
LDF La Druitiere 146.80 8 *ePKIKP* **PKPdf 21 50 48.0 0.0**
LDF La Druitiere 146.80 8 *ePKPdf* **PKPdf 21 50 48.0 0.0**
ARR Arges 146.82 337*⇑iP* **PKPab 21 50 51.7 +0.1**
ANTO Ankara 146.86 322 *ePKIKP* **PKPdf 21 50 48.6 +0.1**
ANTO Ankara 146.86 322 *ePKPdf* **PKPdf 21 50 48.6 +0.1**
LANF Langenberg 146.86 359 PKP2 **PKPab 21 50 51.0 -0.6**
LANF Langenberg 146.86 359 PKP **PKPab 21 50 51.0 -0.6**
LANF Langenberg 146.86 359 PKP **PKPab 21 50 51.0 -0.6**
BBAL Bala 146.87 321 *iP* **PKPdf 21 50 48.5 -0.1**
LOD Lodumlu 146.87 322 *eP* **PKPab 21 50 51.7 -0.2**
GRR Gorron 146.90 9 *ePKIKP* **PKPdf 21 50 48.3 +0.1**
GRR Gorron 146.90 9 *ePKIKP* **PKPab 21 50 48.3 +0.1**
GRR Gorron 146.90 9 *ePKPdf* **PKPdf 21 50 48.3 +0.1**
QUIF Quistinic 146.94 12 *ePKIKP* **PKPdf 21 50 49.1 +0.8**
QUIF Quistinic 146.94 12 *ePKIKP* **PKPdf 21 50 49.1 +0.8**
QUIF Quistinic 146.94 12 *ePKPdf* **PKPdf 21 50 49.1 +0.8**
AFSR Af˙ar-Bala (A 146.96 321 *eP* **PKPab 21 50 52.0 -0.4**
PKSG 146.99 345⇑*ePKPdf* **PKPab 21 50 51.4 -0.6**
STU Stuttgart 147.02 357 *ePKIKP* **PKPdf 21 50 49.0 +0.6**
STU Stuttgart 147.02 357 *ePKPdf* **PKPdf 21 50 49.0 +0.6**
CONA Conrad Observa 147.03 349⇑*iP*KPbc **PKPdf 21 50 49.2 +0.6**
comp=Z,70nm,1.1s,SNR=48
LOT Lotru 147.07 338⇓*iP* **PKPbc 21 50 51.1 +0.1**
KRTS Karatas 147.10 314 *eP* **PKPdf 21 50 48.4 -0.5**
PKS7 Kunszentmiklos 147.11 344⇓*ePKPdf* **PKPdf 21 50 49.3 +0.7**
SOP Sopron 147.12 348⇓*ePKPdf* **PKPab 21 50 52.1 -0.5**
PKST T˙s 147.20 346⇓*ePKPdf* **PKPbc 21 50 51.2 +0.1**
PAGF Fort de Pagny 147.29 1 *ePKIKP* **PKPdf 21 50 49.5 +0.6**
PAGF Fort de Pagny 147.29 1 *ePKPdf* **PKPdf 21

MOA	Molln	147.39	350	⇑i	PKPdf	PKPdf	21 50 49.5	+0.5
	comp=Z,43nm,1.1s,SNR=23							
MDUB	Mudurnu	147.40	324		eP	PKPbc	21 50 52.1	+0.1
SULT	Sultanhani-AKS	147.43	319		eP	PKPbc	21 50 52.5	+0.3
CDF	Champ du Feu	147.44	359		ePKIKP	PKPdf	21 50 49.2	0.0
	comp=Z,8.4nm,1.2s							
CDF	Champ du Feu	147.44	359		ePKIKP	PKPdf	21 50 49.2	0.0
CDF	Champ du Feu	147.44	359		ePKPdf	PKPdf	21 50 49.2	0.0
BFO	Black Forest	147.50	358		ePKP2	PKPbc	21 50 52.4	+0.5
BFO	Black Forest	147.50	358		ePKPbc	PKPbc	21 50 52.4	+0.5
BFO	Black Forest	147.50	358		ePKPdf	PKPdf	21 50 49.5	+0.2
BFO					ePKPbc	PKPbc	21 50 52.6	+0.6
PKS2	Kecel	147.61	344	⇑e	PKPdf	PKPbc	21 50 53.3	+1.1
THEF	They Montfort	147.63	1		PKP2	PKPbc	21 50 53.0	+0.8
THEF	They Montfort	147.63	1		PKP	PKPbc	21 50 53.0	+0.8
THEF	They Montfort	147.63	1		PKP	PKPbc	21 50 53.0	+0.8
ECH	Echery	147.64	359		ePKIKP	PKPdf	21 50 50.2	+0.7
ECH					e		21 50 52.7	
ECH	Echery	147.64	359		ePKPdf	PKPdf	21 50 50.2	+0.7
ECH					ePKPbc	PKPbc	21 50 52.7	+0.4
ECH	Echery	147.64	359		PKP	PKPbc	21 50 52.7	+0.4
BZS	Buzias	147.68	340	⇑	PKP2	PKPbc	21 50 53.0	+0.6
BZS	Buzias	147.68	340	⇑	iP	PKPbc	21 50 53.0	+0.6
SPAK	Spaichingen-Ko	147.71	357		PKP	PKPbc	21 50 53.1	+0.5
RJOB	Jochberg	147.71	352		ePKPbc	PKPbc	21 50 52.9	+0.3
ARSA	Arzberg	147.75	349	⇑	iPKPdf	PKPdf	21 50 50.1	+0.4
	comp=Z,30nm,1.1s,SNR=9.2							
PKS9	Tamasi	147.76	345	⇑	ePKPdf	PKPbc	21 50 53.1	+0.5
SILT	Sile	147.79	326		eP	PKPbc	21 50 51.7	-1.1
HAU	Haudompre	147.85	0		ePKIKP	PKPdf	21 50 50.2	+0.3
HAU					eR			
	comp=Z,231nm,22.0s							
HAU	Haudompre	147.85	0		ePKIKP	PKPdf	21 50 50.2	+0.3
HAU	Haudompre	147.85	0		ePKPdf	PKPdf	21 50 50.2	+0.3
FELD	Feldberg im Sc	147.96	358		PKP	PKPbc	21 50 53.8	+0.5
FELD	Feldberg im Sc	147.96	358		PKP	PKPbc	21 50 53.8	+0.5
MOF	Molkenrain	148.00	359		PKP2	PKPbc	21 50 53.8	+0.4
MOF	Molkenrain	148.00	359		PKP	PKPbc	21 50 53.8	+0.4
MOF	Molkenrain	148.00	359		PKP	PKPbc	21 50 53.8	+0.4
PKSM	Moragy	148.02	344	⇓⇓	PKIKP	PKPdf	21 50 51.1	+1.0
PKSM	Moragy	148.02	344	⇓	iP	PKPdf	21 50 51.1	+1.0
PKSM	Moragy	148.02	344		ePKPdf	PKPdf	21 50 48.2	-1.9
HINF	Hinteralfeld	148.04	360		ePKIKP	PKPdf	21 50 50.2	0.0
HINF	Hinteralfeld	148.04	360		ePKIKP	PKPdf	21 50 50.2	0.0
HINF	Hinteralfeld	148.04	360		ePKPdf	PKPdf	21 50 50.2	0.0
RETA	Reutte	148.18	355	⇓	iPKPbc	PKPbc	21 50 52.6	-1.3
	comp=Z,52nm,1.1s,SNR=21							
ADVT	Abdulvahap	148.24	325		eP	PKPab	21 50 56.9	-0.4
WATA	Walderalm	148.25	354	⇓	iPKPdf	PKPdf	21 50 51.4	+0.7
	comp=Z,27nm,1.0s,SNR=7.3							
KBA	Koelnbreinsper	148.28	351	⇓	iPKPdf	PKPdf	21 50 49.0	-1.8
	comp=Z,24nm,1.1s,SNR=8.8							
BUY	Buyukada	148.28	326		eP	PKPbc	21 50 54.7	+0.5
MOTA	Moosalm	148.29	354	⇑	iPKPdf	PKPdf	21 50 50.9	+0.1
	comp=Z,51nm,0.9s,SNR=22							
PVL	Pavlikeni	148.31	333		eP	PKPbc	21 50 54.7	+0.5
KONT	Konya--Tatoy	148.31	319		eP	PKPbc	21 50 54.3	-0.1
WTTA	Wattenberg	148.32	353	⇓	iPKPdf	PKPdf	21 50 50.8	0.0
	comp=Z,68nm,1.2s,SNR=16							
CTKS	Kestanelik-??a	148.33	328		eP	PKPbc	21 50 55.1	+0.8
BBS	Basel-Blauen	148.38	359		PKP2	PKPbc	21 50 54.2	-0.1
BBS	Basel-Blauen	148.38	359		PKP	PKPbc	21 50 54.2	-0.1
SOKA	Soboth	148.39	349	⇑	iPKPdf	PKPdf	21 50 50.0	-0.9
	comp=Z,48nm,1.0s							
HYF	Humbligny	148.42	5		ePKIKP	PKPdf	21 50 51.5	+0.7
HYF	Humbligny	148.42	5		ePKPdf	PKPdf	21 50 51.5	+0.7
DAVA	Damuels	148.45	356	⇑	iPKPdf	PKPdf	21 50 51.7	+0.7
	comp=Z,84nm,1.1s,SNR=22							
LOMF	Lomont	148.51	360		PKP2	PKPbc	21 50 55.5	+0.8
LOMF	Lomont	148.51	360		PKP	PKPbc	21 50 55.5	+0.8
LOMF	Lomont	148.51	360		PKP	PKPbc	21 50 55.5	+0.8
LOR	Lormes	148.51	4		ePKIKP	PKPdf	21 50 51.3	+0.4
	comp=Z,33nm,1.2s							
LOR					eR			
	comp=Z,309nm,20.0s							
LOR	Lormes	148.51	4		ePKPdf	PKPdf	21 50 51.3	+0.4
ARMT	Armutlu	148.62	326		eP	PKPbc	21 50 55.5	+0.3
FETA	Feichten	148.65	355	⇑	iPKPdf	PKPdf	21 50 52.0	+0.6
	comp=Z,58nm,1.1s,SNR=26							
MYKA	Terra Mystica	148.67	351	⇑	iPKPdf	PKPdf	21 50 51.4	+0.1
	comp=Z,36nm,1.2s							
SSF	Saint Saulge	148.69	4		ePKIKP	PKPdf	21 50 51.6	+0.4
	comp=Z,28nm,1.0s							
SSF	Saint Saulge	148.69	4		ePKIKP	PKPdf	21 50 51.6	+0.4
SSF	Saint Saulge	148.69	4		ePKPdf	PKPdf	21 50 51.6	+0.4
ABTA	Abfaltersbach	148.72	352	⇑	iPKPdf	PKPdf	21 50 51.6	+0.2
	comp=Z,60nm,1.0s,SNR=13							
ERMK	Ermenek	148.72	317		iP	PKPdf	21 50 51.3	-0.6
EDRB	Edirne	148.75	330		eP	PKPbc	21 50 53.6	-1.8
MFF	Saint Martin d	148.75	9		ePKIKP	PKPdf	21 50 51.4	+0.1
	comp=Z,45nm,1.2s							
MFF	Saint Martin d	148.75	9		ePKIKP	PKPdf	21 50 51.4	+0.1
MFF	Saint Martin d	148.75	9		ePKPdf	PKPdf	21 50 51.4	+0.1
CRLT	Corlu	148.80	328		eP	PKPbc	21 50 56.9	+1.4
MPEP	Malo Peshtene	148.85	335		eP	PKPbc	21 50 56.5	+0.9
AVF	Avril sur Loir	148.95	4		ePKIKP	PKPdf	21 50 51.6	0.0
	comp=Z,11nm,1.0s							
AVF	Avril sur Loir	148.95	4		ePKIKP	PKPdf	21 50 51.6	0.0
AVF	Avril sur Loir	148.95	4		ePKPdf	PKPdf	21 50 51.6	0.0
ALT	Altintas	148.97	323		eP	PKPab	21 51 04.0	+3.6
SHUT	Suhut-Afyon	149.04	322		eP	PKPdf	21 50 51.0	-1.2
LFK	Lefkose	149.05	314		eP	PKPdf	21 50 54.3	+2.1
CADS	Cadrg	149.05	350		ePKPdf	PKPdf	21 50 50.9	-1.0
CADS					ePKPbc	PKPbc	21 50 55.6	-0.4
CADS					epPKPdf	pPKPdf	21 51 21.1	+4.5
TVSB	Tavsanli	149.07	324		eP	PKPbc	21 50 55.8	-0.6
LJU	Ljubljana	149.09	349		iPKPdf	PKPdf	21 50 52.3	+0.4
LJU					ePKPbc	PKPbc	21 50 56.4	+0.2
LJU					epPKPdf	pPKPdf	21 51 22.2	+5.7
KCTX	Karacabey (Bur	149.11	326		eP	PKPdf	21 50 52.5	+0.3
SMF	Signal de Mont	149.13	4		ePKIKP	PKPdf	21 50 52.1	+0.1
	comp=Z,9.1nm,0.9s							
SMF	Signal de Mont	149.13	4		ePKIKP	PKPdf	21 50 52.1	+0.1
SMF	Signal de Mont	149.13	4		ePKPdf	PKPdf	21 50 52.1	+0.1
BGF	Bois d'Agland	149.14	5		ePKIKP	PKPdf	21 50 52.2	+0.2
	comp=Z,26nm,1.1s							
BGF	Bois d'Agland	149.14	5		ePKIKP	PKPdf	21 50 52.2	+0.2
BGF	Bois d'Agland	149.14	5		ePKPdf	PKPdf	21 50 52.2	+0.2
DIM	Dimitrovgrad	149.15	332		eP	PKPbc	21 50 57.3	+0.9
VOY	Vojsko	149.21	350		ePKPdf	PKPdf	21 50 52.5	+0.3
VOY					ePKPbc	PKPbc	21 50 56.7	+0.2
VOY					e		21 51 05.1	
CABF	La Chapelle	149.24	1		ePKIKP	PKPdf	21 50 53.2	+0.9
	comp=Z,100nm,1.9s							
CABF	La Chapelle	149.24	1		ePKPdf	PKPdf	21 50 53.2	+0.9
MRMT	Marmara Adasi	149.26	328		eP	PKPbc	21 50 54.7	-2.1
TUE	Stuetta	149.30	356		ePKPdf	PKPdf	21 50 52.4	-0.1
TUE					ePKPbc	PKiKP	21 50 57.6	-0.4
PGB	Panagyurishte	149.34	334		eP	PKPbc	21 50 57.4	+0.5
GAZI	Gazipasa	149.35	317		iP	PKPdf	21 50 52.9	+0.3
TCF	Toulx Ste Croi	149.35	6		ePKIKP	PKPdf	21 50 52.4	0.0
	comp=Z,37nm,1.1s							
TCF	Toulx Ste Croi	149.35	6		ePKPdf	PKPdf	21 50 52.4	0.0
CSS	Prodhromos	149.36	314		ePKPdf	PKPdf	21 50 51.8	-0.9
CSS					ePKPbc	PKPbc	21 50 57.6	+0.4
BOJS	Bojanci	149.47	348		ePKPdf	PKPdf	21 50 53.0	+0.5
BOJS					ePKPbc	PKiKP	21 50 57.8	-0.3
KDZ	Kurdzhali	149.52	332		eP	PKPbc	21 50 57.5	+0.2
OG01	Vacheresse	149.53	360		PKP	PKPbc	21 50 58.5	+1.2
TRI	Trieste	149.55	350		ePKPdf	PKPdf	21 50 52.7	+0.1
TRI					ePKPbc	PKPbc	21 50 57.2	0.0
LEF	Lefka	149.58	314		eP	PKPbc	21 50 57.3	-0.3
GONE	Gonen-Balikesi	149.62	327		eP	PKPbc	21 50 57.3	-0.3
AGO	Saint Agoulin	149.67	5		PKP	PKPbc	21 50 58.1	+0.5
AGO	Saint Agoulin	149.67	5		PKP	PKPbc	21 50 58.1	+0.5
VTS	Vitosha	149.71	335	⇓⇓	PKP2	PKPbc	21 50 58.8	+0.9
VTS	Vitosha	149.71	335	⇓	iP	PKPbc	21 50 58.8	+0.9
VTS	Vitosha	149.71	335		eP	PKPbc	21 50 58.0	+0.1
RZN	Rozhen	149.81	332		eP	PKPbc	21 50 58.3	0.0
BALB	Balikesir	149.81	326		eP	PKPbc	21 50 56.6	-1.5
LPK	Lapseki	149.86	328		eP	PKPdf	21 50 39.9	-13
BALY	Balya	149.88	327		iP	PKPdf	21 50 51.9	-1.5
VERF	Verneugheol	149.91	6		PKP	PKPbc	21 50 58.6	+0.4
VERF	Verneugheol	149.91	6		PKP	PKPbc	21 50 58.6	+0.4
GELI	Tayfur-Gelibol	149.98	329		eP	PKPdf	21 50 54.7	+1.2
KULA	Kula-Manisa	150.17	324		eP	PKPdf	21 50 54.0	0.0
RSL	Roselend	150.17	360		PKP	PKPbc	21 51 00.1	+1.1
COLF	Collangettes	150.24	4		PKP	PKPbc	21 50 59.8	+0.8
RJF	Les Rejaudoux	150.24	7		ePKIKP	PKPdf	21 50 54.0	+0.2
	comp=Z,42nm,1.1s							
RJF					eR			
	comp=Z,206nm,21.0s							
RJF	Les Rejaudoux	150.24	7		ePKIKP	PKPdf	21 50 54.0	+0.2
RJF	Les Rejaudoux	150.24	7		ePKPdf	PKPdf	21 50 54.0	+0.2
FRNF	Fournols	150.28	6		PKP	PKPbc	21 51 00.1	+1.0
MMB	Musomiste	150.32	334		eP	PKPbc	21 50 59.3	0.0
LPL	La Plagne	150.34	360		ePKIKP	PKPdf	21 50 54.8	+0.6
LPL	La Plagne	150.34	360		ePKIKP	PKPdf	21 50 54.8	+0.6
LPL	La Plagne	150.34	360		ePKPdf	PKPdf	21 50 54.8	+0.6
LPG	La Plagne	150.36	360		ePKIKP	PKPdf	21 50 55.0	+0.7
LPG	La Plagne	150.36	360		ePKIKP	PKPdf	21 50 55.0	+0.7
LPG	La Plagne	150.36	360		ePKPdf	PKPdf	21 50 55.0	+0.7
KKB	Krupnik	150.36	335		eP	PKPbc	21 50 59.9	+0.5
LBL	Lubilhac	150.49	5		PKP	PKPbc	21 51 01.3	+1.7
LFF	La Frestale	150.50	8		ePKIKP	PKPdf	21 50 54.4	+0.3
	comp=Z,16nm,0.9s							
LFF	La Frestale	150.50	8		ePKIKP	PKPdf	21 50 54.4	+0.3
LFF	La Frestale	150.50	8		ePKPdf	PKPdf	21 50 54.4	+0.3
SSB	Saint Sauveur	150.53	3		ePKIKP	PKPdf	21 50 55.0	+0.7
SSB	Saint Sauveur	150.53	3		ePKPdf	PKPdf	21 50 55.0	+0.7
SSB					ePKPbc	PKPbc	21 50 60.0	+0.3
SSB	Saint Sauveur	150.53	3		PKP	PKPbc	21 51 00.7	+1.0
ELL	Elmali	150.59	320		eP	PKPbc	21 50 59.5	-0.7
CAF	Calviac	150.68	7		ePKIKP	PKPdf	21 50 55.0	+0.5
	comp=Z,28nm,1.2s							
CAF	Calviac	150.68	7		ePKIKP	PKPdf	21 50 55.0	+0.5
CAF	Calviac	150.68	7		ePKPdf	PKPdf	21 50 55.0	+0.5
IVA	Berane	150.68	340			PKPbc	21 51 00.4	+0.2
UPM	Unac-Piva	150.70	341		ePKP	PKPbc	21 51 00.3	-0.1
PVY	Plav	150.91	339	⇓	iPKP	PKPbc	21 51 00.8	0.0
PGAV	Gavieira, Arco	150.92	23		iP	PKPbc	21 51 01.6	+0.8
ORIF	Oris-en-Rattie	150.93	1		ePKIKP	PKPdf	21 50 55.5	+0.5
ORIF					eR			
	comp=Z,317nm,21.5s							
ORIF	Oris-en-Rattie	150.93	1		ePKIKP	PKPdf	21 50 55.5	+0.5
ORIF	Oris-en-Rattie	150.93	1		ePKPdf	PKPdf	21 50 55.5	+0.5
VIVF	Saint-Julien-l	150.96	3		ePKIKP	PKPdf	21 50 55.6	+0.7
VIVF	Saint-Julien-l	150.96	3		ePKIKP	PKPdf	21 50 55.6	+0.7
VIVF	Saint-Julien-l	150.96	3		ePKPdf	PKPdf	21 50 55.6	+0.7
NKY	Niksic	151.03	341		ePKP	PKPbc	21 51 01.2	+0.2
VAY	Valandovo	151.03	335		iPKP	PKPbc	21 51 00.1	-0.9
BCI	Bajram Curri	151.07	339		eP	PKPbc	21 51 01.2	+0.2
BRY	Bratogost	151.09	342		ePKP	PKPbc	21 51 01.1	-0.1
MBDF	Montbardon	151.13	360		ePKIKP	PKPdf	21 50 55.8	+0.4
MBDF	Montbardon	151.13	360		ePKIKP	PKPdf	21 50 55.8	+0.4
MBDF	Montbardon	151.13	360		ePKPdf	PKPdf	21 50 55.8	+0.4
FETY	Fethiye	151.17	320		eP	PKPdf	21 50 58.4	+2.9
PCAB	Cabril	151.23	23		iP	PKPbc	21 51 01.8	+0.4
OG26	St.-Nazaire-De	151.26	2		PKP	PKPbc	21 51 02.9	+1.4
TTG	Podgorica	151.29	340		ePKP	PKPbc	21 51 01.7	+0.2
DALY	Dalyan (Mu¨la	151.31	321		eP	PKPbc	21 51 01.4	-0.3
YER	Yerkesik	151.32	322		eP	PKPbc	21 51 01.8	-0.1
PUK	Puka	151.42	339		eP	PKPbc	21 51 02.6	+0.7
OG25	Le Caire	151.49	1		PKP	PKPbc	21 51 02.9	+0.9
MLSB	Milas	151.51	323		eP	PKPdf	21 50 54.7	-1.3
HCY	Herceg Novi	151.51	341	⇓	iPKP	PKPbc	21 51 02.1	+0.1
BUM	Brajici-Budva	151.52	341		ePKP	PKPbc	21 51 01.8	-0.3
PHP	Peshkopia	151.54	338		eP	PKPbc	21 51 02.1	-0.1
GCAM	G?zelcaml?	151.54	324		iP	PKPbc	21 51 01.9	-0.3
POLO	Lamas de Olo	151.61	23		iP	PKPbc	21 51 02.9	+0.5
PBRG	Braganca	151.61	21		iP	PKPbc	21 51 02.7	+0.4
LASF	Ste Croix	151.69	4		ePKIKP	PKPdf	21 50 56.8	+0.8
	comp=Z,66nm,1.1s							
LASF	Ste Croix	151.69	4		ePKPdf	PKPdf	21 50 56.8	+0.8
ULC	Ulcinj	151.71	340	⇓	iPKP	PKPbc	21 51 01.5	-1.0
PVRL	Vila Real	151.72	23		iP	PKPbc	21 51 03.2	+0.6
BIA	Bitola	151.78	336		ePKP	PKPbc	21 51 02.5	-0.2
OSSF	Osses	151.79	12		PKP	PKPbc	21 51 02.3	-0.3
TOUF	Mont Tournerai	151.84	359		PKP	PKPbc	21 51 03.4	+0.4
AUTN	L'Aution	151.85	359		PKP	PKPbc	21 51 03.5	+0.5
SAOF	Saorge	151.86	359		PKP	PKPbc	21 51 03.2	+0.4
SMRF	Simiane la Rot	151.87	2		ePKIKP	PKPdf	21 50 57.3	+1.0
	comp=Z,34nm,1.2s							
SMRF	Simiane la Rot	151.87	2		ePKPdf	PKPdf	21 50 57.3	+1.0
SJPF	Ste Jean	151.93	12		ePKIKP	PKPdf	21 50 57.1	+0.7
	comp=Z,15nm,1.2s							
SJPF	Ste Jean	151.93	12		ePKIKP	PKPdf	21 50 57.1	+0.7
SJPF	Ste Jean	151.93	12		ePKPdf	PKPdf	21 50 57.1	+0.7
BODT	Bodrum	151.94	323		eP	PKPbc	21 51 01.8	-1.4
MVIF	Mont Vial	151.96	359		PKP	PKPbc	21 51 03.7	+0.5
SBF	Sospel	151.99	359		ePKIKP	PKPdf	21 50 56.5	-0.1
	comp=Z,322nm,1.9s							
SBF	Sospel	151.99	359		ePKIKP	PKPdf	21 50 56.5	-0.1
SBF	Sospel	151.99	359		ePKPdf	PKPdf	21 50 56.5	-0.1
LARF	Larrau	152.06	12		PKP	PKPbc	21 51 04.3	+1.0
MVO	Moncorvo	152.07	22		ePKPdf	PKPdf	21 50 58.3	+1.5
MVO					iP	PKPbc	21 51 03.5	+0.1
CALN	Calern	152.10	360		PKP	PKPbc	21 51 04.0	+0.5
PVIS	Viseu	152.13	24		iP	PKPbc	21 51 04.1	+0.5
PVIS	Viseu	152.13	24		ePKPab	PKPab	21 51 13.7	+0.3
MTLF	Montolieu	152.26	7		ePKIKP	PKPdf	21 50 57.3	+0.4
	comp=Z,21nm,1.2s							
MTLF	Montolieu	152.26	7		ePKIKP	PKPdf	21 50 57.3	+0.4
MTLF	Montolieu	152.26	7		ePKPdf	PKPdf	21 50 57.3	+0.4
ETSF	Etsaut	152.27	11		ePKIKP	PKPdf	21 50 57.8	+0.8
ETSF	Etsaut	152.27	11		ePKIKP	PKPdf	21 50 57.8	+0.8
ETSF	Etsaut	152.27	11		ePKPdf	PKPdf	21 50 57.8	+0.8
FRF	La Foret Royal	152.30	360		ePKIKP	PKPdf	21 50 56.8	-0.1
	comp=Z,187nm,1.9s							
FRF	La Foret Royal	152.30	360		ePKIKP	PKPdf	21 50 56.8	-0.1
FRF	La Foret Royal	152.30	360		ePKPdf	PKPdf	21 50 56.8	-0.1
EPF	Esparros	152.30	10		ePKIKP	PKPdf	21 50 57.5	+0.5
	comp=Z,24nm,1.2s							
EPF	Esparros	152.30	10		ePKIKP	PKPdf	21 50 57.5	+0.5
EPF	Esparros	152.30	10		ePKPdf	PKPdf	21 50 57.5	+0.5
KBN	Korca	152.33	336		eP	PKPbc	21 51 03.4	-0.6
MLS	Moulis	152.49	9		PKP	PKPbc	21 51 04.9	+0.7
LMR	La Mourre	152.52	0		ePKIKP	PKPdf	21 50 57.5	+0.2
	comp=Z,44nm,1.3s							
LMR	La Mourre	152.52	0		ePKIKP	PKPdf	21 50 57.5	+0.2
LMR	La Mourre	152.52	0		ePKPdf	PKPdf	21 50 57.5	+0.2
MTE	Manteigas	152.54	24		iP	PKPbc	21 51 04.7	+0.2
LRDF	Laroque-de-Fa	152.70	7		PKP	PKPbc	21 51 05.6	+0.9
PTOM	Tomar	152.85	26		ePKPdf	PKPdf	21 50 58.3	+0.4
PTOM					iP	PiKiP	21 51 05.8	+0.5
PTOM	Tomar	152.85	26		ePKPab	PKPab	21 51 16.7	+0.4
AQU	L'Aquila	152.87	349		ePKPdf	PKPdf	21 50 59.0	+1.1
AQU					ePKPbc	PKiKP	21 51 06.2	+0.9
AQU	L'Aquila	152.87	349	⇑	iP	PKPbc	21 50 59.3	-1.2
PCBR	Castelo Branco	153.05	24		ePKPdf	PKPdf	21 51 00.0	+1.9
PCBR					iP	PiKiP	21 51 06.0	+0.3
PGF	Pioggiola	153.23	356		ePKIKP	PKPdf	21 50 59.0	+0.5
	comp=Z,82nm,1.6s							
PGF	Pioggiola	153.23	356		ePKIKP	PKPdf	21 50 59.0	+0.5
PGF	Pioggiola	153.23	356		ePKPdf	PKPdf	21 50 59.0	+0.5
PMTG	Montargil	153.39	26		iP	PKPbc	21 51 06.2	-0.1
PMTG	Montargil	153.39	26		ePKPab	PKPab	21 51 18.5	-0.1
PMRV	Marv??o	153.43	25		iP	PKPbc	21 51 06.6	+0.2
SANT	Santorini	153.49	324		ePKPdf	PKPdf	21 50 57.7	-1.3
SANT					ePKPbc	PKPbc	21 51 05.9	-0.7
PESTR	Estremoz	153.83	26		ePKPab	PKPab	21 51 20.8	+0.3
EVOP	Sao Brissos	153.88	27	⇑	iPKIKP	PKPdf	21 50 59.5	+0.1
EVOP	Sao Brissos	153.88	27	⇑	iPKPdf	PKPdf	21 50 59.5	+0.1
EVO	Evora	153.93	27	⇑	iPKIKP	PKPdf	21 50 59.5	0.0
	comp=Z,31nm,1.2s							
EVO	Evora	153.93	27		iP	PKPbc	21 51 08.1	+0.6
EVO	Evora	153.93	27		ePKPab	PKPab	21 51 20.6	-0.3
MESJ	Messejana	154.41	28		eP	PKPdf	21 50 59.4	-0.8
MESJ					ePP	PP	21 54 57.7	+0.1
MESJ					AMS	AMS	22 52 20.2	
	comp=Z,320nm,25.5s							
MESJ	Messejana	154.41	28		eP	PKPdf	21 50 59.4	-0.8
MESJ	Messejana	154.41	28		ePP	PP	21 54 57.7	0.0
MESJ					A	A	22 52 20.2	
	comp=Z,320nm,25.5s							
MESJ	Messejana	154.41	28		ePKIKP	PKPdf	21 50 59.3	-0.8
MESJ					e		21 54 57.7	
PBEJ	Beja	154.41	27		iP	PKPbc	21 51 07.7	-0.9
PBEJ	Beja	154.41	27		ePKPab	PKPab	21 51 23.1	+0.1
ESDC	Sonseca Array	154.45	19		PKP	PKPdf	21 51 01.2	+1.0
ESDC					PKPbc	PiKiP	21 51 08.8	+0.2
ESDC	Sonseca Array	154.45	19		PKP	PKPdf	21 51 01.2	+1.0
	comp=Z,2.4nm,0.8s,baz=356,slow=2.0,SNR=11							
ESDC					PKPbc	PKiKP	21 51 08.8	+0.2
	comp=Z,3.7nm,0.8s,baz=331,slow=2.9,SNR=15							
CUC	Castrocucco	154.56	343		ePKPdf	PKPdf	21 50 57.6	-2.8
CUC					ePKPbc	PiKiP	21 51 09.0	+0.1
PCVE	Castro Verde	154.66	28		ePKPab	PKPab	21 51 24.5	+0.4
PBDV	Barranco-do-Ve	155.03	28		iP	PKPdf	21 51 09.5	+8.4
TIP	Timpagrande	155.03	341		ePKPdf	PKPdf	21 51 00.3	-0.8
TIP					ePKPbc	PKPab	21 51 10.3	-15
KEST	Kesra	159.97	353		PKP	PKPdf	21 51 08.4	+1.0
KEST					PKPab	PKPab	21 51 47.7	+0.7
KEST	Kesra	159.97	353		PKP	PKPdf	21 51 08.4	+1.0
	comp=Z,2.0nm,0.9s,baz=23,slow=11,SNR=3.9							
KEST					PKPab	PKPab	21 51 47.7	+0.7
	comp=Z,3.9nm,0.9s,baz=252,slow=4.6,SNR=6.9							
LIC	Lamto	165.17	128	⇑	iPKIKP	PKPdf	21 51 12.7	-0.3
	comp=Z,54nm,1.0s							
LIC					eR			
	comp=Z,361nm,22.0s							
LIC	Lamto	165.17	128	⇑	iPKPdf	PKPdf	21 51 12.7	-0.3
DBIC	Dimbokro	165.59	128		PKP	PKPdf	21 51 12.2	-1.1
DBIC					PKPab	PKPab	21 52 12.1	-0.2
DBIC	Dimbokro	165.59	128		PKP	PKPdf	21 51 12.2	-1.1
	comp=Z,16nm,1.0s,baz=238,slow=2.5,SNR=12							
DBIC					PKPab	PKPab	21 52 12.1	-0.2
	comp=Z,17nm,1.0s,baz=195,slow=4.8,SNR=9.6							
TAM	Tamanrasset	172.94	8		ePKIKP	PKPdf	21 51 18.0	+0.2
TAM	Tamanrasset	172.94	8	

BKZ				SN	Sn	21 51 57.1	-0.5	
HIZ	**Hauiti**	**0.82**	**267**	⇑PN	Pn	21 51 39.6	-0.1	
TRVZ	**Turoa**	**0.86**	**199**	⇑PN	Pn	21 51 40.3	0.0	
TRVZ				SN	Sn	21 51 58.8	+0.2	
WNVZ	**Wahianoa**	**0.88**	**196**	PN	Pn	21 51 40.3	-0.1	
PKVZ	**Pokaka**	**0.92**	**208**	⇑PN	Pn	21 51 40.4	-0.1	
PKVZ				SN	Sn	21 51 59.4	+0.5	
MOVZ	**Moawhango**	**0.93**	**187**	⇑PN	Pn	21 51 40.4	-0.3	
MOVZ				SN	Sn	21 51 57.9	-1.3	
MTVZ	**Mangateitei**	**0.96**	**200**	PN	Pn	21 51 40.8	-0.1	
URZ	**Urewera**	**0.97**	**77**	PN	Pn	21 51 40.7	-0.2	
URZ				SN	Sn	21 51 59.0	-0.4	
BHHZ	**Black Hill Sta**	**1.01**	**173**	PN	Pn	21 51 41.1	-0.2	
BHHZ				SN	Sn	21 51 59.2	-1.1	
VRZ	**Vera Road**	**1.10**	**234**	PN	Pn	21 51 41.8	-0.2	
MCHZ	**McNeill Hill**	**1.14**	**148**	PN	Pn	21 51 43.5	+1.1	
MWZ	**Matawai**	**1.28**	**84**	PN	Pn	21 51 43.8	0.0	
MWZ				SN	Sn	21 52 04.2	-0.4	
PNHZ	**Pukenui**	**1.45**	**171**	PN	Pn	21 51 45.1	-0.4	
WAZ	**Wanganui**	**1.46**	**209**	PN	Pn	21 51 45.1	-0.4	
KAHZ	**Kahuranaki**	**1.51**	**150**	PN	Pn	21 51 46.7	+0.6	
TSZ	**Takapari Road**	**1.58**	**178**	PN	Pn	21 51 46.2	-0.6	
PRGZ	**Paritu Road**	**1.61**	**107**	PN	Pn	21 51 47.4	+0.2	
WPHZ	**Waipukurau**	**1.64**	**165**	SN	Sn	21 52 09.4	-1.8	
MHGZ	**Mahia Peninsul**	**1.70**	**114**	PN	Pn	21 51 48.6	+0.4	
DVHZ	**Dannevirke**	**1.83**	**174**	PN	Pn	21 51 48.6	-1.0	
PRHZ	**Porangahau**	**1.87**	**163**	SN	Sn	21 52 14.2	-1.7	
PUZ	**Puketiti**	**1.90**	**78**	PN	Pn	21 51 50.0	-0.3	
PUZ				SN	Sn	21 52 14.9	-1.4	
MRZ	**Mangatainoka R**	**2.19**	**186**	⇑PN	Pn	21 51 52.1	-1.7	
TIWZ	**Tintock**	**2.29**	**180**	PN	Pn	21 51 53.5	-1.5	
OGWZ	**Otaki Gorge**	**2.40**	**193**	PN	Pn	21 51 54.5	-1.8	
HOWZ	**Holdsworth Sta**	**2.43**	**187**	PN	Pn	21 51 54.6	-2.1	
KIW	**Kapiti Island**	**2.50**	**198**	PN	Pn	21 51 55.3	-2.3	
TMWZ	**Te Maipa**	**2.62**	**180**	PN	Pn	21 51 57.0	-2.1	
MTW	**Mount Morrison**	**2.69**	**186**	PN	Pn	21 51 57.4	-2.5	
CAW	**Cannon Point**	**2.70**	**194**	PN	Pn	21 51 57.6	-2.4	
DUWZ	**D'Urville Isla**	**2.78**	**213**	PN	Pn	21 51 58.5	-2.6	
TRWZ	**Traveller**	**2.92**	**183**	PN	Pn	21 52 00.4	-2.4	
PAWZ	**Paruwai Farm**	**2.92**	**187**	PN	Pn	21 52 00.1	-2.7	
SNZO	**South Karori**	**2.97**	**198**	PN	Pn	21 52 00.4	-3.0	
MSWZ	**Moikau Station**	**2.97**	**190**	PN	Pn	21 52 00.6	-2.9	
TCW	**Tory Channel**	**3.00**	**204**	PN	Pn	21 52 01.1	-2.7	
BHW	**Baring Head**	**3.03**	**195**	PN	Pn	21 52 01.1	-3.0	
PLWZ	**Palliser**	**3.12**	**189**	PN	Pn	21 52 02.3	-3.2	
TUWZ	**Tuamarina**	**3.31**	**206**	PN	Pn	21 52 04.5	-3.2	
NNZ	**Nelson**	**3.35**	**215**	PN	Pn	21 52 04.9	-3.4	
QRZ	**Quartz Range**	**3.50**	**227**	PN	Pn	21 52 06.5	-3.8	
THZ	**Tophouse**	**4.00**	**214**	PN	Pn	21 52 13.2	-3.6	
LTZ	**Lake Taylor**	**5.11**	**212**	PN	Pn	21 52 26.4	-4.9	

*ISCJB **13** 21:54:26.9±0.5, 36°.06N±0°.03×71°.39E±0°.09, h119km, mb3.5/4, Error ellipse: s-maj=9.9km s-min=3.8km az=168.8*

*IDC **13** 21:54:32.3±8.8, 36°.33N×71°.21E, h136km±57km, mb3.3/4, mb1 3.3/10, mb1mx3.0/33, mbtmp3.2/10, Error ellipse: s-maj=71.2km s-min=35.8km az=10.0*

*NNC **13** 21:54:36.8±3.8, 36°.84N×71°.62E, h224km±31km, mb2.7, mpv4.0, Error ellipse: s-maj=34.5km s-min=23.5km az=29.0*

ISC 13 21:54:27.9±0.7, **36°.16N**±0°.05×**71°.57E**±0°.09, **h119**km, **n34,** σ1§**98**/37, **mb3.5**/4, **4C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.34**	**173**	⇑P	**Pn**	**21 55 05.7**	**-0.1**
CEP				S	**Sn**	**21 55 34.0**	**-0.8**
THW	**Thamme Wali**	**3.36**	**178**	P	**Pn**	**21 55 17.9**	**-1.0**
THW				S	**Sn**	**21 55 55.0**	**-3.3**
SARP	**Sargodha**	**4.32**	**167**	P	**Pn**	**21 55 30.6**	**-1.1**
KSH	**Kashi**	**4.84**	**45**	Pn	**Pn**	**21 55 38.3**	**-0.4**
KSH				Sn	**Sn**	**21 56 29.4**	**-4.3**
KSH	comp=N,230nm,0.4s			smax	smax		
KSH	comp=E,260nm,0.7s			smax	smax		
THN	**Thein Dam**	**5.05**	**136**	*e*PKP	**Pn**	**21 55 42.5**	**+1.0**
THN				*e*S	**Sn**	**21 56 40.0**	**+1.2**
AML	**Almayashu**	**6.19**	**15**	P	**Pn**	**21 55 59.8**	**+2.6**
	SNR=22						
EKS2	**Erkin-Say**	**6.72**	**14**	P	**Pn**	**21 56 06.7**	**+2.6**
	SNR=17						
AAK	**Ala-Archa**	**6.85**	**18**	P	Pn	21 56 09.5	+3.6
	SNR=11						
AAK	**Ala-Archa**	**6.85**	**18**	P	**Pn**	**21 56 09.1**	**+3.1**
	comp=E,2.7nm,0.3s,baz=195,slow=6.3,SNR=25						
AAK				S	**Sn**	**21 57 25.4**	**+2.9**
	comp=E,2.0nm,0.3s,baz=150,slow=20,SNR=12						
KK31	**Karatay Array**	**6.99**	**354**	⇓P	**Pn**	**21 56 07.7**	**+0.2**
	comp=E,7.1nm,0.4s,baz=179,slow=12,SNR=498						
KK31				S	**Sn**	**21 57 22.6**	**-3.0**
	comp=E,3.7nm,0.3s,baz=194,slow=18,SNR=11						
CHMS	**Chumysh**	**7.26**	**19**	P	Pn	21 56 14.7	+3.4
	SNR=6.8						
TKM2	**Tokmak 2**	**7.44**	**23**	⇑P	**Pn**	**21 56 14.3**	**+0.4**
	comp=E,3.7nm,0.5s						
TKM2				⇑S	Sn	**21 57 33.2**	**-3.6**
	comp=E,3.4nm,0.8s						
USP	**Ospenovka**	**7.45**	**17**	P	**Pn**	**21 56 16.7**	**+2.8**
	SNR=7.4						
PYUN	**Piuthan**	**12.57**	**127**	*e*P	**Pn**	**21 57 21.8**	**-0.9**
	comp=E,12nm,0.4s						
DANN	**Dangsing**	**12.91**	**124**	*e*P	**Pn**	**21 57 27.4**	**+0.1**
KOLN	**Koldanda**	**13.19**	**126**	*e*P	**Pn**	**21 57 30.4**	**-0.4**
	comp=E,3.4nm,0.3s						
MK31	**Makanchi Array**	**13.31**	**34**	⇑P	**Pn**	**21 57 30.5**	**-1.5**
	comp=E,0.2nm,0.3s,baz=206,slow=11,SNR=7.7						
MKAR	**Makanchi Array**	**13.31**	**34**	P	**P**	**21 57 35.4**	**-2.0**
	comp=E,0.1nm,0.3s,baz=218,slow=13,SNR=3.5						
KKN	**Kakani**	**14.30**	**122**	*e*P	**Pn**	**21 57 45.5**	**+0.4**
	comp=E,8.7nm,0.6s						
PKIN	**Phulchoki**	**14.52**	**122**	*e*P	**Pn**	**21 57 48.6**	**+0.7**
PKI	**Pulchoki**	**14.53**	**122**	*e*P	**Pn**	**21 57 48.4**	**+0.3**
GUN	**Gumba**	**14.64**	**120**	*e*P	**Pn**	**21 57 50.6**	**+1.0**
KURBB	**Kurchatov Arra**	**15.31**	**17**	P	**P**	**21 58 02.0**	**+2.5**
	comp=E,0.1nm,0.3s,baz=206,slow=11,SNR=12						
AB31	**Akbulak array**	**15.61**	**331**	P	**Pn**	**21 57 59.3**	**-1.9**
	comp=E,2.9nm,0.5s,baz=151,slow=13,SNR=95						
AB31				⇓S	Sn	22 00 42.2	-12
	comp=E,1.2nm,0.5s,baz=154,slow=24,SNR=11						
RAMN	**Ramite**	**15.74**	**121**	*e*P	**P**	**21 58 04.6**	**-0.1**
TAPN	**Taplejung**	**16.28**	**118**	*e*P	**P**	**21 58 11.7**	**+1.0**
	comp=E,7.4nm,0.3s						
BVAR	**Borovoye Array**	**16.89**	**358**	P	**P**	**21 58 18.5**	**+1.5**
	comp=E,0.2nm,0.3s,baz=160,slow=13,SNR=4.0						
AKTO	**Aktyubinsk**	**17.31**	**330**	⇓P	**P**	**21 58 18.5**	**-3.1**
	comp=E,0.4nm,0.6s						
AKTO				⇓S	Sn	22 01 20.8	-14
	comp=E,0.5nm,1.4s						
AKTO	**Aktyubinsk**	**17.31**	**330**	P	**P**	**21 58 21.9**	**+0.3**
	comp=E,0.5nm,0.3s,baz=146,slow=12,SNR=8.6						
ZALV	**Zalesovo Beam**	**20.04**	**23**	P	Pn	21 58 54.4	+0.2
	comp=E,1.0nm,0.3s,baz=208,slow=11,SNR=22						
SONM	**Songino Array**	**28.15**	**55**	P	P	22 00 13.7	+4.8
	comp=E,0.2nm,0.4s,baz=262,slow=8.4,SNR=3.0						
ARCES	**ARCESS Array B**	**41.64**	**338**	P	**P**	**22 02 04.5**	**+0.6**
	comp=E,1.6nm,0.9s,baz=107,slow=7.9,SNR=4.2						
INK	**Inuvik**	**74.17**	**9**	P	**P**	**22 05 52.9**	**+2.0**
	comp=E,0.8nm,0.5s,baz=329,slow=5.9,SNR=4.7						
YKA	**Yellowknife Ar**	**81.57**	**3**	P	**P**	**22 06 32.5**	**+0.6**
	comp=E,0.2nm,0.4s,baz=350,slow=5.2,SNR=5.4						

*SZGRF **13** 21:58:26.1, 22°.68S×171°.20E, h33km, Southeast of Loyalty Islands*

*ISCJB **13** 21:58:29.3±0.3, 21°.16S±0°.05×170°.62E±0°.04, h33km, mb4.8/35, MS4.1/2, Error ellipse: s-maj=7.2km s-min=5.2km az=144.5*

*NOU **13** 21:58:38.6±0.9, 24°.33S×169°.83E, h30km, MD3.3, ML3.7*

*IDC **13** 21:58:40.4±1.5, 21°.32S×170°.25E, h110km±11km, mb4.4/20, mb1 4.5/24, mb1mx4.4/28, mbtmp4.4/24, MS3.5/2, Ms1 3.5/2, ms1mx3.2/31, Error ellipse: s-maj=13.1km s-min=12.2km az=5.0*

*NEIC **13** 21:58:42.0±1.2, 21°.28S×170°.22E, h123km±10km, mb4.9/11, Error ellipse: s-maj=9.1km s-min=7.7km az=55.0*

*BJI **13** 21:58:43.0, 20°.69S×169°.59E, h103km, mB5.0/7, mb4.6/13*

*AUST **13** 21:58:51.2, 21°.50S×170°.00E, h200km*

*DJA **13** 21:58:59.1±5.6, 21°.S±13°×17°.0E±3°.7, h258km±41km, M5.0/10, mb5.0/10*

ISC 13 21:58:31.1±0.3, **21°.17S**±0°.06×**170°.60E**±0°.06, **h35**km, **n289,** σ1§**22**/294, **mb4.8**/35, **16C-14D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.59**	**254**	*e*S	**Sn**	**22 00 07.4**	**+1.8**
BAYA				AMP		22 00 16.0	
	comp=Z,63nm,4.2s						
DZM	**Mont Dzumac**	**3.97**	**256**	*e*P	Pn	21 59 34.3	+4.7
DZM				*e*S	**Sn**	**22 00 15.5**	**+0.5**
DZM				AMP		22 00 19.1	
	comp=Z,6μm,0.0s						
DZM	**Mont Dzumac**	**3.97**	**256**	*e*Pn	Pn	21 59 35.8	+6.1
DZM				*e*Sn	**Sn**	**22 00 17.2**	**+2.1**
DZM	**Mont Dzumac**	**3.97**	**256**	P	Pn	21 59 35.4	+5.8
	comp=Z,33nm,0.3s,baz=79,slow=17,SNR=176						
DZM				S	**Sn**	**22 00 16.1**	**+1.0**
	comp=Z,160nm,0.3s,baz=311,slow=20,SNR=14						
DZM				LR	LR	22 00 16.1	
	comp=Z,516nm,18.8s,baz=37,slow=26						
NOUC	**Port Laguerre**	**4.10**	**256**	*e*P	Pn	21 59 37.7	+6.4
NOUC				*e*S	**Sn**	**22 00 21.1**	**+2.9**
NOUC				AMP		22 00 27.3	
	comp=Z,243nm,2.2s						
NFK	**Norfolk Island**	**8.20**	**197**	P	Pn	22 00 35.0	+7.4
	baz=7.8,SNR=33						
NFK				S	**Sn**	**22 02 02.4**	**+3.4**
	baz=7.8,SNR=5.5						
OUZ	**Omahuta**	**14.24**	**170**	*e*Pn	**P**	**22 01 59.6**	**+2.5**
	comp=Z,103nm,0.7s						
LHI	**Lord Howe Isla**	**14.59**	**223**	P	Pn	22 01 45.4	-10
	baz=14,SNR=3.1						
HNR	**Honiara**	**15.54**	**317**	P	**P**	**22 02 12.7**	**+1.0**
HNR	**Honiara**	**15.54**	**317**	P	**P**	**22 02 12.6**	**+1.0**
	comp=Z,7.0nm,0.3s,baz=139,slow=9.3,SNR=6.7						
URZ	**Urewera**	**17.93**	**163**	*e*P	P	22 02 44.0	+6.0
URZ	**Urewera**	**17.93**	**163**	P	**P**	**22 02 42.5**	**+4.5**
	comp=Z,31nm,0.3s,baz=328,slow=13,SNR=9.4						
AFI	**Afiamalu**	**18.28**	**70**	P	Pn	22 02 49.3	+7.1
AFI	**Afiamalu**	**18.28**	**70**	P	Pn	22 02 49.3	+7.1
	comp=Z,0.9nm,0.3s,baz=257,slow=15,SNR=2.6						
EIDS	**Eidsvold**	**18.41**	**253**	P	**Pn**	**22 02 46.1**	**+2.4**
	baz=18,SNR=13						
ARMA	**Armidale**	**19.38**	**238**	P	**Pn**	**22 02 56.7**	**+1.3**
	baz=19,SNR=9.2						
RMQ	**Roma**	**20.66**	**251**	P	Pn	22 03 10.4	-0.1
	baz=20,SNR=70						
MGCD	**Mangrove Creek**	**21.04**	**231**	P	**P**	**22 03 14.6**	**+2.6**
	baz=20,SNR=7.2						
RPZ	**Rata Peaks**	**22.48**	**179**	P	**P**	**22 03 28.6**	**+1.2**
RPZ	**Rata Peaks**	**22.48**	**179**	P	**P**	**22 03 28.6**	**+1.2**
	comp=Z,20nm,0.9s,baz=52,slow=12,SNR=3.2						
RPZ				LR	LR	22 10 48.8	
	comp=Z,165nm,18.1s,baz=334,slow=33						
CTA	**Charters Tower**	**22.81**	**268**	P	**P**	**22 03 30.8**	**-0.3**
CTA	**Charters Tower**	**22.81**	**268**	P	**P**	**22 03 30.8**	**-0.3**
	comp=Z,21nm,0.7s,baz=90,slow=12,SNR=20						
CNB	**Canberra Magne**	**23.35**	**228**	P	**P**	**22 03 37.6**	**+1.1**
	baz=23,SNR=65						
YNG	**Young**	**23.54**	**232**	P	**P**	**22 03 39.5**	**+1.2**
	baz=23,SNR=28						
CAN	**Canberra**	**23.61**	**229**	*e*P	**P**	**22 03 39.5**	**+0.5**
	comp=Z,113nm,0.8s						
MILA	**Mila**	**24.44**	**225**	P	**P**	**22 03 47.4**	**+0.7**
	baz=24,SNR=16						
CMSA	**Cobar Meteorol**	**24.54**	**240**	P	**P**	**22 03 47.7**	**+0.1**
	baz=24,SNR=153						
QLP	**Quilpie**	**24.68**	**252**	P	**P**	**22 03 48.8**	**-0.1**
	baz=24,SNR=76						
MTSU	**Mount Surprise**	**24.93**	**272**	P	**P**	**22 03 52.0**	**+0.7**
	baz=24,SNR=28						
PMG	**Port Moresby**	**25.42**	**294**	P	**P**	**22 03 56.4**	**+0.8**
PMG	**Port Moresby**	**25.42**	**294**	P	**P**	**22 03 55.9**	**+0.3**
	comp=Z,47nm,0.8s						
PMG	**Port Moresby**	**25.42**	**294**	P	**P**	**22 03 56.4**	**+0.8**
	comp=Z,35nm,0.8s,baz=100,slow=8.0,SNR=9.4						
TOO	**Toolangi**	**27.19**	**228**	P	**P**	**22 04 11.9**	**+0.4**
	baz=27,SNR=7.3						
STKA	**Stephens Creek**	**27.98**	**242**	*e*P	**P**	**22 04 18.5**	**-0.1**
	comp=Z,9.1nm,0.8s						
STKA				PcP	**PcP**	**22 07 32.3**	**-1.0**
STKA	**Stephens Creek**	**27.98**	**242**	P	**P**	**22 04 18.5**	**-0.1**
	comp=Z,40nm,0.8s,baz=81,slow=9.1,SNR=72						
STKA				PcP	**PcP**	**22 07 32.3**	**-1.0**
	comp=Z,3.6nm,0.5s,baz=110,slow=3.2,SNR=5.2						
STKA	**Stephens Creek**	**27.98**	**242**	P	**P**	**22 04 18.6**	**0.0**
	baz=27,SNR=49						
MOO	**Moorlands**	**28.91**	**217**	P	**P**	**22 04 27.7**	**+0.9**
	baz=28,SNR=5.9						
TAU	**Tasmania Unive**	**29.14**	**217**	*e*P	**P**	**22 04 29.1**	**+0.3**
ARPS	**Mount Arapiles**	**29.43**	**232**	P	**P**	**22 04 31.7**	**+0.3**
	baz=29,SNR=6.6						
BBOO	**Buckleboo**	**32.75**	**242**	P	**P**	**22 05 00.2**	**-0.5**
	baz=32,SNR=16						
WRAB	**Tennant Creek**	**33.92**	**265**	*e*P	**P**	**22 05 09.5**	**-1.7**
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**33.93**	**265**	P	**P**	**22 05 09.2**	**-2.0**
WRA				PcP	**PcP**	**22 07 47.9**	**-1.3**
WRA	**Warramunga Arr**	**33.93**	**265**	P	**P**	**22 05 09.2**	**-2.0**
	comp=Z,6.8nm,0.5s,baz=98,slow=8.4,SNR=129						
WRA				PcP	**PcP**	**22 07 47.9**	**-1.3**
	comp=Z,3.0nm,0.8s,baz=92,slow=2.8,SNR=7.2						
AS31	**Alice Springs**	**33.96**	**259**	*e*P	**P**	**22 05 10.1**	**-1.4**
ASAR	**Alice Springs**	**33.96**	**259**	P	**P**	**22 05 09.9**	**-1.6**
ASAR				PcP	**PcP**	**22 07 47.9**	**-1.4**
ASAR	**Alice Springs**	**33.96**	**259**	P	**P**	**22 05 09.9**	**-1.6**
	comp=Z,36nm,1.0s,baz=93,slow=8.8,SNR=179						
ASAR				PcP	**PcP**	**22 07 47.9**	**-1.4**
	comp=Z,3.5nm,0.8s,baz=110,slow=2.6,SNR=9.6						
JAY	**Jayapura**	**34.51**	**298**	P	**P**	**22 05 17.1**	**+0.7**
	baz=34,SNR=8.9						
KDU	**Kakadu**	**37.36**	**277**	P	**P**	**22 05 39.7**	**-1.0**
	baz=37,SNR=4.1						
MTN	**Manton Dam**	**38.56**	**276**	P	P	22 05 44.9	-5.9
	baz=38,SNR=6.4						
FORT	**Forest**	**39.23**	**247**	P	**P**	**22 05 55.2**	**-1.0**
	baz=38,SNR=12						
KNRA	**Kununurra**	**39.98**	**271**	P	**P**	**22 06 01.6**	**-1.1**
	baz=39,SNR=5.5						
FAKI	**Fak Fak**	**41.48**	**291**	P	**P**	**22 06 14.7**	**-0.4**
	baz=41,SNR=4.0						
FITZ	**Fitzroy Crossi**	**42.35**	**266**	P	**P**	**22 06 21.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**42.35**	**266**	P	**P**	**22 06 21.7**	**-0.5**
	comp=Z,39nm,0.8s,baz=109,slow=9.9,SNR=39						
FITZ	**Fitzroy Crossi**	**42.35**	**266**	P	**P**	**22 06 21.7**	**-0.5**
	baz=42,SNR=22						
KMBL	**Kambalda**	**44.54**	**246**	P	**P**	**22 06 38.1**	**-1.7**
	baz=44,SNR=29						
MEEK	**Meekatharra**	**47.58**	**253**	P	**P**	**22 07 02.2**	**-1.6**
	baz=47,SNR=28						
KLBR	**Kellerberrin**	**48.07**	**246**	P	**P**	**22 07 05.7**	**-1.7**
	baz=47,SNR=30						
BLDU	**Ballidu**	**48.99**	**247**	P	**P**	**22 07 12.7**	**-1.8**
	baz=48,SNR=13						
MORW	**Morawa**	**49.66**	**249**	P	**P**	**22 07 18.0**	**-1.6**
	baz=49,SNR=11						
LUWI	**Luwuk**	**50.73**	**287**	P	P	22 07 23.6	-4.4
	baz=50,SNR=7.3						
KAPI	**Kappang**	**51.81**	**281**	*e*P	**P**	**22 07 34.8**	**-1.3**
	comp=Z,16nm,0.9s						
VNDA	**Vanda**	**56.55**	**182**	*e*P	**P**	**22 08 09.8**	**+0.2**
VNDA	**Vanda**	**56.55**	**182**	P	**P**	**22 08 09.7**	**0.0**
	comp=Z,3.4nm,0.7s,baz=356,slow=8.1,SNR=16						
KKM	**Kota Kinabalu**	**59.81**	**291**	*e*P	**P**	**22 08 33.7**	**+0.2**
KSM	**Kuching**	**63.05**	**283**	*e*P	**P**	**22 08 54.6**	**-0.7**
MJAR	**Matsushiro Arr**	**65.05**	**332**	P	**P**	**22 09 08.3**	**+0.3**
MJAR	**Matsushiro Arr**	**65.05**	**332**	P	**P**	**22 09 08.3**	**+0.3**
	comp=Z,3.7nm,0.7s,baz=158,slow=6.9,SNR=11						
MAT	**Matsushiro**	**65.05**	**332**	P	**P**	**22 09 08.3**	**+0.3**
JNU	**Nakatsue**	**65.98**	**324**	P	**P**	**22 09 14.4**	**+0.3**
JNU	**Nakatsue**	**65.98**	**324**	P	**P**	**22 09 14.4**	**+0.3**
	comp=Z,3.6nm,0.5s,baz=162,slow=6.4,SNR=3.7						
QSPA	**South Pole Qui**	**68.89**	**180**	*e*P	**P**	**22 09 31.8**	**-0.4**
	comp=Z,37nm,1.0s						
KSRS	**Korea Array**	**70.82**	**325**	P	**P**	**22 09 44.8**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=277,slow=39,SNR=4.0						
KSAR	**Wonju Array Be**	**70.83**	**325**	P	**P**	**22 09 44.8**	**+0.5**
NJ2	**Nanjing**	**72.48**	**316**	*e*P	P	22 10 03.1	+8.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PSI	**Prapat**	**74.00**	**279**	P	**P**	**22 10 01.4**	**-2.5**
PSI	**Prapat**	**74.00**	**279**	P	**P**	**22 10 01.4**	**-2.5**
	comp=Z,6.2nm,0.7s,baz=185,slow=5.6,SNR=5.4						
MDJ	**Mudanjiang**	**75.43**	**331**	P	**P**	**22 10 13.4**	**+2.1**
MDJ				pmax	pmax		
	comp=Z,6.0nm,2.5s						
MAW	**Mawson**	**77.13**	**202**	P	**P**	**22 10 20.3**	**-0.4**
MAW	**Mawson**	**77.13**	**202**	P	**P**	**22 10 20.3**	**-0.4**
	comp=Z,11nm,0.7s,baz=112,slow=9.6,SNR=20						
GYA	**Guiyang**	**77.97**	**305**	*e*P	**P**	**22 10 27.3**	**+1.1**
GYA				PP	**PP**	**22 13 26.0**	**+3.2**
GYA				S	S	22 20 06.5	-11
GYA				SKS	SKSac	22 20 22.9	-15
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**80.35**	**312**	P	**P**	**22 10 39.5**	**+0.5**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KMI	**Kunming**	**80.38**	**302**	P	**P**	**22 10 41.0**	**+1.5**
KMI				pmax	pmax		
	comp=Z,15nm,0.9s						
CM31	**Chiang Mai Arr**	**80.46**	**294**	*e*P	**P**	**22 10 40.7**	**+0.9**
	comp=Z,6.4nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.46**	**294**	P	**P**	**22 10 40.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**80.46**	**294**	P	**P**	**22 10 40.5**	**+0.6**
	comp=Z,7.1nm,0.8s,baz=136,slow=4.3,SNR=49						
CD2	**Chengdu**	**82.42**	**307**	P	**P**	**22 10 50.3**	**+0.3**
CD2				PP	**PP**	**22 14 02.6**	**+3.0**
CD2				S	S	22 20 53.4	-11
CD2				SKS	SKSac	22 20 54.4	-14
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.4s						
CD2				LR	LR		
	comp=N,330nm,18.1s						
CD2				LR	LR		
	comp=E,270nm,16.6s						
CD2				LR	LR		
	comp=Z,220nm,14.2s						
SYO	**Syowa Base**	**83.44**	**196**	⇑*e*P	**P**	**22 10 52.0**	**-2.6**
SYO	**Syowa Base**	**83.44**	**196**	⇑*e*PcP	**P**	**22 10 56.6**	**+2.0**
OHAK	**Old Harbor**	**83.75**	**19**	*e*P	**P**	**22 10 58.7**	**+2.5**
	comp=Z,13nm,0.9s						
KDAK	**Kodiak Island**	**84.43**	**19**	*e*P	**P**	**22 11 02.6**	**+3.0**
KDAK	**Kodiak Island**	**84.43**	**19**	P	**P**	**22 11 02.2**	**+2.6**
	comp=Z,6.5nm,0.8s,baz=231,slow=8.4,SNR=7.0						
GAMB	**Gambell**	**85.80**	**8**	*e*P	**P**	**22 11 08.8**	**+2.5**
	comp=Z,7.6nm,0.9s						
SNAA	**Sanae**	**87.29**	**182**	*e*P	**P**	**22 11 13.0**	**-0.9**
SNAA	**Sanae**	**87.29**	**182**	*e*P	**P**	**22 11 12.4**	**-1.5**
	comp=Z,18nm,0.8s						
VNA2	**Neumayer--Watz**	**88.14**	**181**	*e*P	**P**	**22 11 17.4**	**-0.5**
VNA1	**Neumayer--Stat**	**88.42**	**180**	*e*P	**P**	**22 11 18.8**	**-0.4**
NVAR	**Mina Array Bea**	**89.13**	**48**	P	**P**	**22 11 25.6**	**+2.3**
NVAR	**Mina Array Bea**	**89.13**	**48**	P	**P**	**22 11 25.6**	**+2.3**
	comp=Z,1.0nm,0.7s,baz=224,slow=6.3,SNR=7.2						
SONM	**Songino Array**	**89.53**	**323**	P	**P**	**22 11 25.0**	**+0.2**
SONM	**Songino Array**	**89.53**	**323**	P	**P**	**22 11 25.0**	**+0.2**
	comp=Z,2.8nm,1.0s,baz=134,slow=5.0,SNR=13						
ILAR	**Eielson Array**	**91.70**	**17**	P	**P**	**22 11 34.3**	**0.0**
ILAR	**Eielson Array**	**91.70**	**17**	P	**P**	**22 11 34.3**	**0.0**
	comp=Z,0.7nm,0.5s,baz=229,slow=4.9,SNR=13						
EGAK	**Eagle**	**93.33**	**19**	*e*P	**P**	**22 11 42.7**	**+0.8**
	comp=Z,6.7nm,0.8s						
PLCA	**Paso Flores**	**96.25**	**138**	*e*P	**P**	**22 11 56.8**	**+0.7**
PLCA	**Paso Flores**	**96.25**	**138**	P	**P**	**22 11 56.0**	**-0.2**
	comp=Z,4.1nm,1.2s,baz=216,slow=4.1,SNR=3.6						
INK	**Inuvik**	**97.97**	**18**	P	**P**	**22 12 02.8**	**-0.2**
INK	**Inuvik**	**97.97**	**18**	P	**P**	**22 12 02.8**	**-0.2**
	comp=Z,2.0nm,1.1s,baz=227,slow=4.1,SNR=3.9						
YKA	**

comp=Z,24nm,0.8s

CLL				*i* pPKPbc	pPKPbc	22 18 35.0	+19	
CLL				*e*PP	**PP**	22 21 24.0	+0.5	
PKS7	**Kunszentmiklos**	**145.34 325**		*e*PKPbc	**PKPbc**	**22 18 05.1**	**0.0**	
VTS	**Vitosha**	**145.36 316**	⇑	*i*P	**PKPdf**	**22 18 05.7**	**+0.1**	
PKS6	**Bocsa**	**145.40 324**		*e*PKPbc	**PKPab**	**22 18 05.7**	**+0.2**	
NVR	**Nevrokopi**	**145.48 313**		*e*P	**PKPdf**	**22 18 04.8**	**-0.9**	
PKSG		**145.53 326**	⇓	*e*PKPbc	**PKPab**	**22 18 06.2**	**+0.3**	
PRA	**Prague**	**145.56 333**		PKP	**PKPab**	**22 18 06.0**	**+0.1**	
PRU	**Pruhonice**	**145.57 332**		*e*PKP	**PKPbc**	**22 18 05.8**	**+0.1**	
ESK	**Eskdalemuir**	**145.59 354**		*e*PKPdf	**PKPdf**	**22 18 05.4**	**0.0**	
PKS2	**Kecel**	**145.66 324**	⇓	*e*PKPbc	**PKPab**	**22 18 07.1**	**+0.7**	
ZST	**Bratislava**	**145.66 328**		*e*PKP	**PKPdf**	**22 18 05.8**	**+0.1**	
ZST				*e*pP		22 33 50.6		
TREC	**Trest**	**145.66 331**		*e*PKP	**PKPdf**	**22 18 05.8**	**+0.1**	
PKST	**T"s**	**145.81 326**	⇓	*e*PKPdf	**PKPdf**	**22 18 06.2**	**+0.2**	
APE	**Apeiranthos**	**145.85 305**		*e*P	**PKPdf**	**22 18 05.1**	**-1.4**	
ZKR	**Zakros**	**145.86 302**		*e*P	**PKPdf**	**22 18 06.7**	**+0.2**	
SANT	**Santorini**	**146.11 304**		*e*PKPdf	**PKPdf**	**22 18 05.5**	**-1.5**	
SANT	**Santorini**	**146.11 304**		*e*P	**PKPdf**	**22 18 06.2**	**-0.7**	
TANN	**Tannenbergstha**	**146.11 335**		*e*PKPbc	**PKPbc**	**22 18 07.9**	**+0.4**	
PKSM	**Moragy**	**146.14 324**	⇓	*i*P	**PKPdf**	**22 18 06.8**	**+0.2**	
PKSM	**Moragy**	**146.14 324**	‖	*e*	**PKPbc**	**22 18 07.4**	**-0.2**	
NKC	**Novy Kostel**	**146.26 335**		*e*PKP	**PKPbc**	**22 18 08.0**	**+0.1**	
MOX	**Moxa**	**146.26 336**		*e*PKPbc	**PKPbc**	**22 18 08.0**	**+0.2**	
SOP	**Sopron**	**146.28 328**	⇑	*e*PKPdf	**PKPbc**	**22 18 08.4**	**+0.4**	
NPS	**Neapolis**	**146.30 302**		*e*P	**PKPbc**	**22 18 08.0**	**-0.5**	
LAST	**Lasithi**	**146.43 302**		*e*P	**PKPdf**	**22 18 08.3**	**+0.7**	
CONA	**Conrad Observa**	**146.45 329**	⇓	*i*PKPab	**PKPbc**	**22 18 08.8**	**+0.2**	
	comp=Z,26nm,0.7s,SNR=30							
KHC	**Kasperske Hory**	**146.63 332**		*e*PKPdf	**PKPbc**	**22 18 06.7**	**-0.8**	
KHC	**Kasperske Hory**	**146.63 332**		*e*PKP	**PKPbc**	**22 18 09.2**	**+0.2**	
KHC				*ep*PKP	pPKPdf	22 18 39.7	+21	
GRG	**Griva**	**146.64 313**		*e*P	**PKPdf**	**22 18 07.9**	**+0.2**	
ROTZ	**Rotzenmuhle**	**146.72 334**		*e*PKPbc	**PKPbc**	**22 18 09.7**	**+0.5**	
PTL	**Penteli**	**146.77 308**		*e*P	**PKPdf**	**22 18 08.5**	**+0.5**	
GEC2	**GERESS Array S**	**146.79 332**		*e*PKPbc	**PKPbc**	**22 18 09.6**	**0.0**	
GERES	**GERESS Array B**	**146.79 332**		PKPbc	**PKPbc**	**22 18 09.1**	**-0.5**	
GERES				SKPbc	SKPbc	22 21 37.9	-7.7	
GERES	**GERESS Array B**	**146.79 332**		PKPbc	**PKPbc**	**22 18 09.1**	**-0.5**	
	comp=Z,23nm,0.6s,baz=42,slow=3.1,SNR=170							
GERES				SKPbc	SKPbc	22 21 37.9	-7.7	
	comp=Z,1.1nm,0.9s,baz=46,slow=5.8,SNR=3.5							
LIT	**Litokhoron**	**146.95 312**		*e*P	**PKPdf**	**22 18 08.7**	**+0.5**	
BEHE	**Becsehely**	**146.97 326**	‖	*e*PKPdf	**PKPbc**	**22 18 10.7**	**+0.7**	
SIVA	**Sivas**	**147.00 302**		*e*P	**PKPbc**	**22 18 10.2**	**-0.2**	
NAIG	**Nisos Aigina**	**147.15 307**		*e*P	**PKPdf**	**22 18 08.4**	**-0.2**	
KOGS	**Kog**	**147.26 326**	⇑	*i*PKPbc	**PKPbc**	**22 18 10.4**	**-0.5**	
MOA	**Molln**	**147.27 330**	⇑	*i*PKPbc	**PKPbc**	**22 18 10.6**	**-0.3**	
	comp=Z,8.4nm,0.6s							
VAM	**Vamos**	**147.37 303**		*e*P	**PKPbc**	**22 18 11.4**	**-0.1**	
FNA	**Florina**	**147.41 314**		*e*P	**PKPdf**	**22 18 10.1**	**+1.1**	
DID	**Didima**	**147.43 307**		*e*P	**PKPdf**	**22 18 09.5**	**+0.4**	
LTK	**Loutraki**	**147.44 308**		*e*P	**PKPdf**	**22 18 09.9**	**+0.8**	
BCI	**Bajram Curri**	**147.49 317**		*e*P	**PKPbc**	**22 18 11.0**	**-0.6**	
THL	**Klokotos Trika**	**147.51 311**		*e*P	**PKPdf**	**22 18 09.3**	**+0.2**	
AGG	**Agios Georgios**	**147.51 310**		*e*P	**PKPdf**	**22 18 10.2**	**+1.0**	
PHP	**Peshkopia**	**147.60 316**		*e*P	**PKPbc**	**22 18 11.2**	**-0.8**	
GVD	**Gavdhos**	**147.62 302**		*e*PKPdf	**PKPdf**	**22 18 10.3**	**+0.8**	
GVD	**Gavdhos**	**147.62 302**		*e*P	**PKPbc**	**22 18 11.3**	**-0.9**	
PERS	**Pernice**	**147.71 328**		*i*PKPbc	**PKPbc**	**22 18 11.5**	**-0.6**	
SOKA	**Soboth**	**147.72 328**	⇓	*i*PKPbc	**PKPbc**	**22 18 11.5**	**-0.7**	
	comp=Z,18nm,1.1s							
TNS	**Taunus Mts**	**147.76 338**		*e*PKPbc	**PKPbc**	**22 18 12.3**	**+0.1**	
PUK	**Puka**	**147.77 317**		*e*P	**PKPbc**	**22 18 11.7**	**-0.8**	
KBN	**Korca**	**147.88 314**		*e*P	**PKPbc**	**22 18 11.9**	**-0.9**	
KALE	**Kalithea**	**147.90 309**		*e*P	**PKPbc**	**22 18 12.0**	**-0.9**	
ANKY	**Antikythira Is**	**147.93 304**		*e*P	**PKPbc**	**22 18 12.9**	**-0.1**	
EVR	**Evrytania**	**147.93 310**		*e*P	**PKPbc**	**22 18 12.4**	**-0.6**	
VLI	**Veliai**	**147.93 306**		*e*P	**PKPdf**	**22 18 11.1**	**+1.2**	
GUR	**Goura**	**147.93 308**		*e*P	**PKPbc**	**22 18 12.2**	**-0.9**	
TRIZ	**Trizonia**	**147.96 309**		*e*P	**PKPbc**	**22 18 12.2**	**-0.8**	
KYTH	**Kithira**	**148.00 305**		*e*P	**PKPbc**	**22 18 12.5**	**-0.7**	
RJOB	**Jochberg**	**148.02 331**		*e*PKPbc	**PKPbc**	**22 18 12.7**	**-0.2**	
KLV	**Kalavryta, Ach**	**148.03 309**		*e*P	**PKPbc**	**22 18 12.7**	**-0.6**	
EFP	**Efpalio**	**148.06 310**		*e*P	**PKPbc**	**22 18 13.5**	**+0.3**	
LAKA	**Lakka**	**148.08 309**		*e*P	**PKPbc**	**22 18 13.1**	**-0.3**	
VLX	**Vlachokerasia**	**148.12 307**		*e*P	**PKPbc**	**22 18 12.7**	**-0.9**	
TIR	**Tirane**	**148.14 316**		*e*PKPdf	**PKPdf**	**22 18 11.1**	**+1.0**	
TOD	**Tromm**	**148.16 337**		PKP	**PKPbc**	**22 18 13.5**	**+0.3**	
MEM	**Membach**	**148.22 341**		PKPbc	**PKPbc**	**22 18 13.6**	**+0.3**	
KBA	**Koelnbreinsper**	**148.25 330**	⇑	*i*PKPbc	**PKPbc**	**22 18 12.6**	**-1.1**	
	comp=Z,22nm,0.9s,SNR=6.6							
ABH	**Alteburg**	**148.36 339**		PKP	**PKPbc**	**22 18 14.4**	**+0.7**	
DYR	**Agios Nikonas**	**148.37 306**		*e*P	**PKPbc**	**22 18 13.2**	**-1.0**	
BOJS	**Bojanci**	**148.41 326**		*e*PKPdf	**PKPdf**	**22 18 10.1**	**-0.3**	
BOJS				*i* PKPbc	**PKPbc**	**22 18 14.1**	**+0.2**	
LJU	**Ljubljana**	**148.41 327**		*i* PKPbc	**PKPbc**	**22 18 13.8**	**-0.2**	
VISS	**Visnje**	**148.42 327**		*i* PKPbc	**PKPdf**	**22 18 10.3**	**-0.1**	
MYKA	**Terra Mystica**	**148.44 329**	⇑	*i*PKPbc	**PKPbc**	**22 18 13.0**	**-1.1**	
	comp=Z,16nm,0.6s							
RLS	**Riolos of Patr**	**148.52 309**		*e*P	**PKPbc**	**22 18 14.3**	**-0.2**	
BCLA	**Clavier**	**148.59 342**		PKPbc	**PKPbc**	**22 18 14.1**	**-0.2**	
STON	**Ston**	**148.68 320**		P	**PKPbc**	**22 18 13.1**	**-1.6**	
CEY	**Cerknica**	**148.68 327**		*e*PKPdf	**PKPdf**	**22 18 10.6**	**-0.3**	
CEY				*i* PKPbc	**PKPbc**	**22 18 14.4**	**-0.3**	
RUP	**Ruppelstein**	**148.68 339**		PKP	**PKPbc**	**22 18 15.3**	**+0.7**	
STU	**Stuttgart**	**148.70 336**		*e*PKPdf	**PKPdf**	**22 18 11.5**	**+0.7**	
STU				*e*PKPbc	**PKPbc**	**22 18 15.3**	**+0.7**	
VOY	**Vojsko**	**148.74 328**		*e*PKPdf	**PKPdf**	**22 18 09.9**	**-1.2**	
VOY				*e*PKPbc	**PKPbc**	**22 18 14.2**	**-0.7**	
VOY				*e*		22 18 26.6		
PYL	**PYLOS**	**148.76 307**		*e*P	**PKPbc**	**22 18 13.8**	**-1.3**	
LKD2	**Lefkada island**	**148.80 311**		*e*P	**PKPbc**	**22 18 14.8**	**-0.4**	
WATA	**Walderalm**	**148.87 332**	⇑	*i*PKPbc	**PKPbc**	**22 18 14.7**	**-0.6**	
	comp=Z,12nm,0.6s,SNR=8.7							
ABTA	**Abfaltersbach**	**148.89 330**		*i* PKPbc	**PKPbc**	**22 18 14.3**	**-1.0**	
	comp=Z,24nm,0.7s,SNR=11							
WTTA	**Wattenberg**	**148.90 332**		*i* PKPbc	**PKPbc**	**22 18 15.0**	**-0.3**	
	comp=Z,22nm,0.8s,SNR=9.9							
KEK	**Kerkira**	**148.98 313**		*e*P	**PKPbc**	**22 18 14.9**	**-0.7**	
WLF	**Walferdange**	**149.00 340**		PKPbc	**PKPbc**	**22 18 15.9**	**+0.5**	
WLF	**Walferdange**	**149.00 340**		*e*PKPdf	**PKPdf**	**22 18 13.0**	**+1.7**	
LANF	**Langenberg**	**149.04 338**		PKP	**PKPbc**	**22 18 16.0**	**+0.5**	
LANF	**Langenberg**	**149.04 338**		PKP	**PKPbc**	**22 18 16.0**	**+0.5**	
MOTA	**Moosalm**	**149.07 332**		*i* PKPbc	**PKPbc**	**22 18 15.2**	**-0.5**	
	comp=Z,24nm,0.7s,SNR=25							
DOU	**Dourbes**	**149.09 342**		PKPbc	**PKPbc**	**22 18 15.7**	**+0.2**	
VLS	**Valsamata**	**149.10 310**		*e*P	**PKPbc**	**22 18 15.3**	**-0.7**	
BFO	**Black Forest**	**149.39 336**		*e*PKPbc	**PKPbc**	**22 18 16.2**	**-0.2**	
BFO	**Black Forest**	**149.39 336**		*e*PKPdf	**PKPdf**	**22 18 13.6**	**+1.6**	
BFO				*e*PKPbc	**PKPbc**	**22 18 16.4**	**0.0**	
SPAK	**Spaichingen-Ko**	**149.41 336**		PKP	**PKPbc**	**22 18 16.5**	**0.0**	
FETA	**Feichten**	**149.48 332**		*i* PKPbc	**PKPbc**	**22 18 16.6**	**-0.2**	
	comp=Z,44nm,1.1s,SNR=24							
DAVA	**Damuels**	**149.63 334**	⇓	*i*PKPbc	**PKPbc**	**22 18 16.7**	**-0.5**	
	comp=Z,37nm,1.1s							
FELD	**Feldberg im Sc**	**149.89 336**		PKP	**PKPbc**	**22 18 17.5**	**-0.3**	
FELD	**Feldberg im Sc**	**149.89 336**		PKP	**PKPbc**	**22 18 17.5**	**-0.3**	
ECH	**Echery**	**149.91 338**		*e*PKPdf	**PKPbc**	**22 18 14.5**	**+1.7**	
ECH				PKP	**PKPbc**	**22 18 17.6**	**-0.1**	
ECH				*e*PKPbc	**PKiKP**	**22 18 17.8**	**-0.8**	
MOF	**Molkenrain**	**150.23 337**		PKP	**PKPbc**	**22 18 18.5**	**0.0**	
THEF	**They Montfort**	**150.31 339**		PKP	**PKPbc**	**22 18 18.8**	**+0.2**	
TUE	**Stuetta**	**150.50 333**		*e*PKPbc	**PKPbc**	**22 18 19.1**	**-0.2**	
LOMF	**Lomont**	**150.77 337**		PKP	**PKPbc**	**22 18 20.1**	**+0.3**	
TIP	**Timpagrande**	**151.29 314**		*e*PKPbc	**PKPbc**	**22 18 20.3**	**-0.9**	
CUC	**Castrocucco**	**151.47 317**		*e*PKPdf	**PKPdf**	**22 18 17.0**	**+1.5**	
OG01	**Vacheresse**	**151.68 336**		PKP	**PKPbc**	**22 18 22.2**	**+0.2**	
RSL	**Roselend**	**152.24 335**		PKP	**PKPbc**	**22 18 23.2**	**-0.2**	
CEL	**Celeste**	**152.34 314**		*e*PKPbc	**PKPbc**	**22 18 21.9**	**-1.8**	
AGO	**Saint Agoulin**	**153.15 340**		PKP	**PKPbc**	**22 18 25.2**	**0.0**	
SAOF	**Saorge**	**153.24 332**		PKP	**PKPbc**	**22 18 25.0**	**-0.5**	
AUTN	**L'Aution**	**153.29 332**		PKP	**PKPbc**	**22 18 25.5**	**-0.3**	
TOUF	**Mont Tournerai**	**153.35 333**		PKP	**PKPbc**	**22 18 25.4**	**-0.5**	
SSB	**Saint Sauveur**	**153.36 338**		*e*PKPbc	**PKPbc**	**22 18 25.5**	**-0.2**	
LBL	**Lubilhac**	**153.84 339**		PKP	**PKPbc**	**22 18 27.9**	**+1.1**	
DBIC	**Dimbokro**	**164.93 198**		PKPab	**PKPab**	**22 19 27.6**	**-0.8**	
DBIC	**Dimbokro**	**164.93 198**		PKPab	**PKPab**	**22 19 27.6**	**-0.8**	
	comp=Z,11nm,0.6s,baz=163,slow=3.5,SNR=21							
TORD	**Torodi Ar. Bea**	**166.74 235**		PKP	**PKPdf**	**22 18 32.3**	**-1.5**	
TORD				PKPab	**PKPab**	**22 19 34.6**	**-2.0**	
TORD	**Torodi Ar. Bea**	**166.74 235**		PKP	**PKPdf**	**22 18 32.3**	**-1.5**	
	comp=Z,0.6nm,0.6s,baz=143,slow=0.3,SNR=4.6							
TORD				PKPab	**PKPab**	**22 19 34.6**	**-2.0**	
	comp=Z,3.4nm,0.8s,baz=112,slow=4.3,SNR=13							

*IDC **13** 22:04:02.4±0.6,5°.35S×153°.06E, h0km, mb4.4/21, mb1 4.5/23, mb1mx4.5/26, mbtmp4.4/23, ML3.7/2, MS4.0/7,*

Ms1 4.0/7, ms1mx3.5/33, Error ellipse: s-maj=20.4km s-min=12.8km az=100.0

*ISCJB **13** 22:04:06.4±0.4,5°.39S×0°.05×153°.03E±0°.07, h37km, mb4.4/29, MS3.9/6, Error ellipse: s-maj=10.4km s-min=5.9km az=21.1*

*NEIC **13** 22:04:07.0±4.0,5°.37S×153°.01E, h30km±28km, mb4.7/10, Error ellipse: s-maj=11.3km s-min=9.3km az=76.0*

*AUST **13** 22:04:10.7,5°.17S×152°.60E, h35km*

ISC 13 22:04:08.3±0.5,5°.36S±0°.07×152°.96E±0°.08, h37km, n98, σ1§21/102, mb4.5/29, MS3.9/6, 1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.02**	**235**	Pn	**Pn**	**22 05 48.5**	**0.0**
PMG				Sn	**Sn**	**22 07 07.2**	**+0.1**
PMG	**Port Moresby**	**7.02**	**235**	Pn	**Pn**	**22 05 48.5**	**0.0**
	6.9nm,0.3s,baz=42,slow=12,SNR=11						
PMG				Sn	**Sn**	**22 07 07.2**	**+0.1**
	8.4nm,0.3s,baz=26,slow=18,SNR=14						
MTSU	**Mount Surprise**	**15.25**	**213**	P	**P**	**22 07 47.2**	**+1.8**
	baz=15,SNR=10						
CTA	**Charters Tower**	**16.03**	**203**	Pn	**Pn**	**22 07 51.1**	**+0.1**
CTA	**Charters Tower**	**16.03**	**203**	Pn	**Pn**	**22 07 51.1**	**+0.1**
	0.2nm,0.3s,baz=28,slow=13,SNR=3.5						
CTA				LR	LR	22 12 58.8	
	comp=Z,551nm,20.8s,baz=25,slow=33						
QIS	**Mount Isa**	**19.91**	**219**	P	**P**	**22 08 37.6**	**+0.7**
	baz=20,SNR=5.1						
EIDS	**Eidsvold**	**19.98**	**185**	*e*P	**P**	**22 08 38.0**	**+0.5**
	17nm,0.9s						
EIDS	**Eidsvold**	**19.98**	**185**	P	**P**	**22 08 38.0**	**+0.5**
	baz=20,SNR=4.5						
GUMO	**Guam**	**20.47**	**337**	P	**P**	**22 08 44.0**	**+1.1**
	24nm,0.3s,baz=170,slow=18,SNR=2.7						
GUMO				LR	LR	22 14 52.8	
	comp=Z,205nm,20.4s,baz=201,slow=32						
DZM	**Mont Dzumac**	**21.12**	**143**	*e*P	**P**	**22 08 49.1**	**-1.0**
DZM	**Mont Dzumac**	**21.12**	**143**	P	**P**	**22 08 49.3**	**-0.8**
	2.7nm,0.5s,baz=307,slow=10,SNR=3.2						
RMQ	**Roma**	**21.39**	**190**	P	**P**	**22 08 55.0**	**+2.2**
	baz=22,SNR=5.3						
KDU	**Kakadu**	**21.49**	**249**	P	**P**	**22 08 56.1**	**+2.1**
	baz=21,SNR=27						
KDU				S	**S**	**22 12 47.0**	**-3.5**
	baz=21,SNR=5.4						
QLP	**Quilpie**	**22.69**	**201**	P	**P**	**22 09 06.4**	**-0.4**
	baz=23,SNR=12						
MTN	**Manton Dam**	**22.78**	**249**	P	**P**	**22 09 10.0**	**+2.2**
	baz=22,SNR=7.5						
MTN				S	**S**	**22 13 15.0**	**+0.5**
	baz=22,SNR=5.1						
WRAB	**Tennant Creek**	**23.19**	**230**	*e*P	**P**	**22 09 11.6**	**-0.3**
	32nm,1.1s						
WRA	**Warramunga Arr**	**23.20**	**230**	P	**P**	**22 09 11.5**	**-0.6**
WRA	**Warramunga Arr**	**23.20**	**230**	P	**P**	**22 09 11.5**	**-0.6**
	15nm,0.9s,baz=54,slow=10,SNR=33						
AS31	**Alice Springs**	**25.85**	**223**	*e*P	**P**	**22 09 35.1**	**-1.4**
ASAR	**Alice Springs**	**25.85**	**223**	P	**P**	**22 09 36.5**	**-0.1**
ASAR	**Alice Springs**	**25.85**	**223**	P	**P**	**22 09 36.5**	**-0.1**
	10nm,1.0s,baz=57,slow=8.8,SNR=20						
KNRA	**Kununurra**	**25.87**	**245**	P	**P**	**22 09 41.0**	**+4.3**
	baz=26,SNR=3.6						
STKA	**Stephens Creek**	**28.45**	**201**	*e*P	**P**	**22 09 57.2**	**-2.5**
	0.9nm,0.7s						
STKA	**Stephens Creek**	**28.45**	**201**	P	**P**	**22 09 58.6**	**-1.1**
	5.5nm,0.8s,baz=25,slow=12,SNR=6.5						
STKA				LR	LR	22 21 01.7	
	comp=Z,316nm,18.9s,baz=137,slow=36						
STKA	**Stephens Creek**	**28.45**	**201**	P	**P**	**22 09 58.8**	**-0.9**
	baz=29,SNR=4.9						
FITZ	**Fitzroy Crossi**	**29.54**	**242**	*e*P	**P**	**22 10 09.7**	**+0.1**
	11nm,0.9s						
FITZ	**Fitzroy Crossi**	**29.54**	**242**	P	**P**	**22 10 09.6**	**0.0**
	6.1nm,0.8s,baz=77,slow=3.8,SNR=5.9						
FITZ				LR	LR	22 23 38.0	
	comp=Z,227nm,18.4s,baz=66,slow=40						
FITZ	**Fitzroy Crossi**	**29.54**	**242**	P	**P**	**22 10 09.7**	**+0.1**
	baz=29,SNR=5.7						
LUWI	**Luwuk**	**30.44**	**277**	S	**S**	**22 15 11.6**	**-4.8**
	baz=30,SNR=4.5						
NIUE	**Niue**	**38.64**	**114**	S	S	22 17 35.5	+13
	baz=39,SNR=3.2						
MEEK	**Meeksatharra**	**38.99**	**233**	P	P	22 11 36.5	+5.2
	baz=39,SNR=4.3						
MORW	**Morawa**	**42.12**	**232**	S	S	22 17 53.0	-22
	baz=42,SNR=30						
JNU	**Nakatsue**	**43.63**	**333**	P	**P**	**22 12 09.0**	**-0.3**
JNU	**Nakatsue**	**43.63**	**333**	P	**P**	**22 12 09.0**	**-0.3**
	28nm,0.9s,baz=142,slow=4.4,SNR=12						
MJAR	**Matsushiro Arr**	**43.91**	**343**	P	**P**	**22 12 09.4**	**-2.0**
MJAR				PcP	**PcP**	**22 13 58.7**	**+1.5**
MJAR	**Matsushiro Arr**	**43.91**	**343**	P	**P**	**22 12 09.4**	**-2.0**
	1.7nm,0.8s,baz=171,slow=10.0,SNR=5.6						
MJAR				PcP	**PcP**	**22 13 58.7**	**+1.5**
	3.0nm,0.8s,baz=171,slow=3.8,SNR=6.2						
KSRS	**Korea Array**	**48.57**	**333**	P	**P**	**22 12 47.7**	**-0.3**
	2.1nm,0.9s,baz=146,slow=11,SNR=6.9						
KSAR	**Wonju Array Be**	**48.58**	**333**	P	**P**	**22 12 47.7**	**-0.4**
USRK	**Ussuriysk Arra**	**52.82**	**341**	P	**P**	**22 13 19.7**	**-0.3**
	2.8nm,0.8s,baz=166,slow=9.8,SNR=4.8						
USRK				LR	LR	22 33 39.2	
	comp=Z,114nm,19.8s,baz=266,slow=34						
CM31	**Chiang Mai Arr**	**58.26**	**295**	*e*P	**P**	**22 14 01.2**	**+1.6**
	1.2nm,0.4s						
CMAR	**Chiang Mai Arr**	**58.26**	**295**	P	**P**	**22 14 00.8**	**+1.2**
CMAR	**Chiang Mai Arr**	**58.26**	**295**	P	**P**	**22 14 00.8**	**+1.2**
	3.8nm,0.8s,baz=107,slow=5.3,SNR=18						
PEA0B	**Petropavlovsk-**	**58.39**	**3**	*e*P	**P**	**22 14 00.2**	**+0.4**
PETK	**Petropavlovsk-**	**58.39**	**3**	P	**P**	**22 14 00.4**	**+0.6**
PETK	**Petropavlovsk-**	**58.39**	**3**	P	**P**	**22 14 00.4**	**+0.6**
	16nm,0.7s,baz=170,slow=8.2,SNR=30						
PETK				LR	LR	22 36 10.4	
	comp=Z,144nm,18.6s,baz=227,slow=33						
SONM	**Songino Array**	**66.88**	**328**	P	**P**	**22 14 57.3**	**+0.5**
SONM				PcP	**PcP**	**22 15 25.9**	**+0.6**
SONM	**Songino Array**	**66.88**	**328**	P	**P**	**22 14 57.3**	**+0.5**
	1.5nm,0.5s,baz=140,slow=5.7,SNR=12						
SONM				PcP	**PcP**	**22 15 25.9**	**+0.6**
	0.8nm,0.8s,baz=146,slow=4.4,SNR=3.9						
VNDA	**Vanda**	**72.27**	**178**	P	**P**	**22 15 29.3**	**0.0**
	1.2nm,1.1s,baz=1.2,slow=6.2,SNR=4.1						
GUN	**Gumba**	**72.55**	**301**	*e*P	**P**	**22 15 33.0**	**+0.6**
	25nm,1.0s						
PKI	**Pulchoki**	**72.85**	**301**	*e*P	**P**	**22 15 34.2**	**0.0**
KKN	**Kakani**	**73.02**	**301**	*e*P	**P**	**22 15 35.0**	**0.0**
DMN	**Daman**	**73.12**	**301**	*e*P	**P**	**22 15 36.3**	**+0.6**
KOLN	**Koldanda**	**74.45**	**301**	*e*P	**P**	**22 15 43.7**	**+0.3**
DANN	**Dangsing**	**74.47**	**301**	*e*P	**P**	**22 15 43.3**	**-0.3**
PYUN	**Piuthan**	**75.06**	**301**	*e*P	**P**	**22 15 46.5**	**-0.4**
	35nm,1.0s						
MK31	**Makanchi Array**	**80.85**	**319**	*e*P	**P**	**22 16 18.7**	**+0.2**
MKAR	**Makanchi Array**	**80.85**	**319**	P	**P**	**22 16 18.8**	**+0.3**
MKAR	**Makanchi Array**	**80.85**	**319**	P	**P**	**22 16 18.8**	**+0.3**
	1.7nm,0.8s,baz=98,slow=6.4,SNR=17						
MCK	**McKinley**	**81.32**	**22**	*e*P	**P**	**22 16 19.6**	**-1.0**
	12nm,1.0s						
ZAA0	**Zalesovo Array**	**81.70**	**326**	*e*P	**P**	**22 16 22.3**	**-0.5**
ZALV	**Zalesovo Beam**	**81.70**	**326**	P	**P**	**22 16 22.3**	**-0.5**
ZALV	**Zalesovo Beam**	**81.70**	**326**	P	**P**	**22 16 22.3**	**-0.5**
	7.7nm,0.8s,baz=106,slow=5.4,SNR=38						
ILAR	**Eielson Array**	**82.62**	**22**	P	**P**	**22 16 25.8**	**-1.6**
ILAR	**Eielson Array**	**82.62**	**22**	P	**P**	**22 16 25.8**	**-1.6**
	3.2nm,0.9s,baz=250,slow=5.7,SNR=24						
ILAR				LR	LR	22 52 51.8	
	comp=Z,106nm,18.2s,baz=173,slow=36						
DOT	**Dot Lake**	**83.17**	**24**	*e*P	**P**	**22 16 30.4**	**+0.1**
	11nm,0.9s						
KSH	**Kashi**	**83.42**	**311**	*ep*P	**pP**	**22 16 44.4**	**+0.6**
KSH				*es*P	sP	22 16 55.3	+7.3
KSH				*e*PP	PP	22 19 29.3	-15
KURK	**Kurchatov**	**84.31**	**322**	*e*P	**P**	**22 16 36.3**	**0.0**
	10.0nm,1.1s						
TKM2	**Tokmak 2**	**84.43**	**314**	*e*P	**P**	**22 16 37.4**	**-0.1**
	5.5nm,1.1s						
KZA	**Kyzart**	**84.50**	**313**	P	**P**	**22 16 39.7**	**+1.6**
	SNR=12						
KBK	**Karagaybulak**	**84.84**	**314**	P	**P**	**22 16 40.8**	**+1.3**
	SNR=5.1						
CHMS	**Chumysh**	**85.05**	**314**	P	**P**	**22 16 41.1**	**+0.7**
	SNR=6.9						
AAK	**Ala-Archa**	**85.16**	**313**	*e*P	**P**	**22 16 42.0**	**+0.9**
USP	**Ospenovka**	**85.29**	**314**	P	**P**	**22 16 42.8**	**+1.2**
	SNR=9.3						
AML	**Almayashu**	**85.64**	**313**	P	**P**	**22 16 45.1**	**+1.4**
	SNR=20						
EKS2	**Erkin-Say**	**85.69**	**313**	*e*P	**P**	**22 16 42.4**	**-1.2**
	8.9nm,1.1s						
EKS2				*e*pP	pP	22 18 09.7	+74
EKS2	**Erkin-Say**	**85.69**	**313**	P	**P**	**22 16 44.8**	**+1.2**
	SNR=11						
KK31	**Karatay Array**	**88.13**	**313**	⇓‖P	**P**	**22 16 56.7**	**+1.4**
	1.3nm,0.3s,baz=182,slow=12,SNR=88						
KKAR	**Karatay Array**	**88.13**	**313**	*e*P	**P**	**22 16 56.1**	**+0.7**
INK	**Inuvik**	**88.92**	**21**	P	**P**	**22 16 57.4**	**-1.0**
	0.7nm,0.6s,baz=250,slow=4.7,SNR=4.1						
BVAR	**Borovoye Array**	**89.78**	**323**	P	**P**	**22 17 02.2**	**-0.7**
BVAR	**Borovoye Array**	**89.78**	**323**	P	**P**	**22 17 02.2**	**-0.7**
	5.0nm,0.8s,baz=104,slow=6.3,SNR=27						
BRVK	**Borovoye**	**89.85**	**323**	*e*P	**P**	**22 17 02.9**	**-0.3**
	4.0nm,0.9s						
NVAR	**Mina Array Bea**	**92.30**	**52**	P	**P**	**22 17 14.7**	**-0.5**
NVAR	**Mina Array Bea**	**92.30**	**52**	P	**P**	**22 17 14.7**	**-0.5**
	0.2nm,0.3s,baz=255,slow=6.1,SNR=3.4						
YKA	**Yellowknife Ar**	**95.84**	**28**	P	**P**	**22 17 30.1**	**-

SNAA	**Sanae**	**15.09**	**151**	*e*Sn		Sn		22 18 43.6	-10
SNAA	**Sanae**	**15.09**	**151**	*e*P		**Pn**		**22 16 08.0**	**-0.1**
QSPA	**South Pole Qui**	**30.27**	**180**	*e*P		**P**		**22 18 46.6**	**+1.1**
	0.6nm,0.5s								
PLCA	**Paso Flores**	**33.17**	**285**	*e*P		**P**		**22 19 11.5**	**+0.4**
	1.3nm,0.6s								
PLCA	**Paso Flores**	**33.17**	**285**	P		**P**		**22 19 11.4**	**+0.4**
	1.3nm,0.6s,baz=147,slow=10,SNR=4.9								
CFAA	**Coronel Fontan**	**39.51**	**297**	P		**P**		**22 20 05.2**	**0.0**
CFAA	**Coronel Fontan**	**39.51**	**297**	P		**P**		**22 20 05.2**	**0.0**
	0.2nm,0.4s,baz=166,slow=8.3,SNR=3.7								
LBTB	**Lobatse**	**49.98**	**69**	LR		LR		22 39 19.7	
	comp=Z,274nm,19.4s,baz=346,slow=32								
LPAZ	**La Paz**	**52.94**	**307**	*e*P		**P**		**22 21 51.4**	**-0.2**
	0.9nm,0.4s								
LPAZ	**La Paz**	**52.94**	**307**	P		**P**		**22 21 52.2**	**+0.6**
	1.0nm,0.5s,baz=174,slow=5.9,SNR=6.2								
TORD	**Torodi Ar. Bea**	**76.35**	**28**	P		**P**		**22 24 24.4**	**+0.9**
TORD	**Torodi Ar. Bea**	**76.35**	**28**	P		**P**		**22 24 24.4**	**+0.9**
	1.4nm,0.3s,baz=199,slow=6.2,SNR=28								
ASAR	**Alice Springs**	**95.15**	**162**	P		**P**		**22 25 55.2**	**-2.6**
ASAR	**Alice Springs**	**95.15**	**162**	P		**P**		**22 25 55.2**	**-2.6**
	0.2nm,0.4s,baz=47,slow=53,SNR=3.4								
ZALV	**Zalesovo Beam**	**143.69**	**68**	PKP		PKPbc		22 32 05.2	-0.5
ZALV	**Zalesovo Beam**	**143.69**	**68**	PKP		PKPbc		22 32 05.2	-0.5
	0.6nm,0.4s,baz=214,slow=3.2,SNR=4.9								
INK	**Inuvik**	**148.95**	**316**	PKPbc		**PKPbc**		**22 32 19.5**	**-1.1**
INK	**Inuvik**	**148.95**	**316**	PKPbc		**PKPbc**		**22 32 19.5**	**-1.1**
	0.6nm,0.7s,baz=49,slow=2.5,SNR=2.7								
SONM	**Songino Array**	**150.44**	**93**	PKPbc		**PKPbc**		**22 32 25.5**	**+0.4**
SONM	**Songino Array**	**150.44**	**93**	PKPbc		**PKPbc**		**22 32 25.5**	**+0.4**
	0.9nm,0.6s,baz=227,slow=2.7,SNR=7.8								
ILAR	**Eielson Array**	**152.82**	**306**	PKPbc		**PKPbc**		**22 32 29.7**	**-0.1**
ILAR	**Eielson Array**	**152.82**	**306**	PKPbc		**PKPbc**		**22 32 29.7**	**-0.1**
	0.2nm,0.3s,baz=114,slow=2.2,SNR=4.9								

IDC 13 22:13:45.8±0.8, 5°22S×152°79E, h0km, mb4.0/9, mb1 4.1/10, mb1mx3.9/21, mbtmp4.0/10, ML3.0/1, MS3.5/1, Ms1 3.5/1, ms1mx3.1/29, Error ellipse: s-maj=28.0km s-min=16.9km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
PMG	**Port Moresby**	**6.96**	**233**	Pn	Pn		22 15 30.7		+1.7
	1.7nm,0.3s,baz=52,slow=17,SNR=4.6								
PMG				Sn	Sn		22 16 51.6		+2.6
	1.4nm,0.3s,baz=103,slow=19,SNR=1.7								
HNR	**Honiara**	**8.24**	**121**	LR	LR		22 18 41.0		
	comp=Z,276nm,18.1s,baz=336,slow=36								
DZM	**Mont Dzumac**	**21.34**	**143**	P	P		22 18 35.0		+0.2
	5.2nm,0.8s,baz=320,slow=18,SNR=2.7								
WRA	**Warramunga Arr**	**23.16**	**229**	P	P		22 18 54.0		-0.1
	7.9nm,1.0s,baz=54,slow=10,SNR=24								
ASAR	**Alice Springs**	**25.83**	**223**	P	P		22 19 19.0		-0.1
	3.5nm,0.9s,baz=57,slow=9.3,SNR=21								
STKA	**Stephens Creek**	**28.52**	**200**	P	P		22 19 43.0		-0.1
	2.6nm,0.9s,baz=38,slow=12,SNR=3.4								
FITZ	**Fitzroy Crossi**	**29.45**	**242**	P	P		22 19 51.3		-0.3
	3.0nm,0.9s,baz=53,slow=8.5,SNR=5.1								
PETK	**Petropavlovsk-**	**58.26**	**3**	P	P		22 23 43.5		+1.6
	2.0nm,0.5s,baz=161,slow=8.1,SNR=8.3								
MKAR	**Makanchi Array**	**80.63**	**319**	P	P		22 26 00.3		-0.2
	0.1nm,0.5s,baz=104,slow=6.8,SNR=2.8								
ZALV	**Zalesovo Beam**	**81.49**	**326**	P	P		22 26 04.4		-0.5
	1.0nm,0.6s,baz=93,slow=5.8,SNR=6.2								
ILAR	**Eielson Array**	**82.55**	**22**	P	P		22 26 09.3		-1.0
	0.4nm,0.8s,baz=232,slow=5.6,SNR=3.6								
TORD	**Torodi Ar. Bea**	**150.42**	**287**	PKPbc	PKPbc		22 33 39.8		-0.7
	0.8nm,0.4s,baz=97,slow=2.0,SNR=16								
BDFB	**Brasilia**	**150.78**	**136**	PKPbc	PKPbc		22 33 41.3		-0.1
	2.0nm,0.8s,baz=221,slow=9.3,SNR=2.7								

NEIC 13 22:20:34.5, 18°38N×67°33W, h90km, MD3.4(RSPR), After RSPR.

RSPR 13 22:20:34.5, 18°38N×67°33W, h90km±1km, MD3.4/15, 20C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
LSP	**Las Mesas**	**0.31**	**131**	*e*P	Pn		22 20 47.0		-1.1
LSP				*e*S	Sn		22 20 57.3		-0.8
LSP	**Las Mesas**	**0.31**	**131**	*e*P	Pn		22 20 47.0		-1.1
LSP				*e*S	Sn		22 20 57.3		-0.8
CRPR	**Cabo Rojo, PR**	**0.43**	**150**	*e*P	Pn		22 20 48.2		-0.6
CRPR	**Cabo Rojo, PR**	**0.43**	**150**	*e*S	Sn		22 20 59.4		+0.1
CRPR	**Cabo Rojo, PR**	**0.43**	**150**	*e*P	Pn		22 20 48.2		-0.6
CRPR				*e*S	Sn		22 20 59.4		+0.1
LRS	**Lares**	**0.47**	**101**	*e*P	Pn		22 20 48.4		-0.7
LRS				*e*S	Sn		22 20 59.4		-0.5
LRS	**Lares**	**0.47**	**101**	*e*P	Pn		22 20 48.4		-0.7
LRS				*e*S	Sn		22 20 59.4		-0.5
AOPR	**Arecibo Observ**	**0.55**	**94**	*e*P	Pn		22 20 49.3		-0.4
AOPR	**Arecibo Observ**	**0.55**	**94**	*e*S	Sn		22 21 01.0		0.0
AOPR	**Arecibo Observ**	**0.55**	**94**	*e*P	Pn		22 20 49.3		-0.4
AOPR				*e*S	Sn		22 21 01.0		0.0
GBPR	**Guanica, Bosqu**	**0.59**	**133**	*e*P	Pn		22 20 49.2		-0.8
GBPR				*e*S	Sn		22 21 01.3		-0.3
GBPR	**Guanica, Bosqu**	**0.59**	**133**	*e*P	Pn		22 20 49.2		-0.8
GBPR				*e*S	Sn		22 21 01.3		-0.3
OBIP	**Obispado Ponce**	**0.77**	**116**	*e*P	Pn		22 20 51.3		-0.4
OBIP	**Obispado Ponce**	**0.77**	**116**	*e*S	Sn		22 21 04.8		+0.2
OBIP	**Obispado Ponce**	**0.77**	**116**	*e*P	Pn		22 20 51.3		-0.4
OBIP				*e*S	Sn		22 21 04.8		+0.2
CELP	**Cerrillos**	**0.78**	**113**	*e*P	Pn		22 20 51.5		-0.4
CELP				*e*S	Sn		22 21 05.3		+0.6
CELP	**Cerrillos**	**0.78**	**113**	*e*P	Pn		22 20 51.5		-0.4
CELP				*e*S	Sn		22 21 05.3		+0.6
ICM	**Isla Caja Muer**	**0.91**	**122**	*e*P	Pn		22 20 52.2		-1.0
ICM	**Isla Caja Muer**	**0.91**	**122**	*e*S	Sn		22 21 06.7		-0.6
ICM	**Isla Caja Muer**	**0.91**	**122**	*e*P	Pn		22 20 52.2		-1.0
ICM				*e*S	Sn		22 21 06.7		-0.6
SJG	**San Juan**	**1.16**	**103**	*e*P	Pn		22 20 55.8		-0.2
SJG	**San Juan**	**1.16**	**103**	*e*S	Sn		22 21 12.2		0.0
SJG	**San Juan**	**1.16**	**103**	*e*P	Pn		22 20 55.9		-0.1
SJG				*e*S	Sn		22 21 11.3		-0.9
SJG	**San Juan**	**1.16**	**103**	*e*P	Pn		22 20 55.8		-0.2
SJG				*e*S	Sn		22 21 11.3		-0.9
SJG				*e*S			22 21 12.2		
CPD	**Cerro la Pandu**	**1.39**	**104**	*e*P	Pn		22 20 59.0		+0.1
CPD	**Cerro la Pandu**	**1.39**	**104**	*e*S	Sn		22 21 16.5		-0.9
CPD	**Cerro la Pandu**	**1.39**	**104**	*e*P	Pn		22 20 59.0		+0.1
CPD				*e*S	Sn		22 21 16.5		-0.9
CBYP	**Canovanas**	**1.41**	**94**	*e*P	Pn		22 20 58.9		-0.3
CBYP	**Canovanas**	**1.41**	**94**	*e*S	Sn		22 21 16.8		-1.1
CBYP	**Canovanas**	**1.41**	**94**	*e*P	Pn		22 20 58.9		-0.3
CBYP				*e*S	Sn		22 21 16.8		-1.1
DR12	**Loma Pena Alta**	**1.98**	**282**	*e*P	Pn		22 21 03.9		-2.7
DR12				*e*S	Sn		22 21 30.8		-0.4
DR12	**Loma Pena Alta**	**1.98**	**282**	*e*P	Pn		22 21 03.9		-2.7
DR12				*e*S	Sn		22 21 30.8		-0.4
STVI	**Saint Thomas**	**2.26**	**90**	*e*P	Pn		22 21 10.1		-0.1
STVI	**Saint Thomas**	**2.26**	**90**	*e*S	Sn		22 21 37.3		-0.1
STVI	**Saint Thomas**	**2.26**	**90**	*e*P	Pn		22 21 10.1		-0.1
STVI				*e*S	Sn		22 21 37.3		-0.1
TBVI	**Tortola**	**2.58**	**89**	*e*P	Pn		22 21 13.8		-0.6
TBVI				*e*S	Sn		22 21 44.5		-0.5
TBVI	**Tortola**	**2.58**	**89**	*e*P	Pn		22 21 13.8		-0.6
TBVI				*e*S	Sn		22 21 44.5		-0.5
SDDR	**Presa de Saban**	**3.80**	**280**	*e*Pn	Pn		22 21 31.1		+0.2
SDDR				*e*Sn	Sn		22 22 15.8		+1.1

IDC 13 22:23:42.7±0.8, 5°59S×11°45W, h0km, mb3.9/15, mb1 4.0/16, mb1mx3.9/30, mbtmp3.9/16, ML2.9/1, MS3.9/4, Ms1 3.8/4, ms1mx3.4/35, Error ellipse: s-maj=23.5km s-min=17.0km az=115.0

NEIC 13 22:23:44.4±0.5, 5°54S×11°40W, h10km, mb4.9/23, Error ellipse: s-maj=24.5km s-min=8.8km az=129.0

ISC 13 22:23:44.6±0.7, 5°6S±0°1×11°4W±0°1, h10km, n112, σ1s03/44, mb4.5/36, MS4.1/3, Ascension Island region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
LIC	**Lamto**	**13.34**	**29**	*e*Pn	**Pn**		**22 26 53.9**		**-0.3**
	baz=211								
LIC	**Lamto**	**13.34**	**29**	*e*Pn	**Pn**		**22 26 53.9**		**-0.3**
DBIC	**Dimbokro**	**13.81**	**28**	Pn	**Pn**		**22 26 58.7**		**-1.9**
DBIC	**Dimbokro**	**13.81**	**28**	Pn	**Pn**		**22 26 58.7**		**-1.9**
	0.1nm,0.3s,baz=194,slow=12,SNR=4.2								
DBIC				LR	LR		22 31 22.8		

	comp=Z,116nm,19.4s,baz=142,slow=33								
TOA0	**Torodi Ar. Sit**	**22.70**	**35**	*e*P	**P**		**22 28 45.6**		**-1.1**
TORD	**Torodi Ar. Bea**	**22.70**	**35**	P	**P**		**22 28 45.9**		**-0.8**
TORD	**Torodi Ar. Bea**	**22.70**	**35**	P	**P**		**22 28 45.9**		**-0.8**
	3.6nm,0.6s,baz=215,slow=10,SNR=35								
BDFB	**Brasilia**	**37.27**	**251**	P	**P**		**22 30 56.6**		**-0.6**
BDFB	**Brasilia**	**37.27**	**251**	P	**P**		**22 30 56.6**		**-0.6**
	0.8nm,0.3s,baz=39,slow=6.5,SNR=3.6								
BDFB				LR	LR		22 45 34.1		
	comp=Z,128nm,18.3s,baz=242,slow=35								
LSZ	**Lusaka**	**40.07**	**107**	P	**P**		**22 31 20.6**		**-0.1**
	1.0nm,0.7s,baz=153,slow=6.8,SNR=2.7								
LBTB	**Lobatse**	**40.40**	**123**	P	**P**		**22 31 24.3**		**+1.0**
	2.4nm,0.8s,baz=311,slow=11,SNR=2.8								
EVOP	**Sao Brissos**	**43.98**	**4**	*e*P	P		22 31 58.6		+6.5
	17nm,1.0s								
EVO	**Evora**	**43.99**	**4**	*e*P	P		22 31 58.6		+6.4
	17nm,1.0s								
KEST	**Kesra**	**45.48**	**24**	*e*P	**P**		**22 32 04.7**		**+0.5**
KEST	**Kesra**	**45.48**	**24**	P	**P**		**22 32 05.0**		**+0.8**
	1.2nm,0.8s,baz=144,slow=7.9,SNR=2.7								
ESDC	**Sonseca Array**	**45.54**	**8**	P	**P**		**22 32 05.6**		**+1.0**
ESDC	**Sonseca Array**	**45.54**	**8**	P	**P**		**22 32 05.6**		**+1.0**
	0.2nm,0.4s,baz=178,slow=7.7,SNR=2.8								
ETSF	**Etsaut**	**49.23**	**11**	*e*P	P		22 32 38.6		+5.2
ETSF	**Etsaut**	**49.23**	**11**	*e*P	P		22 32 38.6		+5.2
SJPF	**Ste Jean**	**49.33**	**10**	*e*P	P		22 32 40.2		+6.2
	17nm,1.1s								
SJPF	**Ste Jean**	**49.33**	**10**	*e*P	P		22 32 40.2		+6.2
	17nm,1.0s								
EPF	**Esparros**	**49.53**	**11**	*e*P	P		22 32 41.8		+6.2
	33nm,1.5s								
EPF	**Esparros**	**49.53**	**11**	*e*P	P		22 32 41.8		+6.2
	33nm,1.5s								
SIV	**San Ignacio**	**49.74**	**254**	P	**P**		**22 32 38.1**		**+0.4**
SIV	**San Ignacio**	**49.74**	**254**	P	**P**		**22 32 38.1**		**+0.4**
	1.1nm,0.7s,baz=105,slow=8.2,SNR=4.2								
MTLF	**Montolieu**	**50.22**	**13**	*e*P	P		22 32 46.2		+5.4
MTLF	**Montolieu**	**50.22**	**13**	*e*P	P		22 32 46.2		+5.4
LASF	**Ste Croix**	**51.30**	**14**	*e*P	P		22 32 53.9		+5.0
LASF	**Ste Croix**	**51.30**	**14**	*e*P	P		22 32 53.9		+5.0
CAF	**Calviac**	**51.70**	**12**	*e*P	P		22 32 57.5		+5.6
CAF	**Calviac**	**51.70**	**12**	*e*P	P		22 32 57.5		+5.6
RJF	**Les Rejaudoux**	**51.95**	**12**	*e*P	P		22 32 59.2		+5.4
	4.8nm,0.8s								
RJF	**Les Rejaudoux**	**51.95**	**12**	*e*P	P		22 32 59.2		+5.4
	4.8nm,0.8s								
SBF	**Sospel**	**52.06**	**17**	*e*P	P		22 32 59.3		+4.6
SBF	**Sospel**	**52.06**	**17**	*e*P	P		22 32 59.3		+4.6
VIVF	**Saint-Julien-l**	**52.23**	**14**	*e*P	P		22 33 01.8		+5.9
	5.6nm,0.9s								
VIVF	**Saint-Julien-l**	**52.23**	**14**	*e*P	P		22 33 01.8		+5.9
	5.6nm,0.9s								
ORIF	**Oris-en-Rattie**	**52.60**	**15**	*e*P	P		22 33 05.1		+6.4
ORIF	**Oris-en-Rattie**	**52.60**	**15**	*e*P	P		22 33 05.1		+6.4
MBDF	**Montbardon**	**52.66**	**16**	*e*P	P		22 33 04.8		+5.5
	16nm,1.0s								
MBDF	**Montbardon**	**52.66**	**16**	*e*P	P		22 33 04.8		+5.5
	16nm,1.0s								
MFF	**Saint Martin d**	**52.90**	**10**	*e*P	P		22 33 06.2		+5.5
MFF	**Saint Martin d**	**52.90**	**10**	*e*P	P		22 33 06.2		+5.5
TCF	**Toulx Ste Croi**	**53.03**	**12**	*e*P	P		22 33 07.7		+5.9
	21nm,1.1s								
TCF	**Toulx Ste Croi**	**53.03**	**12**	*e*P	P		22 33 07.7		+5.9
	21nm,1.1s								
LPG	**La Plagne**	**53.37**	**16**	*e*P	P		22 33 11.0		+6.4
	13nm,0.9s								
LPG	**La Plagne**	**53.37**	**16**	*e*P	P		22 33 11.0		+6.4
	13nm,0.9s								
LPL	**La Plagne**	**53.38**	**16**	*e*P	P		22 33 11.0		+6.4
LPL	**La Plagne**	**53.38**	**16**	*e*P	P		22 33 11.0		+6.4
BGF	**Bois d'Agland**	**53.42**	**12**	*e*P	P		22 33 10.3		+5.7
BGF	**Bois d'Agland**	**53.42**	**12**	*e*P	P		22 33 10.3		+5.7
SMF	**Signal de Mont**	**53.72**	**13**	*e*P	P		22 33 12.4		+5.6
	21nm,1.4s								
SMF	**Signal de Mont**	**53.72**	**13**	*e*P	P		22 33 12.4		+5.6
	21nm,1.4s								
AVF	**Avril sur Loir**	**53.75**	**13**	*e*P	P		22 33 12.7		+5.7
	24nm,1.3s								
AVF	**Avril sur Loir**	**53.75**	**13**	*e*P	P		22 33 12.7		+5.7
	24nm,1.3s								
SSF	**Saint Saulge**	**54.04**	**13**	*e*P	P		22 33 14.9		+5.7
	27nm,1.2s								
SSF	**Saint Saulge**	**54.04**	**13**	*e*P	P		22 33 14.9		+5.7
	27nm,1.2s								
ROSF	**Rostrenen**	**54.15**	**7**	*e*P	P		22 33 15.0		+5.1
ROSF	**Rostrenen**	**54.15**	**7**	*e*P	P		22 33 15.0		+5.1
SGMF	**Saint Gilles**	**54.16**	**7**	*e*P	P		22 33 15.3		+5.4
SGMF	**Saint Gilles**	**54.16**	**7**	*e*P	P		22 33 15.3		+5.4
CABF	**La Chapelle**	**54.23**	**15**	*e*P	P		22 33 16.1		+5.5
	13nm,0.9s								
CABF	**La Chapelle**	**54.23**	**15**	*e*P	P		22 33 16.1		+5.5
	13nm,0.9s								
LOR	**Lormes**	**54.31**	**13**	*e*P	P		22 33 16.5		+5.3
	10nm,1.1s								
LOR	**Lormes**	**54.31**	**13**	*e*P	P		22 33 16.5		+5.3
	10nm,1.1s								
GRR	**Gorron**	**54.52**	**9**	*e*P	P		22 33 18.2		+5.6
GRR	**Gorron**	**54.52**	**9**	*e*P	P		22 33 18.2		+5.6
LDF	**La Druitiere**	**54.83**	**9**	*e*P	P		22 33 20.1		+5.2
	8.2nm,1.0s								
LDF	**La Druitiere**	**54.83**	**9**	*e*P	P		22 33 20.1		+5.2
	8.2nm,1.0s								
FLN	**La Foliniere**	**54.94**	**9**	*e*P	P		22 33 20.7		+5.0
	10nm,0.8s								
FLN	**La Foliniere**	**54.94**	**9**	*e*P	P		22 33 20.7		+5.0
	10nm,0.8s								
HAU	**Haudompre**	**55.59**	**14**	*e*P	P		22 33 25.6		+5.2
HAU	**Haudompre**	**55.59**	**14**	*e*P	P		22 33 25.6		+5.2
MEZF	**Maizieres J'vi**	**55.74**	**13**	*e*P	P		22 33 27.1		+5.6
	13nm,0.9s								
MEZF	**Maizieres J'vi**	**55.74**	**13**	*e*P	P		22 33 27.1		+5.6
	13nm,0.9s								
PAGF	**Fort de Pagny**	**55.95**	**14**	*e*P	P		22 33 28.7		+5.8
	6.5nm,1.1s								
PAGF	**Fort de Pagny**	**55.95**	**14**	*e*P	P		22 33 28.7		+5.8
	6.5nm,1.1s								
CDF	**Champ du Feu**	**56.20**	**15**	*e*P	P		22 33 29.6		+4.8
	8.6nm,1.0s								
CDF	**Champ du Feu**	**56.20**	**15**	*e*P	P		22 33 29.6		+4.8
	8.6nm,1.0s								
BAIF	**Baives**	**57.03**	**12**	*e*P	P		22 33 35.6		+5.0
BAIF	**Baives**	**57.03**	**12**	*e*P	P		22 33 35.6		+5.0
GIVF	**Givet**	**57.20**	**12**	*e*P	P		22 33 36.6		+4.8
GIVF	**Givet**	**57.20**	**12**	*e*P	P		22 33 36.6		+4.8
GERES	**GERESS Array B**	**58.47**	**19**	P	**P**		**22 33 40.5**		**-0.3**
GERES	**GERESS Array B**	**58.47**	**19**	P	**P**		**22 33 40.5**		**-0.3**
	1.2nm,0.9s,baz=205,slow=5.9,SNR=6.7								
KHC	**Kasperske Hory**	**58.68**	**19**	*e*pP	pP		22 33 47.5		+2.0
PRU	**Pruhonice**	**59.73**	**19**	*e*pP	pP		22 33 54.6		+1.9
VYHS	**Vyhne**	**60.00**	**23**	*e*P	**P**		**22 33 51.5**		**+0.1**
VYHS				*e*pP	**pP**		**22 33 57.0**		**+2.4**
DPC	**Dobruska-Polom**	**60.64**	**20**	*e*P	P		22 34 01.0		+5.3
BRTR	**Keskin Array B**	**61.26**	**39**	P	**P**		**22 34 01.2**		**+0.9**
BRTR	**Keskin Array B**	**61.26**	**39**	P	**P**		**22 34 01.2**		**+0.9**
	3.0nm,0.9s,baz=208,slow=7.7,SNR=8.4								
BR131	**Keskin Array S**	**61.26**	**39**	*e*P	**P**		**22 34 00.8**		**+0.5**
	4.0nm,0.9s								
CRVS	**Cervenica-Dubn**	**61.37**	**24**	*e*P	**P**		**22 34 00.0**		**-0.7**
CRVS				*e*pP	**pP**		**22 34 05.2**		**+1.2**
KOLS	**Kolonicke sedl**	**61.73**	**25**	*e*P	**P**		**22 34 03.4**		**+0.3**
KOLS				*e*pP	**pP**		**22 34 08.9**		**+2.5**
KWP	**Kalwaria Pacla**	**62.45**	**24**	*e*P	**P**		**22 34 07.8**		**-0.1**
	13nm,1.0s								
NNA	**Nana**	**64.85**	**259**	LR	LR		23 01 27.8		
	comp=Z,118nm,19.9s,baz=163,slow=35								
AK02	**Malin Array Si**	**66.01**	**27**	*e*P	**P**		**22 34 30.2**		**-1.1**
AK01	**Malin Array Si**	**66.04**	**27**	*e*P	**P**		**22 34 31.0**		**-0.5**
AKASG	**Malin Array Be**	**66.05**	**27**	P	**P**		**22 34 29.9**		**-1.6**
AKASG	**Malin Array Be**	**66.05**	**27**	P	**P**		**22 34 29.9**		**-1.6**
	0.4nm,0.3s,baz=225,slow=7.2,SNR=6.1								
SUW	**Suwalki**	**66.06**	**22**	*e*P	**P**		**22 34 31.1**		**-0.5**
	25nm,0.9s								
SNAA	**Sanae**	**66.25**	**177**	P	**P**		**22 34 32.5**		**-0.1**
	2.3nm,0.8s								
SNAA	**Sanae**	**66.25**	**177**	P	**P**		**22 34 31.0**		**-1.6**
	0.7nm,1.1s,baz=352,slow=7.1,SNR=2.8								
ATAH	**Atahualpa**	**66.53**	**265**	LR	LR		23 03 13.8		
	comp=Z,229nm,20.0s,baz=271,slow=36								
KBZ	**Khabaz**	**69.24**	**39**	P	**P**		**22 34 52.0**		**+0.2**
KBZ	**Khabaz**	**69.24**	**39**	P	**P**		**22 34 52.0**		**+0.2**
	1.8nm,0.8s,baz=208,slow=4.2,SNR=4.7								
FINES	**FINESS Array B**	**72.85**	**18**	P	**P**		**22 35 12.5**		**-0.8**
FINES	**FINESS Array B**	**72.85**	**18**	P	**P**		**22 35 12.5**		**-0.8**
	2.0nm,0.9s,baz=268,slow=4.2,SNR=1.8								

AAK	**Ala-Archa**	**90.73**	**47**	*e*P	**P**		**22 36 47.8**		**-0.4**
	3.0nm,1.1s								
AAK	**Ala-Archa**	**90.73**	**47**	P	**P**		**22 36 48.6**		**+0.4**
	0.7nm,0.7s,baz=250,slow=12,SNR=3.9								
MKAR	**Makanchi Array**	**96.56**	**44**	P	**P**		**22 37 14.0**		**-0.8**
MKAR	**Makanchi Array**	**96.56**	**44**	P	**P**		**22 37 14.0**		**-0.8**
	0.2nm,0.8s,baz=276,slow=5.7,SNR=3.0								

MEX 13 22:33:44.9±0.3, 16°00N×97°62W, h18km±18km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op	ISC	h	m	s	ISC
PNIG	**Pinotepa**	**0.63**	**309**	*e*P	Pb		22 33 55.1		-2.2
PNIG				*i*S	Sg		22 34 03.2		-2.6
VHO	**Vista Hermosa**	**1.36**	**38**	*e*P	Pn		22 34 06.1		-3.3
VHO				*i*S	Sn		22 34 22.1		-5.1
HUIG	**Huatulco**	**1.47**	**99**	*e*P	Pn		22 34 07.3		-3.2
HUIG				*i*S	Sn		22 34 24.7		-4.7
UTMO	**Huajuapan**	**1.83**	**354**	*e*P	Pn		22 34 13.5		-2.3
UTMO				*e*S	Sn		22 34 34.4		-4.4
CAIG	**El Cayaco**	**2.75**	**293**	*e*P	Pn		22 34 26.4		-1.7
CAIG				*e*S	Sn		22 34 57.9		-3.0
YAIG	**Yautepec**	**3.17**	**334**	*i*P	Pn		22 34 32.4		-1.7
YAIG				*i*S	Sn		22 35 08.3		-3.3
ARIG	**Puente Sto Nin**	**3.46**	**311**	*i*P	Pn		22 34 34.9		-3.1
ARIG				*i*S	Sn		22 35 14.3		-4.2
PCIG		**4.25**	**93**	*i*P	Pn		22 34 46.5		-2.2
PCIG				*i*S	Sn		22 35 34.1		-3.8

ISCJB 13 22:35:29.2±0.5, 6°27S±0°04×147°35E±0°09, h63km, mb4.0/12, Error ellipse: s-maj=12.5km s-min=5.8km az=0.6

NEIC 13 22:35:30.6±1.8, 6°28S×147°44E, h66km±16km, mb4.1/4, Error ellipse: s-maj=15.5km s-min=11.0km az=82.0

IDC 13 22:35:31.9±1.8, 6°30S×147°38E, h74km±17km, mb3.8/11, mb1 4.1/14, mb1mx4.0/20, mbtmp3.9/14, MS3.4/2, Ms1 3.4/2, ms1mx2.9/39, Error ellipse: s-maj=21.0km s-min=9.5km az=109.0

*AUST 13 22:35:37.4±1.5, 6°67S×147°14E, h93km, Error ell

4.0nm,0.7s,baz=122,slow=2.3,SNR=8.8

CSEM ***13*** *22:45:28.9, 42.24N×13.52E, h10km, After ROM*
ROM 13 22:45:28.9±0.1, 42.24N×13.52E, h10km, MI1.7/11, 4C, Error ellipse: s-maj=0.7km s-min=0.6km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.06**	**63**	⇑*i* Pg	Pg	22 45 31.3	+0.2
FAGN				Sg	Sg	22 45 32.6	0.0
	2μm,0.3s						
FAGN	**Fagnano**	**0.06**	**63**	⇑*i* Pg	Pg	22 45 31.3	+0.2
FAGN				Sg	Sg	22 45 32.6	0.0
	2μm,0.3s						
AQU	**L'Aquila**	**0.14**	**323**	Pg	Pg	22 45 32.8	+0.6
AQU				Sg	Sg	22 45 35.4	+0.9
	221nm,0.3s						
AQU	**L'Aquila**	**0.14**	**323**	Pg	Pg	22 45 32.8	+0.6
AQU				Sg	Sg	22 45 35.4	+0.9
	221nm,0.3s						
PTQR	**Pietraquaria**	**0.23**	**202**	⇑*i* Pg	Pg	22 45 34.6	+0.8
PTQR				Sg	Sg	22 45 38.4	+1.2
	32nm,0.1s						
PTQR	**Pietraquaria**	**0.23**	**202**	⇑*i* Pg	Pg	22 45 34.6	+0.8
PTQR				Sg	Sg	22 45 38.4	+1.2
	32nm,0.1s						
VCEL	**Villa Celiera**	**0.29**	**57**	Pg	Pg	22 45 35.4	+0.5
VCEL				Sg	Sb	22 45 40.1	-1.2
	130nm,0.3s						
VCEL	**Villa Celiera**	**0.29**	**57**	Pg	Pg	22 45 35.4	+0.5
VCEL				Sg	Sb	22 45 40.1	-1.2
	130nm,0.3s						
FIAM	**Fiamignano**	**0.30**	**276**	Pg	Pg	22 45 35.4	+0.4
FIAM				Sg	Sg	22 45 40.2	+1.0
	52nm,0.3s						
FIAM	**Fiamignano**	**0.30**	**276**	Pg	Pg	22 45 35.4	+0.4
FIAM				Sg	Sg	22 45 40.2	+1.0
	52nm,0.3s						
CAMP	**Campotosto**	**0.31**	**345**	Pg	Pg	22 45 35.6	+0.3
CAMP				Sg	Sg	22 45 40.7	+1.2
	37nm,0.4s						
CAMP	**Campotosto**	**0.31**	**345**	Pg	Pg	22 45 35.6	+0.3
CAMP				Sg	Sg	22 45 40.7	+1.2
	37nm,0.4s						
INTR	**Introdacqua**	**0.37**	**128**	Pg	Pg	22 45 36.9	+0.6
INTR				Sg	Sb	22 45 42.6	-1.0
	72nm,0.3s						
INTR	**Introdacqua**	**0.37**	**128**	Pg	Pg	22 45 36.9	+0.6
INTR				Sg	Sb	22 45 42.6	-1.0
	72nm,0.3s						
VVLD	**Villa Vallelon**	**0.38**	**168**	Pg	Pg	22 45 36.9	+0.4
VVLD				Sg	Sb	22 45 42.9	-1.0
	63nm,0.6s						
VVLD	**Villa Vallelon**	**0.38**	**168**	Pg	Pg	22 45 36.9	+0.4
VVLD				Sg	Sb	22 45 42.9	-1.0
	63nm,0.6s						
TERO	**Teramo**	**0.39**	**10**	Pg	Pg	22 45 36.7	0.0
TERO				Sg	Sg	22 45 42.9	+1.0
	66nm,0.3s						
TERO	**Teramo**	**0.39**	**10**	Pg	Pg	22 45 36.7	0.0
TERO				Sg	Sg	22 45 42.9	+1.0
	66nm,0.3s						
CERT	**Cerreto**	**0.49**	**234**	Pg	Pg	22 45 38.7	+0.1
CERT	**Cerreto**	**0.49**	**234**	Pg	Pg	22 45 38.7	+0.1
LNSS	**Leonessa**	**0.51**	**316**	Pg	Pg	22 45 39.1	+0.2
	36nm,0.5s						
LNSS	**Leonessa**	**0.51**	**316**	Pg	Pg	22 45 39.1	+0.2
	36nm,0.5s						
LPEL	**Lama dei Pelig**	**0.53**	**111**	Pg	Pg	22 45 39.5	+0.1
LPEL				Sg	Sb	22 45 47.8	-0.5
	48nm,0.2s						
LPEL	**Lama dei Pelig**	**0.53**	**111**	Pg	Pg	22 45 39.5	+0.1
LPEL				Sg	Sb	22 45 47.8	-0.5
	48nm,0.2s						
POFI	**Posta Fibreno**	**0.54**	**164**	Pg	Pg	22 45 40.0	+0.4
POFI	**Posta Fibreno**	**0.54**	**164**	Pg	Pg	22 45 40.0	+0.4
SDI	**San Donato**	**0.57**	**157**	Pg	Pg	22 45 40.5	+0.4
	14nm,0.2s						
SDI	**San Donato**	**0.57**	**157**	Pg	Pg	22 45 40.5	+0.4
	14nm,0.2s						
NRCA	**Norcia**	**0.66**	**334**	Pg	Pg	22 45 41.6	-0.3
NRCA				Sg	Sb	22 45 52.1	0.0
	21nm,0.1s						
NRCA	**Norcia**	**0.66**	**334**	Pg	Pg	22 45 41.6	-0.3
NRCA				Sg	Sb	22 45 52.1	0.0
	21nm,0.1s						
FDMO	**Fiordimonte**	**0.86**	**338**	Pg	Pg	22 45 45.5	0.0
FDMO	**Fiordimonte**	**0.86**	**338**	Pg	Pg	22 45 45.5	0.0

IDC 13 22:45:32.6±11.0, 17.44S×178.51W, h539km±130km, mb3.0/5, mb1 3.3/5, mb1mx3.0/18, mbtmp3.0/5, Error ellipse: s-maj=117.9km s-min=47.4km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.78**	**241**	P	P	22 52 10.9	-0.2
	2.4nm,1.0s,baz=102,slow=9.3,SNR=4.1						
WRA	**Warramunga Arr**	**44.63**	**259**	P	P	22 52 57.3	-0.3
	0.7nm,0.3s,baz=95,slow=7.3,SNR=6.4						
ASAR	**Alice Springs**	**44.83**	**254**	P	P	22 52 59.0	-0.1
	2.3nm,0.5s,baz=85,slow=8.9,SNR=27						
ILAR	**Eielson Array**	**85.45**	**13**	P	P	22 57 12.8	-0.2
	0.2nm,0.4s,baz=217,slow=5.2,SNR=6.9						
PDAR	**Pinedale Array**	**87.08**	**43**	P	P	22 57 21.5	0.0
	0.4nm,0.7s,baz=216,slow=2.9,SNR=3.1						
BRTR	**Keskin Array B**	**144.38**	**315**	PKP	PKPbc	23 04 07.1	-0.8
	0.3nm,0.7s,baz=51,slow=3.2,SNR=2.8						
GERES	**GERESS Array B**	**147.13**	**345**	PKPbc	PKPbc	23 04 14.8	-0.5
	0.4nm,0.4s,baz=20,slow=3.1,SNR=5.1						

ISCJB ***13*** *22:54:28.0±0.5, 21.05S±0.04×68.40W±0.06, h103km±7km, mb3.7/6, Error ellipse: s-maj=10.0km s-min=6.5km az=6.7*
IDC ***13*** *22:54:29.8±2.2, 21.16S×68.44W, h104km±19km, mb3.6/7, mb1 3.8/12, mb1mx3.7/21, mbtmp3.6/12, MS2.7/1, Ms1 2.8/1, ms1mx2.4/29, Error ellipse: s-maj=23.1km s-min=17.7km az=82.0*
GUC ***13*** *22:54:31.0±0.4, 21.04S×68.86W, h117km±3km, ML4.5*
ISC 13 22:54:30.7±0.8, 20.99S±0.05×68.62W±0.10, h112km±8km, n23, σ1°63/27, mb3.8/6, 1C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**0.99**	**216**	⇓*i* P	**Pn**	**22 54 51.8**	**-0.4**
PB09				*i* S	**Sn**	**22 55 07.7**	**-0.7**
PB09				AML	AML	22 55 09.2	
	comp=N,28μm,0.3s						
HMBC	**Humberstone**	**1.38**	**300**	*e*P	**Pn**	**22 54 55.9**	**-0.5**
HMBC				*e*S	**Sn**	**22 55 14.7**	**-1.2**
HMBC				AML	AML	22 55 16.6	
	comp=N,12μm,0.6s						
PB07	**Plate Boundary**	**1.39**	**238**	⇑*i* P	**Pn**	**22 54 55.2**	**-1.3**
PB07				*i* S	**Sn**	**22 55 13.9**	**-2.2**
PB07				AML	AML	22 55 16.1	
	comp=E,5μm,0.5s						
PB04	**Plate Boundary**	**1.51**	**212**	*e*P	Pn	22 55 01.6	+4.0
PB04				*i* S	Sn	22 55 25.3	+7.1
PB04				AML	AML	22 55 35.1	
	comp=N,5μm,0.7s						
MNMC	**Minimini**	**2.06**	**333**	*e*P	**Pn**	**22 55 05.7**	**+0.8**
MNMC				*i* S	**Sn**	**22 55 32.1**	**+1.2**
MNMC				AML	AML	22 55 34.6	
	comp=N,5μm,0.6s						
CEN1	**Los Morros**	**2.81**	**211**	*e*P	**Pn**	**22 55 16.9**	**+2.7**
CEN1				*i* S	**Sn**	**22 55 51.6**	**+3.8**
CEN1				AML	AML	22 56 00.2	
	comp=N,2μm,0.8s						
ARCH	**Arica**	**2.94**	**327**	*i* S	**Sn**	**22 55 51.0**	**+0.1**
ARCH				AML	AML	22 55 56.1	
	comp=N,2μm,0.5s						
ANCH	**Antofagasta**	**3.15**	**211**	*e*P	**Pn**	**22 55 18.5**	**-0.2**
ANCH				*e*S	**Sn**	**22 55 54.2**	**-1.7**
ANCH				AML	AML	22 56 09.0	
	comp=N,832nm,0.2s						
LPAZ	**La Paz**	**4.70**	**6**	P	**Pn**	**22 55 42.9**	**+2.8**
	comp=N,38nm,0.3s,baz=203,slow=5.1,SNR=538						
LPAZ				LR	LR	22 57 11.8	
	comp=N,76nm,18.6s,baz=136,slow=33						
SIV	**San Ignacio**	**8.71**	**56**	P	**Pn**	**22 56 31.6**	**-2.3**
	comp=N,12nm,0.3s,baz=254,slow=11,SNR=125						
SIV				S	Sn	22 58 04.3	-6.2
	baz=145,slow=13,SNR=3.5						
CFAA	**Coronel Fontan**	**10.58**	**178**	P	Pn	22 56 54.4	-4.8
	comp=N,0.1nm,0.3s,baz=18,slow=17,SNR=5.0						
CPUP	**Villa Florida**	**11.63**	**119**	P	Pn	22 57 08.6	-4.6
	comp=N,0.3nm,0.3s,baz=264,slow=19,SNR=3.1						
PLCA	**Paso Flores**	**19.75**	**184**	P	**P**	**22 58 50.9**	**-0.9**
	comp=N,0.1nm,0.3s,baz=9.5,slow=12,SNR=3.5						
BDFB	**Brasilia**	**20.26**	**78**	P	**P**	**22 58 56.2**	**-1.3**
	comp=N,4.6nm,0.5s,baz=249,slow=10,SNR=13						
SNAA	**Sanae**	**62.67**	**161**	P	**P**	**23 04 42.4**	**-0.8**
	comp=N,0.2nm,0.7s,baz=308,slow=15,SNR=3.5						
DBIC	**Dimbokro**	**68.33**	**73**	P	**P**	**23 05 20.1**	**-0.3**
	comp=N,2.5nm,0.8s,baz=203,slow=7.6,SNR=3.0						
PDAR	**Pinedale Array**	**73.81**	**330**	P	**P**	**23 05 54.0**	**+0.8**
	comp=N,0.6nm,0.8s,baz=119,slow=7.3,SNR=3.7						
NVAR	**Mina Array Bea**	**75.26**	**322**	P	**P**	**23 06 03.2**	**+1.6**
	comp=N,0.6nm,0.8s,baz=124,slow=4.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**76.93**	**70**	P	**P**	**23 06 10.3**	**-1.0**
	comp=N,2.5nm,0.6s,baz=252,slow=5.7,SNR=28						
YKA	**Yellowknife Ar**	**90.80**	**340**	P	**P**	**23 07 20.8**	**+0.1**
	comp=N,1.0nm,0.7s,baz=134,slow=4.6,SNR=21						
YKA				pP	**pP**	**23 07 52.0**	**+2.1**
	comp=N,0.5nm,0.8s,baz=132,slow=4.7,SNR=5.8						
ZALV	**Zalesovo Beam**	**141.38**	**25**	PKP	**PKPdf**	**23 13 48.4**	**+0.3**
	comp=N,0.8nm,0.5s,baz=328,slow=0.9,SNR=5.3						
MKAR	**Makanchi Array**	**145.06**	**36**	PKPbc	**PKPdf**	**23 13 54.6**	**-0.2**
	comp=N,1.7nm,0.7s,baz=319,slow=2.8,SNR=15						
SONM	**Songino Array**	**152.91**	**7**	PKPbc	**PKPbc**	**23 14 14.8**	**-0.1**
	comp=N,0.3nm,0.5s,baz=323,slow=3.6,SNR=2.7						

ISCJB ***13*** *22:58:36.2±0.3, 45.17N±0.02×15.83E±0.02, h1km±2km, Error ellipse: s-maj=3.0km s-min=1.6km az=31.3*
CSEM ***13*** *22:58:37.3±0.1, 45.18N×15.81E, h2km, ML3.7/4, Error ellipse: s-maj=2.4km s-min=1.4km az=32.0*
PDG ***13*** *22:58:38.5±0.9, 45.30N×15.99E, h16km±2km, ML3.5/9, Error ellipse: s-maj=1.4km s-min=1.7km az=0.0*
VIE ***13*** *22:58:39.0±0.5, 45.29N×15.82E, h10km±1km, mb2.9/12, ML3.1/13, Error ellipse: s-maj=3.0km s-min=2.2km az=159.0 30 km SE of Karlovac*
BEO ***13*** *22:58:38.1±0.4, 45.22N×15.81E, h13km±3km, ML3.3/1*
LDG ***13*** *22:58:38.0±0.1, 45.34N×16.05E, h10km, Ml3.4/9, Error ellipse: s-maj=4.4km s-min=2.3km az=45.0*
PRU ***13*** *22:58:40.5, 45.33N×15.89E, h9km*
ISC 13 22:58:37.8±1.0, 45.20N±0.02×15.80E±0.01, h10km±8km, n214, σ1°14/330, 25C-52D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SISC	**Sisak**	**0.49**	**56**	*i* Pg	**Pg**	**22 58 47.2**	**-0.2**
SISC				Sg	**Sb**	**22 58 55.3**	**-0.5**
SISC	**Sisak**	**0.49**	**56**	*i* Pg	**Pg**	**22 58 47.2**	**-0.2**
SISC				Sg	**Sb**	**22 58 55.2**	**-0.5**
BOJS	**Bojanci**	**0.49**	**309**	*e*Pg	**Pg**	**22 58 47.3**	**-0.1**
BOJS	**Bojanci**	**0.49**	**309**	⇓*i* Pg	**Pg**	**22 58 47.5**	**+0.1**
BOJS				*e*Sg	**Sb**	**22 58 55.5**	**-0.3**
BOJS	**Bojanci**	**0.49**	**309**	⇓*i* Pg	**Pg**	**22 58 47.5**	**+0.1**
BOJS				*e*Sg	**Sb**	**22 58 55.5**	**-0.3**
CRES	**Cresnjev**	**0.67**	**339**	⇓*i* Pg	**Pg**	**22 58 50.8**	**0.0**
CRES							
	comp=Z,475nm,0.3s						
CRES	**Cresnjev**	**0.67**	**339**	⇓*i* Pg	**Pg**	**22 58 50.8**	**0.0**
GCIS	**Gornji Cirnik**	**0.68**	**350**	⇓*i* Pg	**Pg**	**22 58 51.0**	**0.0**
GCIS	**Gornji Cirnik**	**0.68**	**350**	⇓*i* Pg	**Pg**	**22 58 51.0**	**0.0**
GBRS	**Gornja Briga**	**0.77**	**296**	*i* Pg	**Pg**	**22 58 52.4**	**-0.3**
GBRS				*i* Sg	**Sb**	**22 59 04.6**	**+0.7**
CESS	**Cesta pri Krsk**	**0.81**	**343**	*i* Pg	**Pb**	**22 58 53.5**	**-0.5**
CESS				*e*Sg	**Sn**	**22 59 07.9**	**+0.5**
CESS							
	comp=Z,383nm,0.3s						
CESS	**Cesta pri Krsk**	**0.81**	**343**	*i* Pg	**Pb**	**22 58 53.5**	**-0.5**
CESS				*e*Sg	**Sn**	**22 59 07.9**	**+0.5**
	comp=Z,383nm,0.3s						
GOLS	**Golise**	**0.82**	**352**	*i* Pg	**Pg**	**22 58 53.5**	**-0.2**
GOLS				*e*Sg	**Sn**	**22 59 08.7**	**+1.0**
GOLS							
	comp=Z,340nm,0.3s						
GOLS	**Golise**	**0.82**	**352**	*i* Pg	**Pg**	**22 58 53.5**	**-0.2**
GOLS				*e*Sg	**Sn**	**22 59 08.7**	**+1.0**
LEGS	**Legarje**	**0.82**	**336**	⇓*i* Pg	**Pg**	**22 58 53.4**	**-0.3**
LEGS				*i* Sg	**Sb**	**22 59 06.6**	**+1.2**
LEGS	**Legarje**	**0.82**	**336**	⇓*i* Pg	**Pg**	**22 58 53.4**	**-0.3**
LEGS				*i* Sg	**Sb**	**22 59 06.6**	**+1.2**
VISS	**Visnje**	**0.91**	**312**	⇓*i* Pg	**Pg**	**22 58 54.9**	**-0.3**
VISS				*e*Sg	**Sb**	**22 59 08.9**	**+1.2**
VISS							
	comp=Z,749nm,0.6s						
VISS	**Visnje**	**0.91**	**312**	⇓*i* Pg	**Pg**	**22 58 54.9**	**-0.3**
VISS				*e*Sg	**Sb**	**22 59 08.9**	**+1.2**
DOBS	**Dobrina**	**0.98**	**347**	*i* Pg	**Pb**	**22 58 56.7**	**-0.2**
DOBS				*e*Sg	**Sn**	**22 59 13.0**	**+1.4**
DOBS							
	comp=Z,190nm,0.2s						
DOBS	**Dobrina**	**0.98**	**347**	*i* Pg	**Pb**	**22 58 56.7**	**-0.2**
DOBS				*e*Sg	**Sn**	**22 59 13.0**	**+1.4**
PDKS	**Podkum**	**1.03**	**327**	⇓*i* Pg	**Pb**	**22 58 57.8**	**+0.1**
PDKS				*e*Sg	**Sn**	**22 59 13.7**	**+0.8**
PDKS							
	comp=Z,697nm,0.7s						
PDKS	**Podkum**	**1.03**	**327**	⇓*i* Pg	**Pb**	**22 58 57.8**	**+0.1**
PDKS				*e*Sg	**Sn**	**22 59 13.7**	**+0.8**
	comp=Z,697nm,0.7s						
KNDS	**Knezji Dol**	**1.05**	**289**	*i* Pg	**Pg**	**22 58 57.4**	**-0.7**
KNDS							
	comp=Z,215nm,0.4s						
KNDS	**Knezji Dol**	**1.05**	**289**	*i* Pg	**Pg**	**22 58 57.4**	**-0.7**
BLY	**Banja Luka**	**1.08**	**114**	⇑*i* Pg	Pg	22 58 55.4	-3.2
BLY				*e*Sg	**Sg**	**22 59 11.4**	**-1.3**
CEY	**Cerknica**	**1.10**	**300**	*e*Pg	**Pg**	**22 58 58.4**	**-0.7**
CEY				*e*Sg	**Sb**	**22 59 13.5**	**0.0**
CEY							
	comp=Z,462nm,0.4s						
CEY	**Cerknica**	**1.10**	**300**	*e*Pg	**Pg**	**22 58 58.3**	**-0.7**
CEY				*e*Sg	**Sb**	**22 59 13.5**	**0.0**
VNDS	**Vrh nad Dolski**	**1.19**	**320**	*i* Pg	**Pb**	**22 59 00.5**	**+0.1**
VNDS				*e*Sg	**Sn**	**22 59 17.6**	**+0.9**
VNDS							
	comp=Z,379nm,0.5s						
LJU	**Ljubljana**	**1.23**	**314**	*i* Pg	**Pn**	**22 59 01.3**	**+0.3**
LJU				*i* Sg	**Sn**	**22 59 18.5**	**+0.8**
LJU	**Ljubljana**	**1.23**	**314**	*i* Pg	**Pn**	**22 59 01.3**	**+0.3**
LJU				*e*Sg	**Sn**	**22 59 18.5**	**+0.8**
GROS	**Grobnik**	**1.28**	**351**	⇓*i* Pg	**Pg**	**22 59 02.0**	**-0.4**
GROS				*i* Sg	**Sn**	**22 59 20.5**	**+1.4**
GROS							
	comp=Z,96nm,0.3s						
GROS	**Grobnik**	**1.28**	**351**	⇓*i* Pg	**Pg**	**22 59 02.0**	**-0.4**
GROS				*e*Sg	**Sn**	**22 59 20.5**	**+1.4**
KOGS	**Kog**	**1.29**	**14**	⇓*i* Pg	**Pn**	**22 59 01.9**	**0.0**
KOGS	**Kog**	**1.29**	**14**	⇓*i* Pg	**Pn**	**22 59 01.9**	**0.0**
KOGS				*i* Sg	**Sn**	**22 59 21.4**	**+2.2**
KOGS							
	comp=Z,300nm,0.3s						
KOGS	**Kog**	**1.29**	**14**	⇓*i* Pg	**Pn**	**22 59 01.9**	**0.0**
KOGS				*e*Sg	**Sn**	**22 59 21.4**	**+2.2**
SKDS	**Skadanscina**	**1.30**	**286**	*e*Pg	**Pn**	**22 59 01.4**	**-0.7**
SKDS				*i* Sg	**Sn**	**22 59 21.2**	**+1.6**
SKDS							
	comp=Z,126nm,0.2s						
SKDS	**Skadanscina**	**1.30**	**286**	*e*Pg	**Pn**	**22 59 01.4**	**-0.7**
SKDS				*i* Sg	**Sn**	**22 59 21.2**	**+1.6**
CRNS	**Crni Vrh**	**1.39**	**310**	*i* Pn	**Pb**	**22 59 04.1**	**+0.2**
CRNS				*e*Sn	**Sg**	**22 59 23.5**	**+0.9**
CRNS							
	comp=Z,183nm,0.3s						
JAVS	**Javornik**	**1.40**	**300**	*i* Pn	**Pn**	**22 59 03.9**	**+0.4**
JAVS				*e*Sn	**Sg**	**22 59 23.9**	**+1.0**
JAVS							
	comp=Z,291nm,0.4s						
JAVS	**Javornik**	**1.40**	**300**	*i* Pn	**Pn**	**22 59 03.9**	**+0.4**
JAVS				*e*Sn	**Sg**	**22 59 23.9**	**+1.0**
BEHE	**Becsehely**	**1.45**	**28**	*e*Pn	**Pb**	**22 59 04.7**	**-0.1**
BEHE				*e*Pg	**Pg**	**22 59 06.3**	**+0.8**
BEHE				*e*Sn	**Sg**	**22 59 26.4**	**+2.1**
MOZS	**Mozjanca**	**1.45**	**320**	*i* Pn	**Pb**	**22 59 05.0**	**+0.1**
MOZS				*e*Sn	**Sg**	**22 59 25.4**	**+1.0**
MOZS							
	comp=Z,180nm,0.4s						
MOZS	**Mozjanca**	**1.45**	**320**	*i* Pn	**Pb**	**22 59 05.0**	**+0.1**
MOZS				*e*Sn	**Sg**	**22 59 25.4**	**+1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PERS	**Pernice**	**1.52**	**342**	*e*Pn	**Pn**	**22 59 05.6**	**+0.6**
PERS							
	comp=Z,300nm,0.6s						
PERS	**Pernice**	**1.52**	**342**	*e*Pn	**Pn**	**22 59 05.6**	**+0.6**
TRI	**Trieste**	**1.52**	**290**	⇓*e*Pg	**Pn**	**22 59 05.2**	**+0.2**
TRI				*e*Sg	**Sg**	**22 59 27.7**	**+1.0**
TRI	**Trieste**	**1.52**	**290**	⇓*e*Pg	**Pn**	**22 59 05.2**	**+0.2**
TRI				*e*Sg	**Sg**	**22 59 27.7**	**+1.0**
SOKA	**Soboth**	**1.57**	**340**	⇑*i* Pn	**Pn**	**22 59 06.4**	**+0.5**
SOKA				⇑*i* Sg	**Sg**	**22 59 29.4**	**+1.0**
	comp=Z,74nm,0.4s						
SOKA	**Soboth**	**1.57**	**340**	Pn	**Pn**	**22 59 06.4**	**+0.5**
SOKA				Sg	**Sg**	**22 59 29.4**	**+1.0**
	comp=Z,74nm,0.4s						
OBKA	**Obir**	**1.57**	**327**	⇑*e*Pn	**Pn**	**22 59 06.5**	**+0.6**
	SNR=120						
OBKA				⇑*i* Sg	**Sg**	**22 59 29.3**	**+0.8**
	comp=Z,248nm,0.3s						
OBKA	**Obir**	**1.57**	**327**	Pn	**Pn**	**22 59 06.5**	**+0.6**
	SNR=120						
OBKA				Sg	**Sg**	**22 59 29.3**	**+0.8**
	comp=Z,248nm,0.3s						
VOJS	**Vojsko**	**1.58**	**303**	*i* Pn	**Pn**	**22 59 06.7**	**+0.7**
VOJS				*e*Sn	**Sg**	**22 59 28.7**	**+0.1**
VOJS							
	comp=Z,176nm,0.4s						
VOJS	**Vojsko**	**1.58**	**303**	*i* Pn	**Pn**	**22 59 06.7**	**+0.7**
VOJS				*e*Sn	**Sg**	**22 59 28.7**	**+0.1**
GORS	**Gorjuse**	**1.69**	**312**	*e*Pn	**Pn**	**22 59 08.0**	**+0.6**
GORS				*e*Sn	**Sb**	**22 59 30.4**	**+0.2**
GORS							
	comp=Z,347nm,0.5s						
GORS	**Gorjuse**	**1.69**	**312**	*e*Pn	**Pn**	**22 59 08.0**	**+0.6**
GORS				*e*Sn	**Sb**	**22 59 30.5**	**+0.2**
SABO	**M.te Sabotino**	**1.73**	**298**	⇓*e*Pg	**Pn**	**22 59 09.4**	**-0.3**
SABO				*e*Sg	**Sg**	**22 59 32.5**	**-0.9**
SABO	**M.te Sabotino**	**1.73**	**298**	⇓*e*Pg	**Pb**	**22 59 09.4**	**-0.3**
SABO				*e*Sg	**Sg**	**22 59 32.5**	**-0.9**
CADS	**Cadrg**	**1.77**	**306**	*e*Pn	**Pn**	**22 59 09.2**	**+0.6**
CADS				*e*Sn	**Sg**	**22 59 34.2**	**-0.6**
CADS							
	comp=Z,168nm,0.3s						
CADS	**Cadrg**	**1.77**	**306**	*e*Pn	**Pn**	**22 59 09.2**	**+0.6**
CADS				*e*Sn	**Sg**	**22 59 34.2**	**-0.6**
DRE	**Drenchia**	**1.80**	**304**	⇓*e*Pn	**Pn**	**22 59 09.7**	**+0.8**
DRE				*e*Sn	**Sg**	**22 59 36.4**	**+0.7**
DRE	**Drenchia**	**1.80**	**304**	⇓*e*Pn	**Pn**	**22 59 09.7**	**+0.8**
DRE				*e*Sn	**Sg**	**22 59 36.3**	**+0.7**
COLI	**Coloredo**	**1.94**	**300**	⇓*e*Pn	**Pb**	**22 59 12.2**	**-1.0**
COLI	**Coloredo**	**1.94**	**300**	⇓*e*Pn	**Pb**	**22 59 12.2**	**-1.0**
TLI	**Talmassons**	**2.03**	**292**	⇑*e*Pn	**Pb**	**22 59 14.0**	**-0.7**
TLI	**Talmassons**	**2.03**	**292**	⇑*e*Pn	**Pb**	**22 59 14.0**	**-0.7**
LSR	**Lussari**	**2.04**	**310**	⇓*e*Pn	**Pn**	**22 59 13.0**	**+0.7**
LSR	**Lussari**	**2.04**	**310**	⇓*e*Pn	**Pn**	**22 59 13.0**	**+0.7**
VINO	**Villanova**	**2.06**	**302**	*e*Pn	**Pn**	**22 59 13.8**	**+1.4**
VINO				*e*Sn	**Sb**	**22 59 42.2**	**+1.4**
VINO	**Villanova**	**2.06**	**302**	*e*Pn	**Pn**	**22 59 13.8**	**+1.4**
VINO				*e*Sn	**Sb**	**22 59 42.2**	**+1.4**
ARSA	**Arzberg**	**2.06**	**355**	⇓*e*Pn	**Pn**	**22 59 13.1**	**+0.6**
	SNR=17						
ARSA				⇓*i* Sn	**Sn**	**22 59 37.9**	**-0.4**
ARSA				⇑*i* Sg	**Sg**	**22 59 43.6**	**-0.5**
	comp=Z,44nm,0.4s						
ARSA	**Arzberg**	**2.06**	**355**	Pn	**Pn**	**22 59 13.1**	**+0.6**
	SNR=17						
ARSA				Sn	**Sn**	**22 59 37.9**	**-0.4**
ARSA				Sg	**Sg**	**22 59 43.6**	**-0.5**
	comp=Z,44nm,0.4s						
BAD	**Bernadia**	**2.07**	**301**	⇓*e*Pn	**Pn**	**22 59 14.1**	**+1.5**
BAD	**Bernadia**	**2.07**	**301**	⇓*e*Pn	**Pn**	**22 59 14.1**	**+1.5**
MYKA	**Terra Mystica**	**2.08**	**314**	⇓*i* Pn	**Pn**	**22 59 13.5**	**+0.7**
MYKA				⇑*i* Sn	**Sn**	**22 59 39.9**	**+1.2**
MYKA	**Terra Mystica**	**2.08**	**314**	Pn	**Pn**	**22 59 13.5**	**+0.7**
MYKA				Sn	**Sn**	**22 59 39.9**	**+1.2**
ACOM	**Acomizza, Ital**	**2.09**	**311**	⇑*e*Pn	**Pn**	**22 59 14.3**	**+1.2**
ACOM	**Acomizza, Ital**	**2.09**	**311**	⇑*e*Pn	**Pn**	**22 59 14.3**	**+1.2**
BOO	**Bordano**	**2.20**	**302**	⇓*e*Pn	**Pn**	**22 59 15.9**	**+1.5**
BOO	**Bordano**	**2.20**	**302**	⇓*e*Pn	**Pn**	**22 59 15.9**	**+1.5**
PKS9	**Tamasi**	**2.22**	**50**	⇑*e*Pn	**Pg**	**22 59 20.9**	**+0.5**
PKS9				*e*Pg	Pb	22 59 23.7	±5.7
PKS9				*e*Sn	**S

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BEO	**Beograd**	**3.34**	**95**	*e*Sg	**Sg**	**23 00 23.5**	**-1.5**	**PRYS**	**Parys**	**48.41**	**77**	*e*P	P	23 11 21.0	-3.3
HCY	**Herceg Novi**	**3.37**	**144**	*e*Pn	**Pn**	**22 59 31.1**	**+0.6**	PRYS				AMB	AMB	23 11 22.5	
HCY				*e*Sn	**Sn**	**23 00 12.1**	**+1.5**		comp=Z,30nm,2.0s						
HCY	**Herceg Novi**	**3.37**	**144**	*e*Pn	**Pn**	**22 59 31.1**	**+0.6**	**LBTB**	**Lobatse**	**48.96**	**73**	*e*P	**P**	**23 11 26.2**	**-2.3**
HCY				*e*Sn	**Sn**	**23 00 12.1**	**+1.5**	LBTB				AMB	AMB	23 11 31.9	
ABSI	**Aberstueckl**	**3.48**	**298**	*e*Pn	**Pn**	**22 59 34.4**	**+2.3**		comp=Z,36nm,5.1s						
SMOL	**Smolenice**	**3.50**	**18**	*e*PN	**Pn**	**22 59 32.8**	**+0.5**	**LBTB**	**Lobatse**	**48.96**	**73**	*e*P	**P**	**23 11 25.6**	**-3.0**
ROSI	**Rosskopf**	**3.51**	**301**	*e*Pn	**Pn**	**22 59 35.7**	**+3.1**		comp=Z,16nm,0.7s						
WTTA	**Wattenberg**	**3.55**	**307**	⇑*i*Pn	**Pn**	**22 59 33.6**	**+0.5**	**KLOF**	**Kloof**	**49.00**	**76**	*e*P	**P**	**23 11 26.5**	**-2.4**
	SNR=6.9							KLOF				AMB	AMB	23 11 27.4	
WTTA				⇑*i*Sn	**Sn**	**23 00 15.6**	**+0.4**		comp=Z,26nm,6.7s						
WTTA	**Wattenberg**	**3.55**	**307**	Pn	**Pn**	**22 59 33.6**	**+0.5**	**ERPM**	**east rand prop**	**49.35**	**77**	*e*P	**P**	**23 11 29.9**	**-1.7**
	SNR=6.9							ERPM				AMB	AMB	23 11 30.6	
WTTA				Sn	**Sn**	**23 00 15.6**	**+0.4**		comp=Z,48nm,4.6s						
BUM	**Brajici-Budva**	**3.66**	**141**	⇑*i*Pn	**Pn**	**22 59 35.6**	**+1.0**	**SLR**	**Silverton**	**49.85**	**76**	*e*P	**P**	**23 11 33.3**	**-2.1**
BUM				*e*Sn	**Sn**	**23 00 19.5**	**+1.7**	SLR				AMB	AMB	23 11 37.1	
BUM	**Brajici-Budva**	**3.66**	**141**	⇑*i*Pn	**Pn**	**22 59 35.6**	**+1.0**		comp=Z,46nm,2.7s						
PDG	**Podgorica**	**3.73**	**137**	*e*Pn	**Pn**	**22 59 37.0**	**+1.6**	**MIR**	**Mirnyy**	**49.95**	**153**	*e*P	**P**	**23 11 35.0**	**-0.3**
PDG	**Podgorica**	**3.73**	**137**	⇓*i*Pn	**Pn**	**22 59 36.0**	**+0.6**	MIR				*e*		23 11 47.0	
TTG	**Podgorica**	**3.73**	**137**	⇓*i*Pn	**Pn**	**22 59 36.0**	**+0.6**	MIR				pmax	pmax		
TTG				*e*Sn	**Sn**	**23 00 21.4**	**+2.0**		comp=Z,42nm,1.0s						
GRUS	**Gruza**	**3.75**	**109**	*e*Pn	**Pn**	**22 59 35.6**	**-0.1**	**LPAZ**	**La Paz**	**50.27**	**305**	P	**P**	**23 11 39.5**	**+0.5**
GRUS	**Gruza**	**3.75**	**109**	*e*Pn	**Pn**	**22 59 35.6**	**-0.1**		comp=Z,58nm,0.8s						
BEY	**Berane**	**3.76**	**127**	⇓*i*Pn	**Pn**	**22 59 36.8**	**+0.9**	LPAZ				*e*PcP	**PcP**	**23 12 58.0**	**+0.7**
IVA	**Berane**	**3.76**	**127**	⇓*i*Pn	**Pn**	**22 59 36.8**	**+0.9**	LPAZ				*e*ScP	**ScP**	**23 16 48.3**	**+1.0**
IVA				*e*Sn	**Sn**	**23 00 20.9**	**+0.6**	LPAZ				ScP	ScP	23 16 48.7	+1.4
MOTA	**Moosalm**	**3.90**	**305**	⇓*i*Pn	**Pn**	**22 59 38.3**	**+0.4**	**LPAZ**	**La Paz**	**50.27**	**305**	P	**P**	**23 11 39.5**	**+0.5**
	SNR=17								comp=Z,79nm,0.7s,baz=196,slow=8.5						
MOTA				⇑*i*Sn	**Sn**	**23 00 24.8**	**+1.0**	LPAZ				ScP	**ScP**	**23 16 48.7**	**+1.4**
MOTA	**Moosalm**	**3.90**	**305**	Pn	**Pn**	**22 59 38.3**	**+0.4**		comp=Z,4.0nm,0.8s,baz=120,slow=3.2,SNR=5.3						
	SNR=17							LPAZ				LR	LR	23 32 19.3	
MOTA				Sn	**Sn**	**23 00 24.8**	**+1.0**		comp=Z,625nm,21.1s,baz=132,slow=35						
VYHS	**Vyhne**	**3.90**	**31**	*e*PN	**Pn**	**22 59 37.5**	**-0.3**	**RCBR**	**Riachuelo**	**50.38**	**349**	P	**P**	**23 11 38.2**	**-1.0**
VYHS				*e*SG	Sg	23 00 49.5	+6.5	**RCBR**	**Riachuelo**	**50.38**	**349**	P	**P**	**23 11 38.2**	**-1.0**
PSZ	**Piszkesteto**	**3.92**	**45**	*e*Pn	**Pn**	**22 59 36.9**	**-1.2**		comp=Z,5.2nm,0.9s,baz=144,slow=13,SNR=4.3						
PSZ				*e*Sn	**Sg**	**23 00 44.5**	**+0.7**	**ARE**	**Arequipa**	**51.70**	**301**	*e*P	**P**	**23 11 50.0**	**+0.5**
PVY	**Plav**	**3.98**	**129**	⇓*i*Pn	**Pn**	**22 59 40.0**	**+1.1**	**ARE**	**Arequipa**	**51.70**	**301**	*e*P	**P**	**23 11 50.0**	**+0.5**
PVY				*e*Sn	**Sn**	**23 00 25.6**	**-0.1**	**MSNA**	**Messina**	**53.51**	**76**	*e*P	P	23 11 57.9	-4.6
ULC	**Ulcinj**	**4.09**	**141**	⇓*i*Pn	**Pn**	**22 59 40.9**	**+0.5**	MSNA				AMB	AMB	23 12 09.7	
ULC				*e*Sn	**Sn**	**23 00 30.4**	**+2.1**		comp=Z,34nm,4.7s						
ULC	**Ulcinj**	**4.09**	**141**	⇓*i*Pn	**Pn**	**22 59 40.9**	**+0.5**	**DRV**	**Dumont d'Urvil**	**57.41**	**174**	S	S	23 20 12.0	-9.3
ULC				*e*Sn	**Sn**	**23 00 30.4**	**+2.1**	DRV				SS	SS	23 24 58.0	+47
TREC	**Trest**	**4.10**	**357**	*e*PN	**Pn**	**22 59 41.6**	**+1.0**	DRV				L	L	23 25 00.0	
TREC	**Trest**	**4.10**	**357**	Pn	**Pn**	**22 59 41.6**	**+1.0**	DRV				R		23 30 00.0	
BZS	**Buzias**	**4.12**	**82**	*e*Pn	**Pn**	**22 59 41.5**	**+0.7**	**NNA**	**Nana**	**58.16**	**299**	*e*P	**P**	**23 12 36.5**	**+0.7**
BZS				*e*Sg	**Sg**	**23 00 48.9**	**-1.2**		comp=Z,126nm,1.2s						
BZS	**Buzias**	**4.12**	**82**	*e*Pn	**Pn**	**22 59 41.5**	**+0.7**	**NNA**	**Nana**	**58.16**	**299**	P	**P**	**23 12 36.0**	**+0.2**
BZS				*e*Sg	**Sg**	**23 00 48.9**	**-1.2**		comp=Z,475nm,1.1s,SNR=6.3						
VRAC	**Vranov**	**4.15**	**7**	*e*Pn	**Pn**	**22 59 41.4**	**+0.2**	**NNA**	**Nana**	**58.16**	**299**	P	**P**	**23 12 36.1**	**+0.4**
KHC	**Kasperske Hory**	**4.22**	**340**	*e*PN	**Pn**	**22 59 43.0**	**+0.9**		comp=Z,32nm,0.7s,baz=171,slow=5.3,SNR=16						
KHC				*ex*	x	22 59 52.0		**ATAH**	**Atahualpa**	**63.10**	**300**	P	**P**	**23 13 11.7**	**+1.9**
KHC				*e*SN	**Sn**	**23 00 30.8**	**-0.6**	**ATAH**	**Atahualpa**	**63.10**	**300**	P	**P**	**23 13 11.7**	**+1.9**
KHC				*e*SG	**Sg**	**23 00 55.0**	**+1.9**		comp=Z,80nm,1.2s,baz=153,slow=3.6,SNR=27						
KHC	**Kasperske Hory**	**4.22**	**340**	Pn	**Pn**	**22 59 43.0**	**+0.9**	**DBIC**	**Dimbokro**	**65.00**	**25**	*e*P	**P**	**23 13 20.7**	**-1.1**
KHC				Sn	**Sn**	**23 00 30.8**	**-0.6**		comp=Z,46nm,1.6s						
SELS	**Selova**	**4.31**	**115**	*e*Pn	**Pn**	**22 59 42.8**	**-0.6**	**DBIC**	**Dimbokro**	**65.00**	**25**	P	**P**	**23 13 20.6**	**-1.2**
SELS	**Selova**	**4.31**	**115**	*e*Pn	**Pn**	**22 59 42.8**	**-0.6**		comp=Z,3.0nm,0.6s,baz=190,slow=6.3,SNR=4.7						
BOLS	**Boljevac**	**4.61**	**105**	*e*Pn	**Pn**	**22 59 45.6**	**-1.9**	DBIC				LR	LR	23 34 37.9	
MORC	**Moravsky Berou**	**4.73**	**14**	*e*Pn	**Pn**	**22 59 50.1**	**+0.9**		comp=Z,952nm,21.9s,baz=174,slow=30						
PRU	**Pruhonice**	**4.87**	**350**	*e*PN	**Pn**	**22 59 51.9**	**+0.9**	**OPO**	**Ambohidratompo**	**66.09**	**88**	LR	LR	23 36 28.5	
PRU				*e*SN	**Sn**	**23 00 45.6**	**-1.8**		comp=Z,1μm,21.0s,baz=202,slow=31						
PRU	**Pruhonice**	**4.87**	**350**	Pn	**Pn**	**22 59 51.9**	**+0.9**	**OTAV**	**Otavalo**	**69.55**	**304**	*e*P	**P**	**23 13 52.0**	**+0.8**
PRU				Sn	**Sn**	**23 00 45.6**	**-1.8**		comp=Z,24nm,1.5s						
OKC	**Ostrava-Krasne**	**4.91**	**18**	*e*PN	**Pn**	**22 59 51.9**	**+0.3**	**ROSC**	**El Rosal**	**71.78**	**310**	*e*P	**P**	**23 14 05.1**	**+0.5**
OKC	**Ostrava-Krasne**	**4.91**	**18**	Pn	**Pn**	**22 59 51.9**	**+0.3**	**ROSC**	**El Rosal**	**71.78**	**310**	P	**P**	**23 14 04.7**	**+0.1**
KRLC	**Kraliky**	**4.93**	**7**	*e*PN	**Pn**	**22 59 52.9**	**+1.0**		comp=Z,22nm,0.7s,baz=107,slow=5.6,SNR=15						
KRLC	**Kraliky**	**4.93**	**7**	Pn	**Pn**	**22 59 52.9**	**+1.0**	ROSC				LR	LR	23 46 36.4	
BARS	**Barje**	**4.95**	**117**	*e*Pn	**Pn**	**22 59 51.9**	**-0.3**		comp=Z,342nm,19.0s,baz=187,slow=37						
BARS	**Barje**	**4.95**	**117**	*e*Pn	**Pn**	**22 59 51.9**	**-0.3**	**MBAR**	**Mbarara**	**72.07**	**63**	*e*P	**P**	**23 14 05.7**	**-0.4**
DPC	**Dobruska-Polom**	**5.17**	**4**	*e*PN	**Pn**	**22 59 56.3**	**+1.1**	**MBAR**	**Mbarara**	**72.07**	**63**	P	**P**	**23 14 05.4**	**-0.8**
DPC	**Dobruska-Polom**	**5.17**	**4**	Pn	**Pn**	**22 59 56.3**	**+1.1**	**MBAR**	**Mbarara**	**72.07**	**63**	P	**P**	**23 14 05.4**	**-0.8**
ZAPS	**Zavoj**	**5.28**	**109**	*e*Pn	**Pn**	**22 59 56.7**	**0.0**		comp=Z,4.2nm,0.7s,baz=258,slow=14,SNR=6.5						
CRVS	**Cervenica-Dubn**	**5.36**	**44**	*e*PG	**Pg**	**23 00 18.7**	**-1.7**	**TOAO**	**Torodi Ar. Sit**	**72.90**	**30**	*e*P	**P**	**23 14 09.1**	**-1.6**
CRVS				*e*SG	**Sg**	**23 01 33.4**	**+3.7**	**TORD**	**Torodi Ar. Bea**	**72.90**	**30**	P	**P**	**23 14 09.3**	**-1.4**
PVCC	**Panska Ves**	**5.40**	**352**	*e*PN	**Pn**	**22 59 59.5**	**+1.2**	**TORD**	**Torodi Ar. Bea**	**72.90**	**30**	P	**P**	**23 14 09.3**	**-1.4**
PVCC	**Panska Ves**	**5.40**	**352**	Pn	**Pn**	**22 59 59.5**	**+1.2**		comp=Z,13nm,0.9s,baz=199,slow=6.5,SNR=97						
NKC	**Novy Kostel**	**5.52**	**337**	*e*PN	**Pn**	**23 00 00.5**	**+0.5**	TORD				LR	LR	23 41 47.8	
NKC	**Novy Kostel**	**5.52**	**337**	Pn	**Pn**	**23 00 00.5**	**+0.5**		comp=Z,390nm,18.1s,baz=190,slow=32						
PGF	**Pioggiola**	**5.58**	**244**	*e*Pn	**Pn**	**23 00 02.0**	**+1.0**	**GRGR**	**Grenville**	**73.62**	**325**	*e*P	**P**	**23 14 15.1**	**+0.2**
PGF	**Pioggiola**	**5.58**	**244**	*e*Pn	**Pn**	**23 00 02.0**	**+1.0**		comp=Z,617nm,1.8s						
KOLS	**Kolonicke sedl**	**5.79**	**48**	*e*PG	Pg	23 00 36.4	+7.8	**KMBO**	**Kilima Mbogo**	**74.98**	**69**	P	**P**	**23 14 22.5**	**-0.8**
KOLS				*e*		23 02 02.4		**KMBO**	**Kilima Mbogo**	**74.98**	**69**	P	**P**	**23 14 22.5**	**-0.8**
BRG	**Berggiesshubel**	**5.81**	**348**	PN	**Pn**	**23 00 04.3**	**+0.3**		comp=Z,1.6nm,1.0s,baz=234,slow=19,SNR=2.2						
BRG				SN	**Sn**	**23 01 08.7**	**-2.0**	KMBO				LR	LR	23 47 16.7	
BRG				SG	**Sg**	**23 01 42.0**	**-2.3**		comp=Z,975nm,18.0s,baz=119,slow=36						
	comp=Z,10nm,0.9s							**TBG**	**Guadaloupe-3**	**77.11**	**326**	*e*P	**P**	**23 14 36.8**	**+1.9**
SBF	**Sospel**	**6.12**	**260**	*e*Pn	**Pn**	**23 00 09.3**	**+0.9**	**HMG**	**Houelmont**	**77.25**	**326**	*e*P	**P**	**23 14 37.5**	**+1.8**
SBF				*e*Sn	**Sn**	**23 01 17.3**	**-1.2**	**PHG**	**Guadaloupe-2**	**77.26**	**326**	*e*P	**P**	**23 14 36.7**	**+0.9**
	comp=Z,12nm,0.5s							**DOG**	**Dongo Capester**	**77.27**	**326**	*e*P	**P**	**23 14 36.7**	**+0.9**
SBF	**Sospel**	**6.12**	**260**	*e*Pn	**Pn**	**23 00 09.3**	**+0.9**	**LZG**	**Guadaloupe-1**	**77.42**	**326**	*e*P	**P**	**23 14 38.3**	**+1.7**
SBF				*e*Sn	**Sn**	**23 01 17.3**	**-1.2**	**RPZ**	**Rata Peaks**	**79.59**	**193**	P	**P**	**23 14 48.3**	**-0.2**
	comp=Z,5.8nm,0.5s							**RPZ**	**Rata Peaks**	**79.59**	**193**	P	**P**	**23 14 48.3**	**-0.2**
LPG	**La Plagne**	**6.38**	**276**	*e*Pn	**Pn**	**23 00 12.8**	**+0.7**		comp=Z,16nm,0.7s,baz=222,slow=7.2,SNR=4.4						
LPG				*e*Sn	**Sn**	**23 01 22.9**	**-2.2**	RPZ				LR	LR	23 49 37.2	
	comp=Z,17nm,0.7s								comp=Z,477nm,18.2s,baz=312,slow=35						
LPG	**La Plagne**	**6.38**	**276**	*e*Pn	**Pn**	**23 00 12.8**	**+0.7**	**STVI**	**Saint Thomas**	**80.51**	**324**	*e*P	**P**	**23 14 53.4**	**-0.1**
CLL	**Collm**	**6.39**	**344**	*e*Pn	**Pn**	**23 00 14.0**	**+2.1**		comp=Z,69nm,0.8s						
CLL				*e*Sn	**Sn**	**23 01 23.0**	**-1.9**	**RKT**	**Rikitea**	**80.55**	**243**	*e*LR	LR	23 40 08.5	
CLL				*e*Sg	**Sg**	**23 02 02.0**	**-0.9**		comp=Z,755nm,29.0s						
	comp=Z,16nm,0.9s							**CBYP**	**Canovanas**	**80.74**	**323**	*e*P	**P**	**23 14 53.9**	**-0.9**
LPL	**La Plagne**	**6.39**	**276**	*e*P	Pn	23 00 17.1	+4.9		comp=Z,37nm,0.7s						
MBDF	**Montbardon**	**6.42**	**269**	*e*Sn	**Sn**	**23 01 24.0**	**-1.9**	**JTS**	**JuntasAbangare**	**81.41**	**303**	*e*P	**P**	**23 14 59.5**	**+1.1**
	comp=Z,6.1nm,0.5s								comp=Z,931nm,1.7s						
CDF	**Champ du Feu**	**6.67**	**302**	*e*Pn	**Pn**	**23 00 16.7**	**+0.8**	**TAU**	**Tasmania Unive**	**81.48**	**176**	*e*P	**P**	**23 14 57.9**	**-0.6**
CDF				*e*Sg	**Sg**	**23 02 08.6**	**-3.3**	**TAU**	**Tasmania Unive**	**81.48**	**176**	*e*P	**P**	**23 14 57.9**	**-0.6**
	comp=Z,6.3nm,0.6s								comp=Z,911nm,0.9s						
CDF	**Champ du Feu**	**6.67**	**302**	*e*Pn	**Pn**	**23 00 16.7**	**+0.8**	**TAU**	**Tasmania Unive**	**81.48**	**176**	P	**P**	**23 14 59.0**	**+0.5**
HINF	**Hinteralfeld**	**6.71**	**296**	*e*Pn	**Pn**	**23 00 16.7**	**+0.4**		comp=Z,630nm,0.8s,SNR=6.1						
HINF				*e*Sn	**Sn**	**23 01 28.4**	**-4.3**	**TAM**	**Tamanrasset**	**83.14**	**30**	*e*P	**P**	**23 15 07.4**	**0.0**
	comp=Z,16nm,0.9s							TAM				pmax	pmax		
HINF	**Hinteralfeld**	**6.71**	**296**	*e*Pn	**Pn**	**23 00 16.7**	**+0.4**		comp=Z,19nm,1.5s						
FRF	**La Foret Royal**	**6.76**	**259**	*e*Pn	**Pn**	**23 00 17.2**	**+0.2**	**TAM**	**Tamanrasset**	**83.14**	**30**	*e*P	**P**	**23 15 07.4**	**0.0**
FRF				*e*Sn	**Sn**	**23 01 31.7**	**-2.3**		comp=Z,19nm,1.5s						
	comp=Z,3.1nm,0.5s							**SDDR**	**Presa de Saban**	**83.33**	**318**	*e*P	**P**	**23 15 08.5**	**+0.1**
FRF	**La Foret Royal**	**6.76**	**259**	*e*Pn	**Pn**	**23 00 17.2**	**+0.2**		comp=Z,23nm,1.0s						
CABF	**La Chapelle**	**6.92**	**285**	*e*Pn	**Pn**	**23 00 19.9**	**+0.6**	**URZ**	**Urewera**	**83.97**	**199**	LR	LR	23 49 12.6	
CABF	**La Chapelle**	**6.92**	**285**	*e*Pn	**Pn**	**23 00 19.9**	**+0.6**		comp=Z,448nm,18.6s,baz=169,slow=33						
LMR	**La Mourre**	**6.92**	**258**	*e*Pn	**Pn**	**23 00 19.1**	**-0.2**	**TGUH**	**Tegucigalpa,Un**	**85.78**	**303**	*e*P	**P**	**23 15 20.8**	**0.0**
LMR	**La Mourre**	**6.92**	**258**	*e*Pn	**Pn**	**23 00 19.1**	**-0.2**		comp=Z,44nm,1.1s						
ORIF	**Oris-en-Rattie**	**7.03**	**271**	*e*Pn	**Pn**	**23 00 21.9**	**+1.1**	**NWAO**	**Narrogin (SRO)**	**86.49**	**151**	P	**P**	**23 15 22.0**	**-2.2**
ORIF				*e*Sn	**Sn**	**23 01 37.9**	**-2.9**	**NWAO**	**Narrogin (SRO)**	**86.49**	**151**	P	**P**	**23 15 22.0**	**-2.2**
	comp=Z,13nm,0.6s								comp=Z,5.8nm,0.7s,baz=174,slow=6.1,SNR=3.8						
ORIF	**Oris-en-Rattie**	**7.03**	**271**	*e*Pn	**Pn**	**23 00 21.9**	**+1.1**	**TBI**	**Tubuai**	**87.19**	**231**	*e*S	S	23 26 08.6	+6.3
HAU	**Haudompre**	**7.09**	**297**	*e*Pn	**Pn**	**23 00 21.5**	**-0.1**		comp=Z,281nm,27.0s						
HAU				*e*Sn	**Sn**	**23 01 38.0**	**-4.1**	TBI				*e*LR	LR	23 43 21.3	
	comp=Z,10nm,0.7s								comp=Z,844nm,28.0s						
HAU	**Haudompre**	**7.09**	**297**	*e*Pn	**Pn**	**23 00 21.5**	**-0.1**	**TEIG**	**Tepich**	**91.60**	**305**	LR	LR	00 00 18.4	
SMRF	**Simiane la Rot**	**7.40**	**264**	*e*Pn	**Pn**	**23 00 26.3**	**+0.4**		comp=Z,299nm,18.9s,baz=55,slow=38						
SMRF	**Simiane la Rot**	**7.40**	**264**	*e*Pn	**Pn**	**23 00 26.3**	**+0.4**	**RAO**	**Raoul Island**	**91.61**	**205**	LR	LR	23 51 29.2	
VIVF	**Saint-Julien-l**	**7.89**	**271**	*e*Pn	**Pn**	**23 00 33.3**	**+0.7**		comp=Z,184nm,18.9s,baz=336,slow=32						
VIVF	**Saint-Julien-l**	**7.89**	**271**	*e*Pn	**Pn**	**23 00 33.3**	**+0.7**	**STKA**	**Stephens Creek**	**92.08**	**170**	*e*P	**P**	**23 15 49.8**	**-0.7**
SMF	**Signal de Mont**	**8.46**	**284**	*e*Pn	**Pn**	**23 00 39.5**	**-0.9**		comp=Z,1.8nm,0.8s						
SMF				*e*Sn	**Sn**	**23 02 11.3**	**-4.6**	STKA				PP	**PP**	**23 19 30.0**	**0.0**
	comp=Z,3.3nm,0.4s							**STKA**	**Stephens Creek**	**92.08**	**170**	P	**P**	**23 15 51.0**	**+0.5**
SMF	**Signal de Mont**	**8.46**	**284**	*e*Pn	**Pn**	**23 00 39.5**	**-0.9**		comp=Z,7.5nm,0.7s,baz=165,slow=6.4,SNR=13						
LOR	**Lormes**	**8.53**	**288**	*e*Pn	**Pn**	**23 00 42.2**	**+0.8**	STKA				PP	**PP**	**23 19 30.0**	**0.0**
	baz=108								comp=Z,3.2nm,0.8s,baz=158,slow=10,SNR=3.8						
LOR	**Lormes**	**8.53**	**288**	*e*Pn	**Pn**	**23 00 42.2**	**+0.8**	STKA				LR	LR	23 55 46.0	
	baz=108								comp=Z,569nm,19.8s,baz=194,slow=34						
AVF	**Avril sur Loir**	**8.81**	**285**	*e*Pn	**Pn**	**23 00 44.8**	**-0.3**	**PPT2**	**Papeete2**	**92.28**	**234**	*e*S	**S**	**23 26 54.4**	**+4.6**
AVF	**Avril sur Loir**	**8.81**	**285**	*e*Pn	**Pn**	**23 00 44.8**	**-0.3**		comp=Z,304nm,30.2s						
								PPT2				*e*LR	LR	23 45 38.3	
									comp=Z,905nm,30.2s						
								PPT	**Papeete**	**92.30**	**234**	LR	LR	23 51 31.4	
									comp=Z,386nm,18.5s,baz=184,slow=32						
								KEST	**Kesra**	**96.42**	**29**	LR	LR	23 55 40.3	
									comp=Z,251nm,20.2s,baz=199,slow=33						
								ESDC	**Sonseca Array**	**97.21**	**18**	P	**P**	**23 16 13.5**	**-0.1**
								ESDC	**Sonseca Array**	**97.21**	**18**	P	**P**	**23 16 13.5**	**-0.1**
									comp=Z,0.2nm,0.3s,baz=187,slow=4.2,SNR=3.9						
								ESDC				LR	LR	23 56 58.6	
									comp=Z,305nm,19.4s,baz=190,slow=34						
								ASAR	**Alice Springs**	**99.16**	**162**	P	**Pdif**	**23 16 21.5**	**-1.5**
								ASAR				PP	**PP**	**23 20 26.7**	**+1.6**
								ASAR				PKKP	**PKKPdf**	**23 32 46.4**	**-0.9**
								ASAR	**Alice Springs**	**99.16**	**162**	P	**Pdif**	**23 16 21.5**	**-1.5**
									comp=Z,5.6nm,0.8s,baz=188,slow=4.6,SNR=23						
								ASAR				PP	**PP**	**23 20 26.7**	**+1.6**
									comp=Z,2.2nm,1.0s,baz=190,slow=6.4,SNR=8.0						
								ASAR				PKKP	**PKKPdf**	**23 32 46.4**	**-0.9**
									comp=Z,1.5nm,0.7s,baz=3.5,slow=2.4,SNR=13						
								ASAR				LR	LR	00 02 34.0	
									comp=Z,255nm,20.2s,baz=193,slow=36						
								AS31	**Alice Springs**	**99.17**	**162**	*e*P	**Pdif**	**23 16 21.6**	**-1.4**
								AS31				*e*PP	**PP**	**23 20 23.5**	**-1.6**
								DZM	**Mont Dzumac**	**101.51**	**193**	*e*LR	LR	23 49 50.3	

MOS **13** *23:02:43.7±1.0,55.°91S×27.°01W,h33km,mb5.4/25,Error ellipse: s-maj=20.5km s-min=11.3km az=104.3*

IDC **13** *23:02:44.6±1.1,55.°84S×27.°02W,h32km±7km,mb4.8/23, mb1 4.8/24,mb1mx4.8/26,mbtmp4.7/24,ML4.2/1,MS4.7/26, Ms1 4.7/26,ms1mx4.7/27,Error ellipse: s-maj=14.2km s-min=10.0km az=36.0*

BJI **13** *23:02:44.4,55.°90S×26.°90W,h35km,mB5.4/23,Ms5.3/22, Ms7 5.0/24*

NEIC **13** *23:02:45.6±0.9,55.°87S×26.°92W,h44km±7km,mb5.3/20, Error ellipse: s-maj=7.3km s-min=5.5km az=211.0*

ISCJB **13** *23:02:46.5±0.2,55.°80S±0.°05×26.°88W±0.°08,h63km, mb5.1/39,Error ellipse: s-maj=7.7km s-min=5.4km az=42.8*

GCMT **13** *23:02:47.7±0.1,55.°86S×26.°74W,h20km,MW5.4, Moment Tensor Solution. s65,c108; s87,c150; Moment tensor: Scale 10^17Nm; Mrr1.11±.03; Mθθ-0.26±.03;*

Mφφ-0.85±.03; Mrθ0.21±.05; Mθφ0.81±.02; Mφr0.79±.05; Best double couple: Mb1.50000×10^17 NP1:strike120.00000°, dip40.00000°,rake48.00000°. NP2:strike350.00000°,dip62.00000°, rake119.00000°. Principal axes: T 1.5300, Plg61.0000°, Azm306.0000°; N 0.0100, Plg25.0000°, Azm155.0000°; P -1.5300, Plg12.0000°, Azm59.0000°; Data Used: II IU IC G CN.

ISC 13 23:02:48.5±0.2,55.°87S±0.°06×27.°20W±0.°05,h63km,n404,σ1.1s37/497,mb5.0/38,16C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**16.97**	**158**	*e*P	**Pn**	**23 06 41.5**	**+0.3**
VNA1	**Neumayer--Stat**	**16.97**	**158**	*e*PcS	PcS	23 14 56.6	-2.5
VNA2	**Neumayer--Watz**	**17.36**	**158**	*e*P	**Pn**	**23 06 45.6**	**-0.5**
VNA2	**Neumayer--Watz**	**17.36**	**158**	*e*PcS	PcS	23 14 57.4	-2.6
EFI	**East Falkland**	**18.63**	**270**	*e*P	**Pn**	**23 07 01.7**	**+0.1**
EFI				pmax	pmax		
	comp=Z,138nm,0.8s						
EFI	**East Falkland**	**18.63**	**270**	*e*Pn	**Pn**	**23 07 01.6**	**+0.1**
	comp=Z,138nm,0.8s						
EFI	**East Falkland**	**18.63**	**270**	Pn	**Pn**	**23 07 01.9**	**+0.3**
	comp=Z,1μm,0.9s,SNR=11						
SNAA	**Sanae**	**18.91**	**156**	*e*P	**P**	**23 07 02.1**	**-1.6**
SNAA	**Sanae**	**18.91**	**156**	*e*PcS	PcS	23 15 00.6	-2.9
SNAA	**Sanae**	**18.91**	**156**	*e*Pn	**P**	**23 07 01.4**	**-2.3**
	comp=Z,50nm,0.8s						
SNAA				Sn	**S**	**23 10 31.3**	**-3.6**
SNAA				PcP	**PcP**	**23 11 25.7**	**-1.2**
SNAA				ScP	**ScP**	**23 15 00.5**	**+3.6**
SNAA	**Sanae**	**18.91**	**156**	P	**P**	**23 07 01.6**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=316,slow=9.2,SNR=49						
SNAA				LR	LR	23 12 57.4	
	comp=Z,722nm,20.8s,baz=325,slow=32						
SNAA				ScP	**ScP**	**23 15 00.5**	**+3.6**
	comp=Z,0.2nm,0.3s,baz=287,slow=1.3,SNR=22						
PMSA	**Palmer Station**	**20.01**	**229**	P	Pn	23 07 17.7	-0.2
PMSA	**Palmer Station**	**20.01**	**229**	P	Pn	23 07 17.7	-0.2
	comp=Z,135nm,0.9s,baz=76,slow=9.0,SNR=11						
PMSA				LR	LR	23 14 07.1	
	comp=Z,3μm,18.4s,baz=90,slow=34						
MAIT	**Maitri**	**22.39**	**147**	*e*P	P	23 07 29.4	-12
USHA	**Ushuaia**	**23.22**	**255**	P	**P**	**23 07 49.3**	**-0.5**
USHA				ScP	**ScP**	**23 15 11.4**	**+3.8**
USHA	**Ushuaia**	**23.22**	**255**	P	**P**	**23 07 49.3**	**-0.5**
	comp=Z,44nm,0.7s,baz=73,slow=9.7,SNR=17						
USHA				LR	LR	23 14 53.8	
	comp=Z,4μm,19.8s,baz=210,slow=31						
USHA				ScP	**ScP**	**23 15 11.4**	**+3.8**
	comp=Z,7.8nm,0.7s,baz=72,slow=6.6,SNR=4.7						
SYO	**Syowa Base**

comp=Z,737nm,23.1s
WRA Warramunga Arr 102.88 162 P **Pdif** **23 16 38.5 -1.1**
WRA PP **PP** **23 20 54.0 +0.9**
WRA PKKP **PKKPbc** **23 32 36.8 +2.5**
WRA Warramunga Arr 102.88 162 P **Pdif** **23 16 38.5 -1.1**
comp=Z,1.1nm,0.6s,baz=194,slow=3.9,SNR=6.6
WRA PP **PP** **23 20 54.0 +0.9**
comp=Z,1.8nm,0.8s,baz=189,slow=6.7,SNR=6.0
WRA PKKP **PKKPbc** **23 32 36.8 +2.5**
comp=Z,1.5nm,0.7s,baz=3.8,slow=3.2,SNR=8.7
BRTR Keskin Array B 108.30 45 PKiKP **PKiKP** **23 21 09.1 +0.2**
BRTR PKKP PKKPdf 23 32 42.1 +8.6
BRTR Keskin Array B 108.30 45 PKiKP **PKiKP** **23 21 09.1 +0.2**
comp=Z,0.3nm,0.7s,baz=191,slow=1.5,SNR=2.6
BRTR PKKP PKKPdf 23 32 42.1 +8.6
comp=Z,0.7nm,1.0s,baz=76,slow=5.2,SNR=3.6
GERES GERESS Array B 109.80 27 PKiKP **PKiKP** **23 21 11.7 +0.4**
GERES GERESS Array B 109.80 27 PKiKP **PKiKP** **23 21 11.7 +0.4**
comp=Z,0.5nm,0.6s,baz=215,slow=4.8,SNR=3.6
CLL Collm 111.89 26 *e*P **Pdif** **23 17 18.0 -0.5**
CLL Collm 111.89 26 *e*Pdif **Pdif** **23 17 18.0 -0.5**
CLL *e*PP **PP** **23 22 01.0 +1.1**
CRVS Cervenica-Dubn 112.03 32 *e*P **Pdif** **23 17 23.0 +3.8**
CRVS Cervenica-Dubn 112.03 32 PDIF **Pdif** **23 17 23.0 +3.8**
KOLS Kolonicke sedl 112.30 33 *e*P **Pdif** **23 17 23.0 +2.6**
KOLS Kolonicke sedl 112.30 33 PDIF **Pdif** **23 17 23.0 +2.6**
S25A Robets Cordova 113.81 302 P 23 21 18.9
baz=114
Z14A Wintersburg 114.65 293 P PKPdf 23 21 20.8 -0.1
baz=115
SCHQ Schefferville 115.00 336 PKP **PKPdf** **23 21 18.9 -2.0**
SCHQ Schefferville 115.00 336 PKP **PKPdf** **23 21 18.9 -2.0**
comp=Z,2.3nm,0.6s,baz=106,slow=5.2,SNR=7.1
Y14A Wickenburg 115.13 294 P **PKPdf** **23 21 22.1 +0.2**
baz=116
GLA Glamis 115.39 292 P **PKPdf** **23 21 22.5 0.0**
baz=116
KBZ Khabaz 115.46 49 PKiKP **PKPdf** **23 21 21.3 -0.8**
KBZ Khabaz 115.46 49 PKP **PKPdf** **23 21 21.2 -0.8**
KBZ Khabaz 115.46 49 PKP **PKPdf** **23 21 21.2 -0.8**
comp=Z,1.0nm,0.7s,baz=212,slow=4.6,SNR=4.3
PDMCI Parker Dam,Lak 116.00 293 P **PKPdf** **23 21 23.8 +0.3**
baz=116
AKASG Malin Array Be 116.06 36 PKiKP **PKPdf** **23 21 22.6 -0.4**
AKASG Malin Array Be 116.06 36 PKP **PKPdf** **23 21 22.6 -0.4**
AKASG Malin Array Be 116.06 36 PKP **PKPdf** **23 21 22.6 -0.4**
comp=Z,0.2nm,0.3s,baz=244,slow=1.4,SNR=4.5
ISCO Idaho Springs 116.06 303 P **PKPdf** **23 21 23.5 -0.4**
baz=116
IRM Iron Mountain 116.42 292 P **PKPdf** **23 21 23.7 -0.7**
baz=117
W13A Hualapai Mount 116.49 294 P **PKPdf** **23 21 24.5 -0.3**
baz=117
S18A Hurst Farm, Bl 116.54 298 P **PKPdf** **23 21 24.9 +0.1**
baz=117
GMRC Granite Mounta 117.16 292 P **PKPdf** **23 21 26.0 0.0**
baz=118
P19A Cripple Cowboy 117.55 300 P **PKPdf** **23 21 26.7 +0.1**
baz=118
M22A Cedar Creek Ra 117.78 303 P **PKPdf** **23 21 26.9 -0.1**
baz=118
O19A Miners Draw (B 118.14 301 P **PKPdf** **23 21 27.8 +0.1**
baz=118
MVU Marysvale 118.27 297 *e*PKPdf **PKPdf** **23 21 29.0 +0.9**
K22A Casper 118.72 304 P **PKPdf** **23 21 28.1 -0.6**
baz=119
RSSD Black Hills 118.72 307 *e*PKiKP **PKPdf** **23 21 27.4 -1.3**
RSSD Black Hills 118.72 307 *e*PKPdf **PKPdf** **23 21 27.4 -1.3**
I24A Kuemmerle Ranc 118.79 306 P **PKPdf** **23 21 28.3 -0.5**
baz=119
MPMC Manual Prospec 119.10 292 P **PKPdf** **23 21 29.3 -0.4**
baz=120
H24A Dirks Ranch, A 119.44 307 P **PKPdf** **23 21 29.2 -0.7**
baz=120
K20A Yellowstone Ra 119.58 303 P **PKPdf** **23 21 30.3 -0.1**
baz=120
J21A Lysite 119.69 304 P **PKPdf** **23 21 29.7 -0.9**
baz=120
L18A Fontenelle, Gr 119.83 301 P **PKPdf** **23 21 31.2 +0.3**
baz=120
VORD Divnogorie 119.85 42 *e*PKiKP **PKPdf** **23 21 29.6 -0.7**
VORD pmax pmax
comp=E,9.0nm,1.1s
VORD pmax pmax
comp=Z,7.0nm,1.1s
VORD pmax pmax
comp=N,4.0nm,0.6s
R11A Troy Canyon, C 119.86 295 P **PKPdf** **23 21 31.2 +0.1**
baz=120
DUG Dugway 119.86 298 *e*PKiKP **PKPdf** **23 21 31.4 +0.4**
DUG Dugway 119.86 298 *e*PKPdf **PKPdf** **23 21 31.4 +0.4**
K19A Absolon Red Bu 119.95 303 P **PKPdf** **23 21 30.3 -0.8**
baz=120
I21A Big Trails, Te 119.97 305 P **PKPdf** **23 21 30.0 -1.1**
baz=120
J20A Shoshoni 119.99 304 P **PKPdf** **23 21 30.5 -0.6**
baz=120
VSR Storozhevoye 120.01 42 *e*PKiKP **PKPdf** **23 21 30.1 -0.5**
VSR pmax pmax
comp=Z,10.0nm,1.6s
VSR pmax pmax
comp=N,4.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.8s
ULM Lac du Bonnet 120.11 316 PKP **PKPdf** **23 21 30.1 -0.8**
ULM Lac du Bonnet 120.11 316 PKP **PKPdf** **23 21 30.1 -0.8**
comp=E,6.3nm,0.9s,baz=36,slow=9.7,SNR=2.5
PDAR Pinedale Array 120.24 302 PKP **PKPdf** **23 21 30.9 -0.8**
PDAR PP **PP** **23 22 58.7 -0.2**
PDAR PKKPab **PKKPab** **23 31 38.9 +0.3**
PDAR Pinedale Array 120.24 302 PKP **PKPdf** **23 21 30.9 -0.8**
comp=E,1.3nm,0.7s,baz=126,slow=4.6,SNR=9.4
PDAR PP **PP** **23 22 58.7 -0.2**
comp=E,1.3nm,0.9s,baz=123,slow=5.5,SNR=5.3
PDAR PKKPab **PKKPab** **23 31 38.9 +0.3**
comp=E,0.8nm,0.7s,baz=98,slow=0.3,SNR=6.3
HWUT Hardware Ranch 120.32 300 *e*PKPdf **PKPdf** **23 21 32.1 +0.3**
J19A Crowheart 120.38 303 P **PKPdf** **23 21 31.1 -0.8**
baz=121
NB2 NORSAR Subarra 120.44 21 PKPdf **PKPdf** **23 21 30.4 -0.8**
comp=Z,3.4nm,0.9s,baz=202,slow=1.9
NOA NORSAR Array B 120.44 21 PKP **PKPdf** **23 21 30.8 -0.5**
NOA PKKPbc **PKKPbc** **23 31 39.5 +2.1**
NOA NORSAR Array B 120.44 21 PKP **PKPdf** **23 21 30.8 -0.5**
comp=Z,3.3nm,0.8s,baz=202,slow=1.8,SNR=16
NOA PKKPbc **PKKPbc** **23 31 39.5 +2.1**
comp=Z,1.2nm,0.7s,baz=26,slow=3.3,SNR=5.4
I20A Worland 120.47 304 P **PKPdf** **23 21 31.1 -0.9**
baz=121
J18A Kendall Valley 120.80 302 P **PKPdf** **23 21 32.3 -0.5**
baz=121
H20A Greybull 120.82 305 P **PKPdf** **23 21 32.0 -0.7**
baz=121
VRHR Novokhopersk 120.84 43 *e*PKiKP **PKPdf** **23 21 31.5 -0.7**
VRHR pmax pmax
comp=E,7.0nm,0.7s
VRHR pmax pmax
comp=Z,7.0nm,0.7s
VRHR pmax pmax
comp=N,2.0nm,0.3s
I19A Meeteetse 120.94 304 P **PKPdf** **23 21 32.5 -0.5**
baz=121
D24A Glendive 121.17 309 P **PKPdf** **23 21 32.8 -0.4**
baz=122
NVAR Mina Array Bea 121.32 293 PKP **PKPdf** **23 21 34.9 +0.9**
NVAR Mina Array Bea 121.32 293 PKP **PKPdf** **23 21 34.9 +0.9**
comp=N,3.1nm,0.9s,baz=166,slow=2.7,SNR=11
LOHW Long Hollow 121.38 302 *e*PKPdf **PKPdf** **23 21 32.2 -1.6**
TPAW Teton Pass 121.45 302 *e*PKPdf **PKPdf** **23 21 33.7 -0.4**
TPAW *e*SKPdf **SKiKP** **23 25 06.0 +1.9**
G20A Bridger 121.47 305 P **PKPdf** **23 21 33.5 -0.4**
baz=122
ELK Elko 121.49 297 *e*PKPdf **PKPdf** **23 21 34.0 -0.2**
MOOW Moose Ponds 121.55 302 *e*PKPdf **PKPdf** **23 21 34.5 +0.4**
H18A Shoshone NF, C 121.74 304 P **PKPdf** **23 21 34.1 -0.4**
baz=122
IMW Indian Meadow 121.75 302 *e*P **PKPdf** **23 21 34.6 0.0**
D22A Cohagen 122.01 308 P **PKPdf** **23 21 34.2 -0.6**
baz=122
C23A Lambert 122.07 309 P **PKPdf** **23 21 34.6 -0.2**
baz=122
OBN Obninsk 122.20 38 *i* PKiKP **PKPdf** **23 21 35.3 +0.6**
OBN pmax pmax
comp=Z,10.0nm,0.7s
OBN MLR MLR
comp=Z,100nm,17.0s
F19A Roth Farm, Mol 122.29 305 P **PKPdf** **23 21 35.2 -0.2**
baz=123
D21A La Casta Ranch 122.31 307 P **PKPdf** **23 21 34.3 -1.0**
baz=123
J14A Carey 122.57 300 P **PKPdf** **23 21 37.1 +1.1**
baz=123
E19A Rath Farm, Rou 122.67 306 P **PKPdf** **23 21 35.6 -0.5**
baz=123
F18A Big Timber 122.68 305 P **PKPdf** **23 21 36.1 0.0**
baz=123
D20A Manuel Ranch, 122.85 307 P **PKPdf** **23 21 36.2 -0.2**
baz=123
J13A Cove Ranch, Pi 122.94 300 P **PKPdf** **23 21 37.3 +0.5**
baz=123
I14A Mackay 122.98 301 P **PKPdf** **23 21 37.6 +0.7**
baz=123
H15A Lima 123.11 302 P **PKPdf** **23 21 37.9 +0.7**
baz=124
F17A Fitzpatrick Pl 123.12 304 P **PKPdf** **23 21 37.6 +0.6**
baz=124
G16A Moss Hill, Enn 123.16 303 P **PKPdf** **23 21 37.4 +0.3**
baz=124
HLID Hailey 123.18 300 *e*PKPdf **PKPdf** **23 21 36.8 -0.5**
HLID *e*PP **PP** **23 23 19.4 +0.6**
D19A Cripps Ranch, 123.24 306 P **PKPdf** **23 21 36.8 -0.3**
baz=124
C20A Veseth Ranch, 123.25 307 P **PKPdf** **23 21 37.3 +0.2**
baz=124
I13A Wildhorse Cree 123.30 300 P **PKPdf** **23 21 37.4 -0.2**
baz=124
B21A Ellsworth Farm 123.35 308 P **PKPdf** **23 21 37.7 +0.5**
baz=124
G15A Dillon 123.44 302 P **PKPdf** **23 21 38.0 +0.2**
baz=124
H14A Leadore 123.45 301 P **PKPdf** **23 21 38.3 +0.5**
baz=124
BEKR Beckworth 123.45 293 *e*PKPdf **PKPdf** **23 21 38.1 +0.2**
E17A Martinsdale 123.63 304 P **PKPdf** **23 21 38.2 +0.1**
baz=124
DLMT Dillon 123.63 302 *e*PKPdf **PKPdf** **23 21 39.1 +1.1**
I12A Atlanta 123.70 300 P **PKPdf** **23 21 38.4 +0.1**
baz=124
C19A Slack Wire Ran 123.74 307 P **PKPdf** **23 21 38.1 0.0**
baz=124
SFJD Kangerlussuaq 123.80 349 *i* P **PKPdf** **23 21 37.7 +0.3**
comp=Z,9.9nm,0.8s
H13A Challis 123.84 301 P **PKPdf** **23 21 39.1 +0.7**
baz=124
LRM Limekiln Ridge 123.90 303 *e*PKPdf **PKPdf** **23 21 38.3 -0.4**
F15A Butte 123.94 303 P **PKPdf** **23 21 38.5 -0.2**
baz=124
PYUN Piuthan 123.98 89 *e*P **PKPdf** **23 21 37.3 -2.1**
comp=Z,22nm,0.7s
D17A Six Diamond Ra 124.06 305 P **PKPdf** **23 21 38.8 0.0**
baz=124
E16A East Helena 124.06 304 P **PKPdf** **23 21 39.2 +0.4**
baz=124
KOLN Koldanda 124.07 90 *e*P **PKPdf** **23 21 38.2 -1.3**
comp=Z,15nm,0.7s
H12A Diamond D Ranc 124.12 300 P **PKPdf** **23 21 39.3 +0.2**
baz=124
G13A Cobalt 124.22 301 P **PKPdf** **23 21 39.3 +0.1**
baz=125
FINES FINESS Array B 124.23 28 PKP **PKPdf** **23 21 37.6 -0.8**
FINES FINESS Array B 124.23 28 PKP **PKPdf** **23 21 37.6 -0.8**
comp=Z,7.9nm,0.7s,baz=171,slow=1.4,SNR=35
B19A Brinkman Farms 124.23 307 P **PKPdf** **23 21 39.0 0.0**
baz=125
FIA1 FINESS Array S 124.23 28 *e*PKPdf **PKPdf** **23 21 37.8 -0.6**
EGMT Eagleton 124.28 306 *e*PKPdf **PKPdf** **23 21 38.9 -0.2**
EGMT Eagleton 124.28 306 P **PKPdf** **23 21 39.0 -0.1**
baz=125
D16A Dana Ranch, Ca 124.37 304 P **PKPdf** **23 21 39.9 +0.5**
baz=125
E15A Deer Lodge 124.44 303 P **PKPdf** **23 21 39.7 +0.2**
baz=125
C17A Wharram Farm, 124.45 305 P **PKPdf** **23 21 39.3 -0.2**
baz=125
WVOR Wild Horse Val 124.45 296 *e*PKiKP **PKPdf** **23 21 40.1 +0.4**
WVOR Wild Horse Val 124.45 296 *e*PKPdf **PKPdf** **23 21 40.1 +0.4**
B18A Beardsley Farm 124.56 307 P **PKPdf** **23 21 39.3 -0.3**
baz=125
DANN Dangsing 124.61 90 *e*P **PKPdf** **23 21 39.3 -1.4**
comp=Z,28nm,0.8s
G12A Big Creek, Yel 124.78 301 P **PKPdf** **23 21 40.1 -0.1**
baz=125
F13A Darby 124.78 302 P **PKPdf** **23 21 40.3 +0.1**
baz=125
D15A Lincoln 124.83 304 P **PKPdf** **23 21 40.6 +0.3**
baz=125
KAF Kangasniemi 124.85 27 *e*PKiKP **PKPdf** **23 21 37.7 -1.9**
KAF pmax pmax
comp=Z,12nm,0.7s
KAF Kangasniemi 124.85 27 *e*p **PKPdf** **23 21 37.7 -1.9**
comp=Z,12nm,0.7s
PKI Pulchoki 124.94 92 *e*P **PKPdf** **23 21 39.9 -1.5**
B17A L&G Farms, Che 124.95 306 P **PKPdf** **23 21 40.4 +0.1**
baz=125
KKN Kakani 125.03 91 *e*P **PKPdf** **23 21 40.3 -1.1**
comp=Z,11nm,0.6s
CHMT Chamberlain Mo 125.08 303 *e*PKPdf **PKPdf** **23 21 40.8 -0.1**
WDC Whiskeytown Da 125.11 292 *e*PKiKP **PKPdf** **23 21 40.1 -0.7**
WDC Whiskeytown Da 125.11 292 *e*PKPdf **PKPdf** **23 21 40.1 -0.7**
RAMN Ramite 125.13 93 *e*P **PKPdf** **23 21 40.9 -0.7**
CMAR Chiang Mai Arr 125.14 110 PKP **PKPdf** **23 21 41.2 -0.3**
CMAR Chiang Mai Arr 125.14 110 PKP **PKPdf** **23 21 41.2 -0.3**
comp=Z,4.8nm,0.8s,baz=240,slow=3.7,SNR=18
E13A Victor 125.18 302 P **PKPdf** **23 21 40.7 -0.2**
baz=126
D14A Greenough 125.32 303 P **PKPdf** **23 21 41.1 -0.1**
baz=126
MSO Missoula 125.34 303 *e*PKPdf **PKPdf** **23 21 40.6 -0.6**
MSO Missoula 125.34 303 P **PKPdf** **23 21 40.9 -0.3**
baz=126
A17A Triple J Farms 125.38 307 P **PKPdf** **23 21 40.9 -0.3**
baz=126
C15A Salmond Ranch, 125.40 304 P **PKPdf** **23 21 41.1 -0.2**
baz=126
SLMT Seeley Lake 125.43 303 *e*PKPdf **PKPdf** **23 21 41.1 -0.3**
B16A M & M Farms, S 125.45 306 P **PKPdf** **23 21 40.6 -0.7**
baz=126
GUN Gumba 125.46 92 *e*P **PKPdf** **23 21 41.1 -1.3**
ODAN Odare 125.50 94 *e*P **PKPdf** **23 21 40.8 -1.5**
BMO Blue Mountains 125.54 299 *e*PKiKP **PKPdf** **23 21 40.9 -0.7**
BMO Blue Mountains 125.54 299 *e*PKPdf **PKPdf** **23 21 40.9 -0.7**
B15A Bradely Ranch, 125.77 305 P **PKPdf** **23 21 41.5 -0.5**
baz=126
D13A Huson 125.78 303 P **PKPdf** **23 21 41.6 -0.4**
baz=126
A16A West Butte Ran 125.79 306 P **PKPdf** **23 21 41.7 -0.3**
baz=126
SWMT Swartz Lake 125.86 303 *e*PKPdf **PKPdf** **23 21 41.9 -0.3**
C14A Swan Lake 125.93 304 P **PKPdf** **23 21 41.8 -0.5**
baz=126
FFC Flin Flon 125.94 316 *i* PKiKP **PKPdf** **23 21 42.1 +0.2**
YBH Yreka Blue Hor 126.03 293 PKP **PKPdf** **23 21 42.0 -0.6**
YBH Yreka Blue Hor 126.03 293 PKP **PKPdf** **23 21 42.0 -0.6**
comp=Z,2.9nm,0.7s,baz=83,slow=6.4,SNR=8.3
TAPN Taplejung 126.06 94 *e*P **PKPdf** **23 21 42.1 -1.4**
SCO Scoresbysund 126.11 2 *i* PKiKP **PKPdf** **23 21 43.2 +1.4**
SCO pmax pmax
comp=Z,6.0nm,1.0s
SCO Scoresbysund 126.11 2 *i* P **PKPdf** **23 21 43.2 +1.4**
comp=Z,5.8nm,0.9s
D12A Red Ives Fores 126.18 302 P **PKPdf** **23 21 42.1 -0.7**
baz=126
C13A Hot Springs 126.26 303 P **PKPdf** **23 21 42.6 -0.3**
baz=127
A15A Johnson Ranch, 126.33 305 P **PKPdf** **23 21 42.4 -0.6**
baz=127
BSMT Bassoo Peak 126.48 303 *e*PKPdf **PKPdf** **23 21 43.7 +0.2**
A14A Double T Ranch 126.64 305 P **PKPdf** **23 21 43.0 -0.7**
baz=127
B13A Whitefish 126.70 304 P **PKPdf** **23 21 43.5 -0.2**
baz=127
C12B Naegeli Ranch, 126.70 303 P **PKPdf** **23 21 43.5 -0.2**
baz=127
HUMO Hull Mountain 126.79 293 *e*PKPdf **PKPdf** **23 21 43.4 -0.6**
JOF Joensuu 126.85 29 *e*PKiKP **PKPdf** **23 21 42.2 -1.2**
JOF pmax pmax
comp=Z,6.0nm,0.6s
JOF Joensuu 126.85 29 *e*p **PKPdf** **23 21 42.2 -1.2**
comp=Z,5.8nm,0.6s
A13A Flathead Natio 127.08 304 P **PKPdf** **23 21 44.1 -0.4**
baz=127
C11A Tepee Creek (N 127.17 302 P **PKPdf** **23 21 44.3 -0.3**
baz=128
AKTO Aktyubinsk 127.23 53 PKiKP **PKPdf** **23 21 43.8 -0.8**
AKTO Aktyubinsk 127.23 53 PKP **PKPdf** **23 21 43.8 -0.8**
AKTO Aktyubinsk 127.23 53 PKP **PKPdf** **23 21 43.8 -0.8**
comp=Z,4.0nm,0.8s,baz=189,slow=3.5,SNR=13
ABKAR Akbulak array 127.27 55 *e*PKPdf **PKPdf** **23 21 43.7 -1.0**
NEW Newport 127.88 302 PKP **PKPdf** **23 21 47.0 +1.0**
NEW Newport 127.88 302 PKP **PKPdf** **23 21 47.0 +1.0**
comp=Z,2.2nm,0.8s,baz=172,slow=3.0,SNR=4.7
KKAR Karatay Array 128.16 67 *e*PKiKP **PKPdf** **23 21 45.4 -1.2**
KKAR Karatay Array 128.16 67 *e*PKPdf **PKPdf** **23 21 45.4 -1.2**
SUMG Summit 128.40 356 *i* PKiKP **PKPdf** **23 21 46.6 0.0**
SUMG pmax pmax
comp=Z,12nm,0.9s
SUMG Summit 128.40 356 *e*PKPdf **PKPdf** **23 21 45.8 -0.8**
SUMG Summit 128.40 356 *i* P **PKPdf** **23 21 46.6 0.0**
comp=Z,12nm,0.9s
KSH Kashi 128.53 74 *e*PKP **PKPdf** **23 21 47.1 -0.5**
KSH sPKP 23 22 01.6
KSH *e*PKS **PKSdf** **23 25 22.5 -1.6**
KSH SKS **SKSdf** **23 28 53.8 +0.3**
KSH AMB AMB
comp=Z,120nm,5.5s
KSH LR LR
comp=N,100nm,4.2s
KSH LR LR
comp=E,110nm,4.7s
KSH LR LR
comp=Z,120nm,8.3s
LON Longmire 129.11 298 *e*PKiKP **PKPdf** **23 21 48.5 +0.1**
LON Longmire 129.11 298 *e*PKPdf **PKPdf** **23 21 48.5 +0.1**
AML Almayashu 129.15 70 P **PKPdf** **23 21 48.8 -0.2**
SNR=11
EKS2 Erkin-Say 129.56 70 *e*PKiKP **PKPdf** **23 21 49.2 -0.3**
EKS2 Erkin-Say 129.56 70 *e*PKPdf **PKPdf** **23 21 49.1 -0.3**
EKS2 Erkin-Say 129.56 70 P **PKPdf** **23 21 49.5 0.0**
SNR=15
AAK Ala-Archa 129.92 70*c* *i* PKiKP **PKPdf** **23 21 49.6 -0.6**
AAK pmax pmax
comp=Z,25nm,1.0s
AAK Ala-Archa 129.92 70 *e*PKPdf **PKPdf** **23 21 49.0 -1.1**
AAK Ala-Archa 129.92 70 P **PKPdf** **23 21 49.9 -0.2**
SNR=9.0
KZA Kyzart 129.94 71 P **PKPdf** **23 21 50.6 +0.1**
SNR=7.2
FRU Bishkek 130.13 70 *e*PKiKP **PKPdf** **23 21 49.0 -1.4**
FRU pmax pmax
comp=Z,34nm,1.8s
KBK Karagaybulak 130.18 71 P **PKPdf** **23 21 50.7 0.0**
SNR=5.1
USP Ospenovka 130.36 70 P **PKPdf** **23 21 49.9 -0.9**
SNR=8.4
ARCES ARCESS Array B 130.78 22 PKP **PKPdf** **23 21 50.4 -0.4**
ARCES SKPbc **SKPab** **23 25 11.1 +1.9**
ARCES ARCESS Array B 130.78 22 PKP **PKPdf** **23 21 50.4 -0.4**
comp=Z,17nm,0.9s,baz=264,slow=1.2,SNR=33
ARCES SKPbc **SKPab** **23 25 11.1 +1.9**
comp=Z,1.7nm,0.8s,baz=212,slow=5.0,SNR=3.2
ARE0 ARCESS Array S 130.78 22 *e*PKPdf **PKPdf** **23 21 50.8 0.0**
QIZ Qiongzhong 131.15 121 PKP **PKPdf** **23 21 53.3 +0.3**
QIZ PP **PP** **23 24 10.3 -0.6**
QIZ AMB AMB
comp=Z,66nm,5.5s
QIZ LR LR
comp=N,210nm,20.1s
QIZ LR LR
comp=Z,370nm,22.0s
KEV Kevo 131.27 22 *e*PKiKP **PKPdf** **23 21 51.1 -0.5**
KEV pmax pmax
comp=Z,4.0nm,0.7s
KEV Kevo 131.27 22 *e*p **PKPdf** **23 21 51.1 -0.5**
comp=Z,4.4nm,0.7s
ARU Arti 131.58 48 *i* PKiKP **PKPdf** **23 21 52.7 +0.1**
DAG Danmarks Havn 132.49 3 *i* PKiKP **PKPdf** **23 21 53.4 -0.4**
DAG pmax pmax
comp=Z,7.0nm,1.0s
DAG Danmarks Havn 132.49 3 *i* P **PKPdf** **23 21 53.4 -0.4**
comp=Z,7.2nm,1.0s
KMI Kunming 132.59 109 PKP **PKPdf** **23 21 56.3 +0.4**
KMI sPKP 23 22 11.6
KMI PP **PP** **23 24 23.5 +2.9**
KMI PKS **PKSdf** **23 25 31.1 -1.5**
KMI SKKS 23 31 11.1
KMI SS **SS** **23 41 58.0 +2.1**
KMI AMB AMB
comp=Z,100nm,4.4s
KMI LR LR
comp=N,250nm,18.0s
KMI LR LR
comp=E,210nm,23.1s
KMI LR LR
comp=Z,290nm,22.2s
SVE Sverdlovsk 132.71 48 ⇑ *i* PKiKP **PKPdf** **23 21 55.0 +0.3**
SVE pmax pmax
comp=Z,36nm,1.6s
BRVK Borovoye 134.66 57*c* *i* PKiKP **PKPdf** **23 21 59.2 +0.7**
BRVK pmax pmax
comp=Z,5.0nm,0.8s
BRVK MLR MLR
comp=Z,317nm,18.0s
BRVK Borovoye 134.66 57 *e*PKPdf **PKPdf** **23 21 56.1 -2.4**
GYA Guiyang 135.74 112 Pdif **Pdif** **23 19 04.3 -1.1**
GYA PKP **PKPdf** **23 22 01.8 +0.2**
GYA sPKP 23 22 19.4
GYA PP **PP** **23 24 43.3 +2.9**
GYA PKS **PKSdf** **23 25 35.6 -2.5**
GYA Guiyang 135.74 112 PKP **PKPdf** **23 22 01.8 +0.2**
GYA sPKP 23 22 19.4
GYA PP **PP** **23 24 43.3 +2.9**
GYA PKS **PKSdf** **23 25 35.6 -2.5**
GYA SKKS 23 31 30.0
GYA SS **SS** **23 42 35.8 +2.2**
GYA AMB AMB
comp=Z,140nm,7.8s
GYA LR LR
comp=N,220nm,24.8s
GYA LR LR
comp=E,160nm,25.4s
GYA LR LR
comp=Z,240nm,23.9s
BBB Bella Bella 135.77 300 SKPbc **SKPbc** **23 25 28.5 +2.1**
BBB Bella Bella 135.77 300 SKPbc **SKPbc** **23 25 28.5 +2.1**
comp=Z,12nm,0.9s,baz=161,slow=5.4,SNR=4.4
YKA Yellowknife Ar 136.03 318 PKPpre PKPpre 23 21 46.0
YKA PKP **PKPdf** **23 22 00.2 -0.6**
YKA PP PP 23 24 35.9 -6.0
YKA SKPbc **SKPbc** **23 25 28.3 +1.5**
YKA Yellowknife Ar 136.03 318 PKhKP PKPpre 23 21 46.0
comp=Z,0.7nm,0.7s,baz=122,slow=3.6,SNR=13
YKA PKP **PKPdf** **23 22 00.2 -0.6**
comp=Z,7.0nm,0.7s,baz=109,slow=1.7,SNR=42
YKA PP PP 23 24 35.9 -6.0
comp=Z,1.7nm,0.8s,baz=128,slow=5.8,SNR=4.1
YKA SKPbc **SKPbc** **23 25 28.3 +1.5**
comp=Z,2.5nm,0.7s,baz=132,slow=3.4,SNR=10
YKW3 Yellowknife Ar 136.07 318 *e*PKPdf **PKPdf** **23 22 00.1 -0.7**
MK31 Makanchi Array 136.84 71 *e*PKiKP **PKPdf** **23 22 01.7 -1.1**
MK31 Makanchi Array 136.84 71 *e*PKPdf **PKPdf** **23 22 01.7 -1.1**
MKAR Makanchi Array 136.84 71 PKHKP PKPpre 23 21 49.8
MKAR 23 22 02.5
MKAR Makanchi Array 136.84 71 PKPpre PKPpre 23 21 49.8
MKAR PKP **PKPdf** **23 22 02.5 -0.4**
MKAR SKPbc **SKPbc** **23 25 30.8 +1.0**
MKAR Makanchi Array 136.84 71 PKhKP PKPpre 23 21 49.8
comp=Z,0.3nm,0.5s,baz=215,slow=1.5,SNR=4.5
MKAR PKP **PKPdf** **23 22 02.5 -0.4**
comp=Z,1.3nm,0.8s,baz=197,slow=1.2,SNR=6.3
MKAR SKPbc **SKPbc** **23 25 30.8 +1.0**
comp=Z,1.6nm,0.8s,baz=222,slow=1.6,SNR=9.1
KURK Kurchatov 137.33 64*c* *i* PKiKP **PKPdf** **23 22 02.9 -0.7**
KURK pmax pmax
comp=Z,11nm,1.7s
KURK MLR MLR
comp=Z,362nm,22.0s
KURK Kurchatov 137.33 64 *e*PKPpre PKPpre 23 21 55.3
KURK *e*PKPdf **PKPdf** **23 22 03.1 -0.4**
RES Resolute Bay 137.69 339 PKPpre PKPpre 23 21 53.0
RES *e*PKPpre PKPpre 23 21 53.4
RES *e*PKPdf **PKPdf** **23 22 03.5 0.0**
RES PKP **PKPdf** **23 22 03.8 +0.3**
RES SKP 23 25 34.9
RES Resolute Bay 137.69 339 PKhKP PKPpre 23 21 53.0
comp=Z,2.1nm,0.7s,baz=161,slow=6.5,SNR=7.4
RES PKP **PKPdf** **23 22 03.8 +0.3**
comp=Z,14nm,0.9s,baz=148,slow=2.3,SNR=24

RES				SKP			23 25 34.9			
	comp=Z,3.5nm,0.9s,baz=147,slow=5.5,SNR=5.2									
CD2	**Chengdu**	**137.72**	**105**	PKP	**PKPdf**		**23 22 05.3**	**+0.3**		
CD2				sPKP			23 22 20.3			
CD2				PP	**PP**		**23 24 55.9**	**+3.1**		
CD2				PKS	**PKSdf**		**23 25 39.9**	**-1.4**		
CD2				SKS	**SKSdf**		**23 29 10.3**	**+0.3**		
CD2				SKKS	**SKKSac**		**23 31 42.0**	**+0.9**		
CD2				SS	**SS**		**23 42 59.3**	**+2.2**		
CD2				AMB	AMB					
	comp=Z,110nm,6.8s									
CD2				LR	LR					
	comp=N,210nm,18.6s									
CD2				LR	LR					
	comp=E,200nm,21.6s									
CD2				LR	LR					
	comp=Z,270nm,19.1s									
WMQ	**Urumqi**	**137.88**	**78**	*e*PKP	**PKPdf**		**23 22 06.1**	**+1.2**		
WMQ				PP	**PP**		**23 24 57.6**	**+3.7**		
WMQ				PKS	**PKSdf**		**23 25 40.8**	**-0.2**		
WMQ				SKS	**SKSdf**		**23 29 11.3**	**+1.6**		
WMQ				SKKS	**SKKSac**		**23 31 43.8**	**+2.3**		
WMQ				SS	**SS**		**23 43 01.8**	**+2.6**		
WMQ				LR	LR					
	comp=N,210nm,28.0s									
WMQ				LR	LR					
	comp=E,170nm,25.2s									
WMQ				LR	LR					
	comp=Z,230nm,25.2s									
DLBC	**Dease Lake**	**140.20**	**307**	PKPpre	PKPpre		23 22 02.4			
DLBC				SKPbc	**SKiKP**		**23 25 40.4**	**-1.1**		
DLBC	**Dease Lake**	**140.20**	**307**	PKhKP	PKPpre		23 22 02.4			
	comp=Z,3.1nm,0.8s,baz=167,slow=5.6,SNR=5.2									
DLBC				SKPbc	**SKiKP**		**23 25 40.4**	**-1.1**		
	comp=Z,8.6nm,0.9s,baz=53,slow=1.0,SNR=11									
LZH	**Lanzhou**	**141.65**	**100**	*e*PKP	**PKPdf**		**23 22 10.0**	**-2.2**		
LZH				sPKP			23 22 24.8			
LZH				*e*PP	**PP**		**23 25 18.4**	**+1.3**		
LZH				PKS	**PKSdf**		**23 25 43.0**	**-5.1**		
LZH				SKS	**SKSdf**		**23 29 15.1**	**-1.4**		
LZH				SKKS	**SKKSac**		**23 32 04.3**	**+0.1**		
LZH				*e*SS	**SS**		**23 43 43.3**	**-0.2**		
LZH				AMB	AMB					
	comp=Z,140nm,6.7s									
LZH				LR	LR					
	comp=N,200nm,17.0s									
LZH				LR	LR					
	comp=E,510nm,19.3s									
LZH				LR	LR					
	comp=Z,520nm,20.1s									
GTA	**Gaotai**	**141.74**	**93**	PKP	**PKPdf**		**23 22 11.3**	**-0.9**		
GTA				sPKP			23 22 25.3			
GTA				PP	**PP**		**23 25 19.0**	**+1.3**		
GTA				PKS	**PKSdf**		**23 25 46.1**	**-2.0**		
GTA				SKS	**SKSdf**		**23 29 15.1**	**-1.3**		
GTA				SKKS	**SKKSac**		**23 32 05.0**	**+0.5**		
GTA				SS	**SS**		**23 43 46.9**	**+2.3**		
GTA				AMB	AMB					
	comp=Z,70nm,8.1s									
GTA				LR	LR					
	comp=N,190nm,20.2s									
GTA				LR	LR					
	comp=E,240nm,20.2s									
GTA				LR	LR					
	comp=Z,230nm,19.9s									
NVS	**Novosibirsk**	**141.97**	**62**	*e*PKIKP	PKPpre		23 22 07.8			
NVS				pmax	pmax					
	comp=Z,18nm,1.3s									
NVS				pmax	pmax					
	comp=N,4.0nm,1.0s									
NVS				pmax	pmax					
	comp=E,6.0nm,1.0s									
ZAA0	**Zalesovo Array**	**142.30**	**64**	*e*PKPdf	PKPpre		23 22 07.7			
ZALV	**Zalesovo Beam**	**142.30**	**64**	PKHKP	PKPpre		23 22 06.8			
ZALV							23 22 12.4			
ZALV	**Zalesovo Beam**	**142.30**	**64**	PKPpre	PKPpre		23 22 06.8			
ZALV				PKP	**PKPdf**		**23 22 12.4**	**-0.1**		
ZALV				SKP			23 25 43.5			
ZALV	**Zalesovo Beam**	**142.30**	**64**	PKhKP	PKPpre		23 22 06.8			
	comp=E,1.2nm,0.5s,baz=231,slow=3.8,SNR=9.0									
ZALV				PKP	**PKPdf**		**23 22 12.4**	**-0.1**		
	comp=E,4.6nm,0.5s,baz=254,slow=3.6,SNR=12									
ZALV				SKP			23 25 43.5			
	comp=E,1.0nm,0.8s,baz=215,slow=4.8,SNR=2.7									
XAN	**Xi'an**	**142.91**	**107**	PKP	**PKPdf**		**23 22 12.4**	**-1.9**		
XAN				AMB	AMB					
	comp=Z,30nm,4.9s									
PNL	**Peninsula**	**145.06**	**305**	*e*PKP	**PKPbc**		**23 22 16.6**	**-0.2**		
INK	**Inuvik**	**145.66**	**321**	PKPbc	**PKPdf**		**23 22 18.0**	**+0.1**		
INK				SKPbc	**SKiKP**		**23 25 54.8**	**+2.5**		
INK	**Inuvik**	**145.66**	**321**	PKPbc	**PKPdf**		**23 22 18.0**	**+0.1**		
	comp=Z,46nm,0.7s,baz=86,slow=3.5,SNR=97									
INK				SKPbc	**SKiKP**		**23 25 54.8**	**+2.5**		
	comp=Z,8.9nm,0.9s,baz=111,slow=2.9,SNR=4.2									
JOW	**Kunigami**	**146.00**	**138**	*e*PKPdf	**PKPdf**		**23 22 19.0**	**-0.8**		
NJ2	**Nanjing**	**146.44**	**121**	*e*PKPbc	**PKPbc**		**23 22 21.9**	**0.0**		
NJ2				PKPab	**PKiKP**		**23 22 26.6**	**+1.9**		
NJ2				pPKP	**pPKPdf**		**23 22 33.3**	**-5.4**		
NJ2				sPKP			23 22 37.0			
NJ2				PP	**PP**		**23 25 48.5**	**+3.2**		
NJ2				AMB	AMB					
	comp=Z,80nm,9.3s									
NJ2				LR	LR					
	comp=N,250nm,30.9s									
NJ2				LR	LR					
	comp=E,240nm,26.4s									
NJ2				LR	LR					
	comp=Z,110nm,31.1s									
EGAK	**Eagle**	**147.61**	**313**	*e*PKPdf	**PKPdf**		**23 22 20.7**	**-0.6**		
BTO	**Baotou**	**148.27**	**101**	*e*PKPbc	**PKPdf**		**23 22 23.3**	**0.0**		
DOT	**Dot Lake**	**148.52**	**310**	*e*PKPdf	**PKPdf**		**23 22 21.3**	**-1.6**		
DOT				*e*PKPbc	**PKPbc**		**23 22 27.0**	**+0.4**		
HHC	**Hu-ho-hao-te**	**149.29**	**102**	*e*PKPbc	**PKPbc**		**23 22 27.3**	**-2.1**		
HHC				pPKP	**PKPab**		**23 22 38.4**	**+4.2**		
HHC				sPKP			23 22 42.0			
HHC				PKS	**PP**		**23 26 02.3**	**-0.1**		
HHC				PP	PP		23 26 07.0	+4.6		
HHC				SKS	**SKSdf**		**23 29 30.8**	**+3.5**		
HHC				SKKS	**SKKSac**		**23 32 49.8**	**+2.6**		
HHC				SS	**SS**		**23 45 14.3**	**+3.9**		
HHC				AMB	AMB					
	comp=Z,150nm,10.8s									
HHC				LR	LR					
	comp=E,380nm,21.6s									
HHC				LR	LR					
	comp=Z,410nm,22.8s									
MOY	**Mondy**	**149.69**	**76**	*e*PKHKP	**PKPdf**		**23 22 25.4**	**+0.1**		
MOY				pmax	pmax					
	comp=Z,56nm,2.5s									
SML	**Sawmill**	**149.92**	**306**	*e*PKIKP	**PKPdf**		**23 22 22.8**	**-2.4**		
SML				*e*			23 22 30.6			
SML	**Sawmill**	**149.92**	**306**	*e*PKPdf	**PKPdf**		**23 22 22.8**	**-2.4**		
SML				*e*PKPbc	**PKiKP**		**23 22 30.6**	**-0.5**		
ILAR	**Eielson Array**	**149.99**	**312**	PKP	**PKPdf**		**23 22 22.7**	**-2.5**		
ILAR				PKPbc	**PKPbc**		**23 22 29.4**	**-0.8**		
ILAR	**Eielson Array**	**149.99**	**312**	PKP	**PKPdf**		**23 22 22.7**	**-2.5**		
	comp=Z,1.3nm,0.8s,baz=323,slow=1.7,SNR=16									
ILAR				PKPbc	**PKPbc**		**23 22 29.4**	**-0.8**		
	comp=Z,48nm,0.8s,baz=111,slow=0.6,SNR=152									
PMR	**Palmer**	**150.22**	**305**	*e*PKIKP	**PKPdf**		**23 22 26.2**	**+0.6**		
PMR	**Palmer**	**150.22**	**305**	*e*PKPdf	**PKPdf**		**23 22 26.1**	**+0.6**		
PMR				*e*PKPbc	**PKPbc**		**23 22 30.3**	**-0.5**		
ZAK	**Zakamensk**	**150.32**	**80**	*e*PKIKP	**PKPdf**		**23 22 25.0**	**-1.3**		
ZAK				pmax	pmax					
	comp=Z,15nm,1.1s									
MCK	**McKinley**	**150.65**	**309**	*e*PKIKP	**PKPdf**		**23 22 23.5**	**-2.8**		
MCK				*e*			23 22 31.6			
MCK	**McKinley**	**150.65**	**309**	*e*PKPdf	**PKPdf**		**23 22 23.5**	**-2.8**		
MCK				*e*PKPbc	**PKPbc**		**23 22 31.6**	**-0.2**		
SONM	**Songino Array**	**150.72**	**86**	PKP	**PKPdf**		**23 22 26.2**	**-0.8**		
SONM				PKPbc	**PKPbc**		**23 22 31.6**	**-1.1**		
SONM				PKPab	**PKPab**		**23 22 38.3**	**-1.7**		
SONM	**Songino Array**	**150.72**	**86**	PKP	**PKPdf**		**23 22 26.2**	**-0.8**		
	comp=Z,1.9nm,0.8s,baz=204,slow=2.1,SNR=12									
SONM				PKPbc	**PKPbc**		**23 22 31.6**	**-1.1**		
	comp=Z,62nm,1.2s,baz=204,slow=3.2,SNR=60									
SONM				PKPab	**PKPab**		**23 22 38.3**	**-1.7**		
	comp=Z,11nm,0.5s,baz=221,slow=2.2,SNR=21									
KDAK	**Kodiak Island**	**150.73**	**297**	*e*PKPdf	**PKPdf**		**23 22 26.7**	**+0.2**		
KDAK				*e*PKPbc	**PKPbc**		**23 22 32.1**	**0.0**		
KDAK	**Kodiak Island**	**150.73**	**297**	PKPbc	**PKPbc**		**23 22 32.1**	**0.0**		
	comp=Z,27nm,0.4s,baz=126,slow=1.4,SNR=36									
OHAK	**Old Harbor**	**150.89**	**295**	*e*PKPdf	**PKPdf**		**23 22 26.5**	**-0.3**		
OHAK				*e*PKPbc	**PKPbc**		**23 22 32.4**	**-0.1**		
TLY	**Talaya**	**151.15**	**77**	*e*PKIKP	**PKPbc**		**23 22 32.5**	**-0.9**		
TLY				*e*			23 22 46.7			
TLY				pmax	pmax					
	comp=Z,20nm,1.0s									
BJI	**Beijing**	**151.24**	**108**	PKPbc	**PKPdf**		**23 22 28.6**	**+0.7**		
PPLA	**Purkeypile**	**151.92**	**307**	*e*PKPdf	**PKPdf**		**23 22 26.2**	**-2.2**		
PPLA				*e*PKPbc	**PKPbc**		**23 22 34.9**	**0.0**		
JNU	**Nakatsue**	**152.63**	**137**	PKPbc	**PKPbc**		**23 22 37.6**	**+0.2**		
JNU	**Nakatsue**	**152.63**	**137**	PKPbc	**PKPbc**		**23 22 37.6**	**+0.2**		
	comp=Z,9.6nm,0.8s,baz=74,slow=2.8,SNR=6.5									
KSAR	**Wonju Array Be**	**155.09**	**127**	PKP	**PKPdf**		**23 22 33.3**	**-0.2**		
KSAR				PKPab	**PKPab**		**23 22 58.0**	**-0.4**		
KSRS	**Korea Array**	**155.11**	**127**	PKP	**PKPdf**		**23 22 33.3**	**-0.3**		
	comp=Z,0.8nm,0.5s,baz=192,slow=2.4,SNR=5.4									
KSRS				PKPab	**PKPab**		**23 22 58.0**	**-0.5**		
	comp=Z,2.7nm,0.7s,baz=212,slow=4.1,SNR=7.6									
MJAR	**Matsushiro Arr**	**158.28**	**147**	PKP	**PKPdf**		**23 22 37.0**	**-0.8**		
MJAR				PKPab	**PKPab**		**23 23 11.7**	**-0.5**		
MJAR	**Matsushiro Arr**	**158.28**	**147**	PKP	**PKPdf**		**23 22 37.0**	**-0.8**		
	comp=Z,1.3nm,0.3s,baz=238,slow=6.8,SNR=3.8									
MJAR				PKPab	**PKPab**		**23 23 11.7**	**-0.5**		
	comp=Z,1.1nm,0.3s,baz=190,slow=5.2,SNR=3.0									
MDJ	**Mudanjiang**	**161.47**	**118**	PKP	**PKPdf**		**23 22 42.0**	**+1.0**		
MDJ				pPKP	pPKPdf		23 22 48.9	-11		
MDJ				sPKP			23 22 52.8			
MDJ				PP	**PP**		**23 27 11.3**	**+1.4**		
MDJ				SKS	**SKSdf**		**23 29 42.6**	**+2.5**		
MDJ				SS	**SS**		**23 47 21.1**	**-0.4**		
MDJ				AMB	AMB					
	comp=Z,34nm,18.2s									
MDJ				LR	LR					
	comp=N,68nm,42.9s									
MDJ				LR	LR					
	comp=E,63nm,49.3s									
MDJ				LR	LR					
	comp=Z,170nm,25.4s									
USRK	**Ussuriysk Arra**	**162.33**	**123**	PKPab	**PKPab**		**23 23 29.1**	**-0.6**		
	comp=Z,1.6nm,0.6s,baz=201,slow=2.7,SNR=4.3									
KLR	**Kul'dur**	**165.61**	**109**	*e*PKP2	**PKPab**		**23 23 40.2**	**-3.8**		
BILL	**Bilibino**	**166.29**	**338**	*e*PKIKP	**PKPdf**		**23 22 41.6**	**-3.1**		
BILL				*i*			23 23 45.4			
BILL				*i*			23 27 39.3			
BILL				pmax	pmax					
	comp=Z,19nm,1.3s									
FX1	**Attu Island--F**	**167.76**	**264**	PKPab	**PKPab**		**23 23 52.0**	**-1.5**		
FX1	**Attu Island--F**	**167.76**	**264**	PKPab	**PKPab**		**23 23 52.0**	**-1.5**		
	comp=Z,3.9nm,0.5s,baz=260,slow=8.1,SNR=13									
PETK	**Petropavlovsk-**	**176.02**	**228**	PKIKP	**PKPdf**		**23 22 50.0**	**-0.1**		
PETK	**Petropavlovsk-**	**176.02**	**228**	PKP	**PKPdf**		**23 22 50.0**	**-0.1**		
PETK				PKPab	**PKPab**		**23 24 31.2**	**+1.1**		
PETK	**Petropavlovsk-**	**176.02**	**228**	PKP	**PKPdf**		**23 22 50.0**	**-0.1**		
	comp=Z,3.5nm,0.8s,baz=123,slow=5.5,SNR=3.7									
PETK				PKPab	**PKPab**		**23 24 31.2**	**+1.1**		
	comp=Z,8.4nm,0.8s,baz=130,slow=4.5,SNR=7.1									

*ISCJB **13** 23:03:44.6±0.6, 20°.29S×0°.03×69°.3W±0°.1, h115km±6km, mb3.7/2, Error ellipse: s-maj=17.2km s-min=5.5km az=177.5*
*GUC **13** 23:03:44.4±0.3, 20°.27S×69°.26W, h105km±2km, ML4.1*
*IDC **13** 23:03:46.4±2.6, 20°.33S×68°.75W, h125km±24km, mb3.5/4, mb1 3.7/6, mb1mx3.5/18, mbtmp3.6/6, MS3.4/1, Ms1 3.4/1, ms1mx2.6/20, Error ellipse: s-maj=34.9km s-min=19.5km az=82.0*

ISC 13 23:03:44.5±0.8, 20°.27S±0°.04×69°.24W±0°.10, h105km±8km, n16, σ1§37/22, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HMBC	**Humberstone**	**0.61**	**270**	⇑	*i*	P	**Pn**	**23 04 01.8**	**-0.1**
HMBC					*i*	S	**Sn**	**23 04 15.1**	**+0.2**
HMBC					AML	AML		23 04 19.3	
	comp=N,4μm,0.2s								
PB01	**Plate Boundary**	**0.80**	**197**	⇑	*i*	P	**Pn**	**23 04 03.5**	**0.0**
PB01					*i*	S	**Sn**	**23 04 18.3**	**+0.6**
PB01					AML	AML		23 04 19.6	
	comp=N,7μm,0.3s								
PSGC	**Pisagua**	**1.07**	**309**		*e*	P	**Pn**	**23 04 06.3**	**0.0**
PSGC					*i*	S	**Sn**	**23 04 23.0**	**+0.4**
PSGC					AML	AML		23 04 26.2	
	comp=N,2μm,0.5s								
PB09	**Plate Boundary**	**1.52**	**180**	⇑	*i*	P	**Pn**	**23 04 12.1**	**+0.7**
PB09					*i*	S	**Sn**	**23 04 33.0**	**+1.2**
PB09					AML	AML		23 04 35.7	
	comp=E,7μm,0.6s								
PB07	**Plate Boundary**	**1.73**	**203**	⇑	*i*	P	**Pn**	**23 04 12.6**	**+0.5**
PB07					*i*	S	**Sn**	**23 04 34.1**	**+1.1**
PB07					AML	AML		23 04 38.7	
	comp=E,2μm,0.5s								
ARCH	**Arica**	**2.04**	**330**	*i*		P	**Pn**	**23 04 18.3**	**+0.5**
ARCH				*i*		S	**Sn**	**23 04 43.9**	**+0.7**
ARCH					AML	AML		23 04 52.0	
	comp=E,2μm,0.6s								
CEN1	**Los Morros**	**3.23**	**196**		AML	AML		23 05 31.0	
	comp=E,341nm,0.7s								
ANCH	**Antofagasta**	**3.56**	**198**	⇓	*i*	P	**Pn**	**23 04 39.1**	**+1.2**
ANCH					*i*	S	**Sn**	**23 05 20.7**	**+1.5**
LPAZ	**La Paz**	**4.10**	**15**	P		P	**Pn**	**23 04 47.1**	**+1.3**
	comp=E,11nm,0.3s,baz=191,slow=6.9,SNR=232								
LPAZ				S			**Sn**	**23 05 35.8**	**+2.6**
	comp=E,0.2nm,0.3s,baz=307,slow=20,SNR=1.6								
SIV	**San Ignacio**	**8.85**	**63**	P		Pn		23 05 45.0	-4.7
	comp=E,3.3nm,0.3s,baz=259,slow=12,SNR=58								
ATAH	**Atahualpa**	**15.79**	**325**	LR		LR		23 13 36.2	
	comp=E,148nm,20.6s,baz=16,slow=37								
PLCA	**Paso Flores**	**20.42**	**183**	P		P	**P**	**23 08 13.6**	**+0.2**
	comp=E,4.3nm,0.9s,baz=355,slow=14,SNR=8.4								
BDFB	**Brasilia**	**20.70**	**81**	P		P	**P**	**23 08 13.2**	**-3.5**
	comp=E,2.7nm,0.7s,baz=267,slow=13,SNR=5.6								
SCHQ	**Schefferville**	**74.83**	**1**	P		P	**P**	**23 15 11.8**	**-1.3**
	comp=E,1.4nm,0.7s,baz=135,slow=1.4,SNR=3.9								
YKA	**Yellowknife Ar**	**89.93**	**341**	P		P	**P**	**23 16 33.0**	**+1.6**
	comp=E,0.3nm,0.6s,baz=135,slow=4.8,SNR=5.8								
YKA				pP		pP	**P**	**23 16 58.6**	**-0.3**
	comp=E,0.2nm,0.7s,baz=129,slow=5.0,SNR=3.3								
PETK	**Petropavlovsk-**	**131.40**	**324**	PKP		**PKPdf**		**23 22 43.7**	**-0.6**
	comp=E,6.9nm,1.1s,baz=90,slow=2.9,SNR=6.1								

*NSSC **13** 23:05:20.4±1.7, 22°.64N×37°.11E, h286km±183km, ML4.2*
*IDC **13** 23:05:58.5±1.4, 25°.34N×37°.51E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.5/29, mbtmp3.6/9, ML3.7/3, MS3.0/2, Ms1 3.0/2, ms1mx2.8/32, Error ellipse: s-maj=24.3km s-min=20.7km az=69.0*
*CSEM **13** 23:05:59.6±1.1, 25°.12N×37°.63E, h100km, mb4.8/5, Error ellipse: s-maj=28.0km s-min=7.8km az=131.0*

ISC 13 23:05:59.9±0.9, 25°.41N±0°.05×37°.38E±0°.07, h10km, n43, σ1§50/53, mb3.5/6, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EMRS	**Mersa Alam**	**2.34**	**261**	P		P	**Pn**	**23 06 38.9**	**+0.5**
EMRS				S		S	**Sn**	**23 07 05.5**	**-1.7**
HAGS	**Hagol**	**2.40**	**245**	P		P	**Pn**	**23 06 39.2**	**-0.1**
HADB		**2.50**	**269**	P		P	**Pn**	**23 06 41.7**	**+1.1**
HQSR		**2.73**	**278**	P		P	**Pn**	**23 06 45.4**	**+1.7**
HSFG		**3.31**	**291**	P		P	**Pn**	**23 06 53.8**	**+2.0**
HKAT	**Jabal Katrina**	**4.33**	**316**	P		P	**Pn**	**23 07 09.0**	**+3.0**
EIL	**Elat**	**4.76**	**334**	Pn		Pn		23 07 15.1	+3.4
	1.0nm,0.3s,baz=199,slow=8.5,SNR=6.6								
EIL				Pg		Pg		23 07 27.9	-3.2
	8.6nm,0.3s,baz=140,slow=8.9,SNR=19								
EIL				Lg		Lg		23 08 29.0	
	20nm,0.3s,baz=83,slow=21,SNR=5.9								
EIL				LR		LR		23 09 11.8	
	comp=Z,216nm,20.0s,baz=96,slow=40								
EIL	**Elat**	**4.76**	**334**	Pn		**Pn**		**23 07 13.7**	**+2.0**
EIL				Sn		**Sg**		**23 08 34.3**	**+1.5**
MBRI	**Mt Berech**	**4.89**	**334**	Pn		**Pn**		**23 07 14.3**	**+0.8**
MBRI				Sn		**Sg**		**23 08 37.9**	**+1.1**
GRB	**Gharib**	**5.00**	**306**	P		**Pn**		**23 07 18.0**	**+3.0**
HRFI	**Mount Harif**	**5.06**	**336**	Pn		**Pn**		**23 07 16.7**	**+0.9**
HRFI				Sn		**Sg**		**23 08 42.9**	**+0.6**
KRMI	**Paran Flat**	**5.25**	**334**	Pn		**Pn**		**23 07 19.5**	**+1.1**
KRMI				Sn		**Sg**		**23 08 45.3**	**-3.1**
PRNI	**Paran**	**5.35**	**337**	Pn		**Pn**		**23 07 21.8**	**+1.9**
PRNI				Sn		**Sg**		**23 08 49.7**	**-2.1**
HNKL	**Nakhl**	**5.42**	**327**	P		Pn		23 07 24.0	+3.2
ZFRI	**Zfri**	**5.48**	**340**	Pn		**Pn**		**23 07 23.9**	**+2.3**
ZFRI				Sn		**Sg**		**23 08 54.4**	**-1.6**
RTMI	**Retamim**	**6.10**	**338**	Pn		**Pn**		**23 07 30.7**	**+0.5**
RTMI				Sn		Sb		23 09 07.9	+8.4
DSI	**Dead Sea**	**6.38**	**344**	Pn		Pn		23 07 37.0	+3.0
ASF	**Jabal al Asfar**	**6.75**	**357**	Pn		**Pn**		**23 07 39.5**	**+0.4**
	1.3nm,0.3s,baz=44,slow=8.6,SNR=13								
ASF				Pg		Pg		23 08 03.8	-5.4
	7.8nm,0.3s,baz=32,slow=13,SNR=35								
ASF				Lg		Lg		23 09 35.8	
	4.1nm,0.3s,baz=73,slow=19,SNR=4.4								
ASF				LR		LR		23 10 03.7	
	comp=Z,104nm,21.1s,baz=251,slow=36								
HMDT	**Nahal Hemdat**	**7.01**	**347**	Pn		**Pn**		**23 07 44.8**	**+2.2**
SLTI	**Sal'it**	**7.11**	**344**	Pn		**Pn**		**23 07 46.1**	**+2.1**
SLTI				Sn		Sb		23 09 35.5	+7.1
MMLI	**Mount Malkishu**	**7.21**	**347**	Pn		**Pn**		**23 07 47.8**	**+2.4**
SALA	**Sala**	**7.30**	**356**	*e*P		**Pn**		**23 07 47.3**	**+0.6**
SALA				*e*S		**Sb**		**23 09 33.9**	**-0.1**
SALA				AML		AML		23 10 11.9	
	comp=N,296nm,0.8s								
SALA				AML		AML		23 10 13.2	
	comp=E,30nm,0.8s								
SALA	**Sala**	**7.30**	**356**	*e*P		**Pn**		**23 07 47.3**	**+0.6**
	SNR=104								
SALA				*e*S		**Sb**		**23 09 33.9**	**-0.1**
	comp=E,30nm,0.8s,SNR=104								
TCHB	**Talchebab**	**7.34**	**351**	*e*P		**Pn**		**23 07 47.1**	**0.0**
TCHB				*e*S		**Sb**		**23 09 33.8**	**-1.2**
TCHB	**Talchebab**	**7.34**	**351**	*e*P		**Pn**		**23 07 47.1**	**0.0**
	SNR=104								
TCHB				*e*S		**Sb**		**23 09 33.8**	**-1.2**
	SNR=104								
ZALF	**Zalf**	**7.49**	**360**	*e*P		**Pn**		**23 07 49.4**	**+0.2**
ZALF				*e*S		**Sb**		**23 09 39.3**	**0.0**
ZALF				AML		AML		23 10 07.8	
	comp=E,204nm,0.7s								
ZALF				AML		AML		23 10 32.1	
	comp=N,99nm,0.8s								
ZALF	**Zalf**	**7.49**	**360**	*e*P		**Pn**		**23 07 49.4**	**+0.2**
	SNR=103								
ZALF				*e*S		**Sb**		**23 09 39.3**	**0.0**
	comp=N,99nm,0.8s,SNR=103								
MMA0	**Mount Meron ar**	**7.77**	**348**	Pn		**Pn**		**23 07 55.6**	**+2.4**
MMAI	**Mount Meron Ar**	**7.77**	**348**	Pn		**Pn**		**23 07 54.7**	**+1.6**
	comp=N,3.5nm,0.3s,baz=150,slow=16,SNR=21								
MMAI				Pg		Pg		23 08 21.7	-7.1
	comp=N,3.6nm,0.3s,baz=153,slow=16,SNR=4.1								
MMAI				Lg		Lg		23 10 08.6	
	comp=N,5.3nm,0.3s,baz=149,slow=37,SNR=4.0								
TOTH	**TOTAH**	**7.97**	**354**	*e*P		**Pn**		**23 07 57.6**	**+1.9**
TOTH				*e*S		Sb		23 09 48.2	-5.0
TOTH	**TOTAH**	**7.97**	**354**	*e*P		**Pn**		**23 07 57.7**	**+1.9**
	SNR=103								
TOTH				*e*S		Sb		23 09 48.2	-5.0
	SNR=103								
HAWK	**Haweek**	**9.12**	**355**	*e*P		**Pn**		**23 08 13.1**	**+1.4**
HAWK				*e*S		Sn		23 10 16.0	+21
HAWK				AML		AML		23 11 08.2	
	comp=N,63nm,0.6s								
HAWK				AML		AML		23 11 17.8	
	comp=E,64nm,0.8s								
HAWK	**Haweek**	**9.12**	**355**	*e*P		**Pn**		**23 08 13.1**	**+1.4**
	SNR=102								
HAWK				*e*S		Sn		23 10 16.0	+21
	comp=E,64nm,0.8s,SNR=102								
MZRK	**Al-Mazaregh**	**10.76**	**14**	*e*P		**Pn**		**23 08 33.7**	**-0.3**
MZRK	**Al-Mazaregh**	**10.76**	**14**	*e*P		**Pn**		**23 08 33.7**	**-0.3**
	SNR=100								
BRTR	**Keskin Array B**	**14.62**	**348**	Pn		**P**		**23 09 31.0**	**-2.4**
	comp=E,0.0nm,0.3s,baz=160,slow=8.8,SNR=3.3								
GNI	**Garni**	**15.94**	**21**	Pn		**P**		**23 09 48.3**	**+0.3**
	comp=E,0.1nm,0.3s,baz=282,slow=9.2,SNR

ASAJ				S		Sn	23 31 02.4	+0.7	
	comp=N,6.2nm,0.3s,baz=246,slow=19,SNR=6.4								
ERM	**Erimo**	**3.10**	**229**	*ce*PN		**Pn**	**23 30 37.5**	**+2.1**	
ERM				pmax	pmax				
	comp=Z,213nm,0.7s								
MJA0	**Matsu Arr-Jizo**	**9.73**	**222**	*e*PN		**Pn**	**23 32 06.3**	**+1.2**	
MJA0				pmax	pmax				
	comp=Z,1.0nm,0.3s								
MAJO	**Matsushiro**	**9.74**	**222**	*i* PN		**Pn**	**23 32 05.3**	**0.0**	
MJAR	**Matsushiro Arr**	**9.74**	**222**	P		**Pn**	**23 32 04.5**	**-0.8**	
	comp=Z,0.5nm,0.3s,baz=31,slow=12,SNR=5.2								
USRK	**Ussuriysk Arra**	**10.29**	**276**	P		**Pn**	**23 32 12.9**	**+0.3**	
	comp=Z,0.2nm,0.3s,baz=82,slow=16,SNR=5.3								
KLR	**Kul'dur**	**11.25**	**302**	*e*PN		**Pn**	**23 32 22.8**	**-2.7**	
PETK	**Petropavlovsk-**	**11.75**	**36**	*e*PN		**Pn**	**23 32 34.8**	**+2.6**	
PETK	**Petropavlovsk-**	**11.75**	**36**	P		**Pn**	**23 32 32.6**	**+0.5**	
	comp=Z,0.3nm,0.3s,baz=192,slow=13,SNR=4.1								
KSRS	**Korea Array**	**15.41**	**251**	P		**Pn**	**23 33 19.2**	**-0.4**	
	comp=Z,0.2nm,0.3s,baz=63,slow=12,SNR=3.4								
JNU	**Nakatsue**	**16.26**	**233**	P		**P**	**23 33 33.8**	**+2.4**	
	comp=Z,0.5nm,0.3s,baz=288,slow=11,SNR=3.6								
FX1	**Attu Island--F**	**19.76**	**54**	P		**Pn**	**23 34 11.0**	**-1.0**	
	comp=Z,0.9nm,0.3s,baz=267,slow=11,SNR=6.9								
SONM	**Songino Array**	**27.78**	**292**	P		**P**	**23 35 26.4**	**-0.7**	
	comp=Z,0.3nm,0.3s,baz=87,slow=8.5,SNR=4.5								
ZALV	**Zalesovo Beam**	**40.31**	**307**	PcP		**PcP**	**23 39 16.1**	**0.0**	
	comp=Z,1.3nm,0.6s,baz=105,slow=2.7,SNR=6.6								
ILAR	**Eielson Array**	**41.58**	**36**	P		**P**	**23 37 24.9**	**0.0**	
	comp=Z,0.4nm,0.4s,baz=258,slow=5.1,SNR=9.4								
MKAR	**Makanchi Array**	**43.89**	**297**	*e*P		**P**	**23 37 44.6**	**+0.7**	
MKAR	**Makanchi Array**	**43.89**	**297**	P		**P**	**23 37 43.0**	**-1.0**	
	comp=Z,0.3nm,0.4s,baz=69,slow=2.6,SNR=9.4								
MKAR				PcP		**PcP**	**23 39 28.4**	**+0.3**	
	comp=Z,0.4nm,0.7s,baz=72,slow=4.7,SNR=4.6								
KURK	**Kurchatov**	**44.84**	**303**	*e*P		**P**	**23 37 51.3**	**0.0**	
KURK				pmax	pmax				
	comp=Z,4.0nm,1.6s								
CMAR	**Chiang Mai Arr**	**47.04**	**253**	P		**P**	**23 38 09.8**	**+0.8**	
	comp=Z,0.7nm,0.7s,baz=41,slow=8.4,SNR=4.9								
ODAN	**Odare**	**49.92**	**270**	*e*P		**P**	**23 38 32.3**	**+1.0**	
	comp=Z,4.5nm,0.4s								
RAMN	**Ramite**	**50.43**	**271**	*e*P		**P**	**23 38 35.3**	**+0.1**	
	comp=Z,9.4nm,0.4s								
DANN	**Dangsing**	**51.66**	**274**	*e*P		**P**	**23 38 45.5**	**+1.1**	
	comp=Z,5.0nm,0.3s								
KOLN	**Koldanda**	**52.11**	**274**	*e*P		**P**	**23 38 47.9**	**+0.2**	
	comp=Z,3.7nm,0.3s								
PYUN	**Piuthan**	**52.36**	**275**	*e*P		**P**	**23 38 49.9**	**+0.4**	
	comp=Z,5.6nm,0.4s								
RES	**Resolute Bay**	**54.82**	**17**	P		**P**	**23 39 05.1**	**-1.4**	
	comp=Z,0.5nm,0.4s,baz=18,slow=3.9,SNR=4.6								
YKA	**Yellowknife Ar**	**55.86**	**34**	P		**P**	**23 39 14.1**	**0.0**	
	comp=Z,0.4nm,0.7s,baz=302,slow=6.8,SNR=6.2								
YKA				pP		**pP**	**23 39 39.2**	**-0.6**	
	comp=Z,0.3nm,0.6s,baz=301,slow=7.0,SNR=3.6								
AKTO	**Aktyubinsk**	**56.86**	**310**	P		**P**	**23 39 21.4**	**0.0**	
AKTO				pmax	pmax				
	comp=Z,1.0nm,0.8s								
AKTO	**Aktyubinsk**	**56.86**	**310**	P		**P**	**23 39 21.4**	**0.0**	
	comp=Z,0.8nm,0.8s,baz=63,slow=14								
ARCES	**ARCESS Array B**	**58.72**	**339**	P		**P**	**23 39 33.5**	**-0.7**	
	comp=Z,2.8nm,1.1s,baz=51,slow=8.5,SNR=3.3								
YBH	**Yreka Blue Hor**	**63.22**	**57**	P		**P**	**23 40 06.3**	**+1.1**	
	comp=Z,0.8nm,0.4s,baz=14,slow=5.9,SNR=3.3								
FINES	**FINESS Array B**	**64.30**	**333**	P		**P**	**23 40 09.5**	**-2.2**	
	comp=Z,1.0nm,0.5s,baz=55,slow=7.9,SNR=7.3								
NVAR	**Mina Array Bea**	**67.91**	**59**	P		**P**	**23 40 36.8**	**+1.2**	
	comp=Z,1.7nm,0.7s,baz=285,slow=7.1,SNR=11								
NOA	**NORSAR Array B**	**69.07**	**338**	P		**P**	**23 40 40.8**	**-1.3**	
	comp=Z,0.4nm,0.7s,baz=25,slow=3.9,SNR=5.1								
KBZ	**Khabaz**	**69.12**	**311**	P		**P**	**23 40 42.6**	**-0.1**	
KBZ				pmax	pmax				
	comp=Z,1.0nm,0.7s								
KBZ	**Khabaz**	**69.12**	**311**	P		**P**	**23 40 42.5**	**-0.1**	
	comp=Z,1.1nm,0.7s,baz=82,slow=8.6,SNR=5.1								
PDAR	**Pinedale Array**	**70.15**	**49**	P		**P**	**23 40 50.0**	**+0.7**	
	comp=Z,0.8nm,0.7s,baz=241,slow=2.7,SNR=5.8								
AKASG	**Malin Array Be**	**70.95**	**323**	P		**P**	**23 40 52.7**	**-1.0**	
AKASG				pmax	pmax				
	comp=Z,1.0nm,0.4s								
AKASG	**Malin Array Be**	**70.95**	**323**	P		**P**	**23 40 52.7**	**-1.0**	
	comp=Z,0.8nm,0.4s,baz=38,slow=6.1,SNR=3.5								
BRTR	**Keskin Array B**	**76.87**	**313**	P		**P**	**23 41 28.9**	**+0.3**	
	comp=Z,0.6nm,0.6s,baz=74,slow=2.5,SNR=5.4								
GERES	**GERESS Array B**	**78.57**	**330**	P		**P**	**23 41 37.5**	**-0.3**	
	comp=Z,0.2nm,0.5s,baz=12,slow=5.0,SNR=3.7								
MMAI	**Mount Meron Ar**	**80.80**	**307**	P		**P**	**23 41 49.5**	**-0.6**	
	comp=Z,0.8nm,0.5s,baz=31,slow=6.9,SNR=2.9								
CPUP	**Villa Florida**	**153.94**	**55**	PKPbc		**PKPbc**	**23 49 35.8**	**+0.7**	
	comp=Z,0.6nm,0.3s,baz=286,slow=1.8,SNR=5.2								

IDC ***13*** *23:34:37.0±5.6,5.°55S×151.°07E,h60km±47km,mb3.8/4, mb1 4.1/5,mb1mx3.6/19,mbtmp3.9/5,ML3.1/1,Error ellipse: s-maj=96.5km s-min=31.4km az=131.0*

ISC 13 23:34:34.8±2.1,**5.°9S**±0.°7×**151.°5E**±0.°7,**h41**km,**n9,**σ1**§17**/8, **mb4.1**/4,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.56**	**231**	P		**P**	**Pn**	**23 35 55.3**	**+0.2**
	3.8nm,0.3s,baz=46,slow=7.2,SNR=9.7								
PMG				S		**Sn**	**Sn**	**23 36 58.4**	**+0.5**
	2.7nm,0.3s,baz=100,slow=21,SNR=5.9								
FAKI	**Fak Fak**	**19.43**	**278**	P		P	Pn	23 39 25.8	+26
	baz=10,SNR=4.3								
WRA	**Warramunga Arr**	**21.78**	**228**	P		**P**	**P**	**23 39 21.7**	**-1.7**
	9.8nm,0.6s,baz=52,slow=10,SNR=33								
ASAR	**Alice Springs**	**24.50**	**222**	P		**P**	**P**	**23 39 50.5**	**-0.1**
	6.3nm,0.7s,baz=56,slow=8.5,SNR=66								
FITZ	**Fitzroy Crossi**	**28.03**	**242**	P		**P**	**P**	**23 40 21.6**	**-0.8**
	2.4nm,0.7s,baz=84,slow=9.2,SNR=4.4								
FITZ	**Fitzroy Crossi**	**28.03**	**242**	P		**P**	**P**	**23 40 21.7**	**-0.7**
	baz=14,SNR=3.8								
WSI	**Waingapu**	**31.15**	**261**	P		P	P	23 41 13.8	+24
	baz=18,SNR=3.3								
ILAR	**Eielson Array**	**83.63**	**22**	P		**P**	**P**	**23 46 58.3**	**-0.4**
	0.2nm,0.5s,baz=241,slow=4.7,SNR=3.6								
TORD	**Torodi Ar. Bea**	**149.39**	**286**	PKPbc		**PKPdf**	**P**	**23 54 17.7**	**+1.6**
	0.2nm,0.6s,baz=85,slow=2.1,SNR=3.6								

OMAN ***13*** *23:39:40.6±6.3,29.°09N×55.°77E,h0km,Error ellipse: s-maj=89.0km s-min=67.8km az=88.0*

IDC ***13*** *23:39:48.6±0.8,28.°25N×55.°32E,h0km,mb3.9/22, mb1 4.1/23,mb1mx4.0/34,mbtmp4.0/23,ML4.1/1,MS4.1/1, Ms1 4.3/1,ms1mx2.8/37,Error ellipse: s-maj=19.3km s-min=14.2km az=165.0*

ISCJB ***13*** *23:39:51.2±0.2,28.°31N±0.°03×55.°30E±0.°04,h22km, mb4.0/31,MS4.0/1,Error ellipse: s-maj=5.0km s-min=3.3km az=144.3*

THR ***13*** *23:39:51.4±1.3,28.°35N×55.°38E,h14km±13km,ML3.8*

TEH ***13*** *23:39:51.5,28.°27N×55.°34E,h20km,ML3.9*

NEIC ***13*** *23:39:51.5,28.°26N×55.°33E,h20km, mb4.5/4, MN3.9(TEH),After TEH.*

CSEM ***13*** *23:39:52.6±0.2,28.°30N×55.°34E,h20km,mb4.3/7,Error ellipse: s-maj=7.2km s-min=5.5km az=57.0*

MOS ***13*** *23:39:54.1±1.1,28.°24N×55.°26E,h55km,mb4.6/11,Error ellipse: s-maj=10.8km s-min=6.8km az=116.0*

ISC 13 23:39:52.5±0.4,**28.°27N**±0.°04×**55.°29E**±0.°04,**h22**km,**n222,** σ1**§55**/230,**mb4.2**/31,**4C-1D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**1.17**	**138**	*e*Pg		**Pn**	**Pn**	**23 40 13.4**	**-0.2**
BNDS				*e*Sg		**Sn**	**Sn**	**23 40 29.3**	**+0.4**
BNDS				AML	AML			23 40 35.1	
	comp=N,2μm,0.5s								
IBND	**Bandar-abas**	**1.38**	**126**	*e*Pg		**Pb**	**Pb**	**23 40 17.2**	**-0.3**
IBND				*e*Sg		**Sb**	**Sb**	**23 40 37.8**	**+3.2**
IBND				*e*				23 40 52.5	
	comp=Z,48μm,0.3s								
IBND	**Bandar-abas**	**1.38**	**126**	*e*Pg		**Pb**	**Pb**	**23 40 17.2**	**-0.3**
IBND				*e*Sg		**Sb**	**Sb**	**23 40 37.8**	**+3.2**
GHIR	**Ghir-Karzin**	**2.03**	**271**	*e*Pg		**Pb**	**Pb**	**23 40 29.7**	**+0.9**
GHIR				AML	AML			23 41 10.0	
	comp=E,517nm,0.7s								
GHIR				AML	AML			23 41 23.5	
	comp=N,601nm,0.5s								
GHIR	**Ghir-Karzin**	**2.03**	**271**	*e*Pg		**Pb**	**Pb**	**23 40 29.7**	**+0.9**
KRBR	**Kerman**	**2.14**	**37**	*e*Pg		**Pn**	**Pn**	**23 40 27.7**	**+0.6**
KRBR				AML	AML			23 41 00.1	
	comp=E,806nm,0.6s								
KRBR				AML	AML			23 41 07.0	
	comp=N,860nm,0.5s								
KRBR	**Kerman**	**2.14**	**37**	*e*Pg		**Pn**	**Pn**	**23 40 27.7**	**+0.6**
ISRV	**Sarvestan**	**2.21**	**301**	*e*Pn		**Pb**	**Pb**	**23 40 31.0**	**-0.9**
ISRV				*e*Sg		Sb	Sb	23 41 07.3	+8.3
ISRV				*e*				23 41 24.3	
	comp=Z,9μm,0.3s								
ISRV	**Sarvestan**	**2.21**	**301**	Pn		**Pb**	**Pb**	**23 40 30.8**	**-1.1**
ISRV				Sg		Sb	Sb	23 41 07.2	+8.3
ISRV	**Sarvestan**	**2.21**	**301**	Pn		**Pb**	**Pb**	**23 40 30.8**	**-1.1**
BANOM	**Banah**	**2.50**	**159**	P		**Pn**	**Pn**	**23 40 31.6**	**-0.3**
	SNR=20								
BANOM	**Banah**	**2.50**	**159**	P		**Pn**	**Pn**	**23 40 31.8**	**-0.1**
	SNR=20								
BANOM				S		**Sn**	**Sn**	**23 41 01.5**	**-0.3**
IPAR	**Pars**	**2.51**	**309**	*e*Pn		**Pb**	**Pb**	**23 40 35.1**	**-2.0**
IPAR				*e*				23 41 30.9	
	comp=Z,8μm,0.4s								
IPAR	**Pars**	**2.51**	**309**	Pn		**Pb**	**Pb**	**23 40 35.1**	**-2.0**
IPAR	**Pars**	**2.51**	**309**	*e*Pn		**Pb**	**Pb**	**23 40 35.0**	**-2.0**
IMEH	**Mehriz**	**3.16**	**349**	*e*Pn		**Pn**	**Pn**	**23 40 43.6**	**+2.4**
IMEH				*e*				23 41 43.7	
	comp=Z,3μm,0.4s								
IMEH	**Mehriz**	**3.16**	**349**	Pn		**Pn**	**Pn**	**23 40 43.9**	**+2.7**
IMEH	**Mehriz**	**3.16**	**349**	*e*Pn		**Pn**	**Pn**	**23 40 43.6**	**+2.4**
NAZ	**Nazwa, Dubai**	**3.29**	**174**	⇑P		**Pn**	**Pn**	**23 40 44.9**	**+2.2**
NAZ	**Nazwa, Dubai**	**3.29**	**174**	P		**Pn**	**Pn**	**23 40 44.6**	**+2.0**
HATD	**Hatta, Dubai**	**3.51**	**167**	⇑P		**Pn**	**Pn**	**23 40 47.1**	**+1.4**
HATD	**Hatta, Dubai**	**3.51**	**167**	P		**Pn**	**Pn**	**23 40 47.2**	**+1.4**
FAQ	**Al Faqa, Dubai**	**3.52**	**176**	P		**Pn**	**Pn**	**23 40 47.6**	**+1.7**
ASUD	**Al Ashush, Dub**	**3.63**	**179**	⇑P		**Pn**	**Pn**	**23 40 49.7**	**+2.3**
ASUD	**Al Ashush, Dub**	**3.63**	**179**	P		**Pn**	**Pn**	**23 40 49.7**	**+2.3**
ASHO	**Ashiyiah**	**3.64**	**169**	P		**Pn**	**Pn**	**23 40 48.4**	**+0.9**
	SNR=29								
ASHO				ml				23 41 17.6	
	SNR=23								
ASHO	**Ashiyiah**	**3.64**	**169**	P		**Pn**	**Pn**	**23 40 48.4**	**+0.9**
	SNR=29								
ISAD	**Sadrabad**	**3.89**	**339**	*e*Pn		**Pn**	**Pn**	**23 40 53.8**	**+2.6**
ISAD				*e*				23 41 58.4	
	comp=Z,2μm,0.5s								
ISAD	**Sadrabad**	**3.89**	**339**	Pn		**Pn**	**Pn**	**23 40 54.0**	**+2.8**
ISAD	**Sadrabad**	**3.89**	**339**	*e*Pn		**Pn**	**Pn**	**23 40 53.8**	**+2.6**
ICHK	**Chekchek**	**4.03**	**349**	*e*Pn		**Pn**	**Pn**	**23 40 55.4**	**+2.3**
ICHK				*e*				23 42 15.9	
	comp=Z,1μm,0.3s								
ICHK	**Chekchek**	**4.03**	**349**	Pn		**Pn**	**Pn**	**23 40 55.2**	**+2.1**
ICHK	**Chekchek**	**4.03**	**349**	*e*Pn		**Pn**	**Pn**	**23 40 55.4**	**+2.3**
IGAR	**Gharneh**	**4.99**	**327**	*e*				23 41 30.6	
	comp=Z,479nm,0.3s								
IGAR				*e*Pn		**Pn**	**Pn**	**23 41 08.6**	**+2.4**
ZHSF	**Zahedan**	**4.99**	**73**	*e*Pn		**Pn**	**Pn**	**23 41 06.9**	**+0.7**
ZHSF	**Zahedan**	**4.99**	**73**	*e*Pn		**Pn**	**Pn**	**23 41 06.9**	**+0.7**
NASN	**Na'in**	**5.00**	**335**	*e*Pn		**Pn**	**Pn**	**23 41 08.3**	**+1.9**
NASN	**Na'in**	**5.00**	**335**	*e*Pn		**Pn**	**Pn**	**23 41 08.3**	**+1.9**
ARQ	**Araqi**	**5.04**	**167**	P		**Pn**	**Pn**	**23 41 08.8**	**+2.1**
	SNR=6.0								
ARQ	**Araqi**	**5.04**	**167**	P		**Pn**	**Pn**	**23 41 08.8**	**+2.1**
	SNR=6.0								
IZEF	**Zefreh**	**5.27**	**332**	*e*Pn		**Pn**	**Pn**	**23 41 11.3**	**+1.2**
IZEF				*e*				23 41 33.2	
	comp=Z,378nm,0.5s								
IZEF	**Zefreh**	**5.27**	**332**	Pn		**Pn**	**Pn**	**23 41 11.3**	**+1.2**
IZEF	**Zefreh**	**5.27**	**332**	*e*Pn		**Pn**	**Pn**	**23 41 11.4**	**+1.3**
TABS	**Tabas**	**5.59**	**16**	*e*Pn		**Pn**	**Pn**	**23 41 15.7**	**+1.4**
TABS	**Tabas**	**5.59**	**16**	*e*Pn		**Pn**	**Pn**	**23 41 15.7**	**+1.4**
IPIR	**Pirpir**	**5.81**	**320**	*e*Pn		**Pn**	**Pn**	**23 41 20.4**	**+2.8**
IPIR				*e*				23 43 17.2	
	comp=Z,646nm,0.5s								
IPIR	**Pirpir**	**5.81**	**320**	Pn		**Pn**	**Pn**	**23 41 20.8**	**+3.2**
IKLH	**Kolahrood**	**5.96**	**329**	*e*Pn		**Pn**	**Pn**	**23 41 21.0**	**+1.3**
IKLH				*e*				23 43 20.9	
	comp=Z,269nm,0.5s								
IKLH	**Kolahrood**	**5.96**	**329**	Pn		**Pn**	**Pn**	**23 41 20.9**	**+1.3**
QRN	**Al-Qurain**	**6.51**	**276**	*e*P		**Pn**	**Pn**	**23 41 27.9**	**+1.0**
QRN				AML	AML			23 42 43.9	
	comp=Z,27nm,0.4s								
UMR	**Umm Al-Rimmam**	**6.76**	**283**	*e*P		**Pn**	**Pn**	**23 41 32.1**	**+1.7**
UMR	**Umm Al-Rimmam**	**6.76**	**283**	*e*P		**Pn**	**Pn**	**23 41 32.1**	**+1.7**
RDF	**Al-Radifah**	**6.84**	**277**	*e*P		**Pn**	**Pn**	**23 41 33.3**	**+1.9**
RDF				AML	AML			23 42 49.0	
	comp=Z,12nm,0.7s								
RDF	**Al-Radifah**	**6.84**	**277**	*e*P		**Pn**	**Pn**	**23 41 33.3**	**+1.9**
SHRT	**Shahrakht**	**6.87**	**37**	*e*Pn		**Pn**	**Pn**	**23 41 33.1**	**+1.2**
SHRT	**Shahrakht**	**6.87**	**37**	*e*Pn		**Pn**	**Pn**	**23 41 33.1**	**+1.2**
MIB	**Mutribah**	**7.13**	**284**	*e*P		**Pn**	**Pn**	**23 41 36.8**	**+1.4**
MIB				AML	AML			23 43 01.6	
	comp=Z,15nm,0.6s								
MIB	**Mutribah**	**7.13**	**284**	*e*P		**Pn**	**Pn**	**23 41 36.8**	**+1.4**
NAY	**Al-Naaiem**	**7.13**	**280**	*e*P		**Pn**	**Pn**	**23 41 37.6**	**+2.1**
NAY				AML	AML			23 42 57.6	
	comp=Z,6.6nm,0.6s								
NAY	**Al-Naaiem**	**7.13**	**280**	*e*P		**Pn**	**Pn**	**23 41 37.6**	**+2.1**
BHD	**Baghdad**	**10.62**	**301**	*ex*		**Pn**	**Pn**	**23 42 25.0**	**+1.7**
BHD				*ex*		**Sn**	**Sn**	**23 44 25.0**	**+3.4**
BHD	**Baghdad**	**10.62**	**301**	*e*P		**Pn**	**Pn**	**23 42 25.0**	**+1.7**
BHD				*e*S		**Sn**	**Sn**	**23 44 25.0**	**+3.4**
GNI	**Garni**	**14.70**	**326**	Pn		**P**	**P**	**23 43 27.5**	**+2.3**
GNI	**Garni**	**14.70**	**326**	Pn		**P**	**P**	**23 43 27.5**	**+2.3**
	comp=Z,0.6nm,0.3s,baz=322,slow=2.0,SNR=8.1								
DGRG	**David-gareji**	**15.45**	**331**	P		**P**	**P**	**23 43 36.4**	**+3.0**
SEAG	**Tbilisi Sea**	**15.95**	**330**	P		**P**	**P**	**23 43 39.7**	**+0.8**
TBLG	**Delisi**	**15.95**	**330**	P		**P**	**P**	**23 43 40.6**	**+1.6**
TBLG	**Delisi**	**15.95**	**330**	P		**P**	**P**	**23 43 40.6**	**+1.6**
AKH	**Akhalkalaki**	**16.28**	**327**	P		**Pn**	**Pn**	**23 43 39.8**	**0.0**
ASF	**Jabal al Asfar**	**16.37**	**288**	Pn		**P**	**P**	**23 43 43.3**	**-0.4**
ASF	**Jabal al Asfar**	**16.37**	**288**	Pn		**P**	**P**	**23 43 43.3**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=44,slow=7.8,SNR=2.7								
GOR	**Gori**	**16.44**	**329**	P		P	Pn	23 43 35.2	-6.5
GUDG	**Gudauri**	**16.66**	**331**	P		**P**	**P**	**23 43 46.4**	**-0.6**
GUDG	**Gudauri**	**16.66**	**331**	P		**P**	**P**	**23 43 46.4**	**-0.6**
ZEI	**Tsey**	**17.16**	**330**	*e*P		**P**	**P**	**23 43 56.1**	**+3.6**
ZEI				pmax	pmax				
	comp=Z,17nm,1.0s								
ONI	**Oni**	**17.21**	**329**	P		**P**	**P**	**23 43 56.7**	**+3.7**
MMAI	**Mount Meron Ar**	**17.75**	**290**	P		**P**	**P**	**23 43 59.1**	**+0.1**
MMAI	**Mount Meron Ar**	**17.75**	**290**	P		**P**	**P**	**23 43 59.1**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=92,slow=19,SNR=8.7								
MMAI	**Mount Meron Ar**	**17.75**	**290**	P		**P**	**P**	**23 43 59.1**	**+0.1**
CHVG	**Ch'k'valeri**	**17.95**	**327**	P		**Pn**	**Pn**	**23 43 58.0**	**-2.6**
KBZ	**Khabaz**	**18.36**	**330**	P		**Pn**	**Pn**	**23 44 07.2**	**+1.6**
KBZ	**Khabaz**	**18.36**	**330**	P		**Pn**	**Pn**	**23 44 07.2**	**+1.6**
KBZ	**Khabaz**	**18.36**	**330**	P		**Pn**	**Pn**	**23 44 07.2**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=135,slow=10,SNR=5.2								
KBZ	**Khabaz**	**18.36**	**330**	P		**Pn**	**Pn**	**23 44 07.2**	**+1.6**
KIV	**Kislovodsk**	**18.64**	**330**	*e*P		**Pn**	**Pn**	**23 44 12.3**	**+3.2**
KIV				pmax	pmax				
	comp=Z,9.0nm,1.0s								
KSH	**Kashi**	**20.46**	**51**	*i* P		Pn	Pn	23 44 31.0	+0.1
KSH				*e*PP		PnPn	PnPn	23 44 59.3	+13
KSH				*es*P		sP	sP	23 45 19.9	+42
KSH				*e*S		S	S	23 48 01.8	-15
KSH				*e*PcP		**PcP**	**PcP**	**23 48 41.1**	**+0.8**
KSH				*e*SS		**SnSn**	**SnSn**	**23 48 44.0**	**+8.4**
KSH				pmax	pmax				
	comp=Z,200nm,4.6s								
KSH				pmax	pmax				
	comp=Z,6.0nm,0.6s								
KSH				LR	LR				
	comp=N,170nm,5.3s								
KSH				LR	LR				
	comp=E,210nm,4.6s								
KSH				LR	LR				
	comp=Z,250nm,4.5s								
AAK	**Ala-Archa**	**21.15**	**42**	⇑*i*P		**P**	**P**	**23 44 37.0**	**+0.9**
AAK				pmax	pmax				
	comp=Z,5.0nm,0.6s								
AAK	**Ala-Archa**	**21.15**	**42**	P		**P**	**P**	**23 44 36.3**	**+0.2**
AAK	**Ala-Archa**	**21.15**	**42**	P		**P**	**P**	**23 44 36.3**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=222,slow=3.1,SNR=11								
AAK	**Ala-Archa**	**21.15**	**42**	P		**P**	**P**	**23 44 36.3**	**+0.2**
BRTR	**Keskin Array B**	**21.22**	**308**	P		**P**	**P**	**23 44 38.0**	**+1.1**
BRTR	**Keskin Array B**	**21.22**	**308**	P		**P**	**P**	**23 44 38.0**	**+1.1**
	comp=Z,7.2nm,0.7s,baz=130,slow=13,SNR=30								
BRTR	**Keskin Array B**	**21.22**	**308**	P		**P**	**P**	**23 44 38.0**	**+1.1**
ANN	**Anapa**	**21.79**	**324**	*e*P		P	P	23 44 34.6	-8.1
ANN				pmax	pmax				
	comp=Z,28nm,1.4s								
AKTK	**Aktyubinsk**	**22.23**	**5**	P		**P**	**P**	**23 44 47.2**	**-0.3**
AKTO	**Aktyubinsk**	**22.23**	**5**	P		**P**	**P**	**23 44 47.2**	**-0.3**
AKTO	**Aktyubinsk**	**22.23**	**5**	P		**P**	**P**	**23 44 47.1**	**-0.3**
AKTO	**Aktyubinsk**	**22.23**	**5**	P		**P**	**P**	**23 44 47.1**	**-0.3**
	comp=Z,5.0nm,0.8s,baz=182,slow=12,SNR=20								
AKTO	**Aktyubinsk**	**22.23**	**5**	P		**P**	**P**	**23 44 47.2**	**-0.3**
VRHR	**Novokhopersk**	**25.02**	**339**	*e*P		**P**	**P**	**23 45 15.7**	**+1.0**
VRHR				pmax	pmax				
	comp=N,20nm,0.7s								
VRHR				pmax	pmax				
	comp=E,10.0nm,0.7s								
VRHR				pmax	pmax				
	comp=Z,20nm,0.7s								
VRHR	**Novokhopersk**	**25.02**	**339**	*e*P		**P**	**P**	**23 45 15.7**	**+1.0**
VORD	**Divnogorie**	**25.69**	**336**	*e*P		**P**	**P**	**23 45 22.7**	**+2.0**
VORD				pmax	pmax				
	comp=N,20nm,1.3s								
VORD				pmax	pmax				
	comp=Z,9.0nm,1.3s								
VORD				pmax	pmax				
	comp=E,6.0nm,0.7s								
VORD	**Divnogorie**	**25.69**	**336**	*e*P		**P**	**P**	**23 45 22.7**	**+2.0**
VSR	**Storozhevoye**	**25.94**	**336**	*e*P		**P**	**P**	**23 45 19.5**	**-3.5**
VSR				pmax	pmax				
	comp=Z,10.0nm,1.4s								
VSR				pmax	pmax				
	comp=N,7.0nm,0.7s								
VSR				pmax	pmax				
	comp=E,7.0nm,0.7s								
BRVK	**Borovoye**	**27.14**	**20**	‖*e*P		**P**	**P**	**23 45 33.9**	**+0.1**
BRVK				pmax	pmax				
	comp=Z,2.0nm,1.1s								
BRVK	**Borovoye**	**27.14**	**20**	*e*P		**P**	**P**	**23 45 33.9**	**+0.1**
	comp=Z,2.0nm,1.1s								
BVAR	**Borovoye Array**	**27.14**	**20**	P		**P**	**P**	**23 45 33.2**	**-0.6**
BVAR								23 48 53.8	
BVAR	**Borovoye Array**	**27.14**	**20**	P		**P**	**P**	**23 45 33.2**	**-0.6**
BVAR				PcP		**PcP**	**PcP**	**23 48 53.8**	**-0.2**
BVAR	**Borovoye Array**	**27.14**	**20**	P		**P**	**P**	**23 45 33.2**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=202,slow=7.7,SNR=8.7

comp=Z,0.1nm,0.3s,baz=65,slow=7.6,SNR=3.3
ESDC Sonseca Array 49.64 299 P **P** **23 48 40.8 -1.7**
TORD Torodi Ar. Bea 51.95 265 P **P** **23 48 59.8 -0.3**
TORD Torodi Ar. Bea 51.95 265 P **P** **23 48 59.8 -0.3**
comp=Z,3.3nm,0.7s,baz=58,slow=7.0,SNR=32
TORD Torodi Ar. Bea 51.95 265 P **P** **23 48 59.8 -0.3**
KSAR Wonju Array Be 60.31 61 P **P** **23 49 58.5 -1.1**
KSAR Wonju Array Be 60.31 61 P **P** **23 49 58.5 -1.1**
KSRS Korea Array 60.34 61 P **P** **23 49 58.5 -1.3**
comp=Z,0.7nm,0.4s,baz=273,slow=7.7,SNR=3.7
KSRS Korea Array 60.34 61 P **P** **23 49 58.5 -1.3**
comp=Z,1.0nm,0.4s
BOSA Boshof 63.46 209 P **P** **23 50 20.8 -0.1**
BOSA Boshof 63.46 209 P **P** **23 50 20.8 -0.1**
comp=Z,2.1nm,1.0s,baz=2.1,slow=13,SNR=3.1
BOSA Boshof 63.46 209 P **P** **23 50 20.8 -0.1**
ATTU Attu Island--F 82.83 33 P **P** **23 52 15.6 +0.6**
FX1 Attu Island--F 82.83 33 P **P** **23 52 15.6 +0.6**
FX1 Attu Island--F 82.83 33 P **P** **23 52 15.6 +0.6**
comp=Z,2.8nm,0.6s,baz=243,slow=4.5,SNR=3.5
FX1 Attu Island--F 82.83 33 P **P** **23 52 15.6 +0.6**
ILAR Eielson Array 85.66 9 P **P** **23 52 28.2 -0.9**
ILAR Eielson Array 85.66 9 P **P** **23 52 28.2 -0.9**
comp=Z,0.4nm,0.7s,baz=330,slow=4.4,SNR=6.5
ILAR Eielson Array 85.66 9 P **P** **23 52 28.2 -0.9**
YKA Yellowknife Ar 89.19 355 P **P** **23 52 46.0 -0.2**
YKA Yellowknife Ar 89.19 355 P **P** **23 52 46.0 -0.2**
comp=Z,0.4nm,0.7s,baz=5.2,slow=5.2,SNR=12
YKA Yellowknife Ar 89.19 355 P **P** **23 52 46.0 -0.2**
ASAR Alice Springs 91.63 116 P **P** **23 52 57.6 -0.5**
ASAR Alice Springs 91.63 116 P **P** **23 52 57.6 -0.5**
comp=Z,0.3nm,0.6s,baz=319,slow=4.7,SNR=4.2
ASAR Alice Springs 91.63 116 P **P** **23 52 57.7 -0.5**

IDC 13 23:44:34.4±1.0, **16.79S**×69.22W, **h198**km±6km, **mb3.5**/6, **mb1 3.7**/7, **mb1mx3.4**/20, **mbtmp3.5**/7, **Error ellipse: s-maj=19.8km s-min=18.6km az=5.0, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LPAZ	**La Paz**	**1.16**	**65**	P		Pn	23 45 06.2	+0.4
	154nm,0.3s,baz=271,slow=6.5,SNR=3159							
LPAZ				S		Sn	23 45 30.1	0.0
	25nm,0.3s,baz=319,slow=16,SNR=7.4							
SIV	**San Ignacio**	**7.86**	**85**	P		Pn	23 46 25.6	-0.3
	2.4nm,0.3s,baz=283,slow=11,SNR=16							
SIV				S		Sn	23 47 54.1	-0.5
	0.2nm,0.3s,baz=190,slow=16,SNR=4.2							
NNA	**Nana**	**8.79**	**302**	P		Pn	23 46 32.7	-5.5
	2.6nm,0.3s,baz=147,slow=8.8,SNR=5.7							
NNA				S		Sn	23 48 04.2	-13
	1.7nm,0.3s,baz=54,slow=19,SNR=4.0							
CFAA	**Coronel Fontan**	**14.78**	**177**	P		Pn	23 47 53.4	-0.7
	0.0nm,0.3s,baz=357,slow=19,SNR=3.6							
BDFB	**Brasilia**	**20.39**	**90**	P		P	23 48 56.9	+0.4
	3.0nm,0.5s,baz=241,slow=10,SNR=6.3							
PLCA	**Paso Flores**	**23.89**	**183**	P		P	23 49 30.0	-0.1
	2.2nm,0.6s,baz=4.7,slow=12,SNR=6.9							
DBIC	**Dimbokro**	**67.75**	**75**	P		P	23 55 11.5	+0.2
	1.4nm,0.4s,baz=205,slow=12,SNR=4.6							
PDAR	**Pinedale Array**	**69.91**	**329**	P		P	23 55 23.6	-0.8
	0.4nm,0.4s,baz=118,slow=8.9,SNR=4.8							
TORD	**Torodi Ar. Bea**	**76.10**	**72**	P		P	23 56 00.7	-0.2
	2.5nm,0.6s,baz=260,slow=5.2,SNR=43							
YKA	**Yellowknife Ar**	**86.67**	**341**	P		P	23 56 55.1	-0.2
	0.5nm,0.5s,baz=135,slow=5.0,SNR=17							
ASAR	**Alice Springs**	**133.88**	**210**	PKP		PKPdf	00 03 28.1	-0.7
	0.2nm,0.5s,baz=106,slow=2.0,SNR=2.6							
WRA	**Warramunga Arr**	**136.78**	**213**	PKP		PKPdf	00 03 34.2	0.0
	0.4nm,0.6s,baz=146,slow=1.8,SNR=2.3							
ZALV	**Zalesovo Beam**	**137.78**	**23**	PKP		PKPdf	00 03 35.6	+0.6
	0.4nm,0.5s,baz=262,slow=2.9,SNR=3.4							
ZALV				pPKP		pPKPdf	00 04 26.0	-0.3
	0.2nm,0.3s,baz=272,slow=3.8,SNR=2.0							
SONM	**Songino Array**	**148.83**	**6**	PKPbc		PKPbc	00 03 59.3	+0.5
	0.8nm,0.5s,baz=325,slow=1.5,SNR=7.4							

*ISCJB **13** 23:45:15.2±0.8, 77.14N±0.05×18.5E±0.2, h10km, Error ellipse: s-maj=7.9km s-min=5.0km az=41.0*
*CSEM **13** 23:45:15.7±0.1, 77.05N×18.02E, h2km, ML2.4, Error ellipse: s-maj=2.6km s-min=0.9km az=56.0*
*NAO **13** 23:45:17.0±1.9, 77.11N×18.58E, h16km±15km, ML2.4*
*BER **13** 23:45:19.2±3.7, 77.05N×18.15E, h14km±23km, MD2.3, ML2.3, ML2.4(NAO)*

ISC 13 23:45:17.2±1.0, **77.02N**±0.06×**17.9E**±0.1, **h10**km, **n14, σ1§27/20, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HSP	**Hornsund**	**0.54**	**270**	*e*P		**Pn**	**23 45 29.7**	**-1.2**
HSP				*e*S		Sb	23 45 38.0	+1.6
SPA0	**Spitsbergen Ar**	**1.21**	**345**	Pg		**Pn**	**23 45 38.8**	**-1.4**
	baz=149,slow=22							
SPA0				Lg		Lg	23 45 54.1	
	baz=155,slow=28							
SPA0	**Spitsbergen Ar**	**1.21**	**345**	Pg		**Pn**	**23 45 38.8**	**-1.4**
	baz=149,slow=22							
SPA0				Sg		**Sb**	**23 45 54.1**	**-1.8**
	baz=155,slow=28							
SPA0	**Spitsbergen Ar**	**1.21**	**345**	Pg		**Pn**	**23 45 38.8**	**-1.4**
	baz=149,slow=21,SNR=790							
SPA0				Sg		**Sb**	**23 45 54.1**	**-1.8**
	baz=155,slow=28,SNR=91							
SPA0				Lg		Lg	23 45 54.1	
	baz=155,slow=28,SNR=6.9							
HOPEN	**Hopen**	**1.71**	**104**	*e*Sg		**Sn**	**23 46 10.1**	**+1.2**
HOPEN	**Hopen**	**1.71**	**104**	*e*Sg		**Sn**	**23 46 10.1**	**+1.2**
	SNR=91							
KBS	**Kingsbay**	**2.29**	**330**	Pn		**Pn**	**23 45 54.2**	**-0.7**
KBS				Pg		**Pb**	**23 45 59.1**	**+0.6**
KBS				Lg		Lg	23 46 27.5	
KBS	**Kingsbay**	**2.29**	**330**	*e*P		**Pn**	**23 45 54.3**	**-0.7**
KBS				*e*Pg		**Pb**	**23 45 59.2**	**+0.6**
KBS				*e*Sg		**Sb**	**23 46 28.7**	**+1.9**
KBS				AML		AML	23 46 31.9	
	comp=Z,46nm,0.5s							
KBS	**Kingsbay**	**2.29**	**330**	*e*P		**Pn**	**23 45 54.3**	**-0.7**
	SNR=55							
KBS	**Kingsbay**	**2.29**	**330**	*e*Pg		**Pb**	**23 45 59.2**	**+0.6**
	SNR=90							
KBS				Lg		Lg	23 46 27.5	
KBS				*e*Sg		**Sb**	**23 46 28.7**	**+1.9**
	comp=Z,46nm,0.5s,SNR=90							
BJO	**Bjornoya**	**2.55**	**172**	*e*Sg		**Sb**	**23 46 33.3**	**-0.9**
BJO				AML		AML	23 46 44.4	
	comp=Z,19nm,0.6s							
ARA0	**ARCESS Array S**	**7.82**	**160**	Pn		**Pn**	**23 47 10.9**	**0.0**
	baz=341,slow=22							
ARA0				Sn		Sn	23 48 30.9	-8.4
	slow=22							
ARA0	**ARCESS Array S**	**7.82**	**160**	P		**Pn**	**23 47 10.9**	**0.0**
	baz=341,slow=22							
ARA0				S		Sn	23 48 30.9	-8.4
	slow=22							
ARA0	**ARCESS Array S**	**7.82**	**160**	P		**Pn**	**23 47 10.9**	**0.0**
	baz=341,slow=19,SNR=51							

*VIE **13** 23:52:33.0±0.6, 43.71N×16.62E, h12km±4km, mb2.4/6, ML2.6/6, Error ellipse: s-maj=7.7km s-min=5.5km az=95.0*
25 km NNE of Split
*CSEM **13** 23:52:34.5±0.4, 43.81N×16.34E, h2km, ML2.5, Error ellipse: s-maj=11.4km s-min=5.0km az=43.0*
*BEO **13** 23:52:35.1±0.8, 43.85N×16.30E, h2km±5km, ML2.5/7*

ISC 13 23:52:34.2±1.7, **43.78N**±0.06×**16.68E**±0.06, **h15**km±15km, **n35, σ1§25/50, 6C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BLY	**Banja Luka**	**1.04**	**20**	*e*Pg		**Pb**	**23 52 54.0**	**0.0**
BLY				*e*Sg		**Sn**	**23 53 12.1**	**+3.5**
BLY	**Banja Luka**	**1.04**	**20**	*e*Pg		**Pb**	**23 52 54.0**	**0.0**
BLY				*e*Sg		**Sn**	**23 53 12.1**	**+3.5**
STON	**Ston**	**1.17**	**140**	*e*Pn		**Pg**	**23 52 58.1**	**+1.3**
STON				Sn		Sg	23 53 19.5	+7.3
STON	**Ston**	**1.17**	**140**	*e*Pn		**Pg**	**23 52 58.1**	**+1.3**
STON				Sn		Sg	23 53 19.4	+7.3
SISC	**Sisak**	**1.71**	**353**	↑*i*Pn		**Pn**	**23 53 03.7**	**+0.2**
SISC				Sn		**Sb**	**23 53 27.5**	**+0.8**
BBLS	**Lazići**	**1.98**	**86**	*e*Pn		**Pg**	**23 53 12.4**	**+0.2**
BBLS				*e*Sg		Sg	23 53 46.4	+8.6
BBLS	**Lazići**	**1.98**	**86**	*e*Pn		**Pg**	**23 53 12.4**	**+0.2**
BBLS				*e*Sg		Sg	23 53 46.4	+8.6
BOJS	**Bojanci**	**2.01**	**330**	*i* Pn		**Pn**	**23 53 07.5**	**-0.1**
BOJS	**Bojanci**	**2.01**	**330**	*e*Pn		**Pn**	**23 53 07.7**	**+0.1**
BOJS				*e*Sg		**Sn**	**23 53 33.0**	**+0.6**
BOJS	**Bojanci**	**2.01**	**330**	*e*Pn		**Pn**	**23 53 07.7**	**+0.1**
BOJS				*e*Sg		**Sn**	**23 53 33.0**	**+0.6**
PDG	**Podgorica**	**2.32**	**125**	*e*Pn		**Pg**	**23 53 18.4**	**-0.3**
PDG	**Podgorica**	**2.32**	**125**	*e*Pn		**Pg**	**23 53 18.4**	**-0.3**
DIVS	**Divibare**	**2.42**	**81**	*e*Pn		**Pb**	**23 53 18.4**	**+0.9**
DIVS	**Divibare**	**2.42**	**81**	*e*Pn		**Pb**	**23 53 18.4**	**+0.9**
PDKS	**Podkum**	**2.58**	**333**	*i* Pn		**Pn**	**23 53 15.5**	**0.0**
PDKS	**Podkum**	**2.58**	**333**	*i* Pn		**Pn**	**23 53 15.5**	**0.0**
PKSM	**Moragy**	**2.81**	**29**	*e*Pn		**Pb**	**23 53 21.7**	**-2.4**
PKSM	**Moragy**	**2.81**	**29**	*e*Pn		**Pb**	**23 53 21.7**	**-2.4**
GRUS	**Gruza**	**2.92**	**86**	*e*Pn		**Pb**	**23 53 25.5**	**-0.6**
GRUS	**Gruza**	**2.92**	**86**	*e*Pn		**Pb**	**23 53 25.5**	**-0.6**
VOY	**Vojsko**	**3.00**	**320**	*e*Pn		**Pn**	**23 53 21.2**	**-0.1**
VOY				*e*Sn		**Sn**	**23 53 57.3**	**+0.2**
VOY	**Vojsko**	**3.00**	**320**	*e*Pn		**Pn**	**23 53 21.2**	**-0.1**
VOY				*e*Sn		**Sn**	**23 53 57.3**	**+0.2**
OBKA	**Obir**	**3.12**	**332**	↑*i*Pn		**Pn**	**23 53 23.1**	**+0.1**
OBKA				↓*i*Sn		**Sn**	**23 54 01.0**	**+0.9**
OBKA	**Obir**	**3.12**	**332**	Pn		**Pn**	**23 53 23.1**	**+0.1**
OBKA				Sn		**Sn**	**23 54 01.0**	**+0.9**
SOKA	**Soboth**	**3.13**	**339**	↑*i*Pn		**Pn**	**23 53 22.7**	**-0.4**
SOKA				↓*i*Sn		**Sn**	**23 54 01.9**	**+1.7**
SOKA	**Soboth**	**3.13**	**339**	Pn		**Pn**	**23 53 22.7**	**-0.4**
SOKA				Sn		**Sn**	**23 54 01.9**	**+1.7**
ARSA	**Arzberg**	**3.57**	**347**	↑*i*Pn		**Pn**	**23 53 29.0**	**-0.1**
ARSA				↑*i*Sn		**Sn**	**23 54 11.9**	**+0.9**
ARSA	**Arzberg**	**3.57**	**347**	Pn		**Pn**	**23 53 29.0**	**-0.1**
ARSA				Sn		**Sn**	**23 54 11.9**	**+0.9**
CSNA	**Conrad Observa**	**4.19**	**352**	↓*i*Pn		**Pn**	**23 53 37.8**	**+0.1**
CSNA	**Conrad Observa**	**4.19**	**352**	Pn		**Pn**	**23 53 37.8**	**+0.1**
ZAPS	**Zavoj**	**4.36**	**95**	*e*Pn		Pb	23 53 47.0	-3.6
ZAPS				*e*Sn		**Sb**	**23 54 39.1**	**-3.9**
MOA	**Molln**	**4.41**	**338**	↑*i*Pn		**Pn**	**23 53 40.9**	**+0.3**
MOA	**Molln**	**4.41**	**338**	Pn		**Pn**	**23 53 40.9**	**+0.3**
KHC	**Kasperske Hory**	**5.77**	**339**	*e*PN		**Pn**	**23 53 59.6**	**+0.3**
KHC				*e*SN		**Sn**	**23 55 04.0**	**-1.2**
KHC	**Kasperske Hory**	**5.77**	**339**	Pn		**Pn**	**23 53 59.6**	**+0.3**
KHC				Sn		**Sn**	**23 55 04.0**	**-1.2**

*IDC **14** 00:45:36.8±0.7, 7.43S×129.55E, h0km, mb4.2/8, mb1 4.4/11, mb1mx4.2/22, mbtmp4.2/11, ML4.4/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/25, Error ellipse: s-maj=37.9km s-min=15.5km az=74.0*
*ISCJB **14** 00:45:42.5±0.5, 7.57S±0.04×129.59E±0.06, h50km, mb4.1/7, Error ellipse: s-maj=9.0km s-min=5.7km az=173.9*
*AUST **14** 00:45:44.0±0.4, 7.60S×129.40E, h44km, Error ellipse: s-maj=1.2km s-min=0.9km az=300.0*

ISC 14 00:45:45.9±0.8, **7.65S**±0.06×**129.78E**±0.08, **h50**km, **n35, σ2§08/33, mb4.1/7, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FAKI	**Fak Fak**	**5.30**	**28**	P		**Pn**	**00 47 04.6**	**+2.0**
	baz=5.5,SNR=6.4							
FAKI				S		**Sn**	**00 48 02.3**	**-0.1**
	baz=5.5,SNR=6.4							
MTN	**Manton Dam**	**5.33**	**166**	P		**Pn**	**00 47 04.4**	**+1.4**
	baz=5.5,SNR=60							
MTN				S		**Sn**	**00 48 04.9**	**+1.8**
	baz=5.5,SNR=8.8							
KDU	**Kakadu**	**5.66**	**152**	P		**Pn**	**00 47 09.2**	**+1.7**
	baz=5.9,SNR=45							
KDU				S		**Sn**	**00 48 13.1**	**+1.9**
	baz=5.9,SNR=9.4							
KNRA	**Kununurra**	**8.04**	**187**	P		**Pn**	**00 47 39.7**	**-0.4**
	baz=8.1,SNR=19							
KNRA				S		Sn	00 49 03.3	-6.4
	baz=8.1,SNR=23							
KAPI	**Kappang**	**10.31**	**284**	LR		LR	00 52 44.6	
	comp=Z,38nm,19.6s,baz=234,slow=43							
FITZ	**Fitzroy Crossi**	**11.14**	**201**	Pn		Pn	00 48 18.3	-4.3
	1.2nm,0.3s,baz=42,slow=9.7,SNR=52							
FITZ				Sn		Sn	00 50 13.1	-13
	14nm,0.3s,baz=352,slow=14,SNR=13							
FITZ				LR		LR	00 53 08.7	
	comp=Z,70nm,20.8s,baz=16,slow=40							
FITZ	**Fitzroy Crossi**	**11.14**	**201**	P		Pn	00 48 18.9	-3.8
	baz=11,SNR=44							
FITZ				S		Sn	00 50 13.2	-13
	baz=11,SNR=7.1							
JAY	**Jayapura**	**12.01**	**65**	S		**Sn**	**00 50 43.6**	**-3.7**
	baz=12,SNR=4.0							
WRA	**Warramunga Arr**	**12.99**	**161**	Pn		Pn	00 48 45.6	-2.3
	2.2nm,0.3s,baz=333,slow=12,SNR=15							
WRA				Sn		Sn	00 51 02.4	-8.7
	10nm,0.3s,baz=333,slow=20,SNR=12							
COEN	**Coen**	**14.57**	**117**	P		**Pn**	**00 49 11.9**	**+2.7**
	baz=15,SNR=4.2							
COEN				S		**Sn**	**00 51 45.0**	**-4.5**
	baz=15,SNR=4.6							
QIS	**Mount Isa**	**15.97**	**144**	P		**P**	**00 49 33.3**	**+3.2**
	baz=16,SNR=7.2							
QIS				S		**Sn**	**00 52 19.1**	**-4.5**
	baz=16,SNR=4.5							
ASAR	**Alice Springs**	**16.41**	**167**	Pn		**Pn**	**00 49 31.9**	**-1.1**
	1.6nm,0.3s,baz=332,slow=10,SNR=28							
ASAR				Sn		Sn	00 52 24.8	-9.4
	2.0nm,0.3s,baz=346,slow=25,SNR=12							
MTSU	**Mount Surprise**	**17.57**	**128**	P		**P**	**00 49 50.0**	**+2.1**
	baz=18,SNR=12							
MTSU				S		**Sn**	**00 52 60.0**	**-2.4**
	baz=18,SNR=4.4							
CTA	**Charters Tower**	**20.19**	**129**	P		**P**	**00 50 16.8**	**+0.2**
	2.9nm,0.5s,baz=232,slow=12,SNR=2.8							
MEEK	**Meekatharra**	**21.66**	**208**	P		**P**	**00 50 30.7**	**-1.7**
	baz=22,SNR=8.3							
FORT	**Forest**	**23.07**	**184**	P		**P**	**00 50 46.5**	**-0.7**
	baz=23,SNR=15							
QLP	**Quilpie**	**23.31**	**146**	P		**P**	**00 50 51.2**	**+1.7**
	baz=24,SNR=41							
KMBL	**Kambalda**	**24.72**	**196**	P		**P**	**00 51 01.4**	**-1.2**
	baz=25,SNR=4.6							
MORW	**Morawa**	**24.93**	**210**	P		**P**	**00 51 03.8**	**-0.7**
	baz=25,SNR=4.3							
MORW				S		S	00 55 41.0	+16
	baz=25,SNR=4.1							
BBOO	**Buckleboo**	**25.71**	**168**	P		**P**	**00 51 11.4**	**-0.1**
	baz=26,SNR=11							
KLBR	**Kellerberrin**	**26.33**	**204**	P		**P**	**00 51 15.7**	**-1.5**
	baz=26,SNR=10							
STKA	**Stephens Creek**	**26.50**	**157**	P		**P**	**00 51 19.4**	**+0.7**
	4.4nm,0.4s,baz=324,slow=11,SNR=14							
STKA	**Stephens Creek**	**26.50**	**157**	P		**P**	**00 51 19.3**	**+0.7**
	baz=27,SNR=21							
NWAO	**Narrogin (SRO)**	**27.72**	**203**	P		**P**	**00 51 27.9**	**-1.7**
	4.5nm,0.5s,baz=28,slow=7.7,SNR=8.0							
CMSA	**Cobar Meteorol**	**28.02**	**150**	P		**P**	**00 51 33.8**	**+1.5**
	baz=28,SNR=5.3							
CMSA				S		S	00 56 43.9	+31
	baz=28,SNR=7.3							
ARPS	**Mount Arapiles**	**31.00**	**161**	P		**P**	**00 52 00.1**	**+1.4**
	baz=31,SNR=7.1							
YNG	**Young**	**31.59**	**150**	P		**P**	**00 52 05.8**	**+1.9**
	baz=32,SNR=9.1							
SONM	**Songino Array**	**58.99**	**342**	P		P	00 55 36.9	-3.6
	0.5nm,0.4s,baz=160,slow=6.4,SNR=4.5							
MKAR	**Makanchi Array**	**68.65**	**327**	P		P	00 56 40.4	-3.6
	1.2nm,0.3s,baz=114,slow=8.6,SNR=43							
VNDA	**Vanda**	**71.83**	**173**	P		**P**	**00 57 02.1**	**-0.8**
	1.3nm,0.5s,baz=320,slow=6.5,SNR=12							
ZALV	**Zalesovo Beam**	**72.07**	**334**	P		P	00 57 00.9	-3.8
	1.0nm,0.6s,baz=132,slow=7.3,SNR=6.5							
ILAR	**Eielson Array**	**94.02**	**25**	P		P	00 58 54.5	-3.8
	0.2nm,0.6s,baz=243,slow=6.0,SNR=3.7							
TORD	**Torodi Ar. Bea**	**128.72**	**281**	PKP		**PKPdf**	**01 04 45.7**	**-3.0**
	0.4nm,0.6s,baz=120,slow=1.0,SNR=3.0							
CPUP	**Villa Florida**	**145.53**	**169**	PKPbc		**PKPdf**	**01 05 18.5**	**-0.8**
	0.5nm,0.3s,baz=216,slow=4.2,SNR=3.8							
LPAZ	**La Paz**	**150.34**	**143**	PKPbc		**PKPbc**	**01 05 33.0**	**-0.5**
	0.6nm,0.4s,baz=199,slow=1.2,SNR=6.8							

*ISCJB **14** 01:06:21.6±0.5, 39.26N±0.02×27.44E±0.03, h6km±4km, Error ellipse: s-maj=3.9km s-min=3.7km az=19.8*
*ISK **14** 01:06:21.3, 39.26N×27.45E, h6km, MD2.9*
*DDA **14** 01:06:21.6, 39.26N×27.49E, h7km, MD2.9*

*CSEM **14** 01:06:22.0±0.1, 39.26N×27.46E, h10km, MD2.9, Error ellipse: s-maj=2.1km s-min=1.9km az=37.0*
*ATH **14** 01:06:24.7, 39.32N×27.26E, h43km±2km, MD3.2/4*

ISC 14 01:06:22.0±0.9, **39.26N**±0.02×**27.45E**±0.02, **h14**km±9km, **n56, σ0§68/76, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKS	**Akhisar**	**0.48**	**143**	*e*PG		**Pg**	**01 06 31.0**	**-0.4**
AKS				*e*SG		**Sg**	**01 06 37.5**	**-0.3**
AKS	**Akhisar**	**0.48**	**143**	*e*Pg		**Pg**	**01 06 31.0**	**-0.4**
AKS				*e*Sg		**Sg**	**01 06 37.5**	**-0.3**
AKHS	**Akhisar**	**0.48**	**143**	*i* P		**Pg**	**01 06 31.0**	**-0.4**
AKHS				*i* S		**Sg**	**01 06 37.9**	**+0.1**
AKHS	**Akhisar**	**0.48**	**143**	*i* P		**Pg**	**01 06 31.0**	**-0.4**
AKHS				*i* S		**Sg**	**01 06 37.9**	**+0.1**
BALY	**Balya**	**0.50**	**16**	*i* P		**Pg**	**01 06 31.8**	**0.0**
BALY				*i* S		**Sg**	**01 06 39.0**	**+0.5**
BALY	**Balya**	**0.50**	**16**	*i* P		**Pg**	**01 06 31.8**	**0.0**
BALY				*i* S		**Sg**	**01 06 39.0**	**+0.5**
BALB	**Balikesir**	**0.51**	**42**	*e*PG		**Pg**	**01 06 31.7**	**-0.3**
BALB				*e*SG		**Sg**	**01 06 39.0**	**+0.2**
BALB	**Balikesir**	**0.51**	**42**	*e*Pg		**Pg**	**01 06 31.7**	**-0.3**
BALB				*e*Sg		**Sg**	**01 06 39.0**	**+0.2**
GONE	**Gonen-Balikesi**	**0.81**	**13**	*e*PG		**Pg**	**01 06 37.4**	**-0.2**
GONE	**Gonen-Balikesi**	**0.81**	**13**	*e*Pg		**Pg**	**01 06 37.4**	**-0.2**
DURS	**Dursunbey**	**0.87**	**67**	*i* P		**Pg**	**01 06 38.2**	**-0.6**
DURS				*i* S		**Sg**	**01 06 49.5**	**-0.7**
DURS	**Dursunbey**	**0.87**	**67**	*i* P		**Pg**	**01 06 38.2**	**-0.6**
DURS				*i* S		**Sg**	**01 06 49.5**	**-0.7**
PRK	**Paraskevi**	**0.91**	**269**	*e*P		**Pb**	**01 06 40.2**	**+0.7**
PRK				*e*S		**Sg**	**01 06 51.6**	**+0.1**
PRK	**Paraskevi**	**0.91**	**269**	*e*P		**Pb**	**01 06 40.2**	**+0.7**
PRK				*e*S		**Sg**	**01 06 51.6**	**+0.1**
BLCB	**Balcova**	**0.93**	**200**	*e*PG		**Pg**	**01 06 39.7**	**-0.2**
BLCB	**Balcova**	**0.93**	**200**	*e*Pg		**Pg**	**01 06 39.7**	**-0.2**
DST	**Dursunbey**	**0.97**	**69**	*e*PG		**Pg**	**01 06 40.7**	**-0.1**
DST	**Dursunbey**	**0.97**	**69**	*e*Pg		**Pg**	**01 06 40.7**	**-0.1**
DEMI	**Demirci**	**1.01**	**102**	*i* P		**Pg**	**01 06 40.7**	**-0.8**
DEMI				*i* S		**Sg**	**01 06 54.3**	**-0.5**
DEMI	**Demirci**	**1.01**	**102**	*i* P		**Pg**	**01 06 40.7**	**-0.8**
DEMI				*i* S		**Sg**	**01 06 54.3**	**-0.5**
EZN	**Ezine**	**1.03**	**303**	*e*PG		**Pg**	**01 06 41.4**	**-0.5**
EZN				*e*SG		**Sn**	**01 06 56.4**	**+0.2**
EZN	**Ezine**	**1.03**	**303**	*e*Pg		**Pg**	**01 06 41.4**	**-0.5**
EZN				*e*Sg		**Sn**	**01 06 56.4**	**+0.2**
KRBG	**Karabiga-Canak**	**1.14**	**354**	*e*PN		**Pb**	**01 06 43.4**	**0.0**
KRBG	**Karabiga-Canak**	**1.14**	**354**	*e*Pn		**Pb**	**01 06 43.4**	**0.0**
BNT	**Bandirma**	**1.15**	**18**	*e*PN		**Pb**	**01 06 43.8**	**+0.1**
KULA	**Kula-Manisa**	**1.21**	**128**	*e*PN		**Pb**	**01 06 45.0**	**+0.4**
KULA	**Kula-Manisa**	**1.21**	**128**	*e*Pn		**Pb**	**01 06 45.0**	**+0.4**
KCTX	**Karacabey (Bur**	**1.22**	**35**	*e*PN		**Pn**	**01 06 44.3**	**-0.4**
LPK	**Lapseki**	**1.23**	**335**	*e*PN		**Pb**	**01 06 45.3**	**+0.3**
LPK	**Lapseki**	**1.23**	**335**	*e*Pn		**Pb**	**01 06 45.3**	**+0.3**
MRMT	**Marmara Adasi**	**1.34**	**5**	*e*PN		**Pn**	**01 06 46.5**	**+0.1**
MRMT	**Marmara Adasi**	**1.34**	**5**	*e*Pn		**Pn**	**01 06 46.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.36**	**327**	*e*PN		**Pb**	**01 06 47.6**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.36**	**327**	*e*Pn		**Pb**	**01 06 47.7**	**+0.5**
ORLT	**Orhaneli**	**1.37**	**55**	*e*PN		**Pb**	**01 06 47.8**	**+0.5**
ORLT	**Orhaneli**	**1.37**	**55**	*e*Pn		**Pb**	**01 06 47.8**	**+0.5**
CHOS	**Chios island**	**1.39**	**232**	*e*P		**Pb**	**01 06 48.0**	**+0.2**
CHOS				*e*S		**Sn**	**01 07 05.2**	**-0.1**
CHOS	**Chios island**	**1.39**	**232**	*e*P		**Pb**	**01 06 48.0**	**+0.2**
CHOS				*e*S		**Sn**	**01 07 05.2**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.44**	**352**	*e*PN		**Pn**	**01 06 48.0**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.44**	**352**	*e*Pn		**P

40nm,1.0s
NNA Nana 16.57 159 Pn Pn 01 31 59.9 -0.3
0.7nm,0.3s,baz=323,slow=9.5,SNR=5.0
TEIG Tepich 17.38 343 LR LR 01 38 28.8
comp=Z,200nm,18.9s,baz=254,slow=36
SDDR Presa de Saban 19.02 36 Pn P 01 32 29.2 -0.5
PTP Ponta Puerca 22.27 48 eP x 01 29 13.1
LPAZ La Paz 24.51 144 eP P 01 33 27.5 -0.2
38nm,1.5s
LPAZ La Paz 24.51 144 P P 01 33 27.7 0.0
12nm,1.2s,baz=331,slow=9.7,SNR=19
LPAZ LR LR 01 43 41.8
comp=Z,114nm,21.4s,baz=62,slow=38
SIV San Ignacio 29.00 133 LR LR 01 46 45.5
comp=Z,310nm,18.8s,slow=39
632A Uvalde 30.40 330 ⇑P P 01 34 19.8 +0.1
baz=30
631A Perdido Creek 30.72 329 ⇑P P 01 34 23.2 +0.5
baz=31
532A Rocksprings 30.96 330 ⇓P P 01 34 24.8 0.0
baz=31
JCT Junction City 31.20 331 ⇑P P 01 34 26.7 -0.1
baz=31
531A Rocksprings 31.31 330 ⇑P P 01 34 28.8 +0.9
baz=31
530A J-C Ranch, Com 31.71 328 ⇑P P 01 34 31.9 +0.6
baz=32
431A Sonora 31.77 330 ⇑P P 01 34 32.1 +0.2
baz=32,SNR=13
430A Baggett Ranch, 32.17 329 ⇓P P 01 34 35.9 +0.5
baz=32
331A San Angelo 32.19 331 ⇓P P 01 34 36.0 +0.4
baz=32
232A Coleman 32.30 333 ⇓P P 01 34 36.8 +0.3
baz=32
429A Davenport Ranc 32.38 328 ⇓P P 01 34 38.1 +0.8
baz=32
528A Cox Ranch, San 32.50 327 ⇑P P 01 34 39.2 +0.8
baz=33
330A Mertzon 32.63 330 ⇑P P 01 34 39.8 +0.3
baz=33
230A Sterling City 32.99 331 ⇓P P 01 34 42.8 +0.2
baz=33
329A Wagon Wheel Ra 33.11 329 ⇑P P 01 34 44.1 +0.5
baz=33
229A Bryant Ranch, 33.41 330 ⇑P P 01 34 47.2 +1.0
baz=34
Z32A Haskell 33.42 334 ⇑P P 01 34 47.1 +0.8
baz=34
328A Wristen Ranch, 33.45 328 ⇓P P 01 34 47.8 +1.2
baz=34
130A Snyder 33.51 332 ⇑P P 01 34 47.8 +0.8
baz=34
426A McDonald Obser 33.57 326 ⇑P P 01 34 48.9 +1.1
baz=34
228A UT Block 9, Go 33.92 329 ⇓P P 01 34 51.4 +0.6
baz=34
129A Stewart Farms, 33.97 330 ⇓P P 01 34 51.9 +0.8
baz=34
326A Caldwell Ranch 34.04 327 ⇑P P 01 34 52.2 +0.5
baz=34
Z30A Sanderson Ranc 34.15 332 ⇓P P 01 34 53.2 +0.5
baz=34
425A Indio Mountain 34.20 325 ⇑P P 01 34 53.3 0.0
baz=34
128A Castleberry Fa 34.27 330 ⇓P P 01 34 53.6 -0.1
baz=34
Z29A Hungry Hill Ra 34.40 331 ⇑P P 01 34 55.0 +0.1
baz=34,SNR=5.1
Y30A Stafford Cattl 34.54 333 ⇑P P 01 34 56.6 +0.6
baz=35
226B Tecolote Peak, 34.72 327 ⇑P P 01 34 58.2 +0.5
baz=35
324A Moseley Ranch, 34.98 325 ⇓P P 01 35 00.7 +0.7
baz=35
X30A Coker Ranch, T 35.00 333 ⇑P P 01 35 01.2 +1.2
baz=35
MNTX Cornudas Mount 35.11 325 eP P 01 35 01.2 +0.2
1.2nm,0.9s
Z27A Tatum 35.19 330 ⇓P P 01 35 02.5 +0.7
baz=35
125A Gardner Draw, 35.43 327 ⇓P P 01 35 04.4 +0.6
baz=36
224A Cornudas Mount 35.47 326 ⇓P P 01 35 04.3 +0.1
baz=36
MSTX Muleshoe 35.50 331 ⇑P P 01 35 04.9 +0.5
baz=36
Z26A Caprock 35.55 329 ⇓P P 01 35 04.9 +0.1
baz=36
Y27A Causey 35.62 330 ⇓P P 01 35 05.3 -0.1
baz=36
124A Stringfield Ra 35.90 326 ⇑P P 01 35 08.8 +0.8
baz=36
W29A Amraillo 35.91 333 ⇓P P 01 35 08.1 +0.1
baz=36
Z25A Roswell 35.94 328 ⇑P P 01 35 09.0 +0.8
baz=36
Y26A Elida 35.98 330 ⇑P P 01 35 08.8 +0.3
baz=36
X27A F and S Farms, 36.20 331 ⇑P P 01 35 11.0 +0.6
baz=36
Y25A Mesa, Roswell 36.43 329 ⇑P P 01 35 13.1 +0.7
baz=36
X26A CR and CF Fran 36.47 330 ⇑P P 01 35 13.3 +0.5
baz=37
W27A Bowe Ranch, En 36.52 332 ⇓P P 01 35 13.5 +0.4
baz=37
Y24A Capitan 36.82 328 ⇓P P 01 35 16.6 +0.8
baz=37
X25A Clemmons Ranch 36.88 329 ⇓P P 01 35 16.8 +0.5
baz=37
220A Playas Peak, P 37.11 322 ⇑P P 01 35 19.5 +1.3
baz=37
Z22A Elephant Butte 37.16 325 ⇓P P 01 35 19.6 +1.0
baz=37
Y23A Lovelace Mesa, 37.16 327 ⇑P P 01 35 19.6 +0.9
baz=37
W25A X Bar L Ranch, 37.33 330 ⇓P P 01 35 20.6 +0.6
baz=37,SNR=6.6
V26A Tequesquite Ra 37.46 331 ⇑P P 01 35 21.1 0.0
baz=38,SNR=6.8
T29A Hugoton 37.48 335 ⇑P P 01 35 22.1 +0.9
baz=38
U27A Thompson Grove 37.52 333 ⇑P P 01 35 22.4 +0.7
baz=38
120A U Bar Ranch, L 37.62 323 ⇑P P 01 35 24.4 +1.8
baz=38
Y22A Socorro 37.66 326 ⇓P P 01 35 24.1 +1.2
baz=38
T28A Walsh 37.79 334 ⇓P P 01 35 24.3 +0.3
baz=38
W24A Lazy 6 Ranch, 37.80 329 ⇑P P 01 35 24.8 +0.7
baz=38
V25A Rancho No Teng 37.90 331 ⇑P P 01 35 25.6 +0.7
baz=38,SNR=8.2
U26A Atchley Ranch, 37.93 332 ⇑P P 01 35 26.3 +1.2
baz=38,SNR=5.3
Z20A Nine Sixteen R 38.00 324 ⇓P P 01 35 26.8 +1.0
baz=38
T27A Campo 38.01 334 ⇑P P 01 35 26.7 +0.9
baz=38
V24A Rampart Ranch, 38.13 330 ⇑P P 01 35 27.8 +0.9
baz=38
ANMO Albuquerque 38.14 328 eP P 01 35 28.3 +1.3
3.7nm,1.1s
Y20A Horse Springs, 38.44 325 ⇓P P 01 35 30.7 +1.1
baz=38
X21A Alamocita Cree 38.49 326 ⇓P P 01 35 30.9 +0.9
baz=39
CPUP Villa Florida 38.63 142 LR LR 01 52 39.1
comp=Z,121nm,20.1s,baz=129,slow=38
S26A Kim 38.81 333 ⇑P P 01 35 33.1 +0.6
baz=39,SNR=6.2
T25A Trinidad 38.84 332 ⇓P P 01 35 34.0 +1.2
baz=39,SNR=6.6
R27A Eads 39.07 335 ⇓P P 01 35 35.5 +0.9
baz=39
U23A El Rito 39.07 329 ⇓P P 01 35 36.0 +1.2
baz=39
T24A Torres, Weston 39.09 331 ⇓P P 01 35 36.2 +1.1
baz=39
V22A San Miguel Ran 39.12 328 ⇓P P 01 35 36.4 +1.2
baz=39
S25A Robets Cordova 39.28 333 ⇓P P 01 35 37.6 +1.1
baz=39
R26A Arlington 39.36 334 ⇑P P 01 35 38.2 +1.1
baz=40
BDFB Brasilia 39.38 120 LR LR 01 52 35.4
comp=Z,117nm,20.7s,baz=248,slow=37
W20A Ramah 39.39 326 ⇑P P 01 35 39.0 +1.5
baz=40
T23A Casias Ranch, 39.54 330 ⇑P P 01 35 39.8 +1.0
baz=40
S24A Houchin Ranch, 39.62 332 ⇓P P 01 35 40.7 +1.2
baz=40
Q25A Bedland, Calha 40.22 334 ⇓P P 01 35 45.4 +1.1
baz=40
T21A Navajo Lake 40.27 329 ⇑P P 01 35 45.8 +1.1
baz=40
S22A 4UR Ranch, Cre 40.49 330 ⇑P P 01 35 47.7 +1.0
baz=41
Z14A Wintersburg 40.85 320 ⇑P P 01 35 51.3 +1.9
baz=41
MVCO Mesa Verde 40.93 328 eP P 01 35 51.8 +1.5
11nm,1.5s
MVCO Mesa Verde 40.93 328 ⇓P P 01 35 51.1 +0.8
baz=41
P23A Jefferson 41.31 333 ⇓P P 01 35 54.7 +1.3
baz=41
WUAZ Wupatki 41.32 324 eP P 01 35 54.3 +0.9
2.1nm,0.6s
WUAZ Wupatki 41.32 324 ⇓P P 01 35 55.3 +1.9
baz=41
S20A Disappointment 41.33 329 ⇓P P 01 35 54.4 +0.8
baz=41
Q22A Crested Butte, 41.40 331 ⇑P P 01 35 55.0 +0.8
baz=42
ISCO Idaho Springs 41.55 333 ⇓P P 01 35 56.1 +0.7
baz=42
O24A Longmont 41.57 334 ⇑P P 01 35 56.8 +1.4
baz=42
SMCO Snowmass 41.68 331 eP P 01 35 56.5 -0.1
5.1nm,0.8s
P22A Eagle 41.91 332 ⇑P P 01 35 59.2 +0.9
baz=42
O23A Lake Granby, G 42.02 333 ⇑P P 01 36 00.2 +1.0
baz=42
S18A Hurst Farm, Bl 42.09 327 ⇓P P 01 36 01.0 +1.2
baz=42
P21A Newcastle 42.18 331 ⇓P P 01 36 01.5 +1.1
baz=42,SNR=8.1
O22A Kremmling 42.27 333 ⇓P P 01 36 01.8 +0.6
baz=42
U15A North Rim 42.49 324 ⇓P P 01 36 04.7 +1.6
baz=43
N23A Red Feather La 42.59 334 ⇑P P 01 36 04.5 +0.7
baz=43
BC3 Big Chuckawall 42.67 318 ⇑P P 01 36 05.8 +1.4
baz=43
N21A Black Mountain 43.19 332 ⇓P P 01 36 09.9 +1.2
baz=43
N20A Spence Gulch, 43.59 332 ⇓P P 01 36 12.9 +1.0
baz=44
M21A Separation Pea 43.79 333 ⇓P P 01 36 14.3 +0.8
baz=44
M20A Sweetwater, Wa 44.07 332 ⇓P P 01 36 16.8 +1.0
baz=44
BFSC Mount Baldy Ra 44.49 318 ⇓P P 01 36 21.8 +2.7
baz=45
K20A Yellowstone Ra 45.07 333 ⇓P P 01 36 24.3 +0.7
baz=45
J21A Lysite 45.23 335 ⇓P P 01 36 25.7 +0.8
baz=45
M17A Scullys Gap (B 45.24 330 ⇓P P 01 36 26.0 +0.9
baz=45
L18A Fontenelle, Gr 45.28 331 ⇓P P 01 36 26.2 +0.8
baz=45
FURC Furnace Creek, 45.30 321 ⇓P P 01 36 27.2 +1.9
baz=45
K19A Alson Red Bu 45.43 333 ⇑P P 01 36 27.3 +0.8
baz=46
PDAR Pinedale Array 45.71 332 P P 01 36 28.9 +0.1
PDAR Pinedale Array 45.71 332 P P 01 36 28.9 +0.1
1.3nm,1.1s,baz=146,slow=8.2,SNR=6.2
PDAR LR LR 01 56 56.6
comp=Z,82nm,19.1s,baz=165,slow=38
R11A Troy Canyon, C 45.72 324 ⇓P P 01 36 30.2 +1.4
baz=46
K18A Toltan Ranch, 45.83 332 ⇑P P 01 36 30.2 +0.4
baz=46
J19A Crowheart 45.87 333 ⇑P P 01 36 30.7 +0.8
baz=46
GRAC Grapevine Rang 45.95 321 ⇓P P 01 36 32.5 +2.0
baz=46
I20A Worland 46.01 335 ⇓P P 01 36 31.8 +0.8
baz=46
H21A Big Horn, Sher 46.11 336 ⇓P P 01 36 32.9 +1.1
baz=46
J18A Kendall Valley 46.27 332 ⇓P P 01 36 33.6 +0.5
baz=46
MDND Maddock 46.41 344 ⇓P P 01 36 36.2 +2.2
baz=46
I18A Diamond G Ranc 46.55 333 ⇓P P 01 36 36.2 +0.8
baz=47
J17A Brown Place, J 46.70 332 ⇓P P 01 36 37.3 +0.8
baz=47
TPAW Teton Pass 46.91 332 eP P 01 36 40.2 +1.9
3.4nm,0.9s
G20A Bridger 47.07 336 ⇓P P 01 36 39.7 +0.4
baz=47
H18A Shoshone NF, C 47.25 334 ⇓P P 01 36 41.3 +0.5
baz=47
NVAR Mina Array Bea 47.41 322 P P 01 36 41.8 -0.4
NVAR Mina Array Bea 47.41 322 P P 01 36 41.8 -0.4
2.0nm,1.0s,baz=140,slow=7.0,SNR=8.9
H16A Russell Place, 47.98 333 ⇓P P 01 36 47.9 +1.4
baz=48
J14A Carey 48.03 330 ⇑P P 01 36 48.0 +1.1
baz=48
E20A Meyer Farm, Mu 48.08 337 ⇑P P 01 36 48.4 +1.3
baz=48
F18A Big Timber 48.25 335 ⇓P P 01 36 49.7 +1.3
baz=48
E19A Rath Farm, Rou 48.31 336 ⇑P P 01 36 50.0 +1.2
baz=48
H15A Lima 48.56 332 ⇓P P 01 36 52.4 +1.4
baz=49
D20A Manuel Ranch, 48.57 337 ⇓P P 01 36 51.5 +0.7
baz=49
G16A Moss Hill, Enn 48.64 333 ⇑P P 01 36 52.2 +0.7
baz=49
F17A Fitzpatrick Pl 48.65 334 ⇓P P 01 36 52.4 +0.9
baz=49
HLID Hailey 48.66 330 ⇓P P 01 36 52.4 +0.7
baz=49
I13A Hildhorse Cree 48.76 330 ⇓P P 01 36 53.4 +0.9
baz=49
C21A Desert Coulee 48.79 338 ⇑P P 01 36 54.0 +1.6
baz=49
H14A Leadore 48.91 331 ⇑P P 01 36 54.5 +0.9
baz=49
D19A Cripps Ranch, 48.92 337 ⇑P P 01 36 54.8 +1.3
baz=49
E17A Martinsdale 49.17 335 ⇓P P 01 36 56.1 +0.5
baz=50
C19A Slack Wire Ran 49.45 337 ⇑P P 01 36 58.4 +0.9
baz=50
E16A East Helena 49.59 334 ⇑P P 01 36 59.4 +0.7
baz=50
H12A Diamond D Ranc 49.59 330 ⇑P P 01 36 59.6 +0.8
baz=50
D17A Six Diamond Ra 49.65 335 ⇓P P 01 37 00.2 +1.0
baz=50
G13A Cobalt 49.68 331 ⇓P P 01 37 00.8 +1.4
baz=50
D16A Dana Ranch, Ca 49.92 335 ⇑P P 01 37 02.1 +0.9
baz=50
EGMT Eagleton 49.96 337 ⇑P P 01 37 02.6 +1.1
baz=50
B18A Beardsley Farm 50.27 337 ⇑P P 01 37 05.0 +1.2
baz=50
E14A Clinton 50.31 333 ⇑P P 01 37 05.1 +0.9
baz=50
F12A Elk City 50.65 331 ⇑P P 01 37 07.5 +0.7
baz=51
YBMT Yellow Bay 51.63 334 eP P 01 37 15.6 +1.5
SCHQ Schefferville 52.73 12 LR LR 01 58 27.7
comp=Z,60nm,20.2s,baz=62,slow=35
FFC Flin Flon 53.32 346 eP P 01 37 26.6 +0.3
2.6nm,0.9s
YKA Yellowknife Ar 63.33 344 P P 01 38 34.6 -1.5
YKA Yellowknife Ar 63.33 344 P P 01 38 34.6 -1.5
1.7nm,0.8s,baz=139,slow=6.5,SNR=28
PPT Papeete 69.07 250 LR LR 02 00 19.2
comp=Z,143nm,18.3s,baz=127,slow=28
SUMG Summit 74.10 13 eP P 01 39 42.9 -0.6
194nm,2.8s
SUMG Summit 74.10 13 *i* P P 01 39 43.7 +0.1
8.1nm,0.9s
ILAR Eielson Array 75.93 337 P P 01 39 53.6 -0.2
ILAR Eielson Array 75.93 337 P P 01 39 53.6 -0.2
0.5nm,0.9s,baz=134,slow=4.5,SNR=5.5
ILAR LR LR 02 15 18.8
comp=Z,61nm,18.9s,baz=118,slow=37
ESDC Sonseca Array 79.15 50 P P 01 40 12.1 -0.3
ESDC Sonseca Array 79.15 50 P P 01 40 12.1 -0.3
0.5nm,0.6s,baz=268,slow=5.0,SNR=5.1
TORD Torodi Ar. Bea 83.86 77 P P 01 40 37.8 0.0
TORD Torodi Ar. Bea 83.86 77 P P 01 40 37.8 0.0
0.3nm,0.5s,baz=282,slow=6.6,SNR=3.4
NOA NORSAR Array B 88.86 29 LR LR 02 17 24.6
comp=Z,19nm,19.8s,baz=255,slow=33
ASAR Alice Springs 139.30 237 PKP PKPdf 01 47 36.6 +1.2
ASAR Alice Springs 139.30 237 PKP PKPdf 01 47 36.6 +1.2
0.2nm,0.5s,baz=116,slow=2.2,SNR=3.3

IDC 14 02:04:03.3±1.3, 35.70S×17.39W, h0km, mb4.1/5, mb1 4.1/5, mb1mx3.8/20, mbtmp4.1/5, MS3.7/10, Ms1 3.7/10, ms1mx3.4/25, Error ellipse: s-maj=37.1km s-min=22.1km az=4.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDFB	**Brasilia**	**33.85**	**298**	LR	LR	02 22 07.2	
	comp=Z,186nm,19.6s,baz=324,slow=32						
CPUP	**Villa Florida**	**35.28**	**274**	LR	LR	02 24 13.5	
	comp=Z,98nm,18.8s,baz=298,slow=34						
BOSA	**Boshof**	**36.57**	**91**	LR	LR	02 22 59.9	
	comp=Z,82nm,20.9s,baz=230,slow=31						
PLCA	**Paso Flores**	**41.54**	**247**	LR	LR	02 28 40.6	
	comp=Z,58nm,18.3s,baz=358,slow=36						
SIV	**San Ignacio**	**43.51**	**285**	P	P	02 12 09.6	+0.9
	4.8nm,0.9s,baz=132,slow=9.0,SNR=12						
DBIC	**Dimbokro**	**43.77**	**18**	P	P	02 12 10.8	+0.1
	5.4nm,0.8s,baz=169,slow=8.6,SNR=6.3						
DBIC				LR	LR	02 25 23.6	
	comp=Z,65nm,20.8s,baz=347,slow=29						
LPAZ	**La Paz**	**48.96**	**280**	P	P	02 12 51.0	-1.4
	1.3nm,0.9s,baz=114,slow=8.3,SNR=4.7						
LPAZ				LR	LR	02 33 10.7	
	comp=Z,93nm,18.6s,baz=216,slow=36						
TORD	**Torodi Ar. Bea**	**51.84**	**24**	P	P	02 13 12.9	-0.4
	3.2nm,0.9s,baz=200,slow=7.4,SNR=14						
TORD				LR	LR	02 30 30.0	
	comp=Z,118nm,21.2s,baz=195,slow=31						
MAW	**Mawson**	**53.89**	**152**	LR	LR	02 31 55.8	
	comp=Z,43nm,18.6s,baz=25,slow=31						
ROSC	**El Rosal**	**66.82**	**295**	LR	LR	02 42 42.1	
	comp=Z,115nm,19.7s,baz=193,slow=35						
ESDC	**Sonseca Array**	**76.02**	**11**	P	P	02 15 52.3	+0.1
	0.2nm,0.3s,baz=182,slow=7.7,SNR=4.7						
TKL	**Tuckaleechee C**	**94.11**	**312**	LR	LR	02 58 24.0	
	comp=Z,36nm,18.4s,baz=322,slow=35						
YKA	**Yellowknife Ar**	**124.20**	**326**	PKP	PKPdf	02 23 02.1	-0.8
	0.4nm,0.9s,baz=119,slow=2.2,SNR=2.6						
ILAR	**Eielson Array**	**138.31**	**330**	PKP	PKPdf	02 23 30.1	+0.5
	0.3nm,0.8s,baz=91,slow=0.9,SNR=3.5						

*ISCJB **14** 02:12:00.6±0.6, 32.38N±0.03×36.45E±0.03, h21km±5km, Error ellipse: s-maj=5.7km s-min=3.6km az=42.3*
*NSSC **14** 02:12:00.3±0.8, 32.38N×36.41E, h15km±3km, MD0.7, ML2.5*
*CSEM **14** 02:12:00.7±0.1, 32.40N×36.44E, h20km, ML3.3, Error ellipse: s-maj=2.9km s-min=2.4km az=119.0*
*GRAL **14** 02:12:02.0±0.5, 32.46N×36.38E, h0km±5km, MD3.2*
ISC 14 02:12:00.6±1.1, 32.41N±0.03×36.42E±0.03, h16km±8km, n35, σ0.60/58, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SALA	**Sala**	**0.41**	**41**	*i* P	**Pg**	**02 12 09.3**	**+0.4**
SALA				*e*S	**Sb**	**02 12 15.3**	**-0.3**
SALA				AML	AML	02 12 15.7	
	comp=N,899nm,0.4s						
SALA				AML	AML	02 12 17.1	
	comp=E,42nm,0.3s						
SALA	**Sala**	**0.41**	**41**	*i* P	**Pg**	**02 12 09.3**	**+0.4**
	SNR=103						
SALA				*e*S	**Sb**	**02 12 15.3**	**-0.3**
	comp=E,42nm,0.3s,SNR=106						
TCHB	**Talchebab**	**0.46**	**305**	*i* P	**Pg**	**02 12 10.1**	**+0.3**
TCHB				*e*S	**Sg**	**02 12 16.0**	**-0.1**
TCHB				AML	AML	02 12 24.1	
	comp=E,298nm,0.3s						
TCHB				AML	AML	02 12 29.6	
	comp=N,262nm,0.6s						
TCHB	**Talchebab**	**0.46**	**305**	*i* P	**Pg**	**02 12 10.1**	**+0.3**
	SNR=101						
TCHB				*e*S	**Sg**	**02 12 16.0**	**-0.1**
	comp=N,262nm,0.6s,SNR=104						
KSHT	**Keshet**	**0.77**	**319**	Pg	**Pb**	**02 12 15.5**	**-0.2**
HMDT	**Nahal Hemdat**	**0.77**	**259**	Pg	**Pg**	**02 12 15.8**	**+0.2**
HMDT				Sg	**Sb**	**02 12 26.6**	**+0.8**
MMLI	**Mount Malkishu**	**0.84**	**272**	Pg	**Pb**	**02 12 16.8**	**-0.1**
MMLI				Sg	**Sn**	**02 12 29.4**	**-0.5**
ZALF	**Zalf**	**0.93**	**56**	*i* P	**Pb**	**02 12 17.9**	**-0.5**
ZALF				*e*S	**Sb**	**02 12 30.5**	**0.0**
ZALF				AML	AML	02 12 31.2	
	comp=N,136nm,0.2s						
ZALF				AML	AML	02 12 33.1	
	comp=E,225nm,0.5s						
ZALF	**Zalf**	**0.93**	**56**	*i* P	**Pb**	**02 12 17.9**	**-0.5**
	SNR=66						
ZALF				*e*S	**Sb**	**02 12 30.5**	**0.0**
	comp=E,225nm,0.5s,SNR=62						
TOTH	**TOTAH**	**0.95**	**1**	*i* P	**Pb**	**02 12 18.1**	**-0.7**
TOTH				*e*S	**Sb**	**02 12 31.1**	**-0.2**
TOTH				AML	AML	02 12 31.9	
	comp=E,143nm,0.1s						
TOTH				AML	AML	02 12 32.5	
	comp=N,206nm,0.3s						
TOTH	**TOTAH**	**0.95**	**1**	*i* P	**Pb**	**02 12 18.1**	**-0.7**
	SNR=66						
TOTH				*e*S	**Sb**	**02 12 31.0**	**-0.2**
	comp=N,206nm,0.3s,SNR=62						
KSDI	**Kefar Szold**	**1.01**	**321**	Pg	**Pb**	**02 12 18.8**	**-0.9**
KSDI				Sg	**Sb**	**02 12 33.1**	**+0.3**
MMA0	**Mount Meron ar**	**1.05**	**306**	Pg	**Pb**	**02 12 19.7**	**-0.7**
MMA0				Sg	**Sn**	**02 12 35.8**	**+0.7**
MMC7	**Mount Meron ar**	**1.06**	**306**	Pg	**Pb**	**02 12 19.9**	**-0.7**
BLGI	**Bet Lehem HaGe**	**1.08**	**288**	Pg	**Pb**	**02 12 20.7**	**-0.3**
QASN	**Qassioun**	**1.13**	**354**	*e*P	**Pn**	**02 12 21.5**	**-0.4**
QASN				*e*S	**Sb**	**02 12 36.4**	**0.0**
QASN	**Qassioun**	**1.13**	**354**	*e*P	**Pn**	**02 12 21.5**	**-0.4**
	SNR=66						
QASN				*e*S	**Sb**	**02 12 36.4**	**0.0**
	SNR=62						
SLTI	**Sal'it**	**1.18**	**262**	Pg	**Pn**	**02 12 22.2**	**-0.2**
SLTI				Sg	**Sg**	**02 12 39.0**	**+0.3**
RCY	**Rachaya**	**1.19**	**336**	*e*P	**Pn**	**02 12 22.0**	**-0.8**
RCY				*e*S	**Sb**	**02 12 37.2**	**-1.0**
RCY	**Rachaya**	**1.19**	**336**	*e*P	**Pn**	**02 12 22.0**	**-0.8**
RCY				*e*S	**Sb**	**02 12 37.2**	**-1.0**
DSI	**Dead Sea**	**1.21**	**227**	Pg	**Pn**	**02 12 22.2**	**-0.7**
DSI				Sg	**Sn**	**02 12 38.9**	**-0.1**
OFRI	**'Ofer**	**1.23**	**280**	Pg	**Pn**	**02 12 22.7**	**-0.5**
HNTI	**Hanita**	**1.25**	**303**	Pg	**Pn**	**02 12 23.3**	**-0.1**
HNTI				Sg	**Sg**	**02 12 41.1**	**+0.2**
BHL	**Bhannes**	**1.62**	**337**	*e*P	**Pn**	**02 12 29.4**	**+0.7**
BHL	**Bhannes**	**1.62**	**337**	*e*P	**Pn**	**02 12 29.4**	**+0.7**
FKH	**Fakeheh**	**1.83**	**360**	*e*P	**Pb**	**02 12 33.0**	**-0.9**
FKH				*e*S	**Sn**	**02 12 55.5**	**+0.9**
FKH	**Fakeheh**	**1.83**	**360**	*e*P	**Pb**	**02 12 33.0**	**-0.9**
FKH				*e*S	**Sn**	**02 12 55.5**	**+0.9**
HWQ	**Hawqa**	**1.91**	**348**	*e*P	**Pn**	**02 12 33.8**	**+1.2**
HWQ	**Hawqa**	**1.91**	**348**	*e*P	**Pn**	**02 12 33.8**	**+1.2**
RTMI	**Retamim**	**1.99**	**228**	Pn	**Pn**	**02 12 34.0**	**+0.3**
RTMI				Sn	**Sn**	**02 12 59.4**	**+1.1**
KZIT	**Kziot**	**2.28**	**230**	Pn	**Pn**	**02 12 38.1**	**+0.5**
KZIT				Sn	**Sn**	**02 13 05.8**	**+0.4**
PRNI	**Paran**	**2.38**	**211**	Pn	**Pn**	**02 12 38.5**	**-0.5**
HRFI	**Mount Harif**	**2.64**	**207**	Pn	**Pn**	**02 12 42.0**	**-0.6**
KRMI	**Paran Flat**	**2.70**	**213**	Pn	**Pn**	**02 12 43.1**	**-0.4**
MBRI	**Mt Berech**	**2.91**	**207**	Pn	**Pn**	**02 12 46.5**	**+0.2**

*ATH **14** 02:16:50.3, 38.36N×22.02E, h10km, MD2.5/11*
CSEM 14 02:16:50.4, 38.36N×22.01E, h9km, MD2.5, After ATH,

Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.05**	**84**	*e*PG	Pg	02 16 52.2	0.0
TRIZ				*e*SG	Sg	02 16 53.6	0.0
TRIZ	**Trizonia**	**0.05**	**84**	*e*Pg	Pg	02 16 52.2	0.0
TRIZ				*e*Sg	Sg	02 16 53.6	0.0
PSA1	**Psathopyrgos**	**0.10**	**251**	*e*PG	Pg	02 16 53.2	+0.3
PSA1				*e*SG	Sg	02 16 55.3	+0.6
EFP	**Efpalio**	**0.11**	**309**	*e*PG	Pg	02 16 53.0	0.0
EFP				*e*SG	Sg	02 16 55.0	+0.2
EFP	**Efpalio**	**0.11**	**309**	*e*Pg	Pg	02 16 53.0	0.0
EFP				*e*Sg	Sg	02 16 55.0	+0.2
KALE	**Kalithea**	**0.11**	**73**	*e*PG	Pg	02 16 53.0	-0.1
KALE				*e*SG	Sg	02 16 55.0	0.0
KALE	**Kalithea**	**0.11**	**73**	*e*Pg	Pg	02 16 53.0	-0.1
KALE				*e*Sg	Sg	02 16 55.0	0.0
LAKA	**Lakka**	**0.12**	**192**	*e*PG	Pg	02 16 53.5	+0.2
LAKA				*e*SG	Sg	02 16 55.5	+0.2
LAKA	**Lakka**	**0.12**	**192**	*e*Pg	Pg	02 16 53.5	+0.2
LAKA				*e*Sg	Sg	02 16 55.5	+0.2
KLV	**Kalavryta, Ach**	**0.34**	**161**	*e*PG	Pg	02 16 56.7	-0.4
KLV				*e*SB	Sg	02 17 01.4	-0.3
KLV	**Kalavryta, Ach**	**0.34**	**161**	*e*Pb	Pg	02 16 56.7	-0.4
KLV				*e*Sb	Sg	02 17 01.4	-0.3
GUR	**Goura**	**0.50**	**148**	*e*PB	Pg	02 17 00.0	-0.2
GUR				*e*SB	Sg	02 17 07.3	+0.4
GUR	**Goura**	**0.50**	**148**	*e*Pb	Pg	02 17 00.0	-0.2
GUR				*e*Sb	Sg	02 17 07.3	+0.4
RLS	**Riolos of Patr**	**0.52**	**235**	*e*PB	Pg	02 17 00.9	+0.3
RLS				*e*SB	Sg	02 17 07.9	+0.5
RLS	**Riolos of Patr**	**0.52**	**235**	*e*Pb	Pg	02 17 00.9	+0.3
RLS				*e*Sb	Sg	02 17 07.9	+0.5
EVR	**Evrytania**	**0.58**	**344**	*e*PB	Pg	02 17 01.4	-0.4
EVR				*e*SB	Sg	02 17 09.6	+0.1
EVR	**Evrytania**	**0.58**	**344**	*e*Pb	Pg	02 17 01.4	-0.4
EVR				*e*Sb	Sg	02 17 09.6	+0.1
AGG	**Agios Georgios**	**0.71**	**21**	*e*PG	Pg	02 17 03.7	-0.4
AGG				*e*SB	Sg	02 17 13.6	+0.2
AGG	**Agios Georgios**	**0.71**	**21**	*e*Pg	Pg	02 17 03.7	-0.4
AGG				*e*Sb	Sg	02 17 13.6	+0.2
THL	**Klokotos Trika**	**1.20**	**0**	*e*PG	Pb	02 17 12.9	-0.5
THL	**Klokotos Trika**	**1.20**	**0**	*e*Pg	Pb	02 17 12.9	-0.5

*ISCJB **14** 02:17:37.5±0.5,38°.54N±0°.02×21°.89E±0°.05,h26km±4km, Error ellipse: s-maj=6.7km s-min=4.1km az=6.4*
*ATH **14** 02:17:37.5,38°.54N×21°.91E,h23km*
*THE **14** 02:17:38.0,38°.55N×21°.90E,h18km,ML1.6/4, Error ellipse: s-maj=0.5km s-min=0.3km az=261.0*
*CSEM **14** 02:17:49.4±0.2,38°.53N×21°.90E,h20km,MD2.8, Error ellipse: s-maj=7.2km s-min=3.2km az=90.0*
ISC 14 02:17:37.8±0.9,**38°.55N**±0°.02×**21°.90E**±0°.03,**h18**km±3km, **n36**,σ0**s35**/62,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.12**	**177**	P	**Pg**	**02 17 41.6**	**-0.1**
EFP				S	**Sg**	**02 17 44.5**	**+0.2**
EFP	**Efpalio**	**0.12**	**177**	*e*PB	**Pg**	**02 17 41.7**	**0.0**
EFP				*e*SB	**Sg**	**02 17 44.8**	**+0.5**
EFP	**Efpalio**	**0.12**	**177**	*e*Pb	**Pg**	**02 17 41.7**	**0.0**
EFP				S	**Sg**	**02 17 44.5**	**+0.2**
EFP				*e*Sb	Sb	02 17 44.8	+2.3
TRIZ	**Trizonia**	**0.23**	**143**	P	**Pb**	**02 17 43.2**	**-0.1**
TRIZ				S	**Sg**	**02 17 47.3**	**+0.5**
TRIZ	**Trizonia**	**0.23**	**143**	*e*PB	**Pb**	**02 17 43.2**	**-0.1**
TRIZ				*e*SB	**Sg**	**02 17 47.3**	**+0.5**
TRIZ	**Trizonia**	**0.23**	**143**	*e*Pb	**Pb**	**02 17 43.2**	**-0.1**
TRIZ				S	**Sg**	**02 17 47.3**	**+0.5**
KALE	**Kalithea**	**0.24**	**129**	P	**Pg**	**02 17 43.5**	**0.0**
KALE				S	**Sb**	**02 17 47.8**	**+0.3**
KALE	**Kalithea**	**0.24**	**129**	*e*PB	**Pg**	**02 17 43.5**	**0.0**
KALE				*e*SB	**Sb**	**02 17 47.9**	**+0.4**
KALE	**Kalithea**	**0.24**	**129**	*e*Pb	**Pg**	**02 17 43.5**	**0.0**
KALE				*e*Sb	**Sb**	**02 17 47.9**	**+0.4**
LAKA	**Lakka**	**0.31**	**168**	P	**Pg**	**02 17 44.5**	**-0.1**
LAKA				S	**Sb**	**02 17 49.8**	**+0.1**
LAKA	**Lakka**	**0.31**	**168**	*e*PB	**Pg**	**02 17 44.5**	**-0.1**
LAKA				*e*SB	**Sb**	**02 17 49.8**	**+0.1**
LAKA	**Lakka**	**0.31**	**168**	*e*Pb	**Pg**	**02 17 44.5**	**-0.1**
LAKA				S	**Sb**	**02 17 49.8**	**+0.1**
EVR	**Evrytania**	**0.38**	**349**	P	**Pg**	**02 17 45.5**	**-0.3**
EVR				S	**Sb**	**02 17 51.9**	**+0.2**
EVR	**Evrytania**	**0.38**	**349**	*e*PB	**Pg**	**02 17 45.7**	**-0.1**
EVR				*e*SB	**Sb**	**02 17 51.9**	**+0.2**
EVR	**Evrytania**	**0.38**	**349**	*e*Pb	**Pg**	**02 17 45.7**	**-0.1**
EVR				S	**Sb**	**02 17 51.9**	**+0.2**
MAKR	**Makrakomi, Fth**	**0.50**	**21**	P	**Pg**	**02 17 48.0**	**+0.1**
MAKR				S	**Sb**	**02 17 55.1**	**0.0**
MAKR	**Makrakomi, Fth**	**0.50**	**21**	P	**Pg**	**02 17 48.0**	**+0.1**
MAKR				S	**Sb**	**02 17 55.1**	**0.0**
DSF	**Desfina**	**0.51**	**105**	P	**Pg**	**02 17 47.7**	**-0.4**
DSF				S	**Sb**	**02 17 55.8**	**+0.4**
DSF	**Desfina**	**0.51**	**105**	S	**Sb**	**02 17 55.8**	**+0.4**
KLV	**Kalavryta, Ach**	**0.54**	**158**	*e*PN	**Pg**	**02 17 48.1**	**-0.6**
KLV	**Kalavryta, Ach**	**0.54**	**158**	*e*Pn	**Pg**	**02 17 48.1**	**-0.6**
AGG	**Agios Georgios**	**0.58**	**35**	P	**Pb**	**02 17 49.1**	**-0.4**
AGG				S	**Sb**	**02 17 57.7**	**+0.3**
AGG	**Agios Georgios**	**0.58**	**35**	*e*PN	**Pb**	**02 17 49.2**	**-0.3**
AGG	**Agios Georgios**	**0.58**	**35**	P	**Pb**	**02 17 49.1**	**-0.4**
AGG				S	**Sb**	**02 17 57.7**	**+0.3**
RLS	**Riolos of Patr**	**0.59**	**215**	P	**Pb**	**02 17 49.5**	**-0.2**
RLS				S	**Sb**	**02 17 58.4**	**+0.7**
RLS	**Riolos of Patr**	**0.59**	**215**	*e*PN	**Pb**	**02 17 49.5**	**-0.2**
RLS	**Riolos of Patr**	**0.59**	**215**	P	**Pb**	**02 17 49.5**	**-0.2**
RLS				S	**Sb**	**02 17 58.4**	**+0.7**
AXAR	**Agios Charalam**	**0.63**	**70**	P	**Pb**	**02 17 50.2**	**-0.2**
AXAR				S	**Sg**	**02 17 59.5**	**+0.6**
AXAR	**Agios Charalam**	**0.63**	**70**	P	**Pb**	**02 17 50.2**	**-0.2**
AXAR				S	**Sg**	**02 17 59.5**	**+0.6**
GUR	**Goura**	**0.70**	**150**	P	**Pb**	**02 17 51.0**	**-0.5**
GUR				S	**Sg**	**02 18 01.6**	**+0.5**
GUR	**Goura**	**0.70**	**150**	*e*PN	**Pb**	**02 17 51.1**	**-0.5**
GUR	**Goura**	**0.70**	**150**	*e*Pn	**Pb**	**02 17 51.1**	**-0.5**
GUR				S	**Sg**	**02 18 01.6**	**+0.5**
THL	**Klokotos Trika**	**1.02**	**5**	P	**Pb**	**02 17 56.7**	**-0.3**
THL	**Klokotos Trika**	**1.02**	**5**	P	**Pb**	**02 17 56.7**	**-0.3**
VLX	**Vlachokerasia**	**1.23**	**162**	P	**Pn**	**02 18 00.0**	**-0.3**
VLX	**Vlachokerasia**	**1.23**	**162**	P	**Pn**	**02 18 00.0**	**-0.3**

*CSEM **14** 02:17:37.6±0.1,38°.54N×21°.90E,h20km,ML1.6/4, Error ellipse: s-maj=4.1km s-min=2.3km az=94.0*
*THE **14** 02:17:50.0,38°.55N×21°.90E,h17km,ML2.1/3, Error ellipse: s-maj=0.9km s-min=0.3km az=100.0*
ATH 14 02:17:48.3,38°.55N×21°.83E,h25km±1km,**MD2.8**/6, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.14**	**154**	P	Pb	02 17 53.6	+0.3
EFP				S	Sb	02 17 56.6	0.0
EFP	**Efpalio**	**0.14**	**154**	*e*PB	Pb	02 17 53.6	+0.3
EFP				*e*SB	Sb	02 17 56.7	+0.1
EFP	**Efpalio**	**0.14**	**154**	P	Pb	02 17 53.6	+0.3
EFP				*e*Sb	Sb	02 17 56.7	+0.1
TRIZ	**Trizonia**	**0.27**	**134**	P	Pb	02 17 55.0	+0.2
TRIZ				S	Sb	02 17 59.2	0.0
TRIZ	**Trizonia**	**0.27**	**134**	*e*PB	Pb	02 17 55.1	+0.3
TRIZ				*e*SB	Sb	02 17 59.3	+0.1
TRIZ	**Trizonia**	**0.27**	**134**	*e*Pb	Pb	02 17 55.1	+0.3
TRIZ				S	Sb	02 17 59.2	0.0
KALE	**Kalithea**	**0.29**	**123**	P	Pb	02 17 55.2	-0.1
KALE				S	Sb	02 17 59.8	-0.2
KALE	**Kalithea**	**0.29**	**123**	*e*PB	Pb	02 17 55.4	+0.1
KALE				*e*SB	Sb	02 18 00.2	+0.2
KALE	**Kalithea**	**0.29**	**123**	*e*Pb	Pb	02 17 55.4	+0.1
KALE				S	Sb	02 17 59.8	-0.2
KALE				*e*Sb	Sn	02 18 00.2	-2.5
LAKA	**Lakka**	**0.33**	**159**	P	Pb	02 17 56.3	+0.5
LAKA				S	Sb	02 18 01.9	+0.9
LAKA	**Lakka**	**0.33**	**159**	*e*PB	Pb	02 17 55.6	-0.2
LAKA				*e*SB	Sb	02 18 01.5	+0.5
LAKA	**Lakka**	**0.33**	**159**	*e*Pb	Pb	02 17 55.6	-0.2
LAKA	**Lakka**	**0.33**	**159**	P	Pb	02 17 56.3	+0.5
LAKA				*e*Sb	Sb	02 18 01.5	+0.5
LAKA				S	Sn	02 18 01.9	-1.7
EVR	**Evrytania**	**0.37**	**357**	P	Pn	02 17 57.8	-0.4
EVR				S	Sb	02 18 03.3	+1.2
EVR	**Evrytania**	**0.37**	**357**	*e*PB	Pb	02 17 56.5	0.0
EVR	**Evrytania**	**0.37**	**357**	*e*Pb	Pb	02 17 56.5	0.0
EVR	**Evrytania**	**0.37**	**357**	P	Pn	02 17 57.8	-0.4
EVR				S	Sb	02 18 03.3	+1.2
MAKR	**Makrakomi, Fth**	**0.52**	**27**	P	Pn	02 17 59.7	-0.5
MAKR				S	Sn	02 18 07.9	-0.4
MAKR	**Makrakomi, Fth**	**0.52**	**27**	P	Pn	02 17 59.7	-0.5
MAKR				S	Sn	02 18 07.9	-0.4
RLS	**Riolos of Patr**	**0.57**	**210**	P	Pn	02 18 01.3	+0.5
RLS				S	Sn	02 18 10.6	+1.2
RLS	**Riolos of Patr**	**0.57**	**210**	P	Pn	02 18 01.3	+0.5
RLS				S	Sn	02 18 10.6	+1.2
AGG	**Agios Georgios**	**0.61**	**40**	P	Pn	02 18 01.5	0.0
AGG				S	Sn	02 18 09.9	-0.7
AGG	**Agios Georgios**	**0.61**	**40**	P	Pn	02 18 01.5	0.0
AGG				S	Sn	02 18 09.9	-0.7
GUR	**Goura**	**0.73**	**146**	*e*PN	Pb	02 18 02.2	-0.4
GUR	**Goura**	**0.73**	**146**	*e*Pn	Pb	02 18 02.2	-0.4
THL	**Klokotos Trika**	**1.02**	**8**	P	Pb	02 18 09.2	+1.8
THL				S	Sn	02 18 23.1	+2.5
THL	**Klokotos Trika**	**1.02**	**8**	P	Pb	02 18 09.2	+1.8
THL				S	Sn	02 18 23.1	+2.5

*CSEM **14** 02:18:07.6,36°.45N×21°.65E,h31km,MD3.0, After ATH*
ATH 14 02:18:07.6,36°.45N×21°.65E,h31km±3km,**MD3.0**/5, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.45**	**9**	P	Pb	02 18 17.2	-0.2
PYL	**PYLOS**	**0.45**	**9**	*e*PB	Pb	02 18 17.4	0.0
PYL				*e*SB	Sn	02 18 24.8	-0.2
PYL	**PYLOS**	**0.45**	**9**	P	Pb	02 18 17.2	-0.2
PYL	**PYLOS**	**0.45**	**9**	*e*Pb	Pb	02 18 17.4	0.0
PYL				*e*Sb	Sn	02 18 24.8	-0.2
DYR	**Agios Nikonas**	**0.63**	**60**	*e*PN	Pn	02 18 20.5	0.0
DYR				*e*SN	Sn	02 18 30.1	+0.5
DYR	**Agios Nikonas**	**0.63**	**60**	*e*Pn	Pn	02 18 20.5	0.0
DYR				*e*Sn	Sn	02 18 30.1	+0.5
ITM	**Ithomi**	**0.76**	**17**	*e*PN	Pb	02 18 23.4	+0.9
ITM				*e*SN	Sn	02 18 34.1	+1.3
ITM	**Ithomi**	**0.76**	**17**	*e*Pn	Pb	02 18 23.4	+0.9
ITM				*e*Sn	Sn	02 18 34.1	+1.3
VLI	**Veliai**	**1.07**	**75**	*e*PN	Pb	02 18 27.4	-0.2
VLI	**Veliai**	**1.07**	**75**	*e*Pn	Pb	02 18 27.4	-0.2
KYTH	**Kithira**	**1.13**	**98**	*e*PN	Pb	02 18 29.1	+0.4
KYTH	**Kithira**	**1.13**	**98**	*e*Pn	Pb	02 18 29.1	+0.4

*IDC **14** 02:19:29.0±1.5,25°.25N×123°.09E,h0km,mb3.6/4, mb1 3.7/5,mb1mx3.4/27,mbtmp3.6/5,ML3.8/1, Error ellipse: s-maj=65.8km s-min=24.0km az=69.0*
*ISCJB **14** 02:19:44.7±0.4,24°.87N±0°.03×122°.44E±0°.02, h127km±3km,mb3.5/4, Error ellipse: s-maj=4.7km s-min=2.9km az=161.5*
*TAP **14** 02:19:45.2,24°.92N×122°.43E,h122km,ML4.3,C*
*JMA **14** 02:19:45.9±0.3,24°.95N×122°.45E,h116km±3km,M3.2*
ISC 14 02:19:44.6±0.9,**24°.89N**±0°.04×**122°.42E**±0°.03,**h128**km±6km, **n64**,σ0**s97**/116,**mb3.5**/4,**5C-1D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.41**	**287**	⇑*i*P	**Pn**	**02 20 03.3**	**+0.3**
baz=282							
TWB1				*e*S	**Sn**	**02 20 16.5**	**-0.4**
baz=282							
TWC	**Suao**	**0.59**	**242**	⇑*i*P	**Pn**	**02 20 04.2**	**+0.2**
baz=232							
TWC				*e*S	**Sn**	**02 20 18.1**	**-0.6**
baz=232							
NWF	**Wu-fen Shan**	**0.61**	**288**	P	**Pn**	**02 20 04.4**	**+0.1**
baz=284							
NWF				*e*S	**Sn**	**02 20 19.1**	**0.0**
baz=284							
ILA	**Ilan**	**0.62**	**259**	*e*P	**Pn**	**02 20 05.4**	**+1.2**
baz=248							
ILA				*e*S	**Sn**	**02 20 19.4**	**+0.3**
baz=248							
YOJ	**Yonaguni jima**	**0.68**	**128**	P	**Pn**	**02 20 04.9**	**+0.2**
YOJ				S	**Sn**	**02 20 19.8**	**0.0**
TWE	**Neicheng**	**0.71**	**257**	P	**Pn**	**02 20 05.5**	**+0.7**
baz=253							
TWE				*e*S	**Sn**	**02 20 19.7**	**-0.5**
baz=253							
ENA	**Nanau**	**0.77**	**234**	⇑*i*P	**Pn**	**02 20 06.1**	**+0.7**
baz=226							
ENA				*e*S	**Sn**	**02 20 20.7**	**-0.3**
baz=226							
PCYT	**Pengchaiyu**	**0.81**	**337**	P	**Pn**	**02 20 06.4**	**+0.7**
baz=336							
PCYT				*e*S	**Sn**	**02 20 22.5**	**+0.9**
baz=336							
ENTT	**Nioudou**	**0.82**	**253**	P	**Pn**	**02 20 06.5**	**+0.7**
baz=249							
ENTT				*e*S	**Sn**	**02 20 23.0**	**+1.2**
baz=249							
TAP1	**Taipei**	**0.83**	**281**	*e*P	**Pn**	**02 20 06.2**	**+0.4**
baz=270							
TAP1				*e*S	**Sn**	**02 20 21.4**	**-0.5**
baz=270							
TWY	**Chenhua**	**0.84**	**298**	P	**Pn**	**02 20 06.3**	**+0.4**
baz=290							
TWY				*e*S	**Sn**	**02 20 21.8**	**-0.3**
baz=290							
TAP	**Taipei**	**0.85**	**280**	*e*P	**Pn**	**02 20 06.6**	**+0.6**
baz=270							
TAP				*e*S	**Sn**	**02 20 20.2**	**-1.9**
baz=270							
TWS1	**Kuangyinshan**	**0.94**	**283**	P	**Pn**	**02 20 07.3**	**+0.6**
baz=281							
TWS1				*e*S	**Sn**	**02 20 23.5**	**-0.1**
baz=281							
NSK	**Sanguang**	**0.99**	**258**	P	**Pn**	**02 20 07.9**	**+0.5**
baz=255							
NSK				*e*S	**Sn**	**02 20 24.4**	**-0.2**
baz=255							
NNS	**Nan Shan**	**1.05**	**245**	⇑*i*P	**Pn**	**02 20 09.0**	**+1.0**
baz=235							
NNS				*e*S	**Sn**	**02 20 26.2**	**+0.5**
baz=235							
TWD	**Chiawan**	**1.10**	**223**	*i* P	**Pn**	**02 20 08.6**	**+0.2**
baz=217							
TWD				*e*S	**Sn**	**02 20 26.5**	**+0.1**
baz=217							
NCU	**National Centr**	**1.12**	**274**	*e*P	**Pn**	**02 20 09.3**	**+0.7**
baz=272							
NCU				*e*S	**Sn**	**02 20 27.9**	**+1.1**
baz=272							
HWA	**Hwalien**	**1.17**	**220**	P	**Pn**	**02 20 09.6**	**+0.5**
baz=218							
HWA				*e*S	**Sn**	**02 20 28.1**	**+0.5**
baz=218							
WHF	**Hehuan Shan**	**1.29**	**235**	⇑*i*P	**Pn**	**02 20 11.5**	**+0.8**
baz=230							
WHF				*e*S	**Sn**	**02 20 30.6**	**+0.1**
baz=230							
TWT	**Tachien**	**1.30**	**241**	*e*P	**Pn**	**02 20 12.1**	**+1.5**
baz=235							
TWT				*e*S	**Sn**	**02 20 31.1**	**+0.8**
baz=235							
IRIF	**Iriomote-Funau**	**1.31**	**115**	*e*S	**Sn**	**02 20 29.4**	**-0.8**
NSTT	**Nanjuang**	**1.32**	**259**	⇓*i*P	**Pn**	**02 20 11.1**	**+0.6**
baz=257							
NSTT				*e*S	**Sn**	**02 20 29.7**	**-0.6**
baz=257							
HSN	**Hsinchu**	**1.32**	**267**	*e*P	**Pn**	**02 20 11.1**	**+0.5**
baz=257							
HSN				*e*S	**Sn**	**02 20 30.2**	**-0.2**
baz=257							
ESL	**Shilin**	**1.40**	**220**	P	**Pn**	**02 20 11.4**	**-0.1**
baz=225							
ESL				*e*S	**Sn**	**02 20 30.8**	**-1.1**
baz=225							
HATJ	**Hateruma jima**	**1.51**	**123**	P	**Pn**	**02 20 13.6**	**+0.9**
HATJ				S	**Sn**	**02 20 34.3**	**+0.3**
JKRS	**Kuro-shima**	**1.58**	**114**	P	**Pn**	**02 20 14.5**	**+1.0**
JKRS				S	**Sn**	**02 20 35.8**	**+0.2**
NSY	**Sanyi**	**1.58**	**253**	P	**Pn**	**02 20 14.5**	**+0.9**
baz=251							
NSY				*e*S	**Sn**	**02 20 36.0**	**+0.4**
baz=251							
TWQ1	**Liyutan**	**1.59**	**251**	P	**Pn**	**02 20 14.4**	**+0.7**
baz=257							
TWQ1				*e*S	**Sn**	**02 20 35.7**	**-0.1**
baz=257							
JIJ	**Ishigaki jima**	**1.65**	**108**	P	**Pn**	**02 20 14.9**	**+0.6**
JIJ				S	**Sn**	**02 20 36.4**	**-0.5**
EHY	**Hungye**	**1.70**	**216**	P	**Pn**	**02 20 14.7**	**-0.3**
baz=221							
EHY				*e*S	**Sn**	**02 20 37.0**	**-1.1**
baz=221							
SMLT	**Sun Moon Lake**	**1.71**	**235**	P	**Pn**	**02 20 16.4**	**+1.2**
baz=231							
SMLT				*e*S	**Sn**	**02 20 39.5**	**+1.1**
baz=231							
TYC	**Yuchr**	**1.73**	**236**	P	**Pn**	**02 20 16.7**	**+1.4**
baz=234							
TYC				*e*S	**Sn**	**02 20 39.7**	**+1.1**
baz=234							
TCU	**Taichung**	**1.75**	**246**	P	**Pn**	**02 20 16.4**	**+0.9**
baz=250							
TCU				*e*S	**Sn**	**02 20 38.8**	**-0.3**
baz=250							
TWF1	**Yuli**	**1.84**	**214**	P	**Pn**	**02 20 16.3**	**-0.3**
baz=220							
TWF1				*e*S	**Sn**	**02 20 40.5**	**-0.6**
baz=220							
WNT	**Mingjian**	**1.88**	**238**	*e*P	**Pn**	**02 20 18.5**	**+1.5**
baz=236							
WNT				*e*S	**Sn**	**02 20 43.3**	**+1.5**
baz=236							
ALS	**Alishan**	**2.02**	**227**	*e*P	**Pn**	**02 20 20.8**	**+1.8**
baz=218							
ALS				*e*S	**Sn**	**02 20 47.7**	**+2.5**
baz=218							
CHKT	**Chengkung**	**2.03**	**209**	P	**Pn**	**02 20 18.9**	**+0.1**
baz=201							
CHKT				*e*S	**Sn**	**02 20 43.8**	**-1.3**
baz=201							
CHN5	**Tsauling**	**2.05**	**231**	P	**Pn**	**02 20 20.7**	**+1.5**
baz=238							
CHN5				*e*S	**Sn**	**02 20 46.0**	**+0.4**
baz=238							
WGK	**Gukeng**	**2.08**	**235**	*e*P	**Pn**	**02 20 20.8**	**+1.3**
baz=233							
WGK				*e*S	**Sn**	**02 20 48.4**	**+2.2**
baz=233							
JTJ	**Tarama**	**2.09**	**96**	P	**Pn**	**02 20 20.7**	**+1.2**
JTJ				S	**Sn**	**02 20 46.3**	**0.0**
ELDTW	**Lidau**	**2.12**	**218**	P	**Pn**	**02 20 20.6**	**+0.4**
baz=219							
ELDTW				*e*S	**Sn**	**02 20 47.3**	**-0.1**
baz=219							
WTCT	**Ta-ch'eng**	**2.20**	**243**	*e*P	**Pn**	**02 20 21.3**	**+0.3**
baz=241							
WTCT				*e*S	**Sn**	**02 20 48.9**	**+0.1**
baz=241							
CHN2	**Minshiung**	**2.23**	**233**	*e*P	**Pn**	**02 20 22.3**	**+1.0**
baz=239							
CHN2				*e*S	**Sn**	**02 20 51.1**	**+1.5**
baz=239							
CHN4	**Tsaushan**	**2.27**	**228**	P	**Pn**	**02 20 23.4**	**+1.5**
baz=226							
CHN4				*e*S	**Sn**	**02 20 51.0**	**+0.7**
baz=226							
CHY	**Chiayi**	**2.29**	**233**	*e*P	**Pn**	**02 20 23.9**	**+1.8**
baz=239							
CHY				*e*S	**Sn**	**02 20 51.8**	**+1.0**
baz=239							
WTP	**Ta-pu**	**2.33**	**226**	*e*S	**Sn**	**02 20 51.7**	**0.0**
baz=224							
WSF	**Szhu**	**2.36**	**239**	*e*S	**Sn**	**02 20 53.9**	**+1.4**
baz=237							
TWK	**Hsinying**	**2.39**	**228**	*e*P	**Pn**	**02 20 24.8**	**+1.3**
baz=226							
TWK				*e*S	**Sn**	**02 20 54.6**	**+1.3**
baz=226							
TWG	**Pinlang**	**2.40**	**211**	*e*P	**Pn**	**02 20 23.4**	**-0.1**
baz=210							
TWG				*e*S	**Sn**	**02 20 52.7**	**-0.7**
baz=210							
CHN1	**Nanshi**	**2.42**	**226**	*e*P	**Pn**	**02 20 25.2**	**+1.3**
baz=224							
CHN1				*e*S	**Sn**	**02 20 55.6**	**+1.7**
baz=224							
TTN	**Taitung**	**2.42**	**209**	*e*P	**Pn**	**02 20 24.7**	**+0.9**
baz=213							
TTN				*e*S	**Sn**	**02 20 54.0**	**+0.1**
baz=213							
JOGS	**Gusukube**	**2.71**	**92**	*e*S	**Sn**	**02 21 01.6**	**+1.1**
EAST	**Anshuo**	**2.88**	**210**	*e*P	**Pn**	**02 20 31.4**	**+1.7**
baz=206							
PNG	**Penghu**	**2.93**	**244**	*e*P	**Pn**	**02 20 30.1**	**-0.2**
baz=242							
PNG				*e*S	**Sn**	**02 21 03.6**	**-1.9**
baz=242							
LAY	**Lan-yu**	**2.95**	**196**	*e*P	**Pn**	**02 20 30.5**	**0.0**
baz=196							
LAY				*e*S	**Sn**	**02 21 03.9**	**-2.1**
baz=196							
WDGT	**Dungji**	**3.00**	**238**	P	**Pn**	**02 20 31.5**	**+0.3**
baz=236							
WDGT				*e*S	**Sn**	**02 21 05.4**	**-1.7**
baz=236							
SCZT	**Fangliau**	**3.00**	**214**	*e*P	**Pn**	**02 20 32.6**	**+1.4**
baz=212							
SCZT				*e*S	**Sn**	**02 21 06.3**	**-0.9**
baz=212							
TWK1	**Hengchun**	**3.29**	**207**	*e*P	**Pn**	**02 20 35.7**	**+0.8**
baz=201							
JKE	**Kume jima 2**	**4.19**	**69**	P	**Pn**	**02 20 47.6**	**+0.7**
JKE				*e*S	**Sn**	**02 21 35.7**	**+0.5**
KSRS	**Korea Array**	**13.38**	**19**	P	Pn	02 22 32.4	-17
0.6nm,0.3s,baz=194,slow=16,SNR=3.4							
SONM	**Songino Array**	**26.18**	**335**	P	**P**	**02 25 06.7**	**-0.5**
0.2nm,0.3s,baz=148,slow=8.6,SNR=3.8							
MKAR	**Makanchi Array**	**38.63**	**315**	P	**P**	**02 26 55.1**	**-0.3**
0.5nm,0.4s,baz=100,slow=10,SNR=9.4							

DBIC				LR	LR	02 53 59.7		
	comp=Z,73nm,19.6s,baz=338,slow=30							
LSZ	**Lusaka**	**45.44**	**76**	P	**P**	**02 40 35.6**	**-1.2**	
LSZ	**Lusaka**	**45.44**	**76**	P	**P**	**02 40 35.6**	**-1.2**	
	1.1nm,0.7s,baz=212,slow=9.5,SNR=2.6							
LPAZ	**La Paz**	**48.79**	**279**	P	**P**	**02 41 02.6**	**-0.9**	
LPAZ	**La Paz**	**48.79**	**279**	P	**P**	**02 41 02.6**	**-0.9**	
	2.4nm,1.1s,baz=115,slow=8.3,SNR=5.4							
LPAZ				LR	LR	03 01 13.0		
	comp=Z,129nm,18.9s,baz=248,slow=36							
SAML	**Samuel**	**49.19**	**291**	*e*P	**P**	**02 41 06.7**	**+0.8**	
	15nm,1.3s							
TOA0	**Torodi Ar. Sit**	**51.55**	**24**	*e*P	**P**	**02 41 24.2**	**+0.6**	
TORD	**Torodi Ar. Bea**	**51.55**	**24**	P	**P**	**02 41 24.6**	**+0.9**	
TORD	**Torodi Ar. Bea**	**51.55**	**24**	P	**P**	**02 41 24.6**	**+0.9**	
	6.7nm,1.0s,baz=199,slow=6.9,SNR=32							
TORD				LR	LR	02 58 55.1		
	comp=Z,101nm,20.4s,baz=185,slow=31							
MAW	**Mawson**	**54.25**	**152**	P	**P**	**02 41 42.2**	**-0.7**	
MAW	**Mawson**	**54.25**	**152**	P	**P**	**02 41 42.2**	**-0.7**	
	3.1nm,0.9s,baz=281,slow=5.2,SNR=3.6							
MAW				LR	LR	02 59 36.1		
	comp=Z,104nm,18.1s,baz=111,slow=30							
QSPA	**South Pole Qui**	**54.90**	**180**	*e*P	**P**	**02 41 49.4**	**+1.5**	
	7.4nm,1.0s							
QSPA	**South Pole Qui**	**54.90**	**180**	P	**P**	**02 41 48.2**	**+0.2**	
	5.0nm,0.9s,baz=220,slow=4.4,SNR=13							
ROSC	**El Rosal**	**66.57**	**295**	LR	LR	03 10 45.3		
	comp=Z,212nm,18.4s,baz=187,slow=35							
KEST	**Kesra**	**75.02**	**22**	LR	LR	03 13 51.9		
	comp=Z,53nm,18.5s,baz=203,slow=33							
ESDC	**Sonseca Array**	**75.69**	**11**	P	**P**	**02 44 02.6**	**-0.1**	
ESDC	**Sonseca Array**	**75.69**	**11**	P	**P**	**02 44 02.6**	**-0.1**	
	0.1nm,0.3s,baz=203,slow=5.6,SNR=2.8							
GERES	**GERESS Array B**	**88.31**	**20**	LR	LR	03 23 47.2		
	comp=Z,60nm,18.0s,baz=216,slow=35							
BHD	**Baghdad**	**89.54**	**48**	*i* x	P	02 45 08.0	-6.8	
BHD				*i* x	x	02 55 55.0		
NOA	**NORSAR Array B**	**98.88**	**14**	LR	LR	03 26 05.8		
	comp=Z,22nm,18.2s,baz=255,slow=33							
YKA	**Yellowknife Ar**	**123.84**	**326**	PKP	**PKPdf**	**02 51 14.2**	**-0.4**	
YKA	**Yellowknife Ar**	**123.84**	**326**	PKP	**PKPdf**	**02 51 14.2**	**-0.4**	
	0.3nm,0.7s,baz=98,slow=1.8,SNR=5.2							
ILAR	**Eielson Array**	**137.95**	**330**	PKPpre	PKPpre	02 51 38.1		
ILAR	**Eielson Array**	**137.95**	**330**	PKhKP	PKPpre	02 51 38.1		
	0.4nm,1.0s,baz=71,slow=3.3,SNR=3.4							
KSAR	**Wonju Array Be**	**152.17**	**75**	PKPab	**PKPab**	**02 52 23.3**	**+0.5**	
KSRS	**Korea Array**	**152.20**	**75**	PKPab	**PKPab**	**02 52 23.3**	**+0.4**	
	0.4nm,0.4s,baz=251,slow=3.7,SNR=2.3							

IDC ***14*** *02:42:06.3±0.7, 56.77S×25.50W, 0* ^{km}*, mb4.4/7, mb1 4.4/8, mb1mx4.2/19, mbtmp4.4/8, ML3.8/1, MS3.8/5, Ms1 3.8/5, ms1mx3.5/19, Error ellipse: s-maj=25.7km s-min=17.1km az=62.0*

ISCJB ***14*** *02:42:09.9±0.7, 56.8S±0.1×25.5W±0.3, h35* ^{km}*, mb4.4/11, MS3.9/5, Error ellipse: s-maj=24.6km s-min=9.2km az=149.8*

NEIC ***14*** *02:42:11.7±0.4, 56.80S×25.60W, h35* ^{km}*, mb4.6/3, Error ellipse: s-maj=15.9km s-min=8.5km az=59.0*

ISC 14 02:42:11.8±0.6, 56.8S±0.1×25.6W±0.2, h35^{km}**, n39, σ0.9 69/38, mb4.5/11, MS3.8/5, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
VNA1	**Neumayer--Stat**	**15.79**	**159**	*e*Pn		**Pn**	**02**	**45 51.8**	**+0.8**
VNA2	**Neumayer--Watz**	**16.18**	**158**	*e*Pn		**Pn**	**02**	**45 55.1**	**-1.0**
SNAA	**Sanae**	**17.71**	**156**	*e*Pn		**P**	**02**	**46 16.6**	**+0.7**
SNAA	**Sanae**	**17.71**	**156**	*e*Pn		**Pn**	**02**	**46 14.7**	**-0.6**
	8.5nm,0.6s								
SNAA				S		Sn	02	49 17.4	-14
SNAA	**Sanae**	**17.71**	**156**	P		**Pn**	**02**	**46 14.8**	**-0.4**
	0.3nm,0.3s,baz=321,slow=11,SNR=39								
SNAA				S		Sn	02	49 17.4	-14
	0.0nm,0.3s,baz=324,slow=19,SNR=2.1								
USHA	**Ushuaia**	**23.85**	**256**	P		**P**	**02**	**47 21.3**	**-0.1**
USHA	**Ushuaia**	**23.85**	**256**	P		**P**	**02**	**47 21.3**	**-0.1**
	10nm,0.7s,baz=150,slow=20,SNR=5.4								
PLCA	**Paso Flores**	**32.99**	**280**	LR		LR	03	00 35.3	
	comp=Z,148nm,18.8s,baz=187,slow=34								
QSPA	**South Pole Qui**	**33.46**	**180**	*e*P		**P**	**02**	**48 47.0**	**-0.2**
	7.6nm,0.6s								
QSPA	**South Pole Qui**	**33.46**	**180**	P		**P**	**02**	**48 47.4**	**+0.2**
	7.5nm,0.6s,baz=207,slow=2.3,SNR=55								
CPUP	**Villa Florida**	**37.95**	**310**	P		**P**	**02**	**49 26.1**	**+0.3**
CPUP	**Villa Florida**	**37.95**	**310**	P		**P**	**02**	**49 26.1**	**+0.3**
	4.1nm,0.5s,baz=134,slow=7.3,SNR=16								
CPUP				LR		LR	03	03 01.4	
	comp=Z,81nm,21.0s,baz=140,slow=33								
CFAA	**Coronel Fontan**	**38.65**	**292**	P		**P**	**02**	**49 30.4**	**-1.3**
CFAA	**Coronel Fontan**	**38.65**	**292**	P		**P**	**02**	**49 30.4**	**-1.3**
	0.3nm,0.6s,baz=153,slow=8.6,SNR=9.5								
BDFB	**Brasilia**	**44.44**	**328**	P		**P**	**02**	**50 19.0**	**-0.3**
BDFB	**Brasilia**	**44.44**	**328**	P		**P**	**02**	**50 19.0**	**-0.3**
	4.6nm,0.9s,baz=118,slow=5.7,SNR=4.8								
BOSA	**Boshof**	**45.32**	**74**	LR		LR	03	05 53.8	
	comp=Z,198nm,19.9s,baz=190,slow=32								
VNDA	**Vanda**	**45.87**	**182**	*e*P		**P**	**02**	**50 30.1**	**+0.2**
VNDA	**Vanda**	**45.87**	**182**	P		**P**	**02**	**50 29.3**	**-0.6**
	1.6nm,0.8s,baz=187,slow=6.2,SNR=14								
LBTB	**Lobatse**	**48.40**	**71**	LR		LR	03	06 14.4	
	comp=Z,98nm,21.2s,baz=48,slow=30								
LPAZ	**La Paz**	**51.51**	**304**	P		**P**	**02**	**51 15.9**	**+1.3**
LPAZ	**La Paz**	**51.51**	**304**	P		**P**	**02**	**51 15.9**	**+1.3**
	45nm,0.7s,baz=147,slow=5.5,SNR=214								
SAML	**Samuel**	**55.94**	**313**	*e*P		**P**	**02**	**51 46.5**	**+0.3**
	8.4nm,1.0s								
OTAV	**Otavalo**	**70.79**	**302**	*e*P		**P**	**02**	**53 24.1**	**-0.9**
	11nm,1.1s								
TORD	**Torodi Ar. Bea**	**73.28**	**28**	P		**P**	**02**	**53 39.0**	**-0.4**
TORD	**Torodi Ar. Bea**	**73.28**	**28**	P		**P**	**02**	**53 39.0**	**-0.4**
	0.6nm,0.6s,baz=197,slow=5.8,SNR=14								
PPT	**Papeete**	**92.45**	**232**	LR		LR	03	26 33.3	
	comp=Z,94nm,21.2s,baz=167,slow=29								
TEIG	**Tepich**	**92.84**	**303**	P		**P**	**02**	**55 21.1**	**+0.7**
TEIG	**Tepich**	**92.84**	**303**	P		**P**	**02**	**55 21.1**	**+0.7**
	4.8nm,0.7s,baz=107,slow=20,SNR=3.5								
CMAR	**Chiang Mai Arr**	**123.99**	**109**	PKP		**PKPdf**	**03**	**01 05.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**123.99**	**109**	PKP		**PKPdf**	**03**	**01 05.6**	**-0.5**
	0.7nm,0.3s,baz=233,slow=4.4,SNR=3.7								
YKA	**Yellowknife Ar**	**137.31**	**317**	PKP		**PKPdf**	**03**	**01 29.8**	**+0.1**
YKA				SKPbc		**SKPbc**	**03**	**05 01.2**	**+1.2**
YKA	**Yellowknife Ar**	**137.31**	**317**	PKP		**PKPdf**	**03**	**01 29.8**	**+0.1**
	1.8nm,0.9s,baz=126,slow=2.2,SNR=24								
YKA				SKPbc		**SKPbc**	**03**	**05 01.2**	**+1.2**
	0.2nm,0.8s,baz=126,slow=3.1,SNR=2.9								
DOT	**Dot Lake**	**149.79**	**309**	*e*PKPdf		**PKPdf**	**03**	**01 52.2**	**+0.6**
DOT				*e*PKPbc		**PKiKP**	**03**	**01 57.1**	**-0.2**
SONM	**Songino Array**	**149.90**	**87**	PKPbc		**PKPbc**	**03**	**01 57.0**	**-0.3**
SONM	**Songino Array**	**149.90**	**87**	PKPbc		**PKPbc**	**03**	**01 57.0**	**-0.3**
	3.0nm,0.7s,baz=226,slow=3.1,SNR=18								
ILAR	**Eielson Array**	**151.26**	**310**	PKPbc		**PKPbc**	**03**	**02 00.2**	**+0.4**
ILAR	**Eielson Array**	**151.26**	**310**	PKPbc		**PKPbc**	**03**	**02 00.2**	**+0.4**
	5.3nm,0.9s,baz=132,slow=1.7,SNR=56								
MCK	**McKinley**	**151.91**	**308**	*e*PKPbc		**PKPbc**	**03**	**02 01.8**	**+0.4**

IDC 14 02:46:42.1±12.0, 11.98S×166.55E, h181^{km}**±112km, mb3.4/7, mb1 3.5/7, mb1mx3.4/20, mbtmp3.4/7, Error ellipse: s-maj=49.9km s-min=28.6km az=86.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
CTA	**Charters Tower**	**21.09**	**245**	P		P	02	51 13.7	+1.0
	1.9nm,0.4s,baz=63,slow=11,SNR=3.6								
WRA	**Warramunga Arr**	**31.92**	**252**	P		P	02	52 50.4	-0.6
	0.4nm,0.6s,baz=83,slow=9.2,SNR=4.2								
ASAR	**Alice Springs**	**33.10**	**245**	P		P	02	53 00.6	-0.6
	0.8nm,0.7s,baz=73,slow=9.3,SNR=8.4								
QSPA	**South Pole Qui**	**78.03**	**180**	P		P	02	58 20.7	+0.2
	1.8nm,1.0s,baz=346,slow=2.4,SNR=5.0								
SONM	**Songino Array**	**79.88**	**324**	P		P	02	58 31.5	+0.7
	0.2nm,0.3s,baz=122,slow=5.4,SNR=3.7								
ILAR	**Eielson Array**	**84.14**	**18**	P		P	02	58 52.1	-0.3
	0.9nm,0.6s,baz=236,slow=5.1,SNR=22								
MKAR	**Makanchi Array**	**94.74**	**317**	P		P	02	59 42.9	-0.2
	0.6nm,0.6s,baz=91,slow=6.4,SNR=8.4								
ARCES	**ARCESS Array B**	**117.43**	**346**	PKP		PKPdf	03	05 05.8	+0.1
	0.3nm,0.3s,baz=64,slow=2.1,SNR=14								

DJA 14 02:58:09.1±1.0, 9.5S±5.1×11.0E±., h30^{km}**±9km, M3.9/8, MLv3.9/8, Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
UGM	**Wanagama**	**1.01**	**14**	P		Pn	02	58 27.1	-0.2
UGM				S		Sb	02	58 41.1	-0.1
YOGI	**Yogyakarta**	**1.08**	**1**	P		Pn	02	58 28.0	-0.2
YOGI				S		Sn	02	58 41.6	-0.5
PCJI	**Pacitan**	**1.14**	**52**	P		Pn	02	58 27.4	-1.6
PCJI				S		Sn	02	58 40.4	-3.2
WOJI	**Wonogiri, Jawa**	**1.24**	**32**	P		Pn	02	58 29.8	-0.6
WOJI				S		Sn	02	58 46.2	+0.1
BJII	**Banjamegara**	**1.65**	**340**	P		Pn	02	58 36.2	0.0
CLJI	**Cilicap**	**1.71**	**313**	P		Pn	02	58 35.9	-1.0
PWJI	**Pagerwojo**	**1.75**	**60**	P		Pn	02	58 36.4	-1.0
PWJI				S		Sn	02	58 57.5	-1.2
SMRI	**Semarang**	**1.85**	**5**	P		Pn	02	58 35.4	-3.4
SJI	**Sawahan**	**1.88**	**52**	P		Pn	02	58 39.3	0.0
SJI				S		Sn	02	59 03.4	+1.3
KRKI	**Karangkates**	**2.28**	**71**	P		Pn	02	58 46.5	+1.8
TGJI	**Tegal**	**2.32**	**331**	P		Pn	02	58 44.9	-0.3
CISI	**Cisompet, Garu**	**2.77**	**299**	P		Pn	02	58 52.2	+0.6
BLJI	**Banyuglugur**	**3.48**	**71**	P		Pn	02	59 01.3	0.0

IDC 14 03:00:41.2±1.4, 49.34N×158.22E, h0^{km}**, mb3.6/4, mb1 3.9/5, mb1mx3.5/25, mbtmp3.5/5, ML3.0/1, Error ellipse: s-maj=61.6km s-min=25.4km az=118.0, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
PETK	**Petropavlovsk-**	**3.79**	**355**	Pn		Pn	03	01 41.7	+0.9
	1.1nm,0.3s,baz=180,slow=17,SNR=7.6								
ILAR	**Eielson Array**	**32.36**	**41**	P		P	03	07 11.3	-0.7
	0.6nm,0.9s,baz=258,slow=9.3,SNR=8.2								
YKA	**Yellowknife Ar**	**46.77**	**40**	P		P	03	09 11.2	-0.6
	0.5nm,0.8s,baz=299,slow=8.3,SNR=7.7								
PDAR	**Pinedale Array**	**60.45**	**58**	P		P	03	10 53.6	+0.8
	0.6nm,0.7s,baz=308,slow=4.4,SNR=4.8								
ASAR	**Alice Springs**	**75.84**	**203**	P		P	03	12 29.1	0.0
	0.2nm,0.5s,baz=22,slow=5.3,SNR=3.1								

IDC ***14*** *03:09:37.9±1.6, 20.00S×167.99E, h0* ^{km}*, mb3.9/5, mb1 4.2/6, mb1mx4.0/17, mbtmp3.9/6, ML3.4/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/19, Error ellipse: s-maj=62.3km s-min=24.8km az=141.0*

NOU ***14*** *03:09:38.6±0.4, 20.01S×168.21E, h30* ^{km}*, MD2.6, MS1.4*

ISCJB ***14*** *03:09:40.9±1.0, 20.2S±0.1×168.0E±0.2, h32* ^{km}*, mb3.9/5, MS3.2/3, Error ellipse: s-maj=33.8km s-min=8.9km az=31.9*

ISC 14 03:09:42.2±1.3, 20.3S±0.2×168.1E±0.3, h32^{km}**, n12, σ0.9 91/13, mb3.9/5, MS3.1/3, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
BAYA	**Yate Dam**	**2.17**	**212**	*e*P		**Pn**	**03**	**10 15.5**	**-0.6**
BAYA				AMP			03	10 53.9	
	comp=Z,44nm,15.2s								
DZM	**Mont Dzumac**	**2.34**	**221**	*e*P		**Pn**	**03**	**10 17.2**	**-1.4**
DZM				*e*S		**Sn**	**03**	**10 45.6**	**-0.8**
DZM	**Mont Dzumac**	**2.34**	**221**	Pn		**Pn**	**03**	**10 17.9**	**-0.7**
	comp=Z,8.8nm,0.3s,baz=39,slow=4.8,SNR=131								
DZM				Sn		**Sn**	**03**	**10 46.6**	**+0.2**
	comp=Z,38nm,0.3s,baz=104,slow=20,SNR=6.9								
DZM				LR		LR	03	11 15.8	
	comp=Z,314nm,20.3s,baz=158,slow=39								
NORM	**Noumea**	**2.44**	**218**	*e*P		**Pn**	**03**	**10 19.5**	**-0.3**
NORM				*e*S		**Sn**	**03**	**10 49.3**	**+0.8**
NOUC	**Port Laguerre**	**2.46**	**223**	*e*P		**Pn**	**03**	**10 19.8**	**-0.2**
AFI	**Afiamalu**	**20.24**	**75**	LR		LR	03	20 29.2	
	comp=Z,87nm,20.1s,baz=271,slow=32								
CTA	**Charters Tower**	**20.51**	**267**	LR		LR	03	20 55.7	
	comp=Z,76nm,20.1s,baz=62,slow=33								
STKA	**Stephens Creek**	**26.38**	**239**	P		**P**	**03**	**15 17.6**	**+1.8**
	comp=Z,2.8nm,0.9s,baz=72,slow=13,SNR=3.9								
STKA				LR		LR	03	25 02.0	
	comp=Z,109nm,20.3s,baz=41,slow=35								
WRA	**Warramunga Arr**	**31.68**	**265**	P		**P**	**03**	**16 02.5**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=90,slow=8.5,SNR=2.9								
ASAR	**Alice Springs**	**31.85**	**258**	P		**P**	**03**	**16 04.7**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=86,slow=8.6,SNR=18								
NVAR	**Mina Array Bea**	**90.30**	**49**	P		**P**	**03**	**22 40.5**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=242,slow=7.0,SNR=3.9								
ILAR	**Eielson Array**	**91.56**	**18**	P		**P**	**03**	**22 44.9**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=236,slow=5.7,SNR=4.4								

DDA 14 03:27:45.0, 38.17N×28.77E, h7^{km}**, MD2.6, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
KULA	**Kula-Manisa**	**0.35**	**346**	*e*PG		Pg	03	27 52.4	+0.4
KULA				*e*SG		Sg	03	27 56.8	0.0
MANT	**Manisa**	**0.36**	**332**	*i* P		Pg	03	27 52.6	+0.2
MANT				*i* S		Sg	03	27 57.7	+0.3
KHAL	**Karahalli**	**0.60**	**71**	*i* P		Pg	03	27 54.0	-2.7
KHAL				*i* S		Sg	03	28 03.1	-1.6
KHL	**Karahalli**	**0.61**	**75**	*e*PG		Pn	03	28 04.4	+4.2

KRSC 14 03:31:00.1±0.9, 49.37N×156.31E, h5^{km}**±5km, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
SKR	**Severo-Kuril's**	**1.32**	**355**	P		Pn	03	31 24.6	-0.6
SKR				*i* S		Sn	03	31 43.1	0.0
PAU	**Pauzhetka**	**2.12**	**8**	P		Pb	03	31 38.0	-1.0
PAU				*i* S		Sb	03	32 05.1	-0.6
ASAK	**Asacha**	**3.18**	**18**	P		Pn	03	31 52.9	+2.0
MTVR	**Mutnovka**	**3.33**	**20**	P		Pn	03	31 55.4	+2.3
MTVR				*i* S		Sn	03	32 34.7	+1.5
RUS	**Russkaya**	**3.37**	**24**	P		Pn	03	31 54.9	+1.6
RUS				*i* S		Sn	03	32 35.2	+1.6
UGLR	**Uglovaya**	**4.16**	**21**	P		Pn	03	32 06.9	+2.6
AVH	**Avacha**	**4.19**	**20**	P		Pn	03	32 07.7	+3.0
KOK	**Koryaka**	**4.19**	**19**	P		Pn	03	32 07.8	+3.0
SMAR	**Somma**	**4.20**	**21**	P		Pn	03	32 07.7	+2.7
KRER	**Koryakskii**	**4.23**	**20**	P		Pn	03	32 08.2	+2.8
SDLR	**Sedlovina**	**4.23**	**21**	P		Pn	03	32 07.6	+2.2
SPN	**Mys Shipunski**	**4.40**	**31**	P		Pn	03	32 09.7	+2.2
SPN				*i* S		Sn	03	33 01.3	+2.2
GNI	**Ganaly**	**4.45**	**13**	P		Pn	03	32 10.1	+1.8
KBTR	**Krutoberegovo**	**7.90**	**27**	P		Pn	03	32 57.3	+1.8

MEX 14 03:38:27.7±0.4, 16.10N×97.65W, h10^{km}**±6km, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
PNIG	**Pinotepa**	**0.54**	**302**	*i* P		Pg	03	38 37.3	-1.0
PNIG				*i* S		Sg	03	38 45.2	-0.3
VHO	**Vista Hermosa**	**1.30**	**42**	*i* P		Pn	03	38 48.7	-3.7
VHO				*i* S		Sb	03	39 04.6	-5.1
HUIG	**Huatulco**	**1.52**	**102**	*e*P		Pn	03	38 51.8	-3.2
HUIG				*e*S		Sn	03	39 10.0	-4.9
UTMO	**Huajuapan**	**1.73**	**355**	*e*P		Pn	03	38 55.3	-2.8
UTMO				*e*S		Sn	03	39 15.6	-5.0
YAIG	**Yautepec**	**3.06**	**334**	*i* P		Pn	03	39 14.5	-2.0
YAIG				*i* S		Sn	03	39 49.9	-3.5
ARIG	**Puente Sto Nin**	**3.37**	**310**	*i* P		Pn	03	39 18.0	-2.5
ARIG				*i* S		Sn	03	39 57.6	-3.1

IDC ***14*** *03:47:17.8±0.8, 24.98S×82.89E, h0* ^{km}*, mb4.2/13, mb1 4.4/13, mb1mx4.2/23, mbtmp4.2/13, MS3.6/4, Ms1 3.6/4, ms1mx3.1/29, Error ellipse: s-maj=25.5km s-min=21.1km az=49.0*

ISCJB ***14*** *03:47:18.2±0.5, 25.0S±0.1×83.1E±0.1, h10* ^{km}*, mb4.3/15, MS3.6/4, Error ellipse: s-maj=17.9km s-min=14.7km az=36.7*

ISC 14 03:47:19.8±0.7, 25.0S±0.1×83.0E±0.2, h10^{km}**, n20, σ1.9 02/17, mb4.3/15, MS3.6/4, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
PSI	**Prapat**	**31.62**	**31**	LR		LR	04	03 34.2	
	comp=Z,148nm,18.0s,baz=44,slow=31								
OPO	**Ambohidratompo**	**33.82**	**274**	LR		LR	04	04 21.8	
	comp=Z,100nm,21.4s,baz=349,slow=30								
CMAR	**Chiang Mai Arr**	**45.86**	**21**	P		**P**	**03**	**55 42.6**	**+0.1**
	2.9nm,0.9s,baz=205,slow=8.2,SNR=8.5								
ASAR	**Alice Springs**	**46.16**	**100**	P		**P**	**03**	**55 45.2**	**+0.3**
	2.6nm,0.5s,baz=264,slow=7.3,SNR=25								
WRA	**Warramunga Arr**	**47.46**	**95**	P		**P**	**03**	**55 55.9**	**+0.8**
	4.7nm,0.8s,baz=258,slow=8.0,SNR=19								
BOSA	**Boshof**	**51.28**	**252**	P		**P**	**03**	**56 26.2**	**+1.9**
	7.3nm,0.9s,baz=72,slow=21,SNR=6.0								
SUR	**Sutherland**	**54.43**	**247**	P		P	03	56 50.9	+3.2
	11nm,1.0s,baz=94,slow=16,SNR=3.6								
QSPA	**South Pole Qui**	**65.15**	**180**	P		**P**	**03**	**58 00.1**	**-0.7**
	2.6nm,0.7s,baz=263,slow=3.8,SNR=7.8								
SNAA	**Sanae**	**65.24**	**200**	*e*P		**P**	**03**	**57 59.5**	**-1.7**
VNA2	**Neumayer--Watz**	**66.78**	**201**	*e*P		**P**	**03**	**58 11.9**	**+0.8**
MKAR	**Makanchi Array**	**71.42**	**359**	P		**P**	**03**	**58 39.0**	**-1.0**
	2.4nm,0.9s,baz=178,slow=6.1,SNR=16								
MKAR				LR		LR	04	27 48.8	
	comp=Z,39nm,18.8s,baz=345,slow=34								
KSRS	**Korea Array**	**75.08**	**36**	P		**P**	**03**	**59 03.0**	**+1.1**
	1.8nm,0.8s,baz=214,slow=5.3,SNR=8.0								
KSRS				LR		LR	04	34 24.2	
	comp=Z,17nm,18.3s,baz=164,slow=38								
SONM	**Songino Array**	**75.45**	**16**	P		**P**	**03**	**59 04.3**	**+0.3**
	1.8nm,0.7s,baz=191,slow=5.5,SNR=14								
ZALV	**Zalesovo Beam**	**78.60**	**1**	P		**P**	**03**	**59 19.8**	**-1.5**
	3.5nm,0.7s,baz=178,slow=3.8,SNR=9.9								
BRTR	**Keskin Array B**	**79.14**	**323**	P		**P**	**03**	**59 24.4**	**-0.4**
	0.9nm,0.7s,baz=157,slow=8.6,SNR=7.8								
MJAR	**Matsshiro Arr**	**80.30**	**42**	P		**P**	**03**	**59 31.4**	**+0.4**
	0.9nm,0.3s,baz=220,slow=7.7,SNR=4.1								
MLR	**Muntele Rosu**	**87.22**	**324**	P		**P**	**04**	**00 06.8**	**+0.3**
	0.7nm,0.8s,baz=172,slow=8.7,SNR=4.1								
TORD	**Torodi Ar. Bea**	**87.80**	**285**	P		**P**	**04**	**00 09.2**	**-0.6**
	1.0nm,0.6s,baz=122,slow=3.5,SNR=11								
AKASG	**Malin Array Be**	**89.03**	**329**	P		**P**	**04**	**00 14.6**	**-0.2**
	0.8nm,0.6s,baz=115,slow=4.2,SNR=3.7								
NVAR	**Mina Array Bea**	**157.49**	**48**	PKPab		**PKPab**	**04**	**07 47.9**	**-0.6**
	1.8nm,0.7s,baz=276,slow=5.6,SNR=6.3								

ISCJB ***14*** *03:48:49.9±0.8, 51.41N±0.04×16.08E±0.04, h0* ^{km}*, Error ellipse: s-maj=6.3km s-min=3.5km az=14.9*

WAR ***14*** *03:48:50.4, 51.53N×16.08E*

CSEM ***14*** *03:48:50.5±0.3, 51.46N×16.09E, h2* ^{km}*, ML3.0/6, Error ellipse: s-maj=6.2km s-min=5.2km az=2.0*

PRU ***14*** *03:48:52.1, 51.40N×16.09E, h0* ^{km}

ISC 14 03:48:50.9±1.2, 51.43N±0.05×16.10E±0.03, h0^{km}**, n25, σ0.9 70/47, Poland**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
KSP	**Ksiaz**	**0.60**	**168**	*e*Pg		**Pb**	**03**	**49 03.4**	**-0.8**
KSP				*e*Sg		**Sb**	**03**	**49 12.5**	**-0.7**
KSP	**Ksiaz**	**0.60**	**168**	*e*Sg		**Sg**	**03**	**49 11.9**	**+1.8**
UPC	**Upice**	**0.93**	**184**	*e*Pg		**Pg**	**03**	**49 08.3**	**-0.3**
UPC	**Upice**	**0.93**	**184**	Pg		**Pg**	**03**	**49 08.3**	**-0.3**
DPC	**Dobruska-Polom**	**1

comp=Z,19nm,0.6s,SNR=49
JMIC Jan Mayen 6.75 246 Pn Pn 04 33 41.4 -10
comp=Z,17nm,0.3s,baz=87,slow=10,SNR=7.4
ARA0 ARCESS Array S 6.92 131 Pn **Pn** **04 33 54.6 +0.9**
baz=329,slow=14
ARA0 Sn **Sn** **04 35 10.8 -1.0**
baz=322,slow=22
ARA0 ARCESS Array S 6.92 131 P **Pn** **04 33 54.6 +0.9**
baz=329,slow=14
ARA0 Sn **Sn** **04 35 10.8 -1.0**
baz=322,slow=22
ARA0 ARCESS Array S 6.92 131 Pn **Pn** **04 33 54.6 +0.9**
SNR=5.4
ARA0 Sn **Sn** **04 35 10.9 -1.0**
SNR=8.8
ARCES ARCESS Array B 6.92 131 Pn **Pn** **04 33 55.3 +1.6**
comp=Z,0.7nm,0.3s,baz=332,slow=13,SNR=24
ARCES Sn **Sn** **04 35 10.9 -1.0**
comp=Z,3.4nm,0.3s,baz=319,slow=21,SNR=15
ARCES LR LR 04 36 56.1
comp=Z,315nm,20.2s,baz=252,slow=39
KEV Kevo 7.05 127 *ep* **Pn** **04 33 57.5 +2.1**
comp=Z,1.4nm,0.3s
DAG Danmarks Havn 7.45 300 *i* P Pn 04 33 49.9 -11
DAG *i* S Sn 04 35 01.9 -23
SCO Scoresbysund 10.50 263 *i* P Pn 04 34 31.6 -11
SCO *eS* Sn 04 36 09.5 -30
NOA NORSAR Array B 13.75 179 Pn **Pn** **04 35 27.2 +0.1**
comp=Z,0.1nm,0.3s,baz=353,slow=13,SNR=2.6
NOA LR LR 04 40 10.2
comp=Z,84nm,19.0s,baz=0.0,slow=35
FINES FINESS Array B 14.44 149 Pn **Pn** **04 35 37.0 +0.5**
comp=Z,0.2nm,0.3s,baz=356,slow=12,SNR=4.3
HFS Hagfors 14.70 174 Pn **Pn** **04 35 40.3 +0.2**
comp=Z,0.1nm,0.3s,baz=9.7,slow=12,SNR=5.9
HFS LR LR 04 40 42.4
comp=Z,141nm,19.7s,baz=329,slow=35
SFJD Kangerlussuaq 20.48 280 LR LR 04 43 31.2
comp=Z,179nm,19.6s,baz=61,slow=34
NACGM Naroch 20.90 153 *e* **P** **04 36 52.0 -2.4**
CLL Collm 23.52 176 *eP* **P** **04 37 21.0 -1.1**
CLL *e*(sP) **sP** **04 37 28.0 -0.9**
CLL *e* 04 37 35.0
CLL *e*(PPP) 04 37 59.0
CLL LmV 04 47 00.0
comp=Z,100nm,20.5s
NKC Novy Kostel 24.59 177 *eP* **P** **04 37 32.0 -0.1**
GIVF Givet 24.83 189 *eP* P 04 37 41.6 +7.4
BAIF Baives 24.90 190 *eP* P 04 37 41.2 +6.4
comp=Z,36nm,1.1s
GRF Grafenberg Arr 25.12 179 *eP* **P** **04 37 36.7 -0.2**
comp=Z,11nm,1.2s
AKASG Malin Array Be 25.32 152 P **P** **04 37 39.2 +0.5**
comp=Z,1.2nm,0.6s,baz=339,slow=10,SNR=6.2
VRAC Vranov 25.63 171 LR LR 04 47 50.9
comp=Z,38nm,20.0s,baz=338,slow=37
KHC Kasperske Hory 25.71 175 *eP* **P** **04 37 42.8 +0.5**
GERES GERESS Array B 26.00 175 P **P** **04 37 44.4 -0.6**
comp=Z,2.7nm,0.9s,baz=8.9,slow=7.0,SNR=9.8
GERES LR LR 04 49 40.2
comp=Z,47nm,18.4s,baz=77,slow=40
CRVS Cervenica-Dubn 26.32 164 *eP* **P** **04 37 48.7 +1.0**
PAGF Fort de Pagny 26.34 187 *eP* P 04 37 56.0 +8.1
KOLS Kolonicke sedl 26.35 162 *eP* **P** **04 37 49.5 +1.5**
CDF Champ du Feu 26.44 185 *eP* P 04 37 57.1 +8.2
FLN La Foliniere 26.47 197 *eP* P 04 37 55.6 +6.5
VYHS Vyhne 26.55 168 *eP* **P** **04 37 54.0 +4.1**
LDF La Druitiere 26.61 196 *eP* P 04 37 56.9 +6.5
comp=Z,26nm,1.2s
FRB Frobisher Bay 27.65 290 LR LR 04 47 54.9
comp=Z,26nm,21.2s,baz=333,slow=35
DAVOX Davos/Dischmat 28.04 181 LR LR 04 49 43.9
comp=Z,62nm,18.4s,baz=79,slow=38
KBZ Khabaz 34.24 136 LR LR 04 53 41.7
comp=Z,112nm,20.7s,baz=11,slow=37
ZALV Zalesovo Beam 34.88 84 LR LR 04 56 34.5
comp=Z,56nm,18.1s,baz=69,slow=41
SCHQ Schefferville 34.93 280 LR LR 04 51 55.2
comp=Z,112nm,18.7s,baz=71,slow=34
BRTR Keskin Array B 36.68 150 P **P** **04 39 19.4 +0.5**
comp=Z,0.1nm,0.3s,baz=345,slow=10,SNR=5.4
BRTR LR LR 04 55 30.6
comp=Z,33nm,22.0s,baz=308,slow=38
EVO Evora 37.32 204 *eP* P 04 39 29.8 +5.6
comp=Z,46nm,1.4s
YKA Yellowknife Ar 38.47 322 P P 04 39 29.9 -3.7
comp=Z,0.5nm,0.9s,baz=9.7,slow=8.9,SNR=6.3
ILAR Eielson Array 39.99 345 P **P** **04 39 46.0 -0.3**
comp=Z,1.7nm,0.9s,baz=2.4,slow=6.7,SNR=25
ILAR LR LR 04 54 13.4
comp=Z,29nm,18.9s,baz=351,slow=33
MKAR Makanchi Array 40.73 91 P P 04 39 57.1 +4.5
comp=Z,0.9nm,0.5s,baz=357,slow=7.2,SNR=21
MKAR LR LR 04 59 06.6
comp=Z,49nm,21.9s,baz=105,slow=39
KSH Kashi 45.85 101 *eP* **P** **04 40 36.1 +1.9**
KSH *ep*P pP 04 40 46.0 +6.7
KSH *es*P sP 04 40 49.9 +8.6
KSH *e*PcP **PcP** **04 42 12.0 +0.8**
KSH *e*PP **PP** **04 42 24.6 +3.2**
KSH *e*ScP **ScP** **04 46 01.3 -1.7**
KSH *e*PcS **PcS** **04 46 05.3 -0.2**
KSH *e*S **S** **04 47 19.1 +1.8**
KSH *es*S sS 04 47 35.6 +10
KSH *e*ScS ScS 04 49 26.1 -63
KSH *e*SS **SS** **04 50 36.8 -4.6**
KSH pmax pmax
comp=Z,190nm,3.2s
KSH pmax pmax
comp=Z,5.0nm,0.9s
KSH LR LR
comp=N,80nm,4.1s
KSH LR LR
comp=E,62nm,3.3s
KSH LR LR
comp=Z,80nm,3.5s
SONM Songino Array 46.02 69 P P 04 40 39.8 +4.4
comp=Z,0.4nm,0.9s,baz=337,slow=9.4,SNR=3.5
PDAR Pinedale Array 56.34 310 P P 04 41 49.3 -3.8
comp=Z,0.4nm,0.7s,baz=356,slow=7.2,SNR=4.8
PDAR LR LR 05 06 09.5
comp=Z,50nm,19.7s,baz=210,slow=36
KSRS Korea Array 60.86 54 LR LR 05 12 37.2
comp=Z,27nm,20.9s,baz=320,slow=40
TORD Torodi Ar. Bea 61.76 190 P **P** **04 42 29.5 -1.1**
comp=Z,0.7nm,0.9s,baz=6.1,slow=6.7,SNR=3.4
VNA1 Neumayer--Stat 145.63 191 *e*PKP **PKPab** **04 51 49.6 +0.5**
VNA2 Neumayer--Watz 145.86 190 *e*PKP **PKPbc** **04 51 49.8 +0.3**
SNAA Sanae 146.41 188 *e*PKP **PKPdf** **04 51 48.8 -1.0**

*IDC **14** 04:40:04.4±11.0, 24.93S×179.64W, h403km±104km, mb3.1/2, mb1 3.4/3, mb1mx3.0/17, mbtmp3.2/3, Error ellipse: s-maj=79.2km s-min=34.6km az=36.0*
ISC 14 04:40:13.3±1.5, 24.9S±0.4×180.0W±0.3, h496km, n9, σ1§19/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.56**	**190**	P	P	04 43 01.0	-7.3
	0.8nm,0.3s,baz=143,slow=22,SNR=8.6						
ASAR	**Alice Springs**	**41.91**	**262**	P	**P**	**04 47 20.2**	**+0.3**
	0.6nm,0.4s,baz=91,slow=6.1,SNR=10						
WRA	**Warramunga Arr**	**42.38**	**267**	P	**P**	**04 47 23.5**	**-0.2**
	1.1nm,0.4s,baz=99,slow=7.0,SNR=14						
ARCES	**ARCESS Array B**	**132.85**	**348**	PKP	**PKPdf**	**04 58 32.9**	**+2.0**
	2.8nm,0.9s,baz=15,slow=5.0,SNR=4.5						
NB2	**NORSAR Subarra**	**143.05**	**351**	PKP	**PKPdf**	**04 58 48.5**	**-1.3**
	comp=Z,0.5nm,0.6s,baz=13,slow=3.6						
NOA	**NORSAR Array B**	**143.05**	**351**	PKP	**PKPdf**	**04 58 49.1**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=3.0,slow=2.1,SNR=4.7						
AKASG	**Malin Array Be**	**145.81**	**327**	PKPbc	**PKPab**	**04 58 57.1**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=47,slow=4.0,SNR=5.0						
BRTR	**Keskin Array B**	**148.18**	**306**	PKPbc	**PKPbc**	**04 59 03.5**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=152,slow=2.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**168.22**	**188**	PKPab	**PKPab**	**05 00 34.5**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=182,slow=2.5,SNR=5.0						

*BJI **14** 04:51:15.4, 0.45N×120.22E, h66km, mB4.8/23, mb4.8/36, Ms4.7/14, Ms7 4.5/8*
*AUST **14** 04:51:18.0, 1.00N×120.50E, h60km*
*ISCJB **14** 04:51:18.3±0.5, 0.75N±0.03×120.18E±0.03, h73km±5km, mb4.6/41, Error ellipse: s-maj=5.7km s-min=4.3km az=37.0*

*IDC **14** 04:51:19.5±2.0, 0.72N×120.07E, h73km±18km, mb4.2/15, mb1 4.2/17, mb1mx4.1/25, mbtmp4.1/17, MS3.4/6, Ms1 3.4/6, ms1mx2.9/36, Error ellipse: s-maj=25.8km s-min=10.7km az=71.0*
*DJA **14** 04:51:19.7±0.3, 1.1N±3.3×12.0E±.°, h49km±6km, M5.0/19, mb5.1/17, mB5.4/10, MLv5.2/19, Mw(mB)4.8/10*
*NEIC **14** 04:51:20.0±0.9, 0.71N×120.13E, h77km±8km, mb4.7/17, Error ellipse: s-maj=10.8km s-min=4.6km az=61.0*
NEIC Felt [III] at Tolitoli.
ISC 14 04:51:19.6±0.5, 0.75N±0.04×120.18E±0.05, h70km±3km, n133, σ1§20/165, mb4.7/41, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.78**	**99**	P	**Pn**	**04 51 47.5**	**-0.9**
SGKI	**Sangatta, Kali**	**2.87**	**244**	P	Pn	04 51 57.6	-5.5
LUWI	**Luwuk**	**3.15**	**124**	P	**Pn**	**04 52 09.2**	**+2.4**
LUWI	**Luwuk**	**3.15**	**124**	P	**Pn**	**04 52 08.5**	**+1.7**
	baz=3.1,SNR=15						
SMKI	**Samarinda**	**3.20**	**248**	P	**Pn**	**04 52 06.9**	**-0.7**
SMKI				S	**Sn**	**04 52 44.7**	**+0.1**
SKSI	**Soroako, Sulaw**	**3.46**	**160**	P	**Pn**	**04 52 13.5**	**+2.3**
TTSI	**Tana Toraja**	**3.79**	**185**	P	Pn	04 52 19.4	+3.8
KMSI	**Cibinong**	**3.81**	**93**	P	**Pn**	**04 52 17.6**	**+1.7**
SPSI	**Sidrap Palu**	**4.70**	**185**	P	**Pn**	**04 52 29.3**	**+1.2**
MYLDM	**Lahad Datu**	**4.71**	**339**	P	**Pn**	**04 52 27.4**	**-0.8**
MNI	**Manado**	**4.71**	**82**	P	**Pn**	**04 52 26.2**	**-2.0**
KKSI	**Kolaka, Sulawe**	**5.11**	**163**	P	Pn	04 52 44.3	+11
MTKI	**Muara Teweh, K**	**5.54**	**252**	P	**Pn**	**04 52 38.7**	**-0.9**
	431nm,0.3s,23µm5.6nm						
KBKI	**Kotabaru**	**5.68**	**225**	P	**Pn**	**04 52 41.0**	**-0.5**
	172nm,0.4s,5µm1.0nm						
KAPI	**Kappang**	**5.74**	**184**	*e*Pn	**Pn**	**04 52 42.4**	**0.0**
KAPI				*e*Sn	**Sn**	**04 53 50.0**	**+3.1**
KAPI				*e*		04 54 52.6	
KAPI	**Kappang**	**5.74**	**184**	P	Pn	04 52 50.1	+7.8
KAPI	**Kappang**	**5.74**	**184**	P	**Pn**	**04 52 42.3**	**0.0**
	4.5nm,0.3s,baz=5.2,slow=11,SNR=18						
KAPI				LR	LR	04 55 16.7	
	comp=Z,370nm,20.4s,baz=231,slow=42						
BKSI	**Bulukumba**	**6.03**	**181**	P	**Pn**	**04 52 48.3**	**+2.0**
	75nm,0.7s,670nm0.3nm						
KKM	**Kota Kinabalu**	**6.58**	**323**	*e*Pn	**Pn**	**04 52 52.4**	**-1.5**
KKM				*e*S	Sn	04 53 54.1	-14
KKM				*e*		04 55 36.8	
KKM	**Kota Kinabalu**	**6.58**	**323**	P	**Pn**	**04 52 52.0**	**-1.9**
	73nm,0.9s,2µm0.7nm						
KKM	**Kota Kinabalu**	**6.58**	**323**	P	**Pn**	**04 52 52.5**	**-1.4**
	baz=6.6,SNR=8.7						
KKM				S	Sn	04 53 56.9	-11
	baz=6.6,SNR=6.3						
BBSI	**Bau Bau**	**6.64**	**159**	P	Pn	04 53 00.3	+5.7
	117nm,0.9s,1µm0.4nm						
BBKI	**Banjar Baru**	**6.78**	**232**	P	**Pn**	**04 52 56.3**	**-0.2**
	226nm,0.4s,6µm1.2nm						
BSSI	**Bau Bau, Buton**	**6.86**	**177**	P	Pn	04 53 01.6	+4.0
	68nm,0.7s,1µm0.3nm						
TNTI	**Ternate**	**7.19**	**90**	P	**Pn**	**04 53 02.9**	**+0.8**
	118nm,0.8s,0.5nm						
LBMI	**Labuha**	**7.45**	**101**	P	**Pn**	**04 53 06.6**	**+0.9**
	153nm,0.8s,2µm0.7nm						
NLAI	**Namlea**	**7.97**	**120**	P	**Pn**	**04 53 14.0**	**+1.1**
	148nm,0.6s,2µm						
PBKI	**Pangkalan Bun**	**9.17**	**248**	P	**Pn**	**04 53 28.0**	**-1.3**
	302nm,0.8s,6µm						
KSM	**Kuching**	**9.89**	**274**	*e*Pn	**Pn**	**04 53 39.2**	**+0.1**
FAKI	**Fak Fak**	**12.61**	**107**	P	**Pn**	**04 54 13.9**	**-2.3**
	baz=12,SNR=4.1						
BJII	**Banjamegara**	**13.17**	**232**	P	**Pn**	**04 54 25.4**	**+1.5**
	59nm,1.5s						
PALU	**Palau**	**15.69**	**65**	P	Pn	04 54 47.0	-10
	baz=15,SNR=4.8						
PALU				S	Sn	04 57 36.4	-13
	baz=15,SNR=7.5						
MTN	**Manton Dam**	**17.34**	**142**	P	**P**	**04 55 18.3**	**+0.8**
	baz=17,SNR=31						
RGRI	**Rengat**	**17.88**	**267**	P	Pn	04 55 31.3	+7.6
KDU	**Kakadu**	**18.09**	**138**	P	**P**	**04 55 25.9**	**+0.2**
	baz=18,SNR=12						
IPM	**Ipoh**	**19.48**	**281**	*e*Pn	**Pn**	**04 55 42.8**	**-0.2**
	21nm,0.5s						
IPM	**Ipoh**	**19.48**	**281**	P	**Pn**	**04 55 42.7**	**-0.3**
	26nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.49**	**164**	P	**P**	**04 55 41.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**19.49**	**164**	P	**P**	**04 55 41.2**	**+0.1**
	0.1nm,0.3s,baz=358,slow=10,SNR=3.3						
FITZ				LR	LR	05 03 52.0	
	comp=Z,84nm,20.1s,baz=336,slow=39						
FITZ	**Fitzroy Crossi**	**19.49**	**164**	P	**P**	**04 55 41.9**	**+0.8**
	baz=20,SNR=7.8						
KULM	**Kulim**	**20.01**	**283**	*e*P	**P**	**04 55 46.9**	**0.0**
	18nm,0.9s						
JAY	**Jayapura**	**20.78**	**99**	P	**P**	**04 55 54.8**	**-0.4**
	baz=20,SNR=5.2						
JAY				S	**S**	**04 59 44.1**	**+0.7**
	baz=20,SNR=3.2						
QIZ	**Qiongzhong**	**20.80**	**331**	P	**P**	**04 55 54.9**	**-0.5**
QIZ				pP	**pP**	**04 56 09.4**	**-0.6**
QIZ				S	**S**	**04 59 46.4**	**+2.7**
QIZ				pmax	pmax		
	comp=Z,18nm,1.3s						
PSI	**Prapat**	**21.34**	**276**	LR	LR	05 04 44.7	
	comp=Z,150nm,18.7s,baz=262,slow=38						
KCSI	**Kotacane, Aceh**	**22.56**	**277**	P	**P**	**04 56 15.6**	**+1.3**
	comp=Z,22nm,0.9s						
SSLB	**Suanglung**	**22.91**	**2**	*e*P	**P**	**04 56 18.9**	**+1.0**
	comp=Z,45nm,1.5s						
WRAB	**Tennant Creek**	**24.81**	**147**	*e*P	**P**	**04 56 34.9**	**-0.5**
	comp=Z,29nm,1.1s						
WRA	**Warramunga Arr**	**24.81**	**147**	P	**P**	**04 56 34.8**	**-0.6**
WRA				ScP	**ScP**	**05 03 43.4**	**0.0**
WRA	**Warramunga Arr**	**24.81**	**147**	P	**P**	**04 56 34.8**	**-0.6**
	comp=Z,14nm,0.4s,baz=334,slow=9.5,SNR=98						
WRA				ScP	**ScP**	**05 03 43.4**	**0.0**
	comp=Z,1.7nm,1.1s,baz=329,slow=3.9,SNR=4.8						
COEN	**Coen**	**27.06**	**124**	P	**P**	**04 56 55.3**	**-0.5**
	baz=27,SNR=13						
MEEK	**Meekatharra**	**27.27**	**183**	P	**P**	**04 56 57.4**	**-0.2**
	baz=28,SNR=6.0						
CMAR	**Chiang Mai Arr**	**27.28**	**311**	P	**P**	**04 56 57.3**	**-0.4**
CMAR				PcP	**PcP**	**05 00 16.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**27.28**	**311**	P	**P**	**04 56 57.3**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=123,slow=6.6,SNR=8.1						
CMAR				PcP	**PcP**	**05 00 16.5**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=187,slow=2.2,SNR=6.4						
CMAR				LR	LR	05 08 37.7	
	comp=Z,70nm,19.3s,baz=137,slow=38						
AS31	**Alice Springs**	**27.70**	**152**	*e*P	**P**	**04 57 01.3**	**-0.1**
ASAR	**Alice Springs**	**27.70**	**152**	P	**P**	**04 57 01.3**	**-0.1**
ASAR				ScP	**ScP**	**05 03 51.2**	**-0.6**
ASAR	**Alice Springs**	**27.70**	**152**	P	**P**	**04 57 01.3**	**-0.1**
	comp=Z,5.3nm,0.4s,baz=340,slow=11,SNR=85						
ASAR				ScP	**ScP**	**05 03 51.2**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=343,slow=2.9,SNR=10.0						
QIS	**Mount Isa**	**28.46**	**139**	P	**P**	**04 57 07.8**	**-0.5**
	baz=28,SNR=8.0						
GYA	**Guiyang**	**28.68**	**334**	P	**P**	**04 57 12.8**	**+2.6**
GYA				pP	**pP**	**04 57 27.9**	**+0.9**
GYA				sP	**sP**	**04 57 35.4**	**+0.2**
GYA				PP	**PnPn**	**04 58 07.3**	**+3.2**
GYA				S	**S**	**05 01 55.3**	**+0.9**
GYA				sS	**sS**	**05 02 23.4**	**+0.3**
GYA				ScP	**ScP**	**05 03 55.0**	**+0.1**
GYA				ScS	**ScS**	**05 07 47.5**	**-1.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.7s						
KMI	**Kunming**	**29.51**	**327**	P	P	04 57 21.8	+4.1
KMI				pmax	pmax		
	comp=Z,5.0nm,1.5s						
WHN	**Wuhan**	**30.14**	**350**	P	**P**	**04 57 24.8**	**+1.8**
MTSU	**Mount Surprise**	**30.27**	**130**	P	**P**	**04 57 24.0**	**-0.3**
	baz=30,SNR=9.7						
ENH	**Enshi**	**31.07**	**342**	*e*P	**P**	**04 57 31.6**	**+0.4**
	comp=Z,22nm,0.7s						
CTAO	**Charters Tower**	**32.89**	**130**	*e*P	**P**	**04 57 47.3**	**0.0**
NWAO	**Narrogin (SRO)**	**33.61**	**184**	P	**P**	**04 57 52.8**	**-0.6**
NWAO	**Narrogin (SRO)**	**33.61**	**184**	P	**P**	**04 57 52.8**	**-0.6**
	comp=Z,2.7nm,0.4s,baz=0.0,slow=13,SNR=2.9						
CD2	**Chengdu**	**33.80**	**334**	P	**P**	**04 57 56.1**	**+1.0**
CD2				pP	**pP**	**04 58 11.6**	**-0.4**
CD2				PP	**PnPn**	**04 59 11.3**	**+1.5**
CD2				PcP	**PcP**	**05 00 33.5**	**+0.5**
CD2				S	**S**	**05 03 15.3**	**+1.2**
CD2				PcS	**PcS**	**05 04 18.4**	**-0.7**
CD2				SS	**SnSn**	**05 05 25.5**	**-0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=N,120nm,21.1s						
XAN	**Xi'an**	**34.76**	**343**	P	**P**	**04 58 02.9**	**-0.4**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
QLP	**Quilpie**	**35.72**	**141**	P	**P**	**04 58 12.4**	**+0.7**
	baz=36,SNR=41						
KSAR	**Wonju Array Be**	**37.20**	**10**	P	**P**	**04 58 25.3**	**+1.2**
KSRS	**Korea Array**	**37.22**	**10**	P	**P**	**04 58 25.3**	**+1.1**
	comp=Z,2.9nm,0.6s,baz=187,slow=8.0,SNR=17						
STKA	**Stephens Creek**	**38.27**	**150**	*e*P	**P**	**04 58 33.4**	**+0.1**
	comp=Z,4.3nm,1.3s						
STKA	**Stephens Creek**	**38.27**	**150**	P	**P**	**04 58 33.4**	**+0.1**
	comp=Z,7.1nm,0.6s,baz=328,slow=9.7,SNR=19						
STKA	**Stephens Creek**	**38.27**	**150**	P	**P**	**04 58 33.6**	**+0.4**
	baz=38,SNR=16						
LZH	**Lanzhou**	**38.29**	**338**	*e*P	**P**	**04 58 34.0**	**+0.4**
LZH				pP	**pP**	**04 58 48.6**	**-2.1**
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
BJI	**Beijing**	**39.27**	**355**	P	**P**	**04 58 42.5**	**+1.0**
BJI				S	**S**	**05 04 40.1**	**+2.9**
BJI				pmax	pmax		
	comp=Z,18nm,0.6s						
BJI				pmax	pmax		
	comp=Z,75nm,5.0s						
BJI				LR	LR		
	comp=N,98nm,24.9s						
BJI				LR	LR		
	comp=E,73nm,25.7s						
EIDS	**Eidsvold**	**39.59**	**133**	P	**P**	**04 58 43.5**	**-0.9**
	baz=40,SNR=3.4						
EIDS				S	**S**	**05 04 38.2**	**-4.2**
	baz=40,SNR=5.0						
CMSA	**Cobar Meteorol**	**40.20**	**145**	P	**P**	**04 58 50.2**	**+0.9**
	baz=40,SNR=6.3						
HHC	**Hu-ho-hao-te**	**40.67**	**350**	*e*P	**P**	**04 58 54.3**	**+1.1**
HHC				pP	**pP**	**04 59 09.5**	**-1.0**
HHC				PP	**PnPn**	**05 00 32.3**	**-0.5**
HHC				PcP	**PcP**	**05 00 55.0**	**+1.2**
HHC				ScP	**ScP**	**05 04 38.0**	**+0.6**
HHC				S	**S**	**05 05 02.0**	**+3.7**
HHC				SS	**SS**	**05 07 58.3**	**-3.0**
HHC				ScS	**ScS**	**05 08 52.1**	**0.0**
HHC				pmax	pmax		
	comp=Z,26nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,7.2s						
HHC				LR	LR		
	comp=N,390nm,30.0s						
HHC				LR	LR		
	comp=E,470nm,28.8s						
ODAN	**Odare**	**40.82**	**312**	*e*P	**P**	**04 58 54.6**	**-0.2**
	comp=E,6.3nm,0.3s						
TAPN	**Taplejung**	**40.86**	**313**	*e*P	**P**	**04 58 55.6**	**+0.4**
	comp=E,10nm,0.5s						
RAMN	**Ramite**	**41.45**	**312**	*e*P	**P**	**04 59 00.7**	**+0.6**
	comp=E,46nm,1.0s						
GUN	**Gumba**	**42.52**	**312**	*e*P	**P**	**04 59 09.2**	**+0.4**
	comp=E,40nm,0.7s						
PKI	**Pulchoki**	**42.68**	**312**	*e*P	**P**	**04 59 09.9**	**-0.2**
	comp=E,18nm,0.7s						
PKIN	**Phulchoki**	**42.69**	**312**	*e*P	**P**	**04 59 10.7**	**+0.5**
	comp=E,5.9nm,0.4s						
GTA	**Gaotai**	**42.74**	**337**	P	**P**	**04 59 11.1**	**+0.9**
GTA				pP	**pP**	**04 59 26.6**	**-1.0**
GTA				pmax	pmax		
	comp=Z,35nm,0.8s						
KKN	**Kakani**	**42.89**	**312**	*e*P	**P**	**04 59 12.3**	**+0.6**
DMN	**Daman**	**42.93**	**312**	*e*P	**P**	**04 59 12.4**	**+0.3**
	comp=Z,32nm,0.8s						
ARMA	**Armidale**	**43.09**	**139**	P	**P**	**04 59 15.2**	**+2.0**
	baz=43,SNR=11						
CN2	**Changchun**	**43.12**	**6**	*e*P	P	04 59 17.3	+4.3
CN2				*e*S	S	05 05 40.4	+6.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KOLN	**Koldanda**	**44.15**	**311**	*e*P	**P**	**04 59 22.2**	**+0.4**
HYB	**Hyderabad**	**44.15**	**294**	*i* P	**P**	**04 59 21.0**	**-0.8**
DANN	**Dangsing**	**44.33**	**312**	*e*P	**P**	**04 59 23.6**	**+0.3**
	comp=Z,86nm,0.8s						
MDJ	**Mudanjiang**	**44.47**	**10**	P	**P**	**04 59 24.1**	**+0.3**
MDJ				pmax	pmax		
	comp=Z,14nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,73nm,3.4s						
USRK	**Ussuriysk Arra**	**44.52**	**12**	P	**P**	**04 59 23.6**	**-0.7**
	comp=Z,3.5nm,0.5s,baz=190,slow=6.6,SNR=8.9						
PYUN	**Piuthan**	**44.78**	**311**	*e*P	**P**	**04 59 27.3**	**+0.5**
	comp=Z,124nm,0.8s						
ULN	**Ulaanbaatar**	**48.29**	**348**	*e*P	**P**	**04 59 53.6**	**-0.3**
	comp=Z,11nm,1.1s						
ULN	**Ulaanbaatar**	**48.29**	**348**	P	**P**	**04 59 54.7**	**+0.8**
	comp=Z,9.1nm,1.0s						
SONM	**Songino Array**	**48.40**	**348**	P	**P**	**04 59 55.0**	**+0.2**
SONM	**Songino Array**	**48.40**	**348**	P	**P**	**04 59 55.0**	**+0.2**
	comp=Z,2.6nm,0.6s,baz=167,slow=9.1,SNR=23						
WMQ	**Urumqi**	**51.72**	**330**	P	**P**	**05 00 21.0**	**+1.1**
WMQ				pP	**pP**	**05 00 36.8**	**-1.0**
WMQ				PP	**PP**	**05 02 19.9**	**+1.7**
WMQ				pmax	pmax		
	comp=Z,13nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.6s						
WMQ				LR	LR		
	comp=N,120nm,5.0s						
WMQ				LR	LR		
	comp=E,100nm,5.4s						
NFK	**Norfolk Island**	**54.39**	**127**	P	P	05 00 28.0	-12
	baz=54,SNR=3.1						
KSH	**Kashi**	**55.76**	**319**	P	**P**	**05 00 50.8**	**+1.3**
KSH				*ep*P	**pP**	**05 01 07.0**	**-0.6**
KSH				*e*PcP	**PcP**	**05 01 49.3**	**+1.3**
KSH				*e*PP	**PP**	**05 02 56.8**	**+2.1**
KSH				*e*ScP	**ScP**	**05 05 41.1**	**+0.1**
KSH				*e*PcS	**PcS**	**05 05 49.0**	**+0.6**
KSH				*e*S	**S**	**05 08 29.1**	**-2.2**
KSH				*e*ScS	**ScS**	**05 10 30.8**	**-1.8**
KSH				pmax	pmax		
	comp=Z,16nm,0.5s						
KSH				pmax	pmax		
	comp=Z,140nm,4.3s						
KSH				LR	LR		
	comp=N,90nm,4.2s						
KSH				LR	LR		
	comp=E,84nm,3.8s						
KSH				LR	LR		
	comp=Z,81nm,4.4s						
MK31	**Makanchi Array**	**56.52**	**330**	*e*P	**P**	**05 00 55.1**	**+0.4**
MK31				*e*PcP	**PcP**	**05 01 50.2**	**-0.5**
MKAR	**Makanchi Array**	**56.52**	**330**	*e*P	**P**	**05 00 55.2**

ABKAR **Akbulak array** 70.42 323 *e*P P 05 02 26.5 +0.1
comp=Z,1.7nm,0.3s
AKTO **Aktyubinsk** 72.02 324 LR LR 05 38 53.1
comp=Z,22nm,18.0s,baz=285,slow=40
KBZ **Khabaz** 80.30 314 P P 05 03 22.6 -0.5
KBZ **Khabaz** 80.30 314 P P 05 03 22.6 -0.5
comp=Z,3.5nm,0.8s,baz=79,slow=4.8,SNR=9.8
VNDA **Vanda** 81.39 172 *e*P P 05 03 26.5 -1.8
comp=Z,2.0nm,1.2s
BR131 **Keskin Array S** 86.86 310 *e*P P 05 03 56.1 -0.9
comp=Z,3.3nm,0.9s
BRTR **Keskin Array B** 86.86 310 P P 05 03 56.1 -0.9
BRTR **Keskin Array B** 86.86 310 P P 05 03 56.1 -0.9
comp=Z,2.7nm,0.7s,baz=123,slow=5.3,SNR=21
AKASG **Malin Array Be** 90.03 321 P P 05 04 09.5 -2.1
AKASG **Malin Array Be** 90.03 321 P P 05 04 09.5 -2.1
comp=Z,1.7nm,0.6s,baz=89,slow=3.7,SNR=8.3
ARCES **ARCESS Array B** 90.94 339 P P 05 04 14.0 -1.5
ARCES **ARCESS Array B** 90.94 339 P P 05 04 14.0 -1.5
comp=Z,1.6nm,0.8s,baz=104,slow=3.8,SNR=7.5
CRVS **Cervenica-Dubn** 95.17 319 *e*P P 05 04 36.6 +1.2
TORD **Torodi Ar. Bea** 117.49 285 PKP PKPdf 05 09 56.8 -1.6
TORD **Torodi Ar. Bea** 117.49 285 PKP PKPdf 05 09 56.8 -1.6
comp=Z,0.7nm,0.6s,baz=80,slow=1.8,SNR=7.5

KRSC 14 05:16:35.9±1.4, 49.44N×157.08E, h54km±53km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**2.04**	**355**	P		Pn 05 17 09.0	+1.3
PAU				*i* S		Sn 05 17 33.1	+1.1
ASAK	**Asacha**	**2.99**	**10**	P		Pn 05 17 23.6	+2.7
MTVR	**Mutnovka**	**3.13**	**12**	P		Pn 05 17 25.4	+2.6
MTVR				*i* S		Sn 05 18 01.4	+2.4
RUS	**Russkaya**	**3.13**	**16**	P		Pn 05 17 24.7	+2.0
RUS				*i* S		Sn 05 18 00.4	+1.6
PET	**Petropavlovsk**	**3.72**	**15**	P		Pn 05 17 33.4	+2.6
UGLR	**Uglovaya**	**3.93**	**15**	P		Pn 05 17 37.1	+3.3
AVH	**Avacha**	**3.97**	**15**	P		Pn 05 17 38.0	+3.7
SMAR	**Somma**	**3.98**	**15**	P		Pn 05 17 37.4	+2.8
KOK	**Koryaka**	**3.98**	**14**	P		Pn 05 17 38.2	+3.7
SDLR	**Sedlovina**	**4.01**	**16**	P		Pn 05 17 37.3	+2.4
KRER	**Koryakskii**	**4.01**	**14**	P		Pn 05 17 38.6	+3.6
SPN	**Mys Shipunski**	**4.10**	**26**	P		Pn 05 17 39.1	+3.1
SPN				*i* S		Sn 05 18 26.0	+3.3
GNL	**Ganaly**	**4.29**	**7**	P		Pn 05 17 41.8	+3.0
KBTR	**Krutoberegovo**	**7.62**	**25**	P		Pn 05 18 26.1	+2.0

*BJI **14** 05:48:53.3,21.71N×143.22E,h310km,mB4.5/13, mb4.3/22*
*ISCJB **14** 05:48:54.0±0.6,21.64N±0.04×143.14E±0.04, h314km±5km,mb4.4/75,Error ellipse: s-maj=6.5km s-min=6.0km az=28.2*
*IDC **14** 05:48:54.9±1.9,21.61N×143.18E,h315km±18km, mb4.0/21,mb1 4.2/25,mb1mx4.2/30,mbtmp4.1/25,Error ellipse: s-maj=13.5km s-min=8.4km az=79.0*
*JMA **14** 05:48:54.4±0.3,21.78N×143.55E,h325km±2km,M5.1*
*NEIC **14** 05:48:55.7±0.8,21.58N×143.11E,h322km±8km,mb4.5/43, Error ellipse: s-maj=5.9km s-min=5.3km az=178.0*
ISC 14 05:48:55.0±0.6, 21.66N±0.05×143.17E±0.06, h312km±4km, h312km:pP-P,n342,σ1s05/384,mb4.5/86,94C-81D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**5.03**	**350**	P	**Pn**	**05 50 13.2**	**-0.1**
JHHJ				S	**S**	**05 51 15.0**	**-1.3**
CBIJ	**Chichi jima**	**5.49**	**351**	P	**Pn**	**05 50 18.1**	**-0.5**
CBIJ				S	**S**	**05 51 23.9**	**-2.0**
GUMO	**Guam**	**8.19**	**168**	P	**Pn**	**05 50 50.3**	**-0.8**
GUMO				*e*Sn	S	05 52 17.7	-7.8
GUMO	**Guam**	**8.19**	**168**	P	**Pn**	**05 50 50.3**	**-0.8**
	25nm,0.3s,baz=188,slow=2.8,SNR=16						
JHJ2	**Mitsune**	**11.79**	**346**	P	**Pn**	**05 51 34.2**	**-0.5**
JHJ	**Hachijo jima 2**	**11.80**	**346**	P	**Pn**	**05 51 35.3**	**+0.4**
	39nm,0.3s,baz=64,slow=23,SNR=12						
JHJ				S	**S**	**05 53 46.6**	**+0.1**
	38nm,0.3s,baz=247,slow=23,SNR=4.8						
TK01	**Tokai 1**	**13.03**	**339**	P	**P**	**05 51 51.2**	**+1.9**
BSO1	**Boso 1**	**13.09**	**352**	P	**P**	**05 51 50.5**	**+0.8**
TK02	**Tokai 2**	**13.14**	**340**	P	**P**	**05 51 52.0**	**+1.3**
TTO1	**TONANKAI O.B.S**	**13.19**	**336**	P	**P**	**05 51 52.7**	**+1.6**
JWZ	**Kozaga**	**13.54**	**332**	P	**Pn**	**05 51 57.3**	**+1.6**
JTN	**Tanegashima 3**	**14.13**	**312**	P	**Pn**	**05 52 04.9**	**+2.1**
JTO	**Tosashimizu**	**14.46**	**323**	P	**Pn**	**05 52 08.2**	**+1.5**
JNN	**Nakanoshima**	**14.48**	**307**	P	**Pn**	**05 52 09.3**	**+2.4**
JHU	**Hanno**	**14.54**	**347**	P	**P**	**05 52 06.5**	**+0.1**
JHU				*e*S	**S**	**05 54 40.3**	**-5.0**
MJAR	**Matsushiro Arr**	**15.45**	**345**	P	**P**	**05 52 16.9**	**+0.6**
MJAR				S	**S**	**05 55 01.1**	**-2.2**
MJAR	**Matsushiro Arr**	**15.45**	**345**	P	**P**	**05 52 16.9**	**+0.6**
	6.3nm,0.3s,baz=168,slow=12,SNR=21						
MJAR				S	**S**	**05 55 01.1**	**-2.2**
	1.5nm,0.3s,baz=176,slow=18,SNR=5.6						
MAJO	**Matsushiro**	**15.45**	**345**	*e*P	**P**	**05 52 16.7**	**+0.4**
	22nm,0.8s						
MAJO				*e*S	**S**	**05 55 01.0**	**-2.4**
MAT	**Matsushiro**	**15.45**	**345**	P	**P**	**05 52 16.9**	**+0.6**
MAT				S	**S**	**05 55 01.5**	**-1.8**
MAT	**Matsushiro**	**15.45**	**345**	P	**P**	**05 52 16.8**	**+0.5**
JSJ	**Shimokoshiki**	**15.61**	**313**	P	**Pn**	**05 52 22.5**	**+2.3**
JNU	**Nakatsue**	**15.78**	**319**	P	**Pn**	**05 52 21.3**	**-0.8**
JNU	**Nakatsue**	**15.78**	**319**	P	**Pn**	**05 52 21.3**	**-0.8**
	1.2nm,0.3s,baz=151,slow=2.7,SNR=5.2						
JHS	**Saijyo**	**15.95**	**329**	P	**Pn**	**05 52 23.9**	**-0.2**
KSRS	**Korea Array**	**20.54**	**323**	P	**P**	**05 53 11.1**	**+0.6**
	12nm,0.6s,baz=149,slow=8.9,SNR=50						
KSAR	**Wonju Array Be**	**20.55**	**323**	P	**P**	**05 53 11.1**	**+0.4**
USRK	**Ussuriysk Arra**	**24.31**	**340**	P	**P**	**05 53 45.2**	**+0.3**
	4.4nm,0.6s,baz=166,slow=9.2,SNR=9.5						
BJI	**Beijing**	**29.37**	**315**	P	**P**	**05 54 30.0**	**+0.1**
BJI				S	**S**	**05 59 01.0**	**+1.0**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,76nm,4.7s						
BJI				LR	LR		
	comp=N,75nm,15.0s						
BJI				LR	LR		
	comp=E,110nm,15.0s						
BJI				LR	LR		
	comp=Z,13nm,22.1s						
HHC	**Hu-ho-hao-te**	**32.85**	**313**	*e*P	**P**	**05 55 00.8**	**+0.4**
HHC				pP	**pP**	**05 56 02.5**	**+1.9**
HHC				PP	**PnPn**	**05 56 24.1**	**+0.7**
HHC				PcP	**PcP**	**05 57 38.6**	**+1.6**
HHC				S	**S**	**05 59 53.8**	**-0.5**
HHC				ScP	**ScP**	**06 00 49.6**	**-1.4**
HHC				SS	**SS**	**06 02 22.1**	**-9.1**
HHC				ScS	**ScS**	**06 04 48.6**	**-3.2**
HHC				pmax	pmax		
	comp=Z,41nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,9.6s						
GYA	**Guiyang**	**33.60**	**285**	*e*P	**P**	**05 55 06.8**	**-0.2**
GYA				pP	**pP**	**05 56 07.4**	**0.0**
GYA				sP	**sP**	**05 56 44.0**	**+0.5**
GYA				PcP	**PcP**	**05 57 41.3**	**+1.9**
GYA				S	**S**	**06 00 05.6**	**-0.6**
GYA				ScP	**ScP**	**06 00 53.4**	**-0.5**
GYA				PcS	**PcS**	**06 01 24.3**	**-1.7**
GYA				ScS	**ScS**	**06 04 53.8**	**-2.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LZH	**Lanzhou**	**37.05**	**302**	*e*P	**P**	**05 55 36.5**	**+0.3**
LZH				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI	**Kunming**	**37.17**	**283**	P	P	05 55 41.3	+3.9
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
FX1	**Attu Island--F**	**38.73**	**29**	*e*P	**P**	**05 55 50.6**	**+1.0**
FX1				*e*PcP	**PcP**	**05 57 53.9**	**-0.3**
SONM	**Songino Array**	**39.36**	**321**	P	**P**	**05 55 55.3**	**+0.2**
SONM	**Songino Array**	**39.36**	**321**	P	**P**	**05 55 55.3**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=129,slow=5.8,SNR=24						
CHTO	**Chiang Mai**	**41.49**	**274**	*e*P	**P**	**05 56 12.9**	**+0.2**
	comp=Z,7.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**41.56**	**274**	P	**P**	**05 56 13.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**41.56**	**274**	P	**P**	**05 56 13.7**	**+0.5**
	comp=Z,4.2nm,0.6s,baz=80,slow=6.1,SNR=21						
WRA	**Warramunga Arr**	**42.24**	**192**	P	**P**	**05 56 17.1**	**-1.4**
WRA	**Warramunga Arr**	**42.24**	**192**	P	**P**	**05 56 17.1**	**-1.4**
	comp=Z,3.9nm,0.4s,baz=16,slow=9.4,SNR=20						
KULM	**Kulim**	**44.24**	**255**	*e*P	**P**	**05 56 34.7**	**+0.1**
	comp=Z,15nm,0.6s						
ASAR	**Alice Springs**	**45.95**	**192**	P	**P**	**05 56 46.2**	**-1.6**
ASAR	**Alice Springs**	**45.95**	**192**	P	**P**	**05 56 46.2**	**-1.6**
	comp=Z,1.6nm,0.6s,baz=14,slow=9.4,SNR=24						
LSA	**Lhasa**	**47.23**	**291**	*e*P	**P**	**05 56 59.5**	**+1.2**
	comp=Z,5.7nm,0.5s						
BILL	**Bilibino**	**48.56**	**11**	*e*P	**P**	**05 57 07.5**	**+0.4**
	comp=Z,15nm,0.6s						
TAPN	**Taplejung**	**50.44**	**288**	*e*P	**P**	**05 57 22.4**	**+0.1**
	comp=Z,14nm,0.5s						
WMQ	**Urumqi**	**50.59**	**309**	*e*P	**P**	**05 57 22.9**	**0.0**
ODAN	**Odare**	**50.78**	**288**	*e*P	**P**	**05 57 24.8**	**+0.1**
	comp=Z,23nm,0.7s						
RAMN	**Ramite**	**51.47**	**288**	*e*P	**P**	**05 57 29.5**	**-0.3**
	comp=Z,7.1nm,0.4s						
GUN	**Gumba**	**51.99**	**289**	*e*P	**P**	**05 57 34.1**	**+0.3**
	comp=Z,11nm,0.4s						
PKI	**Pulchoki**	**52.45**	**289**	*e*P	**P**	**05 57 36.7**	**-0.4**
	comp=Z,11nm,0.5s						
PKIN	**Phulchoki**	**52.46**	**289**	*e*P	**P**	**05 57 36.5**	**-0.6**
	comp=Z,8.5nm,0.5s						
KKN	**Kakani**	**52.53**	**289**	*e*P	**P**	**05 57 37.4**	**-0.2**
	comp=Z,7.5nm,0.2s						
DMN	**Daman**	**52.71**	**289**	*e*P	**P**	**05 57 38.7**	**-0.2**
	comp=Z,9.8nm,0.5s						
STKA	**Stephens Creek**	**53.25**	**182**	*e*P	**P**	**05 57 41.5**	**-0.8**
STKA	**Stephens Creek**	**53.25**	**182**	P	**P**	**05 57 41.0**	**-1.3**
	comp=Z,2.8nm,0.4s,baz=3.5,slow=7.2,SNR=16						
DANN	**Dangsing**	**53.80**	**290**	*e*P	**P**	**05 57 47.2**	**+0.4**
	comp=Z,90nm,0.3s						
KOLN	**Koldanda**	**54.01**	**289**	*e*P	**P**	**05 57 48.2**	**-0.1**
	comp=Z,9.2nm,0.4s						
ZALV	**Zalesovo Beam**	**54.23**	**322**	P	**P**	**05 57 48.6**	**-0.5**
ZALV				PcP	**PcP**	**05 58 48.3**	**-0.7**
ZALV	**Zalesovo Beam**	**54.23**	**322**	P	**P**	**05 57 48.6**	**-0.5**
	comp=Z,12nm,0.6s,baz=101,slow=7.1,SNR=37						
ZALV				PcP	**PcP**	**05 58 48.3**	**-0.7**
	comp=Z,7.2nm,0.4s,baz=115,slow=3.7,SNR=13						
PYUN	**Piuthan**	**54.50**	**290**	*e*P	**P**	**05 57 51.8**	**0.0**
	comp=Z,18nm,0.6s						
MK31	**Makanchi Array**	**54.71**	**313**	*e*P	**P**	**05 57 53.0**	**+0.3**
MK31				*e*PcP	**PcP**	**05 58 50.6**	**-0.5**
MKAR	**Makanchi Array**	**54.71**	**313**	P	**P**	**05 57 52.7**	**-0.1**
MKAR				PcP	**PcP**	**05 58 51.0**	**-0.1**
MKAR	**Makanchi Array**	**54.71**	**313**	P	**P**	**05 57 52.7**	**-0.1**
	comp=Z,7.3nm,0.5s,baz=90,slow=9.0,SNR=95						
MKAR				PcP	**PcP**	**05 58 51.0**	**-0.1**
	comp=Z,3.1nm,0.4s,baz=80,slow=4.2,SNR=13						
CHGN	**Chignik**	**54.82**	**36**	*e*P	**P**	**05 57 53.6**	**+0.5**
KURK	**Kurchatov**	**57.49**	**317**	*e*P	**P**	**05 58 12.1**	**0.0**
	comp=Z,16nm,0.8s						
KURK				*e*PcP	**PcP**	**05 59 01.3**	**-0.6**
KDAK	**Kodiak Island**	**58.24**	**35**	*e*P	**P**	**05 58 17.4**	**+0.3**
KDAK	**Kodiak Island**	**58.24**	**35**	P	**P**	**05 58 17.0**	**-0.1**
	comp=Z,6.0nm,0.5s,baz=254,slow=5.0,SNR=9.8						
RSO	**Redoubt South**	**58.65**	**31**	*e*P	**P**	**05 58 20.4**	**+0.2**
	comp=Z,14nm,0.7s						
ULHL	**Ulahol**	**58.90**	**307**	P	**P**	**05 58 23.2**	**+0.9**
	SNR=5.4						
KSH	**Kashi**	**59.24**	**304**	P	P	05 58 27.8	+3.3
KSH				*e*PcP	**PcP**	**05 59 14.1**	**+4.9**
KSH				*e*pP	pP	05 59 37.3	+5.0
KSH				*e*PP	**PP**	**06 00 44.3**	**+5.0**
KSH				*e*ScP	**ScP**	**06 02 42.0**	**+2.6**
KSH				*e*PcS	**PcS**	**06 03 14.5**	**+2.8**
KSH				S	**S**	**06 06 07.0**	**-0.5**
KSH				*e*ScS	**ScS**	**06 07 42.1**	**-0.8**
KSH				pmax	pmax		
	comp=Z,12nm,0.4s						
KSH				pmax	pmax		
	comp=Z,240nm,4.0s						
KSH				LR	LR		
	comp=N,85nm,3.4s						
KSH				LR	LR		
	comp=E,41nm,3.4s						
KSH				LR	LR		
	comp=Z,81nm,3.2s						
TKM2	**Tokmak 2**	**59.35**	**308**	*e*P	**P**	**05 58 26.3**	**+1.0**
	comp=Z,8.3nm,0.6s						
TKM2	**Tokmak 2**	**59.35**	**308**	P	**P**	**05 58 26.3**	**+1.0**
	SNR=17						
PPLA	**Purkeypile**	**59.43**	**29**	*e*P	**P**	**05 58 25.8**	**+0.4**
	comp=Z,47nm,2.0s						
KZA	**Kyzart**	**59.65**	**307**	P	**P**	**05 58 29.2**	**+1.6**
	SNR=16						
KBK	**Karagaybulak**	**59.84**	**308**	P	**P**	**05 58 29.7**	**+1.1**
	SNR=5.2						
USP	**Ospenovka**	**60.15**	**308**	P	**P**	**05 58 31.0**	**+0.5**
	SNR=7.3						
AAK	**Ala-Archa**	**60.18**	**308**	*e*P	**P**	**05 58 30.7**	**-0.2**
	comp=Z,1.1nm,0.6s						
SEW	**Seward**	**60.21**	**32**	*e*P	**P**	**05 58 30.5**	**0.0**
	comp=Z,11nm,0.8s						
TRF	**Thorofare Moun**	**60.38**	**28**	*e*P	**P**	**05 58 31.0**	**-0.9**
	comp=Z,12nm,0.9s						
PMR	**Palmer**	**60.59**	**31**	*e*P	**P**	**05 58 32.8**	**-0.2**
	comp=Z,8.6nm,0.7s						
EKS2	**Erkin-Say**	**60.70**	**308**	*e*P	**P**	**05 58 35.0**	**+0.6**
	comp=Z,5.7nm,1.0s						
AML	**Almayashu**	**60.80**	**307**	P	**P**	**05 58 36.5**	**+1.2**
	SNR=16						
SML	**Sawmill**	**61.00**	**30**	*e*P	**P**	**05 58 36.3**	**+0.4**
	comp=Z,3.9nm,0.9s						
SML				*e*PcP	**PcP**	**05 59 16.3**	**+0.5**
SML				*e*pP	**pP**	**05 59 42.3**	**-1.7**
SML				*e*PP	**PP**	**06 00 56.2**	**+2.0**
MCK	**McKinley**	**61.03**	**28**	*e*P	**P**	**05 58 35.8**	**-0.2**
	comp=Z,8.1nm,0.9s						
COLD	**Coldfoot**	**61.21**	**24**	*e*P	**P**	**05 58 38.5**	**+1.4**
	comp=Z,6.7nm,0.8s						
COLA	**College**	**61.69**	**27**	*e*P	**P**	**05 58 40.7**	**+0.5**
	comp=Z,5.0nm,0.6s						
ILAR	**Eielson Array**	**62.08**	**27**	P	**P**	**05 58 41.8**	**-1.2**
ILAR	**Eielson Array**	**62.08**	**27**	P	**P**	**05 58 41.8**	**-1.2**
	comp=Z,5.9nm,0.6s,baz=259,slow=5.5,SNR=119						
RAGM	**Ragged Mountai**	**62.61**	**32**	*e*P	**P**	**05 58 47.4**	**+0.8**
	comp=Z,9.6nm,1.0s						
BRVK	**Borovoye**	**62.75**	**320**	*e*P	**P**	**05 58 48.0**	**+0.4**
	comp=Z,27nm,0.6s						
DOT	**Dot Lake**	**63.17**	**29**	*e*P	**P**	**05 58 50.5**	**+0.4**
	comp=Z,37nm,1.4s						
EGAK	**Eagle**	**64.52**	**27**	*e*P	**P**	**05 58 58.3**	**-0.5**
	comp=Z,31nm,2.5s						
KBL	**Kabul**	**65.34**	**299**	*e*P	**P**	**05 59 04.8**	**-0.1**
	comp=Z,16nm,0.6s						
ABKAR	**Akbulak array**	**69.57**	**316**	*e*P	**P**	**05 59 30.6**	**0.0**
DLBC	**Dease Lake**	**70.16**	**34**	*e*P	**P**	**05 59 34.9**	**+0.7**
NLWA	**Neilton Lookou**	**76.32**	**44**	*e*P	**P**	**06 00 11.7**	**+1.6**
	comp=Z,5.3nm,0.5s						
YKW3	**Yellowknife Ar**	**76.47**	**28**	*e*P	**P**	**06 00 10.6**	**0.0**
	comp=Z,0.2nm,0.9s						
YKA	**Yellowknife Ar**	**76.50**	**28**	P	**P**	**06 00 10.5**	**-0.2**
YKA	**Yellowknife Ar**	**76.50**	**28**	P	**P**	**06 00 10.5**	**-0.2**
	comp=Z,12nm,0.6s,baz=291,slow=5.9,SNR=176						
RES	**Resolute Bay**	**77.12**	**13**	*e*P	**P**	**06 00 14.0**	**0.0**
	comp=Z,7.2nm,0.7s						
KEV	**Kevo**	**78.39**	**341**	*e*p	**P**	**06 00 21.0**	**0.0**
	comp=Z,22nm,0.6s						
KEV	**Kevo**	**78.39**	**341**	*e*P	**P**	**06 00 20.9**	**-0.1**
	comp=Z,18nm,0.6s						
KHMM	**Horse Mountain**	**78.40**	**51**	*e*P	**P**	**06 00 23.0**	**+1.1**
	comp=Z,9.7nm,0.7s						
ARCES	**ARCESS Array B**	**78.95**	**341**	P	**P**	**06 00 23.9**	**-0.2**
ARCES	**ARCESS Array B**	**78.95**	**341**	P	**P**	**06 00 23.9**	**-0.2**
	comp=Z,19nm,0.5s,baz=72,slow=7.4,SNR=134						
NEW	**Newport**	**80.32**	**42**	*e*P	**P**	**06 00 32.6**	**+0.7**
	comp=Z,6.2nm,0.6s						
NEW	**Newport**	**80.32**	**42**	⇓P	**P**	**06 00 32.2**	**+0.3**
	baz=80						
JOF	**Joensuu**	**80.34**	**334**	*e*p	**P**	**06 00 31.7**	**+0.1**
	comp=Z,20nm,0.3s						
A12A	**Yaak River Ran**	**80.97**	**41**	⇓P	**P**	**06 00 36.9**	**+1.5**
	baz=81						
BMO	**Blue Mountains**	**81.47**	**45**	*e*P	**P**	**06 00 38.2**	**+0.1**
	comp=Z,10nm,1.2s						
A13A	**Flathead Natio**	**81.73**	**41**	⇑P	**P**	**06 00 40.1**	**+0.8**
	baz=82						
CMB	**Columbia Colle**	**81.80**	**52**	*e*P	**P**	**06 00 40.3**	**+0.4**
	comp=Z,7.1nm,0.7s						
D12A	**Red Ives Fores**	**81.89**	**43**	⇑P	**P**	**06 00 40.3**	**+0.1**
	baz=82						
B13A	**Whitefish**	**81.92**	**41**	⇑P	**P**	**06 00 41.0**	**+0.7**
	baz=82						
BSMT	**Bassoo Peak**	**81.93**	**42**	*e*P	**P**	**06 00 41.1**	**+0.6**
	comp=Z,6.7nm,1.0s						
BSMT				*e*PcP	**PcP**	**06 00 45.2**	**0.0**
C13A	**Hot Springs**	**82.13**	**42**	⇑P	**P**	**06 00 41.8**	**+0.4**
	baz=82						
JTMT	**Jette**	**82.28**	**42**	*e*P	**P**	**06 00 42.6**	**+0.4**
	comp=Z,7.7nm,1.1s						
A14A	**Double T Ranch**	**82.31**	**40**	⇓P	**P**	**06 00 43.3**	**+0.9**
	baz=82						
KBZ	**Khabaz**	**82.38**	**314**	P	**P**	**06 00 43.1**	**+0.4**
KBZ	**Khabaz**	**82.38**	**314**	P	**P**	**06 00 43.1**	**+0.4**
	comp=Z,18nm,0.8s,baz=117,slow=4.4,SNR=44						
D13A	**Huson**	**82.43**	**42**	⇑P	**P**	**06 00 42.7**	**-0.3**
	baz=82						
F12A	**Elk City**	**82.46**	**44**	⇓P	**P**	**06 00 43.2**	**0.0**
	baz=82						
SWMT	**Swartz Lake**	**82.55**	**42**	*e*P	**P**	**06 00 43.9**	**+0.3**
C14A	**Swan Lake**	**82.60**	**41**	⇓P	**P**	**06 00 44.2**	**+0.3**
	baz=82						
G12A	**Big Creek, Yel**	**82.66**	**44**	⇑P	**P**	**06 00 44.2**	**-0.2**
	baz=83						
A15A	**Johnson Ranch,**	**82.72**	**40**	⇓P	**P**	**06 00 44.9**	**+0.4**
	baz=83						
KAF	**Kangasniemi**	**82.75**	**335**	*e*p	**P**	**06 00 43.1**	**-1.0**
	comp=Z,5.5nm,0.6s						
MSO	**Missoula**	**82.86**	**42**	⇑P	**P**	**06 00 45.3**	**+0.1**
	baz=83						
E13A	**Victor**	**82.86**	**43**	⇑P	**P**	**06 00 45.2**	**-0.1**
	baz=83						
SLMT	**Seeley Lake**	**82.97**	**42**	*e*P	**P**	**06 00 45.8**	**-0.1**
	comp=Z,2.8nm,0.7s						
MFID	**Camas Ranch**	**83.00**	**46**	*e*P	**P**	**06 00 46.4**	**+0.4**
	comp=Z,16nm,1.2s						
MFID				*e*PcP	**PcP**	**06 00 50.2**	**+0.3**
MFID	**Camas Ranch**	**83.00**	**46**	⇓P	**P**	**06 00 46.4**	**+0.4**
	baz=83,SNR=7.5						
D14A	**Greenough**	**83.03**	**42**	⇓P	**P**	**06 00 46.0**	**-0.2**
	baz=83						
F13A	**Darby**	**83.04**	**43**	⇓P	**P**	**06 00 45.9**	**-0.3**
	baz=83						
B15A	**Bradely Ranch,**	**83.10**	**41**	⇓P	**P**	**06 00 46.5**	**+0.1**
	baz=83,SNR=9.6						
NVAR	**Mina Array Bea**	**83.18**	**51**	P	**P**	**06 00 47.4**	**+0.3**
NVAR	**Mina Array Bea**	**83.18**	**51**	P	**P**	**06 00 47.4**	**+0.3**
	comp=Z,6.8nm,0.7s,baz=275,slow=5.8,SNR=31						
H12A	**Diamond D Ranc**	**83.19**	**45**	⇓P	**P**	**06 00 47.5**	**+0.5**
	baz=83						
FIA1	**FINESS Array S**	**83.21**	**334**	*e*P	**P**	**06 00 45.5**	**-1.0**
FINES	**FINESS Array B**	**83.21**	**334**	P	**P**	**06 00 45.5**	**-1.0**
FINES	**FINESS Array B**	**83.21**	**334**	P	**P**	**06 00 45.5**	**-1.0**
	comp=Z,10nm,0.4s,baz=68,slow=5.0,SNR=80						
RCTC	**Rector, Farmer**	**83.28**	**54**	⇓P	**P**	**06 00 48.0**	**+0.6**
	baz=83						
C15A	**Salmond Ranch,**	**83.30**	**41**	⇑P	**P**	**06 00 47.5**	**0.0**
	baz=83,SNR=8.4						
E14A	**Clinton**	**83.31**	**43**	⇑P	**P**	**06 00 47.8**	**+0.2**
	baz=83						
I12A	**Atlanta**	**83.31**	**46**	⇑P	**P**	**06 00 47.7**	**0.0**
	baz=83						
G13A	**Cobalt**	**83.38**	**44**	⇑P	**P**	**06 00 47.8**	**-0.2**
	baz=83,SNR=11						
VES	**Vestal, Richgr**	**83.57**	**54**	⇑P	**P**	**06 00 48.8**	**-0.1**
	baz=84						
B16A	**M & M Farms, S**	**83.58**	**40**	⇑P	**P**	**06 00 48.8**	**+0.1**
	baz=84,SNR=6.7						
H13A	**Challis**	**83.58**	**45**	⇓P	**P**	**06 00 49.4**	**+0.4**
	baz=84,SNR=7.3						
D15A	**Lincoln**	**83.66**	**42**	⇑P	**P**	**06 00 49.0**	**-0.3**
	baz=84						
C16A	**Fuhringer Ranc**	**83.81**	**41**	⇓P	**P**	**06 00 50.0**	**0.0**
	baz=84,SNR=14						
E15A	**Deer Lodge**	**83.84**	**42**	⇓P	**P**	**06 00 50.4**	**+0.1**
	baz=84,SNR=9.1						
HLID	**Hailey**	**83.88**	**46**	*e*P	**P**	**06 00 50.9**	**+0.4**
	comp=Z,3.5nm,1.0s						
HLID	**Hailey**	**83.88**	**46**	⇓P	**P**	**06 00 50.9**	**+0.4**
	baz=84,SNR=6.0						
I13A	**Wildhorse Cree**	**83.94**	**45**	⇑P	**P**	**06 00 51.2**	**+0.3**
	baz=84,SNR=6.4						
A17A	**Triple J Farms**	**83.95**	**40**	⇑P	**P**	**06 00 50.9**	**+0.3**
	baz=84,SNR=8.5						
ISA	**Isabella**	**84.10**	**54**	⇑P	**P**	**06 00 51.3**	**-0.3**
	baz=84						
J13A	**Cove Ranch, Pi**	**84.11**	**46**	⇑P	**P**	**06 00 52.1**	**+0.4**
	baz=84,SNR=5.6						
H14A	**Leadore**	**84.14**	**44**	⇑P	**P**	**06 00 52.1**	**+0.2**
	baz=84,SNR=8.2						
B17A	**L&G Farms, Che**	**84.17**	**40**

	comp=Z,14nm,0.7s							
I16A	**Newdale**	85.68	44	⇓P		P	06 01 00.5	+1.1
	baz=86							
HVU	**Hansel Valley**	85.72	47	*e*P		P	06 01 00.5	+0.8
B20A	**Solberg Farm,**	85.76	39	⇑P		P	06 00 59.6	+0.1
	baz=86,SNR=6.5							
D19A	**Cripps Ranch,**	85.84	41	⇑P		P	06 01 00.3	+0.2
	baz=86,SNR=13							
MURC	**Murrieta**	85.86	56	⇓P		P	06 01 00.3	-0.1
	baz=86							
FFC	**Flin Flon**	85.87	32	*e*P		P	06 01 00.0	+0.1
	comp=Z,9.8nm,0.9s							
F18A	**Big Timber**	85.90	42	⇓P		P	06 01 00.7	+0.3
	baz=86,SNR=5.4							
IMW	**Indian Meadow**	86.02	44	*e*P		P	06 01 02.0	+0.8
H17A	**Grant Village**	86.04	44	⇓P		P	06 01 03.6	+2.3
	baz=86							
TUQ	**Turquoise Moun**	86.10	53	⇓P		P	06 01 01.9	+0.3
	baz=86							
C20A	**Veseth Ranch,**	86.11	40	⇓P		P	06 01 01.7	+0.4
	baz=86,SNR=8.3							
E19A	**Rath Farm, Rou**	86.22	41	⇓P		P	06 01 02.5	+0.6
	baz=86							
D20A	**Manuel Ranch,**	86.32	40	⇓P		P	06 01 02.7	+0.4
	baz=86,SNR=16							
B21A	**Ellsworth Farm**	86.35	39	⇓P		P	06 01 02.7	+0.2
	baz=86							
DUG	**Dugway**	86.37	48	*e*P		P	06 01 03.1	+0.2
DUG	**Dugway**	86.37	48	⇓P		P	06 01 03.1	+0.2
	baz=86							
PFO	**Pinyon Flat Ob**	86.43	55	⇓P		P	06 01 03.4	+0.1
	baz=86							
H18A	**Shoshone NF, C**	86.49	43	⇓P		P	06 01 04.3	+0.9
	baz=86							
GMRC	**Granite Mounta**	86.56	54	⇑P		P	06 01 04.1	+0.3
	baz=86							
C21A	**Desert Coulee**	86.59	39	⇑P		P	06 01 03.9	+0.2
	baz=86,SNR=7.9							
E20A	**Meyer Farm, Mu**	86.60	41	⇑P		P	06 01 04.1	+0.4
	baz=86							
HWUT	**Hardware Ranch**	86.62	46	*e*P		P	06 01 04.2	+0.2
	comp=Z,12nm,1.4s							
HWUT				*e*pP		pP	06 02 08.6	-8.9
BELC	**Belle Mtn. Jos**	86.62	55	⇓P		P	06 01 03.9	-0.2
	baz=87							
A22A	**Carney Farms,**	86.71	38	⇑P		P	06 01 04.1	0.0
	baz=87							
MONP	**Monument Peak**	86.74	56	⇑P		P	06 01 04.9	0.0
	baz=87							
H19A	**Powell**	86.92	43	⇓P		P	06 01 05.8	+0.4
	baz=87							
J18A	**Kendall Valley**	86.93	44	⇑P		P	06 01 05.7	+0.1
	baz=87,SNR=5.2							
ARUT	**Antelope Range**	86.95	51	*e*P		P	06 01 06.2	+0.5
	comp=Z,2.1nm,0.7s							
D21A	**La Casta Ranch**	87.02	40	⇑P		P	06 01 06.2	+0.5
	baz=87							
G20A	**Bridger**	87.15	42	⇓P		P	06 01 06.9	+0.4
	baz=87							
K18A	**Toltan Ranch,**	87.17	45	⇑P		P	06 01 07.4	+0.6
	baz=87							
BC3	**Big Chuckawall**	87.17	55	⇓P		P	06 01 07.1	+0.3
	baz=87							
IRM	**Iron Mountain**	87.20	54	⇓P		P	06 01 07.2	+0.4
	baz=87							
SWSC	**Sam W. Stewart**	87.20	56	⇑P		P	06 01 06.9	+0.2
	baz=87							
M17A	**Scullys Gap (B**	87.28	46	⇓P		P	06 01 06.9	-0.3
	baz=87							
C22A	**Vida**	87.35	39	⇑P		P	06 01 07.3	+0.1
	baz=87							
DAU	**Daniels Canyon**	87.35	47	*e*P		P	06 01 07.8	+0.1
	comp=Z,2.4nm,0.8s							
PDAR	**Pinedale Array**	87.43	45	P		P	06 01 07.2	-0.8
PDAR	**Pinedale Array**	87.43	45	P		P	06 01 07.2	-0.8
	comp=Z,0.7nm,0.5s,baz=175,slow=1.3,SNR=9.8							
D22A	**Cohagen**	87.47	40	⇑P		P	06 01 08.8	+1.0
	baz=87							
L18A	**Fontenelle, Gr**	87.50	46	⇑P		P	06 01 08.7	+0.4
	baz=87							
B23A	**Brockton**	87.51	38	⇑P		P	06 01 08.0	+0.1
	baz=87							
AKASG	**Malin Array Be**	87.53	324	P		P	06 01 06.0	-1.9
AKASG	**Malin Array Be**	87.53	324	P		P	06 01 06.0	-1.9
	comp=Z,1.8nm,0.4s,baz=50,slow=5.1,SNR=14							
J19A	**Crowheart**	87.53	44	⇑P		P	06 01 08.7	+0.3
	baz=87							
AK01	**Malin Array Si**	87.54	324	*e*P		P	06 01 06.5	-1.5
AK02	**Malin Array Si**	87.56	324	*e*P		P	06 01 06.5	-1.6
M18A	**Lyman**	87.70	46	⇑P		P	06 01 09.0	-0.2
	baz=88							
C23A	**Lambert**	87.73	39	⇑P		P	06 01 09.8	+0.8
	baz=88							
W13A	**Hualapai Mount**	87.76	53	⇓P		P	06 01 09.9	+0.2
	baz=88							
I20A	**Worland**	87.81	43	⇓P		P	06 01 09.8	+0.3
	baz=88							
A24A	**Westby**	87.84	37	⇑P		P	06 01 09.6	+0.1
	baz=88							
Y12C	**Blythe**	87.84	55	⇓P		P	06 01 10.4	+0.6
	baz=88							
K19A	**Absolon Red Bu**	87.87	44	⇓P		P	06 01 09.6	-0.4
	baz=88							
GLA	**Glamis**	87.90	55	⇑P		P	06 01 10.7	+0.6
	baz=88							
PDMCI	**Parker Dam,Lak**	87.90	54	⇑P		P	06 01 10.8	+0.8
	baz=88							
E22A	**Miles City**	87.95	40	⇓P		P	06 01 09.9	-0.2
	baz=88							
Q16A	**Castle Valley**	88.07	49	⇑P		P	06 01 11.5	+0.5
	baz=88							
H21A	**Big Horn, Sher**	88.17	42	⇑P		P	06 01 11.4	+0.1
	baz=88							
K20A	**Yellowstone Ra**	88.28	44	⇑P		P	06 01 12.1	+0.2
	baz=88							
U15A	**North Rim**	88.36	51	⇑P		P	06 01 13.0	+0.5
	baz=88							
P18A	**Preston Nutter**	88.40	48	⇑P		P	06 01 12.7	0.0
	baz=88							
SRU	**San Rafael**	88.44	48	⇑P		P	06 01 13.0	+0.3
	baz=88							
F23A	**Volborg**	88.64	41	⇓P		P	06 01 13.3	0.0
	baz=88							
O19A	**Miners Draw (B**	88.86	47	⇑P		P	06 01 14.3	-0.3
	baz=89							
E24A	**Baker**	88.87	40	⇓P		P	06 01 13.9	-0.5
	baz=89							
I22A	**9 Mile Ranch,**	88.88	43	⇓P		P	06 01 15.2	+0.6
	baz=89							
G23A	**Biddle**	88.91	41	⇑P		P	06 01 14.5	-0.2
	baz=89							
Y14A	**Wickenburg**	88.91	54	⇑P		P	06 01 15.3	+0.4
	baz=89							
NB2	**NORSAR Subarra**	88.97	339	P		P	06 01 12.8	-1.7
	comp=Z,3.6nm,0.7s,baz=53,slow=4.6							
NB2	**NORSAR Subarra**	88.97	339	P		P	06 01 12.8	-1.7
	baz=53,slow=4.6							
NOA	**NORSAR Array B**	88.97	339	P		P	06 01 12.9	-1.7
NOA	**NORSAR Array B**	88.97	339	P		P	06 01 12.9	-1.7
	comp=Z,3.2nm,0.8s,baz=52,slow=4.3,SNR=9.5							
K21A	**Alcova**	89.00	44	⇑P		P	06 01 15.3	0.0
	baz=89							
N20A	**Spence Gulch,**	89.19	46	⇓P		P	06 01 16.1	-0.2
	baz=89							
L21A	**Rawlins**	89.24	45	⇑P		P	06 01 16.2	-0.2
	baz=89							
P19A	**Cripple Cowboy**	89.26	47	⇑P		P	06 01 16.8	+0.2
	baz=89							
S18A	**Hurst Farm, Bl**	89.45	49	⇑P		P	06 01 17.6	0.0
	baz=89							
O20A	**White River Ci**	89.53	47	⇓P		P	06 01 17.6	-0.2
	baz=89							
H24A	**Dirks Ranch, A**	89.65	41	⇓P		P	06 01 17.9	-0.2
	baz=90							
N21A	**Black Mountain**	89.72	46	⇑P		P	06 01 18.9	+0.2
	baz=90							
P20A	**De Beque**	89.73	47	⇑P		P	06 01 18.7	0.0
	baz=90							
X16A	**Lo Mia Camp, P**	89.87	53	⇑P		P	06 01 19.9	+0.5
	baz=90							
214A	**Organ Pipe Nat**	89.90	56	⇑P		P	06 01 20.2	+0.7
	baz=90							
Q20A	**Ridgley Place,**	90.05	48	⇑P		P	06 01 20.6	+0.3
	baz=90							
I24A	**Kuemmerle Ranc**	90.06	42	⇓P		P	06 01 19.9	-0.1
	baz=90							
L23A	**Garrett**	90.25	44	⇓P		P	06 01 20.9	-0.3
	baz=90							
R20A	**Redvale**	90.35	48	⇑P		P	06 01 21.9	+0.2
	baz=90							
P21A	**Newcastle**	90.36	47	⇓P		P	06 01 21.9	+0.2
	baz=90							
BR131	**Keskin Array S**	90.36	313	*e*P		P	06 01 19.9	-1.7
	comp=Z,0.9nm,0.5s							
BRTR	**Keskin Array B**	90.36	313	P		P	06 01 19.9	-1.7
BRTR	**Keskin Array B**	90.36	313	P		P	06 01 19.9	-1.7
	comp=Z,2.4nm,0.7s,baz=80,slow=3.3,SNR=13							
N22A	**Wattenberg Ran**	90.41	45	⇑P		P	06 01 22.4	+0.5
	baz=90							
S20A	**Disappointment**	90.53	49	⇓P		P	06 01 22.5	-0.1
	baz=90							
Q21A	**Lamborn Mesa,**	90.60	48	⇓P		P	06 01 23.4	+0.6
	baz=90							
O22A	**Kremmling**	90.66	46	⇑P		P	06 01 23.2	+0.1
	baz=91							
N23A	**Red Feather La**	90.70	45	⇓P		P	06 01 24.1	+0.8
	baz=91							
P22A	**Eagle**	90.79	47	⇓P		P	06 01 24.3	+0.5
	baz=91							
R21A	**Cimarron**	90.84	48	⇑P		P	06 01 24.4	+0.4
	baz=91							
SMCO	**Snowmass**	90.85	47	*e*P		P	06 01 24.6	+0.4
	comp=Z,2.5nm,0.8s							
SMCO				*e*pP		pP	06 02 34.5	-3.7
MDND	**Maddock**	90.89	37	⇑P		P	06 01 24.2	+0.5
	baz=91							
X18A	**Snowflake**	90.92	52	⇑P		P	06 01 24.8	+0.4
	baz=91							
Q22A	**Crested Butte,**	91.04	47	⇓P		P	06 01 25.5	+0.5
	baz=91							
O23A	**Lake Granby, G**	91.05	46	⇓P		P	06 01 25.5	+0.6
	baz=91							
K25A	**Mack Ranch, Ha**	91.17	43	⇑P		P	06 01 25.8	+0.5
	baz=91							
V20A	**Brimhall**	91.41	51	⇑P		P	06 01 26.8	+0.2
	baz=91							
BUR08	**Bucovina Ar. S**	91.41	323	*e*P		P	06 01 25.6	-0.7
ISCO	**Idaho Springs**	91.46	46	⇑P		P	06 01 26.9	0.0
	baz=91							
P23A	**Jefferson**	91.52	46	⇓P		P	06 01 27.3	+0.1
	baz=91							
K26A	**Motz Farm, Whi**	91.56	42	⇑P		P	06 01 27.1	+0.1
	baz=92							
S22A	**4UR Ranch, Cre**	91.64	48	⇓P		P	06 01 28.0	+0.3
	baz=92							
O24A	**Longmont**	91.66	45	⇑P		P	06 01 28.4	+0.8
	baz=92							
U21A	**Nageezi**	91.69	50	⇑P		P	06 01 28.2	+0.2
	baz=92							
W20A	**Ramah**	91.70	51	⇑P		P	06 01 28.0	0.0
	baz=92							
T22A	**Edith**	91.94	49	⇑P		P	06 01 29.3	+0.2
	baz=92							
X20A	**Quemado**	91.97	52	⇓P		P	06 01 29.8	+0.5
	baz=92							
U22A	**Llaves**	92.28	49	⇓P		P	06 01 31.6	+0.9
	baz=92							
Y20A	**Horse Springs,**	92.36	52	⇑P		P	06 01 31.9	+0.8
	baz=92							
X21A	**Alamocita Cree**	92.54	51	⇓P		P	06 01 32.7	+0.8
	baz=92							
Z20A	**Nine Sixteen R**	92.57	53	⇑P		P	06 01 32.9	+0.9
	baz=92							
R24A	**Sanders Place,**	92.58	47	⇓P		P	06 01 32.8	+0.8
	baz=92							
CRVS	**Cervenica-Dubn**	92.69	326	*e*P		P	06 01 30.9	-1.1
U23A	**El Rito**	92.77	49	⇓P		P	06 01 33.4	+0.5
	baz=93							
120A	**U Bar Ranch, L**	92.81	53	⇓P		P	06 01 34.0	+0.9
	baz=93							
W24A	**Lazy 6 Ranch,**	93.88	50	⇑P		P	06 01 38.6	+0.6
	baz=94							
U25A	**Circle Dot Ran**	93.99	48	⇓P		P	06 01 38.8	+0.3
	baz=94							
T26A	**Comanche Natio**	94.15	47	⇓P		P	06 01 39.1	-0.1
	baz=94							
U26A	**Atchley Ranch,**	94.45	48	⇓P		P	06 01 40.8	+0.2
	baz=94							
224A	**Cornudas Mount**	95.34	53	⇓P		P	06 01 44.6	0.0
	baz=95							
Z26A	**Caprock**	95.87	51	⇓P		P	06 01 46.8	-0.2
	baz=96							
GERES	**GERESS Array B**	96.61	329	P		P	06 01 48.1	-1.9
GERES	**GERESS Array B**	96.61	329	P		P	06 01 48.1	-1.9
	comp=Z,0.2nm,0.3s,baz=30,slow=6.0,SNR=3.9							
SYO	**Syowa Base**	114.89	203	⇑*e*PP		PP	06 08 04.0	+1.8
SNAA	**Sanae**	126.31	193	*e*P		PKPdf	06 07 19.5	-0.6
VNA2	**Neumayer--Watz**	127.80	192	*e*P		PKPdf	06 07 23.0	+0.1
VNA2	**Neumayer--Watz**	127.80	192	*e*SP		SP	06 18 59.2	-3.0
TORD	**Torodi Ar. Bea**	128.75	309	PKP		PKPdf	06 07 25.9	-0.5
TORD	**Torodi Ar. Bea**	128.75	309	PKP		PKPdf	06 07 25.9	-0.5
	comp=Z,0.8nm,0.4s,baz=39,slow=0.9,SNR=20							
PLCA	**Paso Flores**	145.74	131	PKPbc		PKPbc	06 07 57.9	0.0
PLCA	**Paso Flores**	145.74	131	PKPbc		PKPbc	06 07 57.9	0.0
	comp=Z,6.6nm,0.6s,baz=241,slow=3.8,SNR=36							
LPAZ	**La Paz**	149.96	85	*e*PKPdf		PKPdf	06 08 05.4	+0.3
LPAZ				PKP		PKPdf	06 08 05.8	+0.7
LPAZ				*e*PKPbc		PKPbc	06 08 10.7	+0.4
LPAZ				*e*PKPab		PKPab	06 08 18.1	+1.0
LPAZ	**La Paz**	149.96	85	PKP		PKPdf	06 08 05.8	+0.7
	comp=Z,7.4nm,0.6s,baz=308,slow=2.5,SNR=3.8							
LPAZ				PKPbc		PKPbc	06 08 10.7	+0.4
	comp=Z,7.4nm,0.6s,baz=302,slow=3.5,SNR=27							

*ISCJB **14** 05:54:13.0±0.6,39.°13N±0.°03×29.°05E±0.°03,h9km±5km,*
Error ellipse: s-maj=5.5km s-min=4.3km az=168.6
*ISK **14** 05:54:12.9,39.°23N×28.°99E,h4km,MD2.8*
*DDA **14** 05:54:12.9,39.°10N×29.°02E,h7km,MD2.8*
*CSEM **14** 05:54:13.4±0.2,39.°14N×29.°04E,h12km,MD2.8,Error*
ellipse: s-maj=4.9km s-min=3.8km az=4.0

ISC 14 05:54:12.9±1.0,39.°12N±0.°03×29.°06E±0.°02,h11km±9km,
n39,σ0°846/50,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
DEMI	**Demirci**	0.28	254	*i* Pg		Pg	05 54 18.6	-0.1
DEMI				*i* Sg		Sg	05 54 21.8	-0.7
TVSB	**Tavsanli**	0.45	43	PG		Pg	05 54 21.9	0.0
TVSB				*e*SG		Sg	05 54 28.4	+0.6
TVSB	**Tavsanli**	0.45	43	*i* Pg		Pg	05 54 21.9	0.0
TVSB				*e*Sg		Sg	05 54 28.5	+0.6
DURS	**Dursunbey**	0.66	317	*e*P		Pb	05 54 26.5	0.0
DURS				*e*S		Sg	05 54 35.1	+0.6
DURS	**Dursunbey**	0.66	317	*e*P		Pb	05 54 26.5	0.0
DURS				*e*S		Sg	05 54 35.1	+0.6
ALT	**Altintas**	0.82	94	*e*PG		Pn	05 54 30.6	+0.1
ALT	**Altintas**	0.82	94	*e*Pg		Pn	05 54 30.6	+0.1
KHAL	**Karahalli**	0.82	156	*e*P		Pb	05 54 29.3	0.0
KHAL				*e*S		Sg	05 54 39.6	0.0
KHAL	**Karahalli**	0.82	156	*e*P		Pb	05 54 29.3	0.0
KHAL				*e*S		Sg	05 54 39.6	0.0
AKHS	**Akhisar**	1.00	256	*e*P		Pb	05 54 32.4	+0.1
AKHS				*e*S		Sb	05 54 45.6	+0.1
AKHS	**Akhisar**	1.00	256	*e*P		Pb	05 54 32.4	+0.1
AKHS				*e*S		Sb	05 54 45.6	+0.1
AKS	**Akhisar**	1.00	256	*e*PG		Pb	05 54 32.3	0.0
AKS	**Akhisar**	1.00	256	*e*Pg		Pb	05 54 32.3	0.0
CAVI	**Cavuskoy**	1.24	29	*e*PN		Pn	05 54 36.0	-0.2
CAVI	**Cavuskoy**	1.24	29	*e*Pn		Pn	05 54 36.0	-0.2
MDNY	**Mudanya-Bursa**	1.25	354	*e*PN		Pn	05 54 35.3	-1.1
MDNY	**Mudanya-Bursa**	1.25	354	*e*Pn		Pn	05 54 35.3	-1.1
IZI	**Iznik**	1.25	14	*e*PN		Pn	05 54 36.0	-0.5
IZI	**Iznik**	1.25	14	*e*Pn		Pn	05 54 36.0	-0.5
KCTX	**Karacabey (Bur**	1.27	335	*e*PN		Pn	05 54 35.6	-1.0
KCTX	**Karacabey (Bur**	1.27	335	*e*Pn		Pn	05 54 35.6	-1.0
BALY	**Balya**	1.28	299	*e*P		Pg	05 54 37.4	-0.1
BALY				*e*S		Sn	05 54 53.9	0.0
BALY	**Balya**	1.28	299	*e*P		Pg	05 54 37.4	-0.1
BALY				*e*S		Sn	05 54 53.9	0.0
GEMT	**Gemlik**	1.32	4	*e*PN		Pn	05 54 36.6	-0.6
GEMT	**Gemlik**	1.32	4	*e*Pn		Pn	05 54 36.6	-0.6
GONE	**Gonen-Balikesi**	1.41	311	*e*PN		Pn	05 54 38.3	-0.2
GONE	**Gonen-Balikesi**	1.41	311	*e*Pn		Pn	05 54 38.3	-0.2
GPA	**Golpazari**	1.51	39	*e*PN		Pb	05 54 41.0	0.0
GPA	**Golpazari**	1.51	39	*e*Pn		Pb	05 54 41.0	0.0
GULT	**Gulveren**	1.72	40	*e*PN		Pb	05 54 44.1	-0.5
GULT	**Gulveren**	1.72	40	*e*Pn		Pb	05 54 44.1	-0.5
MRMT	**Marmara Adasi**	1.86	323	*e*PN		Pn	05 54 45.0	+0.3
MRMT	**Marmara Adasi**	1.86	323	*e*Pn		Pn	05 54 45.1	+0.3
SVRH	**Sivrihisar-ESK**	1.94	80	*e*PN		Pb	05 54 48.0	-0.3
SVRH	**Sivrihisar-ESK**	1.94	80	*e*Pn		Pb	05 54 48.0	-0.3
RKY	**Sarkoy-Tekirda**	2.13	318	*e*PN		Pn	05 54 48.8	+0.3
RKY	**Sarkoy-Tekirda**	2.13	318	*e*Pn		Pn	05 54 48.8	+0.3
CTKS	**Kestanelik-??a**	2.15	349	*e*PN		Pn	05 54 49.4	+0.7
CTKS	**Kestanelik-??a**	2.15	349	*e*Pn		Pn	05 54 49.4	+0.7

*ISCJB **14** 06:30:22.3±0.2,42.°48N±0.°02×13.°34E±0.°02,h9km±2km,*
Error ellipse: s-maj=2.8km s-min=2.1km az=29.9
*ROM **14** 06:30:22.5±0.1,42.°48N×13.°40E,h10km,MI3.5/32,Error*
ellipse: s-maj=1.1km s-min=0.8km az=76.0
*CSEM **14** 06:30:23.0±0.1,42.°47N×13.°34E,h2km,ML3.9/14,Error*
ellipse: s-maj=2.2km s-min=1.8km az=43.0
*PDG **14** 06:30:24.1±0.4,42.°44N×13.°42E,h10km±1km,ML3.6/8,*
Error ellipse: s-maj=0.9km s-min=1.7km az=0.0
*LDG **14** 06:30:25.1±99.0,42.°30N×13.°30E,h2km,MI3.3/6,Error*
ellipse: s-maj=9999.9km s-min=9999.9km az=99.0

ISC 14 06:30:23.5±0.8,42.°48N±0.°02×13.°35E±0.°02,h8km±5km,
n136,σ1°19/190,17C-9D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CAMP	**Campotosto**	0.07	38	*i* Pg		Pg	06 30 24.9	-0.7
CAMP				Sg		Sg	06 30 26.2	-0.9
	38µm,0.6s							
CAMP	**Campotosto**	0.07	38	⇑*i* Pg		Pg	06 30 24.9	-0.7
CAMP				Sg		Sg	06 30 26.2	-0.9
	38µm,0.6s							
AQU	**L'Aquila**	0.13	164	⇑*i* Pg		Pg	06 30 26.2	-0.2
AQU				Sg		Sg	06 30 28.8	+0.4
	30µm,0.5s							
AQU	**L'Aquila**	0.13	164	⇑*i* Pg		Pg	06 30 26.2	-0.2
AQU				Sg		Sg	06 30 28.8	+0.4
	30µm,0.5s							
TERO	**Teramo**	0.23	53	⇑*i* Pg		Pg	06 30 27.1	-1.1
TERO				Sg		Sg	06 30 30.2	-1.2
	7µm,0.4s							
TERO	**Teramo**	0.23	53	⇑*i* Pg		Pg	06 30 27.1	-1.1
TERO				Sg		Sg	06 30 30.2	-1.2
	7µm,0.4s							
LNSS	**Leonessa**	0.26	298	⇑*i* Pg		Pg	06 30 28.8	0.0
LNSS				Sg		Sg	06 30 33.9	+1.6
	9µm,0.5s							
LNSS	**Leonessa**	0.26	298	⇑*i* Pg		Pg	06 30 28.8	0.0
LNSS				Sg		Sg	06 30 33.9	+1.6
	9µm,0.5s							
FIAM	**Fiamignano**	0.27	219	⇑*i* Pg		Pg	06 30 29.1	+0.1
FIAM				Sg		Sb	06 30 33.8	-1.9
FIAM	**Fiamignano**	0.27	219	⇑*i* Pg		Pg	06 30 29.1	+0.1
FIAM				Sg		Sb	06 30 33.8	-1.9
FAGN	**Fagnano**	0.28	141	Pg		Pg	06 30 28.4	-0.6
FAGN				Sg		Sg	06 30 32.6	-0.1
	27µm,0.4s							
FAGN	**Fagnano**	0.28	141	Pg		Pg	06 30 28.4	-0.6
FAGN				Sg		Sg	06 30 32.6	-0.1
	27µm,0.4s							
VCEL	**Villa Celiera**	0.37	103	Pg		Pg	06 30 29.7	-1.2
VCEL				Sg		Sg	06 30 36.3	+0.5
	13µm,0.5s							
VCEL	**Villa Celiera**	0.37	103	Pg		Pg	06 30 29.7	-1.2
VCEL				Sg		Sg	06 30 36.3	+0.5
	13µm,0.5s							
NRCA	**Norcia**	0.39	334	Pg		Pg	06 30 30.8	-0.5
NRCA	**Norcia**	0.39	334	Pg		Pg	06 30 30.8	-0.5
PTQR	**Pietraquaria**	0.46	175	Pg		Pg	06 30 31.6	-0.9
PTQR	**Pietraquaria**	0.46	175	Pg		Pg	06 30 31.6	-0.9
MNS	**Montasola**	0.51	259	Pg		Pg	06 30 32.9	-0.4
MNS				Sg		Sb	06 30 41.0	-1.3
	3µm,0.6s							
MNS	**Montasola**	0.51	259	Pg		Pg	06 30 32.9	-0.4
MNS				Sg		Sb	06 30 41.0	-1.3
	3µm,0.6s							
OFFI	**Offida**	0.52	28	Pg		Pg	06 30 33.2	-0.3
	18µm,0.7s							
OFFI	**Offida**	0.52	28	Pg		Pg	06 30 33.2	-0.3
	18µm,0.7s							
TRTR	**Tortoreto Alta**	0.53	52	Pg		Pg	06 30 33.7	-0.1
	9µm,0.8s							
TRTR	**Tortoreto Alta**	0.53	52	Pg		Pg	06 30 33.7	-0.1
	9µm,0.8s							
CESX	**Cesi**	0.58	283	Pg		Pg	06 30 34.3	-0.5
CESX	**Cesi**	0.58	283	Pg		Pg	06 30 34.3	-0.5
FDMO	**Fiordimonte**	0.59	341	Pg		Pg	06 30 34.0	-0.9
FDMO				Sg		Sb	06 30 43.4	-1.3
	1µm,0.2s							
FDMO	**Fiordimonte**	0.59	341	Pg		Pg	06 30 34.0	-0.9
FDMO				Sg		Sb	06 30 43.4	-1.3
	1µm,0.2s							
CERT	**Cerreto**	0.60	207	Pg		Pg	06 30 34.3	-0.8
	5µm,0.4s							
CERT	**Cerreto**	0.60	207	Pg		Pg

ARVD	Arcevia	1.06	344	Pg		Pg	06 30 42.2	-1.7
	2µm,1.3s							
ARVD	Arcevia	1.06	344	Pg		Pg	06 30 42.2	-1.7
	2µm,1.3s							
MIDA	Miranda	1.07	141	Pg		Pg	06 30 41.7	-2.5
	677nm,0.4s							
MIDA	Miranda	1.07	141	Pg		Pg	06 30 41.7	-2.5
	677nm,0.4s							
AOI	Ancona	1.08	10	Pg		Pg	06 30 42.9	-1.5
	743nm,0.7s							
AOI	Ancona	1.08	10	Pg		Pg	06 30 42.9	-1.5
	743nm,0.7s							
TOLF	Tolfa	1.09	248	Pg		Pg	06 30 43.2	-1.2
	539nm,0.5s							
TOLF	Tolfa	1.09	248	Pg		Pg	06 30 43.2	-1.2
	539nm,0.5s							
SACS	San Casciano d	1.12	290	Pg		Pg	06 30 44.2	-0.9
	443nm,0.6s							
PIEI	Pieia	1.21	331	Pg		Pg	06 30 45.2	-1.6
	451nm,0.6s							
PIEI	Pieia	1.21	331	Pg		Pg	06 30 45.2	-1.6
	451nm,0.6s							
BADI	Badiali	1.31	322	Pg		Pg	06 30 47.6	-1.1
	582nm,0.7s							
BADI	Badiali	1.31	322	Pg		Pg	06 30 47.6	-1.1
	582nm,0.7s							
CAFI	Castiglion Fio	1.32	310	Pg		Pn	06 30 47.7	-0.7
	293nm,0.6s							
CAFI	Castiglion Fio	1.32	310	Pg		Pn	06 30 47.7	-0.7
	293nm,0.6s							
MS1	Monte Sant'Ang	2.08	111	*e*Sn		Sg	06 31 30.6	+0.3
MAIM	Mastiano	2.54	305	P		Pn	06 31 05.8	+0.8
SKDS	Skadanscina	3.10	9	*i* Pn		Pn	06 31 12.2	-0.6
SKDS				*i* Sn		Sn	06 31 48.9	-1.2
SKDS								
	comp=Z,21nm,0.3s							
SKDS	Skadanscina	3.10	9	*i* Pn		Pn	06 31 12.2	-0.6
SKDS				*i* Sn		Sn	06 31 48.9	-1.2
	comp=Z,21nm,0.3s							
PGF	Pioggiola	3.22	273	*e*Pn		Pn	06 31 14.7	+0.2
PGF				*e*Sn		Sn	06 31 50.7	-2.4
	comp=Z,8.3nm,0.5s							
PGF	Pioggiola	3.22	273	*e*Pn		Pn	06 31 14.7	+0.2
PGF				*e*Sn		Sn	06 31 50.7	-2.4
	comp=Z,4.2nm,0.5s							
BOJS	Bojanci	3.32	24	*i* Pn		Pn	06 31 16.5	+0.7
BOJS				*i* Sn		Sn	06 31 58.2	+2.8
BOJS	Bojanci	3.32	24	*i* Pn		Pn	06 31 16.5	+0.7
BOJS				*i* Sn		Sn	06 31 58.2	+2.8
PE1	Pezze di Greco	3.48	117	*e*Pn		Pn	06 31 18.3	+0.3
VISS	Visnje	3.49	17	*i* Pn		Pn	06 31 18.8	+0.7
VISS				*i* Sn		Sn	06 32 00.7	+1.0
VISS	Visnje	3.49	17	*i* Pn		Pn	06 31 18.8	+0.7
VISS				*i* Sn		Sn	06 32 00.7	+1.0
VOY	Vojsko	3.57	6	*e*Pn		Pn	06 31 20.6	+1.2
VOY				*e*Sn		Sn	06 32 00.7	-1.1
HCY	Herceg Novi	3.81	89⇑	*i* Pn		Pn	06 31 22.7	+0.2
HCY				*e*Sn		Sn	06 32 08.5	+1.1
HCY	Herceg Novi	3.81	89⇑	*i* Pn		Pn	06 31 22.7	+0.2
HCY				*e*Sn		Sn	06 32 08.5	+1.1
BRY	Bratogost	3.85	82⇓	*i* Pn		Pn	06 31 24.6	+1.4
BRY				*e*Sn		Sn	06 32 09.8	+1.1
BRY	Bratogost	3.85	82⇓	*i* Pn		Pn	06 31 24.6	+1.4
BRY				*e*Sn		Sn	06 32 09.8	+1.1
BUM	Brajici-Budva	4.11	91⇓	*i* Pn		Pn	06 31 27.2	+0.5
BUM				*e*Sn		Sn	06 32 16.4	+1.4
BUM	Brajici-Budva	4.11	91⇓	*i* Pn		Pn	06 31 27.2	+0.5
UPM	Unac-Piva	4.15	78⇓	*i* Pn		Pn	06 31 29.2	+1.8
UPM				*e*Sn		Sn	06 32 17.6	+1.5
UPM	Unac-Piva	4.15	78⇓	*i* Pn		Pn	06 31 29.2	+1.8
UPM				*e*Sn		Sn	06 32 17.6	+1.5
NKY	Niksic	4.17	84⇓	*i* Pn		Pn	06 31 28.2	+0.5
NKY				*e*Sn		Sn	06 32 18.1	+1.4
NKY	Niksic	4.17	84⇓	*i* Pn		Pn	06 31 28.2	+0.5
NKY				*e*Sn		Sn	06 32 18.1	+1.4
ABTA	Abfaltersbach	4.31	352⇓	*i* Pn		Pn	06 31 29.9	+0.5
ABTA	Abfaltersbach	4.31	352	Pn		Pn	06 31 29.9	+0.5
PDG	Podgorica	4.37	89⇑	*i* Pn		Pn	06 31 30.8	+0.6
PDG				*e*Sn		Sn	06 32 23.0	+1.7
TTG	Podgorica	4.37	89⇑	*i* Pn		Pn	06 31 30.8	+0.6
TTG				*e*Sn		Sn	06 32 23.0	+1.6
ULC	Ulcinj	4.41	95⇑	*i* Pn		Pn	06 31 31.0	+0.2
ULC				*e*Sn		Sn	06 32 22.9	+0.6
ULC	Ulcinj	4.41	95⇑	*i* Pn		Pn	06 31 31.0	+0.2
SBF	Sospel	4.54	290	*e*Pn		Pn	06 31 33.2	+0.5
SBF				*e*Sn		Sn	06 32 24.6	-1.1
	comp=Z,10.0nm,0.5s							
SBF	Sospel	4.54	290	*e*Pn		Pn	06 31 33.2	+0.5
SBF				*e*Sn		Sn	06 32 24.6	-1.1
	comp=Z,5.0nm,0.5s							
BEY	Berane	4.84	83	*e*Pn		Pn	06 31 38.9	+2.1
BEY				*e*Sn		Sn	06 32 34.4	+1.4
IVA	Berane	4.84	83	*e*Pn		Pn	06 31 38.9	+2.1
IVA				*e*Sn		Sn	06 32 34.4	+1.3
PVY	Plav	4.88	86⇑	*i* Pn		Pn	06 31 38.9	+1.5
PVY				*e*Sn		Sn	06 32 35.3	+1.1
TEKS	Tekeris	4.95	63	*e*Pn		Pn	06 31 38.4	+0.2
FRF	La Foret Royal	5.03	285	*e*Pn		Pn	06 31 39.5	+0.2
FRF	La Foret Royal	5.03	285	*e*Pn		Pn	06 31 39.5	+0.2
LMR	La Mourre	5.10	282	*e*Pn		Pn	06 31 40.4	+0.2
LMR	La Mourre	5.10	282	*e*Pn		Pn	06 31 40.4	+0.2
DIVS	Divibare	5.11	69	*e*Pn		Pn	06 31 41.4	+0.9
GRUS	Gruza	5.56	73	*e*Pn		Pn	06 31 48.3	+1.6
LPG	La Plagne	5.63	305	*e*Pn		Pn	06 31 48.7	+0.8
LPG				*e*Sn		Sn	06 32 51.5	-1.4
	comp=Z,6.4nm,0.5s							
LPG	La Plagne	5.63	305	*e*Pn		Pn	06 31 48.7	+0.8
LPG				*e*Sn		Sn	06 32 51.5	-1.4
	comp=Z,3.2nm,0.5s							
CONA	Conrad Observa	5.73	17	Pn		Pn	06 31 48.7	-0.3
SMRF	Simiane la Rot	5.88	287	*e*Pn		Pn	06 31 51.7	+0.8
SMRF	Simiane la Rot	5.88	287	*e*Pn		Pn	06 31 51.7	+0.8
BARS	Barje	6.25	84	*e*Pn		Pn	06 31 55.8	-0.3
CABF	La Chapelle	6.63	311	*e*Pn		Pn	06 32 02.6	+1.2
CABF	La Chapelle	6.63	311	*e*Pn		Pn	06 32 02.6	+1.2
HINF	Hinteralfeld	7.04	322	*e*Pn		Pn	06 32 08.5	+1.6
HINF				*e*Sn		Sn	06 33 25.3	-1.8
	comp=Z,15nm,0.6s							
HINF	Hinteralfeld	7.04	322	*e*Pn		Pn	06 32 08.5	+1.6
CDF	Champ du Feu	7.31	326	*e*Pn		Pn	06 32 11.7	+1.0
CDF				*e*Sn		Sn	06 33 31.5	-2.3
	comp=Z,4.1nm,0.5s							
CDF	Champ du Feu	7.31	326	*e*Pn		Pn	06 32 11.7	+1.0
HAU	Haudompre	7.41	321	*e*Pn		Pn	06 32 12.9	+0.9
HAU				*e*Sn		Sn	06 33 33.9	-2.4
	comp=Z,12nm,0.5s							
HAU	Haudompre	7.41	321	*e*Pn		Pn	06 32 12.9	+0.9

ISCJB ***14*** *06:32:33.7±0.2,42°.48N±0°.02×13°.35E±0°.02,h9km±2km, Error ellipse: s-maj=3.1km s-min=2.2km az=35.5*
ROM ***14*** *06:32:33.7±0.1,42°.49N×13°.41E,h9km,Ml3.5/14,Error ellipse: s-maj=1.1km s-min=0.9km az=95.0*
CSEM ***14*** *06:32:34.3±0.1,42°.47N×13°.35E,h2km,ML3.2/7,Error ellipse: s-maj=2.4km s-min=1.9km az=37.0*
PDG ***14*** *06:32:35.2±0.3,42°.28N×13°.43E,h10km±1km,ML3.5/8, Error ellipse: s-maj=1.1km s-min=2.2km az=0.0*
LDG ***14*** *06:32:37.7±0.1,42°.36N×13°.14E,h2km,Ml3.2/7,Error ellipse: s-maj=4.3km s-min=2.7km az=51.0*

ISC 14 06:32:34.5±0.8, 42°.48N±0°.02×13°.37E±0°.02, h9km±4km, n113,σ1§43/171, 10C-6D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.06	31	Pg	Pg	06 32 36.2	-0.4
CAMP				Sg	Sg	06 32 37.5	-0.6
CAMP	Campotosto	0.06	31	Pg	Pg	06 32 36.2	-0.4
CAMP				Sg	Sg	06 32 37.5	-0.6
AQU	L'Aquila	0.13	168	Pg	Pg	06 32 37.4	0.0
AQU				Sg	Sg	06 32 39.5	0.0
AQU	L'Aquila	0.13	168	Pg	Pg	06 32 37.4	0.0
AQU				Sg	Sg	06 32 39.5	0.0
TERO	Teramo	0.23	51	Pg	Pg	06 32 38.4	-0.7
TERO				Sg	Sg	06 32 41.6	-0.6
TERO	Teramo	0.23	51	Pg	Pg	06 32 38.4	-0.7
TERO				Sg	Sg	06 32 41.6	-0.6
LNSS	Leonessa	0.27	297	Pg	Pg	06 32 40.2	+0.3
LNSS				Sg	Sg	06 32 45.1	+1.5
LNSS	Leonessa	0.27	297	Pg	Pg	06 32 40.2	+0.3
FAGN	Fagnano	0.27	143	Pg	Pg	06 32 39.6	-0.3
FAGN				Sg	Sg	06 32 43.7	+0.2
FAGN	Fagnano	0.27	143	Pg	Pg	06 32 39.6	-0.3
FAGN				Sg	Sg	06 32 43.7	+0.2
FIAM	Fiamignano	0.28	221	Pg	Pg	06 32 40.2	+0.1
FIAM				Sg	Sb	06 32 46.4	-0.3
	4µm,0.6s						
FIAM	Fiamignano	0.28	221	Pg	Pg	06 32 40.2	+0.1
VCEL	Villa Celiera	0.36	104	Pg	Pg	06 32 40.9	-0.7
VCEL				Sg	Sb	06 32 47.4	-1.6
VCEL	Villa Celiera	0.36	104	Pg	Pg	06 32 40.9	-0.7
VCEL				Sg	Sb	06 32 47.4	-1.6
NRCA	Norcia	0.40	332	Pg	Pg	06 32 42.2	-0.1
NRCA				Sg	Sg	06 32 48.5	+1.0
	8µm,0.1s						
NRCA	Norcia	0.40	332	Pg	Pg	06 32 42.2	-0.1
NRCA				Sg	Sg	06 32 48.5	+1.0
	8µm,0.1s						
PTQR	Pietraquaria	0.46	177	Pg	Pg	06 32 42.8	-0.7
PTQR				Sg	Sb	06 32 51.2	-0.6
PTQR	Pietraquaria	0.46	177	Pg	Pg	06 32 42.8	-0.7
PTQR				Sg	Sb	06 32 51.2	-0.6
MNS	Montasola	0.52	259	Pg	Pg	06 32 44.2	-0.3
MNS	Montasola	0.52	259	Pg	Pg	06 32 44.2	-0.3
TRTR	Tortoreto Alta	0.52	51	Pg	Pb	06 32 44.9	-0.9
TRTR	Tortoreto Alta	0.52	51	Pg	Pb	06 32 44.9	-0.9
FDMO	Fiordimonte	0.59	340	Pg	Pg	06 32 45.3	-0.6
FDMO				Sg	Sg	06 32 54.6	+0.9
FDMO	Fiordimonte	0.59	340	Pg	Pg	06 32 45.3	-0.6
FDMO				Sg	Sg	06 32 54.6	+0.9
CESX	Cesi	0.59	283	Pg	Pg	06 32 45.6	-0.4
CESX				Sg	Sg	06 32 54.7	+0.9
CESX	Cesi	0.59	283	Pg	Pg	06 32 45.6	-0.4
CESX				Sg	Sg	06 32 54.7	+0.9
CERT	Cerreto	0.60	208	Pg	Pg	06 32 45.5	-0.7
	4µm,0.6s						
CERT	Cerreto	0.60	208	Pg	Pg	06 32 45.5	-0.7
	4µm,0.6s						
INTR	Introdacqua	0.62	139	Pg	Pg	06 32 45.6	-0.8
INTR				Sg	Sb	06 32 55.1	-1.2
INTR	Introdacqua	0.62	139	Pg	Pg	06 32 45.6	-0.8
INTR				Sg	Sb	06 32 55.1	-1.2
VVLD	Villa Vallelon	0.64	163	Pg	Pg	06 32 46.5	-0.3
VVLD	Villa Vallelon	0.64	163	Pg	Pg	06 32 46.5	-0.3
MTCE	Montecelio	0.65	225	Pg	Pg	06 32 46.4	-0.7
MTCE	Montecelio	0.65	225	Pg	Pg	06 32 46.4	-0.7
GUMA	Gualdo di Mace	0.72	36	Pg	Pg	06 32 45.4	-2.9
LPEL	Lama dei Pelig	0.75	125	Pg	Pg	06 32 47.5	-1.4
LPEL				Sg	Sb	06 32 58.3	-1.7
LPEL	Lama dei Pelig	0.75	125	Pg	Pg	06 32 47.5	-1.4
LPEL				Sg	Sb	06 32 58.3	-1.7
CAFR	Castel Frentan	0.77	109	Pg	Pg	06 32 48.5	-0.8
	2µm,0.4s						
CAFR	Castel Frentan	0.77	109	Pg	Pg	06 32 48.5	-0.8
	2µm,0.4s						
RMP	Rome, Mte Porz	0.83	217	Pg	Pg	06 32 50.5	0.0
	2µm,0.9s						
RMP	Rome, Mte Porz	0.83	217	Pg	Pg	06 32 50.5	0.0
	2µm,0.9s						
SDI	San Donato	0.84	157	Pg	Pg	06 32 49.4	-1.2
SDI	San Donato	0.84	157	Pg	Pg	06 32 49.4	-1.2
CING	Cingoli	0.90	352	Pg	Pg	06 32 50.7	-1.1
CING	Cingoli	0.90	352	Pg	Pg	06 32 50.7	-1.1
GIUL	Giuliano Di Ro	0.93	185	Pg	Pg	06 32 52.0	-0.3
	991nm,0.8s						
GIUL	Giuliano Di Ro	0.93	185	Pg	Pg	06 32 52.0	-0.3
	991nm,0.8s						
CERA	Filignano	1.01	151	Pg	Pg	06 32 51.7	-2.1
	852nm,0.7s						
CERA	Filignano	1.01	151	Pg	Pg	06 32 51.7	-2.1
	852nm,0.7s						
MGAB	Montegabbione	1.02	295	Pg	Pg	06 32 53.6	-0.5
	2µm,0.4s						
MGAB	Montegabbione	1.02	295	Pg	Pg	06 32 53.6	-0.5
	2µm,0.4s						
ARVD	Arcevia	1.06	343	Pg	Pg	06 32 53.7	-1.2
ARVD	Arcevia	1.06	343	Pg	Pg	06 32 53.7	-1.2
AOI	Ancona	1.08	9	Pg	Pg	06 32 54.1	-1.1
AOI	Ancona	1.08	9	Pg	Pg	06 32 54.1	-1.1
TOLF	Tolfa	1.10	248	Pg	Pg	06 32 55.3	-0.2
	388nm,0.5s						
TOLF	Tolfa	1.10	248	Pg	Pg	06 32 55.3	-0.2
	388nm,0.5s						
SACS	San Casciano d	1.14	289	Pg	Pg	06 32 55.6	-0.7
	507nm,0.7s						
LATE	Laterza	1.16	277	Pg	Pg	06 32 56.0	-0.8
	820nm,0.6s						
LATE	Laterza	1.16	277	Pg	Pg	06 32 56.0	-0.8
	820nm,0.6s						
VAGA	Valle Agricola	1.25	148	Pg	Pg	06 32 56.7	-1.7
	305nm,0.6s						
VAGA	Valle Agricola	1.25	148	Pg	Pg	06 32 56.7	-1.7
	305nm,0.6s						
BADI	Badiali	1.32	322	Pg	Pn	06 32 59.0	-0.1
	570nm,0.6s						
BADI	Badiali	1.32	322	Pg	Pn	06 32 59.0	-0.1
	570nm,0.6s						
MS1	Monte Sant'Ang	2.07	111	*e*Pn	Pb	06 33 12.2	0.0
MS1				*e*Sn	Sg	06 33 41.7	+0.8
SKDS	Skadanscina	3.10	8	*i* Pn	Pn	06 33 23.8	+0.2
SKDS				*i* Sn	Sn	06 34 00.8	+0.1
SKDS	Skadanscina	3.10	8	*i* Pn	Pn	06 33 23.8	+0.2
SKDS				*i* Sn	Sn	06 34 00.9	+0.1
PGF	Pioggiola	3.23	273	*e*Pn	Pn	06 33 25.9	+0.5
PGF				*e*Sn	Sn	06 34 00.3	-3.8
	6.5nm,0.4s						
PGF	Pioggiola	3.23	273	*e*Pn	Pn	06 33 25.9	+0.5
PGF				*e*Sn	Sn	06 34 00.3	-3.8
	3.2nm,0.4s						
BOJS	Bojanci	3.31	24	*i* Pn	Pn	06 33 27.9	+1.4
BOJS				*i* Sn	Sn	06 34 07.2	+1.2
BOJS	Bojanci	3.31	24	*i* Pn	Pn	06 33 27.9	+1.4
BOJS				*i* Sn	Sn	06 34 07.2	+1.2
PE1	Pezze di Greco	3.47	118	*e*Pn	Pn	06 33 29.5	+0.8
VISS	Visnje	3.48	17	*i* Pn	Pn	06 33 31.7	+2.8
VISS				*i* Sn	Sn	06 34 11.6	+1.3
VISS	Visnje	3.48	17	*i* Pn	Pn	06 33 31.7	+2.8
VISS				*i* Sn	Sn	06 34 11.6	+1.3
VOY	Vojsko	3.57	6	*e*Pn	Pn	06 33 29.2	-0.9
VOY				*e*Sn	Sn	06 34 12.3	-0.1
HCY	Herceg Novi	3.79	89⇑	*i* Pn	Pn	06 33 34.1	+1.0
HCY				*e*Sn	Sn	06 34 20.3	+2.4
HCY	Herceg Novi	3.79	89⇑	*i* Pn	Pn	06 33 34.1	+1.0
HCY				*e*Sn	Sn	06 34 20.3	+2.4
BRY	Bratogost	3.84	82⇓	*i* Pn	Pn	06 33 35.9	+2.1
BRY				*e*Sn	Sn	06 34 21.4	+2.3
BRY	Bratogost	3.84	82⇓	*i* Pn	Pn	06 33 35.9	+2.1
BRY				*e*Sn	Sn	06 34 21.4	+2.3
BUM	Brajici-Budva	4.10	91⇓	*i* Pn	Pn	06 33 39.1	+1.7
BUM				*e*Sn	Sn	06 34 26.9	+1.4
BUM	Brajici-Budva	4.10	91⇓	*i* Pn	Pn	06 33 39.1	+1.7
BUM				*e*Sn	Sn	06 34 26.9	+1.4
UPM	Unac-Piva	4.14	78⇓	*i* Pn	Pn	06 33 39.5	+1.5
UPM				*e*Sn	Sn	06 34 29.4	+2.8
UPM	Unac-Piva	4.14	78⇓	*i* Pn	Pn	06 33 39.5	+1.5
UPM				*e*Sn	Sn	06 34 29.4	+2.8
NKY	Niksic	4.16	84⇓	*i* Pn	Pn	06 33 39.8	+1.5
NKY				*e*Sn	Sn	06 34 29.0	+1.9
NKY	Niksic	4.16	84⇓	*i* Pn	Pn	06 33 39.8	+1.5
NKY				*e*Sn	Sn	06 34 29.0	+1.9
ABTA	Abfaltersbach	4.31	352⇓	*i* Pn	Pn	06 33 40.7	+0.5
ABTA	Abfaltersbach	4.31	352	Pn	Pn	06 33 40.7	+0.5
PDG	Podgorica	4.36	89⇑	*i* Pn	Pn	06 33 42.1	+1.3
PDG				*e*Sn	Sn	06 34 33.5	+1.8
TTG	Podgorica	4.36	89⇑	*i* Pn	Pn	06 33 42.1	+1.2
TTG				*e*Sn	Sn	06 34 33.5	+1.7
ULC	Ulcinj	4.40	95⇑	*i* Pn	Pn	06 33 42.1	+0.7
ULC				*e*Sn	Sn	06 34 33.8	+1.0
ULC	Ulcinj	4.40	95⇑	*i* Pn	Pn	06 33 42.1	+0.7
ULC				*e*Sn	Sn	06 34 33.8	+1.0
SBF	Sospel	4.55	290	*e*Pn	Pn	06 33 43.6	0.0
SBF				*e*Sn	Sn	06 34 33.1	-3.5
	7.0nm,0.3s						
SBF	Sospel	4.55	290	*e*Pn	Pn	06 33 43.6	0.0
SBF				*e*Sn	Sn	06 34 33.1	-3.5
	3.5nm,0.3s						
BEY	Berane	4.83	83	*e*Pn	Pn	06 33 49.6	+2.2
BEY				*e*Sn	Sn	06 34 45.5	+1.8
IVA	Berane	4.83	83	*e*Pn	Pn	06 33 49.6	+2.2
IVA				*e*Sn	Sn	06 34 45.3	+1.7
PVY	Plav	4.87	86⇑	*i* Pn	Pn	06 33 50.2	+2.1
PVY				*e*Sn	Sn	06 34 46.4	+1.8
FRF	La Foret Royal	5.04	285	*e*Pn	Pn	06 33 50.4	+0.1
FRF	La Foret Royal	5.04	285	*e*Pn	Pn	06 33 50.4	+0.1
LMR	La Mourre	5.11	282	*e*Pn	Pn	06 33 50.8	-0.3
LMR	La Mourre	5.11	282	*e*Pn	Pn	06 33 50.8	-0.3
MBDF	Montbardon	5.29	297	*e*Pn	Pn	06 33 55.1	+1.3
MBDF				*e*Sn	Sn	06 34 51.7	-3.2
	4.6nm,0.5s						
MBDF	Montbardon	5.29	297	*e*Pn	Pn	06 33 55.1	+1.3
MBDF				*e*Sn	Sn	06 34 51.7	-3.2
	2.3nm,0.5s						
LPG	La Plagne	5.64	305	*e*P	Pn	06 34 04.7	+5.9
LPG				*e*Sn	Sn	06 35 00.4	-3.4
	3.3nm,0.4s						
SMRF	Simiane la Rot	5.88	287	*e*Pn	Pn	06 34 03.0	+1.1
SMRF	Simiane la Rot	5.88	287	*e*Pn	Pn	06 34 03.0	+1.1
CABF	La Chapelle	6.64	311	*e*Pn	Pn	06 34 14.1	+1.9
CABF	La Chapelle	6.64	311	*e*Pn	Pn	06 34 14.1	+1.9
HINF	Hinteralfeld	7.04	321	*e*Pn	Pn	06 34 19.3	+1.5
HINF				*e*Sn	Sn	06 35 35.6	-2.4
	7.9nm,0.4s						
HINF	Hinteralfeld	7.04	321	*e*Pn	Pn	06 34 19.3	+1.5
CDF	Champ du Feu	7.31	326	*e*Pn	Pn	06 34 21.8	+0.3
CDF				*e*Sn	Sn	06 35 42.6	-2.0
	5.0nm,0.4s						
CDF	Champ du Feu	7.31	326	*e*Pn	Pn	06 34 21.8	+0.3
HAU	Haudompre	7.42	321	*e*Pn	Pn	06 34 23.7	+0.8
HAU				*e*Sn	Sn	06 35 43.8	-3.3
	12nm,0.5s						
HAU	Haudompre	7.42	321	*e*Pn	Pn	06 34 23.7	+0.8

IDC 14 07:03:08.4±8.0, 5°.01S×151°.23E, h132km±53km, mb3.3/2, mb1 3.4/3, mb1mx3.0/18, mbtmp3.3/3, Error ellipse: s-maj=153.6km s-min=52.5km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.95	223	P	Pn	07 04 34.6	+0.3
	1.9nm,0.3s,baz=20,slow=12,SNR=3.5						
PMG				S	Sn	07 05 41.6	+0.4
	6.0nm,0.3s,baz=210,slow=22,SNR=7.5						
WRA	Warramunga Arr	22.15	226	P	P	07 07 53.6	-0.2
	0.4nm,0.3s,baz=50,slow=9.4,SNR=5.2						
ASAR	Alice Springs	24.96	220	P	P	07 08 20.1	+0.2
	0.8nm,0.4s,baz=57,slow=9.0,SNR=12						
TORD	Torodi Ar. Bea	148.88	287	PKPbc	PKPbc	07 22 41.0	-0.7
	0.3nm,0.5s,baz=77,slow=2.7,SNR=3.6						

IDC ***14*** *07:25:24.7±1.3,30°.68S×176°.77W,h0km,mb4.1/4, mb1 4.3/5,mb1mx4.0/17,mbtmp4.1/5,ML3.3/1,MS3.5/2, Ms1 3.5/2,ms1mx2.7/27,Error ellipse: s-maj=30.4km s-min=25.9km az=41.0*
ISCJB ***14*** *07:25:27.4±0.8,31°.00S±0°.04×177°.1W±0°.1,h33km, mb4.1/4,MS3.5/1,Error ellipse: s-maj=15.0km s-min=5.9km az=6.6*

ISC 14 07:25:29.0±1.0, 30°.89S±0°.06×177°.0W±0°.1, h35km, n22, σ1§66/20, mb4.1/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.81	334	Pn	Pn	07 25 55.1	-2.6
	70nm,0.3s,baz=84,slow=19,SNR=4.0						
RAO				Sn	Sn	07 26 20.7	+1.2
	988nm,0.3s,baz=107,slow=19,SNR=18						
PUZ	Puketiti	8.16	207	PN	Pn	07 27 22.5	-2.4
PUZ				SN	Sn	07 28 56.5	+0.5
CNGZ	Carnagh Statio	8.54	206	*e*PN	Pn	07 27 27.0	-3.1
MWZ	Matawai	8.69	210	*e*PN	Pn	07 27 28.8	-3.4
MWZ				SN	Sn	07 29 09.3	+0.4
URZ	Urewera	8.81	212	*e*PN	Pn	07 27 32.1	-1.7
URZ				SN	Sn	07 29 12.3	+0.6
URZ	Urewera	8.81	212	Pn	Pn	07 27 33.0	-0.8
	1.2nm,0.3s,baz=179,slow=16,SNR=14						
URZ				Sn	Sn	07 29 12.7	+0.9
	2.6nm,0.3s,baz=156,slow=20,SNR=8.4						
KNZ	Kokohu	9.21	207	*e*PN	Pn	07 27 37.1	-2.2
THZ	Tophouse	13.55	214	PN	Pn	07 28 34.8	-3.9
MQZ	McQueen's Vall	15.20	210	SN	Sn	07 31 36.9	-11
DZM	Mont Dzumac	17.21	297	*e*LR	LR	07 33 28.0	
	112nm,26.9s						
DZM	Mont Dzumac	17.21	297	P	P	07 29 27.5	-0.5
	0.

WRA	**Warramunga Arr**	**17.45**	**195**	P	**Pn**	**08 00 58.3**	**-0.7**
	1.2nm,0.3s,baz=18,slow=13,SNR=34							
WRA				S	**Sn**	**08 04 06.2**	**-6.2**
	0.2nm,0.3s,baz=20,slow=24,SNR=4.1							
WRA				LR	LR	08 08 10.8		
	comp=Z,280nm,19.5s,baz=5.0,slow=38							
GUMO	**Guam**	**17.46**	**19**	LR	LR	08 06 27.6		
	comp=Z,77nm,19.0s,baz=109,slow=32							
CTA	**Charters Tower**	**18.29**	**158**	P	**Pn**	**08 01 10.6**	**+1.3**
	0.1nm,0.3s,baz=322,slow=12,SNR=2.7							
CTA				LR	LR	08 08 34.8		
	comp=Z,238nm,18.7s,baz=343,slow=38							
FITZ	**Fitzroy Crossi**	**20.00**	**221**	P	**P**	**08 01 28.3**	**+0.6**
	10nm,0.8s,baz=56,slow=8.1,SNR=10							
FITZ				LR	LR	08 09 52.6		
	comp=Z,150nm,18.4s,baz=32,slow=38							
FITZ	**Fitzroy Crossi**	**20.00**	**221**	P	**P**	**08 01 28.5**	**+0.8**
	baz=22,SNR=10.0							
ASAR	**Alice Springs**	**21.13**	**194**	P	**P**	**08 01 40.4**	**+0.5**
	7.5nm,0.7s,baz=20,slow=9.9,SNR=51							
ASAR				S	**S**	**08 05 31.2**	**-1.4**
	1.4nm,0.8s,baz=6.1,slow=27,SNR=3.0							
STKA	**Stephens Creek**	**28.77**	**176**	LR	LR	08 15 31.4		
	comp=Z,200nm,19.1s,baz=22,slow=39							
NWAO	**Narrogin (SRO)**	**36.14**	**212**	LR	LR	08 19 54.9		
	comp=Z,193nm,21.8s,baz=275,slow=38							
JNU	**Nakatsue**	**36.82**	**348**	LR	LR	08 16 09.4		
	comp=Z,51nm,21.4s,baz=228,slow=31							
KSRS	**Korea Array**	**41.63**	**346**	P	**P**	**08 04 42.7**	**+0.2**
	0.8nm,0.3s,baz=158,slow=7.6,SNR=4.2							
KSRS				LR	LR	08 19 14.7		
	comp=Z,33nm,18.9s,baz=262,slow=32							
PETK	**Petropavlovsk-**	**58.08**	**13**	LR	LR	08 34 23.0		
	comp=Z,28nm,18.2s,baz=240,slow=39							
SONM	**Songino Array**	**58.22**	**335**	P	**P**	**08 06 48.8**	**+0.3**
	0.3nm,0.4s,baz=153,slow=5.4,SNR=2.3							
SONM				LR	LR	08 29 20.8		
	comp=Z,43nm,19.4s,baz=111,slow=33							
MKAR	**Makanchi Array**	**70.34**	**322**	P	**P**	**08 08 08.0**	**+0.2**
	1.5nm,0.7s,baz=109,slow=7.1,SNR=15							
ZALV	**Zalesovo Beam**	**72.46**	**330**	P	**P**	**08 08 19.0**	**-1.3**
	0.9nm,0.4s,baz=134,slow=6.2,SNR=3.0							
VNDA	**Vanda**	**75.41**	**175**	P	**P**	**08 08 38.4**	**+1.2**
	0.4nm,0.6s,baz=338,slow=6.4,SNR=6.8							
VNDA				LR	LR	08 39 43.9		
	comp=Z,86nm,21.7s,baz=295,slow=34							
ILAR	**Eielson Array**	**85.94**	**24**	P	**P**	**08 09 31.8**	**-2.0**
	1.3nm,0.8s,baz=259,slow=4.3,SNR=16							
ARCES	**ARCESS Array B**	**100.98**	**341**	P	**Pdif**	**08 10 41.2**	**-1.8**
	3.5nm,1.0s,baz=61,slow=7.3,SNR=3.6							

*ISK **14** 08:01:33.8,39.30N×27.97E,h5km,MD2.7*
*DDA **14** 08:01:33.8,39.30N×27.96E,h7km,MD3.0*
*ISCJB **14** 08:01:34.2±0.5,39.29N±0.02×27.95E±0.03,h1km±5km, Error ellipse: s-maj=3.9km s-min=3.6km az=20.3*
*CSEM **14** 08:01:34.6±0.1,39.29N×27.98E,h2km,MD2.7, Error ellipse: s-maj=2.5km s-min=2.4km az=68.0*

ISC 14 08:01:34.4±1.0, 39.31N±0.02×27.97E±0.02, h9km±10km, n51, σ0949/70, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.34**	**348**	*e*PG	**Pg**	**08 01 41.7**	**+0.5**
BALB				*e*SG	**Sb**	**08 01 47.4**	**-0.8**
BALB	**Balikesir**	**0.34**	**348**	*e*Pg	**Pg**	**08 01 41.7**	**+0.5**
BALB				*e*Sg	**Sb**	**08 01 47.4**	**-0.8**
AKHS	**Akhisar**	**0.44**	**196**	*i* P	**Pg**	**08 01 42.0**	**-1.1**
AKHS				*i* S	**Sg**	**08 01 49.6**	**+0.7**
AKHS	**Akhisar**	**0.44**	**196**	*i* P	**Pg**	**08 01 42.0**	**-1.1**
AKHS				*i* S	**Sg**	**08 01 49.6**	**+0.7**
AKS	**Akhisar**	**0.44**	**196**	*e*PG	**Pg**	**08 01 43.1**	**0.0**
AKS	**Akhisar**	**0.44**	**196**	*e*Pg	**Pg**	**08 01 43.1**	**0.0**
DURS	**Dursunbey**	**0.49**	**53**	*i* P	**Pg**	**08 01 42.9**	**-1.1**
DURS				*i* S	**Sb**	**08 01 52.5**	**0.0**
DURS	**Dursunbey**	**0.49**	**53**	*i* P	**Pg**	**08 01 42.9**	**-1.1**
DURS				*i* S	**Sb**	**08 01 52.5**	**0.0**
BALY	**Balya**	**0.51**	**328**	*i* P	**Pg**	**08 01 43.9**	**-0.5**
BALY				*e*S	**Sg**	**08 01 51.2**	**0.0**
BALY	**Balya**	**0.51**	**328**	*i* P	**Pg**	**08 01 43.9**	**-0.5**
BALY				*e*S	**Sg**	**08 01 51.2**	**0.0**
DST	**Dursunbey**	**0.58**	**59**	*e*PG	**Pb**	**08 01 46.6**	**-0.2**
DST				*e*SG	**Sb**	**08 01 55.3**	**+0.1**
DST	**Dursunbey**	**0.58**	**59**	*e*Pg	**Pb**	**08 01 46.6**	**-0.2**
DST				*e*Sg	**Sb**	**08 01 55.3**	**+0.1**
DEMI	**Demirci**	**0.64**	**114**	*i* P	**Pg**	**08 01 46.7**	**0.0**
DEMI				*e*S	**Sg**	**08 01 54.5**	**-0.6**
DEMI	**Demirci**	**0.64**	**114**	*i* P	**Pg**	**08 01 46.7**	**0.0**
DEMI				*e*S	**Sg**	**08 01 54.4**	**-0.6**
GONE	**Gonen-Balikesi**	**0.77**	**343**	*e*PG	**Pg**	**08 01 49.2**	**-0.1**
GONE	**Gonen-Balikesi**	**0.77**	**343**	*e*Pg	**Pg**	**08 01 49.2**	**-0.1**
KULA	**Kula-Manisa**	**0.95**	**146**	*e*PG	**Pg**	**08 01 52.4**	**-0.4**
KULA	**Kula-Manisa**	**0.95**	**146**	*e*Pg	**Pg**	**08 01 52.4**	**-0.4**
AYVA	**Ayvalik**	**0.99**	**271**	*e*P	**Pb**	**08 01 54.1**	**+0.3**
AYVA				*e*S	**Sg**	**08 02 06.7**	**+0.2**
AYVA	**Ayvalik**	**0.99**	**271**	*e*P	**Pb**	**08 01 54.1**	**+0.3**
AYVA				*e*S	**Sg**	**08 02 06.7**	**+0.2**
KCTX	**Karacabey (Bur**	**1.00**	**17**	*e*PG	**Pb**	**08 01 53.9**	**0.0**
KCTX	**Karacabey (Bur**	**1.00**	**17**	*e*Pg	**Pb**	**08 01 53.9**	**0.0**
IZM	**Izmir**	**1.06**	**212**	*e*PG	**Pn**	**08 01 55.6**	**+0.1**
IZM	**Izmir**	**1.06**	**212**	*e*Pg	**Pn**	**08 01 55.6**	**+0.1**
TVSB	**Tavsanli**	**1.16**	**82**	*e*PN	**Pn**	**08 01 57.6**	**+0.7**
TVSB	**Tavsanli**	**1.16**	**82**	*e*Pn	**Pn**	**08 01 57.6**	**+0.7**
BLCB	**Balcova**	**1.17**	**219**	*e*PN	**Pn**	**08 01 57.7**	**+0.8**
BLCB	**Balcova**	**1.17**	**219**	*e*Pn	**Pn**	**08 01 57.7**	**+0.8**
GDZ	**Gediz**	**1.19**	**100**	*i* P	**Pg**	**08 01 57.5**	**+0.2**
GDZ				*i* S	**Sg**	**08 02 13.2**	**+0.4**
GDZ	**Gediz**	**1.19**	**100**	*i* P	**Pg**	**08 01 57.5**	**+0.2**
GDZ				*i* S	**Sg**	**08 02 13.2**	**+0.4**
KRBG	**Karabiga-Canak**	**1.20**	**335**	*e*PN	**Pg**	**08 01 58.0**	**+0.5**
KRBG	**Karabiga-Canak**	**1.20**	**335**	*e*Pn	**Pg**	**08 01 58.0**	**+0.5**
MDNY	**Mudanya-Bursa**	**1.27**	**33**	*e*PN	**Pg**	**08 01 59.0**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.27**	**33**	*e*Pn	**Pg**	**08 01 59.0**	**+0.1**
MRMT	**Marmara Adasi**	**1.33**	**348**	*e*PN	**Pg**	**08 02 00.4**	**+0.5**
MRMT	**Marmara Adasi**	**1.33**	**348**	*e*Pn	**Pg**	**08 02 00.4**	**+0.5**
EZN	**Ezine**	**1.38**	**293**	*e*PN	**Pg**	**08 02 01.1**	**+0.3**
EZN	**Ezine**	**1.38**	**293**	*e*Pn	**Pg**	**08 02 01.1**	**+0.3**
LPK	**Lapseki**	**1.42**	**319**	*e*PN	**Pg**	**08 02 01.7**	**+0.1**
LPK	**Lapseki**	**1.42**	**319**	*e*Pn	**Pg**	**08 02 01.7**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.51**	**336**	*e*PN	**Pg**	**08 02 03.2**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.51**	**336**	*e*Pn	**Pg**	**08 02 03.2**	**-0.2**
SART	**Tekirdag**	**1.51**	**336**	*e*P	**Pb**	**08 02 03.0**	**+0.4**
SART				*e*S	**Sg**	**08 02 22.9**	**-0.1**
SART	**Tekirdag**	**1.51**	**336**	*e*P	**Pb**	**08 02 03.0**	**+0.4**
SART				*e*S	**Sg**	**08 02 22.9**	**-0.1**
IZI	**Iznik**	**1.55**	**48**	*e*PN	**Pb**	**08 02 03.7**	**+0.4**
IZI	**Iznik**	**1.55**	**48**	*e*Pn	**Pb**	**08 02 03.7**	**+0.4**
BOZC	**Bozcaada**	**1.58**	**290**	*i* P	**Pn**	**08 02 01.3**	**-1.2**
BOZC				*i* S	**Sn**	**08 02 22.4**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.59**	**314**	*e*PN	**Pg**	**08 02 04.6**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.59**	**314**	*e*Pn	**Pg**	**08 02 04.6**	**-0.3**
CAVI	**Cavuskoy**	**1.70**	**58**	*e*PN	**Pb**	**08 02 06.0**	**+0.2**
CAVI	**Cavuskoy**	**1.70**	**58**	*e*Pn	**Pb**	**08 02 06.0**	**+0.2**

*ISK **14** 08:16:29.9,39.39N×26.02E,h9km,MD3.1*
*ISCJB **14** 08:16:31.0±0.7,39.41N±0.02×26.11E±0.04,h9km±5km, Error ellipse: s-maj=5.8km s-min=3.4km az=156.9*
*CSEM **14** 08:16:31.5±0.1,39.42N×26.14E,h10km,MD3.0, Error ellipse: s-maj=3.6km s-min=2.6km az=83.0*
*DDA **14** 08:16:31.7,39.42N×26.14E,h16km,MD2.9*
*ATH **14** 08:16:31.0,39.42N×26.21E,h20km±1km,MD3.0/6*

ISC 14 08:16:31.6±0.9, 39.41N±0.02×26.16E±0.02, h18km±4km, n57, σ0983/79, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.19**	**152**	*e*PB	**Pg**	**08 16 36.2**	**-0.2**
PRK				*e*SB	**Sg**	**08 16 39.4**	**-0.2**
PRK	**Paraskevi**	**0.19**	**152**	*e*Pb	**Pg**	**08 16 36.2**	**-0.2**
PRK				*e*Sb	**Sg**	**08 16 39.4**	**-0.2**
AYVA	**Ayvalik**	**0.42**	**104**	*i* P	**Pg**	**08 16 40.2**	**-0.1**
AYVA				*i* S	**Sg**	**08 16 46.3**	**+0.1**
AYVA	**Ayvalik**	**0.42**	**104**	*i* P	**Pg**	**08 16 40.2**	**-0.1**
AYVA				*i* S	**Sg**	**08 16 46.3**	**+0.1**
EZN	**Ezine**	**0.43**	**17**	*e*PG	**Pg**	**08 16 40.3**	**-0.2**
EZN	**Ezine**	**0.43**	**17**	*e*Pg	**Pg**	**08 16 40.3**	**-0.2**
BOZC	**Bozcaada**	**0.44**	**349**	*i* P	**Pg**	**08 16 40.2**	**-0.4**
BOZC				*i* S	**Sg**	**08 16 46.3**	**-0.3**
LIA	**Limnos Island**	**0.90**	**303**	*e*PN	**Pb**	**08 16 49.0**	**+0.3**
LIA				*e*SN	**Sg**	**08 17 01.6**	**+0.7**
LIA	**Limnos Island**	**0.90**	**303**	*e*Pn	**Pb**	**08 16 49.0**	**+0.3**
LIA				*e*Sn	**Sg**	**08 17 01.6**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.01**	**14**	*e*PG	**Pb**	**08 16 50.6**	**0.0**
GELI	**Tayfur-Gelibol**	**1.01**	**14**	*e*Pg	**Pb**	**08 16 50.7**	**0.0**
CHOS	**Chios island**	**1.03**	**185**	*e*PN	**Pb**	**08 16 50.9**	**0.0**
CHOS				*e*SN	**Sg**	**08 17 05.1**	**0.0**
CHOS	**Chios island**	**1.03**	**185**	*e*Pn	**Pb**	**08 16 50.9**	**0.0**
CHOS				*e*Sn	**Sg**	**08 17 05.1**	**0.0**
LPK	**Lapseki**	**1.06**	**26**	*e*PN	**Pb**	**08 16 51.8**	**+0.3**
LPK	**Lapseki**	**1.06**	**26**	*e*Pn	**Pb**	**08 16 51.8**	**+0.3**
URLA	**Izmir**	**1.10**	**162**	*i* P	**Pb**	**08 16 52.0**	**-0.2**
URLA				*i* S	**Sb**	**08 17 06.9**	**+0.6**
URLA	**Izmir**	**1.10**	**162**	*i* P	**Pb**	**08 16 52.0**	**-0.2**
URLA				*i* S	**Sb**	**08 17 06.9**	**+0.6**
SMTH	**Samothraki Isl**	**1.16**	**336**	*e*PN	**Pn**	**08 16 53.1**	**+0.1**
SMTH				*e*SN	**Sg**	**08 17 09.2**	**-0.2**
SMTH	**Samothraki Isl**	**1.16**	**336**	*e*Pn	**Pn**	**08 16 53.1**	**+0.1**
SMTH				*e*Sn	**Sg**	**08 17 09.2**	**-0.2**
BALY	**Balya**	**1.18**	**73**	*i* P	**Pn**	**08 16 53.5**	**+0.3**
BALY				*i* S	**Sg**	**08 17 09.7**	**-0.1**
BALY	**Balya**	**1.18**	**73**	*i* P	**Pn**	**08 16 53.5**	**+0.3**
BALY				*i* S	**Sg**	**08 17 09.7**	**-0.1**
BLCB	**Balcova**	**1.23**	**146**	*e*PN	**Pb**	**08 16 54.6**	**+0.2**
BLCB				*e*SN	**Sg**	**08 17 12.5**	**+0.8**
BLCB	**Balcova**	**1.23**	**146**	*e*Pn	**Pb**	**08 16 54.6**	**+0.2**
BLCB				*e*Sn	**Sg**	**08 17 12.5**	**+0.8**
ERIK	**Erikli-Kesan**	**1.29**	**12**	*e*PN	**Pn**	**08 16 55.0**	**+0.3**
ERIK	**Erikli-Kesan**	**1.29**	**12**	*e*Pn	**Pn**	**08 16 55.0**	**+0.3**
KRBG	**Karabiga-Canak**	**1.31**	**41**	*e*PN	**Pn**	**08 16 55.5**	**+0.4**
KRBG	**Karabiga-Canak**	**1.31**	**41**	*e*Pn	**Pn**	**08 16 55.5**	**+0.4**
ENEZ	**Enez**	**1.32**	**360**	*e*PN	**Pn**	**08 16 55.5**	**+0.3**
ENEZ	**Enez**	**1.32**	**360**	*e*Pn	**Pn**	**08 16 55.5**	**+0.3**
IZM	**Izmir**	**1.33**	**139**	*e*PN	**Pb**	**08 16 56.3**	**+0.2**
IZM	**Izmir**	**1.33**	**139**	*e*Pn	**Pb**	**08 16 56.3**	**+0.2**
GONE	**Gonen-Balikesi**	**1.34**	**61**	*e*PN	**Pb**	**08 16 56.7**	**+0.5**
GONE	**Gonen-Balikesi**	**1.34**	**61**	*e*Pn	**Pb**	**08 16 56.7**	**+0.5**
BALB	**Balikesir**	**1.35**	**80**	*e*PN	**Pg**	**08 16 57.2**	**-0.4**
BALB	**Balikesir**	**1.35**	**80**	*e*Pn	**Pg**	**08 16 57.3**	**-0.4**
AKHS	**Akhisar**	**1.39**	**112**	*e*P	**Pn**	**08 16 56.8**	**+0.6**
AKHS				*e*S	**Sn**	**08 17 09.8**	**-4.4**
AKHS	**Akhisar**	**1.39**	**112**	*e*P	**Pn**	**08 16 56.8**	**+0.6**
ALN	**Alexandroupoli**	**1.49**	**357**	*e*PN	**Pb**	**08 16 58.7**	**0.0**
ALN				*e*SN	**Sb**	**08 17 18.1**	**+0.9**
ALN	**Alexandroupoli**	**1.49**	**357**	*e*Pn	**Pb**	**08 16 58.7**	**0.0**
ALN				*e*Sn	**Sb**	**08 17 18.1**	**+0.9**
RKY	**Sarkoy-Tekirda**	**1.49**	**31**	*e*PN	**Pb**	**08 16 58.9**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.49**	**31**	*e*Pn	**Pb**	**08 16 58.9**	**0.0**
SART	**Tekirdag**	**1.50**	**31**	*i* P	**Pn**	**08 16 58.5**	**+0.8**
SART				*i* S	**Sb**	**08 17 18.2**	**+0.6**
SART	**Tekirdag**	**1.50**	**31**	*i* P	**Pn**	**08 16 58.5**	**+0.8**
SART				*i* S	**Sb**	**08 17 18.2**	**+0.6**
MFT	**Murefte**	**1.62**	**32**	*e*PN	**Pb**	**08 17 00.5**	**-0.6**
MFT	**Murefte**	**1.62**	**32**	*e*Pn	**Pb**	**08 17 00.5**	**-0.6**
MRMT	**Marmara Adasi**	**1.62**	**42**	*e*PN	**Pb**	**08 17 00.7**	**-0.4**
MRMT	**Marmara Adasi**	**1.62**	**42**	*e*Pn	**Pb**	**08 17 00.7**	**-0.4**
AOS	**Alonnisos**	**1.79**	**263**	*e*PN	**Pb**	**08 17 03.8**	**0.0**
AOS	**Alonnisos**	**1.79**	**263**	*e*Pn	**Pb**	**08 17 03.8**	**0.0**
EDRB	**Edirne**	**2.47**	**10**	*e*PN	**Pn**	**08 17 12.1**	**+1.0**
EDRB	**Edirne**	**2.47**	**10**	*e*Pn	**Pn**	**08 17 12.1**	**+1.0**
CTKS	**Kestanelik-??a**	**2.56**	**44**	*e*PN	**Pn**	**08 17 14.1**	**+1.9**
CTKS	**Kestanelik-??a**	**2.56**	**44**	*e*Pn	**Pn**	**08 17 14.1**	**+1.9**
TVSB	**Tavsanli**	**2.56**	**88**	*e*PN	**Pn**	**08 17 13.5**	**+1.2**
TVSB	**Tavsanli**	**2.56**	**88**	*e*Pn	**Pn**	**08 17 13.5**	**+1.2**
IZI	**Iznik**	**2.71**	**69**	*e*PN	**Pn**	**08 17 16.5**	**+2.1**
IZI	**Iznik**	**2.71**	**69**	*e*Pn	**Pn**	**08 17 16.5**	**+2.1**

AUST 14 08:17:36.0±0.0, 4.56S×122.39E, h309km, Error ellipse: s-maj=1.2km s-min=1.1km az=12.0, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**3.52**	**6**	S	S	08 19 26.9	-0.1
	baz=3.5,SNR=6.2						
WSI	**Waingapu**	**5.48**	**202**	P	Pn	08 19 00.7	+1.1
	baz=5.5,SNR=3.8						
SWI	**Sorong**	**9.59**	**68**	S	S	08 21 48.4	+10
	baz=9.6,SNR=3.0						
MTN	**Manton Dam**	**11.93**	**134**	P	P	08 20 18.3	-0.5
	baz=12,SNR=3.9						
KNRA	**Kununurra**	**12.70**	**151**	P	Pn	08 20 24.6	-2.3
	baz=13,SNR=3.9						
KDU	**Kakadu**	**12.82**	**130**	P	P	08 20 29.7	+1.0
	baz=13,SNR=5.6						
CISI	**Cisompet, Garu**	**14.79**	**258**	P	P	08 20 45.5	-5.1
	baz=15,SNR=3.2						
PALU	**Palau**	**16.89**	**46**	P	P	08 21 12.5	-0.9
	baz=17,SNR=3.5						
MMPI	**Merauke**	**18.29**	**103**	P	P	08 21 28.5	+0.1
	baz=18,SNR=4.2						
PPI	**Padang Panjang**	**22.34**	**280**	P	P	08 22 11.7	+3.1
	baz=22,SNR=3.3						
KLBR	**Kellerberrin**	**27.24**	**189**	P	P	08 22 55.5	+3.0
	baz=27,SNR=5.9						
NFK	**Norfolk Island**	**49.50**	**125**	S	S	08 32 34.2	-5.6
	baz=50,SNR=3.2						

*IDC **14** 08:17:32.6±1.0,35.42N×23.51E,h0km,mb4.1/16, mb1 4.1/21,mb1mx4.0/33,mbtmp4.0/21,ML4.1/5,MS3.1/5, Ms1 3.1/5,ms1mx2.5/44,Error ellipse: s-maj=20.1km s-min=15.9km az=11.0*
*MOS **14** 08:17:35.1±1.2,35.29N×23.48E,h33km,mb4.4/15,Error ellipse: s-maj=14.3km s-min=6.5km az=75.1*
*HLW **14** 08:17:37.4,35.49N×23.62E,h33km±37km,Md0.0,Ml4.1*
*ISCJB **14** 08:17:38.5±0.3,35.29N±0.02×23.40E±0.03,h71km±3km, mb4.1/27,Error ellipse: s-maj=4.8km s-min=2.6km az=143.9*
*CSEM **14** 08:17:39.9±0.1,35.31N×23.41E,h67km±1km,mb4.1/19, Mw3.6,Error ellipse: s-maj=5.0km s-min=2.3km az=52.0*
*ATH **14** 08:17:40.5,35.41N×23.47E,h45km,ML3.5*
*THE **14** 08:17:41.5,35.41N×23.47E,h50km±4km,ML3.6/7,Error ellipse: s-maj=4.7km s-min=0.6km az=172.0*

ISC 14 08:17:39.4±0.6, 35.30N±0.03×23.41E±0.03, h58km±6km, n257, σ1905/283, mb4.2/27, MS3.2/3, 1C, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAM	**Vamos**	**0.66**	**81**	P	**Pn**	**08 17 53.5**	**+0.4**
VAM				S	**Sn**	**08 18 02.7**	**-0.3**
VAM	**Vamos**	**0.66**	**81**	*e*P	**Pn**	**08 17 53.7**	**+0.6**
VAM				*e*S	**Sn**	**08 18 03.2**	**+0.2**
VAM	**Vamos**	**0.66**	**81**	*e*P	**Pn**	**08 17 53.7**	**+0.6**
VAM				*e*S	**Sn**	**08 18 03.2**	**+0.2**
GVD	**Gavdhos**	**0.73**	**129**	P	**Pn**	**08 17 55.2**	**+1.3**
GVD				S	**Sn**	**08 18 08.8**	**+2.4**
GVD	**Gavdhos**	**0.73**	**129**	P	**Pn**	**08 17 55.2**	**+1.3**
GVD				S	**Sn**	**08 18 08.8**	**+2.4**
KYTH	**Kithira**	**1.02**	**343**	P	**Pn**	**08 17 58.8**	**+1.1**
KYTH	**Kithira**	**1.02**	**343**	*e*P	**Pn**	**08 17 58.9**	**+1.2**
KYTH	**Kithira**	**1.02**	**343**	*e*P	**Pn**	**08 17 58.9**	**+1.2**
SIVA	**Sivas**	**1.19**	**103**	P	**Pn**	**08 18 01.4**	**+1.6**
SIVA				S	**Sn**	**08 18 15.7**	**+0.7**
SIVA	**Sivas**	**1.19**	**103**	P	**Pn**	**08 18 01.4**	**+1.6**
SIVA				S	**Sn**	**08 18 15.7**	**+0.7**
VLI	**Veliai**	**1.46**	**345**	P	**Pn**	**08 18 04.0**	**+0.4**
VLI	**Veliai**	**1.46**	**345**	*e*P	**Pn**	**08 18 05.0**	**+1.4**
VLI	**Veliai**	**1.46**	**345**	P	**Pn**	**08 18 04.0**	**+0.4**
DYR	**Agios Nikonas**	**1.70**	**330**	P	**Pn**	**08 18 07.7**	**+0.9**
DYR				S	**Sn**	**08 18 28.1**	**+0.7**
DYR	**Agios Nikonas**	**1.70**	**330**	*e*P	**Pn**	**08 18 08.0**	**+1.2**
DYR	**Agios Nikonas**	**1.70**	**330**	*e*P	**Pn**	**08 18 08.0**	**+1.2**
DYR				S	**Sn**	**08 18 28.1**	**+0.7**
LAST	**Lasithi**	**1.70**	**94**	P	**Pn**	**08 18 09.1**	**+2.2**
LAST				S	**Sn**	**08 18 28.9**	**+1.2**
LAST	**Lasithi**	**1.70**	**94**	P	**Pn**	**08 18 09.1**	**+2.2**
LAST				S	**Sn**	**08 18 28.9**	**+1.2**
NPS	**Neapolis**	**1.81**	**91**	P	**Pn**	**08 18 10.3**	**+2.1**
NPS				S	**Sn**	**08 18 30.8**	**+0.7**
NPS	**Neapolis**	**1.81**	**91**	*e*P	**Pn**	**08 18 10.6**	**+2.4**
NPS	**Neapolis**	**1.81**	**91**	*e*P	**Pn**	**08 18 10.6**	**+2.4**
NPS				S	**Sn**	**08 18 30.8**	**+0.7**
XRY	**Khrisi**	**1.93**	**102**	*e*P	**Pn**	**08 18 11.8**	**+2.0**
XRY	**Khrisi**	**1.93**	**102**	*e*P	**Pn**	**08 18 11.8**	**+2.0**
THR6	**Thira Island,**	**1.93**	**56**	P	**Pn**	**08 18 10.3**	**+0.4**
THR6	**Thira Island,**	**1.93**	**56**	P	**Pn**	**08 18 10.3**	**+0.4**
THR3	**Thira Island,**	**1.96**	**55**	P	**Pn**	**08 18 10.7**	**+0.4**
THR3	**Thira Island,**	**1.96**	**55**	P	**Pn**	**08 18 10.7**	**+0.4**
SANT	**Santorini**	**1.98**	**57**	P	**Pn**	**08 18 11.0**	**+0.4**
SANT	**Santorini**	**1.98**	**57**	*e*P	**Pn**	**08 18 11.6**	**+1.0**
SANT	**Santorini**	**1.98**	**57**	*e*P	**Pn**	**08 18 11.6**	**+1.0**
THR1	**Thera Island**	**1.98**	**57**	P	**Pn**	**08 18 11.2**	**+0.6**
THR1	**Thera Island**	**1.98**	**57**	P	**Pn**	**08 18 11.2**	**+0.6**
THR2	**Thira island,**	**2.00**	**55**	P	**Pn**	**08 18 11.9**	**+1.0**
THR2	**Thira island,**	**2.00**	**55**	P	**Pn**	**08 18 11.9**	**+1.0**
PYL	**PYLOS**	**2.08**	**320**	P	**Pn**	**08 18 11.4**	**-0.6**
PYL	**PYLOS**	**2.08**	**320**	P	**Pn**	**08 18 11.4**	**-0.6**
DIDY	**Didyma**	**2.17**	**356**	P	**Pn**	**08 18 13.1**	**-0.3**
DIDY	**Didyma**	**2.17**	**356**	P	**Pn**	**08 18 13.1**	**-0.3**
DID	**Didima**	**2.20**	**357**	P	**Pn**	**08 18 13.4**	**-0.3**
DID				S	**Sn**	**08 18 38.8**	**-1.0**
DID	**Didima**	**2.20**	**357**	*e*P	**Pn**	**08 18 14.4**	**+0.7**
DID	**Didima**	**2.20**	**357**	*e*P	**Pn**	**08 18 14.4**	**+0.7**
DID				S	**Sn**	**08 18 38.8**	**-1.0**
ITH	**Ithomi**	**2.22**	**328**	P	**Pn**	**08 18 14.6**	**+0.7**
ITM	**Ithomi**	**2.22**	**328**	*e*P	**Pn**	**08 18 15.0**	**+1.1**
ITM	**Ithomi**	**2.22**	**328**	P	**Pn**	**08 18 14.6**	**+0.7**
VLX	**Vlachokerasia**	**2.22**	**338**	P	**Pn**	**08 18 15.3**	**+1.3**
VLX				S	**Sn**	**08 18 41.6**	**+1.2**
VLX	**Vlachokerasia**	**2.22**	**338**	P	**Pn**	**08 18 15.3**	**+1.3**
VLX				S	**Sn**	**08 18 41.6**	**+1.2**
ZKR	**Zakros**	**2.31**	**94**	P	**Pn**	**08 18 17.4**	**+2.3**
ZKR				S	**Sn**	**08 18 43.7**	**+1.3**
ZKR	**Zakros**	**2.31**	**94**	P	**Pn**	**08 18 17.4**	**+2.3**
ZKR				S	**Sn**	**08 18 43.7**	**+1.3**
NAIG	**Nisos Aigina**	**2.45**	**2**	*e*P	**Pn**	**08 18 17.9**	**+0.9**
NAIG	**Nisos Aigina**	**2.45**	**2**	*e*P	**Pn**	**08 18 17.9**	**+0.9**
APE	**Apeiranthos**	**2.46**	**44**	P	**Pn**	**08 18 17.0**	**-0.2**
APE				S	**Sn**	**08 18 45.8**	**-0.4**
APE	**Apeiranthos**	**2.46**	**44**	P	**Pn**	**08 18 17.0**	**-0.2**
APE				S	**Sn**	**08 18 45.8**	**-0.4**
ATH	**Athens Observa**	**2.68**	**5**	P	**Pn**	**08 18 21.2**	**+1.2**
ATH				S	**Sn**	**08 18 51.9**	**+0.6**
ATH	**Athens Observa**	**2.68**	**5**	*e*P	**Pn**	**08 18 21.3**	**+1.2**
ATH	**Athens Observa**	**2.68**	**5**	*e*P	**Pn**	**08 18 21.3**	**+1.2**
ATH				S	**Sn**	**08 18 51.9**	**+0.6**
ATHU	**Athens Univers**	**2.68**	**6**	P	**Pn**	**08 18 19.8**	**-0.3**
ATHU				S	**Sn**	**08 18 51.1**	**-0.

KOT	Kottamia	8.90	125	P		Pn	08 19 44.2	-1.1	
	baz=126								
KOT	Kottamia	8.90	125	P		Pn	08 19 44.2	-1.1	
HSAF	As Saff	8.91	127	P		Pn	08 19 44.4	-1.2	
	baz=129								
HSAF	As Saff	8.91	127	P		Pn	08 19 44.4	-1.2	
HFRF	Wahat Farafira	9.15	151	P		Pn	08 19 48.2	-0.5	
	baz=153								
HFRF	Wahat Farafira	9.15	151	P		Pn	08 19 48.2	-0.5	
BRTR	Keskin Array B	9.25	58	Pn		Pn	08 19 45.9	-4.4	
	comp=E,0.1nm,0.3s,baz=188,slow=8.7,SNR=2.1								
AMAG	Maghara	9.45	117	P		Pn	08 19 51.9	-1.1	
	baz=118								
AMAG	Maghara	9.45	117	P		Pn	08 19 51.9	-1.1	
MMAI	Mount Meron Ar	10.20	100	Pn		Pn	08 19 58.6	-4.6	
	comp=E,2.9nm,0.3s,baz=270,slow=11,SNR=12								
MMAI				Sn		Sn	08 21 47.3	-8.7	
	comp=E,2.6nm,0.3s,baz=275,slow=35,SNR=3.2								
KZIT	Kziot	10.21	112	Pn		Pn	08 19 57.7	-5.5	
KZIT				Sn		Sn	08 21 44.9	-11	
KSDI	Kefar Szold	10.36	98	Pn		Pn	08 19 58.7	-6.6	
KSDI				Sn		Sn	08 21 51.2	-8.6	
MLR	Muntele Rosu	10.36	10	Pn		Pn	08 20 04.7	-0.6	
	comp=E,0.1nm,0.3s,baz=110,slow=17,SNR=2.4								
MLR	Muntele Rosu	10.36	10	P		Pn	08 20 04.7	-0.6	
RTMI	Retamim	10.36	111	Sn		Sn	08 21 49.4	-11	
MMLI	Mount Malkishu	10.39	103	Sn		Sn	08 21 50.3	-10	
HMDT	Nahal Hemdat	10.54	103	Sn		Sn	08 21 54.4	-10	
KSHT	Keshet	10.54	99	Pn		Pn	08 20 02.3	-5.5	
DSI	Dead Sea	10.67	107	Sn		Sn	08 21 57.9	-10	
KRMI	Paran Flat	10.84	115	Pn		Pn	08 20 05.3	-6.6	
KRMI				Sn		Sn	08 22 00.1	-12	
PRNI	Paran	10.93	114	Sn		Sn	08 22 02.6	-11	
HRFI	Mount Harif	11.12	115	Sn		Sn	08 22 06.6	-12	
MBRI	Mt Berech	11.15	116	Pn		Pn	08 20 08.2	-8.0	
MBRI				Sn		Sn	08 22 08.7	-11	
EIL	Elat	11.25	117	Pn		Pn	08 20 14.7	-2.8	
	comp=E,1.0nm,0.3s,baz=56,slow=15,SNR=8.2								
EIL				Sn		Sn	08 22 13.2	-8.4	
	comp=E,2.0nm,0.3s,baz=292,slow=13,SNR=5.9								
EIL	Elat	11.25	117	Pn		Pn	08 20 10.2	-7.2	
VYHS	Vyhne	13.61	347	*e*P		Pn	08 20 49.7	+0.2	
VYHS	Vyhne	13.61	347	*e*PN		Pn	08 20 49.7	+0.2	
KOLS	Kolonicke sedl	13.65	357	*e*P		Pn	08 20 51.6	+1.6	
KOLS	Kolonicke sedl	13.65	357	*e*		Pn	08 20 51.6	+1.6	
CRVS	Cervenica-Dubn	13.67	355	*e*P		Pn	08 20 53.6	+3.3	
CRVS	Cervenica-Dubn	13.67	355	*e*		Pn	08 20 53.6	+3.3	
ANN	Anapa	14.31	44	*e*P		Pn	08 20 58.0	-0.9	
ANN				*e*S		Sn	08 23 38.4	+2.3	
ANN				pmax		pmax			
	comp=Z,19nm,1.2s								
GERES	GERESS Array B	15.31	335	Pn		Pn	08 21 10.8	-1.1	
	comp=Z,0.2nm,0.3s,baz=141,slow=13,SNR=2.9								
KHC	Kasperske Hory	15.60	335	*e*P		P	08 21 18.5	-0.3	
KHC	Kasperske Hory	15.60	335	*e*P		P	08 21 18.5	-0.3	
KHC	Kasperske Hory	15.60	335	*e*P		P	08 21 18.5	-0.3	
AKASG	Malin Array Be	15.96	14	P		Pn	08 21 17.2	-2.9	
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AKASG	Malin Array Be	15.96	14	Pn		Pn	08 21 17.2	-2.9	
	comp=E,1.1nm,0.3s,baz=205,slow=12,SNR=2.5								
KBZ	Khabaz	17.21	55	P		Pn	08 21 33.9	-1.8	
KBZ	Khabaz	17.21	55	P		Pn	08 21 33.9	-1.8	
	comp=Z,0.2nm,0.3s,baz=316,slow=16,SNR=2.4								
KBZ				LR		LR	08 29 48.5		
	comp=Z,39nm,19.6s,baz=191,slow=43								
KBZ	Khabaz	17.21	55	P		Pn	08 21 33.9	-1.8	
GNI	Garni	17.55	68	LR		LR	08 29 47.6		
	comp=Z,48nm,18.2s,baz=108,slow=42								
ZEI	Tsey	17.55	59	*e*P		P	08 21 40.3	-0.4	
ZEI				pmax		pmax			
	comp=Z,2.0nm,0.7s								
MIB	Mutribah	20.89	98	*e*P		P	08 22 17.3	+0.5	
MIB				AMb		AMB	08 22 18.2		
	comp=Z,19nm,0.4s								
MIB	Mutribah	20.89	98	*e*P		P	08 22 17.3	+0.5	
	comp=Z,19nm,0.4s								
NAY	Al-Naaiem	21.02	100	*e*P		P	08 22 18.7	+0.4	
NAY				AMb		AMB	08 22 20.0		
	comp=Z,10nm,0.4s								
NAY	Al-Naaiem	21.02	100	*e*P		P	08 22 18.7	+0.4	
	comp=Z,10nm,0.4s								
UMR	Umm Al-Rimmam	21.28	99	*e*P		P	08 22 21.0	-0.1	
UMR				AMb		AMB	08 22 22.4		
	comp=Z,47nm,0.4s								
UMR	Umm Al-Rimmam	21.28	99	*e*P		P	08 22 21.0	-0.1	
	comp=Z,47nm,0.4s								
OBN	Obninsk	21.80	21	*i* P		P	08 22 27.0	+0.6	
OBN				*e*			08 22 46.9		
OBN				pmax		pmax			
	comp=Z,21nm,1.4s								
OBN	Obninsk	21.80	21	*i* P		P	08 22 27.0	+0.6	
	comp=Z,21nm,1.4s								
HFS	Hagfors	25.63	349	P		P	08 23 02.8	-0.5	
	comp=Z,4.8nm,0.6s,baz=150,slow=11,SNR=18								
HFS	Hagfors	25.63	349	P		P	08 23 02.8	-0.5	
	comp=Z,5.0nm,0.6s								
FINES	FINESS Array B	26.22	3	P		P	08 23 07.3	-1.2	
	comp=Z,1.6nm,0.3s,baz=164,slow=9.8,SNR=15								
FINES				LR		LR	08 34 13.9		
	comp=Z,66nm,18.2s,baz=90,slow=38								
FINES	FINESS Array B	26.22	3	P		P	08 23 07.3	-1.2	
	comp=Z,66nm,18.2s								
KAF	Kangasniemi	26.89	3	*e*P		P	08 23 13.5	-1.1	
KAF				pmax		pmax			
	comp=Z,2.0nm,0.4s								
KAF	Kangasniemi	26.89	3	*e*p		P	08 23 13.5	-1.1	
	comp=Z,2.0nm,0.4s								
KAF	Kangasniemi	26.89	3	*e*P		P	08 23 13.5	-1.1	
	comp=Z,2.0nm,0.4s								
NB2	NORSAR Subarra	26.91	347	P		P	08 23 14.4	-0.5	
	comp=Z,0.3nm,0.3s,baz=156,slow=9.3								
NB2	NORSAR Subarra	26.91	347	P		P	08 23 14.4	-0.5	
	comp=Z,0.3nm,0.3s,baz=156,slow=9.0,SNR=5.7								
NOA	NORSAR Array B	26.91	347	P		P	08 23 14.2	-0.6	
	comp=Z,0.8nm,0.4s,baz=149,slow=9.4,SNR=8.9								
NOA	NORSAR Array B	26.91	347	P		P	08 23 14.3	-0.6	
	comp=Z,1.0nm,0.4s								
EKA	Eskdalemuir Ar	27.11	326	P		P	08 23 17.2	+0.6	
	comp=Z,0.8nm,0.4s,baz=123,slow=8.4,SNR=8.3								
EKA	Eskdalemuir Ar	27.11	326	P		P	08 23 17.2	+0.6	
	comp=Z,1.0nm,0.4s								
JOF	Joensuu	28.08	8	*e*P		P	08 23 24.7	-0.5	
JOF	Joensuu	28.08	8	*e*p		P	08 23 24.7	-0.5	
JOF	Joensuu	28.08	8	*e*P		P	08 23 24.7	-0.5	
AKTK	Aktyubinsk	29.21	48	P		P	08 23 34.7	-0.8	
	comp=Z,1.0nm,0.3s								
AKTO	Aktyubinsk	29.21	48	P		P	08 23 34.7	-0.8	
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AKTO	Aktyubinsk	29.21	48	P		P	08 23 34.7	-0.8	
	comp=Z,7.7nm,0.3s,baz=243,slow=9.0,SNR=5.5								
TORD	Torodi Ar. Bea	29.51	227	P		P	08 23 40.4	+2.0	
	comp=Z,2.5nm,0.6s,baz=32,slow=9.1,SNR=19								
ARU	Arti	31.80	37	*c i*P		P	08 23 57.6	-0.6	
ARU							08 25 00.0		
ARU				S		S	08 29 05.9	+1.7	
ARU				pmax		pmax			
	comp=Z,5.0nm,1.0s								
ARU	Arti	31.80	37	*i* P		P	08 23 57.6	-0.6	
	comp=Z,5.0nm,1.0s								
ARCES	ARCESS Array B	34.31	1	P		P	08 24 18.7	-1.2	
	comp=Z,1.6nm,0.5s,baz=188,slow=9.4,SNR=16								
ARCES				LR		LR	08 39 34.1		
	comp=Z,48nm,20.6s,baz=52,slow=39								
ARCES	ARCESS Array B	34.31	1	P		P	08 24 18.7	-1.2	
	comp=Z,48nm,20.6s								
KEV	Kevo	34.57	2	*e*P		P	08 24 21.6	-0.5	
KEV				pmax		pmax			
	comp=Z,1.0nm,0.4s								
KEV	Kevo	34.57	2	*e*p		P	08 24 21.6	-0.5	
	comp=Z,1.3nm,0.4s								
KEV	Kevo	34.57	2	*e*P		P	08 24 21.6	-0.5	
	comp=Z,1.0nm,0.4s								
BRVK	Borovoye	37.23	47	*i* P		P	08 24 45.2	0.0	
BRVK				pmax		pmax			
	comp=Z,3.0nm,0.7s								
BRVK	Borovoye	37.23	47	*i* P		P	08 24 45.2	0.0	
	comp=Z,3.0nm,0.7s								
KURBB	Kurchatov Arra	42.15	51	P		P	08 25 25.8	-0.2	
	comp=Z,4.1nm,0.7s,baz=277,slow=8.5,SNR=25								
KURK	Kurchatov	42.21	51	*i* P		P	08 25 26.3	-0.2	
KURK				pmax		pmax			
	comp=Z,3.0nm,0.9s								
KURK	Kurchatov	42.21	51	*i* P		P	08 25 26.3	-0.2	
	comp=Z,3.0nm,0.9s								
SPITS	Spitsbergen Ar	43.09	358	P		P	08 25 32.6	-0.7	
	comp=Z,0.4nm,0.3s,baz=155,slow=11,SNR=24								
SPITS	Spitsbergen Ar	43.09	358	P		P	08 25 32.6	-0.7	
MKAR	Makanchi Array	44.89	56	P		P	08 25 48.0	-0.2	
MKAR				pmax		pmax			
	comp=Z,2.0nm,0.4s								
MKAR	Makanchi Array	44.89	56	P		P	08 25 48.0	-0.2	
	comp=Z,1.9nm,0.4s,baz=271,slow=7.8,SNR=19								
MKAR	Makanchi Array	44.89	56	P		P	08 25 48.0	-0.2	
	comp=Z,2.0nm,0.4s								
NVS	Novosibirsk	45.00	45	*e*P		P	08 25 49.5	+0.6	
NVS	Novosibirsk	45.00	45	*e*P		P	08 25 49.5	+0.6	
ZALV	Zalesovo Beam	45.94	46	P		P	08 25 55.2	-1.1	
ZALV				pmax		pmax			
	comp=Z,2.0nm,0.4s								
ZALV	Zalesovo Beam	45.94	46	P		P	08 25 55.2	-1.1	
	comp=Z,2.4nm,0.4s,baz=271,slow=8.2,SNR=7.9								
ZALV	Zalesovo Beam	45.94	46	P		P	08 25 55.2	-1.1	
	comp=Z,2.0nm,0.4s								
HVS	Khovu-Aksy	51.65	49	*i* P		P	08 26 40.4	+0.2	
HVS				pmax		pmax			
	comp=Z,13nm,0.9s								
HVS	Khovu-Aksy	51.65	49	*i* P		P	08 26 40.4	+0.2	
	comp=Z,13nm,0.9s								
SONM	Songino Array	60.50	50	P		P	08 27 42.8	-0.7	
	comp=Z,0.3nm,0.5s,baz=285,slow=6.4,SNR=2.7								
SONM	Songino Array	60.50	50	P		P	08 27 42.8	-0.7	
SCHQ	Schefferville	62.14	319	P		P	08 27 54.6	+0.3	
	comp=Z,2.1nm,0.8s,baz=53,slow=7.1,SNR=5.6								
BILL	Bilibino	73.28	14	*e*P		P	08 29 05.5	+1.4	
BILL				*e*			08 29 20.3		
BILL				pmax		pmax			
	comp=Z,10.0nm,1.2s								
BILL	Bilibino	73.28	14	*e*P		P	08 29 05.5	+1.4	
	comp=Z,10.0nm,1.2s								
BILL	Bilibino	73.28	14	*e*PcP		PcP	08 29 20.3	0.0	
YKA	Yellowknife Ar	76.86	341	P		P	08 29 25.6	+0.8	
	comp=Z,0.3nm,0.5s,baz=31,slow=5.7,SNR=11								
YKA	Yellowknife Ar	76.86	341	P		P	08 29 25.6	+0.8	
USRK	Ussuriysk Arra	77.75	44	P		P	08 29 30.5	+0.3	
	comp=Z,2.4nm,0.8s,baz=323,slow=6.0,SNR=5.0								
KSRS	Korea Array	79.33	52	P		P	08 29 39.9	+0.9	
	comp=Z,1.3nm,0.6s,baz=311,slow=5.2,SNR=6.5								
KSRS				LR		LR	09 08 06.8		
	comp=Z,11nm,21.3s,baz=355,slow=38								
KSRS	Korea Array	79.33	52	P		P	08 29 39.9	+0.9	
	comp=Z,11nm,21.3s								

*ISCJB **14** 08:18:49.7±0.5,24.˚83N±0.˚03×122.˚48E±0.˚02,h8km±3km, mb3.5/3,MS3.8/1,Error ellipse: s-maj=5.6km s-min=2.5km az=11.9*
*IDC **14** 08:18:49.4±2.5,24.˚84N×122.˚38E,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.4/24,mbtmp3.7/3,MS3.2/2,Ms1 3.2/2, ms1mx2.4/46,Error ellipse: s-maj=389.9km s-min=28.0km az=70.0*
*TAP **14** 08:18:51.9,24.˚80N×122.˚31E,h13km,ML3.8,C*
*JMA **14** 08:18:51.5±0.2,24.˚94N×122.˚60E,h25km,M2.8*
ISC 14 08:18:49.8±1.2,24.˚78N±0.˚03×122.˚45E±0.˚02,h9km±9km, n44,σ0°69/72,mb3.5/3,4C-2D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
EGS		0.48	278	⇑*i*P		Pg	08 18 59.6	+0.5	
	baz=277								
EGS				*i* S		Sg	08 19 04.8	-0.6	
	baz=277								
TWB1	Santiao Chiao	0.48	299	⇓*i*P		Pg	08 18 59.6	+0.5	
	baz=306								
TWB1				*i* S		Sg	08 19 05.2	-0.3	
	baz=306								
TWC	Suao	0.57	253	⇑*i*P		Pg	08 19 01.0	0.0	
	baz=253								
TWC				*e*S		Sb	08 19 09.2	-1.0	
	baz=253								
YOJ	Yonaguni jima	0.60	122	P		Pb	08 19 03.1	+0.7	
YOJ				S		Sb	08 19 11.2	+0.2	
ILA	Ilan	0.64	269	*e*P		Pb	08 19 03.9	+0.8	
	baz=266								
NWF	Wu-fen Shan	0.68	296	⇓*i*P		Pb	08 19 04.0	+0.2	
	baz=299								
NWF				S		Sb	08 19 12.3	-1.0	
	baz=299								
TWE	Neicheng	0.72	266	⇑P		Pg	08 19 03.6	0.0	
	baz=262								
TWE				*e*S		Sg	08 19 13.1	+0.1	
	baz=262								
ENA	Nanau	0.74	242	*e*P		Pg	08 19 03.9	-0.1	
	baz=233								
ENA				*e*S		Sb	08 19 14.2	-0.7	
	baz=233								
ENTT	Nioudou	0.82	260	*e*P		Pg	08 19 05.7	+0.2	
	baz=256								
ENTT				S		Sg	08 19 16.3	+0.1	
	baz=256								
TAP1	Taipei	0.88	287	*e*P		Pn	08 19 08.2	-0.2	
	baz=288								
TAP1				*e*S		Sb	08 19 18.8	-0.4	
	baz=288								
TAP	Taipei	0.90	287	*e*P		Pb	08 19 07.7	+0.2	
	baz=288								
TAP				*e*S		Sg	08 19 18.6	-0.2	
	baz=288								
TWY	Chenhua	0.92	303	*e*P		Pb	08 19 07.7	-0.2	
	baz=306								
TWY				*e*S		Sg	08 19 19.4	0.0	
	baz=306								
TWS1	Kuangyinshan	0.99	289	*e*P		Pn	08 19 09.9	+0.1	
	baz=290								
TWS1				*e*S		Sb	08 19 22.0	-0.3	
	baz=290								
NSK	Sanguang	1.00	264	*e*P		Pg	08 19 08.8	-0.3	
	baz=261								
NSK				*e*S		Sg	08 19 20.4	-1.7	
	baz=261								
NNS	Nan Shan	1.04	251	*e*P		Pb	08 19 09.3	-0.7	
	baz=235								
NNS				*e*S		Sb	08 19 23.5	-0.3	
	baz=235								
TWD	Chiawan	1.05	228	*e*P		Pb	08 19 09.7	-0.3	
	baz=231								
TWD				*e*S		Sg	08 19 23.5	0.0	
	baz=231								
HWA	Hwalien	1.11	224	*e*P		Pg	08 19 11.5	+0.3	
	baz=224								
NCU	National Centr	1.17	280	*e*P		Pg	08 19 13.1	+0.9	
	baz=279								
NCU				*e*S		Sb	08 19 26.9	-0.4	
	baz=279								
IRIF	Iriomote-Funau	1.24	111	P		Pn	08 19 12.4	-0.9	
IRIF				*e*S		Sb	08 19 28.5	-1.1	
WHF	Hehuan Shan	1.25	240	⇑P		Pn	08 19 13.4	-0.5	
	baz=234								
WHF				*e*S		Sb	08 19 29.5	-0.7	
	baz=234								
TWT	Tachien	1.27	246	*e*P		Pb	08 19 14.3	+0.2	
	baz=242								
TWT				*e*S		Sg	08 19 31.1	+0.2	
	baz=242								
NSTT	Nanjuang	1.33	264	*e*P		Pg	08 19 15.5	+0.2	
	baz=261								
NSTT				*e*S		Sn	08 19 32.0	-0.4	
	baz=261								
ESL	Shilin	1.34	224	*e*P		Pg	08 19 16.1	+0.6	
	baz=200								
HSN	Hsinchu	1.35	271	*e*P		Pn	08 19 14.0	-0.8	
	baz=272								
HATJ	Hateruma jima	1.43	120	P		Pn	08 19 15.8	-0.1	
HATJ				*e*S		Sn	08 19 33.6	-1.1	
JKRS	Kuro-shima	1.52	110	P		Pn	08 19 16.9	-0.2	
JKRS				*e*S		Sn	08 19 36.4	-0.6	
NSY	Sanyi	1.58	257	*e*P		Pg	08 19 20.6	+0.4	
	baz=254								
NSY				*e*S		Sg	08 19 40.7	0.0	
	baz=254								
TWQ1	Liyutan	1.59	255	*e*P		Pg	08 19 20.4	+0.2	
	baz=252								
TWQ1				*e*S		Sg	08 19 40.9	0.0	
	baz=252								
JIJ	Ishigaki jima	1.59	105	P		Pn	08 19 17.3	-0.9	
JIJ				*e*S		Sn	08 19 37.1	-1.8	
EHY	Hungye	1.64	219	*e*P		Pb	08 19 20.3	+0.2	
	baz=213								
SMLT	Sun Moon Lake	1.67	238	*e*P		Pg	08 19 21.7	-0.2	
	baz=233								
SMLT				*e*S		Sb	08 19 42.6	+0.6	
	baz=233								
TYC	Yuchr	1.70	239	*e*P		Pb	08 19 21.8	+0.7	
	baz=235								
TYC				*e*S		Sg	08 19 44.3	-0.1	
	baz=235								
TCU	Taichung	1.74	249	*e*P		Pg	08 19 23.7	+0.6	
	baz=238								
TWF1	Yuli	1.77	217	*e*P		Pn	08 19 21.5	+0.9	
	baz=211								
ALS	Alishan	1.96	230	*e*P		Pb	08 19 25.9	-0.1	
	baz=209								
CHN5	Tsauling	2.00	234	*e*P		Pb	08 19 26.1	-0.4	
	baz=231								
CHN5				*e*S		Sg	08 19 54.4	+0.2	
	baz=231								
CHN4	Tsaushan	2.22	230	*e*P		Pb	08 19 29.1	-0.9	
	baz=209								
CHN4				*e*S		Sb	08 19 57.2	-0.4	
	baz=209								
TWK	Hsinying	2.34	230	*e*P		Pb	08 19 31.4	-0.8	
	baz=210								
TWK				*e*S		Sb	08 20 01.0	-0.3	
	baz=210								
CHN1	Nanshi	2.37	228	*e*P		Pb	08 19 31.4	-1.3	
	baz=224								
KSRS	Korea Array	13.47	19	LR		LR	08 27 51.9		
	comp=Z,30nm,19.6s,baz=175,slow=40								
SONM	Songino Array	26.29	335	P		P	08 24 25.9	+0.2	
	0.7nm,0.8s,baz=140,slow=9.1,SNR=3.6								
WRA	Warramunga Arr	45.93	164	P		P	08 27 13.5	+0.4	
	0.4nm,0.7s,baz=345,slow=8.5,SNR=3.1								
ASAR	Alice Springs	49.42	166	P		P	08 27 42.8	+2.6	
	1.3nm,0.9s,baz=348,slow=8.5,SNR=8.8								
STKA	Stephens Creek	59.23	161	LR		LR	08 57 05.3		
	comp=Z,72nm,18.6s,baz=171,slow=39								

*IDC **14** 08:20:53.4±0.9,39.˚35N×73.˚71E,h0km,mb3.7/7, mb1 3.8/11,mb1mx3.6/31,mbtmp3.7/11,ML3.2/5,MS2.2/1, Ms1 2.2/1,ms1mx2.0/45,Error ellipse: s-maj=19.2km s-min=12.8km az=103.0*
*BJI **14** 08:20:53.9,39.˚59N×73.˚50E,h7km,mb3.7/1,ML3.5/3*
*NNC **14** 08:20:58.9±2.3,39.˚63N×73.˚70E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=19.9km s-min=10.1km az=178.0*
ISC 14 08:20:56.5±1.3,39.70N±0.˚09×73.70E±0.˚07,h10km,n27, σ1°60/25,mb3.8/7,7C-2D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
KSH	Kashi	1.77	95	Pg		Pn	08 21 21.8		-5.4
KSH				Sg		Sn	08 21 41.4		-8.5
KSH				smax		smax			
	comp=N,590nm,0.4s								
KSH				smax		smax			
	comp=E,510nm,0.4s								
AML	Almayashu	2.42	360	P		Pg	08 21 43.0		0.0
	SNR=115								
UCH	Uchtor	2.59	13	P		Pb	08 21 45.0		+1.6
	SNR=13								
KZA	Kyzart	2.65	26	P		Pb	08 21 44.6		+0.4
	SNR=86								
EKS2	Erkin-Say	2.96	1	P		Pb	08 21 51.0		+1.8
	SNR=27								
AAK	Ala-Archa	2.99	11	P		Pb	08 21 50.7		+0.8
	SNR=13								
AAK	Ala-Archa	2.99	11	Pn		Pb	08 21 50.5		+0.6
	comp=E,6.0nm,0.3s,baz=174,slow=13,SNR=26								
AAK				Sn		Sg	08 22 31.9		-0.5
	comp=E,11nm,0.3s,baz=33,slow=17,SNR=9.3								
AAK				Lg		Lg	08 22 36.8		
	comp=E,22nm,0.3s,baz=322,slow=19,SNR=13								
KBK	Karagaybulak	3.10	17	P		Pb	08 21 52.5		+0.7
	SNR=29								
ULHL	Ulahol	3.19	36	P		Pb	08 21 52.8		-0.5
	SNR=12								
CHMS	Chumysh	3.38	13	P		Pb	08 21 58.9		+2.3
	SNR=11								
TKM2	Tokmak 2	3.52	23	⇑Pn		Pb	08 21 56.5		-2.3
	comp=E,6.1nm,0.3s								
TKM2				⇑Pg		Pg	08 22 05.5		+1.6
	comp=E,18nm,0.5s								
TKM2				⇑Lg		Lg	08 22 53.0		
	comp=E,102nm,0.6s								
TKM2	Tokmak 2	3.52	23	P		Pb	08 21 56.6		-2.3
	SNR=17								
USP	Ospenovka	3.61	9	P		Pb	08 21 59.0		-1.4
	SNR=11								
KK31	Karatay Array	4.16	326	⇑Pn		Pn	08 22 03.6		+3.6
	comp=E,1.3nm,0.2s,baz=126,slow=12,SNR=78								
KK31				⇓Pg		Pg	08 22 16.0		-0.1
	comp=E,5.3nm,0.3s,baz=144,slow=14,SNR=14								
KK31				⇑Sn		Sb	08 22 56.0		-4.0
	comp=E,7.9nm,0.3s,baz=162,slow=28,SNR=3.7								
KK31				⇓Lg		Lg	08 23 12.6		
	comp=E,30nm,0.5s,baz=136,slow=30,SNR=4.3								
KNDC	Almaty	4.28	34	⇑Pg		Pg	08 22 17.4		-1.1
KNDC				⇑Lg		Lg	08 23 14.9		
MKAR	Makanchi Array	9.46	39	Pn		Pn	08 23 17.5		+4.8
	comp=E,0.0nm,0.3s,baz=216,slow=12,SNR=2.1								
MKAR				Lg		Lg	08 26 00.7		
	comp=E,0.3nm,0.3s,baz=229,slow=26,SNR=4.3								
KURBB	Kurchatov Arra	11.43	16	Pn		Pn	08 23 40.9		+1.

URLA	**Izmir**	**0.93**	**302**	*i* P		**Pg**	**08 25 38.8**	**0.0**
URLA				*i* S		**Sg**	**08 25 50.3**	**-0.6**
URLA	**Izmir**	**0.93**	**302**	*i* P		**Pg**	**08 25 38.8**	**0.0**
URLA				*i* S		**Sg**	**08 25 50.3**	**-0.6**
MANT	**Manisa**	**0.98**	**50**	*i* P		**Pb**	**08 25 40.4**	**-0.2**
MANT				*i* S		**Sg**	**08 25 51.8**	**-0.8**
MANT	**Manisa**	**0.98**	**50**	*i* P		**Pb**	**08 25 40.4**	**-0.2**
AKHS	**Akhisar**	**1.03**	**10**	*i* P		**Pb**	**08 25 41.2**	**0.0**
AKHS				*i* S		**Sn**	**08 25 56.0**	**-0.8**
AKHS	**Akhisar**	**1.03**	**10**	*i* P		**Pb**	**08 25 41.2**	**0.0**
AKHS				*i* S		**Sn**	**08 25 56.0**	**-0.8**
AKS	**Akhisar**	**1.03**	**10**	*e*PG		**Pb**	**08 25 41.1**	**0.0**
AKS				*e*SG		**Sn**	**08 25 56.0**	**-0.8**
AKS	**Akhisar**	**1.03**	**10**	*e*Pg		**Pb**	**08 25 41.2**	**0.0**
AKS				*e*Sg		**Sn**	**08 25 56.0**	**-0.8**
KULA	**Kula-Manisa**	**1.06**	**52**	*e*PN		**Pg**	**08 25 41.7**	**+0.3**
KULA	**Kula-Manisa**	**1.06**	**52**	*e*Pn		**Pg**	**08 25 41.7**	**+0.3**
DNZL	**Cakiroluk**	**1.17**	**98**	*i* P		**Pn**	**08 25 44.9**	**+0.8**
DNZL				*i* S		**Sb**	**08 25 59.3**	**+0.1**
DNZL	**Cakiroluk**	**1.17**	**98**	*i* P		**Pn**	**08 25 44.9**	**+0.8**
DNZL				*i* S		**Sb**	**08 25 59.3**	**+0.1**
TURN	**Turunc**	**1.28**	**141**	*i* P		Pn	08 25 41.7	-3.7
TURN				*i* S		**Sb**	**08 25 59.9**	**-2.2**
CHOS	**Chios island**	**1.32**	**294**	*e*PB		**Pg**	**08 25 46.6**	**+0.3**
CHOS				*e*SB		**Sn**	**08 26 06.2**	**+2.1**
CHOS	**Chios island**	**1.32**	**294**	*e*Pb		**Pg**	**08 25 46.6**	**+0.3**
CHOS				*e*Sb		**Sn**	**08 26 06.2**	**+2.1**
DALY	**Dalyan (Mu¨la**	**1.35**	**141**	*e*PN		**Pg**	**08 25 46.8**	**0.0**
DALY	**Dalyan (Mu¨la**	**1.35**	**141**	*e*Pn		**Pg**	**08 25 46.8**	**0.0**
DEMI	**Demirci**	**1.47**	**37**	*i* P		**Pg**	**08 25 49.4**	**+0.2**
DEMI				*i* S		**Sb**	**08 26 07.8**	**0.0**
DEMI	**Demirci**	**1.47**	**37**	*i* P		**Pg**	**08 25 49.4**	**+0.2**
DEMI				*i* S		**Sb**	**08 26 07.8**	**0.0**
KHAL	**Karahalli**	**1.58**	**71**	*e*P		**Pn**	**08 25 49.3**	**-0.4**
KHAL				*e*S		**Sn**	**08 26 09.2**	**-1.3**
KHAL	**Karahalli**	**1.58**	**71**	*e*P		**Pn**	**08 25 49.3**	**-0.4**
KHL	**Karahalli**	**1.59**	**73**	*e*PN		**Pg**	**08 25 51.2**	**-0.3**
KHL	**Karahalli**	**1.59**	**73**	*e*Pn		**Pg**	**08 25 51.2**	**-0.3**
ARG	**Arkhangelos**	**1.70**	**165**	*e*PN		**Pn**	**08 25 50.5**	**-0.8**
ARG	**Arkhangelos**	**1.70**	**165**	*e*Pn		**Pn**	**08 25 50.5**	**-0.8**
FETY	**Fethiye**	**1.71**	**135**	*e*PN		**Pn**	**08 25 51.9**	**+0.5**
FETY	**Fethiye**	**1.71**	**135**	*e*Pn		**Pn**	**08 25 51.9**	**+0.5**
PRK	**Paraskevi**	**1.72**	**323**	*e*PN		**Pn**	**08 25 50.9**	**-0.7**
PRK				*e*SN		**Sb**	**08 26 15.3**	**+0.3**
PRK	**Paraskevi**	**1.72**	**323**	*e*Pn		**Pn**	**08 25 50.9**	**-0.7**
APE	**Apeiranthos**	**1.82**	**245**	*e*PN		**Pb**	**08 25 54.8**	**0.0**
APE	**Apeiranthos**	**1.82**	**245**	*e*Pn		**Pb**	**08 25 54.8**	**0.0**
DST	**Dursunbey**	**1.91**	**25**	*e*PN		**Pb**	**08 25 55.5**	**-0.8**
DST	**Dursunbey**	**1.91**	**25**	*e*Pn		**Pb**	**08 25 55.5**	**-0.8**
TVSB	**Tavsanli**	**2.15**	**42**	*e*PN		**Pb**	**08 25 59.0**	**-1.4**
TVSB	**Tavsanli**	**2.15**	**42**	*e*Pn		**Pb**	**08 25 59.1**	**-1.4**
GONE	**Gonen-Balikesi**	**2.18**	**2**	*e*PN		**Pn**	**08 25 58.8**	**+1.0**
GONE	**Gonen-Balikesi**	**2.18**	**2**	*e*Pn		**Pn**	**08 25 58.8**	**+1.0**
KARP	**Karpathos**	**2.34**	**189**	*e*PN		**Pn**	**08 26 01.3**	**+1.2**
KARP	**Karpathos**	**2.34**	**189**	*e*Pn		**Pn**	**08 26 01.3**	**+1.2**
ORLT	**Orhaneli**	**2.40**	**25**	*e*PN		**Pn**	**08 26 02.4**	**+1.4**
ORLT	**Orhaneli**	**2.40**	**25**	*e*Pn		**Pn**	**08 26 02.4**	**+1.4**
KRBG	**Karabiga-Canak**	**2.53**	**355**	*e*PN		**Pn**	**08 26 03.9**	**+1.2**
KRBG	**Karabiga-Canak**	**2.53**	**355**	*e*Pn		**Pn**	**08 26 03.9**	**+1.2**
IZI	**Iznik**	**2.87**	**30**	*e*PN		**Pn**	**08 26 09.1**	**+1.7**
IZI	**Iznik**	**2.87**	**30**	*e*Pn		**Pn**	**08 26 09.1**	**+1.7**

NSSP ***14*** *08:27:38.6, 41.28N×43.90E, h11km, Ms2.9*
MOS ***14*** *08:27:44.7±1.9, 41.21N×43.79E, h27km, mb4.3/1, Error ellipse: s-maj=16.9km s-min=6.2km az=86.8*
TIF ***14*** *08:27:45.2, 41.40N×44.11E, h15km±1km*
CSEM ***14*** *08:27:46.1±0.2, 41.37N×44.08E, h2km, ML2.9, Error ellipse: s-maj=3.5km s-min=3.3km az=60.0*
DDA ***14*** *08:27:47.3, 41.60N×43.85E, h7km, MD3.0*

ISC 14 08:27:44.9±1.0, **41.39N**±0.02×**44.03E**±0.02, **h5km**±9km, **n58,** σ0**87**/85, **6C-8D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZR	**Kazreti**	**0.29**	**91**	P	**Pg**	**08 27 50.8**	**+0.3**
KZR				S	**Sg**	**08 27 54.2**	**-0.1**
KZR	**Kazreti**	**0.29**	**91**	P	**Pg**	**08 27 50.8**	**+0.3**
KZR				S	**Sg**	**08 27 54.2**	**-0.1**
AKH	**Akhalkalaki**	**0.41**	**273**	P	**Pb**	**08 27 54.7**	**0.0**
AKH				S	**Sb**	**08 28 01.3**	**+0.1**
AKH	**Akhalkalaki**	**0.41**	**273**	P	**Pb**	**08 27 54.7**	**0.0**
AKH				S	**Sb**	**08 28 01.3**	**+0.1**
STE	**Stepanavan**	**0.47**	**147**	⇓P	**Pg**	**08 27 54.0**	**+0.1**
STE				S	**Sg**	**08 28 01.6**	**+1.7**
STEZ	**Stepenevan**	**0.48**	**145**	⇑*i*P	Pg	08 27 40.6	-14
STEZ				⇓*i*S	Sg	08 27 46.8	-14
SPIZ	**Spitak**	**0.59**	**162**	⇑*i*P	Pg	08 27 43.0	-14
SPIZ				⇓*i*S	Sg	08 27 51.2	-13
GOR	**Gori**	**0.60**	**5**	*e*PG	**Pb**	**08 27 57.7**	**-0.1**
GOR	**Gori**	**0.60**	**5**	P	**Pb**	**08 27 57.7**	**-0.1**
GOR				S	**Sb**	**08 28 06.7**	**+0.1**
GOR	**Gori**	**0.60**	**5**	P	**Pb**	**08 27 57.7**	**-0.1**
GOR				S	**Sb**	**08 28 06.7**	**+0.1**
TBLG	**Delisi**	**0.63**	**57**	*e*PG	**Pg**	**08 27 54.1**	**-2.9**
TBLG	**Delisi**	**0.63**	**57**	P	**Pg**	**08 27 57.1**	**+0.1**
TBLG				S	**Sg**	**08 28 05.7**	**+0.5**
TBLG	**Delisi**	**0.63**	**57**	*e*Pg	**Pg**	**08 27 54.1**	**-2.9**
TBLG	**Delisi**	**0.63**	**57**	P	**Pg**	**08 27 57.1**	**+0.1**
TBLG				S	**Sg**	**08 28 05.7**	**+0.5**
CKLZ	**Chkalov**	**0.65**	**134**	⇑*i*P	Pg	08 27 43.5	-14
CKLZ				⇓*i*S	Sg	08 27 51.8	-14
SEAG	**Tbilisi Sea**	**0.69**	**57**	P	**Pg**	**08 27 58.4**	**+0.2**
SEAG				S	**Sg**	**08 28 07.7**	**+0.6**
LMTZ	**Lermontov**	**0.78**	**144**	⇑*i*P	Pg	08 27 45.7	-15
LMTZ				⇓*i*S	Sg	08 27 55.4	-15
DGRG	**David-gareji**	**1.01**	**86**	*e*PG	**Pg**	**08 28 04.2**	**0.0**
DGRG	**David-gareji**	**1.01**	**86**	P	**Pg**	**08 28 04.2**	**0.0**
DGRG				S	**Sb**	**08 28 19.1**	**+0.7**
DGRG	**David-gareji**	**1.01**	**86**	P	**Pg**	**08 28 04.2**	**0.0**
DGRG				S	**Sb**	**08 28 19.1**	**+0.7**
GUDG	**Gudauri**	**1.12**	**17**	P	**Pg**	**08 28 06.8**	**+0.3**
GUDG	**Gudauri**	**1.12**	**17**	P	**Pg**	**08 28 06.8**	**+0.3**
ONI	**Oni**	**1.28**	**340**	*e*PG	**Pb**	**08 28 09.5**	**+0.1**
ONI	**Oni**	**1.28**	**340**	P	**Pb**	**08 28 09.5**	**+0.1**
ONI				S	**Sn**	**08 28 27.3**	**+0.4**
ONI	**Oni**	**1.28**	**340**	P	**Pb**	**08 28 09.5**	**+0.1**
ONI				S	**Sn**	**08 28 27.3**	**+0.4**
GNI	**Garni**	**1.35**	**156**	⇓*i*P	**Pb**	**08 28 10.9**	**+0.2**
GNI				⇑*i*S	**Sn**	**08 28 29.4**	**+0.6**
GNI	**Garni**	**1.35**	**156**	⇓P	**Pb**	**08 28 10.9**	**+0.2**
GNI				*e*Sg	**Sn**	**08 28 28.9**	**+0.1**
GNI				S	**Sn**	**08 28 29.4**	**+0.6**
ZEI	**Tsey**	**1.38**	**356**	⇓*i*PG	**Pg**	**08 28 12.2**	**+0.8**
ZEI	**Tsey**	**1.38**	**356**	*i* Pg	**Pg**	**08 28 12.2**	**+0.8**
DIGR	**Digorskoe uzhe**	**1.55**	**348**	⇑*i*PN	**Pg**	**08 28 14.8**	**+0.3**
DIGR	**Digorskoe uzhe**	**1.55**	**348**	*i* Pn	**Pg**	**08 28 14.8**	**+0.3**
ARTV	**Artvin**	**1.60**	**263**	*i* P	**Pg**	**08 28 15.8**	**+0.3**
ARTV				*i* S	**Sg**	**08 28 36.8**	**+0.5**
ARTV	**Artvin**	**1.60**	**263**	*i* P	**Pg**	**08 28 15.8**	**+0.3**
ARTV				*i* S	**Sg**	**08 28 36.8**	**+0.5**
DAGI	**Agillar**	**1.63**	**260**	*i* P	**Pg**	**08 28 16.3**	**+0.2**
DAGI				*i* S	**Sg**	**08 28 38.1**	**+0.9**
KORR	**Kora**	**1.70**	**1**	*e*PN	**Pg**	**08 28 18.1**	**+0.7**
KORR	**Kora**	**1.70**	**1**	*e*Pn	**Pg**	**08 28 18.1**	**+0.7**
VLKR	**Vladikavkaz**	**1.72**	**16**	*e*PN	**Pg**	**08 28 18.2**	**+0.3**
VLKR	**Vladikavkaz**	**1.72**	**16**	*e*Pn	**Pg**	**08 28 18.2**	**+0.3**
SNJR	**Sundja**	**1.77**	**19**	*e*PN	**Pg**	**08 28 18.7**	**-0.2**
SNJR	**Sundja**	**1.77**	**19**	*e*Pn	**Pg**	**08 28 18.7**	**-0.2**
DBOC	**Borcka**	**1.78**	**269**	*i* P	**Pg**	**08 28 18.7**	**-0.3**
DBOC				*i* S	**Sg**	**08 28 42.2**	**+0.1**
DBOC	**Borcka**	**1.78**	**269**	*i* P	**Pg**	**08 28 18.7**	**-0.3**
DBOC				*i* S	**Sg**	**08 28 42.2**	**+0.1**
DDEM	**Demirkent**	**1.79**	**255**	*i* P	**Pb**	**08 28 18.6**	**+0.3**
DDEM				*i* S	**Sg**	**08 28 42.2**	**-0.3**
DDEM	**Demirkent**	**1.79**	**255**	*i* P	**Pb**	**08 28 18.6**	**+0.3**
DDEM				*i* S	**Sg**	**08 28 42.2**	**-0.3**
ARNR	**Ardon**	**1.81**	**6**	*e*PN	**Pg**	**08 28 19.1**	**-0.4**
ARNR	**Ardon**	**1.81**	**6**	*e*Pn	**Pg**	**08 28 19.1**	**-0.4**
LSNR	**Lesken**	**1.89**	**355**	*e*PN	**Pg**	**08 28 21.0**	**-0.1**
LSNR	**Lesken**	**1.89**	**355**	*e*Pn	**Pg**	**08 28 21.0**	**-0.1**
CHVG	**Ch'k'valeri**	**1.97**	**313**	P	**Pg**	**08 28 22.2**	**-0.4**
CHVG				S	**Sg**	**08 28 49.8**	**+1.7**
CHVG	**Ch'k'valeri**	**1.97**	**313**	P	**Pg**	**08 28 22.2**	**-0.4**
CHVG				S	**Sg**	**08 28 49.8**	**+1.7**
BTKR	**Batakoyurt**	**2.02**	**11**	*e*PN	**Pb**	**08 28 22.3**	**+0.3**
BTKR				*e*S	**Sg**	**08 28 49.1**	**-0.6**
BTKR	**Batakoyurt**	**2.02**	**11**	*e*Pn	**Pb**	**08 28 22.3**	**+0.3**
BTKR				*e*Sn	**Sg**	**08 28 49.1**	**-0.6**
GRO	**Groznyy**	**2.31**	**33**	*e*PN	**Pb**	**08 28 27.8**	**+0.8**
GRO				*e*S	**Sb**	**08 28 57.1**	**+1.3**
GRO	**Groznyy**	**2.31**	**33**	*e*Pn	**Pb**	**08 28 27.8**	**+0.8**
GRO				*e*Sn	**Sb**	**08 28 57.1**	**+1.3**
KIV	**Kislovodsk**	**2.75**	**339**	*e*PN	**Pn**	**08 28 28.0**	**-1.7**
KIV				*e*S	**Sn**	**08 29 05.4**	**+2.1**
KIV	**Kislovodsk**	**2.75**	**339**	*e*Sn	**Sn**	**08 29 05.4**	**+2.1**
BEYR	**Belyy Ugol+**	**2.77**	**342**	*e*PN	**Pn**	**08 28 27.4**	**-2.5**
ANN	**Anapa**	**5.91**	**307**	*e*P	**Pn**	**08 29 11.0**	**-2.0**
ANN				*e*		08 30 20.8	
ANN				pmax	pmax		
	comp=Z,6.0nm,0.3s						
ANN				smax	smax		
	comp=E,8.0nm,0.9s						

IDC 14 08:29:08.8**±5.6, **0.24N**×**120.72E, h65km**±58km, **mb3.8**/7, **mb1 3.9**/9, **mb1mx3.6**/26, **mbtmp3.8**/9, **ML4.0**/1, **Error ellipse: s-maj=46.0km s-min=16.5km az=54.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.31**	**190**	P	Pn	08 30 26.7	+1.1
	4.6nm,0.3s,baz=8.8,slow=4.6,SNR=18						
KAPI				S	Sn	08 31 24.5	-1.0
	4.4nm,0.3s,baz=184,slow=21,SNR=5.8						
FITZ	**Fitzroy Crossi**	**18.86**	**165**	P	Pn	08 33 24.6	-0.4
	0.2nm,0.3s,baz=342,slow=4.5,SNR=6.6						
WRA	**Warramunga Arr**	**24.09**	**147**	P	P	08 34 18.9	+0.4
	4.1nm,0.7s,baz=336,slow=9.4,SNR=32						
ASAR	**Alice Springs**	**27.00**	**153**	P	P	08 34 45.0	+0.2
	0.5nm,0.5s,baz=343,slow=14,SNR=10						
PMG	**Port Moresby**	**28.01**	**111**	P	P	08 34 53.0	-1.0
	5.3nm,0.3s,baz=270,slow=7.1,SNR=4.6						
STKA	**Stephens Creek**	**37.56**	**150**	P	P	08 36 17.7	+0.7
	3.0nm,0.8s,baz=340,slow=8.6,SNR=4.0						
SONM	**Songino Array**	**49.01**	**347**	P	P	08 37 49.4	+0.3
	1.3nm,0.9s,baz=167,slow=11,SNR=7.5						
MKAR	**Makanchi Array**	**57.23**	**329**	P	P	08 38 49.5	0.0
	0.5nm,0.4s,baz=129,slow=8.0,SNR=9.2						
KURBB	**Kurchatov Arra**	**61.63**	**331**	P	P	08 39 18.9	-0.8
	0.5nm,0.4s,baz=138,slow=7.0,SNR=6.6						

IDC ***14*** *08:36:10.9±1.2, 39.69N×73.77E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.5/28, mbtmp3.6/6, ML3.5/2, Error ellipse: s-maj=24.0km s-min=17.3km az=96.0*

ISC 14 08:36:14.9±1.3, **40.0N**±0.1×**73.8E**±0.1, **h28km**, **n20,** σ1**72**/16, **mb3.6**/4, **1C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.18**	**358**	P	**Pb**	**08 36 54.8**	**+0.8**
	SNR=214						
UCH	**Uchtor**	**2.33**	**13**	P	**Pb**	**08 36 57.5**	**+0.9**
	SNR=8.7						
KZA	**Kyzart**	**2.38**	**27**	P	**Pb**	**08 36 59.4**	**+2.0**
	SNR=96						
EKS2	**Erkin-Say**	**2.71**	**359**	P	Pb	08 37 06.2	+3.4
	SNR=8.2						
AAK	**Ala-Archa**	**2.73**	**11**	P	**Pb**	**08 37 02.9**	**-0.3**
	SNR=33						
AAK	**Ala-Archa**	**2.73**	**11**	Pn	**Pb**	**08 37 02.8**	**-0.3**
	7.6nm,0.3s,baz=166,slow=8.1,SNR=31						
AAK				Lg	Lg	08 37 45.2	
	18nm,0.3s,baz=297,slow=19,SNR=9.3						
KBK	**Karagaybulak**	**2.83**	**17**	P	**Pb**	**08 37 04.5**	**-0.4**
	SNR=23						
ULHL	**Ulahol**	**2.93**	**38**	P	**Pb**	**08 37 05.8**	**-0.9**
	SNR=13						
CHMS	**Chumysh**	**3.12**	**13**	P	**Pb**	**08 37 08.1**	**-1.7**
	SNR=9.6						
TKM2	**Tokmak 2**	**3.25**	**24**	⇓Pn	**Pb**	**08 37 09.4**	**-2.7**
	7.6nm,0.3s						
TKM2				⇓Lg	Lg	08 37 58.4	
	27nm,0.6s						
TKM2	**Tokmak 2**	**3.25**	**24**	P	**Pb**	**08 37 09.7**	**-2.4**
	SNR=13						
USP	**Ospenovka**	**3.35**	**9**	P	**Pb**	**08 37 11.3**	**-2.4**
	SNR=7.1						
KK31	**Karatau Array**	**4.01**	**323**	⇑Pn	Pn	08 37 18.8	+4.3
	1.8nm,0.3s,baz=130,slow=12,SNR=114						
KK31				⇓Pg	Pb	08 37 31.0	+6.1
	6.4nm,0.5s,baz=148,slow=17,SNR=22						
KK31				⇓Sn	**Sb**	**08 38 13.1**	**+0.1**
	8.8nm,0.4s,baz=130,slow=24,SNR=6.8						
KK31				⇓Lg	Lg	08 38 30.7	
	7.3nm,0.3s,baz=144,slow=16,SNR=6.6						
MKAR	**Makanchi Array**	**9.21**	**39**	Lg	Lg	08 41 06.3	
	0.1nm,0.3s,baz=225,slow=22,SNR=3.9						
KURBB	**Kurchatov Arra**	**11.17**	**16**	Lg	Lg	08 42 11.7	
	0.1nm,0.3s,baz=203,slow=29,SNR=4.3						
AKTO	**Aktyubinsk**	**15.27**	**319**	Pn	**Pn**	**08 39 49.0**	**+0.6**
	0.2nm,0.3s,baz=101,slow=10,SNR=2.1						
SONM	**Songino Array**	**24.62**	**61**	P	**P**	**08 41 35.7**	**+2.8**
	0.5nm,0.9s,baz=246,slow=11,SNR=3.5						
ARCES	**ARCESS Array B**	**38.88**	**335**	P	P	08 43 40.5	+3.1
	2.7nm,0.9s,baz=110,slow=10,SNR=5.4						
TORD	**Torodi Ar. Bea**	**68.01**	**269**	P	**P**	**08 47 10.7**	**-1.2**
	0.2nm,0.3s,baz=51,slow=5.6,SNR=6.3						
WRA	**Warramunga Arr**	**82.01**	**124**	P	**P**	**08 48 32.3**	**-0.2**
	0.6nm,1.0s,baz=328,slow=4.8,SNR=3.2						

IDC 14 08:52:30.4±7.7, **7.13S**×**127.09E, h398km**±103km, **mb3.0**/3, **mb1 3.1**/6, **mb1mx3.0**/20, **mbtmp3.0**/6, **Error ellipse: s-maj=92.8km s-min=37.5km az=52.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.99**	**187**	P	P	08 54 58.7	-0.4
	0.4nm,0.3s,baz=17,slow=13,SNR=10						
WRA	**Warramunga Arr**	**14.55**	**152**	P	P	08 55 37.0	-1.2
	0.9nm,0.3s,baz=327,slow=12,SNR=36						
WRA				S	S	08 58 12.1	-1.5
	0.1nm,0.3s,baz=330,slow=21,SNR=3.7						
ASAR	**Alice Springs**	**17.69**	**159**	P	P	08 56 12.7	+0.8
	0.3nm,0.3s,baz=336,slow=11,SNR=19						
SONM	**Songino Array**	**57.70**	**344**	P	P	09 01 41.4	+0.1
	0.3nm,0.5s,baz=167,slow=6.8,SNR=3.8						
MKAR	**Makanchi Array**	**66.79**	**328**	P	P	09 02 40.9	+0.3
	0.3nm,0.4s,baz=114,slow=7.0,SNR=2.9						
ZALV	**Zalesovo Beam**	**70.45**	**335**	P	P	09 03 02.2	-0.6
	1.1nm,0.5s,baz=123,slow=5.3,SNR=4.1						

IDC ***14*** *09:02:50.4±0.7, 5.36S×152.93E, h0km, mb4.2/15, mb1 4.3/16, mb1mx4.3/22, mbtmp4.2/16, ML2.9/1, MS3.6/3, Ms1 3.5/3, ms1mx2.9/32, Error ellipse: s-maj=21.2km s-min=15.0km az=109.0*
ISCJB ***14*** *09:02:53.8±0.5, 5.41S±0.07×152.95E±0.08, h37km, mb4.2/20, MS3.5/2, Error ellipse: s-maj=13.5km s-min=7.0km az=32.2*
NEIC ***14*** *09:02:55.3±0.3, 5.40S×152.93E, h35km, mb4.5/5, Error ellipse: s-maj=11.6km s-min=6.8km az=110.0*

ISC 14 09:02:55.7±0.5, **5.38S**±0.08×**152.96E**±0.10, **h37km**, **n48,** σ0**91**/48, **mb4.2**/20, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.01**	**235**	Pn	**Pn**	**09 04 35.6**	**-0.1**
PMG				Sn	**Sn**	**09 05 55.1**	**+0.9**
PMG	**Port Moresby**	**7.01**	**235**	Pn	**Pn**	**09 04 35.6**	**-0.1**
	1.3nm,0.3s,baz=69,slow=8.9,SNR=3.1						
PMG				Sn	**Sn**	**09 05 55.1**	**+0.9**
	3.3nm,0.3s,baz=106,slow=19,SNR=10						
CTA	**Charters Tower**	**16.01**	**203**	LR	LR	09 12 03.8	
	comp=Z,193nm,20.0s,baz=34,slow=35						
CTAO	**Charters Tower**	**16.01**	**203**	Pn	**Pn**	**09 06 37.5**	**-0.6**
DZM	**Mont Dzumac**	**21.11**	**143**	P	**P**	**09 07 37.1**	**-0.2**
DZM	**Mont Dzumac**	**21.11**	**143**	P	**P**	**09 07 37.1**	**-0.2**
	6.2nm,1.0s,baz=341,slow=18,SNR=2.5						
DZM				LR	LR	09 14 39.9	
	comp=Z,218nm,19.2s,baz=28,slow=34						
WRAB	**Tennant Creek**	**23.17**	**230**	*e*P	**P**	**09 07 58.6**	**-0.6**
	7.9nm,0.9s						
WRA	**Warramunga Arr**	**23.19**	**230**	P	**P**	**09 07 58.1**	**-1.2**
WRA	**Warramunga Arr**	**23.19**	**230**	P	**P**	**09 07 58.1**	**-1.2**
	7.3nm,0.9s,baz=54,slow=9.9,SNR=15						
ASAR	**Alice Springs**	**25.84**	**223**	P	**P**	**09 08 23.5**	**-0.3**
ASAR	**Alice Springs**	**25.84**	**223**	P	**P**	**09 08 23.5**	**-0.3**
	3.8nm,0.9s,baz=55,slow=8.8,SNR=14						
STKA	**Stephens Creek**	**28.43**	**201**	P	**P**	**09 08 46.1**	**-0.9**
STKA	**Stephens Creek**	**28.43**	**201**	LR	LR	09 19 47.2	
	comp=Z,106nm,19.9s,baz=205,slow=36						
FITZ	**Fitzroy Crossi**	**29.53**	**242**	P	**P**	**09 08 55.8**	**-1.1**
FITZ	**Fitzroy Crossi**	**29.53**	**242**	P	**P**	**09 08 55.8**	**-1.1**
	4.3nm,0.9s,baz=96,slow=9.2,SNR=4.1						
JNU	**Nakatsue**	**43.65**	**333**	P	**P**	**09 10 57.2**	**+0.4**
JNU	**Nakatsue**	**43.65**	**333**	P	**P**	**09 10 57.2**	**+0.4**
	14nm,1.0s,baz=102,slow=4.1,SNR=4.4						
KSRS	**Korea Array**	**48.59**	**333**	P	**P**	**09 11 35.9**	**+0.3**
	0.4nm,0.3s,baz=147,slow=6.8,SNR=4.4						
KSAR	**Wonju Array Be**	**48.59**	**333**	P	**P**	**09 11 35.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**58.27**	**295**	P	**P**	**09 12 46.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**58.27**	**295**	P	**P**	**09 12 46.8**	**-0.2**
	0.7nm,0.3s,baz=123,slow=6.7,SNR=4.9						
PEA0B	**Petropavlovsk-**	**58.41**	**3**	*e*P	**P**	**09 12 47.4**	**+0.1**
PETK	**Petropavlovsk-**	**58.41**	**3**	P	**P**	**09 12 48.5**	**+1.1**
PETK	**Petropavlovsk-**	**58.41**	**3**	P	**P**	**09 12 48.5**	**+1.1**
	11nm,0.5s,baz=169,slow=8.3,SNR=48						
FX1	**Attu Island--F**	**60.52**	**14**	*e*P	**P**	**09 13 01.0**	**-0.9**
SONM	**Songino Array**	**66.90**	**328**	P	**P**	**09 13 45.5**	**+1.2**
SONM	**Songino Array**	**66.90**	**328**	P	**P**	**09 13 45.5**	**+1.2**
	1.0nm,0.6s,baz=146,slow=6.1,SNR=8.3						
VNDA	**Vanda**	**72.25**	**178**	P	**P**	**09 14 19.0**	**+2.4**
VNDA	**Vanda**	**72.25**	**178**	P	**P**	**09 14 19.0**	**+2.4**
	0.8nm,0.9s,baz=63,slow=2.3,SNR=2.6						
MK31	**Makanchi Array**	**80.87**	**319**	*e*P	**P**	**09 15 05.8**	**-0.1**
MKAR	**Makanchi Array**	**80.87**	**319**	P	**P**	**09 15 06.3**	**+0.3**
MKAR	**Makanchi Array**	**80.87**	**319**	P	**P**	**09 15 06.3**	**+0.3**
	0.9nm,0.7s,baz=100,slow=7.3,SNR=7.3						
ZALV	**Zalesovo Beam**	**81.72**	**326**	P	**P**	**09 15 10.3**	**0.0**
ZALV	**Zalesovo Beam**	**81.72**	**326**	P	**P**	**09 15 10.3**	**0.0**
	1.6nm,0.4s,baz=108,slow=5.8,SNR=8.2						
COLA	**College**	**82.33**	**22**	*e*P	**P**	**09 15 12.1**	**-1.1**
	4.3nm,0.9s						
ILAR	**Eielson Array**	**82.63**	**22**	P	**P**	**09 15 13.7**	**-1.1**
ILAR	**Eielson Array**	**82.63**	**22**	P	**P**	**09 15 13.7**	**-1.1**
	1.9nm,0.9s,baz=252,slow=5.0,SNR=16						
KURK	**Kurchatov**	**84.32**	**322**	*e*P	**P**	**09 15 24.1**	**+0.3**
	4.3nm,1.0s						
TKM2	**Tokmak 2**	**84.45**	**314**	*e*P	**P**	**09 15 24.3**	**-0.7**
	5.5nm,1.1s						
AAK	**Ala-Archa**	**85.18**	**313**	*e*P	**P**	**09 15 28.6**	**0.0**
	3.3nm,0.9s						
NVAR	**Mina Array Bea**	**92.31**	**52**	P	**P**	**09 16 02.7**	**+0.1**
NVAR	**Mina Array Bea**	**92.31**	**52**	P	**P**	**09 16 02.7**	**+0.1**
	0.3nm,0.7s,baz=198,slow=2.6,SNR=3.2						
YKA	**Yellowknife Ar**	**95.86**	**28**	P

LAST				eS	Sn	09 14 29.5	-1.2
XRY	Khrisi	1.59	224	eP	Pn	09 14 10.4	+0.2
XRY	Khrisi	1.59	224	eP	Pn	09 14 10.4	+0.2
APE	Apeiranthos	1.60	311	PN	Pn	09 14 08.9	-1.4
APE	Apeiranthos	1.60	311	⇓P	Pn	09 14 10.4	+0.1
APE	Apeiranthos	1.60	311	P	Pn	09 14 09.8	-0.5
APE				S	Sn	09 14 30.3	-1.6
APE	Apeiranthos	1.60	311	eP	Pn	09 14 10.3	0.0
APE				eS	Sn	09 14 30.5	-1.4
APE	Apeiranthos	1.60	311	⇓iP	Pn	09 14 10.4	+0.1
APE	Apeiranthos	1.60	311	iPn	Pn	09 14 08.9	-1.4
APE	Apeiranthos	1.60	311	P	Pn	09 14 10.4	+0.1
APE				eS	Sn	09 14 30.5	-1.4
GCAM	G?zelcaml?	1.67	5	iP	Pn	09 14 11.1	0.0
GCAM				iS	Sn	09 14 32.1	-1.2
GCAM	G?zelcaml?	1.67	5	iP	Pn	09 14 11.1	0.0
GCAM				iS	Sn	09 14 32.1	-1.2
FETY	Fethiye	1.75	69	ePN	Pn	09 14 11.2	-0.9
AYDN	Tasoluk	1.76	22	iP	Pn	09 14 12.1	-0.1
AYDN				iS	Sn	09 14 33.2	-2.1
AYDN	Tasoluk	1.76	22	iP	Pn	09 14 12.1	-0.1
AYDN				iS	Sn	09 14 33.2	-2.1
AKAS	Kas	2.08	84	iP	Pn	09 14 16.0	-0.3
AKAS				iS	Sn	09 14 37.8	-4.7
AKAS	Kas	2.08	84	iP	Pn	09 14 16.0	-0.3
AKAS				iS	Sn	09 14 37.8	-4.7
SIVA	Sivas	2.08	242	P	Pn	09 14 16.7	+0.5
SIVA				S	Sn	09 14 41.0	-1.4
SIVA	Sivas	2.08	242	eP	Pn	09 14 17.5	+1.3
SIVA				eS	Sn	09 14 42.1	-0.3
SIVA	Sivas	2.08	242	P	Pn	09 14 16.7	+0.5
SIVA				eS	Sn	09 14 42.1	-0.3
GLHS	Glhisar (BURDU	2.27	60	ePN	Pn	09 14 19.2	+0.5
GLHS	Glhisar (BURDU	2.27	60	ePn	Pn	09 14 19.2	+0.5
DNZL	Cakiroluk	2.31	43	iP	Pn	09 14 19.0	-0.2
DNZL	Cakiroluk	2.31	43	iP	Pn	09 14 19.0	-0.2
DENT	Denizli	2.34	42	ePN	Pn	09 14 19.5	-0.1
DENT	Denizli	2.34	42	ePn	Pn	09 14 19.5	-0.1
BLCB	Balcova	2.35	360	ePN	Pn	09 14 19.5	-0.1
BLCB	Balcova	2.35	360	ePn	Pn	09 14 19.5	-0.1
URLA	Izmir	2.35	351	iP	Pn	09 14 19.8	+0.1
URLA				iS	Sn	09 14 47.1	-1.5
URLA	Izmir	2.35	351	iP	Pn	09 14 19.8	+0.1
URLA				iS	Sn	09 14 47.1	-1.5
GOLH	Golhisar	2.35	58	iP	Pn	09 14 19.9	+0.2
GOLH				eS	Sn	09 14 46.9	-1.8
GOLH	Golhisar	2.35	58	iP	Pn	09 14 20.0	+0.2
GOLH				eS	Sn	09 14 46.9	-1.8
IZM	Izmir	2.37	4	ePN	Pn	09 14 19.5	-0.4
IZM	Izmir	2.37	4	ePn	Pn	09 14 19.5	-0.4
VAM	Vamos	2.40	256	P	Pn	09 14 19.6	-0.6
VAM				S	Sn	09 14 47.3	-2.3
VAM	Vamos	2.40	256	eP	Pn	09 14 20.4	+0.2
VAM	Vamos	2.40	256	P	Pn	09 14 19.6	-0.6
VAM				S	Sn	09 14 47.3	-2.3
ELL	Elmali	2.42	72	ePN	Pn	09 14 20.0	-0.6
ELL	Elmali	2.42	72	ePn	Pn	09 14 20.0	-0.6
CHOS	Chios island	2.48	342	P	Pn	09 14 21.2	-0.2
CHOS				S	Sn	09 14 50.9	-0.7
CHOS	Chios island	2.48	342	eP	Pn	09 14 21.5	+0.1
CHOS	Chios island	2.48	342	eP	Pn	09 14 21.5	+0.1
CHOS				S	Sn	09 14 50.9	-0.7
GVD	Gavdhos	2.69	245	P	Pn	09 14 24.3	+0.3
GVD				S	Sn	09 14 55.3	-1.1
GVD	Gavdhos	2.69	245	ePn	Pn	09 14 24.3	+0.3
GVD				eSn	Sn	09 14 54.1	-2.3
GVD	Gavdhos	2.69	245	eP	Pn	09 14 24.7	+0.7
GVD				eS	Sn	09 14 56.1	-0.3
GVD	Gavdhos	2.69	245	P	Pn	09 14 24.3	+0.3
GVD				eSn	Sn	09 14 54.1	-2.3
GVD				eS		09 14 56.1	
MANT	Manisa	2.74	26	iP	Pn	09 14 24.4	-0.4
MANT	Manisa	2.74	26	iP	Pn	09 14 24.4	-0.4
KULA	Kula-Manisa	2.79	27	ePN	Pn	09 14 25.6	+0.2
KULA	Kula-Manisa	2.79	27	ePn	Pn	09 14 25.6	+0.2
KORT	Korkueli	2.83	69	iP	Pn	09 14 26.5	+0.5
KORT				eS	Sn	09 14 48.7	-11
KORT	Korkueli	2.83	69	iP	Pn	09 14 26.5	+0.5
AKHS	Akhisar	2.91	12	iP	Pn	09 14 26.4	-0.5
AKHS	Akhisar	2.91	12	iP	Pn	09 14 26.4	-0.5
AKS	Akhisar	2.91	12	ePN	Pn	09 14 27.2	+0.3
AKS	Akhisar	2.91	12	ePn	Pn	09 14 27.2	+0.3
MRMA	Marmari	2.94	314	P	Pn	09 14 27.9	+0.6
MRMA				S	Sn	09 15 01.4	-0.8
MRMA	Marmari	2.94	314	P	Pn	09 14 27.9	+0.6
MRMA				S	Sn	09 15 01.4	-0.8
KHL	Karahalli	3.03	40	ePN	Pn	09 14 28.6	+0.1
KHL	Karahalli	3.03	40	ePn	Pn	09 14 28.6	+0.1
ANTB	Antalya	3.04	72	ePN	Pn	09 14 28.1	-0.4
ANTB	Antalya	3.04	72	ePn	Pn	09 14 28.1	-0.4
ANKY	Antikythira Is	3.04	268	eP	Pn	09 14 28.4	-0.2
ANKY	Antikythira Is	3.04	268	eP	Pn	09 14 28.4	-0.2
KHAL	Karahalli	3.04	39	iP	Pn	09 14 28.2	-0.6
KHAL				iS	Sn	09 15 03.1	-1.7
KHAL	Karahalli	3.04	39	iP	Pn	09 14 28.2	-0.6
KHAL				iS	Sn	09 15 03.1	-1.7
BCK	Bucak	3.18	62	ePN	Pn	09 14 30.3	-0.3
BCK	Bucak	3.18	62	ePn	Pn	09 14 30.3	-0.3
PTL	Penteli	3.25	309	P	Pn	09 14 32.2	+0.8
PTL	Penteli	3.25	309	eP	Pn	09 14 32.0	+0.6
PTL	Penteli	3.25	309	eP	Pn	09 14 32.0	+0.6
ATHU	Athens Univers	3.25	307	P	Pn	09 14 32.1	+0.7
ATHU	Athens Univers	3.25	307	P	Pn	09 14 32.1	+0.7
KYTH	Kithira	3.25	276	P	Pn	09 14 30.8	-0.7
KYTH	Kithira	3.25	276	eP	Pn	09 14 31.4	-0.1
KYTH	Kithira	3.25	276	eP	Pn	09 14 31.4	-0.1
PRK	Paraskevi	3.27	349	P	Pn	09 14 31.8	+0.2
PRK				S	Sn	09 15 09.9	0.0
PRK	Paraskevi	3.27	349	eP	Pn	09 14 31.9	+0.3
PRK	Paraskevi	3.27	349	eP	Pn	09 14 31.9	+0.3
PRK				S	Sn	09 15 09.9	0.0
AYVA	Ayvalik	3.29	355	iP	Pn	09 14 32.2	+0.4
AYVA				iS	Sn	09 15 17.2	+6.8
AYVA	Ayvalik	3.29	355	iP	Pn	09 14 32.2	+0.4
DEMI	Demirci	3.29	23	iP	Pn	09 14 31.6	-0.4
DEMI				iS	Sn	09 15 10.3	-0.3
DEMI	Demirci	3.29	23	iP	Pn	09 14 31.6	-0.4
DEMI				iS	Sn	09 15 10.3	-0.3
ATH	Athens Observa	3.30	307	P	Pn	09 14 32.9	+1.0
ATH	Athens Observa	3.30	307	eP	Pn	09 14 33.0	+1.0
ATH	Athens Observa	3.30	307	P	Pn	09 14 32.9	+1.0
ISP	Isparta	3.31	56	ePN	Pn	09 14 32.3	0.0
ISP	Isparta	3.31	56	⇓P	Pn	09 14 32.3	0.0
ISP	Isparta	3.31	56	P	Pn	09 14 31.6	-0.6
ISP	Isparta	3.31	56	ePn	Pn	09 14 31.7	-0.6
ISP	Isparta	3.31	56	⇓iP	Pn	09 14 32.3	0.0
ISP	Isparta	3.31	56	P	Pn	09 14 31.6	-0.6
ISP	Isparta	3.31	56	ePn	Pn	09 14 32.3	0.0
SIGR	SIGRI	3.31	344	P	Pn	09 14 32.1	-0.1
SIGR				S	Sn	09 15 09.8	-1.2
SIGR	SIGRI	3.31	344	P	Pn	09 14 32.1	-0.1
SIGR				S	Sn	09 15 09.8	-1.2
NAIG	Nisos Aigina	3.33	302	eP	Pn	09 14 32.8	+0.3
NAIG	Nisos Aigina	3.33	302	eP	Pn	09 14 32.8	+0.3
VLI	Veliai	3.39	283	P	Pn	09 14 32.9	-0.2
VLI				S	Sn	09 15 10.8	-2.0
VLI	Veliai	3.39	283	eP	Pn	09 14 33.0	-0.2
VLI	Veliai	3.39	283	eP	Pn	09 14 33.0	-0.2
VLI				S	Sn	09 15 10.8	-2.0
DID	Didima	3.40	297	P	Pn	09 14 33.7	+0.4
DID				S	Sn	09 15 12.4	-0.6
DID	Didima	3.40	297	eP	Pn	09 14 33.8	+0.4
DID	Didima	3.40	297	P	Pn	09 14 33.7	+0.4
DID				S	Sn	09 15 12.4	-0.6
DIDY	Didyma	3.40	296	P	Pn	09 14 33.9	+0.4
DIDY				S	Sn	09 15 11.7	-1.6
DIDY	Didyma	3.40	296	P	Pn	09 14 33.9	+0.4
DIDY				S	Sn	09 15 11.7	-1.6
BALB	Balikesir	3.66	10	ePN	Pn	09 14 37.6	+0.7
BALB	Balikesir	3.66	10	ePn	Pn	09 14 37.6	+0.7
BALY	Balya	3.73	7	iP	Pn	09 14 38.0	+0.2
BALY				iS	Sn	09 15 16.6	-4.4
BALY	Balya	3.73	7	iP	Pn	09 14 38.0	+0.2
DURS	Dursunbey	3.74	17	iP	Pn	09 14 37.6	-0.4
DURS				iS	Sn	09 15 24.8	+3.5
DURS	Dursunbey	3.74	17	iP	Pn	09 14 37.6	-0.4
DURS				iS	Sn	09 15 24.8	+3.5
SHUT	Suhut-Afyon	3.76	47	ePN	Pn	09 14 38.4	+0.1
SHUT	Suhut-Afyon	3.76	47	ePn	Pn	09 14 38.4	+0.1

DST	Dursunbey	3.78	19	ePN	Pn	09 14 39.0	+0.5
DST	Dursunbey	3.78	19	ePn	Pn	09 14 39.0	+0.5
LTK	Loutraki	3.82	303	P	Pn	09 14 39.6	+0.6
LTK				S	Sn	09 15 22.0	-1.2
LTK	Loutraki	3.82	303	eP	Pn	09 14 40.0	+1.0
LTK	Loutraki	3.82	303	P	Pn	09 14 39.6	+0.6
LTK				S	Sn	09 15 22.0	-1.2
EZN	Ezine	3.83	352	ePN	Pn	09 14 39.1	0.0
EZN	Ezine	3.83	352	ePn	Pn	09 14 39.1	0.0
MRKA	Markates	3.84	315	P	Pn	09 14 40.1	+0.9
MRKA				S	Sn	09 15 22.9	-0.6
MRKA	Markates	3.84	315	P	Pn	09 14 40.1	+0.9
MRKA				S	Sn	09 15 22.9	-0.6
DYR	Agios Nikonas	3.87	282	P	Pn	09 14 40.1	+0.4
DYR	Agios Nikonas	3.87	282	eP	Pn	09 14 41.1	+1.4
DYR	Agios Nikonas	3.87	282	P	Pn	09 14 40.1	+0.4
ALT	Altintas	3.88	38	ePN	Pn	09 14 38.7	-1.2
ALT	Altintas	3.88	38	ePn	Pn	09 14 38.7	-1.2
TVSB	Tavsanli	3.91	29	ePN	Pn	09 14 40.8	+0.5
TVSB	Tavsanli	3.91	29	ePn	Pn	09 14 40.8	+0.5
VLX	Vlachokerasia	3.98	291	P	Pn	09 14 41.2	0.0
VLX	Vlachokerasia	3.98	291	eP	Pn	09 14 41.4	+0.2
VLX	Vlachokerasia	3.98	291	P	Pn	09 14 41.2	0.0
AOS	Alonnisos	4.02	322	P	Pn	09 14 42.2	+0.6
AOS				S	Sn	09 15 27.5	-0.3
AOS	Alonnisos	4.02	322	eP	Pn	09 14 42.4	+0.8
AOS	Alonnisos	4.02	322	P	Pn	09 14 42.2	+0.6
AOS				S	Sn	09 15 27.5	-0.3
GONE	Gonen-Balikesi	4.04	7	ePN	Pn	09 14 42.1	+0.2
GONE	Gonen-Balikesi	4.04	7	ePn	Pn	09 14 42.1	+0.2
LIA	Limnos Island	4.13	340	P	Pn	09 14 43.5	+0.4
LIA	Limnos Island	4.13	340	eP	Pn	09 14 43.5	+0.4
LIA	Limnos Island	4.13	340	eP	Pn	09 14 43.5	+0.4
LKR	Lokris	4.15	310	P	Pn	09 14 44.3	+0.9
LKR	Lokris	4.15	310	eP	Pn	09 14 44.4	+1.0
LKR	Lokris	4.15	310	P	Pn	09 14 44.3	+0.9
ATAL	Atalanti	4.17	311	P	Pn	09 14 44.5	+0.9
ATAL	Atalanti	4.17	311	P	Pn	09 14 44.5	+0.9
SMIA	Simia	4.17	314	P	Pn	09 14 45.0	+1.3
SMIA	Simia	4.17	314	P	Pn	09 14 45.0	+1.3
GUR	Goura	4.22	298	P	Pn	09 14 44.7	+0.3
GUR	Goura	4.22	298	eP	Pn	09 14 45.2	+0.8
GUR	Goura	4.22	298	P	Pn	09 14 44.7	+0.3
SKIA	Skiathos	4.23	319	P	Pn	09 14 45.4	+1.0
SKIA	Skiathos	4.23	319	P	Pn	09 14 45.4	+1.0
GAZI	Gazipasa	4.27	86	iP	Pn	09 14 43.0	-2.0
GAZI				iS	Sn	09 15 29.2	-4.7
ITM	Ithomi	4.28	287	P	Pn	09 14 45.5	+0.4
ITM				S	Sn	09 15 32.4	-1.7
ITM	Ithomi	4.28	287	eP	Pn	09 14 45.7	+0.6
ITM	Ithomi	4.28	287	P	Pn	09 14 45.5	+0.4
ITM				S	Sn	09 15 32.4	-1.7
DSF	Desfina	4.32	305	P	Pn	09 14 46.5	+0.8
DSF	Desfina	4.32	305	P	Pn	09 14 46.5	+0.8
LPK	Lapseki	4.34	357	ePN	Pn	09 14 46.5	+0.6
LPK	Lapseki	4.34	357	ePn	Pn	09 14 46.5	+0.6
KCTX	Karacabey (Bur	4.35	13	ePN	Pn	09 14 46.2	+0.1
KCTX	Karacabey (Bur	4.35	13	ePn	Pn	09 14 46.2	+0.1
KRBG	Karabiga-Canak	4.36	3	ePN	Pn	09 14 46.5	+0.3
KRBG	Karabiga-Canak	4.36	3	ePn	Pn	09 14 46.5	+0.3
PYL	PYLOS	4.36	283	P	Pn	09 14 45.3	-0.9
PYL	PYLOS	4.36	283	eP	Pn	09 14 45.8	-0.4
PYL	PYLOS	4.36	283	eP	Pn	09 14 45.8	-0.4
BNT	Bandirma	4.37	9	ePN	Pn	09 14 46.5	+0.1
BNT	Bandirma	4.37	9	ePn	Pn	09 14 46.5	+0.1
KLV	Kalavryta, Ach	4.40	299	eP	Pn	09 14 48.1	+1.3
KLV	Kalavryta, Ach	4.40	299	eP	Pn	09 14 48.1	+1.3
AKMC	Akamas	4.42	102	⇓P	Pn	09 14 44.5	-2.6
AKMC	Akamas	4.42	102	⇓P	Pn	09 14 44.5	-2.6
AXAR	Agios Charalam	4.43	309	P	Pn	09 14 48.5	+1.3
AXAR	Agios Charalam	4.43	309	P	Pn	09 14 48.5	+1.3
NEO	Neokhori	4.46	318	eP	Pn	09 14 48.8	+1.2
NEO	Neokhori	4.46	318	eP	Pn	09 14 48.8	+1.2
PPCY	Paphos	4.47	103	P	Pn	09 14 45.4	-2.3
PPCY	Paphos	4.47	103	P	Pn	09 14 45.4	-2.3
XOR	Xorichti	4.52	319	P	Pn	09 14 49.2	+0.8
XOR	Xorichti	4.52	319	P	Pn	09 14 49.2	+0.8
MDNY	Mudanya-Bursa	4.57	18	ePN	Pn	09 14 48.9	0.0
MDNY	Mudanya-Bursa	4.57	18	ePn	Pn	09 14 48.9	0.0
KALE	Kalithea	4.57	302	P	Pn	09 14 49.7	+0.6
KALE	Kalithea	4.57	302	eP	Pn	09 14 50.0	+0.9
KALE	Kalithea	4.57	302	P	Pn	09 14 49.7	+0.6
MRMT	Marmara Adasi	4.59	5	ePN	Pn	09 14 49.9	+0.6
MRMT	Marmara Adasi	4.59	5	ePn	Pn	09 14 49.9	+0.6
SMTH	Samothraki Isl	4.59	345	eP	Pn	09 14 49.4	+0.1
SMTH	Samothraki Isl	4.59	345	eP	Pn	09 14 49.4	+0.1
TRIZ	Trizonia	4.60	302	P	Pn	09 14 50.1	+0.7
TRIZ	Trizonia	4.60	302	eP	Pn	09 14 50.7	+1.3
TRIZ	Trizonia	4.60	302	P	Pn	09 14 50.1	+0.7
ALFC	Alevga	4.61	99	⇓P	Pn	09 14 46.7	-2.9
	53nm,0.3s						
ALFC				S	Sn	09 15 35.8	-6.3
ALFC	Alevga	4.61	99	⇓P	Pn	09 14 46.7	-2.9
	53nm,0.3s						
LAKA	Lakka	4.61	300	P	Pn	09 14 49.7	+0.1
LAKA	Lakka	4.61	300	eP	Pn	09 14 50.3	+0.7
LAKA	Lakka	4.61	300	P	Pn	09 14 49.7	+0.1
RKY	Sarkoy-Tekirda	4.65	1	ePN	Pn	09 14 50.7	+0.6
RKY	Sarkoy-Tekirda	4.65	1	ePn	Pn	09 14 50.7	+0.6
ERIK	Erikli-Kesan	4.65	355	ePN	Pn	09 14 50.4	+0.3
ERIK	Erikli-Kesan	4.65	355	ePn	Pn	09 14 50.4	+0.3
KONT	Konya--Tatoy	4.66	64	ePN	Pn	09 14 50.5	+0.2
KONT	Konya--Tatoy	4.66	64	ePn	Pn	09 14 50.5	+0.2
IZI	Iznik	4.71	23	ePN	Pn	09 14 51.7	+0.8
IZI	Iznik	4.71	23	ePn	Pn	09 14 51.7	+0.8
GEMT	Gemlik	4.71	20	ePN	Pn	09 14 51.4	+0.5
GEMT	Gemlik	4.71	20	ePn	Pn	09 14 51.4	+0.5
CAVI	Cavuskoy	4.71	27	ePN	Pn	09 14 51.9	+1.0
CAVI	Cavuskoy	4.71	27	ePn	Pn	09 14 51.9	+1.0
PSA1	Psathopyrgos	4.72	301	eP	Pn	09 14 52.3	+1.4
LTBQ	Tobruq	4.74	214	iP	Pn	09 14 51.6	+0.3
	SNR=23						
LTBQ				eS	Sn	09 15 40.5	-4.7
	SNR=23						
ARMT	Armutlu	4.75	17	ePN	Pn	09 14 51.6	+0.2
ARMT	Armutlu	4.75	17	ePn	Pn	09 14 51.6	+0.2
EFP	Efpalio	4.75	302	P	Pn	09 14 51.9	+0.5
EFP	Efpalio	4.75	302	eP	Pn	09 14 52.3	+0.9
EFP	Efpalio	4.75	302	P	Pn	09 14 51.9	+0.5
ENEZ	Enez	4.75	352	ePN	Pn	09 14 51.8	+0.4
ENEZ	Enez	4.75	352	ePn	Pn	09 14 51.8	+0.4
MFT	Murefte	4.75	2	ePN	Pn	09 14 52.2	+0.7
MFT	Murefte	4.75	2	ePn	Pn	09 14 52.2	+0.7
LADK	Ladik-KONYA	4.77	61	ePN	Pn	09 14 52.0	+0.2
LADK	Ladik-KONYA	4.77	61	ePn	Pn	09 14 52.0	+0.2
ERMK	Ermenek	4.78	81	iP	Pn	09 14 52.3	+0.3
ERMK				iS	Sn	09 15 46.1	-0.3
ERMK	Ermenek	4.78	81	iP	Pn	09 14 52.3	+0.3
ERMK				iS	Sn	09 15 46.1	-0.3
SLUM		4.78	199	P	Pn	09 14 51.2	-0.6
	baz=201						
SLUM		4.78	199	P	Pn	09 14 51.2	-0.6
AGG	Agios Georgios	4.79	310	P	Pn	09 14 53.6	+1.6
AGG	Agios Georgios	4.79	310	P	Pn	09 14 53.6	+1.6
LEF	Lefka	4.85	99	ePN	Pn	09 14 49.7	-3.1
LEF	Lefka	4.85	99	ePn	Pn	09 14 49.7	-3.1
AKDN	Akdeniz- K¯-br	4.88	97	ePN	Pn	09 14 52.1	-1.0
ADVT	Abdulvahap	4.88	25	ePN	Pn	09 14 54.1	+1.0
ADVT	Abdulvahap	4.88	25	ePn	Pn	09 14 54.2	+1.0
YLV	Yalova	4.88	21	ePN	Pn	09 14 53.3	0.0
YLV	Yalova	4.88	21	ePn	Pn	09 14 53.3	0.0
RLS	Riolos of Patr	4.90	296	P	Pn	09 14 53.7	+0.3
RLS				S	Sn	09 15 46.5	-2.6
RLS	Riolos of Patr	4.90	296	eP	Pn	09 14 55.1	+1.7
RLS	Riolos of Patr	4.90	296	P	Pn	09 14 53.7	+0.3
RLS				S	Sn	09 15 46.5	-2.6
MAKR	Makrakomi, Fth	4.91	309	P	Pn	09 14 55.5	+1.9
MAKR	Makrakomi, Fth	4.91	309	P	Pn	09 14 55.5	+1.9
ALN	Alexandroupoli	4.92	351	P	Pn	09 14 53.9	+0.2
ALN	Alexandroupoli	4.92	351	P	Pn	09 14 53.9	+0.2
HMAT	Matruh	4.92	179	P	Pn	09 14 53.5	-0.4
	baz=182						
HMAT	Matruh	4.92	179	P	Pn	09 14 49.8	-4.0
OUR	Ouranopolis	4.93	332	P	Pn	09 14 54.5	+0.7
OUR	Ouranopolis	4.93	332	P	Pn	09 14 54.5	+0.7
SZAC	Souni-Zanaja	4.93	103	P	Pn	09 14 51.9	-2.1
SZAC	Souni-Zanaja	4.93	103	P	Pn	09 14 51.9	-2.1
GPA	Golpazari	4.97	30	ePN	Pn	09 14 55.0	+0.6
GPA	Golpazari	4.97	30	ePn	Pn	09 14 55.0	+0.6
EVR	Evrytania	5.07	306	P	Pn	09 14 56.8	+1.0

EVR	Evrytania	5.07	306	eP	Pn	09 14 57.9	+2.1
EVR	Evrytania	5.07	306	P	Pn	09 14 56.8	+1.0
BUY	Buyukada	5.08	18	ePN	Pn	09 14 55.9	0.0
BUY	Buyukada	5.08	18	ePn	Pn	09 14 55.9	0.0
MAMC	Mammari	5.10	98	⇓P	Pn	09 14 54.0	-2.2
GULT	Gulveren	5.17	31	ePN	Pn	09 14 57.7	+0.5
GULT	Gulveren	5.17	31	ePn	Pn	09 14 57.7	+0.5
PLG	Polygyros	5.18	328	P	Pn	09 14 58.0	+0.7
PLG	Polygyros	5.18	328	P	Pn	09 14 58.0	+0.7
HRT	Hereke	5.21	22	ePN	Pn	09 14 57.4	-0.3
HRT	Hereke	5.21	22	ePn	Pn	09 14 57.4	-0.3
CSS	Prodhromos	5.24	100	⇑P	Pn	09 14 55.5	-2.5
	32nm,0.4s						
CSS				S	Sn	09 15 52.2	-5.1
CSS	Prodhromos	5.24	100	ePN	Pn	09 14 55.4	-2.7
CSS	Prodhromos	5.24	100	P	Pn	09 14 55.2	-2.8
CSS	Prodhromos	5.24	100	ePn	Pn	09 14 56.0	-2.0
CSS				eSn	Sn	09 15 55.7	-1.5
CSS	Prodhromos	5.24	100	P	Pn	09 14 55.2	-2.8
CSS	Prodhromos	5.24	100	Pn	Pn	09 14 56.1	-2.0
CSS				Sn	Sn	09 15 50.9	-6.4
CSS				S		09 15 52.2	
ISK	Istanbul-Kandi	5.27	17	ePN	Pn	09 14 57.6	-0.8
ISK	Istanbul-Kandi	5.27	17	ePn	Pn	09 14 57.6	-0.8
SLVT	Silivri	5.27	10	ePN	Pn	09 14 58.9	+0.4
SLVT	Silivri	5.27	10	ePn	Pn	09 14 58.9	+0.4
BGKT	Bogazkoy	5.32	14	ePN	Pn	09 14 59.6	+0.6
BGKT	Bogazkoy	5.32	14	ePn	Pn	09 14 59.7	+0.6
THL	Klokotos Trika	5.32	313	P	Pn	09 15 00.5	+1.4
THL	Klokotos Trika	5.32	313	eP	Pn	09 15 00.9	+1.8
THL	Klokotos Trika	5.32	313	P	Pn	09 15 00.5	+1.4
CTKS	Kestanelik-??a	5.32	12	ePN	Pn	09 14 59.6	+0.6
CTKS	Kestanelik-??a	5.32	12	ePn	Pn	09 14 59.7	+0.6
AKIN	Ak¯nc¯-lar- K	5.33	99	ePN	Pn	09 14 57.1	-2.2
LFK	Lefkose	5.33	96	ePN	Pn	09 14 57.3	-2.1
KAVA	Kavala	5.34	339	P	Pn	09 14 59.7	+0.3
KAVA	Kavala	5.34	339	P	Pn	09 14 59.7	+0.3
KFL	Anninata	5.42	294	P	Pn	09 14 59.6	-0.8
KFL	Anninata	5.42	294	P	Pn	09 14 59.6	-0.8
LIT	Litokhoron	5.42	320	P	Pn	09 15 01.8	+1.2
LIT	Litokhoron	5.42	320	P	Pn	09 15 01.8	+1.2
SILT	Sile	5.50	21	ePN	Pn	09 15 02.2	+0.6
SILT	Sile	5.50	21	ePn	Pn	09 15 02.2	+0.6
MDUB	Mudurnu	5.51	35	ePN	Pn	09 15 01.8	+0.1
MDUB	Mudurnu	5.51	35	ePn	Pn	09 15 01.8	+0.1
HORT	Hortiatis	5.52	327	P	Pn	09 15 03.1	+1.3
HORT	Hortiatis	5.52	327	P	Pn	09 15 03.1	+1.3
CTYL	Yal??k??y-??at	5.52	10	ePN	Pn	09 15 02.3	+0.5
CTYL	Yal??k??y-??at	5.52	10	ePn	Pn	09 15 02.3	+0.5
SOH	Sokhos	5.59	330	P	Pn	09 15 04.3	+1.5
SOH	Sokhos	5.59	330	P	Pn	09 15 04.3	+1.5
THE	Thessaloniki	5.60	326	P	Pn	09 15 04.3	+1.4
THE	Thessaloniki	5.60	326	P	Pn	09 15 04.3	+1.4
SULT	Sultanhani-AKS	5.61	65	ePN	Pn	09 15 03.1	0.0
SULT	Sultanhani-AKS	5.61	65	ePn	Pn	09 15 03.1	0.0
KDZ	Kurdzhali	5.75	348	iP	Pn	09 15 04.8	-0.2
SRS	Serrai	5.75	333	P	Pn	09 15 05.9	+0.9
SRS	Serrai	5.75	333	P	Pn	09 15 05.9	+0.9
LKD2	Lefkada island	5.78	300	P	Pn	09 15 05.2	-0.2
LKD2	Lefkada island	5.78	300	P	Pn	09 15 05.2	-0.2
EREN	Erenkoy	5.81	93	ePN	Pn	09 15 04.2	-1.6
EREN	Erenkoy	5.81	93	ePn	Pn	09 15 04.2	-1.6
EDRB	Edirne	5.81	358	ePN	Pn	09 15 06.1	+0.3
EDRB	Edirne	5.81	358	ePn	Pn	09 15 06.1	+0.3
AFSR	Af¯ar-Bala (A	5.87	53	ePN	Pn	09 15 06.8	+0.2
AFSR	Af¯ar-Bala (A	5.87	53	ePn	Pn	09 15 06.8	+0.2
NVR	Nevrokopi	5.87	336	P	Pn	09 15 07.5	+1.0
NVR	Nevrokopi	5.87	336	P	Pn	09 15 07.5	+1.0
HBRG	Burj al 'Arab	5.92	156	P	Pn	09 15 05.9	-1.4
	baz=158						
HBRG	Burj al 'Arab	5.92	156	P	Pn	09 15 05.9	-1.4
RZN	Rozhen	5.94	343	iP	Pn	09 15 07.9	+0.3
ANTO	Ankara	5.94	48	ePN	Pn	09 15 07.7	+0.1
ANTO	Ankara	5.94	48	eP	Pn	09 15 08.6	+1.0
ANTO	Ankara	5.94	48	ePn	Pn	09 15 08.6	+1.0
ANTO	Ankara	5.94	48	ePn	Pn	09 15 07.7	+0.1
ANTO	Ankara	5.94	48	eP	Pn	09 15 08.6	+1.0
KZN	Kozani	5.96	317	P	Pn	09 15 09.5	+1.7
KZN	Kozani	5.96	317	eP	Pn	09 15 09.6	+1.7
KZN	Kozani	5.96	317	P	Pn	09 15 09.5	+1.7
KNT	Kendrikon	6.07	329	P	Pn	09 15 10.4	+1.2
KNT	Kendrikon	6.07	329	P	Pn	09 15 10.4	+1.2
JAN	Janina	6.09	308	P	Pn	09 15 10.0	+0.4
JAN	Janina	6.09	308	eP	Pn	09 15 11.9	+2.3
JAN	Janina	6.09	308	P	Pn	09 15 10.0	+0.4
GRG	Griva	6.12	325	P	Pn	09 15 11.3	+1.3
GRG	Griva	6.12	325	P	Pn	09 15 11.3	+1.3
MMB	Musomiste	6.13	336	iP	Pn	09 15 10.2	+0.2
PLD	Plovdiv	6.33	344	P	Pn	09 15 13.9	+1.1
PLD	Plovdiv	6.33	344	iP	Pn	09 15 13.9	+1.1
PLD	Plovdiv	6.33	344	P	Pn	09 15 13.9	+1.1
VAY	Valandovo	6.34	328	P	Pn	09 15 13.4	+0.6
VAY	Valandovo	6.34	328	iPn	Pn	09 15 13.5	+0.6
VAY	Valandovo	6.34	328	P	Pn	09 15 13.4	+0.6
IGT	Igoumenitsa	6.36	305	P	Pn	09 15 12.7	-0.5
IGT	Igoumenitsa	6.36	305	P	Pn	09 15 12.7	-0.5
BR131	Keskin Array S	6.39	53	ePn	Pn	09 15 14.2	+0.5
	16nm,0.4s						
BR131				eSn	Sn	09 16 23.5	-1.7
BR131	Keskin Array S	6.39	53	ePn	Pn	09 15 14.2	+0.5
	16nm,0.4s						
BR131				eSn	Sn	09 16 23.5	-1.7
BRTR	Keskin Array B	6.39	53	P	Pn	09 15 12.7	-1.0
BRTR				S	Sn	09 16 22.6	-2.6
BRTR				ScP	ScP	09 25 21.1	+0.1
BRTR	Keskin Array B	6.39	53	P	Pn	09 15 12.7	-1.0
	2.6nm,0.3s,baz=223,slow=13,SNR=96						
BRTR				S	Sn	09 16 22.6	-2.6
	8.5nm,0.3s,baz=231,slow=27,SNR=9.3						
BRTR				ScP	ScP	09 25 21.1	+0.1
	0.1nm,0.3s,baz=168,slow=2.3,SNR=8.5						
BRTR	Keskin Array B	6.39	53	P	Pn	09 15 12.7	-1.0
NIG	Nigde	6.39	69	ePN	Pn	09 15 13.2	-0.7
NIG	Nigde	6.39	69	ePn	Pn	09 15 13.2	-0.7
NEST	Nestorio	6.44	315	P	Pn	09 15 15.5	+1.2
NEST	Nestorio	6.44	315	P	Pn	09 15 15.5	+1.2
FNA	Florina	6.51	319	P	Pn	09 15 16.6	+1.4
FNA	Florina	6.51	319	P	Pn	09 15 16.6	+1.4
KKB	Krupnik	6.59	333	iP	Pn	09 15 16.1	-0.3
BIA	Bitola	6.70	320	iPn	Pn	09 15 19.9	+2.1
KBN	Korca	6.72	315	P	Pn	09 15 18.9	+0.7
KBN	Korca	6.72	315	P	Pn	09 15 18.9	+0.7
KRTS	Karatas	6.75	83	ePN	Pn	09 15 17.6	-0.7
KRTS	Karatas	6.75	83	ePn	Pn	09 15 17.7	-0.7
KEK	Kerkira	6.81	305	P	Pn	09 15 17.9	-1.4
KEK	Kerkira	6.81	305	P	Pn	09 15 17.9	-1.4
PGB	Panagyurishte	6.88	342	iP	Pn	09 15 20.2	-0.1
CANT	Cankiri	6.90	47	ePN	Pn	09 15 20.6	+0.1
HNAT	Natroun	7.05	154	P	Pn	09 15 21.0	-1.6
	baz=155						
HNAT	Natroun	7.05	154	P	Pn	09 15 21.0	-1.6
SQR		7.05	149	P	Pn	09 15 20.9	-1.7
	baz=151						
SQR		7.05	149	P	Pn	09 15 20.9	-1.7
CEYT	Ceyhan	7.08	79	ePN	Pn	09 15 21.9	-0.9
CEYT	Ceyhan	7.08	79	ePn	Pn	09 15 21.9	-0.9
FYM	Al Fayyum	7.16	151	P	Pn	09 15 22.6	-1.5
	baz=152						
FYM	Al Fayyum	7.16	151	P	Pn	09 15 22.6	-1.5
KOZT	Kozan	7.20	76	ePN	Pn	09 15 23.9	-0.6
KOZT	Kozan	7.20	76	ePn	Pn	09 15 23.9	-0.6
VTS	Vitosha	7.20	337	⇑P	Pn	09 15 25.8	+1.2
VTS	Vitosha	7.20	337	P	Pn	09 15 25.1	+0.5
VTS	Vitosha	7.20	337	⇑iP	Pn	09 15 25.8	+1.2
VTS	Vitosha	7.20	337	iP	Pn	09 15 24.7	+0.1
VTS	Vitosha	7.20	337	P	Pn	09 15 25.1	+0.5
ARNB	Al Arnab	7.24	89	eP	Pn	09 15 22.3	-2.9
ARNB				eS	Sn	09 16 37.7	-8.3
ARNB				AML	AML	09 16 46.7	
	comp=E,469nm,0.6s						
ARNB				AML	AML	09 16 48.1	
	comp=N,568nm,0.5s						
ARNB	Al Arnab	7.24	89	eP	Pn	09 15 22.3	-2.9
	SNR=45						
CORM	Corum	7.27	53	ePN	Pn	09 15 25.8	+0.1
CORM	Corum	7.27	53	ePn	Pn	09 15 25.8	+0.1
SZH	Strazhica	7.28	354	iP	Pn	09 15 25.5	-0.1
KOT	Kottamia	7.29	145	P	Pn	09 15 23.3	-2.6
	baz=147						
KOT				S	Sn	09 16 39.0	-8.1
	baz=147						

KOT	**Kottamia**	7.29	145	P		**Pn**	09 15 23.3	-2.6
KOT				S		Sn	09 16 39.0	-8.1
PVL	**Pavlikeni**	7.30	350	*i* P		**Pn**	**09 15 24.9**	**-0.9**
HNTI	**Hanita**	7.32	111	Pn		**Pn**	**09 15 24.0**	**-2.2**
HNTI				Sn		Sn	09 16 41.3	-6.5
HTY	**Hatay**	7.36	87	*e*PN		**Pn**	**09 15 25.1**	**-1.6**
HTY	**Hatay**	7.36	87	*e*Pn		**Pn**	**09 15 25.1**	**-1.6**
BHL	**Bhannes**	7.38	104	*e*P		Pn	09 15 23.5	-3.6
OFRI	**'Ofer**	7.39	115	Pn		Pn	09 15 23.8	-3.5
HHAG	**Hagoal**	7.40	144	P		**Pn**	**09 15 25.3**	**-2.0**
	baz=145							
HHAG	**Hagoal**	7.40	144	P		**Pn**	**09 15 25.3**	**-2.0**
HSAF	**As Saff**	7.43	148	P		**Pn**	**09 15 25.7**	**-2.1**
	baz=149							
HSAF	**As Saff**	7.43	148	P		**Pn**	**09 15 25.7**	**-2.1**
YOZ	**Yozgat**	7.47	59	*e*PN		**Pn**	**09 15 28.0**	**-0.4**
YOZ	**Yozgat**	7.47	59	*e*Pn		**Pn**	**09 15 28.0**	**-0.4**
BLGI	**Bet Lehem HaGe**	7.49	114	Pn		**Pn**	**09 15 25.8**	**-2.8**
HWQ	**Hawqa**	7.50	101	*e*P		Pn	09 15 25.4	-3.4
MMC7	**Mount Meron ar**	7.51	111	Pn		**Pn**	**09 15 25.8**	**-3.1**
MMA0	**Mount Meron ar**	7.52	111	Sn		Sn	09 16 46.1	-6.7
MMAI	**Mount Meron Ar**	7.52	111	P		**Pn**	**09 15 26.0**	**-3.1**
MMAI				S		**Sn**	**09 16 47.4**	**-5.4**
MMAI	**Mount Meron Ar**	7.52	111	P		**Pn**	**09 15 26.0**	**-3.1**
	comp=N,158nm,0.3s,baz=312,slow=12,SNR=173							
MMAI				S		**Sn**	**09 16 47.4**	**-5.4**
	comp=N,191nm,0.3s,baz=306,slow=26,SNR=17							
GLL	**Jalalah**	7.54	147	P		**Pn**	**09 15 27.2**	**-2.0**
	baz=149							
GLL	**Jalalah**	7.54	147	P		**Pn**	**09 15 27.2**	**-2.0**
BNN	**Bunyan**	7.54	65	*e*PN		**Pn**	**09 15 29.0**	**-0.4**
BNN	**Bunyan**	7.54	65	*e*Pn		**Pn**	**09 15 29.0**	**-0.4**
BTCH	**Batrach**	7.63	87	*e*P		**Pn**	**09 15 27.8**	**-2.6**
BTCH				*e*S		Sn	09 16 47.9	-7.3
BTCH				AML	AML		09 16 56.4	
	comp=E,434nm,0.4s							
BTCH				AML	AML		09 16 59.5	
	comp=N,725nm,0.5s							
BTCH	**Batrach**	7.63	87	*e*P		**Pn**	**09 15 27.8**	**-2.6**
	SNR=45							
SLTI	**Sal'it**	7.63	117	Pn		**Pn**	**09 15 27.3**	**-3.1**
WRDH	**Warideh**	7.63	91	*e*P		Pn	09 15 26.9	-3.6
WRDH				*e*S		Sn	09 16 47.0	-8.4
WRDH				AML	AML		09 17 00.9	
	comp=N,316nm,0.7s							
WRDH				AML	AML		09 17 04.0	
	comp=E,312nm,0.5s							
PHP	**Peshkopia**	7.64	320	P		**Pn**	**09 15 30.4**	**-0.2**
PHP	**Peshkopia**	7.64	320	P		**Pn**	**09 15 30.4**	**-0.2**
KSDI	**Kefar Szold**	7.64	109	Pn		**Pn**	**09 15 27.5**	**-3.1**
KSDI				Sn		Sn	09 16 49.1	-6.5
RCY	**Rachaya**	7.66	107	*e*P		**Pn**	**09 15 28.4**	**-2.5**
LJBD	**Adjabya**	7.66	230	*i* P		**Pn**	**09 15 30.1**	**-0.8**
	comp=E,123nm,1.0s,SNR=22							
PSN	**Preselentsi**	7.69	6	*i* P		Pn	09 15 30.2	-1.0
TIR	**Tirane**	7.73	316	*e*P		**Pn**	**09 15 32.0**	**+0.4**
TIR				*e*			09 16 53.9	
TIR	**Tirane**	7.73	316	*e*Pn		**Pn**	**09 15 32.0**	**+0.4**
TIR				*e*Sn		**Sn**	**09 16 53.9**	**-3.6**
TIR	**Tirane**	7.73	316	*e*P		**Pn**	**09 15 32.0**	**+0.4**
MPEP	**Malo Peshtene**	7.75	342	*i* P		**Pn**	**09 15 32.0**	**+0.1**
BRBR	**Barbar**	7.78	107	*e*P		**Pn**	**09 15 29.6**	**-3.1**
BRBR				*e*S		Sn	09 16 51.6	-7.7
BRBR				AML	AML		09 16 54.8	
	comp=E,756nm,0.5s							
BRBR				AML	AML		09 16 54.9	
	comp=N,1µm,0.8s							
MMLI	**Mount Malkishu**	7.80	115	Pn		Pn	09 15 29.5	-3.3
SARI	**SarD1z-Kayseri**	7.84	70	*e*PN		**Pn**	**09 15 33.1**	**-0.4**
KSHT	**Keshet**	7.85	110	Pn		**Pn**	**09 15 31.0**	**-2.4**
SUZ		7.86	140	P		**Pn**	**09 15 31.6**	**-1.9**
	baz=142							
SUZ		7.86	140	P		**Pn**	**09 15 31.6**	**-1.9**
FKH	**Fakeheh**	7.88	100	*e*P		**Pn**	**09 15 31.4**	**-2.5**
HBNS	**Bani Suwayf**	7.88	152	P		**Pn**	**09 15 32.3**	**-1.6**
	baz=154							
HBNS	**Bani Suwayf**	7.88	152	P		**Pn**	**09 15 32.3**	**-1.6**
HMDT	**Nahal Hemdat**	7.97	116	Pn		**Pn**	**09 15 32.1**	**-3.0**
KZIT	**Kziot**	7.99	128	Pn		**Pn**	**09 15 32.5**	**-2.8**
KZIT				Sn		Sn	09 16 56.4	-7.6
QASN	**Qassioun**	7.99	105	*e*P		**Pn**	**09 15 33.2**	**-2.2**
QASN	**Qassioun**	7.99	105	*e*P		**Pn**	**09 15 33.2**	**-2.2**
	SNR=45							
KMRS	**Kahramanmaras**	8.04	77	*e*PN		**Pn**	**09 15 34.8**	**-1.2**
KMRS	**Kahramanmaras**	8.04	77	*e*Pn		**Pn**	**09 15 34.8**	**-1.2**
RTMI	**Retamim**	8.08	126	Pn		**Pn**	**09 15 33.8**	**-2.8**
ZAF		8.08	126	P		**Pn**	**09 15 33.8**	**-2.8**
	baz=145							
ZAF		8.17	144	P		**Pn**	**09 15 35.6**	**-2.2**
YTIR	**Yattir**	8.18	122	Pn		**Pn**	**09 15 35.6**	**-2.3**
DSI	**Dead Sea**	8.24	120	Pn		**Pn**	**09 15 35.9**	**-2.8**
DSI				Sn		Sn	09 17 03.4	-6.6
ZNM		8.25	142	P		**Pn**	**09 15 37.3**	**-1.6**
	baz=143							
ZNM		8.25	142	P		**Pn**	**09 15 37.3**	**-1.6**
GAZ	**Gaziantep**	8.26	79	*e*PN		**Pn**	**09 15 38.2**	**-0.7**
GAZ	**Gaziantep**	8.26	79	*e*Pn		**Pn**	**09 15 38.2**	**-0.7**
HNKL	**Nakhl**	8.42	134	P		**Pn**	**09 15 38.1**	**-3.1**
	baz=136							
HNKL				S		Sn	09 17 03.9	-11
	baz=136							
HNKL	**Nakhl**	8.42	134	P		**Pn**	**09 15 38.1**	**-3.1**
HNKL				S		Sn	09 17 03.9	-11
LUJL	**Ujela**	8.42	217	*i* P		**Pn**	**09 15 39.2**	**-2.0**
	SNR=22							
RMNI	**Mount Ramon**	8.43	128	Pn		**Pn**	**09 15 38.5**	**-2.8**
ULC	**Ulcinj**	8.48	317	⇑*i* Pn		**Pn**	**09 15 41.7**	**-0.2**
ULC				*e*Sn		**Sn**	**09 17 12.8**	**-3.1**
ULC	**Ulcinj**	8.48	317	⇑*i* Pn		**Pn**	**09 15 41.7**	**-0.2**
TIRR	**Tirgusor**	8.48	7	⇑P		**Pn**	**09 15 41.4**	**-0.5**
TIRR	**Tirgusor**	8.48	7	*e*Pn		**Pn**	**09 15 41.2**	**-0.7**
	comp=N,8.5nm,0.6s							
TIRR	**Tirgusor**	8.48	7	⇑*i* P		**Pn**	**09 15 41.4**	**-0.5**
TIRR	**Tirgusor**	8.48	7	P		**Pn**	**09 15 41.4**	**-0.5**
PVY	**Plav**	8.55	322	⇑*i* Pn		**Pn**	**09 15 43.6**	**+0.7**
PVY				*e*Sn		**Sn**	**09 17 14.3**	**-3.4**
PVY	**Plav**	8.55	322	⇑*i* Pn		**Pn**	**09 15 43.6**	**+0.7**
DARE	**Darende-Malaty**	8.70	70	*e*PN		**Pn**	**09 15 44.3**	**-0.6**
ZFRI	**Zfri**	8.72	126	Pn		**Pn**	**09 15 42.4**	**-2.8**
ZFRI				Sn		Sn	09 17 14.9	-6.9
KRMI	**Paran Flat**	8.73	130	Pn		**Pn**	**09 15 42.4**	**-3.0**
KRMI				Sn		Sn	09 17 14.4	-7.7
PRNI	**Paran**	8.75	128	Pn		**Pn**	**09 15 42.5**	**-3.1**
PRNI				Sn		Sn	09 17 15.4	-7.0
TIP	**Timpagrande**	8.75	294	*e*Pn		**Pn**	**09 15 42.7**	**-2.9**
BEY	**Berane**	8.79	323	⇑*i* Pn		**Pn**	**09 15 47.0**	**+0.9**
IVA	**Berane**	8.79	323	⇑*i* Pn		**Pn**	**09 15 47.0**	**+0.9**
IVA				*e*Sn		**Sn**	**09 17 20.4**	**-3.0**
PDG	**Podgorica**	8.79	319	⇑*i* Pn		**Pn**	**09 15 45.9**	**-0.2**
TTG	**Podgorica**	8.79	319	⇑*i* Pn		**Pn**	**09 15 45.9**	**-0.2**
TTG				*e*Sn		**Sn**	**09 17 21.5**	**-1.9**
BUM	**Brajici-Budva**	8.90	317	⇓*i* Pn		**Pn**	**09 15 46.7**	**-0.9**
BUM				*e*Sn		**Sn**	**09 17 23.5**	**-2.6**
BUM	**Brajici-Budva**	8.90	317	⇓*i* Pn		**Pn**	**09 15 46.7**	**-0.9**
HFRF	**Wahat Farafira**	8.92	173	P		**Pn**	**09 15 47.4**	**-0.5**
	baz=174							
HFRF	**Wahat Farafira**	8.92	173	P		**Pn**	**09 15 47.4**	**-0.5**
PE1	**Pezze di Greco**	8.93	305	*e*Pn		**Pn**	**09 15 45.5**	**-2.4**
HRFI	**Mount Harif**	8.98	129	Pn		**Pn**	**09 15 45.7**	**-3.1**
SECR		9.03	356	⇓*i* P		**Pn**	**09 15 51.2**	**+2.0**
ASF	**Jabal al Asfar**	9.03	112	P		**Pn**	**09 15 47.1**	**-2.3**
ASF				S		**Sn**	**09 17 26.6**	**-2.8**
ASF	**Jabal al Asfar**	9.03	112	P		**Pn**	**09 15 47.1**	**-2.3**
	comp=N,8.8nm,0.3s,baz=152,slow=7.8,SNR=43							
ASF				S		**Sn**	**09 17 26.5**	**-2.8**
	comp=N,6.1nm,0.3s,baz=199,slow=22,SNR=3.6							
ASF				LR		LR	09 20 35.0	
	comp=N,118nm,20.1s,baz=139,slow=45							
MBRI	**Mt Berech**	9.07	131	Pn		**Pn**	**09 15 47.0**	**-3.1**
CEL	**Celeste**	9.18	287	*e*Pn		**Pn**	**09 15 49.0**	**-2.4**
	comp=N,198nm,0.4s							
CEL	**Celeste**	9.18	287	*e*Pn		**Pn**	**09 15 49.0**	**-2.4**
	comp=N,198nm,0.4s							
EIL	**Elat**	9.19	131	P		Pn	09 15 48.1	-3.4
EIL				S		Sn	09 17 25.1	-8.0
EIL	**Elat**	9.19	131	P		Pn	09 15 48.1	-3.4
	comp=N,41nm,0.3s,baz=346,slow=15,SNR=92							
EIL				S		Sn	09 17 25.1	-8.0
	comp=N,84nm,0.3s,baz=113,slow=6.3,SNR=11							
EIL				LR		LR	09 21 54.8	
	comp=N,220nm,18.1s,baz=276,slow=53							
EIL	**Elat**	9.19	131	Pn		Pn	09 15 48.1	-3.4
NKY	**Niksic**	9.20	320	⇓*i* Pn		**Pn**	**09 15 51.4**	**-0.3**
NKY				*e*Sn		**Sn**	**09 17 30.3**	**-3.1**
NKY	**Niksic**	9.20	320	⇓*i* Pn		**Pn**	**09 15 51.4**	**-0.3**
HCY	**Herceg Novi**	9.22	317	⇓*i* Pn		**Pn**	**09 15 50.1**	**-1.8**
HCY	**Herceg Novi**	9.22	317	⇓*i* Pn		**Pn**	**09 15 50.1**	**-1.8**
MYA	**Malataya**	9.37	72	*e*PN		**Pn**	**09 15 53.3**	**-0.7**
MYA	**Malataya**	9.37	72	*e*Pn		**Pn**	**09 15 53.3**	**-0.7**
HBST	**Basata**	9.39	134	P		Pn	09 15 51.9	-2.3
	baz=135							
HBST	**Basata**	9.39	134	P		**Pn**	**09 15 51.9**	**-2.3**
ASUT		9.43	155	P		**Pn**	**09 15 52.7**	**-2.0**
	baz=156							
ASUT		9.43	155	P		**Pn**	**09 15 52.7**	**-2.0**
BAI	**Bari**	9.44	306	*e*Pn		**Pn**	**09 15 52.6**	**-2.2**
MLR	**Muntele Rosu**	9.49	355	P		**Pn**	**09 15 54.5**	**-1.1**
MLR	**Muntele Rosu**	9.49	355	⇑*i* P		**Pn**	**09 15 56.0**	**+0.4**
MLR	**Muntele Rosu**	9.49	355	P		**Pn**	**09 15 54.5**	**-1.1**
	comp=N,0.4nm,0.3s,baz=173,slow=11,SNR=74							
MLR				LR		LR	09 19 29.5	
	comp=N,69nm,21.5s,baz=180,slow=37							
MLR	**Muntele Rosu**	9.49	355	P		**Pn**	**09 15 56.0**	**+0.4**
BRY	**Bratogost**	9.50	319	⇓*i* Pn		**Pn**	**09 15 55.0**	**-0.8**
BRY				*e*Sn		**Sn**	**09 17 37.5**	**-3.3**
BRY	**Bratogost**	9.50	319	⇓*i* Pn		**Pn**	**09 15 55.0**	**-0.8**
HKAT	**Jabal Katrina**	9.52	140	P		**Pn**	**09 15 53.6**	**-2.6**
	baz=141							
HKAT	**Jabal Katrina**	9.52	140	P		**Pn**	**09 15 53.6**	**-2.6**
UPM	**Unac-Piva**	9.52	321	*e*Pn		**Pn**	**09 15 56.1**	**0.0**
UPM				*e*Sn		**Sn**	**09 17 39.1**	**-2.3**
UPM	**Unac-Piva**	9.52	321	*e*Pn		**Pn**	**09 15 56.1**	**0.0**
URFA	**Urfa**	9.56	78	*e*PN		**Pn**	**09 15 55.3**	**-1.2**
URFA	**Urfa**	9.56	78	*e*Pn		**Pn**	**09 15 55.3**	**-1.2**
HDHB	**Dhahab**	9.70	137	P		Pn	09 15 56.2	-2.2
	baz=138							
HDHB	**Dhahab**	9.70	137	P		**Pn**	**09 15 56.2**	**-2.2**
DIVS	**Divibare**	9.70	328	P		**Pn**	**09 15 58.6**	**+0.2**
DIVS	**Divibare**	9.70	328	P		**Pn**	**09 15 58.6**	**+0.2**
CUC	**Castrocucco**	9.70	297	*e*Pn		**Pn**	**09 15 56.1**	**-2.4**
CUC	**Castrocucco**	9.70	297	*e*Pn		**Pn**	**09 15 56.1**	**-2.4**
LOT	**Lotru**	9.73	346	⇓*i* P		**Pn**	**09 15 59.3**	**+0.4**
CDT	**Castel del Mon**	9.83	304	*e*Pn		**Pn**	**09 15 57.9**	**-2.2**
VRI	**Vrincioaia**	9.83	359	⇑P		**Pn**	**09 16 00.6**	**+0.5**
VRI	**Vrincioaia**	9.83	359	⇑*i* P		**Pn**	**09 16 00.6**	**+0.5**
VRI	**Vrincioaia**	9.83	359	P		**Pn**	**09 16 00.6**	**+0.5**
STON	**Ston**	9.94	316	*i* Pn		**Pn**	**09 15 59.0**	**-2.6**
STON						Sn	09 17 42.9	-8.3
PTK	**Pertek**	10.22	70	*e*PN		**Pn**	**09 16 04.9**	**-0.7**
PTK	**Pertek**	10.22	70	*e*Pn		**Pn**	**09 16 04.9**	**-0.7**
HHRG	**Al Ghardaqah**	10.39	146	P		**Pn**	**09 16 07.2**	**-0.6**
	baz=147							
HHRG					AMP		09 18 00.0	
	comp=N,100µm,0.7s,logA/T=5.1,baz=147							
HHRG	**Al Ghardaqah**	10.39	146	P		**Pn**	**09 16 07.2**	**-0.6**
BZS	**Buzias**	10.42	338	⇓P		**Pn**	**09 16 07.9**	**-0.2**
BZS	**Buzias**	10.42	338	⇓*i* P		**Pn**	**09 16 07.9**	**-0.2**
BZS	**Buzias**	10.42	338	P		**Pn**	**09 16 07.9**	**-0.2**
LMSR	**Misrath**	10.64	253	*i* P		**Pn**	**09 16 09.0**	**-2.1**
	comp=N,31nm,0.4s,SNR=22							
DRGR		11.23	345	⇑P		**Pn**	**09 16 19.5**	**+0.4**
DRGR		11.23	345	⇑*i* P		**Pn**	**09 16 19.5**	**+0.4**
DRGR		11.23	345	P		**Pn**	**09 16 19.5**	**+0.4**
BUR08	**Bucovina Ar. S**	11.69	354	*e*Pn		**Pn**	**09 16 25.8**	**+0.7**
BUR08	**Bucovina Ar. S**	11.69	354	*e*Pn		**Pn**	**09 16 25.8**	**+0.7**
VRTB	**Varto-Mus**	11.85	70	*e*PN		**Pn**	**09 16 27.0**	**-0.4**
VRTB	**Varto-Mus**	11.85	70	*e*Pn		**Pn**	**09 16 27.0**	**-0.4**
PKSM	**Moragy**	11.98	331	⇑P		**Pn**	**09 16 27.7**	**-1.1**
PKSM	**Moragy**	11.98	331	⇑*i* P		**Pn**	**09 16 27.7**	**-1.1**
PKSM	**Moragy**	11.98	331	⇑*e*Pn		**Pn**	**09 16 27.4**	**-1.4**
PKSM	**Moragy**	11.98	331	P		**Pn**	**09 16 27.7**	**-1.1**
LKFR	**Kufra**	12.28	197	*i* P		**Pn**	**09 16 31.9**	**-1.2**
	SNR=22							
AQU	**L'Aquila**	12.32	305	*e*Pn		**Pn**	**09 16 32.8**	**-0.6**
AQU	**L'Aquila**	12.32	305	*e*P		**Pn**	**09 16 32.8**	**-0.6**
TRPA	**Tarpa**	12.54	346	⇓*e*Pn		**Pn**	**09 16 36.1**	**-0.1**
BEHE	**Becsehely**	12.97	327	⇓*e*Pn		**Pn**	**09 16 41.5**	**-0.3**
PSZ	**Piszkesteto**	13.01	338	*e*P		**Pn**	**09 16 42.3**	**-0.1**
PSZ	**Piszkesteto**	13.01	338	*e*Pn		**Pn**	**09 16 42.3**	**-0.1**
PSZ	**Piszkesteto**	13.01	338	⇑*i* P		**Pn**	**09 16 41.8**	**-0.6**
PSZ	**Piszkesteto**	13.01	338	⇓*e*Pn		**Pn**	**09 16 42.6**	**+0.2**
PSZ	**Piszkesteto**	13.01	338	*e*Pn		**Pn**	**09 16 42.3**	**-0.1**
UZH	**Uzhgorod**	13.07	346	*e*P		Pn	09 16 43.0	-0.1
UZH				*e*S		**Sn**	**09 19 08.0**	**+1.1**
KOLS	**Kolonicke sedl**	13.36	346	*e*P		**Pn**	**09 16 47.1**	**+0.1**
KOLS	**Kolonicke sedl**	13.36	346	*e*PN		**Pn**	**09 16 47.0**	**+0.1**
KOLS	**Kolonicke sedl**	13.36	346	*e*P		**Pn**	**09 16 53.9**	**+1.6**
VISS	**Visnje**	13.42	320	*e*P		**Pn**	**09 16 45.4**	**-2.3**
CRVS	**Cervenica-Dubn**	13.50	344	*e*P		**Pn**	**09 16 48.0**	**-0.8**
CRVS	**Cervenica-Dubn**	13.50	344	*e*PN		**Pn**	**09 16 48.0**	**-0.8**
CRVS	**Cervenica-Dubn**	13.50	344	*e*P		**P**	**09 16 53.7**	**-0.2**
LJU	**Ljubljana**	13.74	321	*e*P		**Pn**	**09 16 49.6**	**-2.3**
LJU				*e*S		Sn	09 18 35.0	-48
VYHS	**Vyhne**	13.85	337	*e*P		**Pn**	**09 16 52.8**	**-0.4**
VYHS	**Vyhne**	13.85	337	*e*PN		**Pn**	**09 16 52.8**	**-0.4**
VYHS	**Vyhne**	13.85	337	*e*P		**P**	**09 16 59.2**	**+1.5**
PERS	**Pernice**	13.86	324	*e*P		**Pn**	**09 16 53.0**	**-0.4**
CRNS	**Crni Vrh**	13.91	320	*e*P		**Pn**	**09 16 51.7**	**-2.3**
AKH	**Akhalkalaki**	13.91	62	P		**Pn**	**09 16 56.2**	**+1.9**
AKH	**Akhalkalaki**	13.91	62	P		**Pn**	**09 16 56.2**	**+1.9**
TRI	**Trieste**	13.93	318	*e*P		**Pn**	**09 16 52.2**	**-2.0**
TRI	**Trieste**	13.93	318	*e*Pn		**Pn**	**09 16 52.2**	**-2.0**
TRI	**Trieste**	13.93	318	*e*Pn		**Pn**	**09 16 52.2**	**-2.0**
SOKA	**Soboth**	13.93	323	⇓*i* Pn		**Pn**	**09 16 53.4**	**-1.0**
SOKA	**Soboth**	13.93	323	Pn		**Pn**	**09 16 53.4**	**-1.0**
LVV	**L'vov**	13.96	352	*e*P		**Pn**	**09 16 55.0**	**+0.4**
KWP	**Kalwaria Pacla**	13.96	348	*e*P		**Pn**	**09 16 55.4**	**+0.8**
KWP				pmax		pmax		
	comp=Z,7.0nm,0.8s							
KWP	**Kalwaria Pacla**	13.96	348	*e*Pn		**Pn**	**09 16 55.4**	**+0.8**
	comp=Z,7.3nm,0.8s							
KWP	**Kalwaria Pacla**	13.96	348	*e*P		**P**	**09 17 00.9**	**+2.0**
KWP	**Kalwaria Pacla**	13.96	348	*e*Pn		**Pn**	**09 16 55.4**	**+0.8**
	comp=Z,7.3nm,0.8s							
KWP	**Kalwaria Pacla**	13.96	348	*e*P		**P**	**09 17 00.9**	**+2.0**
OBKA	**Obir**	14.05	322	⇑*i* Pn		**Pn**	**09 16 55.2**	**-0.7**
	SNR=18							
OBKA	**Obir**	14.05	322	Pn		**Pn**	**09 16 55.2**	**-0.7**
	SNR=18							
VOY	**Vojsko**	14.07	319	*e*P		**Pn**	**09 16 53.9**	**-2.2**
VOY				*e*			09 19 25.7	
VOY				*e*			09 19 48.2	
ARSA	**Arzberg**	14.12	326	⇑*i* Pn		**Pn**	**09 16 55.5**	**-1.2**
	SNR=17							
ARSA	**Arzberg**	14.12	326	Pn		**Pn**	**09 16 55.5**	**-1.2**
	SNR=17							
ZST	**Bratislava**	14.21	332	*e*P		**Pn**	**09 16 55.9**	**-1.9**
ZST	**Bratislava**	14.21	332	*e*PN		**Pn**	**09 16 55.9**	**-1.9**
NIE	**Niedzica**	14.26	342	*e*P		**Pn**	**09 16 57.9**	**-0.6**
NIE	**Niedzica**	14.26	342	*e*P		**Pn**	**09 16 57.9**	**-0.6**
NIE				*e*S		**S**	**09 19 48.4**	**+0.2**
ONI	**Oni**	14.28	58	P		**P**	**09 17 02.7**	**+0.1**
ONI	**Oni**	14.28	58	P		**P**	**09 17 02.7**	**+0.1**
KIV	**Kislovodsk**	14.35	52	*e*P		**Pn**	**09 16 59.7**	**-0.1**
KIV				*e*S		**Sn**	**09 19 39.5**	**+1.4**
KIV				pmax		pmax		
	comp=Z,44nm,1.1s							
KEST	**Kesra**	14.36	274	*e*Pn		**Pn**	**09 17 00.5**	**+0.6**
KEST				S		Sn	09 19 28.1	-10
KEST	**Kesra**	14.36	274	P		**Pn**	**09 17 00.5**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=35,slow=4.7,SNR=31							
KEST				S		Sn	09 19 28.1	-10
	comp=Z,0.3nm,0.3s,baz=55,slow=23,SNR=6.5							
KEST	**Kesra**	14.36	274	*e*Pn		**Pn**	**09 17 00.5**	**+0.6**
KBZ	**Khabaz**	14.38	53	P		**P**	**09 17 03.2**	**-0.5**
KBZ	**Khabaz**	14.38	53	P		**P**	**09 17 03.1**	**-0.5**
KBZ				ScP		**ScP**	**09 25 31.5**	**+0.6**
KBZ	**Khabaz**	14.38	53	P		**P**	**09 17 03.1**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=241,slow=9.3,SNR=45							
KBZ				ScP		**ScP**	**09 25 31.5**	**+0.6**
	comp=Z,0.0nm,0.3s,baz=243,slow=2.3,SNR=5.9							
KBZ	**Khabaz**	14.38	53	P		**P**	**09 17 03.2**	**-0.5**
CONA	**Conrad Observa**	14.49	329	⇓*i* Pn		**Pn**	**09 17 00.6**	**-0.9**
	SNR=10							
CONA	**Conrad Observa**	14.49	329	Pn		**Pn**	**09 17 00.6**	**-0.9**
	SNR=10							
GNI	**Garni**	14.53	68	P		**P**	**09 17 05.2**	**-0.3**
GNI	**Garni**	14.53	68	P		**P**	**09 17 05.2**	**-0.3**
	comp=Z,4.0nm,0.3s,baz=205,slow=19,SNR=4.1							
GNI	**Garni**	14.53	68	P		**P**	**09 17 05.2**	**-0.3**
GOR	**Gori**	14.53	61	P		**P**	**09 17 05.2**	**-0.2**
GOR	**Gori**	14.53	61	P		**P**	**09 17 05.2**	**-0.2**
KZR	**Kazreti**	14.57	63	P		**Pn**	**09 17 04.1**	**+1.5**
KZR	**Kazreti**	14.57	63	P		**Pn**	**09 17 04.1**	**+1.5**
MYKA	**Terra Mystica**	14.59	321	⇑*i* Pn		**Pn**	**09 17 01.0**	**-1.8**
MYKA	**Terra Mystica**	14.59	321	Pn		**Pn**	**09 17 01.0**	**-1.8**
ZEI	**Tsey**	14.66	57	*e*P		**P**	**09 17 07.3**	**+0.3**
ZEI				pmax		pmax		
	comp=Z,23nm,1.1s							
ZEI	**Tsey**	14.66	57	*e*P		**P**	**09 17 07.3**	**+0.3**
	comp=Z,23nm,1.1s							
AK02	**Malin Array Si**	14.71	5	*e*Pn		**Pn**	**09 17 04.0**	**0.0**
AK02	**Malin Array Si**	14.71	5	*e*Pn		**Pn**	**09 17 04.1**	**0.0**
AK01	**Malin Array Si**	14.74	5	*e*Pn		**Pn**	**09 17 04.3**	**-0.2**
AK01	**Malin Array Si**	14.74	5	*e*Pn		**Pn**	**09 17 04.3**	**-0.2**
KIEV	**Kiev**	14.74	5	*e*P		**Pn**	**09 17 04.0**	**-0.6**
KIEV	**Kiev**	14.74	5	*e*Pn		**Pn**	**09 17 04.0**	**-0.6**
KIEV	**Kiev**	14.74	5	*e*Pn		**Pn**	**09 17 04.0**	**-0.6**
**AK

FUR	Furstenfeldbru	16.81	321	eP	Pn	09 17 29.5	-0.8
TUE	Stuetta	16.87	314	eP	P	09 17 31.5	0.0
	comp=Z,41nm,0.7s						
TUE	Stuetta	16.87	314	eP	P	09 17 31.5	0.0
	comp=Z,41nm,0.7s						
SAOF	Saorge	16.89	304	eP	Pn	09 17 30.5	-0.8
SAOF	Saorge	16.89	304	eP	Pn	09 17 30.5	-0.8
SAOF	Saorge	16.89	304	eP	Pn	09 17 30.5	-0.8
SAOF	Saorge	16.89	304	eP	Pn	09 17 30.5	-0.8
SBF	Sospel	16.93	304	eP	Pn	09 17 30.6	-1.2
	comp=Z,179nm,0.7s						
SBF	Sospel	16.93	304	eP	Pn	09 17 30.6	-1.2
SBF				pmax	pmax		
	comp=Z,179nm,0.7s						
SBF	Sospel	16.93	304	eP	Pn	09 17 30.6	-1.2
	comp=Z,179nm,0.7s						
SBF	Sospel	16.93	304	eP	Pn	09 17 30.6	-1.2
	comp=Z,89nm,0.7s						
AUTN	L'Aution	16.98	304	eP	Pn	09 17 31.9	-0.7
AUTN	L'Aution	16.98	304	eP	Pn	09 17 31.9	-0.7
AUTN	L'Aution	16.98	304	eP	Pn	09 17 31.9	-0.7
AUTN	L'Aution	16.98	304	eP	Pn	09 17 31.9	-0.7
DAVA	Damuels	17.02	317	⇓ i Pn	P	09 17 32.7	-0.3
	SNR=40						
DAVA	Damuels	17.02	317	Pn	P	09 17 32.7	-0.3
	SNR=40						
PVCC	Panska Ves	17.07	332	eP	Pn	09 17 33.4	0.0
PVCC	Panska Ves	17.07	332	eP	Pn	09 17 33.4	0.0
PVCC	Panska Ves	17.07	332	eP	Pn	09 17 33.4	0.0
DFRA	Djebel Bou Aff	17.08	278	P	Pn	09 17 34.7	+0.9
DFRA	Djebel Bou Aff	17.08	278	P	Pn	09 17 34.7	+0.9
TOUF	Mont Tournerai	17.11	304	eP	P	09 17 33.8	-0.2
TOUF	Mont Tournerai	17.11	304	eP	P	09 17 33.8	-0.2
TOUF	Mont Tournerai	17.11	304	eP	P	09 17 33.8	-0.2
TOUF	Mont Tournerai	17.11	304	eP	P	09 17 33.8	-0.2
MVIF	Mont Vial	17.13	303	eP	P	09 17 34.0	-0.2
MVIF	Mont Vial	17.13	303	eP	P	09 17 34.0	-0.2
MVIF	Mont Vial	17.13	303	eP	P	09 17 34.0	-0.2
MVIF	Mont Vial	17.13	303	eP	P	09 17 34.0	-0.2
CALN	Calern	17.26	303	eP	P	09 17 35.3	-0.4
CALN	Calern	17.26	303	eP	P	09 17 35.3	-0.4
CALN	Calern	17.26	303	eP	P	09 17 35.3	-0.4
CALN	Calern	17.26	303	eP	P	09 17 35.3	-0.4
VORD	Divnogorie	17.34	27	eP	Pn	09 17 37.2	+0.6
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,4.0nm,0.3s						
VORD	Divnogorie	17.34	27	eP	Pn	09 17 37.2	+0.6
FRF	La Foret Royal	17.36	302	eP	P	09 17 35.7	-0.9
	comp=E,135nm,0.9s						
FRF	La Foret Royal	17.36	302	eP	P	09 17 35.7	-0.9
FRF				pmax	pmax		
	comp=Z,135nm,0.9s						
FRF	La Foret Royal	17.36	302	eP	P	09 17 35.7	-0.9
	comp=Z,135nm,0.9s						
FRF	La Foret Royal	17.36	302	eP	P	09 17 35.7	-0.9
	comp=E,68nm,0.9s						
LMR	La Mourre	17.39	301	eP	P	09 17 35.7	-1.2
	comp=Z,48nm,0.6s						
LMR	La Mourre	17.39	301	eP	P	09 17 35.7	-1.2
LMR				pmax	pmax		
	comp=Z,48nm,0.6s						
LMR	La Mourre	17.39	301	eP	P	09 17 35.7	-1.2
	comp=Z,48nm,0.6s						
LMR	La Mourre	17.39	301	eP	P	09 17 35.7	-1.2
	comp=Z,24nm,0.6s						
ROTZ	Rotzenmuhle	17.47	326	eP	Pn	09 17 38.1	-0.1
SET	Setif	17.49	277	P	Pn	09 17 43.0	+4.2
VSR	Storozhevoye	17.50	26	eP	Pn	09 17 40.4	+1.9
VSR				pmax	pmax		
	comp=N,5.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,4.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	17.50	26	eP	Pn	09 17 40.4	+1.9
SURF	Saint Ours	17.57	305	eP	Pn	09 17 40.8	+1.1
SURF	Saint Ours	17.57	305	eP	Pn	09 17 40.8	+1.1
SURF	Saint Ours	17.57	305	eP	Pn	09 17 40.8	+1.1
BRG	Berggiesshubel	17.58	332	i P	Pn	09 17 39.9	+0.3
	comp=Z,12nm,0.9s						
BRG				es P	sP	09 18 14.2	-0.1
	comp=Z,5.8nm,0.8s						
BRG				e		09 25 37.1	
	comp=Z,4.0nm,1.0s						
BRG	Berggiesshubel	17.58	332	i P	Pn	09 17 39.9	+0.3
BRG				pmax	pmax		
	comp=Z,12nm,0.9s						
BRG				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRG				pmax	pmax		
	comp=N,6.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRG	Berggiesshubel	17.58	332	eP	P	09 17 39.1	+0.1
	comp=Z,24nm,0.9s						
BRG	Berggiesshubel	17.58	332	i P	Pn	09 17 39.9	+0.3
	comp=Z,4.0nm,1.0s						
OG22	Abries	17.61	306	eP	Pn	09 17 41.3	+1.1
OG22	Abries	17.61	306	eP	Pn	09 17 41.3	+1.1
OG22	Abries	17.61	306	eP	Pn	09 17 41.3	+1.1
MBDF	Montbardon	17.69	306	eP	P	09 17 39.2	-1.2
	comp=Z,189nm,0.7s						
MBDF	Montbardon	17.69	306	eP	P	09 17 39.2	-1.2
MBDF				pmax	pmax		
	comp=Z,189nm,0.7s						
MBDF	Montbardon	17.69	306	eP	P	09 17 39.2	-1.2
	comp=Z,189nm,0.7s						
MBDF	Montbardon	17.69	306	eP	P	09 17 39.2	-1.2
	comp=Z,94nm,0.7s						
NKC	Novy Kostel	17.70	328	eP	Pn	09 17 41.2	+0.1
NKC	Novy Kostel	17.70	328	eP	Pn	09 17 41.2	+0.1
NKC	Novy Kostel	17.70	328	eP	Pn	09 17 41.2	+0.1
GRA1	Grafenberg Arr	17.86	325	eP	P	09 17 42.2	+0.1
	comp=Z,107nm,0.9s						
GRF	Grafenberg Arr	17.86	325	eP	P	09 17 42.2	+0.1
GRF				pmax	pmax		
	comp=Z,107nm,0.9s						
GRF	Grafenberg Arr	17.86	325	eP	P	09 17 42.2	+0.1
	comp=Z,107nm,0.9s						
GRFO	Grafenberg	17.86	325	eP	P	09 17 41.6	-0.5
GRFO				pmax	pmax		
	comp=Z,66nm,0.8s						
GRFO	Grafenberg	17.86	325	eP	P	09 17 41.6	-0.5
	comp=Z,66nm,0.8s						
GRFO	Grafenberg	17.86	325	eP	P	09 17 41.6	-0.5
	comp=Z,66nm,0.8s						
LPG	La Plagne	18.01	308	eP	P	09 17 42.3	-1.7
	comp=Z,168nm,0.6s						
LPG	La Plagne	18.01	308	eP	P	09 17 42.3	-1.7
LPG				pmax	pmax		
	comp=Z,168nm,0.6s						
LPG	La Plagne	18.01	308	eP	P	09 17 42.3	-1.7
	comp=Z,168nm,0.6s						
LPG	La Plagne	18.01	308	eP	P	09 17 42.3	-1.7
	comp=Z,84nm,0.6s						
OG25	Le Caire	18.02	304	eP	P	09 17 44.1	+0.1
OG25	Le Caire	18.02	304	eP	P	09 17 44.1	+0.1
OG25	Le Caire	18.02	304	eP	P	09 17 44.1	+0.1
LPL	La Plagne	18.03	308	eP	P	09 17 42.0	-2.2
	comp=Z,118nm,0.5s						
LPL	La Plagne	18.03	308	eP	P	09 17 42.0	-2.2
LPL				pmax	pmax		
	comp=Z,118nm,0.5s						
LPL	La Plagne	18.03	308	eP	P	09 17 42.0	-2.2
	comp=Z,118nm,0.5s						
LPL	La Plagne	18.03	308	eP	P	09 17 42.0	-2.2
	comp=Z,59nm,0.5s						
SENIN	Lac Senin/Sane	18.05	311	eP	P	09 17 43.9	-0.5
	comp=Z,121nm,0.6s						
SENIN	Lac Senin/Sane	18.05	311	eP	P	09 17 43.9	-0.5
	comp=Z,121nm,0.6s						
SPAK	Spaichingen-Ko	18.09	317	eP	Pn	09 17 45.5	-0.3
SPAK	Spaichingen-Ko	18.09	317	eP	Pn	09 17 45.5	-0.3
MIB	Mutribah	18.12	104	eP	P	09 17 45.6	+0.5
MIB				AMb	AMB	09 17 53.4	
	comp=Z,105nm,0.7s						
MIB	Mutribah	18.12	104	eP	P	09 17 45.6	+0.5
	comp=Z,105nm,0.7s						
RSL	Roselend	18.17	308	eP	P	09 17 45.6	-0.1
RSL	Roselend	18.17	308	eP	P	09 17 45.6	-0.1
RSL	Roselend	18.17	308	eP	P	09 17 45.6	-0.1
RSL	Roselend	18.17	308	eP	P	09 17 45.6	-0.1
SUW	Suwalki	18.18	353	eP	P	09 17 45.7	+0.2
SUW				pmax	pmax		
	comp=Z,191nm,0.8s						
SUW	Suwalki	18.18	353	eP	P	09 17 45.7	+0.2
	comp=Z,191nm,0.8s						
SUW	Suwalki	18.18	353	eP	P	09 17 45.6	+0.1
SUW	Suwalki	18.18	353	eP	P	09 17 45.7	+0.1
	comp=Z,191nm,0.8s						
SMRF	Simiane la Rot	18.23	302	eP	P	09 17 45.7	-0.5
	comp=Z,37nm,0.6s						
SMRF	Simiane la Rot	18.23	302	eP	P	09 17 45.7	-0.5
	comp=Z,37nm,0.6s						
SMRF	Simiane la Rot	18.23	302	eP	P	09 17 45.7	-0.5
	comp=Z,19nm,0.6s						
STU	Stuttgart	18.27	320	eP	P	09 17 45.6	-1.0
STU				pmax	pmax		
	comp=Z,55nm,0.9s						
STU	Stuttgart	18.27	320	eP	Pn	09 17 48.0	+0.1
STU	Stuttgart	18.27	320	eP	P	09 17 45.6	-1.0
	comp=Z,55nm,0.9s						
STU	Stuttgart	18.27	320	eP	P	09 17 45.6	-1.0
	comp=Z,55nm,0.9s						
NAY	Al-Naaiem	18.29	106	eP	Pn	09 17 47.7	-0.5
NAY				AMb	AMB	09 17 50.8	
	comp=Z,28nm,0.7s						
NAY	Al-Naaiem	18.29	106	eP	Pn	09 17 47.7	-0.5
	comp=Z,28nm,0.7s						
CLL	Collm	18.29	331	⇓ eP	P	09 17 46.0	-0.7
CLL	Collm	18.29	331	eP	Pn	09 17 47.8	-0.3
	comp=Z,98nm,1.3s						
CLL	Collm	18.29	331	eP	P	09 17 46.0	-0.7
GDM	Grand'Maison	18.30	306	eP	P	09 17 47.5	+0.4
GDM	Grand'Maison	18.30	306	eP	P	09 17 47.5	+0.4
GDM	Grand'Maison	18.30	306	eP	P	09 17 47.5	+0.4
VRHR	Novokhopersk	18.34	30	eP	Pn	09 17 49.2	+0.5
VRHR				es	S	09 21 11.1	+0.2
VRHR				pmax	pmax		
	comp=N,20nm,0.5s						
VRHR				pmax	pmax		
	comp=E,9.0nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.5s						
VRHR				smax	smax		
	comp=N,140nm,1.4s						
VRHR				smax	smax		
	comp=Z,10.0nm,0.3s						
VRHR				smax	smax		
	comp=E,60nm,0.7s						
VRHR	Novokhopersk	18.34	30	eP	Pn	09 17 49.2	+0.5
ORIF	Oris-en-Rattie	18.35	305	eP	P	09 17 46.5	-1.1
	comp=E,64nm,0.6s						
ORIF				eR			
	comp=E,99nm,19.8s						
ORIF	Oris-en-Rattie	18.35	305	eP	P	09 17 46.5	-1.1
ORIF				pmax	pmax		
	comp=Z,64nm,0.6s						
ORIF	Oris-en-Rattie	18.35	305	eP	P	09 17 46.5	-1.1
	comp=Z,64nm,0.6s						
ORIF	Oris-en-Rattie	18.35	305	eP	P	09 17 46.5	-1.1
	comp=Z,32nm,0.6s						
MOX	Moxa	18.36	327	eP	Pn	09 17 49.5	+0.5
MOX				pmax	pmax		
	comp=Z,126nm,1.1s						
MOX	Moxa	18.36	327	eP	Pn	09 17 49.5	+0.5
	comp=Z,126nm,1.1s						
MOX	Moxa	18.36	327	eP	Pn	09 17 49.5	+0.5
	comp=Z,126nm,1.1s						
FELD	Feldberg im Sc	18.40	316	eP	P	09 17 48.8	+0.6
FELD	Feldberg im Sc	18.40	316	eP	P	09 17 48.8	+0.6
FELD	Feldberg im Sc	18.40	316	eP	P	09 17 48.8	+0.6
OG01	Vacheresse	18.41	310	eP	P	09 17 48.2	0.0
OG01	Vacheresse	18.41	310	eP	P	09 17 48.2	0.0
OG01	Vacheresse	18.41	310	eP	P	09 17 48.2	0.0
BBS	Basel-Blauen	18.46	314	eP	Pn	09 17 49.6	-0.6
BBS	Basel-Blauen	18.46	314	eP	Pn	09 17 49.6	-0.6
BBS	Basel-Blauen	18.46	314	eP	Pn	09 17 49.6	-0.6
BFO	Black Forest	18.47	317	eP	P	09 17 49.4	+0.6
BFO				pmax	pmax		
	comp=Z,102nm,1.3s						
BFO	Black Forest	18.47	317	eP	P	09 17 49.4	+0.6
	comp=Z,102nm,1.3s						
BFO	Black Forest	18.47	317	eP	P	09 17 49.2	+0.4
	comp=Z,138nm,1.4s						
BFO	Black Forest	18.47	317	eP	P	09 17 49.2	+0.4
	comp=Z,138nm,1.4s						
MNK	Minsk	18.48	1	eP	P	09 17 46.0	-2.8
MNK				es	S	09 21 07.0	-6.6
MICGM	Minsk	18.48	2	eP	P	09 17 46.0	-2.8
UMR	Umm Al-Rimmam	18.52	105	eP	P	09 17 50.2	+0.7
UMR				AMb	AMB	09 17 53.9	
	comp=Z,112nm,0.7s						
UMR	Umm Al-Rimmam	18.52	105	eP	P	09 17 50.2	+0.7
	comp=Z,112nm,0.7s						
GRN	Grenoble	18.56	306	eP	P	09 17 49.3	-0.5
GRN	Grenoble	18.56	306	eP	P	09 17 49.3	-0.5
GRN	Grenoble	18.56	306	eP	P	09 17 49.3	-0.5
GRN	Grenoble	18.56	306	eP	P	09 17 49.3	-0.5
GKP	Gorka Klasztor	18.57	341	eP	P	09 17 49.3	-0.4
GKP	Gorka Klasztor	18.57	341	eP	P	09 17 49.3	-0.4
OCF	Saint Nazaire	18.61	304	eP	Pn	09 17 51.8	-0.2
OCF	Saint Nazaire	18.61	304	eP	Pn	09 17 51.8	-0.2
OG26	St.-Nazaire-De	18.61	304	eP	Pn	09 17 51.8	-0.2
OG26	St.-Nazaire-De	18.61	304	eP	Pn	09 17 51.8	-0.2
RDF	Al-Radifah	18.68	106	eP	P	09 17 51.8	+0.7
RDF				AMb	AMB	09 17 58.0	
	comp=Z,55nm,0.8s						
RDF	Al-Radifah	18.68	106	eP	P	09 17 51.8	+0.7
	comp=Z,55nm,0.8s						
LOMF	Lomont	18.81	313	eP	Pn	09 17 54.8	+0.5
LOMF	Lomont	18.81	313	eP	Pn	09 17 54.8	+0.5
LOMF	Lomont	18.81	313	eP	Pn	09 17 54.8	+0.5
LOMF	Lomont	18.81	313	eP	Pn	09 17 54.8	+0.5
MOF	Molkenrain	18.88	315	eP	P	09 17 53.1	-0.3
MOF	Molkenrain	18.88	315	eP	P	09 17 53.1	-0.3
MOF	Molkenrain	18.88	315	eP	P	09 17 53.1	-0.3
MOF	Molkenrain	18.88	315	eP	P	09 17 53.1	-0.3
CABF	La Chapelle	18.91	310	eP	P	09 17 52.1	-1.5
	comp=Z,481nm,0.7s						
CABF	La Chapelle	18.91	310	eP	P	09 17 52.1	-1.5
CABF				pmax	pmax		
	comp=Z,481nm,0.7s						
CABF	La Chapelle	18.91	310	eP	P	09 17 52.1	-1.5
	comp=Z,481nm,0.7s						
CABF	La Chapelle	18.91	310	eP	P	09 17 52.1	-1.5
	comp=Z,240nm,0.7s						
TOD	Tromm	18.99	321	eP	P	09 17 54.7	+0.3
TOD	Tromm	18.99	321	eP	P	09 17 54.7	+0.3
TOD	Tromm	18.99	321	eP	P	09 17 54.7	+0.3
HINF	Hinteralfeld	19.03	314	eP	P	09 17 53.9	-1.0
	comp=Z,42nm,0.6s						
HINF	Hinteralfeld	19.03	314	eP	P	09 17 53.9	-1.0
HINF				pmax	pmax		
	comp=Z,43nm,0.6s						
HINF	Hinteralfeld	19.03	314	eP	P	09 17 53.9	-1.0
	comp=Z,42nm,0.6s						
HINF	Hinteralfeld	19.03	314	eP	P	09 17 53.9	-1.0
	comp=Z,21nm,0.6s						
ECH	Echery	19.06	316	eP	P	09 17 56.2	+1.0
ECH	Echery	19.06	316	eP	P	09 17 56.2	+1.0
ECH	Echery	19.06	316	eP	P	09 17 56.2	+1.0
ECH	Echery	19.06	316	eP	P	09 17 56.2	+1.0
CDF	Champ du Feu	19.10	316	eP	P	09 17 55.3	-0.4
	comp=Z,72nm,0.7s						
CDF	Champ du Feu	19.10	316	eP	P	09 17 55.3	-0.4
CDF				pmax	pmax		
	comp=Z,72nm,0.7s						
CDF	Champ du Feu	19.10	316	eP	P	09 17 55.3	-0.4
	comp=Z,72nm,0.7s						
CDF	Champ du Feu	19.10	316	eP	P	09 17 55.3	-0.4
	comp=Z,36nm,0.7s						
VIVF	Saint-Julien-l	19.13	304	eP	P	09 17 54.4	-1.6
	comp=Z,134nm,0.8s						
VIVF	Saint-Julien-l	19.13	304	eP	P	09 17 54.4	-1.6
VIVF				pmax	pmax		
	comp=Z,134nm,0.8s						
VIVF	Saint-Julien-l	19.13	304	eP	P	09 17 54.4	-1.6
	comp=Z,134nm,0.8s						
VIVF	Saint-Julien-l	19.13	304	eP	P	09 17 54.4	-1.6
	comp=Z,67nm,0.8s						
LANF	Langenberg	19.13	319	eP	P	09 17 56.6	+0.6
LANF	Langenberg	19.13	319	eP	P	09 17 56.6	+0.6
LANF	Langenberg	19.13	319	eP	P	09 17 56.6	+0.6
LANF	Langenberg	19.13	319	eP	P	09 17 56.6	+0.6
KTD	Kalmit	19.18	320	eP	Pn	09 17 59.6	+0.9
KTD	Kalmit	19.18	320	eP	Pn	09 17 59.6	+0.9
UBBA	Unterbreizbach	19.21	326	eP	Pn	09 17 58.2	-0.6
IIGN	Ignalina	19.33	359	eP	P	09 17 57.3	-0.8
IIGN				AMB	AMB	09 18 00.8	
	comp=Z,13nm,0.7s						
IIGN	Ignalina	19.33	359	eP	P	09 17 57.3	-0.8
	comp=Z,13nm,0.7s,SNR=33						
SSB	Saint Sauveur	19.36	305	eP	P	09 17 57.5	-1.0
SSB	Saint Sauveur	19.36	305	eP	P	09 17 57.5	-1.0
SSB	Saint Sauveur	19.36	305	eP	P	09 17 57.5	-1.0
SSB	Saint Sauveur	19.36	305	eP	P	09 17 57.5	-1.0
HAU	Haudompre	19.42	314	eP	P	09 17 58.1	-1.0
	comp=Z,53nm,0.6s						
HAU				eR			
	comp=Z,153nm,17.0s						
HAU	Haudompre	19.42	314	eP	P	09 17 58.1	-1.0
HAU				pmax	pmax		
	comp=Z,53nm,0.6s						
HAU	Haudompre	19.42	314	eP	P	09 17 58.1	-1.0
	comp=Z,53nm,0.6s						
HAU	Haudompre	19.42	314	eP	P	09 17 58.1	-1.0
	comp=Z,26nm,0.6s						
LASF	Ste Croix	19.44	301	eP	P	09 17 58.0	-1.4
	comp=Z,44nm,0.6s						
LASF	Ste Croix	19.44	301	eP	P	09 17 58.0	-1.4
	comp=Z,44nm,0.6s						
LASF	Ste Croix	19.44	301	eP	P	09 17 58.0	-1.4
	comp=Z,22nm,0.6s						
EMHD	Djebel Mahouad	19.46	278	P	Pn	09 18 02.5	+0.4
ISAL	Salakas	19.55	358	eP	P	09 17 59.6	-0.9
ISAL				AMB	AMB	09 18 00.8	
	comp=Z,12nm,0.6s						
ISAL	Salakas	19.55	358	eP	P	09 17 59.6	-0.9
	comp=Z,12nm,0.6s,SNR=33						
TNS	Taunus Mts	19.56	322	eP	P	09 18 00.9	+0.3
TNS				pmax	pmax		
	comp=Z,184nm,0.7s						
TNS	Taunus Mts	19.56	322	eP	P	09 18 00.9	+0.3
	comp=Z,184nm,0.7s						
TNS	Taunus Mts	19.56	322	eP	P	09 18 00.9	+0.3
	comp=Z,184nm,0.7s						
IZAR	Zarasai	19.73	359	eP	P	09 18 01.4	-1.0
IZAR				AMB	AMB	09 18 06.6	
	comp=Z,13nm,0.5s						
IZAR	Zarasai	19.73	359	eP	P	09 18 01.4	-1.0
	comp=Z,13nm,0.5s,SNR=29						
THEF	They Montfort	19.74	315	eP	P	09 18 02.2	-0.3
THEF	They Montfort	19.74	315	eP	P	09 18 02.2	-0.3
THEF	They Montfort	19.74	315	eP	P	09 18 02.2	-0.3
THEF	They Montfort	19.74	315	eP	P	09 18 02.2	-0.3
SJAF	Saint Jean de	19.76	296	eP	P	09 18 01.5	-1.3
SJAF	Saint Jean de	19.76	296	eP	P	09 18 01.5	-1.3
SJAF	Saint Jean de	19.76	296	eP	P	09 18 01.5	-1.3
ABH	Alteburg	19.80	320	eP	Pn	09 18 06.4	+0.5
RUP	Ruppelstein	19.95	319	eP	P	09 18 04.5	-0.4
RUP	Ruppelstein	19.95	319	eP	P	09 18 04.5	-0.4
RUP	Ruppelstein	19.95	319	eP	P	09 18 04.5	-0.4
PAGF	Fort de Pagny	20.05	315	eP	P	09 18 04.7	-1.2
	comp=Z,19nm,0.7s,baz=109						
PAGF	Fort de Pagny	20.05	315	eP	P	09 18 04.7	-1.2
	comp=Z,19nm,0.7s						
PAGF	Fort de Pagny	20.05	315	eP	P	09 18 04.7	-1.2
	comp=Z,9.4nm,0.7s,baz=109						
LRDF	Laroque-de-Fa	20.09	298	eP	P	09 18 06.4	-0.1
LRDF	Laroque-de-Fa	20.09	298	eP	P	09 18 06.4	-0.1
LRDF	Laroque-de-Fa	20.09	298	eP	P	09 18 06.4	-0.1
OBN	Obninsk	20.18	16	i P	P	09 18 03.1	-4.1
OBN				i S	S	09 21 41.9	-5.3
OBN				pmax	pmax		
	comp=Z,16nm,1.0s						
LBL	Lubilhac	20.21	304	eP	P	09 18 07.9	+0.2
LBL	Lubilhac	20.21	304	eP	P	09 18 07.9	+0.2
LBL	Lubilhac	20.21	304	eP	P	09 18 07.9	+0.2
LBL	Lubilhac	20.21	304	eP	P	09 18 07.9	+0.2
RAYN	Ar Rayn	20.26	123	P	Pn	09 18 11.0	-0.4
	comp=Z,213nm,0.7s,SNR=13						
SFTF	Sexfontaines	20.28	314	eP	P	09 18 07.9	-0.5
	comp=Z,152nm,0.9s,baz=138						
SFTF	Sexfontaines	20.28	314	eP	P	09 18 07.9	-0.5
	comp=Z,152nm,0.9s						
SFTF	Sexfontaines	20.28	314	eP	P	09 18 07.9	-0.5
	comp=Z,76nm,0.9s,baz=138						
SMF	Signal de Mont	20.32	309	eP	P	09 18 07.6	-1.3
	comp=Z,119nm,0.5s						
SMF	Signal de Mont	20.32	309	eP	P	09 18 07.6	-1.3
SMF				pmax	pmax		
	comp=Z,119nm,0.5s						
SMF	Signal de Mont	20.32	309	eP	P	09 18 07.6	-1.3
	comp=Z,119nm,0.5s						
SMF	Signal de Mont	20.32	309	eP	P	09 18 07.6	-1.3
	comp=Z,60nm,0.5s						
VALF	Valcebollere	20.37	296	eP	P	09 18 09.9	+0.3
VALF	Valcebollere	20.37	296	eP	P	09 18 09.9	+0.3
VALF	Valcebollere	20.37	296	eP	P	09 18 09.9	+0.3
MTLF	Montolieu	20.41	299	eP	P	09 18 08.9	-0.9
	comp=Z,46nm,0.5s						
MTLF	Montolieu	20.41	299	eP	P	09 18 08.9	-0.9
MTLF				pmax	pmax		
	comp=Z,46nm,0.5s						
MTLF	Montolieu	20.41	299	eP	P	09 18 08.9	-0.9
	comp=Z,46nm,0.5s						
MTLF	Montolieu	20.41	299	eP	P	09 18 08.9	-0.9
	comp=Z,23nm,0.5s						
MEZF	Maizieres J'vi	20.41	314	eP	P	09 18 09.7	-0.1
	comp=Z,88nm,0.7s,baz=132						
MEZF	Maizieres J'vi	20.41	314	eP	P	09 18 09.7	-0.1
	comp=Z,88nm,0.7s						
MEZF	Maizieres J'vi	20.41	314	eP	P	09 18 09.7	-0.1
	comp=Z,44nm,0.7s,baz=132						
AGO	Saint Agoulin	20.56	306	eP	P	09 18 11.1	-0.3
AGO	Saint Agoulin	20.56	306	eP	P	09 18 11.1	-0.3
AGO	Saint Agoulin	20.56	306	eP	P	09 18 11.1	-0.3
LOR	Lormes	20.57	310	eP	P	09 18 10.1	-1.4
	comp=Z,65nm,0.7s,baz=122						
LOR				eR			

MEM Membach 21.03 320 P **P** 09 18 16.7 +0.3
comp=Z,36nm,0.9s
MLS Moulis 21.14 297 *e*P **P** 09 18 17.0 -0.7
MLS Moulis 21.14 297 *e*P **P** 09 18 17.0 -0.7
MLS Moulis 21.14 297 *e*P **P** 09 18 17.0 -0.7
TCF Toulx Ste Croi 21.24 306 *e*P **P** 09 18 18.0 -0.8
comp=Z,31nm,0.6s
TCF Toulx Ste Croi 21.24 306 *e*P **P** 09 18 18.0 -0.8
TCF pmax pmax
comp=Z,31nm,0.6s
TCF Toulx Ste Croi 21.24 306 *e*P **P** 09 18 18.0 -0.8
comp=Z,31nm,0.6s
TCF Toulx Ste Croi 21.24 306 *e*P **P** 09 18 18.0 -0.8
comp=Z,15nm,0.6s
BCLA Clavier 21.29 319 P **P** 09 18 20.6 +1.5
comp=Z,22nm,1.2s
BCLA Clavier 21.29 319 P **P** 09 18 20.6 +1.5
comp=Z,22nm,1.2s
HYF Humbligny 21.33 309 *e*P **P** 09 18 19.5 -0.1
HYF Humbligny 21.33 309 *e*P **P** 09 18 19.5 -0.1
HYF Humbligny 21.33 309 *e*P **P** 09 18 19.5 -0.1
GIVF Givet 21.37 318 *e*P **P** 09 18 18.8 -1.2
comp=Z,33nm,0.6s
GIVF Givet 21.37 318 *e*P **P** 09 18 18.8 -1.2
GIVF pmax pmax
comp=Z,33nm,0.6s
GIVF Givet 21.37 318 *e*P **P** 09 18 18.8 -1.2
comp=Z,33nm,0.6s
GIVF Givet 21.37 318 *e*P **P** 09 18 18.8 -1.2
comp=Z,16nm,0.6s
RJF Les Rejaudoux 21.39 304 *e*P **P** 09 18 19.9 -0.5
comp=Z,47nm,0.6s
RJF *e*R
comp=Z,72nm,19.5s
RJF Les Rejaudoux 21.39 304 *e*P **P** 09 18 19.9 -0.5
RJF pmax pmax
comp=Z,47nm,0.6s
RJF Les Rejaudoux 21.39 304 *e*P **P** 09 18 19.9 -0.5
comp=Z,47nm,0.6s
RJF Les Rejaudoux 21.39 304 *e*P **P** 09 18 19.9 -0.5
comp=Z,24nm,0.6s
DOU Dourbes 21.49 318 P **P** 09 18 20.1 -1.3
comp=Z,18nm,1.1s
DOU Dourbes 21.49 318 P **P** 09 18 20.0 -1.3
comp=Z,18nm,1.1s
RESF Ens 21.66 296 *e*P **P** 09 18 24.1 +0.7
RESF Ens 21.66 296 *e*P **P** 09 18 24.1 +0.7
RESF Ens 21.66 296 *e*P **P** 09 18 24.1 +0.7
BAIF Baives 21.68 317 *e*P **P** 09 18 21.8 -1.6
BAIF Baives 21.68 317 *e*P **P** 09 18 21.8 -1.6
BAIF Baives 21.68 317 *e*P **P** 09 18 21.8 -1.6
BAIF Baives 21.68 317 *e*P **P** 09 18 21.8 -1.6
EPF Esparros 21.70 297 *e*P **P** 09 18 21.4 -2.3
comp=Z,20nm,0.6s
EPF Esparros 21.70 297 *e*P **P** 09 18 21.4 -2.3
EPF pmax pmax
comp=Z,20nm,0.6s
EPF Esparros 21.70 297 *e*P **P** 09 18 21.4 -2.3
comp=Z,20nm,0.6s
EPF Esparros 21.70 297 *e*P **P** 09 18 21.4 -2.3
comp=Z,10nm,0.6s
LFF La Frestale 21.82 302 *e*P **P** 09 18 24.8 -0.1
comp=Z,42nm,0.5s
LFF La Frestale 21.82 302 *e*P **P** 09 18 24.8 -0.1
LFF pmax pmax
comp=Z,42nm,0.5s
LFF La Frestale 21.82 302 *e*P **P** 09 18 24.8 -0.1
comp=Z,42nm,0.5s
LFF La Frestale 21.82 302 *e*P **P** 09 18 24.8 -0.1
comp=Z,21nm,0.5s
LLD Lille Linde 21.82 337 *e*P P 09 18 30.1 +5.3
LLD pmax pmax
comp=Z,49nm,0.9s
LLD Lille Linde 21.82 337 *i* P P 09 18 30.1 +5.3
comp=Z,49nm,0.8s
COP Copenhagen 22.05 338 *e*P P 09 18 32.5 +5.4
COP pmax pmax
comp=Z,18nm,0.7s
COP Copenhagen 22.05 338 *i* P P 09 18 32.5 +5.4
comp=Z,18nm,0.7s
ETSF Etsaut 22.33 296 *e*P **P** 09 18 30.0 -0.3
comp=Z,36nm,0.5s
ETSF Etsaut 22.33 296 *e*P **P** 09 18 30.0 -0.3
ETSF pmax pmax
comp=Z,36nm,0.5s
ETSF Etsaut 22.33 296 *e*P **P** 09 18 30.0 -0.3
comp=Z,36nm,0.5s
ETSF Etsaut 22.33 296 *e*P **P** 09 18 30.0 -0.3
comp=Z,18nm,0.5s
SJPF Ste Jean 22.84 297 *e*P **P** 09 18 34.1 -1.2
comp=Z,34nm,0.6s
SJPF Ste Jean 22.84 297 *e*P **P** 09 18 34.1 -1.2
SJPF pmax pmax
comp=Z,34nm,0.6s
SJPF Ste Jean 22.84 297 *e*P **P** 09 18 34.1 -1.2
comp=Z,34nm,0.6s
SJPF Ste Jean 22.84 297 *e*P **P** 09 18 34.1 -1.2
comp=Z,17nm,0.6s
TAM Tamanrasset 22.86 241 *e*P **P** 09 18 35.6 -0.2
TAM pmax pmax
comp=Z,15nm,0.8s
TAM Tamanrasset 22.86 241 *e*P **P** 09 18 35.6 -0.2
comp=Z,15nm,0.8s
TAM Tamanrasset 22.86 241 *e*P **P** 09 18 35.6 -0.2
comp=Z,15nm,0.8s
MFF Saint Martin d 22.89 306 *e*P **P** 09 18 34.3 -1.4
comp=Z,42nm,0.5s
MFF Saint Martin d 22.89 306 *e*P **P** 09 18 34.3 -1.4
MFF pmax pmax
comp=Z,42nm,0.5s
MFF Saint Martin d 22.89 306 *e*P **P** 09 18 34.3 -1.4
comp=Z,42nm,0.5s
MFF Saint Martin d 22.89 306 *e*P **P** 09 18 34.3 -1.4
comp=Z,21nm,0.5s
LDF La Druitiere 23.55 311 *e*P **P** 09 18 40.1 -1.7
comp=Z,48nm,0.5s
LDF La Druitiere 23.55 311 *e*P **P** 09 18 40.1 -1.7
LDF pmax pmax
comp=Z,48nm,0.5s
LDF La Druitiere 23.55 311 *e*P **P** 09 18 40.1 -1.7
comp=Z,48nm,0.5s
LDF La Druitiere 23.55 311 *e*P **P** 09 18 40.1 -1.7
comp=Z,24nm,0.5s
MUD Monsted U'grnd 23.74 335 *e*P **P** 09 18 44.4 +1.0
MUD pmax pmax
comp=Z,5.0nm,0.7s
MUD Monsted U'grnd 23.74 335 *i* P **P** 09 18 44.4 +1.0
comp=Z,5.2nm,0.7s
MUD Monsted U'grnd 23.74 335 *e*P **P** 09 18 44.4 +1.0
comp=Z,5.0nm,0.7s
FLN La Foliniere 23.84 311 *e*P **P** 09 18 42.8 -1.6
comp=Z,143nm,0.8s,baz=119
FLN *e*R
comp=Z,52nm,17.2s
FLN La Foliniere 23.84 311 *e*P **P** 09 18 42.8 -1.6
FLN pmax pmax
comp=Z,143nm,0.8s
FLN La Foliniere 23.84 311 *e*P **P** 09 18 42.8 -1.6
comp=Z,143nm,0.8s
FLN La Foliniere 23.84 311 *e*P **P** 09 18 42.8 -1.6
comp=Z,72nm,0.8s,baz=119
GRR Gorron 23.93 310 *e*P **P** 09 18 44.1 -1.1
comp=Z,80nm,0.5s
GRR Gorron 23.93 310 *e*P **P** 09 18 44.1 -1.1
GRR pmax pmax
comp=Z,80nm,0.5s
GRR Gorron 23.93 310 *e*P **P** 09 18 44.1 -1.1
comp=Z,80nm,0.5s
GRR Gorron 23.93 310 *e*P **P** 09 18 44.1 -1.1
comp=Z,40nm,0.5s
ESDC Sonseca Array 24.69 288 P **P** 09 18 52.6 +0.3
ESDC ScP **ScP** 09 25 53.9 -0.8
ESDC Sonseca Array 24.69 288 P **P** 09 18 52.6 +0.3
comp=Z,15nm,0.5s,baz=81,slow=9.3,SNR=96
ESDC ScP **ScP** 09 25 53.9 -0.8
comp=Z,0.4nm,0.3s,baz=56,slow=1.9,SNR=4.5
ESDC Sonseca Array 24.69 288 P **P** 09 18 52.6 +0.3
SGMF Saint Gilles 24.95 309 *e*P **P** 09 18 53.5 -1.0
comp=Z,47nm,0.7s
SGMF Saint Gilles 24.95 309 *e*P **P** 09 18 53.5 -1.0
SGMF pmax pmax
comp=Z,47nm,0.7s
SGMF Saint Gilles 24.95 309 *e*P **P** 09 18 53.5 -1.0
comp=Z,47nm,0.7s
SGMF Saint Gilles 24.95 309 *e*P **P** 09 18 53.5 -1.0
comp=Z,23nm,0.7s
PAB San Pablo 24.99 288 *e*P **P** 09 18 54.9 -0.2
PAB pmax pmax
comp=Z,24nm,1.0s
PAB San Pablo 24.99 288 *e*P **P** 09 18 54.9 -0.2
comp=Z,24nm,1.0s
PAB San Pablo 24.99 288 *e*P **P** 09 18 54.9 -0.2
comp=Z,24nm,1.0s
JSA Saint Aubin 25.03 311 *e*P **P** 09 18 53.9 -1.3
JSA AMB AMB 09 18 58.0
comp=Z,43nm,1.2s
JSA Saint Aubin 25.03 311 P **P** 09 18 53.9 -1.3
JSA AMB AMB 09 18 58.0
comp=Z,43nm,1.2s
JSA Saint Aubin 25.03 311 *e*P **P** 09 18 53.9 -1.3
QUIF Quistinic 25.24 307 *e*P **P** 09 18 56.3 -0.8
comp=Z,42nm,0.5s
QUIF Quistinic 25.24 307 *e*P **P** 09 18 56.3 -0.8
QUIF pmax pmax
comp=Z,42nm,0.5s
QUIF Quistinic 25.24 307 *e*P **P** 09 18 56.3 -0.8
comp=Z,42nm,0.5s
QUIF Quistinic 25.24 307 *e*P **P** 09 18 56.3 -0.8
comp=Z,21nm,0.5s
SKP1 Kophill 25.27 317 *e*P **P** 09 18 55.1 -2.2
SKP1 Kophill 25.27 317 P **P** 09 18 55.1 -2.2
SKP1 Kophill 25.27 317 *e*P **P** 09 18 55.1 -2.2
WOL Wolverton 25.31 316 *e*P **P** 09 18 56.1 -1.7
WOL AMB AMB 09 18 57.0
comp=Z,51nm,0.7s
WOL Wolverton 25.31 316 P **P** 09 18 56.1 -1.7
WOL AMB AMB 09 18 57.0
comp=Z,51nm,0.7s
WOL Wolverton 25.31 316 *e*P **P** 09 18 56.1 -1.7
ROSF Rostrenen 25.43 308 *e*P **P** 09 18 57.1 -1.8
comp=Z,41nm,0.8s
ROSF Rostrenen 25.43 308 *e*P **P** 09 18 57.1 -1.8
ROSF pmax pmax
comp=Z,41nm,0.8s
ROSF Rostrenen 25.43 308 *e*P **P** 09 18 57.1 -1.8
comp=Z,41nm,0.8s
ROSF Rostrenen 25.43 308 *e*P **P** 09 18 57.1 -1.8
comp=Z,21nm,0.8s
FINES FINESS Array B 25.44 359 P **P** 09 18 57.9 -0.9
FINES PcP **PcP** 09 22 27.6 0.0
FINES S **S** 09 23 13.2 -3.8
FINES ScP **ScP** 09 25 54.6 -1.7
FINES FINESS Array B 25.44 359 P **P** 09 18 57.9 -0.9
comp=Z,5.9nm,0.4s,baz=169,slow=10,SNR=9.2
FINES PcP **PcP** 09 22 27.6 0.0
comp=Z,2.7nm,0.5s,baz=151,slow=1.5,SNR=4.7
FINES S **S** 09 23 13.2 -3.8
comp=Z,2.7nm,0.8s,baz=167,slow=14,SNR=2.8
FINES ScP **ScP** 09 25 54.6 -1.7
comp=Z,1.7nm,0.5s,baz=183,slow=2.5,SNR=4.0
FINES FINESS Array B 25.44 359 P **P** 09 18 57.9 -0.9
HFS Hagfors 25.61 344 P **P** 09 18 58.5 -1.9
HFS Hagfors 25.61 344 P **P** 09 18 58.5 -1.9
comp=Z,5.0nm,0.4s,baz=155,slow=11,SNR=22
HFS LR LR 09 29 11.0
comp=Z,74nm,18.4s,baz=136,slow=36
HFS Hagfors 25.61 344 P **P** 09 18 58.5 -1.9
LIJA Lijar 26.05 282 *i* P **P** 09 19 03.0 -1.6
MDT Midelt 26.25 272 P **P** 09 19 07.3 +0.7
MDT Midelt 26.25 272 P **P** 09 19 07.3 +0.7
comp=Z,8.1nm,0.8s,baz=99,slow=7.8,SNR=6.0
MDT LR LR 09 31 48.2
comp=Z,68nm,18.4s,baz=275,slow=41
MDT Midelt 26.25 272 P **P** 09 19 07.3 +0.7
AKTK Aktyubinsk 26.53 47 P **P** 09 19 08.8 0.0
AKTO Aktyubinsk 26.53 47 P **P** 09 19 08.8 0.0
AKTO Aktyubinsk 26.53 47 P **P** 09 19 08.8 0.0
AKTO ScP **ScP** 09 25 58.0 -1.8
AKTO Aktyubinsk 26.53 47 P **P** 09 19 08.8 0.0
comp=Z,7.6nm,0.7s,baz=250,slow=12,SNR=28
AKTO ScP **ScP** 09 25 57.9 -1.8
comp=Z,6.7nm,1.0s,baz=236,slow=2.4,SNR=7.1
AKTO Aktyubinsk 26.53 47 P **P** 09 19 08.8 0.0
MCH1 Michaelchurch 26.61 316 *e*P **P** 09 19 06.9 -2.5
MCH1 AMB AMB 09 19 13.1
comp=Z,42nm,3.4s
MCH1 Michaelchurch 26.61 316 P **P** 09 19 06.9 -2.5
MCH1 AMB AMB 09 19 13.1
comp=Z,42nm,3.4s
MCH1 Michaelchurch 26.61 316 *e*P **P** 09 19 06.9 -2.5
HEX Exmoor 26.69 314 *e*P **P** 09 19 09.4 -0.8
HEX Exmoor 26.69 314 P **P** 09 19 09.4 -0.8
HEX Exmoor 26.69 314 *e*P **P** 09 19 09.4 -0.8
HLM1 Long Mynd 26.77 317 *e*P **P** 09 19 08.5 -2.4
HLM1 AMB AMB 09 19 18.9
comp=Z,47nm,2.0s
HLM1 Long Mynd 26.77 317 P **P** 09 19 08.5 -2.4
HLM1 AMB AMB 09 19 18.9
comp=Z,47nm,2.0s
HLM1 Long Mynd 26.77 317 *e*P **P** 09 19 08.5 -2.4
PBRG Braganca 26.80 293 *e*P **P** 09 19 11.5 +0.2
comp=Z,31nm,1.1s
PBRG Braganca 26.80 293 *e*P **P** 09 19 11.5 +0.2
comp=Z,31nm,1.1s
NAO01 NORSAR Array S 26.89 342 *e*P **P** 09 19 09.7 -2.2
comp=Z,16nm,0.8s
NAO01 NORSAR Array S 26.89 342 *e*P **P** 09 19 09.6 -2.2
comp=Z,16nm,0.8s
NB2 NORSAR Subarra 26.98 343 P **P** 09 19 10.4 -2.3
comp=Z,18nm,1.4s,baz=151,slow=9.3
NB2 NORSAR Subarra 26.98 343 P **P** 09 19 10.4 -2.3
comp=Z,18nm,1.4s,baz=151,slow=9.0,SNR=5.0
NOA NORSAR Array B 26.98 343 P **P** 09 19 10.8 -1.9
NOA pP **pP** 09 19 35.6 -2.0
NOA ScP **ScP** 09 25 59.5 -1.4
NOA NORSAR Array B 26.98 343 P **P** 09 19 10.8 -1.9
comp=Z,1.8nm,0.6s,baz=151,slow=8.2,SNR=15
NOA pP **pP** 09 19 35.6 -2.0
comp=Z,6.1nm,0.9s,baz=147,slow=11,SNR=8.1
NOA ScP **ScP** 09 25 59.5 -1.4
comp=Z,2.9nm,0.8s,baz=135,slow=4.2,SNR=4.3
NOA LR LR 09 31 34.9
comp=Z,52nm,18.1s,baz=180,slow=40
NOA NORSAR Array B 26.98 343 P **P** 09 19 10.8 -1.9
MVO Moncorvo 27.01 291 *e*P **P** 09 19 13.3 +0.1
comp=Z,33nm,0.7s
MVO Moncorvo 27.01 291 *e*P **P** 09 19 13.3 +0.1
comp=Z,33nm,0.7s
HTL Hartland 27.07 313 *e*P **P** 09 19 12.4 -1.1
HTL AMB AMB 09 19 19.2
comp=Z,52nm,3.0s
HTL Hartland 27.07 313 P **P** 09 19 12.4 -1.1
HTL AMB AMB 09 19 19.2
comp=Z,52nm,3.0s
HTL Hartland 27.07 313 *e*P **P** 09 19 12.4 -1.1
FOEL Foel Wylfa 27.11 318 *e*P **P** 09 19 12.6 -1.3
FOEL AMB AMB 09 19 13.9
comp=Z,19nm,1.0s
FOEL Foel Wylfa 27.11 318 P **P** 09 19 12.6 -1.3
FOEL AMB AMB 09 19 13.9
comp=Z,19nm,1.0s
FOEL Foel Wylfa 27.11 318 *e*P **P** 09 19 12.6 -1.3
AB31 Akbulak array 27.33 51 P **P** 09 19 15.8 -0.1
AB31 pmax pmax
comp=Z,3.0nm,0.7s
AB31 Akbulak array 27.33 51 P **P** 09 19 15.8 -0.1
comp=Z,3.0nm,0.7s
ABKAR Akbulak array 27.33 51 *e*P **P** 09 19 16.0 +0.1
ABKAR Akbulak array 27.33 51 *e*P **P** 09 19 16.0 +0.1
PMRV Marv??o 27.35 288 *e*P **P** 09 19 15.7 -0.5
comp=Z,24nm,1.7s
PMRV Marv??o 27.35 288 *e*P **P** 09 19 15.7 -0.5
comp=Z,24nm,1.7s
PCBR Castelo Branco 27.39 288 *e*P **P** 09 19 17.1 +0.5
comp=Z,29nm,1.9s
PCBR Castelo Branco 27.39 288 *e*P **P** 09 19 17.1 +0.5
comp=Z,29nm,1.9s
POLO Lamas de Olo 27.59 292 *e*P **P** 09 19 18.6 +0.2
POLO Lamas de Olo 27.59 292 *e*P **P** 09 19 18.6 +0.2
WPM1 Penmaenmawr 27.65 318 *e*P **P** 09 19 16.8 -1.9
WPM1 Penmaenmawr 27.65 318 P **P** 09 19 16.8 -1.9
WPM1 Penmaenmawr 27.65 318 *e*P **P** 09 19 16.8 -1.9
PVIS Viseu 27.67 290 *e*P **P** 09 19 19.7 +0.6
comp=Z,35nm,1.1s
PVIS Viseu 27.67 290 *e*P **P** 09 19 19.7 +0.6
comp=Z,35nm,1.1s
PVAQ Vaqueiros 27.81 283 *e*P **P** 09 19 20.1 -0.2
comp=Z,57nm,1.1s
PVAQ Vaqueiros 27.81 283 *e*P **P** 09 19 20.1 -0.2
comp=Z,57nm,1.1s
PBEJ Beja 27.85 285 *e*P **P** 09 19 20.7 0.0
comp=Z,24nm,1.6s
PBEJ Beja 27.85 285 *e*P **P** 09 19 20.7 0.0
comp=Z,24nm,1.6s
EVO Evora 27.91 286 *e*P **P** 09 19 21.6 +0.4
comp=Z,8.6nm,0.5s
EVO *e*R
comp=Z,66nm,17.6s
EVOP Sao Brissos 28.00 286 *e*P **P** 09 19 21.6 -0.3
EVOP pmax pmax
comp=Z,9.0nm,0.5s
EVOP Sao Brissos 28.00 286 *e*P **P** 09 19 21.6 -0.3
comp=Z,8.6nm,0.5s
EVOP Sao Brissos 28.00 286 *e*P **P** 09 19 21.6 -0.3
comp=Z,4.3nm,0.5s
PBDV Barranco-do-Ve 28.00 283 *e*P **P** 09 19 22.2 +0.1
comp=Z,67nm,1.6s
PBDV Barranco-do-Ve 28.00 283 *e*P **P** 09 19 22.2 +0.1
comp=Z,67nm,1.6s
PCVE Castro Verde 28.03 284 *e*P **P** 09 19 22.0 -0.3
comp=Z,29nm,1.1s
PCVE Castro Verde 28.03 284 *e*P **P** 09 19 22.0 -0.3
comp=Z,29nm,1.1s
EKA Eskdalemuir Ar 28.25 323 P **P** 09 19 22.2 -1.7
EKA pP **pP** 09 19 48.6 -0.4
EKA Eskdalemuir Ar 28.25 323 P **P** 09 19 22.2 -1.7
comp=Z,1.9nm,0.4s,baz=131,slow=10,SNR=4.9
EKA pP **pP** 09 19 48.6 -0.4
comp=Z,14nm,0.7s,baz=114,slow=9.7,SNR=6.0
EKA Eskdalemuir Ar 28.25 323 P **P** 09 19 22.3 -1.7
PTEO Sao Teotonio 28.58 284 *e*P **P** 09 19 27.6 +0.4
PTEO Sao Teotonio 28.58 284 *e*P **P** 09 19 27.6 +0.4
APA Apatity 31.80 5 *i*P **P** 09 19 54.0 -1.1
APA *i* S S 09 24 50.0 -6.6
APA MLR MLR
comp=Z,400nm,16.0s
TOA0 Torodi Ar. Sit 32.23 231 *e*P **P** 09 19 59.6 +0.1
TORD Torodi Ar. Bea 32.23 231 P **P** 09 19 59.9 +0.4
TORD S **S** 09 25 03.4 -1.0
TORD ScP **ScP** 09 26 18.1 -0.4
TORD Torodi Ar. Bea 32.23 231 P **P** 09 19 59.9 +0.4
comp=Z,32nm,0.7s,baz=37,slow=9.3,SNR=272
TORD S **S** 09 25 03.4 -1.0
comp=Z,0.9nm,0.8s,baz=47,slow=14,SNR=3.9
TORD ScP **ScP** 09 26 18.1 -0.4
comp=Z,1.6nm,1.0s,baz=33,slow=3.2,SNR=4.0
TORD LR LR 09 34 51.2
comp=Z,101nm,18.6s,baz=10.0,slow=39
ARCES ARCESS Array B 33.57 359 P **P** 09 20 09.4 -1.3
ARCES PcP **PcP** 09 22 47.4 -0.9
ARCES S **S** 09 25 21.6 -2.6
ARCES ScP **ScP** 09 26 20.6 -1.6
ARCES ARCESS Array B 33.57 359 P **P** 09 20 09.4 -1.3
comp=Z,3.0nm,0.7s,baz=174,slow=9.3,SNR=15
ARCES PcP **PcP** 09 22 47.4 -0.9
comp=Z,2.1nm,0.6s,baz=180,slow=3.6,SNR=3.5
ARCES S **S** 09 25 21.6 -2.6
comp=Z,1.2nm,0.6s,baz=179,slow=14,SNR=3.5
ARCES ScP **ScP** 09 26 20.6 -1.6
comp=Z,2.3nm,0.9s,baz=134,slow=3.5,SNR=3.9
ZRNK Zerenda 33.80 47 P **P** 09 20 13.0 +0.2
ZRNK pmax pmax
comp=Z,20nm,0.7s
KK31 Karatay Array 33.94 64 P **P** 09 20 14.8 +0.6
KK31 pmax pmax
comp=Z,5.0nm,0.6s
KKAR Karatay Array 33.94 64 *e*P **P** 09 20 15.0 +0.8
KKAR Karatay Array 33.94 64 *e*P **P** 09 20 15.0 +0.8
KBL Kabul 34.12 80 *e*P **P** 09 20 16.5 +0.4
KBL pmax pmax
comp=Z,7.0nm,0.6s
KBL Kabul 34.12 80 *e*P **P** 09 20 16.5 +0.4
comp=Z,7.1nm,0.6s
VOSK Vostochnaya 34.93 47 P **P** 09 20 22.3 -0.2
VOSK pmax pmax
comp=Z,17nm,0.7s
AML Almayashu 36.36 66 P **P** 09 20 37.4 +2.1
SNR=14
EKS2 Erkin-Say 36.37 65 *e*P **P** 09 20 36.3 +1.2
EKS2 pmax pmax
comp=Z,19nm,1.0s
EKS2 Erkin-Say 36.37 65 *e*P **P** 09 20 36.3 +1.2
comp=Z,19nm,1.0s
EKS2 Erkin-Say 36.37 65 P **P** 09 20 36.3 +1.2
SNR=20
EKS2 Erkin-Say 36.37 65 *e*P **P** 09 20 36.3 +1.2
comp=Z,19nm,1.0s
USP Ospenovka 36.84 64 P **P** 09 20 39.2 +0.2
SNR=6.2
AAK Ala-Archa 36.90 65 *d* P **P** 09 20 40.7 +1.0
AAK pmax pmax
comp=Z,79nm,1.2s
AAK Ala-Archa 36.90 65 *e*P **P** 09 20 40.5 +0.8
comp=Z,4.4nm,0.6s
AAK Ala-Archa 36.90 65 P **P** 09 20 40.0 +0.4
SNR=24
AAK Ala-Archa 36.90 65 *e*P **P** 09 20 40.5 +0.8
comp=Z,4.4nm,0.6s
FRU Bishkek 36.97 65 *e*P **P** 09 20 41.0 +0.9
FRU *e* 09 21 08.0
FRU pmax pmax
comp=Z,80nm,1.4s
FRU Bishkek 36.97 65 *e*P **P** 09 20 41.0 +0.9
comp=Z,80nm,1.4s
CHMS Chumysh 37.05 64 P **P** 09 20 42.1 +1.3
SNR=9.5
KBK Karagaybulak 37.23 65 P **P** 09 20 44.2 +1.8
SNR=8.4
KZA Kyzart 37.52 66 P **P** 09 20 46.9 +1.7
SNR=27
TKM2 Tokmak 2 37.67 64 *e*P **P** 09 20 46.9 +0.6
comp=Z,17nm,0.6s
TKM2 Tokmak 2 37.67 64 P **P** 09 20 47.4 +1.1
SNR=31
TKM2 Tokmak 2 37.67 64 *e*P **P** 09 20 46.9 +0.6
comp=Z,17nm,0.6s
KMBO Kilima Mbogo 38.17 163 P **P** 09 20 52.7 +2.0
KMBO Kilima Mbogo 38.17 163 P **P** 09 20 52.7 +2.0
comp=Z,3.4nm,0.8s,baz=358,slow=9.1,SNR=7.5
KMBO LR LR 09 36 21.5
comp=Z,85nm,20.3s,baz=36,slow=35
ULHL Ulahol 38.23 65 P **P** 09 20 52.8 +1.9
SNR=16
KSH Kashi 38.45 70 P **P** 09 20 52.1 -0.7
KSH *e*pP **pP** 09 21 17.1 -1.4
KSH *e*PP **PnPn** 09 22 26.3 +0.3
KSH *e*PcP **PcP** 09 23 05.3 +1.7
KSH S **S** 09 26 36.6 -3.0
KSH *e*ScP **ScP** 09 26 41.3 +0.3
KSH *e*PcS **PcS** 09 26 53.0 0.0
KSH *e*ScS **ScS** 09 30 50.1 -1.4
KSH pmax pmax
comp=Z,150nm,1.3s
KSH LR LR
comp=N,360nm,7.6s
KSH LR LR
comp=E,160nm,6.4s
KSH LR LR
comp=Z,160nm,4.3s
KURBB Kurchatov Arra 39.38 52 LR LR 09 39 46.7
comp=Z,41nm,19.9s,baz=295,slow=40
KURK Kurchatov 39.44 52 *d* P **P** 09 21 00.7 +0.1
KURK pmax pmax
comp=Z,26nm,0.7s
KURK Kurchatov 39.44 52 *e*P **P** 09 21 00.6 0.0
comp=Z,25nm,0.7s
KURK Kurchatov 39.44 52 *e*P **P** 09 21 00.6 0.0
comp=Z,25nm,0.7s
DBIC Dimbokro 41.31 233 *e*P **P** 09 21 16.1 -0.4
comp=Z,28nm,0.6s
DBIC PcP **PcP** 09 23 13.6 +0.7
DBIC Dimbokro 41.31 233 P **P** 09 21 16.8 +0.4
comp=Z,26nm,0.5s,baz=19,slow=11,SNR=60
DBIC PcP **PcP** 09 23 13.6 +0.7
comp=Z,4.9nm,0.6s,baz=21,slow=7.5,SNR=3.2
LIC Lamto 41.76 232 *e*P **P** 09 21 19.1 -1.0
comp=Z,65nm,0.7s
LIC Lamto 41.76 232 *e*P **P** 09 21 19.1 -1.0
comp=Z,65nm,0.7s
MKAR Makanchi Array 42.01 58 P **P** 09 21 22.4 +0.5
MKAR 09 23 15.2
MKAR Makanchi Array 42.01 58 P **P** 09 21 22.4 +0.5
MKAR PcP **PcP** 09 23 15.2 +0.3
MKAR ScP **ScP** 09 26 54.4 -0.2
MKAR Makanchi Array 42.01 58 P **P** 09 21 22.4 +0.5
comp=Z,52nm,0.5s,baz=276,slow=7.5,SNR=671
MKAR PcP **PcP** 09 23 15.2 +0.3
comp=Z,6.2nm,0.6s,baz=286,slow=3.4,SNR=5.3

MKAR					ScP	**ScP**	**09 26 54.4**	**-0.2**
	comp=Z,6.3nm,0.8s,baz=272,slow=4.4,SNR=15								
NVS	**Novosibirsk**	**42.39**	**45**	⇑	*i*P	**P**	**09 21 25.8**	**+1.1**
NVS					*i* S	**S**	**09 27 38.4**	**+1.1**
NVS					pmax	pmax			
	comp=N,6.0nm,0.5s								
NVS					pmax	pmax			
	comp=Z,23nm,0.5s								
NVS					pmax	pmax			
	comp=E,16nm,0.7s								
NVS					smax	smax			
	comp=N,20nm,1.3s								
NVS					smax	smax			
	comp=E,7.0nm,0.8s								
ZAA0	**Zalesovo Array**	**43.29**	**47**		*e*P	**P**	**09 21 32.0**	**0.0**	
ZALV	**Zalesovo Beam**	**43.29**	**47**		P	**P**	**09 21 31.8**	**-0.2**	
ZALV	**Zalesovo Beam**	**43.29**	**47**		P	**P**	**09 21 31.8**	**-0.2**	
ZALV	**Zalesovo Beam**	**43.29**	**47**		P	**P**	**09 21 31.8**	**-0.2**	
	comp=E,27nm,0.5s,baz=267,slow=8.4,SNR=93								
ZALV					LR	LR	09 40 02.0		
	comp=E,29nm,21.8s,baz=71,slow=37								
WMQ	**Urumqi**	**46.24**	**61**		P	**P**	**09 21 57.0**	**+1.3**	
WMQ					pP	**pP**	**09 22 22.8**	**+0.6**	
WMQ					PP	**PP**	**09 23 47.4**	**+1.5**	
WMQ					ScP	**ScP**	**09 27 12.6**	**+0.6**	
WMQ					PcS	**PcS**	**09 27 24.4**	**+0.3**	
WMQ					S	**S**	**09 28 34.8**	**+1.2**	
WMQ					SS	**SS**	**09 31 54.4**	**-5.6**	
WMQ					pmax	pmax			
	comp=Z,36nm,0.6s								
WMQ					pmax	pmax			
	comp=Z,110nm,6.0s								
WMQ					LR	LR			
	comp=N,59nm,22.2s								
WMQ					LR	LR			
	comp=E,44nm,25.0s								
WMQ					LR	LR			
	comp=Z,45nm,26.0s								
PYUN	**Piuthan**	**47.51**	**83**		*e*P	**P**	**09 22 06.7**	**+0.7**	
DANN	**Dangsing**	**48.03**	**82**		*e*P	**P**	**09 22 10.9**	**+0.9**	
	comp=Z,242nm,0.6s								
KOLN	**Koldanda**	**48.14**	**83**		*e*P	**P**	**09 22 11.1**	**+0.3**	
	comp=Z,46nm,0.3s								
SUMG	**Summit**	**48.72**	**339**		*e*P	**P**	**09 22 13.5**	**-1.4**	
SUMG					pmax	pmax			
	comp=Z,149nm,2.9s								
SUMG	**Summit**	**48.72**	**339**		*e*P	**P**	**09 22 13.5**	**-1.4**	
	comp=Z,148nm,2.9s								
SUMG	**Summit**	**48.72**	**339**		*i* P	**P**	**09 22 13.0**	**-1.9**	
	comp=Z,4.7nm,0.8s								
HVS	**Khovu-Aksy**	**48.92**	**50**	*c*	*i*P	**P**	**09 22 17.2**	**+0.9**	
HVS					pmax	pmax			
	comp=Z,63nm,0.7s								
HYB	**Hyderabad**	**49.01**	**98**		*i* P	**P**	**09 22 16.5**	**-0.9**	
DMN	**Daman**	**49.42**	**83**		*e*P	**P**	**09 22 21.1**	**+0.5**	
	comp=Z,95nm,0.6s								
KKN	**Kakani**	**49.48**	**82**		*e*P	**P**	**09 22 21.2**	**+0.1**	
	comp=Z,94nm,0.5s								
PKIN	**Phulchoki**	**49.67**	**82**		*e*P	**P**	**09 22 23.3**	**+0.8**	
	comp=Z,14nm,0.3s								
PKI	**Pulchoki**	**49.68**	**82**		*e*P	**P**	**09 22 22.8**	**+0.1**	
GUN	**Gumba**	**49.91**	**82**		*e*P	**P**	**09 22 24.7**	**+0.2**	
	comp=Z,56nm,0.5s								
RAMN	**Ramite**	**50.90**	**83**		*e*P	**P**	**09 22 31.4**	**-0.4**	
	comp=Z,50nm,0.6s								
LSZ	**Lusaka**	**51.04**	**179**		*e*P	**P**	**09 22 34.2**	**+1.6**	
ODAN	**Odare**	**51.58**	**82**		*e*P	**P**	**09 22 37.1**	**+0.3**	
	comp=Z,28nm,0.5s								
TAPN	**Taplejung**	**51.62**	**82**		*e*P	**P**	**09 22 37.1**	**-0.1**	
	comp=Z,46nm,0.5s								
LSA	**Lhasa**	**53.37**	**77**		P	**P**	**09 22 51.5**	**+1.2**	
LSA					pmax	pmax			
	comp=Z,30nm,0.6s								
TLY	**Talaya**	**54.88**	**48**		*e*P	**P**	**09 23 02.2**	**+1.8**	
TLY					*e*		09 30 45.8		
TLY					pmax	pmax			
	comp=Z,10.0nm,1.1s								
ZAK	**Zakamensk**	**55.02**	**49**		*e*P	**P**	**09 23 02.3**	**+0.8**	
ZAK					pmax	pmax			
	comp=Z,9.0nm,1.0s								
SHL	**Shillong**	**55.76**	**81**		*e*PKP	**P**	**09 23 07.5**	**+0.2**	
GTA	**Gaotai**	**56.20**	**63**		*e*P	**P**	**09 23 11.3**	**+1.1**	
GTA					pP	**pP**	**09 23 36.9**	**-0.7**	
GTA					S	**S**	**09 30 48.9**	**-2.0**	
GTA					pmax	pmax			
	comp=Z,18nm,1.0s								
GTA					pmax	pmax			
	comp=Z,92nm,5.2s								
GTA					LR	LR			
	comp=N,230nm,20.4s								
GTA					LR	LR			
	comp=E,200nm,18.0s								
GTA					LR	LR			
	comp=Z,400nm,18.5s								
SONM	**Songino Array**	**57.74**	**52**		P	**P**	**09 23 21.6**	**+0.6**	
SONM					pP	**pP**	**09 23 47.2**	**-1.3**	
SONM					PcP	**PcP**	**09 24 13.5**	**+1.0**	
SONM					ScP	**ScP**	**09 28 02.1**	**+0.3**	
SONM	**Songino Array**	**57.74**	**52**		P	**P**	**09 23 21.6**	**+0.6**	
	comp=Z,8.2nm,0.6s,baz=288,slow=7.7,SNR=78								
SONM					pP	**pP**	**09 23 47.2**	**-1.3**	
	comp=Z,1.7nm,0.5s,baz=284,slow=7.7,SNR=3.6								
SONM					PcP	**PcP**	**09 24 13.5**	**+1.0**	
	comp=Z,3.7nm,0.7s,baz=281,slow=5.4,SNR=6.1								
SONM					ScP	**ScP**	**09 28 02.1**	**+0.3**	
	comp=Z,1.1nm,0.9s,baz=271,slow=4.7,SNR=6.2								
ULN	**Ulaanbaatar**	**58.15**	**51**		P	**P**	**09 23 24.9**	**+1.1**	
	comp=Z,14nm,0.9s								
LZH	**Lanzhou**	**60.44**	**65**		*e*P	**P**	**09 23 41.3**	**+1.6**	
LZH					pP	**pP**	**09 24 11.3**	**+3.8**	
LZH					PcP	**PcP**	**09 24 27.1**	**+3.6**	
LZH					PP	**PP**	**09 25 58.6**	**+4.6**	
LZH					*e*S	**S**	**09 31 46.0**	**-0.1**	
LZH					pmax	pmax			
	comp=Z,26nm,1.0s								
LZH					pmax	pmax			
	comp=Z,120nm,5.7s								
LZH					LR	LR			
	comp=N,280nm,17.0s								
LZH					LR	LR			
	comp=E,280nm,15.1s								
LZH					LR	LR			
	comp=Z,480nm,19.1s								
CD2	**Chengdu**	**62.65**	**70**		P	**P**	**09 23 55.8**	**+1.3**	
CD2					pP	**pP**	**09 24 22.1**	**-0.3**	
CD2					PcP	**PcP**	**09 24 33.5**	**+1.1**	
CD2					PP	**PP**	**09 26 16.4**	**+3.0**	
CD2					PcS	**PcS**	**09 28 35.5**	**-0.5**	
CD2					S	**S**	**09 32 13.0**	**-0.9**	
CD2					SS	**SS**	**09 36 20.9**	**+1.0**	
CD2					pmax	pmax			
	comp=Z,50nm,0.5s								
CD2					pmax	pmax			
	comp=Z,100nm,4.5s								
CD2					LR	LR			
	comp=N,490nm,19.6s								
CD2					LR	LR			
	comp=E,490nm,22.5s								
CD2					LR	LR			
	comp=Z,350nm,20.6s								
SCHQ	**Schefferville**	**63.52**	**320**		P	**P**	**09 23 59.0**	**-0.9**	
SCHQ	**Schefferville**	**63.52**	**320**		P	**P**	**09 23 59.0**	**-0.9**	
	comp=Z,40nm,0.5s,baz=61,slow=5.2,SNR=238								
HHC	**Hu-ho-hao-te**	**63.88**	**57**		*e*P	**P**	**09 24 03.3**	**+0.8**	
HHC					PcP	**PcP**	**09 24 36.1**	**-1.2**	
HHC					PP	**PP**	**09 26 26.4**	**+2.4**	
HHC					ScP		09 28 27.9		
HHC					S	**S**	**09 32 28.1**	**-0.9**	
HHC					ScS	**SKSac**	**09 33 42.6**	**-2.9**	
HHC					SS	**SS**	**09 36 39.3**	**+0.5**	
HHC					pmax	pmax			
	comp=Z,61nm,0.8s								
HHC					pmax	pmax			
	comp=Z,170nm,4.0s								
HHC					LR	LR			
	comp=N,310nm,22.8s								
HHC					LR	LR			
	comp=E,340nm,19.2s								
HHC					LR	LR			
	comp=Z,490nm,24.0s								
BOSA	**Boshof**	**64.32**	**182**		P	**P**	**09 24 06.5**	**+1.1**	
BOSA	**Boshof**	**64.32**	**182**		P	**P**	**09 24 06.5**	**+1.1**	
	comp=Z,13nm,0.5s,baz=2.1,slow=7.0,SNR=34								
KMI	**Kunming**	**64.61**	**76**	⇑	P	**P**	**09 24 08.4**	**+0.7**	
KMI					pP	**pP**	**09 24 35.6**	**-0.2**	
KMI					PcP	**PcP**	**09 24 42.1**	**+1.4**	
KMI					PP	**PP**	**09 26 34.8**	**+3.9**	
KMI					PcS		09 28 45.3		
KMI					S	**S**	**09 32 38.0**	**-0.7**	
KMI					SS	**SS**	**09 36 52.4**	**+1.3**	
KMI					pmax	pmax			
	comp=Z,14nm,0.9s								
KMI					pmax	pmax			
	comp=Z,41nm,3.5s								
KMI					LR	LR			
	comp=N,230nm,13.0s								
KMI					LR	LR			
	comp=E,220nm,13.4s								
KMI					LR	LR			
	comp=Z,290nm,19.3s								
CHTO	**Chiang Mai**	**64.77**	**84**		P	**P**	**09 24 08.9**	**+0.4**	
	comp=Z,19nm,1.2s								
CMAR	**Chiang Mai Arr**	**64.95**	**85**		P	**P**	**09 24 09.6**	**-0.1**	
CMAR	**Chiang Mai Arr**	**64.95**	**85**		P	**P**	**09 24 09.6**	**-0.1**	
	comp=Z,15nm,0.8s,baz=300,slow=7.9,SNR=60								
XAN	**Xi'an**	**65.08**	**65**		P	**P**	**09 24 11.0**	**+0.6**	
XAN					pP	**pP**	**09 24 39.3**	**+0.8**	
XAN					pmax	pmax			
	comp=Z,7.0nm,0.7s								
XAN					LR	LR			
	comp=N,250nm,17.4s								
XAN					LR	LR			
	comp=Z,130nm,18.4s								
GYA	**Guiyang**	**67.02**	**73**		*e*P	**P**	**09 24 24.3**	**+1.3**	
GYA					pP	**pP**	**09 24 51.1**	**-0.2**	
GYA					PP	**PP**	**09 26 55.0**	**+3.2**	
GYA					ScP		09 28 43.4		
GYA					PcS		09 28 55.3		
GYA					S	**S**	**09 33 07.5**	**-0.2**	
GYA					SKS	**SKSac**	**09 34 06.5**	**-3.3**	
GYA					pmax	pmax			
	comp=Z,10.0nm,1.0s								
GYA					pmax	pmax			
	comp=Z,120nm,5.2s								
BJI	**Beijing**	**67.37**	**56**		P	**P**	**09 24 25.4**	**+0.6**	
BJI					S	**S**	**09 33 12.6**	**+1.3**	
BJI					SS	**SS**	**09 37 34.9**	**+2.1**	
BJI					pmax	pmax			
	comp=Z,46nm,0.6s								
BJI					pmax	pmax			
	comp=Z,56nm,4.0s								
BJI					LR	LR			
	comp=N,170nm,23.6s								
BJI					LR	LR			
	comp=E,180nm,17.3s								
BJI					LR	LR			
	comp=Z,290nm,30.5s								
CN2	**Changchun**	**71.45**	**49**		*e*P	**P**	**09 24 50.8**	**+0.9**	
CN2					epP	**pP**	**09 25 18.8**	**+0.3**	
CN2					esP	**sP**	**09 25 30.9**	**+0.1**	
CN2					*e*S	**S**	**09 33 57.5**	**-1.6**	
CN2					pmax	pmax			
	comp=Z,10.0nm,0.5s								
CN2					LR	LR			
	comp=N,200nm,15.0s								
CN2					LR	LR			
	comp=E,200nm,15.0s								
CN2					LR	LR			
	comp=Z,200nm,18.0s								
BILL	**Bilibino**	**71.84**	**15**	⇓	*i*P	**P**	**09 24 50.7**	**-1.1**	
BILL					*i*		09 25 12.1		
BILL					*i* *PP	**pP**	**09 25 21.2**	**+0.8**	
BILL					pmax	pmax			
	comp=Z,14nm,1.1s								
BILL	**Bilibino**	**71.84**	**15**		*i* P	**P**	**09 24 50.7**	**-1.1**	
	comp=Z,14nm,1.1s								
BILL	**Bilibino**	**71.84**	**15**		*i* PcP	**PcP**	**09 25 12.1**	**+2.1**	
KLR	**Kul'dur**	**72.10**	**42**		*e*P	P	09 24 50.0	-3.7	
SEY	**Seymchan**	**72.17**	**23**	⇑	*e*P	**P**	**09 24 54.3**	**+0.5**	
SEY	**Seymchan**	**72.17**	**23**		*e*P	**P**	**09 24 54.3**	**+0.5**	
QIZ	**Qiongzhong**	**73.38**	**78**		P	**P**	**09 25 02.8**	**+1.0**	
QIZ					S	**SKiKP**	**09 34 21.3**	**-0.1**	
QIZ					pmax	pmax			
	comp=Z,19nm,1.0s								
QIZ					pmax	pmax			
	comp=Z,50nm,8.9s								
KULM	**Kulim**	**73.65**	**95**		P	**P**	**09 25 03.6**	**+0.2**	
	comp=Z,36nm,0.8s								
PSI	**Prapat**	**73.72**	**99**		P	**P**	**09 25 04.3**	**+0.4**	
PSI	**Prapat**	**73.72**	**99**		P	**P**	**09 25 04.3**	**+0.4**	
	comp=Z,17nm,0.6s,baz=339,slow=9.7,SNR=4.9								
USRK	**Ussuriysk Arra**	**75.14**	**46**		P	**P**	**09 25 11.4**	**-0.1**	
	comp=Z,11nm,0.5s,baz=300,slow=4.7,SNR=41								
USRK					pP	**pP**	**09 25 39.3**	**-1.0**	
	comp=Z,4.7nm,0.6s,baz=300,slow=4.5,SNR=4.7								
KSAR	**Wonju Array Be**	**76.51**	**54**		P	**P**	**09 25 19.8**	**+0.3**	
KSAR					pP	**pP**	**09 25 47.1**	**-1.3**	
KSAR	**Wonju Array Be**	**76.51**	**54**		P	**P**	**09 25 19.8**	**+0.3**	
KSRS	**Korea Array**	**76.53**	**53**		P	**P**	**09 25 19.8**	**+0.2**	
	comp=Z,18nm,0.6s,baz=308,slow=4.5,SNR=78								
KSRS					pP	**pP**	**09 25 47.1**	**-1.4**	
	comp=Z,3.4nm,0.7s,baz=306,slow=5.1,SNR=2.9								
KSRS	**Korea Array**	**76.53**	**53**		P	**P**	**09 25 19.8**	**+0.2**	
	comp=Z,18nm,0.6s								
YKA	**Yellowknife Ar**	**77.08**	**343**		P	**P**	**09 25 20.7**	**-1.5**	
YKA	**Yellowknife Ar**	**77.08**	**343**		P	**P**	**09 25 20.7**	**-1.5**	
	comp=Z,0.4nm,0.5s,baz=33,slow=5.3,SNR=12								
YKA	**Yellowknife Ar**	**77.08**	**343**		P	**P**	**09 25 20.7**	**-1.5**	
ILAR	**Eielson Array**	**79.42**	**357**		P	**P**	**09 25 34.6**	**-0.4**	
ILAR					PKKPbc	**PKKPbc**	**09 44 22.6**	**-0.9**	
ILAR	**Eielson Array**	**79.42**	**357**		P	**P**	**09 25 34.6**	**-0.4**	
	comp=Z,0.3nm,0.4s,baz=329,slow=4.3,SNR=6.2								
ILAR					PKKPbc	**PKKPbc**	**09 44 22.6**	**-0.9**	
	comp=Z,0.6nm,0.7s,baz=240,slow=1.8,SNR=6.2								
ULM	**Lac du Bonnet**	**80.43**	**327**		P	**P**	**09 25 40.1**	**-0.6**	
ULM	**Lac du Bonnet**	**80.43**	**327**		P	**P**	**09 25 40.1**	**-0.6**	
	comp=Z,5.2nm,0.5s,baz=64,slow=7.0,SNR=5.4								
MAT	**Matsushiro**	**83.60**	**49**		P	**P**	**09 25 58.4**	**+0.8**	
MJAR	**Matsushiro Arr**	**83.60**	**49**		P	**P**	**09 25 58.4**	**+0.8**	
MJAR	**Matsushiro Arr**	**83.60**	**49**		P	**P**	**09 25 58.4**	**+0.8**	
	comp=Z,8.4nm,0.9s,baz=302,slow=4.2,SNR=13								
KSM	**Kuching**	**83.68**	**93**		P	**P**	**09 26 00.4**	**+2.1**	
A24A	**Westby**	**84.89**	**330**		P	**P**	**09 26 04.5**	**+0.5**	
	baz=84								
DGMT	**Dagmar**	**85.33**	**330**		P	**P**	**09 26 06.3**	**+0.2**	
	baz=85								
A22A	**Carney Farms,**	**85.60**	**331**		P	**P**	**09 26 07.7**	**+0.2**	
	baz=85								
B23A	**Brockton**	**85.65**	**330**		P	**P**	**09 26 08.2**	**+0.5**	
	baz=85								
C24A	**Savage**	**86.17**	**329**		P	**P**	**09 26 10.9**	**+0.6**	
	baz=86								
B22A	**Reddig Ranch S**	**86.19**	**331**		P	**P**	**09 26 10.9**	**+0.6**	
	baz=86								
C23A	**Lambert**	**86.26**	**330**		P	**P**	**09 26 11.3**	**+0.6**	
	baz=86								
D24A	**Glendive**	**86.45**	**329**		P	**P**	**09 26 12.5**	**+0.8**	
	baz=86								
A20A	**Cobblestone Ra**	**86.46**	**332**		P	**P**	**09 26 12.1**	**+0.4**	
	baz=86								
TIGA	**Tifton**	**86.57**	**307**		P	**P**	**09 26 13.2**	**+0.6**	
	baz=86								
C22A	**Vida**	**86.59**	**330**		P	**P**	**09 26 12.8**	**+0.4**	
	baz=86								
A19A	**Klindworth Far**	**86.73**	**333**		P	**P**	**09 26 13.3**	**+0.3**	
	baz=86								
C21A	**Desert Coulee**	**87.00**	**331**		P	**P**	**09 26 14.4**	**0.0**	
	baz=87								
A18A	**Metzger Ranch,**	**87.15**	**333**		P	**P**	**09 26 15.2**	**+0.2**	
	baz=87								
B19A	**Brinkman Farms**	**87.20**	**332**		P	**P**	**09 26 15.7**	**+0.4**	
	baz=87								
A17A	**Triple J Farms**	**87.43**	**334**		P	**P**	**09 26 15.8**	**-0.7**	
	baz=87								
C20A	**Veseth Ranch,**	**87.45**	**331**		P	**P**	**09 26 16.2**	**-0.4**	
	baz=87								
BDFB	**Brasilia**	**87.45**	**249**		P	**P**	**09 26 19.1**	**+2.0**	
BDFB	**Brasilia**	**87.45**	**249**		P	**P**	**09 26 19.0**	**+2.0**	
	comp=Z,5.1nm,0.5s,baz=65,slow=4.9,SNR=7.9								
F24A	**Ekalaka**	**87.51**	**328**		P	**P**	**09 26 16.9**	**-0.1**	
	baz=87								
B18A	**Beardsley Farm**	**87.56**	**333**		P	**P**	**09 26 17.4**	**+0.4**	
	baz=87								
D21A	**La Casta Ranch**	**87.58**	**331**		P	**P**	**09 26 17.1**	**-0.1**	
	baz=87								
A16A	**West Butte Ran**	**87.75**	**334**		P	**P**	**09 26 17.4**	**-0.6**	
	baz=87								
C19A	**Slack Wire Ran**	**87.83**	**332**		P	**P**	**09 26 18.7**	**+0.4**	
	baz=87								
EGMT	**Eagleton**	**87.86**	**333**		P	**P**	**09 26 19.2**	**+0.7**	
	baz=88								
F23A	**Volborg**	**88.02**	**329**		P	**P**	**09 26 19.5**	**+0.2**	
	baz=88								
B17A	**L&G Farms, Che**	**88.02**	**333**		P	**P**	**09 26 19.0**	**-0.2**	
	baz=88								
A15A	**Johnson Ranch,**	**88.12**	**335**		P	**P**	**09 26 19.3**	**-0.4**	
	baz=88								
B16A	**M & M Farms, S**	**88.24**	**334**		P	**P**	**09 26 19.8**	**-0.5**	
	baz=88								
A14A	**Double T Ranch**	**88.36**	**335**		P	**P**	**09 26 21.1**	**+0.2**	
	baz=88								
C17A	**Wharram Farm,**	**88.56**	**333**		P	**P**	**09 26 21.9**	**0.0**	
	baz=88								
B15A	**Bradely Ranch,**	**88.63**	**334**		P	**P**	**09 26 21.6**	**-0.5**	
	baz=88								
C16A	**Fuhringer Ranc**	**88.77**	**334**		P	**P**	**09 26 22.3**	**-0.6**	
	baz=88								
D17A	**Six Diamond Ra**	**88.93**	**333**		P	**P**	**09 26 23.3**	**-0.4**	
	baz=88								
D16A	**Dana Ranch, Ca**	**89.35**	**333**		P	**P**	**09 26 25.3**	**-0.3**	
	baz=89								
C14A	**Swan Lake**	**89.51**	**335**		P	**P**	**09 26 25.9**	**-0.4**	
	baz=89								
E17A	**Martinsdale**	**89.58**	**332**		P	**P**	**09 26 26.2**	**-0.6**	
	baz=89								
K25A	**Mack Ranch, Ha**	**89.82**	**326**		P	**P**	**09 26 28.0**	**+0.1**	
	baz=89								
C13A	**Hot Springs**	**89.87**	**335**		P	**P**	**09 26 28.5**	**+0.5**	
	baz=90								
F17A	**Fitzpatrick Pl**	**89.97**	**332**		P	**P**	**09 26 28.7**	**+0.1**	
	baz=90								
D14A	**Greenough**	**90.01**	**334**		P	**P**	**09 26 28.4**	**-0.3**	
	baz=90								
NEW	**Newport**	**90.20**	**337**		P	**P**	**09 26 29.8**	**+0.4**	
	baz=90								
D13A	**Huson**	**90.33**	**335**		P	**P**	**09 26 30.2**	**+0.1**	
	baz=90								
I21A	**Big Trails, Te**	**90.35**	**329**		P	**P**	**09 26 30.1**	**-0.3**	
	baz=90								
E14A	**Clinton**	**90.58**	**334**		P	**P**	**09 26 31.6**	**+0.2**	
	baz=90								
F15A	**Butte**	**90.71**	**333**		P	**P**	**09 26 32.1**	**+0.1**	
	baz=90								
K22A	**Casper**	**90.97**	**328**		P	**P**	**09 26 32.6**	**-0.7**	
	baz=91								
G16A	**Moss Hill, Enn**	**90.97**	**332**		P	**P**	**09 26 33.5**	**+0.3**	
	baz=91								
G15A	**Dillon**	**91.28**	**333**		P	**P**	**09 26 34.9**	**+0.2**	
	baz=91								
F13A	**Darby**	**91.42**	**334**		P	**P**	**09 26 35.2**	**-0.1**	
	baz=91								
O25A	**Wiggins**	**91.91**	**325**		P	**P**	**09 26 36.8**	**-0.9**	
	baz=92								
J18A	**Kendall Valley**	**91.97**	**330**		P	**P**	**09 26 37.6**	**-0.4**	
	baz=92								
I16A	**Newdale**	**91.99**	**331**		P	**P**	**09 26 37.5**	**-0.5**	
	baz=92								
H14A	**Leadore**	**92.08**	**333**		P	**P**	**09 26 37.7**	**-0.7**	
	baz=92								
PDAR	**Pinedale Array**	**92.15**	**330**		P	**P**	**09 26 37.5**	**-1.3**	
PDAR	**Pinedale Array**	**92.15**	**330**		P	**P**	**09 26 37.6**	**-1.3**	
	comp=Z,0.3nm,0.7s,baz=81,slow=5.6,SNR=4.5								
I14A	**Mackay**	**92.70**	**333**		P	**P**	**09 26 41.7**	**+0.5**	
	baz=92								
I13A	**Wildhorse Cree**	**92.95**	**333**		P	**P**	**09 26 42.7**	**+0.2**	
	baz=93								
R26A	**Arlington**	**93.02**	**323**		P	**P**	**09 26 43.8**	**+1.0**	
	baz=93								
MFID	**Camas Ranch**	**94.01**	**334**		P	**P**	**09 26 47.4**	**+0.2**	
	baz=94								
ASAR	**Alice Springs**	**116.70**	**101**		PKP	**PKPdf**	**09 32 13.2**	**+0.1**	
ASAR	**Alice Springs**	**116.70**	**101**		PKP	**PKPdf**	**09 32 13.2**	**+0.1**	
	comp=Z,3.0nm,0.7s,baz=316,slow=2.6,SNR=3.5								
PLCA	**Paso Flores**	**117.52**	**238**		PKP	**PKPdf**	**09 32 15.2**	**+1.0**	
PLCA	**Paso Flores**	**117.52**	**238**		PKP	**PKPdf**	**09 32 15.2**	**+1.0**	
	comp=Z,0.8nm,0.7s,baz=80,slow=7.5,SNR=3.3								

HEL 14 09:16:23.9±0.2, 59°29N×27°16E, h0km, ML2.2, Explosion, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**1.27**	**9**	*e*P	Pg	09 16 46.5	-1.6
VJF				*e*SB	Sg	09 17 03.6	-1.0
PVF	**Pernaja**	**1.42**	**333**	*e*P	Pn	09 16 49.4	-1.5
PVF				*e*S	Sg	09 17 07.5	-1.9
MEF	**Metsahovi**	**1.68**	**305**	*e*P	Pn	09 16 53.7	-0.8
MEF				*e*S	Sn	09 17 15.0	-1.7
MTSE	**Matsula**	**1.83**	**253**	*e*P	Pn	09 16 55.9	-0.6
MTSE				*e*S	Sn	09 17 19.9	-0.4
FIA0	**FINESS Array S**	**2.23**	**346**	*e*PB	Pn	09 17 02.6	+0.6
FIA0				*e*SB	Sn	09 17 30.7	+0.5
KAF	**Kangasniemi**	**2.86**	**352**	*e*P	Pn	09 17 11.4	+0.6
KAF				*e*S	Sn	09 17 45.0	-0.9
KEF	**Keuruu**	**3.10**	**340**	MSG		09 17 59.0	
	comp=Z,5.8nm,0.3s						
KEF				*e*SG	Sb	09 17 59.1	+1.0
RAF	**Rauma**	**3.21**	**305**	*e*P	Pn	09 17 16.2	+0.8
RAF				*e*SB	Sb	09 17 59.9	-1.4

BJI **14** *09:24:46.5, 0.89S×125.20E, h41km, mB5.0/31, mb5.3/50, Ms4.6/41, Ms7 4.2/41*
MOS **14** *09:24:50.5±1.2, 0.23S×124.92E, h33km, mb5.5/37, MS4.2/6, Error ellipse: s-maj=11.7km s-min=5.6km az=117.1*
NEIC **14** *09:24:51.2±1.9, 0.25S×124.96E, h26km±13km, mb5.2/46, Error ellipse: s-maj=6.5km s-min=4.4km az=70.0*
IDC **14** *09:24:52.2±2.0, 0.26S×125.00E, h33km±14km, mb4.9/33, mb1 4.9/35, mb1mx4.8/37, mbtmp4.8/35, ML4.4/2, MS4.1/18, Ms1 4.1/18, ms1mx3.8/37, Error ellipse: s-maj=14.5km s-min=8.0km az=73.0*
ISCJB **14** *09:24:53.8±0.4, 0.26S±0.02×125.07E±0.02, h61km±3km, mb5.2/122, Error ellipse: s-maj=3.6km s-min=3.4km az=42.4*
AUST **14** *09:24:56.5±0.2, 0.34S

baz=6.2,SNR=9.9
SWI S Sn 09 27 43.9 +10
baz=6.2,SNR=3.2
SPSI Sidrap Palu 6.44 235 P Pn 09 26 27.3 +0.8
426nm,0.7s,4µm1.3nm
SPSI S **Sn 09 27 40.9 +2.1**
426nm,0.7s,4µm1.3nm
BKSI Bulukumba 7.04 224 P Pn 09 26 37.1 +2.3
132nm,0.8s,2µm0.7nm
KAPI Kappang 7.10 228 *e*Pn Pn 09 26 32.8 -2.8
KAPI *e*Sn **Sn 09 27 53.2 -1.7**
KAPI Sn 09 27 54.5
KAPI Kappang 7.10 228 Pn Pn 09 26 36.0 +0.4
1µm,0.5s,SNR=7.9
KAPI Kappang 7.10 228 P Pn 09 26 37.4 +1.8
154nm,0.8s,1µm0.5nm
KAPI Kappang 7.10 228 Pn **Pn 09 26 34.6 -1.0**
9.0nm,0.3s,baz=52,slow=7.7,SNR=13
KAPI Sn **Sn 09 27 54.5 -0.4**
19nm,0.3s,baz=339,slow=10,SNR=4.3
DAV Davao City (W) 7.30 4 Pn Pn 09 26 42.6 +4.3
DAV Davao City (W) 7.30 4 Pn Pn 09 26 42.6 +4.3
50nm,0.3s,baz=65,slow=6.3,SNR=6.5
DAV LR LR 09 29 51.7
comp=Z,3µm,19.4s,baz=191,slow=41
BSSI Bau Bau, Buton 7.41 218 P Pn 09 26 44.3 +4.4
161nm,1.0s,2µm0.9nm
CTBH Cotabato--PC H 7.47 354 *i* P **Pn 09 26 43.1 +2.4**
FAKI Fak Fak 7.66 110 P Pn 09 26 42.0 -1.2
93nm,0.7s,1µm0.5nm
FAKI Fak Fak 7.66 110 P Pn 09 26 41.6 -1.7
baz=7.6,SNR=8.4
FAKI S **Sn 09 28 05.4 -3.4**
baz=7.6,SNR=6.3
SMKI Samarinda 7.85 269 P Pn 09 26 55.1 +9.2
379nm,0.9s,6µm1.2nm
TSM Tawau 8.48 302 P Pn 09 26 58.8 +4.3
MYLDM Lahad Datu 8.49 310 P Pn 09 26 56.8 +2.2
MYLDM Lahad Datu 8.49 310 P Pn 09 26 58.0 +3.4
285nm,1.1s,3µm
RKPI Ransiki, Papua 9.20 98 P Pn 09 27 13.6 +9.2
KBKI Kotabaru 9.38 251 P Pn 09 27 13.9 +7.0
166nm,1.1s,9µm
SDKM Sandakan 9.80 307 P Pn 09 27 15.2 +2.6
MTKI Muara Teweh, K 10.18 266 P Pn 09 27 28.2 +10
BBKI Banjar Baru 10.70 253 P Pn 09 27 30.5 +5.6
157nm,1.1s,5µm
KKM Kota Kinabalu 10.82 305 *e*Pn **Pn 09 27 23.9 -2.8**
KKM *e*Sn **Sn 09 29 24.1 -2.4**
KKM Kota Kinabalu 10.82 305 P Pn 09 27 36.8 +10
KHKI Kahang-Kahang 12.39 229 P P 09 28 02.0 +3.2
BTM Bintulu 12.45 286 P P 09 27 55.2 -4.3
SBUM Sibu 13.11 282 P P 09 28 04.9 -2.0
SBUM Sibu 13.11 282 P Pn 09 27 59.9 +2.0
71nm,1.0s
STKI Sintang 13.59 271 P Pn 09 28 07.6 +3.2
209nm,1.1s
MTN Manton Dam 13.88 155 P Pn 09 28 07.7 -0.6
baz=14,SNR=14
TGY Tagaytay City 14.84 344 Pn **P 09 28 24.4 -1.7**
TGY Tagaytay City 14.84 344 Pn **P 09 28 24.4 -1.7**
46nm,0.3s,baz=83,slow=17,SNR=2.1
KSM Kuching 14.85 277 *e*P **Pn 09 28 24.1 +2.9**
KSM Kuching 14.85 277 P P 09 28 27.7 +1.5
KSM Kuching 14.85 277 P P 09 28 25.3 -0.9
206nm,1.0s,2µm
KSM Kuching 14.85 277 P P 09 28 24.8 -1.3
baz=15,SNR=34
KSM S **S 09 31 23.0 +2.1**
baz=15,SNR=5.6
SJI Sawahan 15.19 240 P P 09 28 32.6 +2.6
188nm,1.3s,3µm
PWJI Pagerwojo 15.30 239 P P 09 28 33.2 +2.1
117nm,0.8s
KNRA Kununurra 15.75 167 P Pn 09 28 32.4 -0.5
baz=16,SNR=27
PCJI Pacitan 15.92 240 P P 09 28 42.6 +4.5
137nm,1.6s,3µm52µm
WOJI Wonogiri, Jawa 15.97 242 P P 09 28 44.3 +5.6
SMRI Semarang 16.06 245 P P 09 28 42.9 +3.2
332nm,0.9s
SMRI Semarang 16.06 245 P P 09 28 42.8 +3.2
baz=16,SNR=4.0
BJII Banjamegara 16.84 245 P P 09 28 50.5 +2.1
258nm,1.6s,4µm
TGJI Tegal 17.20 247 P P 09 28 55.9 +3.6
132nm,1.1s,6µm
TPI Tanjungpandan 17.57 262 P P 09 28 57.8 +1.4
35nm,0.9s,428nm
CLJI Cilicap 17.63 245 P P 09 28 58.3 +1.3
139nm,1.1s,2µm
FITZ Fitzroy Crossi 17.74 178 P Pn 09 28 55.9 -1.9
FITZ S **Sn 09 32 13.8 -0.9**
FITZ Fitzroy Crossi 17.74 178 P Pn 09 28 55.9 -1.9
0.8nm,0.3s,baz=18,slow=11,SNR=23
FITZ S **Sn 09 32 13.8 -0.9**
0.1nm,0.3s,baz=115,slow=15,SNR=2.8
FITZ LR LR 09 36 39.8
comp=Z,293nm,18.2s,baz=1.3,slow=40
FITZ Fitzroy Crossi 17.74 178 P Pn 09 28 57.3 -0.5
baz=18,SNR=12
LEM Lembang 18.58 249 P Pn 09 29 09.6 +1.3
271nm,0.9s,3µm
LEM Lembang 18.58 249 P Pn 09 29 10.0 +1.7
baz=19,SNR=5.3
CISI Cisompet, Garu 18.66 247 P P 09 29 09.4 +1.0
331nm,0.9s,4µm
CISI Cisompet, Garu 18.66 247 P Pn 09 29 09.9 +0.7
baz=19,SNR=3.4
PPBI Pangkal Pinang 19.01 264 P P 09 29 12.6 +0.4
76nm,1.0s,9µm
DBJI Dramaga 19.31 251 P P 09 29 16.7 +1.2
215nm,0.9s,3µm
SKJI Sukabumi 19.63 250 P Pn 09 29 24.7 +4.0
342nm,1.0s
SBJI Serang 19.77 253 P Pn 09 29 28.1 +5.8
174nm,1.2s
CGJI Cibinong 20.33 252 P Pn 09 29 29.2 +0.3
411nm,0.9s,3µm
KASI Kota Agung 21.18 255 P P 09 29 37.4 +1.6
187nm,1.2s,2µm
MYKOM Kota Tinggi 21.30 276 P P 09 29 38.8 +1.7
MBWA Marble Bar 21.41 194 *e*P **P 09 29 38.7 +0.5**
32nm,0.9s
WRAB Tennant Creek 21.57 156 *e*P **P 09 29 38.2 -1.7**
WRAB pmax pmax
comp=Z,64nm,1.0s
WRAB Tennant Creek 21.57 156 *e*P **P 09 29 38.2 -1.7**
comp=Z,64nm,1.0s
WRAB Tennant Creek 21.57 156 P P 09 29 38.0 -1.9
comp=Z,348nm,0.9s,SNR=27
WRA Warramunga Arr 21.57 156 P P 09 29 38.0 -1.9
WRA S **S 09 33 31.5 -5.0**
WRA ScP **ScP 09 37 15.3 +1.1**
WRA Warramunga Arr 21.57 156 P P 09 29 38.0 -1.9
comp=Z,10nm,0.5s,baz=334,slow=11,SNR=66
WRA S **S 09 33 31.5 -5.0**
comp=Z,1.7nm,0.8s,baz=331,slow=20,SNR=3.3
WRA ScP **ScP 09 37 15.3 +1.1**
comp=Z,3.5nm,0.9s,baz=334,slow=3.0,SNR=9.3
XMIS Christmas Isla 21.80 242 P P 09 29 43.3 +0.9
baz=22,SNR=9.2
XMIS S Sn 09 33 59.0 +6.2
baz=22,SNR=5.0
KGM Kluang 21.85 276 P P 09 29 45.3 +2.2
COEN Coen 22.51 128 P P 09 29 49.6 -0.4
baz=22,SNR=29
MASI Maura Aman, Be 22.98 263 P P 09 29 55.1 0.0
comp=Z,499nm,0.8s
TWG Pinlang 23.27 351 *e*P **P 09 29 56.8 -0.9**
comp=Z,80nm,0.7s
FRIM Kepong 23.68 279 P P 09 30 01.6 -0.2
YULB Yu-li 23.79 351 *e*P **P 09 30 00.5 -2.2**
comp=Z,46nm,1.5s
PMG Port Moresby 23.80 113 *e*P **P 09 30 03.1 +0.3**
PMG Port Moresby 23.80 113 P pP 09 30 13.9 -1.2
PMG Port Moresby 23.80 113 P P 09 30 02.2 -0.7
comp=Z,11nm,0.8s,baz=330,slow=14,SNR=4.5
TPUB Ta-pu 23.81 350 *e*P **P 09 30 00.7 -2.2**
comp=Z,72nm,0.8s
GUMO Guam 23.97 54 P P 09 30 03.7 -0.7
GUMO Guam 23.97 54 P P 09 30 03.7 -0.7
comp=Z,74nm,0.8s,baz=208,slow=15,SNR=2.9
BKNI Bangkinang 24.03 271 P P 09 30 06.0 +1.0
comp=Z,123nm,1.1s
SSLB Suanglung 24.23 351 *e*P **P 09 30 05.9 -0.8**
comp=Z,24nm,0.7s

QIZ Qiongzhong 24.30 323 P P 09 30 06.8 -0.6
QIZ sP **sP 09 30 22.3 -3.3**
QIZ S **S 09 34 23.1 -0.2**
QIZ pmax pmax
comp=Z,21nm,0.9s
QIZ pmax pmax
comp=Z,98nm,8.3s
QIZ LR LR
comp=N,280nm,14.8s
QIZ LR LR
comp=E,110nm,17.6s
QIZ LR LR
comp=Z,400nm,19.1s
IPM Ipoh 24.47 281 *e*P **P 09 30 08.3 -0.8**
comp=Z,38nm,0.8s
IPM Ipoh 24.47 281 P P 09 30 08.5 -0.5
IPM Ipoh 24.47 281 P P 09 30 08.2 -0.8
comp=Z,54nm,0.9s,comp=Z,608nm
GIRL Giralia 24.62 205 P P 09 30 11.7 +1.5
baz=25,SNR=3.4
PPI Padang Panjang 24.66 269 P P 09 30 10.0 -0.8
comp=Z,129nm,1.0s,comp=Z,6µm
QIS Mount Isa 24.69 146 P P 09 30 11.4 +0.5
baz=25,SNR=38
AS31 Alice Springs 24.80 160 *e*P **P 09 30 11.6 -0.3**
ASAR Alice Springs 24.80 160 P P 09 30 11.7 -0.3
ASAR PcP **PcP 09 33 48.4 +0.8**
ASAR S **S 09 34 31.4 0.0**
ASAR ScP **ScP 09 37 23.2 +0.4**
ASAR Alice Springs 24.80 160 P P 09 30 11.7 -0.3
comp=Z,22nm,1.0s,baz=339,slow=9.3,SNR=78
ASAR PcP **PcP 09 33 48.4 +0.8**
comp=Z,6.0nm,0.7s,baz=348,slow=1.9,SNR=12
ASAR S **S 09 34 31.4 0.0**
comp=Z,3.0nm,0.9s,baz=350,slow=22,SNR=5.6
ASAR ScP **ScP 09 37 23.2 +0.4**
comp=Z,2.2nm,0.9s,baz=344,slow=2.1,SNR=7.7
KULM Kulim 24.99 283 *e*P **P 09 30 12.7 -1.0**
comp=Z,108nm,1.7s
KULM Kulim 24.99 283 P P 09 30 12.9 -0.8
KULM Kulim 24.99 283 P P 09 30 13.1 -0.6
comp=Z,37nm,1.4s
MTSU Mount Surprise 25.96 134 P P 09 30 23.2 +0.7
baz=26,SNR=11
PSI Prapat 26.30 277 P P 09 30 24.1 -1.6
PSI Prapat 26.30 277 P P 09 30 25.0 -0.8
comp=Z,55nm,1.2s,comp=Z,5µm
PSI Prapat 26.30 277 P P 09 30 24.1 -1.6
comp=Z,38nm,1.0s,baz=128,slow=3.9,SNR=8.9
PSI Prapat 26.30 277 P P 09 30 24.4 -1.4
baz=26,SNR=8.7
MEEK Meekatharra 26.95 193 P P 09 30 30.7 -0.7
baz=27,SNR=4.4
JOW Kunigami 27.11 6 *e*P **P 09 30 33.6 +0.8**
comp=Z,118nm,0.8s
CTA Charters Tower 28.62 135 P P 09 30 45.2 -1.1
CTA Charters Tower 28.62 135 P P 09 30 45.2 -1.1
comp=Z,6.1nm,0.8s,baz=277,slow=6.6,SNR=3.4
MORW Morawa 29.91 196 P P 09 30 59.1 +1.4
baz=30,SNR=3.7
FORT Forrest 30.49 175 P P 09 31 03.3 +0.6
baz=31,SNR=9.2
BLDU Ballidu 31.21 194 P P 09 31 08.6 -0.5
baz=31,SNR=6.8
SSE Sheshan 31.40 354 P P 09 31 10.3 -0.4
SSE sP **sP 09 31 26.5 -2.5**
SSE S **S 09 36 16.3 +1.3**
SSE sS **sS 09 36 35.3 -0.9**
SSE pmax pmax
comp=Z,16nm,0.6s
SSE pmax pmax
comp=Z,170nm,12.0s
SSE LR LR
comp=N,240nm,23.5s
SSE LR LR
comp=E,89nm,23.5s
SSE LR LR
comp=Z,320nm,21.7s
CMAR Chiang Mai Arr 31.69 307 P P 09 31 12.9 -0.6
CMAR PcP **PcP 09 34 05.3 +0.6**
CMAR Chiang Mai Arr 31.69 307 P P 09 31 12.9 -0.6
comp=Z,7.7nm,0.9s,baz=140,slow=7.4,SNR=19
CMAR PcP **PcP 09 34 05.3 +0.6**
comp=Z,6.3nm,0.8s,baz=172,slow=2.0,SNR=16
CMAR LR LR 09 44 01.0
comp=Z,340nm,21.7s,baz=151,slow=36
CHTO Chiang Mai 31.89 308 *e*P **P 09 31 14.7 -0.5**
CHTO pmax pmax
comp=Z,38nm,1.1s
CHTO Chiang Mai 31.89 308 *e*P **P 09 31 14.7 -0.5**
comp=Z,38nm,1.1s
CHTO Chiang Mai 31.89 308 P P 09 31 14.9 -0.3
GYA Guiyang 31.94 328 P P 09 31 16.9 +1.2
GYA pP **pP 09 31 28.9 +0.6**
GYA PP **PnPn 09 32 23.0 +1.0**
GYA sS S 09 36 42.9 +19
GYA ScP **ScP 09 37 45.8 +0.8**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,720nm,17.8s
GYA LR LR
comp=E,660nm,18.4s
GYA LR LR
comp=Z,840nm,17.9s
QLP Quilpie 32.03 146 P P 09 31 16.8 +0.4
baz=32,SNR=5.0
WHN Wuhan 32.28 343 P P 09 31 20.4 +1.9
WHN S S 09 36 35.1 +6.3
WHN LR LR
comp=Z,870nm,28.2s
NJ2 Nanjing 32.67 350 *e*P P 09 31 25.3 +3.4
NJ2 pP pP 09 31 31.3 -3.2
NJ2 S **S 09 36 37.5 +2.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 pmax pmax
comp=Z,100nm,5.7s
NJ2 LR LR
comp=N,340nm,17.1s
NJ2 LR LR
comp=E,840nm,19.3s
NJ2 LR LR
comp=Z,470nm,16.7s
KMI Kunming 33.21 321 P P 09 31 27.9 +0.9
KMI pP **pP 09 31 39.8 +0.2**
KMI PP **PnPn 09 32 39.8 +1.4**
KMI S **S 09 36 43.6 -0.3**
KMI pmax pmax
comp=Z,11nm,1.4s
KMI pmax pmax
comp=Z,140nm,3.1s
KMI LR LR
comp=N,230nm,13.5s
KMI LR LR
comp=E,220nm,13.9s
KMI LR LR
comp=Z,290nm,16.9s
JNU Nakatsue 33.65 9 *e*P **P 09 31 29.7 -0.8**
comp=Z,30nm,0.8s
ENH Enshi 33.79 335 *e*P **P 09 31 31.5 -0.2**
comp=Z,20nm,0.8s
RMQ Roma 34.65 141 P P 09 31 40.8 +1.5
baz=35,SNR=4.4
STKA Stephens Creek 35.12 155 P P 09 31 43.6 +0.4
STKA ScP **ScP 09 37 56.4 +0.5**
STKA Stephens Creek 35.12 155 P P 09 31 43.6 +0.4
comp=Z,21nm,0.6s,baz=328,slow=8.2,SNR=34
STKA ScP **ScP 09 37 56.4 +0.5**
comp=Z,4.7nm,0.9s,baz=9.3,slow=1.0,SNR=3.5
STKA Stephens Creek 35.12 155 P P 09 31 43.7 +0.5
baz=35,SNR=43
CMSA Cobar Meteorol 36.73 150 P P 09 31 58.3 +1.3
baz=37,SNR=36
CD2 Chengdu 37.02 329 P P 09 31 59.8 +0.3
CD2 pP **pP 09 32 11.3 -0.9**
CD2 PP **PnPn 09 33 26.8 +1.6**
CD2 S **S 09 37 41.8 -0.1**
CD2 PcS **PcS 09 38 07.8 -0.3**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,90nm,4.7s
CD2 LR LR

comp=N,490nm,19.6s
CD2 LR LR
comp=E,490nm,22.5s
CD2 LR LR
comp=Z,350nm,20.5s
XAN Xi'an 37.33 338 P P 09 32 01.8 -0.3
XAN pP **pP 09 32 12.4 -2.4**
XAN pmax pmax
comp=Z,6.0nm,1.1s
XAN LR LR
comp=N,250nm,17.4s
XAN LR LR
comp=Z,130nm,18.4s
KSAR Wonju Array Be 37.60 4 P P 09 32 05.0 +0.8
KSAR PcP **PcP 09 34 22.0 +0.7**
KSRS Korea Array 37.62 4 P P 09 32 05.0 +0.7
comp=Z,30nm,0.9s,baz=179,slow=10,SNR=81
KSRS PcP **PcP 09 34 22.0 +0.7**
comp=Z,4.5nm,0.8s,baz=192,slow=3.1,SNR=8.5
KSRS LR LR 09 46 49.2
comp=Z,273nm,21.8s,baz=195,slow=35
MJAR Matsushiro Arr 38.60 17 P P 09 32 11.9 -0.9
MJAR PcP **PcP 09 34 25.6 +1.2**
MJAR Matsushiro Arr 38.60 17 P P 09 32 11.9 -0.9
comp=Z,15nm,0.7s,baz=195,slow=9.4,SNR=33
MJAR PcP **PcP 09 34 25.6 +1.2**
comp=Z,5.2nm,0.8s,baz=194,slow=2.7,SNR=5.4
MAJO Matsushiro 38.60 17 *e*P **P 09 32 12.1 -0.6**
MAJO pmax pmax
comp=Z,25nm,0.9s
MAJO Matsushiro 38.60 17 *e*P **P 09 32 12.1 -0.6**
comp=Z,25nm,0.9s
MAT Matsushiro 38.60 17 P P 09 32 11.7 -1.0
DL2 Dalian 39.10 356 P P 09 32 16.4 -0.5
DL2 S **S 09 38 11.3 -1.8**
DL2 pmax pmax
comp=Z,35nm,0.8s
DL2 pmax pmax
comp=Z,72nm,5.0s
DL2 LR LR
comp=N,290nm,27.0s
DL2 LR LR
comp=Z,150nm,22.6s
ARMA Armidale 39.21 142 P P 09 32 19.3 +1.2
baz=39,SNR=5.8
YNG Young 40.30 150 P P 09 32 28.6 +1.6
baz=40,SNR=15
BJT Baijiatuan 40.90 350 *e*P **P 09 32 31.9 +0.2**
comp=Z,32nm,0.8s
LZH Lanzhou 41.20 334 *e*P **P 09 32 36.1 +1.6**
LZH pP **pP 09 32 49.9 +2.5**
LZH sP **sP 09 32 54.3 +1.3**
LZH PP **PnPn 09 34 15.4 +0.3**
LZH PcP **PcP 09 34 34.8 +1.8**
LZH *e*S **S 09 38 46.0 +1.1**
LZH pmax pmax
comp=Z,72nm,1.0s
LZH pmax pmax
comp=Z,160nm,5.6s
LZH LR LR
comp=N,1µm,17.0s
LZH LR LR
comp=E,1µm,15.1s
LZH LR LR
comp=Z,1µm,19.1s
CAN Canberra 41.41 150 *e*P **P 09 32 37.7 +1.6**
comp=Z,28nm,0.9s
TOO Toolangi 41.64 155 P P 09 32 40.1 +2.1
baz=42,SNR=6.5
HHC Hu-ho-hao-te 42.72 345 *e*P **P 09 32 48.0 +1.2**
HHC PP **PP 09 34 31.4 +4.8**
HHC ScP **ScP 09 38 25.6 +0.6**
HHC S **S 09 39 08.8 +1.7**
HHC SS **SS 09 42 13.8 -5.4**
HHC ScS **ScS 09 42 43.8 -0.2**
HHC pmax pmax
comp=Z,42nm,1.1s
HHC pmax pmax
comp=Z,94nm,7.2s
HHC LR LR
comp=N,410nm,20.4s
HHC LR LR
comp=E,420nm,18.0s
HHC LR LR
comp=Z,590nm,25.2s
CN2 Changchun 43.87 0 *e*P **P 09 32 58.8 +3.0**
CN2 *e*S **S 09 39 27.1 +3.5**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 LR LR
comp=N,200nm,16.0s
CN2 LR LR
comp=E,200nm,16.0s
CN2 LR LR
comp=Z,200nm,21.0s
LSA Lhasa 43.96 316 *e*P **P 09 32 57.8 +0.4**
LSA pmax pmax
comp=Z,19nm,0.6s
LSA Lhasa 43.96 316 *e*P **P 09 32 57.8 +0.4**
comp=Z,19nm,0.6s
USRK Ussuriysk Arra 44.70 7 P P 09 33 02.6 +0.2
comp=Z,13nm,0.5s,baz=192,slow=6.9,SNR=24
USRK LR LR 09 51 45.8
comp=Z,138nm,21.6s,baz=346,slow=36
MDJ Mudanjiang 44.86 5 P P 09 33 04.3 +0.5
MDJ pmax pmax
comp=Z,37nm,0.8s
MDJ pmax pmax
comp=Z,110nm,3.7s
MDJ Mudanjiang 44.86 5 *e*P **P 09 33 03.7 -0.1**
comp=Z,25nm,0.8s
ODAN Odare 45.16 310 *e*P **P 09 33 06.5 -0.3**
comp=Z,49nm,0.7s
TAPN Taplejung 45.17 310 *e*P **P 09 33 05.5 -1.4**
comp=Z,48nm,0.8s
GTA Gaotai 45.74 333 *e*P **P 09 33 12.5 +1.5**
GTA pP **pP 09 33 24.6 +0.5**
GTA S **S 09 39 51.6 +0.3**
GTA SS **ScS 09 43 09.5 +6.2**
GTA pmax pmax
comp=Z,49nm,1.0s
GTA pmax pmax
comp=Z,110nm,5.2s
GTA LR LR
comp=N,230nm,20.4s
GTA LR LR
comp=E,200nm,16.4s
GTA LR LR
comp=Z,330nm,18.5s
DZM Mont Dzumac 45.76 121 *e*LR LR 09 46 06.7
comp=Z,329nm,24.7s
RAMN Ramite 45.82 309 *e*P **P 09 33 11.2 -0.8**
comp=Z,102nm,0.7s
GUN Gumba 46.85 310 *e*P **P 09 33 18.7 -1.5**
comp=Z,102nm,0.6s
PKI Pulchoki 47.05 309 *e*P **P 09 33 21.1 -0.6**
PKIN Phulchoki 47.06 309 *e*P **P 09 33 21.4 -0.3**
KKN Kakani 47.25 309 *e*P **P 09 33 22.5 -0.7**
comp=Z,19nm,0.4s
DMN Daman 47.30 309 *e*P **P 09 33 22.9 -0.7**
KOLN Koldanda 48.55 308 *e*P **P 09 33 32.0 -1.2**
comp=Z,130nm,0.8s
DANN Dangsing 48.70 309 *e*P **P 09 33 32.8 -1.6**
comp=Z,132nm,0.7s
HYB Hyderabad 49.02 293 *i* P **P 09 33 34.0 -2.8**
comp=Z,50nm,1.0s
PYUN Piuthan 49.18 309 *e*P **P 09 33 36.8 -1.2**
comp=Z,257nm,0.8s
HABR Khabarovsk 49.31 9 P P 09 33 36.5 -1.8
HABR *e**PP pP 09 33 45.9 -5.6
HABR *e**SP sP 09 33 50.1 -7.0
HABR *e*PPP PPP 09 36 22.4
HABR *e*S **S 09 40 40.6 -0.6**
HABR *e**SS sS 09 40 57.2 -6.0
HABR *e* 09 43 25.2
HABR *e*SSS SSS 09 45 32.5
HABR pmax pmax
comp=Z,74nm,1.9s
HABR pmax pmax
comp=N,62nm,1.9s
HABR pmax pmax
comp=E,30nm,1.2s
HABR MLR MLR
comp=Z,105nm,19.0s
HIA Hailar 49.55 355 *e*P **P 09 33 40.4 +0.1**
comp=Z,35nm,0.8s

KLR Kul'dur 49.63 6 eP P 09 33 36.9 -4.0
ULN Ulaanbaatar 50.43 344 eP P 09 33 45.8 -1.3
SONM Songino Array 50.58 344 P P 09 33 47.3 -0.9
SONM PcP PcP 09 35 04.4 -1.0
SONM Songino Array 50.58 344 P P 09 33 47.3 -0.9
comp=Z,29nm,0.9s,baz=157,slow=7.8,SNR=56
SONM PcP PcP 09 35 04.4 -1.0
comp=Z,4.1nm,0.9s,baz=153,slow=5.1,SNR=2.6
SONM LR LR 09 56 04.5
comp=Z,211nm,19.6s,baz=136,slow=37
ZAK Zakamensk 53.77 343 eP P 09 34 12.8 +1.0
ZAK e 09 35 17.9
ZAK pmax pmax
comp=Z,8.0nm,0.9s
TLY Talaya 54.82 344 eP P 09 34 19.6 +0.2
TLY pmax pmax
comp=Z,16nm,0.7s
TLY MLR MLR
comp=Z,127nm,21.0s
TLY Talaya 54.82 344 P P 09 34 18.2 -1.2
comp=Z,147nm,0.8s,SNR=7.5
WMQ Urumqi 55.10 328 P P 09 34 22.3 +0.7
WMQ pP pP 09 34 35.0 +0.1
WMQ PcP PcP 09 35 23.8 +1.3
WMQ PP PP 09 36 26.9 +1.6
WMQ ScP ScP 09 39 17.0 -0.4
WMQ S S 09 41 58.8 -2.2
WMQ ScS ScS 09 44 04.1 -2.8
WMQ pmax pmax
comp=Z,34nm,0.8s
WMQ pmax pmax
comp=Z,200nm,5.0s
WMQ LR LR
comp=N,220nm,12.8s
WMQ LR LR
comp=E,140nm,12.0s
WMQ LR LR
comp=Z,170nm,23.8s
MOY Mondy 55.59 342 eP P 09 34 26.5 +1.5
HVS Khovu-Aksy 57.69 337 i P P 09 34 39.1 -0.8
PEA0B Petropavlovsk- 59.73 22 eP P 09 34 54.9 +0.9
PETK Petropavlovsk- 59.73 22 P P 09 34 55.3 +1.3
PETK Petropavlovsk- 59.73 22 P P 09 34 55.3 +1.3
PETK Petropavlovsk- 59.73 22 P P 09 34 55.3 +1.3
comp=Z,24nm,0.8s,baz=186,slow=7.4,SNR=17
KSH Kashi 59.75 317 P P 09 34 56.3 +1.8
KSH epP pP 09 35 08.6 +0.6
KSH PcP PcP 09 35 42.1 +1.1
KSH PP PP 09 37 10.0 +3.1
KSH eScP ScP 09 39 38.0 -0.2
KSH ePcS PcS 09 39 43.3 0.0
KSH eS S 09 43 01.8 -0.6
KSH ScS ScS 09 44 38.8 -2.4
KSH eSS SS 09 47 00.5 +1.4
KSH pmax pmax
comp=Z,97nm,2.5s
KSH LR LR
comp=N,510nm,5.9s
KSH LR LR
comp=E,280nm,5.1s
KSH LR LR
comp=Z,140nm,4.5s
MK31 Makanchi Array 59.93 327 eP P 09 34 54.1 -1.4
MK31 Makanchi Array 59.93 327 eP P 09 34 54.0 -1.4
MKAR Makanchi Array 59.93 327 P P 09 34 54.0 -1.5
MKAR 09 35 41.3
MKAR Makanchi Array 59.93 327 P P 09 34 54.0 -1.5
MKAR PcP PcP 09 35 41.3 -0.1
MKAR Makanchi Array 59.93 327 P P 09 34 54.0 -1.5
comp=Z,22nm,0.5s,baz=125,slow=9.2,SNR=176
MKAR PcP PcP 09 35 41.3 -0.1
comp=Z,12nm,0.7s,baz=125,slow=5.1,SNR=8.7
MKAR LR LR 10 02 26.0
comp=Z,254nm,20.4s,baz=134,slow=38
ULHL Ulahol 60.93 320 P P 09 35 03.8 +1.1
SNR=7.2
KZA Kyzart 61.48 320 P P 09 35 08.1 +1.4
SNR=32
TKM2 Tokmak 2 61.68 321 eP P 09 35 06.5 -1.2
TKM2 pmax pmax
comp=Z,29nm,0.8s
TKM2 Tokmak 2 61.68 321 eP P 09 35 06.5 -1.2
comp=Z,29nm,0.8s
TKM2 Tokmak 2 61.68 321 P P 09 35 06.6 -1.2
SNR=44
KBK Karagaybulak 61.96 320 P P 09 35 11.2 +1.6
SNR=21
UCH Uchtor 62.03 320 P P 09 35 12.4 +2.0
SNR=6.0
YAK Yakutsk 62.23 2 eP P 09 35 10.0 -0.7
YAK e 09 35 48.3
YAK e 09 37 27.9
YAK ePPP PPP 09 38 54.3
YAK eS S 09 43 29.5 -3.3
YAK e*SS sS 09 44 08.1 +13
YAK e 09 44 52.8
YAK eSS SS 09 50 25.7
YAK pmax pmax
comp=Z,80nm,0.9s
YAK pmax pmax
comp=N,21nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=Z,55nm,2.8s
YAK pmax pmax
comp=N,17nm,1.9s
YAK pmax pmax
comp=E,44nm,2.5s
YAK smax smax
comp=N,89nm,2.6s
YAK smax smax
comp=E,101nm,2.5s
AAK Ala-Archa 62.24 320 c iP P 09 35 10.2 -1.2
AAK pmax pmax
comp=Z,65nm,0.8s
AAK MLR MLR
comp=Z,552nm,20.0s
AAK Ala-Archa 62.24 320 P P 09 35 10.6 -0.8
AAK PcP PcP 09 35 50.3 -0.7
AAK Ala-Archa 62.24 320 P P 09 35 13.1 +1.6
SNR=25
AAK Ala-Archa 62.24 320 P P 09 35 10.7 -0.8
comp=Z,187nm,0.9s,SNR=14
AAK Ala-Archa 62.24 320 P P 09 35 10.6 -0.8
comp=Z,20nm,0.8s,baz=126,slow=4.8,SNR=54
AAK PcP PcP 09 35 50.3 -0.7
comp=Z,9.3nm,0.7s,baz=178,slow=8.9,SNR=4.8
AAK LR LR 10 03 23.9
comp=Z,188nm,21.0s,baz=83,slow=37
CHMS Chumysh 62.26 320 P P 09 35 12.2 +0.8
SNR=5.6
AML Almayashu 62.52 319 P P 09 35 15.1 +1.6
SNR=33
USP Ospenovka 62.55 321 P P 09 35 14.3 +1.0
SNR=30
KBL Kabul 62.68 310 eP P 09 35 12.7 -1.9
KBL pmax pmax
comp=Z,33nm,1.0s
KBL Kabul 62.68 310 eP P 09 35 12.7 -1.9
comp=Z,33nm,1.0s
EKS2 Erkin-Say 62.72 320 eP P 09 35 13.9 -0.7
EKS2 pmax pmax
comp=Z,36nm,0.8s
EKS2 Erkin-Say 62.72 320 eP P 09 35 13.8 -0.7
comp=Z,36nm,0.8s
EKS2 Erkin-Say 62.72 320 P P 09 35 16.2 +1.7
SNR=30
ZAA0 Zalesovo Array 63.41 335 eP P 09 35 17.6 -1.2
ZALV Zalesovo Beam 63.41 335 P P 09 35 16.7 -2.0
ZALV Zalesovo Beam 63.41 335 P P 09 35 16.7 -2.0
ZALV Zalesovo Beam 63.41 335 P P 09 35 16.7 -2.0
comp=Z,13nm,0.6s,baz=121,slow=6.0,SNR=55
ZALV LR LR 10 03 24.7
comp=Z,138nm,19.8s,baz=250,slow=36
KURBB Kurchatov Arra 64.23 329 P P 09 35 22.6 -1.6
comp=Z,34nm,0.8s,baz=130,slow=6.0,SNR=142
KURBB PcP PcP 09 35 57.6 -1.1
comp=Z,11nm,0.9s,baz=123,slow=3.9,SNR=6.8
KURK Kurchatov 64.24 329 P P 09 35 22.4 -1.8
KURK pmax pmax
comp=Z,51nm,0.6s
KURK Kurchatov 64.24 329 P P 09 35 22.6 -1.7
KURK PcP PcP 09 35 57.6 -1.1
KURK Kurchatov 64.24 329 P P 09 35 22.9 -1.3
comp=Z,582nm,0.8s,SNR=76
NVS Novosibirsk 64.70 335 eP P 09 35 25.5 -1.6
NVS pmax pmax
comp=Z,31nm,0.9s
NVS pmax pmax
comp=N,10.0nm,0.7s
NVS pmax pmax
comp=E,12nm,0.7s
KK31 Karatay Array 65.05 319 i P P 09 35 28.4 -1.4
KK31 pmax pmax
comp=Z,18nm,0.8s
KKAR Karatay Array 65.05 319 eP P 09 35 28.4 -1.4
KKAR Karatay Array 65.05 319 eP P 09 35 28.4 -1.4
SEY Seymchan 66.27 13⇑eP P 09 35 38.2 +1.0
FX1 Attu Island--F 66.35 30 eP P 09 35 39.2 +1.3
VOSK Vostochnaya 69.31 328 P P 09 35 54.3 -2.3
VOSK pmax pmax
comp=Z,24nm,1.0s
BVA0 Borovoye Array 69.77 328 i P P 09 35 58.2 -1.2
BVA0 pmax pmax
comp=Z,4.0nm,0.9s
BVAR Borovoye Array 69.77 328 P P 09 35 57.6 -1.8
BVAR Borovoye Array 69.77 328 P P 09 35 57.6 -1.8
BVAR Borovoye Array 69.77 328 P P 09 35 57.6 -1.8
comp=Z,21nm,0.8s,baz=126,slow=7.5,SNR=55
BRVK Borovoye 69.85 328 eP P 09 35 58.6 -1.2
BRVK pmax pmax
comp=Z,40nm,0.9s
BRVK Borovoye 69.85 328 eP P 09 35 58.6 -1.2
comp=Z,40nm,0.9s
BRVK Borovoye 69.85 328 P P 09 35 58.4 -1.4
comp=Z,232nm,0.7s,SNR=11
ZRNK Zerenda 70.47 328 P P 09 36 01.7 -2.0
ZRNK pmax pmax
comp=Z,36nm,0.7s
BILL Bilibino 73.81 15⇓iP P 09 36 23.6 +0.3
BILL pmax pmax
comp=Z,27nm,1.1s
BILL Bilibino 73.81 15 P P 09 36 22.9 -0.5
comp=Z,7.0nm,0.6s
ABKAR Akbulak array 74.20 322 eP P 09 36 24.5 -1.4
comp=Z,20nm,0.7s
AKTO Aktyubinsk 75.76 323 P P 09 36 33.7 -1.3
AKTO Aktyubinsk 75.76 323 P P 09 36 33.6 -1.3
AKTO Aktyubinsk 75.76 323 P P 09 36 33.6 -1.3
comp=Z,54nm,0.6s,baz=106,slow=7.1,SNR=153
AKTO LR LR 10 10 07.3
comp=Z,31nm,18.9s,baz=341,slow=36
SVE Sverdlovsk 76.49 329⇑eP P 09 36 38.2 -0.8
SVE pmax pmax
comp=Z,60nm,0.9s
ARU Arti 77.42 329 c iP P 09 36 42.5 -1.7
ARU 09 39 35.4
ARU S S 09 46 30.3 -0.9
ARU pmax pmax
comp=Z,55nm,1.2s
UNV Unalaska Valle 77.64 34 eP P 09 36 46.5 +1.1
comp=Z,44nm,1.0s
OPO Ambohidratompo 78.42 251 P P 09 36 51.0 +0.3
OPO Ambohidratompo 78.42 251 P P 09 36 51.0 +0.3
comp=Z,20nm,0.8s,baz=52,slow=2.7,SNR=13
GAMB Gambell 78.70 24 eP P 09 36 52.2 +1.1
comp=Z,48nm,1.3s
SOKR Solikamsk 79.37 331 eP P 09 36 52.7 -2.1
SOKR pmax pmax
comp=Z,10.0nm,1.1s
MAW Mawson 79.46 200 P P 09 36 54.6 -0.6
MAW Mawson 79.46 200 P P 09 36 54.6 -0.6
comp=Z,2.2nm,0.4s,baz=85,slow=7.2,SNR=5.0
MAW LR LR 10 06 32.2
comp=Z,108nm,21.1s,baz=207,slow=32
VNDA Vanda 79.71 172 P P 09 36 56.6 +0.1
VNDA Vanda 79.71 172 P P 09 36 56.6 +0.1
comp=Z,2.1nm,0.8s,baz=308,slow=3.9,SNR=11
VNDA LR LR 10 12 52.0
comp=Z,97nm,18.5s,baz=316,slow=36
RAYN Ar Rayn 80.53 294 P P 09 36 59.9 -2.1
comp=Z,92nm,0.7s,SNR=6.9
TNA Tin City 80.89 23 eP P 09 37 03.5 +0.6
comp=Z,12nm,1.0s
SDPT Sand Point 81.42 34 eP P 09 37 06.3 +0.4
comp=Z,101nm,0.6s
DGRG David-gareji 82.44 312 P P 09 37 12.5 +0.8
GNI Garni 82.76 310 P P 09 37 14.3 +0.8
GNI Garni 82.76 310 P P 09 37 14.3 +0.8
comp=Z,3.8nm,0.3s,baz=142,slow=18,SNR=3.0
TBLG Delisi 82.94 312 P P 09 37 14.7 +0.4
KZR Kazreti 83.14 312 P P 09 37 16.4 +1.0
GUDG Gudauri 83.22 313 P P 09 37 16.7 +0.7
GOR Gori 83.44 312 P P 09 37 17.9 +1.0
ZEI Tsey 83.68 313 eP P 09 37 17.3 -1.0
ZEI pmax pmax
comp=Z,26nm,1.0s
AKH Akhalkalaki 83.84 312 P P 09 37 19.8 +0.7
KBZ Khabaz 84.50 314 P P 09 37 21.1 -1.1
KBZ Khabaz 84.50 314 P P 09 37 21.1 -1.1
KBZ Khabaz 84.50 314 P P 09 37 21.1 -1.1
comp=Z,16nm,0.9s,baz=111,slow=3.6,SNR=29
KBZ LR LR 10 14 43.6
comp=Z,49nm,20.2s,baz=258,slow=35
KIV Kislovodsk 84.68 314 eP P 09 37 23.0 -0.2
KIV pmax pmax
comp=Z,20nm,0.9s
KIV MLR MLR
comp=Z,78nm,19.0s
PPT2 Papeete2 85.50 108 eS S 09 47 57.3 +0.9
comp=Z,82nm,27.5s
PPT2 eLR LR 10 04 43.0
comp=Z,155nm,25.8s
OHAK Old Harbor 85.69 33 eP P 09 37 28.3 +0.5
comp=Z,36nm,0.8s
VRHR Novokhopersk 86.06 321 eP P 09 37 28.9 -0.9
VRHR pmax pmax
comp=Z,110nm,0.8s
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR pmax pmax
comp=E,9.0nm,0.4s
KDAK Kodiak Island 86.13 32 eP P 09 37 30.5 +0.5
comp=E,14nm,0.9s
KDAK Kodiak Island 86.13 32 LR LR 10 14 00.7
comp=E,93nm,19.7s,baz=261,slow=34
RSO Redoubt South 86.36 29 eP P 09 37 31.2 -0.2
comp=E,26nm,0.8s
PPLA Purkeypile 86.92 27 eP P 09 37 33.9 -0.1
comp=E,14nm,1.4s
VORD Divnogorie 87.52 321 eP P 09 37 36.2 -0.7
VORD pmax pmax
comp=E,170nm,1.0s
VORD pmax pmax
comp=Z,90nm,1.0s
VORD pmax pmax
comp=N,70nm,0.5s
VSR Storozhevoye 87.62 321 eP P 09 37 36.2 -1.2
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=Z,50nm,0.9s
VSR pmax pmax
comp=E,9.0nm,0.5s
KMBO Kilima Mbogo 87.80 269 eP P 09 37 40.0 +0.6
comp=E,36nm,0.9s
KMBO Kilima Mbogo 87.80 269 P P 09 37 40.3 +0.9
comp=E,29nm,0.9s,baz=66,slow=6.8,SNR=53
KMBO LR LR 10 19 14.3
comp=E,137nm,18.7s,baz=93,slow=37
KMBO Kilima Mbogo 87.80 269 P P 09 37 38.0 -1.4
baz=88,SNR=17
TRF Thorofare Moun 87.83 27 eP P 09 37 36.6 -1.8
comp=E,4.8nm,0.8s
SEW Seward 87.97 30 eP P 09 37 38.8 -0.1
comp=E,21nm,0.8s
SYO Syowa Base 88.13 201⇑eX P 09 37 35.0 -4.4
COLD Coldfoot 88.19 23 eP P 09 37 40.8 +0.9
comp=E,21nm,0.9s
PMR Palmer 88.22 29 eP P 09 37 39.7 -0.3
PMR pmax pmax
comp=Z,12nm,1.1s
PMR Palmer 88.22 29 eP P 09 37 39.7 -0.3
comp=Z,12nm,1.1s
MCK McKinley 88.45 26 eP P 09 37 40.7 -0.4
MCK pmax pmax
comp=Z,16nm,0.9s
MCK McKinley 88.45 26 eP P 09 37 40.7 -0.4
comp=Z,16nm,0.9s
ANN Anapa 88.49 315 eP P 09 37 38.1 -3.6
ANN e*PP PcP 09 37 49.2 +5.9
ANN e 09 41 04.6
ANN eS SKSac 09 48 03.3 -3.7
ANN pmax pmax
comp=Z,94nm,0.8s
ASF Jabal al Asfar 88.58 302 P P 09 37 43.1 +0.5
ASF Jabal al Asfar 88.58 302 P P 09 37 43.1 +0.5
comp=Z,13nm,0.8s,baz=320,slow=2.2,SNR=15
OBN Obninsk 89.34 325⇑iP P 09 37 42.8 -2.6
OBN pmax pmax
comp=Z,81nm,1.0s
ILAR Eielson Array 89.40 25 P P 09 37 44.4 -1.2
ILAR PKKPbc PKKPdf 09 55 21.6 +2.9
ILAR Eielson Array 89.40 25 P P 09 37 44.4 -1.2
comp=Z,3.6nm,0.8s,baz=245,slow=5.0,SNR=42
ILAR PKKPbc PKKPdf 09 55 21.6 +2.9
comp=Z,0.5nm,0.9s,baz=76,slow=2.1,SNR=5.8
QSPA South Pole Qui 89.67 180 eP P 09 37 47.5 +0.5
comp=Z,9.8nm,1.0s
DIV Divide 89.82 29 eP P 09 37 47.6 -0.1
comp=Z,18nm,1.0s
MMAI Mount Meron Ar 89.85 303 P P 09 37 49.4 +0.9
MMAI Mount Meron Ar 89.85 303 P P 09 37 49.4 +0.9
comp=Z,3.4nm,0.4s,baz=77,slow=5.3,SNR=11
EIL Elat 90.22 300 P P 09 37 50.5 +0.4
EIL Elat 90.22 300 P P 09 37 50.5 +0.4
comp=Z,6.0nm,0.8s,baz=90,slow=2.0,SNR=4.0
MENT Mentasta 90.79 27 eP P 09 37 52.4 +0.3
SIM Simferopol' 90.85 315 c iP P 09 37 52.0 -0.7
SIM pmax pmax
comp=Z,21nm,1.1s
SIM MLR MLR
comp=Z,180nm,19.8s
BR131 Keskin Array S 91.26 310 eP P 09 37 53.5 -1.5
comp=Z,3.4nm,0.7s
BRTR Keskin Array B 91.26 310 P P 09 37 54.0 -1.0
BRTR Keskin Array B 91.26 310 P P 09 37 54.0 -1.0
comp=Z,5.7nm,0.9s,baz=126,slow=5.1,SNR=24
BRTR LR LR 10 21 24.9
comp=Z,44nm,21.6s,baz=282,slow=37
CSS Prodhromos 91.57 305 eP P 09 37 55.4 -1.0
comp=Z,32nm,0.9s
EGAK Eagle 91.85 25 eP P 09 37 57.0 0.0
comp=Z,7.2nm,1.2s
JOF Joensuu 91.94 333 eP P 09 37 56.4 -1.0
JOF pmax pmax
comp=Z,13nm,0.5s
JOF Joensuu 91.94 333 ep P 09 37 56.4 -1.0
comp=Z,13nm,0.5s
ARCES ARCESS Array B 93.59 340 P P 09 38 03.4 -1.5
ARCES ARCESS Array B 93.59 340 P P 09 38 03.4 -1.5
comp=Z,7.9nm,0.9s,baz=89,slow=5.5,SNR=13
AKASG Malin Array Be 93.91 321 P P 09 38 05.1 -1.6
AKASG Malin Array Be 93.91 321 P P 09 38 05.0 -1.6
AKASG Malin Array Be 93.91 321 P P 09 38 05.0 -1.6
comp=Z,8.4nm,0.7s,baz=72,slow=4.4,SNR=28
AKASG LR LR 10 26 58.2
comp=Z,74nm,20.4s,baz=295,slow=40
AK01 Malin Array Si 93.91 321 eP P 09 38 05.0 -1.8
KIEV Kiev 93.92 321 eP P 09 38 04.2 -2.5
KIEV pmax pmax
comp=Z,9.0nm,0.9s
KIEV Kiev 93.92 321 eP P 09 38 04.2 -2.5
comp=Z,9.1nm,0.9s
AK02 Malin Array Si 93.92 321 eP P 09 38 05.2 -1.6
KAF Kangasniemi 94.33 332 eP P 09 38 06.8 -1.6
KAF pmax pmax
comp=Z,5.0nm,0.5s
KAF Kangasniemi 94.33 332 ep P 09 38 06.8 -1.6
comp=Z,5.3nm,0.5s
FINES FINESS Array B 94.53 332 P P 09 38 07.5 -1.8
FINES FINESS Array B 94.53 332 P P 09 38 07.5 -1.8
comp=Z,6.2nm,0.7s,baz=100,slow=7.9,SNR=11
TIRR Tirgusor 94.93 314 eP P 09 38 10.2 -1.4
TIRR pmax pmax
comp=Z,17nm,1.0s
TIRR Tirgusor 94.93 314 eP P 09 38 10.2 -1.4
comp=Z,16nm,1.0s
CFR Carcaliu 95.07 315⇓iP P 09 38 11.4 -0.8
SKAG Skagway 95.11 30 eP P 09 38 12.7 +0.7
comp=Z,15nm,0.9s
TESR Tescani 95.98 317⇑iP P 09 38 15.5 -0.9
MLR Muntele Rosu 96.58 316⇑iP P 09 38 18.3 -1.0
BURAR Bucovina Array 96.83 318⇓iP P 09 38 20.5 +0.2
BUR08 Bucovina Ar. S 96.84 318 eP P 09 38 20.2 -0.1
BOSA Boshof 98.48 241 LR LR 10 18 17.7
comp=Z,217nm,18.2s,baz=164,slow=33
KOLS Kolonicke sedl 98.59 319 eP P 09 38 27.8 -0.3
KOLS pmax pmax
comp=Z,10.0nm,1.0s
KOLS Kolonicke sedl 98.59 319 PDIF P 09 38 27.8 -0.3
UZH Uzhgorod 98.62 319⇑iP P 09 38 27.9 -0.3
UZH i 09 38 39.1
VTS Vitosha 98.90 313⇓iP P 09 38 28.4 -1.4
CRVS Cervenica-Dubn 99.12 319 eP Pdif 09 38 29.1 -1.4
CRVS pmax pmax
comp=Z,21nm,1.1s
CRVS Cervenica-Dubn 99.12 319 PDIF Pdif 09 38 29.1 -1.4
OJC Ojcow 99.93 321 eP Pdif 09 38 33.9 -0.1
HFS Hagfors 100.73 332 P Pdif 09 38 35.0 -2.4
HFS Hagfors 100.73 332 P Pdif 09 38 35.0 -2.4
comp=Z,4.4nm,0.9s,baz=91,slow=6.5,SNR=6.7
VYHS Vyhne 100.91 319 eP Pdif 09 38 37.9 -0.5
VYHS pmax pmax
comp=Z,2.0nm,0.9s
VYHS Vyhne 100.91 319 PDIF Pdif 09 38 37.9 -0.5
NB2 NORSAR Subarra101.58 333 P Pdif 09 38 39.0 -2.1
comp=Z,4.7nm,1.0s,baz=70,slow=4.4
NB2 NORSAR Subarra101.58 333 P Pdif 09 38 39.0 -2.1
baz=70,slow=4.4
NOA NORSAR Array B101.58 333 P Pdif 09 38 39.3 -1.8
NOA NORSAR Array B101.58 333 P Pdif 09 38 39.3 -1.8
comp=Z,2.5nm,0.9s,baz=68,slow=4.5,SNR=7.0
BRG Berggiesshubel 103.40 323 eP Pdif 09 38 49.9 +0.5
comp=Z,10nm,1.2s
BRG Berggiesshubel 103.40 323 eP Pdif 09 38 49.9 +0.5
BRG pmax pmax
comp=Z,11nm,1.2s
YKA Yellowknife Ar 103.80 24 Pdif Pdif 09 38 51.5 +0.7
YKA PKiKP PP 09 43 08.0 +0.2
YKA PKKPbc PKKPbc 09 54 41.4 -2.9
YKA Yellowknife Ar 103.80 24 Pdiff Pdif 09 38 51.5 +0.7
comp=Z,0.5nm,0.6s,baz=296,slow=4.5,SNR=8.0
YKA PKiKP PP 09 43 07.9 +0.2
comp=Z,0.3nm,0.5s,baz=298,slow=1.7,SNR=8.2
YKA PKKPbc PKKPbc 09 54 41.4 -2.9
comp=Z,0.5nm,0.8s,baz=107,slow=2.4,SNR=8.4
CLL Collm 103.84 323 i P Pdif 09 38 51.9 +0.6
CLL pmax pmax
comp=Z,5.0nm,0.7s
CLL MLR MLR
comp=Z,100nm,21.8s
CLL Collm 103.84 323 i Pdif Pdif 09 38 51.9 +0.6
comp=Z,5.0nm,0.7s
CLL ePP PP 09 43 07.0 -1.5
CLL LmV 10 27 00.0
comp=Z,100nm,21.8s
GERES GERESS Array B 104.12 321 Pdif Pdif 09 38 52.4 -0.4
GERES GERESS Array B 104.12 321 Pdiff Pdif 09 38 52.4 -0.4
comp=Z,0.5nm,0.4s,baz=76,slow=5.6,SNR=8.4
BAIF Baives 109.51 324 ePP PP 09 43 37.1 -13
comp=Z,19nm,0.9s
LPG La Plagne 109.68 319 ePP PP 09 43 30.6 -21
comp=Z,9.5nm,0.7s
LPL La Plagne 109.68 319 ePP PP 09 43 30.5 -21
comp=Z,17nm,0.8s
SBF Sospel 109.78 317 ePP PP 09 43 27.7 -25
comp=Z,19nm,0.6s
NVAR Mina Array Bea 110.79 49 PKiKP PKiKP 09 43 24.4 +1.7
NVAR Mina Array Bea 110.79 49 PKiKP PKiKP 09 43 24.4 +1.7
comp=Z,0.6nm,0.8s,baz=242,slow=1.7,SNR=4.8
LOR Lormes 110.86 321 ePP PP 09 43 39.2 -21
comp=Z,8.9nm,0.8s
MSO Missoula 110.91 39 P 09 43 23.0
baz=111
B15A Bradely Ranch, 111.15 37 P 09 43 22.7
baz=111
I12A Atlanta 111.29 42 P 09 43 23.9
baz=111
C15A Salmond Ranch, 111.35 38 P 09 43 23.6
baz=111
H13A Challis 111.59 41 P 09 43 25.1
baz=112
B16A M & M Farms, S 111.62 37 P 09 43 23.8
baz=112
HLID Hailey 111.86 42 P 09 43 26.2

	baz=112								
C16A	Fuhringer Ranc	111.87	37	P			09 43 24.2		
	baz=112								
I13A	Wildhorse Cree	111.93	42	P			09 43 25.9		
	baz=112								
A17A	Triple J Farms	111.98	36	P			09 43 25.2		
	baz=112								
EDW2	Edwards Air Fo	112.04	52	P			09 43 26.5		
	baz=112								
J13A	Cove Ranch, Pi	112.08	43	P			09 43 26.1		
	baz=112								
A18A	Metzger Ranch,	112.50	36	P			09 43 25.6		
	baz=112								
C17A	Wharram Farm,	112.54	37	P			09 43 26.0		
	baz=112								
EGMT	Eagleton	112.97	37	P			09 43 25.8		
	baz=113								
A19A	Klindworth Far	113.13	35	P			09 43 26.8		
	baz=113								
F17A	Fitzpatrick Pl	113.36	39	P			09 43 27.9		
	baz=113								
MTLF	Montolieu	113.50	318	*e*PP		PP	09 43 46.9	-32	
H16A	Russell Place,	113.50	40	P			09 43 26.1		
	baz=114								
FFC	Flin Flon	113.52	28	*i* PKIKP		PKiKP	09 43 28.7	+1.7	
PFO	Pinyon Flat Ob	113.61	53	P			09 43 28.3		
	baz=114								
I16A	Newdale	113.69	41	P			09 43 28.2		
	baz=114								
B20A	Solberg Farm,	113.79	36	P			09 43 28.3		
	baz=114								
MONP	Monument Peak	113.84	54	P			09 43 29.6		
	baz=114								
D19A	Cripps Ranch,	113.89	37	P			09 43 28.3		
	baz=114								
GMRC	Granite Mounta	113.90	52	P			09 43 29.6		
	baz=114								
F18A	Big Timber	113.95	39	P			09 43 29.5		
	baz=114								
C20A	Veseth Ranch,	114.15	36	P		PKPdf	09 43 29.2	+0.6	
	baz=114								
E19A	Rath Farm, Rou	114.27	38	P		PKPdf	09 43 29.6	+0.8	
	baz=114								
D20A	Manuel Ranch,	114.37	37	P		PKPdf	09 43 29.0	0.0	
	baz=114								
B22A	Reddig Ranch S	115.03	35	P		PKPdf	09 43 30.8	+0.6	
	baz=115								
D21A	La Casta Ranch	115.07	37	P		**PKPdf**	**09 43 30.9**	**+0.6**	
	baz=115								
K18A	Toltan Ranch,	115.17	42	P		**PKPdf**	**09 43 31.9**	**+1.1**	
	baz=115								
G20A	Bridger	115.20	39	P		**PKPdf**	**09 43 31.6**	**+0.8**	
	baz=115								
I19A	Meeteetse	115.25	40	P		**PKPdf**	**09 43 31.6**	**+0.7**	
	baz=115								
C22A	Vida	115.38	35	P		**PKPdf**	**09 43 31.9**	**+1.0**	
	baz=115								
PDAR	Pinedale Array	115.43	42	PKP		**PKPdf**	**09 43 31.2**	**-0.3**	
PDAR				PKKPbc		**PKKPbc**	**09 54 05.2**	**-1.4**	
PDAR	Pinedale Array	115.43	42	PKP		**PKPdf**	**09 43 31.2**	**-0.3**	
	comp=Z,0.7nm,0.9s,baz=186,slow=4.5,SNR=5.3								
PDAR				PKKPbc		**PKKPbc**	**09 54 05.2**	**-1.4**	
	comp=Z,1.2nm,0.9s,baz=160,slow=4.7,SNR=3.8								
L18A	Fontenelle, Gr	115.47	43	P		**PKPdf**	**09 43 32.5**	**+1.0**	
	baz=115								
D22A	Cohagen	115.51	36	P		**PKPdf**	**09 43 32.5**	**+1.3**	
	baz=116								
B23A	Brockton	115.51	34	P		**PKPdf**	**09 43 31.9**	**+0.7**	
	baz=116								
H20A	Greybull	115.68	39	P		**PKPdf**	**09 43 32.3**	**+0.6**	
	baz=116								
C23A	Lambert	115.75	35	P		**PKPdf**	**09 43 32.7**	**+1.1**	
	baz=116								
I20A	Worland	115.84	40	P		**PKPdf**	**09 43 32.5**	**+0.5**	
	baz=116								
L19A	Farson	115.85	42	P		**PKPdf**	**09 43 32.8**	**+0.5**	
	baz=116								
K19A	Absolon Red Bu	115.88	41	P		**PKPdf**	**09 43 32.5**	**+0.3**	
	baz=116								
U15A	North Rim	115.96	49	P		**PKPdf**	**09 43 33.4**	**+0.7**	
	baz=116								
E22A	Miles City	116.00	37	P		**PKPdf**	**09 43 33.0**	**+0.8**	
	baz=116								
D23A	Lindsay	116.06	36	P		**PKPdf**	**09 43 33.5**	**+1.2**	
	baz=116								
J20A	Shoshoni	116.14	41	P		**PKPdf**	**09 43 33.2**	**+0.5**	
	baz=116								
F22A	Rosebud	116.14	37	P		**PKPdf**	**09 43 33.0**	**+0.6**	
	baz=116								
SRU	San Rafael	116.27	46	P		**PKPdf**	**09 43 33.4**	**+0.3**	
	baz=116								
G22A	Birney	116.40	38	P		**PKPdf**	**09 43 32.7**	**-0.3**	
	baz=116								
I21A	Big Trails, Te	116.44	40	P		**PKPdf**	**09 43 33.5**	**+0.3**	
	baz=116								
D24A	Glendive	116.61	35	P		**PKPdf**	**09 43 34.2**	**+0.9**	
	baz=116								
O19A	Miners Draw (B	116.77	44	P		**PKPdf**	**09 43 34.8**	**+0.8**	
	baz=117								
M20A	Sweetwater, Wa	116.91	42	P		**PKPdf**	**09 43 35.3**	**+1.0**	
	baz=117								
E24A	Baker	116.91	36	P		**PKPdf**	**09 43 34.6**	**+0.7**	
	baz=117								
I22A	9 Mile Ranch,	116.92	39	P		**PKPdf**	**09 43 34.8**	**+0.7**	
	baz=117								
G23A	Biddle	116.96	38	P		**PKPdf**	**09 43 34.6**	**+0.5**	
	baz=117								
K21A	Alcova	117.02	41	P		**PKPdf**	**09 43 35.0**	**+0.6**	
	baz=117								
N20A	Spence Gulch,	117.14	43	P		**PKPdf**	**09 43 36.0**	**+1.2**	
	baz=117								
P19A	Cripple Cowboy	117.15	45	P		**PKPdf**	**09 43 35.9**	**+1.1**	
	baz=117								
J22A	Midwest	117.15	40	P		**PKPdf**	**09 43 34.6**	**0.0**	
	baz=117								
S18A	Hurst Farm, Bl	117.20	47	P		**PKPdf**	**09 43 36.4**	**+1.4**	
	baz=117								
L21A	Rawlins	117.24	42	P		**PKPdf**	**09 43 35.3**	**+0.4**	
	baz=117								
X16A	Lo Mia Camp, P	117.31	51	P		**PKPdf**	**09 43 36.8**	**+1.6**	
	baz=117								
M21A	Separation Pea	117.41	42	P		**PKPdf**	**09 43 35.8**	**+0.5**	
	baz=117								
O20A	White River Ci	117.45	44	P		**PKPdf**	**09 43 36.5**	**+1.1**	
	baz=117								
K22A	Casper	117.48	41	P		**PKPdf**	**09 43 35.3**	**+0.1**	
	baz=117								
P20A	De Beque	117.62	45	P		**PKPdf**	**09 43 36.4**	**+0.8**	
	baz=118								
N21A	Black Mountain	117.68	43	P		**PKPdf**	**09 43 36.1**	**+0.3**	
	baz=118								
H24A	Dirks Ranch, A	117.70	38	P		**PKPdf**	**09 43 35.7**	**+0.2**	
	baz=118								
Q20A	Ridgley Place,	117.92	45	P		**PKPdf**	**09 43 37.5**	**+1.2**	
	baz=118								
R20A	Redvale	118.17	46	P		**PKPdf**	**09 43 37.6**	**+0.8**	
	baz=118								
S20A	Disappointment	118.34	46	P		**PKPdf**	**09 43 38.2**	**+1.0**	
	baz=118								
J24A	Dixon Ranch, L	118.35	39	P		**PKPdf**	**09 43 37.0**	**+0.1**	
	baz=118								
W18A	Petrified Fore	118.37	50	P		**PKPdf**	**09 43 37.7**	**+0.4**	
	baz=118								
N22A	Wattenberg Ran	118.38	42	P		**PKPdf**	**09 43 37.9**	**+0.7**	
	baz=118								
N23A	Red Feather La	118.68	42	P		**PKPdf**	**09 43 38.4**	**+0.6**	
	baz=119								
O23A	Lake Granby, G	119.02	43	P		**PKPdf**	**09 43 39.5**	**+1.0**	
	baz=119								
V20A	Brimhall	119.07	48	P		**PKPdf**	**09 43 39.5**	**+0.9**	
	baz=119								
T21A	Navajo Lake	119.28	47	P		**PKPdf**	**09 43 40.4**	**+1.4**	
	baz=119								
R22A	Saguache, Gunn	119.32	45	P		**PKPdf**	**09 43 40.1**	**+1.0**	
	baz=119								
U21A	Nageezi	119.42	47	P		**PKPdf**	**09 43 40.8**	**+1.5**	
	baz=119								
S22A	4UR Ranch, Cre	119.47	46	P		**PKPdf**	**09 43 40.7**	**+1.3**	
	baz=120								
X20A	Quemado	119.53	50	P		**PKPdf**	**09 43 40.5**	**+1.0**	
	baz=120								
K26A	Motz Farm, Whi	119.61	39	P		**PKPdf**	**09 43 39.5**	**+0.2**	
	baz=120								
Q23A	Hartsel	119.67	44	P		**PKPdf**	**09 43 41.6**	**+1.8**	
	baz=120								
T22A	Edith	119.73	47	P		**PKPdf**	**09 43 41.1**	**+1.2**	
	baz=120								
R23A	Moffat	119.99	45	P		**PKPdf**	**09 43 41.7**	**+1.3**	
	baz=120								
Z20A	Nine Sixteen R	119.99	51	P		**PKPdf**	**09 43 42.1**	**+1.8**	
	baz=120								
U22A	Llaves	120.03	47	P		**PKPdf**	**09 43 42.5**	**+2.0**	
	baz=120								
319A	Douglas	120.06	53	P		**PKPdf**	**09 43 41.8**	**+1.3**	
	baz=120								
X21A	Alamocita Cree	120.11	50	P		**PKPdf**	**09 43 42.4**	**+1.7**	
	baz=120								
120A	U Bar Ranch, L	120.17	52	P		**PKPdf**	**09 43 42.3**	**+1.5**	
	baz=120								
V22A	San Miguel Ran	120.18	48	P		**PKPdf**	**09 43 42.1**	**+1.4**	
	baz=120								
T23A	Casias Ranch,	120.35	46	P		**PKPdf**	**09 43 42.8**	**+1.7**	
	baz=120								
Y21A	Point of Rocks	120.36	50	P		**PKPdf**	**09 43 43.1**	**+1.9**	
	baz=120								
220A	Playas Peak, P	120.48	53	P		**PKPdf**	**09 43 42.6**	**+1.2**	
	baz=120								
P25A	Willow Gulch B	120.53	43	P		**PKPdf**	**09 43 42.3**	**+1.0**	
	baz=120								
Z21A	St. Cloud Mine	120.64	51	P		**PKPdf**	**09 43 43.0**	**+1.3**	
	baz=121								
S24A	Houchin Ranch,	120.67	45	P		**PKPdf**	**09 43 43.4**	**+1.6**	
	baz=121								
320A	Kipp Ranch, An	120.68	53	P		**PKPdf**	**09 43 43.3**	**+1.6**	
	baz=121								
121A	Cookes Peak, D	120.84	52	P		**PKPdf**	**09 43 42.5**	**+0.4**	
	baz=121								
ANMO	Albuquerque	120.92	49	*e*PKPdf		**PKPdf**	**09 43 42.5**	**+0.3**	
Y22A	Socorro	120.94	50	P		**PKPdf**	**09 43 43.3**	**+1.1**	
	baz=121								
T24A	Torres, Weston	121.04	46	P		**PKPdf**	**09 43 43.8**	**+1.3**	
	baz=121								
P26A	Davis Ranch, A	121.07	42	P		**PKPdf**	**09 43 43.0**	**+0.7**	
	baz=121								
Z22A	Elephant Butte	121.20	51	P		**PKPdf**	**09 43 44.1**	**+1.4**	
	baz=121								
S25A	Robets Cordova	121.21	45	P		**PKPdf**	**09 43 43.6**	**+1.0**	
	baz=121								
Q26A	Hugo	121.26	43	P		**PKPdf**	**09 43 43.8**	**+1.1**	
	baz=121								
O27A	Beecher Island	121.33	41	P		**PKPdf**	**09 43 43.6**	**+0.9**	
	baz=121								
T25A	Trinidad	121.47	45	P		**PKPdf**	**09 43 43.8**	**+0.6**	
	baz=121								
V24A	Rampart Ranch,	121.47	47	P		**PKPdf**	**09 43 45.1**	**+1.8**	
	baz=122								
W24A	Lazy 6 Ranch,	121.59	48	P		**PKPdf**	**09 43 44.8**	**+1.4**	
	baz=122								
R26A	Arlington	121.61	44	P		**PKPdf**	**09 43 44.4**	**+1.1**	
	baz=122								
U25A	Circle Dot Ran	121.80	46	P		**PKPdf**	**09 43 45.0**	**+1.2**	
	baz=122								
V25A	Rancho No Teng	121.90	47	P		**PKPdf**	**09 43 45.5**	**+1.5**	
	baz=122								
T26A	Comanche Natio	122.03	45	P		**PKPdf**	**09 43 45.1**	**+0.9**	
	baz=122								
Y24A	Capitan	122.10	49	P		**PKPdf**	**09 43 45.5**	**+1.1**	
	baz=122								
U26A	Atchley Ranch,	122.28	46	P		**PKPdf**	**09 43 45.3**	**+0.5**	
	baz=122								
W25A	X Bar L Ranch,	122.28	47	P		**PKPdf**	**09 43 45.8**	**+1.1**	
	baz=122								
Q28A	Sharon Springs	122.33	42	P		**PKPdf**	**09 43 45.1**	**+0.5**	
	baz=122								
Z24A	Sheeppen Canyo	122.40	50	P		**PKPdf**	**09 43 46.5**	**+1.4**	
	baz=122								
TOA0	Torodi Ar. Sit	122.46	285	*e*PKPdf		**PKPdf**	**09 43 44.8**	**-0.5**	
TORD	Torodi Ar. Bea	122.46	285	PKP		**PKPdf**	**09 43 45.3**	**0.0**	
TORD				PKKPbc		**PKKPab**	**09 53 40.6**	**+0.1**	
TORD	Torodi Ar. Bea	122.46	285	PKP		**PKPdf**	**09 43 45.3**	**0.0**	
	comp=Z,7.0nm,0.7s,baz=63,slow=1.3,SNR=43								
TORD				PKKPbc		**PKKPab**	**09 53 40.6**	**+0.1**	
	comp=Z,1.0nm,0.9s,baz=282,slow=2.9,SNR=4.7								
V26A	Tequesquite Ra	122.52	47	P		**PKPdf**	**09 43 45.9**	**+0.8**	
	baz=122								
124A	Stringfield Ra	122.59	51	P		**PKPdf**	**09 43 46.6**	**+1.1**	
	baz=123								
R28A	Tribune	122.71	43	P		**PKPdf**	**09 43 46.2**	**+0.9**	
	baz=123								
224A	Cornudas Mount	122.78	51	P		**PKPdf**	**09 43 46.8**	**+1.1**	
	baz=123								
ECSD	EROS Data Cent	122.99	35	*e*PKPdf		**PKPdf**	**09 43 45.6**	**0.0**	
S28A	Manter	123.02	44	P		**PKPdf**	**09 43 46.8**	**+0.9**	
	baz=123								
MNTX	Cornudas Mount	123.04	52	*e*PKPdf		**PKPdf**	**09 43 47.2**	**+1.1**	
324A	Moseley Ranch,	123.06	52	P		**PKPdf**	**09 43 47.4**	**+1.1**	
	baz=123								
V27A	Dan Oppiter Fa	123.23	46	P		**PKPdf**	**09 43 47.4**	**+0.9**	
	baz=123								
225A	Deer Hill, Car	123.31	51	P		**PKPdf**	**09 43 47.8**	**+1.0**	
	baz=123								
W27A	Bowe Ranch, En	123.38	47	P		**PKPdf**	**09 43 47.6**	**+0.8**	
	baz=123								
BGNE	Belgrade	123.45	38	P		**PKPdf**	**09 43 46.5**	**-0.1**	
	baz=123								
325A	Bean Ranch, Si	123.49	52	P		**PKPdf**	**09 43 48.1**	**+0.9**	
	baz=124								
425A	Indio Mountain	123.71	52	P		**PKPdf**	**09 43 48.4**	**+0.9**	
	baz=124								
R30A	Dighton	123.78	42	P		**PKPdf**	**09 43 48.1**	**+0.7**	
	baz=124								
Y27A	Causey	123.83	48	P		**PKPdf**	**09 43 48.5**	**+0.8**	
	baz=124								
226B	Tecolote Peak,	123.83	51	P		**PKPdf**	**09 43 48.8**	**+1.1**	
	baz=124								
Z27A	Tatum	124.04	49	P		**PKPdf**	**09 43 48.9**	**+0.8**	
	baz=124								
X28A	Dimmitt	124.26	47	P		**PKPdf**	**09 43 49.1**	**+0.6**	
	baz=124								
326A	Caldwell Ranch	124.29	51	P		**PKPdf**	**09 43 49.2**	**+0.6**	
	baz=124								
526A	Mary Lane Ranc	124.70	53	P		**PKPdf**	**09 43 50.6**	**+1.1**	
	baz=125								
SCHQ	Schefferville	124.74	8	PKP		**PKPdf**	**09 43 49.3**	**+0.7**	
SCHQ	Schefferville	124.74	8	PKP		**PKPdf**	**09 43 49.3**	**+0.7**	
	comp=Z,12nm,1.1s,baz=358,slow=2.4,SNR=15								
626A	Big Bend Ranch	124.86	53	P		**PKPdf**	**09 43 50.3**	**+0.5**	
	baz=125								
128A	Castleberry Fa	124.89	49	P		**PKPdf**	**09 43 50.2**	**+0.5**	
	baz=125								
427A	Hayter Ranch,	124.93	52	P		**PKPdf**	**09 43 50.5**	**+0.7**	
	baz=125								
527A	Woodward Ranch	125.05	53	P		**PKPdf**	**09 43 51.1**	**+0.9**	
	baz=125								
328A	Wristen Ranch,	125.17	51	P		**PKPdf**	**09 43 51.2**	**+0.9**	
	baz=125								
Z29A	Hungry Hill Ra	125.20	48	P		**PKPdf**	**09 43 50.9**	**+0.6**	
	baz=125								
X30A	Coker Ranch, T	125.26	47	P		**PKPdf**	**09 43 49.9**	**-0.4**	
	baz=125								
129A	Stewart Farms,	125.36	49	P		**PKPdf**	**09 43 51.3**	**+0.7**	
	baz=125								
627A	Terlingua Ranc	125.50	53	P		**PKPdf**	**09 43 51.7**	**+0.7**	
	baz=126								
428A	Kincaid Ranch,	125.55	52	P		**PKPdf**	**09 43 52.1**	**+1.1**	
	baz=126								
W31A	Holland Ranch,	125.57	45	P		**PKPdf**	**09 43 51.7**	**+0.8**	
	baz=126								
528A	Cox Ranch, San	125.70	52	P		**PKPdf**	**09 43 52.3**	**+0.9**	
	baz=126								
329A	Wagon Wheel Ra	125.77	50	P		**PKPdf**	**09 43 52.3**	**+0.9**	
	baz=126								
X31A	McDonald Ranch	125.82	46	P		**PKPdf**	**09 43 52.7**	**+1.3**	
	baz=126								
628A	Black Gap, Mar	125.89	53	P		**PKPdf**	**09 43 52.7**	**+1.0**	
	baz=126								
529A	Stev Forrest Ra	126.16	52	P		**PKPdf**	**09 43 53.2**	**+1.0**	
	baz=126								
429A	Davenport Ranc	126.21	51	P		**PKPdf**	**09 43 53.1**	**+0.9**	
	baz=126								
430A	Baggett Ranch,	126.65	51	P		**PKPdf**	**09 43 54.0**	**+0.9**	
	baz=127								
231A	Bronte	126.84	49	P		**PKPdf**	**09 43 54.2**	**+0.8**	
	baz=127								
530A	J-C Ranch, Com	126.84	52	P		**PKPdf**	**09 43 54.8**	**+1.4**	
	baz=127								
331A	San Angelo	127.04	50	P		**PKPdf**	**09 43 54.6**	**+0.8**	
	baz=127								
431A	Sonora	127.18	51	P		**PKPdf**	**09 43 54.8**	**+0.7**	
	baz=127								
531A	Rocksprings	127.45	51	P		**PKPdf**	**09 43 55.8**	**+1.2**	
	baz=127								
332A	Millersview	127.53	49	P		**PKPdf**	**09 43 55.4**	**+0.7**	
	baz=128								
432A	Menard	127.72	50	P		**PKPdf**	**09 43 56.0**	**+0.9**	
	baz=128								
631A	Perdido Creek	127.75	52	P		**PKPdf**	**09 43 55.8**	**+0.6**	
	baz=128								
JCT	Junction City	127.89	51	*e*PKIKP		**PKPdf**	**09 43 56.0**	**+0.6**	
JCT	Junction City	127.89	51	*e*PKPdf		**PKPdf**	**09 43 56.0**	**+0.6**	
JCT	Junction City	127.89	51	P		**PKPdf**	**09 43 56.5**	**+1.0**	
	baz=128								
532A	Rocksprings	127.97	51	P		**PKPdf**	**09 43 56.2**	**+0.6**	
	baz=128								
632A	Uvalde	128.34	52	P		**PKPdf**	**09 43 57.6**	**+1.3**	
	baz=128								
732A	Laxson Ranch,	128.53	53	P		**PKPdf**	**09 43 57.6**	**+1.0**	
	baz=128								
DBIC	Dimbokro	129.63	278	PKP		**PKPdf**	**09 43 59.4**	**+0.2**	
DBIC	Dimbokro	129.63	278	PKP		**PKPdf**	**09 43 59.4**	**+0.2**	
	comp=Z,2.3nm,0.7s,baz=89,slow=2.1,SNR=4.2								
LIC	Lamto	129.84	278	*e*PKIKP		PKPdf	09 43 47.7	-12	
TKL	Tuckaleechee C	135.73	34	*e*PKPdf		**PKPdf**	**09 44 07.8**	**-2.3**	
PLCA	Paso Flores	136.80	163	PKP		**PKPdf**	**09 44 13.7**	**+1.7**	
PLCA	Paso Flores	136.80	163	PKP		**PKPdf**	**09 44 13.7**	**+1.7**	
	comp=Z,6.0nm,1.0s,baz=200,slow=4.4,SNR=8.7								
JTS	JuntasAbangare	148.54	71	*e*PKPbc		**PKPbc**	**09 44 36.0**	**-0.9**	
LPAZ	La Paz	159.03	142	PKP		**PKPdf**	**09 44 48.5**	**-0.3**	
LPAZ				*e*PKPdf		**PKPdf**	**09 44 48.6**	**-0.2**	
LPAZ				PKPab		**PKPab**	**09 45 27.9**	**+2.6**	
LPAZ	La Paz	159.03	142	PKP		**PKPdf**	**09 44 48.5**	**-0.3**	
	comp=Z,1.4nm,0.8s,baz=288,slow=4.9,SNR=5.1								
LPAZ				PKPab		**PKPab**	**09 45 27.9**	**+2.6**	
	comp=Z,2.3nm,0.8s,baz=192,slow=5.9,SNR=6.0								
ROSC	El Rosal	160.10	76	PKP		**PKPdf**	**09 44 50.8**	**+0.9**	
ROSC	El Rosal	160.10	76	PKP		**PKPdf**	**09 44 50.8**	**+0.9**	
	comp=Z,3.4nm,0.5s,baz=294,slow=20,SNR=2.6								
BDFB	Brasilia	162.78	203	PKP		**PKPdf**	**09 44 51.8**	**-0.4**	
BDFB	Brasilia	162.78	203	PKP		**PKPdf**	**09 44 51.8**	**-0.4**	
	comp=Z,1.5nm,0.5s,baz=104,slow=11,SNR=3.4								
SAML	Samuel	167.71	138	*e*PKPdf		**PKPdf**	**09 44 56.7**	**+0.4**	

ISCJB ***14*** *09:30:58.3± 0.3, 4.38N± 0.06× 97.33E± 0.05, h150km, mb4.1/23, Error ellipse: s-maj=9.1km s-min=6.2km az=42.1*

IDC ***14*** *09:31:01.7± 0.7, 4.33N× 97.46E, h168km± 5km, mb3.8/21, mb1 4.0/23, mb1mx3.9/32, mbtmp3.9/23, Error ellipse: s-maj=17.8km s-min=7.3km az=58.0*

NEIC ***14*** *09:31:02.4± 0.8, 4.36N× 97.49E, h176km± 7km, mb4.3/3, Error ellipse: s-maj=12.0km s-min=6.2km az=64.0*

AUST ***14*** *09:31:03.2± 0.0, 4.30N× 97.60E, h178km, Error ellipse: s-maj=1.5km s-min=1.0km az=236.0*

DJA ***14*** *09:31:04.6± 0.5, 4.N± 4.×9.8E± , h145km± 7km, M4.5/7, mb4.7/3, mB5.2/3, MLv4.3/7, Mw(mB)4.5/3*

ISC 14 09:31:00.2± 0.4, 4.42N± 0.05× 97.32E± 0.07, h150km, n80, σ 1 9 71/86, mb4.1/23, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	Lhok Sumawe	0.89	336	P	Pn	09 31 30.9	+6.9
LHMI	Lhok Sumawe	0.89	336	P	Pn	09 31 31.1	+7.0
	baz=1.1,SNR=58						
KCSI	Kotacane, Aceh	1.00	153	P	Pn	09 31 28.2	+3.2
TSI	Tuntungan	1.54	126	P	**Pn**	**09 31 33.2**	**+3.0**
PSI	Prapat	2.27	135	P	**Pn**	**09 31 41.1**	**+2.4**
PSI				S	**Sn**	**09 32 09.4**	**+1.1**
PSI	Prapat	2.27	135	P	**Pn**	**09 31 40.0**	**+1.3**
PSI	Prapat	2.27	135	P	**Pn**	**09 31 41.1**	**+2.4**
	57nm,0.3s,baz=302,slow=11,SNR=142						
PSI				S	**Sn**	**09 32 09.4**	**+1.1**
	41nm,0.3s,baz=93,slow=17,SNR=11						
PSI	Prapat	2.27	135	P	**Pn**	**09 31 41.2**	**+2.4**
	baz=2.1,SNR=66						
PSI				S	**Sn**	**09 32 10.5**	**+2.2**
	baz=2.1,SNR=8.1						
GSI	Gunungsitoli	3.10	175	P	**Pn**	**09 31 50.3**	**+1.4**
GSI	Gunungsitoli	3.10	175	P	**Pn**	**09 31 50.4**	**+1.4**
	baz=3.0,SNR=103						
KULM	Kulim	3.43	75	*e*Pn	**Pn**	**09 31 54.0**	**+0.9**
KULM				*e*Sn	**Sn**	**09 32 32.7**	**-1.4**
KULM	Kulim	3.43	75	P	**Pn**	**09 31 54.0**	**+0.9**
IPM	Ipoh	3.70	89	*e*Pn	**Pn**	**09 31 57.4**	**+0.8**
IPM	Ipoh	3.70	89	P	**Pn**	**09 31 57.5**	**+0.9**
PPI	Padang Panjang	5.74	147	P	**Pn**	**09 32 24.6**	**+1.2**
	60nm,0.8s,5μm0.2nm						
PPI	Padang Panjang	5.74	147	P	**Pn**	**09 32 24.1**	**+0.6**
	baz=5.5,SNR=4.0						
MNAI	Manna	10.38	147	S	Sn	09 35 12.8	-7.5
	baz=10,SNR=5.2						
PPBI	Pangkal Pinang	10.97	126	P	**Pn**	**09 33 32.7**	**-0.4**
	60nm,0.5s,4μm						
UBPT	Khong Chiam	13.45	36	P	**P**	**09 34 11.7**	**+2.5**
CMAR	Chiang Mai Arr	14.04	6	P	**P**	**09 34 15.9**	**0.0**
CMAR				ScP	**ScP**	**09 42 39.0**	**-2.7**
CMAR	Chiang Mai Arr	14.04	6	P	**P**	**09 34 15.9**	**0.0**
	2.7nm,0.3s,baz=194,slow=13,SNR=49						
CMAR				ScP	**ScP**	**09 42 39.0**	**-2.7**
	0.4nm,0.3s,baz=233,slow=3.3,SNR=4.3						
CMMT	Chiang Mai	14.39	6	P	**P**	**09 34 21.5**	**+1.7**
CHTO	Chiang Mai	14.40	6	*e*Pn	**Pn**	**09 34 19.3**	**+2.1**
	12nm,0.6s						
CHTO	Chiang Mai	14.40	6	P	**P**	**09 34 21.2**	**+1.4**

7.3nm,0.7s,baz=180,slow=4.0,SNR=4.8
MMAI Mount Meron Ar 64.16 305 P **P** **09 41 21.2 +2.1**
MMAI Mount Meron Ar 64.16 305 P **P** **09 41 21.2 +2.1**
1.8nm,0.5s,baz=96,slow=4.3,SNR=3.0
BRTR Keskin Array B 67.06 311 P **P** **09 41 37.2 -0.4**
BRTR Keskin Array B 67.06 311 P **P** **09 41 37.2 -0.4**
1.6nm,0.5s,baz=138,slow=6.2,SNR=6.8
AKASG Malin Array Be 72.80 322 P **P** **09 42 10.9 -1.4**
AKASG Malin Array Be 72.80 322 P **P** **09 42 10.9 -1.4**
0.7nm,0.4s,baz=85,slow=6.0,SNR=4.6
MAW Mawson 75.85 193 P **P** **09 42 28.7 -0.8**
MAW Mawson 75.85 193 P **P** **09 42 28.7 -0.8**
2.1nm,0.6s,baz=63,slow=9.0,SNR=5.5
BOSA Boshof 76.49 239 P **P** **09 42 34.3 +0.1**
BOSA Boshof 76.49 239 P **P** **09 42 34.3 +0.1**
2.1nm,0.5s,baz=79,slow=4.0,SNR=6.0
FINES FINESS Array B 77.22 332 P **P** **09 42 36.5 -0.8**
FINES FINESS Array B 77.22 332 P **P** **09 42 36.5 -0.8**
3.3nm,0.6s,baz=110,slow=7.9,SNR=8.1
ARCES ARCESS Array B 79.57 340 P **P** **09 42 49.7 -0.5**
ARCES ARCESS Array B 79.57 340 P **P** **09 42 49.7 -0.5**
1.7nm,0.5s,baz=104,slow=6.6,SNR=22
CUC Castrocucco 80.67 310 *eP* **P** **09 42 56.5 -0.2**
4.3nm,0.7s
GERES GERESS Array B 82.49 319 P **P** **09 43 06.7 +0.5**
GERES GERESS Array B 82.49 319 P **P** **09 43 06.7 +0.5**
0.3nm,0.2s,baz=96,slow=5.1,SNR=5.0
KEST Kesra 85.80 305 P **P** **09 43 24.1 +0.9**
KEST Kesra 85.80 305 P **P** **09 43 24.1 +0.9**
2.9nm,0.8s,baz=323,slow=5.2,SNR=4.2
GAMB Gambell 86.50 26 P **P** **09 43 24.2 -1.7**
VNDA Vanda 88.94 169 P **P** **09 43 36.9 -0.2**
VNDA Vanda 88.94 169 P **P** **09 43 36.9 -0.2**
0.3nm,0.6s,baz=311,slow=6.4,SNR=4.5
SCHQ Schefferville 119.51 350 PKP **PKPdf** **09 49 31.2 -0.8**
SCHQ Schefferville 119.51 350 PKP **PKPdf** **09 49 31.2 -0.8**
1.9nm,0.9s,baz=307,slow=5.1,SNR=5.4
NVAR Mina Array Bea 126.10 34 PKP **PKPdf** **09 49 45.3 -0.2**
NVAR Mina Array Bea 126.10 34 PKP **PKPdf** **09 49 45.3 -0.2**
0.6nm,0.7s,baz=336,slow=2.6,SNR=4.8
PDAR Pinedale Array 127.10 25 PKP **PKPdf** **09 49 45.8 -1.5**
PDAR Pinedale Array 127.10 25 PKP **PKPdf** **09 49 45.7 -1.5**
0.4nm,0.5s,baz=236,slow=0.5,SNR=4.2

IDC 14 09:48:14.2±4.2, 19°.89N×143°.70E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/26, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=102.5km s-min=51.5km az=20.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**17.28**	**345**	P	Pn	09 52 15.7	-1.2
	0.3nm,0.3s,baz=159,slow=7.8,SNR=4.4						
KSRS	**Korea Array**	**22.26**	**325**	P	P	09 53 13.7	+0.9
	1.0nm,0.5s,baz=153,slow=8.2,SNR=6.1						
KURBB	**Kurchatov Arra**	**59.18**	**318**	P	P	09 58 16.6	-0.3
	0.2nm,0.3s,baz=94,slow=7.6,SNR=6.2						
YKA	**Yellowknife Ar**	**77.83**	**28**	P	P	10 00 13.4	+0.2
	0.2nm,0.4s,baz=292,slow=5.7,SNR=4.2						

IDC 14 10:00:41.2±2.5, 5°.64S×115°.03E, h637km±32km, mb2.8/4, mb1 2.9/4, mb1mx2.6/22, mbtmp2.8/4, Error ellipse: s-maj=64.6km s-min=17.7km az=53.0, Java Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.55**	**129**	P	P	10 05 06.2	+1.2
	1.5nm,0.9s,baz=304,slow=9.7,SNR=22						
ASAR	**Alice Springs**	**25.52**	**137**	P	P	10 05 22.4	0.0
	1.2nm,0.5s,baz=312,slow=8.4,SNR=37						
ASAR				ScP	ScP	10 11 11.6	+0.1
	0.2nm,0.5s,baz=321,slow=2.5,SNR=4.3						
STKA	**Stephens Creek**	**36.04**	**140**	P	P	10 06 51.0	-0.6
	3.6nm,1.0s,baz=309,slow=13,SNR=6.5						
HNR	**Honiara**	**44.66**	**98**	P	P	10 07 59.2	-0.7
	27nm,0.4s,baz=274,slow=5.7,SNR=3.8						
MKAR	**Makanchi Array**	**59.72**	**335**	P	P	10 09 46.6	+0.2
	0.4nm,0.3s,baz=147,slow=7.2,SNR=9.9						

*JMA **14** 10:02:25.3±0.4, 32°.79N×138°.19E, h366km, M3.4*
*IDC **14** 10:02:26.8±9.5, 32°.67N×136°.85E, h236km±187km, mb2.9/2, mb1 3.0/3, mb1mx2.7/26, mbtmp2.8/3, Error ellipse: s-maj=173.6km s-min=82.3km az=13.0*
*ISCJB **14** 10:02:30.4±0.8, 33°.4N±0°.1×138°.3E±0°.1, h352km±13km, mb3.0/2, Error ellipse: s-maj=21.6km s-min=18.5km az=1.6*
ISC 14 10:02:31.3±1.2, 33°.4N±0°.1×138°.2E±0°.1, h343km±14km, n15, σ1°.09/19, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMMJ	**Hamamatsu 2**	**1.50**	**345**	P	**Pn**	**10 03 18.9**	**+0.3**
JIE	**Ise**	**1.57**	**309**	P	**Pn**	**10 03 18.3**	**-0.8**
JNY	**Yasuok**	**1.96**	**352**	P	**Pn**	**10 03 22.8**	**+1.1**
JOD2	**Odawara 2**	**2.00**	**22**	P	**Pn**	**10 03 23.0**	**+1.1**
BSO3	**Boso 3**	**2.38**	**54**	P	**Pn**	**10 03 24.3**	**-0.1**
BSO4	**Boso 4**	**2.38**	**48**	*eS*	**S**	**10 04 08.8**	**+1.3**
JHU	**Hanno**	**2.60**	**20**	P	**Pn**	**10 03 27.5**	**+1.0**
BSO1	**Boso 1**	**2.63**	**61**	P	**Pn**	**10 03 25.8**	**-0.4**
BSO1				*eS*	**S**	**10 04 10.7**	**+0.3**
JRY	**Ryogami san**	**2.67**	**13**	P	Pn	10 03 29.0	+1.8
MJAR	**Matsushiro Arr**	**3.13**	**0**	P	**Pn**	**10 03 31.4**	**+0.1**
	0.7nm,0.3s,baz=180,slow=11,SNR=6.5						
MJAR				S	**S**	**10 04 20.3**	**+0.8**
	0.2nm,0.3s,baz=199,slow=28,SNR=2.8						
JAG	**Ashikaga**	**3.18**	**19**	P	**Pn**	**10 03 32.5**	**+0.7**
JAG				S	**S**	**10 04 18.7**	**-1.7**
JYT	**Yasato**	**3.26**	**30**	P	**Pn**	**10 03 32.0**	**-0.5**
JYT				S	**S**	**10 04 20.0**	**-1.7**
JHO	**Hitachi**	**3.75**	**31**	P	**Pn**	**10 03 37.9**	**+0.7**
JHO				S	**S**	**10 04 29.1**	**-1.2**
WRA	**Warramunga Arr**	**53.18**	**185**	P	**P**	**10 11 14.1**	**-1.1**
	0.4nm,0.3s,baz=0.2,slow=7.7,SNR=27						
ASAR	**Alice Springs**	**56.90**	**185**	P	**P**	**10 11 42.8**	**+1.2**
	0.3nm,0.8s,baz=14,slow=9.8,SNR=5.1						

IDC 14 10:06:48.3±6.7, 18°.35S×177°.58W, h0km, mb4.4/3, mb1 4.6/3, mb1mx3.8/18, mbtmp4.4/3, Error ellipse: s-maj=171.2km s-min=106.9km az=135.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.11**	**242**	P	P	10 14 17.3	-0.3
	1.0nm,0.4s,baz=78,slow=8.9,SNR=5.7						
WRA	**Warramunga Arr**	**45.33**	**260**	P	P	10 15 07.3	-1.1
	2.2nm,0.6s,baz=97,slow=7.8,SNR=33						
ASAR	**Alice Springs**	**45.43**	**255**	P	P	10 15 10.3	+1.0
	9.5nm,0.5s,baz=89,slow=7.8,SNR=202						
AKASG	**Malin Array Be**	**141.31**	**333**	PKP	PKPdf	10 26 20.1	-0.9
	1.7nm,0.5s,baz=39,slow=4.4,SNR=7.4						

*ISK **14** 10:30:51.8, 37°.85N×27°.55E, h5km, MD2.9*
*DDA **14** 10:30:52.6, 37°.87N×27°.55E, h17km, MD2.9*
*CSEM **14** 10:30:53.1±0.1, 37°.86N×27°.58E, h5km, MD2.9, Error ellipse: s-maj=3.4km s-min=2.9km az=60.0*
*ATH **14** 10:30:54.6, 37°.85N×27°.50E, h13km±1km, MD3.3/5*
ISC 14 10:30:52.8±0.9, 37°.84N±0°.02×27°.56E±0°.02, h12km±8km, n56, σ0°.67/81, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.29**	**241**	*i* P	**Pg**	**10 30 58.4**	**-0.4**
GCAM				*i* S	**Sg**	**10 31 02.0**	**-0.8**
GCAM	**G?zelcaml?**	**0.29**	**241**	*i* P	**Pg**	**10 30 58.4**	**-0.4**
GCAM				*i* S	**Sg**	**10 31 02.0**	**-0.8**
AYDN	**Tasoluk**	**0.31**	**125**	*i* P	**Pg**	**10 30 59.8**	**+0.6**
AYDN				*i* S	**Sg**	**10 31 03.9**	**+0.4**
AYDN	**Tasoluk**	**0.31**	**125**	*i* P	**Pg**	**10 30 59.8**	**+0.6**
AYDN				*i* S	**Sg**	**10 31 03.9**	**+0.4**
MLSB	**Milas**	**0.57**	**162**	*e*PG	**Pg**	**10 31 04.2**	**+0.2**
MLSB	**Milas**	**0.57**	**162**	*e*Pg	**Pg**	**10 31 04.2**	**+0.2**
IZM	**Izmir**	**0.60**	**337**	*e*PG	**Pg**	**10 31 04.4**	**-0.2**
IZM				*e*SG	**Sb**	**10 31 13.7**	**-0.1**
IZM	**Izmir**	**0.60**	**337**	*e*Pg	**Pg**	**10 31 04.4**	**-0.2**
IZM				*e*Sg	**Sb**	**10 31 13.7**	**-0.1**
BLCB	**Balcova**	**0.68**	**323**	*e*PG	**Pg**	**10 31 05.9**	**-0.1**
BLCB	**Balcova**	**0.68**	**323**	*e*Pg	**Pg**	**10 31 05.9**	**-0.1**
BODT	**Bodrum**	**0.80**	**194**	*e*PG	**Pg**	**10 31 08.7**	**+0.3**
BODT	**Bodrum**	**0.80**	**194**	*e*Pg	**Pg**	**10 31 08.7**	**+0.3**
YER	**Yerkesik**	**0.91**	**141**	*e*PG	**Pg**	**10 31 10.7**	**+0.3**
YER	**Yerkesik**	**0.91**	**141**	*e*Pg	**Pg**	**10 31 10.7**	**+0.3**
URLA	**Izmir**	**0.92**	**305**	*i* P	**Pg**	**10 31 10.7**	**+0.2**
URLA				*i* S	**Sg**	**10 31 22.9**	**+0.4**
URLA	**Izmir**	**0.92**	**305**	*i* P	**Pg**	**10 31 10.7**	**+0.2**
URLA				*i* S	**Sg**	**10 31 22.9**	**+0.4**
MANT	**Manisa**	**1.02**	**50**	*i* P	**Pb**	**10 31 12.4**	**-0.1**
MANT				*i* S	**Sb**	**10 31 25.0**	**-1.0**
MANT	**Manisa**	**1.02**	**50**	*i* P	**Pb**	**10 31 12.4**	**-0.1**
MANT				*i* S	**Sb**	**10 31 25.0**	**-1.0**
AKHS	**Akhisar**	**1.05**	**11**	*i* P	**Pb**	**10 31 13.0**	**0.0**
AKHS				*i* S	**Sg**	**10 31 27.5**	**+0.6**
AKHS	**Akhisar**	**1.05**	**11**	*i* P	**Pb**	**10 31 13.0**	**0.0**
AKHS				*i* S	**Sg**	**10 31 27.5**	**+0.6**
AKS	**Akhisar**	**1.05**	**11**	*e*PG	**Pb**	**10 31 13.2**	**+0.2**
AKS	**Akhisar**	**1.05**	**11**	*e*Pg	**Pb**	**10 31 13.2**	**+0.2**
KULA	**Kula-Manisa**	**1.10**	**52**	*e*PN	**Pb**	**10 31 13.9**	**+0.2**
KULA	**Kula-Manisa**	**1.10**	**52**	*e*Pn	**Pb**	**10 31 14.0**	**+0.2**
DNZL	**Cakiroluk**	**1.19**	**97**	*i* P	**Pg**	**10 31 16.7**	**+1.0**
DNZL				*i* S	**Sn**	**10 31 32.4**	**+0.7**
DNZL	**Cakiroluk**	**1.19**	**97**	*i* P	**Pg**	**10 31 16.7**	**+1.0**
DNZL				*i* S	**Sn**	**10 31 32.4**	**+0.7**
NIS1	**Nisyros Isl.**	**1.27**	**194**	*e*PG	**Pg**	**10 31 18.5**	**+1.2**
NIS1	**Nisyros Isl.**	**1.27**	**194**	*e*Pg	**Pg**	**10 31 18.5**	**+1.2**
TURN	**Turunc**	**1.28**	**139**	*i* P	**Pn**	**10 31 15.3**	**-1.1**
TURN				*i* S	**Sb**	**10 31 31.6**	**-1.6**
TURN	**Turunc**	**1.28**	**139**	*i* P	**Pn**	**10 31 15.3**	**-1.1**
CHOS	**Chios island**	**1.30**	**295**	*e*PB	**Pb**	**10 31 18.4**	**+1.1**
CHOS				*e*SB	**Sg**	**10 31 35.8**	**+1.0**
CHOS	**Chios island**	**1.30**	**295**	*e*Pb	**Pb**	**10 31 18.4**	**+1.1**
CHOS				*e*Sb	**Sg**	**10 31 35.8**	**+1.0**
DALY	**Dalyan (Mu˘la**	**1.35**	**139**	*e*PN	**Pg**	**10 31 19.1**	**+0.5**
DALY	**Dalyan (Mu˘la**	**1.35**	**139**	*e*Pn	**Pg**	**10 31 19.2**	**+0.5**
DEMI	**Demirci**	**1.50**	**37**	*i* P	**Pb**	**10 31 21.4**	**+0.7**
DEMI	**Demirci**	**1.50**	**37**	*i* P	**Pb**	**10 31 21.4**	**+0.7**
KHAL	**Karahalli**	**1.61**	**70**	*i* P	**Pn**	**10 31 21.7**	**+0.5**
KHAL				*i* S	**Sn**	**10 31 42.2**	**+0.2**
KHAL	**Karahalli**	**1.61**	**70**	*i* P	**Pn**	**10 31 21.7**	**+0.5**
KHAL				*i* S	**Sn**	**10 31 42.2**	**+0.2**
KHL	**Karahalli**	**1.62**	**72**	*e*PN	**Pb**	**10 31 23.2**	**+0.4**
KHL	**Karahalli**	**1.62**	**72**	*e*Pn	**Pb**	**10 31 23.2**	**+0.4**
FETY	**Fethiye**	**1.71**	**134**	*e*PN	**Pb**	**10 31 24.0**	**-0.2**
FETY	**Fethiye**	**1.71**	**134**	*e*Pn	**Pb**	**10 31 24.0**	**-0.2**
PRK	**Paraskevi**	**1.73**	**325**	*e*PG	**Pg**	**10 31 26.2**	**+0.3**
PRK				*e*SB	**Sg**	**10 31 48.7**	**+0.4**
PRK	**Paraskevi**	**1.73**	**325**	*e*Pg	**Pg**	**10 31 26.2**	**+0.3**
PRK				*e*Sb	**Sg**	**10 31 48.7**	**+0.4**
APE	**Apeiranthos**	**1.79**	**245**	*e*PN	**Pb**	**10 31 25.6**	**+0.1**
APE	**Apeiranthos**	**1.79**	**245**	*e*PN	**Pb**	**10 31 26.2**	**+0.7**
APE				*e*SN	**Sg**	**10 31 50.7**	**+0.4**
APE	**Apeiranthos**	**1.79**	**245**	*e*Pn	**Pb**	**10 31 25.6**	**+0.1**
APE				*e*Sn	**Sg**	**10 31 50.7**	**+0.4**
BALY	**Balya**	**1.90**	**1**	*i* P	**Pn**	**10 31 24.8**	**-0.2**
BALY	**Balya**	**1.90**	**1**	*i* P	**Pn**	**10 31 24.8**	**-0.2**
DURS	**Dursunbey**	**1.90**	**22**	*i* P	**Pn**	**10 31 24.9**	**-0.2**
DURS				*i* S	**Sn**	**10 31 47.8**	**-1.2**
DURS	**Dursunbey**	**1.90**	**22**	*i* P	**Pn**	**10 31 24.9**	**-0.2**
DURS				*i* S	**Sn**	**10 31 47.8**	**-1.2**
KARP	**Karpathos**	**2.31**	**188**	*e*PN	**Pb**	**10 31 35.1**	**+0.6**
KARP	**Karpathos**	**2.31**	**188**	*e*Pn	**Pb**	**10 31 35.1**	**+0.6**
ALT	**Altintas**	**2.34**	**58**	*e*PN	**Pb**	**10 31 33.4**	**-1.6**
ALT	**Altintas**	**2.34**	**58**	*e*Pn	**Pb**	**10 31 33.4**	**-1.6**
ULDT	**Uludag**	**2.60**	**28**	*i* P	**Pb**	**10 31 40.0**	**+0.4**

IDC 14 11:06:23.3±3.9, 0°.41N×123°.75E, h466km±154km, mb3.1/3, mb1 3.2/4, mb1mx2.7/23, mbtmp3.0/4, Error ellipse: s-maj=207.6km s-min=66.3km az=114.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.70**	**217**	P	P	11 08 04.8	-0.6
	0.8nm,0.3s,baz=14,slow=18,SNR=3.6						
WRA	**Warramunga Arr**	**22.73**	**153**	P	P	11 10 48.9	+0.2
	1.7nm,0.4s,baz=336,slow=9.6,SNR=37						
WRA				S	S	11 14 23.7	+0.4
	0.5nm,1.1s,baz=337,slow=15,SNR=3.3						
ASAR	**Alice Springs**	**25.88**	**158**	P	P	11 11 17.5	+0.7
	0.6nm,0.5s,baz=338,slow=7.4,SNR=19						
STKA	**Stephens Creek**	**36.28**	**154**	P	P	11 12 44.8	-1.3
	3.0nm,0.8s,baz=359,slow=9.9,SNR=3.4						

*CSEM **14** 11:13:43.7, 39°.67N×29°.49E, h7km, MD2.5, After DDA*
DDA 14 11:13:43.7, 39°.67N×29°.49E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.54**	**330**	*i* P	Pg	11 13 54.2	-0.3
ULDT	**Uludag**	**0.54**	**330**	*i* P	Pg	11 13 54.2	-0.3
GDZ	**Gediz**	**0.58**	**180**	*i* P	Pg	11 13 55.0	-0.1
GDZ				*i* S	Sb	11 14 04.5	-0.4
GDZ	**Gediz**	**0.58**	**180**	*i* P	Pg	11 13 55.0	-0.1
GDZ				*i* S	Sb	11 14 04.5	-0.4
BORA	**Eskisehir**	**0.77**	**74**	*i* P	Pg	11 13 58.8	+0.1
BORA	**Eskisehir**	**0.77**	**74**	*i* P	Pg	11 13 58.8	+0.1
DURS	**Dursunbey**	**0.79**	**265**	*i* P	Pg	11 13 58.4	-0.6
DURS				*i* S	Sb	11 14 10.9	+0.2
DURS	**Dursunbey**	**0.79**	**265**	*i* P	Pg	11 13 58.4	-0.5
DURS				*i* S	Sb	11 14 10.9	+0.2
DEMI	**Demirci**	**0.87**	**224**	*i* P	Pg	11 14 00.5	0.0
DEMI	**Demirci**	**0.87**	**224**	*i* P	Pg	11 14 00.5	0.0
SEYT	**Eskypehyr**	**1.06**	**98**	*e*P	Pg	11 14 01.7	-2.6
SEYT	**Eskypehyr**	**1.06**	**98**	*e*P	Pg	11 14 01.7	-2.6
BALY	**Balya**	**1.44**	**273**	*i* P	Pb	11 14 10.9	-0.1
BALY				*i* S	Sg	11 14 31.6	+1.4
BALY	**Balya**	**1.44**	**273**	*i* P	Pb	11 14 10.9	-0.1
BALY				*i* S	Sg	11 14 31.6	+1.4

WEL 14 11:14:25.2±0.1, 40°.21S×175°.01E, h12km, ML3.6/42, 3C-15D, Error ellipse: s-maj=1.3km s-min=0.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.45**	**357**	↑P*	Pb	11 14 34.7	-0.5
WAZ				*e*S*	Sb	11 14 41.4	-0.5
POWZ	**Post Office Ro**	**0.61**	**108**	↑P*	Pg	11 14 37.0	-0.1
POWZ				S*	Sg	11 14 45.4	+0.2
OGWZ	**Otaki Gorge**	**0.62**	**169**	↓P*	Pg	11 14 37.0	-0.4
OGWZ				S*	Sg	11 14 45.5	-0.1
MRZ	**Mangatainoka R**	**0.63**	**137**	↓P*	Pg	11 14 37.5	-0.1
MRZ				S*	Sg	11 14 46.1	+0.3
KIW	**Kapiti Island**	**0.66**	**187**	↓P*	Pg	11 14 37.2	-0.9
KIW				S*	Sg	11 14 45.6	-1.2
TSZ	**Takapari Road**	**0.74**	**79**	↓P*	Pg	11 14 39.2	-0.5
TSZ				S*	Sg	11 14 49.0	-0.5
HOWZ	**Holdsworth Sta**	**0.79**	**151**	P*	Pg	11 14 40.3	-0.3
HOWZ				S*	Sg	11 14 50.6	-0.4
TIWZ	**Tintock**	**0.88**	**131**	P*	Pg	11 14 42.1	-0.1
DVHZ	**Dannevirke**	**0.89**	**96**	P*	Pg	11 14 42.2	-0.3
MTVZ	**Mangateitei**	**0.89**	**23**	P*	Pg	11 14 41.4	-1.3
CAW	**Cannon Point**	**0.90**	**177**	P*	Pg	11 14 41.7	-1.0
PKVZ	**Pokaka**	**0.95**	**16**	P*	Pg	11 14 42.5	-1.2
PNHZ	**Pukenui**	**0.96**	**73**	↓P*	Pg	11 14 42.7	-1.1
MOVZ	**Moawhango**	**0.98**	**36**	↓P*	Pg	11 14 42.3	-2.0
WNVZ	**Wahianoa**	**0.99**	**27**	P*	Pb	11 14 42.9	-1.6
TRVZ	**Turoa**	**1.00**	**25**	↓P*	Pb	11 14 43.0	-1.8
MTW	**Mount Morrison**	**1.02**	**159**	P*	Pb	11 14 44.3	-0.6
DUWZ	**D'Urville Isla**	**1.02**	**234**	P*	Pb	11 14 43.4	-1.5
DRZ	**Dome Shelter**	**1.02**	**25**	P*	Pb	11 14 44.0	-1.4
RAEZ	**Rainy Point**	**1.03**	**332**	P*	Pb	11 14 45.1	0.0
FWVZ	**Far West T-bar**	**1.04**	**24**	P*	Pb	11 14 43.5	-1.9
BFZ	**Birch Farm**	**1.05**	**117**	P*	Pn	11 14 45.7	-0.1
TUVZ	**Tukino**	**1.06**	**28**	P*	Pb	11 14 44.1	-1.6
BHHZ	**Black Hill Sta**	**1.08**	**49**	P*	Pb	11 14 44.1	-1.9
WPVZ	**Whakapapa**	**1.08**	**23**	P*	Pb	11 14 44.5	-1.6
WEL	**Wellington**	**1.09**	**190**	P*	Pb	11 14 44.7	-1.4
VRZ	**Vera Road**	**1.10**	**350**	↓P*	Pb	11 14 45.2	-1.0
WPHZ	**Waipukurau**	**1.10**	**83**	P*	Pb	11 14 46.1	-0.2
TMWZ	**Te Maipa**	**1.12**	**144**	P*	Pb	11 14 45.5	-1.1
DFE	**Dawson Falls**	**1.12**	**321**	P*	Pn	11 14 46.9	0.0
SNZO	**South Karori**	**1.12**	**192**	P*	Pb	11 14 45.2	-1.4
NGZ	**Ngauruhoe**	**1.13**	**24**	P*	Pb	11 14 45.2	-1.6
TCW	**Tory Channel**	**1.15**	**209**	P*	Pb	11 14 44.9	-2.1
OTVZ	**Oturere**	**1.16**	**26**	P*	Pb	11 14 45.9	-1.5
NEZ	**North Egmont**	**1.17**	**323**	P*	Pb	11 14 47.3	-0.2
WTVZ	**West Tongariro**	**1.18**	**22**	↓P*	Pb	11 14 45.9	-1.8
TWVZ	**Taurewa**	**1.18**	**16**	P*	Pn	11 14 45.6	-2.1
DREZ	**Durham Road**	**1.19**	**328**	P*	Pn	11 14 47.6	-0.2
BHW	**Baring Head**	**1.21**	**185**	P*	Pn	11 14 46.6	-1.3
KRVZ	**Karewarewa**	**1.21**	**24**	↑P*	Pn	11 14 46.5	-1.7
PAWZ	**Paruwai Farm**	**1.22**	**165**	↓P*	Pn	11 14 47.3	-0.8
MSWZ	**Moikau Station**	**1.22**	**172**	P*	Pn	11 14 46.9	-1.3
MHEZ	**Mangahewa**	**1.25**	**335**	P*	Pb	11 14 48.8	0.0
PKE	**Pukeiti**	**1.28**	**322**	PN	Pb	11 14 49.3	-0.1
TRWZ	**Traveller**	**1.30**	**157**	PN	Pn	11 14 48.6	-0.7
KATZ	**Kakaramea**	**1.34**	**23**	PN	Pn	11 14 48.3	-1.6
PLWZ	**Palliser**	**1.37**	**172**	PN	Pn	11 14 49.6	-0.7
RITZ	**Rihia Road**	**1.39**	**28**	PN	Pn	11 14 49.9	-0.6
PXZ	**Pawanui**	**1.43**	**84**	↓PN	Pn	11 14 49.9	-1.1
TUWZ	**Tuamarina**	**1.47**	**213**	↓PN	Pn	11 14 50.4	-1.1
KAHZ	**Kahuranaki**	**1.49**	**75**	PN	Pn	11 14 51.2	-0.7
MCHZ	**McNeill Hill**	**1.50**	**60**	PN	Pn	11 14 52.1	0.0
BKZ	**Black Stump Fm**	**1.54**	**48**	↓PN	Pn	11 14 52.4	-0.3
HATZ	**Hinemaiaia**	**1.56**	**33**	PN	Pn	11 14 52.2	-0.7
WATZ	**Wairara**	**1.60**	**21**	PN	Pn	11 14 53.0	-0.3
NNZ	**Nelson**	**1.60**	**230**	PN	Pn	11 14 52.2	-1.1
HIZ	**Hauiti**	**1.70**	**356**	↓PN	Pn	11 14 53.5	-1.2
BSWZ	**Blackbirch Sta**	**1.73**	**209**	PN	Pn	11 14 55.0	-0.2
NMHZ	**Naumai**	**1.77**	**52**	*e*PN	Pn	11 14 55.6	-0.2
QRZ	**Quartz Range**	**1.99**	**251**	PN	Pn	11 14 57.6	-1.1
THZ	**Tophouse**	**2.23**	**225**	↓PN	Pn	11 15 01.7	-0.3
KNZ	**Kokohu**	**2.37**	**61**	PN	Pn	11 15 02.0	-1.9
KHZ	**Kahutara**	**2.47**	**206**	PN	Pn	11 15 03.9	-1.4
MWZ	**Matawai**	**2.70**	**47**	PN	Pn	11 15 07.3	-1.3
MKAZ	**Moumakai**	**3.10**	**2**	PN	Pn	11 15 12.4	-1.5
MQZ	**McQueen's Vall**	**3.91**	**206**	PN	Pn	11 15 21.5	-3.7

IDC 14 11:17:04.1±24.0, 18°.45S×167°.18E, h0km, mb4.0/3, mb1 4.3/4, mb1mx3.8/17, mbtmp4.3/4, ML4.9/1, Error ellipse: s-maj=415.5km s-min=50.2km az=85.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**11.38**	**321**	Pn	Pn	11 19 48.0	-0.1
	7.8nm,0.3s,baz=218,slow=13,SNR=3.5						
STKA	**Stephens Creek**	**26.66**	**235**	P	P	11 22 44.6	-0.2
	7.4nm,1.1s,baz=46,slow=9.4,SNR=4.8						
WRA	**Warramunga Arr**	**31.02**	**262**	P	P	11 23 24.0	+0.1
	1.0nm,0.7s,baz=91,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**31.44**	**255**	P	P	11 23 27.4	-0.1
	1.0nm,0.7s,baz=80,slow=9.3,SNR=18						

*ISCJB **14** 11:50:20.7±0.6, 14°.53N±0°.06×92°.81W±0°.04, h56km±8km, mb3.8/5, Error ellipse: s-maj=10.8km s-min=3.8km az=31.8*
*MEX **14** 11:50:22.8±0.5, 14°.50N×92°.85W, h23km±41km, MD3.7*
*CASC **14** 11:50:24.6±2.0, 14°.56N×92°.62W, h54km±60km, MD4.1*
*IDC **14** 11:50:25.8±9.6, 14°.74N×92°.30W, h83km±63km, mb3.4/5, mb1 3.8/6, mb1mx3.5/24, mbtmp3.6/6, ML4.2/1, Error ellipse: s-maj=133.9km s-min=54.5km az=146.0*
ISC 14 11:50:22.1±1.2, 14°.60N±0°.06×92°.78W±0°.04, h45km±13km, n24, σ1°.40/39, mb3.9/5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.59**	**58**	*e*P	**Pn**	**11 50 33.8**	**-0.4**
THIG				*i* S	**Sn**	**11 50 43.1**	**+0.3**
JAT	**Jato**	**1.15**	**104**	*e*P	**Pn**	**11 50 42.5**	**+0.8**
PCIG		**1.18**	**339**	*e*P	**Pn**	**11 50 42.2**	**0.0**
PCIG				*i* S	**Sn**	**11 50 56.8**	**-0.3**
CCIG	**Comitan**	**1.79**	**20**	*e*P	**Pn**	**11 50 52

ARIG	**Puente Sto Nin**	**4.82**	**292**	*i* P	Pn	12 01 25.7	-1.1
ARIG				*i* S	Sn	12 02 19.1	-2.5

ISK **14** *12:05:37.6, 39˚.39N×28˚.06E, h9km, MD2.6*
ISCJB **14** *12:05:38.6±0.8, 39˚.47N±0˚.04×28˚.05E±0˚.04, h4km±6km, Error ellipse: s-maj=7.2km s-min=4.3km az=41.8*
CSEM **14** *12:05:38.9±0.2, 39˚.46N×28˚.07E, h10km, MD2.6, Error ellipse: s-maj=5.6km s-min=3.4km az=42.0*
DDA **14** *12:05:40.0, 39˚.47N×28˚.14E, h7km, MD2.8*
ISC 14 12:05:39.2±1.0, **39˚.47N**±0˚.03×**28˚.08E**±0˚.03, **h13**km±9km, **n42**, σ0**98**/54, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.23**	**318**	*e*PG	**Pg**	**12 05 43.9**	**-0.3**
BALB	**Balikesir**	**0.23**	**318**	*e*Pg	**Pg**	**12 05 43.9**	**-0.3**
DURS	**Dursunbey**	**0.33**	**66**	*i* P	**Pg**	**12 05 45.6**	**-0.5**
DURS				*i* S	**Sg**	**12 05 51.3**	**+0.7**
DURS	**Dursunbey**	**0.33**	**66**	*i* P	**Pg**	**12 05 45.6**	**-0.5**
DURS				*i* S	**Sg**	**12 05 51.3**	**+0.7**
DST	**Dursunbey**	**0.44**	**72**	*e*PG	**Pg**	**12 05 47.4**	**-0.5**
DST				*e*SG	**Sg**	**12 05 54.4**	**+0.6**
DST	**Dursunbey**	**0.44**	**72**	*e*Pg	**Pg**	**12 05 47.4**	**-0.5**
DST				*e*Sg	**Sg**	**12 05 54.4**	**+0.6**
DEMI	**Demirci**	**0.65**	**130**	*i* P	**Pg**	**12 05 52.2**	**+0.2**
DEMI				*i* S	**Sg**	**12 06 00.3**	**-0.2**
DEMI	**Demirci**	**0.65**	**130**	*i* P	**Pg**	**12 05 52.2**	**+0.2**
DEMI				*i* S	**Sg**	**12 06 00.3**	**-0.2**
GONE	**Gonen-Balikesi**	**0.65**	**332**	*e*PG	**Pg**	**12 05 52.1**	**+0.1**
GONE	**Gonen-Balikesi**	**0.65**	**332**	*e*Pg	**Pg**	**12 05 52.1**	**+0.1**
ORLT	**Orhaneli**	**0.85**	**47**	*e*PG	**Pg**	**12 05 55.6**	**-0.2**
ORLT	**Orhaneli**	**0.85**	**47**	*e*Pg	**Pg**	**12 05 55.6**	**-0.2**
MANT	**Manisa**	**1.04**	**159**	*i* P	**Pn**	**12 05 59.9**	**0.0**
MANT				*i* S	**Sn**	**12 06 14.2**	**-0.2**
MANT	**Manisa**	**1.04**	**159**	*i* P	**Pn**	**12 05 59.9**	**0.0**
MANT				*i* S	**Sn**	**12 06 14.2**	**-0.2**
KULA	**Kula-Manisa**	**1.05**	**154**	*e*PG	**Pb**	**12 05 57.0**	**-2.4**
KULA	**Kula-Manisa**	**1.05**	**154**	*e*Pg	**Pb**	**12 05 57.0**	**-2.4**
TVSB	**Tavsanli**	**1.07**	**91**	*e*PN	**Pb**	**12 05 59.0**	**-0.7**
TVSB	**Tavsanli**	**1.07**	**91**	*e*Pn	**Pb**	**12 05 59.0**	**-0.7**
KRBG	**Karabiga-Canak**	**1.10**	**327**	*e*PN	**Pb**	**12 05 59.9**	**-0.3**
KRBG	**Karabiga-Canak**	**1.10**	**327**	*e*Pn	**Pb**	**12 05 59.9**	**-0.3**
GDZ	**Gediz**	**1.15**	**109**	*i* P	**Pg**	**12 06 01.9**	**+0.5**
GDZ				*i* S	**Sg**	**12 06 16.9**	**+0.4**
GDZ	**Gediz**	**1.15**	**109**	*i* P	**Pg**	**12 06 01.9**	**+0.5**
GDZ				*i* S	**Sg**	**12 06 16.9**	**+0.4**
MRMT	**Marmara Adasi**	**1.19**	**342**	*e*PN	**Pn**	**12 06 01.7**	**-0.1**
MRMT	**Marmara Adasi**	**1.19**	**342**	*e*Pn	**Pn**	**12 06 01.7**	**-0.1**
ARMT	**Armutlu**	**1.25**	**28**	*e*PN	**Pg**	**12 06 03.5**	**+0.2**
ARMT	**Armutlu**	**1.25**	**28**	*e*Pn	**Pg**	**12 06 03.5**	**+0.2**
IZI	**Iznik**	**1.38**	**51**	*e*PN	**Pn**	**12 06 03.7**	**-0.6**
IZI	**Iznik**	**1.38**	**51**	*e*Pn	**Pn**	**12 06 03.7**	**-0.6**
EZN	**Ezine**	**1.40**	**285**	*e*PN	**Pn**	**12 06 04.1**	**-0.4**
EZN	**Ezine**	**1.40**	**285**	*e*Pn	**Pn**	**12 06 04.1**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.40**	**331**	*e*PN	**Pn**	**12 06 04.4**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.40**	**331**	*e*Pn	**Pn**	**12 06 04.4**	**-0.2**
MFT	**Murefte**	**1.45**	**335**	*e*PN	**Pn**	**12 06 05.5**	**+0.1**
MFT	**Murefte**	**1.45**	**335**	*e*Pn	**Pn**	**12 06 05.5**	**+0.1**
YLV	**Yalova**	**1.48**	**42**	*e*PN	**Pb**	**12 06 06.6**	**-0.1**
YLV	**Yalova**	**1.48**	**42**	*e*Pn	**Pb**	**12 06 06.6**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.54**	**307**	*e*PN	**Pn**	**12 06 06.6**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.54**	**307**	*e*Pn	**Pn**	**12 06 06.6**	**+0.1**
KHAL	**Karahalli**	**1.55**	**134**	*i* P	**Pb**	**12 06 07.9**	**0.0**
KHAL				*i* S	**Sg**	**12 06 33.1**	**+3.9**
KHAL	**Karahalli**	**1.55**	**134**	*i* P	**Pb**	**12 06 07.9**	**0.0**
KHAL				*i* S	**Sg**	**12 06 33.1**	**+3.9**
ERIK	**Erikli-Kesan**	**1.70**	**316**	*e*PN	**Pn**	**12 06 08.8**	**+0.2**
ERIK	**Erikli-Kesan**	**1.70**	**316**	*e*Pn	**Pn**	**12 06 08.8**	**+0.2**

NIED **14** *12:07:00, 46˚.00N×151˚.80E, h20km, Mw4.0 Best double couple: M0 1.09000×10^15 NP1:φs126.00000°, δ76.00000°, λ-21.00000°. NP2:φs221.00000°, δ70.00000°, λ-165.00000°.*
ISCJB **14** *12:07:52.7±0.6, 45˚.52N±0˚.09×152˚.03E±0˚.08, h30km, mb3.6/9, MS3.2/2, Error ellipse: s-maj=13.6km s-min=5.5km az=152.3*
JMA **14** *12:07:55.7±0.5, 45˚.98N×151˚.82E, h30km, M4.4*
MOS **14** *12:07:55.1±1.2, 45˚.86N×151˚.92E, h50km, mb4.0/7, Error ellipse: s-maj=18.1km s-min=12.3km az=149.6*
IDC **14** *12:07:58.2±2.8, 45˚.99N×151˚.64E, h56km±25km, mb3.3/9, mb1 3.6/14, mb1mx3.5/28, mbtmp3.4/14, ML3.2/5, MS3.0/4, Ms1 3.0/4, ms1mx2.6/19, Error ellipse: s-maj=25.7km s-min=16.0km az=129.0*
ISC 14 12:07:53.8±0.9, **45.6N**±0˚.1×**152˚.05E**±0˚.09, **h30**km, **n48**, σ1**92**/46, **mb3.7**/9, **1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.97**	**264**	*e*PN	**Pn**	**12 08 40.2**	**+1.4**
KUR				*e*S	**Sn**	**12 09 13.7**	**+0.3**
KUR				pmax	pmax		
	comp=Z,150nm,0.6s						
KUR				pmax	pmax		
	comp=N,100nm,0.7s						
KUR				smax	smax		
	comp=N,550nm,0.5s						
KUR				smax	smax		
	comp=E,380nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.68**	**253**	*d* PN	**Pn**	**12 09 05.1**	**+2.9**
YUK				pmax	pmax		
	comp=E,64nm,0.5s						
YUK				pmax	pmax		
	comp=Z,84nm,0.5s						
YUK				pmax	pmax		
	comp=N,58nm,0.2s						
NEM2	**Nemuro 2**	**5.04**	**246**	P	**Pn**	**12 09 08.5**	**+1.3**
NEM2				*e*S	**Sn**	**12 10 02.7**	**-1.7**
JRA	**Rausu**	**5.21**	**254**	P	Pn	12 09 13.7	+4.2
JRA				*e*S	**Sn**	**12 10 11.4**	**+2.9**
JNK	**Nakash**	**5.61**	**252**	P	**Pn**	**12 09 17.8**	**+2.7**
JNK				*e*S	**Sn**	**12 10 18.9**	**+0.4**
JAK	**Akkeshi**	**5.89**	**246**	P	**Pn**	**12 09 20.1**	**+1.2**
JAK				*e*S	**Sn**	**12 10 23.1**	**-2.2**
JTKR	**Abashiri--Toko**	**6.02**	**257**	P	**Pn**	**12 09 23.6**	**+2.9**
JAR	**Ashorobuto**	**6.36**	**252**	P	**Pn**	**12 09 28.3**	**+2.9**
JAR				*e*S	**Sn**	**12 10 38.5**	**+1.5**
JMP	**Maruseppu**	**6.39**	**259**	P	Pn	12 09 29.3	+3.5
JOB	**Onbets**	**6.49**	**248**	P	**Pn**	**12 09 29.2**	**+2.1**
JOB				*e*S	**Sn**	**12 10 38.7**	**-1.4**
YSS	**Yuzh-Sakhalins**	**6.58**	**285**	*i* PN	Pn	12 09 31.1	+2.7
JKK2	**Kamakawa 2**	**6.85**	**259**	P	Pn	12 09 36.1	+4.0
ASAJ	**Asahikawa**	**6.88**	**261**	P	Pn	12 09 36.5	+3.9
ASAJ	**Asahikawa**	**6.88**	**261**	P	**Pn**	**12 09 33.1**	**+0.5**
	comp=N,1.6nm,0.3s,baz=74,slow=17,SNR=12						
JCH	**Churui**	**6.93**	**248**	P	**Pn**	**12 09 34.4**	**+1.2**
JCH				*e*S	**Sn**	**12 10 48.7**	**-2.3**
JFR	**Furan**	**7.20**	**254**	P	Pn	12 09 41.5	+4.5
JAB	**Ashibetsu**	**7.33**	**257**	P	Pn	12 09 42.6	+3.9
ERM	**Erimo**	**7.37**	**244**	*i* PN	**Pn**	**12 09 42.2**	**+3.0**
JEM	**Erimo**	**7.37**	**244**	P	**Pn**	**12 09 42.1**	**+2.9**
JNBK	**Urakawa-nobuka**	**7.49**	**247**	P	**Pn**	**12 09 41.5**	**+0.6**
JNBK				*e*S	**Sn**	**12 11 00.5**	**-4.2**
JBT2	**Biratori 2**	**7.51**	**251**	P	**Pn**	**12 09 43.1**	**+1.9**
JBT2				*e*S	**Sn**	**12 11 05.4**	**+0.1**
PETK	**Petropavlovsk-**	**8.37**	**24**	*e*PN	Pb	12 10 04.4	-13
PETK	**Petropavlovsk-**	**8.37**	**24**	P	Pn	12 09 53.6	+0.7
	comp=N,0.1nm,0.3s,baz=194,slow=16,SNR=3.1						
JKB	**Kayabe**	**8.80**	**249**	P	**Pn**	**12 09 59.6**	**+0.8**
JKB				*e*S	**Sn**	**12 11 32.1**	**-4.8**
JYM2	**Yakumo 2**	**9.13**	**252**	P	**Pn**	**12 10 04.6**	**+1.2**
JANG	**Nango**	**9.32**	**240**	P	**Pn**	**12 10 05.3**	**-0.7**
JANG				*e*S	Sn	12 11 41.9	-7.9
JTM	**Tenmabayashi**	**9.35**	**243**	P	**Pn**	**12 10 06.5**	**+0.1**
JTM				*e*S	Sn	12 11 44.3	-6.2
JSR	**Shiriuchi**	**9.37**	**248**	P	**Pn**	**12 10 08.1**	**+1.4**
JTH	**Tanohata**	**9.39**	**237**	*e*S	Sn	12 11 44.7	-6.7
JOSM	**Okushiri--Mats**	**9.74**	**253**	P	**Pn**	**12 10 13.4**	**+1.6**
OFUJ	**Ofunato**	**10.07**	**233**	P	**Pn**	**12 10 15.9**	**-0.4**
OFUJ				*e*S	Sn	12 12 01.4	-6.8
JRG	**Rokugo**	**10.46**	**238**	P	**Pn**	**12 10 21.8**	**+0.2**
JIO	**Ouri**	**10.69**	**232**	P	**Pn**	**12 10 25.2**	**+0.5**
JIO				*e*S	Sn	12 12 15.5	-7.8
MJAR	**Matsushiro Arr**	**13.80**	**234**	P	Pn	12 11 11.8	+4.5
	comp=N,0.1nm,0.3s,baz=37,slow=8.3,SNR=3.2						
MJAR				LR	LR	12 16 02.7	
	comp=N,30nm,18.3s,baz=125,slow=35						
USRK	**Ussuriysk Arra**	**14.28**	**272**	P	**Pn**	**12 11 14.6**	**+0.8**
	comp=N,0.1nm,0.3s,baz=74,slow=15,SNR=3.3						
USRK				LR	LR	12 16 03.5	
	comp=N,59nm,20.2s,baz=118,slow=35						
KSRS	**Korea Array**	**19.76**	**254**	P	**P**	**12 12 21.2**	**+0.1**
	comp=N,0.2nm,0.3s,baz=60,slow=11,SNR=7.3						
YAK	**Yakutsk**	**20.92**	**330**	*e*P	Pn	12 12 34.4	-1.7
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZALV	**Zalesovo Beam**	**42.69**	**307**	LR	LR	12 34 21.3	
	comp=Z,35nm,20.5s,baz=69,slow=38						
MKAR	**Makanchi Array**	**46.82**	**298**	*e*P	**P**	**12 16 21.2**	**+0.6**
MKAR	**Makanchi Array**	**46.82**	**298**	P	**P**	**12 16 19.0**	**-1.6**
	comp=Z,0.4nm,0.6s,baz=53,slow=4.7,SNR=3.6						
MKAR				PcP	**PcP**	**12 17 52.6**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=50,slow=2.4,SNR=4.3						
MKAR				LR	LR	12 36 41.5	
	comp=Z,27nm,20.3s,baz=254,slow=37						
CMAR	**Chiang Mai Arr**	**51.38**	**256**	P	**P**	**12 16 56.3**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=29,slow=8.0,SNR=6.9						
YKA	**Yellowknife Ar**	**52.28**	**36**	P	**P**	**12 17 02.3**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=302,slow=6.9,SNR=4.1						
PDAR	**Pinedale Array**	**66.02**	**53**	P	**P**	**12 18 39.4**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=296,slow=4.7,SNR=3.3						
WRA	**Warramunga Arr**	**67.19**	**198**	P	**P**	**12 18 47.4**	**+2.5**
	comp=Z,0.8nm,1.0s,baz=14,slow=6.4,SNR=3.8						
NOA	**NORSAR Array B**	**69.07**	**341**	P	**P**	**12 18 54.6**	**-1.7**
	comp=Z,0.8nm,0.9s,baz=30,slow=6.8,SNR=3.5						
ASAR	**Alice Springs**	**70.89**	**198**	P	P	12 19 11.5	+3.7
	comp=Z,0.2nm,0.5s,baz=19,slow=5.7,SNR=6.3						
BRTR	**Keskin Array B**	**78.72**	**316**	P	**P**	**12 19 52.3**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=48,slow=2.1,SNR=1.7						
GERES	**GERESS Array B**	**79.16**	**333**	P	**P**	**12 19 54.0**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=18,slow=5.6,SNR=4.5						

ISK **14** *12:18:12.1, 39˚.92N×34˚.02E, h4km, MD2.7*
DDA **14** *12:18:12.9, 39˚.99N×33˚.99E, h7km, MD2.9*
CSEM **14** *12:18:13.4±0.2, 39˚.92N×34˚.04E, h20km, MD2.9, Error ellipse: s-maj=7.6km s-min=4.8km az=153.0*
ISC 14 12:18:12.9±1.2, **39˚.92N**±0˚.06×**34˚.01E**±0˚.03, **h7**km±14km, **n13**, σ0**32**/21, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDAG	**Cicekdag**	**0.40**	**136**	*i* P	**Pb**	**12 18 22.2**	**-0.2**
CDAG				*i* S	**Sb**	**12 18 29.2**	**+0.5**
CDAG	**Cicekdag**	**0.40**	**136**	*i* P	**Pb**	**12 18 22.2**	**-0.2**
CDAG				*i* S	**Sb**	**12 18 29.2**	**+0.5**
CORM	**Corum**	**0.54**	**61**	PG	**Pg**	**12 18 23.2**	**-0.2**
CORM				*e*SG	**Sg**	**12 18 31.1**	**+0.6**
CORM	**Corum**	**0.54**	**61**	*i* Pg	**Pg**	**12 18 23.2**	**-0.2**
CORM				*e*Sg	**Sg**	**12 18 31.1**	**+0.6**
BBAL	**Bala**	**0.78**	**242**	*i* P	**Pb**	**12 18 28.9**	**0.0**
BBAL				*i* S	**Sb**	**12 18 39.9**	**+0.2**
BBAL	**Bala**	**0.78**	**242**	*i* P	**Pb**	**12 18 28.9**	**0.0**
BBAL				*i* S	**Sb**	**12 18 39.9**	**+0.2**
AFSR	**Af˙ar-Bala (A**	**0.86**	**238**	*e*PG	**Pg**	**12 18 29.4**	**-0.1**
AFSR				*e*SG	**Sb**	**12 18 42.0**	**-0.1**
AFSR	**Af˙ar-Bala (A**	**0.86**	**238**	*e*Pg	**Pg**	**12 18 29.4**	**-0.1**
AFSR				*e*Sg	**Sb**	**12 18 42.0**	**-0.1**
CTKT	**Corum**	**0.92**	**40**	*i* P	Pg	12 18 24.3	-6.3
CTKT				*i* S	**Sg**	**12 18 42.6**	**-0.1**
YOZ	**Yozgat**	**1.04**	**105**	*e*PN	**Pg**	**12 18 32.5**	**-0.4**
YOZ	**Yozgat**	**1.04**	**105**	*e*Pn	**Pg**	**12 18 32.5**	**-0.4**
BALT	**Daday**	**1.69**	**344**	*i* P	**Pn**	**12 18 42.9**	**-0.1**
BALT	**Daday**	**1.69**	**344**	*i* P	**Pn**	**12 18 42.9**	**-0.1**

ISK **14** *12:27:52.7, 39˚.58N×32˚.77E, h5km, MD2.5*
CSEM **14** *12:27:52.8±0.3, 39˚.57N×32˚.78E, h8km, MD2.9, Error ellipse: s-maj=9.3km s-min=6.2km az=27.0*
DDA **14** *12:27:54.6, 39˚.59N×32˚.94E, h7km, MD2.9*
ISC 14 12:27:53.9±1.2, **39˚.60N**±0˚.03×**32˚.82E**±0˚.03, **h1**km±14km, **n14**, σ1**93**/23, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBAL	**Bala**	**0.24**	**104**	*i* P	**Pg**	**12 27 58.2**	**-0.2**
BBAL				*i* S	**Sg**	**12 28 02.9**	**+1.4**
BBAL	**Bala**	**0.24**	**104**	*i* P	**Pg**	**12 27 58.2**	**-0.2**
BBAL				*i* S	**Sg**	**12 28 02.9**	**+1.4**
AFSR	**Af˙ar-Bala (A**	**0.25**	**129**	*e*PG	**Pg**	**12 27 57.7**	**-0.9**
AFSR				*e*SG	**Sg**	**12 28 02.9**	**+1.2**
AFSR	**Af˙ar-Bala (A**	**0.25**	**129**	*e*Pg	**Pg**	**12 27 57.7**	**-0.9**
AFSR				*e*Sg	**Sg**	**12 28 02.9**	**+1.2**
LOD	**Lodumlu**	**0.29**	**351**	*e*PG	**Pg**	**12 27 58.6**	**-0.9**
LOD				*e*SG	**Sg**	**12 28 04.5**	**+1.2**
LOD	**Lodumlu**	**0.29**	**351**	*e*Pg	**Pg**	**12 27 58.6**	**-0.9**
LOD				*e*Sg	**Sg**	**12 28 04.5**	**+1.2**
SVRH	**Sivrihisar-ESK**	**1.02**	**262**	*e*PG	**Pg**	**12 28 12.0**	**-1.4**
SVRH	**Sivrihisar-ESK**	**1.02**	**262**	*e*Pg	**Pg**	**12 28 12.0**	**-1.4**
CDAG	**Cicekdag**	**1.20**	**88**	*i* P	**Pb**	**12 28 15.6**	**-1.8**
CDAG				*i* S	**Sn**	**12 28 36.0**	**+1.1**
CDAG	**Cicekdag**	**1.20**	**88**	*i* P	**Pb**	**12 28 15.6**	**-1.8**
KDHN	**Kadinhani**	**1.21**	**207**	*i* P	**Pg**	**12 28 18.2**	**+1.1**
KDHN				*i* S	**Sn**	**12 28 36.2**	**+1.0**
CORM	**Corum**	**1.50**	**67**	*e*PN	**Pg**	**12 28 21.7**	**-1.0**
CORM	**Corum**	**1.50**	**67**	*e*Pn	**Pg**	**12 28 21.7**	**-1.0**
BALT	**Daday**	**1.98**	**12**	*i* P	**Pg**	**12 28 31.3**	**-0.5**
BALT				*i* S	**Sg**	**12 29 02.1**	**+4.6**

IDC 14 12:36:57.3±55.0, **23˚.13S×176˚.88W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/17, mbtmp3.7/3, MS3.8/1, Ms1 3.8/1, ms1mx2.8/25, Error ellipse: s-maj=1009.0km s-min=157.4km az=87.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.67**	**247**	P	P	12 44 14.2	-0.2
	1.4nm,0.8s,baz=103,slow=9.2,SNR=3.5						
ASAR	**Alice Springs**	**44.99**	**259**	P	P	12 45 14.7	-0.1
	0.3nm,0.6s,baz=96,slow=7.1,SNR=6.3						
WRA	**Warramunga Arr**	**45.33**	**264**	P	P	12 45 17.4	-0.1
	0.6nm,0.3s,baz=102,slow=8.4,SNR=43						
FITZ	**Fitzroy Crossi**	**53.75**	**264**	LR	LR	13 07 31.3	
	comp=Z,80nm,19.2s,baz=315,slow=34						

ISCJB **14** *12:45:38.1±1.1, 24˚.06S±0˚.08×67˚.10W±0˚.09, h181km±10km, mb3.1/4, Error ellipse: s-maj=16.4km s-min=9.6km az=138.1*
IDC **14** *12:45:39.4±6.5, 24˚.04S×66˚.99W, h183km±50km, mb3.1/4, mb1 3.5/7, mb1mx3.4/17, mbtmp3.3/7, Error ellipse: s-maj=56.7km s-min=21.5km az=20.0*
GUC **14** *12:45:39.9±0.4, 24˚.02S×67˚.36W, h190km±10km, ML4.4*
ISC 14 12:45:38.3±1.6, **24˚.1S**±0˚.1×**67˚.1W**±0˚.1, **h175**km±13km, **n15**, σ1**32**/22, **mb3.2/4, 5C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.25**	**310**	⇑*i* P	**Pn**	**12 46 19.2**	**+1.2**
LVC				*i* S	**Sn**	**12 46 49.1**	**+0.4**
PB04	**Plate Boundary**	**2.88**	**308**	*e*P	Pn	12 46 31.0	+5.8
PB04				*e*S	Sn	12 47 10.3	+8.7
PB04				AML	AML	12 47 13.5	
	comp=E,490nm,0.4s						
CEN1	**Los Morros**	**2.96**	**283**	⇓*i* P	**Pn**	**12 46 27.7**	**+1.4**
CEN1				*i* S	**Sn**	**12 47 04.1**	**+0.3**
CEN1				AML	AML	12 47 06.0	
	comp=N,292nm,0.2s						
PB09	**Plate Boundary**	**3.04**	**318**	⇑*i* P	**Pn**	**12 46 28.6**	**+1.2**
PB09				*i* S	**Sn**	**12 47 05.4**	**-0.1**
PB09				AML	AML	12 47 07.0	
	comp=E,2μm,0.3s						
ANCH	**Antofagasta**	**3.10**	**277**	⇑*i* P	**Pn**	**12 46 28.0**	**+0.1**
ANCH				*i* S	**Sn**	**12 47 04.6**	**-1.9**
MECH	**Mejillones**	**3.26**	**287**	⇑*i* P	**Pn**	**12 46 30.2**	**+0.3**
MECH				*i* S	**Sn**	**12 47 08.6**	**-1.5**
MECH				AML	AML	12 47 14.9	
	comp=N,337nm,0.5s						
PB01	**Plate Boundary**	**3.77**	**323**	⇑*i* P	**Pn**	**12 46 36.2**	**-0.1**
PB01				*i* S	**Sn**	**12 47 20.4**	**-1.4**
PB01				AML	AML	12 47 24.9	
	comp=E,340nm,0.2s						
LPAZ	**La Paz**	**7.82**	**352**	P	**Pn**	**12 47 31.5**	**+1.7**
	comp=E,0.8nm,0.3s,baz=157,slow=9.9,SNR=15						
LPAZ				S	**Sn**	**12 48 57.1**	**-0.8**
	comp=E,0.0nm,0.3s,baz=150,slow=20,SNR=3.4						
SIV	**San Ignacio**	**9.81**	**36**	P	**Pn**	**12 47 56.9**	**+1.3**
	comp=E,0.7nm,0.3s,baz=225,slow=13,SNR=12						
SIV				S	**Sn**	**12 49 41.8**	**-3.0**
	comp=E,0.1nm,0.3s,baz=227,slow=19,SNR=2.6						
BDFB	**Brasilia**	**19.76**	**68**	P	**P**	**12 49 55.4**	**+0.3**
	comp=E,1.3nm,0.3s,baz=244,slow=10,SNR=18						
TORD	**Torodi Ar. Bea**	**76.64**	**69**	P	**P**	**12 57 10.3**	**0.0**
	comp=E,0.3nm,0.3s,baz=252,slow=5.4,SNR=4.1						
PDAR	**Pinedale Array**	**77.19**	**329**	P	**P**	**12 57 13.3**	**+0.3**
	comp=E,0.2nm,0.5s,baz=119,slow=7.3,SNR=2.4						
NVAR	**Mina Array Bea**	**78.57**	**321**	P	**P**	**12 57 21.5**	**+0.8**
	comp=E,0.2nm,0.5s,baz=113,slow=7.0,SNR=2.4						
YKA	**Yellowknife Ar**	**94.18**	**340**	P	**P**	**12 58 37.1**	**+0.4**
	comp=E,0.1nm,0.6s,baz=130,slow=4.6,SNR=5.1						
ASAR	**Alice Springs**	**128.36**	**205**	PKP	**PKPdf**	**13 04 22.9**	**-2.0**
	comp=E,0.3nm,0.6s,baz=132,slow=1.4,SNR=4.3						

NIED **14** *13:15:00, 27˚.90N×127˚.90E, h116km, Mw3.7 Best double couple: M0 3.83000×10^14 NP1:φs41.00000°, δ75.00000°, λ-32.00000°. NP2:φs140.00000°, δ60.00000°, λ-162.00000°.*
ISCJB **14** *13:15:04.4±0.7, 27˚.90N±0˚.09×127˚.91E±0˚.10, h123km±11km, Error ellipse: s-maj=20.5km s-min=5.0km az=136.8*
JMA **14** *13:15:06.4±0.2, 27˚.95N×127˚.94E, h108km±5km, M3.5*
ISC 14 13:15:04.6±1.5, **27˚.89N**±0˚.08×**127˚.93E**±0˚.08, **h129**km±14km, **n17**, σ1**06**/27, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIH	**Iheya**	**0.85**	**178**	P	**Pn**	**13 15 26.9**	**+0.8**
JIH				S	**Sn**	**13 15 42.1**	**-0.2**
JTK	**Tokunoshima**	**0.91**	**96**	P	**Pn**	**13 15 26.7**	**+0.1**
JTK				S	**Sn**	**13 15 41.6**	**-1.6**
JOW	**Kunigami**	**1.09**	**164**	P	**Pn**	**13 15 29.2**	**+0.8**
JOW				S	**Sn**	**13 15 45.3**	**-1.0**
JAMN	**Amaminishikomi**	**1.15**	**72**	P	**Pn**	**13 15 28.9**	**0.0**
JAMN				S	**Sn**	**13 15 46.0**	**-1.3**
JAGN	**Aguni-jima**	**1.43**	**206**	P	**Pn**	**13 15 33.0**	**+1.1**
JAGN				S	**Sn**	**13 15 52.9**	**+0.3**
JAM	**Amami Oshima**	**1.57**	**70**	P	**Pn**	**13 15 33.6**	**+0.3**
JAM				S	**Sn**	**13 15 53.8**	**-1.5**
JJT2	**Tamagusuku 2**	**1.75**	**185**	P	**Pn**	**13 15 37.3**	**+1.8**
JZK	**Kikaishima**	**1.85**	**76**	P	**Pn**	**13 15 37.9**	**+1.2**
JZK				*e*S	**Sn**	**13 16 01.6**	**+0.4**
JKE	**Kume jima 2**	**1.86**	**214**	P	**Pn**	**13 15 38.0**	**+1.1**
JKE				S	**Sn**	**13 16 01.3**	**-0.2**
JNN	**Nakanoshima**	**2.59**	**41**	P	**Pn**	**13 15 47.2**	**+1.3**
JKC	**Kuchinoerabu**	**3.24**	**37**	P	**Pn**	**13 15 55.5**	**+1.2**
JMZ	**Minamidaito 2**	**3.59**	**124**	P	**Pn**	**13 15 59.1**	**+0.2**
JOGS	**Gusukube**	**3.85**	**217**	P	**Pn**	**13 16 03.5**	**+1.1**
JOGS				*e*S	**Sn**	**13 16 47.8**	**+0.6**
JTJ	**Tarama**	**4.34**	**223**	P	**Pn**	**13 16 08.8**	**-0.1**
JTJ				*e*S	**Sn**	**13 16 56.9**	**-2.0**
JIJ	**Ishigaki jima**	**4.89**	**225**	P	**Pn**	**13 16 15.5**	**-0.7**
JKRS	**Kuro-shima**	**5.07**	**225**	P	**Pn**	**13 16 18.0**	**-0.6**
IRIF	**Iriomote-Funau**	**5.17**	**228**	P	**Pn**	**13 16 19.6**	**-0.5**

MEX 14 13:19:02.4±0.3, **15˚.73N×95˚.98W, h18**km±5km, **MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.13**	**286**	*i* P	Pb	13 19 05.6	+0.6
HUIG				*i* S	Sg

ISC 14 13:35:01.9±0.7, 6°18N±0°09×72°91W±0°10, h200km, n22, σ1°13/25, mb3.4/7, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.78**	**19**	*eP*		**Pn**		**13 35 39.0**	**+0.6**
CAPV				*eS*		Sn		13 35 55.9	-11
ROSC	**El Rosal**	**1.93**	**227**	P		**Pn**		**13 35 39.4**	**-0.7**
	25nm,0.3s,baz=90,slow=16,SNR=23								
ROSC				S		**Sn**		**13 36 08.6**	**-1.2**
	55nm,0.3s,baz=84,slow=22,SNR=19								
SOCV	**Socops**	**2.92**	**44**	*eP*		**Pn**		**13 35 48.4**	**-2.3**
SOCV				*eS*		Sn		13 36 12.4	-16
VIGV	**El Vigia**	**3.06**	**30**	*eP*		**Pn**		**13 35 52.6**	**+0.3**
VIGV				*eS*		Sn		13 36 19.3	-13
CURV	**Curarigua**	**4.80**	**37**	*eP*		**Pn**		**13 36 14.0**	**+0.1**
TEPV	**Terepaima**	**5.26**	**44**	*eP*		**Pn**		**13 36 19.7**	**-0.1**
SIQV	**Siquisique**	**5.40**	**34**	*eP*		**Pn**		**13 36 22.3**	**+0.8**
BAUV	**El Baul**	**5.55**	**60**	*eP*		**Pn**		**13 36 22.4**	**-1.0**
MAPV	**Macapo**	**5.71**	**50**	*eP*		**Pn**		**13 36 25.3**	**-0.2**
MAPV				*eS*		Sn		13 37 15.8	-16
MONV	**Montecano**	**6.43**	**27**	*eP*		Pn		13 36 37.5	+2.7
TURV	**Turiamo**	**6.57**	**49**	*eP*		**Pn**		**13 36 36.6**	**-0.1**
BIRV	**Birongo**	**7.84**	**57**	*eP*		**Pn**		**13 36 53.3**	**+0.2**
CUPV	**Cœpira**	**8.04**	**61**	*eP*		**Pn**		**13 36 55.8**	**0.0**
LPAZ	**La Paz**	**22.82**	**168**	P		**P**		**13 39 50.9**	**+2.4**
	0.6nm,0.5s,baz=344,slow=14,SNR=3.4								
LPAZ				pP		**pP**		**13 40 25.0**	**+0.7**
	1.5nm,0.8s,baz=336,slow=14,SNR=3.4								
SIV	**San Ignacio**	**24.95**	**152**	P		**P**		**13 40 07.7**	**+0.5**
	1.2nm,0.8s,baz=320,slow=7.9,SNR=3.1								
TXAR	**Lajitas Array**	**37.04**	**312**	P		**P**		**13 41 53.1**	**+0.1**
	0.9nm,0.6s,baz=119,slow=9.4,SNR=11								
PDAR	**Pinedale Array**	**48.72**	**324**	P		**P**		**13 43 26.3**	**-0.3**
	0.5nm,0.9s,baz=116,slow=10,SNR=3.8								
NVAR	**Mina Array Bea**	**52.08**	**315**	P		**P**		**13 43 52.7**	**+0.9**
	0.7nm,0.7s,baz=116,slow=7.8,SNR=6.0								
YKA	**Yellowknife Ar**	**63.94**	**340**	P		**P**		**13 45 13.4**	**+0.1**
	0.6nm,0.6s,baz=131,slow=6.9,SNR=18								
YKA				pP		**pP**		**13 45 58.5**	**-1.2**
	0.2nm,0.7s,baz=133,slow=6.8,SNR=3.0								
ILAR	**Eielson Array**	**77.63**	**335**	P		**P**		**13 46 35.2**	**-0.6**
	0.3nm,0.6s,baz=96,slow=4.4,SNR=6.6								
ASAR	**Alice Springs**	**148.90**	**233**	PKPbc		**PKPdf**		**13 54 24.9**	**+2.1**
	0.4nm,0.8s,baz=150,slow=7.5,SNR=4.7								
WRA	**Warramunga Arr**	**150.20**	**240**	PKPbc		**PKPbc**		**13 54 28.7**	**-1.5**
	0.2nm,0.6s,baz=108,slow=2.8,SNR=8.5								
WRA				pPKPbc		**pPKPbc**		**13 55 20.2**	**-1.6**
	0.4nm,0.5s,baz=109,slow=2.5,SNR=2.5								

IDC 14 13:52:41.4±2.5, 21°84S×174°30W, h0km, mb4.1/7, mb1 4.2/7, mb1mx3.9/22, mbtmp4.0/7, MS2.9/1, Ms1 2.9/1, ms1mx2.5/30, Error ellipse: s-maj=138.4km s-min=23.8km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**8.07**	**203**	LR		LR		13 57 13.4	
	comp=Z,100nm,21.7s,baz=145,slow=34								
AFI	**Afiamalu**	**8.24**	**17**	Pn		Pn		13 54 35.0	-7.4
	2.0nm,0.3s,baz=209,slow=13,SNR=4.0								
AFI				Sn		Sn		13 55 55.5	-21
	1.6nm,0.3s,baz=57,slow=18,SNR=2.3								
CTA	**Charters Tower**	**36.81**	**265**	P		P		13 59 51.9	+0.6
	2.7nm,0.6s,baz=90,slow=5.1,SNR=3.1								
STKA	**Stephens Creek**	**40.36**	**246**	P		P		14 00 21.2	+0.2
	3.2nm,1.0s,baz=68,slow=11,SNR=2.8								
ASAR	**Alice Springs**	**47.58**	**257**	P		P		14 01 18.4	-0.9
	1.8nm,0.8s,baz=96,slow=8.5,SNR=16								
WRA	**Warramunga Arr**	**47.84**	**262**	P		P		14 01 20.2	-1.1
	1.6nm,0.7s,baz=95,slow=8.4,SNR=25								
FITZ	**Fitzroy Crossi**	**56.27**	**262**	P		P		14 02 24.6	+0.5
	2.8nm,0.9s,baz=98,slow=7.1,SNR=2.6								
NVAR	**Mina Array Bea**	**79.68**	**41**	P		P		14 04 51.5	+0.2
	0.2nm,0.5s,baz=230,slow=4.2,SNR=2.4								
CMAR	**Chiang Mai Arr**	**93.81**	**288**	P		P		14 06 02.1	+1.1
	0.8nm,0.8s,baz=125,slow=3.7,SNR=6.5								
AKASG	**Malin Array Be**	**145.80**	**333**	PKPbc		PKPdf		14 12 20.1	-1.8
	0.4nm,0.3s,baz=23,slow=3.3,SNR=3.9								
BRTR	**Keskin Array B**	**150.27**	**313**	PKPbc		PKPbc		14 12 35.0	0.0
	0.4nm,0.5s,baz=77,slow=3.1,SNR=3.1								

*NOU **14** 13:56:27.8±1.1, 19°89S×168°05E, h30km, MD3.4, ML3.2*
*ISCJB **14** 13:56:31.6±0.3, 20°27S±0°04×168°08E±0°06, h36km, mb4.7/34, MS3.9/17, Error ellipse: s-maj=8.5km s-min=4.3km az=33.7*
*IDC **14** 13:56:33.3±0.6, 20°14S×168°03E, h36km±4km, mb4.2/19, mb1 4.4/21, mb1mx4.4/23, mbtmp4.3/21, ML4.2/2, MS3.8/15, Ms1 3.8/15, ms1mx3.5/33, Error ellipse: s-maj=15.6km s-min=12.2km az=140.0*
*BJI **14** 13:56:33.2, 20°20S×168°20E, h30km, mB5.1/19, mb4.8/22, Ms5.0/14, Ms7 4.7/13*
*NEIC **14** 13:56:33.0±0.3, 20°20S×168°06E, mb5.0/10, Error ellipse: s-maj=9.1km s-min=7.4km az=143.0*
*AUST **14** 13:57:16.1±4.5, 21°04S×165°26E, h21±1km, Error ellipse: s-maj=3.2km s-min=1.6km az=305.0*

ISC 14 13:56:33.0±0.4, 20°33S±0°05×168°15E±0°06, h32km, h32km:pP-P, n139, σ1°57/176, mb4.8/32, MS3.9/17, 4C, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**2.16**	**213**	*eP*		**Pn**		**13 57 04.4**	**-2.4**
BAYA				*eS*		**Sn**		**13 57 33.2**	**+0.6**
BAYA				AMP				13 57 43.6	
	comp=Z,87nm,1.4s								
DZM	**Mont Dzumac**	**2.35**	**222**	*e*Pn		**Pn**		**13 57 07.6**	**-1.9**
	comp=Z,250nm,0.3s								
DZM				*e*Sn		**Sn**		**13 57 36.4**	**-0.9**
	comp=Z,961nm,0.3s								
DZM	**Mont Dzumac**	**2.35**	**222**	*eP*		**Pn**		**13 57 07.6**	**-1.9**
DZM				AMP				13 57 54.3	
	comp=Z,9μm,5.4s								
DZM	**Mont Dzumac**	**2.35**	**222**	Pn		**Pn**		**13 57 07.6**	**-1.9**
DZM				Sn		**Sn**		**13 57 35.7**	**-1.6**
DZM	**Mont Dzumac**	**2.35**	**222**	Pn		**Pn**		**13 57 07.6**	**-1.9**
	comp=Z,266nm,0.3s,baz=60,slow=18,SNR=276								
DZM				Sn		**Sn**		**13 57 35.7**	**-1.6**
	comp=Z,160nm,0.3s,baz=274,slow=19,SNR=13								
DZM				LR		LR		13 58 05.0	
	comp=Z,2μm,18.4s,baz=62,slow=38								
PLUM	**Mont Dore**	**2.39**	**216**	*eP*		**Pn**		**13 57 08.0**	**-2.0**
PLUM				*eS*		**Sn**		**13 57 38.4**	**+0.3**
NOUC	**Port Laguerre**	**2.46**	**224**	*eP*		**Pn**		**13 57 09.7**	**-1.2**
NOUC				*eS*		**Sn**		**13 57 39.0**	**-0.9**
NOUC				AMP				13 57 53.3	
	comp=Z,539nm,3.2s								
HNR	**Honiara**	**13.42**	**323**	Pn		**Pn**		**13 59 39.5**	**-1.7**
HNR	**Honiara**	**13.42**	**323**	Pn		**Pn**		**13 59 39.5**	**-1.7**
	comp=Z,2.1nm,0.3s,baz=217,slow=11,SNR=5.2								
HNR				LR		LR		14 03 26.0	
	comp=Z,237nm,19.3s,baz=123,slow=31								
ARMA	**Armidale**	**17.97**	**233**	P		**P**		**14 00 43.5**	**+2.7**
	baz=15,SNR=4.6								
RMQ	**Roma**	**18.81**	**247**	P		**Pn**		**14 00 52.3**	**+1.6**
	baz=16,SNR=8.7								
URZ	**Urewera**	**19.48**	**158**	*eP*		**Pn**		**14 00 57.8**	**-0.8**
	comp=Z,98nm,1.5s								
URZ	**Urewera**	**19.48**	**158**	P		**Pn**		**14 00 59.2**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=326,slow=7.3,SNR=5.3								
URZ				LR		LR		14 06 20.2	
	comp=Z,126nm,19.8s,baz=342,slow=30								
AFI	**Afiamalu**	**20.21**	**75**	P		**P**		**14 01 05.2**	**-0.2**
AFI	**Afiamalu**	**20.21**	**75**	P		**P**		**14 01 05.2**	**-0.2**
	comp=Z,17nm,0.6s,baz=251,slow=18,SNR=5.3								
AFI				LR		LR		14 06 19.3	
	comp=Z,82nm,20.6s,baz=256,slow=29								
CTA	**Charters Tower**	**20.55**	**267**	P		**P**		**14 01 08.0**	**-1.0**
CTA	**Charters Tower**	**20.55**	**267**	P		**P**		**14 01 08.0**	**-1.0**
	comp=Z,11nm,0.7s,baz=97,slow=14,SNR=13								
CTA				LR		LR		14 07 46.4	
	comp=Z,354nm,20.7s,baz=70,slow=33								
MTSU	**Mount Surprise**	**22.60**	**272**	P		**P**		**14 01 31.8**	**+0.6**
	baz=20,SNR=19								
QLP	**Quilpie**	**22.78**	**250**	P		**P**		**14 01 32.2**	**-0.8**
	baz=20,SNR=6.6								
PMG	**Port Moresby**	**22.98**	**295**	P		**P**		**14 01 37.6**	**+2.6**
PMG	**Port Moresby**	**22.98**	**295**	P		**P**		**14 01 37.6**	**+2.6**
	comp=Z,11nm,0.8s,baz=178,slow=8.5,SNR=2.6								
CMSA	**Cobar Meteorol**	**23.02**	**236**	P		**P**		**14 01 37.9**	**+2.5**
	baz=20,SNR=7.4								
RPZ	**Rata Peaks**	**23.45**	**175**	P		**P**		**14 01 41.5**	**+2.0**
RPZ	**Rata Peaks**	**23.45**	**175**	P		**P**		**14 01 41.5**	**+2.0**
	comp=Z,14nm,0.7s,baz=0.9,slow=18,SNR=5.8								
RPZ				LR		LR		14 10 04.9	
	comp=Z,234nm,19.0s,baz=205,slow=34								
STKA	**Stephens Creek**	**26.40**	**239**	P		**P**		**14 02 07.6**	**+0.9**
STKA				*e*pP		**pP**		**14 02 17.2**	**+1.3**
STKA	**Stephens Creek**	**26.40**	**239**	P		**P**		**14 02 07.6**	**+0.9**
	comp=Z,7.8nm,0.5s,baz=62,slow=7.3,SNR=34								
STKA				pP		**pP**		**14 02 18.1**	**+2.2**
	comp=Z,24nm,0.9s,baz=75,slow=7.3,SNR=12								
STKA				LR		LR		14 11 51.6	
	comp=Z,291nm,21.4s,baz=30,slow=35								
STKA	**Stephens Creek**	**26.40**	**239**	P		**P**		**14 02 07.5**	**+0.8**
	baz=24,SNR=32								
RAR	**Rarotonga**	**29.98**	**97**	LR		LR		14 11 48.2	
	comp=Z,255nm,20.3s,baz=315,slow=30								
BBOO	**Buckleboo**	**31.15**	**240**	P		**P**		**14 02 51.5**	**+2.5**
	baz=28,SNR=6.9								
WRA	**Warramunga Arr**	**31.71**	**265**	P		**P**		**14 02 51.8**	**-2.3**
WRA				pP		**pP**		**14 03 02.2**	**-1.2**
WRA				PcP		**PcP**		**14 05 44.5**	**-1.0**
WRA	**Warramunga Arr**	**31.71**	**265**	P		**P**		**14 02 51.8**	**-2.3**
	comp=Z,3.1nm,0.6s,baz=94,slow=8.3,SNR=18								
WRA				pP		**pP**		**14 03 02.2**	**-1.2**
	comp=Z,5.3nm,0.8s,baz=96,slow=8.8,SNR=14								
WRA				PcP		**PcP**		**14 05 44.5**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=89,slow=2.4,SNR=4.4								
WRA				LR		LR		14 14 13.5	
	comp=Z,114nm,21.9s,baz=80,slow=34								
AS31	**Alice Springs**	**31.88**	**258**	*eP*		**P**		**14 02 53.5**	**-2.1**
AS31				*e*pP		**pP**		**14 03 04.7**	**-0.2**
ASAR	**Alice Springs**	**31.88**	**258**	P		**P**		**14 02 54.2**	**-1.3**
ASAR				pP		**pP**		**14 03 04.5**	**-0.4**
ASAR				PcP		**PcP**		**14 05 44.8**	**-1.0**
ASAR	**Alice Springs**	**31.88**	**258**	P		**P**		**14 02 54.2**	**-1.3**
	comp=Z,12nm,0.6s,baz=87,slow=8.3,SNR=43								
ASAR				pP		**pP**		**14 03 04.5**	**-0.4**
	comp=Z,30nm,0.9s,baz=82,slow=9.0,SNR=24								
ASAR				PcP		**PcP**		**14 05 44.8**	**-1.0**
	comp=Z,1.3nm,0.9s,baz=86,slow=4.0,SNR=4.1								
ASAR				LR		LR		14 16 30.5	
	comp=Z,254nm,18.1s,baz=51,slow=38								
JAY	**Jayapura**	**32.10**	**300**	S		S		14 07 36.1	-32
	baz=30,SNR=3.1								
MTN	**Manton Dam**	**36.18**	**276**	P		**P**		**14 03 31.7**	**-1.3**
	baz=34,SNR=4.7								
KNRA	**Kununurra**	**37.68**	**270**	S		S		14 08 44.1	-50
	baz=35,SNR=3.1								
TBI	**Tubuai**	**39.37**	**102**	*e*LR		LR		14 14 30.9	
	comp=Z,185nm,31.8s								
PPT2	**Papeete2**	**40.00**	**93**	*e*LR		LR		14 14 54.5	
	comp=Z,285nm,29.2s								
PPT	**Papeete**	**40.01**	**93**	LR		LR		14 17 25.3	
	comp=Z,85nm,18.0s,baz=286,slow=31								
FITZ	**Fitzroy Crossi**	**40.12**	**266**	P		**P**		**14 04 04.7**	**-1.4**
FITZ				pP		**pP**		**14 04 15.5**	**-0.1**
FITZ	**Fitzroy Crossi**	**40.12**	**266**	P		**P**		**14 04 04.7**	**-1.4**
	comp=Z,10nm,0.7s,baz=139,slow=9.1,SNR=16								
FITZ				pP		**pP**		**14 04 15.5**	**-0.1**
	comp=Z,18nm,0.9s,baz=138,slow=5.2,SNR=8.5								
FITZ	**Fitzroy Crossi**	**40.12**	**266**	P		**P**		**14 04 05.3**	**-0.8**
	baz=37,SNR=13								
FITZ				S		S		14 09 58.7	-12
	baz=37,SNR=4.2								
MEEK	**Meekatharra**	**45.64**	**252**	P		**P**		**14 04 50.4**	**-0.4**
	baz=43,SNR=12								
NWAO	**Narrogin (SRO)**	**46.80**	**244**	P		**P**		**14 04 59.4**	**-0.5**
NWAO	**Narrogin (SRO)**	**46.80**	**244**	P		**P**		**14 04 59.4**	**-0.5**
	comp=Z,9.5nm,0.8s,baz=22,slow=5.4,SNR=4.2								
WSI	**Waingapu**	**47.27**	**276**	S		**S**		**14 11 49.5**	**-5.6**
	baz=45,SNR=5.7								
LUWI	**Luwuk**	**48.29**	**288**	P		P		14 05 21.9	+10
	baz=46,SNR=8.4								
VNDA	**Vanda**	**57.31**	**182**	*eP*		**P**		**14 06 17.5**	**+0.2**
	comp=Z,4.8nm,1.1s								
VNDA	**Vanda**	**57.31**	**182**	P		**P**		**14 06 17.8**	**+0.5**
	comp=Z,2.4nm,0.8s,baz=0.6,slow=7.3,SNR=12								
VNDA				LR		LR		14 26 00.7	
	comp=Z,87nm,20.7s,baz=200,slow=31								
SBA	**Scott Base**	**57.57**	**180**	*eP*		**P**		**14 06 20.5**	**+1.3**
	comp=Z,12nm,0.8s								
CISI	**Cisompet, Garu**	**59.62**	**273**	P		P		14 06 43.6	+9.1
	baz=57,SNR=3.3								
KSM	**Kuching**	**60.62**	**284**	*eP*		**P**		**14 06 40.9**	**-0.4**
	comp=Z,9.4nm,0.7s								
MJAR	**Matsushiro Arr**	**63.24**	**333**	P		**P**		**14 06 55.9**	**-2.5**
MJAR	**Matsushiro Arr**	**63.24**	**333**	P		**P**		**14 06 55.9**	**-2.5**
	comp=Z,2.3nm,0.9s,baz=181,slow=8.8,SNR=4.3								
KSRS	**Korea Array**	**68.83**	**327**	P		**P**		**14 07 32.2**	**-2.0**
	comp=Z,1.1nm,0.9s,baz=133,slow=8.8,SNR=3.3								
KSAR	**Wonju Array Be**	**68.84**	**327**	P		**P**		**14 07 32.2**	**-2.1**
USRK	**Ussuriysk Arra**	**72.24**	**334**	P		**P**		**14 07 53.2**	**-1.7**
	comp=Z,5.8nm,1.0s,baz=153,slow=6.0,SNR=6.7								
USRK				pP		**pP**		**14 08 05.8**	**+0.8**
	comp=Z,4.3nm,0.9s,baz=151,slow=4.0,SNR=5.6								
MDJ	**Mudanjiang**	**73.60**	**332**	P		**P**		**14 08 04.8**	**+1.8**
MDJ				pmax		pmax			
	comp=Z,11nm,1.2s								
MDJ				pmax		pmax			
	comp=Z,170nm,3.5s								
GYA	**Guiyang**	**75.61**	**306**	P		**P**		**14 08 16.0**	**+0.8**
GYA				pP		**PcP**		**14 08 27.8**	**-0.2**
GYA				sP		**sP**		**14 08 31.4**	**+2.4**
GYA				PP		**PP**		**14 11 07.8**	**+2.6**
GYA				sS		**sS**		**14 18 11.0**	**-0.1**
GYA				SKS		**SKSac**		**14 18 17.6**	**-5.7**
GYA				pmax		pmax			
	comp=Z,20nm,1.0s								
GYA				pmax		pmax			
	comp=Z,130nm,5.3s								
GYA				LR		LR			
	comp=N,520nm,19.8s								
GYA				LR		LR			
	comp=E,460nm,20.4s								
GYA				LR		LR			
	comp=Z,540nm,19.9s								
MAW	**Mawson**	**77.04**	**202**	P		**P**		**14 08 23.7**	**+1.2**
MAW	**Mawson**	**77.04**	**202**	P		**P**		**14 08 23.7**	**+1.2**
	comp=Z,5.5nm,0.8s,baz=133,slow=8.1,SNR=6.2								
BJI	**Beijing**	**77.14**	**322**	P		**P**		**14 08 24.5**	**+1.1**
BJI				S		**S**		**14 18 13.0**	**+2.6**
BJI				SS		**SS**		**14 23 12.3**	**+3.3**
BJI				pmax		pmax			
	comp=Z,8.0nm,0.5s								
BJI				pmax		pmax			
	comp=Z,100nm,3.6s								
BJI				LR		LR			
	comp=N,94nm,14.3s								
BJI				LR		LR			
	comp=E,80nm,16.6s								
KMI	**Kunming**	**77.98**	**303**	P		**P**		**14 08 29.3**	**+0.5**
KMI				pP		**pP**		**14 08 39.8**	**+0.9**
KMI				PP		**PP**		**14 11 28.3**	**+3.0**
KMI				S		**S**		**14 18 19.8**	**-0.9**
KMI				pmax		pmax			
	comp=Z,6.0nm,0.6s								
KMI				pmax		pmax			
	comp=Z,82nm,5.0s								
KMI				LR		LR			
	comp=N,75nm,8.8s								
KMI				LR		LR			
	comp=E,61nm,13.2s								
KMI				LR		LR			
	comp=Z,57nm,15.4s								
CMAR	**Chiang Mai Arr**	**78.02**	**295**	P		**P**		**14 08 28.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**78.02**	**295**	P		**P**		**14 08 28.7**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=120,slow=3.9,SNR=8.9								
CD2	**Chengdu**	**80.09**	**308**	P		**P**		**14 08 41.5**	**+1.5**
CD2				pP		**pP**		**14 08 52.5**	**+2.4**
CD2				sP		**sP**		**14 08 56.6**	**+2.8**
CD2				PP		**PP**		**14 11 45.8**	**+3.2**
CD2				S		**S**		**14 18 42.5**	**0.0**
CD2				SKS		**SKSac**		**14 18 51.4**	**-3.9**
CD2				sS		**ScS**		**14 19 00.9**	**-2.1**
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
CD2				pmax		pmax			
	comp=Z,120nm,5.4s								
HHC	**Hu-ho-hao-te**	**80.38**	**320**	*eP*		**P**		**14 08 43.6**	**+2.2**
HHC				pP		**pP**		**14 08 54.0**	**+2.5**
HHC				sP		**sP**		**14 08 58.6**	**+3.4**
HHC				PP		**PP**		**14 11 49.4**	**+4.5**
HHC				S		**S**		**14 18 45.0**	**-0.3**
HHC				SKS		**SKSac**		**14 18 54.4**	**-2.7**
HHC				sS		**sS**		**14 19 01.9**	**-0.2**
HHC				SS		**SS**		**14 24 01.0**	**+3.0**
HHC				pmax		pmax			
	comp=Z,120nm,6.0s								
HHC				LR		LR			
	comp=N,260nm,19.2s								
HHC				LR		LR			
	comp=E,230nm,24.0s								
HHC				LR		LR			
	comp=Z,190nm,19.2s								
LZH	**Lanzhou**	**82.70**	**313**	*eP*		**P**		**14 08 55.0**	**+1.2**
LZH				pP		**pP**		**14 09 04.4**	**+0.4**
LZH				sP		**sP**		**14 09 10.0**	**+2.3**
LZH				pmax		pmax			
	comp=Z,13nm,1.0s								
KDAK	**Kodiak Island**	**84.40**	**20**	P		**P**		**14 09 01.4**	**-0.4**
KDAK	**Kodiak Island**	**84.40**	**20**	P		**P**		**14 09 01.4**	**-0.4**
	comp=Z,5.9nm,0.9s,baz=239,slow=5.9,SNR=3.7								
SONM	**Songino Array**	**87.48**	**324**	P		**P**		**14 09 16.8**	**-0.7**
SONM	**Songino Array**	**87.48**	**324**	P		**P**		**14 09 16.8**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=145,slow=3.7,SNR=8.2								
KHMM	**Horse Mountain**	**87.71**	**45**	*eP*		**P**		**14 09 18.2**	**-0.5**
	comp=Z,30nm,1.1s								
SNAA	**Sanae**	**88.03**	**183**	*eP*		**P**		**14 09 19.0**	**-0.8**
BILL	**Bilibino**	**88.12**	**359**	*eP*		**P**		**14 09 16.8**	**-3.1**
	comp=Z,10nm,1.3s								
BILL				*e*pP		**pP**		**14 09 28.2**	**-1.9**
YBH	**Yreka Blue Hor**	**88.80**	**44**	*eP*		**P**		**14 09 22.7**	**-1.1**
	comp=Z,22nm,1.5s								
YBH				*e*pP		**pP**		**14 09 33.5**	**-0.5**
VNA2	**Neumayer--Watz**	**88.94**	**181**	*eP*		**P**		**14 09 23.9**	**-0.1**
BFSC	**Mount Baldy Ra**	**88.95**	**53**	P		**P**		**14 09 24.1**	**-0.7**
	baz=89								
ISA	**Isabella**	**88.96**	**51**	P		**P**		**14 09 24.2**	**-0.6**
	baz=89								
EDW2	**Edwards Air Fo**	**88.98**	**52**	P		**P**		**14 09 24.2**	**-0.6**
	baz=89								
MONP	**Monument Peak**	**89.32**	**55**	P		**P**		**14 09 26.0**	**-0.7**
	baz=89								
LRMC	**Laurel Mountai**	**89.46**	**52**	P		**P**		**14 09 26.9**	**-0.2**
	baz=90								
DVTC	**Desert V Tower**	**89.47**	**55**	P		**P**		**14 09 26.9**	**-0.3**
	baz=90								
CWC	**Cottonwood Cre**	**89.59**	**51**	P		**P**		**14 09 27.5**	**-0.3**
	baz=90								
PFO	**Pinyon Flat Ob**	**89.59**	**54**	LR		LR		14 41 50.9	
	comp=Z,48nm,18.3s,baz=319,slow=30								
PFO	**Pinyon Flat Ob**	**89.59**	**54**	P		**P**		**14 09 27.3**	**-0.6**
	baz=90								
MTUM	**Tungsten Hills**	**89.64**	**50**	*eP*		**P**		**14 09 26.8**	**-1.2**
MPMC	**Manual Prospec**	**89.86**	**51**	P		**P**		**14 09 28.5**	**-0.6**
	baz=90								
GSC	**Goldstone**	**90.04**	**52**	P		**P**		**14 09 29.4**	**-0.4**
	baz=90								
BELC	**Belle Mtn. Jos**	**90.10**	**54**	P		**P**		**14 09 29.8**	**-0.4**
	baz=90								
NVAR	**Mina Array Bea**	**90.29**	**49**	P		**P**		**14 09 30.6**	**-0.5**
NVAR				pP		**pP**		**14 09 41.1**	**-0.2**
NVAR	**Mina Array Bea**	**90.29**	**49**	P		**P**		**14 09 30.6**	**-0.5**
	comp=Z,4.5nm,0.8s,baz=228,slow=8.2,SNR=31								
NVAR				pP		**pP**		**14 09 41.1**	**-0.2**
	comp=Z,5.9nm,0.9s,baz=235,slow=8.2,SNR=12								
GRAC	**Grapevine Rang**	**90.34**	**50**	P		**P**		**14 09 30.8**	**-0.4**
	baz=90								
NV11	**Mina Array Sit**	**90.40**	**49**	*eP*		**P**		**14 09 28.8**	**-2.8**
NV11				*e*pP		**pP**		**14 09 41.6**	**-0.1**
GLA	**Glamis**	**90.61**	**55**	*eP*		P		14 09 26.3	-6.2
	comp=Z,14nm,1.1s								
GLA	**Glamis**	**90.61**	**55**	P		**P**		**14 09 32.5**	**0.0**
	baz=91								
GMRC	**Granite Mounta**	**90.67**	**53**	P		**P**		**14 09 32.6**	**-0.2**
	baz=91								
TUQ	**Turquoise Moun**	**90.75**	**52**	P		**P**		**14 09 32.9**	**-0.2**
	baz=91								
IRM	**Iron Mountain**	**90.81**	**54**	P		**P**		**14 09 33.3**	**-0.1**
	baz=91								
ILAR	**Eielson Array**	**91.58**	**18**	P		**P**		**14 09 34.3**	**-1.8**
ILAR	**Eielson Array**	**91.

mb1 4.3/18,mb1mx4.2/28,mbtmp4.2/18,MS3.5/8, Ms1 3.5/8,ms1mx3.1/46,Error ellipse: s-maj=23.3km s-min=12.0km az=92.0

*ISCJB **14** 14:30:44.8±0.4, 12.°18N±0.°05×144.°60E±0.°08, h29km, mb4.4/28,MS3.5/8,Error ellipse: s-maj=11.4km s-min=6.6km az=10.7*

*NEIC **14** 14:30:44.9±5.4, 12.°23N×144.°48E, h18km±33km, mb4.6/7, Error ellipse: s-maj=15.0km s-min=8.4km az=93.0*

ISC 14 14:30:46.8±0.5, 12.°24N±0.°06×144.°7E±0.°1, h29km, n72, σ1§18/70, mb4.4/28, MS3.6/8, 1C, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.35**	**8**	Pn	**Pb**	**14 31 10.6**	**-1.0**
GUMO				Sn	**Sb**	**14 31 27.9**	**-0.5**
GUMO	**Guam**	**1.35**	**8**	Pn	**Pb**	**14 31 10.5**	**-1.0**
	552nm,0.3s,baz=166,slow=3.5,SNR=453						
GUMO				Sn	**Sb**	**14 31 27.9**	**-0.5**
	740nm,0.3s,baz=180,slow=20,SNR=24						
CTBH	**Cotabato--PC H**	**20.75**	**258**⇑	*i*P	Pn	14 35 26.7	-1.2
PMG	**Port Moresby**	**21.64**	**173**	P	**P**	**14 35 34.3**	**-0.7**
PMG	**Port Moresby**	**21.64**	**173**	P	**P**	**14 35 34.3**	**-0.7**
	9.3nm,0.6s,baz=14,slow=4.2,SNR=5.1						
JNU	**Nakatsue**	**24.33**	**331**	P	**P**	**14 36 00.9**	**-1.2**
JNU	**Nakatsue**	**24.33**	**331**	P	**P**	**14 36 00.9**	**-1.2**
	8.3nm,0.9s,baz=320,slow=5.8,SNR=4.7						
JNU				LR	LR	14 45 14.5	
	comp=Z,35nm,18.8s,baz=161,slow=36						
MJAR	**Matsushiro Arr**	**24.89**	**348**	P	**P**	**14 36 06.4**	**-0.8**
MJAR	**Matsushiro Arr**	**24.89**	**348**	P	**P**	**14 36 06.4**	**-0.8**
	4.2nm,0.9s,baz=175,slow=9.1,SNR=7.6						
HNR	**Honiara**	**26.34**	**144**	LR	LR	14 44 41.1	
	comp=Z,97nm,18.3s,baz=223,slow=32						
KSRS	**Korea Array**	**29.26**	**332**	P	**P**	**14 36 44.7**	**-1.6**
	0.5nm,0.5s,baz=145,slow=8.8,SNR=3.1						
KSRS				LR	LR	14 46 43.4	
	comp=Z,23nm,18.4s,baz=358,slow=33						
KSAR	**Wonju Array Be**	**29.26**	**332**	P	**P**	**14 36 44.7**	**-1.7**
WRAB	**Tennant Creek**	**33.55**	**198**	*e*P	**P**	**14 37 22.4**	**-1.9**
	27nm,0.8s						
WRA	**Warramunga Arr**	**33.56**	**198**	P	**P**	**14 37 24.2**	**-0.2**
WRA	**Warramunga Arr**	**33.56**	**198**	P	**P**	**14 37 24.2**	**-0.2**
	19nm,0.6s,baz=22,slow=9.7,SNR=90						
USRK	**Ussuriysk Arra**	**33.67**	**343**	P	**P**	**14 37 26.9**	**+1.9**
	1.2nm,0.6s,baz=91,slow=16,SNR=2.9						
AS31	**Alice Springs**	**37.21**	**196**	*e*P	**P**	**14 37 54.5**	**-1.3**
ASAR	**Alice Springs**	**37.21**	**196**	P	**P**	**14 37 55.6**	**-0.2**
ASAR				PcP	**PcP**	**14 40 16.8**	**+1.3**
ASAR	**Alice Springs**	**37.21**	**196**	P	**P**	**14 37 55.6**	**-0.2**
	5.2nm,0.7s,baz=16,slow=9.8,SNR=66						
ASAR				PcP	**PcP**	**14 40 16.8**	**+1.3**
	1.4nm,0.8s,baz=48,slow=2.8,SNR=4.3						
DZM	**Mont Dzumac**	**40.23**	**148**	LR	LR	14 53 11.9	
	comp=Z,115nm,18.2s,baz=330,slow=33						
STKA	**Stephens Creek**	**43.96**	**184**	P	**P**	**14 38 50.6**	**-0.8**
STKA	**Stephens Creek**	**43.96**	**184**	P	**P**	**14 38 50.6**	**-0.8**
	3.6nm,1.0s,baz=356,slow=20,SNR=3.2						
STKA				LR	LR	14 55 29.6	
	comp=Z,118nm,21.3s,baz=212,slow=34						
CMAR	**Chiang Mai Arr**	**44.45**	**284**	P	**P**	**14 38 57.4**	**+1.7**
CMAR	**Chiang Mai Arr**	**44.45**	**284**	P	**P**	**14 38 57.4**	**+1.7**
	2.3nm,0.5s,baz=79,slow=6.8,SNR=23						
SONM	**Songino Array**	**47.73**	**326**	P	**P**	**14 39 21.2**	**0.0**
SONM	**Songino Array**	**47.73**	**326**	P	**P**	**14 39 21.2**	**0.0**
	1.0nm,0.6s,baz=145,slow=4.6,SNR=5.8						
SONM				LR	LR	15 00 25.4	
	comp=Z,56nm,18.5s,baz=332,slow=37						
LSA	**Lhasa**	**52.46**	**298**	*e*P	**P**	**14 39 56.7**	**-1.1**
	5.2nm,0.6s						
TAPN	**Taplejung**	**55.24**	**295**	*e*P	**P**	**14 40 18.5**	**+0.5**
ODAN	**Odare**	**55.49**	**294**	*e*P	**P**	**14 40 20.4**	**+0.7**
	8.5nm,0.7s						
RAMN	**Ramite**	**56.20**	**294**	*e*P	**P**	**14 40 24.6**	**-0.2**
GUN	**Gumba**	**56.90**	**295**	*e*P	**P**	**14 40 30.7**	**+0.8**
PKIN	**Phulchoki**	**57.30**	**295**	*e*P	**P**	**14 40 32.3**	**-0.4**
	9.9nm,0.8s						
DANN	**Dangsing**	**58.79**	**296**	*e*P	**P**	**14 40 43.4**	**+0.3**
	14nm,0.6s						
KOLN	**Koldanda**	**58.91**	**295**	*e*P	**P**	**14 40 43.7**	**-0.1**
PYUN	**Piuthan**	**59.46**	**295**	*e*P	**P**	**14 40 47.9**	**+0.3**
MK31	**Makanchi Array**	**62.34**	**317**	*e*P	**P**	**14 41 04.8**	**-1.9**
MKAR	**Makanchi Array**	**62.34**	**317**	P	**P**	**14 41 07.0**	**+0.3**
MKAR	**Makanchi Array**	**62.34**	**317**	P	**P**	**14 41 07.0**	**+0.3**
	2.2nm,0.6s,baz=93,slow=8.1,SNR=18						
MKAR				LR	LR	15 09 10.9	
	comp=Z,44nm,18.1s,baz=341,slow=37						
ZALV	**Zalesovo Beam**	**62.61**	**325**	P	**P**	**14 41 07.7**	**-0.6**
ZALV	**Zalesovo Beam**	**62.61**	**325**	P	**P**	**14 41 07.7**	**-0.6**
	0.7nm,0.5s,baz=116,slow=6.8,SNR=3.7						
KURK	**Kurchatov**	**65.50**	**320**	*e*P	**P**	**14 41 26.3**	**-1.1**
	5.8nm,0.6s						
PPLA	**Purkeypile**	**67.07**	**26**	*e*P	**P**	**14 41 37.0**	**-0.3**
TRF	**Thorofare Moun**	**68.06**	**26**	*e*P	**P**	**14 41 43.6**	**0.0**
ILAR	**Eielson Array**	**69.86**	**25**	P	**P**	**14 41 53.9**	**-0.7**
ILAR	**Eielson Array**	**69.86**	**25**	P	**P**	**14 41 53.9**	**-0.7**
	0.8nm,0.5s,baz=251,slow=5.8,SNR=19						
DOT	**Dot Lake**	**70.81**	**27**	*e*P	**P**	**14 41 58.7**	**-1.8**
BVAR	**Borovoye Array**	**70.87**	**322**	LR	LR	15 14 52.6	
	comp=Z,63nm,18.6s,baz=256,slow=38						
BRVK	**Borovoye**	**70.94**	**322**	*e*P	P	14 41 58.1	-3.3
	2.1nm,0.6s						
ABKAR	**Akbulak array**	**77.42**	**318**	*e*P	P	14 42 35.2	-4.1
	1.8nm,0.5s						
YBH	**Yreka Blue Hor**	**83.89**	**49**	P	**P**	**14 43 17.0**	**+2.7**
YBH	**Yreka Blue Hor**	**83.89**	**49**	P	**P**	**14 43 17.0**	**+2.7**
	0.7nm,0.3s,baz=274,slow=9.2,SNR=4.0						
YKA	**Yellowknife Ar**	**84.13**	**27**	P	**P**	**14 43 15.8**	**+0.9**
YKA	**Yellowknife Ar**	**84.13**	**27**	P	**P**	**14 43 15.8**	**+0.9**
	0.5nm,0.4s,baz=287,slow=5.3,SNR=8.4						
RES	**Resolute Bay**	**85.90**	**13**	*e*P	**P**	**14 43 22.9**	**-0.6**
	2.6nm,0.8s						
NEW	**Newport**	**86.35**	**42**	*e*P	**P**	**14 43 25.9**	**-0.5**
NEW	**Newport**	**86.35**	**42**	P	**P**	**14 43 28.3**	**+1.9**
	2.7nm,0.8s,baz=252,slow=3.2,SNR=3.4						
NVAR	**Mina Array Bea**	**87.90**	**51**	P	**P**	**14 43 36.1**	**+1.8**
NVAR	**Mina Array Bea**	**87.90**	**51**	P	**P**	**14 43 36.1**	**+1.8**
	0.8nm,0.5s,baz=266,slow=5.8,SNR=7.7						
ARCES	**ARCESS Array B**	**88.31**	**342**	P	**P**	**14 43 35.5**	**+0.2**
ARCES	**ARCESS Array B**	**88.31**	**342**	P	**P**	**14 43 35.5**	**+0.2**
	2.4nm,0.9s,baz=46,slow=5.2,SNR=4.9						
MFID	**Camas Ranch**	**88.46**	**46**	*e*P	**P**	**14 43 35.8**	**-1.0**
	3.1nm,0.9s						
ELK	**Elko**	**89.60**	**48**	P	**P**	**14 43 44.4**	**+2.0**
ELK	**Elko**	**89.60**	**48**	P	**P**	**14 43 44.4**	**+2.0**
	1.3nm,0.7s,baz=304,slow=2.4,SNR=4.0						
FINES	**FINESS Array B**	**92.30**	**335**	P	**P**	**14 43 53.3**	**-0.8**
FINES	**FINESS Array B**	**92.30**	**335**	P	**P**	**14 43 53.3**	**-0.8**
	0.8nm,0.3s,baz=82,slow=4.0,SNR=5.8						
SUW	**Suwalki**	**97.55**	**329**	*e*P	**P**	**14 44 17.0**	**-1.3**
	45nm,0.4s						
TORD	**Torodi Ar. Bea**	**135.46**	**303**	PKP	**PKPdf**	**14 50 06.8**	**+1.7**
TORD	**Torodi Ar. Bea**	**135.46**	**303**	PKP	**PKPdf**	**14 50 06.8**	**+1.7**
	0.2nm,0.5s,baz=70,slow=1.7,SNR=2.9						
DBIC	**Dimbokro**	**144.36**	**300**	PKP	**PKPdf**	**14 50 20.8**	**-0.5**
DBIC	**Dimbokro**	**144.36**	**300**	PKP	**PKPdf**	**14 50 20.8**	**-0.5**
	3.5nm,0.7s,baz=64,slow=3.0,SNR=4.0						
LPAZ	**La Paz**	**147.96**	**101**	PKPbc	**PKPab**	**14 50 32.8**	**-1.0**
LPAZ	**La Paz**	**147.96**	**101**	PKPbc	**PKPab**	**14 50 32.8**	**-1.0**
	3.1nm,0.7s,baz=266,slow=2.4,SNR=13						

*IDC **14** 14:37:37.4±6.4, 17.°77N×98.°95W, h0km, mb3.4/4, mb1 3.8/5,mb1mx3.6/23,mbtmp3.3/5,ML3.5/1,MS3.3/1, Ms1 3.3/1,ms1mx2.4/20,Error ellipse: s-maj=126.4km s-min=106.8km az=55.0*

*ISCJB **14** 14:37:48.7±0.3, 18.°07N±0.°03×100.°14W±0.°02, h60km±5km, mb3.2/4,Error ellipse: s-maj=4.4km s-min=3.7km az=173.0*

*MEX **14** 14:37:51.2±0.5, 18.°08N×100.°13W, h54km±3km, MD4.0*

ISC 14 14:37:49.6±0.9, 18.°08N±0.°03×100.°13W±0.°03, h53km±8km, n25, σ0§72/41, mb3.3/4, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.29**	**314**	*e*P	**Pn**	**14 37 58.9**	**-0.1**
ARIG				*e*S	**Sn**	**14 38 05.7**	**0.0**
MEIG	**Mezcala**	**0.51**	**108**	*i*P	**Pn**	**14 38 01.3**	**+0.1**
MEIG				*i*S	**Sn**	**14 38 10.0**	**+0.4**
CAIG	**El Cayaco**	**1.03**	**187**	*i*P	**Pn**	**14 38 07.6**	**-0.3**
CAIG				*i*S	**Sn**	**14 38 21.4**	**+0.1**
ACP2	**Acapulco**	**1.22**	**169**	*e*P	**Pn**	**14 38 10.5**	**+0.1**
ACP2				*i*S	**Sn**	**14 38 24.9**	**-0.9**
ACX	**Acapulco**	**1.23**	**168**	*i*P	**Pn**	**14 38 10.5**	**0.0**
ACX				*i*S	**Sn**	**14 38 26.2**	**+0.1**
ZIIG	**Zihuatanejo**	**1.36**	**250**	*i*P	**Pn**	**14 38 12.3**	**+0.1**
ZIIG				*i*S	**Sn**	**14 38 29.1**	**-0.1**
MZVM		**1.39**	**38**	*e*P	**Pn**	**14 38 13.3**	**+0.6**
MZVM				*i*S	**Sn**	**14 38 30.1**	**+0.1**
HMTT	**Tlapaneco**	**1.52**	**100**	*i*P	**Pn**	**14 38 15.1**	**+0.6**
HMTT				*i*S	**Sn**	**14 38 32.3**	**-0.9**
PBVM	**Pinon**	**1.68**	**36**	*e*P	**Pn**	**14 38 16.6**	**+0.1**
PBVM				*i*S	**Sn**	**14 38 36.6**	**-0.3**
PPM	**Popocatepetl**	**1.73**	**55**	*e*P	**Pn**	**14 38 17.9**	**+0.1**
PPM				*i*S	**Sn**	**14 38 38.4**	**-0.5**
PTVM	**Pico Tres Padr**	**1.79**	**32**	*i*P	**Pn**	**14 38 18.2**	**-0.1**
PTVM				*i*S	**Sn**	**14 38 39.8**	**-0.2**
IIO	**Organos**	**2.01**	**41**	*i*P	**Pn**	**14 38 21.3**	**-0.1**
IIO				*i*S	**Sn**	**14 38 45.0**	**-0.5**
VTVM	**Tizayuca**	**2.11**	**37**	*i*P	**Pn**	**14 38 21.7**	**-1.1**
PNIG	**Pinotepa**	**2.54**	**131**	*e*P	**Pn**	**14 38 28.6**	**+0.1**
PNIG				*i*S	**Sn**	**14 38 57.6**	**-0.6**
TPIG	**Tehuac#an**	**2.65**	**82**	*i*P	**Pn**	**14 38 31.2**	**+1.2**
TPIG				*i*S	**Sn**	**14 39 00.8**	**-0.3**
MMIG	**Aquila**	**3.07**	**274**	*i*P	**Pn**	**14 38 35.6**	**+0.1**
MMIG				*i*S	**Sn**	**14 39 10.0**	**-1.0**
VHO	**Vista Hermosa**	**3.39**	**107**	*i*P	**Pn**	**14 38 40.9**	**+0.7**
VHO				*i*S	**Sn**	**14 39 19.1**	**-0.2**
EZ5V		**3.57**	**293**	*i*P	**Pn**	**14 38 43.3**	**+0.6**
EZ5V				*i*S	**Sn**	**14 39 23.3**	**-0.7**
R15V		**3.81**	**287**	*i*P	**Pn**	**14 38 47.3**	**+1.4**
R15V				*i*S	**Sn**	**14 39 29.3**	**-0.2**
TXAR	**Lajitas Array**	**11.66**	**345**	Pn	Pn	14 40 37.0	+3.6
	0.1nm,0.3s,baz=163,slow=19,SNR=2.6						
NVAR	**Mina Array Bea**	**25.74**	**326**	P	**P**	**14 43 17.3**	**+1.9**
	0.6nm,0.6s,baz=139,slow=10,SNR=5.2						
PDAR	**Pinedale Array**	**25.88**	**344**	P	**P**	**14 43 16.1**	**-0.6**
	0.9nm,0.8s,baz=144,slow=11,SNR=5.4						
SADO	**Sadowa**	**31.88**	**29**	LR	LR	15 00 17.4	
	comp=Z,48nm,19.4s,baz=30,slow=43						
YKA	**Yellowknife Ar**	**45.51**	**351**	P	**P**	**14 46 01.7**	**-1.7**
	0.2nm,0.5s,baz=158,slow=7.8,SNR=3.7						
ILAR	**Eielson Array**	**56.08**	**338**	P	**P**	**14 47 24.1**	**+1.1**
	0.1nm,0.6s,baz=121,slow=7.3,SNR=3.3						

MAN 14 14:51:53, 10.°30N×121.°94E, h1km, mb4.3, ML3.2, MS3.0, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.72**	**63**	*e*P	Pb	14 52 07.6	-0.7
CUYO	**Cuyo Island**	**1.06**	**301**	*e*P	Pn	14 52 15.7	+0.7
RCP	**Roxas**	**1.48**	**32**⇑	*e*P	Pg	14 52 21.7	+0.2
RCP				*i*S	Sn	14 52 42.1	+1.1
TBP	**Tagbilaran**	**1.99**	**107**	*e*P	Pb	14 52 28.9	-1.1
OTRP	**Odiongan**	**2.05**	**2**	*e*P	Pb	14 52 30.0	-1.1
SJMP	**San Jose**	**2.29**	**340**	*e*P	Pn	14 52 32.0	0.0
ENPP	**El Nido**	**2.63**	**290**	*e*P	Pn	14 52 37.8	+1.2
MSLP	**Maasin**	**2.88**	**93**	*e*P	Pn	14 52 41.9	+1.8

MEX 14 14:54:58.3±0.7, 16.°59N×94.°19W, h116km±10km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.04**	**80**	*i*P	Pn	14 55 19.4	-1.0
TGIG				*i*S	Sn	14 55 35.4	-1.8
PCIG		**1.29**	**133**	*e*P	Pn	14 55 21.9	-1.0
PCIG				*i*S	Sn	14 55 39.9	-1.8
CCIG	**Comitan**	**1.99**	**99**	*e*P	Pn	14 55 30.7	-1.0
CCIG				*i*S	Sn	14 55 54.6	-2.6
HUIG	**Huatulco**	**2.02**	**246**	*e*P	Pn	14 55 29.8	-2.0
HUIG				*i*S	Sn	14 55 56.5	-0.9
VHO	**Vista Hermosa**	**2.48**	**281**	*i*P	Pn	14 55 36.6	-1.4
VHO				*e*S	Sn	14 56 07.3	-1.1
THIG		**2.50**	**132**	*e*P	Pn	14 55 36.9	-1.0
THIG				*i*S	Sn	14 56 07.7	-0.7
UTMO	**Huajuapan**	**3.67**	**290**	*i*P	Pn	14 55 52.1	-1.4
UTMO				*i*S	Sn	14 56 34.1	-2.3
PNIG	**Pinotepa**	**3.78**	**268**	*e*P	Pn	14 55 53.9	-1.0
PNIG				*i*S	Sn	14 56 37.0	-1.8

*ISCJB **14** 14:57:13.0±0.5, 31.°63N±0.°06×91.°25E±0.°08, h10km, mb3.7/8, MS2.7/1, Error ellipse: s-maj=11.6km s-min=6.4km az=36.5*

*IDC **14** 14:57:12.6±1.0, 31.°48N×91.°06E, h0km, mb3.6/9, mb1 3.8/11,mb1mx3.7/29,mbtmp3.6/11,ML3.1/2,MS2.8/1, Ms1 2.8/1,ms1mx2.4/44,Error ellipse: s-maj=36.7km s-min=19.6km az=65.0*

ISC 14 14:57:15.1±0.7, 31.°73N±0.°07×91.°18E±0.°10, h10km, n22, σ1§15/21, mb3.7/8, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**5.30**	**216**	*e*Pn	**Pn**	**14 58 35.5**	**+0.8**
ODAN	**Odare**	**5.87**	**215**	*e*Pn	**Pn**	**14 58 43.6**	**+1.2**
GUN	**Gumba**	**5.97**	**232**	*e*Pn	**Pn**	**14 58 43.5**	**-0.4**
SHL	**Shillong**	**6.17**	**174**	*e*PKP	**Pg**	**14 59 15.0**	**+1.7**
RAMN	**Ramite**	**6.21**	**221**	*e*Pn	**Pn**	**14 58 46.2**	**-1.0**
KKN	**Kakani**	**6.46**	**234**	*e*Pn	**Pn**	**14 58 50.5**	**0.0**
PKI	**Pulchoki**	**6.51**	**232**	*e*Pn	**Pn**	**14 58 50.9**	**-0.4**
PKI				*e*Sn	**Sn**	**15 00 06.4**	**+0.6**
	25nm,0.7s						
DMN	**Daman**	**6.69**	**234**	*e*Pn	**Pn**	**14 58 53.2**	**-0.5**
DANN	**Dangsing**	**7.26**	**244**	*e*Pn	**Pn**	**14 59 00.5**	**-1.1**
KOLN	**Koldanda**	**7.68**	**241**	*e*Pn	**Pn**	**14 59 06.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**14.96**	**150**	Pn	**Pn**	**15 00 44.0**	**-2.7**
	0.1nm,0.3s,baz=325,slow=14,SNR=4.4						
MKAR	**Makanchi Array**	**16.53**	**338**	Pn	**Pn**	**15 01 06.9**	**-0.2**
	0.0nm,0.3s,baz=159,slow=13,SNR=6.3						
SONM	**Songino Array**	**19.83**	**31**	P	**Pn**	**15 01 48.5**	**+0.9**
	1.2nm,0.7s,baz=214,slow=13,SNR=9.4						
KURBB	**Kurchatov Arra**	**21.09**	**337**	P	**P**	**15 02 01.2**	**+1.7**
	1.4nm,0.7s,baz=150,slow=10,SNR=9.1						
ZALV	**Zalesovo Beam**	**22.68**	**350**	P	**P**	**15 02 16.6**	**0.0**
	2.1nm,0.7s,baz=172,slow=11,SNR=7.2						
KSRS	**Korea Array**	**30.65**	**69**	LR	LR	15 15 35.3	
	comp=Z,18nm,21.2s,baz=352,slow=36						
NOA	**NORSAR Array B**	**58.04**	**326**	P	**P**	**15 07 08.9**	**+0.8**
	0.7nm,0.8s,baz=86,slow=6.7,SNR=3.1						
WRA	**Warramunga Arr**	**65.96**	**135**	P	P	15 07 59.8	-2.0
	0.5nm,1.1s,baz=324,slow=6.0,SNR=3.1						
ASAR	**Alice Springs**	**68.58**	**138**	P	**P**	**15 08 17.2**	**-1.2**
	0.4nm,0.8s,baz=322,slow=6.6,SNR=4.2						
ILAR	**Eielson Array**	**73.76**	**22**	P	**P**	**15 08 49.7**	**+0.5**
	1.8nm,0.9s,baz=295,slow=4.9,SNR=26						
TORD	**Torodi Ar. Bea**	**82.78**	**281**	P	**P**	**15 09 38.4**	**-1.5**
	1.0nm,0.7s,baz=50,slow=4.4,SNR=4.4						
YKA	**Yellowknife Ar**	**83.85**	**12**	P	**P**	**15 09 44.7**	**+0.1**
	0.6nm,0.9s,baz=329,slow=4.9,SNR=4.6						

*IDC **14** 14:57:16.1±1.2, 36.°29N×63.°78E, h0km, mb3.6/4, mb1 3.7/9,mb1mx3.4/31,mbtmp3.5/9,ML3.5/5,MS3.0/4, Ms1 3.0/4,ms1mx2.5/42,Error ellipse: s-maj=21.1km s-min=19.0km az=118.0*

*ISCJB **14** 14:57:19.1±0.9, 36.°63N±0.°08×63.°80E±0.°09, h33km, mb3.6/4, MS3.0/3,Error ellipse: s-maj=13.0km s-min=8.6km az=141.6*

*NNC **14** 14:57:19.7±4.8, 36.°62N×64.°09E, h0km, mb3.8, mpv3.9, Error ellipse: s-maj=63.9km s-min=37.1km az=146.0*

ISC 14 14:57:20.1±1.1, 36.°71N±0.°09×63.°63E±0.°10, h35km, n18, σ2§47/18, mb3.6/4, MS3.0/3, 4C-4D, Turkmenistan-Afghanistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**8.29**	**37**	⇓P	Pn	14 59 21.4	+3.6
	3.8nm,0.6s,baz=226,slow=17,SNR=13						
KK31				⇓Sn	**Sn**	**15 00 52.9**	**+2.8**
	10nm,0.5s,baz=215,slow=21,SNR=6.0						
AAK	**Ala-Archa**	**10.25**	**51**	Pn	**Pn**	**14 59 46.9**	**+2.1**
	0.8nm,0.3s,baz=235,slow=11,SNR=13						
AAK				Sn	**Sn**	**15 01 41.4**	**+2.9**
	1.5nm,0.3s,baz=6.7,slow=14,SNR=8.5						
AAK				LR	LR	15 04 33.1	
	comp=Z,61nm,19.3s,baz=39,slow=42						
TKM2	**Tokmak 2**	**11.10**	**52**	⇑Pn	**Pn**	**14 59 54.9**	**-1.5**
	2.7nm,0.5s						
TKM2				⇑Sn	**Sn**	**15 01 59.9**	**+0.6**
	9.3nm,0.7s						
AB31	**Akbulak array**	**12.83**	**349**	⇑P	**P**	**15 00 28.0**	**-2.3**
	0.4nm,0.5s,baz=160,slow=13,SNR=4.8						
AKTO	**Aktyubinsk**	**14.31**	**345**	Pn	P	15 00 44.0	-2.7
	0.1nm,0.3s,baz=166,slow=12,SNR=3.2						
AKTO				Sn	**Sn**	**15 03 19.2**	**+1.9**
	0.1nm,0.3s,baz=198,slow=20,SNR=2.2						
VOSK	**Vostochnaya**	**16.83**	**16**	⇑P	**P**	**15 01 14.6**	**-0.1**
	2.6nm,0.7s						
BVA0	**Borovoye Array**	**16.99**	**14**	⇓P	**Pn**	**15 01 15.6**	**+0.7**
	0.8nm,1.1s,baz=185,slow=10,SNR=4.7						
BVAR	**Borovoye Array**	**16.99**	**14**	Pn	**Pn**	**15 01 14.6**	**-0.2**
	0.5nm,0.3s,baz=197,slow=13,SNR=4.1						
BVAR				Sn	**Sn**	**15 04 16.6**	**-5.9**
	0.1nm,0.3s,baz=187,slow=22,SNR=2.8						
MK31	**Makanchi Array**	**17.15**	**48**	⇓P	**Pn**	**15 01 17.8**	**+0.9**
	0.9nm,0.7s,baz=148,slow=13,SNR=4.8						
MKAR	**Makanchi Array**	**17.15**	**48**	Pn	**Pn**	**15 01 13.0**	**-3.9**
	0.1nm,0.3s,baz=248,slow=7.6,SNR=7.1						
MKAR				Sn	**Sn**	**15 04 28.1**	**+1.7**
	0.0nm,0.3s,baz=241,slow=30,SNR=2.2						
KURBB	**Kurchatov Arra**	**17.55**	**33**	Pn	**Pn**	**15 01 21.5**	**-0.3**
	0.0nm,0.3s,baz=227,slow=12,SNR=19						
ZALV	**Zalesovo Beam**	**22.64**	**34**	LR	LR	15 13 10.3	
	comp=Z,24nm,21.4s,baz=354,slow=42						
CMAR	**Chiang Mai Arr**	**35.93**	**111**	P	**P**	**15 04 16.7**	**-0.6**
	0.4nm,0.7s,baz=312,slow=7.2,SNR=4.2						
ARCES	**ARCESS Array B**	**38.79**	**340**	LR	LR	15 22 00.6	
	comp=Z,44nm,19.4s,baz=44,slow=38						
KEST	**Kesra**	**43.30**	**286**	LR	LR	15 28 11.9	
	comp=Z,17nm,18.5s,baz=162,slow=43						
TORD	**Torodi Ar. Bea**	**59.81**	**264**	P	**P**	**15 07 24.2**	**+2.1**
	0.8nm,0.9s,baz=25,slow=6.1,SNR=3.7						
YKA	**Yellowknife Ar**	**81.13**	**359**	P	P	15 09 35.1	+3.7
	0.3nm,0.8s,baz=354,slow=5.7,SNR=3.5						
WRA	**Warramunga Arr**	**87.25**	**117**	P	**P**	**15 10 02.4**	**-0.8**
	0.6nm,1.0s,baz=308,slow=5.6,SNR=4.7						

*ISK **14** 15:06:06.4, 39.°62N×38.°33E, h5km, MD3.1*

*ISCJB **14** 15:06:07.7±0.6, 39.°66N±0.°02×38.°36E±0.°04, h5km±5km, Error ellipse: s-maj=5.1km s-min=4.2km az=170.6*

*CSEM **14** 15:06:07.7±0.2, 39.°65N×38.°38E, h5km, MD3.1, Error ellipse: s-maj=4.3km s-min=3.5km az=89.0*

*DDA **14** 15:06:07.3, 39.°65N×38.°40E, h17km, MD3.2*

ISC 14 15:06:07.9±1.0, 39.°65N±0.°02×38.°36E±0.°03, h8km±9km, n43, σ0§67/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIC	**ilic-Erzincan**	**0.25**	**140**	*e*PG	**Pg**	**15 06 12.4**	**-0.6**
ILIC	**ilic-Erzincan**	**0.25**	**140**	*e*Pg	**Pg**	**15 06 12.4**	**-0.6**
KEMA	**Kemaliye**	**0.39**	**164**	*i*P	**Pg**	**15 06 15.6**	**0.0**
KEMA				*i*S	**Sg**	**15 06 21.6**	**+0.9**
KEMA	**Kemaliye**	**0.39**	**164**	*i*P	**Pg**	**15 06 15.6**	**0.0**
KEMA				*i*S	**Sg**	**15 06 21.6**	**+0.9**
SUSE	**Susehri**	**0.57**	**348**	*i*P	**Pg**	**15 06 19.3**	**+0.2**
SUSE				*i*S	**Sg**	**15 06 26.8**	**+0.2**
SUSE	**Susehri**	**0.57**	**348**	*i*P	**Pg**	**15 06 19.3**	**+0.2**
SUSE				*i*S	**Sg**	**15 06 26.8**	**+0.2**
EZC	**Erzincan**	**0.78**	**82**	*e*PG	**Pg**	**15 06 23.2**	**+0.4**
EZC	**Erzincan**	**0.78**	**82**	*e*Pg	**Pg**	**15 06 23.2**	**+0.4**
KELT	**Kelkit**	**0.85**	**54**	*i*P	**Pg**	**15 06 24.0**	**-0.3**
KELT				*i*S	**Sg**	**15 06 35.3**	**-0.2**
KELT	**Kelkit**	**0.85**	**54**	*i*P	**Pg**	**15 06 24.0**	**-0.3**
KELT				*i*S	**Sg**	**15 06

0.6nm,0.8s,baz=277,slow=0.8,SNR=4.5

DDA ***14*** *15:15:59.8,37˚.98N×27˚.49E,h18km,MD3.1*
ISK ***14*** *15:15:59.5,37˚.96N×27˚.40E,h5km,MD3.2*
CSEM ***14*** *15:16:00.9±0.2,37˚.96N×27˚.46E,h2km,MD3.1,Error ellipse: s-maj=4.7km s-min=3.1km az=55.0*
ATH ***14*** *15:16:00.9,38˚.00N×27˚.50E,h5km±3km,MD3.2/5*
ISC 14 15:16:00.5±1.0,**37˚.98N**±0˚.02×**27˚.49E**±0˚.02,**h5**km±10km,
n85,σ1§20/109,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.35**	**216**	*i* P	**Pg**	**15 16 07.2**	**-0.1**
GCAM				*i* S	**Sg**	**15 16 12.2**	**+0.3**
GCAM	**G?zelcaml?**	**0.35**	**216**	*i* P	**Pg**	**15 16 07.2**	**-0.1**
AYDN	**Tasoluk**	**0.44**	**136**	*i* P	**Pg**	**15 16 09.5**	**+0.4**
AYDN				*i* S	**Sg**	**15 16 14.0**	**-0.9**
AYDN	**Tasoluk**	**0.44**	**136**	*i* P	**Pg**	**15 16 09.5**	**+0.4**
AYDN				*i* S	**Sg**	**15 16 14.0**	**-0.9**
IZM	**Izmir**	**0.45**	**336**	*e*PG	**Pg**	**15 16 09.1**	**-0.2**
IZM	**Izmir**	**0.45**	**336**	*e*Pg	**Pg**	**15 16 09.1**	**-0.2**
BLCB	**Balcova**	**0.54**	**319**	*e*PG	**Pg**	**15 16 10.3**	**-0.6**
BLCB				*e*SG	**Sg**	**15 16 17.7**	**-0.2**
BLCB	**Balcova**	**0.54**	**319**	*e*Pg	**Pg**	**15 16 10.3**	**-0.6**
BLCB				*e*Sg	**Sg**	**15 16 17.7**	**-0.2**
MLSB	**Milas**	**0.72**	**162**	*e*PG	**Pg**	**15 16 14.6**	**+0.2**
MLSB	**Milas**	**0.72**	**162**	*e*Pg	**Pg**	**15 16 14.6**	**+0.2**
URLA	**Izmir**	**0.80**	**298**	*i* P	**Pg**	**15 16 15.8**	**-0.1**
URLA				*i* S	**Sg**	**15 16 27.0**	**+0.6**
URLA	**Izmir**	**0.80**	**298**	*i* P	**Pg**	**15 16 15.8**	**-0.1**
URLA				*i* S	**Sg**	**15 16 27.0**	**+0.6**
AKHS	**Akhisar**	**0.93**	**16**	*i* P	**Pg**	**15 16 17.9**	**-0.5**
AKHS				*i* S	**Sg**	**15 16 30.3**	**-0.1**
AKHS	**Akhisar**	**0.93**	**16**	*i* P	**Pg**	**15 16 17.9**	**-0.5**
AKS	**Akhisar**	**0.93**	**16**	*e*PG	**Pg**	**15 16 18.2**	**-0.2**
AKS	**Akhisar**	**0.93**	**16**	*e*Pg	**Pg**	**15 16 18.2**	**-0.2**
MANT	**Manisa**	**0.98**	**58**	*i* P	**Pg**	**15 16 19.5**	**+0.2**
MANT				*i* S	**Sg**	**15 16 30.4**	**-1.6**
MANT	**Manisa**	**0.98**	**58**	*i* P	**Pg**	**15 16 19.5**	**+0.2**
YER	**Yerkesik**	**1.05**	**143**	*e*PN	**Pg**	**15 16 21.3**	**+0.5**
YER				*e*SN	**Sn**	**15 16 37.0**	**-0.2**
YER	**Yerkesik**	**1.05**	**143**	*e*Pn	**Pg**	**15 16 21.3**	**+0.5**
YER				*e*Sn	**Sn**	**15 16 37.0**	**-0.2**
KULA	**Kula-Manisa**	**1.06**	**60**	*e*PN	**Pg**	**15 16 21.4**	**+0.5**
KULA	**Kula-Manisa**	**1.06**	**60**	*e*Pn	**Pg**	**15 16 21.4**	**+0.5**
CHOS	**Chios island**	**1.20**	**290**	*e*PB	**Pg**	**15 16 23.6**	**0.0**
CHOS				*e*SB	**Sb**	**15 16 40.3**	**+0.5**
CHOS	**Chios island**	**1.20**	**290**	*e*Pb	**Pg**	**15 16 23.6**	**0.0**
CHOS				*e*Sb	**Sb**	**15 16 40.3**	**+0.5**
DENT	**Denizli**	**1.24**	**100**	*e*PN	**Pn**	**15 16 25.3**	**+0.7**
DENT	**Denizli**	**1.24**	**100**	*e*Pn	**Pn**	**15 16 25.3**	**+0.7**
DNZL	**Cakiroluk**	**1.26**	**103**	*i* P	**Pg**	**15 16 24.9**	**+0.1**
DNZL				*i* S	**Sg**	**15 16 40.9**	**-0.2**
DNZL	**Cakiroluk**	**1.26**	**103**	*i* P	**Pg**	**15 16 24.9**	**+0.1**
DNZL				*i* S	**Sg**	**15 16 40.9**	**-0.2**
TURN	**Turunc**	**1.42**	**141**	*i* P	**Pn**	**15 16 25.1**	**-1.9**
TURN				*i* S	**Sg**	**15 16 43.0**	**-3.1**
TURN	**Turunc**	**1.42**	**141**	*i* P	**Pn**	**15 16 25.0**	**-1.9**
DEMI	**Demirci**	**1.43**	**42**	*i* P	**Pn**	**15 16 27.5**	**+0.3**
DEMI				*i* S	**Sb**	**15 16 43.4**	**-2.9**
DEMI	**Demirci**	**1.43**	**42**	*i* P	**Pn**	**15 16 27.5**	**+0.3**
AYVA	**Ayvalik**	**1.47**	**335**	*i* P	**Pn**	**15 16 25.9**	**-1.8**
AYVA				*i* S	**Sn**	**15 16 48.3**	**+1.1**
DALY	**Dalyan (Mu¨la**	**1.49**	**141**	*e*PN	**Pn**	**15 16 28.6**	**+0.7**
DALY				*e*SN	**Sg**	**15 16 50.1**	**+1.8**
DALY	**Dalyan (Mu¨la**	**1.49**	**141**	*e*Pn	**Pn**	**15 16 28.6**	**+0.7**
DALY				*e*Sn	**Sg**	**15 16 50.1**	**+1.8**
PRK	**Paraskevi**	**1.58**	**323**	*e*PB	**Pb**	**15 16 30.7**	**+0.4**
PRK				*e*SB	**Sg**	**15 16 51.9**	**+0.5**
PRK	**Paraskevi**	**1.58**	**323**	*e*Pb	**Pb**	**15 16 30.7**	**+0.4**
PRK				*e*Sb	**Sg**	**15 16 51.9**	**+0.5**
KHAL	**Karahalli**	**1.62**	**76**	*i* P	Pn	15 16 25.5	-4.5
KHL	**Karahalli**	**1.64**	**77**	*e*PN	**Pb**	**15 16 31.9**	**+0.7**
KHL	**Karahalli**	**1.64**	**77**	*e*Pn	**Pb**	**15 16 32.0**	**+0.7**
BALB	**Balikesir**	**1.68**	**10**	*e*PN	**Pb**	**15 16 31.9**	**0.0**
BALB	**Balikesir**	**1.68**	**10**	*e*Pn	**Pb**	**15 16 32.0**	**0.0**
BALY	**Balya**	**1.76**	**3**	*i* P	**Pn**	**15 16 31.6**	**-0.2**
BALY				*i* S	**Sn**	**15 16 52.8**	**-1.8**
BALY	**Balya**	**1.76**	**3**	*i* P	**Pn**	**15 16 31.6**	**-0.2**
DURS	**Dursunbey**	**1.79**	**25**	*i* P	**Pn**	**15 16 31.3**	**-0.8**
DURS				*i* S	**Sn**	**15 16 54.0**	**-1.3**
APE	**Apeiranthos**	**1.81**	**240**	*e*PN	**Pn**	**15 16 31.9**	**-0.5**
APE	**Apeiranthos**	**1.81**	**240**	*e*PN	**Pg**	**15 16 35.1**	**-0.1**
APE				*e*SN	**Sg**	**15 17 00.2**	**+1.5**
APE	**Apeiranthos**	**1.81**	**240**	*e*Pn	**Pn**	**15 16 31.9**	**-0.5**
ARG	**Arkhangelos**	**1.83**	**164**	*e*PN	**Pg**	**15 16 35.5**	**-0.2**
ARG	**Arkhangelos**	**1.83**	**164**	*e*Pn	**Pg**	**15 16 35.5**	**-0.2**
DST	**Dursunbey**	**1.84**	**28**	*e*PN	**Pb**	**15 16 34.3**	**-0.5**
DST	**Dursunbey**	**1.84**	**28**	*e*Pn	**Pb**	**15 16 34.3**	**-0.5**
FETY	**Fethiye**	**1.85**	**136**	*e*PN	**Pn**	**15 16 34.3**	**+1.4**
FETY	**Fethiye**	**1.85**	**136**	*e*Pn	**Pn**	**15 16 34.3**	**+1.4**
TVSB	**Tavsanli**	**2.12**	**46**	*e*PN	**Pb**	**15 16 38.7**	**-0.9**
TVSB	**Tavsanli**	**2.12**	**46**	*e*Pn	**Pb**	**15 16 38.7**	**-0.9**
BOZC	**Bozcaada**	**2.17**	**329**	*i* P	**Pn**	**15 16 35.5**	**-1.8**
ORLT	**Orhaneli**	**2.33**	**27**	*e*PN	**Pn**	**15 16 41.7**	**+2.1**
ORLT	**Orhaneli**	**2.33**	**27**	*e*Pn	**Pn**	**15 16 41.7**	**+2.1**
KCTX	**Karacabey (Bur**	**2.38**	**16**	*e*PN	**Pn**	**15 16 42.1**	**+1.9**
KCTX	**Karacabey (Bur**	**2.38**	**16**	*e*Pn	**Pn**	**15 16 42.1**	**+1.9**
KRBG	**Karabiga-Canak**	**2.41**	**356**	*e*PN	**Pn**	**15 16 42.4**	**+1.7**
KRBG	**Karabiga-Canak**	**2.41**	**356**	*e*Pn	**Pn**	**15 16 42.4**	**+1.7**
KARP	**Karpathos**	**2.45**	**186**	*e*PN	**Pb**	**15 16 44.6**	**-0.4**
KARP	**Karpathos**	**2.45**	**186**	*e*Pn	**Pb**	**15 16 44.6**	**-0.4**
LPK	**Lapseki**	**2.45**	**347**	*e*PN	**Pn**	**15 16 42.1**	**+0.8**
LPK	**Lapseki**	**2.45**	**347**	*e*Pn	**Pn**	**15 16 42.1**	**+0.8**
GELI	**Tayfur-Gelibol**	**2.54**	**342**	*e*PN	**Pn**	**15 16 43.7**	**+1.3**
GELI	**Tayfur-Gelibol**	**2.54**	**342**	*e*Pn	**Pn**	**15 16 43.7**	**+1.3**
MRMT	**Marmara Adasi**	**2.62**	**2**	*e*PN	**Pn**	**15 16 45.1**	**+1.5**
MRMT	**Marmara Adasi**	**2.62**	**2**	*e*Pn	**Pn**	**15 16 45.1**	**+1.5**
RKY	**Sarkoy-Tekirda**	**2.71**	**355**	*e*PN	**Pn**	**15 16 46.4**	**+1.6**
RKY	**Sarkoy-Tekirda**	**2.71**	**355**	*e*Pn	**Pn**	**15 16 46.4**	**+1.6**
ARMT	**Armutlu**	**2.79**	**22**	*e*PN	**Pn**	**15 16 48.1**	**+2.2**
ARMT	**Armutlu**	**2.79**	**22**	*e*Pn	**Pn**	**15 16 48.1**	**+2.2**
ERIK	**Erikli-Kesan**	**2.79**	**344**	*e*PN	**Pn**	**15 16 47.1**	**+1.3**
ERIK	**Erikli-Kesan**	**2.79**	**344**	*e*Pn	**Pn**	**15 16 47.1**	**+1.3**
MFT	**Murefte**	**2.81**	**357**	*e*PN	**Pn**	**15 16 47.9**	**+1.7**
MFT	**Murefte**	**2.81**	**357**	*e*Pn	**Pn**	**15 16 47.9**	**+1.7**
IZI	**Iznik**	**2.81**	**33**	*e*PN	**Pn**	**15 16 48.5**	**+2.3**
IZI	**Iznik**	**2.81**	**33**	*e*Pn	**Pn**	**15 16 48.5**	**+2.3**
CAVI	**Cavuskoy**	**2.87**	**39**	*e*PN	**Pn**	**15 16 49.1**	**+2.1**
CAVI	**Cavuskoy**	**2.87**	**39**	*e*Pn	**Pn**	**15 16 49.1**	**+2.1**
YLV	**Yalova**	**2.96**	**29**	*e*PN	**Pn**	**15 16 50.5**	**+2.2**
YLV	**Yalova**	**2.96**	**29**	*e*Pn	**Pn**	**15 16 50.5**	**+2.2**

IDC 14 15:18:50.2±7.7,**22˚.41N×144˚.42E,h208**km±75km,**mb2.8**/8,
mb1 3.0/8,**mb1mx2.9**/26,**mbtmp2.8**/8,**Error ellipse:**
s-maj=38.0km s-min=16.3km az=84.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.67**	**320**	P	P	15 23 14.3	+0.3
	0.6nm,0.5s,baz=148,slow=8.4,SNR=5.7						
SONM	**Songino Array**	**39.54**	**319**	P	P	15 26 00.7	-0.4
	0.2nm,0.5s,baz=139,slow=9.0,SNR=2.6						
WRA	**Warramunga Arr**	**43.23**	**194**	P	P	15 26 30.6	-0.5
	0.2nm,0.3s,baz=15,slow=8.8,SNR=8.0						
ASAR	**Alice Springs**	**46.93**	**193**	P	P	15 27 00.5	+0.4
	0.2nm,0.8s,baz=11,slow=6.4,SNR=3.7						
ZALV	**Zalesovo Beam**	**54.38**	**321**	P	P	15 27 54.9	-0.5
	0.5nm,0.4s,baz=100,slow=7.9,SNR=2.7						
MKAR	**Makanchi Array**	**55.07**	**312**	P	P	15 28 01.0	+0.4
	0.2nm,0.6s,baz=86,slow=6.0,SNR=2.7						
ILAR	**Eielson Array**	**60.88**	**27**	P	P	15 28 40.5	0.0
	0.3nm,0.7s,baz=249,slow=6.1,SNR=6.0						
BVAR	**Borovoye Array**	**62.88**	**319**	P	P	15 28 54.1	0.0
	0.9nm,0.5s,baz=96,slow=9.1,SNR=4.2						

BJI ***14*** *15:49:28.1,32˚.33N×104˚.76E,h10km,mB4.7/21,mb4.6/34,ML4.5/20,Ms4.4/47,Ms7 4.0/37*
IDC ***14*** *15:49:29.0±0.5,32˚.30N×104˚.88E,h0km,mb4.3/27,mb1 4.4/30,mb1mx4.4/38,mbtmp4.3/30,ML3.9/3,MS3.6/12,Ms1 3.6/12,ms1mx3.4/36,Error ellipse: s-maj=14.9km s-min=10.7km az=30.0*
ISCJB ***14*** *15:49:29.6±1.1,32˚.27N±0˚.03×104˚.90E±0˚.03,h16km±8km,mb4.5/81,MS3.7/14,Error ellipse: s-maj=4.7km s-min=3.7km az=153.9*

MOS ***14*** *15:49:32.1±0.8,32˚.25N×104˚.96E,h33km,mb4.9/33,Error ellipse: s-maj=7.5km s-min=4.8km az=103.7*
NEIC ***14*** *15:49:34.3±0.5,32˚.29N×104˚.91E,h36km±5km,mb4.5/33,Error ellipse: s-maj=4.3km s-min=3.8km az=185.0*
ISC 14 15:49:32.1±1.2,**32˚.21N**±0˚.03×**104˚.85E**±0˚.03,**h19**km,7km,
n245,σ1§21/259,**mb4.6**/81,**MS3.7**/15,**6C-7D,Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.59**	**216**	⇓*i*Pn	**Pn**	**15 50 00.6**	**+1.2**
CD2				Sn	**Sn**	**15 50 21.3**	**+1.8**
CD2				Sg	**Sb**	**15 50 23.3**	**+2.5**
CD2				smax	smax		
	comp=N,16μm,0.8s						
CD2				smax	smax		
	comp=E,18μm,0.7s						
XAN	**Xi'an**	**3.87**	**61**	Pn	**Pn**	**15 50 30.0**	**-0.7**
XAN				Pg	**Pb**	**15 50 41.8**	**+1.9**
XAN				Sg	**Sb**	**15 51 28.8**	**+2.4**
XAN				smax	smax		
	comp=N,1μm,0.9s						
XAN				smax	smax		
	comp=E,640nm,0.8s						
XAN				LR	LR		
	comp=N,5μm,8.4s						
XAN				LR	LR		
	comp=E,960nm,7.8s						
XAN				LR	LR		
	comp=Z,1μm,6.7s						
LZH	**Lanzhou**	**3.96**	**348**	*e*Pn	**Pn**	**15 50 32.1**	**+0.1**
LZH				Pg	**Pb**	**15 50 40.3**	**-1.2**
LZH				Sn	**Sn**	**15 51 20.3**	**+2.2**
LZH				Sg	**Sb**	**15 51 30.3**	**+1.2**
LZH				smax	smax		
	comp=N,2μm,0.5s						
LZH				smax	smax		
	comp=E,4μm,0.6s						
LZH				LR	LR		
	comp=N,5μm,5.7s						
LZH				LR	LR		
	comp=E,10μm,5.7s						
LZH				LR	LR		
	comp=Z,3μm,8.8s						
LZH	**Lanzhou**	**3.96**	**348**	*e*P	**Pn**	**15 50 32.1**	**+0.1**
LZH						15 51 20.3	
LZH	**Lanzhou**	**3.96**	**348**	*e*Pn	**Pn**	**15 50 32.1**	**+0.1**
LZH				Pg	**Pb**	**15 50 40.2**	**-1.2**
LZH				Sn	**Sn**	**15 51 20.3**	**+2.2**
LZH				Sg	**Sb**	**15 51 30.2**	**+1.2**
ENH	**Enshi**	**4.41**	**115**	*e*Pn	**Pn**	**15 50 39.0**	**+0.9**
ENH				*e*Pb	**Pb**	**15 50 50.0**	**+0.9**
ENH				*e*Sg	Sb	15 51 49.0	+7.1
GYA	**Guiyang**	**5.94**	**164**	Pn	**Pn**	**15 51 00.6**	**+1.3**
GYA				Sg	**Sg**	**15 52 38.5**	**-4.4**
GYA				smax	smax		
	comp=N,580nm,0.7s						
GYA				smax	smax		
	comp=E,700nm,0.7s						
GYA				LR	LR		
	comp=N,590nm,7.2s						
GYA				LR	LR		
	comp=E,2μm,10.6s						
GYA				LR	LR		
	comp=Z,590nm,7.2s						
KMI	**Kunming**	**7.30**	**195**	Pn	**Pn**	**15 51 19.8**	**+1.8**
KMI				Sn	**Sn**	**15 52 38.3**	**-2.2**
KMI				smax	smax		
	comp=N,91nm,0.9s						
KMI				smax	smax		
	comp=E,78nm,1.4s						
KMI				LR	LR		
	comp=N,1μm,4.8s						
KMI				LR	LR		
	comp=E,1μm,5.0s						
KMI	**Kunming**	**7.30**	**195**	P	**Pn**	**15 51 19.8**	**+1.8**
KMI						15 52 38.2	
KMI	**Kunming**	**7.30**	**195**	Pn	**Pn**	**15 51 19.8**	**+1.8**
KMI				Sn	**Sn**	**15 52 38.2**	**-2.2**
GTA	**Gaotai**	**8.27**	**332**	*e*P	**Pn**	**15 51 29.6**	**-1.6**
GTA				pP	pP	15 51 36.0	
GTA				sP		15 51 41.4	
GTA				S	Sn	15 52 57.8	-6.4
GTA				sS	sS	15 53 09.4	
GTA				pmax	pmax		
	comp=Z,64nm,5.2s						
GTA				LR	LR		
	comp=N,1μm,9.0s						
GTA				LR	LR		
	comp=E,2μm,10.9s						
GTA				LR	LR		
	comp=Z,520nm,10.2s						
WHN	**Wuhan**	**8.29**	**99**	⇑P	**Pn**	**15 51 30.6**	**-0.7**
WHN				S	**Sn**	**15 53 01.3**	**-3.1**
WHN				LR	LR		
	comp=N,2μm,6.6s						
WHN				LR	LR		
	comp=E,4μm,6.4s						
WHN				LR	LR		
	comp=Z,3μm,5.3s						
BTO	**Baotou**	**9.36**	**25**	*e*P	**Pn**	**15 51 45.3**	**-0.8**
HHC	**Hu-ho-hao-te**	**10.17**	**30**	*e*P	**Pn**	**15 51 57.4**	**+0.2**
HHC				S	**Sn**	**15 53 51.3**	**+0.5**
HHC				SS	**SnSn**	**15 54 08.3**	**+5.5**
HHC				pmax	pmax		
	comp=Z,19nm,0.2s						
HHC				pmax	pmax		
	comp=Z,160nm,3.0s						
HHC				LR	LR		
	comp=N,2μm,10.2s						
HHC				LR	LR		
	comp=E,3μm,9.0s						
HHC				LR	LR		
	comp=Z,1μm,7.2s						
TIA	**Tai'an**	**10.92**	**65**	*e*P	**Pn**	**15 52 07.1**	**-0.3**
TIA				LR	LR		
	comp=N,670nm,10.7s						
TIA				LR	LR		
	comp=E,530nm,10.1s						
TIA				LR	LR		
	comp=Z,440nm,11.3s						
GZH	**Guangzhou**	**11.79**	**138**	P	Pn	15 52 15.4	-4.0
GZH				S	Sn	15 54 18.0	-12
GZH				LR	LR		
	comp=N,770nm,5.5s						
GZH				LR	LR		
	comp=E,1μm,6.0s						
NJ2	**Nanjing**	**11.87**	**87**	*e*P	**Pn**	**15 52 19.4**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,100nm,4.3s						
NJ2				LR	LR		
	comp=N,910nm,10.4s						
NJ2				LR	LR		
	comp=E,910nm,8.4s						
NJ2				LR	LR		
	comp=Z,920nm,8.7s						
BJT	**Baijiatuan**	**12.01**	**46**	*e*Pn	**Pn**	**15 52 21.9**	**-0.5**
LSA	**Lhasa**	**12.03**	**262**	P	**Pn**	**15 52 23.6**	**+0.6**
LSA	**Lhasa**	**12.03**	**262**	*e*P	**Pn**	**15 52 24.8**	**+1.8**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LSA	**Lhasa**	**12.03**	**262**	*e*Pn	**Pn**	**15 52 24.8**	**+1.8**
	comp=Z,7.2nm,0.6s						
BJI	**Beijing**	**12.03**	**46**	P	**Pn**	**15 52 22.4**	**-0.1**
BJI				S	**Sn**	**15 54 34.9**	**-1.3**
BJI				pmax	pmax		
	comp=Z,18nm,0.5s						
BJI				pmax	pmax		
	comp=Z,77nm,3.8s						
BJI				LR	LR		
	comp=N,1μm,19.9s						
BJI				LR	LR		
	comp=E,870nm,18.7s						
BJI				LR	LR		
	comp=Z,240nm,14.2s						
QIZ	**Qiongzhong**	**13.87**	**160**	P	**Pn**	**15 52 50.3**	**+2.5**
QIZ				S	**Sn**	**15 55 24.5**	**+3.2**
QIZ				pmax	pmax		
	comp=Z,14nm,1.7s						
QIZ				LR	LR		
	comp=E,670nm,12.1s						
QIZ				LR	LR		
	comp=Z,380nm,9.2s						
SSE	**Sheshan**	**13.96**	**90**	P	Pn	15 52 44.9	-4.1
SSE				S	Sn	15 55 19.1	-4.3
SSE				pmax	pmax		
	comp=Z,39nm,0.7s						
SSE				pmax	pmax		
	comp=E,61nm,6.2s						
SSE				LR	LR		
	comp=N,620nm,14.3s						
SSE				LR	LR		
	comp=E,270nm,14.3s						
SSE				LR	LR		
	comp=Z,610nm,10.7s						
CHTO	**Chiang Mai**	**14.36**	**203**	*e*P	**Pn**	**15 52 56.6**	**+2.1**
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHTO	**Chiang Mai**	**14.36**	**203**	*e*Pn	**Pn**	**15 52 56.6**	**+2.1**
	comp=Z,9.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.69**	**203**	Pn	**Pn**	**15 53 00.0**	**+1.0**
CMAR				Lg	Lg	15 57 21.1	
CMAR	**Chiang Mai Arr**	**14.69**	**203**	Pn	**Pn**	**15 53 00.0**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=11,slow=11,SNR=49						
CMAR				Lg	Lg	15 57 21.1	
	comp=Z,0.1nm,0.3s,baz=22,slow=27,SNR=3.4						
CMAR				LR	LR	15 59 24.9	
	comp=Z,263nm,20.0s,baz=314,slow=40						
TAPN	**Taplejung**	**15.65**	**256**	*e*P	**Pn**	**15 53 10.6**	**-1.4**
	comp=Z,40nm,0.9s						
SONM	**Songino Array**	**15.65**	**4**	Pn	**Pn**	**15 53 10.8**	**-1.0**
SONM				Lg	Lg	15 57 41.8	
SONM	**Songino Array**	**15.65**	**4**	Pn	**Pn**	**15 53 10.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=16						
SONM				Lg	Lg	15 57 41.8	
	comp=Z,0.3nm,0.3s,baz=185,slow=27,SNR=6.8						
SONM				LR	LR	15 59 45.5	
	comp=Z,521nm,18.8s,baz=184,slow=40						
ULN	**Ulaanbaatar**	**15.73**	**5**	*e*Pn	**Pn**	**15 53 11.1**	**-1.6**
	comp=Z,9.1nm,0.8s						
ODAN	**Odare**	**16.10**	**255**	*e*P	**Pn**	**15 53 16.2**	**-1.5**
	comp=Z,34nm,0.4s						
SSLB	**Sunglung**	**16.50**	**117**	*e*Pn	**Pn**	**15 53 22.8**	**+0.2**
	comp=Z,33nm,1.3s						
RAMN	**Ramite**	**16.71**	**256**	*e*P	**Pn**	**15 53 23.5**	**-2.1**
	comp=Z,31nm,0.7s						
GUN	**Gumba**	**16.97**	**260**	*e*P	**Pn**	**15 53 27.4**	**-1.5**
	comp=Z,30nm,0.6s						
PKI	**Pulchoki**	**17.48**	**260**	*e*P	**Pn**	**15 53 33.1**	**-2.1**
	comp=Z,39nm,0.6s						
PKIN	**Phulchoki**	**17.49**	**260**	*e*P	**Pn**	**15 53 34.3**	**-1.0**
	comp=Z,30nm,0.6s						
KKN	**Kakani**	**17.51**	**261**	*e*P	**Pn**	**15 53 33.8**	**-1.7**
	comp=Z,41nm,0.7s						
DMN	**Daman**	**17.72**	**260**	*e*P	**Pn**	**15 53 36.1**	**-2.0**
	comp=Z,43nm,0.8s						
SNY	**Shenyang**	**17.74**	**52**	⇓P	**Pn**	**15 53 37.5**	**-0.5**
SNY				pmax	pmax		
	comp=Z,16nm,2.4s						
SNY				pmax	pmax		
	comp=Z,190nm,5.5s						
SNY				LR	LR		
	comp=N,370nm,16.1s						
SNY				LR	LR		
	comp=E,220nm,18.2s						
SNY				LR	LR		
	comp=Z,190nm,18.5s						
WMQ	**Urumqi**	**17.77**	**316**	P	**P**	**15 53 40.8**	**+1.6**
WMQ				S	**Sn**	**15 56 55.0**	**-1.0**
WMQ				PcP	**PcP**	**15 58 17.0**	**+1.5**
WMQ				PcS	**PcS**	**16 01 52.3**	**+0.5**
WMQ				ScS	**ScS**	**16 05 26.3**	**-3.7**
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,92nm,4.4s						
WMQ				LR	LR		
	comp=N,1μm,11.4s						
WMQ				LR	LR		
	comp=E,710nm,12.2s						
WMQ				LR	LR		
	comp=Z,210nm,18.2s						
ZAK	**Zakamensk**	**18.20**	**357**	*e*P	**Pn**	**15 53 44.3**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
DANN	**Dangsing**	**18.61**	**264**	*e*P	**P**	**15 53 46.6**	**-2.2**
	comp=Z,50nm,0.8s						
KOLN	**Koldanda**	**18.93**	**262**	*e*P	**P**	**15 53 50.4**	**-1.8**
	comp=Z,23nm,0.6s						
PYUN	**Piuthan**	**19.34**	**263**	*e*P	**P**	**15 53 55.4**	**-1.3**
	comp=Z,91nm,0.9s						
KSAR	**Wonju Array Be**	**19.60**	**68**	P	**P**	**15 53 59.8**	**+0.6**
KSRS	**Korea Array**	**19.63**	**68**	P	**P**	**15 53 59.8**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=255,slow=10,SNR=23						
KSRS				LR	LR	16 01 40.0	
	comp=Z,115nm,19.4s,baz=255,slow=37						
MOY	**Mondy**	**19.65**	**353**	*e*P	**P**	**15 54 02.3**	**+2.5**
CN2	**Changchun**	**19.88**	**49**	⇓P	**P**	**15 54 03.3**	**+1.1**
CN2				*e*S	S	15 57 36.3	-8.9
CN2				pmax	pmax		
	comp=Z,70nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,14.0s						
CN2				LR	LR		
	comp=E,300nm,14.0s						
HIA	**Hailar**	**20.37**	**29**	*e*P	**P**	**15 54 07.4**	**-0.2**
	comp=E,17nm,0.8s						
HVS	**Khovu-Aksy**	**20.62**	**340**	*d i*P	**P**	**15 54 11.0**	**+0.6**
HVS				pmax	pmax		
	comp=Z,163nm,1.4s						
JNU	**Nakatsue**	**21.92**	**81**	P	**P**	**15 54 24.4**	**0.0**
JNU	**Nakatsue**	**21.92**	**81**	P	**P**	**15 54 24.4**	**0.0**
	comp=Z,6.3nm,0.7s,baz=291,slow=5.4,SNR=4.1						
MK31	**Makanchi Array**	**22.59**	**317**	*e*P	**P**	**15 54 30.7**	**-0.8**
MK31	**Makanchi Array**	**22.59**	**317**	*e*P	**P**	**15 54 30.7**	**-0.8**
MKAR	**Makanchi Array**	**22.59**	**317**	P	**P**	**15 54 31.0**	**-0.5**

comp=Z,1.0nm,0.5s,baz=157,slow=7.7,SNR=2.3
AAK LR LR 16 07 15.1
comp=Z,156nm,20.0s,baz=156,slow=41
KLR Kul'dur 26.34 42 *eP* P 15 55 02.7 -4.1
KLR MLR MLR
comp=Z,2μm,11.5s
EKS2 Erkin-Say 26.66 302 *eP* **P 15 55 10.7 +0.8**
EKS2 pmax pmax
comp=Z,3.0nm,1.0s
EKS2 Erkin-Say 26.66 302 *eP* **P 15 55 10.7 +0.8**
comp=Z,2.8nm,1.0s
KURBB Kurchatov Arra 26.76 321 P **P 15 55 10.4 -0.1**
comp=Z,4.3nm,0.8s,baz=129,slow=9.0,SNR=44
KURBB PcP **PcP 15 58 32.6 -0.7**
comp=Z,1.2nm,0.6s,baz=113,slow=2.0,SNR=9.5
KURBB ScP **ScP 16 02 11.5 -1.0**
comp=Z,0.8nm,1.0s,baz=103,slow=2.7,SNR=6.0
KURBB LR LR 16 06 45.2
comp=Z,71nm,20.3s,baz=150,slow=39
KURK Kurchatov 26.77 321‖ *eP* **P 15 55 11.1 +0.5**
KURK pmax pmax
comp=Z,13nm,1.2s
KURK MLR MLR
comp=Z,96nm,16.0s
KURK Kurchatov 26.77 321 *eP* **P 15 55 10.0 -0.6**
comp=Z,8.7nm,0.9s
KURK PcP **PcP 15 58 32.6 -0.7**
KURK ScP **ScP 16 02 11.5 -1.0**
MAJO Matsushiro 27.79 72 P **P 15 55 17.9 -2.1**
MAJO pmax pmax
comp=Z,4.0nm,0.5s
MAJO Matsushiro 27.79 72 P **P 15 55 17.9 -2.1**
comp=Z,4.4nm,0.5s
MAT Matsushiro 27.79 72 P **P 15 55 17.8 -2.2**
MJAR Matsushiro Arr 27.79 72 P **P 15 55 18.9 -1.1**
MJAR Matsushiro Arr 27.79 72 P **P 15 55 18.9 -1.1**
comp=Z,3.0nm,0.5s,baz=274,slow=11,SNR=13
HABR Khabarovsk 27.93 46 *eP* **P 15 55 21.6 +0.5**
HABR *e*PPP PPP 15 56 12.9
HABR *e*SS SS 16 01 16.8 -45
HABR *e* 16 06 07.1
HABR pmax pmax
comp=N,9.0nm,1.5s
HABR pmax pmax
comp=E,7.0nm,1.5s
HABR pmax pmax
comp=Z,4.0nm,1.1s
HABR MLR MLR
comp=Z,103nm,16.0s
PSI Prapat 29.78 192 LR LR 16 07 12.3
comp=Z,130nm,19.8s,baz=353,slow=36
ASAJ Asahikawa 31.70 57 P **P 15 55 54.6 0.0**
ASAJ Asahikawa 31.70 57 P **P 15 55 54.6 0.0**
comp=Z,14nm,1.1s,baz=266,slow=15,SNR=4.0
BVAR Borovoye Array 32.34 320 P **P 15 55 59.2 -0.9**
BVAR 15 58 47.1
BVAR Borovoye Array 32.34 320 P **P 15 55 59.2 -0.9**
BVAR PcP **PcP 15 58 47.1 -0.4**
BVAR ScP **ScP 16 02 29.4 -1.0**
BVAR Borovoye Array 32.34 320 P **P 15 55 59.2 -0.9**
comp=Z,1.8nm,0.6s,baz=116,slow=10,SNR=13
BVAR PcP **PcP 15 58 47.1 -0.4**
comp=Z,0.8nm,0.6s,baz=116,slow=3.4,SNR=3.9
BVAR ScP **ScP 16 02 29.4 -1.0**
comp=Z,0.7nm,0.8s,baz=101,slow=7.7,SNR=3.6
BRVK Borovoye 32.41 320⇑ *eP* **P 15 56 01.8 +1.1**
BRVK pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 32.41 320 P **P 15 56 00.8 +0.1**
YAK Yakutsk 33.85 21 *eP* **P 15 56 12.0 -1.1**
YAK *e* 15 56 28.3
YAK pmax pmax
comp=Z,13nm,0.9s
YAK MLR MLR
comp=Z,136nm,12.0s
YAK MLR MLR
comp=E,120nm,15.0s
ABKAR Akbulak array 37.43 310 *eP* **P 15 56 44.1 +0.1**
comp=E,2.1nm,0.5s
AKTO Aktyubinsk 38.86 312 P **P 15 56 56.1 0.0**
AKTO Aktyubinsk 38.86 312 P **P 15 56 56.0 0.0**
AKTO Aktyubinsk 38.86 312 P **P 15 56 56.0 0.0**
comp=E,3.0nm,0.7s,baz=102,slow=14,SNR=11
SVE Sverdlovsk 39.01 322 *eP* **P 15 56 57.5 +0.3**
ARU Arti 39.96 321 *d iP* **P 15 57 05.1 -0.1**
ARU 15 58 36.1
ARU S **S 16 03 13.4 +4.0**
ARU SS **SS 16 06 03.7 -2.5**
ARU pmax pmax
comp=Z,28nm,1.2s
SEY Seymchan 42.82 30 *i* P **P 15 57 28.3 -0.2**
PETK Petropavlovsk- 42.96 45 P **P 15 57 29.6 -0.2**
PETK Petropavlovsk- 42.96 45 P **P 15 57 29.6 -0.2**
PETK Petropavlovsk- 42.96 45 P **P 15 57 29.6 -0.2**
comp=Z,12nm,0.8s,baz=251,slow=3.7,SNR=16
PETK LR LR 16 15 08.7
comp=Z,45nm,18.9s,baz=55,slow=36
COCO West Island 44.81 191 P **P 15 57 44.2 -0.7**
COCO West Island 44.81 191 P **P 15 57 44.2 -0.7**
ZEI Tsey 48.55 301 *eP* **P 15 58 14.3 -0.1**
ZEI pmax pmax
comp=Z,3.0nm,0.7s
KBZ Khabaz 49.13 302 P **P 15 58 18.4 -0.2**
KBZ Khabaz 49.13 302 P **P 15 58 18.4 -0.2**
KBZ Khabaz 49.13 302 P **P 15 58 18.4 -0.2**
comp=Z,3.2nm,0.7s,baz=113,slow=6.8,SNR=7.9
KIV Kislovodsk 49.25 303 *eP* **P 15 58 21.0 +1.4**
KIV pmax pmax
comp=Z,14nm,0.9s
KIV MLR MLR
comp=Z,62nm,17.0s
VRHR Novokhopersk 49.27 312 *eP* **P 15 58 19.1 -0.4**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=E,3.0nm,0.3s
BILL Bilibino 49.91 26⇑ *eP* **P 15 58 23.4 -0.7**
BILL *e* 15 59 42.9
BILL *i* 16 00 18.3
BILL pmax pmax
comp=Z,6.0nm,0.8s
VORD Divnogorie 50.75 312 *eP* **P 15 58 30.6 -0.1**
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,20nm,0.9s
VORD pmax pmax
comp=Z,4.0nm,0.9s
VSR Storozhevoye 50.81 312 *eP* **P 15 58 30.7 -0.5**
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.5s
VSR pmax pmax
comp=Z,7.0nm,0.5s
OBN Obninsk 52.09 317⇑ *iP* **P 15 58 41.0 +0.3**
OBN pmax pmax
comp=Z,9.0nm,1.0s
ANN Anapa 52.83 304 *eP* P 15 58 39.2 -7.1
ANN *e* 15 59 51.8
ANN *e*S S 16 06 03.8 -10
ANN pmax pmax
comp=Z,30nm,0.9s
JOF Joensuu 54.44 327 *eP* **P 15 58 57.1 -0.8**
JOF Joensuu 54.44 327 *ep* **P 15 58 57.1 -0.8**
KEV Kevo 55.99 336 P **P 15 59 08.2 -0.7**
KEV pmax pmax
comp=Z,11nm,0.8s
KEV Kevo 55.99 336 *ep* **P 15 59 08.0 -0.9**
KEV Kevo 55.99 336 P **P 15 59 08.2 -0.7**
comp=Z,11nm,0.8s
ARCES ARCESS Array B 56.52 336 P **P 15 59 12.0 -0.8**
ARCES ARCESS Array B 56.52 336 P **P 15 59 12.0 -0.8**
comp=Z,1.7nm,0.5s,baz=88,slow=8.7,SNR=15
ARCES LR LR 16 25 24.4
comp=Z,71nm,19.7s,baz=246,slow=38
ASF Jabal al Asfar 56.57 290 P **P 15 59 15.5 +1.6**
ASF Jabal al Asfar 56.57 290 P **P 15 59 15.5 +1.6**
comp=Z,4.9nm,0.8s
BR131 Keskin Array S 56.76 299 *eP* **P 15 59 14.2 -0.9**
comp=Z,3.3nm,0.8s
BRTR Keskin Array B 56.76 299 P **P 15 59 14.8 -0.3**
BRTR Keskin Array B 56.76 299 P **P 15 59 14.8 -0.3**
comp=Z,2.6nm,0.8s,baz=96,slow=6.5,SNR=19
KAF Kangasniemi 56.82 327 *eP* **P 15 59 14.0 -1.0**
KAF Kangasniemi 56.82 327 *ep* **P 15 59 14.0 -1.0**
FINES FINESS Array B 57.01 326 P **P 15 59 15.7 -0.6**
FINES FINESS Array B 57.01 326 P **P 15 59 15.7 -0.6**
comp=Z,6.2nm,0.6s,baz=81,slow=8.1,SNR=22
AKASG Malin Array Be 57.10 313 P **P 15 59 16.3 -0.9**
AKASG Malin Array Be 57.10 313 P **P 15 59 16.2 -0.9**
AKASG Malin Array Be 57.10 313 P **P 15 59 16.2 -0.9**
comp=Z,3.1nm,0.5s,baz=67,slow=7.5,SNR=7.6
VSU Vasula 57.11 322 *i* P **P 15 59 17.0 -0.1**
VSU pmax pmax
comp=Z,28nm,1.0s
AK02 Malin Array Si 57.12 313 *eP* P 15 59 15.9 -1.3
SPITS Spitsbergen Ar 58.42 346 P **P 15 59 25.5 -0.6**
SPITS Spitsbergen Ar 58.42 346 P **P 15 59 25.5 -0.6**
comp=Z,1.3nm,0.5s,baz=104,slow=8.2
CSS Prodhromos 58.45 294 P P 15 59 22.0 -5.0
GAMB Gambell 58.79 31 *eP* P 15 59 27.6 -1.2
comp=Z,3.6nm,0.9s
WRAB Tennant Creek 59.04 147 *eP* **P 15 59 30.8 -0.2**
WRAB pmax pmax
comp=Z,7.0nm,0.6s
WRAB Tennant Creek 59.04 147 *eP* **P 15 59 30.8 -0.2**
comp=Z,7.2nm,0.6s
WRA Warramunga Arr 59.04 147 P **P 15 59 31.3 +0.3**
WRA Warramunga Arr 59.04 147 P **P 15 59 31.3 +0.3**
comp=Z,5.1nm,0.5s,baz=340,slow=7.6,SNR=74
TNA Tin City 60.04 29 *eP* P 15 59 36.0 -1.3
comp=Z,4.9nm,1.1s
MLR Muntele Rosu 60.55 308 P **P 15 59 42.3 +1.0**
MLR Muntele Rosu 60.55 308 P **P 15 59 42.3 +1.0**
comp=Z,0.7nm,0.8s
KOLS Kolonicke sedl 61.90 312 *eP* **P 15 59 50.9 +0.5**
KOLS pmax pmax
comp=Z,11nm,1.9s
KOLS Kolonicke sedl 61.90 312 *eP* **P 15 59 50.9 +0.5**
ASAR Alice Springs 62.11 150 P **P 15 59 52.4 +0.4**
ASAR Alice Springs 62.11 150 P **P 15 59 52.4 +0.4**
comp=Z,2.2nm,0.5s,baz=332,slow=6.4,SNR=33
HFS Hagfors 63.22 326 P **P 15 59 57.9 -1.0**
HFS Hagfors 63.22 326 P **P 15 59 57.9 -1.0**
baz=93,slow=7.7
NB2 NORSAR Subarra 64.08 327 P P 16 00 03.0 -1.6
comp=Z,3.5nm,0.5s,baz=73,slow=6.9
NOA NORSAR Array B 64.08 327 P P 16 00 03.2 -1.4
NOA NORSAR Array B 64.08 327 P P 16 00 03.2 -1.4
comp=Z,3.2nm,0.5s,baz=73,slow=6.8,SNR=19
VYHS Vyhne 64.20 313 *eP* **P 16 00 06.5 +0.9**
VYHS pmax pmax
comp=Z,2.0nm,1.3s
VYHS Vyhne 64.20 313 *eP* **P 16 00 06.5 +0.9**
NA001 NORSAR Array S 64.29 327 P P 16 00 04.0 -2.0
MORC Moravsky Berou 64.56 314 *eP* **P 16 00 07.7 -0.3**
MORC pmax pmax
comp=Z,1.0nm,0.8s
MORC Moravsky Berou 64.56 314 *eP* **P 16 00 07.7 -0.3**
comp=Z,1.5nm,0.8s
DPC Dobruska-Polom 65.09 315 *eP* **P 16 00 12.4 +1.0**
DPC Dobruska-Polom 65.09 315 *eP* **P 16 00 12.4 +1.0**
UPC Upice 65.22 315 *eP* **P 16 00 13.6 +1.4**
UPC Upice 65.22 315 *eP* **P 16 00 13.6 +1.4**
COLD Coldfoot 66.21 24 *eP* **P 16 00 17.8 -0.5**
comp=Z,2.5nm,0.7s
BRG Berggiesshubel 66.31 316 *eP* **P 16 00 19.7 +0.5**
comp=Z,4.9nm,1.0s
BRG Berggiesshubel 66.31 316 *eP* **P 16 00 19.7 +0.5**
BRG pmax pmax
comp=Z,5.0nm,1.0s
GERES GERESS Array B 67.23 314 P P 16 00 23.4 -1.9
GERES GERESS Array B 67.23 314 P P 16 00 23.4 -1.9
comp=Z,1.5nm,0.8s,baz=73,slow=5.9,SNR=12
PPLA Purkeypile 67.39 29 *eP* **P 16 00 25.6 -0.5**
comp=Z,9.0nm,0.6s
TRF Thorofare Moun 67.91 28 P P 16 00 28.0 -1.4
comp=Z,4.1nm,0.8s
COLA College 68.16 26 *eP* **P 16 00 29.6 -1.1**
COLA pmax pmax
comp=Z,11nm,0.9s
COLA College 68.16 26 *eP* **P 16 00 29.6 -1.1**
comp=Z,11nm,0.9s
RSO Redoubt South 68.25 31 *eP* **P 16 00 30.9 -0.7**
comp=Z,27nm,0.9s
MCK McKinley 68.30 27 P P 16 00 28.6 -3.1
MCK pmax pmax
comp=Z,3.0nm,0.7s
MCK McKinley 68.30 27 P P 16 00 28.6 -3.1
comp=Z,2.9nm,0.7s
ILAR Eielson Array 68.57 26 P P 16 00 31.4 -1.9
ILAR Eielson Array 68.57 26 P P 16 00 31.4 -1.9
comp=Z,1.3nm,0.7s,baz=290,slow=5.1,SNR=16
ILAR LR LR 16 31 48.7
comp=Z,46nm,18.2s,baz=115,slow=37
SML Sawmill 69.49 29 *eP* **P 16 00 38.5 -0.6**
SML pmax pmax
comp=Z,3.0nm,0.7s
SML Sawmill 69.49 29 *eP* **P 16 00 38.5 -0.6**
comp=Z,2.7nm,0.7s
KDAK Kodiak Island 69.57 34 *eP* **P 16 00 38.6 -0.9**
comp=Z,6.5nm,0.6s
KDAK Kodiak Island 69.57 34 LR LR 16 35 57.7
comp=Z,55nm,20.5s,baz=203,slow=40
FETA Feichten 69.81 313⇑ *iP* **P 16 00 41.8 +0.3**
comp=Z,5.1nm,0.8s
SEW Seward 69.87 31 *eP* P 16 00 39.8 -1.6
comp=Z,7.6nm,0.9s
PAX Paxson 70.04 27 *eP* P 16 00 40.6 -1.9
PAX pmax pmax
comp=Z,3.0nm,0.7s
PAX Paxson 70.04 27 *eP* P 16 00 40.6 -1.9
comp=Z,3.0nm,0.7s
DOT Dot Lake 70.21 26 *eP* P 16 00 42.0 -1.5
comp=Z,3.3nm,1.0s
BAIF Baives 72.27 318 *eP* **P 16 00 56.4 +0.3**
BAIF Baives 72.27 318 *eP* **P 16 00 56.4 +0.3**
BAIF Baives 72.27 318 *eP* **P 16 00 56.4 +0.3**
RES Resolute Bay 72.58 5 P **P 16 00 56.7 -0.9**
comp=Z,1.7nm,0.8s
STKA Stephens Creek 72.59 148 P **P 16 00 58.0 -0.1**
comp=Z,0.5nm,0.6s
STKA Stephens Creek 72.59 148 P **P 16 00 58.0 -0.1**
comp=Z,3.8nm,0.9s,baz=334,slow=2.6,SNR=6.8
PGF Pioggiola 72.93 310 *eP* **P 16 01 00.9 +0.5**
comp=Z,19nm,0.9s
PGF Pioggiola 72.93 310 *eP* **P 16 01 00.9 +0.5**
PGF pmax pmax
comp=Z,19nm,0.9s
PGF Pioggiola 72.93 310 *eP* **P 16 01 00.9 +0.5**
comp=Z,19nm,0.9s
LPG La Plagne 72.96 313 *eP* **P 16 01 01.4 +0.7**
comp=Z,20nm,0.7s
LPG La Plagne 72.96 313 *eP* **P 16 01 01.4 +0.7**
LPG pmax pmax
comp=Z,20nm,0.7s
LPG La Plagne 72.96 313 *eP* **P 16 01 01.4 +0.7**
comp=Z,20nm,0.7s
LPL La Plagne 72.96 313 *eP* **P 16 01 01.4 +0.7**
comp=Z,22nm,0.9s
LPL La Plagne 72.96 313 *eP* **P 16 01 01.4 +0.7**
LPL pmax pmax
comp=Z,22nm,0.9s
LPL La Plagne 72.96 313 *eP* **P 16 01 01.4 +0.7**
comp=Z,22nm,0.9s
SBF Sospel 73.31 312 *eP* **P 16 01 02.7 +0.1**
comp=Z,28nm,0.8s
SBF Sospel 73.31 312 *eP* **P 16 01 02.7 +0.1**
SBF pmax pmax
comp=Z,28nm,0.8s
SBF Sospel 73.31 312 *eP* **P 16 01 02.7 +0.1**
comp=Z,28nm,0.8s
ORIF Oris-en-Rattie 73.78 313 *eP* **P 16 01 05.7 +0.4**
comp=Z,17nm,1.0s
ORIF Oris-en-Rattie 73.78 313 *eP* **P 16 01 05.7 +0.4**
ORIF pmax pmax
comp=Z,17nm,1.0s
ORIF Oris-en-Rattie 73.78 313 *eP* **P 16 01 05.7 +0.4**
comp=Z,17nm,1.0s
SSF Saint Saulge 74.15 316 *eP* **P 16 01 07.2 -0.1**
SSF Saint Saulge 74.15 316 *eP* **P 16 01 07.2 -0.1**
SSF Saint Saulge 74.15 316 *eP* **P 16 01 07.2 -0.1**
LMR La Mourre 74.16 311 *eP* **P 16 01 08.0 +0.6**
LMR La Mourre 74.16 311 *eP* **P 16 01 08.0 +0.6**
LMR La Mourre 74.16 311 *eP* **P 16 01 08.0 +0.6**
PNL Peninsula 74.33 28 *eP* **P 16 01 08.1 -0.1**
comp=Z,16nm,0.8s
AVF Avril sur Loir 74.38 316 *eP* **P 16 01 08.7 0.0**
comp=Z,14nm,0.9s
AVF Avril sur Loir 74.38 316 *eP* **P 16 01 08.7 0.0**
AVF pmax pmax
comp=Z,14nm,0.9s
AVF Avril sur Loir 74.38 316 *eP* **P 16 01 08.7 0.0**
comp=Z,14nm,0.9s
SMRF Simiane la Rot 74.43 312 *eP* **P 16 01 09.2 +0.1**
SMRF Simiane la Rot 74.43 312 *eP* **P 16 01 09.2 +0.1**
VIVF Saint-Julien-l 74.56 313 *eP* **P 16 01 09.9 +0.1**
comp=Z,14nm,1.0s
VIVF Saint-Julien-l 74.56 313 *eP* **P 16 01 09.9 +0.1**
VIVF pmax pmax
comp=Z,14nm,1.0s
VIVF Saint-Julien-l 74.56 313 *eP* **P 16 01 09.9 +0.1**
comp=Z,14nm,1.0s
TCF Toulx Ste Croi 75.31 316 *eP* **P 16 01 14.3 +0.2**
TCF Toulx Ste Croi 75.31 316 *eP* **P 16 01 14.3 +0.2**
TCF Toulx Ste Croi 75.31 316 *eP* **P 16 01 14.3 +0.2**
GRR Gorron 75.97 319 *eP* **P 16 01 17.9 +0.1**
comp=Z,24nm,1.0s
GRR Gorron 75.97 319 *eP* **P 16 01 17.9 +0.1**
GRR pmax pmax
comp=Z,24nm,1.0s
GRR Gorron 75.97 319 *eP* **P 16 01 17.9 +0.1**
comp=Z,24nm,1.0s
SKAG Skagway 76.07 27 *eP* **P 16 01 18.6 +0.5**
comp=Z,12nm,0.8s
MTLF Montolieu 76.85 313 *eP* **P 16 01 22.4 -0.5**
comp=Z,11nm,1.0s
MTLF Montolieu 76.85 313 *eP* **P 16 01 22.4 -0.5**
MTLF pmax pmax
comp=Z,11nm,1.0s
MTLF Montolieu 76.85 313 *eP* **P 16 01 22.4 -0.5**
comp=Z,11nm,1.0s
EPF Esparros 78.18 314 *eP* **P 16 01 30.0 -0.4**
comp=Z,16nm,1.0s
EPF Esparros 78.18 314 *eP* **P 16 01 30.0 -0.4**
EPF pmax pmax
comp=Z,16nm,1.0s
EPF Esparros 78.18 314 *eP* **P 16 01 30.0 -0.4**
comp=Z,16nm,1.0s
YKW3 Yellowknife Ar 80.39 17 *eP* **P 16 01 41.0 -1.0**
YKA Yellowknife Ar 80.45 17 P **P 16 01 41.9 -0.5**
YKA Yellowknife Ar 80.45 17 P **P 16 01 41.8 -0.5**
comp=Z,2.1nm,0.7s,baz=329,slow=5.2,SNR=37
FFC Flin Flon 90.39 15 *i* P **P 16 02 32.0 -0.1**
FFC Flin Flon 90.39 15 *eP* P 16 02 30.9 -1.2
comp=Z,8.7nm,1.2s
TORD Torodi Ar. Bea 93.91 288 P **P 16 02 49.4 +0.3**
TORD Torodi Ar. Bea 93.91 288 P **P 16 02 49.4 +0.3**
comp=Z,0.6nm,0.8s,baz=41,slow=3.8,SNR=3.7

IDC ***14*** *16:48:27.8±1.4, 9.42N×60.97W, h0km, mb3.6/7, mb1 3.9/7, mb1mx3.7/25, mbtmp3.6/7, Error ellipse: s-maj=38.6km s-min=29.5km az=95.0*
TRN ***14*** *16:48:27.0, 8.83N×60.51W, h81km, MD4.3*
NEIC ***14*** *16:48:28.3, 8.96N×60.53W, h35km, MD4.3(TRN), MW3.8(CAR), After CAR.*
FUNV ***14*** *16:48:29.6, 8.98N×60.62W, h35km, MW4.0*

ISC 14 16:48:29.2±1.7, 9.00N±0.04×60.82W±0.06, h27km±12km, n55, σ1s01/74, mb3.6/7, 2C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RIOV	**Rio Grande**	**1.35**	**227**⇑	*iP*		**Pn**	**16 48 53.0**	**+0.7**
RIOV				*e*S		**Sb**	**16 49 11.0**	**+0.3**
TPP	**Pointe-a-Pierr**	**1.45**	**335**	*eP*		**Pb**	**16 48 55.6**	**0.0**
TPP	**Pointe-a-Pierr**	**1.45**	**335**	*eP*		**Pb**	**16 48 55.6**	**0.0**
TBH	**Brigand Hill**	**1.49**	**351**	*eP*		**Pn**	**16 48 55.2**	**+0.9**
TBH	**Brigand Hill**	**1.49**	**351**	*eP*		**Pn**	**16 48 55.2**	**+0.9**
TRN	**Trinidad (W)**	**1.73**	**341**	*eP*		**Pn**	**16 48 59.5**	**+1.9**
TRN	**Trinidad (W)**	**1.73**	**341**	*eP*		**Pn**	**16 48 59.5**	**+1.9**
GUIV	**Guiria**	**2.14**	**320**⇓	*iP*		**Pn**	**16 49 03.4**	**+0.1**
GUIV				*e*S		**Sn**	**16 49 28.7**	**-0.2**
TOSP	**Speyside**	**2.30**	**7**	*eP*		**Pn**	**16 49 05.5**	**0.0**
TOSP				*e*S		**Sn**	**16 49 33.7**	**+0.8**
GURV	**El Guri**	**2.56**	**241**	*eP*		**Pn**	**16 49 10.5**	**+1.5**
GURV				*e*S		**Sn**	**16 49 39.8**	**+0.6**
ORIV	**Oritupano**	**2.56**	**272**⇑	*eP*		**Pn**	**16 49 10.4**	**+1.5**
ORIV				*e*S		**Sn**	**16 49 40.2**	**+1.0**
CRUV	**Carupano**	**2.90**	**305**	*eP*		**Pn**	**16 49 13.5**	**-0.2**
CRUV				*e*S		**Sn**	**16 49 47.0**	**-0.8**
LUEV	**Luepa**	**3.20**	**191**	*eP*		**Pn**	**16 49 17.2**	**-0.7**
GRGR	**Grenville**	**3.22**	**345**	*e*Pn		**Pn**	**16 49 17.4**	**-0.7**
GRW	**Mount Saint Ca**	**3.25**	**345**	*eP*		**Pn**	**16 49 19.8**	**+1.2**
GRW				*e*S		**Sn**	**16 49 58.8**	**+2.5**
GRW	**Mount Saint Ca**	**3.25**	**345**	*eP*		**Pn**	**16 49 19.8**	**+1.2**
GRW				*e*S		**Sn**	**16 49 58.8**	**+2.5**
GRHS	**Sauteurs**	**3.30**	**346**	*eP*		**Pn**	**16 49 20.8**	**+1.6**
GRHS	**Sauteurs**	**3.30**	**346**	*eP*		**Pn**	**16 49 20.8**	**+1.6**
GRIC	**Isle de Caille**	**3.35**	**347**	*e*S		**Sn**	**16 50 00.0**	**+1.2**
GRSS	**Sisters**	**3.37**	**347**	*eP*		**Pn**	**16 49 21.5**	**+1.4**
GRSS				*e*S		**Sn**	**16 50 00.3**	**+1.1**
GRSS	**Sisters**	**3.37**	**347**	*eP*		**Pn**	**16 49 21.5**	**+1.4**
GRSS				*e*S		**Sn**	**16 50 00.3**	**+1.1**
PRGV	**PARIAGUAN**	**3.79**	**267**	*eP*		**Pn**	**16 49 26.9**	**+1.0**
PRGV				*e*S		**Sn**	**16 50 09.3**	**-0.2**
PCRV	**Puerto La Cruz**	**3.94**	**288**‖	*eP*		**Pn**	**16 49 28.6**	**+0.6**
SVB	**Belmont**	**4.27**	**354**	*eP*		**Pn**	**16 49 32.7**	**+0.2**
SVB				*e*S		**Sn**	**16 50 21.3**	**-0.1**
SVB	**Belmont**	**4.27**	**354**	*eP*		**Pn**	**16 49 32.7**	**+0.2**
SVB				*e*S		**Sn**	**16 50 21.3**	**-0.1**
BHS	**Barnard House**	**4.28**	**356**	*eP*		**Pn**	**16 49 33.2**	**+0.6**
BHS				*e*S		**Sn**	**16 50 20.9**	**-0.9**
BHS	**Barnard House**	**4.28**	**356**	*eP*		**Pn**	**16 49 33.2**	**+0.6**
BHS				*e*S		**Sn**	**16 50 20.9**	**-0.9**
SVV	**Soufriere Volc**	**4.31**	**355**	*eP*		**Pn**	**16 49 33.0**	**-0.1**
SVV				*e*S		**Sn**	**16 50 22.4**	**0.0**
SVV	**Soufriere Volc**	**4.31**	**355**	*eP*		**Pn**	**16 49 33.0**	**-0.1**
SVV				*e*S		**Sn**	**16 50 22.4**	**0.0**
MCLT	**Moule a Chique**	**4.68**	**359**	*eP*		**Pn**	**16 49 39.1**	**+0.9**
MCLT				*e*S		**Sn**	**16 50 29.9**	**-1.8**
MCLT	**Moule a Chique**	**4.68**	**359**	*eP*		**Pn**	**16 49 39.1**	**+0.9**
MCLT				*e*S		**Sn**	**16 50 29.9**	**-1.8**
SLB	**Belfond**	**4.80**	**357**	*eP*		**Pn**	**16 49 39.1**	**-0.8**
SLB	**Belfond**	**4.80**	**357**	*eP*		**Pn**	**16 49 39.1**	**-0.8**
CUPV	**Cœpira**	**5.01**	**282**‖	*eP*		**Pn**	**16 49 43.3**	**+0.5**
CUPV				*e*S		**Sn**	**16 50 38.2**	**-1.7**
MERV	**Las Mercedes**	**5.41**	**273**	*eP*		**Pn**	**16 49 48.6**	**+0.4**
BIRV	**Birongo**	**5.56**	**286**	*eP*		**Pn**	**16 49 51.2**	**+0.9**
FUNV	**FUNVISIS**	**6.08**	**284**	*eP*		**Pn**	**16 49 58.3**	**+0.8**
TURV	**Turiamo**	**7.07**	**282**	*eP*		**Pn**	**16 50 10.9**	**0.0**
BAUV	**El Baul**	**7.13**	**270**	*eP*		**Pn**	**16 50 11.2**	**-0.6**
MAPV	**Macapo**	**7.58**	**277**	*eP*		**Pn**	**16 50 17.6**	**-0.4**
TEPV	**Terepaima**	**8.31**	**277**	*eP*		**Pn**	**16 50 27.5**	**-0.6**
SANV	**Sanarito**	**8.62**	**274**	*eP*		**Pn**	**16 50 31.7**	**-0.6**
CURV	**Curarigua**	**9.07**	**277**	*eP*		**Pn**	**16 50 38.2**	**-0.4**
MONV	**Montecano**	**9.46**	**289**	*eP*		**Pn**	**16 50 43.2**	**-0.7**
SOCV	**Socops**	**9.95**	**267**	*eP*		**Pn**	**16 50 49.2**	**-1.3**
VIGV	**El Vigia**	**10.42**	**270**	*eP*		**Pn**	**16 50 55.5**	**-1.5**
SDDR	**Presa de Saban**	**14.19**	**315**	Pn		**Pn**	**16 51 49.2**	**+0.6**
SAML	**Samuel** 2.6nm,0.8s	**17.98**	**188**	*eP*		**Pn**	**16 52 37.5**	**0.0**
LPAZ	**La Paz** 1.1nm,0.7s,baz=55,slow=12,SNR=3.6	**26.15**	**196**	P		P	16 54 08.5	+6.4
TXAR	**Lajitas Array** 0.2nm,0.6s,baz=124,slow=11,SNR=3.2	**44.91**	**303**	P		**P**	**16 56 41.2**	**-0.9**
SCHQ	**Schefferville** 1.8nm,0.5s,baz=185,slow=12,SNR=5.3	**45.96**	**355**	P		**P**	**16 56 50.8**	**+0.9**
PDAR	**Pinedale Array** 0.3nm,0.7s,baz=112,slow=7.7,SNR=2.8	**54.20**	**317**	P		**P**	**16 57 52.6**	**-0.3**
NVAR	**Mina Array Bea** 0.3nm,0.4s,baz=115,slow=7.5,SNR=3.1	**59.12**	**309**	P		**P**	**16 58 27.8**	**-0.1**
YKA	**Yellowknife Ar** 0.3nm,0.6s,baz=105,slow=7.3,SNR=6.2	**65.88**	**336**	P		**P**	**16 59 11.9**	**-0.4**
GERES	**GERESS Array B** 0.4nm,0.4s,baz=261,slow=5.3,SNR=6.2	**73.09**	**42**	P		**P**	**16 59 58.2**	**+0.9**

JMA 14 16:57:35.1±0.2, 43.70N×147.25E, h28km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.15**	**254**	P		Pn	16 57 55.6	+0.4
NEM2				*e*S		Sb	16 58 10.6	-0.1
JRA	**Rausu**	**1.56**	**280**	P		Pn	16 58 01.6	+0.7
JRA				*e*S		Sn	16 58 21.1	+0.9
JNK	**Nakash**	**1.84**	**267**	P		Pn	16 58 05.4	+0.6
JNK				*e*S		Sn	16 58 27.7	+0.5
JAK	**Akkeshi**	**1.99**	**250**	P		Pn	16 58 07.5	+0.6

JAK			*e*S	Sn	16 58 31.3	+0.5
JTKR	**Abashiri--Toko**	**2.43 278**	P	Pn	16 58 14.3	+1.4
JAR	**Ashorobuto**	**2.56 262**	P	Pn	16 58 16.4	+1.6
JAR			*e*S	Sn	16 58 46.7	+1.7
JOB	**Onbets**	**2.62 253**	P	Pn	16 58 16.8	+1.3
JOB			*e*S	Sn	16 58 47.6	+1.3
JMP	**Maruseppu**	**2.83 278**	P	Pn	16 58 20.1	+1.6
JCH	**Churui**	**3.04 250**	P	Pn	16 58 22.0	+0.6
JCH			*e*S	Sn	16 58 57.4	+0.5
JEM	**Erimo**	**3.45 242**	P	Pn	16 58 30.1	+3.2
JNBK	**Urakawa-nobuka**	**3.59 248**	P	Pn	16 58 30.6	+1.7
JNBK			*e*S	Sn	16 59 12.1	+1.8

IDC 14 16:57:36.1±2.1, 3°92N×126°31E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.4/3, Error ellipse: s-maj=173.7km s-min=25.4km az=65.0, Talaud Islands

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.00 162**	P	P	17 03 02.0	+0.2
	0.6nm,0.6s,baz=342,slow=10,SNR=7.6					
ASAR	**Alice Springs**	**28.41 165**	P	P	17 03 32.2	-0.4
	0.2nm,0.5s,baz=340,slow=7.1,SNR=4.7					
MKAR	**Makanchi Array**	**57.16 325**	P	P	17 07 24.7	-0.1
	0.2nm,0.3s,baz=113,slow=7.3,SNR=9.5					

MAN 14 17:21:32,18°.06N×120°.75E, h32km, mb4.7, ML3.6, MS3.6, 1D, Luzon

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.29 335**	↓*i*P	Pn	17 21 42.2	+2.1
ABRA	**Dolores**	**0.41 185**	*e*P	Pn	17 21 43.6	+1.9
ABRA			*e*S	Sn	17 21 50.4	+2.3
APYP	**Conner**	**0.51 112**	*e*P	Pn	17 21 43.7	+0.7
APYP			*e*S	Sn	17 21 51.0	+0.3
SGCP	**Mt. Cagua**	**1.25 81**	*e*P	Pb	17 21 55.4	+0.4

DJA 14 17:28:44.6±0.3, 3°S±3°×12°8E±°, h10km, M4.6/10, mB5.2/7, mb4.9/10, MLv4.4/8, Mw(mB)4.6/7
ISCJB 14 17:28:46.3±0.3, 2°.82S±0°.04×128°.23E±0°.04, h51km, mb3.8/11, MS2.7/1, Error ellipse: s-maj=6.7km s-min=5.6km az=34.9
IDC 14 17:28:47.5±3.0, 2°.83S×128°.43E, h46km±27km, mb3.6/11, mb1 3.9/14, mb1mx3.8/26, mbtmp3.7/14, ML4.4/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/32, Error ellipse: s-maj=41.4km s-min=9.3km az=66.0
ISC 14 17:28:48.1±0.6, 2°.86S±0°.06×128°.26E±0°.08, h51km, n44, σ1s03/44, mb3.7/11, 1D, Ceram Sea

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.83 184**	P	**Pn**	**17 29 03.0**	**-0.6**
LBMI	**Labuha**	**2.33 341**	P	**Pn**	**17 29 22.0**	**-2.0**
SWI	**Sorong**	**3.60 57**	P	**Pn**	**17 29 41.2**	**-0.1**
TNTI	**Ternate**	**3.71 346**	P	**Pn**	**17 29 41.8**	**-1.1**
FAKI	**Fak Fak**	**3.99 91**	P	**Pn**	**17 29 47.3**	**+0.6**
KMSI	**Cibinong**	**5.47 308**	P	**Pn**	**17 30 04.2**	**-2.8**
	166nm,0.5s,8μm					
MNI	**Manado**	**5.47 321**	P	**Pn**	**17 30 07.6**	**+0.5**
LUWI	**Luwuk**	**5.77 288**	P	**Pn**	**17 30 09.2**	**-2.0**
	108nm,0.6s,3μm1.0nm					
RKPI	**Ransiki, Papua**	**6.07 77**	P	**Pn**	**17 30 14.9**	**-0.3**
	100nm,0.6s,2μm1.0nm					
BBSI	**Bau Bau**	**6.24 245**	P	Pn	17 30 13.5	-4.2
SKSI	**Soroako, Sulaw**	**6.92 273**	P	**Pn**	**17 30 27.0**	**0.0**
	59nm,0.6s,728nm					
MRSI	**Marisa**	**7.13 298**	P	**Pn**	**17 30 26.8**	**-3.0**
	59nm,0.5s,2μm					
BAKI	**Biak**	**8.02 78**	P	**Pn**	**17 30 42.8**	**+0.8**
	126nm,0.8s					
TTSI	**Tana Toraja**	**8.43 269**	P	**Pn**	**17 30 47.3**	**-0.3**
	31nm,0.7s					
BKSI	**Bulukumba**	**8.47 253**	P	**Pn**	**17 30 47.7**	**-0.6**
	39nm,1.4s,523nm					
SPSI	**Sidrap Palu**	**8.54 262**	P	**Pn**	**17 30 50.2**	**+1.0**
	55nm,0.6s,807nm					
KAPI	**Kappang**	**8.75 256**	P	**Pn**	**17 30 51.8**	**-0.3**
KAPI	**Kappang**	**8.75 256**	P	**Pn**	**17 30 52.5**	**+0.4**
	3.4nm,0.3s,baz=96,slow=10,SNR=7.1					
KAPI			LR	LR	17 34 37.0	
	comp=Z,232nm,18.7s,baz=77,slow=39					
CTBH	**Cotabato--PC H**	**10.78 338**	↓*i*P	**Pn**	**17 31 18.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**15.37 189**	P	**Pn**	**17 32 22.5**	**+0.8**
	0.8nm,0.3s,baz=32,slow=12,SNR=24					
FITZ			LR	LR	17 38 24.5	
	comp=Z,109nm,21.8s,baz=233,slow=37					
WRA	**Warramunga Arr**	**17.99 161**	P	**P**	**17 32 53.3**	**-1.3**
	1.7nm,0.3s,baz=339,slow=12,SNR=68					
WRA			S	**Sn**	**17 36 14.6**	**0.0**
	0.2nm,0.3s,baz=344,slow=20,SNR=3.5					
ASAR	**Alice Springs**	**21.40 166**	P	**P**	**17 33 31.4**	**-0.2**
	13nm,0.5s,baz=346,slow=11,SNR=342					
ASAR			S	**S**	**17 37 26.3**	**-0.3**
	3.9nm,0.9s,baz=348,slow=21,SNR=10					
STKA	**Stephens Creek**	**31.48 158**	P	**P**	**17 35 05.1**	**+0.1**
	2.2nm,0.8s,baz=358,slow=12,SNR=6.9					
CMAR	**Chiang Mai Arr**	**35.80 307**	P	**P**	**17 35 44.4**	**+1.6**
	0.2nm,0.6s,baz=121,slow=7.2,SNR=3.9					
KSRS	**Korea Array**	**40.11 360**	LR	LR	17 52 11.4	
	comp=Z,10nm,20.8s,baz=122,slow=35					
ODAN	**Odare**	**49.27 310**	*e*P	**P**	**17 37 32.6**	**+0.3**
	4.5nm,0.5s					
TAPN	**Taplejung**	**49.27 310**	*e*P	**P**	**17 37 33.1**	**+0.7**
	5.2nm,0.4s					
RAMN	**Ramite**	**49.92 309**	*e*P	**P**	**17 37 38.3**	**+1.0**
	18nm,0.5s					
GUN	**Gumba**	**50.96 310**	*e*P	**P**	**17 37 45.9**	**+0.7**
	8.1nm,0.5s					
PKI	**Pulchoki**	**51.15 309**	*e*P	**P**	**17 37 46.9**	**+0.2**
PKIN	**Phulchoki**	**51.16 309**	*e*P	**P**	**17 37 47.4**	**+0.7**
KKN	**Kakani**	**51.36 309**	*e*P	**P**	**17 37 48.6**	**+0.5**
	5.0nm,0.6s					
DMN	**Daman**	**51.41 309**	*e*P	**P**	**17 37 49.1**	**+0.6**
KOLN	**Koldanda**	**52.66 308**	*e*P	**P**	**17 37 58.5**	**+0.8**
	11nm,0.5s					
DANN	**Dangsing**	**52.80 309**	*e*P	**P**	**17 37 59.6**	**+0.7**
	11nm,0.6s					
SONM	**Songino Array**	**53.99 342**	P	**P**	**17 38 06.4**	**-0.7**
	0.5nm,0.7s,baz=145,slow=6.6,SNR=3.8					
MKAR	**Makanchi Array**	**63.83 327**	P	**P**	**17 39 15.8**	**+0.6**
	0.6nm,0.7s,baz=117,slow=8.8,SNR=9.5					
ZALV	**Zalesovo Beam**	**67.12 334**	P	**P**	**17 39 36.4**	**+0.1**
	0.3nm,0.5s,baz=145,slow=5.3,SNR=2.4					
KURBB	**Kurchatov Arra**	**68.09 328**	P	**P**	**17 39 42.4**	**-0.1**
	0.7nm,0.5s,baz=130,slow=5.8,SNR=17					
BVAR	**Borovoye Array**	**73.65 328**	P	**P**	**17 40 16.5**	**+0.3**
	0.4nm,0.5s,baz=126,slow=7.5,SNR=4.3					
VNDA	**Vanda**	**76.75 173**	P	**P**	**17 40 33.5**	**-0.1**
	0.7nm,0.8s,baz=305,slow=9.1,SNR=3.8					
AKTO	**Aktyubinsk**	**79.75 322**	P	**P**	**17 40 50.6**	**-0.1**
	1.0nm,0.4s,baz=112,slow=7.9,SNR=4.9					
ILAR	**Eielson Array**	**90.36 25**	P	**P**	**17 41 42.4**	**-1.1**
	0.2nm,0.6s,baz=282,slow=3.7,SNR=4.1					
TORD	**Torodi Ar. Bea**	**126.21 284**	PKP	**PKPdf**	**17 47 47.5**	**+1.5**
	0.3nm,0.7s,baz=71,slow=2.3,SNR=2.7					

KISR 14 17:33:30.4±0.7, 28°.25N×52°.13E, h34km±508km, ML2.9
CSEM 14 17:34:17.0, 25°.87N×55°.11E, h0km, After OMAN
OMAN 14 17:34:17.0±8.2, 25°.87N×55°.11E, h0km±13km, Error ellipse: s-maj=84.0km s-min=12.1km az=128.0
ISC 14 17:33:29.1±1.8, 28°.4N±0°.3×52°.1E±0°.1, h15km, n24, σ0s82/25, 2C-2D, Southern Iran

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDF	**Al-Radifah**	**4.03 279**	*e*P	**Pb**	**17 34 38.8**	**-0.9**
RDF			*e*S	**Sb**	**17 35 29.8**	**+1.5**
RDF			AML	AML	17 35 45.5	
	comp=Z,15nm,0.6s					
NAY	**Al-Naaiem**	**4.34 283**	*e*P	Pb	17 34 43.0	-2.1
NAY			*e*S	**Sb**	**17 35 37.3**	**-0.1**
NAY			AML	AML	17 35 50.8	
	comp=Z,8.2nm,0.7s					
MIB	**Mutribah**	**4.40 290**	*e*P	Pb	17 34 43.9	-2.2
MIB			*e*S	**Sb**	**17 35 39.5**	**+0.5**
MIB			AML	AML	17 35 45.0	
	comp=Z,20nm,0.5s					
BANOM	**Banah**	**4.46 122**	P	**Pn**	**17 34 37.6**	**+1.3**
	SNR=6.4					
BANOM	**Banah**	**4.46 122**	P	**Pn**	**17 34 37.6**	**+1.3**
	SNR=6.4					
ASUD	**Al Ashush, Dub**	**4.71 141**	P	**Pn**	**17 34 41.2**	**+1.6**
	SNR=10					
ASUD	**Al Ashush, Dub**	**4.71 141**	P	**Pn**	**17 34 41.2**	**+1.6**
	SNR=10					
HATD	**Hatta, Dubai**	**5.04 133**	↑P	**Pn**	**17 34 43.7**	**-0.5**
HATD	**Hatta, Dubai**	**5.04 133**	P	**Pn**	**17 34 43.7**	**-0.5**
HATD	**Hatta, Dubai**	**5.04 133**	P	**Pn**	**17 34 43.7**	**-0.5**
ASHO	**Ashiyiah**	**5.10 135**	P	**Pn**	**17 34 44.9**	**-0.1**
	SNR=15					
ASHO			ml		17 34 58.1	
	SNR=3.5					
ASHO	**Ashiyiah**	**5.10 135**	P	**Pn**	**17 34 44.9**	**-0.1**
	SNR=15					
ASHO	**Ashiyiah**	**5.10 135**	P	**Pn**	**17 34 44.9**	**-0.1**
	SNR=15					
ASHO			ml		17 34 58.2	
	SNR=3.0					
ASHO			ml		17 34 58.2	
	SNR=3.0					
HOQ	**Hoqain**	**6.68 134**	↓P	**Pn**	**17 35 06.3**	**-0.4**
HOQ	**Hoqain**	**6.68 134**	P	**Pn**	**17 35 06.3**	**-0.4**
HOQ	**Hoqain**	**6.68 134**	P	**Pn**	**17 35 06.3**	**-0.4**
HOQ	**Hoqain**	**6.68 134**	P	**Pn**	**17 35 06.3**	**-0.4**
BSY	**Bisya**	**7.24 139**	↑P	**Pn**	**17 35 14.7**	**+0.3**
BSYO	**Bisya**	**7.28 139**	P	**Pn**	**17 35 14.7**	**-0.2**
BSYO	**Bisya**	**7.28 139**	P	**Pn**	**17 35 14.7**	**-0.2**
BSYO	**Bisya**	**7.28 139**	P	**Pn**	**17 35 14.7**	**-0.2**
SMDO	**Samad**	**7.53 133**	↓P	**Pn**	**17 35 17.8**	**-0.6**
SMDO	**Samad**	**7.53 133**	P	**Pn**	**17 35 17.8**	**-0.6**
SMDO	**Samad**	**7.53 133**	P	**Pn**	**17 35 17.8**	**-0.6**

IDC 14 17:40:36.1±25.0, 23°.61S×178°.37E, h653km±234km, mb3.4/4, mb1 3.6/4, mb1mx3.0/18, mbtmp3.4/4, Error ellipse: s-maj=218.6km s-min=83.0km az=84.0, South of Fiji Islands

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**29.98 270**	P	P	17 45 56.3	+1.2
	11nm,0.3s,baz=96,slow=12,SNR=26					
STKA	**Stephens Creek**	**33.45 249**	P	P	17 46 23.6	-0.6
	1.9nm,0.6s,baz=80,slow=13,SNR=6.7					
ASAR	**Alice Springs**	**40.60 261**	P	P	17 47 22.4	0.0
	4.3nm,0.8s,baz=96,slow=7.4,SNR=93					
WRA	**Warramunga Arr**	**40.93 266**	P	P	17 47 24.7	-0.3
	4.2nm,0.3s,baz=94,slow=8.5,SNR=132					
BRTR	**Keskin Array B**	**146.21 307**	PKPbc	PKPbc	17 59 05.1	-0.5
	0.6nm,0.6s,baz=61,slow=4.1,SNR=4.3					

FUNV 14 17:44:18.2, 11°.40N×72°.97W, h13km, MW3.7, 1C, Near north coast of Colombia

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOV	**Isla Los Monje**	**2.24 65**	*e*P	Pn	17 44 54.2	-0.9
IMOV			*e*S	Sn	17 45 21.1	-1.6
DABV	**Dabajuro**	**2.34 101**	*e*P	Pn	17 44 55.5	-1.0
DABV			*e*S	Sn	17 45 23.6	-1.6
MONV	**Montecano**	**2.99 79**	*e*P	Pn	17 45 04.7	-0.8
MONV			*e*S	Sn	17 45 39.1	-2.1
VIGV	**El Vigia**	**3.00 148**	*e*P	Pn	17 45 04.5	-1.0
VIGV			*e*S	Sn	17 45 38.9	-2.6
SIQV	**Siquisique**	**3.19 103**	*e*P	Pn	17 45 07.3	-1.0
CURV	**Curarigua**	**3.27 115**	↑*e*P	Pn	17 45 07.9	-1.4
CAPV	**Capacho**	**3.57 169**	*e*P	Pn	17 45 12.9	-0.8
SOCV	**Socopo**	**3.73 146**	*e*P	Pn	17 45 14.1	-1.6
SANV	**Sanarito**	**3.87 119**	*e*P	Pn	17 45 17.0	-0.7
TEPV	**Terepaima**	**3.98 111**	*e*P	Pn	17 45 17.9	-1.2
MAPV	**Macapo**	**4.71 109**	*e*P	Pn	17 45 27.8	-1.3
TURV	**Turiamo**	**5.13 100**	*e*P	Pn	17 45 32.6	-2.2
BAUV	**El Baul**	**5.43 116**	*e*P	Pn	17 45 36.9	-2.1
BIRV	**Birongo**	**6.65 97**	*e*P	Pn	17 45 54.0	-1.7
CUPV	**Cœpira**	**7.19 100**	*e*P	Pn	17 46 01.4	-1.9

AUST 14 17:50:27.6±99.0, 18°.90S×169°.45W, h0km±6km, Error ellipse: s-maj=6.3km s-min=2.8km az=267.0
ISCJB 14 17:52:22.4±0.8, 17°.9S±0°.1×178°.4W±0°.1, h579km, mb3.6/9, Error ellipse: s-maj=19.8km s-min=14.9km az=153.5
IDC 14 17:52:26.0±2.6, 17°.95S×178°.55W, h607km±32km, mb3.1/10, mb1 3.3/11, mb1mx3.1/23, mbtmp3.1/11, Error ellipse: s-maj=21.7km s-min=16.4km az=161.0
ISC 14 17:52:23.6±0.9, 17°.9S±0°.2×178°.5W±0°.1, h579km, n19, σ0s98/20, mb3.6/9, Fiji Islands region

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.78 251**	P	**P**	**17 55 31.0**	**+0.6**
	0.3nm,0.3s,baz=102,slow=20,SNR=4.3					
URZ	**Urewera**	**20.64 190**	P	**P**	**17 56 22.9**	**-1.0**
	6.9nm,0.9s,baz=0.0,slow=1.0,SNR=4.0					
CTA	**Charters Tower**	**33.39 261**	P	**P**	**17 58 15.9**	**+0.5**
	3.2nm,0.5s,baz=101,slow=11,SNR=4.7					
QLP	**Quilpie**	**35.48 249**	P	**P**	**17 58 33.3**	**+0.5**
	baz=43,SNR=12					
COEN	**Coen**	**37.05 270**	P	**P**	**17 58 47.3**	**+1.5**
	baz=46,SNR=11					
STKA	**Stephens Creek**	**38.58 241**	P	**P**	**17 58 59.0**	**+1.0**
	1.8nm,0.9s,baz=88,slow=12,SNR=6.1					
WRA	**Warramunga Arr**	**44.58 260**	P	**P**	**17 59 45.1**	**-0.3**
	2.4nm,0.5s,baz=95,slow=7.3,SNR=76					
ASAR	**Alice Springs**	**44.74 254**	P	**P**	**17 59 46.9**	**+0.2**
	12nm,0.6s,baz=87,slow=8.5,SNR=218					
ASAR			S	**S**	**18 05 39.5**	**-2.8**
	0.9nm,0.9s,baz=92,slow=16,SNR=5.7					
KDU	**Kakadu**	**47.50 269**	P	**P**	**18 00 07.7**	**+0.2**
	baz=56,SNR=4.2					
MTN	**Manton Dam**	**48.74 268**	P	**P**	**18 00 16.7**	**-0.1**
	baz=57,SNR=3.5					
KNRA	**Kununurra**	**50.44 264**	P	**P**	**18 00 29.4**	**+0.2**
	baz=59,SNR=3.8					
SWI	**Sorong**	**52.19 283**	P	**P**	**18 00 42.6**	**+0.8**
	baz=61,SNR=5.3					
MJAR	**Matsushiro Arr**	**67.88 323**	P	**P**	**18 02 24.4**	**-0.7**
	0.9nm,0.5s,baz=153,slow=5.9,SNR=5.5					
QSPA	**South Pole Qui**	**72.15 180**	P	**P**	**18 02 50.4**	**+0.3**
	1.4nm,0.8s,baz=80,slow=0.7,SNR=8.2					
NVAR	**Mina Array Bea**	**79.46 44**	P	**P**	**18 03 31.4**	**+0.4**
	0.4nm,0.7s,baz=213,slow=6.5,SNR=3.5					
PDAR	**Pinedale Array**	**87.39 43**	P	**P**	**18 04 09.9**	**-0.3**
	0.2nm,0.7s,baz=212,slow=5.0,SNR=2.9					
CMAR	**Chiang Mai Arr**	**88.83 290**	P	**P**	**18 04 15.8**	**-1.4**
	0.4nm,0.9s,baz=113,slow=2.3,SNR=4.2					
BRTR	**Keskin Array B**	**144.74 315**	PKP	**PKPdf**	**18 10 55.5**	**-0.1**
	0.3nm,0.8s,baz=119,slow=1.8,SNR=5.0					
GERES	**GERESS Array B**	**147.60 345**	PKPbc	**PKPbc**	**18 11 03.5**	**0.0**
	0.4nm,0.4s,baz=29,slow=3.0,SNR=5.8					

ISCJB 14 17:52:36.4±0.6, 37°.87N±0°.04×23°.09E±0°.05, h25km±5km, Error ellipse: s-maj=8.2km s-min=5.4km az=141.0
CSEM 14 17:52:36.4±0.2, 37°.86N×23°.08E, h20km, MD2.5, Error ellipse: s-maj=6.2km s-min=4.4km az=43.0
ATH 14 17:52:36.5, 37°.85N×23°.05E, h18km±2km, MD2.5/10, ML1.7
THE 14 17:52:37.7, 37°.82N×23°.01E, h2km±22km, ML1.3/3, Error ellipse: s-maj=22.7km s-min=0.5km az=69.0
ISC 14 17:52:36.3±1.1, 37°.85N±0°.03×23°.07E±0°.03, h19km±3km, n28, σ0s37/42, Southern Greece

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.19 336**	P	**Pg**	**17 52 41.7**	**+0.5**
LTK			S	**Sg**	**17 52 44.6**	**+0.1**
LTK	**Loutraki**	**0.19 336**	*e*PB	**Pg**	**17 52 41.5**	**+0.3**
LTK			*e*SB	**Sg**	**17 52 44.8**	**+0.3**
LTK	**Loutraki**	**0.19 336**	*e*Pb	**Pg**	**17 52 41.5**	**+0.3**
LTK			*e*Sb	**Sg**	**17 52 44.8**	**+0.3**
NAIG	**Nisos Aigina**	**0.35 105**	*e*PB	**Pb**	**17 52 44.4**	**+0.4**
NAIG	**Nisos Aigina**	**0.35 105**	*e*Pb	**Pb**	**17 52 44.4**	**+0.4**
DID	**Didima**	**0.37 158**	P	**Pg**	**17 52 44.3**	**+0.2**
DID			S	**Sb**	**17 52 50.3**	**+0.4**
DID	**Didima**	**0.37 158**	*e*PB	**Pg**	**17 52 44.1**	**0.0**
DID			*e*SB	**Sb**	**17 52 50.2**	**+0.4**
DID	**Didima**	**0.37 158**	P	**Pg**	**17 52 44.3**	**+0.2**
DID			S	**Sb**	**17 52 50.3**	**+0.4**
DIDY	**Didyma**	**0.39 163**	P	**Pg**	**17 52 44.6**	**+0.1**
DIDY	**Didyma**	**0.39 163**	P	**Pg**	**17 52 44.6**	**+0.1**
ATH	**Athens Observa**	**0.53 77**	*e*PN	**Pg**	**17 52 46.4**	**-0.5**
ATH	**Athens Observa**	**0.53 77**	*e*Pn	**Pg**	**17 52 46.4**	**-0.5**
GUR	**Goura**	**0.58 279**	P	**Pg**	**17 52 48.0**	**+0.1**
GUR			S	**Sg**	**17 52 55.7**	**0.0**
GUR	**Goura**	**0.58 279**	*e*PN	**Pg**	**17 52 48.1**	**+0.1**
GUR			*e*SN	**Sg**	**17 52 54.9**	**-0.8**
GUR	**Goura**	**0.58 279**	P	**Pg**	**17 52 48.0**	**+0.1**
GUR			*e*Sn	**Sg**	**17 52 54.9**	**-0.8**
GUR			S	**Sg**	**17 52 55.7**	**0.0**
DSF	**Desfina**	**0.70 323**	P	**Pn**	**17 52 51.4**	**+0.1**
DSF			S	**Sn**	**17 53 01.0**	**-0.7**
DSF	**Desfina**	**0.70 323**	P	**Pn**	**17 52 51.4**	**+0.1**
DSF			S	**Sn**	**17 53 01.0**	**-0.7**
KLV	**Kalavryta, Ach**	**0.75 285**	*e*PN	**Pb**	**17 52 50.7**	**-0.1**
KLV	**Kalavryta, Ach**	**0.75 285**	*e*Pn	**Pb**	**17 52 50.7**	**-0.1**
LKR	**Lokris**	**0.80 356**	*e*PN	**Pb**	**17 52 51.8**	**+0.2**
LKR	**Lokris**	**0.80 356**	*e*Pn	**Pb**	**17 52 51.8**	**+0.2**
KALE	**Kalithea**	**0.91 307**	*e*PN	**Pg**	**17 52 54.0**	**0.0**
KALE	**Kalithea**	**0.91 307**	*e*Pn	**Pg**	**17 52 54.0**	**0.0**
ITM	**Ithomi**	**1.13 234**	*e*PN	**Pb**	**17 52 57.6**	**+0.4**
ITM			*e*SN	**Sn**	**17 53 12.0**	**-0.1**
ITM	**Ithomi**	**1.13 234**	*e*Pn	**Pb**	**17 52 57.6**	**+0.4**
ITM			*e*Sn	**Sn**	**17 53 12.0**	**-0.1**
DYR	**Agios Nikonas**	**1.23 208**	*e*PN	**Pg**	**17 53 00.0**	**-0.2**
DYR	**Agios Nikonas**	**1.23 208**	*e*Pn	**Pg**	**17 53 00.0**	**-0.2**
KYTH	**Kithira**	**1.57 181**	*e*PN	**Pg**	**17 53 06.1**	**-0.4**

CSEM 14 17:53:31.9±0.2, 37°.78N×29°.05E, h15km, MD2.9, Error ellipse: s-maj=5.8km s-min=3.2km az=95.0
DDA 14 17:53:32.8, 37°.76N×29°.13E, h7km, MD2.9
ISK 14 17:53:31.5, 37°.81N×29°.04E, h16km, MD2.9, Turkey

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.05 184**	*e*PG	Pg	17 53 35.0	+0.4
DENT	**Denizli**	**0.05 184**	*e*Pg	Pg	17 53 35.0	+0.4
DNZL	**Cakiroluk**	**0.12 177**	*i* P	Pg	17 53 35.4	0.0
DNZL			*i* S	Sg	17 53 37.4	-0.5
DNZL	**Cakiroluk**	**0.12 177**	*i* P	Pg	17 53 35.3	-0.1
DNZL			*i* S	Sg	17 53 37.4	-0.5
KHL	**Karahalli**	**0.64 36**	*e*PG	Pb	17 53 44.5	-0.1
KHL			*e*SG	Sb	17 53 54.1	+0.8
KHL	**Karahalli**	**0.64 36**	*e*Pg	Pb	17 53 44.5	0.0
KHL			*e*Sg	Sb	17 53 54.2	+0.8
KHAL	**Karahalli**	**0.67 32**	*i* P	Pb	17 53 45.2	+0.3
KHAL			*i* S	Sn	17 53 56.3	-0.4
KHAL	**Karahalli**	**0.67 32**	*i* P	Pb	17 53 45.2	+0.2
KHAL			*i* S	Sn	17 53 56.3	-0.4
GOLH	**Golhisar**	**0.70 144**	*i* P	Pg	17 53 45.2	-0.3
GOLH			*i* S	Sb	17 53 55.6	+0.5
GOLH	**Golhisar**	**0.70 144**	*i* P	Pg	17 53 45.2	-0.3
GOLH			*i* S	Sb	17 53 55.6	+0.5
GLHS	**Glhisar (BURDU**	**0.74 150**	*e*PG	Pb	17 53 46.4	+0.1
GLHS	**Glhisar (BURDU**	**0.74 150**	*e*Pg	Pb	17 53 46.4	+0.1
KULA	**Kula-Manisa**	**0.77 337**	*e*PG	Pg	17 53 46.8	+0.2
KULA	**Kula-Manisa**	**0.77 337**	*e*Pg	Pg	17 53 46.8	+0.2
MANT	**Manisa**	**0.78 331**	*i* P	Pn	17 53 49.3	+1.1
MANT			*i* S	Sn	17 54 01.7	+1.9
MANT	**Manisa**	**0.78 331**	*i* P	Pn	17 53 49.3	+1.1
MANT			*i* S	Sn	17 54 01.7	+1.9
YER	**Yerkesik**	**0.90 222**	*e*PG	Pg	17 53 49.2	+0.1
YER	**Yerkesik**	**0.90 222**	*e*Pg	Pg	17 53 49.2	+0.1
DALY	**Dalyan (Mu˘la**	**1.03 197**	*e*PG	Pg	17 53 51.8	+0.3
DALY	**Dalyan (Mu˘la**	**1.03 197**	*e*Pg	Pg	17 53 51.8	+0.3
FETY	**Fethiye**	**1.17 178**	*e*PN	Pb	17 53 53.6	+0.2
FETY	**Fethiye**	**1.17 178**	*e*Pn	Pb	17 53 53.6	+0.2
ALT	**Altintas**	**1.50 34**	*e*PN	Pb	17 53 58.6	-0.6
ALT	**Altintas**	**1.50 34**	*e*Pn	Pn	17 53 58.6	+0.6
TVSB	**Tavsanli**	**1.67 11**	*e*PN	Pn	17 54 01.0	+0.7
TVSB	**Tavsanli**	**1.67 11**	*e*Pn	Pn	17 54 01.0	+0.7

IDC 14 18:00:56.5±8.0, 2°.12S×102°.32E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/23, mbtmp3.2/3, Error ellipse: s-maj=436.7km s-min=29.5km az=52.0, Southern Sumatera

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.95 122**	P	P	18 07 59.4	+0.1
	0.5nm,0.8s,baz=311,slow=9.1,SNR=4.1					
ASAR	**Alice Springs**	**37.33 128**	P	P	18 08 10.7	-0.3
	0.3nm,0.7s,baz=302,slow=7.9,SNR=6.1					
MKAR	**Makanchi Array**	**51.80 343**	P	P	18 10 06.1	-0.1
	0.3nm,0.6s,baz=159,slow=7.2,SNR=4.0					

ISCJB 14 18:13:59.0±1.1, 15°.83N±0°.07×119°.78E±0°.10, h31km, mb3.2/2, Error ellipse: s-maj=13.5km s-min=8.9km az=163.4
MAN 14 18:13:59, 15°.83N×119°.90E, h14km, mb4.5, ML3.4, MS3.3
IDC 14 18:14:00.4±2.0, 14°.05N×119°.08E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/26, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=43.3km s-min=24.4km az=3.0
ISC 14 18:13:57.4±1.3, 15°.62N±0°.10×119°.7E±0°.1, h31km, n10, σ2s11/10, 1C-1D, Luzon

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

baz=5.9,SNR=10
MRSI **Marisa** 5.32 256 P Pn 18 27 25.4 +1.9
AAI **Ambon** 5.56 169 P Pn 18 27 33.3 +6.6
baz=6.7,SNR=4.9
SKSI **Soroako, Sulaw** 7.19 233 P Pn 18 27 49.8 +0.8
46nm,0.7s,678nm0.2nm
TTSI **Tana Toraja** 8.73 237 P Pn 18 28 10.5 +0.7
23nm,0.7s
SPSI **Sidrap Palu** 9.30 232 P Pn 18 28 18.9 +1.3
37nm,0.7s
BKSI **Bulukumba** 9.93 225 P Pn 18 28 28.0 +1.8
14nm,1.0s
KAPI **Kappang** 9.99 227 P Pn 18 28 27.9 +0.9
1.9nm,0.3s,baz=95,slow=7.4,SNR=5.5
KAPI S Sn 18 30 14.7 -2.5
1.9nm,0.3s,baz=214,slow=22,SNR=6.1
JAY **Jayapura** 14.26 107 S Sn 18 31 36.4 -25
baz=15,SNR=3.6
KDU **Kakadu** 15.35 160 P P 18 29 40.5 +0.4
baz=16,SNR=4.3
KNRA **Kununurra** 17.45 175 P P 18 30 02.7 -0.5
baz=19,SNR=3.4
FITZ **Fitzroy Crossi** 19.83 184 P P 18 30 27.3 -2.0
0.4nm,0.3s,baz=40,slow=18,SNR=7.7
FITZ **Fitzroy Crossi** 19.83 184 P P 18 30 28.4 -0.9
baz=21,SNR=5.8
WRA **Warramunga Arr** 22.75 162 P P 18 30 58.0 -2.3
3.7nm,0.4s,baz=340,slow=11,SNR=42
QIS **Mount Isa** 25.38 152 P P 18 31 23.2 -1.3
baz=26,SNR=12
ASAR **Alice Springs** 26.17 166 P P 18 31 29.6 -2.0
0.8nm,0.5s,baz=345,slow=8.0,SNR=34
MEEK **Meekatharra** 29.44 196 P P 18 31 59.8 -0.9
baz=31,SNR=8.7
MORW **Morawa** 32.47 198 P P 18 32 26.6 -0.7
baz=34,SNR=5.0
BLDU **Ballidu** 33.73 196 P P 18 32 37.6 -0.7
baz=35,SNR=8.7
KLBR **Kellerberrin** 34.38 194 P P 18 32 43.0 -0.8
baz=36,SNR=7.0
NWAO **Narrogin (SRO)** 35.78 194 P P 18 32 55.0 -1.0
5.6nm,1.1s,baz=29,slow=7.1,SNR=5.3
STKA **Stephens Creek** 36.21 159 P P 18 32 58.2 -1.3
2.9nm,0.6s,baz=334,slow=7.4,SNR=9.3
MKAR **Makanchi Array** 59.34 326 P P 18 35 58.0 0.0
1.0nm,0.5s,baz=119,slow=7.9,SNR=16

*HLW **14** 18:34:13.6,36.67N×28.18E,h32km±26km,Md3.7,Ml3.5*
*DDA **14** 18:34:20.2,36.40N×28.33E,h63km,MD3.4*
*ISK **14** 18:34:20.4,36.35N×28.22E,h29km,ML3.6*
*ATH **14** 18:34:20.1,36.48N×28.32E,h65km±2km*
*ISCJB **14** 18:34:21.2±0.3,36.45N±0.02×28.28E±0.02,h63km±5km, Error ellipse: s-maj=3.9km s-min=3.0km az=153.8*
*CSEM **14** 18:34:21.2±0.1,36.35N×28.35E,h60km,ML2.7/3, Error ellipse: s-maj=3.8km s-min=3.6km az=144.0*
*THE **14** 18:34:22.4,36.48N×28.34E,h49km±2km,ML2.7/3, Error ellipse: s-maj=3.6km s-min=1.7km az=201.0*

ISC 14 18:34:21.0±1.1,36.44N±0.03×28.30E±0.02,h61km±6km, n144,σ1.933/179,5D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG	Arkhangelos	0.26	212	P		Pn	18 34 32.0	+0.9
ARG				S		Sn	18 34 38.0	-0.2
ARG	Arkhangelos	0.26	212	*e*P		Pn	18 34 31.9	+0.9
ARG				*e*S		Sn	18 34 39.5	+1.3
ARG	Arkhangelos	0.26	212	*e*P		Pn	18 34 31.9	+0.9
ARG				*e*S		Sn	18 34 39.5	+1.3
DALY	Dalyan (Mu˘la	0.48	37	*e*PG		Pn	18 34 33.4	+0.6
DALY				*e*SG		Sn	18 34 41.8	+0.4
DALY	Dalyan (Mu˘la	0.48	37	*e*Pg		Pn	18 34 33.4	+0.6
DALY				*e*Sg		Sn	18 34 41.8	+0.4
TURN	Turunc	0.50	29	*i* P		Pn	18 34 32.6	-0.5
TURN				*i* S		Sn	18 34 40.5	-1.4
TURN	Turunc	0.50	29	*i* P		Pn	18 34 32.6	-0.5
TURN				*i* S		Sn	18 34 40.5	-1.4
FETY	Fethiye	0.66	72	*e*PG		Pn	18 34 35.5	+0.5
FETY				*e*SG		Sn	18 34 45.9	+0.7
FETY	Fethiye	0.66	72	*e*Pg		Pn	18 34 35.5	+0.5
YER	Yerkesik	0.70	359	*e*PG		Pn	18 34 36.5	+1.1
YER				*e*SG		Sn	18 34 47.4	+1.5
YER	Yerkesik	0.70	359	*e*Pg		Pn	18 34 36.5	+1.1
YER				*e*Sg		Sn	18 34 47.4	+1.5
NIS1	Nisyros Isl.	0.92	281	P		Pn	18 34 38.8	+0.7
NIS1				S		Sn	18 34 51.2	+0.6
NIS1	Nisyros Isl.	0.92	281	*e*P		Pn	18 34 38.8	+0.7
NIS1				*e*S		Sn	18 34 51.5	+0.9
NIS1	Nisyros Isl.	0.92	281	*e*P		Pn	18 34 38.8	+0.7
NIS1				S		Sn	18 34 51.2	+0.6
MLSB	Milas	0.95	334	*e*PG		Pn	18 34 38.7	+0.1
MLSB	Milas	0.95	334	*e*Pg		Pn	18 34 38.7	+0.1
BODT	Bodrum	1.01	309	*e*PG		Pn	18 34 39.7	+0.5
BODT	Bodrum	1.01	309	*e*Pg		Pn	18 34 39.7	+0.5
AKAS	Kas	1.08	100	*i* P		Pn	18 34 40.6	+0.4
AKAS				*i* S		Sn	18 34 54.4	-0.1
AKAS	Kas	1.08	100	*i* P		Pn	18 34 40.6	+0.4
AKAS				*i* S		Sn	18 34 54.4	-0.1
KSL	Kastellorizon	1.08	105	⇓*i* P		Pn	18 34 40.7	+0.6
KSL				*e*S		Sn	18 34 54.3	0.0
KSL	Kastellorizon	1.08	105	⇓*i* P		Pn	18 34 40.7	+0.6
KSL				*e*S		Sn	18 34 54.3	0.0
GLHS	Glhisar (BURDU	1.20	53	*e*PN		Pn	18 34 42.8	+0.9
GLHS	Glhisar (BURDU	1.20	53	*e*Pn		Pn	18 34 42.8	+0.9
AYDN	Tasoluk	1.27	345	*i* P		Pn	18 34 44.1	+1.4
AYDN				*i* S		Sn	18 35 00.2	+1.3
AYDN	Tasoluk	1.27	345	*i* P		Pn	18 34 44.1	+1.4
AYDN				*i* S		Sn	18 35 00.2	+1.3
KARP	Karpathos	1.28	226	⇓*i* P		Pn	18 34 43.3	+0.5
KARP				*e*S		Sn	18 34 59.5	+0.4
KARP	Karpathos	1.28	226	⇓*i* P		Pn	18 34 43.3	+0.5
KARP				*e*S		Sn	18 34 59.5	+0.4
GOLH	Golhisar	1.29	51	*i* P		Pn	18 34 44.8	+1.8
GOLH				*i* S		Sn	18 35 02.1	+2.6
GOLH	Golhisar	1.29	51	*i* P		Pn	18 34 44.8	+1.8
GOLH				*i* S		Sn	18 35 02.1	+2.6
ELL	Elmali	1.33	76	*e*PN		Pn	18 34 44.6	+1.0
ELL	Elmali	1.33	76	*e*Pn		Pn	18 34 44.6	+1.0
DNZL	Cakiroluk	1.39	25	*i* P		Pn	18 34 45.4	+1.0
DNZL				*i* S		Sn	18 35 03.0	+1.1
DNZL	Cakiroluk	1.39	25	*i* P		Pn	18 34 45.4	+1.0
DNZL				*i* S		Sn	18 35 03.0	+1.1
DENT	Denizli	1.44	24	*e*PN		Pn	18 34 45.7	+0.7
DENT	Denizli	1.44	24	*e*Pn		Pn	18 34 45.7	+0.7
GCAM	G?zelcaml?	1.52	326	*i* P		Pn	18 34 46.5	+0.5
GCAM				*i* S		Sn	18 35 05.2	+0.4
GCAM	G?zelcaml?	1.52	326	*i* P		Pn	18 34 46.5	+0.5
GCAM				*i* S		Sn	18 35 05.2	+0.4
KORT	Korkueli	1.74	71	*i* P		Pn	18 34 49.8	+0.6
KORT	Korkueli	1.74	71	*i* P		Pn	18 34 49.8	+0.6
ANTB	Antalya	1.95	76	*e*PN		Pn	18 34 53.4	+1.6
ANTB	Antalya	1.95	76	*e*Pn		Pn	18 34 53.4	+1.6
MANT	Manisa	2.06	6	*i* P		Pn	18 34 54.0	+0.4
MANT				*i* S		Sn	18 35 17.1	-1.1
MANT	Manisa	2.06	6	*i* P		Pn	18 34 54.0	+0.4
MANT				*i* S		Sn	18 35 17.1	-1.1
KULA	Kula-Manisa	2.09	8	*e*PN		Pn	18 34 55.6	+1.7
KULA	Kula-Manisa	2.09	8	*e*Pn		Pn	18 34 55.6	+1.7
BCK	Bucak	2.10	60	*e*PN		Pn	18 34 55.6	+1.6
BCK	Bucak	2.10	60	*e*Pn		Pn	18 34 55.6	+1.6
KHL	Karahalli	2.12	27	*e*PN		Pn	18 34 55.9	+1.7
KHL	Karahalli	2.12	27	*e*Pn		Pn	18 34 55.9	+1.7
IZM	Izmir	2.12	337	*e*PN		Pn	18 34 54.6	+0.4
IZM	Izmir	2.12	337	*e*Pn		Pn	18 34 54.6	+0.4
ZKR	Zakros	2.15	233	P		Pn	18 34 55.8	+1.3
ZKR	Zakros	2.15	233	*e*P		Pn	18 34 55.9	+1.4
ZKR	Zakros	2.15	233	P		Pn	18 34 55.8	+1.3
KHAL	Karahalli	2.15	26	*i* P		Pn	18 34 55.2	+0.5
KHAL				*i* S		Sn	18 35 20.2	-0.1
KHAL	Karahalli	2.15	26	*i* P		Pn	18 34 55.2	+0.5
KHAL				*i* S		Sn	18 35 20.2	-0.1
BLCB	Balcova	2.19	333	*e*PN		Pn	18 34 55.9	+0.9
BLCB	Balcova	2.19	333	*e*Pn		Pn	18 34 55.9	+0.9
THR1	Thera Island	2.29	269	P		Pn	18 34 57.5	+1.0
THR1	Thera Island	2.29	269	P		Pn	18 34 57.5	+1.0
APE	Apeiranthos	2.31	287	*e*PN		Pn	18 34 57.5	+0.7
APE	Apeiranthos	2.31	287	P		Pn	18 34 57.7	+0.9
APE				S		Sn	18 35 25.0	+0.9
APE	Apeiranthos	2.31	287	*e*P		Pn	18 34 57.6	+0.8
APE				*e*S		Sn	18 35 24.2	+0.1
APE	Apeiranthos	2.31	287	*e*Pn		Pn	18 34 57.5	+0.7
APE				S		Sn	18 35 25.0	+0.9
THR3	Thira Island,	2.34	270	P		Pn	18 34 58.3	+1.3
THR3	Thira Island,	2.34	270	P		Pn	18 34 58.3	+1.3
URLA	Izmir	2.35	325	*i* P		Pn	18 34 57.8	+0.5
URLA				*i* S		Sn	18 35 24.7	-0.3
URLA	Izmir	2.35	325	*i* P		Pn	18 34 57.8	+0.5
URLA				*i* S		Sn	18 35 24.7	-0.3
AKHS	Akhisar	2.47	351	*i* P		Pn	18 34 59.5	+0.6
AKHS				*i* S		Sn	18 35 26.3	-1.6
AKHS	Akhisar	2.47	351	*i* P		Pn	18 34 59.5	+0.6
AKHS				*i* S		Sn	18 35 26.3	-1.6
AKS	Akhisar	2.47	351	*e*PN		Pn	18 35 00.3	+1.5
AKS	Akhisar	2.47	351	*e*Pn		Pn	18 35 00.4	+1.5
NPS	Neapolis	2.48	243	P		Pn	18 34 59.5	+0.5
NPS	Neapolis	2.48	243	⇓*i* P		Pn	18 34 59.2	+0.2
NPS				*e*S		Sn	18 35 27.4	-0.7
NPS	Neapolis	2.48	243	P		Pn	18 34 59.5	+0.5
NPS				*e*S		Sn	18 35 27.4	-0.7
LAST	Lasithi	2.62	242	P		Pn	18 35 01.6	+0.6
LAST	Lasithi	2.62	242	*e*P		Pn	18 35 01.8	+0.8
LAST	Lasithi	2.62	242	P		Pn	18 35 01.6	+0.6
CHOS	Chios island	2.64	318	P		Pn	18 35 01.9	+0.6
CHOS	Chios island	2.64	318	*e*P		Pn	18 35 02.2	+0.9
CHOS				*e*S		Sn	18 35 31.4	-0.8
CHOS	Chios island	2.64	318	*e*P		Pn	18 35 02.2	+0.9
CHOS				*e*S		Sn	18 35 31.4	-0.8
SHUT	Suhut-Afyon	2.77	40	*e*PN		Pn	18 35 05.2	+2.1
SHUT	Suhut-Afyon	2.77	40	*e*Pn		Pn	18 35 05.2	+2.1
GDZ	Gediz	2.81	19	*i* P		Pn	18 35 04.5	+0.8
GDZ				*i* S		Sn	18 35 35.2	-1.2
GDZ	Gediz	2.81	19	*i* P		Pn	18 35 04.5	+0.8
GDZ				*i* S		Sn	18 35 35.2	-1.2
ALT	Altintas	2.98	28	*e*PN		Pn	18 35 08.1	+2.1
ALT	Altintas	2.98	28	*e*Pn		Pn	18 35 08.1	+2.1
TVSB	Tavsanli	3.15	17	*e*PN		Pn	18 35 10.4	+2.2
TVSB	Tavsanli	3.15	17	*e*Pn		Pn	18 35 10.4	+2.2
SIVA	Sivas	3.17	244	*e*P		Pn	18 35 10.5	+2.0
SIVA	Sivas	3.17	244	*e*P		Pn	18 35 10.5	+2.0
GAZI	Gazipasa	3.25	92	*i* P		Pn	18 35 09.1	-0.5
GAZI				*i* S		Sn	18 35 44.6	-2.5
GAZI	Gazipasa	3.25	92	*i* P		Pn	18 35 09.1	-0.5
GAZI				*i* S		Sn	18 35 44.6	-2.5
BALY	Balya	3.34	351	*i* P		Pn	18 35 11.6	+0.8
BALY				*i* S		Sn	18 35 48.8	-0.5
BALY	Balya	3.34	351	*i* P		Pn	18 35 11.6	+0.8
BALY				*i* S		Sn	18 35 48.8	-0.5
VAM	Vamos	3.48	254	*e*P		Pn	18 35 14.1	+1.4
VAM	Vamos	3.48	254	*e*P		Pn	18 35 14.1	+1.4
GONE	Gonen-Balikesi	3.64	353	*e*PN		Pn	18 35 17.0	+2.2
GONE	Gonen-Balikesi	3.64	353	*e*Pn		Pn	18 35 17.0	+2.2
KARN	Karanos	3.70	255	P		Pn	18 35 18.1	+2.3
KARN	Karanos	3.70	255	*e*P		Pn	18 35 17.1	+1.3
KARN	Karanos	3.70	255	*e*P		Pn	18 35 17.1	+1.3
GVD	Gavdhos	3.78	246	P		Pn	18 35 18.6	+1.8
GVD	Gavdhos	3.78	246	*e*P		Pn	18 35 18.2	+1.4
GVD	Gavdhos	3.78	246	*e*P		Pn	18 35 18.2	+1.4
BOZC	Bozcaada	3.83	333	*i* P		Pn	18 35 18.4	+0.9
BOZC				*i* S		Sn	18 36 00.3	-0.9
KRBG	Karabiga-Canak	4.03	349	*e*PN		Pn	18 35 22.2	+2.1
KRBG	Karabiga-Canak	4.03	349	*e*Pn		Pn	18 35 22.2	+2.1
LPK	Lapseki	4.11	343	*e*PN		Pn	18 35 23.3	+2.0
LPK	Lapseki	4.11	343	*e*Pn		Pn	18 35 23.3	+2.0
MRMT	Marmara Adasi	4.20	353	*e*PN		Pn	18 35 25.0	+2.4
MRMT	Marmara Adasi	4.20	353	*e*Pn		Pn	18 35 25.0	+2.4
GELI	Tayfur-Gelibol	4.21	341	*e*PN		Pn	18 35 25.2	+2.6
GELI	Tayfur-Gelibol	4.21	341	*e*Pn		Pn	18 35 25.2	+2.6
KYTH	Kithira	4.25	269	P		Pn	18 35 24.9	+1.7
KYTH	Kithira	4.25	269	*e*P		Pn	18 35 25.5	+2.3
KYTH	Kithira	4.25	269	P		Pn	18 35 24.9	+1.7
VLI	Veliai	4.32	275	P		Pn	18 35 26.1	+1.9
VLI				S		Sn	18 36 14.4	+1.1
VLI	Veliai	4.32	275	P		Pn	18 35 26.1	+1.9
VLI				S		Sn	18 36 14.4	+1.1
CSS	Prodhromos	4.35	108	*e*PN		Pn	18 35 27.2	+2.5
CSS	Prodhromos	4.35	108	P		Pn	18 35 24.4	-0.3
CSS	Prodhromos	4.35	108	P		Pn	18 35 24.4	-0.3
CSS	Prodhromos	4.35	108	*e*Pn		Pn	18 35 27.2	+2.5
LFK	Lefkose	4.41	104	*e*PN		Pn	18 35 28.2	+2.8
LFK	Lefkose	4.41	104	*e*Pn		Pn	18 35 28.3	+2.8
SLUM		5.56	208	P		Pn	18 35 36.7	-4.5
	baz=207							
SLUM		5.56	208	P		Pn	18 35 36.7	-4.5
AMAG	Maghara	7.08	143	P		Pn	18 35 58.4	-3.7
	baz=143							
AMAG	Maghara	7.08	143	P		Pn	18 35 58.4	-3.7
RSH		7.09	139	P		Pn	18 35 59.3	-2.9
	baz=139							
RSH		7.09	139	P		Pn	18 35 59.3	-2.9
HHAG	Hagoal	7.21	153	P		Pn	18 36 00.9	-2.9
	baz=152							
HHAG	Hagoal	7.21	153	P		Pn	18 36 00.9	-2.9
HSAF	As Saff	7.33	157	P		Pn	18 36 02.0	-3.4
	baz=157							
HSAF	As Saff	7.33	157	P		Pn	18 36 02.0	-3.4
GLL	Jalalah	7.42	156	P		Pn	18 36 03.8	-2.9
	baz=156							
GLL	Jalalah	7.42	156	P		Pn	18 36 03.8	-2.9
SWA2		7.56	199	P		Pn	18 36 04.5	-4.2
	baz=198							
SWA2				AMP			18 37 00.0	
	comp=N,20μm,0.3s,logA/T=4.8,baz=198							
SWA2		7.56	199	P		Pn	18 36 04.4	-4.2
HKAT	Jabal Katrina	9.24	147	P		Pn	18 36 29.1	-2.7
	baz=147							
HKAT	Jabal Katrina	9.24	147	P		Pn	18 36 29.1	-2.7
HFRF	Wahat Farafira	9.26	180	P		Pn	18 36 29.2	-2.7
	baz=179							
HFRF	Wahat Farafira	9.26	180	P		Pn	18 36 29.2	-2.7

JMA 14 18:38:14.2,34.28N×139.13E,h8km±1km,M1.8,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JKO	Kozu shima	0.09	177	P		Pg	18 38 16.6	+0.1
JKO				S		Sg	18 38 18.2	+0.1
JIZS	Izushimoda	0.48	335	P		Pg	18 38 23.8	+0.2
JIZS				*e*S		Sg	18 38 30.5	+0.5
JIM2	Oshima 3	0.50	30	P		Pg	18 38 24.2	+0.2
KTJJ	Kamata 2	0.65	355	P		Pg	18 38 26.7	0.0

*NIED **14** 18:38:00,34.30N×139.10E,h17km,Mw3.7 Best double couple: M○4.08000×10^14 NP1:φs310.00000°,δ74.00000°, λ157.00000°. NP2:φs47.00000°,δ68.00000°,λ18.00000°.*
*IDC **14** 18:38:44.7±0.9,34.19N×139.16E,h0km,mb3.5/6, mb1 3.8/8,mb1mx3.6/27,mbtmp3.6/8,ML3.8/2,MS2.8/2, Ms1 2.9/2,ms1mx2.4/36,Error ellipse: s-maj=25.8km s-min=14.4km az=68.0*
*ISCJB **14** 18:38:45.9±0.5,34.26N±0.03×139.16E±0.05,h12km±3km, mb3.5/6,MS2.9/1,Error ellipse: s-maj=6.8km s-min=4.5km az=170.4*
*JMA **14** 18:38:46.4,34.28N×139.13E,h7km±1km,M3.3*
JMA Felt III J1.

ISC 14 18:38:46.3±0.9,34.26N±0.03×139.16E±0.04,h10km±5km, n20,σ0.967/28,mb3.6/6,3C,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JKO	Kozu shima	0.07	193	P		Pg	18 38 48.8	+0.2
JKO				S		Sg	18 38 50.5	+0.3
JMY	Miyakejima3	0.35	122	P		Pb	18 38 54.1	-0.5
JIM2	Oshima 3	0.51	26	P		Pg	18 38 56.4	0.0
JIM2				S		Sg	18 39 03.3	+0.1
JIZS	Izushimoda	0.51	334	⇑P		Pg	18 38 55.9	-0.5
JIZS				S		Sg	18 39 02.8	-0.4
KTJJ	Kamata 2	0.67	354	⇑P		Pg	18 38 58.5	-0.9
KTJJ				S		Sg	18 39 07.3	-0.9
JSG	Sagara	0.90	298	⇑P		Pb	18 39 04.0	-0.1
JSG				S		Sg	18 39 14.7	-0.8
TK03	Tokai 3	0.99	265	P		Pb	18 39 05.0	-0.5
TK03				S		Sn	18 39 21.1	+1.0
JOD2	Odawara 2	1.01	357	P		Pg	18 39 04.5	-1.2
JOD2				S		Sb	18 39 20.2	+1.1
JHJ	Hachijo jima 2	1.25	155	Pn		Pg	18 39 09.2	-1.1
	109nm,0.3s,baz=311,slow=20,SNR=53							
JHJ				Sn		Sn	18 39 26.8	+0.1
	51nm,0.3s,baz=44,slow=23,SNR=7.0							

MJAR **Matsushiro Arr** 2.41 342 Pn Pn 18 39 26.2 +0.5
5.4nm,0.3s,baz=174,slow=14,SNR=60
MJAR Sn Sb 18 39 59.1 -0.4
7.4nm,0.3s,baz=60,slow=33,SNR=6.0
MAT **Matsushiro** 2.41 342 P Pn 18 39 26.6 +0.8
MAT S Sb 18 39 59.6 +0.1
JNU **Nakatsue** 6.99 263 Pn Pn 18 40 29.1 +0.3
3.4nm,0.3s,baz=69,slow=3.6,SNR=37
KSRS **Korea Array** 9.66 292 LR LR 18 44 59.9
comp=Z,16nm,18.1s,baz=343,slow=39
CMAR **Chiang Mai Arr** 39.04 257 LR LR 19 04 36.8
comp=Z,15nm,18.7s,baz=240,slow=40
ZALV **Zalesovo Beam** 42.49 315 P P 18 46 41.6 +0.1
0.2nm,0.4s,baz=104,slow=3.6,SNR=3.8
MKAR **Makanchi Array** 44.09 304 P P 18 46 54.5 -0.1
0.8nm,0.8s,baz=93,slow=10,SNR=8.4
ILAR **Eielson Array** 52.82 31 P P 18 48 01.7 +0.2
0.4nm,0.8s,baz=287,slow=6.1,SNR=4.2
WRA **Warramunga Arr** 54.09 186 P P 18 48 10.3 -0.9
0.6nm,0.7s,baz=1.7,slow=7.7,SNR=5.2
YKA **Yellowknife Ar** 67.12 29 P P 18 49 39.8 0.0
0.2nm,0.6s,baz=298,slow=6.6,SNR=4.1
TXAR **Lajitas Array** 93.28 51 P P 18 52 02.6 +1.0
0.3nm,0.8s,baz=270,slow=2.5,SNR=3.6

*IDC **14** 19:18:12.7±0.8,27.40N×87.20E,h0km,mb3.7/14, mb1 3.8/17,mb1mx3.8/30,mbtmp3.7/17,ML3.7/3,Error ellipse: s-maj=27.4km s-min=16.1km az=50.0*
*DMN **14** 19:18:16.8±0.2,27.48N×87.36E,h2km,Ml4.7/5,Error ellipse: s-maj=5.2km s-min=2.7km az=29.0*
*NDI **14** 19:18:17.8±2.5,27.26N×87.17E,h10km,ML3.8*

ISC 14 19:18:16.3±1.1,27.49N±0.05×87.31E±0.03,h18km±7km, n36,σ1.946/42,mb3.7/14,1C,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TAPN	Taplejung	0.38	111	*e*Pg		Pg	19 18 23.7	-0.7
TAPN				*e*Sg		Sg	19 18 28.7	-1.2
	9μm,0.3s							
ODAN	Odare	0.63	173	*e*Pg		Pg	19 18 28.8	0.0
ODAN				*e*Sg		Sg	19 18 37.1	-0.1
	6μm,0.4s							
RAMN	Ramite	0.83	230	*e*Pg		Pb	19 18 32.5	+0.3
RAMN				*e*Sg		Sb	19 18 44.3	+1.2
	11μm,0.5s							
GTK	Gangtok	1.17	97	*ex*		Pn	19 18 34.5	-3.5
GTK				*e*S		Sn	19 18 59.5	+5.9
SLGI	Shiliguri	1.26	128	*e*PKP		Pn	19 18 40.0	+1.0
SLGI				*e*S		Sg	19 18 58.0	+0.9
GUN	Gumba	1.33	289	*e*Pn		Pn	19 18 41.1	+0.8
GUN	Gumba	1.33	289	*e*Pg		Pg	19 18 43.2	+1.1
GUN				*e*Sg		Sg	19 19 00.5	+0.9
	2μm,0.4s							
KKN	Kakani	1.82	280	*e*Pn		Pn	19 18 48.8	+1.8
DMN	Daman	1.96	274	*e*Pn		Pn	19 18 50.9	+2.1
DMN				*e*Sn		Sn	19 19 13.9	+0.8
	1μm,0.5s							
DANN	Dangsing	3.25	286	*e*Pn		Pn	19 19 07.6	+0.9
DANN				*e*Sn		Sn	19 19 45.8	+0.6
	512nm,0.5s							
KOLN	Koldanda	3.30	276	*e*Pn		Pn	19 19 08.4	+1.1
KOLN				*e*Sn		Sn	19 19 47.1	+0.9
	630nm,0.4s							
PYUN	Piuthan	3.87	280	*e*Pn		Pn	19 19 15.6	+0.5
PYUN				*e*Sn		Sn	19 20 00.6	+0.3
	1μm,0.6s							
SHL	Shillong	4.52	114	*e*PKP		Pn	19 19 28.0	+4.0
SHL				*e*SB		Sb	19 20 36.0	+6.5
JBP	Jabalpur	7.90	239	⇑*ix*		Sn	19 21 39.4	+0.2
JBP				*ex*		x	19 22 24.7	
DDI	Dehra Dun	8.59	291	*e*PKP		Pn	19 20 20.9	+1.1
DDI				*e*S		Sn	19 21 52.4	-3.8
SMLA	Simla	9.57	295	*e*PKP		Pn	19 20 32.6	-0.5
SMLA				*e*S		Sn	19 22 15.3	-4.8
SMLA				AML		AML	19 22 20.9	
	comp=E,50nm,0.6s							
SMLA				AML		AML	19 22 22.8	
	comp=N,29nm,0.3s							
DHRM	DHARAMSHALA	10.67	299	*ex*		Pn	19 20 47.4	-1.0
DHRM				*e*S		Sn	19 22 41.4	-6.1
DHRM				AML		AML	19 22 48.5	
	comp=E,31nm,0.7s							
DHRM				AML		AML	19 22 52.5	
	comp=N,26nm,0.5s							
CMAR	Chiang Mai Arr	13.98	128	Pn		Pn	19 21 32.4	-1.1
	comp=N,0.1nm,0.3s,baz=310,slow=15,SNR=3.3							
THW	Thamme Wali	14.46	295	P		Pn	19 21 36.1	-4.1
CEP	Cherat	14.68	299	P		Pn	19 21 39.7	-3.4
AAK	Ala-Archa	18.36	329	P		Pn	19 22 31.0	+0.9
	comp=N,0.1nm,0.3s,baz=146,slow=8.3,SNR=8.6							
MKAR	Makanchi Array	19.67	350	P		P	19 22 44.5	+0.2
	comp=N,0.5nm,0.3s,baz=175,slow=12,SNR=21							
KURBB	Kurchatov Arra	24.05	346	P		P	19 23 30.4	+0.2
	comp=N,1.6nm,0.7s,baz=166,slow=9.2,SNR=20							
SONM	Songino Array	25.19	31	P		P	19 23 41.1	+0.3
	comp=N,1.2nm,0.7s,baz=220,slow=9.7,S

baz=86,SNR=3.2
TXAR Lajitas Array 85.65 57 P **P** **20 10 56.3 +0.5**
0.1nm,0.4s,baz=203,slow=1.0,SNR=3.9
BRTR Keskin Array B 145.07 315 PKP **PKPdf** **20 17 48.8 -0.7**
0.5nm,0.6s,baz=130,slow=1.9,SNR=4.2
GERES GERESS Array B 147.71 345 PKPbc **PKPdf** **20 17 55.1 +1.5**
0.3nm,0.6s,baz=29,slow=3.0,SNR=3.7

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*IDC **14** 20:13:11.7±2.3,27˚49N×87˚31E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.3/28, mbtmp3.4/5, Error ellipse: s-maj=80.3km s-min=25.0km az=69.0*
*ISCJB **14** 20:13:14.6±1.8,27˚7N±0˚2×87˚4E±0˚2, h21km, mb3.3/4, Error ellipse: s-maj=37.3km s-min=8.5km az=39.3*
ISC 14 20:13:16.5±1.8,27.7N±0.2×87.5E±0.2,h21km,n7,σ1§80/8, mb3.4/4,Nepal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GTK	**Gangtok**	**1.05**	**111**	*e*PG	**Pb**	**20 13 35.0**	**-1.0**
GTK				*e*SG	**Sb**	**20 13 48.0**	**-1.3**
SHL	**Shillong**	**4.45**	**118**	*e*PKP	**Pn**	**20 14 26.0**	**+3.0**
SHL				*e*S	Sb	20 15 34.0	+6.6
MKAR	**Makanchi Array**	**19.48**	**349**	P	**Pn**	**20 17 42.5**	**-0.8**
	0.2nm,0.3s,baz=167,slow=9.0,SNR=11						
KURBB	**Kurchatov Arra**	**23.88**	**346**	P	**P**	**20 18 28.0**	**-0.4**
	0.8nm,0.9s,baz=168,slow=9.5,SNR=5.7						
SONM	**Songino Array**	**24.89**	**31**	P	**P**	**20 18 38.8**	**+0.9**
	1.0nm,0.8s,baz=219,slow=11,SNR=7.2						
ZALV	**Zalesovo Beam**	**26.28**	**356**	P	**P**	**20 18 50.9**	**+0.7**
	0.5nm,0.4s,baz=187,slow=8.3,SNR=3.6						
ASAR	**Alice Springs**	**67.91**	**134**	P	**P**	**20 24 12.3**	**-1.5**
	0.2nm,0.7s,baz=319,slow=6.1,SNR=3.0						

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*IDC **14** 20:22:49.7±1.1,52˚43N×169˚35W, h0km, mb3.6/11, mb1 3.7/13, mb1mx3.6/32, mbtmp3.6/13, ML3.6/2, MS2.9/1, Ms1 3.0/1, ms1mx2.2/47, Error ellipse: s-maj=30.7km s-min=17.6km az=172.0*
*ISCJB **14** 20:22:53.5±0.7,52˚41N±0˚09×169˚22W±0˚10, h33km, mb3.6/12, Error ellipse: s-maj=15.3km s-min=4.7km az=151.0*
*NEIC **14** 20:22:57.6, 53˚04N×169˚50W, h23km, ML3.4(AEIC), After AEIC.*
ISC 14 20:22:55.1±0.8,52.5N±0.1×169.16W±0.08,h33km,n31, σ1§15/35,mb3.6/12,Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKSP	**Okmok Steeple**	**0.94**	**34**	P	**Pn**	**20 23 12.0**	**-0.1**
OKSO	**Okmok South**	**1.07**	**34**	P	**Pn**	**20 23 13.6**	**-0.3**
OKSO				S	**Sn**	**20 23 27.5**	**-0.1**
OKCE	**Okmok Cone E**	**1.13**	**32**	P	**Pn**	**20 23 14.8**	**+0.2**
OKFG	**Magazine Ridge**	**1.21**	**38**	P	**Pn**	**20 23 15.7**	**0.0**
OKFG				S	**Sn**	**20 23 30.8**	**0.0**
MREP	**Makushin Rep't**	**1.98**	**46**	P	**Pn**	**20 23 27.0**	**+0.6**
MCIR	**Makushin Cirqu**	**2.01**	**42**	P	**Pn**	**20 23 27.8**	**+0.9**
UNV	**Unalaska Valle**	**2.11**	**48**	P	**Pn**	**20 23 28.3**	**+0.3**
UNV				S	**Sn**	**20 23 53.5**	**+0.4**
MTBL	**Makushin Table**	**2.12**	**44**	P	**Pn**	**20 23 29.3**	**+1.0**
AKRB	**Akutan Reef Bi**	**2.49**	**47**	P	**Pn**	**20 23 35.0**	**+1.7**
AKGG	**Akutan Green G**	**2.57**	**47**	P	**Pn**	**20 23 36.1**	**+1.7**
AKUT	**Akutan**	**2.63**	**49**	*e*P	**Pn**	**20 23 37.5**	**+2.3**
KOFP	**Korovin Flat P**	**3.03**	**268**	P	**Pn**	**20 23 42.2**	**+1.5**
ATKA	**Atka Island**	**3.10**	**267**	P	**Pn**	**20 23 43.2**	**+1.6**
SDPT	**Sand Point**	**5.88**	**57**	*e*P	**Pn**	**20 24 20.6**	**+0.7**
AMKA	**Amchitka**	**7.22**	**266**	P	**Pn**	**20 24 39.5**	**+1.3**
FX1	**Attu Island--F**	**10.74**	**279**	Pn	**Pn**	**20 25 28.4**	**+2.0**
	0.8nm,0.3s,baz=48,slow=18,SNR=7.4						
KDAK	**Kodiak Island**	**10.87**	**54**	Pn	**Pn**	**20 25 28.7**	**+0.6**
	0.3nm,0.3s,baz=260,slow=12,SNR=4.4						
ILAR	**Eielson Array**	**16.79**	**34**	Pn	**Pn**	**20 26 46.7**	**-0.8**
	0.0nm,0.3s,baz=233,slow=10,SNR=4.0						
ILAR				LR	LR	20 33 46.3	
	comp=Z,41nm,18.7s,baz=145,slow=39						
PETK	**Petropavlovsk-**	**19.95**	**285**	P	**P**	**20 27 23.6**	**-0.6**
	0.4nm,0.3s,baz=96,slow=13,SNR=6.8						
INK	**Inuvik**	**23.19**	**33**	P	**P**	**20 28 00.6**	**+2.1**
	0.5nm,0.5s,baz=233,slow=10,SNR=3.5						
YKA	**Yellowknife Ar**	**30.08**	**49**	P	**P**	**20 29 02.5**	**+1.6**
	0.2nm,0.4s,baz=275,slow=7.4,SNR=3.7						
PDAR	**Pinedale Array**	**40.26**	**79**	P	**P**	**20 30 29.2**	**+0.3**
	0.4nm,0.6s,baz=18,slow=2.3,SNR=3.9						
SONM	**Songino Array**	**51.35**	**301**	P	**P**	**20 31 55.3**	**-0.9**
	0.3nm,0.5s,baz=57,slow=5.3,SNR=2.9						
SONM				PcP	**PcP**	**20 33 11.0**	**+0.4**
	0.5nm,0.5s,baz=44,slow=3.5,SNR=3.9						
TXAR	**Lajitas Array**	**52.62**	**89**	P	**P**	**20 32 05.0**	**-0.9**
	0.4nm,0.7s,baz=263,slow=6.3,SNR=3.5						
KURBB	**Kurchatov Arra**	**52.48**	**318**	P	**P**	**20 33 13.7**	**-1.2**
	0.4nm,0.7s,baz=48,slow=7.3,SNR=7.4						
BVAR	**Borovoye Array**	**63.69**	**324**	P	**P**	**20 33 22.2**	**-0.6**
	0.8nm,0.5s,baz=58,slow=6.3,SNR=6.3						
MKAR	**Makanchi Array**	**63.82**	**313**	P	**P**	**20 33 22.1**	**-1.7**
	0.2nm,0.6s,baz=60,slow=7.2,SNR=2.4						
FINES	**FINESS Array B**	**65.78**	**352**	P	**P**	**20 33 35.8**	**-0.5**
	1.6nm,0.9s,baz=32,slow=12,SNR=3.2						
HFS	**Hagfors**	**67.72**	**358**	P	**P**	**20 33 47.4**	**-1.3**
	1.1nm,0.7s,baz=46,slow=7.0,SNR=3.5						
CMAR	**Chiang Mai Arr**	**76.72**	**283**	P	**P**	**20 34 43.2**	**+0.2**
	0.5nm,0.5s,baz=26,slow=7.0,SNR=5.2						
ASAR	**Alice Springs**	**90.56**	**230**	P	**P**	**20 35 52.9**	**-0.8**
	0.3nm,0.8s,baz=26,slow=4.4,SNR=2.9						

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*ISCJB **14** 20:30:54.6±0.2,42˚37N±0˚02×13˚29E±0˚02, h12km±1km, mb3.4/5, MS3.1/1, Error ellipse: s-maj=2.8km s-min=2.1km az=28.6*
*IDC **14** 20:30:55.0±1.4,42˚51N×13˚09E, h0km, mb3.4/6, mb1 3.5/10, mb1mx3.4/30, mbtmp3.4/10, ML3.3/3, MS2.9/2, Ms1 2.9/2, ms1mx2.2/37, Error ellipse: s-maj=24.1km s-min=14.3km az=86.0*
*ROM **14** 20:30:54.9±0.1,42˚37N×13˚33E, h10km, Ml3.5/25, Error ellipse: s-maj=1.1km s-min=1.0km az=41.0*
*BEO **14** 20:30:55.2±0.9,42˚39N×13˚03E, h13km±2km, ML3.6/8*
*PDG **14** 20:30:55.8±0.6,42˚39N×13˚33E, h11km, ML3.5/10, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*
*VIE **14** 20:30:55.2±0.5,42˚38N×13˚53E, h5km, mb3.5/5, ML3.4/6, Error ellipse: s-maj=5.7km s-min=2.6km az=122.0*
*LDG **14** 20:30:55.6±0.1,42˚37N×13˚34E, h2km, Ml3.2/7, Error ellipse: s-maj=6.0km s-min=3.3km az=38.0*
*CSEM **14** 20:30:56.7±0.1,42˚36N×13˚20E, h20km, ML3.4/7, Error ellipse: s-maj=3.3km s-min=2.6km az=15.0*
ISC 14 20:30:55.8±0.8,42.38N±0.02×13.32E±0.02,h10km±5km, n148,σ1§66/218,mb3.5/5,9C-14D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.07**	**115**	Pg	**Pg**	**20 30 57.7**	**-0.3**
AQU				Sg	**Sg**	**20 30 59.3**	**-0.3**
	105µm,0.3s						
CAMP	**Campotosto**	**0.17**	**23**	⇑*i*Pg	**Pg**	**20 30 59.3**	**-0.2**
CAMP				Sg	**Sg**	**20 31 02.5**	**+0.4**
FIAM	**Fiamignano**	**0.19**	**233**	Pg	**Pg**	**20 30 59.7**	**-0.2**
FIAM				Sg	**Sg**	**20 31 02.8**	**+0.2**
FIAM	**Fiamignano**	**0.19**	**233**	Pg	**Pg**	**20 30 59.7**	**-0.2**
FIAM				Sg	**Sg**	**20 31 02.8**	**+0.2**
FAGN	**Fagnano**	**0.23**	**121**	Pg	**Pg**	**20 31 00.0**	**-0.5**
FAGN				Sg	**Sg**	**20 31 03.7**	**+0.1**
	25µm,0.3s						
LNSS	**Leonessa**	**0.30**	**317**	Pg	**Pg**	**20 31 01.7**	**-0.3**
LNSS				Sg	**Sg**	**20 31 07.1**	**+1.0**
	7µm,0.4s						
LNSS	**Leonessa**	**0.30**	**317**	Pg	**Pg**	**20 31 01.7**	**-0.3**
LNSS				Sg	**Sg**	**20 31 07.1**	**+1.0**
	7µm,0.4s						
TERO	**Teramo**	**0.32**	**41**	Pg	**Pg**	**20 31 01.5**	**-0.7**
TERO				Sg	**Sg**	**20 31 07.5**	**+1.0**
PTQR	**Pietraquaria**	**0.36**	**171**	Pg	**Pg**	**20 31 02.3**	**-0.7**
VCEL	**Villa Celiera**	**0.38**	**88**	Pg	**Pg**	**20 31 02.7**	**-0.7**
VCEL				Sg	**Sg**	**20 31 09.8**	**+1.3**
	14µm,0.4s						
NRCA	**Norcia**	**0.48**	**341**	Pg	**Pg**	**20 31 04.5**	**-0.7**
NRCA				Sg	**Sg**	**20 31 12.3**	**+0.8**
	2µm,0.2s						
VVLD	**Villa Vallelon**	**0.56**	**156**	Pg	**Pg**	**20 31 05.3**	**-1.3**
MTCE	**Montecelio**	**0.56**	**230**	Pg	**Pg**	**20 31 05.9**	**-0.8**
MTCE				Sg	**Sg**	**20 31 14.1**	**0.0**
	1µm,0.4s						
MTCE	**Montecelio**	**0.56**	**230**	Pg	**Pg**	**20 31 05.9**	**-0.8**
MTCE				Sg	**Sg**	**20 31 14.1**	**0.0**
	1µm,0.4s						
INTR	**Introdacqua**	**0.57**	**130**	Pg	**Pg**	**20 31 05.8**	**-1.1**
CESX	**Cesi**	**0.59**	**293**	Pg	**Pg**	**20 31 06.4**	**-1.0**
	2µm,0.5s						
CESX	**Cesi**	**0.59**	**293**	Pg	**Pg**	**20 31 06.4**	**-1.0**
	2µm,0.5s						
OFFI	**Offida**	**0.61**	**26**	Pg	**Pg**	**20 31 07.7**	**-0.1**
	11µm,0.7s						
CESI	**CESI - Serrava**	**0.69**	**334**	Pg	**Pg**	**20 31 08.4**	**-0.9**
CESI				Sg	**Sb**	**20 31 19.5**	**-0.3**
	515nm,0.4s						
CESI	**CESI - Serrava**	**0.69**	**334**	Pg	**Pg**	**20 31 08.4**	**-0.9**
CESI				Sg	**Sb**	**20 31 19.5**	**-0.3**
	515nm,0.4s						
LPEL	**Lama dei Pelig**	**0.72**	**117**	Pg	**Pg**	**20 31 08.5**	**-1.3**
LPEL				Sg	**Sg**	**20 31 19.2**	**0.0**
	2µm,0.4s						
RMP	**Rome, Mte Porz**	**0.73**	**219**	Pg	**Pg**	**20 31 09.5**	**-0.5**
	2µm,0.5s						
RMP	**Rome, Mte Porz**	**0.73**	**219**	Pg	**Pg**	**20 31 09.5**	**-0.5**
	2µm,0.5s						
SDI	**San Donato**	**0.76**	**151**	Pg	**Pg**	**20 31 08.9**	**-1.6**
RDP	**Rocca di Papa**	**0.77**	**216**	Pg	**Pg**	**20 31 10.1**	**-0.5**
	5µm,0.5s						
RDP	**Rocca di Papa**	**0.77**	**216**	Pg	**Pg**	**20 31 10.1**	**-0.5**
	5µm,0.5s						
MA9	**Marino**	**0.79**	**219**	Pg	**Pg**	**20 31 11.0**	**+0.1**
	3µm,0.5s						
MA9	**Marino**	**0.79**	**219**	Pg	**Pg**	**20 31 11.0**	**+0.1**
	3µm,0.5s						
GUMA	**Gualdo di Mace**	**0.82**	**33**	Pg	Pg	20 31 08.3	-3.3
	5µm,0.5s						
GIUL	**Giuliano Di Ro**	**0.82**	**184**	Pg	**Pg**	**20 31 10.3**	**-1.4**
	1µm,0.6s						
GIUL	**Giuliano Di Ro**	**0.82**	**184**	Pg	**Pg**	**20 31 10.3**	**-1.4**
	1µm,0.6s						
RNI2	**Rionero Sannit**	**0.92**	**137**	Pg	**Pg**	**20 31 12.4**	**-1.1**
	2µm,0.8s						
SNTG	**Esanatoglia**	**0.92**	**342**	Pg	**Pg**	**20 31 12.1**	**-1.4**
	326nm,0.4s						
SNTG	**Esanatoglia**	**0.92**	**342**	Pg	**Pg**	**20 31 12.1**	**-1.4**
	326nm,0.4s						
CERA	**Filignano**	**0.94**	**146**	Pg	**Pg**	**20 31 12.4**	**-1.5**
	945nm,0.6s						
MIDA	**Miranda**	**1.01**	**136**	Pg	**Pg**	**20 31 13.1**	**-2.2**
	824nm,0.5s						
MURB	**Monte Urbino**	**1.06**	**327**	Pg	**Pg**	**20 31 15.2**	**-1.0**
	2µm,0.4s						
MURB	**Monte Urbino**	**1.06**	**327**	Pg	**Pg**	**20 31 15.2**	**-1.0**
	2µm,0.4s						
FRES	**Fresagrandinar**	**1.08**	**112**	Pg	**Pb**	**20 31 14.7**	**-1.9**
	769nm,0.6s						
TRIV	**Trivento**	**1.10**	**123**	Pg	**Pb**	**20 31 15.7**	**-1.3**
	890nm,1.0s						
SACS	**San Casciano d**	**1.14**	**295**	Pg	**Pb**	**20 31 16.7**	**-1.0**
	512nm,0.7s						
ARVD	**Arcevia**	**1.15**	**346**	Pg	**Pb**	**20 31 16.3**	**-1.5**
	986nm,0.9s						
ARVD	**Arcevia**	**1.15**	**346**	Pg	**Pb**	**20 31 16.3**	**-1.5**
	986nm,0.9s						
VAGA	**Valle Agricola**	**1.18**	**144**	Pg	**Pb**	**20 31 17.2**	**-1.2**
	380nm,0.6s						
VAGA	**Valle Agricola**	**1.18**	**144**	Pg	**Pb**	**20 31 17.2**	**-1.2**
	380nm,0.6s						
MODR	**Mondragone**	**1.30**	**161**	Pg	**Pn**	**20 31 19.4**	**-0.7**
	189nm,0.3s						
MODR	**Mondragone**	**1.30**	**161**	Pg	**Pn**	**20 31 19.4**	**-0.7**
	189nm,0.5s						
FSSB	**Fossombrone**	**1.37**	**343**	Pg	**Pn**	**20 31 20.5**	**-0.6**
FSSB	**Fossombrone**	**1.37**	**343**	Pg	**Pn**	**20 31 20.5**	**-0.6**
PARC	**Parchiule**	**1.50**	**328**	Pg	**Pn**	**20 31 23.2**	**+0.4**
	476nm,0.7s						
PARC	**Parchiule**	**1.50**	**328**	Pg	**Pn**	**20 31 23.2**	**+0.4**
	476nm,0.7s						
MS1	**Monte Sant'Ang**	**2.06**	**108**	*e*Pn	**Pb**	**20 31 33.9**	**+0.5**
MAIM	**Mastiano**	**2.58**	**307**	P	**Pn**	**20 31 37.2**	**-0.4**
BAI	**Bari**	**2.95**	**114**	*e*Pn	**Pn**	**20 31 43.9**	**+1.2**
BAI				*e*Sn	**Sn**	**20 32 21.0**	**+2.8**
PGF	**Pioggiola**	**3.20**	**274**	*e*Pn	**Pn**	**20 31 46.6**	**+0.3**
PGF				*e*Sn	**Sn**	**20 32 22.1**	**-2.5**
	31nm,0.7s						
PGF	**Pioggiola**	**3.20**	**274**	*e*Pn	**Pn**	**20 31 46.6**	**+0.3**
PGF				*e*Sn	**Sn**	**20 32 22.1**	**-2.5**
	15nm,0.7s						
SKDS	**Skadanscina**	**3.20**	**9**	*i* Pn	**Pn**	**20 31 46.4**	**+0.1**
SKDS				*i* Sn	**Pn**	**20 32 25.3**	**+0.8**
SKDS	**Skadanscina**	**3.20**	**9**	*i* Pn	**Pn**	**20 31 46.4**	**+0.1**
SKDS				*i* Sn	**Sn**	**20 32 25.3**	**+0.8**
STON	**Ston**	**3.27**	**80**	*e*Pn	**Pn**	**20 31 47.5**	**+0.4**
STON				Sn	**Sn**	**20 32 27.2**	**+1.2**
STON	**Ston**	**3.27**	**80**	*e*Pn	**Pn**	**20 31 47.5**	**+0.4**
STON				Sn	**Sn**	**20 32 27.2**	**+1.2**
BOJS	**Bojanci**	**3.42**	**23**	*i* Pn	**Pn**	**20 31 50.1**	**+0.9**
BOJS				*i* Sn	**Sb**	**20 32 35.4**	**-2.7**
BOJS	**Bojanci**	**3.42**	**23**	*i* Pn	**Pn**	**20 31 50.1**	**+0.9**
BOJS				*i* Sn	**Sb**	**20 32 35.4**	**-2.7**
PE1	**Pezze di Greco**	**3.46**	**116**	*e*Pn	**Pn**	**20 31 50.9**	**+1.2**
VISS	**Visnje**	**3.59**	**17**	*i* Pn	**Pn**	**20 31 52.0**	**+0.4**
VISS				*i* Sn	**Sn**	**20 32 35.4**	**+1.4**
VISS	**Visnje**	**3.59**	**17**	*i* Pn	**Pn**	**20 31 52.0**	**+0.4**
VISS				*i* Sn	**Sn**	**20 32 35.4**	**+1.4**
VOY	**Vojsko**	**3.67**	**6**	*e*Pn	**Pn**	**20 31 53.7**	**+0.9**
VOY				*e*Sn	**Sn**	**20 32 37.1**	**+0.9**
HCY	**Herceg Novi**	**3.83**	**87**	⇓*i*Pn	**Pn**	**20 31 55.6**	**+0.8**
HCY				*e*Sn	**Sn**	**20 32 41.4**	**+1.5**
HCY	**Herceg Novi**	**3.83**	**87**	⇓*i*Pn	**Pn**	**20 31 55.6**	**+0.8**
HCY				*e*Sn	**Sn**	**20 32 41.4**	**+1.5**
BRY	**Bratogost**	**3.88**	**81**	⇓*i*Pn	**Pn**	**20 31 57.5**	**+1.8**
BRY				*e*Sn	**Sn**	**20 32 42.9**	**+1.5**
BRY	**Bratogost**	**3.88**	**81**	⇓*i*Pn	**Pn**	**20 31 57.5**	**+1.8**
BRY				*e*Sn	**Sn**	**20 32 42.9**	**+1.5**
BUM	**Brajici-Budva**	**4.13**	**89**	⇑*i*Pn	**Pn**	**20 32 00.6**	**+1.6**
BUM				*e*Sn	**Sn**	**20 32 48.4**	**+1.0**
BUM	**Brajici-Budva**	**4.13**	**89**	⇑*i*Pn	**Pn**	**20 32 00.6**	**+1.6**
BUM				*e*Sn	**Sn**	**20 32 48.4**	**+1.0**
UPM	**Unac-Piva**	**4.19**	**77**	⇓*i*Pn	**Pn**	**20 32 01.5**	**+1.5**
UPM				*e*Sn	**Sn**	**20 32 50.6**	**+1.5**
UPM	**Unac-Piva**	**4.19**	**77**	⇓*i*Pn	**Pn**	**20 32 01.5**	**+1.5**
UPM				*e*Sn	**Sn**	**20 32 50.6**	**+1.5**
NKY	**Niksic**	**4.21**	**82**	⇓*i*Pn	**Pn**	**20 32 00.4**	**+0.3**
NKY				*e*Sn	**Sn**	**20 32 50.6**	**+1.2**
NKY	**Niksic**	**4.21**	**82**	⇓*i*Pn	**Pn**	**20 32 00.4**	**+0.3**
NKY				*e*Sn	**Sn**	**20 32 50.6**	**+1.2**
PDG	**Podgorica**	**4.39**	**87**	*e*Pn	**Pn**	**20 32 03.4**	**+1.7**
PDG				*e*Sn	**Sn**	**20 32 56.4**	**+2.5**
PDG	**Podgorica**	**4.39**	**87**	*e*Pn	**Pn**	**20 32 04.3**	**+1.7**
PDG				*e*Sn	**Sn**	**20 32 55.2**	**+1.4**
TTG	**Podgorica**	**4.39**	**87**	⇑*i*Pn	**Pn**	**20 32 04.4**	**+1.8**
TTG				*e*Sn	**Sn**	**20 32 55.2**	**+1.4**
ABTA	**Abfaltersbach**	**4.40**	**353**	⇓*i*Pn	**Pn**	**20 32 03.5**	**+0.7**
	SNR=10						
ABTA				⇑*i*Sn	**Sn**	**20 32 56.7**	**+2.5**
ABTA	**Abfaltersbach**	**4.40**	**353**	Pn	**Pn**	**20 32 03.5**	**+0.7**
	SNR=10						
ABTA				Sn	**Sn**	**20 32 56.7**	**+2.5**
ULC	**Ulcinj**	**4.42**	**93**	⇑*i*Pn	**Pn**	**20 32 03.4**	**+0.4**
ULC				*e*Sn	**Sn**	**20 32 55.3**	**+0.8**
ULC	**Ulcinj**	**4.42**	**93**	⇑*i*Pn	**Pn**	**20 32 03.4**	**+0.4**
ULC				*e*Sn	**Sn**	**20 32 55.3**	**+0.8**
SBF	**Sospel**	**4.56**	**291**	*e*Pn	**Pn**	**20 32 04.6**	**-0.3**
SBF				*e*Sn	**Sn**	**20 32 54.9**	**-3.0**
	9.8nm,0.5s						
SBF	**Sospel**	**4.56**	**291**	*e*Pn	**Pn**	**20 32 04.6**	**-0.3**
SBF				*e*Sn	**Sn**	**20 32 54.9**	**-3.0**
	4.9nm,0.5s						
PLE	**Pljevlja**	**4.56**	**76**	⇓*i*Pn	**Pn**	**20 32 06.5**	**+1.5**
PLE	**Pljevlja**	**4.56**	**76**	⇓*i*Pn	**Pn**	**20 32 06.5**	**+1.5**
BBLS	**Lazići**	**4.69**	**70**	*e*Pn	**Pn**	**20 32 08.5**	**+1.7**
BBLS				*e*Sn	**Sn**	**20 33 04.5**	**+3.2**
BBLS	**Lazići**	**4.69**	**70**	*e*Pn	**Pn**	**20 32 08.5**	**+1.7**
BBLS				*e*Sn	**Sn**	**20 33 04.5**	**+3.2**
BEY	**Berane**	**4.87**	**82**	*e*Sn	**Sn**	**20 32 06.9**	**+1.1**
IVA	**Berane**	**4.87**	**82**	*e*Pn	**Pn**	**20 32 11.2**	**+1.9**
IVA				*e*Sn	**Sn**	**20 33 06.9**	**+1.1**
PUK	**Puka**	**4.89**	**92**	*e*PG	**Pn**	**20 32 11.5**	**+2.0**
PUK				*i* SG	**Sb**	**20 33 16.5**	**-4.0**
PUK	**Puka**	**4.89**	**92**	*e*PG	**Sn**	**20 33 08.8**	**+2.6**
PUK				*i* SG	Sb	20 33 10.5	-10
PUK	**Puka**	**4.89**	**92**	*e*Pg	**Pn**	**20 32 11.5**	**+2.0**
PUK				*i* Sg	**Sn**	**20 33 10.5**	**+4.3**
PVY	**Plav**	**4.91**	**85**	⇑*i*Pn	**Pn**	**20 32 11.8**	**+2.0**
PVY				*e*Sn	**Sn**	**20 33 07.5**	**+0.7**
TIR	**Tirane**	**4.99**	**100**	*e*Pn	**Pn**	**20 32 12.1**	**+1.3**
TIR				*e*Sn	**Sn**	**20 33 10.2**	**+1.6**
TIR	**Tirane**	**4.99**	**100**	*e*Pn	**Pn**	**20 32 12.1**	**+1.3**
TIR				*e*Sn	**Sn**	**20 33 10.2**	**+1.6**
BCI	**Bajram Curri**	**5.00**	**88**	*e*PG	**Sn**	**20 33 13.2**	**+4.5**
BCI				*i* SG	**Sb**	**20 33 18.2**	**-5.3**
FRF	**La Foret Royal**	**5.04**	**286**	*e*Pn	**Pn**	**20 32 11.1**	**-0.3**
FRF	**La Foret Royal**	**5.04**	**286**	*e*Pn	**Pn**	**20 32 11.1**	**-0.3**
DAVOX	**Davos/Dischmat**	**5.04**	**332**	Pn	**Pn**	**20 32 14.5**	**+2.9**
	1.8nm,0.3s,baz=151,slow=19,SNR=14						
DAVOX				Sn	**Sn**	**20 33 14.3**	**+4.3**
	0.7nm,0.3s,baz=185,slow=19,SNR=2.7						
LMR	**La Mourre**	**5.10**	**283**	*e*Pn	**Pn**	**20 32 12.2**	**0.0**
LMR				*e*Sn	**Sn**	**20 33 07.5**	**-3.7**
	9.5nm,0.6s						
LMR	**La Mourre**	**5.10**	**283**	*e*Pn	**Pn**	**20 32 12.2**	**0.0**
LMR				*e*Sn	**Sn**	**20 33 07.5**	**-3.7**
	4.8nm,0.6s						
DIVS	**Divibare**	**5.17**	**68**	*e*Pn	**Pn**	**20 32 14.2**	**+0.9**
DIVS				*e*Sn	**Sn**	**20 33 13.4**	**+0.4**
MOTA	**Moosalm**	**5.21**	**343**	⇓*i*Pn	**Pn**	**20 32 14.9**	**+1.0**
	SNR=7.9						
MOTA	**Moosalm**	**5.21**	**343**	Pn	**Pn**	**20 32 14.9**	**+1.0**
	SNR=7.9						
MOA	**Molln**	**5.51**	**7**	⇑*i*Pn	**Pn**	**20 32 18.0**	**+0.1**
	SNR=8.1						
MOA				⇓*i*Sn	**Sn**	**20 33 22.0**	**+0.7**
MOA	**Molln**	**5.51**	**7**	Pn	**Pn**	**20 32 18.0**	**+0.1**
	SNR=8.1						
MOA				Sn	**Sn**	**20 33 22.0**	**+0.7**
GRUS	**Gruza**	**5.62**	**72**	*e*Pn	**Pn**	**20 32 19.2**	**-0.2**
GRUS				*e*Sn	**Sn**	**20 33 23.5**	**-0.4**
GRUS	**Gruza**	**5.62**	**72**	*e*Pn	**Pn**	**20 32 19.2**	**-0.2**
GRUS				*e*Sn	**Sn**	**20 33 23.5**	**-0.4**
LPG	**La Plagne**	**5.67**	**306**	*e*Pn	**Pn**	**20 32 19.4**	**-1.1**
LPG				*e*Sn	**Sn**	**20 33 21.4**	**-4.4**
	5.1nm,0.6s						
LPG	**La Plagne**	**5.67**	**306**	*e*Pn	**Pn**	**20 32 19.4**	**-1.1**
CSNA	**Conrad Observa**	**5.83**	**17**	⇓*i*Pn	**Pn**	**20 32 20.9**	**-1.5**
CSNA	**Conrad Observa**	**5.83**	**17**	Pn	**Pn**	**20 32 20.9**	**-1.5**
SMRF	**Simiane la Rot**	**5.88**	**288**	*e*Pn	**Pn**	**20 32 22.8**	**-0.3**
SMRF	**Simiane la Rot**	**5.88**	**288**	*e*Pn	**Pn**	**20 32 22.8**	**-0.3**
ORIF	**Oris-en-Rattie**	**5.96**	**298**	*e*P	Pn	20 32 28.0	+3.7
BARS	**Barje**	**6.28**	**83**	*e*Pn	**Pn**	**20 32 29.8**	**+1.2**
BARS				*e*Sn	**Sn**	**20 33 41.5**	**+1.1**
BARS	**Barje**	**6.28**	**83**	*e*Pn	**Pn**	**20 32 29.8**	**+1.2**
BARS				*e*Sn	**Sn**	**20 33 41.5**	**+1.1**
ZST	**Bratislava**	**6.40**	**23**	*e*PN	**Pn**	**20 32 30.1**	**0.0**
GERES	**GERESS Array B**	**6.47**	**2**	Pn	**Pn**	**20 32 30.9**	**-0.3**
	0.5nm,0.3s,baz=166,slow=12,SNR=12						
GERES				Sn	**Sn**	**20 33 43.4**	**-1.7**
	1.1nm,0.3s,baz=177,slow=23,SNR=7.6						
BOLS	**Boljevac**	**6.48**	**74**	*e*Pn	**Pn**	**20 32 31.6**	**+0.3**
BOLS	**Boljevac**	**6.48**	**74**	*e*Pn	**Pn**	**20 32 31.6**	**+0.3**
KHC	**Kasperske Hory**	**6.75**	**1**	*e*PN	**Pn**	**20 32 34.4**	**-0.6**
KHC				*e*SN	**Sn**	**20 33 49.0**	**-3.0**
KHC	**Kasperske Hory**	**6.75**	**1**	Pn	**Pn**	**20 32 34.4**	**-0.6**
SMOL	**Smolenice**	**6.78**	**24**	*e*PN	Pn	20 32 40.5	+5.2
**ZAPS

URZ	**Urewera**	**7.06 200**	P	Pn	20 45 46.4	+3.4
	4.4nm,0.3s,baz=302,slow=6.6,SNR=21						
URZ			S	**S**	**20 47 05.9**	**-0.8**
	18nm,0.3s,baz=300,slow=20,SNR=17						
MHGZ	**Mahia Peninsul**	**7.71 193**	*e*PN	**Pn**	**20 45 53.5**	**+2.9**
MHGZ			SN	**S**	**20 47 19.8**	**-0.9**
KAHZ	**Kahuranaki**	**8.56 198**	*e*PN	**P**	**20 46 02.9**	**-0.5**
PXZ	**Pawanui**	**8.78 197**	*e*PN	**Pn**	**20 46 02.5**	**-0.8**
PXZ			SN	**S**	**20 47 40.0**	**-4.1**
WPHZ	**Waipukurau**	**8.93 199**	SN	**S**	**20 47 47.8**	**+0.5**
DZM	**Mont Dzumac**	**15.55 305**	P	**P**	**20 47 21.7**	**+0.8**
	0.7nm,0.3s,baz=60,slow=20,SNR=5.6						
CTA	**Charters Tower**	**32.53 282**	P	**P**	**20 50 00.2**	**+0.5**
	8.1nm,0.6s,baz=94,slow=9.5,SNR=9.8						
STKA	**Stephens Creek**	**32.72 259**	P	**P**	**20 50 02.2**	**+1.1**
	4.4nm,0.7s,baz=92,slow=10,SNR=14						
ASAR	**Alice Springs**	**41.53 269**	P	**P**	**20 51 14.0**	**-0.7**
	1.9nm,0.6s,baz=106,slow=7.3,SNR=6.4						
WRA	**Warramunga Arr**	**42.64 274**	P	**P**	**20 51 22.6**	**-1.0**
	2.6nm,0.4s,baz=111,slow=8.0,SNR=65						
QSPA	**South Pole Qui**	**58.45 180**	P	P	20 53 23.4	+3.4
	10nm,0.7s,baz=36,slow=2.1,SNR=48						
USRK	**Ussuriysk Arra**	**87.38 328**	P	**P**	**20 56 08.5**	**+0.6**
	1.1nm,0.6s,baz=105,slow=2.7,SNR=5.1						
MKAR	**Makanchi Array**	**117.41 310**	PKP	**PKPdf**	**21 02 03.5**	**-0.6**
	0.6nm,0.7s,baz=46,slow=0.2,SNR=6.1						
ZALV	**Zalesovo Beam**	**117.95 318**	PKP	**PKPdf**	**21 02 04.4**	**-0.5**
	0.1nm,0.3s,baz=132,slow=2.1,SNR=2.7						
ARCES	**ARCESS Array B**	**139.48 347**	PKhKP	PKPpre	21 02 38.2		
	1.9nm,0.8s,baz=42,slow=2.0,SNR=5.5						
ARCES			PKP	**PKiKP**	**21 02 46.9**	**-0.7**
	2.9nm,1.0s,baz=316,slow=5.1,SNR=3.7						
KBZ	**Khabaz**	**144.51 302**	PKP	PKPbc	21 02 54.2	-0.3	
	3.8nm,0.9s,baz=111,slow=2.1,SNR=8.7						
KAF	**Kangasniemi**	**145.19 339**	*ep*	**PKPdf**	**21 02 55.6**	**+0.1**
	3.2nm,0.6s						
FINES	**FINESS Array B**	**145.77 338**	PKPbc	**PKPdf**	**21 02 57.2**	**+0.7**
	10nm,0.5s,baz=47,slow=4.1,SNR=81						
NB2	**NORSAR Subarra**	**149.71 340**	PKP	**PKPbc**	**21 03 07.9**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=14,slow=2.5						
NOA	**NORSAR Array B**	**149.74 349**	PKPbc	**PKPbc**	**21 03 07.7**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=16,slow=4.1,SNR=5.4						
AKASG	**Malin Array Be**	**151.32 320**	PKPbc	**PKPbc**	**21 03 12.0**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=73,slow=2.1,SNR=12						
AKASG			PKPab	**PKPab**	**21 03 20.9**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=49,slow=4.6,SNR=6.2						
BRTR	**Keskin Array B**	**151.81 296**	PKPbc	**PKPbc**	**21 03 13.4**	**-0.4**
	comp=Z,3.3nm,0.5s,baz=138,slow=3.8,SNR=24						
GERES	**GERESS Array B**	**160.04 333**	PKPab	**PKPab**	**21 03 58.6**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=35,slow=4.9,SNR=6.3						
TORD	**Torodi Ar. Bea**	**161.52 185**	PKPab	**PKPab**	**21 04 07.2**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=168,slow=4.3,SNR=14						

ISCJB ***14*** *21:02:10.6±0.6, 6.°79N±0.°09×72.°97W±0.°09, h174km±8km, mb3.3/4, Error ellipse: s-maj=19.6km s-min=8.1km az=136.3*

IDC ***14*** *21:02:11.5±2.2, 6.°70N×72.°97W, h169km±22km, mb3.1/4, mb1 3.4/5, mb1mx3.2/22, mbtmp3.1/5, Error ellipse: s-maj=31.9km s-min=22.6km az=51.0*

FUNV ***14*** *21:02:19.5, 7.°06N×72.°59W, h135km, MW3.2*

ISC 14 21:02:11.3±0.9, 6.°92N±0.°07×72.°84W±0.°08, h151km±7km, n20,σ2^{s}61/23, mb3.3/4, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.08**	**29**	⇓*iP*	Pn	21 02 40.4	+3.2
CAPV				*eS*	**Sn**	**21 02 57.9**	**+1.0**
SOCV	**Socops**	**2.39**	**55**	*eP*	Pn	21 02 54.7	+3.5
SOCV				*eS*	**Sn**	**21 03 19.1**	**-2.9**
VIGV	**El Vigia**	**2.41**	**37**	*eP*	Pn	21 02 54.9	+3.5
VIGV				*eS*	**Sn**	**21 03 20.8**	**-1.6**
ROSC	**El Rosal**	**2.53**	**216**	P	**Pn**	**21 02 52.3**	**-1.0**
	19nm,0.3s,baz=276,slow=22,SNR=54						
ROSC				S	**Sn**	**21 03 22.6**	**-3.0**
	29nm,0.3s,baz=92,slow=18,SNR=13						
ELOV	**Elorza**	**3.33**	**88**	*eP*	**Pn**	**21 03 05.9**	**+2.8**
QARV	**Quebrada Arrib**	**3.99**	**35**	*eP*	**Pn**	**21 03 14.8**	**+3.1**
QARV				*eS*	**Sn**	**21 03 55.2**	**-3.3**
CURV	**Curarigua**	**4.19**	**43**	*eP*	**Pn**	**21 03 17.1**	**+2.9**
CURV				*eS*	**Sn**	**21 03 59.8**	**-3.4**
DABV	**Dabajuro**	**4.54**	**29**	*eP*	**Pn**	**21 03 21.6**	**+2.9**
TEPV	**Terepaima**	**4.71**	**50**	*eP*	**Pn**	**21 03 24.2**	**+3.1**
BAUV	**El Baul**	**5.16**	**67**	*eP*	**Pn**	**21 03 29.3**	**+2.4**
MAPV	**Macapo**	**5.21**	**56**	*eP*	**Pn**	**21 03 30.5**	**+2.8**
MONV	**Montecano**	**5.75**	**29**	*eP*	**Pn**	**21 03 36.6**	**+1.9**
TURV	**Turiamo**	**6.06**	**54**	*eP*	**Pn**	**21 03 41.2**	**+2.3**
BIRV	**Birongo**	**7.39**	**61**	*eP*	**Pn**	**21 03 58.5**	**+1.8**
TXAR	**Lajitas Array**	**36.61 311**		P	**P**	**21 09 01.7**	**-1.5**
	0.5nm,0.7s,baz=102,slow=8.4,SNR=3.4						
PDAR	**Pinedale Array**	**48.17 324**		P	**P**	**21 10 35.8**	**-0.9**
	0.3nm,0.5s,baz=119,slow=7.3,SNR=2.7						
YKA	**Yellowknife Ar**	**63.27 340**		P	**P**	**21 12 23.0**	**-0.5**
	0.6nm,0.5s,baz=132,slow=6.8,SNR=12						
TORD	**Torodi Ar. Bea**	**73.44 78**		P	**P**	**21 13 26.9**	**-0.9**
	0.5nm,1.1s,baz=292,slow=7.6,SNR=3.2						
ASAR	**Alice Springs**	**149.39 234**		PKPbc	**PKPdf**	**21 21 40.6**	**+1.7**
	0.3nm,0.7s,baz=122,slow=2.6,SNR=3.4						
WRA	**Warramunga Arr**	**150.63 241**		PKPbc	**PKPdf**	**21 21 43.8**	**+2.9**
	0.7nm,0.8s,baz=104,slow=2.7,SNR=5.7						

MAN 14 21:05:15, 16.°08N×119.°79E, h32km, mb3.9, ML2.7, MS2.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.32**	**22**	*eP*	Pn	21 05 24.6	+1.1
BOLP				*eS*	Sb	21 05 27.3	-1.1
SCZP	**Santa Cruz**	**0.33**	**159**	*eP*	Pn	21 05 24.8	+1.3
SCZP				*eS*	Sb	21 05 27.9	-0.5
BCPH	**Baguio City Da**	**0.82**	**69**	⇑*iP*	Pb	21 05 31.4	+0.3

CSEM ***14*** *21:26:04.1±0.6, 36.°95N×34.°98E, h10km, MD2.8, Error ellipse: s-maj=14.5km s-min=13.1km az=173.0*

DDA ***14*** *21:26:06.4, 36.°93N×35.°21E, h7km, MD2.8*

ISK ***14*** *21:26:07.4, 37.°09N×35.°10E, h8km, MD2.8*

ISC 14 21:26:05.5±1.3, 36.°97N±0.°04×35.°10E±0.°07, h14km±12km, n18, σ1^{s}05/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRTS	**Karatas**	**0.45**	**151**	*e*PG	**Pn**	**21 26 18.8**	**+1.2**
KRTS				*e*SG	Sn	21 26 27.1	+1.7
KRTS	**Karatas**	**0.45**	**151**	*e*Pg	**Pn**	**21 26 18.8**	**+1.2**
KRTS				*e*Sg	Sn	21 26 27.1	+1.7
CEYT	**Ceyhan**	**0.52**	**85**	*e*PG	**Pb**	**21 26 17.1**	**+0.8**
CEYT				*e*SG	**Sb**	**21 26 26.0**	**+2.3**
CEYT	**Ceyhan**	**0.52**	**85**	*e*Pg	**Pb**	**21 26 17.1**	**+0.8**
CEYT				*e*Sg	**Sb**	**21 26 26.0**	**+2.3**
KOZT	**Kozan**	**0.77**	**48**	*e*PG	**Pb**	**21 26 21.4**	**+0.7**
KOZT				*e*SG	**Sb**	**21 26 31.6**	**+0.5**
KOZT	**Kozan**	**0.77**	**48**	*e*Pg	**Pb**	**21 26 21.4**	**+0.7**
KOZT				*e*Sg	**Sb**	**21 26 31.6**	**+0.5**
COBT	**Iskenderun**	**1.03**	**116**	*i*P	**Pb**	**21 26 25.4**	**+0.2**
COBT				*i*S	**Sg**	**21 26 38.3**	**-0.5**
COBT	**Iskenderun**	**1.03**	**116**	*i*P	**Pb**	**21 26 25.4**	**+0.2**
COBT				*i*S	**Sg**	**21 26 38.3**	**-0.5**
NIG	**Nigde**	**1.20**	**341**	*e*PN	**Pg**	**21 26 28.8**	**+0.1**
NIG	**Nigde**	**1.20**	**341**	*e*Pn	**Pg**	**21 26 28.8**	**+0.1**
YAYL	**Yayladag**	**1.23**	**139**	*i*P	**Pn**	**21 26 28.3**	**-0.2**
YAYL				*i*S	**Sb**	**21 26 44.9**	**+0.4**
YAYL	**Yayladag**	**1.23**	**139**	*i*P	**Pn**	**21 26 28.3**	**-0.2**
YAYL				*i*S	**Sb**	**21 26 44.9**	**+0.4**
AYKD	**Aykdinkavak**	**1.43**	**71**	*i*P	**Pn**	**21 26 31.8**	**+0.7**
AYKD				*i*S	**Sn**	**21 26 48.5**	**-1.2**
AYKD	**Aykdinkavak**	**1.43**	**71**	*i*P	**Pn**	**21 26 31.8**	**+0.7**
AYKD				*i*S	**Sn**	**21 26 48.5**	**-1.2**
KUZU	**Kuzuini**	**1.59**	**96**	*i*P	**Pn**	**21 26 32.7**	**-0.6**
KUZU				*i*S	**Sn**	**21 26 51.9**	**-1.8**
KUZU	**Kuzuini**	**1.59**	**96**	*i*P	**Pn**	**21 26 32.7**	**-0.6**
KUZU				*i*S	**Sn**	**21 26 51.9**	**-1.8**
SARI	**SarD1z-Kayseri**	**1.77**	**36**	*e*PN	**Pb**	**21 26 38.0**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.77**	**36**	*e*Pn	**Pb**	**21 26 38.0**	**+0.1**

IDC 14 22:04:42.6±19.0, 14.°32N×44.°83W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.5/26, mbtmp3.7/3, MS3.5/5, Ms1 3.6/5, ms1mx3.1/27, Error ellipse: s-maj=768.4km s-min=37.5km az=24.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**38.14 218**		LR	LR	22 27 27.5	
	comp=Z,53nm,19.7s,baz=76,slow=36						
ESDC	**Sonseca Array**	**43.78 47**		LR	LR	22 27 11.5	
	comp=Z,59nm,20.6s,baz=170,slow=31						
SCHQ	**Schefferville**	**43.91 342**		LR	LR	22 29 33.1	
	comp=Z,70nm,19.4s,baz=266,slow=34						
TORD	**Torodi Ar. Bea**	**45.15 86**		P	P	22 13 01.3	-0.2
	0.7nm,0.7s,baz=282,slow=7.6,SNR=4.2						
YKA	**Yellowknife Ar**	**68.08 332**		P	P	22 15 43.6	-0.4
	0.3nm,0.5s,baz=101,slow=6.3,SNR=4.4						
ILAR	**Eielson Array**	**82.23 335**		P	P	22 17 06.1	+0.6
	1.0nm,1.0s,baz=82,slow=5.2,SNR=8.3						
KURBB	**Kurchatov Arra**	**98.63 33**		LR	LR	23 01 51.0	
	comp=Z,25nm,19.4s,baz=250,slow=35						
ZALV	**Zalesovo Beam**	**99.64 27**		LR	LR	23 00 54.3	
	comp=Z,22nm,18.1s,baz=71,slow=34						

NIED ***14*** *22:08:00, 40.°10N×142.°10E, h59km, Mw3.9 Best double couple: Mo7.16000×10^{14} NP1:φs176.00000°, δ77.00000°, λ83.00000°. NP2:φs27.00000°, δ15.00000°, λ120.00000°.*

ISCJB ***14*** *22:08:01.9±0.6, 40.°14N±0.°03×142.°14E±0.°08, h63km±5km, mb3.8/10, Error ellipse: s-maj=9.8km s-min=5.5km az=4.7*

JMA ***14*** *22:08:02.8, 40.°13N×142.°12E, h55km±1km, M3.8*

JMA Felt II J1.

IDC ***14*** *22:08:03.7±2.4, 40.°14N×141.°98E, h67km±20km, mb3.6/10, mb1 3.7/12, mb1mx3.5/28, mbtmp3.6/12, MS2.8/2, Ms1 2.8/2, ms1mx2.5/33, Error ellipse: s-maj=22.2km s-min=14.0km az=120.0*

ISC 14 22:08:02.8±0.9, 40.°12N±0.°04×142.°09E±0.°07, h57km±7km, n25, σ0^{s}95/35, mb3.9/10, 8C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.25**	**224**	⇑P	**Pn**	**22 08 12.4**	**+0.1**
JTH				S	**Sn**	**22 08 19.3**	**+0.2**
JANG	**Nango**	**0.51**	**300**	⇑P	**Pn**	**22 08 14.6**	**-0.1**
JANG				S	**Sn**	**22 08 23.1**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.58**	**201**	⇑P	**Pn**	**22 08 15.4**	**-0.1**
MIYJ				*e*S	**Sn**	**22 08 24.6**	**-0.1**
JKZ	**Kuzumaki**	**0.60**	**257**	⇑P	**Pn**	**22 08 15.9**	**+0.2**
JKZ				*e*S	**Sn**	**22 08 25.2**	**+0.1**
JOM	**Ohasama**	**0.89**	**224**	⇑P	**Pn**	**22 08 19.5**	**+0.2**
JOM				*e*S	**Sn**	**22 08 31.9**	**+0.4**
JTM	**Tenmabayashi**	**1.02**	**311**	⇑P	**Pn**	**22 08 21.2**	**+0.1**
JTM				*e*S	**Sn**	**22 08 34.6**	**0.0**
JAH	**Hinai**	**1.12**	**274**	⇑P	**Pn**	**22 08 22.8**	**+0.5**
JAH				*e*S	**Sn**	**22 08 37.5**	**+0.8**
JRG	**Rokugo**	**1.33**	**238**	P	**Pn**	**22 08 25.7**	**+0.5**
JRG				*e*S	**Sn**	**22 08 43.7**	**+1.7**
JMK	**Ichinoseki**	**1.35**	**210**	⇑P	**Pn**	**22 08 25.7**	**+0.4**
JMK				*e*S	**Sn**	**22 08 42.8**	**+0.6**
JOT	**Ohata**	**1.49**	**328**	P	**Pn**	**22 08 27.4**	**+0.1**
JOT				*e*S	**Sn**	**22 08 45.5**	**-0.1**
ASAJ	**Asahikawa**	**4.01**	**5**	P	**Pn**	**22 09 02.4**	**+0.7**
	4.7nm,0.3s,baz=216,slow=10.0,SNR=15						
ASAJ				S	**Sn**	**22 09 48.1**	**+0.7**
	2.5nm,0.3s,baz=75,slow=17,SNR=3.9						
MAT	**Matsushiro**	**4.70**	**222**	P	**Pn**	**22 09 13.4**	**+2.2**
MAT				S	Sn	22 10 12.6	+8.2
MJAR	**Matsushiro Arr**	**4.70**	**222**	P	**Pn**	**22 09 13.2**	**+2.1**
	1.6nm,0.3s,baz=35,slow=13,SNR=21						
MJAR				S	Sn	22 10 22.6	+18
	baz=31,slow=17,SNR=2.5						
MJAR				LR	LR	22 11 22.0	
	comp=Z,130nm,19.2s,baz=45,slow=43						
USRK	**Ussuriysk Arra**	**8.53**	**302**	P	**Pn**	**22 10 06.3**	**+2.8**
	0.5nm,0.3s,baz=110,slow=16,SNR=15						
KSRS	**Korea Array**	**11.37**	**261**	P	Pn	22 10 46.9	+4.4
	0.2nm,0.3s,baz=63,slow=14,SNR=3.3						
KSRS				LR	LR	22 14 44.9	
	comp=Z,42nm,18.1s,baz=338,slow=35						
SONM	**Songino Array**	**26.63**	**299**	P	**P**	**22 13 35.2**	**-0.8**
	0.4nm,0.4s,baz=97,slow=9.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**40.29**	**310**	P	**P**	**22 15 33.2**	**-0.8**
	0.8nm,0.4s,baz=79,slow=7.5,SNR=3.9						
MKAR	**Makanchi Array**	**43.00**	**299**	P	**P**	**22 15 55.8**	**-0.6**
	1.3nm,0.7s,baz=82,slow=9.9,SNR=12						
KDAK	**Kodiak Island**	**44.48**	**4**	P	**P**	**22 16 08.3**	**+0.3**
	2.9nm,0.7s,baz=200,slow=15,SNR=4.1						
ILAR	**Eielson Array**	**46.62**	**34**	P	**P**	**22 16 25.6**	**+0.7**
	1.0nm,0.8s,baz=286,slow=6.7,SNR=3.6						
INK	**Inuvik**	**51.41**	**28**	P	**P**	**22 17 02.1**	**+0.8**
	0.9nm,0.6s,baz=286,slow=6.7,SNR=3.6						
WRA	**Warramunga Arr**	**60.19**	**188**	P	**P**	**22 18 03.4**	**-1.3**
	0.8nm,1.0s,baz=6.4,slow=7.2,SNR=3.3						
YKA	**Yellowknife Ar**	**60.89**	**31**	P	**P**	**22 18 09.1**	**0.0**
	0.2nm,0.6s,baz=302,slow=7.2,SNR=3.9						
FINES	**FINESS Array B**	**66.34**	**332**	P	**P**	**22 18 44.5**	**-0.5**
	1.1nm,0.8s,baz=32,slow=8.2,SNR=2.7						
ULM	**Lac du Bonnet**	**76.64**	**34**	P	**P**	**22 19 47.4**	**+0.2**
	2.1nm,0.4s,baz=344,slow=2.6,SNR=3.0						

THE ***14*** *22:22:08.8, 42.°46N×26.°52E, h31km±27km, ML3.0/6, Error ellipse: s-maj=27.9km s-min=1.2km az=1.0*

SOF ***14*** *22:22:09.6, 42.°22N×26.°23E, h13km, MD2.7*

BEO ***14*** *22:22:10.4±0.6, 42.°23N×26.°18E, h0km, ML2.8/8*

CSEM ***14*** *22:22:10.3±0.1, 42.°18N×26.°18E, h2km, MD3.5, Error ellipse: s-maj=2.7km s-min=2.1km az=26.0*

DDA ***14*** *22:22:13.2, 42.°00N×26.°33E, h31km, MD3.3*

ISK ***14*** *22:22:15.3, 41.°85N×26.°48E, h7km, MD3.5*

ISC 14 22:22:09.6±1.1, 42.°18N±0.°01×26.°25E±0.°01, h2km±9km, n191, σ1^{s}41/233, 14C-7D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMB	**Yambol**	**0.38**	**41**	⇑*i*Pg	**Pg**	**22 22 17.2**	**+0.3**
JMB				*e*Sg	**Sg**	**22 22 22.1**	**+0.2**
JMB	**Yambol**	**0.38**	**41**	*i*Pg	**Pg**	**22 22 17.3**	**+0.3**
JMB	**Yambol**	**0.38**	**41**	*i*Pg	**Pg**	**22 22 17.3**	**+0.3**
JMB				*e*Sg	**Sg**	**22 22 22.1**	**+0.2**
EDRB	**Edirne**	**0.50**	**132**	*e*PG	**Pg**	**22 22 19.8**	**+0.6**
EDRB	**Edirne**	**0.50**	**132**	*e*Pg	**Pg**	**22 22 19.8**	**+0.6**
DIM	**Dimitrovgrad**	**0.55**	**256**	*i*Pg	**Pg**	**22 22 20.6**	**+0.5**
DIM	**Dimitrovgrad**	**0.55**	**256**	*i*Pg	**Pg**	**22 22 20.6**	**+0.5**
KDZ	**Kurdzhali**	**0.81**	**230**	*i*P	**Pb**	**22 22 26.8**	**+0.3**
KDZ				*i*Pg	**Pn**	**22 22 28.8**	**+0.7**
KDZ	**Kurdzhali**	**0.81**	**230**	*i*P	**Pb**	**22 22 26.8**	**+0.3**
SZH	**Strazhica**	**1.11**	**348**	*i*P	**Pg**	**22 22 30.7**	**-0.2**
SZH	**Strazhica**	**1.11**	**348**	*i*P	**Pg**	**22 22 30.7**	**-0.2**
PLD	**Plovdiv**	**1.15**	**267**	P	**Pg**	**22 22 30.7**	**-1.0**
PLD	**Plovdiv**	**1.15**	**267**	*e*Pg	**Pg**	**22 22 30.7**	**-1.0**
PLD				*e*Sg	**Sg**	**22 22 44.1**	**-2.5**
PLD	**Plovdiv**	**1.15**	**267**	*i*Pg	**Pg**	**22 22 31.4**	**-0.3**
PLD	**Plovdiv**	**1.15**	**267**	P	**Pg**	**22 22 30.7**	**-1.0**
PLD	**Plovdiv**	**1.15**	**267**	*i*Pg	**Pg**	**22 22 31.4**	**-0.3**
PLD				*e*Sg	**Sg**	**22 22 44.1**	**-2.5**
PVL	**Pavlikeni**	**1.23**	**327**	*i*P	**Pg**	**22 22 33.2**	**-0.1**
PVL	**Pavlikeni**	**1.23**	**327**	*i*P	**Pg**	**22 22 33.2**	**-0.1**
RZN	**Rozhen**	**1.24**	**247**	*i*Pg	**Pg**	**22 22 33.4**	**-0.1**
RZN	**Rozhen**	**1.24**	**247**	*i*Pg	**Pg**	**22 22 33.4**	**-0.1**
ALN	**Alexandroupoli**	**1.29**	**187**	P	**Pb**	**22 22 35.0**	**+0.4**
ALN				S	**Sn**	**22 22 54.9**	**+2.5**
ALN	**Alexandroupoli**	**1.29**	**187**	P	**Pb**	**22 22 35.0**	**+0.4**
ALN				S	**Sn**	**22 22 54.9**	**+2.5**
PRD	**Provadia**	**1.33**	**39**	*i*Pg	**Pn**	**22 22 34.3**	**-0.9**
PRD	**Provadia**	**1.33**	**39**	*i*Pg	**Pn**	**22 22 34.3**	**-0.9**
ENEZ	**Enez**	**1.44**	**183**	*e*PN	**Pb**	**22 22 37.6**	**+0.4**
ENEZ				*e*SN	**Sb**	**22 22 53.8**	**-2.2**
ENEZ	**Enez**	**1.44**	**183**	*e*Pn	**Pb**	**22 22 37.6**	**+0.4**
ENEZ				*e*Sn	**Sb**	**22 22 53.8**	**-2.2**
ERIK	**Erikli-Kesan**	**1.52**	**172**	*e*PN	**Pn**	**22 22 38.0**	**+0.2**
ERIK				*e*SN	**Sn**	**22 22 54.6**	**-3.5**
ERIK	**Erikli-Kesan**	**1.52**	**172**	*e*Pn	**Pn**	**22 22 38.0**	**+0.2**
ERIK				*e*Sn	**Sn**	**22 22 54.7**	**-3.5**
CRLT	**Corlu**	**1.53**	**133**	*e*PN	**Pb**	**22 22 38.5**	**-0.2**
CRLT				*e*SN	**Sn**	**22 22 55.5**	**-3.0**
CRLT	**Corlu**	**1.53**	**133**	*e*Pn	**Pb**	**22 22 38.5**	**-0.2**
CRLT				*e*Sn	**Sn**	**22 22 55.5**	**-3.0**
TKR	**Tekirdag**	**1.53**	**140**	*e*PN	**Pn**	**22 22 38.2**	**+0.2**
TKR	**Tekirdag**	**1.53**	**140**	*e*Pn	**Pn**	**22 22 38.2**	**+0.2**
PGB	**Panagyurishte**	**1.58**	**284**	*i*P	**Pn**	**22 22 38.9**	**+0.1**
PGB	**Panagyurishte**	**1.58**	**284**	*i*P	**Pn**	**22 22 38.9**	**+0.1**
MFT	**Murefte**	**1.59**	**150**	*e*PN	**Pn**	**22 22 39.2**	**+0.3**
MFT	**Murefte**	**1.59**	**150**	*e*Pn	**Pn**	**22 22 39.2**	**+0.3**
ZIMR		**1.61**	**337**	⇑*i*P	**Pb**	**22 22 40.0**	**-0.1**
ZIMR		**1.61**	**337**	S	**Sg**	**22 23 02.9**	**+1.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SART	**Tekirdag**	**1.65**	**154**	*i*P	**Pn**	**22 22 39.8**	**+0.2**
SART				*i*S	**Sg**	**22 23 03.2**	**+0.7**
SART	**Tekirdag**	**1.65**	**154**	*i*P	**Pn**	**22 22 39.8**	**+0.2**
SART				*i*S	**Sg**	**22 23 03.2**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.65**	**155**	*e*PN	**Pn**	**22 22 39.9**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.65**	**155**	*e*Pn	**Pn**	**22 22 39.9**	**+0.3**
CTYL	**Yal??k??y-??at**	**1.68**	**114**	*e*PN	**Pg**	**22 22 41.9**	**0.0**
CTYL	**Yal??k??y-??at**	**1.68**	**114**	*e*Pn	**Pg**	**22 22 41.9**	**0.0**
SLVT	**Silivri**	**1.75**	**122**	*e*PN	**Pb**	**22 22 42.1**	**-0.3**
SLVT	**Silivri**	**1.75**	**122**	*e*Pn	**Pb**	**22 22 42.2**	**-0.3**
KAVA	**Kavala**	**1.76**	**228**	P	**Pn**	**22 22 41.6**	**+0.6**
KAVA				S	**Sg**	**22 23 06.6**	**+0.6**
KAVA	**Kavala**	**1.76**	**228**	P	**Pn**	**22 22 41.6**	**+0.6**
KAVA				S	**Sg**	**22 23 06.6**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.79**	**174**	*e*PN	**Pn**	**22 22 42.1**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.79**	**174**	*e*Pn	**Pn**	**22 22 42.1**	**+0.6**
LPK	**Lapseki**	**1.85**	**168**	*e*PN	**Pn**	**22 22 43.1**	**+0.8**
LPK	**Lapseki**	**1.85**	**168**	*e*Pn	**Pn**	**22 22 43.1**	**+0.8**
MRMT	**Marmara Adasi**	**1.88**	**147**	*e*PN	**Pn**	**22 22 43.2**	**+0.5**
MRMT	**Marmara Adasi**	**1.88**	**147**	*e*Pn	**Pn**	**22 22 43.2**	**+0.5**
ELBA	**Catalca**	**1.94**	**122**	*i*P	**Pn**	**22 22 44.1**	**+0.6**
ELBA				*i*S	**Sn**	**22 23 07.4**	**-1.0**
ELBA	**Catalca**	**1.94**	**122**	*i*P	**Pn**	**22 22 44.1**	**+0.6**
ELBA				*i*S	**Sn**	**22 23 07.4**	**-1.0**
CTKS	**Kestanelik-??a**	**1.94**	**118**	*e*PN	**Pb**	**22 22 45.1**	**-0.5**
CTKS	**Kestanelik-??a**	**1.94**	**118**	*e*Pn	**Pb**	**22 22 45.1**	**-0.5**
KRBG	**Karabiga-Canak**	**1.95**	**156**	*e*PN	**Pn**	**22 22 44.7**	**+1.0**
KRBG	**Karabiga-Canak**	**1.95**	**156**	*e*Pn	**Pn**	**22 22 44.7**	**+1.0**
NVR	**Nevrokopi**	**1.97**	**246**	P	**Pn**	**22 22 44.1**	**+0.1**
NVR	**Nevrokopi**	**1.97**	**246**	P	**Pn**	**22 22 44.1**	**+0.1**
PSN	**Preselentsi**	**2.07**	**43**	*i*P	**Pn**	**22 22 44.9**	**-0.4**
PSN	**Preselentsi**	**2.07**	**43**	*i*P	**Pn**	**22 22 44.9**	**-0.4**
BGKT	**Bogazkoy**	**2.14**	**117**	*e*PN	**Pb**	**22 22 48.1**	**-1.0**
BGKT	**Bogazkoy**	**2.14**	**117**	*e*Pn	**Pb**	**22 22 48.1**	**-1.0**
MPEP	**Malo Peshtene**	**2.19**	**303**	*i*P	**Pg**	**22 22 52.1**	**+0.5**
BNT	**Bandirma**	**2.22**	**145**	*e*PN	**Pn**	**22 22 48.1**	**+0.7**
BNT	**Bandirma**	**2.22**	**145**	*e*Pn	**Pn**	**22 22 48.1**	**+0.7**
SRS	**Serrai**	**2.25**	**243**	P	**Pn**	**22 22 48.2**	**+0.3**
SRS				S	**Sb**	**22 23 18.8**	**-0.6**
SRS	**Serrai**	**2.25**	**243**	P	**Pn**	**22 22 48.2**	**+

VRI	**Vrincioaia**	**3.70**	**5**	⇑*i*P	**Pn**	**22 23 09.2**	**+1.4**
BORA	**Eskisehir**	**3.92**	**124**	*i* P	**Pn**	**22 23 10.9**	**-0.1**
BORA	**Eskisehir**	**3.92**	**124**	*i* P	**Pn**	**22 23 10.9**	**-0.1**
GDZ	**Gediz**	**3.95**	**140**	*i* P	**Pn**	**22 23 12.8**	**+1.5**
GDZ	**Gediz**	**3.95**	**140**	*i* P	**Pn**	**22 23 12.8**	**+1.5**
MANT	**Manisa**	**4.09**	**154**	*i* P	**Pn**	**22 23 13.7**	**+0.4**
MANT	**Manisa**	**4.09**	**154**	*i* P	**Pn**	**22 23 13.7**	**+0.4**
MDUB	**Mudurnu**	**4.10**	**113**	*e*PN	**Pn**	**22 23 16.4**	**+3.0**
MDUB	**Mudurnu**	**4.10**	**113**	*e*Pn	**Pn**	**22 23 16.4**	**+3.0**
ALT	**Altintas**	**4.29**	**135**	*e*PN	**Pn**	**22 23 17.8**	**+1.8**
ALT	**Altintas**	**4.29**	**135**	*e*Pn	**Pn**	**22 23 17.8**	**+1.8**
GRUS	**Gruza**	**4.40**	**295**	⇑*i*Pn	**Pn**	**22 23 17.7**	**+0.3**
GRUS				*e*Sg	**Sg**	**22 24 28.3**	**-2.6**
GRUS	**Gruza**	**4.40**	**295**	⇑*i*Pn	**Pn**	**22 23 17.7**	**+0.3**
GRUS				*e*Sg	**Sg**	**22 24 28.3**	**-2.6**
BZS	**Buzias**	**4.79**	**317**	*e*Pn	**Pn**	**22 23 20.7**	**-2.1**
BZS	**Buzias**	**4.79**	**317**	⇑*i*P	**Pn**	**22 23 20.8**	**-2.1**
BZS	**Buzias**	**4.79**	**317**	S	**Sb**	**22 24 36.6**	**+4.2**
BZS	**Buzias**	**4.79**	**317**	*e*Pn	**Pn**	**22 23 20.7**	**-2.1**
DIVS	**Divibare**	**4.96**	**295**	*e*Sn	**Sn**	**22 24 19.9**	**-3.2**
DIVS	**Divibare**	**4.96**	**295**	*e*Sn	**Sn**	**22 24 19.9**	**-3.2**
BBLS	**Lazići**	**5.29**	**291**	*e*Pn	**Pn**	**22 23 30.3**	**+0.6**
BBLS				*e*Sn	**Sn**	**22 24 28.2**	**-3.0**
BBLS	**Lazići**	**5.29**	**291**	*e*Pn	**Pn**	**22 23 30.3**	**+0.6**
BBLS				*e*Sn	**Sn**	**22 24 28.2**	**-3.0**

IDC ***14*** *22:23:00.6±1.4, 51.°94N×161.°23E, h0km, mb3.4/5, mb1 3.9/7, mb1mx3.5/29, mbtmp3.6/7, ML4.2/2, Error ellipse: s-maj=38.7km s-min=16.3km az=177.0*
MOS ***14*** *22:23:01.1±0.8, 51.°70N×161.°43E, h21km, mb4.4/3, Error ellipse: s-maj=17.4km s-min=9.5km az=96.2*
ISCJB ***14*** *22:23:02.5±0.6, 51.°69N±0.°04×161.°33E±0.°04, h30km, mb3.4/5, Error ellipse: s-maj=5.2km s-min=3.9km az=1.3*
KRSC ***14*** *22:23:02.9±1.0, 51.°72N×161.°21E, h40km±39km, ML4.3*
ISC 14 22:23:02.6±0.8, 51.°58N±0.°06×161.°36E±0.°04, h30km, n45, σ1s58/75, mb3.6/5, Off east of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.73**	**332**	PN	**Pn**	**22 23 29.5**	**-1.0**
SPN				S	**Sn**	**22 23 48.7**	**-2.8**
SPN	**Mys Shipunski**	**1.73**	**332**	P	**Pn**	**22 23 29.5**	**-1.0**
SPN				*i* S	**Sn**	**22 23 48.7**	**-2.8**
RUS	**Russkaya**	**1.96**	**297**	PN	**Pn**	**22 23 32.8**	**-0.9**
RUS				S	**Sn**	**22 23 54.6**	**-2.6**
RUS	**Russkaya**	**1.96**	**297**	P	**Pn**	**22 23 32.8**	**-0.9**
RUS				*i* S	**Sn**	**22 23 54.6**	**-2.6**
NLC	**Nalytchevo**	**2.01**	**323**	PN	**Pn**	**22 23 34.0**	**-0.5**
NLC				S	**Sn**	**22 23 56.8**	**-1.8**
NLC	**Nalytchevo**	**2.01**	**323**	*e*P	**Pn**	**22 23 34.0**	**-0.5**
NLC				*i* S	**Sn**	**22 23 56.8**	**-1.8**
MTVR	**Mutnovka**	**2.16**	**296**	*e*P	**Pn**	**22 23 36.0**	**-0.6**
MTVR				*i* S	**Sn**	**22 23 59.9**	**-2.6**
PET	**Petropavlovsk**	**2.20**	**312**	*e*PN	**Pn**	**22 23 36.5**	**-0.5**
PET				*e*S	**Sn**	**22 24 00.8**	**-2.4**
PET	comp=Z,93nm,0.6s			pmax	pmax		
PET	comp=E,489nm,0.8s			smax	smax		
PET	comp=N,417nm,0.5s			smax	smax		
PET	**Petropavlovsk**	**2.20**	**312**	*e*P	**Pn**	**22 23 36.6**	**-0.5**
PET				*i* S	**Sn**	**22 24 01.3**	**-1.9**
GRL	**Gorelyy**	**2.25**	**297**	*e*P	**Pn**	**22 23 37.9**	**0.0**
GRL				*i* S	**Sn**	**22 24 03.4**	**-1.2**
UGLR	**Uglovaya**	**2.25**	**317**	*e*P	**Pn**	**22 23 38.0**	**+0.1**
UGLR				*i* S	**Sn**	**22 24 03.5**	**-1.2**
SDLR	**Sedlovina**	**2.28**	**319**	P	**Pn**	**22 23 38.1**	**-0.1**
SDLR				*i* S	**Sn**	**22 24 03.7**	**-1.6**
ASAK	**Asacha**	**2.29**	**292**	P	**Pn**	**22 23 38.1**	**-0.2**
ASAK				*i* S	**Sn**	**22 24 03.9**	**-1.6**
SMAR	**Somma**	**2.30**	**318**	*e*P	**Pn**	**22 23 38.7**	**+0.1**
SMAR				*i* S	**Sn**	**22 24 05.1**	**-0.9**
AVH	**Avacha**	**2.33**	**317**	*e*P	**Pn**	**22 23 39.0**	**+0.1**
AVH				*i* S	**Sn**	**22 24 05.3**	**-1.2**
KRER	**Koryakskii**	**2.35**	**318**	P	**Pn**	**22 23 39.5**	**+0.2**
KRER				*i* S	**Sn**	**22 24 06.3**	**-0.9**
KOK	**Koryaka**	**2.39**	**317**	P	**Pn**	**22 23 40.0**	**+0.2**
KOK				*i* S	**Sn**	**22 24 07.3**	**-0.8**
PETK	**Petropavlovsk-**	**2.72**	**306**	*e*PN	**Pn**	**22 23 44.1**	**-0.1**
PETK	comp=Z,14nm,0.3s			pmax	pmax		
PETK	**Petropavlovsk-** comp=Z,14nm,0.3s,baz=124,slow=19,SNR=240	**2.72**	**306**	Pn	**Pn**	**22 23 44.0**	**-0.1**
PETK	comp=Z,20nm,0.3s,baz=90,slow=25,SNR=11			Sn	**Sn**	**22 24 14.7**	**-1.3**
APC	**Apacha**	**2.91**	**299**	*e*P	**Pn**	**22 23 47.1**	**+0.3**
APC				*i* S	**Sn**	**22 24 19.4**	**-1.4**
GNL	**Ganaly**	**2.97**	**317**	P	**Pn**	**22 23 48.3**	**+0.6**
GNL				*i* S	**Sn**	**22 24 21.9**	**-0.5**
MKZ	**Mys Kozlova**	**2.99**	**4**	PN	**Pn**	**22 23 47.3**	**-0.5**
MKZ				S	**Sn**	**22 24 19.6**	**-3.0**
MKZ	**Mys Kozlova**	**2.99**	**4**	*e*P	**Pn**	**22 23 47.3**	**-0.5**
MKZ				*i* S	**Sn**	**22 24 19.6**	**-3.0**
SKR	**Severo-Kuril's**	**3.42**	**257**	*e*PN	Pn	22 23 50.0	-3.9
SKR	comp=Z,80nm,0.4s			pmax	pmax		
SKR	**Severo-Kuril's**	**3.42**	**257**	*e*P	**Pn**	**22 23 53.0**	**-0.9**
SKR				*i* S	**Sn**	**22 24 29.3**	**-4.1**
TUMR	**Tumrok**	**3.78**	**349**	*e*P	**Pn**	**22 23 59.9**	**+1.1**
TUMR				*i* S	**Sn**	**22 24 41.9**	**-0.4**
KMNR	**Kamenistaya**	**4.23**	**351**	*e*P	**Pn**	**22 24 06.9**	**+1.8**
KMNR				*i* S	**Sn**	**22 24 53.2**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**4.38**	**355**	*e*P	**Pn**	**22 24 08.3**	**+1.2**
BZGR				*i* S	**Sn**	**22 24 56.2**	**-1.0**
BZMR	**Bezymyannaya**	**4.39**	**354**	*e*P	**Pn**	**22 24 08.0**	**+0.7**
BZWR	**Bezymyannyi-We**	**4.42**	**354**	*e*P	**Pn**	**22 24 09.4**	**+1.7**
BZWR				*e*S	**Sn**	**22 24 57.6**	**-0.6**
KIRR	**Kirishev**	**4.42**	**353**	*e*P	**Pn**	**22 24 09.3**	**+1.6**
KIRR				*i* S	**Sn**	**22 24 57.6**	**-0.5**
KPT	**Kopyto**	**4.44**	**352**	*e*P	**Pn**	**22 24 09.0**	**+1.1**
KPT				*i* S	**Sn**	**22 24 58.0**	**-0.6**
BKI	**Bering**	**4.56**	**35**	PN	**Pn**	**22 24 09.0**	**-0.4**
BKI	**Bering**	**4.56**	**35**	*e*P	**Pn**	**22 24 09.0**	**-0.4**
BKI				*i* S	**Sn**	**22 24 57.2**	**-4.1**
KBG	**Krutoberegovo**	**4.75**	**9**	PN	**Pn**	**22 24 12.6**	**+0.6**
KBG	**Krutoberegovo**	**4.75**	**9**	*e*P	**Pn**	**22 24 12.6**	**+0.6**
KBG				*i* S	**Sn**	**22 25 04.0**	**-2.0**
SRDR	**Sredinnyy**	**4.84**	**349**	*e*P	**Pn**	**22 24 14.1**	**+0.7**
FX1	**Attu Island--F** comp=Z,26nm,0.3s,baz=303,slow=7.0,SNR=187	**7.37**	**75**	Pn	**Pn**	**22 24 49.1**	**+1.2**
FX1	comp=Z,16nm,0.3s,baz=284,slow=23,SNR=8.9			Sn	**Sn**	**22 26 06.3**	**-4.2**
BILL	**Bilibino**	**16.68**	**6**	*i* P	**P**	**22 26 54.7**	**-1.2**
BILL	comp=Z,4.0nm,1.1s			pmax	pmax		
MJA0	**Matsu Arr-Jizo**	**22.27**	**237**	*e*P	P	22 28 02.6	+5.5
MJA0	comp=Z,1.0nm,0.5s			pmax	pmax		
MJAR	**Matsushiro Arr** comp=Z,1.3nm,0.5s,baz=17,slow=10,SNR=4.0	**22.29**	**237**	P	**P**	**22 28 00.8**	**+3.5**
ILAR	**Eielson Array** comp=Z,0.2nm,0.6s,baz=249,slow=8.3,SNR=3.9	**29.35**	**43**	P	**P**	**22 29 01.9**	**-0.5**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.8s,baz=295,slow=8.6,SNR=3.3	**43.76**	**42**	P	**P**	**22 31 05.2**	**+0.4**
PDAR	**Pinedale Array** comp=Z,0.4nm,0.7s,baz=329,slow=3.4,SNR=1.9	**57.58**	**61**	P	**P**	**22 32 50.6**	**+1.0**
TXAR	**Lajitas Array** comp=Z,0.5nm,0.6s,baz=312,slow=6.7,SNR=3.8	**70.51**	**67**	P	**P**	**22 34 15.0**	**+0.5**

THE ***14*** *22:40:48.8, 42.°54N×26.°06E, h0km±9km, ML2.6/2, Error ellipse: s-maj=25.2km s-min=1.1km az=353.0*
DDA ***14*** *22:40:49.6, 42.°27N×26.°78E, h20km, MD3.1*
SOF ***14*** *22:40:49.3, 42.°22N×26.°25E, h14km, MD2.5*
BEO ***14*** *22:40:49.4±0.7, 42.°14N×26.°25E, h0km, ML2.5/8*
CSEM ***14*** *22:40:50.5±0.1, 42.°09N×26.°14E, h2km, MD3.3, Error ellipse: s-maj=3.4km s-min=2.1km az=31.0*
ISK ***14*** *22:40:53.0, 41.°90N×26.°43E, h5km, MD3.3*
ISC 14 22:40:49.1±1.1, 42.°17N±0.°02×26.°24E±0.°02, h5km±9km, n109, σ1s28/136, 13C-3D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMB	**Yambol**	**0.39**	**41**	P	**Pg**	**22 40 56.6**	**0.0**
JMB	**Yambol**	**0.39**	**41**	⇑*i*Pg	**Pg**	**22 40 56.7**	**+0.1**
JMB				*e*Sg	**Sg**	**22 41 01.6**	**-0.1**
JMB	**Yambol**	**0.39**	**41**	*i* Pg	**Pg**	**22 40 56.8**	**+0.1**
JMB	**Yambol**	**0.39**	**41**	P	**Pg**	**22 40 56.6**	**0.0**
EDRB	**Edirne**	**0.50**	**131**	*e*PG	**Pg**	**22 40 58.7**	**+0.1**
EDRB	**Edirne**	**0.50**	**131**	*e*Pg	**Pg**	**22 40 58.7**	**+0.1**
DIM	**Dimitrovgrad**	**0.54**	**257**	*i* Pg	**Pg**	**22 41 00.1**	**+0.6**
DIM	**Dimitrovgrad**	**0.54**	**257**	*i* Pg	**Pg**	**22 41 00.1**	**+0.6**
KDZ	**Kurdzhali**	**0.81**	**230**	*i* P	**Pn**	**22 41 06.5**	**-0.7**
KDZ				*i* Pg	**Pb**	**22 41 08.6**	**+3.0**
KDZ	**Kurdzhali**	**0.81**	**230**	*i* P	**Pn**	**22 41 06.5**	**-0.7**
SZH	**Strazhica**	**1.12**	**348**	*i* P	**Pg**	**22 41 10.8**	**+0.3**
PLD	**Plovdiv**	**1.15**	**267**	P	**Pg**	**22 41 09.7**	**-1.3**
PLD	**Plovdiv**	**1.15**	**267**	*e*Pg	**Pg**	**22 41 10.3**	**-0.7**
PLD				*e*Sg	**Sg**	**22 41 25.2**	**-0.7**
PLD	**Plovdiv**	**1.15**	**267**	P	**Pg**	**22 41 09.7**	**-1.3**
PLD	**Plovdiv**	**1.15**	**267**	*e*Pg	**Pg**	**22 41 10.3**	**-0.7**
PLD				*e*Sg	**Sg**	**22 41 25.2**	**-0.7**
RZN	**Rozhen**	**1.24**	**247**	*i* P	**Pb**	**22 41 13.2**	**+0.2**
RZN	**Rozhen**	**1.24**	**247**	*i* P	**Pb**	**22 41 13.2**	**+0.2**
PVL	**Pavlikeni**	**1.24**	**328**	*i* P	**Pg**	**22 41 12.9**	**0.0**
PRD	**Provadia**	**1.34**	**39**	*i* Pg	**Pn**	**22 41 13.9**	**-0.5**
ENEZ	**Enez**	**1.44**	**183**	*e*PN	**Pg**	**22 41 16.8**	**+0.2**
ENEZ				*e*SN	**Sb**	**22 41 33.8**	**-1.1**
ENEZ	**Enez**	**1.44**	**183**	*e*Pn	**Pg**	**22 41 16.8**	**+0.2**
ENEZ				*e*Sn	**Sb**	**22 41 33.8**	**-1.1**
ERIK	**Erikli-Kesan**	**1.51**	**172**	*e*PN	**Pb**	**22 41 17.5**	**-0.1**
ERIK	**Erikli-Kesan**	**1.51**	**172**	*e*Pn	**Pb**	**22 41 17.5**	**-0.1**
CRLT	**Corlu**	**1.53**	**132**	*e*PN	**Pb**	**22 41 17.9**	**0.0**
CRLT				*e*SN	**Sn**	**22 41 35.9**	**-1.5**
CRLT	**Corlu**	**1.53**	**132**	*e*Pn	**Pb**	**22 41 18.0**	**0.0**
PGB	**Panagyurishte**	**1.58**	**285**	*i* Pg	**Pg**	**22 41 19.7**	**+0.3**
MFT	**Murefte**	**1.59**	**150**	*e*PN	**Pb**	**22 41 18.8**	**-0.2**
MFT				*e*SN	**Sn**	**22 41 38.0**	**-0.9**
MFT	**Murefte**	**1.59**	**150**	*e*Pn	**Pb**	**22 41 18.8**	**-0.2**
MFT				*e*Sn	**Sn**	**22 41 38.1**	**-0.9**
ZIMR		**1.62**	**337**	⇓*i*P	**Pg**	**22 41 20.0**	**-0.1**
ZIMR		**1.62**	**337**	S	**Sg**	**22 41 42.7**	**+1.6**
SART	**Tekirdag**	**1.64**	**154**	*i* P	**Pn**	**22 41 19.3**	**+0.6**
SART				*i* S	**Sg**	**22 41 43.4**	**+1.6**
SART	**Tekirdag**	**1.64**	**154**	*i* P	**Pn**	**22 41 19.3**	**+0.6**
SART				*i* S	**Sg**	**22 41 43.4**	**+1.6**
RKY	**Sarkoy-Tekirda**	**1.64**	**154**	*e*PN	**Pn**	**22 41 19.4**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.64**	**154**	*e*Pn	**Pn**	**22 41 19.4**	**+0.7**
CTYL	**Yal??k??y-??at**	**1.68**	**114**	*e*PN	**Pg**	**22 41 21.2**	**-0.1**
CTYL	**Yal??k??y-??at**	**1.68**	**114**	*e*Pn	**Pg**	**22 41 21.2**	**-0.1**
SLVT	**Silivri**	**1.75**	**122**	*e*PN	**Pb**	**22 41 22.2**	**+0.5**
SLVT	**Silivri**	**1.75**	**122**	*e*Pn	**Pb**	**22 41 22.2**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.78**	**174**	*e*PN	**Pn**	**22 41 21.2**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.78**	**174**	*e*Pn	**Pn**	**22 41 21.2**	**+0.7**
LPK	**Lapseki**	**1.84**	**168**	*e*PN	**Pb**	**22 41 23.0**	**-0.2**
LPK	**Lapseki**	**1.84**	**168**	*e*Pn	**Pb**	**22 41 23.0**	**-0.2**
MRMT	**Marmara Adasi**	**1.87**	**146**	*e*PN	**Pb**	**22 41 23.3**	**-0.5**
MRMT	**Marmara Adasi**	**1.87**	**146**	*e*Pn	**Pb**	**22 41 23.3**	**-0.5**
ELBA	**Catalca**	**1.93**	**121**	*i* P	**Pn**	**22 41 23.4**	**+0.7**
ELBA	**Catalca**	**1.93**	**121**	*i* P	**Pn**	**22 41 23.4**	**+0.7**
CTKS	**Kestanelik-??a**	**1.94**	**118**	*e*PN	**Pb**	**22 41 24.9**	**+0.1**
CTKS	**Kestanelik-??a**	**1.94**	**118**	*e*Pn	**Pb**	**22 41 24.9**	**+0.1**
KRBG	**Karabiga-Canak**	**1.95**	**155**	*e*PN	**Pb**	**22 41 24.2**	**-0.8**
KRBG	**Karabiga-Canak**	**1.95**	**155**	*e*Pn	**Pb**	**22 41 24.2**	**-0.8**
NVR	**Nevrokopi**	**1.96**	**246**	P	**Pn**	**22 41 23.6**	**+0.6**
NVR	**Nevrokopi**	**1.96**	**246**	P	**Pn**	**22 41 23.6**	**+0.6**
MMB	**Musomiste**	**1.96**	**254**	*i* P	**Pb**	**22 41 26.0**	**+0.6**
BGKT	**Bogazkoy**	**2.14**	**117**	*e*PN	**Pb**	**22 41 27.8**	**-0.5**
BGKT	**Bogazkoy**	**2.14**	**117**	*e*Pn	**Pb**	**22 41 27.8**	**-0.5**
MPEP	**Malo Peshtene**	**2.19**	**304**	*i* Pg	**Pg**	**22 41 31.9**	**+0.9**
BNT	**Bandirma**	**2.21**	**145**	*e*PN	**Pn**	**22 41 28.1**	**+1.6**
BNT	**Bandirma**	**2.21**	**145**	*e*Pn	**Pn**	**22 41 28.1**	**+1.6**
SRS	**Serrai**	**2.25**	**243**	P	**Pn**	**22 41 27.7**	**+0.7**
SRS				S	**Sb**	**22 41 57.8**	**-0.5**
SRS	**Serrai**	**2.25**	**243**	P	**Pn**	**22 41 27.7**	**+0.7**
SRS				S	**Sb**	**22 41 57.8**	**-0.5**
VTS	**Vitosha**	**2.29**	**282**	⇑*i*P	**Pn**	**22 41 28.4**	**+0.8**
VTS	**Vitosha**	**2.29**	**282**	S	**Sn**	**22 41 56.0**	**-0.2**
VTS	**Vitosha**	**2.29**	**282**	⇑*i*P	**Pn**	**22 41 28.4**	**+0.8**
VTS				*e*Sn	**Sn**	**22 41 56.2**	**0.0**
BOZC	**Bozcaada**	**2.33**	**184**	*i* P	**Pn**	**22 41 29.2**	**+1.1**
ISK	**Istanbul-Kandi**	**2.38**	**117**	*e*PN	**Pb**	**22 41 31.7**	**-0.8**
ISK	**Istanbul-Kandi**	**2.38**	**117**	*e*Pn	**Pb**	**22 41 31.7**	**-0.8**
GONE	**Gonen-Balikesi**	**2.39**	**152**	*e*PN	**Pn**	**22 41 30.3**	**+1.4**
GONE	**Gonen-Balikesi**	**2.39**	**152**	*e*Pn	**Pn**	**22 41 30.3**	**+1.4**
KCTX	**Karacabey (Bur**	**2.48**	**139**	*e*PN	**Pn**	**22 41 32.0**	**+1.7**
KCTX	**Karacabey (Bur**	**2.48**	**139**	*e*Pn	**Pn**	**22 41 32.0**	**+1.7**
BUY	**Buyukada**	**2.53**	**120**	*e*PN	**Pb**	**22 41 33.2**	**-1.8**
BUY	**Buyukada**	**2.53**	**120**	*e*Pn	**Pb**	**22 41 33.2**	**-1.8**
ARMT	**Armutlu**	**2.54**	**128**	*e*PN	**Pn**	**22 41 32.9**	**+1.9**
ARMT	**Armutlu**	**2.54**	**128**	*e*Pn	**Pn**	**22 41 32.9**	**+1.9**
SOH	**Sokhos**	**2.55**	**239**	P	**Pn**	**22 41 32.0**	**+0.8**
SOH				S	**Sb**	**22 42 06.9**	**-0.2**
SOH	**Sokhos**	**2.55**	**239**	P	**Pn**	**22 41 32.0**	**+0.8**
SOH				S	**Sb**	**22 42 06.9**	**-0.2**
BALY	**Balya**	**2.64**	**156**	*i* P	**Pn**	**22 41 33.8**	**+1.3**
BALY				*i* S	**Sn**	**22 42 05.7**	**+0.8**
BALY	**Balya**	**2.64**	**156**	*i* P	**Pn**	**22 41 33.8**	**+1.3**
BALY				*i* S	**Sn**	**22 42 05.7**	**+0.8**
SILT	**Sile**	**2.75**	**111**	*e*PN	**Pb**	**22 41 36.9**	**-1.8**
SILT	**Sile**	**2.75**	**111**	*e*Pn	**Pb**	**22 41 36.9**	**-1.8**
TIRR	**Tirgusor**	**2.78**	**34**	⇑*i*P	**Pb**	**22 41 37.9**	**-1.4**
TIRR	**Tirgusor**	**2.78**	**34**	⇑*i*P	**Pb**	**22 41 37.9**	**-1.4**
TIRR				S	**Sb**	**22 42 13.8**	**+0.2**
BALB	**Balikesir**	**2.82**	**153**	*e*PN	**Pn**	**22 41 36.5**	**+1.7**
BALB	**Balikesir**	**2.82**	**153**	*e*Pn	**Pn**	**22 41 36.5**	**+1.7**
ZAPS	**Zavoj**	**2.88**	**294**	*e*Pn	**Pn**	**22 41 36.7**	**+1.0**
ZAPS				*e*Sn	**Sn**	**22 42 12.0**	**+1.3**
IZI	**Iznik**	**3.05**	**126**	*e*PN	**Pn**	**22 41 40.6**	**+2.6**
IZI	**Iznik**	**3.05**	**126**	*e*Pn	**Pn**	**22 41 40.6**	**+2.6**
DST	**Dursunbey**	**3.13**	**144**	*e*PN	**Pn**	**22 41 41.2**	**+2.0**
DST	**Dursunbey**	**3.13**	**144**	*e*Pn	**Pn**	**22 41 41.2**	**+2.0**
CFR	**Carcaliu**	**3.31**	**24**	⇓*i*P	**Pn**	**22 41 44.3**	**+2.8**
CFR	**Carcaliu**	**3.31**	**24**	⇓*i*P	**Pn**	**22 41 44.3**	**+2.8**
CFR				S	**Sb**	**22 42 28.4**	**-0.3**
MLR	**Muntele Rosu**	**3.33**	**356**	⇑*i*P	**Pb**	**22 41 46.4**	**-2.2**
MLR	**Muntele Rosu**	**3.33**	**356**	⇑*i*P	**Pb**	**22 41 46.4**	**-2.2**
BARS	**Barje**	**3.33**	**283**	*e*Pn	**Pn**	**22 41 43.2**	**+1.3**
BARS				*e*Sg	**Sg**	**22 42 37.1**	**+0.9**
BARS	**Barje**	**3.33**	**283**	*e*Pn	**Pn**	**22 41 43.2**	**+1.3**
BARS				*e*Sg	**Sg**	**22 42 37.1**	**+0.9**
PLOR	**Plostina**	**3.69**	**4**	⇑*i*P	**Pn**	**22 41 49.8**	**+3.0**
PLOR	**Plostina**	**3.69**	**4**	⇑*i*P	**Pn**	**22 41 49.8**	**+3.0**
VRI	**Vrincioaia**	**3.71**	**5**	⇑*i*P	**Pn**	**22 41 50.1**	**+3.0**
VRI	**Vrincioaia**	**3.71**	**5**	⇑*i*P	**Pn**	**22 41 50.1**	**+3.0**
GRUS	**Gruza**	**4.40**	**295**	⇑*i*Pn	**Pn**	**22 41 57.1**	**+0.6**
GRUS				*e*Sg	**Sg**	**22 42 40.0**	**-2.3**
GRUS	**Gruza**	**4.40**	**295**	⇑*i*Pn	**Pn**	**22 41 57.1**	**+0.6**
GRUS				*e*Sg	**Sg**	**22 43 08.0**	**-2.3**
BZS	**Buzias**	**4.80**	**317**	*e*Sn	**Sn**	**22 43 00.0**	**+2.0**
BZS	**Buzias**	**4.80**	**317**	*e*Sn	**Sn**	**22 43 00.0**	**+2.0**
DIVS	**Divibare**	**4.96**	**295**	*e*Pn	**Pn**	**22 42 04.8**	**+0.5**
DIVS				*e*Sn	**Sn**	**22 43 00.2**	**-1.9**
DIVS	**Divibare**	**4.96**	**295**	*e*Pn	**Pn**	**22 42 04.8**	**+0.5**
DIVS				*e*Sn	**Sn**	**22 43 00.2**	**-1.9**
BBLS	**Lazići**	**5.29**	**291**	*e*Sn	**Sn**	**22 43 10.6**	**+0.4**
BBLS	**Lazići**	**5.29**	**291**	*e*Sn	**Sn**	**22 43 10.6**	**+0.4**
CRVS	**Cervenica-Dubn**	**7.52**	**335**	*e*PN	**Pn**	**22 42 38.7**	**-0.7**
VYHS	**Vyhne**	**8.19**	**323**	*e*PN	**Pn**	**22 42 47.1**	**-1.5**

IGQ 14 22:43:21.8, 1.°53S×81.°29W, h10km±10km, Mb4.3, Ms4.1, 6C-4D, Error ellipse: s-maj=8.3km s-min=3.9km az=5.3, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.74**	**50**	⇓S	Sg	22 43 44.4	-1.4
CHIS	**Cerro-Chispas-**	**0.74**	**50**	⇓P	Pg	22 43 36.0	-0.1
PECV	**Mancha de Ca P**	**1.45**	**59**	⇑S	Sn	22 44 00.7	-6.6
PECV	**Mancha de Ca P**	**1.45**	**59**	⇑P	Pn	22 43 43.8	-4.4
JAMA	**Jama**	**1.66**	**41**	P	Pn	22 43 51.9	+0.7
JAMA	**Jama**	**1.66**	**41**	S	Sn	22 44 11.1	-1.6
IGUA	**Igualata**	**2.65**	**89**	P	Pn	22 44 07.1	+1.7
BBIL	**Ulba Tungurahu**	**2.80**	**88**	P	Pn	22 44 10.3	-2.1
BMAS	**Trigal station**	**2.81**	**90**	P	Pn	22 44 08.6	+1.3
JUI6	**Juive**	**2.82**	**88**	P	Pn	22 44 09.8	+2.4
ARRY	**Arrayan**	**2.83**	**90**	⇑S	Sn	22 44 42.9	+0.7
ARRY	**Arrayan**	**2.83**	**90**	⇑P	Pn	22 44 08.7	+1.0
RETU	**Refugio**	**2.84**	**88**	P	Pb	22 44 11.0	-2.4
PAT1	**Patacocha**	**2.85**	**90**	P	Pn	22 44 09.1	+1.1
BPAT	**Tungurahua Vol**	**2.85**	**90**	S	Sn	22 44 43.0	0.0
BPAT	**Tungurahua Vol**	**2.85**	**90**	P	Pn	22 44 09.1	+1.0
RUN5	**Runtun**	**2.87**	**88**	P	Pb	22 44 11.0	-2.5
BRUN	**Tungurahua Vol**	**2.88**	**88**	P	Pn	22 44 10.7	+2.5
BULB	**Ulba Tungurahu**	**2.88**	**88**	P	Pn	22 44 09.3	+1.0
BULB	**Ulba Tungurahu**	**2.88**	**88**	S	Sn	22 44 44.2	+0.8
BNAS	**Cotopaxi Volca**	**2.94**	**73**	⇓S	Sb	22 44 53.6	+2.2
BNAS	**Cotopaxi Volca**	**2.94**	**73**	⇓P	Pn	22 44 12.1	+2.8
BMOR	**Cotopaxi Volca**	**2.94**	**74**	P	Pb	22 44 12.3	-2.7
PISA	**Pisayambo**	**2.94**	**81**	P	Pn	22 44 11.3	+2.0
NAS2	**Nasa**	**2.95**	**73**	P	Pb	22 44 12.9	-2.4
MOV1	**Cotopaxi Vol s**	**2.96**	**74**	P	Pb	22 44 12.7	-2.8
BREF	**Cotopaxi Volca**	**2.97**	**73**	⇑P	Pb	22 44 13.3	-2.4
JUA2	**San Juan 2**	**2.98**	**64**	S	Sb	22 44 49.9	-2.8
JUA2	**San Juan 2**	**2.98**	**64**	P	Pn	22 44 10.8	+1.0
TERV	**Terraza Guagua**	**3.00**	**63**	P	Pn	22 44 12.8	+2.5
BVC2	**Cotopaxi Volca**	**3.00**	**73**	P	Pn	22 44 12.1	+1.8
PINO	**Pino**	**3.01**	**63**	P	Pn	22 44 10.5	+0.1
GGP	**Refugio Guagua**	**3.01**	**63**	P	Pn	22 44 10.8	+0.5
BTAM	**Cotopaxi Volca**	**3.01**	**74**	⇑P	Pb	22 44 13.6	-2.8
PITA	**Cotopaxi Volc**	**3.02**	**71**	P	Pn	22 44 12.7	+2.4
VC1	**Cotopaxi 1**	**3.02**	**73**	P	Pn	22 44 13.0	+2.6
TAMB	**Tambo**	**3.04**	**74**	P	Pb	22 44 14.4	-2.3
COV1	**Cotopaxi Volc**	**3.07**	**74**	P	Pn	22 44 13.4	+2.1
CATE	**Catamayo**	**3.08**	**142**	P	Pn	22 44 12.2	+1.3
OTAV	**Otavalo**	**3.34**	**58**	P	Pn	22 44 14.5	-0.2
CAYR	**Refugio C

LTK	Loutraki	1.65	48	P		Pn	22 52 07.0	-0.5
DSF	Desfina	1.73	30	P		Pn	22 52 08.1	-0.5
DSF	Desfina	1.73	30	P		Pn	22 52 08.1	-0.5
NAIG	Nisos Aigina	1.85	63	*e*PB		Pn	22 52 11.2	+1.0
NAIG	Nisos Aigina	1.85	63	*e*Pb		Pn	22 52 11.2	+1.0
LKD2	Lefkada island	1.96	342	P		Pn	22 52 12.6	+0.9
LKD2	Lefkada island	1.96	342	*e*PN		Pn	22 52 11.3	-0.4
LKD2	Lefkada island	1.96	342	*e*Pn		Pn	22 52 11.3	-0.4
LKD2	Lefkada island	1.96	342	P		Pn	22 52 12.6	+0.9
EVR	Evrytania	2.02	9	P		Pn	22 52 12.6	0.0
EVR	Evrytania	2.02	9	*e*PN		Pn	22 52 12.7	+0.1
EVR	Evrytania	2.02	9	P		Pn	22 52 12.6	0.0
AXAR	Agios Charalam	2.09	28	P		Pn	22 52 13.3	-0.2
AXAR	Agios Charalam	2.09	28	P		Pn	22 52 13.3	-0.2
ATH	Athens Observa	2.11	59	*e*PN		Pn	22 52 14.0	+0.3
ATH	Athens Observa	2.11	59	*e*Pn		Pn	22 52 14.0	+0.3
LKR	Lokris	2.13	36	P		Pn	22 52 13.6	-0.5
LKR	Lokris	2.13	36	*e*PN		Pn	22 52 14.5	+0.4
LKR	Lokris	2.13	36	P		Pn	22 52 13.6	-0.5
LKR	Lokris	2.13	36	*e*Pn		Pn	22 52 14.5	+0.4
MAKR	Makrakomi, Fth	2.16	15	P		Pn	22 52 14.8	+0.3
MAKR	Makrakomi, Fth	2.16	15	P		Pn	22 52 14.8	+0.3
AGG	Agios Georgios	2.22	19	*e*PN		Pn	22 52 15.5	+0.2
AGG	Agios Georgios	2.22	19	*e*Pn		Pn	22 52 15.5	+0.2
PTL	Penteli	2.25	59	*e*PN		Pn	22 52 15.7	0.0
PTL	Penteli	2.25	59	*e*Pn		Pn	22 52 15.7	0.0
KARN	Karanos	2.53	126	P		Pn	22 52 19.2	-0.3
KARN	Karanos	2.53	126	P		Pn	22 52 19.2	-0.3
THL	Klokotos Trika	2.68	10	*e*PN		Pn	22 52 22.1	+0.5
THL	Klokotos Trika	2.68	10	*e*Pn		Pn	22 52 22.1	+0.5
NEO	Neokhori	2.77	30	*e*PN		Pn	22 52 23.0	+0.1
NEO	Neokhori	2.77	30	*e*Pn		Pn	22 52 23.0	+0.1
XOR	Xorichti	2.81	29	P		Pn	22 52 23.2	-0.3
XOR	Xorichti	2.81	29	P		Pn	22 52 23.2	-0.3
AOS	Alonnisos	2.97	40	*e*PN		Pn	22 52 25.6	0.0
AOS	Alonnisos	2.97	40	*e*Pn		Pn	22 52 25.6	0.0
FNA	Florina	3.86	360	*e*PN		Pn	22 52 37.6	-0.2
FNA	Florina	3.86	360	*e*Pn		Pn	22 52 37.6	-0.2
GRG	Griva	4.10	10	*e*PN		Pn	22 52 41.0	-0.2
GRG	Griva	4.10	10	*e*Pn		Pn	22 52 41.0	-0.2
SOH	Sokhos	4.18	21	*e*PN		Pn	22 52 42.2	0.0
SOH	Sokhos	4.18	21	*e*Pn		Pn	22 52 42.2	0.0

NOU **14** *23:13:34.5±0.9, 20.°24S×169.°85E, h30km, MD2.9, ML4.0*
ISCJB **14** *23:13:35.2±1.3, 20.°38S±0.°09×169.°63E±0.°07, h131km±9km, mb4.2/16, Error ellipse: s-maj=15.0km s-min=11.0km az=7.3*
IDC **14** *23:13:36.7±3.0, 20.°40S×169.°67E, h136km±25km, mb4.1/14, mb1 4.2/16, mb1mx4.1/25, mbtmp4.1/16, MS3.2/2, Ms1 3.2/2, ms1mx2.8/27, Error ellipse: s-maj=18.0km s-min=15.5km az=49.0*
NEIC **14** *23:13:36.9±1.8, 20.°39S×169.°63E, h139km±15km, mb4.4/3, Error ellipse: s-maj=15.1km s-min=12.1km az=211.0*
AUST **14** *23:13:41.4±4.6, 20.°53S×169.°84E, h184km, Error ellipse: s-maj=4.8km s-min=2.4km az=248.0*

ISC 14 23:13:36.4±0.9, **20.°40S**±0.°09×**169.°65E**±0.°07, **h134**km±6km, **n78**, σ**1°13/83**, **mb4.3**/16, **1C-1D**, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.11**	**235**	*e*P		**Pn**	**Pn**	**23 14 23.3**	**-1.3**
BAYA				*e*S		**Sn**	**Sn**	**23 15 00.4**	**-1.4**
BAYA				AMP				23 15 05.1	
	comp=Z,125nm,0.0s								
DZM	**Mont Dzumac**	**3.42**	**240**	*e*P		**Pn**	**Pn**	**23 14 27.9**	**-0.8**
DZM				*e*S		**Sn**	**Sn**	**23 15 07.1**	**-2.0**
DZM				AMP				23 15 21.0	
	comp=Z,6μm,0.3s								
DZM	**Mont Dzumac**	**3.42**	**240**	*e*Pn		**Pn**	**Pn**	**23 14 28.4**	**-0.2**
DZM				*e*Sn		**Sn**	**Sn**	**23 15 06.7**	**-2.4**
DZM	**Mont Dzumac**	**3.42**	**240**	P		**Pn**	**Pn**	**23 14 28.5**	**-0.2**
	comp=Z,48nm,0.3s,baz=53,slow=18,SNR=1354								
DZM				S		**Sn**	**Sn**	**23 15 07.6**	**-1.6**
	comp=Z,143nm,0.3s,baz=138,slow=23,SNR=27								
NORM	**Noumea**	**3.46**	**238**	*e*P		**Pn**	**Pn**	**23 14 29.1**	**-0.1**
NORM				*e*S		**Sn**	**Sn**	**23 15 08.8**	**-1.2**
NORM				AMP				23 15 11.7	
	comp=Z,1μm,5.4s								
NOUC	**Port Laguerre**	**3.55**	**241**	*e*P		**Pn**	**Pn**	**23 14 31.0**	**+0.7**
NOUC				*e*S		**Sn**	**Sn**	**23 15 12.8**	**+0.7**
NOUC				AMP				23 15 18.2	
	comp=Z,329nm,8.7s								
NFK	**Norfolk Island**	**8.74**	**190**	P		**Pn**	**Pn**	**23 15 41.1**	**+1.3**
	baz=8.7,SNR=3.5								
EIDS	**Eidsvold**	**17.80**	**250**	P		**Pn**	**Pn**	**23 17 37.7**	**+1.9**
	baz=18,SNR=10								
AFI	**Afiamalu**	**18.88**	**73**	LR		LR	LR	23 22 32.1	
	comp=Z,57nm,19.3s,baz=37,slow=28								
URZ	**Urewera**	**18.93**	**162**	P		**Pn**	**Pn**	**23 17 48.2**	**-0.8**
URZ	**Urewera**	**18.93**	**162**	P		**Pn**	**Pn**	**23 17 48.2**	**-0.8**
	comp=Z,1.4nm,0.3s,baz=336,slow=1.2,SNR=7.2								
ARMA	**Armidale**	**19.07**	**235**	P		**Pn**	**Pn**	**23 17 51.8**	**+0.9**
	baz=19,SNR=19								
RMQ	**Roma**	**20.09**	**248**	P		Pn	Pn	23 18 02.6	-0.1
	baz=20,SNR=34								
CTA	**Charters Tower**	**21.95**	**267**	P		**P**	**P**	**23 18 20.3**	**+0.8**
CTA	**Charters Tower**	**21.95**	**267**	P		**P**	**P**	**23 18 20.3**	**+0.8**
	comp=Z,18nm,0.5s,baz=90,slow=12,SNR=28								
CTA				LR		LR	LR	23 24 42.9	
	comp=Z,78nm,18.6s,baz=44,slow=30								
CNB	**Canberra Magne**	**23.22**	**226**	P		**P**	**P**	**23 18 33.6**	**+1.8**
	baz=23,SNR=13								
YNG	**Young**	**23.34**	**229**	P		**P**	**P**	**23 18 35.3**	**+2.4**
	baz=23,SNR=6.6								
MTSU	**Mount Surprise**	**24.01**	**271**	P		**P**	**P**	**23 18 40.8**	**+1.7**
	baz=24,SNR=25								
QLP	**Quilpie**	**24.08**	**250**	P		**P**	**P**	**23 18 40.6**	**+1.1**
	baz=24,SNR=25								
CMSA	**Cobar Meteorol**	**24.17**	**238**	P		**P**	**P**	**23 18 41.4**	**+1.1**
	baz=24,SNR=80								
PMG	**Port Moresby**	**24.29**	**293**	P		**P**	**P**	**23 18 42.3**	**+0.7**
PMG	**Port Moresby**	**24.29**	**293**	P		**P**	**P**	**23 18 42.3**	**+0.7**
	comp=Z,21nm,0.8s,baz=99,slow=4.9,SNR=5.0								
STKA	**Stephens Creek**	**27.57**	**240**	P		**P**	**P**	**23 19 11.9**	**+0.9**
STKA	**Stephens Creek**	**27.57**	**240**	P		**P**	**P**	**23 19 11.9**	**+0.9**
	comp=Z,11nm,0.6s,baz=88,slow=10,SNR=28								
STKA	**Stephens Creek**	**27.57**	**240**	P		**P**	**P**	**23 19 12.2**	**+1.2**
	baz=28,SNR=21								
QIS	**Mount Isa**	**28.13**	**264**	S		**S**	**S**	**23 23 50.3**	**-1.3**
	baz=28,SNR=4.9								
BBOO	**Buckleboo**	**32.34**	**241**	P		**P**	**P**	**23 19 53.6**	**+0.5**
	baz=32,SNR=15								
WRAB	**Tennant Creek**	**33.10**	**265**	*e*P		**P**	**P**	**23 19 58.4**	**-1.5**
	comp=Z,5.6nm,0.8s								
WRA	**Warramunga Arr**	**33.11**	**265**	P		**P**	**P**	**23 19 59.0**	**-0.9**
WRA	**Warramunga Arr**	**33.11**	**265**	P		**P**	**P**	**23 19 59.0**	**-0.9**
	comp=Z,2.8nm,0.3s,baz=98,slow=7.4,SNR=18								
AS31	**Alice Springs**	**33.24**	**258**	*e*P		**P**	**P**	**23 20 00.9**	**-0.2**
ASAR	**Alice Springs**	**33.24**	**258**	P		**P**	**P**	**23 20 01.2**	**+0.1**
ASAR				pP		**pP**	**pP**	**23 20 32.2**	**+2.2**
ASAR	**Alice Springs**	**33.24**	**258**	P		**P**	**P**	**23 20 01.2**	**+0.1**
	comp=Z,22nm,0.6s,baz=87,slow=9.3,SNR=206								
ASAR				pP		**pP**	**pP**	**23 20 32.2**	**+2.2**
	comp=Z,2.8nm,0.6s,baz=86,slow=8.8,SNR=2.4								
MTN	**Manton Dam**	**37.59**	**275**	P		**P**	**P**	**23 20 38.5**	**+0.2**
	baz=38,SNR=20								
KNRA	**Kununurra**	**39.09**	**270**	P		**P**	**P**	**23 20 51.0**	**+0.2**
	baz=39,SNR=3.1								
KNRA				S		S	S	23 27 04.5	+24
	baz=39,SNR=3.6								
FAKI	**Fak Fak**	**40.38**	**291**	P		**P**	**P**	**23 21 01.7**	**+0.2**
	baz=41,SNR=5.2								
FITZ	**Fitzroy Crossi**	**41.52**	**265**	P		**P**	**P**	**23 21 11.5**	**+0.7**
FITZ	**Fitzroy Crossi**	**41.52**	**265**	P		**P**	**P**	**23 21 11.5**	**+0.7**
	comp=Z,16nm,0.6s,baz=95,slow=8.7,SNR=46								
FITZ	**Fitzroy Crossi**	**41.52**	**265**	P		**P**	**P**	**23 21 11.6**	**+0.8**
	baz=42,SNR=22								
SWI	**Sorong**	**42.24**	**293**	S		**S**	**S**	**23 27 24.9**	**-2.5**
	baz=42,SNR=3.2								
PALU	**Palau**	**44.23**	**305**	S		**S**	**S**	**23 27 58.4**	**+2.0**
	baz=44,SNR=5.7								
MEEK	**Meekatharra**	**46.96**	**252**	P		**P**	**P**	**23 21 54.1**	**0.0**
	baz=47,SNR=9.3								
KLBR	**Kellerberrin**	**47.57**	**245**	P		**P**	**P**	**23 21 58.5**	**-0.3**
	baz=48,SNR=18								
NWAO	**Narrogin (SRO)**	**48.03**	**244**	*e*P		**P**	**P**	**23 22 00.4**	**-1.9**
	comp=Z,8.1nm,0.6s								
NWAO				*e*sP		**sP**	**sP**	**23 22 46.7**	**-1.2**
NWAO	**Narrogin (SRO)**	**48.03**	**244**	P		**P**	**P**	**23 22 02.0**	**-0.3**
	comp=Z,4.9nm,0.7s,baz=108,slow=8.0,SNR=8.9								
WSI	**Waingapu**	**48.68**	**275**	S		S	S	23 28 44.5	-15
	baz=49,SNR=5.4								
MORW	**Morawa**	**49.10**	**249**	P		**P**	**P**	**23 22 10.5**	**-0.1**
	baz=49,SNR=4.0								
VNDA	**Vanda**	**57.29**	**182**	P		**P**	**P**	**23 23 10.1**	**+0.5**
VNDA	**Vanda**	**57.29**	**182**	P		**P**	**P**	**23 23 10.1**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=350,slow=8.6,SNR=5.1								
MJAR	**Matsushiro Arr**	**63.95**	**332**	P		**P**	**P**	**23 23 55.1**	**-0.2**
MJAR	**Matsushiro Arr**	**63.95**	**332**	P		**P**	**P**	**23 23 55.1**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=170,slow=7.7,SNR=3.9								
QSPA	**South Pole Qui**	**69.66**	**180**	P		**P**	**P**	**23 24 30.9**	**-0.4**
QSPA	**South Pole Qui**	**69.66**	**180**	P		**P**	**P**	**23 24 30.9**	**-0.4**
	comp=Z,3.2nm,0.7s,baz=3.4,slow=1.3,SNR=18								
CMAR	**Chiang Mai Arr**	**79.33**	**294**	P		**P**	**P**	**23 25 28.9**	**+1.2**
CMAR	**Chiang Mai Arr**	**79.33**	**294**	P		**P**	**P**	**23 25 28.9**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=141,slow=4.6,SNR=3.7								
YBH	**Yreka Blue Hor**	**87.86**	**44**	P		**P**	**P**	**23 26 11.8**	**+0.9**
YBH	**Yreka Blue Hor**	**87.86**	**44**	P		**P**	**P**	**23 26 11.8**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=323,slow=5.1,SNR=3.4								
ULN	**Ulaanbaatar**	**88.02**	**323**	*e*P		**P**	**P**	**23 26 11.9**	**+0.3**
	comp=Z,1.2nm,0.7s								
NVAR	**Mina Array Bea**	**89.28**	**48**	P		**P**	**P**	**23 26 18.4**	**+0.5**
NVAR	**Mina Array Bea**	**89.28**	**48**	P		**P**	**P**	**23 26 18.4**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=225,slow=9.5,SNR=10								
ILAR	**Eielson Array**	**91.22**	**17**	P		**P**	**P**	**23 26 23.9**	**-2.0**
ILAR	**Eielson Array**	**91.22**	**17**	P		**P**	**P**	**23 26 23.9**	**-2.0**
	comp=Z,0.3nm,0.5s,baz=236,slow=5.1,SNR=7.9								
BOSA	**Boshof**	**120.36**	**216**	PKP		**PKPdf**	**PKPdf**	**23 32 12.1**	**-0.6**
BOSA	**Boshof**	**120.36**	**216**	PKP		**PKPdf**	**PKPdf**	**23 32 12.1**	**-0.6**
	comp=Z,4.6nm,1.2s,baz=169,slow=5.2,SNR=3.1								
ARCES	**ARCESS Array B**	**126.28**	**345**	PKP		**PKPdf**	**PKPdf**	**23 32 21.3**	**-1.3**
ARCES	**ARCESS Array B**	**126.28**	**345**	PKP		**PKPdf**	**PKPdf**	**23 32 21.3**	**-1.3**
	comp=Z,1.4nm,0.8s,baz=90,slow=2.4,SNR=4.7								
BDFB	**Brasilia**	**128.50**	**131**	PKP		**PKPdf**	**PKPdf**	**23 32 27.2**	**-1.3**
BDFB	**Brasilia**	**128.50**	**131**	PKP		**PKPdf**	**PKPdf**	**23 32 27.2**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=172,slow=7.1,SNR=3.6								
FINES	**FINESS Array B**	**131.80**	**337**	PKP		**PKPdf**	**PKPdf**	**23 32 32.6**	**-0.6**
FINES	**FINESS Array B**	**131.80**	**337**	PKP		**PKPdf**	**PKPdf**	**23 32 32.6**	**-0.6**
	comp=Z,3.4nm,1.0s,baz=96,slow=2.8,SNR=3.2								
BRG	**Berggiesshubel**	**144.08**	**334**	*e*P		PKPbc		23 32 54.3	-0.1
	comp=Z,4.6nm,0.6s								
CLL	**Collm**	**144.13**	**335**	*i* PKPdf		**PKPab**	**PKPab**	**23 32 53.9**	**-0.1**
	comp=Z,5.0nm,0.6s								
CONA	**Conrad Observa**	**145.33**	**329**	⇓*i* PKPab		**PKPab**	**PKPab**	**23 32 59.3**	**+0.5**
	comp=Z,3.8nm,0.8s								
GERES	**GERESS Array B**	**145.69**	**331**	PKPbc		**PKPbc**	**PKPbc**	**23 32 59.4**	**-0.2**
GERES				pPKPbc		pPKPbc	pPKPbc	23 33 31.4	-3.6
GERES	**GERESS Array B**	**145.69**	**331**	PKPbc		**PKPbc**	**PKPbc**	**23 32 59.4**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=34,slow=3.3,SNR=25								
GERES				pPKPbc		pPKPbc	pPKPbc	23 33 31.4	-3.6
	comp=Z,1.1nm,0.8s,baz=35,slow=4.9,SNR=3.7								
FETA	**Feichten**	**148.38**	**332**	⇑*i* PKPbc		**PKPbc**	**PKPbc**	**23 33 07.0**	**-0.3**
	comp=Z,1.4nm,0.6s								
TORD	**Torodi Ar. Bea**	**166.40**	**240**	PKPab		**PKPab**	**PKPab**	**23 34 28.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**166.40**	**240**	PKPab		**PKPab**	**PKPab**	**23 34 28.6**	**-0.3**
	comp=Z,0.6nm,1.0s,baz=95,slow=4.8,SNR=2.5								

ISCJB **14** *23:17:29.9±0.5, 23.°42N±0.°02×122.°10E±0.°02, h20km±4km, Error ellipse: s-maj=3.8km s-min=2.4km az=42.2*
TAP **14** *23:17:31.5, 23.°44N×122.°07E, h41km, ML3.5, C*
JMA **14** *23:17:32.2±0.3, 23.°46N×122.°15E, h66km, M2.8*

ISC 14 23:17:30.1±1.2, **23.°43N**±0.°02×**122.°07E**±0.°03, **h20**km±5km, **n47**, σ**0°69/89**, **6C-1D**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.56**	**300**	*e*P		**Pn**	**Pn**	**23 17 42.4**	**-0.4**
	baz=299								
TEGC				*e*S		**Sb**	**Sb**	**23 17 50.2**	**+1.4**
	baz=299								
EHY	**Hungye**	**0.69**	**277**	⇑*i* P		**Pn**	**Pn**	**23 17 44.3**	**-0.4**
	baz=282								
EHY				*e*S		**Sb**	**Sb**	**23 17 53.7**	**+1.1**
	baz=282								
HWA	**Hwalien**	**0.69**	**322**	*e*P		**Pb**	**Pb**	**23 17 44.0**	**+0.5**
	baz=328								
HWA				*e*S		**Sb**	**Sb**	**23 17 53.5**	**+0.9**
	baz=328								
ESL	**Shilin**	**0.70**	**304**	*e*P		**Pb**	**Pb**	**23 17 43.7**	**+0.1**
	baz=299								
ESL				*e*S		**Sb**	**Sb**	**23 17 52.4**	**-0.4**
	baz=299								
TWF1	**Yuli**	**0.71**	**264**	⇑*i* P		**Pn**	**Pn**	**23 17 44.6**	**-0.4**
	baz=255								
TWF1				*i* S		**Sn**	**Sn**	**23 17 54.9**	**-0.5**
	baz=255								
CHKT	**Chengkung**	**0.72**	**243**	⇑P		**Pb**	**Pb**	**23 17 44.4**	**+0.4**
	baz=236								
CHKT				S		**Sb**	**Sb**	**23 17 53.4**	**-0.1**
	baz=236								
TWD	**Chiawan**	**0.78**	**326**	⇓*i* P		**Pb**	**Pb**	**23 17 45.2**	**+0.2**
	baz=327								
TWD				*e*S		**Sb**	**Sb**	**23 17 54.9**	**-0.2**
	baz=327								
ELDTW	**Lidau**	**1.00**	**256**	P		**Pb**	**Pb**	**23 17 48.5**	**-0.2**
	baz=247								
ELDTW				*e*S		**Sb**	**Sb**	**23 18 00.3**	**-1.1**
	baz=247								
WHF	**Hehuan Shan**	**1.03**	**314**	P		**Pb**	**Pb**	**23 17 49.2**	**-0.2**
	baz=314								
WHF				*e*S		**Sb**	**Sb**	**23 18 01.5**	**-1.1**
	baz=314								
ENA	**Nanau**	**1.04**	**343**	P		**Pb**	**Pb**	**23 17 49.2**	**-0.2**
	baz=337								
ENA				*e*S		**Sb**	**Sb**	**23 18 02.2**	**-0.4**
	baz=337								
TTN	**Taitung**	**1.08**	**232**	*e*P		**Pn**	**Pn**	**23 17 50.0**	**0.0**
	baz=231								
TTN				*e*S		**Sb**	**Sb**	**23 18 03.5**	**-0.2**
	baz=231								
TWT	**Tachien**	**1.16**	**315**	*e*P		**Pb**	**Pb**	**23 17 51.9**	**+0.4**
	baz=315								
TWT				*e*S		**Sb**	**Sb**	**23 18 05.2**	**-1.0**
	baz=315								
ALS	**Alishan**	**1.16**	**274**	⇑*i* P		**Pb**	**Pb**	**23 17 52.3**	**+0.6**
	baz=281								
ALS				S		**Sb**	**Sb**	**23 18 06.5**	**0.0**
	baz=281								
SMLT	**Sun Moon Lake**	**1.16**	**293**	⇑*i* P		**Pb**	**Pb**	**23 17 51.7**	**+0.1**
	baz=293								
SMLT				*e*S		**Sn**	**Sn**	**23 18 06.6**	**0.0**
	baz=293								
NNS	**Nan Shan**	**1.19**	**328**	P		**Pn**	**Pn**	**23 17 51.7**	**0.0**
	baz=319								
NNS				*e*S		**Sb**	**Sb**	**23 18 06.2**	**-0.9**
	baz=319								
TWC	**Suao**	**1.19**	**350**	P		**Pb**	**Pb**	**23 17 52.0**	**0.0**
TWC				*e*S		**Sb**	**Sb**	**23 18 06.6**	**-0.4**
TYC	**Yuchr**	**1.21**	**293**	*e*P		**Pb**	**Pb**	**23 17 52.1**	**-0.1**
	baz=293								
TYC				S		**Sn**	**Sn**	**23 18 07.6**	**+0.1**
	baz=293								
CHN5	**Tsauling**	**1.29**	**278**	⇑*i* P		**Pb**	**Pb**	**23 17 54.2**	**+0.6**
	baz=283								
CHN5				*e*S		**Sb**	**Sb**	**23 18 10.4**	**+0.6**
	baz=283								
ENTT	**Nioudou**	**1.29**	**339**	P		**Pb**	**Pb**	**23 17 53.2**	**-0.4**
	baz=340								
ENTT				*e*S		**Sn**	**Sn**	**23 18 09.0**	**-0.7**
	baz=340								
ECL	**Taimali**	**1.32**	**231**	*e*P		**Pn**	**Pn**	**23 17 52.9**	**-0.4**
	baz=241								
ECL				*e*S		**Sn**	**Sn**	**23 18 08.5**	**-1.8**
	baz=241								
TWE	**Neicheng**	**1.34**	**344**	*e*P		**Pn**	**Pn**	**23 17 53.8**	**+0.2**
	baz=345								
TWE				*e*S		**Sn**	**Sn**	**23 18 10.4**	**-0.4**
	baz=345								
YOJ	**Yonaguni jima**	**1.34**	**40**	P		**Pb**	**Pb**	**23 17 54.5**	**0.0**
YOJ				S		**Sn**	**Sn**	**23 18 10.4**	**-0.5**
WTP	**Ta-pu**	**1.35**	**263**	*e*P		**Pb**	**Pb**	**23 17 55.0**	**+0.4**
	baz=262								
WTP				*e*S		**Sb**	**Sb**	**23 18 11.7**	**+0.2**
	baz=262								
CHN4	**Tsaushan**	**1.36**	**267**	*e*P		**Pb**	**Pb**	**23 17 55.0**	**+0.2**
	baz=267								
CHN4				*e*S		**Sb**	**Sb**	**23 18 12.3**	**+0.5**
	baz=267								
NSK	**Sanguang**	**1.40**	**333**	P		**Pn**	**Pn**	**23 17 54.9**	**+0.3**
	baz=333								
NSK				*e*S		**Sn**	**Sn**	**23 18 10.8**	**-1.7**
	baz=333								
EGS		**1.42**	**355**	P		**Pb**	**Pb**	**23 17 55.5**	**-0.3**
	baz=6.0								
EGS				*e*S		**Sb**	**Sb**	**23 18 13.6**	**+0.1**
	baz=6.0								
CHN1	**Nanshi**	**1.44**	**261**	*e*P		**Pb**	**Pb**	**23 17 56.7**	**+0.5**
	baz=260								
CHN1				*e*S		**Sb**	**Sb**	**23 18 15.0**	**+1.0**
	baz=260								
TWK	**Hsinying**	**1.46**	**264**	*e*P		**Pb**	**Pb**	**23 17 56.3**	**-0.3**
	baz=264								
TWK				*e*S		**Sb**	**Sb**	**23 18 15.4**	**+0.7**
	baz=264								
LAY	**Lan-yu**	**1.46**	**199**	*e*P		**Pn**	**Pn**	**23 17 54.4**	**-0.9**
	baz=199								
LAY				*e*S		**Sn**	**Sn**	**23 18 11.8**	**-2.1**
	baz=199								
TCU	**Taichung**	**1.46**	**300**	*e*P		**Pb**	**Pb**	**23 17 57.3**	**+0.7**
	baz=299								
TWQ1	**Liyutan**	**1.50**	**308**	*e*P		**Pb**	**Pb**	**23 17 57.6**	**+0.4**
	baz=319								
TWQ1				*e*S		**Sb**	**Sb**	**23 18 15.5**	**-0.3**
	baz=319								
EAST	**Anshuo**	**1.53**	**228**	P		**Pn**	**Pn**	**23 17 56.2**	**-0.1**
	baz=234								
EAST				*e*S		**Sn**	**Sn**	**23 18 13.9**	**-1.8**
	baz=234								
NSTT	**Nanjuang**	**1.55**	**321**	*e*P		**Pb**	**Pb**	**23 17 58.0**	**0.0**
	baz=321								
NSTT				*e*S		**Sn**	**Sn**	**23 18 16.2**	**+0.3**
	baz=321								
TWB1	**Santiao Chiao**	**1.57**	**357**	*e*P		**Pn**	**Pn**	**23 17 57.0**	**+0.2**
	baz=358								
TWB1				*e*S		**Sn**	**Sn**	**23 18 16.7**	**+0.1**
	baz=358								
TWM1	**Shoushan**	**1.63**	**249**	*e*P		**Pb**	**Pb**	**23 18 00.2**	**+0.8**
	baz=248								
NWF	**Wu-fen Shan**	**1.66**	**351**	*e*P		**Pb**	**Pb**	**23 17 59.5**	**-0.5**
	baz=351								
NWF				*e*S		**Sn**	**Sn**	**23 18 19.3**	**+0.5**
	baz=351								
SCZT	**Fangliau**	**1.70**	**232**	*e*P		**Pb**	**Pb**	**23 18 00.8**	**+0.2**
	baz=228								
SCZT				*e*S		**Sn**	**Sn**	**23 18 20.2**	**+0.5**
	baz=228								
HATJ	**Hateruma jima**	**1.71**	**68**	P		**Pn**	**Pn**	**23 17 59.1**	**+0.4**
HATJ				S		**Sn**	**Sn**	**23 18 19.4**	**-0.5**
IRIF	**Iriomote-Funau**	**1.77**	**59**	P		**Pn**	**Pn**	**23 18 00.2**	**+0.7**
IRIF				S		**Sn**	**Sn**	**23 18 21.8**	**+0.4**
TWS1	**Kuangyinshan**	**1.77**	**340**	*e*P		**Pb**	**Pb**	**23 18 01.1**	**-0.7**
	baz=341								
TSEB	**Hengchuen, Pin**	**1.86**	**216**	*e*P		**Pb**	**Pb**	**23 18 03.6**	**+0.2**
	baz=224								
TSEB				*e*S		**Sn**	**Sn**	**23 18 24.6**	**+0.8**
	baz=224								
TWK1	**Hengchun**	**1.88**	**219**	*e*P		**Pn**	**Pn**	**23 18 02.2**	**+1.1**
	baz=225								
TWK1				*e*S		**Sn**	**Sn**	**23 18 23.8**	**-0.5**
	baz=225								
JKRS	**Kuro-shima**	**1

IDC ***14*** *23:26:08.6±2.1, 63°.03N×150°.75W, h87km±19km, mb3.6/9, mb1 3.7/13, mb1mx3.5/30, mbtmp3.6/13, Error ellipse: s-maj=22.7km s-min=16.5km az=107.0*
NEIC ***14*** *23:26:10.1, 62°.95N×150°.50W, h95km, mb3.9/2, After AEIC.*
NEIC Felt at Talkeetna.
ISC 14 23:26:09.9±0.6**, 62°.98N**±0°.04×**150°.45W**±0°.04**, h102**km±5km**, n98, σ1s11**/113**, mb4.2**/11**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUR	**Hurricane**	**0.37**	**90**	P	**Pn**	**23 26 24.9**	**-0.2**
TRF	**Thorofare Moun**	**0.48**	**9**	P	**Pn**	**23 26 25.3**	**-0.7**
TRF				S	**Sn**	**23 26 37.6**	**-0.4**
TRAP	**Trapper Creek**	**0.65**	**171**	P	**Pn**	**23 26 26.6**	**-0.4**
PPLA	**Purkeypile**	**0.80**	**265**	P	**Pn**	**23 26 28.3**	**-0.2**
PPLA				S	**Sn**	**23 26 41.8**	**-0.8**
RND	**Reindeer**	**0.84**	**59**	P	**Pn**	**23 26 29.1**	**+0.2**
RND				S	**Sn**	**23 26 43.1**	**-0.1**
MCK	**McKinley**	**1.02**	**41**	P	**Pn**	**23 26 31.0**	**+0.3**
MCK				S	**Sn**	**23 26 47.5**	**+1.1**
DHY	**Denali Highway**	**1.41**	**85**	P	**Pn**	**23 26 35.2**	**-0.1**
PMR	**Palmer**	**1.52**	**155**	P	**Pn**	**23 26 35.9**	**-0.6**
SML	**Sawmill**	**1.53**	**139**	*e*Pn	**Pn**	**23 26 36.9**	**+0.2**
SML				*e*Sn	**Sn**	**23 26 57.1**	**+0.1**
STLK	**Strandline Lak**	**1.62**	**204**	P	**Pn**	**23 26 37.2**	**-0.6**
NEA	**Nenana**	**1.72**	**20**	P	**Pn**	**23 26 39.1**	**+0.2**
WRH	**Wood River Hil**	**1.83**	**34**	P	**Pn**	**23 26 40.5**	**+0.1**
BGL	**Barrier Glacie**	**1.95**	**209**	P	**Pn**	**23 26 41.9**	**0.0**
SPU	**Mount Spurr**	**1.95**	**203**	P	**Pn**	**23 26 41.2**	**-0.8**
CKL	**Chakachamna La**	**2.00**	**207**	P	**Pn**	**23 26 41.9**	**-0.6**
CCB	**Clear Creek Bu**	**2.05**	**34**	P	**Pn**	**23 26 43.2**	**+0.1**
MLY	**Manley**	**2.07**	**357**	P	**Pn**	**23 26 43.8**	**+0.4**
HDA	**Harding Lake**	**2.12**	**46**	P	**Pn**	**23 26 44.4**	**+0.3**
MDM	**Murphy Dome**	**2.22**	**25**	P	**Pn**	**23 26 45.7**	**+0.3**
DDM	**Donnelly Dome**	**2.22**	**66**	P	**Pn**	**23 26 46.2**	**+0.7**
COLA	**College**	**2.23**	**30**	P	**Pn**	**23 26 45.7**	**+0.3**
PAX	**Paxson**	**2.28**	**88**	P	**Pn**	**23 26 46.9**	**+0.7**
ILAR	**Eielson Array**	**2.40**	**40**	P	**Pn**	**23 26 47.6**	**0.0**
ILAR				S	**Sn**	**23 27 15.9**	**-0.6**
ILAR	**Eielson Array**	**2.40**	**40**	P	**Pn**	**23 26 47.6**	**0.0**
	49nm,0.3s,baz=220,slow=14,SNR=1543						
ILAR				S	**Sn**	**23 27 15.9**	**-0.6**
	33nm,0.3s,baz=214,slow=29,SNR=13						
IL1	**Eielson Array**	**2.40**	**40**	P	**Pn**	**23 26 47.8**	**+0.1**
GLM	**Gilmore Dome**	**2.43**	**32**	P	**Pn**	**23 26 48.5**	**+0.4**
SLKM	**Skilak Lake**	**2.48**	**177**	P	**Pn**	**23 26 48.8**	**0.0**
HARP	**HAARP**	**2.51**	**101**	P	**Pn**	**23 26 49.9**	**+0.8**
TT01	**Tatalina**	**2.55**	**271**	P	**Pn**	**23 26 48.8**	**-0.9**
DFR	**Drift River**	**2.62**	**205**	P	**Pn**	**23 26 50.4**	**-0.3**
VLZ	**Valdez**	**2.68**	**132**	P	**Pn**	**23 26 50.0**	**-1.4**
RSO	**Redoubt South**	**2.75**	**204**	*e*Pn	**Pn**	**23 26 51.4**	**-1.1**
RSO				*e*Sn	**Sn**	**23 27 23.3**	**-2.0**
DIV	**Divide**	**2.88**	**128**	P	**Pn**	**23 26 52.9**	**-1.3**
SEW	**Seward**	**2.92**	**170**	P	**Pn**	**23 26 53.9**	**-0.7**
DOT	**Dot Lake**	**2.96**	**74**	P	**Pn**	**23 26 55.2**	**0.0**
SVW2	**Sparrevohn**	**3.06**	**234**	P	**Pn**	**23 26 55.7**	**-0.8**
MENT	**Mentasta**	**3.08**	**88**	*e*Pn	**Pn**	**23 26 57.1**	**+0.4**
MENT				*e*Sn	**Sn**	**23 27 36.7**	**+3.9**
BRLK	**Bradley Lake**	**3.23**	**184**	P	**Pn**	**23 26 58.5**	**-0.2**
EYAK	**Cordova Ski Ar**	**3.31**	**135**	P	**Pn**	**23 26 59.0**	**-0.7**
PRP	**Porcupine Dome**	**3.34**	**38**	P	**Pn**	**23 27 01.0**	**+0.7**
IM3	**Indian Mountai**	**3.34**	**336**	P	**Pn**	**23 27 00.3**	**+0.2**
OPT	**Oil Point**	**3.59**	**203**	P	**Pn**	**23 27 03.9**	**+0.2**
VRDI	**Verde Repeater**	**3.73**	**115**	P	**Pn**	**23 27 04.7**	**-0.9**
RAGM	**Ragged Mountai**	**3.79**	**131**	*e*Pn	**Pn**	**23 27 05.1**	**-1.1**
MCARA	**McCarthy VSAT**	**3.83**	**111**	P	**Pn**	**23 27 06.7**	**-0.1**
AUP	**Augustine Pinn**	**3.90**	**203**	P	**Pn**	**23 27 08.1**	**+0.3**
AUW	**Augustine West**	**3.90**	**203**	P	**Pn**	**23 27 07.6**	**-0.1**
BCA3	**Beaver Creek A**	**3.95**	**85**	P	**Pn**	**23 27 08.1**	**-0.4**
MID	**Middleton Isla**	**4.08**	**149**	P	**Pn**	**23 27 10.2**	**+0.1**
COLD	**Coldfoot**	**4.27**	**1**	P	**Pn**	**23 27 13.3**	**+0.7**
BALM	**Baldy**	**4.29**	**113**	P	**Pn**	**23 27 12.1**	**-0.9**
KIAG	**Kiagna River**	**4.34**	**115**	P	**Pn**	**23 27 12.5**	**-1.3**
EGAK	**Eagle**	**4.49**	**62**	*e*Pn	**Pn**	**23 27 16.1**	**+0.5**
EGAK				*e*Sn	**Sn**	**23 28 02.0**	**-4.7**
BARN	**Barnard Glacie**	**4.57**	**111**	P	**Pn**	**23 27 16.2**	**-0.7**
GRNC	**Granite Creek**	**4.70**	**115**	P	**Pn**	**23 27 17.5**	**-1.1**
DAWY	**Dawson**	**5.07**	**73**	P	**Pn**	**23 27 23.6**	**+0.1**
BM3	**Burnt Mountain**	**5.09**	**26**	P	**Pn**	**23 27 24.1**	**+0.3**
KAKN	**Katmai Knife C**	**5.21**	**208**	P	**Pn**	**23 27 25.6**	**0.0**
KELA	**Mount Kelaz**	**5.24**	**212**	P	**Pn**	**23 27 26.0**	**+0.1**
KABU	**Katmai Buttres**	**5.29**	**209**	P	**Pn**	**23 27 26.8**	**+0.2**
KCE	**Katmai Mt Cerb**	**5.29**	**208**	P	**Pn**	**23 27 26.3**	**-0.2**
KDAK	**Kodiak Island**	**5.32**	**192**	P	**Pn**	**23 27 25.0**	**-1.9**
KDAK	**Kodiak Island**	**5.32**	**192**	P	**Pn**	**23 27 24.9**	**-1.9**
	2.4nm,0.3s,baz=43,slow=9.7,SNR=14						
KDAK				S	Sn	23 28 20.1	-6.7
	11nm,0.3s,baz=140,slow=23,SNR=19						
KABR	**Katmai Barrier**	**5.35**	**207**	P	**Pn**	**23 27 27.0**	**-0.4**
SAMH	**Samovar Hills**	**5.43**	**117**	P	**Pn**	**23 27 28.6**	**0.0**
OHAK	**Old Harbor**	**5.94**	**195**	*e*Pn	**Pn**	**23 27 33.5**	**-1.9**
OHAK				*e*Sn	Sn	23 28 35.0	-7.0
PNL	**Peninsula**	**6.27**	**117**	P	**Pn**	**23 27 38.6**	**-1.2**
HYT	**Haines Junctio**	**6.49**	**104**	P	**Pn**	**23 27 41.6**	**-1.2**
ANNW	**Aniakchak Nort**	**7.17**	**216**	P	**Pn**	**23 27 49.7**	**-2.4**
CHGN	**Chignik**	**7.81**	**215**	*e*Pn	**Pn**	**23 27 59.8**	**-0.9**
TNA	**Tin City**	**8.02**	**297**	*e*Pn	**Pn**	**23 28 04.5**	**+1.0**
TNA				*e*Sn	**Sn**	**23 29 29.8**	**-2.6**
INK	**Inuvik**	**8.78**	**45**	P	**Pn**	**23 28 14.4**	**+0.7**
INK				S	**Sn**	**23 29 49.5**	**-1.3**
INK	**Inuvik**	**8.78**	**45**	P	**Pn**	**23 28 14.4**	**+0.7**
	0.7nm,0.3s,baz=240,slow=16,SNR=37						
INK				S	**Sn**	**23 29 49.5**	**-1.3**
	0.2nm,0.3s,baz=228,slow=16,SNR=3.0						
GAMB	**Gambell**	**9.56**	**284**	*e*Pn	**Pn**	**23 28 25.7**	**+1.3**
	1.7nm,0.6s						
YKA	**Yellowknife Ar**	**16.30**	**76**	P	**Pn**	**23 29 51.9**	**-0.6**
YKA	**Yellowknife Ar**	**16.30**	**76**	P	**Pn**	**23 29 51.9**	**-0.6**
	0.2nm,0.3s,baz=283,slow=10,SNR=16						
FX1	**Attu Island--F**	**21.49**	**259**	P	**P**	**23 30 52.1**	**+2.0**
FX1	**Attu Island--F**	**21.49**	**259**	P	**P**	**23 30 52.1**	**+2.0**
	22nm,1.0s,baz=37,slow=1.6,SNR=3.2						
RES	**Resolute Bay**	**22.14**	**36**	*e*P	**P**	**23 30 57.2**	**+0.5**
	1.1nm,0.4s						
RES	**Resolute Bay**	**22.14**	**36**	P	**P**	**23 30 57.9**	**+1.1**
	0.9nm,0.4s,baz=253,slow=13,SNR=9.9						
TXAR	**Lajitas Array**	**45.03**	**116**	P	**P**	**23 34 16.9**	**+1.7**
TXAR				pP	**pP**	**23 34 37.0**	**-2.0**
TXAR	**Lajitas Array**	**45.03**	**116**	P	**P**	**23 34 16.9**	**+1.7**
	0.2nm,0.5s,baz=317,slow=8.7,SNR=2.6						
TXAR				pP	**pP**	**23 34 37.1**	**-2.0**
	0.2nm,0.5s,baz=335,slow=7.6,SNR=2.4						
ARCES	**ARCESS Array B**	**47.74**	**2**	P	**P**	**23 34 35.6**	**-0.2**
ARCES	**ARCESS Array B**	**47.74**	**2**	P	**P**	**23 34 35.6**	**-0.2**
	3.3nm,0.9s,baz=9.5,slow=8.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**55.69**	**324**	P	**P**	**23 35 34.4**	**-0.6**
ZALV	**Zalesovo Beam**	**55.69**	**324**	P	**P**	**23 35 34.4**	**-0.6**
	1.8nm,0.5s,baz=24,slow=7.2,SNR=12						
FINES	**FINESS Array B**	**55.87**	**2**	P	**P**	**23 35 35.8**	**-0.4**
FINES	**FINESS Array B**	**55.87**	**2**	P	**P**	**23 35 35.8**	**-0.4**
	2.6nm,0.9s,baz=18,slow=8.0,SNR=3.7						
BVAR	**Borovoye Array**	**59.98**	**333**	P	**P**	**23 36 05.2**	**+0.1**
BVAR	**Borovoye Array**	**59.98**	**333**	P	**P**	**23 36 05.2**	**+0.1**
	1.9nm,0.3s,baz=55,slow=7.8,SNR=12						
MK31	**Makanchi Array**	**62.85**	**322**	*e*P	**P**	**23 36 23.7**	**-0.8**
MKAR	**Makanchi Array**	**62.85**	**322**	P	**P**	**23 36 24.0**	**-0.4**
MKAR	**Makanchi Array**	**62.85**	**322**	P	**P**	**23 36 24.0**	**-0.4**
	1.2nm,0.4s,baz=41,slow=6.8,SNR=35						
AKASG	**Malin Array Be**	**66.67**	**0**	P	**P**	**23 36 47.1**	**-2.0**
AKASG	**Malin Array Be**	**66.67**	**0**	P	**P**	**23 36 47.1**	**-2.0**
	0.4nm,0.3s,baz=3.4,slow=6.3,SNR=3.8						
EKS2	**Erkin-Say**	**68.95**	**327**	*e*P	**P**	**23 37 04.7**	**+0.9**
	2.0nm,0.5s						
BRTR	**Keskin Array B**	**77.59**	**357**	P	**P**	**23 37 55.2**	**+0.7**
BRTR	**Keskin Array B**	**77.59**	**357**	P	**P**	**23 37 55.2**	**+0.7**
	0.2nm,0.4s,baz=86,slow=4.9,SNR=3.2						

ISCJB ***14*** *23:27:09.9±0.8, 16°.22S±0°.09×72°.3W±0°.1, h103km, mb3.4/2, Error ellipse: s-maj=19.0km s-min=7.1km az=143.5*
NEIC ***14*** *23:27:10.1±1.1, 16°.20S×72°.19W, h63km±14km, MG3.9(ARE), Error ellipse: s-maj=22.5km s-min=14.8km az=46.0*
NEIC Felt [II] at Arequipa and Camana.
IDC ***14*** *23:27:15.2±2.3, 15°.98S×72°.35W, h105km±21km, mb3.2/2, mb1 3.2/5, mb1mx3.1/22, mbtmp3.1/5, Error ellipse: s-maj=51.0km s-min=17.1km az=34.0*
ISC 14 23:27:13.6±0.9**, 16°.2S**±0°.1×**72°.4W**±0°.1**, h103**km**, n13, σ1s94**/13**, 1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.93**	**105**	⇓*i*P	Pn	23 27 24.4	-10
ARE				*i* S	Sn	23 27 38.0	-11
LPAZ	**La Paz**	**4.13**	**91**	*e*Pn	**Pn**	**23 28 14.2**	**-1.1**
LPAZ	**La Paz**	**4.13**	**91**	P	**Pn**	**23 28 15.7**	**+0.5**
	0.6nm,0.3s,baz=272,slow=7.8,SNR=16						
NNA	**Nana**	**6.01**	**314**	*e*Pn	**Pn**	**23 28 39.1**	**-1.1**
NNA				*e*Sn	**Sn**	**23 29 47.1**	**-0.5**
NNA	**Nana**	**6.01**	**314**	P	**Pn**	**23 28 38.9**	**-1.2**
	1.6nm,0.3s,baz=158,slow=11,SNR=5.9						
NNA				S	**Sn**	**23 29 48.2**	**+0.6**
	3.5nm,0.3s,baz=186,slow=18,SNR=3.9						
LVC	**Limon Verde**	**7.17**	**153**	*e*Pn	Pn	23 28 51.9	-4.1
LVC				*e*Sn	**Sn**	**23 30 12.4**	**-3.7**
SAML	**Samuel**	**11.56**	**52**	*e*Pn	Pn	23 29 50.0	-5.6
	2.7nm,0.8s						
CFAA	**Coronel Fontan**	**15.78**	**167**	P	**P**	**23 30 54.8**	**+3.0**
CFAA	**Coronel Fontan**	**15.78**	**167**	P	**P**	**23 30 54.8**	**+3.0**
	0.1nm,0.3s,baz=333,slow=13,SNR=2.0						
TORD	**Torodi Ar. Bea**	**78.86**	**73**	P	**P**	**23 39 07.1**	**+1.0**
TORD	**Torodi Ar. Bea**	**78.86**	**73**	P	**P**	**23 39 07.1**	**+1.0**
	0.5nm,0.7s,baz=253,slow=4.9,SNR=3.6						
YKA	**Yellowknife Ar**	**85.15**	**342**	P	**P**	**23 39 37.6**	**-0.3**
YKA	**Yellowknife Ar**	**85.15**	**342**	P	**P**	**23 39 37.6**	**-0.3**
	0.3nm,0.8s,baz=137,slow=4.9,SNR=3.3						

ISCJB ***14*** *23:47:35.8±0.3, 41°.41S±0°.04×174°.14E±0°.04, h57km±5km, mb3.9/3, MS3.4/1, Error ellipse: s-maj=7.3km s-min=4.3km az=144.2*
NEIC ***14*** *23:47:37.3, 41°.37S×174°.12E, h39km, ML4.5(WEL), After WEL.*
NEIC Felt [V] at Blenheim and [IV] at Kelburn, Lower Hutt, Picton, Redwoodtown, Renwick, Springlands, Wellington and Witherlea.
WEL ***14*** *23:47:37.3±0.1, 41°.37S×174°.12E, h39km±1km, ML4.5/19, Error ellipse: s-maj=1.1km s-min=1.0km az=0.0*
WEL Felt from Wellington to Nelson, maximum reported intensity MM 5.
IDC ***14*** *23:47:39.0±2.3, 40°.97S×174°.14E, h73km±20km, mb3.6/3, mb1 3.9/5, mb1mx3.7/16, mbtmp3.8/5, MS3.5/1, Ms1 3.5/1, ms1mx2.8/22, Error ellipse: s-maj=25.8km s-min=22.2km az=100.0*
ISC 14 23:47:36.6±0.8**, 41°.38S**±0°.03×**174°.14E**±0°.03**, h46**km±5km**, n92, σ1s22**/96**, mb3.9**/3**, 5C-10D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUWZ	**Tuamarina**	**0.16**	**250**	⇓P*	**Pn**	**23 47 43.8**	**-0.4**
TUWZ				S*	**Sn**	**23 47 48.3**	**-1.2**
TUWZ	**Tuamarina**	**0.16**	**250**	P*	**Pn**	**23 47 43.8**	**-0.4**
TUWZ				S*	**Sn**	**23 47 48.3**	**-1.2**
TCW	**Tory Channel**	**0.19**	**32**	⇑P*	**Pn**	**23 47 44.3**	**-0.1**
TCW	**Tory Channel**	**0.19**	**32**	P*	**Pn**	**23 47 44.3**	**-0.1**
CMWZ	**Cape Campbell**	**0.38**	**172**	⇑P*	**Pn**	**23 47 47.5**	**+1.3**
CMWZ	**Cape Campbell**	**0.38**	**172**	P*	**Pn**	**23 47 47.5**	**+1.3**
BSWZ	**Blackbirch Sta**	**0.39**	**211**	P*	**Pn**	**23 47 46.4**	**+0.1**
BSWZ	**Blackbirch Sta**	**0.39**	**211**	P*	**Pn**	**23 47 46.4**	**+0.1**
SNZO	**South Karori**	**0.43**	**81**	⇑P*	**Pn**	**23 47 47.3**	**+0.6**
SNZO	**South Karori**	**0.43**	**81**	*e*Pn	**Pn**	**23 47 47.1**	**+0.5**
SNZO				*e*Pg		23 47 54.3	
WEL	**Wellington**	**0.48**	**79**	⇑P*	**Pn**	**23 47 48.0**	**+0.7**
WEL	**Wellington**	**0.48**	**79**	P*	**Pn**	**23 47 48.0**	**+0.7**
BHW	**Baring Head**	**0.55**	**94**	P*	**Pn**	**23 47 49.2**	**+1.0**
BHW	**Baring Head**	**0.55**	**94**	P*	**Pn**	**23 47 49.2**	**+1.0**
DUWZ	**D'Urville Isla**	**0.60**	**344**	⇓P*	**Pn**	**23 47 48.4**	**-0.4**
DUWZ	**D'Urville Isla**	**0.60**	**344**	P*	**Pn**	**23 47 48.4**	**-0.4**
NNZ	**Nelson**	**0.60**	**285**	⇓PN	**Pn**	**23 47 48.2**	**-0.6**
NNZ	**Nelson**	**0.60**	**285**	Pn	**Pn**	**23 47 48.2**	**-0.6**
CAW	**Cannon Point**	**0.75**	**69**	⇓P*	**Pn**	**23 47 51.8**	**+1.0**
CAW	**Cannon Point**	**0.75**	**69**	P*	**Pn**	**23 47 51.8**	**+1.0**
KIW	**Kapiti Island**	**0.77**	**49**	P*	**Pn**	**23 47 51.9**	**+0.8**
KIW	**Kapiti Island**	**0.77**	**49**	P*	**Pn**	**23 47 51.9**	**+0.8**
MSWZ	**Moikau Station**	**0.83**	**93**	⇓P*	**Pn**	**23 47 52.7**	**+0.7**
MSWZ	**Moikau Station**	**0.83**	**93**	P*	**Pn**	**23 47 52.6**	**+0.7**
PLWZ	**Palliser**	**0.86**	**103**	⇓P*	**Pn**	**23 47 52.9**	**+0.6**
PLWZ	**Palliser**	**0.86**	**103**	P*	**Pn**	**23 47 52.9**	**+0.6**
OGWZ	**Otaki Gorge**	**0.96**	**55**	⇓P*	**Pn**	**23 47 54.8**	**+1.2**
OGWZ	**Otaki Gorge**	**0.96**	**55**	P*	**Pn**	**23 47 54.8**	**+1.2**
PAWZ	**Paruwai Farm**	**0.97**	**91**	P*	**Pn**	**23 47 54.1**	**+0.4**
THZ	**Tophouse**	**1.01**	**247**	P*	**Pn**	**23 47 54.0**	**-0.3**
THZ	**Tophouse**	**1.01**	**247**	P*	**Pn**	**23 47 54.0**	**-0.3**
MTW	**Mount Morrison**	**1.05**	**78**	⇓PN	**Pn**	**23 47 55.3**	**+0.4**
MTW	**Mount Morrison**	**1.05**	**78**	Pn	**Pn**	**23 47 55.2**	**+0.4**
KHZ	**Kahutara**	**1.13**	**203**	⇓PN	**Pn**	**23 47 56.8**	**+0.9**
KHZ	**Kahutara**	**1.13**	**203**	*e*Pn	**Pn**	**23 47 56.9**	**+0.9**
HOWZ	**Holdsworth Sta**	**1.14**	**66**	⇓PN	**Pn**	**23 47 56.6**	**+0.5**
HOWZ	**Holdsworth Sta**	**1.14**	**66**	Pn	**Pn**	**23 47 56.6**	**+0.5**
TRWZ	**Traveller**	**1.16**	**92**	PN	**Pn**	**23 47 56.6**	**+0.2**
TRWZ	**Traveller**	**1.16**	**92**	Pn	**Pn**	**23 47 56.6**	**+0.2**
MRZ	**Mangatainoka R**	**1.30**	**57**	⇑PN	**Pn**	**23 47 58.8**	**+0.5**
QRZ	**Quartz Range**	**1.34**	**294**	PN	**Pn**	**23 47 59.6**	**+0.8**
QRZ	**Quartz Range**	**1.34**	**294**	Pn	**Pn**	**23 47 59.5**	**+0.8**
TMWZ	**Te Maipa**	**1.34**	**79**	PN	**Pn**	**23 47 58.9**	**0.0**
TIWZ	**Tintock**	**1.45**	**66**	PN	**Pn**	**23 48 00.3**	**0.0**
POWZ	**Post Office Ro**	**1.58**	**52**	PN	**Pn**	**23 48 02.2**	**+0.2**
BFZ	**Birch Farm**	**1.74**	**67**	PN	**Pn**	**23 48 03.6**	**-0.6**
WAZ	**Wanganui**	**1.74**	**22**	PN	**Pn**	**23 48 06.4**	**+2.0**
DVHZ	**Dannevirke**	**1.87**	**56**	PN	**Pn**	**23 48 05.7**	**-0.4**
TSZ	**Takapari Road**	**1.91**	**47**	PN	**Pn**	**23 48 06.8**	**+0.2**
LTZ	**Lake Taylor**	**1.98**	**224**	PN	**Pn**	**23 48 07.8**	**+0.2**
RAEZ	**Rainy Point**	**2.10**	**5**	PN	Pn	23 48 12.6	+3.4
PNHZ	**Pukenui**	**2.14**	**48**	PN	**Pn**	**23 48 09.5**	**-0.3**
WPHZ	**Waipukurau**	**2.18**	**54**	PN	**Pn**	**23 48 10.1**	**-0.3**
PRHZ	**Porangahau**	**2.19**	**60**	PN	**Pn**	**23 48 09.5**	**-1.0**
VRZ	**Vera Road**	**2.30**	**12**	PN	**Pn**	**23 48 14.0**	**+2.0**
MHEZ	**Mangahewa**	**2.30**	**4**	PN	**Pn**	**23 48 14.9**	**+2.9**
MOVZ	**Moawhango**	**2.32**	**33**	PN	**Pn**	**23 48 12.7**	**+0.4**
FWVZ	**Far West T-bar**	**2.38**	**27**	PN	**Pn**	**23 48 14.5**	**+1.3**
WPVZ	**Whakapapa**	**2.42**	**27**	PN	**Pn**	**23 48 15.2**	**+1.5**
PXZ	**Pawanui**	**2.46**	**58**	PN	**Pn**	**23 48 12.8**	**-1.4**
OTVZ	**Oturere**	**2.50**	**28**	PN	**Pn**	**23 48 16.0**	**+1.2**
WTVZ	**West Tongariro**	**2.51**	**27**	PN	**Pn**	**23 48 16.3**	**+1.3**
KAHZ	**Kahuranaki**	**2.61**	**54**	PN	**Pn**	**23 48 15.5**	**-0.8**
MCHZ	**McNeill Hill**	**2.74**	**46**	*e*PN	**Pn**	**23 48 17.6**	**-0.5**
HIZ	**Hauiti**	**2.91**	**11**	PN	**Pn**	**23 48 22.3**	**+2.0**
WVZ	**Waitaha Valley**	**3.05**	**235**	*e*PN	**Pn**	**23 48 22.6**	**+0.4**
RPZ	**Rata Peaks**	**3.27**	**223**	*e*Pn	**Pn**	**23 48 26.9**	**+1.7**
RPZ				*e*Sn	Sn	23 49 13.9	+11
RPZ	**Rata Peaks**	**3.27**	**223**	P	Pn	23 48 31.9	+6.7
	64nm,0.3s,baz=351,slow=2.9,SNR=46						
RPZ				S	Sn	23 49 14.2	+11
	23nm,0.3s,baz=40,slow=22,SNR=10						
MHGZ	**Mahia Peninsul**	**3.64**	**54**	*e*PN	**Pn**	**23 48 28.4**	**-1.9**
PRGZ	**Paritu Road**	**3.77**	**51**	*e*PN	**Pn**	**23 48 30.1**	**-2.1**
TOZ	**Tahuroa Road**	**3.79**	**17**	*e*PN	**Pn**	**23 48 33.4**	**+1.0**
URZ	**Urewera**	**3.86**	**37**	*e*PN	**Pn**	**23 48 31.3**	**-2.0**
URZ	**Urewera**	**3.86**	**37**	*e*Pn	**Pn**	**23 48 31.4**	**-2.0**
URZ	**Urewera**	**3.86**	**37**	P	**Pn**	**23 48 31.5**	**-1.9**
	2.6nm,0.3s,baz=226,slow=6.5,SNR=12						
URZ				S	**Sn**	**23 49 15.5**	**-2.0**
	15nm,0.3s,baz=130,slow=12,SNR=3.8						
FOZ	**Fox Glacier**	**3.95**	**235**	*e*PN	**Pn**	**23 48 34.7**	**+0.1**
MKAZ	**Moumakai**	**4.33**	**11**	PN	**Pn**	**23 48 41.4**	**+1.5**
ODZ	**Otahua Downs**	**4.47**	**214**	*e*PN	**Pn**	**23 48 40.2**	**-1.6**
ODZ	**Otahua Downs**	**4.47**	**214**	*e*Pn	**Pn**	**23 48 40.1**	**-1.6**
JCZ	**Jackson Bay**	**4.80**	**234**	*e*PN	**Pn**	**23 48 45.9**	**-0.4**
JCZ	**Jackson Bay**	**4.80**	**234**	Pn	**Pn**	**23 48 45.9**	**-0.4**
WCZ	**Waipu Caves**	**5.43**	**2**	PN	**Pn**	**23 48 56.8**	**+1.9**
WCZ	**Waipu Caves**	**5.43**	**2**	Pn	**Pn**	**23 48 56.8**	**+1.9**
CTZ	**Chatham Island**	**7.22**	**112**	*e*PN	**Pn**	**23 49 18.7**	**-0.7**
CTZ	**Chatham Island**	**7.22**	**112**	Pn	**Pn**	**23 49 18.7**	**-0.7**
CTA	**Charters Tower**	**31.78**	**303**	LR	LR	00 05 58.7	
	comp=Z,77nm,18.4s,baz=47,slow=35						
ASAR	**Alice Springs**	**37.85**	**285**	P	**P**	**23 54 47.8**	**-1.3**
	1.4nm,0.8s,baz=128,slow=7.2,SNR=10						
ASAR				pP	**pP**	**23 55 04.5**	**+3.3**
	0.5nm,0.5s,baz=126,slow=6.7,SNR=2.4						
WRA	**Warramunga Arr**	**39.90**	**290**	P	**P**	**23 55 05.0**	**-1.2**
	3.1nm,0.7s,baz=129,slow=7.5,SNR=13						
QSPA	**South Pole Qui**	**48.75**	**180**	P	**P**	**23 56 19.4**	**+2.9**
	0.8nm,0.8s,baz=353,slow=5.4,SNR=2.9						
ARCES	**ARCESS Array B**	**147.40**	**340**	PKPbc	**PKPdf**	**00 07 11.8**	**+0.3**
	1.6nm,1.0s,baz=21,slow=3.1,SNR=2.7						
BRTR	**Keskin Array B**	**150.12**	**280**	PKPbc	**PKPdf**	**00 07 18.9**	**+1.8**
	0.2nm,0.6s,baz=76,slow=6.1,SNR=2.6						
BRTR				PKPab	**PKPab**	**00 07 26.9**	**-1.3**
	0.4nm,0.7s,baz=157,slow=7.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**151.11**	**195**	PKPbc	**PKPbc**	**00 07 25.1**	**+0.2**
	0.4nm,0.6s,baz=168,slow=2.5,SNR=7.7						
TORD				PKPab	**PKPab**	**00 07 32.8**	**+0.1**
	0.4nm,0.8s,baz=176,slow=2.6,SNR=4.9						
FINES	**FINESS Array B**	**152.18**	**327**	PKPbc	**PKPbc**	**00 07 24.7**	**-1.3**
	1.3nm,0.8s,baz=353,slow=3.2,SNR=2.6						
FINES				PKPab	**PKPab**	**00 07 33.1**	**-2.8**
	1.6nm,0.8s,baz=353,slow=3.2,SNR=2.5						

BJI ***14*** *23:59:01.4, 31°.73N×94°.96E, h10km, mb4.1/1, ML3.8/4*
IDC ***14*** *23:59:06.8±0.8, 32°.19N×95°.14E, h0km, mb3.7/11, mb1 3.9/13, mb1mx3.8/29, mbtmp3.7/13, ML2.9/2, MS3.2/6, Ms1 3.2/6, ms1mx2.8/37, Error ellipse: s-maj=37.9km s-min=16.0km az=52.0*
ISC 14 23:59:10.0±0.8**, 31°.9N**±0°.1×**95°.3E**±0°.1**, h35**km**, n19, σ2s05**/14**, mb4.0**/12**, MS3.1**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	**4.21**	**239**	Pg	**Pn**	**00 00 11.9**	**-0.2**
LSA				smax	smax		
	comp=N,30nm,0.9s						
LSA				smax	smax		
	comp=E,50nm,0.8s						
KMI	**Kunming**	**9.43**	**134**	P	Pn	00 01 17.9	-5.7
KMI				S	**Sn**	**00 03 06.3**	**-2.2**
CMAR	**Chiang Mai Arr**	**13.82**	**165**	LR	LR	00 08 15.0	
	comp=E,46nm,21.4s,baz=220,slow=39						
MKAR	**Makanchi Array**	**17.88**	**330**	P	**Pn**	**00 03 12.3**	**-3.6**
	comp=E,0.0nm,0.3s,baz=137,slow=12,SNR=5.4						
AAK	**Ala-Archa**	**19.64**	**309**	P	**P**	**00 03 34.3**	**-1.4**
	comp=E,0.1nm,0.3s,baz=114,slow=7.1,SNR=13						
AAK				LR	LR	00 12 20.5	
	comp=E,92nm,20.4s,baz=274,slow=41						
KURBB	**Kurchatov Arra**	**22.43**	**331**	P	**P**	**00 04 03.5**	**-2.0**
	comp=E,4.7nm,1.0s,baz=137,slow=11,SNR=17						
ZALV	**Zalesovo Beam**	**23.25**	**344**	P	**P**	**00 04 12.2**	**-1.7**
	comp=E,0.3nm,0.3s,baz=141,slow=5.2,SNR=6.6						
ZALV				LR	LR	00 14 00.7	
	comp=E,33nm,20.1s,baz=63,slow=39						
KSRS	**Korea Array**	**27.30**	**69**	LR	LR	00 16 38.9	
	comp=E,38nm,18.2s,baz=240,slow=38						
BVAR	**Borovoye Array**	**27.70**	**327**	P	**P**	**00 04 54.2**	**-0.6**
	comp=E,0.9nm,0.7s,baz=138,slow=11,SNR=6.4						
AKTO	**Aktyubinsk**	**33.14**	**315**	LR	LR	00 20 02.7	
	comp=E,56nm,18.8s,baz=211,slow=38						
AKASG	**Malin Array Be**	**51.27**	**312**	P	**P**	**00 08 08.7**	**-1.6**
	comp=E,1.3nm,0.5s,baz=78,slow=7.1,SNR=4.8						
NOA	**NORSAR Array B**	**59.83**	**326**	P	**P**	**00 09 13.0**	**+1.4**
	comp=E,1.0nm,0.9s,baz=77,slow=7.3,SNR=3.7						
BRG	**Berggiesshubel**	**60.77**	**314**	*e*(P)	**P**	**00 09 20.4**	**+2.2**
	comp=E,16nm,1.8s						
GERES	**GERESS Array B**	**61.49**	**312**	P	**P**	**00 09 24.6**	**+1.4**
	comp=E,1.1nm,1.0s,baz=74,slow=5.7,SNR=5.3						
GERES				LR	LR	00 38 41.6	
	comp=E,36nm,19.3s,baz=82,slow=39						
WRA	**Warramunga Arr**	**63.72**	**139**	P	P	00 09 41.9	+3.7
	comp=E,1.8nm,0.8s,baz=330,slow=7.3,SNR=8.1						
ASAR	**Alice Springs**	**66.48**	**141**	P	P	00 10 00.1	+3.9
	comp=E,1.3nm,0.7s,baz=328,slow=6.9,SNR=12						
ILAR	**Eielson Array**	**72.20**	**23**	P	**P**	**00 10 31.5**	**+0.5**
	comp=E,0.3nm,0.6s,baz=289,slow=5.6,SNR=3.4						
YKA	**Yellowknife Ar**	**82.87**	**13**	P	**P**	**00 11 32.9**	**+2.4**
	comp=E,0.2nm,0.5s,baz=331,slow=5.0,SNR=2.9						
TORD	**Torodi Ar. Bea**	**86.16**	**283**	P	**P**	**00 11 49.2**	**+1.2**
	comp=E,1.4nm,0.7s,baz=55,slow=5.2,SNR=11						

ISK ***15*** *00:22:26.7, 39°.10N×29°.04E, h7km, MD2.7*
ISCJB ***15*** *00:22:27.1±0.4, 39°.10N±0°.03×29°.05E±0°.03, h4km±6km, Error ellipse: s-maj=4.8km s-min=3.8km az=13.1*
DDA ***15*** *00:22:27.2, 39°.09N×29°.05E, h7km, MD2.8*
CSEM ***15*** *00:22:27.3±0.1, 39°.10N×29°.05E, h8km, MD2.8, Error ellipse: s-maj=1.6km s-min=1.5km az=35.0*
ISC 15 00:22:27.5±0.9**, 39°.11N**±0°.03×**29°.05E**±0°.02**, h11**km±8km**, n34, σ0s34**/52**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.27**	**257**	*i* P	**Pg**	**00 22 33.1**	**0.0**
DEMI				*i* S	**Sg**	**00 22 37.0**	**+0.2**
DEMI	**Demirci**	**0.27**	**257**	*i* P	**Pg**	**00 22 33.1**	**0.0**
DEMI				*i* S	**Sg**	**00 22 37.0**	**+0.2**
GDZ	**Gediz**	**0.34**	**93**	*i* P	**Pg**	**00 22 34.0**	**-0.4**
GDZ				*i* S	**Sg**	**00 22 39.0**	**+0.1**
GDZ	**Gediz**	**0.34**	**93**	*i* P	**Pg**	**00 22 34.0**	**-0.4**
GDZ				*i* S	**Sg**	**00 22 39.0**	**+0.1**
TVSB	**Tavsanli**	**0.47**	**43**	*e*PG	**Pg**	**00 22 36.0**	**-0.8**
TVSB	**Tavsanli**	**0.47**	**43**	*e*Pg	**Pg**	**00 22 36.0**	**-0.8**
DST	**Dursunbey**	**0.60**	**326**	*e*PG	**Pg**	**00 22 38.9**	**-0.3**
DST	**Dursunbey**	**0.60**	**326**	*e*Pg	**Pg**	**00 22 38.9**	**-0.3**
KULA	**Kula-Manisa**	**0.66**	**207**	*e*PG	**Pg**	**00 22 40.0**	**-0.4**
KULA				*e*SG	**Sg**	**00 22 49.1**	**0.0**
KULA	**Kula-Manisa**	**0.66**	**207**	*e*Pg	**Pg**	**00 22 40.0**	**-0.4**
KULA				*e*Sg	**Sg**	**00 22 49.1**	**0.0**
DURS	**Dursunbey**	**0.67**	**318**	*i* P	**Pg**	**00 22 40.8**	**+0.3**
DURS				*i* S	**Sg**	**00 22 49.4**	**+0.1**
DURS	**Dursunbey**	**0.67**	**318**	*i* P	**Pg**	**00 22 40.8**	**+0.3**
DURS				*i* S	**Sg**	**00 22 49.4**	**+0.1**
MANT	**Manisa**	**0.72**	**212**	*i* P	**Pg**	**00 22 41.6**	**0.0**
MANT				*i* S	**Sg**	**00 22 51.0**	**-0.1**
MANT	**Manisa**	**0.72**	**212**	*i* P	**Pg**	**00 22 41.6**	**0.0**
MANT				*i* S	**Sg**	**00 22 51.0**	**-0.1**
KHAL	**Karahalli**	**0.81**	**155**	*i* P	**Pg**	**00 22 43.1**	**-0.1**
KHAL				*i* S	**Sg**	**00 22 53.6**	**-0.2**
KHAL	**Karahalli**	**0.81**	**155**	*i* P	**Pg**	**00 22 43.1**	**-0.1**
KHAL				*i* S	**Sg**	**00 22 53.6**	**-0.2**
ALT	**Altintas**	**0.83**	**93**	*e*PG	**Pg**	**00 22 43.4**	**-0.1**
ALT	**Altintas**	**0.83**	**93**	*e*Pg	**Pg**	**00 22 43.4**	**-0.1**
BALB	**Balikesir**	**1.05**	**301**	*e*PG	**Pb**	**00 22 47.2**	**-0.5**
BALB				*e*SG	**Sn**	**00 23 02.2**	**-0.6**
BALB	**Balikesir**	**1.05**	**301**	*e*Pg	**Pb**	**00 22 47.2**	**-0.5**
BALB				*e*Sg	**Sn**	**00 23 02.2**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.27**	**354**	*e*PN	**Pb**	**00 22 51.5**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.27**	**354**	*e*Pn	**Pb**	**00 22 51.5**	**+0.1**
BALY	**Balya**	**1.28**	**300**	*i* P	**Pb**	**00 22 51.5**	**-0.1**
BALY				*i* S	**Sb**	**00 23 08.3**	**+0.3**
BALY	**Balya**	**1.28**	**300**	*i* P	**Pb**	**00 22 51.5**	**-0.1**
BALY				*i* S	**Sb**	**00 23 08.3**	**+0.3**
KCTX	**Karacabey (Bur**	**1.28**	**335**	*e*PN	**Pn**	**00 22 51.0**	**-0.3**
KCTX	**Karacabey (Bur**	**1.28**	**335**	*e*Pn	**Pn**	**00 22 51.0**	**-0.3**
BORA	**Eskisehir**	**1.33**	**54**	*i* P	**Pb**	**00 22 52.8**	**+0.2**
BORA				*i* S	**Sn**	**00 23 10.1**	**+0.2**
BORA	**Eskisehir**	**1.33**	**54**	*i* P	**Pb**	**00 22 52.8**	**+0.2**
BORA				*i* S	**Sn**	**00 23 10.1**	**+0.2**
GONE	**Gonen-Balikesi**	**1.41**	**312**	*e*PN	**Pn**	**00 22 53.4**	**+0.3**
GONE	**Gonen-Balikesi**	**1.41**	**312**	*e*Pn	**Pn**	**00 22 53.4**	**+0.3**
ARMT	**Armutlu**	**1.47**	**354**	*e*PN	**Pb**	**00 22 54.7**	**-0.1**
ARMT	**Armutlu**	**1.47**	**354**	*e*Pn	**Pb**	**00 22 54.7**	**-0.1**
GULT	**Gulveren**	**1.74**	**40**	*e*PN	**Pn**	**00 22 58.5**	**+0.7**
GULT	**Gulveren**	**1.74**	**40**	*e*Pn	**Pn**	**00 22 58.5**	**+0.7**

IDC ***15*** *00:23:13.9±0.7, 8°.14S×107°.96E, h0km, mb4.3/12, mb1 4.4/13, mb1mx4.2/25, mbtmp4.3/13, ML3.9/1, MS3.2/6, Ms1 3.3/6, ms1mx3.0/25, Error ellipse: s-maj=37.9km s-min=14.7km az=49.0*
ISCJB ***15*** *00:23:19.7±0.4, 8°.47S±0°.04×107°.89E±0°.03, h66km±5km, mb4.2/15, Error ellipse: s-maj=6.3km s-min=4.8km az=9.9*
AUST ***15*** *00:23:19.6±0.0, 8°.42S×107°.83E, h36km, Error ellipse: s-maj=0.8km s-min=0.7km az=315.0*
NEIC ***15*** *00:23:19.0±0.4, 8°.15S×108°.00E, h35km, mb4.8/4, Error ellipse: s-maj=21.9km s-min=7.0km az=49.0*
DJA ***15*** *00:23:23.0±0.7, 8°S±5°×10°8E±°, h34km±6km, M4.6/18, mb4.6/3, MLv4.5/18*
ISC 15 00:23:19.4±0.7**, 8°.43S**±0°.04×**107°.88E**±0°.03**, h38**km±2km**, n81, σ1s80**/76**, mb4.4**/15**, MS3.3**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.88**	**356**	P	**Pn**	**00 23 35.5**	**+0.2**
CISI				S	**Sn**	**00 23 45.1**	**-1.8**
CISI	**Cisompet, Garu**	**0.88**	**356**	P	**Pn**	**00 23 35.3**	**0.0**
	baz=0.9,SNR=71						
CLJI	**Cilicap**	**1.33**	**58**	P	Pn	00 23 45.3	+3.9
CLJI				S	**Sn**	**00 23 59.2**	**+1.4**
LEM	**Lembang**	**1.62**	**351**	P	**Pn**	**00 23 47.9**	**+2.3**
LEM	**Lembang**	**1.62**	**351**	P	**Pn**	**00 23 48.1**	**+2.5**
	baz=1.6,SNR=81						
SKJI	**Sukabumi**	**1.94**	**317**	P	**Pn**	**00 23 50.6**	**+0.8**

SKJI				S		**Sn**	**00 24 17.7 +4.8**
TGJI	**Tegal**	**1.98**	**38**	P		**Pn**	**00 23 51.1 +0.7**
BJII	**Banjamegara**	**2.11**	**59**	P		**Pn**	**00 23 54.7 +2.4**
BJII				S		**Sn**	**00 24 18.2 +0.8**
DBJI	**Dramaga**	**2.18**	**329**	P		**Pn**	**00 23 56.1 +2.9**
DBJI				S		**Sn**	**00 24 22.7 +3.7**
UGM	**Wanagama**	**2.66**	**79**	P		**Pn**	**00 24 00.8 +1.0**
UGM				S		**Sn**	**00 24 28.2 -2.7**
UGM	**Wanagama** baz=2.7,SNR=25	**2.66**	**79**	P		**Pn**	**00 23 60.0 +0.1**
UGM				S		**Sn**	**00 24 28.8 -2.1**
	baz=2.7,SNR=5.5						
CGJI	**Cibinong**	**2.83**	**310**	P		**Pn**	**00 24 03.5 +1.4**
SMRI	**Semarang**	**2.88**	**62**	P		**Pn**	**00 24 05.0 +2.1**
SMRI				S		**Sn**	**00 24 35.8 -0.5**
SMRI	**Semarang** baz=2.9,SNR=17	**2.88**	**62**	P		**Pn**	**00 24 05.0 +2.1**
SMRI				S		**Sn**	**00 24 38.1 +1.8**
	baz=2.9,SNR=6.4						
SBJI	**Serang**	**2.88**	**323**	P		Pn	00 24 06.4 +3.6
XMI	**Christmas Isla** baz=2.9,SNR=23	**2.95**	**227**	P		**Pn**	**00 24 05.5 +1.8**
XMI				S		**Sn**	**00 24 36.8 -1.2**
	baz=2.9,SNR=13						
XMIS	**Christmas Isla** baz=3.0,SNR=70	**3.00**	**227**	P		**Pn**	**00 24 05.8 +1.4**
XMIS				S		**Sn**	**00 24 37.1 -2.0**
	baz=3.0,SNR=14						
WOJI	**Wonogiri, Jawa**	**3.07**	**79**	P		**Pn**	**00 24 06.2 +0.8**
PCJI	**Pacitan**	**3.27**	**86**	P		**Pn**	**00 24 08.5 +0.4**
PCJI				S		**Sn**	**00 24 43.2 -2.6**
PWJI	**Pagerwojo**	**3.90**	**84**	P		**Pn**	**00 24 18.0 +1.2**
PWJI				S		**Sn**	**00 25 00.1 -1.3**
SJI	**Sawahan**	**3.91**	**80**	P		**Pn**	**00 24 19.0 +2.0**
KASI	**Kota Agung**	**4.43**	**310**	P		Pn	00 24 35.0 +11
KRKI	**Karangkates**	**4.53**	**87**	P		Pn	00 24 29.8 +4.3
GMJI	**Gumukmas** 78nm,1.4s,0.4nm	**5.50**	**89**	P		Pn	00 24 42.4 +3.5
MNAI	**Manna** baz=6.3,SNR=3.9	**6.35**	**309**	P		Pn	00 24 57.7 +7.1
PPBI	**Pangkal Pinang** 23nm,0.9s,0.3nm	**6.47**	**344**	P		Pn	00 24 56.1 +3.9
SRBI	**Singaraja**	**7.26**	**88**	P		Pn	00 25 07.8 +4.8
PPI	**Padang Panjang** baz=11,SNR=5.5	**10.88**	**316**	S		Sn	00 27 36.3 -17
KAPI	**Kappang** comp=Z,52nm,21.0s,baz=172,slow=46	**12.27**	**75**	LR		LR	00 32 28.1
WSI	**Waingapu** baz=12,SNR=5.3	**12.32**	**97**	P		P	00 26 20.9 -3.0
GSI	**Gunungsitoli** baz=14,SNR=9.0	**14.11**	**313**	S		**Sn**	**00 29 07.8 -4.5**
PSI	**Prapat** comp=Z,120nm,21.1s,baz=208,slow=36	**14.30**	**321**	LR		LR	00 31 43.0
GIRL	**Giralia** baz=16,SNR=5.3	**15.39**	**157**	P		**Pn**	**00 26 51.9 -1.9**
GIRL				S		Sn	00 29 30.6 -13
	baz=16,SNR=5.6						
MBWA	**Marble Bar**	**17.05**	**139**	*e*Pn		**Pn**	**00 27 13.7 -1.3**
FITZ	**Fitzroy Crossi**	**19.75**	**121**	P		**Pn**	**00 27 48.0 +0.1**
FITZ				S		S	00 31 12.6 -14
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=31,slow=21,SNR=5.4	**19.75**	**121**	P		**Pn**	**00 27 48.0 +0.1**
FITZ				S		S	00 31 12.6 -14
	0.1nm,0.3s,baz=297,slow=18,SNR=2.2						
FITZ				LR		LR	00 34 18.7
	comp=Z,81nm,20.9s,baz=304,slow=34						
FITZ	**Fitzroy Crossi** baz=20,SNR=6.1	**19.75**	**121**	P		**Pn**	**00 27 49.5 +1.5**
MEEK	**Meekatharra** baz=21,SNR=18	**20.77**	**152**	P		Pn	00 28 02.9 +3.0
MEEK				S		S	00 31 37.9 -9.2
	baz=21,SNR=8.4						
LBMI	**Labuha**	**21.02**	**69**	P		pP	00 28 08.9 -0.9
KNRA	**Kununurra** baz=22,SNR=8.1	**21.64**	**111**	P		**P**	**00 28 04.7 -1.9**
KNRA				S		Sn	00 32 18.4 +4.0
	baz=22,SNR=5.0						
MORW	**Morawa** baz=22,SNR=3.6	**21.91**	**161**	P		P	00 28 24.6 +15
MORW				S		**S**	**00 32 11.1 +1.6**
	baz=22,SNR=6.0						
MTN	**Manton Dam** baz=23,SNR=4.8	**23.26**	**103**	P		**P**	**00 28 27.8 +4.1**
NWAO	**Narrogin (SRO)** comp=Z,101nm,19.2s,baz=213,slow=34	**25.86**	**162**	LR		LR	00 37 50.5
WRA	**Warramunga Arr**	**28.03**	**117**	P		**P**	**00 29 08.0 +0.7**
WRA	**Warramunga Arr** 2.5nm,0.8s,baz=290,slow=11,SNR=5.8	**28.03**	**117**	P		**P**	**00 29 08.0 +0.7**
WRAB	**Tennant Creek**	**28.04**	**117**	*e*P		**P**	**00 29 08.0 +0.6**
CMAR	**Chiang Mai Arr** comp=Z,53nm,19.9s,baz=44,slow=35	**28.14**	**342**	LR		LR	00 39 37.6
ASAR	**Alice Springs**	**29.15**	**124**	P		**P**	**00 29 17.9 +0.6**
ASAR	**Alice Springs** 0.6nm,0.3s,baz=295,slow=7.9,SNR=6.3	**29.15**	**124**	P		**P**	**00 29 17.9 +0.6**
COEN	**Coen** baz=35,SNR=6.2	**35.02**	**102**	P		**P**	**00 30 09.6 +0.8**
STKA	**Stephens Creek**	**39.04**	**131**	*e*P		**P**	**00 30 43.3 +1.7**
STKA	**Stephens Creek** 9.8nm,0.9s,baz=308,slow=8.2,SNR=13	**39.04**	**131**	P		**P**	**00 30 43.5 +0.8**
STKA	**Stephens Creek** baz=39,SNR=11	**39.04**	**131**	P		**P**	**00 30 44.3 +1.7**
ULN	**Ulaanbaatar**	**56.06**	**359**	*e*P		**P**	**00 32 52.3 -2.3**
TKM2	**Tokmak 2** 5.6nm,0.4s	**58.97**	**333**	*e*P		**P**	**00 33 13.9 -1.4**
AAK	**Ala-Archa**	**59.25**	**332**	*e*P		**P**	**00 33 15.3 -2.0**
MK31	**Makanchi Array**	**59.52**	**340**	*e*P		**P**	**00 33 16.4 -2.5**
MKAR	**Makanchi Array**	**59.52**	**340**	P		**P**	**00 33 17.1 -1.8**
MKAR	**Makanchi Array** 2.3nm,0.4s,baz=152,slow=7.4,SNR=43	**59.52**	**340**	P		**P**	**00 33 17.1 -1.8**
MKAR				LR		LR	01 01 46.3
	comp=Z,24nm,21.0s,baz=346,slow=39						
KURK	**Kurchatov** 1.9nm,0.3s	**64.14**	**340**	*e*P		**P**	**00 33 48.2 -1.6**
ZALV	**Zalesovo Beam**	**65.13**	**345**	P		**P**	**00 33 54.4 -1.8**
ZALV	**Zalesovo Beam** 1.4nm,0.4s,baz=137,slow=5.8,SNR=5.2	**65.13**	**345**	P		**P**	**00 33 54.4 -1.8**
BVAR	**Borovoye Array**	**69.02**	**337**	P		**P**	**00 34 20.2 -0.7**
BVAR	**Borovoye Array** 2.7nm,0.3s,baz=132,slow=8.1,SNR=22	**69.02**	**337**	P		**P**	**00 34 20.2 -0.7**
ABKAR	**Akbulak array** 8.6nm,0.7s	**71.09**	**329**	*e*P		**P**	**00 34 32.6 -1.0**
AKTO	**Aktyubinsk**	**72.80**	**329**	P		**P**	**00 34 43.3 -0.6**
AKTO	**Aktyubinsk** 2.0nm,0.8s,baz=118,slow=4.1,SNR=5.9	**72.80**	**329**	P		**P**	**00 34 43.3 -0.6**
VNDA	**Vanda**	**74.41**	**169**	P		**P**	**00 34 54.6 +1.6**
VNDA	**Vanda** 0.3nm,0.3s,baz=315,slow=6.0,SNR=4.5	**74.41**	**169**	P		**P**	**00 34 54.6 +1.6**
KBZ	**Khabaz**	**78.30**	**318**	P		**P**	**00 35 15.4 -0.1**
KBZ	**Khabaz** 2.3nm,0.9s,baz=118,slow=12,SNR=6.7	**78.30**	**318**	P		**P**	**00 35 15.4 -0.1**
BOSA	**Boshof**	**79.57**	**242**	P		**P**	**00 35 25.2 +2.0**
BOSA	**Boshof** 5.2nm,1.2s,baz=102,slow=11,SNR=5.5	**79.57**	**242**	P		**P**	**00 35 25.2 +2.0**
BR131	**Keskin Array S** 0.6nm,0.6s	**83.43**	**312**	*e*P		**P**	**00 35 42.8 -0.5**
BRTR	**Keskin Array B**	**83.43**	**312**	P		**P**	**00 35 42.5 -0.8**
BRTR	**Keskin Array B** 0.8nm,0.7s,baz=129,slow=7.1,SNR=8.6	**83.43**	**312**	P		**P**	**00 35 42.5 -0.8**
ARCES	**ARCESS Array B**	**95.18**	**340**	P		**P**	**00 36 37.6 -0.8**
ARCES	**ARCESS Array B** 1.7nm,0.8s,baz=92,slow=6.3,SNR=3.9	**95.18**	**340**	P		**P**	**00 36 37.6 -0.8**
TXAR	**Lajitas Array**	**143.82**	**51**	PKP		PKPbc	00 42 50.0 +0.9
TXAR	**Lajitas Array** 0.1nm,0.5s,baz=180,slow=0.9,SNR=3.0	**143.82**	**51**	PKP		PKPbc	00 42 50.0 +0.9
WVT	**Waverly**	**148.93**	**25**	*e*PKPbc		**PKPbc**	**00 43 03.3 -0.3**

IGQ 15 00:37:16.9, 1.62S×81.43W, h6km±26km, Mb4.1, Ms3.9, 1C-3D, Error ellipse: s-maj=9.4km s-min=4.4km az=10.5, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PECV	**Mancha de Ca P**	**1.62**	**59**	S	Sn	00 37 59.3	-8.0
PECV	**Mancha de Ca P**	**1.62**	**59**	P	Pn	00 37 43.1	-2.9
JAMA	**Jama**	**1.83**	**42**	S	Sn	00 38 09.4	-3.1
JAMA	**Jama**	**1.83**	**42**	P	Pb	00 37 50.1	-0.8
IGUA	**Igualata**	**2.80**	**87**	P	Pb	00 38 05.5	-2.5
BMAS	**Trigal station**	**2.96**	**88**	P	Pn	00 38 05.6	+0.7
ARRY	**Arrayan**	**2.98**	**88**	P	Pn	00 38 07.1	+1.9
PAT1	**Patacocha**	**3.00**	**88**	P	Pn	00 38 07.4	+1.8
BPAT	**Tungurahua Vol**	**3.00**	**88**	S	Sn	00 38 38.7	-3.7
BPAT	**Tungurahua Vol**	**3.00**	**88**	P	Pn	00 38 06.5	+0.8
BRUN	**Tungurahua Vol**	**3.03**	**86**	‖P	Pn	00 38 08.3	+2.4
BULB	**Ulba Tungurahu**	**3.03**	**87**	P	Pn	00 38 07.3	+1.4
ULBA	**Ulba**	**3.03**	**87**	P	Pn	00 38 08.3	+2.4
PISA	**Pisayambo**	**3.10**	**80**	P	Pb	00 38 11.0	-2.1
BNAS	**Cotopaxi Volca**	**3.10**	**72**	P	Pn	00 38 09.2	+2.2
BMOR	**Cotopaxi Volca**	**3.10**	**73**	P	Pn	00 38 09.2	+2.0
NAS2	**Nasa**	**3.12**	**72**	P	Pb	00 38 11.8	-1.7
MOV1	**Cotopaxi Vol s**	**3.12**	**73**	P	Pb	00 38 11.1	-2.6
BREF	**Cotopaxi Volca**	**3.14**	**72**	P	Pn	00 38 10.1	+2.3
BVC2	**Cotopaxi Volca**	**3.17**	**72**	P	Pn	00 38 11.0	+2.9
BTAM	**Cotopaxi Volca**	**3.18**	**73**	‖P	Pn	00 38 11.1	+2.9
PINO	**Pino**	**3.18**	**63**	P	Pn	00 38 09.1	+0.8
PITA	**Cotopaxi Volc**	**3.18**	**71**	P	Pn	00 38 10.6	+2.5
GGP	**Refugio Guagua**	**3.18**	**63**	P	Pn	00 38 10.1	+1.8
VC1	**Cotopaxi 1**	**3.18**	**72**	P	Pb	00 38 11.7	-2.9
TAMB	**Tambo**	**3.20**	**73**	P	Pb	00 38 12.6	-2.3
COV1	**Cotopaxi Volc**	**3.23**	**73**	P	Pn	00 38 11.7	+2.6
ANTI	**Antisana**	**3.47**	**70**	‖P	Pb	00 38 16.3	-3.3
OTAV	**Otavalo**	**3.51**	**58**	‖P	Pn	00 38 13.2	+0.6

JMA 15 00:46:56.5±0.3, 43.40N×147.64E, h3km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.38**	**269**	P	Pn	00 47 22.4	-0.3
NEM2				*e*S	Sb	00 47 41.0	0.0
JRA	**Rausu**	**1.91**	**287**	P	Pn	00 47 30.5	+0.7
JRA				*e*S	Sn	00 47 55.0	+0.7
JNK	**Nakash**	**2.13**	**276**	P	Pn	00 47 33.5	+0.5
JAK	**Akkeshi**	**2.19**	**260**	P	Pn	00 47 34.5	+0.7
JAK				*e*S	Sn	00 48 01.7	+0.3
JTKR	**Abashiri--Toko**	**2.77**	**283**	P	Pn	00 47 43.1	+1.4
JAR	**Ashorobuto**	**2.83**	**269**	P	Pn	00 47 43.8	+1.3
JCH	**Churui**	**3.23**	**257**	P	Pn	00 47 49.2	+1.1

JMA 15 01:03:47.7±0.1, 32.10N×132.05E, h28km±2km, M2.6, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSN	**Tsuno**	**0.48**	**288**	P	Pb	01 03 57.3	-0.5
JTSN				S	Sb	01 04 04.3	-0.4
JKIT	**Kitakata**	**0.73**	**316**	P	Pb	01 04 01.7	-0.1
JKIT				S	Sn	01 04 12.0	-0.3
JTZ	**Takazaki**	**0.84**	**257**	P	Pn	01 04 02.8	-0.9
JTZ				*e*S	Sb	01 04 14.5	-0.2
JNAR	**Kushima--Naru**	**0.88**	**229**	P	Pn	01 04 03.9	-0.2
JNAR				S	Sn	01 04 16.5	+0.6
JTO	**Tosashimizu**	**0.99**	**40**	P	Pn	01 04 05.1	-0.6
JTO				*e*S	Sn	01 04 18.0	-0.8
JUS	**Usuki**	**1.00**	**345**	P	Pb	01 04 06.3	-0.1
JUS				*e*S	Sb	01 04 20.4	+1.3
JIU2	**Izumi 2**	**1.14**	**293**	P	Pn	01 04 07.8	0.0
JIU2				*e*S	Sn	01 04 22.4	-0.1
JZO	**Okuchi**	**1.23**	**272**	P	Pn	01 04 08.9	-0.2
JZO				S	Sn	01 04 24.8	-0.1

MEX 15 01:33:19.7±0.3, 17.84N×100.18W, h60km±5km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.47**	**341**	*e*P	Pn	01 33 30.0	-1.4
ARIG				*i* S	Sn	01 33 38.0	-1.9
MEIG	**Mezcala**	**0.54**	**81**	*e*P	Pn	01 33 30.7	-1.5
MEIG				*i* S	Sn	01 33 39.7	-1.7
CAIG	**El Cayaco**	**0.79**	**186**	*e*P	Pn	01 33 33.8	-1.3
CAIG				*e*S	Sn	01 33 44.4	-1.9
ACX	**Acapulco**	**1.01**	**162**	*e*P	Pn	01 33 36.7	-1.2
ACX				*e*S	Sn	01 33 49.1	-2.3
ZIIG	**Zihuatanejo**	**1.24**	**260**	*e*P	Pn	01 33 39.7	-1.3
ZIIG				*e*S	Sn	01 33 54.7	-2.1
PNIG	**Pinotepa**	**2.44**	**126**	*i* P	Pn	01 33 55.8	-1.4
PNIG				*i* S	Sn	01 34 23.7	-2.2

*ISCJB **15** 01:43:16.9±0.5, 36.92N±0.05×4.14E±0.05, h13km, Error ellipse: s-maj=7.6km s-min=4.6km az=35.5*
*CSEM **15** 01:43:16.7±0.3, 36.83N×4.17E, h2km, ML3.7, Error ellipse: s-maj=10.2km s-min=6.1km az=29.0*
*MDD **15** 01:43:17.3±0.5, 36.83N×4.14E, h0km, mb4.1/2, Error ellipse: s-maj=9.5km s-min=4.8km az=27.0, PRXIMO*
*CRAAG **15** 07:43:14.3, 36.92N×4.20E, Ml3.7*

ISC 15 01:43:16.7±0.9, 36.90N±0.05×4.22E±0.03, h13km, n37, σ1s85/47, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKF	**Akfadou**	**0.38**	**133**	P	**Pg**	**01 43 24.1**	**-0.3**
AKF	**Akfadou**	**0.38**	**133**	P	**Pg**	**01 43 24.1**	**-0.3**
AKF	**Akfadou**	**0.38**	**133**	P	**Pg**	**01 43 24.1**	**-0.3**
ABA	**Alger-Bouzarea**	**0.95**	**265**	P	**Pb**	**01 43 32.0**	**-3.1**
ABA	**Alger-Bouzarea**	**0.95**	**265**	P	**Pb**	**01 43 32.0**	**-3.1**
ABA	**Alger-Bouzarea**	**0.95**	**265**	P	**Pb**	**01 43 32.0**	**-3.1**
SET	**Setif**	**1.18**	**126**	P	**Pg**	**01 43 40.0**	**+0.6**
SET	**Setif**	**1.18**	**126**	P	**Pg**	**01 43 40.0**	**+0.6**
SET	**Setif**	**1.18**	**126**	P	**Pg**	**01 43 40.0**	**+0.6**
EMHD	**Djebel Mahouad**	**1.23**	**236**	P	**Pb**	**01 43 39.7**	**-0.2**
EMHD	**Djebel Mahouad**	**1.23**	**236**	P	**Pb**	**01 43 39.7**	**-0.2**
EMHD	**Djebel Mahouad**	**1.23**	**236**	P	**Pb**	**01 43 39.7**	**-0.2**
DFRA	**Djebel Bou Aff**	**1.38**	**104**	P	**Pn**	**01 43 42.0**	**+0.3**
DFRA	**Djebel Bou Aff**	**1.38**	**104**	P	**Pn**	**01 43 42.0**	**+0.3**
DFRA	**Djebel Bou Aff**	**1.38**	**104**	P	**Pn**	**01 43 42.0**	**+0.3**
CASM	**Ain Smara**	**1.93**	**108**	P	**Pb**	**01 43 51.0**	**-0.8**
CASM	**Ain Smara**	**1.93**	**108**	P	**Pb**	**01 43 51.0**	**-0.8**
CASM	**Ain Smara**	**1.93**	**108**	P	**Pb**	**01 43 51.0**	**-0.8**
EIBI	**Ibiza** 2.5nm,0.2s,SNR=7.9	**3.11**	**314**	S	**Sn**	**01 44 42.9**	**+0.3**
EIBI	**Ibiza** 2.5nm,0.2s,SNR=7.9	**3.11**	**314**	S	**Sn**	**01 44 42.9**	**+0.3**
EBEN	**Beniarda** 0.1nm,0.1s,SNR=4.0	**3.96**	**298**	P	**Pn**	**01 44 19.6**	**+2.4**
EBEN				S	**Sn**	**01 45 01.3**	**-2.1**
	0.9nm,0.2s,SNR=7.9						
EBEN	**Beniarda** 0.1nm,0.1s,SNR=4.0	**3.96**	**298**	P	**Pn**	**01 44 19.5**	**+2.4**
EBEN				S	**Sn**	**01 45 01.3**	**-2.1**
	0.9nm,0.2s,SNR=7.9						
ETOB	**Tobarra** 0.3nm,0.1s,SNR=7.0	**4.89**	**293**	P	**Pn**	**01 44 32.8**	**+2.8**
ETOB				S	**Sn**	**01 45 24.5**	**-2.0**
	0.7nm,0.2s,SNR=7.9						
ETOB	**Tobarra** 0.3nm,0.1s,SNR=7.0	**4.89**	**293**	P	**Pn**	**01 44 32.8**	**+2.8**
ETOB				S	**Sn**	**01 45 24.5**	**-2.0**
	0.7nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela** 0.4nm,0.2s,SNR=7.9	**5.05**	**315**	P	**Pn**	**01 44 33.5**	**+1.2**
EMOS				S	**Sn**	**01 45 29.4**	**-1.1**
	0.4nm,0.1s,SNR=4.0						
EMOS	**Mosqueruela** 0.4nm,0.2s,SNR=7.9	**5.05**	**315**	P	**Pn**	**01 44 33.5**	**+1.2**
EMOS				S	**Sn**	**01 45 29.4**	**-1.1**
	0.4nm,0.1s,SNR=4.0						
CFON	**Fontmartina** 1.9nm,0.2s,SNR=7.4	**5.05**	**345**	P	**Pn**	**01 44 33.6**	**+1.4**
CFON				S	**Sn**	**01 45 32.0**	**+1.5**
	1.7nm,0.2s,SNR=4.0						
CFON	**Fontmartina** 1.9nm,0.2s,SNR=7.4	**5.05**	**345**	P	**Pn**	**01 44 33.6**	**+1.4**
CFON				S	**Sn**	**01 45 32.0**	**+1.5**
	1.7nm,0.2s,SNR=4.0						
EPOB	**Poblet** 0.0nm,0.1s,SNR=4.0	**5.08**	**332**	P	**Pn**	**01 44 34.5**	**+1.9**
EPOB				S	**Sn**	**01 45 28.4**	**-2.7**
	0.6nm,0.4s,SNR=7.9						
EPOB	**Poblet** SNR=4.0	**5.08**	**332**	P	**Pn**	**01 44 34.5**	**+1.9**
EPOB				S	**Sn**	**01 45 28.4**	**-2.7**
	0.6nm,0.4s,SNR=7.9						
EMIR	**Miracle** 0.5nm,0.1s,SNR=7.9	**5.43**	**338**	P	**Pn**	**01 44 40.1**	**+2.7**
EMIR				S	**Sn**	**01 45 38.1**	**-1.6**
	1.0nm,0.4s,SNR=7.9						
EMIR	**Miracle** 0.5nm,0.1s,SNR=7.9	**5.43**	**338**	P	**Pn**	**01 44 40.1**	**+2.7**
EJON	**La Jonquera** 2.1nm,0.3s,SNR=7.9	**5.64**	**350**	P	**Pn**	**01 44 42.2**	**+1.9**
EJON	**La Jonquera** 2.1nm,0.3s,SNR=7.9	**5.64**	**350**	P	**Pn**	**01 44 42.2**	**+1.9**
CLLI	**Llivia** 0.1nm,0.1s,SNR=7.9	**5.84**	**343**	P	Pn	01 44 46.4	+3.3
CLLI	**Llivia** 0.1nm,0.1s,SNR=7.9	**5.84**	**343**	P	Pn	01 44 46.4	+3.3
EQES	**Quesada** 0.7nm,0.3s,SNR=7.9	**5.88**	**281**	P	**Pn**	**01 44 46.8**	**+3.2**
EQES				S	**Sn**	**01 45 52.4**	**+1.5**
	1.2nm,0.4s,SNR=7.9						

*IDC **15** 01:56:59.6±0.8, 11.11N×138.81E, h0km, mb4.1/12, mb1 4.3/12, mb1mx4.1/25, mbtmp4.1/12, MS3.3/6, Ms1 3.3/6, ms1mx3.1/37, Error ellipse: s-maj=29.2km s-min=17.5km az=87.0*
*ISCJB **15** 01:57:02.6±0.6, 11.08N±0.09×138.7E±0.1, h31km, mb4.2/23, MS3.2/5, Error ellipse: s-maj=16.5km s-min=12.8km az=169.7*
*NEIC **15** 01:57:05.2±2.9, 11.09N×138.79E, h36km±26km, mb4.4/11, Error ellipse: s-maj=12.5km s-min=8.7km az=82.0*

ISC 15 01:57:04.3±0.8, 11.1N±0.1×138.8E±0.2, h31km, n44, σ0s59/40, mb4.4/23, MS3.1/5, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** comp=Z,173nm,19.1s,baz=252,slow=37	**6.43**	**67**	LR	LR	02 00 54.5	
SSLB	**Suanglung** 10nm,0.6s	**21.17**	**309**	*e*P	**P**	**02 01 48.1**	**+0.9**
JHJ	**Hachijo jima 2** comp=Z,154nm,21.7s,baz=152,slow=31	**21.96**	**2**	LR	LR	02 08 14.8	
JNU	**Nakatsue**	**23.11**	**343**	P	**P**	**02 02 07.0**	**-0.9**
JNU	**Nakatsue** 3.5nm,0.6s,baz=217,slow=10,SNR=3.6	**23.11**	**343**	P	**P**	**02 02 07.0**	**-0.9**
JNU				LR	LR	02 09 15.3	
	comp=Z,72nm,19.8s,baz=236,slow=32						
KSRS	**Korea Array** 1.0nm,0.5s,baz=172,slow=9.7,SNR=3.5	**28.02**	**341**	P	**P**	**02 02 52.2**	**-0.5**
KSRS				LR	LR	02 14 10.4	
	comp=Z,47nm,18.2s,baz=179,slow=37						
KSAR	**Wonju Array Be**	**28.03**	**341**	P	**P**	**02 02 52.2**	**-0.5**
WRA	**Warramunga Arr**	**31.14**	**188**	P	**P**	**02 03 20.2**	**-0.2**
WRA	**Warramunga Arr** 1.2nm,1.0s,baz=12,slow=10,SNR=2.8	**31.14**	**188**	P	**P**	**02 03 20.2**	**-0.2**
ASAJ	**Asahikawa** comp=Z,13nm,20.4s,baz=174,slow=35	**33.08**	**5**	LR	LR	02 16 03.9	
USRK	**Ussuriysk Arra** 1.0nm,0.6s,baz=178,slow=7.4,SNR=3.7	**33.52**	**351**	P	**P**	**02 03 41.2**	**+0.2**
ASAR	**Alice Springs**	**34.86**	**188**	P	**P**	**02 03 53.5**	**+0.6**
ASAR	**Alice Springs** 0.6nm,0.4s,baz=17,slow=12,SNR=10	**34.86**	**188**	P	**P**	**02 03 53.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**39.16**	**286**	P	**P**	**02 04 29.5**	**-0.2**
CMAR	**Chiang Mai Arr** 2.5nm,0.5s,baz=92,slow=6.9,SNR=9.5	**39.16**	**286**	P	**P**	**02 04 29.5**	**-0.2**
STKA	**Stephens Creek** comp=Z,139nm,18.2s,baz=22,slow=36	**42.80**	**176**	LR	LR	02 22 42.1	
ULN	**Ulaanbaatar** 3.6nm,0.6s	**45.31**	**330**	*e*P	**P**	**02 05 20.3**	**+0.7**
MK31	**Makanchi Array**	**59.28**	**318**	*e*P	**P**	**02 07 03.5**	**+0.3**
MKAR	**Makanchi Array**	**59.28**	**318**	P	**P**	**02 07 03.6**	**+0.5**
MKAR	**Makanchi Array** 4.0nm,0.6s,baz=100,slow=8.5,SNR=54	**59.28**	**318**	P	**P**	**02 07 03.6**	**+0.5**
BILL	**Bilibino** 1.7nm,0.7s	**59.70**	**12**	*e*P	**P**	**02 07 05.7**	**0.0**
ZAA0	**Zalesovo Array**	**60.32**	**327**	*e*P	**P**	**02 07 09.6**	**-0.5**
ZALV	**Zalesovo Beam**	**60.32**	**327**	P	**P**	**02 07 09.9**	**-0.2**
ZALV	**Zalesovo Beam** 1.8nm,0.6s,baz=108,slow=5.8,SNR=7.7	**60.32**	**327**	P	**P**	**02 07 09.9**	**-0.2**
KURK	**Kurchatov** 6.8nm,0.7s	**62.76**	**322**	*e*P	**P**	**02 07 26.1**	**-0.5**
TKM2	**Tokmak 2** 1.9nm,0.6s	**62.96**	**313**	*e*P	**P**	**02 07 28.8**	**+0.4**
AAK	**Ala-Archa**	**63.71**	**312**	*e*P	**P**	**02 07 33.8**	**+0.5**
EKS2	**Erkin-Say** 1.2nm,0.4s	**64.24**	**312**	*e*P	**P**	**02 07 36.8**	**+0.1**
BRVK	**Borovoye** 5.3nm,0.6s	**68.33**	**323**	*e*P	**P**	**02 08 02.9**	**+0.3**
MCK	**McKinley** 3.4nm,0.8s	**72.30**	**26**	*e*P	**P**	**02 08 27.1**	**+0.4**
COLD	**Coldfoot** 3.6nm,0.8s	**72.53**	**23**	*e*P	**P**	**02 08 28.7**	**+0.8**
ILAR	**Eielson Array**	**73.37**	**26**	P	**P**	**02 08 33.0**	**0.0**
ILAR	**Eielson Array** 0.9nm,0.6s,baz=246,slow=5.7,SNR=14	**73.37**	**26**	P	**P**	**02 08 33.0**	**0.0**
ABKAR	**Akbulak array** 1.7nm,0.6s	**74.42**	**318**	*e*P	**P**	**02 08 39.2**	**-0.2**
YKW3	**Yellowknife Ar**	**87.74**	**26**	*e*P	**P**	**02 09 50.9**	**+0.9**
YKA	**Yellowknife Ar**	**87.77**	**26**	P	**P**	**02 09 50.9**	**+0.8**
YKA	**Yellowknife Ar** 1.5nm,0.7s,baz=292,slow=5.2,SNR=17	**87.77**	**26**	P	**P**	**02 09 50.9**	**+0.8**
RES	**Resolute Bay** 1.5nm,0.8s	**88.30**	**12**	*e*P	**P**	**02 09 52.3**	**-0.1**
FINES	**FINESS Array B**	**90.84**	**334**	P	**P**	**02 10 03.3**	**-1.3**
FINES	**FINESS Array B** 1.9nm,0.7s,baz=74,slow=4.9,SNR=6.2	**90.84**	**334**	P	**P**	**02 10 03.3**	**-1.3**
NVAR	**Mina Array Bea**	**93.09**	**50**	P	**P**	**02 10 15.4**	**-0.4**
NVAR	**Mina Array Bea** 0.2nm,0.3s,baz=297,slow=

0.4nm,0.7s,baz=90,slow=7.2,SNR=3.7

ILAR	**Eielson Array**	**51.96**	**32**	P	**P**	**02 11 41.4**	**+0.6**
	0.5nm,0.6s,baz=285,slow=9.4,SNR=9.5							
WRA	**Warramunga Arr**	**57.18**	**180**	P	**P**	**02 12 17.1**	**-1.3**
	0.4nm,0.4s,baz=358,slow=7.7,SNR=2.2							
YKA	**Yellowknife Ar**	**66.01**	**28**	P	**P**	**02 13 16.2**	**+0.1**
	0.2nm,0.6s,baz=308,slow=6.3,SNR=4.0							
NVAR	**Mina Array Bea**	**78.91**	**50**	P	**P**	**02 14 33.3**	**+1.1**
	0.4nm,0.5s,baz=296,slow=5.5,SNR=3.6							
PDAR	**Pinedale Array**	**81.05**	**42**	P	**P**	**02 14 43.7**	**+0.3**
	0.5nm,0.7s,baz=289,slow=2.8,SNR=3.8							

IDC ***15*** *02:21:02.3±1.8,36°.32N×63°.68E, h0km, mb3.4/5, mb1 3.6/10, mb1mx3.5/31, mbtmp3.5/10, ML3.6/5, MS3.1/7, Ms1 3.1/7, ms1mx2.7/34, Error ellipse: s-maj=33.2km s-min=17.6km az=152.0*

ISCJB ***15*** *02:21:06.5±0.9, 36°.72N±0°.06×63°.70E±0°.06, h33km, mb3.4/5, MS3.3/3, Error ellipse: s-maj=9.3km s-min=7.0km az=159.1*

NNC ***15*** *02:21:07.9±1.2, 37°.00N×63°.87E, h0km, mb3.6, mpv3.8, Error ellipse: s-maj=9.5km s-min=7.4km az=0.0*

ISC 15 02:21:08.0±1.3, 36°.7N±0°.1×63°.75E±0°.08, h35km, n23, σ1§40/32, mb3.3/5, MS3.3/3, 12C-8D, Turkmenistan-Afghanistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**8.26**	**37**	Pn		**Pn**		**02 23 05.7**	**+0.4**
	3.9nm,0.7s,baz=224,slow=16,SNR=12								
KK31				⇓Sn		**Sn**		**02 24 36.4**	**-1.0**
	6.6nm,0.6s,baz=213,slow=23,SNR=4.8								
AAK	**Ala-Archa**	**10.20**	**51**	Pn		**Pn**		**02 23 31.2**	**-0.8**
	0.4nm,0.3s,baz=291,slow=19,SNR=3.7								
AAK				Sn		**Sn**		**02 25 28.4**	**+3.3**
	0.6nm,0.3s,baz=235,slow=14,SNR=6.6								
AAK				LR		LR		02 28 06.9	
	comp=Z,56nm,19.3s,baz=44,slow=41								
TKM2	**Tokmak 2**	**11.04**	**52**	⇓Pn		**Pn**		**02 23 43.2**	**-0.4**
	2.5nm,0.6s								
TKM2				⇓Sn		**Sn**		**02 25 46.6**	**+0.7**
	7.5nm,0.8s								
AB31	**Akbulak array**	**12.88**	**349**	⇑Pn		**Pn**		**02 24 08.5**	**+0.1**
	0.4nm,0.4s,baz=158,slow=14,SNR=9.0								
AB31				⇑Sn		**Sn**		**02 26 29.4**	**-1.0**
	2.5nm,0.8s,baz=244,slow=61,SNR=5.9								
AKTO	**Aktyubinsk**	**14.36**	**345**	⇑Pn		**Pn**		**02 24 27.6**	**-1.0**
	0.2nm,0.8s								
AKTO				⇑Sn		**Sn**		**02 27 07.8**	**+1.2**
	0.3nm,0.8s								
AKTO	**Aktyubinsk**	**14.36**	**345**	Pn		**Pn**		**02 24 28.3**	**-0.4**
	0.2nm,0.3s,baz=162,slow=14,SNR=5.5								
AKTO				Sn		**Sn**		**02 27 06.2**	**-0.3**
	0.1nm,0.3s,baz=225,slow=20,SNR=2.8								
AKTO				LR		LR		02 31 09.8	
	comp=Z,70nm,18.4s,baz=202,slow=41								
ZRNK	**Zerenda**	**16.69**	**11**	⇑Pn		**Pn**		**02 24 58.2**	**-0.8**
	1.9nm,0.9s								
ZRNK				⇓Sn		**Sn**		**02 28 01.3**	**-1.8**
	2.6nm,0.7s								
VOSK	**Vostochnaya**	**16.84**	**15**	⇑Pn		**Pn**		**02 24 59.7**	**-1.1**
	1.7nm,0.6s								
VOSK				⇓Sn		**Sn**		**02 28 04.9**	**-1.7**
	2.0nm,0.6s								
BVA0	**Borovoye Array**	**17.00**	**14**	⇑Pn		**Pn**		**02 25 02.5**	**-0.4**
	0.2nm,0.6s,baz=185,slow=14,SNR=4.9								
BVA0				⇓Sn		**Sn**		**02 28 09.3**	**-1.3**
	0.4nm,0.8s								
BVAR	**Borovoye Array**	**17.00**	**14**	P		**P**		**02 25 04.9**	**+0.4**
	0.5nm,0.3s,baz=178,slow=15,SNR=6.6								
BVAR				LR		LR		02 32 12.5	
	comp=Z,74nm,18.7s,baz=323,slow=39								
BRVK	**Borovoye**	**17.01**	**14**	⇓Pn		**P**		**02 25 03.7**	**-0.9**
	3.3nm,0.6s								
BRVK				⇑Sn		**Sn**		**02 28 09.5**	**-1.4**
	3.7nm,0.8s								
MK31	**Makanchi Array**	**17.10**	**48**	⇑Pn		**Pn**		**02 25 03.8**	**-0.4**
	2.1nm,1.3s,baz=240,slow=14,SNR=7.0								
MK31				⇑Sn		**Sn**		**02 28 12.7**	**-0.5**
	0.5nm,0.7s								
MKAR	**Makanchi Array**	**17.10**	**48**	P		**P**		**02 25 07.2**	**+1.5**
	0.1nm,0.3s,baz=241,slow=12,SNR=5.9								
KURBB	**Kurchatov Arra**	**17.52**	**33**	⇑Pn		**P**		**02 25 09.5**	**-0.8**
	0.3nm,0.6s								
KURBB				⇓Sn		**Sn**		**02 28 22.9**	**-0.5**
	0.5nm,0.7s								
KURBB	**Kurchatov Arra**	**17.52**	**33**	P		**P**		**02 25 10.5**	**+0.2**
	0.0nm,0.3s,baz=225,slow=12,SNR=8.0								
KURBB				LR		LR		02 31 56.7	
	comp=Z,17nm,20.0s,baz=255,slow=37								
KURK	**Kurchatov**	**17.63**	**33**	⇑Sn		**Sn**		**02 28 24.8**	**-1.1**
	1.9nm,0.7s								
ZALV	**Zalesovo Beam**	**22.61**	**34**	P		**P**		**02 26 09.0**	**+3.4**
	0.5nm,0.4s,baz=251,slow=11,SNR=3.4								
BRTR	**Keskin Array B**	**23.80**	**287**	P		**P**		**02 26 16.8**	**-0.9**
	0.2nm,0.5s,baz=109,slow=9.7,SNR=2.5								
FINES	**FINESS Array B**	**34.18**	**328**	P		**P**		**02 27 52.2**	**+2.6**
	3.1nm,0.9s,baz=110,slow=12,SNR=5.1								
FINES				LR		LR		02 44 45.8	
	comp=Z,58nm,18.6s,baz=179,slow=41								
ARCES	**ARCESS Array B**	**38.85**	**340**	LR		LR		02 45 23.0	
	comp=Z,52nm,19.9s,baz=42,slow=37								
NOA	**NORSAR Array B**	**40.75**	**324**	LR		LR		02 47 17.4	
	comp=Z,33nm,19.1s,baz=115,slow=38								
TORD	**Torodi Ar. Bea**	**59.91**	**264**	P		**P**		**02 31 09.1**	**-1.6**
	0.4nm,0.7s,baz=48,slow=6.4,SNR=5.0								
YKA	**Yellowknife Ar**	**81.17**	**359**	P		P		02 33 22.7	+3.2
	0.1nm,0.4s,baz=349,slow=5.8,SNR=3.0								

IDC 15 02:30:13.5±3.3, 16°.52S×173°.75W, h52km±30km, mb3.7/7, mb1 4.1/8, mb1mx3.8/22, mbtmp3.8/8, ML2.8/1, Error ellipse: s-maj=44.9km s-min=17.7km az=135.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.22**	**37**	P		P	Pn	02 31 01.9	+0.2
	58nm,0.3s,baz=236,slow=11,SNR=17								
AFI				S			Sn	02 31 35.0	-4.0
	142nm,0.3s,baz=177,slow=18,SNR=12								
URZ	**Urewera**	**23.10**	**199**	P		P		02 35 15.2	+0.3
	22nm,0.6s,baz=45,slow=4.7,SNR=17								
WRA	**Warramunga Arr**	**49.27**	**258**	P		P		02 38 56.7	-0.8
	0.4nm,0.4s,baz=92,slow=6.9,SNR=3.9								
ASAR	**Alice Springs**	**49.45**	**253**	P		P		02 38 58.5	-0.4
	2.2nm,0.6s,baz=89,slow=8.1,SNR=30								
NVAR	**Mina Array Bea**	**75.38**	**42**	P		P		02 41 52.0	0.0
	0.3nm,0.5s,baz=218,slow=5.7,SNR=3.4								
TXAR	**Lajitas Array**	**81.51**	**56**	P		P		02 42 25.4	-0.5
	0.5nm,1.0s,baz=202,slow=6.4,SNR=3.5								
PDAR	**Pinedale Array**	**83.32**	**42**	P		P		02 42 34.9	-0.3
	1.6nm,0.7s,baz=201,slow=3.6,SNR=12								
ILAR	**Eielson Array**	**83.60**	**11**	P		P		02 42 35.8	-0.1
	0.5nm,0.5s,baz=215,slow=4.3,SNR=11								
BRTR	**Keskin Array B**	**146.80**	**320**	PKPbc		PKPbc	PKPbc	02 49 50.6	+0.2
	1.3nm,0.6s,baz=130,slow=1.9,SNR=12								
GERES	**GERESS Array B**	**147.19**	**351**	PKPbc		PKPbc	PKPbc	02 49 50.9	-0.3
	0.5nm,0.7s,baz=7.6,slow=4.0,SNR=4.5								

IDC 15 02:33:09.3±13.0, 5°.37S×128°.53E, h266km±149km, mb2.8/2, mb1 3.2/5, mb1mx3.0/22, mbtmp3.0/5, Error ellipse: s-maj=83.1km s-min=48.4km az=40.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.96**	**192**	P		P	Pn	02 36 04.0	-0.5
	0.1nm,0.3s,baz=0.7,slow=11,SNR=4.5								
FITZ				S			S	02 38 31.9	+3.4
	0.1nm,0.3s,baz=6.3,slow=18,SNR=1.9								
WRA	**Warramunga Arr**	**15.55**	**159**	P		P	Pn	02 36 35.3	-0.3
	1.2nm,0.3s,baz=337,slow=11,SNR=23								
ASAR	**Alice Springs**	**18.91**	**165**	P		P	P	02 37 10.2	-0.7
	0.4nm,0.3s,baz=343,slow=11,SNR=19								
MKAR	**Makanchi Array**	**66.07**	**327**	P		P	P	02 43 28.4	+0.3
	0.2nm,0.4s,baz=128,slow=7.9,SNR=3.5								
KURBB	**Kurchatov Arra**	**70.37**	**329**	P		P	P	02 43 54.3	-0.1
	0.1nm,0.4s,baz=122,slow=5.7,SNR=3.7								

IDC 15 02:47:11.1±1.5, 8°.11S×121°.95E, h0km, mb3.6/1, mb1 3.7/5, mb1mx3.5/24, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=152.1km s-min=22.4km az=58.0, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.77**	**324**	Pn		Pn	Pn	02 48 11.7	+1.1
	1.3nm,0.3s,baz=157,slow=10.0,SNR=3.9								
FITZ	**Fitzroy Crossi**	**10.56**	**160**	Pn		Pn	Pn	02 49 43.1	-0.8
	0.1nm,0.3s,baz=342,slow=13,SNR=4.0								
FITZ				Sn			Sn	02 51 36.1	-6.9
	0.2nm,0.3s,baz=347,slow=18,SNR=2.9								
WRA	**Warramunga Arr**	**16.80**	**136**	Pn		Pn	Pn	02 51 06.8	-1.2
	0.2nm,0.3s,baz=310,slow=14,SNR=6.7								
WRA				Sn			Sn	02 54 06.2	-9.3
	0.1nm,0.3s,baz=318,slow=26,SNR=3.1								
ASAR	**Alice Springs**	**19.25**	**145**	P		Pn	Pn	02 51 38.7	+0.5
	0.2nm,0.3s,baz=326,slow=13,SNR=11								
MKAR	**Makanchi Array**	**65.05**	**331**	P		P	P	02 57 52.8	-0.5
	0.3nm,0.5s,baz=135,slow=7.1,SNR=5.7								

ISCJB ***15*** *02:49:50.9±0.9, 41°.09N±0°.06×20°.05E±0°.09, h31km±7km, Error ellipse: s-maj=12.9km s-min=6.5km az=142.2*

TIR ***15*** *02:49:50.6, 41°.11N×20°.11E, h27km, ML2.5*

CSEM ***15*** *02:49:50.6±0.4, 41°.08N×20°.05E, h30km, ML2.5, Error ellipse: s-maj=12.7km s-min=4.9km az=55.0*

THE ***15*** *02:49:51.3, 41°.18N×20°.23E, h17km±15km, ML1.9/2, Error ellipse: s-maj=16.7km s-min=0.4km az=305.0*

ISC 15 02:49:50.5±1.2, 41°.06N±0°.05×20°.06E±0°.06, h26km±10km, n18, σ1§00/35, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**333**	*i* PG		**Pb**		**02 49 57.8**	**0.0**
TIR				*i* SG		**Sn**		**02 50 04.1**	**-1.2**
TIR	**Tirane**	**0.32**	**333**	P		**Pb**		**02 49 57.8**	**0.0**
TIR				S		**Sb**		**02 50 03.3**	**+0.5**
TIR	**Tirane**	**0.32**	**333**	P		**Pb**		**02 49 57.8**	**0.0**
TIR				S		**Sb**		**02 50 03.3**	**+0.5**
TIR				*i* Sg		**Sn**		**02 50 04.1**	**-1.2**
PHP	**Peshkopia**	**0.69**	**25**	*i* PG		**Pb**		**02 50 03.5**	**-0.4**
PHP				*i* SG		**Sb**		**02 50 13.1**	**+0.1**
PHP	**Peshkopia**	**0.69**	**25**	*i* Pg		**Pb**		**02 50 03.5**	**-0.4**
PHP				*i* Sg		**Sb**		**02 50 13.1**	**+0.1**
KBN	**Korca**	**0.71**	**128**	*i* PG		**Pb**		**02 50 04.1**	**-0.1**
KBN				*i* SG		**Sn**		**02 50 15.4**	**+0.4**
KBN	**Korca**	**0.71**	**128**	P		**Pb**		**02 50 04.5**	**+0.3**
KBN				S		**Sn**		**02 50 15.1**	**+0.1**
KBN	**Korca**	**0.71**	**128**	*i* Pg		**Pb**		**02 50 04.1**	**-0.1**
KBN	**Korca**	**0.71**	**128**	P		**Pb**		**02 50 04.5**	**+0.3**
KBN				S		**Sn**		**02 50 15.1**	**+0.1**
KBN				*i* Sg		**Sn**		**02 50 15.4**	**+0.4**
BIA	**Bitola**	**0.96**	**92**	P		**Pn**		**02 50 07.0**	**-1.4**
BIA	**Bitola**	**0.96**	**92**	*i* Pg		**Pn**		**02 50 06.9**	**-1.5**
BIA				*e*Sg		**Sn**		**02 50 22.1**	**+0.9**
BIA	**Bitola**	**0.96**	**92**	P		**Pn**		**02 50 07.0**	**-1.4**
BIA				*e*Sg		**Sn**		**02 50 22.1**	**+0.9**
PUK	**Puka**	**0.99**	**353**	*i* PG		**Pb**		**02 50 09.6**	**+0.6**
PUK				*i* SG		**Sn**		**02 50 25.8**	**+3.9**
PUK	**Puka**	**0.99**	**353**	*i* Pg		**Pb**		**02 50 09.6**	**+0.6**
NEST	**Nestorio**	**0.99**	**130**	P		**Pb**		**02 50 09.6**	**+0.5**
NEST				S		**Sn**		**02 50 23.3**	**+1.2**
NEST	**Nestorio**	**0.99**	**130**	P		**Pb**		**02 50 09.6**	**+0.5**
NEST				S		**Sn**		**02 50 23.3**	**+1.2**
FNA	**Florina**	**1.04**	**105**	P		**Pn**		**02 50 09.1**	**-0.3**
FNA				S		**Sb**		**02 50 22.8**	**-0.2**
FNA	**Florina**	**1.04**	**105**	P		**Pn**		**02 50 09.1**	**-0.3**
FNA				S		**Sb**		**02 50 22.8**	**-0.2**

GUC 15 03:10:21.0±1.8, 21°.86S×68°.53W, h133km±15km, ML3.5, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**0.66**	**275**	⇑*i* P		Pn		03 10 42.6	+1.0
PB09				*i* S		Sn		03 10 59.1	+1.9
PB09				AML		AML		03 10 59.9	
	comp=N,2μm,0.3s								
LVC	**Limon Verde**	**0.83**	**205**	*e*P		Pn		03 10 43.7	+0.7
LVC				*i* S		Sn		03 10 59.9	+0.1
PB04	**Plate Boundary**	**0.97**	**245**	⇑*i* P		Pn		03 10 51.4	+7.5
PB04				*i* S		Sn		03 11 13.6	+12
PB04				AML		AML		03 11 15.5	
	comp=N,386nm,0.2s								
PB01	**Plate Boundary**	**1.20**	**312**	⇑*i* P		Pn		03 10 47.0	+0.8
PB01				*i* S		Sn		03 11 05.8	+0.4
PB01				AML		AML		03 11 07.9	
	comp=N,707nm,0.2s								
CEN1	**Los Morros**	**2.17**	**225**	AML		AML		03 11 39.2	
	comp=N,112nm,0.7s								
MNMC	**Minimini**	**2.89**	**340**	*e*P		Pn		03 11 07.9	+1.2
MNMC				*i* S		Sn		03 11 42.8	+0.9
MNMC				AML		AML		03 11 46.4	
	comp=E,223nm,0.2s								

IDC ***15*** *03:18:52.1±0.7, 4°.01N×126°.80E, h0km, mb4.1/12, mb1 4.3/12, mb1mx4.1/24, mbtmp4.1/12, MS3.2/1, Ms1 3.2/1, ms1mx2.3/32, Error ellipse: s-maj=40.0km s-min=14.2km az=71.0*

ISCJB ***15*** *03:18:55.6±0.4, 3°.98N±0°.07×126°.76E±0°.1, h36km, mb4.3/23, Error ellipse: s-maj=18.2km s-min=8.2km az=162.7*

NEIC ***15*** *03:18:57.3±0.2, 3°.98N×126°.76E, h35km, mb4.5/12, Error ellipse: s-maj=10.7km s-min=4.8km az=71.0*

ISC 15 03:18:57.7±0.6, 3°.98N±0°.09×126°.8E±0°.2, h36km, n44, σ1§24/46, mb4.3/23, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**4.09**	**322**	⇓*i* P		Pn		03 20 06.0	+8.4
KAPI	**Kappang**	**11.36**	**218**	LR		LR		03 26 23.7	
	comp=Z,108nm,18.8s,baz=216,slow=40								
FITZ	**Fitzroy Crossi**	**21.97**	**183**	P		**P**		**03 23 48.2**	**-0.4**
FITZ	**Fitzroy Crossi**	**21.97**	**183**	P		**P**		**03 23 48.2**	**-0.4**
	4.9nm,0.8s,baz=1.5,slow=9.6,SNR=5.5								
WRAB	**Tennant Creek**	**24.90**	**163**	*e*P		**P**		**03 24 16.6**	**-0.8**
	11nm,0.8s								
WRA	**Warramunga Arr**	**24.91**	**163**	P		**P**		**03 24 16.7**	**-0.8**
WRA	**Warramunga Arr**	**24.91**	**163**	P		**P**		**03 24 16.7**	**-0.8**
	7.6nm,0.8s,baz=343,slow=11,SNR=15								
MBWA	**Marble Bar**	**25.92**	**195**	*e*P		**P**		**03 24 26.4**	**-0.2**
	14nm,1.0s								
KULM	**Kulim**	**26.07**	**274**	*e*P		**P**		**03 24 27.9**	**-0.2**
	40nm,1.4s								
ASAR	**Alice Springs**	**28.34**	**166**	P		**P**		**03 24 48.0**	**-0.5**
ASAR	**Alice Springs**	**28.34**	**166**	P		**P**		**03 24 48.0**	**-0.5**
	0.4nm,0.5s,baz=348,slow=7.1,SNR=5.1								
CMAR	**Chiang Mai Arr**	**30.79**	**300**	P		**P**		**03 25 10.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**30.79**	**300**	P		**P**		**03 25 10.3**	**+0.2**
	1.1nm,0.3s,baz=107,slow=6.1,SNR=3.4								
CHTO	**Chiang Mai**	**30.93**	**301**	*e*P		**P**		**03 25 10.6**	**-0.8**
	4.0nm,0.9s								
KSAR	**Wonju Array Be**	**33.32**	**2**	P		**P**		**03 25 31.7**	**-0.4**
KSRS	**Korea Array**	**33.33**	**2**	P		**P**		**03 25 31.7**	**-0.5**
	1.4nm,0.8s,baz=174,slow=9.2,SNR=5.0								
STKA	**Stephens Creek**	**38.35**	**159**	P		**P**		**03 26 15.4**	**+0.1**
STKA	**Stephens Creek**	**38.35**	**159**	P		**P**		**03 26 15.4**	**+0.1**
	3.9nm,0.7s,baz=341,slow=4.4,SNR=7.3								
ULN	**Ulaanbaatar**	**46.90**	**342**	*e*P		**P**		**03 27 25.3**	**+0.6**
	6.3nm,0.9s								
MK31	**Makanchi Array**	**57.38**	**325**	*e*P		**P**		**03 28 41.9**	**-0.6**
MKAR	**Makanchi Array**	**57.38**	**325**	P		**P**		**03 28 42.1**	**-0.4**
MKAR				PcP		**PcP**		**03 29 36.8**	**+0.6**
MKAR				ScP		**ScP**		**03 33 38.6**	**+5.2**
MKAR	**Makanchi Array**	**57.38**	**325**	P		**P**		**03 28 42.1**	**-0.4**
	2.2nm,0.7s,baz=123,slow=8.2,SNR=25								
MKAR				PcP		**PcP**		**03 29 36.8**	**+0.6**
	1.0nm,0.7s,baz=121,slow=5.0,SNR=4.2								
MKAR				ScP		**ScP**		**03 33 38.7**	**+5.2**
	0.3nm,0.7s,baz=104,slow=4.6,SNR=3.7								
TKM2	**Tokmak 2**	**59.59**	**318**	*e*P		**P**		**03 28 57.5**	**-0.8**
	2.0nm,0.9s								
ZALV	**Zalesovo Beam**	**60.39**	**333**	P		**P**		**03 29 02.6**	**-0.5**
ZALV	**Zalesovo Beam**	**60.39**	**333**	P		**P**		**03 29 02.6**	**-0.5**
	1.5nm,0.6s,baz=136,slow=6.0,SNR=4.4								
EKS2	**Erkin-Say**	**60.70**	**318**	*e*P		**P**		**03 29 06.1**	**+0.3**
	2.1nm,0.8s								
KURK	**Kurchatov**	**61.55**	**327**	*e*P		**P**		**03 29 10.1**	**-1.1**
	4.0nm,0.6s								
BRVK	**Borovoye**	**67.21**	**327**	*e*P		**P**		**03 29 48.4**	**+0.2**
	3.3nm,0.8s								
ABKAR	**Akbulak array**	**71.99**	**321**	*e*P		**P**		**03 30 17.1**	**-0.6**
VNDA	**Vanda**	**83.67**	**173**	*e*P		**P**		**03 31 22.7**	**+0.6**
	2.5nm,1.0s								
VNDA	**Vanda**	**83.67**	**173**	P		**P**		**03 31 23.2**	**+1.1**
	1.5nm,0.8s,baz=308,slow=5.7,SNR=7.7								
MCK	**McKinley**	**83.92**	**26**	*e*P		**P**		**03 31 23.8**	**0.0**
	5.2nm,0.9s								
ILAR	**Eielson Array**	**84.86**	**25**	P		**P**		**03 31 28.4**	**0.0**
ILAR	**Eielson Array**	**84.86**	**25**	P		**P**		**03 31 28.4**	**0.0**
	0.6nm,0.9s,baz=248,slow=6.2,SNR=6.7								
BRTR	**Keskin Array B**	**89.90**	**310**	P		**P**		**03 31 52.5**	**-1.0**
BRTR	**Keskin Array B**	**89.90**	**310**	P		**P**		**03 31 52.5**	**-1.0**
	0.8nm,0.8s,baz=126,slow=6.3,SNR=4.8								
ARCES	**ARCESS Array B**	**90.23**	**340**	P		**P**		**03 31 54.0**	**-0.3**
ARCES	**ARCESS Array B**	**90.23**	**340**	P		**P**		**03 31 54.0**	**-0.3**
	2.5nm,0.9s,baz=81,slow=6.5,SNR=5.4								
BUR08	**Bucovina Ar. S**	**94.85**	**318**	*e*P		**P**		**03 32 16.1**	**0.0**
RES	**Resolute Bay**	**97.56**	**10**	*e*P		**P**		**03 32 27.1**	**-0.6**
	1.6nm,1.1s								
TXAR	**Lajitas Array**	**121.41**	**52**	PKP		**PKPdf**		**03 37 48.0**	**-0.1**
TXAR	**Lajitas Array**	**121.41**	**52**	PKP		**PKPdf**		**03 37 48.0**	**-0.1**
	0.4nm,0.9s,baz=204,slow=2.0,SNR=3.7								
TORD	**Torodi Ar. Bea**	**122.89**	**288**	PKP		**PKPdf**		**03 37 50.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**122.89**	**288**	PKP		**PKPdf**		**03 37 50.9**	**-0.2**
	0.3nm,0.8s,baz=54,slow=2.1,SNR=4.3								

ISK ***15*** *03:28:26.2, 39°.27N×27°.82E, h5km, MD3.2*

DDA ***15*** *03:28:27.0, 39°.27N×27°.88E, h7km, ML3.3*

CSEM ***15*** *03:28:27.5±0.1, 39°.27N×27°.81E, h2km, MD3.2, Error ellipse: s-maj=2.5km s-min=2.2km az=105.0*

ISCJB ***15*** *03:28:27.4±0.4, 39°.28N±0°.02×27°.81E±0°.02, h4km±3km, Error ellipse: s-maj=2.9km s-min=2.6km az=32.1*

THE ***15*** *03:28:28.4, 39°.20N×27°.82E, h3km±1km, ML2.8/3, Error ellipse: s-maj=2.6km s-min=1.4km az=112.0*

ATH ***15*** *03:28:30.5, 39°.31N×27°.60E, h25km±2km, MD3.4/5*

ISC 15 03:28:27.8±1.0, 39°.27N±0°.02×27°.82E±0°.02, h8km±8km, n126, σ0§76/165, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.37**	**7**	*e*PG		**Pg**		**03 28 34.7**	**-0.4**
BALB				*e*SG		**Sg**		**03 28 41.1**	**+1.1**
BALB	**Balikesir**	**0.37**	**7**	*e*Pg		**Pg**		**03 28 34.7**	**-0.4**
BALB				*e*Sg		**Sg**		**03 28 41.1**	**+1.1**
AKHS	**Akhisar**	**0.39**	**181**	*i* P		**Pg**		**03 28 34.9**	**-0.6**
AKHS				*i* S		**Sg**		**03 28 41.4**	**+0.7**
AKHS	**Akhisar**	**0.39**	**181**	*i* P		**Pg**		**03 28 34.9**	**-0.6**
AKHS				*i* S		**Sg**		**03 28 41.4**	**+0.7**
AKS	**Akhisar**	**0.39**	**181**	*e*PG		**Pg**		**03 28 35.0**	**-0.5**
AKS				*e*SG		**Sg**		**03 28 41.0**	**+0.3**
AKS	**Akhisar**	**0.39**	**181**	*e*Pg		**Pg**		**03 28 35.0**	**-0.5**
AKS				*e*Sg		**Sg**		**03 28 41.0**	**+0.3**
BALY	**Balya**	**0.49**	**341**	*i* P		**Pg**		**03 28 37.3**	**-0.1**
BALY				*i* S		**Sg**		**03 28 44.8**	**+0.9**
BALY	**Balya**	**0.49**	**341**	*i* P		**Pg**		**03 28 37.3**	**-0.1**
BALY				*i* S		**Sg**		**03 28 44.8**	**+0.9**
DST	**Dursunbey**	**0.70**	**61**	*e*PG		**Pg**		**03 28 40.0**	**-1.3**
DST				*e*SG		**Sg**		**03 28 51.0**	**+0.5**
DST	**Dursunbey**	**0.70**	**61**	*e*Pg		**Pg**		**03 28 40.0**	**-1.3**
DST				*e*Sg		**Sg**		**03 28 51.0**	**+0.5**
GONE	**Gonen-Balikesi**	**0.78**	**352**	*e*PG		**Pg**		**03 28 42.5**	**-0.4**
GONE	**Gonen-Balikesi**	**0.78**	**352**	*e*Pg		**Pg**		**03 28 42.5**	**-0.4**
AYVA	**Ayvalik**	**0.88**	**273**	*e*P		**Pb**		**03 28 45.7**	**+0.3**
AYVA				*e*S		**Sb**		**03 28 57.9**	**+0.6**
AYVA	**Ayvalik**	**0.88**	**273**	*e*P		**Pb**		**03 28 45.7**	**+0.3**
AYVA				*e*S		**Sb**		**03 28 57.9**	**+0.6**
MANT	**

ISK	**Istanbul-Kandi**	**2.03**	**27**	*e*Pn	**Pn**	**03 29 03.1 +0.8**			
CTKS	**Kestanelik-??a**	**2.03**	**15**	*e*PN	**Pn**	**03 29 03.5 +1.1**			
CTKS	**Kestanelik-??a**	**2.03**	**15**	*e*Pn	**Pn**	**03 29 03.5 +1.1**			
BGKT	**Bogazkoy**	**2.04**	**21**	*e*PN	**Pn**	**03 29 03.5 +1.0**			
BGKT	**Bogazkoy**	**2.04**	**21**	*e*Pn	**Pn**	**03 29 03.5 +1.0**			
HRT	**Hereke**	**2.10**	**42**	*e*PN	**Pn**	**03 29 04.6 +1.3**			
HRT	**Hereke**	**2.10**	**42**	*e*Pn	**Pn**	**03 29 04.6 +1.3**			
ALN	**Alexandroupoli**	**2.12**	**321**	P	**Pn**	**03 29 03.7 +0.2**			
ALN				S	**Sb**	**03 29 32.5 -0.5**			
ALN	**Alexandroupoli**	**2.12**	**321**	*e*PB	**Pn**	**03 29 03.8 +0.2**			
ALN				*e*SN	**Sn**	**03 29 29.6 -0.5**			
ALN	**Alexandroupoli**	**2.12**	**321**	P	**Pn**	**03 29 03.7 +0.2**			
ALN				*e*Sn	**Sn**	**03 29 29.6 -0.5**			
ALN				S	**Sb**	**03 29 32.5 -0.5**			
SMTH	**Samothraki Isl**	**2.13**	**305**	*e*PB	**Pn**	**03 29 03.9 +0.1**			
SMTH				*e*SN	**Sn**	**03 29 29.6 -0.9**			
SMTH	**Samothraki Isl**	**2.13**	**305**	*e*Pb	**Pn**	**03 29 03.9 +0.1**			
SMTH				*e*Sn	**Sn**	**03 29 29.6 -0.9**			
LIA	**Limnos Island**	**2.13**	**288**	P	**Pn**	**03 29 04.0 +0.2**			
LIA				S	**Sn**	**03 29 31.3 +0.9**			
LIA	**Limnos Island**	**2.13**	**288**	*e*PB	**Pn**	**03 29 04.0 +0.2**			
LIA				*e*SN	**Sn**	**03 29 29.7 -0.7**			
LIA	**Limnos Island**	**2.13**	**288**	*e*Pb	**Pn**	**03 29 04.0 +0.2**			
LIA				*e*Sn	**Sn**	**03 29 29.7 -0.7**			
LIA				S	**Sn**	**03 29 31.3 +0.9**			
BODT	**Bodrum**	**2.24**	**191**	*e*PN	**Pn**	**03 29 06.8 +1.5**			
BODT	**Bodrum**	**2.24**	**191**	*e*Pn	**Pn**	**03 29 06.8 +1.5**			
SHUT	**Suhut-Afyon**	**2.25**	**108**	*e*PN	**Pn**	**03 29 06.3 +0.9**			
SHUT	**Suhut-Afyon**	**2.25**	**108**	*e*Pn	**Pn**	**03 29 06.3 +0.9**			
SILT	**Sile**	**2.34**	**36**	*e*PN	**Pn**	**03 29 07.9 +1.3**			
SILT	**Sile**	**2.34**	**36**	*e*Pn	**Pn**	**03 29 07.9 +1.3**			
ESKT	**Eskisehir**	**2.36**	**83**	*e*PN	**Pn**	**03 29 07.4 +0.4**			
ESKT	**Eskisehir**	**2.36**	**83**	*e*Pn	**Pn**	**03 29 07.4 +0.4**			
GULT	**Gulveren**	**2.37**	**60**	*e*PN	**Pn**	**03 29 08.6 +1.5**			
GULT	**Gulveren**	**2.37**	**60**	*e*Pn	**Pn**	**03 29 08.6 +1.5**			
EDRB	**Edirne**	**2.70**	**343**	*e*PN	**Pn**	**03 29 13.0 +1.5**			
EDRB	**Edirne**	**2.70**	**343**	*e*Pn	**Pn**	**03 29 13.0 +1.5**			
APE	**Apeiranthos**	**2.85**	**220**	*e*PN	**Pn**	**03 29 14.0 +0.4**			
APE	**Apeiranthos**	**2.85**	**220**	*e*Pn	**Pn**	**03 29 14.0 +0.4**			
MDUB	**Mudurnu**	**2.86**	**64**	*e*PN	**Pn**	**03 29 15.6 +1.8**			
MDUB	**Mudurnu**	**2.86**	**64**	*e*Pn	**Pn**	**03 29 15.6 +1.8**			
SVRH	**Sivrihisar-ESK**	**2.87**	**85**	*e*PN	**Pn**	**03 29 15.6 +1.5**			
SVRH	**Sivrihisar-ESK**	**2.87**	**85**	*e*Pn	**Pn**	**03 29 15.6 +1.5**			

IDC ***15*** *03:33:50.5±0.5, 3.°97N×126.°67E, h0km, mb4.6/22, mb1 4.7/22, mb1mx4.6/25, mbtmp4.6/22, MS3.7/6, Ms1 3.7/6, ms1mx3.2/34, Error ellipse: s-maj=25.9km s-min=11.6km az=80.0*

MOS ***15*** *03:33:54.4±1.1, 3.°98N×126.°53E, h33km, mb5.0/32, Error ellipse: s-maj=14.5km s-min=6.5km az=114.6*

BJI ***15*** *03:33:55.0, 3.°97N×126.°64E, h35km, mB4.9/27, mb4.8/39, Ms4.5/22, Ms7 4.2/24*

NEIC ***15*** *03:33:56.4±0.2, 4.°00N×126.°66E, h35km, mb4.8/42, Error ellipse: s-maj=7.8km s-min=5.0km az=72.0*

ISCJB ***15*** *03:33:57.8±0.6, 4.°01N±0.°03×126.°72E±0.°04, h63km±5km, mb4.8/91, Error ellipse: s-maj=6.9km s-min=4.6km az=157.1*

DJA ***15*** *03:33:57.3±0.9, 4.°N±8.″×12.°7E±.°, h54km±8km, M4.9/12, mB5.2/3, mb4.8/12, MLv5.0/7, Mw(mB)4.5/3*

AUST ***15*** *03:34:11.1±4.1, 3.°92N×126.°76E, h192km, Error ellipse: s-maj=2.2km s-min=1.0km az=256.0*

ISC 15 03:33:56.9±0.3, 4.°01N±0.°03×126.°72E±0.°05, h60km±2km, h40km:pP-P,n247,σ1$45/277, mb4.8/90, MS3.9/16, 3C-12D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**2.41**	**154**	P	**Pn**	**03 34 33.4**	**-0.4**
MNI	**Manado**	**3.17**	**216**	P	Pn	03 34 46.9	+2.6
DAV	**Davao City (W)**	**3.25**	**340**	Pn	Pn	03 34 49.2	+3.8
DAV	**Davao City (W)**	**3.25**	**340**	P	Pn	03 35 05.6	+20
DAV	**Davao City (W)**	**3.25**	**340**	Pn	Pn	03 34 49.2	+3.8
	72nm,0.3s,baz=207,slow=1.8,SNR=4.1						
TNTI	**Ternate**	**3.28**	**169**	P	**Pn**	**03 34 47.0**	**+1.2**
CTBH	**Cotabato--PC H**	**4.03**	**322**	*i*P	Pn	03 34 58.9	+2.8
KMSI	**Cibinong**	**4.38**	**219**	P	Pn	03 35 05.4	+4.5
LBMI	**Labuha**	**4.68**	**170**	P	Pn	03 35 08.9	+3.8
CGP	**Cagayan de Oro**	**4.85**	**336**	*e*P	Pn	03 35 21.8	+14
CGP				*e*S	Sn	03 36 19.4	+17
PAGZ	**Pagadian**	**5.06**	**319**	*e*P	Pn	03 35 13.2	+3.0
PAGZ				*e*S	Px	03 35 21.8	
IPIL	**Ipil**	**5.58**	**312**	*e*P	Pn	03 35 11.5	-5.9
IPIL				*e*S	Px	03 35 19.1	
MRSI	**Marisa**	**5.93**	**234**	P	Pn	03 35 24.6	+2.4
	160nm,0.7s,2µm0.6nm						
LUWI	**Luwuk**	**6.39**	**218**	P	Pn	03 35 34.4	+5.9
	406nm,1.1s,4µm1.4nm						
MYLDM	**Lahad Datu**	**8.28**	**278**	P	Pn	03 35 58.5	+4.0
	138nm,1.0s						
SKSI	**Soroako, Sulaw**	**8.44**	**220**	P	Pn	03 36 00.3	+3.6
	60nm,0.8s,576nm						
FAKI	**Fak Fak**	**8.82**	**141**	P	**Pn**	**03 36 01.9**	**-0.1**
	30nm,1.0s						
TTSI	**Tana Toraja**	**9.84**	**225**	P	Pn	03 36 20.5	+4.7
	48nm,1.0s						
SPSI	**Sidrap Palu**	**10.54**	**221**	P	Pn	03 36 31.2	+5.8
	21nm,1.0s						
KKM	**Kota Kinabalu**	**10.66**	**281**	*e*Pn	Pn	03 36 30.9	+3.7
KAPI	**Kappang**	**11.35**	**218**	*e*Pn	Pn	03 36 40.7	+4.1
KAPI	**Kappang**	**11.35**	**218**	Pn	Pn	03 36 39.6	+3.0
	0.7nm,0.3s,baz=36,slow=8.7,SNR=4.5						
SBUM	**Sibu**	**14.56**	**264**	P	**P**	**03 37 27.4**	**+1.2**
WSI	**Waingapu**	**15.02**	**205**	S	**S**	**03 40 24.8**	**-3.3**
	baz=15,SNR=8.4						
JAY	**Jayapura**	**15.40**	**115**	P	**P**	**03 37 34.6**	**-1.0**
JAY	**Jayapura**	**15.40**	**115**	P	**P**	**03 37 36.4**	**+0.8**
	baz=15,SNR=10						
KSM	**Kuching**	**16.59**	**262**	*e*Pn	**Pn**	**03 37 47.7**	**+1.0**
	55nm,1.3s						
MTN	**Manton Dam**	**17.31**	**165**	P	**P**	**03 37 59.6**	**+3.0**
	baz=17,SNR=3.0						
KDU	**Kakadu**	**17.54**	**161**	P	Pn	03 37 48.4	-10
	baz=18,SNR=4.7						
GMJI	**Gumukmas**	**18.01**	**227**	P	**P**	**03 38 06.1**	**+1.7**
	48nm,1.0s						
PWJI	**Pagerwojo**	**19.09**	**231**	P	**P**	**03 38 16.1**	**-0.2**
	34nm,1.4s						
KNRA	**Kununurra**	**19.66**	**174**	P	**P**	**03 38 22.9**	**+0.4**
	baz=20,SNR=5.9						
YULB	**Yu-li**	**19.97**	**345**	*e*P	**P**	**03 38 24.1**	**-1.8**
	15nm,0.5s						
TPUB	**Ta-pu**	**20.06**	**343**	*e*P	**P**	**03 38 26.1**	**-0.8**
	43nm,1.0s						
TPI	**Tanjungpandan**	**20.21**	**251**	P	Pn	03 38 32.5	+1.8
	16nm,0.7s						
SSLB	**Suanglung**	**20.44**	**345**	*e*P	**P**	**03 38 30.8**	**-0.2**
	25nm,0.7s						
YHNB	**Yeheng**	**21.18**	**346**	*e*P	**P**	**03 38 39.9**	**+0.9**
	25nm,0.8s						
FITZ	**Fitzroy Crossi**	**22.00**	**183**	P	**P**	**03 38 45.4**	**-2.3**
FITZ	**Fitzroy Crossi**	**22.00**	**183**	P	**P**	**03 38 45.4**	**-2.3**
	6.7nm,1.0s,baz=17,slow=11,SNR=8.4						
FITZ	**Fitzroy Crossi**	**22.00**	**183**	P	**P**	**03 38 46.7**	**-1.1**
	baz=22,SNR=12						
QIZ	**Qiongzhong**	**22.24**	**313**	P	**P**	**03 38 51.1**	**+0.7**
QIZ				S	**S**	**03 42 54.3**	**+1.3**
QIZ				LR	LR		
	comp=Z,190nm,16.9s						
JOW	**Kunigami**	**22.74**	**4**	*e*P	**P**	**03 38 57.4**	**+1.7**
	comp=Z,8.7nm,0.7s						
UBPT	**Khong Chiam**	**23.73**	**300**	P	**P**	**03 39 04.6**	**-0.9**
	comp=Z,45nm,1.3s						
PMG	**Port Moresby**	**24.34**	**123**	*e*P	**P**	**03 39 13.1**	**+1.9**
	comp=Z,24nm,1.1s						
WRAB	**Tennant Creek**	**24.95**	**163**	*e*P	**P**	**03 39 15.5**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,40nm,0.9s						
WRAB	**Tennant Creek**	**24.95**	**163**	*e*P	**P**	**03 39 15.4**	**-1.2**
	comp=Z,40nm,0.9s						
WRA	**Warramunga Arr**	**24.95**	**163**	P	**P**	**03 39 15.1**	**-1.6**
WRA	**Warramunga Arr**	**24.95**	**163**	P	**P**	**03 39 15.1**	**-1.6**
	comp=Z,27nm,0.7s,baz=343,slow=10,SNR=40						
IPM	**Ipoh**	**25.63**	**272**	*e*P	**P**	**03 39 23.8**	**+0.8**
MBWA	**Marble Bar**	**25.94**	**195**	*e*P	**P**	**03 39 25.2**	**-0.4**
	comp=Z,16nm,0.8s						
KULM	**Kulim**	**26.02**	**274**	*e*P	**P**	**03 39 27.8**	**+1.3**
	comp=Z,13nm,0.8s						
QIS	**Mount Isa**	**27.50**	**153**	P	**P**	**03 39 40.8**	**+1.1**
	baz=28,SNR=8.8						
QIS				S	S	03 43 49.9	-28
	baz=28,SNR=5.7						
PSI	**Prapat**	**27.78**	**268**	LR	LR	03 51 29.7	
	comp=Z,58nm,21.0s,baz=205,slow=38						
AS31	**Alice Springs**	**28.39**	**166**	*e*P	P	03 39 49.9	+2.3
ASAR	**Alice Springs**	**28.39**	**166**	P	**P**	**03 39 46.1**	**-1.5**
ASAR				PcP	**PcP**	**03 42 59.8**	**+0.2**
ASAR	**Alice Springs**	**28.39**	**166**	P	**P**	**03 39 46.1**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=349,slow=7.3,SNR=16						
ASAR				PcP	**PcP**	**03 42 59.8**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=358,slow=2.5,SNR=4.3						
NJ2	**Nanjing**	**28.86**	**346**	*e*P	P	03 39 54.3	+2.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WHN	**Wuhan**	**28.86**	**337**	P	**P**	**03 39 51.9**	**+0.2**
WHN				S	**S**	**03 44 44.3**	**+5.0**
WHN				LR	LR		
	comp=Z,490nm,23.9s						
JNU	**Nakatsue**	**29.22**	**7**	P	**P**	**03 39 54.3**	**-0.7**
JNU	**Nakatsue**	**29.22**	**7**	P	**P**	**03 39 54.3**	**-0.7**
	comp=Z,9.0nm,1.0s,baz=236,slow=7.3,SNR=3.2						
GSI	**Gunungsitoli**	**29.24**	**266**	S	S	03 44 30.6	-15
	baz=29,SNR=14						
GYA	**Guiyang**	**29.45**	**321**	*e*P	P	03 40 01.1	+3.9
GYA				pP	pP	03 40 08.8	+0.6
GYA				PP	**PnPn**	**03 40 55.3**	**+2.9**
GYA				PcP	**PcP**	**03 43 04.0**	**+1.6**
GYA				S	**S**	**03 44 49.6**	**+0.7**
GYA				sS	sS	03 45 05.6	-1.6
GYA				SS	**SnSn**	**03 46 23.4**	**+5.0**
GYA				ScP	**ScP**	**03 46 41.0**	**-0.3**
GYA				ScS	**ScS**	**03 50 35.4**	**-0.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.8s						
GYA				LR	LR		
	comp=N,590nm,15.8s						
GYA				LR	LR		
	comp=E,460nm,16.6s						
GYA				LR	LR		
	comp=Z,490nm,15.2s						
CMAR	**Chiang Mai Arr**	**30.73**	**300**	P	**P**	**03 40 08.4**	**0.0**
CMAR	**Chiang Mai Arr**	**30.73**	**300**	P	**P**	**03 40 08.4**	**0.0**
	comp=Z,1.3nm,0.7s,baz=112,slow=6.9,SNR=8.3						
ENH	**Enshi**	**30.78**	**330**	*e*P	**P**	**03 40 08.6**	**-0.3**
	comp=Z,16nm,0.9s						
CHTO	**Chiang Mai**	**30.87**	**301**	*e*P	**P**	**03 40 10.0**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	**30.87**	**301**	*e*P	**P**	**03 40 10.0**	**+0.2**
	comp=Z,8.5nm,0.9s						
KMI	**Kunming**	**31.18**	**315**	P	P	03 40 15.4	+2.8
KMI				S	**S**	**03 45 19.5**	**+3.2**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMI				LR	LR		
	comp=N,71nm,14.7s						
KMI				LR	LR		
	comp=E,100nm,13.7s						
KMI				LR	LR		
	comp=Z,110nm,18.2s						
MEEK	**Meekatharra**	**31.46**	**194**	P	**P**	**03 40 14.5**	**-0.4**
	baz=32,SNR=9.0						
KSAR	**Wonju Array Be**	**33.29**	**2**	P	**P**	**03 40 31.4**	**+0.8**
KSRS	**Korea Array**	**33.30**	**2**	P	**P**	**03 40 31.4**	**+0.7**
	comp=Z,4.4nm,0.7s,baz=179,slow=9.7,SNR=16						
MJAR	**Matsushiro Arr**	**34.06**	**17**	P	P	03 40 34.0	-3.5
MJAR				PcP	**PcP**	**03 43 13.9**	**-0.6**
MJAR	**Matsushiro Arr**	**34.06**	**17**	P	P	03 40 34.0	-3.5
	comp=Z,1.5nm,0.4s,baz=189,slow=8.9,SNR=6.1						
MJAR				PcP	**PcP**	**03 43 13.9**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=202,slow=3.0,SNR=4.2						
XAN	**Xi'an**	**34.16**	**333**	P	**P**	**03 40 37.3**	**-1.1**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				LR	LR		
	comp=N,110nm,18.4s						
XAN				LR	LR		
	comp=Z,45nm,17.4s						
CD2	**Chengdu**	**34.41**	**324**	P	**P**	**03 40 41.5**	**+0.9**
CD2				pP	**pP**	**03 40 51.6**	**-0.1**
CD2				sP	**sP**	**03 40 55.8**	**-0.7**
CD2				PP	**PP**	**03 41 57.9**	**-1.3**
CD2				PcP	**PcP**	**03 43 16.5**	**+0.8**
CD2				S	**S**	**03 46 06.5**	**+0.3**
CD2				sS	**sS**	**03 46 23.3**	**-1.3**
CD2				SS	**SnSn**	**03 48 18.5**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=N,100nm,20.1s						
CD2				LR	LR		
	comp=E,180nm,24.0s						
CD2				LR	LR		
	comp=Z,150nm,18.6s						
QLP	**Qulpie**	**34.81**	**152**	P	**P**	**03 40 45.5**	**+1.4**
	baz=35,SNR=5.9						
DL2	**Dalian**	**35.04**	**353**	P	**P**	**03 40 47.4**	**+1.6**
DL2				pmax	pmax		
	comp=Z,48nm,0.8s						
KLBR	**Kellerberrin**	**36.42**	**193**	P	**P**	**03 40 58.6**	**+0.8**
	baz=36,SNR=7.5						
BJI	**Beijing**	**37.11**	**347**	P	**P**	**03 41 05.8**	**+2.2**
BJI				S	**S**	**03 46 51.5**	**+4.4**
BJI				pmax	pmax		
	comp=Z,40nm,0.7s						
BJI				pmax	pmax		
	comp=Z,56nm,3.5s						
BJI				LR	LR		
	comp=N,87nm,15.7s						
BJI				LR	LR		
	comp=E,98nm,15.8s						
EIDS	**Eidsvold**	**37.58**	**142**	P	**P**	**03 41 07.4**	**-0.3**
	baz=38,SNR=3.5						
LZH	**Lanzhou**	**38.26**	**329**	*e*P	**P**	**03 41 13.9**	**+0.4**
LZH				pP	**pP**	**03 41 25.8**	**+1.1**
LZH				sP	**sP**	**03 41 30.3**	**+0.8**
LZH				pmax	pmax		
	comp=Z,50nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,5.1s						
STKA	**Stephens Creek**	**38.39**	**159**	*e*P	**P**	**03 41 14.8**	**+0.4**
	comp=Z,3.5nm,0.8s						
STKA				PcP	**PcP**	**03 43 26.9**	**-0.6**
STKA	**Stephens Creek**	**38.39**	**159**	P	**P**	**03 41 14.1**	**-0.4**
	comp=Z,16nm,0.7s,baz=338,slow=8.6,SNR=4.3						
STKA				PcP	**PcP**	**03 43 26.9**	**-0.6**
	comp=Z,3.8nm,0.6s,baz=326,slow=5.4,SNR=4.9						
STKA	**Stephens Creek**	**38.39**	**159**	P	**P**	**03 41 14.1**	**-0.4**
	baz=38,SNR=11						
HHC	**Hu-ho-hao-te**	**39.13**	**342**	*e*P	P	03 41 23.5	+2.8
HHC				pP	pP	03 41 42.1	+10
HHC				sP	sP	03 41 50.4	+14
HHC				PP	**PnPn**	**03 42 58.3**	**+4.5**
HHC				PcP	**PcP**	**03 43 26.8**	**-3.0**
HHC				S	**S**	**03 47 18.6**	**+0.7**
HHC				sS	sS	03 47 49.6	+13
HHC				SS	**SS**	**03 50 06.3**	**-5.5**
HHC	**Hu-ho-hao-te**	**39.13**	**342**	ScS	ScS	03 51 24.8	-2.0
HHC				pmax	pmax		
	comp=Z,32nm,0.6s						
HHC				pmax	pmax		
	comp=Z,160nm,5.6s						
HHC				LR	LR		
	comp=N,290nm,16.7s						
HHC				LR	LR		
	comp=E,170nm,14.3s						
HHC				LR	LR		
	comp=Z,210nm,19.0s						
HHC	**Hu-ho-hao-te**	**39.13**	**342**	*e*P	**P**	**03 41 22.6**	**+1.9**
HHC				pP	**pP**	**03 41 32.8**	**+0.9**
HHC				sP	**sP**	**03 41 36.4**	**-0.3**
HHC				PP	**PnPn**	**03 42 58.4**	**+4.6**
HHC				PcP	**PcP**	**03 43 31.8**	**+2.0**
HHC				S	**S**	**03 47 20.1**	**+2.2**
HHC				SS	**SS**	**03 50 05.4**	**-6.4**
HHC				ScS	**ScS**	**03 51 26.3**	**-0.5**
HHC				pmax	pmax		
	comp=Z,32nm,0.7s						
HHC				LR	LR		
	comp=N,310nm,15.5s						
HHC				LR	LR		
	comp=E,300nm,15.5s						
HHC				LR	LR		
	comp=Z,310nm,16.7s						
CN2	**Changchun**	**39.64**	**359**	*e*P	P	03 41 29.6	+4.8
CN2				*e*S	**S**	**03 47 27.6**	**+2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CMSA	**Cobar Meteorol**	**39.70**	**154**	P	P	03 41 29.0	+3.6
	baz=40,SNR=4.7						
USRK	**Ussuriysk Arra**	**40.29**	**6**	P	**P**	**03 41 30.6**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=197,slow=6.0,SNR=6.3						
MDJ	**Mudanjiang**	**40.52**	**3**	P	**P**	**03 41 32.3**	**+0.3**
MDJ				pP	**pP**	**03 41 41.1**	**-2.2**
MDJ				sP	**sP**	**03 41 45.0**	**-3.0**
MDJ				ScP	**ScP**	**03 47 21.6**	**+1.1**
MDJ				PcS	**PcS**	**03 47 25.3**	**+0.8**
MDJ				S	**S**	**03 47 38.8**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,48nm,4.1s						
MDJ	**Mudanjiang**	**40.52**	**3**	*e*P	**P**	**03 41 33.1**	**+1.1**
	comp=Z,9.6nm,0.9s						
ARMA	**Armidale**	**41.70**	**147**	P	**P**	**03 41 42.6**	**+0.5**
	baz=42,SNR=6.5						
LSA	**Lhasa**	**42.25**	**311**	P	**P**	**03 41 47.5**	**+0.4**
LSA				pmax	pmax		
	comp=Z,90nm,0.6s						
LSA	**Lhasa**	**42.25**	**311**	*e*P	**P**	**03 41 47.4**	**+0.4**
LSA				pmax	pmax		
	comp=Z,16nm,0.6s						
LSA	**Lhasa**	**42.25**	**311**	*e*P	**P**	**03 41 47.4**	**+0.4**
	comp=Z,16nm,0.6s						
ASAJ	**Asahikawa**	**42.33**	**17**	P	**P**	**03 41 46.4**	**-0.5**
ASAJ	**Asahikawa**	**42.33**	**17**	P	**P**	**03 41 46.4**	**-0.5**
	comp=Z,6.5nm,0.7s,baz=217,slow=12,SNR=3.8						
GTA	**Gaotai**	**42.85**	**329**	*e*P	**P**	**03 41 51.4**	**0.0**
GTA				pP	**pP**	**03 42 01.3**	**-1.4**
GTA				sP	**sP**	**03 42 05.3**	**-2.2**
GTA				S	**S**	**03 48 13.0**	**-0.4**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,55nm,5.9s						
GTA				LR	LR		
	comp=N,140nm,19.5s						
GTA				LR	LR		
	comp=E,200nm,17.3s						
GTA				LR	LR		
	comp=Z,130nm,19.5s						
TAPN	**Taplejung**	**43.85**	**306**	*e*P	**P**	**03 41 58.6**	**-1.2**
	comp=Z,25nm,0.8s						
ODAN	**Odare**	**43.90**	**305**	*e*P	**P**	**03 41 59.6**	**-0.6**
	comp=Z,21nm,0.8s						
RAMN	**Ramite**	**44.58**	**305**	*e*P	**P**	**03 42 05.0**	**-0.7**
	comp=Z,37nm,1.1s						
HABR	**Khabarovsk**	**44.87**	**8**	P	**P**	**03 42 06.2**	**-1.0**
HABR				*e*PP	**pP**	**03 42 15.9**	**-2.7**
HABR				*e*SP	**sP**	**03 42 20.2**	**-3.1**
HABR				S	**S**	**03 48 42.9**	**+0.7**
HABR				*e*SS	**sS**	**03 48 59.7**	**-1.3**
HABR				*e*		03 52 00.4	
HABR				*e*SSS	SSS	03 52 52.9	
HABR				pmax	pmax		
	comp=E,130nm,3.6s						
HABR				pmax	pmax		
	comp=N,64nm,2.2s						
HABR				pmax	pmax		
	comp=Z,81nm,2.2s						
HABR				MLR	MLR		
	comp=Z,147nm,21.0s						
KLR	**Kul'dur**	**45.26**	**5**	*e*P	P	03 42 06.5	-3.9
HIA	**Hailar**	**45.48**	**354**	*e*P	**P**	**03 42 13.8**	**+1.7**
	comp=Z,21nm,1.0s						
GUN	**Gumba**	**45.56**	**306**	*e*P	**P**	**03 42 13.0**	**-0.5**
	comp=Z,26nm,0.6s						
DZM	**Mont Dzumac**	**46.70**	**125**	*e*P	**P**	**03 42 22.9**	**+0.6**
	comp=Z,8.6nm,0.9s						
ULN	**Ulaanbaatar**	**46.85**	**342**	*e*P	**P**	**03 42 23.3**	**+0.1**
	comp=Z,6.8nm,0.7s						
SONM	**Songino Array**	**47.03**	**341**	P	**P**	**03 42 24.4**	**-0.1**
SONM	**Songino Array**	**47.03**	**341**	P	**P**	**03 42 24.4**	**-0.1**
	comp=Z,2.5nm,0.6s,baz=157,slow=8.0,SNR=4.2						
KOLN	**Koldanda**	**47.36**	**305**	*e*P	**P**	**03 42 26.9**	**-0.6**
	comp=Z,40nm,0.6s						
DANN	**Dangsing**	**47.45**	**305**	*e*P	**P**	**03 42 27.2**	**-1.1**
	comp=Z,54nm,0.7s						
PYUN	**Piuthan**	**47.98**	**305**	*e*P	**P**	**03 42 31.4**	**-0.9**
	comp=Z,46nm,0.9s						
ZAK	**Zakamensk**	**50.26**	**341**	*e*P	P	03 42 54.0	+4.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MOY	**Mondy**	**52.12**	**340**	*e*P	**P**	**03 43 04.2**	**+1.0**
WMQ	**Urumqi**	**52.49**	**325**	*e*P	**P**	**03 43 07.5**	**+1.4**
WMQ				pP	**pP**	**03 43 17.5**	**-0.1**
WMQ				sP	**sP**	**03 43 21.4**	**-0.9**
WMQ				PP	**PP**	**03 45 07.3**	**+2.0**
WMQ				PcS	**PcS**	**03 48 15.1**	**+0.4**
WMQ				S	**S**	**03 50 29.6**	**-0.3**
WMQ				sS	**sS**	**03 50 46.3**	**-2.8**
WMQ				ScS	**ScS**	**03 52 51.5**	**-1.4**
WMQ				SS	**SS**	**03 54 06.1**	**-2.4**
WMQ				pmax	pmax		
	comp=Z,14nm,0.4s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.8s						
WMQ				LR	LR		
	comp=N,120nm,5.4s						
WMQ				LR	LR		
	comp=E,140nm,5.2s						
WMQ				LR	LR		
	comp=Z,160nm,4.8s						
POO	**Poona**	**53.61**	**290**	*e*PKP	P	03 43 10.0	-4.7
PETK	**Petropavlovsk-**	**55.17**	**22**	P	**

comp=Z,4.3nm,0.6s,baz=132,slow=6.4,SNR=14
ZALV LR LR 04 11 58.0
comp=Z,40nm,18.7s,baz=71,slow=38
EKS2 Erkin-Say 60.64 318 *e*P **P 03 44 03.6 -0.5**
EKS2 pmax pmax
comp=Z,6.0nm,0.9s
EKS2 Erkin-Say 60.64 318 *e*P **P 03 44 03.6 -0.5**
comp=Z,6.0nm,0.9s
KBL Kabul 61.35 307 *e*P **P 03 44 08.0 -1.2**
KBL pmax pmax
comp=Z,8.0nm,0.6s
KBL Kabul 61.35 307 *e*P **P 03 44 08.0 -1.2**
comp=Z,7.8nm,0.6s
KURK Kurchatov 61.50 327*c i*P **P 03 44 08.8 -0.8**
KURK pmax pmax
comp=Z,17nm,0.8s
KURK Kurchatov 61.50 327 *e*P **P 03 44 09.0 -0.6**
comp=Z,14nm,0.6s
NVS Novosibirsk 61.62 333 *e*P **P 03 44 07.8 -2.5**
NVS pmax pmax
comp=N,4.0nm,0.7s
NVS pmax pmax
comp=E,6.0nm,0.7s
NVS pmax pmax
comp=Z,7.0nm,0.7s
SEY Seymchan 61.76 13⇓*e*P **P 03 44 12.8 +1.7**
KKAR Karatay Array 63.02 317 *e*P **P 03 44 19.3 -0.7**
KKAR Karatay Array 63.02 317 *e*P **P 03 44 19.2 -0.7**
VOSK Vostochnaya 66.63 327 P **P 03 44 41.9 -1.4**
VOSK pmax pmax
comp=Z,7.0nm,0.9s
BVA0 Borovoye Array 67.08 327 P **P 03 44 46.0 -0.1**
BVA0 pmax pmax
comp=Z,1.0nm,0.9s
BRVK Borovoye 67.16 327*ce*P **P 03 44 46.9 +0.3**
BRVK pmax pmax
comp=Z,11nm,1.2s
BRVK Borovoye 67.16 327 *e*P **P 03 44 46.3 -0.3**
comp=Z,7.9nm,0.6s
TIXI Tiksi 67.56 1⇓*e*P **P 03 44 49.1 +0.3**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
ZRNK Zerenda 67.81 326 P **P 03 44 49.6 -1.1**
ZRNK pmax pmax
comp=Z,6.0nm,0.6s
BILL Bilibino 69.29 15 *i*P **P 03 45 00.0 +0.4**
BILL *i* 03 45 24.5
BILL *e* 03 47 31.4
BILL pmax pmax
comp=Z,3.0nm,0.8s
AB31 Akbulak array 71.93 321 P **P 03 45 14.5 -1.6**
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 71.93 321 *e*P **P 03 45 15.4 -0.7**
AKTO Aktyubinsk 73.44 322 LR LR 04 19 09.7
comp=Z,69nm,20.4s,baz=100,slow=37
GAMB Gambell 74.14 24 *e*P **P 03 45 29.5 +0.6**
comp=Z,17nm,1.2s
ARU Arti 74.70 328*d i*P **P 03 45 31.7 -0.6**
ARU S **S** 03 55 07.5 **+2.0**
ARU SS **SS** 03 59 49.4 **-4.0**
ARU pmax pmax
comp=Z,7.0nm,0.6s
RDF Al-Radifah 78.60 299 *e*P **P 03 45 53.7 -1.3**
RDF AMb AMB 03 45 59.0
comp=Z,20nm,1.3s
MIB Mutribah 78.81 299 *e*P **P 03 45 54.9 -1.1**
MIB AMb AMB 03 45 58.6
comp=Z,24nm,0.8s
NAY Al-Naaiem 78.88 299 *e*P **P 03 45 54.9 -1.5**
NAY AMb AMB 03 45 55.9
comp=Z,11nm,0.9s
OHAK Old Harbor 81.22 33 *e*P **P 03 46 09.3 +0.8**
comp=Z,15nm,1.0s
KDAK Kodiak Island 81.66 32 *e*P **P 03 46 11.0 +0.2**
comp=Z,17nm,1.1s
ZEI Tsey 82.02 312 *e*P **P 03 46 12.7 -0.7**
ZEI pmax pmax
comp=Z,5.0nm,1.0s
PPLA Purkeypile 82.38 27 *e*P **P 03 46 16.1 +1.4**
comp=Z,20nm,1.4s
TRF Thorofare Moun 83.29 27 *e*P **P 03 46 19.7 +0.3**
comp=Z,16nm,1.1s
COLD Coldfoot 83.64 23 *e*P P 03 46 23.2 +2.3
comp=Z,19nm,1.1s
PMR Palmer 83.70 29 *e*P **P 03 46 22.0 +0.7**
PMR pmax pmax
comp=Z,30nm,1.2s
PMR Palmer 83.70 29 *e*P **P 03 46 22.0 +0.7**
comp=Z,30nm,1.2s
VNDA Vanda 83.70 173 *e*P **P 03 46 21.6 +0.6**
comp=Z,6.2nm,0.9s
VNDA Vanda 83.70 173 P **P 03 46 21.2 +0.2**
comp=Z,5.5nm,0.9s,baz=318,slow=5.9,SNR=22
MCK McKinley 83.92 26 *e*P **P 03 46 23.2 +0.7**
MCK pmax pmax
comp=Z,20nm,1.0s
MCK McKinley 83.92 26 *e*P **P 03 46 23.2 +0.7**
comp=Z,20nm,1.0s
SML Sawmill 84.09 28 *e*P **P 03 46 24.6 +1.2**
SML pmax pmax
comp=Z,11nm,1.3s
SML Sawmill 84.09 28 *e*P **P 03 46 24.6 +1.2**
comp=Z,11nm,1.3s
COLA College 84.45 25 *e*P **P 03 46 25.4 +0.4**
COLA College 84.45 25 *e*P **P 03 46 25.4 +0.4**
ILAR Eielson Array 84.85 25 P **P 03 46 25.4 -1.7**
ILAR Eielson Array 84.85 25 P **P 03 46 25.5 -1.7**
comp=Z,4.2nm,1.0s,baz=246,slow=5.5,SNR=22
DIV Divide 85.31 29 *e*P **P 03 46 30.6 +1.0**
comp=Z,23nm,1.0s
OBN Obninsk 86.83 325 *e*P **P 03 46 37.1 0.0**
OBN *i* 03 46 43.6
OBN pmax pmax
comp=Z,39nm,1.6s
JOF Joensuu 88.93 333 *e*P **P 03 46 46.6 -0.4**
JOF pmax pmax
comp=Z,7.0nm,0.6s
JOF Joensuu 88.93 333 *ep* **P 03 46 46.6 -0.4**
comp=Z,7.0nm,0.6s
KMBO Kilima Mbogo 89.55 269 *e*P **P 03 46 51.2 0.0**
comp=Z,7.8nm,1.2s
KMBO Kilima Mbogo 89.55 269 P **P 03 46 50.8 -0.5**
comp=Z,3.4nm,1.0s,baz=39,slow=3.3,SNR=4.3
BR131 Keskin Array S 89.84 310 *e*P **P 03 46 50.9 -1.1**
comp=Z,2.0nm,0.8s
BRTR Keskin Array B 89.84 310 P **P 03 46 51.2 -0.7**
BRTR PP **PP** 03 50 25.6 **+0.9**
BRTR Keskin Array B 89.84 310 P **P 03 46 51.2 -0.7**
comp=Z,2.4nm,0.9s,baz=118,slow=4.6,SNR=13
BRTR PP **PP** 03 50 25.6 **+0.9**
comp=Z,0.1nm,0.4s,baz=84,slow=6.3,SNR=3.6
ARCES ARCESS Array B 90.19 340 P **P 03 46 52.2 -0.5**
ARCES ARCESS Array B 90.19 340 P **P 03 46 52.2 -0.5**
comp=Z,5.1nm,0.8s,baz=81,slow=7.5,SNR=18
ARCES LR LR 04 30 01.4
comp=Z,45nm,20.6s,baz=217,slow=37
KAF Kangasniemi 91.35 332 *e*P **P 03 46 57.2 -1.1**
KAF pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 91.35 332 *ep* **P 03 46 57.2 -1.1**
comp=Z,3.3nm,0.6s
FINES FINESS Array B 91.58 332 P **P 03 46 59.2 -0.1**
FINES FINESS Array B 91.58 332 P **P 03 46 59.2 -0.1**
comp=Z,5.6nm,0.8s,baz=57,slow=5.1,SNR=7.7
AKASG Malin Array Be 91.67 321 P **P 03 46 59.0 -1.0**
AKASG Malin Array Be 91.67 321 P **P 03 46 59.0 -1.0**
AKASG Malin Array Be 91.67 321 P **P 03 46 59.0 -1.0**
comp=Z,3.4nm,0.7s,baz=71,slow=4.6,SNR=8.8
KIEV Kiev 91.68 321 *e*P **P 03 46 58.8 -1.3**
KIEV pmax pmax
comp=Z,7.0nm,1.2s
KIEV Kiev 91.68 321 *e*P **P 03 46 58.8 -1.3**
comp=Z,7.1nm,1.2s
QSPA South Pole Qui 93.92 180 *e*P **P 03 47 11.2 +1.0**
comp=Z,41nm,2.1s
TESR Tescani 94.03 317⇓*i*P **P 03 47 10.8 -0.2**
VRI Vrincioaia 94.09 316⇓*i*P **P 03 47 11.9 +0.6**
PLOR Plostina 94.14 316⇓*i*P **P 03 47 11.3 -0.3**
MLR Muntele Rosu 94.69 316⇓*i*P **P 03 47 14.1 -0.2**
BURAR Bucovina Array 94.79 318⇓*i*P **P 03 47 14.2 -0.4**
BUR08 Bucovina Ar. S 94.79 318 *e*P **P 03 47 14.5 -0.1**
KWP Kalwaria Pacla 95.99 321 *e*P **P 03 47 18.3 -1.6**
KWP pmax pmax
comp=Z,8.0nm,1.0s
KWP Kalwaria Pacla 95.99 321 *e*P **P 03 47 18.3 -1.6**
comp=Z,8.2nm,1.0s
KWP Kalwaria Pacla 95.99 321⇓*i*P **P 03 47 19.9 0.0**
LOT Lotru 96.20 316⇓*i*P **P 03 47 21.6 +0.5**
KOLS Kolonicke sedl 96.43 320 *e*P **P 03 47 21.7 -0.2**
KOLS pmax pmax
comp=Z,2.0nm,0.9s
KOLS Kolonicke sedl 96.43 320 *e*P **P 03 47 21.7 -0.2**
CRVS Cervenica-Dubn 96.95 320 *e*P **P 03 47 23.1 -1.2**
CRVS pmax pmax
comp=Z,6.0nm,0.9s
CRVS Cervenica-Dubn 96.95 320 *e*P **P 03 47 23.1 -1.2**
RES Resolute Bay 97.54 10 *e*P **P 03 47 26.2 -0.2**
comp=Z,2.0nm,0.9s
NB2 NORSAR Subarra 98.53 334 P **P 03 47 29.8 -1.4**
comp=Z,1.7nm,0.7s,baz=71,slow=4.6
NOA NORSAR Array B 98.53 334 P **P 03 47 29.8 -1.4**
NOA NORSAR Array B 98.53 334 P **P 03 47 29.8 -1.4**
comp=Z,1.3nm,0.8s,baz=68,slow=4.5,SNR=4.8
NOA LR LR 04 36 55.9
comp=Z,36nm,19.0s,baz=65,slow=38
NAO01 NORSAR Array S 98.76 334 *e*P **P 03 47 31.7 -0.5**
comp=Z,4.1nm,0.8s
YKA Yellowknife Ar 99.25 24 P **Pdif 03 47 34.1 -0.2**
YKA Yellowknife Ar 99.25 24 P **Pdif 03 47 34.1 -0.2**
comp=Z,0.6nm,0.8s,baz=299,slow=4.7,SNR=4.3
BRG Berggiesshubel 101.01 323 *e*PDIF **Pdif 03 47 42.6 +0.2**
comp=Z,5.7nm,1.1s
BRG Berggiesshubel 101.01 323 *e*P **Pdif 03 47 42.6 +0.2**
BRG pmax pmax
comp=Z,6.0nm,1.1s
CLL Collm 101.41 324 *e*P **Pdif 03 47 43.0 -1.2**
CLL *e* 03 52 01.0
CLL pmax pmax
comp=Z,13nm,1.6s
CLL Collm 101.41 324 *e*Pdif **Pdif 03 47 43.0 -1.2**
CLL *e*(PP) 03 52 01.0
comp=Z,13nm,1.6s
GERES GERESS Array B 101.86 322 P **Pdif 03 47 45.1 -1.2**
GERES GERESS Array B 101.86 322 P **Pdif 03 47 45.1 -1.2**
comp=Z,0.7nm,0.8s,baz=99,slow=6.4,SNR=5.2
SNOW Snow King Moun 110.05 41 *e*PKP 03 52 24.7
MNTX Cornudas Mount 119.08 50 *e*PKPdf **PKPdf 03 52 41.8 -0.3**
TXAR Lajitas Array 121.43 52 PKP **PKPdf 03 52 47.7 +0.9**
TXAR Lajitas Array 121.43 52 PKP **PKPdf 03 52 47.7 +0.9**
comp=Z,0.5nm,0.8s,baz=270,slow=0.9,SNR=5.3
TORD Torodi Ar. Bea 122.83 288 PKP **PKPdf 03 52 49.2 -0.5**
TORD Torodi Ar. Bea 122.83 288 PKP **PKPdf 03 52 49.2 -0.5**
comp=Z,0.3nm,0.3s,baz=87,slow=1.6,SNR=12
JCT Junction City 123.88 49 *e*PKIKP **PKPdf 03 52 52.2 +0.8**
JCT Junction City 123.88 49 *e*PKPdf **PKPdf 03 52 52.1 +0.8**
HKT Hockley 127.10 47 *e*PKIKP **PKPdf 03 52 57.5 0.0**
HKT Hockley 127.10 47 *e*PKPdf **PKPdf 03 52 57.5 0.0**
WVT Waverly 128.63 36 *e*PKIKP **PKPdf 03 53 01.3 +1.0**
WVT Waverly 128.63 36 *e*PKPdf **PKPdf 03 53 01.2 +1.0**
TRQA Tornquist 145.19 168 *e*PKPbc **PKPdf 03 53 30.8 +0.1**
TRQA *e*PKPdf **PKPab 03 53 31.1 +0.7**
JTS JuntasAbangare 145.40 66 *e*PKPbc **PKPbc 03 53 31.4 -0.2**
LCO Las Campanas 150.14 148 *e*PKPbc **PKPbc 03 53 45.2 +0.7**
OTAV Otavalo 154.49 81 *e*PKPdf **PKPdf 03 53 46.2 -0.4**
OTAV *e*PKPbc **PKPbc 03 53 55.1 +0.1**
NNA Nana 155.37 110 *e*PKPdf **PKPdf 03 53 46.8 -0.4**
CPUP Villa Florida 157.47 170 PKPab **PKPab 03 54 21.8 +0.8**
CPUP Villa Florida 157.47 170 PKPab **PKPab 03 54 21.8 +0.8**
comp=Z,3.5nm,0.7s,baz=158,slow=5.3,SNR=8.3
LPAZ La Paz 160.98 131 *e*PKPdf **PKPdf 03 53 55.4 +0.8**
LPAZ *e*PKPab **PKPab 03 54 39.3 +1.9**
SAML Samuel 169.00 117 *e*PKPdf **PKPdf 03 54 01.7 +0.8**
SAML *e*PKPab **PKPab 03 55 12.1 -0.1**

UPP ***15*** *03:42:13.6, 57˚.59N×22˚.83E, h0km, ML2.1, Suspected Mining explosion.*
CSEM ***15*** *03:42:16.9±0.3, 57˚.79N×22˚.37E, h2km, ML2.3, Error ellipse: s-maj=9.0km s-min=4.8km az=157.0, Mining explosion.*
ISCJB ***15*** *03:42:16.1±0.6, 57˚.85N±0˚.04×22˚.30E±0˚.07, h0km, Error ellipse: s-maj=6.4km s-min=4.9km az=141.1*
NAO ***15*** *03:42:17.6±2.1, 57˚.97N×22˚.28E, ML2.0*
HEL ***15*** *03:42:17.0±0.3, 57˚.79N×22˚.39E, h0km, ML1.8, ML2.1(UPP), Explosion*
BER ***15*** *03:42:19.1±4.9, 57˚.93N×22˚.28E, h0km±31km, ML2.0(NAO)*

ISC 15 03:42:15.8±0.9,**57˚.80N**±0˚.04×**22˚.32E**±0˚.03,**h0km**,**n46,** σ1**89**/65,**Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.17**	**185**	*e*P	**Pg**	**03 42 20.4**	**+1.3**
SLIT	**Slitere, Latvi**	**0.17**	**185**	*e*P	**Pg**	**03 42 20.2**	**+1.1**
SNR=90							
GOTU	**Gotland**	**2.01**	**268**	*e*P	**Pn**	**03 42 52.6**	**+1.6**
GOTU	**Gotland**	**2.01**	**268**	P	**Pn**	**03 42 52.6**	**+1.6**
VSU	**Vasula**	**2.43**	**72**	Pn	**Pn**	**03 42 57.4**	**+0.6**
VSU				Sn	**Sn**	**03 43 27.7**	**+0.5**
VSU	**Vasula**	**2.43**	**72**	Pn	**Pn**	**03 42 57.4**	**+0.6**
VSU				Sn	**Sn**	**03 43 27.7**	**+0.5**
VSU	**Vasula**	**2.43**	**72**	*e*P	**Pn**	**03 42 57.6**	**+0.8**
SNR=50							
VSU				Sn	**Sn**	**03 43 27.7**	**+0.5**
SNR=50							
VSU				*e*S	**Sb**	**03 43 29.2**	**-1.7**
40nm,0.4s,SNR=50							
NYNU	**Nynaeshamn**	**2.57**	**300**	*e*P	**Pn**	**03 43 01.3**	**+2.7**
NYNU	**Nynaeshamn**	**2.57**	**300**	P	**Pn**	**03 43 01.3**	**+2.7**
MEF	**Metsahovi**	**2.65**	**23**	*e*P	**Pn**	**03 43 01.2**	**+1.4**
MEF				*e*SB	**Sb**	**03 43 37.0**	**-0.2**
MEF				MSG		03 43 37.5	
comp=Z,3.8nm,0.1s							
MEF	**Metsahovi**	**2.65**	**23**	P	**Pn**	**03 43 01.1**	**+1.4**
MEF				*e*S	**Sn**	**03 43 35.6**	**+3.1**
comp=Z,8.7nm,0.4s,SNR=50							
MEF				Sb	**Sb**	**03 43 36.9**	**-0.2**
AAL	**Aland**	**2.67**	**334**	*e*P	**Pn**	**03 43 01.7**	**+1.7**
AAL				*e*SG	**Sb**	**03 43 40.0**	**+2.3**
AAL	**Aland**	**2.67**	**334**	P	**Pn**	**03 43 01.7**	**+1.7**
AAL				Sg	**Sb**	**03 43 39.9**	**+2.3**
NRTU	**Norrtaelje**	**2.69**	**316**	*e*P	**Pn**	**03 43 02.8**	**+2.5**
NRTU	**Norrtaelje**	**2.69**	**316**	P	**Pn**	**03 43 02.7**	**+2.5**
RAF	**Rauma**	**3.24**	**355**	*e*P	**Pn**	**03 43 07.9**	**0.0**
RAF				*e*SB	**Sb**	**03 43 53.2**	**-1.0**
RAF				MSG		03 43 53.8	
comp=Z,1.8nm,0.2s							
RAF	**Rauma**	**3.24**	**355**	P	**Pn**	**03 43 07.8**	**0.0**
RAF				Sb	**Sb**	**03 43 53.1**	**-1.0**
FLYU	**Flymyra**	**3.27**	**317**	*e*P	**Pn**	**03 43 11.2**	**+2.9**
FLYU	**Flymyra**	**3.27**	**317**	P	**Pn**	**03 43 11.2**	**+2.9**
PVF	**Pernaja**	**3.30**	**32**	*e*P	**Pn**	**03 43 10.3**	**+1.6**
PVF				*e*SG	**Sg**	**03 43 59.8**	**-2.0**
PVF				MSG		03 44 04.8	
comp=Z,2.8nm,0.2s							
PVF	**Pernaja**	**3.30**	**32**	P	**Pn**	**03 43 10.3**	**+1.6**
PVF				Sg	**Sg**	**03 43 59.7**	**-2.0**
OSKU	**Oskarshamn**	**3.41**	**262**	*e*P	**Pn**	**03 43 11.8**	**+1.6**
OSKU	**Oskarshamn**	**3.41**	**262**	P	**Pn**	**03 43 11.7**	**+1.6**
ESKU	**Eskilstuna**	**3.42**	**297**	*e*P	**Pn**	**03 43 11.9**	**+1.6**
ESKU	**Eskilstuna**	**3.42**	**297**	P	**Pn**	**03 43 11.9**	**+1.6**
VXJU	**Vaexsjoe**	**4.09**	**261**	*e*P	**Pn**	**03 43 20.0**	**+0.4**
VXJU	**Vaexsjoe**	**4.09**	**261**	P	**Pn**	**03 43 20.0**	**+0.4**
FIA0	**FINESS Array S**	**4.12**	**26**	Pn	**Pn**	**03 43 20.5**	**+0.6**
baz=227,slow=11							
FIA0				Pg	**Pb**	**03 43 28.6**	**-0.5**
baz=225,slow=16							
FIA0				Lg	Lg	03 44 22.8	
baz=209,slow=28							
FIA0	**FINESS Array S**	**4.12**	**26**	Pn	**Pn**	**03 43 20.5**	**+0.6**
baz=227,slow=11							
FIA0				Pg	**Pb**	**03 43 28.6**	**-0.5**
baz=225,slow=16							
FIA0				Lg	Lg	03 44 22.8	
baz=209,slow=28							
FIA0	**FINESS Array S**	**4.12**	**26**	*e*P	**Pn**	**03 43 20.2**	**+0.2**
FIA0	**FINESS Array S**	**4.12**	**26**	P	**Pn**	**03 43 20.1**	**+0.2**
FIA0	**FINESS Array S**	**4.12**	**26**	Pn	**Pn**	**03 43 20.5**	**+0.6**
baz=227,slow=11,SNR=50							
FIA0				Lg	Lg	03 44 22.8	
baz=209,slow=28,SNR=3.5							
KEF	**Keuruu**	**4.56**	**15**	*e*P	**Pn**	**03 43 27.6**	**+1.6**
KEF				*e*SG	**Sb**	**03 44 38.0**	**+5.9**
KEF	**Keuruu**	**4.56**	**15**	P	**Pn**	**03 43 27.6**	**+1.6**
KAF	**Kangasniemi**	**4.77**	**23**	*e*P	**Pn**	**03 43 28.5**	**-0.3**
KAF				*e*SG	**Sb**	**03 44 43.6**	**+5.6**
KAF	**Kangasniemi**	**4.77**	**23**	P	**Pn**	**03 43 28.5**	**-0.3**
HFS	**Hagfors**	**5.04**	**301**	Pn	**Pn**	**03 43 33.0**	**+0.5**
baz=130,slow=12							
HFS				Sn	**Sn**	**03 44 28.0**	**-3.4**
baz=120,slow=28							
HFS				Lg	Lg	03 44 51.2	
baz=106,slow=28							
HFS	**Hagfors**	**5.04**	**301**	Pn	**Pn**	**03 43 33.0**	**+0.5**
baz=130,slow=12							
HFS				Sn	**Sn**	**03 44 28.0**	**-3.4**
baz=120,slow=28							
HFS				Lg	Lg	03 44 51.2	
baz=106,slow=28							
HFS	**Hagfors**	**5.04**	**301**	Pn	**Pn**	**03 43 33.0**	**+0.5**
baz=130,slow=12,SNR=50							
HFS				Lg	Lg	03 44 51.2	
baz=106,slow=24,SNR=3.5							
VAF	**Ylistaro**	**5.26**	**2**	*e*P	**Pn**	**03 43 35.5**	**-0.1**
VAF	**Ylistaro**	**5.26**	**2**	P	**Pn**	**03 43 35.5**	**-0.1**
NB2	**NORSAR Subarra**	**6.53**	**304**	Pn	**Pn**	**03 43 53.0**	**-0.1**
baz=118,slow=14							
NB2				Lg	Lg	03 45 39.4	
baz=130,slow=37							
NB2	**NORSAR Subarra**	**6.53**	**304**	Pn	**Pn**	**03 43 53.0**	**-0.1**
baz=118,slow=14							
NB2				Lg	Lg	03 45 39.4	
baz=130,slow=37							
NB2	**NORSAR Subarra**	**6.53**	**304**	Pn	**Pn**	**03 43 53.0**	**-0.1**
baz=118,slow=13,SNR=50							
NB2				Lg	Lg	03 45 39.4	
baz=130,slow=31,SNR=3.3							
SPA0	**Spitsbergen Ar**	**20.57**	**357**	P	**P**	**03 46 53.2**	**-2.5**
baz=161,slow=18							
SPA0	**Spitsbergen Ar**	**20.57**	**357**	P	**P**	**03 46 53.2**	**-2.5**
baz=161,slow=18							

CSEM ***15*** *03:44:41.0, 42˚.35N×13˚.37E, h8km, MD1.7/5, After ROM*
ROM 15 03:44:41.0±0.1,**42˚.35N×13˚.37E, h8**km,**Md1.7**/5,**Ml1.3**/2,
Error ellipse: s-maj=2.2km s-min=1.0km az=50.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.03**	**84**	Pg	Pg	03 44 42.9	+0.3
AQU				Sg	Sg	03 44 43.8	+0.1
AQU	**L'Aquila**	**0.03**	**84**	Pg	Pg	03 44 42.9	+0.3
AQU				Sg	Sg	03 44 43.8	+0.1
FAGN	**Fagnano**	**0.18**	**118**	Pg	Pg	03 44 45.5	+0.6
FAGN				Sg	Sg	03 44 48.5	+1.0
91nm,0.4s							
FAGN	**Fagnano**	**0.18**	**118**	Pg	Pg	03 44 45.5	+0.6
FAGN				Sg	Sg	03 44 48.5	+1.0
91nm,0.4s							
CAMP	**Campotosto**	**0.19**	**10**	Pg	Pg	03 44 45.4	+0.3
CAMP				Sg	Sg	03 44 48.8	+1.0
CAMP	**Campotosto**	**0.19**	**10**	Pg	Pg	03 44 45.4	+0.3
CAMP				Sg	Sg	03 44 48.8	+1.0
LNSS	**Leonessa**	**0.35**	**316**	Pg	Pg	03 44 48.7	+0.7
LNSS				Sg	Sb	03 44 54.5	-1.0
144nm,2.5s							
LNSS	**Leonessa**	**0.35**	**316**	Pg	Pg	03 44 48.7	+0.7
LNSS				Sg	Sb	03 44 54.5	-1.0
144nm,2.5s							
VCEL	**Villa Celiera**	**0.35**	**83**	Pg	Pb	03 44 49.4	-0.4
VCEL				Sg	Sg	03 44 54.3	+1.3
VCEL	**Villa Celiera**	**0.35**	**83**	Pg	Pb	03 44 49.4	-0.4
VCEL				Sg	Sg	03 44 54.3	+1.3

PRE 15 03:50:05.5±2.4,**21˚.41S×33˚.64E, h10**km,**ML3.9,**
Mozambique

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**3.48**	**254**	*e*P	Pn	03 51 02.1	+2.2
MSNA				*e*S	Sn	03 51 40.6	-0.6
MSNA				AML	AML	03 51 50.9	
comp=Z,82nm,0.5s							
POGA	**Pongola**	**6.22**	**197**	*e*S	Sn	03 52 44.4	-4.2
POGA				AML	AML	03 53 52.8	
comp=Z,15nm,0.7s							
SLR	**Silverton**	**6.53**	**228**	*e*P	Pn	03 51 41.9	0.0
SLR				*e*S	Sn	03 52 53.0	-3.7
SLR				AML	AML	03 53 37.3	
comp=Z,34nm,0.5s							
ERPM	**east rand prop**	**6.96**	**224**	*e*P	Pn	03 51 46.8	-1.1
ERPM				*e*S	Sn	03 53 00.6	-6.8
ERPM				AML	AML	03 53 53.5	
comp=Z,8.9nm,0.5s							
KSR	**Koster**	**7.60**	**233**	*e*S	Sn	03 53 19.3	-3.7
KSR				AML	AML	03 54 08.2	
comp=Z,18nm,0.8s							
PRYS	**Parys**	**7.94**	**225**	*e*P	Pn	03 52 03.2	+2.0
PRYS				*e*S	Sn	03 53 28.9	-2.4
PRYS				AML	AML	03 54 28.9	
comp=Z,11nm,0.6s							
LBTB	**Lobatse**	**8.22**	**243**	*e*P	Pn	03 52 06.3	+1.3
LBTB				*e*S	Sn	03 53 34.7	-3.4
LBTB				AML	AML	03 54 38.6	
comp=Z,12nm,0.8s							
SEK	**Senekal**	**8.79**	**217**	*e*P	Pn	03 52 14.5	+1.6
SEK				*e*S	Sn	03 53 49.1	-3.0
SEK				AML	AML	03 54 54.1	
comp=Z,12nm,0.6s							
SWZ	**Schweizer**	**9.51**	**231**	*e*P	Pn	03 52 22.3	-0.4
SWZ				*e*S	Sn	03 54 03.7	-6.2
SWZ				AML	AML	03 55 16.2	
comp=Z,9.6nm,0.8s							
BOSA	**Boshof**	**10.45**	**225**	*e*P	Pn	03 52 37.0	+1.4
BOSA				*e*S	Sn	03 54 28.2	-4.7
BOSA				AML	AML	03 55 42.3	
comp=Z,5.8nm,0.7s							

ISK ***15*** *04:12:15.8, 35˚.46N×30˚.24E, h8km, MD3.3*
CSEM ***15*** *04:12:16.3±0.4, 35˚.47N×30˚.26E, h2km, MD3.3, Error ellipse: s-maj=8.4km s-min=4.6km az=7.0*
DDA ***15*** *04:12:18.6, 35˚.74N×30˚.37E, h5km, MD3.3*
ISC 15 04:12:21.9±5.5,**35.6N**±0˚.2×**30˚.2E**±0˚.1,**h8**km±16km,**n37,**
σ1**81**/13,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.79**	**321**	*e*P	Pg	04 12 34.4	-2.7
AKAS				*e*S	**Sg**	**04 12 46.2**	**-1.2**
AKAS	**Kas**	**0.79**	**321**	*e*P	Pg	04 12 34.4	-2.7
AKAS				*e*S	**Sg**	**04 12 46.2**	**-1.2**
ELL	**Elmali**	**1.15**	**348**	*e*PN	Pg	04 12 41.3	-2.8
ELL				*e*SN	**Sg**	**04 13 00.2**	**+1.1**
ELL	**Elmali**	**1.15**	**348**	*e*Pn	Pg	04 12 41.3	-2.8
ELL				*e*Sn	**Sg**	**04 13 00.2**	**+1.1**
ANTB	**Antalya**	**1.32**	**15**	*e*PN	Pn	04 12 43.2	-3.5
ANTB	**Antalya**	**1.32**	**15**	*e*Pn	Pn	04 12 43.2	-3.5
FETY	**Fethiye**	**1.37**	**318**	*e*PN	Pn	04 12 43.7	-3.6
FETY	**Fethiye**	**1.37**	**318**	*e*Pn	Pn	04 12 43.7	-3.6
KORT	**Korkueli**	**1.38**	**4**	*e*P	Pn	04 12 44.0	-3.6
KORT				*e*S	Sn	04 13 03.1	-3.0
KORT	**Korkueli**	**1.38**	**4**	*e*P	Pn	04 12 44.0	-3.6
KORT				*e*S	Sn	04 13 03.1	-3.0
GLHS	**Glhisar (BURDU**	**1.64**	**339**	*e*PN	Pn	04 12 47.9	-3.2
GLHS	**Glhisar (BURDU**	**1.64**	**339**	*e*Pn	Pn	04 12 47.9	-3.2
GOLH	**Golhisar**	**1.70**	**342**	*e*P	Pn	04 12 49.8	-2.1
GOLH				*e*S	**Sn**	**04 13 13.2**	**-0.7**
GOLH	**Golhisar**	**1.70**	**342**	*e*P	Pn	04 12 49.8	-2.1
GOLH				*e*S	**Sn**	**04 13 13.2**	**-0.7**
DALY	**Dalyan (Mu˘la**	**1.74**	**314**	*e*PN	Pn	04 12 48.9	-3.5
DALY	**Dalyan (Mu˘la**	**1.74**	**314**	*e*Pn	Pn	04 12 48.9	-3.5
TURN	**Turunc**	**1.81**	**314**	*e*P	**Pn**	**04 12 53.7**	**+0.4**
TURN				*e*S	**Sn**	**04 13 16.3**	**-0.1**
TURN	**Turunc**	**1.81**	**314**	*e*P	**Pn**	**04 12 53.7**	**+0.4**
TURN				*e*S	**Sn**	**04 13 16.3**	**-0.1**
GAZI	**Gazipasa**	**1.81**	**70**	*e*P	Pn	04 12 49.8	-3.6
GAZI				*e*S	Sn	04 13 11.8	-4.8
GAZI	**Gazipasa**	**1.81**	**70**	*e*P	Pn	04 12 49.8	-3.6
GAZI				*e*S	Sn	04 13 11.8	-4.8
BCK	**Bucak**	**1.86**	**9**	*e

DNZL	**Cakiroluk**	**2.27**	**336**	*e*P	Pn	04 13 02.2	+2.3
DNZL				*e*S	**Sn**	**04 13 29.7**	**+1.6**
MLSB	**Milas**	**2.58**	**311**	*e*PN	Pn	04 13 01.0	-3.0
MLSB	**Milas**	**2.58**	**311**	*e*Pn	Pn	04 13 01.0	-3.0
BODT	**Bodrum**	**2.75**	**302**	*e*PN	Pn	04 13 02.8	-3.6
BODT	**Bodrum**	**2.75**	**302**	*e*Pn	Pn	04 13 02.8	-3.6
KHL	**Karahalli**	**2.75**	**349**	*e*PN	Pn	04 13 04.0	-2.5
KHL	**Karahalli**	**2.75**	**349**	*e*Pn	Pn	04 13 04.0	-2.5
KONT	**Konya--Tatoy**	**2.89**	**36**	*e*PN	Pn	04 13 05.0	-3.3
KONT	**Konya--Tatoy**	**2.89**	**36**	*e*Pn	Pn	04 13 05.0	-3.3
KULA	**Kula-Manisa**	**3.14**	**337**	*e*PN	Pn	04 13 09.3	-2.5
KULA	**Kula-Manisa**	**3.14**	**337**	*e*Pn	Pn	04 13 09.3	-2.5

IDC ***15*** *04:13:53.5±0.7, 34°.82N×80°.61E, h0km, mb3.7/11, mb1 3.8/15, mb1mx3.7/30, mbtmp3.7/15, ML3.3/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/39, Error ellipse: s-maj=22.4km s-min=15.6km az=51.0*

ISCJB ***15*** *04:13:57.2±0.5, 34°.92N±0°.05×80°.7E±0°.1, h33km, mb3.6/12, MS3.3/1, Error ellipse: s-maj=12.2km s-min=7.4km az=10.5*

ISC 15 04:13:58.9±0.7, 34°.84N±0°.08×80°.8E±0°.1, h35km, n21, σ1º18/21, mb3.7/12, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DHRM	**DHARAMSHALA**	**4.52**	**236**	*e*PKP	**Pn**	**04 15 06.8**	**+1.7**
SMLA	**Simla**	**4.77**	**220**	*e*PKP	**Pn**	**04 15 08.8**	**+0.6**
SMLA				*e*S	Sn	04 16 09.7	+7.4
AAK	**Ala-Archa**	**9.18**	**330**	Pn	**Pn**	**04 16 09.0**	**+0.1**
	0.2nm,0.3s,baz=167,slow=13,SNR=1.8						
AAK				Lg	Lg	04 18 46.1	
	0.2nm,0.3s,baz=312,slow=17,SNR=3.0						
AAK				LR	LR	04 20 11.8	
	comp=Z,58nm,18.3s,baz=30,slow=41						
MKAR	**Makanchi Array**	**12.00**	**5**	Pn	**Pn**	**04 16 47.0**	**-0.3**
	0.1nm,0.3s,baz=181,slow=12,SNR=8.3						
MKAR				Sn	**Sn**	**04 19 01.3**	**+1.5**
	baz=173,slow=26,SNR=2.3						
KURBB	**Kurchatov Arra**	**15.86**	**355**	Pn	**Pn**	**04 17 39.6**	**+0.3**
	0.0nm,0.3s,baz=180,slow=11,SNR=18						
ZALV	**Zalesovo Beam**	**19.32**	**7**	P	**P**	**04 18 19.3**	**-1.5**
	baz=189,slow=8.3,SNR=2.6						
BVAR	**Borovoye Array**	**19.61**	**341**	P	**P**	**04 18 24.5**	**+0.5**
	0.3nm,0.3s,baz=153,slow=11,SNR=6.6						
AKTO	**Aktyubinsk**	**22.72**	**320**	P	**P**	**04 19 00.3**	**+2.8**
	0.8nm,0.3s,baz=124,slow=14,SNR=8.4						
CMAR	**Chiang Mai Arr**	**22.98**	**131**	P	**P**	**04 19 01.3**	**+0.8**
	1.2nm,0.4s,baz=312,slow=11,SNR=12						
SONM	**Songino Array**	**23.10**	**48**	P	**P**	**04 19 01.8**	**+0.2**
	1.2nm,0.4s,baz=239,slow=9.9,SNR=2.7						
BRTR	**Keskin Array B**	**37.46**	**292**	P	**P**	**04 21 08.7**	**-0.4**
	1.6nm,1.0s,baz=95,slow=7.6,SNR=11						
AKASG	**Malin Array Be**	**40.15**	**309**	P	**P**	**04 21 30.3**	**-1.0**
	0.9nm,0.5s,baz=77,slow=8.0,SNR=4.1						
NOA	**NORSAR Array B**	**50.45**	**324**	P	**P**	**04 22 52.1**	**-0.7**
	0.6nm,0.7s,baz=87,slow=7.6,SNR=3.8						
KMBO	**Kilima Mbogo**	**54.16**	**238**	LR	LR	04 47 08.6	
	comp=Z,28nm,20.1s,baz=266,slow=37						
TORD	**Torodi Ar. Bea**	**73.70**	**275**	P	**P**	**04 25 28.8**	**-0.7**
	2.0nm,0.8s,baz=40,slow=5.0,SNR=14						
ILAR	**Eielson Array**	**73.96**	**19**	P	**P**	**04 25 30.7**	**+0.5**
	0.4nm,0.9s,baz=308,slow=4.5,SNR=4.5						
WRA	**Warramunga Arr**	**74.55**	**128**	P	**P**	**04 25 34.8**	**+0.6**
	0.6nm,0.8s,baz=319,slow=6.4,SNR=3.9						
ASAR	**Alice Springs**	**76.99**	**131**	P	**P**	**04 25 49.2**	**+1.0**
	0.2nm,0.4s,baz=322,slow=5.9,SNR=3.1						
BOSA	**Boshof**	**82.02**	**227**	P	**P**	**04 26 13.7**	**-1.9**
	2.5nm,0.8s,baz=89,slow=3.3,SNR=3.7						
YKA	**Yellowknife Ar**	**92.22**	**7**	P	**P**	**04 26 14.9**	**-1.0**
	0.1nm,0.5s,baz=339,slow=5.5,SNR=3.7						
LPAZ	**La Paz**	**146.59**	**296**	PKPbc	**PKPbc**	**04 33 38.0**	**+0.1**
	0.7nm,0.6s,baz=45,slow=4.3,SNR=3.6						

NNC ***15*** *04:29:52.5±1.6, 39°.21N×73°.25E, h241km±18km, mb1.7, mpv2.9, Error ellipse: s-maj=18.8km s-min=7.5km az=7.0*

ISC 15 04:29:49.3±4.9, 38°.8N±0°.3×73°.2E±0°.1, h10km, n9, σ1º11/9, 1C-2D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.34**	**7**	P	**Pn**	**04 30 43.0**	**+1.0**
	SNR=25						
KZA	**Kyzart**	**3.63**	**25**	P	**Pn**	**04 30 46.3**	**+0.3**
	SNR=14						
EKS2	**Erkin-Say**	**3.88**	**7**	P	**Pn**	**04 30 50.5**	**+1.4**
	SNR=11						
AAK	**Ala-Archa**	**3.95**	**14**	P	**Pn**	**04 30 51.8**	**+1.6**
	SNR=8.1						
ULHL	**Ulahol**	**4.16**	**33**	P	**Pn**	**04 30 52.8**	**-0.2**
	SNR=12						
TKM2	**Tokmak 2**	**4.50**	**23**	⇑P	**Pn**	**04 30 57.6**	**-0.2**
	1.5nm,0.7s						
TKM2				⇓S	**Sn**	**04 31 49.2**	**-1.1**
	1.1nm,0.5s						
TKM2	**Tokmak 2**	**4.50**	**23**	P	Pn	04 30 47.3	-10
	SNR=10						
KK31	**Karatay Array**	**4.74**	**336**	P	**Pn**	**04 31 00.3**	**-0.5**
	1.0nm,0.3s,baz=146,slow=11,SNR=53						
KK31				S	**Sn**	**04 31 55.5**	**-0.4**
	9.2nm,0.3s,baz=158,slow=25,SNR=37						
AB31	**Akbulak array**	**14.11**	**322**	⇓P	Pn	04 32 59.1	-10
	0.1nm,0.2s,baz=133,slow=12,SNR=6.9						
AB31				S	Sn	04 35 32.1	-13
	0.1nm,0.2s,baz=127,slow=27,SNR=6.4						

NAO ***15*** *04:30:35.4±1.0, 77°.02N×18°.96E, ML2.9*

CSEM ***15*** *04:30:35.7±0.1, 77°.03N×18°.30E, h5km, ML2.5, Error ellipse: s-maj=5.6km s-min=2.2km az=58.0*

ISCJB ***15*** *04:30:37.0±0.7, 77°.03N±0°.06×18°.4E±0°.2, h16km, Error ellipse: s-maj=9.0km s-min=5.7km az=28.2*

BER ***15*** *04:30:38.2±3.6, 76°.96N×17°.97E, h15km±26km, MD2.2, ML2.5, ML2.0(NAO)*

ISC 15 04:30:36.6±0.9, 76°.93N±0°.05×18°.43E±0°.05, h16km, n15, σ1º83/22, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**0.66**	**278**	*e*P	**Pg**	**04 30 49.8**	**+0.4**
HSP				*e*S	**Sg**	**04 30 58.2**	**+0.1**
SPA0	**Spitsbergen Ar**	**1.33**	**341**	Pg	**Pn**	**04 30 59.8**	**-0.7**
	baz=153,slow=22						
SPA0				Lg	Lg	04 31 16.6	
	baz=151,slow=28						
SPA0	**Spitsbergen Ar**	**1.33**	**341**	Pg	**Pn**	**04 30 59.8**	**-0.7**
	baz=153,slow=22						
SPA0				Lg	Lg	04 31 16.6	
	baz=151,slow=28						
SPA0	**Spitsbergen Ar**	**1.33**	**341**	Pg	**Pn**	**04 30 59.8**	**-0.7**
	baz=153,slow=19,SNR=92						
SPA0				Lg	Lg	04 31 16.6	
	baz=151,slow=26,SNR=8.5						
HOPEN	**Hopen**	**1.58**	**102**	*e*P	**Pn**	**04 31 05.0**	**+1.2**
HOPEN				*e*		04 31 07.4	
HOPEN				*e*S	**Sb**	**04 31 26.2**	**+1.2**
HOPEN	**Hopen**	**1.58**	**102**	*e*P	**Pn**	**04 31 05.0**	**+1.2**
	SNR=55						
HOPEN				*e*S	**Sb**	**04 31 26.2**	**+1.2**
	SNR=55						
KBS	**Kingsbay**	**2.42**	**329**	Pn	**Pn**	**04 31 14.6**	**-0.8**
KBS				Pg	**Pb**	**04 31 19.7**	**+0.1**
KBS				Lg	Lg	04 31 49.8	
KBS	**Kingsbay**	**2.42**	**329**	Pn	**Pn**	**04 31 14.6**	**-0.8**
KBS				Pg	**Pb**	**04 31 19.7**	**+0.1**
KBS				Lg	Lg	04 31 49.8	
KBS				AML	AML	04 31 57.1	
	comp=Z,89nm,0.4s						
KBS	**Kingsbay**	**2.42**	**329**	Pn	**Pn**	**04 31 14.6**	**-0.8**
	SNR=55						
BJO	**Bjornoya**	**2.45**	**175**	*e*P	**Pn**	**04 31 18.0**	**+2.2**
BJO				*e*Sg	**Sb**	**04 31 50.4**	**+0.4**
BJO				AML	AML	04 31 54.4	
	comp=Z,36nm,0.3s						
BJO	**Bjornoya**	**2.45**	**175**	*e*P	**Pn**	**04 31 18.0**	**+2.2**
	SNR=55						
KEV	**Kevo**	**7.61**	**157**	*e*p	Pn	04 32 31.1	+4.5
	comp=Z,0.2nm,0.3s						
ARA0	**ARCESS Array S**	**7.70**	**161**	Pn	**Pn**	**04 32 29.7**	**+1.8**
	slow=14						
ARA0				Sn	**Sn**	**04 33 50.5**	**-4.2**
	baz=358,slow=22						
ARA0	**ARCESS Array S**	**7.70**	**161**	Pn	**Pn**	**04 32 29.7**	**+1.8**
	slow=13,SNR=55						

KRSC 15 04:31:53.6±0.1, 53°.38N×161°.28E, h17km±17km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.81**	**250**	*e*P	Pg	04 32 09.5	+0.2
SPN				*e*S	Sg	04 32 20.4	+0.4
NLC	**Nalytchevo**	**1.18**	**261**	*e*P	Pn	04 32 14.9	-0.4
NLC				*e*S	Sb	04 32 30.2	-0.3
MKZ	**Mys Kozlova**	**1.21**	**13**	*e*P	Pn	04 32 13.9	-1.8
MKZ				*e*S	Sb	04 32 28.1	-3.2
KII	**Karymskiy**	**1.27**	**302**	*e*P	Pn	04 32 16.2	-0.5
KII				*e*S	Sb	04 32 31.6	-1.8
SDLR	**Sedlovina**	**1.44**	**267**	*e*P	Pn	04 32 19.1	0.0
SDLR				*e*S	Sn	04 32 37.9	+0.2
UGLR	**Uglovaya**	**1.48**	**264**	P	Pn	04 32 20.2	+0.5
UGLR				*e*S	Sn	04 32 39.0	+0.3
SMAR	**Somma**	**1.49**	**266**	*e*P	Pn	04 32 20.0	+0.1
SMAR				*e*S	Sb	04 32 40.0	0.0
KRER	**Koryakskii**	**1.52**	**268**	*e*P	Pn	04 32 20.7	+0.4
KRER				*e*S	Sn	04 32 39.9	+0.1
AVH	**Avacha**	**1.53**	**267**	*e*P	Pn	04 32 20.8	+0.6
AVH				*e*S	Sn	04 32 40.2	+0.4
KOK	**Koryaka**	**1.59**	**268**	P	Pn	04 32 21.4	+0.3
KOK				*e*S	Sn	04 32 41.6	+0.3
PET	**Petropavlovsk**	**1.62**	**258**	*e*P	Pn	04 32 21.5	+0.2
PET				*e*S	Sn	04 32 41.9	+0.1
RUS	**Russkaya**	**1.93**	**242**	*e*P	Pb	04 32 27.0	-1.2
RUS				*e*S	Sb	04 32 51.2	-0.7
GNL	**Ganaly**	**2.02**	**280**	*e*P	Pb	04 32 28.7	-1.3
GNL				*e*S	Sb	04 32 54.2	-0.7
TUMR	**Tumrok**	**2.02**	**341**	*e*P	Pn	04 32 27.3	+0.3
TUMR				*e*S	Sn	04 32 51.0	-1.0
MTVR	**Mutnovka**	**2.08**	**246**	*e*P	Pn	04 32 28.9	+1.0
MTVR				*e*S	Sn	04 32 54.6	+1.1
GRL	**Gorelyy**	**2.11**	**248**	*e*P	Pn	04 32 29.4	+1.1
GRL				*e*S	Sn	04 32 55.7	+1.5
ASAK	**Asacha**	**2.28**	**245**	*e*P	Pn	04 32 32.3	+1.8
ASAK				*e*S	Sb	04 33 00.8	-1.5
KMNR	**Kamenistaya**	**2.46**	**346**	*e*P	Pn	04 32 34.0	+1.0
KMNR				*e*S	Sn	04 33 03.4	+0.7
APC	**Apacha**	**2.52**	**261**	*e*S	Sb	04 33 07.4	-1.7
BZGR	**Bezymyannyi-Gr**	**2.59**	**353**	*e*P	Pn	04 32 36.0	+1.2
BZGR				*e*S	Sn	04 33 06.3	+0.3
BZMR	**Bezymyannaya**	**2.60**	**350**	*e*P	Pn	04 32 36.8	+1.7
BZMR				*e*S	Sn	04 33 07.8	+1.4
BZWR	**Bezymyannyi-We**	**2.63**	**350**	*e*P	Pn	04 32 37.1	+1.6
BZWR				*e*S	Sn	04 33 08.4	+1.3
KIRR	**Kirishev**	**2.64**	**348**	*e*P	Pn	04 32 37.4	+1.9
KIRR				*e*S	Sn	04 33 08.8	+1.6
ZLN	**Zelenaya**	**2.66**	**354**	*e*P	Pn	04 32 37.5	+1.7
ZLN				*e*S	Sn	04 33 09.6	+1.9
KPT	**Kopyto**	**2.66**	**347**	*e*P	Pn	04 32 36.7	+0.9
KPT				*e*S	Sn	04 33 07.6	-0.2
LGNR	**Loginova**	**2.73**	**353**	*e*P	Pn	04 32 39.0	+2.0
LGNR				*e*S	Sn	04 33 12.0	+2.1
CIRR	**Tsirk**	**2.76**	**354**	*e*P	Pn	04 32 39.6	+2.4
CIRR				*e*S	Sn	04 33 13.0	+2.7
KOZ	**Kozyrevsk**	**2.81**	**344**	P	Pn	04 32 38.6	+0.9
KOZ				S	Sn	04 33 11.6	+0.5
KRSR	**Krestovskiy**	**2.87**	**352**	*e*P	Pn	04 32 40.9	+2.2
KRSR				*e*S	Sn	04 33 14.5	+1.5
KLY	**Klyuchi**	**2.96**	**353**	*e*P	Pn	04 32 42.4	+2.6
KLY				*e*S	Sn	04 33 17.5	+2.6
KBTR	**Krutoberegovo**	**2.97**	**17**	P	Pn	04 32 41.4	+1.5
KBG	**Krutoberegovo**	**3.00**	**15**	S	Sn	04 33 18.5	+2.8
SRDR	**Sredinnyy**	**3.08**	**344**	*e*P	Pn	04 32 42.2	+0.7
BDR	**Baidarnaya**	**3.20**	**359**	*e*P	Pn	04 32 45.4	+2.3
BDR				*e*S	Sn	04 33 23.0	+2.1
SMKR	**Semkarok**	**3.21**	**2**	*e*P	Pn	04 32 46.0	+2.7
SMKR				*e*S	Sn	04 33 23.6	+2.4
SRKR	**Sorokina**	**3.28**	**359**	*e*P	Pn	04 32 47.6	+3.3
SRKR				*e*S	Sn	04 33 26.7	+3.7
BKI	**Bering**	**3.30**	**55**	*e*P	Pn	04 32 43.0	-1.4
BKI				*e*S	Sn	04 33 18.6	-4.6

MEX 15 04:38:52.6±0.5, 18°.12N×100°.83W, h68km±8km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.48**	**71**	*e*P	Pn	04 39 03.7	-1.4
ARIG				*i* S	Sn	04 39 12.5	-1.9
ZIIG	**Zihuatanejo**	**0.79**	**230**	*e*P	Pn	04 39 06.9	-1.6
ZIIG				*i* S	Sn	04 39 18.6	-1.6
CAIG	**El Cayaco**	**1.20**	**153**	*e*P	Pn	04 39 12.7	-0.8
CAIG				*i* S	Sn	04 39 27.0	-2.1

NNC ***15*** *04:41:26.1±5.6, 36°.81N×71°.06E, h192km±54km, mb2.5, mpv3.5, Error ellipse: s-maj=48.7km s-min=35.8km az=33.0*

ISC 15 04:41:27.1±3.0, 36°.9N±0°.2×71°.1E±0°.1, h204km, n10, σ0º77/14, 2C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.65**	**20**	P	**Pn**	**04 42 49.4**	**-0.9**
	SNR=14						
KZA	**Kyzart**	**6.14**	**31**	P	**Pn**	**04 42 55.9**	**-0.7**
	SNR=5.3						
EKS2	**Erkin-Say**	**6.17**	**19**	P	**Pn**	**04 42 57.0**	**+0.4**
	SNR=7.3						
KK31	**Karatay Array**	**6.26**	**356**	⇑P	**Pn**	**04 42 56.6**	**-1.1**
	0.9nm,0.3s,baz=173,slow=11,SNR=39						
KK31				⇑S	**S**	**04 44 10.0**	**+0.7**
	1.6nm,0.5s,baz=187,slow=25,SNR=5.7						
AAK	**Ala-Archa**	**6.35**	**24**	P	**Pn**	**04 42 59.0**	**0.0**
	SNR=7.8						
CHMS	**Chumysh**	**6.76**	**24**	P	**Pn**	**04 43 04.2**	**0.0**
	SNR=9.0						
TKM2	**Tokmak 2**	**6.99**	**29**	⇓P	**Pn**	**04 43 06.4**	**-1.0**
	2.7nm,0.5s						
TKM2				⇓S	**S**	**04 44 26.8**	**0.0**
	2.4nm,0.8s						
TKM2	**Tokmak 2**	**6.99**	**29**	P	**Pn**	**04 43 07.7**	**+0.3**
	SNR=8.1						
AB31	**Akbulak array**	**14.80**	**330**	P	**P**	**04 44 47.2**	**-0.1**
	0.4nm,0.2s,baz=160,slow=13,SNR=37						
AB31				S	**S**	**04 47 29.6**	**-0.9**
	0.4nm,0.3s,baz=163,slow=23,SNR=7.7						
AKTO	**Aktyubinsk**	**16.50**	**329**	⇓P	**Pn**	**04 45 08.0**	**+1.0**
	0.5nm,0.9s						
AKTO				⇓S	**S**	**04 48 08.8**	**+0.7**

ISK ***15*** *04:50:46.6, 37°.82N×27°.53E, h5km, ML3.3*

ATH ***15*** *04:50:46.1, 37°.89N×27°.68E, h8km±2km, MD3.6/7*

DDA ***15*** *04:50:47.5, 37°.85N×27°.55E, h14km, MD3.6*

IDC ***15*** *04:50:48.5±1.4, 37°.48N×27°.67E, h0km, mb3.4/2, mb1 3.5/5, mb1mx3.3/28, mbtmp3.4/5, ML3.5/3, Error ellipse: s-maj=32.1km s-min=22.1km az=161.0*

CSEM ***15*** *04:50:48.4±0.1, 37°.82N×27°.53E, h2km, MD3.6, Error ellipse: s-maj=3.7km s-min=2.7km az=70.0*

THE ***15*** *04:50:49.7, 37°.94N×27°.51E, h10km±2km, ML3.2/3, Error ellipse: s-maj=3.1km s-min=0.7km az=88.0*

ISC 15 04:50:48.1±1.1, 37°.85N±0°.02×27°.53E±0°.02, h3km±9km, n109, σ1º08/136, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.28**	**237**	*i* P	**Pg**	**04 50 53.4**	**-0.1**
GCAM				*i* S	**Sg**	**04 50 57.3**	**+0.2**
GCAM	**G?zelcaml?**	**0.28**	**237**	*i* P	**Pg**	**04 50 53.4**	**-0.1**
GCAM				*i* S	**Sg**	**04 50 57.3**	**+0.2**
AYDN	**Tasoluk**	**0.34**	**124**	*i* P	**Pg**	**04 50 54.5**	**-0.1**
AYDN				*i* S	**Sg**	**04 50 58.8**	**-0.2**
AYDN	**Tasoluk**	**0.34**	**124**	*i* P	**Pg**	**04 50 54.5**	**-0.1**
AYDN				*i* S	**Sg**	**04 50 58.8**	**-0.2**
IZM	**Izmir**	**0.58**	**339**	*e*PG	**Pg**	**04 50 59.2**	**-0.2**
IZM	**Izmir**	**0.58**	**339**	*e*Pg	**Pg**	**04 50 59.2**	**-0.2**
MLSB	**Milas**	**0.59**	**161**	*e*PG	**Pg**	**04 50 59.1**	**-0.3**
MLSB				*e*SG	**Sg**	**04 51 07.3**	**+0.3**
MLSB	**Milas**	**0.59**	**161**	*e*Pg	**Pg**	**04 50 59.1**	**-0.3**
MLSB				*e*Sg	**Sg**	**04 51 07.3**	**+0.3**

BLCB	**Balcova**	**0.66**	**324**	*e*PG	**Pg**	**04 51 00.7**	**0.0**
BLCB				*e*SG	**Sg**	**04 51 09.6**	**+0.3**
BLCB	**Balcova**	**0.66**	**324**	*e*Pg	**Pg**	**04 51 00.7**	**0.0**
BLCB				*e*Sg	**Sg**	**04 51 09.6**	**+0.3**
BODT	**Bodrum**	**0.81**	**193**	*e*PG	**Pg**	**04 51 02.5**	**-1.1**
BODT	**Bodrum**	**0.81**	**193**	*e*Pg	**Pg**	**04 51 02.5**	**-1.1**
URLA	**Izmir**	**0.90**	**305**	*i* P	**Pg**	**04 51 05.4**	**+0.1**
URLA				*i* S	**Sg**	**04 51 17.9**	**+1.0**
URLA	**Izmir**	**0.90**	**305**	*i* P	**Pg**	**04 51 05.4**	**+0.1**
URLA				*i* S	**Sg**	**04 51 17.9**	**+1.0**
YER	**Yerkesik**	**0.93**	**140**	*e*PG	**Pg**	**04 51 05.4**	**-0.6**
YER	**Yerkesik**	**0.93**	**140**	*e*Pg	**Pg**	**04 51 05.4**	**-0.6**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pg**	**04 51 07.6**	**-0.7**
AKHS				*i* S	**Sg**	**04 51 22.0**	**+0.1**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pg**	**04 51 07.6**	**-0.7**
AKHS				*i* S	**Sg**	**04 51 22.0**	**+0.1**
AKS	**Akhisar**	**1.05**	**12**	*e*PN	**Pg**	**04 51 07.8**	**-0.5**
AKS	**Akhisar**	**1.05**	**12**	*e*Pn	**Pg**	**04 51 07.8**	**-0.5**
KULA	**Kula-Manisa**	**1.11**	**53**	*e*PN	**Pg**	**04 51 08.1**	**-1.3**
DENT	**Denizli**	**1.19**	**94**	*e*PN	**Pg**	**04 51 10.1**	**-0.9**
DENT	**Denizli**	**1.19**	**94**	*e*Pn	**Pg**	**04 51 10.1**	**-0.9**
NIS1	**Nisyros Isl.**	**1.28**	**193**	P	Pn	**04 51 12.9**	**0.0**
NIS1	**Nisyros Isl.**	**1.28**	**193**	P	**Pg**	**04 51 12.9**	**0.0**
CHOS	**Chios island**	**1.28**	**295**	P	**Pg**	**04 51 11.5**	**-1.2**
CHOS				S	**Sg**	**04 51 28.5**	**-0.8**
CHOS	**Chios island**	**1.28**	**295**	*e*PG	**Pg**	**04 51 11.7**	**-1.0**
CHOS				*e*SB	**Sb**	**04 51 30.5**	**+0.6**
CHOS	**Chios island**	**1.28**	**295**	P	**Pg**	**04 51 11.5**	**-1.2**
CHOS				S	**Sg**	**04 51 28.5**	**-0.8**
CHOS				*e*Sb	**Sb**	**04 51 30.5**	**+0.6**
DALY	**Dalyan (Mu¨la**	**1.37**	**139**	*e*PN	Pn	**04 51 13.1**	**-1.0**
DALY	**Dalyan (Mu¨la**	**1.37**	**139**	*e*Pn	Pn	**04 51 13.1**	**-1.0**
AYVA	**Ayvalik**	**1.60**	**336**	*i* P	**Pg**	**04 51 18.2**	**-0.1**
AYVA				*i* S	**Sg**	**04 51 40.0**	**+0.5**
AYVA	**Ayvalik**	**1.60**	**336**	*i* P	**Pg**	**04 51 18.2**	**-0.1**
AYVA				*i* S	**Sg**	**04 51 40.0**	**+0.5**
KHL	**Karahalli**	**1.64**	**73**	*e*PN	Pn	**04 51 17.9**	**0.0**
KHL	**Karahalli**	**1.64**	**73**	*e*Pn	Pn	**04 51 18.0**	**0.0**
ARG	**Arkhangelos**	**1.70**	**164**	P	**Pb**	**04 51 19.5**	**-0.6**
ARG	**Arkhangelos**	**1.70**	**164**	*e*PN	Pn	**04 51 18.8**	**+0.1**
ARG	**Arkhangelos**	**1.70**	**164**	*e*Pn	Pn	**04 51 18.8**	**+0.1**
ARG	**Arkhangelos**	**1.70**	**164**	P	**Pb**	**04 51 19.5**	**-0.6**
PRK	**Paraskevi**	**1.71**	**325**	P	**Pn**	**04 51 16.9**	**-1.9**
PRK				S	**Sn**	**04 51 38.4**	**-2.8**
PRK	**Paraskevi**	**1.71**	**325**	*e*PN	Pn	**04 51 19.3**	**+0.5**
PRK				*e*SN	**Sg**	**04 51 43.1**	**+0.1**
PRK	**Paraskevi**	**1.71**	**325**	P	Pn	**04 51 16.9**	**-1.9**
PRK	**Paraskevi**	**1.71**	**325**	*e*Pn	Pn	**04 51 19.3**	**+0.5**
PRK				S	**Sn**	**04 51 38.4**	**-2.8**
PRK				*e*Sn	**Sg**	**04 51 43.1**	**+0.1**
GLHS	**Glhisar (BURDU**	**1.71**	**113**	*e*PN	Pn	**04 51 19.0**	**0.0**
GLHS	**Glhisar (BURDU**	**1.71**	**113**	*e*Pn	Pn	**04 51 19.0**	**0.0**
FETY	**Fethiye**	**1.73**	**134**	*e*PN	Pn	**04 51 18.4**	**-0.8**
FETY	**Fethiye**	**1.73**	**134**	*e*Pn	Pn	**04 51 18.5**	**-0.8**
APE	**Apeiranthos**	**1.77**	**244**	*e*PN	Pn	**04 51 19.4**	**-0.3**
APE	**Apeiranthos**	**1.77**	**244**	P	Pn	**04 51 19.6**	**-0.2**
APE				S	**Sn**	**04 51 42.7**	**-0.2**
APE	**Apeiranthos**	**1.77**	**244**	*e*PN	**Pb**	**04 51 21.0**	**-0.3**
APE				*e*SN	**Sg**	**04 51 47.2**	**+2.1**
APE	**Apeiranthos**	**1.77**	**244**	*e*Pn	**Pb**	**04 51 21.0**	**-0.3**
APE				S	**Sn**	**04 51 42.7**	**-0.2**
APE				*e*Sn	**Sg**	**04 51 47.2**	**+2.1**
BALB	**Balikesir**	**1.81**	**9**	*e*PN	Pn	**04 51 18.8**	**-1.4**
BALB	**Balikesir**	**1.81**	**9**	*e*Pn	Pn	**04 51 18.8**	**-1.4**
BALY	**Balya**	**1.89**	**2**	*i* P	Pn	**04 51 19.8**	**-1.6**
BALY				*i* S	**Sn**	**04 51 44.0**	**-1.7**
SIGRI	**SIGRI**	**1.89**	**316**	P	Pn	**04 51 19.8**	**-1.5**
SIGR	**SIGRI**	**1.89**	**316**	P	Pn	**04 51 19.8**	**-1.5**
DST	**Dursunbey**	**1.95**	**26**	*e*PN	Pn	**04 51 22.1**	**-0.1**
DST	**Dursunbey**	**1.95**	**26**	*e*Pn	Pn	**04 51 22.1**	**-0.1**
ELL	**Elmali**	**2.19**	**119**	*e*PN	Pn	**04 51 26.4**	**+0.8**
TVSB	**Tavsanli**	**2.20**	**43**	*e*PN	Pn	**04 51 25.2**	**-0.5**
TVSB	**Tavsanli**	**2.20**	**43**	*e*Pn	P

ALN				S	Sb	05 21 00.6	-1.3	
ENEZ	**Enez**	**0.72**	**88**	*e*PG	Pb	05 20 52.6	-0.8	
ENEZ				*e*SG	Sb	05 21 03.1	-0.5	
ENEZ	**Enez**	**0.72**	**88**	*e*Pg	Pb	05 20 52.6	-0.8	
ENEZ				*e*Sg	Sb	05 21 03.1	-0.5	
LIA	**Limnos Island**	**0.81**	**181**	P	Pb	05 20 54.5	-0.4	
LIA				S	Sb	05 21 07.1	+1.0	
LIA	**Limnos Island**	**0.81**	**181**	*e*PN	Pb	05 20 54.5	-0.4	
LIA	**Limnos Island**	**0.81**	**181**	P	Pb	05 20 54.5	-0.4	
LIA				S	Sb	05 21 07.1	+1.0	
KDZ	**Kurdzhali**	**0.95**	**10**	Pg	Pg	05 20 55.3	-1.5	
KDZ	**Kurdzhali**	**0.95**	**10**	Pg	Pg	05 20 55.3	-1.5	
ERIK	**Erikli-Kesan**	**0.99**	**92**	*e*PG	Pb	05 20 57.4	-0.7	
ERIK	**Erikli-Kesan**	**0.99**	**92**	*e*Pg	Pb	05 20 57.4	-0.7	
OUR	**Ouranopolis**	**1.00**	**249**	P	Pb	05 20 58.1	-0.2	
OUR				S	Sn	05 21 13.4	-0.1	
OUR	**Ouranopolis**	**1.00**	**249**	P	Pb	05 20 58.1	-0.2	
OUR				S	Sn	05 21 13.4	-0.1	
GELI	**Tayfur-Gelibol**	**1.01**	**107**	*e*PG	Pb	05 20 57.7	-0.7	
GELI	**Tayfur-Gelibol**	**1.01**	**107**	*e*Pg	Pb	05 20 57.7	-0.7	
RZN	**Rozhen**	**1.05**	**339**	*i* Pg	Pg	05 20 57.9	-0.6	
RZN	**Rozhen**	**1.05**	**339**	*i* Pg	Pg	05 20 57.9	-0.6	
BOZC	**Bozcaada**	**1.08**	**143**	*i* P	Pb	05 20 59.3	-0.2	
BOZC				*i* S	Sb	05 21 13.9	0.0	
NVR	**Nevrokopi**	**1.20**	**303**	P	Pg	05 21 01.3	-0.2	
NVR				S	Sn	05 21 18.5	0.0	
NVR	**Nevrokopi**	**1.20**	**303**	*e*PN	Pb	05 21 01.6	-0.1	
NVR				*e*SN	Sb	05 21 18.0	+0.5	
NVR	**Nevrokopi**	**1.20**	**303**	P	Pg	05 21 01.3	-0.2	
NVR	**Nevrokopi**	**1.20**	**303**	*e*Pn	Pb	05 21 01.6	-0.1	
NVR				*e*Sn	Sb	05 21 18.0	+0.5	
NVR				S	Sn	05 21 18.5	0.0	
EZN	**Ezine**	**1.23**	**135**	*e*PN	Pg	05 21 01.3	-0.7	
EZN				*e*SN	Sn	05 21 18.8	-0.3	
EZN	**Ezine**	**1.23**	**135**	*e*Pn	Pg	05 21 01.3	-0.7	
EZN				*e*Sn	Sn	05 21 18.8	-0.3	
LPK	**Lapseki**	**1.23**	**105**	*e*PN	Pn	05 21 02.1	-0.1	
LPK				*e*SN	Sn	05 21 19.3	+0.2	
LPK	**Lapseki**	**1.23**	**105**	*e*Pn	Pn	05 21 02.1	-0.1	
LPK				*e*Sn	Sn	05 21 19.3	+0.2	
SRS	**Serrai**	**1.29**	**289**	P	Pg	05 21 02.6	-0.6	
SRS				S	Sn	05 21 20.9	+0.3	
SRS	**Serrai**	**1.29**	**289**	P	Pg	05 21 02.6	-0.6	
SRS				S	Sn	05 21 20.9	+0.3	
DIM	**Dimitrovgrad**	**1.36**	**10**	Pg	Pn	05 21 03.6	-0.4	
DIM	**Dimitrovgrad**	**1.36**	**10**	Pg	Pn	05 21 03.6	-0.4	
PLG	**Polygyros**	**1.38**	**257**	P	Pn	05 21 03.7	-0.6	
PLG				S	Sn	05 21 23.8	+0.8	
PLG	**Polygyros**	**1.38**	**257**	*e*PN	Pn	05 21 04.3	+0.1	
PLG	**Polygyros**	**1.38**	**257**	P	Pn	05 21 03.7	-0.6	
PLG	**Polygyros**	**1.38**	**257**	*e*Pn	Pn	05 21 04.4	+0.1	
PLG				S	Sn	05 21 23.8	+0.8	
SOH	**Sokhos**	**1.41**	**275**	P	Pn	05 21 04.3	-0.4	
SOH				S	Sn	05 21 25.0	+1.3	
SOH	**Sokhos**	**1.41**	**275**	*e*PB	Pn	05 21 03.8	-0.9	
SOH				*e*SN	Sb	05 21 23.5	0.0	
SOH	**Sokhos**	**1.41**	**275**	*e*Pb	Pn	05 21 03.8	-0.9	
SOH	**Sokhos**	**1.41**	**275**	P	Pn	05 21 04.3	-0.4	
SOH				*e*Sn	Sb	05 21 23.5	0.0	
SOH				S	Sn	05 21 25.0	+1.3	
MMB	**Musomiste**	**1.42**	**309**	P	Pn	05 21 04.7	-0.2	
MMB	**Musomiste**	**1.42**	**309**	P	Pn	05 21 04.7	-0.2	
PLD	**Plovdiv**	**1.45**	**345**	P	Pg	05 21 06.1	-0.1	
PLD	**Plovdiv**	**1.45**	**345**	P	Pg	05 21 05.9	-0.3	
PLD	**Plovdiv**	**1.45**	**345**	P	Pg	05 21 05.9	-0.3	
RKY	**Sarkoy-Tekirda**	**1.50**	**90**	*e*PN	Pg	05 21 06.6	-0.6	
RKY	**Sarkoy-Tekirda**	**1.50**	**90**	*e*Pn	Pg	05 21 06.6	-0.6	
SART	**Tekirdag**	**1.50**	**90**	*e*P	Pg	05 21 06.9	-0.3	
SART				*e*S	Sg	05 21 26.4	-0.3	
SART	**Tekirdag**	**1.50**	**90**	*e*P	Pg	05 21 06.9	-0.3	
SART				*e*S	Sg	05 21 26.4	-0.3	
SIGR	**SIGRI**	**1.58**	**161**	P	Pn	05 21 06.8	-0.1	
SIGR	**SIGRI**	**1.58**	**161**	P	Pn	05 21 06.8	-0.1	
MFT	**Murefte**	**1.58**	**87**	*e*PN	Pg	05 21 07.9	-0.8	
MFT	**Murefte**	**1.58**	**87**	*e*Pn	Pg	05 21 07.9	-0.8	
HORT	**Hortiatis**	**1.61**	**267**	P	Pn	05 21 07.0	-0.5	
HORT				S	Sg	05 21 30.3	+0.2	
HORT	**Hortiatis**	**1.61**	**267**	P	Pn	05 21 07.0	-0.5	
HORT				S	Sg	05 21 30.3	+0.2	
EDRB	**Edirne**	**1.62**	**45**	*e*PN	Pb	05 21 07.9	-0.9	
EDRB	**Edirne**	**1.62**	**45**	*e*Pn	Pb	05 21 07.9	-0.9	
KRBG	**Karabiga-Canak**	**1.62**	**101**	*e*PN	Pb	05 21 08.4	-0.4	
KRBG				*e*SN	Sg	05 21 30.9	+0.2	
KRBG	**Karabiga-Canak**	**1.62**	**101**	*e*Pn	Pb	05 21 08.4	-0.4	
KRBG				*e*Sn	Sg	05 21 30.9	+0.2	
PRK	**Paraskevi**	**1.68**	**150**	P	Pn	05 21 08.4	+0.1	
PRK	**Paraskevi**	**1.68**	**150**	*e*PN	Pn	05 21 08.4	+0.1	
PRK	**Paraskevi**	**1.68**	**150**	P	Pn	05 21 08.4	+0.1	
TKR	**Tekirdag**	**1.79**	**80**	*e*PN	Pb	05 21 11.1	-0.6	
TKR	**Tekirdag**	**1.79**	**80**	*e*Pn	Pb	05 21 11.1	-0.6	
AYVA	**Ayvalik**	**1.81**	**140**	*e*P	Pn	05 21 09.8	-0.3	
AYVA				*e*S	Sn	05 21 33.8	+0.6	
AYVA	**Ayvalik**	**1.81**	**140**	*e*P	Pn	05 21 09.8	-0.3	
AYVA				*e*S	Sn	05 21 33.8	+0.6	
KNT	**Kendrikon**	**1.81**	**285**	P	Pn	05 21 10.2	+0.1	
KNT				S	Sb	05 21 35.4	+0.6	
KNT	**Kendrikon**	**1.81**	**285**	P	Pn	05 21 10.2	+0.1	
KNT				S	Sb	05 21 35.4	+0.6	
MRMT	**Marmara Adasi**	**1.82**	**93**	*e*PN	Pb	05 21 11.1	-1.1	
MRMT	**Marmara Adasi**	**1.82**	**93**	*e*Pn	Pb	05 21 11.1	-1.1	
AOS	**Alonnisos**	**1.84**	**214**	P	Pn	05 21 09.8	-0.8	
AOS	**Alonnisos**	**1.84**	**214**	*e*PB	Pn	05 21 09.8	-0.8	
AOS	**Alonnisos**	**1.84**	**214**	P	Pn	05 21 09.8	-0.8	
KKB	**Krupnik**	**1.97**	**307**	P	Pn	05 21 12.4	-0.1	
KKB				Pg	Pg	05 21 15.9	-0.4	
KKB				Pg	Pg	05 21 15.9	-0.4	
KKB	**Krupnik**	**1.97**	**307**	P	Pn	05 21 12.4	-0.1	
PGB	**Panagyurishte**	**2.00**	**337**	P	Pn	05 21 12.6	-0.2	
PGB				Pg	Pb	05 21 15.2	0.0	
PGB	**Panagyurishte**	**2.00**	**337**	P	Pn	05 21 12.6	-0.2	
GONE	**Gonen-Balikesi**	**2.01**	**108**	*e*PN	Pn	05 21 13.5	+0.6	
GONE	**Gonen-Balikesi**	**2.01**	**108**	*e*Pn	Pn	05 21 13.5	+0.6	
JMB	**Yambol**	**2.04**	**30**	*e*P	Pg	05 21 17.0	-0.5	
JMB	**Yambol**	**2.04**	**30**	*e*P	Pg	05 21 17.0	-0.5	
XOR	**Xorichti**	**2.05**	**230**	P	Pn	05 21 12.7	-0.8	
XOR	**Xorichti**	**2.05**	**230**	P	Pn	05 21 12.7	-0.8	
BALY	**Balya**	**2.09**	**117**	*e*P	Pb	05 21 15.2	-1.5	
BALY				*e*S	Sb	05 21 43.2	+0.3	
BALY	**Balya**	**2.09**	**117**	*e*P	Pb	05 21 15.2	-1.5	
BALY				*e*S	Sb	05 21 43.2	+0.3	
VAY	**Valandovo**	**2.09**	**288**	*e*Pn	Pn	05 21 14.6	+0.1	
VAY	**Valandovo**	**2.09**	**288**	*e*Pn	Pn	05 21 14.6	+0.6	
BNT	**Bandirma**	**2.10**	**99**	*e*PN	Pn	05 21 15.0	+0.8	
BNT	**Bandirma**	**2.10**	**99**	*e*Pn	Pn	05 21 15.0	+0.8	
GRG	**Griva**	**2.14**	**278**	P	Pn	05 21 14.9	+0.1	
GRG	**Griva**	**2.14**	**278**	*e*PB	Pn	05 21 14.9	+0.1	
GRG	**Griva**	**2.14**	**278**	P	Pn	05 21 14.9	+0.1	
BALB	**Balikesir**	**2.31**	**117**	*e*PN	Pn	05 21 17.7	+0.6	
BALB	**Balikesir**	**2.31**	**117**	*e*Pn	Pn	05 21 17.7	+0.6	
SLVT	**Silivri**	**2.33**	**76**	*e*PN	Pb	05 21 19.5	-1.4	
SLVT	**Silivri**	**2.33**	**76**	*e*Pn	Pb	05 21 19.5	-1.4	
VTS	**Vitosha**	**2.40**	**322**	*e*Pn	Pb	05 21 22.5	+0.3	
VTS				*e*Sg	Sg	05 21 55.7	0.0	
VTS	**Vitosha**	**2.40**	**322**	⇓*i*P	Pb	05 21 23.0	+0.8	
VTS	**Vitosha**	**2.40**	**322**	P	Pb	05 21 23.0	+0.8	
VTS	**Vitosha**	**2.40**	**322**	*e*Pn	Pb	05 21 22.5	+0.3	
VTS	**Vitosha**	**2.40**	**322**	⇓*i*P	Pb	05 21 23.0	+0.8	
VTS				*e*Sg	Sg	05 21 55.7	0.0	
CHOS	**Chios island**	**2.41**	**164**	P	Pn	05 21 18.4	-0.1	
CHOS	**Chios island**	**2.41**	**164**	*e*PN	Pn	05 21 18.3	-0.2	
CHOS	**Chios island**	**2.41**	**164**	P	Pn	05 21 18.4	-0.1	
KCTX	**Karacabey (Bur**	**2.44**	**99**	*e*PN	Pn	05 21 20.1	+1.2	
KCTX	**Karacabey (Bur**	**2.44**	**99**	*e*Pn	Pn	05 21 20.1	+1.2	
CTYL	**Yal??k??y-??at**	**2.45**	**71**	*e*PN	Pb	05 21 20.9	-2.0	
CTYL	**Yal??k??y-??at**	**2.45**	**71**	*e*Pn	Pb	05 21 21.0	-2.0	
CTKS	**Kestanelik-??a**	**2.55**	**77**	*e*PN	Pb	05 21 22.1	-2.5	
CTKS	**Kestanelik-??a**	**2.55**	**77**	*e*Pn	Pb	05 21 22.2	-2.5	
SZH	**Strazhica**	**2.61**	**12**	*i* P	Pn	05 21 22.1	+0.9	
SZH	**Strazhica**	**2.61**	**12**	*i* P	Pn	05 21 22.1	+0.9	
DURS	**Dursunbey**	**2.74**	**113**	*e*P	Pn	05 21 24.4	+1.4	
DURS	**Dursunbey**	**2.74**	**113**	*e*P	Pn	05 21 24.4	+1.4	
BGKT	**Bogazkoy**	**2.74**	**79**	*e*PN	Pb	05 21 25.1	-2.8	
BGKT	**Bogazkoy**	**2.74**	**79**	*e*Pn	Pb	05 21 25.1	-2.8	
AGG	**Agios Georgios**	**2.78**	**234**	*e*PN	Pn	05 21 22.9	-0.7	
AGG	**Agios Georgios**	**2.78**	**234**	*e*Pn	Pn	05 21 22.9	-0.7	
MPEP	**Malo Peshtene**	**2.86**	**338**	P	Pn	05 21 25.8	+1.2	
ORLT	**Orhaneli**	**2.90**	**102**	*e*PN	Pn	05 21 26.6	+1.5	
ORLT	**Orhaneli**	**2.90**	**102**	*e*Pn	Pn	05 21 26.6	+1.5	
ISK	**Istanbul-Kandi**	**2.94**	**82**	*e*PN	Pn	05 21 27.7	+2.0	
ISK	**Istanbul-Kandi**	**2.94**	**82**	*e*Pn	Pn	05 21 27.7	+2.0	
BUY	**Buyukada**	**2.97**	**86**	*e*PN	Pn	05 21 28.4	+2.3	
BUY	**Buyukada**	**2.97**	**86**	*e*Pn	Pn	05 21 28.4	+2.3	
YLV	**Yalova**	**3.17**	**91**	*e*PN	Pn	05 21 31.3	+2.3	
YLV	**Yalova**	**3.17**	**91**	*e*Pn	Pn	05 21 31.3	+2.3	
ZAPS	**Zavoj**	**3.20**	**324**	*e*Pn	Pn	05 21 32.2	+2.9	
ZAPS				*e*Sg	Sg	05 22 23.4	+2.1	
IZI	**Iznik**	**3.27**	**95**	*e*PN	Pn	05 21 32.3	+1.9	
IZI	**Iznik**	**3.27**	**95**	*e*Pn	Pn	05 21 32.3	+1.9	
BARS	**Barje**	**3.30**	**311**	⇑*i*Pn	Pn	05 21 31.4	+0.8	
BARS				*e*Sg	Sg	05 22 24.2	-0.1	
BARS	**Barje**	**3.30**	**311**	⇑*i*Pn	Pn	05 21 31.4	+0.8	
BARS				*e*Sg	Sg	05 22 24.2	-0.1	
HRT	**Hereke**	**3.39**	**87**	*e*PN	Pn	05 21 34.4	+2.5	
HRT	**Hereke**	**3.39**	**87**	*e*Pn	Pn	05 21 34.4	+2.5	
KULA	**Kula-Manisa**	**3.45**	**128**	*e*PN	Pn	05 21 33.8	+1.0	
KULA	**Kula-Manisa**	**3.45**	**128**	*e*Pn	Pn	05 21 33.8	+1.0	
TVSB	**Tavsanli**	**3.50**	**110**	*e*PN	Pn	05 21 34.8	+1.3	
TVSB	**Tavsanli**	**3.50**	**110**	*e*Pn	Pn	05 21 34.8	+1.3	
ALT	**Altintas**	**4.12**	**112**	*e*PN	Pn	05 21 43.1	+1.1	
ALT	**Altintas**	**4.12**	**112**	*e*Pn	Pn	05 21 43.1	+1.1	
TIRR	**Tirgusor**	**4.43**	**31**	⇓*i*P	Pg	05 22 04.3	+1.0	
GRUS	**Gruza**	**4.60**	**315**	*e*Pn	Pn	05 21 49.8	+1.2	
GRUS				*e*Sn	Sn	05 22 40.9	-1.4	
GRUS	**Gruza**	**4.60**	**315**	*e*Pn	Pn	05 21 49.8	+1.2	
GRUS				*e*Sn	Sn	05 22 40.9	-1.4	
MLR	**Muntele Rosu**	**4.81**	**6**	⇑*i*P	Pn	05 21 52.7	+1.2	
MLR	**Muntele Rosu**	**4.81**	**6**	⇑*i*P	Pn	05 21 52.7	+1.2	
CFR	**Carcaliu**	**4.96**	**25**	⇑*i*P	Pb	05 22 05.4	-0.2	
PLOR	**Plostina**	**5.25**	**11**	⇓*i*P	Pn	05 21 59.8	+2.4	
PLOR	**Plostina**	**5.25**	**11**	⇓*i*P	Pn	05 21 59.8	+2.4	
DOPR	**Dopca**	**5.26**	**1**	⇑*i*P	Pn	05 22 00.3	+2.7	
DOPR	**Dopca**	**5.26**	**1**	⇑*i*P	Pn	05 22 00.3	+2.7	
VRI	**Vrincioaia**	**5.27**	**12**	⇓*i*P	Pn	05 21 59.6	+1.8	
VRI	**Vrincioaia**	**5.27**	**12**	⇓*i*P	Pn	05 21 59.6	+1.8	
BBLS	**Lazići**	**5.33**	**308**	*e*Sg	Sg	05 23 28.0	-1.7	
BBLS	**Lazići**	**5.33**	**308**	*e*Sg	Sg	05 23 28.0	-1.7	
TESR	**Tescani**	**5.89**	**10**	⇑*i*P	Pn	05 22 08.1	+1.8	
TESR	**Tescani**	**5.89**	**10**	⇑*i*P	Pn	05 22 08.1	+1.8	
BURAR	**Bucovina Array**	**6.90**	**0**	⇑*i*P	Pn	05 22 23.4	+3.1	
BURAR	**Bucovina Array**	**6.90**	**0**	⇑*i*P	Pn	05 22 23.4	+3.1	

IDC ***15*** *05:53:05.9±0.8, 9.°07N×126.°37E, h0km, mb3.9/8, mb1 4.0/8, mb1mx3.8/26, mbtmp3.9/8, Error ellipse: s-maj=51.3km s-min=16.2km az=77.0*
MAN ***15*** *05:53:14, 8.°90N×126.°28E, h31km, mb4.8, ML3.8, MS3.8*
ISCJB ***15*** *05:53:15.5±1.0, 8.°97N±0.°05×126.°2E±0.°1, h98km±10km, mb3.8/8, Error ellipse: s-maj=16.8km s-min=7.8km az=172.8*

ISC 15 05:53:15.7±1.6, 8.°99N±0.°05×126.°2E±0.°1, h78km±16km, n17, σ1ş47/23, mb3.8/8, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**1.59**	**251**	⇑*i*P	**Pn**	**05 53 40.9**	**-1.3**
CGP				*i* S	**Sn**	**05 54 00.9**	**-1.3**
MSLP	**Maasin**	**1.75**	**311**	*e*P	**Pn**	**05 53 45.3**	**+1.0**
MSLP				*e*S	**Sn**	**05 54 02.0**	**-3.9**
DAV	**Davao City (W)**	**2.01**	**198**	Sn	**Sn**	**05 54 14.2**	**+2.2**
	115nm,0.3s,baz=104,slow=9.7,SNR=4.9						
TBP	**Tagbilaran**	**2.42**	**287**	*e*P	**Pn**	**05 53 53.9**	**+0.7**
TBP				*e*S	**Sn**	**05 54 23.8**	**+1.8**
PLP	**Palo**	**2.48**	**331**	⇓*e*P	**Pn**	**05 53 54.7**	**+0.7**
PLP				*e*S	**Sn**	**05 54 25.6**	**+2.2**
CTBH	**Cotabato--PC H**	**2.62**	**228**	⇑*i*P	**Pn**	**05 53 55.8**	**-0.2**
DCPH	**Dipolog City**	**2.85**	**262**	⇓*e*P	**Pn**	**05 53 59.4**	**+0.3**
DCPH				*e*S	**Sn**	**05 54 33.5**	**+1.0**
PAGZ	**Pagadian**	**3.02**	**248**	*e*P	**Pn**	**05 54 02.2**	**+0.9**
GUIM	**Jordan**	**3.92**	**295**	*e*P	**Pn**	**05 54 14.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**26.92**	**181**	P	**P**	**05 58 50.4**	**+0.6**
	1.4nm,0.5s,baz=2.6,slow=8.0,SNR=7.0						
WRA	**Warramunga Arr**	**29.84**	**164**	P	**P**	**05 59 14.9**	**-0.9**
	0.7nm,0.9s,baz=345,slow=7.9,SNR=6.2						
ASAR	**Alice Springs**	**33.31**	**167**	P	**P**	**05 59 45.8**	**-0.5**
	0.6nm,0.3s,baz=352,slow=7.1,SNR=8.1						
USRK	**Ussuriysk Arra**	**35.44**	**7**	P	**P**	**06 00 03.5**	**-0.9**
	3.4nm,0.6s,baz=196,slow=6.2,SNR=7.4						
STKA	**Stephens Creek**	**43.22**	**161**	P	**P**	**06 01 09.3**	**0.0**
	1.4nm,0.6s,baz=338,slow=13,SNR=3.7						
MKAR	**Makanchi Array**	**53.01**	**323**	P	**P**	**06 02 24.5**	**-0.2**
	0.7nm,0.7s,baz=122,slow=7.5,SNR=6.7						
MKAR				PcP	**PcP**	**06 03 33.9**	**+1.5**
	0.4nm,0.6s,baz=101,slow=4.6,SNR=3.0						
KURBB	**Kurchatov Arra**	**57.09**	**326**	P	**P**	**06 02 53.8**	**-0.2**
	0.6nm,0.5s,baz=125,slow=6.4,SNR=8.4						
ILAR	**Eielson Array**	**80.61**	**26**	P	**P**	**06 05 19.1**	**-0.6**
	0.4nm,0.7s,baz=267,slow=4.7,SNR=5.3						

IDC 15 05:57:50.4±1.5, 4.°82S×151.°45E, h48km±8km, mb3.5/4, mb1 3.8/5, mb1mx3.5/20, mbtmp3.6/5, ML2.6/1, MS3.4/1, Ms1 3.3/1, ms1mx2.7/20, Error ellipse: s-maj=74.6km s-min=17.2km az=127.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.24**	**223**	P	Pn	05 59 19.6	-0.3
	0.8nm,0.3s,baz=53,slow=20,SNR=2.2						
PMG				S	Sn	06 00 30.2	+0.2
	1.7nm,0.3s,baz=348,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**22.44**	**226**	P	P	06 02 45.5	-0.1
	1.1nm,0.4s,baz=50,slow=10,SNR=11						
WRA				pP	pP	06 02 58.0	+1.2
	2.6nm,0.4s,baz=52,slow=9.8,SNR=12						
ASAR	**Alice Springs**	**25.25**	**220**	P	P	06 03 12.3	0.0
	1.5nm,0.7s,baz=52,slow=9.1,SNR=14						
ASAR				pP	pP	06 03 24.4	-0.2
	1.1nm,0.4s,baz=60,slow=8.6,SNR=6.5						
STKA	**Stephens Creek**	**28.46**	**198**	LR	LR	06 13 41.3	
	comp=Z,82nm,21.2s,baz=206,slow=33						
FITZ	**Fitzroy Crossi**	**28.48**	**240**	P	P	06 03 41.1	-0.3
	3.1nm,0.9s,baz=54,slow=8.8,SNR=10						
FITZ				pP	pP	06 03 53.2	-0.6
	7.2nm,0.8s,baz=52,slow=8.3,SNR=4.0						
ILAR	**Eielson Array**	**82.69**	**22**	P	P	06 10 08.3	-0.4
	0.2nm,0.6s,baz=238,slow=6.0,SNR=5.7						
TORD	**Torodi Ar. Bea**	**149.03**	**288**	PKPbc	PKPbc	06 17 34.5	0.0
	0.3nm,0.3s,baz=83,slow=2.0,SNR=11						
TORD				pPKPbc	pPKPbc	06 17 48.5	-0.5
	0.6nm,0.6s,baz=65,slow=2.9,SNR=3.4						

IDC ***15*** *06:12:08.9±0.5, 56.°16S×27.°17W, h124km±4km, mb4.2/11, mb1 4.3/13, mb1mx4.1/18, mbtmp4.2/13, Error ellipse: s-maj=15.2km s-min=12.4km az=59.0*
BJI ***15*** *06:12:09.7, 56.°10S×27.°10W, h127km, mB5.1/3*
NEIC ***15*** *06:12:10.6±1.1, 56.°18S×27.°23W, h140km±9km, mb4.6/13, Error ellipse: s-maj=11.0km s-min=7.6km az=221.0*

ISC 15 06:12:08.9±0.5, 56.°15S±0.°08×27.°30W±0.°07, h126km±4km, h125km:pP-P, n83, σ1ş23/118, mb4.4/20, 3C, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.58**	**286**	*e*Pn	**Pn**	**06 13 31.2**	**+1.6**
HOPE				*e*Sn	**Sn**	**06 14 30.7**	**-1.9**
SNAA	**Sanae**	**18.68**	**156**	*e*P	**P**	**06 16 16.3**	**-0.5**
	24nm,0.5s						
SNAA				ScP	**ScP**	**06 24 01.3**	**-1.6**
SNAA	**Sanae**	**18.68**	**156**	P	**P**	**06 16 16.5**	**-0.3**
	1.5nm,0.3s,baz=305,slow=9.6,SNR=327						
SNAA				ScP	**ScP**	**06 24 01.3**	**-1.6**
	0.0nm,0.3s,baz=352,slow=3.2,SNR=7.4						
PMSA	**Palmer Station**	**19.79**	**229**	*e*P	**Pn**	**06 16 34.0**	**+2.4**
	116nm,1.0s						
PMSA	**Palmer Station**	**19.79**	**229**	P	**Pn**	**06 16 30.6**	**-1.0**
	6.2nm,0.3s,baz=151,slow=2.2,SNR=9.2						
PMSA				pP	**pP**	**06 16 52.7**	**+1.2**
	7.5nm,0.3s,baz=167,slow=24,SNR=2.2						
TRQA	**Tornquist**	**29.31**	**293**	*e*P	**P**	**06 17 59.9**	**+0.6**
	3.4nm,1.2s						
SYO	**Syowa Base**	**31.54**	**141**	⇑*e*P	**P**	**06 18 17.0**	**-1.6**
SYO	**Syowa Base**	**31.54**	**141**	⇑*e*pP	pP	06 18 46.6	+0.8
SYO	**Syowa Base**	**31.54**	**141**	⇑*e*sP	sP	06 19 01.4	+1.1
PLCA	**Paso Flores**	**31.96**	**280**	P	**P**	**06 18 22.4**	**-0.3**
PLCA				PcP	**PcP**	**06 21 09.1**	**-0.6**
PLCA				ScP	**ScP**	**06 24 39.8**	**-1.4**
PLCA	**Paso Flores**	**31.96**	**280**	P	**P**	**06 18 22.4**	**-0.3**
	1.1nm,0.9s,baz=342,slow=1.6,SNR=4.0						
PLCA				PcP	**PcP**	**06 21 09.1**	**-0.6**
	1.2nm,0.7s,baz=254,slow=12,SNR=3.4						
PLCA				ScP	**ScP**	**06 24 39.8**	**-1.4**
	1.7nm,0.9s,baz=219,slow=11,SNR=3.2						
QSPA	**South Pole Qui**	**34.10**	**180**	*e*P	**P**	**06 18 41.8**	**+0.6**
	11nm,0.8s						
QSPA				*e*PcP	**PcP**	**06 21 15.0**	**-0.3**
CPUP	**Villa Florida**	**36.83**	**311**	P	**P**	**06 19 04.3**	**-0.4**
CPUP				pP	**pP**	**06 19 32.0**	**-0.4**
CPUP				PcP	**PcP**	**06 21 23.3**	**-0.5**
CPUP	**Villa Florida**	**36.83**	**311**	P	**P**	**06 19 04.3**	**-0.4**
	2.7nm,0.5s,baz=139,slow=6.5,SNR=23						
CPUP				pP	**pP**	**06 19 32.0**	**-0.4**
	0.5nm,0.4s,baz=159,slow=8.6,SNR=2.2						
CPUP				PcP	**PcP**	**06 21 23.3**	**-0.5**
	1.5nm,0.6s,baz=95,slow=14,SNR=3.6						
MAW	**Mawson**	**40.10**	**143**	*e*P	**P**	**06 19 31.9**	**+0.4**
MAW	**Mawson**	**40.10**	**143**	P	**P**	**06 19 30.6**	**-0.9**
	7.9nm,0.6s,baz=224,slow=9.2,SNR=17						
LVC	**Limon Verde**	**45.30**	**300**	*e*P	**P**	**06 20 16.1**	**+1.8**
	4.4nm,0.7s						
SBA	**Scott Base**	**45.97**	**184**	*e*P	**P**	**06 20 20.1**	**+1.5**
	12nm,1.0s						
BOSA	**Boshof**	**46.05**	**76**	P	**P**	**06 20 19.5**	**-0.5**
BOSA	**Boshof**	**46.05**	**76**	P	**P**	**06 20 19.5**	**-0.5**
	1.1nm,0.4s,baz=355,slow=18,SNR=4.1						
VNDA	**Vanda**	**46.47**	**183**	*e*P	**P**	**06 20 23.3**	**+0.9**
	12nm,0.7s						
VNDA				ScP	**ScP**	**06 25 36.8**	**+0.6**
VNDA	**Vanda**	**46.47**	**183**	P	**P**	**06 20 23.4**	**+0.9**
	12nm,0.6s,baz=185,slow=6.3,SNR=47						
VNDA				ScP	**ScP**	**06 25 36.8**	**+0.6**
	1.1nm,1.0s,baz=186,slow=3.2,SNR=4.0						
LBTB	**L

comp=N,110nm,25.1s
BJI LR LR
comp=E,120nm,25.3s
BJI LR LR
comp=Z,11nm,24.8s
TRF Thorofare Moun 151.32 308 *e*PKPbc **PKPbc 06 31 45.7 -0.6**
COLD Coldfoot 151.85 316 *e*PKPbc **PKPbc 06 31 48.4 +1.2**
PPLA Purkeypile 152.05 307 *e*PKPbc **PKPbc 06 31 48.5 +0.6**
CN2 Changchun 158.72 114 *e*PKP **PKPdf 06 31 52.3 +1.7**
MDJ Mudanjiang 161.38 119 PKP **PKPdf 06 31 52.5 -1.1**

UPP ***15*** *06:12:34.7, 57°.27N×24°.51E, h0km, ML2.1, Suspected Mining explosion.*
ISCJB ***15*** *06:12:49.9±0.5, 57°.89N±0°.04×22°.28E±0°.06, h0km, Error ellipse: s-maj=5.7km s-min=4.0km az=155.9*
HEL ***15*** *06:12:50.6±0.3, 57°.81N×22°.43E, h0km, ML2.1, Explosion*
CSEM ***15*** *06:12:50.6±0.2, 57°.80N×22°.30E, h2km, ML2.1, Error ellipse: s-maj=6.5km s-min=4.0km az=152.0, Mining explosion.*
NAO ***15*** *06:12:51.9±1.9, 57°.96N×22°.30E, ML2.1*
BER ***15*** *06:12:52.7±4.7, 57°.82N×22°.35E, h0km±22km, ML2.1(NAO)*

ISC 15 06:12:49.4±0.8, 57°.84N±0°.03×22°.30E±0°.03, h0km, n43, σ1§25/63, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.21**	**181**	*e*P	**Pg**	**06 12 54.3**	**+0.9**
SLIT	**Slitere, Latvi**	**0.21**	**181**	*e*P	**Pg**	**06 12 54.5**	**+1.1**
	SNR=90						
MTSE	**Matsula**	**1.19**	**42**	*e*P	**Pg**	**06 13 10.9**	**-1.3**
MTSE				*e*S	**Sg**	**06 13 26.0**	**-1.6**
GOTU	**Gotland**	**2.00**	**267**	P	**Pn**	**06 13 25.7**	**+1.2**
VSU	**Vasula**	**2.43**	**73**	Pn	**Pn**	**06 13 31.4**	**+1.0**
VSU				Sn	**Sb**	**06 14 02.9**	**-1.6**
VSU	**Vasula**	**2.43**	**73**	Pn	**Pn**	**06 13 31.4**	**+1.0**
VSU				Sn	**Sb**	**06 14 02.9**	**-1.6**
	SNR=50						
VSU	**Vasula**	**2.43**	**73**	Pn	**Pn**	**06 13 31.4**	**+1.0**
VSU				Sn	**Sb**	**06 14 02.9**	**-1.6**
	SNR=50						
NYNU	**Nynaeshamn**	**2.54**	**299**	P	**Pb**	**06 13 35.5**	**-0.4**
MEF	**Metsahovi**	**2.62**	**24**	*e*P	**Pn**	**06 13 35.0**	**+2.0**
MEF				*e*SG	**Sb**	**06 14 11.4**	**+1.4**
MEF				MSG		06 14 12.3	
	comp=Z,13nm,0.1s						
MEF	**Metsahovi**	**2.62**	**24**	P	**Pn**	**06 13 34.9**	**+2.0**
MEF				*e*S	**Sb**	**06 14 09.2**	**-0.7**
	comp=Z,16nm,0.4s,SNR=50						
AAL	**Aland**	**2.63**	**334**	*e*P	**Pn**	**06 13 34.2**	**+1.0**
AAL				*e*SG	**Sg**	**06 14 14.2**	**+0.2**
AAL	**Aland**	**2.63**	**334**	P	**Pn**	**06 13 34.1**	**+1.0**
AAL				Sg	**Sg**	**06 14 14.2**	**+0.2**
NRTU	**Norrtaelje**	**2.66**	**316**	P	**Pb**	**06 13 36.7**	**-1.1**
BYXU	**Byxelkrok**	**2.90**	**261**	P	**Pn**	**06 13 38.2**	**+1.4**
VIKU	**Víkbolandet**	**3.04**	**285**	P	**Pb**	**06 13 42.9**	**-1.5**
	baz=110						
GRAU	**Graesoe**	**3.17**	**324**	P	**Pn**	**06 13 40.8**	**+0.3**
RAF	**Rauma**	**3.21**	**355**	*e*P	**Pn**	**06 13 42.5**	**+1.5**
RAF				*e*SB	**Sb**	**06 14 26.9**	**+0.1**
RAF				MSG		06 14 28.6	
	comp=Z,2.9nm,0.2s						
RAF	**Rauma**	**3.21**	**355**	P	**Pn**	**06 13 42.5**	**+1.5**
RAF				*e*S	**Sb**	**06 14 25.5**	**-1.3**
	comp=Z,7.8nm,0.4s,SNR=50						
FLYU	**Flymyra**	**3.24**	**317**	P	**Pn**	**06 13 43.6**	**+2.1**
PVF	**Pernaja**	**3.28**	**32**	*e*P	**Pn**	**06 13 43.8**	**+1.8**
PVF				*e*S	**Sn**	**06 14 23.0**	**+1.4**
PVF				MSG		06 14 41.9	
	comp=Z,3.0nm,0.2s						
PVF	**Pernaja**	**3.28**	**32**	P	**Pn**	**06 13 43.8**	**+1.8**
PVF				S	**Sn**	**06 14 23.0**	**+1.4**
BACU	**Backbrunna**	**3.37**	**309**	P	**Pn**	**06 13 44.8**	**+1.5**
ESKU	**Eskilstuna**	**3.40**	**297**	P	**Pn**	**06 13 45.2**	**+1.6**
LNKU	**Linkoeping**	**3.63**	**279**	P	**Pn**	**06 13 49.4**	**+2.5**
FIA0	**FINESS Array S**	**4.09**	**26**	Pn	**Pn**	**06 13 54.5**	**+1.3**
	baz=208,slow=12						
FIA0				Pg	**Pb**	**06 14 01.9**	**-0.4**
	baz=211,slow=16						
FIA0				Sn	**Sn**	**06 14 43.0**	**+1.2**
FIA0				Lg	Lg	06 14 57.9	
	baz=207,slow=28						
FIA0	**FINESS Array S**	**4.09**	**26**	Pn	**Pn**	**06 13 54.5**	**+1.3**
	baz=208,slow=12						
FIA0				Pg	**Pb**	**06 14 01.9**	**-0.4**
	baz=211,slow=16						
FIA0				Sn	**Sn**	**06 14 43.0**	**+1.2**
FIA0				Lg	Lg	06 14 57.9	
	baz=207,slow=28						
FIA0	**FINESS Array S**	**4.09**	**26**	*e*P	**Pn**	**06 13 54.1**	**+0.9**
FIA0	**FINESS Array S**	**4.09**	**26**	P	**Pn**	**06 13 54.1**	**+0.9**
FIA0	**FINESS Array S**	**4.09**	**26**	Pn	**Pn**	**06 13 54.5**	**+1.3**
	baz=208,slow=12,SNR=50						
FIA0				Sn	**Sn**	**06 14 43.0**	**+1.2**
	SNR=50						
FIA0				Lg	Lg	06 14 57.9	
	baz=207,slow=26,SNR=7.7						
NRAU	**Nora**	**4.17**	**298**	P	**Pn**	**06 13 55.7**	**+1.5**
KAF	**Kangasniemi**	**4.74**	**23**	*e*P	**Pn**	**06 14 01.6**	**-0.4**
KAF	**Kangasniemi**	**4.74**	**23**	P	**Pn**	**06 14 01.6**	**-0.4**
BSD	**Bornholm Skovb**	**4.92**	**239**	*i* P	**Pn**	**06 14 03.9**	**-0.6**
BSD				*i* S	**Sn**	**06 15 00.6**	**-1.5**
BSD	**Bornholm Skovb**	**4.92**	**239**	*i* P	**Pn**	**06 14 03.9**	**-0.6**
BSD				*i* S	**Sn**	**06 15 00.6**	**-1.5**
HFS	**Hagfors**	**5.01**	**301**	Pn	**Pn**	**06 14 06.7**	**+0.9**
	baz=130,slow=12						
HFS				Sn	**Sn**	**06 15 04.3**	**0.0**
	baz=108,slow=37						
HFS				Lg	Lg	06 15 27.0	
	baz=108,slow=28						
HFS	**Hagfors**	**5.01**	**301**	Pn	**Pn**	**06 14 06.7**	**+0.9**
	baz=130,slow=12						
HFS				Sn	**Sn**	**06 15 04.3**	**0.0**
	baz=108,slow=37						
HFS				Lg	Lg	06 15 27.0	
	baz=108,slow=28						
HFS	**Hagfors**	**5.01**	**301**	Pn	**Pn**	**06 14 06.7**	**+0.9**
	baz=130,slow=12,SNR=50						
HFS				Sn	**Sn**	**06 15 04.3**	**0.0**
	baz=108,slow=29,SNR=50						
HFS				Lg	Lg	06 15 27.0	
	baz=108,slow=26,SNR=6.5						
UDD	**Uddeholm**	**5.03**	**300**	P	**Pn**	**06 14 07.4**	**+1.3**
NB2	**NORSAR Subarra**	**6.50**	**304**	Pn	**Pn**	**06 14 27.0**	**+0.7**
	baz=117,slow=14						
NB2				Lg	Lg	06 16 17.2	
	baz=111,slow=28						
NB2	**NORSAR Subarra**	**6.50**	**304**	Pn	**Pn**	**06 14 27.0**	**+0.7**
	baz=117,slow=14						
NB2				Lg	Lg	06 16 17.2	
	baz=111,slow=28						
NB2	**NORSAR Subarra**	**6.50**	**304**	Pn	**Pn**	**06 14 27.0**	**+0.7**
	baz=117,slow=13,SNR=50						
NB2				Lg	Lg	06 16 17.2	
	baz=111,slow=25,SNR=3.1						
ARA0	**ARCESS Array S**	**11.83**	**6**	Pn	Pn	06 15 35.6	-3.5
	baz=185,slow=14						
ARA0	**ARCESS Array S**	**11.83**	**6**	P	Pn	06 15 35.6	-3.5
	baz=185,slow=14						

MEX 15 06:17:59.7±0.6, 17°.13N×96°.12W, h101km±6km, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.59**	**264**	*i* P	Pn	06 18 15.4	-1.3
VHO				*i* S	Sn	06 18 27.3	-1.9
HUIG	**Huatulco**	**1.36**	**180**	*e*P	Pn	06 18 23.6	-0.8
HUIG				*i* S	Sn	06 18 41.9	-1.1
TPIG	**Tehuac#an**	**1.75**	**317**	*i* P	Pn	06 18 28.6	-0.8
TPIG				*i* S	Sn	06 18 50.2	-1.6
UTMO	**Huajuapan**	**1.75**	**293**	*e*P	Pn	06 18 28.8	-0.7
UTMO				*i* S	Sn	06 18 50.4	-1.7
PNIG	**Pinotepa**	**2.06**	**249**	*i* P	Pn	06 18 31.6	-1.6
PNIG				*i* S	Sn	06 18 57.5	-1.3
TGIG		**2.89**	**97**	*e*P	Pn	06 19 42.4	-1.7
TGIG				*i* S	Sn	06 19 16.3	-1.9
PCIG		**3.12**	**117**	*e*P	Pn	06 18 45.9	-1.3
PCIG				*i* S	Sn	06 19 22.4	-1.3
CCIG	**Comitan**	**3.91**	**102**	*e*P	Pn	06 18 56.8	-1.1
CCIG				*i* S	Sn	06 19 42.3	-0.7

NIED ***15*** *06:19:00, 36°.90N×141°.90E, h35km, Mw4.2 Best double couple: M0 2.23000×10^15 NP1:φ=24.00000°, δ=69.00000°, λ=90.00000°. NP2:φ=205.00000°, δ=21.00000°, λ=91.00000°.*
IDC ***15*** *06:19:51.9±1.0, 36°.85N×142°.06E, h0km, mb3.9/9, mb1 4.0/15, mb1mx3.9/31, mbtmp4.0/15, ML3.7/5, MS3.4/8, Ms1 3.4/8, ms1mx3.1/38, Error ellipse: s-maj=21.6km s-min=16.4km az=-96.0*
ISCJB ***15*** *06:19:52.7±0.6, 36°.87N±0°.04×142°.08E±0°.06, h19km, mb4.0/14, MS3.5/4, Error ellipse: s-maj=7.7km s-min=5.1km az=32.8*
JMA ***15*** *06:19:55.0±0.3, 36°.92N×141°.94E, h41km, M4.2*
NEIC ***15*** *06:19:56.9±1.2, 36°.88N×142°.02E, h35km±8km, mb4.2/4, Error ellipse: s-maj=14.7km s-min=8.0km az=128.0*

ISC 15 06:19:55.1±0.7, 36°.90N±0°.06×141°.98E±0°.06, h19km, n46, σ1§28/50, mb4.0/14, MS3.5/4, 5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.97**	**283**	ǁP	**Pb**	**06 20 11.7**	**-1.5**
JFK	**Kawauchi**	**1.00**	**298**	ǁP	**Pb**	**06 20 12.0**	**-1.8**
JHO	**Hitachi**	**1.17**	**256**	P	**Pn**	**06 20 14.6**	**-1.8**
JMM	**Marumori**	**1.35**	**316**	ǁP	**Pn**	**06 20 17.6**	**-1.3**
JFT	**Otama**	**1.45**	**296**	ǁP	**Pn**	**06 20 19.6**	**-0.7**
JFT				S	**Sn**	**06 20 36.0**	**-2.8**
JIO	**Ouri**	**1.63**	**342**	ǁP	**Pn**	**06 20 22.0**	**-0.8**
MJAR	**Matsushiro Arr**	**3.05**	**264**	Pn	**Pn**	**06 20 42.6**	**+0.4**
MJAR				Sn	**Sn**	**06 21 21.3**	**+3.1**
MJAR	**Matsushiro Arr**	**3.05**	**264**	Pn	**Pn**	**06 20 42.6**	**+0.4**
	14nm,0.3s,baz=88,slow=15,SNR=145						
MJAR				Sn	**Sn**	**06 21 21.3**	**+3.1**
	10nm,0.3s,baz=100,slow=10,SNR=5.8						
MJAR				LR	LR	06 22 07.2	
	comp=Z,723nm,19.6s,baz=95,slow=44						
MAJO	**Matsushiro**	**3.05**	**264**	*e*Pn	**Pn**	**06 20 43.1**	**+0.8**
MAT	**Matsushiro**	**3.05**	**264**	P	**Pn**	**06 20 42.7**	**+0.4**
MAT				S	**Sn**	**06 21 20.0**	**+1.7**
JHJ	**Hachijo jima 2**	**4.18**	**206**	Pn	**Pn**	**06 20 58.2**	**+0.5**
	4.4nm,0.3s,baz=164,slow=19,SNR=3.3						
JHJ				Sn	**Sn**	**06 21 46.3**	**+0.2**
	32nm,0.3s,baz=250,slow=24,SNR=6.7						
ERM	**Erimo**	**5.19**	**10**	*e*Pn	**Pn**	**06 21 12.1**	**+0.4**
ERM				*e*Sn	**Sn**	**06 22 12.6**	**+1.6**
ASAJ	**Asahikawa**	**7.23**	**4**	Pn	**Pn**	**06 21 39.0**	**-0.6**
ASAJ	**Asahikawa**	**7.23**	**4**	Pn	**Pn**	**06 21 39.0**	**-0.6**
	0.8nm,0.3s,baz=216,slow=19,SNR=2.6						
ASAJ				LR	LR	06 25 17.0	
	comp=Z,150nm,18.2s,baz=190,slow=45						
JNU	**Nakatsue**	**9.85**	**251**	Pn	**Pn**	**06 22 17.0**	**+1.3**
JNU	**Nakatsue**	**9.85**	**251**	Pn	**Pn**	**06 22 17.0**	**+1.3**
	0.9nm,0.3s,baz=64,slow=13,SNR=6.2						
USRK	**Ussuriysk Arra**	**10.52**	**317**	Pn	**Pn**	**06 22 26.8**	**+2.1**
	0.3nm,0.3s,baz=145,slow=43,SNR=3.0						
KSRS	**Korea Array**	**11.23**	**277**	Pn	**Pn**	**06 22 37.0**	**+2.5**
	0.4nm,0.3s,baz=91,slow=14,SNR=6.4						
KSRS				LR	LR	06 26 34.2	
	comp=Z,160nm,19.9s,baz=168,slow=36						
KSAR	**Wonju Array Be**	**11.26**	**277**	Pn	**Pn**	**06 22 37.0**	**+2.1**
PETK	**Petropavlovsk-**	**19.58**	**29**	LR	LR	06 31 21.5	
	comp=Z,40nm,18.3s,baz=206,slow=55						
ENH	**Enshi**	**27.77**	**266**	*e*P	**P**	**06 25 41.8**	**-1.0**
	6.7nm,0.7s						
SONM	**Songino Array**	**28.24**	**304**	P	**P**	**06 25 47.1**	**+0.2**
SONM	**Songino Array**	**28.24**	**304**	P	**P**	**06 25 47.1**	**+0.2**
	6.0nm,0.8s,baz=92,slow=8.9,SNR=10						
CMAR	**Chiang Mai Arr**	**41.90**	**256**	P	**P**	**06 27 42.9**	**-1.5**
CMAR	**Chiang Mai Arr**	**41.90**	**256**	P	**P**	**06 27 42.9**	**-1.5**
	1.0nm,0.7s,baz=48,slow=6.8,SNR=6.0						
CMAR				LR	LR	06 46 52.8	
	comp=Z,28nm,18.5s,baz=230,slow=39						
ZAA0	**Zalesovo Array**	**42.34**	**312**	*e*P	**P**	**06 27 47.8**	**+0.2**
ZALV	**Zalesovo Beam**	**42.34**	**312**	P	**P**	**06 27 47.9**	**+0.3**
ZALV	**Zalesovo Beam**	**42.34**	**312**	P	**P**	**06 27 47.9**	**+0.3**
	3.0nm,0.6s,baz=92,slow=7.4,SNR=8.1						
ZALV				LR	LR	06 46 11.4	
	comp=Z,47nm,18.8s,baz=70,slow=37						
MKAR	**Makanchi Array**	**44.57**	**302**	P	**P**	**06 28 05.6**	**-0.2**
MKAR	**Makanchi Array**	**44.57**	**302**	P	**P**	**06 28 05.6**	**-0.2**
	3.1nm,0.9s,baz=88,slow=9.2,SNR=21						
KURK	**Kurchatov**	**46.37**	**308**	*e*P	**P**	**06 28 19.0**	**-0.9**
	5.5nm,0.6s						
ILAR	**Eielson Array**	**49.37**	**32**	P	**P**	**06 28 43.5**	**+0.7**
ILAR	**Eielson Array**	**49.37**	**32**	P	**P**	**06 28 43.5**	**+0.7**
	0.5nm,0.9s,baz=263,slow=6.0,SNR=6.0						
BVAR	**Borovoye Array**	**51.00**	**312**	P	**P**	**06 28 55.3**	**-0.1**
BVAR	**Borovoye Array**	**51.00**	**312**	P	**P**	**06 28 55.3**	**-0.1**
	0.8nm,0.6s,baz=103,slow=10,SNR=3.9						
KKAR	**Karatay Array**	**53.58**	**300**	*e*P	**P**	**06 29 15.6**	**+0.8**
	0.6nm,0.5s						
WRA	**Warramunga Arr**	**56.99**	**189**	P	**P**	**06 29 38.4**	**-1.0**
WRA	**Warramunga Arr**	**56.99**	**189**	P	**P**	**06 29 38.4**	**-1.0**
	0.2nm,0.3s,baz=2.5,slow=7.2,SNR=6.0						
ABKAR	**Akbulak array**	**58.37**	**310**	*e*P	**P**	**06 29 47.7**	**-1.2**
	0.7nm,0.5s						
ASAR	**Alice Springs**	**60.72**	**188**	P	**P**	**06 30 05.2**	**-0.1**
ASAR	**Alice Springs**	**60.72**	**188**	P	**P**	**06 30 05.2**	**-0.1**
	0.3nm,0.6s,baz=23,slow=9.6,SNR=3.8						
FINES	**FINESS Array B**	**69.14**	**332**	LR	LR	07 01 03.6	
	comp=Z,41nm,18.5s,baz=270,slow=36						
NB2	**NORSAR Subarra**	**74.48**	**338**	P	**P**	**06 31 31.9**	**0.0**
	comp=Z,1.0nm,0.7s,baz=37,slow=6.2						
NOA	**NORSAR Array B**	**74.48**	**338**	P	**P**	**06 31 32.4**	**+0.5**
NOA	**NORSAR Array B**	**74.48**	**338**	P	**P**	**06 31 32.4**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=38,slow=5.8,SNR=5.2						
NOA				LR	LR	07 05 56.3	
	comp=Z,52nm,19.4s,baz=225,slow=37						
CLL	**Collm**	**81.44**	**330**	*i* P	**P**	**06 32 10.9**	**+0.3**
	comp=Z,5.0nm,0.4s						

ISK ***15*** *06:28:24.9, 39°.16N×29°.04E, h5km, MD2.6*
ISCJB ***15*** *06:28:25.3±0.5, 39°.11N±0°.03×29°.06E±0°.03, h9km±5km, Error ellipse: s-maj=5.5km s-min=4.2km az=153.5*
DDA ***15*** *06:28:25.3, 39°.10N×29°.07E, h7km, MD2.7*
CSEM ***15*** *06:28:25.4±0.1, 39°.12N×29°.05E, h8km, MD2.7, Error ellipse: s-maj=2.2km s-min=1.9km az=130.0*

ISC 15 06:28:25.3±0.9, 39°.13N±0°.03×29°.05E±0°.02, h14km±9km, n26, σ0§38/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.27**	**252**	*i* P	**Pg**	**06 28 31.4**	**+0.3**
DEMI				*i* S	**Sg**	**06 28 35.2**	**+0.1**
DEMI	**Demirci**	**0.27**	**252**	*i* P	**Pg**	**06 28 31.4**	**+0.3**
DEMI				*i* S	**Sg**	**06 28 35.2**	**+0.1**
GDZ	**Gediz**	**0.34**	**96**	*i* P	**Pg**	**06 28 32.1**	**-0.1**
GDZ				*i* S	**Sg**	**06 28 36.8**	**-0.2**
GDZ	**Gediz**	**0.34**	**96**	*i* P	**Pg**	**06 28 32.1**	**-0.1**
GDZ				*i* S	**Sg**	**06 28 36.8**	**-0.2**
TVSB	**Tavsanli**	**0.45**	**44**	*e*PG	**Pg**	**06 28 34.2**	**-0.2**
TVSB				*e*SG	**Sg**	**06 28 39.9**	**-0.6**
TVSB	**Tavsanli**	**0.45**	**44**	*e*Pg	**Pg**	**06 28 34.2**	**-0.2**
TVSB				*e*Sg	**Sg**	**06 28 39.9**	**-0.6**
DURS	**Dursunbey**	**0.65**	**317**	*i* P	**Pb**	**06 28 38.9**	**+0.3**
DURS	**Dursunbey**	**0.65**	**317**	*i* P	**Pb**	**06 28 38.9**	**+0.3**
KULA	**Kula-Manisa**	**0.68**	**207**	*e*PG	**Pg**	**06 28 38.7**	**0.0**
KULA	**Kula-Manisa**	**0.68**	**207**	*e*Pg	**Pg**	**06 28 38.7**	**0.0**
MANT	**Manisa**	**0.74**	**211**	*i* P	**Pg**	**06 28 39.7**	**-0.1**
MANT				*i* S	**Sg**	**06 28 48.8**	**-0.8**
MANT	**Manisa**	**0.74**	**211**	*i* P	**Pg**	**06 28 39.7**	**-0.1**
MANT				*i* S	**Sg**	**06 28 48.8**	**-0.8**
ALT	**Altintas**	**0.83**	**95**	*e*PG	**Pb**	**06 28 42.0**	**+0.5**
ALT	**Altintas**	**0.83**	**95**	*e*Pg	**Pb**	**06 28 42.0**	**+0.5**
KHAL	**Karahalli**	**0.83**	**155**	*i* P	**Pg**	**06 28 41.2**	**-0.2**
KHAL				*i* S	**Sg**	**06 28 51.9**	**-0.4**
KHAL	**Karahalli**	**0.83**	**155**	*i* P	**Pg**	**06 28 41.2**	**-0.2**
KHAL				*i* S	**Sg**	**06 28 51.9**	**-0.4**
KHL	**Karahalli**	**0.88**	**155**	*e*PG	**Pb**	**06 28 42.9**	**+0.4**
KHL	**Karahalli**	**0.88**	**155**	*e*Pg	**Pb**	**06 28 42.9**	**+0.4**
BALY	**Balya**	**1.27**	**299**	*i* P	Pn	06 28 42.8	-5.9
BALY				*i* S	**Sb**	**06 29 05.0**	**-0.2**
BALY	**Balya**	**1.27**	**299**	*i* S	**Sb**	**06 29 05.0**	**-0.2**
BORA	**Eskisehir**	**1.32**	**55**	*i* P	**Pb**	**06 28 50.3**	**+0.3**
BORA				*i* S	**Sb**	**06 29 07.2**	**+0.4**
BORA	**Eskisehir**	**1.32**	**55**	*i* P	**Pb**	**06 28 50.3**	**+0.3**
BORA				*i* S	**Sb**	**06 29 07.2**	**+0.4**
GONE	**Gonen-Balikesi**	**1.40**	**312**	*e*PN	**Pb**	**06 28 51.2**	**0.0**
GONE	**Gonen-Balikesi**	**1.40**	**312**	*e*Pn	**Pb**	**06 28 51.2**	**0.0**
YLV	**Yalova**	**1.46**	**10**	*e*PN	**Pb**	**06 28 52.7**	**+0.4**
YLV	**Yalova**	**1.46**	**10**	*e*Pn	**Pb**	**06 28 52.7**	**+0.4**

IDC 15 06:32:40.9±11.0, 6°.45S×149°.95E, h280km±34km, mb3.2/4, mb1 3.4/5, mb1mx3.1/19, mbtmp3.3/5, Error ellipse: s-maj=142.3km s-min=54.3km az=37.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.03**	**223**	P	Pn	06 33 46.5	0.0
	3.8nm,0.3s,baz=31,slow=10,SNR=9.8						
WRA	**Warramunga Arr**	**20.24**	**227**	P	P	06 36 55.8	0.0
	1.1nm,0.3s,baz=52,slow=9.8,SNR=18						
ASAR	**Alice Springs**	**23.04**	**220**	P	P	06 37 22.4	+0.2
	0.6nm,0.4s,baz=52,slow=8.5,SNR=15						
FITZ	**Fitzroy Crossi**	**26.39**	**242**	P	P	06 37 52.1	-0.2
	4.1nm,1.1s,baz=49,slow=9.3,SNR=2.0						
STKA	**Stephens Creek**	**26.47**	**196**	P	P	06 37 52.6	-0.3
	2.9nm,0.9s,baz=35,slow=11,SNR=3.3						

DJA 15 06:42:15.3±0.4, 8°.5E±4°×11°.4E±°, h10km, M3.6/14, mb4.3/1, MLv3.2/14, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLJI	**Banyuglugur**	**0.01**	**135**	P	Pg	06 42 15.3	-1.8
GMJI	**Gumukmas**	**0.55**	**195**	P	Pg	06 42 25.5	-0.5
ABJI	**Asem Bagus**	**0.64**	**95**	P	Pg	06 42 27.3	-0.4
KMMI	**Kalianget**	**0.78**	**29**	P	Pg	06 42 29.6	-0.8
BYJI	**Banyuwangi**	**0.89**	**122**	P	Pg	06 42 32.0	-0.5
KRKI	**Karangkates**	**1.20**	**250**	P	Pn	06 42 38.2	0.0
SRBI	**Singaraja**	**1.64**	**102**	P	Pn	06 42 44.9	+0.6
DNP	**Denpasar**	**1.85**	**120**	P	Pn	06 42 48.0	+0.8
KHKI	**Kahang-Kahang**	**2.09**	**107**	P	Pn	06 42 51.1	+0.7
PCJI	**Pacitan**	**2.43**	**259**	P	Pn	06 42 56.1	+1.0
UGM	**Wanagama**	**3.04**	**267**	P	Pn	06 43 04.5	+0.9
SMRI	**Semarang**	**3.20**	**282**	P	Pn	06 43 06.5	+0.8
CLJI	**Cilicap**	**4.53**	**270**	P	Pn	06 43 25.1	+1.0
PBKI	**Pangkalan Bun**	**5.36**	**339**	P	Pn	06 43 35.8	+0.4
CISI	**Cisompet, Garu**	**5.73**	**271**	P	Pn	06 43 41.0	+0.5

ISCJB ***15*** *06:47:40.0±0.5, 37°.98N±0°.03×21°.54E±0°.03, h9km±4km, Error ellipse: s-maj=5.0km s-min=4.0km az=143.6*
THE ***15*** *06:47:40.1, 38°.03N×21°.51E, h18km, ML2.4/2, Error ellipse: s-maj=0.8km s-min=0.3km az=338.0*
ATH ***15*** *06:47:40.5, 37°.95N×21°.56E, h7km±5km, MD3.4/14*
CSEM ***15*** *06:47:40.0±0.2, 37°.98N×21°.53E, h10km, ML2.4/2, Error ellipse: s-maj=3.6km s-min=3.0km az=116.0*

ISC 15 06:47:40.2±0.9, 37°.98N±0°.03×21°.53E±0°.03, h16km±5km, n47, σ0§57/70, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.09**	**327**	P	**Pg**	**06 47 43.2**	**-0.3**
RLS				S	**Sg**	**06 47 45.7**	**+0.1**
RLS	**Riolos of Patr**	**0.09**	**327**	*e*PG	**Pg**	**06 47 43.1**	**-0.4**
RLS				*e*SG	**Sg**	**06 47 45.7**	**+0.1**
RLS	**Riolos of Patr**	**0.09**	**327**	P	**Pg**	**06 47 43.2**	**-0.3**
RLS				S	**Sg**	**06 47 45.7**	**+0.1**
LAKA	**Lakka**	**0.44**	**53**	P	**Pg**	**06 47 48.8**	**-0.3**
LAKA				S	**Sg**	**06 47 55.3**	**+0.3**
LAKA	**Lakka**	**0.44**	**53**	*e*PG	**Pg**	**06 47 48.8**	**-0.3**
LAKA				*e*SB	**Sb**	**06 47 56.0**	**0.0**
LAKA	**Lakka**	**0.44**	**53**	P	**Pg**	**06 47 48.7**	**-0.3**
LAKA				S	**Sg**	**06 47 54.5**	**-0.5**
LAKA				*e*Sb	**Sb**	**06 47 56.0**	**0.0**
KLV	**Kalavryta, Ach**	**0.49**	**82**	*e*PB	**Pg**	**06 47 50.1**	**+0.1**
KLV	**Kalavryta, Ach**	**0.49**	**82**	*e*Pb	**Pg**	**06 47 50.1**	**+0.1**
EFP	**Efpalio**	**0.54**	**33**	P	**Pg**	**06 47 49.8**	**-1.0**
EFP	**Efpalio**	**0.54**	**33**	*e*PB	**Pg**	**06 47 49.9**	**-0.9**
EFP				*e*SB	**Sb**	**06 47 58.9**	**+0.1**
EFP	**Efpalio**	**0.54**	**33**	*e*Pb	**Pg**	**06 47 49.9**	**-0.9**
EFP				S	**Sg**	**06 47 57.8**	**-0.2**
EFP				*e*Sb	**Sb**	**06 47 58.9**	**+0.1**
TRIZ	**Trizonia**	**0.57**	**48**	P	**Pg**	**06 47 50.9**	**-0.6**
TRIZ				S	**Sg**	**06 47 59.3**	**+0.1**
TRIZ	**Trizonia**	**0.57**	**48**	*e*PB	**Pg**	**06 47 50.8**	**-0.7**
TRIZ				*e*SB	**Sb**	**06 48 00.0**	**+0.1**
TRIZ	**Trizonia**	**0.57**	**48**	P	**Pg**	**06 47 50.9**	**-0.6**
TRIZ				S	**Sg**	**06 47 59.3**	**+0.1**
TRIZ				*e*Sb	**Sb**	**06 48 00.0**	**+0.1

SVRC	**Sivrice-ELAZID**	**1.06**	**102**	*e*PN	**Pb**	**06 59 31.6**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.06**	**102**	*e*Pn	**Pb**	**06 59 31.6**	**-0.3**
PTK	**Pertek**	**1.13**	**75**	*e*PN	**Pg**	**06 59 32.6**	**-0.3**
PTK	**Pertek**	**1.13**	**75**	*e*Pn	**Pg**	**06 59 32.6**	**-0.3**
PINB	**Pinarbasi**	**1.25**	**274**	*i* P	**Pg**	**06 59 34.5**	**-0.6**
PINB	**Pinarbasi**	**1.25**	**274**	*i* P	**Pg**	**06 59 34.5**	**-0.6**
URFA	**Urfa**	**1.33**	**150**	*e*PN	**Pg**	**06 59 37.4**	**+0.7**
URFA	**Urfa**	**1.33**	**150**	*e*Pn	**Pg**	**06 59 37.4**	**+0.7**
KMRS	**Kahramanmaras**	**1.39**	**219**	*e*PN	**Pn**	**06 59 37.2**	**+0.1**
KMRS	**Kahramanmaras**	**1.39**	**219**	*e*Pn	**Pn**	**06 59 37.2**	**+0.1**
KELT	**Kelkit**	**1.83**	**32**	*i* P	**Pg**	**06 59 45.7**	**-0.5**
KELT	**Kelkit**	**1.83**	**32**	*i* P	**Pg**	**06 59 45.7**	**-0.5**

*ISK **15** 07:06:42.2, 38°.55N×37°.94E, h3km, MD3.1*
*DDA **15** 07:06:43.6, 38°.58N×37°.91E, h13km, MD2.9*
*CSEM **15** 07:06:43.2±0.2, 38°.55N×37°.95E, h2km, MD2.9, Error ellipse: s-maj=6.3km s-min=4.9km az=134.0*

ISC 15 07:06:43.5±1.0, 38°.57N±0°.02×37°.95E±0°.02, h6km±10km, n44, σ0958/62, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKCD	**Akcadag**	**0.28**	**184**	*i* P	**Pg**	**07 06 49.1**	**+0.2**
AKCD				*i* S	**Sg**	**07 06 53.6**	**+1.1**
AKCD	**Akcadag**	**0.28**	**184**	*i* P	**Pg**	**07 06 49.1**	**+0.2**
AKCD				*i* S	**Sg**	**07 06 53.6**	**+1.1**
DARE	**Darende-Malaty**	**0.36**	**270**	*e*PG	**Pg**	**07 06 50.1**	**-0.4**
DARE				*e*SG	**Sg**	**07 06 55.7**	**+0.3**
DARE	**Darende-Malaty**	**0.36**	**270**	*e*Pg	**Pg**	**07 06 50.2**	**-0.4**
DARE				*e*Sg	**Sg**	**07 06 55.7**	**+0.3**
MYA	**Malataya**	**0.45**	**123**	*e*PG	**Pg**	**07 06 51.9**	**-0.3**
MYA	**Malataya**	**0.45**	**123**	*e*Pg	**Pg**	**07 06 51.9**	**-0.3**
KEMA	**Kemaliye**	**0.82**	**31**	*i* P	**Pg**	**07 06 59.2**	**0.0**
KEMA				*i* S	**Sb**	**07 07 11.5**	**0.0**
KEMA	**Kemaliye**	**0.82**	**31**	*i* P	**Pg**	**07 06 59.2**	**0.0**
KEMA				*i* S	**Sb**	**07 07 11.5**	**0.0**
ILIC	**ilic-Erzincan**	**1.00**	**29**	*e*PG	**Pg**	**07 07 02.8**	**0.0**
ILIC				*e*SG	**Sb**	**07 07 17.5**	**+0.5**
ILIC	**ilic-Erzincan**	**1.00**	**29**	*e*Pg	**Pg**	**07 07 02.8**	**0.0**
ILIC				*e*Sg	**Sb**	**07 07 17.5**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.08**	**100**	*e*PN	**Pg**	**07 07 03.4**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.08**	**100**	*e*Pn	**Pg**	**07 07 03.4**	**-0.9**
PTK	**Pertek**	**1.18**	**74**	*e*PN	**Pg**	**07 07 05.0**	**-1.0**
PTK	**Pertek**	**1.18**	**74**	*e*Pn	**Pg**	**07 07 05.0**	**-1.0**
SARI	**SarD1z-Kayseri**	**1.21**	**263**	*e*PN	**Pg**	**07 07 05.4**	**-1.3**
PINB	**Pinarbasi**	**1.21**	**276**	*i* P	**Pg**	**07 07 06.3**	**-0.5**
PINB				*i* S	**Sb**	**07 07 23.0**	**-0.1**
PINB	**Pinarbasi**	**1.21**	**276**	*i* P	**Pg**	**07 07 06.3**	**-0.5**
PINB				*i* S	**Sb**	**07 07 23.0**	**-0.1**
GZT	**Gaziantep**	**1.25**	**194**	*i* P	**Pn**	**07 07 08.4**	**+0.8**
GZT				*i* S	**Sn**	**07 07 25.9**	**+1.0**
URFA	**Urfa**	**1.32**	**148**	*e*PN	**Pn**	**07 07 08.2**	**-0.4**
URFA	**Urfa**	**1.32**	**148**	*e*Pn	**Pn**	**07 07 08.2**	**-0.4**
AYKD	**Aykdinkavak**	**1.46**	**218**	*i* P	**Pg**	**07 07 11.6**	**+0.1**
AYKD				*i* S	**Sg**	**07 07 30.1**	**-0.4**
GAZ	**Gaziantep**	**1.51**	**203**	*e*PN	**Pn**	**07 07 10.5**	**-0.7**
GAZ	**Gaziantep**	**1.51**	**203**	*e*Pn	**Pn**	**07 07 10.5**	**-0.7**
ANDN	**Andirin**	**1.60**	**232**	*i* P	**Pg**	**07 07 14.1**	**-0.1**
ANDN				*i* S	**Sg**	**07 07 34.4**	**-0.6**
ANDN	**Andirin**	**1.60**	**232**	*i* P	**Pg**	**07 07 14.1**	**-0.1**
ANDN				*i* S	**Sg**	**07 07 34.4**	**-0.6**
EZC	**Erzincan**	**1.61**	**42**	*e*PN	**Pn**	**07 07 12.9**	**+0.3**
EZC	**Erzincan**	**1.61**	**42**	*e*Pn	**Pn**	**07 07 12.9**	**+0.3**
ERZN	**Erzincan**	**1.71**	**53**	*e*PN	**Pn**	**07 07 14.0**	**-0.1**
KELT	**Kelkit**	**1.88**	**32**	*i* P	**Pb**	**07 07 18.1**	**-0.2**
KELT				*i* S	**Sg**	**07 07 43.8**	**+0.1**
KELT	**Kelkit**	**1.88**	**32**	*i* P	**Pb**	**07 07 18.1**	**-0.2**
KELT				*i* S	**Sg**	**07 07 43.8**	**+0.1**
KUZU	**Kuzuini**	**1.92**	**201**	*e*P	**Pg**	**07 07 21.7**	**+1.4**
KUZU				*i* S	**Sg**	**07 07 45.3**	**+0.1**
KOZT	**Kozan**	**2.00**	**238**	*e*PN	**Pn**	**07 07 17.6**	**-0.2**
KOZT	**Kozan**	**2.00**	**238**	*e*Pn	**Pn**	**07 07 17.6**	**-0.2**
BINT	**Bingol**	**2.01**	**80**	*e*Pn	**Pb**	**07 07 20.3**	**-0.3**
BNGB	**Bing¯¶l**	**2.18**	**78**	*e*PN	**Pn**	**07 07 20.3**	**-0.1**
GUMT	**Gumushane**	**2.23**	**32**	*e*PN	**Pn**	**07 07 21.5**	**+0.4**
GUMT	**Gumushane**	**2.23**	**32**	*e*Pn	**Pn**	**07 07 21.5**	**+0.4**
YOZ	**Yozgat**	**2.31**	**298**	*e*PN	**Pn**	**07 07 22.7**	**+0.5**
YOZ	**Yozgat**	**2.31**	**298**	*e*Pn	**Pn**	**07 07 22.7**	**+0.5**
COBT	**Iskenderun**	**2.45**	**214**	*i* P	**Pg**	**07 07 29.5**	**-0.9**
COBT				*i* S	**Sg**	**07 08 00.8**	**-1.3**
BAYT	**Ayd¯–ntepe-Bay**	**2.49**	**42**	*e*PN	**Pn**	**07 07 25.3**	**+0.5**
BAYT	**Ayd¯–ntepe-Bay**	**2.49**	**42**	*e*Pn	**Pn**	**07 07 25.3**	**+0.5**
NIG	**Nigde**	**2.66**	**261**	*e*PN	**Pn**	**07 07 27.5**	**+0.3**
NIG	**Nigde**	**2.66**	**261**	*e*Pn	**Pn**	**07 07 27.5**	**+0.3**

IDC 15 07:07:42.3±3.2, 55°.76S×24°.24W, h0km, mb4.2/2, mb1 4.5/2, mb1mx3.8/16, mbtmp4.2/2, Error ellipse: s-maj=592.4km s-min=63.9km az=31.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**37.91**	**307**	P	P	07 15 00.8	-0.2
	0.5nm,0.4s,baz=263,slow=18,SNR=4.9						
LPAZ	**La Paz**	**51.60**	**302**	P	P	07 16 51.0	-0.1
	6.5nm,0.6s,baz=154,slow=6.2,SNR=41						
YKA	**Yellowknife Ar**	**137.07**	**317**	PKP	PKPdf	07 27 06.0	+0.4
	0.1nm,0.4s,baz=138,slow=1.5,SNR=3.4						
ILAR	**Eielson Array**	**151.16**	**312**	PKPbc	PKPbc	07 27 35.2	-0.6
	1.0nm,1.0s,baz=120,slow=2.0,SNR=8.9						

IDC 15 07:15:42.1±4.3, 20°.97S×177°.56W, h0km, mb4.5/4, mb1 4.7/4, mb1mx4.0/18, mbtmp4.5/4, Error ellipse: s-maj=171.2km s-min=48.6km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.96**	**245**	P	P	07 23 01.9	+0.2
	2.6nm,0.4s,baz=93,slow=9.8,SNR=11						
ASAR	**Alice Springs**	**44.81**	**257**	P	P	07 23 57.6	-0.5
	4.1nm,0.4s,baz=97,slow=7.1,SNR=57						
WRA	**Warramunga Arr**	**44.95**	**262**	P	P	07 23 58.9	-0.3
	3.4nm,0.4s,baz=96,slow=8.4,SNR=96						
CMAR	**Chiang Mai Arr**	**90.66**	**289**	P	P	07 28 47.5	+0.3
	0.9nm,0.3s,baz=141,slow=3.6,SNR=4.8						
AKASG	**Malin Array Be**	**143.62**	**331**	PKP	PKPbc	07 35 16.0	-0.2
	0.9nm,0.3s,baz=45,slow=4.5,SNR=6.1						
BRTR	**Keskin Array B**	**147.46**	**312**	PKPbc	PKPbc	07 35 28.4	0.0
	0.5nm,0.4s,baz=105,slow=3.3,SNR=3.5						

*THE **15** 07:26:57.5, 38°.04N×21°.50E, h18km, ML2.6/3, Error ellipse: s-maj=0.9km s-min=0.3km az=166.0*
*CSEM **15** 07:26:57.9±0.2, 38°.09N×21°.49E, h15km, MD3.3, Error ellipse: s-maj=5.5km s-min=3.8km az=173.0*
*ISCJB **15** 07:26:58.3±0.5, 38°.11N±0°.04×21°.49E±0°.03, h18km±4km, Error ellipse: s-maj=6.8km s-min=4.2km az=161.7*
*ATH **15** 07:26:58.2, 38°.06N×21°.49E, h15km±1km, MD3.3/11*

ISC 15 07:26:57.4±0.9, 38°.05N±0°.03×21°.51E±0°.02, h18km±2km, n47, σ0961/73, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.03**	**280**	P	**Pg**	**07 27 00.7**	**0.0**
RLS				S	**Sg**	**07 27 03.1**	**+0.2**
RLS	**Riolos of Patr**	**0.03**	**280**	*e*PB	**Pg**	**07 27 00.7**	**0.0**
RLS				*e*SB	**Sg**	**07 27 03.1**	**+0.2**
RLS	**Riolos of Patr**	**0.03**	**280**	P	**Pg**	**07 27 00.7**	**0.0**
RLS				S	**Sg**	**07 27 03.1**	**+0.2**
UPR	**University Cam**	**0.32**	**43**	P	**Pb**	**07 27 04.7**	**+0.1**
UPR				S	**Sb**	**07 27 09.7**	**+0.3**
LAKA	**Lakka**	**0.41**	**63**	P	**Pb**	**07 27 06.0**	**-0.3**
LAKA				S	**Sb**	**07 27 12.8**	**+0.5**
LAKA	**Lakka**	**0.41**	**63**	*e*PB	**Pb**	**07 27 06.2**	**-0.1**
LAKA				*e*SB	**Sb**	**07 27 13.4**	**+1.1**
LAKA	**Lakka**	**0.41**	**63**	*e*Pb	**Pb**	**07 27 06.2**	**-0.1**
LAKA				S	**Sb**	**07 27 12.2**	**-0.1**
LAKA				*e*Sb	**Sb**	**07 27 13.4**	**+1.1**
EFP	**Efpalio**	**0.49**	**40**	P	**Pb**	**07 27 07.3**	**-0.2**
EFP				S	**Sb**	**07 27 14.8**	**+0.5**
EFP	**Efpalio**	**0.49**	**40**	*e*PB	**Pb**	**07 27 07.4**	**-0.1**
EFP				*e*SB	**Sb**	**07 27 15.6**	**+1.3**
EFP	**Efpalio**	**0.49**	**40**	P	**Pb**	**07 27 07.3**	**-0.2**
EFP				S	**Sb**	**07 27 14.8**	**+0.5**
EFP				*e*Sb	**Sb**	**07 27 15.6**	**+1.3**
KLV	**Kalavryta, Ach**	**0.51**	**91**	*e*PN	**Pb**	**07 27 07.6**	**-0.2**
KLV				*e*SN	**Sb**	**07 27 15.6**	**+0.8**
KLV	**Kalavryta, Ach**	**0.51**	**91**	*e*Pn	**Pb**	**07 27 07.6**	**-0.2**
KLV				*e*Sn	**Sb**	**07 27 15.6**	**+0.8**
TRIZ	**Trizonia**	**0.54**	**55**	P	**Pg**	**07 27 08.2**	**-0.1**
TRIZ	**Trizonia**	**0.54**	**55**	*e*PN	**Pg**	**07 27 08.3**	**-0.1**
TRIZ				*e*SN	**Sn**	**07 27 17.2**	**-1.6**
TRIZ	**Trizonia**	**0.54**	**55**	*e*Pn	**Pg**	**07 27 08.3**	**-0.1**
TRIZ				S	**Sb**	**07 27 16.8**	**+1.0**
TRIZ				*e*Sn	**Sn**	**07 27 17.2**	**-1.6**
KFL	**Anninata**	**0.57**	**276**	P	**Pg**	**07 27 08.6**	**-0.3**
KFL	**Anninata**	**0.57**	**276**	P	**Pg**	**07 27 08.6**	**-0.3**
KFL				S	**Sg**	**07 27 17.4**	**+0.8**
KALE	**Kalithea**	**0.60**	**56**	P	**Pg**	**07 27 09.2**	**-0.2**
KALE				S	**Sg**	**07 27 18.4**	**+0.9**
KALE	**Kalithea**	**0.60**	**56**	*e*PB	**Pb**	**07 27 09.1**	**-0.3**
KALE				*e*SN	**Sn**	**07 27 19.3**	**-1.1**
KALE	**Kalithea**	**0.60**	**56**	P	**Pg**	**07 27 09.2**	**-0.2**
KALE				S	**Sg**	**07 27 18.1**	**+0.6**
KALE				*e*Sn	**Sn**	**07 27 19.3**	**-1.1**
GUR	**Goura**	**0.67**	**100**	P	**Pb**	**07 27 10.1**	**-0.4**
GUR	**Goura**	**0.67**	**100**	*e*PB	**Pb**	**07 27 10.4**	**-0.1**
GUR				*e*SB	**Sn**	**07 27 21.7**	**-0.4**
GUR	**Goura**	**0.67**	**100**	P	**Pb**	**07 27 10.1**	**-0.4**
GUR	**Goura**	**0.67**	**100**	*e*Pb	**Pb**	**07 27 10.4**	**-0.1**
GUR				S	**Sg**	**07 27 20.0**	**+0.4**
GUR				*e*Sb	**Sn**	**07 27 21.7**	**-0.4**
DSF	**Desfina**	**0.88**	**66**	P	**Pb**	**07 27 13.8**	**-0.3**
DSF	**Desfina**	**0.88**	**66**	P	**Pb**	**07 27 13.9**	**-0.2**
DSF				S	**Sn**	**07 27 27.1**	**-0.1**
EVR	**Evrytania**	**0.90**	**15**	*e*PN	**Pn**	**07 27 15.4**	**+0.2**
EVR	**Evrytania**	**0.90**	**15**	*e*Pn	**Pn**	**07 27 15.4**	**+0.2**
LKD2	**Lefkada island**	**0.99**	**318**	P	**Pb**	**07 27 15.7**	**-0.4**
LKD2	**Lefkada island**	**0.99**	**318**	*e*PN	**Pg**	**07 27 16.8**	**0.0**
LKD2	**Lefkada island**	**0.99**	**318**	P	**Pb**	**07 27 15.7**	**-0.4**
LKD2	**Lefkada island**	**0.99**	**318**	*e*Pn	**Pg**	**07 27 16.8**	**0.0**
LTK	**Loutraki**	**1.15**	**91**	*e*PN	**Pg**	**07 27 19.7**	**0.0**
LTK	**Loutraki**	**1.15**	**91**	*e*Pn	**Pg**	**07 27 19.7**	**0.0**
AGG	**Agios Georgios**	**1.16**	**33**	*e*PN	**Pg**	**07 27 20.0**	**0.0**
AGG	**Agios Georgios**	**1.16**	**33**	*e*Pn	**Pg**	**07 27 20.0**	**0.0**
PYL	**PYLOS**	**1.17**	**171**	*e*PN	**Pg**	**07 27 20.0**	**-0.1**
PYL	**PYLOS**	**1.17**	**171**	*e*Pn	**Pg**	**07 27 20.0**	**-0.1**
LKR	**Lokris**	**1.32**	**63**	*e*PB	**Pg**	**07 27 22.3**	**-0.5**
LKR	**Lokris**	**1.32**	**63**	*e*Pb	**Pg**	**07 27 22.3**	**-0.5**
DYR	**Agios Nikonas**	**1.45**	**153**	*e*PN	**Pg**	**07 27 26.1**	**+0.8**
DYR	**Agios Nikonas**	**1.45**	**153**	*e*Pn	**Pg**	**07 27 26.1**	**+0.8**
DID	**Didima**	**1.47**	**111**	*e*PN	**Pg**	**07 27 25.7**	**-0.1**
DID	**Didima**	**1.47**	**111**	*e*Pn	**Pg**	**07 27 25.7**	**-0.1**
NAIG	**Nisos Aigina**	**1.59**	**100**	*e*PN	**Pg**	**07 27 28.1**	**0.0**
NAIG	**Nisos Aigina**	**1.59**	**100**	*e*Pn	**Pg**	**07 27 28.1**	**0.0**
KYTH	**Kithira**	**2.15**	**145**	*e*PN	**Pg**	**07 27 37.1**	**-1.6**

WEL 15 07:28:23.6±0.5, 37°.69S×176°.08E, h188km±5km, ML3.6/12, 2C-3D, Error ellipse: s-maj=6.4km s-min=6.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.99**	**125**	⇓PN	Pn	07 28 52.1	+0.1
URZ				SN	Sn	07 29 13.8	-0.2
MWZ	**Matawai**	**1.31**	**120**	PN	Pn	07 28 54.6	+0.1
MWZ				SN	Sn	07 29 18.6	-0.1
RAHZ	**Arahi**	**1.46**	**147**	PN	Pn	07 28 56.1	+0.3
RAHZ				SN	Sn	07 29 20.7	-0.3
BKZ	**Black Stump Fm**	**1.51**	**168**	⇑PN	Pn	07 28 56.0	-0.3
BKZ				SN	Sn	07 29 20.6	-1.4
NMHZ	**Naumai**	**1.52**	**158**	PN	Pn	07 28 57.2	+0.7
NMHZ				SN	Sn	07 29 22.2	+0.1
FWVZ	**Far West T-bar**	**1.62**	**195**	PN	Pn	07 28 57.8	+0.2
MOVZ	**Moawhango**	**1.73**	**188**	PN	Pn	07 28 58.0	-0.5
PUZ	**Puketiti**	**1.77**	**103**	PN	Pn	07 28 58.2	-0.6
BHHZ	**Black Hill Sta**	**1.79**	**180**	PN	Pn	07 28 58.5	-0.6
BHHZ				SN	Sn	07 29 24.8	-2.2
MCHZ	**McNeill Hill**	**1.82**	**165**	PN	Pn	07 28 59.5	+0.2
KNZ	**Kokohu**	**1.83**	**137**	⇓PN	Pn	07 28 58.9	-0.4
CNGZ	**Carnagh Statio**	**1.86**	**116**	⇑PN	Pn	07 29 00.2	+0.5
PRGZ	**Paritu Road**	**1.88**	**131**	PN	Pn	07 28 59.5	-0.4
MHGZ	**Mahia Peninsul**	**2.05**	**136**	PN	Pn	07 29 01.3	-0.4
CKHZ	**Cape Kidnapper**	**2.12**	**159**	PN	Pn	07 29 01.8	-0.5
CKHZ				SN	Sn	07 29 31.4	-1.4
KAHZ	**Kahuranaki**	**2.19**	**164**	PN	Pn	07 29 02.6	-0.7
PNHZ	**Pukenui**	**2.22**	**178**	PN	Pn	07 29 02.5	-1.1
WAZ	**Wanganui**	**2.23**	**202**	PN	Pn	07 29 03.6	-0.1
TSZ	**Takapari Road**	**2.37**	**182**	PN	Pn	07 29 03.8	-1.4
WPHZ	**Waipukurau**	**2.39**	**173**	PN	Pn	07 29 04.5	-0.9
PXZ	**Pawanui**	**2.42**	**166**	PN	Pn	07 29 04.5	-1.2
PRHZ	**Porangahau**	**2.61**	**171**	PN	Pn	07 29 06.6	-1.4
BFZ	**Birch Farm**	**2.99**	**178**	PN	Pn	07 29 10.8	-1.7
MRZ	**Mangatainoka R**	**2.99**	**187**	PN	Pn	07 29 09.9	-2.6
OGWZ	**Otaki Gorge**	**3.20**	**192**	PN	Pn	07 29 12.4	-2.6
HOWZ	**Holdsworth Sta**	**3.23**	**188**	PN	Pn	07 29 12.3	-3.0
KIW	**Kapiti Island**	**3.29**	**196**	PN	Pn	07 29 13.2	-3.0
CAW	**Cannon Point**	**3.50**	**193**	PN	Pn	07 29 15.6	-3.1
MSWZ	**Moikau Station**	**3.77**	**190**	PN	Pn	07 29 18.3	-3.8
TCW	**Tory Channel**	**3.78**	**201**	PN	Pn	07 29 18.9	-3.3
PLWZ	**Palliser**	**3.93**	**189**	PN	Pn	07 29 20.0	-4.0
TUWZ	**Tuamarina**	**4.08**	**203**	PN	Pn	07 29 22.4	-3.5
NNZ	**Nelson**	**4.09**	**210**	PN	Pn	07 29 22.6	-3.4
QRZ	**Quartz Range**	**4.17**	**220**	PN	Pn	07 29 23.9	-3.2
THZ	**Tophouse**	**4.75**	**210**	PN	Pn	07 29 30.9	-3.6
KHZ	**Kahutara**	**5.11**	**202**	⇓PN	Pn	07 29 34.9	-4.1
LTZ	**Lake Taylor**	**5.86**	**209**	PN	Pn	07 29 44.3	-4.6
MQZ	**McQueen's Vall**	**6.55**	**202**	SN	Sn	07 31 00.9	-11

*NIED **15** 07:30:00, 32°.30N×141°.20E, h47km, Mw3.6 Best double couple: M0 2.89000×10^14 NP1:φs351.00000°, δ82.00000°, λ-49.00000°. NP2:φs90.00000°, δ41.00000°, λ-168.00000°.*
*JMA **15** 07:30:29.7±0.3, 32°.28N×141°.23E, h13km, M3.7*
*ISCJB **15** 07:30:31.5±1.3, 32°.20N±0°.06×141°.2E±0°.1, h68km±14km, mb3.7/2, Error ellipse: s-maj=16.1km s-min=10.7km az=177.5*
*IDC **15** 07:30:32.0±4.7, 32°.01N×140°.96E, h44km±55km, mb3.5/2, mb1 3.7/3, mb1mx3.3/25, mbtmp3.5/3, ML3.4/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/37, Error ellipse: s-maj=121.3km s-min=29.8km az=65.0*

ISC 15 07:30:31.1±3.0, 32°.1N±0°.1×141°.2E±0°.1, h45km±30km, n14, σ1906/23, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**1.53**	**310**	P	**Pn**	**07 30 55.4**	**-0.7**
JHCJ				*e*S	**Sn**	**07 31 14.8**	**0.0**
JHJ2	**Mitsune**	**1.55**	**312**	P	**Pn**	**07 30 55.9**	**-0.3**
JHJ2				*e*S	**Sn**	**07 31 14.8**	**-0.3**
BSO1	**Boso 1**	**2.56**	**356**	P	**Pn**	**07 31 10.5**	**+0.8**
BSO1				*e*S	**Sn**	**07 31 38.5**	**-0.9**
JKO	**Kozu shima**	**2.71**	**321**	P	**Pn**	**07 31 12.8**	**+0.6**
JKO				*e*S	**Sn**	**07 31 43.6**	**-0.2**
BSO3	**Boso 3**	**2.77**	**348**	P	**Pn**	**07 31 12.7**	**0.0**
BSO3				*e*S	**Sn**	**07 31 44.4**	**-0.3**
JOD2	**Odawara 2**	**3.62**	**332**	P	**Pn**	**07 31 24.6**	**-0.1**
JOD2				*e*S	**Sn**	**07 32 04.6**	**-1.6**
JYN	**Shimob**	**4.05**	**328**	P	**Pn**	**07 31 33.6**	**+2.9**
JRY	**Ryogami san**	**4.36**	**335**	P	**Pn**	**07 31 36.5**	**+1.7**
JRY				*e*S	**Sn**	**07 32 24.4**	**+0.1**
JAG	**Ashikaga**	**4.56**	**342**	P	**Pn**	**07 31 37.8**	**+0.2**
JAG				*e*S	**Sn**	**07 32 27.7**	**-1.6**
MJAR	**Matsushiro Arr**	**5.08**	**332**	P	**Pn**	**07 31 46.0**	**+1.3**
	1.4nm,0.3s,baz=156,slow=11,SNR=12						
MJAR				S	**Sn**	**07 32 41.9**	**-0.3**
	0.7nm,0.3s,baz=150,slow=24,SNR=3.2						
MAT	**Matsushiro**	**5.08**	**332**	P	**Pn**	**07 31 45.7**	**+0.9**
MAT				*e*S	**Sn**	**07 32 42.1**	**-0.1**
USRK	**Ussuriysk Arra**	**14.08**	**332**	LR	LR	07 38 31.4	
	comp=Z,34nm,19.2s,baz=74,slow=34						
MKAR	**Makanchi Array**	**46.74**	**306**	P	**P**	**07 38 55.8**	**0.0**
	1.7nm,0.5s,baz=85,slow=9.5,SNR=23						
WRA	**Warramunga Arr**	**52.15**	**188**	P	**P**	**07 39 36.9**	**-0.3**
	0.2nm,0.6s,baz=5.4,slow=7.8,SNR=9.8						

*IDC **15** 07:32:52.2±0.6, 54°.05N×169°.12E, h0km, mb3.7/12, mb1 4.0/14, mb1mx3.9/30, mbtmp3.8/14, ML4.0/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/52, Error ellipse: s-maj=19.2km s-min=10.7km az=18.0*
*KRSC **15** 07:32:53.8±1.1, 53°.97N×169°.11E, h20km±20km, ML4.5*
*ISCJB **15** 07:32:54.3±0.4, 53°.95N±0°.04×169°.11E±0°.04, h25km, mb3.7/12, MS3.3/2, Error ellipse: s-maj=5.9km s-min=3.1km az=9.7*
*MOS **15** 07:32:54.6±1.0, 54°.02N×169°.23E, h30km, mb4.1/6, Error ellipse: s-maj=14.0km s-min=10.1km az=38.3*

ISC 15 07:32:55.9±0.6, 54°.00N±0°.06×169°.23E±0°.05, h25km, n66, σ1933/96, mb3.7/12, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.25**	**304**	PN	**Pn**	**07 33 30.2**	**-1.2**
BKI				S	**Sn**	**07 33 56.4**	**-1.9**
BKI	**Bering**	**2.25**	**304**	*e*P	**Pn**	**07 33 30.2**	**-1.2**
BKI				*i* S	**Sn**	**07 33 56.4**	**-1.9**
FX1	**Attu Island--F**	**2.60**	**114**	Pn	**Pn**	**07 33 35.5**	**-0.8**
	51nm,0.3s,baz=334,slow=7.8,SNR=383						
FX1				Sn	**Sn**	**07 34 06.8**	**-0.3**
	398nm,0.3s,baz=119,slow=17,SNR=9.5						
KBTR	**Krutoberegovo**	**4.30**	**304**	PN	**Pn**	**07 33 58.7**	**-0.9**
KBTR	**Krutoberegovo**	**4.30**	**304**	*e*P	**Pn**	**07 33 58.7**	**-0.9**
KBTR				*i* S	**Sn**	**07 34 46.2**	**-2.6**
MKZ	**Mys Kozlova**	**4.43**	**280**	PN	**Pn**	**07 34 01.1**	**-0.3**
MKZ	**Mys Kozlova**	**4.43**	**280**	*e*P	**Pn**	**07 34 01.1**	**-0.3**
MKZ				*i* S	**Sn**	**07 34 49.9**	**-2.2**
SMKR	**Semkarok**	**5.14**	**303**	*e*P	**Pn**	**07 34 11.8**	**+0.6**
SMKR				*i* S	**Sn**	**07 35 09.2**	**-0.4**
ZLN	**Zelenaya**	**5.25**	**296**	P	**Pn**	**07 34 13.3**	**+0.5**
ZLN				*i* S	**Sn**	**07 35 11.4**	**-1.2**
BDR	**Baidarnaya**	**5.26**	**303**	P	**Pn**	**07 34 14.8**	**+2.0**
BZGR	**Bezymyannyi-Gr**	**5.29**	**295**	P	**Pn**	**07 34 14.8**	**+1.5**
BZGR				*i* S	**Sn**	**07 35 13.6**	**+0.2**
CIRR	**Tsirk**	**5.32**	**297**	P	**Pn**	**07 34 16.0**	**+2.3**
SRKR	**Sorokina**	**5.32**	**303**	P	**Pn**	**07 34 13.7**	**+0.1**
SRKR				*i* S	**Sn**	**07 35 12.3**	**-1.7**
BZMR	**Bezymyannaya**	**5.40**	**295**	*e*P	**Pn**	**07 34 17.0**	**+2.2**
BZWR	**Bezymyannyi-We**	**5.40**	**295**	P	**Pn**	**07 34 15.7**	**+0.8**
BZWR				*i* S	**Sn**	**07 35 16.3**	**0.0**
TUMR	**Tumrok**	**5.43**	**287**	*e*P	**Pn**	**07 34 16.5**	**+1.2**
TUMR				*i* S	**Sn**	**07 35 17.3**	**+0.4**
KLY	**Klyuchi**	**5.44**	**299**	PN	**Pn**	**07 34 13.8**	**-1.4**
KLY	**Klyuchi**	**5.44**	**299**	*e*P	**Pn**	**07 34 13.8**	**-1.4**
KLY				*i* S	**Sn**	**07 35 13.0**	**-3.9**
KRSR	**Krestovskiy**	**5.45**	**298**	P	**Pn**	**07 34 16.8**	**+1.3**
KRSR				*i* S	**Sn**	**07 35 18.4**	**+1.1**
KIRR	**Kirishev**	**5.48**	**295**	*e*P	**Pn**	**07 34 16.4**	**+0.4**
KIRR				*i* S	**Sn**	**07 35 17.9**	**-0.3**
KMNR	**Kamenistaya**	**5.48**	**292**	*e*P	**Pn**	**07 34 16.4**	**+0.4**
KMNR				*i* S	**Sn**	**07 35 18.3**	**+0.1**
KPT	**Kopyto**	**5.55**	**294**	P	**Pn**

*NOU **15** 07:49:07.4±2.3, 18°.15S×168°.76E, h0km±999km, MD3.4, ML2.4, MS3.0*
*ISCJB **15** 07:49:11.0±1.3, 17°.97S±0°.06×167°.9E±0°.2, h69km, mb4.4/5, Error ellipse: s-maj=28.9km s-min=7.8km az=6.5*
*IDC **15** 07:49:12.8±5.3, 18°.05S×167°.99E, h72km±56km, mb3.9/5, mb1 4.1/6, mb1mx3.7/18, mbtmp3.9/6, ML4.1/1, MS3.6/7, Ms1 3.6/7, ms1mx3.2/29, Error ellipse: s-maj=48.5km s-min=30.8km az=139.0*
ISC 15 07:49:12.5±1.6, 18°.01S±0°.09×168°.0E±0°.3, h69km, n14, σ1§27/13, mb4.2/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.31**	**200**	*e*P	**Pn**	**07 50 14.4**	**-1.2**
DZM				*e*S	**Sn**	**07 51 04.0**	**-0.6**
DZM				AMP		07 51 08.7	
	comp=Z,562nm,13.5s						
DZM	**Mont Dzumac**	**4.31**	**200**	P	**Pn**	**07 50 14.6**	**-1.0**
	comp=Z,9.9nm,0.3s,baz=30,slow=18,SNR=55						
DZM				S	**Sn**	**07 51 04.5**	**-0.1**
	comp=Z,11nm,0.3s,baz=145,slow=21,SNR=10.0						
DZM				LR	LR	07 51 06.1	
	comp=Z,256nm,19.0s,baz=30,slow=27						
NOUC	**Port Laguerre**	**4.38**	**201**	*e*P	**Pn**	**07 50 17.5**	**+0.9**
NOUC				*e*S	**Sn**	**07 51 08.5**	**+2.2**
NOUC				AMP		07 51 14.4	
	comp=Z,15nm,1.7s						
PLUM	**Mont Dore**	**4.44**	**197**	*e*S	**Sn**	**07 51 08.1**	**+0.5**
AFI	**Afiamalu**	**19.85**	**81**	LR	LR	07 59 39.3	
	comp=Z,143nm,18.3s,baz=254,slow=32						
CTA	**Charters Tower**	**20.68**	**261**	P	**P**	**07 53 47.5**	**+0.5**
	comp=Z,11nm,0.9s,baz=86,slow=13,SNR=6.0						
CTA				LR	LR	08 00 24.8	
	comp=Z,167nm,19.6s,baz=58,slow=32						
STKA	**Stephens Creek**	**27.56**	**235**	P	**P**	**07 54 54.0**	**+0.9**
	comp=Z,5.0nm,0.7s,baz=74,slow=9.2,SNR=12						
STKA				LR	LR	08 05 46.9	
	comp=Z,138nm,18.7s,baz=29,slow=36						
WRA	**Warramunga Arr**	**31.88**	**261**	P	**P**	**07 55 29.6**	**-1.8**
	comp=Z,1.2nm,0.8s,baz=82,slow=6.5,SNR=6.2						
ASAR	**Alice Springs**	**32.32**	**254**	P	**P**	**07 55 34.2**	**-1.1**
	comp=Z,5.3nm,0.6s,baz=80,slow=8.8,SNR=70						
FITZ	**Fitzroy Crossi**	**40.23**	**263**	LR	LR	08 13 10.8	
	comp=Z,107nm,18.3s,baz=178,slow=36						
PPT	**Papeete**	**40.32**	**96**	LR	LR	08 10 27.7	
	comp=Z,99nm,18.4s,baz=216,slow=32						
JHJ	**Hachijo jima 2**	**57.55**	**332**	P	**P**	**07 58 56.3**	**+1.3**
	comp=Z,252nm,0.8s,baz=246,slow=10.0,SNR=3.7						
ILAR	**Eielson Array**	**89.41**	**18**	P	**P**	**08 02 00.8**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=232,slow=5.6,SNR=5.4						
SNAA	**Sanae**	**90.33**	**183**	LR	LR	08 37 18.2	
	comp=Z,21nm,20.7s,baz=69,slow=32						

*DDA **15** 08:04:50.4, 39°.87N×35°.23E, h7km, MD2.9*
*CSEM **15** 08:04:50.4, 39°.87N×35°.23E, h7km, MD2.9, After DDA*
ISC 15 08:04:51.7±1.3, 39°.87N±0°.03×35°.19E±0°.05, h8km±10km, n10, σ1§02/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOZ	**Yozgat**	**0.25**	**157**	*e*PG	**Pg**	**08 04 56.4**	**-0.4**
YOZ				*e*SG	**Sg**	**08 05 01.2**	**+1.0**
CORM	**Corum**	**0.53**	**306**	*e*PG	**Pg**	**08 05 00.9**	**-1.0**
CDAG	**Cicekdag**	**0.68**	**249**	*i* P	**Pg**	**08 05 03.9**	**-0.9**
CDAG				*i* S	**Sg**	**08 05 14.1**	**+0.5**
CDAG	**Cicekdag**	**0.68**	**249**	*i* P	**Pg**	**08 05 03.9**	**-0.9**
CDAG				*i* S	**Sg**	**08 05 14.1**	**+0.5**
CTKT	**Corum**	**0.81**	**338**	*i* P	**Pg**	**08 05 06.2**	**-1.1**
CTKT				*i* S	**Sb**	**08 05 20.1**	**+0.7**
CTKT	**Corum**	**0.81**	**338**	*i* P	**Pg**	**08 05 06.2**	**-1.1**
CTKT				*i* S	**Sb**	**08 05 20.1**	**+0.7**
AVNT	**Avonos**	**1.12**	**193**	*i* P	**Pg**	**08 05 12.4**	**-0.9**
AVNT				*i* S	**Sn**	**08 05 29.7**	**0.0**
AVNT	**Avonos**	**1.12**	**193**	*i* P	**Pg**	**08 05 12.4**	**-0.9**
AVNT				*i* S	**Sn**	**08 05 29.7**	**0.0**
ELDT	**Eldivan**	**1.48**	**295**	*i* P	**Pn**	**08 05 18.6**	**-0.4**
ELDT				*i* S	**Sg**	**08 05 41.2**	**+1.7**
ELDT	**Eldivan**	**1.48**	**295**	*i* P	**Pn**	**08 05 18.6**	**-0.4**
ELDT				*i* S	**Sg**	**08 05 41.2**	**+1.7**

*ISCJB **15** 08:06:07.9±0.7, 25°.90N±0°.06×140°.14E±0°.08, h150km, mb3.7/11, Error ellipse: s-maj=9.8km s-min=8.2km az=10.6*
*IDC **15** 08:06:10.8±7.8, 26°.11N×140°.72E, h170km±73km, mb3.5/11, mb1 3.7/12, mb1mx3.5/26, mbtmp3.5/12, Error ellipse: s-maj=23.9km s-min=21.0km az=61.0*
*JMA **15** 08:06:16.0±0.3, 26°.13N×140°.37E, h143km, M4.0*
ISC 15 08:06:10.1±1.0, 25°.93N±0°.09×140°.13E±0°.10, h150km, n20, σ1§93/19, mb3.8/11, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.96**	**69**	P	**Pn**	**08 06 47.3**	**+2.5**
JHHJ				S	**Sn**	**08 07 10.6**	**-0.9**
CBIJ	**Chichi jima**	**2.17**	**57**	P	**Pn**	**08 06 49.8**	**+2.5**
CBIJ				S	**Sn**	**08 07 15.7**	**-0.2**
BSO3	**Boso 3**	**8.85**	**2**	P	**Pn**	**08 08 16.3**	**+1.8**
BSO3				*e*S	**Sn**	**08 09 50.6**	**-2.0**
BSO4	**Boso 4**	**9.03**	**1**	P	**Pn**	**08 08 20.1**	**+3.0**
BSO4				*e*S	**Sn**	**08 09 55.4**	**-1.9**
JOD2	**Odawara 2**	**9.35**	**355**	P	Pn	08 08 25.6	+4.2
JOD2				*e*S	**Sn**	**08 10 05.4**	**+0.3**
JRV	**Ryogami san**	**10.11**	**354**	P	Pn	08 08 35.6	+4.0
JAG	**Ashikaga**	**10.48**	**357**	P	**Pn**	**08 08 38.8**	**+2.4**
JAG				*e*S	Sn	08 10 24.4	-7.9
JHO	**Hitachi**	**10.65**	**2**	P	**Pn**	**08 08 38.7**	**0.0**
JHO				*e*S	Sn	08 10 28.1	-8.4
KSRS	**Korea Array**	**15.47**	**321**	P	**P**	**08 09 43.0**	**+1.6**
	0.3nm,0.3s,baz=136,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**45.94**	**188**	P	**P**	**08 14 18.4**	**+0.3**
	0.8nm,0.7s,baz=10,slow=8.6,SNR=5.9						
MKAR	**Makanchi Array**	**49.81**	**310**	P	**P**	**08 14 48.6**	**+0.9**
	0.3nm,0.3s,baz=71,slow=8.2,SNR=6.2						
KURBB	**Kurchatov Array**	**52.55**	**315**	P	**P**	**08 15 08.8**	**+0.8**
	1.6nm,0.5s,baz=92,slow=9.0,SNR=17						
BVAR	**Borovoye Array**	**57.66**	**318**	P	**P**	**08 15 45.0**	**+0.4**
	2.0nm,0.4s,baz=87,slow=6.8,SNR=11						
ILAR	**Eielson Array**	**59.61**	**28**	P	P	08 15 53.1	-4.8
	1.0nm,0.8s,baz=258,slow=4.9,SNR=15						
ARCES	**ARCESS Array B**	**74.03**	**341**	P	**P**	**08 17 26.6**	**-2.4**
	2.4nm,0.8s,baz=67,slow=9.3,SNR=8.7						
YKA	**Yellowknife Ar**	**74.03**	**28**	P	P	08 17 25.9	-3.2
	0.9nm,0.5s,baz=297,slow=5.6,SNR=13						
FINES	**FINESS Array B**	**78.17**	**333**	P	**P**	**08 17 51.1**	**-1.5**
	1.5nm,0.4s,baz=60,slow=4.6,SNR=6.6						
NVAR	**Mina Array Bea**	**82.68**	**51**	P	P	08 18 12.9	-4.4
	0.2nm,0.4s,baz=273,slow=5.3,SNR=3.7						
PDAR	**Pinedale Array**	**86.33**	**44**	P	P	08 18 31.6	-4.1
	0.6nm,0.8s,baz=260,slow=4.1,SNR=4.2						
TXAR	**Lajitas Array**	**97.77**	**52**	P	**P**	**08 19 25.8**	**-2.9**
	0.1nm,0.5s,baz=353,slow=2.1,SNR=3.2						

IDC 15 08:10:50.1±4.1, 6°.47S×149°.01E, h132km±40km, mb3.0/3, mb1 3.2/5, mb1mx3.1/19, mbtmp3.0/5, Error ellipse: s-maj=98.0km s-min=31.5km az=134.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.44**	**212**	P	Pn	08 11 43.1	+0.5
	3.2nm,0.3s,baz=0.0,slow=7.1,SNR=6.8						
PMG				S	Sn	08 12 23.6	+0.3
	4.4nm,0.3s,baz=171,slow=19,SNR=7.1						
WRA	**Warramunga Arr**	**19.55**	**225**	P	P	08 15 07.7	0.0
	0.3nm,0.3s,baz=52,slow=9.9,SNR=11						
ASAR	**Alice Springs**	**22.43**	**219**	P	P	08 15 39.8	+1.6
	0.4nm,0.6s,baz=48,slow=10,SNR=6.0						
FITZ	**Fitzroy Crossi**	**25.56**	**241**	P	P	08 16 05.9	-1.0
	1.7nm,0.6s,baz=72,slow=10,SNR=3.8						
ILAR	**Eielson Array**	**85.14**	**23**	P	P	08 23 10.9	-0.1
	0.1nm,0.5s,baz=244,slow=4.7,SNR=4.2						

IDC 15 08:24:01.9±70.0, 14°.15S×165°.24E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/19, mbtmp3.8/3, Error ellipse: s-maj=1184.0km s-min=104.5km az=63.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**27.91**	**227**	P	P	08 29 54.0	+0.2
	2.8nm,0.9s,baz=58,slow=9.5,SNR=8.5						
WRA	**Warramunga Arr**	**30.07**	**255**	P	P	08 30 13.3	+0.2
	0.1nm,0.5s,baz=86,slow=9.7,SNR=6.2						
ASAR	**Alice Springs**	**31.05**	**248**	P	P	08 30 21.5	-0.4
	0.7nm,0.5s,baz=74,slow=9.3,SNR=19						

*ISCJB **15** 08:26:52.7±0.6, 49°.88S±0°.08×127°.1E±0°.3, h10km, mb4.2/9, MS3.7/7, Error ellipse: s-maj=31.4km s-min=9.9km az=13.4*
*IDC **15** 08:26:53.1±0.8, 49°.93S×127°.33E, h0km, mb4.4/8, mb1 4.5/8, mb1mx4.3/16, mbtmp4.4/8, MS3.7/8, Ms1 3.7/8, ms1mx3.5/20, Error ellipse: s-maj=44.2km s-min=15.5km az=101.0*
*NEIC **15** 08:26:55.1±0.4, 49°.87S×126°.92E, h10km, mb4.2/6, Error ellipse: s-maj=26.0km s-min=8.4km az=103.0*
ISC 15 08:26:54.7±0.7, 49°.9S±0°.1×127°.1E±0°.2, h10km, n27, σ0§83/23, mb4.3/9, MS3.6/7, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**18.47**	**333**	LR	LR	08 36 12.7	
	comp=Z,326nm,19.4s,baz=333,slow=30						
CASY	**Casey**	**18.50**	**201**	*e*P	**P**	**08 31 10.1**	**-0.6**
	11nm,1.0s						
STKA	**Stephens Creek**	**21.01**	**36**	*e*P	**P**	**08 31 39.1**	**+0.7**
	5.5nm,1.0s						
STKA	**Stephens Creek**	**21.01**	**36**	P	**P**	**08 31 36.9**	**-1.5**
	13nm,0.9s,baz=213,slow=11,SNR=11						
STKA				LR	LR	08 38 01.4	
	comp=Z,255nm,21.7s,baz=319,slow=32						
ASAR	**Alice Springs**	**26.73**	**14**	P	**P**	**08 32 34.0**	**-0.2**
ASAR	**Alice Springs**	**26.73**	**14**	P	**P**	**08 32 34.0**	**-0.2**
	10nm,0.9s,baz=186,slow=9.4,SNR=39						
AS31	**Alice Springs**	**26.73**	**14**	*e*P	**P**	**08 32 33.8**	**-0.5**
RPZ	**Rata Peaks**	**30.36**	**95**	LR	LR	08 42 45.0	
	comp=Z,190nm,19.9s,baz=185,slow=32						
WRA	**Warramunga Arr**	**30.45**	**14**	P	**P**	**08 33 06.8**	**-0.6**
WRA	**Warramunga Arr**	**30.45**	**14**	P	**P**	**08 33 06.8**	**-0.6**
	2.3nm,1.0s,baz=199,slow=9.3,SNR=4.6						
VNDA	**Vanda**	**30.67**	**166**	*e*P	**P**	**08 33 08.6**	**-0.2**
	5.0nm,1.0s						
VNDA	**Vanda**	**30.67**	**166**	P	**P**	**08 33 08.7**	**-0.2**
	4.9nm,1.0s,baz=316,slow=8.4,SNR=14						
VNDA				LR	LR	08 44 21.3	
	comp=Z,189nm,18.0s,baz=324,slow=34						
SBA	**Scott Base**	**31.69**	**165**	*e*P	**P**	**08 33 20.0**	**+2.2**
	1.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**31.75**	**357**	LR	LR	08 44 08.4	
	comp=Z,95nm,20.7s,baz=72,slow=33						
MAW	**Mawson**	**35.68**	**216**	P	**P**	**08 33 52.0**	**-0.5**
MAW	**Mawson**	**35.68**	**216**	P	**P**	**08 33 52.0**	**-0.5**
	5.8nm,1.0s,baz=77,slow=11,SNR=5.4						
MAW				LR	LR	08 45 08.9	
	comp=Z,119nm,20.0s,baz=295,slow=31						
QSPA	**South Pole Qui**	**40.22**	**180**	*e*P	**P**	**08 34 31.6**	**+0.4**
	6.6nm,1.0s						
QSPA	**South Pole Qui**	**40.22**	**180**	P	**P**	**08 34 30.1**	**-1.1**
	7.7nm,1.0s,baz=348,slow=5.2,SNR=10						
DZM	**Mont Dzumac**	**41.51**	**63**	LR	LR	08 49 34.2	
	comp=Z,141nm,18.9s,baz=212,slow=33						
SNAA	**Sanae**	**53.68**	**198**	*e*P	**P**	**08 36 16.0**	**-0.1**
	26nm,1.1s						
SNAA	**Sanae**	**53.68**	**198**	P	**P**	**08 36 16.4**	**+0.4**
	8.9nm,1.1s,baz=152,slow=8.9,SNR=42						
CMAR	**Chiang Mai Arr**	**72.48**	**332**	P	**P**	**08 38 22.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**72.48**	**332**	P	**P**	**08 38 22.4**	**+1.1**
	0.8nm,0.4s,baz=188,slow=8.7,SNR=6.4						
CMAR				LR	LR	09 08 47.5	
	comp=Z,29nm,19.9s,baz=160,slow=35						
YKA	**Yellowknife Ar**	**144.88**	**45**	PKP	**PKPdf**	**08 46 30.9**	**+0.4**
YKA	**Yellowknife Ar**	**144.88**	**45**	PKP	**PKPdf**	**08 46 30.9**	**+0.4**
	1.9nm,0.9s,baz=264,slow=3.0,SNR=20						
YKW3	**Yellowknife Ar**	**144.88**	**45**	*e*PKPdf	**PKPdf**	**08 46 30.7**	**+0.1**
RES	**Resolute Bay**	**149.66**	**21**	*e*PKPbc	**PKPbc**	**08 46 42.6**	**-0.3**

MEX 15 08:28:34.6±0.4, 16°.45N×96°.56W, h8km±4km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**0.64**	**345**	*e*P	Pg	08 28 45.9	-1.5
VHO				*i* S	Sg	08 28 55.1	-0.8
HUIG	**Huatulco**	**0.80**	**147**	*e*P	Pg	08 28 48.0	-2.1
HUIG				*i* S	Sg	08 28 58.7	-1.9
PNIG	**Pinotepa**	**1.50**	**268**	*e*P	Pn	08 28 58.5	-3.3
PNIG				*e*S	Sn	08 29 16.6	-5.0
UTMO	**Huajuapan**	**1.82**	**319**	*e*P	Pn	08 29 02.8	-3.6
UTMO				*i* S	Sn	08 29 24.7	-5.1
PCIG		**3.30**	**102**	*i* P	Pn	08 29 24.7	-1.8
PCIG				*i* S	Sn	08 30 01.9	-3.9
TGIG		**3.31**	**84**	*i* P	Pn	08 29 24.9	-1.9
TGIG				*i* S	Sn	08 30 03.1	-3.3

PRE 15 08:41:48.4±2.1, 23°.37S×25°.67E, h10km, ML3.5, 1C, Botswana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**1.64**	**182**	⇑*i*P	Pb	08 42 18.8	-0.1
LBTB				*e*S	Sb	08 42 39.4	-0.3
LBTB				AML	AML	08 42 41.4	
	comp=Z,104nm,0.2s						
KSR	**Koster**	**2.71**	**156**	*e*P	Pn	08 42 31.9	-0.5
KSR				*e*S	Sn	08 43 05.7	+0.2
KSR				AML	AML	08 43 17.4	
	comp=Z,109nm,0.2s						
SLR	**Silverton**	**3.35**	**135**	*e*S	Sn	08 43 21.2	+0.2
SLR				AML	AML	08 43 36.0	
	comp=Z,79nm,0.7s						
ERPM	**east rand prop**	**3.77**	**142**	*e*P	Pn	08 42 47.5	+0.6
ERPM				*e*S	Sn	08 43 29.1	-2.5
ERPM				AML	AML	08 43 47.1	
	comp=Z,28nm,0.6s						
SWZ	**Schweizer**	**3.81**	**185**	*e*P	Pn	08 42 47.8	+0.4
SWZ				*e*S	Sn	08 43 31.7	-0.7
SWZ				AML	AML	08 43 49.9	
	comp=Z,60nm,0.4s						
PRYS	**Parys**	**3.86**	**157**	*e*P	Pn	08 42 48.7	+0.6
PRYS				*e*S	Sn	08 43 31.8	-1.8
PRYS				AML	AML	08 43 51.9	
	comp=Z,59nm,0.5s						
MSNA	**Messina**	**4.14**	**77**	*e*P	Pn	08 42 51.0	-0.8
MSNA				*e*S	Sn	08 43 37.9	-2.5
MSNA				AML	AML	08 44 01.9	
	comp=Z,88nm,0.2s						
BOSA	**Boshof**	**5.24**	**184**	*e*P	Pn	08 43 07.5	+0.6
BOSA				*e*S	Sn	08 44 04.0	-3.5
BOSA				AML	AML	08 44 36.2	
	comp=Z,31nm,0.5s						
SEK	**Senekal**	**5.24**	**161**	*e*P	Pn	08 43 08.5	+1.4
SEK				*e*S	Sn	08 44 04.3	-3.4
SEK				AML	AML	08 44 36.0	
	comp=Z,47nm,0.7s						
KSD	**Kokstad**	**7.89**	**156**	*e*S	Sn	08 45 09.1	-3.8
KSD				AML	AML	08 46 02.6	
	comp=Z,18nm,0.6s						
LSZ	**Lusaka**	**8.39**	**17**	*e*P	Pn	08 43 53.1	+2.7
LSZ				*e*S	Sn	08 45 19.9	-5.5
BUFB	**Buffelsbos**	**10.77**	**184**	*e*S	Sn	08 46 17.1	-6.4
BUFB				AML	AML	08 47 41.0	
	comp=Z,10nm,0.7s						

*NIED **15** 08:46:00, 25°.70N×124°.60E, h135km, Mw3.8 Best double couple: M0 5.89000×10^14 NP1:φs 31.00000°, δ81.00000°, λ-66.00000°. NP2:φs 141.00000°, δ26.00000°, λ-159.00000°.*
*ISCJB **15** 08:46:28.3±0.4, 25°.62N±0°.07×124°.75E±0°.06, h129km±6km, mb3.6/7, Error ellipse: s-maj=13.4km s-min=4.3km az=144.2*
*JMA **15** 08:46:30.2±0.3, 25°.74N×124°.61E, h97km, M3.8*
*IDC **15** 08:46:33.0±4.9, 25°.63N×124°.64E, h157km±48km, mb3.4/7, mb1 3.5/8, mb1mx3.4/26, mbtmp3.4/8, Error ellipse: s-maj=29.4km s-min=15.4km az=74.0*
ISC 15 08:46:29.4±0.8, 25°.63N±0°.08×124°.75E±0°.06, h128km±9km, n25, σ1§24/38, mb3.7/7, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMJ	**Miyako jima 2**	**0.95**	**148**	P	**Pn**	**08 46 52.1**	**+0.5**
JMJ				S	**Sn**	**08 47 08.2**	**-0.2**
JTJ	**Tarama**	**0.98**	**182**	P	**Pn**	**08 46 52.0**	**+0.1**
JTJ				S	**Sn**	**08 47 08.1**	**-0.9**
JOGS	**Gusukube**	**1.05**	**145**	P	**Pn**	**08 46 53.3**	**+0.7**
JOGS				S	**Sn**	**08 47 10.1**	**0.0**
JIJ	**Ishigaki jima**	**1.37**	**204**	P	**Pn**	**08 46 55.4**	**-0.5**
JIJ				S	**Sn**	**08 47 13.7**	**-2.4**
JKRS	**Kuro-shima**	**1.54**	**206**	P	**Pn**	**08 46 57.5**	**-0.2**
JKRS				S	**Sn**	**08 47 17.3**	**-2.0**
IRIF	**Iriomote-Funau**	**1.58**	**216**	P	**Pn**	**08 46 58.0**	**-0.3**
IRIF				S	**Sn**	**08 47 18.9**	**-1.4**
HATJ	**Hateruma jima**	**1.78**	**209**	P	**Pn**	**08 47 00.3**	**-0.3**
HATJ				S	**Sn**	**08 47 23.1**	**-1.3**
YOJ	**Yonaguni jima**	**1.96**	**234**	P	**Pn**	**08 47 02.9**	**+0.2**
YOJ				*e*S	**Sn**	**08 47 28.2**	**+0.1**
JKE	**Kume jima 2**	**1.96**	**69**	P	**Pn**	**08 47 03.5**	**+0.8**
JKE				*e*S	**Sn**	**08 47 29.7**	**+1.4**
JAGN	**Aguni-jima**	**2.44**	**66**	P	**Pn**	**08 47 09.6**	**+0.9**
JAGN				S	**Sn**	**08 47 38.8**	**-0.1**
JJT2	**Tamagusuku 2**	**2.75**	**79**	P	**Pn**	**08 47 13.6**	**+0.9**
JIH	**Iheya**	**3.21**	**63**	P	**Pn**	**08 47 19.1**	**+0.5**
JIH				*e*S	**Sn**	**08 47 55.5**	**-1.2**
JOW	**Kunigami**	**3.39**	**69**	P	**Pn**	**08 47 21.1**	**+0.1**
JOW				*e*S	**Sn**	**08 47 59.4**	**-1.5**
JTK	**Tokunoshima**	**4.33**	**59**	P	**Pn**	**08 47 33.0**	**-0.5**
JTK				*e*S	**Sn**	**08 48 20.4**	**-2.8**
JAMN	**Amaminishikomi**	**4.73**	**56**	P	**Pn**	**08 47 38.1**	**-0.7**
JAM	**Amami Oshima**	**5.14**	**56**	P	**Pn**	**08 47 44.0**	**-0.3**
JAM				S	**Sn**	**08 48 39.3**	**-3.4**
JMZ	**Minamidaito 2**	**5.84**	**87**	P	**Pn**	**08 47 51.7**	**-2.0**
JMZ				S	Sn	08 48 53.1	-6.5
KSRS	**Korea Array**	**12.10**	**12**	P	Pn	08 49 20.7	+3.2
	0.1nm,0.3s,baz=195,slow=14,SNR=7.3						
SONM	**Songino Array**	**26.47**	**332**	P	**P**	**08 51 54.8**	**+0.3**
	1.6nm,0.5s,baz=148,slow=8.5,SNR=2.8						
MKAR	**Makanchi Array**	**39.63**	**313**	P	**P**	**08 53 49.0**	**+0.5**
	2.0nm,0.5s,baz=100,slow=10,SNR=40						
ZALV	**Zalesovo Beam**	**40.87**	**325**	P	**P**	**08 53 57.9**	**-0.6**
	0.9nm,0.4s,baz=99,slow=9.2,SNR=5.0						
WRA	**Warramunga Arr**	**46.25**	**167**	P	**P**	**08 54 42.3**	**+0.3**
	0.8nm,0.6s,baz=350,slow=8.9,SNR=8.1						
ASAR	**Alice Springs**	**49.80**	**169**	P	**P**	**08 55 10.3**	**+1.0**
	0.3nm,0.4s,baz=352,slow=7.7,SNR=7.4						
ILAR	**Eielson Array**	**66.44**	**28**	P	**P**	**08 57 04.5**	**-0.1**
	0.3nm,0.4s,baz=242,slow=4.9,SNR=7.4						
YKA	**Yellowknife Ar**	**80.37**	**24**	P	**P**	**08 58 27.4**	**+1.2**
	0.8nm,0.6s,baz=304,slow=5.2,SNR=12						

*ISCJB **15** 08:51:09.4±0.8, 43°.46N±0°.04×46°.30E±0°.05, h6km±4km, Error ellipse: s-maj=7.1km s-min=5.5km az=171.4*
*TIF **15** 08:51:10.6, 43°.34N×46°.18E, h21km±2km*
*CSEM **15** 08:51:13.2±0.4, 43°.44N×46°.21E, h20km, mb4.1, Error ellipse: s-maj=14.6km s-min=7.9km az=161.0*
*MOS **15** 08:51:14.9±1.8, 43°.34N×45°.94E, h19km, mb4.1/1, Error ellipse: s-maj=16.7km s-min=8.2km az=0.9*
ISC 15 08:51:13.0±1.3, 43°.34N±0°.04×46°.13E±0°.04, h14km±8km, n42, σ1§23/70, 11C-3D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRO	**Groznyy**	**0.28**	**267**	⇑*i*PG	**Pg**	**08 51 18.2**	**-0.6**
GRO				*i* S	**Sb**	**08 51 23.9**	**-0.4**
GRO	**Groznyy**	**0.28**	**267**	*i* Pg	**Pg**	**08 51 18.2**	**-0.6**
GRO				*i* Sg	**Sb**	**08 51 23.9**	**-0.4**
MAK	**Makhachkala**	**1.07**	**110**	*e*PG	Pg	08 51 37.0	+3.3
MAK				*e*		08 51 51.0	
MAK				pmax	pmax		
	comp=Z,171nm,0.4s						
MAK				smax	smax		
	comp=N,607nm,0.5s						
MAK				smax	smax		
	comp=E,367nm,0.4s						
MAK	**Makhachkala**	**1.07**	**110**	*e*Pg	Pg	08 51 37.0	+3.3
	comp=E,171nm,0.4s						
MAK				*e*Sg	**Sn**	**08 51 51.0**	**+2.6**
	comp=E,607nm,0.5s						
TRKR	**Terskaya**	**1.09**	**291**	⇑*i*PG	**Pg**	**08 51 34.6**	**+0.6**
TRKR				*i* S	**Sn**	**08 51 51.3**	**+2.6**
TRKR	**Terskaya**	**1.09**	**291**	*i* Pg	**Pg**	**08 51 34.6**	**+0.6**
TRKR				*i* Sg	**Sn**	**08 51 51.3**	**+2.6**
VLKR	**Vladikavkaz**	**1.10**	**255**	⇑*i*PG	**Pb**	**08 51 33.9**	**+0.1**
VLKR				*e*S	**Sn**	**08 51 49.3**	**+0.2**
VLKR	**Vladikavkaz**	**1.10**	**255**	*i* Pg	**Pb**	**08 51 33.9**	**+0.1**
VLKR				*e*Sg	**Sn**	**08 51 49.3**	**+0.2**
BTKR	**Batakoyurt**	**1.16**	**272**	⇑*i*PG	**Pb**	**08 51 35.3**	**+0.5**
BTKR				*e*S	**Sg**	**08 51 52.1**	**+1.7**
BTKR	**Batakoyurt**	**1.16**	**272**	*i* Pg	**Pb**	**08 51 35.3**	**+0.5**
BTKR				*e*Sg	**Sg**	**08 51 52.1**	**+1.7**
ARNR	**Ardon**	**1.36**	**264**	⇑*i*PG	**Pn**	**08 51 37.7**	**+0.1**
ARNR				*e*S	**Sg**	**08 51 57.2**	**+0.4**
ARNR	**Ardon**	**1.36**	**264**	*i* Pg	**Pn**	**08 51 37.7**	**+0.1**
ARNR				*e*Sg	**Sg**	**08 51 57.2**	**+0.4**
PRTR	**Priterechnaya**

APE	**Apeiranthos**	**16.92**	**255**	*i* P	**Pn**	**08 55 10.3 +1.0**

ISCJB ***15*** *09:00:26.7±0.6,50°.25N±0°.04×18°.94E±0°.03,h0km, Error ellipse: s-maj=6.3km s-min=2.5km az=12.7*
WAR ***15*** *09:00:27.7,50°.21N×19°.08E*
CSEM ***15*** *09:00:27.8±0.4,50°.25N×18°.96E,h2km,ML2.7/4, Error ellipse: s-maj=10.3km s-min=3.9km az=7.0*
PRU ***15*** *09:00:29.0,50°.21N×18°.97E,h0km*
ISC 15 09:00:27.5±0.8,50°.19N±0°.05×19°.00E±0°.02,h0km,n25, σ0§64/44,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.51**	**87**	*e*Pg	**Pg**	**09 00 36.9**	**-0.4**
OJC				*e*Sg	**Sg**	**09 00 43.7**	**-0.2**
OJC	**Ojcow**	**0.51**	**87**	*e*Pg	**Pg**	**09 00 36.9**	**-0.4**
OJC				*e*Sg	**Sg**	**09 00 43.7**	**-0.2**
OKC	**Ostrava-Krasne**	**0.66**	**238**	*e*PG	**Pb**	**09 00 41.5**	**-0.3**
OKC				*e*SG	**Sg**	**09 00 49.1**	**+0.6**
	comp=Z,13nm,0.4s						
OKC	**Ostrava-Krasne**	**0.66**	**238**	Pg	**Pb**	**09 00 41.5**	**-0.3**
OKC				Sg	**Sg**	**09 00 49.1**	**+0.6**
	13nm,0.4s						
MORC	**Moravsky Berou**	**1.03**	**247**	*e*Pg	**Pg**	**09 00 47.5**	**+0.3**
MORC				*e*Sg	**Sb**	**09 01 01.5**	**-0.8**
NIE	**Niedzica**	**1.15**	**132**	*e*Pg	**Pb**	**09 00 50.3**	**+0.1**
NIE				*e*Sg	**Sb**	**09 01 06.3**	**+0.6**
NIE	**Niedzica**	**1.15**	**132**	*e*Pg	**Pb**	**09 00 50.3**	**+0.1**
NIE				*e*Sg	**Sb**	**09 01 06.3**	**+0.6**
KRLC	**Kraliky**	**1.43**	**266**	*e*PG	**Pn**	**09 00 54.3**	**-0.5**
KRLC				*e*SG	**Sb**	**09 01 13.5**	**-0.4**
KRLC	**Kraliky**	**1.43**	**266**	Pg	**Pn**	**09 00 54.3**	**-0.5**
KRLC				Sg	**Sb**	**09 01 13.5**	**-0.4**
VYHS	**Vyhne**	**1.70**	**184**	*e*PN	**Pn**	**09 00 57.9**	**-0.6**
VYHS				*e*SN	**Sn**	**09 01 21.3**	**+0.4**
DPC	**Dobruska-Polom**	**1.73**	**276**	*e*PG	**Pn**	**09 00 58.8**	**0.0**
DPC				*e*SG	**Sg**	**09 01 23.2**	**+0.3**
	comp=Z,18nm,0.6s						
DPC	**Dobruska-Polom**	**1.73**	**276**	Pg	**Pn**	**09 00 58.8**	**0.0**
DPC				Sg	**Sg**	**09 01 23.2**	**+0.3**
	18nm,0.6s						
VRAC	**Vranov**	**1.79**	**241**	*e*Pn	**Pb**	**09 01 00.8**	**-0.4**
VRAC				*e*Sg	**Sn**	**09 01 23.6**	**+0.4**
KSP	**Ksiaz**	**1.85**	**292**	*e*Pg	**Pg**	**09 01 02.9**	**0.0**
KSP				*e*Sg	**Sg**	**09 01 27.9**	**+1.1**
KSP	**Ksiaz**	**1.85**	**292**	*e*Pg	**Pg**	**09 01 02.9**	**0.0**
KSP				*e*Sg	**Sg**	**09 01 27.9**	**+1.1**
CRVS	**Cervenica-Dubn**	**2.06**	**128**	*e*PN	**Pn**	**09 01 04.5**	**+1.2**
CRVS				*e*SN	**Sb**	**09 01 32.2**	**+0.4**
CRVS	**Cervenica-Dubn**	**2.06**	**128**	*e*Pn	**Pn**	**09 01 04.5**	**+1.2**
CRVS				*e*Sn	**Sb**	**09 01 32.2**	**+0.4**
KOLS	**Kolonicke sedl**	**2.48**	**119**	*e*PN	**Pb**	**09 01 12.1**	**-0.7**
KOLS				*e*SN	**Sb**	**09 01 42.9**	**-0.9**
KOLS	**Kolonicke sedl**	**2.48**	**119**	*e*Pn	**Pb**	**09 01 12.1**	**-0.7**
KOLS				*e*Sn	**Sb**	**09 01 42.9**	**-0.9**
PRU	**Pruhonice**	**2.88**	**268**	*e*SG	**Sg**	**09 01 59.4**	**-0.6**
	comp=Z,5.0nm,0.3s						
PRU	**Pruhonice**	**2.88**	**268**	Sg	**Sg**	**09 01 59.4**	**-0.6**
	5.0nm,0.3s						
BRG	**Berggiesshubel**	**3.30**	**284**	SG	**Sg**	**09 02 14.9**	**+1.5**
	3.6nm,0.5s						
KHC	**Kasperske Hory**	**3.68**	**255**	*e*SG	**Sg**	**09 02 25.2**	**-0.5**
	comp=Z,6.7nm,0.6s						
KHC	**Kasperske Hory**	**3.68**	**255**	Sg	**Sg**	**09 02 25.2**	**-0.5**
	6.7nm,0.6s						
CLL	**Collm**	**3.97**	**289**	*e*Sg	**Sg**	**09 02 36.0**	**+1.0**

ATH ***15*** *09:06:05.9,39°.52N×26°.09E,h21km±1km, MD2.8/5*
DDA ***15*** *09:06:05.2,39°.48N×26°.08E,h7km, MD3.0*
ISCJB ***15*** *09:06:05.8±0.4,39°.53N±0°.02×26°.06E±0°.04,h9km±3km, Error ellipse: s-maj=4.6km s-min=2.9km az=1.1*
CSEM ***15*** *09:06:06.0±0.2,39°.51N×26°.05E,h10km, MD3.0, Error ellipse: s-maj=4.3km s-min=3.1km az=90.0*
THE ***15*** *09:06:07.1,39°.47N×26°.05E,h13km±1km,ML2.3/2, Error ellipse: s-maj=1.5km s-min=0.5km az=189.0*
ISK ***15*** *09:06:08.1,39°.63N×26°.21E,h10km, MD3.0*
ISC 15 09:06:05.2±1.1,39°.51N±0°.02×26°.06E±0°.03,h13km±9km, n54,σ0§56/88,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.31**	**148**	P	**Pb**	**09 06 12.9**	**+0.2**
PRK				S	**Sb**	**09 06 17.2**	**-0.5**
PRK	**Paraskevi**	**0.31**	**148**	*e*PB	**Pb**	**09 06 12.9**	**+0.2**
PRK				*e*SB	**Sb**	**09 06 17.8**	**+0.1**
PRK	**Paraskevi**	**0.31**	**148**	P	**Pb**	**09 06 12.9**	**+0.2**
PRK				S	**Sb**	**09 06 17.2**	**-0.5**
PRK				*e*Sb	**Sb**	**09 06 17.8**	**+0.1**
BOZC	**Bozcaada**	**0.33**	**359**	*i* P	**Pb**	**09 06 13.1**	**+0.1**
BOZC				*i* S	**Sb**	**09 06 17.8**	**-0.4**
SIGR	**SIGRI**	**0.34**	**208**	P	**Pb**	**09 06 13.2**	**0.0**
SIGR				S	**Sb**	**09 06 17.9**	**-0.6**
SIGR	**SIGRI**	**0.34**	**208**	P	**Pb**	**09 06 13.2**	**0.0**
SIGR				S	**Sb**	**09 06 17.9**	**-0.6**
EZN	**Ezine**	**0.38**	**33**	*e*PG	**Pb**	**09 06 13.6**	**-0.2**
EZN				*e*SG	**Sg**	**09 06 16.9**	**-0.9**
EZN	**Ezine**	**0.38**	**33**	*e*Pg	**Pb**	**09 06 13.6**	**-0.2**
EZN				*e*Sg	**Sg**	**09 06 16.9**	**-0.9**
AYVA	**Ayvalik**	**0.53**	**112**	*i* P	**Pn**	**09 06 17.8**	**-0.7**
AYVA				*i* S	**Sn**	**09 06 27.8**	**+0.5**
AYVA	**Ayvalik**	**0.53**	**112**	*i* P	**Pn**	**09 06 17.8**	**-0.7**
AYVA				*i* S	**Sn**	**09 06 27.8**	**+0.5**
LIA	**Limnos Island**	**0.78**	**300**	P	**Pn**	**09 06 22.0**	**0.0**
LIA	**Limnos Island**	**0.78**	**300**	*e*PN	**Pn**	**09 06 21.6**	**-0.4**
LIA				*e*SN	**Sn**	**09 06 32.6**	**-0.9**
LIA	**Limnos Island**	**0.78**	**300**	*e*Pn	**Pn**	**09 06 21.6**	**-0.4**
LIA	**Limnos Island**	**0.78**	**300**	P	**Pn**	**09 06 22.0**	**0.0**
LIA				*e*Sn	**Sn**	**09 06 32.6**	**-0.9**
GELI	**Tayfur-Gelibol**	**0.94**	**20**	*e*PG	**Pn**	**09 06 24.1**	**-0.1**
GELI				*e*SG	**Sg**	**09 06 34.9**	**-0.8**
GELI	**Tayfur-Gelibol**	**0.94**	**20**	*e*Pg	**Pn**	**09 06 24.1**	**-0.1**
GELI				*e*Sg	**Sg**	**09 06 34.9**	**-0.8**
LPK	**Lapseki**	**1.01**	**32**	*e*PG	**Pb**	**09 06 24.8**	**+0.1**
LPK				*e*SG	**Sb**	**09 06 38.0**	**0.0**
LPK	**Lapseki**	**1.01**	**32**	*e*Pg	**Pb**	**09 06 24.8**	**+0.1**
LPK				*e*Sg	**Sb**	**09 06 38.0**	**0.0**
SMTH	**Samothraki Isl**	**1.04**	**337**	*e*PN	**Pn**	**09 06 25.8**	**+0.2**
SMTH				*e*SN	**Sn**	**09 06 40.1**	**0.0**
SMTH	**Samothraki Isl**	**1.04**	**337**	*e*Pn	**Pn**	**09 06 25.8**	**+0.2**
SMTH				*e*Sn	**Sn**	**09 06 40.1**	**0.0**
CHOS	**Chios island**	**1.12**	**180**	P	**Pn**	**09 06 26.7**	**-0.1**
CHOS	**Chios island**	**1.12**	**180**	*e*PB	**Pn**	**09 06 26.7**	**-0.1**
CHOS				*e*SN	**Sn**	**09 06 43.2**	**+1.1**
CHOS	**Chios island**	**1.12**	**180**	P	**Pn**	**09 06 26.7**	**-0.1**
CHOS				*e*Sn	**Sn**	**09 06 43.2**	**+1.1**
ERIK	**Erikli-Kesan**	**1.21**	**17**	*e*PG	**Pb**	**09 06 28.2**	**+0.2**
ERIK				*e*SG	**Sb**	**09 06 43.7**	**+0.1**
ERIK	**Erikli-Kesan**	**1.21**	**17**	*e*Pg	**Pb**	**09 06 28.2**	**+0.2**
ERIK				*e*Sg	**Sb**	**09 06 43.7**	**+0.1**
URLA	**Izmir**	**1.22**	**160**	*i* P	**Pb**	**09 06 28.1**	**-0.1**
URLA				*i* S	**Sn**	**09 06 44.4**	**-0.2**
URLA	**Izmir**	**1.22**	**160**	*i* P	**Pb**	**09 06 28.1**	**-0.1**
URLA				*i* S	**Sn**	**09 06 44.4**	**-0.2**
ENEZ	**Enez**	**1.23**	**3**	*e*PN	**Pg**	**09 06 30.2**	**+1.4**
ENEZ	**Enez**	**1.23**	**3**	*e*Pn	**Pg**	**09 06 30.2**	**+1.4**
BALY	**Balya**	**1.23**	**79**	*i* P	**Pg**	**09 06 28.9**	**+0.1**
BALY				*i* S	**Sg**	**09 06 45.7**	**+0.9**
BALY	**Balya**	**1.23**	**79**	*i* P	**Pg**	**09 06 28.9**	**+0.1**
BALY				*i* S	**Sg**	**09 06 45.7**	**+0.9**
KRBG	**Karabiga-Canak**	**1.30**	**47**	*e*PN	**Pb**	**09 06 29.5**	**0.0**
KRBG				*e*SN	**Sn**	**09 06 46.5**	**+0.2**
KRBG	**Karabiga-Canak**	**1.30**	**47**	*e*Pn	**Pb**	**09 06 29.5**	**0.0**
KRBG				*e*Sn	**Sn**	**09 06 46.5**	**+0.2**
BLCB	**Balcova**	**1.36**	**145**	*e*PN	Pg	09 06 35.4	+4.0
ALN	**Alexandroupoli**	**1.38**	**360**	P	**Pg**	**09 06 31.7**	**-0.2**
ALN	**Alexandroupoli**	**1.38**	**360**	*e*PN	**Pg**	**09 06 32.0**	**+0.1**
ALN				*e*SN	**Sg**	**09 06 50.5**	**+0.7**
ALN	**Alexandroupoli**	**1.38**	**360**	P	**Pg**	**09 06 31.7**	**-0.2**
ALN	**Alexandroupoli**	**1.38**	**360**	*e*Pn	**Pg**	**09 06 32.0**	**+0.1**
ALN				*e*Sn	**Sg**	**09 06 50.5**	**+0.7**
BALB	**Balikesir**	**1.41**	**84**	*e*PN	**Pg**	**09 06 32.5**	**+0.1**
BALB	**Balikesir**	**1.41**	**84**	*e*Pn	**Pg**	**09 06 32.5**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.45**	**36**	*e*PN	**Pb**	**09 06 32.7**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.45**	**36**	*e*Pn	**Pb**	**09 06 32.7**	**+0.5**
SART	**Tekirdag**	**1.46**	**36**	*i* P	**Pb**	**09 06 32.5**	**+0.2**
SART				*i* S	**Sg**	**09 06 53.3**	**+1.1**
SART	**Tekirdag**	**1.46**	**36**	*i* P	**Pb**	**09 06 32.5**	**+0.2**
SART				*i* S	**Sg**	**09 06 53.3**	**+1.1**
MFT	**Murefte**	**1.58**	**36**	*e*PN	**Pb**	**09 06 35.0**	**+0.6**
MFT	**Murefte**	**1.58**	**36**	*e*Pn	**Pb**	**09 06 35.0**	**+0.6**
MRMT	**Marmara Adasi**	**1.61**	**47**	*e*PN	**Pb**	**09 06 35.0**	**+0.2**
MRMT	**Marmara Adasi**	**1.61**	**47**	*e*Pn	**Pb**	**09 06 35.0**	**+0.2**
BNT	**Bandirma**	**1.66**	**59**	*e*PN	**Pb**	**09 06 35.2**	**-0.5**
BNT	**Bandirma**	**1.66**	**59**	*e*Pn	**Pb**	**09 06 35.2**	**-0.5**
DURS	**Dursunbey**	**1.87**	**86**	*i* P	**Pb**	**09 06 38.2**	**-1.1**
DURS				*i* S	**Sn**	**09 07 00.4**	**-0.2**
DURS	**Dursunbey**	**1.87**	**86**	*i* P	**Pb**	**09 06 38.2**	**-1.1**
DURS				*i* S	**Sn**	**09 07 00.4**	**-0.2**
EDRB	**Edirne**	**2.39**	**12**	*e*PN	**Pb**	**09 06 47.1**	**-1.1**
EDRB	**Edirne**	**2.39**	**12**	*e*Pn	**Pb**	**09 06 47.1**	**-1.1**

ISCJB ***15*** *09:09:02.8±0.7,37°.34N±0°.03×27°.99E±0°.05,h0km, Error ellipse: s-maj=6.0km s-min=4.5km az=151.2*
DDA ***15*** *09:09:03.1,37°.38N×27°.95E,h7km,MD2.8*
ISC 15 09:09:03.2±1.3,37°.35N±0°.04×28°.00E±0°.04,h0km,n5, σ1§11/10,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.31**	**134**	*e*PG	**Pg**	**09 09 07.8**	**-1.3**
YER				*e*SG	**Sg**	**09 09 14.7**	**+1.5**
AYDN	**Tasoluk**	**0.32**	**342**	*i* P	**Pg**	**09 09 08.8**	**-0.6**
AYDN				*i* S	**Sg**	**09 09 14.7**	**+1.0**
BODT	**Bodrum**	**0.62**	**243**	*e*PG	**Pg**	**09 09 14.3**	**-0.8**
BODT				*e*SG	**Sg**	**09 09 23.9**	**+0.7**
TURN	**Turunc**	**0.68**	**135**	*i* P	**Pg**	**09 09 15.8**	**-0.4**
TURN				*i* S	**Sg**	**09 09 25.5**	**+0.6**
MANT	**Manisa**	**1.22**	**21**	*i* P	**Pg**	**09 09 25.4**	**-1.2**
MANT				*i* S	**Sb**	**09 09 44.2**	**+0.5**

IDC 15 09:16:37.3±0.9,12°.77N×145°.61E,h0km,mb3.5/6, mb1 3.8/6,mb1mx3.6/25,mbtmp3.5/6,Error ellipse: s-maj=27.2km s-min=18.3km az=73.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.09**	**319**	Pn	Pn	09 17 00.3	+0.4
	41nm,0.3s,baz=130,slow=8.9,SNR=10.0						
GUMO				Sn	Sn	09 17 15.3	-0.3
	94nm,0.3s,baz=163,slow=19,SNR=12						
WRA	**Warramunga Arr**	**34.35**	**199**	P	P	09 23 25.8	-0.3
	1.0nm,0.9s,baz=23,slow=9.7,SNR=3.0						
ASAR	**Alice Springs**	**37.98**	**198**	P	P	09 23 57.3	+0.1
	1.5nm,1.2s,baz=23,slow=7.2,SNR=5.1						
MKAR	**Makanchi Array**	**62.58**	**316**	P	P	09 27 03.3	0.0
	0.1nm,0.3s,baz=99,slow=9.2,SNR=2.3						
ILAR	**Eielson Array**	**69.00**	**25**	P	P	09 27 45.1	+0.7
	0.3nm,0.7s,baz=269,slow=5.1,SNR=3.7						
YKA	**Yellowknife Ar**	**83.25**	**27**	P	P	09 29 05.0	-0.5
	0.1nm,0.3s,baz=283,slow=5.3,SNR=4.5						
NVAR	**Mina Array Bea**	**86.87**	**51**	P	P	09 29 24.1	-0.5
	0.2nm,0.6s,baz=251,slow=2.8,SNR=2.5						

ISCJB ***15*** *09:30:27.4±0.6,50°.18N±0°.04×19°.00E±0°.03,h0km, Error ellipse: s-maj=6.5km s-min=2.7km az=7.5*
CSEM ***15*** *09:30:28.2±0.3,50°.19N×19°.01E,h2km,ML2.9/5, Error ellipse: s-maj=7.4km s-min=2.7km az=4.0*
IPEC ***15*** *09:30:28.7±0.2,50°.20N×19°.04E,h0km±1km,ML2.3/3, Error ellipse: s-maj=2.7km s-min=1.1km az=167.0*
WAR ***15*** *09:30:29.1,50°.11N×19°.11E*
PRU ***15*** *09:30:29.1,50°.19N×19°.01E,h0km*
ISC 15 09:30:28.9±0.8,50°.12N±0°.04×19°.06E±0°.02,h0km,n23, σ0§96/42,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.49**	**78**	*e*Pg	**Pg**	**09 30 38.3**	**0.0**
OJC				*e*Sg	**Sg**	**09 30 44.6**	**0.0**
OJC	**Ojcow**	**0.49**	**78**	*e*Pg	**Pg**	**09 30 38.3**	**0.0**
OJC				*e*Sg	**Sg**	**09 30 44.6**	**0.0**
OKC	**Ostrava-Krasne**	**0.65**	**245**	*e*PG	**Pg**	**09 30 42.2**	**+0.8**
OKC				*e*SG	**Sg**	**09 30 50.1**	**+0.3**
	comp=Z,16nm,0.3s						
OKC	**Ostrava-Krasne**	**0.65**	**245**	Pg	**Pg**	**09 30 42.2**	**+0.8**
OKC				Sg	**Sg**	**09 30 50.1**	**+0.3**
	16nm,0.3s						
MORC	**Moravsky Berou**	**1.04**	**251**	*e*Pg	**Pg**	**09 30 48.7**	**0.0**
	baz=66						
MORC				*e*Sg	**Sg**	**09 31 01.9**	**-0.3**
	49nm,0.4s,baz=66						
NIE	**Niedzica**	**1.07**	**130**	*e*Pg	**Pg**	**09 30 49.9**	**+0.4**
NIE				*e*Sg	**Sg**	**09 31 04.1**	**+0.7**
NIE	**Niedzica**	**1.07**	**130**	*e*Pg	**Pg**	**09 30 49.9**	**+0.4**
NIE				*e*Sg	**Sg**	**09 31 04.1**	**+0.7**
KRLC	**Kraliky**	**1.47**	**269**	*e*PG	**Pn**	**09 30 55.6**	**-1.1**
KRLC				*e*SG	**Sg**	**09 31 14.6**	**-1.4**
KRLC	**Kraliky**	**1.47**	**269**	Pg	**Pn**	**09 30 55.6**	**-1.1**
KRLC				Sg	**Sg**	**09 31 14.6**	**-1.4**
VYHS	**Vyhne**	**1.63**	**185**	*e*PN	**Pn**	**09 30 58.1**	**-0.8**
VYHS				*e*SN	**Sn**	**09 31 19.4**	**-1.2**
VYHS	**Vyhne**	**1.63**	**185**	*e*Pn	**Pn**	**09 30 58.1**	**-0.8**
VYHS				*e*Sn	**Sn**	**09 31 19.4**	**-1.2**
DPC	**Dobruska-Polom**	**1.77**	**279**	*e*PG	**Pn**	**09 31 00.4**	**-0.5**
DPC				*e*SG	**Sn**	**09 31 23.7**	**-0.4**
	comp=Z,14nm,0.4s						
DPC	**Dobruska-Polom**	**1.77**	**279**	Pg	**Pn**	**09 31 00.4**	**-0.5**
DPC				Sg	**Sn**	**09 31 23.7**	**-0.4**
	14nm,0.4s						
VRAC	**Vranov**	**1.79**	**244**	*e*Pn	**Pn**	**09 31 01.0**	**-0.1**
VRAC				*e*Sg	**Sb**	**09 31 25.8**	**+0.2**
	28nm,0.6s,baz=60						
KSP	**Ksiaz**	**1.91**	**293**	*e*Pg	**Pg**	**09 31 05.4**	**-0.1**
KSP				*e*Sg	**Sn**	**09 31 27.8**	**+0.4**
CRVS	**Cervenica-Dubn**	**1.98**	**127**	*e*PN	**Pn**	**09 31 04.4**	**+0.7**
CRVS				*e*SN	**Sb**	**09 31 30.7**	**-0.4**
CRVS	**Cervenica-Dubn**	**1.98**	**127**	*e*Pn	**Pn**	**09 31 04.4**	**+0.7**
CRVS				*e*Sn	**Sb**	**09 31 30.7**	**-0.4**
KRUC	**Moravsky**	**2.03**	**240**	*e*Sn	**Sb**	**09 31 32.1**	**-0.3**
	16nm,0.4s,baz=55						
KOLS	**Kolonicke sedl**	**2.41**	**118**	*e*PN	**Pb**	**09 31 12.7**	**-0.4**
KOLS				*e*SN	**Sn**	**09 31 39.7**	**-0.1**
KOLS	**Kolonicke sedl**	**2.41**	**118**	*e*Pn	**Pb**	**09 31 12.7**	**-0.4**
KOLS				*e*Sn	**Sn**	**09 31 39.7**	**-0.1**
PRU	**Pruhonice**	**2.91**	**269**	*e*SG	**Sb**	**09 31 59.9**	**+2.1**
	comp=Z,4.9nm,0.3s						
PRU	**Pruhonice**	**2.91**	**269**	Sg	**Sb**	**09 31 59.9**	**+2.1**
	4.9nm,0.3s						
KHC	**Kasperske Hory**	**3.70**	**257**	*e*SG	**Sb**	**09 32 23.8**	**+3.4**
	comp=Z,6.0nm,0.5s						

ISCJB ***15*** *09:37:14.3±2.5,30°.26S±0°.09×179°.6W±0°.4,h350km, mb2.9/2,Error ellipse: s-maj=42.4km s-min=11.8km az=178.8*
IDC ***15*** *09:37:15.8±9.2,30°.39S×179°.43W,h366km±94km,mb2.9/2, mb1 3.2/3,mb1mx3.0/18,mbtmp3.0/3,Error ellipse: s-maj=95.6km s-min=48.2km az=15.0*
ISC 15 09:37:15.6±2.3,30°.4S±0°.1×179°.7W±0°.3,h350km,n8, σ1§60/11,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**7.88**	**192**	PN	**Pn**	**09 39 10.4**	**+2.2**
PUZ				SN	**S**	**09 40 38.0**	**-2.1**
URZ	**Urewera**	**8.32**	**198**	*e*PN	**Pn**	**09 39 13.4**	**0.0**
URZ				SN	**S**	**09 40 48.8**	**-0.7**
URZ	**Urewera**	**8.32**	**198**	P	**Pn**	**09 39 15.0**	**+1.6**
	1.4nm,0.3s,baz=159,slow=14,SNR=33						
URZ				S	**S**	**09 40 49.9**	**+0.4**
	2.6nm,0.3s,baz=145,slow=20,SNR=13						
TCW	**Tory Channel**	**11.89**	**203**	SN	**S**	**09 42 06.3**	**-1.7**
NNZ	**Nelson**	**12.21**	**206**	SN	**S**	**09 42 14.2**	**-0.7**
ASAR	**Alice Springs**	**41.65**	**268**	P	**P**	**09 44 31.8**	**+0.6**
	0.3nm,0.5s,baz=104,slow=7.4,SNR=7.3						
WRA	**Warramunga Arr**	**42.64**	**273**	P	**P**	**09 44 39.5**	**+0.4**
	0.9nm,0.6s,baz=111,slow=7.7,SNR=13						
FINES	**FINESS Array B**	**144.59**	**339**	PKP	**PKPab**	**09 56 07.8**	**-2.0**
	0.9nm,0.3s,baz=38,slow=4.9,SNR=12						

IDC 15 09:38:37.0±4.9,30°.45S×176°.98W,h0km,mb3.7/3, mb1 4.0/3,mb1mx3.7/18,mbtmp3.7/3,Error ellipse: s-maj=257.9km s-min=34.6km az=160.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.98**	**267**	P	P	09 46 46.1	-0.2
	0.6nm,0.7s,baz=102,slow=7.1,SNR=8.1						
WRA	**Warramunga Arr**	**44.98**	**272**	P	P	09 46 54.0	-0.3
	0.7nm,0.5s,baz=111,slow=8.0,SNR=10.0						
NVAR	**Mina Array Bea**	**87.68**	**42**	P	P	09 51 27.3	-0.4
	0.2nm,0.6s,baz=221,slow=4.8,SNR=4.6						
FINES	**FINESS Array B**	**145.49**	**341**	PKPbc	PKPdf	09 58 16.3	0.0
	1.1nm,0.6s,baz=49,slow=3.8,SNR=4.0						

ISCJB ***15*** *09:58:51.9±0.5,24°.65N±0°.09×95°.03E±0°.06,h112km, mb4.1/16,Error ellipse: s-maj=13.9km s-min=6.4km az=23.7*
IDC ***15*** *09:58:54.9±0.8,24°.58N×95°.05E,h127km±7km,mb3.7/13, mb1 3.8/14,mb1mx3.6/29,mbtmp3.6/14,MS3.0/1, Ms1 3.0/1,ms1mx2.1/38,Error ellipse: s-maj=37.0km s-min=11.2km az=52.0*
ISC 15 09:58:54.0±0.6,24°.7N±0°.1×94°.88E±0°.09,h112km,n32, σ1§99/41,mb4.1/16,1C,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**2.87**	**289**	*e*PN	**Pn**	**09 59 41.2**	**+2.7**
SHL				*e*SN	**Sn**	**10 00 14.5**	**+1.7**
TAPN	**Taplejung**	**6.99**	**294**	*e*Pn	**Pn**	**10 00 35.6**	**+1.5**
TAPN				*e*Sn	**Sn**	**10 01 47.6**	**-4.7**
	397nm,0.9s						
ODAN	**Odare**	**7.11**	**290**	*e*Pn	**Pn**	**10 00 36.5**	**+0.9**
ODAN				*e*Sn	**Sn**	**10 01 49.9**	**-5.1**
	336nm,0.5s						
CMAR	**Chiang Mai Arr**	**7.23**	**148**	P	**Pn**	**10 00 35.9**	**-1.2**
	0.5nm,0.3s,baz=325,slow=13,SNR=13						
RAMN	**Ramite**	**7.81**	**289**	*e*Pn	**Pn**	**10 00 46.0**	**+0.9**
RAMN				*e*Sn	Sn	10 02 06.5	-5.6
	137nm,0.5s						
GUN	**Gumba**	**8.71**	**294**	*e*Pn	**Pn**	**10 00 58.2**	**+0.8**
GUN				*e*Sn	Sn	10 02 27.0	-7.1
	106nm,0.4s						
PKI	**Pulchoki**	**9.00**	**291**	*e*Pn	**Pn**	**10 01 01.3**	**-0.1**
PKIN	**Phulchoki**	**9.01**	**291**	*e*Pn	**Pn**	**10 01 01.9**	**+0.4**
PKIN				*e*Sn	**Sn**	**10 02 36.3**	**-5.0**
	124nm,0.5s						
KKN	**Kakani**	**9.17**	**292**	*e*Pn	**Pn**	**10 01 04.0**	**+0.4**
KKN				*e*Sn	**Sn**	**10 02 41.5**	**-3.6**
	26nm,0.3s						
DMN	**Daman**	**9.27**	**291**	*e*Pn	**Pn**	**10 01 04.6**	**-0.3**
KOLN	**Koldanda**	**10.60**	**289**	*e*Pn	**Pn**	**10 01 22.4**	**-0.5**
KOLN				*e*Sn	Sn	10 03 12.1	-7.6
	54nm,0.4s						
DANN	**Dangsing**	**10.62**	**293**	*e*Pn	**Pn**	**10 01 23.1**	**-0.2**
DANN				*e*Sn	Sn	10 03 13.6	-6.8
	36nm,0.4s						
PYUN	**Piuthan**	**11.20**	**290**	*e*Pn	**Pn**	**10 01 29.7**	**-1.4**
PYUN				*e*Sn	Sn	10 03 26.8	-7.6
	62nm,0.5s						
JBP	**Jabalpur**	**13.71**	**267**	*e*PKP	**Pn**	**10 02 06.5**	**+2.7**
JBP				*i* x	x	10 02 07.8	
	comp=Z,11nm,0.4s						
JBP				*e*S	**Sn**	**10 04 34.8**	**-0.1**
MKAR	**Makanchi Array**	**24.29**	**339**	P	**P**	**10 04 02.1**	**+1.3**
	comp=Z,3.2nm,0.6s,baz=146,slow=9.7,SNR=48						
KURBB	**Kurchatov Arra**	**28.85**	**338**	P	**P**	**10 04 42.5**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=146,slow=10.0,SNR=4.3						
ZALV	**Zalesovo Beam**	**30.22**	**348**	LR	LR	10 18 43.7	
	comp=Z,27nm,18.4s,baz=250,slow=39						
RDF	**Al-Radifah**	**42.25**	**287**	*e*P	**P**	**10 06 38.2**	**+1.7**
RDF				AMb	AMB	10 06 38.9	
	comp=Z,22nm,0.5s						
MIB	**Mutribah**	**42.36**	**288**	*e*P	**P**	**10 06 38.8**	**+1.6**
MIB				AMb	AMB	10 06 41.1	
	comp=Z,9.6nm,1.4s						
NAY	**Al

GONE	Gonen-Balikesi	2.02	20	ePN	Pb	10 04 57.3	-1.0
GONE	Gonen-Balikesi	2.02	20	ePn	Pb	10 04 57.3	-1.0
GELI	Tayfur-Gelibol	2.26	354	ePN	Pn	10 05 00.4	+1.5
GELI	Tayfur-Gelibol	2.26	354	ePn	Pn	10 05 00.4	+1.5
KRBG	Karabiga-Canak	2.28	10	ePN	Pn	10 05 00.7	+1.6
KRBG	Karabiga-Canak	2.28	10	ePn	Pn	10 05 00.7	+1.6
KCTX	Karacabey (Bur	2.44	29	ePN	Pn	10 05 03.1	+1.7
KCTX	Karacabey (Bur	2.44	29	ePn	Pn	10 05 03.1	+1.7
TVSB	Tavsanli	2.46	57	ePN	Pn	10 05 02.9	+1.2
TVSB	Tavsanli	2.46	57	ePn	Pn	10 05 02.9	+1.2
SMTH	Samothraki Isl	2.52	338	ePN	Pn	10 05 01.6	-0.8
SMTH				eSN	Sn	10 05 31.8	-1.2
SMTH	Samothraki Isl	2.52	338	ePn	Pn	10 05 01.6	-0.8
SMTH				eSn	Sn	10 05 31.8	-1.2
MRMT	Marmara Adasi	2.53	14	ePN	Pn	10 05 04.5	+1.8
MRMT	Marmara Adasi	2.53	14	ePn	Pn	10 05 04.5	+1.8
RKY	Sarkoy-Tekirda	2.56	7	ePN	Pn	10 05 04.6	+1.7
RKY	Sarkoy-Tekirda	2.56	7	ePn	Pn	10 05 04.6	+1.7
MFT	Murefte	2.66	8	ePN	Pn	10 05 06.5	+2.0
MFT	Murefte	2.66	8	ePn	Pn	10 05 06.5	+2.0
ARMT	Armutlu	2.90	33	ePN	Pn	10 05 09.8	+2.1
ARMT	Armutlu	2.90	33	ePn	Pn	10 05 09.8	+2.1

CASC ***15*** *10:12:47.7±1.5, 14°.34N×94°.72W, h91km±81km, MD4.5*
ISCJB ***15*** *10:12:56.7±1.3, 14°.46N±0°.04×93°.87W±0°.03, h16km±9km, mb4.2/47, MS3.4/6, Error ellipse: s-maj=7.4km s-min=4.2km az=30.4*
NEIC ***15*** *10:12:58.4, 14°.44N×93°.93W, h8km, mb4.3/36, MD4.2(MEX), After MEX.*
MEX ***15*** *10:12:58.4±0.4, 14°.44N×93°.93W, h8km±5km, MD4.2*
IDC ***15*** *10:13:02.4±3.2, 14°.63N×93°.50W, h44km±28km, mb4.0/16, mb1 4.3/18, mb1mx4.2/27, mbtmp4.0/18, ML4.4/2, MS3.5/6, Ms1 3.5/6, ms1mx3.0/36, Error ellipse: s-maj=25.3km s-min=12.9km az=52.0*

ISC 15 10:12:59.6±1.9, 14°.50N±0°.05×93°.89W±0°.03, h28km±13km, n437, σ1%67/433, mb4.3/47, MS3.3/6, 152C-165D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.36	28	*i* P	Pn	10 13 20.9	-1.9
PCIG				*i* S	Sn	10 13 38.6	-1.3
PCIG		1.36	28	*i* P	Pn	10 13 20.9	-1.9
PCIG				*i* S	Sn	10 13 38.6	-1.3
THIG		1.62	75	*e*P	Pn	10 13 24.6	-1.8
THIG				*i* S	Sn	10 13 44.9	-1.4
THIG		1.62	75	*e*P	Pn	10 13 24.6	-1.8
THIG				*i* S	Sn	10 13 44.9	-1.4
JAT	Jato	2.19	94	*e*P	Pn	10 13 34.2	0.0
JAT				*e*S	Sb	10 14 08.8	+3.5
TGIG		2.38	18	*e*P	Pn	10 13 36.0	-1.0
TGIG				*e*S	Sn	10 14 05.2	-0.1
TGIG		2.38	18	*e*P	Pn	10 13 36.0	-1.0
TGIG				*e*S	Sn	10 14 05.2	-0.1
CCIG	Comitan	2.45	43	*e*P	Pn	10 13 37.7	-0.2
CCIG				*e*S	Sn	10 14 06.9	-0.1
CCIG	Comitan	2.45	43	*e*P	Pn	10 13 37.7	-0.2
CCIG				*e*S	Sn	10 14 06.9	-0.1
HUIG	Huatulco	2.49	301	*e*P	Pn	10 13 36.3	-2.0
HUIG				*i* S	Sn	10 14 05.7	-2.1
HUIG	Huatulco	2.49	301	*e*P	Pn	10 13 36.3	-2.0
HUIG				*i* S	Sn	10 14 05.7	-2.1
FUG	Fuego 3	2.95	91	*e*P	Pn	10 13 43.7	-1.2
PCG	Pacaya	3.18	91	*e*P	Pn	10 13 48.3	+0.3
PCG				*e*S	Sb	10 14 34.9	+0.8
NBG	Las Nubes	3.43	88	*e*P	Pn	10 13 52.2	+0.6
NBG				*e*S	Sb	10 14 40.5	-0.8
VHO	Vista Hermosa	3.75	313	*e*P	Pn	10 13 55.1	-0.6
VHO				*e*S	Sn	10 14 38.0	-1.1
VHO	Vista Hermosa	3.75	313	*e*P	Pn	10 13 55.1	-0.6
VHO				*e*S	Sn	10 14 38.0	-1.1
RBDL	Robledal	4.09	95	*e*P	Pn	10 13 59.7	-0.8
MRL	Marmol	4.10	82	*e*P	Pn	10 14 00.9	+0.3
MRL				*e*S	Sb	10 14 56.8	-3.7
RTR	El Retiro	4.16	98	*e*P	Pn	10 14 01.2	-0.2
SBLS	San Blas	4.19	98	*e*P	Pn	10 14 00.8	-1.1
PNIG	Pinotepa	4.50	295	*e*P	Pn	10 14 05.3	-0.7
PNIG				*i* S	Sn	10 14 55.8	-1.7
PNIG	Pinotepa	4.50	295	*e*P	Pn	10 14 05.3	-0.7
PNIG				*i* S	Sn	10 14 55.8	-1.7
BQQS	Boqueron	4.54	99	*e*P	Pn	10 14 05.5	-1.2
LFRS	El Faro	4.76	100	*e*P	Pn	10 14 08.8	-0.9
SNVI	San Vicente	4.98	100	*e*P	Pn	10 14 11.8	-0.9
UTMO	Huajuapan	5.01	312	*e*P	Pn	10 14 12.2	-1.0
UTMO				*e*S	Sn	10 15 08.9	-1.4
UTMO	Huajuapan	5.01	312	*e*P	Pn	10 14 12.2	-1.0
UTMO				*e*S	Sn	10 15 08.9	-1.4
CNCH	Conchagua	6.00	101	*e*P	Pn	10 14 24.1	-2.7
TGUH	Tegucigalpa,Un	6.43	93	*e*Pn	Pn	10 14 28.9	-3.6
TEIG	Tepich	7.82	42	P	Pn	10 14 49.0	-2.5
TEIG				S	Sn	10 16 12.9	-6.3
TEIG	Tepich 20nm,0.3s,baz=238,slow=6.3,SNR=38	7.82	42	P S	Pn Sn	10 14 49.0 10 16 12.9	-2.5 -6.3
	2.2nm,0.3s,baz=114,slow=20,SNR=3.8						
JTS	JuntasAbangare	9.68	115	*e*Pn	Pn	10 15 17.1	-0.1
732A	Laxson Ranch, baz=15,SNR=5.5	15.24	339	⇓P	Pn	10 16 33.3	+0.3
632A	Uvalde baz=16	15.90	341	⇓P	Pn	10 16 42.5	+1.0
631A	Perdido Creek baz=16,SNR=9.4	16.08	338	⇑P	Pn	10 16 43.5	-0.3
532A	Rocksprings baz=17,SNR=9.3	16.51	341	⇑P	Pn	10 16 49.1	-0.2
531A	Rocksprings baz=17,SNR=28	16.75	340	⇓P	Pn	10 16 52.8	+0.4
JCT	Junction City 17nm,0.8s	16.81	342	*e*P	P	10 16 55.4	+0.3
JCT	Junction City baz=17,SNR=11	16.81	342	⇓P	Pn	10 16 53.0	-0.1
530A	J-C Ranch, Com baz=17,SNR=12	17.02	337	⇑P	Pn	10 16 56.3	+0.5
628A	Black Gap, Mar baz=17,SNR=33	17.08	332	⇑P	P	10 16 57.8	-0.2
432A	Menard baz=17,SNR=17	17.18	343	⇓P	P	10 16 59.4	+0.3
431A	Sonora baz=17,SNR=18	17.25	340	⇑P	Pn	10 16 59.6	+0.9
627A	Terlingua Ranc baz=17,SNR=42	17.28	331	⇑P	P	10 17 01.4	+1.1
TXAR	Lajitas Array	17.31	330	P	P	10 17 01.4	+0.7
TXAR	Lajitas Array 0.1nm,0.3s,baz=153,slow=9.9,SNR=27	17.31	330	P	P	10 17 01.4	+0.7
529A	Stev Forest Ra baz=17,SNR=5.6	17.34	335	⇓P	P	10 17 00.9	-0.1
430A	Baggett Ranch, baz=18	17.56	339	⇑P	P	10 17 04.0	+0.6
528A	Cox Ranch, San baz=18,SNR=8.6	17.61	334	⇓P	P	10 17 05.0	+0.9
332A	Millersview baz=18	17.64	343	⇑P	P	10 17 04.4	+0.2
429A	Davenport Ranc baz=18,SNR=25	17.66	337	⇑P	P	10 17 05.8	+1.3
WHTX	Lake Whitney baz=18	17.72	350	⇑P	Pn	10 17 04.6	+0.3
626A	Big Bend Ranch baz=18,SNR=26	17.72	329	⇑P	P	10 17 08.4	+3.2
331A	San Angelo baz=18,SNR=10.0	17.77	341	⇑P	P	10 17 05.8	+0.1
527A	Woodward Ranch baz=18,SNR=30	17.97	332	⇓P	P	10 17 09.5	+1.5
428A	Kincaid Ranch, baz=18,SNR=18	18.06	335	⇓P	P	10 17 10.6	+1.6
232A	Coleman baz=18	18.09	344	⇑P	P	10 17 09.8	+0.6
330A	Mertzon baz=18,SNR=20	18.11	340	⇑P	P	10 17 09.8	+0.4
526A	Mary Lane Ranc baz=18,SNR=21	18.12	330	⇑P	P	10 17 12.3	+2.7
231A	Bronte baz=18,SNR=9.0	18.32	342	⇑P	Pn	10 17 12.6	+0.8
329A	Wagon Wheel Ra baz=19,SNR=11	18.46	338	⇓P	Pn	10 17 14.6	+1.0
427A	Hayter Ranch, baz=19	18.47	333	⇑P	Pn	10 17 15.5	+1.8
230A	Sterling City baz=19,SNR=19	18.53	340	⇓P	Pn	10 17 14.9	+0.6
426A	McDonald Obser baz=19,SNR=26	18.60	332	⇓P	Pn	10 17 17.1	+1.7
328A	Wristen Ranch, baz=19,SNR=18	18.69	336	⇓P	Pn	10 17 17.9	+1.6
ABTX	Abilene, Hawle baz=19,SNR=5.7	18.79	345	⇑P	Pn	10 17 17.8	+0.3
229A	Bryant Ranch, baz=19,SNR=9.4	18.84	339	⇓P	Pn	10 17 18.6	+0.5
327A	Balmorhea Ranc baz=19	18.96	334	⇑P	Pn	10 17 21.0	+1.4
131A	Roby baz=19,SNR=12	19.04	343	⇓P	Pn	10 17 20.9	+0.4
326A	Caldwell Ranch baz=19,SNR=12	19.13	333	⇓P	Pn	10 17 22.7	+1.1
130A	Snyder baz=19	19.14	342	⇑P	Pn	10 17 22.4	+0.7
425A	Indio Mountain baz=19,SNR=14	19.15	330	⇓P	Pn	10 17 23.0	+1.0
228A	UT Block 9, Go baz=19,SNR=7.6	19.26	337	⇓P	Pn	10 17 23.5	+0.3
TIGA	Tifton baz=20	19.32	28	⇓P	P	10 17 23.5	+0.8
Z32A	Haskell baz=20,SNR=9.1	19.40	346	⇓P	P	10 17 24.3	+0.7
227A	Bennet, Jal baz=20	19.44	335	⇑P	Pn	10 17 25.7	+0.4
129A	Stewart Farms, baz=20,SNR=11	19.46	339	⇓P	Pn	10 17 25.5	-0.1
LRAL	Lakeview Retre 12nm,0.9s	19.49	18	*e*P	Pn	10 17 26.9	+1.1
Z31A	Sharp Cattle R baz=20,SNR=5.3	19.58	344	⇑P	P	10 17 26.2	+0.7
128A	Castleberry Fa baz=20,SNR=6.9	19.67	338	⇓P	P	10 17 27.1	+0.6
Z30A	Sanderson Ranc baz=20,SNR=12	19.83	342	⇑P	P	10 17 28.9	+0.6
226B	Tecolote Peak, baz=20,SNR=13	19.86	334	⇑P	Pn	10 17 30.9	+0.5
324A	Moseley Ranch, baz=20	19.93	330	⇑P	Pn	10 17 31.4	+0.1
Z29A	Hungry Hill Ra baz=20,SNR=16	19.98	341	⇑P	P	10 17 30.8	+0.8
127A	Arkansas Junct baz=20,SNR=8.1	20.05	336	⇑P	Pn	10 17 32.2	-0.4
GDL2	Guadalupe Moun 4.6nm,0.6s	20.05	333	*e*P	Pn	10 17 32.8	+0.1
Y32A	R-V Farms, Ver baz=20,SNR=7.6	20.06	346	⇑P	P	10 17 31.8	+1.1
MNTX	Cornudas Mount 9.6nm,1.0s	20.09	330	*e*P	P	10 17 32.1	+1.0
225A	Deer Hill, Car baz=20,SNR=7.2	20.18	332	⇑P	Pn	10 17 34.1	-0.1
Y31A	Rekieta Farm, baz=20,SNR=18	20.22	345	⇓P	P	10 17 33.4	+0.9
Z28A	Tucker Farm, M baz=20,SNR=33	20.24	339	⇑P	Pn	10 17 34.2	-0.6
UALR	University of 17nm,0.9s	20.24	4	P	Pn	10 17 36.6	+1.9
126A	Clayton Basin, baz=20,SNR=7.8	20.29	335	⇓P	Pn	10 17 35.0	-0.5
Y30A	Stafford Cattl baz=20	20.31	343	⇓P	P	10 17 34.7	+1.2
224A	Cornudas Mount baz=21,SNR=13	20.47	331	⇑P	Pn	10 17 37.2	-0.4
Y29A	Porterfield Fa baz=21,SNR=17	20.53	341	⇑P	P	10 17 37.4	+1.5
Z27A	Tatum baz=21,SNR=50	20.56	337	⇓P	P	10 17 37.6	+1.4
125A	Gardner Draw, baz=21,SNR=15	20.57	333	⇑P	P	10 17 37.9	+1.5
Y28A	McKinney Farm, baz=21,SNR=20	20.76	340	⇓P	P	10 17 39.5	+1.1
X31A	McDonald Ranch baz=21,SNR=13	20.79	346	⇑P	P	10 17 39.8	+1.2
Z26A	Caprock baz=21,SNR=13	20.82	336	⇑P	P	10 17 40.5	+1.4
X30A	Coker Ranch, T baz=21,SNR=13	20.84	344	⇑P	P	10 17 40.0	+0.8
223A	Chaparral, Ant baz=21	20.86	329	⇑P	Pn	10 17 42.1	0.0
124A	Stringfield Ra baz=21,SNR=11	20.96	332	⇓P	Pn	10 17 42.8	-0.7
MSTX	Muleshoe baz=21,SNR=38	20.99	339	⇓P	P	10 17 42.5	+1.6
Y27A	Causey baz=21,SNR=32	21.05	338	⇑P	P	10 17 42.6	+1.0
X29A	Tulia baz=21,SNR=14	21.08	342	⇓P	P	10 17 42.7	+0.9
Z25A	Roswell baz=21,SNR=8.9	21.13	334	⇓P	P	10 17 43.7	+1.3
123A	Bell Site, Whi baz=21	21.29	330	⇑P	P	10 17 46.9	+2.8
X28A	Dimmitt baz=21,SNR=7.5	21.30	341	⇑P	P	10 17 45.4	+1.2
W31A	Holland Ranch, baz=21	21.31	346	⇓P	P	10 17 45.1	+0.8
TUL1	Tulsa baz=22	21.39	356	⇓P	P	10 17 45.8	+0.7
Z24A	Sheeppen Canyo baz=22,SNR=24	21.45	333	⇑P	P	10 17 48.5	+2.6
320A	Kipp Ranch, An baz=22,SNR=12	21.47	324	⇓P	P	10 17 49.4	+3.2
AMTX	Amarillo 37nm,0.8s	21.48	342	*e*P	P	10 17 46.7	+0.5
ROSC	El Rosal	21.51	115	P	P	10 17 47.6	+0.7
ROSC	El Rosal 10nm,0.7s,baz=90,slow=22,SNR=8.4	21.51	115	P	P	10 17 47.6	+0.7
221A	Mesquite Ranch baz=22	21.56	326	⇑P	P	10 17 49.8	+2.7
Y25A	Mesa, Roswell baz=22	21.67	335	⇑P	P	10 17 50.2	+1.9
W29A	Amraillo baz=22,SNR=6.2	21.69	343	⇓P	P	10 17 49.2	+0.8
122A	Conniff Cattle baz=22	21.70	329	⇑P	P	10 17 51.0	+2.4
X27A	F and S Farms, baz=22,SNR=18	21.71	339	⇓P	P	10 17 50.0	+1.3
Z23A	Rita Site, Whi baz=22,SNR=11	21.79	331	⇑P	P	10 17 52.0	+2.4
V31A	Spring Creek L baz=22	21.85	347	⇓P	P	10 17 51.0	+0.9
X26A	CR and CF Fran baz=22,SNR=8.4	21.88	338	⇑P	P	10 17 52.2	+1.7
220A	Playas Peak, P baz=22,SNR=18	21.89	325	⇑P	P	10 17 53.6	+3.0
319A	Douglas baz=22,SNR=7.9	21.93	323	⇑P	P	10 17 54.7	+3.6
121A	Cookes Peak, D baz=22,SNR=31	21.97	327	⇓P	P	10 17 54.6	+3.0
W28A	Vega baz=22	21.98	342	⇓P	P	10 17 53.2	+1.6
Y24A	Capilan baz=22,SNR=16	21.99	334	⇓P	P	10 17 53.7	+2.0
V30A	Spur Ranch, Mi baz=22	22.04	345	⇑P	P	10 17 53.5	+1.4
W27A	Bowe Ranch, En baz=22	22.08	340	⇑P	P	10 17 54.0	+1.4
Z22A	Elephant Butte baz=22,SNR=9.3	22.13	330	⇓P	P	10 17 55.7	+2.4
WVT	Waverly 32nm,1.4s	22.21	13	*e*P	P	10 17 53.1	-0.8
Y23A	Lovelace Mesa, baz=22,SNR=18	22.27	332	⇓P	P	10 17 56.8	+2.1
W26A	Owens Ranch, T baz=22	22.35	338	⇓P	P	10 17 57.1	+1.6
V29A	Stinnett baz=22	22.36	344	⇑P	P	10 17 56.8	+1.2
U31A	Nine Bar Ranch baz=23	22.42	347	⇓P	P	10 17 56.9	+0.7
120A	U Bar Ranch, L baz=22,SNR=7.7	22.44	326	⇑P	P	10 17 60.0	+3.4
V28A	Channing baz=23,SNR=8.8	22.45	342	⇓P	P	10 17 57.3	+0.8
Z21A	St. Cloud Mine baz=23	22.52	329	⇓P	P	10 18 00.1	+2.5
V27A	Dan Oppiter Fa baz=23	22.64	341	⇑P	P	10 17 60.0	+1.4
Y22A	Socorro baz=23,SNR=8.8	22.69	331	⇓P	P	10 18 01.6	+2.3
BNM	Barren Site 11nm,1.1s	22.71	332	*e*P	P	10 18 01.7	+2.2
W25A	X Bar L Ranch, baz=23,SNR=10	22.72	337	⇑P	P	10 18 00.8	+1.3
U30A	WK&E Inc. Balk baz=23,SNR=5.0	22.76	346	⇓P	P	10 18 00.8	+1.0
Z20A	Nine Sixteen R baz=23,SNR=6.3	22.85	327	⇓P	P	10 18 04.2	+3.3
TKL	Tuckaleechee C	22.95	22	P	P	10 18 00.0	-1.7
TKL	Tuckaleechee C 2.0nm,0.6s,baz=173,slow=13,SNR=4.2	22.95	22	P	P	10 18 00.0	-1.7
TKL	comp=Z,95nm,20.6s,baz=246,slow=42			LR	LR	10 29 00.9	
V26A	Tequesquite Ra baz=23,SNR=6.8	22.99	339	⇑P	P	10 18 05.0	+2.7
U28A	Mallet baz=23	23.03	343	⇑P	P	10 18 03.8	+1.2
W24A	Lazy 6 Ranch, baz=23,SNR=7.1	23.08	335	⇓P	P	10 18 04.8	+1.5
Y21A	Point of Rocks baz=23	23.09	330	⇓P	P	10 18 05.5	+2.1
T31A	Randall Ranch, baz=23	23.09	348	⇓P	P	10 18 03.7	+0.5
LAZ	Ladron 4.9nm,1.1s	23.15	331	*e*P	P	10 18 06.6	+2.5
X22A	Bernardo baz=23	23.18	332	⇑P	P	10 18 05.9	+1.6
T30A	Plains baz=23	23.23	346	⇑P	P	10 18 05.1	+0.5
U27A	Thompson Grove baz=23,SNR=12	23.25	341	⇓P	P	10 18 05.9	+1.0
ANMO	Albuquerque	23.30	333	P	P	10 18 07.0	+1.5
ANMO	Albuquerque 2.7nm,0.9s,baz=148,slow=9.7,SNR=9.6	23.30	333	P	P	10 18 07.0	+1.5
V25A	Rancho No Teng baz=23,SNR=8.5	23.33	338	⇓P	P	10 18 07.7	+1.9
W23A	Werner Place, baz=24	23.35	334	⇑P	P	10 18 07.9	+1.9
Y20A	Horse Springs, baz=24,SNR=17	23.36	328	⇓P	P	10 18 09.0	+2.8
KMSC	Kings Mountain baz=24	23.46	27	⇓P	P	10 18 06.7	-0.1
V24A	Rampart Ranch, baz=24,SNR=15	23.48	336	⇓P	P	10 18 09.2	+1.9
TUC	Tucson 1.7nm,0.9s	23.50	322	*e*P	P	10 18 09.9	+2.6
X21A	Alamocita Cree baz=24,SNR=12	23.50	330	⇑P	P	10 18 09.8	+2.3
T29A	Hugoton baz=24	23.51	345	⇑P	P	10 18 07.9	+0.5
U26A	Atchley Ranch, baz=24	23.52	340	⇓P	P	10 18 09.1	+1.5
U25A	Circle Dot Ran baz=24,SNR=7.7	23.75	339	⇑P	P	10 18 11.3	+1.4
T27A	Campo baz=24	23.81	342	⇑P	P	10 18 11.7	+1.3
V23A	Ortiz Mt. (NFS baz=24,SNR=5.7	23.86	335	⇑P	P	10 18 13.8	+2.8
S29A	Ulysses baz=24	23.91	346	⇑P	P	10 18 12.4	+1.2
X20A	Quemado baz=24,SNR=21	23.92	329	⇓P	P	10 18 15.0	+3.5
S28A	Manter baz=24	24.07	344	⇓P	P	10 18 13.9	+1.1
T26A	Comanche Natio baz=24	24.18	341	⇓P	P	10 18 15.1	+1.2
V22A	San Miguel Ran baz=24	24.31	334	⇓P	P	10 18 16.8	+1.7
R30A	Dighton baz=24,SNR=7.0	24.36	348	⇓P	P	10 18 16.3	+1.0
U23A	El Rito baz=24,SNR=8.5	24.37	335	⇓P	P	10 18 17.8	+2.2
W20A	Ramah baz=24,SNR=6.0	24.39	330	⇓P	P	10 18 18.5	+2.6
T25A	Trinidad baz=24,SNR=8.4	24.42	339	⇑P	P	10 18 18.6	+2.5
214A	Organ Pipe Nat baz=25	24.51	318	⇓P	P	10 18 19.5	+2.7
V21A	Milan baz=25	24.54	332	⇑P	P	10 18 18.9	+1.7
S26A	Kim baz=25	24.55	341	⇑P	P	10 18 18.4	+1.2
T24A	Torres, Weston baz=25	24.59	338	⇓P	P	10 18 19.0	+1.3
X18A	Snowflake baz=25,SNR=10	24.66	327	⇓P	P	10 18 20.6	+2.3
OLIL	Olney 7.5nm,0.6s	24.68	11	*e*P	P	10 18 17.3	-0.9
R29A	Marienthal baz=25	24.68	346	⇑P	P	10 18 19.0	+0.7
U22A	Llaves baz=25	24.68	334	⇓P	P	10 18 19.8	+1.3
R28A	Tribune baz=25	24.76	345	⇓P	P	10 18 19.8	+0.8
S25A	Robets Cordova baz=25,SNR=13	24.90	340	⇑P	P	10 18 22.4	+2.0
V20A	Brimhall baz=25	24.92	331	⇓P	P	10 18 23.1	+2.5
T23A	Casias Ranch, baz=25	24.92	336	⇓P	P	10 18 23.0	+2.3
R27A	Eads baz=25	24.97	343	⇓P	P	10 18 22.6	+1.6
W18A	Petrified Fore baz=25	25.00	328	⇑P	P	10 18 23.5	+2.1
U21A	Nageezi baz=25	25.07	333	⇑P	P	10 18 23.8	+1.8
S24A	Houchin Ranch, baz=25	25.15	338	⇓P	P	10 18 24.3	+1.5
R26A	Arlington baz=25,SNR=10.0	25.17	342	⇓P	P	10 18 25.0	+2.2
T22A	Edith baz=25	25.25	335	⇑P	P	10 18 25.7	+2.1
R25A	Fountain Ranch baz=25,SNR=9.6	25.29	341	⇓P	P	10 18 26.0	+2.1
SDCO	Great Sand Dun 3.0nm,0.8s	25.35	338	*e*P	P	10 18 26.5	+1.9
X16A	Lo Mia Camp, P baz=26,SNR=6.3	25.39	324	⇓P	P	10 18 27.5	+2.6
U20A	Newcomb baz=26	25.41	332	⇑P	P	10 18 27.2	+2.1
T21A	Navajo Lake baz=26	25.49	334	⇑P	P	10 18 28.0	+2.2
Z14A	Wintersburg baz=26	25.53	321	⇑P	P	10 18 29.4	+3.4
KSCO	Kaye Shedlock' baz=26	25.60	344	⇑P	P	10 18 27.9	+1.2
R24A	Sanders Place, baz=26,SNR=6.2	25.64	339	⇓P	P	10 18 29.5	+2.3
Q26A	Hugo baz=26	25.77	343	⇑P	P	10 18 29.8	+1.5
S22A	4UR Ranch, Cre baz=26	25.85	336	⇓P	P	10 18 31.0	+1.8
R23A	Moffat baz=26	25.86	338	⇑P	P	10 18 31.0	+1.8
Y14A	Wickenburg baz=26	25.96	322	⇓P	P	10 18 32.3	+2.4
Q25A	Bedland, Calha baz=26	25.98	341	⇓P	P	10 18 31.9	+1.7
MVCO	Mesa Verde 5.9nm,0.8s	26.09	333	*e*P	P	10 18 32.8	+1.5
MVCO	Mesa Verde baz=26,SNR=5.1	26.09	333	⇓P	P	10 18 33.1	+1.8
WUAZ	Wupatki 8.0nm,0.9s	26.17	326	*e*P	P	10 18 34.4	+2.5
WUAZ	Wupatki baz=26	26.17	326	⇑P	P	10 18 33.3	+1.4
S21A	Coal Bank Pass baz=26	26.17	334	⇑P	P	10 18 33.9	+1.8
R22A	Saguache, Gunn baz=26	26.24	337	⇑P	P	10 18 33.9	+1.2
P26A	Davis Ranch, A baz=26	26.31	343	⇓P	P	10 18 34.5	+1.4
Q24A	Divide baz=26	26.32	340	⇓P	P	10 18 34.3	+0.9
ATAH	Atahualpa	26.42	143	P	P	10 18 35.8	+1.2
ATAH	Atahualpa 8.1nm,0.8s,baz=317,slow=5.8,SNR=4.1	26.42	143	P	P	10 18 35.8	+1.2
ATAH	comp=Z,49nm,18.2s,baz=75,slow=31			LR	LR	10 26 41.5	
GLA	Glamis baz=27	26.52	318	⇑P	P	10 18 37.6	+2.6
S20A	Disappointment baz=27	26.55	334	⇓P	P	10 18 37.4	+1.9
Y12C	Blythe baz=27	26.77	319	⇓P	P	10 18 39.7	+2.5
R20A	Redvale baz=27	26.86	334	⇓P	P	10 18 40.5	+2.3
PV01	Paradox Valley	26.90	334	*e*P	P	10 18 40.8	+2.2
PDMCI	Parker Dam,Lak baz=27	26.90	321	⇓P	P	10 18 41.4	+3.1
O26A	Horse Wrangler baz=27	26.94	344	⇑P	P	10 18 40.3	+1.5
BGNE	Belgrade baz=27	27.07	353	⇓P	P	10 18 40.4	+0.6
Q21A	Lamborn Mesa, baz=27	27.08	336	⇑P	P	10 18 41.9	+1.7
SWSC	Sam W. Stewart baz=27	27.09	316	⇓P	P	10 18 43.1	+3.1
SMCO	Snowmass 6.2nm,1.1s	27.15	337	*e*P	P	10 18 42.7	+1.7
S18A	Hurst Farm, Bl	27.17	331	⇑P	P	10 18 42.8	+1.8

	baz=27							
ISCO	Idaho Springs	27.22	340	e	P	P	10 18 43.0	+1.4
	5.7nm,1.1s							
ISCO	Idaho Springs	27.22	340	⇑	P	P	10 18 43.1	+1.6
	baz=27,SNR=7.1							
PV04	Paradox Valley	27.26	334	e	P	P	10 18 43.9	+2.2
W13A	Hualapai Mount	27.29	322	⇓	P	P	10 18 44.6	+2.5
	baz=27							
BC3	Big Chuckawall	27.31	318	⇓	P	P	10 18 45.0	+2.9
	baz=27,SNR=6.5							
U15A	North Rim	27.34	326	⇓	P	P	10 18 45.1	+2.5
	baz=27,SNR=6.0							
IRM	Iron Mountain	27.43	319	⇑	P	P	10 18 45.5	+2.3
	baz=28,SNR=6.0							
O22A	Kremmling	27.87	339	⇑	P	P	10 18 48.7	+1.4
	baz=28							
BELC	Belle Mtn. Jos	27.88	318	⇓	P	P	10 18 50.1	+2.8
	baz=28							
PFO	Pinyon Flat Ob	27.93	317		P	P	10 18 50.1	+2.3
PFO	Pinyon Flat Ob	27.93	317		P	P	10 18 50.1	+2.3
	1.3nm,0.7s,baz=200,slow=2.7,SNR=3.8							
PFO					LR	LR	10 30 22.3	
	comp=Z,103nm,19.0s,baz=168,slow=37							
PFO	Pinyon Flat Ob	27.93	317	⇓	P	P	10 18 50.5	+2.8
	baz=28							
109C	Camp Elliot, M	27.95	315	⇑	P	P	10 18 51.2	+3.5
	baz=28							
GMRC	Granite Mounta	28.16	320	⇓	P	P	10 18 52.5	+2.7
	baz=28							
P19A	Cripple Cowboy	28.33	335	⇑	P	P	10 18 52.5	+1.2
	baz=28							
N22A	Wattenberg Ran	28.41	340	⇑	P	P	10 18 53.2	+1.1
	baz=28							
O20A	White River Ci	28.46	337	⇓	P	P	10 18 54.1	+1.6
	baz=29							
SRU	San Rafael	28.56	332	⇓	P	P	10 18 55.7	+2.3
	baz=29							
HEC	Hector,Ludlow	28.61	319	⇓	P	P	10 18 57.2	+3.5
	baz=29							
BBRC	Big Bear Solar	28.64	317	⇑	P	P	10 18 58.0	+3.8
	baz=29							
Q16A	Castle Valley	28.70	331	⇑	P	P	10 18 56.9	+2.2
	baz=29							
N21A	Black Mountain	28.74	338	⇑	P	P	10 18 56.9	+1.9
	baz=29							
TUQ	Turquoise Moun	28.75	320	⇑	P	P	10 18 58.5	+3.5
	baz=29							
P17A	Butcher Ranch,	28.95	332	⇓	P	P	10 18 59.4	+2.5
	baz=29							
ARUT	Antelope Range	28.96	327	e	P	P	10 19 00.1	+3.1
	5.6nm,0.7s							
N20A	Spence Gulch,	29.08	337	⇓	P	P	10 19 00.3	+2.4
	baz=29							
BFSC	Mount Baldy Ra	29.11	317	⇑	P	P	10 19 02.1	+3.8
	baz=29							
ECSD	EROS Data Cent	29.23	356	e	P	P	10 18 57.7	-1.4
	6.4nm,0.6s							
L23A	Garrett	29.35	342	⇑	P	P	10 19 02.2	+1.8
	baz=30							
M21A	Separation Pea	29.43	339	⇑	P	P	10 19 02.9	+1.7
	baz=30							
L21A	Rawlins	29.75	339	⇓	P	P	10 19 05.8	+1.8
	baz=30							
K22A	Casper	30.09	341	⇓	P	P	10 19 08.4	+1.5
	baz=30							
MPMC	Manual Prospec	30.12	320	⇑	P	P	10 19 10.6	+3.3
	baz=30							
L20A	Wamsutter	30.13	338	⇑	P	P	10 19 08.8	+1.6
	baz=30							
K21A	Alcova	30.31	340	⇓	P	P	10 19 10.8	+1.9
	baz=30							
DUG	Dugway	30.49	331	⇑	P	P	10 19 13.0	+2.6
	baz=31							
R11A	Troy Canyon, C	30.54	325	⇑	P	P	10 19 13.9	+3.0
	baz=31							
GRAC	Grapevine Rang	30.65	321	⇓	P	P	10 19 15.1	+3.3
	baz=31							
L18A	Fontenelle, Gr	30.70	336	⇑	P	P	10 19 14.3	+2.0
	baz=31							
VES	Vestal, Richgr	31.00	318	⇓	P	P	10 19 18.2	+3.4
	baz=31							
K19A	Absolon Red Bu	31.03	338	⇓	P	P	10 19 16.7	+1.6
	baz=31							
J20A	Shoshoni	31.23	340	⇑	P	P	10 19 18.7	+1.8
	baz=31							
PDAR	Pinedale Array	31.23	337		P	P	10 19 17.4	+0.3
PDAR	Pinedale Array	31.23	337		P	P	10 19 17.4	+0.3
	1.0nm,0.8s,baz=141,slow=9.6,SNR=7.5							
K18A	Toltan Ranch,	31.31	337	⇓	P	P	10 19 19.4	+1.8
	baz=31,SNR=8.6							
I21A	Big Trails, Te	31.38	341	⇓	P	P	10 19 19.9	+1.7
	baz=32							
RCTC	Rector, Farmer	31.39	318	⇑	P	P	10 19 21.8	+3.6
	baz=32							
H24A	Dirks Ranch, A	31.48	345	⇓	P	P	10 19 20.3	+1.2
	baz=32							
J19A	Crowheart	31.48	339	⇑	P	P	10 19 20.4	+1.2
	baz=32							
I20A	Worland	31.77	340	⇓	P	P	10 19 23.3	+1.7
	baz=32,SNR=6.8							
J18A	Kendall Valley	31.79	337	⇓	P	P	10 19 23.9	+1.9
	baz=32							
H22A	Clearmont	31.82	343	⇓	P	P	10 19 24.0	+2.0
	baz=32							
H21A	Big Horn, Sher	32.05	342	⇓	P	P	10 19 25.6	+1.5
	baz=32							
NV11	Mina Array Sit	32.06	323	e	P	P	10 19 27.5	+3.2
G23A	Biddle	32.12	345	⇓	P	P	10 19 26.3	+1.7
	baz=32							
I19A	Meeteetse	32.14	339	⇓	P	P	10 19 26.8	+1.9
	baz=32,SNR=6.5							
NVAR	Mina Array Bea	32.15	322		P	P	10 19 28.3	+3.2
NVAR					PcP	PcP	10 22 15.1	+1.2
NVAR	Mina Array Bea	32.15	322		P	P	10 19 28.3	+3.2
	4.2nm,0.6s,baz=137,slow=8.3,SNR=41							
NVAR					PcP	PcP	10 22 15.1	+1.2
	0.5nm,0.7s,baz=131,slow=2.2,SNR=3.5							
J17A	Brown Place, J	32.18	337	⇓	P	P	10 19 27.5	+2.2
	baz=32,SNR=8.6							
H20A	Greybull	32.21	341	⇑	P	P	10 19 26.5	+1.0
	baz=32,SNR=6.0							
SNOW	Snow King Moun	32.28	337	e	P	P	10 19 27.8	+1.6
	15nm,1.1s							
LOHW	Long Hollow	32.35	337	e	P	P	10 19 28.6	+1.7
	5.8nm,1.1s							
G22A	Birney	32.37	344	⇓	P	P	10 19 28.5	+1.6
	baz=32							
I17A	Pilgrim Ck.	32.60	337	⇓	P	P	10 19 31.7	+2.6
	baz=33							
F23A	Volborg	32.61	345	⇓	P	P	10 19 30.7	+1.8
	baz=33							
H19A	Powell	32.70	340	⇑	P	P	10 19 31.7	+1.9
	baz=33,SNR=6.0							
F22A	Rosebud	32.88	344	⇑	P	P	10 19 33.2	+2.0
	baz=33							
I16A	Newdale	32.91	336	⇑	P	P	10 19 33.9	+2.2
	baz=33							
H18A	Shoshone NF, C	32.93	339	⇓	P	P	10 19 33.5	+1.6
	baz=33,SNR=19							
G20A	Bridger	32.94	341	⇓	P	P	10 19 33.4	+1.6
	baz=33							
H17A	Grant Village	33.01	338	⇑	P	P	10 19 34.9	+2.3
	baz=33							
E24A	Baker	33.14	347	⇑	P	P	10 19 34.9	+1.4
	baz=33							
E23A	Ismay	33.31	346	⇑	P	P	10 19 36.1	+1.2
	baz=33							
F20A	Billings	33.44	342	⇓	P	P	10 19 37.9	+1.7
	baz=34							
G18A	Lazy EL Ranch,	33.46	340	⇓	P	P	10 19 37.6	+1.1
	baz=34,SNR=7.4							
H16A	Russell Place,	33.52	337	⇓	P	P	10 19 39.0	+2.0
	baz=34							
MDND	Maddock	33.59	353	⇓	P	P	10 19 38.5	+1.2
	baz=34							
D24A	Glendive	33.67	347	⇑	P	P	10 19 39.3	+1.2
	baz=34							
F19A	Roth Farm, Mol	33.73	341	⇑	P	P	10 19 40.0	+1.2
	baz=34							
I14A	Mackay	33.76	334	⇓	P	P	10 19 41.2	+2.1
	baz=34							
G17A	Pierce Place,	33.87	338	⇓	P	P	10 19 42.6	+2.6
	baz=34							
HLID	Hailey	33.88	333	e	P	P	10 19 42.0	+1.9
	4.8nm,1.2s							
HLID	Hailey	33.88	333	⇑	P	P	10 19 41.8	+1.7
	baz=34,SNR=5.3							
D23A	Lindsay	33.92	346	⇑	P	P	10 19 41.4	+1.1
	baz=34							
H15A	Lima	33.99	336	⇑	P	P	10 19 43.5	+2.3
	baz=34							
F18A	Big Timber	34.03	340	⇓	P	P	10 19 42.3	+1.0
	baz=34,SNR=7.6							
I13A	Wildhorse Cree	34.03	333	⇑	P	P	10 19 43.7	+2.2
	baz=34							
E20A	Meyer Farm, Mu	34.07	342	⇑	P	P	10 19 43.2	+1.6
	baz=34							
C24A	Savage	34.08	347	⇑	P	P	10 19 43.0	+1.3
	baz=34							
D22A	Cohagen	34.13	345	⇑	P	P	10 19 43.4	+1.3
	baz=34,SNR=12							
G16A	Moss Hill, Enn	34.18	337	⇑	P	P	10 19 45.2	+2.5
	baz=34							
E19A	Rath Farm, Rou	34.23	342	⇓	P	P	10 19 44.8	+1.8
	baz=34							
MCMT	McKenzie Canyo	34.25	336	e	P	P	10 19 46.2	+2.8
	3.0nm,1.1s							
D21A	La Casta Ranch	34.27	344	⇓	P	P	10 19 45.5	+2.2
	baz=34							
H14A	Leadore	34.28	335	⇑	P	P	10 19 46.3	+2.6
	baz=34							
F17A	Fitzpatrick Pl	34.35	339	⇑	P	P	10 19 46.3	+2.2
	baz=34,SNR=20							
I12A	Atlanta	34.38	332	⇓	P	P	10 19 46.7	+2.2
	baz=34							
G15A	Dillon	34.39	336	⇓	P	P	10 19 46.7	+2.2
	baz=34,SNR=5.5							
MFID	Camas Ranch	34.41	331	⇓	P	P	10 19 46.9	+2.3
	baz=34							
BOZ	Bozeman (W)	34.47	338	e	P	P	10 19 45.7	+0.5
	2.1nm,1.0s							
C23A	Lambert	34.51	347	⇑	P	P	10 19 46.7	+1.3
	baz=35							
F16A	Kennard Place,	34.59	338	⇓	P	P	10 19 48.3	+2.1
	baz=35							
DLMT	Dillon	34.59	337	e	P	P	10 19 48.5	+2.3
	9.3nm,1.2s							
D20A	Manuel Ranch,	34.60	343	⇓	P	P	10 19 47.8	+1.5
	baz=35							
H13A	Challis	34.61	334	⇓	P	P	10 19 48.7	+2.3
	baz=35,SNR=7.3							
C22A	Vida	34.62	346	⇓	P	P	10 19 47.9	+1.6
	baz=35							
E18A	Harlowton	34.68	340	⇓	P	P	10 19 48.6	+1.6
	baz=35,SNR=5.1							
G14A	Jackson	34.83	336	⇓	P	P	10 19 50.4	+1.9
	baz=35							
H12A	Diamond D Ranc	34.85	333	⇑	P	P	10 19 50.6	+2.0
	baz=35,SNR=8.9							
D19A	Cripps Ranch,	34.89	342	⇓	P	P	10 19 50.3	+1.6
	baz=35							
LRM	Limekiln Ridge	34.92	337	e	P	P	10 19 50.2	+1.0
	44nm,1.1s							
DGMT	Dagmar	34.93	348	⇑	P	P	10 19 50.1	+1.1
	baz=35							
F15A	Butte	34.95	337	⇓	P	P	10 19 50.9	+1.5
	baz=35,SNR=5.6							
C21A	Desert Coulee	34.99	344	⇓	P	P	10 19 51.4	+1.8
	baz=35							
G13A	Cobalt	35.03	335	⇑	P	P	10 19 52.1	+2.1
	baz=35							
WVOR	Wild Horse Val	35.07	327	e	P	P	10 19 51.9	+1.4
	5.2nm,1.1s							
B23A	Brockton	35.09	347	⇓	P	P	10 19 51.9	+1.6
	baz=35							
B22A	Reddig Ranch S	35.16	346	⇑	P	P	10 19 52.7	+1.7
	baz=35							
E16A	East Helena	35.25	339	⇓	P	P	10 19 54.0	+2.1
	baz=35							
F14A	Wisdom	35.27	336	⇓	P	P	10 19 54.2	+2.1
	baz=35							
A24A	Westby	35.32	348	⇓	P	P	10 19 54.1	+1.7
	baz=36							
D17A	Six Diamond Ra	35.45	340	⇓	P	P	10 19 55.1	+1.5
	baz=36,SNR=7.4							
C19A	Slack Wire Ran	35.45	342	⇑	P	P	10 19 55.3	+1.8
	baz=36							
E15A	Deer Lodge	35.50	337	⇑	P	P	10 19 56.1	+2.0
	baz=36							
G12A	Big Creek, Yel	35.52	334	⇓	P	P	10 19 56.7	+2.4
	baz=36							
B21A	Ellsworth Farm	35.53	345	⇓	P	P	10 19 55.7	+1.6
	baz=36							
D16A	Dana Ranch, Ca	35.63	339	⇑	P	P	10 19 56.8	+1.7
	baz=36							
F13A	Darby	35.63	335	⇑	P	P	10 19 57.0	+1.8
	baz=36							
ULM	Lac du Bonnet	35.69	358		LR	LR	10 37 37.3	
	comp=Z,45nm,19.0s,baz=324,slow=42							
A22A	Carney Farms,	35.79	346	⇓	P	P	10 19 58.0	+1.6
	baz=36							
B20A	Solberg Farm,	35.80	344	⇑	P	P	10 19 57.9	+1.4
	baz=36							
C17A	Wharram Farm,	35.89	340	⇑	P	P	10 19 58.5	+1.1
	baz=36,SNR=10							
EGMT	Eagleton	35.92	342	e	P	P	10 19 58.7	+1.1
	6.4nm,1.0s							
EGMT	Eagleton	35.92	342	⇑	P	P	10 19 59.6	+2.1
	baz=36							
D15A	Lincoln	35.98	338	⇑	P	P	10 20 00.2	+2.0
	baz=36							
F12A	Elk City	35.99	334	⇓	P	P	10 19 59.9	+1.6
	baz=36,SNR=13							
B19A	Brinkman Farms	36.07	343	⇓	P	P	10 20 00.6	+1.8
	baz=36							
E13A	Victor	36.11	336	⇑	P	P	10 20 00.7	+1.4
	baz=36,SNR=6.1							
A20A	Cobblestone Ra	36.18	344	⇓	P	P	10 20 01.3	+1.6
	baz=36							
B18A	Beardsley Farm	36.26	342	⇓	P	P	10 20 02.1	+1.7
	baz=36							
MSO	Missoula	36.33	337	⇑	P	P	10 20 03.1	+2.0
	baz=36							
C16A	Fuhringer Ranc	36.36	340	⇓	P	P	10 20 02.7	+1.3
	baz=36,SNR=8.2							
D14A	Gough	36.38	337	⇓	P	P	10 20 02.7	+1.2
	baz=36,SNR=5.5							
A19A	Klindworth Far	36.44	343	⇑	P	P	10 20 03.8	+1.7
	baz=37							
B17A	L&G Farms, Che	36.48	341	⇑	P	P	10 20 04.2	+1.9
	baz=37							
SLMT	Seeley Lake	36.51	337	e	P	P	10 20 03.3	+0.6
	3.6nm,1.0s							
C15A	Salmond Ranch,	36.64	339	⇓	P	P	10 20 05.2	+1.4
	baz=37							
A18A	Metzger Ranch,	36.75	342	⇑	P	P	10 20 05.6	+0.9
	baz=37,SNR=6.4							
D13A	Huson	36.75	336	⇑	P	P	10 20 06.1	+1.4
	baz=37							
B16A	M & M Farms, S	36.88	340	⇓	P	P	10 20 06.6	+0.8
	baz=37,SNR=5.7							
A17A	Triple J Farms	37.03	342	⇑	P	P	10 20 08.0	+1.0
	baz=37,SNR=5.1							
C14A	Swan Lake	37.04	338	⇑	P	P	10 20 08.6	+1.4
	baz=37							
D12A	Red Ives Fores	37.07	335	⇑	P	P	10 20 08.6	+1.2
	baz=37							
B15A	Bradely Ranch,	37.08	339	⇓	P	P	10 20 09.1	+1.6
	baz=37							
JTMT	Jette	37.22	337	e	P	P	10 20 10.1	+1.3
	2.2nm,0.7s							
C13A	Hot Springs	37.28	337	⇓	P	P	10 20 11.0	+1.9
	baz=37							
B14A	Marquette Ranc	37.37	339	⇓	P	P	10 20 11.6	+1.6
	baz=38							
C12B	Naegeli Ranch,	37.65	336	⇑	P	P	10 20 14.0	+1.7
	baz=38							
A15A	Johnson Ranch,	37.71	340	⇓	P	P	10 20 14.5	+1.7
	baz=38							
B13A	Whitefish	37.81	338	⇑	P	P	10 20 15.6	+2.0
	baz=38							
A14A	Double T Ranch	37.94	339	⇓	P	P	10 20 15.9	+1.1
	baz=38,SNR=5.3							
A13A	Flathead Natio	38.26	338	⇑	P	P	10 20 19.9	+2.4
	baz=38							
B12A	Libby	38.32	337	⇑	P	P	10 20 20.3	+2.4
	baz=38							
NEW	Newport	38.76	335	e	P	P	10 20 21.6	0.0
	1.8nm,0.6s							
NEW	Newport	38.76	335	⇓	P	P	10 20 23.1	+1.5
	baz=39							
LPAZ	La Paz	39.79	139	e	P	P	10 20 30.6	-0.6
	1.8nm,0.7s							
LPAZ	La Paz	39.79	139		P	P	10 20 30.6	-0.6
	1.7nm,0.8s,baz=329,slow=8.6,SNR=7.0							
FFC	Flin Flon	40.63	353	e	P	P	10 20 36.9	-0.1
	2.8nm,0.9s							
YKA	Yellowknife Ar	50.14	348		P	P	10 21 52.5	+0.3
YKA	Yellowknife Ar	50.14	348		P	P	10 21 52.5	+0.3
	6.0nm,0.6s,baz=154,slow=7.3,SNR=76							
YKW3	Yellowknife Ar	50.20	348	e	P	P	10 21 52.7	+0.1
CPUP	Villa Florida	53.95	139		P	P	10 22 19.8	-1.3
CPUP	Villa Florida	53.95	139		P	P	10 22 19.8	-1.3
	0.3nm,0.3s,baz=311,slow=10.0,SNR=3.8							
BDFB	Brasilia	54.34	122		P	P	10 22 22.8	-1.4
BDFB	Brasilia	54.34	122		P	P	10 22 22.8	-1.4
	6.7nm,0.5s,baz=289,slow=9.0,SNR=8.4							
BDFB					LR	LR	10 48 21.8	
	comp=Z,70nm,18.4s,baz=237,slow=39							
MENT	Mentasta	59.54	336	e	P	P	10 23 01.6	+1.3
RES	Resolute Bay	60.19	360	e	P	P	10 23 03.7	-0.8
	2.4nm,0.6s							
ILAR	Eielson Array	61.67	337		P	P	10 23 15.3	+0.6
ILAR	Eielson Array	61.67	337		P	P	10 23 15.3	+0.6
	3.6nm,0.6s,baz=152,slow=4.9,SNR=67							
ILAR					LR	LR	10 55 32.0	
	comp=Z,42nm,18.3s,baz=60,slow=41							
MCK	McKinley	61.98	336	e	P	P	10 23 17.8	+0.8
	6.8nm,1.0s							
COLA	College	62.08	337	e	P	P	10 23 17.8	+0.4
	3.4nm,0.9s							
TRF	Thorofare Moun	62.41	335	e	P	P	10 23 20.0	+0.1
	6.7nm,0.8s							
NB2	NORSAR Subarra	84.58	28		P	P	10 25 31.0	+0.8
	comp=Z,1.5nm,0.6s,baz=291,slow=5.1							
NOA	NORSAR Array B	84.58	28		P	P	10 25 30.3	0.0
NOA	NORSAR Array B	84.58	28		P	P	10 25 30.3	0.0
	comp=Z,3.0nm,0.9s,baz=296,slow=5.1,SNR=6.9							
ARCES	ARCESS Array B	86.23	18		P	P	10 25 38.0	-0.3
ARCES	ARCESS Array B	86.23	18		P	P	10 25 38.0	-0.3
	comp=Z,1.4nm,0.6s,baz=292,slow=4.3,SNR=18							
GERES	GERESS Array B	90.38	39		P	P	10 25 58.0	-0.5
GERES	GERESS Array B	90.38	39		P	P	10 25 58.0	-0.5
	comp=Z,0.2nm,0.4s,baz=258,slow=3.8,SNR=4.2							
FINES	FINESS Array B	90.82	25		P	P	10 25 59.2	-1.0
FINES	FINESS Array B	90.82	25		P	P	10 25 59.2	-1.0
	comp=Z,0.9nm,0.6s,baz=0.0,slow=2.1,SNR=5.1							
TORD	Torodi Ar. Bea	92.04	76		P	P	10 26 05.2	-1.6
TORD	Torodi Ar. Bea	92.04	76		P	P	10 26 05.2	-1.6
	comp=Z,0.3nm,0.5s,baz=298,slow=5.1,SNR=5.4							
MKAR	Makanchi Array	118.90	3		PKP	PKPdf	10 31 45.1	-0.6
MKAR	Makanchi Array	118.90	3		PKP	PKPdf	10 31 45.1	-0.6
	comp=Z,0.2nm,0.6s,baz=51,slow=1.2,SNR=2.8							
BOSA	Boshof	122.23	115		PKP	PKPdf	10 31 52.7	0.0
BOSA	Boshof	122.23	115		PKP	PKPdf	10 31 52.7	0.0
	comp=Z,2.4nm,0.8s,baz=196,slow=7.4,SNR=3.2							
WRA	Warramunga Arr	133.74	256		PKP	PKPdf	10 32 15.1	+0.4
WRA	Warramunga Arr	133.74	256		PKP	PKPdf	10 32 15.1	+0.4
	comp=Z,1.2nm,0.6s,baz=87,slow=2.4,SNR=18							
ASAR	Alice Springs	134.10	251		PKP	PKPdf	10 32 15.8	+0.4
ASAR	Alice Springs	134.10	251		PKP	PKPdf	10 32 15.8	+0.4
	comp=Z,0.6nm,1.0s,baz=114,slow=1.4,SNR=5.2							
CMAR	Chiang Mai Arr	144.90	338		PKP	PKPbc	10 32 34.7	+0.6
CMAR	Chiang Mai Arr	144.90	338		PKP	PKPbc	10 32 34.7	+0.6
	comp=Z,2.8nm,0.6s,baz=341,slow=3.6,SNR=17							

IDC 15 10:15:15.6±2.5, 16.18S×178.51W, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.8/19, mbtmp4.0/3, Error ellipse: s-maj=275.2km s-min=33.7km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	44.87	258	P	P	10 23 32.4	+0.2
	0.6nm,0.5s,baz=91,slow=8.0,SNR=14						
ASAR	Alice Springs	45.19	253	P	P	10 23 34.2	-0.5
	6.8nm,0.5s,baz=88,slow=8.3,SNR=110						
TXAR	Lajitas Array	85.16	58	P	P	10 27 54.3	0.0
	0.2nm,0.6s,baz=206,slow=6.0,SNR=3.7						

*SOF **15** 10:19:42.9,41.16N×23.14E,h1km,MD2.5*
*SKO **15** 10:19:44.0,41.20N×23.23E,h15km,M1.9,ML2.3*
*ATH **15** 10:19:44.0,41.18N×23.23E,h22km,MD3.0/7*
*CSEM **15** 10:19:44.7±0.1,41.17N×23.22E,h5km,ML2.5/6, Error ellipse: s-maj=1.9km s-min=1.7km az=129.0*
*THE **15** 10:19:44.7,41.18N×23.23E,h2km±25km,ML2.5/6, Error ellipse: s-maj=25.6km s-min=0.4km az=0.0*
*ISCJB **15** 10:19:44.2±0.3,41.18N±0.02×23.22E±0.02,h8km±3km, Error ellipse: s-maj=3.2km s-min=2.8km az=40.2*
*BEO **15** 10:19:46.7±0.7,41.26N×23.16E,h4km±4km,ML2.2/5*
ISC 15 10:19:44.7±0.9, 41.18N±0.02×23.22E±0.02, h8km±8km, n61, σ0s47/104, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNT	Kendrikon	0.24	265	P	Pg	10 19 49.6	0.0
KNT				S	Sg	10 19 53.0	+0.1
KNT	Kendrikon	0.24	265	P	Pg	10 19 49.6	0.0
KNT				S	Sg	10 19 53.0	+0.1
SRS	Serrai	0.29	103	P	Pg	10 19 50.2	-0.2
SRS				S	Sg	10 19 54.5	+0.2
SRS	Serrai	0.29	103	P	Pg	10 19 50.2	-0.2
SRS				S	Sg	10 19 54.5	+0.2
SOH	Sokhos	0.37	164	P	Pg	10 19 52.1	+0.1
SOH				S	Sg	10 19 57.2	+0.3
SOH	Sokhos	0.37	164	ePB	Pg	10 19 52.1	+0.1
SOH				eSB	Sg	10 19 57.3	+0.3
SOH	Sokhos	0.37	164	P	Pg	10 19 52.1	+0.1
SOH				S	Sg	10 19 57.2	+0.3
VAY	Valandovo	0.51	286	P	Pg	10 19 54.1	-0.5
VAY	Valandovo	0.51	286	*i* Pg	Pg	10 19 54.0	-0.5
VAY				*i* Sg	Sg	10 20 01.6	+0.3
VAY				eLg	Lg	10 20 02.6	
	comp=N,132nm,0.3s						
VAY				eLg	Lg	10 20 02.7	
	comp=E,102nm,0.3s						
VAY	Valandovo	0.51	286	ePg	Pg	10 19 54.0	-0.5
VAY				eSg	Sg	10 20 01.6	+0.3
VAY	Valandovo	0.51	286	P	Pg	10 19 54.1	-0.5

VTS					*e*Sg		**Sg**	**10 20 30.2**	**+0.2**
VTS	**Vitosha**	**1.41**	**360**		P		**Pb**	**10 20 11.5**	**+0.3**
VTS	**Vitosha**	**1.41**	**360**		*e*Pg		**Pb**	**10 20 11.6**	**+0.3**
VTS					*e*Sg		**Sg**	**10 20 30.2**	**+0.2**
PLD	**Plovdiv**	**1.45**	**50**		*e*Pn		**Pg**	**10 20 12.8**	**+0.4**
PLD					*e*Sg		**Sg**	**10 20 32.3**	**+1.2**
PLD	**Plovdiv**	**1.45**	**50**		*e*Pn		**Pg**	**10 20 12.8**	**+0.4**
PLD					*e*Sg		**Sg**	**10 20 32.3**	**+1.2**
FNA	**Florina**	**1.45**	**255**		*e*PN		**Pn**	**10 20 11.3**	**+0.1**
FNA					*e*SN		**Sb**	**10 20 30.5**	**-0.1**
FNA	**Florina**	**1.45**	**255**		*e*Pn		**Pn**	**10 20 11.3**	**+0.1**
FNA					*e*Sn		**Sb**	**10 20 30.5**	**-0.1**
PGB	**Panagyurishte**	**1.54**	**27**		P		**Pb**	**10 20 13.3**	**-0.2**
PGB	**Panagyurishte**	**1.54**	**27**		P		**Pb**	**10 20 13.3**	**-0.2**
KDZ	**Kurdzhali**	**1.72**	**73**		P		**Pb**	**10 20 16.0**	**-0.5**
KDZ	**Kurdzhali**	**1.72**	**73**		P		**Pb**	**10 20 16.0**	**-0.5**
THL	**Klokotos Trika**	**1.86**	**210**		*e*PN		**Pn**	**10 20 17.2**	**+0.4**
THL					*e*SN		**Sn**	**10 20 40.9**	**+0.5**
THL	**Klokotos Trika**	**1.86**	**210**		*e*Pn		**Pn**	**10 20 17.2**	**+0.4**
THL					*e*Sn		**Sn**	**10 20 40.9**	**+0.5**
SMTH	**Samothraki Isl**	**1.89**	**111**		*e*PB		**Pn**	**10 20 16.5**	**-0.7**
SMTH	**Samothraki Isl**	**1.89**	**111**		*e*Pb		**Pn**	**10 20 16.5**	**-0.7**
BARS	**Barje**	**1.94**	**328**		*e*Sg		**Sg**	**10 20 46.5**	**-0.5**
BARS	**Barje**	**1.94**	**328**		*e*Sg		**Sg**	**10 20 46.5**	**-0.5**
AOS	**Alonnisos**	**2.07**	**166**		*e*PN		**Pn**	**10 20 19.8**	**+0.1**
AOS					*e*SN		**Sn**	**10 20 45.8**	**+0.2**
AOS	**Alonnisos**	**2.07**	**166**		*e*Pn		**Pn**	**10 20 19.8**	**+0.1**
AOS					*e*Sn		**Sn**	**10 20 45.8**	**+0.2**
ZAPS	**Zavoj**	**2.14**	**348**		*e*Pn		**Pb**	**10 20 22.3**	**-1.3**
ZAPS					*e*Sg		**Sb**	**10 20 49.4**	**-0.9**
ALN	**Alexandroupoli**	**2.16**	**97**		*e*PB		**Pn**	**10 20 20.8**	**0.0**
ALN					*e*SN		**Sn**	**10 20 47.8**	**+0.1**
ALN	**Alexandroupoli**	**2.16**	**97**		*e*Pb		**Pn**	**10 20 20.8**	**0.0**
ALN					*e*Sn		**Sn**	**10 20 47.8**	**+0.1**
MPEP	**Malo Peshtene**	**2.21**	**10**		*e*P		**Pn**	**10 20 22.5**	**+0.9**
MPEP					Pg		**Pg**	**10 20 27.5**	**+0.5**
AGG	**Agios Georgios**	**2.26**	**198**		*e*PB		**Pn**	**10 20 22.8**	**+0.4**
AGG	**Agios Georgios**	**2.26**	**198**		*e*Pb		**Pn**	**10 20 22.8**	**+0.4**

*MDD **15** 10:26:36.7±2.8,37.°31N×13.°57W,h0km,mb3.6/5,Error ellipse: s-maj=27.6km s-min=21.4km az=10.0,PRXIMO*
*INMG **15** 10:26:38.2±1.1,37.°09N×13.°96W,h10km,ML2.4, Error ellipse: s-maj=13.2km s-min=9.1km az=158.0*
*CSEM **15** 10:26:38.7±0.6,37.°41N×13.°36W,h10km,ML2.9/8,Error ellipse: s-maj=13.6km s-min=9.7km az=3.0*

ISC 15 10:26:36.8±3.9,37.°4N±0.°1×13.°5W±0.°2,h10km,n42,
σ1§10/67,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**3.67**	**63**	Sn	**Sn**	**10 28 18.5**	**+1.5**
	19nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**3.67**	**63**	S	**Sn**	**10 28 15.7**	**-1.3**
	10nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.72**	**92**	*e*Pn	**Pn**	**10 27 34.4**	**+0.1**
PFVI				*e*Sn	**Sn**	**10 28 17.3**	**-0.9**
PFVI				A	A	10 28 30.5	
	12nm,0.8s						
PFVI	**Vila Bisbo**	**3.72**	**92**	Sn	**Sn**	**10 28 17.1**	**-1.2**
	7.0nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.72**	**92**	*e*Pn	**Pn**	**10 27 34.4**	**+0.1**
PFVI				*e*Sn	**Sn**	**10 28 17.3**	**-0.9**
	12nm,0.8s						
PTEO	**Sao Teotonio**	**3.79**	**86**	*e*Sn	**Sn**	**10 28 19.7**	**-0.2**
PTEO	**Sao Teotonio**	**3.79**	**86**	Sn	**Sn**	**10 28 19.7**	**-0.2**
PTEO	**Sao Teotonio**	**3.79**	**86**	*e*Sn	**Sn**	**10 28 19.7**	**-0.2**
MORF	**Marmelete**	**3.85**	**89**	*e*Pn	**Pn**	**10 27 36.4**	**+0.2**
MORF				*e*Sn	**Sn**	**10 28 21.2**	**-0.3**
MORF				A	A	10 28 25.7	
	4.7nm,0.4s						
MORF	**Marmelete**	**3.85**	**89**	Pn	**Pn**	**10 27 36.4**	**+0.2**
MORF				Sn	**Sn**	**10 28 21.2**	**-0.3**
	4.7nm,0.4s						
MORF	**Marmelete**	**3.85**	**89**	*e*Pn	**Pn**	**10 27 36.4**	**+0.2**
MORF				*e*Sn	**Sn**	**10 28 21.2**	**-0.3**
	4.7nm,0.4s						
PNCL	**Nicolau / Gran**	**4.00**	**78**	*e*Pn	**Pn**	**10 27 38.1**	**0.0**
PNCL				*e*Sn	**Sn**	**10 28 24.0**	**-1.0**
PNCL				A	A	10 28 28.2	
	2.7nm,0.4s						
PNCL	**Nicolau / Gran**	**4.00**	**78**	*e*Pn	**Pn**	**10 27 38.1**	**0.0**
PNCL				*e*Sn	**Sn**	**10 28 24.0**	**-1.0**
	2.7nm,0.4s						
MOE	**Montemor**	**4.22**	**73**	*e*Sn	**Sn**	**10 28 30.2**	**-0.3**
MOE	**Montemor**	**4.22**	**73**	Sn	**Sn**	**10 28 30.2**	**-0.3**
MOE	**Montemor**	**4.22**	**73**	*e*Sn	**Sn**	**10 28 30.2**	**-0.3**
PCVE	**Castro Verde**	**4.34**	**85**	*e*Pn	**Pn**	**10 27 43.8**	**+1.0**
PCVE				*e*Sn	**Sn**	**10 28 32.7**	**-0.7**
PCVE				A	A	10 28 38.3	
	1.7nm,0.3s						
PCVE	**Castro Verde**	**4.34**	**85**	Pn	**Pn**	**10 27 43.8**	**+1.0**
PCVE				Sn	**Sn**	**10 28 32.7**	**-0.7**
	1.7nm,0.3s						
PCVE	**Castro Verde**	**4.34**	**85**	*e*Pn	**Pn**	**10 27 43.8**	**+1.0**
PCVE				*e*Sn	**Sn**	**10 28 32.7**	**-0.7**
	1.7nm,0.3s						
PBDV	**Barranco-do-Ve**	**4.43**	**90**	*e*Sn	**Sn**	**10 28 35.7**	**0.0**
PBDV				A	A	10 28 47.7	
	4.7nm,0.7s						
PBDV	**Barranco-do-Ve**	**4.43**	**90**	Sn	**Sn**	**10 28 35.7**	**0.0**
	4.7nm,0.7s						
PBDV	**Barranco-do-Ve**	**4.43**	**90**	*e*Sn	**Sn**	**10 28 35.7**	**0.0**
	4.7nm,0.7s						
PMTG	**Montargil**	**4.47**	**66**	*e*Pn	**Pn**	**10 27 46.1**	**+1.4**
PMTG				*e*Sn	**Sn**	**10 28 37.5**	**+0.7**
PMTG				A	A	10 28 38.8	
	2.5nm,1.0s						
PMTG	**Montargil**	**4.47**	**66**	*e*Pn	**Pn**	**10 27 46.1**	**+1.4**
PMTG				*e*Sn	**Sn**	**10 28 37.5**	**+0.7**
	2.5nm,1.0s						
PVAQ	**Vaqueiros**	**4.59**	**88**	*e*Pn	**Pn**	**10 27 47.5**	**+1.2**
PVAQ				*e*Sn	**Sn**	**10 28 38.5**	**-1.2**
PVAQ				A	A	10 28 43.9	
	3.4nm,0.4s						
PVAQ	**Vaqueiros**	**4.59**	**88**	Pn	**Pn**	**10 27 47.5**	**+1.2**
PVAQ				Sn	**Sn**	**10 28 38.5**	**-1.2**
	3.4nm,0.4s						
PVAQ	**Vaqueiros**	**4.59**	**88**	*e*Pn	**Pn**	**10 27 47.5**	**+1.2**
PVAQ				*e*Sn	**Sn**	**10 28 38.5**	**-1.2**
	3.4nm,0.4s						
EGRO	**El Granado**	**4.78**	**86**	Pn	**Pn**	**10 27 50.1**	**+1.3**
	0.3nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**10 28 43.2**	**-1.1**
	1.4nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.78**	**86**	P	**Pn**	**10 27 49.8**	**+1.0**
	0.3nm,0.1s,SNR=7.9						
EGRO				S	**Sn**	**10 28 43.0**	**-1.2**
	2.2nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**4.88**	**70**	*e*Sn	**Sn**	**10 28 47.5**	**+0.6**
PESTR	**Estremoz**	**4.88**	**70**	Sn	**Sn**	**10 28 47.5**	**+0.6**
PESTR	**Estremoz**	**4.88**	**70**	*e*Sn	**Sn**	**10 28 47.5**	**+0.6**
PMRV	**Marv??o**	**5.21**	**65**	*e*Pn	**Pn**	**10 27 56.6**	**+1.8**
PMRV				*e*Sn	**Sn**	**10 28 54.4**	**-0.5**
PMRV				A	A	10 28 58.6	
	3.5nm,0.2s						
PMRV	**Marv??o**	**5.21**	**65**	Pn	**Pn**	**10 27 56.6**	**+1.8**
PMRV				Sn	**Sn**	**10 28 54.4**	**-0.5**
	3.5nm,0.2s						
PMRV	**Marv??o**	**5.21**	**65**	*e*Pn	**Pn**	**10 27 56.6**	**+1.8**
PMRV				*e*Sn	**Sn**	**10 28 54.4**	**-0.5**
	3.5nm,0.2s						
EBAD	**Badajoz**	**5.29**	**73**	Pn	**Pn**	**10 27 56.5**	**+0.6**
	0.5nm,0.1s,SNR=37						
EBAD				Sn	**Sn**	**10 28 55.1**	**-1.8**
	1.1nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**5.29**	**73**	P	**Pn**	**10 27 56.1**	**+0.2**
	0.5nm,0.1s,SNR=37						
EBAD				S	**Sn**	**10 28 54.7**	**-2.2**
	1.1nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.42**	**84**	Pn	**Pn**	**10 27 58.2**	**+0.4**
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**10 28 59.5**	**-0.8**
	0.6nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.42**	**84**	P	**Pn**	**10 27 57.4**	**-0.3**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**10 28 57.9**	**-2.3**
	0.6nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.14**	**41**	Pn	**Pn**	**10 28 08.0**	**+0.4**
	0.4nm,0.1s,SNR=4.0						
ELOB				Sn	**Sn**	**10 29 14.3**	**-3.6**
	0.5nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.14**	**41**	P	**Pn**	**10 28 07.1**	**-0.5**
	0.4nm,0.2s,SNR=4.0						
EPLA	**Plasencia**	**6.38**	**63**	Pn	**Pn**	**10 28 12.8**	**+1.9**
	0.3nm,0.2s,SNR=7.9						

*ISCJB **15** 10:27:51.3±1.0,25.°3N±0.°1×37.°79E±0.°07,h10km,Error ellipse: s-maj=20.8km s-min=8.3km az=169.2*
*CSEM **15** 10:27:53.5±1.3,25.°25N×37.°83E,h15km,ML3.5,Error ellipse: s-maj=36.4km s-min=7.2km az=121.0*
*HLW **15** 10:27:55.5,25.°25N×37.°84E,h20km±11km,Md0.0,Ml3.5*

ISC 15 10:27:53.9±1.4,25.°3N±0.°1×37.°8E±0.°1,h10km,n14,
σ0§68/12,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HEDF	**Idfu**	**4.14**	**268**	P	**Pn**	**10 28 56.6**	**-0.7**
HHRG	**Al Ghardaqah**	**4.22**	**298**	S	Sn	10 29 42.0	-5.7
	baz=299						
HHRG	**Al Ghardaqah**	**4.22**	**298**	S	Sn	10 29 42.0	-5.7
HKAT	**Jabal Katrina**	**4.65**	**315**	P	**Pn**	**10 29 04.2**	**-0.3**
	baz=315						
HKAT	**Jabal Katrina**	**4.65**	**315**	P	**Pn**	**10 29 04.2**	**-0.3**
HNKL	**Nakhl**	**5.71**	**325**	P	**Pn**	**10 29 18.6**	**-0.2**
	baz=325						
HNKL				AMP		10 30 00.0	
	comp=N,280μm,0.6s,logA/T=5.7,baz=325						
HNKL	**Nakhl**	**5.71**	**325**	P	**Pn**	**10 29 18.6**	**-0.2**
HMSM	**Jabal Masmas**	**5.87**	**247**	P	**Pn**	**10 29 20.8**	**-0.3**
	baz=248						
HMSM				AMP		10 30 00.0	
	comp=E,20μm,0.3s,logA/T=4.8,baz=248						
HMSM	**Jabal Masmas**	**5.87**	**247**	P	**Pn**	**10 29 20.8**	**-0.3**
HDK1	**Dakhla**	**7.55**	**274**	P	**Pn**	**10 29 44.9**	**+0.7**
	baz=275						
HDK1	**Dakhla**	**7.55**	**274**	P	**Pn**	**10 29 44.9**	**+0.7**
NAY	**Al-Naaiem**	**9.32**	**63**	*e*P	**Pn**	**10 30 08.2**	**-0.1**
RDF	**Al-Radifah**	**9.45**	**65**	*e*P	**Pn**	**10 30 11.5**	**+1.3**
QRN	**Al-Qurain**	**9.70**	**67**	*e*P	**Pn**	**10 30 12.7**	**-0.8**
QRN				*e*S	Sn	10 32 24.1	+22

WEL 15 10:32:35.5±0.2,41.°13S×173.°92E,h67km±1km,ML3.7/17,
6C-5D,Error ellipse: s-maj=1.6km s-min=1.3km az=90.0,
South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCW	**Tory Channel**	**0.28**	**107**	⇓Pn	Pn	10 32 46.4	+0.1
TCW				SN	Sn	10 32 53.8	-0.3
TUWZ	**Tuamarina**	**0.30**	**177**	⇓Pn	Pn	10 32 46.2	-0.3
TUWZ				SN	Sn	10 32 53.7	-0.6
DUWZ	**D'Urville Isla**	**0.33**	**0**	⇓Pn	Pn	10 32 46.0	-0.7
DUWZ				SN	Sn	10 32 54.4	-0.5
NNZ	**Nelson**	**0.42**	**258**	⇓Pn	Pn	10 32 46.4	-0.9
NNZ				SN	Sn	10 32 54.8	-1.2
BSWZ	**Blackbirch Sta**	**0.58**	**183**	PN	Pn	10 32 49.2	+0.2
BSWZ				SN	Sn	10 32 59.6	+0.8
SNZO	**South Karori**	**0.62**	**107**	⇑PN	Pn	10 32 49.5	+0.1
SNZO				SN	Sn	10 33 00.5	+1.1
SNZO				SN		10 33 00.8	
CMWZ	**Cape Campbell**	**0.65**	**160**	PN	Pn	10 32 51.1	+1.3
WEL	**Wellington**	**0.66**	**104**	PN	Pn	10 32 49.9	+0.2
BHW	**Baring Head**	**0.77**	**111**	PN	Pn	10 32 50.9	-0.1
KIW	**Kapiti Island**	**0.80**	**70**	⇑PN	Pn	10 32 51.8	+0.4
KIW				SN	Sn	10 33 04.4	+1.2
CAW	**Cannon Point**	**0.87**	**89**	PN	Pn	10 32 52.2	-0.1
THZ	**Tophouse**	**0.99**	**230**	⇑PN	Pn	10 32 53.9	0.0
OGWZ	**Otaki Gorge**	**1.00**	**72**	⇑PN	Pn	10 32 54.0	+0.2
MSWZ	**Moikau Station**	**1.04**	**106**	PN	Pn	10 32 54.1	-0.3
MSWZ				SN	Sn	10 33 13.0	+4.4
PLWZ	**Palliser**	**1.10**	**114**	PN	Pn	10 32 54.8	-0.4
QRZ	**Quartz Range**	**1.10**	**286**	PN	Pn	10 32 54.4	-0.7
PAWZ	**Paruwai Farm**	**1.16**	**103**	PN	Pn	10 32 55.6	-0.4
MTW	**Mount Morrison**	**1.20**	**92**	PN	Pn	10 32 56.0	-0.4
HOWZ	**Holdsworth Sta**	**1.23**	**80**	⇑PN	Pn	10 32 56.4	-0.5
KHZ	**Kahutara**	**1.31**	**192**	PN	Pn	10 32 57.9	-0.1
MRZ	**Mangatainoka R**	**1.34**	**70**	PN	Pn	10 32 57.8	-0.6
TRWZ	**Traveller**	**1.36**	**102**	PN	Pn	10 32 58.4	-0.1
TMWZ	**Te Maipa**	**1.49**	**90**	PN	Pn	10 32 59.6	-0.8
TIWZ	**Tintock**	**1.53**	**77**	PN	Pn	10 32 59.4	-1.5
WAZ	**Wanganui**	**1.60**	**31**	PN	Pn	10 33 02.7	+0.9
DFE	**Dawson Falls**	**1.81**	**5**	PN	Pn	10 33 05.1	+0.4
BFZ	**Birch Farm**	**1.82**	**76**	PN	Pn	10 33 03.5	-1.2
NWEZ	**Newall Road**	**1.86**	**359**	PN	Pn	10 33 05.8	+0.6
NEZ	**North Egmont**	**1.86**	**4**	PN	Pn	10 33 05.9	+0.5
TSZ	**Takapari Road**	**1.89**	**56**	PN	Pn	10 33 04.8	-0.9
PKE	**Pukeiti**	**1.94**	**2**	PN	Pn	10 33 06.7	+0.4
DREZ	**Durham Road**	**1.95**	**6**	PN	Pn	10 33 07.1	+0.6
MHEZ	**Mangahewa**	**2.08**	**9**	⇑PN	Pn	10 33 09.1	+0.9
VRZ	**Vera Road**	**2.11**	**18**	PN	Pn	10 33 09.6	+1.0
MOVZ	**Moawhango**	**2.22**	**40**	PN	Pn	10 33 09.6	-0.6
BHHZ	**Black Hill Sta**	**2.32**	**46**	PN	Pn	10 33 11.3	-0.3
HIZ	**Hauiti**	**2.71**	**16**	PN	Pn	10 33 17.1	+0.3
MQZ	**McQueen's Vall**	**2.74**	**200**	PN	Pn	10 33 15.8	-1.3
TOZ	**Tahuroa Road**	**3.61**	**20**	*e*PN	Pn	10 33 28.8	-0.2
FOZ	**Fox Glacier**	**3.97**	**231**	*e*PN	Pn	10 33 31.5	-2.4
MKAZ	**Moumakai**	**4.13**	**14**	⇓PN	Pn	10 33 36.5	+0.4
WTAZ	**Waiatarua**	**4.22**	**7**	PN	Pn	10 33 38.0	+0.5
RVAZ	**Riverhead Bore**	**4.39**	**7**	PN	Pn	10 33 39.8	+0.2
ABAZ	**Army Bay**	**4.58**	**9**	PN	Pn	10 33 42.8	+0.5
ODZ	**Otahua Downs**	**4.59**	**210**	PN	Pn	10 33 41.1	-1.3
KUZ	**Kuaotunu**	**4.60**	**18**	PN	Pn	10 33 42.4	-0.1

NNC 15 10:45:56.7±2.5,54.°17N×86.°27E,h0km,mb3.7,mpv3.1,
6C-8D,Error ellipse: s-maj=22.2km s-min=12.6km
az=53.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.82**	**237**	⇓Pn	Pn	10 47 24.7	+0.6
	2.8nm,0.7s						
KURK				⇓Lg	Lg	10 49 02.7	
	10nm,0.8s						
KURBB	**Kurchatov Arra**	**5.92**	**236**	⇓Pn	Pn	10 47 26.4	+0.9
	0.4nm,0.7s						
KURBB				⇑Lg	Lg	10 49 05.6	
	3.4nm,0.8s						
MK31	**Makanchi Array**	**7.81**	**201**	⇓Pn	Pn	10 47 50.1	-1.3
	0.8nm,0.5s,baz=29,slow=13,SNR=19						
MK31				Sn	Sn	10 49 21.7	+1.1
	0.7nm,0.5s,baz=27,slow=26,SNR=8.9						
MK31				⇑Lg	Lg	10 50 04.7	
	3.5nm,0.8s,baz=31,slow=33,SNR=4.0						
VOSK	**Vostochnaya**	**9.24**	**267**	⇑Pn	Pn	10 48 10.9	-0.2
	1.8nm,0.3s						
VOSK				⇓Sn	Sn	10 49 57.8	+2.1
	3.2nm,0.6s						
BVA0	**Borovoye Array**	**9.52**	**270**	⇑Pn	Pn	10 48 16.0	+1.2
	0.3nm,0.5s,baz=112,slow=30,SNR=4.3						
BVA0				⇓Sn	Sn	10 50 02.5	+0.1
	0.4nm,0.6s,baz=77,slow=24						
BRVK	**Borovoye**	**9.57**	**270**	⇑Pn	Pn	10 48 15.7	+0.1
	4.8nm,0.7s						
BRVK				⇑Sn	Sn	10 50 03.5	-0.2
	2.3nm,0.8s						
ZRNK	**Zerenda**	**10.35**	**270**	⇓Pn	Pn	10 48 26.2	-0.1
	0.7nm,0.3s						
ZRNK				⇓Sn	Sn	10 50 22.8	0.0
	2.0nm,0.7s						

*IDC **15** 11:18:42.1±6.0,45.°66N×152.°69E,h0km,mb3.7/2, mb1 3.7/5,mb1mx3.4/28,mbtmp3.7/5,ML3.5/3,Error ellipse: s-maj=123.7km s-min=31.1km az=134.0*
*MOS **15** 11:18:46.2±1.3,45.°81N×152.°44E,h63km,mb4.0/2, Error ellipse: s-maj=41.8km s-min=22.9km az=143.2*
*JMA **15** 11:18:50.0±0.6,46.°29N×151.°92E,h30km,M4.4*

ISC 15 11:18:54.7±2.0,45.°1N±0.°1×152.°0E±0.°1,h41km,n26,
σ1§62/34,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.96**	**273**	*e*PN	Pn	11 19 33.0	-6.1
KUR				*e*S	**Sn**	**11 20 11.0**	**-2.3**
KUR				pmax	pmax		
	comp=Z,80nm,0.6s						
KUR				smax	smax		
	comp=N,290nm,0.5s						
KUR				smax	smax		
	comp=E,150nm,0.5s						
NEM2	**Nemuro 2**	**4.86**	**251**	P	**Pn**	**11 20 05.7**	**+0.4**
NEM2				*e*S	**Sn**	**11 21 02.1**	**+1.9**
JNK	**Nakash**	**5.48**	**256**	P	**Pn**	**11 20 14.3**	**+0.6**
JNK				*e*S	**Sn**	**11 21 18.1**	**+2.7**
JAK	**Akkeshi**	**5.71**	**251**	P	**Pn**	**11 20 17.1**	**+0.2**
JAK				*e*S	**Sn**	**11 21 21.9**	**+0.7**
JAR	**Ashorobuto**	**6.22**	**256**	P	**Pn**	**11 20 24.5**	**+0.5**
JAR				*e*S	**Sn**	**11 21 37.5**	**+3.7**
JMP	**Maruseppu**	**6.31**	**263**	P	**Pn**	**11 20 25.1**	**0.0**
JOB	**Onbets**	**6.33**	**252**	P	**Pn**	**11 20 26.0**	**+0.6**
JOB				*e*S	**Sn**	**11 21 37.2**	**+0.9**
JCH	**Churui**	**6.76**	**251**	P	**Pn**	**11 20 31.4**	**0.0**
JCH				*e*S	**Sn**	**11 21 47.2**	**+0.2**
JKK2	**Kamakawa 2**	**6.77**	**262**	P	**Pn**	**11 20 32.7**	**+1.2**
ASAJ	**Asahikawa**	**6.82**	**265**	P	**Pn**	**11 20 33.7**	**+1.6**
ASAJ	**Asahikawa**	**6.82**	**265**	Pn	**Pn**	**11 20 31.0**	**-1.2**
	comp=E,1.3nm,0.3s,baz=82,slow=12,SNR=9.1						
JEM	**Erimo**	**7.17**	**247**	P	**Pn**	**11 20 39.0**	**+2.1**
JNBK	**Urakawa-nobuka**	**7.31**	**250**	P	**Pn**	**11 20 38.9**	**0.0**
JBT2	**Biratori 2**	**7.37**	**255**	*e*S	**Sn**	**11 22 04.2**	**+2.1**
JNB	**Noboribetsu**	**8.40**	**255**	P	**Pn**	**11 20 53.9**	**+0.1**
JNB				*e*S	**Sn**	**11 22 26.3**	**-0.9**
JKB	**Kayabe**	**8.64**	**252**	P	**Pn**	**11 20 55.9**	**-1.1**
JKB				*e*S	**Sn**	**11 22 29.1**	**-4.0**
PETK	**Petropavlovsk-**	**8.79**	**23**	PN	Pn	11 20 41.8	-17
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**8.79**	**23**	Pn	Pn	11 20 41.8	-17
	comp=Z,0.6nm,0.3s,baz=197,slow=15,SNR=16						
JANG	**Nango**	**9.09**	**242**	P	**Pn**	**11 21 02.8**	**-0.5**
JANG				*e*S	**Sn**	**11 22 42.3**	**-2.0**
JTM	**Tenmabayashi**	**9.14**	**245**	P	**Pn**	**11 21 03.6**	**-0.4**
JTM				*e*S	**Sn**	**11 22 42.3**	**-3.3**
JRG	**Rokugo**	**10.21**	**240**	P	**Pn**	**11 21 20.0**	**+1.3**
JRG				*e*S	**Sn**	**11 23 11.2**	**-0.7**
JIO	**Ouri**	**10.40**	**234**	*e*S	**Sn**	**11 23 16.6**	**+0.1**
MJAR	**Matsushiro Arr**	**13.53**	**235**	Pn	**Pn**	**11 22 04.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=30,slow=12,SNR=3.4						
KSRS	**Korea Array**	**19.64**	**255**	P	**P**	**11 23 19.1**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=53,slow=11,SNR=10						
SONM	**Songino Array**	**31.20**	**292**	P	P	11 25 04.6	-5.3
	comp=Z,0.8nm,0.7s,baz=90,slow=13,SNR=2.4						
BSD	**Bornholm Skovb**	**73.73**	**336**	*i* P	**P**	**11 30 24.1**	**+0.1**

IDC 15 11:21:41.7±0.8,3.°29N×127.°41E,h0km,mb4.0/9,
mb1 4.1/9,mb1mx3.8/27,mbtmp4.0/9,Error ellipse:
s-maj=50.4km s-min=15.1km az=73.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.33**	**185**	P	P	11 26 30.5	0.0
	2.4nm,0.9s,baz=22,slow=9.8,SNR=5.3						
WRA	**Warramunga Arr**	**24.07**	**164**	P	P	11 26 58.5	-0.5
	1.8nm,0.5s,baz=334,slow=11,SNR=30						
ASAR	**Alice Springs**	**27.53**	**167**	P	P	11 27 30.8	+0.4
	0.9nm,0.5s,baz=350,slow=7.5,SNR=24						
STKA	**Stephens Creek**	**37.48**	**160**	P	P	11 28 57.2	-0.1
	2.3nm,0.8s,baz=354,slow=5.5,SNR=2.7						
PETK	**Petropavlovsk-**	**55.58**	**22**	P	P	11 31 18.9	0.0
	1.4nm,0.6s,baz=190,slow=3.2,SNR=7.2						
MKAR	**Makanchi Array**	**58.30**	**325**	P	P	11 31 38.9	+0.4
	1.0nm,0.4s,baz=118,slow=7.8,SNR=15						
KURBB	**Kurchatov Arra**	**62.47**	**327**	P	P	11 32 06.1	-0.8
	0.8nm,0.3s,baz=129,slow=5.8,SNR=7.0						
BVAR	**Borovoye Array**	**68.06**	**327**	P	P	11 32 43.6	+0.5
	0.7nm,0.5s,baz=152,slow=10,SNR=4.7						
AKTO	**Akhtubinsk**	**74.42**	**322**	P	P	11 33 21.5	-0.2
	0.6nm,0.3s,baz=99,slow=10,SNR=4.3						
TORD	**Torodi Ar. Bea**	**123.70**	**288**	PKP	PKPdf	11 40 42.2	-0.4
	0.4nm,0.9s,baz=99,slow

baz=222,slow=22
FIA0 Lg Lg 11 31 17.4
baz=215,slow=22
FIA0 FINESS Array S 4.06 27 Pn **Pn 11 30 14.2 +0.7**
baz=208,slow=12,SNR=50
FIA0 Sn **Sn 11 31 03.6 +1.9**
baz=222,slow=21,SNR=50
FIA0 Lg Lg 11 31 17.4
baz=215,slow=22,SNR=9.4
FINES FINESS Array B 4.06 27 Pn **Pn 11 30 14.1 +0.6**
comp=Z,0.4nm,0.3s,baz=210,slow=12,SNR=20
FINES Pg **Pb 11 30 23.8 +1.3**
comp=Z,0.9nm,0.3s,baz=209,slow=14,SNR=22
FINES Sn **Sn 11 31 03.3 +1.6**
comp=Z,0.6nm,0.3s,baz=193,slow=20,SNR=3.6
FINES Lg Lg 11 31 18.4
comp=Z,1.9nm,0.3s,baz=192,slow=34,SNR=11
NRAU Nora 4.14 297 *eP* **Pn 11 30 16.0 +1.4**
NRAU Nora 4.14 297 P **Pn 11 30 16.0 +1.4**
HFS Hagfors 4.98 301 Pn **Pn 11 30 27.3 +1.1**
baz=128,slow=16
HFS Sn **Sn 11 31 25.0 +0.5**
baz=100,slow=28
HFS Lg Lg 11 31 45.4
baz=111,slow=28
HFS Hagfors 4.98 301 Pn **Pn 11 30 27.3 +1.1**
baz=128,slow=16
HFS Sn **Sn 11 31 25.0 +0.5**
baz=100,slow=28
HFS Lg Lg 11 31 45.4
baz=111,slow=28
HFS Hagfors 4.98 301 Pn **Pn 11 30 26.6 +0.4**
comp=Z,0.6nm,0.3s,baz=130,slow=14,SNR=19
HFS Lg Lg 11 31 46.5
comp=Z,0.7nm,0.3s,baz=115,slow=30,SNR=7.6
HFS Hagfors 4.98 301 Pn **Pn 11 30 27.3 +1.1**
baz=128,slow=15,SNR=50
HFS Sn **Sn 11 31 25.0 +0.5**
baz=100,slow=24,SNR=50
HFS Lg Lg 11 31 45.4
baz=111,slow=24,SNR=5.3
UDD Uddeholm 5.01 300 *eP* **Pn 11 30 27.7 +1.2**
UDD Uddeholm 5.01 300 P **Pn 11 30 27.7 +1.2**
NB2 NORSAR Subarra 6.47 304 Pn **Pn 11 30 47.0 +0.3**
baz=115,slow=14
NB2 Lg Lg 11 32 33.6
baz=120,slow=28
NB2 NORSAR Subarra 6.47 304 Pn **Pn 11 30 47.0 +0.3**
baz=115,slow=14
NB2 Lg Lg 11 32 33.6
baz=120,slow=28
NB2 NORSAR Subarra 6.47 304 Pn **Pn 11 30 47.0 +0.3**
baz=115,slow=13,SNR=50
NB2 Lg Lg 11 32 33.6
baz=120,slow=27,SNR=3.0
NOA NORSAR Array B 6.47 304 Pn **Pn 11 30 46.1 -0.6**
comp=Z,0.2nm,0.3s,baz=130,slow=17,SNR=6.8
NOA Lg Lg 11 32 32.3
comp=Z,0.4nm,0.3s,baz=57,slow=22,SNR=4.0
ARA0 ARCESS Array S 11.79 6 Pn **Pn 11 31 56.6 -2.8**
baz=184,slow=14
ARA0 ARCESS Array S 11.79 6 P **Pn 11 31 56.6 -2.8**
baz=184,slow=14
ARCES ARCESS Array B 11.79 6 Pn Pn 11 31 55.6 -3.8
comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=3.6

CASC 15 11:46:24.1±2.4**, 13°60N**×**91°61W, h10**km±26km**, MD3.5,**
Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.71**	**358**	*eP*	**Pg**	11 46 35.6	-2.4
JAT				*eS*	Sn	11 46 51.9	+0.5
FUG	**Fuego 3**	**1.13**	**42**	*eP*	**Pb**	11 46 43.8	-2.2
FUG				*eS*	Sn	11 47 09.6	+7.7
NBG	**Las Nubes**	**1.57**	**51**	*eP*	**Pn**	11 46 52.3	-0.1
NBG				*eS*	Sg	11 47 22.2	+6.8
RTR	**El Retiro**	**1.94**	**81**	*eP*	**Pn**	11 46 57.7	+0.4
RBDL	**Robledal**	**1.94**	**75**	*eP*	**Pn**	11 46 56.6	-0.7
RBDL				*eS*	Sn	11 47 21.8	-0.2
SBLS	**San Blas**	**1.95**	**83**	*eP*	**Pn**	11 46 57.2	-0.4
SBLS				*eS*	Sn	11 47 23.0	+0.6
SNJE	**San Jose**	**1.97**	**82**	*eP*	**Pn**	11 46 58.0	+0.2
SNJE				*eS*	Sn	11 47 23.5	+0.7
MRL	**Marmol**	**2.37**	**52**	*eP*	**Pn**	11 47 03.7	+0.4
MRL				*eS*	Sg	11 47 41.8	+1.2
LFRS	**El Faro**	**2.48**	**89**	*eP*	**Pn**	11 47 04.6	-0.1
SNVI	**San Vicente**	**2.70**	**89**	*eP*	**Pn**	11 47 07.1	-0.7

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*UPP **15** 11:52:17.7, 57°.78N×22°.60E, h0km, ML2.1, Suspected Mining explosion.*
*ISCJB **15** 11:52:18.9±0.5, 57°.90N±0°.04×22°.27E±0°.06, h0km, Error ellipse: s-maj=6.0km s-min=4.0km az=153.6*
*HEL **15** 11:52:19.4±0.2, 57°.82N×22°.38E, h0km, ML2.2, ML2.1(UPP), Explosion*
*BER **15** 11:52:19.9±4.6, 57°.77N×22°.39E, h0km, ML2.2(NAO), Suspected explosion*
*NAO **15** 11:52:20.7±2.6, 57°.95N×22°.31E, ML2.2*
*CSEM **15** 11:52:20.0±0.1, 57°.84N×22°.27E, h2km, ML2.2, Error ellipse: s-maj=3.8km s-min=2.7km az=151.0, Mining explosion.*
*IDC **15** 11:52:20.2±2.3, 57°.87N×22°.27E, h0km, mb1 3.2/4, mb1mx3.1/27, mbtmp3.2/4, ML2.7/4, Error ellipse: s-maj=25.1km s-min=9.4km az=160.0*
ISC 15 11:52:18.9±0.9**, 57°.86N**±0°.04×**22°.31E**±0°.03**, h0km, n52,**
σ1§17/65, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.23**	**183**	*eP*	**Pg**	**11 52 23.5**	**+0.2**
SLIT	**Slitere, Latvi**	**0.23**	**183**	P	**Pg**	**11 52 23.5**	**+0.2**
MTSE	**Matsula**	**1.17**	**42**	*eP*	**Pg**	**11 52 40.2**	**-1.1**
MTSE				*eS*	**Sg**	**11 52 55.5**	**-0.9**
GOTU	**Gotland**	**2.01**	**267**	*eP*	**Pn**	**11 52 54.6**	**+0.5**
GOTU	**Gotland**	**2.01**	**267**	P	**Pn**	**11 52 54.6**	**+0.5**
VSU	**Vasula**	**2.42**	**74**	*eP*	**Pn**	**11 52 59.6**	**0.0**
VSU				*eSG*	**Sb**	**11 53 32.5**	**-1.1**
VSU	**Vasula**	**2.42**	**74**	*eP*	**Pn**	**11 53 00.8**	**+1.1**
	SNR=20						
VSU				*eS*	**Sb**	**11 53 32.0**	**-1.6**
	42nm,0.3s,SNR=20						
NYNU	**Nynaeshamn**	**2.54**	**299**	*eP*	**Pn**	**11 53 02.5**	**+1.2**
NYNU	**Nynaeshamn**	**2.54**	**299**	P	**Pn**	**11 53 02.4**	**+1.2**
MEF	**Metsahovi**	**2.60**	**24**	*eP*	**Pn**	**11 53 04.2**	**+2.1**
MEF				*eS*	**Sn**	**11 53 35.2**	**+0.9**
MEF				MSG		11 53 41.6	
	comp=Z,15nm,0.1s						
MEF	**Metsahovi**	**2.60**	**24**	*eP*	**Pn**	**11 53 04.1**	**+2.0**
	SNR=16						
MEF				S	**Sn**	**11 53 35.2**	**+0.9**
AAL	**Aland**	**2.62**	**334**	*eP*	**Pn**	**11 53 04.6**	**+2.3**
AAL				*eSG*	**Sg**	**11 53 43.0**	**+0.1**
AAL	**Aland**	**2.62**	**334**	P	**Pn**	**11 53 02.9**	**+0.6**
AAL				Sg	**Sg**	**11 53 42.9**	**+0.1**
NRTU	**Norrtaelje**	**2.64**	**315**	*eP*	**Pn**	**11 53 03.7**	**+1.0**
NRTU	**Norrtaelje**	**2.64**	**315**	P	**Pn**	**11 53 03.7**	**+1.0**
	baz=123						
BYXU	**Byxelkrok**	**2.91**	**261**	*eP*	**Pn**	**11 53 07.2**	**+0.8**
BYXU	**Byxelkrok**	**2.91**	**261**	P	**Pn**	**11 53 07.2**	**+0.8**
VIKU	**Vikbolandet**	**3.04**	**285**	*eP*	**Pn**	**11 53 09.5**	**+1.3**
VIKU	**Vikbolandet**	**3.04**	**285**	P	**Pn**	**11 53 09.4**	**+1.3**
GRAU	**Graesoe**	**3.15**	**324**	*eP*	**Pn**	**11 53 10.2**	**+0.5**
GRAU	**Graesoe**	**3.15**	**324**	P	**Pn**	**11 53 10.2**	**+0.5**
RAF	**Rauma**	**3.19**	**355**	*eP*	**Pn**	**11 53 11.6**	**+1.4**
RAF				MSG		11 54 02.6	
	comp=Z,4.0nm,0.1s						
RAF	**Rauma**	**3.19**	**355**	P	**Pn**	**11 53 11.5**	**+1.4**
FLYU	**Flymyra**	**3.23**	**317**	*eP*	**Pn**	**11 53 13.0**	**+2.3**
FLYU	**Flymyra**	**3.23**	**317**	P	**Pn**	**11 53 13.0**	**+2.3**
PVF	**Pernaja**	**3.25**	**33**	*ePG*	**Pg**	**11 53 20.0**	**-1.2**
BACU	**Backbrunna**	**3.36**	**309**	*eP*	**Pn**	**11 53 13.9**	**+1.3**
BACU	**Backbrunna**	**3.36**	**309**	P	**Pn**	**11 53 13.9**	**+1.3**
ESKU	**Eskilstuna**	**3.39**	**296**	*eP*	**Pn**	**11 53 14.4**	**+1.4**
ESKU	**Eskilstuna**	**3.39**	**296**	P	**Pn**	**11 53 14.3**	**+1.4**
OSKU	**Oskarshamn**	**3.42**	**261**	*eP*	**Pn**	**11 53 13.9**	**+0.6**
OSKU	**Oskarshamn**	**3.42**	**261**	P	**Pn**	**11 53 13.9**	**+0.6**
VJF	**Virojoki**	**3.81**	**43**	MSG		11 54 23.2	
	comp=Z,6.8nm,0.3s						
BLEU	**Blekinge**	**3.87**	**249**	*eP*	**Pn**	**11 53 20.4**	**+0.7**
BLEU	**Blekinge**	**3.87**	**249**	P	**Pn**	**11 53 20.3**	**+0.7**
FIA0	**FINESS Array S**	**4.07**	**26**	Pn	**Pn**	**11 53 23.8**	**+1.4**
	baz=217,slow=12						
FIA0				Pg	**Pb**	**11 53 29.9**	**-1.4**
	baz=200,slow=16						
FIA0				Sn	**Sn**	**11 54 12.2**	**+1.6**
FIA0				Lg	Lg	11 54 26.2	
	baz=196,slow=28						
FIA0	**FINESS Array S**	**4.07**	**26**	Pn	**Pn**	**11 53 23.8**	**+1.4**
	baz=217,slow=12						
FIA0				Pg	**Pb**	**11 53 29.9**	**-1.4**
	baz=200,slow=16						
FIA0				Sn	**Sn**	**11 54 12.2**	**+1.6**
FIA0				Lg	Lg	11 54 26.2	
	baz=196,slow=28						
FIA0	**FINESS Array S**	**4.07**	**26**	Pn	**Pn**	**11 53 23.8**	**+1.4**
	baz=217,slow=11,SNR=2.9						
FIA0				Sn	**Sn**	**11 54 12.2**	**+1.6**
FIA0				Lg	Lg	11 54 26.2	
	baz=196,slow=25,SNR=9.5						
FINES	**FINESS Array B**	**4.07**	**26**	Pn	**Pn**	**11 53 23.6**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=214,slow=12,SNR=19						
FINES				Pg	**Pb**	**11 53 32.8**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=210,slow=14,SNR=21						
FINES				Sn	**Sn**	**11 54 12.1**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=205,slow=20,SNR=3.2						
FINES				Lg	Lg	11 54 28.6	
	comp=Z,1.7nm,0.3s,baz=203,slow=23,SNR=10						
VXJU	**Vaexsjoe**	**4.10**	**260**	*eP*	**Pn**	**11 53 23.2**	**+0.5**
VXJU	**Vaexsjoe**	**4.10**	**260**	P	**Pn**	**11 53 23.2**	**+0.5**
HFS	**Hagfors**	**5.00**	**301**	Pn	**Pn**	**11 53 35.9**	**+0.7**
	baz=128,slow=16						
HFS				Sn	**Sn**	**11 54 33.3**	**-0.3**
	baz=100,slow=22						
HFS				Lg	Lg	11 54 55.3	
	baz=115,slow=37						
HFS	**Hagfors**	**5.00**	**301**	Pn	**Pn**	**11 53 35.9**	**+0.7**
	baz=128,slow=16						
HFS				Sn	**Sn**	**11 54 33.3**	**-0.3**
	baz=100,slow=22						
HFS				Lg	Lg	11 54 55.3	
	baz=115,slow=37						
HFS	**Hagfors**	**5.00**	**301**	Pn	**Pn**	**11 53 36.0**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=128,slow=13,SNR=21						
HFS				Lg	Lg	11 54 53.6	
	comp=Z,0.7nm,0.3s,baz=115,slow=28,SNR=6.3						
HFS	**Hagfors**	**5.00**	**301**	Pn	**Pn**	**11 53 35.9**	**+0.7**
	baz=128,slow=14,SNR=9.0						
HFS				Sn	**Sn**	**11 54 33.3**	**-0.3**
	baz=100,slow=22,SNR=3.0						
HFS				Lg	Lg	11 54 55.3	
	baz=115,slow=32,SNR=5.1						
NB2	**NORSAR Subarra**	**6.49**	**304**	Pn	**Pn**	**11 53 55.7**	**+0.1**
	baz=114,slow=14						
NB2	**NORSAR Subarra**	**6.49**	**304**	Pn	**Pn**	**11 53 55.7**	**+0.1**
	baz=114,slow=14						
NB2	**NORSAR Subarra**	**6.49**	**304**	Pn	**Pn**	**11 53 55.7**	**+0.1**
	baz=114,slow=13,SNR=3.5						
NOA	**NORSAR Array B**	**6.49**	**304**	Pn	**Pn**	**11 53 54.8**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=121,slow=11,SNR=7.4						
NOA				Lg	Lg	11 55 44.0	
	comp=Z,0.4nm,0.3s,baz=55,slow=22,SNR=4.6						
ARA0	**ARCESS Array S**	**11.80**	**6**	Pn	Pn	11 55 04.6	-3.6
	baz=186,slow=14						
ARA0	**ARCESS Array S**	**11.80**	**6**	P	Pn	11 55 04.6	-3.6
	baz=186,slow=14						
ARCES	**ARCESS Array B**	**11.80**	**6**	Pn	Pn	11 55 04.6	-3.7
	comp=Z,0.1nm,0.3s,baz=183,slow=14,SNR=4.0						

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*ISCJB **15** 11:52:37.8±0.5, 39°.76N±0°.03×29°.55E±0°.04, h0km, Error ellipse: s-maj=4.1km s-min=3.9km az=172.3*
*ISK **15** 11:52:37.9, 39°.70N×29°.52E, h21km, MD2.7*
*CSEM **15** 11:52:37.4±0.3, 39°.70N×29°.55E, h1km, MD2.7, Error ellipse: s-maj=7.4km s-min=6.8km az=106.0*
*DDA **15** 11:52:38.8, 39°.72N×29°.47E, h7km, MD3.0*
ISC 15 11:52:37.5±0.8**, 39°.72N**±0°.02×**29°.51E**±0°.02**, h0km, n40,**
σ1§15/55, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVSB	**Tavsanli**	**0.28**	**188**	*ePG*	**Pg**	**11 52 43.7**	**+1.0**
TVSB				*eSG*	**Sb**	**11 52 48.8**	**-1.8**
TVSB	**Tavsanli**	**0.28**	**188**	*ePg*	**Pg**	**11 52 43.7**	**+1.0**
TVSB				*eSg*	**Sb**	**11 52 48.8**	**-1.8**
CAVI	**Cavuskoy**	**0.54**	**28**	*ePG*	**Pb**	**11 52 50.1**	**+0.2**
CAVI	**Cavuskoy**	**0.54**	**28**	*ePg*	**Pb**	**11 52 50.1**	**+0.2**
ORLT	**Orhaneli**	**0.57**	**305**	*ePG*	**Pb**	**11 52 50.0**	**-0.3**
ORLT				*eSG*	**Sb**	**11 52 59.3**	**+0.2**
ORLT	**Orhaneli**	**0.57**	**305**	*ePg*	**Pb**	**11 52 50.1**	**-0.3**
ORLT				*eSg*	**Sb**	**11 52 59.3**	**+0.2**
DST	**Dursunbey**	**0.70**	**260**	*ePG*	**Pb**	**11 52 52.4**	**-0.1**
DST				*eSG*	**Sb**	**11 53 02.6**	**-0.1**
DST	**Dursunbey**	**0.70**	**260**	*ePg*	**Pb**	**11 52 52.4**	**-0.1**
DST				*eSg*	**Sb**	**11 53 02.6**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.80**	**324**	*ePG*	**Pb**	**11 52 54.4**	**+0.1**
MDNY	**Mudanya-Bursa**	**0.80**	**324**	*ePg*	**Pb**	**11 52 54.4**	**+0.1**
DURS	**Dursunbey**	**0.81**	**262**	*iP*	**Pg**	**11 52 53.2**	**+0.2**
DURS				*iS*	**Sb**	**11 53 05.7**	**-0.3**
DURS	**Dursunbey**	**0.81**	**262**	*iP*	**Pg**	**11 52 53.2**	**+0.2**
DURS				*iS*	**Sb**	**11 53 05.7**	**-0.3**
ALT	**Altintas**	**0.81**	**145**	*ePG*	**Pb**	**11 52 54.0**	**-0.5**
ALT	**Altintas**	**0.81**	**145**	*ePg*	**Pb**	**11 52 54.0**	**-0.5**
YLV	**Yalova**	**0.85**	**353**	*ePG*	**Pb**	**11 52 54.7**	**-0.4**
YLV	**Yalova**	**0.85**	**353**	*ePg*	**Pb**	**11 52 54.7**	**-0.4**
KCTX	**Karacabey (Bur**	**1.04**	**302**	*ePG*	**Pb**	**11 52 58.7**	**+0.4**
KCTX	**Karacabey (Bur**	**1.04**	**302**	*ePg*	**Pb**	**11 52 58.7**	**+0.4**
GULT	**Gulveren**	**1.05**	**47**	*ePG*	**Pb**	**11 52 58.5**	**0.0**
GULT	**Gulveren**	**1.05**	**47**	*ePg*	**Pb**	**11 52 58.5**	**0.0**
SEYT	**Eskypehyr**	**1.05**	**101**	*iP*	**Pn**	**11 53 00.2**	**+0.6**
SEYT				*iS*	**Sn**	**11 53 18.2**	**+3.1**
SEYT	**Eskypehyr**	**1.05**	**101**	*iP*	**Pn**	**11 53 00.2**	**+0.6**
BUY	**Buyukada**	**1.17**	**345**	*ePN*	**Pg**	**11 52 59.3**	**-0.5**
BUY	**Buyukada**	**1.17**	**345**	*ePn*	**Pg**	**11 52 59.3**	**-0.5**
BALB	**Balikesir**	**1.26**	**267**	*ePN*	**Pg**	**11 53 01.2**	**-0.4**
BALB	**Balikesir**	**1.26**	**267**	*ePn*	**Pg**	**11 53 01.2**	**-0.4**
KHAL	**Karahalli**	**1.35**	**181**	*iP*	**Pg**	**11 53 02.9**	**-0.4**
KHAL				*iS*	**Sn**	**11 53 24.3**	**+1.9**
KHAL	**Karahalli**	**1.35**	**181**	*iP*	**Pg**	**11 53 02.9**	**-0.4**
KHAL				*iS*	**Sn**	**11 53 24.3**	**+1.9**
KULA	**Kula-Manisa**	**1.38**	**209**	*ePN*	**Pg**	**11 53 01.6**	**-2.2**
KULA	**Kula-Manisa**	**1.38**	**209**	*ePn*	**Pg**	**11 53 01.6**	**-2.2**
MANT	**Manisa**	**1.44**	**211**	*iP*	**Pn**	**11 53 04.4**	**-0.5**
MANT				*iS*	**Sn**	**11 53 26.7**	**+2.0**
MANT	**Manisa**	**1.44**	**211**	*iP*	**Pn**	**11 53 04.4**	**-0.5**
MANT				*iS*	**Sn**	**11 53 26.7**	**+2.0**
GONE	**Gonen-Balikesi**	**1.44**	**284**	*ePN*	**Pn**	**11 53 04.0**	**-0.8**
GONE	**Gonen-Balikesi**	**1.44**	**284**	*ePn*	**Pn**	**11 53 04.0**	**-0.8**
BALY	**Balya**	**1.46**	**271**	*iP*	**Pn**	**11 53 05.1**	**0.0**
BALY				*iS*	**Sn**	**11 53 27.0**	**+2.1**
BALY	**Balya**	**1.46**	**271**	*iP*	**Pn**	**11 53 05.1**	**0.0**
BALY				*iS*	**Sn**	**11 53 27.0**	**+2.1**
MDUB	**Mudurnu**	**1.50**	**59**	*ePN*	**Pn**	**11 53 03.8**	**-1.9**
MDUB	**Mudurnu**	**1.50**	**59**	*ePn*	**Pn**	**11 53 03.8**	**-1.9**
MRMT	**Marmara Adasi**	**1.71**	**302**	*ePN*	**Pn**	**11 53 07.1**	**-1.5**
MRMT	**Marmara Adasi**	**1.71**	**302**	*ePn*	**Pn**	**11 53 07.1**	**-1.5**

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*ISCJB **15** 12:25:27.9±1.4, 50°.4N±0°.2×156°.6E±0°.3, h62km±15km, Error ellipse: s-maj=42.9km s-min=7.1km az=39.6*
*MOS **15** 12:25:28.7±1.3, 50°.80N×155°.92E, h57km, mb4.2/1, Error ellipse: s-maj=37.6km s-min=12.7km az=66.1*
*KRSC **15** 12:25:28.9±1.1, 50°.41N×157°.71E, h5km±5km, ML4.3*
ISC 15 12:25:28.2±1.9**, 50°.4N**±0°.2×**156°.6E**±0°.2**, h48**km±28km**, n18,**
σ1§42/23, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.47**	**316**	PN	**Pn**	**12 25 39.0**	**0.0**
SKR				*i* S	**Sn**	**12 25 47.0**	**+0.3**
SKR				pmax	pmax		
	comp=N,100nm,0.4s						
SKR				pmax	pmax		
	comp=E,100nm,0.4s						
SKR				pmax	pmax		
	comp=Z,110nm,0.4s						
SKR				smax	smax		
	comp=N,2μm,0.3s						
SKR				smax	smax		
	comp=E,3μm,0.3s						
ASAK	**Asacha**	**2.19**	**21**	*eP*	**Pn**	**12 26 03.6**	**+1.5**
ASAK				*eS*	**Sn**	**12 26 29.2**	**+1.1**
MTVR	**Mutnovka**	**2.35**	**24**	*eP*	**Pn**	**12 26 05.5**	**+1.1**
MTVR				*eS*	**Sn**	**12 26 31.9**	**-0.2**
GRL	**Gorelyy**	**2.39**	**22**	*eS*	**Sn**	**12 26 33.6**	**+0.6**
RUS	**Russkaya**	**2.40**	**29**	PN	**Pn**	**12 26 05.3**	**+0.4**
RUS				S	**Sn**	**12 26 31.5**	**-1.6**
RUS	**Russkaya**	**2.40**	**29**	*eP*	**Pn**	**12 26 05.3**	**+0.4**
RUS				*eS*	**Sn**	**12 26 31.5**	**-1.6**
PET	**Petropavlovsk**	**2.96**	**24**	PN	Pn	12 26 14.1	+1.5
PET				S	**Sn**	**12 26 47.5**	**+0.6**
PET	**Petropavlovsk**	**2.96**	**24**	*eP*	Pn	12 26 14.1	+1.5
PET				*eS*	**Sn**	**12 26 47.5**	**+0.6**
KOK	**Koryaka**	**3.20**	**22**	*eP*	Pn	12 26 19.0	+3.0
SDLR	**Sedlovina**	**3.25**	**25**	*eP*	**Pn**	**12 26 18.0**	**+1.3**
SDLR				*eS*	**Sn**	**12 26 54.2**	**0.0**
GNL	**Ganaly**	**3.45**	**13**	*eP*	Pn	12 26 22.2	+2.7
MKZ	**Mys Kozlova**	**5.24**	**34**	PN	**Pn**	**12 26 43.8**	**-0.1**
MKZ	**Mys Kozlova**	**5.24**	**34**	*eP*	**Pn**	**12 26 43.8**	**-0.1**
MKZ				*eS*	**Sn**	**12 27 38.9**	**-4.0**
KBTR	**Krutoberegovo**	**6.94**	**30**	PN	**Pn**	**12 27 07.5**	**+0.3**
KBTR	**Krutoberegovo**	**6.94**	**30**	*eP*	**Pn**	**12 27 07.5**	**+0.3**
ERM	**Erimo**	**12.50**	**233**	*ePN*	**Pn**	**12 28 23.3**	**+0.1**
BILL	**Bilibino**	**18.38**	**12**	*i* P	**P**	**12 29 36.1**	**-2.5**
BILL				pmax	pmax		
	comp=Z,2.0nm,2.1s						
MAJO	**Matsushiro**	**19.14**	**231**	*i* P	**Pn**	**12 29 50.3**	**+1.8**

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*IDC **15** 12:28:52.5±3.5, 50°.00N×154°.88E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.6/28, mbtmp3.8/8, ML3.7/1, Error ellipse: s-maj=76.8km s-min=24.7km az=130.0*
*KRSC **15** 12:28:53.8±1.6, 49°.45N×157°.55E, h30km±30km, ML4.1*
*MOS **15** 12:28:55.4±1.6, 49°.93N×155°.93E, h70km, mb4.4/5, Error ellipse: s-maj=21.6km s-min=9.8km az=68.4*
ISC 15 12:28:54.6±1.8**, 49°.6N**±0°.1×**156°.5E**±0°.1**, h75**km±14km**, n36,**
σ1§39/44, mb3.9/8, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.15**	**347**	⇓*i* PN	Pn	12 29 11.5	-3.6
SKR				*i* S	**Sn**	**12 29 27.0**	**-3.5**
SKR				pmax	pmax		
	comp=N,150nm,0.5s						
SKR				pmax	pmax		
	comp=E,150nm,0.5s						
SKR				pmax	pmax		
	comp=Z,230nm,0.5s						
SKR				smax	smax		
	comp=N,2μm,0.2s						
SKR				smax	smax		
	comp=E,3μm,0.2s						
ASAK	**Asacha**	**2.95**	**17**	*eP*	**Pn**	**12 29 40.1**	**+0.9**
ASAK				*i* S	**Sn**	**12 30 13.6**	**+0.1**
MTVR	**Mutnovka**	**3.10**	**19**	*eP*	**Pn**	**12 29 42.0**	**+0.7**
MTVR				*i* S	**Sn**	**12 30 17.1**	**-0.2**
RUS	**Russkaya**	**3.13**	**23**	PN	**Pn**	**12 29 41.4**	**-0.2**
RUS				S	**Sn**	**12 30 16.2**	**-1.6**
RUS	**Russkaya**	**3.13**	**23**	*eP*	**Pn**	**12 29 41.4**	**-0.2**
RUS				*i* S	**Sn**	**12 30 16.2**	**-1.6**
GRL	**Gorelyy**	**3.14**	**18**	*eP*	**Pn**	**12 29 43.1**	**+1.2**
GRL				*i* S	**Sn**	**12 30 19.3**	**+1.0**
PETK	**Petropavlovsk-**	**3.62**	**11**	*ePN*	**Pn**	**12 29 49.9**	**+1.7**
PETK				pmax	pmax		
	comp=Z,7.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.62**	**11**	Pn	**Pn**	**12 29 49.9**	**+1.7**
	comp=Z,6.8nm,0.3s,baz=182,slow=14,SNR=45						
PETK				Sn	Sn	12 30 35.0	+5.3
	baz=185,slow=12,SNR=2.0						
PET	**Petropavlovsk**	**3.71**	**20**	PN	**Pn**	**12 29 50.2**	**+0.8**
PET				S	**Sn**	**12 30 31.6**	**-0.3**
PET	**Petropavlovsk**	**3.71**	**20**	*eP*	**Pn**	**12 29 50.2**	**+0.8**
PET				*i* S	**Sn**	**12 30 31.6**	**-0.3**
UGLR	**Uglovaya**	**3.92**	**21**	*eP*	**Pn**	**12 29 53.7**	**+1.3**
AVH	**Avacha**	**3.95**	**20**	*eP*	**Pn**	**12 29 54.7**	**+1.9**
AVH				*i* S	**Sn**	**12 30 39.5**	**+1.5**
KOK	**Koryaka**	**3.96**	**19**	*eP*	**Pn**	**12 29 54.9**	**+2.0**
SMAR	**Somma**	**3.96**	**20**	*eP*	**Pn**	**12 29 54.2**	**+1.1**
KRER	**Koryakskii**	**3.99**	**20**	*eP*	**Pn**	**12 29 55.1**	**+1.6**
KRER				*i* S	**Sn**	**12 30 40.4**	**+1.3**
SDLR	**Sedlovina**	**4.00**	**21**	*eP*	**Pn**	**12 29 54.2**	**+0.7**
GNL	**Ganaly**	**4.23**	**12**	*eP*	**Pn**	**12 29 58.6**	**+2.0**
KII	**Karymskiy**	**4.83**	**21**	*eP*	**Pn**	**12 30 06.7**	**+2.0**
MKZ	**Mys Kozlova**	**5.94**	**31**	PN	**Pn**	**12 30 18.9**	**-0.8**
MKZ	**Mys Kozlova**	**5.94**	**31**	*eP*	**Pn**	**12 30 18.9**	**-0.8**
MKZ				*i* S	Sn	12 31 21.3	-5.0
KBTR	**Krutoberegovo**	**7.66**	**27**	PN	**Pn**	**12 30 43.2**	**-0.1**
KBTR	**Krutoberegovo**	**7.66**	**27**	*eP*	**Pn**	**12 30 43.2**	**-0.1**
YSS	**Yuzh-Sakhalins**	**9.55**	**259**	*ePN*	**Pn**	**12 31 10.0**	**+0.9**
ERM	**Erimo**	**11.99**	**236**	*i* PN	**Pn**	**12 31 43.4**	**+1.0**
KSRS	**Korea Array**	**23.86**	**250**	P	**P**	**12 33 59.4**	**-1.4**
	comp=Z,1.8nm,0.9s,baz=44,slow=9.4,SNR=4.7						
COLA	**College**	**32.51**	**41**	*i* P	P	12 35 23.3	+5.7
ZALV	**Zalesovo Beam**	**42.86**	**304**	*eP*	**P**	**12 36 43.6**	**-1.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**42.86**	**304**	P	**P**	**12 36 43.5**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=81,slow=7.7,SNR=5.2						
MKAR	**Makanchi Array**	**47.70**	**297**	*eP*	**P**

MKAR Lg Lg 12 41 48.5
0.7nm,0.3s,baz=320,slow=26,SNR=7.6
ZALV Zalesovo Beam 7.44 60 Pn Pn 12 39 54.6 -2.0
0.2nm,0.3s,baz=247,slow=14,SNR=3.5
ZALV Sn **Sn 12 41 21.3 +0.3**
0.1nm,0.3s,baz=240,slow=24,SNR=2.8
TKM2 Tokmak 2 7.94 171 ⇓Lg Lg 12 42 18.7
12nm,0.8s
AKTO Aktyubinsk 10.07 274 Pn Pn 12 40 28.1 -4.6
0.2nm,0.3s,baz=79,slow=12,SNR=4.1
AKTO Lg Lg 12 43 24.9
0.1nm,0.3s,baz=20,slow=16,SNR=2.8
ILAR Eielson Array 60.55 19 P P 12 48 15.4 -2.6
0.2nm,0.5s,baz=315,slow=5.0,SNR=4.2

DJA ***15*** *12:38:46.0±0.6, 7.7°S±9.7°×111.2°E±*, h178km, M3.2/6, MLv3.2/6*
IDC ***15*** *12:39:02.6±11.0, 6.9°S×113.1°E, h298km±127km, mb2.6/3, mb1 2.9/4, mb1mx2.7/22, mbtmp2.7/4, MS2.7/1, Ms1 2.9/1, ms1mx2.2/6, Error ellipse: s-maj=167.2km s-min=28.8km az=50.0*
ISC 15 12:38:43.3±1.9, 7.0S±0.2°×111.5E±0.1, h200km, n12, σ1§76/12, mb3.2/3, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJI	**Sawahan**	**0.80**	**163**	P	**Pn**	**12 39 13.7**	**+1.7**
GRJI	**Gresik**	**0.94**	**87**	P	**Pn**	**12 39 13.1**	**+0.4**
GRJI				S	**Sn**	**12 39 34.8**	**-0.6**
PWJI	**Pagerwojo**	**1.09**	**166**	P	**Pn**	**12 39 14.1**	**+0.4**
PWJI				S	**Sn**	**12 39 33.6**	**-3.8**
PCJI	**Pacitan**	**1.27**	**196**	P	**Pn**	**12 39 17.9**	**+2.8**
PCJI				S	**Sn**	**12 39 39.8**	**-0.1**
UGM	**Wanagama**	**1.37**	**227**	P	**Pn**	**12 39 15.7**	**-0.3**
UGM				S	Sn	12 39 35.5	-5.9
YOGI	**Yogyakarta**	**1.49**	**235**	P	**Pn**	**12 39 17.2**	**+0.2**
KRKI	**Karangkates**	**1.50**	**142**	P	Pn	12 39 14.7	-2.3
FITZ	**Fitzroy Crossi**	**17.65**	**130**	P	**P**	**12 42 34.7**	**-0.8**
	0.1nm,0.3s,baz=326,slow=7.3,SNR=4.0						
FITZ				S	S	12 45 29.8	-19
	0.1nm,0.3s,baz=14,slow=20,SNR=3.6						
WRA	**Warramunga Arr**	**25.61**	**122**	P	**P**	**12 43 54.4**	**-0.2**
	0.6nm,0.8s,baz=299,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**27.16**	**130**	P	**P**	**12 44 09.5**	**+1.2**
	0.2nm,0.6s,baz=305,slow=8.6,SNR=4.0						
CMAR	**Chiang Mai Arr**	**28.15**	**334**	LR	LR	12 57 58.7	
	comp=Z,14nm,20.9s,baz=150,slow=39						
MKAR	**Makanchi Array**	**59.49**	**337**	P	P	12 48 38.5	+13
	0.2nm,0.4s,baz=152,slow=7.5,SNR=4.3						

IDC ***15*** *12:45:22.2±1.3, 64.4°S×168.0°E, h0km, mb3.5/5, mb1 3.8/6, mb1mx3.5/30, mbtmp3.5/6, ML3.5/1, Error ellipse: s-maj=51.5km s-min=22.7km az=167.0*
NERS ***15*** *12:45:23.7, 64.6°S×168.0°E, h0km*
MOS ***15*** *12:45:24.7±1.1, 64.7°S×168.2°E, h10km, mb3.9/2, Error ellipse: s-maj=34.0km s-min=17.2km az=81.9*
ISC 15 12:45:24.7±0.9, 64.6S±0.0°×167.7E±0.0°, h10km, n21, σ1§59/22, mb3.8/6, 1D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BILL	**Bilibino**	**3.42**	**350**	⇓*i*P	**Pn**	**12 46 18.8**	**+0.7**
BILL				e*S*	**Sn**	**12 46 56.7**	**-2.0**
BILL				pmax	pmax		
	comp=Z,49nm,0.7s						
BILL				smax	smax		
	comp=N,304nm,0.8s						
BILL	**Bilibino**	**3.42**	**350**	e*P*	**Pn**	**12 46 18.9**	**+0.8**
BILL				Pmax		12 46 19.6	
	comp=N,10.0nm,0.4s						
BILL				*e*		12 46 22.6	
BILL				e*Pg*	**Pb**	**12 46 26.6**	**+1.2**
BILL				Pgmax		12 46 27.7	
	comp=N,30nm,0.3s						
BILL				e*S*	**Sn**	**12 47 01.7**	**+3.0**
BILL				e*Sg*	**Sg**	**12 47 12.0**	**-2.6**
BILL				Sgmax		12 47 18.0	
	comp=N,240nm,0.4s						
BILL				Sgmax		12 47 18.0	
	comp=N,210nm,0.4s						
EVEN	**Evensk**	**4.75**	**238**	e*P*	**Pn**	**12 46 38.2**	**+1.9**
EVEN				*e*		12 46 41.5	
EVEN				e*Pg*	Pb	12 46 52.7	+4.7
EVEN				Pgmax		12 46 53.3	
	comp=N,10.0nm,0.3s						
EVEN				e*Sg*	**Sg**	**12 47 55.8**	**-1.3**
EVEN				Sgmax		12 48 00.9	
	comp=N,160nm,0.4s						
OMS	**Omsukchan**	**5.78**	**253**	e*Pg*	**Pg**	**12 47 13.0**	**-2.3**
OMS				Pgmax		12 47 16.5	
	comp=N,20nm,0.6s						
OMS				e*Sg*	**Sg**	**12 48 30.8**	**+0.7**
OMS				Sgmax		12 48 38.0	
	comp=N,110nm,0.8s						
OMS				Sgmax		12 48 38.0	
	comp=N,80nm,0.7s						
SEY	**Seymchan**	**7.04**	**263**	e*P*	Pn	12 47 14.3	+6.7
SEY				e*S*	Sn	12 48 34.9	+7.3
SEY	**Seymchan**	**7.04**	**263**	e*P*	Pn	12 47 11.2	+3.6
SEY				e*Pg*	Pg	12 47 34.5	-4.8
SEY				Pgmax		12 47 42.1	
	comp=N,10.0nm,0.6s						
SEY				e*Sg*	**Sg**	**12 49 09.1**	**-1.2**
SEY				Sgmax		12 49 23.1	
	comp=N,50nm,0.7s						
SEY				Sgmax		12 49 23.1	
	comp=N,20nm,0.7s						
TLAR	**Talaya**	**7.87**	**250**	e*P*	Pn	12 47 23.8	+4.7
TLAR				Pmax		12 47 27.8	
	comp=N,20nm,0.3s						
TLAR				e*Sg*	**Sg**	**12 49 38.6**	**+1.7**
TLAR				Sgmax		12 49 47.9	
	comp=N,60nm,0.8s						
TLAR				Sgmax		12 49 47.9	
	comp=N,80nm,0.8s						
SNGR	**Sinegor'e**	**8.23**	**259**	e*Sg*	**Sg**	**12 49 47.0**	**-1.5**
SUUS	**Susuman**	**8.90**	**267**	e*P*	Pn	12 47 39.8	+6.6
SUUS				e*Sg*	**Sg**	**12 50 11.7**	**+1.9**
SUUS				Sgmax		12 50 28.4	
	comp=N,50nm,0.8s						
MGD	**Magadan 1**	**9.17**	**247**	e*P*	Pn	12 47 42.0	+5.1
MGD				*e*		12 50 10.3	
MGD				e*Sg*	Sn	12 50 15.6	+56
MGD				Sgmax		12 50 34.2	
	comp=N,30nm,0.8s						
OCHR	**Omchak**	**9.48**	**261**	e*P*	Pn	12 47 47.9	+6.7
OCHR				e*Sg*		12 50 28.4	
OCHR				Sgmax		12 51 35.1	
	comp=N,20nm,0.5s						
PET	**Petropavlovsk**	**12.59**	**206**	*i*P	Pn	12 48 28.8	+5.2
TIXI	**Tiksi**	**15.78**	**313**	*i*P	**P**	**12 49 10.0**	**-0.5**
COLA	**College**	**18.62**	**69**	*i*P	**P**	**12 49 42.6**	**+0.7**
ILAR	**Eielson Array**	**19.04**	**69**	P	**P**	**12 49 45.2**	**-1.4**
	comp=N,0.1nm,0.3s,baz=283,slow=10,SNR=15						
INK	**Inuvik**	**22.90**	**55**	P	**P**	**12 50 27.4**	**-0.7**
	comp=N,0.6nm,0.5s,baz=282,slow=8.5,SNR=3.7						
YKA	**Yellowknife Ar**	**32.60**	**57**	P	**P**	**12 51 56.1**	**+0.3**
	comp=N,0.1nm,0.6s,baz=306,slow=8.7,SNR=3.8						
KURK	**Kurchatov**	**45.50**	**297**	P	**P**	**12 53 44.7**	**+1.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURBB	**Kurchatov Arra**	**45.61**	**297**	P	**P**	**12 53 44.6**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=38,slow=8.0,SNR=11						
PDAR	**Pinedale Array**	**49.36**	**74**	P	P	12 54 11.7	-2.5
	comp=Z,1.0nm,0.8s,baz=352,slow=3.0,SNR=8.2						
WRA	**Warramunga Arr**	**88.20**	**211**	P	**P**	**12 58 14.8**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=7.7,slow=5.5,SNR=4.8						

ISCJB ***15*** *12:46:23.2±0.5, 10.9°S×62.0°E, h93km±6km, Error ellipse: s-maj=5.5km s-min=3.3km az=33.0*
TRN ***15*** *12:46:24.6, 10.9°N×61.9°W, h96km, MD3.4*
FUNV ***15*** *12:46:24.8, 11.0°N×62.0°W, h80km, MW3.6*
ISC 15 12:46:23.9±1.3, 10.9S±0.0°×62.0W±0.0°, h91km±9km, n29, σ1§25/48, 4C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.31**	**205**	⇑e*P*	**Pn**	**12 46 37.9**	**+0.4**
GUIV				e*S*	**Sn**	**12 46 47.1**	**-0.4**
TRN	**Trinidad (W)**	**0.73**	**112**	e*P*	**Pn**	**12 46 40.8**	**+0.1**
TRN				e*S*	**Sn**	**12 46 51.8**	**-1.6**
TPP	**Pointe-a-Pierr**	**0.87**	**134**	e*P*	**Pn**	**12 46 42.8**	**+0.6**
TPP				e*S*	**Sn**	**12 46 55.3**	**-0.7**
TBH	**Brigand Hill**	**1.10**	**113**	e*P*	**Pn**	**12 46 45.0**	**+0.2**
TBH				e*S*	**Sn**	**12 47 00.1**	**-0.4**
CRUV	**Carupano**	**1.15**	**258**	⇓e*P*	**Pn**	**12 46 46.0**	**+0.6**
CRUV				e*S*	**Sn**	**12 47 01.9**	**+0.2**
GRW	**Mount Saint Ca**	**1.30**	**19**	⇑e*P*	**Pn**	**12 46 48.7**	**+1.4**
GRW				e*S*	**Sn**	**12 47 05.0**	**+0.1**
TPR	**Prospect**	**1.31**	**79**	e*P*	**Pn**	**12 46 47.0**	**-0.4**
TPR				e*S*	**Sn**	**12 47 04.4**	**-0.7**
GRHS	**Sauteurs**	**1.36**	**19**	⇓e*P*	**Pn**	**12 46 49.1**	**+1.1**
GRHS				e*S*	**Sn**	**12 47 06.0**	**-0.2**
GRIC	**Isle de Caille**	**1.44**	**20**	e*P*	**Pn**	**12 46 50.1**	**+1.2**
GRIC				e*S*	**Sn**	**12 47 08.4**	**+0.6**
GRSS	**Sisters**	**1.44**	**19**	e*P*	**Pn**	**12 46 50.5**	**+1.5**
GRSS				e*S*	**Sn**	**12 47 09.0**	**+1.1**
TOSP	**Speyside**	**1.57**	**76**	e*P*	**Pn**	**12 46 49.7**	**-0.8**
TOSP				e*S*	**Sn**	**12 47 09.0**	**-1.8**
ORIV	**Oritupano**	**2.26**	**215**	e*P*	**Pn**	**12 47 01.0**	**+1.5**
ORIV				e*S*	**Sn**	**12 47 28.2**	**+1.4**
SVB	**Belmont**	**2.47**	**19**	e*P*	**Pn**	**12 47 02.6**	**+0.2**
SVB				e*S*	**Sn**	**12 47 31.3**	**-0.6**
SVV	**Soufriere Volc**	**2.53**	**20**	e*S*	**Sn**	**12 47 32.7**	**-0.6**
BHS	**Barnard House**	**2.54**	**22**	e*S*	**Sn**	**12 47 32.6**	**-0.9**
PCRV	**Puerto La Cruz**	**2.61**	**254**	e*P*	**Pn**	**12 47 05.5**	**+1.3**
PCRV				e*S*	**Sn**	**12 47 35.0**	**-0.3**
RIOV	**Rio Grande**	**2.85**	**175**	e*P*	**Pn**	**12 47 08.9**	**+1.4**
RIOV				e*S*	**Sn**	**12 47 41.1**	**0.0**
MCLT	**Moule a Chique**	**2.99**	**22**	e*P*	**Pn**	**12 47 10.6**	**+1.3**
MCLT				e*S*	**Sn**	**12 47 42.2**	**-2.0**
SLB	**Belfond**	**3.06**	**19**	e*S*	**Sn**	**12 47 45.2**	**-0.9**
GURV	**El Guri**	**3.29**	**197**	e*P*	**Pn**	**12 47 14.1**	**+0.6**
PRGV	**PARIAGUAN**	**3.31**	**230**	e*P*	**Pn**	**12 47 15.4**	**+1.8**
PRGV				e*S*	**Sn**	**12 47 52.1**	**0.0**
CUPV	**Cœpira**	**3.74**	**257**	⇑*i*P	**Pn**	**12 47 20.6**	**+1.1**
CUPV				e*S*	**Sn**	**12 48 00.7**	**-1.8**
BIRV	**Birongo**	**4.13**	**264**	e*P*	**Pn**	**12 47 25.2**	**+0.5**
LUEV	**Luepa**	**5.09**	**173**	e*P*	**Pn**	**12 47 38.8**	**+0.9**
LZG	**Guadaloupe-1**	**5.19**	**3**	e*P*	**Pn**	**12 47 41.7**	**+2.6**
TURV	**Turiamo**	**5.67**	**266**	e*P*	**Pn**	**12 47 45.6**	**-0.1**
BAUV	**El Baul**	**6.18**	**252**	e*P*	**Pn**	**12 47 52.0**	**-0.6**
BAUV				e*S*	**Sn**	**12 48 57.7**	**-4.3**
MAPV	**Macapo**	**6.36**	**261**	⇑e*P*	**Pn**	**12 47 54.8**	**-0.3**
MONV	**Montecano**	**7.79**	**278**	e*P*	**Pn**	**12 48 13.8**	**-0.8**

ISCJB ***15*** *13:02:20.5±0.8, 36.5°S×70.4°E±0.1, h204km, mb3.3/1, Error ellipse: s-maj=13.9km s-min=5.4km az=151.5*
IDC ***15*** *13:02:26.9±9.0, 36.9°S×70.3°E, h214km±56km, mb3.2/1, mb1 3.0/6, mb1mx2.8/31, mbtmp2.9/6, Error ellipse: s-maj=89.8km s-min=44.7km az=174.0*
NNC ***15*** *13:02:27.4±7.4, 37.0°S×70.3°E, h228km±94km, mb2.5, mpv3.7, Error ellipse: s-maj=103.4km s-min=37.3km az=48.0*
ISC 15 13:02:21.4±1.1, 36.6S±0.0°×70.4E±0.1, h204km, n20, σ1§57/23, 3C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.49**	**1**	P	**Pn**	**13 03 55.9**	**+0.9**
	1.0nm,0.2s,baz=191,slow=14,SNR=25						
KK31				⇓S	**S**	**13 05 06.7**	**-2.3**
	6.1nm,0.7s,baz=192,slow=26,SNR=6.8						
AAK	**Ala-Archa**	**6.81**	**27**	P	**Pn**	**13 04 00.6**	**+1.4**
	0.9nm,0.3s,baz=182,slow=8.0,SNR=8.2						
AAK				S	**S**	**13 05 15.9**	**-0.8**
	1.0nm,0.3s,baz=127,slow=23,SNR=14						
TKM2	**Tokmak 2**	**7.48**	**31**	⇑P	**Pn**	**13 04 08.7**	**+0.8**
	3.3nm,0.4s						
MKAR	**Makanchi Array**	**13.51**	**37**	P	**P**	**13 05 27.0**	**-0.3**
	0.1nm,0.3s,baz=218,slow=7.6,SNR=5.3						
PYUN	**Piuthan**	**13.62**	**125**	e*P*	**Pn**	**13 05 23.7**	**-2.9**
	9.2nm,0.3s						
DANN	**Dangsing**	**13.97**	**122**	e*P*	**Pn**	**13 05 29.6**	**-1.5**
	8.3nm,0.4s						
AB31	**Akbulak array**	**14.75**	**332**	P	**P**	**13 05 41.6**	**+0.5**
	0.9nm,0.4s,baz=148,slow=12,SNR=35						
AB31				⇑S	**S**	**13 08 19.8**	**-3.9**
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**15.19**	**20**	P	**P**	**13 05 47.7**	**+1.8**
	0.0nm,0.3s,baz=213,slow=10.0,SNR=5.6						
DMN	**Daman**	**15.36**	**122**	e*P*	**Pn**	**13 05 47.3**	**-0.8**
	16nm,0.7s						
KKN	**Kakani**	**15.36**	**121**	e*P*	**Pn**	**13 05 47.6**	**-0.5**
	14nm,0.4s						
PKIN	**Phulchoki**	**15.58**	**121**	e*P*	**P**	**13 05 50.4**	**-0.3**
	14nm,0.3s						
PKI	**Pulchoki**	**15.59**	**121**	e*P*	**P**	**13 05 50.6**	**-0.3**
	24nm,0.5s						
GUN	**Gumba**	**15.71**	**119**	e*P*	**P**	**13 05 52.0**	**-0.2**
	15nm,0.5s						
AKTO	**Aktyubinsk**	**16.44**	**331**	⇑P	**Pn**	**13 06 00.3**	**-0.3**
	0.6nm,0.9s						
AKTO	**Aktyubinsk**	**16.44**	**331**	P	**Pn**	**13 06 02.0**	**+1.4**
	0.4nm,0.3s,baz=153,slow=10,SNR=10.0						
RAMN	**Ramite**	**16.80**	**120**	e*P*	**P**	**13 06 04.0**	**-0.2**
	16nm,0.6s						
TAPN	**Taplejung**	**17.34**	**117**	e*P*	**P**	**13 06 11.0**	**+0.9**
ODAN	**Odare**	**17.41**	**119**	e*P*	**Pn**	**13 06 11.8**	**-0.8**
	13nm,0.6s						
ZALV	**Zalesovo Beam**	**20.03**	**25**	P	**P**	**13 06 40.0**	**+1.5**
	0.6nm,0.3s,baz=215,slow=9.9,SNR=7.0						
ARCES	**ARCESS Array B**	**40.85**	**338**	P	**P**	**13 09 44.5**	**+1.7**
	0.8nm,0.6s,baz=106,slow=7.7,SNR=8.6						

ISCJB ***15*** *13:15:06.7±0.5, 9.7°S±0.0°×124.5°E±0.0, h25km, mb3.6/3, Error ellipse: s-maj=10.8km s-min=5.6km az=44.4*
IDC ***15*** *13:15:12.0±7.2, 9.6°S×124.8°E, h75km±86km, mb3.3/3, mb1 3.8/6, mb1mx3.5/20, mbtmp3.6/6, ML4.1/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/16, Error ellipse: s-maj=59.9km s-min=36.6km az=39.0*
AUST ***15*** *13:15:13.6, 10.0°S×125.0°E, h0km*
DJA ***15*** *13:15:36.3±1.5, 9.3°S±8.1°×123.2°E±1.5°, h45km±12km, M4.1/6, mb4.9/2, mB6.1/1, MLv3.6/6, Mw(mB)5.7/1*
ISC 15 13:15:10.2±0.8, 9.6S±0.0°×124.5E±0.0°, h25km, n22, σ2§29/19, mb3.7/3, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**2.45**	**294**	P	**Pn**	**13 15 46.7**	**-1.9**
BASI	**Baing, Sumba**	**3.91**	**261**	P	**Pn**	**13 16 11.0**	**+2.3**
WSI	**Waingapu**	**4.15**	**269**	P	**Pn**	**13 16 11.6**	**-0.3**
WSI	**Waingapu**	**4.15**	**269**	S	Sb	13 17 44.5	+32
	baz=4.7,SNR=4.4						
WBSI	**Waikabubak, Su**	**5.04**	**270**	P	**Pn**	**13 16 22.6**	**-1.7**
WBSI				S	Sn	13 17 09.1	-13
BSSI	**Bau Bau, Buton**	**5.28**	**311**	P	**Pn**	**13 16 26.7**	**-0.8**
BKSI	**Bulukumba**	**6.11**	**314**	P	**Pn**	**13 16 37.5**	**-1.4**
MTN	**Manton Dam**	**7.24**	**117**	P	**Pn**	**13 16 53.8**	**-0.7**
	baz=6.6,SNR=15						
KNRA	**Kununurra**	**7.30**	**146**	P	**Pn**	**13 16 54.7**	**-0.6**
	baz=6.7,SNR=100						
KDU	**Kakadu**	**8.38**	**112**	P	**Pn**	**13 17 10.2**	**0.0**
	baz=7.8,SNR=8.4						
FITZ	**Fitzroy Crossi**	**8.48**	**173**	P	**Pn**	**13 17 10.8**	**-0.7**
	2.3nm,0.3s,baz=8.2,slow=12,SNR=82						
FITZ				S	**Sn**	**13 18 45.0**	**-1.5**
	1.2nm,0.3s,baz=320,slow=7.4,SNR=7.4						
FITZ				LR	LR	13 20 35.8	
	comp=Z,77nm,20.8s,baz=105,slow=38						
FITZ	**Fitzroy Crossi**	**8.48**	**173**	P	**Pn**	**13 17 11.1**	**-0.5**
	baz=8.1,SNR=43						
FITZ				S	**Sn**	**13 18 49.3**	**+2.8**
	baz=8.1,SNR=3.6						
LUWI	**Luwuk**	**8.72**	**348**	P	Pn	13 17 27.0	+12
	43nm,1.1s,0.3nm						
BYJI	**Banyuwangi**	**10.12**	**277**	P	Pn	13 17 30.1	-4.0
FAKI	**Fak Fak**	**10.19**	**50**	P	**Pn**	**13 17 36.4**	**+1.4**
	baz=10,SNR=5.4						
WRA	**Warramunga Arr**	**13.97**	**138**	P	Pn	13 18 23.0	-3.7
	1.0nm,0.3s,baz=320,slow=14,SNR=47						
WRA				S	Sn	13 20 53.7	-7.3
	0.5nm,0.3s,baz=311,slow=23,SNR=6.5						
MMPI	**Merauke**	**15.73**	**87**	S	**S**	**13 22 01.1**	**+2.8**
	baz=15,SNR=3.3						
ASAR	**Alice Springs**	**16.59**	**148**	P	**Pn**	**13 18 58.8**	**-2.5**
	0.7nm,0.3s,baz=321,slow=12,SNR=40						
ASAR				S	**Sn**	**13 21 59.8**	**-5.0**
	0.2nm,0.3s,baz=318,slow=21,SNR=8.8						
MEEK	**Meekatharra**	**17.80**	**197**	P	**P**	**13 19 20.9**	**+4.0**
	baz=18,SNR=3.8						
CMAR	**Chiang Mai Arr**	**37.63**	**318**	P	**P**	**13 22 23.1**	**-0.2**
	0.9nm,0.9s,baz=163,slow=5.4,SNR=4.6						
SONM	**Songino Array**	**59.44**	**346**	P	P	13 25 07.5	-3.4
	0.5nm,0.6s,baz=167,slow=9.4,SNR=4.0						
MKAR	**Makanchi Array**	**67.61**	**330**	P	P	13 26 01.2	-3.6
	0.3nm,0.5s,baz=140,slow=8.1,SNR=5.3						

IDC 15 13:39:35.1±1.3, 11.7°N×145.2°E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/26, mbtmp3.6/4, ML3.4/1, Error ellipse: s-maj=75.5km s-min=19.1km az=98.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.23**	**351**	Pn	Pn	13 40 14.3	+0.9
	10nm,0.3s,baz=218,slow=19,SNR=7.3						
GUMO				Sn	Sn	13 40 42.9	+1.1
	27nm,0.3s,baz=198,slow=23,SNR=9.2						
WRA	**Warramunga Arr**	**32.91**	**199**	P	P	13 46 10.9	-0.4
	1.1nm,0.7s,baz=20,slow=9.8,SNR=10						
ASAR	**Alice Springs**	**36.53**	**198**	P	P	13 46 43.1	+0.4
	0.3nm,0.6s,baz=17,slow=11,SNR=8.0						
ILAR	**Eielson Array**	**70.42**	**25**	P	P	13 50 50.6	-0.4
	0.3nm,0.5s,baz=251,slow=6.0,SNR=7.6						

SZGRF ***15*** *13:58:39.5, 21.0°S×176.6°W, h33km, Fiji Islands region*
IDC ***15*** *13:59:04.8±2.6, 20.7°S×176.8°W, h234km±24km, mb3.6/12, mb1 3.9/14, mb1mx3.7/22, mbtmp3.6/14, Error ellipse: s-maj=27.5km s-min=11.7km az=145.0*
NEIC ***15*** *13:59:06.5±1.6, 20.7°S×176.7°W, h275km±16km, mb4.5/7, Error ellipse: s-maj=24.2km s-min=13.4km az=139.0*
ISC 15 13:59:02.1±0.5, 21.0S±0.1°×176.6W±0.1, h219km, n59, σ1§26/58, mb3.9/18, 1D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.97**	**302**	e*P*n	Pn	14 00 35.2	+5.9
AFI	**Afiamalu**	**8.38**	**34**	e*P*n	**Pn**	**14 01 01.4**	**+0.9**
AFI	**Afiamalu**	**8.38**	**34**	P	**Pn**	**14 01 01.8**	**+1.3**
	5.4nm,0.3s,baz=107,slow=23,SNR=14						
AFI				S	S	14 02 28.0	-7.3
	15nm,0.3s,baz=68,slow=22,SNR=8.4						
DZM	**Mont Dzumac**	**15.81**	**263**	e*P*	**P**	**14 02 32.2**	**-0.6**
	23nm,0.9s						
DZM	**Mont Dzumac**	**15.81**	**263**	P	**Pn**	**14 02 37.7**	**+4.3**
	1.4nm,0.3s,baz=74,slow=20,SNR=15						
URZ	**Urewera**	**18.08**	**196**	e*P*	**Pn**	**14 03 00.3**	**+0.3**
URZ	**Urewera**	**18.08**	**196**	P	**Pn**	**14 03 00.1**	**0.0**
	2.0nm,0.3s,baz=141,slow=18,SNR=15						
URZ				S	**S**	**14 06 11.6**	**-1.5**
	2.5nm,0.3s,baz=66,slow=23,SNR=15						
CTA	**Charters Tower**	**34.74**	**265**	P	**P**	**14 05 32.8**	**+1.1**
	2.9nm,0.3s,baz=96,slow=9.5,SNR=17						
CTAO	**Charters Tower**	**34.74**	**265**	e*P*	P	14 05 28.3	-3.5
STKA	**Stephens Creek**	**38.77**	**245**	P	**P**	**14 06 06.4**	**+0.8**
	1.6nm,0.4s,baz=267,slow=9.8,SNR=9.6						
AS31	**Alice Springs**	**45.68**	**257**	e*P*	**P**	**14 06 59.1**	**-2.4**
ASAR	**Alice Springs**	**45.68**	**257**	P	**P**	**14 07 01.3**	**-0.2**
	1.2nm,0.4s,baz=85,slow=8.5,SNR=91						
WRAB	**Tennant Creek**	**45.81**	**262**	e*P*	**P**	**14 07 00.7**	**-1.8**
WRA	**Warramunga Arr**	**45.82**	**262**	P	**P**	**14 07 01.9**	**-0.7**
	1.3nm,0.3s,baz=94,slow=7.8,SNR=94						
FITZ	**Fitzroy Crossi**	**54.25**	**262**	P	**P**	**14 08 06.6**	**+0.7**
	2.6nm,0.9s,baz=118,slow=20,SNR=7.4						
QSPA	**South Pole Qui**	**69.12**	**180**	e*P*	**P**	**14 09 45.1**	**+0.7**
PETK	**Petropavlovsk-**	**77.04**	**344**	P	**P**	**14 10 29.8**	**-0.9**
	3.6nm,0.7s,baz=127,slow=9.4,SNR=12						
ISA	**Isabella**	**78.73**	**45**	e*P*	P	**14 10 38.6**	**-1.9**
NVAR	**Mina Array Bea**	**80.47**	**43**	P	**P**	**14 10 52.1**	**+2.3**
	1.3nm,0.6s,baz=220,slow=8.0,SNR=9.5						
LDFC	**Landfair**	**80.66**	**47**	e*P*	**P**	**14 10 54.0**	**+3.1**
WVOR	**Wild Horse Val**	**82.65**	**39**	e*P*	**P**	**14 11 00.5**	**-0.6**
	1.3nm,0.6s						
CCUT	**Cedar City**	**83.19**	**46**	e*P*	**P**	**14 11 05.7**	**+1.6**
GAMB	**Gambell**	**84.53**	**2**	e*P*	P	14 11 06.7	-3.3
	12nm,1.4s						
TXAR	**Lajitas Array**	**86.21**	**57**	P	**P**	**14 11 21.8**	**+2.6**
	1.2nm,0.8s,baz=208,slow=7.0,SNR=8.0						
TRF	**Thorofare Moun**	**86.62**	**12**	e*P*	P	14 11 17.1	-3.4
PAX	**Paxson**	**87.17**	**14**	e*P*	**P**	**14 11 20.9**	**-2.2**
	8.3nm,0.5s						
COLA	**College**	**88.37**	**12**	e*P*	**P**	**14 11 26.9**	**-1.6**
	4.8nm,0.6s						
PDAR	**Pinedale Array**	**88.41**	**43**	P	**P**	**14 11 30.6**	**+1.0**
	0.5nm,0.8s,baz=222,slow=2.0,SNR=4.8						
ILAR	**Eielson Array**	**88.47**	**12**	P	**P**	**14 11 28.8**	**-0.2**
	1.3nm,0.6s,baz=229,slow=6.0,SNR=23						
BOZ	**Bozeman (W)**	**88.63**	**39**	e*P*	**P**	**14 11 29.5**	**-0.9**
	0.7nm,0.6s						
PHWY	**Pilot Hill**	**90.36

GRL	**Gorelyy**	**2.18 275**	*e*P	Pn	14 12 12.5	+2.4
ASAK	**Asacha**	**2.29 271**	*e*P	Pn	14 12 13.8	+2.3
ASAK			*i* S	Sn	14 12 41.3	+2.8
GNL	**Ganaly**	**2.58 302**	*e*P	Pn	14 12 19.0	+3.5
GNL			*i* S	Sn	14 12 50.2	+4.5

CSEM ***15*** *14:16:21.8, 42.45N×13.36E, h9km, MD1.6/5, After ROM*
ROM 15 14:16:21.8±0.2, 42.45N×13.36E, h9km±3km, Md1.6/5, Ml1.5/4, Error ellipse: s-maj=1.9km s-min=1.1km az=70.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.10**	**24**	Pg	Pg	14 16 24.6	+0.2
CAMP				Sg	Sg	14 16 26.8	+0.5
	71nm,0.3s						
CAMP	**Campotosto**	**0.10**	**24**	Pg	Pg	14 16 24.6	+0.2
CAMP				Sg	Sg	14 16 26.8	+0.5
	71nm,0.3s						
AQU	**L'Aquila**	**0.10**	**159**	Pg	Pg	14 16 24.5	+0.1
AQU				Sg	Sg	14 16 26.3	+0.2
	119nm,0.3s						
AQU	**L'Aquila**	**0.10**	**159**	Pg	Pg	14 16 24.5	+0.1
AQU				Sg	Sg	14 16 26.3	+0.2
	119nm,0.3s						
FAGN	**Fagnano**	**0.25**	**137**	Pg	Pg	14 16 27.6	+0.7
FAGN				Sg	Sg	14 16 32.3	+2.0
	126nm,0.3s						
FAGN	**Fagnano**	**0.25**	**137**	Pg	Pg	14 16 27.6	+0.7
FAGN				Sg	Sg	14 16 32.3	+2.0
	126nm,0.3s						
LNSS	**Leonessa**	**0.28**	**304**	Pg	Pg	14 16 28.1	+0.5
LNSS				Sg	Sb	14 16 33.2	-1.0
	68nm,0.1s						
LNSS	**Leonessa**	**0.28**	**304**	Pg	Pg	14 16 28.1	+0.5
LNSS				Sg	Sb	14 16 33.2	-1.0
	68nm,0.1s						

NIED ***15*** *14:30:00, 24.00N×121.30E, h5km, Mw4.9 Best double couple: M₀2.26000×10¹⁶ NP1:φ₁66.00000°, δ77.00000°, λ85.00000°. NP2:φ₂267.00000°, δ15.00000°, λ111.00000°.*
JMA ***15*** *14:30:58.3±0.5, 24.04N×121.30E, h35km, M4.9*
NEIC ***15*** *14:31:02.2±1.4, 24.20N×121.86E, h18km±8km, mb4.5/12, Error ellipse: s-maj=9.4km s-min=7.2km az=124.0*
BJI ***15*** *14:31:02.4, 24.24N×121.81E, h6km, mB4.7/24, mb4.5/31, ML4.6/7, Ms4.6/23, Ms7 4.5/23*
ISCJB ***15*** *14:31:03.5±0.3, 24.20N±0.01×121.86E±0.02, h24km±2km, mb4.2/32, MS3.9/14, Error ellipse: s-maj=3.2km s-min=2.1km az=33.0*
TAP ***15*** *14:31:03.4, 24.18N×121.77E, h12km, ML4.6, B*
IDC ***15*** *14:31:09.8±3.3, 24.25N×121.90E, h78km±30km, mb4.0/16, mb1 4.1/19, mb1mx4.0/28, mbtmp3.9/19, MS3.7/16, Ms1 3.7/16, ms1mx3.5/35, Error ellipse: s-maj=17.7km s-min=14.3km az=74.0*
ISC 15 14:31:03.1±0.5, 24.17N±0.02×121.82E±0.02, h18km±2km, n175,σ1ᵎ36/212, mb4.4/32, MS3.9/14, 17C-12D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.16**	**333**	*i* P	**Pb**	**14 31 06.8**	**-0.5**
	baz=350						
EHP				*i* S	**Sb**	**14 31 09.6**	**-0.6**
	baz=350						
NACB	**Ninganchiao**	**0.21**	**272**	*e*Pg	**Pg**	**14 31 06.8**	**-1.4**
TWD	**Chiawan**	**0.22**	**248**	⇑*i*P	**Pg**	**14 31 07.8**	**-0.6**
	baz=246						
TWD				S	**Sg**	**14 31 11.1**	**-0.8**
	baz=246						
ENA	**Nanau**	**0.27**	**344**	⇑*i*P	**Pg**	**14 31 08.8**	**-0.3**
	baz=355						
ENA				*e*S	**Sg**	**14 31 12.9**	**-0.3**
	baz=355						
HWA	**Hwalien**	**0.27**	**227**	*e*P	**Pb**	**14 31 09.7**	**+0.3**
	baz=228						
ESF	**Shoufeng Towns**	**0.41**	**225**	*e*P	**Pg**	**14 31 11.8**	**+0.2**
	baz=228						
ESF				*e*S	**Sb**	**14 31 18.2**	**+0.4**
	baz=228						
TWC	**Suao**	**0.44**	**3**	⇑*i*P	**Pb**	**14 31 12.3**	**-0.1**
	baz=16						
NNS	**Nan Shan**	**0.49**	**304**	⇑*i*P	**Pg**	**14 31 12.6**	**-0.5**
	baz=307						
NNS				S	**Sg**	**14 31 18.7**	**-1.1**
	baz=307						
ESL	**Shilin**	**0.50**	**226**	P	**Pg**	**14 31 13.0**	**-0.2**
	baz=228						
ESL				*e*S	**Sb**	**14 31 20.6**	**+0.2**
	baz=228						
WHF	**Hehuan Shan**	**0.51**	**268**	⇑*i*P	**Pg**	**14 31 12.9**	**-0.6**
	baz=268						
TEGC	**Jichi Village**	**0.52**	**210**	*e*P	**Pn**	**14 31 15.0**	**-0.6**
	baz=197						
TEGC				*e*S	**Sn**	**14 31 24.0**	**-0.1**
	baz=197						
ENTT	**Nioudou**	**0.53**	**334**	⇑*i*P	**Pb**	**14 31 13.6**	**-0.2**
	baz=339						
TWE	**Neicheng**	**0.57**	**346**	⇑*i*P	**Pb**	**14 31 14.6**	**0.0**
	baz=351						
TWE				S	**Sb**	**14 31 22.4**	**0.0**
	baz=351						
TWT	**Tachien**	**0.60**	**279**	⇑*i*P	**Pg**	**14 31 15.1**	**+0.1**
	baz=278						
TWT				S	**Sg**	**14 31 22.4**	**-0.6**
	baz=278						
ILA	**Ilan**	**0.60**	**354**	⇑*i*P	**Pb**	**14 31 15.6**	**+0.5**
	baz=353						
ILA				S	**Sb**	**14 31 23.9**	**+0.6**
	baz=353						
YHNB	**Yeheng**	**0.65**	**321**	*e*Pn	**Pb**	**14 31 15.3**	**-0.6**
YHNB				*e*Sn	**Sg**	**14 31 22.8**	**-1.8**
NSK	**Sanguang**	**0.66**	**320**	⇑*i*P	**Pb**	**14 31 16.0**	**-0.1**
	baz=323						
NSK				S	**Sg**	**14 31 24.4**	**-0.6**
	baz=323						
EGS		**0.68**	**8**	⇑*i*P	**Pn**	**14 31 17.1**	**-0.8**
	baz=19						
EHY	**Hungye**	**0.80**	**215**	*e*P	**Pb**	**14 31 18.1**	**-0.4**
	baz=225						
TWB1	**Santiao Chiao**	**0.85**	**10**	P	**Pn**	**14 31 19.9**	**-0.3**
	baz=13						
TWB1				*e*S	**Sg**	**14 31 31.1**	**0.0**
	baz=13						
TATO	**Taipei**	**0.86**	**339**	*e*Pg	**Pg**	**14 31 19.7**	**-0.2**
SSLB	**Suanglung**	**0.88**	**245**	*e*Pg	**Pb**	**14 31 19.4**	**-0.5**
NSTT	**Nanjuang**	**0.88**	**302**	⇑*i*P	**Pg**	**14 31 20.1**	**-0.1**
	baz=304						
NSTT				S	**Sb**	**14 31 31.3**	**0.0**
	baz=304						
SMLT	**Sun Moon Lake**	**0.89**	**252**	⇓P	**Pb**	**14 31 20.1**	**0.0**
	baz=252						
SMLT				S	**Sb**	**14 31 32.1**	**+0.4**
	baz=252						
NWF	**Wu-fen Shan**	**0.90**	**358**	⇑*i*P	**Pn**	**14 31 21.2**	**+0.2**
	baz=353						
NWF				*i* S	**Sg**	**14 31 32.8**	**+0.2**
	baz=353						
YULB	**Yu-li**	**0.91**	**212**	*e*Pn	**Pb**	**14 31 19.5**	**-0.8**
TAP1	**Taipei**	**0.91**	**343**	*e*P	**Pn**	**14 31 20.8**	**-0.3**
	baz=336						
TAP	**Taipei**	**0.92**	**342**	*e*P	**Pn**	**14 31 21.0**	**-0.1**
	baz=344						
TAP				*e*S	**Sg**	**14 31 32.9**	**-0.2**
	baz=344						
TYC	**Yuchr**	**0.92**	**254**	⇓*i*P	**Pb**	**14 31 20.8**	**+0.2**
	baz=254						
TYC				*e*S	**Sb**	**14 31 32.0**	**-0.4**
	baz=254						
TWF1	**Yuli**	**0.94**	**211**	*e*P	**Pb**	**14 31 20.1**	**-0.8**
	baz=225						
TWQ1	**Liyutan**	**0.97**	**281**	⇑P	**Pg**	**14 31 22.4**	**+0.3**
	baz=292						
TWQ1				*e*S	**Sn**	**14 31 36.1**	**+0.8**
	baz=292						
NCU	**National Centr**	**0.99**	**324**	⇓*i*P	**Pg**	**14 31 22.9**	**+0.6**
	baz=326						
NCU				S	**Sn**	**14 31 36.9**	**+1.2**
	baz=326						
NSY	**Sanyi**	**1.00**	**285**	P	**Pg**	**14 31 23.1**	**+0.6**
	baz=286						
NSY				S	**Sn**	**14 31 36.5**	**+0.5**
	baz=286						
TWS1	**Kuangyinshan**	**1.00**	**339**	⇓*i*P	**Pg**	**14 31 22.8**	**+0.2**
	baz=341						
TWS1				S	**Sn**	**14 31 37.3**	**+1.4**
	baz=341						
HSN	**Hsinchu**	**1.00**	**309**	*e*P	**Pg**	**14 31 23.1**	**+0.6**
	baz=304						
HSN				*e*S	**Sn**	**14 31 36.4**	**+0.4**
	baz=304						
TCU	**Taichung**	**1.05**	**269**	⇓*i*P	**Pg**	**14 31 24.2**	**+0.8**
	baz=270						
TCU				S	**Sg**	**14 31 38.6**	**+1.4**
	baz=270						
WNT	**Mingjian**	**1.08**	**255**	⇓*e*P	**Pg**	**14 31 24.4**	**+0.4**
	baz=251						
WNT				*e*S	**Sg**	**14 31 39.6**	**+1.4**
	baz=251						
TWY	**Chenhua**	**1.12**	**350**	⇓*e*P	**Pg**	**14 31 24.2**	**-0.7**
	baz=352						
YOJ	**Yonaguni jima**	**1.12**	**75**	⇓P	**Pg**	**14 31 25.2**	**+0.4**
	baz=87						
YOJ				S	**Sg**	**14 31 43.3**	**+3.7**
	baz=87						
YOJ	**Yonaguni jima**	**1.12**	**75**	P	**Pg**	**14 31 25.3**	**+0.4**
YOJ				*e*S	Sg	14 31 45.6	+6.0
ALS	**Alishan**	**1.14**	**235**	⇓*i*P	**Pb**	**14 31 24.9**	**+0.5**
	baz=225						
CHKT	**Chengkung**	**1.14**	**202**	*e*P	**Pn**	**14 31 24.3**	**+0.1**
	baz=186						
CHN5	**Tsauling**	**1.19**	**242**	⇓*i*P	**Pg**	**14 31 26.0**	**-0.2**
	baz=243						
CHN5				*e*S	**Sg**	**14 31 42.9**	**+1.1**
	baz=243						
ELDTW	**Lidau**	**1.22**	**217**	*e*P	**Pn**	**14 31 24.6**	**-0.9**
	baz=203						
WGK	**Gukeng**	**1.25**	**248**	*e*P	**Pg**	**14 31 26.9**	**-0.3**
	baz=249						
CHN2	**Minshiung**	**1.39**	**243**	*e*P	**Pg**	**14 31 29.8**	**-0.1**
	baz=245						
CHN2				*e*S	**Sg**	**14 31 49.0**	**+1.1**
	baz=245						
CHN4	**Tsaushan**	**1.39**	**234**	*e*P	**Pb**	**14 31 29.2**	**+0.7**
	baz=236						
CHN4				S	**Sg**	**14 31 49.6**	**+1.6**
	baz=236						
TPUB	**Ta-pu**	**1.39**	**232**	*e*Pn	**Pb**	**14 31 28.9**	**+0.2**
WTP	**Ta-pu**	**1.44**	**231**	P	**Pb**	**14 31 30.0**	**+0.6**
	baz=232						
WTP				S	**Sg**	**14 31 50.3**	**+0.7**
	baz=232						
WTCT	**Ta-ch'eng**	**1.44**	**258**	*e*P	**Pb**	**14 31 29.5**	**+0.1**
	baz=260						
WTCT				*e*S	**Sg**	**14 31 49.8**	**+0.1**
	baz=260						
CHY	**Chiayi**	**1.44**	**243**	*e*P	**Pb**	**14 31 30.3**	**+0.8**
	baz=245						
CHY				*e*S	**Sb**	**14 31 48.5**	**+1.0**
	baz=245						
PCYT	**Pengchaiyu**	**1.48**	**9**	⇓P	**Pb**	**14 31 29.9**	**-0.1**
	baz=8.0						
TWG	**Pinlang**	**1.51**	**207**	*e*P	**Pn**	**14 31 28.5**	**-0.8**
	baz=192						
TWG	**Pinlang**	**1.51**	**207**	*e*Pn	**Pn**	**14 31 28.0**	**-1.2**
TWK	**Hsinying**	**1.52**	**234**	P	**Pb**	**14 31 31.5**	**+0.8**
	baz=235						
TWK				*e*S	**Sg**	**14 31 51.9**	**-0.2**
	baz=235						
TTN	**Taitung**	**1.54**	**204**	*e*P	**Pn**	**14 31 30.2**	**+0.6**
	baz=199						
CHN1	**Nanshi**	**1.54**	**231**	⇑P	**Pb**	**14 31 31.6**	**+0.5**
	baz=223						
CHN1				*e*S	**Sg**	**14 31 54.4**	**+1.6**
	baz=223						
WSF	**Szhu**	**1.56**	**251**	P	**Pb**	**14 31 31.6**	**+0.2**
	baz=253						
WSF				*e*S	**Sg**	**14 31 52.7**	**-0.6**
	baz=253						
CHN8	**Yiju**	**1.69**	**241**	*e*P	**Pb**	**14 31 33.2**	**-0.4**
	baz=244						
CHN3	**Shinhua**	**1.72**	**231**	*e*P	**Pg**	**14 31 35.6**	**-0.7**
	baz=233						
IRIF	**Iriomote-Funau**	**1.75**	**84**	P	**Pb**	**14 31 33.9**	**-0.8**
IRIF				*e*S	**Sg**	**14 32 00.7**	**+1.2**
ECL	**Taimali**	**1.75**	**207**	*e*P	**Pn**	**14 31 33.4**	**+0.8**
	baz=194						
SCLT	**Jiali**	**1.79**	**237**	*e*P	**Pb**	**14 31 34.9**	**-0.5**
	baz=238						
SCLT				*e*S	**Sg**	**14 31 59.6**	**-1.1**
	baz=238						
HATJ	**Hateruma jima**	**1.81**	**93**	P	**Pb**	**14 31 35.3**	**-0.5**
HATJ				*e*S	**Sg**	**14 32 01.0**	**-0.6**
TAI1	**Yung-k'ang**	**1.84**	**233**	*e*P	**Pb**	**14 31 36.6**	**+0.4**
	baz=234						
TWM1	**Shoushan**	**1.85**	**224**	*e*P	**Pb**	**14 31 36.7**	**+0.2**
	baz=225						
SGLT	**Jiouru**	**1.89**	**221**	*e*P	**Pb**	**14 31 37.8**	**+0.8**
	baz=206						
EAST	**Anshuo**	**1.99**	**207**	*e*P	**Pn**	**14 31 35.5**	**-0.4**
	baz=196						
TAW	**Tawu**	**1.99**	**206**	*e*P	**Pb**	**14 31 38.0**	**-0.8**
	baz=194						
JKRS	**Kuro-shima**	**2.00**	**88**	P	**Pb**	**14 31 38.2**	**-0.7**
JKRS				*e*S	**Sg**	**14 32 06.1**	**-1.4**
SCZT	**Fangliau**	**2.10**	**212**	*e*P	**Pb**	**14 31 39.3**	**-1.4**
	baz=198						
KAU	**Kaohsiung**	**2.11**	**221**	*e*P	**Pb**	**14 31 40.7**	**-0.2**
	baz=242						
JIJ	**Ishigaki jima**	**2.13**	**84**	P	**Pn**	**14 31 39.4**	**+1.6**
LAY	**Lan-yu**	**2.13**	**187**	*e*P	**Pn**	**14 31 37.0**	**-0.9**
	baz=187						
PNG	**Penghu**	**2.16**	**254**	*e*P	**Pn**	**14 31 38.5**	**+0.3**
	baz=258						
PNG				*e*S	**Sn**	**14 32 06.3**	**+1.8**
	baz=258						
WDGT	**Dungji**	**2.18**	**246**	⇓*i*P	**Pn**	**14 31 39.6**	**+1.1**
	baz=248						
WDGT				*e*S	**Sb**	**14 32 07.2**	**-1.5**
	baz=248						
TWP	**Hsiaoliuchiu**	**2.25**	**217**	*e*P	**Pb**	**14 31 42.6**	**-0.7**
	baz=218						
HEN	**Hengchun**	**2.37**	**205**	*e*P	**Pn**	**14 31 42.8**	**+1.7**
	baz=198						
TWK1	**Hengchun**	**2.40**	**203**	*e*P	**Pn**	**14 31 43.5**	**+2.0**
	baz=192						
TSEB	**Hengchuen, Pin**	**2.41**	**201**	*e*P	**Pn**	**14 31 43.5**	**+1.8**
	baz=204						
JTJ	**Tarama**	**2.67**	**79**	P	**Pn**	**14 31 47.3**	**+2.1**
QZH	**Quanzhou**	**3.04**	**285**	⇑*i*Pn	**Pn**	**14 31 51.3**	**+1.0**
QZH				Sn	**Sn**	**14 32 26.3**	**0.0**
QZH				smax	smax		
	comp=N,3μm,0.9s						
QZH				smax	smax		
	comp=E,2μm,0.8s						
QZH				LR	LR		
	comp=N,6μm,3.3s						
QZH				LR	LR		
	comp=E,6μm,3.0s						
QZH				LR	LR		
	comp=Z,9μm,10.2s						
KNM	**Kinmen**	**3.10**	**275**	*e*P	**Pn**	**14 31 53.4**	**+2.2**
	baz=277						
JOGS	**Gusukube**	**3.32**	**79**	P	**Pn**	**14 31 57.0**	**+2.8**
JKE	**Kume jima 2**	**4.98**	**63**	P	**Pn**	**14 32 19.9**	**+2.9**
JAGN	**Aguni-jima**	**5.46**	**63**	P	Pn	14 32 27.3	+3.7
JOW	**Kunigami**	**6.41**	**64**	*e*P	**Pn**	**14 32 38.0**	**+1.3**
	baz=67						
JOW	**Kunigami**	**6.41**	**64**	*e*Pn	**Pn**	**14 32 37.5**	**+0.9**
JOW	**Kunigami**	**6.41**	**64**	P	**Pn**	**14 32 37.8**	**+1.2**
JTK	**Tokunoshima**	**7.36**	**59**	P	**Pn**	**14 32 50.0**	**+0.3**
JAMN	**Amaminishikomi**	**7.75**	**57**	P	**Pn**	**14 32 55.5**	**+0.4**
NJ2	**Nanjing**	**8.28**	**342**	*e*P	**Pn**	**14 33 01.8**	**-0.5**
NJ2				pP	pP	14 33 05.8	
NJ2				sP		14 33 09.3	
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,130nm,4.2s						
NJ2				smax	smax		
	comp=N,360nm,0.9s						
NJ2				smax	smax		
	comp=E,320nm,1.0s						
NJ2				LR	LR		
	comp=N,2μm,12.4s						
NJ2				LR	LR		
	comp=E,630nm,12.4s						
NJ2				LR	LR		
	comp=Z,2μm,13.0s						
WHN	**Wuhan**	**9.19**	**315**	P	**Pn**	**14 33 14.3**	**-0.5**
WHN				LR	LR		
	comp=N,6μm,8.5s						
WHN				LR	LR		
	comp=E,4μm,9.1s						
WHN				LR	LR		
	comp=Z,7μm,10.2s						
JNU	**Nakatsue**	**11.95**	**40**	*e*Pn	**Pn**	**14 33 51.9**	**-0.7**
JNU	**Nakatsue**	**11.95**	**40**	P	Pn	14 33 57.1	+4.5
	comp=Z,0.1nm,0.3s,baz=233,slow=10,SNR=3.2						
QIZ	**Qiongzhong**	**12.26**	**248**	P	P	14 34 12.8	+3.6
QIZ				S	Sn	14 36 33.4	+20
QIZ				LR	LR		
	comp=N,430nm,15.1s						
QIZ				LR	LR		
	comp=Z,300nm,14.8s						
ENH	**Enshi**	**12.54**	**302**	*e*Pn	**Pn**	**14 34 01.9**	**+1.1**
	comp=Z,3.8nm,0.6s						
GYA	**Guiyang**	**13.90**	**283**	P	**Pn**	**14 34 20.0**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GYA				pmax	pmax		
	comp=Z,50nm,4.2s						
GYA				LR	LR		
	comp=N,380nm,7.7s						
GYA				LR	LR		
	comp=E,1μm,9.9s						
GYA				LR	LR		
	comp=Z,1μm,9.4s						
KSAR	**Wonju Array Be**	**14.22**	**20**	P	P	14 34 27.4	-3.4
KSRS	**Korea Array**	**14.24**	**20**	P	P	14 34 27.4	-3.7
	comp=Z,0.4nm,0.3s,baz=198,slow=12,SNR=20						
KSRS				LR	LR	14 39 31.7	
	comp=Z,104nm,21.0s,baz=194,slow=36						
DL2	**Dalian**	**14.70**	**359**	P	P	14 34 39.4	+3.2
DL2				S	Sn	14 37 20.8	+8.3
DL2				pmax	pmax		
	comp=Z,40nm,1.0s						
DL2				LR	LR		
	comp=N,730nm,13.7s						
DL2				LR	LR		
	comp=E,190nm,14.4s						
DL2				LR	LR		
	comp=Z,800nm,13.6s						
XAN	**Xi'an**	**14.95**	**314**	P	**Pn**	**14 34 33.8**	**+0.2**
XAN				pP	**P**	**14 34 41.1**	**+2.0**
XAN				pmax	pmax		
	comp=Z,2.0nm,1.3s						
XAN				LR	LR		
	comp=N,340nm,8.2s						
XAN				LR	LR		
	comp=E,440nm,11.0s						
XAN				LR	LR		
	comp=Z,500nm,11.0s						
DAV	**Davao City (W)**	**17.38**	**167**	LR	LR	14 43 08.9	
	comp=Z,141nm,18.6s,baz=269,slow=41						
JHJ	**Hachijo jima 2**	**18.09**	**56**	LR	LR	14 42 13.4	
	comp=Z,136nm,18.3s,baz=270,slow=37						
HHC	**Hu-ho-hao-te**	**18.73**	**335**	*e*P	**Pn**	**14 35 22.4**	**+1.0**
HHC				PP	**PnPn**	**14 35 38.3**	**+4.8**
HHC				S	**Sn**	**14 38 48.0**	**-2.4**
HHC				SS	**SnSn**	**14 39 12.4**	**+7.8**
HHC				PcP	**PcP**	**14 39 52.8**	**+4.3**
HHC				pmax	pmax		
	comp=Z,36nm,0.8s						
HHC				pmax	pmax		
	comp=Z,550nm,6.5s						
HHC				LR	LR		
	comp=N,1μm,11.3s						
HHC				LR	LR		
	comp=E,620nm,11.3s						
HHC				LR	LR		
	comp=Z,1μm,13.7s						
MJAR	**Matsushiro Arr**	**18.73**	**45**	P	**P**	**14 35 20.3**	**-0.6**
MJAR	**Matsushiro Arr**	**18.73**	**45**	P	**P**	**14 35 20.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=239,slow=9.9,SNR=6.0						
MJAR				LR	LR	14 43 18.4	
	comp=Z,277nm,20.0s,baz=225,slow=39						
LZH	**Lanzhou**	**19.53**	**312**	⇑P	**Pn**	**14 35 33.3**	**+2.1**
LZH				PP	**PnPn**	**14 35 49.0**	**+4.4**
LZH				*e*S	S	14 38 58.3	-12
LZH				pmax	pmax		
	comp=Z,38nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,4.3s						
LZH				LR	LR		
	comp=N,870nm,12.4s						
LZH				LR	LR		
	comp=E,950nm,10.7s						
LZH				LR	LR		
	comp=Z,2μm,13.5s						
CN2	**Changchun**	**19.81**	**8**	*e*P	**Pn**	**14 35 34.0**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,11.0s						
CN2				LR	LR		
	comp=E,900nm,11.0s						
CN2				LR	LR		
	comp=Z,900nm,13.0s						
USRK	**Ussuriysk Arra**	**21.65**	**20**	P	**P**	**14 35 52.0**	**-0.5**
	comp=Z,1.7nm,0.6s,baz=138,slow=42,SNR=3.4						
CHTO	**Chiang Mai**	**21.93**	**260**	*e*P	**P**	**14 35 55.6**	**-0.2**
	comp=Z,11nm,1.1s						
CMAR	**Chiang Mai Arr**	**22.05**	**259**	P	**P**	**14 35 59.4**	**+2.4**
CMAR	**Chiang Mai Arr**	**22.05**	**259**	P	**P**	**14 35 59.4**	**+2.4**
	comp=Z,2.8nm,0.8s,baz=59,slow=7.9,SNR=17						
GTA	**Gaotai**	**24.01**	**314**	*e*P	**P**	**14 36 17.9**	**+0.8**
GTA				pP	**pP**	**14 36 22.1**	**-0.4**
GTA				sP	**sP**	**14 36 25.3**	**+0.6**
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,53nm,4.5s						
GTA				LR	LR		
	comp=N,310nm,12.1s						
GTA				LR	LR		
	comp=E,850nm,11.9s						
GTA				LR	LR		
	comp=Z,1μm,12.6s						
GUMO	**Guam**	**24.17**	**112**	LR	LR	14 44 15.7	
	comp=Z,60nm,20.2s,baz=94,slow=32						
HIA	**Hailar**	**25.11**	**357**	*e*P	**P**	**14 36 23.9**	**-2.9**
	comp=Z,16nm,0.9s						
KSM	**Kuching**	**25.16**	**208**	*e*P	**P**	**14 36 28.3**	**+0.8**
	comp=Z,10nm,0.9s						
ASAJ	**Asahikawa**	**26.17**	**35**	LR	LR	14 47 51.5	
	comp=Z,304nm,18.7s,baz=177,slow=38						
ULN	**Ulaanbaatar**	**26.40**	**337**	*e*P	**P**	**14 36 39.4**	**+0.6**
SONM	**Songino Array**	**26.61**	**336**	P	**P**	**14 36 40.8**	**+0.1**
SONM	**Songino Array**	**26.61**	**336**	P	**P**	**14 36 40.8**	**+0.1**
	comp=Z,9.9nm,1.0s,baz=153,slow=9.7,SNR=45						
SONM				LR	LR	14 48 21.2	
	comp=Z,536nm,18.0s,baz=335,slow=39						
LSA	**Lhasa**	**27.85**	**288**	P	**P**	**14 36 54.3**	**+2.0**
LSA	**Lhasa**	**27.85**	**288**	*e*P	**P**	**14 36 50.5**	**-1.7**
	comp=Z,6.1nm,0.8s						
KAPI	**Kappang**	**29.07**	**184**	LR	LR	14 48 51.4	
	comp=Z,74nm,21.9s,baz=202,slow=36						
PSI	**Prapat**	**30.66**	**230**	LR	LR	14 48 56.5	
	comp=Z,93nm,18.9s,baz=224,slow=35						
MK31	**Makanchi Array**	**38.76**	**316**	*e*P	**P**	**14 38 25.0**	**-1.5**
MKAR	**Makanchi Array**	**38.76**	**316**	P	**P**	**14 38 26.9**	**+0.4**
MKAR	**Makanchi Array**	**38.76**	**316**	P	**P**	**14 38 26.9**	**+0.4**
	comp=Z,3.2nm,0.7s,baz=106,slow=9.7,SNR=38						
MKAR				LR	LR	14 55 36.7	
	comp=Z,162nm,18.1s,baz=173,slow=38						
PETK	**Petropavlovsk-**	**39.56**	**34**	LR	LR	14 56 11.3	
	comp=Z,118nm,18.8s,baz=233,slow=38						
ZAAO	**Zalesovo Array**	**40.58**	**327**	*e*P	**P**	**14 38 38.9**	**-2.5**
ZALV	**Zalesovo Beam**	**40.58**	**327**	P	**P**	**14 38 40.4**	**-1.1**
ZALV	**Zalesovo Beam**	**40.58**	**327**	P	**P**	**14 38 40.4**	**-1.1**
	comp=Z,8.7nm,0.8s,baz=111,slow=8.1,SNR=40						
ZALV				LR	LR	14 56 29.4	
	comp=Z,126nm,21.4s,baz=248,slow=38						
KSH	**Kash

KSH				LR	LR				
	comp=Z,270nm,7.0s								
TKM2	**Tokmak 2**	**42.23**	**308**	*e*P	**P**	**14 38 56.2**	**+0.7**		
	comp=Z,5.3nm,0.9s								
KURK	**Kurchatov**	**42.48**	**320**	*e*P	**P**	**14 38 56.8**	**-0.3**		
WRA	**Warramunga Arr**	**45.51**	**163**	P	**P**	**14 39 21.1**	**-0.6**		
WRA	**Warramunga Arr**	**45.51**	**163**	P	**P**	**14 39 21.1**	**-0.6**		
	comp=Z,2.7nm,0.8s,baz=345,slow=8.7,SNR=19								
KKAR	**Karatay Array**	**45.95**	**307**	*e*P	**P**	**14 39 22.9**	**-2.2**		
KBL	**Kabul**	**46.70**	**295**	*e*P	**P**	**14 39 29.8**	**-1.5**		
BRVK	**Borovoye**	**48.13**	**321**	*e*P	**P**	**14 39 41.9**	**+0.1**		
	comp=Z,12nm,0.9s								
ASAR	**Alice Springs**	**48.97**	**165**	P	**P**	**14 39 49.2**	**+0.5**		
ASAR	**Alice Springs**	**48.97**	**165**	P	**P**	**14 39 49.2**	**+0.5**		
	comp=Z,1.1nm,0.7s,baz=340,slow=7.1,SNR=18								
ABKAR	**Akbulak array**	**53.87**	**314**	*e*P	**P**	**14 40 23.7**	**-1.5**		
	comp=Z,5.9nm,0.7s								
GAMB	**Gambell**	**58.22**	**29**	*e*P	**P**	**14 40 54.4**	**-1.6**		
	comp=Z,2.8nm,1.1s								
KBZ	**Khabaz**	**65.94**	**309**	P	**P**	**14 41 47.8**	**-0.4**		
KBZ	**Khabaz**	**65.94**	**309**	P	**P**	**14 41 47.8**	**-0.4**		
	comp=Z,3.6nm,0.8s,baz=129,slow=9.3,SNR=7.5								
KBZ				LR	LR	15 14 38.7			
	comp=Z,56nm,18.7s,baz=171,slow=40								
PPLA	**Purkeypile**	**66.97**	**30**	*e*P	P	14 41 49.3	-5.4		
ILAR	**Eielson Array**	**68.96**	**27**	P	**P**	**14 42 06.1**	**-0.9**		
ILAR	**Eielson Array**	**68.96**	**27**	P	**P**	**14 42 06.1**	**-0.9**		
	comp=Z,0.9nm,0.8s,baz=285,slow=8.5,SNR=11								
JOF	**Joensuu**	**69.01**	**331**	*e*p	**P**	**14 42 06.4**	**-0.8**		
	comp=Z,6.3nm,0.8s								
ARCES	**ARCESS Array B**	**69.77**	**338**	LR	LR	15 16 08.2			
	comp=Z,62nm,18.3s,baz=220,slow=39								
DOT	**Dot Lake**	**70.42**	**28**	*e*P	**P**	**14 42 13.3**	**-2.7**		
FINES	**FINESS Array B**	**71.75**	**330**	P	**P**	**14 42 21.6**	**-2.5**		
FINES	**FINESS Array B**	**71.75**	**330**	P	**P**	**14 42 21.6**	**-2.5**		
	comp=Z,5.9nm,0.9s,baz=78,slow=9.9,SNR=12								
FINES				LR	LR	15 16 54.1			
	comp=Z,157nm,18.2s,baz=90,slow=38								
AKASG	**Malin Array Be**	**73.27**	**318**	P	**P**	**14 42 32.2**	**-1.1**		
AKASG	**Malin Array Be**	**73.27**	**318**	P	**P**	**14 42 32.2**	**-1.1**		
	comp=Z,3.7nm,0.8s,baz=59,slow=5.9,SNR=10								
BRTR	**Keskin Array B**	**73.65**	**307**	P	**P**	**14 42 35.6**	**-0.3**		
BRTR	**Keskin Array B**	**73.65**	**307**	P	**P**	**14 42 35.6**	**-0.3**		
	comp=Z,3.6nm,1.0s,baz=101,slow=5.2,SNR=18								
KOLS	**Kolonicke sedl**	**78.11**	**318**	*e*P	**P**	**14 43 03.0**	**+1.9**		
NB2	**NORSAR Subarra**	**78.51**	**332**	P	**P**	**14 43 02.0**	**-1.1**		
	comp=Z,2.8nm,0.8s,baz=60,slow=5.6								
NOA	**NORSAR Array B**	**78.51**	**332**	P	**P**	**14 43 02.4**	**-0.8**		
NOA	**NORSAR Array B**	**78.51**	**332**	P	**P**	**14 43 02.4**	**-0.8**		
	comp=Z,2.2nm,0.8s,baz=58,slow=5.7,SNR=12								
NOA				LR	LR	15 20 32.5			
	comp=Z,90nm,20.0s,baz=50,slow=38								
RES	**Resolute Bay**	**78.59**	**9**	*e*P	**P**	**14 43 00.6**	**-2.6**		
	comp=Z,4.3nm,1.0s								
VYHS	**Vyhne**	**80.36**	**319**	*e*P	**P**	**14 43 13.7**	**+0.3**		
CLL	**Collm**	**82.42**	**323**	*e*P	**P**	**14 43 23.0**	**-1.2**		
CLL				*e*(sP)	**sP**	**14 43 33.0**	**+0.8**		
YKW3	**Yellowknife Ar**	**82.71**	**23**	*e*P	**P**	**14 43 23.6**	**-1.9**		
	comp=Z,0.1nm,0.8s								
YKA	**Yellowknife Ar**	**82.76**	**23**	P	**P**	**14 43 24.9**	**-0.9**		
YKA	**Yellowknife Ar**	**82.76**	**23**	P	**P**	**14 43 24.9**	**-0.9**		
	comp=Z,3.7nm,0.7s,baz=312,slow=5.1,SNR=55								
KMBO	**Kilima Mbogo**	**85.50**	**267**	P	**P**	**14 43 42.1**	**+1.2**		
KMBO	**Kilima Mbogo**	**85.50**	**267**	P	**P**	**14 43 42.1**	**+1.2**		
	comp=Z,0.7nm,0.4s,baz=220,slow=23,SNR=6.1								
WALA	**Waterton Lakes**	**91.81**	**33**	*e*P	**P**	**14 44 08.0**	**-2.2**		
	comp=Z,0.3nm,1.2s								
BMO	**Blue Mountains**	**92.71**	**38**	*e*P	**P**	**14 44 12.3**	**-2.1**		
	comp=Z,2.8nm,1.1s								
SLMT	**Seeley Lake**	**93.22**	**34**	*e*P	P	14 44 13.2	-3.6		
	comp=Z,4.0nm,0.9s								
NVAR	**Mina Array Bea**	**96.05**	**43**	P	**P**	**14 44 29.7**	**-0.3**		
NVAR	**Mina Array Bea**	**96.05**	**43**	P	**P**	**14 44 29.7**	**-0.3**		
	comp=Z,0.6nm,0.7s,baz=276,slow=6.7,SNR=4.3								

*ISCJB **15** 14:41:32.6±0.8, 45.4°S×0.1°×97.3°E×0.2, h10km, mb4.3/12, MS4.2/8, Error ellipse: s-maj=22.6km s-min=13.3km az=20.4*

*IDC **15** 14:41:32.6±0.8, 45.32°S×97.17°E, h0km, mb4.2/9, mb1 4.3/9, mb1mx4.2/18, mbtmp4.2/9, MS4.1/9, Ms1 4.1/9, ms1mx3.8/20, Error ellipse: s-maj=28.3km s-min=17.8km az=109.0*

*NEIC **15** 14:41:34.1±0.5, 45.34°S×97.32E, h10km, mb4.7/3, Error ellipse: s-maj=18.6km s-min=11.7km az=108.0*

ISC 15 14:41:34.3±0.7, **45.4°S**±0.1°×**97.3°E**±0.2, **h10**km, **n35,**
σ1°**33**/34, **mb4.3**/12, **MS4.1**/8, **Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**19.76**	**58**	LR	LR	14 52 01.1	
	comp=Z,333nm,20.6s,baz=215,slow=32						
CASY	**Casey**	**22.16**	**166**	*e*P	**P**	**14 46 29.2**	**-0.8**
	133nm,1.6s						
MAW	**Mawson**	**28.62**	**207**	LR	LR	14 56 32.1	
	comp=Z,418nm,18.7s,baz=74,slow=31						
ASAR	**Alice Springs**	**36.67**	**66**	P	**P**	**14 48 41.9**	**+0.6**
ASAR				PcP	**PcP**	**14 51 07.7**	**+3.7**
ASAR	**Alice Springs**	**36.67**	**66**	P	**P**	**14 48 41.9**	**+0.6**
	2.4nm,0.8s,baz=221,slow=7.7,SNR=24						
ASAR				PcP	**PcP**	**14 51 07.7**	**+3.7**
	0.4nm,0.6s,baz=212,slow=2.0,SNR=6.2						
ASAR				LR	LR	15 01 48.5	
	comp=Z,164nm,19.7s,baz=83,slow=33						
STKA	**Stephens Creek**	**36.68**	**84**	P	**P**	**14 48 41.5**	**+0.4**
STKA	**Stephens Creek**	**36.68**	**84**	P	**P**	**14 48 41.5**	**+0.4**
	3.7nm,0.8s,baz=181,slow=14,SNR=4.9						
STKA				LR	LR	15 00 28.8	
	comp=Z,221nm,20.7s,baz=206,slow=31						
WRA	**Warramunga Arr**	**39.65**	**63**	P	**P**	**14 49 07.0**	**+0.6**
WRA	**Warramunga Arr**	**39.65**	**63**	P	**P**	**14 49 07.0**	**+0.6**
	7.0nm,0.8s,baz=224,slow=8.5,SNR=57						
WRAB	**Tennant Creek**	**39.67**	**63**	*e*P	**P**	**14 49 04.4**	**-2.1**
	15nm,1.4s						
VNDA	**Vanda**	**40.72**	**162**	P	**P**	**14 49 15.2**	**+0.6**
VNDA	**Vanda**	**40.72**	**162**	P	**P**	**14 49 15.2**	**+0.6**
	2.5nm,1.0s,baz=284,slow=8.9,SNR=8.3						
VNDA				LR	LR	15 04 18.4	
	comp=Z,491nm,19.6s,baz=297,slow=34						
QSPA	**South Pole Qui**	**44.80**	**180**	P	**P**	**14 49 47.9**	**-0.1**
QSPA	**South Pole Qui**	**44.80**	**180**	P	**P**	**14 49 47.9**	**-0.1**
	8.0nm,1.0s,baz=315,slow=3.9,SNR=30						
CTAO	**Charters Tower**	**47.37**	**74**	*e*P	**P**	**14 50 07.5**	**-1.1**
	6.5nm,1.1s						
SNAA	**Sanae**	**50.70**	**204**	P	**P**	**14 50 33.4**	**-0.1**
SNAA	**Sanae**	**50.70**	**204**	P	**P**	**14 50 33.4**	**-0.1**
	2.6nm,0.7s,baz=127,slow=7.8,SNR=25						
BOSA	**Boshof**	**58.06**	**260**	LR	LR	15 11 54.7	
	comp=Z,108nm,18.1s,baz=164,slow=31						
CMAR	**Chiang Mai Arr**	**63.52**	**2**	P	**P**	**14 52 04.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**63.52**	**2**	P	**P**	**14 52 04.2**	**-0.4**
	2.9nm,1.0s,baz=196,slow=5.2,SNR=14						
MKAR	**Makanchi Array**	**92.70**	**350**	P	**P**	**14 54 45.7**	**-0.2**
MKAR	**Makanchi Array**	**92.70**	**350**	P	**P**	**14 54 45.7**	**-0.2**
	0.2nm,0.6s,baz=181,slow=4.3,SNR=3.4						
MKAR				LR	LR	15 33 13.8	
	comp=Z,61nm,20.1s,baz=166,slow=34						
SONM	**Songino Array**	**93.14**	**6**	P	**P**	**14 54 48.7**	**+0.7**
SONM	**Songino Array**	**93.14**	**6**	P	**P**	**14 54 48.7**	**+0.7**
	0.2nm,0.5s,baz=197,slow=4.5,SNR=4.6						
PLCA	**Paso Flores**	**93.61**	**189**	LR	LR	15 34 15.2	
	comp=Z,401nm,18.3s,baz=181,slow=34						
ZALV	**Zalesovo Beam**	**99.49**	**353**	LR	LR	15 38 26.8	
	comp=Z,70nm,18.5s,baz=249,slow=34						
ILAR	**Eielson Array**	**140.55**	**37**	PKP	**PKPdf**	**15 01 02.7**	**+0.1**
ILAR	**Eielson Array**	**140.55**	**37**	PKP	**PKPdf**	**15 01 02.7**	**+0.1**
	0.3nm,0.9s,baz=238,slow=3.1,SNR=3.7						
RES	**Resolute Bay**	**150.08**	**6**	PKPbc	**PKPbc**	**15 01 23.9**	**+0.2**
RES	**Resolute Bay**	**150.08**	**6**	PKPbc	**PKPbc**	**15 01 23.9**	**+0.2**
	2.1nm,0.8s,baz=350,slow=6.8,SNR=6.7						
HUMO	**Hull Mountain**	**151.11**	**81**	*e*PKPbc	**PKPbc**	**15 01 26.7**	**-0.4**
NVAR	**Mina Array Bea**	**152.77**	**92**	PKPbc	**PKPbc**	**15 01 32.1**	**+0.9**
NVAR				PKPab	**PKPab**	**15 01 40.5**	**-1.7**
NVAR	**Mina Array Bea**	**152.77**	**92**	PKPbc	**PKPbc**	**15 01 32.1**	**+0.9**
	1.6nm,0.7s,baz=225,slow=4.3,SNR=14						
NVAR				PKPab	**PKPab**	**15 01 40.5**	**-1.7**
	0.9nm,0.7s,baz=219,slow=6.4,SNR=4.5						
YKA	**Yellowknife Ar**	**154.95**	**35**	PKPbc	**PKPbc**	**15 01 32.6**	**-2.2**
YKA	**Yellowknife Ar**	**154.95**	**35**	PKPbc	**PKPbc**	**15 01 32.6**	**-2.2**
	0.3nm,0.5s,baz=300,slow=2.2,SNR=6.2						

*HEL **15** 14:55:44.5±1.4, 67.49°N×34.35E, h0km, ML2.0, Explosion*
*NAO **15** 14:55:45.2±1.8, 67.52°N×33.96E, ML2.5*

*CSEM **15** 14:55:48.3±0.4, 67.60°N×33.54E, h1km, ML2.5, Error ellipse: s-maj=6.2km s-min=5.6km az=138.0, Mining explosion.*

ISC 15 14:55:46.0±2.5, **67.59°N**±0.05°×**33.3°E**±0.1, **h0**km, **n20,**
σ0°**97**/27, **Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.32**	**273**	Pg	**Pg**	**14 55 53.1**	**+1.0**
	baz=102,slow=16						
APA0				Lg	Lg	14 55 58.1	
	baz=103,slow=37						
APA0				Rg	Rg	14 55 59.7	
	baz=84,slow=37						
APA0	**Apatity Array**	**0.32**	**273**	Pg	**Pg**	**14 55 53.1**	**+1.0**
	baz=102,slow=16						
APA0				Lg	Lg	14 55 58.1	
	baz=103,slow=37						
APA0				Rg	Rg	14 55 59.7	
	baz=84,slow=37						
APA0	**Apatity Array**	**0.32**	**273**	Pg	**Pg**	**14 55 53.1**	**+1.0**
	baz=102,slow=15,SNR=90						
APA0				Lg	Lg	14 55 58.1	
	baz=103,slow=33,SNR=119						
VRF	**Varrio**	**1.62**	**278**	PN	**Pn**	**14 56 16.1**	**+0.3**
	baz=92						
VRF				SG	**Sg**	**14 56 37.8**	**-0.1**
VRF				MSG		14 56 37.8	
	comp=Z,16nm,0.4s						
VRF				RG	Rg	14 56 54.0	
VRF	**Varrio**	**1.62**	**278**	Pn	**Pn**	**14 56 16.1**	**+0.3**
VRF				Sg	**Sg**	**14 56 37.8**	**-0.1**
MSF	**Maaselka**	**2.54**	**231**	SG	**Sg**	**14 57 06.5**	**-0.9**
MSF				MSG		14 57 06.5	
	comp=Z,1.5nm,0.4s						
MSF	**Maaselka**	**2.54**	**231**	Sg	**Sg**	**14 57 06.5**	**-0.9**
SGF	**Sodankyl**	**2.81**	**270**	PN	**Pb**	**14 56 35.5**	**-1.5**
SGF				SG	**Sb**	**14 57 13.0**	**+1.1**
SGF				MSG		14 57 13.0	
	comp=Z,2.4nm,0.4s						
SGF	**Sodankyl**	**2.81**	**270**	Pn	**Pb**	**14 56 35.5**	**-1.5**
SGF				Sg	**Sb**	**14 57 13.0**	**+1.1**
RNF	**Rovaniemi**	**3.21**	**256**	PN	**Pn**	**14 56 38.9**	**+1.3**
RNF	**Rovaniemi**	**3.21**	**256**	Pn	**Pn**	**14 56 38.9**	**+1.3**
KEV	**Kevo**	**3.31**	**314**	PN	**Pn**	**14 56 40.0**	**+1.1**
KEV				SG	**Sg**	**14 57 31.7**	**-0.4**
KEV				MSG		14 57 31.7	
	comp=Z,8.7nm,0.4s						
KEV	**Kevo**	**3.31**	**314**	Pn	**Pn**	**14 56 40.0**	**+1.1**
KEV				Sg	**Sg**	**14 57 31.7**	**-0.4**
ARA0	**ARCESS Array S**	**3.62**	**306**	Pn	**Pn**	**14 56 43.9**	**+0.5**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**14 57 25.6**	**-1.2**
	baz=127,slow=28						
ARA0				Lg	Lg	14 57 37.2	
	baz=119,slow=37						
ARA0	**ARCESS Array S**	**3.62**	**306**	Pn	**Pn**	**14 56 43.9**	**+0.5**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**14 57 25.6**	**-1.2**
	baz=127,slow=28						
ARA0				Lg	Lg	14 57 37.2	
	baz=119,slow=37						
ARA0	**ARCESS Array S**	**3.62**	**306**	Pn	**Pn**	**14 56 43.9**	**+0.5**
	baz=122,slow=14,SNR=50						
ARA0				Sn	**Sn**	**14 57 25.6**	**-1.2**
	baz=127,slow=26,SNR=50						
ARA0				Lg	Lg	14 57 37.2	
	baz=119,slow=36,SNR=50						
HEF	**Hetta**	**3.91**	**287**	SG	**Sg**	**14 57 51.4**	**-0.1**
HEF				MSG		14 57 51.4	
	comp=Z,5.3nm,0.4s						
HEF	**Hetta**	**3.91**	**287**	Sg	**Sg**	**14 57 51.4**	**-0.1**
FIA0	**FINESS Array S**	**7.01**	**212**	Sn	Sn	14 58 42.2	-7.9
FIA0				Lg	Lg	14 59 22.9	
FIA0	**FINESS Array S**	**7.01**	**212**	Sn	Sn	14 58 42.2	-7.9
FIA0				Lg	Lg	14 59 22.9	

*LDG **15** 15:06:25.4±0.3, 24.12°N×94.40E, h33km, Mb4.6/12, Error ellipse: s-maj=12.8km s-min=6.9km az=169.0*

*MOS **15** 15:06:27.6±1.0, 24.48°N×94.55E, h41km, mb4.8/34, Error ellipse: s-maj=12.3km s-min=5.6km az=116.2*

*ISCJB **15** 15:06:30.4±0.6, 24.55°N±0.04°×94.48E±0.04, h65km±5km, mb4.4/75, Error ellipse: s-maj=7.4km s-min=4.1km az=39.3*

*BJI **15** 15:06:32.5, 24.69°N×94.51E, h78km, mB4.4/5, mb4.4/10, Ms3.9/10, Ms7 3.6/7*

*NEIC **15** 15:06:32.9±0.2, 24.58°N×94.56E, mb4.7/38, Error ellipse: s-maj=6.9km s-min=4.7km az=53.0*

*IDC **15** 15:06:33.4±0.5, 24.53°N×94.55E, h74km±4km, mb4.0/22, mb1 4.1/23, mb1mx4.0/32, mbtmp4.0/23, MS3.3/5, Ms1 3.4/5, ms1mx3.0/42, Error ellipse: s-maj=17.2km s-min=9.0km az=56.0*

*DJA **15** 15:06:36.9±1.3, 25°N±7°×97°E±1°2, h79km±18km, M4.8/7, mB4.8/2, mb4.4/7, MLv5.0/2, Mw(mB)4.1/2, Mwp6.2/1*

ISC 15 15:06:33.6±0.4, **24.52N**±0.04°×**94.37E**±0.04, **h78**km±3km, **h78**km**:pP-P, n225,** σ1°**60**/275, **mb4.5**/75, **11C-2D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.49**	**295**	⇑*i*P	**Pn**	**15 07 13.0**	**+0.8**
SHL				*e*S	**Sn**	**15 07 41.2**	**-0.5**
GTK	**Gangtok**	**5.89**	**300**	*e*PKP	**Pn**	**15 07 57.0**	**-1.5**
GTK				*e*S	**Sn**	**15 09 03.0**	**-1.8**
LSA	**Lhasa**	**5.91**	**332**	P	**Pn**	**15 08 00.1**	**+1.1**
LSA				S	**Sn**	**15 09 03.0**	**-2.5**
LSA				smax	smax		
	comp=N,60nm,0.9s						
LSA				smax	smax		
	comp=E,140nm,0.9s						
LSA	**Lhasa**	**5.91**	**332**	*e*P	**Pn**	**15 07 59.2**	**+0.2**
LSA				pmax	pmax		
	comp=Z,56nm,0.5s						
LSA	**Lhasa**	**5.91**	**332**	*e*P	**Pn**	**15 07 59.2**	**+0.2**
	comp=Z,56nm,0.5s						
TAPN	**Taplejung**	**6.63**	**297**	*e*Pn	**Pn**	**15 08 08.6**	**0.0**
TAPN				*e*Sn	**Sn**	**15 09 19.1**	**-3.8**
	comp=Z,596nm,0.6s						
ODAN	**Odare**	**6.72**	**292**	*e*Pn	**Pn**	**15 08 09.4**	**-0.4**
ODAN				*e*Sn	**Sn**	**15 09 20.8**	**-4.2**
	comp=Z,699nm,0.5s						
CHTO	**Chiang Mai**	**7.09**	**142**	*e*P	**Pn**	**15 08 15.0**	**+0.3**
CHTO	**Chiang Mai**	**7.09**	**142**	*e*Pn	**Pn**	**15 08 15.0**	**+0.3**
CHTO	**Chiang Mai**	**7.09**	**142**	P	**Pn**	**15 08 15.5**	**+0.8**
	comp=Z,38nm,0.8s,comp=Z,975nmcomp=Z,0.4nm						
CMMT	**Chiang Mai**	**7.09**	**142**	P	**Pn**	**15 08 15.0**	**+0.2**
	comp=Z,37nm,0.7s,comp=Z,972nmcomp=Z,182μmcomp=Z,0.4nm						
CMAR	**Chiang Mai Arr**	**7.38**	**144**	P	**Pn**	**15 08 18.8**	**+0.1**
CMAR				S	**Sn**	**15 09 40.1**	**-0.8**
CMAR	**Chiang Mai Arr**	**7.38**	**144**	P	**Pn**	**15 08 18.8**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=321,slow=13,SNR=67						
CMAR				S	**Sn**	**15 09 40.1**	**-0.8**
	comp=Z,1.8nm,0.3s,baz=322,slow=24,SNR=6.3						
RAMN	**Ramite**	**7.42**	**291**	*e*Pn	**Pn**	**15 08 18.7**	**-0.7**
RAMN				*e*Sn	**Sn**	**15 09 37.9**	**-4.2**
	comp=Z,343nm,0.4s						
KMI	**Kunming**	**7.63**	**84**	⇑P	**Pn**	**15 08 24.9**	**+2.7**
KMI				S	**Sn**	**15 09 51.4**	**+4.2**
KMI				LR	LR		
	comp=N,400nm,9.1s						
KMI				LR	LR		
	comp=E,340nm,6.1s						
KMI				LR	LR		
	comp=Z,280nm,9.1s						
KMI	**Kunming**	**7.63**	**84**	⇑P	**Pn**	**15 08 24.9**	**+2.7**
KMI	**Kunming**	**7.63**	**84**	⇑P	**Pn**	**15 08 24.9**	**+2.7**
GUN	**Gumba**	**8.34**	**296**	*e*Pn	**Pn**	**15 08 31.1**	**-1.0**
GUN				*e*Sn	**Sn**	**15 10 00.4**	**-4.5**
	comp=Z,567nm,0.6s						
PKI	**Pulchoki**	**8.62**	**293**	*e*Pn	**Pn**	**15 08 35.3**	**-0.5**
PKI				*e*Sn	**Sn**	**15 10 06.7**	**-4.9**
	comp=Z,262nm,0.6s						
PKIN	**Phulchoki**	**8.63**	**293**	*e*Pn	**Pn**	**15 08 35.1**	**-0.8**
PKIN				*e*Sn	**Sn**	**15 10 06.4**	**-5.4**
	comp=Z,328nm,0.5s						
KKN	**Kakani**	**8.79**	**294**	*e*Pn	**Pn**	**15 08 37.1**	**-1.1**
KKN				*e*Sn	**Sn**	**15 10 11.7**	**-4.1**
	comp=Z,148nm,0.5s						
DMN	**Daman**	**8.88**	**292**	*e*Pn	**Pn**	**15 08 38.6**	**-0.8**
DMN				*e*Sn	**Sn**	**15 10 13.8**	**-4.2**
	comp=Z,161nm,0.6s						
KOLN	**Koldanda**	**10.21**	**291**	*e*Pn	**Pn**	**15 08 56.2**	**-1.2**
KOLN				*e*Sn	Sn	15 10 43.4	-6.8
	comp=Z,134nm,0.5s						
DANN	**Dangsing**	**10.25**	**294**	*e*Pn	**Pn**	**15 08 55.9**	**-2.1**
DANN				*e*Sn	Sn	15 10 45.0	-6.4
	comp=Z,113nm,0.5s						
JBP	**Jabalpur**	**13.24**	**267**	*e*PKP	Pn	15 09 31.3	-7.0
JBP				AMB	AMB	15 09 55.2	
	comp=Z,18nm,0.5s						
JBP				*ex*	x	15 11 59.5	
NGP	**Nagpur**	**14.52**	**260**	*e*PKP	Pn	15 09 49.1	-6.0
NGP				AMB	AMB	15 10 03.2	
	comp=Z,17nm,2.1s						
NGP				*e*S	Sn	15 12 22.8	-12
NGP				AML	AML	15 12 26.3	
	comp=N,26nm,0.5s						
NGP				AML	AML	15 12 26.9	
	comp=E,12nm,0.6s						
ENH	**Enshi**	**14.59**	**64**	*e*Pn	**Pn**	**15 09 53.8**	**-2.3**
	comp=E,17nm,0.4s						
QIZ	**Qiongzhong**	**15.37**	**108**	P	**Pn**	**15 10 02.3**	**-3.7**
QIZ				S	Sn	15 12 45.3	-10
QIZ				LR	LR		
	comp=N,190nm,13.8s						
GTA	**Gaotai**	**15.55**	**16**	*e*P	**Pn**	**15 10 04.4**	**-3.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HYB	**Hyderabad**	**16.37**	**247**	*e*P	**P**	**15 10 22.5**	**+2.3**
HYB	**Hyderabad**	**16.37**	**247**	*i* P	**P**	**15 10 22.5**	**+2.3**
HYB				*e*PP	**pP**	**15 10 38.5**	**+2.9**
HYB				*e*		15 13 05.5	
HYB				*e*S	**Sn**	**15 13 17.0**	**-2.8**
HYB	**Hyderabad**	**16.37**	**247**	*e*P	**P**	**15 10 22.5**	**+2.3**
HYB				*e*		15 10 38.5	
HYB				*e*S	Sn	15 13 05.5	-14
POO	**Poona**	**19.99**	**257**	*ex*	**pP**	**15 11 13.0**	**-2.7**
	comp=Z,45nm,1.0s						
POO				*e*S	S	15 14 32.0	-8.6
WMQ	**Urumqi**	**20.02**	**346**	P	Pn	15 11 01.4	-1.1
WMQ				pP	pP	15 11 16.9	+1.0
WMQ				sP	sP	15 11 24.0	-1.8
WMQ				LR	LR		
	comp=N,140nm,5.8s						
WMQ				LR	LR		
	comp=E,130nm,4.8s						
WMQ				LR	LR		
	comp=Z,100nm,22.4s						
KULM	**Kulim**	**20.05**	**161**	*e*P	**P**	**15 10 59.0**	**-1.5**
	comp=Z,16nm,0.9s						
KULM	**Kulim**	**20.05**	**161**	P	Pn	15 11 02.3	-0.6
	comp=Z,21nm,1.2s						
IPM	**Ipoh**	**20.93**	**161**	*e*P	**P**	**15 11 07.8**	**-2.2**
	comp=Z,8.9nm,0.8s						
THW	**Thamme Wali**	**21.47**	**298**	P	**P**	**15 11 19.2**	**+3.4**
KSH	**Kashi**	**21.55**	**318**	P	**P**	**15 11 17.8**	**+1.2**
KSH				*e*pP	**pP**	**15 11 34.3**	**+1.7**
KSH				*e*sP	**sP**	**15 11 43.8**	**+1.3**
KSH				*e*PP	**PnPn**	**15 11 45.3**	**+4.6**
KSH				*e*S	**S**	**15 15 05.4**	**-5.9**
KSH				*e*PcP	**PcP**	**15 15 19.8**	**+3.6**
KSH				sS	sS	15 15 32.0	-5.6
KSH				SS	**SnSn**	**15 15 45.8**	**+4.8**
KSH				*e*ScP	**ScP**	**15 18 48.8**	**+2.4**
KSH				*e*PcS	**PcS**	**15 18 56.6**	**+2.0**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KSH				LR	LR		
	comp=N,750nm,17.4s						
KSH				LR	LR		
	comp=E,310nm,6.6s						
KSH				LR	LR		
	comp=Z,310nm,4.2s						
CEP	**Cherat**	**21.66**	**300**	P	**P**	**15 11 20.5**	**+2.6**
PSI	**Prapat**	**22.03**	**168**	P	**P**	**15 11 22.8**	**+0.9**
PSI	**Prapat**	**22.03**	**168**	P	**P**	**15 11 24.7**	**+2.8**
	comp=Z,12nm,0.9s						
PSI	**Prapat**	**22.03**	**168**	P	**P**	**15 11 22.8**	**+0.9**
	comp=Z,11nm,0.9s,baz=7.1,slow=5.8,SNR=6.6						
PSI				LR	LR	15 20 37.1	
	comp=Z,72nm,18.6s,baz=12,slow=38						
TKM2	**Tokmak 2**	**24.01**	**324**	*e*P	**P**	**15 11 41.1**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
TKM2	**Tokmak 2**	**24.01**	**324**	*e*P	**P**	**15 11 41.0**	**-0.2**
	comp=Z,8.6nm,0.8s						
KBL	**Kabul**	**24.14**	**300**	*e*P	**P**	**15 11 40.8**	**-1.8**
KBL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KBL	**Kabul**	**24.14**	**300**	*e*P	**P**	**15 11 40.8**	**-1.8**
	comp=Z,8.4n

NVS				pmax	pmax			
	comp=Z,6.0nm,0.9s							
NVS				pmax	pmax			
	comp=N,4.0nm,0.7s							
NVS				smax	smax			
	comp=E,6.0nm,1.2s							
NVS				smax	smax			
	comp=N,2.0nm,0.8s							
CN2	**Changchun**	**31.84**	**45**	*e*P	**P**		**15 12 48.6**	**-2.4**
BVAR	**Borovoye Array**	**33.74**	**334**	P	**P**		**15 13 08.8**	**+1.4**
BVAR							15 15 45.8	
BVAR	**Borovoye Array**	**33.74**	**334**	P	**P**		**15 13 08.8**	**+1.4**
BVAR				PcP	**PcP**		**15 15 45.8**	**+0.5**
BVAR				ScP	**ScP**		**15 19 23.4**	**+0.4**
BVAR	**Borovoye Array**	**33.74**	**334**	P	**P**		**15 13 08.8**	**+1.4**
	comp=N,0.7nm,0.5s,baz=141,slow=14,SNR=4.9							
BVAR				PcP	**PcP**		**15 15 45.8**	**+0.5**
	comp=N,1.2nm,0.6s,baz=145,slow=3.6,SNR=4.7							
BVAR				ScP	**ScP**		**15 19 23.4**	**+0.4**
	comp=N,0.7nm,0.5s,baz=119,slow=5.1,SNR=5.7							
BRVK	**Borovoye**	**33.81**	**334**	⇑*i*P	P		15 13 11.3	+3.3
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.6s							
AB31	**Akbulak array**	**36.49**	**321**	P	**P**		**15 13 32.8**	**+1.8**
AB31				pmax	pmax			
	comp=Z,2.0nm,0.4s							
ABKAR	**Akbulak array**	**36.49**	**321**	*e*P	**P**		**15 13 31.2**	**+0.2**
MJAR	**Matsushiro Arr**	**39.31**	**62**	P	**P**		**15 13 52.8**	**-2.2**
MJAR	**Matsushiro Arr**	**39.31**	**62**	P	**P**		**15 13 52.8**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=266,slow=9.5,SNR=4.8							
SVE	**Sverdlovsk**	**40.44**	**332**	*e*P	**P**		**15 14 06.3**	**+2.3**
SVE				pmax	pmax			
	comp=Z,11nm,1.0s							
ARU	**Arti**	**41.11**	**330**	*d*iP	**P**		**15 14 11.6**	**+2.0**
ARU							15 15 44.8	
ARU				S	**S**		**15 20 20.5**	**+3.9**
ARU				SS	**SS**		**15 23 18.2**	**-3.6**
ARU				pmax	pmax			
	comp=Z,3.0nm,0.6s							
RDF	**Al-Radifah**	**41.85**	**287**	*e*P	**P**		**15 14 18.2**	**+2.2**
RDF				AMb	AMB		15 14 19.7	
	comp=Z,28nm,1.0s							
MIB	**Mutribah**	**41.95**	**288**	*e*P	**P**		**15 14 19.0**	**+2.1**
MIB				AMb	AMB		15 14 37.5	
	comp=Z,45nm,1.0s							
NAY	**Al-Naaiem**	**42.09**	**287**	*e*P	**P**		**15 14 19.6**	**+1.7**
NAY				AMb	AMB		15 14 21.1	
	comp=Z,9.9nm,0.9s							
SOKR	**Solikamsk**	**43.73**	**333**	*e*P	**P**		**15 14 32.9**	**+2.2**
SOKR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
ZEI	**Tsey**	**45.08**	**307**	*e*P	**P**		**15 14 43.7**	**+1.5**
ZEI				pmax	pmax			
	comp=Z,6.0nm,0.8s							
KBZ	**Khabaz**	**45.93**	**308**	LR	LR		15 39 09.4	
	comp=Z,28nm,19.8s,baz=172,slow=42							
KIV	**Kislovodsk**	**46.11**	**308**	*c*iP	**P**		**15 14 51.8**	**+1.7**
KIV				*i* *PP	**pP**		**15 15 10.2**	**+0.9**
KIV				pmax	pmax			
	comp=Z,7.0nm,1.1s							
TIXI	**Tiksi**	**51.01**	**13**	*d*iP	**P**		**15 15 26.9**	**-0.2**
TIXI				pmax	pmax			
	comp=Z,7.0nm,0.6s							
OBN	**Obninsk**	**51.93**	**322**	*i*P	**P**		**15 15 34.9**	**+0.7**
OBN				pmax	pmax			
	comp=Z,5.0nm,1.1s							
BR131	**Keskin Array S**	**52.69**	**302**	*e*P	**P**		**15 15 38.2**	**-2.1**
	comp=Z,1.0nm,0.5s							
BRTR	**Keskin Array B**	**52.69**	**302**	P	**P**		**15 15 40.6**	**+0.3**
BRTR				pP	**pP**		**15 15 59.8**	**-0.2**
BRTR	**Keskin Array B**	**52.69**	**302**	P	**P**		**15 15 40.6**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=123,slow=4.6,SNR=8.0							
BRTR				pP	**pP**		**15 15 59.8**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=91,slow=7.4,SNR=4.0							
SEY	**Seymchan**	**54.01**	**29**	⇑*i*P	**P**		**15 15 48.5**	**-0.9**
PETK	**Petropavlovsk-**	**54.85**	**41**	P	**P**		**15 15 54.2**	**-1.5**
PETK	**Petropavlovsk-**	**54.85**	**41**	P	**P**		**15 15 54.1**	**-1.5**
PETK	**Petropavlovsk-**	**54.85**	**41**	P	**P**		**15 15 54.1**	**-1.5**
	comp=Z,1.4nm,0.6s,baz=240,slow=4.5,SNR=12							
AKASG	**Malin Array Be**	**55.81**	**316**	*ce*P	**P**		**15 16 03.0**	**+0.4**
AKASG				*e**PP	**PcP**		**15 17 02.7**	**+2.0**
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.5s							
AKASG	**Malin Array Be**	**55.81**	**316**	P	**P**		**15 16 02.6**	**0.0**
AKASG	**Malin Array Be**	**55.81**	**316**	P	**P**		**15 16 02.6**	**0.0**
	comp=Z,1.9nm,0.5s,baz=81,slow=6.0,SNR=8.0							
KIEV	**Kiev**	**55.82**	**316**	*e*P	**P**		**15 16 02.0**	**-0.6**
KIEV				pmax	pmax			
	comp=Z,3.0nm,0.6s							
KIEV	**Kiev**	**55.82**	**316**	*e*P	**P**		**15 16 02.0**	**-0.6**
	comp=Z,3.2nm,0.6s							
JOF	**Joensuu**	**56.24**	**331**	*e*P	**P**		**15 16 06.3**	**+0.9**
JOF				pmax	pmax			
	comp=Z,5.0nm,0.6s							
JOF	**Joensuu**	**56.24**	**331**	*ep*	**P**		**15 16 06.3**	**+0.9**
	comp=Z,4.6nm,0.6s							
KAF	**Kangasniemi**	**58.39**	**329**	*e*P	**P**		**15 16 21.9**	**+1.3**
KAF				pmax	pmax			
	comp=Z,2.0nm,0.7s							
KAF	**Kangasniemi**	**58.39**	**329**	*ep*	**P**		**15 16 21.9**	**+1.3**
	comp=Z,2.1nm,0.7s							
FINES	**FINESS Array B**	**58.42**	**328**	P	**P**		**15 16 20.9**	**+0.2**
FINES	**FINESS Array B**	**58.42**	**328**	P	**P**		**15 16 20.9**	**+0.2**
	comp=Z,5.4nm,0.6s,baz=97,slow=7.4,SNR=19							
WRA	**Warramunga Arr**	**58.88**	**135**	P	**P**		**15 16 23.9**	**-0.6**
WRA	**Warramunga Arr**	**58.88**	**135**	P	**P**		**15 16 23.9**	**-0.6**
	comp=Z,5.4nm,0.5s,baz=325,slow=7.4,SNR=54							
WRAB	**Tennant Creek**	**58.88**	**135**	*e*P	**P**		**15 16 23.1**	**-1.4**
WRAB				pmax	pmax			
	comp=Z,5.0nm,0.6s							
WRAB	**Tennant Creek**	**58.88**	**135**	*e*P	**P**		**15 16 23.1**	**-1.4**
	comp=Z,5.3nm,0.6s							
KEV	**Kevo**	**59.41**	**338**	*e*P	**P**		**15 16 28.0**	**+0.5**
KEV				pmax	pmax			
	comp=Z,4.0nm,0.9s							
KEV	**Kevo**	**59.41**	**338**	*ep*	**P**		**15 16 28.0**	**+0.5**
	comp=Z,3.7nm,0.9s							
ARCES	**ARCESS Array B**	**59.88**	**338**	P	**P**		**15 16 32.0**	**+1.2**
ARCES	**ARCESS Array B**	**59.88**	**338**	P	**P**		**15 16 32.0**	**+1.2**
	comp=Z,1.6nm,0.6s,baz=96,slow=7.4,SNR=11							
ARE0	**ARCESS Array S**	**59.88**	**338**	*e*P	**P**		**15 16 31.6**	**+0.8**
AS31	**Alice Springs**	**61.35**	**138**	*e*P	**P**		**15 16 40.3**	**-1.2**
ASAR	**Alice Springs**	**61.35**	**138**	P	**P**		**15 16 41.0**	**-0.4**
ASAR				pP	**pP**		**15 17 01.1**	**-0.4**
ASAR	**Alice Springs**	**61.35**	**138**	P	**P**		**15 16 41.0**	**-0.4**
	comp=Z,3.6nm,0.5s,baz=317,slow=6.6,SNR=139							
ASAR				pP	**pP**		**15 17 01.1**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=321,slow=6.6,SNR=4.1							
NB2	**NORSAR Subarra**	**65.59**	**328**	P	**P**		**15 17 08.9**	**0.0**
	comp=Z,4.8nm,0.6s,baz=83,slow=6.5							
NOA	**NORSAR Array B**	**65.59**	**328**	P	**P**		**15 17 09.3**	**+0.4**
NOA				pP	**pP**		**15 17 27.7**	**-1.5**
NOA	**NORSAR Array B**	**65.59**	**328**	P	**P**		**15 17 09.3**	**+0.4**
	comp=Z,5.7nm,0.7s,baz=84,slow=6.5,SNR=26							
NOA				pP	**pP**		**15 17 27.7**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=85,slow=6.6,SNR=3.4							
GERES	**GERESS Array B**	**65.96**	**314**	P	**P**		**15 17 12.3**	**+0.7**
GERES				pP	**pP**		**15 17 31.7**	**-0.2**
GERES	**GERESS Array B**	**65.96**	**314**	P	**P**		**15 17 12.3**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=79,slow=6.9,SNR=20							
GERES				pP	**pP**		**15 17 31.7**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=76,slow=5.6,SNR=4.7							
GAMB	**Gambell**	**70.00**	**28**	*e*P	**P**		**15 17 33.7**	**-2.8**
	comp=Z,2.0nm,0.6s							
CDF	**Champ du Feu**	**70.22**	**315**	*e*P	**P**		**15 17 38.6**	**+0.4**
	comp=Z,5.0nm,0.5s							
CDF	**Champ du Feu**	**70.22**	**315**	*e*P	**P**		**15 17 38.6**	**+0.4**
CDF				pmax	pmax			
	comp=Z,5.0nm,0.5s							
CDF	**Champ du Feu**	**70.22**	**315**	*e*P	**P**		**15 17 38.6**	**+0.4**
	comp=Z,5.0nm,0.5s							
PGF	**Pioggiola**	**70.59**	**309**	*e*P	**P**		**15 17 41.1**	**+0.5**
	comp=Z,116nm,1.6s							
PGF	**Pioggiola**	**70.59**	**309**	*e*P	**P**		**15 17 41.1**	**+0.5**
PGF				pmax	pmax			
	comp=Z,116nm,1.6s							
PGF	**Pioggiola**	**70.59**	**309**	*e*P	**P**		**15 17 41.1**	**+0.5**
	comp=Z,116nm,1.6s							
HINF	**Hinteralfeld**	**70.65**	**314**	*e*P	**P**		**15 17 40.9**	**+0.1**
	comp=Z,3.5nm,0.5s							
HINF	**Hinteralfeld**	**70.65**	**314**	*e*P	**P**		**15 17 40.9**	**+0.1**
HINF				pmax	pmax			
	comp=Z,4.0nm,0.5s							
HINF	**Hinteralfeld**	**70.65**	**314**	*e*P	**P**		**15 17 40.9**	**+0.1**
	comp=Z,3.5nm,0.5s							
HAU	**Haudompre**	**70.92**	**315**	*e*P	**P**		**15 17 42.8**	**+0.3**
HAU	**Haudompre**	**70.92**	**315**	*e*P	**P**		**15 17 42.8**	**+0.3**
HAU	**Haudompre**	**70.92**	**315**	*e*P	**P**		**15 17 42.8**	**+0.3**
LPG	**La Plagne**	**71.34**	**312**	*e*P	**P**		**15 17 46.2**	**+0.8**
	comp=Z,8.3nm,0.8s							
LPG	**La Plagne**	**71.34**	**312**	*e*P	**P**		**15 17 46.2**	**+0.8**
LPG				pmax	pmax			
	comp=Z,8.0nm,0.8s							
LPG	**La Plagne**	**71.34**	**312**	*e*P	**P**		**15 17 46.2**	**+0.8**
	comp=Z,8.3nm,0.8s							
LPL	**La Plagne**	**71.35**	**312**	*e*P	**P**		**15 17 46.2**	**+0.9**
	comp=Z,6.5nm,0.7s							
LPL	**La Plagne**	**71.35**	**312**	*e*P	**P**		**15 17 46.2**	**+0.9**
LPL				pmax	pmax			
	comp=Z,7.0nm,0.6s							
LPL	**La Plagne**	**71.35**	**312**	*e*P	**P**		**15 17 46.2**	**+0.9**
	comp=Z,6.5nm,0.6s							
MEZF	**Maizieres J'vi**	**71.62**	**316**	*e*P	**P**		**15 17 46.9**	**+0.3**
	comp=Z,7.9nm,0.6s							
MEZF	**Maizieres J'vi**	**71.62**	**316**	*e*P	**P**		**15 17 46.9**	**+0.3**
	comp=Z,7.9nm,0.6s							
BAIF	**Baives**	**71.71**	**317**	*e*P	**P**		**15 17 47.3**	**+0.2**
BAIF	**Baives**	**71.71**	**317**	*e*P	**P**		**15 17 47.3**	**+0.2**
BAIF	**Baives**	**71.71**	**317**	*e*P	**P**		**15 17 47.3**	**+0.2**
SFTF	**Sexfontaines**	**71.71**	**315**	*e*P	**P**		**15 17 47.7**	**+0.5**
SFTF	**Sexfontaines**	**71.71**	**315**	*e*P	**P**		**15 17 47.7**	**+0.5**
STKA	**Stephens Creek**	**71.97**	**139**	P	**P**		**15 17 47.8**	**-1.1**
STKA	**Stephens Creek**	**71.97**	**139**	P	**P**		**15 17 47.8**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=341,slow=8.2,SNR=3.9							
SMF	**Signal de Mont**	**72.95**	**314**	*e*P	**P**		**15 17 54.9**	**+0.3**
	comp=Z,7.5nm,0.6s							
SMF	**Signal de Mont**	**72.95**	**314**	*e*P	**P**		**15 17 54.9**	**+0.3**
SMF				pmax	pmax			
	comp=Z,8.0nm,0.6s							
SMF	**Signal de Mont**	**72.95**	**314**	*e*P	**P**		**15 17 54.9**	**+0.3**
	comp=Z,7.5nm,0.6s							
SSF	**Saint Saulge**	**73.04**	**314**	*e*P	**P**		**15 17 55.6**	**+0.5**
	comp=Z,12nm,0.9s							
SSF	**Saint Saulge**	**73.04**	**314**	*e*P	**P**		**15 17 55.6**	**+0.5**
SSF				pmax	pmax			
	comp=Z,12nm,0.9s							
SSF	**Saint Saulge**	**73.04**	**314**	*e*P	**P**		**15 17 55.6**	**+0.5**
	comp=Z,12nm,0.9s							
AVF	**Avril sur Loir**	**73.22**	**314**	*e*P	**P**		**15 17 56.6**	**+0.4**
AVF	**Avril sur Loir**	**73.22**	**314**	*e*P	**P**		**15 17 56.6**	**+0.4**
AVF	**Avril sur Loir**	**73.22**	**314**	*e*P	**P**		**15 17 56.6**	**+0.4**
BGF	**Bois d'Agland**	**73.63**	**314**	*e*P	**P**		**15 17 58.9**	**+0.3**
BGF	**Bois d'Agland**	**73.63**	**314**	*e*P	**P**		**15 17 58.9**	**+0.3**
BGF	**Bois d'Agland**	**73.63**	**314**	*e*P	**P**		**15 17 58.9**	**+0.3**
TCF	**Toulx Ste Croi**	**74.13**	**314**	*e*P	**P**		**15 18 02.4**	**+0.9**
	comp=Z,8.1nm,0.6s							
TCF	**Toulx Ste Croi**	**74.13**	**314**	*e*P	**P**		**15 18 02.4**	**+0.9**
TCF				pmax	pmax			
	comp=Z,8.0nm,0.6s							
TCF	**Toulx Ste Croi**	**74.13**	**314**	*e*P	**P**		**15 18 02.4**	**+0.9**
	comp=Z,8.1nm,0.6s							
CAF	**Calviac**	**74.67**	**313**	*e*P	**P**		**15 18 05.7**	**+1.0**
	comp=Z,18nm,0.9s							
CAF	**Calviac**	**74.67**	**313**	*e*P	**P**		**15 18 05.7**	**+1.0**
CAF				pmax	pmax			
	comp=Z,18nm,0.9s							
CAF	**Calviac**	**74.67**	**313**	*e*P	**P**		**15 18 05.7**	**+1.0**
	comp=Z,18nm,0.9s							
MTLF	**Montolieu**	**75.09**	**311**	*e*P	**P**		**15 18 07.2**	**0.0**
MTLF	**Montolieu**	**75.09**	**311**	*e*P	**P**		**15 18 07.2**	**0.0**
MTLF	**Montolieu**	**75.09**	**311**	*e*P	**P**		**15 18 07.2**	**0.0**
LSZ	**Lusaka**	**75.70**	**246**	*e*P	**P**		**15 18 10.2**	**-0.9**
	comp=Z,9.3nm,0.7s							
SGMF	**Saint Gilles**	**76.50**	**317**	*e*P	**P**		**15 18 15.8**	**+0.8**
SGMF	**Saint Gilles**	**76.50**	**317**	*e*P	**P**		**15 18 15.8**	**+0.8**
SGMF	**Saint Gilles**	**76.50**	**317**	*e*P	**P**		**15 18 15.8**	**+0.8**
COLD	**Coldfoot**	**76.83**	**21**	*e*P	**P**		**15 18 15.8**	**-0.7**
	comp=Z,10.0nm,1.2s							
ROSF	**Rostrenen**	**76.91**	**317**	*e*P	**P**		**15 18 18.1**	**+0.7**
ROSF	**Rostrenen**	**76.91**	**317**	*e*P	**P**		**15 18 18.1**	**+0.7**
ROSF	**Rostrenen**	**76.91**	**317**	*e*P	**P**		**15 18 18.1**	**+0.7**
QUIF	**Quistinic**	**77.00**	**317**	*e*P	**P**		**15 18 18.3**	**+0.4**
QUIF	**Quistinic**	**77.00**	**317**	*e*P	**P**		**15 18 18.3**	**+0.4**
QUIF	**Quistinic**	**77.00**	**317**	*e*P	**P**		**15 18 18.3**	**+0.4**
SVW2	**Sparrevohn**	**77.94**	**28**	*e*P	**P**		**15 18 21.1**	**-1.8**
	comp=Z,6.8nm,0.8s							
SUMG	**Summit**	**78.06**	**347**	*e*P	**P**		**15 18 21.9**	**-1.9**
SUMG				pmax	pmax			
	comp=Z,7.0nm,0.6s							
SUMG	**Summit**	**78.06**	**347**	*e*P	**P**		**15 18 21.9**	**-1.9**
	comp=Z,6.6nm,0.6s							
PPLA	**Purkeypile**	**78.41**	**25**	*e*P	**P**		**15 18 24.3**	**-1.4**
	comp=Z,12nm,1.0s							
TRF	**Thorfare Moun**	**78.85**	**24**	*e*P	**P**		**15 18 26.2**	**-1.8**
	comp=Z,9.2nm,1.2s							
COLA	**College**	**78.94**	**23**	*e*P	**P**		**15 18 26.7**	**-1.5**
COLA				pmax	pmax			
	comp=Z,6.0nm,0.7s							
COLA	**College**	**78.94**	**23**	*e*P	**P**		**15 18 26.7**	**-1.5**
	comp=Z,5.8nm,0.7s							
MCK	**McKinley**	**79.19**	**24**	*e*P	**P**		**15 18 28.9**	**-0.9**
MCK				pmax	pmax			
	comp=Z,10.0nm,0.5s							
MCK	**McKinley**	**79.19**	**24**	*e*P	**P**		**15 18 28.9**	**-0.9**
	comp=Z,9.8nm,0.5s							
ILAR	**Eielson Array**	**79.33**	**22**	P	**P**		**15 18 29.7**	**-0.8**
ILAR	**Eielson Array**	**79.33**	**22**	P	**P**		**15 18 29.7**	**-0.8**
	comp=Z,5.0nm,0.6s,baz=294,slow=4.6,SNR=96							
ILAR				LR	LR		15 58 12.1	
	comp=Z,47nm,18.3s,baz=196,slow=39							
SPU	**Mount Spurr**	**79.37**	**27**	*e*P	**P**		15 18 27.3	-3.5
PMR	**Palmer**	**80.33**	**26**	*e*P	**P**		**15 18 35.4**	**-0.4**
PMR				pmax	pmax			
	comp=Z,12nm,0.6s							
PMR	**Palmer**	**80.33**	**26**	*e*P	**P**		**15 18 35.4**	**-0.4**
	comp=Z,12nm,0.6s							
SML	**Sawmill**	**80.52**	**25**	*e*P	**P**		**15 18 36.6**	**-0.4**
SML				pmax	pmax			
	comp=Z,3.0nm,0.7s							
SML	**Sawmill**	**80.52**	**25**	*e*P	**P**		**15 18 36.6**	**-0.4**
	comp=Z,3.4nm,0.7s							
RES	**Resolute Bay**	**80.86**	**2**	*e*P	**P**		**15 18 37.1**	**-1.3**
	comp=Z,5.4nm,0.8s							
OHAK	**Old Harbor**	**80.92**	**31**	*e*P	**P**		**15 18 38.4**	**-0.6**
	comp=Z,23nm,1.0s							
KDAK	**Kodiak Island**	**80.94**	**30**	*e*P	**P**		**15 18 37.6**	**-1.5**
	comp=Z,8.6nm,0.6s							
DOT	**Dot Lake**	**81.00**	**23**	*e*P	**P**		**15 18 38.0**	**-1.5**
	comp=Z,6.6nm,0.8s							
EGAK	**Eagle**	**81.26**	**21**	*e*P	**P**		**15 18 39.9**	**-0.9**
	comp=Z,13nm,0.8s							
LBTB	**Lobatse**	**82.78**	**238**	*e*P	**P**		**15 18 50.5**	**+1.0**
	comp=Z,39nm,1.0s							
BOSA	**Boshof**	**84.90**	**236**	P	**P**		**15 19 01.2**	**+0.9**
BOSA				pP	**pP**		**15 19 21.4**	**0.0**
BOSA	**Boshof**	**84.90**	**236**	P	**P**		**15 19 01.2**	**+0.9**
	comp=Z,5.0nm,0.7s,baz=38,slow=6.6,SNR=9.4							
BOSA				pP	**pP**		**15 19 21.4**	**0.0**
	comp=Z,6.6nm,0.5s,baz=55,slow=7.6,SNR=4.9							
TORD	**Torodi Ar. Bea**	**87.03**	**283**	P	**P**		**15 19 12.1**	**+1.1**
TORD				pP	**pP**		**15 19 32.6**	**+0.4**
TORD	**Torodi Ar. Bea**	**87.03**	**283**	P	**P**		**15 19 12.1**	**+1.1**
	comp=Z,1.8nm,0.9s,baz=60,slow=4.0,SNR=8.6							
TORD				pP	**pP**		**15 19 32.6**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=56,slow=4.3,SNR=14							
YKA	**Yellowknife Ar**	**90.26**	**13**	P	**P**		**15 19 24.9**	**-0.4**
YKA	**Yellowknife Ar**	**90.26**	**13**	P	**P**		**15 19 24.9**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=328,slow=4.7,SNR=10							
TXAR	**Lajitas Array**	**123.72**	**19**	PKP	**PKPdf**		**15 25 23.3**	**+0.4**
TXAR	**Lajitas Array**	**123.72**	**19**	PKP	**PKPdf**		**15 25 23.3**	**+0.4**
	comp=Z,1.4nm,0.6s,baz=130,slow=0.6,SNR=15							
ROSC	**El Rosal**	**148.80**	**338**	*e*PKPdf	**PKPdf**		**15 26 09.1**	**-0.5**
ROSC				PKPbc	**PKPbc**		**15 26 15.0**	**+1.5**
ROSC				*e*PKPab	**PKPab**		**15 26 16.8**	**-0.6**
ROSC	**El Rosal**	**148.80**	**338**	PKPbc	**PKPbc**		**15 26 15.0**	**+1.5**
	comp=Z,17nm,0.4s,baz=85,slow=22,SNR=12							
CPUP	**Villa Florida**	**154.40**	**260**	PKPbc	**PKPbc**		**15 26 25.3**	**-0.2**
CPUP	**Villa Florida**	**154.40**	**260**	PKPbc	**PKPbc**		**15 26 25.3**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=85,slow=3.5,SNR=5.9							
LPAZ	**La Paz**	**161.68**	**293**	PKP	**PKPdf**		**15 26 27.2**	**+0.2**
LPAZ	**La Paz**	**161.68**	**293**	PKP	**PKPdf**		**15 26 27.2**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=16,slow=4.7,SNR=6.9							

IDC 15 15:22:21.2±6.0, 20°.41S×178°.69W, h540km±70km, mb3.2/10, mb1 3.5/11, mb1mx3.3/19, mbtmp3.2/11, Error ellipse: s-maj=26.7km s-min=21.7km az=27.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
DZM	**Mont Dzumac**	**13.96**	**261**	P	P		15 25 26.4	+6.2
	0.8nm,0.3s,baz=103,slow=20,SNR=11							
URZ	**Urewera**	**18.16**	**191**	P	P		15 25 59.7	-1.2
	1.1nm,0.3s,baz=76,slow=21,SNR=10							
ASAR	**Alice Springs**	**43.91**	**257**	P	P		15 29 40.8	+0.3
	2.0nm,0.5s,baz=90,slow=7.8,SNR=73							
WRA	**Warramunga Arr**	**43.97**	**262**	P	P		15 29 40.9	-0.1
	1.1nm,0.3s,baz=96,slow=7.6,SNR=84							
VNDA	**Vanda**	**57.94**	**185**	P	P		15 31 21.6	+0.2
	0.4nm,0.4s,baz=1.1,slow=6.0,SNR=5.0							
MJAR	**Matsushiro Arr**	**69.75**	**324**	P	P		15 32 37.1	-0.1
	1.2nm,0.6s,baz=162,slow=6.2,SNR=4.8							
PETK	**Petropavlovsk-**	**76.02**	**346**	P	P		15 33 12.3	-0.5
	3.2nm,0.8s,baz=130,slow=11,SNR=6.6							
NVAR	**Mina Array Bea**	**81.41**	**44**	P	P		15 33 42.0	-0.2
	0.6nm,0.6s,baz=223,slow=7.3,SNR=4.8							
TXAR	**Lajitas Array**	**87.56**	**58**	P	P		15 34 13.7	+1.4
	0.1nm,0.4s,baz=214,slow=6.0,SNR=3.5							
ILAR	**Eielson Array**	**88.37**	**13**	P	P		15 34 14.6	-0.5
	1.3nm,0.9s,baz=222,slow=5.1,SNR=9.1							
PDAR	**Pinedale Array**	**89.34**	**43**	P	P		15 34 21.3	+0.8
	0.6nm,0.7s,baz=213,slow=2.7,SNR=5.7							
CMAR	**Chiang Mai Arr**	**89.47**	**290**	P	P		15 34 21.6	+0.2
	0.6nm,0.8s,baz=130,slow=3.1,SNR=6.1							
ARCES	**ARCESS Array B**	**128.71**	**349**	PKP	PKPdf		15 40 25.3	-1.2
	1.4nm,0.9s,baz=64,slow=2.8,SNR=6.3							
AKASG	**Malin Array Be**	**142.62**	**331**	PKP	PKPdf		15 40 48.3	-4.5
	1.9nm,0.4s,baz=43,slow=4.3,SNR=17							
BRTR	**Keskin Array B**	**146.30**	**312**	PKPbc	PKPdf		15 41 00.7	+1.0
	0.7nm,0.5s,baz=108,slow=2.7,SNR=4.1							

IDC 15 15:23:59.3±20.0, 18°.78S×178°.95W, h654km±184km, mb3.2/3, mb1 3.3/3, mb1mx2.8/19, mbtmp3.2/3, Error ellipse: s-maj=175.0km s-min=86.7km az=87.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
STKA	**Stephens Creek**	**37.77**	**242**	P	P		15 30 23.1	+0.3
	1.1nm,0.3s,baz=82,slow=11,SNR=12							
WRA	**Warramunga Arr**	**43.98**	**260**	P	P		15 31 11.4	-0.4
	1.2nm,0.5s,baz=97,slow=6.5,SNR=9.3							
WRA				PcP	PcP		15 32 42.1	-0.3
	0.2nm,0.4s,baz=89,slow=4.0,SNR=2.6							
ASAR	**Alice Springs**	**44.07**	**255**	P	P		15 31 12.6	+0.1
	6.3nm,0.6s,baz=89,slow=8.7,SNR=47							
ASAR				PcP	PcP		15 32 42.2	-0.5
	0.3nm,0.5s,baz=104,slow=4.2,SNR=3.9							
BRTR	**Keskin Array B**	**145.02**	**314**	PKPbc	PKPbc		15 42 25.1	-0.3
	0.3nm,0.2s,baz=51,slow=6.3,SNR=5.3							

MEX 15 15:42:50.2±0.3, 19°.55N×105°.36W, h38km±3km, MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CJM	**Chamela**	**0.30**	**99**	*i* P	Pn		15 42 56.8	-1.6
CJM				*i* S	Sn		15 43 02.1	-3.4
R15V		**1.35**	**106**	*e*P	Pn		15 43 11.2	-1.4
R15V				*

baz=334
CHN4 Tsaushan 0.94 263 P Pb 15 44 09.9 +0.1
baz=256
CHN4 eS Sb 15 44 22.9 +1.0
baz=256
WTP Ta-pu 0.94 257 *i* P Pn 15 44 09.7 +0.4
baz=255
WTP eS Sn 15 44 22.2 +0.5
baz=255
WNT Mingjian 0.94 296 eP Pb 15 44 09.9 0.0
baz=297
WNT eS Sb 15 44 22.4 +0.4
baz=297
ENA Nanau 0.97 7⇑ *i* P Pn 15 44 09.1 -0.6
baz=20
ENA eS Sn 15 44 21.6 -0.8
baz=20
WGK Gukeng 0.98 283 eP Pn 15 44 10.4 +0.5
baz=283
WGK eS Sb 15 44 23.9 +0.7
baz=283
NNS Nan Shan 0.99 348 eP Pn 15 44 09.6 -0.6
NNS eS Sn 15 44 22.3 -1.0
CHN1 Nanshi 1.03 254⇓ *i* P Pb 15 44 11.4 0.0
baz=253
CHN1 S Sb 15 44 25.4 +0.9
baz=253
CHN2 Minshiung 1.04 274 eP Pb 15 44 11.8 +0.2
baz=273
CHN2 eS Sb 15 44 25.9 +1.1
baz=273
TWK Hsinying 1.04 259 eP Pb 15 44 11.6 -0.1
baz=258
TWK eS Sb 15 44 25.3 +0.3
baz=258
ECL Taimali 1.05 215 eP Pn 15 44 10.5 -0.3
baz=213
TCU Taichung 1.09 309 eP Pb 15 44 12.3 -0.1
baz=310
TCU eS Sb 15 44 26.9 +0.6
baz=310
TWC Suao 1.16 11 eP Pn 15 44 12.4 +0.1
baz=12
TWC S Sn 15 44 27.0 -0.2
baz=12
TWQ1 Liyutan 1.16 319 P Pb 15 44 13.7 0.0
baz=321
TWQ1 eS Sb 15 44 29.1 +0.7
baz=321
ENTT Nioudou 1.17 358 eP Pn 15 44 11.8 -0.8
baz=1.0
ENTT eS Sn 15 44 26.1 -1.4
baz=1.0
CHN3 Shinhua 1.20 251 eP Pb 15 44 14.0 -0.3
baz=264
NSY Sanyi 1.22 321 eP Pb 15 44 14.3 -0.4
baz=337
NSY eS Sb 15 44 31.3 +1.2
baz=337
NSK Sanguang 1.23 350 P Pn 15 44 13.3 0.0
baz=1.0
NSK eS Sn 15 44 27.9 -1.1
baz=1.0
TWE Neicheng 1.25 3 eP Pn 15 44 13.1 -0.5
baz=356
TWM1 Shoushan 1.26 240 eP Pb 15 44 16.4 +1.0
baz=238
WTCT Ta-ch'eng 1.28 288 eP Pn 15 44 14.7 +0.8
baz=288
WTCT eS Sb 15 44 31.1 -0.5
baz=288
EAST Anshuo 1.28 213 eP Pn 15 44 14.3 +0.2
baz=212
NSTT Nanjuang 1.28 335 eP Pn 15 44 14.9 +0.8
baz=348
NSTT eS Sn 15 44 30.6 +0.3
baz=348
SCZT Fangliau 1.42 220 eP Pb 15 44 17.3 -0.6
baz=216
SCZT eS Sb 15 44 35.0 -0.6
baz=216
LAY Lan-yu 1.42 182 eP Pn 15 44 14.2 -1.7
baz=173
NWF Wu-fen Shan 1.61 6 eP Pn 15 44 19.3 +0.7
baz=7.0
YOJ Yonaguni jima 1.63 52 P Pn 15 44 19.1 +0.3
YOJ eS Sn 15 44 38.8 +0.1
WDGT Dungji 1.80 264 eP Pn 15 44 21.1 0.0
baz=262
PNG Penghu 1.88 274 eP Pn 15 44 22.5 +0.2
baz=272
HATJ Hateruma jima 2.10 73 P Pn 15 44 25.1 -0.2
HATJ eS Sn 15 44 52.1 +1.7
IRIF Iriomote-Funau 2.13 66 P Pn 15 44 26.1 +0.4
JKRS Kuro-shima 2.33 70 P Pn 15 44 29.1 +0.6
JKRS eS Sn 15 44 57.9 +1.7
JIJ Ishigaki jima 2.49 68 P Pn 15 44 30.5 -0.2
JIJ eS Sn 15 45 00.3 +0.3
JTJ Tarama 3.06 67 P Pn 15 44 38.6 0.0
JTJ eS Sn 15 45 14.9 +0.7

*ISK **15** 16:20:26.6, 38˚.24N×27˚.20E, h7km, MD2.8*
*ISCJB **15** 16:20:27.0±0.5, 38˚.26N±0˚.02×27˚.22E±0˚.04, h11km±4km, Error ellipse: s-maj=5.5km s-min=4.1km az=172.3*
*DDA **15** 16:20:27.2, 38˚.26N×27˚.21E, h7km, MD2.8*
*CSEM **15** 16:20:27.3±0.1, 38˚.26N×27˚.22E, h12km, MD2.8, Error ellipse: s-maj=3.2km s-min=2.6km az=85.0*

ISC 15 16:20:26.9±0.9, 38˚.26N±0˚.02×27˚.20E±0˚.03, h16km±6km, n34, σ0s48/52, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IZM	**Izmir**	**0.15**	**21**	*e*PG	**Pg**	**16 20 30.8**	**-0.1**
IZM	**Izmir**	**0.15**	**21**	*e*Pg	**Pg**	**16 20 30.8**	**-0.1**
BLCB	**Balcova**	**0.17**	**316**	*e*PG	**Pg**	**16 20 31.0**	**-0.2**
BLCB				*e*SG	**Sg**	**16 20 34.2**	**+0.1**
BLCB	**Balcova**	**0.17**	**316**	*e*Pg	**Pg**	**16 20 31.0**	**-0.2**
BLCB				*e*Sg	**Sg**	**16 20 34.2**	**+0.1**
URLA	**Izmir**	**0.48**	**282**	*i* P	**Pb**	**16 20 37.3**	**+0.2**
URLA				*i* S	**Sb**	**16 20 44.3**	**+0.4**
URLA	**Izmir**	**0.48**	**282**	*i* P	**Pb**	**16 20 37.3**	**+0.2**
URLA				*i* S	**Sb**	**16 20 44.3**	**+0.4**
GCAM	**G?zelcaml?**	**0.56**	**177**	*i* P	**Pg**	**16 20 37.9**	**0.0**
GCAM	**G?zelcaml?**	**0.56**	**177**	*i* P	**Pg**	**16 20 37.9**	**0.0**
AKHS	**Akhisar**	**0.79**	**38**	*i* P	**Pg**	**16 20 42.0**	**-0.2**
AKHS				*i* S	**Sb**	**16 20 53.2**	**+0.5**
AKHS	**Akhisar**	**0.79**	**38**	*i* P	**Pg**	**16 20 42.0**	**-0.2**
AKHS				*i* S	**Sb**	**16 20 53.2**	**+0.5**
AKS	**Akhisar**	**0.79**	**38**	*e*PG	**Pb**	**16 20 42.4**	**+0.1**
AKS				*e*SG	**Sb**	**16 20 53.8**	**+1.1**
AKS	**Akhisar**	**0.79**	**38**	*e*Pg	**Pb**	**16 20 42.4**	**+0.1**
AKS				*e*Sg	**Sb**	**16 20 53.8**	**+1.1**
AYDN	**Tasoluk**	**0.81**	**138**	*i* P	**Pb**	**16 20 43.1**	**+0.5**
AYDN				*i* S	**Sb**	**16 20 53.3**	**0.0**
AYDN	**Tasoluk**	**0.81**	**138**	*i* P	**Pb**	**16 20 43.1**	**+0.5**
AYDN				*i* S	**Sb**	**16 20 53.3**	**0.0**
MLSB	**Milas**	**1.07**	**154**	*e*PG	**Pb**	**16 20 47.0**	**0.0**
MLSB				*e*SG	**Sn**	**16 21 01.8**	**0.0**
MLSB	**Milas**	**1.07**	**154**	*e*Pg	**Pb**	**16 20 47.0**	**0.0**
MLSB				*e*Sg	**Sn**	**16 21 01.8**	**0.0**
MANT	**Manisa**	**1.10**	**77**	*i* P	**Pn**	**16 20 48.2**	**+0.3**
MANT				*i* S	**Sb**	**16 21 00.8**	**-1.0**
MANT	**Manisa**	**1.10**	**77**	*i* P	**Pn**	**16 20 48.2**	**+0.3**
MANT				*i* S	**Sb**	**16 21 00.8**	**-1.0**
KULA	**Kula-Manisa**	**1.18**	**77**	*e*PN	**Pg**	**16 20 49.9**	**+0.2**
KULA	**Kula-Manisa**	**1.18**	**77**	*e*Pn	**Pg**	**16 20 49.9**	**+0.2**
BODT	**Bodrum**	**1.20**	**176**	*e*PN	**Pb**	**16 20 49.4**	**+0.1**
BODT	**Bodrum**	**1.20**	**176**	*e*Pn	**Pb**	**16 20 49.4**	**+0.1**
YER	**Yerkesik**	**1.42**	**142**	*e*PN	**Pg**	**16 20 53.7**	**-0.5**
YER	**Yerkesik**	**1.42**	**142**	*e*Pn	**Pg**	**16 20 53.7**	**-0.5**
BALY	**Balya**	**1.52**	**12**	*i* P	**Pn**	**16 20 53.2**	**-0.3**
BALY				*i* S	**Sb**	**16 21 13.8**	**+0.1**
BALY	**Balya**	**1.52**	**12**	*i* P	**Pn**	**16 20 53.2**	**-0.3**
BALY				*i* S	**Sb**	**16 21 13.8**	**+0.1**
DURS	**Dursunbey**	**1.67**	**36**	*i* P	**Pn**	**16 20 55.4**	**-0.2**
DURS				*i* S	**Sn**	**16 21 16.1**	**-0.7**
DURS	**Dursunbey**	**1.67**	**36**	*i* P	**Pn**	**16 20 55.4**	**-0.2**
DURS				*i* S	**Sn**	**16 21 16.1**	**-0.7**
EZN	**Ezine**	**1.71**	**337**	*e*PN	**Pb**	**16 20 57.4**	**-0.5**
EZN	**Ezine**	**1.71**	**337**	*e*Pn	**Pb**	**16 20 57.4**	**-0.5**
APE	**Apeiranthos**	**1.78**	**229**	*e*PN	**Pb**	**16 20 58.8**	**-0.3**
APE	**Apeiranthos**	**1.78**	**229**	*e*Pn	**Pb**	**16 20 58.8**	**-0.3**
GONE	**Gonen-Balikesi**	**1.82**	**12**	*e*PN	**Pn**	**16 20 58.8**	**+1.1**

GONE	**Gonen-Balikesi**	**1.82**	**12**	*e*Pn	**Pn**	**16 20 58.8**	**+1.1**

IDC 15 16:30:23.6±1.6, 3˚.59N×127˚.05E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/23, mbtmp3.3/4, Error ellipse: s-maj=171.7km s-min=21.5km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.46**	**163**	P	P	16 35 44.0	-0.5
	0.7nm,0.8s,baz=345,slow=10,SNR=8.3						
ASAR	**Alice Springs**	**27.90**	**166**	P	P	16 36 16.2	+0.6
	0.3nm,0.7s,baz=339,slow=7.5,SNR=5.7						
SONM	**Songino Array**	**47.53**	**341**	P	P	16 39 01.1	+0.2
	0.2nm,0.5s,baz=164,slow=8.7,SNR=2.4						
MKAR	**Makanchi Array**	**57.85**	**325**	P	P	16 40 16.8	-0.4
	0.2nm,0.4s,baz=122,slow=7.9,SNR=7.5						

*IDC **15** 16:45:48.4±1.3, 54˚.10N×109˚.01E, h0km, mb3.4/3, mb1 3.4/7, mb1mx3.2/30, mbtmp3.2/7, ML3.2/4, Error ellipse: s-maj=26.0km s-min=22.1km az=128.0*
*MOS **15** 16:45:49.4±1.2, 54˚.14N×108˚.78E, h8km, mb4.4/2, Error ellipse: s-maj=15.7km s-min=8.7km az=57.7*
*BYKL **15** 16:45:50.6±0.2, 54˚.19N×108˚.64E*

ISC 15 16:45:49.1±1.1, 54˚.13N±0˚.02×108˚.88E±0˚.02, h2km±9km, n53, σ1s82/99, mb3.5/4, 6C-3D, Lake Baikal region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SYVR	**Suvo**	**0.81**	**125**	*e*PG	**Pn**	**16 46 08.1**	**+0.5**
SYVR				*e*		16 46 20.4	
SYVR				pmax	pmax		
	comp=Z,187nm,0.3s						
SYVR				smax	smax		
	comp=N,1μm,0.3s						
SYVR	**Suvo**	**0.81**	**125**	⇓ *i*Pg	**Pn**	**16 46 08.2**	**+0.6**
	comp=N,442nm,0.5s						
SYVR				⇑ *i*Pg	**Pn**	**16 46 08.2**	**+0.6**
	comp=N,620nm,0.5s						
SYVR				⇑ *i*Pg	**Pn**	**16 46 08.2**	**+0.6**
	comp=N,2μm,0.5s						
SYVR				*e*Sg	**Sn**	**16 46 20.9**	**+0.7**
SYVR				Pmax			
	comp=N,2μm,0.1s						
SYVR				Smax			
	comp=N,1μm,0.6s						
MXMB	**Maximikha**	**0.87**	**185**	⇑ *i*Pg	**Pn**	**16 46 08.1**	**-0.3**
MXMB				*e*Sg	**Sn**	**16 46 21.1**	**-0.6**
MXMB				Pmax			
	comp=N,975nm,0.2s						
MXMB				Smax			
	comp=N,7μm,0.3s						
OGRR	**Ongureny**	**0.90**	**238**	*e*PG	**Pb**	**16 46 06.9**	**-0.6**
OGRR				*e*		16 46 18.1	
OGRR				pmax	pmax		
	comp=Z,222nm,0.2s						
OGRR				smax	smax		
	comp=N,2μm,0.2s						
OGRR	**Ongureny**	**0.90**	**238**	⇓ *i*Pg	**Pb**	**16 46 06.9**	**-0.6**
OGRR				*e*Sg	**Sg**	**16 46 17.9**	**-0.1**
OGRR				Pmax			
	comp=N,222nm,0.2s						
OGRR				Smax			
	comp=N,1μm,0.2s						
YLYR	**Ulyunkhan**	**1.53**	**60**	*e*PG	**Pg**	**16 46 19.1**	**+0.7**
YLYR				*i*		16 46 39.8	
YLYR				pmax	pmax		
	comp=Z,146nm,0.3s						
YLYR				smax	smax		
	comp=E,681nm,0.7s						
YLYR	**Ulyunkhan**	**1.53**	**60**	⇑ *i*Pg	**Pg**	**16 46 19.0**	**+0.7**
YLYR				*e*Sg	**Sg**	**16 46 40.5**	**+2.3**
YLYR				Pmax			
	comp=E,98nm,0.3s						
YLYR				Smax			
	comp=E,644nm,0.3s						
NIZ	**Nizh Angarsk**	**1.70**	**13**	*e*PN	**Pb**	**16 46 20.6**	**-0.5**
NIZ				*e*		16 46 42.3	
NIZ				pmax	pmax		
	comp=Z,72nm,0.2s						
NIZ				smax	smax		
	comp=N,413nm,0.5s						
NIZ	**Nizh Angarsk**	**1.70**	**13**	*e*Sg	**Sb**	**16 46 42.4**	**-0.5**
NIZ				Smax			
	comp=N,402nm,0.2s						
ZRHB	**Zarechye**	**1.89**	**214**	*e*Pn	**Pb**	**16 46 22.8**	**-1.5**
ZRHB				*e*Pg	**Pg**	**16 46 24.7**	**-0.5**
ZRHB				*e*Sg	**Sg**	**16 46 49.8**	**+0.2**
TRG	**Tyrgan**	**2.04**	**229**	*e*PN	**Pb**	**16 46 25.1**	**-1.9**
TRG				*e*		16 46 26.4	
TRG				*e*S	**Sn**	**16 46 49.8**	**-0.9**
TRG				*e*		16 46 51.9	
TRG				pmax	pmax		
	comp=Z,84nm,0.2s						
TRG				smax	smax		
	comp=E,558nm,0.2s						
TRG	**Tyrgan**	**2.04**	**229**	*e*Pn	**Pb**	**16 46 25.0**	**-1.9**
TRG				*e*Pg	**Pg**	**16 46 26.4**	**-1.8**
TRG				*e*Sg	**Sb**	**16 46 52.0**	**-0.8**
TRG				Pmax			
	comp=E,34nm,0.2s						
TRG				Smax			
	comp=E,557nm,0.2s						
KMO	**Kumora**	**2.21**	**36**	⇓ *i*Pn	**Pb**	**16 46 28.1**	**-1.8**
KMO				*e*Pg	**Pg**	**16 46 31.5**	**0.0**
KMO				*e*Sg	**Sg**	**16 47 00.7**	**+0.5**
KMO				Pmax			
	comp=E,195nm,0.3s						
KMO				Smax			
	comp=E,466nm,0.8s						
UUDB	**Ulan-Yde**	**2.38**	**199**	*e*Pn	**Pn**	**16 46 30.1**	**+0.9**
UUDB				*e*Pg	**Pb**	**16 46 33.5**	**+0.8**
UUDB				*e*		16 46 41.0	
UUDB				*e*Sn	**Sn**	**16 46 59.0**	**0.0**
UUDB				*e*Sg	**Sg**	**16 47 05.0**	**-0.5**
UUDB				Pmax			
	comp=E,30nm,0.1s						
UUDB				Smax			
	comp=E,203nm,0.3s						
FFNB	**Fofonovo**	**2.44**	**212**	*e*Pn	**Pn**	**16 46 30.1**	**0.0**
FFNB				*e*Pg	**Pb**	**16 46 33.6**	**-0.2**
FFNB				*e*Sg	**Sb**	**16 47 04.9**	**+0.6**
FFNB				Pmax			
	comp=E,28nm,0.2s						
FFNB				Smax			
	comp=E,248nm,0.4s						
KAB	**Kabansk**	**2.48**	**214**	*e*Pg	**Pb**	**16 46 34.5**	**+0.2**
KAB				*e*Sg	**Sb**	**16 47 06.0**	**+0.7**
KAB				Pmax			
	comp=E,61nm,0.3s						
KAB				Smax			
	comp=E,533nm,0.5s						
YOA	**Uoyan**	**2.59**	**38**	*e*Pn	**Pb**	**16 46 34.8**	**-1.5**
YOA				*e*Pg	**Pg**	**16 46 38.6**	**-0.1**
YOA				*e*Sg	**Sg**	**16 47 12.5**	**+0.2**
YOA				Pmax			
	comp=E,145nm,0.4s						
YOA				Smax			
	comp=E,705nm,0.5s						
HRMR	**Khuramsha**	**2.76**	**206**	Smax		16 46 35.5	
HRMR				Smax		16 46 40.7	
HRMR				*e*Sg	**Sg**	**16 47 15.8**	**-1.9**
HRMR				Smax			
	comp=E,861nm,0.5s						
UKT	**Uakit**	**3.07**	**62**	⇑ *i*PN	**Pn**	**16 46 40.2**	**+1.5**
UKT				*e*		16 46 46.6	
UKT				*e*S	**Sn**	**16 47 17.0**	**+1.0**
UKT				*e*		16 47 27.7	
UKT				pmax	pmax		
	comp=Z,51nm,0.2s						
UKT				smax	smax		
	comp=N,128nm,0.3s						
UKT	**Uakit**	**3.07**	**62**	⇑ *i*Pn	**Pn**	**16 46 40.3**	**+1.5**
UKT				*e*Pg	**Pg**	**16 46 46.8**	**-1.1**
UKT				*e*Sn	**Sn**	**16 47 17.2**	**+1.2**
UKT				*e*Sg	**Sg**	**16 47 28.8**	**+1.2**
UKT				Pmax			
	comp=N,48nm,0.4s						
UKT				Smax			
	comp=N,126nm,0.3s						
IRK	**Irkutsk**	**3.35**	**238**	*e*PN	**Pb**	**16 46 49.5**	**+0.2**
IRK				*e*		16 47 31.8	
IRK				pmax	pmax		
	comp=Z,18nm,0.1s						
IRK				smax	smax		
	comp=N,820nm,0.4s						
IRK	**Irkutsk**	**3.35**	**238**	*e*Pg	**Pb**	**16 46 50.0**	**+0.7**
IRK				*e*Sn	**Sn**	**16 47 20.5**	**-2.5**
IRK				*e*Sg	**Sb**	**16 47 31.6**	**+1.1**
IRK				Pmax			
	comp=N,58nm,0.2s						
IRK				Smax			
	comp=N,920nm,0.4s						
CIT	**Chita**	**3.52**	**125**	*e*PN	**Pb**	**16 46 53.8**	**+1.7**
CIT				*e*		16 47 41.4	
CIT				pmax	pmax		
	comp=Z,114nm,0.4s						
CIT				smax	smax		
	comp=E,187nm,0.2s						
CIT	**Chita**	**3.52**	**125**	*e*Pg	**Pg**	**16 46 56.3**	**-0.2**
CIT				*e*Sg	**Sg**	**16 47 43.8**	**+1.8**
CIT				Pmax			
	comp=E,80nm,0.2s						
CIT				Smax			
	comp=E,157nm,0.2s						
TLY	**Talaya**	**4.01**	**234**	*e*PN	**Pn**	**16 46 51.7**	**+0.1**
TLY				*e*		16 47 01.2	
TLY				*e*S	**Sn**	**16 47 36.6**	**-2.5**
TLY	**Talaya**	**4.01**	**234**	*e*Pn	**Pn**	**16 46 51.1**	**-0.5**
TLY				*e*Pg	**Pb**	**16 47 00.5**	**+0.1**
TLY				*e*Sn	**Sn**	**16 47 36.3**	**-2.8**
TLY				*e*Sg	**Sb**	**16 47 50.5**	**+1.2**
TLY				Pmax			
	comp=E,28nm,0.4s						
TLY				Smax			
	comp=E,127nm,0.2s						
ARS	**Arshan**	**4.48**	**243**	*e*PN	**Pn**	**16 46 57.9**	**-0.2**
ARS				*e*		16 47 10.4	
ARS				*e*S	**Sn**	**16 47 46.2**	**-4.7**
ARS				*e*		16 48 06.8	
ARS				pmax	pmax		
	comp=Z,49nm,0.2s						
ARS				smax	smax		
	comp=E,472nm,0.4s						
ARS	**Arshan**	**4.48**	**243**	*e*Pn	**Pn**	**16 46 59.1**	**+1.0**
ARS				*e*Pg	**Pb**	**16 47 10.4**	**+1.9**
ARS				*e*Sn	**Sn**	**16 47 48.0**	**-2.9**
ARS				*e*Sg	**Sb**	**16 48 06.0**	**+3.0**
ARS				Pmax			
	comp=E,57nm,0.6s						
ARS				Smax			
	comp=E,479nm,0.4s						
NLYR	**Nelyaty**	**4.56**	**56**	*e*PN	Pb	16 47 13.0	+3.1
NLYR				*e*		16 48 14.8	
NLYR				pmax	pmax		
	comp=Z,24nm,1.4s						
NLYR				smax	smax		
	comp=N,214nm,1.4s						
NLYR	**Nelyaty**	**4.56**	**56**	*e*Pg	**Pg**	**16 47 14.2**	**-2.2**
NLYR				*e*Sg	**Sg**	**16 48 14.1**	**-1.4**
NLYR				Pmax			
	comp=N,23nm,0.6s						
NLYR				Smax			
	comp=N,214nm,1.3s						
BOD	**Bodaibo**	**4.69**	**36**	*e*Pn	**Pn**	**16 47 01.6**	**+0.7**
BOD				*e*Sg	**Sg**	**16 48 16.0**	**-3.6**
BOD				Smax			
	comp=N,52nm,0.5s						
ZAK	**Zakamensk**	**5.09**	**225**	*e*Pn	**Pn**	**16 47 07.7**	**+1.2**
ZAK				*e*		16 47 26.2	
ZAK				*e*Sg	Sg	16 48 27.0	-5.4
ZAK				Smax			
	comp=N,37nm,0.4s						
MOY	**Mondy**	**5.37**	**246**	*e*PN	**Pn**	**16 47 11.1**	**+0.7**
MOY				*e*		16 47 26.2	
MOY				*e*S	**Sn**	**16 48 10.6**	**-2.3**
MOY				*e*		16 48 33.8	
MOY				pmax	pmax		
	comp=Z,17nm,0.4s						
MOY				smax	smax		
	comp=E,175nm,1.0s						
MOY	**Mondy**	**5.37**	**246**	*e*Pn	**Pn**	**16 47 11.2**	**+0.8**
MOY				*e*Sn	**Sn**	**16 48 09.1**	**-3.8**
MOY				*e*Sg	**Sb**	**16 48 33.2**	**+4.5**
MOY				Smax			
	comp=E,176nm,0.8s						
ORL	**Orlik**	**5.66**	**257**	*e*PN	**Pn**	**16 47 15.6**	**+1.2**
ORL				*e*		16 47 32.4	
ORL				*e*		16 48 44.2	
ORL				pmax	pmax		
	comp=Z,16nm,0.6s						
ORL				smax	smax		
	comp=N,118nm,0.8s						
ORL	**Orlik**	**5.66**	**257**	*e*Pn	**Pn**	**16 47 15.1**	**+0.7**
ORL				*e*Sn	**Sn**	**16 48 16.5**	**-3.6**
ORL				*e*Sg	**Sb**	**16 48 41.5**	**+4.4**
ORL				Smax			
	comp=N,119nm,0.8s						
CRS	**Chara**	**6.01**	**59**	*e*PN	**Pn**	**16 47 20.6**	**+1.5**
CRS				*e*S	**Sg**	**16 48 58.8**	**-3.3**
CRS				smax	smax		
	comp=E,119nm,1.4s						
CRS	**Chara**	**6.01**	**59**	*e*Pn	**Pn**	**16 47 20.8**	**+1.7**
CRS				*e*Pg	Pg	16 47 40.3	-3.9
CRS				*e*Sg	**Sg**	**16 48 58.9**	**-3.2**
CRS				Pmax			
	comp=E,16nm,0.9s						
CRS				Smax			
	comp=E,118nm,1.4s						
SONM	**Songino Array**	**6.49**	**195**	Pn	**Pn**	**16 47 27.1**	**+1.3**
	comp=E,0.4nm,0.3s,baz=4.5,slow=14,SNR=18						
SONM				Sn	**Sn**	**16 48 36.3**	**-4.2**
	comp=E,0.9nm,0.3s,baz=10,slow=26,SNR=5.0						
SONM				Lg	Lg	16 49 13.2	
	comp=E,2.4nm,0.3s,baz=10,slow=29,SNR=8.7						
TUP	**Tupik**	**6.49**	**83**	*e*PG	Pg	16 47 48.5	-4.9
TUP				*e*		16 49 12.7	
TUP				pmax	pmax		
	comp=Z,5.0nm,0.5s						
TUP				smax	smax		
	comp=N,103nm,1.0s						
TUP	**Tupik**	**6.49**	**83**	*e*Pn	**Pn**	**16 47 26.8**	**+1.1**
TUP				*e*Sn	**Sn**	**16 48 38.8**	**-1.5**
TUP				*e*Sg	**Sg**	**16 49 14.5**	**-3.0**
TUP				Smax			
	comp=N,114nm,1.3s						
KHNR	**Khani**	**6.89**	**62**	*e*Pn	Pn	16 47 33.6	+2.4
KHNR				*e*Sn	**Sn**	**16 48 48.5**	**-1.7**
KHNR				*e*Sg	**Sg**	**16 49 27.2**	**-3.1**
ZALV	**Zalesovo Beam**	**14.13**	**279**	P	**Pn**	**16 49 11.4**	**+1.3**
ZALV	**Zalesovo Beam**	**14.13**	**279**	Pn	**Pn**	**16 49 11.4**	**+1.3**
	comp=N,0.1nm,0.3s,baz=91,slow=13,SNR=2.7						
ZALV				Lg	Lg	16 53 10.2	
	comp=N,0.2nm,0.3s,baz=72,slow=29,SNR=3.7						
MKAR	**Makanchi Array**	**18.37**	**257**	P	**Pn**	**16 50 02.3**	**-2.6**
MKAR	**Makanchi Array**	**18.37**	**257**	Pn	**Pn**	**16 50 02.3**	**-2.6**
	comp=N,0.1nm,0.3s,baz=63,slow=11,SNR=4.9						
KURK	**Kurchatov**	**18.70**	**272**	P	**Pn**	**16 50 08.8**	**0.0**
KURBB	**Kurchatov Arra**	**18.78**	**272**	P	**Pn**	**16 50 08.8**	**-1.1**
	comp=N,0.0nm,0.3s,baz=69,slow=11,SNR=4.9						
BVAR	**Borovoye Array**	**22.70**	**283**	P	**P**	**16 50 53.8**	**+2.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**22.70**	**283**	P	**P**	**16 50 53.8**	**+2.0**
	comp=Z,1.0nm,0.6s,baz=67,slow=11,SNR=5.5						
CMAR	**Chiang Mai Arr**	**36.42**	**196**	P	P	16 52 57.4	+2.4
	comp=Z,0.6nm,0.8s,baz=8.3,slow=8.9,SNR=5.1						
ILAR	**Eielson Array**	**48.06**	**34**	P	**P**	**16 54 28.3**	**-1.1**
	comp=Z,0.4nm,0.8s,baz=317,slow=5.2,SNR=6.0						
ASAR	**Alice Springs**	**80.42**	**157**	P	**P**	**16 58 01.4**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=356,slow=5.5,SNR=4.2						

IDC 15 16:48:01.2±7.9, 26˚.36S×68˚.56W, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.7/16, mbtmp3.8/2, MS3.2/2, Ms1 3.2/2, ms1mx2.9/21, Error ellipse: s-maj=355.4km s-min=54.4km az=20.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**10.07**	**92**	LR	LR	16 54 14.3	
	comp=Z,57nm,21.1s,baz=234,slow=37						
PLCA	**Paso Flores**	**14.43**	**186**	LR	LR	16 57 03.9	
	comp=Z,236nm,19.7s,baz=340,slow=38						
PDAR	**Pinedale Array**	**78.47**	**330**	P	P	17 00 04.1	-0.2
	0.4nm,0.8s,baz=133,slow=7.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**78.73**	**69**	P	P	17 00 05.9	-0.1
	1.7nm,0.8s,baz=250,slow=5.0,SNR=7.7						

KURBB **Kurchatov Arra 145.11 37** PKPbc PKPbc 17 07 38.6 -1.2
0.5nm,1.0s,baz=296,slow=3.3,SNR=8.1
ZALV **Zalesovo Beam 146.13 28** PKPbc PKPbc 17 07 42.9 -0.1
0.7nm,0.5s,baz=298,slow=3.2,SNR=5.0
MKAR **Makanchi Array 149.23 41** PKPbc PKPbc 17 07 51.3 -0.4
0.7nm,0.9s,baz=318,slow=2.2,SNR=6.3

*ISCJB **15** 16:49:33.3±0.5, 31°.65N×104°.52E±0'.07, h9km, mb3.7/7, Error ellipse: s-maj=9.5km s-min=5.1km az=37.8*
*IDC **15** 16:49:33.6±1.0, 31°.68N×104°.32E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.7/30, mbtmp3.8/9, ML2.8/1, Error ellipse: s-maj=36.4km s-min=17.5km az=60.0*
*BJI **15** 16:49:35.0, 31°.73N×104°.23E, h17km, ML3.6/10, Ms3.2/3, Ms7 3.2/2*
ISC 15 16:49:35.3±0.7, 31°.61N±0'.05×104°.39E±0'.06, h9km, n13, σ2s07/20, mb3.9/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
CD2	**Chengdu**	**0.88**	**218**	Pg	**Pb**		**16 49 52.8**	**0.0**
CD2				Sg	**Sn**		**16 50 06.1**	**-0.8**
CD2	comp=N,3μm,0.7s			smax	smax			
CD2	comp=E,1μm,0.7s			smax	smax			
LZH	**Lanzhou**	**4.49**	**354**	*e*Pn	**Pn**		**16 50 44.9**	**+1.2**
LZH				Pg	**Pb**		**16 50 56.3**	**+1.9**
LZH				Sn	**Sn**		**16 51 35.5**	**-0.6**
LZH				Sg	**Sb**		**16 51 50.9**	**+2.3**
LZH	comp=N,86nm,1.0s			smax	smax			
LZH	comp=E,120nm,0.6s			smax	smax			
LZH	comp=N,470nm,5.9s			LR	LR			
LZH	comp=E,320nm,7.4s			LR	LR			
LZH	comp=Z,330nm,7.6s			LR	LR			
XAN	**Xi'an**	**4.52**	**56**	Pn	**Pn**		**16 50 44.1**	**+0.1**
XAN				Pg	**Pg**		**16 50 59.1**	**-2.9**
XAN				Sn	**Sn**		**16 51 33.6**	**-3.2**
XAN				Sg	**Sb**		**16 51 53.9**	**+4.4**
XAN	comp=N,150nm,0.8s			smax	smax			
XAN	comp=E,72nm,0.8s			smax	smax			
XAN	comp=N,130nm,5.9s			LR	LR			
XAN	comp=E,90nm,7.4s			LR	LR			
XAN	comp=Z,110nm,7.6s			LR	LR			
GYA	**Guiyang**	**5.51**	**158**	Pg	Pb		16 51 07.6	-4.2
GYA				Sg	**Sn**		**16 52 05.5**	**+4.3**
GYA	comp=N,100nm,1.0s			smax	smax			
GYA	comp=E,80nm,0.9s			smax	smax			
SONM	**Songino Array 16.28**		**5**	Pn	**Pn**		**16 53 24.2**	**0.0**
	comp=E,0.0nm,0.3s,baz=187,slow=11,SNR=2.3							
KSRS	**Korea Array 20.23**		**67**	P	**P**		**16 54 11.2**	**+0.5**
	comp=E,3.0nm,0.6s,baz=254,slow=11,SNR=14							
MKAR	**Makanchi Array 22.76**		**318**	P	**P**		**16 54 37.0**	**-0.9**
	comp=E,0.5nm,0.7s,baz=116,slow=11,SNR=5.2							
ZALV	**Zalesovo Beam 26.37**		**334**	P	**P**		**16 55 10.7**	**-1.0**
	comp=E,1.2nm,0.8s,baz=141,slow=11,SNR=4.8							
KURBB	**Kurchatov Arra 26.98**		**322**	P	**P**		**16 55 16.3**	**-0.9**
	comp=E,0.3nm,0.5s,baz=130,slow=8.7,SNR=6.3							
WRA	**Warramunga Arr 58.76**		**147**	P	**P**		**16 59 34.2**	**+0.3**
	comp=E,2.5nm,0.5s,baz=340,slow=7.8,SNR=49							
ASAR	**Alice Springs 61.80**		**149**	P	**P**		**16 59 55.1**	**+0.4**
	comp=E,0.8nm,0.5s,baz=336,slow=6.6,SNR=33							
INK	**Inuvik 71.60**		**19**	P	**P**		**17 00 55.3**	**-1.2**
	comp=E,1.1nm,0.7s,baz=330,slow=2.0,SNR=4.6							
YKA	**Yellowknife Ar 81.14**		**17**	P	**P**		**17 01 49.8**	**-1.0**
	comp=E,0.5nm,0.5s,baz=328,slow=5.1,SNR=8.8							

KRSC 15 16:54:08.7±0.1, 56°.14N×163°.41E, h8km±8km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
KBTR	**Krutoberegovo**	**0.34**	**282**	*e*P	Pg		16 54 15.6	+0.3
KBTR				*i* S	Sg		16 54 19.9	+0.1
KBG	**Krutoberegovo**	**0.41**	**287**	*e*P	Pg		16 54 16.9	+0.2
KBG				*i* S	Sb		16 54 23.6	-1.0
SMKR	**Semkarok**	**1.17**	**293**	*e*P	Pg		16 54 30.8	-0.4
SMKR				*i* S	Sn		16 54 47.6	0.0
BDR	**Baidarnaya**	**1.30**	**290**	*e*P	Pg		16 54 33.7	0.0
BDR				*i* S	Sn		16 54 51.5	+0.6
SRKR	**Sorokina**	**1.35**	**293**	*e*P	Pg		16 54 35.2	+0.5
SRKR				*i* S	Sg		16 54 54.7	+2.4
ZLN	**Zelenaya**	**1.47**	**266**	*e*P	Pb		16 54 36.6	+0.2
ZLN				*i* S	Sg		16 54 56.9	+0.8
CIRR	**Tsirk**	**1.49**	**270**	*e*P	Pb		16 54 36.8	0.0
CIRR				*i* S	Sg		16 54 56.7	-0.3
LGNR	**Loginova**	**1.52**	**269**	*e*P	Pn		16 54 36.9	+0.3
LGNR				*i* S	Sg		16 54 58.3	-0.1
BZGR	**Bezymyannyi-Gr**	**1.54**	**264**	*e*P	Pn		16 54 36.9	+0.4
BZGR				*i* S	Sg		16 54 58.1	-0.2
KLY	**Klyuchi**	**1.55**	**278**	*e*P	Pn		16 54 34.4	-2.2
KLY				*i* S	Sn		16 54 53.6	-3.2
KRSR	**Krestovskiy**	**1.59**	**274**	*e*P	Pn		16 54 37.9	+0.6
KRSR				*i* S	Sb		16 54 59.4	+0.5
BZWR	**Bezymyannyi-We**	**1.64**	**265**	*e*P	Pn		16 54 38.6	+0.5
BZWR				*i* S	Sb		16 55 00.4	-0.1
BZMR	**Bezymyannaya**	**1.65**	**264**	*e*P	Pn		16 54 38.0	-0.2
BZMR				*i* S	Sn		16 54 59.4	-0.3
BKI	**Bering**	**1.73**	**122**	*e*P	Pn		16 54 37.6	-1.4
BKI				*i* S	Sn		16 54 58.2	-3.0
KIRR	**Kirishev**	**1.73**	**265**	*e*P	Pn		16 54 39.8	+0.5
KIRR				*i* S	Sn		16 55 01.9	+0.2
KPT	**Kopyto**	**1.80**	**266**	*e*P	Pn		16 54 41.0	+0.9
KPT				*i* S	Sb		16 55 05.2	+0.5
KMNR	**Kamenistaya**	**1.83**	**259**	*e*P	Pn		16 54 41.4	+0.9
KMNR				*i* S	Sb		16 55 06.0	+0.4
MKZ	**Mys Kozlova**	**1.85**	**212**	*e*P	Pn		16 54 39.9	-0.8
MKZ				*i* S	Sn		16 55 02.3	-2.0
KOZ	**Kozyrevsk**	**1.98**	**269**	*e*P	Pb		16 54 44.8	-0.3
KOZ				*i* S	Sg		16 55 11.4	-1.1
TUMR	**Tumrok**	**2.04**	**246**	*e*P	Pn		16 54 44.2	+0.8
TUMR				*i* S	Sb		16 55 10.9	-0.8
SRDR	**Sredinnyy**	**2.07**	**276**	*e*P	Pn		16 54 44.7	+0.9
SRDR				*i* S	Sn		16 55 10.9	+1.1
ESO	**Esso**	**2.65**	**267**	*e*P	Pn		16 54 53.8	+2.0
ESO				*i* S	Sb		16 55 27.1	-2.1
SDLR	**Sedlovina**	**3.89**	**224**	*e*P	Pn		16 55 09.7	+0.8
KRER	**Koryakskii**	**3.92**	**225**	*e*P	Pn		16 55 11.3	+1.9
SMAR	**Somma**	**3.93**	**225**	P	Pn		16 55 11.6	+2.0
AVH	**Avacha**	**3.96**	**225**	*e*P	Pn		16 55 11.9	+2.2
UGLR	**Uglovaya**	**3.96**	**224**	*e*P	Pn		16 55 11.5	+1.6
TILK	**Tilichiki**	**4.55**	**17**	P	Pn		16 55 17.8	0.0
ASAK	**Asacha**	**4.96**	**223**	*e*P	Pn		16 55 26.1	+2.6

IDC 15 17:03:11.9±1.9, 15°.45S×174°.67W, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.7/20, mbtmp4.0/4, ML2.0/1, Error ellipse: s-maj=179.2km s-min=28.6km az=154.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
AFI	**Afiamalu 3.19**		**62**	Pn	Pn		17 04 03.4	-0.1
	9.4nm,0.3s,baz=194,slow=4.2,SNR=17							
AFI				Sn	Sn		17 04 36.3	-6.1
	15nm,0.3s,baz=31,slow=20,SNR=12							
STKA	**Stephens Creek 42.95**		**240**	P	P		17 11 12.8	-0.1
	3.3nm,1.1s,baz=80,slow=12,SNR=2.6							
WRA	**Warramunga Arr 48.64**		**257**	P	P		17 11 57.9	-0.2
	0.4nm,0.8s,baz=92,slow=7.8,SNR=5.3							
ASAR	**Alice Springs 48.93**		**252**	P	P		17 12 00.1	-0.1
	1.8nm,0.3s,baz=89,slow=7.9,SNR=71							

*IDC **15** 17:38:14.6±0.5, 56°.50N×152°.38W, h0km, mb4.5/26, mb1 4.7/29, mb1mx4.6/33, mbtmp4.5/29, ML3.9/3, MS4.3/25, Ms1 4.3/25, ms1mx4.2/38, Error ellipse: s-maj=16.0km s-min=10.1km az=19.0*
*NEIC **15** 17:38:14.9, 56°.27N×152°.04W, h10km, mb4.6/41, ML4.3(AEIC), After AEIC.*
NEIC Felt at Old Harbor.
*BJI **15** 17:38:16.2, 56°.40N×152°.53W, h29km, mB5.1/27, mb5.0/37, Ms5.0/28, Ms7 4.7/28*
*ISCJB **15** 17:38:17.5±0.2, 56°.59N±0'.02×152°.19W±0'.03, h27km, mb4.8/179, MS4.5/58, Error ellipse: s-maj=3.3km s-min=2.5km az=9.4*
*MOS **15** 17:38:18.5±1.0, 56°.61N×152°.31W, h33km, mb5.2/84, MS4.4/23, Error ellipse: s-maj=10.8km s-min=3.7km az=88.7*
*GCMT **15** 17:38:19.2±0.3, 56°.15N×151°.99W, h13km±1km, MW4.9, Moment Tensor Solution. s26,c32; s59,c87; Moment tensor: Scale 10^16 Nm; Mrr 1.22±.12; Mθθ -0.88±.07; Mφφ -0.34±.08; Mrθ 2.23±.35; Mθφ -0.97±.05; Mφr 0.12±.19; Best double couple: M0 2.70000×10^16 NP1:φs206.00000°, δ24.00000°, λ38.00000°. NP2:φs81.00000°, δ76.00000°, λ109.00000°. Principal axes: T 2.7000, Plg55.0000°, Azm15.0000°; N -0.0600, Plg18.0000°, Azm256.0000°; P -2.6400, Plg28.0000°, Azm156.0000°; Data Used: II IU IC G CN.*
*SZGRF **15** 17:38:30.2, 58°.02N×152°.88W, h33km, mb5.1, Kodiak Island, Alaska, United States, region*
ISC 15 17:38:18.5±0.4, 56°.44N±0'.05×152°.23W±0'.03, h28km±1km, h28km; pP-P, n522, σ1s30/580, mb4.9/184, MS4.4/58, 28C-11D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
OHAK	**Old Harbor**	**0.97**	**324**	P	**Pn**		**17 38 34.2**	**-2.1**
KDAK	**Kodiak Island**	**1.36**	**352**	P	**Pn**		**17 38 40.1**	**-1.4**
KDAK	**Kodiak Island**	**1.36**	**352**	Pn	**Pn**		**17 38 40.1**	**-1.4**
KDAK	44nm,0.3s,baz=178,slow=16,SNR=268			Sn	**Sn**		**17 38 57.9**	**-0.6**
	154nm,0.3s,baz=172,slow=14,SNR=16							
KABR	**Katmai Barrier**	**2.25**	**320**	P	**Pn**		**17 38 53.4**	**-0.5**
KAWH	**Katmai**	**2.39**	**325**	P	**Pn**		**17 38 56.0**	**+0.2**
KAKN	**Katmai Knife C**	**2.41**	**322**	P	**Pn**		**17 38 55.9**	**-0.2**
KCE	**Katmai Mt Cerb**	**2.41**	**320**	P	**Pn**		**17 38 56.4**	**+0.3**
KABU	**Katmai Buttres**	**2.47**	**319**	P	**Pn**		**17 38 56.9**	**0.0**
FOSS	**Fourpeaked Sta**	**2.49**	**342**	P	**Pn**		**17 38 57.1**	**0.0**
FONW	**Fourpeaked Sta**	**2.56**	**340**	P	**Pn**		**17 38 58.6**	**+0.4**
KELA	**Mount Kelaz**	**2.76**	**318**	P	**Pn**		**17 39 00.7**	**-0.2**
AUI	**Augustine Isla**	**2.97**	**348**	P	**Pn**		**17 39 04.4**	**+0.7**
MCNL	**McNeil River**	**2.97**	**339**	P	**Pn**		**17 39 04.2**	**+0.5**
AUE	**Augustine Isla**	**2.99**	**349**	P	**Pn**		**17 39 04.7**	**+0.8**
AUW	**Augustine West**	**3.01**	**348**	P	**Pn**		**17 39 04.8**	**+0.6**
AUNW	**Augustine NWes**	**3.02**	**348**	P	**Pn**		**17 39 04.8**	**+0.5**
OPT	**Oil Point**	**3.26**	**351**	P	**Pn**		**17 39 08.1**	**+0.4**
ANPK	**Aniakchak Peak**	**3.28**	**279**	P	**Pn**		**17 39 06.6**	**-1.5**
ANPK				S	**Sn**		**17 39 45.9**	**-0.3**
ANNW	**Aniakchak Nort**	**3.34**	**281**	P	**Pn**		**17 39 07.8**	**-1.1**
ANNW				S	**Sn**		**17 39 49.1**	**+1.5**
ANPB	**Aniakchak Plen**	**3.37**	**279**	P	**Pn**		**17 39 07.1**	**-2.0**
BRLK	**Bradley Lake**	**3.41**	**11**	P	**Pn**		**17 39 07.8**	**-1.9**
CHGN	**Chignik**	**3.44**	**270**	*e*Pn	Pn		17 39 07.0	-3.1
ILW	**Iliamna West**	**3.66**	**353**	P	**Pn**		**17 39 13.2**	**-0.1**
VNHG	**Veniaminof 1**	**3.87**	**270**	P	**Pn**		**17 39 15.0**	**-1.2**
SEW	**Seward**	**3.95**	**21**	P	**Pn**		**17 39 14.6**	**-2.8**
RSO	**Redoubt South**	**4.04**	**356**	*e*Pn	**Pn**		**17 39 17.8**	**-0.8**
NCT	**North Crescent**	**4.15**	**355**	P	**Pn**		**17 39 19.4**	**-0.5**
DFR	**Drift River**	**4.17**	**357**	P	**Pn**		**17 39 19.6**	**-0.6**
SLKM	**Skilak Lake**	**4.21**	**14**	P	**Pn**		**17 39 19.7**	**-1.1**
SLKM	**Skilak Lake**	**4.21**	**14**	P	**Pn**		**17 39 19.7**	**-1.1**
SPU	**Mount Spurr**	**4.75**	**1**	P	**Pn**		**17 39 27.5**	**-0.8**
CKL	**Chakachamna La**	**4.77**	**359**	P	**Pn**		**17 39 27.4**	**-1.1**
SDPT	**Sand Point**	**4.77**	**260**	P	**Pn**		**17 39 26.9**	**-1.5**
SDPT				S	**Sn**		**17 40 21.2**	**-1.5**
BGL	**Barrier Glacie**	**4.83**	**359**	P	**Pn**		**17 39 29.0**	**-0.4**
SVW2	**Sparrevohn**	**4.98**	**341**	P	**Pn**		**17 39 31.0**	**-0.4**
STLK	**Strandline Lak**	**5.07**	**2**	P	**Pn**		**17 39 31.4**	**-1.3**
EYAK	**Cordova Ski Ar**	**5.34**	**37**	P	**Pn**		**17 39 34.7**	**-1.5**
EYAK				S	**Sn**		**17 40 36.2**	**-0.3**
PMR	**Palmer**	**5.41**	**16**	P	**Pn**		**17 39 34.9**	**-2.2**
PMR	comp=Z,113nm,0.9s			pmax	pmax			
PMR	**Palmer**	**5.41**	**16**	Pn	**Pn**		**17 39 34.9**	**-2.2**
	comp=Z,113nm,0.9s							
SGAM	**Sherman Glacie**	**5.49**	**39**	P	**Pn**		**17 39 36.4**	**-1.9**
RAGM	**Ragged Mountai**	**5.60**	**42**	P	**Pn**		**17 39 37.9**	**-2.0**
VLZ	**Valdez**	**5.61**	**31**	P	**Pn**		**17 39 38.0**	**-1.9**
VLZ				S	**Sn**		**17 40 41.6**	**-1.7**
SML	**Sawmill**	**5.74**	**19**	*e*P	**Pn**		**17 39 39.9**	**-1.9**
SML	comp=Z,56nm,1.0s			pmax	pmax			
SML	**Sawmill**	**5.74**	**19**	*e*Pn	**Pn**		**17 39 39.9**	**-1.9**
	comp=Z,56nm,1.0s							
DIV	**Divide**	**5.77**	**33**	P	**Pn**		**17 39 40.2**	**-2.0**
DT1	**Dutton Round H**	**5.83**	**261**	P	**Pn**		**17 39 40.1**	**-2.8**
PPLA	**Purkeypile**	**6.47**	**0**	P	**Pn**		**17 39 51.1**	**-0.8**
FALS	**False Pass**	**6.53**	**261**	*e*Pn	Pn		17 39 48.3	-4.3
FALS				*e*Sn	Sn		17 40 57.9	-8.1
VRDI	**Verde Repeater**	**6.61**	**40**	P	**Pn**		**17 39 51.8**	**-2.1**
TT01	**Tatalina**	**6.76**	**345**	P	**Pn**		**17 39 54.5**	**-1.2**
KIAG	**Kiagna River**	**6.83**	**45**	P	**Pn**		**17 39 54.5**	**-2.2**
MCARA	**McCarthy VSAT**	**6.87**	**40**	P	**Pn**		**17 39 55.2**	**-2.0**
BALM	**Baldy**	**6.90**	**44**	P	**Pn**		**17 39 55.7**	**-2.0**
BALM	**Baldy**	**6.90**	**44**	P	**Pn**		**17 39 55.6**	**-2.0**
GRNC	**Granite Creek**	**6.96**	**48**	P	**Pn**		**17 39 56.6**	**-2.0**
DHY	**Denali Highway**	**7.09**	**18**	P	**Pn**		**17 39 59.0**	**-1.3**
TRF	**Thorofare Moun**	**7.10**	**7**	P	**Pn**		**17 39 58.1**	**-2.4**
BARN	**Barnard Glacie**	**7.18**	**46**	P	**Pn**		**17 39 59.7**	**-2.0**
RND	**Reindeer**	**7.19**	**12**	P	**Pn**		**17 40 00.2**	**-1.4**
RND	**Reindeer**	**7.19**	**12**	P	**Pn**		**17 40 00.2**	**-1.4**
PAX	**Paxson**	**7.38**	**25**	P	**Pn**		**17 40 03.0**	**-1.3**
PAX	**Paxson**	**7.38**	**25**	P	**Pn**		**17 40 03.0**	**-1.3**
MCK	**McKinley**	**7.49**	**11**	P	**Pn**		**17 40 03.9**	**-1.9**
MCK	**McKinley**	**7.49**	**11**	P	**Pn**		**17 40 03.9**	**-1.9**
PNL	**Peninsula**	**7.53**	**59**	P	**Pn**		**17 40 04.7**	**-1.7**
MENT	**Mentasta**	**7.80**	**30**	*e*Pn	**Pn**		**17 40 08.5**	**-1.5**
DDM	**Donnelly Dome**	**8.02**	**21**	P	**Pn**		**17 40 11.4**	**-1.6**
AKUT	**Akutan**	**8.07**	**259**	Pn	Pn		17 40 04.1	-10
DOT	**Dot Lake**	**8.29**	**26**	*e*Pn	**Pn**		**17 40 16.8**	**0.0**
	comp=Z,16nm,0.7s							
NEA	**Nenana**	**8.31**	**9**	P	**Pn**		**17 40 16.4**	**-0.5**
WRH	**Wood River Hil**	**8.31**	**12**	P	**Pn**		**17 40 15.4**	**-1.4**
BCA3	**Beaver Creek A**	**8.47**	**34**	P	**Pn**		**17 40 16.9**	**-2.2**
UNV	**Unalaska Valle**	**8.58**	**258**	*e*Pn	Pn		17 40 17.4	-3.3
UNV				*e*Sn	Sn		17 41 47.7	-8.7
MLY	**Manley**	**8.65**	**4**	P	**Pn**		**17 40 20.1**	**-1.4**
COLA	**College**	**8.72**	**12**	P	**Pn**		**17 40 20.9**	**-1.7**
COLA	**College**	**8.72**	**12**	P	**Pn**		**17 40 20.9**	**-1.7**
IL1	**Eielson Array**	**8.75**	**15**	P	**Pn**		**17 40 22.1**	**-1.0**
ILAR	**Eielson Array**	**8.75**	**15**	Pn	**Pn**		**17 40 22.3**	**-0.7**
ILAR				Sn	**Sn**		**17 41 58.6**	**-2.0**
ILAR	**Eielson Array**	**8.75**	**15**	Pn	**Pn**		**17 40 22.3**	**-0.7**
	comp=Z,6.2nm,0.3s,baz=204,slow=14,SNR=224							
ILAR				Sn	**Sn**		**17 41 58.6**	**-2.0**
	comp=Z,0.9nm,0.3s,baz=199,slow=22,SNR=3.1							
MDM	**Murphy Dome**	**8.76**	**11**	P	**Pn**		**17 40 21.2**	**-2.0**
HYT	**Haines Junctio**	**8.84**	**54**	P	**Pn**		**17 40 22.6**	**-1.7**
SKAG	**Skagway**	**9.47**	**64**	*e*Pn	**Pn**		**17 40 31.0**	**-1.9**
	comp=Z,40nm,0.9s							
EGAK	**Eagle**	**9.96**	**28**	Pn	Pn		17 40 35.1	-4.4
CRAG	**Craig**	**10.75**	**87**	*e*Pn	**Pn**		**17 40 49.7**	**-0.7**
COLD	**Coldfoot**	**10.86**	**4**	*e*Pn	Pn		17 40 46.9	-5.0
	comp=Z,21nm,1.0s							
DIB	**Dawson Inlet,**	**11.84**	**98**	T	T		17 53 11.1	
TNA	**Tin City**	**11.86**	**327**	*e*Pn	**Pn**		**17 41 07.1**	**+1.7**
	comp=Z,24nm,0.9s							
DLBC	**Dease Lake**	**12.11**	**71**	*e*Pn	**Pn**		**17 41 11.3**	**+2.3**
DLBC	**Dease Lake**	**12.11**	**71**	Pn	Pn		17 41 12.3	+3.3
	comp=Z,0.5nm,0.3s,baz=235,slow=14,SNR=5.4							
DLBC				LR	LR		17 45 32.6	
	comp=Z,1μm,18.5s,baz=285,slow=36							
GAMB	**Gambell**	**12.13**	**315**	*e*Pn	**Pn**		**17 41 08.9**	**-0.3**
	comp=Z,26nm,1.0s							
INK	**Inuvik**	**14.63**	**28**	Pn	**Pn**		**17 41 42.4**	**-0.8**
INK	**Inuvik**	**14.63**	**28**	Pn	**Pn**		**17 41 42.4**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=206,slow=14,SNR=20							
INK				LR	LR		17 48 56.4	
	comp=Z,2μm,18.4s,baz=222,slow=44							
BBB	**Bella Bella**	**14.67**	**97**	LR	LR		17 46 02.6	
	comp=Z,693nm,18.9s,baz=353,slow=32							
AMKA	**Amchitka**	**17.45**	**265**	P	**Pn**		**17 42 17.0**	**-2.5**
YKW3	**Yellowknife Ar**	**19.81**	**57**	*e*P	**P**		**17 42 45.4**	**-1.1**
	comp=Z,0.6nm,1.3s							
YKA	**Yellowknife Ar**	**19.82**	**57**	P	**P**		**17 42 46.5**	**+0.1**
YKA				PcP	**PcP**		**17 47 02.8**	**-0.3**
YKA	**Yellowknife Ar**	**19.82**	**57**	P	**P**		**17 42 46.5**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=270,slow=10,SNR=64							
YKA				PcP	**PcP**		**17 47 02.7**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=284,slow=2.1,SNR=4.6							
FX1	**Attu Island--F 20.20**		**274**	P	**P**		**17 42 49.2**	**-1.4**
FX1	**Attu Island--F 20.20**		**274**	P	**P**		**17 42 51.3**	**+0.6**
	comp=Z,17nm,0.6s,baz=296,slow=5.6,SNR=4.0							
LON	**Longmire 21.07**		**104**	*e*P	**P**		**17 43 01.1**	**+0.8**
LON	**Longmire 21.07**		**104**	*e*P	**P**		**17 43 01.1**	**+0.8**
	comp=Z,9.8nm,1.1s							
GULW	**Guler Mountain 21.71**		**106**	P	**P**		**17 43 09.5**	**+2.3**
BILL	**Bilibino 22.03**		**318**	*c* *i*P	**P**		**17 43 09.5**	**-0.8**
BILL				*i* S	**S**		**17 47 13.5**	**+2.1**
BILL				pmax	pmax			
	comp=Z,92nm,1.6s							
BILL				MLR	MLR			
	comp=Z,300nm,16.0s							
VFP	**Flag Point 22.18**		**107**	P	**P**		**17 43 12.9**	**+0.7**
H04A	**Detroit Lake 22.22**		**109**	P	**P**		**17 43 13.1**	**+0.5**
BROR	**Big Rock Looko 22.36**		**110**	P	**P**		**17 43 15.1**	**+1.0**
OD2	**Odessa Site #2 22.37**		**100**	P	**P**		**17 43 14.6**	**+0.4**
HAWA	**Hanford 22.52**		**103**	P	**P**		**17 43 13.2**	**-2.6**
	comp=Z,20nm,1.3s							
NEW	**Newport 22.73**		**96**	*e*P	**P**		**17 43 17.5**	**-0.6**
	comp=Z,19nm,1.5s							
NEW	**Newport 22.73**		**96**	P	**P**		**17 43 17.9**	**-0.1**
	comp=Z,3.9nm,0.9s,baz=299,slow=10,SNR=5.4							
HUMO	**Hull Mountain 23.28**		**114**	*e*P	**P**		**17 43 23.9**	**+0.3**
	comp=Z,10nm,1.1s							
YBH	**Yreka Blue Hor 24.05**		**115**	P	**P**		**17 43 32.9**	**+1.8**
YBH	**Yreka Blue Hor 24.05**		**115**	P	**P**		**17 43 32.9**	**+1.8**
	comp=Z,4.6nm,0.8s,baz=320,slow=3.3,SNR=11							
YBH				LR	LR		17 50 33.0	
	comp=Z,654nm,20.6s,baz=313,slow=31							
WALA	**Waterton Lakes 24.08**		**92**	*e*P	**P**		**17 43 33.6**	**+2.2**
	comp=Z,0.2nm,1.0s							
BSMT	**Bassoo Peak 24.26**		**95**	*e*P	**P**		**17 43 32.7**	**-0.4**
	comp=Z,6.5nm,1.2s							
JTMT	**Jette 24.60**		**95**	*e*P	**P**		**17 43 36.8**	**+0.7**
	comp=Z,8.1nm,1.2s							
YBMT	**Yellow Bay 24.68**		**94**	*e*P	**P**		**17 43 34.8**	**-2.1**
	comp=Z,12nm,1.3s							
BMO	**Blue Mountains 24.71**		**103**	*e*P	**P**		**17 43 36.9**	**-0.2**
	comp=Z,6.5nm,1.3s							
SWMT	**Swartz Lake 24.89**		**95**	*e*P	**P**		**17 43 40.0**	**+1.3**
	comp=Z,8.5nm,1.1s							
MOD	**Modoc 25.15**		**112**	*e*P	**P**		**17 43 41.6**	**+0.5**
	comp=Z,28nm,1.6s							
SLMT	**Seeley Lake 25.33**		**95**	*e*P	**P**		**17 43 44.9**	**+2.1**
	comp=Z,12nm,1.1s							
WVOR	**Wild Horse Val 25.64**		**109**	*e*P	**P**		**17 43 46.5**	**+0.9**
WVOR				pmax	pmax			
	comp=Z,26nm,1.3s							
WVOR	**Wild Horse Val 25.64**		**109**	*e*P	**P**		**17 43 46.5**	**+0.9**
	comp=Z,26nm,1.3s							
MFID	**Camas Ranch 26.46**		**104**	*e*P	**P**		**17 43 54.4**	**+1.4**
	comp=Z,6.9nm,1.0s							
LRM	**Limekiln Ridge 26.75**		**96**	*e*P	**P**		**17 43 57.6**	**+1.9**
	comp=Z,21nm,0.9s							
DLMT	**Dillon 26.96**		**97**	P	**P**		**17 43 58.1**	**+0.5**
	comp=Z,6.4nm,1.0s							
HLID	**Hailey 27.12**		**102**	*e*P	**P**		**17 43 59.5**	**+0.4**
	comp=Z,2.9nm,0.9s							
MCMT	**McKenzie Canyo 27.16**		**98**	*e*P	**P**		**17 44 00.2**	**+0.8**
	comp=Z,1.9nm,0.9s							
SEY	**Seymchan 27.90**		**306**	*i* P	**P**		**17 44 05.3**	**-0.2**
FFC	**Flin Flon 27.94**		**72**	P	**P**		**17 44 05.5**	**-0.6**
FFC	**Flin Flon 27.94**		**72**	P	**P**		**17 44 05.5**	**-0.6**
PET	**Petropavlovsk 28.08**		**284**	*e*P	**P**		**17 44 07.7**	**+0.5**
PET				*e*S	**S**		**17 48 52.4**	**+2.5**
PET				pmax	pmax			
	comp=Z,51nm,1.6s							
PET				MLR	MLR			
	comp=Z,700nm,19.0s							
RES	**Resolute Bay 28.19**		**28**	*e*P	**P**		**17 44 07.8**	**-0.3**
RES	**Resolute Bay 28.19**		**28**	P	**P**		**17 44 07.9

comp=Z,403nm,20.0s
HABR Khabarovsk 43.07 291 *e*P **P** **17 46 14.4 -1.1**
HABR *e**PP **pP** **17 46 23.7 -0.3**
HABR *e* 17 47 52.5
HABR S **S** **17 52 34.2 -5.1**
HABR *e**SS **sS** **17 52 51.3 -2.0**
HABR *e*SS **SS** **17 55 46.5 -5.1**
HABR *e* 17 56 11.8
HABR pmax pmax
comp=Z,56nm,1.6s
HABR pmax pmax
comp=N,18nm,1.6s
HABR pmax pmax
comp=E,23nm,1.2s
HABR MLR MLR
comp=Z,565nm,20.0s
TXAR Lajitas Array 43.43 108 P **P** **17 46 19.7 +1.0**
TXAR PcP **PcP** **17 48 07.9 +1.2**
TXAR Lajitas Array 43.43 108 P **P** **17 46 19.7 +1.0**
comp=Z,2.5nm,1.0s,baz=306,slow=7.1,SNR=13
TXAR PcP **PcP** **17 48 07.9 +1.2**
comp=Z,0.2nm,0.3s,baz=26,slow=2.3,SNR=3.9
TXAR LR LR 18 03 59.3
comp=Z,344nm,18.0s,baz=10.0,slow=36
SUMG Summit 43.48 24 *i* P **P** **17 46 19.6 +0.6**
SUMG pmax pmax
comp=Z,14nm,1.1s
SUMG Summit 43.48 24 *e*P **P** **17 46 19.2 +0.1**
comp=Z,24nm,1.0s
SUMG Summit 43.48 24 *i* P **P** **17 46 19.6 +0.6**
comp=Z,14nm,1.1s
DAG Danmarks Havn 43.85 14 *i* P **P** **17 46 21.2 -0.3**
DAG *i* 17 46 36.2
DAG pmax pmax
comp=Z,9.0nm,1.0s
DAG MLR MLR
comp=Z,420nm,16.0s
DAG Danmarks Havn 43.85 14 *i* P **P** **17 46 21.2 -0.3**
comp=Z,8.9nm,1.0s
DAG *i* 17 46 36.2
DAG
comp=Z,410nm,16.0s
SFJD Kangerlussuaq 43.88 34 *i* P **P** **17 46 22.8 +1.0**
comp=Z,12nm,0.9s
SFJD
comp=Z,590nm,15.0s
KLR Kul'dur 44.28 294 *e*P P 17 46 21.0 -4.2
KLR *e*S **S** **17 52 55.0 -1.9**
KLR *e*SS **ScS** **17 56 25.5 +4.6**
KLR pmax pmax
comp=E,30nm,1.4s
KLR pmax pmax
comp=Z,67nm,1.4s
KLR MLR MLR
comp=Z,2μm,12.0s
KBS Kingsbay 44.55 4⇑ *i*P **P** **17 46 28.3 +1.3**
KBS pmax pmax
comp=Z,10.0nm,0.8s
KBS MLR MLR
comp=Z,368nm,18.0s
SCHQ Schefferville 45.24 54 P **P** **17 46 33.0 +0.2**
SCHQ Schefferville 45.24 54 P **P** **17 46 33.0 +0.2**
comp=Z,5.4nm,0.5s,baz=318,slow=10,SNR=5.0
USRK Ussuriysk Arra 47.47 289 P **P** **17 46 49.2 -1.2**
comp=Z,2.2nm,0.9s,baz=45,slow=5.8,SNR=4.5
USRK LR LR 18 07 14.4
comp=Z,726nm,20.7s,baz=46,slow=37
VLA Vladivostok 48.27 288 *e*P **P** **17 46 57.0 +0.4**
VLA pmax pmax
comp=Z,36nm,1.7s
VLA MLR MLR
comp=Z,415nm,19.0s
MDJ Mudanjiang 48.45 291 P **P** **17 46 56.6 -1.4**
MDJ ScP **ScP** **17 52 17.8 +1.6**
MDJ PcS **PcS** **17 52 19.0 -0.7**
MDJ S **S** **17 53 57.6 +0.9**
MDJ ScS **ScS** **17 56 49.5 +1.3**
MDJ pmax pmax
comp=Z,4.0nm,0.8s
MDJ pmax pmax
comp=Z,70nm,4.4s
MDJ LR LR
comp=N,620nm,23.8s
MDJ LR LR
comp=E,320nm,21.4s
MDJ LR LR
comp=Z,560nm,18.2s
SCO Scoresbysund 48.50 20 *i* P **P** **17 46 58.6 +0.6**
SCO pmax pmax
comp=Z,4.0nm,0.8s
SCO Scoresbysund 48.50 20 *i* P **P** **17 46 58.6 +0.6**
comp=Z,3.5nm,0.8s
SSPA Standing Stone 49.19 76 *e*P **P** **17 47 00.8 -2.9**
MAJO Matsushiro 49.52 277 *e*P **P** **17 47 05.9 -0.5**
MAJO pmax pmax
comp=Z,12nm,0.8s
MAJO Matsushiro 49.52 277 *e*P **P** **17 47 05.8 -0.5**
comp=Z,12nm,0.8s
MAT Matsushiro 49.52 277 P **P** **17 47 06.0 -0.4**
MAT S **S** **17 54 14.2 +2.1**
MJAR Matsushiro Arr 49.52 277 P **P** **17 47 06.0 -0.3**
MJAR Matsushiro Arr 49.52 277 P **P** **17 47 06.0 -0.3**
comp=Z,3.3nm,0.8s,baz=39,slow=6.4,SNR=14
MJAR LR LR 18 07 41.9
comp=Z,237nm,20.7s,baz=60,slow=36
CIT Chita 51.05 308 *e*P **P** **17 47 18.3 +0.5**
CIT pmax pmax
comp=Z,68nm,2.0s
CN2 Changchun 51.15 293 *e*P **P** **17 47 17.9 -0.6**
CN2 *e*pP **pP** **17 47 22.4 -4.8**
CN2 *e*S **S** **17 54 33.9 -0.6**
CN2 pmax pmax
comp=Z,30nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,17.0s
CN2 LR LR
comp=E,600nm,17.0s
CN2 LR LR
comp=Z,400nm,14.0s
KEV Kevo 54.10 0 *e*P **P** **17 47 39.2 -0.8**
KEV pmax pmax
comp=Z,8.0nm,0.6s
KEV Kevo 54.10 0 *e*P **P** **17 47 39.3 -0.8**
KEV pmax pmax
comp=Z,10.0nm,0.9s
KEV Kevo 54.10 0 *e*p **P** **17 47 39.2 -0.8**
comp=Z,7.6nm,0.6s
KEV Kevo 54.10 0 *e*P **P** **17 47 39.3 -0.6**
comp=Z,9.8nm,0.9s
ARCES ARCESS Array B 54.31 1 P **P** **17 47 41.4 -0.2**
ARCES PcP **PcP** **17 48 46.0 +0.7**
ARCES ARCESS Array B 54.31 1 P **P** **17 47 41.4 -0.2**
comp=Z,5.0nm,0.6s,baz=8.2,slow=6.8,SNR=22
ARCES PcP **PcP** **17 48 46.0 +0.7**
comp=Z,5.9nm,0.9s,baz=358,slow=3.0,SNR=5.7
ARCES LR LR 18 14 09.5
comp=Z,175nm,19.2s,baz=354,slow=40
ARE0 ARCESS Array S 54.31 1 *e*P **P** **17 47 40.7 -0.9**
KSRS Korea Array 54.45 286 P **P** **17 47 43.1 +0.2**
comp=Z,3.8nm,0.9s,baz=50,slow=7.3,SNR=11
KSRS LR LR 18 11 14.3
comp=Z,156nm,18.4s,baz=277,slow=36
KSAR Wonju Array Be 54.48 286 P **P** **17 47 43.1 -0.1**
TLY Talaya 55.50 313 *e*P **P** **17 47 52.4 +2.0**
TLY *e*S **S** **17 55 37.2 +3.8**
TLY pmax pmax
comp=Z,27nm,1.7s
TLY MLR MLR
comp=Z,482nm,18.0s
MOY Mondy 56.58 314 *e*P **P** **17 48 00.1 +1.9**
ZAK Zakamensk 56.64 312 *e*P **P** **17 47 58.4 -0.3**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
ULN Ulaanbaatar 56.96 308 *e*P **P** **17 47 60.0 -1.1**
comp=Z,8.1nm,0.9s
SONM Songino Array 57.27 308 P **P** **17 48 03.7 +0.5**
SONM PcP **PcP** **17 48 58.2 +1.0**
SONM Songino Array 57.27 308 P **P** **17 48 03.7 +0.5**
comp=Z,18nm,0.8s,baz=44,slow=6.8,SNR=94
SONM PcP **PcP** **17 48 58.2 +1.0**
comp=Z,4.0nm,0.8s,baz=45,slow=3.2,SNR=4.1
SONM LR LR 18 14 57.7
comp=Z,782nm,18.3s,baz=46,slow=38
BJI Beijing 58.60 296 P **P** **17 48 11.6 -0.9**
BJI S **S** **17 56 16.1 +1.7**
BJI SS **SS** **18 00 10.3 +3.6**
BJI pmax pmax
comp=Z,10.0nm,0.5s
BJI pmax pmax
comp=Z,100nm,6.8s
BJI LR LR
comp=N,540nm,19.1s
BJI LR LR
comp=E,490nm,17.2s
BJI LR LR
comp=Z,110nm,25.5s
HHC Hu-ho-hao-te 60.24 300 *e*P **P** **17 48 25.3 +1.3**
HHC pP **pP** **17 48 35.1 +2.3**
HHC sP **sP** **17 48 39.0 +2.8**
HHC PP **PP** **17 50 38.8 +2.3**
HHC S **S** **17 56 33.3 -2.7**
HHC sS **sS** **17 56 51.1 +0.6**
HHC ScS SKKSac 17 58 09.6 -2.6
HHC SS **SS** **18 00 31.1 -1.6**
HHC pmax pmax
comp=Z,64nm,0.6s
HHC pmax pmax
comp=Z,180nm,5.1s
HHC LR LR
comp=N,620nm,13.0s
HHC LR LR
comp=E,500nm,12.9s
HHC LR LR
comp=Z,1μm,14.3s
NVS Novosibirsk 60.25 327 *i* P **P** **17 48 21.9 -1.7**
NVS *e*S **S** **17 56 37.7 +2.4**
NVS pmax pmax
comp=E,11nm,1.1s
NVS pmax pmax
comp=Z,21nm,1.1s
NVS pmax pmax
comp=N,9.0nm,1.2s
NVS smax smax
comp=E,23nm,2.6s
NVS smax smax
comp=N,14nm,2.3s
ZAA0 Zalesovo Array 60.51 325 *e*P **P** **17 48 25.3 -0.2**
ZALV Zalesovo Beam 60.51 325 P **P** **17 48 25.5 0.0**
ZALV Zalesovo Beam 60.51 325 P **P** **17 48 25.4 0.0**
ZALV Zalesovo Beam 60.51 325 P **P** **17 48 25.4 0.0**
comp=N,14nm,0.7s,baz=31,slow=7.1,SNR=73
ZALV LR LR 18 15 36.6
comp=N,328nm,20.2s,baz=249,slow=37
JOF Joensuu 60.94 358 *e*P **P** **17 48 28.2 0.0**
JOF pmax pmax
comp=Z,7.0nm,0.6s
JOF Joensuu 60.94 358 *e*p **P** **17 48 28.2 0.0**
comp=Z,7.3nm,0.6s
KAF Kangasniemi 61.77 1 *e*P **P** **17 48 33.7 -0.2**
KAF pmax pmax
comp=Z,8.0nm,0.7s
KAF Kangasniemi 61.77 1 *e*p **P** **17 48 33.7 -0.2**
comp=Z,7.7nm,0.7s
SOKR Solikamsk 62.05 344 *e*P **P** **17 48 35.5 -0.2**
SOKR pmax pmax
comp=Z,30nm,1.5s
SOKR MLR MLR
comp=Z,260nm,20.0s
NB2 NORSAR Subarra 62.13 9 P **P** **17 48 36.4 +0.1**
comp=Z,16nm,0.9s,baz=350,slow=6.9
NB2 NORSAR Subarra 62.13 9 P **P** **17 48 36.4 +0.1**
baz=350,slow=6.9
NOA NORSAR Array B 62.13 9 P **P** **17 48 36.5 +0.1**
NOA NORSAR Array B 62.13 9 P **P** **17 48 36.5 +0.1**
comp=Z,9.7nm,0.8s,baz=350,slow=6.7,SNR=44
NOA LR LR 18 18 01.1
comp=Z,142nm,18.4s,baz=320,slow=38
NAO01 NORSAR Array S 62.30 9 *e*P **P** **17 48 36.4 -1.0**
FIA1 FINESS Array S 62.44 1 *e*P **P** **17 48 38.1 -0.2**
FINES FINESS Array B 62.44 1 P **P** **17 48 38.7 +0.4**
FINES FINESS Array B 62.44 1 P **P** **17 48 38.7 +0.4**
comp=Z,19nm,0.9s,baz=5.2,slow=8.4,SNR=37
KONO Kongsberg 63.35 10 *e*P **P** **17 48 44.3 -0.1**
KONO pmax pmax
comp=Z,33nm,1.3s
KONO Kongsberg 63.35 10 *e*P **P** **17 48 44.3 -0.1**
comp=Z,33nm,1.3s
SVE Sverdlovsk 64.01 341⇑ *i*P **P** **17 48 49.1 +0.3**
SVE *e* 17 51 15.6
SVE *e*PPP PPP 17 52 38.8
SVE *e*S S 17 57 14.0 -8.7
SVE *e* 18 04 26.7
SVE pmax pmax
comp=Z,21nm,1.1s
SVE MLR MLR
comp=Z,358nm,20.0s
ARU Arti 64.76 342 *d i*P **P** **17 48 53.5 -0.2**
ARU 17 49 26.8
ARU S **S** **17 57 30.0 -1.9**
ARU pmax pmax
comp=Z,29nm,1.7s
ARU MLR MLR
comp=Z,357nm,20.0s
KURK Kurchatov 65.22 327 *c* iP **P** **17 48 56.6 -0.2**
KURK pmax pmax
comp=Z,12nm,1.2s
KURK MLR MLR
comp=Z,397nm,23.0s
KURK Kurchatov 65.22 327 *e*P **P** **17 48 56.3 -0.5**
comp=Z,7.7nm,0.9s
BRVK Borovoye 65.42 333 *e*P **P** **17 48 57.4 -0.6**
BRVK pmax pmax
comp=Z,18nm,1.0s
BRVK Borovoye 65.42 333 *e*P **P** **17 48 57.4 -0.6**
comp=Z,18nm,1.0s
VSU Vasula 65.44 1 *c i*P **P** **17 48 58.6 +0.5**
VSU pmax pmax
comp=Z,36nm,0.9s
VSU MLR MLR
comp=Z,231nm,20.0s
VOSK Vostochnaya 65.55 333 P **P** **17 48 58.3 -0.6**
VOSK pmax pmax
comp=Z,8.0nm,1.3s
ZRNK Zerenda 65.83 334 P **P** **17 49 00.0 -0.7**
ZRNK pmax pmax
comp=Z,20nm,1.0s
GTA Gaotai 66.85 307 *e*P **P** **17 49 07.3 -0.3**
GTA pmax pmax
comp=Z,9.0nm,1.5s
XAN Xi'an 66.90 297 P **P** **17 49 08.1 +0.2**
XAN pP **pP** **17 49 16.6 -0.2**
XAN S **S** **17 58 02.5 +3.7**
XAN LR LR
comp=N,260nm,19.3s
XAN LR LR
comp=E,150nm,20.4s
XAN LR LR
comp=Z,110nm,18.3s
MK31 Makanchi Array 67.49 323 *i* P **P** **17 49 11.2 -0.3**
MK31 pmax pmax
comp=Z,7.0nm,0.8s
MK31 Makanchi Array 67.49 323 *e*P **P** **17 49 10.7 -0.8**
MKAR Makanchi Array 67.49 323 P **P** **17 49 11.1 -0.4**
MKAR Makanchi Array 67.49 323 P **P** **17 49 11.1 -0.4**
MKAR Makanchi Array 67.49 323 P **P** **17 49 11.1 -0.4**
comp=Z,5.1nm,0.7s,baz=30,slow=6.5,SNR=56
MKAR LR LR 18 21 29.1
comp=Z,275nm,18.3s,baz=32,slow=38
LZH Lanzhou 67.70 302 *e*P **P** **17 49 14.0 +0.9**
LZH pP **pP** **17 49 21.3 -0.7**
LZH sP **sP** **17 49 23.6 -1.8**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH LR LR
comp=N,550nm,16.3s
LZH LR LR
comp=E,830nm,15.7s
LZH LR LR
comp=Z,210nm,15.1s
MOS Moscow 67.89 354 *e*P **P** **17 49 13.4 -0.3**
WMQ Urumqi 68.14 318 P **P** **17 49 16.8 +1.2**
WMQ pP **pP** **17 49 26.8 +2.2**
WMQ sP **sP** **17 49 31.1 +3.2**
WMQ PcP **PcP** **17 49 43.0 +1.5**
WMQ PP **PP** **17 51 48.9 +3.4**
WMQ 17 53 46.5
WMQ S **S** **17 58 12.3 -1.2**
WMQ sS **sS** **17 58 29.3 +1.1**
WMQ ScS **SKiKP** **17 59 09.5 +1.3**
WMQ SS **SS** **18 02 35.9 +0.6**
WMQ pmax pmax
comp=Z,13nm,0.6s
WMQ pmax pmax
comp=Z,160nm,4.8s
WMQ LR LR
comp=N,550nm,13.8s
WMQ LR LR
comp=E,370nm,11.8s
WMQ LR LR
comp=Z,340nm,19.4s
OBN Obninsk 68.57 355⇑ *i*P **P** **17 49 17.8 -0.2**
OBN *i* S **S** **17 58 16.9 -1.1**
OBN pmax pmax
comp=Z,18nm,1.0s
OBN MLR MLR
comp=Z,200nm,19.0s
BSEG Bad Segeberg 69.06 11 *e*P **P** **17 49 22.5 +1.5**
BSEG pmax pmax
comp=Z,35nm,1.1s
BSEG Bad Segeberg 69.06 11 *e*P **P** **17 49 22.5 +1.5**
comp=Z,35nm,1.1s
MICGM Minsk 69.42 360 *e* **P** **17 49 23.0 -0.3**
MNK Minsk 69.42 360 *e*P **P** **17 49 23.0 -0.3**
SUW Suwalki 69.84 3 *e*P **P** **17 49 25.8 -0.1**
IBBN Ibbenburen 70.36 13 *e*P **P** **17 49 30.7 +1.6**
comp=Z,30nm,1.2s
NRDL Niedersach Rie 70.45 11 *e*P **P** **17 49 30.6 +1.0**
comp=Z,23nm,1.1s
AKTO Aktyubinsk 70.58 340 P **P** **17 49 30.2 -0.3**
AKTO pmax pmax
comp=Z,2.0nm,1.0s
RUE Ruedersdorf 70.83 9 *e*P **P** **17 49 33.1 +1.2**
comp=Z,45nm,1.4s
BUG Bochum--Univer 71.15 13 *e*P **P** **17 49 34.6 +0.7**
comp=Z,29nm,0.9s
PMOR Pomariorio Ree 71.27 176 *e*T T 19 07 21.7
comp=Z,192nm,0.3s
AB31 Akbulak array 71.32 338 *i* P **P** **17 49 34.3 -0.7**
AB31 pmax pmax
comp=Z,8.0nm,0.7s
ABKAR Akbulak array 71.32 338 *e*P **P** **17 49 34.4 -0.6**
comp=Z,5.9nm,0.6s
NEUB Neuenburg 71.90 11 *e*P **P** **17 49 39.4 +0.9**
comp=Z,17nm,0.9s
CLL Collm 71.92 10 *e*P **P** **17 49 39.0 +0.4**
CLL *e*S **S** **17 58 54.0 -3.3**
CLL pmax pmax
comp=Z,10.0nm,1.0s
CLL MLR MLR
comp=Z,200nm,18.9s
CLL Collm 71.92 10 *e*P **P** **17 49 39.1 +0.4**
comp=Z,10.0nm,1.0s
CLL Collm 71.92 10 *e*P **P** **17 49 39.0 +0.4**
comp=Z,10.0nm,1.0s
CLL *e*PcP **PcP** **17 49 59.0 +1.8**
CLL *e*S S 17 59 05.0 +7.7
CLL *e*PS **PnS** **17 59 36.0 +7.3**
CLL *e*SS SS 18 03 54.0 +21
CLL *e* 18 07 36.0
CLL LmV 18 27 00.0
comp=Z,200nm,18.9s
CD2 Chengdu 71.97 299 P **P** **17 49 38.5 -0.8**
CD2 pP **pP** **17 49 47.9 -0.4**
CD2 sP **sP** **17 49 51.6 0.0**
CD2 PP **PP** **17 52 19.5 +0.7**
CD2 S **S** **17 58 54.8 -3.9**
CD2 sS **sS** **17 59 10.3 -3.2**
CD2 SKS **SKSac** **17 59 35.3 -5.9**
CD2 SS **SS** **18 03 32.3 -2.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,80nm,5.4s
CD2 LR LR
comp=N,330nm,21.1s
CD2 LR LR
comp=E,450nm,15.2s
CD2 LR LR
comp=Z,310nm,16.7s
BAIF Baives 72.08 16 *e*P **P** **17 49 40.5 +1.0**
comp=Z,26nm,1.0s
BAIF Baives 72.08 16 *e*P **P** **17 49 40.5 +1.0**
BAIF pmax pmax
comp=Z,26nm,1.0s
BAIF Baives 72.08 16 *e*P **P** **17 49 40.5 +1.0**
comp=Z,26nm,1.0s
GIVF Givet 72.12 15 *e*P **P** **17 49 40.5 +0.7**
comp=Z,20nm,0.7s
GIVF Givet 72.12 15 *e*P **P** **17 49 40.5 +0.7**
GIVF pmax pmax
comp=Z,20nm,0.7s
GIVF Givet 72.12 15 *e*P **P** **17 49 40.5 +0.7**
comp=Z,20nm,0.7s
VRHR Novokhopersk 72.21 351 *e*P **P** **17 49 38.8 -1.5**
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=N,9.0nm,0.5s
VSR Storozhevoye 72.29 353 *e*P **P** **17 49 40.4 -0.4**
VSR pmax pmax
comp=Z,20nm,1.2s
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.4s
FBE Freiberg 72.34 10 *e*P **P** **17 49 42.2 +1.1**
comp=Z,19nm,1.0s
ROSF Rostrenen 72.42 21 *e*P **P** **17 49 42.3 +0.6**
comp=Z,24nm,1.0s
ROSF Rostrenen 72.42 21 *e*P **P** **17 49 42.3 +0.6**
ROSF pmax pmax
comp=Z,24nm,1.0s
ROSF Rostrenen 72.42 21 *e*P **P** **17 49 42.3 +0.6**
comp=Z,24nm,1.0s
BRG Berggiesshubel 72.44 9 *e*P **P** **17 49 42.6 +0.9**
comp=Z,7.8nm,0.8s
BRG Berggiesshubel 72.44 9 *e*P **P** **17 49 42.6 +0.9**
BRG pmax pmax
comp=Z,8.0nm,0.9s
BRG Berggiesshubel 72.44 9 *e*P **P** **17 49 42.4 +0.7**
comp=Z,13nm,1.2s
MOX Moxa 72.44 11 *e*P **P** **17 49 42.6 +0.9**
MOX pmax pmax
comp=Z,16nm,1.2s
MOX Moxa 72.44 11 *e*P **P** **17 49 42.6 +0.9**
comp=Z,16nm,1.2s
TNS Taunus Mts 72.50 13 *e*P **P** **17 49 43.1 +1.0**
TNS pmax pmax
comp=Z,21nm,1.0s
TNS Taunus Mts 72.50 13 *e*P **P** **17 49 43.1 +1.0**
comp=Z,21nm,1.0s
VORD Divnogorie 72.53 352 *e*P **P** **17 49 41.2 -1.0**
VORD pmax pmax
comp=N,10.0nm,1.1s
VORD pmax pmax
comp=E,10.0nm,1.1s
VORD pmax pmax
comp=Z,10.0nm,1.1s
FLN La Foliniere 72.55 19 *e*P **P** **17 49 42.9 +0.5**
comp=Z,36nm,1.0s
FLN *e*R
comp=Z,661nm,19.5s
FLN La Foliniere 72.55 19 *e*P **P** **17 49 42.9 +0.5**
FLN pmax pmax
comp=Z,36nm,1.0s
FLN La Foliniere 72.55 19 *e*P **P** **17 49 42.9 +0.5**
comp=Z,36nm,1.0s
SGMF Saint Gilles 72.64 21 *e*P **P** **17 49 43.9 +0.9**
SGMF Saint Gilles 72.64 21 *e*P **P** **17 49 43.9 +0.9**
SGMF Saint Gilles 72.64 21 *e*P **P** **17 49 43.9 +0.9**
PLN Plauen 72.65 10 *e*P **P** **17 49 43.7 +0.7**
comp=Z,46nm,1.0s
KSP Ksiaz 72.66 8 *e*P **P** **17 49 43.8 +0.8**
KSP Ksiaz 72.66 8 *e*P **P** **17 49 43.9 +0.9**
WERD Werda 72.70 10 *e*P **P** **17 49 43.8 +0.5**
comp=Z,6.0nm,1.1s
TANN Tannenbergstha 72.75 10 *e*P **P** **17 49 44.5 +0.8**
comp=Z,6.0nm,1.0s
LDF La Druitiere 72.78 19 *e*P **P** **17 49 43.9 +0.1**
comp=Z,38nm,1.2s
LDF La Druitiere 72.78 19 *e*P **P** **17 49 43.9 +0.1**
LDF pmax pmax
comp=Z,38nm,1.2s

LDF La Druitiere 72.78 19 *e*P **P 17 49 43.9 +0.1**
comp=Z,38nm,1.2s

GUNZ Gunzen 72.79 10 *e*P **P 17 49 45.1 +1.2**
comp=Z,13nm,1.1s

PVCC Panska Ves 72.83 9 *e*P **P 17 49 45.1 +1.0**
PVCC MLR MLR
comp=Z,300nm,16.6s

PVCC Panska Ves 72.83 9⇑*e*P **P 17 49 45.1 +1.0**
PVCC AMS AMS 18 28 50.0
comp=Z,300nm,16.6s

GRR Gorron 72.84 20 *e*P **P 17 49 44.8 +0.7**
comp=Z,12nm,0.8s

GRR Gorron 72.84 20 *e*P **P 17 49 44.8 +0.7**
GRR pmax pmax
comp=Z,12nm,0.8s

GRR Gorron 72.84 20 *e*P **P 17 49 44.8 +0.7**
comp=Z,12nm,0.8s

QUIF Quistinic 72.85 21 *e*P **P 17 49 44.8 +0.7**
QUIF Quistinic 72.85 21 *e*P **P 17 49 44.8 +0.7**
QUIF Quistinic 72.85 21 *e*P **P 17 49 44.8 +0.7**

WERN Wernitzgruen 72.87 10 *e*P **P 17 49 45.3 +1.0**
comp=Z,18nm,1.5s

NKC Novy Kostel 72.93 10 *e*P **P 17 49 45.7 +1.0**
NKC MLR MLR
comp=Z,200nm,15.2s

NKC Novy Kostel 72.93 10⇑*e*P **P 17 49 45.7 +1.0**
NKC AMS AMS 18 29 10.0
comp=Z,200nm,15.2s

UPC Upice 72.97 8 *e*P **P 17 49 45.6 +0.7**
UPC Upice 72.97 8⇑*e*P **P 17 49 45.6 +0.7**
TKM2 Tokmak 2 73.12 325 *e*P **P 17 49 46.3 +0.1**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s

TKM2 Tokmak 2 73.12 325 *e*P **P 17 49 46.3 +0.1**
comp=Z,8.0nm,0.9s

TKM2 Tokmak 2 73.12 325 P **P 17 49 46.7 +0.5**
SNR=11

MANZ Manzenberg 73.14 10 *e*P **P 17 49 47.3 +1.4**
comp=Z,7.0nm,1.1s

USP Ospenovka 73.15 326 P **P 17 49 46.7 +0.6**
SNR=8.6

DPC Dobruska-Polom 73.15 8 *e*P **P 17 49 47.1 +1.1**
DPC Dobruska-Polom 73.15 8 *e*P **P 17 49 47.1 +1.1**
AKASG Malin Array Be 73.21 359 P **P 17 49 45.9 -0.4**
AKASG Malin Array Be 73.21 359 P **P 17 49 45.9 -0.4**
AKASG Malin Array Be 73.21 359 P **P 17 49 45.9 -0.4**
comp=Z,9.0nm,0.6s,baz=3.2,slow=6.0,SNR=37
AKASG LR LR 18 25 29.2
comp=Z,187nm,19.2s,baz=350,slow=39

KIEV Kiev 73.22 359 *e*P **P 17 49 45.4 -0.9**
KIEV pmax pmax
comp=Z,11nm,0.6s

KIEV Kiev 73.22 359 *e*P **P 17 49 45.4 -0.9**
comp=Z,11nm,0.6s

AK01 Malin Array Si 73.22 359 *e*P **P 17 49 45.7 -0.7**
AK02 Malin Array Si 73.26 359 *e*P **P 17 49 45.9 -0.7**
CHMS Chumysh 73.31 326 P **P 17 49 47.9 +0.8**
SNR=5.4

GRF Grafenberg Arr 73.34 11 *e*P **P 17 49 48.1 +1.0**
GRF pmax pmax
comp=Z,10.0nm,0.9s

GRF Grafenberg Arr 73.34 11 *e*P **P 17 49 48.1 +1.0**
comp=Z,10.0nm,0.9s

PRU Pruhonice 73.37 9 *e*P **P 17 49 48.0 +0.8**
PRU MLR MLR
comp=Z,200nm,19.4s

PRU Pruhonice 73.37 9⇑*e*P **P 17 49 48.0 +0.8**
PRU AMS AMS 18 29 50.0
comp=Z,200nm,19.4s

ROTZ Rotzenmuhle 73.37 10 *e*P **P 17 49 48.6 +1.4**
comp=Z,16nm,1.1s

FRU Bishkek 73.50 326⇓*i*P **P 17 49 49.0 +0.8**
FRU pmax pmax
comp=Z,60nm,2.0s

FRU MLR MLR
comp=Z,700nm,12.0s

KBK Karagaybulak 73.56 326 P **P 17 49 49.4 +0.7**
SNR=9.5

MEZF Maizieres J'vi 73.72 16 *e*P **P 17 49 50.2 +0.9**
MEZF Maizieres J'vi 73.72 16 *e*P **P 17 49 50.2 +0.9**
AAK Ala-Archa 73.72 326*e i*P **P 17 49 50.1 +0.4**
AAK pmax pmax
comp=Z,32nm,1.7s

AAK MLR MLR
comp=Z,1μm,23.0s

AAK Ala-Archa 73.72 326 *e*P **P 17 49 49.8 +0.1**
comp=Z,7.4nm,0.9s

AAK Ala-Archa 73.72 326 P **P 17 49 50.3 +0.7**
SNR=6.4

TIAR Tiarei 73.75 177 *e*T T 19 10 32.0
comp=Z,50nm,0.3s

PPT Papeete 73.76 177 LR LR 18 19 59.6
comp=Z,356nm,18.9s,baz=343,slow=34

PAGF Fort de Pagny 73.77 15 *e*P **P 17 49 50.7 +1.1**
PAGF Fort de Pagny 73.77 15 *e*P **P 17 49 50.7 +1.1**
PPT2 Papeete2 73.78 177 *e*LR LR 18 12 29.9
comp=Z,272nm,24.0s

OKC Ostrava-Krasne 73.78 6⇑*i*P **P 17 49 50.1 +0.4**
OKC Ostrava-Krasne 73.78 6⇑*i*P **P 17 49 50.1 +0.4**
MORC Moravsky Berou 73.81 7⇑*i*P **P 17 49 50.6 +0.7**
EKS2 Erkin-Say 73.92 326 *e*P **P 17 49 51.0 +0.2**
EKS2 pmax pmax
comp=Z,8.0nm,0.9s

EKS2 Erkin-Say 73.92 326 *e*P **P 17 49 51.0 +0.2**
comp=Z,8.0nm,0.9s

EKS2 Erkin-Say 73.92 326 P **P 17 49 51.2 +0.4**
SNR=11

TVO Taravao 73.98 177 *e*T T 19 10 41.5
comp=Z,9.6nm,0.3s

SFTF Sexfontaines 74.01 16 *e*P **P 17 49 51.8 +0.8**
comp=Z,12nm,0.7s

SFTF Sexfontaines 74.01 16 *e*P **P 17 49 51.8 +0.8**
comp=Z,12nm,0.7s

WET Wettzell 74.05 10 *e*P **P 17 49 53.2 +1.9**
WET pmax pmax
comp=Z,11nm,1.3s

WET Wettzell 74.05 10 *e*P **P 17 49 53.2 +1.9**
comp=Z,11nm,1.3s

CDF Champ du Feu 74.12 14 *e*P **P 17 49 52.7 +0.9**
comp=Z,22nm,1.0s

CDF Champ du Feu 74.12 14 *e*P **P 17 49 52.7 +0.9**
CDF pmax pmax
comp=Z,22nm,1.0s

CDF Champ du Feu 74.12 14 *e*P **P 17 49 52.7 +0.9**
comp=Z,22nm,1.0s

KHC Kasperske Hory 74.13 10⇑*i*P **P 17 49 52.9 +1.1**
KHC *e* 17 50 01.8
KHC MLR MLR
comp=Z,200nm,15.6s

KHC Kasperske Hory 74.13 10 *e*P **P 17 49 52.6 +0.9**
comp=Z,7.6nm,0.8s

KHC Kasperske Hory 74.13 10⇑*i*P **P 17 49 52.9 +1.1**
KHC *ex* x 17 50 01.8
KHC AMS AMS 18 28 50.0
comp=Z,200nm,15.6s

TREC Trest 74.13 8 ⇑AMS AMS 18 31 00.0
comp=Z,300nm,14.3s

GYA Guiyang 74.18 294 *e*P **P 17 49 52.0 -0.5**
GYA pmax pmax
comp=Z,10.0nm,1.0s

VRAC Vranov 74.20 8⇑*i*P **P 17 49 53.2 +1.0**
BFO Black Forest 74.34 13 *e*P **P 17 49 54.5 +1.5**
BFO pmax pmax
comp=Z,55nm,2.1s

BFO Black Forest 74.34 13 *e*P **P 17 49 54.5 +1.5**
comp=Z,55nm,2.1s

HAU Haudompre 74.39 15 *e*P **P 17 49 54.0 +0.7**
comp=Z,21nm,0.8s

HAU *e*R
comp=Z,323nm,19.2s

HAU Haudompre 74.39 15 *e*P **P 17 49 54.0 +0.7**
HAU pmax pmax
comp=Z,21nm,0.8s

HAU Haudompre 74.39 15 *e*P **P 17 49 54.0 +0.7**
comp=Z,21nm,0.8s

GEC2 GERESS Array S 74.42 10 *e*P **P 17 49 54.2 +0.6**
GEC2 pmax pmax
comp=Z,7.0nm,0.8s

GEC2 GERESS Array S 74.42 10 *e*P **P 17 49 54.2 +0.6**
comp=Z,7.0nm,0.8s

GERES GERESS Array B 74.42 10 P **P 17 49 54.4 +0.8**
GERES GERESS Array B 74.42 10 P **P 17 49 54.4 +0.8**
comp=Z,4.6nm,0.7s,baz=353,slow=4.9,SNR=40
GERES LR LR 18 21 16.1
comp=Z,154nm,21.9s,baz=134,slow=35

AML Almayashu 74.43 326 P **P 17 49 54.5 +0.4**
SNR=12

KK31 Karatay Array 74.48 329 *i* P **P 17 49 53.3 -0.6**
KK31 pmax pmax
comp=Z,6.0nm,0.7s

KKAR Karatay Array 74.48 329 *e*P **P 17 49 53.5 -0.4**
KKAR pmax pmax
comp=Z,4.0nm,0.6s

KKAR Karatay Array 74.48 329 *e*P **P 17 49 53.5 -0.4**
comp=Z,4.0nm,0.6s

HYF Humbligny 74.54 17 *e*P **P 17 49 55.0 +0.9**
HYF Humbligny 74.54 17 *e*P **P 17 49 55.0 +0.9**
HINF Hinteralfeld 74.65 14 *e*P **P 17 49 55.4 +0.6**
comp=Z,16nm,1.1s

HINF Hinteralfeld 74.65 14 *e*P **P 17 49 55.4 +0.6**
HINF pmax pmax
comp=Z,16nm,1.1s

HINF Hinteralfeld 74.65 14 *e*P **P 17 49 55.4 +0.6**
comp=Z,16nm,1.1s

MFF Saint Martin d 74.69 20 *e*P **P 17 49 55.8 +0.8**
comp=Z,82nm,1.3s

MFF Saint Martin d 74.69 20 *e*P **P 17 49 55.8 +0.8**
MFF pmax pmax
comp=Z,82nm,1.3s

MFF Saint Martin d 74.69 20 *e*P **P 17 49 55.8 +0.8**
comp=Z,82nm,1.3s

LOR Lormes 74.74 17 *e*P **P 17 49 56.0 +0.7**
comp=Z,54nm,1.2s

LOR *e*R
comp=Z,389nm,19.0s

LOR Lormes 74.74 17 *e*P **P 17 49 56.0 +0.7**
comp=Z,54nm,1.2s

SSF Saint Saulge 74.88 17 *e*P **P 17 49 56.8 +0.7**
comp=Z,16nm,0.7s

SSF Saint Saulge 74.88 17 *e*P **P 17 49 56.8 +0.7**
SSF pmax pmax
comp=Z,16nm,0.7s

SSF Saint Saulge 74.88 17 *e*P **P 17 49 56.8 +0.7**
comp=Z,16nm,0.7s

CRVS Cervenica-Dubn 74.89 4 *e*P **P 17 49 55.5 -0.6**
CRVS pmax pmax
comp=Z,11nm,1.5s

CRVS Cervenica-Dubn 74.89 4 *e*P **P 17 49 55.5 -0.6**
KOLS Kolonicke sedl 74.89 4 *e*P **P 17 49 57.1 +1.0**
KOLS pmax pmax
comp=Z,11nm,1.7s

KOLS Kolonicke sedl 74.89 4 *e*P **P 17 49 57.1 +1.0**
AVF Avril sur Loir 75.12 17 *e*P **P 17 49 58.0 +0.5**
comp=Z,20nm,0.8s

AVF Avril sur Loir 75.12 17 *e*P **P 17 49 58.0 +0.5**
AVF pmax pmax
comp=Z,21nm,0.8s

AVF Avril sur Loir 75.12 17 *e*P **P 17 49 58.0 +0.5**
comp=Z,20nm,0.8s

VYHS Vyhne 75.16 6 *e*P **P 17 49 58.3 +0.6**
VYHS pmax pmax
comp=Z,6.0nm,1.1s

VYHS Vyhne 75.16 6 *e*P **P 17 49 58.3 +0.6**
UZH Uzhgorod 75.19 4 *e*P **P 17 49 58.5 +0.7**
UZH *e* 17 50 19.7
BGF Bois d'Agland 75.26 18 *e*P **P 17 49 58.9 +0.6**
comp=Z,24nm,0.8s

BGF Bois d'Agland 75.26 18 *e*P **P 17 49 58.9 +0.6**
BGF pmax pmax
comp=Z,24nm,0.8s

BGF Bois d'Agland 75.26 18 *e*P **P 17 49 58.9 +0.6**
comp=Z,24nm,0.8s

SMF Signal de Mont 75.34 17 *e*P **P 17 49 59.2 +0.4**
comp=Z,18nm,1.0s

SMF Signal de Mont 75.34 17 *e*P **P 17 49 59.2 +0.4**
SMF pmax pmax
comp=Z,18nm,1.0s

SMF Signal de Mont 75.34 17 *e*P **P 17 49 59.2 +0.4**
comp=Z,18nm,1.0s

ZST Bratislava 75.35 7 *e*P **P 17 49 58.5 -0.3**
ZST pmax pmax
comp=Z,9.0nm,1.1s

ZST Bratislava 75.35 7 *e*P **P 17 49 58.5 -0.3**
TCF Toulx Ste Croi 75.42 18 *e*P **P 17 49 59.7 +0.5**
comp=Z,12nm,0.9s

TCF Toulx Ste Croi 75.42 18 *e*P **P 17 49 59.7 +0.5**
TCF pmax pmax
comp=Z,12nm,0.9s

TCF Toulx Ste Croi 75.42 18 *e*P **P 17 49 59.7 +0.5**
comp=Z,12nm,0.9s

RJOB Jochberg 75.44 10 *e*P **P 17 50 00.1 +0.7**
comp=Z,12nm,0.8s

CONA Conrad Observa 75.52 8⇓*i*pP **P 17 50 00.4 +0.5**
comp=Z,12nm,1.5s

TRPA Tarpa 75.70 4⇑*i*P **P 17 50 01.9 +1.1**
CABF La Chapelle 75.72 15 *e*P **P 17 50 02.0 +1.0**
comp=Z,40nm,1.1s

CABF La Chapelle 75.72 15 *e*P **P 17 50 02.0 +1.0**
CABF pmax pmax
comp=Z,40nm,1.1s

CABF La Chapelle 75.72 15 *e*P **P 17 50 02.0 +1.0**
comp=Z,40nm,1.1s

PSZ Piszkesteto 75.80 5⇓*i*P **P 17 50 02.9 +1.4**
FETA Feichten 75.92 12⇓*i*pP **P 17 50 03.0 +0.7**
comp=Z,5.3nm,0.9s

KSH Kashi 76.07 324 P P 17 50 06.9 +3.7
KSH *e*pP pP 17 50 11.3 -0.9
KSH *e*sP sP 17 50 14.1 -1.5
KSH *e*PcP **PcP 17 50 19.3 +3.9**
KSH *e*PP PP 17 53 00.5 +7.1
KSH *e*S S 17 59 50.8 +6.1
KSH *e*SKS **SKKSac 18 00 13.3 +0.9**
KSH *e*ScS **ScS 18 00 19.1 +3.2**
KSH *e*SS SS 18 04 49.4 +13
KSH pmax pmax
comp=Z,9.0nm,0.6s

KSH LR LR
comp=N,150nm,4.3s

KSH LR LR
comp=E,110nm,5.9s

KSH LR LR
comp=Z,140nm,5.1s

KBA Koelnbreinsper 76.14 10⇓*i*pP **P 17 50 04.6 +1.1**
comp=Z,15nm,1.6s

BUR08 Bucovina Ar. S 76.26 2 *e*P **P 17 50 04.4 +0.3**
BURAR Bucovina Array 76.29 2⇓*i*P **P 17 50 05.2 +0.9**
LFF La Frestale 76.46 19 *e*P **P 17 50 05.9 +0.8**
comp=Z,33nm,0.9s

LFF La Frestale 76.46 19 *e*P **P 17 50 05.9 +0.8**
LFF pmax pmax
comp=Z,33nm,0.9s

LFF La Frestale 76.46 19 *e*P **P 17 50 05.9 +0.8**
comp=Z,33nm,0.9s

SOKA Soboth 76.69 9⇑*i*pP **P 17 50 07.2 +0.6**
comp=Z,11nm,1.2s

CAF Calviac 76.71 18 *e*P **P 17 50 07.3 +0.7**
comp=Z,14nm,0.9s

CAF Calviac 76.71 18 *e*P **P 17 50 07.3 +0.7**
CAF pmax pmax
comp=Z,14nm,0.9s

CAF Calviac 76.71 18 *e*P **P 17 50 07.3 +0.7**
comp=Z,14nm,0.9s

OBKA Obir 76.82 9⇑*i*pP **P 17 50 07.9 +0.6**
comp=Z,19nm,0.9s

LPL La Plagne 76.88 15 *e*P **P 17 50 09.6 +1.8**
LPL La Plagne 76.88 15 *e*P **P 17 50 09.6 +1.8**
LPL La Plagne 76.88 15 *e*P **P 17 50 09.6 +1.8**
LPG La Plagne 76.90 15 *e*P **P 17 50 09.9 +1.9**
comp=Z,11nm,1.0s

LPG La Plagne 76.90 15 *e*P **P 17 50 09.9 +1.9**
LPG pmax pmax
comp=Z,11nm,1.0s

LPG La Plagne 76.90 15 *e*P **P 17 50 09.9 +1.9**
comp=Z,11nm,1.0s

VIVF Saint-Julien-l 77.22 17 *e*P **P 17 50 10.3 +0.8**
comp=Z,23nm,1.0s

VIVF Saint-Julien-l 77.22 17 *e*P **P 17 50 10.3 +0.8**
VIVF pmax pmax
comp=Z,23nm,1.0s

VIVF Saint-Julien-l 77.22 17 *e*P **P 17 50 10.3 +0.8**
comp=Z,23nm,1.0s

PGAV Gavieira, Arco 77.34 27 *e*P **P 17 50 10.0 -0.3**
comp=Z,57nm,2.0s

ORIF Oris-en-Rattie 77.34 16 *e*P **P 17 50 11.2 +0.9**
comp=Z,9.9nm,0.9s

ORIF *e*R
comp=Z,222nm,18.8s

ORIF Oris-en-Rattie 77.34 16 *e*P **P 17 50 11.2 +0.9**
ORIF pmax pmax
comp=Z,10.0nm,0.9s

ORIF Oris-en-Rattie 77.34 16 *e*P **P 17 50 11.2 +0.9**
comp=Z,9.9nm,0.9s

MBDF Montbardon 77.66 15 *e*P **P 17 50 13.6 +1.5**
comp=Z,10nm,0.8s

MBDF Montbardon 77.66 15 *e*P **P 17 50 13.6 +1.5**
MBDF pmax pmax
comp=Z,10.0nm,0.8s

MBDF Montbardon 77.66 15 *e*P **P 17 50 13.6 +1.5**
comp=Z,10nm,0.8s

LASF Ste Croix 77.84 17 *e*P **P 17 50 13.2 +0.2**
LASF Ste Croix 77.84 17 *e*P **P 17 50 13.2 +0.2**
PBRG Braganca 77.87 26 *e*P **P 17 50 13.8 +0.6**
comp=Z,32nm,1.5s

POLO Lamas de Olo 78.02 27 *e*P **P 17 50 15.5 +1.4**
comp=Z,21nm,1.9s

VRI Vrincioaia 78.06 1⇑*i*P **P 17 50 15.0 +0.9**
GOF Gofitskoye 78.06 349 *e*P P 17 50 22.3 +8.2
PLOR Plostina 78.07 1⇑*i*P **P 17 50 15.3 +1.1**
PVRL Vila Real 78.13 27 *e*P **P 17 50 14.9 +0.3**
comp=Z,24nm,1.3s

ETSF Etsaut 78.18 21 *e*P **P 17 50 16.2 +1.3**
comp=Z,35nm,0.9s

ETSF Etsaut 78.18 21 *e*P **P 17 50 16.2 +1.3**
ETSF pmax pmax
comp=Z,35nm,0.9s

ETSF Etsaut 78.18 21 *e*P **P 17 50 16.2 +1.3**
comp=Z,35nm,0.9s

SMRF Simiane la Rot 78.22 16 *e*P **P 17 50 16.5 +1.4**
comp=Z,23nm,0.8s

SMRF Simiane la Rot 78.22 16 *e*P **P 17 50 16.5 +1.4**
comp=Z,23nm,0.8s

EPF Esparros 78.23 20 *e*P **P 17 50 15.2 0.0**
comp=Z,15nm,1.0s

EPF Esparros 78.23 20 *e*P **P 17 50 15.2 0.0**
EPF pmax pmax
comp=Z,15nm,1.0s

EPF Esparros 78.23 20 *e*P **P 17 50 15.2 0.0**
comp=Z,15nm,1.0s

MTLF Montolieu 78.27 19 *e*P **P 17 50 16.2 +0.8**
comp=Z,18nm,0.9s

MTLF Montolieu 78.27 19 *e*P **P 17 50 16.2 +0.8**
MTLF pmax pmax
comp=Z,18nm,0.9s

MTLF Montolieu 78.27 19 *e*P **P 17 50 16.2 +0.8**
comp=Z,18nm,0.9s

MVO Moncorvo 78.40 26 *e*P **P 17 50 16.8 +0.6**
comp=Z,24nm,1.0s

LOT Lotru 78.42 3⇑*i*P **P 17 50 15.9 -0.4**
MLR Muntele Rosu 78.42 1⇓*i*P **P 17 50 17.7 +1.4**
SBF Sospel 78.60 15 *e*P **P 17 50 17.3 +0.1**
SBF Sospel 78.60 15 *e*P **P 17 50 17.3 +0.1**
SBF Sospel 78.60 15 *e*P **P 17 50 17.3 +0.1**
PVIS Viseu 78.61 27 *e*P **P 17 50 18.2 +0.9**
comp=Z,30nm,1.6s

QIZ Qiongzhong 78.64 287 P **P 17 50 14.9 -2.8**
QIZ S S 17 59 59.3 -13
QIZ LR LR
comp=N,200nm,20.5s

QIZ LR LR
comp=E,130nm,19.3s

QIZ LR LR
comp=Z,190nm,17.5s

CFR Carcaliu 78.75 360⇓*i*P **P 17 50 18.4 +0.5**
FRF La Foret Royal 78.78 15 *e*P **P 17 50 18.8 +0.6**
FRF La Foret Royal 78.78 15 *e*P **P 17 50 18.8 +0.6**
FRF La Foret Royal 78.78 15 *e*P **P 17 50 18.8 +0.6**
LMR La Mourre 78.98 16 *e*P **P 17 50 20.3 +1.0**
comp=Z,49nm,1.2s

LMR La Mourre 78.98 16 *e*P **P 17 50 20.3 +1.0**
LMR pmax pmax
comp=Z,49nm,1.2s

LMR La Mourre 78.98 16 *e*P **P 17 50 20.3 +1.0**
comp=Z,49nm,1.2s

MTE Manteigas 79.00 27 *e*P **P 17 50 20.5 +1.0**
comp=Z,37nm,1.6s

KIV Kislovodsk 79.18 349*e i*P **P 17 50 21.0 +0.5**
KIV *e*S **S 18 00 21.8 +3.7**
KIV pmax pmax
comp=Z,17nm,1.0s

KIV MLR MLR
comp=Z,100nm,21.0s

KBZ Khabaz 79.39 349 P **P 17 50 22.2 +0.8**
KBZ Khabaz 79.39 349 P **P 17 50 22.2 +0.8**
KBZ Khabaz 79.39 349 P **P 17 50 22.2 +0.8**
comp=Z,9.4nm,0.9s,baz=0.6,slow=5.6,SNR=27
KBZ LR LR 18 28 51.2
comp=Z,144nm,20.1s,baz=18,slow=38

TIRR Tirgusor 79.47 360⇓*i*P **P 17 50 22.4 +0.6**
TBI Tubuai 79.51 177 *e*LR LR 18 15 07.2
comp=Z,340nm,27.8s

TBI *e*T T 19 17 45.3
comp=Z,30nm,0.3s

PCBR Castelo Branco 79.54 27 *e*P **P 17 50 23.2 +0.8**
comp=Z,32nm,1.7s

MAK Makhachkala 79.57 345 *e*P **P 17 50 20.8 -1.6**
MAK *e* 17 53 23.3
MAK *e*S **S 18 00 21.6 -0.4**
MAK *e*SSS SSS 18 08 46.1
MAK pmax pmax
comp=Z,73nm,1.5s

SOC Sochi 79.83 351 *e*P **P 17 50 24.1 +0.2**
SOC *e*S **S 18 00 24.1 -0.7**
SOC pmax pmax
comp=Z,21nm,0.9s

SOC MLR MLR
comp=Z,205nm,20.0s

PGF Pioggiola 80.11 14 *e*P **P 17 50 26.0 +0.5**
comp=Z,12nm,0.8s

PGF Pioggiola 80.11 14 *e*P **P 17 50 26.0 +0.5**
PGF pmax pmax
comp=Z,12nm,0.8s

PGF Pioggiola 80.11 14 *e*P **P 17 50 26.0 +0.5**
comp=Z,12nm,0.8s

ZEI Tsey 80.22 348 *e*P **P 17 50 26.8 +0.5**
ZEI pmax pmax
comp=Z,17nm,1.6s

ESDC Sonseca Array 80.54 24 P **P 17 50 28.6 +0.7**
ESDC Sonseca Array 80.54 24 P **P 17 50 28.6 +0.7**
comp=Z,6.1nm,0.7s,baz=341,slow=5.2,SNR=31
ESDC LR LR 18 25 59.4
comp=Z,204nm,20.9s,baz=310,slow=36

RKT Rikitea 80.59 164 *e*T T 19 19 08.7
comp=Z,9.5nm,0.3s

EVOP Sao Brissos 80.62 28 *e*P **P 17 50 28.7 +0.5**
EVOP pmax pmax
comp=Z,20nm,1.0s

EVOP Sao Brissos 80.62 28 *e*P **P 17 50 28.7 +0.5**
comp=Z,20nm,1.0s

EVO Evora 80.64 28 *e*P **P 17 50 28.7 +0.4**
comp=Z,20nm,1.0s

EVO *e*R
comp=Z,518nm,18.8s

PBAR Barrancos 81.23 27 *e*P **P 17 50 31.7 +0.3**
PVAQ Vaqueiros 81.78 28 *e*P **P 17 50 34.5 +0.1**
comp=Z,36nm,1.1s

TAPN Taplejung 82.38 309 *e*P **P 17 50 38.3 +0.2**
comp=Z,26nm,0.7s

GUN Gumba 82.67 311 *e*P **P 17 50 39.9 +0.3**
comp=Z,60nm,1.1s

ODAN Odare 82.94 309 *e*P **P 17 50 41.0 +0.1**
comp=Z,30nm,1.0s

KKN Kakani 83.03 311 *e*P **P 17 50 41.2 -0.1**
comp=Z,9.6nm,0.7s

DANN Dangsing 83.16 313 *e*P **P 17 50 42.6 +0.5**
comp=Z,82nm,1.0s

PKIN Phulchoki 83.17 311 *e*P **P 17 50 42.2 +0.1**
comp=Z,9.6nm,0.7s

PKI Pulchoki 83.17 311 *e*P **P 17 50 42.0 -0.2**
comp=Z,22nm,0.8s

RAMN Ramite 83.21 310 *e*P **P 17 50 42.9 +0.6**
comp=Z,60nm,0.8s

DMN Daman 83.26 311 *e*P **P 17 50 42.9 +0.3**
comp=Z,34nm,0.9s

PYUN Piuthan 83.70 313 *e*P **P 17 50 44.9 +0.1**
comp=Z,78nm,1.1s

KOLN Koldanda 83.74 312 *e*P **P 17 50 45.0 0.0**
comp=Z,12nm,0.7s

BR131 Keskin Array S 84.07 355 *e*P **P 17 50 46.0 -0.4**
comp=Z,3.8nm,0.8s

BRTR Keskin Array B 84.07 355 P **P 17 50 46.5 +0.1**
BRTR Keskin Array B 84.07 355 P **P 17 50 46.5 +0.1**
comp=Z,4.6nm,0.8s,baz=0.7,slow=3.4,SNR=27

CHTO Chiang Mai 84.44 296 *e*P **P 17 50 47.4 -1.0**
CHTO Chiang Mai 84.44 296 *e*P **P 17 50 47.4 -1.0**
comp=Z,1.1nm,0.8s

CMAR Chiang Mai Arr 84.75 296 P **P 17 50 49.2 -0.7**
CMAR Chiang Mai Arr 84.75 296 P **P 17 50 49.2 -0.7**
comp=Z,4.0nm,0.8s,baz=9.5,slow=5.9,SNR=46

CMAR				LR		LR	18 31 44.5	
	comp=Z,160nm,20.6s,baz=305,slow=38								
KEST	**Kesra**	**86.86**	**15**	LR		LR	18 32 17.9	
	comp=Z,60nm,18.3s,baz=245,slow=37								
CSS	**Prodhromos**	**88.83**	**355**	P		**P**	**17 51 08.1**	**-1.5**
	comp=Z,8.2nm,0.9s								
KMBO	**Kilima Mbogo**	**124.33**	**348**	PKP		**PKPdf**	**17 57 15.2**	**+0.2**
KMBO	**Kilima Mbogo**	**124.33**	**348**	PKP		**PKPdf**	**17 57 15.2**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=72,slow=3.2,SNR=4.2								
BOSA	**Boshof**	**152.13**	**5**	PKPbc		**PKPbc**	**17 58 10.4**	**-0.5**
BOSA				PKPab		**PKPab**	**17 58 18.8**	**-1.8**
BOSA	**Boshof**	**152.13**	**5**	PKPbc		**PKPbc**	**17 58 10.4**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=358,slow=4.0,SNR=6.5								
BOSA				PKPab		**PKPab**	**17 58 18.8**	**-1.8**
	comp=Z,8.8nm,1.1s,baz=0.8,slow=6.0,SNR=4.9								

CSEM ***15*** *17:47:46.0, 40.64N × 15.51E, h17km, MD1.7/4, After ROM*
ROM 15 17:47:46.0±0.3, 40.64N×15.51E, h17km±4km, Md1.7/4, Ml1.2/3, Error ellipse: s-maj=3.6km s-min=1.5km az=95.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRLC	**Muro Lucano**	**0.12**	**351**	Pg	Pb	17 47 50.0	0.0
MRLC				Sg	Sb	17 47 52.9	+0.2
	45nm,0.2s						
MRLC	**Muro Lucano**	**0.12**	**351**	Pg	Pb	17 47 50.0	0.0
MRLC				Sg	Sb	17 47 52.9	+0.2
	45nm,0.2s						
SGO	**Sicignano**	**0.17**	**244**	Pg	Pg	17 47 50.6	+0.1
SGO				Sg	Sg	17 47 53.7	+0.1
	16nm,0.2s						
SGO	**Sicignano**	**0.17**	**244**	Pg	Pg	17 47 50.6	+0.1
SGO				Sg	Sg	17 47 53.7	+0.1
	16nm,0.2s						
CDRU	**Civita di Ruta**	**0.22**	**227**	Pg	Pg	17 47 51.4	+0.2
CDRU				Sg	Sb	17 47 55.6	+0.1
	30nm,0.2s						
CDRU	**Civita di Ruta**	**0.22**	**227**	Pg	Pg	17 47 51.4	+0.2
CDRU				Sg	Sb	17 47 55.6	+0.1
	30nm,0.2s						
MCRV	**Calabrutti - M**	**0.30**	**299**	Pg	Pg	17 47 52.6	0.0
MCRV				Sg	Sb	17 47 57.7	-0.2
	18nm,0.2s						
MCRV	**Calabrutti - M**	**0.30**	**299**	Pg	Pg	17 47 52.6	0.0
MCRV				Sg	Sb	17 47 57.7	-0.2
	18nm,0.2s						

IDC ***15*** *17:53:35.6±2.1, 56.40N × 152.40W, h0km, mb3.7/4, mb1 3.6/6, mb1mx3.4/27, mbtmp3.5/6, ML2.9/2, Error ellipse: s-maj=38.9km s-min=31.2km az=136.0*
ISCJB ***15*** *17:53:37.2±0.9, 56.47N±0.06×151.99W±0.09, h18km, mb3.7/4, Error ellipse: s-maj=9.0km s-min=7.2km az=12.5*
NEIC ***15*** *17:53:40.9, 56.57N × 152.19W, h10km, ML2.8(AEIC), After AEIC.*
ISC 15 17:53:37.7±1.2, 56.41N±0.09×152.11W±0.07, h18km, n34, σ1°15/38, mb3.8/4, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.04**	**322**	P	**Pb**	**17 53 56.1**	**-1.0**
KDAK	**Kodiak Island**	**1.40**	**350**	P	**Pn**	**17 54 02.0**	**-0.3**
KDAK	**Kodiak Island**	**1.40**	**350**	Pn	**Pn**	**17 54 01.9**	**-0.3**
	6.3nm,0.3s,baz=174,slow=11,SNR=53						
KDAK				Sn	**Sn**	**17 54 19.3**	**-1.0**
	11nm,0.3s,baz=200,slow=16,SNR=7.4						
KABR	**Katmai Barrier**	**2.32**	**319**	P	**Pn**	**17 54 15.4**	**+0.4**
KAKN	**Katmai Knife C**	**2.48**	**321**	P	**Pn**	**17 54 18.1**	**+0.9**
FOSS	**Fourpeaked Sta**	**2.54**	**341**	P	**Pn**	**17 54 19.3**	**+1.3**
FONW	**Fourpeaked Sta**	**2.62**	**339**	P	**Pn**	**17 54 20.5**	**+1.4**
KELA	**Mount Kelaz**	**2.83**	**318**	P	**Pn**	**17 54 23.3**	**+1.3**
MCNL	**McNeil River**	**3.03**	**338**	P	**Pn**	**17 54 26.1**	**+1.4**
AUH	**Augustine H**	**3.05**	**347**	P	**Pn**	**17 54 25.7**	**+0.7**
OPT	**Oil Point**	**3.31**	**350**	P	**Pn**	**17 54 29.9**	**+1.4**
BRLK	**Bradley Lake**	**3.42**	**10**	P	**Pn**	**17 54 30.0**	**-0.2**
BRLK				S	**Sn**	**17 55 09.6**	**-0.7**
CHGN	**Chignik**	**3.51**	**271**	*e*Pn	**Pn**	**17 54 29.3**	**-1.9**
RSO	**Redoubt South**	**4.08**	**356**	*e*P	**Pn**	**17 54 39.7**	**+0.4**
SPU	**Mount Spurr**	**4.79**	**0**	P	**Pn**	**17 54 49.1**	**+0.2**
SPU				S	**Sn**	**17 55 43.3**	**-0.6**
STLK	**Strandline Lak**	**5.11**	**1**	P	**Pn**	**17 54 53.4**	**+0.1**
STLK				S	**Sn**	**17 55 51.6**	**-0.1**
SML	**Sawmill**	**5.75**	**18**	P	**Pn**	**17 55 02.3**	**+0.2**
KLU	**Klutina**	**6.02**	**30**	P	**Pn**	**17 55 05.8**	**0.0**
KIAG	**Kiagna River**	**6.80**	**44**	P	**Pn**	**17 55 18.3**	**+1.6**
TT01	**Tatalina**	**6.81**	**345**	P	**Pn**	**17 55 16.9**	**+0.3**
BALM	**Baldy**	**6.88**	**44**	P	**Pn**	**17 55 16.7**	**+1.0**
GRNC	**Granite Creek**	**6.93**	**47**	P	**Pn**	**17 55 19.8**	**+1.3**
BARN	**Barnard Glacie**	**7.16**	**45**	P	**Pn**	**17 55 22.1**	**+0.5**
RND	**Reindeer**	**7.21**	**12**	P	**Pn**	**17 55 22.8**	**+0.7**
PNL	**Peninsula**	**7.49**	**59**	*e*Pn	**Pn**	**17 55 27.3**	**+1.3**
	32nm,0.9s						
PNL				*e*Sn	Sn	17 56 40.1	-10
ILAR	**Eielson Array**	**8.77**	**15**	Pn	**Pn**	**17 55 44.5**	**+1.1**
	0.8nm,0.3s,baz=202,slow=14,SNR=47						
ILAR				Sn	**Sn**	**17 57 18.1**	**-3.5**
	0.1nm,0.3s,baz=204,slow=23,SNR=3.6						
IM3	**Indian Mountai**	**9.64**	**356**	P	**Pn**	**17 55 54.6**	**-0.8**
DIB	**Dawson Inlet,**	**11.77**	**98**	T	T	18 08 34.9	
	SNR=3.4						
INK	**Inuvik**	**14.63**	**28**	Pn	**Pn**	**17 57 05.5**	**+2.0**
	0.1nm,0.3s,baz=240,slow=8.1,SNR=1.9						
YKA	**Yellowknife Ar**	**19.78**	**57**	P	**Pn**	**17 58 08.7**	**+0.7**
	0.0nm,0.3s,baz=271,slow=10,SNR=6.9						
SONM	**Songino Array**	**57.34**	**308**	P	**P**	**18 03 23.8**	**-0.6**
	0.4nm,0.6s,baz=57,slow=5.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**60.58**	**325**	P	**P**	**18 03 46.7**	**+0.1**
	0.5nm,0.5s,baz=35,slow=5.4,SNR=4.8						
MKAR	**Makanchi Array**	**67.56**	**323**	P	**P**	**18 04 33.2**	**+0.6**
	0.3nm,0.6s,baz=30,slow=6.0,SNR=4.4						
AKASG	**Malin Array Be**	**73.25**	**359**	P	**P**	**18 05 07.9**	**+0.7**
	0.7nm,0.5s,baz=7.6,slow=5.4,SNR=3.8						

GUC 15 18:03:39.8±0.8, 21.66S×68.50W, h114km±14km, ML3.5, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.02**	**202**	↑*i*P	Pn	18 04 02.7	+0.8
LVC				*i* S	Sn	18 04 19.4	+0.9
PB04	**Plate Boundary**	**1.09**	**237**	↑*i*P	Pn	18 04 09.4	+7.2
PB04				*i* S	Sn	18 04 31.5	+12
PB04				AML	AML	18 04 33.6	
	comp=E,318nm,0.1s						
MACH	**Maria Elena**	**1.28**	**245**	↓*i*P	Pn	18 04 05.5	+0.8
MACH				*i* S	Sn	18 04 24.6	+1.1
PB07	**Plate Boundary**	**1.29**	**267**	↑*i*P	Pn	18 04 05.5	+0.9
PB07				*i* S	Sn	18 04 25.1	+1.6
PB07				AML	AML	18 04 25.7	
	comp=N,1μm,0.2s						
HMBC	**Humberstone**	**1.89**	**317**	*i* S	Sn	18 04 37.3	+1.0
HMBC				AML	AML	18 04 41.6	
	comp=E,424nm,0.2s						
ANCH	**Antofagasta**	**2.67**	**221**	*e*P	Pn	18 04 19.9	-1.7
ANCH				*i* S	Sn	18 04 51.8	-2.0
MNMC	**Minimini**	**2.72**	**338**	*i* S	Sn	18 04 57.1	+1.5
MNMC				AML	AML	18 04 59.2	
	comp=N,414nm,0.2s						

ISCJB ***15*** *18:15:33.8±0.9, 56.40N±0.07×151.94W±0.08, h18km, mb3.6/4, Error ellipse: s-maj=10.5km s-min=6.2km az=168.0*
IDC ***15*** *18:15:33.5±2.1, 56.39N × 152.31W, h0km, mb3.7/4, mb1 3.6/5, mb1mx3.4/26, mbtmp3.6/5, ML2.9/1, Error ellipse: s-maj=38.2km s-min=34.9km az=135.0*
NEIC ***15*** *18:15:36.8, 56.44N × 152.15W, h10km, ML2.9(AEIC), After AEIC.*
ISC 15 18:15:35.8±1.3, 56.4N±0.1×152.14W±0.06, h18km, n29, σ1°06/33, mb3.7/4, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.01**	**322**	P	**Pb**	**18 15 53.8**	**-0.9**
KDAK	**Kodiak Island**	**1.37**	**350**	P	**Pn**	**18 15 59.7**	**-0.3**
KDAK	**Kodiak Island**	**1.37**	**350**	Pn	**Pn**	**18 15 59.7**	**-0.3**
	4.8nm,0.3s,baz=180,slow=9.2,SNR=38						
KDAK				Sn	**Sn**	**18 16 17.3**	**-0.3**
	13nm,0.3s,baz=189,slow=19,SNR=18						
KABR	**Katmai Barrier**	**2.29**	**319**	P	**Pn**	**18 16 12.9**	**+0.2**
KAKN	**Katmai Knife C**	**2.44**	**321**	P	**Pn**	**18 16 15.6**	**+0.7**
FOSS	**Fourpeaked Sta**	**2.51**	**341**	P	**Pn**	**18 16 16.8**	**+1.1**
FONW	**Fourpeaked Sta**	**2.59**	**339**	P	**Pn**	**18 16 18.1**	**+1.3**
KELA	**Mount Kelaz**	**2.79**	**317**	P	**Pn**	**18 16 20.2**	**+0.5**
MCNL	**McNeil River**	**3.00**	**338**	P	**Pn**	**18 16 23.8**	**+1.4**
AUW	**Augustine West**	**3.02**	**347**	P	**Pn**	**18 16 24.3**	**+1.5**
OPT	**Oil Point**	**3.27**	**350**	P	**Pn**	**18 16 27.9**	**+1.6**
ANNW	**Aniakchak Nort**	**3.39**	**282**	P	**Pn**	**18 16 26.7**	**-1.1**
BRLK	**Bradley Lake**	**3.40**	**11**	P	**Pn**	**18 16 27.5**	**-0.5**
BRLK				S	**Sn**	**18 17 07.3**	**-0.5**
CHGN	**Chignik**	**3.49**	**270**	*e*Pn	**Pn**	**18 16 26.1**	**-3.1**
RSO	**Redoubt South**	**4.05**	**356**	*e*Pn	Pn	18 16 32.8	-4.2
TT01	**Tatalina**	**6.78**	**345**	P	**Pn**	**18 17 14.8**	**+0.6**
KIAG	**Kiagna River**	**6.80**	**45**	P	**Pn**	**18 17 14.5**	**-0.2**
KIAG				S	**Sn**	**18 18 32.2**	**+0.6**
BALM	**Baldy**	**6.87**	**44**	P	**Pn**	**18 17 16.0**	**+0.4**
GRNC	**Granite Creek**	**6.93**	**47**	P	**Pn**	**18 17 15.5**	**-1.1**
TRF	**Thorofare Moun**	**7.10**	**7**	P	**Pn**	**18 17 18.2**	**-0.6**
BARN	**Barnard Glacie**	**7.15**	**45**	P	**Pn**	**18 17 19.6**	**0.0**
BARN				S	**Sn**	**18 18 39.7**	**-0.6**
ILAR	**Eielson Array**	**8.75**	**15**	Pn	**Pn**	**18 17 43.0**	**+1.7**
	0.5nm,0.3s,baz=202,slow=14,SNR=18						
ILAR				Sn	**Sn**	**18 19 18.0**	**-1.3**
	0.1nm,0.3s,baz=199,slow=23,SNR=4.1						
IM3	**Indian Mountai**	**9.61**	**356**	P	**Pn**	**18 17 51.5**	**-1.6**
INK	**Inuvik**	**14.61**	**28**	Pn	**P**	**18 19 07.8**	**+0.2**
	0.1nm,0.3s,baz=229,slow=11,SNR=6.1						
YKA	**Yellowknife Ar**	**19.78**	**57**	P	**Pn**	**18 20 06.0**	**-0.2**
	0.1nm,0.3s,baz=270,slow=11,SNR=6.4						
SONM	**Songino Array**	**57.31**	**308**	P	**P**	**18 25 23.0**	**+0.6**
	0.7nm,0.7s,baz=38,slow=7.5,SNR=3.9						
ZALV	**Zalesovo Beam**	**60.55**	**325**	P	**P**	**18 25 44.8**	**+0.3**
	0.2nm,0.3s,baz=44,slow=6.6,SNR=3.8						
MKAR	**Makanchi Array**	**67.53**	**323**	P	**P**	**18 26 31.0**	**+0.4**
	0.3nm,0.8s,baz=30,slow=6.4,SNR=3.1						
AKASG	**Malin Array Be**	**73.22**	**359**	P	**P**	**18 27 05.7**	**+0.5**
	0.2nm,0.3s,baz=11,slow=7.6,SNR=4.7						

NEIC ***15*** *18:24:13.4, 56.26N × 151.98W, h10km, mb5.1/153, ML4.8(AEIC), After AEIC.*
IDC ***15*** *18:24:13.6±0.5, 56.50N × 152.43W, h0km, mb4.8/27, mb1 5.0/29, mb1mx5.0/32, mbtmp4.8/29, ML4.1/3, MS4.8/40, Ms1 4.8/40, ms1mx4.8/43, Error ellipse: s-maj=15.6km s-min=9.1km az=19.0*
ISCJB ***15*** *18:24:16.5±0.1, 56.48N±0.02×152.37W±0.03, h31km, mb5.0/276, MS4.9/89, Error ellipse: s-maj=3.4km s-min=2.0km az=27.4*
BJI ***15*** *18:24:16.7, 56.56N × 152.89W, h30km, mB5.3/50, mb5.1/53, Ms5.4/55, Ms7 5.1/54*
GCMT ***15*** *18:24:18.8±0.2, 56.23N × 151.88W, h12km, MW5.2, Moment Tensor Solution. s65,c99; s96,c171; Moment tensor: Scale 10^{16}Nm; M_{rr}=4.36±.09; $M_{\theta\theta}$=-3.11±.08; $M_{\phi\phi}$=-1.25±.08; $M_{r\theta}$=7.08±.23; $M_{\theta\phi}$=-2.31±.07; $M_{r\phi}$=3.20±.25; Best double couple: M_0=9.00000×10^{16} NP1:ϕ=227.00000°, δ=16.00000°, λ=73.00000°. NP2:ϕ=64.00000°, δ=75.00000°, λ=95.00000°. Principal axes: T 8.8900, Plg60.0000°, Azm341.0000°; N 0.2000, Plg5.0000°, Azm243.0000°; P -9.0900, Plg30.0000°, Azm151.0000°; Data Used: II IU IC G CN.*
MOS ***15*** *18:24:19.8±0.9, 56.97N × 152.85W, h33km, mb5.5/113, MS4.8/34 Error ellipse: s-maj=12.5km s-min=3.6km az=87.9*
SZGRF ***15*** *18:24:28.8, 58.00N × 154.16W, h33km, mb5.5, MS4.8, Alaska Peninsula, United States*
ISC 15 18:24:17.7±0.4, 56.53N±0.04×152.35W±0.03, h27km±1km, h26km:pP-P,n1094,σ1°20/1180, mb5.2/295, MS4.9/89, 175C-182D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.87**	**324**	P	**Pb**	**18 24 33.0**	**-1.1**
KDAK	**Kodiak Island**	**1.26**	**354**	P	**Pn**	**18 24 39.0**	**-0.6**
KDAK	**Kodiak Island**	**1.26**	**354**	Pn	**Pn**	**18 24 38.9**	**-0.6**
	141nm,0.3s,baz=186,slow=8.2,SNR=710						
KDAK				Sn	**Sn**	**18 24 56.7**	**0.0**
	592nm,0.3s,baz=192,slow=15,SNR=21						
KABR	**Katmai Barrier**	**2.15**	**320**	P	**Pn**	**18 24 52.4**	**+0.7**
KAWH	**Katmai**	**2.28**	**326**	P	**Pn**	**18 24 54.8**	**+1.2**
KAKN	**Katmai Knife C**	**2.30**	**322**	P	**Pn**	**18 24 54.6**	**+0.7**
KCE	**Katmai Mt Cerb**	**2.31**	**319**	P	**Pn**	**18 24 55.3**	**+1.4**
KABU	**Katmai Buttres**	**2.36**	**319**	P	**Pn**	**18 24 55.7**	**+1.0**
FONW	**Fourpeaked Sta**	**2.46**	**341**	P	**Pn**	**18 24 57.3**	**+1.3**
KELA	**Mount Kelaz**	**2.65**	**318**	P	**Pn**	**18 24 59.5**	**+0.8**
MCNL	**McNeil River**	**2.87**	**339**	P	**Pn**	**18 25 03.0**	**+1.3**
AUW	**Augustine West**	**2.91**	**349**	P	**Pn**	**18 25 02.9**	**+0.7**
AUNW	**Augustine NWes**	**2.92**	**349**	P	**Pn**	**18 25 03.4**	**+1.1**
OPT	**Oil Point**	**3.17**	**352**	P	**Pn**	**18 25 06.9**	**+1.2**
ANPK	**Aniakchak Peak**	**3.20**	**278**	P	**Pn**	**18 25 05.4**	**-0.9**
ANNW	**Aniakchak Nort**	**3.26**	**280**	P	**Pn**	**18 25 06.5**	**-0.9**
BRLK	**Bradley Lake**	**3.34**	**13**	P	**Pn**	**18 25 06.7**	**-1.4**
CHGN	**Chignik**	**3.38**	**269**	*e*Pn	**Pn**	**18 25 05.8**	**-2.8**
INE	**Iliamna NE**	**3.56**	**354**	P	**Pn**	**18 25 11.9**	**+0.7**
VNHG	**Veniaminof 1**	**3.80**	**268**	P	**Pn**	**18 25 13.7**	**-0.8**
SEW	**Seward**	**3.90**	**22**	P	**Pn**	**18 25 14.1**	**-1.6**
RSO	**Redoubt South**	**3.95**	**357**	*e*Pn	**Pn**	**18 25 16.6**	**-0.1**
VNWF	**Veniaminof 8**	**4.03**	**268**	P	**Pn**	**18 25 16.8**	**-0.9**
DFR	**Drift River**	**4.08**	**358**	P	**Pn**	**18 25 18.9**	**+0.6**
SLKM	**Skilak Lake**	**4.14**	**15**	P	**Pn**	**18 25 18.4**	**-0.7**
SLKM	**Skilak Lake**	**4.14**	**15**	P	**Pn**	**18 25 18.4**	**-0.7**
MID	**Middleton Isla**	**4.32**	**45**	P	Pn	18 25 18.6	-2.9
MID				S	**Sn**	**18 26 08.3**	**-2.6**
MID	**Middleton Isla**	**4.32**	**45**	P	Pn	18 25 18.6	-2.9
MID				S	**Sn**	**18 26 08.3**	**-2.6**
CKL	**Chakachamna La**	**4.68**	**0**	P	**Pn**	**18 25 26.9**	**+0.3**
SDPT	**Sand Point**	**4.72**	**259**	P	**Pn**	**18 25 24.9**	**-2.1**
SDPT				S	**Sn**	**18 26 20.9**	**+0.1**
BGL	**Barrier Glacie**	**4.75**	**360**	P	**Pn**	**18 25 28.3**	**+0.8**
SVW2	**Sparrevohn**	**4.88**	**341**	P	**Pn**	**18 25 29.9**	**+0.7**
STLK	**Strandline Lak**	**4.99**	**3**	P	**Pn**	**18 25 30.7**	**-0.1**
EYAK	**Cordova Ski Ar**	**5.31**	**38**	P	**Pn**	**18 25 32.8**	**-2.3**
PMR	**Palmer**	**5.34**	**17**	P	**Pn**	**18 25 33.9**	**-1.6**
PMR	**Palmer**	**5.34**	**17**	P	**Pn**	**18 25 33.9**	**-1.6**
PS4A	**Pavlof South-4**	**5.47**	**261**	P	**Pn**	**18 25 35.3**	**-2.1**
SKT	**Skwentna**	**5.49**	**4**	P	**Pn**	**18 25 37.2**	**-0.3**
VLZ	**Valdez**	**5.57**	**32**	P	**Pn**	**18 25 37.1**	**-1.5**
RAGM	**Ragged Mountai**	**5.58**	**43**	P	**Pn**	**18 25 36.8**	**-2.1**
RAGM				S	**Sn**	**18 26 39.2**	**-2.9**
SML	**Sawmill**	**5.68**	**20**	P	**Pn**	**18 25 37.8**	**-2.5**
SML	**Sawmill**	**5.68**	**20**	P	**Pn**	**18 25 37.8**	**-2.5**
DIV	**Divide**	**5.74**	**34**	P	**Pn**	**18 25 38.7**	**-2.3**
DT1	**Dutton Round H**	**5.78**	**260**	P	**Pn**	**18 25 39.2**	**-2.3**
PPLA	**Purkeypile**	**6.39**	**1**	P	**Pn**	**18 25 49.5**	**-0.6**
FALS	**False Pass**	**6.48**	**260**	Pn	**Pn**	**18 25 49.0**	**-2.1**
FALS				*e*Sn	**Sn**	**18 26 59.1**	**-4.9**
VRDI	**Verde Repeater**	**6.59**	**41**	P	Pn	18 25 49.9	-2.9
TT01	**Tatalina**	**6.66**	**345**	P	**Pn**	**18 25 53.4**	**-0.2**
KIAG	**Kiagna River**	**6.81**	**46**	P	**Pn**	**18 25 53.1**	**-2.7**
MCARA	**McCarthy VSAT**	**6.85**	**41**	P	**Pn**	**18 25 53.4**	**-2.9**
MCARA				S	**Sn**	**18 27 11.7**	**-1.5**
BALM	**Baldy**	**6.88**	**45**	P	**Pn**	**18 25 54.8**	**-2.1**
BALM	**Baldy**	**6.88**	**45**	P	**Pn**	**18 25 54.8**	**-2.1**
HARP	**HAARP**	**6.94**	**29**	P	**Pn**	**18 25 56.5**	**-1.0**
TRF	**Thorofare Moun**	**7.02**	**8**	P	**Pn**	**18 25 57.9**	**-0.9**
DHY	**Denali Highway**	**7.03**	**19**	P	**Pn**	**18 25 58.1**	**-0.7**
RND	**Reindeer**	**7.12**	**13**	P	**Pn**	**18 25 59.3**	**-0.7**
RND	**Reindeer**	**7.12**	**13**	P	**Pn**	**18 25 59.3**	**-0.7**
PAX	**Paxson**	**7.33**	**25**	P	**Pn**	**18 26 01.4**	**-1.5**
PAX	**Paxson**	**7.33**	**25**	P	**Pn**	**18 26 01.4**	**-1.5**
MCK	**McKinley**	**7.42**	**12**	P	**Pn**	**18 26 04.3**	**+0.2**
MCK	**McKinley**	**7.42**	**12**	P	**Pn**	**18 26 04.3**	**+0.2**
PNL	**Peninsula**	**7.55**	**60**	*e*Pn	**Pn**	**18 26 03.6**	**-2.2**
	302nm,0.4s						
PNL				*e*Sn	**Sn**	**18 27 27.7**	**-2.7**
MENT	**Mentasta**	**7.76**	**31**	*e*Pn	**Pn**	**18 26 07.2**	**-1.6**
DDM	**Donnelly Dome**	**7.96**	**21**	P	Pn	**18 26 10.8**	**-0.8**
AKUT	**Akutan**	**8.02**	**258**	*e*Pn	**Pn**	**18 26 09.2**	**-3.1**
NEA	**Nenana**	**8.23**	**10**	P	**Pn**	**18 26 14.6**	**-0.6**
WRH	**Wood River Hil**	**8.24**	**13**	P	**Pn**	**18 26 14.3**	**-1.0**
DOT	**Dot Lake**	**8.25**	**27**	*e*Pn	**Pn**	**18 26 13.9**	**-1.5**
	36nm,0.9s						
BCA3	**Beaver Creek A**	**8.44**	**35**	P	**Pn**	**18 26 15.8**	**-2.2**
CCB	**Clear Creek Bu**	**8.44**	**13**	P	**Pn**	**18 26 16.5**	**-1.6**
UNV	**Unalaska Valle**	**8.53**	**258**	*e*Pn	**Pn**	**18 26 16.1**	**-3.1**
	270nm,1.6s						
MLY	**Manley**	**8.57**	**5**	P	**Pn**	**18 26 18.0**	**-1.8**
MTBL	**Makushin Table**	**8.58**	**259**	P	Pn	18 26 16.4	-3.6
COLA	**College**	**8.66**	**13**	P	**Pn**	**18 26 19.5**	**-1.5**
COLA	**College**	**8.66**	**13**	P	**Pn**	**18 26 19.4**	**-1.5**
IL1	**Eielson Array**	**8.69**	**16**	P	**Pn**	**18 26 19.8**	**-1.6**
ILAR	**Eielson Array**	**8.69**	**16**	Pn	**Pn**	**18 26 20.0**	**-1.4**
ILAR				Sn	**Sn**	**18 27 54.6**	**-3.8**
ILAR	**Eielson Array**	**8.69**	**16**	Pn	**Pn**	**18 26 20.0**	**-1.4**
	19nm,0.3s,baz=203,slow=12,SNR=324						
ILAR				Sn	**Sn**	**18 27 54.6**	**-3.8**
	2.6nm,0.3s,baz=200,slow=23,SNR=3.5						
ILAR				LR		18 29 27.3	
	comp=Z,2μm,20.6s,baz=210,slow=36						
MDM	**Murphy Dome**	**8.69**	**12**	P	**Pn**	**18 26 19.9**	**-1.6**
SKAG	**Skagway**	**9.50**	**65**	*e*Pn	**Pn**	**18 26 32.4**	**-0.1**
	72nm,0.6s						
SKAG				*e*Sn	**Sn**	**18 28 15.8**	**-2.4**
EGAK	**Eagle**	**9.91**	**29**	*e*Pn	**Pn**	**18 26 35.8**	**-2.4**
	83nm,1.1s						
COLD	**Coldfoot**	**10.79**	**4**	*e*Pn	**Pn**	**18 26 47.8**	**-2.3**
	48nm,1.0s						
CRAG	**Craig**	**10.82**	**88**	*e*Pn	**Pn**	**18 26 48.9**	**-1.7**
	95nm,1.4s						
WRAK	**Wrangell Islan**	**11.06**	**82**	*e*Pn	**Pn**	**18 26 52.6**	**-1.3**
	6.7nm,0.7s						
TNA	**Tin City**	**11.75**	**327**	*e*Pn	**Pn**	**18 27 04.0**	**+0.8**
	56nm,1.0s						
DIB	**Dawson Inlet,**	**11.91**	**98**	Pn	**Pn**	**18 27 04.4**	**-1.1**
	SNR=25						
DIB				T	T	18 39 09.1	
	SNR=419						
GAMB	**Gambell**	**12.03**	**315**	*e*Pn	**Pn**	**18 27 07.5**	**+0.4**
	18nm,1.0s						
DLBC	**Dease Lake**	**12.15**	**72**	*e*Pn	**Pn**	**18 27 07.2**	**-1.6**
DLBC				Sn	**Sn**	**18 29 22.0**	**-1.2**
DLBC	**Dease Lake**	**12.15**	**72**	Pn	**Pn**	**18 27 08.0**	**-0.9**
	1.1nm,0.3s,baz=254,slow=11,SNR=11						
DLBC				Sn	**Sn**	**18 29 22.0**	**-1.2**
	0.4nm,0.3s,baz=243,slow=19,SNR=4.2						
DLBC				LR	LR	18 31 31.9	
	comp=Z,5μm,18.4s,baz=280,slow=36						
INK	**Inuvik**	**14.59**	**28**	Pn	**Pn**	**18 27 40.2**	**-1.7**
INK				Sn	**S**	**18 30 41.9**	**+0.7**
INK	**Inuvik**	**14.59**	**28**	Pn	**Pn**	**18 27 40.2**	**-1.7**
	0.3nm,0.3s,baz=202,slow=14,SNR=59						
INK				Sn	**S**	**18 30 41.9**	**+0.7**
	baz=193,slow=18,SNR=3.1						
INK				LR	LR	18 34 56.0	
	comp=Z,7μm,18.0s,baz=221,slow=44						
BBB	**Bella Bella**	**14.75**	**97**	Pn	**Pn**	**18 27 43.2**	**-1.0**
BBB				Sn	Sn	18 30 33.2	+6.7
BBB	**Bella Bella**	**14.75**	**97**	Pn	**Pn**	**18 27 43.2**	**-1.0**
	0.1nm,0.3s,baz=298,slow=16,SNR=2.4						
BBB				Sn	Sn	18 30 33.2	+6.7
	0.1nm,0.3s,baz=270,slow=20,SNR=2.4						
BBB				LR	LR	18 32 02.6	
	comp=Z,2μm,19.1s,baz=181,slow=32						
AMKA	**Amchitka**	**17.39**	**265**	*e*Pn	**Pn**	**18 28 16.0**	**-2.1**
PGC	**Sidney**	**19.13**	**102**	*e*P	**P**	**18 28 35.5**	**-2.8**
	1.8nm,1.0s						
OBC	**Olympics--Boni**	**19.15**	**104**	P	**Pn**	**18 28 41.2**	**+1.4**
VDB	**Vedder Mountai**	**19.65**	**100**	P	**P**	**18 28 44.8**	**+0.7**
NLWA	**Neilton Lookou**	**19.66**	**106**	*e*P	**P**	**18 28 44.2**	**-0.1**
	85nm,1.4s						
YKW3	**Yellowknife Ar**	**19.82**	**57**	*e*P	**P**	**18 28 44.8**	**-1.0**
	2.1nm,1.3s						
YKA	**Yellowknife Ar**	**19.83**	**57**	P	**P**	**18 28 45.

MOD	Modoc	25.24	112	eP		P	18 29 40.6	-0.7		comp=Z,60nm,1.2s	
B15A	Bradely Ranch,	25.30	92	⇓P		P	18 29 41.8	0.0		baz=25,SNR=34	
F12A	Elk City	25.33	99	⇑P		P	18 29 42.2	+0.1		baz=25,SNR=32	
MSO	Missoula	25.40	96	eP		P	18 29 41.9	-0.7		comp=Z,16nm,1.3s	
MSO	Missoula	25.40	96	⇓P		P	18 29 42.6	-0.1		baz=25,SNR=6.5	
SLMT	Seeley Lake	25.40	95	eP		P	18 29 42.9	+0.1		comp=Z,29nm,1.1s	
D14A	Greenough	25.49	95	⇓P		P	18 29 43.5	0.0		baz=25,SNR=15	
E13A	Victor	25.50	97	⇓P		P	18 29 43.4	-0.2		baz=25,SNR=12	
C15A	Salmond Ranch,	25.58	93	⇓P		P	18 29 44.3	-0.1		baz=25,SNR=41	
B16A	M & M Farms, S	25.72	91	⇑P		P	18 29 45.4	-0.2		baz=25,SNR=5.8	
CHMT	Chamberlain Mo	25.73	95	eP		P	18 29 45.1	-0.7		comp=Z,9.4nm,1.2s	
WVOR	Wild Horse Val	25.73	109	eP		P	18 29 45.4	-0.3			
WVOR					pmax	pmax				comp=Z,74nm,1.1s	
WVOR	Wild Horse Val	25.73	109	eP		P	18 29 45.4	-0.3		comp=Z,74nm,1.1s	
F13A	Darby	25.82	98	⇑P		P	18 29 46.6	+0.1		baz=26,SNR=18	
E14A	Clinton	25.89	96	⇓P		P	18 29 47.0	-0.2		baz=26,SNR=13	
A17A	Triple J Farms	25.99	89	⇑P		P	18 29 47.9	-0.1		baz=26,SNR=16	
C16A	Fuhringer Ranc	26.05	92	⇓P		P	18 29 48.3	-0.3		baz=26,SNR=5.6	
D15A	Lincoln	26.06	94	⇑P		P	18 29 48.6	-0.1		baz=26,SNR=15	
B17A	L&G Farms, Che	26.29	90	⇓P		P	18 29 50.5	-0.2		baz=26,SNR=6.9	
G13A	Cobalt	26.31	99	⇑P		P	18 29 51.4	+0.4		baz=26,SNR=19	
H12A	Diamond D Ranc	26.32	101	⇓P		P	18 29 51.4	+0.2		baz=26,SNR=22	
F14A	Wisdom	26.33	97	⇑P		P	18 29 50.9	-0.3		baz=26	
E15A	Deer Lodge	26.36	96	⇓P		P	18 29 51.2	-0.2		baz=26	
A18A	Metzger Ranch,	26.47	89	⇑P		P	18 29 51.9	-0.4		baz=26	
MFID	Camas Ranch	26.55	104	eP		P	18 29 52.8	-0.3		comp=Z,23nm,1.0s	
MFID	Camas Ranch	26.55	104	⇓P		P	18 29 53.6	+0.5		baz=26,SNR=17	
H13A	Challis	26.64	100	⇓P		P	18 29 54.1	+0.2		baz=26,SNR=26	
G14A	Jackson	26.64	98	⇓P		P	18 29 54.4	+0.3		baz=26,SNR=8.5	
I12A	Atlanta	26.67	103	⇓P		P	18 29 54.6	+0.3		baz=26,SNR=23	
BEKR	Beckworth	26.72	115	eP		P	18 29 53.5	-1.3		comp=Z,12nm,1.2s	
F15A	Butte	26.80	96	⇑P		P	18 29 55.5	+0.1		baz=26,SNR=11	
B18A	Beardsley Farm	26.80	89	⇓P		P	18 29 55.4	+0.1		baz=26	
E16A	East Helena	26.83	94	⇓P		P	18 29 55.9	+0.3		baz=26,SNR=8.9	
LRM	Limekiln Ridge	26.83	96	eP		P	18 29 55.5	-0.3		comp=Z,91nm,1.1s	
D17A	Six Diamond Ra	27.01	92	⇑P		P	18 29 57.0	-0.2		baz=27,SNR=8.9	
EGMT	Eagleton	27.02	90	eP		P	18 29 56.3	-1.0		comp=Z,34nm,1.2s	
EGMT	Eagleton	27.02	90	⇑P		P	18 29 57.1	-0.2		baz=27,SNR=9.0	
DLMT	Dillon	27.04	97	eP		P	18 29 56.6	-1.0		comp=Z,28nm,1.4s	
A19A	Klindworth Far	27.08	88	⇑P		P	18 29 58.0	+0.2		baz=27,SNR=11	
H14A	Leadore	27.09	99	⇑P		P	18 29 58.3	+0.3		baz=27	
I13A	Wildhorse Cree	27.14	101	⇑P		P	18 29 59.2	+0.6		baz=27,SNR=30	
HLID	Hailey	27.21	102	eP		P	18 29 58.6	-0.5		comp=Z,11nm,1.0s	
HLID	Hailey	27.21	102	⇑P		P	18 29 59.6	+0.5		baz=27,SNR=14	
G15A	Dillon	27.22	98	⇑P		P	18 29 59.3	+0.1		baz=27,SNR=9.7	
B19A	Brinkman Farms	27.23	89	⇓P		P	18 29 59.4	+0.3		baz=27,SNR=16	
MCMT	McKenzie Canyo	27.24	99	eP		P	18 29 58.9	-0.5		comp=Z,5.6nm,1.0s	
F16A	Kennard Place,	27.31	96	⇓P		P	18 30 00.0	+0.1		baz=27	
BOZ	Bozeman (W)	27.39	96	eP		P	18 30 00.7	0.0			
BOZ					pmax	pmax				comp=Z,2.0nm,0.3s	
BOZ	Bozeman (W)	27.39	96	eP		P	18 30 00.7	0.0		comp=Z,1.6nm,0.3s	
J13A	Cove Ranch, Pi	27.45	102	⇑P		P	18 30 01.7	+0.4		baz=27,SNR=7.1	
WCN	Washoe City	27.45	115	eP		P	18 30 01.4	+0.1			
WCN					pmax	pmax				comp=Z,14nm,0.9s	
WCN	Washoe City	27.45	115	eP		P	18 30 01.4	+0.1		comp=Z,14nm,0.9s	
D18A	Linhart Farms,	27.47	92	⇓P		P	18 30 01.8	+0.4		baz=27,SNR=7.3	
H15A	Lima	27.48	99	⇑P		P	18 30 01.8	+0.2		baz=27,SNR=11	
I14A	Mackay	27.49	101	⇑P		P	18 30 01.9	+0.2		baz=27,SNR=12	
G16A	Moss Hill, Enn	27.56	97	⇑P		P	18 30 02.5	+0.3		baz=27,SNR=7.9	
A20A	Cobblestone Ra	27.56	87	⇓P		P	18 30 02.1	0.0		baz=27	
C19A	Slack Wire Ran	27.58	90	⇓P		P	18 30 02.8	+0.5		baz=27,SNR=16	
B20A	Solberg Farm,	27.75	88	⇑P		P	18 30 03.9	+0.1		baz=27,SNR=7.9	
F17A	Fitzpatrick Pl	27.77	95	⇑P		P	18 30 04.0	-0.1		baz=27,SNR=8.2	
E18A	Harlowton	27.78	93	⇓P		P	18 30 04.2	+0.1		baz=28,SNR=12	
SEY	Seymchan	27.79	306	⇓/P		P	18 30 03.5	-0.4			
J14A	Carey	27.85	102	⇑P		P	18 30 05.2	+0.3		baz=28,SNR=11	
BMN	Battle Mountai	27.91	110	eP		P	18 30 06.2	+0.8			
BMN					pmax	pmax				comp=Z,14nm,1.3s	
BMN	Battle Mountai	27.91	110	eP		P	18 30 06.2	+0.8		comp=Z,14nm,1.3s	
I15A	Monteview	27.97	100	⇓P		P	18 30 06.0	+0.1		baz=28	
FFC	Flin Flon	27.98	72	i P		P	18 30 09.2	+3.5			
FFC	Flin Flon	27.98	72	eP		P	18 30 05.8	+0.1			
PET	Petropavlovsk	27.99	284	eP		P	18 30 06.0	+0.2			
PET				eS		S	18 34 50.1	+2.0			
PET					pmax	pmax				comp=Z,59nm,1.2s	
PET					pmax	pmax				comp=Z,300nm,4.6s	
PET					MLR	MLR				comp=Z,2µm,19.0s	
D19A	Cripps Ranch,	28.00	91	⇑P		P	18 30 06.1	+0.1		baz=28	
QLMT	Earthquake Lak	28.01	97	eP		P	18 30 05.4	-1.0		comp=Z,0.3nm,0.2s	
G17A	Pierce Place,	28.09	96	⇓P		P	18 30 07.0	+0.1		baz=28	
CMB	Columbia Colle	28.12	118	eP		P	18 30 07.0	-0.1			
CMB					pmax	pmax				comp=Z,20nm,1.3s	
CMB	Columbia Colle	28.12	118	eP		P	18 30 07.0	-0.1		comp=Z,20nm,1.3s	
RES	Resolute Bay	28.15	28	eP		P	18 30 06.4	-0.6		comp=Z,10nm,0.8s	
RES	Resolute Bay	28.15	28	P		P	18 30 07.7	+0.7		comp=Z,2.7nm,0.6s,baz=257,slow=13,SNR=12	
RES					LR	LR	18 43 21.9				
C20A	Veseth Ranch,	28.17	89	⇓P		P	18 30 07.5	0.0		comp=Z,3µm,19.9s,baz=83,slow=41	
H16A	Russell Place,	28.19	97	⇑P		P	18 30 08.0	0.0		baz=28,SNR=12	
F18A	Big Timber	28.29	94	⇓P		P	18 30 09.1	+0.4		baz=28,SNR=6.2	
B21A	Ellsworth Farm	28.31	87	⇓P		P	18 30 08.9	+0.1		baz=28	
YMR	Madison River	28.37	97	eP		P	18 30 08.8	-0.8		comp=Z,32nm,1.2s	
D20A	Manuel Ranch,	28.45	90	⇓P		P	18 30 10.3	+0.2		baz=28,SNR=12	
PEA0B	Petropavlovsk-	28.47	284	eP		P	18 30 09.0	-1.1			
PETK	Petropavlovsk-	28.47	284	P		P	18 30 09.1	-1.0			
PETK	Petropavlovsk-	28.47	284	P		P	18 30 09.1	-1.0			
PETK	Petropavlovsk-	28.47	284	P		P	18 30 09.1	-1.0		comp=Z,5.1nm,0.7s,baz=78,slow=14,SNR=19	
PETK					LR	LR	18 41 59.7				
E19A	Rath Farm, Rou	28.47	92	⇑P		P	18 30 10.6	+0.3		comp=Z,1µm,19.5s,baz=79,slow=38	
C21A	Desert Coulee	28.61	88	⇓P		P	18 30 11.5	0.0		baz=28,SNR=13	
ELK	Elko	28.72	107	eP		P	18 30 13.0	+0.3		baz=28	
ELK	Elko	28.72	107	P		P	18 30 13.9	+1.2		comp=Z,13nm,1.0s	
ELK					LR	LR	18 39 52.8			comp=Z,10.0nm,0.9s,baz=312,slow=7.6,SNR=25	
G18A	Lazy EL Ranch,	28.74	95	⇑P		P	18 30 12.8	+0.1		comp=Z,1µm,18.6s,baz=311,slow=33	
F19A	Roth Farm, Mol	28.75	93	⇓P		P	18 30 13.1	+0.3		baz=28	
H17A	Grant Village	28.76	97	⇓P		P	18 30 13.8	+0.8		baz=28,SNR=6.4	
E20A	Meyer Farm, Mu	28.81	91	⇑P		P	18 30 13.5	+0.2		baz=28,SNR=9.8	
NVAR	Mina Array Bea	28.85	114	P		P	18 30 14.0	+0.1		baz=28,SNR=7.7	
NVAR				PcP		PcP	18 33 23.8	+1.0			
NVAR				ScP		ScP	18 37 03.9	+2.0			
NVAR	Mina Array Bea	28.85	114	P		P	18 30 14.0	+0.1			
NVAR				PcP		PcP	18 33 23.8	+1.0		comp=Z,13nm,0.9s,baz=303,slow=8.0,SNR=65	
NVAR				ScP		ScP	18 37 03.9	+2.0		comp=Z,1.3nm,0.7s,baz=304,slow=2.7,SNR=5.4	
NVAR				LR		LR	18 40 00.6			comp=Z,1.9nm,1.0s,baz=285,slow=1.9,SNR=8.0	
IMW	Indian Meadow	28.88	98	eP		P	18 30 14.5	+0.3		comp=Z,2µm,18.4s,baz=46,slow=33	
DCID1	Drake Creek	28.95	99	P		P	18 30 10.4	-4.3		comp=Z,8.2nm,0.9s	
H18A	Shoshone NF, C	29.08	96	⇑P		P	18 30 15.7	-0.2			
D21A	La Casta Ranch	29.10	89	⇓P		P	18 30 15.7	-0.2		baz=29	
TPAW	Teton Pass	29.14	99	eP		P	18 30 16.4	-0.1		comp=Z,11nm,1.2s	
MLAC	Mammoth Lakes	29.20	116	⇑P		P	18 30 17.3	+0.3		baz=29	
F20A	Billings	29.22	93	⇑P		P	18 30 17.0	+0.1		baz=29	
C22A	Vida	29.32	87	⇑P		P	18 30 18.2	+0.4		baz=29,SNR=8.5	
B23A	Brockton	29.41	86	⇑P		P	18 30 18.4	-0.2		baz=29	
H19A	Powell	29.46	95	⇓P		P	18 30 19.0	-0.1		baz=29	
D22A	Cohagen	29.50	89	⇓P		P	18 30 19.8	+0.4		baz=29,SNR=8.0	
G20A	Bridger	29.54	94	⇓P		P	18 30 19.9	+0.1		baz=29	
I18A	Diamond G Ranc	29.63	97	⇑P		P	18 30 20.9	+0.2		baz=29	
C23A	Lambert	29.68	87	⇓P		P	18 30 21.3	+0.3		baz=29,SNR=11	
J18A	Kendall Valley	29.84	98	⇓P		P	18 30 22.8	+0.1		baz=30,SNR=9.1	
I19A	Meeteetse	29.86	96	⇓P		P	18 30 22.6	-0.2		baz=30	
TIN	Tinemaha	29.95	116	⇑P		P	18 30 24.5	+1.0		baz=30	
D23A	Lindsay	30.03	88	⇓P		P	18 30 24.3	+0.2		baz=30	
E22A	Miles City	30.05	90	⇓P		P	18 30 24.3	0.0		baz=30	
HWUT	Hardware Ranch	30.08	102	eP		P	18 30 24.6	-0.1		comp=Z,9.2nm,0.9s	
G21A	Lodge Grass	30.10	93	⇑P		P	18 30 24.8	+0.1		baz=30	
H20A	Greybull	30.12	94	⇑P		P	18 30 24.7	-0.2		baz=30	
K18A	Tolman Ranch,	30.21	99	⇓P		P	18 30 25.8	-0.1		baz=30	
F22A	Rosebud	30.28	91	⇓P		P	18 30 26.1	-0.2		baz=30	
R11A	Troy Canyon, C	30.30	111	⇓P		P	18 30 26.9	+0.2		baz=30,SNR=40	
J19A	Crowheart	30.33	97	⇓P		P	18 30 26.6	-0.3		baz=30	
E23A	Ismay	30.37	89	⇓P		P	18 30 27.2	+0.1		baz=30	
BW06	Boulder Array	30.39	99	eP		P	18 30 26.5	-1.0		comp=Z,8.8nm,1.0s	
PDAR	Pinedale Array	30.39	99	P		P	18 30 27.2	-0.3			
PDAR				ScP		ScP	18 37 08.0	+1.2			
PDAR	Pinedale Array	30.39	99	P		P	18 30 27.2	-0.3		comp=Z,5.7nm,0.9s,baz=315,slow=4.3,SNR=38	
PDAR				ScP		ScP	18 37 08.0	+1.2		comp=Z,0.4nm,0.8s,baz=316,slow=2.5,SNR=3.7	
I20A	Worland	30.40	95	⇓P		P	18 30 27.1	-0.3		baz=30	
DUG	Dugway	30.40	106	eP		P	18 30 27.6	+0.1			
DUG				e			18 33 26.5				
DUG					pmax	pmax				comp=Z,14nm,1.2s	
DUG	Dugway	30.40	106	eP		P	18 30 27.6	+0.1		comp=Z,14nm,1.2s	
DUG				ePcP		PcP	18 33 26.5	-0.1			
DUG	Dugway	30.40	106	⇑P		P	18 30 27.7	+0.1			
GRAC	Grapevine Rang	30.42	115	⇓P		P	18 30 28.4	+0.8		baz=30,SNR=8.5	
SMMC	Simmler	30.47	120	⇑P		P	18 30 29.1	+1.1		baz=30,SNR=12	
VES	Vestal, Richgr	30.49	119	⇑P		P	18 30 28.6	+0.5		baz=30	
D24A	Glendive	30.55	87	⇑P		P	18 30 29.2	+0.6		baz=30	
H21A	Big Horn, Sher	30.56	93	⇑P		P	18 30 29.2	+0.4		baz=30,SNR=11	
M17A	Scullys Gap (B	30.66	101	⇑P		P	18 30 30.3	+0.4		baz=30	
K19A	Absolon Red Bu	30.74	98	⇑P		P	18 30 30.4	-0.1		baz=30	
F23A	Volborg	30.79	90	⇓P		P	18 30 30.6	-0.2		baz=30	
J20A	Shoshoni	30.81	96	⇓P		P	18 30 31.2	+0.1		baz=30,SNR=17	
JLU	Joanelle	30.84	104	eP		P	18 30 31.2	-0.3		comp=Z,7.2nm,1.0s	
DAC	Darwin (Calif)	30.88	116	eP		P	18 30 31.9	+0.1			
DAC					pmax	pmax				comp=Z,55nm,1.5s	
DAC	Darwin (Calif)	30.88	116	eP		P	18 30 31.9	+0.1		comp=Z,55nm,1.5s	
PKM	Peak Mountain	30.90	121	⇑P		P	18 30 32.6	+0.7		baz=30	
ISA	Isabella	30.93	118	eP		P	18 30 30.7	-1.4			
ISA					pmax	pmax				comp=Z,18nm,1.0s	
ISA	Isabella	30.93	118	eP		P	18 30 30.7	-1.4		comp=Z,18nm,1.0s	
ISA	Isabella	30.93	118	⇓P		P	18 30 32.6	+0.5		baz=31,SNR=11	
I21A	Big Trails, Te	30.95	95	⇓P		P	18 30 31.8	-0.5		baz=31,SNR=8.1	
M18A	Lyman	31.02	101	⇑P		P	18 30 33.1	0.0		baz=31	
DAU	Daniels Canyon	31.08	104	eP		P	18 30 34.0	+0.3			
DAU					pmax	pmax				comp=Z,10.0nm,0.9s	
DAU	Daniels Canyon	31.08	104	eP		P	18 30 34.0	+0.3		comp=Z,10nm,0.9s	
FURC	Furnace Creek,	31.09	115	⇑P		P	18 30 33.9	+0.5		baz=31,SNR=9.2	
MPMC	Manual Prospec	31.10	116	⇑P		P	18 30 34.0	+0.2		baz=31,SNR=22	
G23A	Biddle	31.12	91	⇑P		P	18 30 33.7	0.0		baz=31	
K20A	Yellowstone Ra	31.13	98	⇓P		P	18 30 33.5	-0.4		baz=31	
J21A	Lysite	31.16	96	⇑P		P	18 30 33.9	-0.3		baz=31,SNR=8.5	
F24A	Ekalaka	31.25	89	⇑P		P	18 30 34.8	0.0		baz=31,SNR=6.0	
I22A	9 Mile Ranch,	31.34	94	⇓P		P	18 30 35.6	-0.2		baz=31	
M19A	Rock Springs	31.46	100	⇓P		P	18 30 36.9	0.0		baz=31	
LRMC	Laurel Mountai	31.46	117	⇓P		P	18 30 37.4	+0.5		baz=31,SNR=9.7	
L20A	Wamsutter	31.56	98	⇑P		P	18 30 37.9	+0.1		baz=31	
G24A	Alzada	31.58	90	⇓P		P	18 30 37.8	+0.1		baz=31	
K21A	Alcova	31.74	97	⇑P		P	18 30 39.2	-0.2		baz=31,SNR=9.5	
EDW2	Edwards Air Fo	31.79	118	⇓P		P	18 30 40.0	+0.3		baz=31,SNR=6.5	
SHOC	Shoshone	31.83	115	⇑P		P	18 30 40.5	+0.5		baz=32	
ARUT	Antelope Range	31.84	109	eP		P	18 30 41.0	+0.8			
ARUT					pmax	pmax				comp=Z,12nm,0.8s	
ARUT	Antelope Range	31.84	109	eP		P	18 30 41.0	+0.8		comp=Z,12nm,0.8s	
BLG	Laguna Peak	31.90	120	⇓P		P	18 30 41.4	+0.9		baz=32	
MVU	Marysvale	31.95	107	eP		P	18 30 41.8	+0.5		comp=Z,25nm,1.1s	
MSU	Marysvale	31.96	107	eP		P	18 30 41.6	+0.2			
MSU				e			18 33 31.3				
MSU					pmax	pmax				comp=Z,33nm,1.3s	
MSU	Marysvale	31.96	107	eP		P	18 30 41.5	+0.2		comp=Z,33nm,1.3s	
MSU				ePcP		PcP	18 33 31.3	+0.4			
GSC	Goldstone	32.04	116	eP		P	18 30 41.2	-0.7			
GSC					pmax	pmax				comp=Z,30nm,1.5s	
GSC	Goldstone	32.04	116	eP		P	18 30 41.2	-0.7		comp=Z,30nm,1.5s	
GSC	Goldstone	32.04	116	⇓P		P	18 30 42.5	+0.6		baz=32,SNR=6.0	
CCUT	Cedar City	32.06	110	eP		P	18 30 42.5	+0.3		comp=Z,11nm,1.0s	
L21A	Rawlins	32.13	98	⇓P		P	18 30 42.5	-0.3		baz=32,SNR=9.2	
K22A	Casper	32.13	96	⇑P		P	18 30 41.8	-1.0		baz=32	
M21A	Separation Pea	32.37	98	⇑P		P	18 30 44.7	-0.2		baz=32,SNR=14	
TUQ	Turquoise Moun	32.37	115	⇓P		P	18 30 45.3	+0.4		baz=32,SNR=10	
SRU	San Rafael	32.41	105	⇑P		P	18 30 45.5	+0.3		baz=32	
N20A	Spence Gulch,	32.41	100	⇓P		P	18 30 45.7	+0.4		baz=32	
BFSC	Mount Baldy Ra	32.47	119	⇑P		P	18 30 46.5	+0.8		baz=32,SNR=14	
RSSD	Black Hills	32.55	92	eP		P	18 30 45.9	-0.5			
RSSD					pmax	pmax				comp=Z,13nm,1.0s	
RSSD	Black Hills	32.55	92	eP		P	18 30 45.9	-0.5		comp=Z,13nm,1.0s	
K23A	Bowen Ranch, D	32.56	95	⇑P		P	18 30 46.5	0.0		baz=32,SNR=5.5	
L22A	Ellis Ranch, M	32.59	97	⇑P		P	18 30 47.0	+0.1		baz=32,SNR=6.3	
HEC	Hector,Ludlow	32.65	116	⇑P		P	18 30 48.1	+0.9		baz=32,SNR=11	
P19A	Cripple Cowboy	32.87	102	⇑P		P	18 30 49.4	+0.1		baz=32	
N21A	Black Mountain	32.87	99	⇓P		P	18 30 49.0	-0.3		baz=32	
O20A	White River Ci	32.91	101	⇑P		P	18 30 49.4	-0.2		baz=33	
M22A	Cedar Creek Ra	32.93	98	⇓P		P	18 30 49.9	+0.1		baz=33	
L23A	Garrett	32.94	96	⇑P		P	18 30 49.9	0.0		baz=33,SNR=17	
GMRC	Granite Mounta	33.02	116	⇓P		P	18 30 51.2	+0.7		baz=33,SNR=13	
K24A	Anderson Ranch	33.03	94	⇑P		P	18 30 50.6	+0.1		baz=33	
LDFC	Landfair	33.06	115	eP		P	18 30 51.6	+0.7		comp=Z,82nm,1.2s	
SCI	San Clemente I	33.07	121	⇓P		P	18 30 51.9	+1.1		baz=33	
P20A	De Beque	33.28	102	⇓P		P	18 30 52.9	+0.1		baz=33	
M23A	Laramie	33.37	97	⇓P		P	18 30 53.5	-0.2		baz=33	
ULM	Lac du Bonnet	33.41	76	P		P	18 30 54.4	+0.7			
ULM	Lac du Bonnet	33.41	76	P		P	18 30 54.4	+0.7		comp=Z,12nm,0.9s,baz=295,slow=10,SNR=8.3	
ULM					LR	LR	18 44 39.5				
N22A	Wattenberg Ran	33.42	98	⇓P		P	18 30 54.4	+0.3		comp=Z,2µm,18.6s,baz=144,slow=37	
U15A	North Rim	33.47	110	⇓P		P	18 30 54.9	+0.3		baz=33	
BELC	Belle Mtn. Jos	33.48	117	⇓P		P	18 30 55.0	+0.5		baz=33,SNR=8.2	
NEE2	Needles Airpor	33.56	114	⇑P		P	18 30 55.3	+0.2		baz=33,SNR=9.3	
PFO	Pinyon Flat Ob	33.57	118	eP		P	18 30 54.7	-0.6		baz=33	
PFO	Pinyon Flat Ob	33.57	118	LR		LR	18 42 57.8			comp=Z,31nm,1.4s	
PFO	Pinyon Flat Ob	33.57	118	⇓P		P	18 30 55.8	+0.5		comp=Z,1µm,18.3s,baz=326,slow=34	
N23A	Red Feather La	33.64	98	⇑P		P	18 30 55.6	-0.4		baz=33,SNR=6.0	
W13A	Hualapai Mount	33.67	113	⇑P		P	18 30 56.5	+0.2		baz=33	
Q20A	Ridgley Place,	33.72	102	⇓P		P	18 30 56.6	0.0		baz=33,SNR=17	
S18A	Hurst Farm, Bl	33.73	106	⇓P		P	18 30 57.0	+0.2		baz=33	
IRM	Iron Mountain	33.77	116	⇑P		P	18 30 57.6	+0.6		baz=33,SNR=6.5	
P21A	Newcastle	33.77	101	⇑P		P	18 30 57.1	0.0		baz=33,SNR=45	
O22A	Kremmling	33.82	99	⇓P		P	18 30 57.6	-0.1		baz=33	
BC3	Big Chuckawall	34.02	116	⇓P		P	18 30 59.6	+0.4		baz=34	
P22A	Eagle	34.10	100	⇓P		P	18 31 00.2	+0.1		baz=34,SNR=9.2	
O23A	Lake Granby, G	34.13	99	⇑P		P	18 31 00.4	+0.1		baz=34	
MONP	Monument Peak	34.17	118	⇑P		P	18 31 01.2	+0.6		baz=34,SNR=7.5	
PDMCI	Parker Dam,Lak	34.17	114	⇓P		P	18 31 01.1	+0.7		baz=34,SNR=11	
R20A	Redvale	34.23	103	⇓P		P	18 31 01.4	+0.2		baz=34,SNR=7.4	
SMCO	Snowmass	34.28	101	eP		P	18 31 02.0	+0.2		baz=34,SNR=6.2	
ALE	Alert	34.39	13	P		P	18 31 02.2	+0.4		comp=Z,6.9nm,1.3s	
Y12C	Blythe	34.41	115	⇑P		P	18 31 03.3	+0.9		comp=Z,175nm,1.0s,SNR=18	
SWSC	Sam W. Stewart	34.43	118	⇓P		P	18 31 03.2	+0.6		baz=34,SNR=8.9	
DVTC	Desert V Tower	34.51	118	⇑P		P	18 31 04.4	+0.9		baz=34	
AGMN	Agassiz Nation	34.52	79	eP		P	18 31 03.8	+0.6		baz=34,SNR=5.4	
Q22A	Crested Butte,	34.54	101	⇑P		P	18 31 03.8	-0.1		comp=Z,25nm,0.9s	
TIXI	Tiksi	34.54	327	⇑/P		P	18 31 02.9	-0.3		baz=34	
TIXI					pmax	pmax				comp=Z,24nm,1.2s	
TIXI					MLR	MLR				comp=Z,1µm,12.0s	
WUAZ	Wupatki	34.64	110	eP		P	18 31 05.6	+0.9		comp=Z,26nm,1.1s	
WUAZ	Wupatki	34.64	110	⇑P		P	18 31 04.9	+0.3		baz=34,SNR=6.8	
P23A	Jefferson	34.76	99	⇓P		P	18 31 06.2	+0.4		baz=34,SNR=5.7	
GLA	Glamis	34.82	116	eP		P	18 31 06.2	+0.2			
GLA					pmax	pmax				comp=Z,58nm,1.4s	
GLA	Glamis	34.82	116	eP		P	18 31 06.2	+0.2		comp=Z,58nm,1.4s	
GLA	Glamis	34.82	116	⇑P		P	18 31 06.6	+0.5		baz=34,SNR=9.0	
Y14A	Wickenburg	35.03	113	⇓P		P	18 31 08.2	+0.3		baz=35,SNR=12	

Q23A Hartsel 35.09 100 ⇑P P 18 31 08.5 -0.2
baz=35
Q24A Divide 35.43 99 ⇑P P 18 31 11.8 +0.2
baz=35
X16A Lo Mia Camp, P 35.45 111 ⇓P P 18 31 12.4 +0.7
baz=35,SNR=14
Z14A Wintersburg 35.51 114 ⇓P P 18 31 12.8 +0.9
baz=35,SNR=5.3
113A Mohawk Valley, 35.58 115 ⇓P P 18 31 13.0 +0.5
baz=35,SNR=9.1
N27A Anderson Farm, 35.58 95 ⇓P P 18 31 12.6 0.0
baz=35
P25A Willow Gulch B 35.58 98 ⇓P P 18 31 12.9 +0.2
baz=35,SNR=6.5
T22A Edith 35.89 103 ⇑P P 18 31 15.4 0.0
baz=36
U21A Nageezi 35.92 105 ⇓P P 18 31 16.1 +0.4
baz=36,SNR=7.5
Q25A Bedland, Calha 35.96 99 ⇓P P 18 31 16.1 +0.1
baz=36
V20A Brimhall 35.96 106 ⇓P P 18 31 16.5 +0.5
baz=36,SNR=6.0
R24A Sanders Place, 35.97 100 ⇑P P 18 31 16.2 0.0
baz=36,SNR=10
SDCO Great Sand Dun 36.11 101 *e*P P 18 31 18.4 +1.0
comp=Z,7.4nm,1.2s
X18A Snowflake 36.14 109 ⇑P P 18 31 17.7 +0.1
baz=36
T23A Casias Ranch, 36.34 102 ⇓P P 18 31 19.4 0.0
baz=36
S24A Houchin Ranch, 36.34 101 ⇑P P 18 31 19.4 0.0
baz=36,SNR=12
Q26A Hugo 36.35 98 ⇑P P 18 31 19.2 -0.1
baz=36
U22A Llaves 36.39 104 ⇓P P 18 31 19.8 +0.1
baz=36
W20A Ramah 36.45 107 ⇓P P 18 31 20.4 +0.2
baz=36,SNR=7.8
R25A Fountain Ranch 36.48 99 ⇑P P 18 31 20.8 +0.3
baz=36,SNR=9.4
V22A San Miguel Ran 36.70 105 ⇓P P 18 31 22.3 -0.1
baz=36,SNR=7.9
214A Organ Pipe Nat 36.71 115 ⇑P P 18 31 23.0 +0.8
baz=36,SNR=15
S25A Robets Cordova 36.75 100 ⇓P P 18 31 22.4 -0.4
baz=36
KSCO Kaye Shedlock' 36.78 97 ⇑P P 18 31 23.0 +0.1
baz=36
U23A El Rito 36.78 103 ⇓P P 18 31 23.6 +0.6
baz=36,SNR=10
R26A Arlington 36.83 98 ⇑P P 18 31 23.6 +0.2
baz=36,SNR=7.4
T24A Torres, Weston 36.84 101 ⇓P P 18 31 24.0 +0.3
baz=36,SNR=11
X20A Quemado 36.90 108 ⇓P P 18 31 24.3 +0.2
baz=36
ECSD EROS Data Cent 36.91 86 P P 18 31 23.0 -0.8
comp=Z,7.1nm,1.0s
EYMN Ely 37.09 77 *e*P P 18 31 25.3 0.0
comp=Z,37nm,0.8s
T25A Trinidad 37.15 101 ⇓P P 18 31 26.5 +0.4
baz=37,SNR=7.6
R27A Eads 37.20 98 ⇑P P 18 31 26.7 +0.2
baz=37,SNR=5.7
V23A Ortiz Mt. (NFS 37.22 104 ⇑P P 18 31 26.9 +0.1
baz=37
S26A Kim 37.31 99 ⇓P P 18 31 27.8 +0.4
baz=37,SNR=13
X21A Alamocita Cree 37.35 107 ⇑P P 18 31 28.4 +0.5
baz=37,SNR=18
Y20A Horse Springs, 37.45 108 ⇑P P 18 31 29.1 +0.3
baz=37
TUC Tucson 37.45 112 *e*P P 18 31 29.1 +0.5
TUC pmax pmax
comp=Z,5.0nm,1.5s
TUC Tucson 37.45 112 *e*P P 18 31 29.1 +0.5
comp=Z,5.1nm,1.5s
T26A Comanche Natio 37.57 100 ⇓P P 18 31 30.0 +0.3
baz=37,SNR=8.1
ANMO Albuquerque 37.67 105 *e*P P 18 31 30.3 -0.3
comp=Z,12nm,1.5s
ANMO PcP **PcP** 18 33 49.1 +1.7
ANMO ScP **ScP** 18 37 34.8 +2.1
ANMO Albuquerque 37.67 105 PcP **PcP** 18 33 49.1 +1.7
comp=Z,2.3nm,0.8s,baz=348,slow=3.5,SNR=3.5
ANMO ScP **ScP** 18 37 34.8 +2.1
comp=Z,4.1nm,1.1s,baz=315,slow=2.9,SNR=10
ANMO LR LR 18 46 32.5
comp=Z,655nm,18.1s,baz=131,slow=36
W23A Werner Place, 37.68 105 ⇓P P 18 31 30.8 +0.1
baz=37
U25A Circle Dot Ran 37.69 102 ⇓P P 18 31 31.2 +0.5
baz=37,SNR=11
X22A Bernardo 37.71 106 ⇓P P 18 31 31.2 +0.3
baz=37
LAZ Ladron 37.72 106 *e*P P 18 31 31.3 +0.2
comp=Z,10nm,1.5s
Y21A Point of Rocks 37.74 107 ⇓P P 18 31 31.6 +0.3
baz=37
YAK Yakutsk 37.95 311 *c i*P P 18 31 31.4 -1.0
YAK *e**PP **pP** 18 31 40.7 +0.2
YAK *e* 18 33 00.9
YAK *e*PPP PPP 18 33 18.7
YAK *e* 18 33 45.3
YAK *e*S **S** **18 37 23.3 +1.2**
YAK *e**SS sS 18 37 42.6 +7.2
YAK *e*SSS SSS 18 40 26.6
YAK pmax pmax
comp=Z,71nm,0.9s
YAK pmax pmax
comp=E,25nm,1.1s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=N,195nm,5.0s
YAK pmax pmax
comp=Z,341nm,5.5s
YAK pmax pmax
comp=E,147nm,2.4s
YAK smax smax
comp=N,62nm,4.3s
YAK smax smax
comp=E,149nm,4.3s
YAK MLR MLR
comp=E,1μm,16.0s
YAK MLR MLR
comp=Z,1μm,11.0s
Z20A Nine Sixteen R 37.95 109 ⇑P P 18 31 33.5 +0.6
baz=38,SNR=14
LENM Lemitar 37.99 107 *e*P P 18 31 33.8 +0.5
comp=Z,15nm,1.5s
V25A Rancho No Teng 37.99 102 ⇓P P 18 31 33.3 0.0
baz=38
W24A Lazy 6 Ranch, 38.04 104 ⇑P P 18 31 33.9 +0.2
baz=38,SNR=6.6
U26A Atchley Ranch, 38.06 101 ⇑P P 18 31 34.2 +0.4
baz=38,SNR=16
LPM Los Pinos Moun 38.06 106 *e*P P 18 31 33.6 -0.3
comp=Z,7.0nm,1.2s
X23A Hourglass Bar 38.09 105 ⇑P P 18 31 34.0 -0.2
baz=38
T27A Campo 38.12 99 ⇑P P 18 31 34.7 +0.4
baz=38
Y22A Socorro 38.17 107 ⇓P P 18 31 35.3 +0.5
baz=38
BNM Barren Site 38.19 106 P P 18 31 35.2 +0.2
comp=Z,17nm,1.5s
S28A Manter 38.19 98 ⇑P P 18 31 35.1 +0.3
baz=38
Z21A St. Cloud Mine 38.28 108 ⇓P P 18 31 36.3 +0.5
baz=38
120A U Bar Ranch, L 38.38 110 ⇑P P 18 31 36.8 +0.3
baz=38
V26A Tequesquite Ra 38.48 102 ⇑P P 18 31 37.6 +0.3
baz=38,SNR=32
U27A Thompson Grove 38.54 100 ⇑P P 18 31 38.1 +0.3
baz=38,SNR=6.9
W25A X Bar L Ranch, 38.54 103 ⇓P P 18 31 38.1 +0.2
baz=38,SNR=8.1
R30A Dighton 38.59 96 ⇓P P 18 31 37.9 -0.2
baz=38
S29A Ulysses 38.60 97 ⇓P P 18 31 38.6 +0.4
baz=38
Y23A Lovelace Mesa, 38.66 106 ⇑P P 18 31 39.3 +0.4
baz=38,SNR=7.1
Z22A Elephant Butte 38.70 107 ⇓P P 18 31 39.8 +0.6
baz=38,SNR=16
121A Cookes Peak, D 38.83 109 ⇓P P 18 31 41.1 +0.7
baz=38,SNR=6.5
220A Playas Peak, P 38.94 110 ⇑P P 18 31 41.6 +0.4
baz=39,SNR=11
X25A Clemmons Ranch 38.95 104 ⇓P P 18 31 41.5 +0.2
baz=39
319A Douglas 38.97 112 ⇑P P 18 31 41.9 +0.5
baz=39,SNR=8.3
Y24A Capitan 39.00 105 ⇑P P 18 31 41.9 +0.2
baz=39,SNR=9.2
320A Kipp Ranch, An 39.38 111 ⇑P P 18 31 45.2 +0.3
baz=39,SNR=11
X26A CR and CF Fran 39.40 103 ⇑P P 18 31 45.2 +0.2
baz=39,SNR=7.5
Y25A Mesa, Roswell 39.40 104 ⇑P P 18 31 45.3 +0.3
baz=39,SNR=20
W27A Bowe Ranch, En 39.41 102 ⇓P P 18 31 45.3 +0.1
baz=39
FRB Frobisher Bay 39.45 44 LR LR 18 48 51.0
comp=Z,5μm,20.5s,baz=300,slow=37
Z24A Sheeppen Canyo 39.49 106 ⇓P P 18 31 46.4 +0.5
baz=39
COWI Conover 39.50 78 *e*P P 18 31 45.6 0.0
comp=Z,32nm,1.2s
S31A Mullinville 39.50 96 ⇓P P 18 31 45.8 0.0
baz=39
222A Williams Famil 39.52 109 ⇓P P 18 31 46.8 +0.7
baz=39
U30A WK&E Inc. Balk 39.65 98 ⇓P P 18 31 47.3 +0.3
baz=39
X27A F and S Farms, 39.71 102 ⇓P P 18 31 47.9 +0.3
baz=39
W28A Vega 39.73 101 ⇓P P 18 31 47.9 +0.1
baz=39
T31A Randall Ranch, 39.77 96 ⇓P P 18 31 48.1 +0.2
baz=39
Y26A Elida 39.86 104 ⇑P P 18 31 49.1 +0.2
baz=40
YSS Yuzh-Sakhalins 39.87 285 *e*P P 18 31 48.0 -0.6
YSS *e* 18 33 21.0
YSS *e*S **S** **18 37 52.0 +0.6**
YSS *e* 18 38 07.0
YSS MLR MLR
comp=Z,2μm,20.0s
Z25A Roswell 39.88 105 ⇓P P 18 31 49.5 +0.5
baz=40
124A Stringfield Ra 39.93 106 ⇑P P 18 31 49.7 +0.1
baz=40,SNR=6.4
YUK Yuzh-Kuril'sk 40.05 279 *d i*P P 18 31 48.7 -1.4
YUK *e*S **S** **18 37 52.5 -1.5**
YUK MLR MLR
comp=Z,1μm,19.0s
YUK MLR MLR
comp=E,560nm,19.0s
Y27A Causey 40.25 103 ⇑P P 18 31 52.2 +0.1
baz=40,SNR=13
Z26A Caprock 40.28 104 ⇑P P 18 31 52.6 +0.3
baz=40,SNR=13
AMTX Amarillo 40.30 101 *e*P P 18 31 51.9 -0.6
comp=E,31nm,1.1s
224A Cornudas Mount 40.38 107 ⇑P P 18 31 53.5 +0.3
baz=40,SNR=15
125A Gardner Draw, 40.38 106 ⇑P P 18 31 53.5 +0.3
baz=40,SNR=8.6
MSTX Muleshoe 40.40 103 ⇓P P 18 31 53.5 +0.3
baz=40,SNR=5.5
X29A Tulia 40.62 101 ⇓P P 18 31 55.1 0.0
baz=40
V31A Spring Creek L 40.65 98 ⇓P P 18 31 55.3 +0.1
baz=40
Z27A Tatum 40.65 104 ⇓P P 18 31 55.4 0.0
baz=40,SNR=6.7
225A Deer Hill, Car 40.72 106 ⇓P P 18 31 56.1 0.0
baz=40
126A Clayton Basin, 40.73 105 ⇓P P 18 31 56.3 +0.2
baz=40
MNTX Cornudas Mount 40.75 107 *e*P P 18 31 56.2 +0.2
comp=E,13nm,1.1s
324A Moseley Ranch, 40.89 108 ⇑P P 18 31 57.7 +0.2
baz=40,SNR=6.7
JFWS Jewell Farm 40.95 82 *e*P P 18 31 57.3 -0.3
JFWS pmax pmax
comp=Z,23nm,0.9s
JFWS Jewell Farm 40.95 82 *e*P P 18 31 57.3 -0.3
comp=Z,23nm,0.9s
W31A Holland Ranch, 41.02 99 ⇓P P 18 31 58.3 -0.1
baz=41
X30A Coker Ranch, T 41.07 100 ⇑P P 18 31 58.9 +0.2
baz=41
Y29A Porterfield Fa 41.08 102 ⇓P P 18 31 59.1 +0.2
baz=41,SNR=8.0
226B Tecolote Peak, 41.10 106 ⇑P P 18 31 59.5 +0.4
baz=41,SNR=8.5
X31A McDonald Ranch 41.42 99 ⇑P P 18 32 01.6 0.0
baz=41
Z29A Hungry Hill Ra 41.51 102 ⇓P P 18 32 02.5 +0.1
baz=41
128A Castleberry Fa 41.58 104 ⇓P P 18 32 03.4 +0.4
baz=41,SNR=6.9
227A Bennet, Jal 41.61 105 ⇑P P 18 32 03.5 +0.2
baz=41
425A Indio Mountain 41.67 108 ⇓P P 18 32 04.2 +0.4
baz=41,SNR=15
ASAJ Asahikawa 41.77 281 LR LR 18 50 10.3
comp=Z,1μm,19.7s,baz=72,slow=37
326A Caldwell Ranch 41.79 106 ⇑P P 18 32 05.3 +0.6
baz=41,SNR=14
Z30A Sanderson Ranc 41.80 102 ⇑P P 18 32 04.9 0.0
baz=42,SNR=6.3
228A UT Block 9, Go 41.91 104 ⇓P P 18 32 06.0 +0.3
baz=42,SNR=5.9
WMOK Wichita Mounta 41.99 98 *e*P P 18 32 05.5 -0.8
WMOK pmax pmax
comp=Z,23nm,1.0s
WMOK Wichita Mounta 41.99 98 *e*P P 18 32 05.5 -0.8
comp=Z,23nm,1.0s
Y32A R-V Farms, Ver 42.18 99 ⇓P P 18 32 07.8 -0.1
baz=42
426A McDonald Obser 42.27 107 ⇑P P 18 32 08.6 -0.2
baz=42
Z31A Sharp Cattle R 42.31 101 ⇑P P 18 32 08.5 -0.5
baz=42
328A Wristen Ranch, 42.36 105 ⇓P P 18 32 08.9 -0.4
baz=42
131A Roby 42.67 101 ⇑P P 18 32 11.8 -0.1
baz=42
Z32A Haskell 42.69 100 ⇑P P 18 32 12.0 0.0
baz=42,SNR=6.4
526A Mary Lane Ranc 42.72 108 ⇓P P 18 32 12.6 +0.2
baz=42,SNR=13
329A Wagon Wheel Ra 42.73 104 ⇓P P 18 32 12.4 +0.1
baz=42,SNR=7.5
TUL1 Tulsa 42.78 94 ⇑P P 18 32 12.0 -0.7
baz=42
ERM Erimo 42.87 279 *e*P P 18 32 11.8 -1.5
ERM Erimo 42.87 279 *e*P P 18 32 11.8 -1.5
230A Sterling City 42.88 103 ⇑P P 18 32 13.7 +0.1
baz=42,SNR=5.7
527A Woodward Ranch 42.90 107 ⇓P P 18 32 14.4 +0.5
baz=43,SNR=5.4
428A Kincaid Ranch, 42.94 106 ⇑P P 18 32 14.4 +0.2
baz=43,SNR=17
HABR Khabarovsk 42.98 291 *c i*P P 18 32 12.8 -1.3
HABR *e**PP **pP** 18 32 21.6 -0.7
HABR *e**SP **sP** 18 32 25.8 +0.3
HABR *e* 18 33 51.6
HABR *e* 18 34 00.6
HABR *e*PPP PPP 18 34 24.3
HABR *e*S **S** **18 38 35.7 -1.6**
HABR *e**SS **sS** **18 38 51.2 +0.4**
HABR *e* 18 42 09.9
HABR *e*SSS SSS 18 42 23.6
HABR pmax pmax
comp=Z,76nm,1.2s
HABR pmax pmax
comp=E,48nm,1.2s
HABR pmax pmax
comp=N,19nm,1.5s
HABR MLR MLR
comp=Z,2μm,19.0s
HABR MLR MLR
comp=N,1μm,18.0s
HABR MLR MLR
comp=E,2μm,18.0s
HDIL Hopedale 43.07 84 *e*P P 18 32 14.1 -0.9
comp=E,44nm,0.8s
626A Big Bend Ranch 43.09 108 ⇑P P 18 32 15.9 +0.5
baz=43,SNR=11
ABTX Abilene, Hawle 43.12 101 ⇑P P 18 32 15.2 -0.2
baz=43
330A Mertzon 43.22 103 ⇓P P 18 32 16.3 0.0
baz=43,SNR=16
231A Bronte 43.28 102 ⇓P P 18 32 16.5 -0.3
baz=43
528A Cox Ranch, San 43.33 106 ⇑P P 18 32 17.4 +0.1
baz=43,SNR=17
SUMG Summit 43.44 24 *e*P P 18 32 18.3 +0.3
SUMG pmax pmax
comp=Z,54nm,1.0s
SUMG Summit 43.44 24 *e*P P 18 32 18.3 +0.3
comp=Z,54nm,1.0s
SUMG Summit 43.44 24 *i*P P 18 32 18.7 +0.7
comp=Z,30nm,1.1s
SUMG
comp=Z,2μm,17.0s
429A Davenport Ranc 43.44 105 ⇑P P 18 32 18.1 0.0
baz=43,SNR=10
TXAR Lajitas Array 43.52 108 P P 18 32 19.6 +0.8
TXAR PcP **PcP** 18 34 07.0 +0.7
TXAR ScP **ScP** 18 37 57.4 +1.9
TXAR Lajitas Array 43.52 108 P P 18 32 19.6 +0.8
comp=Z,8.2nm,0.9s,baz=324,slow=6.2,SNR=48
TXAR PcP **PcP** 18 34 07.0 +0.7
comp=Z,1.1nm,0.6s,baz=337,slow=2.1,SNR=3.8
TXAR ScP **ScP** 18 37 57.4 +1.9
comp=Z,0.5nm,0.7s,baz=318,slow=1.7,SNR=4.6
TXAR LR LR 18 49 41.0
comp=Z,1μm,18.3s,baz=0.0,slow=35
627A Terlingua Ranc 43.57 107 ⇑P P 18 32 19.3 +0.1
baz=43,SNR=15
529A Stev Forest Ra 43.66 106 ⇑P P 18 32 19.9 +0.1
baz=43,SNR=21
430A Baggett Ranch, 43.67 104 ⇓P P 18 32 20.0 0.0
baz=43,SNR=5.7
232A Coleman 43.68 102 ⇓P P 18 32 19.1 -0.9
baz=43
DAG Danmarks Havn 43.79 14 ⇑*i*P P 18 32 19.0 -1.3
DAG *i* 18 34 09.8
DAG *e*S S 18 38 41.8 -6.8
DAG pmax pmax
comp=Z,21nm,0.9s
DAG MLR MLR
comp=Z,1μm,15.0s
DAG Danmarks Havn 43.79 14 ⇑*i*P P 18 32 19.0 -1.3
comp=Z,25nm,0.9s
DAG *i* 18 34 09.8
DAG
comp=Z,1μm,14.0s
628A Black Gap, Mar 43.81 107 ⇑P P 18 32 21.4 +0.3
baz=44,SNR=18
SFJD Kangerlussuaq 43.85 34 *i*P P 18 32 21.9 +1.1
comp=Z,26nm,1.0s
SFJD *i* pP pP 18 32 35.0 +6.0
SFJD *i* S **S** **18 38 50.1 +0.5**
SFJD *i* 18 42 15.1
SFJD
comp=Z,2μm,18.0s
332A Millersview 44.01 102 ⇑P P 18 32 22.6 -0.1
baz=44
431A Sonora 44.09 104 ⇑P P 18 32 23.2 -0.1
baz=44,SNR=11
530A J-C Ranch, Com 44.11 105 ⇑P P 18 32 23.6 0.0
baz=44,SNR=7.5
KLR Kul'dur 44.18 294 ⇓*i*P P 18 32 20.4 -3.4
KLR *e*S **S** **18 38 54.0 -1.0**
KLR *e*SS **ScS** **18 42 21.5 +1.7**
KLR pmax pmax
comp=N,30nm,1.6s
KLR pmax pmax
comp=E,74nm,1.6s
KLR pmax pmax
comp=Z,140nm,1.6s
432A Menard 44.38 103 ⇑P P 18 32 25.3 -0.3
baz=44
SFIN Scholer Farm 44.41 82 ⇓P P 18 32 24.4 -1.3
baz=44
LPIG La Paz 44.43 119 LR LR 18 46 50.4
comp=Z,68nm,21.9s,baz=327,slow=30
KBS Kingsbay 44.47 4 *ce*P P 18 32 27.1 +1.4
KBS pmax pmax
comp=Z,26nm,1.0s
KBS MLR MLR
comp=Z,1μm,19.0s
KBS Kingsbay 44.47 4 P P 18 32 22.6 -3.1
comp=Z,15nm,0.8s
531A Rocksprings 44.52 104 ⇑P P 18 32 26.5 -0.4
baz=44
JCT Junction City 44.68 103 *e*P P 18 32 27.6 -0.4
JCT pmax pmax
comp=Z,37nm,1.0s
JCT Junction City 44.68 103 *e*P P 18 32 27.6 -0.4
comp=Z,37nm,1.0s
JCT Junction City 44.68 103 ⇑P P 18 32 27.9 -0.1
baz=44,SNR=12
WHTX Lake Whitney 44.79 99 ⇓P P 18 32 28.6 -0.2
baz=44
532A Rocksprings 44.90 103 ⇑P P 18 32 29.6 -0.2
baz=45
OLIL Olney 45.01 85 *e*P P 18 32 30.7 +0.2
comp=Z,44nm,1.0s
631A Perdido Creek 45.10 105 ⇓P P 18 32 31.0 -0.3
baz=45,SNR=13
SCHQ Schefferville 45.25 54 *e*P P 18 32 31.5 -0.7
comp=Z,13nm,0.7s
SCHQ Schefferville 45.25 54 P P 18 32 32.5 +0.3
comp=Z,16nm,0.8s,baz=326,slow=8.2,SNR=11
SCHQ LR LR 18 53 48.6
comp=Z,2μm,19.5s,baz=304,slow=39
632A Uvalde 45.45 104 ⇓P P 18 32 33.9 -0.2
baz=45
SADO Sadowa 45.71 72 LR LR 18 52 47.2
comp=Z,1μm,18.3s,baz=337,slow=37
USIN University of 45.79 85 P P 18 32 36.9 +0.2
732A Laxson Ranch, 45.96 105 ⇓P P 18 32 37.9 -0.2
baz=46
HKT Hockley 47.25 100 *e*P P 18 32 48.3 +0.2
HKT pmax pmax
comp=Z,44nm,1.4s
HKT Hockley 47.25 100 *e*P P 18 32 48.3 +0.2
comp=Z,44nm,1.4s
OXF Oxford 47.34 90 *e*P P 18 32 48.1 -0.8
OXF pmax pmax
comp=Z,50nm,1.1s
OXF Oxford 47.34 90 *e*P P 18 32 48.0 -0.8
comp=Z,50nm,1.1s
USRK Ussuriysk Arra 47.39 289 P P 18 32 48.4 -0.7
comp=Z,6.3nm,1.0s,baz=74,slow=6.4,SNR=10
USRK LR LR 18 53 13.8
comp=Z,2μm,20.8s,baz=45,slow=37
VLA Vladivostok 48.19 288 ⇑*e*P P 18 32 53.8 -1.5
VLA *e*S **S** **18 39 51.1 -1.4**
VLA pmax pmax
comp=Z,28nm,1.3s
MDJ Mudanjiang 48.35 291 P P 18 32 55.5 -1.1
MDJ ScP **ScP** **18 38 16.3 +1.0**
MDJ PcS **PcS** **18 38 17.5 -1.2**
MDJ S S **18 39 57.0 +2.1**
MDJ ScS **ScS** **18 42 48.3 +1.2**
MDJ pmax pmax
comp=Z,8.0nm,1.0s
MDJ pmax pmax
comp=Z,190nm,6.5s
MDJ LR LR
comp=N,2μm,24.4s
MDJ LR LR
comp=E,1μm,23.5s
MDJ LR LR
comp=Z,2μm,17.1s
MDJ Mudanjiang 48.35 291 *e*P P 18 32 55.4 -1.1
comp=Z,24nm,1.0s
VBMS Vicksburg 48.44 93 P P 18 32 57.7 +0.3
SCO Scoresbysund 48.45 20 *i*P P 18 32 58.2 +1.2
SCO pmax pmax
comp=Z,7.0nm,1.0s
SCO MLR MLR
comp=Z,1μm,16.0s
SCO Scoresbysund 48.45 20 *i*P P 18 32 58.2 +1.2
comp=Z,7.1nm,1.0s
SCO
comp=Z,1μm,16.0s
FRNY Flat Rock 48.56 69 *e*P P 18 32 56.2 -2.0
comp=Z,10nm,1.0s
SWET Sewanee 48.74 87 *e*P P 18 32 59.3 -0.5
comp=Z,16nm,0.7s
BINY Binghamton 49.14 73 *e*P P 18 33 02.9 +0.1

comp=Z,47nm,1.2s
MJAR Matsushiro Arr 49.44 277 P **P 18 33 04.8 -0.3**
MJAR Matsushiro Arr 49.44 277 P **P 18 33 04.8 -0.3**
comp=Z,8.2nm,1.0s,baz=25,slow=5.2,SNR=25
MJAR LR LR 18 56 06.6
comp=Z,754nm,19.0s,baz=80,slow=39
MAJO Matsushiro 49.45 277 *eP* **P 18 33 03.7 -1.4**
MAJO Matsushiro 49.45 277 *eP* **P 18 33 03.7 -1.4**
MAT Matsushiro 49.45 277 P **P 18 33 04.7 -0.4**
MAT S S 18 40 16.6 +6.1
TKL Tuckaleechee C 49.61 84 P **P 18 33 06.6 +0.2**
TKL Tuckaleechee C 49.61 84 P **P 18 33 06.6 +0.2**
baz=286,slow=7.4
TKL LR LR 18 54 08.6
comp=Z,2μm,18.2s,baz=333,slow=36
HIA Hailar 50.04 301 *eP* **P 18 33 08.5 -1.0**
comp=Z,25nm,1.0s
CIT Chita 50.95 307 *eP* **P 18 33 17.3 +0.9**
CIT *e* 18 33 27.8
CIT *e* 18 33 34.1
CIT pmax pmax
comp=Z,123nm,1.6s
CN2 Changchun 51.05 293 *eP* **P 18 33 16.6 -0.6**
CN2 *ep*P **pP 18 33 21.1 -4.4**
CN2 PP **PP 18 35 14.1 +0.6**
CN2 *e*S **S 18 40 32.8 +0.2**
CN2 pmax pmax
comp=Z,70nm,0.9s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,900nm,14.0s
CN2 LR LR
comp=E,2μm,14.0s
CN2 LR LR
comp=Z,1μm,16.0s
KMSC Kings Mountain 51.34 83 ⇓P **P 18 33 18.6 -0.8**
baz=51
WES Weston 51.45 69 *eP* **P 18 33 20.2 0.0**
WES Weston 51.45 69 *eP* **P 18 33 20.1 0.0**
comp=Z,280nm,1.5s
KEV Kevo 54.02 0 *eP* **P 18 33 38.3 -0.4**
KEV Kevo 54.02 0 *ep* **P 18 33 38.3 -0.4**
comp=Z,16nm,0.7s
KEV Kevo 54.02 0 *eP* **P 18 33 38.3 -0.4**
ARCES ARCESS Array B 54.23 1 P **P 18 33 40.2 -0.1**
ARCES PcP **PcP 18 34 45.4 +1.1**
ARCES ARCESS Array B 54.23 1 P **P 18 33 40.2 -0.1**
comp=Z,5.7nm,0.5s,baz=3.4,slow=7.2,SNR=66
ARCES PcP **PcP 18 34 45.4 +1.1**
comp=Z,8.0nm,0.8s,baz=349,slow=5.2,SNR=5.8
ARCES LR LR 18 59 22.2
comp=Z,471nm,18.8s,baz=358,slow=39
ARE0 ARCESS Array S 54.23 1 *eP* **P 18 33 39.2 -1.1**
KSRS Korea Array 54.36 286 P **P 18 33 41.7 +0.1**
comp=Z,12nm,1.0s,baz=46,slow=6.5,SNR=23
KSRS LR LR 18 59 56.5
comp=Z,471nm,18.1s,baz=46,slow=39
KSAR Wonju Array Be 54.39 286 P **P 18 33 41.7 -0.1**
INCN Inchon 55.02 286 P P 18 33 41.9 -4.6
TLY Talaya 55.40 313 *eP* **P 18 33 49.3 +0.3**
TLY *e*S S 18 41 38.8 +7.3
TLY pmax pmax
comp=Z,38nm,1.4s
TLY MLR MLR
comp=Z,2μm,18.0s
TLY Talaya 55.40 313 P **P 18 33 50.3 +1.3**
comp=Z,121nm,1.1s,SNR=5.7
LVZ Lovozero 55.78 357*d iP* **P 18 33 52.3 +0.8**
LVZ pmax pmax
comp=Z,88nm,1.2s
LVZ MLR MLR
comp=Z,670nm,20.0s
LVZ Lovozero 55.78 357 P **P 18 33 52.0 +0.5**
comp=Z,329nm,1.1s,SNR=5.5
JNU Nakatsue 56.01 280 LR LR 18 56 53.7
comp=Z,770nm,22.0s,baz=233,slow=35
APA Apatity 56.14 357⇓ *iP* **P 18 33 55.0 +0.9**
APA pmax pmax
comp=Z,26nm,1.0s
MOY Mondy 56.47 314 *eP* **P 18 33 58.2 +1.4**
ZAK Zakamensk 56.53 312 *eP* **P 18 33 57.4 +0.1**
ZAK pmax pmax
comp=Z,10.0nm,1.0s
DL2 Dalian 56.59 291 P **P 18 33 59.0 +1.3**
DL2 pmax pmax
comp=Z,23nm,0.7s
DL2 pmax pmax
comp=Z,210nm,7.4s
DL2 LR LR
comp=N,720nm,18.0s
DL2 LR LR
comp=E,680nm,18.0s
DL2 LR LR
comp=Z,500nm,19.6s
ULN Ulaanbaatar 56.85 308 *eP* **P 18 33 57.9 -1.7**
comp=Z,24nm,0.9s
ULN *e*PcP **PcP 18 34 54.6 -0.4**
ULN Ulaanbaatar 56.85 308 P **P 18 34 00.3 +0.7**
SNR=12
ULN mb 18 34 01.6
SNR=18
SONM Songino Array 57.16 308 P **P 18 34 02.6 +0.8**
SONM Songino Array 57.16 308 P **P 18 34 02.6 +0.8**
comp=Z,44nm,1.0s,baz=48,slow=6.6,SNR=84
SONM LR LR 19 00 14.9
comp=Z,3μm,18.2s,baz=40,slow=38
BJI Beijing 58.50 296 P **P 18 34 09.8 -1.3**
BJI S **S 18 42 13.8 +1.2**
BJI pmax pmax
comp=Z,5.0nm,0.4s
BJI pmax pmax
comp=Z,210nm,6.6s
BJI LR LR
comp=N,1μm,22.2s
BJI LR LR
comp=E,910nm,24.5s
BJI LR LR
comp=Z,980nm,19.5s
TEIG Tepich 59.09 100 LR LR 19 04 17.1
comp=Z,645nm,19.5s,baz=336,slow=41
NVS Novosibirsk 60.14 327⇑ *iP* **P 18 34 20.7 -1.5**
NVS *e* 18 36 29.3
NVS *e*S S 18 42 25.1 -8.3
NVS pmax pmax
comp=N,24nm,1.3s
NVS pmax pmax
comp=Z,66nm,1.3s
NVS pmax pmax
comp=E,26nm,1.4s
NVS pmax pmax
comp=Z,35nm,2.1s
NVS pmax pmax
comp=N,15nm,2.0s
NVS smax smax
comp=E,48nm,2.7s
NVS smax smax
comp=N,25nm,2.3s
HHC Hu-ho-hao-te 60.15 300 *eP* **P 18 34 21.4 -1.2**
HHC pP **pP 18 34 31.6 +0.5**
HHC sP **sP 18 34 36.3 +2.0**
HHC PP **PP 18 36 35.3 +0.3**
HHC S **S 18 42 28.5 -5.6**
HHC ScS SKKSac 18 44 06.1 -4.9
HHC SS **SS 18 46 27.3 -3.3**
HHC pmax pmax
comp=Z,34nm,0.7s
HHC pmax pmax
comp=Z,530nm,6.1s
HHC LR LR
comp=N,520nm,12.2s
HHC LR LR
comp=E,1μm,13.3s
HHC LR LR
comp=Z,1μm,14.3s
ZAA0 Zalesovo Array 60.41 325 *eP* **P 18 34 24.0 -0.1**
ZALV Zalesovo Beam 60.41 325 *i P* **P 18 34 24.3 +0.2**
ZALV pmax pmax
comp=Z,31nm,0.8s
ZALV Zalesovo Beam 60.41 325 P **P 18 34 24.0 0.0**
ZALV Zalesovo Beam 60.41 325 P **P 18 34 24.0 0.0**
comp=Z,30nm,0.8s,baz=31,slow=5.9,SNR=107
ZALV LR LR 19 01 35.6
comp=Z,1μm,19.9s,baz=56,slow=37
JOF Joensuu 60.85 358 *eP* **P 18 34 26.9 -0.1**
JOF pmax pmax
comp=Z,11nm,0.7s
JOF Joensuu 60.85 358 *ep* **P 18 34 26.9 -0.1**
comp=Z,11nm,0.7s
KAF Kangasniemi 61.69 1 *eP* **P 18 34 32.4 -0.2**
KAF pmax pmax
comp=Z,8.0nm,0.5s
KAF Kangasniemi 61.69 1 *ep* **P 18 34 32.4 -0.2**
comp=Z,8.4nm,0.5s
SOKR Solikamsk 61.93 344*c iP* **P 18 34 34.1 -0.1**
SOKR pmax pmax
comp=Z,100nm,1.6s
SOKR MLR MLR
comp=Z,2μm,36.0s
NB2 NORSAR Subarra 62.06 9 P **P 18 34 35.3 +0.1**
comp=Z,2.2nm,0.8s,baz=350,slow=6.9
NOA NORSAR Array B 62.06 9 P **P 18 34 35.0 -0.2**
NOA NORSAR Array B 62.06 9 P **P 18 34 35.0 -0.2**
comp=Z,19nm,0.8s,baz=350,slow=6.7,SNR=64
NOA LR LR 19 03 50.8
comp=Z,342nm,19.1s,baz=335,slow=38
NAO01 NORSAR Array S 62.22 9 *eP* **P 18 34 36.2 0.0**
comp=Z,23nm,0.8s
JOW Kunigami 62.29 277 *eP* **P 18 34 35.7 -1.5**
comp=Z,11nm,1.0s
FIA1 FINESS Array S 62.36 1 *eP* **P 18 34 37.1 -0.1**
FINES FINESS Array B 62.36 1 P **P 18 34 37.3 +0.1**
FINES FINESS Array B 62.36 1 P **P 18 34 37.3 +0.1**
comp=Z,34nm,0.9s,baz=5.0,slow=6.5,SNR=66
FINES LR LR 19 03 07.1
comp=Z,448nm,20.3s,baz=90,slow=37
SSE Sheshan 62.80 286 P **P 18 34 39.8 -0.7**
SSE S **S 18 43 12.1 +4.3**
SSE pmax pmax
comp=Z,24nm,0.6s
SSE pmax pmax
comp=Z,220nm,6.0s
SSE LR LR
comp=N,730nm,18.7s
SSE LR LR
comp=E,240nm,18.9s
SSE LR LR
comp=Z,560nm,18.7s
KONO Kongsberg 63.28 10 *eP* **P 18 34 43.6 +0.3**
KONO pmax pmax
comp=Z,37nm,1.0s
KONO Kongsberg 63.28 10 *eP* **P 18 34 43.6 +0.3**
comp=Z,36nm,1.0s
NJ2 Nanjing 63.29 288 *eP* **P 18 34 42.4 -1.4**
NJ2 PP **PP 18 37 01.4 -1.3**
NJ2 S **S 18 43 14.0 +0.1**
NJ2 sS sS 18 43 22.0 -5.9
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 pmax pmax
comp=Z,110nm,8.7s
NJ2 LR LR
comp=N,1μm,20.5s
NJ2 LR LR
comp=E,4μm,21.6s
NJ2 LR LR
comp=Z,2μm,22.1s
GUMO Guam 63.85 254 LR LR 18 59 51.6
comp=Z,157nm,21.1s,baz=50,slow=34
SVE Sverdlovsk 63.91 341⇑ *iP* **P 18 34 47.9 +0.4**
SVE *e*S **S 18 43 24.6 +3.7**
SVE pmax pmax
comp=Z,56nm,1.3s
ARU Arti 64.66 342*c iP* **P 18 34 51.9 -0.5**
ARU 18 35 25.6
ARU 18 37 10.1
ARU PPP PPP 18 38 43.8
ARU S **S 18 43 31.3 +1.1**
ARU 18 44 43.6
ARU SS **SS 18 47 37.7 -2.3**
ARU pmax pmax
comp=Z,52nm,1.2s
ARU MLR MLR
comp=Z,1μm,21.0s
ARU Arti 64.66 342 P **P 18 34 52.8 +0.4**
comp=Z,216nm,0.7s,SNR=17
KURK Kurchatov 65.12 327*c iP* **P 18 34 55.7 +0.2**
KURK pmax pmax
comp=Z,35nm,1.2s
KURK MLR MLR
comp=Z,1μm,21.0s
KURK Kurchatov 65.12 327 *eP* **P 18 34 55.0 -0.4**
comp=Z,20nm,0.9s
KURK Kurchatov 65.12 327 P **P 18 34 55.9 +0.4**
SNR=11
KURK mb 18 34 57.7
SNR=16
KURBB Kurchatov Arra 65.23 327 LR LR 19 06 23.7
comp=Z,1μm,18.6s,baz=45,slow=39
BRVK Borovoye 65.31 333 *eP* **P 18 34 56.2 -0.5**
BRVK pmax pmax
comp=Z,33nm,0.9s
BRVK Borovoye 65.31 333 *eP* **P 18 34 56.2 -0.5**
comp=Z,33nm,0.9s
BRVK Borovoye 65.31 333 P **P 18 34 57.0 +0.2**
SNR=14
BRVK mb 18 34 58.8
SNR=22
BRVK Borovoye 65.31 333 P **P 18 34 56.2 -0.5**
comp=Z,206nm,0.9s,SNR=13
BVA0 Borovoye Array 65.32 333 *i P* **P 18 34 56.3 -0.5**
BVA0 pmax pmax
comp=Z,6.0nm,0.9s
BVAR Borovoye Array 65.32 333 LR LR 19 09 05.7
comp=Z,1μm,18.1s,baz=30,slow=41
VSU Vasula 65.36 1*c iP* **P 18 34 57.3 +0.4**
VSU MLR MLR
comp=Z,575nm,19.0s
VOSK Vostochnaya 65.44 333 P **P 18 34 56.7 -0.9**
VOSK pmax pmax
comp=Z,32nm,1.5s
ZRNK Zerenda 65.73 334 P P 18 34 52.3 -7.1
MUD Monsted U'grnd 66.38 11 *i P* **P 18 35 04.9 +1.4**
MUD pmax pmax
comp=Z,25nm,0.9s
MUD MLR MLR
comp=Z,640nm,22.0s
MUD Monsted U'grnd 66.38 11 *i P* **P 18 35 04.9 +1.4**
comp=Z,25nm,0.9s
MUD
comp=Z,640nm,21.0s
GTA Gaotai 66.74 307 *eP* **P 18 35 06.0 -0.3**
GTA S **S 18 43 58.8 +2.4**
GTA pmax pmax
comp=Z,17nm,1.0s
GTA pmax pmax
comp=Z,220nm,6.2s
GTA LR LR
comp=N,460nm,19.7s
GTA LR LR
comp=E,580nm,22.3s
GTA LR LR
comp=Z,340nm,20.7s
XAN Xi'an 66.80 297 P **P 18 35 06.1 -0.5**
XAN pP **pP 18 35 15.8 +0.6**
XAN S **S 18 43 59.6 +2.5**
XAN pmax pmax
comp=Z,5.0nm,1.6s
XAN pmax pmax
comp=Z,72nm,6.4s
XAN LR LR
comp=N,940nm,20.3s
XAN LR LR
comp=E,460nm,20.3s
XAN LR LR
comp=Z,350nm,14.2s
WHN Wuhan 66.83 290 P **P 18 35 06.4 -0.4**
WHN S **S 18 43 57.1 -0.3**
WHN LR LR
comp=N,4μm,22.4s
WHN LR LR
comp=E,3μm,24.4s
WHN LR LR
comp=Z,2μm,17.1s
MK31 Makanchi Array 67.39 323 *eP* **P 18 35 09.2 -0.9**
MK31 Makanchi Array 67.39 323 *eP* **P 18 35 09.2 -0.9**
MKAR Makanchi Array 67.39 323 P **P 18 35 10.0 -0.2**
MKAR Makanchi Array 67.39 323 P **P 18 35 09.9 -0.2**
MKAR Makanchi Array 67.39 323 P **P 18 35 09.9 -0.2**
comp=Z,8.4nm,0.5s,baz=35,slow=5.3,SNR=119
MKAR LR LR 19 06 02.2
comp=Z,706nm,18.9s,baz=34,slow=37
LZH Lanzhou 67.60 302 *eP* **P 18 35 12.3 +0.5**
LZH PP **PP 18 37 41.6 +1.1**
LZH *e*S **S 18 44 06.0 -0.9**
LZH pmax pmax
comp=Z,42nm,1.4s
LZH pmax pmax
comp=Z,200nm,4.7s
LZH LR LR
comp=N,3μm,12.1s
LZH LR LR
comp=E,3μm,16.6s
LZH LR LR
comp=Z,3μm,16.9s
MOS Moscow 67.80 354 *eP* **P 18 35 13.1 +0.6**
WMQ Urumqi 68.03 317 P **P 18 35 16.1 +1.8**
WMQ pP **pP 18 35 26.4 +3.5**
WMQ sP **sP 18 35 30.4 +4.3**
WMQ PcP **PcP 18 35 42.5 +2.1**
WMQ PP **PP 18 37 47.9 +4.0**
WMQ PcS 18 39 46.0
WMQ S **S 18 44 10.9 -0.8**
WMQ sS **sS 18 44 28.0 +2.2**
WMQ ScS **SKiKP 18 45 08.6 +1.1**
WMQ SS **SS 18 48 34.3 +1.2**
WMQ pmax pmax
comp=Z,21nm,0.8s
WMQ pmax pmax
comp=Z,340nm,4.8s
WMQ LR LR
comp=N,2μm,14.4s
WMQ LR LR
comp=E,1μm,10.8s
WMQ LR LR
comp=Z,1μm,19.4s
IZAR Zarasai 68.07 1 *eP* **P 18 35 15.2 +1.0**
IZAR AMB AMB 18 35 17.5
comp=Z,16nm,1.2s
BSD Bornholm Skovb 68.23 8 *i P* **P 18 35 16.7 +1.5**
BSD pmax pmax
comp=Z,20nm,0.9s
BSD MLR MLR
comp=Z,440nm,20.0s
BSD Bornholm Skovb 68.23 8 *i P* **P 18 35 16.7 +1.5**
comp=Z,20nm,0.8s
BSD
comp=Z,440nm,19.0s
ISAL Salakas 68.25 1 *eP* **P 18 35 16.3 +0.9**
ISAL AMB AMB 18 35 18.7
comp=Z,17nm,1.1s
IIGN Ignalina 68.47 1 *eP* **P 18 35 17.7 +0.9**
IIGN AMB AMB 18 35 20.1
comp=Z,17nm,1.3s
OBN Obninsk 68.48 355 *eP* **P 18 35 16.6 -0.2**
OBN *e* 18 35 42.3
OBN *i* 18 37 47.2
OBN pmax pmax
comp=Z,94nm,1.3s
OBN MLR MLR
comp=Z,700nm,20.0s
IDID Didziasalis 68.51 1 *eP* **P 18 35 18.0 +1.0**
IDID AMB AMB 18 35 20.1
comp=Z,18nm,1.1s
SSLB Suanglung 68.71 281 *eP* **P 18 35 16.1 -2.6**
comp=Z,31nm,1.4s
NACGM Naroch 68.93 1 *e* **P 18 35 17.0 -2.6**
BSEG Bad Segeberg 68.99 11 *eP* **P 18 35 22.1 +2.1**
BSEG pmax pmax
comp=Z,76nm,1.1s
BSEG Bad Segeberg 68.99 11 *eP* **P 18 35 22.1 +2.1**
comp=Z,76nm,1.1s
QZH Quanzhou 69.06 284⇑P **P 18 35 20.5 -0.4**
QZH pmax pmax
comp=Z,470nm,6.9s
QZH LR LR
comp=N,1μm,15.2s
QZH LR LR
comp=E,700nm,16.6s
QZH LR LR
comp=Z,960nm,14.5s
MICGM Minsk 69.33 360⇓ *eP* **P 18 35 22.0 -0.1**
MNK Minsk 69.33 360⇓ *eP* **P 18 35 22.0 -0.1**
MNK pmax pmax
comp=Z,140nm,1.0s
ENH Enshi 69.55 294 *eP* **P 18 35 21.9 -2.0**
comp=Z,22nm,1.1s
SUW Suwalki 69.76 3 *eP* **P 18 35 24.2 -0.6**
SUW pmax pmax
comp=Z,85nm,0.9s
SUW Suwalki 69.76 3 *eP* **P 18 35 24.2 -0.6**
comp=Z,85nm,0.9s
SUW Suwalki 69.76 3 *eP* **P 18 35 24.4 -0.3**
GKP Gorka Klasztor 70.23 7 *eP* **P 18 35 28.3 +0.7**
IBBN Ibbenburen 70.30 13 *eP* **P 18 35 29.5 +1.4**
comp=Z,93nm,1.5s
NRDL Niedersach Rie 70.38 11 *eP* **P 18 35 29.8 +1.3**
comp=Z,53nm,1.1s
RUE Ruedersdorf 70.76 9 *eP* **P 18 35 32.3 +1.5**
comp=Z,89nm,1.2s
BUG Bochum--Univer 71.09 13 *eP* **P 18 35 33.9 +1.0**
comp=Z,66nm,1.0s
AB31 Akbulak array 71.22 338 *i P* **P 18 35 33.1 -0.6**
AB31 pmax pmax
comp=Z,13nm,0.6s
ABKAR Akbulak array 71.22 338 *eP* **P 18 35 33.4 -0.4**
comp=Z,14nm,0.7s
MEM Membach 71.73 14 P **P 18 35 38.0 +1.1**
comp=Z,21nm,1.0s
BCLA Clavier 71.82 15 P **P 18 35 38.6 +1.2**
comp=Z,17nm,1.3s
NEUB Neuenburg 71.83 10 *eP* **P 18 35 38.4 +1.0**
comp=Z,87nm,1.5s
CLL Collm 71.85 10 *i P* **P 18 35 38.1 +0.6**
CLL *e*S **S 18 45 00.0 +4.0**
CLL pmax pmax
comp=Z,33nm,1.3s
CLL Collm 71.85 10 *eP* **P 18 35 38.3 +0.8**
comp=Z,34nm,1.3s
CLL Collm 71.85 10 *i P* **P 18 35 38.1 +0.6**
comp=Z,33nm,1.3s
CLL *e*PcP **PcP 18 35 56.0 -0.2**
CLL *e*S **S 18 45 00.0 +4.0**
CLL *e*PS **PnS 18 45 36.0 +9.0**
CLL *e*SS SS 18 49 48.0 +17
CLL *e*(SSS) 18 53 06.0
CD2 Chengdu 71.87 299 P **P 18 35 36.8 -1.3**
CD2 pP **pP 18 35 46.1 -0.6**
CD2 sP **sP 18 35 49.8 -0.1**
CD2 PP **PP 18 38 17.5 +0.2**
CD2 S **S 18 44 52.3 -4.7**
CD2 sS **sS 18 45 07.9 -3.3**
CD2 SKS **SKSac 18 45 33.3 -6.7**
CD2 SS **SS 18 49 29.5 -3.2**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
CD2 LR LR
comp=N,1μm,21.1s
CD2 LR LR
comp=E,1μm,16.6s
CD2 LR LR
comp=Z,840nm,18.1s
BAIF Baives 72.01 16 *eP* **P 18 35 39.3 +0.8**
comp=Z,42nm,0.8s
BAIF Baives 72.01 16 *eP* **P 18 35 39.3 +0.8**
BAIF pmax pmax
comp=Z,42nm,0.8s
BAIF Baives 72.01 16 *eP* **P 18 35 39.3 +0.8**
comp=Z,42nm,0.8s
DOU Dourbes 72.03 15 P **P 18 35 39.8 +1.1**
comp=Z,14nm,1.1s
GIVF Givet 72.06 15 *eP* **P 18 35 39.4 +0.6**
comp=Z,70nm,1.0s
GIVF Givet 72.06 15 *eP* **P 18 35 39.4 +0.6**
GIVF pmax pmax
comp=Z,70nm,1.0s
GIVF Givet 72.06 15 *eP* **P 18 35 39.4 +0.6**
comp=Z,70nm,1.0s
VRHR Novokhopersk 72.12 351 *eP* **P 18 35 37.9 -1.2**
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=N,9.0nm,0.5s
VRHR MLR MLR

comp=N,790nm,23.0s
VRHR MLR MLR
comp=E,660nm,23.0s
VRHR MLR MLR
comp=Z,910nm,23.0s
VSR Storozhevoye 72.20 352 *e*P **P 18 35 38.8 -0.8**
VSR *e**PP **pP 18 35 48.2 0.0**
VSR *e*S **S 18 44 58.1 -1.9**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=Z,30nm,0.8s
VSR pmax pmax
comp=E,1.0nm,0.4s
VSR smax smax
comp=N,120nm,4.3s
VSR smax smax
comp=E,80nm,4.3s
VSR smax smax
comp=Z,60nm,4.3s
VSR MLR MLR
comp=N,300nm,20.0s
VSR MLR MLR
comp=E,200nm,20.0s
VSR MLR MLR
comp=Z,810nm,20.0s
FBE Freiberg 72.26 9 *e*P **P 18 35 41.3 +1.3**
comp=Z,58nm,1.2s
BRG Berggiesshubel 72.36 9 P **P 18 35 40.0 -0.6**
BRG S **SKiKP 18 45 09.0 -4.6**
BRG SS SS 18 49 53.0 +14
BRG
comp=N,475nm,18.7s
BRG
comp=E,245nm,19.8s
BRG
comp=E,645nm,16.9s
BRG Berggiesshubel 72.36 9 P **P 18 35 40.0 -0.6**
BRG MLR MLR
comp=N,475nm,18.7s
BRG MLR MLR
comp=E,245nm,19.8s
BRG MLR MLR
comp=Z,645nm,16.9s
BRG Berggiesshubel 72.36 9 *e*P **P 18 35 41.8 +1.2**
comp=Z,45nm,1.4s
MOX Moxa 72.37 11 *e*P **P 18 35 41.9 +1.2**
MOX *e*S **S 18 45 00.2 -1.8**
MOX pmax pmax
comp=Z,48nm,1.2s
MOX MLR MLR
comp=Z,500nm,19.5s
MOX Moxa 72.37 11 *e*P **P 18 35 41.9 +1.2**
comp=Z,48nm,1.2s
MOX *e*S **S 18 45 00.2 -1.8**
MOX *e*L L 19 11 46.4
comp=Z,466nm,19.5s
ROSF Rostrenen 72.37 21 *e*P **P 18 35 41.3 +0.6**
comp=Z,61nm,1.2s
ROSF Rostrenen 72.37 21 *e*P **P 18 35 41.3 +0.6**
ROSF pmax pmax
comp=Z,61nm,1.2s
ROSF Rostrenen 72.37 21 *e*P **P 18 35 41.3 +0.6**
comp=Z,61nm,1.2s
TNS Taunus Mts 72.43 13 *e*P **P 18 35 42.7 +1.6**
TNS pmax pmax
comp=Z,34nm,1.1s
TNS Taunus Mts 72.43 13 *e*P **P 18 35 42.7 +1.6**
comp=Z,34nm,1.1s
FLN La Foliniere 72.49 19 *e*P **P 18 35 41.7 +0.3**
comp=Z,110nm,1.1s
FLN *e*R
comp=Z,2µm,19.8s
FLN La Foliniere 72.49 19 *e*P **P 18 35 41.7 +0.3**
FLN pmax pmax
comp=Z,110nm,1.1s
FLN La Foliniere 72.49 19 *e*P **P 18 35 41.7 +0.3**
comp=Z,110nm,1.1s
KSP Ksiaz 72.58 8 *e*P **P 18 35 42.7 +0.8**
KSP Ksiaz 72.58 8 *e*P **P 18 35 42.1 +0.2**
PLN Plauen 72.58 10 *e*P **P 18 35 43.1 +1.2**
comp=Z,124nm,1.1s
SGMF Saint Gilles 72.59 21 *e*P **P 18 35 42.6 +0.6**
comp=Z,99nm,1.2s
SGMF Saint Gilles 72.59 21 *e*P **P 18 35 42.6 +0.6**
SGMF pmax pmax
comp=Z,99nm,1.2s
SGMF Saint Gilles 72.59 21 *e*P **P 18 35 42.6 +0.6**
comp=Z,99nm,1.2s
WERD Werda 72.63 10 *e*P **P 18 35 43.4 +1.1**
comp=Z,26nm,1.4s
ABH Alteburg 72.65 13 *e*P **P 18 35 43.7 +1.3**
WLF Walferdange 72.68 14 P **P 18 35 43.2 +0.7**
comp=Z,36nm,2.2s
WLF Walferdange 72.68 14 *e*P **P 18 35 45.0 +2.5**
comp=Z,80nm,1.6s
TANN Tannenbergstha 72.68 10 *e*P **P 18 35 43.7 +1.1**
comp=Z,13nm,1.0s
GUNZ Gunzen 72.72 10 *e*P **P 18 35 44.1 +1.3**
comp=Z,18nm,1.0s
LDF La Druitiere 72.72 19 *e*P **P 18 35 42.9 +0.1**
comp=Z,48nm,1.0s
LDF La Druitiere 72.72 19 *e*P **P 18 35 42.9 +0.1**
LDF pmax pmax
comp=Z,48nm,1.0s
LDF La Druitiere 72.72 19 *e*P **P 18 35 42.9 +0.1**
comp=Z,48nm,1.0s
PVCC Panska Ves 72.76 9 *i*P **P 18 35 44.2 +1.2**
PVCC MLR MLR
comp=Z,700nm,16.1s
PVCC Panska Ves 72.76 9 *i*P **P 18 35 44.2 +1.2**
PVCC AMS AMS 19 14 50.0
comp=Z,700nm,16.1s
RUP Ruppelstein 72.76 14 *e*P **P 18 35 44.0 +0.9**
RUP Ruppelstein 72.76 14 *e*P **P 18 35 44.0 +0.9**
GRR Gorron 72.78 19 *e*P **P 18 35 43.6 +0.5**
comp=Z,64nm,1.0s
GRR Gorron 72.78 19 *e*P **P 18 35 43.6 +0.5**
GRR pmax pmax
comp=Z,64nm,1.0s
GRR Gorron 72.78 19 *e*P **P 18 35 43.6 +0.5**
comp=Z,64nm,1.0s
QUIF Quistinic 72.79 21 *e*P **P 18 35 43.6 +0.4**
QUIF Quistinic 72.79 21 *e*P **P 18 35 43.6 +0.4**
QUIF Quistinic 72.79 21 *e*P **P 18 35 43.6 +0.4**
WERN Wernitzgruen 72.80 10 *e*P **P 18 35 44.2 +0.9**
comp=Z,58nm,1.6s
NKC Novy Kostel 72.86 10 *i*P **P 18 35 44.8 +1.2**
NKC Novy Kostel 72.86 10 *i*P **P 18 35 44.8 +1.2**
UPC Upice 72.89 8 *i*P **P 18 35 44.6 +0.8**
UPC *e* 18 35 54.9
UPC Upice 72.89 8 *i*P **P 18 35 44.6 +0.8**
UPC *ex* x 18 35 54.9
TKM2 Tokmak 2 73.01 325 *e*P **P 18 35 45.2 +0.3**
TKM2 pmax pmax
comp=Z,26nm,1.0s
TKM2 Tokmak 2 73.01 325 *e*P **P 18 35 45.2 +0.3**
comp=Z,26nm,1.0s
TKM2 Tokmak 2 73.01 325 P **P 18 35 45.6 +0.7**
SNR=30
USP Ospenovka 73.04 326 P **P 18 35 45.9 +1.1**
SNR=15
MANZ Manzenberg 73.07 10 *e*P **P 18 35 46.0 +1.1**
comp=Z,13nm,1.0s
DPC Dobruska-Polom 73.07 8 *i*P **P 18 35 45.9 +1.0**
DPC *e* 18 35 56.7
DPC MLR MLR
comp=Z,500nm,16.5s
DPC Dobruska-Polom 73.07 8 *i*P **P 18 35 45.9 +1.0**
DPC *ex* x 18 35 56.7
DPC AMS AMS 19 16 30.0
comp=Z,500nm,16.5s
TOD Tromm 73.08 13 *e*P **P 18 35 46.3 +1.4**
TOD Tromm 73.08 13 *e*P **P 18 35 46.3 +1.4**
AKASG Malin Array Be 73.13 359 *e*P **P 18 35 44.7 -0.4**
AKASG pmax pmax
comp=Z,13nm,0.5s
AKASG Malin Array Be 73.13 359 P **P 18 35 44.8 -0.3**
AKASG Malin Array Be 73.13 359 P **P 18 35 44.8 -0.3**
comp=Z,13nm,0.5s,baz=2.9,slow=5.7,SNR=62
AKASG LR LR 19 11 38.5
comp=Z,582nm,20.1s,baz=10.0,slow=39
KIEV Kiev 73.14 359 *e*P **P 18 35 44.4 -0.7**
KIEV pmax pmax
comp=Z,35nm,0.8s
KIEV Kiev 73.14 359 *e*P **P 18 35 44.4 -0.7**
comp=Z,35nm,0.8s
AK01 Malin Array Si 73.14 359 *e*P **P 18 35 44.5 -0.7**
AK02 Malin Array Si 73.17 359 *e*P **P 18 35 44.8 -0.6**
CHMS Chumysh 73.20 326 P **P 18 35 47.1 +1.3**
SNR=15
GRF Grafenberg Arr 73.27 11 *e*P **P 18 35 47.5 +1.5**
GRF *e*S S 18 45 06.5 -5.8
GRF pmax pmax
comp=Z,25nm,0.9s
GRF MLR MLR
comp=Z,500nm,18.6s
GRF Grafenberg Arr 73.27 11 *e*P **P 18 35 47.5 +1.5**
comp=Z,25nm,0.9s
GRF *e*S S 18 45 06.5 -5.8
GRF *e*L L 19 13 56.1
comp=Z,537nm,18.6s
PRU Pruhonice 73.29 9 *i*P **P 18 35 46.8 +0.7**
PRU *e* 18 35 53.8
PRU *e*S **SKiKP 18 45 18.6 +3.6**
PRU MLR MLR
comp=Z,600nm,17.2s
PRU Pruhonice 73.29 9 *i*P **P 18 35 46.8 +0.7**
PRU *ex* x 18 35 53.8
PRU *e*S **SKiKP 18 45 18.6 +3.6**
PRU AMS AMS 19 15 20.0
comp=Z,600nm,17.2s
ROTZ Rotzenmuhle 73.30 10 *e*P **P 18 35 47.7 +1.5**
comp=Z,21nm,1.0s
FRU Bishkek 73.40 326 ||*i*P **P 18 35 48.0 +1.1**
FRU pmax pmax
comp=Z,130nm,2.0s
FRU MLR MLR
comp=Z,3µm,13.0s
OJC Ojcow 73.42 5 *e*P **P 18 35 47.9 +1.0**
OJC Ojcow 73.42 5 *e*P **P 18 35 47.9 +1.0**
KBK Karagaybulak 73.45 326 P **P 18 35 48.4 +0.9**
SNR=23
LANF Langenberg 73.57 13 *e*P **P 18 35 48.4 +0.6**
LANF Langenberg 73.57 13 *e*P **P 18 35 48.4 +0.6**
LANF Langenberg 73.57 13 *e*P **P 18 35 48.4 +0.6**
AAK Ala-Archa 73.62 326 *c i*P **P 18 35 49.1 +0.7**
AAK pmax pmax
comp=Z,66nm,1.2s
AAK MLR MLR
comp=Z,3µm,23.0s
AAK Ala-Archa 73.62 326 *e*P **P 18 35 48.7 +0.3**
comp=Z,22nm,1.0s
AAK Ala-Archa 73.62 326 P **P 18 35 49.4 +1.0**
SNR=13
AAK Ala-Archa 73.62 326 P **P 18 35 49.1 +0.7**
SNR=15
MEZF Maizieres J'vi 73.66 15 *e*P **P 18 35 49.0 +0.7**
comp=Z,78nm,1.2s
MEZF Maizieres J'vi 73.66 15 *e*P **P 18 35 49.0 +0.7**
comp=Z,78nm,1.2s
PAGF Fort de Pagny 73.70 15 *e*P **P 18 35 49.5 +0.9**
comp=Z,9.3nm,0.7s
PAGF Fort de Pagny 73.70 15 *e*P **P 18 35 49.5 +0.9**
comp=Z,9.3nm,0.7s
OKC Ostrava-Krasne 73.71 6 *i*P **P 18 35 49.5 +0.9**
OKC *e* 18 35 59.3
OKC MLR MLR
comp=Z,400nm,18.8s
OKC Ostrava-Krasne 73.71 6 *i*P **P 18 35 49.5 +0.9**
OKC *ex* x 18 35 59.3
OKC *e*S S 18 45 24.1 +6.9
OKC AMS AMS 19 17 20.0
comp=Z,400nm,18.8s
MORC Moravsky Berou 73.73 7 *e*P **P 18 35 48.1 -0.7**
MORC pmax pmax
comp=Z,11nm,1.0s
MORC Moravsky Berou 73.73 7 *e*P **P 18 35 48.1 -0.7**
comp=Z,12nm,1.0s
MORC Moravsky Berou 73.73 7 ||*i*P **P 18 35 49.3 +0.5**
EKS2 Erkin-Say 73.81 326 *e*P **P 18 35 50.0 +0.5**
EKS2 pmax pmax
comp=Z,24nm,1.0s
EKS2 Erkin-Say 73.81 326 *e*P **P 18 35 50.0 +0.5**
comp=Z,24nm,1.0s
EKS2 Erkin-Say 73.81 326 P **P 18 35 50.4 +0.9**
SNR=30
PPT Papeete 73.85 177 LR LR 19 05 59.8
comp=Z,808nm,18.4s,baz=352,slow=34
PPT2 Papeete2 73.87 177 *e*S **SKiKP 18 45 12.8 -3.7**
comp=Z,204nm,24.8s
PPT2 *e*LR LR 18 58 18.3
comp=Z,889nm,24.0s,baz=355
KZA Kyzart 73.88 325 P **P 18 35 51.5 +1.2**
SNR=10
SFTF Sexfontaines 73.94 16 *e*P **P 18 35 50.5 +0.5**
comp=Z,107nm,1.2s
SFTF Sexfontaines 73.94 16 *e*P **P 18 35 50.5 +0.5**
comp=Z,107nm,1.2s
LVV L'vov 73.98 2 ||*i*P **P 18 35 50.6 +0.4**
LVV MLR MLR
comp=N,300nm,21.0s
LVV MLR MLR
comp=Z,500nm,21.0s
LVV MLR MLR
comp=E,200nm,20.0s
WET Wettzell 73.98 10 *e*P **P 18 35 52.1 +1.9**
WET pmax pmax
comp=Z,72nm,2.0s
WET Wettzell 73.98 10 *e*P **P 18 35 52.1 +1.9**
comp=Z,72nm,2.0s
CDF Champ du Feu 74.06 14 *e*P **P 18 35 51.4 +0.6**
comp=Z,45nm,1.0s
CDF Champ du Feu 74.06 14 *e*P **P 18 35 51.4 +0.6**
CDF pmax pmax
comp=Z,45nm,1.0s
CDF Champ du Feu 74.06 14 *e*P **P 18 35 51.4 +0.6**
comp=Z,45nm,1.0s
KHC Kasperske Hory 74.06 10 *i*P **P 18 35 51.5 +0.8**
KHC *e* 18 35 59.9
KHC *e*S **S 18 45 26.5 +5.2**
KHC MLR MLR
comp=Z,700nm,17.8s
KHC Kasperske Hory 74.06 10 *e*P **P 18 35 51.7 +1.0**
comp=Z,20nm,1.0s
KHC Kasperske Hory 74.06 10 *i*P **P 18 35 51.5 +0.8**
KHC *ex* x 18 35 59.9
KHC *e*S **S 18 45 26.5 +5.2**
KHC AMS AMS 19 16 00.0
comp=Z,700nm,17.8s
THEF They Montfort 74.06 15 *e*P **P 18 35 51.6 +0.9**
THEF They Montfort 74.06 15 *e*P **P 18 35 51.6 +0.9**
THEF They Montfort 74.06 15 *e*P **P 18 35 51.6 +0.9**
TREC Trest 74.06 8 *i*P **P 18 35 51.4 +0.7**
TREC MLR MLR
comp=Z,800nm,15.0s
TREC Trest 74.06 8 *i*P **P 18 35 51.4 +0.7**
TREC AMS AMS 19 16 50.0
comp=Z,800nm,15.0s
GYA Guiyang 74.08 294 P **P 18 35 51.4 +0.1**
GYA PP **PP 18 38 38.3 +1.9**
GYA S **S 18 45 20.1 -2.3**
GYA SKS **SKSac 18 45 55.1 -1.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,130nm,6.3s
GYA LR LR
comp=N,450nm,19.8s
GYA LR LR
comp=E,590nm,18.9s
GYA LR LR
comp=Z,710nm,23.6s
KWP Kalwaria Pacla 74.13 3 *e*P **P 18 35 51.5 +0.4**
KWP Kalwaria Pacla 74.13 3 *e*P **P 18 35 51.5 +0.4**
KWP Kalwaria Pacla 74.13 3 *e*P **P 18 35 51.2 +0.1**
VRAC Vranov 74.13 8 ||*i*P **P 18 35 52.2 +1.1**
ECH Echery 74.23 14 *e*P **P 18 35 52.0 +0.3**
ECH pmax pmax
comp=Z,27nm,0.9s
ECH Echery 74.23 14 *e*P **P 18 35 52.0 +0.3**
comp=Z,27nm,0.9s
ECH Echery 74.23 14 *e*P **P 18 35 52.7 +1.0**
BFO Black Forest 74.27 13 *e*P **P 18 35 52.2 +0.2**
BFO pmax pmax
comp=Z,41nm,1.5s
BFO Black Forest 74.27 13 *e*P **P 18 35 53.1 +1.1**
comp=Z,109nm,2.1s
BFO Black Forest 74.27 13 *e*P **P 18 35 52.2 +0.2**
comp=Z,41nm,1.5s
AML Almayashu 74.32 326 P **P 18 35 54.3 +1.5**
SNR=19
HAU Haudompre 74.33 15 *e*P **P 18 35 52.8 +0.5**
comp=Z,48nm,0.9s
HAU *e*R
comp=Z,1µm,19.5s
HAU Haudompre 74.33 15 *e*P **P 18 35 52.8 +0.5**
HAU pmax pmax
comp=Z,48nm,0.9s
HAU Haudompre 74.33 15 *e*P **P 18 35 52.8 +0.5**
comp=Z,48nm,0.9s
GEC2 GERESS Array S 74.35 10 *e*P **P 18 35 53.5 +1.0**
GEC2 pmax pmax
comp=Z,14nm,1.0s
GEC2 GERESS Array S 74.35 10 *e*P **P 18 35 53.5 +1.0**
comp=Z,14nm,1.0s
GERES GERESS Array B 74.35 10 P **P 18 35 53.0 +0.6**
GERES GERESS Array B 74.35 10 P **P 18 35 53.0 +0.6**
comp=Z,6.5nm,0.7s,baz=356,slow=4.1,SNR=49
GERES LR LR 19 11 55.1
comp=Z,318nm,19.8s,baz=360,slow=38
KK31 Karatay Array 74.38 329 *i*P **P 18 35 52.7 +0.1**
KK31 pmax pmax
comp=Z,8.0nm,0.6s
KKAR Karatay Array 74.38 329 *e*P **P 18 35 52.5 -0.1**
KKAR pmax pmax
comp=Z,9.0nm,0.7s
KKAR Karatay Array 74.38 329 *e*P **P 18 35 52.5 -0.1**
comp=Z,9.5nm,0.7s
HYF Humbligny 74.48 17 *e*P **P 18 35 53.8 +0.7**
HYF Humbligny 74.48 17 *e*P **P 18 35 53.8 +0.7**
SPAK Spaichingen-Ko 74.56 13 *e*P **P 18 35 55.2 +1.5**
HINF Hinteralfeld 74.58 14 *e*P **P 18 35 54.2 +0.4**
comp=Z,24nm,0.9s
HINF Hinteralfeld 74.58 14 *e*P **P 18 35 54.2 +0.4**
HINF pmax pmax
comp=Z,24nm,0.9s
HINF Hinteralfeld 74.58 14 *e*P **P 18 35 54.2 +0.4**
comp=Z,24nm,0.9s
MOF Molkenrain 74.59 14 *e*P **P 18 35 55.3 +1.4**
MOF Molkenrain 74.59 14 *e*P **P 18 35 55.3 +1.4**
MOF Molkenrain 74.59 14 *e*P **P 18 35 55.3 +1.4**
MFF Saint Martin d 74.63 19 *e*P **P 18 35 54.6 +0.6**
comp=Z,91nm,1.0s
MFF Saint Martin d 74.63 19 *e*P **P 18 35 54.6 +0.6**
MFF pmax pmax
comp=Z,91nm,1.0s
MFF Saint Martin d 74.63 19 *e*P **P 18 35 54.6 +0.6**
comp=Z,91nm,1.0s
LOR Lormes 74.67 17 *e*P **P 18 35 54.8 +0.5**
comp=Z,93nm,1.1s
LOR *e*R
comp=Z,1µm,18.8s
LOR Lormes 74.67 17 *e*P **P 18 35 54.8 +0.5**
comp=Z,93nm,1.1s
FELD Feldberg im Sc 74.68 14 *e*P **P 18 35 54.5 0.0**
FELD Feldberg im Sc 74.68 14 *e*P **P 18 35 54.5 0.0**
FUR Furstenfeldbru 74.78 11 *e*P **P 18 35 56.6 +1.7**
FUR pmax pmax
comp=Z,27nm,0.9s
FUR Furstenfeldbru 74.78 11 *e*P **P 18 35 56.6 +1.7**
comp=Z,27nm,0.9s
KOLS Kolonicke sedl 74.81 4 *e*P **P 18 35 56.0 +1.0**
KOLS pmax pmax
comp=Z,25nm,1.5s
KOLS Kolonicke sedl 74.81 4 *e*P **P 18 35 56.0 +1.0**
CRVS Cervenica-Dubn 74.81 4 *e*P **P 18 35 55.1 +0.1**
CRVS pmax pmax
comp=Z,60nm,2.2s
CRVS Cervenica-Dubn 74.81 4 *e*P **P 18 35 55.1 +0.1**
SSF Saint Saulge 74.82 17 *e*P **P 18 35 55.7 +0.6**
comp=Z,96nm,1.0s
SSF Saint Saulge 74.82 17 *e*P **P 18 35 55.7 +0.6**
SSF pmax pmax
comp=Z,96nm,1.0s
SSF Saint Saulge 74.82 17 *e*P **P 18 35 55.7 +0.6**
comp=Z,96nm,1.0s
SMOL Smolenice 74.98 7 *e*P **P 18 35 57.7 +1.7**
SMOL Smolenice 74.98 7 *e*P **P 18 35 57.7 +1.7**
LOMF Lomont 75.03 14 *e*P **P 18 35 58.0 +1.5**
LOMF Lomont 75.03 14 *e*P **P 18 35 58.0 +1.5**
LOMF Lomont 75.03 14 *e*P **P 18 35 58.0 +1.5**
AVF Avril sur Loir 75.06 17 *e*P **P 18 35 56.8 +0.3**
comp=Z,30nm,0.6s
AVF Avril sur Loir 75.06 17 *e*P **P 18 35 56.8 +0.3**
AVF pmax pmax
comp=Z,30nm,0.6s
AVF Avril sur Loir 75.06 17 *e*P **P 18 35 56.8 +0.3**
comp=Z,30nm,0.6s
VYHS Vyhne 75.09 6 *e*P **P 18 35 57.5 +0.8**
VYHS pmax pmax
comp=Z,12nm,1.1s
VYHS Vyhne 75.09 6 *e*P **P 18 35 57.5 +0.8**
UZH Uzhgorod 75.11 4 *e*P **P 18 35 57.9 +1.2**
UZH *e* 18 36 04.7
BGF Bois d'Agland 75.20 17 *e*P **P 18 35 57.7 +0.4**
comp=Z,74nm,1.0s
BGF Bois d'Agland 75.20 17 *e*P **P 18 35 57.7 +0.4**
BGF pmax pmax
comp=Z,74nm,1.0s
BGF Bois d'Agland 75.20 17 *e*P **P 18 35 57.7 +0.4**
comp=Z,74nm,1.0s
ZST Bratislava 75.27 7 *e*P **P 18 35 58.3 +0.6**
ZST pmax pmax
comp=Z,16nm,1.0s
ZST Bratislava 75.27 7 *e*P **P 18 35 58.3 +0.6**
SMF Signal de Mont 75.28 17 *e*P **P 18 35 58.0 +0.2**
comp=Z,92nm,1.2s
SMF Signal de Mont 75.28 17 *e*P **P 18 35 58.0 +0.2**
SMF pmax pmax
comp=Z,92nm,1.2s
SMF Signal de Mont 75.28 17 *e*P **P 18 35 58.0 +0.2**
comp=Z,92nm,1.2s
TCF Toulx Ste Croi 75.36 18 *e*P **P 18 35 58.5 +0.2**
comp=Z,59nm,1.1s
TCF Toulx Ste Croi 75.36 18 *e*P **P 18 35 58.5 +0.2**
TCF pmax pmax
comp=Z,59nm,1.1s
TCF Toulx Ste Croi 75.36 18 *e*P **P 18 35 58.5 +0.2**
comp=Z,59nm,1.1s
RJOB Jochberg 75.36 10 *e*P **P 18 35 59.4 +1.1**
comp=Z,23nm,0.9s
CONA Conrad Observa 75.45 8 *i*P **P 18 36 00.3 +1.5**
comp=Z,16nm,0.9s,SNR=9.0
MOTA Moosalm 75.57 12 ||*i*P **P 18 36 00.7 +1.1**
comp=Z,12nm,1.0s
TRPA Tarpa 75.62 4 ||*i*P **P 18 36 00.3 +0.6**
TRPA Tarpa 75.62 4 ||*e*P **P 18 36 01.1 +1.4**
CABF La Chapelle 75.65 15 *e*P **P 18 36 00.9 +0.9**
comp=Z,42nm,0.8s
CABF La Chapelle 75.65 15 *e*P **P 18 36 00.9 +0.9**
CABF pmax pmax
comp=Z,42nm,0.8s
CABF La Chapelle 75.65 15 *e*P **P 18 36 00.9 +0.9**
comp=Z,42nm,0.8s
WTTA Wattenberg 75.71 11 *i*P **P 18 36 01.8 +1.3**
comp=Z,26nm,0.8s,SNR=11
PSZ Piszkesteto 75.72 5 *e*P **P 18 36 01.0 +0.6**
PSZ pmax pmax
comp=Z,22nm,0.9s
PSZ Piszkesteto 75.72 5 *e*P **P 18 36 00.9 +0.6**
comp=Z,22nm,0.9s
PSZ Piszkesteto 75.72 5 ||*i*P **P 18 36 01.4 +1.0**
PSZ Piszkesteto 75.72 5 ||*e*P **P 18 36 02.1 +1.7**
AGO Saint Agoulin 75.74 17 *e*P **P 18 36 02.5 +2.1**
AGO Saint Agoulin 75.74 17 *e*P **P 18 36 02.5 +2.1**
SOP Sopron 75.74 8 ||*e*P **P 18 36 02.8 +2.4**
FETA Feichten 75.85 12 *i*P **P 18 36 02.6 +1.3**
comp=Z,20nm,0.9s,SNR=17
KSH Kashi 75.96 323 ||P P 18 36 05.5 +3.5
KSH pP pP 18 36 10.0 -0.6
KSH e**PcP** **PcP 18 36 17.5 +3.2**
KSH e**PP** **PP** 18 38 59.1 +7.3
KSH *e*S S 18 45 50.0 +7.0
KSH sS sS 18 45 57.8 +0.6
KSH *e*SKS **SKKSac 18 46 11.8 +0.8**
KSH *e*ScS **ScS 18 46 17.6 +3.1**
KSH pmax pmax
comp=Z,15nm,1.0s
KSH pmax pmax
comp=Z,340nm,4.1s
KSH LR LR
comp=N,360nm,6.9s
KSH LR LR
comp=E,370nm,6.5s
KSH LR LR
comp=Z,500nm,8.2s

KBA	**Koelnbreinsper**	**76.07**	**10**	*i* pP		**P**	**18 36 04.1**	**+1.5**
	comp=Z,23nm,0.8s,SNR=14							
ARSA	**Arzberg**	**76.09**	**8**	⇑*i*pP		**P**	**18 36 04.0**	**+1.5**
	comp=Z,13nm,1.1s							
BUD	**Budapest**	**76.11**	**6**	⇓*e*P		**P**	**18 36 05.1**	**+2.6**
BUR08	**Bucovina Ar. S**	**76.18**	**2**	*e*P		**P**	**18 36 03.3**	**+0.3**
RJF	**Les Rejaudoux**	**76.19**	**19**	*e*P		**P**	**18 36 03.1**	**+0.1**
	comp=Z,50nm,1.1s							
RJF				*e*R				
	comp=Z,2µm,18.8s							
RJF	**Les Rejaudoux**	**76.19**	**19**	*e*P		**P**	**18 36 03.1**	**+0.1**
RJF				pmax	pmax			
	comp=Z,50nm,1.1s							
RJF	**Les Rejaudoux**	**76.19**	**19**	*e*P		**P**	**18 36 03.1**	**+0.1**
	comp=Z,50nm,1.1s							
BURAR	**Bucovina Array**	**76.20**	**2**	⇓*i*P		**P**	**18 36 04.4**	**+1.2**
TUE	**Stuetta**	**76.23**	**13**	*e*P		**P**	**18 36 04.4**	**+0.9**
	comp=Z,9.5nm,0.9s							
LFF	**La Frestale**	**76.40**	**19**	*e*P		**P**	**18 36 04.7**	**+0.5**
	comp=Z,78nm,0.9s							
LFF	**La Frestale**	**76.40**	**19**	*e*P		**P**	**18 36 04.7**	**+0.5**
LFF				pmax	pmax			
	comp=Z,79nm,0.9s							
LFF	**La Frestale**	**76.40**	**19**	*e*P		**P**	**18 36 04.7**	**+0.5**
	comp=Z,78nm,0.9s							
HNR	**Honiara**	**76.56**	**229**	LR		LR	19 03 03.4	
	comp=Z,751nm,21.8s,baz=360,slow=30							
SOKA	**Soboth**	**76.62**	**9**	⇑*i*pP		**P**	**18 36 06.3**	**+0.8**
	comp=Z,24nm,1.1s							
RSL	**Roselend**	**76.63**	**15**	*e*P		**P**	**18 36 07.5**	**+1.8**
RSL	**Roselend**	**76.63**	**15**	*e*P		**P**	**18 36 07.5**	**+1.8**
RSL	**Roselend**	**76.63**	**15**	*e*P		**P**	**18 36 07.5**	**+1.8**
CAF	**Calviac**	**76.65**	**18**	*e*P		**P**	**18 36 06.0**	**+0.3**
	comp=Z,42nm,1.0s							
CAF	**Calviac**	**76.65**	**18**	*e*P		**P**	**18 36 06.0**	**+0.3**
CAF				pmax	pmax			
	comp=Z,42nm,1.0s							
CAF	**Calviac**	**76.65**	**18**	*e*P		**P**	**18 36 06.0**	**+0.3**
	comp=Z,42nm,1.0s							
PERS	**Pernice**	**76.67**	**9**	*e*P		**P**	**18 36 06.6**	**+0.8**
OBKA	**Obir**	**76.75**	**9**	⇓*i*pP		**P**	**18 36 07.4**	**+1.2**
	comp=Z,34nm,0.8s							
LPL	**La Plagne**	**76.82**	**15**	*e*P		**P**	**18 36 08.2**	**+1.4**
	comp=Z,55nm,1.3s							
LPL	**La Plagne**	**76.82**	**15**	*e*P		**P**	**18 36 08.2**	**+1.4**
LPL				pmax	pmax			
	comp=Z,55nm,1.3s							
LPL	**La Plagne**	**76.82**	**15**	*e*P		**P**	**18 36 08.2**	**+1.4**
	comp=Z,55nm,1.3s							
KIS	**Kishinev**	**76.84**	**359**	*e*P		**P**	**18 36 05.0**	**-1.6**
KIS				*e*			18 36 13.0	
KIS				*e*			18 36 18.0	
KIS				*e*S		**S**	**18 45 47.0**	**-5.0**
KIS	**Kishinev**	**76.84**	**359**	*e*P		**P**	**18 36 05.0**	**-1.6**
KIS				*e*S		**S**	**18 45 47.0**	**-5.0**
KIS				*e*L		L	19 10 46.0	
KIS				LRM		MLR	19 19 54.0	
	comp=Z,600nm,15.0s							
LPG	**La Plagne**	**76.84**	**15**	*e*P		**P**	**18 36 08.5**	**+1.5**
	comp=Z,76nm,1.4s							
LPG	**La Plagne**	**76.84**	**15**	*e*P		**P**	**18 36 08.5**	**+1.5**
LPG				pmax	pmax			
	comp=Z,77nm,1.4s							
LPG	**La Plagne**	**76.84**	**15**	*e*P		**P**	**18 36 08.5**	**+1.5**
	comp=Z,76nm,1.4s							
GROS	**Grobnik**	**76.88**	**9**	*e*P		**P**	**18 36 07.5**	**+0.5**
CADS	**Cadrg**	**76.95**	**10**	*i* P		**P**	**18 36 07.3**	**0.0**
BEHE	**Becsehely**	**76.97**	**8**	⇓*e*P		**P**	**18 36 09.8**	**+2.4**
VIVF	**Saint-Julien-l**	**77.15**	**17**	*e*P		**P**	**18 36 09.2**	**+0.7**
	comp=Z,48nm,1.0s							
VIVF	**Saint-Julien-l**	**77.15**	**17**	*e*P		**P**	**18 36 09.2**	**+0.7**
VIVF				pmax	pmax			
	comp=Z,48nm,1.0s							
VIVF	**Saint-Julien-l**	**77.15**	**17**	*e*P		**P**	**18 36 09.2**	**+0.7**
	comp=Z,48nm,1.0s							
KMI	**Kunming**	**77.16**	**296**	P		**P**	**18 36 08.8**	**-0.3**
KMI				PP		**PP**	**18 39 04.4**	**+1.9**
KMI				S		**S**	**18 45 57.3**	**+0.7**
KMI				SKS		**SKSac**	**18 46 16.6**	**-3.4**
KMI				pmax	pmax			
	comp=Z,8.0nm,1.4s							
KMI				pmax	pmax			
	comp=Z,210nm,7.3s							
KMI				LR	LR			
	comp=N,1µm,18.2s							
KMI				LR	LR			
	comp=E,900nm,19.3s							
KMI				LR	LR			
	comp=Z,620nm,18.0s							
ORIF	**Oris-en-Rattie**	**77.28**	**16**	*e*P		**P**	**18 36 10.0**	**+0.7**
	comp=Z,17nm,0.9s							
ORIF				*e*R				
	comp=Z,765nm,19.0s							
ORIF	**Oris-en-Rattie**	**77.28**	**16**	*e*P		**P**	**18 36 10.0**	**+0.7**
ORIF				pmax	pmax			
	comp=Z,17nm,0.9s							
ORIF	**Oris-en-Rattie**	**77.28**	**16**	*e*P		**P**	**18 36 10.0**	**+0.7**
	comp=Z,17nm,0.9s							
PKSM	**Moragy**	**77.35**	**6**	⇓*i*P		**P**	**18 36 10.1**	**+0.6**
PKSM	**Moragy**	**77.35**	**6**	⇓*e*P		**P**	**18 36 11.2**	**+1.7**
VISS	**Visnje**	**77.47**	**9**	*i* P		**P**	**18 36 11.0**	**+0.8**
MBDF	**Montbardon**	**77.60**	**15**	*e*P		**P**	**18 36 12.5**	**+1.4**
	comp=Z,21nm,0.9s							
MBDF	**Montbardon**	**77.60**	**15**	*e*P		**P**	**18 36 12.5**	**+1.4**
MBDF				pmax	pmax			
	comp=Z,21nm,0.9s							
MBDF	**Montbardon**	**77.60**	**15**	*e*P		**P**	**18 36 12.5**	**+1.4**
	comp=Z,21nm,0.9s							
RAR	**Rarotonga**	**77.69**	**187**	LR		LR	19 00 55.1	
	comp=Z,397nm,21.9s,baz=225,slow=28							
LASF	**Ste Croix**	**77.78**	**17**	*e*P		**P**	**18 36 12.3**	**+0.3**
LASF	**Ste Croix**	**77.78**	**17**	*e*P		**P**	**18 36 12.3**	**+0.3**
SJPF	**Ste Jean**	**77.78**	**21**	*e*P		**P**	**18 36 12.8**	**+0.8**
	comp=Z,55nm,1.2s							
SJPF	**Ste Jean**	**77.78**	**21**	*e*P		**P**	**18 36 12.8**	**+0.8**
SJPF				pmax	pmax			
	comp=Z,55nm,1.2s							
SJPF	**Ste Jean**	**77.78**	**21**	*e*P		**P**	**18 36 12.8**	**+0.8**
	comp=Z,55nm,1.2s							
BOJS	**Bojanci**	**77.81**	**9**	*i* P		**P**	**18 36 13.0**	**+1.0**
PBRG	**Braganca**	**77.82**	**26**	*e*P		**P**	**18 36 13.9**	**+1.6**
	comp=Z,36nm,1.8s							
GOF	**Gofitskoye**	**77.96**	**349**	*e*P		P	18 36 22.3	+9.4
GOF				pmax	pmax			
	comp=Z,40nm,0.9s							
POLO	**Lamas de Olo**	**77.97**	**27**	*e*P		**P**	**18 36 14.8**	**+1.6**
	comp=Z,21nm,1.8s							
VRI	**Vrincioaia**	**77.97**	**1**	⇑*i*P		**P**	**18 36 14.3**	**+1.3**
PLOR	**Plostina**	**77.99**	**1**	⇓*i*P		**P**	**18 36 14.6**	**+1.5**
PVRL	**Vila Real**	**78.08**	**26**	*e*P		**P**	**18 36 15.2**	**+1.5**
	comp=Z,43nm,2.0s							
BZS	**Buzias**	**78.10**	**4**	⇑*i*P		**P**	**18 36 14.5**	**+0.8**
ETSF	**Etsaut**	**78.12**	**21**	*e*P		**P**	**18 36 15.0**	**+1.0**
	comp=Z,48nm,0.9s							
ETSF	**Etsaut**	**78.12**	**21**	*e*P		**P**	**18 36 15.0**	**+1.0**
ETSF				pmax	pmax			
	comp=Z,48nm,0.9s							
ETSF	**Etsaut**	**78.12**	**21**	*e*P		**P**	**18 36 15.0**	**+1.0**
	comp=Z,48nm,0.9s							
SMRF	**Simiane la Rot**	**78.15**	**16**	*e*P		**P**	**18 36 15.4**	**+1.3**
SMRF	**Simiane la Rot**	**78.15**	**16**	*e*P		**P**	**18 36 15.4**	**+1.3**
EPF	**Esparros**	**78.17**	**20**	*e*P		**P**	**18 36 14.1**	**-0.1**
	comp=Z,40nm,1.0s							
EPF	**Esparros**	**78.17**	**20**	*e*P		**P**	**18 36 14.1**	**-0.1**
EPF				pmax	pmax			
	comp=Z,40nm,1.0s							
EPF	**Esparros**	**78.17**	**20**	*e*P		**P**	**18 36 14.1**	**-0.1**
	comp=Z,40nm,1.0s							
MTLF	**Montolieu**	**78.22**	**19**	*e*P		**P**	**18 36 14.9**	**+0.5**
	comp=Z,46nm,1.0s							
MTLF	**Montolieu**	**78.22**	**19**	*e*P		**P**	**18 36 14.9**	**+0.5**
MTLF				pmax	pmax			
	comp=Z,46nm,1.0s							
MTLF	**Montolieu**	**78.22**	**19**	*e*P		**P**	**18 36 14.9**	**+0.5**
	comp=Z,46nm,1.0s							
MLR	**Muntele Rosu**	**78.34**	**1**	⇑*i*P		**P**	**18 36 16.2**	**+1.0**
MVO	**Moncorvo**	**78.36**	**26**	*e*P		**P**	**18 36 16.8**	**+1.5**
	comp=Z,42nm,1.2s							
TOUF	**Mont Tournerai**	**78.36**	**15**	*e*P		**P**	**18 36 17.1**	**+1.7**
TOUF	**Mont Tournerai**	**78.36**	**15**	*e*P		**P**	**18 36 17.1**	**+1.7**
TOUF	**Mont Tournerai**	**78.36**	**15**	*e*P		**P**	**18 36 17.1**	**+1.7**
AUTN	**L'Aution**	**78.41**	**15**	*e*P		**P**	**18 36 17.8**	**+2.1**
AUTN	**L'Aution**	**78.41**	**15**	*e*P		**P**	**18 36 17.8**	**+2.1**
AUTN	**L'Aution**	**78.41**	**15**	*e*P		**P**	**18 36 17.8**	**+2.1**
SAOF	**Saorge**	**78.43**	**15**	*e*P		**P**	**18 36 17.0**	**+1.4**
SAOF	**Saorge**	**78.43**	**15**	*e*P		**P**	**18 36 17.0**	**+1.4**
SBF	**Sospel**	**78.54**	**15**	*e*P		**P**	**18 36 16.7**	**+0.5**
	comp=Z,62nm,0.9s							
SBF	**Sospel**	**78.54**	**15**	*e*P		**P**	**18 36 16.7**	**+0.5**
SBF				pmax	pmax			
	comp=Z,62nm,0.9s							
SBF	**Sospel**	**78.54**	**15**	*e*P		**P**	**18 36 16.7**	**+0.5**
	comp=Z,62nm,0.9s							
QIZ	**Qiongzhong**	**78.55**	**287**	P		**P**	**18 36 14.8**	**-1.8**
QIZ				PP		**PP**	**18 39 12.8**	**-1.2**
QIZ				S		**S**	**18 46 11.3**	**0.0**
QIZ				pmax	pmax			
	comp=Z,190nm,7.6s							
QIZ				LR	LR			
	comp=N,470nm,21.5s							
QIZ				LR	LR			
	comp=E,370nm,21.5s							
QIZ				LR	LR			
	comp=Z,430nm,21.5s							
PVIS	**Viseu**	**78.57**	**27**	*e*P		**P**	**18 36 18.3**	**+1.9**
	comp=Z,49nm,1.8s							
CFR	**Carcaliu**	**78.66**	**360**	⇓*i*P		**P**	**18 36 17.6**	**+0.8**
ANN	**Anapa**	**78.71**	**353**	*e*P		**P**	**18 36 14.9**	**-2.1**
ANN				pmax	pmax			
	comp=Z,126nm,7.2s							
ISR	**Istrita**	**78.72**	**1**	⇓*i*P		**P**	**18 36 18.5**	**+1.3**
FRF	**La Foret Royal**	**78.72**	**15**	*e*P		**P**	**18 36 17.7**	**+0.5**
FRF	**La Foret Royal**	**78.72**	**15**	*e*P		**P**	**18 36 17.7**	**+0.5**
FRF	**La Foret Royal**	**78.72**	**15**	*e*P		**P**	**18 36 17.7**	**+0.5**
LSA	**Lhasa**	**78.74**	**307**	P		**P**	**18 36 19.3**	**+1.2**
LSA				pmax	pmax			
	comp=Z,20nm,1.1s							
LSA	**Lhasa**	**78.74**	**307**	*e*P		**P**	**18 36 18.7**	**+0.6**
LSA				pmax	pmax			
	comp=Z,20nm,1.0s							
LSA	**Lhasa**	**78.74**	**307**	*e*P		**P**	**18 36 18.7**	**+0.6**
	comp=Z,20nm,1.0s							
LMR	**La Mourre**	**78.92**	**16**	*e*P		**P**	**18 36 19.0**	**+0.7**
LMR	**La Mourre**	**78.92**	**16**	*e*P		**P**	**18 36 19.0**	**+0.7**
LMR	**La Mourre**	**78.92**	**16**	*e*P		**P**	**18 36 19.0**	**+0.7**
MTE	**Manteigas**	**78.95**	**27**	*e*P		**P**	**18 36 20.0**	**+1.4**
	comp=Z,48nm,1.6s							
KIV	**Kislovodsk**	**79.09**	**349**	*c* *i*P		**P**	**18 36 19.8**	**+0.5**
KIV				*e*			18 36 37.8	
KIV				*e*			18 39 20.9	
KIV				*e*S		S	18 46 32.6	+16
KIV				pmax	pmax			
	comp=Z,41nm,0.8s							
KIV				MLR	MLR			
	comp=Z,500nm,22.0s							
KIV	**Kislovodsk**	**79.09**	**349**	P		**P**	**18 36 19.6**	**+0.3**
	comp=Z,253nm,0.7s,SNR=6.5							
KBZ	**Khabaz**	**79.29**	**349**	P		**P**	**18 36 21.4**	**+1.2**
KBZ	**Khabaz**	**79.29**	**349**	P		**P**	**18 36 21.4**	**+1.2**
KBZ	**Khabaz**	**79.29**	**349**	P		**P**	**18 36 21.4**	**+1.2**
	comp=Z,23nm,0.9s,baz=332,slow=2.8,SNR=52							
ROSC	**El Rosal**	**79.36**	**97**	LR		LR	19 15 47.5	
	comp=Z,250nm,19.1s,baz=192,slow=39							
TIRR	**Tirgusor**	**79.38**	**359**	*e*P		**P**	**18 36 20.6**	**-0.1**
TIRR				pmax	pmax			
	comp=Z,25nm,1.0s							
TIRR	**Tirgusor**	**79.38**	**359**	*e*P		**P**	**18 36 20.6**	**-0.1**
	comp=Z,25nm,1.0s							
TIRR	**Tirgusor**	**79.38**	**359**	⇓*i*P		**P**	**18 36 21.6**	**+0.9**
MAK	**Makhachkala**	**79.47**	**345**	*e*P		**P**	**18 36 21.5**	**+0.2**
MAK				*e*PPP		PPP	18 41 19.2	
MAK				*e*S		**S**	**18 46 20.1**	**-0.3**
MAK				pmax	pmax			
	comp=Z,152nm,1.5s							
PCBR	**Castelo Branco**	**79.50**	**27**	*e*P		**P**	**18 36 23.0**	**+1.5**
	comp=Z,34nm,1.6s							
TBI	**Tubuai**	**79.60**	**177**	*e*S		S	18 46 14.9	-6.9
	comp=Z,557nm,34.5s							
TBI				*e*LR		LR	19 01 01.7	
	comp=Z,868nm,28.0s,baz=1.9							
SOC	**Sochi**	**79.74**	**351**	*c* *i*P		**P**	**18 36 23.3**	**+0.6**
SOC				*e*			18 36 29.3	
SOC				*e*			18 39 27.7	
SOC				*e*S		**S**	**18 46 22.3**	**-1.0**
SOC				*e*			18 47 01.3	
SOC				pmax	pmax			
	comp=Z,34nm,0.9s							
SOC				MLR	MLR			
	comp=Z,575nm,18.0s							
PMAFR	**Mafra**	**79.87**	**28**	*e*P		**P**	**18 36 24.8**	**+1.3**
	comp=Z,150nm,1.5s							
PMTG	**Montargil**	**80.04**	**28**	*e*P		**P**	**18 36 25.6**	**+1.2**
	comp=Z,32nm,1.7s							
PGF	**Pioggiola**	**80.04**	**14**	*e*P		**P**	**18 36 25.0**	**+0.5**
	comp=Z,13nm,0.7s							
PGF	**Pioggiola**	**80.04**	**14**	*e*P		**P**	**18 36 25.0**	**+0.5**
PGF				pmax	pmax			
	comp=Z,13nm,0.7s							
PGF	**Pioggiola**	**80.04**	**14**	*e*P		**P**	**18 36 25.0**	**+0.5**
	comp=Z,13nm,0.7s							
ZEI	**Tsey**	**80.11**	**348**	*e*P		**P**	**18 36 25.2**	**+0.2**
ZEI				*e*S		S	18 46 35.6	+8.0
ZEI				pmax	pmax			
	comp=Z,17nm,1.0s							
ESDC	**Sonseca Array**	**80.49**	**24**	P		**P**	**18 36 27.9**	**+1.0**
ESDC	**Sonseca Array**	**80.49**	**24**	P		**P**	**18 36 27.9**	**+1.0**
	comp=Z,18nm,0.8s,baz=341,slow=5.2,SNR=60							
ESDC				LR		LR	19 11 58.2	
	comp=Z,736nm,19.8s,baz=300,slow=36							
ESLA	**Sonseca Array**	**80.49**	**24**	*e*P		**P**	**18 36 27.8**	**+0.9**
	comp=Z,5.5nm,0.9s							
EVOP	**Sao Brissos**	**80.57**	**28**	*e*P		**P**	**18 36 27.6**	**+0.3**
EVOP				pmax	pmax			
	comp=Z,19nm,0.9s							
EVOP	**Sao Brissos**	**80.57**	**28**	*e*P		**P**	**18 36 27.6**	**+0.3**
	comp=Z,19nm,0.9s							
EVO	**Evora**	**80.60**	**28**	*e*P		**P**	**18 36 27.6**	**+0.2**
	comp=Z,19nm,0.9s							
EVO				*e*R				
	comp=Z,2µm,18.8s							
RKT	**Rikitea**	**80.69**	**164**	*e*LR		LR	19 01 14.0	
	comp=Z,626nm,30.0s							
PNCL	**Nicolau / Gran**	**80.86**	**28**	*e*P		**P**	**18 36 30.0**	**+1.2**
	comp=Z,26nm,2.1s							
VTS	**Vitosha**	**81.18**	**3**	⇑*i*P		**P**	**18 36 31.2**	**+0.5**
PBAR	**Barrancos**	**81.18**	**27**	*e*P		**P**	**18 36 32.4**	**+1.8**
	comp=Z,35nm,2.2s							
PCVE	**Castro Verde**	**81.44**	**28**	*e*P		**P**	**18 36 31.8**	**-0.1**
	comp=Z,42nm,1.7s							
MORF	**Marmelete**	**81.59**	**29**	*e*P		**P**	**18 36 33.9**	**+1.1**
	comp=Z,62nm,1.7s							
PVAQ	**Vaqueiros**	**81.74**	**28**	*e*P		**P**	**18 36 35.4**	**+1.9**
	comp=Z,59nm,1.8s							
TAPN	**Taplejung**	**82.28**	**309**	*e*P		**P**	**18 36 37.1**	**+0.2**
	comp=Z,54nm,0.9s							
NVR	**Nevrokopi**	**82.44**	**3**	P		**P**	**18 36 38.2**	**+1.0**
GUN	**Gumba**	**82.56**	**311**	*e*P		**P**	**18 36 38.9**	**+0.5**
	comp=Z,155nm,1.1s							
KNT	**Kendrikon**	**82.59**	**4**	P		P	18 36 34.1	-3.9
GNI	**Garni**	**82.61**	**347**	*e*P		**P**	**18 36 39.3**	**+1.0**
	comp=Z,11nm,0.8s							
GNI	**Garni**	**82.61**	**347**	P		P	18 36 41.6	+3.3
	SNR=5.5							
KBL	**Kabul**	**82.72**	**327**	*e*P		**P**	**18 36 37.6**	**-1.4**
KBL				pmax	pmax			
	comp=Z,13nm,1.0s							
KBL	**Kabul**	**82.72**	**327**	*e*P		**P**	**18 36 37.6**	**-1.4**
	comp=Z,13nm,1.0s							
GRG	**Griva**	**82.78**	**4**	P		**P**	**18 36 39.6**	**+0.6**
KAVA	**Kavala**	**82.81**	**2**	P		**P**	**18 36 37.8**	**-1.2**
ODAN	**Odare**	**82.84**	**309**	*e*P		**P**	**18 36 39.9**	**+0.1**
	comp=Z,37nm,1.0s							
FNA	**Florina**	**82.91**	**5**	P		**P**	**18 36 40.1**	**+0.4**
KKN	**Kakani**	**82.92**	**311**	*e*P		**P**	**18 36 40.4**	**+0.3**
	comp=Z,119nm,1.4s							
ALN	**Alexandroupoli**	**82.93**	**1**	P		P	18 36 35.0	-4.7
DANN	**Dangsing**	**83.06**	**313**	*e*P		**P**	**18 36 41.4**	**+0.5**
	comp=Z,204nm,0.9s							
PKI	**Pulchoki**	**83.06**	**311**	*e*P		**P**	**18 36 41.0**	**0.0**
	comp=Z,39nm,0.6s							
PKIN	**Phulchoki**	**83.06**	**311**	*e*P		**P**	**18 36 41.5**	**+0.6**
	comp=Z,20nm,0.7s							
RAMN	**Ramite**	**83.10**	**310**	*e*P		**P**	**18 36 41.1**	**0.0**
	comp=Z,112nm,0.8s							
DMN	**Daman**	**83.15**	**311**	*e*P		**P**	**18 36 41.8**	**+0.4**
	comp=Z,76nm,0.9s							
OUR	**Ouranopolis**	**83.45**	**3**	P		**P**	**18 36 42.0**	**-0.4**
PYUN	**Piuthan**	**83.59**	**313**	*e*P		**P**	**18 36 43.7**	**+0.1**
	comp=Z,198nm,1.0s							
KOLN	**Koldanda**	**83.63**	**312**	*e*P		**P**	**18 36 43.9**	**+0.1**
	comp=Z,49nm,1.0s							
ANTO	**Ankara**	**83.87**	**356**	*e*P		**P**	**18 36 45.1**	**+0.4**
ANTO				pmax	pmax			
	comp=Z,64nm,1.5s							
ANTO	**Ankara**	**83.87**	**356**	*e*P		**P**	**18 36 45.1**	**+0.4**
	comp=Z,64nm,1.5s							
ANTO	**Ankara**	**83.87**	**356**	P		**P**	**18 36 46.3**	**+1.7**
	SNR=7.7							
LIA	**Limnos Island**	**83.92**	**2**	P		**P**	**18 36 44.9**	**+0.1**
BR131	**Keskin Array S**	**83.98**	**355**	*e*P		**P**	**18 36 45.4**	**+0.1**
	comp=Z,11nm,0.9s							
BRTR	**Keskin Array B**	**83.98**	**355**	P		**P**	**18 36 45.8**	**+0.5**
BRTR				PP		**PP**	**18 40 03.0**	**+4.9**
BRTR	**Keskin Array B**	**83.98**	**355**	P		**P**	**18 36 45.8**	**+0.5**
	comp=Z,11nm,0.9s,baz=29,slow=2.8,SNR=63							
BRTR				PP		**PP**	**18 40 03.0**	**+4.9**
	comp=Z,0.9nm,1.0s,baz=346,slow=4.2,SNR=3.6							
BRTR				LR		LR	19 16 48.6	
	comp=Z,264nm,19.7s,baz=116,slow=38							
IGT	**Igoumenitsa**	**84.10**	**6**	P		**P**	**18 36 46.6**	**+0.8**
CHTO	**Chiang Mai**	**84.35**	**296**	*e*P		**P**	**18 36 46.1**	**-1.2**
CHTO				pmax	pmax			
	comp=Z,9.0nm,1.2s							
CHTO	**Chiang Mai**	**84.35**	**296**	*e*P		**P**	**18 36 46.0**	**-1.2**
	comp=Z,9.4nm,1.2s							
CMAR	**Chiang Mai Arr**	**84.65**	**295**	P		**P**	**18 36 48.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**84.65**	**295**	P		**P**	**18 36 48.5**	**-0.3**
	comp=Z,9.5nm,0.9s,baz=18,slow=5.4,SNR=66							
AGG	**Agios Georgios**	**84.71**	**4**	P		**P**	**18 36 48.9**	**0.0**
EFP	**Efpalio**	**85.28**	**5**	P		**P**	**18 36 52.4**	**+0.7**
DSF	**Desfina**	**85.33**	**4**	P		**P**	**18 36 51.9**	**-0.1**
TRIZ	**Trizonia**	**85.35**	**4**	P		P	18 36 49.0	-3.0
CHOS	**Chios island**	**85.44**	**1**	P		**P**	**18 36 52.0**	**-0.6**
DZM	**Mont Dzumac**	**85.66**	**218**	*e*S		S	18 47 14.5	-10
	comp=Z,710nm,26.1s							
DZM				*e*LR		LR	19 03 58.7	
	comp=Z,514nm,20.8s							
GUR	**Goura**	**85.79**	**4**	P		**P**	**18 36 54.3**	**-0.1**
DID	**Didima**	**86.25**	**4**	P		**P**	**18 36 56.1**	**-0.5**
DIDY	**Didyma**	**86.28**	**4**	P		**P**	**18 36 55.5**	**-1.3**
ITM	**Ithomi**	**86.53**	**5**	P		**P**	**18 36 58.3**	**+0.4**
KEST	**Kesra**	**86.79**	**15**	P		**P**	**18 37 00.7**	**+1.3**
KEST	**Kesra**	**86.79**	**15**	P		**P**	**18 37 00.7**	**+1.3**
	comp=Z,3.8nm,1.0s,baz=308,slow=6.3,SNR=5.0							
PYL	**PYLOS**	**86.80**	**5**	P		P	18 36 56.0	-3.2
DYR	**Agios Nikonas**	**86.96**	**4**	P		**P**	**18 37 00.8**	**+0.8**
VLI	**Veliai**	**87.03**	**4**	P		**P**	**18 37 00.0**	**-0.3**
KARN	**Karanos**	**88.37**	**3**	P		P	18 37 02.4	-4.4
LAST	**Lasithi**	**88.65**	**2**	P		P	**18 37 06.4**	**-1.8**
ZKR	**Zakros**	**88.71**	**1**	P		P	18 37 02.7	-5.7
CSS	**Prodhromos**	**88.74**	**355**	P		**P**	**18 37 08.9**	**+0.3**
CSS	**Prodhromos**	**88.74**	**355**	*e*P		**P**	**18 37 08.3**	**-0.3**
	comp=Z,20nm,1.0s							
SIVA	**Sivas**	**88.78**	**2**	P		**P**	**18 37 09.5**	**+0.8**
GVD	**Gavdhos**	**88.94**	**3**	*e*P		**P**	**18 37 09.9**	**+0.4**
	comp=Z,47nm,0.9s							
DRV	**Dumont d'Urvil**	**132.81**	**210**	Pdif		Pdif	18 40 47.0	+22
DRV	**Dumont d'Urvil**	**132.81**	**210**	PP		PP	18 46 04.0	+9.3
DRV				SKS			18 49 04.0	
DRV				SKKS		**SKKSac**	**18 52 53.0**	**+6.0**
DRV				SP		SP	18 55 49.0	-18
DRV				SS		SKKSdf	19 01 03.0	+32
LBTB	**Lobatse**	**148.48**	**4**	*e*P		**PKPbc**	**18 44 01.4**	**-0.2**
BOSA	**Boshof**	**152.05**	**4**	PKPbc		**PKPbc**	**18 44 10.1**	**0.0**
BOSA				PKPab		**PKPab**	**18 44 20.6**	**+1.0**
BOSA	**Boshof**	**152.05**	**4**	PKPbc		**PKPbc**	**18 44 10.1**	**0.0**
	comp=Z,7.6nm,0.8s,baz=349,slow=3.2,SNR=16							
BOSA				PKPab		**PKPab**	**18 44 20.6**	**+1.0**
	comp=Z,19nm,1.1s,baz=360,slow=4.5,SNR=6.2							

*ISK **15** 18:25:29.4,37.˚30N×28.˚65E,h6km,MD2.5*
*DDA **15** 18:25:31.2,37.˚20N×28.˚56E,h7km,MD2.7*
*ISCJB **15** 18:25:32.2±0.5,37.˚18N±0.˚03×28.˚54E±0.˚04,h20km±10km, Error ellipse: s-maj=5.7km s-min=4.8km az=25.4*
*CSEM **15** 18:25:32.1±0.2,37.˚16N×28.˚53E,h20km,MD2.7, Error ellipse: s-maj=5.3km s-min=4.0km az=36.0*

ISC 15 18:25:31.4±0.9,37.˚24N±0.˚03×28.˚57E±0.˚03,h17km±8km, n20,σ1.˚928/34,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.25**	**246**	*e*P		G	**Pg**	**18 25 37.0**	**-0.1**
YER				*e*S		G	**Sg**	**18 25 41.3**	**+0.4**
YER	**Yerkesik**	**0.25**	**246**	*e*P		G	**Pg**	**18 25 37.0**	**-0.1**
YER				*e*S		G	**Sg**	**18 25 41.3**	**+0.4**
TURN	**Turunc**	**0.36**	**176**	*i* P			**Pb**	**18 25 40.2**	**+

ZALV	Zalesovo Beam	60.44	325	P		P	18 37 27.0	+0.1
	1.4nm,0.7s,baz=42,slow=6.6,SNR=3.4							
MKAR	Makanchi Array	67.42	323	P		P	18 38 12.2	-0.8
MKAR	Makanchi Array	67.42	323	P		P	18 38 12.2	-0.8
	0.7nm,0.5s,baz=43,slow=7.0,SNR=3.1							
AKASG	Malin Array Be	73.12	359	P		P	18 38 46.7	-1.0
AKASG	Malin Array Be	73.12	359	P		P	18 38 46.7	-1.0
	0.9nm,0.4s,baz=3.4,slow=6.2,SNR=4.6							
ESDC	Sonseca Array	80.45	24	P		P	18 39 30.0	+0.6
ESDC	Sonseca Array	80.45	24	P		P	18 39 30.0	+0.6
	0.6nm,0.6s,baz=342,slow=4.9,SNR=3.6							
WRA	Warramunga Arr	97.69	245	LR		LR	19 20 22.2	
	comp=Z,437nm,20.7s,baz=50,slow=33							

*IDC **15** 18:33:04.8±1.1,56°54N×152°33W,h0km,mb3.8/13, mb1 3.9/15,mb1mx3.8/29,mbtmp3.7/15,ML2.9/2, Error ellipse: s-maj=27.5km s-min=19.4km az=36.0*

*ISCJB **15** 18:33:05.4±0.7,56°45N±0°06×152°1W±0°1,h18km, mb3.8/13,Error ellipse: s-maj=12.4km s-min=7.7km az=155.5*

*NEIC **15** 18:33:09.4,56°56N×152°37W,h10km,ML2.9(AEIC),After AEIC.*

ISC 15 18:33:07.6±0.8,56°56N±0°07×152°15W±0°09,h18km,n42, σ0s88/47,mb3.9/13,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.92	317	P		P	Pb	18 33 24.1	-0.8
KDAK	Kodiak Island	1.25	349	P		P	Pn	18 33 29.6	-0.6
KDAK				Sn		Sn	Sb	18 33 46.7	+0.2
KDAK	Kodiak Island	1.25	349	Pn		Pn	Pn	18 33 29.9	-0.3
	6.5nm,0.3s,baz=167,slow=11,SNR=4.8								
KDAK				Sn		Sn	Sb	18 33 46.7	+0.2
	16nm,0.3s,baz=176,slow=17,SNR=8.5								
KAKN	Katmai Knife C	2.35	319	P		P	Pn	18 33 45.9	+0.5
FOSS	Fourpeaked Sta	2.40	340	P		P	Pn	18 33 47.1	+1.1
MCNL	McNeil River	2.88	337	P		P	Pn	18 33 54.0	+1.3
AUH	Augustine H	2.90	347	P		P	Pn	18 33 54.5	+1.6
OPT	Oil Point	3.16	350	P		P	Pn	18 33 58.2	+1.7
ILW	Iliamna West	3.55	352	P		P	Pn	18 34 02.9	+0.9
RSO	Redoubt South	3.93	356	eP		P	Pn	18 34 07.4	+0.2
RSO				eSn		S	Sn	18 34 56.1	+3.2
ILAR	Eielson Array	8.63	15	Pn		P	Pn	18 35 12.1	+0.6
ILAR				Sn		S	Sn	18 36 46.9	-1.4
ILAR	Eielson Array	8.63	15	Pn		P	Pn	18 35 12.1	+0.6
	0.9nm,0.3s,baz=202,slow=14,SNR=20								
ILAR				Sn		S	Sn	18 36 46.9	-1.4
	0.2nm,0.3s,baz=198,slow=24,SNR=4.2								
INK	Inuvik	14.51	28	Pn		P	Pn	18 36 32.1	+0.3
INK	Inuvik	14.51	28	Pn		P	Pn	18 36 32.1	+0.3
	0.0nm,0.3s,baz=112,slow=5.4,SNR=1.9								
YKA	Yellowknife Ar	19.72	57	P		P	Pn	18 37 37.0	-0.3
YKA	Yellowknife Ar	19.72	57	P		P	Pn	18 37 36.9	-0.3
	0.1nm,0.3s,baz=270,slow=11,SNR=5.1								
NVAR	Mina Array Bea	28.76	115	P		P	Pn	18 39 05.6	+1.3
NVAR				S		S	Pn	18 43 41.6	-11
NVAR	Mina Array Bea	28.76	115	P		P	Pn	18 39 05.6	+1.3
	0.4nm,0.6s,baz=312,slow=9.5,SNR=4.0								
NVAR				S		S	Pn	18 43 41.6	-11
	0.1nm,0.3s,baz=348,slow=35,SNR=5.3								
PDAR	Pinedale Array	30.28	99	P		P	Pn	18 39 18.5	+0.8
PDAR	Pinedale Array	30.28	99	P		P	Pn	18 39 18.5	+0.8
	0.3nm,0.7s,baz=297,slow=6.0,SNR=1.9								
ARCES	ARCESS Array B	54.20	1	P		P	Pn	18 42 31.3	0.0
ARCES	ARCESS Array B	54.20	1	P		P	Pn	18 42 31.3	0.0
	4.1nm,1.1s,baz=23,slow=6.6,SNR=5.0								
SONM	Songino Array	57.23	308	P		P	Pn	18 42 53.9	+0.3
SONM	Songino Array	57.23	308	P		P	Pn	18 42 53.9	+0.3
	1.4nm,0.7s,baz=39,slow=8.6,SNR=7.3								
ZALV	Zalesovo Beam	60.45	325	P		P	Pn	18 43 15.2	-0.5
ZALV	Zalesovo Beam	60.45	325	P		P	Pn	18 43 15.2	-0.5
	1.0nm,0.5s,baz=25,slow=7.1,SNR=5.3								
NOA	NORSAR Array B	62.02	9	P		P	Pn	18 43 25.9	-0.3
NOA	NORSAR Array B	62.02	9	P		P	Pn	18 43 25.9	-0.3
	0.5nm,1.0s,baz=351,slow=6.8,SNR=3.3								
FINES	FINESS Array B	62.33	1	P		P	Pn	18 43 28.4	+0.2
FINES	FINESS Array B	62.33	1	P		P	Pn	18 43 28.4	+0.2
	0.7nm,0.7s,baz=22,slow=10,SNR=3.9								
KURK	Kurchatov	65.16	327	P		P	Pn	18 43 47.4	+0.4
KURBB	Kurchatov Arra	65.27	327	P		P	Pn	18 43 47.4	-0.3
	0.4nm,0.9s,baz=28,slow=6.0,SNR=4.8								
BVAR	Borovoye Array	65.34	333	P		P	Pn	18 43 48.0	-0.2
BVAR	Borovoye Array	65.34	333	P		P	Pn	18 43 48.0	-0.2
	1.0nm,0.7s,baz=64,slow=6.8,SNR=6.2								
MKAR	Makanchi Array	67.43	323	P		P	Pn	18 44 01.2	-0.5
MKAR	Makanchi Array	67.43	323	P		P	Pn	18 44 01.2	-0.5
	0.5nm,0.6s,baz=29,slow=5.6,SNR=6.8								
AKASG	Malin Array Be	73.10	359	P		P	Pn	18 44 36.1	-0.2
AKASG	Malin Array Be	73.10	359	P		P	Pn	18 44 36.1	-0.2
	0.6nm,0.4s,baz=7.4,slow=6.5,SNR=3.8								
BRTR	Keskin Array B	83.96	356	P		P	Pn	18 45 36.2	-0.4
BRTR	Keskin Array B	83.96	356	P		P	Pn	18 45 36.2	-0.4
	0.4nm,0.8s,baz=46,slow=4.2,SNR=2.7								
CMAR	Chiang Mai Arr	84.74	296	P		P	Pn	18 45 39.8	-0.8
CMAR	Chiang Mai Arr	84.74	296	P		P	Pn	18 45 39.8	-0.8
	0.4nm,0.7s,baz=32,slow=3.6,SNR=4.3								

*IDC **15** 18:38:16.6±1.2,56°49N×152°37W,h0km,mb3.9/13, mb1 4.0/14,mb1mx3.9/28,mbtmp3.9/14,Error ellipse: s-maj=28.1km s-min=21.6km az=24.0*

*ISCJB **15** 18:38:17.4±0.6,56°50N±0°05×151°89W±0°09,h18km, mb3.9/14,Error ellipse: s-maj=8.2km s-min=6.6km az=43.6*

*NEIC **15** 18:38:20.6,56°54N×152°10W,h10km,mb4.0/1, ML3.4(AEIC),After AEIC.*

ISC 15 18:38:19.7±0.8,56°57N±0°09×152°06W±0°06,h18km,n59, σ0s89/63,mb4.0/14,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.94	315	P		P	Pg	18 38 38.1	0.0
KDAK	Kodiak Island	1.25	347	P		P	Pn	18 38 41.8	-0.5
KDAK				S		S	Sn	18 38 58.9	+0.2
KDAK	Kodiak Island	1.25	347	Pn		Pn	Pn	18 38 40.6	-1.7
	7.7nm,0.3s,baz=185,slow=11,SNR=11								
KDAK				Sn		Sn	Sb	18 38 58.9	+0.2
	44nm,0.3s,baz=194,slow=19,SNR=21								
KABR	Katmai Barrier	2.22	316	P		P	Pn	18 38 55.9	+0.2
KAKN	Katmai Knife C	2.38	318	P		P	Pn	18 38 58.1	+0.3
FOSS	Fourpeaked Sta	2.40	339	P		P	Pn	18 38 58.9	+0.7
KELA	Mount Kelaz	2.73	315	P		P	Pn	18 39 02.8	0.0
AUW	Augustine West	2.91	346	P		P	Pn	18 39 06.2	+1.2
OPT	Oil Point	3.16	349	P		P	Pn	18 39 10.2	+1.7
CHGN	Chignik	3.54	268	ePn		P	Pn	18 39 09.4	-4.3
ILW	Iliamna West	3.55	351	P		P	Pn	18 39 15.2	+1.2
RSO	Redoubt South	3.92	355	ePn		P	Pn	18 39 19.6	+0.4
NCT	North Crescent	4.03	354	P		P	Pn	18 39 22.0	+1.4
SPU	Mount Spurr	4.63	0	P		P	Pn	18 39 29.4	+0.6
SPU				S		S	Sn	18 40 23.3	+1.3
CKL	Chakachamna La	4.64	358	P		P	Pn	18 39 29.9	+0.9
SVW2	Sparrevohn	4.90	340	P		P	Pn	18 39 32.5	+0.1
SML	Sawmill	5.59	18	ePn		P	Pn	18 39 42.5	+0.5
	10nm,1.2s								
PPLA	Purkeypile	6.35	359	ePn		P	Pn	18 39 52.3	-0.2
	12nm,0.9s								
TT01	Tatalina	6.67	344	P		P	Pn	18 39 57.6	+1.0
KIAG	Kiagna River	6.67	45	P		P	Pn	18 39 55.6	-1.2
BALM	Baldy	6.74	44	P		P	Pn	18 39 57.2	-0.6
GRNC	Granite Creek	6.80	48	P		P	Pn	18 39 58.1	-0.6
TRF	Thorofare Moun	6.96	7	ePn		P	Pn	18 40 00.6	-0.3
	24nm,1.0s								
BARN	Barnard Glacie	7.03	46	P		P	Pn	18 40 01.3	-0.5
ILAR	Eielson Array	8.61	15	Pn		P	Pn	18 40 24.5	+1.2
ILAR				Sn		Sn	Sn	18 41 57.6	-2.2
ILAR	Eielson Array	8.61	15	Pn		P	Pn	18 40 24.5	+1.2
	0.9nm,0.3s,baz=201,slow=14,SNR=45								
ILAR				Sn		Sn	Sn	18 41 57.6	-2.2
	0.4nm,0.3s,baz=203,slow=23,SNR=4.7								
IM3	Indian Mountai	9.48	356	P		P	Pn	18 40 34.3	-0.9
INK	Inuvik	14.48	28	Pn		P	Pn	18 41 42.9	-0.5
INK	Inuvik	14.48	28	Pn		P	Pn	18 41 42.9	-0.5
	0.0nm,0.3s,baz=238,slow=18,SNR=2.5								
YKA	Yellowknife Ar	19.67	57	P		P	Pn	18 42 49.0	+0.2
YKA	Yellowknife Ar	19.67	57	P		P	Pn	18 42 49.0	+0.2
	0.0nm,0.3s,baz=270,slow=10,SNR=12								
BILL	Bilibino	22.00	318	eP		P		18 43 11.2	-1.3
	7.1nm,1.1s								
PDAR	Pinedale Array	30.23	99	P		P	Pn	18 44 30.0	+0.6
PDAR	Pinedale Array	30.23	99	P		P	Pn	18 44 30.0	+0.6
	0.4nm,0.7s,baz=340,slow=9.6,SNR=1.5								

ARCES	ARCESS Array B	54.19	1	P		P	18 47 43.3	-0.1
ARCES	ARCESS Array B	54.19	1	P		P	18 47 43.3	-0.1
	0.8nm,0.6s,baz=21,slow=8.4,SNR=4.6							
SONM	Songino Array	57.26	308	P		P	18 48 05.5	-0.4
SONM	Songino Array	57.26	308	P		P	18 48 05.5	-0.4
	2.1nm,0.8s,baz=49,slow=7.1,SNR=13							
ZALV	Zalesovo Beam	60.46	325	P		P	18 48 27.6	-0.2
ZALV	Zalesovo Beam	60.46	325	P		P	18 48 27.6	-0.2
	1.5nm,0.6s,baz=28,slow=6.6,SNR=7.6							
NB2	NORSAR Subarra	61.99	9	P		P	18 48 38.8	+0.7
	comp=Z,0.6nm,0.7s,baz=352,slow=6.5							
NOA	NORSAR Array B	61.99	9	P		P	18 48 38.9	+0.7
NOA	NORSAR Array B	61.99	9	P		P	18 48 38.9	+0.7
	comp=Z,1.1nm,0.8s,baz=350,slow=6.6,SNR=4.8							
FINES	FINESS Array B	62.32	1	P		P	18 48 40.8	+0.5
FINES	FINESS Array B	62.32	1	P		P	18 48 40.8	+0.5
	comp=Z,2.2nm,0.8s,baz=15,slow=8.1,SNR=5.3							
KURK	Kurchatov	65.17	327	P		P	18 48 59.6	+0.4
KURBB	Kurchatov Arra	65.28	327	P		P	18 48 59.6	-0.3
	comp=Z,0.8nm,0.7s,baz=29,slow=6.6,SNR=4.5							
BVAR	Borovoye Array	65.36	333	P		P	18 49 00.0	-0.4
BVAR	Borovoye Array	65.36	333	P		P	18 49 00.0	-0.4
	comp=Z,2.0nm,0.7s,baz=31,slow=6.9,SNR=7.7							
MKAR	Makanchi Array	67.45	323	P		P	18 49 12.8	-1.1
MKAR	Makanchi Array	67.45	323	P		P	18 49 12.8	-1.1
	comp=Z,0.6nm,0.6s,baz=42,slow=8.2,SNR=6.1							
AKASG	Malin Array Be	73.09	359	P		P	18 49 48.0	-0.4
AKASG	Malin Array Be	73.09	359	P		P	18 49 48.0	-0.4
	comp=Z,1.2nm,0.6s,baz=6.7,slow=6.7,SNR=6.1							
GERES	GERESS Array B	74.29	10	P		P	18 49 56.4	+0.8
GERES	GERESS Array B	74.29	10	P		P	18 49 56.4	+0.8
	comp=Z,0.4nm,0.8s,baz=343,slow=4.2,SNR=4.5							
ESDC	Sonseca Array	80.39	24	P		P	18 50 31.2	+1.4
ESDC	Sonseca Array	80.39	24	P		P	18 50 31.2	+1.4
	comp=Z,0.3nm,0.4s,baz=353,slow=6.0,SNR=4.4							
CMAR	Chiang Mai Arr	84.78	296	P		P	18 50 51.9	-1.0
CMAR	Chiang Mai Arr	84.78	296	P		P	18 50 51.9	-1.0
	comp=Z,0.5nm,0.7s,baz=11,slow=6.1,SNR=5.8							

*IDC **15** 18:41:46.3±0.6,56°50N×152°45W,h0km,mb4.3/25, mb1 4.4/27,mb1mx4.3/34,mbtmp4.2/27,ML3.5/2, Error ellipse: s-maj=18.3km s-min=10.8km az=29.0*

*NEIC **15** 18:41:46.6,56°29N×152°03W,h10km,mb4.5/27, ML3.9(AEIC),After AEIC.*

*ISCJB **15** 18:41:47.5±0.3,56°53N±0°03×152°21W±0°05,h20km, mb4.3/51,MS4.6/1,Error ellipse: s-maj=4.3km s-min=3.9km az=1.5*

*BJI **15** 18:41:50.8,56°72N×153°12W,h30km,mB4.9/2,mb4.5/11, Ms4.9/1,Ms7 4.6/2*

ISC 15 18:41:49.1±0.4,56°51N±0°06×152°34W±0°04,h20km, n198,σ1s37/212,mb4.4/51,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.89	324	P		P	Pn	18 42 05.8	-0.7
KDAK	Kodiak Island	1.29	354	P		P	Pb	18 42 11.5	-1.1
KDAK	Kodiak Island	1.29	354	Pn		Pb	Pb	18 42 11.5	-1.1
	20nm,0.3s,baz=184,slow=9.2,SNR=74								
KDAK				Sn		Sn	Sn	18 42 28.0	-0.6
	133nm,0.3s,baz=198,slow=19,SNR=18								
KABR	Katmai Barrier	2.17	320	P		P	Pn	18 42 24.9	+0.8
KAWH	Katmai	2.30	326	P		P	Pb	18 42 27.4	-2.6
KAKN	Katmai Knife C	2.32	322	P		P	Pb	18 42 27.7	-2.6
KCE	Katmai Mt Cerb	2.33	320	P		P	Pb	18 42 28.0	-2.4
KABU	Katmai Buttres	2.38	319	P		P	Pb	18 42 28.8	-2.6
KELA	Mount Kelaz	2.67	318	P		P	Pn	18 42 32.0	+1.0
AUW	Augustine West	2.94	349	P		P	Pn	18 42 36.2	+1.6
AUNW	Augustine NWes	2.94	349	P		P	Pn	18 42 35.6	+0.9
OPT	Oil Point	3.19	352	P		P	Pn	18 42 39.6	+1.4
ANPK	Aniakchak Peak	3.21	278	P		P	Pn	18 42 38.1	-0.4
BRLK	Bradley Lake	3.36	13	P		P	Pn	18 42 39.4	-1.1
BRLK				S		S	Sn	18 43 20.9	+1.2
CHGN	Chignik	3.38	269	ePn		P	Pn	18 42 38.9	-1.8
SEW	Seward	3.92	22	ePn		P	Pn	18 42 46.0	-2.0
RSO	Redoubt South	3.97	357	ePn		P	Pn	18 42 48.3	-0.8
DFR	Drift River	4.10	358	P		P	Pn	18 42 51.1	+0.4
MID	Middleton Isla	4.33	45	Pn		P	Pn	18 42 49.3	-4.5
SPU	Mount Spurr	4.69	2	P		P	Pn	18 42 59.5	+0.7
CKL	Chakachamna La	4.71	0	P		P	Pn	18 42 59.5	+0.5
CKL				S		S	Sn	18 43 55.4	+2.4
SDPT	Sand Point	4.72	259	P		P	Pn	18 42 58.0	-1.1
SDPT				S		S	Sn	18 43 53.1	0.0
BGL	Barrier Glacie	4.77	360	P		P	Pn	18 43 00.2	+0.3
SVW2	Sparrevohn	4.90	341	P		P	Pn	18 43 02.4	+0.8
STLK	Strandline Lak	5.01	3	P		P	Pn	18 43 03.3	+0.1
EYAK	Cordova Ski Ar	5.33	38	P		P	Pn	18 43 06.1	-1.3
PMR	Palmer	5.36	17	ePn		P	Pn	18 43 07.2	-0.7
RAGM	Ragged Mountai	5.60	43	ePn		P	Pn	18 43 09.5	-1.7
SML	Sawmill	5.70	20	ePn		P	Pn	18 43 11.7	-0.9
DIV	Divide	5.75	34	ePn		P	Pn	18 43 11.8	-1.5
	57nm,0.7s								
DIV					eSn		Sn	18 44 12.1	-6.7
VRDI	Verde Repeater	6.60	41	P		P	Pn	18 43 23.4	-1.8
TT01	Tatalina	6.68	345	P		P	Pn	18 43 26.6	+0.6
KIAG	Kiagna River	6.83	45	P		P	Pn	18 43 26.3	-1.8
MCARA	McCarthy VSAT	6.86	41	P		P	Pn	18 43 26.3	-2.2
BALM	Baldy	6.90	45	P		P	Pn	18 43 27.1	-2.0
HARP	HAARP	6.96	29	P		P	Pn	18 43 28.8	-1.0
GRNC	Granite Creek	6.96	48	P		P	Pn	18 43 28.7	-1.3
TRF	Thorofare Moun	7.04	8	P		P	Pn	18 43 31.8	+0.7
DHY	Denali Highway	7.05	19	P		P	Pn	18 43 30.9	-0.2
RND	Reindeer	7.14	13	P		P	Pn	18 43 32.1	-0.3
BARN	Barnard Glacie	7.18	46	P		P	Pn	18 43 31.7	-1.4
PAX	Paxson	7.35	25	ePn		P	Pn	18 43 34.8	-0.5
MCK	McKinley	7.45	12	ePn		P	Pn	18 43 32.2	-4.3
	24nm,0.9s								
PNL	Peninsula	7.55	60	P		P	Pn	18 43 36.0	-2.0
WRH	Wood River Hil	8.26	13	P		P	Pn	18 43 47.1	-0.5
BCA3	Beaver Creek A	8.45	35	P		P	Pn	18 43 48.1	-2.2
CCB	Clear Creek Bu	8.46	13	P		P	Pn	18 43 50.2	-0.2
UNV	Unalaska Valle	8.53	258	P		P	Pn	18 43 49.7	-1.7
COLA	College	8.68	13	Pn		Pn	Pn	18 43 47.0	-6.3
IL1	Eielson Array	8.71	16	P		P	Pn	18 43 52.9	-0.9
ILAR	Eielson Array	8.71	16	Pn		Pn	Pn	18 43 53.8	-0.1
ILAR				Sn		Sn	Sn	18 45 26.4	-4.9
ILAR	Eielson Array	8.71	16	Pn		Pn	Pn	18 43 53.8	-0.1
	2.2nm,0.3s,baz=201,slow=14,SNR=63								
ILAR				Sn		Sn	Sn	18 45 26.4	-4.9
	0.7nm,0.3s,baz=138,slow=19,SNR=4.3								
SKAG	Skagway	9.50	65	ePn		P	Pn	18 44 03.3	-1.4
IM3	Indian Mountai	9.54	357	P		P	Pn	18 44 02.9	-2.2
TNA	Tin City	11.77	327	ePn		P	Pn	18 44 38.4	+2.8
	14nm,1.1s								
DIB	Dawson Inlet,	11.91	98	T		T	T	18 56 43.3	
	SNR=4.8								
GAMB	Gambell	12.05	315	ePn		P	Pn	18 44 40.3	+0.9
	8.2nm,1.0s								
DLBC	Dease Lake	12.15	72	Pn		P	Pn	18 44 42.9	+2.0
DLBC	Dease Lake	12.15	72	Pn		P	Pn	18 44 42.9	+2.0
	0.2nm,0.3s,baz=300,slow=12,SNR=3.1								
INK	Inuvik	14.61	28	Pn		P	Pn	18 45 13.4	-0.8
INK	Inuvik	14.61	28	Pn		P	Pn	18 45 13.4	-0.8
	0.0nm,0.3s,baz=202,slow=14,SNR=6.6								
YKW3	Yellowknife Ar	19.83	57	ePn		P	P	18 46 18.0	-0.3
	0.2nm,1.3s								
YKA	Yellowknife Ar	19.84	57	P		P	P	18 46 18.6	+0.4
YKA	Yellowknife Ar	19.84	57	P		P	P	18 46 18.6	+0.4
	0.1nm,0.3s,baz=270,slow=11,SNR=23								
FX1	Attu Island--F	20.13	274	Pn		P	P	18 46 19.5	-2.0
HAWA	Hanford	22.60	103	eP		P	P	18 46 46.9	-1.3
	11nm,1.2s								
NEW	Newport	22.80	96	eP		P	P	18 46 50.7	+0.3
	7.4nm,1.3s								
NEW	Newport	22.80	96	P		P	P	18 46 51.2	+0.8
	2.8nm,0.7s,baz=304,slow=11,SNR=5.9								
YBH	Yreka Blue Hor	24.13	115	P		P	P	18 47 05.0	+1.5
YBH	Yreka Blue Hor	24.13	115	P		P	P	18 47 05.0	+1.5
	4.4nm,0.8s,baz=329,slow=5.7,SNR=11								
BSMT	Bassoo Peak	24.33	95	P		P	P	18 47 04.7	-0.8
JTMT	Jette	24.67	95	eP		P	P	18 47 08.4	-0.1
	6.8nm,1.3s								
SWMT	Swartz Lake	24.96	95	eP		P	P	18 47 12.5	+1.4
	3.2nm,1.0s								
HLID	Hailey	27.20	102	eP		P	P	18 47 32.1	+0.6
	2.7nm,1.0s								
RES	Resolute Bay	28.16	28	P		P	P	18 47 38.0	-1.5
	5.5nm,1.2s								
PETK	Petropavlovsk-	28.48	285	P		P	P	18 47 42.2	-0.3
PETK	Petropavlovsk-	28.48	285	P		P	P	18 47 42.2	-0.3
	3.5nm,0.8s,baz=73,slow=12,SNR=3.5								
ELK	Elko	28.71	107	P		P	P	18 47 45.8	+0.8

ELK	Elko	28.71	107	P		P		18 47 45.8	+0.8
	1.5nm,0.7s,baz=342,slow=7.2,SNR=5.3								
NVAR	Mina Array Bea	28.84	114	P		P		18 47 47.1	+1.0
NVAR	Mina Array Bea	28.84	114	P		P		18 47 47.1	+1.0
	2.6nm,0.8s,baz=306,slow=8.9,SNR=17								
PDAR	Pinedale Array	30.38	98	P		P		18 48 00.2	+0.5
PDAR	Pinedale Array	30.38	98	P		P		18 48 00.2	+0.5
	1.4nm,0.7s,baz=315,slow=5.4,SNR=14								
ARUT	Antelope Range	31.83	109	eP		P		18 48 11.7	-0.8
	62nm,1.6s								
SUMG	Summit	43.45	24	eP		P		18 49 48.8	-1.7
	4.6nm,0.9s								
TXAR	Lajitas Array	43.51	108	P		P		18 49 51.8	+0.7
TXAR	Lajitas Array	43.51	108	P		P		18 49 51.8	+0.7
	1.5nm,0.8s,baz=316,slow=7.0,SNR=8.9								
MAJO	Matsushiro	49.45	277	P		P		18 50 35.8	-1.8
	4.0nm,0.8s								
MJAR	Matsushiro Arr	49.45	277	P		P		18 50 37.4	-0.1
MJAR	Matsushiro Arr	49.45	277	P		P		18 50 37.4	-0.1
	1.4nm,0.8s,baz=38,slow=5.4,SNR=6.5								
CN2	Changchun	51.07	293	eP		P		18 50 49.4	-0.3
CN2				pmax		pmax			
	comp=Z,20nm,0.8s								
KEV	Kevo	54.04	0	P		P		18 51 11.5	+0.2
ARCES	ARCESS Array B	54.25	1	P		P		18 51 12.8	-0.1
ARCES	ARCESS Array B	54.25	1	P		P		18 51 12.8	-0.1
	comp=Z,1.6nm,0.6s,baz=12,slow=7.8,SNR=9.7								
KSRS	Korea Array	54.37	286	P		P		18 51 14.3	+0.2
	comp=Z,1.0nm,0.7s,baz=43,slow=11,SNR=5.0								
KSAR	Wonju Array Be	54.40	286	P		P		18 51 14.3	-0.1
ULN	Ulaanbaatar	56.87	308	eP		P		18 51 32.4	+0.2
	comp=Z,2.0nm,0.8s								
SONM	Songino Array	57.18	308	P		P		18 51 35.2	+0.8
SONM				PcP		PcP		18 52 30.1	+1.4
SONM	Songino Array	57.18	308	P		P		18 51 35.2	+0.8
	comp=Z,6.8nm,0.8s,baz=43,slow=6.7,SNR=45								
SONM				PcP		PcP		18 52 30.1	+1.4
	comp=Z,1.7nm,0.8s,baz=50,slow=2.6,SNR=3.9								
HHC	Hu-ho-hao-te	60.16	300	eP		P		18 51 54.3	-0.9
HHC				pP		pP		18 52 03.9	+2.3
HHC				sP		sP		18 52 07.3	+3.3
HHC				PP		PP		18 54 08.6	+1.1
HHC				PcS		PcS		18 56 40.8	-2.3
HHC				S		S		19 00 03.0	-4.4
HHC				sS		sS		19 00 20.9	+2.9
HHC				ScS		SKKSac		19 01 38.8	-5.5
HHC				SS		SS		19 04 00.0	-3.8
ZAA0	Zalesovo Array	60.43	325	eP		P		18 51 56.8	+0.1
ZALV	Zalesovo Beam	60.43	325	P		P		18 51 57.0	+0.4
ZALV	Zalesovo Beam	60.43	325	P		P		18 51 57.0	+0.4
	comp=Z,5.3nm,0.8s,ba

MTLF	**Montolieu**	**78.23**	**19**	*e*P	**P**	**18 53 47.7**	**+0.7**
	comp=Z,4.8nm,0.7s						
MTLF	**Montolieu**	**78.23**	**19**	*e*P	**P**	**18 53 47.7**	**+0.7**
	comp=Z,4.8nm,0.7s						
FRF	**La Foret Royal**	**78.74**	**15**	*e*P	**P**	**18 53 50.5**	**+0.7**
	comp=Z,10nm,0.8s						
FRF	**La Foret Royal**	**78.74**	**15**	*e*P	**P**	**18 53 50.5**	**+0.7**
	comp=Z,10nm,0.8s						
KBZ	**Khabaz**	**79.31**	**349**	P	**P**	**18 53 54.2**	**+1.4**
KBZ	**Khabaz**	**79.31**	**349**	P	**P**	**18 53 54.2**	**+1.4**
	comp=Z,3.3nm,0.9s,baz=331,slow=4.6,SNR=11						
ESDC	**Sonseca Array**	**80.51**	**24**	P	**P**	**18 54 00.1**	**+0.5**
ESDC	**Sonseca Array**	**80.51**	**24**	P	**P**	**18 54 00.1**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=345,slow=4.8,SNR=11						
TAPN	**Taplejung**	**82.29**	**309**	*e*P	**P**	**18 54 09.4**	**-0.1**
	comp=Z,13nm,1.0s						
GUN	**Gumba**	**82.58**	**311**	*e*P	**P**	**18 54 11.3**	**+0.3**
	comp=Z,17nm,1.0s						
ODAN	**Odare**	**82.86**	**309**	*e*P	**P**	**18 54 10.3**	**-2.0**
KKN	**Kakanj**	**82.94**	**311**	*e*P	**P**	**18 54 12.1**	**-0.6**
	comp=Z,7.1nm,0.8s						
DANN	**Dangsing**	**83.07**	**313**	*e*P	**P**	**18 54 13.4**	**-0.1**
	comp=Z,24nm,0.8s						
DMN	**Daman**	**83.17**	**311**	*e*P	**P**	**18 54 13.2**	**-0.8**
	comp=Z,32nm,1.4s						
PYUN	**Piuthan**	**83.61**	**313**	*e*P	**P**	**18 54 14.9**	**-1.3**
	comp=Z,25nm,1.0s						
KOLN	**Koldanda**	**83.65**	**312**	*e*P	**P**	**18 54 13.9**	**-2.5**
	comp=Z,9.2nm,0.9s						
BR131	**Keskin Array S**	**84.00**	**355**	*e*P	**P**	**18 54 18.1**	**+0.2**
	comp=Z,0.4nm,0.3s						
BRTR	**Keskin Array B**	**84.00**	**355**	P	**P**	**18 54 18.1**	**+0.2**
BRTR	**Keskin Array B**	**84.00**	**355**	P	**P**	**18 54 18.1**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=27,slow=3.9,SNR=11						
CMAR	**Chiang Mai Arr**	**84.66**	**295**	P	**P**	**18 54 21.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**84.66**	**295**	P	**P**	**18 54 21.2**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=12,slow=5.9,SNR=18						
STKA	**Stephens Creek**	**104.24**	**233**	Pdif	**Pdif**	**18 55 48.3**	**-2.9**
STKA	**Stephens Creek**	**104.24**	**233**	Pdiff	**Pdif**	**18 55 48.3**	**-2.9**
	comp=Z,2.3nm,0.9s,baz=14,slow=4.2,SNR=2.5						
QSPA	**South Pole Qui**	**146.30**	**180**	PKPbc	**PKPdf**	**19 01 25.7**	**+0.2**
QSPA	**South Pole Qui**	**146.30**	**180**	PKPbc	**PKPdf**	**19 01 25.7**	**+0.2**
	comp=Z,2.0nm,1.1s,baz=144,slow=2.1,SNR=5.9						
BOSA	**Boshof**	**152.07**	**5**	PKPbc	**PKPbc**	**19 01 42.0**	**-0.6**
BOSA	**Boshof**	**152.07**	**5**	PKPbc	**PKPbc**	**19 01 42.0**	**-0.6**
	comp=Z,1.5nm,0.7s,baz=343,slow=2.7,SNR=2.8						

IDC 15 18:41:53.1±3.3, **17°.15S**×**177°.97W, h0**km, **mb3.8**/5, **mb1 4.1**/5, **mb1mx3.8**/19, **mbtmp3.8**/5, **Error ellipse: s-maj=109.1km s-min=31.5km az=131.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.36**	**240**	P	P	18 49 25.7	+1.2
	4.1nm,1.1s,baz=94,slow=14,SNR=5.0						
WRA	**Warramunga Arr**	**45.19**	**259**	P	P	18 50 11.0	-1.2
	0.3nm,0.5s,baz=93,slow=7.3,SNR=4.9						
ASAR	**Alice Springs**	**45.40**	**253**	P	P	18 50 13.2	-0.7
	2.6nm,0.5s,baz=89,slow=7.9,SNR=95						
MJAR	**Matsushiro Arr**	**67.56**	**323**	P	P	18 52 52.1	+0.6
	0.4nm,0.4s,baz=154,slow=5.7,SNR=3.6						
ILAR	**Eielson Array**	**85.06**	**13**	P	P	18 54 29.9	-0.4
	0.2nm,0.3s,baz=219,slow=5.6,SNR=5.0						

IDC ***15*** *18:42:43.3±0.9, 30°.47N×79°.24E, h0km, mb3.6/12, mb1 3.7/14, mb1mx3.6/33, mbtmp3.7/14, ML3.6/2, MS3.0/1, Ms1 3.0/1, ms1mx2.8/34, Error ellipse: s-maj=26.8km s-min=16.6km az=51.0*

NDI ***15*** *18:42:46.1±1.7, 30°.61N×79°.35E, h10km, ML3.6*

ISCJB ***15*** *18:42:47.5±0.7, 30°.62N±0°.03×79°.26E±0°.05, h40km±8km, mb3.7/14, Error ellipse: s-maj=7.2km s-min=5.1km az=157.2*

ISC 15 18:42:48.2±2.2, **30°.59N**±0°.05×**79°.32E**±0°.05, **h32**km±16km, **n30**, σ1°**34**/**40**, **mb3.6**/14, **1D, Western Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**1.29**	**143**	*e*PKP	**Pn**	**18 43 10.9**	**+0.6**
PTH				*e*S	**Sn**	**18 43 27.3**	**+0.7**
SMLA	**Simla**	**1.93**	**287**	*i* P	**Pn**	**18 43 19.9**	**+1.1**
SMLA				*i* S	**Sb**	**18 43 45.1**	**-1.2**
BHK	**Bhakra**	**2.62**	**289**	*e*PKP	**Pn**	**18 43 30.5**	**+2.1**
BHK				*ex*	**Sb**	**18 44 07.2**	**+0.8**
AYAN	**Aya Nagar**	**2.84**	**223**	*e*PKP	**Pn**	**18 43 31.6**	**+0.3**
AYAN				*e*S	**Sn**	**18 44 06.2**	**+1.7**
KUDL	**Kundal**	**3.47**	**226**	*e*PKP	**Pn**	**18 43 40.6**	**+0.6**
KUDL				*e*S	**Sn**	**18 44 20.0**	**0.0**
KUDL				AML	AML	18 44 31.1	
	comp=E,109nm,0.6s						
KUDL				AML	AML	18 44 32.1	
	comp=N,164nm,0.8s						
AGRA	**Agra**	**3.56**	**200**	*ex*	Pb	18 43 47.3	-3.1
AGRA				*e*S	**Sn**	**18 44 23.9**	**+1.8**
AGRA				AML	AML	18 44 41.6	
	comp=E,162nm,0.4s						
AGRA				AML	AML	18 44 42.1	
	comp=N,214nm,0.2s						
THN	**Thein Dam**	**3.58**	**302**	*e*PKP	**Pn**	**18 43 41.0**	**-0.6**
THN				*e*S	**Sn**	**18 44 22.5**	**-0.3**
KHET	**Khetri**	**3.96**	**232**	*e*PKP	**Pn**	**18 43 46.4**	**-0.4**
KHET				*e*S	**Sn**	**18 44 31.7**	**-0.5**
KHET				AML	AML	18 44 51.5	
	comp=N,266nm,0.2s						
KHET				AML	AML	18 44 51.6	
	comp=E,233nm,0.2s						
CHCP	**Chirah Chowk**	**5.98**	**302**	P	**Pn**	**18 44 15.2**	**+0.7**
THW	**Thamme Wali**	**6.82**	**291**	P	**Pn**	**18 44 25.8**	**-0.3**
CEP	**Cherat**	**7.06**	**299**	P	**Pn**	**18 44 28.9**	**-0.6**
CEP				S	**Sn**	**18 45 47.0**	**-1.7**
JBP	**Jabalpur**	**7.42**	**175**	⇓*i*P	**Pn**	**18 44 34.2**	**-0.1**
JBP				*e*S	**Sn**	**18 45 53.2**	**-4.1**
JBP				AML	AML	18 46 49.5	
	comp=N,107nm,0.1s						
JBP				AML	AML	18 46 51.4	
	comp=E,110nm,0.4s						
AAK	**Ala-Archa**	**12.63**	**344**	Pn	**Pn**	**18 45 45.5**	**-0.2**
	comp=E,0.4nm,0.3s,baz=146,slow=8.3,SNR=5.4						
AAK				Sn	**Sn**	**18 48 01.8**	**-3.5**
	comp=E,0.1nm,0.3s,baz=190,slow=18,SNR=3.0						
AAK				LR	LR	18 50 16.4	
	comp=E,68nm,20.4s,baz=283,slow=36						
HYB	**Hyderabad**	**13.13**	**183**	*i* P	Pn	18 45 48.0	-4.6
HYB				*e*		18 48 06.0	
HYB				*e*S	**Sn**	**18 48 21.0**	**+3.4**
MKAR	**Makanchi Array**	**16.34**	**7**	Pn	**Pn**	**18 46 34.8**	**-0.5**
	comp=E,0.2nm,0.3s,baz=183,slow=11,SNR=15						
KURBB	**Kurchatov Arra**	**20.02**	**359**	P	**P**	**18 47 18.1**	**-0.1**
	comp=E,2.0nm,0.8s,baz=187,slow=9.6,SNR=15						
CMAR	**Chiang Mai Arr**	**21.52**	**120**	P	**P**	**18 47 34.4**	**-0.3**
	comp=E,0.9nm,0.9s,baz=307,slow=12,SNR=10						
BVAR	**Borovoye Array**	**23.35**	**346**	P	**P**	**18 47 54.0**	**+0.3**
	comp=E,1.2nm,0.4s,baz=157,slow=11,SNR=8.1						
ZALV	**Zalesovo Beam**	**23.68**	**8**	P	**P**	**18 47 57.0**	**+0.1**
	comp=E,0.8nm,0.4s,baz=197,slow=10,SNR=7.2						
AKTO	**Aktyubinsk**	**25.44**	**327**	P	**P**	**18 48 13.6**	**+0.6**
	comp=E,1.0nm,0.5s,baz=137,slow=8.5,SNR=6.1						
SONM	**Songino Array**	**26.94**	**43**	P	**P**	**18 48 28.3**	**+1.5**
	comp=E,1.1nm,0.8s,baz=235,slow=8.3,SNR=5.0						
BRTR	**Keskin Array B**	**38.10**	**297**	P	**P**	**18 50 04.2**	**-0.1**
	comp=E,0.5nm,0.5s,baz=105,slow=9.6,SNR=5.0						
FINES	**FINESS Array B**	**46.21**	**328**	P	**P**	**18 51 10.5**	**+0.6**
	comp=E,0.8nm,0.5s,baz=106,slow=7.8,SNR=6.3						
LPG	**La Plagne**	**57.20**	**307**	*e*P	**P**	**18 52 32.5**	**-0.1**
	comp=E,4.7nm,0.6s						
LPL	**La Plagne**	**57.21**	**307**	*e*P	**P**	**18 52 32.5**	**-0.1**
	comp=E,10nm,0.8s						
SMF	**Signal de Mont**	**58.94**	**309**	*e*P	**P**	**18 52 43.7**	**-0.7**
	comp=E,6.3nm,0.8s						
TORD	**Torodi Ar. Bea**	**72.87**	**275**	P	**P**	**18 54 13.9**	**-0.6**
	comp=E,0.5nm,0.7s,baz=73,slow=4.0,SNR=4.2						
WRA	**Warramunga Arr**	**72.94**	**126**	P	**P**	**18 54 14.6**	**-0.1**
	comp=E,0.6nm,0.9s,baz=318,slow=5.9,SNR=3.5						
ASAR	**Alice Springs**	**75.16**	**129**	P	**P**	**18 54 27.6**	**0.0**
	comp=E,0.4nm,0.8s,baz=317,slow=6.3,SNR=6.0						
ILAR	**Eielson Array**	**78.36**	**18**	P	**P**	**18 54 45.3**	**+0.2**
	comp=E,0.4nm,0.9s,baz=311,slow=6.8,SNR=5.4						

IDC ***15*** *18:44:09.3±0.8, 56°.51N×152°.39W, h0km, mb4.1/19, mb1 4.3/20, mb1mx4.2/31, mbtmp4.1/20, ML3.3/1, Error ellipse: s-maj=24.2km s-min=16.9km az=39.0*

NEIC ***15*** *18:44:09.7, 56°.28N×152°.04W, h10km, mb4.2/3, ML3.5(AEIC), After AEIC.*

ISCJB ***15*** *18:44:10.4±0.5, 56°.55N±0°.05×151°.93W±0°.07, h18km, mb4.1/22, Error ellipse: s-maj=7.3km s-min=5.8km az=174.0*

ISC 15 18:44:12.2±0.6, **56°.56N**±0°.07×**152°.11W**±0°.05, **h18**km, **n74**, σ0°**99**/**79**, **mb4.2**/**22**, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.93**	**316**	P	**Pg**	**18 44 29.7**	**-0.5**
KDAK	**Kodiak Island**	**1.25**	**348**	P	**Pg**	**18 44 34.7**	**-0.6**
KDAK				Sn	**Sn**	**18 44 50.1**	**-1.0**
KDAK	**Kodiak Island**	**1.25**	**348**	Pn	**Pb**	**18 44 34.7**	**-0.6**
	8.3nm,0.3s,baz=186,slow=9.5,SNR=8.3						
KDAK				Sn	**Sn**	**18 44 50.1**	**-1.0**
	40nm,0.3s,baz=182,slow=15,SNR=4.6						
KAKN	**Katmai Knife C**	**2.36**	**319**	P	**Pn**	**18 44 50.4**	**+0.3**
FOSS	**Fourpeaked Sta**	**2.40**	**340**	P	**Pn**	**18 44 52.1**	**+1.5**
FONW	**Fourpeaked Sta**	**2.48**	**338**	P	**Pn**	**18 44 53.1**	**+1.4**
MCNL	**McNeil River**	**2.89**	**337**	P	**Pn**	**18 44 58.4**	**+1.1**
AUH	**Augustine H**	**2.90**	**346**	P	**Pn**	**18 44 59.0**	**+1.5**
OPT	**Oil Point**	**3.16**	**350**	P	**Pn**	**18 45 02.6**	**+1.6**
BRLK	**Bradley Lake**	**3.28**	**11**	P	**Pn**	**18 45 02.5**	**-0.1**
ANPK	**Aniakchak Peak**	**3.33**	**277**	P	**Pn**	**18 45 01.9**	**-1.5**
ANPK				S	**Sn**	**18 45 40.2**	**-2.3**
ILW	**Iliamna West**	**3.55**	**352**	P	**Pn**	**18 45 07.5**	**+0.9**
EYAK	**Cordova Ski Ar**	**5.20**	**37**	P	**Pn**	**18 45 27.9**	**-1.1**
SGAM	**Sherman Glacie**	**5.35**	**40**	P	**Pn**	**18 45 30.8**	**-0.4**
DIV	**Divide**	**5.64**	**33**	P	**Pn**	**18 45 34.2**	**-0.9**
KIAG	**Kiagna River**	**6.70**	**45**	P	**Pn**	**18 45 46.7**	**-2.9**
KIAG				S	**Sn**	**18 47 04.0**	**-1.5**
WASW	**Wrangell South**	**6.74**	**34**	P	**Pn**	**18 45 50.7**	**+0.3**
BALM	**Baldy**	**6.77**	**44**	P	**Pn**	**18 45 50.1**	**-0.5**
GRNC	**Granite Creek**	**6.83**	**48**	P	**Pn**	**18 45 50.5**	**-1.0**
BARN	**Barnard Glacie**	**7.05**	**46**	P	**Pn**	**18 45 54.1**	**-0.5**
PNL	**Peninsula**	**7.42**	**60**	*e*Pn	**Pn**	**18 45 59.3**	**-0.1**
ILAR	**Eielson Array**	**8.62**	**15**	Pn	**Pn**	**18 46 17.6**	**+1.7**
ILAR				Sn	**Sn**	**18 47 53.3**	**+0.7**
ILAR	**Eielson Array**	**8.62**	**15**	Pn	**Pn**	**18 46 17.6**	**+1.7**
	1.6nm,0.3s,baz=202,slow=14,SNR=9.4						
ILAR				Sn	**Sn**	**18 47 53.3**	**+0.7**
	0.2nm,0.3s,baz=202,slow=23,SNR=3.6						
DIB	**Dawson Inlet,**	**11.79**	**98**	T	T	18 59 01.1	
INK	**Inuvik**	**14.50**	**28**	Pn	**P**	**18 47 41.7**	**-0.9**
INK	**Inuvik**	**14.50**	**28**	Pn	**P**	**18 47 41.7**	**-0.9**
	0.2nm,0.3s,baz=214,slow=11,SNR=5.8						
YKA	**Yellowknife Ar**	**19.70**	**57**	P	**P**	**18 48 41.1**	**+1.0**
YKA	**Yellowknife Ar**	**19.70**	**57**	P	**P**	**18 48 41.1**	**+1.0**
	0.1nm,0.3s,baz=269,slow=10,SNR=9.9						
BILL	**Bilibino**	**21.98**	**318**	*e*P	**P**	**18 49 03.9**	**-0.9**
	12nm,1.1s						
NVAR	**Mina Array Bea**	**28.74**	**115**	P	**P**	**18 50 09.3**	**+0.6**
NVAR	**Mina Array Bea**	**28.74**	**115**	P	**P**	**18 50 09.3**	**+0.6**
	0.6nm,0.7s,baz=298,slow=9.1,SNR=3.5						
TXAR	**Lajitas Array**	**43.40**	**108**	P	**P**	**18 52 14.8**	**+1.1**
TXAR	**Lajitas Array**	**43.40**	**108**	P	**P**	**18 52 14.8**	**+1.1**
	0.6nm,0.8s,baz=319,slow=5.0,SNR=2.5						
SADO	**Sadowa**	**45.57**	**72**	P	**P**	**18 52 31.3**	**+0.6**
SADO	**Sadowa**	**45.57**	**72**	P	**P**	**18 52 31.3**	**+0.6**
	1.6nm,0.7s,baz=307,slow=10,SNR=3.1						
ARCES	**ARCESS Array B**	**54.20**	**1**	P	**P**	**18 53 36.1**	**+0.2**
ARCES	**ARCESS Array B**	**54.20**	**1**	P	**P**	**18 53 36.1**	**+0.2**
	3.2nm,1.0s,baz=3.5,slow=7.3,SNR=4.1						
SONM	**Songino Array**	**57.25**	**308**	P	**P**	**18 53 57.2**	**-1.0**
SONM	**Songino Array**	**57.25**	**308**	P	**P**	**18 53 57.2**	**-1.0**
	3.5nm,0.8s,baz=44,slow=6.5,SNR=13						
ZAA0	**Zalesovo Array**	**60.45**	**325**	*e*P	**P**	**18 54 19.7**	**-0.5**
ZALV	**Zalesovo Beam**	**60.45**	**325**	P	**P**	**18 54 20.4**	**+0.2**
ZALV	**Zalesovo Beam**	**60.45**	**325**	P	**P**	**18 54 20.4**	**+0.2**
	3.3nm,0.8s,baz=32,slow=7.0,SNR=11						
NB2	**NORSAR Subarra**	**62.01**	**9**	P	**P**	**18 54 30.9**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=349,slow=6.9						
NOA	**NORSAR Array B**	**62.01**	**9**	P	**P**	**18 54 31.1**	**+0.4**
NOA	**NORSAR Array B**	**62.01**	**9**	P	**P**	**18 54 31.1**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=350,slow=6.7,SNR=6.7						
FINES	**FINESS Array B**	**62.33**	**1**	P	**P**	**18 54 33.0**	**+0.3**
FINES	**FINESS Array B**	**62.33**	**1**	P	**P**	**18 54 33.0**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=348,slow=8.6,SNR=8.6						
KURK	**Kurchatov**	**65.16**	**327**	P	**P**	**18 54 51.9**	**+0.3**
KURBB	**Kurchatov Arra**	**65.27**	**327**	P	**P**	**18 54 51.9**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=27,slow=6.2,SNR=8.4						
BVAR	**Borovoye Array**	**65.35**	**333**	P	**P**	**18 54 52.5**	**-0.3**
BVAR	**Borovoye Array**	**65.35**	**333**	P	**P**	**18 54 52.5**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=38,slow=7.5,SNR=7.7						
MKAR	**Makanchi Array**	**67.44**	**323**	P	**P**	**18 55 05.0**	**-1.3**
MKAR	**Makanchi Array**	**67.44**	**323**	P	**P**	**18 55 05.0**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=50,slow=6.5,SNR=6.5						
AKTO	**Aktyubinsk**	**70.49**	**340**	P	**P**	**18 55 24.4**	**-0.7**
AKTO	**Aktyubinsk**	**70.49**	**340**	P	**P**	**18 55 24.4**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=329,slow=6.1,SNR=5.0						
AKASG	**Malin Array Be**	**73.10**	**359**	P	**P**	**18 55 40.7**	**-0.1**
AKASG	**Malin Array Be**	**73.10**	**359**	P	**P**	**18 55 40.7**	**-0.1**
	comp=Z,2.8nm,0.7s,baz=359,slow=5.5,SNR=8.0						
KIEV	**Kiev**	**73.10**	**359**	*e*P	**P**	**18 55 39.9**	**-1.0**
	comp=Z,1.0nm,0.9s						
AK01	**Malin Array Si**	**73.11**	**359**	*e*P	**P**	**18 55 40.0**	**-0.8**
AAK	**Ala-Archa**	**73.66**	**326**	P	**P**	**18 55 44.9**	**+0.3**
AAK	**Ala-Archa**	**73.66**	**326**	P	**P**	**18 55 44.9**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=106,slow=1.6,SNR=4.9						
EKS2	**Erkin-Say**	**73.86**	**327**	*e*P	**P**	**18 55 45.5**	**-0.1**
	comp=Z,4.5nm,1.4s						
GERES	**GERESS Array B**	**74.30**	**10**	P	**P**	**18 55 48.4**	**+0.3**
GERES	**GERESS Array B**	**74.30**	**10**	P	**P**	**18 55 48.4**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=354,slow=5.4,SNR=7.6						
KBZ	**Khabaz**	**79.28**	**349**	P	**P**	**18 56 17.7**	**+1.6**
KBZ	**Khabaz**	**79.28**	**349**	P	**P**	**18 56 17.7**	**+1.6**
	comp=Z,2.3nm,0.9s,baz=354,slow=2.7,SNR=4.9						
ESDC	**Sonseca Array**	**80.41**	**24**	P	**P**	**18 56 23.5**	**+1.1**
ESDC	**Sonseca Array**	**80.41**	**24**	P	**P**	**18 56 23.5**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=344,slow=4.9,SNR=6.7						
BRTR	**Keskin Array B**	**83.96**	**356**	P	**P**	**18 56 41.5**	**+0.4**
BRTR	**Keskin Array B**	**83.96**	**356**	P	**P**	**18 56 41.5**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=29,slow=3.1,SNR=7.4						
CMAR	**Chiang Mai Arr**	**84.75**	**296**	P	**P**	**18 56 44.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**84.75**	**296**	P	**P**	**18 56 44.4**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=9.2,slow=5.3,SNR=7.6						
QSPA	**South Pole Qui**	**146.35**	**180**	PKPbc	**PKPdf**	**19 03 50.0**	**+1.0**
QSPA	**South Pole Qui**	**146.35**	**180**	PKPbc	**PKPdf**	**19 03 50.0**	**+1.0**
	comp=Z,1.8nm,0.9s,baz=238,slow=1.6,SNR=4.9						

NIC ***15*** *18:55:29.0±0.2, 34°.50N×33°.67E, h20km, ML2.4, MW2.7*

ISK ***15*** *18:55:28.4, 34°.53N×33°.59E, h22km, MD2.6*

CSEM ***15*** *18:55:28.1±0.6, 34°.46N×33°.66E, h25km±3km, Mw2.7, Error ellipse: s-maj=10.6km s-min=4.9km az=175.0*

ISC 15 18:55:28.9±2.4, **34°.5N**±0°.1×**33°.66E**±0°.05, **h25**km±12km, **n18**, σ0°**44**/**30**, **6C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CSS	**Prodhromos**	**0.50**	**328**	⇑P	**Pb**	**18 55 39.8**	**+0.6**
	1.8nm,0.2s						
CSS				S	**Sn**	**18 55 48.0**	**-0.4**
CSS	**Prodhromos**	**0.50**	**328**	*e*PG	**Pb**	**18 55 39.6**	**+0.4**
CSS				*e*SG	**Sb**	**18 55 45.5**	**-0.7**
CSS	**Prodhromos**	**0.50**	**328**	*e*Pg	**Pb**	**18 55 39.6**	**+0.4**
CSS	**Prodhromos**	**0.50**	**328**	⇑P	**Pb**	**18 55 39.8**	**+0.6**
	1.8nm,0.2s						
CSS				*e*Sg	**Sb**	**18 55 45.5**	**-0.7**
CSS				S	**Sn**	**18 55 48.0**	**-0.4**
PHNC	**Paralimni**	**0.56**	**33**	⇑P	**Pb**	**18 55 40.3**	**+0.1**
	1.1nm,0.2s						
PHNC				S	**Sn**	**18 55 49.6**	**-0.2**
PHNC	**Paralimni**	**0.56**	**33**	⇑P	**Pb**	**18 55 40.3**	**+0.1**
	1.1nm,0.2s						
PHNC				S	**Sn**	**18 55 49.6**	**-0.2**
LFK	**Lefkose**	**0.75**	**352**	*e*PG	**Pb**	**18 55 43.3**	**0.0**
LFK				*e*SG	**Sn**	**18 55 55.1**	**+0.5**
LFK	**Lefkose**	**0.75**	**352**	*e*Pg	**Pb**	**18 55 43.3**	**0.0**
LFK				*e*Sg	**Sn**	**18 55 55.1**	**+0.5**
LEF	**Lefka**	**0.86**	**313**	*e*PG	**Pb**	**18 55 44.8**	**-0.3**
LEF				*e*SG	**Sn**	**18 55 57.7**	**+0.6**
LEF	**Lefka**	**0.86**	**313**	*e*Pg	**Pb**	**18 55 44.8**	**-0.3**
LEF				*e*Sg	**Sn**	**18 55 57.7**	**+0.6**
ALFC	**Alevga**	**1.07**	**306**	P	**Pn**	**18 55 47.8**	**-0.5**
	0.8nm,0.3s						
ALFC				S	**Sb**	**18 56 02.7**	**+0.4**
ALFC	**Alevga**	**1.07**	**306**	P	**Pn**	**18 55 47.8**	**-0.5**
	0.8nm,0.3s						
ALFC				S	**Sb**	**18 56 02.7**	**+0.4**
EREN	**Erenkoy**	**1.08**	**23**	*e*PN	**Pn**	**18 55 48.5**	**+0.1**
EREN	**Erenkoy**	**1.08**	**23**	*e*Pn	**Pn**	**18 55 48.5**	**+0.1**
PPCY	**Paphos**	**1.14**	**288**	⇑P	**Pn**	**18 55 49.0**	**-0.1**
PPCY	**Paphos**	**1.14**	**288**	⇑P	**Pn**	**18 55 49.0**	**-0.1**
AKMC	**Akamas**	**1.20**	**295**	P	**Pn**	**18 55 50.0**	**0.0**
AKMC	**Akamas**	**1.20**	**295**	P	**Pn**	**18 55 50.0**	**0.0**

IDC ***15*** *19:04:49.5±1.6, 56°.47N×152°.42W, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.5/27, mbtmp3.6/6, ML3.1/2, Error ellipse: s-maj=32.4km s-min=24.9km az=51.0*

ISCJB ***15*** *19:04:50.4±0.9, 56°.51N±0°.07×151°.9W±0°.1, h18km, mb3.8/4, Error ellipse: s-maj=11.4km s-min=8.7km az=148.4*

NEIC ***15*** *19:04:51.0, 56°.45N×151°.81W, h10km, ML2.9(AEIC), After AEIC.*

ISC 15 19:04:52.4±1.1, **56°.57N**±0°.08×**152°.07W**±0°.08, **h18**km, **n21**, σ0°**70**/**23**, **mb4.0**/**4**, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.93**	**315**	P	**Pg**	**19 05 10.8**	**+0.2**
KDAK	**Kodiak Island**	**1.25**	**347**	P	**Pn**	**19 05 14.1**	**-0.8**
KDAK				S	**Sg**	**19 05 32.4**	**-0.3**
KDAK	**Kodiak Island**	**1.25**	**347**	Pn	**Pn**	**19 05 14.4**	**-0.5**
	6.8nm,0.3s,baz=227,slow=7.2,SNR=6.5						
KDAK				Sn	**Sb**	**19 05 31.4**	**+0.4**
	17nm,0.3s,baz=188,slow=15,SNR=8.1						
CAHL	**Cahill**	**2.30**	**312**	P	**Pn**	**19 05 29.0**	**-0.4**
FOSS	**Fourpeaked Sta**	**2.40**	**339**	P	**Pn**	**19 05 31.2**	**+0.4**
FONW	**Fourpeaked Sta**	**2.48**	**337**	P	**Pn**	**19 05 32.6**	**+0.7**
KAHC	**Katmai Hardscr**	**2.61**	**324**	P	**Pn**	**19 05 34.2**	**+0.4**
AUH	**Augustine H**	**2.89**	**346**	P	**Pn**	**19 05 38.8**	**+1.2**
OPT	**Oil Point**	**3.15**	**349**	P	**Pn**	**19 05 42.0**	**+0.9**
BRLK	**Bradley Lake**	**3.26**	**11**	P	**Pn**	**19 05 42.3**	**-0.3**
BRLK				S	**Sn**	**19 06 21.2**	**+0.3**
RSO	**Redoubt South**	**3.92**	**355**	*e*Pn	**Pn**	**19 05 51.7**	**-0.1**
CKL	**Chakachamna La**	**4.64**	**358**	P	**Pn**	**19 06 02.0**	**+0.4**
EYAK	**Cordova Ski Ar**	**5.18**	**37**	P	**Pn**	**19 06 08.4**	**-0.5**
ILAR	**Eielson Array**	**8.61**	**15**	Pn	**Pn**	**19 06 57.2**	**+1.3**
	0.7nm,0.3s,baz=201,slow=14,SNR=25						
DIB	**Dawson Inlet,**	**11.77**	**98**	T	T	19 19 46.9	
INK	**Inuvik**	**14.47**	**28**	Pn	**P**	**19 08 21.5**	**-1.2**
	0.1nm,0.3s,baz=229,slow=16,SNR=3.6						
YKA	**Yellowknife Ar**	**19.67**	**57**	P	**Pn**	**19 09 21.9**	**+0.4**
	0.1nm,0.3s,baz=269,slow=11,SNR=4.6						
TXAR	**Lajitas Array**	**43.38**	**108**	P	**P**	**19 12 54.9**	**+1.1**
	0.2nm,0.6s,baz=276,slow=3.6,SNR=3.4						
SONM	**Songino Array**	**57.26**	**308**	P	**P**	**19 14 38.3**	**-0.3**
	1.0nm,0.7s,baz=37,slow=9.0,SNR=6.

CHGN Chignik 3.42 269 *e*Pn Pn 19 24 06.8 -1.9
VNHG Veniaminof 1 3.85 268 P Pn 19 24 14.6 -0.1
SEW Seward 3.89 21 *e*Pn Pn 19 24 13.3 -1.8
RSO Redoubt South 3.96 356 *e*Pn Pn 19 24 16.7 +0.4
DFR Drift River 4.09 357 P Pn 19 24 18.4 +0.4
SLKM Skilak Lake 4.14 14 P Pn 19 24 18.1 -0.5
SLKM Skilak Lake 4.14 14 P Pn 19 24 18.1 -0.5
MID Middleton Isla 4.29 45 *e*P Pn 19 24 18.4 -2.3
MID Middleton Isla 4.29 45 *e*Pn Pn 19 24 18.4 -2.3
SPU Mount Spurr 4.68 1 *e*Pn Pn 19 24 25.5 -0.6
CKL Chakachamna La 4.69 360 P Pn 19 24 26.2 0.0
BGL Barrier Glacie 4.76 359 P Pn 19 24 28.1 +0.9
SDPT Sand Point 4.77 259 *e*Pn Pn 19 24 25.1 -2.0
SVW2 Sparrevohn 4.90 341 *e*Pn Pn 19 24 28.8 -0.3
STLK Strandline Lak 5.00 2 P Pn 19 24 31.0 +0.5
EYAK Cordova Ski Ar 5.29 37 P Pn 19 24 32.7 -1.6
PMR Palmer 5.34 16 *e*P Pn 19 24 34.0 -1.0
PMR Palmer 5.34 16 *e*Pn Pn 19 24 34.0 -1.0
VLZ Valdez 5.55 31 P Pn 19 24 36.9 -1.0
RAGM Ragged Mountai 5.56 43 *e*Pn Pn 19 24 36.4 -1.7
SML Sawmill 5.67 19 *e*P Pn 19 24 39.2 -0.5
SML Sawmill 5.67 19 *e*Pn Pn 19 24 39.2 -0.5
DIV Divide 5.72 33 *e*Pn Pn 19 24 38.4 -1.9
DT1 Dutton Round H 5.82 260 P Pn 19 24 39.3 -2.4
PPLA Purkeypile 6.40 0 *e*Pn Pn 19 24 49.6 -0.1
FALS False Pass 6.52 260 *e*Pn Pn 19 24 52.2 +0.9
VRDI Verde Repeater 6.56 40 P Pn 19 24 50.1 -1.9
TT01 Tatalina 6.68 345 P Pn 19 24 53.9 +0.4
KIAG Kiagna River 6.79 45 P Pn 19 24 53.6 -1.5
MCARA McCarthy VSAT 6.82 41 P Pn 19 24 54.0 -1.5
BALM Baldy 6.86 45 P Pn 19 24 54.8 -1.2
BALM Baldy 6.86 45 P Pn 19 24 54.8 -1.2
GRNC Granite Creek 6.92 48 P Pn 19 24 55.3 -1.7
HARP HAARP 6.92 29 P Pn 19 24 56.0 -0.8
DHY Denali Highway 7.02 19 P Pn 19 24 58.1 -0.2
TRF Thorofare Moun 7.02 7 *e*Pn Pn 19 24 57.2 -1.1
RND Reindeer 7.12 12 P Pn 19 24 59.4 -0.1
RND Reindeer 7.12 12 P Pn 19 24 59.4 -0.1
PAX Paxson 7.32 25 *e*P Pn 19 25 01.9 -0.4
PAX Paxson 7.32 25 *e*Pn Pn 19 25 01.9 -0.4
MCK McKinley 7.42 12 *e*P Pn 19 25 03.2 -0.4
MCK McKinley 7.42 12 *e*Pn Pn 19 25 03.2 -0.4
PNL Peninsula 7.51 60 *e*Pn Pn 19 25 03.7 -1.1
298nm,0.5s
PNL *e*Sn Sn 19 26 24.3 -5.5
MENT Mentasta 7.74 30 *e*Pn Pn 19 25 08.0 0.0
DDM Donnelly Dome 7.95 21 P Pn 19 25 09.5 -1.5
AKUT Akutan 8.07 258 *e*Pn Pn 19 25 11.1 -1.4
NEA Nenana 8.23 10 P Pn 19 25 14.0 -0.7
DOT Dot Lake 8.23 26 *e*Pn Pn 19 25 15.3 +0.5
WRH Wood River Hil 8.24 13 P Pn 19 25 14.3 -0.5
HDA Harding Lake 8.33 16 P Pn 19 25 16.0 -0.1
BCA3 Beaver Creek A 8.41 34 P Pn 19 25 14.9 -2.4
CCB Clear Creek Bu 8.44 13 P Pn 19 25 16.8 -0.7
MLY Manley 8.57 4 P Pn 19 25 18.3 -1.1
UNV Unalaska Valle 8.58 258 *e*Pn Pn 19 25 21.0 +1.5
COLA College 8.65 13 *e*P Pn 19 25 20.2 -0.3
COLA College 8.65 13 *e*Pn Pn 19 25 20.1 -0.3
ILAR Eielson Array 8.68 15 Pn Pn 19 25 20.3 -0.6
ILAR Sn Sn 19 26 57.1 -1.4
ILAR Eielson Array 8.68 15 Pn Pn 19 25 20.3 -0.6
17nm,0.3s,baz=205,slow=13,SNR=370
ILAR Sn Sn 19 26 57.1 -1.4
4.4nm,0.3s,baz=206,slow=22,SNR=4.7
IL1 Eielson Array 8.69 15 P Pn 19 25 19.5 -1.5
MDM Murphy Dome 8.69 11 P Pn 19 25 20.1 -1.0
SKAG Skagway 9.46 65 *e*Pn Pn 19 25 30.9 -0.6
EGAK Eagle 9.90 29 *e*Pn Pn 19 25 37.5 0.0
CRAG Craig 10.77 88 *e*Pn Pn 19 25 47.4 -2.1
44nm,1.0s
COLD Coldfoot 10.79 4 *e*Pn Pn 19 25 48.2 -1.5
WRAK Wrangell Islan 11.02 82 *e*Pn Pn 19 25 52.0 -0.8
29nm,0.3s
TNA Tin City 11.78 327 *e*Pn Pn 19 26 04.9 +1.6
45nm,0.7s
DIB Dawson Inlet, 11.87 98 T T 19 38 04.0
SNR=231
GAMB Gambell 12.07 315 *e*Pn Pn 19 26 07.8 +0.7
DLBC Dease Lake 12.11 72 *e*Pn Pn 19 26 06.8 -1.1
DLBC Sn Sn 19 28 20.6 -1.9
DLBC Dease Lake 12.11 72 Pn Pn 19 26 08.6 +0.7
0.8nm,0.3s,baz=240,slow=13,SNR=11
DLBC Sn Sn 19 28 20.6 -1.9
0.9nm,0.3s,baz=287,slow=19,SNR=4.1
DLBC LR LR 19 30 31.2
comp=Z,5µm,18.6s,baz=280,slow=36
INK Inuvik 14.57 28 Pn Pn 19 26 40.9 -0.4
INK Sn S 19 29 40.5 -1.2
INK Inuvik 14.57 28 Pn Pn 19 26 40.9 -0.4
0.9nm,0.3s,baz=225,slow=15,SNR=39
INK Sn S 19 29 40.5 -1.2
0.2nm,0.3s,baz=205,slow=20,SNR=3.2
INK LR LR 19 32 49.3
comp=Z,5µm,19.9s,baz=221,slow=39
BBB Bella Bella 14.70 97 Pn Pn 19 26 43.6 +0.5
BBB Bella Bella 14.70 97 Pn Pn 19 26 43.6 +0.5
0.2nm,0.3s,baz=271,slow=16,SNR=4.1
BBB LR LR 19 31 01.3
comp=Z,2µm,18.8s,baz=324,slow=32
AMKA Amchitka 17.44 265 *e*Pn Pn 19 27 16.3 -2.1
PGC Sidney 19.08 102 *e*Pn Pn 19 27 41.4 +2.8
1.7nm,1.0s
NLWA Neilton Lookou 19.61 106 *e*Pn P 19 27 43.7 +0.1
44nm,1.1s
YKW3 Yellowknife Ar 19.79 57 *e*P P 19 27 45.0 -0.4
1.3nm,1.2s
YKA Yellowknife Ar 19.79 57 P P 19 27 45.9 +0.5
YKA PcP PcP 19 32 01.6 -1.0
YKA ScP ScP 19 35 37.7 -0.4
YKA Yellowknife Ar 19.79 57 P P 19 27 45.9 +0.5
1.2nm,0.3s,baz=269,slow=10,SNR=133
YKA PcP PcP 19 32 01.6 -1.0
0.1nm,0.3s,baz=272,slow=1.5,SNR=5.4
YKA ScP ScP 19 35 37.7 -0.4
0.0nm,0.3s,baz=275,slow=2.4,SNR=6.2
FX1 Attu Island--F 20.17 274 P P 19 27 49.1 -0.5
FX1 Attu Island--F 20.17 274 P P 19 27 49.1 -0.5
29nm,0.6s,baz=65,slow=2.6,SNR=11
JCW Jim Creek 20.17 102 P P 19 27 50.5 +0.8
LON Longmire 21.11 105 *e*P P 19 28 00.5 +0.6
LON pmax pmax
comp=Z,20nm,1.0s
LON Longmire 21.11 105 *e*P P 19 28 00.5 +0.6
comp=Z,20nm,1.0s
FL2 Flat Top 2 21.18 106 P P 19 28 01.5 +0.8
WPW White Pass 21.29 104 P P 19 28 02.8 +1.0
ETW Entiat 21.39 101 P P 19 28 03.5 +0.5
ASR Mount Adams--S 21.61 106 P P 19 28 05.7 +0.4
MPOR Mary's Peak 21.68 111 P P 19 28 06.4 +0.3
COR Corvallis 21.75 111 *e*P P 19 28 06.5 -0.2
COR pmax pmax
comp=Z,49nm,1.0s
COR Corvallis 21.75 111 *e*P P 19 28 06.5 -0.2
comp=Z,48nm,1.0s
BILL Bilibino 21.96 318 *c i*P P 19 28 08.5 -0.2
BILL *e* 19 28 27.8
BILL *i*S S 19 32 11.3 +0.8
BILL pmax pmax
comp=Z,130nm,1.6s
BILL MLR MLR
comp=Z,4µm,21.0s
VFP Flag Point 22.22 107 P P 19 28 12.1 +0.1
BROR Big Rock Looko 22.41 110 P P 19 28 14.3 +0.6
HAWA Hanford 22.56 103 *e*P P 19 28 15.5 +0.1
comp=Z,85nm,1.4s
PRLK Prince Lake 22.71 110 P P 19 28 18.0 +0.9
NEW Newport 22.76 96 *e*P P 19 28 17.0 -0.6
comp=Z,23nm,0.9s
NEW Newport 22.76 96 P P 19 28 17.9 +0.3
comp=Z,19nm,0.9s,baz=302,slow=9.0,SNR=16
NEW Newport 22.76 96 ⇓P P 19 28 17.4 -0.2
baz=22,SNR=23
A12A Yaak River Ran 23.20 93 ⇑P P 19 28 22.0 -0.1
baz=23
VIPM Ingram Point 23.21 108 P P 19 28 21.8 -0.5
VIPM Ingram Point 23.21 108 P P 19 28 21.8 -0.5
HUMO Hull Mountain 23.33 114 *e*P P 19 28 22.4 -1.0
comp=Z,45nm,1.4s
B12A Libby 23.50 94 ⇑P P 19 28 25.5 +0.5
baz=23
A13A Flathead Natio 23.89 92 ⇑P P 19 28 28.9 0.0
baz=24,SNR=16
C12B Naegeli Ranch, 23.99 96 ⇑P P 19 28 29.3 -0.5
baz=24
YBH Yreka Blue Hor 24.10 115 P P 19 28 31.6 +0.7
YBH Yreka Blue Hor 24.10 115 P P 19 28 31.6 +0.7
comp=Z,19nm,0.9s,baz=344,slow=3.8,SNR=36
YBH LR LR 19 35 31.8
comp=Z,2µm,20.0s,baz=318,slow=31
WALA Waterton Lakes 24.10 92 *e*P P 19 28 31.0 +0.1
comp=Z,0.5nm,0.9s
B13A Whitefish 24.17 94 ⇓P P 19 28 31.4 -0.1
baz=24,SNR=9.4
BSMT Bassoo Peak 24.29 95 *e*P P 19 28 32.5 -0.2
A14A Double T Ranch 24.42 91 ⇑P P 19 28 33.9 0.0
baz=24,SNR=30
BLMT Blacktail Moun 24.43 94 *e*P P 19 28 32.4 -1.7
C13A Hot Springs 24.50 95 ⇓P P 19 28 34.5 0.0
baz=24,SNR=28
JTMT Jette 24.63 95 *e*P P 19 28 35.4 -0.3
YBMT Yellow Bay 24.71 94 *e*P P 19 28 35.7 -0.8
comp=Z,38nm,1.2s
BMO Blue Mountains 24.75 103 *e*P P 19 28 36.9 +0.1
comp=Z,18nm,1.1s
A15A Johnson Ranch, 24.80 91 ⇑P P 19 28 37.2 -0.1
baz=24,SNR=30
B14A Marquette Ranc 24.84 93 ⇑P P 19 28 38.1 +0.5
baz=25,SNR=12
D13A Huson 24.91 96 ⇓P P 19 28 38.5 +0.2
baz=25,SNR=8.9
SWMT Swartz Lake 24.92 95 *e*P P 19 28 36.8 -1.6
WDC Whiskeytown Da 25.05 117 *e*P P 19 28 40.3 +0.8
WDC pmax pmax
comp=Z,21nm,0.9s
WDC Whiskeytown Da 25.05 117 *e*P P 19 28 40.3 +0.8
comp=Z,20nm,0.9s
LTIM Timbered Crate 25.13 115 P P 19 28 41.6 +1.3
KIPM Iron Peak 25.18 119 *e*P P 19 28 40.6 -0.2
comp=Z,68nm,1.1s
MOD Modoc 25.20 112 *e*P P 19 28 40.8 -0.2
comp=Z,34nm,1.1s
MOD *e*ScP ScP 19 35 53.2 +0.5
B15A Bradely Ranch, 25.26 92 ⇓P P 19 28 41.1 -0.3
baz=25,SNR=27
F12A Elk City 25.29 99 ⇓P P 19 28 41.5 -0.2
baz=25,SNR=28
MSO Missoula 25.35 96 *e*P P 19 28 42.9 +0.6
comp=Z,16nm,1.1s
MSO Missoula 25.35 96 ⇓P P 19 28 42.1 -0.2
baz=25,SNR=7.8
SLMT Seeley Lake 25.36 95 *e*P P 19 28 42.2 -0.2
D14A Greough 25.44 95 ⇑P P 19 28 42.8 -0.3
baz=25,SNR=22
E13A Victor 25.45 97 ⇑P P 19 28 42.8 -0.3
baz=25,SNR=13
LBCM Butte Creek Ri 25.45 115 P P 19 28 44.1 +0.8
C15A Salmond Ranch, 25.54 93 ⇑P P 19 28 44.3 +0.4
baz=25,SNR=30
B16A M & M Farms, S 25.68 91 ⇓P P 19 28 45.2 0.0
baz=25,SNR=18
CHMT Chamberlain Mo 25.68 95 *e*P P 19 28 45.1 -0.3
WVOR Wild Horse Val 25.68 109 *e*P P 19 28 46.0 +0.7
WVOR pmax pmax
comp=Z,62nm,1.0s
WVOR Wild Horse Val 25.68 109 *e*P P 19 28 46.0 +0.7
comp=Z,62nm,1.0s
F13A Darby 25.77 98 ⇑P P 19 28 45.8 -0.3
baz=26,SNR=15
E14A Clinton 25.85 96 ⇑P P 19 28 46.7 -0.1
baz=26,SNR=7.4
A17A Triple J Farms 25.94 89 ⇑P P 19 28 47.7 +0.2
baz=26,SNR=28
C16A Fuhringer Ranc 26.00 92 ⇑P P 19 28 47.8 -0.3
baz=26,SNR=5.3
D15A Lincoln 26.01 94 ⇓P P 19 28 48.0 -0.3
baz=26,SNR=17
B17A L&G Farms, Che 26.25 91 ⇑P P 19 28 50.1 -0.2
baz=26
G13A Cobalt 26.26 100 ⇑P P 19 28 50.4 -0.2
baz=26,SNR=24
H12A Diamond D Ranc 26.27 101 ⇓P P 19 28 50.3 -0.4
baz=26,SNR=16
F14A Wisdom 26.29 97 ⇑P P 19 28 50.0 -0.8
baz=26
E15A Deer Lodge 26.31 96 ⇓P P 19 28 49.9 -1.1
baz=26
A18A Metzger Ranch, 26.43 89 ⇑P P 19 28 51.3 -0.7
baz=26
MFID Camas Ranch 26.50 104 *e*P P 19 28 53.1 +0.4
comp=Z,25nm,0.9s
MFID Camas Ranch 26.50 104 ⇑P P 19 28 52.6 -0.2
baz=26,SNR=22
D16A Dana Ranch, Ca 26.55 94 ⇓P P 19 28 53.0 -0.2
baz=26,SNR=22
H13A Challis 26.59 100 ⇓P P 19 28 53.3 -0.2
baz=26,SNR=35
G14A Jackson 26.59 98 ⇓P P 19 28 53.4 -0.3
baz=26,SNR=13
I12A Atlanta 26.62 103 ⇑P P 19 28 53.8 -0.1
baz=26,SNR=17
C17A Wharram Farm, 26.64 92 ⇓P P 19 28 53.5 -0.4
baz=26
BEKR Beckworth 26.68 115 *e*P P 19 28 54.2 -0.3
comp=Z,7.0nm,0.9s
F15A Butte 26.75 97 ⇑P P 19 28 54.6 -0.5
baz=26
B18A Beardsley Farm 26.75 89 ⇑P P 19 28 54.7 -0.2
baz=26,SNR=13
E16A East Helena 26.78 95 ⇓P P 19 28 55.2 -0.1
baz=26,SNR=6.1
LRM Limekiln Ridge 26.78 96 *e*P P 19 28 55.0 -0.4
D17A Six Diamond Ra 26.96 93 ⇑P P 19 28 56.6 -0.3
baz=27,SNR=12
EGMT Eagleton 26.98 90 *e*P P 19 28 55.9 -1.0
comp=Z,16nm,0.9s
EGMT Eagleton 26.98 90 ⇓P P 19 28 56.5 -0.4
baz=27,SNR=12
DLMT Dillon 26.99 97 *e*P P 19 28 57.0 -0.2
comp=Z,21nm,1.2s
A19A Klindworth Far 27.03 88 ⇓P P 19 28 57.4 0.0
baz=27
H14A Leadore 27.04 99 ⇓P P 19 28 57.0 -0.6
baz=27,SNR=11
I13A Wildhorse Cree 27.09 101 ⇑P P 19 28 58.1 -0.1
baz=27,SNR=29
HLID Hailey 27.16 102 *e*P P 19 28 58.5 -0.2
comp=Z,12nm,1.0s
HLID *e*ScP ScP 19 35 58.9 +0.5
HLID Hailey 27.16 102 ⇓P P 19 28 58.7 -0.1
baz=27,SNR=14
G15A Dillon 27.17 98 ⇓P P 19 28 58.1 -0.7
baz=27
B19A Brinkman Farms 27.18 89 ⇓P P 19 28 59.1 +0.3
baz=27,SNR=16
MCMT McKenzie Canyo 27.19 99 *e*P P 19 28 59.0 -0.1
comp=Z,7.8nm,1.0s
BOZ Bozeman (W) 27.34 96 *e*P P 19 29 00.5 +0.2
BOZ pmax pmax
comp=Z,5.0nm,1.0s
BOZ Bozeman (W) 27.34 96 *e*P P 19 29 00.5 +0.2
comp=Z,4.9nm,1.0s
J13A Cove Ranch, Pi 27.40 102 ⇓P P 19 29 01.0 +0.1
baz=27,SNR=8.0
WCN Washoe City 27.41 115 *e*P P 19 29 01.2 +0.2
WCN pmax pmax
comp=Z,12nm,0.9s
WCN Washoe City 27.41 115 *e*P P 19 29 01.2 +0.2
comp=Z,12nm,0.9s
D18A Linhart Farms, 27.42 92 ⇑P P 19 29 01.4 +0.4
baz=27,SNR=9.3
H15A Lima 27.44 99 ⇓P P 19 29 00.6 -0.6
baz=27
I14A Mackay 27.44 101 ⇑P P 19 29 00.9 -0.4
baz=27,SNR=13
G16A Moss Hill, Enn 27.51 97 ⇑P P 19 29 01.5 -0.3
baz=27
C19A Slack Wire Ran 27.53 90 ⇓P P 19 29 02.2 +0.2
baz=27,SNR=18
B20A Solberg Farm, 27.70 88 ⇑P P 19 29 03.4 0.0
baz=27
F17A Fitzpatrick Pl 27.72 95 ⇑P P 19 29 03.6 -0.1
baz=27,SNR=9.2
E18A Harlowton 27.73 93 ⇑P P 19 29 04.2 +0.3
baz=28,SNR=8.3
SEY Seymchan 27.83 306 ⇓*i*P P 19 29 03.7 -0.7
BMN Battle Mountai 27.86 110 *e*P P 19 29 09.8 +4.8
BMN pmax pmax
comp=Z,13nm,1.1s
BMN Battle Mountai 27.86 110 *e*P P 19 29 09.8 +4.8
comp=Z,13nm,1.1s
FFC Flin Flon 27.94 72 *i*P P 19 29 09.5 +4.1
FFC Flin Flon 27.94 72 *e*P P 19 29 05.1 -0.3
comp=Z,6.4nm,1.1s
D19A Cripps Ranch, 27.95 91 ⇓P P 19 29 05.8 +0.1
baz=28
QLMT Earthquake Lak 27.97 97 *e*P P 19 29 05.5 -0.5
G17A Pierce Place, 28.04 96 ⇓P P 19 29 06.5 0.0
baz=28
PET Petropavlovsk 28.04 284 *e*P P 19 29 06.4 +0.1
PET *e*S S 19 33 49.9 -0.2
PET pmax pmax
comp=Z,56nm,1.1s
PET pmax pmax
comp=Z,300nm,8.7s
PET MLR MLR
comp=Z,2µm,21.0s
CMB Columbia Colle 28.07 118 *e*P P 19 29 07.4 +0.6
CMB pmax pmax
comp=Z,15nm,1.1s
CMB Columbia Colle 28.07 118 *e*P P 19 29 07.4 +0.6
comp=Z,15nm,1.1s
RES Resolute Bay 28.13 28 *e*P P 19 29 06.4 -0.5
comp=Z,14nm,0.9s
RES Resolute Bay 28.13 28 P P 19 29 06.9 0.0
comp=Z,2.5nm,0.6s,baz=250,slow=11,SNR=12
RES LR LR 19 42 39.8
comp=Z,3µm,19.2s,baz=81,slow=41
H16A Russell Place, 28.15 97 ⇓P P 19 29 07.7 +0.1
baz=28,SNR=13
F18A Big Timber 28.24 94 ⇑P P 19 29 08.8 +0.5
baz=28
YMR Madison River 28.32 97 *e*P P 19 29 09.4 +0.2
comp=Z,29nm,1.2s
D20A Manuel Ranch, 28.41 90 ⇓P P 19 29 10.6 +0.9
baz=28,SNR=7.9
E19A Rath Farm, Rou 28.42 92 ⇑P P 19 29 11.0 +1.2
baz=28,SNR=11
PETK Petropavlovsk- 28.51 285 P P 19 29 09.7 -0.8
PETK Petropavlovsk- 28.51 285 P P 19 29 09.7 -0.8
PETK Petropavlovsk- 28.51 285 P P 19 29 09.7 -0.8
comp=Z,4.6nm,0.5s,baz=84,slow=13,SNR=18
PETK LR LR 19 41 00.9
comp=Z,1µm,19.8s,baz=79,slow=38
C21A Desert Coulee 28.56 88 ⇓P P 19 29 12.6 +1.6
baz=28
A22A Carney Farms, 28.56 85 ⇑P P 19 29 12.2 +1.2
baz=28
ELK Elko 28.67 108 *e*P P 19 29 12.5 +0.2
comp=Z,150nm,0.9s
ELK PcP PcP 19 32 24.8 +2.1
ELK Elko 28.67 108 P P 19 29 13.1 +0.8
comp=Z,9.4nm,0.8s,baz=308,slow=8.0,SNR=34
ELK PcP PcP 19 32 24.8 +2.1
comp=Z,1.0nm,0.6s,baz=16,slow=4.4,SNR=4.1
ELK LR LR 19 39 01.2
comp=Z,1µm,18.4s,baz=310,slow=33
G18A Lazy EL Ranch, 28.69 95 ⇓P P 19 29 13.1 +0.8
baz=28
F19A Roth Farm, Mol 28.70 93 ⇑P P 19 29 13.1 +0.7
baz=28
H17A Grant Village 28.71 97 ⇑P P 19 29 13.9 +1.2
baz=28,SNR=12
E20A Meyer Farm, Mu 28.76 91 ⇑P P 19 29 13.7 +0.8
baz=28
NVAR Mina Array Bea 28.80 114 P P 19 29 14.4 +0.9
NVAR PcP PcP 19 32 23.5 +0.5
NVAR ScP ScP 19 36 03.6 0.0
NVAR Mina Array Bea 28.80 114 P P 19 29 14.4 +0.9
comp=Z,13nm,0.9s,baz=301,slow=8.7,SNR=52
NVAR PcP PcP 19 32 23.5 +0.5
comp=Z,1.1nm,0.7s,baz=294,slow=1.5,SNR=3.6
NVAR ScP ScP 19 36 03.6 0.0
comp=Z,1.9nm,0.9s,baz=292,slow=2.8,SNR=6.0
NVAR LR LR 19 38 50.3
comp=Z,2µm,18.9s,baz=45,slow=32
IMW Indian Meadow 28.84 98 *e*P P 19 29 13.4 -0.4
comp=Z,12nm,0.9s
NV11 Mina Array Sit 28.88 114 *e*P P 19 29 14.2 +0.1
H18A Shoshone NF, C 29.04 96 ⇓P P 19 29 16.3 +0.8
baz=29
MOOW Moose Ponds 29.04 98 *e*P P 19 29 16.1 +0.6
comp=Z,5.2nm,0.9s
TPAW Teton Pass 29.10 99 *e*P P 19 29 16.1 0.0
comp=Z,11nm,1.1s
MLAC Mammoth Lakes 29.16 116 ⇓P P 19 29 17.7 +1.1
baz=29
F20A Billings 29.17 93 ⇑P P 19 29 17.6 +1.0
baz=29
LOHW Long Hollow 29.21 98 *e*P P 19 29 16.9 -0.2
comp=Z,9.4nm,1.0s
HVU Hansel Valley 29.26 103 *e*P P 19 29 17.3 -0.2
HVU pmax pmax
comp=Z,20nm,1.3s
HVU Hansel Valley 29.26 103 *e*P P 19 29 17.2 -0.2
comp=Z,20nm,1.3s
J17A Brown Place, J 29.31 99 ⇑P P 19 29 18.3 +0.4
baz=29
E21A Keefer Ranch, 29.32 90 ⇓P P 19 29 18.8 +1.0
baz=29
B23A Brockton 29.36 86 ⇑P P 19 29 19.4 +1.2
baz=29
H19A Powell 29.41 95 ⇑P P 19 29 19.5 +0.8
baz=29
D22A Cohagen 29.46 89 ⇓P P 19 29 19.7 +0.7
baz=29,SNR=9.8
G20A Bridger 29.50 94 ⇓P P 19 29 20.5 +1.1
baz=29
MTUM Tungsten Hills 29.51 116 *e*P P 19 29 20.5 +0.8
I18A Diamond G Ranc 29.58 97 ⇑P P 19 29 21.3 +1.0
baz=29
C23A Lambert 29.63 87 ⇓P P 19 29 21.1 +0.5
baz=29,SNR=12
J18A Kendall Valley 29.79 98 ⇑P P 19 29 22.8 +0.6
baz=30,SNR=7.8
I19A Meeteetse 29.82 96 ⇓P P 19 29 23.0 +0.5
baz=30
TIN Tinemaha 29.91 116 ⇑P P 19 29 24.5 +1.3
baz=30
D23A Lindsay 29.98 88 ⇑P P 19 29 24.6 +0.9
baz=30
E22A Miles City 30.01 90 ⇓P P 19 29 24.8 +0.9
baz=30
HWUT Hardware Ranch 30.03 102 *e*P P 19 29 23.6 -0.7
comp=Z,13nm,0.9s
G21A Lodge Grass 30.05 93 ⇓P P 19 29 25.2 +0.9
baz=30
H20A Greybull 30.08 95 ⇓P P 19 29 25.4 +0.8
baz=30
C24A Savage 30.21 87 ⇑P P 19 29 27.1 +1.5
baz=30
F22A Rosebud 30.23 91 ⇑P P 19 29 27.3 +1.3
baz=30
R11A Troy Canyon, C 30.25 111 ⇓P P 19 29 24.5 -1.8
baz=30,SNR=16
J19A Crowheart 30.29 97 ⇑P P 19 29 27.2 +0.7
baz=30
E23A Ismay 30.33 89 ⇑P P 19 29 27.8 +1.0
baz=30
BW06 Boulder Array 30.34 99 *e*P P 19 29 26.4 -0.7
comp=Z,9.1nm,0.9s
PDAR Pinedale Array 30.34 99 P P 19 29 27.1 +0.1
PDAR Pinedale Array 30.34 99 P P 19 29 27.1 +0.1
comp=Z,4.2nm,0.8s,baz=311,slow=5.5,SNR=35
I20A Worland 30.35 95 ⇓P P 19 29 27.8 +0.8
baz=30
DUG Dugway 30.36 106 *e*P P 19 29 26.6 -0.6
DUG pmax pmax
comp=Z,8.0nm,0.8s
DUG Dugway 30.36 106 *e*P P 19 29 26.6 -0.6
comp=Z,8.2nm,0.8s
DUG Dugway 30.36 106 ⇓P P 19 29 27.7 +0.6
baz=30
GRAC Grapevine Rang 30.38 115 ⇑P P 19 29 28.2 +1.0
baz=30
SMMC Simmler 30.43 120 ⇓P P 19 29 28.6 +0.9
baz=30
VES Vestal, Richgr 30.45 119 ⇑P P 19 29 28.1 +0.4
baz=30
D24A Glendive 30.50 87 ⇑P P 19 29 29.1 +0.8
baz=30
M17A Scullys Gap (B 30.61 102 ⇑P P 19 29 28.9 -0.6
baz=30,SNR=8.0
L18A Fontenelle, Gr 30.65 100 ⇓P P 19 29 30.1 +0.3
baz=30
K19A Absolon Red Bu 30.69 98 ⇑P P 19 29 30.5 +0.4
baz=30
F23A Volborg 30.74 90 ⇓P P 19 29 26.9 -3.5
baz=30

J20A	Shoshoni	30.76	96	⇓P		P		19 29 30.8	+0.1		
	baz=30,SNR=14										
JLU	Jordanelle	30.80	104	*e*P		P		19 29 29.7	-1.5		
	comp=Z,8.7nm,1.0s										
DAC	Darwin (Calif)	30.83	116	*e*P		P		19 29 31.1	-0.3		
DAC				pmax		pmax					
	comp=Z,16nm,1.0s										
DAC	Darwin (Calif)	30.83	116	*e*P		P		19 29 31.1	-0.3		
	comp=Z,16nm,1.0s										
ISA	Isabella	30.89	118	*e*P		P		19 29 31.8	0.0		
ISA				pmax		pmax					
	comp=Z,22nm,1.1s										
ISA	Isabella	30.89	118	*e*P		P		19 29 31.8	0.0		
	comp=Z,22nm,1.1s										
ISA	Isabella	30.89	118	⇑P		P		19 29 31.7	-0.1		
	baz=31,SNR=9.8										
L19A	Farson	30.90	99	⇑P		P		19 29 31.6	-0.4		
	baz=31										
I21A	Big Trails, Te	30.90	95	⇑P		P		19 29 31.7	-0.3		
	baz=31,SNR=12										
M18A	Lyman	30.97	101	⇑P		P		19 29 32.7	0.0		
	baz=31										
DAU	Daniels Canyon	31.04	104	*e*P		P		19 29 33.1	-0.2		
DAU	Daniels Canyon	31.04	104	*e*P		P		19 29 33.1	-0.2		
FURC	Furnace Creek,	31.05	115	⇑P		P		19 29 33.5	+0.4		
	baz=31										
MPMC	Manual Prospec	31.05	116	⇓P		P		19 29 33.4	0.0		
	baz=31										
K20A	Yellowstone Ra	31.08	98	⇑P		P		19 29 33.7	+0.2		
	baz=31										
J21A	Lysite	31.12	96	⇓P		P		19 29 34.1	+0.2		
	baz=31,SNR=15										
ARVC	Arvin	31.14	119	⇓P		P		19 29 34.0	+0.1		
	baz=31										
F24A	Ekalaka	31.20	89	⇓P		P		19 29 34.7	+0.2		
	baz=31,SNR=8.5										
LRMC	Laurel Mountai	31.42	117	⇑P		P		19 29 36.4	-0.1		
	baz=31										
H23A	Clabaugh Cattl	31.47	92	⇓P		P		19 29 31.9	-5.0		
	baz=31,SNR=20										
L20A	Wamsutter	31.52	99	⇑P		P		19 29 37.9	+0.5		
	baz=31										
K21A	Alcova	31.70	97	⇑P		P		19 29 39.1	+0.1		
	baz=31,SNR=12										
ARUT	Antelope Range	31.79	109	*e*P		P		19 29 40.1	+0.3		
ARUT				pmax		pmax					
	comp=Z,18nm,0.9s										
ARUT	Antelope Range	31.79	109	*e*P		P		19 29 40.1	+0.3		
	comp=Z,18nm,0.9s										
MVU	Marysvale	31.91	107	*e*P		P		19 29 42.3	+1.3		
	comp=Z,16nm,0.9s										
MSU	Marysvale	31.92	107	*e*P		P		19 29 41.4	+0.4		
MSU	Marysvale	31.92	107	*e*P		P		19 29 41.4	+0.4		
P17A	Butcher Ranch,	31.98	104	⇓P		P		19 29 41.9	+0.4		
	baz=32										
GSC	Goldstone	31.99	116	⇑P		P		19 29 42.4	+0.9		
	baz=32										
L21A	Rawlins	32.08	98	⇑P		P		19 29 42.2	-0.2		
	baz=32										
P18A	Preston Nutter	32.14	104	⇑P		P		19 29 43.2	+0.1		
	baz=32										
Q16A	Castle Valley	32.16	106	⇓P		P		19 29 44.0	+1.0		
	baz=32										
MWC	Mount Wilson	32.24	119	*e*P		P		19 29 44.1	+0.3		
MWC				pmax		pmax					
	comp=Z,17nm,0.9s										
MWC	Mount Wilson	32.24	119	*e*P		P		19 29 44.1	+0.3		
	comp=Z,17nm,0.9s										
M21A	Separation Pea	32.33	98	⇓P		P		19 29 45.0	+0.4		
	baz=32,SNR=15										
SRU	San Rafael	32.36	105	⇑P		P		19 29 45.9	+1.0		
	baz=32,SNR=24										
N20A	Spence Gulch,	32.36	100	⇑P		P		19 29 45.8	+0.9		
	baz=32,SNR=21										
BFSC	Mount Baldy Ra	32.43	119	⇓P		P		19 29 45.3	0.0		
	baz=32										
RSSD	Black Hills	32.50	92	*e*P		P		19 29 46.0	-0.1		
RSSD				pmax		pmax					
	comp=Z,8.0nm,0.8s										
RSSD	Black Hills	32.50	92	*e*P		P		19 29 46.0	-0.1		
	comp=Z,8.4nm,0.8s										
K23A	Bowen Ranch, D	32.51	95	⇓P		P		19 29 46.8	+0.7		
	baz=32										
FMP	Fort Macarthur	32.55	120	⇓P		P		19 29 46.6	+0.4		
	baz=32										
L22A	Ellis Ranch, M	32.55	97	⇑P		P		19 29 47.5	+1.0		
	baz=32,SNR=9.1										
HEC	Hector,Ludlow	32.60	116	⇓P		P		19 29 47.0	+0.1		
	baz=32										
P19A	Cripple Cowboy	32.82	102	⇓P		P		19 29 49.1	+0.2		
	baz=32,SNR=22										
N21A	Black Mountain	32.82	99	⇑P		P		19 29 49.2	+0.3		
	baz=32,SNR=10										
O20A	White River Ci	32.86	101	⇑P		P		19 29 49.6	+0.3		
	baz=33,SNR=11										
M22A	Cedar Creek Ra	32.88	98	⇓P		P		19 29 49.8	+0.3		
	baz=33										
L23A	Garrett	32.90	96	⇓P		P		19 29 50.2	+0.6		
	baz=33,SNR=24										
GMRC	Granite Mounta	32.98	116	⇓P		P		19 29 50.4	+0.2		
	baz=33,SNR=5.4										
K24A	Anderson Ranch	32.98	94	⇑P		P		19 29 50.8	+0.6		
	baz=33										
SCI	San Clemente I	33.02	121	⇑P		P		19 29 51.5	+1.0		
	baz=33										
O21A	Pagoda	33.23	100	⇓P		P		19 29 52.6	+0.1		
	baz=33										
P20A	De Beque	33.23	102	⇑P		P		19 29 52.8	+0.3		
	baz=33										
M23A	Laramie	33.32	97	⇓P		P		19 29 53.5	+0.2		
	baz=33										
ULM	Lac du Bonnet	33.37	76	P		P		19 29 53.9	+0.6		
ULM	Lac du Bonnet	33.37	76	P		P		19 29 53.9	+0.6		
	comp=Z,25nm,0.9s,baz=298,slow=8.9,SNR=10										
ULM				LR		LR		19 42 59.8			
	comp=Z,2μm,19.8s,baz=146,slow=36										
N22A	Wattenberg Ran	33.38	98	⇑P		P		19 29 54.1	+0.2		
	baz=33										
U15A	North Rim	33.42	110	⇓P		P		19 29 54.6	+0.3		
	baz=33										
BELC	Belle Mtn. Jos	33.43	117	⇓P		P		19 29 54.8	+0.6		
	baz=33										
N23A	Red Feather La	33.59	98	⇓P		P		19 29 56.4	+0.7		
	baz=33										
W13A	Hualapai Mount	33.62	113	⇑P		P		19 29 56.3	+0.4		
	baz=33,SNR=7.5										
Q20A	Ridgley Place,	33.67	103	⇑P		P		19 29 56.0	-0.3		
	baz=33										
S18A	Hurst Farm, Bl	33.68	106	⇑P		P		19 29 56.9	+0.4		
	baz=33,SNR=13										
IRM	Iron Mountain	33.73	116	⇑P		P		19 29 57.5	+0.9		
	baz=33,SNR=14										
P21A	Newcastle	33.73	101	⇓P		P		19 29 56.8	0.0		
	baz=33										
PV04	Paradox Valley	33.75	104	*e*P		P		19 29 56.7	-0.3		
O22A	Kremmling	33.77	99	⇓P		P		19 29 57.2	-0.1		
	baz=34										
BC3	Big Chuckawall	33.98	117	⇑P		P		19 29 59.2	+0.2		
	baz=34										
P22A	Eagle	34.05	100	⇑P		P		19 30 00.5	+0.9		
	baz=34										
O23A	Lake Granby, G	34.08	99	⇑P		P		19 30 00.7	+0.7		
	baz=34,SNR=7.7										
MONP	Monument Peak	34.12	119	⇓P		P		19 30 00.6	+0.3		
	baz=34,SNR=7.0										
PV01	Paradox Valley	34.12	104	*e*P		P		19 30 00.5	+0.2		
	comp=Z,1μm,0.9s										
PDMCI	Parker Dam,Lak	34.12	114	⇑P		P		19 30 01.1	+1.1		
	baz=34										
Q21A	Lamborn Mesa,	34.15	102	⇑P		P		19 30 01.1	+0.6		
	baz=34										
BAR	Barrett	34.17	119	*e*P		P		19 30 00.3	-0.2		
	comp=Z,15nm,0.9s										
R20A	Redvale	34.18	104	⇑P		P		19 30 01.1	+0.3		
	baz=34										
N24A	Carr	34.22	97	⇓P		P		19 30 01.6	+0.5		
	baz=34										
SMCO	Snowmass	34.23	101	*e*P		P		19 30 02.4	+1.0		
	comp=Z,5.3nm,0.9s										
Y12C	Blythe	34.37	115	⇑P		P		19 30 02.9	+0.8		
	baz=34,SNR=6.0										
ALE	Alert	34.38	13	P		P		19 30 02.2	+0.4		
	comp=Z,120nm,1.0s,SNR=14										
SWSC	Sam W. Stewart	34.38	118	⇓P		P		19 30 02.6	+0.3		
	baz=34										
S20A	Disappointment	34.46	104	⇓P		P		19 30 03.6	+0.4		
	baz=34,SNR=11										
DVTC	Desert V Tower	34.47	118	⇓P		P		19 30 03.4	+0.3		
	baz=34										
AGMN	Agassiz Nation	34.47	79	*e*P		P		19 30 03.4	+0.5		
	comp=Z,31nm,0.8s										
Q22A	Crested Butte,	34.49	101	⇑P		P		19 30 04.1	+0.5		
	baz=34										
R21A	Cimarron	34.50	102	⇓P		P		19 30 04.1	+0.6		
	baz=34										
ISCO	Idaho Springs	34.53	99	*e*P		P		19 30 04.8	+0.9		
ISCO				pmax		pmax					
	comp=Z,5.0nm,0.9s										
ISCO	Idaho Springs	34.53	99	*e*P		P		19 30 04.8	+0.9		
	comp=Z,5.3nm,0.9s										
ISCO	Idaho Springs	34.53	99	⇓P		P		19 30 05.0	+1.0		
	baz=34										
TIXI	Tiksi	34.57	327	⇑*i*P		P		19 30 03.0	-0.5		
TIXI				pmax		pmax					
	comp=Z,13nm,1.0s										
TIXI				MLR		MLR					
	comp=Z,2μm,20.0s										
WUAZ	Wupatki	34.59	110	*e*P		P		19 30 04.8	+0.6		
	comp=Z,20nm,0.9s										
WUAZ	Wupatki	34.59	110	⇓P		P		19 30 04.9	+0.6		
	baz=34,SNR=8.1										
P23A	Jefferson	34.71	100	⇓P		P		19 30 06.2	+0.7		
	baz=34,SNR=10										
GLA	Glamis	34.77	116	*e*P		P		19 30 06.5	+0.7		
GLA				pmax		pmax					
	comp=Z,21nm,0.9s										
GLA	Glamis	34.77	116	*e*P		P		19 30 06.5	+0.7		
	comp=Z,20nm,0.9s										
GLA	Glamis	34.77	116	⇑P		P		19 30 06.4	+0.7		
	baz=34										
S21A	Coal Bank Pass	34.88	104	⇓P		P		19 30 07.6	+0.6		
	baz=35										
Y14A	Wickenburg	34.98	113	⇓P		P		19 30 08.5	+0.9		
	baz=35										
R22A	Saguache, Gunn	35.03	102	⇓P		P		19 30 09.1	+0.9		
	baz=35										
Q23A	Hartsel	35.05	100	⇓P		P		19 30 08.5	+0.1		
	baz=35										
S22A	4UR Ranch, Cre	35.34	102	⇓P		P		19 30 11.3	+0.4		
	baz=35										
Q24A	Divide	35.38	99	⇑P		P		19 30 11.6	+0.4		
	baz=35										
X16A	Lo Mia Camp, P	35.41	111	⇑P		P		19 30 12.5	+1.2		
	baz=35,SNR=14										
U20A	Newcomb	35.45	106	⇑P		P		19 30 12.2	+0.5		
	baz=35										
Z14A	Wintersburg	35.47	114	⇓P		P		19 30 12.4	+0.8		
	baz=35										
O26A	Horse Wrangler	35.49	96	⇓P		P		19 30 12.4	+0.4		
	baz=35										
113A	Mohawk Valley,	35.53	116	⇓P		P		19 30 13.1	+0.9		
	baz=35										
P25A	Willow Gulch B	35.53	98	⇓P		P		19 30 13.7	+1.3		
	baz=35,SNR=6.7										
R23A	Moffat	35.56	101	⇓P		P		19 30 13.3	+0.5		
	baz=35										
W18A	Petrified Fore	35.76	109	⇑P		P		19 30 14.9	+0.6		
	baz=35										
T22A	Edith	35.84	103	⇑P		P		19 30 15.4	+0.3		
	baz=36										
U21A	Nageezi	35.87	105	⇓P		P		19 30 15.8	+0.4		
	baz=36,SNR=10.0										
V20A	Brimhall	35.91	106	⇓P		P		19 30 16.3	+0.6		
	baz=36										
R24A	Sanders Place,	35.93	100	⇓P		P		19 30 16.7	+0.9		
	baz=36,SNR=13										
P26A	Davis Ranch, A	35.95	97	⇓P		P		19 30 16.4	+0.5		
	baz=36										
SDCO	Great Sand Dun	36.06	101	*e*P		P		19 30 17.9	+0.8		
	comp=Z,9.0nm,1.3s										
X18A	Snowflake	36.10	109	⇓P		P		19 30 18.3	+1.1		
	baz=36,SNR=8.9										
S24A	Houchin Ranch,	36.30	101	⇑P		P		19 30 19.9	+0.8		
	baz=36,SNR=13										
U22A	Llaves	36.34	104	⇑P		P		19 30 19.8	+0.4		
	baz=36										
P27A	Ficken Ranch,	36.37	96	⇑P		P		19 30 20.1	+0.6		
	baz=36										
W20A	Ramah	36.40	107	⇑P		P		19 30 20.1	+0.2		
	baz=36										
R25A	Fountain Ranch	36.44	100	⇓P		P		19 30 20.8	+0.7		
	baz=36,SNR=8.0										
V22A	San Miguel Ran	36.66	105	⇓P		P		19 30 22.3	+0.2		
	baz=36,SNR=9.0										
214A	Organ Pipe Nat	36.66	115	⇑P		P		19 30 22.4	+0.5		
	baz=36,SNR=12										
S25A	Robets Cordova	36.71	100	⇑P		P		19 30 23.1	+0.7		
	baz=36,SNR=6.7										
KSCO	Kaye Shedlock'	36.73	97	⇓P		P		19 30 23.6	+1.0		
	baz=36										
U23A	El Rito	36.73	103	⇓P		P		19 30 23.8	+1.1		
	baz=36										
R26A	Arlington	36.78	99	⇓P		P		19 30 23.8	+0.8		
	baz=36,SNR=17										
T24A	Torres, Weston	36.80	102	⇓P		P		19 30 24.8	+1.4		
	baz=36,SNR=17										
X20A	Quemado	36.85	108	⇓P		P		19 30 24.7	+0.9		
	baz=36										
ECSD	EROS Data Cent	36.86	86	*e*P		P		19 30 24.2	+0.7		
	comp=Z,11nm,1.0s										
W21A	San Fidel	36.86	106	⇓P		P		19 30 24.8	+0.9		
	baz=37										
EYMN	Ely	37.05	77	*e*P		P		19 30 25.8	+0.7		
	comp=Z,53nm,0.8s										
T25A	Trinidad	37.10	101	⇑P		P		19 30 26.7	+0.9		
	baz=37,SNR=6.0										
R27A	Eads	37.15	98	⇑P		P		19 30 27.6	+1.4		
	baz=37										
V23A	Ortiz Mt. (NFS	37.17	104	⇑P		P		19 30 27.7	+1.2		
	baz=37										
S26A	Kim	37.26	99	⇓P		P		19 30 28.0	+0.9		
	baz=37,SNR=20										
X21A	Alamocita Cree	37.30	107	⇑P		P		19 30 28.7	+1.2		
	baz=37,SNR=21										
Y20A	Horse Springs,	37.40	108	⇓P		P		19 30 29.6	+1.1		
	baz=37,SNR=9.2										
TUC	Tucson	37.41	113	*e*P		P		19 30 28.7	+0.4		
TUC	Tucson	37.41	113	*e*P		P		19 30 28.6	+0.4		
T26A	Comanche Natio	37.52	100	⇓P		P		19 30 30.6	+1.3		
	baz=37,SNR=13										
ANMO	Albuquerque	37.63	105	*e*P		P		19 30 30.8	+0.5		
	comp=Z,17nm,1.7s										
ANMO	Albuquerque	37.63	105	LR		LR		19 45 31.8			
	comp=Z,701nm,18.6s,baz=129,slow=36										
W23A	Werner Place,	37.63	105	⇑P		P		19 30 31.2	+0.8		
	baz=37										
U25A	Circle Dot Ran	37.64	102	⇑P		P		19 30 31.3	+0.9		
	baz=37,SNR=11										
X22A	Bernardo	37.67	106	⇓P		P		19 30 30.6	0.0		
	baz=37										
LAZ	Ladron	37.68	107	*e*P		P		19 30 31.5	+0.8		
	comp=Z,9.1nm,1.5s										
V24A	Rampart Ranch,	37.68	103	⇓P		P		19 30 31.0	+0.2		
	baz=37										
Y21A	Point of Rocks	37.70	108	⇑P		P		19 30 31.5	+0.5		
	baz=37										
Z20A	Nine Sixteen R	37.91	109	⇑P		P		19 30 33.9	+1.2		
	baz=38,SNR=15										
LENM	Lemitar	37.95	107	*e*P		P		19 30 35.9	+2.9		
V25A	Rancho No Teng	37.95	102	⇑P		P		19 30 33.5	+0.5		
	baz=38										
YAK	Yakutsk	37.99	311	*c i*P		P		19 30 31.7	-1.1		
YAK				*e**PP		pP		19 30 41.3	+4.3		
YAK				*e*				19 31 58.7			
YAK				*e*PPP		PPP		19 32 17.2			
YAK				*e*				19 32 46.9			
YAK				*e*S		S		19 36 21.0	-3.0		
YAK				*e**SS		ScP		19 36 36.4	+1.5		
YAK				*e*				19 40 42.1			
YAK				pmax		pmax					
	comp=E,21nm,1.2s										
YAK				pmax		pmax					
	comp=N,7.0nm,1.1s										
YAK				pmax		pmax					
	comp=Z,72nm,1.0s										
YAK				pmax		pmax					
	comp=Z,58nm,2.2s										
YAK				pmax		pmax					
	comp=E,56nm,2.0s										
YAK				pmax		pmax					
	comp=N,23nm,1.8s										
YAK				smax		smax					
	comp=E,172nm,5.9s										
YAK				smax		smax					
	comp=N,139nm,5.2s										
YAK				MLR		MLR					
	comp=N,2μm,19.0s										
YAK				MLR		MLR					
	comp=Z,1μm,12.0s										
YAK				MLR		MLR					
	comp=E,1μm,13.0s										
W24A	Lazy 6 Ranch,	37.99	104	⇓P		P		19 30 34.1	+0.7		
	baz=38										
SPMN	St. Paul	38.01	81	⇑P		P		19 30 33.8	+0.7		
	baz=38										
U26A	Atchley Ranch,	38.01	101	⇑P		P		19 30 34.4	+0.9		
	baz=38,SNR=15										
T27A	Campo	38.08	99	⇓P		P		19 30 34.1	+0.1		
	baz=38										
Y22A	Socorro	38.13	107	⇓P		P		19 30 34.7	+0.2		
	baz=38										
BNM	Barren Site	38.14	106	*e*P		P		19 30 34.7	0.0		
	comp=E,11nm,1.3s										
S28A	Manter	38.15	98	⇓P		P		19 30 35.6	+1.1		
	baz=38										
Z21A	St. Cloud Mine	38.24	108	⇓P		P		19 30 36.6	+1.1		
	baz=38										
120A	U Bar Ranch, L	38.33	110	⇓P		P		19 30 37.3	+1.1		
	baz=38										
V26A	Tequesquite Ra	38.43	102	⇓P		P		19 30 38.1	+1.1		
	baz=38,SNR=35										
X24A	Lazy V/L Ranch,	38.46	105	⇑P		P		19 30 38.0	+0.6		
	baz=38										
U27A	Thompson Grove	38.49	100	⇑P		P		19 30 38.2	+0.7		
	baz=38,SNR=9.4										
W25A	X Bar L Ranch,	38.49	103	⇓P		P		19 30 38.4	+0.8		
	baz=38,SNR=8.3										
R30A	Dighton	38.54	96	⇑P		P		19 30 38.8	+1.0		
	baz=38										
S29A	Ulysses	38.55	97	⇓P		P		19 30 38.8	+0.9		
	baz=38										
Y23A	Lovelace Mesa,	38.61	106	⇓P		P		19 30 39.6	+1.0		
	baz=38,SNR=10										
Z22A	Elephant Butte	38.65	108	⇑P		P		19 30 40.1	+1.1		
	baz=38,SNR=15										
121A	Cookes Peak, D	38.78	109	⇑P		P		19 30 41.1	+1.1		
	baz=38										
T29A	Hugoton	38.79	98	⇑P		P		19 30 41.0	+1.1		
	baz=38										
U28A	Mallet	38.85	100	⇑P		P		19 30 41.3	+0.8		
	baz=38										
220A	Playas Peak, P	38.89	111	⇑P		P		19 30 41.9	+1.0		
	baz=39										
S30A	Montezuma	38.90	97	⇑P		P		19 30 41.9	+1.1		
	baz=39										
X25A	Clemmons Ranch	38.91	104	⇓P		P		19 30 42.2	+1.2		
	baz=39										
319A	Douglas	38.92	112	⇑P		P		19 30 42.2	+1.1		
	baz=39										
Y24A	Capitan	38.95	105	⇓P		P		19 30 42.4	+1.0		
	baz=39,SNR=7.6										
W26A	Owens Ranch, T	38.97	102	⇓P		P		19 30 42.7	+1.2		
	baz=39										
V27A	Dan Oppiter Fa	38.97	101	⇑P		P		19 30 43.0	+1.5		
	baz=39										
122A	Conniff Cattle	39.06	108	⇓P		P		19 30 43.3	+0.9		
	baz=39										
221A	Mesquite Ranch	39.20	110	⇑P		P		19 30 44.7	+1.3		
	baz=39										
V28A	Channing	39.31	100	⇓P		P		19 30 45.8	+1.4		
	baz=39										
U29A	Oasis Ranch, S	39.32	99	⇑P		P		19 30 45.7	+1.3		
	baz=39										
320A	Kipp Ranch, An	39.34	111	⇓P		P		19 30 45.8	+1.2		
	baz=39,SNR=8.1										
X26A	CR and CF Fran	39.35	103	⇑P		P		19 30 45.2	+0.5		
	baz=39,SNR=11										
Y25A	Mesa, Roswell	39.35	105	⇑P		P		19 30 45.4	+0.7		
	baz=39,SNR=11										
W27A	Bowe Ranch, En	39.37	102	⇓P		P		19 30 45.5	+0.6		
	baz=39										
Z24A	Sheeppen Canyo	39.44	106	⇑P		P		19 30 46.5	+0.9		
	baz=39,SNR=9.3										
COWI	Conover	39.45	78	*e*P		P		19 30 45.3	0.0		
	comp=E,18nm,0.8s										
S31A	Mullinville	39.45	96	⇑P		P		19 30 46.4	+0.9		
	baz=39										
U30A	WK&E Inc. Balk	39.60	98	⇑P		P		19 30 47.6	+0.9		
	baz=39										
V29A	Stinnett	39.60	99	⇑P		P		19 30 48.1	+1.3		
	baz=39										
X27A	F and S Farms,	39.66	102	⇑P		P		19 30 48.5	+1.2		
	baz=39										
W28A	Vega	39.69	101	⇓P		P		19 30 48.4	+0.9		
	baz=39										
T31A	Randall Ranch,	39.72	96	⇑P		P		19 30 48.8	+1.2		
	baz=39										
Y26A	Elida	39.81	104	⇑P		P		19 30 49.4	+0.8		
	baz=40										
124A	Stringfield Ra	39.88	107	⇓P		P		19 30 49.7	+0.5		
	baz=40,SNR=8.7										
YSS	Yuzh-Sakhalins	39.92	285	*e*P		P		19 30 50.0	+0.9		
YSS				*e*S		S		19 36 55.0	+1.6		
YSS				*e*				19 37 08.0			
YSS				*e*SSS		SSS		19 39 46.0	

baz=41,SNR=16
326A Caldwell Ranch 41.74 106 ⇓P P 19 31 05.0 +0.6
baz=41,SNR=14
Z30A Sanderson Ranc 41.76 102 ⇑P P 19 31 04.4 -0.1
baz=42,SNR=8.5
ASAJ Asahikawa 41.82 281 *e*P P 19 31 06.1 +1.3
comp=Z,33nm,1.5s
228A UT Block 9, Go 41.86 104 ⇓P P 19 31 05.4 0.0
baz=42,SNR=7.6
WMOK Wichita Mounta 41.95 98 *e*P P 19 31 06.2 +0.2
WMOK pmax pmax
comp=Z,26nm,0.9s
WMOK Wichita Mounta 41.95 98 *e*P P 19 31 06.2 +0.2
comp=Z,26nm,0.9s
Y32A R-V Farms, Ver 42.13 99 ⇓P P 19 31 07.3 -0.3
baz=42
426A McDonald Obser 42.22 107 ⇑P P 19 31 08.2 -0.3
baz=42
Z31A Sharp Cattle R 42.27 101 ⇓P P 19 31 08.3 -0.3
baz=42
328A Wristen Ranch, 42.31 105 ⇑P P 19 31 08.5 -0.6
baz=42
131A Roby 42.62 102 ⇑P P 19 31 11.6 0.0
baz=42
Z32A Haskell 42.64 100 ⇑P P 19 31 11.5 -0.2
baz=42,SNR=9.7
526A Mary Lane Ranc 42.67 108 ⇑P P 19 31 13.1 +1.0
baz=42,SNR=13
329A Wagon Wheel Ra 42.68 104 ⇑P P 19 31 11.7 -0.4
baz=42,SNR=8.9
TUL1 Tulsa 42.73 94 ⇓P P 19 31 12.7 +0.3
baz=42
230A Sterling City 42.84 103 ⇑P P 19 31 13.2 -0.1
baz=42
527A Woodward Ranch 42.86 107 ⇓P P 19 31 13.7 +0.1
baz=43,SNR=9.5
428A Kincaid Ranch, 42.89 106 ⇑P P 19 31 14.4 +0.6
baz=43,SNR=14
ERM Erimo 42.92 279 *c i*P P 19 31 10.8 -3.0
ERM pmax pmax
comp=Z,54nm,1.3s
ERM MLR MLR
comp=Z,1μm,20.0s
ERM Erimo 42.92 279 *e*P P 19 31 10.6 -3.2
comp=Z,49nm,1.0s
HABR Khabarovsk 43.02 291 *de*P P 19 31 12.4 -2.1
HABR 19 32 51.8
HABR *e* 19 33 01.9
HABR PPP PPP 19 33 24.0
HABR *e*S **S** **19 37 38.7 -0.7**
HABR *e* 19 41 12.7
HABR *e*SSS SSS 19 41 25.5
HABR pmax pmax
comp=Z,63nm,1.1s
HABR pmax pmax
comp=N,12nm,0.7s
HABR pmax pmax
comp=E,29nm,1.1s
HABR MLR MLR
comp=Z,2μm,19.0s
HABR MLR MLR
comp=N,1μm,17.0s
HABR MLR MLR
comp=E,2μm,17.0s
626A Big Bend Ranch 43.05 108 ⇑P P 19 31 15.3 +0.2
baz=43,SNR=7.6
ABTX Abilene, Hawle 43.07 101 ⇑P P 19 31 14.9 -0.3
baz=43
330A Mertzon 43.17 103 ⇓P P 19 31 16.0 -0.1
baz=43,SNR=12
231A Bronte 43.23 102 ⇑P P 19 31 16.5 +0.1
baz=43
528A Cox Ranch, San 43.28 106 ⇓P P 19 31 17.2 +0.2
baz=43,SNR=13
429A Davenport Ranc 43.40 105 ⇓P P 19 31 17.9 0.0
baz=43,SNR=11
SUMG Summit 43.42 24 *e*P P 19 31 17.8 -0.2
SUMG Summit 43.42 24 *e*P P 19 31 17.8 -0.2
SUMG Summit 43.42 24 *i* P P 19 31 18.7 +0.7
comp=E,24nm,0.9s
SUMG
comp=Z,2μm,15.0s
TXAR Lajitas Array 43.47 108 P P 19 31 19.1 +0.6
TXAR PcP **PcP** **19 33 06.4 -0.1**
TXAR ScP **ScP** **19 36 57.0 -0.1**
TXAR Lajitas Array 43.47 108 P P 19 31 19.1 +0.6
comp=Z,7.5nm,0.9s,baz=316,slow=5.9,SNR=42
TXAR PcP **PcP** **19 33 06.4 -0.1**
comp=Z,1.8nm,0.8s,baz=14,slow=0.5,SNR=5.0
TXAR ScP **ScP** **19 36 57.0 -0.1**
comp=Z,0.3nm,0.7s,baz=262,slow=6.8,SNR=3.9
TXAR LR LR 19 48 49.0
comp=Z,1μm,18.3s,baz=300,slow=35
627A Terlingua Ranc 43.52 107 ⇑P P 19 31 19.4 +0.4
baz=43,SNR=13
529A Stev Forest Ra 43.61 106 ⇑P P 19 31 20.0 +0.4
baz=43,SNR=17
430A Baggett Ranch, 43.62 104 ⇑P P 19 31 19.6 -0.1
baz=43,SNR=12
232A Coleman 43.63 102 ⇑P P 19 31 19.7 -0.1
baz=43
331A San Angelo 43.65 103 ⇑P P 19 31 19.7 -0.2
baz=43
628A Black Gap, Mar 43.76 107 ⇑P P 19 31 21.0 +0.2
baz=44,SNR=16
DAG Danmarks Havn 43.78 14 *i* P P 19 31 20.5 +0.2
DAG pmax pmax
comp=Z,18nm,1.0s
DAG MLR MLR
comp=Z,2μm,16.0s
DAG Danmarks Havn 43.78 14 *i* P P 19 31 20.5 +0.2
comp=Z,18nm,1.0s
DAG
comp=Z,2μm,16.0s
SFJD Kangerlussuaq 43.83 34 *i* P P 19 31 21.6 +0.8
comp=Z,20nm,1.0s
SFJD
comp=Z,2μm,18.0s
332A Millersview 43.97 102 ⇑P P 19 31 22.4 0.0
baz=44
431A Sonora 44.04 104 ⇓P P 19 31 23.2 +0.2
baz=44,SNR=12
530A J-C Ranch, Com 44.06 105 ⇑P P 19 31 23.3 +0.1
baz=44,SNR=9.8
KLR Kul'dur 44.23 294 *e*P P 19 31 20.2 -4.1
KLR *e*S **S** **19 37 55.0 -2.0**
KLR *e*SS **ScS** **19 41 19.5 -2.4**
KLR pmax pmax
comp=E,38nm,1.2s
KLR pmax pmax
comp=Z,90nm,1.2s
432A Menard 44.33 103 ⇓P P 19 31 25.4 +0.1
baz=44
LPIG La Paz 44.39 119 LR LR 19 47 06.0
comp=Z,63nm,21.5s,baz=195,slow=32
KBS Kingsbay 44.47 4 ⇑*i*P P 19 31 27.1 +1.2
KBS pmax pmax
comp=Z,13nm,0.7s
KBS MLR MLR
comp=Z,1μm,19.0s
531A Rocksprings 44.48 104 ⇑P P 19 31 26.5 -0.1
baz=44,SNR=14
JCT Junction City 44.63 103 *e*P P 19 31 28.1 +0.3
JCT pmax pmax
comp=Z,43nm,1.0s
JCT Junction City 44.63 103 *e*P P 19 31 28.1 +0.3
comp=Z,43nm,1.0s
JCT Junction City 44.63 103 ⇑P P 19 31 27.7 0.0
baz=44,SNR=8.2
532A Rocksprings 44.85 103 ⇓P P 19 31 28.9 -0.7
baz=45
OLIL Olney 44.96 85 *e*P P 19 31 30.6 +0.4
comp=Z,25nm,0.8s
631A Perdido Creek 45.05 105 ⇓P P 19 31 30.6 -0.5
baz=45
SIUC Southern Illin 45.07 87 P P 19 31 28.7 -2.3
comp=Z,11nm,0.4s
SCHQ Schefferville 45.21 54 *e*P P 19 31 32.0 -0.1
comp=Z,23nm,0.8s
SCHQ Schefferville 45.21 54 P P 19 31 31.9 -0.1
comp=Z,18nm,0.7s,baz=310,slow=8.6,SNR=10
SCHQ LR LR 19 51 29.7
comp=Z,3μm,18.2s,baz=313,slow=38
632A Uvalde 45.40 104 ⇓P P 19 31 33.6 -0.2
baz=45
BLO Bloomington 45.52 83 *e*P P 19 31 35.0 +0.3
BLO pmax pmax
comp=Z,35nm,1.1s
BLO Bloomington 45.52 83 *e*P P 19 31 35.0 +0.3
comp=Z,35nm,1.1s
SADO Sadowa 45.67 72 LR LR 19 51 15.5
comp=Z,895nm,18.3s,baz=339,slow=37
732A Laxson Ranch, 45.91 105 ⇓P P 19 31 37.7 -0.2
baz=46
ACSO Alum Creek Sta 46.72 80 *e*P P 19 31 45.1 +1.0
comp=Z,26nm,0.9s
WVT Waverly 46.98 87 *e*P P 19 31 43.9 -2.3
WVT pmax pmax
comp=Z,10.0nm,1.0s
WVT Waverly 46.98 87 *e*P P 19 31 43.9 -2.3
comp=Z,10nm,1.0s
ERPA Erie 47.02 76 *e*P P 19 31 51.2 +4.7
comp=Z,33nm,0.8s
HKT Hockley 47.20 100 *e*P P 19 31 50.6 +2.7
HKT Hockley 47.20 100 *e*P P 19 31 50.6 +2.7
OXF Oxford 47.29 90 *e*P P 19 31 47.8 -0.8
OXF pmax pmax
comp=Z,57nm,0.9s
OXF Oxford 47.29 90 *e*P P 19 31 47.8 -0.8
comp=Z,58nm,0.9s
USRK Ussuriysk Arra 47.43 289 P P 19 31 47.6 -2.0
comp=Z,7.8nm,0.9s,baz=50,slow=6.9,SNR=12
USRK LR LR 19 52 14.8
comp=Z,3μm,20.8s,baz=45,slow=37
VLA Vladivostok 48.23 288 ⇑*e*P P 19 31 53.0 -2.8
VLA *e* 19 33 46.2
VLA S **S** **19 38 53.0 -1.6**
VLA pmax pmax
comp=Z,19nm,1.0s
MDJ Mudanjiang 48.40 291 P P 19 31 55.9 -1.2
MDJ pP **pP** **19 31 59.1 -2.3**
MDJ sP **sP** **19 32 00.3 -2.8**
MDJ ScP **ScP** **19 37 16.6 -0.7**
MDJ PcS **PcS** **19 37 17.8 -1.3**
MDJ S **S** **19 38 58.0 +1.1**
MDJ sS **sS** **19 39 03.1 -0.9**
MDJ pmax pmax
comp=Z,14nm,1.1s
MDJ pmax pmax
comp=Z,250nm,8.9s
MDJ LR LR
comp=N,2μm,23.9s
MDJ LR LR
comp=E,1μm,25.3s
MDJ LR LR
comp=Z,1μm,17.6s
MDJ Mudanjiang 48.40 291 P P 19 31 52.7 -4.4
comp=Z,8.5nm,0.6s
SCO Scoresbysund 48.44 20 *i* P P 19 31 56.4 -0.6
SCO pmax pmax
comp=Z,6.0nm,0.9s
SCO MLR MLR
comp=Z,1μm,16.0s
SCO Scoresbysund 48.44 20 *i* P P 19 31 56.4 -0.6
comp=Z,5.6nm,0.9s
SCO
comp=Z,1μm,15.0s
FRNY Flat Rock 48.52 69 *e*P P 19 31 57.1 -0.9
comp=Z,13nm,0.8s
SWET Sewanee 48.70 87 *e*P P 19 32 00.1 +0.6
comp=Z,20nm,0.8s
NCB Newcomb 48.79 70 *e*P P 19 32 00.1 -0.1
comp=Z,23nm,1.3s
BINY Binghamton 49.10 73 *e*P P 19 32 01.7 -0.8
comp=Z,24nm,0.8s
SSPA Standing Stone 49.19 76 *e*P P 19 32 02.5 -0.7
comp=Z,25nm,1.0s
CPCT Cooper Cave 49.31 85 *e*P P 19 32 05.9 +1.7
ACCN Adirondack Com 49.49 70 *e*P P 19 32 10.0 +4.6
comp=Z,15nm,1.0s
MAJO Matsushiro 49.49 277 *e*P P 19 32 05.8 +0.2
MAJO pmax pmax
comp=Z,35nm,1.0s
MAJO Matsushiro 49.49 277 *e*P P 19 32 05.8 +0.2
comp=Z,35nm,1.0s
MAT Matsushiro 49.49 277 P P 19 32 05.1 -0.5
MAT S **S** **19 39 16.8 +4.3**
MJAR Matsushiro Arr 49.49 277 P P 19 32 05.3 -0.3
MJAR Matsushiro Arr 49.49 277 P P 19 32 05.3 -0.3
comp=Z,6.5nm,0.9s,baz=30,slow=4.7,SNR=20
MJAR LR LR 19 52 32.0
comp=Z,853nm,20.8s,baz=65,slow=36
LRAL Lakeview Retre 49.73 89 *e*P P 19 32 06.4 -1.0
comp=Z,11nm,0.8s
HIA Hailar 50.09 301 *e*P P 19 32 09.4 -0.5
comp=Z,21nm,1.0s
BLA Blacksburg 50.27 81 P P 19 32 09.7 -1.9
BLA pmax pmax
comp=Z,28nm,1.2s
BLA Blacksburg 50.27 81 P P 19 32 09.7 -1.9
comp=Z,28nm,1.2s
MVL Millersville 50.47 75 *e*P P 19 32 12.8 -0.1
comp=Z,20nm,0.9s
SDMD Soldier's Deli 50.62 76 *e*P P 19 32 18.3 +4.1
comp=Z,24nm,1.0s
CIT Chita 50.99 308 *e*P P 19 32 17.3 +0.5
CIT *e* 19 32 23.4
CIT *e* 19 32 35.9
CIT pmax pmax
comp=Z,90nm,1.8s
CN2 Changchun 51.10 293 *e*P P 19 32 16.8 -0.9
CN2 *ep*P **pP** **19 32 21.3 -0.7**
CN2 *es*P **sP** **19 32 23.8 +0.1**
CN2 *e*S **S** **19 39 33.3 -1.4**
CN2 pmax pmax
comp=Z,50nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,14.0s
CN2 LR LR
comp=E,1μm,14.0s
CN2 LR LR
comp=Z,1μm,16.0s
KMSC Kings Mountain 51.29 83 ⇓P P 19 32 19.1 -0.1
baz=51
JSRW J. Sargeant Re 51.31 78 *e*P P 19 32 24.2 +4.9
GOGA Godfrey 51.40 86 *e*P P 19 32 23.4 +3.4
GOGA pmax pmax
comp=Z,12nm,0.9s
GOGA Godfrey 51.40 86 *e*P P 19 32 23.4 +3.4
comp=Z,12nm,0.9s
KEV Kevo 54.02 0 *e*P P 19 32 39.3 +0.4
KEV pmax pmax
comp=Z,19nm,0.7s
KEV Kevo 54.02 0 *ep* P 19 32 36.8 -2.1
comp=Z,15nm,0.6s
KEV Kevo 54.02 0 *e*P P 19 32 39.2 +0.4
comp=Z,19nm,0.7s
ARCES ARCESS Array B 54.24 1 P P 19 32 40.0 -0.5
ARCES PcP **PcP** **19 33 44.4 -0.2**
ARCES ARCESS Array B 54.24 1 P P 19 32 40.0 -0.5
comp=Z,10nm,0.7s,baz=9.7,slow=6.9,SNR=62
ARCES PcP **PcP** **19 33 44.4 -0.2**
comp=Z,7.9nm,0.9s,baz=336,slow=2.7,SNR=5.7
ARCES LR LR 19 58 57.4
comp=Z,648nm,18.1s,baz=360,slow=40
ARE0 ARCESS Array S 54.24 1 *e*P P 19 32 40.1 -0.4
KSRS Korea Array 54.41 286 P P 19 32 42.2 +0.1
comp=Z,7.0nm,0.9s,baz=53,slow=6.7,SNR=19
KSRS LR LR 19 56 33.6
comp=Z,519nm,18.0s,baz=277,slow=37
KSAR Wonju Array Be 54.44 286 P P 19 32 42.2 -0.1
TLY Talaya 55.43 313 *e*P P 19 32 49.8 +0.3
TLY *e*S **S** **19 40 38.9 +5.4**
TLY pmax pmax
comp=Z,31nm,1.3s
TLY MLR MLR
comp=Z,2μm,21.0s
TLY Talaya 55.43 313 P P 19 32 49.5 0.0
comp=Z,102nm,1.2s,SNR=6.1
LVZ Lovozero 55.79 357 *c i*P P 19 32 52.0 +0.2
LVZ pmax pmax
comp=Z,88nm,1.6s
LVZ MLR MLR
comp=Z,687nm,21.0s
MOY Mondy 56.51 314 *e*P P 19 32 58.6 +1.3
ZAK Zakamensk 56.57 312 *e*P P 19 32 57.0 -0.7
ZAK *e* 19 33 54.5
ZAK pmax pmax
comp=Z,9.0nm,1.0s
DL2 Dalian 56.63 291 P P 19 32 57.4 -0.8
DL2 S **S** **19 40 52.0 +2.4**
DL2 pmax pmax
comp=Z,30nm,1.0s
DL2 pmax pmax
comp=Z,160nm,6.2s
DL2 LR LR
comp=N,750nm,18.0s
DL2 LR LR
comp=E,790nm,18.8s
DL2 LR LR
comp=Z,540nm,19.9s
ULN Ulaanbaatar 56.89 308 *e*P P 19 32 59.6 -0.5
SONM Songino Array 57.20 308 P P 19 33 03.0 +0.7
SONM PcP **PcP** **19 33 57.9 +1.3**
SONM Songino Array 57.20 308 P P 19 33 02.9 +0.7
comp=Z,37nm,0.9s,baz=47,slow=6.7,SNR=188
SONM PcP **PcP** **19 33 57.9 +1.3**
comp=Z,11nm,1.0s,baz=53,slow=2.5,SNR=3.2
SONM LR LR 19 59 15.8
comp=Z,3μm,18.4s,baz=39,slow=38
BJI Beijing 58.55 296 P P 19 33 09.5 -2.1
BJI S **S** **19 41 15.1 +0.4**
BJI pmax pmax
comp=Z,8.0nm,0.5s
BJI pmax pmax
comp=Z,250nm,5.2s
BJI LR LR
comp=N,2μm,19.5s
BJI LR LR
comp=E,2μm,18.3s
BJI LR LR
comp=Z,880nm,19.1s
NVS Novosibirsk 60.17 327 ⇑*i*P P 19 33 21.0 -1.6
NVS *e*S **S** **19 41 38.0 +2.7**
NVS pmax pmax
comp=E,14nm,1.0s
NVS pmax pmax
comp=Z,42nm,1.0s
NVS pmax pmax
comp=N,12nm,1.0s
NVS smax smax
comp=N,15nm,2.1s
HHC Hu-ho-hao-te 60.19 300 *e*P P 19 33 23.4 +0.3
HHC sP **sP** **19 33 29.5 +0.3**
HHC PP **PP** **19 35 37.6 +2.2**
HHC S **S** **19 41 34.4 -1.8**
HHC sS **sS** **19 41 41.6 -1.9**
HHC ScS SKKSac 19 43 09.6 -3.4
HHC pmax pmax
comp=Z,56nm,1.0s
HHC pmax pmax
comp=Z,500nm,5.4s
HHC LR LR
comp=N,1μm,15.5s
HHC LR LR
comp=E,1μm,15.5s
HHC LR LR
comp=Z,1μm,14.3s
ZAA0 Zalesovo Array 60.44 325 *e*P P 19 33 24.5 +0.1
ZALV Zalesovo Beam 60.44 325 P P 19 33 24.7 +0.2
ZALV Zalesovo Beam 60.44 325 P P 19 33 24.7 +0.2
ZALV Zalesovo Beam 60.44 325 P P 19 33 24.7 +0.2
comp=Z,32nm,0.9s,baz=30,slow=6.7,SNR=141
ZALV LR LR 20 00 36.1
comp=Z,1μm,19.7s,baz=54,slow=37
JOF Joensuu 60.86 358 *e*P P 19 33 26.6 -0.6
JOF pmax pmax
comp=Z,12nm,0.7s
JOF Joensuu 60.86 358 *ep* P 19 33 26.6 -0.6
comp=Z,12nm,0.7s
KAF Kangasniemi 61.70 1 *e*P P 19 33 31.6 -1.3
KAF pmax pmax
comp=Z,12nm,0.7s
KAF Kangasniemi 61.70 1 *ep* P 19 33 31.6 -1.3
comp=Z,12nm,0.7s
SOKR Solikamsk 61.95 344 *c i*P P 19 33 34.3 -0.2
SOKR pmax pmax
comp=Z,60nm,1.3s
SOKR MLR MLR
comp=Z,840nm,20.0s
NB2 NORSAR Subarra 62.06 9 P P 19 33 35.5 +0.1
comp=Z,2.0nm,0.8s,baz=351,slow=6.9
NOA NORSAR Array B 62.06 9 P P 19 33 35.9 +0.5
NOA NORSAR Array B 62.06 9 P P 19 33 35.9 +0.5
comp=Z,15nm,0.8s,baz=350,slow=6.7,SNR=55
NOA LR LR 20 03 08.7
comp=Z,415nm,18.2s,baz=335,slow=39
NAO01 NORSAR Array S 62.22 9 *e*P P 19 33 35.4 -1.1
comp=Z,15nm,0.8s
FIA1 FINESS Array S 62.37 1 *e*P P 19 33 37.1 -0.3
FINES FINESS Array B 62.37 1 P P 19 33 37.8 +0.4
FINES FINESS Array B 62.37 1 P P 19 33 37.8 +0.4
comp=Z,26nm,0.8s,baz=15,slow=7.9,SNR=72
SSE Sheshan 62.84 286 P P 19 33 40.5 -0.5
SSE S **S** **19 42 13.4 +3.6**
SSE pmax pmax
comp=Z,24nm,0.6s
SSE pmax pmax
comp=Z,190nm,7.4s
SSE LR LR
comp=N,680nm,21.0s
SSE LR LR
comp=E,370nm,21.3s
SSE LR LR
comp=Z,460nm,25.6s
KONO Kongsberg 63.28 10 *e*P P 19 33 43.6 +0.1
KONO pmax pmax
comp=Z,55nm,1.4s
KONO Kongsberg 63.28 10 *e*P P 19 33 43.6 +0.1
comp=Z,55nm,1.4s
NJ2 Nanjing 63.34 288 *e*P P 19 33 44.1 -0.1
NJ2 pP **pP** **19 33 46.0 -2.7**
NJ2 sP **sP** **19 33 47.0 -3.3**
NJ2 PP **PP** **19 36 02.0 -1.2**
NJ2 S **S** **19 42 16.0 +0.1**
NJ2 sS **sS** **19 42 22.0 -1.2**
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,140nm,10.0s
NJ2 LR LR
comp=N,1μm,25.6s
NJ2 LR LR
comp=E,2μm,20.8s
NJ2 LR LR
comp=Z,9μm,22.9s
SVE Sverdlovsk 63.93 341 ⇑*i*P P 19 33 48.3 +0.5
SVE pmax pmax
comp=Z,36nm,1.1s
TGUH Tegucigalpa,Un 64.64 103 P P 19 33 52.2 -0.8
ARU Arti 64.68 342 *c i*P P 19 33 52.1 -0.6
ARU 19 34 25.3
ARU 19 36 11.9
ARU S **S** **19 42 33.2 +1.3**
ARU SS **SS** **19 46 38.0 -3.6**
ARU pmax pmax
comp=Z,48nm,1.7s
ARU MLR MLR
comp=Z,1μm,20.0s
ARU Arti 64.68 342 P P 19 33 52.9 +0.2
comp=Z,178nm,0.7s,SNR=12
KURK Kurchatov 65.15 327 *c i*P P 19 33 55.8 -0.1
KURK pmax pmax
comp=Z,30nm,1.7s
KURK MLR MLR
comp=Z,1μm,22.0s
KURK Kurchatov 65.15 327 *e*P P 19 33 55.4 -0.4
comp=Z,20nm,1.1s
BRVK Borovoye 65.34 333 *e*P P 19 33 56.5 -0.6
BRVK pmax pmax
comp=Z,23nm,0.9s
BRVK Borovoye 65.34 333 *e*P P 19 33 56.5 -0.6
comp=Z,23nm,0.9s
BVA0 Borovoye Array 65.34 333 *i* P P 19 33 55.9 -1.2
BVA0 pmax pmax
comp=Z,5.0nm,0.9s
VSU Vasula 65.36 1 *c i*P P 19 33 57.5 +0.4
VSU pmax pmax
comp=Z,75nm,0.9s
VSU MLR MLR
comp=Z,697nm,20.0s
VOSK Vostochnaya 65.47 333 P P 19 33 56.7 -1.3
VOSK pmax pmax
comp=Z,11nm,0.8s
ZRNK Zerenda 65.75 334 P P 19 33 58.6 -1.2
ZRNK pmax pmax
comp=Z,30nm,0.9s

MUD Monsted U'grnd 66.38 11 *i* P **P** **19 34 03.7 0.0**
MUD pmax pmax
comp=Z,24nm,1.0s
MUD MLR MLR
comp=Z,770nm,21.0s
MUD Monsted U'grnd 66.38 11 *i* P **P** **19 34 03.7 0.0**
comp=Z,24nm,0.9s
MUD
comp=Z,760nm,20.0s
GTA Gaotai 66.78 307 *e*P **P** **19 34 06.9 +0.1**
GTA pP **pP** **19 34 11.1 -0.1**
GTA sP **sP** **19 34 14.6 +1.7**
GTA S **S** **19 42 59.4 +1.0**
GTA sS **sS** **19 43 06.1 +0.3**
GTA pmax pmax
comp=Z,14nm,1.1s
GTA pmax pmax
comp=Z,280nm,7.6s
GTA LR LR
comp=N,1µm,21.4s
GTA LR LR
comp=E,2µm,18.1s
GTA LR LR
comp=Z,4µm,17.6s
XAN Xi'an 66.84 297 P **P** **19 34 06.5 -0.6**
XAN pP **pP** **19 34 15.3 +3.7**
XAN S **S** **19 43 00.3 +1.2**
XAN pmax pmax
comp=Z,3.0nm,0.8s
XAN pmax pmax
comp=Z,43nm,6.3s
XAN LR LR
comp=N,990nm,13.2s
XAN LR LR
comp=Z,330nm,16.3s
WHN Wuhan 66.88 291 P **P** **19 34 07.3 0.0**
WHN S **S** **19 43 01.3 +1.8**
WHN LR LR
comp=N,2µm,17.6s
WHN LR LR
comp=E,3µm,20.2s
WHN LR LR
comp=Z,2µm,19.9s
MK31 Makanchi Array 67.42 323 *i* P **P** **19 34 09.9 -0.6**
MK31 pmax pmax
comp=Z,9.0nm,0.6s
MK31 Makanchi Array 67.42 323 *e*P **P** **19 34 09.9 -0.6**
MKAR Makanchi Array 67.42 323 P **P** **19 34 10.0 -0.6**
MKAR Makanchi Array 67.42 323 P **P** **19 34 10.0 -0.6**
MKAR Makanchi Array 67.42 323 P **P** **19 34 10.0 -0.6**
comp=Z,17nm,0.9s,baz=34,slow=6.3,SNR=109
MKAR LR LR 20 06 51.5
comp=Z,941nm,18.3s,baz=33,slow=39
LZH Lanzhou 67.64 302 *e*P **P** **19 34 12.3 0.0**
LZH pP **pP** **19 34 16.0 -0.8**
LZH sP **sP** **19 34 18.3 -0.1**
LZH PP **PP** **19 36 40.3 -0.7**
LZH SS **SS** **19 47 28.3 -0.7**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,230nm,4.5s
LZH LR LR
comp=N,4µm,17.2s
LZH LR LR
comp=E,3µm,17.7s
LZH LR LR
comp=Z,4µm,18.3s
MOS Moscow 67.81 354 *e*P **P** **19 34 12.0 -0.8**
MOS pmax pmax
comp=Z,36nm,0.9s
WMQ Urumqi 68.07 318 P **P** **19 34 15.4 +0.7**
WMQ pP **pP** **19 34 20.1 +0.9**
WMQ sP **sP** **19 34 22.4 +1.5**
WMQ PcP **PcP** **19 34 41.5 +0.7**
WMQ PP **PP** **19 36 47.8 +3.5**
WMQ PcS 19 38 45.0
WMQ S **S** **19 43 13.3 -0.3**
WMQ sS **sS** **19 43 21.0 0.0**
WMQ ScS **SKiKP** **19 44 10.3 +0.9**
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ pmax pmax
comp=Z,170nm,4.8s
WMQ LR LR
comp=N,2µm,16.0s
WMQ LR LR
comp=E,1µm,17.6s
WMQ LR LR
comp=Z,1µm,20.0s
IZAR Zarasai 68.08 1 *e*P **P** **19 34 14.7 +0.2**
IZAR AMB AMB 19 34 16.7
comp=Z,10nm,0.8s
BSD Bornholm Skovb 68.23 8 *i* P **P** **19 34 16.0 +0.6**
BSD pmax pmax
comp=Z,19nm,1.0s
BSD MLR MLR
comp=Z,470nm,18.0s
BSD Bornholm Skovb 68.23 8 *i* P **P** **19 34 16.0 +0.6**
comp=Z,19nm,1.0s
BSD
comp=Z,470nm,18.0s
ISAL Salakas 68.26 1 *e*P **P** **19 34 15.9 +0.3**
ISAL AMB AMB 19 34 18.0
comp=Z,11nm,1.3s
HLG Helgoland 68.47 12 *e*P **P** **19 34 18.4 +1.5**
comp=Z,381nm,1.3s
IIGN Ignalina 68.48 1 *e*P **P** **19 34 17.2 +0.2**
IIGN AMB AMB 19 34 20.0
comp=Z,10nm,1.1s
OBN Obninsk 68.49 355 *c i*P **P** **19 34 17.0 0.0**
OBN *i* 19 34 23.4
OBN *i* 19 34 46.6
OBN *i* SS SS 19 47 38.9 -1.7
OBN pmax pmax
comp=Z,42nm,0.8s
OBN MLR MLR
comp=Z,800nm,21.0s
SSLB Suanglung 68.76 281 *e*P **P** **19 34 18.5 -0.8**
comp=Z,15nm,1.0s
NACGM Naroch 68.93 1 *e* **P** **19 34 17.0 -2.8**
BSEG Bad Segeberg 68.98 11 *e*P **P** **19 34 21.3 +1.2**
BSEG pmax pmax
comp=Z,56nm,1.1s
BSEG Bad Segeberg 68.98 11 *e*P **P** **19 34 21.3 +1.2**
comp=Z,56nm,1.1s
QZH Quanzhou 69.11 284 *e*P **P** **19 34 23.4 +2.0**
QZH S **S** **19 43 30.3 +4.0**
QZH LR LR
comp=N,750nm,11.7s
QZH LR LR
comp=E,710nm,13.2s
QZH LR LR
comp=Z,1µm,15.6s
MICGM Minsk 69.34 360‖ *e*P **P** **19 34 22.0 -0.4**
MNK Minsk 69.34 360‖ *e*P **P** **19 34 22.0 -0.4**
ENH Enshi 69.59 294 *e*P **P** **19 34 23.9 -0.5**
comp=Z,7.8nm,0.4s
SUW Suwalki 69.76 3 *e*P **P** **19 34 25.3 +0.3**
SUW pmax pmax
comp=Z,60nm,0.7s
SUW Suwalki 69.76 3 *e*P **P** **19 34 25.3 +0.3**
comp=Z,60nm,0.7s
SUW Suwalki 69.76 3 *e*P **P** **19 34 25.3 +0.3**
GKP Gorka Klasztor 70.23 7 *e*P **P** **19 34 28.6 +0.7**
NRDL Niedersach Rie 70.38 11 *e*P **P** **19 34 29.5 +0.8**
comp=Z,37nm,1.0s
AKTO Aktyubinsk 70.50 340 P **P** **19 34 28.9 -0.7**
RUE Ruedersdorf 70.75 9 *e*P **P** **19 34 32.2 +1.1**
comp=Z,44nm,0.9s
RUE Ruedersdorf 70.75 9 P **P** **19 34 31.8 +0.8**
BUG Bochum--Univer 71.08 13 *e*P **P** **19 34 33.8 +0.7**
comp=Z,50nm,0.9s
AB31 Akbulak array 71.24 338 *i* P **P** **19 34 33.4 -0.7**
AB31 pmax pmax
comp=Z,11nm,0.6s
ABKAR Akbulak array 71.24 338 *e*P **P** **19 34 34.0 -0.1**
BEBN Eben Emael 71.50 15 P **P** **19 34 35.9 +0.3**
MEM Membach 71.73 14 P **P** **19 34 37.8 +0.8**
BCLA Clavier 71.81 15 P **P** **19 34 38.2 +0.7**
comp=Z,16nm,1.7s
NEUB Neuenburg 71.83 10 *e*P **P** **19 34 38.5 +0.9**
comp=Z,47nm,1.3s
CLL Collm 71.85 10 *e*P **P** **19 34 37.0 -0.7**
CLL *i* 19 34 44.5
CLL *e*S **S** **19 43 58.0 +0.5**
CLL pmax pmax
comp=Z,22nm,1.2s
CLL Collm 71.85 10 *e*P **P** **19 34 38.2 +0.5**
comp=Z,14nm,0.9s
CLL Collm 71.85 10 *e*P **P** **19 34 37.0 -0.7**
comp=Z,22nm,1.2s
CLL *i* (sP) **sP** **19 34 44.5 +0.6**
CLL *e* 19 34 47.0
CLL ePcP **PcP** **19 34 57.0 +0.5**
CLL *e*PP **PP** **19 37 18.0 +1.5**
CLL *e*S **S** **19 43 58.0 +0.5**
CLL *e*SS SS 19 48 42.0 +10
CLL *e* 19 52 36.0
CD2 Chengdu 71.92 299 P **P** **19 34 38.0 -0.5**
CD2 pP **pP** **19 34 42.8 -0.2**
CD2 sP **sP** **19 34 45.0 +0.3**
CD2 PcP **PcP** **19 34 57.3 +0.1**
CD2 PP **PP** **19 37 19.0 +1.2**
CD2 S **S** **19 43 56.6 -2.4**
CD2 SKS **SKSac** **19 44 37.0 -5.0**
CD2 SS **SS** **19 48 34.0 -0.7**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
CD2 LR LR
comp=N,1µm,21.5s
CD2 LR LR
comp=E,2µm,15.7s
CD2 LR LR
comp=Z,880nm,18.6s
BAIF Baives 72.01 16 *e*P **P** **19 34 39.4 +0.7**
comp=Z,44nm,1.0s
BAIF Baives 72.01 16 *e*P **P** **19 34 39.4 +0.7**
BAIF pmax pmax
comp=Z,44nm,1.0s
BAIF Baives 72.01 16 *e*P **P** **19 34 39.4 +0.7**
comp=Z,44nm,1.0s
UBBA Unterbreizbach 72.02 12 *e*P **P** **19 34 39.5 +0.9**
comp=Z,25nm,1.6s
DOU Dourbes 72.03 15 P **P** **19 34 39.8 +1.0**
AFI Afiamalu 72.04 200 LR LR 20 03 31.5
comp=Z,475nm,18.6s,baz=274,slow=34
GIVF Givet 72.06 15 *e*P **P** **19 34 39.5 +0.5**
comp=Z,69nm,1.0s
GIVF Givet 72.06 15 *e*P **P** **19 34 39.5 +0.5**
GIVF pmax pmax
comp=Z,69nm,1.0s
GIVF Givet 72.06 15 *e*P **P** **19 34 39.5 +0.5**
comp=Z,69nm,1.0s
VRHR Novokhopersk 72.13 351 *e*P **P** **19 34 37.8 -1.6**
VRHR pmax pmax
comp=N,9.0nm,0.8s
VRHR pmax pmax
comp=E,8.0nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s
VRHR MLR MLR
comp=N,600nm,23.0s
VRHR MLR MLR
comp=Z,900nm,23.0s
VRHR MLR MLR
comp=E,200nm,11.0s
VSR Storozhevoye 72.21 352 *e*P **P** **19 34 39.3 -0.6**
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=Z,20nm,0.8s
VSR pmax pmax
comp=E,1.0nm,0.4s
VSR MLR MLR
comp=N,170nm,17.0s
VSR MLR MLR
comp=E,100nm,17.0s
VSR MLR MLR
comp=Z,640nm,17.0s
FBE Freiberg 72.26 10 *e*P **P** **19 34 41.2 +1.0**
comp=Z,27nm,1.0s
ROSF Rostrenen 72.36 21 *e*P **P** **19 34 41.2 +0.4**
ROSF Rostrenen 72.36 21 *e*P **P** **19 34 41.2 +0.4**
ROSF Rostrenen 72.36 21 *e*P **P** **19 34 41.2 +0.4**
BRG Berggiesshubel 72.36 9 *e*P **P** **19 34 41.5 +0.7**
comp=Z,18nm,1.1s
BRG S **S** **19 44 09.0 +5.5**
BRG
comp=N,556nm,17.4s
BRG
comp=E,555nm,20.9s
BRG
comp=Z,556nm,17.4s
BRG Berggiesshubel 72.36 9 *e*P **P** **19 34 41.5 +0.7**
BRG pmax pmax
comp=Z,18nm,1.1s
BRG MLR MLR
comp=N,556nm,17.4s
BRG MLR MLR
comp=E,555nm,20.9s
BRG MLR MLR
comp=Z,556nm,17.4s
BRG Berggiesshubel 72.36 9 *e*P **P** **19 34 41.4 +0.6**
comp=Z,18nm,1.1s
MOX Moxa 72.37 11 *e*P **P** **19 34 41.6 +0.7**
MOX *e*S **S** **19 44 05.6 +2.0**
MOX pmax pmax
comp=Z,26nm,0.8s
MOX MLR MLR
comp=Z,500nm,18.7s
MOX Moxa 72.37 11 *e*P **P** **19 34 41.6 +0.7**
comp=Z,26nm,0.8s
MOX *e*S **S** **19 44 05.6 +2.0**
MOX *e*L L 20 13 26.6
comp=Z,488nm,18.7s
TNS Taunus Mts 72.42 13 *e*P **P** **19 34 42.2 +0.9**
TNS pmax pmax
comp=Z,23nm,0.9s
TNS Taunus Mts 72.42 13 *e*P **P** **19 34 42.2 +0.9**
comp=Z,23nm,0.9s
VORD Divnogorie 72.45 352 *e*P **P** **19 34 40.6 -0.7**
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=Z,20nm,0.8s
VORD pmax pmax
comp=E,3.0nm,0.4s
VORD MLR MLR
comp=N,920nm,20.0s
VORD MLR MLR
comp=E,300nm,20.0s
VORD MLR MLR
comp=Z,820nm,20.0s
FLN La Foliniere 72.48 19 *e*P **P** **19 34 41.8 +0.2**
comp=Z,61nm,1.0s
FLN *e*R
comp=Z,2µm,20.0s
FLN La Foliniere 72.48 19 *e*P **P** **19 34 41.8 +0.2**
FLN pmax pmax
comp=Z,61nm,1.0s
FLN La Foliniere 72.48 19 *e*P **P** **19 34 41.8 +0.2**
comp=Z,61nm,1.0s
SGMF Saint Gilles 72.58 21 *e*P **P** **19 34 42.7 +0.6**
comp=Z,154nm,1.4s
SGMF Saint Gilles 72.58 21 *e*P **P** **19 34 42.7 +0.6**
SGMF pmax pmax
comp=Z,154nm,1.4s
SGMF Saint Gilles 72.58 21 *e*P **P** **19 34 42.7 +0.6**
comp=Z,154nm,1.4s
PLN Plauen 72.58 10 *e*P **P** **19 34 42.6 +0.5**
comp=Z,79nm,0.9s
KSP Ksiaz 72.58 8‖ *e*P **P** **19 34 42.6 +0.5**
KSP Ksiaz 72.58 8 *e*P **P** **19 34 42.7 +0.6**
WERD Werda 72.63 10 *e*P **P** **19 34 43.1 +0.6**
comp=Z,11nm,0.9s
WLF Walferdange 72.67 15 P **P** **19 34 43.5 +0.8**
comp=Z,20nm,1.3s
WLF Walferdange 72.67 15 *e*P **P** **19 34 43.3 +0.6**
WLF pmax pmax
comp=Z,36nm,1.2s
WLF Walferdange 72.67 15 *e*P **P** **19 34 44.0 +1.3**
comp=Z,38nm,1.3s
WLF Walferdange 72.67 15 *e*P **P** **19 34 43.3 +0.6**
comp=Z,36nm,1.2s
TANN Tannenbergstha 72.68 10 *e*P **P** **19 34 43.5 +0.7**
comp=Z,15nm,1.1s
LDF La Druitiere 72.71 19 *e*P **P** **19 34 43.0 +0.1**
LDF La Druitiere 72.71 19 *e*P **P** **19 34 43.0 +0.1**
LDF La Druitiere 72.71 19 *e*P **P** **19 34 43.0 +0.1**
comp=Z,17nm,1.0s
GUNZ Gunzen 72.72 10 *e*P **P** **19 34 43.7 +0.7**
comp=Z,17nm,1.0s
RUP Ruppelstein 72.76 14 *e*P **P** **19 34 44.3 +1.0**
RUP Ruppelstein 72.76 14 *e*P **P** **19 34 44.3 +1.0**
PVCC Panska Ves 72.76 9 *i* P **P** **19 34 43.7 +0.5**
PVCC *e* 19 34 50.9
PVCC MLR MLR
comp=Z,900nm,19.7s
PVCC Panska Ves 72.76 9 *i* P **P** **19 34 43.7 +0.5**
PVCC *e*pP **pP** **19 34 50.9 +3.2**
PVCC AMS AMS 20 16 00.0
comp=Z,900nm,19.7s
GRR Gorron 72.77 20 *e*P **P** **19 34 43.7 +0.4**
comp=Z,98nm,1.3s
GRR Gorron 72.77 20 *e*P **P** **19 34 43.7 +0.4**
GRR pmax pmax
comp=Z,98nm,1.3s
GRR Gorron 72.77 20 *e*P **P** **19 34 43.7 +0.4**
comp=Z,98nm,1.3s
QUIF Quistinic 72.78 21 *e*P **P** **19 34 43.8 +0.5**
QUIF Quistinic 72.78 21 *e*P **P** **19 34 43.8 +0.5**
QUIF Quistinic 72.78 21 *e*P **P** **19 34 43.8 +0.5**
WERN Wernitzgruen 72.80 10 *e*P **P** **19 34 44.4 +0.9**
comp=Z,16nm,0.8s
NKC Novy Kostel 72.86 10 *i* P **P** **19 34 44.7 +0.9**
NKC *e* 19 34 50.6
NKC MLR MLR
comp=Z,800nm,14.0s
NKC Novy Kostel 72.86 10 *i* P **P** **19 34 44.7 +0.9**
NKC *e*pP **pP** **19 34 50.6 +2.3**
NKC AMS AMS 20 14 00.0
comp=Z,800nm,14.0s
UPC Upice 72.89 8 *i* P **P** **19 34 45.1 +1.1**
UPC *e* 19 34 51.2
UPC Upice 72.89 8 *i* P **P** **19 34 45.1 +1.1**
UPC *e*pP **pP** **19 34 51.2 +2.7**
TKM2 Tokmak 2 73.04 325 P **P** **19 34 44.9 -0.4**
TKM2 pmax pmax
comp=Z,19nm,1.0s
TKM2 Tokmak 2 73.04 325 *e*P **P** **19 34 45.7 +0.4**
TKM2 Tokmak 2 73.04 325 P **P** **19 34 46.3 +1.0**
SNR=28
MANZ Manzenberg 73.07 10 *e*P **P** **19 34 45.7 +0.6**
comp=Z,12nm,1.0s
USP Ospenovka 73.07 326 P **P** **19 34 46.1 +0.9**
SNR=17
DPC Dobruska-Polom 73.07 8 *i* P **P** **19 34 45.8 +0.7**
DPC *e* 19 34 52.6
DPC MLR MLR
comp=Z,500nm,17.7s
DPC Dobruska-Polom 73.07 8 *e*P **P** **19 34 46.0 +0.9**
DPC pmax pmax
comp=Z,40nm,0.9s
DPC Dobruska-Polom 73.07 8 *e*P **P** **19 34 46.0 +0.9**
comp=Z,40nm,0.9s
DPC Dobruska-Polom 73.07 8 *i* P **P** **19 34 45.8 +0.7**
DPC *e*pP **pP** **19 34 52.6 +3.0**
DPC AMS AMS 20 15 40.0
comp=Z,500nm,17.7s
TOD Tromm 73.08 13 *e*P **P** **19 34 45.7 +0.6**
TOD Tromm 73.08 13 *e*P **P** **19 34 45.7 +0.6**
AKASG Malin Array Be 73.14 359 P **P** **19 34 45.2 -0.2**
AKASG Malin Array Be 73.14 359 P **P** **19 34 45.1 -0.2**
AKASG PP PP 19 37 21.2 -6.3
AKASG Malin Array Be 73.14 359 P **P** **19 34 45.1 -0.2**
comp=Z,14nm,0.6s,baz=2.4,slow=5.9,SNR=63
AKASG PP PP 19 37 21.2 -6.3
comp=Z,0.3nm,0.4s,baz=353,slow=9.3,SNR=4.1
AKASG LR LR 20 10 28.0
comp=Z,546nm,20.4s,baz=10.0,slow=39
KIEV Kiev 73.14 359 *e*P **P** **19 34 44.8 -0.6**
KIEV pmax pmax
comp=Z,25nm,0.8s
KIEV Kiev 73.14 359 *e*P **P** **19 34 44.8 -0.6**
comp=Z,25nm,0.8s
AK01 Malin Array Si 73.15 359 *e*P **P** **19 34 45.0 -0.4**
AK02 Malin Array Si 73.18 359 *e*P **P** **19 34 44.8 -0.9**
CHMS Chumysh 73.24 326 P **P** **19 34 47.3 +1.1**
SNR=18
GRF Grafenberg Arr 73.27 11 *e*P **P** **19 34 47.3 +1.1**
GRF *e*S **SKiKP** **19 44 18.0 +1.2**
GRF pmax pmax
comp=Z,20nm,0.8s
GRF MLR MLR
comp=Z,500nm,18.5s
GRF Grafenberg Arr 73.27 11 *e*P **P** **19 34 47.3 +1.1**
comp=Z,20nm,0.8s
GRF *e*S **SKiKP** **19 44 18.0 +1.2**
GRF *e*L L 20 12 36.8
comp=Z,502nm,18.5s
GRFO Grafenberg 73.27 11 *e*P **P** **19 34 47.6 +1.4**
GRFO Grafenberg 73.27 11 *e*P **P** **19 34 47.6 +1.4**
PRU Pruhonice 73.29 9 *i* P **P** **19 34 47.4 +1.0**
PRU *e* 19 34 53.5
PRU *e*S **SKiKP** **19 44 16.7 -0.1**
PRU MLR MLR
comp=Z,700nm,16.3s
PRU Pruhonice 73.29 9 *i* P **P** **19 34 47.4 +1.0**
PRU *e*pP **pP** **19 34 53.5 +2.7**
PRU *e*S **SKiKP** **19 44 16.7 -0.1**
PRU AMS AMS 20 14 10.0
comp=Z,700nm,16.3s
ROTZ Rotzenmuhle 73.30 10 *e*P **P** **19 34 47.2 +0.8**
comp=Z,15nm,0.9s
OJC Ojcow 73.42 5 *e*P **P** **19 34 47.2 +0.1**
OJC Ojcow 73.42 5 *e*P **P** **19 34 47.6 +0.5**
comp=Z,13nm,0.9s
OJC Ojcow 73.42 5 *e*P **P** **19 34 47.2 +0.1**
FRU Bishkek 73.43 326‖ *i*P **P** **19 34 47.0 -0.3**
FRU pmax pmax
comp=Z,60nm,2.0s
FRU MLR MLR
comp=Z,2µm,14.0s
KBK Karagaybulak 73.49 326 P **P** **19 34 49.0 +1.1**
SNR=18
LANF Langenberg 73.56 14 *e*P **P** **19 34 48.3 +0.3**
LANF Langenberg 73.56 14 *e*P **P** **19 34 48.3 +0.3**
LANF Langenberg 73.56 14 *e*P **P** **19 34 48.3 +0.3**
AAK Ala-Archa 73.65 326 *e*P **P** **19 34 49.1 +0.3**
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 73.65 326 *e*P **P** **19 34 49.0 +0.3**
comp=Z,4.0nm,1.0s
AAK Ala-Archa 73.65 326 P **P** **19 34 49.8 +1.0**
SNR=11
MEZF Maizieres J'vi 73.65 16 *e*P **P** **19 34 49.2 +0.7**
comp=Z,40nm,1.0s
MEZF Maizieres J'vi 73.65 16 *e*P **P** **19 34 49.2 +0.7**
comp=Z,40nm,1.0s
PAGF Fort de Pagny 73.70 15 *e*P **P** **19 34 49.6 +0.8**
comp=Z,8.1nm,0.7s
PAGF Fort de Pagny 73.70 15 *e*P **P** **19 34 49.6 +0.8**
comp=Z,8.1nm,0.7s
OKC Ostrava-Krasne 73.71 6 *i* P **P** **19 34 49.4 +0.6**
OKC *e* 19 34 55.7
OKC MLR MLR
comp=Z,500nm,16.3s
OKC Ostrava-Krasne 73.71 6 *i* P **P** **19 34 49.4 +0.6**
OKC *e*pP **pP** **19 34 55.7 +2.4**
OKC AMS AMS 20 16 30.0
comp=Z,500nm,16.3s
MORC Moravsky Berou 73.73 7 *e*P **P** **19 34 49.4 +0.4**
MORC pmax pmax
comp=Z,9.0nm,0.9s
MORC Moravsky Berou 73.73 7 *e*P **P** **19 34 49.4 +0.4**
comp=Z,9.2nm,0.9s
MORC Moravsky Berou 73.73 7‖ *i*P **P** **19 34 49.9 +0.9**
PPT Papeete 73.84 177 LR LR 20 03 48.8
comp=Z,761nm,18.1s,baz=356,slow=33
EKS2 Erkin-Say 73.84 326 *e*P **P** **19 34 50.3 +0.4**
EKS2 pmax pmax
comp=Z,17nm,0.9s
EKS2 Erkin-Say 73.84 326 *e*P **P** **19 34 50.2 +0.4**
comp=Z,17nm,0.9s
EKS2 Erkin-Say 73.84 326 P **P** **19 34 51.0 +1.1**
SNR=24
PPT2 Papeete2 73.86 177 *e*S **SKiKP** **19 44 15.0 -3.3**
comp=Z,1µm,30.2s
PPT2 *e*LR LR 19 57 18.9
comp=Z,953nm,24.0s,baz=355
KZA Kyzart 73.91 325 P **P** **19 34 51.7 +1.1**
SNR=8.9
SFTF Sexfontaines 73.94 16 *e*P **P** **19 34 50.6 +0.4**
comp=Z,36nm,0.9s

SFTF Sexfontaines 73.94 16 *e*P **P 19 34 50.6 +0.4**
comp=Z,36nm,0.9s
STU Stuttgart 73.94 13 *e*P **P 19 34 51.2 +1.0**
comp=Z,18nm,0.7s
WET Wettzell 73.98 10 *e*P **P 19 34 51.1 +0.7**
WET pmax pmax
comp=Z,11nm,1.1s
WET Wettzell 73.98 10 *e*P **P 19 34 51.1 +0.7**
comp=Z,11nm,1.1s
LVV L'vov 73.98 2 *e*P **P 19 34 49.8 -0.6**
LVV *e*S **SKiKP 19 44 19.2 +1.3**
LVV MLR MLR
comp=N,300nm,21.0s
LVV MLR MLR
comp=Z,500nm,21.0s
LVV MLR MLR
comp=E,200nm,20.0s
CDF Champ du Feu 74.05 14 *e*P **P 19 34 51.5 +0.5**
comp=E,27nm,1.0s
CDF Champ du Feu 74.05 14 *e*P **P 19 34 51.5 +0.5**
CDF pmax pmax
comp=Z,27nm,1.0s
CDF Champ du Feu 74.05 14 *e*P **P 19 34 51.5 +0.5**
comp=Z,27nm,1.0s
THEF They Montfort 74.05 15 *e*P **P 19 34 51.3 +0.4**
THEF They Montfort 74.05 15 *e*P **P 19 34 51.3 +0.4**
THEF They Montfort 74.05 15 *e*P **P 19 34 51.3 +0.4**
KHC Kasperske Hory 74.06 10 *i* P **P 19 34 51.7 +0.8**
KHC *e* 19 34 57.9
KHC *e*S **S 19 44 24.7 +1.9**
KHC MLR MLR
comp=Z,800nm,17.0s
KHC Kasperske Hory 74.06 10 *e*P **P 19 34 51.4 +0.5**
comp=Z,12nm,0.8s
KHC Kasperske Hory 74.06 10 *i* P **P 19 34 51.7 +0.8**
KHC *e*pP **pP 19 34 57.9 +2.5**
KHC *e*S **S 19 44 24.7 +1.9**
KHC AMS AMS 20 15 00.0
comp=Z,800nm,17.0s
TREC Trest 74.06 8 *i* P **P 19 34 51.2 +0.3**
TREC MLR MLR
comp=Z,900nm,15.9s
TREC Trest 74.06 8 *i* P **P 19 34 51.2 +0.3**
TREC AMS AMS 20 16 00.0
comp=Z,900nm,15.9s
GYA Guiyang 74.13 294 P **P 19 34 51.0 -0.8**
GYA PP **PP 19 37 36.0 -0.9**
GYA S **S 19 44 23.5 -1.0**
GYA SKS **SKSac 19 44 53.4 -5.5**
GYA SS **SS 19 49 02.4 -6.4**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,100nm,6.3s
GYA LR LR
comp=N,470nm,21.4s
GYA LR LR
comp=E,820nm,19.6s
GYA LR LR
comp=Z,630nm,22.7s
VRAC Vranov 74.13 8 ||*i*P **P 19 34 52.4 +1.1**
ECH Echery 74.23 14 *e*P **P 19 34 52.3 +0.4**
ECH pmax pmax
comp=Z,15nm,0.9s
ECH Echery 74.23 14 *e*P **P 19 34 52.3 +0.4**
comp=Z,15nm,0.9s
ECH Echery 74.23 14 *e*P **P 19 34 52.3 +0.4**
BFO Black Forest 74.27 13 *e*P **P 19 34 52.9 +0.8**
BFO pmax pmax
comp=Z,11nm,0.9s
BFO Black Forest 74.27 13 *e*P **P 19 34 52.9 +0.8**
comp=Z,11nm,0.9s
BFO Black Forest 74.27 13 *e*P **P 19 34 53.0 +0.8**
HAU Haudompre 74.32 15 *e*P **P 19 34 52.9 +0.4**
comp=Z,33nm,0.8s
HAU *e*R
comp=Z,992nm,19.2s
HAU Haudompre 74.32 15 *e*P **P 19 34 52.9 +0.4**
HAU pmax pmax
comp=Z,33nm,0.8s
HAU Haudompre 74.32 15 *e*P **P 19 34 52.9 +0.4**
comp=Z,33nm,0.8s
AML Almayashu 74.35 326 P **P 19 34 54.5 +1.3**
SNR=19
LIBD Limburg 74.35 14 *e*P **P 19 34 53.5 +0.9**
LIBD Limburg 74.35 14 *e*P **P 19 34 53.5 +0.9**
GEC2 GERESS Array S 74.35 10 *e*P **P 19 34 53.2 +0.5**
GEC2 pmax pmax
comp=Z,9.0nm,0.8s
GEC2 GERESS Array S 74.35 10 *e*P **P 19 34 53.2 +0.5**
comp=Z,9.0nm,0.8s
GEC2 GERESS Array S 74.35 10 *e*P **P 19 34 53.7 +0.9**
GERES GERESS Array B 74.35 10 P **P 19 34 53.2 +0.5**
GERES GERESS Array B 74.35 10 P **P 19 34 53.2 +0.5**
comp=Z,6.5nm,0.7s,baz=355,slow=4.2,SNR=65
GERES LR LR 20 10 54.8
comp=Z,395nm,19.5s,baz=3.5,slow=38
KK31 Karatay Array 74.41 329 *i* P **P 19 34 52.6 -0.4**
KK31 pmax pmax
comp=Z,15nm,0.9s
HYF Humbligny 74.47 17 *e*P **P 19 34 54.0 +0.7**
HYF Humbligny 74.47 17 *e*P **P 19 34 54.0 +0.7**
SPAK Spaichingen-Ko 74.55 13 *e*P **P 19 34 54.4 +0.5**
HINF Hinteralfeld 74.58 14 *e*P **P 19 34 54.3 +0.3**
comp=Z,54nm,1.3s
HINF Hinteralfeld 74.58 14 *e*P **P 19 34 54.3 +0.3**
HINF pmax pmax
comp=Z,54nm,1.3s
HINF Hinteralfeld 74.58 14 *e*P **P 19 34 54.3 +0.3**
comp=Z,54nm,1.3s
MOF Molkenrain 74.58 14 *e*P **P 19 34 54.2 +0.1**
MOF Molkenrain 74.58 14 *e*P **P 19 34 54.2 +0.1**
MOF Molkenrain 74.58 14 *e*P **P 19 34 54.2 +0.1**
MFF Saint Martin d 74.62 20 *e*P **P 19 34 54.7 +0.5**
comp=Z,45nm,0.8s
MFF Saint Martin d 74.62 20 *e*P **P 19 34 54.7 +0.5**
MFF pmax pmax
comp=Z,45nm,0.8s
MFF Saint Martin d 74.62 20 *e*P **P 19 34 54.7 +0.5**
comp=Z,45nm,0.8s
LOR Lormes 74.67 17 *e*P **P 19 34 54.9 +0.4**
comp=Z,44nm,0.9s
LOR *e*R
comp=Z,1µm,18.8s
LOR Lormes 74.67 17 *e*P **P 19 34 54.9 +0.4**
comp=Z,44nm,0.9s
FUR Furstenfeldbru 74.78 11 *e*P **P 19 34 55.9 +0.8**
FUR pmax pmax
comp=Z,24nm,0.7s
FUR Furstenfeldbru 74.78 11 *e*P **P 19 34 55.9 +0.8**
comp=Z,24nm,0.7s
SSF Saint Saulge 74.81 17 *e*P **P 19 34 55.8 +0.5**
comp=Z,67nm,1.0s
SSF Saint Saulge 74.81 17 *e*P **P 19 34 55.8 +0.5**
SSF pmax pmax
comp=Z,67nm,1.0s
SSF Saint Saulge 74.81 17 *e*P **P 19 34 55.8 +0.5**
comp=Z,67nm,1.0s
CRVS Cervenica-Dubn 74.81 4 *e*P **P 19 34 54.9 -0.4**
CRVS Cervenica-Dubn 74.81 4 *e*P **P 19 34 54.9 -0.4**
KOLS Kolonicke sedl 74.81 4 *e*P **P 19 34 56.1 +0.8**
KOLS Kolonicke sedl 74.81 4 *e*P **P 19 34 56.0 +0.8**
SMOL Smolenice 74.98 7 *e*P **P 19 34 57.6 +1.4**
SMOL Smolenice 74.98 7 *e*P **P 19 34 57.6 +1.4**
BBS Basel-Blauen 75.01 14 *e*P **P 19 34 56.8 +0.3**
BBS Basel-Blauen 75.01 14 *e*P **P 19 34 56.8 +0.3**
AVF Avril sur Loir 75.05 17 *e*P **P 19 34 56.9 +0.2**
comp=Z,34nm,0.7s
AVF Avril sur Loir 75.05 17 *e*P **P 19 34 56.9 +0.2**
AVF pmax pmax
comp=Z,34nm,0.7s
AVF Avril sur Loir 75.05 17 *e*P **P 19 34 56.9 +0.2**
comp=Z,34nm,0.7s
VYHS Vyhne 75.09 6 *e*P **P 19 34 57.6 +0.7**
VYHS Vyhne 75.09 6 *e*P **P 19 34 57.6 +0.7**
UZH Uzhgorod 75.12 4 *e*P **P 19 34 57.0 0.0**
UZH *e* 19 35 04.7
UZH *i* 19 37 54.5
UZH *e*S **S 19 44 31.0 -3.6**
UZH MLR MLR
comp=N,300nm,18.0s
UZH MLR MLR
comp=E,300nm,18.0s
UZH MLR MLR
comp=Z,170nm,18.0s

BGF Bois d'Agland 75.19 17 *e*P **P 19 34 57.8 +0.3**
comp=Z,48nm,0.8s
BGF Bois d'Agland 75.19 17 *e*P **P 19 34 57.8 +0.3**
BGF pmax pmax
comp=Z,48nm,0.8s
BGF Bois d'Agland 75.19 17 *e*P **P 19 34 57.8 +0.3**
comp=Z,48nm,0.8s
SMF Signal de Mont 75.27 17 *e*P **P 19 34 58.2 +0.2**
comp=Z,55nm,1.1s
SMF Signal de Mont 75.27 17 *e*P **P 19 34 58.2 +0.2**
SMF pmax pmax
comp=Z,55nm,1.1s
SMF Signal de Mont 75.27 17 *e*P **P 19 34 58.2 +0.2**
comp=Z,55nm,1.1s
ZST Bratislava 75.27 7 *e*P **P 19 34 58.0 +0.1**
ZST Bratislava 75.27 7 *e*P **P 19 34 58.0 +0.1**
TCF Toulx Ste Croi 75.35 18 *e*P **P 19 34 58.6 +0.2**
comp=Z,53nm,1.1s
TCF Toulx Ste Croi 75.35 18 *e*P **P 19 34 58.6 +0.2**
TCF pmax pmax
comp=Z,53nm,1.1s
TCF Toulx Ste Croi 75.35 18 *e*P **P 19 34 58.6 +0.2**
comp=Z,53nm,1.1s
RJOB Jochberg 75.36 10 *e*P **P 19 34 59.2 +0.7**
comp=Z,23nm,0.8s
MOA Molln 75.39 9⇑*i*pP **P 19 34 58.8 +0.2**
comp=Z,11nm,1.3s
CONA Conrad Observa 75.45 8 *i* pP **P 19 34 59.8 +0.8**
comp=Z,26nm,1.2s,SNR=7.7
MOTA Moosalm 75.57 12⇑*i*pP **P 19 35 00.6 +0.7**
comp=Z,12nm,1.0s
TRPA Tarpa 75.63 4⇑*i*P **P 19 35 01.2 +1.3**
TRPA Tarpa 75.63 4⇑*e*P **P 19 35 00.8 +0.9**
WATA Walderalm 75.63 11⇑*i*pP **P 19 35 01.1 +0.9**
comp=Z,25nm,1.0s
CABF La Chapelle 75.65 15 *e*P **P 19 35 00.9 +0.7**
CABF La Chapelle 75.65 15 *e*P **P 19 35 00.9 +0.7**
CABF La Chapelle 75.65 15 *e*P **P 19 35 00.9 +0.7**
WTTA Wattenberg 75.71 11⇑*i*pP **P 19 35 01.4 +0.7**
comp=Z,23nm,0.8s,SNR=8.7
PSZ Piszkesteto 75.72 5 *e*P **P 19 35 02.0 +1.4**
PSZ pmax pmax
comp=Z,19nm,0.9s
PSZ Piszkesteto 75.72 5 *e*P **P 19 35 02.0 +1.4**
comp=Z,19nm,0.9s
PSZ Piszkesteto 75.72 5⇑*i*P **P 19 35 01.9 +1.4**
PSZ Piszkesteto 75.72 5⇑*e*P **P 19 35 01.8 +1.2**
AGO Saint Agoulin 75.73 17 *e*P **P 19 35 01.4 +0.8**
AGO Saint Agoulin 75.73 17 *e*P **P 19 35 01.4 +0.8**
SOP Sopron 75.74 8||*e*P **P 19 35 01.6 +1.0**
FETA Feichten 75.85 12⇑*i*pP **P 19 35 02.0 +0.6**
comp=Z,16nm,0.9s
KSH Kashi 76.00 324 P **P 19 35 05.5 +3.1**
KSH *e*pP **pP 19 35 10.3 +3.4**
KSH sP **sP 19 35 12.6 +4.1**
KSH *e*PcP **PcP 19 35 17.8 +3.1**
KSH *e*PP **PP 19 37 54.8 +2.6**
KSH *e*S **S 19 44 50.0 +5.1**
KSH *e*sS sS 19 44 58.1 +5.8
KSH *e*SKS **SKSac 19 45 11.1 -1.5**
KSH *e*ScS **ScS 19 45 17.8 +1.3**
KSH pmax pmax
comp=Z,24nm,0.9s
KSH LR LR
comp=N,130nm,4.8s
KSH LR LR
comp=E,120nm,4.5s
KSH LR LR
comp=Z,100nm,4.0s
KBA Koelnbreinsper 76.07 10||*i*pP **P 19 35 03.6 +0.9**
comp=Z,21nm,0.8s,SNR=11
ARSA Arzberg 76.09 9||*i*pP **P 19 35 03.4 +0.8**
comp=Z,11nm,0.9s,SNR=7.2
RJF Les Rejaudoux 76.18 19 *e*P **P 19 35 03.3 +0.1**
comp=Z,87nm,1.4s
RJF *e*R
comp=Z,2µm,18.2s
RJF Les Rejaudoux 76.18 19 *e*P **P 19 35 03.3 +0.1**
RJF pmax pmax
comp=Z,87nm,1.4s
RJF Les Rejaudoux 76.18 19 *e*P **P 19 35 03.3 +0.1**
comp=Z,87nm,1.4s
BUR08 Bucovina Ar. S 76.18 2 *e*P **P 19 35 03.3 0.0**
FUORN Ofenpass-Fuorn 76.19 12 *e*P **P 19 35 05.1 +1.5**
BURAR Bucovina Array 76.21 2||*i*P **P 19 35 04.1 +0.7**
TUE Stuetta 76.22 13 *e*P **P 19 35 05.2 +1.5**
comp=Z,103nm,2.2s
LFF La Frestale 76.39 19 *e*P **P 19 35 04.9 +0.5**
comp=Z,85nm,1.0s
LFF La Frestale 76.39 19 *e*P **P 19 35 04.9 +0.5**
LFF pmax pmax
comp=Z,85nm,1.0s
LFF La Frestale 76.39 19 *e*P **P 19 35 04.9 +0.5**
comp=Z,85nm,1.0s
LBL Lubilhac 76.55 18 *e*P **P 19 35 06.2 +0.8**
LBL Lubilhac 76.55 18 *e*P **P 19 35 06.2 +0.8**
LBL Lubilhac 76.55 18 *e*P **P 19 35 06.2 +0.8**
HNR Honiara 76.59 229 LR LR 20 01 52.8
comp=Z,820nm,22.0s,baz=298,slow=30
SOKA Soboth 76.62 9||*i*pP **P 19 35 06.2 +0.4**
comp=Z,20nm,1.0s
CAF Calviac 76.64 18 *e*P **P 19 35 06.1 +0.3**
comp=Z,75nm,1.3s
CAF Calviac 76.64 18 *e*P **P 19 35 06.1 +0.3**
CAF pmax pmax
comp=Z,75nm,1.3s
CAF Calviac 76.64 18 *e*P **P 19 35 06.1 +0.3**
comp=Z,75nm,1.3s
PERS Pernice 76.67 9 *i* P **P 19 35 06.4 +0.4**
OBKA Obir 76.75 9⇑*i*pP **P 19 35 06.9 +0.4**
comp=Z,37nm,0.8s,SNR=10
LPL La Plagne 76.81 15 *e*P **P 19 35 08.3 +1.3**
comp=Z,28nm,1.0s
LPL La Plagne 76.81 15 *e*P **P 19 35 08.3 +1.3**
LPL pmax pmax
comp=Z,28nm,1.0s
LPL La Plagne 76.81 15 *e*P **P 19 35 08.3 +1.3**
comp=Z,28nm,1.0s
LPG La Plagne 76.83 15 *e*P **P 19 35 08.6 +1.4**
comp=Z,27nm,1.0s
LPG La Plagne 76.83 15 *e*P **P 19 35 08.6 +1.4**
LPG pmax pmax
comp=Z,27nm,1.0s
LPG La Plagne 76.83 15 *e*P **P 19 35 08.6 +1.4**
comp=Z,27nm,1.0s
KIS Kishinev 76.85 359 *e*P **P 19 35 05.0 -1.9**
KIS *e* 19 35 11.0
KIS *e* 19 35 15.0
KIS *e*S **S 19 44 50.0 -3.7**
KIS Kishinev 76.85 359 *e*P **P 19 35 05.0 -1.9**
KIS *e*S **S 19 44 50.0 -3.7**
KIS LRM MLR 20 18 54.0
comp=Z,500nm,16.0s
GROS Grobnik 76.88 9 *e*P **P 19 35 07.4 +0.3**
CADS Cadrg 76.95 10 *e*P **P 19 35 07.2 -0.4**
KOGS Kog 76.95 8 *i* P **P 19 35 08.0 +0.5**
BEHE Becsehely 76.97 8||*e*P **P 19 35 09.0 +1.4**
VIVF Saint-Julien-l 77.15 17 *e*P **P 19 35 09.3 +0.6**
comp=Z,32nm,0.9s
VIVF Saint-Julien-l 77.15 17 *e*P **P 19 35 09.3 +0.6**
VIVF pmax pmax
comp=Z,32nm,0.9s
VIVF Saint-Julien-l 77.15 17 *e*P **P 19 35 09.3 +0.6**
comp=Z,32nm,0.9s
KMI Kunming 77.20 296 P **P 19 35 08.9 -0.6**
KMI pP **pP 19 35 12.1 -2.0**
KMI sP **sP 19 35 13.4 -2.3**
KMI PP **PP 19 38 03.0 0.0**
KMI S **S 19 44 57.0 -1.7**
KMI sS **sS 19 45 02.6 -3.6**
KMI SKS **SKSac 19 45 16.8 -5.3**
KMI pmax pmax
comp=Z,6.0nm,1.3s
KMI pmax pmax
comp=Z,210nm,8.7s
KMI LR LR
comp=N,1µm,16.9s
KMI LR LR
comp=E,900nm,16.9s
KMI LR LR
comp=Z,750nm,16.1s
ORIF Oris-en-Rattie 77.27 16 *e*P **P 19 35 10.1 +0.6**
comp=Z,36nm,1.2s
ORIF *e*R
comp=Z,726nm,18.8s

ORIF Oris-en-Rattie 77.27 16 *e*P **P 19 35 10.1 +0.6**
ORIF pmax pmax
comp=Z,36nm,1.2s
ORIF Oris-en-Rattie 77.27 16 *e*P **P 19 35 10.1 +0.6**
comp=Z,36nm,1.2s
JAVS Javornik 77.31 10 *i* P **P 19 35 09.4 -0.3**
PKSM Moragy 77.35 6||*e*P **P 19 35 10.2 +0.5**
LEOM Leova 77.37 360||*i*P **P 19 35 10.4 +0.6**
MBDF Montbardon 77.59 15 *e*P **P 19 35 12.6 +1.3**
MBDF Montbardon 77.59 15 *e*P **P 19 35 12.6 +1.3**
MBDF Montbardon 77.59 15 *e*P **P 19 35 12.6 +1.3**
RAR Rarotonga 77.69 187 LR LR 20 02 58.4
comp=Z,407nm,18.8s,baz=315,slow=31
BOJS Bojanci 77.80 9 *e*P **P 19 35 12.5 +0.2**
PBRG Braganca 77.81 26 *e*P **P 19 35 13.2 +0.8**
comp=Z,37nm,1.6s
POLO Lamas de Olo 77.96 27 *e*P **P 19 35 14.7 +1.4**
comp=Z,26nm,1.6s
GOF Gofitskoye 77.97 349 *e*P P 19 35 21.6 +8.3
GOF pmax pmax
comp=Z,40nm,0.9s
VRI Vrincioaia 77.98 1||*i*P **P 19 35 14.1 +0.8**
PLOR Plostina 77.99 1||*i*P **P 19 35 14.3 +0.9**
SDV Santo Domingo 78.03 92 *e*P P 19 35 17.4 +3.3
PVRL Vila Real 78.07 27 *e*P **P 19 35 15.0 +1.1**
comp=Z,39nm,1.0s
BZS Buzias 78.10 4⇑*i*P **P 19 35 14.7 +0.8**
ETSF Etsaut 78.11 21 *e*P **P 19 35 15.1 +0.9**
comp=Z,31nm,0.7s
ETSF Etsaut 78.11 21 *e*P **P 19 35 15.1 +0.9**
ETSF pmax pmax
comp=Z,31nm,0.7s
ETSF Etsaut 78.11 21 *e*P **P 19 35 15.1 +0.9**
comp=Z,31nm,0.7s
SMRF Simiane la Rot 78.15 16 *e*P **P 19 35 15.5 +1.2**
comp=Z,94nm,1.2s
SMRF Simiane la Rot 78.15 16 *e*P **P 19 35 15.5 +1.2**
comp=Z,94nm,1.2s
EPF Esparros 78.16 20 *e*P **P 19 35 14.2 -0.2**
EPF Esparros 78.16 20 *e*P **P 19 35 14.2 -0.2**
EPF Esparros 78.16 20 *e*P **P 19 35 14.2 -0.2**
MTLF Montolieu 78.21 19 *e*P **P 19 35 15.0 +0.4**
comp=Z,30nm,0.8s
MTLF Montolieu 78.21 19 *e*P **P 19 35 15.0 +0.4**
MTLF pmax pmax
comp=Z,30nm,0.8s
MTLF Montolieu 78.21 19 *e*P **P 19 35 15.0 +0.4**
comp=Z,30nm,0.8s
MVO Moncorvo 78.34 26 *e*P **P 19 35 16.5 +1.1**
comp=Z,44nm,1.4s
LOT Lotru 78.34 3⇑*i*P **P 19 35 15.5 +0.1**
MLR Muntele Rosu 78.35 1||*i*P **P 19 35 16.7 +1.2**
ARR Arges 78.45 2||*i*P **P 19 35 17.1 +1.1**
SBF Sospel 78.53 15 *e*P **P 19 35 16.9 +0.5**
comp=Z,66nm,0.8s
SBF Sospel 78.53 15 *e*P **P 19 35 16.9 +0.5**
SBF pmax pmax
comp=Z,66nm,0.8s
SBF Sospel 78.53 15 *e*P **P 19 35 16.9 +0.5**
comp=Z,66nm,0.8s
PVIS Viseu 78.55 27 *e*P **P 19 35 17.7 +1.1**
comp=Z,32nm,1.0s
QIZ Qiongzhong 78.59 287 P **P 19 35 15.8 -1.2**
QIZ S **S 19 45 11.8 -1.5**
QIZ sS **sS 19 45 18.5 -2.3**
QIZ SS **SS 19 50 17.3 +0.9**
QIZ LR LR
comp=N,500nm,20.0s
QIZ LR LR
comp=E,400nm,19.2s
QIZ LR LR
comp=Z,490nm,20.9s
VLC Villacollemand 78.63 13 *e*P **P 19 35 17.6 +0.7**
comp=Z,15nm,0.8s
TLCR 78.66 359⇑*i*P **P 19 35 17.8 +0.8**
CFR Carcaliu 78.67 360⇑*i*P **P 19 35 16.9 -0.1**
FRF La Foret Royal 78.71 15 *e*P **P 19 35 17.3 -0.1**
comp=Z,27nm,0.9s
FRF La Foret Royal 78.71 15 *e*P **P 19 35 17.3 -0.1**
FRF pmax pmax
comp=Z,27nm,0.9s
FRF La Foret Royal 78.71 15 *e*P **P 19 35 17.3 -0.1**
comp=Z,27nm,0.9s
ANN Anapa 78.72 353 *e*P **P 19 35 17.0 -0.3**
ANN *e*S **S 19 45 14.4 +0.5**
ANN pmax pmax
comp=Z,116nm,5.9s
LSA Lhasa 78.78 308 P **P 19 35 19.1 +0.5**
LSA pmax pmax
comp=Z,20nm,0.8s
LSA Lhasa 78.78 308 *e*P **P 19 35 18.9 +0.3**
LSA pmax pmax
comp=Z,25nm,1.2s
LSA Lhasa 78.78 308 *e*P **P 19 35 18.9 +0.3**
comp=Z,26nm,1.2s
LMR La Mourre 78.92 16 *e*P **P 19 35 19.1 +0.6**
comp=Z,126nm,1.5s
LMR La Mourre 78.92 16 *e*P **P 19 35 19.1 +0.6**
LMR pmax pmax
comp=Z,126nm,1.5s
LMR La Mourre 78.92 16 *e*P **P 19 35 19.1 +0.6**
comp=Z,126nm,1.5s
MTE Manteigas 78.94 27 *e*P **P 19 35 19.8 +1.1**
comp=Z,65nm,0.9s
MTE Manteigas 78.94 27 *e*P **P 19 35 19.1 +0.3**
comp=Z,16nm,0.9s
KIV Kislovodsk 79.10 349*c i*P **P 19 35 20.2 +0.6**
KIV *i* 19 35 26.7
KIV *i* S **S 19 45 20.1 +1.8**
KIV pmax pmax
comp=Z,37nm,0.8s
KIV MLR MLR
comp=Z,500nm,21.0s
KIV Kislovodsk 79.10 349 P **P 19 35 20.8 +1.2**
comp=Z,264nm,0.7s,SNR=10
KBZ Khabaz 79.31 349 P **P 19 35 21.4 +0.8**
KBZ Khabaz 79.31 349 P **P 19 35 21.4 +0.8**
KBZ Khabaz 79.31 349 P **P 19 35 21.4 +0.8**
comp=Z,24nm,0.9s,baz=12,slow=3.8,SNR=27
KBZ LR LR 20 13 39.9
comp=Z,512nm,21.3s,baz=18,slow=38
ROSC El Rosal 79.31 97 LR LR 20 17 40.7
comp=Z,373nm,18.1s,baz=5.6,slow=41
TIRR Tirgusor 79.39 360 *e*P **P 19 35 21.6 +0.6**
TIRR Tirgusor 79.39 360 *e*P **P 19 35 21.6 +0.6**
TIRR Tirgusor 79.39 360||*i*P **P 19 35 21.6 +0.6**
TBI Tubuai 79.59 177 *e*S **S 19 45 20.3 -3.0**
comp=Z,465nm,27.2s
TBI *e*LR LR 20 00 04.9
comp=Z,800nm,25.0s
SOC Sochi 79.75 351*c i*P **P 19 35 22.8 -0.2**
SOC *e* 19 35 29.2
SOC *e* 19 38 31.8
SOC *e*PPP PPP 19 40 19.2
SOC *e*S **S 19 45 25.1 +0.1**
SOC *e* 19 46 02.4
SOC pmax pmax
comp=Z,24nm,0.7s
SOC MLR MLR
comp=Z,733nm,21.0s
PMAFR Mafra 79.85 28 *e*P **P 19 35 24.4 +0.7**
comp=Z,169nm,1.7s
PMTG Montargil 80.02 28 *e*P **P 19 35 24.2 -0.4**
comp=Z,24nm,1.4s
PGF Pioggiola 80.04 14 *e*P **P 19 35 25.1 +0.4**
comp=Z,63nm,1.1s
PGF Pioggiola 80.04 14 *e*P **P 19 35 25.1 +0.4**
PGF pmax pmax
comp=Z,63nm,1.1s
PGF Pioggiola 80.04 14 *e*P **P 19 35 25.1 +0.4**
comp=Z,63nm,1.1s
ZEI Tsey 80.12 348 *e*P **P 19 35 24.9 -0.4**
ZEI pmax pmax
comp=Z,42nm,1.8s
MPEP Malo Peshtene 80.44 3 P **P 19 35 26.5 -0.2**
ESDC Sonseca Array 80.48 24 P **P 19 35 27.7 +0.6**
ESDC Sonseca Array 80.48 24 P **P 19 35 27.7 +0.6**
comp=Z,11nm,0.7s,baz=341,slow=5.1,SNR=54
ESDC LR LR 20 10 57.4
comp=Z,792nm,18.9s,baz=305,slow=36
ESLA Sonseca Array 80.48 24 *e*P **P 19 35 27.5 +0.4**
comp=Z,6.6nm,1.0s
PAB San Pablo 80.52 25 *e*P **P 19 35 28.4 +1.1**
PAB pmax pmax
comp=Z,11nm,1.0s

PAB	**San Pablo**	**80.52**	**25**	*eP*		**P**	**19 35 28.4**	**+1.1**
	comp=Z,11nm,1.0s								
EVOP	**Sao Brissos**	**80.56**	**28**⇑	*iP*		**P**	**19 35 27.7**	**+0.3**
EVOP					pmax	pmax			
	comp=Z,56nm,1.4s								
EVOP	**Sao Brissos**	**80.56**	**28**⇑	*iP*		**P**	**19 35 27.7**	**+0.3**
	comp=Z,56nm,1.4s								
EVO	**Evora**	**80.58**	**28**⇑	*iP*		**P**	**19 35 27.7**	**+0.1**
	comp=Z,56nm,1.4s								
EVO					*eR*				
	comp=Z,2µm,18.2s								
PVL	**Pavlikeni**	**80.61**	**2**	P		**P**	**19 35 28.3**	**+0.7**
PRD	**Provadia**	**80.65**	**0**	P		**P**	**19 35 29.1**	**+1.3**
AQU	**L'Aquila**	**80.75**	**11**⇓	*iP*		P	19 35 35.7	+7.2
PNCL	**Nicolau / Gran**	**80.84**	**28**	*eP*		**P**	**19 35 29.7**	**+0.7**
	comp=Z,159nm,2.1s								
PBAR	**Barrancos**	**81.17**	**27**	*eP*		**P**	**19 35 31.4**	**+0.7**
	comp=Z,31nm,2.5s								
VTS	**Vitosha**	**81.18**	**3**⇑	*iP*		**P**	**19 35 31.2**	**+0.3**
VTS	**Vitosha**	**81.18**	**3**	P		**P**	**19 35 30.7**	**-0.2**
PCVE	**Castro Verde**	**81.42**	**28**	*eP*		**P**	**19 35 32.6**	**+0.5**
	comp=Z,33nm,1.6s								
PFVI	**Vila Bisbo**	**81.69**	**29**	*eP*		**P**	**19 35 32.7**	**-0.8**
	comp=Z,91nm,1.4s								
PVAQ	**Vaqueiros**	**81.72**	**28**	*eP*		**P**	**19 35 34.6**	**+0.9**
	comp=Z,59nm,1.4s								
PBDV	**Barranco-do-Ve**	**81.82**	**28**	*eP*		**P**	**19 35 35.3**	**+1.1**
	comp=Z,34nm,1.1s								
KKB	**Krupnik**	**81.90**	**4**	P		P	19 35 24.1	-10
MMB	**Musomiste**	**82.20**	**3**	P		**P**	**19 35 37.0**	**+0.8**
TAPN	**Taplejung**	**82.31**	**309**	*eP*		**P**	**19 35 37.2**	**-0.1**
	comp=Z,55nm,0.9s								
NVR	**Nevrokopi**	**82.44**	**3**	P		**P**	**19 35 37.8**	**+0.4**
KNT	**Kendrikon**	**82.60**	**4**	P		**P**	**19 35 39.1**	**+0.9**
GUN	**Gumba**	**82.60**	**311**	*eP*		**P**	**19 35 38.9**	**0.0**
	comp=Z,122nm,1.0s								
GNI	**Garni**	**82.62**	**347**	*eP*		**P**	**19 35 38.3**	**-0.3**
	comp=Z,26nm,0.9s								
SRS	**Serrai**	**82.67**	**3**	P		**P**	**19 35 38.9**	**+0.3**
KBL	**Kabul**	**82.75**	**327**	*eP*		**P**	**19 35 38.3**	**-1.1**
KBL	**Kabul**	**82.75**	**327**	*eP*		**P**	**19 35 38.2**	**-1.1**
ODAN	**Odare**	**82.88**	**309**	*eP*		**P**	**19 35 39.1**	**-1.1**
	comp=Z,40nm,1.0s								
FNA	**Florina**	**82.91**	**5**	P		**P**	**19 35 40.0**	**+0.1**
ALN	**Alexandroupoli**	**82.94**	**1**	P		**P**	**19 35 40.1**	**+0.1**
KKN	**Kakani**	**82.96**	**311**	*eP*		**P**	**19 35 40.3**	**-0.3**
	comp=Z,65nm,1.2s								
DANN	**Dangsing**	**83.09**	**313**	*eP*		**P**	**19 35 41.5**	**+0.1**
	comp=Z,174nm,0.9s								
PKI	**Pulchoki**	**83.10**	**311**	*eP*		**P**	**19 35 41.4**	**0.0**
	comp=Z,36nm,0.7s								
PKIN	**Phulchoki**	**83.10**	**311**	*eP*		**P**	**19 35 41.5**	**+0.1**
	comp=Z,32nm,1.0s								
RAMN	**Ramite**	**83.14**	**310**	*eP*		**P**	**19 35 39.2**	**-2.4**
	comp=Z,122nm,1.0s								
DMN	**Daman**	**83.19**	**311**	*eP*		**P**	**19 35 41.3**	**-0.5**
	comp=Z,67nm,0.9s								
OUR	**Ouranopolis**	**83.46**	**3**	P		**P**	**19 35 43.1**	**+0.5**
PYUN	**Piuthan**	**83.63**	**313**	*eP*		**P**	**19 35 43.6**	**-0.4**
	comp=Z,178nm,0.9s								
ANTO	**Ankara**	**83.88**	**356**	*eP*		**P**	**19 35 44.8**	**-0.1**
ANTO					pmax	pmax			
	comp=Z,10.0nm,0.8s								
ANTO	**Ankara**	**83.88**	**356**	*eP*		**P**	**19 35 44.8**	**-0.1**
	comp=Z,9.7nm,0.8s								
KEK	**Kerkira**	**83.90**	**6**	P		**P**	**19 35 45.1**	**+0.2**
BR131	**Keskin Array S**	**83.99**	**355**	*eP*		**P**	**19 35 45.5**	**-0.1**
	comp=Z,9.3nm,0.8s								
BRTR	**Keskin Array B**	**83.99**	**355**	P		**P**	**19 35 46.1**	**+0.5**
BRTR	**Keskin Array B**	**83.99**	**355**	P		**P**	**19 35 46.1**	**+0.5**
	comp=Z,10nm,0.8s,baz=28,slow=2.9,SNR=47								
BRTR					LR	LR	20 15 49.0		
	comp=Z,290nm,20.0s,baz=137,slow=38								
THL	**Klokotos Trika**	**84.16**	**4**	P		**P**	**19 35 46.1**	**-0.1**
CHTO	**Chiang Mai**	**84.39**	**296**	*eP*		**P**	**19 35 45.8**	**-2.0**
CHTO					pmax	pmax			
	comp=Z,7.0nm,1.1s								
CHTO	**Chiang Mai**	**84.39**	**296**	*eP*		**P**	**19 35 45.8**	**-2.0**
	comp=Z,6.5nm,1.1s								
XOR	**Xorichti**	**84.40**	**4**	P		**P**	**19 35 46.5**	**-1.0**
CMAR	**Chiang Mai Arr**	**84.69**	**296**	P		**P**	**19 35 48.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**84.69**	**296**	P		**P**	**19 35 48.9**	**-0.4**
	comp=Z,7.8nm,0.8s,baz=19,slow=5.2,SNR=78								
CMAR					LR	LR	20 17 05.5		
	comp=Z,572nm,20.5s,baz=223,slow=38								
AGG	**Agios Georgios**	**84.71**	**4**	P		**P**	**19 35 48.4**	**-0.7**
MAKR	**Makrakomi, Fth**	**84.71**	**4**	P		**P**	**19 35 49.4**	**+0.3**
EVR	**Evrytania**	**84.79**	**5**	P		**P**	**19 35 50.0**	**+0.4**
EFP	**Efpalio**	**85.29**	**5**	P		**P**	**19 35 52.9**	**+0.9**
DSF	**Desfina**	**85.33**	**4**	P		**P**	**19 35 51.4**	**-0.9**
TRIZ	**Trizonia**	**85.36**	**4**	P		**P**	**19 35 52.3**	**0.0**
VLS	**Valsamata**	**85.47**	**6**	P		**P**	**19 35 52.7**	**-0.2**
LAKA	**Lakka**	**85.48**	**5**	P		**P**	**19 35 54.1**	**+1.1**
RLS	**Riolos of Patr**	**85.63**	**5**	P		**P**	**19 35 54.3**	**+0.6**
DZM	**Mont Dzumac**	**85.68**	**218**	LR		LR	20 11 02.4		
	comp=Z,481nm,19.4s,baz=24,slow=34								
LTK	**Loutraki**	**85.73**	**4**	P		**P**	**19 35 53.3**	**-0.9**
GUR	**Goura**	**85.79**	**4**	P		**P**	**19 35 52.9**	**-1.8**
DID	**Didima**	**86.26**	**4**	P		**P**	**19 35 55.4**	**-1.5**
DIDY	**Didyma**	**86.29**	**4**	P		**P**	**19 35 55.5**	**-1.6**
ITM	**Ithomi**	**86.53**	**5**	P		**P**	**19 35 58.1**	**-0.1**
APE	**Apeiranthos**	**86.75**	**2**⇓	*iP*		**P**	**19 35 57.6**	**-1.7**
KEST	**Kesra**	**86.78**	**15**	P		**P**	**19 36 00.1**	**+0.5**
KEST	**Kesra**	**86.78**	**15**	P		**P**	**19 36 00.1**	**+0.5**
	comp=Z,2.3nm,0.8s,baz=328,slow=7.4,SNR=4.7								
KEST					LR	LR	20 17 15.6		
	comp=Z,248nm,19.4s,baz=320,slow=37								
VLI	**Veliai**	**87.03**	**4**	P		**P**	**19 35 59.7**	**-0.9**
RAO	**Raoul Island**	**88.17**	**202**	LR		LR	20 06 05.2		
	comp=Z,292nm,21.0s,baz=58,slow=29								
KARN	**Karanos**	**88.38**	**3**	P		**P**	**19 36 06.8**	**-0.3**
LAST	**Lasithi**	**88.66**	**2**	P		**P**	**19 36 07.4**	**-1.1**
CSS	**Prodhromos**	**88.75**	**355**	*eP*		**P**	**19 36 07.4**	**-1.5**
	comp=Z,21nm,0.9s								
SIVA	**Sivas**	**88.78**	**2**	P		**P**	**19 36 09.1**	**+0.1**
GVD	**Gavdhos**	**88.94**	**3**	*eP*		**P**	**19 36 09.3**	**-0.4**
	comp=Z,81nm,0.9s								
CTA	**Charters Tower**	**92.04**	**236**	LR		LR	20 12 58.0		
	comp=Z,619nm,18.2s,baz=21,slow=32								
MIB	**Mutribah**	**92.42**	**343**	*eP*		**P**	**19 36 25.8**	**-0.2**
MIB					AMb	AMB	19 36 27.1		
	comp=Z,32nm,0.8s								
UMR	**Umm Al-Rimmam**	**92.60**	**343**	*eP*		**P**	**19 36 26.7**	**-0.1**
UMR					AMb	AMB	19 36 29.7		
	comp=Z,28nm,1.0s								
NAY	**Al-Naaiem**	**92.97**	**343**	*eP*		**P**	**19 36 28.0**	**-0.6**
NAY					AMb	AMB	19 36 29.5		
	comp=Z,11nm,1.1s								
QSPA	**South Pole Qui**	**146.31**	**180**	PKPbc		**PKPdf**	**19 42 53.1**	**-0.2**
QSPA	**South Pole Qui**	**146.31**	**180**	PKPbc		**PKPdf**	**19 42 53.1**	**-0.2**
	comp=Z,6.3nm,0.7s,baz=30,slow=0.9,SNR=22								
BOSA	**Boshof**	**152.05**	**5**	PKPbc		**PKPbc**	**19 43 09.8**	**-0.6**
BOSA	**Boshof**	**152.05**	**5**	PKPbc		**PKPbc**	**19 43 09.8**	**-0.6**
	comp=Z,7.0nm,0.7s,baz=32,slow=3.2,SNR=13								
SNAA	**Sanae**	**160.15**	**152**	PKPab		**PKPab**	**19 43 52.0**	**-1.4**
SNAA	**Sanae**	**160.15**	**152**	PKPab		**PKPab**	**19 43 52.0**	**-1.4**
	comp=Z,1.8nm,0.9s,baz=250,slow=3.4,SNR=9.4								

*ISCJB **15** 19:46:06.7±0.4, 6.84N±0.06×72.99W±0.05, h166km, mb3.8/11, Error ellipse: s-maj=9.5km s-min=5.9km az=138.8*

*IDC **15** 19:46:06.8±2.0, 6.82N×72.94W, h156km±19km, mb3.6/11, mb1 3.8/12, mb1mx3.6/25, mbtmp3.6/12, Error ellipse: s-maj=26.5km s-min=14.7km az=59.0*

*FUNV **15** 19:46:14.7, 7.09N×72.67W, h138km, MW3.5*

ISC 15 19:46:07.7±0.7, 6.89N±0.07×72.90W±0.07, h166km, n34, σ1§59/36, mb3.7/11, 5C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAPV	**Capacho**	**1.13**	**31**⇓	*eP*		**Pn**	**19 46 36.6**	**+1.3**
CAPV				*eS*		**Sn**	**19 46 53.0**	**-3.6**
SOCV	**Socops**	**2.45**	**55**⇑	*eP*		**Pn**	**19 46 50.6**	**+1.5**
SOCV				*eS*		**Sn**	**19 47 16.4**	**-4.7**
VIGV	**El Vigia**	**2.46**	**38**	*eP*		**Pn**	**19 46 51.2**	**+2.0**
VIGV				*eS*		Sn	19 47 16.5	-4.9
ROSC	**El Rosal**	**2.47**	**215**	P		**Pn**	**19 46 48.6**	**-1.1**
	130nm,0.3s,baz=86,slow=13,SNR=106								
ROSC				S		**Sn**	**19 47 18.4**	**-3.9**
	122nm,0.3s,baz=81,slow=19,SNR=5.7								
ELOV	**Elorza**	**3.39**	**88**⇑	*eP*		**Pn**	**19 47 02.5**	**+2.0**
QARV	**Quebrada Arrib**	**4.04**	**35**	*eP*		**Pn**	**19 47 10.0**	**+0.9**
SANV	**Sanarito**	**4.22**	**52**	*eP*		**Pn**	**19 47 12.5**	**+1.1**
CURV	**Curarigua**	**4.25**	**43**	*eP*		**Pn**	**19 47 13.2**	**+1.5**
DABV	**Dabajuro**	**4.59**	**29**	*eP*		**Pn**	**19 47 17.1**	**+1.1**
TEPV	**Terepaima**	**4.77**	**50**⇓	*iP*		**Pn**	**19 47 20.2**	**+1.8**
SIQV	**Siquisique**	**4.82**	**39**⇓	*eP*		**Pn**	**19 47 20.2**	**+1.1**
BAUV	**El Baul**	**5.22**	**67**⇑	*eP*		**Pn**	**19 47 24.5**	**+0.1**
MAPV	**Macapo**	**5.27**	**56**⇑	*eP*		**Pn**	**19 47 26.3**	**+1.3**
IMOV	**Isla Los Monje**	**5.78**	**20**	*eP*		**Pn**	**19 47 32.3**	**+0.7**
MONV	**Montecano**	**5.80**	**30**	*eP*		**Pn**	**19 47 32.4**	**+0.5**
TURV	**Turiamo**	**6.12**	**54**	*eP*		**Pn**	**19 47 37.8**	**+1.6**
MERV	**Las Mercedes**	**6.94**	**70**	*eP*		**Pn**	**19 47 47.3**	**+0.3**
BIRV	**Birongo**	**7.46**	**61**	*eP*		**Pn**	**19 47 54.2**	**+0.3**
CUPV	**Cepira**	**7.70**	**65**⇑	*eP*		**Pn**	**19 47 57.5**	**+0.3**
PCRV	**Puerto La Cruz**	**8.80**	**68**	*eP*		**Pn**	**19 48 12.6**	**+1.0**
TEIG	**Tepich**	**19.96**	**313**	P		Pn	19 50 30.7	0.0
	1.3nm,0.3s,baz=35,slow=2.4,SNR=5.9								
LPAZ	**La Paz**	**23.51**	**168**	P		**P**	**19 51 04.0**	**+0.6**
	0.6nm,0.4s,baz=349,slow=10,SNR=4.3								
BDFB	**Brasilia**	**33.29**	**132**	P		**P**	**19 52 30.6**	**+0.6**
	2.0nm,0.4s,baz=294,slow=10.0,SNR=3.7								
TXAR	**Lajitas Array**	**36.59**	**311**	P		**P**	**19 52 58.2**	**+0.2**
	0.9nm,0.5s,baz=125,slow=6.4,SNR=5.4								
ULM	**Lac du Bonnet**	**47.30**	**340**	P		**P**	**19 54 24.2**	**-0.1**
	4.2nm,0.4s,baz=143,slow=5.1,SNR=4.5								
PDAR	**Pinedale Array**	**48.16**	**324**	P		**P**	**19 54 31.8**	**+0.3**
	1.0nm,0.6s,baz=131,slow=9.6,SNR=8.7								
NVAR	**Mina Array Bea**	**51.59**	**314**	P		**P**	**19 54 58.5**	**+1.1**
	0.4nm,0.6s,baz=133,slow=6.7,SNR=5.1								
FRB	**Frobisher Bay**	**56.84**	**2**	P		**P**	**19 55 34.6**	**+0.1**
	4.2nm,0.9s,baz=172,slow=7.1,SNR=3.1								
YKA	**Yellowknife Ar**	**63.28**	**340**	P		**P**	**19 56 18.7**	**+0.3**
	2.7nm,0.6s,baz=132,slow=6.7,SNR=72								
INK	**Inuvik**	**73.04**	**340**	P		**P**	**19 57 19.9**	**+0.9**
	0.9nm,0.6s,baz=108,slow=5.2,SNR=5.1								
TORD	**Torodi Ar. Bea**	**73.50**	**78**	P		**P**	**19 57 22.6**	**-0.2**
	1.0nm,1.2s,baz=283,slow=6.9,SNR=7.1								
ILAR	**Eielson Array**	**77.00**	**335**	P		**P**	**19 57 42.1**	**+0.3**
	0.5nm,0.7s,baz=107,slow=4.6,SNR=6.1								
ASAR	**Alice Springs**	**149.33**	**234**	PKPbc		**PKPbc**	**20 05 37.2**	**-0.6**
	0.3nm,0.5s,baz=116,slow=3.2,SNR=9.1								
WRA	**Warramunga Arr**	**150.57**	**241**	PKPbc		**PKPbc**	**20 05 39.8**	**-1.0**
	0.4nm,0.3s,baz=106,slow=2.7,SNR=17								

IDC 15 19:56:29.0±3.3, 9.90S×160.93E, h42km±24km, mb3.4/4, mb1 3.7/5, mb1mx3.4/20, mbtmp3.6/5, ML4.0/1, Error ellipse: s-maj=37.8km s-min=20.3km az=50.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**1.08**	**295**	P		Pn	19 56 46.8	-0.9
	252nm,0.3s,baz=140,slow=6.8,SNR=85							
HNR				S		Sn	19 57 01.8	+0.3
	904nm,0.3s,baz=180,slow=20,SNR=44							
DZM	**Mont Dzumac**	**13.21**	**157**	P		Pn	19 59 35.4	+1.2
	0.7nm,0.3s,baz=310,slow=16,SNR=37							
DZM				S		Sn	20 01 57.6	-2.3
	0.1nm,0.3s,baz=202,slow=19,SNR=2.1							
WRA	**Warramunga Arr**	**27.53**	**246**	P		P	20 02 12.7	+0.6
	0.7nm,0.6s,baz=76,slow=8.9,SNR=5.6							
ASAR	**Alice Springs**	**29.20**	**239**	P		P	20 02 26.0	-1.0
	0.2nm,0.4s,baz=60,slow=10,SNR=5.0							
SONM	**Songino Array**	**74.99**	**325**	P		P	20 08 06.5	+0.2
	1.1nm,0.7s,baz=132,slow=5.1,SNR=7.0							
MKAR	**Makanchi Array**	**89.47**	**318**	P		P	20 09 21.6	-0.3
	0.3nm,0.7s,baz=90,slow=7.3,SNR=4.4							

*ISCJB **15** 19:59:41.4±0.2, 56.52N±0.03×152.27W±0.04, h14km, mb4.5/87, MS4.1/3, Error ellipse: s-maj=4.3km s-min=3.3km az=160.7*

*IDC **15** 19:59:41.2±0.6, 56.48N×152.44W, h0km, mb4.3/23, mb1 4.4/26, mb1mx4.4/33, mbtmp4.3/26, ML3.7/3, MS3.7/2, Ms1 3.7/2, ms1mx3.3/38, Error ellipse: s-maj=17.5km s-min=10.9km az=22.0*

*NEIC **15** 19:59:41.7, 56.29N×152.06W, h10km, mb4.7/30, ML4.0(AEIC), After AEIC.*

*BJI **15** 19:59:42.9, 56.80N×153.16W, h10km, mB5.2/6, mb4.7/18, Ms4.9/7, Ms7 4.6/7*

*MOS **15** 19:59:45.1±1.0, 56.66N×152.47W, h33km, mb4.9/47, Error ellipse: s-maj=12.9km s-min=4.3km az=88.2*

ISC 15 19:59:43.0±0.6, 56.47N±0.05×152.29W±0.04, h14km±3km, n329, σ1§04/346, mb4.6/87, MS4.0/3, 8C-1D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHAK	**Old Harbor**	**0.93**	**324**	P		**Pb**	**20 00 00.8**	**0.0**
KDAK	**Kodiak Island**	**1.32**	**353**	P		**Pn**	**20 00 06.5**	**-0.4**
KDAK				S		**Sg**	**20 00 26.3**	**+0.6**
KDAK	**Kodiak Island**	**1.32**	**353**	Pn		**Pn**	**20 00 06.6**	**-0.4**
	40nm,0.3s,baz=185,slow=8.9,SNR=277							
KDAK				Sn		**Sg**	**20 00 24.2**	**-1.5**
	106nm,0.3s,baz=199,slow=18,SNR=13							
KABR	**Katmai Barrier**	**2.21**	**320**	P		**Pn**	**20 00 19.9**	**+0.6**
KAWH	**Katmai**	**2.35**	**326**	P		**Pn**	**20 00 22.3**	**+1.1**
KAKN	**Katmai Knife C**	**2.37**	**322**	P		**Pn**	**20 00 22.6**	**+1.2**
KCE	**Katmai Mt Cerb**	**2.37**	**320**	P		**Pn**	**20 00 22.8**	**+1.3**
KABU	**Katmai Buttres**	**2.42**	**319**	P		**Pn**	**20 00 23.8**	**+1.6**
FOSS	**Fourpeaked Sta**	**2.45**	**343**	P		**Pn**	**20 00 23.9**	**+1.3**
FONW	**Fourpeaked Sta**	**2.53**	**340**	P		**Pn**	**20 00 25.2**	**+1.6**
KELA	**Mount Kelaz**	**2.72**	**318**	P		**Pn**	**20 00 27.2**	**+1.0**
MCNL	**McNeil River**	**2.93**	**339**	P		**Pn**	**20 00 30.8**	**+1.7**
AUH	**Augustine H**	**2.96**	**348**	P		**Pn**	**20 00 31.4**	**+1.8**
AUW	**Augustine West**	**2.97**	**348**	P		**Pn**	**20 00 31.0**	**+1.4**
AUNW	**Augustine NWes**	**2.98**	**348**	P		**Pn**	**20 00 31.4**	**+1.6**
OPT	**Oil Point**	**3.23**	**351**	P		**Pn**	**20 00 34.8**	**+1.6**
ANPK	**Aniakchak Peak**	**3.24**	**279**	P		**Pn**	**20 00 32.8**	**-0.7**
ANPK				S		**Sn**	**20 01 10.9**	**-0.9**
ANNW	**Aniakchak Nort**	**3.30**	**281**	P		**Pn**	**20 00 33.9**	**-0.4**
BRLK	**Bradley Lake**	**3.38**	**12**	P		**Pn**	**20 00 34.5**	**-0.9**
BRLK				S		**Sn**	**20 01 18.5**	**+3.3**
CHGN	**Chignik**	**3.41**	**270**	*ePn*		**Pn**	**20 00 33.3**	**-2.3**
VNHG	**Veniaminof 1**	**3.83**	**269**	P		**Pn**	**20 00 41.1**	**-0.5**
SEW	**Seward**	**3.94**	**21**	P		**Pn**	**20 00 41.5**	**-1.4**
SEW				S		**Sn**	**20 01 28.2**	**-0.6**
RSO	**Redoubt South**	**4.01**	**357**	*ePn*		**Pn**	**20 00 44.3**	**+0.2**
DFR	**Drift River**	**4.14**	**357**	P		**Pn**	**20 00 46.3**	**+0.5**
MID	**Middleton Isla**	**4.34**	**44**	*eP*		Pn	20 00 44.7	-3.7
MID	**Middleton Isla**	**4.34**	**44**	*ePn*		Pn	20 00 44.7	-3.7
SPU	**Mount Spurr**	**4.73**	**1**	P		**Pn**	**20 00 53.4**	**-0.3**
CKL	**Chakachamna La**	**4.74**	**360**	P		**Pn**	**20 00 54.2**	**+0.2**
SDPT	**Sand Point**	**4.74**	**260**	P		**Pn**	**20 00 52.4**	**-1.9**
SVW2	**Sparrevohn**	**4.95**	**341**	P		**Pn**	**20 00 57.6**	**+0.8**
STLK	**Strandline Lak**	**5.05**	**2**	P		**Pn**	**20 00 59.2**	**+1.0**
EYAK	**Cordova Ski Ar**	**5.33**	**37**	P		**Pn**	**20 01 01.2**	**-0.8**
PMR	**Palmer**	**5.39**	**16**	*eP*		**Pn**	**20 01 01.1**	**-1.7**
PMR					pmax	pmax		
	comp=Z,117nm,1.3s							
PMR	**Palmer**	**5.39**	**16**	*ePn*		**Pn**	**20 01 01.1**	**-1.7**
	comp=Z,117nm,1.3s							
VLZ	**Valdez**	**5.60**	**31**	P		**Pn**	**20 01 05.0**	**-0.8**
SML	**Sawmill**	**5.73**	**19**	*eP*		**Pn**	**20 01 06.5**	**-1.0**
SML	**Sawmill**	**5.73**	**19**	*ePn*		**Pn**	**20 01 06.5**	**-1.0**
DIV	**Divide**	**5.77**	**33**	*ePn*		**Pn**	**20 01 07.0**	**-1.1**
	comp=Z,36nm,0.7s							
DIV				*eSn*		**Sn**	**20 02 09.3**	**-4.7**
PPLA	**Purkeypile**	**6.45**	**0**	P		**Pn**	**20 01 17.7**	**+0.3**
VRDI	**Verde Repeater**	**6.61**	**40**	P		**Pn**	**20 01 18.6**	**-1.2**
TT01	**Tatalina**	**6.72**	**345**	P		**Pn**	**20 01 21.4**	**+0.2**
KIAG	**Kiagna River**	**6.83**	**45**	P		**Pn**	**20 01 21.8**	**-1.0**
BALM	**Baldy**	**6.90**	**44**	P		**Pn**	**20 01 23.1**	**-0.6**
BALM	**Baldy**	**6.90**	**44**	P		**Pn**	**20 01 23.1**	**-0.6**
GRNC	**Granite Creek**	**6.96**	**48**	P		**Pn**	**20 01 23.2**	**-1.4**
HARP	**HAARP**	**6.97**	**28**	P		**Pn**	**20 01 24.3**	**-0.3**
DHY	**Denali Highway**	**7.07**	**18**	P		**Pn**	**20 01 25.6**	**-0.5**
TRF	**Thorofare Moun**	**7.07**	**7**	P		**Pn**	**20 01 25.6**	**-0.5**
RND	**Reindeer**	**7.17**	**12**	P		**Pn**	**20 01 27.1**	**-0.2**
RND	**Reindeer**	**7.17**	**12**	P		**Pn**	**20 01 27.1**	**-0.2**
BARN	**Barnard Glacie**	**7.19**	**46**	P		**Pn**	**20 01 26.2**	**-1.5**
PAX	**Paxson**	**7.37**	**25**	P		**Pn**	**20 01 29.3**	**-0.8**
PAX	**Paxson**	**7.37**	**25**	P		**Pn**	**20 01 29.3**	**-0.8**
MCK	**McKinley**	**7.47**	**12**	P		**Pn**	**20 01 31.2**	**-0.2**
MCK	**McKinley**	**7.47**	**12**	P		**Pn**	**20 01 31.2**	**-0.2**
PNL	**Peninsula**	**7.55**	**60**	P		**Pn**	**20 01 30.2**	**-2.3**
MENT	**Mentasta**	**7.79**	**30**	*ePn*		**Pn**	**20 01 34.5**	**-1.3**
DDM	**Donnelly Dome**	**8.00**	**21**	P		**Pn**	**20 01 37.9**	**-0.9**
AKUT	**Akutan**	**8.04**	**259**	Pn		**Pn**	**20 01 38.0**	**-1.2**
DOT	**Dot Lake**	**8.29**	**26**	*ePn*		**Pn**	**20 01 40.9**	**-1.6**
	comp=Z,24nm,1.1s							
WRH	**Wood River Hil**	**8.29**	**13**	P		**Pn**	**20 01 42.1**	**-0.4**
BCA3	**Beaver Creek A**	**8.46**	**34**	P		**Pn**	**20 01 42.6**	**-2.5**
CCB	**Clear Creek Bu**	**8.49**	**13**	P		**Pn**	**20 01 44.2**	**-1.1**
UNV	**Unalaska Valle**	**8.55**	**258**	*ePn*		**Pn**	**20 01 45.1**	**-1.1**
COLA	**College**	**8.70**	**13**	*eP*		**Pn**	**20 01 47.7**	**-0.6**
COLA					pmax	pmax		
	comp=Z,17nm,0.9s							
COLA	**College**	**8.70**	**13**	*ePn*		**Pn**	**20 01 47.7**	**-0.6**
	comp=Z,16nm,0.9s							
ILAR	**Eielson Array**	**8.74**	**15**	Pn		**Pn**	**20 01 48.0**	**-0.7**
ILAR				Sn		**Sn**	**20 03 24.1**	**-2.8**
ILAR	**Eielson Array**	**8.74**	**15**	Pn		**Pn**	**20 01 48.0**	**-0.7**
	comp=Z,3.6nm,0.3s,baz=202,slow=13,SNR=148							
ILAR				Sn		**Sn**	**20 03 24.1**	**-2.8**
	comp=Z,0.4nm,0.3s,baz=201,slow=25,SNR=3.3							
IL1	**Eielson Array**	**8.74**	**15**	P		**Pn**	**20 01 47.0**	**-1.7**
MDM	**Murphy Dome**	**8.74**	**11**	P		**Pn**	**20 01 48.0**	**-0.9**
SKAG	**Skagway**	**9.49**	**65**	Pn		**Pn**	**20 01 58.7**	**-0.4**
	comp=Z,18nm,0.6s							
IM3	**Indian Mountai**	**9.57**	**356**	P		**Pn**	**20 01 59.6**	**-0.5**
COLD	**Coldfoot**	**10.84**	**4**	*ePn*		**Pn**	**20 02 16.1**	**-1.3**
TNA	**Tin City**	**11.81**	**327**	*ePn*		**Pn**	**20 02 32.9**	**+2.1**
	comp=Z,6.0nm,0.4s							
DIB	**Dawson Inlet,**	**11.87**	**98**	T		T	20 14 43.0	
	SNR=25							
GAMB	**Gambell**	**12.09**	**315**	*ePn*		**Pn**	**20 02 35.2**	**+0.7**
	comp=Z,9.4nm,1.0s							
DLBC	**Dease Lake**	**12.14**	**71**	*ePn*		**Pn**	**20 02 36.3**	**+1.0**
DLBC	**Dease Lake**	**12.14**	**71**	Pn		**Pn**	**20 02 37.1**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=252,slow=13,SNR=3.3							
INK	**Inuvik**	**14.62**	**28**	Pn		**Pn**	**20 03 09.4**	**+0.3**
INK	**Inuvik**	**14.62**	**28**	Pn		**Pn**	**20 03 09.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=199,slow=16,SNR=10							
INK					LR	LR	20 09 17.6	
	comp=Z,234nm,19.2s,baz=229,slow=39							
YKW3	**Yellowknife Ar**	**19.83**	**57**	*eP*		**P**	**20 04 11.6**	**-1.2**
	comp=Z,0.2nm,1.1s					

HHC					PP	**PP**	20 12 04.8	+2.2
HHC					S	**S**	20 18 00.3	-3.0
HHC					ScS	SKKSac	20 19 36.6	-3.5
HHC					SS	**SS**	20 21 59.4	-0.4
HHC					pmax	pmax		
	comp=Z,28nm,0.6s							
HHC					LR	LR		
	comp=N,240nm,13.1s							
HHC					LR	LR		
	comp=E,670nm,13.1s							
HHC					LR	LR		
	comp=Z,250nm,15.5s							
NVS	**Novosibirsk**	60.20	327		*e*P	**P**	20 09 47.6	-2.3
NVS					pmax	pmax		
	comp=Z,12nm,1.0s							
NVS					pmax	pmax		
	comp=E,4.0nm,0.9s							
ZAA0	**Zalesovo Array**	60.47	325		*e*P	**P**	20 09 51.4	-0.3
ZALV	**Zalesovo Beam**	60.47	325		P	**P**	20 09 52.0	+0.2
ZALV	**Zalesovo Beam**	60.47	325		P	**P**	20 09 52.0	+0.2
ZALV	**Zalesovo Beam**	60.47	325		P	**P**	20 09 52.0	+0.2
	comp=E,6.5nm,0.8s,baz=30,slow=7.0,SNR=36							
JOF	**Joensuu**	60.91	358		*e*P	**P**	20 09 54.0	-0.6
JOF					pmax	pmax		
	comp=Z,5.0nm,0.6s							
JOF	**Joensuu**	60.91	358		*e*p	**P**	20 09 54.0	-0.6
	comp=Z,4.6nm,0.6s							
KAF	**Kangasniemi**	61.75	1		*e*P	**P**	20 09 59.4	-0.8
KAF					pmax	pmax		
	comp=Z,4.0nm,0.6s							
KAF	**Kangasniemi**	61.75	1		*e*p	**P**	20 09 59.4	-0.8
	comp=Z,4.0nm,0.6s							
SOKR	**Solikamsk**	62.02	344		*e*P	**P**	20 10 02.1	0.0
SOKR					pmax	pmax		
	comp=Z,10.0nm,0.8s							
NB2	**NORSAR Subarra**	62.11	9		P	**P**	20 10 03.0	+0.2
	comp=Z,0.6nm,0.7s,baz=352,slow=6.9							
NOA	**NORSAR Array B**	62.11	9		P	**P**	20 10 03.1	+0.3
NOA	**NORSAR Array B**	62.11	9		P	**P**	20 10 03.1	+0.3
	comp=Z,5.3nm,0.8s,baz=350,slow=6.7,SNR=25							
NAO01	**NORSAR Array S**	62.27	9		*e*P	**P**	20 10 03.2	-0.6
	comp=Z,7.1nm,0.8s							
FINES	**FINESS Array B**	62.42	1		P	**P**	20 10 05.2	+0.5
FINES	**FINESS Array B**	62.42	1		P	**P**	20 10 05.2	+0.5
	comp=Z,6.6nm,0.8s,baz=2.0,slow=8.8,SNR=24							
ARU	**Arti**	64.72	342	*c*	*i*P	**P**	20 10 19.6	-0.4
ARU							20 12 39.0	
ARU					S	**S**	20 19 01.3	+1.9
ARU					pmax	pmax		
	comp=Z,11nm,1.2s							
KURK	**Kurchatov**	65.18	327		*e*P	**P**	20 10 21.9	-1.2
KURK					pmax	pmax		
	comp=Z,9.0nm,1.5s							
BRVK	**Borovoye**	65.38	333		*e*P	**P**	20 10 24.0	-0.4
BRVK					pmax	pmax		
	comp=Z,6.0nm,1.1s							
BRVK	**Borovoye**	65.38	333		*e*P	**P**	20 10 23.9	-0.4
	comp=Z,5.7nm,1.1s							
VSU	**Vasula**	65.41	1	*c*	*i*P	**P**	20 10 24.7	+0.2
VSU					pmax	pmax		
	comp=Z,29nm,1.1s							
GTA	**Gaotai**	66.80	307		*e*P	**P**	20 10 34.0	+0.1
GTA					pP	**pP**	20 10 38.3	-0.3
GTA					sP	**sP**	20 10 41.3	+0.9
GTA					pmax	pmax		
	comp=Z,4.0nm,0.9s							
MK31	**Makanchi Array**	67.45	323		*e*P	**P**	20 10 37.0	-0.8
MK31	**Makanchi Array**	67.45	323		*e*P	**P**	20 10 37.0	-0.8
MKAR	**Makanchi Array**	67.45	323	*ce*	P	**P**	20 10 37.2	-0.5
MKAR					pmax	pmax		
	comp=Z,4.0nm,0.9s							
MKAR	**Makanchi Array**	67.45	323		P	**P**	20 10 37.3	-0.5
MKAR	**Makanchi Array**	67.45	323		P	**P**	20 10 37.3	-0.5
	comp=Z,3.5nm,0.9s,baz=42,slow=7.1,SNR=20							
LZH	**Lanzhou**	67.66	302		*e*P	P	20 10 49.4	+10
LZH					pP	pP	20 10 54.1	+10
LZH					sP	sP	20 10 56.5	+11
LZH					pmax	pmax		
	comp=Z,18nm,1.2s							
WMQ	**Urumqi**	68.10	318		*e*P	**P**	20 10 43.3	+1.3
OBN	**Obninsk**	68.54	355	*c*	*i*P	**P**	20 10 44.1	-0.3
OBN					pmax	pmax		
	comp=Z,18nm,1.2s							
AKTO	**Aktyubinsk**	70.54	340		*i* P	**P**	20 10 55.3	-1.6
AKTO					pmax	pmax		
	comp=Z,1.0nm,1.0s							
AB31	**Akbulak array**	71.28	338		*i* P	**P**	20 11 01.0	-0.4
AB31					pmax	pmax		
	comp=Z,1.0nm,0.3s							
ABKAR	**Akbulak array**	71.28	338		*e*P	**P**	20 11 01.0	-0.4
	comp=Z,4.3nm,0.8s							
CLL	**Collm**	71.90	10		*e*P	**P**	20 11 06.0	+0.9
CLL					pmax	pmax		
	comp=Z,5.0nm,0.8s							
CLL	**Collm**	71.90	10		*e*P	**P**	20 11 06.0	+0.9
	comp=Z,5.0nm,0.8s							
BAIF	**Baives**	72.06	16		*e*P	**P**	20 11 06.8	+0.8
	comp=Z,11nm,0.8s							
BAIF	**Baives**	72.06	16		*e*P	**P**	20 11 06.8	+0.8
BAIF					pmax	pmax		
	comp=Z,11nm,0.8s							
BAIF	**Baives**	72.06	16		*e*P	**P**	20 11 06.8	+0.8
	comp=Z,11nm,0.8s							
GIVF	**Givet**	72.11	15		*e*P	**P**	20 11 07.0	+0.7
	comp=Z,19nm,0.9s							
GIVF	**Givet**	72.11	15		*e*P	**P**	20 11 07.0	+0.7
GIVF					pmax	pmax		
	comp=Z,19nm,0.9s							
GIVF	**Givet**	72.11	15		*e*P	**P**	20 11 07.0	+0.7
	comp=Z,19nm,0.9s							
VRHR	**Novokhopersk**	72.18	351		*e*P	P	20 11 03.1	-3.6
VRHR					pmax	pmax		
	comp=N,8.0nm,0.7s							
VRHR					pmax	pmax		
	comp=Z,8.0nm,0.7s							
VRHR					pmax	pmax		
	comp=E,1.0nm,0.3s							
VSR	**Storozhevoye**	72.26	352		*e*P	**P**	20 11 06.7	-0.5
VSR					pmax	pmax		
	comp=N,2.0nm,0.8s							
VSR					pmax	pmax		
	comp=E,4.0nm,0.8s							
VSR					pmax	pmax		
	comp=Z,8.0nm,0.8s							
ROSF	**Rostrenen**	72.41	21		*e*P	**P**	20 11 09.3	+1.1
ROSF	**Rostrenen**	72.41	21		*e*P	**P**	20 11 09.3	+1.1
ROSF	**Rostrenen**	72.41	21		*e*P	**P**	20 11 09.3	+1.1
BRG	**Berggiesshubel**	72.42	9		*e*P	**P**	20 11 08.8	+0.6
	comp=Z,7.1nm,1.2s							
BRG	**Berggiesshubel**	72.42	9		*e*P	**P**	20 11 08.8	+0.6
BRG					pmax	pmax		
	comp=Z,7.0nm,1.2s							
VORD	**Divnogorie**	72.50	352		*e*P	**P**	20 11 08.0	-0.6
VORD					pmax	pmax		
	comp=N,9.0nm,0.7s							
VORD					pmax	pmax		
	comp=E,7.0nm,0.7s							
VORD					pmax	pmax		
	comp=Z,6.0nm,0.7s							
FLN	**La Foliniere**	72.53	19		*e*P	**P**	20 11 09.3	+0.4
FLN	**La Foliniere**	72.53	19		*e*P	**P**	20 11 09.3	+0.4
FLN	**La Foliniere**	72.53	19		*e*P	**P**	20 11 09.3	+0.4
SGMF	**Saint Gilles**	72.63	21		*e*P	**P**	20 11 10.2	+0.7
	comp=Z,40nm,1.0s							
SGMF	**Saint Gilles**	72.63	21		*e*P	**P**	20 11 10.2	+0.7
SGMF					pmax	pmax		
	comp=Z,40nm,1.0s							
SGMF	**Saint Gilles**	72.63	21		*e*P	**P**	20 11 10.2	+0.7
	comp=Z,40nm,1.0s							
LDF	**La Druitiere**	72.76	19		*e*P	**P**	20 11 10.5	+0.2
LDF	**La Druitiere**	72.76	19		*e*P	**P**	20 11 10.5	+0.2
LDF	**La Druitiere**	72.76	19		*e*P	**P**	20 11 10.5	+0.2
PVCC	**Panska Ves**	72.81	9		*e*P	**P**	20 11 11.4	+0.9
PVCC	**Panska Ves**	72.81	9		*e*P	**P**	20 11 11.4	+0.9
GRR	**Gorron**	72.83	19		*e*P	**P**	20 11 11.3	+0.7
GRR	**Gorron**	72.83	19		*e*P	**P**	20 11 11.3	+0.7
GRR	**Gorron**	72.83	19		*e*P	**P**	20 11 11.3	+0.7
QUIF	**Quistinic**	72.83	21		*e*P	**P**	20 11 11.2	+0.5
QUIF	**Quistinic**	72.83	21		*e*P	**P**	20 11 11.2	+0.5
QUIF	**Quistinic**	72.83	21		*e*P	**P**	20 11 11.2	+0.5
NKC	**Novy Kostel**	72.91	10		*e*P	**P**	20 11 11.9	+0.7
NKC	**Novy Kostel**	72.91	10		*e*P	**P**	20 11 11.9	+0.7
UPC	**Upice**	72.95	8		*e*P	**P**	20 11 12.3	+0.9
UPC	**Upice**	72.95	8		*e*P	**P**	20 11 12.3	+0.9
UPC					*ep*P	**pP**	20 11 16.5	+0.4
TKM2	**Tokmak 2**	73.08	325		*i* P	**P**	20 11 12.9	+0.4
TKM2					pmax	pmax		
	comp=Z,6.0nm,1.0s							
TKM2	**Tokmak 2**	73.08	325		*e*P	**P**	20 11 12.8	+0.2
	comp=Z,5.7nm,1.0s							
DPC	**Dobruska-Polom**	73.13	8		*e*P	**P**	20 11 13.4	+0.9
DPC	**Dobruska-Polom**	73.13	8		*e*P	**P**	20 11 13.4	+0.9
DPC					*ep*P	**pP**	20 11 17.8	+0.6
AKASG	**Malin Array Be**	73.19	359		P	**P**	20 11 12.5	-0.2
AKASG	**Malin Array Be**	73.19	359		P	**P**	20 11 12.5	-0.2
AKASG	**Malin Array Be**	73.19	359		P	**P**	20 11 12.5	-0.2
	comp=Z,4.8nm,0.5s,baz=4.2,slow=5.9,SNR=27							
AK01	**Malin Array Si**	73.20	359		*e*P	**P**	20 11 12.3	-0.5
AK02	**Malin Array Si**	73.23	359		*e*P	**P**	20 11 12.5	-0.5
PRU	**Pruhonice**	73.34	9		*e*P	**P**	20 11 14.8	+1.1
PRU	**Pruhonice**	73.34	9		*e*P	**P**	20 11 14.8	+1.1
AAK	**Ala-Archa**	73.68	326	*c*	*i*P	**P**	20 11 16.3	+0.3
AAK					pmax	pmax		
	comp=Z,18nm,1.6s							
AAK	**Ala-Archa**	73.68	326		*e*P	**P**	20 11 16.4	+0.3
	comp=Z,4.4nm,1.1s							
MEZF	**Maizieres J'vi**	73.70	15		*e*P	**P**	20 11 16.5	+0.7
MEZF	**Maizieres J'vi**	73.70	15		*e*P	**P**	20 11 16.5	+0.7
PAGF	**Fort de Pagny**	73.75	15		*e*P	**P**	20 11 17.1	+1.0
	comp=Z,4.8nm,0.9s							
PAGF	**Fort de Pagny**	73.75	15		*e*P	**P**	20 11 17.1	+1.0
	comp=Z,4.8nm,0.9s							
OKC	**Ostrava-Krasne**	73.76	6		*e*P	**P**	20 11 16.7	+0.6
OKC	**Ostrava-Krasne**	73.76	6		*e*P	**P**	20 11 16.7	+0.6
EKS2	**Erkin-Say**	73.88	326		*e*P	**P**	20 11 17.7	+0.6
EKS2					pmax	pmax		
	comp=Z,4.0nm,0.9s							
EKS2	**Erkin-Say**	73.88	326		*e*P	**P**	20 11 17.7	+0.6
	comp=Z,3.8nm,0.9s							
SFTF	**Sexfontaines**	73.99	16		*e*P	**P**	20 11 17.9	+0.4
SFTF	**Sexfontaines**	73.99	16		*e*P	**P**	20 11 17.9	+0.4
CDF	**Champ du Feu**	74.10	14		*e*P	**P**	20 11 19.2	+0.9
CDF	**Champ du Feu**	74.10	14		*e*P	**P**	20 11 19.2	+0.9
CDF	**Champ du Feu**	74.10	14		*e*P	**P**	20 11 19.2	+0.9
KHC	**Kasperske Hory**	74.11	10		*e*P	**P**	20 11 19.4	+1.1
KHC	**Kasperske Hory**	74.11	10		*e*P	**P**	20 11 19.4	+1.1
KHC					*ep*P	**pP**	20 11 23.8	+0.8
HAU	**Haudompre**	74.37	15		*e*P	**P**	20 11 20.4	+0.6
HAU	**Haudompre**	74.37	15		*e*P	**P**	20 11 20.4	+0.6
HAU	**Haudompre**	74.37	15		*e*P	**P**	20 11 20.4	+0.6
GERES	**GERESS Array B**	74.40	10		P	**P**	20 11 20.9	+0.9
	comp=Z,1.7nm,0.7s,baz=351,slow=4.3,SNR=21							
KK31	**Karatay Array**	74.44	329		*i* P	**P**	20 11 20.1	-0.2
KK31					pmax	pmax		
	comp=Z,4.0nm,0.7s							
KKAR	**Karatay Array**	74.44	329		*e*P	**P**	20 11 19.5	-0.8
KKAR					pmax	pmax		
	comp=Z,3.0nm,0.8s							
KKAR	**Karatay Array**	74.44	329		*e*P	**P**	20 11 19.5	-0.8
	comp=Z,3.0nm,0.8s							
HINF	**Hinteralfeld**	74.63	14		*e*P	**P**	20 11 21.8	+0.5
HINF	**Hinteralfeld**	74.63	14		*e*P	**P**	20 11 21.8	+0.5
HINF	**Hinteralfeld**	74.63	14		*e*P	**P**	20 11 21.8	+0.5
MFF	**Saint Martin d**	74.68	20		*e*P	**P**	20 11 22.2	+0.7
	comp=Z,18nm,0.9s							
MFF	**Saint Martin d**	74.68	20		*e*P	**P**	20 11 22.2	+0.7
MFF					pmax	pmax		
	comp=Z,18nm,0.9s							
MFF	**Saint Martin d**	74.68	20		*e*P	**P**	20 11 22.2	+0.7
	comp=Z,18nm,0.9s							
LOR	**Lormes**	74.72	17		*e*P	**P**	20 11 22.4	+0.6
	comp=Z,14nm,0.8s							
LOR	**Lormes**	74.72	17		*e*P	**P**	20 11 22.4	+0.6
	comp=Z,14nm,0.8s							
CRVS	**Cervenica-Dubn**	74.86	4		*e*P	**P**	20 11 21.7	-0.9
CRVS					pmax	pmax		
	comp=Z,5.0nm,1.3s							
CRVS	**Cervenica-Dubn**	74.86	4		*e*P	**P**	20 11 21.7	-0.9
KOLS	**Kolonicke sedl**	74.86	4		*e*P	**P**	20 11 21.3	-1.3
KOLS					pmax	pmax		
	comp=Z,2.0nm,1.3s							
KOLS	**Kolonicke sedl**	74.86	4		*e*P	**P**	20 11 21.3	-1.3
SSF	**Saint Saulge**	74.86	17		*e*P	**P**	20 11 23.3	+0.7
	comp=Z,19nm,0.9s							
SSF	**Saint Saulge**	74.86	17		*e*P	**P**	20 11 23.3	+0.7
SSF					pmax	pmax		
	comp=Z,19nm,0.9s							
SSF	**Saint Saulge**	74.86	17		*e*P	**P**	20 11 23.3	+0.7
	comp=Z,19nm,0.9s							
AVF	**Avril sur Loir**	75.10	17		*e*P	**P**	20 11 24.4	+0.4
	comp=Z,7.5nm,0.5s							
AVF	**Avril sur Loir**	75.10	17		*e*P	**P**	20 11 24.4	+0.4
AVF					pmax	pmax		
	comp=Z,8.0nm,0.5s							
AVF	**Avril sur Loir**	75.10	17		*e*P	**P**	20 11 24.4	+0.4
	comp=Z,7.5nm,0.5s							
VYHS	**Vyhne**	75.14	6		*e*P	**P**	20 11 24.7	+0.5
VYHS					pmax	pmax		
	comp=Z,2.0nm,1.0s							
VYHS	**Vyhne**	75.14	6		*e*P	**P**	20 11 24.7	+0.5
BGF	**Bois d'Agland**	75.25	17		*e*P	**P**	20 11 25.3	+0.4
	comp=Z,8.4nm,0.6s							
BGF	**Bois d'Agland**	75.25	17		*e*P	**P**	20 11 25.3	+0.4
BGF					pmax	pmax		
	comp=Z,8.0nm,0.6s							
BGF	**Bois d'Agland**	75.25	17		*e*P	**P**	20 11 25.3	+0.4
	comp=Z,8.4nm,0.6s							
SMF	**Signal de Mont**	75.32	17		*e*P	**P**	20 11 25.6	+0.3
SMF	**Signal de Mont**	75.32	17		*e*P	**P**	20 11 25.6	+0.3
SMF	**Signal de Mont**	75.32	17		*e*P	**P**	20 11 25.6	+0.3
CABF	**La Chapelle**	75.70	15		*e*P	**P**	20 11 28.6	+1.0
CABF	**La Chapelle**	75.70	15		*e*P	**P**	20 11 28.6	+1.0
CABF	**La Chapelle**	75.70	15		*e*P	**P**	20 11 28.6	+1.0
KSH	**Kashi**	76.03	324		P	P	20 11 33.3	+3.7
KSH					*ep*P	pP	20 11 37.8	+3.4
KSH					*es*P	sP	20 11 40.5	+4.4
KSH					*ePcP*	**PcP**	20 11 44.9	+3.0
KSH					*e*PP	PP	20 14 26.0	+6.5
KSH					*e*S	**S**	20 21 15.5	+3.3
KSH					*e*SKS	**SKSac**	20 21 39.3	-0.5
KSH					*e*ScS	**ScS**	20 21 45.3	+1.6
KSH					pmax	pmax		
	comp=Z,5.0nm,0.5s							
KSH					pmax	pmax		
	comp=Z,53nm,4.3s							
KSH					LR	LR		
	comp=N,79nm,6.9s							
KSH					LR	LR		
	comp=E,100nm,5.6s							
KSH					LR	LR		
	comp=Z,130nm,5.5s							
BUR08	**Bucovina Ar. S**	76.23	2		*e*P	**P**	20 11 30.2	-0.4
RJF	**Les Rejaudoux**	76.23	19		*e*P	**P**	20 11 30.7	+0.2
	comp=Z,12nm,0.8s							
RJF	**Les Rejaudoux**	76.23	19		*e*P	**P**	20 11 30.7	+0.2
RJF					pmax	pmax		
	comp=Z,12nm,0.8s							
RJF	**Les Rejaudoux**	76.23	19		*e*P	**P**	20 11 30.7	+0.2
	comp=Z,12nm,0.8s							
LFF	**La Frestale**	76.44	19		*e*P	**P**	20 11 32.5	+0.8
LFF	**La Frestale**	76.44	19		*e*P	**P**	20 11 32.5	+0.8
LFF	**La Frestale**	76.44	19		*e*P	**P**	20 11 32.5	+0.8
CAF	**Calviac**	76.70	18		*e*P	**P**	20 11 33.6	+0.4
CAF	**Calviac**	76.70	18		*e*P	**P**	20 11 33.6	+0.4
CAF	**Calviac**	76.70	18		*e*P	**P**	20 11 33.6	+0.4
LPG	**La Plagne**	76.89	15		*e*P	**P**	20 11 36.1	+1.5
LPG	**La Plagne**	76.89	15		*e*P	**P**	20 11 36.1	+1.5
LPG	**La Plagne**	76.89	15		*e*P	**P**	20 11 36.1	+1.5
VIVF	**Saint-Julien-l**	77.20	17		*e*P	**P**	20 11 36.8	+0.8
VIVF	**Saint-Julien-l**	77.20	17		*e*P	**P**	20 11 36.8	+0.8
VIVF	**Saint-Julien-l**	77.20	17		*e*P	**P**	20 11 36.8	+0.8
MBDF	**Montbardon**	77.64	15		*e*P	**P**	20 11 40.1	+1.4
MBDF	**Montbardon**	77.64	15		*e*P	**P**	20 11 40.1	+1.4
MBDF	**Montbardon**	77.64	15		*e*P	**P**	20 11 40.1	+1.4
LASF	**Ste Croix**	77.83	17		*e*P	**P**	20 11 39.8	+0.3
LASF	**Ste Croix**	77.83	17		*e*P	**P**	20 11 39.8	+0.3
ETSF	**Etsaut**	78.17	21		*e*P	**P**	20 11 42.7	+1.2
	comp=Z,9.7nm,0.7s							
ETSF	**Etsaut**	78.17	21		*e*P	**P**	20 11 42.7	+1.2
ETSF					pmax	pmax		
	comp=Z,10.0nm,0.7s							
ETSF	**Etsaut**	78.17	21		*e*P	**P**	20 11 42.7	+1.2
	comp=Z,9.7nm,0.7s							
MTLF	**Montolieu**	78.26	19		*e*P	**P**	20 11 42.5	+0.6
	comp=Z,17nm,1.0s							
MTLF	**Montolieu**	78.26	19		*e*P	**P**	20 11 42.5	+0.6
MTLF					pmax	pmax		
	comp=Z,17nm,1.0s							
MTLF	**Montolieu**	78.26	19		*e*P	**P**	20 11 42.5	+0.6
	comp=Z,17nm,1.0s							
LSA	**Lhasa**	78.80	308		*e*P	**P**	20 11 45.9	+0.2
LSA					pmax	pmax		
	comp=Z,5.0nm,1.1s							
LSA	**Lhasa**	78.80	308		*e*P	**P**	20 11 45.9	+0.2
	comp=Z,4.6nm,1.1s							
KIV	**Kislovodsk**	79.15	349	*c*	*i*P	**P**	20 11 47.4	+0.5
KIV					*e*		20 11 51.1	
KIV					pmax	pmax		
	comp=Z,9.0nm,1.1s							
KBZ	**Khabaz**	79.35	349		P	**P**	20 11 49.1	+1.2
KBZ	**Khabaz**	79.35	349		P	**P**	20 11 49.1	+1.2
KBZ	**Khabaz**	79.35	349		P	**P**	20 11 49.1	+1.2
	comp=Z,4.6nm,0.9s,baz=334,slow=3.8,SNR=12							
SOC	**Sochi**	79.80	351		*e*P	**P**	20 11 49.9	-0.4
SOC					pmax	pmax		
	comp=Z,13nm,0.8s							
ZEI	**Tsey**	80.19	348		*e*P	**P**	20 11 52.2	-0.5
ZEI					pmax	pmax		
	comp=Z,5.0nm,1.0s							
ESDC	**Sonseca Array**	80.53	24		P	**P**	20 11 55.7	+1.3
ESDC	**Sonseca Array**	80.53	24		P	**P**	20 11 55.7	+1.3
	comp=Z,2.6nm,0.7s,baz=342,slow=4.8,SNR=16							
TAPN	**Taplejung**	82.34	309		*e*P	**P**	20 12 04.1	-0.4
	comp=Z,22nm,1.1s							
GUN	**Gumba**	82.63	311		*e*P	**P**	20 12 05.8	-0.3
	comp=Z,42nm,1.2s							
ODAN	**Odare**	82.90	309		*e*P	**P**	20 12 06.8	-0.6
	comp=Z,19nm,1.2s							
KKN	**Kakani**	82.98	311		*e*P	**P**	20 12 07.5	-0.3
	comp=Z,14nm,1.1s							
DANN	**Dangsing**	83.12	313		*e*P	**P**	20 12 09.0	+0.5
	comp=Z,45nm,0.9s							
PKI	**Pulchoki**	83.12	311		*e*P	**P**	20 12 08.3	-0.3
	comp=Z,11nm,0.6s							
PKIN	**Phulchoki**	83.12	311		*e*P	**P**	20 12 07.5	-1.0
	comp=Z,36nm,1.7s							
RAMN	**Ramite**	83.16	310		*e*P	**P**	20 12 08.6	-0.1
	comp=Z,28nm,0.8s							
DMN	**Daman**	83.22	311		*e*P	**P**	20 12 08.3	-0.7
	comp=Z,108nm,2.0s							
PYUN	**Piuthan**	83.65	313		*e*P	**P**	20 12 11.0	-0.2
	comp=Z,42nm,1.0s							
BR131	**Keskin Array S**	84.04	355		*e*P	**P**	20 12 12.3	-0.6
	comp=Z,3.2nm,0.9s							
BRTR	**Keskin Array B**	84.04	355		P	**P**	20 12 13.0	+0.1
BRTR	**Keskin Array B**	84.04	355		P	**P**	20 12 13.0	+0.1
	comp=Z,2.5nm,0.9s,baz=28,slow=3.2,SNR=16							
CMAR	**Chiang Mai Arr**	84.70	296		P	**P**	20 12 16.0	-0.4
CMAR	**Chiang Mai Arr**	84.70	296		P	**P**	20 12 16.0	-0.4
	comp=Z,2.1nm,1.0s,baz=18,slow=5.2,SNR=17							

JMA 15 20:03:31.5±0.3, 43.38N×147.62E, h5km, M3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.37**	**270**	P		Pn 20 03 57.1	-0.1
NEM2				*e*S		Sb 20 04 15.1	-0.2
JRA	**Rausu**	**1.90**	**288**	P		Pn 20 04 04.8	+0.3
JNK	**Nakash**	**2.12**	**277**	P		Pn 20 04 07.5	-0.1
JAK	**Akkeshi**	**2.17**	**261**	P		Pn 20 04 08.7	+0.4
JAK				*e*S		Sn 20 04 35.6	+0.1
JTKR	**Abashiri--Toko**	**2.76**	**284**	P		Pn 20 04 17.4	+1.1
JAR	**Ashorobuto**	**2.81**	**270**	P		Pn 20 04 18.3	+1.2
JOB	**Onbets**	**2.81**	**262**	P		Pn 20 04 18.0	+0.9
JCH	**Churui**	**3.22**	**258**	P		Pn 20 04 23.5	+0.9
JCH				*e*S		Sn 20 05 00.6	-0.7
JEM	**Erimo**	**3.56**	**249**	P		Pn 20 04 30.3	+2.9
JKK2	**Kamakawa 2**	**3.57**	**280**	P		Pn 20 04 30.9	+3.3
JFR	**Furan**	**3.68**	**268**	P		Pn 20 04 31.3	+2.3
JNBK	**Urakawa-nobuka**	**3.75**	**255**	P		Pn 20 04 31.0	+1.1

*ISCJB **15** 20:03:50.9±0.7, 56.39N±0.05×152.00W±0.08, h18km, mb

BDR	**Baidarnaya**	**1.35**	**285**	*e*P	Pn	20 08 17.8	-0.3
BDR				*i* S	Sg	20 08 36.5	0.0
SRKR	**Sorokina**	**1.39**	**288**	*e*P	Pn	20 08 18.9	+0.3
SRKR				*i* S	Sg	20 08 38.4	+0.6
ZLN	**Zelenaya**	**1.57**	**263**	*e*P	Pb	20 08 21.7	-0.5
ZLN				*i* S	Sb	20 08 42.2	0.0
CIRR	**Tsirk**	**1.58**	**266**	*e*P	Pg	20 08 23.9	+0.5
LGNR	**Loginova**	**1.62**	**265**	*e*P	Pn	20 08 21.6	-0.4
LGNR				*i* S	Sn	20 08 42.2	-1.1
KLY	**Klyuchi**	**1.63**	**273**	*e*P	Pn	20 08 20.4	-1.3
KLY				*i* S	Sn	20 08 40.1	-2.8
BZGR	**Bezymyannyi-Gr**	**1.64**	**260**	*e*P	Pb	20 08 23.1	-0.3
BZGR				*i* S	Sg	20 08 45.1	-0.7
KRSR	**Krestovskiy**	**1.68**	**270**	*e*P	Pb	20 08 23.4	-0.7
KRSR				*i* S	Sb	20 08 45.3	-0.1
BKI	**Bering**	**1.72**	**127**	*e*P	Pn	20 08 21.7	-1.2
BKI				*i* S	Sn	20 08 42.8	-2.2
BZWR	**Bezymyannyi-We**	**1.75**	**262**	*e*P	Pb	20 08 24.5	-0.8
BZWR				*i* S	Sb	20 08 48.3	+0.8
BZMR	**Bezymyannaya**	**1.75**	**261**	*e*P	Pn	20 08 24.1	+0.4
BZMR				*i* S	Sb	20 08 47.7	0.0
KIRR	**Kirishev**	**1.83**	**262**	*e*P	Pb	20 08 26.4	-0.4
KPT	**Kopyto**	**1.90**	**263**	*e*P	Pn	20 08 26.3	+0.7
KPT				*i* S	Sb	20 08 51.4	-0.3
KMNR	**Kamenistaya**	**1.94**	**257**	*e*P	Pn	20 08 27.1	+1.0
MKZ	**Mys Kozlova**	**2.00**	**212**	*e*P	Pn	20 08 25.5	-1.3
KOZ	**Kozyrevsk**	**2.08**	**266**	*e*P	Pb	20 08 29.9	-0.9
KOZ				*i* S	Sb	20 08 56.8	+0.1
SRDR	**Sredinnyy**	**2.15**	**273**	*e*P	Pn	20 08 30.4	+1.4
SRDR				*i* S	Sb	20 08 58.0	-0.9
TUMR	**Tumrok**	**2.16**	**245**	*e*P	Pb	20 08 31.0	-1.4
TUMR				*i* S	Sb	20 08 59.5	+0.1
SDLR	**Sedlovina**	**4.03**	**224**	*e*P	Pn	20 08 56.4	+0.5
SMAR	**Somma**	**4.07**	**225**	*e*P	Pn	20 08 56.6	+1.0
AVH	**Avacha**	**4.10**	**225**	*e*P	Pn	20 08 57.9	+2.1
UGLR	**Uglovaya**	**4.11**	**224**	*e*P	Pn	20 08 59.0	+3.1
GNL	**Ganaly**	**4.13**	**234**	*e*P	Pn	20 08 57.5	+1.2

IGQ 15 20:13:13.4,0°42'S×81°15'W,h10km±37km, Mb4.2,Ms4.0, 10C-4D,Error ellipse: s-maj=7.5km s-min=4.4km az=4.7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHIS	**Cerro-Chispas-**	**0.76**	**146**	⇑P	Pg	20 13 28.1	-0.1
JAMA	**Jama**	**0.96**	**81**	⇓P	Pn	20 13 35.4	+2.3
JAMA	**Jama**	**0.96**	**81**	⇓S	Sn	20 13 46.0	-0.8
PECV	**Mancha de Ca P**	**1.16**	**108**	⇓P	Pb	20 13 29.1	-6.5
JUA2	**San Juan 2**	**2.55**	**86**	S	Sn	20 14 26.7	-0.4
JUA2	**San Juan 2**	**2.55**	**86**	P	Pn	20 13 57.2	+1.7
PINO	**Pino**	**2.56**	**84**	P	Pn	20 13 57.1	+1.4
TERV	**Terraza Guagua**	**2.56**	**85**	P	Pb	20 13 58.1	-2.1
TERV	**Terraza Guagua**	**2.56**	**85**	S	Sn	20 14 29.3	+1.9
GGP	**Refugio Guagua**	**2.57**	**85**	P	Pn	20 13 57.3	+1.4
BNAS	**Cotopaxi Volca**	**2.68**	**95**	P	Pn	20 13 59.0	+1.6
NAS2	**Nasa**	**2.69**	**95**	P	Pn	20 13 59.6	+2.1
BMOR	**Cotopaxi Volca**	**2.71**	**97**	⇑S	Sn	20 14 32.7	+1.5
BMOR	**Cotopaxi Volca**	**2.71**	**97**	⇑P	Pb	20 14 01.3	-1.5
BREF	**Cotopaxi Volca**	**2.72**	**95**	P	Pb	20 14 02.7	-2.4
PITA	**Cotopaxi Volc**	**2.72**	**93**	⇑P	Pn	20 13 59.6	+1.8
PITA	**Cotopaxi Volc**	**2.72**	**93**	⇑S	Sn	20 14 32.6	+1.3
MOV1	**Cotopaxi Vol s**	**2.73**	**96**	⇑P	Pn	20 14 00.4	+2.3
IGUA	**Igualata**	**2.73**	**113**	P	Pn	20 13 59.6	+1.5
BVC2	**Cotopaxi Volca**	**2.75**	**95**	⇓P	Pn	20 13 59.7	+1.3
VC1	**Cotopaxi 1**	**2.76**	**95**	P	Pn	20 14 00.0	+1.6
BTAM	**Cotopaxi Volca**	**2.77**	**95**	P	Pb	20 14 02.0	-1.7
OTAV	**Otavalo**	**2.78**	**76**	S	Sn	20 14 32.7	+0.1
OTAV	**Otavalo**	**2.78**	**76**	P	Pb	20 14 01.4	-2.4
TAMB	**Tambo**	**2.80**	**96**	P	Pb	20 14 02.8	-1.5
COV1	**Cotopaxi Volc**	**2.82**	**95**	P	Pn	20 14 01.2	+1.8
PISA	**Pisayambo**	**2.84**	**103**	P	Pb	20 14 02.7	-2.2
RIOE	**Riobamba**	**2.85**	**118**	P	Pn	20 14 01.2	+1.8
BBIL	**Ulba Tungurahu**	**2.85**	**111**	P	Pn	20 14 01.9	+2.3
JUI6	**Juive**	**2.86**	**111**	P	Pn	20 14 02.0	+2.5
BMAS	**Trigal station**	**2.88**	**112**	P	Pn	20 14 02.0	+2.1
RETU	**Refugio**	**2.89**	**111**	P	Pb	20 14 03.1	-2.8
PAT1	**Patacocha**	**2.92**	**112**	⇑P	Pn	20 14 02.4	+1.8
PAT1	**Patacocha**	**2.92**	**112**	⇑S	Sn	20 14 34.2	-2.0
BULB	**Ulba Tungurahu**	**2.92**	**110**	P	Pn	20 14 00.9	+0.4
ULBA	**Ulba**	**2.93**	**111**	S	Sn	20 14 33.4	-2.8
ULBA	**Ulba**	**2.93**	**111**	P	Pn	20 14 01.7	+1.1
ANTI	**Antisana**	**2.99**	**91**	⇑P	Pn	20 14 04.2	+2.5
ANTI	**Antisana**	**2.99**	**91**	⇑S	Sb	20 14 43.2	-1.5
CAYR	**Refugio Cayamb**	**3.17**	**82**	P	Pb	20 14 09.4	-1.3
MACE	**Macas**	**3.47**	**122**	P	Pn	20 14 09.5	+1.7

*CSEM **15** 20:39:20.2±0.3,36°.28N×35°.84E,h2km,MD2.7,Error ellipse: s-maj=5.6km s-min=4.4km az=62.0*
*ISCJB **15** 20:39:21.1±0.9,36°.27N±0°.03×35°.91E±0°.05,h8km±5km, Error ellipse: s-maj=7.1km s-min=4.7km az=175.9*
*DDA **15** 20:39:21.6,36°.26N×35°.98E,h7km,MD2.7*
*NSSC **15** 20:39:22.6±0.8,36°.29N×36°.01E,h15km±3km,MD1.1, ML2.1*

ISC 15 20:39:20.4±1.0,36°27N±0°.03×35°.89E±0°.04,h16km±8km, n18,σ0s36/33,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.29**	**143**	*i* P	**Pg**	**20 39 26.6**	**0.0**
YAYL				*i* S	**Sg**	**20 39 30.8**	**-0.2**
YAYL	**Yayladag**	**0.29**	**143**	*i* P	**Pg**	**20 39 26.6**	**0.0**
YAYL				*i* S	**Sg**	**20 39 30.8**	**-0.2**
COBT	**Iskenderun**	**0.39**	**50**	*i* P	**Pb**	**20 39 29.0**	**0.0**
COBT	**Iskenderun**	**0.39**	**50**	*i* P	**Pb**	**20 39 29.0**	**0.0**
BTCH	**Batrach**	**0.52**	**116**	*e*P	**Pb**	**20 39 31.4**	**+0.4**
BTCH				*e*S	**Sb**	**20 39 38.3**	**-0.1**
BTCH				AML	AML	20 39 39.0	
	comp=N,237nm,0.2s						
BTCH				AML	AML	20 39 39.0	
	comp=E,114nm,0.3s						
BTCH	**Batrach** SNR=101	**0.52**	**116**	*e*P	**Pb**	**20 39 31.5**	**+0.4**
BTCH				*e*S	**Sb**	**20 39 38.3**	**-0.1**
	comp=E,114nm,0.3s,SNR=104						
DRWC	**Darouich**	**0.72**	**60**	*e*P	**Pb**	**20 39 34.6**	**0.0**
DRWC				*e*S	**Sg**	**20 39 43.8**	**-0.2**
DRWC				AML	AML	20 39 45.9	
	comp=E,29nm,0.3s						
DRWC				AML	AML	20 39 46.6	
	comp=N,49nm,0.1s						
DRWC	**Darouich** SNR=96	**0.72**	**60**	*e*P	**Pb**	**20 39 34.6**	**0.0**
DRWC				*e*S	**Sg**	**20 39 43.8**	**-0.2**
	comp=N,49nm,0.1s,SNR=62						
KUZU	**Kuzuini**	**1.08**	**62**	*i* P	**Pg**	**20 39 42.0**	**+0.7**
KUZU				*i* S	**Sg**	**20 39 55.5**	**+0.1**
KUZU	**Kuzuini**	**1.08**	**62**	*i* P	**Pg**	**20 39 42.0**	**+0.7**
KUZU				*i* S	**Sg**	**20 39 55.5**	**+0.1**
KFRA	**Kufra**	**1.29**	**145**	*e*P	**Pg**	**20 39 45.1**	**0.0**
KFRA				*e*S	**Sb**	**20 40 00.6**	**0.0**
KFRA				AML	AML	20 40 03.3	
	comp=N,146nm,0.4s						
KFRA				AML	AML	20 40 04.1	
	comp=E,59nm,0.6s						
KFRA	**Kufra** SNR=66	**1.29**	**145**	*e*P	**Pg**	**20 39 45.2**	**0.0**
KFRA				*e*S	**Sb**	**20 40 00.6**	**0.0**
	comp=E,59nm,0.6s,SNR=62						
GULE	**Gulek**	**1.35**	**319**	*i* P	**Pn**	**20 39 44.2**	**-0.5**
GULE				*i* S	**Sg**	**20 40 04.1**	**+0.1**
GULE	**Gulek**	**1.35**	**319**	*i* P	**Pn**	**20 39 44.3**	**-0.5**
GULE				*i* S	**Sg**	**20 40 04.1**	**+0.1**
AYKD	**Aykdinkavak**	**1.36**	**33**	*i* P	**Pg**	**20 39 47.3**	**+0.7**
AYKD				*i* S	**Sg**	**20 40 04.4**	**+0.1**
GZT	**Gaziantep**	**1.73**	**51**	*i* P	**Pg**	**20 39 52.9**	**-0.7**
GZT				*i* S	**Sg**	**20 40 11.7**	**0.0**
HAWK	**Haweek**	**1.79**	**166**	*e*P	**Pb**	**20 39 53.4**	**+0.4**
HAWK				*e*S	**Sb**	**20 40 15.8**	**+0.6**
HAWK				AML	AML	20 40 17.2	
	comp=N,49nm,0.4s						
HAWK				AML	AML	20 40 17.2	
	comp=E,34nm,0.4s						
HAWK	**Haweek** SNR=51	**1.79**	**166**	*e*P	**Pb**	**20 39 53.3**	**+0.4**

*BJI **15** 20:47:18.2,56°.50N×152°.30W,h2km,mB4.9/6,mb4.3/10, Ms4.9/3,Ms7 4.3/2*

*IDC **15** 20:47:20.9±0.7,56°.52N×152°.36W,h0km,mb4.2/20, mb1 4.3/22,mb1mx4.3/30,mbtmp4.1/22,ML3.3/2,MS3.7/7, Ms1 3.7/7,ms1mx3.4/41,Error ellipse: s-maj=20.3km s-min=11.3km az=30.0*
*ISCJB **15** 20:47:22.2±0.3,56°.61N±0°.03×152°.13W±0°.05,h18km, mb4.2/56,MS3.8/8,Error ellipse: s-maj=4.4km s-min=3.6km az=39.3*
*MOS **15** 20:47:24.1±0.9,56°.66N×152°.29W,h33km,mb4.6/17, Error ellipse: s-maj=14.2km s-min=5.6km az=90.1*
*NEIC **15** 20:47:25.6,56°.64N×152°.19W,h10km,mb4.2/21, ML3.7(AEIC),After AEIC.*

ISC 15 20:47:24.1±0.4,56°.61N±0°.05×152°.24W±0°.05,h18km, n310,σ0s99/323,mb4.3/56,MS3.7/8,80C-58D,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.84**	**317**	P	**Pb**	**20 47 39.7**	**-0.3**
KDAK	**Kodiak Island**	**1.19**	**351**	P	**Pn**	**20 47 45.6**	**0.0**
KDAK				Sn	**Sg**	**20 48 02.7**	**+0.1**
KDAK	**Kodiak Island**	**1.19**	**351**	Pn	**Pn**	**20 47 45.8**	**0.0**
	9.6nm,0.3s,baz=184,slow=8.2,SNR=116						
KDAK				Sn	**Sg**	**20 48 02.7**	**+0.1**
	36nm,0.3s,baz=257,slow=14,SNR=17						
KABR	**Katmai Barrier**	**2.12**	**317**	P	**Pn**	**20 47 59.2**	**+0.5**
KAKN	**Katmai Knife C**	**2.27**	**319**	P	**Pn**	**20 48 02.0**	**+1.2**
KCE	**Katmai Mt Cerb**	**2.28**	**317**	P	**Pb**	**20 48 02.6**	**-2.1**
KABU	**Katmai Buttres**	**2.34**	**317**	P	**Pn**	**20 48 03.2**	**+1.5**
KELA	**Mount Kelaz**	**2.63**	**316**	P	**Pn**	**20 48 06.3**	**+0.7**
AUW	**Augustine West**	**2.84**	**347**	P	**Pn**	**20 48 09.6**	**+1.1**
OPT	**Oil Point**	**3.09**	**351**	P	**Pn**	**20 48 13.9**	**+1.9**
BRLK	**Bradley Lake**	**3.24**	**12**	P	**Pn**	**20 48 13.6**	**-0.4**
BRLK				S	**Sn**	**20 48 53.6**	**+1.5**
CHGN	**Chignik**	**3.44**	**267**	*e*Pn	Pn	20 48 12.9	-3.7
SEW	**Seward**	**3.80**	**22**	*e*Pn	**Pn**	**20 48 20.0**	**-1.6**
RSO	**Redoubt South**	**3.87**	**356**	*e*Pn	**Pn**	**20 48 23.4**	**+0.6**
DFR	**Drift River**	**4.00**	**357**	P	**Pn**	**20 48 25.8**	**+1.3**
SPU	**Mount Spurr**	**4.58**	**1**	P	**Pn**	**20 48 33.6**	**+1.1**
SPU				S	**Sn**	**20 49 26.5**	**+1.2**
CKL	**Chakachamna La**	**4.60**	**359**	P	**Pn**	**20 48 33.7**	**+1.0**
SDPT	**Sand Point**	**4.79**	**258**	*e*Pn	**Pn**	**20 48 32.1**	**-3.1**
EYAK	**Cordova Ski Ar**	**5.21**	**38**	P	**Pn**	**20 48 40.2**	**-0.7**
EYAK				S	**Sn**	**20 49 40.7**	**+0.2**
PMR	**Palmer**	**5.25**	**17**	*e*P	**Pn**	**20 48 42.9**	**+1.4**
PMR				pmax	pmax		
	comp=Z,71nm,1.3s						
PMR	**Palmer**	**5.25**	**17**	*e*Pn	**Pn**	**20 48 42.9**	**+1.4**
	comp=Z,71nm,1.3s						
SML	**Sawmill**	**5.58**	**19**	*e*P	**Pn**	**20 48 46.4**	**+0.2**
SML				pmax	pmax		
	comp=Z,18nm,0.3s						
SML	**Sawmill**	**5.58**	**19**	*e*Pn	**Pn**	**20 48 46.4**	**+0.2**
	comp=Z,18nm,0.3s						
DIV	**Divide**	**5.64**	**34**	*e*Pn	**Pn**	**20 48 45.9**	**-1.0**
	comp=Z,31nm,0.7s						
PPLA	**Purkeypile**	**6.30**	**0**	P	**Pn**	**20 48 57.4**	**+1.3**
VRDI	**Verde Repeater**	**6.49**	**41**	P	**Pn**	**20 48 57.9**	**-0.8**
TT01	**Tatalina**	**6.59**	**345**	P	**Pn**	**20 49 00.5**	**+0.5**
BALM	**Baldy**	**6.79**	**45**	P	**Pn**	**20 49 02.2**	**-0.5**
BALM	**Baldy**	**6.79**	**45**	P	**Pn**	**20 49 02.2**	**-0.5**
HARP	**HAARP**	**6.84**	**29**	P	**Pn**	**20 49 03.0**	**-0.3**
GRNC	**Granite Creek**	**6.85**	**49**	P	**Pn**	**20 49 03.0**	**-0.7**
TRF	**Thorofare Moun**	**6.93**	**7**	P	**Pn**	**20 49 03.4**	**-1.4**
RND	**Reindeer**	**7.02**	**13**	P	**Pn**	**20 49 05.6**	**-0.3**
RND	**Reindeer**	**7.02**	**13**	P	**Pn**	**20 49 05.6**	**-0.3**
PAX	**Paxson**	**7.23**	**25**	*e*P	**Pn**	**20 49 09.1**	**+0.3**
PAX				pmax	pmax		
	comp=Z,15nm,1.0s						
PAX	**Paxson**	**7.23**	**25**	*e*Pn	**Pn**	**20 49 09.1**	**+0.3**
	comp=Z,15nm,1.0s						
MCK	**McKinley**	**7.33**	**12**	*e*P	**Pn**	**20 49 11.5**	**+1.4**
MCK				pmax	pmax		
	comp=Z,36nm,1.0s						
MCK	**McKinley**	**7.33**	**12**	*e*Pn	**Pn**	**20 49 11.5**	**+1.4**
	comp=Z,36nm,1.0s						
PNL	**Peninsula**	**7.46**	**60**	P	**Pn**	**20 49 11.3**	**-0.5**
MENT	**Mentasta**	**7.66**	**31**	*e*Pn	**Pn**	**20 49 14.8**	**+0.1**
WRH	**Wood River Hil**	**8.14**	**13**	P	**Pn**	**20 49 22.2**	**+1.0**
DOT	**Dot Lake**	**8.15**	**27**	*e*Pn	**Pn**	**20 49 20.0**	**-1.3**
	comp=Z,9.8nm,0.9s						
BCA3	**Beaver Creek A**	**8.33**	**35**	P	**Pn**	**20 49 24.6**	**+0.8**
CCB	**Clear Creek Bu**	**8.35**	**13**	P	**Pn**	**20 49 25.4**	**+1.4**
COLA	**College**	**8.56**	**13**	*e*P	**Pn**	**20 49 25.8**	**-1.1**
COLA				pmax	pmax		
	comp=Z,18nm,1.1s						
COLA	**College**	**8.56**	**13**	*e*Pn	**Pn**	**20 49 25.8**	**-1.1**
	comp=Z,18nm,1.1s						
IL1	**Eielson Array**	**8.59**	**16**	P	**Pn**	**20 49 26.3**	**-1.1**
ILAR	**Eielson Array**	**8.59**	**16**	Pn	**Pn**	**20 49 27.4**	**0.0**
ILAR				Sn	**Sn**	**20 51 01.1**	**-2.6**
ILAR	**Eielson Array**	**8.59**	**16**	Pn	**Pn**	**20 49 27.4**	**0.0**
	comp=Z,1.4nm,0.3s,baz=203,slow=11,SNR=107						
ILAR				Sn	**Sn**	**20 51 01.1**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=204,slow=21,SNR=3.2						
MDM	**Murphy Dome**	**8.60**	**11**	P	**Pn**	**20 49 27.0**	**-0.5**
SKAG	**Skagway**	**9.41**	**65**	*e*Pn	**Pn**	**20 49 39.0**	**+0.5**
IM3	**Indian Mountai**	**9.43**	**356**	P	**Pn**	**20 49 37.7**	**-1.2**
WHY	**Whitehorse**	**9.91**	**59**	P	**Pn**	**20 49 44.6**	**-0.9**
TNA	**Tin City**	**11.71**	**326**	*e*Pn	**Pn**	**20 50 12.5**	**+2.6**
	comp=Z,11nm,1.0s						
DIB	**Dawson Inlet,** SNR=6.5	**11.87**	**98**	T	T	21 02 18.2	
GAMB	**Gambell**	**12.01**	**315**	*e*Pn	**Pn**	**20 50 14.7**	**+0.6**
	comp=Z,8.7nm,1.0s						
DLBC	**Dease Lake**	**12.07**	**72**	Pn	**Pn**	**20 50 15.5**	**+0.5**
DLBC	**Dease Lake**	**12.07**	**72**	Pn	**Pn**	**20 50 15.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=246,slow=12,SNR=2.4						
INK	**Inuvik**	**14.49**	**28**	Pn	**Pn**	**20 50 47.5**	**-0.3**
INK	**Inuvik**	**14.49**	**28**	Pn	**Pn**	**20 50 47.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=204,slow=20,SNR=5.3						
INK				LR	LR	20 57 53.5	
	comp=Z,296nm,18.6s,baz=246,slow=43						
YKW3	**Yellowknife Ar**	**19.73**	**57**	*e*P	**P**	**20 51 51.5**	**-0.8**
	comp=Z,0.2nm,1.3s						
YKA	**Yellowknife Ar**	**19.73**	**57**	P	**P**	**20 51 52.5**	**+0.1**
YKA	**Yellowknife Ar**	**19.73**	**57**	P	**P**	**20 51 52.5**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=270,slow=11,SNR=26						
LON	**Longmire**	**21.12**	**105**	*e*P	**P**	**20 52 07.5**	**-0.2**
LON				pmax	pmax		
	comp=Z,13nm,1.2s						
LON	**Longmire**	**21.12**	**105**	*e*P	**P**	**20 52 07.5**	**-0.2**
	comp=Z,13nm,1.2s						
BILL	**Bilibino**	**21.90**	**318**	*c i* P	**P**	**20 52 15.1**	**-0.6**
BILL				*i*		20 52 30.2	
BILL				*i*		20 52 37.3	
BILL				pmax	pmax		
	comp=Z,22nm,1.4s						
HAWA	**Hanford**	**22.57**	**103**	P	**P**	**20 52 21.8**	**-1.4**
	comp=Z,11nm,1.0s						
NEW	**Newport**	**22.76**	**97**	P	**P**	**20 52 25.1**	**-0.1**
NEW	**Newport**	**22.76**	**97**	P	**P**	**20 52 25.1**	**-0.1**
	comp=Z,2.9nm,0.7s,baz=297,slow=7.1,SNR=4.0						
NEW	**Newport** baz=23	**22.76**	**97**	⇓P	**P**	**20 52 25.5**	**+0.4**
HUMO	**Hull Mountain**	**23.36**	**114**	*e*P	**P**	**20 52 30.1**	**-1.1**
	comp=Z,6.7nm,0.9s						
YBH	**Yreka Blue Hor**	**24.13**	**116**	P	**P**	**20 52 39.1**	**+0.3**
YBH	**Yreka Blue Hor**	**24.13**	**116**	P	**P**	**20 52 39.1**	**+0.3**
	comp=Z,5.5nm,0.8s,baz=314,slow=1.3,SNR=12						
B13A	**Whitefish** baz=24	**24.16**	**94**	⇑P	**P**	**20 52 39.7**	**+0.7**
BSMT	**Bassoo Peak**	**24.29**	**95**	*e*P	**P**	**20 52 39.4**	**-0.8**
	comp=Z,7.9nm,1.4s						
A14A	**Double T Ranch** baz=24,SNR=5.3	**24.41**	**92**	⇑P	**P**	**20 52 41.3**	**-0.1**
D12A	**Red Ives Fores** baz=24,SNR=5.4	**24.44**	**97**	⇑P	**P**	**20 52 41.9**	**+0.3**
JTMT	**Jette**	**24.62**	**95**	*e*P	**P**	**20 52 42.9**	**-0.3**
	comp=Z,3.0nm,0.9s						
A15A	**Johnson Ranch,** baz=25,SNR=8.6	**24.79**	**91**	⇓P	**P**	**20 52 44.6**	**-0.2**
C14A	**Swan Lake** baz=25,SNR=9.0	**24.91**	**94**	⇓P	**P**	**20 52 45.5**	**-0.3**
D13A	**Huson** baz=25	**24.91**	**96**	⇓P	**P**	**20 52 46.4**	**+0.7**
SWMT	**Swartz Lake**	**24.92**	**95**	*e*P	**P**	**20 52 46.3**	**+0.4**
	comp=Z,6.1nm,1.2s						
WDC	**Whiskeytown Da**	**25.08**	**117**	*e*P	**P**	**20 52 46.7**	**-0.6**
WDC				pmax	pmax		
	comp=Z,11nm,1.1s						
WDC	**Whiskeytown Da**	**25.08**	**117**	*e*P	**P**	**20 52 46.6**	**-0.6**
	comp=Z,11nm,1.1s						
MOD	**Modoc**	**25.22**	**112**	*e*P	**P**	**20 52 48.7**	**0.0**
	comp=Z,12nm,1.2s						
B15A	**Bradely Ranch,** baz=25,SNR=6.0	**25.25**	**92**	⇑P	**P**	**20 52 49.5**	**+0.6**
F12A	**Elk City** baz=25,SNR=7.8	**25.29**	**100**	⇓P	**P**	**20 52 49.3**	**0.0**
MSO	**Missoula** baz=25	**25.35**	**96**	⇓P	**P**	**20 52 50.2**	**+0.4**
SLMT	**Seeley Lake** comp=Z,10nm,1.2s	**25.35**	**95**	*e*P	**P**	**20 52 50.8**	**+0.9**
D14A	**Greenough** baz=25,SNR=5.3	**25.44**	**95**	⇑P	**P**	**20 52 51.5**	**+0.8**
E13A	**Victor** baz=25	**25.45**	**97**	⇓P	**P**	**20 52 51.4**	**+0.7**
C15A	**Salmond Ranch,** baz=25,SNR=7.6	**25.53**	**93**	⇑P	**P**	**20 52 52.2**	**+0.7**
G12A	**Big Creek, Yel** baz=26	**25.65**	**101**	⇑P	**P**	**20 52 53.1**	**+0.4**
B16A	**M & M Farms, S** baz=26,SNR=5.4	**25.67**	**91**	⇓P	**P**	**20 52 53.2**	**+0.5**
WVOR	**Wild Horse Val**	**25.70**	**109**	*e*P	**P**	**20 52 52.8**	**-0.3**
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WVOR	**Wild Horse Val** comp=Z,9.2nm,1.0s	**25.70**	**109**	*e*P	**P**	**20 52 52.8**	**-0.3**
F13A	**Darby** baz=26	**25.77**	**99**	⇑P	**P**	**20 52 54.5**	**+0.8**
E14A	**Clinton** baz=26	**25.85**	**97**	⇑P	**P**	**20 52 54.6**	**+0.2**
A17A	**Triple J Farms** baz=26	**25.93**	**89**	⇑P	**P**	**20 52 55.2**	**+0.2**
D15A	**Lincoln** baz=26	**26.01**	**95**	⇑P	**P**	**20 52 56.0**	**+0.1**
G13A	**Cobalt** baz=26	**26.27**	**100**	⇑P	**P**	**20 52 58.4**	**+0.2**
H12A	**Diamond D Ranc** baz=26	**26.28**	**101**	⇑P	**P**	**20 52 58.8**	**+0.4**
MFID	**Camas Ranch** comp=Z,6.1nm,0.9s	**26.51**	**104**	*e*P	**P**	**20 52 59.2**	**-1.1**
MFID	**Camas Ranch** baz=26	**26.51**	**104**	⇑P	**P**	**20 53 00.8**	**+0.5**
D16A	**Dana Ranch, Ca** baz=26	**26.55**	**94**	⇑P	**P**	**20 53 00.3**	**-0.4**
H13A	**Challis** baz=26	**26.60**	**101**	⇓P	**P**	**20 53 01.2**	**+0.1**
I12A	**Atlanta** baz=26	**26.63**	**103**	⇓P	**P**	**20 53 01.4**	**-0.2**
E16A	**East Helena** baz=27	**26.77**	**95**	⇓P	**P**	**20 53 03.0**	**+0.3**
D17A	**Six Diamond Ra** baz=27	**26.95**	**93**	⇑P	**P**	**20 53 04.2**	**-0.2**
EGMT	**Eagleton** baz=27	**26.96**	**90**	⇓P	**P**	**20 53 04.5**	**+0.1**
A19A	**Klindworth Far** baz=27	**27.02**	**88**	⇓P	**P**	**20 53 04.6**	**-0.2**
H14A	**Leadore** baz=27	**27.05**	**100**	⇓P	**P**	**20 53 05.9**	**+0.6**
I13A	**Wildhorse Cree** baz=27	**27.10**	**102**	⇑P	**P**	**20 53 06.0**	**+0.3**
B19A	**Brinkman Farms** baz=27	**27.17**	**89**	⇓P	**P**	**20 53 06.1**	**0.0**
HLID	**Hailey** comp=Z,3.3nm,0.9s	**27.17**	**102**	*e*P	**P**	**20 53 05.6**	**-0.8**
HLID	**Hailey** baz=27	**27.17**	**102**	⇓P	**P**	**20 53 06.6**	**+0.2**
G15A	**Dillon** baz=27	**27.17**	**98**	⇓P	**P**	**20 53 06.7**	**+0.3**
MCMT	**McKenzie Canyo**	**27.19**	**99**	P	**P**	**20 53 04.4**	**-2.2**
H15A	**Lima** baz=27	**27.44**	**99**	⇓P	**P**	**20 53 08.9**	**+0.1**
C19A	**Slack Wire Ran** baz=27	**27.52**	**90**	⇓P	**P**	**20 53 09.8**	**+0.5**
F17A	**Fitzpatrick Pl** baz=28	**27.72**	**95**	⇓P	**P**	**20 53 11.5**	**+0.3**
SEY	**Seymchan**	**27.79**	**306**	*e*P	**P**	**20 53 10.2**	**-1.3**
RES	**Resolute Bay**	**28.05**	**28**	P	**P**	**20 53 15.9**	**+2.3**
RES	**Resolute Bay**	**28.05**	**28**	LR	LR	21 06 46.3	
	comp=Z,164nm,18.5s,baz=260,slow=41						
D20A	**Manuel Ranch,** baz=28	**28.40**	**91**	⇑P	**P**	**20 53 17.9**	**+0.7**
E19A	**Rath Farm, Rou** baz=28	**28.41**	**92**	⇑P	**P**	**20 53 18.0**	**+0.6**
PETK	**Petropavlovsk-**	**28.50**	**284**	P	**P**	**20 53 16.7**	**-1.3**
PETK	**Petropavlovsk-**	**28.50**	**284**	P	**P**	**20 53 16.7**	**-1.3**
PETK	**Petropavlovsk-**	**28.50**	**284**	P	**P**	**20 53 16.7**	**-1.3**
	comp=Z,2.0nm,0.6s,baz=64,slow=17,SNR

Y12C	Blythe	34.39	116	⇑	P		P	20 54 10.5	+0.6
	baz=34								
S20A	Disappointment	34.47	104	⇓	P		P	20 54 11.1	+0.2
	baz=34								
TIXI	Tiksi	34.50	327	⇑	*i* P		P	20 54 10.0	-0.5
TIXI					pmax	pmax			
	comp=Z,3.0nm,1.2s								
TIXI					MLR	MLR			
	comp=Z,61nm,13.0s								
WUAZ	Wupatki	34.62	110	⇑	P		P	20 54 12.6	+0.5
	baz=34								
P23A	Jefferson	34.72	100	⇑	P		P	20 54 13.3	+0.2
	baz=35								
GLA	Glamis	34.80	117	⇓	P		P	20 54 14.1	+0.6
	baz=35								
Y14A	Wickenburg	35.01	114	⇑	P		P	20 54 15.6	+0.3
	baz=35								
X16A	Lo Mia Camp, P	35.43	111	⇓	P		P	20 54 19.8	+0.7
	baz=35,SNR=6.2								
113A	Mohawk Valley,	35.56	116	⇑	P		P	20 54 20.2	+0.2
	baz=36								
T22A	Edith	35.85	104	⇓	P		P	20 54 23.2	+0.4
	baz=36								
U21A	Nageezi	35.88	105	⇑	P		P	20 54 23.6	+0.6
	baz=36								
V20A	Brimhall	35.93	107	⇑	P		P	20 54 23.8	+0.5
	baz=36								
R24A	Sanders Place,	35.93	100	⇑	P		P	20 54 23.4	0.0
	baz=36								
S24A	Houchin Ranch,	36.30	101	⇑	P		P	20 54 27.3	+0.6
	baz=36								
214A	Organ Pipe Nat	36.69	115	⇓	P		P	20 54 30.1	+0.4
	baz=37								
S26A	Kim	37.27	100	⇑	P		P	20 54 35.0	+0.3
	baz=37								
X21A	Alamocita Cree	37.32	107	⇑	P		P	20 54 35.8	+0.6
	baz=37,SNR=7.9								
T26A	Comanche Natio	37.52	100	⇓	P		P	20 54 37.4	+0.5
	baz=37								
U25A	Circle Dot Ran	37.65	102	⇓	P		P	20 54 38.6	+0.5
	baz=38								
Z20A	Nine Sixteen R	37.93	110	⇓	P		P	20 54 41.5	+1.1
	baz=38								
YAK	Yakutsk	37.94	311		*e*P		P	20 54 37.1	-2.8
YAK					pmax	pmax			
	comp=Z,10.0nm,0.9s								
V25A	Rancho No Teng	37.96	103	⇑	P		P	20 54 41.1	+0.4
	baz=38								
W24A	Lazy 6 Ranch,	38.00	104	⇑	P		P	20 54 41.8	+0.7
	baz=38								
Y22A	Socorro	38.14	107	⇓	P		P	20 54 43.2	+1.0
	baz=38								
V26A	Tequesquite Ra	38.44	102	⇑	P		P	20 54 45.1	+0.5
	baz=38,SNR=7.8								
U27A	Thompson Grove	38.49	100	⇓	P		P	20 54 45.8	+0.7
	baz=38								
W25A	X Bar L Ranch,	38.51	103	⇓	P		P	20 54 46.0	+0.8
	baz=38								
Y23A	Lovelace Mesa,	38.63	106	⇓	P		P	20 54 47.0	+0.7
	baz=38								
Z22A	Elephant Butte	38.67	108	⇑	P		P	20 54 47.4	+0.8
	baz=39								
121A	Cookes Peak, D	38.80	109	⇑	P		P	20 54 49.2	+1.5
	baz=39								
220A	Playas Peak, P	38.91	111	⇓	P		P	20 54 49.3	+0.7
	baz=39								
Y24A	Capitan	38.96	105	⇓	P		P	20 54 49.5	+0.4
	baz=39								
W26A	Owens Ranch, T	38.98	103	⇑	P		P	20 54 49.6	+0.5
	baz=39								
320A	Kipp Ranch, An	39.36	111	⇑	P		P	20 54 53.5	+1.1
	baz=39								
Y25A	Mesa, Roswell	39.36	105	⇓	P		P	20 54 53.2	+0.8
	baz=39								
124A	Stringfield Ra	39.90	107	⇓	P		P	20 54 57.0	+0.1
	baz=40								
Y27A	Causey	40.21	103	⇓	P		P	20 54 59.6	+0.2
	baz=40								
224A	Cornudas Mount	40.35	107	⇑	P		P	20 55 01.4	+0.8
	baz=40								
324A	Moseley Ranch,	40.86	108	⇑	P		P	20 55 05.0	+0.1
	baz=41								
W31A	Holland Ranch,	40.98	99	⇓	P		P	20 55 06.1	+0.5
	baz=41								
Z30A	Sanderson Ranc	41.77	102	⇓	P		P	20 55 11.7	-0.4
	baz=42								
ASAJ	Asahikawa	41.81	281		LR		LR	21 12 14.2	
	comp=Z,85nm,21.9s,baz=334,slow=36								
131A	Roby	42.63	102	⇑	P		P	20 55 18.8	-0.4
	baz=42								
Z32A	Haskell	42.65	100	⇓	P		P	20 55 19.2	0.0
	baz=42								
526A	Mary Lane Ranc	42.69	108	⇑	P		P	20 55 19.9	+0.1
	baz=43								
329A	Wagon Wheel Ra	42.69	104	⇓	P		P	20 55 19.6	-0.1
	baz=43								
626A	Big Bend Ranch	43.07	108	⇓	P		P	20 55 22.7	0.0
	baz=43								
330A	Mertzon	43.19	104	⇑	P		P	20 55 23.4	-0.3
	baz=43								
429A	Davenport Ranc	43.41	105	⇑	P		P	20 55 25.4	-0.1
	baz=43								
TXAR	Lajitas Array	43.49	108		P		P	20 55 25.9	-0.3
TXAR	Lajitas Array	43.49	108		P		P	20 55 25.9	-0.3
	comp=Z,2.2nm,0.9s,baz=310,slow=5.7,SNR=14								
627A	Terlingua Ranc	43.54	108	⇓	P		P	20 55 26.8	+0.2
	baz=43								
529A	Stev Forest Ra	43.63	106	⇑	P		P	20 55 27.2	-0.1
	baz=44,SNR=5.1								
430A	Baggett Ranch,	43.63	104	⇓	P		P	20 55 27.2	-0.2
	baz=44								
628A	Black Gap, Mar	43.78	107	⇑	P		P	20 55 28.7	+0.2
	baz=44,SNR=6.1								
431A	Sonora	44.05	104	⇑	P		P	20 55 30.4	-0.3
	baz=44								
530A	J-C Ranch, Com	44.08	105	⇓	P		P	20 55 30.5	-0.4
	baz=44								
KLR	Kul'dur	44.20	294		*e*P		P	20 55 26.8	-4.8
531A	Rocksprings	44.49	104	⇑	P		P	20 55 33.8	-0.4
	baz=44								
JCT	Junction City	44.64	103	⇓	P		P	20 55 35.2	-0.2
	baz=44								
631A	Perdido Creek	45.06	105	⇑	P		P	20 55 37.5	-1.2
	baz=45								
632A	Uvalde	45.41	104	⇑	P		P	20 55 40.9	-0.6
	baz=45								
732A	Laxson Ranch,	45.93	105	⇓	P		P	20 55 44.8	-0.8
	baz=46								
USRK	Uesuriysk Arra	47.41	289		LR		LR	21 16 10.3	
	comp=Z,101nm,21.4s,baz=133,slow=36								
MDJ	Mudanjiang	48.38	291		P		P	20 56 07.1	+2.7
MDJ					pmax	pmax			
	comp=Z,5.0nm,2.0s								
MDJ					pmax	pmax			
	comp=Z,77nm,4.6s								
MAJO	Matsushiro	49.49	277		*e*P		P	20 56 12.3	-0.8
MAJO	Matsushiro	49.49	277		*e*P		P	20 56 12.3	-0.8
MJAR	Matsushiro Arr	49.49	277		P		P	20 56 12.4	-0.7
MJAR	Matsushiro Arr	49.49	277		P		P	20 56 12.4	-0.7
	comp=Z,1.5nm,1.1s,baz=39,slow=6.2,SNR=3.9								
CN2	Changchun	51.07	293		*e*P		P	20 56 23.8	-1.2
CN2					pmax	pmax			
	comp=Z,10.0nm,0.8s								
KEV	Kevo	53.93	0		*e*P		P	20 56 45.5	-0.3
KEV					pmax	pmax			
	comp=Z,7.0nm,0.9s								
KEV	Kevo	53.93	0		*e*P		P	20 56 45.5	-0.3
	comp=Z,7.0nm,0.9s								
ARCES	ARCESS Array B	54.15	1		P		P	20 56 47.4	0.0
ARCES	ARCESS Array B	54.15	1		P		P	20 56 47.4	0.0
	comp=Z,1.2nm,0.6s,baz=8.6,slow=9.0,SNR=7.8								
ULN	Ulaanbaatar	56.84	308		*e*P		P	20 57 06.3	-1.0
	comp=Z,2.0nm,0.9s								
SONM	Songino Array	57.16	308		P		P	20 57 09.9	+0.5
SONM	Songino Array	57.16	308		P		P	20 57 09.9	+0.5
	comp=Z,5.2nm,0.9s,baz=48,slow=7.3,SNR=20								
NVS	Novosibirsk	60.10	327		*e*P		P	20 57 27.4	-2.2
HHC	Hu-ho-hao-te	60.15	300		*e*P		P	20 57 30.8	+0.4
HHC					PP		PP	20 59 44.8	+2.1
HHC					PcS		PcS	21 02 18.3	0.0
HHC					S		S	21 05 42.8	0.0
HHC					ScS		SKKSac	21 07 19.1	-0.6
HHC					SS		SS	21 09 40.6	+1.4
HHC					pmax	pmax			
	comp=Z,210nm,4.2s								
HHC					LR		LR		
	comp=N,240nm,15.5s								
HHC					LR		LR		
	comp=E,380nm,15.5s								
HHC					LR		LR		
	comp=Z,120nm,17.8s								
ZAA0	Zalesovo Array	60.37	325		*e*P		P	20 57 31.1	-0.4
ZALV	Zalesovo Beam	60.37	325		P		P	20 57 31.7	+0.2
ZALV	Zalesovo Beam	60.37	325		P		P	20 57 31.6	+0.2
ZALV	Zalesovo Beam	60.37	325		P		P	20 57 31.6	+0.2
	comp=Z,4.8nm,0.8s,baz=29,slow=6.8,SNR=25								
JOF	Joensuu	60.77	358		*e*P		P	20 57 34.0	-0.1
JOF					pmax	pmax			
	comp=Z,2.0nm,0.7s								
JOF	Joensuu	60.77	358		*e*p		P	20 57 34.0	-0.1
	comp=Z,2.1nm,0.7s								
KAF	Kangasniemi	61.61	1		*e*P		P	20 57 38.7	-1.1
KAF					pmax	pmax			
	comp=Z,2.0nm,0.7s								
KAF	Kangasniemi	61.61	1		*e*p		P	20 57 38.7	-1.1
	comp=Z,1.7nm,0.7s								
NB2	NORSAR Subarra	61.97	9		P		P	20 57 42.3	0.0
	comp=Z,4.7nm,0.9s,baz=348,slow=6.9								
NOA	NORSAR Array B	61.97	9		P		P	20 57 42.6	+0.3
NOA	NORSAR Array B	61.97	9		P		P	20 57 42.6	+0.3
	comp=Z,2.7nm,0.8s,baz=350,slow=6.7,SNR=11								
NAO01	NORSAR Array S	62.13	9		P		P	20 57 43.2	-0.2
FINES	FINESS Array B	62.28	1		P		P	20 57 44.5	+0.3
FINES	FINESS Array B	62.28	1		P		P	20 57 44.5	+0.3
	comp=Z,3.9nm,0.8s,baz=0.0,slow=8.0,SNR=12								
ARU	Arti	64.59	342	*c*	*i*P		P	20 57 59.0	-0.7
ARU								21 00 20.3	
ARU					S		S	21 06 38.3	+0.3
ARU					SS		SS	21 10 41.0	-6.5
ARU					pmax	pmax			
	comp=Z,7.0nm,1.2s								
KURK	Kurchatov	65.08	327	*c*	*i*P		P	20 58 02.5	-0.4
KURK					pmax	pmax			
	comp=Z,4.0nm,1.1s								
KURK	Kurchatov	65.08	327		*e*P		P	20 58 02.3	-0.6
	comp=Z,3.0nm,1.1s								
BRVK	Borovoye	65.27	333		*e*P		P	20 58 03.1	-1.0
BRVK	Borovoye	65.27	333		*e*P		P	20 58 03.1	-1.0
GTA	Gaotai	66.74	307		*e*P		P	20 58 13.8	-0.2
GTA					pP		pP	20 58 17.4	-2.4
GTA					sP		sP	20 58 20.5	-1.5
GTA					pmax	pmax			
	comp=Z,3.0nm,1.0s								
MKAR	Makanchi Array	67.35	323		P		P	20 58 17.2	-0.4
MKAR	Makanchi Array	67.35	323		P		P	20 58 17.2	-0.4
MKAR	Makanchi Array	67.35	323		P		P	20 58 17.2	-0.4
	comp=Z,1.5nm,0.8s,baz=41,slow=6.4,SNR=13								
WMQ	Urumqi	68.01	317		*e*P		P	20 58 23.8	+1.9
OBN	Obninsk	68.40	355	*c*	*i*P		P	20 58 23.5	-0.5
OBN					pmax	pmax			
	comp=Z,11nm,1.0s								
ABKAR	Akbulak array	71.16	338		*e*P		P	20 58 40.7	-0.4
	comp=Z,0.5nm,0.3s								
TKM2	Tokmak 2	72.97	325		*e*P		P	20 58 52.2	-0.2
TKM2	Tokmak 2	72.97	325		*e*P		P	20 58 52.2	-0.2
AKASG	Malin Array Be	73.05	359		P		P	20 58 51.7	-0.7
AKASG	Malin Array Be	73.05	359		P		P	20 58 51.7	-0.7
AKASG	Malin Array Be	73.05	359		P		P	20 58 51.7	-0.7
	comp=Z,1.8nm,0.6s,baz=5.5,slow=6.2,SNR=8.8								
AAK	Ala-Archa	73.58	326	*c*	*i*P		P	20 58 55.9	0.0
AAK					pmax	pmax			
	comp=Z,22nm,2.5s								
AAK	Ala-Archa	73.58	326		*e*P		P	20 58 56.0	0.0
	comp=Z,1.4nm,1.0s								
EKS2	Erkin-Say	73.77	326		*e*P		P	20 58 56.7	-0.3
EKS2					pmax	pmax			
	comp=Z,4.0nm,1.2s								
EKS2	Erkin-Say	73.77	326		*e*P		P	20 58 56.7	-0.3
	comp=Z,4.0nm,1.2s								
HAU	Haudompre	74.23	15		*e*P		P	20 58 59.5	+0.1
	comp=Z,6.5nm,0.8s								
GERES	GERESS Array B	74.26	10		P		P	20 59 00.3	+0.6
GERES	GERESS Array B	74.26	10		P		P	20 59 00.3	+0.6
	comp=Z,1.0nm,0.7s,baz=5.7,slow=4.0,SNR=10								
KKAR	Karatay Array	74.33	329		*e*P		P	20 58 59.5	-0.6
KKAR					pmax	pmax			
	comp=Z,1.0nm,0.6s								
KKAR	Karatay Array	74.33	329		*e*P		P	20 58 59.5	-0.6
	comp=Z,0.9nm,0.6s								
TCF	Toulx Ste Croi	75.26	18		*e*P		P	20 59 05.2	-0.2
KSH	Kashi	75.93	324		*e*P		P	20 59 12.3	+2.8
KSH					*e*pP		pP	20 59 16.8	+1.4
KSH					sP		sP	20 59 19.3	+1.7
KSH					*e*PcP		PcP	20 59 24.1	+2.2
KSH					*e*PP		PP	21 02 05.9	+6.7
KSH					*e*S		S	21 08 56.8	+5.6
KSH					*e*sS		sS	21 09 04.3	+3.3
KSH					*e*SKS		SKSac	21 09 18.3	-0.8
KSH					*e*ScS		ScS	21 09 24.3	+1.4
KSH					*e*SS		SS	21 13 54.9	+12
KSH					pmax	pmax			
	comp=Z,2.0nm,0.6s								
KSH					pmax	pmax			
	comp=Z,51nm,3.2s								
KSH					LR		LR		
	comp=E,110nm,4.9s								
KSH					LR		LR		
	comp=Z,68nm,3.4s								
HNR	Honiara	76.66	229		LR		LR	21 30 28.5	
	comp=Z,106nm,19.9s,baz=140,slow=34								
LPL	La Plagne	76.72	15		*e*P		P	20 59 14.9	+0.9
LPG	La Plagne	76.74	15		*e*P		P	20 59 15.4	+1.2
	comp=Z,16nm,1.1s								
VIVF	Saint-Julien-l	77.06	17		*e*P		P	20 59 15.9	+0.2
ANN	Anapa	78.63	353		*e*P		P	20 59 28.6	+4.3
ANN					pmax	pmax			
	comp=Z,67nm,1.1s								
KIV	Kislovodsk	79.02	349	*c*	*i*P		P	20 59 27.0	+0.4
KIV					pmax	pmax			
	comp=Z,5.0nm,1.0s								
KBZ	Khabaz	79.22	349		P		P	20 59 28.3	+0.7
KBZ	Khabaz	79.22	349		P		P	20 59 28.3	+0.7
KBZ	Khabaz	79.22	349		P		P	20 59 28.3	+0.7
	comp=Z,2.0nm,0.8s,baz=271,slow=3.5,SNR=6.9								
DAV	Davao City (W)	79.83	267		LR		LR	21 35 53.6	
	comp=Z,69nm,19.5s,baz=233,slow=36								
ZEI	Tsey	80.04	348		*e*P		P	20 59 31.8	-0.6
ZEI					pmax	pmax			
	comp=Z,4.0nm,1.1s								
ESDC	Sonseca Array	80.39	24		P		P	20 59 34.9	+0.7
ESDC	Sonseca Array	80.39	24		P		P	20 59 34.9	+0.7
	comp=Z,3.2nm,1.1s,baz=333,slow=5.4,SNR=9.0								
BR131	Keskin Array S	83.90	355		*e*P		P	20 59 52.9	+0.3
	comp=Z,1.0nm,0.8s								
BRTR	Keskin Array B	83.90	355		P		P	20 59 52.9	+0.2
BRTR	Keskin Array B	83.90	355		P		P	20 59 52.9	+0.2
	comp=Z,1.3nm,0.8s,baz=12,slow=3.8,SNR=8.8								
CMAR	Chiang Mai Arr	84.67	296		P		P	20 59 55.7	-0.9
CMAR	Chiang Mai Arr	84.67	296		P		P	20 59 55.7	-0.9
	comp=Z,1.1nm,0.8s,baz=7.8,slow=5.7,SNR=9.7								

*ISCJB **15** 20:50:46.1±0.7, 22.°00N±0.°04×121.°39E±0.°03, h41km±10km, Error ellipse: s-maj=6.9km s-min=4.0km az=170.5*
*TAP **15** 20:50:47.2, 22.°09N×121.°28E, h35km, ML3.2, C*
*JMA **15** 20:50:49.8±0.3, 22.°34N×121.°47E, h127km, M2.8*

ISC 15 20:50:47.2±1.1, 22.°09N±0.°04×121.°32E±0.°03, h33km±5km, n47, σ1°17/73, 4C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LAY	Lan-yu	0.22	104	P		Pb	20 50 54.3	+0.3
	baz=93							
LAY				*e*S		Sb	20 51 00.0	+1.4
	baz=93							
TSEB	Hengchuen, Pin	0.43	244	⇓	*i*P	Pn	20 50 56.9	-0.2
	baz=253							
TSEB				S		Sn	20 51 04.2	+0.3
	baz=253							
TAW	Tawu	0.47	304	*e*P		Pb	20 50 56.9	-0.5
	baz=313							
TAW				*e*S		Sb	20 51 03.7	-0.7
	baz=313							
TWK1	Hengchun	0.50	253	⇓	*i*P	Pb	20 50 57.1	-0.7
	baz=257							
TWK1				*e*S		Sb	20 51 04.4	-0.7
	baz=257							
EAST	Anshuo	0.53	304	⇑	*i*P	Pb	20 50 57.6	-0.6
	baz=312							
EAST				*i* S		Sb	20 51 04.9	-0.9
	baz=312							
HEN	Hengchun	0.55	261		*i* P	Pb	20 50 58.0	-0.5
	baz=263							
HEN				S		Sb	20 51 05.7	-0.5
	baz=263							
ECL	Taimali	0.61	326	⇑	*i* P	Pn	20 50 58.4	-1.1
	baz=330							
ECL				*e*S		Sb	20 51 06.6	-1.3
	baz=330							
TTN	Taitung	0.68	346		P	Pn	20 51 00.8	+0.3
	baz=350							
SCZT	Fangliau	0.71	293		P	Pn	20 51 00.6	-0.2
	baz=295							
SCZT				*e*S		Sn	20 51 09.9	-0.7
	baz=295							
TWG	Pinlang	0.76	342	⇑	*i* P	Pn	20 51 00.6	-1.1
	baz=346							
TWG				*e*S		Sn	20 51 11.4	-0.6
	baz=346							
TWP	Hsiaoliuchiu	0.92	286		*e*P	Pb	20 51 05.7	+1.0
	baz=288							
CHKT	Chengkung	1.00	2		P	Pn	20 51 04.4	-0.6
	baz=354							
CHKT				*e*S		Sn	20 51 18.1	+0.1
	baz=354							
KAU	Kaohsiung	1.05	297		*e*P	Pb	20 51 08.4	+1.6
	baz=299							
TWM1	Shoushan	1.10	311		P	Pb	20 51 08.6	+0.7
	baz=314							
ELDTW	Lidau	1.13	346		P	Pn	20 51 05.7	-1.1
	baz=355							
TWF1	Yuli	1.26	359		*e*P	Pn	20 51 07.2	-1.2
	baz=352							
TWF1				*e*S		Sn	20 51 25.4	+1.2
	baz=352							
CHN1	Nanshi	1.31	326	⇓	*i* P	Pb	20 51 10.7	-0.6
	baz=328							
CHN1				*e*S		Sb	20 51 29.1	+1.3
	baz=328							
CHN3	Shinhua	1.32	318		*e*P	Pb	20 51 12.9	+1.5
	baz=320							
WTP	Ta-pu	1.32	331	⇑	*i* P	Pn	20 51 10.7	+1.3
	baz=343							
WTP				*e*S		Sb	20 51 29.2	+1.1
	baz=343							
TWK	Hsinying	1.40	327		*e*P	Pn	20 51 11.8	+1.3
	baz=329							
EHY	Hungye	1.41	0		P	Pn	20 51 09.5	-1.0
	baz=354							
CHN4	Tsaushan	1.42	332		P	Pb	20 51 12.3	-0.8
	baz=334							
CHN4				*e*S		Sb	20 51 33.2	+2.3
	baz=334							
ALS	Alishan	1.49	341		P	Pn	20 51 13.1	+1.1
	baz=350							
ALS				*e*S		Sb	20 51 34.1	+0.9
	baz=350							
CHN5	Tsauling	1.61	339		P	Pn	20 51 14.8	+1.4
	baz=340							
CHN5				*e*S		Sb	20 51 37.9	+1.4
	baz=340							
ESL	Shilin	1.72	3		P	Pn	20 51 13.8	-1.0
	baz=357							
SMLT	Sun Moon Lake	1.83	348		P	Pn	20 51 18.2	+1.8
	baz=349							
SMLT				*e*S		Sn	20 51 41.3	+2.8
	baz=349							
TYC	Yuchr	1.85	347		P	Pn	20 51 18.6	+1.9
	baz=349							
TYC				S		Sb	20 51 43.1	-0.1
	baz=349							
WNT	Mingjian	1.87	342		*e*P	Pb	20 51 19.2	-1.6
	baz=343							
WNT				*e*S		Sb	20 51 43.4	-0.4
	baz=343							
WDGT	Dungji	1.93	308		*e*P	Pn	20 51 17.1	-0.6
	baz=295							
WDGT				*e*S		Sn	20 51 39.3	-1.4
	baz=295							
WHF	Hehuan Shan	2.04	359		P	Pn	20 51 20.3	+0.6
	baz=10.0							
WHF				*e*S		Sn	20 51 44.3	0.0
	baz=10.0							
TWT	Tachien	2.16	356		*e*P	Pb	20 51 24.1	-1.6
	baz=357							
PNG	Penghu	2.19	312		*e*P	Pn	20 51 20.7	-0.7
	baz=303							
TWQ1	Liyutan	2.30	347		*e*P	Pn	20 51 25.6	+2.7
	baz=349							
TWQ1				*e*S		Sb	20 51 54.5	-1.7
	baz=349							
NNS	Nan Shan	2.34	1		*e*P	Pb	20 51 26.6	-2.1
	baz=12							
ENA	Nanau	2.36	9		*e*P	Pn	20 51 24.1	+0.4
ENTT	Nioudou	2.55	5		*e*P	Pn	20 51 27.0	+0.8
	baz=5.0							
TWC	Suao	2.55	11		*e*P	Pn	20 51 27.6	+1.3
	baz=2.0							
TWC	Suao	2.55	11		*e*S	Sn	20 51 57.8	+1.5
	baz=2.0							
NSK	Sanguang	2.57	1		*e*P	Pn	20 51 28.0	+1.3
	baz=352							
TWE	Neicheng	2.64	7		*e*P	Pn	20 51 28.4	+0.9
	baz=7.0							
EGS		2.80	11		*e*P	Pn	20 51 33.3	+3.7
	baz=1.0							
YOJ	Yonaguni jima	2.83	33		P	Pn	20 51 31.0	+1.0
YOJ					*e*S	Sn	20 52 02.7	-0.3
HATJ	Hateruma jima	3.01	49		*e*S	Sn	20 52 06.6	-0.9
IRIF	Iriomote-Funau	3.15	44		P	Pn	20 51 35.2	+0.8
IRIF					S	Sn	20 52 10.4	-0.5
JKRS	Kuro-shima	3.27	49		P	Pn	20 51 37.4	+1.3
JKRS					S	Sn	20 52 12.8	-1.1
JIJ	Ishigaki jima	3.44	48		P	Pn	20 51 39.1	+0.6
JIJ					S	Sn	20 52 17.3	-0.9
JTJ	Tarama	4.01	50		P	Pn	20 51 46.9	+0.6
JTJ					*e*S	Sn	20 52 31.3	-0.9

TAP 15 20:51:48.0, 24.°41N×121.°27E, h6km±1km, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NNS	Nan Shan	0.10	71	*i*	P	Pg	20 51 50.4	-0.1
	baz=73							
NNS				*i*	S	Sg	20 51 52.1	0.0
	baz=73							
TWT	Tachien	0.17	209		*e*P	Pg	20 51 51.9	+0.1
	baz=211							
TWT				*e*S		Sg	20 51 54.3	0.0
	baz=211							

ISC 15 21:37:27.4±0.7, 6°07'S±0'.09×151°2'E±0'.1, h43km, n42, σ1°50/47, mb4.1/13, MS3.5/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.21**	**230**	*e*Pn	**Pn**	**21 38 45.8**	**+3.0**
	172nm,0.4s						
PMG				*e*Sn	**Sn**	**21 39 41.4**	**-0.2**
PMG	**Port Moresby**	**5.21**	**230**	P	Pn	21 38 46.3	+3.5
	23nm,0.3s,baz=35,slow=7.6,SNR=38						
PMG				S	**Sn**	**21 39 42.0**	**+0.4**
	67nm,0.3s,baz=161,slow=21,SNR=8.8						
JAY	**Jayapura**	**11.05**	**288**	P	**Pn**	**21 40 04.3**	**+1.2**
	baz=10,SNR=4.1						
COEN	**Coen**	**11.13**	**225**	P	**Pn**	**21 40 06.6**	**+2.5**
	baz=10,SNR=7.9						
COEN				S	**Sn**	**21 42 03.8**	**-3.5**
	baz=10,SNR=4.5						
MTSU	**Mount Surprise**	**13.75**	**209**	P	**P**	**21 40 44.8**	**-2.7**
	baz=13,SNR=3.7						
KDU	**Kakadu**	**19.61**	**249**	P	**P**	**21 41 50.8**	**-1.5**
	baz=19,SNR=34						
RMQ	**Roma**	**20.44**	**186**	P	Pn	21 42 07.5	+3.8
	baz=20,SNR=8.3						
MTN	**Manton Dam**	**20.91**	**250**	P	**P**	**21 42 04.9**	**-1.5**
	baz=20,SNR=8.3						
WRAB	**Tennant Creek**	**21.41**	**228**	*e*P	**P**	**21 42 11.2**	**-0.6**
	9.7nm,0.6s						
WRA	**Warramunga Arr**	**21.42**	**228**	P	**P**	**21 42 12.4**	**+0.5**
WRA				S	**S**	**21 46 04.7**	**-2.8**
WRA				ScP	**ScP**	**21 49 48.4**	**+0.1**
WRA	**Warramunga Arr**	**21.42**	**228**	P	**P**	**21 42 12.4**	**+0.5**
	7.1nm,0.5s,baz=51,slow=10,SNR=79						
WRA				S	**S**	**21 46 04.7**	**-2.8**
	1.7nm,1.0s,baz=53,slow=20,SNR=5.2						
WRA				ScP	**ScP**	**21 49 48.4**	**+0.1**
	0.7nm,0.8s,baz=50,slow=3.3,SNR=5.0						
QLP	**Quilpie**	**21.46**	**197**	P	P	21 42 21.9	+10
	baz=21,SNR=5.3						
KNRA	**Kununurra**	**24.00**	**245**	P	**P**	**21 42 38.2**	**-0.1**
	baz=23,SNR=9.9						
ASAR	**Alice Springs**	**24.15**	**222**	P	**P**	**21 42 41.3**	**+1.6**
ASAR				ScP	**ScP**	**21 49 55.8**	**+0.4**
ASAR	**Alice Springs**	**24.15**	**222**	P	**P**	**21 42 41.3**	**+1.6**
	4.1nm,0.8s,baz=55,slow=9.1,SNR=27						
ASAR				ScP	**ScP**	**21 49 55.8**	**+0.4**
	0.5nm,0.9s,baz=48,slow=4.1,SNR=4.8						
STKA	**Stephens Creek**	**27.20**	**198**	P	**P**	**21 43 10.3**	**+3.1**
STKA	**Stephens Creek**	**27.20**	**198**	P	**P**	**21 43 10.3**	**+3.1**
	1.2nm,0.7s,baz=31,slow=12,SNR=2.5						
FITZ	**Fitzroy Crossi**	**27.67**	**242**	P	**P**	**21 43 10.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**27.67**	**242**	P	**P**	**21 43 10.9**	**-0.6**
	4.6nm,0.6s,baz=70,slow=7.7,SNR=18						
FITZ				LR	LR	21 55 16.5	
	comp=Z,130nm,21.7s,baz=47,slow=38						
FITZ	**Fitzroy Crossi**	**27.67**	**242**	P	**P**	**21 43 10.9**	**-0.6**
	baz=27,SNR=16						
MEEK	**Meekatharra**	**37.18**	**233**	P	**P**	**21 44 34.9**	**+0.2**
	baz=36,SNR=7.9						
KMBL	**Kambalda**	**37.24**	**224**	P	**P**	**21 44 36.0**	**+0.8**
	baz=36,SNR=6.0						
KLBR	**Kellerberrin**	**40.29**	**227**	P	**P**	**21 45 00.7**	**0.0**
	baz=40,SNR=7.3						
JNU	**Nakatsue**	**43.50**	**335**	*e*P	**P**	**21 45 26.1**	**-0.7**
	8.0nm,0.8s						
JNU	**Nakatsue**	**43.50**	**335**	P	**P**	**21 45 27.2**	**+0.4**
	19nm,0.7s,baz=144,slow=3.2,SNR=18						
MJAR	**Matsushiro Arr**	**44.10**	**345**	LR	LR	22 00 16.4	
	comp=Z,58nm,21.8s,baz=190,slow=31						
KSRS	**Korea Array**	**48.45**	**335**	P	**P**	**21 46 06.3**	**+0.7**
	2.9nm,0.7s,baz=156,slow=8.5,SNR=12						
KSRS				LR	LR	22 04 39.8	
	comp=Z,46nm,21.0s,baz=135,slow=34						
KSAR	**Wonju Array Be**	**48.45**	**335**	P	**P**	**21 46 06.3**	**+0.7**
PETK	**Petropavlovsk-**	**59.21**	**5**	P	**P**	**21 47 24.7**	**+0.6**
PETK	**Petropavlovsk-**	**59.21**	**5**	P	**P**	**21 47 24.7**	**+0.6**
	4.5nm,0.7s,baz=168,slow=8.0,SNR=10						
SONM	**Songino Array**	**66.57**	**329**	P	**P**	**21 48 13.7**	**+0.4**
SONM	**Songino Array**	**66.57**	**329**	P	**P**	**21 48 13.7**	**+0.4**
	0.8nm,0.5s,baz=150,slow=4.4,SNR=5.7						
ZALV	**Zalesovo Beam**	**81.33**	**327**	P	**P**	**21 49 37.6**	**-1.7**
ZALV	**Zalesovo Beam**	**81.33**	**327**	P	**P**	**21 49 37.6**	**-1.7**
	0.4nm,0.3s,baz=123,slow=5.4,SNR=3.5						
ILAR	**Eielson Array**	**83.93**	**22**	P	**P**	**21 49 50.9**	**-1.7**
ILAR	**Eielson Array**	**83.93**	**22**	P	**P**	**21 49 50.9**	**-1.7**
	1.3nm,0.8s,baz=249,slow=5.5,SNR=15						
NVAR	**Mina Array Bea**	**94.11**	**52**	P	**P**	**21 50 41.9**	**-0.1**
NVAR	**Mina Array Bea**	**94.11**	**52**	P	**P**	**21 50 41.9**	**-0.1**
	0.3nm,0.6s,baz=254,slow=6.5,SNR=3.3						
YKA	**Yellowknife Ar**	**97.28**	**28**	P	**P**	**21 50 55.4**	**-0.2**
YKA	**Yellowknife Ar**	**97.28**	**28**	P	**P**	**21 50 55.4**	**-0.2**
	0.3nm,0.5s,baz=273,slow=4.6,SNR=7.2						
TORD	**Torodi Ar. Bea**	**149.16**	**285**	PKPbc	**PKPbc**	**21 57 11.8**	**-0.5**
TORD	**Torodi Ar. Bea**	**149.16**	**285**	PKPbc	**PKPbc**	**21 57 11.8**	**-0.5**
	0.4nm,0.3s,baz=88,slow=2.2,SNR=24						

IDC 15 21:51:28.8±8.8, 29°97'S×179°43'W, h372km±90km, mb3.2/3, mb1 3.4/4, mb1mx3.1/18, mbtmp3.3/4, Error ellipse: s-maj=88.8km s-min=45.1km az=11.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.75**	**198**	P	P	21 53 33.0	-0.2
	2.0nm,0.3s,baz=105,slow=20,SNR=14						
URZ				S	S	21 55 10.7	-2.2
	1.1nm,0.3s,baz=99,slow=16,SNR=3.9						
STKA	**Stephens Creek**	**33.37**	**257**	P	P	21 57 34.0	+0.3
	3.6nm,1.0s,baz=85,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**41.90**	**267**	P	P	21 58 44.1	-0.4
	0.6nm,0.5s,baz=102,slow=6.6,SNR=7.7						
WRA	**Warramunga Arr**	**42.84**	**272**	P	P	21 58 51.8	-0.3
	2.0nm,0.5s,baz=110,slow=7.7,SNR=12						
FINES	**FINESS Array B**	**144.31**	**339**	PKP	PKPab	22 10 19.6	0.0
	1.6nm,0.4s,baz=46,slow=4.1,SNR=30						

IDC 15 21:53:18.8±8.2, 17°58S×173°55W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.7/20, mbtmp3.7/3, Error ellipse: s-maj=373.3km s-min=36.9km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.24**	**259**	P	P	22 02 09.6	0.0
	0.3nm,0.6s,baz=98,slow=7.5,SNR=5.0						
ASAR	**Alice Springs**	**49.33**	**254**	P	P	22 02 09.9	-0.3
	1.9nm,0.8s,baz=87,slow=8.3,SNR=15						
ILAR	**Eielson Array**	**84.60**	**11**	P	P	22 05 53.4	-0.3
	0.4nm,0.7s,baz=229,slow=6.3,SNR=5.2						
BRTR	**Keskin Array B**	**147.72**	**319**	PKPbc	PKPbc	22 13 05.7	-0.3
	0.8nm,0.9s,baz=63,slow=2.7,SNR=4.9						

IDC 15 21:55:42.7±7.1, 36°21N×22°45E, h29km±54km, mb3.6/11, mb1 3.7/14, mb1mx3.5/33, mbtmp3.5/14, ML3.6/3, MS3.4/1, Ms1 3.4/1, ms1mx2.2/42, Error ellipse: s-maj=22.5km s-min=19.1km az=169.0
THE 15 21:55:43.2, 36°22N×22°49E, h0km±1km, ML3.6/7, Error ellipse: s-maj=2.4km s-min=0.9km az=231.0
CSEM 15 21:55:43.2, 36°22N×22°49E, h0km, ML3.6/7, After THE

ISC 15 21:55:41.2±1.1, 36°14N±0°.03×22°39E±0°.03, h13km±7km, n102, σ1°71/125, mb3.9/11, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**0.54**	**75**	P	**Pg**	**21 55 51.9**	**+0.1**
KYTH	**Kithira**	**0.54**	**75**	P	**Pg**	**21 55 51.9**	**+0.1**
DYR	**Agios Nikonas**	**0.62**	**356**	P	**Pg**	**21 55 53.3**	**0.0**
DYR				S	**Sg**	**21 56 02.1**	**+0.6**
DYR	**Agios Nikonas**	**0.62**	**356**	P	**Pg**	**21 55 53.3**	**0.0**
DYR				S	**Sg**	**21 56 02.1**	**+0.6**
VLI	**Veliai**	**0.72**	**38**	P	**Pg**	**21 55 55.0**	**-0.3**
VLI				S	**Sg**	**21 56 03.3**	**-1.5**
VLI	**Veliai**	**0.72**	**38**	P	**Pg**	**21 55 55.0**	**-0.3**
VLI				S	**Sg**	**21 56 03.3**	**-1.5**
PYL	**PYLOS**	**0.91**	**325**	P	**Pg**	**21 55 59.3**	**+0.4**
PYL				S	**Sn**	**21 56 14.3**	**+1.5**
PYL	**PYLOS**	**0.91**	**325**	P	**Pg**	**21 55 59.3**	**+0.4**
PYL				S	**Sn**	**21 56 14.3**	**+1.5**
ITM	**Ithomi**	**1.10**	**340**	P	**Pg**	**21 56 02.7**	**+0.3**
ITM				S	**Sn**	**21 56 18.5**	**+1.1**
ITM	**Ithomi**	**1.10**	**340**	P	**Pg**	**21 56 02.7**	**+0.3**
ITM				S	**Sn**	**21 56 18.5**	**+1.1**
VLX	**Vlachokerasia**	**1.22**	**360**	P	**Pb**	**21 56 04.2**	**-0.1**
VLX				S	**Sb**	**21 56 20.1**	**+0.1**
KARN	**Karanos**	**1.45**	**120**	P	**Pn**	**21 56 08.0**	**+0.9**
KARN				S	**Sg**	**21 56 28.4**	**+0.6**
KARN	**Karanos**	**1.45**	**120**	P	**Pn**	**21 56 08.0**	**+0.9**
KARN				S	**Sg**	**21 56 28.4**	**+0.6**
DID	**Didima**	**1.52**	**26**	P	**Pn**	**21 56 09.2**	**+1.1**
DID				S	**Sg**	**21 56 29.7**	**-0.5**
DID	**Didima**	**1.52**	**26**	P	**Pn**	**21 56 09.2**	**+1.1**
DID				S	**Sg**	**21 56 29.7**	**-0.5**
VAM	**Vamos**	**1.65**	**116**	P	**Pb**	**21 56 12.2**	**+0.8**
VAM				S	**Sg**	**21 56 35.0**	**+0.8**
VAM	**Vamos**	**1.65**	**116**	P	**Pb**	**21 56 12.2**	**+0.8**
VAM				S	**Sg**	**21 56 35.0**	**+0.8**
GUR	**Goura**	**1.79**	**359**	P	**Pb**	**21 56 14.7**	**+0.8**
GUR				S	**Sb**	**21 56 37.1**	**+0.8**
GUR	**Goura**	**1.79**	**359**	P	**Pb**	**21 56 14.7**	**+0.8**
GUR				S	**Sb**	**21 56 37.1**	**+0.8**
GVD	**Gavdhos**	**1.90**	**133**	P	**Pn**	**21 56 15.1**	**+1.8**
GVD	**Gavdhos**	**1.90**	**133**	P	**Pn**	**21 56 15.1**	**+1.8**
LTK	**Loutraki**	**1.93**	**14**	P	**Pb**	**21 56 16.4**	**+0.1**
LTK				S	**Sb**	**21 56 40.0**	**-0.3**
LTK	**Loutraki**	**1.93**	**14**	P	**Pb**	**21 56 16.4**	**+0.1**
LTK				S	**Sb**	**21 56 40.0**	**-0.3**
RLS	**Riolos of Patr**	**2.05**	**339**	P	**Pb**	**21 56 18.2**	**0.0**
RLS				S	**Sb**	**21 56 43.6**	**0.0**
RLS	**Riolos of Patr**	**2.05**	**339**	P	**Pb**	**21 56 18.2**	**0.0**
RLS				S	**Sb**	**21 56 43.6**	**0.0**
PTL	**Penteli**	**2.24**	**31**	P	**Pn**	**21 56 19.8**	**+1.8**
PTL				S	**Sn**	**21 56 46.5**	**+1.0**
PTL	**Penteli**	**2.24**	**31**	P	**Pn**	**21 56 19.8**	**+1.8**
PTL				S	**Sn**	**21 56 46.5**	**+1.0**
SIVA	**Sivas**	**2.27**	**119**	P	**Pg**	**21 56 23.9**	**-0.9**
SIVA				S	**Sb**	**21 56 51.0**	**+1.0**
SIVA	**Sivas**	**2.27**	**119**	P	**Pg**	**21 56 23.9**	**-0.9**
SIVA				S	**Sb**	**21 56 51.0**	**+1.0**
THR3	**Thira Island,**	**2.45**	**83**	P	**Pn**	**21 56 22.5**	**+1.7**
THR3	**Thira Island,**	**2.45**	**83**	P	**Pn**	**21 56 22.5**	**+1.7**
VLS	**Valsamata**	**2.49**	**325**	P	**Pn**	**21 56 23.2**	**+1.8**
VLS	**Valsamata**	**2.49**	**325**	P	**Pn**	**21 56 23.2**	**+1.8**
THR1	**Thera Island**	**2.49**	**84**	P	**Pn**	**21 56 22.5**	**+1.0**
THR1	**Thera Island**	**2.49**	**84**	P	**Pn**	**21 56 22.5**	**+1.0**
ATAL	**Atalanti**	**2.59**	**11**	P	**Pn**	**21 56 25.0**	**+2.1**
ATAL	**Atalanti**	**2.59**	**11**	P	**Pn**	**21 56 25.0**	**+2.1**
LAST	**Lasithi**	**2.70**	**110**	P	**Pn**	**21 56 26.3**	**+1.9**
LAST	**Lasithi**	**2.70**	**110**	P	**Pn**	**21 56 26.3**	**+1.9**
NPS	**Neapolis**	**2.77**	**108**	P	**Pn**	**21 56 27.2**	**+1.9**
NPS	**Neapolis**	**2.77**	**108**	P	**Pn**	**21 56 27.2**	**+1.9**
MAKR	**Makrakomi, Fth**	**2.87**	**356**	P	**Pn**	**21 56 29.5**	**+2.8**
MAKR	**Makrakomi, Fth**	**2.87**	**356**	P	**Pn**	**21 56 29.5**	**+2.8**
AGG	**Agios Georgios**	**2.87**	**359**	P	**Pb**	**21 56 30.7**	**-1.6**
AGG				S	**Sn**	**21 57 04.2**	**+3.0**
AGG	**Agios Georgios**	**2.87**	**359**	P	**Pb**	**21 56 30.7**	**-1.6**
AGG				S	**Sn**	**21 57 04.2**	**+3.0**
LKD2	**Lefkada island**	**2.98**	**333**	P	**Pn**	**21 56 30.8**	**+2.6**
LKD2				S	**Sn**	**21 57 07.5**	**+3.8**
LKD2	**Lefkada island**	**2.98**	**333**	P	**Pn**	**21 56 30.8**	**+2.6**
LKD2				S	**Sn**	**21 57 07.5**	**+3.8**
SKIA	**Skiathos**	**3.14**	**16**	P	**Pn**	**21 56 33.1**	**+2.8**
SKIA				S	**Sn**	**21 57 11.3**	**+3.7**
SKIA	**Skiathos**	**3.14**	**16**	P	**Pn**	**21 56 33.1**	**+2.8**
SKIA				S	**Sn**	**21 57 11.3**	**+3.7**
AOS	**Alonnisos**	**3.25**	**21**	P	**Pn**	**21 56 33.4**	**+1.6**
AOS	**Alonnisos**	**3.25**	**21**	P	**Pn**	**21 56 33.4**	**+1.6**
XOR	**Xorichti**	**3.28**	**11**	P	**Pn**	**21 56 35.3**	**+3.0**
XOR	**Xorichti**	**3.28**	**11**	P	**Pn**	**21 56 35.3**	**+3.0**
ZKR	**Zakros**	**3.28**	**107**	P	Pn	21 56 35.9	+3.6
ZKR	**Zakros**	**3.28**	**107**	P	Pn	21 56 35.9	+3.6
THL	**Klokotos Trika**	**3.43**	**355**	P	**Pn**	**21 56 37.1**	**+2.8**
THL	**Klokotos Trika**	**3.43**	**355**	P	**Pn**	**21 56 37.1**	**+2.8**
CHOS	**Chios island**	**3.68**	**51**	P	**Pn**	**21 56 39.2**	**+1.3**
CHOS	**Chios island**	**3.68**	**51**	P	**Pn**	**21 56 39.2**	**+1.3**
IGT	**Igoumenitsa**	**3.75**	**335**	P	**Pn**	**21 56 40.5**	**+1.7**
IGT	**Igoumenitsa**	**3.75**	**335**	P	**Pn**	**21 56 40.5**	**+1.7**
KEK	**Kerkira**	**4.11**	**331**	P	**Pn**	**21 56 44.8**	**+1.1**
KEK	**Kerkira**	**4.11**	**331**	P	**Pn**	**21 56 44.8**	**+1.1**
SIGR	**SIGRI**	**4.12**	**41**	P	**Pn**	**21 56 45.1**	**+1.3**
SIGR	**SIGRI**	**4.12**	**41**	P	**Pn**	**21 56 45.1**	**+1.3**
PRK	**Paraskevi**	**4.37**	**44**	P	**Pn**	**21 56 48.7**	**+1.5**
PRK	**Paraskevi**	**4.37**	**44**	P	**Pn**	**21 56 48.7**	**+1.5**
OUR	**Ouranopolis**	**4.37**	**16**	P	**Pn**	**21 56 49.0**	**+1.8**
OUR	**Ouranopolis**	**4.37**	**16**	P	**Pn**	**21 56 49.0**	**+1.8**
NEST	**Nestorio**	**4.39**	**347**	P	**Pn**	**21 56 50.8**	**+3.1**
NEST	**Nestorio**	**4.39**	**347**	P	**Pn**	**21 56 50.8**	**+3.1**
ARG	**Arkhangelos**	**4.64**	**87**	P	**Pn**	**21 56 53.7**	**+2.7**
ARG	**Arkhangelos**	**4.64**	**87**	P	**Pn**	**21 56 53.7**	**+2.7**
FNA	**Florina**	**4.70**	**351**	P	**Pn**	**21 56 53.7**	**+1.8**
FNA	**Florina**	**4.70**	**351**	P	**Pn**	**21 56 53.7**	**+1.8**
KNT	**Kendrikon**	**5.03**	**4**	P	**Pn**	**21 56 58.8**	**+2.5**
KNT	**Kendrikon**	**5.03**	**4**	P	**Pn**	**21 56 58.8**	**+2.5**
SRS	**Serrai**	**5.05**	**10**	P	**Pn**	**21 56 58.1**	**+1.4**
SRS	**Serrai**	**5.05**	**10**	P	**Pn**	**21 56 58.1**	**+1.4**
MMB	**Musomiste**	**5.54**	**10**	P	Pn	21 57 06.5	+3.2
KKB	**Krupnik**	**5.74**	**5**	P	Pn	21 57 12.0	+5.9
RZN	**Rozhen**	**5.83**	**17**	P	Pn	21 57 11.3	+3.9
MPEP	**Malo Peshtene**	**7.28**	**8**	P	Pn	21 57 36.0	+8.8
STON	**Ston**	**7.63**	**333**	*e*Pn	**Pn**	**21 57 30.4**	**-1.6**
STON				S	Sn	21 58 53.3	-5.0
BRTR	**Keskin Array B**	**9.58**	**65**	Pn	Pn	21 58 02.9	+4.0
	0.1nm,0.3s,baz=250,slow=14,SNR=8.2						
MLR	**Muntele Rosu**	**9.72**	**15**	Pn	Pn	21 58 04.6	+3.9
	0.0nm,0.3s,baz=180,slow=11,SNR=5.0						
MMAI	**Mount Meron Ar**	**11.17**	**102**	Pn	**Pn**	**21 58 19.2**	**-1.4**
	0.6nm,0.3s,baz=294,slow=11,SNR=5.2						
GERES	**GERESS Array B**	**14.21**	**336**	Pn	**Pn**	**21 59 01.1**	**-0.9**
	0.1nm,0.3s,baz=161,slow=9.3,SNR=4.4						
AKASG	**Malin Array Be**	**15.36**	**17**	Pn	**Pn**	**21 59 20.0**	**+2.4**
	0.3nm,0.3s,baz=204,slow=9.1,SNR=3.8						
KBZ	**Khabaz**	**17.43**	**58**	P	**Pn**	**21 59 43.4**	**-0.6**
	0.1nm,0.3s,baz=235,slow=7.0,SNR=3.2						
ESDC	**Sonseca Array**	**21.06**	**288**	P	**P**	**22 00 24.2**	**-0.8**
	1.3nm,0.8s,baz=86,slow=12,SNR=6.8						
HFS	**Hagfors**	**24.65**	**350**	P	**P**	**22 01 00.2**	**-1.1**
	0.8nm,0.6s,baz=158,slow=13,SNR=6.3						
FINES	**FINESS Array B**	**25.43**	**4**	P	**P**	**22 01 06.4**	**-1.9**
	2.6nm,1.0s,baz=144,slow=14,SNR=5.0						
NOA	**NORSAR Array B**	**25.91**	**348**	P	**P**	**22 01 12.7**	**-0.1**
	0.7nm,0.8s,baz=158,slow=11,SNR=3.1						
EKA	**Eskdalemuir Ar**	**25.95**	**326**	P	**P**	**22 01 12.4**	**-0.7**
	3.0nm,0.7s,baz=130,slow=7.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**29.50**	**224**	P	**P**	**22 01 45.7**	**+0.4**
	0.3nm,0.7s,baz=30,slow=8.7,SNR=2.6						
ARCES	**ARCESS Array B**	**33.49**	**2**	P	**P**	**22 02 18.8**	**-1.1**
	1.4nm,0.9s,baz=184,slow=11,SNR=3.8						
ARCES				LR	LR	22 17 04.5	
	comp=Z,54nm,18.8s,baz=183,slow=38						
SPITS	**Spitsbergen Ar**	**42.22**	**358**	P	**P**	**22 03 32.5**	**-0.9**
	3.4nm,0.9s,baz=155,slow=14,SNR=3.5						
MKAR	**Makanchi Array**	**45.12**	**57**	P	**P**	**22 03 55.5**	**-1.7**
	0.9nm,0.5s,baz=269,slow=8.0,SNR=20						
ZALV	**Zalesovo Beam**	**45.97**	**47**	P	**P**	**22 04 01.8**	**-1.9**
	1.1nm,0.5s,baz=280,slow=8.9,SNR=7.1						
YKA	**Yellowknife Ar**	**75.80**	**341**	P	P	22 07 24.0	-2.5
	0.1nm,0.5s,baz=36,slow=5.3,SNR=2.9						

IDC 15 22:04:50.9±2.1, 9°10S×123°86E, h0km, mb3.5/1, mb1 3.7/3, mb1mx3.4/20, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=221.9km s-min=32.8km az=56.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.79**	**138**	Pn	Pn	22 08 20.5	-1.2
	0.3nm,0.3s,baz=314,slow=14,SNR=9.5						
WRA				Sn	Sn	22 10 50.5	-16
	0.7nm,0.3s,baz=315,slow=25,SNR=10.0						
ASAR	**Alice Springs**	**17.39**	**148**	Pn	P	22 08 56.0	-0.6
	0.1nm,0.3s,baz=321,slow=12,SNR=14						
ASAR				Sn	Sn	22 11 54.0	-16
	0.1nm,0.3s,baz=316,slow=21,SNR=3.1						
MKAR	**Makanchi Array**	**66.83**	**330**	P	P	22 15 44.6	0.0
	0.3nm,0.6s,baz=138,slow=6.5,SNR=5.9						

ISCJB 15 22:15:34.6±0.5, 2°.26S×0°.04×120°.82E±0°.05, h10km, mb4.0/10, MS3.4/5, Error ellipse: s-maj=8.2km s-min=4.7km az=21.5
IDC 15 22:15:34.0±0.8, 2°.26S×120°.92E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.0/24, mbtmp4.1/11, ML3.9/1, MS3.5/6, Ms1 3.5/6, ms1mx3.1/29, Error ellipse: s-maj=31.0km s-min=14.1km az=64.0
DJA 15 22:15:36.7±1.1, 2°.5S±3°×12°1E±°, h15km±8km, M4.7/6, MLv4.7/6

ISC 15 22:15:35.4±0.6, 2°24S±0°.04×120°87E±0°.06, h10km, n25, σ1°67/27, mb4.1/10, MS3.6/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.32**	**233**	P	**Pn**	**22 15 57.5**	**-2.4**
TTSI				S	**Sb**	**22 16 14.4**	**-2.9**
LUWI	**Luwuk**	**2.24**	**58**	P	**Pb**	**22 16 14.4**	**-1.7**
MRSI	**Marisa**	**2.90**	**22**	P	**Pn**	**22 16 22.5**	**+0.7**
MRSI				S	**Sb**	**22 16 59.5**	**-3.5**
KAPI	**Kappang**	**2.97**	**202**	P	**Pn**	**22 16 21.0**	**-1.7**
KAPI	**Kappang**	**2.97**	**202**	Pn	**Pn**	**22 16 21.2**	**-1.5**
	16nm,0.3s,baz=17,slow=4.3,SNR=37						
KAPI				Sn	**Sn**	**22 16 58.1**	**-0.3**
	23nm,0.3s,baz=103,slow=12,SNR=8.4						
BKSI	**Bulukumba**	**3.15**	**194**	P	**Pn**	**22 16 26.3**	**+1.2**
BKSI				S	**Sn**	**22 17 03.7**	**+0.9**
BBSI	**Bau Bau**	**3.65**	**152**	P	**Pg**	**22 16 45.8**	**+0.5**
SGKI	**Sangatta, Kali**	**3.68**	**297**	P	**Pn**	**22 16 32.3**	**+0.1**
BSSI	**Bau Bau, Buton**	**3.90**	**186**	P	**Pn**	**22 16 36.9**	**+1.5**
SMKI	**Samarinda**	**4.07**	**296**	P	**Pn**	**22 16 39.0**	**+1.2**
KMSI	**Cibinong**	**4.18**	**48**	P	**Pb**	**22 16 46.9**	**-2.3**
FITZ	**Fitzroy Crossi**	**16.44**	**164**	LR	LR	22 25 56.3	
	comp=Z,229nm,20.6s,baz=338,slow=38						
WRA	**Warramunga Arr**	**21.97**	**144**	P	**P**	**22 20 29.5**	**-0.3**
	4.7nm,0.8s,baz=324,slow=11,SNR=15						
PSI	**Prapat**	**22.50**	**283**	P	**P**	**22 20 37.6**	**+2.0**
	9.3nm,0.8s,baz=113,slow=5.6,SNR=8.4						
PSI				LR	LR	22 30 46.9	
	comp=Z,258nm,18.6s,baz=259,slow=40						
ASAR	**Alice Springs**	**24.76**	**150**	P	**P**	**22 20 57.8**	**+0.3**
	1.6nm,0.7s,baz=335,slow=10,SNR=17						
ASAR				PcP	**PcP**	**22 24 33.7**	**-0.7**
	0.5nm,0.7s,baz=346,slow=1.8,SNR=4.6						
ASAR				LR	LR	22 31 34.5	
	comp=Z,47nm,20.2s,baz=331,slow=39						
CMAR	**Chiang Mai Arr**	**29.81**	**315**	P	**P**	**22 21 44.1**	**+1.2**
	2.7nm,0.8s,baz=139,slow=7.0,SNR=18						
STKA	**Stephens Creek**	**35.36**	**149**	P	**P**	**22 22 31.2**	**-0.1**
	3.9nm,0.9s,baz=263,slow=6.0,SNR=4.6						
KSRS	**Korea Array**	**40.03**	**9**	LR	LR	22 38 08.6	
	comp=Z,54nm,21.7s,baz=340,slow=34						
USRK	**Ussuriysk Arra**	**47.30**	**11**	LR	LR	22 42 59.7	
	comp=Z,64nm,20.7s,baz=333,slow=35						
SONM	**Songino Array**	**51.45**	**348**	P	**P**	**22 24 41.2**	**+0.1**
	1.7nm,0.6s,baz=164,slow=7.3,SNR=7.8						
SONM				LR	LR	22 45 30.6	
	comp=Z,59nm,21.3s,baz=310,slow=35						
MKAR	**Makanchi Array**	**59.44**	**330**	P	**P**	**22 25 38.4**	**-0.1**
	2.4nm,0.9s,baz=133,slow=7.1,SNR=14						
ZALV	**Zalesovo Beam**	**63.50**	**337**	P	**P**	**22 26 06.4**	**+0.7**
	0.5nm,0.4s,baz=116,slow=6.8,SNR=4.7						
VNDA	**Vanda**	**78.35**	**172**	P	**P**	**22 27 36.0**	**+0.5**
	0.7nm,0.7s,baz=306,slow=7.1,SNR=4.8						
BRTR	**Keskin Array B**	**89.28**	**310**	P	**P**	**22 28 31.6**	**-0.8**
	0.3nm,0.4s,baz=180,slow=3.6,SNR=4.8						
TORD	**Torodi Ar. Bea**	**118.90**	**284**	PKP	**PKPdf**	**

MYA	**Malataya**	**1.85**	**70**	*e*Pn	**Pn**	**22 30 45.6**	**-0.9**
MYA	**Malataya**	**1.85**	**70**	*e*Pn	**Pn**	**22 30 45.6**	**-0.9**
URFA	**Urfa**	**2.09**	**97**	*e*Pn	**Pn**	**22 30 49.3**	**-0.5**
URFA	**Urfa**	**2.09**	**97**	*e*Pn	**Pn**	**22 30 49.3**	**-0.5**
SULT	**Sultanhani-AKS**	**2.18**	**284**	*e*PN	**Pn**	**22 30 50.7**	**-0.3**
ILIC	**ilic-Erzincan**	**2.53**	**46**	*e*PN	**Pn**	**22 30 55.5**	**-0.4**
ILIC	**ilic-Erzincan**	**2.53**	**46**	*e*Pn	**Pn**	**22 30 55.5**	**-0.4**
SVRC	**Sivrice-ELAZID**	**2.53**	**74**	*e*PN	**Pn**	**22 30 55.2**	**-0.7**
SVRC	**Sivrice-ELAZID**	**2.53**	**74**	*e*Pn	**Pn**	**22 30 55.2**	**-0.7**
PTK	**Pertek**	**2.77**	**64**	*e*PN	**Pn**	**22 30 58.4**	**-0.7**
PTK	**Pertek**	**2.77**	**64**	*e*Pn	**Pn**	**22 30 58.4**	**-0.7**

CRAAG ***15*** *22:35:47.5,36.94N×4.21E,Ml4.3*
CSEM ***15*** *22:35:49.1±0.1,36.87N×4.30E,h10km,ML4.3, Error ellipse: s-maj=3.9km s-min=3.3km az=18.0*
MDD ***15*** *22:35:51.8±1.5,36.86N×4.27E,h26km±17km, mb4.4/24, Error ellipse: s-maj=5.6km s-min=4.5km az=17.0, PRXIMO*
LDG ***15*** *22:35:54.3±0.3,37.03N×3.81E,h30km, Ml3.6/9, Error ellipse: s-maj=7.3km s-min=3.6km az=147.0*
STR ***15*** *22:35:57.4±0.0,37.36N×4.41E,h20km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 15 22:35:48.6±1.4,**36.93N**±0.05×**4.24E**±0.02,**h16**km±13km, **n193,σ1s73**/180,**3C,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKF	**Akfadou**	**0.39**	**138**	Pn	**Pb**	**22 35 56.8**	**-0.5**
AKF	**Akfadou**	**0.39**	**138**	P	**Pb**	**22 35 56.8**	**-0.5**
AKF	**Akfadou**	**0.39**	**138**	P	**Pb**	**22 35 56.8**	**-0.5**
AKET	**Djebel Ketaf**	**0.93**	**198**	Pn	**Pb**	**22 36 07.2**	**+0.8**
AKET	**Djebel Ketaf**	**0.93**	**198**	P	**Pb**	**22 36 07.2**	**+0.8**
AKET	**Djebel Ketaf**	**0.93**	**198**	P	**Pb**	**22 36 07.2**	**+0.8**
ABA	**Alger-Bouzarea**	**0.98**	**263**	Pn	**Pb**	**22 36 07.2**	**+0.1**
ABA	**Alger-Bouzarea**	**0.98**	**263**	P	**Pb**	**22 36 07.2**	**+0.1**
ABA	**Alger-Bouzarea**	**0.98**	**263**	P	**Pb**	**22 36 07.2**	**+0.1**
ADJB	**Djebel Djouab**	**1.01**	**220**	Pn	**Pg**	**22 36 05.9**	**-2.2**
ADJB	**Djebel Djouab**	**1.01**	**220**	P	**Pg**	**22 36 05.9**	**-2.2**
ADJB	**Djebel Djouab**	**1.01**	**220**	Pn	**Pg**	**22 36 05.9**	**-2.2**
SET	**Setif**	**1.18**	**128**	Pn	**Pg**	**22 36 12.0**	**+0.5**
SET	**Setif**	**1.18**	**128**	P	**Pg**	**22 36 12.0**	**+0.5**
SET	**Setif**	**1.18**	**128**	P	**Pg**	**22 36 12.0**	**+0.5**
EMHD	**Djebel Mahouad**	**1.27**	**235**	Pn	**Pn**	**22 36 12.4**	**+0.6**
EMHD	**Djebel Mahouad**	**1.27**	**235**	P	**Pn**	**22 36 12.4**	**+0.6**
EMHD	**Djebel Mahouad**	**1.27**	**235**	P	**Pn**	**22 36 12.4**	**+0.6**
DFRA	**Djebel Bou Aff**	**1.37**	**106**	Pn	**Pg**	**22 36 14.0**	**-1.0**
DFRA	**Djebel Bou Aff**	**1.37**	**106**	P	**Pg**	**22 36 14.0**	**-1.0**
DFRA	**Djebel Bou Aff**	**1.37**	**106**	P	**Pg**	**22 36 14.0**	**-1.0**
CASM	**Ain Smara**	**1.93**	**110**	Pn	**Pn**	**22 36 21.0**	**+0.2**
CASM	**Ain Smara**	**1.93**	**110**	P	**Pn**	**22 36 21.0**	**+0.2**
CASM	**Ain Smara**	**1.93**	**110**	P	**Pn**	**22 36 21.0**	**+0.2**
CKFL	**Kef-Lekhel**	**2.06**	**104**	Pn	**Pn**	**22 36 23.0**	**+0.3**
CKFL	**Kef-Lekhel**	**2.06**	**104**	P	**Pn**	**22 36 23.0**	**+0.3**
CKFL	**Kef-Lekhel**	**2.06**	**104**	P	**Pn**	**22 36 23.0**	**+0.3**
CAEH	**'Ain El Ouahch**	**2.10**	**93**	Pn	**Pn**	**22 36 23.9**	**+0.8**
CAEH	**'Ain El Ouahch**	**2.10**	**93**	P	**Pn**	**22 36 23.9**	**+0.8**
CAEH	**'Ain El Ouahch**	**2.10**	**93**	P	**Pn**	**22 36 23.9**	**+0.8**
EBNR	**Beni Rached**	**2.27**	**255**	P	**Pg**	**22 36 31.7**	**-0.5**
ECHA	**Ech Chlef**	**2.44**	**252**	P	**Pg**	**22 36 34.0**	**-1.4**
ECHF	**Ech Chlef**	**2.46**	**253**	Pn	**Pb**	**22 36 34.0**	**+1.6**
ECHF	**Ech Chlef**	**2.46**	**253**	Pn	**Pb**	**22 36 34.0**	**+1.6**
CMAH	**Djebel Manchou**	**2.57**	**96**	Pn	**Pn**	**22 36 30.0**	**+0.4**
CMAH	**Djebel Manchou**	**2.57**	**96**	P	**Pn**	**22 36 30.0**	**+0.4**
CMAH	**Djebel Manchou**	**2.57**	**96**	P	**Pn**	**22 36 30.0**	**+0.4**
ABSA	**Djebel Ababsia**	**2.69**	**103**	P	**Pn**	**22 36 31.0**	**-0.2**
ABSA	**Djebel Ababsia**	**2.69**	**103**	P	**Pn**	**22 36 31.0**	**-0.2**
CABS	**Djebel Ababsia**	**2.69**	**103**	Pn	**Pn**	**22 36 31.0**	**-0.2**
CABS	**Djebel Ababsia**	**2.69**	**103**	Pn	**Pn**	**22 36 31.0**	**-0.2**
EANR	**'Ain N'Sour**	**2.71**	**250**	P	**Pg**	**22 36 39.2**	**-1.5**
EANR	**'Ain N'Sour**	**2.71**	**250**	P	**Pg**	**22 36 39.2**	**-1.5**
MAHO	**Mahon**	**2.96**	**0**	Pn	**Pn**	**22 36 35.9**	**+1.0**
MAHO				Sn	**Sn**	**22 37 06.6**	**-3.5**
MAHO	**Mahon**	**2.96**	**0**	Pn	**Pn**	**22 36 35.9**	**+1.0**
EIBI	**Ibiza**	**3.10**	**313**	Pn	**Pn**	**22 36 38.6**	**+1.7**
	3.4nm,0.1s,SNR=33						
EIBI				Sn	**Sn**	**22 37 13.0**	**-0.7**
	41nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**3.10**	**313**	Pn	**Pn**	**22 36 38.6**	**+1.7**
	3.4nm,0.1s,SNR=33						
EIBI				Sn	**Sn**	**22 37 13.0**	**-0.7**
	41nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.96**	**298**	Pn	**Pn**	**22 36 49.7**	**+1.0**
	1.4nm,0.1s,SNR=20						
EBEN				Sn	**Sn**	**22 37 32.2**	**-2.5**
	8.4nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**3.96**	**298**	Pn	**Pn**	**22 36 49.7**	**+1.0**
	1.4nm,0.1s,SNR=20						
EMUR	**La Murta**	**4.46**	**283**	Pn	**Pn**	**22 36 56.6**	**+1.0**
	2.7nm,0.2s,SNR=10						
EMUR				Sn	**Sn**	**22 37 44.8**	**-2.3**
	3.5nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**4.46**	**283**	Pn	**Pn**	**22 36 56.6**	**+1.0**
	2.7nm,0.2s,SNR=10						
EMUR				Sn	**Sn**	**22 37 44.8**	**-2.3**
	3.5nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.89**	**305**	Pn	Pn	22 37 04.4	+2.9
	13nm,0.3s,SNR=6.6						
ECHE	**Chera**	**4.89**	**305**	Pn	Pn	22 37 04.4	+2.9
	13nm,0.3s,SNR=6.6						
ETOB	**Tobarra**	**4.89**	**292**	Pn	**Pn**	**22 37 03.6**	**+2.1**
	4.5nm,0.3s,SNR=86						
ETOB				Sn	**Sn**	**22 37 55.4**	**-2.5**
	5.1nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.89**	**292**	Pn	**Pn**	**22 37 03.7**	**+2.1**
	4.5nm,0.3s,SNR=86						
CFON	**Fontmartina**	**5.03**	**344**	⇑Pn	**Pn**	**22 37 05.8**	**+2.4**
	24nm,0.2s,SNR=18						
CFON				Sn	**Sn**	**22 37 59.4**	**-1.8**
	17nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.03**	**344**	Pn	**Pn**	**22 37 05.8**	**+2.4**
	24nm,0.2s,SNR=18						
CFON				Sn	**Sn**	**22 37 59.4**	**-1.8**
	17nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.04**	**314**	Pn	**Pn**	**22 37 05.7**	**+2.1**
	1.2nm,0.1s,SNR=24						
EMOS				Sn	**Sn**	**22 38 00.3**	**-1.3**
	4.9nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**5.04**	**314**	Pn	**Pn**	**22 37 05.7**	**+2.1**
	1.2nm,0.1s,SNR=24						
EMOS				Sn	**Sn**	**22 38 00.3**	**-1.3**
	4.9nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**5.04**	**324**	Pn	**Pn**	**22 37 05.3**	**+1.7**
	1.3nm,0.1s,SNR=14						
ERTA				Sn	**Sn**	**22 37 60.0**	**-1.6**
	5.8nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**5.04**	**324**	Pn	**Pn**	**22 37 05.3**	**+1.7**
	1.3nm,0.1s,SNR=14						
ERTA				Sn	**Sn**	**22 38 00.0**	**-1.6**
	5.8nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**5.06**	**332**	Pn	**Pn**	**22 37 05.4**	**+1.6**
	4.2nm,0.3s,SNR=20						
EPOB				Sn	**Sn**	**22 37 59.7**	**-2.2**
	5.2nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**5.06**	**332**	Pn	**Pn**	**22 37 05.4**	**+1.6**
	4.2nm,0.3s,SNR=20						
EPOB				Sn	**Sn**	**22 37 59.7**	**-2.2**
	5.2nm,0.2s,SNR=7.9						
ENIJ	**Nijar**	**5.17**	**272**	Pn	**Pn**	**22 37 07.0**	**+1.7**
	3.1nm,0.4s,SNR=4.0						
ENIJ				Sn	**Sn**	**22 38 02.8**	**-1.7**
	3.5nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**5.17**	**272**	Pn	**Pn**	**22 37 06.9**	**+1.7**
	3.1nm,0.4s,SNR=4.0						
ENIJ				Sn	**Sn**	**22 38 02.8**	**-1.7**
	3.5nm,0.3s,SNR=7.9						
EMIR	**Miracle**	**5.40**	**338**	⇑Pn	Pn	22 37 11.9	+3.3
	9.2nm,0.1s,SNR=18						
EMIR				Sn	**Sn**	**22 38 10.6**	**+0.2**
	10nm,0.2s,SNR=5.7						
EMIR	**Miracle**	**5.40**	**338**	Pn	Pn	22 37 11.9	+3.3
	9.2nm,0.1s,SNR=18						
EHUE	**Huescar**	**5.51**	**281**	Pn	**Pn**	**22 37 13.0**	**+2.9**
	2.2nm,0.3s,SNR=7.9						
EHUE				Sn	**Sn**	**22 38 12.3**	**-1.0**
	2.4nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**5.51**	**281**	Pn	**Pn**	**22 37 13.0**	**+2.9**
	2.2nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**5.61**	**290**	Pn	**Pn**	**22 37 13.4**	**+2.0**
	9.1nm,0.3s,SNR=9.2						
EVIA				Sn	**Sn**	**22 38 12.7**	**-2.8**
	6.8nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**5.61**	**290**	Pn	**Pn**	**22 37 13.4**	**+2.0**
	9.1nm,0.3s,SNR=9.2						
EJON	**La Jonquera**	**5.61**	**350**	⇑Pn	Pn	22 37 14.3	+2.9
	26nm,0.3s,SNR=18						
EJON				Sn	**Sn**	**22 38 13.5**	**-2.0**
	13nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**5.61**	**350**	Pn	Pn	22 37 14.3	+2.9
	26nm,0.3s,SNR=18						
SJAF	**Saint Jean de**	**5.65**	**350**	P	Pn	22 37 14.7	+2.8
SJAF	**Saint Jean de**	**5.65**	**350**	P	Pn	22 37 14.7	+2.8
EBER	**Berja**	**5.71**	**272**	Pn	**Pn**	**22 37 13.1**	**+0.1**
	0.6nm,0.2s,SNR=6.5						
EBER				Sn	**Sn**	**22 38 16.0**	**-2.3**
	7.3nm,0.6s,SNR=7.9						
EBER	**Berja**	**5.71**	**272**	Pn	**Pn**	**22 37 13.1**	**+0.1**
	0.6nm,0.2s,SNR=6.5						
VALF	**Valcebollere**	**5.73**	**343**	P	Pn	22 37 16.3	+3.2
VALF	**Valcebollere**	**5.73**	**343**	P	Pn	22 37 16.3	+3.2
FILF	**Fillols**	**5.77**	**348**	P	Pn	22 37 17.3	+3.7
FILF	**Fillols**	**5.77**	**348**	P	Pn	22 37 17.3	+3.7
CLLI	**Llivia**	**5.81**	**343**	Pn	Pn	22 37 17.9	+3.6
	8.2nm,0.2s,SNR=56						
CLLI				Sn	**Sn**	**22 38 20.1**	**-0.5**
	4.0nm,0.2s,SNR=7.9						
CLLI	**Llivia**	**5.81**	**343**	Pn	Pn	22 37 17.9	+3.6
	8.2nm,0.2s,SNR=56						
EQES	**Quesada**	**5.89**	**281**	Pn	**Pn**	**22 37 17.6**	**+2.3**
	8.0nm,0.3s,SNR=47						
EQES				Sn	**Sn**	**22 38 22.0**	**-0.5**
	8.1nm,0.4s,SNR=7.9						
EQES	**Quesada**	**5.89**	**281**	Pn	**Pn**	**22 37 17.6**	**+2.3**
	8.0nm,0.3s,SNR=47						
CSOR	**Sort**	**5.94**	**337**	Pn	Pn	22 37 19.6	+3.6
	2.8nm,0.2s,SNR=16						
CSOR				Sn	**Sn**	**22 38 24.0**	**+0.1**
	8.5nm,0.2s,SNR=7.9						
CSOR	**Sort**	**5.94**	**337**	Pn	Pn	22 37 19.6	+3.6
	2.8nm,0.2s,SNR=16						
CSOR				Sn	**Sn**	**22 38 24.0**	**+0.1**
	8.5nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**6.02**	**324**	Pn	Pn	22 37 19.7	+2.7
	12nm,0.3s,SNR=7.2						
ESAC				Sn	**Sn**	**22 38 27.4**	**+1.8**
	15nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**6.02**	**324**	Pn	Pn	22 37 19.7	+2.7
	12nm,0.3s,SNR=7.2						
ESAC				Sn	**Sn**	**22 38 27.4**	**+1.8**
	15nm,0.2s,SNR=7.9						
LRDF	**Laroque-de-Fa**	**6.14**	**348**	P	Pn	22 37 21.7	+3.0
LRDF	**Laroque-de-Fa**	**6.14**	**348**	P	Pn	22 37 21.7	+3.0
ETOR	**Torete**	**6.26**	**310**	Pn	Pn	22 37 23.8	+3.4
	8.1nm,0.3s,SNR=13						
ETOR				Sn	**Sn**	**22 38 34.5**	**+2.8**
	5.7nm,0.5s,SNR=7.9						
ETOR	**Torete**	**6.26**	**310**	Pn	Pn	22 37 23.8	+3.4
	8.1nm,0.3s,SNR=13						
ETOR				Sn	**Sn**	**22 38 34.5**	**+2.8**
	5.7nm,0.5s,SNR=7.9						
MTLF	**Montolieu**	**6.59**	**347**	*e*Pn	**Pn**	**22 37 27.1**	**+2.3**
	SNR=1.0						
MTLF				*e*Sn	Sn	22 38 32.5	-7.1
	3.6nm,0.3s,SNR=1.0						
MTLF	**Montolieu**	**6.59**	**347**	*e*Pn	**Pn**	**22 37 27.1**	**+2.3**
	SNR=1.0						
LMR	**La Mourre**	**6.63**	**14**	*e*Pn	**Pn**	**22 37 26.4**	**+1.1**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**22 38 38.1**	**-2.4**
	15nm,0.4s						
LMR	**La Mourre**	**6.63**	**14**	*e*Pn	**Pn**	**22 37 26.4**	**+1.1**
	SNR=1.0						
PGF	**Pioggiola**	**6.70**	**32**	*e*Pn	**Pn**	**22 37 27.2**	**+0.8**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**22 38 38.6**	**-3.9**
	8.4nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**6.70**	**32**	*e*Pn	**Pn**	**22 37 27.2**	**+0.8**
	SNR=1.0						
EPF	**Esparros**	**6.79**	**335**	*e*P	Pn	22 37 31.1	+3.5
	SNR=1.0						
EPF				*e*Sn	Sn	22 38 36.9	-7.7
	4.9nm,0.3s						
EPF	**Esparros**	**6.79**	**335**	*e*P	Pn	22 37 31.1	+3.5
	SNR=1.0						
ELUQ	**Luque**	**6.82**	**278**	Pn	**Pn**	**22 37 30.2**	**+2.2**
	2.1nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**6.82**	**278**	Pn	**Pn**	**22 37 30.2**	**+2.2**
	2.1nm,0.2s,SNR=7.9						
FRF	**La Foret Royal**	**6.87**	**15**	*e*Pn	**Pn**	**22 37 29.9**	**+1.2**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**22 38 43.6**	**-3.0**
	7.1nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**6.87**	**15**	*e*Pn	**Pn**	**22 37 29.9**	**+1.2**
	SNR=1.0						
ESDC	**Sonseca Array**	**7.01**	**296**	Pn	**Pn**	**22 37 32.8**	**+2.2**
	2.9nm,0.2s,baz=107,slow=13,SNR=15						
ESDC				Sn	**Sn**	**22 38 47.6**	**-2.4**
	1.1nm,0.2s,baz=109,slow=24,SNR=3.8						
ESDC	**Sonseca Array**	**7.01**	**296**	Pn	**Pn**	**22 37 32.8**	**+2.2**
	2.9nm,0.2s,slow=13,SNR=15						
ETSF	**Etsaut**	**7.01**	**330**	*e*Pn	**Pn**	**22 37 29.6**	**-1.0**
ETSF	**Etsaut**	**7.01**	**330**	*e*P	Pn	22 37 33.9	+3.3
	SNR=1.0						
ETSF	**Etsaut**	**7.01**	**330**	*e*P	Pn	22 37 33.9	+3.3
	SNR=1.0						
SMRF	**Simiane la Rot**	**7.11**	**8**	*e*Pn	Pn	22 37 34.4	+2.4
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**22 38 48.7**	**-3.8**
	4.0nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**7.11**	**8**	*e*Pn	Pn	22 37 34.4	+2.4
	SNR=1.0						
EADA	**Adamuz**	**7.12**	**283**	Pn	**Pn**	**22 37 33.0**	**+1.0**
	0.4nm,0.2s,SNR=7.9						
EADA				Sn	**Sn**	**22 38 49.1**	**-3.5**
	1.0nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**7.12**	**283**	Pn	**Pn**	**22 37 33.0**	**+1.0**
	0.4nm,0.2s,SNR=7.9						
LASF	**Ste Croix**	**7.15**	**358**	*e*Pn	**Pn**	**22 37 33.9**	**+1.5**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**22 38 48.1**	**-5.2**
	3.7nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**7.15**	**358**	*e*Pn	**Pn**	**22 37 33.9**	**+1.5**
	SNR=1.0						
IEPA	**Eparoz**	**7.22**	**326**	Pn	Pn	22 37 37.4	+3.9
	2.1nm,0.2s,SNR=7.9						
IEPA				Sn	**Sn**	**22 38 55.9**	**+0.8**
	1.3nm,0.2s,SNR=7.9						
IEPA	**Eparoz**	**7.22**	**326**	Pn	Pn	22 37 37.4	+3.9
	2.1nm,0.2s,SNR=7.9						
IEPA				Sn	**Sn**	**22 38 55.9**	**+0.8**
	1.3nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**7.25**	**270**	Pn	**Pn**	**22 37 33.2**	**-0.6**
	1.9nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**7.25**	**270**	Pn	**Pn**	**22 37 33.2**	**-0.6**
	1.9nm,0.3s,SNR=7.9						
IELO	**Elcoad**	**7.25**	**326**	Pn	Pn	22 37 36.8	+2.8
	2.0nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**7.25**	**326**	Pn	Pn	22 37 36.8	+2.8
	2.0nm,0.2s,SNR=7.9						
IUNC	**Unciti**	**7.30**	**325**	Pn	Pn	22 37 38.1	+3.4
	1.5nm,0.2s,SNR=7.9						
IUNC	**Unciti**	**7.30**	**325**	Pn	Pn	22 37 38.1	+3.4
	1.5nm,0.2s,SNR=7.9						
SBF	**Sospel**	**7.34**	**18**	*e*Pn	**Pn**	**22 37 35.9**	**+0.7**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**22 38 55.0**	**-3.2**
	9.9nm,0.4s,SNR=1.0						
SBF	**Sospel**	**7.34**	**18**	*e*Pn	**Pn**	**22 37 35.9**	**+0.7**
	SNR=1.0						
SJPF	**Ste Jean**	**7.46**	**328**	*e*P	Pn	22 37 39.8	+3.0
	SNR=1.0						
SJPF	**Ste Jean**	**7.46**	**328**	*e*P	Pn	22 37 39.8	+3.0
	SNR=1.0						
IUSE	**Utxeti**	**7.47**	**325**	Pn	Pn	22 37 39.9	+2.9
	1.3nm,0.3s,SNR=7.9						
IUSE	**Utxeti**	**7.47**	**325**	Pn	Pn	22 37 39.9	+2.9
	1.3nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**7.53**	**302**	Pn	Pn	22 37 41.1	+3.2
	1.0nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**7.53**	**302**	Pn	Pn	22 37 41.1	+3.2
	1.0nm,0.4s,SNR=7.9						
ELIZ	**Elizondo**	**7.64**	**326**	Pn	Pn	22 37 42.4	+3.2
	2.7nm,0.2s,SNR=7.9						
ELIZ	**Elizondo**	**7.64**	**326**	Pn	Pn	22 37 42.4	+3.2
	2.7nm,0.2s,SNR=7.9						
VIVF	**Saint-Julien-l**	**7.93**	**2**	*e*Pn	**Pn**	**22 37 44.9**	**+1.7**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**22 39 07.7**	**-4.8**
	5.8nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**7.93**	**2**	*e*Pn	**Pn**	**22 37 44.9**	**+1.7**
	SNR=1.0						
ORIF	**Oris-en-Rattie**	**8.08**	**8**	*e*Pn	**Pn**	**22 37 46.7**	**+1.4**
ORIF	**Oris-en-Rattie**	**8.08**	**8**	*e*Pn	**Pn**	**22 37 46.7**	**+1.4**
CAF	**Calviac**	**8.16**	**349**	*e*Pn	**Pn**	**22 37 48.1**	**+1.8**
	SNR=1.0						
CAF	**Calviac**	**8.16**	**349**	*e*Pn	**Pn**	**22 37 48.1**	**+1.8**
	SNR=1.0						
LBL	**Lubilhac**	**8.33**	**355**	P	**Pn**	**22 37 51.1**	**+2.4**
LBL	**Lubilhac**	**8.33**	**355**	P	**Pn**	**22 37 51.1**	**+2.4**
LFF	**La Frestale**	**8.43**	**343**	*e*Pn	**Pn**	**22 37 51.6**	**+1.6**
	SNR=1.0						
LFF	**La Frestale**	**8.43**	**343**	*e*Pn	**Pn**	**22 37 51.6**	**+1.6**
	SNR=1.0						
RJF	**Les Rejaudoux**	**8.62**	**347**	*e*Pn	**Pn**	**22 37 53.9**	**+1.3**
RJF	**Les Rejaudoux**	**8.62**	**347**	*e*Pn	**Pn**	**22 37 53.9**	**+1.3**
EMIN	**Mina Concepcio**	**8.73**	**279**	Pn	**Pn**	**22 37 55.4**	**+1.2**
	0.6nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**8.73**	**279**	Pn	**Pn**	**22 37 55.4**	**+1.2**
	0.6nm,0.3s,SNR=7.9						
LPG	**La Plagne**	**8.77**	**12**	*e*Pn	Pn	22 37 57.6	+2.7
	SNR=1.0						
LPG	**La Plagne**	**8.77**	**12**	*e*Pn	Pn	22 37 57.6	+2.7
	SNR=1.0						
LPL	**La Plagne**	**8.78**	**12**	*e*Pn	Pn	22 37 57.5	+2.4
	SNR=1.0						
LPL	**La Plagne**	**8.78**	**12**	*e*Pn	Pn	22 37 57.5	+2.4
	SNR=1.0						
PYM	**Petit Puy Mans**	**8.86**	**354**	P	Pn	22 37 59.3	+3.3
PYM	**Petit Puy Mans**	**8.86**	**354**	P	Pn	22 37 59.3	+3.3
EBAD	**Badajoz**	**9.09**	**285**	Pn	**Pn**	**22 38 00.8**	**+1.7**
	0.7nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**9.09**	**285**	Pn	**Pn**	**22 38 00.8**	**+1.7**
	0.7nm,0.3s,SNR=7.9						
AGO	**Saint Agoulin**	**9.15**	**355**	P	**Pn**	**22 38 02.3**	**+2.3**
AGO	**Saint Agoulin**	**9.15**	**355**	P	**Pn**	**22 38 02.3**	**+2.3**
TCF	**Toulx Ste Croi**	**9.47**	**351**	*e*Pn	Pn	22 38 07.0	+2.6
	SNR=1.0						
TCF	**Toulx Ste Croi**	**9.47**	**351**	*e*Pn	Pn	22 38 07.0	+2.6
	SNR=1.0						
EARI	**Arriondas**	**9.63**	**314**	Pn	Pn	22 38 09.7	+3.1
	0.4nm,0.2s,SNR=4.0						
EARI	**Arriondas**	**9.63**	**314**	Pn	Pn	22 38 09.7	+3.1
	0.4nm,0.2s,SNR=4.0						
BGF	**Bois d'Agland**	**9.68**	**354**	*e*Pn	Pn	22 38 09.9	+2.8
	SNR=1.0						
BGF	**Bois d'Agland**	**9.68**	**354**	*e*Pn	Pn	22 38 09.9	+2.8
	SNR=1.0						
SMF	**Signal de Mont**	**9.71**	**358**	*e*Pn	**Pn**	**22 38 09.1**	**+1.5**
SMF	**Signal de Mont**	**9.71**	**358**	*e*Pn	**Pn**	**22 38 09.1**	**+1.5**
MVO	**Moncorvo**	**9.73**	**299**	Pn	**Pn**	**22 38 10.6**	**+2.6**
	2.2nm,0.4s,SNR=6.6						
MVO				Sn	Sn	22 39 51.0	-6.0
	1.4nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**9.73**	**299**	Pn	**Pn**	**22 38 10.6**	**+2.6**
	2.2nm,0.4s,SNR=6.6						
CABF	**La Chapelle**	**9.77**	**8**	*e*Pn	**Pn**	**22 38 10.6**	**+2.1**
	SNR=1.0						
CABF	**La Chapelle**	**9.77**	**8**	*e*Pn	**Pn**	**22 38 10.6**	**+2.1**
	SNR=1.0						
ECAL	**Calabor**	**9.86**	**304**	Pn	Pn	22 38 11.6	+1.9
	6.1nm,0.3s,SNR=9

Error ellipse: s-maj=14.2km s-min=8.6km az=74.0
NEIC Felt at Chinandega.
*CASC **15** 22:47:06.8±3.0, 12°.53N×87°.74W, h43km±142km, MD4.0, ML4.2, mb4.4(NEIC)*
*IDC **15** 22:47:07.7±1.9, 12°.93N×87°.37W, h64km±7km, mb3.7/10, mb1 4.0/10, mb1mx3.7/26, mbtmp3.7/10, MS3.3/6, Ms1 3.3/6, ms1mx2.9/35, Error ellipse: s-maj=41.2km s-min=31.8km az=51.0*
ISC 15 22:47:06.6±0.7, 12.55N±0.05×87.71W±0.04, h63km±5km, n309, σ0.91/325, mb4.2/29, 114C-119D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res
CNCH	**Conchagua**	**0.73**	**351**	⇑*eP*		**Pn**	**22 47 22.0**	**+0.4**
CNCH				*eS*		**Sn**	**22 47 33.1**	**+0.6**
CNGN	**Cerro Negro**	**0.99**	**93**	⇑*eP*		**Pn**	**22 47 24.9**	**+0.2**
CNGN				*eS*		**Sn**	**22 47 40.2**	**+2.1**
BLLM	**Bellamira**	**1.02**	**330**	*eP*		**Pn**	**22 47 25.1**	**-0.1**
BLLM				*eS*		**Sn**	**22 47 38.8**	**-0.1**
VSM	**San Miguel**	**1.03**	**328**	*eP*		**Pn**	**22 47 25.2**	**-0.3**
CAHU	**Cacaquatique**	**1.31**	**338**	*eP*		**Pn**	**22 47 29.6**	**+0.5**
CAHU				*eS*		**Sn**	**22 47 45.7**	**-0.1**
SNVI	**San Vicente**	**1.52**	**314**	*eP*		**Pn**	**22 47 31.2**	**-0.7**
SNVI				*eS*		**Sn**	**22 47 49.9**	**-1.0**
TGUH	**Tegucigalpa,Un**	**1.56**	**16**	*ePn*		**Pn**	**22 47 34.0**	**+1.8**
TGUH				*eSn*		**Sn**	**22 47 51.3**	**-0.1**
LFRS	**El Faro**	**1.69**	**309**	*eP*		**Pn**	**22 47 33.3**	**-0.9**
LBRS	**Las Brisas**	**1.75**	**312**	*eP*		**Pn**	**22 47 34.6**	**-0.3**
SNET	**Serv Nac Est T** comp=Z,3μm,0.4s	**1.86**	**308**	AML		AML	22 48 04.0	
BOQS	**Boqueron**	**1.93**	**308**	*eP*		**Pn**	**22 47 36.6**	**-0.8**
BOQS				*eS*		**Sn**	**22 48 00.3**	**-0.5**
SBLS	**San Blas**	**2.26**	**305**	*eP*		**Pn**	**22 47 41.4**	**-0.5**
SNJE	**San Jose**	**2.26**	**306**	*eP*		**Pn**	**22 47 41.9**	**0.0**
RTR	**El Retiro**	**2.31**	**306**	*eP*		**Pn**	**22 47 42.9**	**+0.3**
GBS2	**Las Lilas**	**2.79**	**127**	*i* P		**Pn**	**22 47 49.3**	**+0.3**
GB1A	**Borinquen Arri**	**2.84**	**127**	*i* P		**Pn**	**22 47 50.3**	**+0.5**
LIM1	**Limonal**	**3.03**	**127**	*i* P		**Pn**	**22 47 51.9**	**-0.4**
LIM1				*i* S		**Sn**	**22 48 27.8**	**+0.4**
IXG	**Ixpaco**	**3.12**	**301**	*eP*		**Pn**	**22 47 54.6**	**+1.0**
IXG				*eS*		**Sn**	**22 48 32.5**	**+2.7**
MRL	**Marmol**	**3.15**	**323**	*eP*		Pn	22 47 58.8	+4.7
MRL				*eS*		Sn	22 48 40.8	+10
VCR	**Vista de Mar**	**3.16**	**140**	*eP*		**Pn**	**22 47 53.2**	**-0.8**
PTEN	**Parque Tenorio**	**3.23**	**124**	*i* P		**Pn**	**22 47 54.4**	**-0.6**
NBG	**Las Nubes**	**3.27**	**309**	*eP*		Pn	**22 47 56.8**	**+1.1**
NBG				*eS*		Sn	22 48 39.9	+6.3
JTS	**JuntasAbangare**	**3.52**	**129**	*ePn*		**Pn**	**22 47 59.2**	**+0.3**
JTS				*eSn*		**Sn**	**22 48 43.2**	**+3.9**
FUG	**Fuego 3**	**3.58**	**302**	*eP*		**Pn**	**22 48 01.8**	**+1.9**
FUG				*eS*		**Sn**	**22 48 46.6**	**+3.4**
FORC	**Fortuna**	**3.63**	**124**	*eP*		**Pn**	**22 48 00.2**	**-0.2**
CGA2	**Cerro Gallo 2**	**4.06**	**128**	*eP*		**Pn**	**22 48 08.0**	**+1.6**
JAT	**Jato**	**4.21**	**295**	*eP*		**Pn**	**22 48 09.6**	**+1.3**
JAT				*eS*		**Sn**	**22 48 57.4**	**+1.2**
LAJ	**Bijagual**	**4.42**	**127**	*eP*		**Pn**	**22 48 09.4**	**-2.0**
QCR	**Quepos**	**4.67**	**131**	*eP*		**Pn**	**22 48 16.2**	**+1.6**
BUS	**Buena Vista**	**4.89**	**127**	*eP*		**Pn**	**22 48 20.4**	**+2.3**
ACR	**Cerro Adams**	**5.91**	**130**	⇑*eP*		**Pn**	**22 48 33.2**	**+1.5**
ACR				*eS*		**Sn**	**22 49 32.9**	**-5.2**
TEIG	**Tepich**	**7.65**	**356**	*ePn*		**Pn**	**22 48 53.5**	**-2.0**
TEIG	**Tepich** comp=Z,1.6nm,0.3s,baz=143,slow=14,SNR=4.0	**7.65**	**356**	P		**Pn**	**22 48 58.5**	**+3.0**
TEIG					LR	LR	22 52 15.1	
	comp=Z,90nm,20.0s,baz=254,slow=42							
BCIP	**Isla Barro Col**	**8.43**	**113**	*ePn*		**Pn**	**22 49 06.8**	**+0.6**
MTDJ	**Mount Denham**	**11.32**	**59**	*ePn*		Pn	22 49 50.1	+4.4
PAYG	**Puerto Ayora**	**13.38**	**191**	*ePn*		**Pn**	**22 50 14.1**	**+0.3**
ROSC	**El Rosal**	**15.27**	**119**	LR		LR	22 57 11.5	
	comp=Z,53nm,18.9s,baz=322,slow=40							
TIGA	**Tifton** baz=19	**19.18**	**11**	⇑P		**Pn**	**22 51 26.9**	**+0.2**
732A	**Laxson Ranch,** baz=20,SNR=8.2	**19.74**	**326**	⇓P		**P**	**22 51 32.2**	**+0.8**
632A	**Uvalde** baz=20,SNR=7.1	**20.26**	**328**	⇓P		**P**	**22 51 38.3**	**+1.2**
631A	**Perdido Creek** baz=21,SNR=9.3	**20.60**	**326**	⇑P		**P**	**22 51 41.7**	**+0.9**
532A	**Rocksprings** baz=21	**20.82**	**329**	⇓P		**P**	**22 51 43.6**	**+0.5**
JCT	**Junction City** comp=Z,23nm,1.4s	**21.06**	**330**	*ePn*		**P**	**22 51 47.9**	**+2.2**
JCT	**Junction City** baz=21	**21.06**	**330**	⇓P		**P**	**22 51 46.2**	**+0.5**
GOGA	**Godfrey** comp=Z,16nm,0.8s	**21.12**	**10**	*ePn*		**P**	**22 51 48.8**	**+2.5**
531A	**Rocksprings** baz=21	**21.18**	**328**	⇓P		**P**	**22 51 47.8**	**+0.7**
432A	**Menard** baz=22	**21.38**	**330**	⇓P		**P**	**22 51 49.5**	**+0.4**
530A	**J-C Ranch, Com** baz=22,SNR=7.5	**21.59**	**326**	⇑P		**P**	**22 51 52.8**	**+1.4**
431A	**Sonora** baz=22,SNR=14	**21.63**	**329**	⇓P		**P**	**22 51 53.5**	**+1.8**
332A	**Millersview** baz=22,SNR=6.2	**21.78**	**331**	⇑P		**P**	**22 51 54.5**	**+1.2**
628A	**Black Gap, Mar** baz=22	**21.97**	**322**	⇑P		**P**	**22 51 55.9**	**+0.4**
430A	**Baggett Ranch,** baz=22,SNR=8.4	**22.04**	**328**	⇑P		**P**	**22 51 57.1**	**+0.9**
331A	**San Angelo** baz=22,SNR=6.9	**22.05**	**330**	⇑P		**P**	**22 51 56.6**	**+0.4**
529A	**Stev Forest Ra** baz=22	**22.06**	**325**	⇑P		**P**	**22 51 55.7**	**-0.7**
232A	**Coleman** baz=22,SNR=8.5	**22.16**	**332**	⇓P		**P**	**22 51 57.0**	**-0.4**
627A	**Terlingua Ranc** baz=22	**22.25**	**322**	⇓P		**P**	**22 51 57.7**	**-0.8**
429A	**Davenport Ranc** baz=22,SNR=11	**22.26**	**326**	⇓P		**P**	**22 51 58.5**	**-0.1**
TXAR	**Lajitas Array** comp=Z,9.4nm,0.8s,baz=143,slow=10,SNR=49	**22.34**	**321**	P		**P**	**22 51 60.0**	**+0.5**
TXAR					PcP	**PcP**	**22 55 53.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=150,slow=3.8,SNR=4.7							
TXAR					ScP	**ScP**	**22 59 26.0**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=159,slow=6.2,SNR=5.2							
TXAR					LR	LR	23 03 35.0	
	comp=Z,43nm,18.8s,baz=210,slow=44							
330A	**Mertzon** baz=23,SNR=6.1	**22.50**	**329**	⇓P		**P**	**22 51 59.9**	**-1.2**
231A	**Bronte** baz=23	**22.51**	**331**	⇑P		**P**	**22 52 01.1**	**-0.1**
428A	**Kincaid Ranch,** baz=23,SNR=8.1	**22.78**	**325**	⇓P		**P**	**22 52 03.6**	**-0.5**
ABTX	**Abilene, Hawle** baz=23	**22.78**	**333**	⇓P		**P**	**22 52 03.8**	**-0.3**
626A	**Big Bend Ranch** baz=23	**22.78**	**320**	⇓P		**P**	**22 52 03.8**	**-0.4**
230A	**Sterling City** baz=23,SNR=6.6	**22.86**	**329**	⇑P		**P**	**22 52 04.4**	**-0.5**
527A	**Woodward Ranch** baz=23	**22.88**	**322**	⇑P		**P**	**22 52 05.1**	**-0.2**
329A	**Wagon Wheel Ra** baz=23,SNR=6.8	**22.98**	**327**	⇑P		**P**	**22 52 05.5**	**-0.7**
CPCT	**Cooper Cave**	**22.98**	**7**	*eP*		**P**	**22 52 08.2**	**+2.2**
526A	**Mary Lane Ranc** baz=23	**23.11**	**321**	⇓P		**P**	**22 52 07.0**	**-0.5**
131A	**Roby** baz=23	**23.16**	**332**	⇓P		**P**	**22 52 07.0**	**-0.8**
KMSC	**Kings Mountain** baz=23	**23.22**	**13**	⇑P		**P**	**22 52 08.3**	**-0.1**
229A	**Bryant Ranch,** baz=23,SNR=12	**23.27**	**328**	⇑P		**P**	**22 52 08.3**	**-0.6**
427A	**Hayter Ranch,** baz=23	**23.28**	**324**	⇑P		**P**	**22 52 08.0**	**-1.0**
TKL	**Tuckaleechee C**	**23.28**	**8**	*eP*		**P**	**22 52 09.2**	**+0.2**
TKL	**Tuckaleechee C** comp=Z,8.1nm,0.9s,baz=175,slow=10.0,SNR=7.5	**23.28**	**8**	P		**P**	**22 52 09.4**	**+0.5**
Z32A	**Haskell** baz=23	**23.29**	**334**	⇑P		**P**	**22 52 08.1**	**-1.0**
328A	**Wristen Ranch,** baz=23,SNR=22	**23.34**	**326**	⇑P		**P**	**22 52 09.8**	**+0.1**
130A	**Snyder** baz=24,SNR=5.6	**23.36**	**331**	⇑P		**P**	**22 52 09.5**	**-0.3**
426A	**McDonald Obser** baz=24,SNR=7.1	**23.51**	**323**	⇑P		**P**	**22 52 10.5**	**-0.8**
Z31A	**Sharp Cattle R** baz=24	**23.59**	**333**	⇑P		**P**	**22 52 11.3**	**-0.6**
228A	**UT Block 9, Go** baz=24	**23.80**	**327**	⇑P		**P**	**22 52 13.6**	**-0.3**
129A	**Stewart Farms,** baz=24,SNR=6.8	**23.83**	**329**	⇑P		**P**	**22 52 13.6**	**-0.6**
326A	**Caldwell Ranch**	**23.95**	**324**	⇑P		**P**	**22 52 15.5**	**+0.2**
	baz=24,SNR=11							
Z30A	**Sanderson Ranc** baz=24,SNR=7.1	**24.01**	**331**	⇓P		**P**	**22 52 15.3**	**-0.4**
227A	**Bennet, Jal** baz=24	**24.09**	**326**	⇑P		**P**	**22 52 15.9**	**-0.6**
128A	**Castleberry Fa** baz=24,SNR=10	**24.14**	**328**	⇑P		**P**	**22 52 16.6**	**-0.3**
425A	**Indio Mountain** baz=24	**24.17**	**321**	⇑P		**P**	**22 52 17.3**	**0.0**
TZTN	**Tazewell**	**24.18**	**8**	*eP*		**P**	**22 52 18.2**	**+1.0**
Y31A	**Rekieta Farm,** baz=24	**24.19**	**334**	⇑P		**P**	**22 52 17.3**	**0.0**
Z29A	**Hungry Hill Ra** baz=24,SNR=9.9	**24.26**	**330**	⇓P		**P**	**22 52 17.4**	**-0.7**
TUL1	**Tulsa** baz=24	**24.38**	**344**	⇓P		**P**	**22 52 19.9**	**+1.0**
Y30A	**Stafford Cattl** baz=24	**24.40**	**333**	⇑P		**P**	**22 52 20.0**	**+0.8**
Z28A	**Tucker Farm, M** baz=25,SNR=5.8	**24.62**	**329**	⇓P		**P**	**22 52 20.7**	**-0.6**
226B	**Tecolote Peak,** baz=25,SNR=9.2	**24.62**	**325**	⇑P		**P**	**22 52 21.6**	**+0.3**
127A	**Arkansas Junct** baz=25,SNR=7.0	**24.64**	**327**	⇓P		**P**	**22 52 21.0**	**-0.5**
X31A	**McDonald Ranch** baz=25	**24.64**	**335**	⇓P		**P**	**22 52 21.8**	**+0.3**
Y29A	**Porterfield Fa** baz=25	**24.74**	**331**	⇑P		**P**	**22 52 22.4**	**+0.1**
X30A	**Coker Ranch, T** baz=25,SNR=7.6	**24.87**	**333**	⇓P		**P**	**22 52 23.7**	**+0.2**
324A	**Moseley Ranch,** baz=25,SNR=9.4	**24.93**	**322**	⇑P		**P**	**22 52 23.5**	**-0.8**
126A	**Clayton Basin,** baz=25	**24.97**	**326**	⇓P		**P**	**22 52 24.8**	**+0.3**
225A	**Deer Hill, Car** baz=25	**25.02**	**324**	⇓P		**P**	**22 52 25.7**	**+0.6**
Z27A	**Tatum** baz=25,SNR=8.6	**25.06**	**328**	⇓P		**P**	**22 52 24.5**	**-0.8**
X29A	**Tulia** baz=25	**25.23**	**332**	⇓P		**P**	**22 52 26.6**	**-0.3**
125A	**Gardner Draw,** baz=25,SNR=12	**25.33**	**325**	⇓P		**P**	**22 52 28.3**	**+0.4**
MSTX	**Muleshoe** baz=25,SNR=10	**25.36**	**330**	⇑P		**P**	**22 52 27.7**	**-0.3**
224A	**Cornudas Mount** baz=26	**25.41**	**323**	⇑P		**P**	**22 52 27.4**	**-1.1**
Z26A	**Caprock** baz=26	**25.43**	**327**	⇑P		**P**	**22 52 28.1**	**-0.5**
Y27A	**Causey** baz=26,SNR=10	**25.48**	**329**	⇑P		**P**	**22 52 28.7**	**-0.5**
X28A	**Dimmitt** baz=26	**25.52**	**331**	⇓P		**P**	**22 52 30.0**	**+0.4**
124A	**Stringfield Ra** baz=26,SNR=5.7	**25.82**	**324**	⇓P		**P**	**22 52 32.5**	**+0.1**
Z25A	**Rowell** baz=26,SNR=9.4	**25.83**	**326**	⇓P		**P**	**22 52 33.0**	**+0.6**
X27A	**F and S Farms,** baz=26	**26.06**	**330**	⇓P		**P**	**22 52 34.9**	**+0.5**
Z24A	**Sheeppen Canyo** baz=26,SNR=8.1	**26.23**	**325**	⇓P		**P**	**22 52 36.6**	**+0.6**
Y25A	**Mesa, Roswell** baz=26,SNR=5.8	**26.31**	**327**	⇑P		**P**	**22 52 37.6**	**+0.9**
X26A	**CR and CF Fran** baz=26	**26.34**	**329**	⇓P		**P**	**22 52 37.3**	**+0.4**
W27A	**Bowe Ranch, En** baz=26,SNR=7.7	**26.38**	**331**	⇓P		**P**	**22 52 37.4**	**+0.1**
Z23A	**Rita Site, Whi** baz=27	**26.67**	**324**	⇓P		**P**	**22 52 41.1**	**+1.1**
Y24A	**Capitan** baz=27	**26.71**	**326**	⇓P		**P**	**22 52 40.8**	**+0.4**
X25A	**Clemmons Ranch** baz=27,SNR=5.6	**26.75**	**328**	⇓P		**P**	**22 52 41.0**	**+0.2**
Y23A	**Wallace Mesa,** baz=27	**27.06**	**325**	⇑P		**P**	**22 52 43.2**	**-0.3**
121A	**Cookes Peak, D** baz=27	**27.10**	**320**	⇓P		**P**	**22 52 43.5**	**-0.4**
220A	**Playas Peak, P** baz=27	**27.15**	**319**	⇓P		**P**	**22 52 44.4**	**+0.1**
W25A	**X Bar L Ranch,** baz=27,SNR=6.6	**27.19**	**329**	⇑P		**P**	**22 52 44.8**	**+0.2**
319A	**Douglas** baz=27	**27.31**	**317**	⇓P		**P**	**22 52 45.5**	**-0.2**
V26A	**Tequesquite Ra** baz=27	**27.32**	**331**	⇓P		**P**	**22 52 46.2**	**+0.5**
Z21A	**St. Cloud Mine** baz=28	**27.56**	**322**	⇑P		**P**	**22 52 47.5**	**-0.5**
X23A	**Hourglass Bar** baz=28	**27.61**	**326**	⇓P		**P**	**22 52 47.9**	**-0.6**
120A	**U Bar Ranch, L** baz=28	**27.64**	**319**	⇑P		**P**	**22 52 49.8**	**+1.2**
W24A	**Lazy 6 Ranch,** baz=28	**27.67**	**328**	⇑P		**P**	**22 52 49.4**	**+0.4**
V25A	**Rancho No Teng** baz=28	**27.76**	**330**	⇑P		**P**	**22 52 50.8**	**+1.0**
U26A	**Atchley Ranch,** baz=28	**27.78**	**331**	⇓P		**P**	**22 52 50.7**	**+0.8**
R30A	**Dighton** baz=28	**27.97**	**339**	⇑P		**P**	**22 52 52.6**	**+1.2**
S28A	**Manter** baz=28	**27.98**	**335**	⇑P		**P**	**22 52 52.3**	**+0.7**
Z20A	**Nine Sixteen R** baz=28	**27.99**	**320**	⇑P		**P**	**22 52 52.3**	**+0.5**
V24A	**Rampart Ranch,** baz=28	**28.00**	**328**	⇓P		**P**	**22 52 52.3**	**+0.4**
X22A	**Bernardo** baz=28	**28.02**	**324**	⇑P		**P**	**22 52 52.3**	**+0.3**
W23A	**Werner Place,** baz=28	**28.03**	**327**	⇑P		**P**	**22 52 52.6**	**+0.4**
ANMO	**Albuquerque** comp=Z,0.8nm,0.6s,baz=144,slow=6.1,SNR=3.6	**28.03**	**326**	P		**P**	**22 52 51.1**	**-1.1**
ANMO					LR	LR	23 05 20.0	
	comp=Z,50nm,20.4s,baz=319,slow=39							
Y21A	**Point of Rocks** baz=28	**28.05**	**323**	⇑P		**P**	**22 52 52.7**	**+0.3**
Y20A	**Horse Springs,** baz=28	**28.40**	**322**	⇑P		**P**	**22 52 56.8**	**+1.3**
X21A	**Alamocita Cree** baz=28	**28.42**	**323**	⇓P		**P**	**22 52 57.1**	**+1.4**
U23A	**El Rito** baz=29,SNR=8.5	**28.94**	**328**	⇓P		**P**	**22 53 00.8**	**+0.5**
T24A	**Torres, Weston** baz=29	**28.95**	**330**	⇑P		**P**	**22 53 00.5**	**+0.1**
V22A	**San Miguel Ran** baz=29	**29.00**	**327**	⇑P		**P**	**22 53 01.1**	**+0.3**
S25A	**Robets Cordova** baz=29	**29.13**	**332**	⇓P		**P**	**22 53 02.3**	**+0.3**
SDCO	**Great Sand Dun** comp=Z,8.4nm,1.5s	**29.70**	**331**	*eP*		**P**	**22 53 08.3**	**+1.2**
R24A	**Sanders Place,** baz=30	**29.91**	**332**	⇑P		**P**	**22 53 10.0**	**+1.2**
T21A	**Navajo Lake** baz=30	**30.14**	**327**	⇑P		**P**	**22 53 11.7**	**+0.8**
R23A	**Moffat** baz=30	**30.21**	**331**	⇑P		**P**	**22 53 12.4**	**+0.8**
U20A	**Newcomb** baz=30	**30.22**	**325**	⇑P		**P**	**22 53 12.3**	**+0.7**
S22A	**4UR Ranch, Cre** baz=30,SNR=6.0	**30.35**	**329**	⇓P		**P**	**22 53 13.4**	**+0.5**
X16A	**Lo Mia Camp, P** baz=31	**30.64**	**319**	⇓P		**P**	**22 53 16.1**	**+0.9**
Q23A	**Hartsel** baz=31	**30.79**	**332**	⇓P		**P**	**22 53 16.7**	**+0.1**
P23A	**Jefferson** baz=31	**31.17**	**332**	⇓P		**P**	**22 53 21.6**	**+1.5**
S20A	**Disappointment** baz=31	**31.20**	**327**	⇑P		**P**	**22 53 21.0**	**+0.7**
Q22A	**Crested Butte,** baz=31	**31.26**	**330**	⇑P		**P**	**22 53 21.4**	**+0.5**
WUAZ	**Wupatki** baz=31	**31.30**	**321**	⇓P		**P**	**22 53 22.4**	**+1.3**
ISCO	**Idaho Springs** baz=32	**31.41**	**333**	⇑P		**P**	**22 53 22.3**	**+0.1**
R20A	**Redvale** baz=32	**31.48**	**328**	⇓P		**P**	**22 53 23.3**	**+0.6**
SMCO	**Snowmass** comp=Z,3.4nm,0.7s	**31.54**	**331**	*eP*		**P**	**22 53 24.1**	**+0.6**
PV04	**Paradox Valley**	**31.91**	**327**	*eP*		**P**	**22 53 27.6**	**+1.2**
S18A	**Hurst Farm, Bl** baz=32,SNR=5.2	**31.98**	**325**	⇓P		**P**	**22 53 27.5**	**+0.3**
P21A	**Newcastle** baz=32	**32.04**	**331**	⇓P		**P**	**22 53 28.3**	**+0.7**
O22A	**Kremmling** baz=32	**32.12**	**332**	⇓P		**P**	**22 53 28.5**	**0.0**
PDMCI	**Parker Dam,Lak** baz=32	**32.33**	**316**	⇓P		**P**	**22 53 31.5**	**+1.5**
SAML	**Samuel** comp=Z,2.5nm,0.8s	**32.41**	**130**	*eP*		**P**	**22 53 29.4**	**-1.4**
U15A	**North Rim**	**32.46**	**321**	⇓P		**P**	**22 53 31.4**	**0.0**
	baz=32							
M24A	**Cheyenne** baz=33	**32.46**	**336**	⇓P		**P**	**22 53 31.6**	**+0.4**
P20A	**De Beque** baz=33	**32.48**	**329**	⇑P		**P**	**22 53 31.7**	**+0.3**
N22A	**Wattenberg Ran** baz=33	**32.60**	**333**	⇑P		**P**	**22 53 33.1**	**+0.5**
M23A	**Laramie** baz=33	**32.83**	**335**	⇓P		**P**	**22 53 35.1**	**+0.6**
P19A	**Cripple Cowboy** baz=33	**32.88**	**329**	⇓P		**P**	**22 53 36.4**	**+1.4**
O20A	**White River Ci** baz=33	**32.90**	**330**	⇑P		**P**	**22 53 36.4**	**+1.4**
N21A	**Black Mountain** baz=33	**33.05**	**332**	⇑P		**P**	**22 53 38.0**	**+1.6**
SRU	**San Rafael** baz=33	**33.29**	**327**	⇓P		**P**	**22 53 38.7**	**+0.2**
L23A	**Garrett** baz=34	**33.36**	**335**	⇓P		**P**	**22 53 39.9**	**+0.8**
N20A	**Spence Gulch,** baz=34,SNR=8.9	**33.45**	**331**	⇓P		**P**	**22 53 40.9**	**+0.9**
O19A	**Miners Draw (B** baz=34	**33.45**	**330**	⇑P		**P**	**22 53 40.7**	**+0.8**
Q16A	**Castle Valley** baz=34	**33.51**	**326**	⇑P		**P**	**22 53 41.5**	**+1.1**
P18A	**Preston Nutter** baz=34	**33.52**	**328**	⇑P		**P**	**22 53 41.7**	**+1.0**
M21A	**Separation Pea** baz=34	**33.65**	**333**	⇑P		**P**	**22 53 42.7**	**+1.0**
P17A	**Butcher Ranch,** baz=34,SNR=7.4	**33.67**	**327**	⇓P		**P**	**22 53 42.1**	**+0.3**
L21A	**Rawlins** baz=34,SNR=7.0	**33.94**	**333**	⇑P		**P**	**22 53 45.1**	**+0.9**
K22A	**Casper** baz=34	**34.15**	**335**	⇑P		**P**	**22 53 46.5**	**+0.7**
L20A	**Wamsutter** baz=34	**34.41**	**332**	⇑P		**P**	**22 53 48.9**	**+0.6**
I24A	**Kuemmerle Ranc** baz=35	**34.43**	**338**	⇓P		**P**	**22 53 49.3**	**+1.1**
K21A	**Alcova** baz=34	**34.44**	**334**	⇓P		**P**	**22 53 49.5**	**+1.1**
DAU	**Daniels Canyon**	**34.62**	**328**	*eP*		**P**	**22 53 49.9**	**-0.3**
J22A	**Midwest** baz=35	**34.76**	**336**	⇓P		**P**	**22 53 52.2**	**+1.1**
K20A	**Yellowstone Ra** baz=35	**34.93**	**333**	⇑P		**P**	**22 53 53.3**	**+0.7**
L19A	**Farson** baz=35	**34.95**	**331**	⇓P		**P**	**22 53 53.3**	**+0.3**
J21A	**Lysite** baz=35,SNR=6.4	**35.10**	**335**	⇓P		**P**	**22 53 55.5**	**+1.4**
M17A	**Scullys Gap (B** baz=35,SNR=5.3	**35.11**	**329**	⇑P		**P**	**22 53 53.9**	**-0.3**
L18A	**Fontenelle, Gr** baz=35	**35.14**	**330**	⇓P		**P**	**22 53 55.5**	**+0.9**
I22A	**9 Mile Ranch,** baz=35	**35.16**	**336**	⇑P		**P**	**22 53 55.3**	**+0.7**
H24A	**Dirks Ranch, A** baz=35	**35.17**	**339**	⇑P		**P**	**22 53 55.6**	**+1.0**
K19A	**Absolon Red Bu** baz=35,SNR=5.6	**35.29**	**333**	⇑P		**P**	**22 53 56.0**	**+0.3**
EDW2	**Edwards Air Fo** baz=35	**35.30**	**314**	⇓P		**P**	**22 53 56.1**	**+0.3**
DUG	**Dugway** baz=35	**35.31**	**326**	⇑P		**P**	**22 53 56.4**	**+0.5**
J20A	**Shoshoni** baz=36	**35.38**	**334**	⇓P		**P**	**22 53 57.7**	**+1.3**
I21A	**Big Trails, Te** baz=36	**35.42**	**335**	⇓P		**P**	**22 53 58.3**	**+1.4**
PDAR	**Pinedale Array** comp=Z,2.3nm,0.6s,baz=127,slow=10,SNR=21	**35.56**	**332**	P		**P**	**22 53 58.1**	**0.0**
HWUT	**Hardware Ranch** comp=Z,11nm,0.8s	**35.66**	**329**	*eP*		**P**	**22 53 59.3**	**+0.3**
BLG	**Laguna Peak** baz=36	**35.67**	**312**	⇑P		**P**	**22 53 58.8**	**-0.2**
R11A	**Troy Canyon, C** baz=36	**35.70**	**321**	⇓P		**P**	**22 53 59.0**	**-0.4**
J19A	**Crowheart** baz=36,SNR=5.1	**35.73**	**333**	⇓P		**P**	**22 53 59.9**	**+0.4**
I20A	**Worland** baz=36	**35.88**	**335**	⇑P		**P**	**22 54 01.2**	**+0.4**
H21A	**Big Horn, Sher** baz=36	**36.00**	**336**	⇑P		**P**	**22 54 02.4**	**+0.7**
J18A	**Kendall Valley** baz=36,SNR=10	**36.12**	**332**	⇓P		**P**	**22 54 03.4**	**+0.4**
K17A	**Gardner Place,** baz=36	**36.19**	**331**	⇓P		**P**	**22 54 03.9**	**+0.3**
H20A	**Greybull** baz=36	**36.26**	**335**	⇑P		**P**	**22 54 04.4**	**+0.4**
I19A	**Meeteetse** baz=36	**36.32**	**334**	⇓P		**P**	**22 54 04.6**	**+0.1**
I18A	**Diamond G Ranc** baz=36,SNR=7.8	**36.41**	**333**	⇓P		**P**	**22 54 06.0**	**+0.6**
J17A	**Brown Place, J** baz=37,SNR=9.8	**36.56**	**331**	⇓P		**P**	**22 54 07.1**	**+0.5**
VES	**Vestal, Richgr** baz=37	**36.56**	**315**	⇓P		**P**	**22 54 07.8**	**+1.3**
LOHW	**Long Hollow** comp=Z,8.3nm,1.1s	**36.70**	**332**	*eP*		**P**	**22 54 08.2**	**+0.3**
TPAW	**Teton Pass** comp=Z,9.5nm,0.8s	**36.77**	**331**	*eP*		**P**	**22 54 08.2**	**-0.3**
RRI2	**Red Ridge** comp=Z,6.2nm,0.6s	**36.84**	**331**	*eP*		**P**	**22 54 09.0**	**-0.1**
MOOW	**Moose Ponds** comp=Z,4.6nm,0.7s	**36.87**	**332**	*eP*		**P**	**22 54 08.9**	**-0.4**
I17A	**Pilgrim Ck.** baz=37	**36.93**	**332**	⇓P		**P**	**22 54 10.3**	**+0.5**
G20A	**Bridger** baz=37	**36.95**	**336**	⇑P		**P**	**22 54 10.4**	**+0.5**
E23A	**Ismay** baz=37	**36.96**	**340**	⇓P		**P**	**22 54 10.4**	**+0.6**
IMW	**Indian Meadow** comp=Z,4.3nm,0.6s	**37.08**	**332**	*eP*		**P**	**22 54 11.5**	**+0.4**
H18A	**Shoshone NF, C** baz=37,SNR=8.5	**37.12**	**334**	⇑P		**P**	**22 54 11.7**	**+0.3**
D24A	**Glendive** baz=37	**37.18**	**341**	⇑P		**P**	**22 54 12.4**	**+0.7**
H17A	**Grant Village** baz=37	**37.30**	**333**	⇑P		**P**	**22 54 12.9**	**-0.1**
NVAR	**Mina Array Bea** comp=Z,1.3nm,0.7s,baz=134,slow=6.7,SNR=7.9	**37.46**	**319**	P		**P**	**22 54 15.5**	**+1.2**
NVAR					PcP	**PcP**	**22 56 32.7**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=141,slow=3.8,SNR=7.1							
NVAR					ScP	**ScP**	**23 00 13.8**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=138,slow=5.4,SNR=5.0							
G18A	**Lazy EL Ranch,** baz=38	**37.59**	**334**	⇑P		**P**	**22 54 15.2**	**-0.1**
F19A	**Roth Farm, Mol** baz=38	**37.77**	**336**	⇑P		**P**	**22 54 16.6**	**-0

E18A	Harlowton baz=39	38.74	335	⇓P		P	22 54 25.3	+0.4
BOZ	Bozeman (W) comp=Z,3.1nm,0.7s	38.74	333	eP		P	22 54 24.8	-0.2
G15A	Dillon baz=39,SNR=9.1	38.76	332	⇓P		P	22 54 26.0	+0.8
H14A	Leadore baz=39,SNR=6.4	38.77	330	⇑P		P	22 54 26.0	+0.7
D19A	Cripps Ranch, baz=39	38.82	337	⇓P		P	22 54 25.6	+0.1
DLMT	Dillon comp=Z,5.9nm,0.8s	38.96	332	eP		P	22 54 27.3	+0.5
E17A	Martinsdale baz=39	39.05	334	⇓P		P	22 54 27.8	+0.3
I12A	Atlanta baz=39,SNR=5.8	39.06	328	⇑P		P	22 54 27.8	+0.1
MFID	Camas Ranch baz=39	39.16	327	⇓P		P	22 54 28.8	+0.4
H13A	Challis baz=39,SNR=5.7	39.16	330	⇓P		P	22 54 28.7	+0.2
LRM	Limekiln Ridge	39.24	332	eP		P	22 54 29.9	+0.6
G14A	Jackson baz=39	39.27	331	⇑P		P	22 54 29.7	+0.2
F15A	Butte baz=39,SNR=6.4	39.28	332	⇑P		P	22 54 29.8	+0.3
C19A	Slack Wire Ran baz=40	39.36	337	⇓P		P	22 54 30.6	+0.6
H12A	Diamond D Ranc baz=40,SNR=5.1	39.45	329	⇓P		P	22 54 31.4	+0.5
E16A	East Helena baz=40	39.45	334	⇓P		P	22 54 31.0	+0.2
D17A	Six Diamond Ra baz=40	39.53	335	⇓P		P	22 54 31.4	-0.1
G13A	Cobalt baz=40	39.53	330	⇓P		P	22 54 32.0	+0.4
D16A	Dana Ranch, Ca baz=40	39.79	334	⇑P		P	22 54 33.0	-0.7
E15A	Deer Lodge baz=40,SNR=5.0	39.79	333	⇑P		P	22 54 33.4	-0.2
EGMT	Eagleton baz=40	39.86	337	⇑P		P	22 54 34.4	+0.2
C17A	Wharram Farm, baz=40	39.94	336	⇑P		P	22 54 35.0	+0.1
WVOR	Wild Horse Val comp=Z,2.1nm,0.8s	40.07	324	eP		P	22 54 35.9	-0.2
F13A	Darby baz=40,SNR=11	40.09	331	⇓P		P	22 54 36.3	+0.1
G12A	Big Creek, Yel baz=40	40.10	329	⇑P		P	22 54 36.2	-0.1
E14A	Clinton baz=40	40.17	332	⇓P		P	22 54 36.9	+0.1
D15A	Lincoln baz=40	40.21	334	⇓P		P	22 54 37.5	+0.3
C16A	Fuhringer Ranc baz=41	40.48	335	⇑P		P	22 54 39.6	+0.3
E13A	Victor baz=41	40.51	332	⇓P		P	22 54 39.6	0.0
F12A	Elk City baz=41,SNR=29	40.51	330	⇓P		P	22 54 40.0	+0.3
D14A	Greenough baz=41	40.68	333	⇓P		P	22 54 41.2	+0.2
MSO	Missoula comp=Z,3.5nm,1.1s	40.68	332	eP		P	22 54 41.1	+0.1
MSO	Missoula baz=41	40.68	332	⇑P		P	22 54 41.7	+0.7
C15A	Salmond Ranch, baz=41	40.82	334	⇑P		P	22 54 42.5	+0.3
A17A	Triple J Farms baz=41	40.98	337	⇓P		P	22 54 43.2	-0.1
D13A	Huson baz=41	41.12	332	⇑P		P	22 54 44.1	-0.4
B15A	Bradely Ranch, baz=41	41.22	335	⇓P		P	22 54 45.3	-0.1
C14A	Swan Lake baz=41	41.30	333	⇓P		P	22 54 46.1	-0.1
A16A	West Butte Ran baz=41	41.33	336	⇓P		P	22 54 46.5	+0.1
D12A	Red Ives Fores baz=42	41.50	331	⇑P		P	22 54 47.7	0.0
B14A	Marquette Ranc baz=42	41.55	334	⇓P		P	22 54 48.6	+0.4
A15A	Johnson Ranch, baz=42,SNR=5.7	41.81	335	⇓P		P	22 54 50.1	-0.2
C12B	Naegeli Ranch, baz=42	42.03	332	⇑P		P	22 54 52.2	+0.1
B13A	Whitefish baz=42	42.08	333	⇑P		P	22 54 52.7	+0.3
A14A	Double T Ranch baz=42,SNR=7.6	42.09	335	⇓P		P	22 54 52.7	+0.2
A13A	Flathead Natio baz=43	42.48	334	⇑P		P	22 54 56.1	+0.4
C11A	Tepee Creek (N baz=43	42.49	332	⇓P		P	22 54 55.9	+0.1
NEW	Newport baz=43	43.20	331	⇓P		P	22 55 00.6	-0.9
FFC	Flin Flon comp=Z,3.3nm,0.9s	43.55	348	eP		P	22 55 03.5	-0.5
SCHQ	Schefferville comp=Z,4.3nm,0.5s,baz=284,slow=11,SNR=6.3	45.26	17	P		P	22 55 16.5	-1.3
YKA	Yellowknife Ar comp=Z,0.9nm,0.7s,baz=136,slow=8.0,SNR=18	53.45	345	P		P	22 56 18.6	-1.5
YKA				pP		pP	22 56 35.9	-0.5
	comp=Z,0.3nm,0.4s,baz=149,slow=6.4,SNR=3.4							
YKA				PcP		PcP	22 57 24.9	-1.4
	comp=Z,0.2nm,0.4s,baz=146,slow=3.8,SNR=6.3							
YKA				ScP		ScP	23 01 18.9	+0.1
	comp=Z,0.3nm,0.5s,baz=145,slow=4.6,SNR=7.3							
DLBC	Dease Lake comp=Z,2.1nm,0.7s,baz=140,slow=6.9,SNR=7.3	55.71	335	P		P	22 56 36.3	-0.3
DLBC				pP		pP	22 56 53.7	+0.6
	comp=Z,1.5nm,0.6s,baz=137,slow=6.6,SNR=3.4							
RES	Resolute Bay comp=Z,0.5nm,0.3s,baz=179,slow=8.8,SNR=10	62.25	358	P		P	22 57 19.7	-1.8
RES				pP		pP	22 57 36.9	-1.4
	comp=Z,0.8nm,0.6s,baz=176,slow=9.1,SNR=2.2							
INK	Inuvik comp=Z,0.8nm,0.9s,baz=106,slow=4.4,SNR=3.9	63.03	343	P		P	22 57 25.9	-0.9
PMR	Palmer	65.61	333	eP		P	22 57 44.6	+0.9
ILAR	Eielson Array comp=Z,0.4nm,0.7s,baz=149,slow=5.1,SNR=9.4	65.83	336	P		P	22 57 43.6	-1.6
TNA	Tin City	74.61	335	eP		P	22 58 39.9	+1.1
ESDC	Sonseca Array	77.33	52	LR		LR	23 25 46.6	
	comp=Z,66nm,19.2s,baz=125,slow=30							
WRA	Warramunga Arr comp=Z,0.4nm,0.3s,baz=91,slow=2.6,SNR=5.1	139.05	254	PKP		PKPdf	23 06 27.0	-0.1
ASAR	Alice Springs comp=Z,0.5nm,0.9s,baz=114,slow=2.7,SNR=4.1	139.07	248	PKhKP	PKPpre		23 06 18.6	
ASAR				PKP		PKPdf	23 06 27.0	-0.1
	comp=Z,0.6nm,0.7s,baz=85,slow=2.0,SNR=6.2							
ASAR				SKP			23 09 59.4	
	comp=Z,0.5nm,0.7s,baz=74,slow=3.0,SNR=4.9							
CMAR	Chiang Mai Arr comp=Z,1.3nm,0.3s,baz=357,slow=4.0,SNR=5.4	148.50	348	PKPbc		PKPdf	23 06 45.3	+1.6

*ISCJB **15** 22:55:58.2±0.7, 56˚.36N±0˚.06×152˚.05W±0˚.07, h18km, mb4.0/9, MS3.3/2, Error ellipse: s-maj=8.4km s-min=4.9km az=161.7*

*IDC **15** 22:55:58.6±1.8, 56˚.42N×152˚.35W, h0km, mb3.9/8, mb1 3.9/9, mb1mx3.7/26, mbtmp3.8/9, ML3.2/1, MS3.4/2, Ms1 3.4/2, ms1mx2.6/49, Error ellipse: s-maj=35.1km s-min=32.5km az=166.0*

*NEIC **15** 22:56:01.2, 56˚.41N×152˚.16W, h10km, ML3.2(AEIC), After AEIC.*

ISC 15 22:56:00.4±0.8, 56˚.40N±0˚.08×152˚.21W±0˚.06, h18km, n63, σ1§11/66, mb4.0/9, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHAK	Old Harbor	1.02	325	P		Pb	22 56 18.4	-1.0
KDAK	Kodiak Island 9.5nm,0.3s,baz=177,slow=8.6,SNR=54	1.40	352	Pn		Pn	22 56 24.4	-0.7
KDAK				Sn		Sn	22 56 42.2	-0.9
	32nm,0.3s,baz=187,slow=16,SNR=13							
KABR	Katmai Barrier	2.29	320	P		Pn	22 56 37.9	+0.5
KAKN	Katmai Knife C	2.45	322	P		Pn	22 56 40.2	+0.6
KCE	Katmai Mt Cerb	2.45	320	P		Pn	22 56 39.5	-0.1
FOSS	Fourpeaked Sta	2.54	342	P		Pn	22 56 41.6	+0.9
FONW	Fourpeaked Sta	2.61	340	P		Pn	22 56 42.8	+1.0
MCNL	McNeil River	3.02	339	P		Pn	22 56 48.5	+1.2
AUH	Augustine H	3.04	348	P		Pn	22 56 49.2	+1.5
AUW	Augustine West	3.05	348	P		Pn	22 56 49.0	+1.2
OPT	Oil Point	3.31	351	P		Pn	22 56 52.8	+1.5
ANNW	Aniakchak Nort	3.36	282	P		Pn	22 56 51.4	-0.7
BRLK	Bradley Lake	3.45	11	P		Pn	22 56 52.3	-0.9
BRLK				S		Sn	22 57 33.2	-0.4
CHGN	Chignik	3.45	271	ePn		Pn	22 56 51.1	-2.2
SEW	Seward	3.99	20	P		Pn	22 56 59.4	-1.2
RSO	Redoubt South	4.08	356	ePn		Pn	22 57 01.9	-0.2
SDPT	Sand Point	4.77	261	ePn		Pn	22 57 10.8	-0.5
SPU	Mount Spurr	4.80	1	P		Pn	22 57 12.2	+0.5
STLK	Strandline Lak	5.12	2	P		Pn	22 57 16.9	+0.7
EYAK	Cordova Ski Ar	5.37	36	P		Pn	22 57 19.6	+0.1
SGAM	Sherman Glacie	5.51	39	P		Pn	22 57 21.5	-0.1
RAGM	Ragged Mountai	5.63	42	P		Pn	22 57 22.7	-0.5
RAGM				S		Sn	22 58 26.2	-1.1
SML	Sawmill 5.3nm,1.0s	5.78	19	eP		Pn	22 57 25.2	0.0
DIV	Divide	5.80	33	ePn		Pn	22 57 26.0	+0.4
DIV				eSn		Sn	22 58 29.4	-2.3
PPLA	Purkeypile 8.7nm,0.9s	6.52	0	eP		Pn	22 57 36.7	+1.3
VRDI	Verde Repeater	6.64	40	P		Pn	22 57 36.6	-0.6
TT01	Tatalina	6.81	345	P		Pn	22 57 39.9	+0.6
KIAG	Kiagna River	6.85	44	P		Pn	22 57 39.5	-0.5
BALM	Baldy	6.92	44	P		Pn	22 57 40.5	-0.5
GRNC	Granite Creek	6.98	47	P		Pn	22 57 41.3	-0.5
DHY	Denali Highway	7.13	18	P		Pn	22 57 44.1	+0.3
TRF	Thorofare Moun	7.14	7	P		Pn	22 57 44.4	+0.4
BARN	Barnard Glacie	7.21	45	P		Pn	22 57 44.7	-0.2
PNL	Peninsula	7.55	59	ePn		Pn	22 57 40.5	-8.9
PNL				eSn		Sn	22 59 16.5	+2.0
IL1	Eielson Array	8.79	15	P		Pn	22 58 05.8	-0.7
ILAR	Eielson Array	8.79	15	Pn		Pn	22 58 07.1	+0.6
ILAR				Sn		Sn	22 59 41.8	-3.2
ILAR	Eielson Array 1.2nm,0.3s,baz=200,slow=14,SNR=46	8.79	15	Pn		Pn	22 58 07.1	+0.6
ILAR				Sn		Sn	22 59 41.8	-3.2
	0.1nm,0.3s,baz=7.4,slow=21,SNR=3.3							
IM3	Indian Mountai	9.65	356	P		Pn	22 58 17.2	-1.0
DIB	Dawson Inlet, SNR=4.5	11.82	97	T		T	23 10 58.9	
INK	Inuvik	14.67	28	Pn		P	22 59 32.2	-0.6
INK	Inuvik 0.1nm,0.3s,baz=230,slow=15,SNR=7.1	14.67	28	Pn		P	22 59 32.2	-0.6
YKA	Yellowknife Ar	19.83	57	P		Pn	23 00 31.4	-0.1
YKA	Yellowknife Ar 0.1nm,0.3s,baz=270,slow=10,SNR=13	19.83	57	P		Pn	23 00 31.4	-0.1
NVAR	Mina Array Bea comp=Z,46nm,18.2s,baz=263,slow=36	28.73	114	LR		LR	23 13 24.6	
TXAR	Lajitas Array comp=Z,62nm,21.7s,baz=0.0,slow=34	43.40	108	LR		LR	23 20 36.3	
MDJ	Mudanjiang	48.47	291	P		P	23 04 40.3	-1.3
MDJ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
MDJ				pmax		pmax		
	comp=Z,28nm,4.6s							
ARCES	ARCESS Array B	54.36	1	P		P	23 05 25.8	+0.5
ARCES	ARCESS Array B comp=Z,0.7nm,0.5s,baz=12,slow=7.4,SNR=9.3	54.36	1	P		P	23 05 25.8	+0.5
SONM	Songino Array	57.30	308	P		P	23 05 48.0	+1.1
SONM	Songino Array comp=Z,1.2nm,0.8s,baz=45,slow=5.7,SNR=5.3	57.30	308	P		P	23 05 48.0	+1.1
ZALV	Zalesovo Beam	60.55	325	P		P	23 06 10.2	+1.0
ZALV	Zalesovo Beam comp=Z,6.6nm,0.3s,baz=30,slow=9.1,SNR=5.2	60.55	325	P		P	23 06 10.2	+1.0
NB2	NORSAR Subarra comp=Z,0.7nm,0.7s,baz=350,slow=6.9	62.18	9	P		P	23 06 20.9	+0.8
NOA	NORSAR Array B	62.18	9	P		P	23 06 21.1	+1.0
NOA	NORSAR Array B comp=Z,0.8nm,0.7s,baz=351,slow=6.8,SNR=5.7	62.18	9	P		P	23 06 21.1	+1.0
FINES	FINESS Array B	62.49	1	P		P	23 06 23.0	+0.9
FINES	FINESS Array B comp=Z,1.4nm,0.8s,baz=352,slow=9.6,SNR=9.2	62.49	1	P		P	23 06 23.0	+0.9
MKAR	Makanchi Array	67.53	323	P		P	23 06 55.1	0.0
MKAR	Makanchi Array comp=Z,0.5nm,0.7s,baz=32,slow=7.0,SNR=4.3	67.53	323	P		P	23 06 55.1	0.0
AKASG	Malin Array Be	73.26	359	P		P	23 07 30.4	+0.4
AKASG	Malin Array Be comp=Z,0.9nm,0.5s,baz=2.6,slow=6.1,SNR=5.6	73.26	359	P		P	23 07 30.4	+0.4
ESDC	Sonseca Array	80.58	24	P		P	23 08 13.3	+1.8
ESDC	Sonseca Array comp=Z,0.3nm,0.5s,baz=340,slow=5.6,SNR=3.0	80.58	24	P		P	23 08 13.3	+1.8

IDC 15 23:05:09.1±1.7, 1˚.67N×127˚.42E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/23, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=114.1km s-min=20.1km az=70.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	Fitzroy Crossi 0.2nm,0.3s,baz=15,slow=12,SNR=6.4	19.72	185	P		P	23 09 40.6	+0.2
WRA	Warramunga Arr 1.5nm,0.4s,baz=341,slow=11,SNR=4.8	22.52	163	P		P	23 10 11.4	+0.7
ASAR	Alice Springs 0.4nm,0.5s,baz=349,slow=7.7,SNR=9.2	25.96	166	P		P	23 10 42.8	-0.7
MKAR	Makanchi Array 0.3nm,0.3s,baz=121,slow=8.3,SNR=6.1	59.64	326	P		P	23 15 15.4	+0.3
KURBB	Kurchatov Arra 0.5nm,0.5s,baz=130,slow=6.2,SNR=7.3	63.84	328	P		P	23 15 43.1	-0.2

*IDC **15** 23:08:10.6±1.7, 17˚.31N×84˚.85W, h0km, mb4.1/15, mb1 4.3/16, mb1mx4.1/29, mbtmp4.1/16, ML4.6/2, MS3.5/7, Ms1 3.5/7, ms1mx3.1/35, Error ellipse: s-maj=45.0km s-min=19.4km az=17.0*

*ISCJB **15** 23:08:15.2±0.5, 17˚.36N±0˚.06×85˚.05W±0˚.05, h33km, mb4.3/42, MS3.7/4, Error ellipse: s-maj=9.9km s-min=5.4km az=24.0*

*NEIC **15** 23:08:15.0±2.1, 17˚.23N×85˚.12W, h23km×16km, mb4.6/36, Error ellipse: s-maj=7.6km s-min=5.9km az=222.0*

ISC 15 23:08:17.0±0.7, 17˚.43N±0˚.10×85˚.13W±0˚.07, h35km, n286, σ1§33/283, mb4.4/42, MS3.6/4, 94C-87D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TGUH	Tegucigalpa,Un	3.94	212	ePn		Pn	23 09 10.0	-4.9
TEIG	Tepich	4.07	313	ePn		Pn	23 09 16.5	-0.3
TEIG				eSn		Sn	23 10 02.6	-0.7
TEIG	Tepich 188nm,0.3s,baz=8.7,slow=1.3,SNR=398	4.07	313	Pn		Pn	23 09 16.7	-0.1
TEIG				Sn		Sn	23 10 02.6	-0.7
	87nm,0.3s,baz=46,slow=21,SNR=12							
TEIG				LR		LR	23 11 06.2	
	comp=Z,484nm,18.8s,baz=92,slow=40							
JTS	JuntasAbangare	7.10	179	ePn		Pn	23 09 52.8	-5.7
MTDJ	Mount Denham	7.28	83	ePn		Pn	23 09 54.8	-6.2
GTBY	Guantanamo Bay	9.81	74	ePn		Pn	23 10 35.1	-0.6
SDDR	Presa de Saban	13.24	81	ePn		Pn	23 11 21.9	-0.8
LRAL	Lakeview Retre	15.63	354	ePn		Pn	23 11 53.8	-0.7
LRAL				eSn		Sn	23 14 33.8	-13
HKT	Hockley 46nm,0.8s	15.84	324	ePn		Pn	23 11 58.6	+1.4
HKT				eSn		Sn	23 14 46.4	-5.3
GOGA	Godfrey 62nm,2.0s	15.98	5	ePn		P	23 12 02.7	+0.4
ROSC	El Rosal	16.37	139	ePn		Pn	23 12 03.8	-0.8
ROSC	El Rosal 0.2nm,0.3s,baz=227,slow=20,SNR=5.0	16.37	139	Pn		P	23 12 08.9	+1.7
ROSC				LR		LR	23 18 34.2	
	comp=Z,118nm,19.2s,baz=6.3,slow=39							
SDV	Santo Domingo 0.3nm,1.0s	16.47	119	ePn		Pn	23 12 04.9	-0.8
JSC	Jenkinsville	17.13	11	ePn		P	23 12 14.7	-0.3
LRS	Lares	17.43	84	ePn		P	23 12 18.6	+0.1
OBIP	Obispado Ponce 94nm,1.5s	17.66	85	ePn		P	23 12 21.7	+0.7
732A	Laxson Ranch, baz=18,SNR=13	17.67	312	⇑P		Pn	23 12 18.8	-1.5
CPCT	Cooper Cave	17.95	2	ePn		Pn	23 12 23.7	-0.1
CPCT				eSn		Sn	23 15 33.0	-10
632A	Uvalde baz=18,SNR=43	18.01	314	⇑P		Pn	23 12 24.2	-0.4
TKL	Tuckaleechee C	18.19	4	ePn		P	23 12 29.6	+2.8
TKL				eSn		Sn	23 15 39.5	-9.3
TKL	Tuckaleechee C 0.3nm,0.3s,baz=180,slow=16,SNR=4.7	18.19	4	Pn		P	23 12 26.8	0.0
TKL				Sn		Sn	23 15 38.2	-11
	0.5nm,0.3s,baz=93,slow=1.6,SNR=5.0							
TKL				LR		LR	23 19 04.5	
	comp=Z,58nm,20.3s,baz=248,slow=36							
WHTX	Lake Whitney baz=18,SNR=20	18.29	325	⇓P		Pn	23 12 29.4	+1.4
532A	Rocksprings baz=19,SNR=52	18.48	316	⇑P		P	23 12 30.3	+0.2
631A	Perdido Creek baz=19,SNR=64	18.50	313	⇓P		P	23 12 29.2	-1.0
JCT	Junction City 27nm,0.6s	18.64	317	eP		P	23 12 32.7	+0.9
JCT				eSn		Sn	23 16 00.9	+1.1
JCT	Junction City baz=19	18.64	317	⇓P		P	23 12 32.1	+0.3
WVT	Waverly	18.78	353	eP		Pn	23 12 34.5	+0.7
WVT				eSn		Sn	23 15 50.1	-13
432A	Menard baz=19,SNR=16	18.89	318	⇑P		P	23 12 35.6	+1.0
531A	Rocksprings baz=19,SNR=40	18.93	315	⇑P		P	23 12 35.4	+0.4
TZTN	Tazewell 20nm,1.2s	19.09	4	eP		Pn	23 12 38.4	+0.8
332A	Millersview baz=19,SNR=12	19.20	319	⇓P		P	23 12 39.3	+1.4
431A	Sonora baz=20,SNR=17	19.30	316	⇑P		P	23 12 39.5	+0.5
530A	J-C Ranch, Com baz=20,SNR=32	19.47	313	⇑P		P	23 12 40.8	-0.1
232A	Coleman baz=20,SNR=18	19.49	320	P		Pn	23 12 43.3	+0.8
331A	San Angelo baz=20,SNR=10	19.59	318	⇓P		P	23 12 43.5	+1.3
430A	Baggett Ranch, baz=20,SNR=9.4	19.79	315	⇑P		P	23 12 45.8	+1.4
231A	Bronte baz=20,SNR=5.7	19.94	319	⇑P		P	23 12 47.7	+1.7
ABTX	Abilene, Hawle baz=20	20.01	322	⇑P		P	23 12 48.5	+1.8
529A	Stev Forest Ra baz=20,SNR=6.1	20.07	312	⇑P		P	23 12 48.0	+0.5
BLA	Blacksburg	20.14	11	eP		Pn	23 12 50.8	+0.7
429A	Davenport Ranc baz=20,SNR=22	20.14	314	P		P	23 12 49.7	+1.5
330A	Mertzon baz=20,SNR=14	20.14	317	P		P	23 12 49.8	+1.6
628A	Black Gap, Mar baz=20,SNR=7.2	20.20	310	⇑P		P	23 12 49.3	+0.5
VWCC	Virginia Weste	20.25	12	ePn		Pn	23 12 53.1	+1.7
Z32A	Haskell baz=21	20.41	323	⇓P		Pn	23 12 53.5	+0.3
230A	Sterling City baz=21,SNR=9.0	20.41	318	P		P	23 12 52.8	+1.7
131A	Roby baz=21,SNR=7.8	20.49	321	⇑P		P	23 12 53.6	+1.6
528A	Cox Ranch, San baz=21	20.50	311	⇓P		P	23 12 53.3	+1.1
SIUC	Southern Illin 18nm,0.9s	20.52	351	eP		Pn	23 12 54.6	+0.1
627A	Terlingua Ranc baz=21,SNR=22	20.55	309	⇓P		P	23 12 53.4	+0.6
USIN	University of 17nm,0.8s	20.58	354	eP		Pn	23 12 54.7	-0.5
TXAR	Lajitas Array	20.70	308	P		P	23 12 55.4	+1.1
TXAR				S		S	23 16 41.3	-2.4
TXAR	Lajitas Array 3.5nm,0.7s,baz=126,slow=11,SNR=30	20.70	308	P		P	23 12 55.4	+1.1
TXAR				S		S	23 16 41.3	-2.4
	0.7nm,0.6s,baz=138,slow=11,SNR=2.0							
329A	Wagon Wheel Ra baz=21,SNR=5.2	20.72	316	⇓P		P	23 12 55.6	+1.1
WCI	Wyandotte Cave 21nm,1.1s	20.74	357	eP		Pn	23 12 56.2	-0.9
428A	Kincaid Ranch, baz=21	20.75	313	⇓P		P	23 12 55.8	+1.0
130A	Snyder baz=21,SNR=5.9	20.79	320	P		P	23 12 56.8	+1.5
Z31A	Sharp Cattle R baz=21,SNR=6.6	20.80	322	⇑P		P	23 12 56.7	+1.4
Y32A	R-V Farms, Ver baz=21	20.90	325	⇓P		P	23 12 58.3	+2.0
229A	Bryant Ranch, baz=21	20.91	317	⇓P		P	23 12 57.6	+1.1
527A	Woodward Ranch baz=21,SNR=17	21.08	310	⇓P		P	23 12 58.9	+0.4
626A	Big Bend Ranch baz=21,SNR=12	21.16	308	⇓P		P	23 12 59.8	+0.5
JSRW	J. Sargeant Re	21.17	16	eP		P	23 12 59.5	+0.3
328A	Wristen Ranch, baz=21	21.22	314	⇓P		P	23 13 00.3	+0.4
427A	Hayter Ranch, baz=22,SNR=8.3	21.32	312	⇓P		P	23 13 01.7	+0.7
Y31A	Rekieta Farm, baz=22	21.33	323	⇓P		P	23 13 03.2	+2.3
Z30A	Sanderson Ranc baz=22,SNR=5.2	21.36	321	⇑P		P	23 13 02.5	+1.2
129A	Stewart Farms, baz=22	21.38	318	⇓P		P	23 13 02.1	+0.5
OLIL	Olney 25nm,0.9s	21.38	354	eP		P	23 13 03.0	+1.6
526A	Mary Lane Ranc baz=22	21.39	309	⇑P		P	23 13 02.5	+0.7
228A	UT Block 9, Go baz=22	21.52	316	⇓P		P	23 13 04.1	+0.9
SLM	Saint Louis 20nm,0.9s	21.59	349	eP		P	23 13 06.6	+2.9
Y30A	Stafford Cattl baz=22	21.63	322	⇑P		P	23 13 06.9	+2.5
426A	McDonald Obser baz=22	21.67	311	⇑P		P	23 13 05.9	+1.1
BLO	Bloomington 25nm,1.1s	21.69	357	eP		P	23 13 05.6	+0.8
128A	Castleberry Fa baz=22	21.77	317	⇑P		P	23 13 07.2	+1.5
227A	Bennet, Jal baz=22	21.92	315	⇓P		P	23 13 08.6	+1.1
326A	Caldwell Ranch baz=22	21.99	312	⇑P		P	23 13 08.6	+0.4
X30A	Coker Ranch, T baz=22	22.03	323	⇑P		P	23 13 10.6	+2.1
W31A	Holland Ranch, baz=22	22.06	326	⇑P		P	23 13 10.8	+1.9
Y29A	Porterfield Fa baz=22	22.08	321	⇑P		P	23 13 10.7	+1.6
Z28A	Tucker Farm, M baz=22	22.14	319	⇓P		P	23 13 10.5	+0.8
127A	Arkansas Junct baz=23	22.37	316	⇑P		P	23 13 13.3	+1.0
425A	Indio Mountain baz=23	22.43	310	⇓P		P	23 13 13.4	+0.4
V31A	Spring Creek L baz=23	22.46	327	⇑P		P	23 13 15.9	+2.7
X29A	Tulia baz=23	22.51	322	⇑P		P	23 13 14.6	+0.9
226B	Tecolote Peak, baz=23,SNR=5.3	22.56	314	⇓P		P	23 13 14.6	+0.3
Z27A	Tatum baz=23,SNR=5.5	22.68	318	P		P	23 13 15.2	-0.4
126A	Clayton Basin, baz=23	22.80	315	⇓P		P	23 13 17.4	+0.6
AMTX	Amarillo 23nm,0.5s	22.80	323	eP		P	23 13 17.7	+0.9
MSTX	Muleshoe baz=23	22.83	320	⇑P		P	23 13 17.7	+0.5
Y27A	Causey

Y25A Mesa, Roswell 24.02 317 ⇑P P 23 13 29.7 +0.9
baz=24,SNR=6.2
V27A Dan Oppiter Fa 24.09 323 ⇓P P 23 13 30.6 +1.2
baz=24
Z24A Sheeppen Canyo 24.11 315 ⇑P P 23 13 30.4 +0.7
baz=24,SNR=5.6
W26A Owens Ranch, T 24.18 320 ⇓P P 23 13 31.6 +1.3
baz=24
X25A Clemmons Ranch 24.38 318 ⇓P P 23 13 32.9 +0.8
baz=25,SNR=5.1
Y24A Capitan 24.51 316 ⇓P P 23 13 34.0 +0.6
baz=25,SNR=20
S29A Ulysses 24.53 328 ⇓P P 23 13 35.3 +1.8
baz=25
U27A Thompson Grove 24.55 324 ⇓P P 23 13 34.4 +0.8
baz=25,SNR=6.9
R30A Dighton 24.65 330 ⇑P P 23 13 36.5 +2.1
baz=25
222A Williams Famil 24.66 310 ⇓P P 23 13 34.7 +0.1
baz=25
Z23A Rita Site, Whi 24.66 314 ⇑P P 23 13 35.4 +0.7
baz=25
V26A Tequesquite Ra 24.67 321 ⇓P P 23 13 35.7 +0.9
baz=25
W25A X Bar L Ranch, 24.70 320 ⇓P P 23 13 35.8 +0.8
baz=25,SNR=15
122A Conniff Cattle 24.89 312 ⇑P P 23 13 38.0 +1.2
baz=25
S28A Manter 24.91 327 ⇓P P 23 13 38.2 +1.3
baz=25
Y23A Lovelace Mesa, 24.93 315 ⇑P P 23 13 37.7 +0.5
baz=25
U26A Atchley Ranch, 25.06 323 ⇓P P 23 13 39.4 +1.1
baz=25
V25A Rancho No Teng 25.20 320 ⇑P P 23 13 40.8 +1.2
baz=25
W24A Lazy 6 Ranch, 25.29 318 ⇑P P 23 13 41.4 +1.0
baz=26
320A Kipp Ranch, An 25.34 307 ⇑P P 23 13 41.7 +0.8
baz=26
121A Cookes Peak, D 25.37 311 ⇓P P 23 13 41.3 +0.2
baz=26
U25A Circle Dot Ran 25.45 322 ⇑P P 23 13 43.3 +1.4
baz=26
T26A Comanche Natio 25.52 324 ⇑P P 23 13 43.8 +1.3
baz=26
V24A Rampart Ranch, 25.53 319 ⇓P P 23 13 43.9 +1.3
baz=26,SNR=8.7
LPM Los Pinos Moun 25.54 315 eP P 23 13 44.1 +1.4
220A Playas Peak, P 25.61 309 ⇑P P 23 13 43.8 +0.6
baz=26
Z21A St. Cloud Mine 25.70 312 ⇑P P 23 13 45.2 +1.1
baz=26
S26A Kim 25.77 325 ⇑P P 23 13 46.2 +1.4
baz=26
ANMO Albuquerque 25.80 317 eP P 23 13 46.6 +1.6
3.0nm,0.8s
ANMO Albuquerque 25.80 317 P P 23 13 46.3 +1.2
2.9nm,0.8s,baz=145,slow=9.5,SNR=7.5
319A Douglas 25.93 307 ⇑P P 23 13 46.8 +0.6
baz=26
LAZ Ladron 25.93 315 eP P 23 13 47.4 +1.1
T25A Trinidad 25.96 323 ⇑P P 23 13 48.7 +2.2
baz=26
U24A Moreno Valley 25.98 321 ⇓P P 23 13 49.0 +2.2
baz=26
120A U Bar Ranch, L 26.00 310 ⇑P P 23 13 47.4 +0.5
baz=26,SNR=5.3
Z20A Nine Sixteen R 26.25 311 ⇑P P 23 13 50.0 +0.8
baz=26
R26A Arlington 26.25 326 ⇑P P 23 13 50.9 +1.8
baz=26
T24A Torres, Weston 26.29 322 ⇓P P 23 13 51.6 +2.0
baz=26
X21A Alamocita Cree 26.40 314 ⇑P P 23 13 51.6 +1.0
baz=27
Y20A Horse Springs, 26.51 313 ⇑P P 23 13 52.7 +1.1
baz=27
Q26A Hugo 26.75 327 ⇓P P 23 13 55.2 +1.6
baz=27
S24A Houchin Ranch, 26.77 323 ⇓P P 23 13 55.1 +1.2
baz=27
SDCO Great Sand Dun 27.01 323 eP P 23 13 58.3 +2.2
3.0nm,0.8s
R24A Sanders Place, 27.12 324 ⇑P P 23 13 58.6 +1.7
baz=27
TUC Tucson 27.49 307 eP P 23 14 01.4 +1.2
4.6nm,1.2s
WES Weston 27.52 22 eP P 23 14 03.2 +3.0
P25A Willow Gulch B 27.53 327 ⇓P P 23 14 02.4 +1.8
baz=28
SADO Sadowa 27.71 9 P P 23 14 01.9 0.0
SADO Sadowa 27.71 9 P P 23 14 01.9 0.0
2.3nm,0.5s,baz=214,slow=9.4,SNR=4.8
SADO LR LR 23 24 50.3
comp=Z,94nm,18.7s,baz=25,slow=36
214A Organ Pipe Nat 28.90 305 ⇓P P 23 14 13.4 +0.7
baz=29
X16A Lo Mia Camp, P 28.96 311 ⇓P P 23 14 14.1 +0.7
baz=29
P22A Eagle 28.99 324 ⇓P P 23 14 15.8 +2.1
baz=29
PDMCI Parker Dam,Lak 30.89 309 ⇑P P 23 14 31.3 +1.0
baz=31
GLA Glamis 30.90 306 eP P 23 14 32.5 +2.1
28nm,1.5s
GLA Glamis 30.90 306 ⇓P P 23 14 31.1 +0.7
baz=31
W13A Hualapai Mount 31.05 310 ⇑P P 23 14 33.1 +1.2
baz=31
K21A Alcova 31.40 328 ⇓P P 23 14 36.6 +1.8
baz=32
L20A Wamsutter 31.52 326 ⇑P P 23 14 37.0 +1.1
baz=32
BC3 Big Chuckawall 31.61 307 ⇓P P 23 14 37.3 +0.5
baz=32
MVU Marysvale 31.62 317 eP P 23 14 39.7 +2.7
7.0nm,0.7s
CCUT Cedar City 31.88 315 eP P 23 14 41.3 +2.1
29nm,2.7s
LDFC Landfair 31.94 309 eP P 23 14 42.3 +2.6
20nm,0.4s
K20A Yellowstone Ra 31.98 327 ⇑P P 23 14 41.4 +1.4
baz=32
J21A Lysite 32.01 328 ⇑P P 23 14 41.6 +1.3
baz=32
ARUT Antelope Range 32.05 315 eP P 23 14 42.2 +1.5
DAU Daniels Canyon 32.14 321 eP P 23 14 42.2 +0.6
BELC Belle Mtn. Jos 32.17 307 ⇑P P 23 14 42.1 +0.4
baz=32
J20A Shoshoni 32.34 328 ⇓P P 23 14 45.0 +1.9
baz=33
TUQ Turquoise Moun 32.70 309 ⇓P P 23 14 46.9 +0.6
baz=33
PDAR Pinedale Array 32.70 326 P P 23 14 47.3 +1.0
PDAR PcP PcP 23 17 30.6 -0.9
PDAR Pinedale Array 32.70 326 P P 23 14 47.3 +1.0
3.2nm,0.6s,baz=128,slow=12,SNR=6.8
PDAR PcP PcP 23 17 30.6 -0.9
0.6nm,0.9s,baz=122,slow=6.7,SNR=2.9
HEC Hector,Ludlow 32.75 308 ⇓P P 23 14 47.9 +1.2
baz=33
DUG Dugway 32.97 319 ⇓P P 23 14 49.8 +1.2
baz=33
HWUT Hardware Ranch 33.07 322 eP P 23 14 50.7 +1.2
J18A Kendall Valley 33.25 326 ⇑P P 23 14 52.2 +1.1
baz=34
I19A Meeteetse 33.29 328 ⇑P P 23 14 53.0 +1.6
baz=34
J17A Brown Place, J 33.73 325 ⇓P P 23 14 57.3 +2.0
baz=34
R11A Troy Canyon, C 33.80 314 ⇓P P 23 14 56.8 +0.9
baz=34
SNOW Snow King Moun 33.81 326 eP P 23 14 58.0 +1.9
18nm,1.3s
LOHW Long Hollow 33.84 326 eP P 23 14 57.0 +0.8
4.6nm,0.8s
TPAW Teton Pass 33.94 325 eP P 23 14 58.7 +1.5
15nm,0.6s
MOOW Moose Ponds 34.00 326 eP P 23 14 59.1 +1.4
4.5nm,0.8s
EDW2 Edwards Air Fo 34.02 307 ⇑P P 23 14 58.1 +0.3
baz=34
SAML Samuel 34.02 139 eP P 23 14 57.4 -0.5
0.1nm,1.2s
I17A Pilgrim Ck. 34.03 326 ⇑P P 23 15 00.4 +2.5
baz=34
LRMC Laurel Mountai 34.03 308 ⇓P P 23 14 57.7 -0.2
baz=34
MPMC Manual Prospec 34.12 309 ⇓P P 23 14 59.1 +0.4
baz=34
IMW Indian Meadow 34.21 326 eP P 23 15 01.3 +1.8
6.8nm,0.7s
H17A Grant Village 34.35 327 ⇓P P 23 15 02.4 +1.6
baz=35
C23A Lambert 34.46 336 ⇓P P 23 15 03.5 +2.1
baz=35
G18A Lazy EL Ranch, 34.49 329 ⇓P P 23 15 03.0 +1.2
baz=35
F19A Roth Farm, Mol 34.58 330 ⇓P P 23 15 04.0 +1.5
baz=35
C22A Vida 34.69 335 ⇑P P 23 15 04.7 +1.3
baz=35
ELK Elko 34.81 318 P P 23 15 06.1 +1.3
ELK Elko 34.81 318 P P 23 15 06.1 +1.3
1.2nm,0.6s,baz=120,slow=6.6,SNR=5.6
H16A Russell Place, 34.91 327 ⇑P P 23 15 07.1 +1.5
baz=35
E19A Rath Farm, Rou 34.95 331 ⇓P P 23 15 07.2 +1.5
baz=35
F18A Big Timber 34.98 330 ⇓P P 23 15 07.3 +1.3
baz=35
D20A Manuel Ranch, 35.13 332 ⇑P P 23 15 08.7 +1.5
baz=35
F17A Fitzpatrick Pl 35.45 329 ⇓P P 23 15 11.7 +1.6
baz=36
C20A Veseth Ranch, 35.55 333 ⇓P P 23 15 12.5 +1.7
baz=36
G16A Moss Hill, Enn 35.56 327 ⇑P P 23 15 12.7 +1.7
baz=36
H15A Lima 35.60 325 ⇑P P 23 15 13.2 +1.8
baz=36,SNR=5.7
I14A Mackay 35.60 324 ⇑P P 23 15 12.9 +1.4
baz=36
J13A Cove Ranch, Pi 35.69 323 ⇑P P 23 15 13.5 +1.3
baz=36
NVAR Mina Array Bea 35.72 313 P P 23 15 14.5 +1.9
NVAR Mina Array Bea 35.72 313 P P 23 15 14.5 +1.9
1.5nm,0.7s,baz=121,slow=9.3,SNR=9.5
BOZ Bozeman (W) 35.76 328 eP P 23 15 13.8 +1.1
3.6nm,1.2s
MCMT McKenzie Canyo 35.85 326 eP P 23 15 16.3 +2.7
5.7nm,0.8s
G15A Dillon 35.88 326 ⇓P P 23 15 15.5 +1.7
baz=36
HLID Hailey 35.93 323 eP P 23 15 15.9 +1.7
3.1nm,1.1s
HLID Hailey 35.93 323 ⇓P P 23 15 15.5 +1.3
baz=36
I13A Wildhorse Cree 35.97 323 ⇑P P 23 15 15.9 +1.3
baz=36,SNR=6.3
H14A Leadore 35.99 325 ⇑P P 23 15 16.7 +1.9
baz=36,SNR=7.4
C19A Slack Wire Ran 36.02 332 ⇓P P 23 15 16.3 +1.4
baz=36
DLMT Dillon 36.06 326 eP P 23 15 17.8 +2.4
5.9nm,0.8s
LRM Limekiln Ridge 36.30 327 eP P 23 15 19.5 +2.0
F15A Butte 36.33 327 ⇓P P 23 15 19.3 +1.6
baz=36
D17A Six Diamond Ra 36.35 330 ⇑P P 23 15 19.2 +1.5
baz=37
E16A East Helena 36.39 329 ⇓P P 23 15 19.8 +1.7
baz=37
G14A Jackson 36.45 326 ⇓P P 23 15 20.5 +1.8
baz=37
H13A Challis 36.45 324 ⇓P P 23 15 20.0 +1.3
baz=37
I12A Atlanta 36.48 322 ⇑P P 23 15 20.2 +1.2
baz=37
EGMT Eagleton 36.56 332 ⇑P P 23 15 20.6 +1.1
baz=37,SNR=7.6
MFID Camas Ranch 36.67 321 ⇑P P 23 15 21.3 +0.8
baz=37
D16A Dana Ranch, Ca 36.68 329 ⇓P P 23 15 21.9 +1.4
baz=37
C17A Wharram Farm, 36.73 331 ⇓P P 23 15 22.4 +1.5
baz=37
G13A Cobalt 36.77 325 ⇑P P 23 15 22.6 +1.2
baz=37
H12A Diamond D Ranc 36.78 324 ⇓P P 23 15 22.3 +0.8
baz=37
E15A Deer Lodge 36.80 328 ⇑P P 23 15 22.7 +1.1
baz=37
A19A Klindworth Far 36.80 334 ⇑P P 23 15 23.2 +1.7
baz=37
D15A Lincoln 37.16 329 ⇑P P 23 15 26.5 +1.8
baz=37
E14A Clinton 37.23 327 ⇓P P 23 15 25.8 +0.5
baz=37,SNR=7.6
A18A Metzger Ranch, 37.27 333 ⇑P P 23 15 26.5 +1.1
baz=38
F13A Darby 37.27 326 ⇓P P 23 15 25.6 0.0
baz=38,SNR=6.1
C16A Fuhringer Ranc 37.31 330 ⇓P P 23 15 27.7 +1.7
baz=38
G12A Big Creek, Yel 37.40 324 ⇑P P 23 15 28.0 +1.3
baz=38
E13A Victor 37.61 327 ⇓P P 23 15 29.7 +1.2
baz=38
A17A Triple J Farms 37.66 332 ⇑P P 23 15 30.3 +1.5
baz=38
D14A Greenough 37.68 328 ⇑P P 23 15 30.1 +1.0
baz=38
C15A Salmond Ranch, 37.71 329 ⇑P P 23 15 30.5 +1.2
baz=38,SNR=5.4
B16A M & M Farms, S 37.73 331 ⇓P P 23 15 30.4 +1.0
baz=38
MSO Missoula 37.74 327 eP P 23 15 30.7 +1.1
3.3nm,0.6s
MSO Missoula 37.74 327 ⇓P P 23 15 30.4 +0.9
baz=38
F12A Elk City 37.75 325 ⇑P P 23 15 29.9 +0.3
baz=38,SNR=7.8
WVOR Wild Horse Val 37.86 318 eP P 23 15 31.2 +0.5
10nm,1.5s
A15A Johnson Ranch, 38.61 331 ⇑P P 23 15 38.0 +1.1
baz=39
C13A Hot Springs 38.62 328 ⇑P P 23 15 37.5 +0.6
baz=39
A14A Double T Ranch 38.93 330 ⇑P P 23 15 41.0 +1.4
baz=39
B13A Whitefish 39.03 329 ⇓P P 23 15 41.9 +1.6
baz=39
C12B Naegeli Ranch, 39.10 327 ⇑P P 23 15 41.4 +0.4
baz=39
SCHQ Schefferville 39.89 16 P P 23 15 45.9 -1.4
SCHQ Schefferville 39.89 16 P P 23 15 45.9 -1.4
4.7nm,0.9s,baz=214,slow=16,SNR=3.3
SCHQ LR LR 23 32 36.3
comp=Z,108nm,19.7s,baz=99,slow=37
NEW Newport 40.31 327 P P 23 15 51.5 +0.6
NEW Newport 40.31 327 P P 23 15 51.5 +0.6
2.1nm,0.7s,baz=131,slow=10.0,SNR=5.7
NEW Newport 40.31 327 ⇓P P 23 15 51.9 +1.0
baz=40
LON Longmire 42.04 322 eP P 23 16 05.2 -0.1
5.2nm,0.8s
YKA Yellowknife Ar 49.49 343 P P 23 17 03.5 -0.1
YKA PcP PcP 23 18 24.9 -0.3
YKA Yellowknife Ar 49.49 343 P P 23 17 03.5 -0.1
0.4nm,0.5s,baz=139,slow=7.6,SNR=11
YKA PcP PcP 23 18 24.9 -0.3
0.5nm,0.6s,baz=134,slow=3.7,SNR=9.3
DLBC Dease Lake 52.49 332 eP P 23 17 28.2 +1.9
RES Resolute Bay 57.52 357 P P 23 18 02.1 -0.2
RES Resolute Bay 57.52 357 P P 23 18 02.1 -0.2
1.4nm,0.7s,baz=193,slow=9.0,SNR=10
DOT Dot Lake 60.90 334 eP P 23 18 27.7 +1.7
14nm,1.5s
ILAR Eielson Array 62.44 335 P P 23 18 36.9 +0.5
ILAR Eielson Array 62.44 335 P P 23 18 36.9 +0.5
5.3nm,0.6s,baz=113,slow=5.0,SNR=66
TRF Thorofare Moun 63.50 333 eP P 23 18 44.0 +0.4
6.0nm,0.7s
ESDC Sonseca Array 72.39 53 P P 23 19 39.1 -0.7
ESDC Sonseca Array 72.39 53 P P 23 19 39.1 -0.7
1.1nm,0.9s,baz=286,slow=5.3,SNR=7.0
USHA Ushuaia 73.37 170 LR LR 23 49 39.6
comp=Z,172nm,18.4s,baz=312,slow=34
NB2 NORSAR Subarra 77.95 30 P P 23 20 10.4 -1.0
comp=Z,3.2nm,1.0s,baz=283,slow=5.6
NOA NORSAR Array B 77.95 30 P P 23 20 10.4 -1.0
NOA NORSAR Array B 77.95 30 P P 23 20 10.4 -1.0
comp=Z,1.4nm,0.9s,baz=284,slow=5.4,SNR=5.5
NOA LR LR 23 57 48.8
comp=Z,18nm,18.3s,baz=95,slow=38
ARCES ARCESS Array B 80.77 19 P P 23 20 25.1 -1.5
ARCES ARCESS Array B 80.77 19 P P 23 20 25.1 -1.5
comp=Z,1.3nm,0.9s,baz=308,slow=4.0,SNR=4.4
TORD Torodi Ar. Bea 83.18 78 P P 23 20 37.5 -2.7
TORD Torodi Ar. Bea 83.18 78 P P 23 20 37.5 -2.7
comp=Z,0.2nm,0.5s,baz=285,slow=3.8,SNR=3.1
ASAR Alice Springs 143.01 254 PKPpre PKPpre 23 27 42.4
ASAR Alice Springs 143.01 254 PKPKP PKPpre 23 27 42.4
comp=Z,1.5nm,0.5s,baz=104,slow=3.3,SNR=24

IDC 15 23:09:37.6±1.8, 2°83'N×128°37'E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.5/23, mbtmp3.8/4, Error ellipse: s-maj=160.5km s-min=22.2km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.38**	**166**	P		P	23 14 48.1	0.0
	1.9nm,0.6s,baz=345,slow=10,SNR=5.4							
STKA	**Stephens Creek**	**36.73**	**161**	P		P	23 16 46.0	-0.7
	2.1nm,0.7s,baz=332,slow=12,SNR=3.3							
MKAR	**Makanchi Array**	**59.23**	**325**	P		P	23 19 41.2	+0.5
	0.3nm,0.4s,baz=125,slow=7.9,SNR=7.8							
KURBB	**Kurchatov Arra**	**63.38**	**327**	P		P	23 20 08.6	-0.2
	0.5nm,0.5s,baz=127,slow=6.1,SNR=10.0							

*IDC **15** 23:10:13.7±5.8, 36°53N×71°40E, h76km±53km, mb3.3/4, mb1 3.4/10, mb1mx3.2/32, mbtmp3.4/10, ML3.6/5, MS3.4/2, Ms1 3.4/2, ms1mx2.5/24, Error ellipse: s-maj=57.7km s-min=37.9km az=123.0*
*ISCJB **15** 23:10:16.0±1.1, 36°.90N±0°.07×71°.03E±0°.08, h88km, mb3.5/4, Error ellipse: s-maj=10.9km s-min=8.6km az=159.6*
*NNC **15** 23:10:20.0±2.0, 37°.06N×71°.12E, h168km±21km, mb2.6, mpv3.8, Error ellipse: s-maj=17.3km s-min=10.0km az=26.0*

ISC 15 23:10:16.6±1.5, 36°.9N±0°.1×71°.1E±0°.1, h88km, n22, σ1°82/27, mb3.6/4, 3C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**5.62**	**20**	P		**Pn**	**23 11 39.4**	**+1.4**
	SNR=38							
EKS2	**Erkin-Say**	**6.14**	**19**	P		**Pn**	**23 11 46.9**	**+2.1**
	SNR=11							
KK31	**Karatay Array**	**6.22**	**356**	P		**Pn**	**23 11 47.6**	**+1.7**
	2.7nm,0.3s,baz=177,slow=12,SNR=216							
KK31				⇑S		**Sn**	**23 12 57.1**	**+1.5**
	1.8nm,0.3s,baz=187,slow=24,SNR=6.2							
AAK	**Ala-Archa**	**6.32**	**24**	P		**Pn**	**23 11 48.0**	**+0.6**
	SNR=6.5							
AAK	**Ala-Archa**	**6.32**	**24**	P		**Pn**	**23 11 49.1**	**+1.8**
	3.7nm,0.3s,baz=168,slow=6.1,SNR=51							
AAK				S		**Sn**	**23 12 59.7**	**+1.5**
	0.8nm,0.3s,baz=336,slow=18,SNR=5.9							
CHMS	**Chumysh**	**6.73**	**24**	P		**Pn**	**23 11 54.2**	**+1.4**
	SNR=15							
USP	**Ospenovka**	**6.90**	**21**	P		**Pn**	**23 11 55.8**	**+0.7**
	SNR=9.7							
TKM2	**Tokmak 2**	**6.96**	**29**	⇓P		**Pn**	**23 11 56.7**	**+0.6**
	3.8nm,0.6s							
TKM2				⇓S		**Sn**	**23 13 14.8**	**+0.9**
	2.2nm,0.6s							
TKM2	**Tokmak 2**	**6.96**	**29**	P		**Pn**	**23 11 57.4**	**+1.3**
	SNR=11							
MK31	**Makanchi Array**	**12.96**	**37**	⇑P		**Pn**	**23 13 16.1**	**-1.1**
	0.6nm,0.7s,baz=223,slow=14,SNR=7.4							
MKAR	**Makanchi Array**	**12.96**	**37**	P		**Pn**	**23 13 16.5**	**-0.7**
	0.1nm,0.3s,baz=229,slow=15,SNR=7.7							
KURBB	**Kurchatov Arra**	**14.74**	**19**	P		**P**	**23 13 43.0**	**-1.2**
	0.0nm,0.3s,baz=204,slow=11,SNR=9.4							
AB31	**Akbulak array**	**14.77**	**330**	⇓P		**Pn**	**23 13 39.8**	**-1.0**
	0.3nm,0.4s,baz=148,slow=12,SNR=12							
AB31				⇑S		**Sn**	**23 16 21.5**	**-1.9**
	0.5nm,0.5s,baz=140,slow=25,SNR=4.8							
BVAR	**Borovoye Array**	**16.15**	**359**	P		**P**	**23 14 01.7**	**+1.9**
	0.3nm,0.3s,baz=165,slow=14,SNR=5.9							
AKTO	**Aktyubinsk**	**16.47**	**329**	⇓P		**Pn**	**23 14 00.4**	**-1.8**
	0.3nm,0.8s							
AKTO				⇓S		**Sn**	**23 17 01.1**	**-3.3**
	0.3nm,1.1s							
AKTO	**Aktyubinsk**	**16.47**	**329**	P		**P**	**23 14 03.8**	**+0.4**
	0.4nm,0.3s,baz=135,slow=11,SNR=6.0							
ZALV	**Zalesovo Beam**	**19.55**	**25**	P		**P**	**23 14 36.6**	**-0.4**
	0.5nm,0.3s,baz=216,slow=10,SNR=8.5							
ZALV				pP		**pP**	**23 14 50.2**	**-4.0**
	0.3nm,0.3s,baz=214,slow=9.2,SNR=4.7							
FINES	**FINESS Array B**	**37.19**	**326**	P		**P**	**23 17 21.8**	**+2.9**
	0.6nm,0.7s,baz=124,slow=12,SNR=5.4							
FINES				LR		LR	23 34 23.0	
	comp=Z,29nm,20.7s,baz=270,slow=38							
ARCES	**ARCESS Array B**	**40.81**	**337**	P		**P**	**23 17 51.1**	**+2.2**
	0.9nm,0.8s,baz=116,slow=9.2,SNR=3.3							
PSI	**Prapat**	**42.53**	**136**	LR		LR	23 38 06.1	
	comp=Z,83nm,19.2s,baz=13,slow=40							
NOA	**NORSAR Array B**	**44.10**	**323**	P		**P**	**23 18 17.2**	**+1.4**
	0.5nm,0.5s,baz=97,slow=7.8,SNR=2.9							
TORD	**Torodi Ar. Bea**	**65.77**	**268**	P		**P**	**23 20 52.2**	**-0.4**
	0.3nm,0.5s,baz=45,slow=6.0,SNR=8.8							

IDC 15 23:10:32.7±1.2, 58°.63S×25°.07W, h0km, mb3.7/2, mb1 3.8/2, mb1mx3.6/17, mbtmp3.7/2, Error ellipse: s-maj=91.9km s-min=32.4km az=101.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VNDA	**Vanda**	**44.04**	**182**	P		P	23 18 41.7	+0.3
	0.4nm,0.6s,baz=183,slow=7.5,SNR=3.1							
TORD	**Torodi Ar. Bea**	**74.79**	**27**	P		P	23 22 15.0	+0.5
	0.5nm,0.4s,baz=200,slow=6.2,SNR=9.7							
YKA	**Yellowknife Ar**	**138.84**	**315**	PKP		PKPdf	23 29 58.5	-0.8
	0.2nm,0.4s,baz=129,slow=2.0,SNR=6.9							
SONM	**Songino Array**	**149.67**	**89**	PKPbc		PKPbc	23 30 21.9	-1.5
	0.3nm,0.6s,baz=174,slow=5.8,SNR=3.5							
ILAR	**Eielson Array**	**152.65**	**308**	PKPbc		PKPbc	23 30 29.4	-0.3
	0.7nm,0.7s,baz=140,slow=4.1,SNR=8.4							

IDC 15 23:50:57.3±13.0, 12°.10S×167°.09E, h265km±130km, mb3.6/8, mb1 3.8/8, mb1mx3.5/20, mbtmp3.6/8, Error ellipse: s-maj=67.1km s-min=41.0km az=151.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower**	**21.52**	**246**	P		P	23 55 26.8	+1.0
	3.1nm,0.5s,baz=83,slow=15,SNR=9.0							
STKA	**Stephens Creek**	**30.62**	**226**	P		P	23 56 47.2	0.0
	4.5nm,0.7s,baz=45,slow=11,SNR=7.2							
WRA	**Warramunga Arr**	**32.38**	**252**	P		P	23 57 02.2	-0.5
	1.5nm,0.5s,baz=83,slow=9.2,SNR=5.8							
ASAR	**Alice Springs**	**33.52**	**245**	P		P	23 57 11.8	-0.8
	2.6nm,0.8s,baz=71,slow=9.5,SNR=24							
ASAR				pP		pP	23 58 03.9	-1.2
	0.2nm,0.4s,baz=73,slow=8.8,SNR=4.6							
ILAR	**Eielson Array**	**84.10**	**18**	P		P	00 02 57.8	-0.3
	2.7nm,0.6s,baz=248,slow=5.1,SNR=51							
NVAR	**Mina Array Bea**	**85.70**	**49**	P		P	00 03 07.6	+0.6
	0.8nm,0.7s,baz=249,slow=11,SNR=5.2							
MKAR	**Makanchi Array**	**95.19**	**317**	P		P	00 03 51.4	+0.6
	0.3nm,0.6s,baz=83,slow=6.3,SNR=3.4							
YKA	**Yellowknife Ar**	**95.31**	**27**	P		P	00 03 49.9	-1.0
	0.2nm,0.4s,baz=260,slow=4.8,SNR=5.4							
ARCES	**ARCESS Array B**	**117.68**	**346**	PKP		PKPdf	00 09 11.4	0.0
	0.6nm,0.6s,baz=56,slow=1.3,SNR=8.3							

*IDC **15** 23:59:36.2±1.3, 37°.29N×20°.93E, h0km, mb3.5/8, mb1 3.6/10, mb1mx3.5/30, mbtmp3.5/10, ML3.3/2, MS2.7/1, Ms1 2.7/1, ms1mx2.0/38, Error ellipse: s-maj=27.1km s-min=23.1km az=92.0*
*ISCJB **15** 23:59:38.0±0.6, 37°.23N±0°.02×20°.65E±0°.03, h16km±4km, mb3.5/8, Error ellipse: s-maj=4.7km s-min=3.2km az=138.4*
*ATH **15** 23:59:38.9, 37°.33N×20°.79E, h16km, MD3.7/40, ML3.5*
*THE **15** 23:59:39.8, 37°.31N×20°.85E, h0km±1km, ML3.5/15, Error ellipse: s-maj=2.7km s-min=0.8km az=232.0*
*CSEM **15** 23:59:39.1±0.3, 37°.29N×20°.79E, h2km, ML3.5/15, Error ellipse: s-maj=6.1km s-min=3.0km az=53.0*

ISC 15 23:59:38.9±1.2,**37°31N**±0.02×**20°80E**±0.03,**h10**km±8km, **n154**,σ1s38/215,**mb3.5**/8,**Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.80**	**359**	P	**Pg**	**23 59 54.2**	**-0.2**
KFL				S	**Sb**	**00 00 06.0**	**+0.2**
KFL	**Anninata**	**0.80**	**359**	P	**Pg**	**23 59 54.2**	**-0.2**
KFL				S	**Sb**	**00 00 06.0**	**+0.2**
PYL	**PYLOS**	**0.86**	**118**	P	**Pb**	**23 59 55.4**	**-0.4**
PYL				S	**Sb**	**00 00 08.5**	**+1.2**
PYL	**PYLOS**	**0.86**	**118**	*e*PB	**Pg**	**23 59 55.1**	**-0.3**
PYL				*e*SN	**Sb**	**00 00 08.6**	**+1.2**
PYL	**PYLOS**	**0.86**	**118**	*e*Pb	**Pg**	**23 59 55.1**	**-0.3**
PYL	**PYLOS**	**0.86**	**118**	P	**Pb**	**23 59 55.4**	**-0.4**
PYL				S	**Sb**	**00 00 08.5**	**+1.2**
VLS	**Valsamata**	**0.89**	**349**	P	**Pg**	**23 59 55.8**	**-0.1**
VLS				S	**Sn**	**00 00 09.8**	**-0.4**
VLS	**Valsamata**	**0.89**	**349**	*e*PN	**Pg**	**23 59 55.8**	**-0.1**
VLS	**Valsamata**	**0.89**	**349**	P	**Pg**	**23 59 55.8**	**-0.1**
VLS				S	**Sn**	**00 00 09.8**	**-0.4**
ITM	**Ithomi**	**0.91**	**98**	P	**Pb**	**23 59 56.4**	**-0.3**
ITM				S	**Sb**	**00 00 08.9**	**0.0**
ITM	**Ithomi**	**0.91**	**98**	*e*PN	**Pb**	**23 59 56.3**	**-0.4**
ITM	**Ithomi**	**0.91**	**98**	P	**Pb**	**23 59 56.4**	**-0.3**
ITM				S	**Sb**	**00 00 08.9**	**0.0**
RLS	**Riolos of Patr**	**0.92**	**35**	P	**Pg**	**23 59 56.0**	**-0.5**
RLS				S	**Sb**	**00 00 09.5**	**+0.4**
RLS	**Riolos of Patr**	**0.92**	**35**	*e*PN	**Pg**	**23 59 56.1**	**-0.5**
RLS	**Riolos of Patr**	**0.92**	**35**	P	**Pg**	**23 59 56.0**	**-0.5**
RLS				S	**Sb**	**00 00 09.5**	**+0.4**
VLX	**Vlachokerasia**	**1.26**	**87**	P	**Pn**	**00 00 03.0**	**+0.4**
VLX				S	**Sn**	**00 00 21.2**	**+1.5**
VLX	**Vlachokerasia**	**1.26**	**87**	*e*PN	**Pb**	**00 00 02.7**	**-0.1**
VLX				*e*SN	**Sn**	**00 00 20.9**	**+1.2**
VLX	**Vlachokerasia**	**1.26**	**87**	P	**Pn**	**00 00 03.0**	**+0.4**
VLX				S	**Sn**	**00 00 21.2**	**+1.5**
KLV	**Kalavryta, Ach**	**1.30**	**55**	*e*PN	**Pg**	**00 00 02.6**	**-1.3**
LAKA	**Lakka**	**1.32**	**45**	*e*PN	**Pn**	**00 00 03.4**	**0.0**
DYR	**Agios Nikonas**	**1.34**	**113**	P	**Pn**	**00 00 03.9**	**+0.2**
DYR				S	**Sn**	**00 00 23.1**	**+1.6**
DYR	**Agios Nikonas**	**1.34**	**113**	*e*PN	**Pn**	**00 00 03.9**	**+0.2**
DYR				*e*SN	**Sn**	**00 00 23.1**	**+1.6**
DYR	**Agios Nikonas**	**1.34**	**113**	P	**Pn**	**00 00 03.9**	**+0.2**
DYR				S	**Sn**	**00 00 23.1**	**+1.6**
GUR	**Goura**	**1.38**	**62**	P	**Pn**	**00 00 03.6**	**-0.6**
GUR				S	**Sn**	**00 00 24.8**	**+2.3**
GUR	**Goura**	**1.38**	**62**	*e*PN	**Pn**	**00 00 04.2**	**0.0**
GUR				*e*SN	**Sn**	**00 00 23.4**	**+0.9**
GUR	**Goura**	**1.38**	**62**	P	**Pn**	**00 00 03.6**	**-0.6**
GUR				S	**Sn**	**00 00 24.8**	**+2.3**
EFP	**Efpalio**	**1.42**	**38**	P	**Pn**	**00 00 05.0**	**+0.3**
EFP				S	**Sn**	**00 00 26.0**	**+2.6**
EFP	**Efpalio**	**1.42**	**38**	*e*PN	**Pb**	**00 00 05.4**	**0.0**
EFP				*e*SN	**Sn**	**00 00 25.0**	**+1.6**
EFP	**Efpalio**	**1.42**	**38**	P	**Pn**	**00 00 05.0**	**+0.3**
EFP				S	**Sn**	**00 00 26.0**	**+2.6**
TRIZ	**Trizonia**	**1.46**	**43**	P	**Pn**	**00 00 05.7**	**+0.5**
TRIZ				S	**Sg**	**00 00 26.8**	**+0.9**
TRIZ	**Trizonia**	**1.46**	**43**	*e*PN	**Pb**	**00 00 05.9**	**-0.2**
TRIZ	**Trizonia**	**1.46**	**43**	P	**Pn**	**00 00 05.7**	**+0.5**
TRIZ				S	**Sg**	**00 00 26.8**	**+0.9**
LKD2	**Lefkada island**	**1.48**	**356**	P	**Pn**	**00 00 05.8**	**+0.2**
LKD2				S	**Sg**	**00 00 29.4**	**+2.8**
LKD2	**Lefkada island**	**1.48**	**356**	*e*PN	**Pn**	**00 00 06.2**	**+0.6**
LKD2	**Lefkada island**	**1.48**	**356**	P	**Pn**	**00 00 05.8**	**+0.2**
KALE	**Kalithea**	**1.52**	**44**	*e*PN	**Pb**	**00 00 06.8**	**-0.3**
KALE				*e*SN	**Sg**	**00 00 27.9**	**+0.2**
DSF	**Desfina**	**1.76**	**51**	P	**Pb**	**00 00 11.3**	**+0.1**
DSF				S	**Sg**	**00 00 35.0**	**-0.4**
DSF	**Desfina**	**1.76**	**51**	P	**Pb**	**00 00 11.3**	**+0.1**
DSF				S	**Sg**	**00 00 35.0**	**-0.4**
EVR	**Evrytania**	**1.79**	**26**	P	**Pb**	**00 00 11.6**	**-0.3**
EVR				S	**Sb**	**00 00 34.6**	**+0.2**
EVR	**Evrytania**	**1.79**	**26**	*e*PN	**Pb**	**00 00 11.7**	**-0.2**
EVR	**Evrytania**	**1.79**	**26**	P	**Pb**	**00 00 11.6**	**-0.3**
EVR				S	**Sb**	**00 00 34.6**	**+0.2**
VLI	**Veliai**	**1.81**	**108**	P	**Pb**	**00 00 12.2**	**+0.1**
VLI				S	**Sn**	**00 00 34.0**	**+1.0**
VLI	**Veliai**	**1.81**	**108**	*e*PN	**Pg**	**00 00 12.6**	**-1.0**
VLI				*e*SN	**Sb**	**00 00 35.1**	**+0.3**
VLI	**Veliai**	**1.81**	**108**	P	**Pb**	**00 00 12.2**	**+0.1**
VLI				S	**Sn**	**00 00 34.0**	**+1.0**
LTK	**Loutraki**	**1.86**	**67**	P	**Pn**	**00 00 12.0**	**+1.2**
LTK				S	**Sb**	**00 00 36.7**	**+0.3**
LTK	**Loutraki**	**1.86**	**67**	*e*PN	**Pb**	**00 00 12.2**	**-0.8**
LTK	**Loutraki**	**1.86**	**67**	P	**Pn**	**00 00 12.0**	**+1.2**
LTK				S	**Sb**	**00 00 36.7**	**+0.3**
DID	**Didima**	**1.95**	**83**	P	**Pn**	**00 00 13.2**	**+1.2**
DID				S	**Sb**	**00 00 38.8**	**-0.1**
DID	**Didima**	**1.95**	**83**	*e*PN	**Pb**	**00 00 14.4**	**-0.1**
DID	**Didima**	**1.95**	**83**	P	**Pn**	**00 00 13.2**	**+1.2**
DID				S	**Sb**	**00 00 38.8**	**-0.1**
MAKR	**Makrakomi, Fth**	**2.00**	**31**	P	**Pb**	**00 00 15.8**	**+0.4**
MAKR				S	**Sb**	**00 00 41.2**	**+0.8**
MAKR	**Makrakomi, Fth**	**2.00**	**31**	P	**Pb**	**00 00 15.8**	**+0.4**
MAKR				S	**Sb**	**00 00 41.2**	**+0.8**
KYTH	**Kithira**	**2.07**	**119**	*e*PN	**Pb**	**00 00 16.0**	**-0.5**
AXAR	**Agios Charalam**	**2.07**	**45**	P	**Pb**	**00 00 15.9**	**-0.6**
AXAR	**Agios Charalam**	**2.07**	**45**	P	**Pb**	**00 00 15.9**	**-0.6**
AGG	**Agios Georgios**	**2.10**	**35**	P	**Pb**	**00 00 16.4**	**-0.6**
AGG				S	**Sb**	**00 00 43.2**	**+0.1**
AGG	**Agios Georgios**	**2.10**	**35**	*e*PN	**Pb**	**00 00 16.3**	**-0.7**
AGG	**Agios Georgios**	**2.10**	**35**	P	**Pb**	**00 00 16.4**	**-0.6**
AGG				S	**Sb**	**00 00 43.2**	**+0.1**
NAIG	**Nisos Aigina**	**2.19**	**77**	*e*PB	**Pn**	**00 00 16.2**	**+1.0**
LKR	**Lokris**	**2.20**	**52**	P	**Pn**	**00 00 16.9**	**+1.5**
LKR				S	**Sn**	**00 00 44.5**	**+1.9**
LKR	**Lokris**	**2.20**	**52**	*e*PN	**Pn**	**00 00 16.9**	**+1.5**
LKR				*e*SN	**Sn**	**00 00 44.2**	**+1.6**
LKR	**Lokris**	**2.20**	**52**	P	**Pn**	**00 00 16.9**	**+1.5**
LKR				S	**Sn**	**00 00 44.5**	**+1.9**
ATAL	**Atalanti**	**2.24**	**51**	P	**Pn**	**00 00 17.6**	**+1.7**
ATAL				S	**Sb**	**00 00 46.3**	**-0.8**
ATAL	**Atalanti**	**2.24**	**51**	P	**Pn**	**00 00 17.6**	**+1.7**
ATAL				S	**Sb**	**00 00 46.3**	**-0.8**
IGT	**Igoumenitsa**	**2.25**	**351**	P	**Pn**	**00 00 17.1**	**+1.0**
IGT				S	**Sb**	**00 00 48.0**	**+0.5**
IGT	**Igoumenitsa**	**2.25**	**351**	P	**Pn**	**00 00 17.1**	**+1.0**
IGT				S	**Sb**	**00 00 48.0**	**+0.5**
JAN	**Janina**	**2.35**	**1**	P	**Pb**	**00 00 20.7**	**-0.5**
JAN	**Janina**	**2.35**	**1**	P	**Pb**	**00 00 20.7**	**-0.5**
ATH	**Athens Observa**	**2.41**	**73**	*e*PN	**Pn**	**00 00 20.0**	**+1.7**
ATH				*e*SN	**Sn**	**00 00 49.7**	**+1.9**
THL	**Klokotos Trika**	**2.45**	**23**	P	**Pn**	**00 00 20.8**	**+1.9**
THL	**Klokotos Trika**	**2.45**	**23**	*e*PN	**Pn**	**00 00 20.7**	**+1.9**
THL	**Klokotos Trika**	**2.45**	**23**	P	**Pn**	**00 00 20.8**	**+1.9**
SMIA	**Simia**	**2.47**	**50**	P	**Pn**	**00 00 20.7**	**+1.6**
SMIA	**Simia**	**2.47**	**50**	P	**Pn**	**00 00 20.7**	**+1.6**
ANKY	**Antikythira Is**	**2.48**	**125**	*e*PB	**Pb**	**00 00 21.5**	**-1.9**
KEK	**Kerkira**	**2.53**	**342**	P	**Pn**	**00 00 21.6**	**+1.7**
KEK	**Kerkira**	**2.53**	**342**	*e*PN	**Pn**	**00 00 21.3**	**+1.4**
KEK	**Kerkira**	**2.53**	**342**	P	**Pn**	**00 00 21.6**	**+1.7**
PTL	**Penteli**	**2.54**	**72**	P	**Pn**	**00 00 21.2**	**+1.0**
PTL				S	**Sn**	**00 00 52.6**	**+1.4**
PTL	**Penteli**	**2.54**	**72**	*e*PN	**Pn**	**00 00 21.6**	**+1.4**
PTL	**Penteli**	**2.54**	**72**	P	**Pn**	**00 00 21.2**	**+1.0**
PTL				S	**Sn**	**00 00 52.6**	**+1.4**
MRKA	**Markates**	**2.61**	**57**	P	**Pn**	**00 00 22.4**	**+1.3**
MRKA				S	**Sn**	**00 00 53.9**	**+1.1**
MRKA	**Markates**	**2.61**	**57**	P	**Pn**	**00 00 22.4**	**+1.3**
MRKA				S	**Sn**	**00 00 53.9**	**+1.1**
NEO	**Neokhori**	**2.76**	**43**	*e*PN	**Pn**	**00 00 24.9**	**+1.7**
NEO				*e*SN	**Sn**	**00 00 58.0**	**+1.4**
XOR	**Xorichti**	**2.79**	**42**	P	**Pn**	**00 00 24.3**	**+0.8**
XOR				S	**Sn**	**00 00 59.8**	**+2.6**
XOR	**Xorichti**	**2.79**	**42**	P	**Pn**	**00 00 24.3**	**+0.8**
XOR				S	**Sn**	**00 00 59.8**	**+2.6**
AOS	**Alonnisos**	**3.06**	**52**	P	**Pn**	**00 00 28.2**	**+1.0**
AOS	**Alonnisos**	**3.06**	**52**	*e*PN	**Pn**	**00 00 28.3**	**+1.0**
AOS				*e*SN		23 01 05.4	
AOS	**Alonnisos**	**3.06**	**52**	P	**Pn**	**00 00 28.2**	**+1.0**
LIT	**Litokhoron**	**3.09**	**25**	P	**Pn**	**00 00 29.1**	**+1.4**
LIT	**Litokhoron**	**3.09**	**25**	*e*PN	**Pn**	**00 00 28.9**	**+1.2**
LIT	**Litokhoron**	**3.09**	**25**	P	**Pn**	**00 00 29.1**	**+1.4**
KZN	**Kozani**	**3.09**	**14**	P	**Pn**	**00 00 29.9**	**+2.2**
KZN				S	**Sn**	**00 01 08.4**	**+3.6**
KZN	**Kozani**	**3.09**	**14**	*e*PN	**Pn**	**00 00 29.6**	**+1.9**
KZN				*e*SN		23 01 06.7	
KZN	**Kozani**	**3.09**	**14**	P	**Pn**	**00 00 29.9**	**+2.2**
KZN				S	**Sn**	**00 01 08.4**	**+3.6**
NEST	**Nestorio**	**3.11**	**4**	P	**Pn**	**00 00 30.8**	**+2.8**
NEST	**Nestorio**	**3.11**	**4**	P	**Pn**	**00 00 30.8**	**+2.8**
KARN	**Karanos**	**3.15**	**126**	P	**Pn**	**00 00 31.4**	**+2.8**
KARN	**Karanos**	**3.15**	**126**	*e*PN	**Pn**	**00 00 31.4**	**+2.8**
KARN	**Karanos**	**3.15**	**126**	P	**Pn**	**00 00 31.4**	**+2.8**
VAM	**Vamos**	**3.34**	**124**	P	**Pn**	**00 00 32.9**	**+1.9**
VAM				S	**Sn**	**00 01 13.3**	**+2.6**
VAM	**Vamos**	**3.34**	**124**	*e*PN	**Pn**	**00 00 33.2**	**+2.2**
VAM	**Vamos**	**3.34**	**124**	P	**Pn**	**00 00 32.9**	**+1.9**
VAM				S	**Sn**	**00 01 13.3**	**+2.6**
FNA	**Florina**	**3.50**	**7**	P	**Pn**	**00 00 34.9**	**+1.5**
FNA	**Florina**	**3.50**	**7**	*e*PN	**Pn**	**00 00 34.7**	**+1.3**
FNA				*e*SN		23 01 16.8	
FNA	**Florina**	**3.50**	**7**	P	**Pn**	**00 00 34.9**	**+1.5**
PLG	**Polygyros**	**3.70**	**33**	P	**Pn**	**00 00 36.9**	**+0.9**
PLG	**Polygyros**	**3.70**	**33**	*e*PN	**Pn**	**00 00 37.2**	**+1.2**
PLG	**Polygyros**	**3.70**	**33**	P	**Pn**	**00 00 36.9**	**+0.9**
BIA	**Bitola**	**3.73**	**6**	*i* Pn	**Pn**	**00 00 38.0**	**+1.5**
BIA				*e*Sn	**Sn**	**00 01 22.0**	**+1.5**
APE	**Apeiranthos**	**3.79**	**92**	*e*PN	**Pn**	**00 00 37.5**	**+0.2**
APE	**Apeiranthos**	**3.79**	**92**	P	**Pn**	**00 00 37.1**	**-0.2**
APE	**Apeiranthos**	**3.79**	**92**	P	**Pn**	**00 00 37.1**	**-0.2**
GRG	**Griva**	**3.85**	**18**	P	**Pn**	**00 00 39.1**	**+0.9**
GRG	**Griva**	**3.85**	**18**	*e*PN	**Pn**	**00 00 39.2**	**+1.0**
GRG	**Griva**	**3.85**	**18**	P	**Pn**	**00 00 39.1**	**+0.9**
SOH	**Sokhos**	**4.04**	**29**	*e*PN	**Pn**	**00 00 42.6**	**+1.9**
KNT	**Kendrikon**	**4.18**	**22**	P	**Pn**	**00 00 44.1**	**+1.4**
KNT	**Kendrikon**	**4.18**	**22**	P	**Pn**	**00 00 44.1**	**+1.4**
VAY	**Valandovo**	**4.24**	**18**	*i* Pn	**Pn**	**00 00 43.1**	**-0.3**
VAY				*e*Sn	**Sn**	**00 01 32.4**	**-0.5**
CHOS	**Chios island**	**4.30**	**74**	P	**Pn**	**00 00 45.4**	**+1.1**
CHOS	**Chios island**	**4.30**	**74**	*e*PN	**Pn**	**00 00 45.9**	**+1.6**
CHOS	**Chios island**	**4.30**	**74**	P	**Pn**	**00 00 45.4**	**+1.1**
LIA	**Limnos Island**	**4.30**	**52**	P	**Pn**	**00 00 45.0**	**+0.7**
LIA				S	**Sn**	**00 01 37.2**	**+2.8**
LIA	**Limnos Island**	**4.30**	**52**	*e*PN	**Pn**	**00 00 45.3**	**+1.0**
LIA	**Limnos Island**	**4.30**	**52**	P	**Pn**	**00 00 45.0**	**+0.7**
LIA				S	**Sn**	**00 01 37.2**	**+2.8**
SRS	**Serrai**	**4.38**	**29**	P	**Pn**	**00 00 46.3**	**+0.9**
SRS	**Serrai**	**4.38**	**29**	P	**Pn**	**00 00 46.3**	**+0.9**
NPS	**Neapolis**	**4.39**	**116**	*e*PN	**Pn**	**00 00 46.7**	**+1.1**
SIGR	**SIGRI**	**4.41**	**63**	P	**Pn**	**00 00 48.4**	**+2.6**
SIGR	**SIGRI**	**4.41**	**63**	P	**Pn**	**00 00 48.4**	**+2.6**
NVR	**Nevrokopi**	**4.69**	**30**	*e*PN	**Pn**	**00 00 51.5**	**+1.9**
SKO	**Skopje**	**4.69**	**6**	*e*Pn	Pn	00 00 42.9	-6.7
SKO				*e*Sn	Sn	00 01 32.0	-12
GELI	**Tayfur-Gelibol**	**5.40**	**53**	*e*PN	**Pn**	**00 00 59.9**	**+0.6**
LPK	**Lapseki**	**5.57**	**55**	*e*PN	**Pn**	**00 01 00.7**	**-1.1**
ERIK	**Erikli-Kesan**	**5.58**	**51**	*e*PN	**Pn**	**00 01 03.8**	**+2.0**
KRBG	**Karabiga-Canak**	**5.94**	**57**	*e*PN	**Pn**	**00 01 03.8**	**-2.9**
STON	**Ston**	**6.04**	**338**	*e*Pn	**Pn**	**00 01 07.4**	**-0.8**
STON				S	Sn	00 02 11.2	-6.2
DALY	**Dalyan (Mu˘la**	**6.30**	**92**	*e*PN	**Pn**	00 01 05.3	-6.5
NVLJ	**Novalja**	**8.52**	**330**	*e*Pn	**Pn**	**00 01 42.0**	**-0.2**
NVLJ				S	**Sn**	**00 03 14.4**	**-3.9**
MLR	**Muntele Rosu**	**9.04**	**24**	Pn	**Pn**	**00 01 52.1**	**+2.6**
	0.0nm,0.3s,baz=168,slow=16,SNR=3.0						
BRTR	**Keskin Array B**	**10.35**	**73**	Pn	Pn	00 02 10.9	+3.5
	0.1nm,0.3s,baz=255,slow=12,SNR=2.3						
DAVOX	**Davos/Dischmat**	**12.46**	**323**	LR	LR	00 07 47.8	
	comp=Z,30nm,19.5s,baz=358,slow=39						
GERES	**GERESS Array B**	**12.64**	**338**	Pn	**Pn**	**00 02 39.4**	**+0.8**
	0.1nm,0.3s,baz=155,slow=13,SNR=5.0						
MMAI	**Mount Meron Ar**	**12.69**	**105**	Pn	Pn	00 02 35.6	-3.9
	0.2nm,0.3s,baz=305,slow=13,SNR=3.1						
HFS	**Hagfors**	**23.29**	**351**	P	**P**	**00 04 45.1**	**-1.4**
	1.0nm,0.5s,baz=167,slow=13,SNR=4.7						
EKA	**Eskdalemuir Ar**	**24.27**	**326**	P	**P**	**00 04 55.1**	**-0.8**
	6.9nm,1.1s,baz=116,slow=13,SNR=3.7						
FINES	**FINESS Array B**	**24.39**	**6**	P	**P**	**00 04 56.0**	**-0.9**
	0.9nm,0.8s,baz=178,slow=9.5,SNR=4.7						
NB2	**NORSAR Subarra**	**24.51**	**349**	P	**P**	**00 04 56.2**	**-2.0**
	comp=Z,1.0nm,0.8s,baz=161,slow=9.3						
NOA	**NORSAR Array B**	**24.51**	**349**	P	**P**	**00 04 57.2**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=162,slow=8.8,SNR=3.1						
TORD	**Torodi Ar. Bea**	**29.50**	**220**	P	**P**	**00 05 42.9**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=33,slow=9.5,SNR=7.9						
ARCES	**ARCESS Array B**	**32.39**	**3**	P	**P**	**00 06 08.7**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=198,slow=11,SNR=3.3						
MKAR	**Makanchi Array**	**45.58**	**58**	P	**P**	**00 07 57.5**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=281,slow=8.5,SNR=3.3						
ZALV	**Zalesovo Beam**	**46.11**	**48**	P	**P**	**00 08 01.0**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=292,slow=7.6,SNR=2.5						

NNC ***16*** *00:28:47.2±0.3,42°.73N×70°.51E,h17km±2km, mb3.7, mpv3.7, Error ellipse: s-maj=3.0km s-min=2.7km az=47.0*
ISCJB ***16*** *00:28:48.9±0.7,42°.89N±0°.05×70°.44E±0°.06,h45km±3km, Error ellipse: s-maj=9.8km s-min=5.5km az=35.3*

ISC 16 00:28:49.0±1.6,**42°75N**±0°08×**70°46E**±0°07,**h25**km±9km, **n31**,σ0s89/47,**29C-19D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK07	**Karatay Array**	**0.34**	**6**	⇓P	**Pb**	**00 28 55.9**	**-0.7**
KK07				⇑S	**Sb**	**00 29 02.3**	**+0.4**
KK06	**Karatay Array**	**0.35**	**8**	⇓P	**Pb**	**00 28 56.1**	**-0.7**
KK06				⇓S	**Sb**	**00 29 02.5**	**+0.4**
KK03	**Karatay Array**	**0.35**	**5**	⇓P	**Pb**	**00 28 56.2**	**-0.6**
KK03				⇑S	**Sb**	**00 29 02.7**	**+0.5**
KK02	**Karatay Array**	**0.35**	**7**	⇓P	**Pb**	**00 28 56.2**	**-0.7**
KK02				⇑S	**Sb**	**00 29 02.7**	**+0.4**
KK08	**Karatay Array**	**0.35**	**4**	⇓P	**Pb**	**00 28 56.3**	**-0.6**
KK08				⇑S	**Sb**	**00 29 02.5**	**+0.2**
KK31	**Karatay Array**	**0.35**	**7**	⇓P	**Pb**	**00 28 56.3**	**-0.6**
	44nm,0.2s,baz=4.3,slow=3.5,SNR=6970						
KK31				⇑S	**Sb**	**00 29 02.9**	**+0.6**
	176nm,0.3s,baz=179,slow=31,SNR=11						
KK01	**Karatay Array**	**0.36**	**6**	⇓P	**Pb**	**00 28 56.3**	**-0.7**
KK01				⇑S	**Sb**	**00 29 02.7**	**+0.4**
KK04	**Karatay Array**	**0.36**	**6**	⇓P	**Pb**	**00 28 56.4**	**-0.6**
KK04				⇑S	**Sb**	**00 29 02.8**	**+0.3**
KK05	**Karatay Array**	**0.37**	**8**	⇓P	**Pb**	**00 28 56.5**	**-0.6**
KK05				⇑S	**Sb**	**00 29 03.2**	**+0.6**
KK09	**Karatay Array**	**0.37**	**5**	⇓P	**Pb**	**00 28 56.6**	**-0.6**
KK09				⇑S	**Sb**	**00 29 03.1**	**+0.3**
EKS2	**Erkin-Say**	**2.45**	**91**	P	**Pn**	**00 29 28.1**	**+0.6**
	SNR=117						
AML	**Almayashu**	**2.48**	**103**	P	**Pn**	**00 29 29.3**	**+1.3**
	SNR=163						
AAK	**Ala-Archa**	**2.98**	**91**	P	**Pn**	**00 29 35.7**	**+0.9**
	SNR=18						
USP	**Ospenovka**	**3.01**	**79**	P	**Pn**	**00 29 35.4**	**+0.3**
	SNR=15						
UCH	**Uchtor**	**3.05**	**99**	P	**Pb**	**00 29 40.3**	**-2.5**
	SNR=16						
CHMS	**Chumysh**	**3.17**	**84**	P	**Pn**	**00 29 38.1**	**+0.9**
	SNR=6.3						
KBK	**Karagaybulak**	**3.31**	**90**	P	**Pn**	**00 29 39.9**	**+0.6**
	SNR=40						
KZA	**Kyzart**	**3.61**	**99**	P	**Pn**	**00 29 46.1**	**+2.5**
	SNR=7.7						
TKM2	**Tokmak 2**	**3.79**	**86**	⇑Pn	**Pn**	**00 29 46.0**	**+0.1**
	5.9nm,0.5s						
TKM2				⇑Pg	**Pb**	**00 29 54.3**	**-0.9**
	39nm,0.5s						
TKM2				⇑Lg	Lg	00 30 45.1	
	70nm,0.5s						
TKM2	**Tokmak 2**	**3.79**	**86**	P	**Pn**	**00 29 46.4**	**+0.5**
	SNR=19						
ULHL	**Ulahol**	**4.31**	**95**	P	**Pb**	**00 30 03.2**	**-0.9**
	SNR=7.2						
KNDC	**Almaty**	**4.80**	**82**	⇓Pg	**Pb**	**00 30 13.3**	**+0.9**
KNDC				⇑Lg	Lg	00 31 19.0	
MK31	**Makanchi Array**	**9.34**	**60**	⇑Pn	**Pn**	**00 31 01.6**	**-0.3**
	1.4nm,0.4s,baz=242,slow=9.7,SNR=51						
MK31				⇑Sn	**Sn**	**00 32 45.9**	**-0.1**
	1.5nm,0.5s,baz=241,slow=21,SNR=4.2						
MK31				⇓Lg	Lg	00 33 41.4	
	8.1nm,0.6s,baz=251,slow=27,SNR=4.4						
KUR16	**Kurchatov Arra**	**9.62**	**32**	⇑Pn	**Pn**	**00 31 06.0**	**+0.4**
KUR16				⇓Sn	**Sn**	**00 32 54.0**	**+1.2**
	0.1nm,0.6s						
KUR16				⇓Lg	Lg	00 33 54.0	
	1.0nm,0.7s						
KURK	**Kurchatov**	**9.73**	**32**	⇑Pn	**Pn**	**00 31 06.6**	**-0.7**
	2.3nm,1.2s						
KURK				⇑Sn	**Sn**	**00 32 53.5**	**-2.1**
	4.9nm,1.1s						
KURK				⇑Lg	Lg	00 33 55.7	
	45nm,1.0s						
AB31	**Akbulak array**	**9.78**	**315**	⇓Pn	**Pn**	**00 31 08.5**	**+0.5**
	0.8nm,0.4s,baz=117,slow=13,SNR=26						
AB31				⇑Sn	**Sn**	**00 32 57.2**	**+0.4**
	1.4nm,0.5s,baz=132,slow=14,SNR=4.0						
AB31				⇑Lg	Lg	00 33 59.5	
	3.0nm,0.7s,baz=119,slow=24,SNR=4.2						
VOSK	**Vostochnaya**	**9.98**	**2**	⇑Pn	**Pn**	**00 31 11.1**	**+0.4**
	2.1nm,1.1s						
VOSK				⇓Sn	**Sn**	**00 33 02.0**	**+0.2**
	2.0nm,0.5s						
VOSK				⇓Lg	Lg	00 34 04.7	
	14nm,0.9s						
ZRNK	**Zerenda**	**10.25**	**355**	⇑Pn	**Pn**	**00 31 14.2**	**-0.1**
	1.1nm,0.6s						
ZRNK				⇑Sn	**Sn**	**00 33 08.1**	**-0.3**
	1.2nm,0.3s						
ZRNK				⇑Lg	Lg	00 34 12.6	
	12nm,1.1s						
BVA0	**Borovoye Array**	**10.28**	**360**	⇓Lg	Lg	00 34 13.9	
	0.8nm,0.7s,baz=239,slow=35,SNR=5.4						
BRVK	**Borovoye**	**10.31**	**359**	⇑Lg	Lg	00 34 15.8	
	16nm,1.1s						
AKTO	**Aktyubinsk**	**11.49**	**316**	⇑Pn	**Pn**	**00 31 30.0**	**-1.3**
	0.3nm,0.8s						
AKTO				⇑Sn	**Sn**	**00 33 38.7**	**-0.1**
	0.5nm,0.8s						
AKTO				⇑Lg	Lg	00 34 52.7	
	1.1nm,0.9s						

IDC ***16*** *00:36:10.6±0.6,18°.94N×121°.33E,h0km,mb3.9/20, mb1 4.1/22,mb1mx4.0/29,mbtmp3.9/22,ML4.3/2,MS3.6/8, Ms1 3.6/8,ms1mx3.3/64,Error ellipse: s-maj=20.6km s-min=14.0km az=68.0*
BJI ***16*** *00:36:15.4,19°.26N×120°.89E,h6km,mB4.5/14,mb4.6/18, ML4.1/3,Ms4.0/13,Ms7 3.9/12*
NEIC ***16*** *00:36:15.4±2.0,18°.96N×121°.13E,h26km±14km,mb4.4/14, Error ellipse: s-maj=8.1km s-min=6.1km az=111.0*
MAN ***16*** *00:36:18,19°.01N×121°.15E,h14km,mb5.1,ML4.0,MS4.2*

ISC 16 00:36:15.4±0.5,**19°10N**±0°03×**121°25E**±0°06,**h22**km±3km, **n97**,σ1s78/120,**mb4.2**/38,**MS3.5**/8,**1C,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**1.23**	**180**	*e*P	**Pb**	**00 36 38.7**	**+0.7**
APYP				*e*S	**Sn**	**00 36 52.7**	**-0.5**
CVP	**Callao Caves**	**1.49**	**159**	⇑*i*P	**Pb**	**00 36 43.6**	**+1.2**

comp=Z,230nm,4.2s
HHC LR LR
comp=N,500nm,19.0s
HHC LR LR
comp=E,480nm,17.8s
HHC LR LR
comp=Z,470nm,17.8s
GUMO Guam 23.30 100 *eP* P 00 41 27.5 +5.6
comp=Z,232nm,1.2s
GUMO Guam 23.30 100 LR LR 00 48 28.7
comp=Z,174nm,20.6s,baz=130,slow=32
KAPI Kappang 24.01 184 *eP* **P 00 41 29.0 +0.3**
comp=Z,12nm,1.0s
KAPI Kappang 24.01 184 LR LR 00 51 42.4
comp=Z,92nm,21.1s,baz=6.1,slow=39
KULM Kulim 24.33 238 *eP* **P 00 41 30.7 -1.0**
comp=Z,18nm,1.1s
IPM Ipoh 24.52 236 *eP* **P 00 41 32.1 -1.3**
comp=Z,75nm,2.0s
PSI Prapat 27.19 236 LR LR 00 51 58.0
comp=Z,106nm,19.6s,baz=209,slow=35
ULN Ulaanbaatar 30.93 341 *eP* **P 00 42 32.5 +1.8**
comp=Z,3.8nm,0.9s
SONM Songino Array 31.11 340 P **P 00 42 32.8 +0.5**
SONM Songino Array 31.11 340 P **P 00 42 32.8 +0.5**
comp=Z,0.7nm,0.7s,baz=145,slow=5.3,SNR=3.6
SONM LR LR 00 56 09.2
comp=Z,150nm,18.2s,baz=95,slow=38
WRAB Tennant Creek 40.86 161 *eP* P 00 43 52.5 -3.3
WRA Warramunga Arr 40.87 161 P P 00 43 52.3 -3.5
WRA PcP **PcP 00 45 55.8 -0.7**
WRA Warramunga Arr 40.87 161 P P 00 43 52.3 -3.5
comp=Z,2.8nm,0.6s,baz=343,slow=9.1,SNR=6.9
WRA PcP **PcP 00 45 55.8 -0.7**
comp=Z,0.7nm,0.4s,baz=344,slow=3.3,SNR=7.1
MK31 Makanchi Array 42.14 320 *eP* **P 00 44 06.3 +0.3**
MKAR Makanchi Array 42.14 320 *eP* **P 00 44 06.9 +0.8**
MKAR Makanchi Array 42.14 320 *eP* **P 00 44 06.6 +0.5**
comp=Z,1.0nm,0.5s,baz=112,slow=9.5,SNR=15
KSH Kashi 43.88 308 P **P 00 44 23.3 +2.9**
KSH *ePP* **pP 00 44 28.0 +0.7**
KSH *eS*P **sP 00 44 30.3 +0.3**
KSH *ePP* **PcP 00 46 06.9 +0.5**
KSH *ePcP* PP 00 46 08.5 +5.8
KSH *eScP* **ScP 00 49 59.4 +2.4**
KSH *ePcS* **PcS 00 50 02.8 +3.3**
KSH *eS* **S 00 50 54.4 +3.9**
KSH *eS*S **sS 00 51 01.4 -0.5**
KSH *eSS* **SS 00 54 03.3 -3.8**
KSH *eScS* **ScS 00 54 19.1 +0.6**
KSH pmax pmax
comp=Z,11nm,0.8s
KSH pmax pmax
comp=Z,140nm,4.1s
KSH LR LR
comp=N,170nm,3.8s
KSH LR LR
comp=E,150nm,5.1s
KSH LR LR
comp=Z,160nm,5.8s
PETK Petropavlovsk- 44.10 31 P **P 00 44 21.6 -0.2**
PETK Petropavlovsk- 44.10 31 P **P 00 44 21.6 -0.2**
comp=Z,0.9nm,0.3s,baz=197,slow=4.5,SNR=5.8
AS31 Alice Springs 44.26 163 *eP* **P 00 44 22.6 -0.8**
ASAR Alice Springs 44.26 163 P **P 00 44 20.9 -2.6**
ASAR Alice Springs 44.26 163 P **P 00 44 20.9 -2.6**
comp=Z,1.6nm,0.4s,baz=344,slow=6.6,SNR=20
ZAA0 Zalesovo Array 44.60 330 *eP* **P 00 44 25.1 -0.6**
ZALV Zalesovo Beam 44.60 330 P **P 00 44 25.7 0.0**
ZALV Zalesovo Beam 44.60 330 P **P 00 44 25.7 0.0**
comp=Z,1.5nm,0.8s,baz=108,slow=8.0,SNR=6.4
TKM2 Tokmak 2 45.07 312 *eP* **P 00 44 30.7 +0.7**
comp=Z,29nm,2.5s
KURK Kurchatov 46.10 323 *eP* **P 00 44 37.7 0.0**
comp=Z,3.4nm,0.8s
KURBB Kurchatov Arra 46.11 323 P **P 00 44 37.9 +0.1**
comp=Z,1.8nm,0.7s,baz=122,slow=7.9,SNR=25
EKS2 Erkin-Say 46.28 311 *eP* **P 00 44 40.0 +0.5**
comp=Z,9.4nm,1.8s
KBL Kabul 48.55 300 *eP* **P 00 44 57.2 -0.1**
comp=Z,15nm,1.5s
KKAR Karatay Array 48.72 311 *eP* **P 00 44 58.5 +0.3**
BVAR Borovoye Array 51.70 323 P **P 00 45 21.1 +0.4**
BVAR PcP **PcP 00 46 33.0 -0.9**
BVAR Borovoye Array 51.70 323 P **P 00 45 21.1 +0.4**
comp=Z,0.8nm,0.6s,baz=116,slow=6.8,SNR=4.2
BVAR PcP **PcP 00 46 33.0 -0.9**
comp=Z,0.5nm,0.5s,baz=101,slow=6.0,SNR=2.5
NWAO Narrogin (SRO) 51.88 184 *eP* **P 00 45 20.8 -1.4**
STKA Stephens Creek 54.31 159 *eP* **P 00 45 38.7 -1.4**
STKA Stephens Creek 54.31 159 P **P 00 45 37.7 -2.4**
comp=Z,3.3nm,0.9s,baz=337,slow=13,SNR=3.2
ABKAR Akbulak array 57.10 317 *eP* **P 00 46 00.0 0.0**
AKTO Aktyubinsk 58.51 318 P **P 00 46 09.9 0.0**
AKTO Aktyubinsk 58.51 318 P **P 00 46 09.9 0.0**
comp=Z,0.6nm,0.6s,baz=110,slow=4.0,SNR=5.9
KBZ Khabaz 68.75 310 P **P 00 47 17.2 -0.4**
KBZ Khabaz 68.75 310 P **P 00 47 17.2 -0.4**
comp=Z,1.1nm,0.8s,baz=62,slow=7.8,SNR=3.8
JOF Joensuu 73.16 331 *ep* **P 00 47 43.4 -0.6**
comp=Z,0.9nm,0.5s
ILAR Eielson Array 73.70 27 P **P 00 47 45.5 -1.7**
ILAR Eielson Array 73.70 27 P **P 00 47 45.5 -1.7**
comp=Z,0.3nm,0.5s,baz=269,slow=4.2,SNR=4.6
ARCES ARCESS Array B 74.27 339 P **P 00 47 50.0 -0.4**
ARCES ARCESS Array B 74.27 339 P **P 00 47 50.0 -0.4**
comp=Z,1.0nm,0.8s,baz=82,slow=9.1,SNR=8.9
KAF Kangasniemi 75.60 331 *ep* pP 00 48 11.9 +6.4
comp=Z,1.7nm,0.8s
FINES FINESS Array B 75.86 330 P **P 00 47 59.0 -0.7**
FINES FINESS Array B 75.86 330 P **P 00 47 59.0 -0.7**
comp=Z,0.5nm,0.6s,baz=85,slow=6.7,SNR=4.9
BRTR Keskin Array B 76.27 308 P **P 00 48 02.5 -0.2**
BRTR Keskin Array B 76.27 308 P **P 00 48 02.4 -0.2**
comp=Z,0.3nm,0.6s,baz=132,slow=4.1,SNR=3.1
NOA NORSAR Array B 82.74 333 P **P 00 48 36.4 -0.9**
NOA NORSAR Array B 82.74 333 P **P 00 48 36.4 -0.9**
comp=Z,0.4nm,0.7s,baz=64,slow=5.4,SNR=2.6
GERES GERESS Array B 86.80 321 P **P 00 48 57.6 -0.6**
GERES GERESS Array B 86.80 321 P **P 00 48 57.6 -0.6**
comp=Z,0.3nm,0.8s,baz=30,slow=10,SNR=2.6
YKW3 Yellowknife Ar 87.56 23 *eP* **P 00 49 01.4 0.0**
comp=Z,0.1nm,1.2s
YKA Yellowknife Ar 87.61 23 P **P 00 49 01.4 -0.2**
YKA Yellowknife Ar 87.61 23 P **P 00 49 01.4 -0.2**
comp=Z,1.5nm,0.5s,baz=309,slow=4.6,SNR=32
TXAR Lajitas Array 115.22 43 PKP **PKPdf 00 54 55.1 -0.6**
TXAR Lajitas Array 115.22 43 PKP **PKPdf 00 54 55.1 -0.6**
comp=Z,0.4nm,0.5s,baz=326,slow=2.6,SNR=3.3

PDG ***16*** *00:53:44.6,31.˚50S×178.˚80W,h10km*
BJI ***16*** *00:53:45.1,30.˚98S×178.˚19W,h9km,mB6.7/53,mb6.1/52, Ms6.3/71,Ms7.6.1/65*
SZGRF ***16*** *00:53:46.0,32.˚71S×178.˚23W,h33km,mb6.8, South of Kermadec Islands*
AUST ***16*** *00:53:50.6±0.8,31.˚45S×178.˚28W,h31km,Error ellipse: s-maj=0.9km s-min=0.6km az=311.0*
ISCJB ***16*** *00:53:50.3±0.1,31.˚59S±0.˚02×178.˚74W±0.˚03,h43km, mb6.0/218,MS6.2/101, Error ellipse: s-maj=3.9km s-min=2.2km az=34.3*
MOS ***16*** *00:53:50.1±0.9,31.˚36S×178.˚63W,h33km,mb6.3/72, MS6.3/33,Error ellipse: s-maj=9.2km s-min=6.9km az=67.7*
NEIC ***16*** *00:53:51.2±0.1,31.˚55S×178.˚83W,h43km,mb6.1/160, ME6.0,MW6.3,MWb6.5,MW6.6(USGS),Error ellipse: s-maj=4.3km s-min=3.3km az=134.0 Broadband fault plane solution: P waves. NP1:φs35.00000°,δ55.00000°, λ100.00000°. NP2:φs198.00000°,δ36.00000°,λ76.00000°. Principal axes: T Plg77.0000°, Azm339.0000°; N Plg0.0000°, Azm0.0000°; P Plg9.0000°, Azm118.0000°; Moment Tensor Solution. s98 Moment tensor: Scale 10¹⁸ Nm; Mrr3.38; Mθθ-1.95; Mφφ-1.43; Mrθ0.68; Mθφ0.05; Mφr2.58; Best double couple: Mo4.00000×10¹⁸ NP1: φs19.00000°,δ69.00000°,λ87.00000°. NP2:φs207.00000°, δ21.00000°,λ98.00000°. Principal axes: T 4.5600, Plg66.0000°, Azm283.0000°; N -1.9300, Plg2.0000°, Azm20.0000°; P -2.6300, Plg23.0000°, Azm111.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt at Gisborne, Rotorua and Wellington, New Zealand.

NEIC ***16*** *00:53:52.0±0.0,31.˚52S×178.˚79W,h50km*
IDC ***16*** *00:53:53.3±1.0,31.˚40S×178.˚57W,h55km±8km,mb5.7/37, mb1 5.6/39,mb1mx5.6/39,mbtmp5.6/39,MS6.3/47, Ms1 6.3/47,ms1mx6.2/51,Error ellipse: s-maj=11.0km s-min=9.6km az=53.0*
DJA ***16*** *00:53:55.6±2.2,31˚S±.7˚×17˚8W±1˚1,h107km±20km, M6.5/23,mb6.0/23,mB6.6/23,Mw(mB)6.5/23,Mwp6.5/11*
GCMT ***16*** *00:53:57.7±0.1,31.˚56S×178.˚12W,h48km,MW6.5, Moment Tensor Solution. s123,c313; s99,c215; Moment tensor: Scale 1018Nm; Mrr6.10±.04; Mθθ0.20±.03; Mφφ-6.31±.03; Mrθ0.53±.03; Mrφ-1.99±.02; Mθφ3.08±.03; Best double couple: Mo7.20000×1018 NP1:φs199.00000°, δ32.00000°,λ95.00000°. NP2:φs13.00000°,δ58.00000°, λ87.00000°. Principal axes: T 6.8200, Plg77.0000°, Azm272.0000°; N 0.7500, Plg3.0000°, Azm15.0000°; P -7.5800, Plg13.0000°, Azm105.0000°; Data Used: II IU CN IC G. Mantle waves from 107 sta. Surface waves: sta=118, comp=278, per= 50.*
NEIC ***16*** *00:54:11.1±0.0,31.˚34S×178.˚04W,h49km,Moment Tensor Solution. s141 Moment tensor: Scale 1018Nm; Mrr7.61; Mθθ-0.89; Mφφ-6.72; Mrθ0.24; Mθφ-2.76; Mrφ3.17; Best double couple: Mo8.30000×1018 NP1:φs15.00000°, δ56.00000°,λ82.00000°. NP2:φs208.00000°,δ35.00000°, λ101.00000°. Principal axes: T 8.2900, Plg77.0000°, Azm259.0000°; N 0.1000, Plg6.0000°, Azm19.0000°; P -8.4000, Plg10.0000°, Azm110.0000°;*
ISC 16 00:53:50.1±0.4,31.˚45S±0.˚03×178.˚56W±0.˚03,h33km±2km, h32km:pP-P,n2161,σ1.944/2310,mb6.1/198,MS6.3/101, 495C-225D,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.26**	**14**	*e*Pn		**Pn**	**00 54 26.5**	**+1.4**
RAO				*e*Sn		**Sn**	**00 54 54.4**	**+2.5**
RAO	**Raoul Island**	**2.26**	**14**	P		**Pn**	**00 54 26.6**	**+1.4**
	3μm,0.3s,baz=154,slow=3.0,SNR=84							
RAO				S		**Sn**	**00 54 51.5**	**-0.4**
	14μm,0.3s,baz=72,slow=20,SNR=9.5							
MXZ	**Matakaoa Point**	**6.62**	**202**	PN		**Pn**	**00 55 23.1**	**-2.1**
MXZ				SN		**Sn**	**00 56 39.3**	**-0.2**
WIZ	**White Island**	**7.01**	**209**	*e*PN		**Pn**	**00 55 30.7**	**+0.4**
WIZ				SN		**Sn**	**00 56 48.0**	**-0.8**
KUZ	**Kuaotunu**	**7.10**	**220**	*e*PN		Pn	00 55 35.4	+3.7
PUZ	**Puketiti**	**7.11**	**201**	SN		**Sn**	**00 56 50.3**	**-1.1**
MYRZ	**Mayor Island**	**7.23**	**215**	PN		Pn	00 55 38.5	+5.0
WCZ	**Waipu Caves**	**7.42**	**231**	PN		Pn	00 55 42.1	+6.1
CNGZ	**Carnagh Statio**	**7.50**	**200**	*e*PN		**Pn**	**00 55 35.2**	**-2.0**
OPRZ	**Ohinepanea**	**7.54**	**211**	PN		**Pn**	**00 55 38.1**	**+0.3**
OUZ	**Omahuta**	**7.56**	**238**	*e*Pn		Pn	00 55 44.1	+6.0
	22μm,0.8s							
OUZ	**Omahuta**	**7.56**	**238**	PN		Pn	00 55 45.3	+7.3
TGRZ	**Tauranga**	**7.58**	**213**	PN		**Pn**	**00 55 39.7**	**+1.4**
MWZ	**Matawai**	**7.58**	**204**	PN		**Pn**	**00 55 36.1**	**-2.3**
MARZ	**Manawahe**	**7.61**	**210**	*e*PN		**Pn**	**00 55 36.7**	**-2.0**
MKAZ	**Moumakai**	**7.67**	**221**	PN		Pn	00 55 44.3	+4.8
URZ	**Urewera**	**7.67**	**206**	*e*Pn		**Pn**	**00 55 37.7**	**-1.8**
URZ				*e*Sn		**Sn**	**00 57 03.4**	**-1.8**
URZ	**Urewera**	**7.67**	**206**	PN		**Pn**	**00 55 36.8**	**-2.7**
URZ				SN		**Sn**	**00 57 05.0**	**-0.2**
URZ	**Urewera**	**7.67**	**206**	P		**Pn**	**00 55 37.4**	**-2.1**
	51nm,0.3s,baz=33,slow=4.7,SNR=119							
URZ				S		**Sn**	**00 57 05.1**	**-0.2**
	486nm,0.3s,baz=168,slow=11,SNR=13							
EDRZ	**Edgecumbe**	**7.69**	**209**	PN		**Pn**	**00 55 40.7**	**+1.0**
KARZ	**Kaharoa**	**7.83**	**212**	*e*PN		**Pn**	**00 55 42.5**	**+0.9**
OMRZ	**Omania**	**7.84**	**211**	*e*PN		**Pn**	**00 55 43.0**	**+1.1**
TARZ	**Mount Tarawera**	**7.89**	**210**	PN		**Pn**	**00 55 43.2**	**+0.6**
TOZ	**Tahuroa Road**	**7.95**	**216**	PN		Pn	00 55 46.8	+3.5
HLRZ	**Highlands Stat**	**7.97**	**210**	*e*PN		**Pn**	**00 55 44.0**	**+0.3**
RRRZ	**Republican Roa**	**7.98**	**209**	*e*PN		**Pn**	**00 55 43.3**	**-0.5**
PRGZ	**Paritu Road**	**8.01**	**200**	*e*PN		Pn	00 55 40.7	-3.4
KNZ	**Kokohu**	**8.16**	**201**	*e*PN		Pn	00 55 41.8	-4.3
PRRZ	**Plateau Road**	**8.16**	**209**	*e*PN		**Pn**	**00 55 45.7**	**-0.6**
MHGZ	**Mahia Peninsul**	**8.21**	**200**	*e*PN		Pn	00 55 43.1	-3.8
ALRZ	**Allen Road**	**8.24**	**209**	*e*PN		**Pn**	**00 55 45.9**	**-1.4**
RAHZ	**Arahi**	**8.26**	**204**	*e*PN		**Pn**	**00 55 44.9**	**-2.7**
NMHZ	**Naumai**	**8.52**	**205**	*e*PN		Pn	00 55 47.9	-3.3
HATZ	**Hinemaiaia**	**8.62**	**209**	*e*PN		**Pn**	**00 55 52.1**	**-0.5**
WATZ	**Wairara**	**8.62**	**211**	*e*PN		**Pn**	**00 55 53.1**	**+0.6**
RITZ	**Rihia Road**	**8.79**	**210**	*e*PN		**Pn**	**00 55 55.1**	**+0.2**
KATZ	**Kakaramea**	**8.86**	**210**	*e*PN		**Pn**	**00 55 56.5**	**+0.6**
MCHZ	**McNeill Hill**	**8.87**	**205**	*e*PN		**Pn**	**00 55 53.6**	**-2.3**
HIZ	**Hauiti**	**8.88**	**216**	*e*PN		**Pn**	**00 55 58.3**	**+2.2**
CKHZ	**Cape Kidnapper**	**8.93**	**202**	*e*PN		Pn	00 55 52.8	-4.0
KRVZ	**Karewarewa**	**8.98**	**210**	*e*PN		**Pn**	**00 55 58.2**	**+0.6**
WTVZ	**West Tongariro**	**9.02**	**210**	*e*PN		**Pn**	**00 55 58.1**	**0.0**
TWVZ	**Taurewa**	**9.05**	**211**	*e*PN		**Pn**	**00 55 59.2**	**+0.7**
KAHZ	**Kahuranaki**	**9.12**	**203**	*e*PN		Pn	00 55 54.6	-4.8
BHHZ	**Black Hill Sta**	**9.14**	**207**	*e*PN		Pn	00 55 55.8	-3.9
FWVZ	**Far West T-bar**	**9.15**	**210**	*e*PN		**Pn**	**00 55 58.6**	**-1.4**
WHVZ	**Whangaehu Hut**	**9.16**	**210**	*e*PN		**Pn**	**00 56 00.3**	**+0.2**
TRVZ	**Turoa**	**9.19**	**210**	PN		**Pn**	**00 56 00.2**	**-0.3**
MOVZ	**Moawhango**	**9.20**	**209**	*e*PN		Pn	00 55 57.0	-3.5
PKVZ	**Pokaka**	**9.27**	**211**	*e*PN		**Pn**	**00 56 01.2**	**-0.3**
PXZ	**Pawanui**	**9.34**	**202**	*e*PN		Pn	00 55 58.6	-5.7
PNHZ	**Pukenui**	**9.46**	**205**	*e*PN		Pn	00 55 58.7	-5.3
WPHZ	**Waipukurau**	**9.51**	**204**	PN		Pn	00 55 59.6	-5.0
PRHZ	**Porangahau**	**9.62**	**203**	*e*PN		Pn	00 56 00.9	-5.4
WAZ	**Wanganui**	**9.81**	**211**	*e*PN		**Pn**	**00 56 06.9**	**-2.0**
DVHZ	**Dannevirke**	**9.81**	**204**	*e*PN		**Pn**	**00 56 06.2**	**-2.7**
ANWZ	**Angora Road**	**9.85**	**203**	*e*PN		Pn	00 56 04.1	-5.3
POWZ	**Post Office Ro**	**10.04**	**206**	*e*PN		Pn	00 56 07.5	-4.5
PRWZ	**Pori Road**	**10.11**	**204**	PN		Pn	00 56 07.9	-5.0
BFZ	**Birch Farm**	**10.12**	**203**	*e*PN		Pn	00 56 06.8	-6.3
MRZ	**Mangatainoka R**	**10.34**	**206**	*e*PN		Pn	00 56 10.3	-5.9
HOWZ	**Holdsworth Sta**	**10.57**	**205**	*e*PN		Pn	00 56 12.7	-6.6
TMWZ	**Te Maipa**	**10.63**	**203**	*e*PN		Pn	00 56 13.5	-6.5
OGWZ	**Otaki Gorge**	**10.63**	**207**	*e*PN		Pn	00 56 14.0	-6.1
KIW	**Kapiti Island**	**10.77**	**207**	*e*PN		Pn	00 56 15.7	-6.3
CAW	**Cannon Point**	**10.92**	**206**	*e*PN		Pn	00 56 18.0	-6.0
TRWZ	**Traveller**	**10.95**	**203**	*e*PN		Pn	00 56 18.5	-6.0
PAWZ	**Paruwai Farm**	**11.03**	**204**	*e*PN		Pn	00 56 21.2	-4.4
MSWZ	**Moikau Station**	**11.12**	**205**	PN		Pn	00 56 20.8	-6.0
DUWZ	**D'Urville Isla**	**11.13**	**211**	*e*PN		Pn	00 56 22.2	-4.8
SNZO	**South Karori**	**11.23**	**207**	*e*Pn		Pn	00 56 24.0	-4.3
SNZO				*e*Sn		Sn	00 58 24.9	-7.7
BHW	**Baring Head**	**11.26**	**206**	*e*PN		Pn	00 56 23.6	-4.9
PLWZ	**Palliser**	**11.26**	**204**	PN		Pn	00 56 21.9	-6.8
TCW	**Tory Channel**	**11.32**	**209**	*e*PN		Pn	00 56 22.5	-7.0
TUWZ	**Tuamarina**	**11.64**	**209**	*e*PN		Pn	00 56 27.5	-6.4
NNZ	**Nelson**	**11.71**	**211**	*e*PN		Pn	00 56 28.8	-6.0
QRZ	**Quartz Range**	**11.80**	**215**	*e*PN		Pn	00 56 30.8	-5.3
BSWZ	**Blackbirch Sta**	**11.91**	**209**	*e*PN		Pn	00 56 30.6	-6.9
NFK	**Norfolk Island**	**11.92**	**278**	P		Pn	00 56 45.1	+7.3
	baz=12,SNR=36							
CTZ	**Chatham Island**	**12.36**	**173**	*e*PN		**Pn**	**00 56 40.7**	**-3.0**
THZ	**Tophouse**	**12.36**	**211**	*e*PN		Pn	00 56 37.0	-6.8
KHZ	**Kahutara**	**12.63**	**208**	*e*Pn		Pn	00 56 42.3	-5.1
KHZ				*e*Sn		Sn	00 58 57.1	-10
KHZ	**Kahutara**	**12.63**	**208**	*e*PN		Pn	00 56 40.2	-7.2
LTZ	**Lake Taylor**	**13.46**	**210**	*e*PN		Pn	00 56 54.2	-4.6
MSVF	**Nonsavu**	**14.00**	**347**	*e*P		P	00 57 10.4	-3.4
MSVF	**Nonsavu**	**14.00**	**347**	*e*Pn		P	00 57 10.4	-3.4
MSVF				*e*ScP		**ScP**	**01 05 56.7**	**-0.6**
OXZ	**Oxford**	**14.00**	**210**	*e*PN		Pn	00 56 58.2	-7.9
MQZ	**McQueen's Vall**	**14.07**	**207**	*e*PN		Pn	00 56 59.0	-8.1
NIUE	**Niue**	**14.58**	**34**	P		**Pn**	**00 57 11.2**	**-2.8**
	baz=14,SNR=13							
NIUE				S		Sn	00 59 35.8	-19
	baz=14,SNR=8.1							
RPZ	**Rata Peaks**	**14.74**	**211**	*e*Pn		Pn	00 57 11.8	-4.3
RPZ				S		Sn	00 59 43.4	-15
RPZ	**Rata Peaks**	**14.74**	**211**	P		Pn	00 57 10.2	-6.0
	21nm,0.3s,baz=41,slow=2.2,SNR=18							
RPZ				S		Sn	00 59 43.4	-15
	76nm,0.3s,baz=14,slow=23,SNR=10							
LBZ	**Lake Benmore**	**15.65**	**211**	*e*PN		Pn	00 57 20.9	-7.3
ODZ	**Otahua Downs**	**15.98**	**209**	*e*Pn		Pn	00 57 27.5	-4.9
	66nm,0.8s							
ODZ				*e*Sn		Sn	01 00 13.1	-15
PLUM	**Mont Dore**	**16.05**	**301**	*e*P		P	00 57 41.5	+5.0
DZM	**Mont Dzumac**	**16.31**	**301**	*e*P		**P**	**00 57 43.8**	**+4.2**
	56μm,6.0s							
DZM				*e*LR		LR	01 01 25.8	
	431μm,24.8s							
DZM	**Mont Dzumac**	**16.31**	**301**	*e*Pn		**P**	**00 57 43.7**	**+4.2**
	3μm,1.6s							
DZM				ScP		**ScP**	**01 06 00.3**	**-1.3**
DZM	**Mont Dzumac**	**16.31**	**301**	P		**P**	**00 57 44.0**	**+4.4**
	5.9nm,0.3s,baz=115,slow=13,SNR=68							
DZM				LR		LR	01 02 39.2	
	comp=Z,246μm,21.5s,baz=122,slow=32							
DZM				ScP		**ScP**	**01 06 00.3**	**-1.3**
	0.5nm,0.3s,baz=128,slow=12,SNR=3.3							
NOUC	**Port Laguerre**	**16.40**	**301**	*e*P		P	00 57 48.4	+8.1
EAZ	**Earnscleugh**	**16.70**	**211**	*e*PN		Pn	00 57 36.5	-5.1
TUZ	**Tuapeka**	**17.14**	**209**	*e*PN		Pn	00 57 41.5	-5.5
SYZ	**Scrubby Hill**	**17.81**	**209**	*e*PN		**Pn**	**00 57 51.2**	**-4.1**
WHZ	**Wether Hill Ro**	**17.82**	**212**	*e*Pn		**Pn**	**00 57 52.8**	**-2.7**
	136nm,0.7s							
WHZ	**Wether Hill Ro**	**17.82**	**212**	*e*PN		**Pn**	**00 57 54.4**	**-1.1**
APZ	**The Paps**	**18.53**	**210**	*e*PN		**P**	**00 58 00.7**	**-3.1**
AFI	**Afiamalu**	**18.54**	**21**	*e*P		**P**	**00 58 02.1**	**-2.0**
	699nm,1.0s							
AFI				S		Sn	01 01 14.5	-16
AFI	**Afiamalu**	**18.54**	**21**	P		**P**	**00 58 01.8**	**-2.3**
	12nm,0.3s,baz=226,slow=5.8,SNR=10.0							
AFI				S		Sn	01 01 14.5	-16
	7.2nm,0.3s,baz=221,slow=19,SNR=4.9							
LHI	**Lord Howe Isla**	**19.09**	**264**	P		Pn	00 58 16.6	+5.7
	baz=19,SNR=4.9							
RAR	**Rarotonga**	**19.66**	**63**	*e*P		**Pn**	**00 58 17.2**	**-0.6**
	5μm,2.6s							
RAR				S		S	01 01 40.1	-16
RAR	**Rarotonga**	**19.66**	**63**	P		**Pn**	**00 58 17.8**	**0.0**
	11nm,0.3s,baz=225,slow=0.0,SNR=16							
RAR				S		S	01 01 40.1	-16
	9.5nm,0.3s,SNR=5.5							
RAR				LR		LR	01 04 24.4	
	comp=Z,57μm,19.0s,baz=315,slow=32							
FUNA	**Funafuti**	**22.91**	**354**	*e*P		**P**	**00 58 48.8**	**-2.4**
	481nm,1.4s							
ARMA	**Armidale**	**25.56**	**264**	P		**P**	**00 59 20.5**	**+4.3**
	baz=26,SNR=30							
MGCD	**Mangrove Creek**	**25.65**	**258**	P		**P**	**00 59 21.2**	**+4.3**
	baz=26,SNR=71							
CNB	**Canberra Magne**	**27.00**	**253**	P		**P**	**00 59 33.2**	**+4.1**
	baz=27,SNR=47							
TBI	**Tubuai**	**27.00**	**80**	*e*P		P	00 59 38.8	+10
	1μm,1.3s							
TBI				*e*LQ		LQ	01 04 50.3	
	149μm,26.8s							
TBI				*e*LR		LR	01 06 24.9	
	297μm,27.2s,baz=246							
MILA	**Mila**	**27.19**	**249**	P		**P**	**00 59 35.3**	**+4.6**
	baz=27,SNR=12							
CAN	**Canberra**	**27.30**	**253**	*e*P		**P**	**00 59 35.2**	**+3.4**
CAN				*e*			01 02 49.8	
CAN				pmax		pmax		
	comp=Z,454nm,1.3s							
CAN	**Canberra**	**27.30**	**253**	*e*P		**P**	**00 59 35.2**	**+3.4**
	comp=Z,454nm,1.3s							
CAN				*e*PcP		**PcP**	**01 02 49.8**	**-1.1**
CAN				*e*ScP		**ScP**	**01 06 29.6**	**+0.7**
EIDS	**Eidsvold**	**27.33**	**275**	P		**P**	**00 59 35.2**	**+3.2**
	baz=28,SNR=101							
EIDS				S		**S**	**01 04 14.1**	**+4.4**
	baz=28,SNR=8.4							
YNG	**Young**	**27.83**	**255**	P		**P**	**00 59 40.1**	**+3.5**
	baz=28,SNR=60							
RMQ	**Roma**	**28.95**	**271**	P		P	00 59 51.0	+4.3
	baz=29,SNR=328							
RMQ	**Roma**	**28.95**	**271**	P		**PKiKP**	**01 10 30.6**	**+1.3**
	baz=32,SNR=6.0							
TAU	**Tasmania Unive**	**29.30**	**237**	*e*P		**P**	**00 59 51.8**	**+2.3**
TAU				*e*			01 06 35.0	
TAU				pmax		pmax		
	comp=Z,179nm,0.9s							
TAU	**Tasmania Unive**	**29.30**	**237**	*e*P		**P**	**00 59 51.8**	**+2.3**
	comp=Z,179nm,0.9s							
TAU				*e*ScP		**ScP**	**01 06 35.0**	**+0.1**
MOO	**Moorlands**	**29.31**	**238**	P		**P**	**00 59 52.0**	**+2.5**
	baz=29,SNR=10.0							
HNR	**Honiara**	**29.64**	**313**	*e*P		**P**	**00 59 51.6**	**-1.1**
	comp=Z,679nm,1.0s							
HNR	**Honiara**	**29.64**	**313**	P		**P**	**00 59 54.0**	**+1.3**
	comp=Z,339nm,0.5s,baz=158,slow=5.1,SNR=6.3							
HNR				LR		LR	01 10 03.4	
	comp=Z,37μm,19.7s,baz=0.2,slow=33							
PPT2	**Papeete2**	**29.65**	**69**	*e*P		P	01 00 03.2	+10
	comp=Z,466nm,1.1s							
PPT2				*e*S		S	01 04 55.8	+9.3
	comp=Z,37μm,27.2s							
PPT2				*e*LQ		LQ	01 05 50.3	
	comp=Z,106μm,26.0s							
PPT2				*e*LR		LR	01 07 33.0	
	comp=Z,237μm,26.5s,baz=233							
PPT	**Papeete**	**29.66**	**69**	P		P	00 59 57.8	+4.9
PPT	**Papeete**	**29.66**	**69**	P		P	00 59 57.8	+4.9
	comp=Z,124nm,0.9s,baz=333,slow=7.3,SNR=4.8							
PPT				LR		LR	01 08 38.5	
	comp=Z,50μm,21.6s,baz=241,slow=30							
TVO	**Taravao**	**29.81**	**70**	*e*P		P	01 00 04.6	+10
	comp=Z,326nm,1.1s							
TOO	**Toolangi**	**30.12**	**248**	P		**P**	**00 59 59.8**	**+3.0**
	baz=30,SNR=17		

baz=39,SNR=150
RKT Rikitea 39.41 89 *e*P P 01 01 26.6 +10
comp=Z,280nm,1.4s
RKT *e*S S 01 07 26.0 +9.3
comp=Z,33µm,30.5s
RKT *e*LQ LQ 01 10 23.3
comp=Z,42µm,24.5s
RKT *e*LR LR 01 12 11.6
comp=Z,242µm,27.5s,baz=250
KWAJ Kwajalein Atol 42.16 339 *e*P **P 01 01 39.5 -0.2**
KWAJ pmax pmax
comp=Z,119nm,0.6s
KWAJ Kwajalein Atol 42.16 339 *e*P **P 01 01 39.5 -0.2**
comp=Z,119nm,0.6s
AS31 Alice Springs 42.59 268 *e*P **P 01 01 44.3 +1.0**
ASAR Alice Springs 42.59 268 P **P 01 01 44.9 +1.6**
ASAR ScP **ScP 01 07 21.5 -2.2**
ASAR S **S 01 08 02.2 -1.9**
ASAR PKiKP **PKiKP 01 10 39.1 -0.8**
ASAR P'P' 01 33 29.2
ASAR Alice Springs 42.59 268 P **P 01 01 44.9 +1.6**
comp=Z,688nm,0.6s,baz=105,slow=7.1,SNR=2366
ASAR ScP **ScP 01 07 21.5 -2.2**
comp=Z,17nm,0.9s,baz=114,slow=2.3,SNR=3.6
ASAR S **S 01 08 02.2 -1.9**
comp=Z,6.2nm,0.8s,baz=115,slow=14,SNR=2.4
ASAR PKiKP **PKiKP 01 10 39.1 -0.8**
comp=Z,3.3nm,0.6s,baz=108,slow=1.6,SNR=5.0
ASAR LR LR 01 19 35.9
comp=Z,32µm,18.6s,baz=114,slow=36
ASAR PKPPKP P'P'df 01 33 29.2 -17
comp=Z,4.7nm,1.2s,baz=258,slow=1.6,SNR=5.9
DRV Dumont d'Urvil 42.99 203 PP PP 01 03 14.0 -12
DRV S S 01 07 52.0 -17
DRV L L 01 11 00.0
DRV R 01 14 00.0
WRAB Tennant Creek 43.66 274 *e*P **P 01 01 53.4 +1.4**
WRAB *e*S **S 01 08 18.2 -1.7**
WRAB pmax pmax
comp=Z,4µm,1.1s
WRAB Tennant Creek 43.66 274 *e*P **P 01 01 53.4 +1.4**
comp=Z,4µm,1.1s
WRAB *e*S **S 01 08 18.2 -1.7**
WRAB Tennant Creek 43.66 274 P **P 01 01 53.0 +1.0**
comp=Z,19µm,1.1s
WRA Warramunga Arr 43.67 274 P **P 01 01 53.4 +1.4**
WRA ScP **ScP 01 07 25.8 -2.3**
WRA S **S 01 08 18.0 -1.9**
WRA PKiKP **PKiKP 01 10 40.0 -1.0**
WRA Warramunga Arr 43.67 274 P **P 01 01 53.4 +1.4**
comp=Z,2µm,0.5s,baz=113,slow=7.8,SNR=539
WRA ScP **ScP 01 07 25.8 -2.3**
comp=Z,42nm,1.1s,baz=109,slow=4.5,SNR=7.1
WRA S **S 01 08 18.0 -1.9**
comp=Z,27nm,0.9s,baz=112,slow=14,SNR=6.0
WRA PKiKP **PKiKP 01 10 40.0 -1.0**
comp=Z,7.4nm,0.9s,baz=113,slow=0.3,SNR=5.5
WRA LR LR 01 19 24.1
comp=Z,71µm,19.0s,baz=115,slow=35
PATS Pohnpei 44.02 326 P **P 01 01 55.9 +1.1**
baz=44,SNR=6.0
MMPI Merauke 44.48 292 S SS 01 12 07.3 +15
baz=20,SNR=3.7
FORT Forrest 45.32 256 P **P 01 02 05.5 +0.4**
baz=46,SNR=87
SBA Scott Base 46.96 184 *e*P **P 01 02 20.4 +3.1**
SBA *e* 01 03 50.3
SBA pmax pmax
comp=Z,320nm,0.9s
SBA Scott Base 46.96 184 *e*P **P 01 02 20.4 +3.1**
comp=Z,320nm,0.9s
SBA *e*PcP **PcP 01 03 50.3 +1.0**
SBA *e*ScP **ScP 01 07 41.5 +0.8**
VNDA Vanda 47.01 186 *e*P **P 01 02 19.6 +2.0**
comp=Z,672nm,1.9s
VNDA *e*ScP **ScP 01 07 39.9 -0.9**
VNDA Vanda 47.01 186 P **P 01 02 19.9 +2.2**
comp=Z,45nm,0.9s,baz=7.4,slow=7.7,SNR=35
VNDA ScP **ScP 01 07 40.7 -0.2**
comp=Z,9.5nm,0.9s,baz=334,slow=8.5,SNR=1.9
VNDA LR LR 01 18 20.0
comp=Z,15µm,21.4s,baz=46,slow=31
JAY Jayapura 47.96 299 P **P 01 02 27.0 +1.0**
JAY Jayapura 47.96 299 P **P 01 02 27.1 +1.0**
baz=48,SNR=59
JAY Jayapura 47.96 299 P S 01 09 04.8 -17
baz=21,SNR=3.1
KDU Kakadu 48.64 281 P **P 01 02 32.2 +1.1**
baz=49,SNR=205
MTN Manton Dam 49.68 280 P **P 01 02 40.6 +1.5**
baz=50,SNR=112
KMBL Kambalda 50.26 254 P **P 01 02 43.2 -0.2**
baz=50,SNR=59
KNRA Kununurra 50.32 275 P **P 01 02 45.4 +1.4**
baz=50,SNR=168
SRPI Serui, Papua 51.78 295 P **P 01 02 55.5 +0.6**
FITZ Fitzroy Crossi 51.89 271 P **P 01 02 56.7 +1.0**
FITZ Fitzroy Crossi 51.89 271 P **P 01 02 56.7 +1.0**
comp=Z,695nm,1.0s,baz=123,slow=6.6,SNR=260
FITZ LR LR 01 24 33.4
comp=Z,72µm,19.2s,baz=110,slow=36
FITZ Fitzroy Crossi 51.89 271 P **P 01 02 56.8 +1.0**
baz=52,SNR=335
BAKI Biak 52.31 296 P **P 01 02 59.2 +0.3**
comp=Z,516nm,1.0s,comp=Z,15µmcomp=Z,88µm
WAKE Wake Island 52.40 342 *e*P **P 01 02 58.6 -0.7**
comp=Z,210nm,0.8s
RKGY Rocky Gully 53.31 248 P **P 01 03 05.8 -0.3**
baz=53,SNR=20
KLBR Kellerberrin 53.56 252 P **P 01 03 07.4 -0.6**
baz=54,SNR=167
NWAO Narrogin (SRO) 53.58 250 *e*P **P 01 03 06.9 -1.1**
comp=Z,284nm,1.3s
NWAO Narrogin (SRO) 53.58 250 P **P 01 03 07.5 -0.6**
SNR=14
NWAO mb 01 03 09.0
SNR=30
NWAO Narrogin (SRO) 53.58 250 P **P 01 03 07.0 -1.1**
comp=Z,153nm,1.1s,baz=108,slow=5.6,SNR=36
NWAO LR LR 01 23 38.7
comp=Z,18µm,20.4s,baz=265,slow=33
RKPI Ransiki, Papua 53.60 294 P **P 01 03 08.6 +0.2**
CASY Casey 53.99 208 *e*P **P 01 03 09.8 -0.7**
comp=Z,354nm,0.7s
FAKI Fak Fak 54.26 291 P **P 01 03 14.0 +0.7**
baz=54,SNR=11
MEEK Meekatharra 54.49 258 P **P 01 03 14.1 -0.7**
baz=55,SNR=184
BLDU Ballidu 54.72 253 P **P 01 03 15.5 -0.9**
baz=55,SNR=47
KKH Kailua Kona 55.23 26 *e*P **P 01 03 22.6 +2.6**
KKH Kailua Kona 55.23 26 *e*P **P 01 03 22.6 +2.6**
PUH Pauahi 55.28 27 *e*P **P 01 03 21.7 +1.2**
comp=Z,734nm,1.0s
STCH Steam Cracks 55.32 27 *e*P **P 01 03 22.2 +1.3**
comp=Z,1µm,1.2s
POHA Pohakuloa 55.50 27 *e*P **P 01 03 23.5 +1.2**
comp=Z,406nm,1.0s
MBWA Marble Bar 55.64 265 *e*P **P 01 03 22.9 -0.3**
comp=Z,529nm,1.0s
MBWA Marble Bar 55.64 265 P **P 01 03 23.3 +0.1**
SNR=20
MBWA mb 01 03 24.5
SNR=41
MORW Morawa 55.78 254 P **P 01 03 23.4 -0.7**
baz=56,SNR=90
HON Honolulu 56.05 23 *e*P **P 01 03 27.6 +1.7**
HON Honolulu 56.05 23 *e*P **P 01 03 27.6 +1.7**
HKL Haleakala 56.10 25 *e*P **P 01 03 28.9 +2.1**
HKL Haleakala 56.10 25 *e*P **P 01 03 28.9 +2.1**
KIP Kipapa 56.14 23 *c i*P **P 01 03 27.8 +1.2**
KIP *i* *PP **pP 01 03 40.6 +4.1**
KIP Kipapa 56.14 23 *e*P **P 01 03 28.4 +1.8**
KIP Kipapa 56.14 23 *e*P **P 01 03 28.4 +1.8**
comp=Z,1µm,1.4s
SWI Sorong 56.29 293 P **P 01 03 29.1 +1.2**
baz=57,SNR=12
OPA Opana 56.39 23 *e*P **P 01 03 30.1 +1.8**
OPA Opana 56.39 23 *e*P **P 01 03 30.1 +1.8**
GUMO Guam 56.89 316 *e*P **P 01 03 31.3 -0.7**
comp=Z,156nm,1.3s
GUMO Guam 56.89 316 P **P 01 03 31.2 -0.8**
comp=Z,174nm,0.8s,baz=177,slow=7.2,SNR=5.6
GUMO LR LR 01 24 12.8
comp=Z,18µm,21.9s,baz=335,slow=32
QSPA South Pole Qui 58.66 180 *e*P **P 01 03 45.5 +1.4**
comp=Z,1µm,0.9s
QSPA S **S 01 11 50.1 +3.9**
QSPA P'P' 01 33 19.1
QSPA South Pole Qui 58.66 180 P **P 01 03 45.7 +1.7**
comp=Z,217nm,0.6s,baz=19,slow=0.9,SNR=216
QSPA S **S 01 11 50.1 +3.9**
comp=Z,20nm,1.0s,baz=298,slow=23,SNR=12
QSPA LR LR 01 27 31.3
comp=Z,17µm,18.4s,baz=226,slow=34
QSPA PKPPKP P'P'df 01 33 19.1 -7.6
comp=Z,14nm,0.9s,baz=222,slow=2.8,SNR=9.2
PALU Palau 59.16 302 P **P 01 03 48.4 +0.3**
baz=60,SNR=4.3
MMRI Maumere 59.33 279 P **P 01 03 49.1 -0.1**
MIDW Midway 59.34 1 *e*P **P 01 03 48.9 0.0**
comp=Z,427nm,1.5s
GIRL Giralia 59.69 261 P **P 01 03 53.0 +1.4**
baz=60,SNR=35
BASI Baing, Sumba 59.93 277 P **P 01 03 54.3 +0.9**
WSI Waingapu 60.44 277 P **P 01 03 56.6 -0.3**
WSI Waingapu 60.44 277 P **P 01 03 59.1 +2.2**
baz=61,SNR=4.1
BSSI Bau Bau, Buton 62.11 280 P **P 01 04 06.2 -2.0**
LUWI Luwuk 63.02 287 P **P 01 04 15.8 +1.5**
baz=63,SNR=5.0
KAPI Kappang 63.33 281 *e*P **P 01 04 15.9 -0.4**
comp=Z,946nm,2.2s
KAPI *e*PP **PP 01 06 31.5 -4.3**
KAPI P'P'ab **P'P'ab 01 33 26.4 -1.4**
KAPI Kappang 63.33 281 P **P 01 04 16.3 0.0**
SNR=19
KAPI Kappang 63.33 281 P **P 01 04 15.5 -0.8**
comp=Z,184nm,3.2s,comp=Z,10µmcomp=Z,46µm
KAPI Kappang 63.33 281 LR LR 01 31 40.2
comp=Z,35µm,20.3s,baz=39,slow=36
KAPI PKP2ab 01 33 26.4
comp=Z,26nm,1.2s,baz=260,slow=16,SNR=4.1
KHKI Kahang-Kahang 65.09 275 P **P 01 04 25.7 -2.1**
IGBI Denpasar 65.25 275 P **P 01 04 26.7 -2.2**
DNP Denpasar 65.27 275 P **P 01 04 27.3 -1.7**
SRBI Singaraja 65.56 276 P **P 01 04 30.2 -0.7**
DAV Davao City (W) 65.64 296 *e*P **P 01 04 31.2 -0.1**
DAV Davao City (W) 65.64 296 P **P 01 04 31.7 +0.4**
SNR=7.4
DAV Davao City (W) 65.64 296⇑ *i*P **P 01 04 31.3 -0.1**
DAV Davao City (W) 65.64 296 P **P 01 04 31.1 -0.3**
comp=Z,128nm,0.3s,baz=49,slow=13,SNR=6.7
CTBH Cotabato--PC H 66.76 295⇑ *i*P **P 01 04 38.8 +0.3**
BLJI Banyuglugur 67.11 275 P **P 01 04 40.0 -0.9**
PLP Palo 68.69 299⇓ *e*P P 01 04 46.7 -4.0
UGM Wanagama 69.65 273 *e*P **P 01 04 56.6 -0.2**
comp=Z,310nm,1.0s
UGM Wanagama 69.65 273 P **P 01 04 57.2 +0.4**
baz=70,SNR=18
TSM Tawau 70.08 288 P **P 01 05 00.2 +0.9**
MYLDM Lahad Datu 70.08 289 P **P 01 05 01.1 +1.7**
MYLDM Lahad Datu 70.08 289 P **P 01 04 58.9 -0.5**
comp=Z,155nm,2.0s,comp=Z,8µm
SMRI Semarang 70.16 274 P **P 01 05 00.9 +1.0**
baz=70,SNR=3.4
RCP Roxas 70.62 297⇑ *e*P **P 01 05 01.8 -0.8**
MAW Mawson 71.16 201 *e*P **P 01 05 05.3 +0.3**
comp=Z,132nm,1.1s
MAW S **S 01 14 14.3 -5.0**
MAW P'P' 01 33 02.6
MAW Mawson 71.16 201 P **P 01 05 05.3 +0.3**
comp=Z,550nm,1.1s,baz=124,slow=7.3,SNR=117
MAW *e*PP **PP 01 07 59.5 +4.4**
KKM Kota Kinabalu 72.43 289 P **P 01 05 14.3 +0.6**
KKM Kota Kinabalu 72.43 289 P **P 01 05 10.8 -2.9**
comp=Z,147nm,3.1s,comp=Z,7µm
KKM Kota Kinabalu 72.43 289 P **P 01 05 14.3 +0.6**
baz=73,SNR=7.0
KDM Kudat 72.44 290 P **P 01 05 13.2 -0.4**
LEM Lembang 72.68 273 P **P 01 05 16.1 +0.8**
baz=73,SNR=13
LEM Lembang 72.68 273 P **PP 01 07 58.8 +1.6**
baz=13,SNR=5.2
BTM Bintulu 73.39 284 P **P 01 05 20.3 +1.0**
TGY Tagaytay City 73.59 298 P **P 01 05 21.3 +0.9**
TGY Tagaytay City 73.59 298 P **P 01 05 21.3 +0.9**
comp=Z,1µm,1.0s,baz=196,slow=7.4,SNR=7.8
TGY LR LR 01 37 19.4
comp=Z,24nm,20.0s,baz=133,slow=35
SBUM Sibu 73.69 283 P **P 01 05 22.1 +1.1**
SBUM Sibu 73.69 283 P **P 01 05 20.5 -0.5**
comp=Z,180nm,1.5s,comp=Z,7µm
KSM Kuching 74.75 281 *e*P **P 01 05 27.1 -0.1**
comp=Z,291nm,1.1s
KSM *e*PP **PP 01 08 10.4 -4.4**
KSM Kuching 74.75 281 P **P 01 05 27.0 -0.2**
KSM Kuching 74.75 281 P **P 01 05 26.2 -1.0**
comp=Z,259nm,1.4s,comp=Z,7µmcomp=Z,47µm
KSM Kuching 74.75 281 P **P 01 05 27.3 +0.1**
baz=75,SNR=52
KSM Kuching 74.75 281 P **PP 01 08 11.5 -3.2**
baz=15,SNR=4.5
JHJ Hachijo jima 2 75.31 325 P **P 01 05 30.6 +0.6**
comp=Z,162nm,0.8s,baz=84,slow=19,SNR=3.2
JHJ LR LR 01 34 21.1
comp=Z,6µm,20.7s,baz=146,slow=32
USHA Ushuaia 75.32 146 P **P 01 05 30.2 +0.3**
USHA Ushuaia 75.32 146 P **P 01 05 30.2 +0.3**
comp=Z,55nm,1.0s,baz=230,slow=6.0,SNR=11
USHA LR LR 01 34 42.1
comp=Z,5µm,18.3s,baz=206,slow=32
SYO Syowa Base 75.99 193⇓ *i*P **P 01 05 32.2 -1.2**
SYO Syowa Base 75.99 193 *e*SH 01 15 25.0
JOW Kunigami 77.01 313 *e*P **P 01 05 40.1 +0.3**
comp=Z,74nm,1.0s
SNAA Sanae 77.12 179 *e*P **P 01 05 40.0 +0.1**
comp=Z,864nm,0.9s
SNAA *e*S **S 01 15 26.6 +0.2**
SNAA PKKPbc **PKKPbc 01 24 46.4 -1.2**
SNAA P'P' 01 32 46.8
SNAA Sanae 77.12 179 P **P 01 05 40.1 +0.1**
comp=Z,208nm,1.2s,baz=199,slow=6.5,SNR=152
SNAA S **S 01 15 25.1 -1.3**
comp=Z,4.0nm,1.1s,baz=214,slow=21,SNR=18
SNAA PKKPbc **PKKPbc 01 24 46.4 -1.2**
comp=Z,1.0nm,0.9s,baz=169,slow=1.6,SNR=20
SNAA PKPPKP P'P'df 01 32 46.8 -8.0
comp=Z,3.0nm,1.0s,baz=310,slow=1.8,SNR=10.0
SNAA LR LR 01 35 42.4
comp=Z,8µm,22.0s,baz=207,slow=32
MAIT Maitri 77.80 183 *e*P P 01 05 34.5 -9.1
MNAI Manna 77.92 272 P **PP 01 08 41.7 +0.3**
baz=18,SNR=3.6
COYC Coyhaique 78.50 137⇑ *i*P **P 01 05 46.0 -2.0**
COYC Coyhaique 78.50 137⇑ *i*P **P 01 05 46.0 -2.0**
MJAR Matsushiro Arr 78.83 326 P **P 01 05 49.0 -0.8**
MJAR Matsushiro Arr 78.83 326 P **P 01 05 49.0 -0.8**
comp=Z,28nm,0.8s,baz=168,slow=6.4,SNR=47
MAJO Matsushiro 78.83 326 *e*P **P 01 05 49.3 -0.4**
MAJO pmax pmax
comp=Z,150nm,1.4s
MAJO Matsushiro 78.83 326 *e*P **P 01 05 49.3 -0.4**
comp=Z,25nm,1.4s
MAT Matsushiro 78.83 326 P **P 01 05 49.0 -0.7**
MAT S **SKSac 01 16 02.2 -0.5**
PAF Port-aux-Franc 79.02 218 *e*P **P 01 05 48.0 -2.7**
PAF pmax pmax
comp=Z,327nm,1.0s
PAF Port-aux-Franc 79.02 218 *e*P **P 01 05 48.0 -2.7**
comp=Z,327nm,1.0s
TWG Pinlang 79.07 305 *e*P **P 01 05 49.8 -1.6**
comp=Z,630nm,0.8s
YULB Yu-li 79.28 306 *e*P **P 01 05 50.4 -2.1**
comp=Z,111nm,0.9s
NACB Ninganchiao 79.59 307 *e*P **P 01 05 52.9 -1.2**
comp=Z,502nm,1.3s
TPUB Ta-pu 79.69 305 *e*P **P 01 05 54.0 -0.7**
comp=Z,348nm,0.9s
SSLB Suanglung 79.78 306 *e*P **P 01 05 54.3 -1.0**
comp=Z,223nm,0.7s
JNU Nakatsue 80.02 319 *e*P **P 01 05 56.0 -0.3**
comp=Z,75nm,1.0s
JNU Nakatsue 80.02 319 P **P 01 05 55.9 -0.5**
comp=Z,111nm,0.9s,baz=112,slow=3.1,SNR=35
JNU LR LR 01 36 52.6
comp=Z,12µm,21.8s,baz=135,slow=32
YHNB Yeheng 80.07 307 *e*P **P 01 05 55.0 -1.7**
comp=Z,155nm,1.0s
TATO Taipei 80.19 307 *e*P **P 01 05 56.3 -1.1**
comp=Z,71nm,1.0s
TATO Taipei 80.19 307 P **P 01 05 57.2 -0.1**
SNR=11
MYKOM Kota Tinggi 80.36 278 P **P 01 05 58.8 +0.3**
MYKOM Kota Tinggi 80.36 278 P **P 01 05 56.9 -1.7**
comp=Z,186nm,1.4s,comp=Z,6µm
KGM Kluang 80.93 278 P **P 01 06 02.0 +0.4**
ERM Erimo 81.16 332 *d i*P **P 01 06 03.5 +1.4**
ERM pmax pmax
comp=Z,170nm,1.4s
ERM MLR MLR
comp=Z,17µm,19.0s
ERM Erimo 81.16 332 *e*P **P 01 06 03.2 +1.1**
comp=Z,123nm,1.1s
ERM Erimo 81.16 332 P **P 01 06 04.6 +2.5**
comp=Z,528nm,1.1s,SNR=7.3
YUK Yuzh-Kuril'sk 81.85 335 *i*P P 01 06 00.6 -5.1
YUK *i* 01 06 17.0
YUK *i* 01 09 16.1
YUK *i*S **S 01 16 11.4 -5.3**
YUK *i*SS **SS 01 21 42.1 +5.9**
YUK *i*SSS SSS 01 25 03.7
YUK pmax pmax
comp=E,118nm,1.4s
YUK pmax pmax
comp=Z,230nm,1.4s
YUK pmax pmax
comp=Z,355nm,1.4s
YUK pmax pmax
comp=N,95nm,1.4s
YUK MLR MLR
comp=E,2µm,20.0s
YUK MLR MLR
comp=Z,4µm,20.0s
YUK MLR MLR
comp=N,1µm,20.0s
BKNI Bangkinang 81.98 275 P **P 01 06 07.0 -0.2**
baz=82,SNR=4.5
BKNI Bangkinang 81.98 275 P **PP 01 09 17.7 +2.5**
baz=22,SNR=7.7
PPI Padang Panjang 82.12 274 P **PP 01 09 15.8 -0.5**
baz=22,SNR=4.1
PLCA Paso Flores 82.14 133 *e*P **P 01 06 08.9 +1.1**
comp=N,321nm,1.1s
PLCA PKKPbc **PKKPbc 01 24 35.1 -0.6**
PLCA P'P' 01 32 42.0
PLCA Paso Flores 82.14 133 P **P 01 06 08.7 +0.9**
comp=N,217nm,1.1s,baz=228,slow=5.1,SNR=87
PLCA PKKPbc **PKKPbc 01 24 35.1 -0.6**
comp=N,2.1nm,0.7s,baz=300,slow=5.5,SNR=3.3
PLCA PKPPKP **P'P'df 01 32 42.0 -3.4**
comp=N,2.2nm,0.3s,baz=109,slow=4.0,SNR=9.0
PLCA LR LR 01 33 48.7
comp=N,25µm,21.2s,baz=252,slow=29
QZH Quanzhou 82.17 305⇑ *i*P **P 01 06 09.4 +1.6**
QZH PP **PP 01 09 19.3 +2.6**
QZH S **S 01 16 19.8 -1.0**
QZH pmax pmax
comp=Z,570nm,1.1s
QZH pmax pmax
comp=Z,8µm,5.4s
QZH LR LR
comp=N,6µm,18.8s
QZH LR LR
comp=E,6µm,17.0s
QZH LR LR
comp=Z,16µm,25.8s
EFI East Falkland 82.17 147 *c i*P **P 01 06 08.3 +0.7**
EFI pmax pmax
comp=Z,502nm,1.3s
EFI MLR MLR
comp=Z,13µm,19.0s
EFI East Falkland 82.17 147 *e*P **P 01 06 07.9 +0.3**
comp=Z,193nm,1.1s
AMKA Amchitka 82.49 359 *e*P **P 01 06 09.1 +0.2**
KTGM Kuala Trenggan 82.84 281 P **P 01 06 12.3 +0.6**
FRIM Kepong 83.01 278 P **P 01 06 12.1 -0.5**
ASAJ Asahikawa 83.15 333 *e*P **P 01 06 13.1 +0.6**
comp=Z,35nm,0.9s
ASAJ Asahikawa 83.15 333 P **P 01 06 14.1 +1.5**
comp=Z,75nm,1.0s,baz=221,slow=7.2,SNR=14
ASAJ LR LR 01 39 30.0
comp=Z,20µm,20.9s,baz=188,slow=33
ATKA Atka Island 83.38 3 *e*P **P 01 06 13.9 +0.5**
comp=Z,805nm,1.4s
CCHI Chillan 83.50 129⇑ *i*P **P 01 06 15.6 +0.8**
CCHI Chillan 83.50 129⇑ *i*P **P 01 06 15.6 +0.8**
IPM Ipoh 84.17 279 *e*P **P 01 06 17.2 -1.3**
comp=Z,310nm,1.3s
IPM *e*PP **PP 01 09 30.6 -2.6**
IPM Ipoh 84.17 279 P **P 01 06 18.6 0.0**
IPM Ipoh 84.17 279 P **P 01 06 16.4 -2.1**
comp=Z,195nm,1.2s,comp=Z,5µmcomp=Z,36µm
FX1 Attu Island--F 84.29 355 *e*P **P 01 06 18.8 +0.7**
FX1 Attu Island--F 84.29 355 P **P 01 06 18.2 +0.1**
comp=Z,48nm,0.7s,baz=172,slow=10.0,SNR=10
FX1 LR LR 01 38 18.3
comp=Z,24µm,21.6s,baz=198,slow=32
SSE Sheshan 84.44 312 P **P 01 06 19.1 -0.3**
SSE S **S 01 16 47.8 +4.3**
SSE sS **sS 01 16 58.1 -2.5**
SSE pmax pmax
comp=Z,110nm,1.0s
SSE pmax pmax
comp=Z,3µm,6.4s
SSE LR LR
comp=N,4µm,19.9s
SSE LR LR
comp=E,3µm,19.9s
SSE LR LR
comp=Z,7µm,19.9s
GZH Guangzhou 84.77 301 P **P 01 06 22.8 +1.5**
GZH S **S 01 16 52.6 +5.4**
GZH LR LR
comp=N,2µm,21.0s
GZH LR LR
comp=E,4µm,20.1s
GZH LR LR
comp=Z,7µm,20.1s
SKR Severo-Kuril's 84.79 344 *e*P P 01 06 14.0 -6.7
SKR *e* 01 09 36.0
SKR *e*PPP PPP 01 11 34.0
SKR S **S 01 16 44.0 -2.1**
SKR pmax pmax
comp=Z,800nm,1.5s
SKR pmax pmax
comp=Z,5µm,6.0s
SKR pmax pmax
comp=N,5µm,12.0s
SKR smax smax
comp=N,8µm,24.0s
SKR MLR MLR
comp=N,13µm,20.0s
SKR MLR MLR
comp=E,9µm,20.0s
SKR MLR MLR
comp=Z,17µm,20.0s
KSRS Korea Array 84.84 320 P **P 01 06 22.1 +0.8**
comp=Z,64nm,0.9s,baz=142,slow=5.4,SNR=87
KSRS PKKPbc **PKKPbc 01 24 33.0 +2.2**
comp=Z,0.6nm,0.4s,baz=299,slow=2.8,SNR=2.8
KSRS LR LR 01 39 54.7
comp=Z,6µm,21.7s,baz=316,slow=33
KSAR Wonju Array Be 84.85 320 P **P 01 06 22.1 +0.8**
KSAR PKKPbc **PKKPbc 01 24 33.0 +2.2**
KULM Kulim 84.92 279 *e*P **P 01 06 20.8 -1.5**
comp=Z,199nm,1.1s
KULM *e*PP **PP 01 09 37.1 -2.2**
KULM Kulim 84.92 279 P **P 01 06 22.5 +0.2**
KULM Kulim 84.92 279 P **P 01 06 20.4 -1.9**

comp=Z,198nm,1.4s,comp=Z,6µmcomp=Z,38µm
QIZ Qiongzhong 85.01 296 P P 01 06 22.3 -0.3
QIZ pP **PcP 01 06 25.6 -0.2**
QIZ sP sP 01 06 28.9 -7.8
QIZ S **SKKSac 01 16 51.1 -0.2**
QIZ pmax pmax
comp=Z,93nm,1.3s
QIZ LR LR
comp=N,2µm,22.6s
QIZ LR LR
comp=E,2µm,23.3s
QIZ LR LR
comp=Z,12µm,32.9s
QIZ Qiongzhong 85.01 296 *e*P **P 01 06 23.1 +0.5**
comp=Z,99nm,1.0s
QIZ *e*PP **PP 01 09 37.1 -2.9**
PSI Prapat 85.07 276 P **P 01 06 21.3 -1.9**
PSI PP **PP 01 09 40.0 -0.6**
PSI Prapat 85.07 276 P **P 01 06 20.7 -2.5**
comp=Z,170nm,1.4s,comp=Z,5µmcomp=Z,28µm
PSI Prapat 85.07 276 P **P 01 06 21.3 -1.9**
comp=Z,156nm,1.1s,baz=187,slow=7.9,SNR=54
PSI PP **PP 01 09 40.0 -0.6**
comp=Z,175nm,1.0s,baz=157,slow=6.6,SNR=22
PSI LR LR 01 44 47.5
comp=Z,39µm,21.3s,baz=266,slow=36
PSI Prapat 85.07 276 P **P 01 06 22.0 -1.3**
baz=85,SNR=38
PSI Prapat 85.07 276 P **PP 01 09 42.3 +1.6**
baz=24,SNR=8.8
GSI Gunungsitoli 85.44 274 P **P 01 06 26.1 +1.2**
baz=86,SNR=10
GSI Gunungsitoli 85.44 274 P **PP 01 09 43.5 0.0**
baz=25,SNR=8.7
YSS Yuzh-Sakhalins 85.48 335α *i*P **P 01 06 26.0 +1.8**
YSS *e**SP sP 01 06 31.4 -6.9
YSS *e* 01 09 41.0
YSS *e* 01 16 40.0
YSS *e*S **SKKSac 01 16 56.0 +2.5**
YSS *e*PPS PPS 01 17 55.0
YSS *e*SS **SS 01 22 26.0 -3.9**
YSS pmax pmax
comp=N,90nm,1.2s
YSS pmax pmax
comp=Z,230nm,1.2s
YSS pmax pmax
comp=Z,6µm,6.0s
YSS smax smax
comp=N,2µm,12.0s
LPIG La Paz 85.49 58 P **P 01 06 22.1 -2.8**
LPIG La Paz 85.49 58 LR LR 01 39 08.2
comp=N,5µm,18.5s,baz=234,slow=32
SCI San Clemente I 85.54 47 ⇑P **P 01 06 26.5 +1.6**
baz=86
SCI ⇑SKSac **S 01 16 51.2 -3.2**
baz=86
SCI ⇑SKSac **S 01 16 51.2 -3.2**
baz=86
BSC Santa Cruz Isl 85.55 46 ⇑P **P 01 06 26.4 +1.4**
baz=86,SNR=11
INCN Inchon 85.57 319 *e*P **P 01 06 24.6 -0.4**
comp=N,6.0nm,0.6s
UNV Unalaska Valle 85.58 7 *e*P **P 01 06 25.0 +0.4**
comp=N,362nm,1.3s
SBC Santa Barbara 85.81 45 ⇓P **P 01 06 28.2 +2.0**
baz=86
IHA Instituto Hidr 85.83 126 *i*P **P 01 06 27.8 +1.2**
IHA Instituto Hidr 85.83 126 *i*P **P 01 06 27.8 +1.2**
CIS Catalina Islan 85.91 47 ⇓P **P 01 06 28.0 +1.2**
baz=86
AKUT Akutan 85.95 8 *e*P **P 01 06 27.1 +0.7**
comp=N,616nm,1.6s
BLG Laguna Peak 85.98 46 ⇑P **P 01 06 28.0 +0.9**
baz=86,SNR=7.6
PKM Peak Mountain 86.05 45 ⇓P **P 01 06 29.4 +1.8**
baz=86,SNR=20
SRIG Santa Rosalia 86.08 55 P **P 01 06 26.5 -1.2**
FMP Fort Macarthur 86.19 47 ⇑P **P 01 06 29.6 +1.5**
baz=87
SMMC Simmler 86.22 44 ⇓P **P 01 06 30.2 +1.9**
baz=87,SNR=9.1
PTRM Twissleman Ran 86.33 44 *e*P **P 01 06 31.6 +2.8**
UBPT Khong Chiam 86.33 290 P **P 01 06 29.0 -0.2**
LMEL Las Melosas 86.34 128⇑*i*P **P 01 06 28.6 -0.8**
LMEL Las Melosas 86.34 128⇑*i*P **P 01 06 28.6 -0.8**
SAO San Andreas Ge 86.37 43 *e*P **P 01 06 31.4 +2.4**
SAO pmax pmax
comp=Z,481nm,1.9s
SAO San Andreas Ge 86.37 43 *e*P **P 01 06 31.4 +2.4**
comp=Z,480nm,1.9s
CLCH Cerro Calan 86.37 127 *i*P **P 01 06 29.3 -0.1**
109C Camp Elliot, M 86.39 48 ⇑P **P 01 06 30.5 +1.4**
baz=87
SAC San Andreas 86.39 41 *e*P **P 01 06 28.5 -0.5**
SAC pmax pmax
comp=Z,276nm,1.4s
SAC San Andreas 86.39 41 *e*P **P 01 06 28.5 -0.5**
comp=Z,276nm,1.4s
PET Petropavlovsk 86.43 346α *i*P **P 01 06 28.3 -0.5**
PET *e* 01 09 53.3
PET *e* 01 16 47.5
PET *e*S **S 01 16 59.9 -2.3**
PET *e*PS **PnS 01 17 56.3 -7.8**
PET *e*SS **SS 01 22 39.3 -4.3**
PET *e*SSS SSS 01 26 15.5
PET pmax pmax
comp=Z,4µm,6.2s
PET pmax pmax
comp=Z,95nm,0.5s
PET pmax pmax
comp=Z,2µm,13.6s
PET pmax pmax
comp=Z,700nm,17.6s
DECC Green Verdugo 86.52 46 ⇓P **P 01 06 31.1 +1.3**
baz=87
BAR Barrett 86.52 48 *e*P **P 01 06 31.0 +1.2**
comp=Z,151nm,1.4s
OSI Osito Adit 86.53 46 ⇓P **P 01 06 31.4 +1.6**
baz=87
MCCM Marconi Confer 86.53 41 *e*P **P 01 06 30.6 +1.0**
comp=Z,762nm,1.8s
PASC Pasadena Art C 86.56 46 *e*P **P 01 06 30.8 +0.9**
comp=Z,211nm,1.4s
PASC *e*PP **PP 01 09 50.0 -2.4**
NJ2 Nanjing 86.56 311 *e*P **P 01 06 30.8 +0.8**
NJ2 pP **PcP 01 06 34.4 +2.0**
NJ2 PP **PP 01 09 52.0 -0.5**
NJ2 S **S 01 17 05.0 +0.6**
NJ2 sS **ScS 01 17 15.0 +2.4**
NJ2 pmax pmax
comp=Z,220nm,0.9s
NJ2 pmax pmax
comp=Z,5µm,4.9s
NJ2 LR LR
comp=N,6µm,21.8s
NJ2 LR LR
comp=E,5µm,24.5s
NJ2 LR LR
comp=Z,8µm,22.3s
MWC Mount Wilson 86.67 46 *e*P **P 01 06 32.3 +1.6**
MWC *e* 01 09 58.7
MWC pmax pmax
comp=Z,271nm,1.4s
MWC Mount Wilson 86.67 46 *e*P **P 01 06 32.3 +1.6**
comp=Z,271nm,1.4s
MWC *e*PP **PP 01 09 58.7 +5.1**
PEA0B Petropavlovsk- 86.71 346 *e*P **P 01 06 30.3 +0.1**
PETK Petropavlovsk- 86.71 346 P **P 01 06 30.3 +0.1**
PETK Petropavlovsk- 86.71 346 P **P 01 06 30.3 +0.1**
PETK PKiKP **PKiKP 01 11 36.6 +0.3**
PETK Petropavlovsk- 86.71 346 P **P 01 06 30.3 +0.1**
comp=Z,79nm,0.8s,baz=137,slow=8.1,SNR=45
PETK PKiKP **PKiKP 01 11 36.6 +0.3**
comp=Z,13nm,0.7s,baz=134,slow=6.2,SNR=8.1
PETK LR LR 01 39 34.2
comp=Z,9µm,21.8s,baz=166,slow=32
MURC Murrieta 86.79 47 ⇑P **P 01 06 32.9 +1.7**
baz=87,SNR=25
ARVC Arvin 86.80 45 ⇑P **P 01 06 32.8 +1.6**
baz=87,SNR=25
MONP Monument Peak 86.82 48 ⇑P **P 01 06 33.3 +1.8**
baz=87
DVTC Desert V Tower 86.88 49 ⇓P **P 01 06 33.5 +1.8**
baz=87
BFSC Mount Baldy Ra 86.93 46 ⇑P **P 01 06 33.2 +1.3**
baz=87,SNR=44

FALS False Pass 86.94 9 *e*P **P 01 06 32.5 +1.3**
comp=Z,464nm,1.1s
VLA Vladivostok 87.00 326α *i*P **P 01 06 31.9 +0.1**
VLA S **SKSac 01 16 57.4 +1.1**
VLA pmax pmax
comp=Z,127nm,1.3s
HOPS Hopland 87.02 40 *e*P **P 01 06 33.3 +1.2**
comp=Z,221nm,1.2s
VES Vestal, Richgr 87.13 44 ⇑P **P 01 06 33.8 +1.1**
baz=88,SNR=50
EDW2 Edwards Air Fo 87.15 46 ⇑P **P 01 06 34.5 +1.6**
baz=88,SNR=68
KCPM Cahto Peak 87.23 39 *e*P **P 01 06 32.1 -1.1**
comp=Z,127nm,1.4s
SWSC Sam W. Stewart 87.25 48 ⇑P **P 01 06 35.1 +1.8**
baz=88
PFO Pinyon Flat Ob 87.27 48 P **P 01 06 34.9 +1.3**
comp=Z,286nm,1.1s,SNR=20
PFO Pinyon Flat Ob 87.27 48 *e*P **P 01 06 35.1 +1.6**
comp=Z,89nm,1.1s
PFO Pinyon Flat Ob 87.27 48 LR LR 01 40 47.9
comp=Z,27µm,18.5s,baz=237,slow=32
PFO Pinyon Flat Ob 87.27 48 ⇑P **P 01 06 35.2 +1.7**
baz=88,SNR=28
RCTC Rector, Farmer 87.36 44 ⇓P **P 01 06 34.8 +1.0**
baz=88,SNR=7.0
KIPM Iron Peak 87.38 39 *e*P **P 01 06 35.3 +1.4**
comp=Z,288nm,1.3s
ISA Isabella 87.38 45 *e*P **P 01 06 35.6 +1.6**
ISA pmax pmax
comp=Z,290nm,1.3s
ISA Isabella 87.38 45 *e*P **P 01 06 35.6 +1.6**
comp=Z,70nm,1.3s
ISA *e*PKKPbc **PKKPbc 01 24 27.1 +2.5**
ISA Isabella 87.38 45 ⇓P **P 01 06 35.6 +1.6**
baz=88,SNR=106
MMIG Aquila 87.40 67 P **P 01 06 35.1 +0.7**
BBRC Big Bear Solar 87.40 47 ⇓P **P 01 06 36.0 +1.7**
baz=88
CHBT CHBT 87.50 286 P **P 01 06 34.2 -0.7**
LRMC Laurel Mountai 87.73 46 ⇑P **P 01 06 37.4 +1.6**
baz=88,SNR=95
RRX Edison Barstow 87.76 46 ⇑P **P 01 06 37.3 +1.5**
baz=88
USRK Ussuriysk Arra 87.77 327 P **P 01 06 36.1 +0.6**
comp=Z,84nm,0.9s,baz=128,slow=3.2,SNR=57
USRK PKKPbc **PKKPbc 01 24 25.3 +1.2**
comp=Z,1.0nm,0.6s,baz=258,slow=4.1,SNR=2.7
USRK PKPPKP **P'P'df** 01 32 31.9 +5.5
comp=Z,0.8nm,0.5s,baz=222,slow=2.6,SNR=4.1
USRK LR LR 01 46 00.4
comp=Z,10µm,18.7s,baz=290,slow=36
BELC Belle Mtn. Jos 87.81 48 ⇓P **P 01 06 37.9 +1.7**
baz=88,SNR=60
SDPT Sand Point 87.83 10 *e*P **P 01 06 36.2 +0.7**
comp=Z,703nm,0.9s
CMB Columbia Colle 87.86 42 *e*P **P 01 06 37.5 +1.3**
CMB pmax pmax
comp=Z,115nm,1.0s
CMB Columbia Colle 87.86 42 *e*P **P 01 06 37.5 +1.3**
comp=Z,115nm,1.0s
CMB *e*PKKPbc **PKKPbc 01 24 23.7 +0.1**
BC3 Big Chuckawall 87.93 48 ⇓P **P 01 06 38.7 +2.0**
baz=88,SNR=76
GLA Glamis 87.95 49 *e*P **P 01 06 38.8 +2.0**
GLA pmax pmax
comp=Z,374nm,1.3s
GLA Glamis 87.95 49 *e*P **P 01 06 38.8 +2.0**
comp=Z,93nm,1.3s
GLA *e*PKKPbc **PKKPbc 01 24 24.6 +1.5**
GLA Glamis 87.95 49 ⇑P **P 01 06 39.0 +2.2**
baz=88
KHMM Horse Mountain 88.00 38 *e*P **P 01 06 38.4 +1.4**
comp=Z,513nm,2.0s
LHMI Lhok Sumawe 88.01 277 P **P 01 06 38.1 +0.6**
baz=88,SNR=4.9
LHMI Lhok Sumawe 88.01 277 P **PP 01 10 06.1 +1.8**
baz=27,SNR=5.1
HSIG 88.02 54 P **P 01 06 37.6 +0.5**
ANIG Ahuacatlan 88.05 64 P **P 01 06 37.2 -0.4**
CWC Cottonwood Cre 88.14 45 ⇑P **P 01 06 39.2 +1.5**
baz=89,SNR=11
OHCM Honcut 88.14 41 *e*P **P 01 06 38.7 +1.3**
HEC Hector,Ludlow 88.14 47 ⇑P **P 01 06 39.2 +1.5**
baz=89,SNR=29
GSC Goldstone 88.16 46 *e*P **P 01 06 39.1 +1.3**
GSC pmax pmax
comp=Z,435nm,1.6s
GSC Goldstone 88.16 46 *e*P **P 01 06 39.1 +1.3**
comp=Z,105nm,1.6s
GSC *e*PKKPbc **PKKPbc 01 24 23.5 +0.8**
GSC Goldstone 88.16 46 ⇑P **P 01 06 39.4 +1.6**
baz=89,SNR=94
PAYG Puerto Ayora 88.18 90 *e*P **P 01 06 41.2 +2.9**
comp=Z,253nm,1.1s
MPMC Manual Prospec 88.24 45 ⇓P **P 01 06 39.6 +1.3**
baz=89,SNR=84
DAC Darwin (Calif) 88.32 45 *e*P **P 01 06 39.6 +1.0**
DAC pmax pmax
comp=Z,131nm,1.4s
DAC Darwin (Calif) 88.32 45 *e*P **P 01 06 39.6 +1.0**
comp=Z,131nm,1.4s
KRMB Red Mountain 88.37 38 *e*P **P 01 06 40.6 +1.9**
comp=Z,1µm,2.4s
WDC Whiskeytown Da 88.43 39 *e*P **P 01 06 39.7 +0.9**
WDC pmax pmax
comp=Z,187nm,1.4s
WDC Whiskeytown Da 88.43 39 *e*P **P 01 06 39.7 +0.9**
comp=Z,187nm,1.4s
IRM Iron Mountain 88.45 48 ⇓P **P 01 06 41.1 +2.0**
baz=89,SNR=137
113A Mohawk Valley, 88.45 50 ⇑P **P 01 06 40.9 +1.8**
baz=89
TIN Tinemaha 88.46 44 ⇑P **P 01 06 40.5 +1.3**
baz=89
MTUM Tungsten Hills 88.46 44 *e*P **P 01 06 40.8 +1.6**
MTUM *e*PKKPbc **PKKPbc 01 24 23.2 +0.9**
MLAC Mammoth Lakes 88.48 43 ⇑P **P 01 06 41.0 +1.6**
baz=89
ZIIG Zihuatanejo 88.51 68 P **P 01 06 41.1 +1.5**
GMRC Granite Mounta 88.53 47 ⇓P **P 01 06 41.3 +1.7**
baz=89,SNR=60
214A Organ Pipe Nat 88.57 51 ⇑P **P 01 06 41.5 +1.8**
baz=89
Y12C Blythe 88.59 49 ⇑P **P 01 06 41.5 +1.8**
baz=89,SNR=48
WHN Wuhan 88.60 307⇑*i*P **P 01 06 40.4 +0.6**
WHN S **S 01 17 25.8 +1.8**
WHN SS **SS 01 23 16.8 +0.7**
WHN pmax pmax
comp=Z,250nm,1.0s
WHN pmax pmax
comp=Z,7µm,10.0s
WHN LR LR
comp=N,3µm,14.6s
WHN LR LR
comp=E,8µm,17.6s
WHN LR LR
comp=Z,15µm,32.4s
KBO Bosley Butte 88.70 37 *e*P **P 01 06 42.2 +2.1**
comp=Z,416nm,1.7s
TUQ Turquoise Moun 88.79 46 ⇑P **P 01 06 42.4 +1.6**
baz=89,SNR=62
LCO Las Campanas 88.80 124 *e*P **P 01 06 42.3 +0.9**
comp=Z,208nm,1.2s
LCO Las Campanas 88.80 124 P **P 01 06 42.1 +0.8**
baz=88,SNR=9.5
SHOC Shoshone 88.87 46 ⇓P **P 01 06 42.5 +1.5**
baz=89,SNR=85
FURC Furnace Creek, 88.89 45 ⇑P **P 01 06 42.4 +1.4**
baz=89,SNR=41
GRAC Grapevine Rang 88.93 45 ⇑P **P 01 06 43.0 +1.7**
baz=89
CFAA Coronel Fontan 89.00 127 P **P 01 06 42.6 +0.7**
CFAA PKKPbc **PKKPbc 01 24 22.1 +2.7**
CFAA P'P' 01 32 31.8
CFAA Coronel Fontan 89.00 127 P **P 01 06 42.6 +0.7**
comp=Z,14nm,1.1s,baz=238,slow=3.6,SNR=69
CFAA PKKPbc **PKKPbc 01 24 22.1 +2.7**
comp=Z,0.6nm,1.0s,baz=20,slow=2.5,SNR=4.7
CFAA PKPPKP **P'P'df 01 32 31.8 -0.7**
comp=Z,0.7nm,1.1s,baz=24,slow=3.5,SNR=3.4
CFAA LR LR 01 37 56.5
comp=Z,1µm,21.3s,baz=231,slow=30
TRQA Tornquist 89.03 135 *e*P **P 01 06 42.7 +0.7**
comp=Z,48nm,1.6s
CHGN Chignik 89.07 11 *e*P **P 01 06 42.1 +0.8**

WCN Washoe City 89.09 42 *e*P **P 01 06 43.7 +1.5**
WCN pmax pmax
comp=Z,98nm,1.1s
WCN Washoe City 89.09 42 *e*P **P 01 06 43.6 +1.5**
comp=Z,98nm,1.1s
KEBM Edson Butte 89.12 37 *e*P **P 01 06 43.8 +1.7**
comp=Z,479nm,1.3s
BEKR Beckworth 89.13 41 *e*P **P 01 06 43.4 +1.0**
comp=Z,41nm,1.1s
YBH Yreka Blue Hor 89.15 38 *e*P **P 01 06 43.6 +1.4**
comp=Z,121nm,1.2s
YBH Yreka Blue Hor 89.15 38 P **P 01 06 43.7 +1.5**
comp=Z,91nm,1.1s,baz=166,slow=4.0,SNR=49
YBH LR LR 01 38 57.9
comp=Z,24µm,21.8s,baz=237,slow=30
CAIG El Cayaco 89.16 70 P **P 01 06 43.7 +0.9**
NEE2 Needles Airpor 89.18 48 ⇑P **P 01 06 44.3 +1.9**
baz=90,SNR=31
PDMCI Parker Dam,Lak 89.18 48 ⇓P **P 01 06 44.5 +2.1**
baz=90,SNR=49
MDJ Mudanjiang 89.22 326 P **P 01 06 43.3 +0.9**
MDJ pP **PcP 01 06 46.4 +2.6**
MDJ sP sP 01 06 47.9 -8.6
MDJ PP **PP 01 10 14.9 +1.3**
MDJ S **S 01 17 30.5 +1.3**
MDJ pmax pmax
comp=Z,62nm,1.1s
MDJ pmax pmax
comp=Z,4µm,6.3s
MDJ LR LR
comp=N,6µm,27.5s
MDJ LR LR
comp=E,4µm,30.1s
MDJ LR LR
comp=Z,8µm,30.1s
MDJ Mudanjiang 89.22 326 *e*P **P 01 06 42.8 +0.4**
comp=Z,197nm,1.4s
NVAR Mina Array Bea 89.33 43 P **P 01 06 44.4 +1.0**
NVAR PKiKP **PKiKP 01 11 44.0 +2.5**
NVAR PKKPbc **PKKPbc 01 24 20.1 -0.1**
NVAR P'P' 01 32 24.2
NVAR Mina Array Bea 89.33 43 P **P 01 06 44.4 +1.0**
comp=Z,96nm,1.0s,baz=221,slow=6.1,SNR=197
NVAR PKiKP **PKiKP 01 11 44.0 +2.5**
comp=Z,3.6nm,1.0s,baz=211,slow=5.1,SNR=3.0
NVAR PKKPbc **PKKPbc 01 24 20.1 -0.1**
comp=Z,2.2nm,0.5s,baz=50,slow=4.6,SNR=11
NVAR PKPPKP **P'P'df 01 32 24.2 -0.6**
comp=Z,3.6nm,0.9s,baz=77,slow=2.1,SNR=9.9
NVAR LR LR 01 42 32.0
comp=Z,26µm,18.5s,baz=135,slow=33
Z14A Wintersburg 89.36 50 ⇓P **P 01 06 45.3 +2.0**
baz=90,SNR=68
DL2 Dalian 89.40 318⇑*i*P **P 01 06 43.0 -0.3**
DL2 PP **PP 01 10 14.3 -0.8**
DL2 S **S 01 17 31.6 +0.5**
DL2 pmax pmax
comp=Z,140nm,1.1s
DL2 pmax pmax
comp=Z,3µm,5.9s
DL2 LR LR
comp=N,2µm,21.1s
DL2 LR LR
comp=E,2µm,21.3s
DL2 LR LR
comp=Z,4µm,21.5s
NV11 Mina Array Sit 89.42 43 *e*P **P 01 06 44.6 +1.0**
HUMO Hull Mountain 89.64 38 *e*P **P 01 06 46.4 +2.0**
comp=Z,381nm,1.5s
Y14A Wickenburg 89.68 49 ⇑P **P 01 06 46.7 +1.8**
baz=90,SNR=143
HABR Khabarovsk 89.73 331*e*P **P 01 06 45.2 +0.6**
HABR *e* 01 10 16.0
HABR *e*PPP PPP 01 12 12.5
HABR *e* 01 17 40.4
HABR *e*SS SS 01 23 35.7 +3.9
HABR *e*SSS SSS 01 27 09.3
HABR pmax pmax
comp=Z,2µm,2.9s
HABR MLR MLR
comp=Z,5µm,18.0s
HABR MLR MLR
comp=E,5µm,17.0s
W13A Hualapai Mount 89.85 48 ⇓P **P 01 06 47.6 +1.7**
baz=90,SNR=148
VSP Spence Mountai 89.98 38 P **P 01 06 48.4 +2.2**
TUC Tucson 90.14 52 *e*P **P 01 06 49.2 +2.1**
TUC pmax pmax
comp=Z,44nm,1.2s
TUC Tucson 90.14 52 *e*P **P 01 06 49.1 +2.1**
comp=Z,44nm,1.2s
TUC *e*PKKPdf **PKKPdf 01 24 13.0 -1.2**
TUC *e*PKKPbc **PKKPbc 01 24 17.6 0.0**
MEIG Mezcala 90.16 69 P **P 01 06 48.9 +1.4**
SNY Shenyang 90.30 321 ⇑P **P 01 06 47.8 +0.3**
SNY SKS **SKSac 01 17 12.9 -3.1**
SNY S **SKKSac 01 17 29.9 0.0**
SNY pmax pmax
comp=Z,60nm,1.1s
SNY pmax pmax
comp=Z,3µm,4.3s
SNY LR LR
comp=N,3µm,22.5s
SNY LR LR
comp=E,2µm,22.6s
SNY LR LR
comp=Z,3µm,26.0s
TIA Tai'an 90.33 313 ⇑P **P 01 06 47.5 -0.3**
TIA PP **PP 01 10 18.8 -3.9**
TIA pmax pmax
comp=Z,5µm,9.5s
TIA LR LR
comp=N,7µm,24.1s
TIA LR LR
comp=E,7µm,25.9s
TIA LR LR
comp=Z,12µm,24.1s
PLIG Platanillo 90.50 69 P **P 01 06 50.0 +0.9**
ZAIG Zacatecas 90.51 64 P **P 01 06 50.3 +1.0**
PNIG Pinotepa 90.53 71 P **P 01 06 48.5 -0.7**
HPIG 90.54 59 P **P 01 06 49.1 -0.2**
MOD Modoc 90.56 39 *e*P **P 01 06 49.7 +0.8**
comp=Z,60nm,1.4s
MOD *e*PKKPbc **PKKPbc 01 24 17.9 +0.8**
319A Douglas 90.59 53 ⇑P **P 01 06 51.0 +1.7**
baz=91,SNR=22
CN2 Changchun 90.69 323 ⇑P **P 01 06 49.3 0.0**
CN2 *e*sP **sP 01 07 03.9 +0.5**
CN2 PP **PP 01 10 22.3 -3.0**
CN2 SKS **SKSac 01 17 15.5 -2.7**
CN2 *e*S **S 01 17 38.3 -4.5**
CN2 SS **SS 01 23 46.6 +0.6**
CN2 pmax pmax
comp=Z,120nm,1.0s
CN2 LR LR
comp=N,4µm,20.0s
CN2 LR LR
comp=E,6µm,20.0s
CN2 LR LR
comp=Z,8µm,20.0s
MPOR Mary's Peak 90.69 36 P **P 01 06 51.4 +2.0**
K05A Summer Lake 90.81 39 P **P 01 06 51.6 +1.4**
COR Corvallis 90.87 36 *e*P **P 01 06 52.7 +2.6**
COR pmax pmax
comp=Z,349nm,1.4s
COR Corvallis 90.87 36 *e*P **P 01 06 52.7 +2.6**
comp=Z,58nm,1.4s
OHAK Old Harbor 90.88 13 *e*P **P 01 06 51.0 +1.3**
comp=Z,241nm,1.0s
R11A Troy Canyon, C 90.89 44 ⇓P **P 01 06 51.7 +1.1**
baz=91
CGIG 90.89 55 P **P 01 06 51.6 +0.8**
X16A Lo Mia Camp, P 91.00 50 ⇓P **P 01 06 53.1 +1.9**
baz=91,SNR=166
BROR Big Rock Looko 91.07 37 P **P 01 06 52.4 +1.4**
320A Kipp Ranch, An 91.08 54 ⇑P **P 01 06 53.5 +1.9**
baz=92,SNR=33
HEBO Mount Hebo 91.09 35 P **P 01 06 53.2 +2.0**
YAIG Yautepec 91.10 69 P **P 01 06 52.5 +0.6**
BMN Battle Mountai 91.29 42 *e*P **P 01 06 53.9 +1.5**
BMN pmax pmax
comp=Z,154nm,1.2s
BMN Battle Mountai 91.29 42 *e*P **P 01 06 53.9 +1.5**
comp=Z,154nm,1.2s
220A Playas Peak, P 91.42 53 ⇑P **P 01 06 55.0 +1.8**
baz=92,SNR=56

H04A	**Detroit Lake**	**91.50**	**36**	P		**P**	**01 06 53.8**	**+0.7**
KDAK	**Kodiak Island**	**91.54**	**14**	*e*P		**P**	**01 06 53.4**	**+0.6**
	comp=Z,223nm,1.4s							
KDAK				PKKPbc		**PKKPbc**	**01 24 15.0**	**-0.2**
KDAK				P'P'			01 32 24.6	
KDAK	**Kodiak Island**	**91.54**	**14**	P		**P**	**01 06 53.8**	**+1.0**
	comp=Z,73nm,0.9s,baz=163,slow=2.3,SNR=46							
KDAK				PKKPbc		**PKKPbc**	**01 24 15.0**	**-0.2**
	comp=Z,7.1nm,0.9s,baz=48,slow=3.4,SNR=3.6							
KDAK				PKPPKP	P'P'df		01 32 24.6	+6.5
	comp=Z,11nm,1.1s,baz=74,slow=1.8,SNR=3.9							
PPM	**Popocatepetl**	**91.56**	**69**	P		**P**	**01 06 56.2**	**+1.6**
PPM	**Popocatepetl**	**91.56**	**69**	P		**P**	**01 06 56.2**	**+1.6**
GYA	**Guiyang**	**91.66**	**300**	⇑*i*P		**P**	**01 06 55.5**	**+1.1**
GYA				PP		**PP**	**01 10 36.5**	**+3.1**
GYA				SKS		**SKSac**	**01 17 25.6**	**+0.7**
GYA				S		**ScS**	**01 17 55.3**	**-0.1**
GYA				pmax	pmax			
	comp=Z,190nm,1.0s							
GYA				pmax	pmax			
	comp=Z,1μm,8.4s							
GYA				LR	LR			
	comp=N,2μm,24.5s							
GYA				LR	LR			
	comp=E,3μm,27.6s							
GYA				LR	LR			
	comp=Z,4μm,27.0s							
U15A	**North Rim**	**91.69**	**48**	⇓P		**P**	**01 06 56.2**	**+1.7**
	baz=92,SNR=145							
KLR	**Kul'dur**	**91.70**	**330**	⇓*i*P		**P**	**01 06 50.8**	**-3.0**
KLR				*e*			01 10 28.5	
KLR				pmax	pmax			
	comp=Z,500nm,2.6s							
WUAZ	**Wupatki**	**91.72**	**49**	*e*P		**P**	**01 06 56.0**	**+1.6**
	comp=Z,137nm,1.2s							
WUAZ	**Wupatki**	**91.72**	**49**	⇓P		**P**	**01 06 56.4**	**+1.9**
	baz=92,SNR=66							
CCUT	**Cedar City**	**91.73**	**46**	*e*P		**P**	**01 06 56.5**	**+1.9**
	comp=Z,106nm,1.3s							
120A	**U Bar Ranch, L**	**91.73**	**53**	⇑P		**P**	**01 06 56.5**	**+1.9**
	baz=92,SNR=48							
ENH	**Enshi**	**91.80**	**305**	*e*P		**P**	**01 06 55.0**	**+0.1**
	comp=Z,505nm,1.3s							
ARUT	**Antelope Range**	**91.83**	**46**	*e*P		**P**	**01 06 56.8**	**+1.8**
ARUT				pmax	pmax			
	comp=Z,38nm,1.0s							
ARUT	**Antelope Range**	**91.83**	**46**	*e*P		**P**	**01 06 56.8**	**+1.8**
	comp=Z,38nm,1.0s							
WVOR	**Wild Horse Val**	**91.83**	**40**	*e*P		**P**	**01 06 55.7**	**+0.9**
WVOR				pmax	pmax			
	comp=Z,166nm,1.4s							
WVOR	**Wild Horse Val**	**91.83**	**40**	*e*P		**P**	**01 06 55.7**	**+0.9**
	comp=Z,166nm,1.4s							
DEIG	**Demacu**	**91.90**	**67**	P		**P**	**01 06 56.5**	**+0.7**
221A	**Mesquite Ranch**	**92.00**	**53**	⇑P		**P**	**01 06 57.5**	**+1.7**
	baz=92,SNR=5.3							
VHO	**Vista Hermosa**	**92.02**	**71**	P		**P**	**01 06 56.9**	**+0.5**
X18A	**Snowflake**	**92.04**	**50**	⇓P		**P**	**01 06 57.9**	**+1.9**
	baz=92,SNR=49							
Z20A	**Nine Sixteen R**	**92.10**	**52**	⇓P		**P**	**01 06 58.2**	**+1.9**
	baz=92,SNR=65							
VIPM	**Ingram Point**	**92.19**	**37**	P		**P**	**01 06 57.3**	**+0.9**
VIPM	**Ingram Point**	**92.19**	**37**	P		**P**	**01 06 57.3**	**+0.9**
TPIG	**Tehuac#an**	**92.23**	**70**	P		**P**	**01 06 59.8**	**+2.6**
121A	**Cookes Peak, D**	**92.30**	**53**	⇓P		**P**	**01 06 59.0**	**+1.7**
	baz=93,SNR=16							
VFP	**Flag Point**	**92.31**	**36**	P		**P**	**01 06 57.7**	**+0.7**
222A	**Williams Famil**	**92.52**	**54**	⇑P		**P**	**01 06 59.5**	**+1.3**
	baz=93,SNR=10.0							
W18A	**Petrified Fore**	**92.53**	**50**	⇑P		**P**	**01 06 59.9**	**+1.6**
	baz=93							
STD	**Studebaker Rid**	**92.58**	**35**	P		**P**	**01 06 59.5**	**+1.4**
NLWA	**Neilton Lookou**	**92.60**	**34**	*e*P		**P**	**01 06 59.0**	**+0.9**
	comp=Z,86nm,1.0s							
ELK	**Elko**	**92.64**	**43**	*e*P		**P**	**01 07 00.1**	**+1.3**
	comp=Z,569nm,1.0s							
ELK				PKKPbc		**PKKPbc**	**01 24 11.6**	**-0.3**
ELK				P'P'			01 32 22.1	
ELK	**Elko**	**92.64**	**43**	PKKPbc	PKKPbc		01 24 11.6	-0.3
	comp=Z,5.1nm,0.8s,baz=65,slow=3.6,SNR=9.4							
ELK				PKPPKP		**P'P'df**	**01 32 22.1**	**+3.5**
	comp=Z,1.1nm,0.8s,baz=215,slow=3.8,SNR=3.5							
ELK				LR	LR		01 44 09.1	
	comp=Z,25μm,19.0s,baz=217,slow=33							
TDL	**Tradedollar La**	**92.66**	**35**	P		**P**	**01 06 59.8**	**+1.3**
OOW	**Octopus West**	**92.69**	**33**	P		**P**	**01 07 01.5**	**+2.9**
Y20A	**Horse Springs,**	**92.71**	**52**	⇓P		**P**	**01 07 01.1**	**+1.9**
	baz=93,SNR=54							
Z21A	**St. Cloud Mine**	**92.83**	**52**	⇑P		**P**	**01 07 01.5**	**+1.8**
	baz=93,SNR=30							
223A	**Chaparral, Ant**	**92.93**	**54**	⇓P		**P**	**01 07 01.6**	**+1.5**
	baz=93							
122A	**Conniff Cattle**	**92.93**	**53**	⇓P		**P**	**01 07 02.1**	**+2.0**
	baz=93							
X20A	**Quemado**	**93.01**	**51**	⇑P		**P**	**01 07 02.4**	**+1.9**
	baz=93,SNR=42							
MVU	**Marysvale**	**93.03**	**46**	*e*P		**P**	**01 07 03.3**	**+2.7**
	comp=Z,92nm,1.3s							
MVU				*e*PKKPbc		**PKKPbc**	**01 24 10.8**	**+0.2**
MSU	**Marysvale**	**93.06**	**46**	*e*P		**P**	**01 07 02.7**	**+2.0**
MSU	**Marysvale**	**93.06**	**46**	*e*P		**P**	**01 07 02.7**	**+2.0**
MSU				*e*PKKPbc		**PKKPdf**	**01 24 10.0**	**+0.5**
LON	**Longmire**	**93.14**	**35**	*e*P		**P**	**01 07 01.6**	**+1.0**
LON				*e*			01 10 41.8	
LON				pmax	pmax			
	comp=Z,300nm,2.2s							
LON	**Longmire**	**93.14**	**35**	*e*P		**P**	**01 07 01.6**	**+1.0**
	comp=Z,300nm,2.2s							
LON				*e*PP		**PP**	**01 10 41.8**	**-2.9**
LON				*e*PKKPbc		**PKKPbc**	**01 24 10.1**	**-0.4**
626A	**Big Bend Ranch**	**93.14**	**57**	⇑P		**P**	**01 07 02.1**	**+1.0**
	baz=94,SNR=8.8							
WPW	**White Pass**	**93.23**	**35**	P		**P**	**01 07 02.8**	**+1.7**
425A	**Indio Mountain**	**93.23**	**56**	⇓P		**P**	**01 07 02.7**	**+1.1**
	baz=94,SNR=18							
Y21A	**Point of Rocks**	**93.24**	**52**	⇓P		**P**	**01 07 03.6**	**+1.9**
	baz=94,SNR=52							
324A	**Moseley Ranch,**	**93.26**	**55**	⇑P		**P**	**01 07 02.5**	**+0.8**
	baz=94,SNR=8.6							
Z22A	**Elephant Butte**	**93.28**	**53**	⇓P		**P**	**01 07 03.3**	**+1.5**
	baz=94,SNR=12							
CMAR	**Chiang Mai Arr**	**93.30**	**290**	P		**P**	**01 07 03.0**	**+1.0**
CMAR				PP		**PP**	**01 10 49.2**	**+2.9**
CMAR				PKKPbc		**PKKPbc**	**01 24 08.9**	**+0.1**
CMAR				P'P'			01 32 18.1	
CMAR	**Chiang Mai Arr**	**93.30**	**290**	P		**P**	**01 07 03.0**	**+1.0**
	comp=Z,22nm,1.0s,baz=145,slow=3.6,SNR=22							
CMAR				PP		**PP**	**01 10 49.2**	**+2.9**
	comp=Z,40nm,1.0s,baz=136,slow=6.0,SNR=16							
CMAR				PKKPbc		**PKKPbc**	**01 24 08.9**	**+0.1**
	comp=Z,3.8nm,0.6s,baz=289,slow=4.0,SNR=12							
CMAR				PKPPKP		**P'P'df**	**01 32 18.1**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=300,slow=5.8,SNR=4.9							
BJT	**Baijiatuau**	**93.33**	**316**	*e*P		**P**	**01 07 02.4**	**+0.8**
	comp=Z,208nm,1.3s							
BJI	**Beijing**	**93.33**	**316**	P		**P**	**01 07 02.5**	**+0.9**
BJI				SS	SS		01 24 28.1	+3.9
BJI				pmax	pmax			
	comp=Z,110nm,1.3s							
BJI				pmax	pmax			
	comp=Z,3μm,5.4s							
BJI				LR	LR			
	comp=N,9μm,20.8s							
BJI				LR	LR			
	comp=E,8μm,19.8s							
BJI				LR	LR			
	comp=Z,9μm,21.9s							
W20A	**Ramah**	**93.35**	**51**	⇑P		**P**	**01 07 04.0**	**+1.8**
	baz=94,SNR=90							
TXAR	**Lajitas Array**	**93.36**	**58**	P		**P**	**01 07 03.2**	**+1.1**
TXAR				PKiKP	PKiKP		01 11 54.0	+5.5
TXAR				PKKP		**PKKPdf**	**01 24 04.1**	**-4.3**
TXAR				P'P'			01 32 18.6	
TXAR	**Lajitas Array**	**93.36**	**58**	P		**P**	**01 07 03.2**	**+1.1**
	comp=Z,23nm,1.2s,baz=212,slow=4.4,SNR=29							
TXAR				PKiKP	PKiKP		01 11 54.0	+5.5
	comp=Z,1.2nm,0.8s,baz=200,slow=4.8,SNR=3.1							
TXAR				PKKP		**PKKPdf**	**01 24 04.1**	**-4.3**
	comp=Z,1.5nm,0.8s,baz=134,slow=5.4,SNR=3.8							
TXAR				PKPPKP		**P'P'df**	**01 32 18.6**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=106,slow=0.8,SNR=3.4							
TXAR				LR	LR		01 44 04.2	
	comp=Z,28μm,18.3s,baz=280,slow=32							
123A	**Bell Site, Whi**	**93.40**	**54**	⇑P		**P**	**01 07 03.9**	**+1.6**
	baz=94							
X21A	**Alamocita Cree**	**93.42**	**51**	⇑P		**P**	**01 07 04.1**	**+1.6**
	baz=94,SNR=43							
526A	**Mary Lane Ranc**	**93.46**	**57**	⇑P		**P**	**01 07 03.6**	**+0.9**
	baz=94,SNR=27							
MNTX	**Cornudas Mount**	**93.48**	**55**	*e*P		**P**	**01 07 03.2**	**+0.7**
	comp=Z,18nm,1.1s							
CMMT	**Chiang Mai**	**93.48**	**290**	P		**P**	**01 07 02.7**	**-0.1**
	comp=Z,40nm,1.3s,comp=Z,2μm							
CHTO	**Chiang Mai**	**93.48**	**290**	*e*P		**P**	**01 07 02.5**	**-0.3**
CHTO				pmax	pmax			
	comp=Z,37nm,1.1s							
CHTO	**Chiang Mai**	**93.48**	**290**	*e*P		**P**	**01 07 02.5**	**-0.3**
	comp=Z,9.3nm,1.1s							
CHTO				*e*PP		PP	01 10 41.4	-6.4
CHTO	**Chiang Mai**	**93.48**	**290**	P		**P**	**01 07 02.5**	**-0.3**
	SNR=20							
CHTO	**Chiang Mai**	**93.48**	**290**	P		**P**	**01 07 01.9**	**-0.9**
	comp=Z,44nm,1.4s,comp=Z,3μm							
LPA	**La Plata**	**93.56**	**135**	*c*eP		**P**	**01 07 03.0**	**0.0**
LPA				pP		**PcP**	**01 07 05.0**	**+1.5**
LPA				PKiKP		**PKiKP**	**01 11 48.0**	**-0.6**
LPA				SKS		**SKSac**	**01 17 37.0**	**+1.7**
LPA				S		**ScS**	**01 18 12.0**	**+1.0**
LPA				SP		**SP**	**01 19 30.0**	**+8.1**
NNA	**Nana**	**93.59**	**106**	*e*P		**P**	**01 07 04.2**	**+0.6**
	comp=Z,121nm,1.1s							
NNA	**Nana**	**93.59**	**106**	P		**P**	**01 07 05.5**	**+1.9**
	comp=Z,523nm,1.3s,SNR=11							
NNA	**Nana**	**93.59**	**106**	P		**P**	**01 07 04.7**	**+1.1**
	comp=Z,69nm,0.9s,baz=257,slow=8.0,SNR=30							
NNA				LR	LR		01 39 13.6	
	comp=Z,23μm,21.9s,baz=259,slow=29							
224A	**Cornudas Mount**	**93.59**	**54**	⇓P		**P**	**01 07 04.4**	**+1.2**
	baz=94							
627A	**Terlingua Ranc**	**93.62**	**58**	⇓P		**P**	**01 07 04.4**	**+1.0**
	baz=94,SNR=37							
Y22A	**Socorro**	**93.68**	**52**	⇓P		**P**	**01 07 04.7**	**+1.1**
	baz=94,SNR=23							
PGC	**Sidney**	**93.69**	**33**	*e*P		**P**	**01 07 04.9**	**+1.9**
	comp=Z,9.5nm,1.5s							
DUG	**Dugway**	**93.72**	**44**	*e*P		**P**	**01 07 04.6**	**+1.0**
DUG				pmax	pmax			
	comp=Z,49nm,1.3s							
DUG	**Dugway**	**93.72**	**44**	*e*P		**P**	**01 07 04.6**	**+1.0**
	comp=Z,49nm,1.3s							
DUG				*e*PKKPbc		**PKKPdf**	**01 24 07.6**	**-0.7**
DUG	**Dugway**	**93.72**	**44**	⇓P		**P**	**01 07 04.6**	**+1.0**
	baz=94							
V20A	**Brimhall**	**93.77**	**50**	⇑P		**P**	**01 07 05.1**	**+1.0**
	baz=94,SNR=15							
Z23A	**Rita Site, Whi**	**93.79**	**53**	⇑P		**P**	**01 07 05.4**	**+1.3**
	baz=94							
Y22D	**IRIS PASSCAL I**	**93.79**	**52**	⇑P		**P**	**01 07 05.4**	**+1.4**
	baz=94							
LENM	**Lemitar**	**93.81**	**52**	*e*P		**P**	**01 07 05.7**	**+1.5**
LAZ	**Ladron**	**93.83**	**52**	*e*P		**P**	**01 07 06.2**	**+1.8**
	comp=Z,30nm,1.4s							
LVC	**Limon Verde**	**93.84**	**119**	*e*P		**P**	**01 07 06.7**	**+1.8**
	comp=Z,89nm,1.2s							
LVC				*e*PKKPdf		**PKKPdf**	**01 24 05.4**	**-0.2**
LVC				PKKPbc		**PKKPbc**	**01 24 08.5**	**+1.2**
LVC	**Limon Verde**	**93.84**	**119**	PKKPbc	PKKPbc		01 24 08.5	+1.2
	comp=Z,8.4nm,0.9s,baz=59,slow=5.5,SNR=4.8							
LVC				LR	LR		01 39 25.2	
	comp=Z,19μm,21.0s,baz=174,slow=29							
426A	**McDonald Obser**	**93.85**	**56**	⇑P		**P**	**01 07 05.2**	**+0.7**
	baz=94,SNR=19							
527A	**Woodward Ranch**	**93.85**	**57**	⇓P		**P**	**01 07 05.0**	**+0.5**
	baz=94,SNR=19							
KMI	**Kunming**	**93.87**	**297**	P		**P**	**01 07 05.6**	**+0.9**
KMI				pP		**pP**	**01 07 11.6**	**-3.5**
KMI				sP		**sP**	**01 07 14.9**	**-4.0**
KMI				PP		**PP**	**01 10 51.4**	**+0.4**
KMI				SKS		**SKSac**	**01 17 37.6**	**+0.2**
KMI				S		**ScS**	**01 18 14.9**	**+0.8**
KMI				SS		**SS**	**01 24 34.9**	**+2.2**
KMI				pmax	pmax			
	comp=Z,81nm,1.1s							
KMI				pmax	pmax			
	comp=Z,2μm,7.8s							
KMI				LR	LR			
	comp=N,1μm,23.1s							
KMI				LR	LR			
	comp=E,8μm,20.2s							
KMI				LR	LR			
	comp=Z,7μm,20.2s							
W21A	**San Fidel**	**93.91**	**51**	⇑P		**P**	**01 07 06.0**	**+1.3**
	baz=94							
S18A	**Hurst Farm, Bl**	**93.92**	**48**	⇓P		**P**	**01 07 05.9**	**+1.2**
	baz=94,SNR=10.0							
Q16A	**Castle Valley**	**93.93**	**46**	⇓P		**P**	**01 07 06.2**	**+1.5**
	baz=94							
X22A	**Bernardo**	**93.98**	**52**	⇑P		**P**	**01 07 06.6**	**+1.7**
	baz=94,SNR=7.6							
124A	**Stringfield Ra**	**94.00**	**54**	⇓P		**P**	**01 07 06.3**	**+1.1**
	baz=94,SNR=12							
RSO	**Redoubt South**	**94.00**	**12**	*e*P		**P**	**01 07 03.6**	**-0.8**
628A	**Black Gap, Mar**	**94.00**	**58**	⇓P		**P**	**01 07 05.9**	**+0.9**
	baz=94,SNR=18							
MFID	**Camas Ranch**	**94.03**	**40**	*e*P		**P**	**01 07 06.2**	**+1.3**
	comp=Z,64nm,0.9s							
MFID				*e*PKKPbc		**PKKPbc**	**01 24 08.3**	**+0.2**
MFID	**Camas Ranch**	**94.03**	**40**	⇑P		**P**	**01 07 05.9**	**+1.0**
	baz=94							
BNM	**Barren Site**	**94.03**	**52**	*e*P		**P**	**01 07 06.7**	**+1.4**
	comp=Z,117nm,2.0s							
BNM				*e*PP		**PP**	**01 10 56.0**	**+3.8**
HAWA	**Hanford**	**94.03**	**37**	*e*P		**P**	**01 07 06.5**	**+1.9**
	comp=Z,139nm,1.3s							
HAWA				*e*PKKPbc		**PKKPbc**	**01 24 09.3**	**+1.2**
LNIG	**Linares**	**94.04**	**63**	P		**P**	**01 07 05.2**	**-0.1**
U20A	**Newcomb**	**94.08**	**50**	⇑P		**P**	**01 07 06.8**	**+1.4**
	baz=94,SNR=9.8							
225A	**Deer Hill, Car**	**94.10**	**55**	⇓P		**P**	**01 07 06.7**	**+1.1**
	baz=94							
SVW2	**Sparrevohn**	**94.10**	**11**	*e*P		**P**	**01 07 05.4**	**+0.7**
	comp=Z,20nm,1.0s							
LPM	**Los Pinos Moun**	**94.12**	**52**	*e*P		**P**	**01 07 06.9**	**+1.3**
BMO	**Blue Mountains**	**94.16**	**39**	*e*P		**P**	**01 07 05.7**	**+0.2**
BMO				pmax	pmax			
	comp=Z,78nm,1.4s							
BMO	**Blue Mountains**	**94.16**	**39**	*e*P		**P**	**01 07 05.7**	**+0.2**
	comp=Z,78nm,1.4s							
BMO				*e*PP		PP	01 10 44.0	-8.7
PCIG		**94.17**	**74**	P		**P**	**01 07 07.3**	**+1.4**
TIY	**Taiyuan**	**94.21**	**312**	*e*P		**P**	**01 07 06.6**	**+0.8**
TIY				PP		**PP**	**01 10 51.1**	**-2.2**
TIY				SKS		**SKSac**	**01 17 40.8**	**+2.4**
TIY				S		**S**	**01 18 15.3**	**+0.5**
TIY				pmax	pmax			
	comp=Z,2μm,4.3s							
TIY				LR	LR			
	comp=N,3μm,19.5s							
TIY				LR	LR			
	comp=E,4μm,19.3s							
TIY				LR	LR			
	comp=Z,6μm,21.3s							
326A	**Caldwell Ranch**	**94.25**	**56**	⇓P		**P**	**01 07 06.8**	**+0.7**
	baz=95,SNR=5.4							
BBB	**Bella Bella**	**94.25**	**28**	LR		LR	01 42 13.8	
	comp=Z,11μm,21.1s,baz=213,slow=31							
Y23A	**Lovelace Mesa,**	**94.29**	**53**	⇓P		**P**	**01 07 07.4**	**+1.0**
	baz=95,SNR=14							
MPU	**Maple Canyon**	**94.32**	**45**	*e*P		**P**	**01 07 06.7**	**+0.3**
	comp=Z,37nm,1.1s							
SEW	**Seward**	**94.32**	**14**	*e*P		**P**	**01 07 05.3**	**-0.3**
	comp=Z,108nm,1.3s							
V21A	**Milan**	**94.32**	**50**	⇑P		**P**	**01 07 07.6**	**+1.0**
	baz=95,SNR=8.0							
XAN	**Xi'an**	**94.36**	**307**	P		**P**	**01 07 07.6**	**+1.0**
XAN				SKS		**SKSac**	**01 17 35.5**	**-3.9**
XAN				pmax	pmax			
	comp=Z,13nm,1.0s							
XAN				pmax	pmax			
	comp=Z,650nm,6.3s							
XAN				LR	LR			
	comp=N,4μm,19.9s							
XAN				LR	LR			
	comp=E,1μm,22.8s							
XAN				LR	LR			
	comp=Z,2μm,19.2s							
427A	**Hayter Ranch,**	**94.39**	**56**	⇑P		**P**	**01 07 07.8**	**+0.9**
	baz=95,SNR=23							
W22A	**Albuquerque**	**94.40**	**51**	⇑P		**P**	**01 07 08.2**	**+1.3**
	baz=95							
Z24A	**Sheeppen Canyo**	**94.42**	**53**	⇑P		**P**	**01 07 08.1**	**+1.1**
	baz=95,SNR=9.8							
SRU	**San Rafael**	**94.44**	**46**	⇑P		**P**	**01 07 08.1**	**+1.1**
	baz=95							
528A	**Cox Ranch, San**	**94.45**	**57**	⇓P		**P**	**01 07 08.1**	**+0.9**
	baz=95							
GDL2	**Guadalupe Moun**	**94.47**	**55**	*e*P		**P**	**01 07 08.3**	**+1.1**
GDL2				*e*PP		**PP**	**01 10 59.4**	**+3.9**
125A	**Gardner Draw,**	**94.53**	**54**	⇑P		**P**	**01 07 08.5**	**+1.0**
	baz=95,SNR=13							
P17A	**Butcher Ranch,**	**94.53**	**46**	⇓P		**P**	**01 07 08.7**	**+1.4**
	baz=95							
226B	**Tecolote Peak,**	**94.54**	**55**	⇑P		**P**	**01 07 08.0**	**+0.5**
	baz=95,SNR=10							
THIG		**94.55**	**75**	P		**P**	**01 07 08.7**	**+1.0**
X23A	**Hourglass Bar**	**94.58**	**52**	⇑P		**P**	**01 07 08.8**	**+1.1**
	baz=95							
MVCO	**Mesa Verde**	**94.58**	**49**	P		**P**	**01 07 08.8**	**+1.0**
	baz=95							
ANMO	**Albuquerque**	**94.60**	**52**	*e*P		**P**	**01 07 08.4**	**+0.5**
	comp=Z,50nm,1.3s							
ANMO				PKKPbc		**PKKPdf**	**01 24 06.6**	**+0.1**
ANMO	**Albuquerque**	**94.60**	**52**	PKKPbc	PKKPbc		01 24 06.6	+0.3
	comp=Z,1.9nm,0.9s,baz=28,slow=2.9,SNR=5.5							
ANMO				LR	LR		01 45 48.9	
	comp=Z,25μm,18.3s,baz=217,slow=33							
327A	**Balmorhea Ranc**	**94.62**	**56**	⇓P		**P**	**01 07 08.7**	**+0.8**
	baz=95							
I12A	**Atlanta**	**94.66**	**41**	⇓P		**P**	**01 07 09.3**	**+1.4**
	baz=95							
CTU	**Camp Tracy**	**94.66**	**45**	*e*P		**P**	**01 07 09.5**	**+1.6**
	comp=Z,242nm,2.2s							
U21A	**Nageezi**	**94.67**	**50**	⇑P		**P**	**01 07 09.5**	**+1.3**
	baz=95,SNR=52							
Y24A	**Capitan**	**94.71**	**53**	⇓P		**P**	**01 07 09.3**	**+0.9**
	baz=95,SNR=23							
HVU	**Hansel Valley**	**94.73**	**43**	*e*P		**P**	**01 07 09.7**	**+1.5**
HVU				pmax	pmax			
	comp=Z,119nm,1.2s							
HVU	**Hansel Valley**	**94.73**	**43**	*e*P		**P**	**01 07 09.7**	**+1.5**
	comp=Z,119nm,1.2s							
HVU				*e*PKKPbc		**PKKPbc**	**01 24 05.5**	**-0.8**
JLU	**Jordanelle**	**94.79**	**45**	*e*P		**P**	**01 07 09.5**	**+0.9**
	comp=Z,75nm,1.6s							
JLU				*e*PKKPbc		**PKKPdf**	**01 24 06.6**	**+0.1**
DAU	**Daniels Canyon**	**94.79**	**45**	*e*P		**P**	**01 07 10.1**	**+1.4**
DAU	**Daniels Canyon**	**94.79**	**45**	*e*P		**P**	**01 07 10.1**	**+1.4**
DAU				*e*PKKPdf		**PKKPbc**	**01 24 04.8**	**-1.3**
SPU	**Mount Spurr**	**94.80**	**13**	*e*P		**P**	**01 07 07.3**	**-0.5**
TGIG		**94.81**	**73**	P		**P**	**01 07 09.5**	**+0.5**
Z25A	**Roswell**	**94.84**	**54**	⇓P		**P**	**01 07 10.0**	**+1.1**
	baz=95,SNR=12							
428A	**Kincaid Ranch,**	**94.84**	**57**	⇓P		**P**	**01 07 10.1**	**+1.2**
	baz=95,SNR=11							
529A	**Stev Forest Ra**	**94.84**	**58**	⇑P		**P**	**01 07 09.5**	**+0.6**
	baz=95,SNR=6.9							
V22A	**San Miguel Ran**	**94.86**	**51**	⇑P		**P**	**01 07 10.1**	**+1.0**
	baz=95,SNR=8.4							
CRAG	**Craig**	**94.89**	**24**	*e*P		**P**	**01 07 09.5**	**+1.1**
	comp=Z,111nm,1.2s							
ATAH	**Atahualpa**	**94.91**	**101**	P		**P**	**01 07 09.7**	**-0.4**
ATAH	**Atahualpa**	**94.91**	**101**	P		**P**	**01 07 09.7**	**-0.4**
	comp=Z,33nm,1.1s,baz=293,slow=3.8,SNR=10							
ATAH				LR	LR		01 40 14.3	
	comp=Z,6μm,22.0s,baz=192,slow=29							
HLID	**Hailey**	**94.91**	**41**	*e*P		**P**	**01 07 10.2**	**+1.2**
	comp=Z,82nm,1.4s							
HLID				*e*PKKPbc		**PKKPbc**	**01 24 04.8**	**-1.0**
HLID	**Hailey**	**94.91**	**41**	⇓P		**P**	**01 07 10.4**	**+1.4**
	baz=95							
P18A	**Preston Nutter**	**94.93**	**46**	⇓P		**P**	**01 07 10.1**	**+0.8**
	baz=95,SNR=24							
W23A	**Werner Place,**	**94.93**	**52**	⇑P		**P**	**01 07 10.2**	**+0.8**
	baz=95							
J13A	**Cove Ranch, Pi**	**94.94**	**41**	⇑P		**P**	**01 07 10.6**	**+1.4**
	baz=95							
126A	**Clayton Basin,**	**94.96**	**55**	⇓P		**P**	**01 07 10.1**	**+0.6**
	baz=95							
PV04	**Paradox Valley**	**95.03**	**48**	*e*P		**P**	**01 07 10.2**	**+0.5**
PV04				*e*PKKPbc		**PKKPdf**	**01 24 06.2**	**+0.3**
S20A	**Disappointment**	**95.04**	**48**	⇓P		**P**	**01 07 10.7**	**+0.8**
	baz=96,SNR=15							
GAMB	**Gambell**	**95.06**	**3**	*e*P		**P**	**01 07 09.5**	**+0.6**
	comp=Z,76nm,1.1s							
X24A	**Lazy VL Ranch,**	**95.08**	**52**	⇑P		**P**	**01 07 10.5**	**+0.4**
	baz=96							
T21A	**Navajo Lake**	**95.08**	**49**	⇓P		**P**	**01 07 10.9**	**+0.9**
	baz=96,SNR=8.6							
PV01	**Paradox Valley**	**95.08**	**48**

WRAK	**Wrangell Islan**	**95.91**	**24**	*e*P		**P**		**01 07 12.0**	**-0.9**
	comp=Z,150nm,1.7s								
430A	**Baggett Ranch,**	**95.91**	**58**	⇓P		**P**		**01 07 14.3**	**+0.6**
	baz=96								
S22A	**4UR Ranch, Cre**	**95.97**	**49**	⇑P		**P**		**01 07 15.4**	**+1.2**
	baz=96,SNR=17								
G13A	**Cobalt**	**95.98**	**40**	⇓P		**P**		**01 07 14.7**	**+0.9**
	baz=96								
P20A	**De Beque**	**96.00**	**47**	⇓P		**P**		**01 07 14.9**	**+0.8**
	baz=96,SNR=8.9								
O19A	**Miners Draw (B**	**96.02**	**46**	⇑P		**P**		**01 07 14.8**	**+0.7**
	baz=96,SNR=8.2								
128A	**Castleberry Fa**	**96.03**	**55**	⇑P		**P**		**01 07 14.7**	**+0.4**
	baz=96								
DIV	**Divide**	**96.04**	**15**	*e*P		**P**		**01 07 14.8**	**+1.2**
	comp=Z,128nm,1.3s								
531A	**Rocksprings**	**96.08**	**58**	⇑P		**P**		**01 07 14.9**	**+0.4**
	baz=96,SNR=21								
T23A	**Casias Ranch,**	**96.08**	**50**	⇑P		**P**		**01 07 15.7**	**+1.0**
	baz=96								
SML	**Sawmill**	**96.10**	**14**	*e*P		**P**		**01 07 14.6**	**+0.8**
SML					pmax	pmax			
	comp=Z,9.0nm,1.0s								
SML	**Sawmill**	**96.10**	**14**	*e*P		**P**		**01 07 14.6**	**+0.8**
	comp=Z,9.0nm,1.0s								
W25A	**X Bar L Ranch,**	**96.10**	**52**	⇑P		**P**		**01 07 15.0**	**+0.4**
	baz=96								
M18A	**Lyman**	**96.12**	**45**	⇑P		**P**		**01 07 15.4**	**+0.7**
	baz=96,SNR=11								
Q21A	**Lamborn Mesa,**	**96.13**	**48**	⇓P		**P**		**01 07 15.6**	**+0.9**
	baz=96								
229A	**Bryant Ranch,**	**96.14**	**56**	⇓P		**P**		**01 07 15.3**	**+0.5**
	baz=96								
H14A	**Leadore**	**96.16**	**41**	⇓P		**P**		**01 07 16.0**	**+1.3**
	baz=97,SNR=68								
X26A	**CR and CF Fran**	**96.17**	**53**	⇑P		**P**		**01 07 15.4**	**+0.4**
	baz=97								
U24A	**Moreno Valley**	**96.23**	**51**	⇓P		**P**		**01 07 16.4**	**+1.1**
	baz=97								
CD2	**Chengdu**	**96.24**	**302**	P		**P**		**01 07 15.9**	**+0.7**
CD2				pP		**pP**		**01 07 20.8**	**-4.9**
CD2				sP		sP		01 07 22.9	-6.5
CD2				PP		**PP**		**01 11 11.5**	**+2.4**
CD2				SKS		**SKSac**		**01 17 51.3**	**+1.8**
CD2				S		**S**		**01 18 32.1**	**-0.6**
CD2				sS		**ScS**		**01 18 39.8**	**+6.5**
CD2				SS		**SS**		**01 25 08.0**	**+2.0**
CD2				pmax		pmax			
	comp=Z,80nm,0.5s								
CD2				pmax		pmax			
	comp=Z,3μm,5.8s								
CD2				LR		LR			
	comp=N,6μm,21.1s								
CD2				LR		LR			
	comp=E,8μm,24.0s								
CD2				LR		LR			
	comp=Z,4μm,17.2s								
Y27A	**Causey**	**96.25**	**54**	⇓P		**P**		**01 07 15.7**	**+0.4**
	baz=97								
I15A	**Monteview**	**96.27**	**42**	⇓P		**P**		**01 07 16.6**	**+1.4**
	baz=97,SNR=8.7								
632A	**Uvalde**	**96.28**	**59**	⇑P		**P**		**01 07 16.0**	**+0.5**
	baz=97								
330A	**Mertzon**	**96.29**	**57**	⇓P		**P**		**01 07 15.5**	**0.0**
	baz=97								
R22A	**Saguache, Gunn**	**96.30**	**49**	⇓P		**P**		**01 07 16.8**	**+1.2**
	baz=97,SNR=7.5								
431A	**Sonora**	**96.31**	**58**	⇑P		**P**		**01 07 16.0**	**+0.5**
	baz=97								
AHID	**Auburn Hatcher**	**96.31**	**43**	*e*P		**P**		**01 07 16.5**	**+1.0**
	comp=Z,85nm,1.3s								
V25A	**Rancho No Teng**	**96.35**	**52**	⇑P		**P**		**01 07 16.6**	**+0.8**
	baz=97								
PPLA	**Purkeypile**	**96.36**	**12**	*e*P		**P**		**01 07 13.4**	**-1.7**
	comp=Z,20nm,1.0s								
F13A	**Darby**	**96.37**	**39**	⇑P		**P**		**01 07 16.1**	**+0.6**
	baz=97,SNR=36								
K17A	**Gardner Place,**	**96.41**	**43**	⇑P		**P**		**01 07 17.0**	**+1.1**
	baz=97,SNR=13								
L18A	**Fontenelle, Gr**	**96.44**	**44**	⇑P		**P**		**01 07 16.8**	**+0.7**
	baz=97								
Z28A	**Tucker Farm, M**	**96.46**	**55**	⇑P		**P**		**01 07 16.4**	**+0.2**
	baz=97								
129A	**Stewart Farms,**	**96.47**	**56**	⇑P		**P**		**01 07 16.5**	**+0.3**
	baz=97								
O20A	**White River Ci**	**96.47**	**47**	⇑P		**P**		**01 07 16.9**	**+0.7**
	baz=97,SNR=8.6								
S23A	**Nye Farm, Mont**	**96.49**	**50**	⇓P		**P**		**01 07 17.4**	**+0.9**
	baz=97								
G14A	**Jackson**	**96.50**	**40**	⇓P		**P**		**01 07 16.9**	**+0.7**
	baz=97,SNR=6.3								
NEW	**Newport**	**96.50**	**36**	*e*P		**P**		**01 07 16.0**	**+0.1**
	comp=Z,26nm,1.4s								
NEW					PKKPbc	**PKKPbc**		**01 24 02.1**	**+0.6**
NEW	**Newport**	**96.50**	**36**	P		**P**		**01 07 16.1**	**+0.1**
	comp=Z,12nm,1.1s,baz=252,slow=3.4,SNR=10								
NEW					PKKPbc	**PKKPbc**		**01 24 02.1**	**+0.6**
	comp=Z,2.1nm,0.4s,baz=46,slow=4.6,SNR=7.4								
NEW					LR	LR		01 46 05.4	
	comp=Z,24μm,19.4s,baz=221,slow=32								
NEW	**Newport**	**96.50**	**36**	⇓P		**P**		**01 07 16.3**	**+0.3**
	baz=97,SNR=9.4								
W26A	**Owens Ranch, T**	**96.50**	**53**	⇑P		**P**		**01 07 16.9**	**+0.5**
	baz=97								
532A	**Rocksprings**	**96.52**	**59**	⇓P		**P**		**01 07 17.0**	**+0.4**
	baz=97,SNR=11								
RRI2	**Red Ridge**	**96.54**	**43**	*e*P		**P**		**01 07 18.2**	**+1.7**
	comp=Z,63nm,1.4s								
RRI2					*e*PKKPbc	**PKKPbc**		**01 24 02.3**	**+0.8**
H15A	**Lima**	**96.56**	**41**	⇓P		**P**		**01 07 17.7**	**+1.1**
	baz=97,SNR=21								
MSTX	**Muleshoe**	**96.57**	**54**	⇑P		**P**		**01 07 16.9**	**+0.1**
	baz=97								
Q22A	**Crested Butte,**	**96.57**	**48**	⇑P		**P**		**01 07 17.8**	**+1.0**
	baz=97,SNR=6.9								
MCMT	**McKenzie Canyo**	**96.58**	**41**	*e*P		**P**		**01 07 18.1**	**+1.4**
	comp=Z,16nm,1.1s								
230A	**Sterling City**	**96.60**	**57**	⇑P		**P**		**01 07 17.1**	**+0.3**
	baz=97								
P21A	**Newcastle**	**96.61**	**47**	⇑P		**P**		**01 07 17.7**	**+0.8**
	baz=97								
HHC	**Hu-ho-hao-te**	**96.62**	**314**	*e*P		**P**		**01 07 17.4**	**+0.6**
HHC				sP		sP		01 07 22.8	-8.1
HHC				PP		**PP**		**01 11 15.3**	**+3.4**
HHC				SKS		**SKSac**		**01 17 52.4**	**+1.3**
HHC				S		**ScS**		**01 18 36.4**	**+0.3**
HHC				sS		S		01 18 43.5	+7.9
HHC				SS		**SS**		**01 25 15.0**	**+3.9**
HHC				pmax		pmax			
	comp=Z,77nm,1.6s								
HHC				pmax		pmax			
	comp=Z,3μm,11.3s								
HHC				LR		LR			
	comp=N,9μm,19.0s								
HHC				LR		LR			
	comp=E,6μm,20.2s								
HHC				LR		LR			
	comp=Z,17μm,19.0s								
C11A	**Tepee Creek (N**	**96.67**	**37**	⇓P		**P**		**01 07 17.6**	**+0.8**
	baz=97								
SMCO	**Snowmass**	**96.71**	**48**	*e*P		**P**		**01 07 19.1**	**+1.5**
	comp=Z,42nm,1.3s								
SMCO					*e*PP	**PP**		**01 11 13.0**	**0.0**
SMCO					*e*PKKPbc	**PKKPbc**		**01 24 00.7**	**-0.3**
M19A	**Rock Springs**	**96.71**	**45**	⇓P		**P**		**01 07 17.9**	**+0.5**
	baz=97								
X27A	**F and S Farms,**	**96.72**	**53**	⇓P		**P**		**01 07 17.7**	**+0.3**
	baz=97								
T24A	**Torres, Weston**	**96.75**	**51**	⇑P		**P**		**01 07 18.9**	**+1.2**
	baz=97								
I16A	**Newdale**	**96.77**	**42**	⇑P		**P**		**01 07 18.9**	**+1.5**
	baz=97,SNR=8.6								
DCID1	**Drake Creek**	**96.77**	**42**	*e*P		**P**		**01 07 19.1**	**+1.5**
	comp=Z,19nm,0.6s								
331A	**San Angelo**	**96.78**	**58**	⇓P		**P**		**01 07 17.7**	**+0.1**
	baz=97								
JCT	**Junction City**	**96.79**	**59**	*e*P		**P**		**01 07 18.4**	**+0.7**
JCT				pmax		pmax			
	comp=Z,70nm,1.7s								
JCT	**Junction City**	**96.79**	**59**	*e*P		**P**		**01 07 18.4**	**+0.7**
	comp=Z,70nm,1.7s								
JCT	**Junction City**	**96.79**	**59**	⇑P		**P**		**01 07 17.9**	**+0.2**
	baz=97								
U25A	**Circle Dot Ran**	**96.80**	**51**	⇑P		**P**		**01 07 18.6**	**+0.7**
	baz=97								
REDW	**Red Top Meadow**	**96.82**	**43**	*e*P		**P**		**01 07 18.9**	**+1.1**
	comp=Z,0.9nm,1.2s								
SDCO	**Great Sand Dun**	**96.84**	**50**	*e*P		**P**		**01 07 18.0**	**-0.1**
	comp=Z,74nm,2.0s								
SDCO					*e*PKKPbc	**PKKPbc**		**01 23 56.4**	**-4.1**
TPAW	**Teton Pass**	**96.84**	**43**	*e*P		**P**		**01 07 19.2**	**+1.3**
	comp=Z,46nm,1.0s								
TPAW					*e*PKKPbc	**PKKPbc**		**01 24 00.5**	**-0.2**
E13A	**Victor**	**96.86**	**39**	⇑P		**P**		**01 07 18.0**	**+0.3**
	baz=97,SNR=8.6								
N20A	**Spence Gulch,**	**96.86**	**46**	⇑P		**P**		**01 07 18.6**	**+0.6**
	baz=97,SNR=28								
R23A	**Moffat**	**96.88**	**49**	⇓P		**P**		**01 07 19.1**	**+0.8**
	baz=97,SNR=5.6								
V26A	**Tequesquite Ra**	**96.88**	**52**	⇓P		**P**		**01 07 18.8**	**+0.6**
	baz=97								
SEY	**Seymchan**	**96.89**	**347**	⇑*i*P		**P**		**01 07 16.8**	**-0.5**
Y28A	**McKinney Farm,**	**96.90**	**54**	⇓P		**P**		**01 07 18.2**	**0.0**
	baz=97								
J17A	**Brown Place, J**	**96.90**	**43**	⇑P		**P**		**01 07 19.1**	**+0.9**
	baz=97,SNR=28								
F14A	**Wisdom**	**96.91**	**40**	⇑P		**P**		**01 07 18.6**	**+0.5**
	baz=97								
Z29A	**Hungry Hill Ra**	**96.92**	**55**	⇑P		**P**		**01 07 18.5**	**+0.2**
	baz=97								
SNOW	**Snow King Moun**	**96.94**	**43**	*e*P		**P**		**01 07 19.6**	**+1.3**
	comp=Z,44nm,1.0s								
L19A	**Farson**	**96.95**	**44**	⇑P		**P**		**01 07 19.2**	**+0.8**
	baz=97,SNR=21								
S24A	**Houchin Ranch,**	**96.97**	**50**	⇑P		**P**		**01 07 19.8**	**+1.1**
	baz=97								
W27A	**Bowe Ranch, En**	**96.97**	**53**	⇑P		**P**		**01 07 19.0**	**+0.5**
	baz=97								
C12B	**Naegeli Ranch,**	**96.98**	**37**	⇑P		**P**		**01 07 18.9**	**+0.7**
	baz=97								
G15A	**Dillon**	**96.99**	**41**	⇑P		**P**		**01 07 19.6**	**+1.1**
	baz=97,SNR=53								
O21A	**Pagoda**	**97.00**	**47**	⇑P		**P**		**01 07 19.2**	**+0.5**
	baz=97								
432A	**Menard**	**97.00**	**58**	⇑P		**P**		**01 07 18.5**	**-0.2**
	baz=97								
TNA	**Tin City**	**97.05**	**4**	*e*P		Pdif		01 07 18.1	+0.1
	comp=Z,92nm,1.1s								
TNA					*e*PP	**PP**		**01 11 14.1**	**-0.4**
TNA					*e*PKPdf	**PKiKP**		**01 11 54.3**	**+0.7**
DLMT	**Dillon**	**97.05**	**40**	*e*P		Pdif		01 07 20.5	+1.7
	comp=Z,73nm,1.3s								
DLMT					*e*PKKPbc	**PKKPdf**		**01 24 01.4**	**-1.1**
P22A	**Eagle**	**97.08**	**48**	⇑P		Pdif		01 07 19.5	+0.3
	baz=98								
130A	**Snyder**	**97.09**	**56**	⇓P		Pdif		01 07 19.2	+0.1
	baz=98								
IMW	**Indian Meadow**	**97.09**	**42**	*e*P		Pdif		01 07 20.8	+1.6
	comp=Z,43nm,1.3s								
IMW					*e*PKKPbc	**PKKPbc**		**01 24 00.8**	**+0.8**
LOHW	**Long Hollow**	**97.11**	**43**	*e*P		Pdif		01 07 20.2	+1.0
	comp=Z,33nm,1.1s								
LOHW					*e*PKKPbc	**PKKPbc**		**01 23 58.7**	**-1.2**
MOOW	**Moose Ponds**	**97.12**	**43**	*e*P		Pdif		01 07 19.4	+0.2
	comp=Z,86nm,1.7s								
D13A	**Huson**	**97.13**	**38**	⇓P		**P**		**01 07 18.7**	**-0.2**
	baz=98,SNR=7.8								
231A	**Bronte**	**97.19**	**57**	⇑P		**P**		**01 07 19.3**	**-0.2**
	baz=98								
T25A	**Trinidad**	**97.21**	**51**	⇓P		Pdif		01 07 20.4	+0.6
	baz=98								
TRF	**Thorofare Moun**	**97.21**	**12**	*e*P		**P**		**01 07 18.6**	**-0.4**
	comp=Z,52nm,0.8s								
TRF					*e*PKPdf	**PKiKP**		**01 11 54.1**	**-0.1**
J18A	**Kendall Valley**	**97.22**	**43**	⇑P		Pdif		01 07 20.4	+0.7
	baz=98,SNR=48								
E14A	**Clinton**	**97.22**	**39**	⇓P		Pdif		01 07 19.9	+0.4
	baz=98,SNR=13								
BW06	**Boulder Array**	**97.22**	**44**	*e*P		**P**		**01 07 19.7**	**0.0**
	comp=Z,23nm,1.2s								
PDAR	**Pinedale Array**	**97.22**	**44**	P		Pdif		01 07 19.7	0.0
PDAR				PP		PP		01 11 25.8	+9.1
PDAR				PKiKP		**PKiKP**		**01 11 57.9**	**+2.9**
PDAR				PKKPbc		**PKKPbc**		**01 23 58.5**	**-1.1**
PDAR				P'P'				01 32 08.6	
PDAR	**Pinedale Array**	**97.22**	**44**	P		Pdif		01 07 19.7	0.0
	comp=Z,12nm,1.0s,baz=202,slow=2.6,SNR=52								
PDAR				PP		PP		01 11 25.8	+9.1
	comp=Z,9.0nm,1.1s,baz=228,slow=5.4,SNR=7.0								
PDAR				PKiKP		**PKiKP**		**01 11 57.9**	**+2.9**
	comp=Z,3.3nm,1.1s,baz=250,slow=2.7,SNR=3.0								
PDAR				PKKPbc		**PKKPbc**		**01 23 58.5**	**-1.1**
	comp=Z,9.5nm,1.0s,baz=84,slow=4.8,SNR=16								
PDAR				PKPPKP		**P'P'df**		**01 32 08.6**	**-1.7**
	comp=Z,2.7nm,1.0s,baz=101,slow=1.5,SNR=8.5								
PDAR				LR		LR		01 47 44.5	
	comp=Z,20μm,18.3s,baz=232,slow=33								
MSO	**Missoula**	**97.23**	**39**	*e*P		Pdif		01 07 20.1	+0.6
	comp=Z,36nm,1.6s								
MSO					*e*PP	**PP**		**01 11 16.7**	**+0.2**
MSO					*e*PKKPbc	PKKPbc		01 23 54.2	-5.3
U26A	**Atchley Ranch,**	**97.24**	**52**	⇓P		Pdif		01 07 20.5	+0.5
	baz=98								
X28A	**Dimmitt**	**97.27**	**54**	⇑P		Pdif		01 07 20.0	0.0
	baz=98								
Y29A	**Porterfield Fa**	**97.27**	**55**	⇑P		Pdif		01 07 20.1	+0.2
	baz=98								
N21A	**Black Mountain**	**97.28**	**46**	⇓P		Pdif		01 07 20.8	+0.8
	baz=98,SNR=12								
Q23A	**Hartsel**	**97.28**	**49**	⇓P		Pdif		01 07 20.7	+0.5
	baz=98								
M20A	**Sweetwater, Wa**	**97.30**	**46**	⇑P		Pdif		01 07 21.0	+0.9
	baz=98,SNR=15								
332A	**Millersview**	**97.31**	**58**	⇑P		Pdif		01 07 20.4	+0.3
	baz=98								
I17A	**Pilgrim Ck.**	**97.32**	**42**	⇓P		Pdif		01 07 21.4	+1.3
	baz=98,SNR=7.5								
Z30A	**Sanderson Ranc**	**97.34**	**56**	⇑P		Pdif		01 07 20.3	0.0
	baz=98								
R24A	**Sanders Place,**	**97.37**	**50**	⇓P		Pdif		01 07 21.6	+1.1
	baz=98								
SKAG	**Skagway**	**97.38**	**21**	*e*P		Pdif		01 07 21.0	+1.4
	comp=Z,52nm,1.4s								
QLMT	**Earlequake Lak**	**97.38**	**41**	*e*P		Pdif		01 07 22.2	+1.9
F15A	**Butte**	**97.41**	**40**	⇓P		Pdif		01 07 21.2	+0.8
	baz=98,SNR=12								
H16A	**Russell Place,**	**97.41**	**42**	⇓P		Pdif		01 07 21.9	+1.4
	baz=98,SNR=23								
G16A	**Moss Hill, Enn**	**97.41**	**41**	⇑P		Pdif		01 07 21.2	+0.8
	baz=98,SNR=20								
B12A	**Libby**	**97.41**	**37**	⇑P		Pdif		01 07 21.0	+0.9
	baz=98								
LRM	**Limekiln Ridge**	**97.42**	**40**	*e*P		Pdif		01 07 21.3	+0.8
BTO	**Baotou**	**97.43**	**313**	*e*P		**P**		**01 07 19.4**	**-1.0**
BSMT	**Bassoo Peak**	**97.43**	**38**	*e*P		Pdif		01 07 21.1	+0.6
BSMT					*e*PKKPbc	**PKKPbc**		**01 23 59.1**	**0.0**
C13A	**Hot Springs**	**97.44**	**38**	⇓P		Pdif		01 07 20.6	+0.3
	baz=98								
S25A	**Robets Cordova**	**97.49**	**50**	⇑P		Pdif		01 07 21.6	+0.6
	baz=98								
L20A	**Wamsutter**	**97.50**	**45**	⇑P		Pdif		01 07 22.0	+1.0
	baz=98,SNR=8.7								
V27A	**Dan Oppiter Fa**	**97.50**	**53**	⇑P		Pdif		01 07 21.6	+0.6
	baz=98								
131A	**Roby**	**97.54**	**56**	⇓P		Pdif		01 07 21.2	0.0
	baz=98								
O22A	**Kremmling**	**97.54**	**47**	⇓P		Pdif		01 07 22.0	+0.7
	baz=98,SNR=12								
P23A	**Jefferson**	**97.54**	**48**	⇓P		Pdif		01 07 22.6	+1.2
	baz=98								
YMR	**Madison River**	**97.55**	**42**	*e*P		Pdif		01 07 22.8	+1.7
	comp=Z,87nm,1.3s								
X29A	**Tulia**	**97.57**	**54**	⇓P		Pdif		01 07 21.8	+0.5
	baz=98								
H17A	**Grant Village**	**97.60**	**42**	⇑P		Pdif		01 07 23.4	+2.0
	baz=98,SNR=14								
D14A	**Greenough**	**97.62**	**39**	⇓P		Pdif		01 07 21.5	+0.3
	baz=98,SNR=14								
I18A	**Diamond G Ranc**	**97.63**	**43**	⇑P		Pdif		01 07 22.2	+0.7
	baz=98,SNR=9.3								
JTMT	**Jette**	**97.63**	**38**	*e*P		Pdif		01 07 21.6	+0.3
JTMT					*e*PKKPbc	**PKKPbc**		**01 23 58.6**	**+0.1**
SWMT	**Swartz Lake**	**97.63**	**38**	*e*P		**P**		**01 07 20.5**	**-0.7**
SWMT					*e*PP	**PP**		**01 11 19.6**	**0.0**
SWMT					*e*PKKPbc	**PKKPbc**		**01 23 58.2**	**-0.3**
232A	**Coleman**	**97.65**	**57**	⇓P		Pdif		01 07 21.8	+0.1
	baz=98								
CHMT	**Chamberlain Mo**	**97.66**	**39**	*e*P		Pdif		01 07 22.1	+0.6
W28A	**Vega**	**97.66**	**53**	⇓P		Pdif		01 07 21.9	+0.2
	baz=98								
A12A	**Yaak River Ran**	**97.68**	**36**	⇑P		Pdif		01 07 22.1	+0.8
	baz=98								
K19A	**Absolon Red Bu**	**97.68**	**44**	⇓P		Pdif		01 07 21.8	+0.1
	baz=98,SNR=7.1								
E15A	**Deer Lodge**	**97.68**	**40**	⇓P		Pdif		01 07 22.1	+0.5
	baz=98,SNR=17								
MCK	**McKinley**	**97.72**	**13**	*e*P		Pdif		01 07 21.6	+0.5
MCK					pmax	pmax			
	comp=Z,57nm,1.0s								
MCK	**McKinley**	**97.72**	**13**	*e*P		Pdif		01 07 21.6	+0.4
	comp=Z,57nm,1.0s								
MCK					*e*PKPdf	**PKiKP**		**01 11 55.2**	**+0.3**
SLMT	**Seeley Lake**	**97.73**	**39**	*e*P		Pdif		01 07 22.3	+0.5
SLMT				*e*PP		**PP**		**01 11 17.0**	**-3.5**
SLMT				*e*PKKPbc		**PKKPbc**		**01 23 56.2**	**-2.0**
PAX	**Paxson**	**97.74**	**15**	*e*P		**P**		**01 07 20.9**	**-0.4**
PAX					pmax	pmax			
	comp=Z,21nm,1.0s								
PAX	**Paxson**	**97.74**	**15**	*e*P		**P**		**01 07 20.9**	**-0.4**
	comp=Z,21nm,1.0s								
Q24A	**Divide**	**97.75**	**49**	⇑P		Pdif		01 07 22.9	+0.6
	baz=98								
BLMT	**Blacktail Moun**	**97.75**	**38**	*e*PP		PP		01 11 30.5	+10
BLMT				*e*PKKPbc		**PKKPbc**		**01 23 58.6**	**+0.3**
BOZ	**Bozeman (W)**	**97.76**	**41**	*e*P		Pdif		01 07 22.9	+0.9
BOZ					pmax	pmax			
	comp=Z,55nm,1.3s								
BOZ	**Bozeman (W)**	**97.76**	**41**	*e*P		Pdif		01 07 22.9	+0.9
	comp=Z,70nm,1.3s								
T26A	**Comanche Natio**	**97.78**	**51**	⇑P		Pdif		01 07 22.7	+0.4
	baz=98								
J19A	**Crowheart**	**97.82**	**44**	⇓P		Pdif		01 07 22.9	+0.6
	baz=98,SNR=18								
AMTX	**Amarillo**	**97.82**	**54**	*e*P		Pdif		01 07 22.6	+0.2
	comp=Z,23nm,1.2s								
Y30A	**Stafford Cattl**	**97.82**	**55**	⇓P		Pdif		01 07 22.5	+0.1
	baz=98								
F16A	**Kennard Place,**	**97.85**	**41**	⇑P		Pdif		01 07 23.2	+0.9
	baz=98								
R25A	**Fountain Ranch**	**97.86**	**50**	⇓P		Pdif		01 07 22.7	+0.1
	baz=98								
M21A	**Separation Pea**	**97.87**	**46**	⇑P		Pdif		01 07 23.1	+0.4
	baz=98,SNR=18								
U27A	**Thompson Grove**	**97.88**	**52**	⇑P		**P**		**01 07 22.5**	**-0.1**
	baz=98								
K20A	**Yellowstone Ra**	**97.88**	**44**	⇓Pdif		Pdif		01 07 22.6	0.0
	baz=98								
V28A	**Channing**	**97.92**	**53**	⇓Pdif		Pdif		01 07 22.9	0.0
	baz=98								
C14A	**Swan Lake**	**97.93**	**38**	⇓Pdif		Pdif		01 07 22.7	+0.1
	baz=98								
ISCO	**Idaho Springs**	**97.93**	**48**	*e*P		Pdif		01 07 24.0	+1.0
ISCO					pmax	pmax			
	comp=Z,28nm,1.7s								
ISCO	**Idaho Springs**	**97.93**	**48**	*e*P		Pdif		01 07 24.0	+1.0
	comp=Z,28nm,1.7s								
ISCO	**Idaho Springs**	**97.93**	**48**	⇑Pdif		Pdif		01 07 24.2	+1.1
	baz=98								
B13A	**Whitefish**	**97.93**	**37**	⇓Pdif		Pdif		01 07 22.8	+0.3
	baz=98								
N22A	**Wattenberg Ran**	**97.97**	**47**	⇑Pdif		Pdif		01 07 23.9	+0.8
	baz=98								
O23A	**Lake Granby, G**	**97.97**	**48**	⇑Pdif		Pdif		01 07 24.1	+0.9
	baz=98								
W29A	**Amraillo**	**97.97**	**54**	⇓Pdif		Pdif		01 07 23.6	+0.5
	baz=98								
ABTX	**Abilene, Hawle**	**98.04**	**57**	⇑Pdif		Pdif		01 07 23.8	+0.4
	baz=98								
Z31A	**Sharp Cattle R**	**98.06**	**56**	⇑Pdif		Pdif		01 07 23.7	+0.2
	baz=98								
G17A	**Pierce Place,**	**98.07**	**41**	⇑Pdif		Pdif		01 07 24.7	+1.4
	baz=98								
L21A	**Rawlins**	**98.07**	**45**	⇑Pdif		Pdif		01 07 23.8	+0.4
	baz=98								
MENT	**Mentasta**	**98.10**	**15**	*e*P		Pdif		01 07 23.9	+1.0
S26A	**Kim**	**98.10**	**51**	⇓Pdif		Pdif		01 07 24.0	+0.3
	baz=98								
D15A	**Lincoln**	**98.13**	**39**	⇓Pdif		Pdif		01 07 24.5	+0.9
	baz=99								
X30A	**Coker Ranch, T**	**98.14**	**55**	⇓Pdif		Pdif		01 07 24.1	+0.3
	baz=98								
LPAZ	**La Paz**	**98.15**	**115**	*e*P		Pdif		01 07 26.5	+1.4
	comp=Z,20nm,1.0s								
LPAZ					PKKPbc	**PKKPdf**		**01 23 59.3**	**+0.8**
LPAZ	**La Paz**	**98.15**	**115**	P		Pdif		01 07 25.5	+0.4
	comp=Z,12nm,0.9s,baz=234,slow=3.9,SNR=44								
LPAZ					PKKPbc	**PKKPdf**		**01 23 59.3**	**+0.8**
	comp=Z,0.7nm,0.4s,baz=337,slow=6.2,SNR=6.0								
LPAZ					LR	LR		01 41 09.0	
	comp=Z,

baz=99
J21A Lysite 98.82 44 ⇓Pdiff Pdiff 01 07 27.6 +0.9
baz=99
A14A Double T Ranch 98.84 37 ⇓Pdiff Pdiff 01 07 27.3 +0.7
baz=99
X31A McDonald Ranch 98.87 55 ⇑Pdiff Pdiff 01 07 27.5 +0.5
baz=99
PHWY Pilot Hill 98.87 47 *e*P Pdiff 01 07 27.5 +0.3
comp=Z,18nm,1.4s
B15A Bradely Ranch, 98.89 38 ⇓Pdiff Pdiff 01 07 26.9 +0.1
baz=99
R27A Eads 98.91 51 ⇓Pdiff Pdiff 01 07 27.7 +0.5
baz=99
Y32A R-V Farms, Ver 98.92 56 ⇓Pdiff Pdiff 01 07 27.7 +0.5
baz=99
U29A Oasis Ranch, S 98.95 53 ⇓Pdiff Pdiff 01 07 27.8 +0.5
baz=99
GCMT Greycliff 98.95 41 *e*P Pdiff 01 07 28.8 +1.6
comp=Z,28nm,1.4s
COLA College 98.96 13 *e*P Pdiff 01 07 27.0 +0.5
COLA pmax pmax
comp=Z,47nm,0.8s
COLA College 98.96 13 *e*P Pdiff 01 07 27.0 +0.5
comp=Z,12nm,0.8s
LZH Lanzhou 98.96 307 *e*P Pdiff 01 07 29.3 +1.8
LZH pP pP 01 07 39.3 +1.3
LZH PP **PP** **01 11 30.3 +0.2**
LZH SKS **SKSac** **01 18 03.3 -0.1**
LZH *e*S **S** **01 18 54.0 -1.9**
LZH SS **SS** **01 25 42.4 -2.0**
LZH pmax pmax
comp=Z,36nm,1.4s
LZH pmax pmax
comp=Z,170nm,5.8s
LZH LR LR
comp=N,3μm,15.4s
LZH LR LR
comp=E,4μm,15.6s
LZH LR LR
comp=Z,4μm,17.3s
N24A Carr 98.97 47 ⇑Pdiff Pdiff 01 07 28.4 +0.9
baz=99
K22A Casper 98.97 45 ⇑Pdiff Pdiff 01 07 28.0 +0.6
baz=99
V30A Spur Ranch, Mi 98.98 54 ⇓Pdiff Pdiff 01 07 28.0 +0.5
baz=99
F18A Big Timber 98.99 41 ⇑Pdiff Pdiff 01 07 28.4 +1.1
baz=99
C16A Fuhringer Ranc 99.01 39 ⇑Pdiff **Pdif** **01 07 28.0 +0.6**
baz=99
ILAR Eielson Array 99.05 13 P **Pdif** **01 07 26.9 -0.2**
ILAR PP **PP** **01 11 30.6 +0.7**
ILAR PKiKP **PKiKP** **01 11 57.0 -0.3**
ILAR S **SKSac** **01 18 00.1 -2.1**
ILAR PKKPbc **PKKPbc** **01 23 50.6 -4.3**
ILAR P'P' 01 32 06.9
ILAR Eielson Array 99.05 13 P **Pdif** **01 07 26.9 -0.2**
comp=Z,11nm,0.8s,baz=222,slow=5.7,SNR=110
ILAR PP **PP** **01 11 30.6 +0.7**
comp=Z,4.3nm,0.9s,baz=220,slow=7.3,SNR=5.0
ILAR PKiKP **PKiKP** **01 11 57.0 -0.3**
comp=Z,8.8nm,0.9s,baz=274,slow=3.2,SNR=12
ILAR S **SKSac** **01 18 00.1 -2.1**
comp=Z,1.1nm,0.9s,baz=237,slow=4.0,SNR=3.0
ILAR PKKPbc **PKKPbc** **01 23 50.6 -4.3**
comp=Z,1.9nm,0.7s,baz=333,slow=3.6,SNR=12
ILAR PKPPKP **P'P'df** **01 32 06.9 +2.7**
comp=Z,1.4nm,1.0s,baz=332,slow=2.3,SNR=6.4
ILAR LR LR 01 47 46.6
comp=Z,10μm,20.5s,baz=200,slow=33
O25A Wiggins 99.05 48 ⇓Pdiff **Pdif** **01 07 28.4 +0.6**
baz=100
S28A Manter 99.13 52 ⇓Pdiff **Pdif** **01 07 28.8 +0.6**
baz=100
H20A Greybull 99.15 43 ⇑Pdiff **Pdif** **01 07 28.5 +0.4**
baz=100
L23A Garrett 99.17 46 ⇑Pdiff **Pdif** **01 07 29.0 +0.6**
baz=100
I21A Big Trails, Te 99.18 44 ⇓Pdiff **Pdif** **01 07 28.8 +0.6**
baz=100
W31A Holland Ranch, 99.19 54 ⇑Pdiff **Pdif** **01 07 28.6 +0.2**
baz=100
D17A Six Diamond Ra 99.19 40 ⇑Pdiff **Pdif** **01 07 29.4 +1.2**
baz=100
A15A Johnson Ranch, 99.21 38 ⇓Pdiff **Pdif** **01 07 28.6 +0.4**
baz=100
P26A Davis Ranch, A 99.25 49 ⇑Pdiff **Pdif** **01 07 29.2 +0.5**
baz=100
E18A Harlowton 99.27 41 ⇑Pdiff **Pdif** **01 07 30.1 +1.5**
baz=100
WHTX Lake Whitney 99.29 58 ⇓Pdiff **Pdif** **01 07 29.1 +0.3**
baz=100
T29A Hugoton 99.31 52 ⇑Pdiff **Pdif** **01 07 29.2 +0.3**
baz=100
M24A Cheyenne 99.36 47 ⇓Pdiff **Pdif** **01 07 29.7 +0.5**
baz=100
F19A Roth Farm, Mol 99.40 42 ⇑Pdiff **Pdif** **01 07 30.1 +0.9**
baz=100
B16A M & M Farms, S 99.40 38 ⇓Pdiff **Pdif** **01 07 29.6 +0.5**
baz=100
U30A WK&E Inc. Balk 99.41 53 ⇑Pdiff **Pdif** **01 07 29.7 +0.3**
baz=100
KSCO Kaye Shedlock' 99.42 50 ⇑Pdiff **Pdif** **01 07 30.1 +0.6**
baz=100
HKT Hockley 99.44 61 *e*P **Pdif** **01 07 30.6 +1.1**
HKT *e* 01 11 37.6
HKT Hockley 99.44 61 *e*Pdif **Pdif** **01 07 30.6 +1.1**
HKT *e*PP **PP** **01 11 37.6 +4.1**
C17A Wharram Farm, 99.44 39 ⇓Pdiff **Pdif** **01 07 30.0 +0.7**
baz=100
G20A Bridger 99.45 42 ⇑Pdiff **Pdif** **01 07 30.1 +0.7**
baz=100
N25A Grover 99.46 48 ⇑Pdiff **Pdif** **01 07 30.7 +1.1**
baz=100
V31A Spring Creek L 99.57 54 ⇑Pdiff **Pdif** **01 07 31.6 +1.6**
baz=100
K23A Bowen Ranch, D 99.58 46 ⇑Pdiff **Pdif** **01 07 31.0 +0.9**
baz=100
R28A Tribune 99.60 51 ⇑Pdiff **Pdif** **01 07 31.0 +0.8**
baz=100
L24A Wheatland 99.61 46 ⇓Pdiff **Pdif** **01 07 31.1 +0.8**
baz=100
O26A Horse Wrangler 99.64 49 ⇓Pdiff **Pdif** **01 07 31.3 +0.8**
baz=100
S29A Ulysses 99.67 52 ⇓Pdiff **Pdif** **01 07 31.1 +0.6**
baz=100
I22A 9 Mile Ranch, 99.70 44 ⇓Pdiff **Pdif** **01 07 31.5 +0.9**
baz=100
D18A Linhart Farms, 99.70 40 ⇓Pdiff **Pdif** **01 07 31.7 +1.2**
baz=100
CPUP Villa Florida 99.71 129 P **Pdif** **01 07 32.8 +1.8**
CPUP PKKPbc **PKKPbc** **01 23 51.0 -0.2**
CPUP P'P' 01 32 05.2
CPUP Villa Florida 99.71 129 P **Pdif** **01 07 32.8 +1.8**
comp=Z,5.4nm,0.8s,baz=225,slow=6.0,SNR=7.9
CPUP PKKPbc **PKKPbc** **01 23 51.0 -0.2**
comp=Z,4.6nm,0.7s,baz=62,slow=2.3,SNR=8.0
CPUP PKPPKP P'P'df 01 32 05.2 -6.8
comp=Z,1.5nm,0.7s,baz=263,slow=20,SNR=4.2
CPUP LR LR 01 49 41.1
comp=Z,6μm,18.3s,baz=210,slow=34
P27A Ficken Ranch, 99.74 50 ⇑Pdiff **Pdif** **01 07 31.7 +0.9**
baz=100
T30A Plains 99.77 53 ⇑Pdiff **Pdif** **01 07 31.5 +0.5**
baz=100
A16A West Butte Ran 99.78 38 ⇓Pdiff **Pdif** **01 07 31.5 +0.7**
baz=100
H21A Big Horn, Sher 99.79 43 ⇑Pdiff **Pdif** **01 07 31.7 +0.7**
baz=100
B17A L&G Farms, Che 99.81 39 ⇑Pdiff **Pdif** **01 07 31.5 +0.7**
baz=100
F20A Billings 99.82 42 ⇑Pdiff **Pdif** **01 07 31.9 +0.9**
baz=100
M25A Palm-Egli Farm 99.82 47 ⇓Pdiff **Pdif** **01 07 32.2 +1.0**
baz=100
BILL Bilibino 99.83 354 *c* *i*P **Pdif** **01 07 30.3 -0.1**
BILL *i* 01 07 42.2
BILL *i* 01 18 08.7
BILL *i* PS **PS** **01 20 33.0 -1.1**
BILL *i* SSS SSS 01 29 51.3
BILL pmax pmax
comp=Z,20nm,1.7s
BILL MLR MLR
comp=Z,10μm,20.0s
BILL Bilibino 99.83 354 *e*Pdif **Pdif** **01 07 30.6 +0.3**
comp=Z,18nm,1.0s
E19A Rath Farm, Rou 99.84 41 ⇓Pdiff **Pdif** **01 07 32.2 +1.2**
baz=100
U31A Nine Bar Ranch 99.87 53 ⇑Pdiff **Pdif** **01 07 32.6 +1.1**
baz=100
J23A Dilts Ranch, B 99.99 45 ⇓Pdiff **Pdif** **01 07 32.8 +0.9**
baz=100
N26A Koester Ranch, 100.02 48 ⇑Pdiff **Pdif** **01 07 32.7 +0.7**
baz=100
G21A Lodge Grass 100.03 43 ⇑Pdiff **Pdif** **01 07 33.1 +1.1**
baz=100
K24A Anderson Ranch 100.06 46 ⇓Pdiff **Pdif** **01 07 33.2 +1.0**
baz=100
CLNS Chul'man 100.07 332 *e*P **Pdif** **01 07 32.7 +0.9**
CLNS *e**PP pP 01 07 50.8 +8.6
CLNS *e* 01 11 37.6
CLNS *e*S **SKSac** **01 18 04.3 -3.3**
CLNS *e*SSS SSS 01 26 10.1
CLNS pmax pmax
comp=N,9.0nm,1.2s
CLNS pmax pmax
comp=Z,21nm,1.5s
CLNS pmax pmax
comp=E,7.0nm,1.2s
CLNS pmax pmax
comp=N,5.0nm,0.9s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS pmax pmax
comp=Z,6.0nm,1.1s
CLNS smax smax
comp=E,390nm,11.5s
CLNS smax smax
comp=N,717nm,12.3s
CLNS MLR MLR
comp=N,9.0nm,17.0s
CLNS MLR MLR
comp=Z,23μm,22.0s
CLNS MLR MLR
comp=N,11μm,19.0s
R29A Marienthal 100.09 51 ⇑Pdiff **Pdif** **01 07 33.2 +0.8**
baz=100
S30A Montezuma 100.12 52 ⇑Pdiff **Pdif** **01 07 33.3 +0.8**
baz=100
O27A Beecher Island 100.15 49 ⇑Pdiff **Pdif** **01 07 33.5 +0.9**
baz=101
H22A Clearmont 100.18 44 ⇑Pdiff **Pdif** **01 07 33.6 +0.9**
baz=101
D19A Cripps Ranch, 100.20 41 ⇑Pdiff **Pdif** **01 07 34.1 +1.5**
baz=101
EGMT Eagleton 100.22 39 *e*Pdif **Pdif** **01 07 34.3 +1.6**
EGMT *e*PP **PP** **01 11 38.8 -0.5**
EGMT Eagleton 100.22 39 ⇓Pdiff **Pdif** **01 07 33.9 +1.2**
baz=101
E20A Meyer Farm, Mu 100.23 41 ⇓Pdiff **Pdif** **01 07 34.2 +1.4**
baz=101
A17A Triple J Farms 100.25 38 ⇓Pdiff **Pdif** **01 07 33.7 +0.9**
baz=101
EGAK Eagle 100.27 15 *e*Pdif **Pdif** **01 07 34.0 +1.6**
L25A Engebretsen Ra 100.27 47 ⇓Pdiff **Pdif** **01 07 34.4 +1.2**
baz=101
I23A Meade Ranch, G 100.35 45 ⇑Pdiff **Pdif** **01 07 34.3 +0.8**
baz=101
T31A Randall Ranch, 100.37 53 ⇑Pdiff **Pdif** **01 07 34.5 +0.8**
baz=101
M26A McRoberts Ranc 100.41 48 ⇓Pdiff **Pdif** **01 07 34.4 +0.6**
baz=101
F21A Absaloka Mine, 100.42 42 ⇑Pdiff **Pdif** **01 07 34.9 +1.2**
baz=101
B18A Beardsley Farm 100.42 39 ⇓Pdiff **Pdif** **01 07 34.6 +1.0**
baz=101
C19A Slack Wire Ran 100.43 40 ⇑Pdiff **Pdif** **01 07 35.2 +1.5**
baz=101
N27A Anderson Farm, 100.44 49 ⇓Pdiff **Pdif** **01 07 34.9 +1.0**
baz=101
J24A Dixon Ranch, L 100.49 45 ⇓Pdiff **Pdif** **01 07 35.3 +1.2**
baz=101
G22A Birney 100.56 43 ⇑Pdiff **Pdif** **01 07 35.2 +0.9**
baz=101
D20A Manuel Ranch, 100.57 41 ⇓Pdiff **Pdif** **01 07 35.5 +1.2**
baz=101
K25A Mack Ranch, Ha 100.58 46 ⇑Pdiff **Pdif** **01 07 35.6 +1.1**
baz=101
R30A Dighton 100.59 52 ⇓Pdiff **Pdif** **01 07 35.5 +0.9**
baz=101
COLD Coldfoot 100.69 11 *e*Pdif **Pdif** **01 07 35.1 +0.9**
COLD *e*PKPdf **PKiKP** **01 12 01.3 +1.3**
A18A Metzger Ranch, 100.69 39 ⇓Pdiff **Pdif** **01 07 35.5 +0.8**
baz=101
H23A Clabaugh Cattl 100.72 44 ⇑Pdiff **Pdif** **01 07 35.6 +0.5**
baz=101
L26A Underwood Farm 100.76 47 ⇑Pdiff **Pdif** **01 07 36.3 +1.0**
baz=101
S31A Mullinville 100.78 53 ⇓Pdiff **Pdif** **01 07 36.0 +0.6**
baz=101
I24A Kuemmerle Ranc 100.80 45 ⇑Pdiff **Pdif** **01 07 36.1 +0.6**
baz=101
OGNE Ogallala 100.84 49 ⇑Pdiff **Pdif** **01 07 36.2 +0.5**
baz=101
E21A Keefer Ranch, 100.85 42 ⇑Pdiff **Pdif** **01 07 36.9 +1.4**
baz=101
F22A Rosebud 100.90 43 ⇓Pdiff **Pdif** **01 07 36.8 +1.0**
baz=101
B19A Brinkman Farms 100.91 39 ⇓Pdiff **Pdif** **01 07 37.0 +1.3**
baz=101
M27A Reverse DX Ran 100.93 48 ⇓Pdiff **Pdif** **01 07 36.9 +0.9**
baz=101
C20A Veseth Ranch, 101.00 40 ⇓Pdiff **Pdif** **01 07 37.3 +1.2**
baz=101
K26A Motz Farm, Whi 101.06 47 ⇓Pdiff **Pdif** **01 07 37.6 +1.0**
baz=102
G23A Biddle 101.08 44 ⇑Pdiff **Pdif** **01 07 37.7 +1.1**
baz=102
D21A La Casta Ranch 101.20 41 ⇓Pdiff **Pdif** **01 07 38.4 +1.4**
baz=102
L27A T5 Ranch, Ells 101.27 47 ⇑Pdiff **Pdif** **01 07 38.2 +0.7**
baz=102
A19A Klindworth Far 101.29 39 ⇓Pdiff **Pdif** **01 07 38.4 +1.0**
baz=102
RSSD Black Hills 101.30 45 *e*P **Pdif** **01 07 38.9 +1.1**
RSSD Black Hills 101.30 45 *e*Pdif **Pdif** **01 07 38.9 +1.1**
RSSD *e*PKKPbc **PKKPbc** **01 23 47.7 -0.3**
H24A Dirks Ranch, A 101.33 44 ⇑Pdiff **Pdif** **01 07 38.3 +0.6**
baz=102
F23A Volborg 101.36 43 ⇓Pdiff **Pdif** **01 07 38.9 +1.0**
baz=102
B20A Solberg Farm, 101.40 40 ⇓Pdiff **Pdif** **01 07 39.2 +1.2**
baz=102
E22A Miles City 101.44 42 ⇑Pdiff **Pdif** **01 07 39.4 +1.2**
baz=102
C21A Desert Coulee 101.57 41 ⇑Pdiff **Pdif** **01 07 39.7 +1.0**
baz=102
K27A Flueckinger Fa 101.65 47 ⇑Pdiff **Pdif** **01 07 40.2 +1.0**
baz=102
D22A Cohagen 101.70 42 ⇓Pdiff **Pdif** **01 07 40.9 +1.6**
baz=102
A20A Cobblestone Ra 101.71 39 ⇓Pdiff **Pdif** **01 07 40.6 +1.4**
baz=102
G24A Alzada 101.73 44 ⇑Pdiff **Pdif** **01 07 40.5 +1.0**
baz=102
E23A Ismay 101.84 43 ⇑Pdiff **Pdif** **01 07 41.2 +1.2**
baz=102
B21A Ellsworth Farm 101.95 40 ⇑Pdiff **Pdif** **01 07 41.5 +1.2**
baz=102
F24A Ekalaka 101.99 43 ⇓Pdiff **Pdif** **01 07 41.8 +1.1**
baz=102
YAK Yakutsk 102.03 338 *e*P **Pdif** **01 07 34.7 -5.6**
YAK *e* 01 11 48.6
YAK *e*PPP PPP 01 14 14.5
YAK *e*SP SP 01 20 51.8 -1.4
YAK *e*SS SS 01 26 34.9 +9.2
YAK *e*SSS SSS 01 30 22.9
YAK pmax pmax
comp=Z,350μm,9.4s
YAK pmax pmax
comp=N,97μm,10.3s
YAK pmax pmax
comp=E,94μm,11.4s
YAK pmax pmax
comp=Z,555nm,3.8s
YAK pmax pmax
comp=E,306nm,4.4s
YAK pmax pmax
comp=N,257nm,4.1s
YAK MLR MLR
comp=Z,9μm,21.0s
YAK MLR MLR
comp=E,6μm,18.0s
YAK MLR MLR
comp=N,8μm,22.0s
DGAR Diego Garcia 102.08 254 ⇑*i*P **Pdif** **01 07 40.0 -1.7**
C22A Vida 102.20 41 ⇑Pdiff **Pdif** **01 07 42.8 +1.3**
baz=103
D23A Lindsay 102.27 42 ⇓Pdiff **Pdif** **01 07 43.2 +1.3**
baz=103
B22A Reddig Ranch S 102.44 41 ⇑Pdiff **Pdif** **01 07 43.6 +1.1**
baz=103
E24A Baker 102.46 43 ⇓Pdiff **Pdif** **01 07 43.7 +1.0**
baz=103
TUL1 Tulsa 102.46 56 ⇑Pdiff **Pdif** **01 07 43.7 +0.8**
baz=103
SHL Shillong 102.53 292 *e*PKP **Pdif** **01 07 43.0 -0.7**
SHL *ex* x 01 11 35.0
C23A Lambert 102.63 41 ⇓Pdiff **Pdif** **01 07 44.9 +1.5**
baz=103
D24A Glendive 102.75 42 ⇑Pdiff **Pdif** **01 07 45.6 +1.7**
baz=103
A22A Carney Farms, 102.87 40 ⇓Pdiff **Pdif** **01 07 46.2 +1.7**
baz=103
C24A Savage 102.91 42 ⇑Pdiff **Pdif** **01 07 46.7 +2.1**
baz=103
B23A Brockton 103.09 41 ⇑Pdiff **Pdif** **01 07 47.6 +2.2**
baz=104
ULN Ulaanbaatar 103.24 318 *e*Pdif **Pdif** **01 07 46.4 +0.1**
ULN Ulaanbaatar 103.24 318 P **Pdif** **01 07 46.4 +0.1**
SNR=5.3
ULN Ulaanbaatar 103.24 318 P **Pdif** **01 07 41.8 -4.4**
A23A Redstone 103.42 41 ⇓Pdiff **Pdif** **01 07 48.9 +2.0**
baz=104
KSU1 Kansas State U 103.47 52 *e*PP PP 01 12 06.6 +2.6
DGMT Dagmar 103.55 41 ⇓Pdiff **Pdif** **01 07 49.5 +2.0**
baz=104
BGNE Belgrade 103.59 50 ⇑Pdiff **Pdif** **01 07 49.4 +1.6**
baz=104
SONM Songino Array 103.60 318 Pdif **Pdif** **01 07 49.1 +1.3**
SONM PKiKP **PKiKP** **01 12 06.6 +0.5**
SONM PKKPbc **PKKPbc** **01 23 41.1 -0.1**
SONM P'P' 01 32 00.3
SONM Songino Array 103.60 318 Pdiff **Pdif** **01 07 49.1 +1.3**
comp=N,1.6nm,0.5s,baz=153,slow=10.0,SNR=5.0
SONM PKiKP **PKiKP** **01 12 06.6 +0.5**
comp=N,5.4nm,1.0s,baz=1.7,slow=0.9,SNR=5.8
SONM PKKPbc **PKKPbc** **01 23 41.1 -0.1**
comp=N,1.6nm,0.5s,baz=176,slow=2.4,SNR=4.7
SONM PKPPKP **P'P'df** **01 32 00.3 +2.4**
comp=N,0.6nm,0.4s,baz=247,slow=3.0,SNR=3.7
A24A Westby 103.89 41 ⇑Pdiff **Pdif** **01 07 50.7 +1.8**
baz=104
BRSD Miller 104.58 47 ⇓Pdiff **Pdif** **01 07 52.3 +0.1**
baz=105
INK Inuvik 104.92 16 Pdif **Pdif** **01 07 53.5 +0.5**
INK PKiKP **PKiKP** **01 12 07.8 +0.1**
INK PKKPbc **PKKPbc** **01 23 37.1 -0.5**
INK P'P' 01 31 57.5
INK Inuvik 104.92 16 Pdiff **Pdif** **01 07 53.5 +0.5**
comp=N,9.4nm,1.1s,baz=206,slow=3.8,SNR=18
INK PKiKP **PKiKP** **01 12 07.8 +0.1**
comp=N,30nm,1.1s,baz=200,slow=4.3,SNR=14
INK PKKPbc **PKKPbc** **01 23 37.1 -0.5**
comp=N,3.1nm,0.5s,baz=42,slow=3.8,SNR=14
INK PKPPKP **P'P'df** **01 31 57.5 +4.3**
comp=N,6.9nm,1.1s,baz=43,slow=2.2,SNR=7.4
ECSD EROS Data Cent 105.72 48 *e*PKPdf **PKiKP** **01 12 09.7 -0.3**
MDND Maddock 105.87 43 ⇑Pdiff **Pdif** **01 07 58.6 +0.9**
baz=106
YKA Yellowknife Ar 106.59 26 Pdif **Pdif** **01 08 01.4 +0.8**
YKA PKiKP **PKiKP** **01 12 10.6 -0.4**
YKA PKKPbc **PKKPbc** **01 23 27.2 -5.1**
YKA P'P' 01 31 54.5
YKA Yellowknife Ar 106.59 26 Pdiff **Pdif** **01 08 01.4 +0.8**
comp=N,1.5nm,0.7s,baz=238,slow=4.4,SNR=28
YKA PKiKP **PKiKP** **01 12 10.5 -0.4**
comp=N,5.8nm,0.6s,baz=256,slow=1.5,SNR=72
YKA PKKPbc **PKKPbc** **01 23 27.2 -5.1**
comp=N,1.7nm,0.8s,baz=46,slow=2.7,SNR=5.7
YKA PKPPKP **P'P'df** **01 31 54.5 +3.8**
comp=N,2.0nm,1.0s,baz=45,slow=1.8,SNR=5.3
YKW3 Yellowknife Ar 106.63 26 *e*Pdif **Pdif** **01 08 01.7 +1.0**
comp=N,0.2nm,1.3s
YKW3 *e*PKPdf **PKiKP** **01 12 11.0 0.0**
ZAK Zakamensk 106.65 319 *e*P **Pdif** **01 08 01.2 -0.1**
ZAK pmax pmax
comp=Z,7.0nm,1.1s
TRD Trivandrum 106.72 270 ⇑*i*x **Pdif** **01 08 09.5 +7.2**
TRD *i* x x 01 12 38.5
TLY Talaya 107.09 320 *c* *i*P **Pdif** **01 08 01.9 -1.2**
TLY *e*PPP PPP 01 14 51.3
TLY *e* 01 18 37.3
TLY *e*PPS PPS 01 22 57.1
TLY *e*SS SS 01 27 40.1 +4.5
TLY pmax pmax
comp=Z,8.0nm,0.3s
PARMO Parma 107.12 57 *e*PKPdf **PKiKP** **01 12 13.2 +0.5**
LRAL Lakeview Retre 107.53 62 *e*PKPdf **PKiKP** **01 12 13.3 -0.4**
PLAL Pickwick Lake 107.59 59 *e*PKiKP **PKiKP** **01 12 12.6 -1.1**
FFC Flin Flon 107.93 36 *e*PKPdf **PKiKP** **01 12 13.4 -0.3**
FFC *e*PKKPab **PKKPab** **01 23 34.1 -4.0**
FFC *e*PKKPdf **PKKPdf** **01 23 39.8 -2.4**
SIUC Southern Illin 107.97 56 *e*PKPdf **PKiKP** **01 12 17.0 +2.7**
SPMN St. Paul 108.82 48 ⇓Pdiff **Pdif** **01 08 11.6 +0.6**
baz=109
ULM Lac du Bonnet 109.16 42 PKKPab PKKPab 01 23 33.0 +0.1
ULM Lac du Bonnet 109.16 42 PKiKP **PKiKP** **01 12 15.8 -0.4**
comp=Z,8.4nm,0.7s,baz=260,slow=4.5,SNR=3.6
ULM PKKPab **PKKPab** **01 23 33.0 +0.1**
comp=Z,13nm,1.1s,baz=48,slow=9.5,SNR=3.8
JFWS Jewell Farm 109.50 51 *e*PKPdf **PKiKP** **01 12 16.8 -0.2**
HYB Hyderabad 109.66 279 *i* Pdiff **Pdif** **01 08 14.0 -1.4**
HYB *e*PKP **PKiKP** **01 12 17.0 -1.1**
HYB *e* 01 12 41.0
HYB *e*PP **PP** **01 12 48.0 -1.8**
HYB *e*PPP PPP 01 15 12.0
HYB *e* 01 19 08.0
HYB *e*SKKS 01 19 34.0
HYB *e* 01 22 20.0
HYB *e* 01 23 28.0
HYB *e*PKKP **PKKPab** **01 23 33.5 +0.5**
HYB *e*SS SS 01 28 04.0 -7.5
SDV Santo Domingo 109.85 92 *e*PKPdf **PKiKP** **01 12 20.3 +1.5**
SDV *e*PKKPab **PKKPab** **01 23 32.8 -0.1**
WCI Wyandotte Cave 110.28 57 *e*PKiKP **PKiKP** **01 12 18.3 -0.4**
WCI Wyandotte Cave 110.28 57 *e*PKPdf **PKiKP** **01 12 18.3 -0.4**
GOGA Godfrey 110.36 63 *e*PKiKP **PKiKP** **01 12 23.6 +4.7**
GOGA *e* 01 13 06.0
GOGA Godfrey 110.36 63 *e*PKiKP **PKiKP** **01 12 23.6 +4.7**
GOGA *e*PP PP 01 13 06.0 +11
CPCT Cooper Cave 110.42 60 *e*PKPdf **PKiKP** **01 12 18.8 -0.3**
BLO Bloomington 110.50 56 *e*PKiKP **PKiKP** **01 12 19.5 +0.5**
BLO Bloomington 110.50 56 *e*PKPdf **PKiKP** **01 12 19.5 +0.5**
NGP Nagpur 110.94 283 *e*PKP **PKiKP** **01 12 16.4 -4.1**
NGP *ex* x 01 22 26.4
NGP AMS AMS 02 13 26.0
comp=Z,3μm,13.9s
JBP Jabalpur 111.06 285 *e*PKP **PKiKP** **01 12 19.5 -1.1**
JBP *ex* x 01 28 51.0
JBP AMS AMS 02 00 17.4
comp=Z,5μm,17.4s
TKL Tuckaleechee C 111.06 60 *e*PKPdf **PKiKP** **01 12 19.7 -0.6**
COWI Conover 111.52 48 *e*PKPdf **PKiKP** **01 12 20.3 -0.5**
JSC Jenkinsville 112.40 63 *e*PKiKP **PKiKP** **01 12 23.5 +0.7**
JSC Jenkinsville 112.40 63 *e*PKPdf **PKiKP** **01 12 23.5 +0.7**
KMSC Kings Mountain 112.68 62 ⇑Pdiff **Pdif** **01 08 27.5 -0.8**
baz=113
ABPO Ambohimpanom 113.31 228 *e*PKiKP **PKiKP** **01 12 24.6 -0.7**
ABPO Ambohimpanom 113.31 228 *e*PKPdf **PKiKP** **01 12 24.6 -0.7**
BDFB Brasilia 113.34 127 PKiKP **PKiKP** **01 12 25.3 0.0**
BDFB PKKPbc **PKKPbc** **01 23 11.0 +1.7**
BDFB Brasilia 113.34 127 PKiKP **PKiKP** **01 12 25.3 0.0**
comp=Z,8.4nm,1.1s,baz=1.8,slow=3.5,SNR=4.5
BDFB PKKPbc **PKKPbc** **01 23 11.0 +1.7**
comp=Z,4.4nm,0.8s,baz=91,slow=3.6,SNR=4.2
ACSO Alum Creek Sta 113.43 56 *e*PKPdf **PKiKP** **01 12 24.1 -0.4**
WMQ Urumqi 113.50 308 PKP **PKiKP** **01 12 23.6 -1.1**
WMQ PP **PP** **01 13 19.3 +2.3**
WMQ PKS **PKSdf** **01 15 59.1 -2.2**
WMQ SKS **SKSdf** **01 19 34.8 +0.5**
WMQ SKKS **SKKSac** **01 20 12.0 -3.9**
WMQ SS **SS** **01 29 01.8 -0.1**
WMQ LR LR
comp=N,5μm,25.4s
WMQ LR LR
comp=E,4μm,23.8s
WMQ LR LR

comp=Z,5µm,23.8s
OPO Ambohidratompo 113.67 228 PKiKP **PKiKP** **01 12 26.4 +0.4**
OPO Ambohidratompo 113.67 228 PKiKP **PKiKP** **01 12 26.4 +0.4**
comp=Z,13nm,0.8s,baz=174,slow=1.8,SNR=19
SUR Sutherland 113.92 198 *e*PKPdf **PKiKP** **01 12 26.8 +0.6**
SUR *e*PP **PP** **01 13 17.8 -0.9**
SUR PKKPbc **PKKPbc** **01 23 07.0 -0.8**
SUR Sutherland 113.92 198 PKiKP **PKiKP** **01 12 26.9 +0.7**
comp=Z,23nm,0.5s,baz=121,slow=1.5,SNR=55
SUR PP **PP** **01 13 20.0 +1.3**
comp=Z,41nm,0.8s,baz=139,slow=11,SNR=6.9
SUR PKKPbc **PKKPbc** **01 23 07.0 -0.8**
comp=Z,14nm,0.7s,baz=13,slow=2.4,SNR=12
POO Poona 114.15 278 *e*PKP PKPdf 01 12 24.0 -2.6
comp=Z,68nm,1.2s
BLA Blacksburg 114.16 60 *e*PKIKP **PKiKP** **01 12 25.3 -0.8**
BLA Blacksburg 114.16 60 *e*PKPdf PKPdf 01 12 25.3 -0.8
CNNC Cliffs of the 115.32 63 *e*PKPdf **PKPdf** **01 12 28.3 0.0**
DDI Dehra Dun 115.59 291 *e*PKP **PKPdf** **01 12 28.5 -0.6**
BOSA Boshof 116.11 203 Pdif **Pdif** **01 08 44.1 0.0**
BOSA *e*PKPdf **PKPdf** **01 12 30.7 +0.3**
BOSA PKP **PKPdf** **01 12 30.9 +0.5**
BOSA PKKPbc **PKKPbc** **01 23 00.8 +0.7**
BOSA *e*PKKPbc PKKPab 01 23 01.3 -6.7
BOSA Boshof 116.11 203 Pdiff **Pdif** **01 08 44.1 0.0**
comp=Z,4.5nm,0.9s,baz=203,slow=5.4,SNR=5.1
BOSA PKP **PKPdf** **01 12 30.9 +0.5**
comp=Z,48nm,0.8s,baz=148,slow=2.2,SNR=79
BOSA PKKPbc **PKKPbc** **01 23 00.8 +0.7**
comp=Z,11nm,0.9s,baz=329,slow=5.0,SNR=12
ERPA Erie 116.21 55 *e*PKPdf **PKPdf** **01 12 29.6 -0.3**
JSRW J. Sargeant Re 116.22 60 *e*PKPdf **PKPdf** **01 12 30.5 +0.5**
SDNR Sundarnagar 116.90 292 *e*PKP **PKPdf** **01 12 32.0 +0.4**
SDNR *ex* x 01 12 55.0
SSPA Standing Stone 117.21 57 *e*PKPdf **PKPdf** **01 12 31.7 -0.1**
LRS Lares 117.54 85 *e*PKPdf **PKPdf** **01 12 33.2 0.0**
SDMD Soldier's Deli 117.57 59 *e*PKPdf **PKPdf** **01 12 32.5 0.0**
SJG San Juan 118.05 85 *e*PKPdf **PKPdf** **01 12 33.8 -0.2**
MK31 Makanchi Array 118.08 310 *i* PKIKP **PKPdf** **01 12 32.3 -1.1**
MK31 pmax pmax
comp=Z,17nm,0.5s
MK31 Makanchi Array 118.08 310 *e*PKPdf **PKPdf** **01 12 32.2 -1.1**
MKAR Makanchi Array 118.08 310 *e*PKIKP **PKPdf** **01 12 32.5 -0.9**
MKAR Makanchi Array 118.08 310 *e*PKPdf **PKPdf** **01 12 32.5 -0.9**
MKAR PKKPbc **PKKPab** **01 22 55.0 +0.8**
MKAR P'P' 01 31 36.1
MKAR Makanchi Array 118.08 310 PKP **PKPdf** **01 12 32.4 -0.9**
comp=Z,17nm,0.4s,baz=223,slow=1.3,SNR=109
MKAR PKKPbc **PKKPab** **01 22 55.0 +0.8**
comp=Z,1.9nm,0.5s,baz=275,slow=2.9,SNR=14
MKAR PKPPKP **P'P'df** **01 31 36.1 +5.0**
comp=Z,0.9nm,1.0s,baz=124,slow=2.1,SNR=3.3
MVL Millersville 118.11 58 *e*PKPdf **PKPdf** **01 12 33.1 -0.4**
HUMP Col San Antoni 118.32 85 *e*PKPdf **PKPdf** **01 12 34.5 -0.1**
RES Resolute Bay 118.39 17 *e*PKPdf **PKPdf** **01 12 32.4 -0.7**
RES PKKPbc **PKKPbc** **01 22 52.5 -0.2**
RES Resolute Bay 118.39 17 PKP **PKPdf** **01 12 32.4 -0.7**
comp=Z,77nm,1.0s,baz=256,slow=3.1,SNR=124
RES PKKPbc **PKKPbc** **01 22 52.5 -0.2**
comp=Z,26nm,1.0s,baz=53,slow=6.7,SNR=22
ZAA0 Zalesovo Array 118.49 318 *e*PKPdf **PKPdf** **01 12 32.5 -1.4**
ZALV Zalesovo Beam 118.49 318 PKIKP **PKPdf** **01 12 32.6 -1.3**
ZALV pmax pmax
comp=Z,29nm,0.7s
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 118.49 318 Pdif **Pdif** **01 08 58.8 +5.1**
ZALV PKP **PKPdf** **01 12 32.6 -1.3**
ZALV PKKPbc PKKPbc 01 22 57.5 +5.5
ZALV Zalesovo Beam 118.49 318 Pdiff **Pdif** **01 08 58.8 +5.1**
comp=Z,1.9nm,0.9s,baz=116,slow=6.8,SNR=7.5
ZALV PKP **PKPdf** **01 12 32.6 -1.3**
comp=Z,28nm,0.7s,baz=174,slow=1.5,SNR=50
ZALV PKKPbc PKKPbc 01 22 57.5 +5.5
comp=Z,1.1nm,0.5s,baz=239,slow=4.7,SNR=3.6
BINY Binghamton 119.06 56 *e*PKPdf **PKPdf** **01 12 35.1 -0.2**
LBTB Lobatse 119.29 205 *e*PKPdf **PKPdf** **01 12 37.2 +0.6**
LBTB *e*PKKPbc **PKKPbc** **01 22 49.0 +0.2**
NVS Novosibirsk 119.61 319⇑ *i*PKIKP **PKPdf** **01 12 33.5 -2.5**
NVS *e* 01 12 47.8
NVS *e* 01 19 43.6
NVS pmax pmax
comp=N,24nm,1.3s
NVS pmax pmax
comp=E,41nm,1.4s
CPNY Central Park 120.09 58 *e*PKPdf PKPdf 01 12 43.9 +6.6
KSH Kashi 120.36 300 PKP **PKPdf** **01 12 38.0 -0.1**
KSH PP **PP** **01 14 04.4 -0.6**
KSH *e*PKS **PKSdf** **01 16 12.9 -1.9**
KSH SKS **SKSdf** **01 19 45.5 -2.3**
KSH AMB AMB
comp=Z,3µm,6.2s
KSH LR LR
comp=N,7µm,20.0s
KSH LR LR
comp=E,3µm,16.6s
KSH LR LR
comp=Z,9µm,16.5s
MSNY Massena 120.63 53 *e*PKPdf **PKPdf** **01 12 38.3 +0.1**
LONY Lake Ozonia 120.72 54 *e*PKPdf **PKPdf** **01 12 37.0 -1.5**
NCB Newcomb 120.80 55 *e*PKPdf **PKPdf** **01 12 38.5 -0.1**
TRY Troy 120.85 56 *e*PKPdf **PKPdf** **01 12 39.0 +0.3**
ULHL Ulahol 120.94 303 P **PKPdf** **01 12 39.5 +0.3**
SNR=9.4
ACCN Adirondack Com 121.03 55 *e*PKPdf **PKPdf** **01 12 39.0 -0.1**
KURK Kurchatov 121.42 313 *c* *i*PKIKP **PKPdf** **01 12 38.6 -1.0**
KURK MLR MLR
comp=Z,5µm,19.0s
KURK Kurchatov 121.42 313 Pdif **Pdif** **01 09 13.0 +6.2**
KURK *e*PKPdf **PKPdf** **01 12 38.6 -1.0**
KURK PKP **PKiKP** **01 12 38.9 -0.9**
KURK PKKPbc **PKKPab** **01 22 40.1 +0.8**
KURK Kurchatov 121.42 313 P **PKPdf** **01 12 39.0 -0.6**
SNR=51
KURBB Kurchatov Arra 121.46 313 Pdiff **Pdif** **01 09 13.0 +6.1**
comp=Z,0.5nm,0.9s,baz=94,slow=2.8,SNR=3.1
KURBB PKP **PKPdf** **01 12 38.9 -0.8**
comp=Z,95nm,0.9s,baz=104,slow=2.0,SNR=236
KURBB PKKPbc **PKKPbc** **01 22 40.1 -0.7**
comp=Z,2.5nm,0.8s,baz=279,slow=5.1,SNR=9.5
FRNY Flat Rock 121.46 54 *e*PKPdf **PKPdf** **01 12 38.9 -0.9**
TKM2 Tokmak 2 121.58 304 PKIKP **PKPdf** **01 12 39.7 -0.8**
TKM2 pmax pmax
comp=Z,70nm,0.8s
TKM2 Tokmak 2 121.58 304 *e*PKPdf **PKPdf** **01 12 39.6 -0.8**
TKM2 Tokmak 2 121.58 304 P **PKPdf** **01 12 40.1 -0.3**
SNR=11
KZA Kyzart 121.61 303 P **PKPdf** **01 12 40.9 +0.1**
SNR=66
QUA2 Belchertown 121.67 57 *e*PKPdf **PKPdf** **01 12 40.4 0.0**
KBK Karagaybulak 121.97 304 P **PKPdf** **01 12 40.8 -0.4**
SNR=50
HNH Hanover 122.08 55 *e*PKPdf **PKPdf** **01 12 42.0 +0.9**
BRYW Bryant College 122.16 57 *e*PKPdf **PKPdf** **01 12 41.0 -0.4**
UCH Uchtor 122.17 303 P **PKPdf** **01 12 42.7 +0.7**
SNR=16
CHMS Chumysh 122.20 304 P **PKPdf** **01 12 41.1 -0.3**
SNR=10.0
FRU Bishkek 122.25 304⇑ *e*P **Pdif** **01 09 10.0 -0.8**
FRU *i* 01 12 40.0
FRU *e* 01 14 16.0
FRU *e* 01 19 47.0
FRU *e*PS **PS** **01 24 12.0 -0.4**
FRU *i* PPS PPS 01 25 36.0
FRU *i* SS SS 01 31 20.0 +24
FRU pmax pmax
comp=Z,150nm,1.4s
AAK Ala-Archa 122.29 303 *c* *i*PKIKP **PKPdf** **01 12 41.3 -0.5**
AAK Ala-Archa 122.29 303 *e*PKPdf **PKPdf** **01 12 41.4 -0.4**
AAK *e*PKKPbc **PKKPbc** **01 22 38.8 +1.1**
AAK Ala-Archa 122.29 303 P **PKPdf** **01 12 41.5 -0.3**
SNR=28
AAK Ala-Archa 122.29 303 P **PKPdf** **01 12 41.6 -0.2**
SNR=16
AAK Ala-Archa 122.29 303 PKKPbc PKKPbc 01 22 38.7 +1.0
comp=Z,15nm,0.9s,baz=239,slow=2.6,SNR=12
HRV Adam Dziewonsk 122.30 57 *e*PKIKP **PKPdf** **01 12 41.8 +0.3**
HRV Adam Dziewonsk 122.30 57 *e*PKPdf **PKPdf** **01 12 41.8 +0.3**
WES Weston 122.44 57 *e*PKIKP **PKPdf** **01 12 41.9 +0.1**
WES Weston 122.44 57 *e*PKPdf **PKPdf** **01 12 41.9 +0.1**
USP Ospenovka 122.45 304 P **PKPdf** **01 12 41.3 -0.6**
SNR=74
LBNH Lisbon 122.47 55 *e*PKIKP **PKPdf** **01 12 41.7 -0.1**
LBNH Lisbon 122.47 55 *e*PKPdf **PKPdf** **01 12 41.7 -0.1**

FFD Franklin Falls 122.47 56 *e*PKPdf **PKPdf** **01 12 42.5 +0.6**
AML Almayashu 122.74 303 P **PKPdf** **01 12 42.8 -0.2**
SNR=68
EKS2 Erkin-Say 122.81 303 *e*PKIKP **PKPdf** **01 12 42.5 -0.2**
EKS2 Erkin-Say 122.81 303 *e*PKPdf **PKPdf** **01 12 42.5 -0.2**
EKS2 *e*PKKPab **PKKPbc** **01 22 37.4 +1.7**
EKS2 Erkin-Say 122.81 303 P **PKPdf** **01 12 42.5 -0.2**
SNR=51
KBL Kabul 124.19 293 *e*PKIKP **PKPdf** **01 12 45.6 -0.1**
KBL Kabul 124.19 293 *e*PKPdf **PKPdf** **01 12 45.6 -0.1**
KK31 Karatay Array 125.25 303 PKIKP **PKPdf** **01 12 46.0 -1.2**
KK31 pmax pmax
comp=Z,108nm,1.1s
KKAR Karatay Array 125.25 303 *e*PKIKP **PKPdf** **01 12 46.9 -0.3**
KKAR Karatay Array 125.25 303 *e*PKPdf **PKPdf** **01 12 46.9 -0.3**
PQI Presque Isle 125.66 53 *e*PKPdf **PKPdf** **01 12 47.5 -0.4**
EMMW East Machias 125.69 55 *e*PKPdf **PKPdf** **01 12 48.0 0.0**
VOSK Vostochnaya 126.43 315 PKIKP **PKPdf** **01 12 47.9 -1.3**
VOSK pmax pmax
comp=Z,201nm,1.1s
BVA0 Borovoye Array 126.81 315 *i* PKIKP **PKPdf** **01 12 47.2 -2.7**
BVA0 pmax pmax
comp=Z,32nm,1.3s
BVAR Borovoye Array 126.81 315 PKHKP PKPpre 01 12 38.1
BVAR 01 12 49.1
BVAR Borovoye Array 126.81 315 PKPpre PKPpre 01 12 38.1
BVAR PKP **PKPdf** **01 12 49.1 -0.8**
BVAR Borovoye Array 126.81 315 PKhKP PKPpre 01 12 38.1
comp=Z,2.4nm,0.7s,baz=104,slow=3.4,SNR=9.9
BVAR PKP **PKPdf** **01 12 49.1 -0.8**
comp=Z,43nm,0.5s,baz=142,slow=1.2,SNR=105
BRVK Borovoye 126.88 315 *e*PKIKP **PKPdf** **01 12 49.3 -0.7**
BRVK Borovoye 126.88 315 *e*PKPdf **PKPdf** **01 12 49.3 -0.7**
BRVK Borovoye 126.88 315 P **PKPdf** **01 12 49.7 -0.3**
SNR=74
LSZ Lusaka 126.92 213 *e*PKPdf **PKPdf** **01 12 51.8 +0.3**
LSZ PKP **PKPdf** **01 12 51.9 +0.4**
LSZ PKKPbc **PKKPab** **01 22 21.1 +0.3**
LSZ Lusaka 126.92 213 P **PKPdf** **01 12 52.2 +0.8**
SNR=32
LSZ Lusaka 126.92 213 PKP **PKPdf** **01 12 51.9 +0.4**
comp=Z,137nm,1.0s,baz=57,slow=5.5,SNR=132
LSZ PKKPbc **PKKPab** **01 22 21.1 +0.3**
comp=Z,4.3nm,0.7s,baz=0.8,slow=6.5,SNR=7.2
TSUM Tsumeb 127.31 199 PKPpre PKPpre 01 12 43.7
TSUM *e*PKPdf **PKPdf** **01 12 52.0 -0.2**
TSUM PKP **PKiKP** **01 12 52.5 -0.2**
TSUM PP **PP** **01 14 49.3 -1.0**
TSUM *e*PP PP 01 14 49.5 -0.9
TSUM Tsumeb 127.31 199 PKhKP PKPpre 01 12 43.7
comp=Z,20nm,1.2s,baz=306,slow=3.0,SNR=5.4
TSUM PKP **PKiKP** **01 12 52.5 -0.2**
comp=Z,83nm,1.0s,baz=153,slow=2.9,SNR=119
TSUM PP **PP** **01 14 49.3 -1.0**
comp=Z,21nm,0.8s,baz=156,slow=6.4,SNR=5.4
SCHQ Schefferville 127.34 43 *e*PKPdf **PKPdf** **01 12 50.0 -0.8**
SCHQ PKP **PKPdf** **01 12 50.7 -0.2**
SCHQ Schefferville 127.34 43 PKP **PKPdf** **01 12 50.7 -0.2**
comp=Z,122nm,1.1s,baz=319,slow=1.9,SNR=36
RCBR Riachuelo 128.58 129 *e*PKPdf **PKPdf** **01 12 55.6 +1.0**
RCBR SKP 01 16 25.7
RCBR Riachuelo 128.58 129 SKP **SKPdf** **01 16 25.7 -1.9**
comp=Z,7.1nm,0.7s,baz=244,slow=7.4,SNR=3.9
JMDO Jabal Madar 129.14 274 P **PKPdf** **01 12 55.1 -0.2**
SNR=14
SMDO Samad 129.45 275 P **PKPdf** **01 12 56.1 +0.1**
SNR=22
BSY Bisya 130.06 274 P **PKPdf** **01 12 56.5 -0.6**
SNR=19
HOQ Hoqain 130.28 275 P **PKPdf** **01 12 57.1 -0.4**
SNR=14
RBK Rabkut 130.45 267 P **PKPdf** **01 12 58.1 +0.2**
SNR=20
ARQ Araqi 130.86 275 P **PKPdf** **01 12 58.1 -0.4**
SNR=18
ABTO Aybut 131.15 266 P **PKPdf** **01 12 59.6 +0.3**
SNR=14
HATD Hatta, Dubai 131.73 276 P **PKPdf** **01 12 59.3 -0.8**
SNR=8.5
HATD Hatta, Dubai 131.73 276 P **SKPbc** **01 16 21.1 -2.3**
SNR=6.2
ASHO Ashiyiah 131.74 276 P **PKPdf** **01 12 59.5 -0.8**
SNR=13
ASHO Ashiyiah 131.74 276 P **SKPbc** **01 16 21.1 -2.4**
SNR=7.5
BANOM Banah 131.97 278 P **SKPbc** **01 16 22.4 -1.9**
SNR=5.7
NAZ Nazwa, Dubai 132.19 276 P **PKPdf** **01 13 02.6 +1.6**
SNR=6.6
NAZ Nazwa, Dubai 132.19 276 P **SKPbc** **01 16 22.8 -2.3**
SNR=12
KBS Kingsbay 132.21 357⇑ *i*P **PKPdf** **01 12 59.4 -0.1**
KBS AMB AMB 01 13 02.4
comp=Z,209nm,0.7s
KBS *e*SS SS 01 33 03.8 +6.5
KBS AMS AMS 01 58 54.7
comp=Z,7µm,25.3s
KBS Kingsbay 132.21 357 *c* *i*PKIKP **PKPdf** **01 13 00.0 +0.5**
KBS pmax pmax
comp=Z,20nm,1.0s
KBS Kingsbay 132.21 357 *e*PKPdf **PKPdf** **01 13 00.4 +0.9**
KBS *e*SKPbc **SKPbc** **01 16 22.6 -0.9**
ASUD Al Ashush, Dub 132.34 276 P **SKPbc** **01 16 23.6 -2.0**
SNR=8.5
SPA0 Spitsbergen Ar 132.71 356 *e* **PKPdf** **01 13 01.0 +0.5**
SPITS Spitsbergen Ar 132.71 356 PKPpre PKPpre 01 12 44.3
SPITS PKP **PKPdf** **01 13 00.5 0.0**
SPITS SKPab **SKPbc** **01 16 23.3 -1.9**
SPITS Spitsbergen Ar 132.71 356 PKhKP PKPpre 01 12 44.3
comp=Z,4.6nm,0.7s,baz=73,slow=2.8,SNR=11
SPITS PKP **PKPdf** **01 13 00.5 0.0**
comp=Z,172nm,0.7s,baz=104,slow=7.0,SNR=70
SPITS SKPab **SKPbc** **01 16 23.3 -1.9**
comp=Z,21nm,0.8s,baz=180,slow=0.6,SNR=3.7
KMBO Kilima Mbogo 133.06 233 PKPpre PKPpre 01 12 51.5
KMBO PKP **PKPdf** **01 13 03.0 -0.3**
KMBO *e*PKPdf **PKPdf** **01 13 04.2 +0.9**
KMBO SKPbc **SKPbc** **01 16 26.1 -2.6**
KMBO *e*SKPbc **SKPab** **01 16 28.3 -2.2**
KMBO Kilima Mbogo 133.06 233 P **PKPdf** **01 13 04.2 +0.9**
SNR=10.0
KMBO Kilima Mbogo 133.06 233 PKhKP PKPpre 01 12 51.5
comp=Z,0.7nm,0.3s,baz=249,slow=24,SNR=4.8
KMBO PKP **PKPdf** **01 13 03.0 -0.3**
comp=Z,19nm,0.8s,baz=92,slow=1.6,SNR=17
KMBO SKPbc **SKPbc** **01 16 26.1 -2.6**
comp=Z,35nm,0.9s,baz=82,slow=3.0,SNR=19
KMBO Kilima Mbogo 133.06 233 P **SKPbc** **01 16 31.1 +2.3**
baz=83,SNR=3.9
SFJD Kangerlussuaq 133.15 25 *e*PKPdf **PKPdf** **01 13 00.8 -0.7**
SFJD *e*PP PP 01 15 21.1 -7.4
SFJD Kangerlussuaq 133.15 25 *i* P **PKPdf** **01 13 00.6 -0.9**
comp=Z,28nm,0.9s
SFJD *i* 01 15 26.9
SFJD *i* 01 16 26.1
SFJD
comp=Z,9µm,22.0s
ABKAR Akbulak array 133.22 310 *e*PKPdf **PKPdf** **01 12 58.9 -3.2**
ABKAR *e*PP PP 01 15 24.1 -5.6
ABKAR *e*SKPbc **SKPbc** **01 16 28.0 +0.3**
ARU Arti 133.59 320 *i* PKIKP **PKPdf** **01 13 02.3 -0.3**
ARU MLR MLR
comp=Z,11µm,23.0s
DAG Danmarks Havn 133.64 6⇑ *i*PKIKP **PKPdf** **01 13 00.8 -1.4**
DAG pmax pmax
comp=Z,54nm,0.8s
DAG MLR MLR
comp=Z,8µm,26.0s
DAG Danmarks Havn 133.64 6⇑ *i*P **PKPdf** **01 13 00.8 -1.4**
comp=Z,72nm,0.8s
DAG *i* 01 15 23.7
DAG *i* 01 16 22.6
DAG
comp=Z,6µm,25.0s
SUMG Summit 133.84 16⇑ *i*PKIKP **PKPdf** **01 13 02.5 -0.7**
SUMG *i* 01 15 30.7
SUMG pmax pmax
comp=Z,86nm,1.0s
SUMG MLR MLR
comp=Z,9µm,19.0s
SUMG Summit 133.84 16 *e*PKPdf **PKPdf** **01 13 02.5 -0.7**
SUMG Summit 133.84 16⇑ *i*P **PKPdf** **01 13 02.5 -0.7**
comp=Z,86nm,1.0s
SUMG *i* 01 15 30.7
SUMG

comp=Z,9µm,19.0s
HSP Hornsund 133.89 356 *e*P **PKPdf** **01 13 02.6 0.0**
SOKR Solikamsk 133.96 324 *c* *i*PKIKP **PKPdf** **01 13 02.8 -0.4**
SOKR pmax pmax
comp=Z,70nm,0.7s
AKTO Aktyubinsk 134.44 312 PKHKP PKPpre 01 12 52.2
AKTO 01 13 03.6
AKTO Aktyubinsk 134.44 312 PKPpre PKPpre 01 12 52.2
AKTO PKP **PKPdf** **01 13 03.6 -0.9**
AKTO SKP 01 16 33.0
AKTO Aktyubinsk 134.44 312 PKhKP PKPpre 01 12 52.2
comp=Z,2.3nm,0.5s,baz=154,slow=3.9,SNR=9.6
AKTO PKP **PKPdf** **01 13 03.6 -0.9**
comp=Z,50nm,0.8s,baz=94,slow=2.3,SNR=23
AKTO SKP 01 16 33.0
comp=Z,10nm,0.9s,baz=202,slow=22,SNR=8.4
BJO Bjornoya 135.96 353 *e* PKPpre 01 12 56.2
BJO *e*PP PP 01 15 39.8 -6.2
WNDE Wendo Genet 137.68 243 *e*P **PKPdf** **01 13 13.3 +1.4**
MBAR Mbarara 137.72 227 PKPpre PKPpre 01 13 03.5
MBAR PKP **PKPdf** **01 13 11.7 -0.2**
MBAR SKP 01 16 41.6
MBAR Mbarara 137.72 227 PKHKP PKPpre 01 13 03.5
comp=Z,11nm,0.9s,baz=58,slow=22,SNR=4.7
MBAR PKP **PKPdf** **01 13 11.7 -0.2**
comp=Z,34nm,1.0s,baz=187,slow=4.3,SNR=20
MBAR SKP 01 16 41.6
comp=Z,24nm,0.9s,baz=155,slow=6.9,SNR=7.1
LVZ Lovozero 138.69 342 *e*PKIKP **PKPdf** **01 13 10.6 -1.2**
LVZ MLR MLR
comp=Z,9µm,22.0s
FURI Furi 138.77 245 *e*PKPdf **PKPdf** **01 13 15.5 +1.5**
FURI *e*SKPbc **SKiKP** **01 16 49.0 -0.9**
FURI Furi 138.77 245 P PKPdf 01 13 06.1 -7.9
FURI S PP 01 16 17.9 +13
SCO Scoresbysund 138.82 12⇑ *i*PKIKP **PKPdf** **01 13 11.4 -0.5**
SCO pmax pmax
comp=Z,77nm,1.0s
SCO MLR MLR
comp=Z,6µm,22.0s
SCO Scoresbysund 138.82 12⇑ *i*P **PKPdf** **01 13 11.4 -0.5**
comp=Z,77nm,1.0s
SCO
comp=Z,6µm,21.0s
KEV Kevo 139.03 347 *e*PKHKP PKPpre 01 13 04.7
KEV Kevo 139.03 347 *e*pkp PKPpre 01 13 04.7
KEV Kevo 139.03 347 *e*PKPdf PKPpre 01 13 04.4
APA Apatity 139.26 342⇑ *i*PKHKP PKPpre 01 13 06.0
APA *i* 01 16 07.0
APA *i* PS 01 26 34.0
APA pmax pmax
comp=Z,78nm,1.0s
ARCES ARCESS Array B 139.51 347 PKPpre PKPpre 01 13 05.3
ARCES PKP **PKPdf** **01 13 13.8 +0.5**
ARCES SKP 01 16 43.7
ARCES ARCESS Array B 139.51 347 PKhKP PKPpre 01 13 05.3
comp=Z,16nm,0.5s,baz=64,slow=2.8,SNR=80
ARCES PP **PKPdf** **01 13 13.8 +0.5**
comp=Z,130nm,0.7s,baz=117,slow=1.0,SNR=46
ARCES SKP 01 16 43.7
comp=Z,34nm,0.9s,baz=58,slow=2.2,SNR=7.7
ARE0 ARCESS Array S 139.51 347 *e* PKPpre 01 13 03.4
ARE0 ARCESS Array S 139.51 347 *e*PKPdf PKPpre 01 13 05.3
ARE0 *e*SKPdf **SKPdf** **01 16 39.4 -6.2**
QRN Al-Qurain 139.93 278 *e*P PKPdf 01 13 08.9 -6.3
QRN AMb AMB 01 13 19.6
comp=Z,369nm,1.6s
JMIC Jan Mayen 140.03 5 *e*P **PKPdf** **01 13 13.6 -0.6**
JMIC AMB AMB 01 13 20.2
comp=Z,227nm,1.1s
JMIC *e*SS SS 01 34 31.8 +1.2
JMIC AMS AMS 02 09 52.4
comp=Z,6µm,20.7s
JMIC Jan Mayen 140.03 5 PKP **PKPdf** **01 13 14.0 -0.1**
JMIC SKPbc **SKPbc** **01 16 46.3 -1.3**
JMIC Jan Mayen 140.03 5 PKP **PKPdf** **01 13 14.0 -0.1**
comp=Z,136nm,1.0s,baz=240,slow=4.0,SNR=2.6
JMIC SKPbc **SKPbc** **01 16 46.3 -1.3**
comp=Z,25nm,0.8s,baz=163,slow=7.4,SNR=3.1
RDF Al-Radifah 140.29 279 *e*P PKPdf 01 13 10.2 -5.7
RDF AMb AMB 01 13 20.0
comp=Z,242nm,0.9s
KTK1 Kautokeino 140.38 348 *e*P PKPpre 01 13 04.5
KTK1 AMB AMB 01 13 23.5
comp=Z,253nm,1.9s
KTK1 *e*PP **PP** **01 16 10.0 -3.5**
KTK1 *e*SS SS 01 34 32.8 -2.0
TRO Tromso 140.51 350 *e* PKPpre 01 13 01.1
TRO AMB AMB 01 13 18.3
comp=Z,213nm,0.0s
TRO *e*PP **PP** **01 16 14.7 +0.5**
TRO *e*SS SS 01 34 41.9 +5.7
TRO AMS AMS 02 05 30.6
comp=Z,5µm,25.6s
NAY Al-Naaiem 140.63 279 *e*P PKPdf 01 13 10.6 -5.9
NAY AMb AMB 01 13 20.7
comp=Z,68nm,1.1s
MIB Mutribah 140.69 280 *e*P PKPdf 01 13 10.4 -6.2
MIB AMb AMB 01 13 21.8
comp=Z,154nm,1.1s
MAK Makhachkala 141.99 301 *e*PKHKP PKPpre 01 13 11.1
MAK *e* 01 16 22.1
MAK pmax pmax
comp=Z,187nm,1.0s
STEI Steigen 142.59 351 *e*P **PKPdf** **01 13 15.4 -3.4**
STEI AMB AMB 01 13 23.1
comp=Z,118nm,0.9s
JOF Joensuu 143.21 338 *e*PKHKP PKPab 01 13 16.0 +0.2
JOF Joensuu 143.21 338 *e*pkp PKPab 01 13 16.0 +0.2
DGRG David-gareji 143.62 298 P PKPbc 01 13 18.7 -0.3
BORG Borgarnes 143.81 16 *e*PKPdf PKPbc 01 13 19.8 +1.1
BORG PKP **PKPdf** **01 13 20.1 -0.9**
BORG Borgarnes 143.81 16 PKP **PKPdf** **01 13 20.1 -0.9**
comp=Z,32nm,0.9s,baz=347,slow=2.2,SNR=2.6
BHD Baghdad 143.87 285 *i* x PKPab 01 13 17.0 -2.3
BHD *i* x **SKPbc** **01 16 57.4 -1.1**
TBLG Delisi 144.09 299 P **PKPab** **01 13 19.7 -0.2**
GNI Garni 144.12 296 *e*P **PKPab** **01 13 19.9 -0.3**
GNI Garni 144.12 296 PKP **PKPab** **01 13 20.1 -0.1**
GNI *e*PKPdf PKPbc 01 13 20.2 -0.5
GNI Garni 144.12 296 P **PKPab** **01 13 20.5 +0.2**
SNR=54
GNI Garni 144.12 296 PKP **PKPab** **01 13 20.1 -0.1**
comp=Z,50nm,0.9s,baz=164,slow=1.4,SNR=41
KONS Konsvik 144.22 352 *e*P PKPab 01 13 13.5 -6.0
GUDG Gudauri 144.24 300 P PKPbc 01 13 21.4 +0.3
KZR Kazreti 144.34 298 P **PKPdf** **01 13 24.0 +1.2**
FLOS Flostrand 144.35 352 *e*P **PKPab** **01 13 18.8 -1.2**
FLOS AMB AMB 01 13 29.7
comp=Z,708nm,0.0s
MOR8 Moi Rana 144.37 351⇑ *i*P **PKPab** **01 13 18.9 -1.3**
MOR8 AMB AMB 01 13 21.4
comp=Z,382nm,1.7s
STOK Stokkvaagen 144.39 352 *e*P PKPbc 01 13 20.5 +0.1
STOK AMB AMB 01 13 35.6
comp=N,226nm,1.3s
GOR Gori 144.54 299 P **PKPab** **01 13 21.5 -0.1**
VRHR Novokhopersk 144.56 315 *e*PKHKP PKPpre 01 13 19.4
VRHR pmax pmax
comp=Z,1µm,3.0s
VRHR pmax pmax
comp=N,80nm,1.5s
VRHR pmax pmax
comp=E,110nm,1.5s
VRHR MLR MLR
comp=N,2µm,20.0s
VRHR MLR MLR
comp=E,4µm,20.0s
VRHR MLR MLR
comp=Z,6µm,20.0s
CLDR Calditan 144.75 295 *e*P PKPbc 01 13 23.1 +0.2
HAKT HAKKARI 144.86 292 *i* P **PKPdf** **01 13 23.8 -0.3**
MOS Moscow 144.92 324 *α* *i*PKIKP **PKPab** **01 13 21.8 -0.7**
MOS *e* 01 13 36.1
MOS pmax pmax
comp=E,2µm,4.6s
MOS pmax pmax
comp=Z,7µm,4.6s
MOS pmax pmax
comp=N,3µm,4.0s
MOS pmax pmax
comp=N,250nm,1.2s
MOS pmax pmax
comp=E,133nm,1.2s

MOS pmax pmax
comp=Z,714nm,1.2s
CUKT Cukurca 144.93 291 *e*P **PKPab 01 13 23.1 -0.2**
DYDN Diyadin 144.93 295 *i* P **PKPdf 01 13 24.0 -0.1**
ONI Oni 144.99 301 P PKPbc 01 13 23.3 0.0
GOF Gofitskoye 145.01 305 *e*PKIKP PKPdf 01 13 32.0 +8.2
GOF pmax pmax
comp=Z,150nm,0.8s
AKH Akhalkalaki 145.03 298 P **PKPab 01 13 23.7 +0.1**
TVAN Van 145.14 293 *i* P **PKPdf 01 13 25.9 +1.4**
VANB Van 145.15 294 *e*P **PKPbc 01 13 23.1 -0.9**
KBZ Khabaz 145.28 303 PKP2 **PKPbc 01 13 23.6 -0.5**
KBZ Khabaz 145.28 303 PKPbc **PKPbc 01 13 23.6 -0.5**
KBZ Khabaz 145.28 303 PKPbc **PKPbc 01 13 23.6 -0.5**
comp=Z,158nm,1.0s,baz=80,slow=1.4,SNR=113
KAF Kangasniemi 145.37 340 *e*PKP2 **PKPbc 01 13 22.0 -1.7**
KAF Kangasniemi 145.37 340 *e*pkp **PKPbc 01 13 22.0 -1.7**
KARS Kars 145.38 297 *e*P **PKPab 01 13 25.2 +0.3**
GEVA Gevas 145.40 293 *i* P **PKPab 01 13 25.1 0.0**
KIV Kislovodsk 145.41 303 *c i*PKIKP **PKPbc 01 13 24.3 -0.3**
TUTA Tutak 145.60 295 *i* P **PKPab 01 13 26.2 +0.3**
PUL Pulkovo 145.75 334 *c i*PKIKP **PKPdf 01 13 24.5 0.0**
OBN Obninsk 145.75 324 ⇓*i*PKIKP **PKPdf 01 13 24.1 -0.5**
OBN *i* 01 13 39.4
OBN *e*PPS PPS 01 29 14.9
OBN pmax pmax
comp=Z,1μm,1.3s
VOR Voronezh 145.77 317 ⇑*i*PKIKP **PKPdf 01 13 23.0 -1.8**
VOR pmax pmax
comp=Z,2μm,1.2s
SIRN S¨–rnak 145.89 292 *i* P **PKPbc 01 13 26.3 0.0**
FIA1 FINESS Array S 145.96 339 *e*PKPdf **PKPdf 01 13 24.2 -0.6**
FINES FINESS Array B 145.96 339 PKPbc **PKPbc 01 13 25.2 -0.3**
FINES FINESS Array B 145.96 339 PKPbc **PKPbc 01 13 25.2 -0.3**
comp=Z,524nm,0.6s,baz=50,slow=3.2,SNR=1042
VSR Storozhevoye 145.98 317 *e*PKIKP **PKPdf 01 13 24.7 -0.5**
VSR *i* 01 13 30.1
VSR pmax pmax
comp=E,890nm,1.5s
VSR pmax pmax
comp=Z,2μm,1.5s
VSR pmax pmax
comp=N,150nm,1.0s
VSR MLR MLR
comp=N,4μm,17.0s
VSR MLR MLR
comp=E,4μm,17.0s
VSR MLR MLR
comp=Z,8μm,17.0s
CHVG Ch'k'valeri 145.98 301 P **PKPbc 01 13 25.9 -0.4**
VORD Divnogorie 145.99 316 *e*PKIKP **PKPdf 01 13 24.1 -1.1**
VORD *e* 01 16 58.7
VORD pmax pmax
comp=Z,3μm,2.7s
VORD pmax pmax
comp=N,130nm,1.4s
VORD pmax pmax
comp=E,490nm,1.4s
VORD MLR MLR
comp=N,4μm,17.0s
VORD MLR MLR
comp=E,3μm,17.0s
VORD MLR MLR
comp=Z,7μm,17.0s
TATV Tatvan 146.03 293 *i* P **PKPbc 01 13 26.5 -0.4**
ARTV Artvin 146.22 298 *i* P **PKPdf 01 13 26.3 +0.1**
DAGI Agillar 146.24 298 *i* P **PKPdf 01 13 26.4 +0.2**
HOMI Horasan 146.29 296 *i* P **PKPdf 01 13 27.0 +0.6**
DDEM Demirkent 146.37 298 *i* P **PKPbc 01 13 27.7 0.0**
DBAD Bademkaya 146.41 298 *i* P **PKPdf 01 13 26.4 0.0**
DBOC Borcka 146.41 298 *i* P **PKPdf 01 13 26.5 +0.1**
BCA Borcka 146.44 299 *e*P **PKPdf 01 13 26.2 -0.1**
BTMT Batman 146.64 293 *e*P **PKPdf 01 13 27.2 +0.3**
VRTB Varto-Mus 146.66 295 *e*P **PKPbc 01 13 28.0 -0.7**
EZM Erzurum 146.72 296 *e*P **PKPbc 01 13 28.4 -0.5**
BEST Besiri 146.81 292 *i* P **PKPbc 01 13 28.6 -0.4**
PZAR Pazar-Rize 147.00 298 *e*P **PKPdf 01 13 26.8 -0.5**
MARD Mardin 147.18 291 *i* P **PKPdf 01 13 28.7 +0.8**
MZRK Al-Mazaregh 147.22 288 *e*P **PKPbc 01 13 29.9 -0.2**
MZRK Al-Mazaregh 147.22 288 *e*P **PKPbc 01 13 29.9 -0.2**
SNR=168
BNGB Bing ¶‖ 147.27 294 *e*P **PKPdf 01 13 28.3 +0.3**
KOPT Kop Dagi 147.38 296 *i* P **PKPdf 01 13 29.5 +1.1**
SOC Sochi 147.59 303 *c i*PKIKP **PKPdf 01 13 27.2 -1.0**
SOC *i* 01 13 31.6
SOC *e*PPP PPP 01 20 16.3
SOC *e* 01 29 35.3
SOC *e*SS SS 01 36 33.0 +33
SOC pmax pmax
comp=Z,86nm,1.0s
SOC pmax pmax
comp=Z,248nm,0.9s
SOC MLR MLR
comp=E,3μm,21.0s
SOC MLR MLR
comp=Z,7μm,21.0s
SOC MLR MLR
comp=N,2μm,21.0s
BAYT Ayd¨–ntepe-Bay 147.63 297 *e*P **PKPbc 01 13 30.4 -1.0**
DIY Diyarbakir 147.63 292 *e*P **PKPdf 01 13 28.4 -0.2**
TBLU Trondheim 147.69 353 ⇑*i*P **PKPdf 01 13 25.1 -2.6**
TBLU AMB AMB 01 13 47.8
comp=Z,764nm,1.9s
DIYA Diyarbakir 147.72 292 *i* P **PKPdf 01 13 29.7 +1.0**
MACK Trabzon 147.87 298 *i* P **PKPbc 01 13 32.3 +0.5**
VSU Vasula 147.98 335 *c i*PKIKP **PKPdf 01 13 27.9 -0.4**
ERZN Erzincan 147.99 295 *e*P **PKPdf 01 13 29.2 0.0**
EUZM Uzumlu 148.00 296 *i* P **PKPdf 01 13 30.6 +1.4**
GUMT Gumushane 148.12 297 *e*P **PKPdf 01 13 30.3 +0.9**
EZC Erzincan 148.27 296 *e*P **PKPbc 01 13 33.7 +0.7**
PTK Pertek 148.28 294 *e*P **PKPdf 01 13 30.1 +0.4**
KELT Kelkit 148.32 297 *i* P **PKPdf 01 13 30.0 +0.2**
SVRC Sivrice-ELAZID 148.35 293 *e*P **PKPbc 01 13 32.4 -0.9**
ELZG Elazig 148.60 293 *i* P **PKPbc 01 13 34.8 +0.8**
MOL Molde 148.62 355 ⇑*i*P **PKPdf 01 13 28.4 -0.8**
MOL AMB AMB 01 13 35.5
comp=Z,426nm,1.9s
ESPY Espiye-Giresun 148.66 298 *e*P **PKPdf 01 13 31.6 +1.5**
ILIC ilic-Erzincan 148.89 295 *e*P **PKPdf 01 13 31.2 +0.6**
KEMA Kemaliye 148.96 295 *i* P **PKPdf 01 13 31.2 +0.5**
ANN Anapa 148.97 306 *c i*PKHKP **PKPdf 01 13 29.4 -1.0**
ANN *e* 01 17 07.3
ANN *e*SS SS 01 36 11.7 -3.3
ANN *e*SSS SSS 01 41 46.7
ANN pmax pmax
comp=E,681nm,8.4s
ANN pmax pmax
comp=Z,4μm,8.4s
ANN pmax pmax
comp=N,497nm,5.0s
DOMB Dombas 149.00 353 *e* **PKPbc 01 13 34.1 0.0**
GRSN GIRESUNGRSN 149.00 298 *i* P **PKPbc 01 13 34.0 -0.7**
MYA Malataya 149.05 293 *e*P **PKPdf 01 13 31.6 +0.7**
SUSE Susehri 149.12 297 *i* P **PKPdf 01 13 30.7 -0.3**
ATAB Bozova 149.16 291 *i* P **PKPdf 01 13 31.3 +0.3**
SLMH Al Salmeh 149.44 289 *e*P **PKPbc 01 13 37.2 +1.3**
SLMH Al Salmeh 149.44 289 *e*P **PKPbc 01 13 37.2 +1.3**
SNR=165
ZALF Zalf 149.68 282 *e*P **PKPbc 01 13 35.7 -1.0**
ZALF Zalf 149.68 282 *e*P **PKPbc 01 13 35.7 -1.0**
SNR=154
NB2 NORSAR Subarra1 149.71 351 PKP **PKPdf 01 13 31.0 -0.1**
comp=Z,287nm,0.8s,baz=17,slow=4.3
NB2 NORSAR Subarra1 149.71 351 PKP **PKPdf 01 13 31.0 -0.1**
baz=17,slow=4.3
NOA NORSAR Array B 149.71 351 PKP **PKPdf 01 13 30.8 -0.3**
NOA PKPbc **PKPbc 01 13 35.6 -0.2**
NOA NORSAR Array B 149.71 351 PKP **PKPdf 01 13 30.8 -0.3**
comp=Z,33nm,0.9s,baz=16,slow=4.2,SNR=150
NOA PKPbc **PKPbc 01 13 35.6 -0.2**
comp=Z,189nm,0.8s,baz=16,slow=4.2,SNR=209
GZT Gaziantep 149.75 291 *i* P **PKPdf 01 13 32.8 +0.7**
RSDY Resadiye-TOKAT 149.77 297 *e*P **PKPdf 01 13 30.8 -1.1**
DARE Darende-Malaty 149.78 294 *e*P **PKPdf 01 13 32.0 0.0**
ASF Jabal al Asfar 149.94 281 PKP **PKPdf 01 13 32.2 -0.3**
ASF PKPbc **PKPbc 01 13 37.5 +0.1**
ASF Jabal al Asfar 149.94 281 PKP **PKPdf 01 13 32.2 -0.3**
comp=Z,8.8nm,0.9s,baz=177,slow=1.2,SNR=14
ASF PKPbc **PKPbc 01 13 37.5 +0.1**
comp=Z,99nm,0.8s,baz=279,slow=0.3,SNR=60
NAO01 NORSAR Array S 149.94 351 *e*PKPdf **PKPdf 01 13 31.1 -0.3**
NC602 NORSAR Array S 149.95 350 ⇑*i*P **PKPdf 01 13 30.6 -0.9**
GAZ Gaziantep 150.03 291 *e*P **PKPbc 01 13 37.1 -0.3**

HYA Hoyanger 150.11 355 *e*P **PKPdf 01 13 31.4 -0.2**
KUZU Kuzuini 150.14 290 *i* P **PKPdf 01 13 32.8 +0.2**
SALA Sala 150.15 282 *e*P **PKPbc 01 13 38.0 0.0**
SALA Sala 150.15 282 *e*P **PKPbc 01 13 38.0 0.0**
SNR=150
HFS Hagfors 150.17 348 PKP **PKPdf 01 13 31.3 -0.5**
HFS PKPbc **PKPbc 01 13 36.7 -0.2**
HFS Hagfors 150.17 348 PKP **PKPdf 01 13 31.3 -0.5**
comp=Z,64nm,0.9s,baz=135,slow=0.6,SNR=75
HFS PKPbc **PKPbc 01 13 36.7 -0.2**
comp=Z,239nm,0.7s,baz=99,slow=4.7,SNR=397
ERBA Erbaa 150.17 298 *i* P **PKPdf 01 13 31.8 -0.7**
MICGM Minsk 150.24 328 ⇑*i*PKP **PKPdf 01 13 30.0 -2.1**
MNK Minsk 150.26 328 *c i*PKIKP **PKPdf 01 13 30.0 -2.1**
MNK *e* 01 13 44.0
KMRS Kahramanmaras 150.27 292 *e*P **PKPdf 01 13 32.0 -0.8**
SUE Sulen 150.30 357 ⇑*i*P **PKPdf 01 13 30.8 -1.1**
AYKD Aykdinkavak 150.35 291 *i* P **PKPdf 01 13 32.8 -0.1**
TOKA Tokat 150.42 297 *i* P **PKPbc 01 13 37.6 -0.6**
NACGM Naroch 150.46 330 *e*PKP **PKPdf 01 13 30.0 -2.4**
TOTH TOTAH 150.48 283 *e*P **PKPbc 01 13 38.8 +0.2**
TOTH TOTAH 150.48 283 *e*P **PKPbc 01 13 38.8 +0.2**
SNR=152
HAWK Haweek 150.60 285 *e*P **PKPdf 01 13 33.3 -0.2**
HAWK Haweek 150.60 285 *e*P **PKPdf 01 13 33.3 -0.2**
SNR=156
PINB Pinarbasi 150.62 294 *i* P **PKPdf 01 13 34.2 +0.6**
SARI SarD1z-Kayseri 150.62 293 *e*P **PKPdf 01 13 33.2 -0.3**
BTCH Batrach 150.62 289 *e*P **PKPdf 01 13 35.6 +2.2**
BTCH Batrach 150.62 289 *e*P **PKPdf 01 13 35.6 +2.2**
SNR=157
WRDH Warideh 150.65 287 *e*P **PKPdf 01 13 32.8 -0.7**
WRDH Warideh 150.65 287 *e*P **PKPdf 01 13 32.8 -0.7**
SNR=157
KVT Kavak 150.65 299 *e*P **PKPdf 01 13 33.0 -0.3**
BIDA Albida 150.70 286 *e*P **PKPbc 01 13 36.4 -2.7**
BIDA Albida 150.70 286 *e*P **PKPbc 01 13 36.4 -2.7**
SNR=157
ANDN Andirin 150.71 292 *i* P **PKPdf 01 13 33.7 +0.2**
TCHB Talchebab 150.79 282 *e*P **PKPbc 01 13 39.9 +0.6**
TCHB Talchebab 150.79 282 *e*P **PKPbc 01 13 39.9 +0.6**
SNR=146
ASK Askoy 150.85 356 *e*P **PKPdf 01 13 32.7 -0.2**
HTY Hatay 150.89 289 *e*P **PKPdf 01 13 33.5 -0.2**
YAYL Yayladag 150.91 289 *i* P **PKPdf 01 13 34.0 +0.1**
RUND Rundenannen 150.91 356 *e*P **PKPdf 01 13 32.8 -0.2**
RUND *e* 01 13 38.3
BER Bergen 150.94 356 ⇑*i*P **PKPdf 01 13 31.4 -1.6**
BER AMS AMS 02 25 17.0
comp=Z,6μm,19.4s
HWQ Hawqa 150.96 285 *e*P **PKPdf 01 13 33.4 -0.6**
RCY Rachaya 150.99 283 *e*P **PKPdf 01 13 33.6 -0.6**
ARNB Al Arnab 151.01 288 *e*P **PKPdf 01 13 33.6 -0.5**
ARNB Al Arnab 151.01 288 *e*P **PKPdf 01 13 33.6 -0.5**
SNR=154
EGD Espegrend 151.06 356 *e*P **PKPdf 01 13 32.8 -0.3**
KOZT Kozan 151.13 292 *e*P **PKPdf 01 13 34.4 +0.3**
EIL Elat 151.15 275 PKP **PKPdf 01 13 33.9 -0.4**
EIL PKPbc **PKPbc 01 13 40.1 -0.1**
EIL Elat 151.15 275 PKP **PKPdf 01 13 33.9 -0.4**
comp=Z,16nm,0.9s,baz=193,slow=0.5,SNR=21
EIL PKPbc **PKPbc 01 13 40.1 -0.1**
comp=Z,755nm,1.2s,baz=76,slow=1.3,SNR=88
DIKM Dikmen 151.15 300 *e*P **PKPdf 01 13 32.0 -1.9**
BHL Bhannes 151.17 284 *e*P **PKPdf 01 13 33.6 -0.8**
CEYT Ceyhan 151.20 291 *e*P **PKPdf 01 13 34.4 +0.3**
SIM Simferopol' 151.21 307 *c i*PKIKP **PKPdf 01 13 33.1 -0.8**
SIM *e*PPS PPS 01 30 07.0
SIM pmax pmax
comp=Z,700nm,17.1s
KONO Kongsberg 151.27 351 ⇑*i*P **PKPdf 01 13 31.6 -1.9**
KONO *e*SS SS 01 36 45.4 +6.9
KONO Kongsberg 151.27 351 *e*PKIKP **PKPdf 01 13 33.4 -0.1**
KONO *e* 01 13 39.8
KONO Kongsberg 151.27 351 *e*PKPdf **PKPdf 01 13 33.4 -0.1**
KONO *e*PKPbc **PKiKP 01 13 39.8 -0.2**
MMAI Mount Meron Ar 151.30 282 PKP **PKPdf 01 13 35.0 +0.4**
MMAI PKPbc **PKiKP 01 13 40.9 -0.1**
MMAI Mount Meron Ar 151.30 282 PKP **PKPdf 01 13 35.0 +0.4**
comp=Z,17nm,1.1s,baz=50,slow=1.3,SNR=14
MMAI PKPbc **PKiKP 01 13 40.9 -0.1**
comp=Z,84nm,0.4s,baz=78,slow=7.9,SNR=209
ODD1 Odda 151.32 355 *e*P **PKPdf 01 13 30.8 -2.9**
ODD1 *e* 01 13 38.0
YOZ Yozgat 151.38 296 *e*P **PKPbc 01 13 40.5 -0.2**
KRTS Karatas 151.50 290 *e*P **PKPdf 01 13 33.1 -1.5**
BYBT Boyabat 151.55 300 *e*P **PKPbc 01 13 39.7 -1.1**
CTKT Corum 151.66 298 *i* P **PKPdf 01 13 35.3 +0.3**
AVNT Avonos 151.82 294 *i* P **PKPdf 01 13 34.9 -0.4**
BLS5 Blasjo 151.82 355 *e*P **PKPdf 01 13 34.2 -0.2**
AKASG Malin Array Be 151.83 321 PKIKP **PKPdf 01 13 33.3 -1.3**
AKASG 01 13 41.0
AKASG Malin Array Be 151.83 321 PKP **PKPdf 01 13 33.3 -1.3**
AKASG PKPbc **PKPbc 01 13 41.0 -0.1**
AKASG Malin Array Be 151.83 321 PKP **PKPdf 01 13 33.3 -1.3**
comp=Z,26nm,0.9s,baz=49,slow=1.0,SNR=49
AKASG PKPbc **PKPbc 01 13 41.0 -0.1**
comp=Z,131nm,0.7s,baz=56,slow=2.5,SNR=119
SACV Santiago Islan 151.84 120 *e*PKPdf **PKPdf 01 13 36.0 +0.2**
SACV *e*PKPbc **PKPbc 01 13 41.8 -0.4**
AK01 Malin Array Si 151.84 321 *e*PKPdf **PKPdf 01 13 34.3 -0.4**
AK01 *e*PKPbc **PKPbc 01 13 40.6 -0.5**
KIEV Kiev 151.84 321 *e*PKIKP **PKPdf 01 13 32.7 -1.9**
KIEV 01 13 40.6
KIEV Kiev 151.84 321 *e*PKPdf **PKPdf 01 13 32.7 -1.9**
KIEV *e*PKPbc **PKPbc 01 13 40.6 -0.5**
CORM Corum 151.84 297 *e*P **PKPdf 01 13 34.9 -0.3**
AK02 Malin Array Si 151.86 321 *e*PKPdf **PKPdf 01 13 34.1 -0.6**
AK02 *e*PKPbc **PKPbc 01 13 40.6 -0.5**
GULE Gulek 151.97 291 *i* P **PKPdf 01 13 35.9 +0.4**
NIG Nigde 152.06 293 *e*P **PKPdf 01 13 35.6 -0.2**
CDAG Cicekdag 152.11 296 *i* P **PKPdf 01 13 35.4 -0.2**
TOS Tosya 152.17 299 *e*P **PKPbc 01 13 42.5 +0.2**
STAV Stavanger 152.36 355 *e* **PKPbc 01 13 42.2 +0.2**
ILGA Ilgaz 152.40 299 *i* P **PKPdf 01 13 36.3 +0.2**
EREN Erenkoy 152.47 287 *e*P **PKPdf 01 13 35.2 -0.9**
CANT Cankiri 152.54 298 *e*P **PKPdf 01 13 35.8 -0.4**
BALT Daday 152.55 300 *i* P **PKPdf 01 13 36.7 +0.4**
PHNC Paralimni 152.57 286 P **PKPbc 01 13 44.0 +0.7**
comp=Z,5.2nm,0.5s
SUW Suwalki 152.58 332 *e*PKIKP **PKPdf 01 13 35.3 -0.4**
SUW Suwalki 152.58 332 *e*PKPdf **PKPdf 01 13 35.3 -0.4**
SUW Suwalki 152.58 332 *e*PKPdf **PKPdf 01 13 35.2 -0.4**
SUW *e*PKPbc **PKiKP 01 13 42.9 0.0**
SUW *e*PP **PP 01 17 23.2 -2.6**
SUW LMZ LR 02 21 43.5
BR131 Keskin Array S 152.66 297 *e*PKPdf **PKPdf 01 13 35.4 -1.0**
BR131 *e*PKPbc **PKPbc 01 13 42.9 -0.6**
BRTR Keskin Array B 152.66 297 PKP **PKPdf 01 13 35.1 -1.3**
BRTR PKPbc **PKPbc 01 13 42.9 -0.6**
BRTR PKPab **PKPab 01 13 54.0 -0.3**
BRTR Keskin Array B 152.66 297 PKP **PKPdf 01 13 35.1 -1.3**
comp=Z,17nm,1.0s,baz=130,slow=1.9,SNR=66
BRTR PKPbc **PKPbc 01 13 42.9 -0.6**
comp=Z,59nm,0.5s,baz=144,slow=4.5,SNR=124
BRTR PKPab **PKPab 01 13 54.0 -0.3**
comp=Z,60nm,0.8s,baz=124,slow=2.6,SNR=12
ELDT Eldivan 152.71 298 *i* P **PKPdf 01 13 35.9 -0.6**
HOMB Homborsund 152.75 352 ⇑*i*P **PKPdf 01 13 35.2 -0.5**
SNART Snartemo 152.82 353 *e* **PKPbc 01 13 41.1 -2.0**
SULT Sultanhani-AKS 152.91 293 *e*P **PKPdf 01 13 35.5 -1.3**
LFK Lefkose 152.99 287 *e*P **PKPdf 01 13 36.4 -0.6**
BBAL Bala 153.08 296 *i* P **PKPdf 01 13 36.0 -1.1**
SAFT Safranbolu 153.13 300 *e*P **PKPdf 01 13 36.4 -0.5**
AFSR Af˙ar-Bala (A 153.13 296 *e*P **PKPdf 01 13 36.3 -0.8**
CSS Prodhromos 153.15 286 P **PKPbc 01 13 44.5 -0.1**
comp=Z,3.6nm,1.1s
CSS Prodhromos 153.15 286 *e*P **PKPdf 01 13 35.7 -1.5**
CSS Prodhromos 153.15 286 P **PKPdf 01 13 35.9 -1.3**
CSS Prodhromos 153.15 286 *e*PKPdf **PKPdf 01 13 35.9 -1.3**
CSS *e*PKPbc **PKPbc 01 13 44.6 0.0**
MAMC Mammari 153.25 287 P **PKPbc 01 13 45.2 +0.4**
ANTO Ankara 153.28 297 *e*P **PKPdf 01 13 36.6 -0.7**
ANTO Ankara 153.28 297 *e*PKIKP **PKPdf 01 13 36.4 -0.8**
ANTO *e* 01 13 44.0
ANTO Ankara 153.28 297 *e*PKPdf **PKPdf 01 13 36.4 -0.8**
ANTO *e*PKPbc **PKPbc 01 13 44.0 -0.8**
ANTO Ankara 153.28 297 P **PKPdf 01 13 36.5 -0.8**
SNR=168
LOD Lodumlu 153.30 297 *e*P **PKPdf 01 13 36.7 -0.6**
ERMK Ermenek 153.48 290 *i* P **PKPbc 01 13 42.8 -2.7**
LEF Lefka 153.51 286 *e*P **PKPdf 01 13 36.6 -1.0**

ALFC Alevga 153.75 287 P **PKPbc 01 13 45.4 -0.5**
comp=Z,2.1nm,0.3s
LADK Ladik-KONYA 153.82 293 *e*P **PKPdf 01 13 36.7 -1.5**
KONT Konya--Tatoy 153.84 293 *e*P **PKPdf 01 13 36.9 -1.2**
KIS Kishinev 153.90 314 *e*PKIKP **PKPdf 01 13 35.0 -2.8**
KIS *i* 01 13 45.0
KIS *e* 01 14 00.0
KIS pmax pmax
comp=Z,2μm,5.5s
KIS pmax pmax
comp=Z,2μm,9.0s
KIS Kishinev 153.90 314 *e*PKP **PKPdf 01 13 35.0 -2.8**
comp=Z,2μm,5.5s
KIS *e*SKP 01 16 53.0
KIS Kishinev 153.90 314 *e*PP PP 01 17 29.0 -4.8
KIS Kishinev 153.90 314 *e*PS 01 28 06.0
PPCY Paphos 153.96 286 P **PKPbc 01 13 45.7 -0.6**
AKMC Akamas 153.97 286 P **PKPbc 01 13 45.8 -0.6**
GAZI Gazipasa 153.98 289 *i* P **PKPdf 01 13 36.9 -1.4**
KDHN Kadinhani 153.98 294 *i* P **PKPdf 01 13 37.0 -1.3**
KDZE Karadeniz Ereo 154.03 301 *e*P **PKPdf 01 13 36.0 -2.2**
LIC Lamto 154.18 165 ⇑*i*PKIKP **PKPdf 01 13 39.8 +0.6**
comp=Z,149nm,0.7s
LIC *e*R
comp=Z,15μm,22.2s
LIC Lamto 154.18 165 ⇑*i*PKPdf **PKPdf 01 13 39.8 +0.6**
SVRH Sivrihisar-ESK 154.31 296 *e*P **PKPdf 01 13 37.8 -1.0**
MDUB Mudurnu 154.38 299 *e*P **PKPdf 01 13 37.7 -1.2**
MUD Monsted U'grnd 154.42 350 ⇑*i*PKIKP **PKPdf 01 13 37.9 -0.3**
MUD pmax pmax
comp=Z,58nm,1.1s
MUD MLR MLR
comp=Z,8μm,23.0s
MUD Monsted U'grnd 154.42 350 ⇑*i*P **PKPdf 01 13 37.9 -0.3**
comp=Z,58nm,1.1s
MUD
comp=Z,8μm,23.0s
LEOM Leova 154.48 314 ⇑⇑PKIKP **PKPbc 01 13 47.1 +0.1**
LEOM Leova 154.48 314 ⇑⇑*i*P **PKPbc 01 13 47.1 +0.1**
BSD Bornholm Skovb 154.48 342 ⇑*i*PKIKP **PKPdf 01 13 37.9 -0.4**
BSD pmax pmax
comp=Z,100nm,0.8s
BSD MLR MLR
comp=Z,7μm,20.0s
BSD Bornholm Skovb 154.48 342 ⇑⇑*i*P **PKPdf 01 13 37.9 -0.4**
comp=Z,102nm,0.8s
BSD
comp=Z,7μm,20.0s
HENT Hendek 154.53 300 *i* P **PKPdf 01 13 38.7 -0.3**
COP Copenhagen 154.56 345 ⇑*i*PKIKP **PKPdf 01 13 38.3 -0.1**
COP pmax pmax
comp=Z,84nm,0.8s
COP MLR MLR
comp=Z,3μm,19.0s
COP Copenhagen 154.56 345 ⇑⇑*i*P **PKPdf 01 13 38.3 -0.1**
comp=Z,84nm,0.8s
COP
comp=Z,3μm,19.0s
DBIC Dimbokro 154.65 165 PKP **PKPdf 01 13 40.4 +0.5**
DBIC *e*PKPdf PKPbc 01 13 40.5 -7.9
DBIC PKPbc **PKiKP 01 13 50.4 +2.0**
DBIC Dimbokro 154.65 165 PKP **PKPdf 01 13 40.4 +0.5**
comp=Z,76nm,1.1s,baz=154,slow=1.2,SNR=36
DBIC PKPbc **PKiKP 01 13 50.4 +2.0**
comp=Z,26nm,0.3s,baz=156,slow=2.6,SNR=19
TLCR 154.66 311 ⇓⇓PKIKP **PKPdf 01 13 39.1 +0.2**
TLCR 154.66 311 ⇓⇓*i*P **PKPdf 01 13 39.1 +0.2**
ESKT Eskisehir 154.82 297 *e*P **PKPdf 01 13 38.4 -1.2**
SEYT Eskypehyr 154.82 297 *i* P **PKPdf 01 13 39.5 0.0**
BOLV Bolvadin 154.86 295 *i* P **PKPbc 01 13 53.2 +4.9**
LLD Lille Linde 154.94 345 *i* PKIKP **PKPdf 01 13 38.9 0.0**
LLD *i* 01 13 48.4
LLD pmax pmax
comp=Z,200nm,0.8s
LLD Lille Linde 154.94 345 *i* P **PKPdf 01 13 38.9 0.0**
comp=Z,204nm,0.8s
LLD *i* 01 13 48.4
LVV L'vov 155.05 324 *i* PKIKP **PKPdf 01 13 38.6 -0.7**
LVV *i* 01 17 40.0
BORA Eskisehir 155.06 298 *i* P **PKPdf 01 13 38.7 -1.1**
CFR Carcaliu 155.11 311 ⇓⇓PKIKP **PKPdf 01 13 38.8 -0.7**
CFR Carcaliu 155.11 311 ⇓⇓*i*P **PKPdf 01 13 38.8 -0.7**
BEL Belsk 155.16 331 *e*PKPdf **PKPdf 01 13 39.0 -0.4**
BEL *e*PKPbc PKPab 01 13 49.1 -15
BEL *e*PP **PP 01 17 38.8 -1.5**
BEL LMZ LR 02 23 27.9
TIRR Tirgusor 155.21 309 ⇑PKIKP **PKPdf 01 13 38.9 -0.8**
TIRR Tirgusor 155.21 309 *e*PKPdf **PKPdf 01 13 38.1 -1.6**
TIRR Tirgusor 155.21 309 ⇑*i*P **PKPdf 01 13 38.9 -0.8**
ANTB Antalya 155.28 291 *e*P **PKPdf 01 13 37.6 -2.4**
ISP Isparta 155.30 293 *e*PKIKP **PKPdf 01 13 39.2 -1.0**
ISP Isparta 155.30 293 *e*PKPdf **PKPdf 01 13 39.2 -1.0**
ISP Isparta 155.30 293 ⇑*i*P **PKPdf 01 13 38.3 -1.9**
GKP Gorka Klasztor 155.38 337 *e*PKPdf **PKPdf 01 13 39.3 -0.3**
GKP *e*PKPbc PKPab 01 13 49.3 -16
GKP *e*PP **PP 01 17 38.1 -3.3**
GKP LMZ LR 02 16 14.4
RGN Rugen 155.40 343 *e*PKPdf **PKPdf 01 13 39.7 +0.1**
KORT Korkueli 155.52 291 *i* P **PKPdf 01 13 39.6 -1.0**
PSN Preselentsi 155.65 308 P **PKPdf 01 13 38.9 -1.4**
VRI Vrincioaia 155.70 314 ⇑PKIKP **PKPdf 01 13 38.9 -1.5**
VRI Vrincioaia 155.70 314 ⇑⇑*i*P **PKPdf 01 13 38.9 -1.5**
BUR08 Bucovina Ar. S 155.71 319 *e*PKPdf **PKPdf 01 13 40.0 -0.4**
BUR08 *e*PKPdif PKPab 01 13 51.6 -15
BURAR Bucovina Array 155.71 318 ⇑⇑*i*P **PKPdf 01 13 39.9 -0.5**
PLOR Plostina 155.75 314 ⇑⇑PKIKP **PKPdf 01 13 39.1 -1.4**
PLOR Plostina 155.75 314 ⇑⇑*i*P **PKPdf 01 13 39.1 -1.4**
KWP Kalwaria Pacla 155.83 325 ⇑⇑PKIKP **PKPdf 01 13 39.8 -0.6**
KWP Kalwaria Pacla 155.83 325 *e*PKPdf **PKPdf 01 13 39.4 -1.0**
KWP *e*PKPdif PKPab 01 13 50.2 -17
KWP Kalwaria Pacla 155.83 325 ⇑⇑*i*P **PKPdf 01 13 39.8 -0.6**
KWP Kalwaria Pacla 155.83 325 *e*PKPdf **PKPdf 01 13 39.1 -1.3**
KWP *e*PKPab **PKPab 01 14 07.4 +0.2**
KWP *e*PP **PP 01 17 44.4 +0.1**
KWP LMZ LR 02 16 39.1
BUY Buyukada 155.84 301 *i* P **PKPdf 01 13 39.5 -1.2**
EKA Eskdalemuir Ar 155.90 6 PKP **PKPdf 01 13 39.9 -0.4**
EKA PKPab **PKPab 01 14 07.2 -0.1**
EKA Eskdalemuir Ar 155.90 6 PKP **PKPdf 01 13 39.9 -0.4**
comp=Z,7.1nm,0.7s,baz=323,slow=0.8,SNR=15
EKA PKPab **PKPab 01 14 07.2 -0.1**
comp=Z,43nm,0.7s,baz=339,slow=2.7,SNR=16
ESK Eskdalemuir 155.92 7 *e*PKP2 **PKPab 01 14 07.4 +0.1**
ESK Eskdalemuir 155.92 7 *e*PKPab **PKPab 01 14 07.4 +0.1**
GDZ Gediz 155.94 296 *i* P **PKPdf 01 13 39.7 -1.3**
KHAL Karahalli 156.04 294 *i* P **PKPdf 01 13 40.3 -0.9**
ISR Istrita 156.15 312 ⇑⇑PKIKP **PKPdf 01 13 40.2 -0.8**
ISR Istrita 156.15 312 ⇑⇑*i*P **PKPdf 01 13 40.2 -0.8**
ELBA Catalca 156.27 302 *i* P **PKPdf 01 13 40.1 -1.2**
MLR Muntele Rosu 156.36 313 PKP **PKPdf 01 13 40.1 -1.3**
MLR PKPab **PKPab 01 14 10.5 +0.7**
MLR Muntele Rosu 156.36 313 ⇑⇑*i*P **PKPdf 01 13 39.9 -1.5**
MLR Muntele Rosu 156.36 313 PKP **PKPdf 01 13 40.1 -1.3**
comp=Z,13nm,1.2s,baz=342,slow=3.2
MLR PKPab **PKPab 01 14 10.5 +0.7**
baz=12,slow=5.9
PRD Provadia 156.36 307 P **PKPdf 01 13 40.5 -0.8**
PRD P **PKPdf 01 13 42.4 +1.1**
DOPR Dopca 156.47 315 ⇓⇓*i*P **PKPdf 01 13 43.0 +1.6**
DNZL Cakiroluk 156.48 293 *i* P **PKPdf 01 13 41.8 0.0**
KOLS Kolonicke sedl 156.50 324 *e*PKIKP **PKPdf 01 13 40.9 -0.4**
KOLS *e* 01 14 09.5
KOLS Kolonicke sedl 156.50 324 *e*PKP **PKPdf 01 13 40.9 -0.4**
KOLS *e* 01 14 09.5
DEMI Demirci 156.53 296 *i* P **PKPdf 01 13 40.9 -0.9**
BBTS Babate 156.55 131 PKP **PKPdf 01 13 44.0 +1.7**
BBTS Babate 156.55 131 PKP **PKPdf 01 13 44.0 +1.7**
comp=Z,182nm,1.2s,baz=282,slow=2.7
DURS Dursunbey 156.61 298 *i* P **PKPdf 01 13 40.4 -1.5**
BSEG Bad Segeberg 156.64 347 *e*PKIKP **PKPdf 01 13 41.1 -0.2**
BSEG Bad Segeberg 156.64 347 *e*PKPdf **PKPdf 01 13 41.1 -0.2**
BMR Baia Mare 156.64 320 ⇑PKIKP **PKPdf 01 13 42.2 +0.7**
BMR Baia Mare 156.64 320 ⇑⇑*i*P **PKPdf 01 13 42.2 +0.7**
UZH Uzhgorod 156.69 323 *i* PKIKP **PKPdf 01 13 40.7 -0.8**
UZH *e* 01 13 47.9
UZH *i* 01 17 46.3
UZH *e*PPP PPP 01 21 24.1
MANT Manisa 156.75 295 *i* P **PKPdf 01 13 41.7 -0.6**
OJC Ojcow 156.78 329 *e*PKP2 **PKPab 01

OJC	**Ojcow**	**156.78**	**329**	*i* PKPdf	**PKPdf**	**01 13 40.8**	**-0.8**
OJC				*e*PKPab	**PKPab**	**01 14 11.2**	**-0.1**
OJC				*e*PP	**PP**	**01 17 46.1**	**-3.3**
OJC				*e*SKSdf	**SKSdf**	**01 20 45.2**	**+0.1**
OJC				*e*SS	SS	01 37 47.1	+7.8
OJC				L	L	02 34 59.1	
	comp=Z,8µm,22.2s						
HLG	**Helgoland**	**156.81**	**350**	*e*PKPdf	**PKPdf**	**01 13 41.1**	**-0.4**
TRPA	**Tarpa**	**156.87**	**322**	⇑*i*P	**PKPdf**	**01 13 40.7**	**-1.0**
TRPA	**Tarpa**	**156.87**	**322**	⇑*e*PKPdf	**PKPdf**	**01 13 40.8**	**-1.0**
TURN	**Turunc**	**156.92**	**291**	*i* P	**PKPdf**	**01 13 41.5**	**-0.7**
CRVS	**Cervenica-Dubn**	**156.93**	**325**	*e*PKIKP	**PKPdf**	**01 13 40.2**	**-1.7**
CRVS	**Cervenica-Dubn**	**156.93**	**325**	*e*PKP	**PKPdf**	**01 13 40.2**	**-1.7**
CRVS				*e*		01 14 11.5	
CMLA	**Cha da Macela**	**156.97**	**67**	*e*PKIKP	**PKPdf**	**01 13 42.0**	**-0.3**
CMLA	**Cha da Macela**	**156.97**	**67**	*e*PKPdf	**PKPdf**	**01 13 42.0**	**-0.3**
NIE	**Niedzica**	**157.12**	**327**	*e*PKP2	**PKPab**	**01 14 12.7**	**-0.1**
NIE				*e*		01 17 47.3	
NIE				*e*SS	SS	01 37 47.7	+4.5
NIE	**Niedzica**	**157.12**	**327**	*i* PKPdf	**PKPdf**	**01 13 42.2**	**+0.1**
NIE				*e*PKPab	**PKPab**	**01 14 12.7**	**-0.1**
NIE				*e*PP	**PP**	**01 17 47.3**	**-4.1**
NIE				*e*SS	SS	01 37 47.7	+4.5
RUE	**Ruedersdorf**	**157.13**	**340**	*e*PKPdf	**PKPdf**	**01 13 41.7**	**-0.2**
RUE	**Ruedersdorf**	**157.13**	**340**	*e*PKPdf	**PKPdf**	**01 13 42.0**	**+0.1**
JMB	**Yambol**	**157.18**	**306**	P	**PKPdf**	**01 13 41.1**	**-1.3**
JMB	**Yambol**	**157.18**	**306**	P	**PKPdf**	**01 13 42.1**	**-0.3**
BALY	**Balya**	**157.22**	**299**	*i* P	**PKPdf**	**01 13 40.7**	**-1.9**
DCN	**Croghan**	**157.23**	**14**	*e*P	**PKPdf**	**01 13 41.8**	**-0.2**
ARR	**Arges**	**157.23**	**314**	⇑*i*P	**PKPdf**	**01 13 41.8**	**-0.6**
SZH	**Strazhica**	**157.32**	**308**	P	**PKPdf**	**01 13 41.6**	**-0.9**
ARG	**Arkhangelos**	**157.36**	**289**	P	**PKPdf**	**01 13 41.1**	**-1.7**
AYDN	**Tasoluk**	**157.40**	**293**	*i* P	**PKPdf**	**01 13 42.3**	**-0.6**
HUMR	**Humele**	**157.41**	**312**	⇓*i*P	**PKPdf**	**01 13 41.4**	**-1.2**
RAC	**Raciborz**	**157.56**	**331**	*e*PKIKP	**PKPdf**	**01 13 42.5**	**-0.1**
DRGR		**157.59**	**319**	⇑PKIKP	**PKPdf**	**01 13 41.8**	**-1.1**
DRGR		**157.59**	**319**	⇑*i*P	**PKPdf**	**01 13 41.8**	**-1.1**
KSP	**Ksiaz**	**157.71**	**335**	*e*PKP2	**PKPab**	**01 14 12.8**	**-2.4**
KSP				*e*SS	SS	01 37 52.0	+3.0
KSP	**Ksiaz**	**157.71**	**335**	*e*PKPdf	**PKPdf**	**01 13 42.2**	**-0.6**
KSP				*e*PP	**PP**	**01 17 50.9**	**-3.5**
KSP				LMZ	LR	02 26 09.3	
PVL	**Pavlikeni**	**157.75**	**309**	P	**PKPdf**	**01 13 41.3**	**-1.7**
OKC	**Ostrava-Krasne**	**157.77**	**331**	⇑*i*PKIKP	**PKPdf**	**01 13 42.5**	**-0.4**
OKC				*e*		01 14 15.8	
OKC				MLR	MLR		
	comp=Z,7µm,21.1s						
OKC	**Ostrava-Krasne**	**157.77**	**331**	⇑*i*PKPDF	**PKPdf**	**01 13 42.5**	**-0.4**
OKC				*e*PKPAB	**PKPab**	**01 14 15.8**	**+0.3**
OKC				*e*PP	PP	01 17 48.0	-6.8
OKC				*ex*	x	01 31 32.7	
OKC				AMS	AMS	02 25 40.0	
	comp=Z,7µm,21.1s						
VAL	**Valentia**	**157.80**	**19**	*e*P	**PKPdf**	**01 13 42.1**	**-0.7**
GCAM	**G?zelcaml?**	**157.90**	**293**	*i* P	**PKPdf**	**01 13 43.5**	**+0.1**
DEV	**Deva**	**157.99**	**317**	⇓PKIKP	**PKPdf**	**01 13 44.1**	**+0.8**
DEV	**Deva**	**157.99**	**317**	⇓*i*P	**PKPdf**	**01 13 44.1**	**+0.8**
NRDL	**Niedersach Rie**	**158.04**	**346**	*e*PKPdf	**PKPdf**	**01 13 42.6**	**-0.4**
NRDL				*e*PKPab	**PKPab**	**01 14 17.0**	**+0.6**
DIM	**Dimitrovgrad**	**158.06**	**306**	P	**PKPdf**	**01 13 43.2**	**-0.3**
MORC	**Moravsky Berou**	**158.07**	**331**	⇑PKIKP	**PKPdf**	**01 13 42.7**	**-0.6**
MORC	**Moravsky Berou**	**158.07**	**331**	*e*PKPdf	**PKPdf**	**01 13 42.4**	**-0.9**
MORC	**Moravsky Berou**	**158.07**	**331**	⇑*i*P	**PKPdf**	**01 13 42.7**	**-0.6**
ALN	**Alexandroupoli**	**158.07**	**302**	P	**PKPdf**	**01 13 40.8**	**-2.7**
UPC	**Upice**	**158.09**	**335**	⇑*i*PKIKP	**PKPdf**	**01 13 43.0**	**-0.3**
UPC				*e*		01 14 16.8	
UPC	**Upice**	**158.09**	**335**	⇑*i*PKPDF	**PKPdf**	**01 13 43.0**	**-0.3**
UPC				*e*PKPAB	**PKPab**	**01 14 16.8**	**-0.1**
NIS1	**Nisyros Isl.**	**158.09**	**291**	P	**PKPdf**	**01 13 41.7**	**-2.0**
DPC	**Dobruska-Polom**	**158.10**	**334**	⇑*i*PKIKP	**PKPdf**	**01 13 42.9**	**-0.4**
DPC				*e*		01 14 17.3	
DPC				MLR	MLR		
	comp=Z,8µm,19.7s						
DPC	**Dobruska-Polom**	**158.10**	**334**	*e*PKPdf	**PKPdf**	**01 13 42.6**	**-0.7**
DPC	**Dobruska-Polom**	**158.10**	**334**	⇑*i*PKPDF	**PKPdf**	**01 13 42.9**	**-0.4**
DPC				*e*PKPAB	**PKPab**	**01 14 17.3**	**+0.3**
DPC				*ex*	x	01 17 46.3	
DPC				*ex*	x	01 38 10.0	
DPC				AMS	AMS	02 34 30.0	
	comp=Z,8µm,19.7s						
KDZ	**Kurdzhali**	**158.28**	**305**	P	**PKPdf**	**01 13 42.7**	**-1.1**
URLA	**Izmir**	**158.29**	**295**	*i* P	**PKPdf**	**01 13 42.9**	**-1.1**
WIT	**Witteveen**	**158.31**	**351**	*e*PKP	**PKPdf**	**01 13 43.9**	**+0.5**
PRK	**Paraskevi**	**158.35**	**298**	P	**PKPdf**	**01 13 42.3**	**-1.6**
PSZ	**Piszkesteto**	**158.36**	**325**	⇑PKIKP	**PKPdf**	**01 13 43.0**	**-0.7**
PSZ	**Piszkesteto**	**158.36**	**325**	*e*PKPdf	**PKPdf**	**01 13 42.8**	**-0.9**
PSZ	**Piszkesteto**	**158.36**	**325**	⇑*i*P	**PKPdf**	**01 13 43.0**	**-0.7**
PSZ	**Piszkesteto**	**158.36**	**325**	⇑*e*PKPdf	**PKPdf**	**01 13 43.1**	**-0.7**
BOZC	**Bozcaada**	**158.37**	**300**	*i* P	**PKPdf**	**01 13 42.3**	**-1.6**
CLL	**Collm**	**158.40**	**340**	⇑*i*PKIKP	**PKPdf**	**01 13 42.8**	**-0.8**
CLL				*i*		01 13 57.9	
CLL				*i*		01 14 18.3	
CLL				pmax	pmax		
	comp=Z,258nm,2.0s						
CLL				pmax	pmax		
	comp=Z,64nm,1.3s						
CLL				pmax	pmax		
	comp=Z,73nm,0.8s						
CLL				MLR	MLR		
	comp=Z,9µm,20.6s						
CLL	**Collm**	**158.40**	**340**	*e*PKPdf	**PKPdf**	**01 13 43.0**	**-0.6**
CLL				*e*PKPab	**PKPab**	**01 14 18.4**	**+0.2**
CLL				*e*		01 14 48.1	
CLL	**Collm**	**158.40**	**340**	⇑*i*PKPdf	**PKPdf**	**01 13 42.8**	**-0.8**
	comp=Z,258nm,2.0s						
CLL				*e*pPKPdf	**pPKPdf**	**01 13 56.0**	**+1.7**
	comp=Z,58nm,1.0s						
CLL				*i* PKPdiff	PKPab	01 13 57.9	-20
	comp=Z,64nm,1.3s						
CLL				*i*		01 14 00.9	
	comp=Z,48nm,0.7s						
CLL				⇓*i*PKPab	PKPab	01 14 18.3	+0.1
	comp=Z,73nm,0.8s						
CLL				*i*		01 14 24.5	
CLL				*e*pPKPab	**pPKPab**	**01 14 32.0**	**+3.4**
CLL				*e*		01 16 37.0	
CLL				*e*PP	**PP**	**01 17 58.0**	**0.0**
CLL				*e*PPk		01 18 31.0	
CLL				*e*PPP	PPP	01 21 43.0	
CLL				*e*PPPP		01 24 00.0	
CLL				*e*		01 25 13.0	
CLL				*e*PPPrev		01 26 39.0	
CLL				*e*PSKS		01 28 18.0	
CLL				*e*pSKSP		01 28 36.0	
CLL				*e*PPS	PPS	01 31 17.0	
CLL				*e*		01 33 02.0	
CLL				*e*		01 34 24.0	
CLL				*e*SS	SS	01 38 00.0	+3.9
CLL				*e*PSS	PSS	01 38 56.0	
CLL				*e*SSS	SSS	01 44 24.0	
CLL				*e*PSSrev		01 46 24.0	
CLL				*e*		01 47 24.0	
CLL				*e*SSSS		01 48 54.0	
CLL				LmV		02 37 00.0	
	comp=Z,9µm,20.6s						
VYHS	**Vyhne**	**158.46**	**327**	*e*PKIKP	**PKPdf**	**01 13 42.8**	**-1.0**
VYHS				*e*		01 14 19.2	
VYHS				*e*		01 18 05.2	
VYHS	**Vyhne**	**158.46**	**327**	*e*PKP	**PKPdf**	**01 13 42.8**	**-1.0**
VYHS				*e*		01 14 19.2	
VYHS				*e*PP	PP	01 18 05.2	+6.5
BRG	**Berggiesshubel**	**158.49**	**338**	*e*PKP	**PKPdf**	**01 13 43.3**	**-0.4**
	comp=Z,164nm,1.4s						
BRG				*i*		01 14 19.0	
	comp=Z,167nm,1.4s						
BRG				PP	**PP**	**01 17 55.0**	**-3.5**
BRG				*e*		01 28 04.0	
BRG				SS	SS	01 38 00.0	+2.8
BRG							
	comp=N,3µm,22.0s						
BRG							
	comp=E,5µm,23.2s						
BRG							
	comp=Z,11µm,20.9s						
BRG	**Berggiesshubel**	**158.49**	**338**	*e*PKIKP	**PKPdf**	**01 13 43.3**	**-0.4**
BRG				*i*		01 14 19.0	
BRG						01 17 55.0	
BRG				SS	SS	01 38 00.0	+2.8
BRG				pmax	pmax		
	comp=Z,164nm,1.4s						
BRG				pmax	pmax		
	comp=Z,167nm,1.4s						
BRG				MLR	MLR		
	comp=N,3µm,22.0s						
BRG				MLR	MLR		
	comp=E,5µm,23.2s						
BRG				MLR	MLR		
	comp=Z,11µm,20.9s						
BRG	**Berggiesshubel**	**158.49**	**338**	*e*PKPdf	**PKPdf**	**01 13 43.1**	**-0.6**
BRG				*e*PKPab	**PKPab**	**01 14 19.0**	**+0.4**
PVCC	**Panska Ves**	**158.58**	**337**	⇑*i*PKIKP	**PKPdf**	**01 13 43.5**	**-0.3**
PVCC				MLR	MLR		
	comp=Z,13µm,21.2s						
PVCC	**Panska Ves**	**158.58**	**337**	⇑*i*PKPDF	**PKPdf**	**01 13 43.5**	**-0.3**
PVCC				*e*PKPAB	**PKPab**	**01 14 19.0**	**0.0**
PVCC				*ex*	x	01 28 31.0	
PVCC				*ex*	x	01 38 15.4	
PVCC				AMS	AMS	02 27 30.0	
	comp=Z,13µm,21.2s						
PLD	**Plovdiv**	**158.61**	**306**	P	**PKPdf**	**01 13 41.7**	**-2.4**
PLD	**Plovdiv**	**158.61**	**306**	P	**PKPdf**	**01 13 42.4**	**-1.7**
IBBN	**Ibbenburen**	**158.65**	**349**	*e*PKPdf	**PKPdf**	**01 13 43.6**	**-0.2**
IBBN				*e*PKPab	**PKPab**	**01 14 19.4**	**+0.2**
SIGR	**SIGRI**	**158.67**	**298**	P	**PKPdf**	**01 13 42.0**	**-2.3**
CHOS	**Chios island**	**158.70**	**296**	P	**PKPdf**	**01 13 42.9**	**-1.6**
MPEP	**Malo Peshtene**	**158.74**	**310**	P	**PKPdf**	**01 13 43.5**	**-0.8**
RZN	**Rozhen**	**158.76**	**305**	P	**PKPdf**	**01 13 43.5**	**-1.1**
VRAC	**Vranov**	**158.82**	**332**	PKP	**PKPdf**	**01 13 43.7**	**-0.5**
VRAC				PKPab	**PKPab**	**01 14 20.2**	**+0.1**
VRAC	**Vranov**	**158.82**	**332**	⇓*i*P	**PKPdf**	**01 13 43.3**	**-0.9**
VRAC	**Vranov**	**158.82**	**332**	PKP	**PKPdf**	**01 13 43.7**	**-0.5**
	comp=Z,38nm,1.1s,baz=72,slow=0.9,SNR=35						
VRAC				PKPab	**PKPab**	**01 14 20.2**	**+0.1**
	comp=Z,36nm,0.9s,baz=66,slow=4.5,SNR=5.5						
NEUB	**Neuenburg**	**158.83**	**342**	*e*PKPdf	**PKPdf**	**01 13 43.6**	**-0.5**
BZS	**Buzias**	**158.89**	**318**	⇑PKIKP	**PKPdf**	**01 13 43.4**	**-1.0**
BZS	**Buzias**	**158.89**	**318**	⇑*i*P	**PKPdf**	**01 13 43.3**	**-1.1**
ZKR	**Zakros**	**158.98**	**287**	P	**PKPdf**	**01 13 45.2**	**+0.4**
LIA	**Limnos Island**	**159.00**	**300**	P	**PKPdf**	**01 13 42.9**	**-1.7**
PRA	**Prague**	**159.01**	**336**	⇑PKPDF	**PKPdf**	**01 13 44.0**	**-0.3**
PRA				PKPAB	**PKPab**	**01 14 21.0**	**+0.1**
PRA				PP	**PP**	**01 18 00.0**	**-1.4**
PRA				*ex*	x	01 20 52.0	
PRA				*ex*	x	01 28 23.0	
PRA				AMS	AMS	02 29 00.0	
PRU	**Pruhonice**	**159.04**	**336**	⇑*i*PKIKP	**PKPdf**	**01 13 43.8**	**-0.6**
PRU				*e*		01 13 52.6	
PRU				*e*		01 14 21.6	
PRU				MLR	MLR		
	comp=Z,17µm,22.1s						
PRU	**Pruhonice**	**159.04**	**336**	⇑*i*PKPDF	**PKPdf**	**01 13 43.8**	**-0.6**
PRU				*ex*	x	01 13 52.6	
PRU				*e*PKPAB	**PKPab**	**01 14 21.6**	**+0.6**
PRU				*e*PP	PP	01 17 55.4	-6.2
PRU				*ex*	x	01 28 36.7	
PRU				*ex*	x	01 31 19.4	
PRU				*e*SKSSKS		01 38 23.6	
PRU				AMS	AMS	02 28 50.0	
	comp=Z,17µm,22.1s						
SMOL	**Smolenice**	**159.08**	**329**	*e*PKIKP	**PKPdf**	**01 13 44.5**	**0.0**
SMOL				*e*		01 14 21.0	
SMOL				*e*		01 18 05.6	
SMOL	**Smolenice**	**159.08**	**329**	*e*PKP	**PKPdf**	**01 13 44.5**	**0.0**
SMOL				*e*		01 14 21.0	
SMOL				*e*PP	**PP**	**01 18 05.6**	**+3.6**
BUD	**Budapest**	**159.09**	**325**	⇑*e*PKPdf	**PKPdf**	**01 13 43.6**	**-0.9**
WTSB	**Winterswijk**	**159.12**	**351**	*e*PKP	**PKPdf**	**01 13 43.8**	**-0.6**
	comp=Z,309nm,1.4s						
WTSB				*e*X		01 14 21.6	
KAVA	**Kavala**	**159.14**	**304**	P	**PKPdf**	**01 13 42.9**	**-1.9**
TREC	**Trest**	**159.27**	**333**	⇑*i*PKIKP	**PKPdf**	**01 13 44.2**	**-0.5**
TREC				MLR	MLR		
	comp=Z,13µm,22.2s						
TREC	**Trest**	**159.27**	**333**	⇑*i*PKPDF	**PKPdf**	**01 13 44.2**	**-0.5**
TREC				*e*PP	PP	01 17 57.6	-5.4
TREC				*ex*	x	01 28 24.9	
TREC				*e*SKSSKS		01 38 23.9	
TREC				AMS	AMS	02 29 40.0	
	comp=Z,13µm,22.2s						
APE	**Apeiranthos**	**159.34**	**292**	⇑PKIKP	**PKPdf**	**01 13 42.9**	**-2.3**
APE	**Apeiranthos**	**159.34**	**292**	P	**PKPdf**	**01 13 42.0**	**-3.2**
APE	**Apeiranthos**	**159.34**	**292**	⇑*i*P	**PKPdf**	**01 13 42.9**	**-2.3**
TANN	**Tannenbergstha**	**159.35**	**340**	*e*PKPdf	**PKPdf**	**01 13 44.2**	**-0.6**
WERD	**Werda**	**159.36**	**340**	*e*PKPdf	**PKPdf**	**01 13 44.2**	**-0.6**
PLN	**Plauen**	**159.37**	**340**	*e*PKPdf	**PKPdf**	**01 13 44.2**	**-0.6**
MOX	**Moxa**	**159.38**	**341**	*e*PKP2	**PKPab**	**01 14 22.7**	**+0.2**
MOX				*e*		01 17 59.9	
MOX	**Moxa**	**159.38**	**341**	*e*PKPdf	**PKPdf**	**01 13 44.0**	**-0.8**
MOX				*e*PKPab	**PKPab**	**01 14 22.7**	**+0.2**
MOX				*e*		01 14 52.4	
MOX				*e*PP	**PP**	**01 17 59.9**	**-3.5**
MOX				*e*L	L	02 39 36.1	
	comp=Z,10µm,18.8s						
PKS6	**Bocsa**	**159.41**	**322**	⇓*e*PKPdf	**PKPdf**	**01 13 45.0**	**+0.1**
VTS	**Vitosha**	**159.43**	**309**	⇓PKIKP	**PKPdf**	**01 13 44.1**	**-1.2**
VTS	**Vitosha**	**159.43**	**309**	P	**PKPdf**	**01 13 43.7**	**-1.6**
VTS	**Vitosha**	**159.43**	**309**	⇓*i*P	**PKPdf**	**01 13 44.1**	**-1.2**
VTS	**Vitosha**	**159.43**	**309**	P	**PKPdf**	**01 13 44.2**	**-1.1**
GUNZ	**Gunzen**	**159.43**	**340**	*e*PKPdf	**PKPdf**	**01 13 44.3**	**-0.5**
GUNZ				*e*PKPab	**PKPab**	**01 14 23.1**	**+0.4**
PKSG		**159.46**	**326**	⇓*e*PKPdf	**PKPdf**	**01 13 44.6**	**-0.3**
ZST	**Bratislava**	**159.47**	**329**	*e*PKIKP	**PKPdf**	**01 13 43.7**	**-1.2**
ZST				*e*		01 14 22.4	
ZST				*e*		01 18 12.4	
ZST	**Bratislava**	**159.47**	**329**	*e*PKP	**PKPdf**	**01 13 43.7**	**-1.2**
ZST				*e*		01 14 22.4	
ZST				*e*PP	PP	01 18 12.4	+8.3
NPS	**Neapolis**	**159.47**	**287**	P	**PKPdf**	**01 13 44.3**	**-1.1**
NVR	**Nevrokopi**	**159.48**	**305**	P	**PKPdf**	**01 13 42.6**	**-2.6**
MMB	**Musomiste**	**159.48**	**306**	P	**PKPdf**	**01 13 43.2**	**-2.0**
WERN	**Wernitzgruen**	**159.49**	**340**	*e*PKPdf	**PKPdf**	**01 13 44.3**	**-0.7**
WERN				*e*PKPab	**PKPab**	**01 14 23.4**	**+0.4**
NKC	**Novy Kostel**	**159.51**	**339**	⇑*i*PKIKP	**PKPdf**	**01 13 44.1**	**-0.9**
NKC				*e*		01 14 23.4	
NKC				MLR	MLR		
	comp=Z,15µm,20.5s						
NKC	**Novy Kostel**	**159.51**	**339**	⇑*i*PKPDF	**PKPdf**	**01 13 44.1**	**-0.9**
NKC				*e*PKPAB	**PKPab**	**01 14 23.4**	**+0.3**
NKC				*ex*	x	01 28 22.3	
NKC				*ex*	x	01 31 24.3	
NKC				AMS	AMS	02 28 00.0	
	comp=Z,15µm,20.5s						
BUG	**Bochum--Univer**	**159.57**	**350**	*e*PKPdf	**PKPdf**	**01 13 44.3**	**-0.6**
LAST	**Lasithi**	**159.59**	**287**	P	**PKPdf**	**01 13 44.3**	**-1.3**
UBBA	**Unterbreizbach**	**159.63**	**344**	*e*PKPdf	**PKPdf**	**01 13 44.2**	**-0.7**
PKS2	**Kecel**	**159.66**	**323**	⇓*e*PKPdf	**PKPdf**	**01 13 44.9**	**-0.3**
PKST	**T``s**	**159.72**	**326**	⇓*e*PKPdf	**PKPdf**	**01 13 44.2**	**-1.1**
OUR	**Ouranopolis**	**159.74**	**302**	P	**PKPdf**	**01 13 42.6**	**-2.9**
SRS	**Serrai**	**159.75**	**305**	P	**PKPdf**	**01 13 43.1**	**-2.4**
KKB	**Krupnik**	**159.81**	**307**	P	**PKPdf**	**01 13 44.5**	**-1.1**
MANZ	**Manzenberg**	**159.83**	**340**	*e*PKPdf	**PKPdf**	**01 13 44.5**	**-0.9**
MANZ				*e*PKPab	**PKPab**	**01 14 24.8**	**+0.3**
ROTZ	**Rotzenmuhle**	**160.00**	**339**	*e*PKPdf	**PKPdf**	**01 13 44.8**	**-0.7**
ROTZ				*e*PKPab	**PKPab**	**01 14 25.7**	**+0.5**
SOH	**Sokhos**	**160.03**	**304**	P	**PKPdf**	**01 13 43.1**	**-2.8**
MRMA	**Marmari**	**160.06**	**296**	P	**PKPdf**	**01 13 43.7**	**-2.3**
PKS9	**Tamasi**	**160.07**	**324**	⇓*e*PKPdf	**PKPdf**	**01 13 45.4**	**-0.3**
SOP	**Sopron**	**160.09**	**329**	⇑*e*PKPdf	**PKPdf**	**01 13 45.0**	**-0.7**
KHC	**Kasperske Hory**	**160.10**	**336**	⇑*i*PKIKP	**PKPdf**	**01 13 44.9**	**-0.8**
KHC				*e*		01 13 52.4	
KHC				*e*		01 14 25.8	
KHC				*e*		01 18 06.1	
KHC				MLR	MLR		
	comp=Z,10µm,19.7s						
KHC	**Kasperske Hory**	**160.10**	**336**	*e*PKPdf	**PKPdf**	**01 13 44.6**	**-1.1**
KHC				*e*PKPab	**PKPab**	**01 14 25.7**	**-0.1**
KHC	**Kasperske Hory**	**160.10**	**336**	⇑*i*PKPDF	**PKPdf**	**01 13 44.9**	**-0.8**
KHC				*ex*	x	01 13 48.5	
KHC				*ex*	x	01 13 52.4	
KHC				*e*PKPAB	**PKPab**	**01 14 25.8**	**+0.1**
KHC				*e*pPKP	pPKPdf	01 14 44.0	+48
KHC				*e*PP	**PP**	**01 18 06.1**	**-1.3**
KHC				*ex*	x	01 28 41.7	
KHC				*ex*	x	01 31 44.6	
KHC				AMS	AMS	02 35 10.0	
	comp=Z,10µm,19.7s						
PLG	**Polygyros**	**160.12**	**303**	P	**PKPdf**	**01 13 42.9**	**-3.1**
SIVA	**Sivas**	**160.14**	**287**	P	**PKPdf**	**01 13 45.2**	**-0.9**
PKSM	**Moragy**	**160.14**	**323**	⇑PKIKP	**PKPdf**	**01 13 44.9**	**-0.9**
PKSM	**Moragy**	**160.14**	**323**	⇑*i*P	**PKPdf**	**01 13 44.9**	**-0.9**
PKSM	**Moragy**	**160.14**	**323**	⇑*e*PKPdf	**PKPdf**	**01 13 44.8**	**-1.0**
CONA	**Conrad Observa**	**160.21**	**330**	*i* PKPdf	**PKPdf**	**01 13 45.0**	**-0.9**
	comp=Z,2µm,4.6s,SNR=27						
KNT	**Kendrikon**	**160.22**	**305**	P	**PKPdf**	**01 13 43.1**	**-3.0**
HORT	**Hortiatis**	**160.29**	**304**	P	**PKPdf**	**01 13 44.1**	**-2.1**
GEC2	**GERESS Array S**	**160.30**	**335**	*e*PKIKP	**PKPdf**	**01 13 45.1**	**-0.9**
GEC2	**GERESS Array S**	**160.30**	**335**	*e*PKPdf	**PKPdf**	**01 13 45.1**	**-0.9**
GEC2	**GERESS Array S**	**160.30**	**335**	*e*PKPdf	**PKPdf**	**01 13 45.1**	**-0.9**
GERES	**GERESS Array B**	**160.30**	**335**	PKP	**PKPdf**	**01 13 44.9**	**-1.1**
GERES				PKPab	**PKPab**	**01 14 26.6**	**-0.1**
GERES	**GERESS Array B**	**160.30**	**335**	PKP	**PKPdf**	**01 13 44.9**	**-1.1**
	comp=Z,16nm,0.8s,baz=96,slow=1.3,SNR=78						
GERES				PKPab	**PKPab**	**01 14 26.6**	**-0.1**
	comp=Z,16nm,0.8s,baz=37,slow=3.1,SNR=8.9						
WET	**Wettzell**	**160.33**	**337**	*e*PKIKP	**PKPdf**	**01 13 45.0**	**-0.9**
WET	**Wettzell**	**160.33**	**337**	*e*PKPdf	**PKPdf**	**01 13 45.0**	**-0.9**
GRF	**Grafenberg Arr**	**160.35**	**341**	*e*PKP2	**PKPab**	**01 14 27.6**	**+0.9**
GRF				*e*		01 18 06.9	
GRF	**Grafenberg Arr**	**160.35**	**341**	*e*PKPdf	**PKPdf**	**01 13 45.1**	**-0.8**
GRF				*e*PKPab	**PKPab**	**01 14 27.6**	**+0.9**
GRF				*e*PP	**PP**	**01 18 06.9**	**-1.7**
GRF				*e*L	L	02 32 22.9	
	comp=Z,15µm,20.9s						
GRFO	**Grafenberg**	**160.35**	**341**	*e*PKIKP	**PKPdf**	**01 13 45.9**	**0.0**
GRFO				*e*		01 14 27.6	
GRFO	**Grafenberg**	**160.35**	**341**	*e*PKPdf	**PKPdf**	**01 13 45.9**	**0.0**
GRFO				*e*PKPab	**PKPab**	**01 14 27.6**	**+0.9**
THE	**Thessaloniki**	**160.37**	**304**	P	**PKPdf**	**01 13 43.4**	**-2.8**
VAY	**Valandovo**	**160.39**	**306**	P	**PKPdf**	**01 13 43.5**	**-2.7**
VAY	**Valandovo**	**160.39**	**306**	⇑*i*PKP	**PKPdf**	**01 13 43.8**	**-2.4**
VAY				*i* PKP	**PKPab**	**01 14 27.3**	**0.0**
BEBN	**Eben Emael**	**160.42**	**352**	PKPdf	**PKPdf**	**01 13 46.2**	**+0.3**
BEBN				PKPab	**PKPab**	**01 14 26.8**	**-0.1**
HGN	**Heimansgroeve**	**160.42**	**351**	*e*PKP	**PKPdf**	**01 13 45.2**	**-0.7**
	comp=Z,77nm,1.1s						
HGN				*e*X		01 14 26.5	
PTL	**Penteli**	**160.46**	**296**	P	**PKPdf**	**01 13 43.4**	**-3.0**
SKIA	**Skiathos**	**160.47**	**299**	P	**PKPdf**	**01 13 44.3**	**-2.1**
MRKA	**Markates**	**160.51**	**298**	P	**PKPdf**	**01 13 44.3**	**-2.2**
TNS	**Taunus Mts**	**160.53**	**346**	*e*PKIKP	**PKPdf**	**01 13 45.7**	**-0.5**
TNS	**Taunus Mts**	**160.53**	**346**	*e*PKPdf	**PKPdf**	**01 13 45.7**	**-0.5**
UCC	**Uccle**	**160.55**	**354**	PKPdf	**PKPdf**	**01 13 46.1**	**0.0**
MEM	**Membach**	**160.56**	**351**	PKPdf	**PKPdf**	**01 13 45.0**	**-1.1**
MEM				PKPab	**PKPab**	**01 14 26.6**	**-1.0**
ATH	**Athens Observa**	**160.59**	**296**	P	**PKPdf**	**01 13 44.0**	**-2.5**
VAM	**Vamos**	**160.61**	**288**	P	**PKPdf**	**01 13 45.5**	**-1.2**
XOR	**Xorichti**	**160.62**	**300**	P	**PKPdf**	**01 13 44.0**	**-2.6**
GRG	**Griva**	**160.65**	**305**	P	**PKPdf**	**01 13 44.8**	**-1.8**
DIVS	**Divibare**	**160.70**	**316**	P	**PKPdf**	**01 13 45.2**	**-1.4**
GVD	**Gavdhos**	**160.75**	**286**	*e*PKPdf	**PKPdf**	**01 13 45.6**	**-1.3**
SMIA	**Simia**	**160.75**	**299**	P	**PKPdf**	**01 13 45.3**	**-1.4**
BCLA	**Clavier**	**160.83**	**352**	PKPdf	**PKPdf**	**01 13 45.6**	**-0.8**
BCLA				PKPab	**PK

BOJS				*i* sPKPdf	**sPKPdf**	01 14 01.5	-1.0	
BOJS				*e*PP	**PP**	01 18 18.8	-0.8	
BOJS				*e*		01 24 59.7		
WATA	**Walderalm**	**162.33**	**337**	⇑*i*PKPdf	**PKPdf**	**01 13 47.0**	**-1.2**	
	comp=Z,110nm,1.4s							
BFO	**Black Forest**	**162.34**	**345**	*e*PKP2	**PKPab**	**01 14 37.4**	**+1.9**	
BFO	**Black Forest**	**162.34**	**345**	*e*PKPdf	**PKPdf**	**01 13 47.1**	**-1.0**	
BFO				*e*PKPab	**PKPab**	**01 14 37.4**	**+1.9**	
BFO				*e*		01 15 05.5		
BFO	**Black Forest**	**162.34**	**345**	*e*PKPdf	**PKPdf**	**01 13 46.5**	**-1.6**	
BFO				*e*PKPab	**PKPab**	**01 14 35.3**	**-0.2**	
PYL	**PYLOS**	**162.35**	**293**	P	**PKPdf**	**01 13 46.4**	**-2.0**	
BUM	**Brajici-Budva**	**162.36**	**313**	*e*PKP	**PKPdf**	**01 13 46.9**	**-1.5**	
WTTA	**Wattenberg**	**162.38**	**337**	⇑*i*PKPdf	**PKPdf**	**01 13 47.1**	**-1.3**	
	comp=Z,2µm,4.0s,SNR=21							
SPAK	**Spaichingen-Ko**	**162.45**	**343**	PKP	**PKPdf**	**01 13 46.9**	**-1.4**	
RETA	**Reutte**	**162.46**	**339**	⇓*i*PKPdf	**PKPdf**	**01 13 47.1**	**-1.2**	
	comp=Z,1µm,4.3s,SNR=9.6							
MOTA	**Moosalm**	**162.48**	**338**	⇑*i*PKPdf	**PKPdf**	**01 13 47.2**	**-1.3**	
	comp=Z,120nm,1.3s,SNR=22							
CDF	**Champ du Feu**	**162.49**	**347**	⇑*i*PKIKP	**PKPdf**	**01 13 47.2**	**-1.1**	
	comp=Z,68nm,1.0s							
CDF	**Champ du Feu**	**162.49**	**347**	⇑*i*PKIKP	**PKPdf**	**01 13 47.2**	**-1.1**	
CDF	**Champ du Feu**	**162.49**	**347**	⇑*i*PKPdf	**PKPdf**	**01 13 47.2**	**-1.1**	
ABTA	**Abfaltersbach**	**162.50**	**334**	⇑*i*PKPdf	**PKPdf**	**01 13 46.6**	**-1.8**	
	comp=Z,579nm,3.1s,SNR=48							
VOY	**Vojsko**	**162.53**	**330**	*e*PKPdf	**PKPdf**	**01 13 47.2**	**-1.2**	
VOY				*e*		01 13 51.6		
VOY				*e*		01 14 12.6		
VOY				*e*		01 14 34.9		
HCY	**Herceg Novi**	**162.53**	**314**	⇑*i*PKP	**PKPdf**	**01 13 47.1**	**-1.3**	
JAVS	**Javornik**	**162.56**	**329**	*i* PKPdf	**PKPdf**	**01 13 47.4**	**-1.1**	
JAVS				*i* sPKPdf	**sPKPdf**	**01 14 01.6**	**-1.3**	
PAGF	**Fort de Pagny**	**162.61**	**350**	⇑*i*PKIKP	**PKPdf**	**01 13 48.1**	**-0.2**	
	comp=Z,78nm,1.3s							
PAGF	**Fort de Pagny**	**162.61**	**350**	⇑*i*PKPdf	**PKPdf**	**01 13 48.1**	**-0.2**	
FLN	**La Foliniere**	**162.65**	**4**	⇑*i*PKIKP	**PKPdf**	**01 13 48.0**	**-0.3**	
	comp=Z,327nm,1.4s							
FLN				*e*R				
	comp=Z,23µm,21.2s							
FLN	**La Foliniere**	**162.65**	**4**	⇑*i*PKIKP	**PKPdf**	**01 13 48.0**	**-0.3**	
FLN	**La Foliniere**	**162.65**	**4**	⇑*i*PKPdf	**PKPdf**	**01 13 48.0**	**-0.3**	
IGT	**Igoumenitsa**	**162.65**	**303**	P	**PKPdf**	**01 13 46.4**	**-2.3**	
LIBD	**Limburg**	**162.67**	**346**	PKIKP	**PKPdf**	**01 13 47.6**	**-0.8**	
LIBD	**Limburg**	**162.67**	**346**	PKP	**PKPdf**	**01 13 47.6**	**-0.8**	
LKD2	**Lefkada island**	**162.68**	**300**	P	**PKPdf**	**01 13 47.5**	**-1.2**	
ECH	**Echery**	**162.70**	**347**	*e*PKIKP	**PKPdf**	**01 13 47.2**	**-1.2**	
ECH				*e*		01 14 35.7		
ECH	**Echery**	**162.70**	**347**	*e*PKPdf	**PKPdf**	**01 13 47.2**	**-1.2**	
ECH				*e*PKPab	**PKPab**	**01 14 35.7**	**-1.3**	
ECH	**Echery**	**162.70**	**347**	PKP	**PKPdf**	**01 13 47.3**	**-1.2**	
MEZF	**Maizieres J'vi**	**162.75**	**352**	⇑*i*PKIKP	**PKPdf**	**01 13 48.4**	**0.0**	
	comp=Z,768nm,1.4s							
MEZF	**Maizieres J'vi**	**162.75**	**352**	⇑*i*PKPdf	**PKPdf**	**01 13 48.4**	**0.0**	
ROSF	**Rostrenen**	**162.76**	**11**	⇑*i*PKIKP	**PKPdf**	**01 13 48.0**	**-0.4**	
	comp=Z,35nm,0.8s							
ROSF	**Rostrenen**	**162.76**	**11**	⇑*i*PKIKP	**PKPdf**	**01 13 48.0**	**-0.4**	
ROSF	**Rostrenen**	**162.76**	**11**	⇑*i*PKPdf	**PKPdf**	**01 13 48.0**	**-0.4**	
STON	**Ston**	**162.77**	**316**	P	**PKPdf**	**01 13 47.8**	**-0.9**	
LDF	**La Druitiere**	**162.84**	**4**	⇑*i*PKIKP	**PKPdf**	**01 13 48.1**	**-0.4**	
	comp=Z,320nm,1.5s							
LDF	**La Druitiere**	**162.84**	**4**	⇑*i*PKIKP	**PKPdf**	**01 13 48.1**	**-0.4**	
LDF	**La Druitiere**	**162.84**	**4**	⇑*i*PKPdf	**PKPdf**	**01 13 48.1**	**-0.4**	
TRI	**Trieste**	**162.84**	**330**	*e*PKIKP	**PKPdf**	**01 13 47.6**	**-1.0**	
TRI				*e*		01 14 34.7		
TRI	**Trieste**	**162.84**	**330**	*e*PKPdf	**PKPdf**	**01 13 47.5**	**-1.0**	
TRI				*e*PKPab	**PKPab**	**01 14 34.7**	**-3.0**	
FELD	**Feldberg im Sc**	**162.85**	**345**	PKP	**PKPdf**	**01 13 47.3**	**-1.5**	
FELD	**Feldberg im Sc**	**162.85**	**345**	PKP	**PKPdf**	**01 13 47.3**	**-1.5**	
SKDS	**Skadanscina**	**162.86**	**329**	*i* PKPdf	**PKPdf**	**01 13 47.3**	**-1.3**	
SKDS				*i* sPKPdf	**sPKPdf**	**01 14 01.4**	**-1.7**	
VLO	**Vlora**	**162.86**	**307**	*e*P	**PKPdf**	**01 13 48.4**	**-0.4**	
FETA	**Feichten**	**162.89**	**338**	⇓*i*PKPdf	**PKPdf**	**01 13 47.9**	**-0.9**	
	comp=Z,616nm,2.0s,SNR=81							
THEF	**They Montfort**	**162.89**	**350**	PKIKP	**PKPdf**	**01 13 47.8**	**-0.8**	
THEF	**They Montfort**	**162.89**	**350**	PKP	**PKPdf**	**01 13 47.8**	**-0.8**	
THEF	**They Montfort**	**162.89**	**350**	PKP	**PKPdf**	**01 13 47.8**	**-0.8**	
DAVA	**Damuels**	**162.91**	**340**	⇑*i*PKPdf	**PKPdf**	**01 13 47.9**	**-1.0**	
	comp=Z,2µm,4.3s,SNR=20							
VLS	**Valsamata**	**162.92**	**298**	P	**PKPdf**	**01 13 49.3**	**+0.3**	
SGMF	**Saint Gilles**	**162.94**	**9**	⇑*i*PKIKP	**PKPdf**	**01 13 48.2**	**-0.4**	
	comp=Z,258nm,1.6s							
SGMF	**Saint Gilles**	**162.94**	**9**	⇑*i*PKIKP	**PKPdf**	**01 13 48.2**	**-0.4**	
SGMF	**Saint Gilles**	**162.94**	**9**	⇑*i*PKPdf	**PKPdf**	**01 13 48.2**	**-0.4**	
KEK	**Kerkira**	**162.96**	**304**	P	**PKPdf**	**01 13 47.2**	**-1.7**	
GRR	**Gorron**	**162.99**	**5**	⇑*i*PKIKP	**PKPdf**	**01 13 48.5**	**-0.2**	
	comp=Z,342nm,1.5s							
GRR	**Gorron**	**162.99**	**5**	⇑*i*PKIKP	**PKPdf**	**01 13 48.5**	**-0.2**	
GRR	**Gorron**	**162.99**	**5**	⇑*i*PKPdf	**PKPdf**	**01 13 48.5**	**-0.2**	
SFTF	**Sexfontaines**	**163.04**	**352**	⇑*i*PKIKP	**PKPdf**	**01 13 48.5**	**-0.2**	
	comp=Z,734nm,1.2s							
SFTF	**Sexfontaines**	**163.04**	**352**	⇑*i*PKPdf	**PKPdf**	**01 13 48.5**	**-0.2**	
HAU	**Haudompre**	**163.05**	**349**	⇑*i*PKIKP	**PKPdf**	**01 13 48.1**	**-0.7**	
	comp=Z,307nm,1.4s							
HAU				*e*R				
	comp=Z,20µm,22.2s							
HAU	**Haudompre**	**163.05**	**349**	⇑*i*PKIKP	**PKPdf**	**01 13 48.1**	**-0.7**	
HAU	**Haudompre**	**163.05**	**349**	⇑*i*PKPdf	**PKPdf**	**01 13 48.1**	**-0.7**	
MOF	**Molkenrain**	**163.05**	**347**	PKIKP	**PKPdf**	**01 13 48.0**	**-0.9**	
MOF	**Molkenrain**	**163.05**	**347**	PKP	**PKPdf**	**01 13 48.0**	**-0.9**	
MOF	**Molkenrain**	**163.05**	**347**	PKP	**PKPdf**	**01 13 48.0**	**-0.9**	
HINF	**Hinteralfeld**	**163.14**	**347**	⇑*i*PKIKP	**PKPdf**	**01 13 48.0**	**-0.9**	
	comp=Z,110nm,1.0s							
HINF	**Hinteralfeld**	**163.14**	**347**	⇑*i*PKIKP	**PKPdf**	**01 13 48.0**	**-0.9**	
HINF	**Hinteralfeld**	**163.14**	**347**	⇑*i*PKPdf	**PKPdf**	**01 13 48.0**	**-0.9**	
QUIF	**Quistinic**	**163.18**	**11**	⇑*i*PKIKP	**PKPdf**	**01 13 48.6**	**-0.2**	
	comp=Z,280nm,1.5s							
QUIF	**Quistinic**	**163.18**	**11**	⇑*i*PKIKP	**PKPdf**	**01 13 48.6**	**-0.2**	
QUIF	**Quistinic**	**163.18**	**11**	⇑*i*PKPdf	**PKPdf**	**01 13 48.6**	**-0.2**	
NVLJ	**Novalja**	**163.20**	**325**	P	**PKPdf**	**01 13 48.0**	**-1.0**	
BBS	**Basel-Blauen**	**163.34**	**346**	PKIKP	**PKPdf**	**01 13 47.8**	**-1.3**	
BBS	**Basel-Blauen**	**163.34**	**346**	PKP	**PKPdf**	**01 13 47.8**	**-1.3**	
DAVOX	**Davos/Dischmat**	**163.37**	**339**	PKP	**PKPdf**	**01 13 48.5**	**-0.9**	
DAVOX				PKPab	**PKPab**	**01 14 40.4**	**+0.2**	
DAVOX	**Davos/Dischmat**	**163.37**	**339**	PKP	**PKPdf**	**01 13 48.5**	**-0.9**	
	comp=Z,45nm,0.9s,baz=219,slow=2.0,SNR=50							
DAVOX				PKPab	**PKPab**	**01 14 40.4**	**+0.2**	
	comp=Z,33nm,0.5s,baz=321,slow=6.3,SNR=7.9							
LOMF	**Lomont**	**163.59**	**347**	PKIKP	**PKPdf**	**01 13 48.7**	**-0.7**	
LOMF	**Lomont**	**163.59**	**347**	PKP	**PKPdf**	**01 13 48.7**	**-0.7**	
LOMF	**Lomont**	**163.59**	**347**	PKP	**PKPdf**	**01 13 48.7**	**-0.7**	
TUE	**Stuetta**	**163.80**	**340**	*e*PKPdf	**PKPdf**	**01 13 48.5**	**-1.3**	
TUE				*e*PKPab	**PKPab**	**01 14 42.3**	**+0.1**	
LOR	**Lormes**	**164.09**	**354**	⇑*i*PKIKP	**PKPdf**	**01 13 49.5**	**-0.3**	
	comp=Z,386nm,1.3s							
LOR				*e*R				
	comp=Z,22µm,21.8s							
LOR	**Lormes**	**164.09**	**354**	⇑*i*PKPdf	**PKPdf**	**01 13 49.5**	**-0.3**	
PMOZ	**Porto Moniz, M**	**164.15**	**80**	*e*PKPdf	**PKPdf**	**01 13 51.9**	**+1.5**	
HYF	**Humbligny**	**164.18**	**357**	⇑*i*PKIKP	**PKPdf**	**01 13 49.8**	**0.0**	
HYF	**Humbligny**	**164.18**	**357**	⇑*i*PKPdf	**PKPdf**	**01 13 49.8**	**0.0**	
SSF	**Saint Saulge**	**164.33**	**355**	⇑*i*PKIKP	**PKPdf**	**01 13 49.6**	**-0.4**	
	comp=Z,263nm,1.3s							
SSF	**Saint Saulge**	**164.33**	**355**	⇑*i*PKIKP	**PKPdf**	**01 13 49.6**	**-0.4**	
SSF	**Saint Saulge**	**164.33**	**355**	⇑*i*PKPdf	**PKPdf**	**01 13 49.6**	**-0.4**	
PMAR	**Madeira**	**164.39**	**80**	*e*PKPdf	**PKPdf**	**01 13 53.9**	**+3.2**	
CABF	**La Chapelle**	**164.44**	**348**	⇑*i*PKIKP	**PKPdf**	**01 13 50.2**	**0.0**	
	comp=Z,414nm,1.6s							
CABF	**La Chapelle**	**164.44**	**348**	⇑*i*PKIKP	**PKPdf**	**01 13 50.2**	**0.0**	
CABF	**La Chapelle**	**164.44**	**348**	⇑*i*PKPdf	**PKPdf**	**01 13 50.2**	**0.0**	
OG01	**Vacheresse**	**164.60**	**346**	PKP	**PKPdf**	**01 13 48.4**	**-2.0**	
OG01	**Vacheresse**	**164.60**	**346**	PKP	**PKPdf**	**01 13 48.4**	**-2.0**	
AVF	**Avril sur Loir**	**164.61**	**355**	⇑*i*PKIKP	**PKPdf**	**01 13 49.6**	**-0.6**	
	comp=Z,166nm,1.3s							
AVF	**Avril sur Loir**	**164.61**	**355**	⇑*i*PKIKP	**PKPdf**	**01 13 49.6**	**-0.6**	
AVF	**Avril sur Loir**	**164.61**	**355**	⇑*i*PKPdf	**PKPdf**	**01 13 49.6**	**-0.6**	
SMF	**Signal de Mont**	**164.71**	**354**	⇑*i*PKIKP	**PKPdf**	**01 13 49.7**	**-0.6**	
	comp=Z,221nm,1.5s							
SMF	**Signal de Mont**	**164.71**	**354**	⇑*i*PKIKP	**PKPdf**	**01 13 49.7**	**-0.6**	
SMF	**Signal de Mont**	**164.71**	**354**	⇑*i*PKPdf	**PKPdf**	**01 13 49.7**	**-0.6**	
MFF	**Saint Martin d**	**164.82**	**4**	⇑*i*PKIKP	**PKPdf**	**01 13 50.2**	**-0.2**	
	comp=Z,308nm,1.2s							
MFF	**Saint Martin d**	**164.82**	**4**	⇑*i*PKIKP	**PKPdf**	**01 13 50.2**	**-0.2**	
MFF	**Saint Martin d**	**164.82**	**4**	⇑*i*PKPdf	**PKPdf**	**01 13 50.2**	**-0.2**	
PMPST	**Porto Santo, M**	**164.87**	**79**	*e*PKPdf	**PKPdf**	**01 13 52.5**	**+1.6**	
PMPST	**Porto Santo, M**	**164.87**	**79**	*e*PKPab	**PKPab**	**01 14 49.0**	**+1.8**	
PMPS	**Porto Santo**	**164.87**	**79**	*e*PKPdf	**PKPdf**	**01 13 52.3**	**+1.4**	
PMPS	**Porto Santo**	**164.87**	**79**	*e*PKPab	**PKPab**	**01 14 50.6**	**+3.4**	
BGF	**Bois d'Agland**	**164.87**	**356**	⇑*i*PKIKP	**PKPdf**	**01 13 50.3**	**-0.2**	
	comp=Z,420nm,1.5s							
BGF	**Bois d'Agland**	**164.87**	**356**	⇑*i*PKIKP	**PKPdf**	**01 13 50.3**	**-0.2**	
BGF	**Bois d'Agland**	**164.87**	**356**	⇑*i*PKPdf	**PKPdf**	**01 13 50.3**	**-0.2**	
TCF	**Toulx Ste Croi**	**165.17**	**358**	⇑*i*PKIKP	**PKPdf**	**01 13 50.4**	**-0.4**	
	comp=Z,144nm,1.0s							
TCF	**Toulx Ste Croi**	**165.17**	**358**	⇑*i*PKIKP	**PKPdf**	**01 13 50.4**	**-0.4**	
TCF	**Toulx Ste Croi**	**165.17**	**358**	⇑*i*PKPdf	**PKPdf**	**01 13 50.4**	**-0.4**	
RSL	**Roselend**	**165.22**	**346**	PKIKP	**PKPdf**	**01 13 49.8**	**-1.2**	
RSL	**Roselend**	**165.22**	**346**	PKP	**PKPdf**	**01 13 49.8**	**-1.2**	
RSL	**Roselend**	**165.22**	**346**	PKP	**PKPdf**	**01 13 49.8**	**-1.2**	
TIP	**Timpagrande**	**165.32**	**306**	*e*PKPdf	**PKPdf**	**01 13 50.9**	**-0.3**	
TIP				*e*PKPab	**PKPab**	**01 14 50.1**	**+1.1**	
AGO	**Saint Agoulin**	**165.36**	**355**	PKP	**PKPdf**	**01 13 50.4**	**-0.5**	
AGO	**Saint Agoulin**	**165.36**	**355**	PKP	**PKPdf**	**01 13 50.4**	**-0.5**	
LPL	**La Plagne**	**165.36**	**345**	⇑*i*PKIKP	**PKPdf**	**01 13 51.0**	**-0.2**	
LPL	**La Plagne**	**165.36**	**345**	⇑*i*PKIKP	**PKPdf**	**01 13 51.0**	**-0.2**	
LPL	**La Plagne**	**165.36**	**345**	⇑*i*PKPdf	**PKPdf**	**01 13 51.0**	**-0.2**	
LPG	**La Plagne**	**165.38**	**345**	⇑*i*PKIKP	**PKPdf**	**01 13 51.1**	**-0.2**	
	comp=Z,72nm,1.0s							
LPG	**La Plagne**	**165.38**	**345**	⇑*i*PKIKP	**PKPdf**	**01 13 51.1**	**-0.2**	
LPG	**La Plagne**	**165.38**	**345**	⇑*i*PKPdf	**PKPdf**	**01 13 51.1**	**-0.2**	
VLC	**Villacollemand**	**165.49**	**333**	*e*PKPdf	**PKPdf**	**01 13 49.4**	**-1.7**	
AQU	**L'Aquila**	**165.53**	**322**	*e*PKPdf	**PKPdf**	**01 13 50.6**	**-0.7**	
AQU				*e*PKPab	**PKPab**	**01 14 48.2**	**-1.6**	
CUC	**Castrocucco**	**165.56**	**310**	*e*PKPdf	**PKPdf**	**01 13 49.6**	**-1.7**	
CUC				*e*PKPab	**PKPab**	**01 14 50.6**	**+0.5**	
PYM	**Petit Puy Mans**	**165.67**	**356**	PKIKP	**PKPdf**	**01 13 52.6**	**+1.3**	
PYM	**Petit Puy Mans**	**165.67**	**356**	PKP	**PKPdf**	**01 13 52.6**	**+1.3**	
PYM	**Petit Puy Mans**	**165.67**	**356**	PKP	**PKPdf**	**01 13 52.6**	**+1.3**	
VERF	**Verneugheol**	**165.70**	**357**	PKP	**PKPdf**	**01 13 50.2**	**-1.1**	
VERF	**Verneugheol**	**165.70**	**357**	PKP	**PKPdf**	**01 13 50.2**	**-1.1**	
GDM	**Grand'Maison**	**165.79**	**346**	PKP	**PKPdf**	**01 13 51.0**	**-0.5**	
GDM	**Grand'Maison**	**165.79**	**346**	PKP	**PKPdf**	**01 13 51.0**	**-0.5**	
GRN	**Grenoble**	**165.82**	**347**	PKIKP	**PKPdf**	**01 13 51.2**	**-0.2**	
GRN	**Grenoble**	**165.82**	**347**	PKP	**PKPdf**	**01 13 51.2**	**-0.2**	
GRN	**Grenoble**	**165.82**	**347**	PKP	**PKPdf**	**01 13 51.2**	**-0.2**	
SSB	**Saint Sauveur**	**165.98**	**351**	*e*PKIKP	**PKPdf**	**01 13 50.9**	**-0.6**	
SSB				*e*		01 14 51.4		
SSB	**Saint Sauveur**	**165.98**	**351**	*e*PKPdf	**PKPdf**	**01 13 50.9**	**-0.6**	
SSB				*e*PKPab	**PKPab**	**01 14 51.4**	**-0.2**	
SSB	**Saint Sauveur**	**165.98**	**351**	PKP	**PKPdf**	**01 13 50.3**	**-1.2**	
FRNF	**Fournols**	**166.06**	**357**	PKP	**PKPdf**	**01 13 51.4**	**-0.1**	
FRNF	**Fournols**	**166.06**	**357**	PKP	**PKPdf**	**01 13 51.4**	**-0.1**	
MBDF	**Montbardon**	**166.10**	**344**	⇑*i*PKIKP	**PKPdf**	**01 13 51.3**	**-0.5**	
	comp=Z,84nm,0.9s							
MBDF	**Montbardon**	**166.10**	**344**	⇑*i*PKIKP	**PKPdf**	**01 13 51.3**	**-0.5**	
MBDF	**Montbardon**	**166.10**	**344**	⇑*i*PKPdf	**PKPdf**	**01 13 51.3**	**-0.5**	
ORIF	**Oris-en-Rattie**	**166.11**	**347**	⇑*i*PKIKP	**PKPdf**	**01 13 51.4**	**-0.3**	
	comp=Z,108nm,1.1s							
ORIF				*e*R				
	comp=Z,18µm,19.8s							
ORIF	**Oris-en-Rattie**	**166.11**	**347**	⇑*i*PKIKP	**PKPdf**	**01 13 51.4**	**-0.3**	
ORIF	**Oris-en-Rattie**	**166.11**	**347**	⇑*i*PKPdf	**PKPdf**	**01 13 51.4**	**-0.3**	
RJF	**Les Rejaudoux**	**166.17**	**360**	⇑*i*PKIKP	**PKPdf**	**01 13 51.5**	**-0.1**	
	comp=Z,287nm,1.2s							
RJF				*e*R				
	comp=Z,25µm,22.8s							
RJF	**Les Rejaudoux**	**166.17**	**360**	⇑*i*PKIKP	**PKPdf**	**01 13 51.5**	**-0.1**	
RJF	**Les Rejaudoux**	**166.17**	**360**	⇑*i*PKPdf	**PKPdf**	**01 13 51.5**	**-0.1**	
LBL	**Lubilhac**	**166.17**	**355**	PKIKP	**PKPdf**	**01 13 51.1**	**-0.6**	
LBL	**Lubilhac**	**166.17**	**355**	PKP	**PKPdf**	**01 13 51.1**	**-0.6**	
LBL	**Lubilhac**	**166.17**	**355**	PKP	**PKPdf**	**01 13 51.1**	**-0.6**	
SURF	**Saint Ours**	**166.32**	**344**	PKP	**PKPdf**	**01 13 51.7**	**-0.3**	
SURF	**Saint Ours**	**166.32**	**344**	PKP	**PKPdf**	**01 13 51.7**	**-0.3**	
CEL	**Celeste**	**166.33**	**304**	*e*PKPdf	**PKPdf**	**01 13 51.7**	**-0.3**	
CEL				*e*PKPab	**PKPab**	**01 14 55.2**	**+1.7**	
VIVF	**Saint-Julien-l**	**166.38**	**350**	⇑*i*PKIKP	**PKPdf**	**01 13 51.8**	**0.0**	
	comp=Z,258nm,1.2s							
VIVF	**Saint-Julien-l**	**166.38**	**350**	⇑*i*PKIKP	**PKPdf**	**01 13 51.8**	**0.0**	
VIVF	**Saint-Julien-l**	**166.38**	**350**	⇑*i*PKPdf	**PKPdf**	**01 13 51.8**	**0.0**	
LFF	**La Frestale**	**166.52**	**2**	⇑*i*PKIKP	**PKPdf**	**01 13 51.9**	**+0.1**	
	comp=Z,256nm,1.2s							
LFF	**La Frestale**	**166.52**	**2**	⇑*i*PKIKP	**PKPdf**	**01 13 51.9**	**+0.1**	
LFF	**La Frestale**	**166.52**	**2**	⇑*i*PKPdf	**PKPdf**	**01 13 51.9**	**+0.1**	
CAF	**Calviac**	**166.54**	**358**	⇑*i*PKIKP	**PKPdf**	**01 13 51.9**	**0.0**	
	comp=Z,209nm,1.2s							
CAF	**Calviac**	**166.54**	**358**	⇑*i*PKIKP	**PKPdf**	**01 13 51.9**	**0.0**	
CAF	**Calviac**	**166.54**	**358**	⇑*i*PKPdf	**PKPdf**	**01 13 51.9**	**0.0**	
OCF	**Saint Nazaire**	**166.55**	**348**	PKP	**PKPdf**	**01 13 50.5**	**-1.5**	
OG26	**St.-Nazaire-De**	**166.55**	**348**	PKP	**PKPdf**	**01 13 50.5**	**-1.5**	
SAOF	**Saorge**	**166.59**	**341**	PKIKP	**PKPdf**	**01 13 50.5**	**-1.5**	
SAOF	**Saorge**	**166.59**	**341**	PKP	**PKPdf**	**01 13 50.5**	**-1.5**	
SAOF	**Saorge**	**166.59**	**341**	PKP	**PKPdf**	**01 13 50.5**	**-1.5**	
OG25	**Le Caire**	**166.60**	**346**	PKP	**PKPdf**	**01 13 50.9**	**-1.2**	
OG25	**Le Caire**	**166.60**	**346**	PKP	**PKPdf**	**01 13 50.9**	**-1.2**	
AUTN	**L'Aution**	**166.62**	**341**	PKIKP	**PKPdf**	**01 13 51.9**	**-0.4**	
AUTN	**L'Aution**	**166.62**	**341**	PKP	**PKPdf**	**01 13 51.9**	**-0.4**	
AUTN	**L'Aution**	**166.62**	**341**	PKP	**PKPdf**	**01 13 51.9**	**-0.4**	
TOUF	**Mont Tournerai**	**166.65**	**342**	PKIKP	**PKPdf**	**01 13 51.7**	**-0.6**	
TOUF	**Mont Tournerai**	**166.65**	**342**	PKP	**PKPdf**	**01 13 51.7**	**-0.6**	
TOUF	**Mont Tournerai**	**166.65**	**342**	PKP	**PKPdf**	**01 13 51.7**	**-0.6**	
SBF	**Sospel**	**166.74**	**341**	⇑*i*PKIKP	**PKPdf**	**01 13 51.3**	**-0.9**	
	comp=Z,154nm,1.0s							
SBF	**Sospel**	**166.74**	**341**	⇑*i*PKIKP	**PKPdf**	**01 13 51.3**	**-0.9**	
SBF	**Sospel**	**166.74**	**341**	⇑*i*PKPdf	**PKPdf**	**01 13 51.3**	**-0.9**	
REVF	**Revere**	**166.87**	**341**	PKIKP	**PKPdf**	**01 13 51.6**	**-0.6**	
REVF	**Revere**	**166.87**	**341**	PKP	**PKPdf**	**01 13 51.6**	**-0.6**	
REVF	**Revere**	**166.87**	**341**	PKP	**PKPdf**	**01 13 51.6**	**-0.6**	
PGAV	**Gavieira, Arco**	**166.94**	**34**	*e*PKPdf	**PKPdf**	**01 13 52.8**	**+0.4**	
PGAV	**Gavieira, Arco**	**166.94**	**34**	*e*PKPab	PKPab	01 15 07.0	+11	
PGAV	**Gavieira, Arco**	**166.94**	**34**	*i* PP	PP	01 18 45.1	+1.3	
PGAV				*e*SS	SS	01 39 44.5	+19	
PGAV				*e*LQ	LQ	02 03 05.4		
PGAV				*e*LR	LR	02 12 16.5		
	comp=Z,9µm,22.2s							
CALN	**Calern**	**166.99**	**342**	PKIKP	**PKPdf**	**01 13 51.9**	**-0.6**	
CALN	**Calern**	**166.99**	**342**	PKP	**PKPdf**	**01 13 51.9**	**-0.6**	
CALN	**Calern**	**166.99**	**342**	PKP	**PKPdf**	**01 13 51.9**	**-0.6**	
SMRF	**Simiane la Rot**	**167.08**	**347**	⇑*i*PKIKP	**PKPdf**	**01 13 52.5**	**+0.1**	
	comp=Z,167nm,1.2s							
SMRF	**Simiane la Rot**	**167.08**	**347**	⇑*i*PKPdf	**PKPdf**	**01 13 52.5**	**+0.1**	
FRF	**La Foret Royal**	**167.23**	**343**	⇑*i*PKIKP	**PKPdf**	**01 13 51.9**	**-0.5**	
	comp=Z,230nm,1.4s							
FRF	**La Foret Royal**	**167.23**	**343**	⇑*i*PKIKP	**PKPdf**	**01 13 51.9**	**-0.5**	
FRF	**La Foret Royal**	**167.23**	**343**	⇑*i*PKPdf	**PKPdf**	**01 13 51.9**	**-0.5**	
LASF	**Ste Croix**	**167.25**	**352**	⇑*i*PKIKP	**PKPdf**	**01 13 52.6**	**+0.1**	
	comp=Z,336nm,1.5s							
LASF	**Ste Croix**	**167.25**	**352**	⇑*i*PKPdf	**PKPdf**	**01 13 52.6**	**+0.1**	
PCAB	**Cabril**	**167.25**	**34**	*i* PKPdf	**PKPdf**	**01 13 52.7**	**+0.1**	
PCAB	**Cabril**	**167.25**	**34**	*e*PP	PP	01 18 44.6	-0.7	
PGF	**Pioggiola**	**167.39**	**334**	⇑*i*PKIKP	**PKPdf**	**01 13 52.0**	**-0.7**	
	comp=Z,274nm,1.2s							
PGF	**Pioggiola**	**167.39**	**334**	⇑*i*PKIKP	**PKPdf**	**01 13 52.0**	**-0.7**	
PGF	**Pioggiola**	**167.39**	**334**	⇑*i*PKPdf	**PKPdf**	**01 13 52.0**	**-0.7**	
LMR	**La Mourre**	**167.47**	**343**	⇑*i*PKIKP	**PKPdf**	**01 13 52.0**	**-0.6**	
	comp=Z,119nm,1.3s							
LMR	**La Mourre**	**167.47**	**343**	⇑*i*PKIKP	**PKPdf**	**01 13 52.0**	**-0.6**	
LMR	**La Mourre**	**167.47**	**343**	⇑*i*PKPdf	**PKPdf**	**01 13 52.0**	**-0.6**	
POLO	**Lamas de Olo**	**167.62**	**34**	*e*PKPdf	**PKPdf**	**01 13 53.4**	**+0.5**	
POLO	**Lamas de Olo**	**167.62**	**34**	*i* PP	PP	01 18 48.2	+0.9	
POLO				*e*SS	SS	01 39 55.7	+23	
PVRL	**Vila Real**	**167.74**	**34**	*e*PKPdf	**PKPdf**	**01 13 54.2**	**+1.3**	
PVRL	**Vila Real**	**167.74**	**34**	*i* PKPdf	**PP**	**01 18 46.9**	**-0.9**	
PBRG	**Braganca**	**167.76**	**30**	*e*PKPdf	**PKPdf**	**01 13 54.2**	**+1.2**	
PBRG	**Braganca**	**167.76**	**30**	*i* PP	PP	01 18 48.4	+0.6	
PBRG				*e*SS	SS	01 39 54.2	+21	
OSSF	**Osses**	**168.02**	**10**	PKP	**PKPdf**	**01 13 52.9**	**-0.1**	
OSSF	**Osses**	**168.02**	**10**	PKP	**PKPdf**	**01 13 52.9**	**-0.1**	
OSPF	**L'Ospedale**	**168.06**	**331**	PKP	**PKPdf**	**01 13 52.4**	**-0.8**	
**OSPF

EMHD	Djebel Mahouad	175.10	346	P	PKPdf	01 13 59.0	+2.1
EBNR	Beni Rached	175.17	359	P	PKPdf	01 14 03.0	+6.2
ECHA	Ech Chlef	175.31	1	P	PKPdf	01 14 10.5	+14

IDC 16 00:56:09.5±3.8, 2.75N×95.73E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.6/29, mbtmp3.7/8, ML2.9/1, Error ellipse: s-maj=84.9km s-min=35.4km az=23.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	Prapat	3.19	89	Pn	Pn	00 57 01.2	+0.1
	1.5nm,0.3s,baz=227,slow=18,SNR=4.4						
CMAR	Chiang Mai Arr	15.93	11	Pn	Pn	00 59 55.9	+0.7
	baz=208,slow=8.9,SNR=2.4						
MKAR	Makanchi Array	45.41	347	P	P	01 04 30.6	+0.6
	0.5nm,0.4s,baz=153,slow=8.9,SNR=13						
SONM	Songino Array	45.85	10	P	P	01 04 33.0	-0.6
	1.7nm,0.8s,baz=201,slow=12,SNR=3.0						
KURBB	Kurchatov Arra	49.87	346	P	P	01 05 04.1	-0.4
	0.2nm,0.6s,baz=165,slow=6.9,SNR=4.2						
ZALV	Zalesovo Beam	51.82	352	P	P	01 05 18.7	-0.4
	0.5nm,0.4s,baz=167,slow=7.4,SNR=3.7						
BVAR	Borovoye Array	54.32	341	P	P	01 05 37.3	-0.3
	0.2nm,0.4s,baz=159,slow=8.7,SNR=3.1						
ARCES	ARCESS Array B	80.59	340	P	P	01 08 23.9	+0.2
	1.0nm,0.7s,baz=92,slow=5.5,SNR=4.8						

IDC 16 01:02:34.6±1.6, 31.63S×177.90W, h0km, mb4.5/2, mb1 4.7/3, mb1mx4.2/20, mbtmp4.6/3, ML4.1/1, Error ellipse: s-maj=55.0km s-min=40.9km az=142.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	7.78	210	Pn	Pn	01 04 28.7	-0.4
	3.0nm,0.3s,baz=354,slow=19,SNR=1.9						
URZ				Sn	Sn	01 05 53.6	-4.3
	3.4nm,0.3s,baz=113,slow=17,SNR=6.1						
CTA	Charters Tower	34.10	281	P	P	01 09 22.7	+1.6
	6.8nm,0.7s,baz=144,slow=8.7,SNR=3.0						
WRA	Warramunga Arr	44.24	273	P	P	01 10 44.0	-1.9
	2.1nm,0.4s,baz=112,slow=7.9,SNR=4.9						
KURBB	Kurchatov Arra	121.99	313	PKP	PKPdf	01 21 29.8	-0.8
	0.5nm,0.5s,baz=106,slow=2.1,SNR=4.6						
FINES	FINESS Array B	146.32	339	PKPbc	PKPdf	01 22 15.6	+0.3
	3.0nm,0.4s,baz=45,slow=4.3,SNR=15						
MMAI	Mount Meron Ar	151.89	282	PKPbc	PKPbc	01 22 32.2	+0.4
	1.8nm,0.5s,baz=68,slow=6.2,SNR=11						
BRTR	Keskin Array B	153.24	296	PKPbc	PKPbc	01 22 34.6	-0.1
	2.8nm,1.1s,baz=90,slow=1.4,SNR=3.7						

IDC 16 01:05:52.8±0.5, 31.45S×177.94W, h0km, mb4.7/8, mb1 4.9/9, mb1mx4.5/23, mbtmp4.7/9, ML4.9/1, Error ellipse: s-maj=21.3km s-min=18.8km az=82.0
ISCJB 16 01:05:55.1±1.0, 31.76S±0.05×177.8W±0.2, h33km, mb4.8/10, Error ellipse: s-maj=20.9km s-min=6.6km az=10.7
NEIC 16 01:05:59.8±1.2, 31.39S×177.98W, h50km±9km, mb5.2/3, Error ellipse: s-maj=13.5km s-min=8.4km az=123.0
AUST 16 01:06:28.6±7.8, 32.55S×179.99W, h186km±1km, Error ellipse: s-maj=5.5km s-min=2.6km az=251.0

ISC 16 01:05:58.1±0.5, 31.58S±0.06×177.9W±0.1, h35km, n102, σ1§33/110, mb4.9/10, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.32	0	Pn	Pn	01 06 32.2	-1.7
RAO				Sn	Sn	01 06 59.5	-1.7
RAO	Raoul Island	2.32	0	Pn	Pn	01 06 32.2	-1.7
	347nm,0.3s,baz=125,slow=17,SNR=12						
RAO				Sn	Sn	01 06 59.5	-1.7
	563nm,0.3s,baz=102,slow=22,SNR=7.7						
PUZ	Puketiti	7.20	205	PN	Pn	01 07 37.1	-3.8
PUZ				SN	Sn	01 08 59.3	-2.0
WCZ	Waipu Caves	7.77	234	PN	Pn	01 07 52.6	+4.0
URZ	Urewera	7.81	210	Pn	Pn	01 07 45.0	-4.2
URZ				Sn	Sn	01 09 13.4	-2.9
URZ	Urewera	7.81	210	ePn	Pn	01 07 48.9	-0.3
URZ				SN	Sn	01 09 11.3	-5.1
URZ	Urewera	7.81	210	Pn	Pn	01 07 45.0	-4.2
	2.2nm,0.3s,baz=8.1,slow=7.1,SNR=4.7						
URZ				Sn	Sn	01 09 13.4	-2.9
	5.6nm,0.3s,baz=152,slow=22,SNR=9.1						
OUZ	Omahuta	7.97	241	ePn	Pn	01 07 55.0	+3.6
	52nm,0.5s						
OUZ	Omahuta	7.97	241	PN	Pn	01 07 55.2	+3.8
KNZ	Kokohu	8.25	205	PN	Pn	01 07 50.7	-4.4
KNZ				SN	Sn	01 09 24.7	-2.4
DZM	Mont Dzumac	16.85	300	Pn	P	01 09 56.9	+3.7
DZM	Mont Dzumac	16.85	300	Pn	P	01 09 56.9	+3.7
	0.4nm,0.3s,baz=112,slow=16,SNR=4.5						
ARMA	Armidale	26.09	265	P	P	01 11 32.3	+3.6
	baz=24,SNR=4.3						
RMQ	Roma	29.50	271	P	P	01 12 01.6	+2.5
	baz=28,SNR=4.5						
CMSA	Cobar Meteorol	30.92	260	P	P	01 12 12.7	+1.1
	baz=29,SNR=12						
QLP	Quilpie	33.33	269	P	P	01 12 33.5	+0.6
	baz=32,SNR=9.2						
CTA	Charters Tower	34.07	281	P	P	01 12 40.3	+1.0
CTA	Charters Tower	34.07	281	P	P	01 12 40.3	+1.0
	24nm,0.6s,baz=110,slow=9.9,SNR=27						
STKA	Stephens Creek	34.29	259	P	P	01 12 41.8	+0.7
STKA	Stephens Creek	34.29	259	P	P	01 12 41.8	+0.7
	4.9nm,0.5s,baz=103,slow=10.0,SNR=7.2						
STKA	Stephens Creek	34.29	259	P	P	01 12 42.4	+1.3
	baz=32,SNR=7.2						
MTSU	Mount Surprise	36.60	282	P	P	01 13 02.3	+1.2
	baz=35,SNR=17						
BBOO	Buckleboo	38.73	256	P	P	01 13 18.5	-0.5
	baz=37,SNR=7.0						
COEN	Coen	39.67	287	P	P	01 13 27.8	+0.8
	baz=38,SNR=7.8						
AS31	Alice Springs	43.12	268	eP	P	01 13 54.4	-0.9
ASAR	Alice Springs	43.13	268	P	P	01 13 54.4	-1.0
ASAR	Alice Springs	43.13	268	P	P	01 13 54.4	-1.0
	10.0nm,0.6s,baz=106,slow=6.9,SNR=25						
WRAB	Tennant Creek	44.22	273	eP	P	01 14 03.3	-0.8
	26nm,0.8s						
WRAB	Tennant Creek	44.22	273	P	P	01 14 03.0	-1.1
	187nm,0.7s,SNR=17						
WRA	Warramunga Arr	44.22	273	P	P	01 14 03.1	-1.0
WRA	Warramunga Arr	44.22	273	P	P	01 14 03.1	-1.0
	10.0nm,0.4s,baz=113,slow=7.8,SNR=34						
MTN	Manton Dam	50.24	280	P	P	01 14 51.2	+0.2
	baz=49,SNR=3.9						
KNRA	Kununurra	50.87	275	P	P	01 14 56.5	+0.7
	baz=49,SNR=3.2						
FITZ	Fitzroy Crossi	52.43	271	P	P	01 15 06.1	-1.3
FITZ	Fitzroy Crossi	52.43	271	P	P	01 15 06.1	-1.3
	4.9nm,0.7s,baz=232,slow=22,SNR=6.1						
FITZ	Fitzroy Crossi	52.43	271	P	P	01 15 07.0	-0.5
	baz=51,SNR=4.3						
KLBR	Kellerberrin	54.04	252	P	P	01 15 18.2	-1.0
	baz=52,SNR=6.1						
CASY	Casey	54.13	208	eP	P	01 15 19.0	-0.2
	13nm,0.5s						
CASY				epP	pP	01 15 32.2	+2.4
QSPA	South Pole Qui	58.53	180	eP	P	01 15 52.8	+2.0
	9.6nm,0.4s						
QSPA	South Pole Qui	58.53	180	P	P	01 15 52.8	+2.0
	7.0nm,0.9s,baz=282,slow=2.4,SNR=9.0						
SYO	Syowa Base	75.98	193	eP	P	01 17 40.4	-0.6
SNAA	Sanae	76.97	178	P	P	01 17 47.9	+1.2
SNAA	Sanae	76.97	178	P	P	01 17 47.9	+1.2
	1.7nm,1.1s,baz=202,slow=12,SNR=5.3						
PETK	Petropavlovsk-	86.97	346	P	P	01 18 38.7	-0.4
PETK	Petropavlovsk-	86.97	346	P	P	01 18 38.7	-0.4
	4.4nm,0.6s,baz=138,slow=8.1,SNR=5.0						
YKA	Yellowknife Ar	106.48	26	PKKPbc	PKKPbc	01 35 38.6	-1.7
YKA				PKKPab	PKKPdf	01 35 53.4	+0.6
YKA	Yellowknife Ar	106.48	26	PKKPbc	PKKPbc	01 35 38.6	-1.7
	0.3nm,0.7s,baz=36,slow=3.1,SNR=4.1						
YKA				PKKPab	PKKPdf	01 35 53.4	+0.6
	0.4nm,0.8s,baz=39,slow=3.8,SNR=5.2						
MKAR	Makanchi Array	118.58	310	PKP	PKPdf	01 24 41.0	-1.0
MKAR	Makanchi Array	118.58	310	PKP	PKPdf	01 24 41.0	-1.0
	1.7nm,0.6s,baz=213,slow=1.3,SNR=5.3						
ZALV	Zalesovo Beam	118.95	318	PKP	PKPdf	01 24 42.2	-0.1
ZALV	Zalesovo Beam	118.95	318	PKP	PKPdf	01 24 42.2	-0.1
	2.0nm,0.4s,baz=138,slow=5.0,SNR=8.8						
KURK	Kurchatov	121.91	313	PKP	PKPdf	01 24 47.4	-0.8
KURBB	Kurchatov Arra	121.95	313	PKP	PKPdf	01 24 47.4	-0.9
	3.6nm,0.6s,baz=113,slow=1.9,SNR=22						
AAK	Ala-Archa	122.82	303	PKP	PKPdf	01 24 50.2	-0.3
AAK	Ala-Archa	122.82	303	PKP	PKPdf	01 24 50.2	-0.3
	2.0nm,0.3s,baz=112,slow=5.4,SNR=3.2						
LSZ	Lusaka	127.10	212	PKP	PKPdf	01 24 59.5	+0.1
LSZ	Lusaka	127.10	212	PKP	PKPdf	01 24 59.5	+0.1
	3.0nm,1.0s,baz=27,slow=5.2,SNR=2.8						
BVAR	Borovoye Array	127.29	315	PKP	PKPdf	01 24 58.3	-0.2
BVAR	Borovoye Array	127.29	315	PKP	PKPdf	01 24 58.3	-0.2
	3.2nm,0.5s,baz=151,slow=1.4,SNR=12						
SPITS	Spitsbergen Ar	132.88	356	PKP	PKPdf	01 25 08.2	-0.2
SPITS	Spitsbergen Ar	132.88	356	PKP	PKPdf	01 25 08.2	-0.2
	4.0nm,0.8s,baz=350,slow=10,SNR=4.0						
ABKAR	Akbulak array	133.72	310	ePKPdf	PKPdf	01 25 09.9	-0.8
SUMG	Summit	133.82	16	ePKPdf	PKPdf	01 25 09.5	-1.3
AKTO	Aktyubinsk	134.94	312	PKP	PKPdf	01 25 13.3	+0.3
AKTO	Aktyubinsk	134.94	312	PKP	PKPdf	01 25 13.3	+0.3
	3.7nm,0.7s,baz=221,slow=2.5,SNR=4.9						
KEV	Kevo	139.29	347	epkp	PKPdf	01 25 21.8	+1.4
ARCES	ARCESS Array B	139.75	348	PKPpre	PKPpre	01 25 14.1	
ARCES	ARCESS Array B	139.75	348	PKhKP	PKPpre	01 25 14.1	
	6.9nm,0.9s,baz=49,slow=2.4,SNR=7.7						
JOF	Joensuu	143.54	338	epkp	PKPab	01 25 24.4	-0.3
KAF	Kangasniemi	145.68	340	epkp	PKPdf	01 25 30.3	-1.7
KBZ	Khabaz	145.81	303	PKPbc	PKPbc	01 25 33.4	0.0
KBZ	Khabaz	145.81	303	PKPbc	PKPbc	01 25 33.4	0.0
	4.6nm,1.1s,baz=37,slow=5.1,SNR=2.6						
FIA1	FINESS Array S	146.27	339	ePKPbc	PKPbc	01 25 33.7	-0.5
FINES	FINESS Array B	146.27	339	PKPbc	PKPbc	01 25 33.8	-0.4
FINES	FINESS Array B	146.27	339	PKPbc	PKPbc	01 25 33.8	-0.4
	17nm,0.4s,baz=46,slow=4.0,SNR=88						
NB2	NORSAR Subarra	149.33	351	PKP	PKPbc	01 25 43.8	-0.2
	comp=Z,2.4nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	149.93	351	PKPbc	PKPbc	01 25 44.0	0.0
NOA				PKPab	PKPab	01 25 49.2	-0.4
NOA	NORSAR Array B	149.93	351	PKPbc	PKPbc	01 25 44.0	0.0
	comp=Z,4.0nm,0.9s,baz=14,slow=4.1,SNR=6.3						
NOA				PKPab	PKPab	01 25 49.2	-0.4
	comp=Z,3.0nm,0.7s,baz=22,slow=2.6,SNR=8.5						
HFS	Hagfors	150.41	348	PKPbc	PKPbc	01 25 44.7	-0.4
HFS				PKPab	PKPab	01 25 50.6	-1.0
HFS	Hagfors	150.41	348	PKPbc	PKPbc	01 25 44.7	-0.4
	comp=Z,6.6nm,0.9s,baz=116,slow=3.4,SNR=11						
HFS				PKPab	PKPab	01 25 50.6	-1.0
	comp=Z,3.6nm,0.4s,baz=64,slow=3.4,SNR=19						
IZAR	Zarasai	150.47	332	eP	PKPbc	01 25 45.8	+0.4
IZAR				AMB	AMB	01 25 47.4	
	comp=Z,9.3nm,1.3s						
ASF	Jabal al Asfar	150.50	280	PKPbc	PKPbc	01 25 46.7	+0.3
ASF	Jabal al Asfar	150.50	280	PKPbc	PKPbc	01 25 46.7	+0.3
	comp=Z,2.6nm,0.5s,baz=350,slow=4.4,SNR=5.5						
ISAL	Salakas	150.65	332	eP	PKPbc	01 25 46.1	+0.3
ISAL				AMB	AMB	01 25 47.8	
	comp=Z,13nm,1.7s						
IIGN	Ignalina	150.76	331	eP	PKPbc	01 25 46.4	+0.3
IIGN				AMB	AMB	01 25 48.1	
	comp=Z,8.9nm,1.4s						
NACGM	Naroch	150.84	330	e	PKPdf	01 25 43.0	+2.4
EIL	Elat	151.71	275	PKPbc	PKPbc	01 25 49.4	+0.2
EIL	Elat	151.71	275	PKPbc	PKPbc	01 25 49.4	+0.2
	comp=Z,8.1nm,0.7s,baz=278,slow=2.2,SNR=12						
MMAI	Mount Meron Ar	151.86	282	PKPbc	PKPbc	01 25 49.8	+0.3
MMAI				PKPab	PKPab	01 25 58.0	-0.7
MMAI	Mount Meron Ar	151.86	282	PKPbc	PKPbc	01 25 49.8	+0.3
	comp=Z,11nm,0.5s,baz=76,slow=7.0,SNR=65						
MMAI				PKPab	PKPab	01 25 58.0	-0.7
	comp=Z,2.4nm,0.4s,baz=94,slow=6.8,SNR=8.5						
AKASG	Malin Array Be	152.27	321	PKPbc	PKPbc	01 25 48.5	-1.2
AKASG	Malin Array Be	152.27	321	PKPbc	PKPbc	01 25 48.5	-1.2
	comp=Z,5.2nm,0.6s,baz=53,slow=2.8,SNR=16						
AK01	Malin Array Si	152.28	321	ePKPbc	PKPbc	01 25 49.4	-0.3
AK02	Malin Array Si	152.31	321	ePKPbc	PKPbc	01 25 49.4	-0.4
BR131	Keskin Array S	153.20	296	ePKPbc	PKPbc	01 25 51.7	-0.7
BRTR	Keskin Array B	153.20	296	PKPbc	PKPbc	01 25 51.6	-0.7
BRTR				PKPab	PKPab	01 26 05.7	+1.4
BRTR	Keskin Array B	153.20	296	PKPbc	PKPbc	01 25 51.6	-0.7
	comp=Z,3.2nm,0.6s,baz=139,slow=4.4,SNR=17						
BRTR				PKPab	PKPab	01 26 05.7	+1.4
	comp=Z,1.8nm,0.5s,baz=144,slow=4.3,SNR=6.8						
DBIC	Dimbokro	154.38	164	PKPbc	PKPbc	01 25 55.9	+0.4
DBIC				PKPab	PKPab	01 26 11.6	+2.1
DBIC	Dimbokro	154.38	164	PKPbc	PKPbc	01 25 55.9	+0.4
	comp=Z,1.9nm,0.6s,baz=258,slow=9.3,SNR=2.1						
DBIC				PKPab	PKPab	01 26 11.6	+2.1
	comp=Z,2.4nm,0.8s,baz=180,slow=2.0,SNR=2.9						
EKA	Eskdalemuir Ar	155.97	7	PKPab	PKPab	01 26 14.6	-0.6
EKA	Eskdalemuir Ar	155.97	7	PKPab	PKPab	01 26 14.6	-0.6
	comp=Z,0.4nm,0.4s,baz=309,slow=2.8,SNR=4.1						
TORD	Torodi Ar. Bea	161.65	179	PKPab	PKPab	01 26 39.4	-1.4
	comp=Z,4.9nm,1.1s,baz=170,slow=1.8,SNR=5.4						

IDC 16 01:25:53.9±2.6, 4.88S×133.80E, h0km, mb3.2/1, mb1 3.7/4, mb1mx3.5/18, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=97.2km s-min=29.0km az=82.0
AUST 16 01:27:30.3±2.2, 11.45S×131.84E, h108km, Error ellipse: s-maj=3.1km s-min=1.2km az=23.0

ISC 16 01:25:57.9±1.8, 5.1S±0.1×133.5E±0.2, h25km, n8, σ1§43/7, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDU	Kakadu	7.61	188	P	Pn	01 27 53.1	+5.8
	baz=1.4,SNR=6.8						
MTN	Manton Dam	8.05	197	P	Pn	01 27 60.0	+6.7
	baz=1.6,SNR=7.4						
KNRA	Kununurra	11.50	204	P	Pn	01 28 46.7	+6.0
	baz=5.2,SNR=3.5						
WRA	Warramunga Arr	14.77	177	Pn	Pn	01 29 25.7	+0.3
	0.2nm,0.3s,baz=357,slow=12,SNR=6.6						
WRA				Sn	Sn	01 32 07.3	-1.0
	0.1nm,0.3s,baz=353,slow=23,SNR=3.2						
FITZ	Fitzroy Crossi	15.05	210	Pn	P	01 29 32.7	-1.5
	0.3nm,0.3s,baz=32,slow=16,SNR=6.5						
FITZ				Sn	Sn	01 32 15.4	+0.3
	0.1nm,0.3s,baz=231,slow=14,SNR=3.9						
FITZ	Fitzroy Crossi	15.05	210	P	P	01 29 34.5	+0.3
	baz=9.0,SNR=4.5						
ASAR	Alice Springs	18.46	179	P	Pn	01 30 14.3	+2.2
	0.2nm,0.3s,baz=7.0,slow=12,SNR=13						
MKAR	Makanchi Array	68.64	325	P	P	01 36 58.9	-0.2
	0.1nm,0.5s,baz=132,slow=7.8,SNR=2.6						

AUST 16 01:31:19.2±5.5, 4.80S×133.89E, h0km, Error ellipse: s-maj=1.1km s-min=1.0km az=305.0
IDC 16 01:31:19.5±0.6, 4.80S×133.77E, h0km, mb4.0/12, mb1 4.3/15, mb1mx4.2/23, mbtmp4.2/15, ML4.7/3, Error ellipse: s-maj=34.2km s-min=14.8km az=66.0
ISCJB 16 01:31:21.3±0.3, 4.82S±0.03×133.84E±0.04, h28km, mb4.2/24, Error ellipse: s-maj=6.2km s-min=4.1km az=176.4
DJA 16 01:31:23.2±0.6, 5.5°S×13.4°E, h113km±15km, M5.0/8, mb5.1/4, mB5.5/2, MLv5.0/8, Mw(mB)5.0/2
NEIC 16 01:31:24.4±0.4, 4.87S×133.89E, h35km, mb4.5/11, Error ellipse: s-maj=14.8km s-min=8.0km az=70.0

ISC 16 01:31:23.2±0.4, 4.79S±0.05×133.90E±0.05, h28km, n80, σ1§68/87, mb4.3/24, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.48	318	P	Pn	01 32 00.8	-1.0
FAKI	Fak Fak	2.48	318	P	Pn	01 32 01.3	-0.5
	baz=2.5,SNR=38						
RKPI	Ransiki, Papua	3.27	5	P	Pn	01 32 13.3	+0.7
SRPI	Serui, Papua	3.72	39	P	Pn	01 32 16.8	-2.0
BAKI	Biak	4.20	32	P	Pn	01 32 23.7	-1.7
SWI	Sorong	4.71	326	P	Pn	01 32 31.0	-1.4
NLAI	Namlea	6.96	283	P	Pn	01 33 01.5	-1.8
	141nm,0.7s,4μm0.6nm						
NLAI				S	Sn	01 34 21.8	+0.2
	141nm,0.7s,4μm0.6nm						
JAY	Jayapura	7.16	72	P	Pn	01 33 03.4	-2.7
	43nm,0.8s,6μm0.8nm						
JAY	Jayapura	7.16	72	P	Pn	01 33 04.0	-2.1
	baz=7.2,SNR=5.4						
LBMI	Labuha	7.61	303	P	Pn	01 33 11.7	-0.6
LBMI				S	Sn	01 34 35.3	-2.3
KDU	Kakadu	7.97	190	P	Pn	01 33 18.0	+0.7
	baz=8.0,SNR=57						
MTN	Manton Dam	8.46	199	P	Pn	01 33 24.8	+0.8
	baz=8.5,SNR=80						
MTN				S	Sn	01 35 00.2	+1.7
	baz=8.5,SNR=5.9						
MNI	Manado	10.97	304	P	Pn	01 33 53.8	-4.6
LUWI	Luwuk	11.72	288	P	Pn	01 34 06.7	-2.0
KNRA	Kununurra	11.94	205	P	Pn	01 34 10.9	-0.7
	baz=12,SNR=27						
KNRA				S	Sn	01 36 23.0	-1.0
	baz=12,SNR=8.7						
COEN	Coen	12.91	136	P	Pn	01 34 21.8	-3.0
	baz=13,SNR=16						
PMG	Port Moresby	13.93	110	Pn	Pn	01 34 36.6	-2.3
PMG	Port Moresby	13.93	110	Pn	Pn	01 34 36.6	-2.3
	0.8nm,0.3s,baz=308,slow=9.4,SNR=3.9						
WSI	Waingapu	14.34	249	S	Sn	01 37 23.4	+0.7
	baz=14,SNR=3.2						
WRAB	Tennant Creek	15.06	178	ePn	Pn	01 34 52.0	-2.2
	31nm,0.6s						
WRAB				eP	P	01 35 00.3	+1.1
WRAB				eSn	Sn	01 37 31.2	-9.1
WRA	Warramunga Arr	15.07	178	Pn	Pn	01 34 51.0	-3.3
WRA				Sn	Sn	01 37 32.2	-8.3
WRA	Warramunga Arr	15.07	178	Pn	Pn	01 34 51.1	-3.3
	1.4nm,0.3s,baz=355,slow=13,SNR=8.9						
WRA				Sn	Sn	01 37 32.2	-8.3
	1.5nm,0.3s,baz=358,slow=23,SNR=5.7						
FITZ	Fitzroy Crossi	15.50	211	Pn	Pn	01 34 57.1	-2.9
FITZ				Sn	Sn	01 37 40.5	-11
FITZ	Fitzroy Crossi	15.50	211	Pn	Pn	01 34 57.1	-2.9
	4.6nm,0.3s,baz=42,slow=12,SNR=39						
FITZ				Sn	Sn	01 37 40.5	-11
	3.3nm,0.3s,baz=189,slow=10.0,SNR=9.5						
FITZ	Fitzroy Crossi	15.50	211	P	Pn	01 34 58.6	-1.4
	baz=16,SNR=61						
FITZ				S	Sn	01 37 32.2	-19
	baz=16,SNR=7.3						
QIS	Mount Isa	16.63	161	P	Pn	01 35 00.2	-14
	baz=17,SNR=4.9						
MTSU	Mount Surprise	16.72	143	P	P	01 35 19.8	+2.1
	baz=17,SNR=6.4						
MTSU				S	Sn	01 38 24.1	+3.4
	baz=17,SNR=4.1						
AS31	Alice Springs	18.77	180	eP	Pn	01 35 42.0	+1.1
ASAR	Alice Springs	18.77	180	P	P	01 35 39.4	-0.9
ASAR				S	Sn	01 39 04.5	-5.7
ASAR	Alice Springs	18.77	180	P	P	01 35 39.4	-0.9
	2.1nm,0.3s,baz=6.2,slow=11,SNR=79						
ASAR				S	Sn	01 39 04.5	-5.7
	0.4nm,0.3s,baz=358,slow=26,SNR=5.3						
CTA	Charters Tower	19.39	143	P	P	01 35 47.5	+0.4
CTA	Charters Tower	19.39	143	P	P	01 35 47.5	+0.4
	0.8nm,0.3s,baz=321,slow=13,SNR=7.6						
CTAO	Charters Tower	19.39	143	eP	Pn	01 35 48.3	0.0
	22nm,0.8s						
MBWA	Marble Bar	21.31	219	eP	P	01 36 09.6	+1.6
	33nm,1.0s						
QLP	Quilpie	23.82	157	P	P	01 36 35.1	+1.1
	baz=24,SNR=9.8						
STKA	Stephens Creek	27.90	166	P	P	01 37 12.3	+1.4
STKA	Stephens Creek	27.90	166	P	P	01 37 12.3	+1.4
	1.5nm,0.7s,baz=6.6,slow=8.9,SNR=1.9						
LHI	Lord Howe Isla	35.56	141	P	P	01 38 23.8	+5.6
	baz=36,SNR=3.1						
CMAR	Chiang Mai Arr	41.48	305	P	P	01 39 08.1	-0.1
CMAR	Chiang Mai Arr	41.48	305	P	P	01 39 08.1	-0.1
	1.0nm,0.4s,baz=135,slow=7.0,SNR=8.9						
CHTO	Chiang Mai	41.66	305	eP	P	01 39 09.7	+0.1
	7.1nm,1.2s						
USRK	Ussuriysk Arra	48.79	358	P	P	01 40 09.5	+3.8
	0.7nm,0.5s,baz=169,slow=13,SNR=4.1						
LZH	Lanzhou	49.46	328	eP	P	01 40 21.4	+10
LZH				pP	pP	01 40 29.9	+10
LZH				sP	sP	01 40 34.0	+11
LZH				pmax	pmax		
	comp=Z,27nm,1.4s						
GTA	Gaotai	54.06	328	eP	P	01 40 55.3	+10
GTA				pP	pP	01 40 59.3	+5.2
GTA				sP	sP	01 41 01.4	+4.0
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ULN	Ulaanbaatar	57.49	339	eP	P	01 41 10.3	+0.3
	comp=Z,3.2nm,0.6s						
SONM	Songino Array	57.71	338	P	P	01 41 12.1	+0.7
SONM	Songino Array	57.71	338	P	P	01 41 12.1	+0.7
	comp=Z,0.8nm,0.6s,baz=145,slow=5.3,SNR=2.5						
MK31	Makanchi Array	68.60	325	eP	P	01 42 23.4	-0.2
MKAR	Makanchi Array	68.60	325	P	P	01

AFSR	**Af˙ar-Bala (A**	**0.32**	**126**	*e*PG	**Pg**	**01 35 23.8**	**0.0**
AFSR				*e*SG	**Sg**	**01 35 28.8**	**+0.1**
AFSR	**Af˙ar-Bala (A**	**0.32**	**126**	*e*Pg	**Pg**	**01 35 23.8**	**0.0**
AFSR				*e*Sg	**Sg**	**01 35 28.8**	**+0.1**
ELDT	**Eldivan**	**1.00**	**32**	*i* P	**Pb**	**01 35 34.7**	**-0.9**
ELDT				*i* S	**Sn**	**01 35 50.6**	**+1.0**
ELDT	**Eldivan**	**1.00**	**32**	*i* P	**Pb**	**01 35 34.7**	**-0.9**
ELDT				*i* S	**Sn**	**01 35 50.6**	**+1.0**
CDAG	**Cicekdag**	**1.27**	**90**	*i* P	**Pn**	**01 35 39.6**	**+0.1**
CDAG				*i* S	**Sb**	**01 35 55.3**	**-0.6**
CDAG	**Cicekdag**	**1.27**	**90**	*i* P	**Pn**	**01 35 39.6**	**+0.1**
CDAG				*i* S	**Sb**	**01 35 55.3**	**-0.6**
CORM	**Corum**	**1.56**	**69**	*e*PN	**Pb**	**01 35 45.5**	**+0.6**
CORM	**Corum**	**1.56**	**69**	*e*Pn	**Pb**	**01 35 45.5**	**+0.6**

BJI **16** *01:35:18.2, 56˙26N×152˙80W, h6km, mB4.9/1, mb4.8/5*
IDC **16** *01:35:19.2±0.6, 56˙52N×152˙25W, h0km, mb4.3/35, mb1 4.4/38, mb1mx4.4/45, mbtmp4.3/38, ML3.6/3, Error ellipse: s-maj=16.3km s-min=10.4km az=24.0*
NEIC **16** *01:35:20.4, 56˙34N×152˙00W, h10km, mb4.3/30, ML3.9(AEIC), After AEIC.*
ISCJB **16** *01:35:21.0±0.2, 56˙60N±0˙03×152˙08W±0˙04, h18km, mb4.4/88, MS5.1/1, Error ellipse: s-maj=4.3km s-min=3.4km az=24.5*
MOS **16** *01:35:23.3±0.9, 56˙63N×152˙24W, h33km, mb4.7/42, Error ellipse: s-maj=12.8km s-min=4.2km az=87.2*

ISC 16 01:35:21.8±0.5, 56˚55N±0˙06×152˚08W±0˙04, h18km, n350, σ1§16/368, mb4.5/88, 5C-3D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.95**	**316**	P		**Pb**	**01 35 39.3**	**-0.4**
OHAK				S		**Sn**	**01 35 54.2**	**+0.9**
KDAK	**Kodiak Island**	**1.27**	**348**	P		**Pn**	**01 35 44.6**	**0.0**
KDAK	**Kodiak Island**	**1.27**	**348**	Pn		**Pn**	**01 35 44.6**	**0.0**
	27nm,0.3s,baz=189,slow=8.7,SNR=217							
KDAK				Sn		**Sn**	**01 36 01.4**	**+0.2**
	73nm,0.3s,baz=172,slow=19,SNR=18							
KABR	**Katmai Barrier**	**2.23**	**317**	P		**Pn**	**01 35 58.4**	**+0.5**
KAKN	**Katmai Knife C**	**2.38**	**319**	P		**Pn**	**01 36 01.0**	**+1.0**
KCE	**Katmai Mt Cerb**	**2.39**	**317**	P		**Pn**	**01 36 01.6**	**+1.4**
FOSS	**Fourpeaked Sta**	**2.42**	**340**	P		**Pn**	**01 36 02.0**	**+1.5**
KABU	**Katmai Buttres**	**2.45**	**316**	P		**Pn**	**01 36 02.3**	**+1.4**
FONW	**Fourpeaked Sta**	**2.50**	**337**	P		**Pn**	**01 36 03.4**	**+1.7**
KELA	**Mount Kelaz**	**2.74**	**315**	P		**Pn**	**01 36 06.0**	**+1.0**
MCNL	**McNeil River**	**2.91**	**336**	P		**Pn**	**01 36 09.0**	**+1.8**
AUW	**Augustine West**	**2.93**	**346**	P		**Pn**	**01 36 09.2**	**+1.7**
AUNW	**Augustine NWes**	**2.94**	**346**	P		**Pn**	**01 36 09.4**	**+1.9**
OPT	**Oil Point**	**3.17**	**349**	P		**Pn**	**01 36 12.8**	**+2.0**
ANNE	**Aniakchak Nort**	**3.31**	**279**	P		**Pn**	**01 36 11.3**	**-1.5**
ANPK	**Aniakchak Peak**	**3.35**	**278**	P		**Pn**	**01 36 11.9**	**-1.4**
ANNW	**Aniakchak Nort**	**3.40**	**280**	P		**Pn**	**01 36 12.7**	**-1.4**
CHGN	**Chignik**	**3.53**	**269**	*e*Pn		Pn	01 36 11.7	-3.9
ILW	**Iliamna West**	**3.57**	**351**	P		**Pn**	**01 36 17.7**	**+1.3**
SEW	**Seward**	**3.83**	**20**	P		**Pn**	**01 36 19.1**	**-0.7**
RSO	**Redoubt South**	**3.94**	**355**	*e*Pn		**Pn**	**01 36 22.5**	**+0.9**
VNHG	**Veniaminof 1**	**3.95**	**268**	P		**Pn**	**01 36 20.5**	**-1.1**
DFR	**Drift River**	**4.07**	**356**	P		**Pn**	**01 36 24.2**	**+1.0**
SPU	**Mount Spurr**	**4.65**	**0**	P		**Pn**	**01 36 31.7**	**+0.6**
CKL	**Chakachamna La**	**4.67**	**358**	P		**Pn**	**01 36 32.5**	**+1.1**
BGL	**Barrier Glacie**	**4.74**	**358**	P		**Pn**	**01 36 33.6**	**+1.3**
SDPT	**Sand Point**	**4.87**	**259**	P		**Pn**	**01 36 31.7**	**-2.4**
SDPT				S		**Sn**	**01 37 28.2**	**-1.7**
SVW2	**Sparrevohn**	**4.91**	**340**	P		**Pn**	**01 36 35.7**	**+1.0**
STLK	**Strandline Lak**	**4.97**	**1**	P		**Pn**	**01 36 36.1**	**+0.6**
EYAK	**Cordova Ski Ar**	**5.21**	**37**	P		**Pn**	**01 36 38.6**	**0.0**
PMR	**Palmer**	**5.28**	**15**	*e*P		**Pn**	**01 36 40.8**	**+1.1**
PMR	**Palmer**	**5.28**	**15**	*e*Pn		**Pn**	**01 36 40.8**	**+1.1**
RAGM	**Ragged Mountai**	**5.47**	**42**	*e*Pn		**Pn**	**01 36 43.1**	**+0.7**
VLZ	**Valdez**	**5.48**	**31**	P		**Pn**	**01 36 42.5**	**+0.1**
SML	**Sawmill**	**5.62**	**18**	*e*P		**Pn**	**01 36 44.8**	**+0.4**
SML	**Sawmill**	**5.62**	**18**	*e*Pn		**Pn**	**01 36 44.8**	**+0.4**
DIV	**Divide**	**5.64**	**33**	P		**Pn**	**01 36 44.5**	**-0.2**
PPLA	**Purkeypile**	**6.37**	**360**	*e*Pn		**Pn**	**01 36 55.4**	**+0.5**
VRDI	**Verde Repeater**	**6.48**	**40**	P		**Pn**	**01 36 56.1**	**-0.2**
TT01	**Tatalina**	**6.68**	**344**	P		**Pn**	**01 36 59.5**	**+0.5**
KIAG	**Kiagna River**	**6.70**	**45**	P		**Pn**	**01 36 58.3**	**-1.0**
MCARA	**McCarthy VSAT**	**6.74**	**40**	P		**Pn**	**01 36 58.9**	**-0.8**
BALM	**Baldy**	**6.77**	**44**	P		**Pn**	**01 37 00.1**	**-0.2**
BALM	**Baldy**	**6.77**	**44**	P		**Pn**	**01 37 00.1**	**-0.2**
GRNC	**Granite Creek**	**6.83**	**48**	P		**Pn**	**01 37 01.3**	**+0.1**
HARP	**HAARP**	**6.85**	**28**	P		**Pn**	**01 37 01.2**	**-0.1**
DHY	**Denali Highway**	**6.96**	**18**	P		**Pn**	**01 37 03.5**	**+0.5**
TRF	**Thorofare Moun**	**6.99**	**7**	P		**Pn**	**01 37 04.5**	**+1.3**
BARN	**Barnard Glacie**	**7.05**	**46**	P		**Pn**	**01 37 04.4**	**+0.2**
RND	**Reindeer**	**7.07**	**12**	P		**Pn**	**01 37 04.8**	**+0.5**
RND	**Reindeer**	**7.07**	**12**	P		**Pn**	**01 37 04.8**	**+0.5**
PAX	**Paxson**	**7.25**	**25**	P		**Pn**	**01 37 06.5**	**-0.4**
PAX	**Paxson**	**7.25**	**25**	P		**Pn**	**01 37 06.5**	**-0.4**
MCK	**McKinley**	**7.38**	**11**	P		**Pn**	**01 37 09.8**	**+1.3**
MCK	**McKinley**	**7.38**	**11**	P		**Pn**	**01 37 09.7**	**+1.3**
PNL	**Peninsula**	**7.41**	**60**	P		**Pn**	**01 37 08.7**	**-0.3**
MENT	**Mentasta**	**7.67**	**30**	*e*Pn		**Pn**	**01 37 13.8**	**+1.2**
DDM	**Donnelly Dome**	**7.89**	**20**	P		**Pn**	**01 37 15.7**	**+0.1**
DOT	**Dot Lake**	**8.17**	**26**	*e*Pn		**Pn**	**01 37 21.2**	**+1.9**
WRH	**Wood River Hil**	**8.19**	**12**	P		**Pn**	**01 37 20.6**	**+1.0**
BCA3	**Beaver Creek A**	**8.34**	**34**	P		**Pn**	**01 37 21.1**	**-0.6**
CCB	**Clear Creek Bu**	**8.39**	**13**	P		**Pn**	**01 37 22.6**	**+0.2**
COLA	**College**	**8.61**	**12**	P		**Pn**	**01 37 26.2**	**+0.9**
COLA	**College**	**8.61**	**12**	P		**Pn**	**01 37 26.1**	**+0.9**
IL1	**Eielson Array**	**8.63**	**15**	P		**Pn**	**01 37 26.1**	**+0.4**
ILAR	**Eielson Array**	**8.63**	**15**	Pn		**Pn**	**01 37 25.1**	**-0.6**
ILAR				Sn		**Sn**	**01 38 58.6**	**-3.9**
ILAR	**Eielson Array**	**8.63**	**15**	Pn		**Pn**	**01 37 25.1**	**-0.6**
	3.1nm,0.3s,baz=203,slow=13,SNR=228							
ILAR				Sn		**Sn**	**01 38 58.6**	**-3.9**
	0.9nm,0.3s,baz=199,slow=25,SNR=6.0							
MDM	**Murphy Dome**	**8.65**	**11**	P		**Pn**	**01 37 25.9**	**0.0**
HYT	**Haines Junctio**	**8.71**	**54**	P		**Pn**	**01 37 26.1**	**-0.8**
SKAG	**Skagway**	**9.36**	**65**	*e*Pn		**Pn**	**01 37 37.4**	**+1.8**
IM3	**Indian Mountai**	**9.50**	**356**	P		**Pn**	**01 37 37.5**	**-0.1**
COLD	**Coldfoot**	**10.76**	**4**	*e*Pn		**Pn**	**01 37 55.3**	**+0.6**
DIB	**Dawson Inlet,**	**11.77**	**98**	T		T	01 50 14.9	
	SNR=20							
TNA	**Tin City**	**11.82**	**326**	*e*Pn		**Pn**	**01 38 08.6**	**-0.6**
	9.0nm,0.8s							
DLBC	**Dease Lake**	**12.00**	**72**	Pn		**Pn**	**01 38 13.6**	**+1.8**
DLBC				Sn		**Sn**	**01 40 22.0**	**-3.1**
DLBC	**Dease Lake**	**12.00**	**72**	Pn		**Pn**	**01 38 13.6**	**+1.8**
	0.3nm,0.3s,baz=234,slow=13,SNR=5.4							
DLBC				Sn		**Sn**	**01 40 22.0**	**-3.1**
	0.1nm,0.3s,baz=101,slow=19,SNR=2.5							
GAMB	**Gambell**	**12.12**	**315**	*e*Pn		**Pn**	**01 38 13.8**	**+0.4**
	13nm,1.0s							
INK	**Inuvik**	**14.50**	**28**	Pn		**Pn**	**01 38 46.2**	**+0.4**
INK	**Inuvik**	**14.50**	**28**	Pn		**Pn**	**01 38 46.2**	**+0.4**
	0.2nm,0.3s,baz=229,slow=15,SNR=20							
YKW3	**Yellowknife Ar**	**19.69**	**57**	*e*P		**Pn**	**01 39 50.7**	**-0.4**
	0.3nm,1.4s							
YKA	**Yellowknife Ar**	**19.69**	**57**	P		**Pn**	**01 39 50.9**	**-0.3**
YKA				PcP		**PcP**	**01 44 07.8**	**+0.1**
YKA	**Yellowknife Ar**	**19.69**	**57**	P		**Pn**	**01 39 50.8**	**-0.3**
	0.1nm,0.3s,baz=270,slow=11,SNR=28							
YKA				PcP		**PcP**	**01 44 07.8**	**+0.1**
	0.1nm,0.3s,baz=258,slow=1.5,SNR=4.9							
FX1	**Attu Island--F**	**20.27**	**274**	P		**P**	**01 39 54.5**	**-1.6**
FX1	**Attu Island--F**	**20.27**	**274**	P		**P**	**01 39 54.5**	**-1.6**
	21nm,0.9s,baz=63,slow=9.0,SNR=2.7							
LON	**Longmire**	**21.02**	**105**	*e*P		**P**	**01 40 05.4**	**+1.1**
LON	**Longmire**	**21.02**	**105**	*e*P		**P**	**01 40 05.4**	**+1.1**
	4.4nm,1.0s							
BILL	**Bilibino**	**22.01**	**318**	*c i*P		**P**	**01 40 14.6**	**-0.1**
BILL				pmax		pmax		
	comp=Z,26nm,1.3s							
BILL	**Bilibino**	**22.01**	**318**	*e*P		**P**	**01 40 14.7**	**+0.1**
	comp=Z,12nm,0.8s							
HAWA	**Hanford**	**22.47**	**103**	*e*P		**P**	**01 40 22.3**	**+2.5**
	comp=Z,2.3nm,0.7s							
NEW	**Newport**	**22.67**	**97**	*e*P		**P**	**01 40 23.1**	**+1.2**
	comp=Z,4.8nm,1.0s							
NEW	**Newport**	**22.67**	**97**	P		**P**	**01 40 22.3**	**+0.4**
	comp=Z,4.7nm,1.0s,baz=306,slow=6.9,SNR=5.8							
YBH	**Yreka Blue Hor**	**24.02**	**116**	P		**P**	**01 40 36.6**	**+1.1**
YBH	**Yreka Blue Hor**	**24.02**	**116**	P		**P**	**01 40 36.6**	**+1.1**
	comp=Z,2.9nm,0.8s,baz=340,slow=2.4,SNR=7.3							
JTMT	**Jette**	**24.53**	**95**	*e*P		**P**	**01 40 41.7**	**+1.5**
YBMT	**Yellow Bay**	**24.61**	**94**	*e*P		**P**	**01 40 42.0**	**+1.1**
	comp=Z,3.6nm,1.0s							
BMO	**Blue Mountains**	**24.66**	**103**	*e*P		**P**	**01 40 42.1**	**+0.8**
	comp=Z,2.0nm,1.0s							
SWMT	**Swartz Lake**	**24.82**	**95**	*e*P		**P**	**01 40 45.6**	**+2.8**
SLMT	**Seeley Lake**	**25.26**	**95**	*e*P		**P**	**01 40 49.7**	**+2.9**
WVOR	**Wild Horse Val**	**25.59**	**109**	*e*P		**P**	**01 40 51.6**	**+1.7**
WVOR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
WVOR	**Wild Horse Val**	**25.59**	**109**	*e*P		**P**	**01 40 51.6**	**+1.7**
	comp=Z,4.3nm,0.8s							
MFID	**Camas Ranch**	**26.41**	**104**	*e*P		**P**	**01 41 01.1**	**+3.9**
	comp=Z,4.4nm,1.0s							
HLID	**Hailey**	**27.07**	**103**	*e*P		**P**	**01 41 04.6**	**+1.4**
	comp=Z,29nm,2.5s							
SEY	**Seymchan**	**27.90**	**306**	*i*P		**P**	**01 41 09.7**	**-0.6**
RES	**Resolute Bay**	**28.06**	**28**	*e*P		**P**	**01 41 11.3**	**-0.3**
	comp=Z,4.7nm,1.1s							
RES	**Resolute Bay**	**28.06**	**28**	P		**P**	**01 41 11.5**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=288,slow=20,SNR=12							
ELK	**Elko**	**28.58**	**108**	*e*P		**P**	**01 41 18.4**	**+1.5**
	comp=Z,3.5nm,1.1s							
ELK	**Elko**	**28.58**	**108**	P		**P**	**01 41 18.4**	**+1.5**
	comp=Z,0.9nm,0.5s,baz=326,slow=13,SNR=5.4							
PETK	**Petropavlovsk-**	**28.61**	**285**	P		**P**	**01 41 15.0**	**-1.7**
PETK	**Petropavlovsk-**	**28.61**	**285**	P		**P**	**01 41 15.0**	**-1.7**
PETK	**Petropavlovsk-**	**28.61**	**285**	P		**P**	**01 41 15.0**	**-1.7**
	comp=Z,3.1nm,0.8s,baz=109,slow=12,SNR=3.3							
NVAR	**Mina Array Bea**	**28.72**	**115**	P		**P**	**01 41 19.4**	**+1.3**
NVAR				ScP		**ScP**	**01 48 08.0**	**-0.1**
NVAR	**Mina Array Bea**	**28.72**	**115**	P		**P**	**01 41 19.4**	**+1.3**
	comp=Z,1.9nm,0.6s,baz=309,slow=9.2,SNR=11							
NVAR				ScP		**ScP**	**01 48 08.0**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=304,slow=2.5,SNR=3.7							
BW06	**Boulder Array**	**30.24**	**99**	*e*P		**P**	**01 41 31.9**	**+0.3**
	comp=Z,1.5nm,0.7s							
PDAR	**Pinedale Array**	**30.24**	**99**	P		**P**	**01 41 32.1**	**+0.5**
PDAR	**Pinedale Array**	**30.24**	**99**	P		**P**	**01 41 32.1**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=299,slow=5.1,SNR=10							
DUG	**Dugway**	**30.27**	**106**	*e*P		**P**	**01 41 31.2**	**-0.5**
DUG				pmax		pmax		
	comp=Z,5.0nm,1.2s							
DUG	**Dugway**	**30.27**	**106**	*e*P		**P**	**01 41 31.2**	**-0.5**
	comp=Z,4.6nm,1.2s							
PV01	**Padox Valley**	**34.03**	**104**	*e*P		**P**	**01 42 06.0**	**+1.2**
	comp=Z,468nm,1.1s							
TIXI	**Tiksi**	**34.61**	**327**	*i*P		**P**	**01 42 09.4**	**+0.3**
TIXI				pmax		pmax		
	comp=Z,3.0nm,0.7s							
WMOK	**Wichita Mounta**	**41.85**	**98**	*e*P		**P**	**01 43 11.7**	**+1.2**
WMOK				pmax		pmax		
	comp=Z,4.0nm,0.8s							
WMOK	**Wichita Mounta**	**41.85**	**98**	*e*P		**P**	**01 43 11.7**	**+1.2**
	comp=Z,3.6nm,0.8s							
HABR	**Khabarovsk**	**43.11**	**291**	*e*P		**P**	**01 43 19.1**	**-1.5**
HABR				*e*			01 44 58.9	
HABR							01 45 08.7	
HABR				PPP		PPP	01 45 31.5	
HABR				pmax		pmax		
	comp=N,13nm,0.7s							
HABR				pmax		pmax		
	comp=Z,42nm,1.3s							
HABR				pmax		pmax		
	comp=E,35nm,1.3s							
HABR				MLR		MLR		
	comp=Z,2μm,18.0s							
SUMG	**Summit**	**43.36**	**24**	*e*P		**P**	**01 43 23.9**	**+1.1**
SUMG				pmax		pmax		
	comp=Z,3.0nm,0.8s							
SUMG	**Summit**	**43.36**	**24**	*e*P		**P**	**01 43 23.9**	**+1.1**
	comp=Z,3.4nm,0.8s							
SUMG	**Summit**	**43.36**	**24**	*i* P		**P**	**01 43 24.3**	**+1.5**
	comp=Z,5.4nm,0.8s							
SUMG				*i*			01 43 35.0	
TXAR	**Lajitas Array**	**43.38**	**108**	P		**P**	**01 43 24.4**	**+1.3**
TXAR				PcP		**PcP**	**01 45 11.5**	**+0.1**
TXAR	**Lajitas Array**	**43.38**	**108**	P		**P**	**01 43 24.4**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=301,slow=4.8,SNR=8.1							
TXAR				PcP		**PcP**	**01 45 11.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=14,slow=0.9,SNR=4.7							
SFJD	**Kangerlussuaq**	**43.75**	**34**	P		**P**	**01 43 26.5**	**+1.1**
SFJD	**Kangerlussuaq**	**43.75**	**34**	*i* P		**P**	**01 43 27.8**	**+2.3**
	comp=Z,7.9nm,0.9s							
SFJD	**Kangerlussuaq**	**43.75**	**34**	P		**P**	**01 43 26.5**	**+1.1**
	comp=Z,9.1nm,1.1s,baz=285,slow=6.8,SNR=3.7							
KLR	**Kul'dur**	**44.31**	**294**	*e*P		P	01 43 26.2	-4.1
JCT	**Junction City**	**44.54**	**103**	*e*P		**P**	**01 43 33.1**	**+0.7**
JCT				pmax		pmax		
	comp=Z,4.0nm,0.6s							
JCT	**Junction City**	**44.54**	**103**	*e*P		**P**	**01 43 33.1**	**+0.7**
	comp=Z,4.2nm,0.6s							
SCHQ	**Schefferville**	**45.12**	**54**	P		**P**	**01 43 36.3**	**-0.3**
SCHQ	**Schefferville**	**45.12**	**54**	P		**P**	**01 43 36.3**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=259,slow=16,SNR=2.6							
SPITS	**Spitsbergen Ar**	**45.34**	**3**	P		**P**	**01 43 38.3**	**+0.1**
SPITS	**Spitsbergen Ar**	**45.34**	**3**	P		**P**	**01 43 38.3**	**+0.1**
	comp=Z,9.5nm,0.9s,baz=15,slow=3.5,SNR=9.0							
MAJO	**Matsushiro**	**49.59**	**277**	*e*P		**P**	**01 44 11.3**	**-0.4**
MAJO				pmax		pmax		
	comp=Z,5.0nm,0.6s							
MAJO	**Matsushiro**	**49.59**	**277**	*e*P		**P**	**01 44 11.3**	**-0.4**
	comp=Z,4.7nm,0.6s							
MJAR	**Matsushiro Arr**	**49.59**	**277**	P		**P**	**01 44 11.5**	**-0.2**
MJAR	**Matsushiro Arr**	**49.59**	**277**	P		**P**	**01 44 11.5**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=35,slow=5.5,SNR=3.9							
KEV	**Kevo**	**54.00**	**0**	*e*P		**P**	**01 44 44.0**	**0.0**
KEV				pmax		pmax		
	comp=Z,4.0nm,0.6s							
KEV	**Kevo**	**54.00**	**0**	*e*p		**P**	**01 44 44.0**	**0.0**
	comp=Z,4.3nm,0.6s							
ARCES	**ARCESS Array B**	**54.21**	**1**	P		**P**	**01 44 45.8**	**+0.2**
ARCES	**ARCESS Array B**	**54.21**	**1**	P		**P**	**01 44 45.8**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=4.2,slow=7.3,SNR=17							
ZAK	**Zakamensk**	**56.63**	**312**	*e*P		**P**	**01 45 03.3**	**-0.2**
ZAK				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ULN	**Ulaanbaatar**	**56.96**	**308**	*e*P		**P**	**01 45 05.5**	**-0.4**
	comp=Z,4.2nm,0.8s							
SONM	**Songino Array**	**57.27**	**308**	P		**P**	**01 45 08.7**	**+0.7**
SONM				PcP		**PcP**	**01 46 01.5**	**-0.7**
SONM	**Songino Array**	**57.27**	**308**	P		**P**	**01 45 08.7**	**+0.7**
	comp=Z,7.7nm,0.8s,baz=47,slow=6.7,SNR=15							
SONM				PcP		**PcP**	**01 46 01.5**	**-0.7**
	comp=Z,3.5nm,0.9s,baz=101,slow=3.1,SNR=4.5							
NVS	**Novosibirsk**	**60.21**	**327**	*e*P		**P**	**01 45 27.0**	**-1.1**
NVS				pmax		pmax		
	comp=Z,10.0nm,1.1s							
NVS				pmax		pmax		
	comp=E,4.0nm,0.7s							
ZALV	**Zalesovo Beam**	**60.48**	**325**	*i* P		**P**	**01 45 30.5**	**+0.5**
ZALV				pmax		pmax		
	comp=Z,6.0nm,0.7s							
ZALV	**Zalesovo Beam**	**60.48**	**325**	P		**P**	**01 45 30.4**	**+0.4**
ZALV	**Zalesovo Beam**	**60.48**	**325**	P		**P**	**01 45 30.4**	**+0.4**
	comp=Z,6.2nm,0.7s,baz=31,slow=7.1,SNR=22							
JOF	**Joensuu**	**60.84**	**358**	*e*P		**P**	**01 45 32.3**	**0.0**
JOF				pmax		pmax		
	comp=Z,2.0nm,0.7s							
JOF	**Joensuu**	**60.84**	**358**	*e*p		**P**	**01 45 32.3**	**0.0**
	comp=Z,2.1nm,0.7s							
KAF	**Kangasniemi**	**61.67**	**1**	*e*P		**P**	**01 45 37.5**	**-0.5**
KAF				pmax		pmax		
	comp=Z,3.0nm,0.6s							
KAF	**Kangasniemi**	**61.67**	**1**	*e*p		**P**	**01 45 37.5**	**-0.5**
	comp=Z,2.8nm,0.6s							
NB2	**NORSAR Subarra**	**62.02**	**9**	P		**P**	**01 45 41.1**	**+0.7**
	comp=Z,4.1nm,0.8s,baz=350,slow=6.9							
NOA	**NORSAR Array B**	**62.02**	**9**	P		**P**	**01 45 40.9**	**+0.4**
NOA	**NORSAR Array B**	**62.02**	**9**	P		**P**	**01 45 40.9**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=350,slow=6.7,SNR=17							
NAO01	**NORSAR Array S**	**62.18**	**9**	*e*P		**P**	**01 45 41.2**	**-0.3**
	comp=Z,4.5nm,0.9s							
FINES	**FINESS Array B**	**62.34**	**1**	P		**P**	**01 45 43.1**	**+0.6**
FINES	**FINESS Array B**	**62.34**	**1**	P		**P**	**01 45 43.1**	**+0.6**
	comp=Z,5.6nm,0.8s,baz=356,slow=9.9,SNR=23							
HFS	**Hagfors**	**63.12**	**8**	P		**P**	**01 45 48.0**	**+0.3**
HFS	**Hagfors**	**63.12**	**8**	P		**P**	**01 45 48.0**	**+0.3**
	comp=Z,4.6nm,0.8s,baz=28,slow=4.0,SNR=13							
ARU	**Arti**	**64.68**	**342**	*d i*P		**P**	**01 45 58.0**	**-0.1**
ARU				S		**S**	**01 54 39.3**	**+2.4**
ARU				SS		**SS**	**01 58 43.1**	**-3.6**
ARU				pmax		pmax		
	comp=Z,10.0nm,1.2s							
KURK	**Kurchatov**	**65.18**	**327**	*e*P		**P**	**01 46 01.4**	**0.0**
KURK				pmax		pmax		
	comp=Z,5.0nm,1.1s							
KURK	**Kurchatov**	**65.18**	**327**	*e*P		**P**	**01 46 01.4**	**0.0**
	comp=Z,4.6nm,1.1s							
KURBB	**Kurchatov Arra**	**65.29**	**327**	P		**P**	**01 46 02.1**	**0.0**
	comp=Z,2.7nm,0.8s,baz=28,slow=6.1,SNR=21							
VSU	**Vasula**	**65.34**	**1**	*c i*P		**P**	**01 46 03.3**	**+1.1**
VSU				pmax		pmax		
	comp=Z,20nm,0.9s							
BRVK	**Borovoye**	**65.36**	**333**	*e*P		**P**	**01 46 02.2**	**-0.4**
BRVK				pmax		pmax		
	comp=Z,6.0nm,0.8s							
BRVK	**Borovoye**	**65.36**	**333**	*e*P		**P**	**01 46 02.1**	**-0.4**
	comp=Z,5.8nm,0.8s							
BVAR	**Borovoye Array**	**65.37**	**333**	P		**P**	**01 46 02.6**	**0.0**
BVAR	**Borovoye Array**	**65.37**	**333**	P		**P**	**01 46 02.6**	**0.0**
BVAR	**Borovoye Array**	**65.37**	**333**	P		**P**	**01 46 02.6**	**0.0**
	comp=Z,5.6nm,0.8s,baz=42,slow=6.9,SNR=22							
EKA	**Eskdalemuir Ar**	**65.65**	**19**	P		**P**	**01 46 05.0**	**+0.6**
EKA	**Eskdalemuir Ar**	**65.65**	**19**	P		**P**	**01 46 05.0**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=332,slow=5.2,SNR=4.2							
GTA	**Gaotai**	**66.85**	**307**	*e*P		**P**	**01 46 12.6**	**+0.1**
GTA				pP		**pP**	**01 46 18.8**	**+0.5**
GTA				sP		**sP**	**01 46 21.6**	**+1.1**
GTA				pmax		pmax		
	comp=Z,4.0nm,1.1s							
MKAR	**Makanchi Array**	**67.46**	**323**	P		**P**	**01 46 16.0**	**-0.1**
MKAR	**Makanchi Array**	**67.46**	**323**	P		**P**	**01 46 16.0**	**-0.1**
MKAR	**Makanchi Array**	**67.46**	**323**	P		**P**	**01 46 16.0**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=33,slow=6.8,SNR=15							
OBN	**Obninsk**	**68.47**	**355**	*c i*P		**P**	**01 46 22.6**	**+0.4**
OBN				*e*			01 46 47.4	
OBN				pmax		pmax		
	comp=Z,10.0nm,0.7s							
AKTO	**Aktyubinsk**	**70.51**	**340**	P		**P**	**01 46 34.5**	**-0.5**
AKTO	**Aktyubinsk**	**70.51**	**340**	P		**P**	**01 46 34.5**	**-0.5**
AKTO	**Aktyubinsk**	**70.51**	**340**	P		**P**	**01 46 34.5**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=24,slow=5.1,SNR=13							
ABKAR	**Akbulak array**	**71.25**	**338**	*e*P		**P**	**01 46 39.5**	**0.0**
	comp=Z,3.0nm,0.7s							
CLL	**Collm**	**71.81**	**10**	*e*P		**P**	**01 46 43.0**	**+0.2**
CLL	**Collm**	**71.81**	**10**	*e*P		**P**	**01 46 43.0**	**+0.2**
BAIF	**Baives**	**71.95**	**16**	*e*P		**P**	**01 46 44.9**	**+1.2**
BAIF	**Baives**	**71.95**	**16**	*e*P

MFF	**Saint Martin d**	**74.57**	**20**	*e*P		**P**	**01 47 00.4**	**+1.2**
LOR	**Lormes**	**74.61**	**17**	*e*P		**P**	**01 47 00.7**	**+1.2**
	comp=Z,7.4nm,0.8s							
LOR	**Lormes**	**74.61**	**17**	*e*P		**P**	**01 47 00.7**	**+1.2**
	comp=Z,7.4nm,0.8s							
SSF	**Saint Saulge**	**74.76**	**17**	*e*P		**P**	**01 47 01.5**	**+1.2**
	comp=Z,7.0nm,0.7s							
SSF	**Saint Saulge**	**74.76**	**17**	*e*P		**P**	**01 47 01.5**	**+1.2**
SSF				pmax	pmax			
	comp=Z,7.0nm,0.7s							
SSF	**Saint Saulge**	**74.76**	**17**	*e*P		**P**	**01 47 01.5**	**+1.2**
	comp=Z,7.0nm,0.7s							
AVF	**Avril sur Loir**	**75.00**	**17**	*e*P		**P**	**01 47 02.5**	**+0.9**
	comp=Z,9.3nm,0.7s							
AVF	**Avril sur Loir**	**75.00**	**17**	*e*P		**P**	**01 47 02.5**	**+0.9**
AVF				pmax	pmax			
	comp=Z,9.0nm,0.7s							
AVF	**Avril sur Loir**	**75.00**	**17**	*e*P		**P**	**01 47 02.5**	**+0.9**
	comp=Z,9.3nm,0.7s							
BGF	**Bois d'Agland**	**75.14**	**18**	*e*P		**P**	**01 47 03.5**	**+1.0**
	comp=Z,18nm,0.8s							
BGF	**Bois d'Agland**	**75.14**	**18**	*e*P		**P**	**01 47 03.5**	**+1.0**
BGF				pmax	pmax			
	comp=Z,18nm,0.8s							
BGF	**Bois d'Agland**	**75.14**	**18**	*e*P		**P**	**01 47 03.5**	**+1.0**
	comp=Z,18nm,0.8s							
SMF	**Signal de Mont**	**75.22**	**17**	*e*P		**P**	**01 47 03.8**	**+0.9**
	comp=Z,14nm,0.9s							
SMF	**Signal de Mont**	**75.22**	**17**	*e*P		**P**	**01 47 03.8**	**+0.9**
SMF				pmax	pmax			
	comp=Z,14nm,0.9s							
SMF	**Signal de Mont**	**75.22**	**17**	*e*P		**P**	**01 47 03.8**	**+0.9**
	comp=Z,14nm,0.9s							
TCF	**Toulx Ste Croi**	**75.29**	**18**	*e*P		**P**	**01 47 04.3**	**+0.9**
TCF	**Toulx Ste Croi**	**75.29**	**18**	*e*P		**P**	**01 47 04.3**	**+0.9**
TCF	**Toulx Ste Croi**	**75.29**	**18**	*e*P		**P**	**01 47 04.3**	**+0.9**
CABF	**La Chapelle**	**75.60**	**15**	*e*P		**P**	**01 47 06.5**	**+1.3**
	comp=Z,7.8nm,0.8s							
CABF	**La Chapelle**	**75.60**	**15**	*e*P		**P**	**01 47 06.5**	**+1.3**
CABF				pmax	pmax			
	comp=Z,8.0nm,0.8s							
CABF	**La Chapelle**	**75.60**	**15**	*e*P		**P**	**01 47 06.5**	**+1.3**
	comp=Z,7.8nm,0.8s							
DAVOX	**Davos/Dischmat**	**75.94**	**13**	P		**P**	**01 47 08.7**	**+1.4**
DAVOX	**Davos/Dischmat**	**75.94**	**13**	P		**P**	**01 47 08.7**	**+1.4**
	comp=Z,1.9nm,0.7s,baz=316,slow=21,SNR=3.8							
BUR08	**Bucovina Ar. S**	**76.15**	**2**	*e*P		**P**	**01 47 08.7**	**+0.3**
LFF	**La Frestale**	**76.33**	**20**	*e*P		**P**	**01 47 10.6**	**+1.3**
	comp=Z,6.9nm,0.6s							
LFF	**La Frestale**	**76.33**	**20**	*e*P		**P**	**01 47 10.6**	**+1.3**
LFF				pmax	pmax			
	comp=Z,7.0nm,0.6s							
LFF	**La Frestale**	**76.33**	**20**	*e*P		**P**	**01 47 10.6**	**+1.3**
	comp=Z,6.9nm,0.6s							
CAF	**Calviac**	**76.59**	**19**	*e*P		**P**	**01 47 11.8**	**+1.0**
CAF	**Calviac**	**76.59**	**19**	*e*P		**P**	**01 47 11.8**	**+1.0**
CAF	**Calviac**	**76.59**	**19**	*e*P		**P**	**01 47 11.8**	**+1.0**
LPL	**La Plagne**	**76.76**	**15**	*e*P		**P**	**01 47 13.9**	**+1.9**
LPL	**La Plagne**	**76.76**	**15**	*e*P		**P**	**01 47 13.9**	**+1.9**
LPL	**La Plagne**	**76.76**	**15**	*e*P		**P**	**01 47 13.9**	**+1.9**
LPG	**La Plagne**	**76.78**	**15**	*e*P		**P**	**01 47 14.2**	**+2.0**
LPG	**La Plagne**	**76.78**	**15**	*e*P		**P**	**01 47 14.2**	**+2.0**
LPG	**La Plagne**	**76.78**	**15**	*e*P		**P**	**01 47 14.2**	**+2.0**
VIVF	**Saint-Julien-l**	**77.09**	**17**	*e*P		**P**	**01 47 15.0**	**+1.3**
	comp=Z,13nm,0.9s							
VIVF	**Saint-Julien-l**	**77.09**	**17**	*e*P		**P**	**01 47 15.0**	**+1.3**
VIVF				pmax	pmax			
	comp=Z,13nm,0.9s							
VIVF	**Saint-Julien-l**	**77.09**	**17**	*e*P		**P**	**01 47 15.0**	**+1.3**
	comp=Z,13nm,0.9s							
ORIF	**Oris-en-Rattie**	**77.22**	**16**	*e*P		**P**	**01 47 16.0**	**+1.5**
ORIF	**Oris-en-Rattie**	**77.22**	**16**	*e*P		**P**	**01 47 16.0**	**+1.5**
ORIF	**Oris-en-Rattie**	**77.22**	**16**	*e*P		**P**	**01 47 16.0**	**+1.5**
MBDF	**Montbardon**	**77.54**	**15**	*e*P		**P**	**01 47 18.2**	**+1.9**
MBDF	**Montbardon**	**77.54**	**15**	*e*P		**P**	**01 47 18.2**	**+1.9**
MBDF	**Montbardon**	**77.54**	**15**	*e*P		**P**	**01 47 18.2**	**+1.9**
SJPF	**Ste Jean**	**77.71**	**21**	*e*P		**P**	**01 47 18.5**	**+1.4**
SJPF	**Ste Jean**	**77.71**	**21**	*e*P		**P**	**01 47 18.5**	**+1.4**
SJPF	**Ste Jean**	**77.71**	**21**	*e*P		**P**	**01 47 18.5**	**+1.4**
ETSF	**Etsaut**	**78.05**	**21**	*e*P		**P**	**01 47 20.8**	**+1.7**
	comp=Z,19nm,0.9s							
ETSF	**Etsaut**	**78.05**	**21**	*e*P		**P**	**01 47 20.8**	**+1.7**
ETSF				pmax	pmax			
	comp=Z,19nm,0.9s							
ETSF	**Etsaut**	**78.05**	**21**	*e*P		**P**	**01 47 20.8**	**+1.7**
	comp=Z,19nm,0.9s							
SMRF	**Simiane la Rot**	**78.09**	**16**	*e*P		**P**	**01 47 21.3**	**+2.0**
	comp=Z,13nm,0.9s							
SMRF	**Simiane la Rot**	**78.09**	**16**	*e*P		**P**	**01 47 21.3**	**+2.0**
	comp=Z,13nm,0.9s							
EPF	**Esparros**	**78.10**	**20**	*e*P		**P**	**01 47 19.9**	**+0.5**
EPF	**Esparros**	**78.10**	**20**	*e*P		**P**	**01 47 19.9**	**+0.5**
EPF	**Esparros**	**78.10**	**20**	*e*P		**P**	**01 47 19.9**	**+0.5**
MTLF	**Montolieu**	**78.15**	**19**	*e*P		**P**	**01 47 20.7**	**+1.1**
	comp=Z,10.0nm,0.8s							
MTLF	**Montolieu**	**78.15**	**19**	*e*P		**P**	**01 47 20.7**	**+1.1**
MTLF				pmax	pmax			
	comp=Z,10.0nm,0.8s							
MTLF	**Montolieu**	**78.15**	**19**	*e*P		**P**	**01 47 20.7**	**+1.1**
	comp=Z,10.0nm,0.8s							
MLR	**Muntele Rosu**	**78.32**	**1**	P		**P**	**01 47 21.3**	**+0.7**
MLR	**Muntele Rosu**	**78.32**	**1**	P		**P**	**01 47 21.3**	**+0.7**
	comp=Z,0.4nm,0.9s,baz=332,slow=12,SNR=3.9							
SBF	**Sospel**	**78.48**	**15**	*e*P		**P**	**01 47 22.5**	**+1.0**
SBF	**Sospel**	**78.48**	**15**	*e*P		**P**	**01 47 22.5**	**+1.0**
SBF	**Sospel**	**78.48**	**15**	*e*P		**P**	**01 47 22.5**	**+1.0**
FRF	**La Foret Royal**	**78.66**	**16**	*e*P		**P**	**01 47 23.4**	**+1.0**
FRF	**La Foret Royal**	**78.66**	**16**	*e*P		**P**	**01 47 23.4**	**+1.0**
FRF	**La Foret Royal**	**78.66**	**16**	*e*P		**P**	**01 47 23.4**	**+1.0**
KIV	**Kislovodsk**	**79.10**	**349**	f P		**P**	**01 47 25.9**	**+1.0**
KIV				*e*			01 47 31.7	
KIV				pmax	pmax			
	comp=Z,6.0nm,0.7s							
KBZ	**Khabaz**	**79.30**	**349**	P		**P**	**01 47 26.8**	**+1.0**
KBZ	**Khabaz**	**79.30**	**349**	P		**P**	**01 47 26.8**	**+1.0**
KBZ	**Khabaz**	**79.30**	**349**	P		**P**	**01 47 26.8**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=339,slow=3.7,SNR=12							
ZEI	**Tsey**	**80.14**	**348**	*e*P		**P**	**01 47 30.2**	**-0.5**
ZEI				pmax	pmax			
	comp=Z,7.0nm,1.5s							
ESDC	**Sonseca Array**	**80.42**	**24**	P		**P**	**01 47 33.2**	**+1.2**
ESDC	**Sonseca Array**	**80.42**	**24**	P		**P**	**01 47 33.2**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=341,slow=4.9,SNR=16							
GNI	**Garni**	**82.62**	**347**	P		**P**	**01 47 45.6**	**+1.7**
GNI	**Garni**	**82.62**	**347**	P		**P**	**01 47 45.6**	**+1.7**
	comp=Z,1.0nm,0.3s,baz=99,slow=15,SNR=3.2							
BR131	**Keskin Array S**	**83.97**	**356**	*e*P		**P**	**01 47 51.5**	**+0.7**
	comp=Z,1.8nm,0.9s							
BRTR	**Keskin Array B**	**83.97**	**356**	P		**P**	**01 47 51.4**	**+0.6**
BRTR	**Keskin Array B**	**83.97**	**356**	P		**P**	**01 47 51.4**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=23,slow=2.5,SNR=16							
CMAR	**Chiang Mai Arr**	**84.78**	**296**	P		**P**	**01 47 54.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**84.78**	**296**	P		**P**	**01 47 54.6**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=7.5,slow=5.6,SNR=11							

*IDC **16** 01:46:27.8±4.8, 37°.24N×71°.96E, h107km±32km, mb3.3/10, mb1 3.3/16, mb1mx3.2/36, mbtmp3.3/16, Error ellipse: s-maj=51.3km s-min=20.6km az=156.0*

*ISCJB **16** 01:46:28.9±0.3, 37°.39N±0°.03×72°.06E±0°.06, h130km, mb3.4/10, Error ellipse: s-maj=6.9km s-min=3.4km az=169.8*

*NNC **16** 01:46:35.8±3.7, 37°.99N×71°.66E, h192km±40km, mb2.7, mpv3.7, Error ellipse: s-maj=35.4km s-min=19.1km az=19.0*

ISC 16 01:46:29.9±0.6, 37°.41N±0°.05×72°.03E±0°.07, h130km, n48, σ1§80/55, mb3.5/10, 4C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.58**	**182**	P	**Pn**	**01 47 24.7**	**+0.4**
CEP				S	**Sn**	**01 48 07.0**	**+0.6**
CHCP	**Chirah Chowk**	**3.88**	**165**	P	**Pn**	**01 47 30.3**	**+2.2**
THW	**Thamme Wali**	**4.62**	**183**	P	**Pn**	**01 47 37.8**	**-0.1**
AML	**Almayashu**	**4.88**	**15**	P	**Pn**	**01 47 42.0**	**+0.2**
	SNR=214						
UCH	**Uchtor**	**5.17**	**21**	P	**Sn**	**01 48 43.2**	**-1.5**
	SNR=12						
KZA	**Kyzart**	**5.28**	**27**	P	**Pn**	**01 47 48.3**	**+1.3**
	SNR=5.7						
EKS2	**Erkin-Say**	**5.41**	**14**	P	**Pn**	**01 47 49.5**	**+0.9**
	SNR=6.1						
SARP	**Sargodha**	**5.50**	**174**	P	**Pn**	**01 47 49.1**	**-0.7**
AAK	**Ala-Archa**	**5.54**	**19**	P	**Pn**	**01 47 51.9**	**+1.5**
	SNR=9.6						
AAK	**Ala-Archa**	**5.54**	**19**	P	**Pn**	**01 47 51.5**	**+1.1**
	2.5nm,0.3s,baz=179,slow=5.9,SNR=17						
AAK				S	**Sn**	**01 48 52.4**	**-0.7**
	2.6nm,0.3s,baz=330,slow=21,SNR=20						
KK31	**Karatay Array**	**5.80**	**349**	f P	**Pn**	**01 47 52.0**	**-1.7**
	5.1nm,0.2s,baz=180,slow=14,SNR=73						
KK31				f S	**Sn**	**01 48 53.5**	**-5.5**
	27nm,0.6s,baz=178,slow=23,SNR=12						
THN	**Thein Dam**	**5.82**	**148**	*e*PKP	**Pn**	**01 47 54.5**	**+0.5**
THN				*ex*	**Sn**	**01 49 03.0**	**+3.5**
CHMS	**Chumysh**	**5.95**	**20**	P	**Pn**	**01 47 56.9**	**+1.2**
	SNR=9.3						
TKM2	**Tokmak 2**	**6.14**	**25**	⇑P	**Pn**	**01 47 59.5**	**+1.0**
	3.0nm,0.6s						
TKM2				⇓S	**Sn**	**01 49 07.1**	**-0.5**
	3.4nm,0.6s						
TKM2	**Tokmak 2**	**6.14**	**25**	P	**Pn**	**01 47 59.6**	**+1.2**
	SNR=7.4						
USP	**Ospenovka**	**6.14**	**17**	P	**Pn**	**01 47 58.8**	**+0.4**
	SNR=6.4						
SDNR	**Sundarnagar**	**7.17**	**144**	*e*PKP	**Pn**	**01 48 12.0**	**-0.2**
SDNR				*eS*	**Sn**	**01 49 32.0**	**-0.3**
SMLA	**Simla**	**7.57**	**144**	*i* P	**Pn**	**01 48 17.9**	**+0.3**
SMLA				*ex*	**Sn**	**01 49 36.5**	**-5.5**
KHET	**Khetri**	**9.84**	**160**	*e*PKP	**Pn**	**01 48 45.9**	**-2.2**
KHET				*eS*	Sn	01 50 30.7	-6.1
AYAN	**Aya Nagar**	**9.88**	**153**	*e*S	**Sn**	**01 50 33.1**	**-4.6**
KUDL	**Kundal**	**9.97**	**157**	*e*PKP	**Pn**	**01 48 46.9**	**-3.0**
KUDL				*eS*	Sn	01 50 32.1	-8.0
KUDL				AML	AML	01 50 35.4	
	comp=E,18nm,0.4s						
KUDL				AML	AML	01 50 41.1	
	comp=N,18nm,0.6s						
AGRA	**Agra**	**11.31**	**152**	*e*PKP	**Pn**	**01 49 06.2**	**-1.6**
AGRA				*eS*	Sn	01 51 06.3	-6.2
AGRA				AML	AML	01 51 18.7	
	comp=E,55nm,0.2s						
AGRA				AML	AML	01 51 20.7	
	comp=N,85nm,0.3s						
MKAR	**Makanchi Array**	**12.07**	**36**	P	**Pn**	**01 49 18.3**	**+0.7**
	comp=N,0.1nm,0.3s,baz=228,slow=14,SNR=5.3						
PYUN	**Piuthan**	**13.08**	**132**	*e*P	**Pn**	**01 49 29.1**	**-1.9**
	comp=N,38nm,0.4s						
PYUN				*eS*	Sn	01 51 43.9	-12
DANN	**Dangsing**	**13.36**	**129**	*e*P	**Pn**	**01 49 33.1**	**-1.7**
	comp=N,14nm,0.3s						
KOLN	**Koldanda**	**13.68**	**131**	*e*P	**Pn**	**01 49 37.2**	**-1.6**
	comp=N,16nm,0.3s						
KURBB	**Kurchatov Arra**	**14.00**	**17**	P	**Pn**	**01 49 41.9**	**-0.6**
	comp=N,0.0nm,0.3s,baz=208,slow=12,SNR=3.8						
AB31	**Akbulak array**	**14.72**	**327**	P	Pn	01 49 47.2	-4.4
	comp=N,0.6nm,0.3s,baz=142,slow=12,SNR=49						
AB31				⇓S	Sn	01 52 20.6	-14
	comp=N,3.0nm,0.5s,baz=145,slow=18,SNR=19						
DMN	**Daman**	**14.72**	**128**	*e*P	**Pn**	**01 49 51.1**	**-1.0**
PKIN	**Phulchoki**	**14.93**	**127**	*e*P	**Pn**	**01 49 54.3**	**-0.3**
PKI	**Pulchoki**	**14.94**	**127**	*e*P	**Pn**	**01 49 54.1**	**-0.8**
GUN	**Gumba**	**15.01**	**125**	*e*P	**Pn**	**01 49 54.2**	**-1.5**
BVAR	**Borovoye Array**	**15.65**	**356**	P	**Pn**	**01 50 03.3**	**+0.1**
	comp=N,0.1nm,0.3s,baz=169,slow=8.5,SNR=3.3						
AKTO	**Aktyubinsk**	**16.43**	**327**	⇑P	**Pn**	**01 50 10.3**	**-2.5**
	comp=N,1.0nm,0.6s						
AKTO				⇓S	Sn	01 53 03.3	-12
	comp=N,0.8nm,1.1s						
AKTO	**Aktyubinsk**	**16.43**	**327**	P	**Pn**	**01 50 12.8**	**0.0**
	comp=N,1.1nm,0.3s,baz=130,slow=12,SNR=26						
AKTO				pP	**pP**	**01 50 35.7**	**-0.3**
	comp=N,0.5nm,0.3s,baz=141,slow=14,SNR=2.6						
AKTO				S	Sn	01 53 01.9	-14
	comp=N,0.4nm,0.3s,baz=139,slow=17,SNR=8.0						
TAPN	**Taplejung**	**16.59**	**123**	*e*P	**Pn**	**01 50 14.8**	**-0.4**
ODAN	**Odare**	**16.71**	**125**	*e*P	**P**	**01 50 16.8**	**+0.1**
ZALV	**Zalesovo Beam**	**18.74**	**24**	P	**Pn**	**01 50 39.5**	**-0.9**
	comp=N,0.2nm,0.3s,baz=224,slow=8.9,SNR=4.7						
GNI	**Garni**	**21.42**	**286**	P	**P**	**01 51 07.9**	**+0.3**
	comp=N,3.5nm,0.5s,baz=113,slow=3.7,SNR=4.7						
BRTR	**Keskin Array B**	**29.96**	**286**	P	**P**	**01 52 26.6**	**+0.6**
	comp=N,0.4nm,0.5s,baz=110,slow=11,SNR=4.0						
MLR	**Muntele Rosu**	**35.07**	**298**	P	**P**	**01 53 12.3**	**+1.9**
	comp=N,0.3nm,0.9s,baz=179,slow=12,SNR=3.0						
FINES	**FINESS Array B**	**37.20**	**325**	P	**P**	**01 53 28.6**	**+0.5**
	comp=N,0.4nm,0.4s,baz=123,slow=14,SNR=3.9						
ARCES	**ARCESS Array B**	**40.62**	**337**	P	**P**	**01 53 57.8**	**+1.2**
	comp=N,0.7nm,0.7s,baz=113,slow=9.3,SNR=3.8						
HFS	**Hagfors**	**42.87**	**321**	P	**P**	**01 54 15.6**	**+0.7**
	comp=N,1.3nm,0.4s,baz=92,slow=10,SNR=8.4						
NOA	**NORSAR Array B**	**44.16**	**322**	P	**P**	**01 54 25.4**	**+0.1**
	comp=N,0.7nm,0.6s,baz=94,slow=7.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**66.56**	**269**	P	**P**	**01 57 05.2**	**-1.1**
	comp=N,0.3nm,0.5s,baz=54,slow=5.7,SNR=6.5						
INK	**Inuvik**	**72.87**	**10**	P	**P**	**01 57 46.6**	**+2.5**
	comp=N,0.8nm,0.9s,baz=344,slow=2.5,SNR=3.0						
YKA	**Yellowknife Ar**	**80.29**	**3**	P	**P**	**01 58 27.3**	**+1.4**
	comp=N,0.2nm,0.6s,baz=350,slow=5.5,SNR=5.2						

*ISCJB **16** 01:51:29.3±0.3, 15°.30S±0°.03×30°.71E±0°.06, h10km, mb3.8/17, Error ellipse: s-maj=8.7km s-min=4.0km az=16.2*

*PRE **16** 01:51:29.6±3.0, 15°.20S×31°.04E, h10km, ML5.8*

*IDC **16** 01:51:30.1±0.8, 15°.26S×30°.84E, h0km, mb3.7/11, mb1 3.9/15, mb1mx3.9/28, mbtmp3.8/15, ML4.2/2, Error ellipse: s-maj=21.9km s-min=16.8km az=150.0*

*NEIC **16** 01:51:31.5±0.3, 15°.24S×30°.81E, h10km, mb4.3/7, Error ellipse: s-maj=10.1km s-min=7.4km az=127.0*

ISC 16 01:51:30.5±0.4, 15°.39S±0°.05×30°.78E±0°.05, h10km, n72, σ2§06/80, mb4.0/17, 1D, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**2.50**	**272**	*e*P	**Pb**	**01 52 15.8**	**+0.1**
LSZ				*eS*	**Sb**	**01 52 47.3**	**+0.6**
LSZ	**Lusaka**	**2.50**	**272**	Pn	**Pb**	**01 52 14.0**	**-1.7**
LSZ				Pg	**Pg**	**01 52 17.0**	**-1.6**
LSZ				Lg	Lg	01 52 47.3	
LSZ	**Lusaka**	**2.50**	**272**	Pn	**Pb**	**01 52 14.0**	**-1.7**
	86nm,0.3s,baz=84,slow=16,SNR=418						
LSZ				Pg	**Pg**	**01 52 17.0**	**-1.6**
	88nm,0.3s,baz=76,slow=17,SNR=513						
LSZ				Lg	Lg	01 52 47.3	
	438nm,0.3s,baz=175,slow=23,SNR=21						
MSNA	**Messina**	**6.95**	**186**	*e*P	Pn	01 53 17.0	+4.4
MSNA				*eS*	**Sn**	**01 54 35.6**	**+3.8**
MSNA				AML	AML	01 55 25.5	
	comp=Z,300nm,0.6s						
SLR	**Silverton**	**10.55**	**192**	*e*P	Pn	01 54 06.4	+4.4
SLR				*eS*	**Sn**	**01 56 01.3**	**+0.8**
SLR				AML	AML	01 57 09.2	
	comp=Z,137nm,0.6s						
LBTB	**Lobatse**	**10.74**	**206**	*e*P	Pn	01 54 08.7	+4.2
LBTB				*eS*	**Sn**	**01 56 05.2**	**+0.3**
LBTB				AML	AML	01 57 23.5	
	comp=Z,52nm,0.5s						
LBTB	**Lobatse**	**10.74**	**206**	*e*Pn	Pn	01 54 08.4	+3.8
	comp=Z,53nm,0.6s						
LBTB				*eSn*	**Sn**	**01 56 05.4**	**+0.5**
KSR	**Koster**	**11.02**	**199**	*i*P	Pn	01 54 13.4	+4.9
KSR				*eS*	**Sn**	**01 56 12.3**	**+0.3**
KSR				AML	AML	01 57 25.0	
	comp=Z,74nm,0.8s						
ERPM	**east rand prop**	**11.15**	**192**	*e*P	Pn	01 54 14.0	+3.7
ERPM				*eS*	**Sn**	**01 56 12.7**	**-2.5**
ERPM				AML	AML	01 57 46.2	
	comp=Z,60nm,0.5s						
PRYS	**Parys**	**11.91**	**195**	*e*P	Pn	01 54 24.0	+3.4
PRYS				*eS*	**Sn**	**01 56 34.5**	**+0.8**
PRYS				AML	AML	01 58 07.8	
	comp=Z,48nm,0.7s						
POGA	**Pongola**	**11.94**	**176**	*e*P	Pn	01 54 24.5	+3.6
POGA				*eS*	**Sn**	**01 56 30.0**	**-4.3**
POGA				AML	AML	01 58 08.2	
	comp=Z,80nm,0.6s						
SWZ	**Schweizer**	**12.78**	**202**	*e*P	**Pn**	**01 54 35.0**	**+2.4**
SWZ				*eS*	**Sn**	**01 56 53.8**	**-1.2**
SWZ				AML	AML	01 58 27.8	
	comp=Z,60nm,0.6s						
TSUM	**Tsumeb**	**13.16**	**251**	Pn	**Pn**	**01 54 37.9**	**+0.1**
TSUM				Sn	Sn	01 56 56.4	-8.0
TSUM				Lg	Lg	01 58 29.4	
TSUM	**Tsumeb**	**13.16**	**251**	Pn	**Pn**	**01 54 37.9**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=50,slow=11,SNR=22						
TSUM				Sn	Sn	01 56 56.4	-8.0
	comp=Z,0.3nm,0.3s,baz=140,slow=21,SNR=3.2						
TSUM				Lg	Lg	01 58 29.4	
	comp=Z,0.6nm,0.3s,baz=132,slow=19,SNR=3.4						
SEK	**Senekal**	**13.20**	**192**	*e*P	**Pn**	**01 54 41.1**	**+2.9**
SEK				*eS*	**Sn**	**01 57 02.2**	**-3.0**
SEK				AML	AML	01 58 42.9	
	comp=Z,51nm,0.6s						
BOSA	**Boshof**	**14.12**	**200**	*e*P	**Pn**	**01 54 53.0**	**+2.3**
BOSA				*eS*	**Sn**	**01 57 24.4**	**-3.2**
BOSA				AML	AML	01 59 13.4	
	comp=Z,42nm,0.6s						
BOSA	**Boshof**	**14.12**	**200**	Pn	**Pn**	**01 54 52.2**	**+1.5**
BOSA				Sn	**Sn**	**01 57 22.8**	**-4.8**
BOSA				Lg	Lg	01 58 54.4	
BOSA	**Boshof**	**14.12**	**200**	Pn	**Pn**	**01 54 52.2**	**+1.5**
	comp=Z,6.7nm,0.3s,baz=22,slow=12,SNR=119						
BOSA				Sn	**Sn**	**01 57 22.8**	**-4.8**
	comp=Z,3.5nm,0.3s,baz=125,slow=16,SNR=6.5						
BOSA				Lg	Lg	01 58 54.4	
	comp=Z,3.3nm,0.3s,baz=281,slow=22,SNR=4.4						
MBAR	**Mbarara**	**14.70**	**360**	Pn	Pn	01 54 53.5	-5.3
MBAR				Sn	Sn	01 57 25.9	-16
MBAR				Lg	Lg	01 58 53.5	
MBAR	**Mbarara**	**14.70**	**360**	Pn	Pn	01 54 53.5	-5.3
	comp=Z,7.5nm,0.3s,baz=189,slow=18,SNR=29						
MBAR				Sn	Sn	01 57 25.9	-16
	comp=Z,2.1nm,0.3s,baz=73,slow=19,SNR=2.6						
MBAR				Lg	Lg	01 58 53.5	
	comp=Z,1.3nm,0.3s,baz=98,slow=22,SNR=6.9						
KSD	**Kokstad**	**15.13**	**185**	*e*P	**P**	**01 55 09.4**	**-0.4**
KSD				*eS*	**Sn**	**01 57 49.5**	**-2.8**
KSD				AML	AML	01 59 42.5	
	comp=Z,60nm,0.7s						
KMBO	**Kilima Mbogo**	**15.55**	**25**	Pn	**Pn**	**01 55 07.4**	**-2.8**
KMBO				Sn	**Sn**	**01 58 00.3**	**-2.5**
KMBO				Lg	Lg	01 59 30.2	
KMBO	**Kilima Mbogo**	**15.55**	**25**	Pn	**Pn**	**01 55 07.4**	**-2.8**
	comp=Z,0.5nm,0.3s,baz=209,slow=15,SNR=12						
KMBO				Sn	**Sn**	**01 58 00.3**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=229,slow=19,SNR=2.1						
KMBO				Lg	Lg	01 59 30.2	
	comp=Z,0.3nm,0.3s,baz=67,slow=22,SNR=6.9						
HVD	**Gariep Dam**	**15.90**	**197**	*e*P	**P**	**01 55 18.9**	**+0.6**
HVD				*eS*	**Sn**	**01 58 05.4**	**-5.7**
HVD				AML	AML	02 00 10.7	
	comp=Z,34nm,0.6s						
ABPO	**Ambohimpanom**	**16.12**	**105**	P	**P**	**01 55 19.3**	**-1.5**
	comp=Z,5.4nm,0.7s						
SUR	**Sutherland**	**19.19**	**206**	*e*P	**Pn**	**01 55 56.8**	**+1.2**
	comp=Z,27nm,0.6s						
SUR				S	**Sn**	**01 59 24.9**	**-5.9**
SUR				Lg	Lg	02 01 35.4	
SUR	**Sutherland**	**19.19**	**206**	P	**Pn**	**01 55 57.0**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=17,slow=11,SNR=13						
SUR				S	**Sn**	**01 59 24.9**	**-5.9**
	comp=Z,0.6nm,0.3s,baz=207,slow=18,SNR=3.4						
SUR				Lg	Lg	02 01 35.4	
	comp=Z,0.6nm,0.3s,baz=310,slow=18,SNR=4.3						
TOA0	**Torodi Ar. Sit**	**40.40**	**313**	*e*P	**P**	**01 59 10.3**	**+1.2**
TORD	**Torodi Ar. Bea**	**40.40**	**313**	P	**P**	**01 59 08.4**	**-0.8**
TORD	**Torodi Ar. Bea**	**40.40**	**313**	P	**P**	**01 59 08.4**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=126,slow=7.7,SNR=9.4						
DBIC	**Dimbokro**	**41.56**	**299**	P	**P**	**01 59 20.4**	**+1.6**
DBIC	**Dimbokro**	**41.56**	**299**	P	**P**	**01 59 20.4**	**+1.6**
	comp=Z,2.1nm,0.7s,baz=135,slow=5.5,SNR=3.2						
BUR08	**Bucovina Ar. S**	**62.95**	**356**	*e*P	**P**	**02

KULA				*e*Sg	**Sg**	01 59 56.0	-0.2
GONE	**Gonen-Balikesi**	**1.00**	**347**	*e*PG	**Pb**	01 59 50.2	+0.2
GONE	**Gonen-Balikesi**	**1.00**	**347**	*e*Pg	**Pb**	01 59 50.2	+0.2
BLCB	**Balcova**	**1.00**	**227**	*e*PG	**Pg**	01 59 50.0	-0.2
BLCB	**Balcova**	**1.00**	**227**	*e*Pg	**Pg**	01 59 50.1	-0.2
AYVA	**Ayvalik**	**1.03**	**284**	*i* P	**Pg**	01 59 49.9	-0.9
AYVA				*i* S	Sg	01 59 57.3	-6.9
AYVA	**Ayvalik**	**1.03**	**284**	*i* P	**Pg**	01 59 49.9	-0.9
ORLT	**Orhaneli**	**1.21**	**36**	*e*PN	**Pb**	01 59 53.7	+0.1
ORLT	**Orhaneli**	**1.21**	**36**	*e*Pn	**Pb**	01 59 53.7	+0.1
TVSB	**Tavsanli**	**1.22**	**71**	*e*PN	**Pn**	01 59 53.3	-0.3
TVSB	**Tavsanli**	**1.22**	**71**	*e*Pn	**Pn**	01 59 53.3	-0.3
KCTX	**Karacabey (Bur**	**1.23**	**14**	*e*PN	**Pb**	01 59 54.1	+0.1
KCTX	**Karacabey (Bur**	**1.23**	**14**	*e*Pn	**Pb**	01 59 54.1	+0.1
KRBG	**Karabiga-Canak**	**1.42**	**339**	*e*PN	**Pb**	01 59 57.5	+0.3
KRBG	**Karabiga-Canak**	**1.42**	**339**	*e*Pn	**Pb**	01 59 57.5	+0.3
MDNY	**Mudanya-Bursa**	**1.47**	**28**	*e*PN	**Pb**	01 59 58.5	+0.4
MDNY	**Mudanya-Bursa**	**1.47**	**28**	*e*Pn	**Pb**	01 59 58.5	+0.4
EZN	**Ezine**	**1.48**	**301**	*e*PN	**Pb**	01 59 58.6	+0.3
EZN	**Ezine**	**1.48**	**301**	*e*Pn	**Pb**	01 59 58.6	+0.3
MRMT	**Marmara Adasi**	**1.56**	**349**	*e*PN	**Pb**	01 59 59.3	-0.3
MRMT	**Marmara Adasi**	**1.56**	**349**	*e*Pn	**Pb**	01 59 59.3	-0.3
ARMT	**Armutlu**	**1.64**	**24**	*e*PN	**Pb**	02 00 00.9	-0.1
ARMT	**Armutlu**	**1.64**	**24**	*e*Pn	**Pb**	02 00 00.9	-0.1
ALT	**Altintas**	**1.66**	**90**	*e*PN	**Pn**	02 00 00.6	+0.8
ALT	**Altintas**	**1.66**	**90**	*e*Pn	**Pn**	02 00 00.6	+0.8
IZI	**Iznik**	**1.71**	**42**	*e*PN	**Pb**	02 00 01.6	-0.6
IZI	**Iznik**	**1.71**	**42**	*e*Pn	**Pb**	02 00 01.6	-0.6
RKY	**Sarkoy-Tekirda**	**1.73**	**339**	*e*PN	**Pb**	02 00 02.0	-0.5
RKY	**Sarkoy-Tekirda**	**1.73**	**339**	*e*Pn	**Pb**	02 00 02.0	-0.5
GELI	**Tayfur-Gelibol**	**1.76**	**319**	*e*PN	**Pb**	02 00 02.5	-0.5
GELI	**Tayfur-Gelibol**	**1.76**	**319**	*e*Pn	**Pb**	02 00 02.5	-0.5
MFT	**Murefte**	**1.79**	**343**	*e*PN	**Pb**	02 00 03.7	0.0
MFT	**Murefte**	**1.79**	**343**	*e*Pn	**Pb**	02 00 03.7	0.0
YLV	**Yalova**	**1.84**	**35**	*e*PN	**Pb**	02 00 04.1	-0.3
YLV	**Yalova**	**1.84**	**35**	*e*Pn	**Pb**	02 00 04.1	-0.3
ERIK	**Erikli-Kesan**	**1.95**	**325**	*e*PN	**Pb**	02 00 05.7	-0.6
ERIK	**Erikli-Kesan**	**1.95**	**325**	*e*Pn	**Pb**	02 00 05.7	-0.6
BODT	**Bodrum**	**2.07**	**195**	*e*PN	**Pn**	02 00 06.0	+0.7
BODT	**Bodrum**	**2.07**	**195**	*e*Pn	**Pn**	02 00 06.0	+0.7
GULT	**Gulveren**	**2.38**	**54**	*e*PN	**Pn**	02 00 10.7	+1.0
GULT	**Gulveren**	**2.38**	**54**	*e*Pn	**Pn**	02 00 10.7	+1.0

IDC 16 02:11:05.3±2.9, 51.94S×140.72E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/14, mbtmp3.8/3, Error ellipse: s-maj=273.1km s-min=26.4km az=85.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**28.71**	**347**	P	P	02 17 04.1	-0.1
	0.4nm,0.6s,baz=165,slow=10,SNR=6.1						
WRA	**Warramunga Arr**	**32.32**	**349**	P	P	02 17 35.6	-0.4
	3.0nm,0.8s,baz=176,slow=8.0,SNR=5.7						
QSPA	**South Pole Qui**	**38.17**	**180**	P	P	02 18 26.1	-0.2
	1.9nm,1.0s,baz=338,slow=6.0,SNR=3.8						
ARCES	**ARCESS Array B**	**145.88**	**325**	PKPbc	PKPab	02 30 45.4	-0.2
	1.7nm,0.7s,baz=85,slow=2.9,SNR=5.8						
ESDC	**Sonseca Array**	**152.78**	**257**	PKPbc	PKPbc	02 31 03.0	-0.6
	0.1nm,0.3s,baz=96,slow=1.6,SNR=2.4						

ISK ***16*** *02:12:48.5, 38.56N×37.93E, h5km, MD3.2*
ISCJB ***16*** *02:12:49.7±0.6, 38.60N±0.02×37.93E±0.03, h1km±5km, Error ellipse: s-maj=4.9km s-min=3.2km az=135.9*
DDA ***16*** *02:12:49.7, 38.59N×37.91E, h12km, MD3.0*
CSEM ***16*** *02:12:50.1±0.2, 38.58N×37.95E, h5km, MD3.0, Error ellipse: s-maj=4.9km s-min=3.2km az=119.0*
ISC 16 02:12:50.1±1.0, 38.57N±0.02×37.94E±0.02, h7km±9km, n51, σ0.870/70, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.27**	**183**	*i* P	**Pg**	**02 12 55.8**	**+0.2**
AKCD				*i* S	**Sg**	**02 13 00.3**	**+1.1**
AKCD	**Akcadag**	**0.27**	**183**	*i* P	**Pg**	**02 12 55.8**	**+0.2**
AKCD				*i* S	**Sg**	**02 13 00.3**	**+1.1**
DARE	**Darende-Malaty**	**0.36**	**270**	PG	**Pg**	**02 12 56.8**	**-0.4**
DARE				SG	**Sg**	**02 13 02.4**	**+0.5**
DARE	**Darende-Malaty**	**0.36**	**270**	*i* Pg	**Pg**	**02 12 56.8**	**-0.4**
DARE				*i* Sg	**Sg**	**02 13 02.4**	**+0.5**
KEMA	**Kemaliye**	**0.82**	**32**	*i* P	**Pg**	**02 13 05.7**	**-0.2**
KEMA				*i* S	**Sb**	**02 13 18.1**	**+0.1**
KEMA	**Kemaliye**	**0.82**	**32**	*i* P	**Pg**	**02 13 05.7**	**-0.2**
KEMA				*i* S	**Sb**	**02 13 18.1**	**+0.1**
ELZG	**Elazig**	**0.82**	**95**	*i* P	**Pg**	**02 13 05.2**	**-0.8**
ELZG				*i* S	**Sg**	**02 13 16.1**	**-0.6**
ELZG	**Elazig**	**0.82**	**95**	*i* P	**Pg**	**02 13 05.2**	**-0.8**
ELZG				*i* S	**Sg**	**02 13 16.1**	**-0.6**
ILIC	**ilic-Erzincan**	**1.01**	**29**	*e*PG	**Pg**	**02 13 09.0**	**-0.5**
ILIC	**ilic-Erzincan**	**1.01**	**29**	*e*Pg	**Pg**	**02 13 09.0**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.09**	**100**	*e*PN	**Pb**	**02 13 10.7**	**-0.7**
SVRC	**Sivrice-ELAZID**	**1.09**	**100**	*e*Pn	**Pb**	**02 13 10.7**	**-0.7**
ATAB	**Bozova**	**1.13**	**166**	*i* P	**Pn**	**02 13 12.9**	**+0.5**
ATAB				*i* S	**Sn**	**02 13 28.3**	**+0.1**
ATAB	**Bozova**	**1.13**	**166**	*i* P	**Pn**	**02 13 12.9**	**+0.5**
ATAB				*i* S	**Sn**	**02 13 28.3**	**+0.1**
PTK	**Pertek**	**1.18**	**74**	*e*PN	**Pb**	**02 13 11.8**	**-1.1**
PTK				*e*SN	**Sn**	**02 13 30.1**	**+0.5**
PTK	**Pertek**	**1.18**	**74**	*e*Pn	**Pb**	**02 13 11.8**	**-1.1**
PTK				*e*Sn	**Sn**	**02 13 30.1**	**+0.5**
SARI	**SarD1z-Kayseri**	**1.21**	**263**	*e*PN	**Pn**	**02 13 12.1**	**-1.4**
SARI				*e*SN	**Sn**	**02 13 29.8**	**-0.4**
GZT	**Gaziantep**	**1.25**	**194**	*i* P	**Pg**	**02 13 14.2**	**+0.1**
GZT				*i* S	**Sn**	**02 13 32.6**	**+1.5**
KMRS	**Kahramanmaras**	**1.34**	**218**	*e*PN	**Pn**	**02 13 14.7**	**-0.6**
KMRS	**Kahramanmaras**	**1.34**	**218**	*e*Pn	**Pn**	**02 13 14.7**	**-0.6**
AYKD	**Aykdinkavak**	**1.46**	**218**	*i* P	**Pb**	**02 13 17.6**	**0.0**
AYKD				*i* S	**Sb**	**02 13 36.7**	**+0.3**
GAZ	**Gaziantep**	**1.51**	**203**	*e*PN	**Pb**	**02 13 17.9**	**-0.6**
GAZ	**Gaziantep**	**1.51**	**203**	*e*Pn	**Pb**	**02 13 17.9**	**-0.6**
ANDN	**Andirin**	**1.60**	**232**	*i* P	**Pn**	**02 13 18.8**	**-0.1**
ANDN				*i* S	**Sb**	**02 13 39.9**	**-0.6**
ANDN	**Andirin**	**1.60**	**232**	*i* P	**Pn**	**02 13 18.8**	**-0.1**
ANDN				*i* S	**Sb**	**02 13 39.9**	**-0.6**
EZC	**Erzincan**	**1.61**	**43**	*e*PN	**Pb**	**02 13 19.7**	**-0.6**
EZC	**Erzincan**	**1.61**	**43**	*e*Pn	**Pb**	**02 13 19.7**	**-0.6**
ERZN	**Erzincan**	**1.72**	**53**	*e*PN	**Pb**	**02 13 21.3**	**-0.8**
DIYA	**Diyarbakir**	**1.83**	**110**	*i* P	**Pb**	**02 13 22.8**	**-1.2**
DIYA	**Diyarbakir**	**1.83**	**110**	*i* P	**Pb**	**02 13 22.8**	**-1.2**
KELT	**Kelkit**	**1.88**	**32**	*i* P	**Pb**	**02 13 24.4**	**-0.5**
KELT				*i* S	**Sg**	**02 13 51.6**	**+1.1**
KELT	**Kelkit**	**1.88**	**32**	*i* P	**Pb**	**02 13 24.4**	**-0.5**
RSDY	**Resadiye-TOKAT**	**1.89**	**346**	*e*PN	**Pn**	**02 13 23.2**	**+0.4**
RSDY	**Resadiye-TOKAT**	**1.89**	**346**	*e*Pn	**Pn**	**02 13 23.2**	**+0.4**
KUZU	**Kuzuini**	**1.92**	**201**	*i* P	**Pb**	**02 13 24.5**	**-0.9**
KUZU				*i* S	**Sg**	**02 13 51.4**	**-0.4**
KUZU	**Kuzuini**	**1.92**	**201**	*i* P	**Pb**	**02 13 24.5**	**-0.9**
KOZT	**Kozan**	**1.99**	**238**	*e*PN	**Pn**	**02 13 24.8**	**+0.6**
KOZT	**Kozan**	**1.99**	**238**	*e*Pn	**Pn**	**02 13 24.8**	**+0.6**
GUMT	**Gumushane**	**2.23**	**32**	*e*PN	**Pn**	**02 13 28.5**	**+0.9**
GUMT	**Gumushane**	**2.23**	**32**	*e*Pn	**Pn**	**02 13 28.5**	**+0.9**
CEYT	**Ceyhan**	**2.33**	**229**	*e*PN	**Pn**	**02 13 29.3**	**+0.5**
CEYT	**Ceyhan**	**2.33**	**229**	*e*Pn	**Pn**	**02 13 29.3**	**+0.5**
ESPY	**Espiye-Giresun**	**2.42**	**14**	*e*PN	**Pn**	**02 13 31.1**	**+1.1**
ESPY	**Espiye-Giresun**	**2.42**	**14**	*e*Pn	**Pn**	**02 13 31.2**	**+1.1**
BAYT	**Ayd¨–ntepe-Bay**	**2.49**	**42**	*e*PN	**Pn**	**02 13 32.2**	**+1.0**
BAYT	**Ayd¨–ntepe-Bay**	**2.49**	**42**	*e*Pn	**Pn**	**02 13 32.2**	**+1.0**
NIG	**Nigde**	**2.66**	**261**	*e*PN	**Pn**	**02 13 33.8**	**+0.2**
NIG	**Nigde**	**2.66**	**261**	*e*Pn	**Pn**	**02 13 33.8**	**+0.2**
BEST	**Besiri**	**2.71**	**103**	*i* P	**Pb**	**02 13 39.1**	**+0.2**
YAYL	**Yayladag**	**2.92**	**211**	*i* P	**Pn**	**02 13 37.8**	**+0.7**
YAYL	**Yayladag**	**2.92**	**211**	*i* P	**Pn**	**02 13 37.8**	**+0.7**

BJI ***16*** *02:16:44.9, 7.70S×125.77E, h468km, mB5.1/6, mb4.4/20*
DJA ***16*** *02:16:49.0±0.4, 7.5±4.2×12.6E±1.2°, h481km±9km, M4.9/15, mB5.3/8, mb4.8/15, MLv5.2/10, Mw(mB)4.7/8*
AUST ***16*** *02:16:50.4±0.0, 7.08S×125.43E, h466km, Error ellipse: s-maj=1.1km s-min=0.9km az=30.0*
NEIC ***16*** *02:16:50.9±0.8, 7.08S×125.56E, h468km±10km, mb4.4/15, Error ellipse: s-maj=14.7km s-min=6.6km az=60.0*
ISCJB ***16*** *02:16:50.5±0.3, 7.11S±0.03×125.49E±0.04, h477km±3km, mb4.2/38, Error ellipse: s-maj=6.1km s-min=3.6km az=152.5*
IDC ***16*** *02:16:51.4±1.0, 7.10S×125.48E, h472km±11km, mb3.7/18, mb1 3.8/22, mb1mx3.8/27, mbtmp3.8/22, Error ellipse: s-maj=16.2km s-min=7.8km az=73.0*
ISC 16 02:16:51.2±0.4, 7.18S±0.04×125.54E±0.06, h471km±3km, h472km; pP-P, n120, σ1938/151, mb4.2/38, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBSI	**Bau Bau**	**3.39**	**299**	P	**P**	**02 18 01.4**	**-1.5**
MMRI	**Maumere**	**3.58**	**246**	P	**P**	**02 18 02.2**	**-2.1**
NLAI	**Namlea**	**4.21**	**22**	P	**P**	**02 18 10.1**	**+0.5**
BSSI	**Bau Bau, Buton**	**5.12**	**281**	P	**P**	**02 18 18.5**	**+0.7**
BKSI	**Bulukumba**	**5.69**	**289**	P	**P**	**02 18 23.3**	**0.0**
	106nm,0.9s,0.3nm						
WSI	**Waingapu**	**5.75**	**244**	P	**P**	**02 18 22.7**	**-1.2**
	1µm,0.6s,34µm10nm						
WSI	**Waingapu**	**5.75**	**244**	P	**P**	**02 18 23.1**	**-0.8**
	baz=5.7,SNR=4.1						
WSI				S	**S**	**02 19 35.4**	**-4.0**
	baz=5.7,SNR=4.6						
BASI	**Baing, Sumba**	**5.76**	**238**	P	**P**	**02 18 22.8**	**-1.2**
	467nm,0.8s,10µm3.3nm						
KAPI	**Kappang**	**6.14**	**290**	*e*Pn	**P**	**02 18 27.9**	**+0.1**
	96nm,0.9s						
KAPI	**Kappang**	**6.14**	**290**	P	**P**	**02 18 28.2**	**+0.4**
	111nm,0.9s,0.4nm						
KAPI	**Kappang**	**6.14**	**290**	P	**P**	**02 18 28.0**	**+0.1**
	4.7nm,0.3s,baz=154,slow=5.9,SNR=38						
KAPI				S	**S**	**02 19 45.6**	**-1.1**
	3.3nm,0.3s,baz=196,slow=17,SNR=2.8						
SKSI	**Soroako, Sulaw**	**6.23**	**318**	P	**P**	**02 18 30.8**	**+2.0**
	345nm,0.9s,3µm1.1nm						
WBSI	**Waikabubak, Su**	**6.56**	**248**	P	**P**	**02 18 30.5**	**-1.5**
	272nm,0.7s,9µm3.5nm						
SPSI	**Sidrap Palu**	**6.57**	**299**	P	**P**	**02 18 32.9**	**+0.8**
	68nm,0.9s,0.2nm						
LUWI	**Luwuk**	**6.69**	**336**	P	**P**	**02 18 34.7**	**+1.4**
	862nm,0.8s,8µm2.7nm						
LUWI	**Luwuk**	**6.69**	**336**	P	**P**	**02 18 34.1**	**+0.8**
	baz=6.6,SNR=19						
LBMI	**Labuha**	**6.78**	**17**	P	**P**	**02 18 35.6**	**+1.3**
	77nm,0.9s,2µm0.6nm						
TTSI	**Tana Toraja**	**7.02**	**305**	P	**P**	**02 18 38.4**	**+1.7**
	150nm,0.8s,0.4nm						
KMSI	**Cibinong**	**7.85**	**349**	P	**P**	**02 18 46.7**	**+1.2**
	467nm,0.7s						
MTN	**Manton Dam**	**7.88**	**136**	P	**P**	**02 18 47.1**	**+1.4**
	baz=8.0,SNR=50						
MTN				S	**S**	**02 20 18.3**	**-1.3**
	baz=8.0,SNR=5.4						
FAKI	**Fak Fak**	**7.91**	**58**	P	**P**	**02 18 46.0**	**-0.1**
	45nm,0.8s						
FAKI	**Fak Fak**	**7.91**	**58**	P	**P**	**02 18 46.8**	**+0.7**
	baz=8.0,SNR=4.0						
FAKI				S	**S**	**02 20 16.9**	**-3.4**
	baz=8.0,SNR=7.5						
TNTI	**Ternate**	**8.10**	**13**	P	**P**	**02 18 47.9**	**-0.2**
	225nm,0.8s,3µm						
MRSI	**Marisa**	**8.41**	**335**	P	**P**	**02 18 52.5**	**+1.1**
	464nm,0.8s,4µm						
MNI	**Manado**	**8.59**	**355**	P	**P**	**02 18 53.7**	**+0.4**
KDU	**Kakadu**	**8.76**	**129**	P	**P**	**02 18 56.0**	**+1.0**
	baz=8.9,SNR=22						
KNRA	**Kununurra**	**9.02**	**160**	P	**P**	**02 18 59.4**	**+1.5**
	baz=9.2,SNR=19						
KNRA				S	**S**	**02 20 43.0**	**+1.1**
	baz=9.2,SNR=7.1						
SGKI	**Sangatta, Kali**	**10.30**	**310**	P	**P**	**02 19 14.2**	**+2.4**
FITZ	**Fitzroy Crossi**	**10.86**	**179**	P	**P**	**02 19 18.6**	**+1.0**
	5.1nm,0.3s,baz=18,slow=8.5,SNR=124						
FITZ				S	**S**	**02 21 16.5**	**-1.7**
	1.5nm,0.3s,baz=182,slow=18,SNR=20						
FITZ	**Fitzroy Crossi**	**10.86**	**179**	P	**P**	**02 19 18.9**	**+1.2**
	baz=11,SNR=19						
FITZ				S	**S**	**02 21 17.3**	**-1.0**
	baz=11,SNR=5.3						
BBKI	**Banjar Baru**	**11.27**	**289**	P	**P**	**02 19 20.5**	**-1.7**
BAKI	**Biak**	**12.10**	**61**	P	**P**	**02 19 30.5**	**-0.6**
MBWA	**Marble Bar**	**14.99**	**201**	*e*P	**P**	**02 20 01.9**	**0.0**
	9.6nm,0.6s						
WRAB	**Tennant Creek**	**15.29**	**147**	*e*P	**P**	**02 20 05.3**	**+0.2**
	61nm,1.2s						
WRA	**Warramunga Arr**	**15.30**	**147**	P	**P**	**02 20 05.3**	**+0.2**
	3.5nm,0.3s,baz=322,slow=11,SNR=50						
WRA				S	**S**	**02 22 42.8**	**-2.5**
	baz=316,slow=18,SNR=5.1						
AS31	**Alice Springs**	**18.26**	**155**	*e*P	**P**	**02 20 36.5**	**+1.0**
ASAR	**Alice Springs**	**18.26**	**155**	P	**P**	**02 20 36.4**	**+0.8**
	7.2nm,0.3s,baz=323,slow=7.6,SNR=260						
ASAR				S	**S**	**02 23 37.9**	**-1.1**
	baz=344,slow=24,SNR=8.0						
ASAR				ScP	**ScP**	**02 27 32.5**	**-0.9**
	0.2nm,0.3s,baz=349,slow=2.4,SNR=12						
COEN	**Coen**	**18.59**	**113**	P	**P**	**02 20 39.3**	**+0.5**
	baz=19,SNR=50						
QIS	**Mount Isa**	**19.04**	**136**	P	**P**	**02 20 44.0**	**+1.2**
	baz=19,SNR=13						
XMI	**Christmas Isla**	**19.88**	**259**	S	S	02 24 27.0	+22
	baz=20,SNR=3.4						
XMIS	**Christmas Isla**	**19.92**	**259**	S	S	02 23 51.2	-15
	baz=20,SNR=3.1						
MEEK	**Meekatharra**	**20.45**	**198**	P	**P**	**02 20 56.1**	**+0.6**
	baz=21,SNR=34						
MTSU	**Mount Surprise**	**21.29**	**123**	P	**P**	**02 21 04.7**	**+1.4**
	baz=22,SNR=13						
FORT	**Forrest**	**23.60**	**175**	P	**P**	**02 21 24.8**	**+0.9**
	baz=24,SNR=27						
CTA	**Charters Tower**	**23.84**	**125**	P	**P**	**02 21 26.9**	**+0.7**
	4.6nm,0.9s,baz=260,slow=11,SNR=3.4						
KMBL	**Kambalda**	**24.31**	**188**	P	**P**	**02 21 31.1**	**+0.9**
	baz=24,SNR=12						
BLDU	**Balidu**	**24.75**	**198**	P	**P**	**02 21 34.6**	**+0.5**
	baz=25,SNR=14						
KLBR	**Kellerberrin**	**25.36**	**196**	P	**P**	**02 21 40.3**	**+0.7**
	baz=26,SNR=6.1						
QLP	**Quilpie**	**26.25**	**140**	P	**P**	**02 21 49.3**	**+1.8**
	baz=26,SNR=18						
NWAO	**Narrogin (SRO)**	**26.76**	**196**	P	**P**	**02 21 52.5**	**+0.5**
	9.2nm,0.5s,baz=21,slow=9.0,SNR=13						
BBOO	**Buckleboo**	**27.32**	**160**	P	**P**	**02 21 57.7**	**+0.8**
	baz=28,SNR=9.4						
KULM	**Kulim**	**27.75**	**296**	*e*P	**P**	**02 22 00.8**	**-0.2**
	9.6nm,1.1s						
RKGY	**Rocky Gully**	**28.42**	**195**	P	**P**	**02 22 08.6**	**+2.1**
	baz=29,SNR=7.4						
STKA	**Stephens Creek**	**28.78**	**151**	*e*P	**P**	**02 22 10.8**	**+1.1**
	6.3nm,1.1s						
STKA	**Stephens Creek**	**28.78**	**151**	P	**P**	**02 22 10.8**	**+1.1**
	18nm,0.7s,baz=325,slow=9.3,SNR=21						
STKA				pP	**pP**	**02 23 27.4**	**-3.8**
	4.1nm,0.7s,baz=8.0,slow=6.4,SNR=2.6						
STKA	**Stephens Creek**	**28.78**	**151**	P	**P**	**02 22 11.2**	**+1.4**
	baz=29,SNR=15						
TPUB	**Ta-pu**	**30.67**	**351**	*e*P	**P**	**02 22 24.3**	**-1.9**
	26nm,0.8s						
CMSA	**Cobar Meteorol**	**30.69**	**145**	P	**P**	**02 22 28.1**	**+1.8**
	baz=31,SNR=33						
ARPS	**Mount Arapiles**	**33.00**	**156**	P	**P**	**02 22 48.0**	**+2.0**
	baz=33,SNR=18						
ARMA	**Armidale**	**33.66**	**137**	P	**P**	**02 22 54.6**	**+2.7**
	baz=34,SNR=9.6						
YNG	**Young**	**34.25**	**145**	P	**P**	**02 22 59.2**	**+2.4**
	baz=34,SNR=20						
CMAR	**Chiang Mai Arr**	**36.57**	**314**	P	**P**	**02 23 15.9**	**-0.3**
	3.0nm,0.6s,baz=144,slow=6.7,SNR=15						
CMAR				PcP	**PcP**	**02 25 28.3**	**+0.8**
	1.5nm,0.5s,baz=184,slow=2.9,SNR=7.0						
CMAR				ScP	**ScP**	**02 28 29.1**	**0.0**
	1.0nm,0.6s,baz=157,slow=4.9,SNR=5.3						
CHTO	**Chiang Mai**	**36.80**	**315**	*e*P	**P**	**02 23 18.0**	**-0.2**
	4.4nm,0.9s						
GYA	**Guiyang**	**38.12**	**332**	*e*P	**P**	**02 23 30.0**	**+0.9**
GYA				pP	**pP**	**02 24 56.8**	**+2.2**
GYA				sP	**sP**	**02 25 49.0**	**+0.6**
GYA				ScP	**ScP**	**02 28 36.4**	**+1.4**
GYA				S	**S**	**02 28 51.3**	**+3.5**
GYA				ScS	**ScS**	**02 32 46.9**	**+0.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WHN	**Wuhan**	**39.01**	**345**	P	**P**	**02 23 36.3**	**+0.2**
KMI	**Kunming**	**39.03**	**326**	P	**P**	**02 23 38.3**	**+1.6**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
XAN	**Xi'an**	**43.91**	**340**	P	**P**	**02 24 13.8**	**-1.4**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KSRS	**Korea Array**	**44.45**	**3**	P	**P**	**02 24 18.9**	**-0.3**
	comp=Z,3.1nm,0.4s,baz=180,slow=9.1,SNR=11						
KSRS				PcP	**PcP**	**02 25 53.0**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=187,slow=3.9,SNR=4.2						

MAJO	**Matsushiro**	**45.08**	**14**	*e*P	**P**	**02 24 22.7**	**-1.5**
	comp=Z,10.0nm,0.8s						
MAT	**Matsushiro**	**45.08**	**14**	P	**P**	**02 24 23.1**	**-1.1**
MJAR	**Matsushiro Arr**	**45.08**	**14**	P	**P**	**02 24 22.9**	**-1.2**
	comp=Z,9.6nm,0.7s,baz=194,slow=9.3,SNR=24						
LZH	**Lanzhou**	**47.62**	**336**	*e*P	**P**	**02 24 42.3**	**-1.4**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC	**Hu-ho-hao-te**	**49.49**	**346**	*e*P	**P**	**02 24 58.3**	**+0.8**
HHC				PcP	**PcP**	**02 26 10.8**	**-0.3**
HHC				pP	**pP**	**02 26 31.0**	**+2.1**
HHC				PP	**PP**	**02 27 00.8**	**+3.0**
HHC				sP	**sP**	**02 27 22.3**	**+1.3**
HHC				S	**S**	**02 31 30.8**	**+1.5**
HHC				ScS	**ScS**	**02 33 58.3**	**-0.1**
HHC				sS	**sS**	**02 34 12.5**	**-1.5**
HHC				SS	**SS**	**02 35 09.6**	**+0.5**
HHC				pmax	pmax		
	comp=Z,43nm,0.6s						
HHC				pmax	pmax		
	comp=Z,860nm,7.0s						
ODAN	**Odare**	**50.11**	**314**	*e*P	**P**	**02 25 02.8**	**+0.3**
	comp=Z,13nm,0.5s						
TAPN	**Taplejung**	**50.18**	**315**	*e*P	**P**	**02 25 02.5**	**-0.6**
	comp=Z,11nm,0.4s						
USRK	**Ussuriysk Arra**	**51.47**	**6**	P	**P**	**02 25 11.3**	**-0.5**
	comp=Z,5.1nm,0.7s,baz=193,slow=5.9,SNR=10						
MDJ	**Mudanjiang**	**51.68**	**4**	P	**P**	**02 25 13.5**	**+0.1**
MDJ				pmax	pmax		
	comp=Z,17nm,1.0s						
GUN	**Gumba**	**51.81**	**314**	*e*P	**P**	**02 25 14.2**	**-0.9**
	comp=Z,12nm,0.5s						
PKI	**Pulchoki**	**51.95**	**313**	*e*P	**P**	**02 25 15.0**	**-1.1**
	comp=Z,9.9nm,0.5s						
PKIN	**Phulchoki**	**51.96**	**313**	*e*P	**P**	**02 25 15.4**	**-0.7**
	comp=Z,8.1nm,0.5s						
GTA	**Gaotai**	**52.12**	**335**	*e*P	**P**	**02 25 16.8**	**0.0**
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KKN	**Kakani**	**52.17**	**314**	*e*P	**P**	**02 25 15.9**	**-1.6**
KOLN	**Koldanda**	**53.38**	**312**	*e*P	**P**	**02 25 25.6**	**-0.6**
	comp=Z,10nm,0.6s						
DANN	**Dangqi**	**53.59**	**313**	*e*P	**P**	**02 25 26.2**	**-1.6**
	comp=Z,9.6nm,0.6s						
PYUN	**Piuthan**	**54.01**	**312**	*e*P	**P**	**02 25 30.1**	**-0.6**
ULN	**Ulaanbaatar**	**57.18**	**345**	*e*P	**P**	**02 25 52.1**	**-0.3**
	comp=Z,15nm,1.1s						
SONM	**Songino Array**	**57.32**	**345**	P	**P**	**02 25 53.1**	**-0.2**
	comp=Z,6.3nm,0.7s,baz=161,slow=8.1,SNR=15						
WMQ	**Urumqi**	**61.21**	**330**	*e*P	**P**	**02 26 19.3**	**-0.2**
KSH	**Kashi**	**65.22**	**320**	*i* P	**P**	**02 26 45.6**	**+0.1**
KSH				*e*PcP	**PcP**	**02 27 16.3**	**+2.9**
KSH				*e*pP	**pP**	**02 28 25.8**	**+2.1**
KSH				*e*sP	**sP**	**02 29 14.9**	**+1.1**
KSH				*e*PP	**PP**	**02 29 16.5**	**-0.3**
KSH				*e*ScP		02 30 32.1	
KSH				*e

1.3nm,0.6s,baz=88,slow=7.8,SNR=17
NVAR Mina Array Bea 73.54 42 P P 03 10 55.8 -0.3
0.7nm,0.7s,baz=234,slow=8.5,SNR=4.3
PDAR Pinedale Array 81.48 42 P P 03 11 40.3 -0.1
0.2nm,0.3s,baz=230,slow=6.9,SNR=3.5
ILAR Eielson Array 81.96 11 P P 03 11 40.9 -1.2
0.2nm,0.9s,baz=237,slow=6.3,SNR=3.7
GERES GERESS Array B 145.91 353 PKPbc PKPab 03 19 02.7 -0.2
0.2nm,0.4s,baz=11,slow=2.0,SNR=4.5
BRTR Keskin Array B 146.39 322 PKPbc PKPab 03 19 05.5 +0.4
0.4nm,0.7s,baz=50,slow=3.9,SNR=2.7

*IDC **16** 03:00:23.3±1.1,56.54N×152.29W,h0km,mb3.8/13, mb1 4.0/15,mb1mx3.9/27,mbtmp3.8/15,ML3.0/2,Error ellipse: s-maj=30.4km s-min=16.5km az=43.0*
*ISCJB **16** 03:00:24.1±0.5,56.52N±0.04×152.01W±0.07,h18km, mb3.8/13,Error ellipse: s-maj=6.3km s-min=5.7km az=11.9*
*NEIC **16** 03:00:25.0,56.42N×152.08W,h10km,ML3.2(AEIC),After AEIC.*
ISC 16 03:00:26.2±0.7,56.58N±0.07×152.07W±0.05,h18km,n70, σ1°07/75,mb3.9/13,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.93**	**314**	P		**Pb**	**03 00 42.4**	**-1.3**
KDAK	**Kodiak Island**	**1.24**	**347**	P		**Pn**	**03 00 48.5**	**0.0**
KDAK	**Kodiak Island**	**1.24**	**347**	Pn		**Pn**	**03 00 48.4**	**-0.1**
	11nm,0.3s,baz=184,slow=8.9,SNR=73							
KDAK				Sn		**Sn**	**03 01 05.3**	**+0.5**
	22nm,0.3s,baz=202,slow=19,SNR=16							
KABR	**Katmai Barrier**	**2.21**	**316**	P		**Pn**	**03 01 01.9**	**-0.1**
KAKN	**Katmai Knife C**	**2.36**	**318**	P		**Pn**	**03 01 04.7**	**+0.6**
FOSS	**Fourpeaked Sta**	**2.39**	**339**	P		**Pn**	**03 01 05.9**	**+1.4**
FONW	**Fourpeaked Sta**	**2.47**	**337**	P		**Pn**	**03 01 07.1**	**+1.5**
KELA	**Mount Kelaz**	**2.72**	**315**	P		**Pn**	**03 01 09.2**	**+0.2**
MCNL	**McNeil River**	**2.88**	**336**	P		**Pn**	**03 01 12.6**	**+1.5**
AUH	**Augustine H**	**2.89**	**346**	P		**Pn**	**03 01 12.4**	**+1.1**
OPT	**Oil Point**	**3.14**	**349**	P		**Pn**	**03 01 13.3**	**+1.5**
BRLK	**Bradley Lake**	**3.25**	**11**	P		**Pn**	**03 01 16.4**	**0.0**
BRLK				S		**Sn**	**03 01 56.7**	**+2.2**
ANNE	**Aniakchak Nort**	**3.32**	**278**	P		**Pn**	**03 01 14.6**	**-2.6**
ANNW	**Aniakchak Nort**	**3.41**	**279**	P		**Pn**	**03 01 16.8**	**-1.7**
CHGN	**Chignik**	**3.54**	**268**	*e*Pn		Pn	03 01 16.0	-4.1
ILW	**Iliamna West**	**3.54**	**351**	P		**Pn**	**03 01 21.6**	**+1.3**
SEW	**Seward**	**3.79**	**20**	P		**Pn**	**03 01 23.2**	**-0.5**
SEW				S		**Sn**	**03 02 08.7**	**+0.9**
DFR	**Drift River**	**4.04**	**356**	P		**Pn**	**03 01 28.1**	**+1.0**
SPU	**Mount Spurr**	**4.62**	**0**	P		**Pn**	**03 01 36.1**	**+1.1**
SPU				S		**Sn**	**03 02 30.1**	**+2.0**
CKL	**Chakachamna La**	**4.63**	**358**	P		**Pn**	**03 01 36.4**	**+1.1**
EYAK	**Cordova Ski Ar**	**5.17**	**37**	P		**Pn**	**03 01 43.0**	**+0.4**
VRDI	**Verde Repeater**	**6.45**	**40**	P		**Pn**	**03 02 00.5**	**+0.2**
TT01	**Tatalina**	**6.65**	**344**	P		**Pn**	**03 02 03.0**	**+0.1**
KIAG	**Kiagna River**	**6.67**	**45**	P		**Pn**	**03 02 03.7**	**+0.5**
BALM	**Baldy**	**6.74**	**44**	P		**Pn**	**03 02 04.5**	**+0.3**
GRNC	**Granite Creek**	**6.80**	**48**	P		**Pn**	**03 02 05.5**	**+0.3**
DHY	**Denali Highway**	**6.93**	**18**	P		**Pn**	**03 02 07.6**	**+0.7**
TRF	**Thorofare Moun**	**6.95**	**7**	P		**Pn**	**03 02 07.0**	**-0.1**
BARN	**Barnard Glacie**	**7.02**	**46**	P		**Pn**	**03 02 08.6**	**+0.4**
RND	**Reindeer**	**7.03**	**12**	P		**Pn**	**03 02 08.8**	**+0.6**
MCK	**McKinley**	**7.34**	**11**	*e*Pn		**Pn**	**03 02 14.2**	**+1.8**
	8.9nm,0.9s							
PNL	**Peninsula**	**7.39**	**60**	*e*Pn		**Pn**	**03 02 13.7**	**+0.7**
	27nm,0.5s							
PNL				*e*Sg		**Sg**	**03 04 20.3**	**-2.6**
WRH	**Wood River Hil**	**8.15**	**12**	P		**Pn**	**03 02 24.1**	**+0.6**
CCB	**Clear Creek Bu**	**8.36**	**13**	P		**Pn**	**03 02 25.8**	**-0.5**
ILAR	**Eielson Array**	**8.60**	**15**	Pn		**Pn**	**03 02 29.4**	**-0.2**
ILAR				Sn		**Sn**	**03 04 03.2**	**-2.8**
ILAR	**Eielson Array**	**8.60**	**15**	Pn		**Pn**	**03 02 29.4**	**-0.2**
	1.5nm,0.3s,baz=202,slow=14,SNR=111							
ILAR				Sn		**Sn**	**03 04 03.2**	**-2.8**
	0.1nm,0.3s,baz=197,slow=24,SNR=2.9							
IL1	**Eielson Array**	**8.60**	**15**	P		**Pn**	**03 02 29.3**	**-0.3**
IM3	**Indian Mountai**	**9.47**	**356**	P		**Pn**	**03 02 41.0**	**-0.5**
DIB	**Dawson Inlet,**	**11.77**	**98**	T		T	03 15 22.1	
	SNR=5.7							
INK	**Inuvik**	**14.47**	**28**	Pn		**Pn**	**03 03 50.9**	**+1.2**
INK	**Inuvik**	**14.47**	**28**	Pn		**Pn**	**03 03 50.9**	**+1.2**
	0.0nm,0.3s,baz=233,slow=15,SNR=3.8							
YKA	**Yellowknife Ar**	**19.67**	**57**	P		**Pn**	**03 04 54.6**	**-0.6**
YKA	**Yellowknife Ar**	**19.67**	**57**	P		**Pn**	**03 04 54.6**	**-0.6**
	0.1nm,0.3s,baz=271,slow=10,SNR=11							
NVAR	**Mina Array Bea**	**28.73**	**115**	P		**P**	**03 06 23.4**	**+0.9**
NVAR	**Mina Array Bea**	**28.73**	**115**	P		**P**	**03 06 23.4**	**+0.9**
	0.2nm,0.3s,baz=325,slow=7.7,SNR=4.1							
PDAR	**Pinedale Array**	**30.24**	**99**	P		**P**	**03 06 36.8**	**+0.9**
PDAR	**Pinedale Array**	**30.24**	**99**	P		**P**	**03 06 36.8**	**+0.9**
	0.4nm,0.6s,baz=345,slow=3.1,SNR=2.9							
TXAR	**Lajitas Array**	**43.38**	**108**	P		**P**	**03 08 28.5**	**+1.0**
TXAR	**Lajitas Array**	**43.38**	**108**	P		**P**	**03 08 28.5**	**+1.0**
	0.4nm,0.8s,baz=298,slow=4.7,SNR=4.6							
ARCES	**ARCESS Array B**	**54.17**	**1**	P		**P**	**03 09 48.9**	**-0.8**
ARCES	**ARCESS Array B**	**54.17**	**1**	P		**P**	**03 09 48.9**	**-0.8**
	1.4nm,0.7s,baz=22,slow=6.8,SNR=8.3							
SONM	**Songino Array**	**57.25**	**308**	P		**P**	**03 10 12.1**	**-0.2**
SONM	**Songino Array**	**57.25**	**308**	P		**P**	**03 10 12.1**	**-0.2**
	1.6nm,0.7s,baz=46,slow=8.3,SNR=5.2							
ZALV	**Zalesovo Beam**	**60.45**	**325**	P		**P**	**03 10 34.0**	**-0.2**
ZALV	**Zalesovo Beam**	**60.45**	**325**	P		**P**	**03 10 34.0**	**-0.2**
	2.0nm,0.8s,baz=29,slow=7.4,SNR=7.0							
NB2	**NORSAR Subarra**	**61.98**	**9**	P		**P**	**03 10 44.9**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=350,slow=6.9							
NOA	**NORSAR Array B**	**61.98**	**9**	P		**P**	**03 10 44.7**	**+0.2**
NOA	**NORSAR Array B**	**61.98**	**9**	P		**P**	**03 10 44.7**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=350,slow=6.7,SNR=4.0							
FINES	**FINESS Array B**	**62.30**	**1**	P		**P**	**03 10 46.8**	**+0.2**
FINES	**FINESS Array B**	**62.30**	**1**	P		**P**	**03 10 46.8**	**+0.2**
	comp=Z,2.3nm,0.9s,baz=348,slow=14,SNR=6.9							
MKAR	**Makanchi Array**	**67.44**	**323**	P		**P**	**03 11 19.6**	**-0.7**
MKAR	**Makanchi Array**	**67.44**	**323**	P		**P**	**03 11 19.6**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=42,slow=7.3,SNR=8.3							
AKASG	**Malin Array Be**	**73.08**	**359**	P		**P**	**03 11 54.1**	**-0.6**
AKASG	**Malin Array Be**	**73.08**	**359**	P		**P**	**03 11 54.1**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=355,slow=5.3,SNR=4.8							
GERES	**GERESS Array B**	**74.28**	**10**	P		**P**	**03 12 02.3**	**+0.4**
GERES	**GERESS Array B**	**74.28**	**10**	P		**P**	**03 12 02.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=349,slow=4.1,SNR=5.2							
ESDC	**Sonseca Array**	**80.38**	**24**	P		**P**	**03 12 37.6**	**+1.4**
ESDC	**Sonseca Array**	**80.38**	**24**	P		**P**	**03 12 37.6**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=345,slow=5.3,SNR=4.8							
BRTR	**Keskin Array B**	**83.94**	**356**	P		**P**	**03 12 55.4**	**+0.4**
BRTR	**Keskin Array B**	**83.94**	**356**	P		**P**	**03 12 55.4**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=316,slow=6.0,SNR=2.6							

IDC 16 03:15:47.3±2.1,15.34N×143.83E,h0km,mb3.9/4, mb1 4.2/4,mb1mx3.6/24,mbtmp3.9/4,MS3.7/1,Ms1 3.7/1, ms1mx2.8/33,Error ellipse: s-maj=189.0km s-min=25.8km az=113.0,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**26.16**	**330**	LR		LR	03 31 00.1	
	comp=Z,150nm,19.1s,baz=310,slow=35							
WRA	**Warramunga Arr**	**36.28**	**195**	P		P	03 22 53.3	+0.6
	2.2nm,0.5s,baz=20,slow=9.3,SNR=8.5							
ASAR	**Alice Springs**	**39.96**	**194**	P		P	03 23 22.8	-0.9
	0.5nm,0.5s,baz=19,slow=8.8,SNR=11							
YKA	**Yellowknife Ar**	**81.78**	**27**	P		P	03 28 06.6	-1.2
	0.4nm,0.8s,baz=290,slow=5.6,SNR=4.5							
NVAR	**Mina Array Bea**	**86.62**	**51**	P		P	03 28 34.8	+1.4
	0.6nm,0.6s,baz=260,slow=5.3,SNR=4.8							

KRSC 16 03:24:10.6±0.3,55.21N×163.24E,h5km±5km,ML3.6,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**1.03**	**347**	*e*P		Pg	03 24 30.3	0.0
KBTR				*e*S		Sb	03 24 44.4	-0.3
KBG	**Krutoberegovo**	**1.09**	**344**	*e*P		Pg	03 24 31.4	-0.1
KBG				*e*S		Sb	03 24 46.5	+0.1
MKZ	**Mys Kozlova**	**1.09**	**234**	*e*P		Pg	03 24 31.3	-0.2
MKZ				*e*S		Sb	03 24 46.1	-0.3
BKI	**Bering**	**1.57**	**89**	*e*P		Pn	03 24 38.7	-0.3
BKI				*e*S		Sn	03 24 58.4	-1.2
ZLN	**Zelenaya**	**1.60**	**301**	*e*P		Pn	03 24 39.8	+0.1
ZLN				*e*S		Sb	03 25 01.8	+0.4
BZGR	**Bezymyannyi-Gr**	**1.62**	**298**	*e*P		Pn	03 24 40.0	0.0
BZGR				*e*S		Sb	03 25 01.9	-0.1
LGNR	**Loginova**	**1.69**	**302**	*e*P		Pb	03 24 42.1	-0.4
LGNR				*e*S		Sg	03 25 05.8	+0.2
SMKR	**Semkarok**	**1.70**	**325**	*e*P		Pn	03 24 41.3	+0.3
SMKR				*e*S		Sb	03 25 04.0	-0.2
BZMR	**Bezymyannaya**	**1.72**	**296**	*e*P		Pn	03 24 41.9	+0.5
BZMR				*e*S		Sb	03 25 05.1	+0.1
BZWR	**Bezymyannyi-We**	**1.73**	**297**	*e*P		Pn	03 24 42.3	+0.7
BZWR				*e*S		Sb	03 25 05.7	+0.4
TUMR	**Tumrok**	**1.77**	**274**	*e*P		Pn	03 24 42.3	+0.2
TUMR				*e*S		Sn	03 25 04.6	-0.5
BDR	**Baidarnaya**	**1.78**	**321**	*e*P		Pn	03 24 42.3	+0.2
BDR				*e*S		Sn	03 25 05.3	+0.1
KMNR	**Kamenistaya**	**1.79**	**289**	*e*P		Pn	03 24 43.0	+0.6
KMNR				*e*S		Sb	03 25 07.0	0.0
KIRR	**Kirishev**	**1.81**	**296**	*e*P		Pn	03 24 43.4	+0.8
KIRR				*e*S		Sb	03 25 07.7	+0.3
KRSR	**Krestovskiy**	**1.82**	**305**	*e*P		Pn	03 24 42.7	0.0
KRSR				*e*S		Sn	03 25 05.7	-0.5
SRKR	**Sorokina**	**1.86**	**322**	*e*P		Pb	03 24 45.0	-0.1
SRKR				*e*S		Sg	03 25 10.2	-0.3
KPT	**Kopyto**	**1.87**	**295**	*e*P		Pb	03 24 44.6	-0.8
KPT				*e*S		Sb	03 25 09.8	+0.6
KOZ	**Kozyrevsk**	**2.09**	**295**	*e*P		Pb	03 24 48.5	-0.5
KOZ				*e*S		Sg	03 25 16.7	-1.1
SRDR	**Sredinnyy**	**2.28**	**301**	*e*P		Pn	03 24 50.3	+1.3
SRDR				*e*S		Sb	03 25 19.2	-1.6
ESO	**Esso**	**2.68**	**287**	*e*P		Pn	03 24 55.7	+1.3
SPN	**Mys Shipunski**	**2.84**	**223**	*e*P		Pn	03 24 57.0	+0.5
SPN				*e*S		Sn	03 25 31.4	+0.3
NLC	**Nalytchevo**	**3.07**	**230**	*e*P		Pn	03 24 59.9	+0.3
NLC				*e*S		Sn	03 25 36.4	-0.3
KRER	**Koryakskii**	**3.25**	**236**	*e*P		Pn	03 25 08.8	+1.3
SMAR	**Somma**	**3.25**	**235**	*e*P		Pn	03 25 03.4	+0.9
SMAR				*e*S		Sn	03 25 41.5	-0.3
UGLR	**Uglovaya**	**3.28**	**234**	*e*P		Pn	03 25 03.8	+1.1
AVH	**Avacha**	**3.28**	**235**	*e*P		Pn	03 25 04.0	+1.2
KOK	**Koryaka**	**3.31**	**236**	*e*P		Pn	03 25 04.6	+1.4
GNL	**Ganaly**	**3.44**	**246**	*e*P		Pn	03 25 06.4	+1.4
PET	**Petropavlovsk**	**3.48**	**233**	*e*P		Pn	03 25 08.8	+3.5
PET				*e*S		Sb	03 25 51.3	-3.7
RUS	**Russkaya**	**3.95**	**227**	*e*S		Sn	03 26 02.9	+4.5
MTVR	**Mutnovka**	**4.05**	**230**	*e*P		Pn	03 25 14.9	+1.5
MTVR				*e*S		Sn	03 26 02.0	+0.6
ASAK	**Asacha**	**4.25**	**230**	*e*P		Pn	03 25 18.1	+2.1

*ATH **16** 03:30:10.8,36.20N×27.74E,h35km±7km,MD3.3/5*
*DDA **16** 03:30:10.9,36.24N×27.52E,h7km,MD2.9*
*CSEM **16** 03:30:11.0±0.2,36.16N×27.59E,h5km,MD3.3,Error ellipse: s-maj=5.7km s-min=4.4km az=163.0*
*ISK **16** 03:30:12.1,36.26N×27.58E,h23km,MD3.2*
ISC 16 03:30:11.7±1.5,36.16N±0.03×27.59E±0.03,h22km±5km, n30,σ1°25/45,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.44**	**82**	*e*PB		**Pb**	**03 30 19.6**	**-1.2**
ARG				*e*SB		**Sb**	**03 30 25.3**	**-1.6**
ARG	**Arkhangelos**	**0.44**	**82**	*e*Pb		**Pb**	**03 30 19.6**	**-1.2**
ARG				*e*Sb		**Sb**	**03 30 25.3**	**-1.6**
NIS1	**Nisyros Isl.**	**0.55**	**324**	*e*PN		**Pb**	**03 30 22.7**	**-0.1**
NIS1				*e*SN		**Sn**	**03 30 32.9**	**-0.1**
NIS1	**Nisyros Isl.**	**0.55**	**324**	*e*Pn		**Pb**	**03 30 22.7**	**-0.1**
BODT	**Bodrum**	**0.93**	**346**	*e*PG		**Pn**	**03 30 29.3**	**-0.3**
BODT				*e*SG		**Sn**	**03 30 41.3**	**-1.0**
DALY	**Dalyan (Mu˘la**	**1.08**	**52**	*e*PG		**Pb**	**03 30 33.7**	**-0.1**
DALY	**Dalyan (Mu˘la**	**1.08**	**52**	*e*Pg		**Pb**	**03 30 31.7**	**-0.1**
TURN	**Turunc**	**1.09**	**49**	*i* P		Pn	03 30 26.5	-5.1
TURN				*i* S		Sb	03 30 38.1	-7.5
YER	**Yerkesik**	**1.13**	**30**	*e*PG		**Pb**	**03 30 32.3**	**-0.3**
YER	**Yerkesik**	**1.13**	**30**	*e*Pg		**Pb**	**03 30 32.3**	**-0.3**
MLSB	**Milas**	**1.15**	**8**	*e*PG		**Pn**	**03 30 31.2**	**-1.3**
FETY	**Fethiye**	**1.30**	**68**	*e*PN		**Pb**	**03 30 34.4**	**-1.1**
FETY	**Fethiye**	**1.30**	**68**	*e*Pn		**Pb**	**03 30 34.4**	**-1.1**
AYDN	**Tasoluk**	**1.52**	**9**	*i* P		**Pb**	**03 30 39.1**	**-0.2**
AYDN				*i* S		**Sb**	**03 30 57.8**	**-0.3**
AYDN	**Tasoluk**	**1.52**	**9**	*i* P		**Pb**	**03 30 39.1**	**-0.2**
AYDN				*i* S		**Sb**	**03 30 57.8**	**-0.3**
ZKR	**Zakros**	**1.52**	**227**	*e*PB		**Pb**	**03 30 39.6**	**+0.3**
ZKR				*e*SN		**Sb**	**03 30 59.4**	**+1.3**
ZKR	**Zakros**	**1.52**	**227**	*e*Pb		**Pb**	**03 30 39.6**	**+0.3**
ZKR				*e*Sn		**Sb**	**03 30 59.4**	**+1.3**
GCAM	**G?zelcaml?**	**1.57**	**350**	*i* P		**Pb**	**03 30 39.1**	**-0.9**
GCAM				*i* S		**Sb**	**03 31 01.1**	**+1.7**
GCAM	**G?zelcaml?**	**1.57**	**350**	*i* P		**Pb**	**03 30 39.1**	**-0.9**
GCAM				*i* S		**Sb**	**03 31 01.1**	**+1.7**
AKAS	**Kas**	**1.64**	**87**	*i* P		**Pb**	**03 30 41.4**	**+0.1**
AKAS				*i* S		**Sb**	**03 31 03.5**	**+2.0**
AKAS	**Kas**	**1.64**	**87**	*i* P		**Pb**	**03 30 41.4**	**+0.1**
AKAS				*i* S		**Sb**	**03 31 03.5**	**+2.0**
NPS	**Neapolis**	**1.84**	**242**	*e*PN		**Pb**	**03 30 43.6**	**-1.0**
NPS	**Neapolis**	**1.84**	**242**	*e*Pn		**Pb**	**03 30 43.6**	**-1.0**
APE	**Apeiranthos**	**1.89**	**299**	*e*PN		**Pn**	**03 30 43.0**	**+0.3**
APE	**Apeiranthos**	**1.89**	**299**	*e*PN		**Pb**	**03 30 43.8**	**-1.7**
APE	**Apeiranthos**	**1.89**	**299**	*e*Pn		**Pb**	**03 30 43.8**	**-1.7**
GOLH	**Golhisar**	**1.92**	**55**	*i* P		**Pb**	**03 30 47.7**	**+1.6**
GOLH				*i* S		**Sb**	**03 31 11.9**	**+2.2**
GOLH	**Golhisar**	**1.92**	**55**	*i* P		**Pb**	**03 30 47.7**	**+1.6**
GOLH				*i* S		**Sb**	**03 31 11.9**	**+2.2**
URLA	**Izmir**	**2.34**	**341**	*i* P		**Pn**	**03 30 48.7**	**-0.2**
URLA				*i* S		**Sb**	**03 31 23.5**	**+1.9**
URLA	**Izmir**	**2.34**	**341**	*i* P		**Pn**	**03 30 48.7**	**-0.2**
URLA				*i* S		**Sb**	**03 31 23.5**	**+1.9**

IDC 16 03:56:29.0±3.1,4.75S×133.89E,h0km,mb3.2/1, mb1 3.7/4,mb1mx3.5/18,mbtmp3.5/4,ML3.5/3,Error ellipse: s-maj=130.9km s-min=28.8km az=82.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.11**	**178**	Pn		Pn	04 00 02.6	-1.3
	0.1nm,0.3s,baz=357,slow=12,SNR=2.2							
WRA				Sn		Sn	04 02 41.0	-11
	0.2nm,0.3s,baz=360,slow=23,SNR=4.2							
FITZ	**Fitzroy Crossi**	**15.53**	**211**	Pn		Pn	04 00 09.1	-0.3
	0.4nm,0.3s,baz=35,slow=12,SNR=10							
FITZ				Sn		Sn	04 02 51.5	-11
	0.2nm,0.3s,baz=202,slow=18,SNR=3.7							
ASAR	**Alice Springs**	**18.81**	**180**	P		Pn	04 00 50.9	+0.2
	0.2nm,0.3s,baz=5.8,slow=12,SNR=19							
MKAR	**Makanchi Array**	**68.56**	**325**	P		P	04 07 33.6	0.0
	0.1nm,0.4s,baz=109,slow=7.8,SNR=2.8							

IDC 16 03:58:08.7±0.8,58.76S×25.08W,h0km,mb4.0/5, mb1 4.0/6,mb1mx3.9/18,mbtmp3.9/6,ML3.9/1,Error ellipse: s-maj=39.5km s-min=20.9km az=66.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**15.80**	**154**	Pn		Pn	04 01 52.1	-0.2
	0.4nm,0.3s,baz=317,slow=16,SNR=106							
MAW	**Mawson**	**37.30**	**141**	P		P	04 05 21.5	-0.4
	1.9nm,0.7s,baz=270,slow=10,SNR=3.6							
VNDA	**Vanda**	**43.91**	**182**	P		P	04 06 17.5	+1.1
	1.1nm,0.7s,baz=182,slow=7.0,SNR=14							
LPAZ	**La Paz**	**52.87**	**305**	P		P	04 07 26.9	0.0
	0.5nm,0.6s,baz=135,slow=1.4,SNR=3.3							
TORD	**Torodi Ar. Bea**	**74.91**	**27**	P		P	04 09 51.9	+0.7
	1.1nm,0.5s,baz=200,slow=6.2,SNR=32							
ASAR	**Alice Springs**	**96.05**	**161**	P		P	04 11 36.5	-1.4
	0.2nm,0.6s,baz=177,slow=4.6,SNR=4.0							
YKA	**Yellowknife Ar**	**138.93**	**315**	PKP	PKPdf		04 17 34.9	-0.4
	0.5nm,0.7s,baz=126,slow=2.4,SNR=8.2							
INK	**Inuvik**	**148.60**	**317**	PKPbc	PKPbc		04 17 54.5	-1.3
	2.0nm,0.9s,baz=118,slow=2.4,SNR=10							
ILAR	**Eielson Array**	**152.72**	**307**	PKPbc	PKPbc		04 18 04.7	-1.0
	0.6nm,0.7s,baz=147,slow=2.5,SNR=9.1							
ILAR				PKPab	PKPab		04 18 16.9	+0.2
	0.5nm,0.9s,baz=177,slow=2.9,SNR=4.3							

*CSEM **16** 04:17:00.9±0.5,36.07N×22.33E,h8km,ML2.0/2,Error ellipse: s-maj=10.7km s-min=6.4km az=41.0*
*ISCJB **16** 04:17:02.9±1.0,36.15N±0.06×22.43E±0.08,h27km,Error ellipse: s-maj=10.2km s-min=6.0km az=140.4*
*THE **16** 04:17:02.6,36.15N×22.39E,h7km±3km,ML2.0/2,Error ellipse: s-maj=3.6km s-min=0.7km az=7.0*
*ATH **16** 04:17:02.0,36.14N×22.38E,h16km±1km,MD2.9/9*
ISC 16 04:17:02.5±1.3,36.14N±0.05×22.41E±0.05,h27km,n27, σ0°48/36,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.52**	**74**	P		**Pb**	**04 17 13.0**	**-0.2**
KYTH	**Kithira**	**0.52**	**74**	*e*PN		**Pb**	**04 17 12.9**	**-0.2**
KYTH	**Kithira**	**0.52**	**74**	P		**Pb**	**04 17 13.0**	**-0.2**
DYR	**Agios Nikonas**	**0.62**	**354**	P		**Pb**	**04 17 14.1**	**-0.7**
DYR				S		**Sb**	**04 17 23.0**	**-0.2**
DYR	**Agios Nikonas**	**0.62**	**354**	*e*PN		**Pb**	**04 17 14.1**	**-0.7**
DYR				*e*SN		**Sb**	**04 17 22.8**	**-0.4**
DYR	**Agios Nikonas**	**0.62**	**354**	P		**Pb**	**04 17 14.1**	**-0.7**
DYR				*e*Sn		**Sb**	**04 17 22.8**	**-0.4**
VLI	**Veliai**	**0.71**	**36**	P		**Pb**	**04 17 16.0**	**-0.4**
VLI				S		**Sn**	**04 17 27.3**	**+0.4**
VLI	**Veliai**	**0.71**	**36**	*e*PN		**Pb**	**04 17 15.9**	**-0.4**
VLI				*e*SN		**Sn**	**04 17 26.7**	**-0.2**
VLI	**Veliai**	**0.71**	**36**	P		**Pb**	**04 17 16.0**	**-0.4**
VLI				*e*Sn		**Sn**	**04 17 26.7**	**-0.2**
VLI				S		**Sn**	**04 17 27.3**	**+0.4**
ANKY	**Antikythira Is**	**0.77**	**111**	*e*PN		**Pb**	**04 17 17.2**	**-0.1**
ANKY	**Antikythira Is**	**0.77**	**111**	*e*Pn		**Pb**	**04 17 17.2**	**-0.1**
PYL	**PYLOS**	**0.93**	**324**	P		**Pb**	**04 17 19.7**	**-0.2**
PYL	**PYLOS**	**0.93**	**324**	*e*PN		**Pn**	**04 17 19.4**	**-0.3**
PYL	**PYLOS**	**0.93**	**324**	*e*Pn		**Pn**	**04 17 19.4**	**-0.3**
PYL	**PYLOS**	**0.93**	**324**	P		**Pb**	**04 17 19.7**	**-0.2**
ITM	**Ithomi**	**1.11**	**339**	P		**Pb**	**04 17 23.4**	**+0.4**
ITM	**Ithomi**	**1.11**	**339**	*e*PN		**Pb**	**04 17 23.0**	**0.0**
ITM				*e*SN		**Sb**	**04 17 38.3**	**+1.3**
ITM	**Ithomi**	**1.11**	**339**	*e*Pn		**Pb**	**04 17 23.0**	**0.0**
ITM	**Ithomi**	**1.11**	**339**	P		**Pb**	**04 17 23.4**	**+0.4**
ITM				*e*Sn		**Sb**	**04 17 38.3**	**+1.3**
VLX	**Vlachokerasia**	**1.23**	**359**	*e*PN		**Pb**	**04 17 25.2**	**+0.1**
VLX	**Vlachokerasia**	**1.23**	**359**	*e*Pn		**Pb**	**04 17 25.2**	**+0.1**
KARN	**Karanos**	**1.43**	**121**	P		**Pb**	**04 17 28.4**	**0.0**
KARN	**Karanos**	**1.43**	**121**	P		**Pb**	**04 17 28.4**	**0.0**
DID	**Didima**	**1.51**	**26**	*e*PN		**Pb**	**04 17 30.5**	**+0.6**
DID	**Didima**	**1.51**	**26**	*e*Pn		**Pb**	**04 17 30.5**	**+0.6**
GUR	**Goura**	**1.79**	**358**	*e*PN		**Pb**	**04 17 34.7**	**0.0**
GUR	**Goura**	**1.79**	**358**	*e*Pn		**Pb**	**04 17 34.7**	**0.0**

*ISK **16** 04:50:32.0,40.05N×28.31E,h7km,MD2.6*
*CSEM **16** 04:50:32.6±0.2,40.07N×28.32E,h15km,MD2.6,Error ellipse: s-maj=4.1km s-min=2.7km az=42.0*
ISC 16 04:50:32.6±1.0,40.05N±0.03×28.33E±0.03,h10km±11km, n20,σ0°30/32,Turkey

| Code | Station

BVA0			⇓Sn	**Sn**	**05 43 18.5**	**+0.2**
	0.2nm,0.5s,baz=151,slow=25,SNR=5.1						
BVA0			⇑Lg	Lg	05 44 23.4		
	1.8nm,1.1s,baz=162,slow=34,SNR=6.4						
BRVK	**Borovoye**	**10.75**	**347** ⇑Lg	Lg	05 44 21.6		
	30nm,1.2s						
ZRNK	**Zerenda**	**10.89**	**343** ⇑Pn	**Pn**	**05 41 21.8**	**+0.7**
	0.6nm,0.4s						
ZRNK			⇓Sn	**Sn**	**05 43 21.5**	**-1.3**
	2.2nm,0.5s						
ZRNK			⇓Lg	Lg	05 44 27.1		
	9.0nm,1.2s						
AB31	**Akbulak array**	**11.89**	**309** ⇑Pn	**Pn**	**05 41 34.9**	**+0.1**
	2.8nm,0.6s,baz=117,slow=13,SNR=34						
AB31			⇓Sn	**Sn**	**05 43 43.5**	**-3.7**
	0.7nm,0.4s,baz=114,slow=24,SNR=9.5						
AKTO	**Aktyubinsk**	**13.55**	**311** ⇑Pn	**Pn**	**05 41 58.3**	**+0.9**
	0.5nm,0.8s						

*IDC **16** 05:54:26.0±1.7,56°.33N×152°.60W,h0km,mb3.6/9, mb1 3.8/10,mb1mx3.7/29,mbtmp3.7/10,ML3.2/1,Error ellipse: s-maj=39.0km s-min=25.4km az=24.0*
*ISCJB **16** 05:54:27.2±0.8,56°.41N±0°.06×152°.02W±0°.08,h18km, mb3.7/8,Error ellipse: s-maj=9.1km s-min=6.4km az=175.3*
*NEIC **16** 05:54:29.1,56°.38N×152°.20W,h8km,ML3.2(AEIC),After AEIC.*

ISC 16 05:54:29.0±1.0,56°.48N±0°.08×152°.17W±0°.06,h18km,n51, σ1§43/54,mb3.8/8,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.96**	**321**	P	**Pb**	**05 54 46.7**	**-0.5**
KDAK	**Kodiak Island**	**1.32**	**350**	P	**Pn**	**05 54 52.9**	**+0.3**
KDAK	**Kodiak Island**	**1.32**	**350**	Pn	**Pn**	**05 54 52.9**	**+0.3**
	5.5nm,0.3s,baz=190,slow=8.5,SNR=149						
KDAK				Sn	**Sn**	**05 55 05.5**	**-4.3**
	27nm,0.3s,baz=172,slow=14,SNR=26						
KABR	**Katmai Barrier**	**2.25**	**319**	P	**Pn**	**05 55 05.9**	**+0.6**
KAKN	**Katmai Knife C**	**2.40**	**321**	P	**Pn**	**05 55 08.7**	**+1.2**
KCE	**Katmai Mt Cerb**	**2.41**	**319**	P	**Pn**	**05 55 09.1**	**+1.6**
FOSS	**Fourpeaked Sta**	**2.46**	**341**	P	**Pn**	**05 55 09.9**	**+1.6**
FONW	**Fourpeaked Sta**	**2.54**	**339**	P	**Pn**	**05 55 11.1**	**+1.8**
KELA	**Mount Kelaz**	**2.75**	**317**	P	**Pn**	**05 55 13.0**	**+0.7**
MCNL	**McNeil River**	**2.95**	**338**	P	**Pn**	**05 55 16.8**	**+1.8**
AUW	**Augustine West**	**2.98**	**347**	P	**Pn**	**05 55 17.4**	**+2.1**
AUL	**Augustine Lava**	**2.99**	**347**	P	**Pn**	**05 55 17.3**	**+1.8**
OPT	**Oil Point**	**3.23**	**350**	P	**Pn**	**05 55 20.6**	**+1.8**
BRLK	**Bradley Lake**	**3.36**	**11**	P	**Pn**	**05 55 20.9**	**+0.3**
BRLK				S	**Sn**	**05 56 00.9**	**+0.8**
ANNW	**Aniakchak Nort**	**3.37**	**281**	P	**Pn**	**05 55 19.6**	**-1.1**
ILW	**Iliamna West**	**3.63**	**352**	P	**Pn**	**05 55 26.0**	**+1.6**
SEW	**Seward**	**3.91**	**20**	P	**Pn**	**05 55 27.8**	**-0.2**
SEW				S	**Sn**	**05 56 14.7**	**+1.3**
RSO	**Redoubt South**	**4.00**	**356**	*e*Pn	**Pn**	**05 55 30.5**	**+0.9**
DFR	**Drift River**	**4.13**	**356**	P	**Pn**	**05 55 33.4**	**+2.1**
SPU	**Mount Spurr**	**4.72**	**1**	P	**Pn**	**05 55 40.7**	**+1.5**
CKL	**Chakachamna La**	**4.73**	**359**	P	**Pn**	**05 55 40.5**	**+1.0**
BGL	**Barrier Glacie**	**4.80**	**359**	P	**Pn**	**05 55 42.1**	**+1.7**
STLK	**Strandline Lak**	**5.04**	**2**	P	**Pn**	**05 55 45.2**	**+1.6**
EYAK	**Cordova Ski Ar**	**5.29**	**37**	P	**Pn**	**05 55 47.4**	**+0.4**
SML	**Sawmill**	**5.70**	**19**	*e*Pn	**Pn**	**05 55 53.5**	**+0.9**
	4.4nm,0.9s						
PPLA	**Purkeypile**	**6.44**	**360**	*e*Pn	**Pn**	**05 56 04.2**	**+1.3**
	16nm,1.2s						
TT01	**Tatalina**	**6.73**	**345**	P	**Pn**	**05 56 07.5**	**+0.6**
KIAG	**Kiagna River**	**6.78**	**45**	P	**Pn**	**05 56 08.2**	**+0.5**
BALM	**Baldy**	**6.85**	**44**	P	**Pn**	**05 56 09.2**	**+0.6**
GRNC	**Granite Creek**	**6.91**	**48**	P	**Pn**	**05 56 09.7**	**+0.2**
DHY	**Denali Highway**	**7.04**	**18**	P	**Pn**	**05 56 12.3**	**+1.0**
TRF	**Thorofare Moun**	**7.06**	**7**	P	**Pn**	**05 56 11.6**	**+0.2**
BARN	**Barnard Glacie**	**7.13**	**46**	P	**Pn**	**05 56 13.4**	**+0.8**
PAX	**Paxson**	**7.33**	**25**	*e*Pn	**Pn**	**05 56 17.3**	**+2.1**
	4.7nm,0.7s						
PNL	**Peninsula**	**7.49**	**59**	P	**Pn**	**05 56 18.0**	**+0.7**
WRH	**Wood River Hil**	**8.27**	**12**	P	**Pn**	**05 56 29.9**	**+2.1**
ILAR	**Eielson Array**	**8.71**	**15**	Pn	**Pn**	**05 56 35.6**	**+1.7**
	0.6nm,0.3s,baz=201,slow=14,SNR=61						
ILAR				Sn	**Sn**	**05 58 08.5**	**-3.1**
	0.1nm,0.3s,baz=204,slow=22,SNR=3.3						
IL1	**Eielson Array**	**8.71**	**15**	P	**Pn**	**05 56 34.0**	**0.0**
IM3	**Indian Mountai**	**9.57**	**356**	P	**Pn**	**05 56 46.0**	**+0.3**
DIB	**Dawson Inlet,**	**11.81**	**98**	T	T	06 09 26.4	
	SNR=3.6						
INK	**Inuvik**	**14.58**	**28**	Pn	**P**	**05 57 58.3**	**-2.2**
	0.1nm,0.3s,baz=220,slow=12,SNR=9.6						
YKA	**Yellowknife Ar**	**19.77**	**57**	P	**Pn**	**05 58 59.7**	**+0.4**
	0.6nm,0.6s,baz=268,slow=12,SNR=10						
YKA				S	Sn	06 02 53.6	+13
	0.3nm,0.5s,baz=188,slow=27,SNR=7.1						
PDAR	**Pinedale Array**	**30.28**	**99**	P	**P**	**06 00 41.1**	**+1.9**
	0.2nm,0.5s,baz=316,slow=2.5,SNR=2.9						
ARCES	**ARCESS Array B**	**54.28**	**1**	P	**P**	**06 03 53.2**	**-0.1**
	0.5nm,0.6s,baz=14,slow=8.4,SNR=4.6						
NB2	**NORSAR Subarra**	**62.09**	**9**	P	**P**	**06 04 49.0**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=349,slow=6.9						
NOA	**NORSAR Array B**	**62.09**	**9**	P	**P**	**06 04 49.4**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=350,slow=6.7,SNR=4.5						
FINES	**FINESS Array B**	**62.41**	**1**	P	**P**	**06 04 51.5**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=356,slow=8.9,SNR=3.0						
KURBB	**Kurchatov Arra**	**65.32**	**327**	P	**P**	**06 05 08.8**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=40,slow=5.7,SNR=3.3						
BVAR	**Borovoye Array**	**65.41**	**333**	P	**P**	**06 05 10.2**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=14,slow=6.9,SNR=4.1						
MKAR	**Makanchi Array**	**67.48**	**323**	P	**P**	**06 05 23.6**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=45,slow=7.5,SNR=5.0						
AKASG	**Malin Array Be**	**73.18**	**359**	P	**P**	**06 05 58.7**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=357,slow=5.7,SNR=4.5						

IDC 16 06:08:37.1±0.9,9°.41S×158°.38E,h0km,mb4.0/6, mb1 4.2/6,mb1mx3.9/17,mbtmp4.0/6,MS3.6/1,Ms1 3.6/1, ms1mx2.8/19,Error ellipse: s-maj=29.5km s-min=17.3km az=157.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.55**	**91**	Pn	Pn	06 09 05.0	-0.9
	98nm,0.3s,baz=252,slow=5.3,SNR=12						
HNR				Sn	Sg	06 09 29.1	+2.2
	313nm,0.3s,baz=180,slow=20,SNR=10						
DZM	**Mont Dzumac**	**14.79**	**149**	Pn	P	06 12 11.6	-2.4
	0.2nm,0.3s,baz=326,slow=14,SNR=8.3						
WRA	**Warramunga Arr**	**25.47**	**243**	P	P	06 14 07.7	+0.5
	3.4nm,1.0s,baz=69,slow=9.8,SNR=7.4						
STKA	**Stephens Creek**	**27.25**	**212**	P	P	06 14 23.4	+0.3
	2.1nm,0.6s,baz=45,slow=13,SNR=2.7						
ASAR	**Alice Springs**	**27.35**	**236**	P	P	06 14 24.1	-0.1
	1.7nm,0.9s,baz=63,slow=8.7,SNR=13						
RPZ	**Rata Peaks**	**35.92**	**164**	LR	LR	06 26 00.1	
	comp=Z,107nm,21.2s,baz=216,slow=29						
PETK	**Petropavlovsk-**	**62.27**	**360**	P	P	06 19 01.8	+1.1
	3.1nm,0.9s,baz=177,slow=8.7,SNR=3.9						
ILAR	**Eielson Array**	**84.41**	**21**	P	P	06 21 08.6	-2.6
	0.6nm,0.8s,baz=256,slow=4.6,SNR=6.0						
MKAR	**Makanchi Array**	**87.42**	**318**	P	P	06 21 24.8	-1.7
	0.3nm,0.6s,baz=97,slow=4.8,SNR=4.7						
NVAR	**Mina Array Bea**	**90.59**	**51**	P	P	06 21 42.1	+0.2
	0.5nm,0.8s,baz=230,slow=7.4,SNR=3.7						

MEX 16 06:26:52.5±0.8,16°.71N×94°.53W,h120km±16km,MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGIG		**1.35**	**87**	*e*P	Pn	06 27 17.4	-0.9
TGIG				*i* S	Sn	06 27 35.6	-2.3
PCIG		**1.61**	**128**	*i* P	Pn	06 27 19.6	-1.6
PCIG				*e*S	Sn	06 27 41.9	-1.2
HUIG	**Huatulco**	**1.78**	**239**	*i* P	Pn	06 27 21.5	-1.8
HUIG				*i* S	Sn	06 27 45.4	-1.4
VHO	**Vista Hermosa**	**2.14**	**280**	*i* P	Pn	06 27 27.3	-0.7
VHO				*e*S	Sn	06 27 54.0	-1.2
CCIG	**Comitan**	**2.33**	**100**	*e*P	Pn	06 27 30.1	-0.4
CCIG				*i* S	Sn	06 27 57.8	-1.6
PNIG	**Pinotepa**	**3.47**	**265**	*i* P	Pn	06 27 44.1	-0.9
PNIG				*i* S	Sn	06 28 24.5	-1.1

IDC 16 06:31:08.7±3.1,31°.55S×177°.98W,h0km,mb3.8/2, mb1 4.0/3,mb1mx3.7/19,mbtmp3.8/3,ML3.0/1,Error ellipse: s-maj=72.7km s-min=36.8km az=113.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.81**	**210**	Pn	Pn	06 33 04.1	+0.5
	0.2nm,0.3s,baz=187,slow=16,SNR=4.8						
URZ				Sn	Sn	06 34 31.7	-1.0
	0.9nm,0.3s,baz=130,slow=17,SNR=7.3						
ASAR	**Alice Springs**	**43.07**	**268**	P	P	06 39 10.7	0.0
	0.5nm,0.5s,baz=105,slow=8.1,SNR=7.6						
WRA	**Warramunga Arr**	**44.17**	**273**	P	P	06 39 19.3	-0.2
	1.0nm,0.5s,baz=110,slow=8.0,SNR=6.5						
ARCES	**ARCESS Array B**	**139.72**	**347**	PKhKP	PKPpre	06 50 17.9	
	1.2nm,0.8s,baz=34,slow=7.0,SNR=2.5						
FINES	**FINESS Array B**	**146.23**	**339**	PKPbc	PKPdf	06 50 49.4	+0.1
	0.7nm,0.6s,baz=40,slow=3.2,SNR=5.5						

MEX 16 06:31:19.2±0.5,14°.87N×94°.00W,h12km±7km,MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.12**	**42**	*i* P	Pb	06 31 36.9	-3.7
PCIG				*i* S	Sb	06 31 50.7	-4.4
THIG		**1.67**	**88**	*e*P	Pn	06 31 45.3	-3.0
THIG				*i* S	Sn	06 32 04.7	-5.0
TGIG		**2.08**	**24**	*e*P	Pn	06 31 51.3	-2.7
TGIG				*e*S	Sn	06 32 15.7	-4.2
HUIG	**Huatulco**	**2.23**	**294**	*i* P	Pn	06 31 52.6	-3.4
HUIG				*i* S	Sn	06 32 20.0	-3.5
CCIG	**Comitan**	**2.28**	**52**	*e*P	Pn	06 31 54.7	-2.3
CCIG				*i* S	Sn	06 32 20.9	-4.2
VHO	**Vista Hermosa**	**3.43**	**310**	*i* P	Pn	06 32 10.8	-2.0
VHO				*i* S	Sn	06 32 49.7	-3.9
PNIG	**Pinotepa**	**4.26**	**291**	*i* P	Pn	06 32 22.4	-1.6
PNIG				*i* S	Sn	06 33 11.0	-2.7

IDC 16 06:38:36.9±7.3,7°.24S×108°.22E,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.6/23,mbtmp3.8/3,Error ellipse: s-maj=492.9km s-min=100.1km az=59.0,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**27.13**	**340**	P	P	06 44 21.8	-0.1
	1.0nm,0.6s,baz=176,slow=8.4,SNR=6.2						
MKAR	**Makanchi Array**	**58.53**	**339**	P	P	06 48 35.1	-0.1
	0.8nm,0.6s,baz=142,slow=7.4,SNR=11						
ZALV	**Zalesovo Beam**	**64.07**	**345**	P	P	06 49 12.6	+0.1
	0.6nm,0.5s,baz=149,slow=7.1,SNR=4.6						
TXAR	**Lajitas Array**	**142.81**	**50**	PKP	PKPdf	06 58 12.7	-0.6
	0.7nm,0.9s,baz=268,slow=4.5,SNR=4.2						

*ISCJB **16** 06:45:12.6±1.0,9.37°.75N±0°.07×72°.76E±0°.1,h119km,Error ellipse: s-maj=16.7km s-min=7.2km az=155.2*
*NNC **16** 06:45:18.8±13.0,38°.43N×72°.53E,h0km,mb3.7,mpv3.6, Error ellipse: s-maj=113.2km s-min=76.9km az=177.0*

ISC 16 06:45:12.4±1.2,37°.8N±0°.1×72°.6E±0°.1,h119km,n10, σ1§42/11,2C-4D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.56**	**344**	⇑P	**Pn**	**06 46 34.3**	**+1.5**
	12nm,0.3s,baz=152,slow=11,SNR=125						
KK31				⇓S	**Sn**	**06 47 32.5**	**-3.1**
	6.5nm,0.4s,baz=152,slow=24,SNR=12						
TKM2	**Tokmak 2**	**5.65**	**23**	⇓P	Pn	06 46 37.7	+3.4
	0.9nm,0.4s						
TKM2				⇓S	**Sn**	**06 47 38.2**	**+0.1**
	4.2nm,0.7s						
PYUN	**Piuthan**	**13.01**	**135**	*e*P	**Pn**	**06 48 12.5**	**-0.5**
	18nm,0.4s						
DANN	**Dangsing**	**13.26**	**132**	*e*P	**Pn**	**06 48 15.3**	**-1.1**
	14nm,0.5s						
KOLN	**Koldanda**	**13.61**	**134**	*e*P	**Pn**	**06 48 20.8**	**+0.1**
	5.8nm,0.4s						
AB31	**Akbulak array**	**14.67**	**326**	⇑P	**Pn**	**06 48 33.5**	**-0.4**
	0.3nm,0.2s						
PKIN	**Phulchoki**	**14.81**	**130**	*e*P	**Pn**	**06 48 36.4**	**+0.2**
	7.7nm,0.5s						
GUN	**Gumba**	**14.88**	**127**	*e*P	**Pn**	**06 48 36.5**	**-0.5**
AKTO	**Aktyubinsk**	**16.38**	**325**	⇓P	**P**	**06 48 57.4**	**+1.5**
	0.3nm,0.7s						
TAPN	**Taplejung**	**16.43**	**125**	*e*P	**P**	**06 48 56.6**	**-0.4**
	7.4nm,0.5s						

*UPP **16** 06:52:26.0,57°.72N×22°.75E,h0km,ML2.1,Mining explosion.*
*ISCJB **16** 06:52:28.1±0.5,57°.88N±0°.04×22°.36E±0°.06,h0km,Error ellipse: s-maj=6.0km s-min=3.5km az=146.5*
*IDC **16** 06:52:28.4±2.9,57°.80N×22°.32E,h0km,mb1 3.1/3, mb1mx2.9/26,mbtmp3.0/3,ML2.5/3,Error ellipse: s-maj=31.2km s-min=13.2km az=159.0*
*CSEM **16** 06:52:28.9±0.2,57°.83N×22°.36E,h2km,ML2.6,Error ellipse: s-maj=5.3km s-min=2.8km az=148.0,Mining explosion.*
*HEL **16** 06:52:29.0±0.3,57°.82N×22°.32E,h0km,ML2.0, ML2.1(UPP),Explosion*
*NAO **16** 06:52:30.0±2.0,57°.94N×22°.31E,ML2.1*
*BER **16** 06:52:31.0±4.3,57°.86N×22°.25E,h0km±21km, ML2.1(NAO)*

ISC 16 06:52:28.6±0.9,57°.84N±0°.04×22°.26E±0°.03,h0km,n68, σ1§41/106,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.22**	**176**	*e*P	**Pg**	**06 52 33.1**	**+0.4**
	SNR=22						
MTSE	**Matsula**	**1.20**	**43**	*e*P	**Pg**	**06 52 49.6**	**-1.9**
MTSE				*e*S	**Sg**	**06 53 05.2**	**-1.8**
MTSE	**Matsula**	**1.20**	**43**	P	**Pg**	**06 52 49.6**	**-1.9**
MTSE				S	**Sg**	**06 53 05.2**	**-1.8**
GOTU	**Gotland**	**1.99**	**267**	P	**Pn**	**06 53 04.0**	**+0.6**
GOTU	**Gotland**	**1.99**	**267**	P	**Pn**	**06 53 04.0**	**+0.6**
VSU	**Vasula**	**2.45**	**73**	Pn	**Pn**	**06 53 09.4**	**-0.4**
VSU				Sn	**Sn**	**06 53 40.6**	**+0.3**
VSU	**Vasula**	**2.45**	**73**	Pn	**Pn**	**06 53 09.4**	**-0.4**
VSU				Sn	**Sn**	**06 53 40.6**	**+0.3**
VSU	**Vasula**	**2.45**	**73**	*e*P	**Pn**	**06 53 10.2**	**+0.5**
VSU				*e*S	**Sn**	**06 53 40.3**	**-0.1**
VSU	**Vasula**	**2.45**	**73**	*e*P	**Pn**	**06 53 09.6**	**-0.1**
	SNR=20						
VSU				S	**Sn**	**06 53 40.3**	**-0.1**
VSU				Sn	**Sn**	**06 53 40.6**	**+0.3**
	SNR=50						
NYNU	**Nynaeshamn**	**2.52**	**299**	P	**Pn**	**06 53 12.0**	**+1.2**
NYNU	**Nynaeshamn**	**2.52**	**299**	P	**Pn**	**06 53 12.0**	**+1.2**
AAL	**Aland**	**2.62**	**334**	*e*P	**Pn**	**06 53 12.5**	**+0.5**
AAL				*e*S	**Sn**	**06 53 45.6**	**+1.0**
AAL	**Aland**	**2.62**	**334**	P	**Pn**	**06 53 12.5**	**+0.5**
AAL				S	**Sn**	**06 53 45.5**	**+1.0**
MEF	**Metsahovi**	**2.62**	**24**	*e*P	**Pn**	**06 53 13.8**	**+1.7**
MEF				*e*S	**Sn**	**06 53 45.4**	**+0.7**
MEF	**Metsahovi**	**2.62**	**24**	*e*P	**Pn**	**06 53 13.8**	**+1.7**
	SNR=16						
MEF				S	**Sn**	**06 53 45.3**	**+0.7**
NRTU	**Norrtaelje**	**2.64**	**316**	P	**Pn**	**06 53 13.3**	**+0.9**
NRTU	**Norrtaelje**	**2.64**	**316**	P	**Pn**	**06 53 13.2**	**+0.9**
VIKU	**Vikbolandet**	**3.02**	**285**	P	**Pn**	**06 53 18.9**	**+1.2**
VIKU	**Vikbolandet**	**3.02**	**285**	P	**Pn**	**06 53 18.8**	**+1.2**
GRAU	**Graesoe**	**3.15**	**324**	P	**Pn**	**06 53 19.7**	**+0.3**
GRAU	**Graesoe**	**3.15**	**324**	P	**Pn**	**06 53 19.7**	**+0.3**
RAF	**Rauma**	**3.20**	**356**	*e*P	**Pn**	**06 53 20.8**	**+0.8**
RAF				*e*S	**Sn**	**06 53 59.8**	**+0.9**
RAF	**Rauma**	**3.20**	**356**	P	**Pn**	**06 53 20.8**	**+0.8**
RAF				S	**Sn**	**06 53 59.7**	**+0.9**
FLYU	**Flymyra**	**3.22**	**317**	P	**Pn**	**06 53 21.7**	**+1.4**
FLYU	**Flymyra**	**3.22**	**317**	P	**Pn**	**06 53 21.7**	**+1.4**
PVF	**Pernaja**	**3.28**	**33**	*e*P	**Pn**	**06 53 22.5**	**+1.3**
PVF				*e*S	**Sn**	**06 54 00.3**	**-0.5**
PVF	**Pernaja**	**3.28**	**33**	P	**Pn**	**06 53 22.4**	**+1.3**
PVF				S	**Sn**	**06 54 00.3**	**-0.5**
BACU	**Backbrunna**	**3.35**	**309**	P	**Pn**	**06 53 23.3**	**+1.2**
BACU	**Backbrunna**	**3.35**	**309**	P	**Pn**	**06 53 23.3**	**+1.2**
OSKU	**Oskarshamn**	**3.39**	**262**	P	**Pn**	**06 53 23.7**	**+1.1**
OSKU	**Oskarshamn**	**3.39**	**262**	P	**Pn**	**06 53 23.7**	**+1.1**
LNKU	**Linkoeping**	**3.61**	**279**	P	**Pn**	**06 53 27.1**	**+1.3**
LNKU	**Linkoeping**	**3.61**	**279**	P	**Pn**	**06 53 27.0**	**+1.3**
VJF	**Virojoki**	**3.83**	**43**	*e*P	**Pn**	**06 53 28.6**	**-0.2**
VJF				*e*S	**Sn**	**06 54 13.7**	**-0.8**
VJF	**Virojoki**	**3.83**	**43**	P	**Pn**	**06 53 28.6**	**-0.2**
VJF				S	**Sn**	**06 54 13.7**	**-0.8**
VXJU	**Vaexsjoe**	**4.07**	**260**	P	**Pn**	**06 53 32.4**	**+0.4**
VXJU	**Vaexsjoe**	**4.07**	**260**	P	**Pn**	**06 53 32.4**	**+0.4**
FIA0	**FINESS Array S**	**4.10**	**27**	Pn	**Pn**	**06 53 32.8**	**+0.4**
	baz=203,slow=12						
FIA0				Pg	**Pb**	**06 53 40.8**	**-0.7**
	baz=204,slow=16						
FIA0				Sn	**Sn**	**06 54 21.1**	**+0.1**
	baz=222,slow=28						
FIA0				Lg	Lg	06 54 36.2	
	baz=212,slow=28						
FIA0	**FINESS Array S**	**4.10**	**27**	Pn	**Pn**	**06 53 32.8**	**+0.4**
	baz=203,slow=12						
FIA0				Pg	**Pb**	**06 53 40.8**	**-0.7**
	baz=204,slow=16						
FIA0				Sn	**Sn**	**06 54 21.1**	**+0.1**
	baz=222,slow=28						
FIA0				Lg	Lg	06 54 36.2	
	baz=212,slow=28						
FIA0	**FINESS Array S**	**4.10**	**27**	*e*P	**Pn**	**06 53 32.5**	**+0.1**
FIA0				*e*S	**Sn**	**06 54 19.8**	**-1.1**
FIA0				*e*SG	**Sb**	**06 54 35.3**	**+3.8**
FIA0				MSG		06 54 40.1	
	comp=Z,2.0nm,0.3s						
FIA0	**FINESS Array S**	**4.10**	**27**	P	**Pn**	**06 53 32.5**	**+0.1**
FIA0	**FINESS Array S**	**4.10**	**27**	Pn	**Pn**	**06 53 32.8**	**+0.4**
	baz=203,slow=12,SNR=50						
FIA0				S	**Sn**	**06 54 19.8**	**-1.1**
FIA0				Sn	**Sn**	**06 54 21.1**	**+0.1**
	baz=222,slow=23,SNR=50						
FIA0				Sg	**Sb**	**06 54 35.2**	**+3.8**
FIA0				Lg	Lg	06 54 36.2	
	baz=212,slow=25,SNR=9.4						
FINES	**FINESS Array B**	**4.10**	**27**	Pn	**Pn**	**06 53 32.8**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=209,slow=12,SNR=7.8						
FINES				Pg	**Pb**	**06 53 42.2**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=209,slow=14,SNR=20						
FINES				Lg	Lg	06 54 37.1	
	comp=Z,1.4nm,0.3s,baz=204,slow=25,SNR=12						
NRAU	**Nora**	**4.15**	**298**	P	**Pn**	**06 53 34.4**	**+1.4**
NRAU	**Nora**	**4.15**	**298**	P	**Pn**	**06 53 34.4**	**+1.4**
KEF	**Keuruu**	**4.53**	**16**	*e*P	**Pn**	**06 53 39.5**	**+1.2**
KEF				*e*S	**Sn**	**06 54 30.4**	**-1.2**
KEF				*e*SG	**Sb**	**06 54 48.3**	**+4.4**
KEF				MSG		06 54 52.0	
	comp=Z,2.4nm,0.3s						
KEF	**Keuruu**	**4.53**	**16**	P	**Pn**	**06 53 39.5**	**+1.2**
KEF				S	**Sn**	**06 54 30.4**	**-1.2**
ARNU	**Arnoeviken**	**4.58**	**329**	P	**Pn**	**06 53 39.8**	**+0.8**
ARNU	**Arnoeviken**	**4.58**	**329**	P	**Pn**	**06 53 39.8**	**+0.8**
KAF	**Kangasniemi**	**4.74**	**24**	*e*P	**Pn**	**06 53 41.4**	**+0.2**
KAF				*e*S	**Sn**	**06 54 35.4**	**-1.4**
KAF				*e*SG	**Sb**	**06 54 54.3**	**+4.4**
KAF				MSG		06 54 58.0	
	comp=Z,1.4nm,0.3s						
KAF	**Kangasniemi**	**4.74**	**24**	P	**Pn**	**06 53 41.4**	**+0.2**
KAF				S	**Sn**	**06 54 35.4**	**-1.4**
HFS	**Hagfors**	**4.99**	**301**	Pn	**Pn**	**06 53 45.5**	**+0.9**
	baz=132,slow=12						
HFS				Sn	**Sn**	**06 54 40.6**	**-2.4**
	baz=112,slow=22						
HFS				Lg	Lg	06 55 04.6	
	baz=106,slow=28						
HFS	**Hagfors**	**4.99**	**301**	Pn	**Pn**	**06 53 45.5**	**+0.9**
	baz=132,slow=12						
HFS				Sn	**Sn**	**06 54 40.6**	**-2.4**
	baz=112,slow=22						
HFS				Lg	Lg	06 55 04.6	
	baz=106,slow=28						
HFS	**Hagfors**	**4.99**	**301**	Pn	**Pn**	**06 53 45.5**	**+0.9**
	baz=132,slow=12,SNR=50						
HFS				Sn	**Sn**	**06 54 40.6**	**-2.4**
	baz=112,slow=21,SNR=50						
HFS				Lg	Lg	06 55 04.6	
	baz=106,slow=26,SNR=5.3						
VAF	**Ylistaro**	**5.22**	**2**	*e*P	**Pn**	**06 53 48.6**	**+0.9**
VAF				*e*SB	**Sb**	**06 55 05.2**	**+1.5**
VAF				MSG		06 55 10.8	
	comp=Z,2.3nm,0.3s						
VAF	**Ylistaro**	**5.22**	**2**	P	**Pn**	**06 53 48.6**	**+0.9**
VAF				Sb	**Sb**	**06 55 05.2**	**+1.5**
SUF	**Sumiainen**	**5.26**	**20**	*e*P	**Pn**	**06 53 48.6**	**+0.3**
SUF				*e*S	**Sn**	**06 54 48.8**	**-0.8**
SUF				*e*SG	**Sb**	**06 55 10.2**	**+5.3**
SUF				MSG		06 55 12.1	
	comp=Z,1.5nm,0.4s

TXAR	**Lajitas Array**	**27.19**	**319**	P	P	07 03 46.4	+8.6
	0.4nm,0.7s,baz=138,slow=9.5,SNR=5.8							
NVAR	**Mina Array Bea**	**42.34**	**318**	P	P	07 05 57.8	+10
	0.3nm,0.6s,baz=123,slow=7.6,SNR=3.6							
NVAR				PcP	PcP	07 07 49.4	+7.6
	0.7nm,0.8s,baz=138,slow=4.2,SNR=5.0							
YKA	**Yellowknife Ar**	**57.35**	**343**	P	P	07 07 46.5	+4.8
	0.2nm,0.8s,baz=134,slow=6.4,SNR=4.8							

MEX 16 07:06:03.2±0.6, 16°24'N×96°17'W, h36km±8km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.48**	**173**	*i* P	Pn	07 06 11.8	-1.7
HUIG				*i* S	Sn	07 06 18.9	-1.8
VHO	**Vista Hermosa**	**0.98**	**327**	*i* P	Pn	07 06 18.8	-1.9
VHO				*i* S	Sn	07 06 31.0	-2.6
PNIG	**Pinotepa**	**1.89**	**275**	*i* P	Pn	07 06 31.4	-1.5
PNIG				*i* S	Sn	07 06 53.2	-2.3
UTMO	**Huajuapan**	**2.22**	**315**	*i* P	Pn	07 06 36.9	-0.9
UTMO				*i* S	Sn	07 07 02.6	-1.6
PCIG		**2.89**	**100**	*e*P	Pn	07 06 45.5	-1.1
PCIG				*e*S	Sn	07 07 18.0	-2.2
TGIG		**2.97**	**79**	*e*P	Pn	07 06 46.9	-1.0
TGIG				*e*S	Sn	07 07 20.2	-2.2

*ISCJB **16** 07:08:06.2±0.6, 47°.1N±0°.1×153°.1E±0°.2, h56km, mb3.6/8, Error ellipse: s-maj=22.7km s-min=7.3km az=143.3*
*IDC **16** 07:08:07.8±1.1, 47°.10N×152°.64E, h62km±8km, mb3.3/8, mb1 3.6/9, mb1mx3.4/26, mbtmp3.3/9, Error ellipse: s-maj=30.7km s-min=20.4km az=127.0*
*MOS **16** 07:08:07.6±1.4, 47°.22N×152°.77E, h77km, mb4.2/3, Error ellipse: s-maj=36.7km s-min=13.6km az=62.5*

ISC 16 07:08:08.5±0.7, 47°.2N±0°.2×153°.0E±0°.1, h56km, n14, σ1§89/18, mb3.5/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.06**	**243**	PN	**Pn**	**07 09 08.5**	**+0.5**
KUR				S	**Sn**	**07 09 56.0**	**+1.8**
KUR				pmax	pmax		
	comp=Z,110nm,0.8s						
KUR				smax	smax		
	comp=N,230nm,0.5s						
KUR				smax	smax		
	comp=E,150nm,0.5s						
SKR	**Severo-Kuril's**	**4.07**	**29**	*e*PN	**Pn**	**07 09 07.4**	**-0.7**
SKR				*e*		07 09 50.0	
PETK	**Petropavlovsk-**	**6.66**	**25**	PN	**Pn**	**07 09 46.0**	**+2.3**
PETK	**Petropavlovsk-**	**6.66**	**25**	P	**Pn**	**07 09 46.0**	**+2.3**
	comp=E,0.3nm,0.3s,baz=208,slow=13,SNR=3.3						
FX1	**Attu Island--F**	**14.14**	**59**	P	**Pn**	**07 11 25.6**	**-0.1**
	comp=E,1.3nm,0.3s,baz=285,slow=20,SNR=4.3						
FX1				S	Sn	07 13 50.9	-10
	comp=E,1.1nm,0.3s,baz=41,slow=19,SNR=4.6						
ILAR	**Eielson Array**	**36.27**	**39**	P	**P**	**07 15 06.4**	**+0.5**
	comp=E,1.0nm,1.1s,baz=267,slow=6.7,SNR=6.0						
ILAR				pP	**pP**	**07 15 21.7**	**+1.6**
	comp=E,0.4nm,0.8s,baz=257,slow=7.2,SNR=3.0						
MKAR	**Makanchi Array**	**46.67**	**297**	P	**P**	**07 16 28.3**	**-3.0**
MKAR	**Makanchi Array**	**46.67**	**297**	P	**P**	**07 16 28.3**	**-3.0**
	comp=E,0.2nm,0.5s,baz=40,slow=5.6,SNR=2.9						
YKA	**Yellowknife Ar**	**50.63**	**37**	P	**P**	**07 17 01.9**	**+0.5**
	comp=E,0.2nm,0.5s,baz=298,slow=6.9,SNR=5.5						
YKA				pP	**pP**	**07 17 17.9**	**+1.7**
	comp=E,0.6nm,0.6s,baz=296,slow=7.0,SNR=9.2						
NVAR	**Mina Array Bea**	**62.31**	**62**	P	**P**	**07 18 25.4**	**+0.3**
	comp=E,0.4nm,0.6s,baz=304,slow=8.2,SNR=3.8						
FINES	**FINESS Array B**	**63.62**	**335**	P	**P**	**07 18 31.3**	**-1.8**
	comp=E,1.1nm,0.7s,baz=60,slow=5.5,SNR=4.9						
WRA	**Warramunga Arr**	**68.89**	**199**	P	**P**	**07 19 04.8**	**-2.4**
	comp=E,0.3nm,0.8s,baz=16,slow=6.7,SNR=2.9						
ASAR	**Alice Springs**	**72.59**	**198**	P	**P**	**07 19 27.8**	**-1.9**
	comp=E,0.2nm,0.5s,baz=12,slow=5.1,SNR=4.6						
TXAR	**Lajitas Array**	**77.35**	**61**	P	**P**	**07 19 57.0**	**-0.3**
	comp=E,0.7nm,0.5s,baz=300,slow=5.4,SNR=18						
TXAR				pP	**pP**	**07 20 14.2**	**+1.1**
	comp=E,0.3nm,0.5s,baz=303,slow=4.6,SNR=4.3						

*ISCJB **16** 07:25:48.9±1.1, 37°.27N±0°.05×28°.23E±0°.06, h12km±14km, Error ellipse: s-maj=11.1km s-min=5.3km az=40.4*
*ISK **16** 07:25:49.1, 37°.26N×28°.21E, h5km, MD2.5*
*DDA **16** 07:25:49.6, 37°.19N×28°.15E, h7km, MD2.8*
*CSEM **16** 07:25:49.6±0.2, 37°.25N×28°.22E, h10km, MD2.5, Error ellipse: s-maj=7.5km s-min=3.1km az=37.0*

ISC 16 07:25:49.3±1.1, 37°.27N±0°.05×28°.21E±0°.04, h10km±9km, n14, σ0§29/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.14**	**155**	*e*Pg	**Pg**	**07 25 52.4**	**-0.1**
YER				*e*Sg	**Sg**	**07 25 54.9**	**+0.1**
YER	**Yerkesik**	**0.14**	**155**	*e*Pg	**Pg**	**07 25 52.4**	**-0.1**
YER				*e*Sg	**Sg**	**07 25 54.9**	**+0.1**
MLSB	**Milas**	**0.35**	**275**	*e*PG	**Pg**	**07 25 56.2**	**+0.1**
MLSB	**Milas**	**0.35**	**275**	*e*Pg	**Pg**	**07 25 56.2**	**+0.1**
AYDN	**Tasoluk**	**0.47**	**327**	*i* P	**Pb**	**07 25 59.8**	**+0.1**
AYDN				*i* S	**Sg**	**07 26 04.7**	**-0.1**
AYDN	**Tasoluk**	**0.47**	**327**	*i* P	**Pb**	**07 25 59.8**	**+0.1**
AYDN				*i* S	**Sg**	**07 26 04.7**	**-0.1**
TURN	**Turunc**	**0.50**	**141**	*i* P	**Pg**	**07 25 58.3**	**-0.7**
TURN				*i* S	**Sg**	**07 26 05.7**	**0.0**
TURN	**Turunc**	**0.50**	**141**	*i* P	**Pg**	**07 25 58.3**	**-0.7**
TURN				*i* S	**Sg**	**07 26 05.7**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.57**	**141**	*e*PG	**Pg**	**07 26 00.5**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.57**	**141**	*e*Pg	**Pg**	**07 26 00.5**	**+0.2**
BODT	**Bodrum**	**0.74**	**254**	*e*PG	**Pb**	**07 26 04.2**	**-0.2**
BODT				*e*SG	**Sb**	**07 26 14.7**	**+0.1**
BODT	**Bodrum**	**0.74**	**254**	*e*Pg	**Pb**	**07 26 04.2**	**-0.2**
BODT				*e*Sg	**Sb**	**07 26 14.7**	**+0.1**
FETY	**Fethiye**	**0.94**	**132**	*e*PG	**Pb**	**07 26 08.0**	**+0.3**
FETY	**Fethiye**	**0.94**	**132**	*e*Pg	**Pb**	**07 26 08.0**	**+0.3**

NNC 16 07:37:54.6±2.5, 41°.98N×80°.88E, h0km, mb3.7, mpv3.4, 5C-4D, Error ellipse: s-maj=22.6km s-min=8.3km az=154.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**3.14**	**294**	⇑Pn	Pn	07 38 44.6	-0.9
	33nm,0.5s						
KNDC				⇑Sn	Sn	07 39 24.1	+0.4
	169nm,0.6s						
TKM2	**Tokmak 2**	**4.02**	**285**	⇓Pn	Pn	07 38 57.4	-0.3
	8.7nm,0.5s						
TKM2				⇓Sn	Sn	07 39 47.8	+2.1
	43nm,0.5s						
MK31	**Makanchi Array**	**4.92**	**11**	Pn	Pn	07 39 09.1	-0.7
	1.9nm,0.3s,baz=198,slow=13,SNR=139						
MK31				Sn	Sn	07 40 09.1	+1.6
	20nm,0.9s,baz=192,slow=24,SNR=17						
KK31	**Karatay Array**	**7.74**	**282**	Pg	Pg	07 40 17.3	-5.5
	2.4nm,0.8s,baz=89,slow=15,SNR=9.6						
KK31				⇓Lg	Lg	07 41 55.1	
	3.4nm,0.6s,baz=85,slow=30,SNR=5.5						
KUR16	**Kurchatov Arra**	**8.80**	**350**	⇓Pn	Pn	07 40 04.7	+1.7
	0.1nm,1.1s						
KUR16				⇑Lg	Lg	07 42 28.7	
	0.3nm,0.8s						
KURK	**Kurchatov**	**8.87**	**351**	⇑Pn	Pn	07 40 03.9	-0.1
	2.5nm,0.9s						
KURK				⇑Lg	Lg	07 42 34.3	
	6.1nm,1.0s						

AUST 16 07:44:19.4±2.6, 33°.46S×116°.61E, h9km, Error ellipse: s-maj=3.4km s-min=0.8km az=273.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKGY	**Rocky Gully**	**1.19**	**165**	P	Pb	07 44 41.6	-0.4
	baz=1.2,SNR=18						
RKGY				S	Sn	07 44 59.9	+1.5
	baz=1.2,SNR=8.5						
KLBR	**Kellerberrin**	**2.10**	**28**	P	Pn	07 44 54.1	-0.6
	baz=2.1,SNR=9.9						
KLBR				S	Sb	07 45 23.3	-0.5
	baz=2.1,SNR=5.0						
BLDU	**Ballidu**	**2.84**	**2**	P	Pn	07 45 05.2	+0.3
	baz=2.8,SNR=7.1						

*UPP **16** 08:05:44.5, 57°.70N×22°.69E, h0km, ML2.0, Mining explosion.*
*HEL **16** 08:05:47.8±0.3, 57°.81N×22°.12E, h0km, ML2.2, ML2.0(UPP), Explosion*
*IDC **16** 08:05:49.0±2.3, 57°.91N×22°.21E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.1/4, ML2.6/4, Error ellipse: s-maj=25.1km s-min=9.3km az=165.0*
*CSEM **16** 08:05:48.0±0.2, 57°.81N×22°.19E, h2km, ML2.8, Error ellipse: s-maj=5.8km s-min=3.0km az=152.0, Mining explosion.*
*ISCJB **16** 08:05:48.5±0.6, 58°.02N±0°.04×22°.11E±0°.05, h0km, Error ellipse: s-maj=6.2km s-min=3.3km az=157.3*
*NAO **16** 08:05:48.9±2.0, 57°.90N×22°.19E, ML2.2*
*BER **16** 08:05:50.2±4.6, 57°.83N×22°.19E, h0km, ML2.2(NAO), Suspected explosion*

ISC 16 08:05:47.1±0.9, 57°.81N±0°.04×22°.20E±0°.03, h0km, n67, σ1§59/106, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.19**	**164**	*e*P	**Pg**	**08 05 51.5**	**+0.8**
	SNR=90						
MTSE	**Matsula**	**1.25**	**43**	*e*P	**Pg**	**08 06 09.8**	**-1.2**
MTSE				*e*S	**Sg**	**08 06 26.6**	**-0.5**
MTSE	**Matsula**	**1.25**	**43**	P	**Pg**	**08 06 09.7**	**-1.2**
MTSE				S	**Sg**	**08 06 26.6**	**-0.5**
GOTU	**Gotland**	**1.95**	**268**	P	**Pn**	**08 06 21.9**	**+0.5**
GOTU	**Gotland**	**1.95**	**268**	P	**Pn**	**08 06 21.9**	**+0.5**
VSU	**Vasula**	**2.49**	**73**	Pn	**Pn**	**08 06 29.2**	**+0.4**
VSU				Sn	**Sb**	**08 07 03.2**	**-0.7**
VSU	**Vasula**	**2.49**	**73**	Pn	**Pn**	**08 06 29.2**	**+0.4**
VSU				Sn	**Sb**	**08 07 03.2**	**-0.7**
VSU	**Vasula**	**2.49**	**73**	*e*P	**Pn**	**08 06 29.3**	**+0.4**
VSU				*e*S	**Sn**	**08 07 00.9**	**+0.9**
VSU	**Vasula**	**2.49**	**73**	P	**Pn**	**08 06 29.3**	**+0.4**
VSU				S	**Sn**	**08 07 00.8**	**+0.9**
VSU				Sn	**Sb**	**08 07 03.2**	**-0.7**
	SNR=50						
NYNU	**Nynaeshamn**	**2.51**	**300**	P	**Pn**	**08 06 29.9**	**+0.8**
NYNU	**Nynaeshamn**	**2.51**	**300**	P	**Pn**	**08 06 29.9**	**+0.8**
AAL	**Aland**	**2.63**	**335**	*e*P	**Pn**	**08 06 30.8**	**0.0**
AAL				*e*SG	**Sb**	**08 07 08.5**	**+0.6**
AAL	**Aland**	**2.63**	**335**	P	**Pn**	**08 06 30.8**	**0.0**
AAL				Sg	**Sb**	**08 07 08.5**	**+0.6**
NRTU	**Norrtaelje**	**2.64**	**317**	P	**Pn**	**08 06 31.6**	**+0.7**
NRTU	**Norrtaelje**	**2.64**	**317**	P	**Pn**	**08 06 31.6**	**+0.7**
MEF	**Metsahovi**	**2.67**	**24**	*e*P	**Pn**	**08 06 33.0**	**+1.7**
MEF				*e*S	**Sn**	**08 07 05.3**	**+1.0**
MEF	**Metsahovi**	**2.67**	**24**	P	**Pn**	**08 06 33.0**	**+1.7**
MEF				S	**Sn**	**08 07 05.3**	**+1.0**
VIKU	**Vikbolandet**	**3.00**	**286**	P	**Pn**	**08 06 37.1**	**+1.3**
VIKU	**Vikbolandet**	**3.00**	**286**	P	**Pn**	**08 06 37.1**	**+1.3**
	baz=109						
GRAU	**Graesoe**	**3.16**	**325**	P	**Pn**	**08 06 38.7**	**+0.7**
GRAU	**Graesoe**	**3.16**	**325**	P	**Pn**	**08 06 38.7**	**+0.7**
RAF	**Rauma**	**3.23**	**356**	*e*P	**Pn**	**08 06 39.7**	**+0.7**
RAF				*e*S	**Sn**	**08 07 16.5**	**-1.7**
RAF	**Rauma**	**3.23**	**356**	P	**Pn**	**08 06 39.7**	**+0.7**
RAF				S	**Sn**	**08 07 16.4**	**-1.7**
PVF	**Pernaja**	**3.33**	**33**	*e*P	**Pn**	**08 06 42.0**	**+1.6**
PVF				*e*S	**Sn**	**08 07 20.3**	**-0.2**
PVF				*e*SG	**Sb**	**08 07 31.5**	**+3.5**
PVF	**Pernaja**	**3.33**	**33**	P	**Pn**	**08 06 41.9**	**+1.6**
PVF				S	**Sn**	**08 07 20.3**	**-0.2**
PVF				Sg	**Sb**	**08 07 31.4**	**+3.5**
BACU	**Backbrunna**	**3.35**	**310**	P	**Pn**	**08 06 42.0**	**+1.3**
BACU	**Backbrunna**	**3.35**	**310**	P	**Pn**	**08 06 41.9**	**+1.3**
OSKU	**Oskarshamn**	**3.35**	**262**	P	**Pn**	**08 06 41.5**	**+0.9**
OSKU	**Oskarshamn**	**3.35**	**262**	P	**Pn**	**08 06 41.5**	**+0.9**
ESKU	**Eskilstuna**	**3.36**	**298**	P	**Pn**	**08 06 41.6**	**+0.8**
ESKU	**Eskilstuna**	**3.36**	**298**	P	**Pn**	**08 06 41.6**	**+0.8**
OSTU	**Oestervaala**	**3.57**	**315**	P	**Pn**	**08 06 44.5**	**+0.8**
OSTU	**Oestervaala**	**3.57**	**315**	P	**Pn**	**08 06 44.5**	**+0.8**
LNKU	**Linkoeping**	**3.58**	**279**	P	**Pn**	**08 06 44.9**	**+1.0**
LNKU	**Linkoeping**	**3.58**	**279**	P	**Pn**	**08 06 44.9**	**+1.0**
BLEU	**Blekinge**	**3.80**	**249**	P	**Pn**	**08 06 47.2**	**+0.4**
BLEU	**Blekinge**	**3.80**	**249**	P	**Pn**	**08 06 47.2**	**+0.4**
VJF	**Virojoki**	**3.88**	**43**	*e*P	**Pn**	**08 06 50.0**	**+2.0**
VJF				*e*S	**Sn**	**08 07 34.4**	**+0.1**
VJF				*e*SG	**Sg**	**08 07 48.7**	**-3.1**
VJF				MSG		08 07 53.0	
	comp=Z,5.5nm,0.3s						
VJF	**Virojoki**	**3.88**	**43**	P	**Pn**	**08 06 50.0**	**+2.0**
VJF				S	**Sn**	**08 07 34.3**	**+0.1**
VJF				Sg	**Sg**	**08 07 48.7**	**-3.1**
IGGU	**Iggoen**	**3.96**	**323**	P	**Pn**	**08 06 49.6**	**+0.6**
IGGU	**Iggoen**	**3.96**	**323**	P	**Pn**	**08 06 49.6**	**+0.6**
ASKU	**Askersund**	**4.03**	**289**	P	**Pn**	**08 06 51.6**	**+1.5**
ASKU	**Askersund**	**4.03**	**289**	P	**Pn**	**08 06 51.5**	**+1.5**
FIA0	**FINESS Array S**	**4.14**	**27**	Pn	**Pn**	**08 06 52.6**	**+1.1**
	baz=198,slow=12						
FIA0				Pg	**Pb**	**08 06 59.6**	**-1.2**
	baz=212,slow=16						
FIA0				Lg	Lg	08 07 58.0	
	baz=217,slow=28						
FIA0	**FINESS Array S**	**4.14**	**27**	Pn	**Pn**	**08 06 52.6**	**+1.1**
	baz=198,slow=12						
FIA0				Pg	**Pb**	**08 06 59.6**	**-1.2**
	baz=212,slow=16						
FIA0				Lg	Lg	08 07 58.0	
	baz=217,slow=28						
FIA0	**FINESS Array S**	**4.14**	**27**	*e*P	**Pn**	**08 06 52.7**	**+1.1**
FIA0				*e*S	**Sn**	**08 07 39.8**	**-0.9**
FIA0				MSG		08 07 59.8	
	comp=Z,2.8nm,0.3s						
FIA0	**FINESS Array S**	**4.14**	**27**	P	**Pn**	**08 06 52.7**	**+1.1**
FIA0				S	**Sn**	**08 07 39.7**	**-0.9**
FIA0				Lg	Lg	08 07 58.0	
	baz=217,slow=24,SNR=4.2						
FINES	**FINESS Array B**	**4.14**	**27**	Pn	**Pn**	**08 06 52.2**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=209,slow=11,SNR=30						
FINES				Pg	**Pb**	**08 06 59.6**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=214,slow=13,SNR=11						
FINES				Lg	Lg	08 07 57.7	
	comp=Z,2.3nm,0.3s,baz=215,slow=27,SNR=13						
KEF	**Keuruu**	**4.57**	**16**	*e*P	**Pn**	**08 06 58.6**	**+1.1**
KEF				*e*S	**Sn**	**08 07 50.2**	**-1.1**
KEF				*e*SG	**Sb**	**08 08 08.2**	**+4.5**
KEF				MSG		08 08 12.1	
	comp=Z,3.1nm,0.3s						
KEF	**Keuruu**	**4.57**	**16**	P	**Pn**	**08 06 58.5**	**+1.1**
KEF				S	**Sn**	**08 07 50.1**	**-1.1**
KAF	**Kangasniemi**	**4.78**	**24**	*e*P	**Pn**	**08 07 01.4**	**+1.1**
KAF				*e*S	**Sn**	**08 07 54.6**	**-1.8**
KAF				*e*SG	**Sb**	**08 08 15.6**	**+5.8**
KAF				MSG		08 08 21.0	
	comp=Z,4.7nm,0.4s						
KAF	**Kangasniemi**	**4.78**	**24**	P	**Pn**	**08 07 01.4**	**+1.1**
KAF				S	**Sn**	**08 07 54.6**	**-1.8**
HFS	**Hagfors**	**4.98**	**301**	Pn	**Pn**	**08 07 03.7**	**+0.7**
	baz=128,slow=14						
HFS				Sn	**Sn**	**08 08 00.6**	**-0.6**
	baz=118,slow=28						
HFS				Lg	Lg	08 08 21.4	
	baz=106,slow=37						
HFS	**Hagfors**	**4.98**	**301**	Pn	**Pn**	**08 07 03.7**	**+0.7**
	baz=128,slow=14						
HFS				Sn	**Sn**	**08 08 00.6**	**-0.6**
	baz=118,slow=28						
HFS				Lg	Lg	08 08 21.4	
	baz=106,slow=37						
HFS	**Hagfors**	**4.98**	**301**	Pn	**Pn**	**08 07 03.3**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=130,slow=14,SNR=34						
HFS				Sn	**Sn**	**08 08 00.9**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=126,slow=24,SNR=2.3						
HFS				Lg	Lg	08 08 22.2	
	comp=Z,0.9nm,0.3s,baz=111,slow=29,SNR=8.6						
HFS	**Hagfors**	**4.98**	**301**	Pn	**Pn**	**08 07 03.7**	**+0.7**
	baz=128,slow=13,SNR=50						
HFS				Sn	**Sn**	**08 08 00.6**	**-0.6**
	baz=118,slow=26,SNR=50						
HFS				Lg	Lg	08 08 21.4	
	baz=106,slow=29,SNR=7.7						
VAF	**Ylistaro**	**5.25**	**2**	*e*P	**Pn**	**08 07 08.1**	**+1.3**
VAF				*e*S	**Sn**	**08 08 05.7**	**-2.4**
VAF				*e*SG	**Sb**	**08 08 27.9**	**+4.6**
VAF				MSG		08 08 33.1	
	comp=Z,2.3nm,0.3s						
VAF	**Ylistaro**	**5.25**	**2**	P	**Pn**	**08 07 08.1**	**+1.3**
VAF				S	**Sn**	**08 08 05.6**	**-2.4**
SUF	**Sumiainen**	**5.30**	**20**	*e*P	**Pn**	**08 07 08.7**	**+1.2**
SUF				*e*S	**Sn**	**08 08 07.8**	**-1.4**
SUF				*e*SG	**Sb**	**08 08 30.4**	**+5.7**
SUF	**Sumiainen**	**5.30**	**20**	P	**Pn**	**08 07 08.6**	**+1.2**
SUF				S	**Sn**	**08 08 07.8**	**-1.4**
NB2	**NORSAR Subarra**	**6.47**	**305**	Pn	**Pn**	**08 07 23.5**	**-0.1**
	baz=120,slow=12						
NB2				Lg	Lg	08 09 12.6	
	baz=121,slow=28						
NB2	**NORSAR Subarra**	**6.47**	**305**	Pn	**Pn**	**08 07 23.5**	**-0.1**
	baz=120,slow=12						
NB2				Lg	Lg	08 09 12.6	
	baz=121,slow=28						
NB2	**NORSAR Subarra**	**6.47**	**305**	Pn	**Pn**	**08 07 23.5**	**-0.1**
	baz=120,slow=12,SNR=50						
NB2				Lg	Lg	08 09 12.6	
	baz=121,slow=27,SNR=3.3						
NOA	**NORSAR Array B**	**6.47**	**305**	Pn	**Pn**	**08 07 23.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=170,slow=19,SNR=7.7						
NOA				Lg	Lg	08 09 09.0	
	comp=Z,0.5nm,0.3s,baz=228,slow=17,SNR=2.1						
ARCES	**ARCESS Array B**	**11.86**	**6**	Pn	Pn	08 08 33.6	-3.6
	comp=Z,0.1nm,0.3s,baz=182,slow=13,SNR=5.1						
ARA0	**ARCESS Array S**	**11.86**	**6**	Pn	Pn	08 08 34.3	-2.9
	baz=192,slow=12						
ARA0	**ARCESS Array S**	**11.86**	**6**	P	Pn	08 08 34.3	-2.9
	baz=192,slow=12						

*NSSC **16** 08:30:37.0±0.6, 36°.01N×36°.67E, h4km±7km, ML1.9*
*DDA **16** 08:30:45.9, 36°.01N×36°.60E, h6km, MD2.8*

ISC 16 08:30:42.2±1.4, 35°.77N±0°.06×36°.49E±0°.09, h14km±11km, n6, σ1§32/8, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTCH	**Batrach**	**0.27**	**355**	*e*P	Pg	08 30 40.5	-7.4
BTCH				*e*S	Sg	08 30 43.4	-8.4
BTCH				AML	AML	08 30 46.2	
	comp=E,654nm,0.5s						
BTCH				AML	AML	08 30 49.8	
	comp=N,1µm,0.3s						
WRDH	**Warideh**	**0.27**	**193**	*e*P	**Pg**	**08 30 47.7**	**-0.2**
WRDH				*e*S	**Sb**	**08 30 55.0**	**+1.7**
WRDH				AML	AML	08 31 03.0	
	comp=E,67nm,0.3s						
WRDH				AML	AML	08 31 03.7	
	comp=N,50nm,0.4s						
SLNF	**Slenfeh**	**0.28**	**231**	*e*P	**Pg**	**08 30 48.1**	**0.0**
SLNF				*e*S	**Sn**	**08 30 56.1**	**-1.9**
SLNF				AML	AML	08 31 00.7	
	comp=N,88nm,0.3s						
SLNF				AML	AML	08 31 00.9	
	comp=E,77nm,0.4s						
YAYL	**Yayladag**	**0.41**	**311**	*i* P	**Pn**	**08 30 53.9**	**+0.2**
YAYL				*i* S	**Sn**	**08 31 01.4**	**+0.3**
DRWC	**Darouich**	**0.86**	**10**	AML	AML	08 31 15.2	
	comp=E,12nm,0.2s						
KUZU	**Kuzuini**	**1.11**	**25**	*i* P	**Pb**	**08 31 02.9**	**-0.3**
KUZU				*i* S	**Sn**	**08 31 18.0**	**-0.4**

*ISCJB **16** 08:37:49.6±1.1, 36°.90N±0°.06×27°.59E±0°.05, h8km±7km, Error ellipse: s-maj=10.6km s-min=6.6km az=13.9*
*ISK **16** 08:37:49.3, 36°.93N×27°.57E, h13km, MD2.5*
*DDA **16** 08:37:49.4, 36°.88N×27°.65E, h7km, MD2.8*
*CSEM **16** 08:37:49.7±0.6, 36°.89N×27°.59E, h5km, MD2.5, Error ellipse: s-maj=12.0km s-min=7.1km az=23.0*

ISC 16 08:37:49.0±1.4, 36°.86N±0°.06×27°.61E±0°.04, h8km±14km, n15, σ0§69/23, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.31**	**310**	*e*PG	**Pg**	**08 37 54.8**	**-0.3**
BODT				*e*SG	**Sg**	**08 37 59.3**	**+0.1**
BODT	**Bodrum**	**0.31**	**310**	*e*Pg	**Pg**	**08 37 54.8**	**-0.3**
BODT				*e*Sg	**Sg**	**08 37 59.3**	**+0.1**
MLSB	**Milas**	**0.45**	**17**	*e*PG	**Pg**	**08 37 57.6**	**-0.2**
MLSB				*e*SG	**Sg**	**08 38 04.0**	**+0.3**
MLSB	**Milas**	**0.45**	**17**	*e*Pg	**Pg**	**08 37 57.6**	**-0.2**
MLSB				*e*Sg	**Sg**	**08 38 04.0**	**+0.3**
YER	**Yerkesik**	**0.60**	**63**	*e*PG	**Pb**	**08 38 01.9**	**0.0**
YER				*e*SG	**Sb**	**08 38 10.4**	**-0.2**
YER	**Yerkesik**	**0.60**	**63**	*e*Pg	**Pb**	**08 38 01.9**	**0.0**
YER				*e*Sg	**Sb**	**08 38 10.4**	**-0.2**
TURN	**Turunc**	**0.80**	**89**	*i* P	Pg	08 37 59.3	-5.0
TURN				*i* S	Sg	08 38 07.6	-7.2
AYDN	**Tasoluk**	**0.82**	**15**	*i* P	**Pg**	**08 38 04.7**	**-0.2**
AYDN				*i* S	**Sg**	**08 38 15.5**	**-0.1**
AYDN	**Tasoluk**	**0.82**	**15**	*i* P	**Pg**	**08 38 04.7**	**-0.2**
AYDN				*i* S	**Sg**	**08 38 15.5**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.84**	**93**	*e*PG	**Pn**	**08 38 07.0**	**-0.2**
DALY	**Dalyan (Mu¨la**	**0.84**	**93**	*e*Pg	**Pn**	**08 38 07.0**	**-0.2**
FETY	**Fethiye**	**1.21**	**100**	*e*PN	**Pg**	**08 38 12.2**	**+0.1**
FETY	**Fethiye**	**1.21**	**100**	*e*Pn	**Pg**	**08 38 12.2**	**+0.1**
URLA	**Izmir**	**1.70**	**332**	*i* P	**Pg**	**08 38 21.1**	**-0.5**
UR

1µm,0.3s,baz=142,slow=23,SNR=7.3
PUZ **Puketiti** **7.19 204** *e*PN Pn 09 05 01.3 -2.7
PUZ *e*SN Sn 09 06 19.6 -4.9
CNGZ Carnagh Statio **7.58 203** *e*PN **Pn** **09 05 07.2 -2.1**
MWZ Matawai **7.69 207** *e*PN Pn 09 05 07.7 -3.2
MWZ SN **Sn** **09 06 34.8 -2.0**
WCZ Waipu Caves **7.71 233** PN Pn 09 05 16.7 +5.6
URZ Urewera **7.79 209** Pn **Pn** **09 05 10.4 -1.8**
16nm,0.9s
URZ *e*Sn **Sn** **09 06 35.1 -4.2**
URZ Sn Sn 09 06 37.5 -1.8
URZ Urewera **7.79 209** *e*PN **Pn** **09 05 10.2 -2.1**
URZ SN **Sn** **09 06 37.3 -1.9**
URZ Urewera **7.79 209** Pn **Pn** **09 05 10.5 -1.8**
2.8nm,0.3s,baz=31,slow=0.7,SNR=12
URZ Sn **Sn** **09 06 37.5 -1.8**
11nm,0.3s,baz=170,slow=18,SNR=10
OUZ Omahuta **7.89 240** *e*PN Pn 09 05 18.2 +4.5
41nm,0.3s
KNZ Kokohu **8.24 204** *e*PN Pn 09 05 15.2 -3.2
KNZ SN **Sn** **09 06 47.7 -2.6**
MHGZ Mahia Peninsul **8.28 202** *e*PN Pn 09 05 14.8 -4.2
MCHZ McNeill Hill **8.97 207** *e*PN **Pn** **09 05 27.1 -1.4**
PXZ Pawanui **9.43 205** SN Sn 09 07 12.0 -7.4
WPHZ Waipukurau **9.61 206** SN Sn 09 07 17.4 -6.5
PRWZ Pori Road **10.21 207** SN Sn 09 07 31.8 -6.9
BFZ Birch Farm **10.22 205** *e*PN Pn 09 05 42.3 -3.2
BFZ SN Sn 09 07 31.2 -7.6
DZM Mont Dzumac **16.74 301** *e*LR LR 09 10 47.4
406nm,24.1s
DZM Mont Dzumac **16.74 301** LR LR 09 11 39.0
comp=Z,219nm,20.2s,baz=197,slow=30
AFI Afiamalu **18.47 20** LR LR 09 13 12.7
comp=Z,98nm,18.2s,baz=113,slow=33
TBI Tubuai **26.59 79** *e*LR LR 09 15 43.1
214nm,28.2s
PPT2 Papeete2 **29.28 68** *e*LR LR 09 16 55.4
150nm,24.2s
PPT Papeete **29.29 68** LR LR 09 19 13.8
comp=Z,56nm,19.1s,baz=287,slow=33
RMQ Roma **29.40 271** P **P** **09 09 24.6 +3.1**
baz=28,SNR=4.6
CMSA Cobar Meteorol **30.82 260** P **P** **09 09 36.0 +2.0**
baz=30,SNR=12
QLP Quilpie **33.23 269** P **P** **09 09 56.5 +1.3**
baz=32,SNR=6.4
CTA Charters Tower **33.96 281** P **P** **09 10 03.2 +1.5**
CTA Charters Tower **33.96 281** P **P** **09 10 03.2 +1.5**
22nm,0.7s,baz=100,slow=11,SNR=20
CTAO Charters Tower **33.96 281** *e*P **P** **09 10 02.8 +1.1**
14nm,0.6s
STKA Stephens Creek **34.20 259** P **P** **09 10 04.9 +1.3**
STKA Stephens Creek **34.20 259** P **P** **09 10 04.9 +1.3**
9.2nm,0.8s,baz=102,slow=10,SNR=18
STKA LR LR 09 21 47.0
comp=Z,202nm,19.4s,baz=198,slow=32
STKA Stephens Creek **34.20 259** P **P** **09 10 05.0 +1.3**
baz=33,SNR=18
MTSU Mount Surprise **36.49 282** P **P** **09 10 24.9 +1.5**
baz=36,SNR=11
QIS Mount Isa **39.37 276** P **P** **09 10 48.3 +0.5**
baz=38,SNR=5.1
COEN Coen **39.56 287** P **P** **09 10 50.5 +1.1**
baz=39,SNR=18
AS31 Alice Springs **43.02 268** *e*P **P** **09 11 17.6 -0.2**
ASAR Alice Springs **43.02 268** P **P** **09 11 17.4 -0.4**
ASAR Alice Springs **43.02 268** P **P** **09 11 17.4 -0.4**
13nm,0.5s,baz=105,slow=7.4,SNR=109
WRAB Tennant Creek **44.11 273** *e*P **P** **09 11 26.3 -0.2**
17nm,0.6s
WRA Warramunga Arr **44.11 273** P **P** **09 11 26.4 -0.2**
WRA Warramunga Arr **44.11 273** P **P** **09 11 26.4 -0.2**
36nm,0.5s,baz=113,slow=7.9,SNR=78
SBA Scott Base **46.90 184** *e*P P 09 11 52.0 +4.2
6.5nm,1.0s
SBA *e*PcP **PcP** **09 13 22.7 +2.7**
VNDA Vanda **46.96 186** P P 09 11 52.5 +4.2
VNDA Vanda **46.96 186** P P 09 11 52.5 +4.2
0.8nm,0.5s,baz=3.7,slow=6.5,SNR=9.7
KDU Kakadu **49.09 281** P **P** **09 12 05.5 -0.1**
baz=48,SNR=6.4
MTN Manton Dam **50.13 280** P **P** **09 12 14.0 +0.5**
baz=49,SNR=3.8
KNRA Kununurra **50.76 275** P **P** **09 12 18.8 +0.5**
baz=50,SNR=5.9
FITZ Fitzroy Crossi **52.33 271** P **P** **09 12 30.1 +0.1**
baz=51,SNR=6.7
NWAO Narrogin (SRO) **53.97 250** LR LR 09 33 19.5
comp=Z,165nm,19.1s,baz=312,slow=33
QSPA South Pole Qui **58.57 180** P **P** **09 13 17.2 +2.8**
QSPA South Pole Qui **58.57 180** P **P** **09 13 17.2 +2.8**
16nm,0.8s,baz=65,slow=2.7,SNR=18
KKM Kota Kinabalu **72.88 288** P **PcP** **09 15 05.8 +1.5**
baz=72,SNR=3.2
SYO Syowa Base **76.00 193**[] *e*P **P** **09 15 04.0 -0.4**
SNAA Sanae **77.02 178** *e*P **P** **09 15 11.7 +1.4**
11nm,1.0s
SNAA Sanae **77.02 178** P **P** **09 15 11.7 +1.4**
1.5nm,0.6s,baz=174,slow=6.6,SNR=6.3
GSI Gunungsitoli **85.88 274** P P 09 16 10.8 +13
baz=85,SNR=3.6
ILAR Eielson Array **99.04 13** P Pdif 09 16 57.8 -0.1
ILAR Eielson Array **99.04 13** P Pdif 09 16 57.8 -0.1
0.2nm,0.7s,baz=213,slow=6.5,SNR=3.4
MKAR Makanchi Array **118.47 310** PKP **PKPdf** **09 22 04.2 -0.9**
MKAR Makanchi Array **118.47 310** PKP **PKPdf** **09 22 04.2 -0.9**
0.7nm,0.6s,baz=75,slow=2.3,SNR=8.3
BRVK Borovoye **127.25 315** PKPdf **PKPdf** **09 22 20.6 -1.1**
AKTO Aktyubinsk **134.83 312** PKP **PKPdf** **09 22 36.7 +0.6**
AKTO Aktyubinsk **134.83 312** PKP **PKPdf** **09 22 36.7 +0.6**
0.9nm,0.4s,baz=97,slow=3.4,SNR=7.5
ARCES ARCESS Array B **139.69 347** PKPpre PKPpre 09 22 37.7
ARCES ARCESS Array B **139.69 347** PKhKP PKPpre 09 22 37.7
1.4nm,0.7s,baz=46,slow=3.5,SNR=8.2
JOF Joensuu **143.46 338** *ep* PKPab 09 22 47.1 -0.6
1.5nm,0.6s
KAF Kangasniemi **145.61 340** *ep* **PKPdf** **09 22 53.6 -1.6**
7.2nm,0.7s
KBZ Khabaz **145.70 303** PKPbc **PKPab** **09 22 57.0 +0.3**
KBZ Khabaz **145.70 303** PKPbc **PKPab** **09 22 57.0 +0.3**
2.2nm,0.8s,baz=164,slow=3.4,SNR=5.5
FIA1 FINESS Array S **146.20 339** *e*PKPbc **PKPbc** **09 22 56.8 -0.5**
FINES FINESS Array B **146.20 339** PKPbc **PKPbc** **09 22 56.8 -0.5**
FINES FINESS Array B **146.20 339** PKPbc **PKPbc** **09 22 56.8 -0.5**
17nm,0.8s,baz=64,slow=4.4,SNR=43
NB2 NORSAR Subarra **149.87 351** PKP **PKPbc** **09 23 06.9 -0.2**
comp=Z,5.1nm,0.7s,baz=19,slow=2.6
NOA NORSAR Array B **149.87 351** PKPbc **PKPbc** **09 23 07.0 -0.2**
NOA NORSAR Array B **149.87 351** PKPbc **PKPbc** **09 23 06.9 -0.2**
comp=Z,4.3nm,0.7s,baz=14,slow=4.1,SNR=17
AKASG Malin Array Be **152.17 321** PKPbc **PKPbc** **09 23 12.7 -0.1**
AKASG Malin Array Be **152.17 321** PKPbc **PKPbc** **09 23 12.7 -0.1**
comp=Z,4.5nm,0.6s,baz=53,slow=2.2,SNR=13
BRTR Keskin Array B **153.09 296** PKPbc **PKPbc** **09 23 15.0 -0.4**
BRTR Keskin Array B **153.09 296** PKPbc **PKPbc** **09 23 15.0 -0.4**
comp=Z,1.4nm,0.5s,baz=135,slow=4.4,SNR=9.4
TORD Torodi Ar. Bea **161.69 179** PKP **PKPdf** **09 23 16.7 -2.7**
TORD PKPab **PKPab** **09 24 05.1 +0.8**
TORD Torodi Ar. Bea **161.69 179** PKP **PKPdf** **09 23 16.7 -2.7**
comp=Z,0.4nm,0.9s,baz=183,slow=3.9,SNR=3.8
TORD PKPab **PKPab** **09 24 05.1 +0.8**
comp=Z,1.1nm,0.6s,baz=183,slow=3.4,SNR=10

*JMA **16** 09:09:22.4±0.2,22.4°N×144.07E,h202km,M4.8*
*IDC **16** 09:09:26.8±0.9,21.93°N×143.21E,h246km±8km,mb3.3/13, mb1 3.5/16,mb1mx3.4/29,mbtmp3.4/16,Error ellipse: s-maj=15.4km s-min=11.3km az=78.0*
ISC 16 09:09:23.1±1.3,22.4°N±0.1°×143.9°E±0.2°,h200km,n36, σ1§64/32,mb3.5/12,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**4.49**	**340**		P		**Pn**	**09 10 31.8**	**+0.8**
JHHJ					*e*S		**Sn**	**09 11 25.9**	**+1.4**
CBIJ	**Chichi jima**	**4.92**	**342**		P		**Pn**	**09 10 37.1**	**+0.6**
CBIJ					*e*S		**Sn**	**09 11 35.1**	**+0.7**
JHJ2	**Mitsune**	**11.26**	**342**		P		**Pn**	**09 11 58.3**	**-0.2**
JHJ2					*e*S		**Sn**	**09 14 02.3**	**-1.7**
JHJ	**Hachijo jima 2**	**11.27**	**342**		P		**P**	**09 12 03.2**	**-1.3**
	3.9nm,0.3s,baz=184,slow=15,SNR=4.1								
JSG	**Sagara**	**13.21**	**339**		P		**Pn**	**09 12 21.0**	**-2.1**
JOD2	**Odawara 2**	**13.48**	**343**		P		**P**	**09 12 28.1**	**-1.4**
JRY	**Ryogami san**	**14.24**	**343**		P		**P**	**09 12 37.1**	**-0.5**
JTO	**Tosashimizu**	**14.31**	**319**		P		**P**	**09 12 40.0**	**+1.7**
JMN	**Monobe**	**14.32**	**324**		P		**P**	**09 12 40.3**	**+1.8**
JGF	**Kuroka**	**14.33**	**338**		P		**P**	**09 12 37.9**	**-0.7**
JWT	**Wachi**	**14.82**	**332**		P		**P**	**09 12 44.8**	**+0.8**
JOW	**Kunigami**	**14.88**	**290**		P		**Pn**	**09 12 42.9**	**-0.9**
MJAR	**Matsushiro Arr**	**14.93**	**342**		P		**P**	**09 12 47.7**	**+2.5**
	2.2nm,0.3s,baz=160,slow=5.3,SNR=17								
MAT	**Matsushiro**	**14.93**	**342**		P		**P**	**09 12 47.7**	**+2.6**
MAT	**Matsushiro**	**14.93**	**342**		P		**P**	**09 12 47.8**	**+2.6**
JAD	**Aida**	**15.12**	**328**		P		**P**	**09 12 48.2**	**+1.0**
JMM	**Marumori**	**15.64**	**351**		P		**Pn**	**09 12 56.5**	**+3.5**
JMM					*e*S		**S**	**09 15 43.8**	**-2.6**
JNU	**Nakatsue**	**15.69**	**316**		P		**Pn**	**09 12 55.2**	**+1.5**
	0.6nm,0.3s,baz=97,slow=15,SNR=6.3								
JSD	**Sado**	**16.32**	**344**		P		**Pn**	**09 13 02.2**	**+1.1**
JOM	**Ohasama**	**17.16**	**353**		P		Pn	09 13 16.7	+5.6
JTM	**Tenmabayashi**	**18.48**	**353**		P		**Pn**	**09 13 27.5**	**+0.9**
KSRS	**Korea Array**	**20.36**	**321**		P		**P**	**09 13 43.5**	**-0.7**
	6.5nm,0.6s,baz=148,slow=8.8,SNR=30								
USRK	**Ussuriysk Arra**	**23.85**	**338**		P		**P**	**09 14 20.2**	**+2.2**
	0.9nm,0.5s,baz=156,slow=7.8,SNR=5.1								
CMAR	**Chiang Mai Arr**	**42.20**	**273**		P		P	09 16 51.1	-5.5
	0.5nm,0.3s,baz=106,slow=15,SNR=3.0								
WRA	**Warramunga Arr**	**43.12**	**193**		P		P	09 16 57.6	-6.3
	0.3nm,0.3s,baz=13,slow=9.0,SNR=4.9								
WRA					pP		pP	09 17 50.5	+3.7
	0.2nm,0.3s,baz=15,slow=8.6,SNR=1.7								
ASAR	**Alice Springs**	**46.82**	**193**		P		P	09 17 26.6	-6.4
	0.3nm,0.8s,baz=16,slow=14,SNR=3.9								
ASAR					pP		pP	09 18 17.7	+1.1
	0.2nm,0.8s,baz=354,slow=4.1,SNR=1.2								
ZALV	**Zalesovo Beam**	**54.07**	**321**		P		**P**	**09 18 25.7**	**-1.2**
	1.8nm,0.5s,baz=100,slow=7.6,SNR=6.9								
MKAR	**Makanchi Array**	**54.71**	**312**		P		**P**	**09 18 30.9**	**-0.8**
	0.6nm,0.5s,baz=95,slow=9.0,SNR=8.5								
ILAR	**Eielson Array**	**61.11**	**27**		P		P	09 19 17.9	+2.2
	0.8nm,0.7s,baz=268,slow=5.3,SNR=10								
ILAR					pP		pP	09 20 16.9	+15
	0.5nm,0.9s,baz=227,slow=5.9,SNR=3.8								
YKA	**Yellowknife Ar**	**75.52**	**28**		P		P	09 20 47.8	+2.6
	1.9nm,0.5s,baz=292,slow=5.8,SNR=25								
ARCES	**ARCESS Array B**	**78.46**	**342**		P		**P**	**09 21 02.1**	**+0.6**
	0.6nm,0.8s,baz=76,slow=7.6,SNR=6.9								
NVAR	**Mina Array Bea**	**82.18**	**52**		P		P	09 21 25.2	+2.9
	1.7nm,0.7s,baz=281,slow=5.0,SNR=16								
FINES	**FINESS Array B**	**82.83**	**335**		P		**P**	**09 21 23.8**	**-1.0**
	0.3nm,0.3s,baz=74,slow=6.9,SNR=7.0								
PDAR	**Pinedale Array**	**86.42**	**45**		P		P	09 21 45.8	+2.3
	0.3nm,0.6s,baz=294,slow=6.7,SNR=3.4								
PLCA	**Paso Flores**	**145.72**	**130**	PKPbc			**PKPbc**	**09 28 37.4**	**-1.3**
	2.4nm,0.5s,baz=195,slow=9.0,SNR=7.4								
LPAZ	**La Paz**	**149.21**	**84**	PKPbc			**PKPbc**	**09 28 49.9**	**+0.4**
	1.9nm,0.5s,baz=350,slow=2.7,SNR=15								

*KRSC **16** 09:43:13.0±1.2,58.14°N×164.72E,h21km±20km,ML3.9*
*IDC **16** 09:43:14.4±1.1,58.17°N×164.04E,h0km,mb3.5/8, mb1 3.9/9,mb1mx3.6/29,mbtmp3.6/9,ML3.2/1,MS3.1/1, Ms1 3.1/1,ms1mx2.3/42,Error ellipse: s-maj=25.9km s-min=19.3km az=111.0*
*ISCJB **16** 09:43:18.4±0.5,57.97°N±0.05°×164.55E±0.09,h33km, mb3.5/8,MS3.1/1,Error ellipse: s-maj=9.6km s-min=4.8km az=139.2*
ISC 16 09:43:20.3±0.8,57.95N±0.09°×164.55E±0.08,h35km,n33, σ1§12/33,mb3.5/8,Bering Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**1.97**	**212**		*e*P		**Pn**	**09 43 49.1**	**-2.0**
KBG					*e*S		**Sn**	**09 44 15.2**	**+0.6**
KBTR	**Krutoberegovo**	**1.98**	**209**		*e*P		**Pn**	**09 43 48.6**	**-2.7**
KBTR					*e*S		**Sn**	**09 44 14.9**	**0.0**
PALN	**Palana**	**2.67**	**297**		*e*P		Pn	09 43 56.2	-4.5
KLY	**Klyuchi**	**2.68**	**234**		*e*S		**Sn**	**09 44 30.8**	**-1.3**
KRSR	**Krestovskiy**	**2.78**	**233**		*e*P		**Pn**	**09 44 01.1**	**-1.3**
ZLN	**Zelenaya**	**2.82**	**228**		*e*P		**Pn**	**09 44 02.0**	**-0.9**
BKI	**Bering**	**2.86**	**163**		*e*S		**Sn**	**09 44 35.9**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**2.92**	**228**		*e*P		**Pn**	**09 44 04.2**	**-0.1**
BZWR	**Bezymyannyi-We**	**2.98**	**230**		*e*P		**Pn**	**09 44 04.6**	**-0.6**
BZMR	**Bezymyannaya**	**3.00**	**230**		*e*P		**Pn**	**09 44 05.1**	**-0.4**
KIRR	**Kirishev**	**3.05**	**231**		*e*P		**Pn**	**09 44 05.4**	**-0.7**
KIRR					*e*S		**Sn**	**09 44 42.8**	**+1.3**
KPT	**Kopyto**	**3.09**	**232**		*e*P		**Pn**	**09 44 06.0**	**-0.6**
SRDR	**Sredinnyy**	**3.10**	**240**		*e*P		**Pn**	**09 44 05.1**	**-1.6**
KMNR	**Kamenistaya**	**3.23**	**229**		*e*P		**Pn**	**09 44 08.3**	**-0.3**
TUMR	**Tumrok**	**3.61**	**224**		*e*P		**Pn**	**09 44 14.1**	**+0.3**
MKZ	**Mys Kozlova**	**3.74**	**206**		*e*P		**Pn**	**09 44 13.9**	**-1.6**
GNL	**Ganaly**	**5.66**	**224**		*e*P		**Pn**	**09 44 42.7**	**+0.8**
SDLR	**Sedlovina**	**5.67**	**217**		*e*P		**Pn**	**09 44 42.9**	**+0.8**
SMAR	**Somma**	**5.71**	**217**		*e*P		**Pn**	**09 44 43.5**	**+0.8**
AVH	**Avacha**	**5.73**	**218**		*e*P		**Pn**	**09 44 44.0**	**+1.1**
PETK	**Petropavlovsk-**	**6.21**	**222**		Pn		Pn	09 44 53.3	+3.9
	0.9nm,0.3s,baz=73,slow=18,SNR=7.0								
MTVR	**Mutnovka**	**6.57**	**216**		*e*P		**Pn**	**09 44 55.8**	**+1.3**
ASAK	**Asacha**	**6.75**	**217**		*e*P		**Pn**	**09 44 58.6**	**+1.7**
FX1	**Attu Island--F**	**7.05**	**132**		Pn		**Pn**	**09 45 02.3**	**+1.4**
	1.2nm,0.3s,baz=339,slow=6.8,SNR=4.7								
ILAR	**Eielson Array**	**23.71**	**53**		P		**P**	**09 48 28.3**	**-0.3**
	1.1nm,0.7s,baz=267,slow=8.5,SNR=17								
INK	**Inuvik**	**28.53**	**43**		P		**P**	**09 49 11.2**	**-0.8**
	0.8nm,0.8s,baz=223,slow=4.3,SNR=2.9								
YKA	**Yellowknife Ar**	**37.94**	**48**		P		**P**	**09 50 33.3**	**-0.6**
	0.4nm,0.9s,baz=297,slow=11,SNR=3.0								
ZALV	**Zalesovo Beam**	**42.40**	**300**		LR		LR	10 11 08.3	
	comp=Z,25nm,21.2s,baz=91,slow=40								
NVAR	**Mina Array Bea**	**51.92**	**77**		P		**P**	**09 52 26.5**	**+1.0**
	0.4nm,0.7s,baz=308,slow=7.3,SNR=3.9								
PDAR	**Pinedale Array**	**53.10**	**67**		P		**P**	**09 52 34.8**	**+0.6**
	1.0nm,0.7s,baz=330,slow=3.0,SNR=9.1								
TXAR	**Lajitas Array**	**66.56**	**72**		P		**P**	**09 54 07.4**	**+0.7**
	1.0nm,0.8s,baz=299,slow=5.8,SNR=12								
WRA	**Warramunga Arr**	**81.56**	**209**		P		**P**	**09 55 33.7**	**-0.3**
	0.4nm,0.7s,baz=13,slow=6.0,SNR=4.1								
ASAR	**Alice Springs**	**85.24**	**208**		P		**P**	**09 55 53.2**	**+0.2**
	0.4nm,0.9s,baz=0.0,slow=4.6,SNR=3.5								

*ISCJB **16** 09:59:09.9±0.4,39.03°N±0.03°×30.09E±0.03,h6km±4km, Error ellipse: s-maj=4.9km s-min=4.0km az=137.3*
*ISK **16** 09:59:09.7,39.02°N×30.07E,h6km,MD2.8*
*DDA **16** 09:59:09.3,39.03°N×30.09E,h7km,MD2.8*
*CSEM **16** 09:59:10.0±0.1,39.03°N×30.08E,h2km,MD2.8,Error ellipse: s-maj=2.3km s-min=1.8km az=133.0*
ISC 16 09:59:10.0±0.8,39.05N±0.02°×30.07E±0.02,h6km±5km, n35,σ0§68/55,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ALT	**Altintas**	**0.03**	**76**		*e*PG		**Pg**	**09 59 11.3**	**0.0**
ALT					*e*SG		**Sg**	**09 59 12.7**	**+0.4**
ALT	**Altintas**	**0.03**	**76**		*e*Pg		**Pg**	**09 59 11.3**	**0.0**
ALT					*e*Sg		**Sg**	**09 59 12.7**	**+0.4**
GDZ	**Gediz**	**0.46**	**275**		*i*P		**Pg**	**09 59 19.0**	**+0.1**
GDZ					*i*S		**Sg**	**09 59 25.9**	**+1.0**
GDZ	**Gediz**	**0.46**	**275**		*i*P		**Pg**	**09 59 19.0**	**+0.1**
GDZ					*i*S		**Sg**	**09 59 25.9**	**+1.0**
TVSB	**Tavsanli**	**0.62**	**311**		*e*PG		**Pg**	**09 59 22.2**	**+0.3**
TVSB					*e*SG		**Sb**	**09 59 31.4**	**-0.9**
TVSB	**Tavsanli**	**0.62**	**311**		*e*Pg		**Pg**	**09 59 22.2**	**+0.3**
TVSB					*e*Sg		**Sb**	**09 59 31.4**	**-0.9**
SHUT	**Suhut-Afyon**	**0.62**	**143**		*e*PG		**Pg**	**09 59 22.2**	**+0.3**
SHUT					*e*SG		**Sg**	**09 59 29.8**	**-0.2**
SHUT	**Suhut-Afyon**	**0.62**	**143**		*e*Pg		**Pg**	**09 59 22.2**	**+0.3**
SHUT					*e*Sg		**Sg**	**09 59 29.8**	**-0.2**
BOLV	**Bolvadin**	**0.76**	**115**		*i*P		Pn	09 59 32.2	+4.7
BOLV					*i*S		**Sn**	**09 59 41.6**	**+2.4**
SEYT	**Eskypehyr**	**0.77**	**52**		*i*P		**Pg**	**09 59 24.5**	**-0.2**
SEYT					*i*S		**Sg**	**09 59 34.5**	**-0.2**
SEYT	**Eskypehyr**	**0.77**	**52**		*i*P		**Pg**	**09 59 24.5**	**-0.2**
SEYT					*i*S		**Sg**	**09 59 34.5**	**-0.2**
KHAL	**Karahalli**	**0.81**	**214**		*i*P		**Pg**	**09 59 25.4**	**-0.2**
KHAL					*i*S		**Sg**	**09 59 36.6**	**+0.5**
KHAL	**Karahalli**	**0.81**	**214**		*i*P		**Pg**	**09 59 25.4**	**-0.2**
KHAL					*i*S		**Sg**	**09 59 36.6**	**+0.5**
KHL	**Karahalli**	**0.84**	**211**		*e*PG		**Pg**	**09 59 25.6**	**-0.5**
KHL	**Karahalli**	**0.84**	**211**		*e*Pg		**Pg**	**09 59 25.6**	**-0.5**
BORA	**Eskisehir**	**0.88**	**20**		*i*P		**Pg**	**09 59 27.0**	**+0.1**
BORA					*i*S		**Sb**	**09 59 39.4**	**-0.5**
BORA	**Eskisehir**	**0.88**	**20**		*i*P		**Pg**	**09 59 27.0**	**+0.1**
BORA					*i*S		**Sb**	**09 59 39.4**	**-0.5**
DEMI	**Demirci**	**1.05**	**270**		*i*P		**Pg**	**09 59 30.2**	**0.0**
DEMI					*i*S		**Sb**	**09 59 44.7**	**-0.1**
DEMI	**Demirci**	**1.05**	**270**		*i*P		**Pg**	**09 59 30.2**	**0.0**
DEMI					*i*S		**Sb**	**09 59 44.7**	**-0.1**
CAVI	**Cavuskoy**	**1.17**	**351**		*e*PN		**Pn**	**09 59 33.4**	**+0.5**
CAVI	**Cavuskoy**	**1.17**	**351**		*e*Pn		**Pn**	**09 59 33.4**	**+0.5**
KULA	**Kula-Manisa**	**1.22**	**245**		*e*PN		**Pn**	**09 59 33.6**	**-0.1**
KULA	**Kula-Manisa**	**1.22**	**245**		*e*Pn		**Pn**	**09 59 33.6**	**-0.1**
MANT	**Manisa**	**1.31**	**245**		*i*P		**Pn**	**09 59 34.5**	**-0.5**
MANT					*i*S		**Sb**	**09 59 52.0**	**-0.2**
MANT	**Manisa**	**1.31**	**245**		*i*P		**Pn**	**09 59 34.5**	**-0.5**
MANT					*i*S		**Sb**	**09 59 52.0**	**-0.2**
ORLT	**Orhaneli**	**1.35**	**318**		*e*PN		**Pg**	**09 59 36.3**	**+0.5**
ORLT	**Orhaneli**	**1.35**	**318**		*e*Pn		**Pg**	**09 59 36.3**	**+0.5**
DURS	**Dursunbey**	**1.35**	**295**		*i*P		**Pg**	**09 59 36.2**	**+0.2**
DURS					*i*S		**Sb**	**09 59 51.3**	**-2.2**
DURS	**Dursunbey**	**1.35**	**295**		*i*P		**Pg**	**09 59 36.2**	**+0.2**
DURS					*i*S		**Sb**	**09 59 51.3**	**-2.2**
GULT	**Gulveren**	**1.43**	**14**		*e*PN		**Pg**	**09 59 37.5**	**+0.2**
GULT	**Gulveren**	**1.43**	**14**		*e*Pn		**Pg**	**09 59 37.5**	**+0.2**
YLV	**Yalova**	**1.61**	**341**		*e*PN		**Pg**	**09 59 40.5**	**-0.3**
YLV	**Yalova**	**1.61**	**341**		*e*Pn		**Pg**	**09 59 40.5**	**-0.3**
ARMT	**Armutlu**	**1.78**	**329**		*e*PN		**Pb**	**09 59 42.5**	**-0.5**
ARMT	**Armutlu**	**1.78**	**329**		*e*Pn		**Pb**	**09 59 42.5**	**-0.5**

*IDC **16** 10:01:09.4±0.6,56.42N×152.43W,h0km,mb4.1/25, mb1 4.3/27,mb1mx4.2/34,mbtmp4.1/27,ML3.8/2,MS4.0/20, Ms1 4.0/20,ms1mx3.8/39,Error ellipse: s-maj=18.1km s-min=11.4km az=22.0*
*NEIC **16** 10:01:09.6,56.21N×152.11W,h10km,mb4.2/7, ML4.0(AEIC),After AEIC.*
*BJI **16** 10:01:10.6,56.40N×152.40W,h10km,mB5.1/5,mb4.6/5, Ms4.6/7,Ms7 4.3/6*
*MOS **16** 10:01:13.1±1.1,56.62N×152.39W,h33km,mb4.7/14, Error ellipse: s-maj=14.9km s-min=5.4km az=85.2*
ISC 16 10:01:12.8±1.6,56.35N±0.06°×152.26W±0.04, h29km±10km,n218,σ1§38/209,mb4.3/45,MS3.9/22,3C-2D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.04**	**327**		P		**Pn**	**10 01 29.5**	**-1.9**
KDAK	**Kodiak Island**	**1.44**	**353**		*e*Pn		**Pn**	**10 01 35.7**	**-1.2**
KDAK					*e*S		Sn	10 01 47.1	-7.7
KDAK	**Kodiak Island**	**1.44**	**353**		*e*Pn		**Pn**	**10 01 35.7**	**-1.2**
	46nm,0.3s,baz=190,slow=8.6,SNR=306								
KDAK					*e*S		Sn	10 01 47.1	-7.7
	148nm,0.3s,baz=194,slow=14,SNR=34								
KABR	**Katmai Barrier**	**2.31**	**322**		P		**Pn**	**10 01 48.0**	**-0.9**
KAWH	**Katmai**	**2.46**	**327**		P		**Pn**	**10 01 50.9**	**0.0**
KAKN	**Katmai Knife C**	**2.47**	**323**		P		**Pn**	**10 01 51.3**	**+0.2**
KABU	**Katmai Buttres**	**2.53**	**321**		P		**Pn**	**10 01 51.8**	**-0.1**
FOSS	**Fourpeaked Sta**	**2.57**	**343**		P		**Pn**	**10 01 52.7**	**+0.2**
FONW	**Fourpeaked Sta**	**2.64**	**341**		P		**Pn**	**10 01 53.9**	**+0.4**
KELA	**Mount Kelaz**	**2.81**	**319**		P		**Pn**	**10 01 55.7**	**-0.1**
MCNL	**McNeil River**	**3.05**	**339**		P		**Pn**	**10 01 59.5**	**+0.5**
AUI	**Augustine Isla**	**3.06**	**349**		P		**Pn**	**10 01 59.5**	**+0.5**
AUW	**Augustine West**	**3.09**	**348**		P		**Pn**	**10 02 00.2**	**+0.6**
AUNW	**Augustine NWes**	**3.10**	**348**		P		**Pn**	**10 02 00.4**	**+0.7**
ANPK	**Aniakchak Peak**	**3.28**	**281**		P		**Pn**	**10 02 01.1**	**-1.1**
ANNW	**Aniakchak Nort**	**3.34**	**283**		P		**Pn**	**10 02 02.5**	**-0.6**
OPT	**Oil Point**	**3.35**	**352**		P		**Pn**	**10 02 03.6**	**+0.5**
CHGN	**Chignik**	**3.43**	**272**		*e*Pn		**Pn**	**10 02 02.0**	**-2.2**
BRLK	**Bradley Lake**	**3.50**	**11**		P		**Pn**	**10 02 03.5**	**-1.7**
BRLK					S		**Sn**	**10 02 44.7**	**-0.9**
ILW	**Iliamna West**	**3.75**	**353**		P		**Pn**	**10 02 08.6**	**-0.1**
VNHG	**Veniaminof 1**	**3.85**	**271**		P		**Pn**	**10 02 09.3**	**-0.7**
SEW	**Seward**	**4.04**	**20**		P		**Pn**	**10 02 10.4**	**-2.2**
RSO	**Redoubt South**	**4

5.8nm,0.4s,baz=265,slow=5.5,SNR=8.9
BILL Bilibino 22.09 319 *c* iP **P** 10 06 04.1 -1.0
BILL *i* 10 06 29.4
BILL pmax pmax
comp=Z,14nm,1.3s
BILL Bilibino 22.09 319 *e*P **P** **10 06 04.3 -0.8**
comp=Z,28nm,1.3s
NEW Newport 22.74 96 LR LR 10 13 17.8
comp=Z,185nm,19.8s,baz=184,slow=32
YBH Yreka Blue Hor 24.02 115 P P 10 06 27.6 +2.6
YBH Yreka Blue Hor 24.02 115 P P 10 06 27.6 +2.6
comp=Z,1.1nm,0.8s,baz=346,slow=9.1,SNR=3.3
YBH LR LR 10 13 28.6
comp=Z,305nm,21.0s,baz=323,slow=31
JTMT Jette 24.61 94 *e*P **P** **10 06 32.4 +2.0**
comp=Z,1.5nm,0.7s
SWMT Swartz Lake 24.90 94 *e*P **P** **10 06 34.5 +1.4**
comp=Z,2.6nm,1.0s
WVOR Wild Horse Val 25.63 109 *e*P **P** **10 06 42.0 +2.4**
WVOR pmax pmax
comp=Z,4.0nm,0.9s
WVOR Wild Horse Val 25.63 109 *e*P **P** **10 06 42.0 +2.4**
comp=Z,3.5nm,0.9s
RES Resolute Bay 28.28 28 *e*P **P** **10 07 03.5 +0.5**
comp=Z,2.3nm,0.6s
RES Resolute Bay 28.28 28 P **P** **10 07 03.5 +0.5**
comp=Z,1.1nm,0.6s,baz=258,slow=13,SNR=9.4
RES LR LR 10 20 19.5
comp=Z,393nm,19.6s,baz=246,slow=41
PETK Petropavlovsk- 28.56 285 P **P** **10 07 05.0 -0.7**
PETK Petropavlovsk- 28.56 285 P **P** **10 07 05.0 -0.7**
PETK Petropavlovsk- 28.56 285 P **P** **10 07 05.0 -0.7**
comp=Z,1.3nm,0.5s,baz=87,slow=11,SNR=9.7
PETK LR LR 10 18 33.8
comp=Z,158nm,20.1s,baz=270,slow=37
ELK Elko 28.62 107 P P 10 07 07.8 +1.1
ELK Elko 28.62 107 P P 10 07 07.8 +1.1
comp=Z,0.7nm,0.9s,baz=253,slow=17,SNR=3.6
ELK LR LR 10 17 25.0
comp=Z,116nm,18.9s,baz=300,slow=34
NVAR Mina Array Bea 28.73 114 P P 10 07 10.1 +2.4
NVAR Mina Array Bea 28.73 114 P P 10 07 10.1 +2.4
comp=Z,0.8nm,0.6s,baz=305,slow=9.1,SNR=7.5
NVAR LR LR 10 17 04.3
comp=Z,256nm,18.1s,baz=52,slow=33
PDAR Pinedale Array 30.31 98 P P 10 07 23.2 +1.6
PDAR Pinedale Array 30.31 98 P P 10 07 23.2 +1.6
comp=Z,0.9nm,0.6s,baz=320,slow=3.9,SNR=8.4
ULM Lac du Bonnet 33.41 76 LR LR 10 21 06.2
comp=Z,202nm,18.1s,baz=303,slow=36
TIXI Tiksi 34.72 327 *e*P **P** **10 07 58.0 -1.5**
TIXI pmax pmax
comp=Z,2.0nm,1.4s
YUK Yuzh-Kuril'sk 40.12 279 *d* iP **P** **10 08 42.5 -3.1**
YUK *i* 10 10 49.1
YUK *i* S S 10 14 45.1 -4.7
YUK *i* SS **SS** **10 17 46.1 -1.5**
YUK *i* SSS SSS 10 18 23.5
YUK pmax pmax
comp=Z,75nm,13.5s
YUK MLR MLR
comp=E,80nm,17.0s
YUK MLR MLR
comp=Z,161nm,18.0s
YUK MLR MLR
comp=N,96nm,18.0s
ERM Erimo 42.94 279 *e*P **P** **10 09 10.1 +1.4**
ERM pmax pmax
comp=Z,16nm,1.2s
TXAR Lajitas Array 43.42 108 P P 10 09 14.8 +2.0
TXAR PcP **PcP** **10 11 02.0 +1.2**
TXAR Lajitas Array 43.42 108 P P 10 09 14.8 +2.0
comp=Z,0.5nm,0.7s,baz=315,slow=5.3,SNR=7.3
TXAR PcP **PcP** **10 11 02.0 +1.2**
comp=Z,0.3nm,0.6s,baz=286,slow=4.6,SNR=3.8
TXAR LR LR 10 26 44.8
comp=Z,160nm,18.6s,baz=100,slow=35
SUMG Summit 43.58 24 ⇑ *i* P **P** **10 09 15.1 +1.1**
SUMG pmax pmax
comp=Z,8.0nm,0.7s
SUMG Summit 43.58 24 *e*P **P** **10 09 14.8 +0.9**
comp=Z,7.1nm,0.6s
SUMG Summit 43.58 24 ⇑ *i* P **P** **10 09 15.1 +1.1**
comp=Z,7.9nm,0.7s
SFJD Kangerlussuaq 43.97 34 *i* P **P** **10 09 18.3 +1.7**
comp=Z,5.2nm,0.6s
KLR Kul'dur 44.30 294 *e*P P 10 09 15.7 -3.9
SCHQ Schefferville 45.31 54 P **P** **10 09 27.7 +0.1**
SCHQ Schefferville 45.31 54 P **P** **10 09 27.7 +0.1**
comp=Z,4.4nm,0.7s,baz=307,slow=8.2,SNR=8.3
USRK Ussuriysk Arra 47.48 289 LR LR 10 30 07.7
comp=Z,332nm,19.8s,baz=294,slow=37
MJAR Matsushiro Arr 49.52 277 P **P** **10 10 00.5 0.0**
MJAR Matsushiro Arr 49.52 277 P **P** **10 10 00.5 0.0**
comp=Z,1.0nm,0.9s,baz=30,slow=8.4,SNR=4.1
MJAR LR LR 10 33 00.1
comp=Z,112nm,19.3s,baz=65,slow=39
KEV Kevo 54.19 0 *e*P **P** **10 10 34.6 -0.2**
KEV pmax pmax
comp=Z,5.0nm,0.6s
KEV Kevo 54.19 0 *e*p **P** **10 10 34.6 -0.2**
comp=Z,4.5nm,0.6s
ARCES ARCESS Array B 54.41 1 P **P** **10 10 36.5 +0.1**
ARCES ARCESS Array B 54.41 1 P **P** **10 10 36.5 +0.1**
comp=Z,2.6nm,0.5s,baz=3.9,slow=7.0,SNR=27
KSRS Korea Array 54.45 286 P **P** **10 10 37.9 +0.7**
comp=Z,0.7nm,0.6s,baz=42,slow=6.9,SNR=3.0
KSRS LR LR 10 35 46.0
comp=Z,63nm,19.8s,baz=286,slow=38
KSAR Wonju Array Be 54.48 286 P **P** **10 10 37.9 +0.5**
TLY Talaya 55.55 313 *e*P **P** **10 10 45.8 +0.8**
TLY pmax pmax
comp=Z,9.0nm,0.8s
ZAK Zakamensk 56.69 312 *e*P **P** **10 10 51.6 -1.6**
ZAK pmax pmax
comp=Z,2.0nm,2.2s
SONM Songino Array 57.31 308 P **P** **10 10 58.6 +0.9**
SONM Songino Array 57.31 308 P **P** **10 10 58.6 +0.9**
comp=Z,3.0nm,0.6s,baz=64,slow=6.8,SNR=4.3
SONM LR LR 10 37 21.3
comp=Z,423nm,19.5s,baz=187,slow=38
HHC Hu-ho-hao-te 60.27 300 *e*P **P** **10 11 17.5 -0.9**
HHC PcP **PcP** **10 12 02.5 -0.9**
HHC PP **PP** **10 13 31.8 +0.8**
HHC S **S** **10 19 28.5 -2.0**
HHC ScS SKKSac 10 21 03.6 -3.0
HHC SS **SS** **10 23 26.3 -1.0**
HHC pmax pmax
comp=Z,160nm,5.0s
HHC LR LR
comp=N,210nm,14.3s
HHC LR LR
comp=E,260nm,13.1s
HHC LR LR
comp=Z,350nm,15.5s
ZALV Zalesovo Beam 60.58 325 *i* P **P** **10 11 20.6 +0.5**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 60.58 325 P **P** **10 11 20.3 +0.3**
ZALV Zalesovo Beam 60.58 325 P **P** **10 11 20.3 +0.3**
comp=Z,2.2nm,0.6s,baz=29,slow=6.3,SNR=9.9
ZALV LR LR 10 38 32.2
comp=Z,165nm,20.6s,baz=65,slow=37
JOF Joensuu 61.03 358 *e*P **P** **10 11 21.2 -1.8**
JOF pmax pmax
comp=Z,4.0nm,0.6s
JOF Joensuu 61.03 358 *e*p **P** **10 11 21.2 -1.8**
comp=Z,3.6nm,0.6s
KAF Kangasniemi 61.87 1 *e*P **P** **10 11 28.9 +0.3**
KAF pmax pmax
comp=Z,4.0nm,0.6s
KAF Kangasniemi 61.87 1 *e*p **P** **10 11 28.9 +0.3**
comp=Z,3.7nm,0.6s
NOA NORSAR Array B 62.23 9 P **P** **10 11 32.1 +1.0**
NOA NORSAR Array B 62.23 9 P **P** **10 11 32.1 +1.0**
comp=Z,3.7nm,0.7s,baz=350,slow=6.7,SNR=26
NOA LR LR 10 40 49.4
comp=Z,60nm,18.4s,baz=320,slow=38
FINES FINESS Array B 62.54 1 P **P** **10 11 33.5 +0.3**
FINES FINESS Array B 62.54 1 P **P** **10 11 33.5 +0.3**
comp=Z,5.1nm,0.8s,baz=356,slow=10.0,SNR=16
ARU Arti 64.84 342 *d* iP **P** **10 11 47.7 -0.7**
ARU S **S** **10 20 25.9 -1.1**
ARU pmax pmax
comp=Z,10.0nm,1.7s
KURK Kurchatov 65.29 327 P **P** **10 11 52.2 +0.8**
KURK Kurchatov 65.29 327 P **P** **10 11 52.2 +0.8**
KURBB Kurchatov Arra 65.40 327 P **P** **10 11 52.2 +0.1**
comp=Z,0.9nm,0.6s,baz=27,slow=6.0,SNR=4.9
BVAR Borovoye Array 65.50 333 P **P** **10 11 52.7 0.0**
BVAR Borovoye Array 65.50 333 P **P** **10 11 52.7 0.0**
BVAR Borovoye Array 65.50 333 P **P** **10 11 52.7 0.0**
comp=Z,3.5nm,0.7s,baz=38,slow=7.5,SNR=8.5
TAOE Nuku Hiva Isla 65.74 167 *e*T T 11 23 33.6
comp=Z,26nm,0.2s
MKAR Makanchi Array 67.56 323 *i* P **P** **10 12 06.1 +0.1**
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 67.56 323 P **P** **10 12 06.2 +0.1**
MKAR Makanchi Array 67.56 323 P **P** **10 12 06.2 +0.1**
comp=Z,1.4nm,0.7s,baz=41,slow=6.6,SNR=8.7
MKAR LR LR 10 44 35.1
comp=Z,150nm,19.7s,baz=26,slow=39
WMQ Urumqi 68.19 318 *e*P **P** **10 12 12.8 +2.6**
WMQ LR LR
comp=N,190nm,8.0s
WMQ LR LR
comp=E,380nm,9.8s
WMQ LR LR
comp=Z,130nm,19.4s
PMOR Pomariorio Ree 71.18 176 *e*T T 11 30 20.2
comp=Z,206nm,0.3s
ABKAR Akbulak array 71.40 338 *e*P **P** **10 12 30.0 +0.3**
comp=Z,1.5nm,0.5s
CLL Collm 72.01 10 *e*P **P** **10 12 34.0 +0.7**
CLL Collm 72.01 10 *e*P **P** **10 12 34.0 +0.7**
CLL *e*PcP **PcP** **10 12 51.0 -0.8**
CLL LmV 10 50 00.0
comp=Z,100nm,18.8s
BAIF Baives 72.17 16 *e*P **P** **10 12 35.6 +1.3**
comp=Z,5.1nm,0.7s
BRG Berggiesshubel 72.53 9 *e*(P) **P** **10 12 35.8 -0.6**
comp=Z,16nm,1.9s
BRG Berggiesshubel 72.53 9 *e*P **P** **10 12 35.8 -0.6**
BRG pmax pmax
comp=Z,16nm,1.9s
UPC Upice 73.06 8 *e*P P 10 12 46.9 +7.3
UPC Upice 73.06 8 *e*pP P 10 12 46.9 +7.3
DPC Dobruska-Polom 73.24 8 *e*P **P** **10 12 42.6 +1.9**
DPC Dobruska-Polom 73.24 8 *e*P **P** **10 12 42.6 +1.9**
AKASG Malin Array Be 73.31 359 *i* P **P** **10 12 41.4 +0.4**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 73.31 359 P **P** **10 12 40.9 -0.1**
AKASG Malin Array Be 73.31 359 P **P** **10 12 40.9 -0.1**
comp=Z,1.6nm,0.4s,baz=4.9,slow=5.9,SNR=8.2
TIAR Tiarei 73.66 177 *e*T T 11 33 28.5
comp=Z,28nm,0.2s
PPT Papeete 73.67 177 LR LR 10 37 29.0
comp=Z,192nm,21.8s,baz=347,slow=30
PPT2 Papeete2 73.69 177 *e*S **SKiKP** **10 22 07.3 -3.6**
comp=Z,55nm,27.2s
PPT2 *e*LR LR 10 35 20.2
comp=Z,105nm,22.0s
PPT2 *e*T T 11 33 29.0
comp=Z,2.9nm,0.2s
PAE Paea 73.76 177 *e*T T 11 33 31.6
comp=Z,1.4nm,0.3s
AAK Ala-Archa 73.79 326 P **P** **10 12 45.0 +0.8**
AAK Ala-Archa 73.79 326 P **P** **10 12 45.0 +0.8**
AAK Ala-Archa 73.79 326 P **P** **10 12 45.0 +0.8**
comp=Z,1.0nm,0.5s,baz=24,slow=12,SNR=3.7
TVO Taravao 73.89 177 *e*T T 11 33 45.9
comp=Z,5.4nm,0.3s
KHC Kasperske Hory 74.22 10 *e*P **P** **10 12 48.3 +1.8**
KHC Kasperske Hory 74.22 10 *e*P **P** **10 12 48.3 +1.8**
KHC Kasperske Hory 74.22 10 *e*P **P** **10 12 47.5 +1.0**
HAU Haudompre 74.48 15 *e*P **P** **10 12 49.1 +1.1**
HAU Haudompre 74.48 15 *e*P **P** **10 12 49.1 +1.1**
HAU Haudompre 74.48 15 *e*P **P** **10 12 49.1 +1.1**
GERES GERESS Array B 74.52 10 P **P** **10 12 49.3 +1.0**
GERES GERESS Array B 74.52 10 P **P** **10 12 49.3 +1.0**
comp=Z,0.8nm,0.7s,baz=351,slow=4.3,SNR=6.7
MFF Saint Martin d 74.78 20 *e*P **P** **10 12 51.1 +1.4**
MFF Saint Martin d 74.78 20 *e*P **P** **10 12 51.1 +1.4**
MFF Saint Martin d 74.78 20 *e*P **P** **10 12 51.1 +1.4**
LOR Lormes 74.83 17 *e*P **P** **10 12 51.2 +1.2**
comp=Z,4.0nm,0.7s
SSF Saint Saulge 74.97 17 *e*P **P** **10 12 52.1 +1.3**
comp=Z,6.6nm,0.7s
AVF Avril sur Loir 75.21 17 *e*P **P** **10 12 53.2 +1.0**
SMF Signal de Mont 75.43 17 *e*P **P** **10 12 54.3 +0.8**
TCF Toulx Ste Croi 75.51 18 *e*P **P** **10 12 54.9 +0.9**
KSH Kashi 76.13 324 *e*P P 10 13 02.3 +4.5
KSH *e*pP pP 10 13 06.8 -0.1
KSH *e*sP sP 10 13 09.0 -1.3
KSH *e*PcP **PcP** **10 13 13.9 +4.1**
KSH *e*S S 10 22 47.3 +7.8
KSH *e*sS sS 10 22 54.3 -0.3
KSH *e*SKS **SKKSac** **10 23 08.4 +1.4**
KSH *e*ScS **ScS** **10 23 14.5 +4.0**
KSH *e*SS SS 10 27 44.6 +13
KSH pmax pmax
comp=Z,7.0nm,0.9s
KSH LR LR
comp=N,73nm,4.3s
KSH LR LR
comp=E,52nm,3.5s
KSH LR LR
comp=Z,49nm,3.6s
LASF Ste Croix 77.94 17 *e*P **P** **10 13 08.7 +1.0**
LASF Ste Croix 77.94 17 *e*P **P** **10 13 08.7 +1.0**
ETSF Etsaut 78.27 21 *e*P **P** **10 13 11.3 +1.7**
ETSF Etsaut 78.27 21 *e*P **P** **10 13 11.3 +1.7**
ETSF Etsaut 78.27 21 *e*P **P** **10 13 11.3 +1.7**
MTLF Montolieu 78.37 19 *e*P **P** **10 13 11.3 +1.2**
MTLF Montolieu 78.37 19 *e*P **P** **10 13 11.3 +1.2**
MTLF Montolieu 78.37 19 *e*P **P** **10 13 11.3 +1.2**
QIZ Qiongzhong 78.64 287 P **P** **10 13 10.3 -1.6**
QIZ S **S** **10 23 04.8 -2.2**
QIZ LR LR
comp=N,110nm,17.0s
QIZ LR LR
comp=E,61nm,19.3s
QIZ LR LR
comp=Z,110nm,11.6s
LSA Lhasa 78.89 308 P P 10 13 01.8 -12
LSA pmax pmax
comp=Z,50nm,0.4s
KBZ Khabaz 79.47 349 P **P** **10 13 18.0 +2.0**
KBZ Khabaz 79.47 349 P **P** **10 13 18.0 +2.0**
KBZ Khabaz 79.47 349 P **P** **10 13 18.0 +2.0**
comp=Z,2.3nm,0.9s,baz=24,slow=1.3,SNR=5.6
ESDC Sonseca Array 80.63 24 P **P** **10 13 24.4 +1.9**
ESDC Sonseca Array 80.63 24 P **P** **10 13 24.4 +1.9**
comp=Z,0.3nm,0.3s,baz=345,slow=6.5,SNR=7.8
BRTR Keskin Array B 84.16 355 P **P** **10 13 42.1 +1.1**
BRTR Keskin Array B 84.16 355 P **P** **10 13 42.1 +1.1**
comp=Z,0.6nm,0.5s,baz=20,slow=3.9,SNR=6.1
BRTR LR LR 10 53 55.6
comp=Z,41nm,18.1s,baz=74,slow=38
CMAR Chiang Mai Arr 84.77 296 LR LR 10 54 20.1
comp=Z,65nm,19.8s,baz=15,slow=38
QSPA South Pole Qui 146.14 180 PKPbc **PKPab** **10 20 49.7 +0.4**
QSPA South Pole Qui 146.14 180 PKPbc **PKPab** **10 20 49.7 +0.4**
comp=Z,2.6nm,0.8s,baz=331,slow=1.9,SNR=10

TAP ***16*** *10:02:47.7,24.57N×122.72E,h100km, ML3.3, C*
JMA ***16*** *10:02:47.7±0.2,24.73N×122.78E, h95km±2km, M1.9*
ISCJB ***16*** *10:02:48.1±0.8,24.57N±0.06×122.75E±0.02, h92km±8km, Error ellipse: s-maj=9.6km s-min=3.5km az=2.9*
ISC 16 10:02:48.8±1.6,**24.55N**±0.07×**122.75E**±0.03,**h88**km±12km, **n29,**σ**0°75**/49,**2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.26**	**110**	P	**Pn**		**10 03 02.0**	**+0.2**
YOJ				*e*S	**Sn**		**10 03 12.9**	**+1.4**
TWC	**Suao**	**0.82**	**274**	P	**Pn**		**10 03 05.9**	**-0.5**
TWC	baz=276			S	**Sn**		**10 03 18.8**	**-0.8**
TWB1	**Santiao Chiao**	**0.83**	**304**	*e*P	**Pn**		**10 03 06.2**	**-0.3**
TWB1	baz=303			*e*S	**Sn**		**10 03 19.6**	**-0.1**
IRIF	**Iriomote-Funau**	**0.92**	**103**	P	**Pn**		**10 03 07.3**	**-0.2**
IRIF				*e*S	**Sn**		**10 03 22.1**	**+0.6**
ENA	**Nanau**	**0.93**	**263**	*e*P	**Pn**		**10 03 07.4**	**-0.2**
TWE	**Neicheng** baz=278	**1.00**	**280**	*e*P	**Pn**		**10 03 07.9**	**-0.5**
TWE				*e*S	**Sn**		**10 03 22.9**	**-0.2**
NWF	**Wu-fen Shan** baz=294	**1.02**	**301**	*e*P	**Pn**		**10 03 08.5**	**-0.3**
NWF				*e*S	**Sn**		**10 03 24.1**	**+0.4**
ENTT	**Nioudou** baz=270	**1.08**	**275**	P	**Pn**		**10 03 09.4**	**0.0**
ENTT				*e*S	**Sn**		**10 03 25.2**	**+0.4**
HATJ	**Hateruma jima**	**1.08**	**117**	P	**Pn**		**10 03 09.7**	**+0.3**
TWD	**Chiawan** baz=239	**1.15**	**246**	P	**Pn**		**10 03 09.4**	**-0.8**
TWD				*e*S	**Sn**		**10 03 25.4**	**-0.9**
JKRS	**Kuro-shima**	**1.19**	**105**	P	**Pn**		**10 03 10.8**	**+0.1**
JKRS				*e*S	**Sn**		**10 03 28.0**	**+0.9**
NNS	**Nan Shan** baz=257	**1.26**	**265**	P	**Pn**		**10 03 11.0**	**-0.6**
NNS				*e*S	**Sn**		**10 03 28.4**	**-0.3**
NSK	**Sanguang** baz=268	**1.27**	**276**	P	**Pn**		**10 03 11.5**	**-0.2**
NSK				*e*S	**Sn**		**10 03 28.8**	**-0.2**
JIJ	**Ishigaki jima**	**1.28**	**98**	P	**Pn**		**10 03 11.4**	**-0.4**
JIJ				*e*S	**Sn**		**10 03 28.6**	**-0.5**
TWS1	**Kuangyinshan** baz=287	**1.33**	**295**	*e*S	**Sn**		**10 03 30.1**	**0.0**
ESL	**Shilin** baz=236	**1.41**	**239**	P	**Pn**		**10 03 12.4**	**-0.9**
ESL				*e*S	**Sn**		**10 03 31.0**	**-0.9**
WHF	**Hehuan Shan** baz=251	**1.41**	**254**	⇓ *i* P	**Pn**		**10 03 13.3**	**-0.5**
WHF				S	**Sn**		**10 03 31.7**	**-1.0**
TWT	**Tachien** baz=253	**1.46**	**259**	P	**Pn**		**10 03 14.4**	**+0.2**
TWT				*e*S	**Sn**		**10 03 33.9**	**+0.4**
NSTT	**Nanjuang** baz=272	**1.59**	**273**	*e*P	**Pn**		**10 03 16.5**	**+0.8**
NSTT				*e*S	**Sn**		**10 03 35.8**	**-0.2**
JTJ	**Tarama**	**1.78**	**87**	P	**Pn**		**10 03 17.7**	**-0.4**
JTJ				*e*S	**Sn**		**10 03 39.5**	**-0.9**
TWF1	**Yuli** baz=235	**1.79**	**228**	⇓ *i* P	**Pn**		**10 03 17.3**	**-0.9**
TWQ1	**Liyutan** baz=263	**1.81**	**264**	*e*P	**Pn**		**10 03 18.3**	**-0.3**
SMLT	**Sun Moon Lake** baz=242	**1.81**	**249**	P	**Pn**		**10 03 19.2**	**+0.5**
TYC	**Yuchr** baz=243	**1.84**	**250**	P	**Pn**		**10 03 19.4**	**+0.5**
TYC				*e*S	**Sn**		**10 03 42.7**	**+0.9**
ALS	**Alishan** baz=233	**2.06**	**240**	P	**Pn**		**10 03 22.4**	**+0.4**
CHN5	**Tsauling** baz=241	**2.12**	**244**	P	**Pn**		**10 03 23.1**	**+0.5**
CHN5				*e*S	**Sn**		**10 03 50.4**	**+2.0**
CHN4	**Tsaushan** baz=236	**2.31**	**239**	*e*P	**Pn**		**10 03 25.6**	**+0.6**
CHN4				*e*S	**Sn**		**10 03 54.5**	**+1.8**
CHN1	**Nanshi** baz=244	**2.44**	**237**	*e*P	**Pn**		**10 03 27.8**	**+0.9**
LAY	**Lan-yu** baz=202	**2.73**	**204**	*e*P	**Pn**		**10 03 29.1**	**-1.7**

IDC ***16*** *10:02:59.1±6.3,37.47N×72.32E, h64km±53km, mb3.6/7, mb1 3.8/11,mb1mx3.5/31,mbtmp3.7/11, ML4.0/4, Error ellipse: s-maj=33.4km s-min=26.4km az=4.0*
ISCJB ***16*** *10:03:05.7±0.4,37.67N±0.03×72.40E±0.08, h176km, mb3.5/7, Error ellipse: s-maj=8.7km s-min=3.3km az=171.5*
NNC ***16*** *10:03:12.3±4.5,38.18N×71.96E, h172km±43km, mb3.3, mpv4.3, Error ellipse: s-maj=41.6km s-min=20.0km az=8.0*
ISC 16 10:03:05.9±0.8,**37.68N**±0.05×**72.52E**±0.09,**h176**km,**n53,** σ**1°84**/50,**mb3.5**/7,**3C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.88**	**188**	P	**Pn**		**10 04 06.2**	**+0.6**
CEP				S	**Sn**		**10 04 51.0**	**-1.1**
CHCP	**Chirah Chowk**	**4.06**	**171**	P	**Pn**		**10 04 09.8**	**+2.1**
AML	**Almayashu** SNR=70	**4.54**	**11**	P	**Pn**		**10 04 14.3**	**+0.3**
UCH	**Uchtor** SNR=6.4	**4.79**	**18**	P	**Pn**		**10 04 19.0**	**+1.5**
KZA	**Kyzart** SNR=27	**4.87**	**25**	P	**Pn**		**10 04 19.3**	**+0.9**
THW	**Thamme Wali**	**4.92**	**188**	P	**Pn**		**10 04 18.9**	**+0.1**
EKS2	**Erkin-Say** SNR=30	**5.07**	**11**	P	**Pn**		**10 04 21.6**	**+0.9**
AAK	**Ala-Archa** 13nm,0.3s,baz=157,slow=6.2,SNR=85	**5.17**	**16**	P	**Pn**		**10 04 23.6**	**+1.4**
AAK	3.1nm,0.3s,baz=208,slow=12,SNR=6.2			S	**Sn**		**10 05 19.3**	**-2.7**
KBK	**Karagaybulak** SNR=14	**5.31**	**20**	P	**Pn**		**10 04 26.8**	**+3.0**
ULHL	**Ulahol** SNR=27	**5.38**	**31**	P	**Pn**		**10 04 26.3**	**+1.4**
CHMS	**Chumysh** SNR=9.5	**5.58**	**17**	P	**Pn**		**10 04 28.6**	**+1.3**
KK31	**Karatay Array** 82nm,0.5s,baz=165,slow=12,SNR=945	**5.63**	**345**	⇓ P	**Pn**		**10 04 26.9**	**-1.1**
KK31	35nm,0.5s,baz=169,slow=19,SNR=13			S	Sn		10 05 25.4	-7.0
TKM2	**Tokmak 2** 5.6nm,0.5s	**5.74**	**23**	⇓ P	**Pn**		**10 04 31.5**	**+1.9**
TKM2	32nm,0.8s			⇓ S	**Sn**		**10 05 36.3**	**+1.0**
TKM2	**Tokmak 2** SNR=17	**5.74**	**23**	P	**Pn**		**10 04 31.3**	**+1.7**
SARP	**Sargodha**	**5.75**	**179**	P	**Pn**		**10 04 30.7**	**+1.1**
USP	**Ospenovka** SNR=15	**5.78**	**15**	P	**Pn**		**10 04 30.7**	**+0.7**
DLH	**Dalhousie**	**5.86**	**150**	*e*PKP	**Pn**		**10 04 30.0**	**-1.2**
DLH				*ex*	x		10 05 43.0	
THN	**Thein Dam**	**5.86**	**152**	*e*PKP	**Pn**		**10 04 31.3**	**+0.3**
THN				*e*S	**Sn**		**10 05 34.5**	**-3.4**
DHRM	**DHARAMSHALA**	**6.25**	**149**	*e*PKP	**Pn**		**10 04 37.8**	**+1.4**
DHRM				*e*S	**Sn**		**10 05 44.6**	**-2.8**
DHRM	comp=E,570nm,0.3s			AML	AML		10 05 48.8	
DHRM	comp=N,749nm,0.3s			AML	AML		10 05 50.6	
SDNR	**Sundarnagar**	**7.17**	**148**	*ex*	Pn		10 04 43.5	-4.9
SDNR				*e*S	Sn		10 06 03.0	-6.3
SMLA	**Simla**	**7.58**	**148**	*i* P	**Pn**		**10 04 54.9**	**+1.2**
SMLA				*i* S	**Sn**		**10 06 14.1**	**-4.8**
SMLA	comp=E,302nm,0.5s			AML	AML		10 06 17.6	
SMLA	comp=N,230nm,0.3s			AML	AML		10 06 20.9	
DDI	**Dehra Dun**	**8.66**	**146**	*e*S	Sn		10 06 37.0	-7.7
DDI				*e*S			10 06 38.6	
DDI	comp=E,427nm,0.2s			AML	AML		10 06 48.1	
DDI	comp=N,556nm,0.3s			AML	AML		10 06 48.7	
MKAR	**Makanchi Array** comp=N,0.1nm,0.3s,baz=225,slow=16,SNR=6.9	**11.63**	**35**	P	**Pn**		**10 05 49.5**	**+3.0**
PUN	**Piuthan** comp=N,28nm,0.3s	**12.98**	**134**	*e*P	**Pn**		**10 06 04.7**	**+0.5**
DANN	**Dangsing** comp=N,17nm,0.2s	**13.24**	**131**	*e*P	**Pn**		**10 06 08.0**	**+0.5**
DANN				*e*S	Sn		10 08 26.9	-8.0
KOLN	**Koldanda** comp=N,15nm,0.3s	**13.58**	**133**	*e*P	**Pn**		**10 06 12.7**	**+1.0**
KUR16	**Kurchatov Arra** comp=N,0.3nm,0.8s	**13.63**	**16**	⇑ P	**Pn**		**10 06 11.2**	**-0.7**
KURBB	**Kurchatov Arra** comp=N,0.0nm,0.3s,baz=206,slow=12,SNR=9.8	**13.63**	**16**	P	**Pn**		**10 06 11.5**	**-0.5**
KURK	**Kurchatov** comp=N,2.9nm,0.6s	**13.74**	**17**	⇓ P	**P**		**10 06 17.2**	**+1.1**
KKN	**Kakani**	**14.57**	**129**	*e*P	**P**		**10 06 25.3**	**-0.5**
DMN	**Daman** comp=N,22nm,0.4s	**14.59**	**130**	*e*P	**P**		**10 06 25.4**	**-0.7**

AB31	**Akbulak array**	**14.71**	**326**	P		**Pn**	**10 06 23.8**	**-1.6**
	comp=N,2.2nm,0.4s,baz=135,slow=14,SNR=75							
AB31				S		Sn	10 08 53.7	-16
	comp=N,1.6nm,0.4s,baz=285,slow=40,SNR=13							
PKIN	**Phulchoki**	**14.79**	**129**	*e*P		**P**	**10 06 28.4**	**0.0**
	comp=N,7.8nm,0.3s							
PKI	**Pulchoki**	**14.80**	**129**	*e*P		**P**	**10 06 28.5**	**0.0**
GUN	**Gumba**	**14.86**	**127**	*e*P		**Pn**	**10 06 27.9**	**+0.1**
	comp=N,16nm,0.3s							
VOSK	**Vostochnaya**	**15.08**	**356**	⇑P		**Pn**	**10 06 30.3**	**+0.4**
	comp=N,5.2nm,1.2s							
BVAR	**Borovoye Array**	**15.42**	**355**	P		**P**	**10 06 34.7**	**0.0**
	comp=N,2.4nm,0.3s,baz=163,slow=12,SNR=21							
BVAR				S		**Sn**	**10 09 20.3**	**-5.7**
	comp=N,0.5nm,0.3s,baz=158,slow=24,SNR=6.6							
BRVK	**Borovoye**	**15.46**	**355**	⇓P		**P**	**10 06 36.5**	**+1.4**
	comp=N,11nm,0.8s							
ZRNK	**Zerenda**	**15.46**	**352**	⇓P		**Pn**	**10 06 34.9**	**+0.2**
	comp=N,9.9nm,0.8s							
RAMN	**Ramite**	**15.99**	**128**	*e*P		**P**	**10 06 43.9**	**+2.4**
TAPN	**Taplejung**	**16.42**	**124**	*e*P		**Pn**	**10 06 48.0**	**+1.2**
	comp=N,15nm,0.4s							
AKTO	**Aktyubinsk**	**16.43**	**326**	⇑P		**Pn**	**10 06 46.9**	**+0.6**
	comp=N,1.6nm,0.9s							
AKTO	**Aktyubinsk**	**16.43**	**326**	P		**Pn**	**10 06 47.1**	**+0.8**
	comp=N,1.1nm,0.3s,baz=149,slow=12,SNR=12							
AKTO				S			10 09 37.8	-10
	comp=N,0.4nm,0.3s,baz=1.2,slow=11,SNR=3.5							
ODAN	**Odare**	**16.55**	**126**	*e*P		**Pn**	**10 06 50.4**	**+2.1**
ZALV	**Zalesovo Beam**	**18.34**	**24**	P		**Pn**	**10 07 11.4**	**+2.4**
	comp=N,0.6nm,0.3s,baz=226,slow=11,SNR=8.1							
FINES	**FINESS Array B**	**37.20**	**325**	P		P	10 10 05.0	+5.2
	comp=N,0.8nm,0.5s,baz=115,slow=10,SNR=9.2							
ARCES	**ARCESS Array B**	**40.53**	**337**	P		P	10 10 32.9	+5.6
	comp=N,1.9nm,0.6s,baz=115,slow=9.0,SNR=18							
NB2	**NORSAR Subarra**	**44.18**	**322**	P		pP	10 11 31.8	-3.6
	comp=Z,4.2nm,0.7s,baz=350,slow=6.9							
NOA	**NORSAR Array B**	**44.18**	**322**	P		P	10 11 01.6	+4.6
	comp=Z,0.2nm,0.5s,baz=91,slow=7.8,SNR=4.0							
TORD	**Torodi Ar. Bea**	**66.95**	**269**	P		P	10 13 44.0	+4.2
	comp=Z,1.1nm,0.5s,baz=47,slow=5.4,SNR=24							
INK	**Inuvik**	**72.54**	**10**	P		P	10 14 20.1	+7.1
	comp=Z,0.8nm,0.7s,baz=35,slow=5.0,SNR=3.7							
YKA	**Yellowknife Ar**	**80.00**	**3**	P		P	10 15 01.9	+6.7
	comp=Z,0.3nm,0.5s,baz=350,slow=5.5,SNR=6.7							
WRA	**Warramunga Arr**	**81.60**	**123**	P		P	10 15 10.7	+6.4
	comp=Z,0.5nm,0.6s,baz=329,slow=5.0,SNR=6.3							

IDC 16 10:08:52.3±1.8, 21°65N×92°87E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/28, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=111.7km s-min=19.9km az=57.0, Myanmar-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.53**	**118**	Pn		Pn	10 10 31.2	+1.4
	0.5nm,0.3s,baz=309,slow=13,SNR=6.7							
MKAR	**Makanchi Array**	**26.52**	**344**	P		P	10 14 31.6	+0.1
	1.2nm,0.7s,baz=155,slow=10.0,SNR=8.8							
KURBB	**Kurchatov Arra**	**31.03**	**342**	P		P	10 15 11.8	+0.1
	0.1nm,0.4s,baz=150,slow=8.8,SNR=4.4							
KURBB				PcP		PcP	10 18 07.1	-0.4
	0.2nm,0.6s,baz=160,slow=2.7,SNR=4.4							
WRA	**Warramunga Arr**	**57.90**	**133**	P		P	10 18 45.8	-0.7
	0.9nm,0.5s,baz=321,slow=7.5,SNR=29							
ASAR	**Alice Springs**	**60.20**	**136**	P		P	10 19 02.6	+0.2
	0.7nm,0.7s,baz=322,slow=7.0,SNR=15							

*BUC **16** 10:26:35.4±1.5, 45°15N×22°34E, h10km, MD2.5/3, Error ellipse: s-maj=15.6km s-min=5.2km az=17.0*
*BEO **16** 10:26:36.4±0.4, 45°19N×22°28E, h1km±4km, ML1.7/6*
*CSEM **16** 10:26:36.1±0.4, 45°20N×22°32E, h2km, ML1.7, Error ellipse: s-maj=11.7km s-min=5.3km az=84.0*
ISC 16 10:26:36.0±1.2, 45°18N±0°03×22°32E±0°03, h3km±11km, n19, σ0°48/33, 8C, Romania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BZS	**Buzias**	**0.66**	**312**	*e*Pg		**Pg**	**10 26 47.7**	**-1.0**
BZS				*e*Sg		**Sg**	**10 26 56.6**	**-0.7**
BZS	**Buzias**	**0.66**	**312**	⇑*i*P		**Pg**	**10 26 49.3**	**+0.6**
BZS				*i* S		**Sg**	**10 26 57.8**	**+0.5**
BZS	**Buzias**	**0.66**	**312**	⇑*i*P		**Pg**	**10 26 49.3**	**+0.6**
BZS	**Buzias**	**0.66**	**312**	*e*Pg		**Pg**	**10 26 47.7**	**-1.0**
BZS	**Buzias**	**0.66**	**312**	⇑*i*P		**Pg**	**10 26 49.3**	**+0.6**
BZS				*e*Sg		**Sg**	**10 26 56.6**	**-0.7**
BZS				S		**Sg**	**10 26 57.8**	**+0.5**
LOT	**Lotru**	**1.06**	**75**	⇑*i*P		**Pg**	**10 26 56.0**	**-0.3**
LOT				*i* S		**Sg**	**10 27 10.3**	**+0.3**
LOT	**Lotru**	**1.06**	**75**	⇑*i*P		**Pg**	**10 26 56.0**	**-0.3**
BOLS	**Boljevac**	**1.38**	**191**	*e*Pg		**Pn**	**10 27 01.5**	**-0.7**
BOLS				*e*Sg		**Sg**	**10 27 20.3**	**+0.1**
BOLS	**Boljevac**	**1.38**	**191**	*e*Pg		**Pn**	**10 27 01.5**	**-0.7**
BOLS				*e*Sg		**Sg**	**10 27 20.3**	**+0.1**
DRGR		**1.64**	**9**	*e*Pg		**Pn**	**10 27 06.1**	**+0.3**
DRGR				*e*Sg		**Sn**	**10 27 27.1**	**-0.3**
DRGR		**1.64**	**9**	⇑*i*P		**Pn**	**10 27 05.8**	**0.0**
DRGR				*i* S		**Sb**	**10 27 28.0**	**0.0**
DRGR		**1.64**	**9**	⇑*i*P		**Pn**	**10 27 05.8**	**0.0**
DRGR		**1.64**	**9**	⇑*i*P		**Pn**	**10 27 05.8**	**0.0**
DRGR		**1.64**	**9**	*e*Pg		**Pn**	**10 27 06.1**	**+0.3**
DRGR				*e*Sg		**Sn**	**10 27 27.1**	**-0.3**
DRGR				S		**Sb**	**10 27 28.0**	**0.0**
GRUS	**Gruza**	**1.73**	**222**	*e*Pn		**Pn**	**10 27 07.0**	**0.0**
GRUS	**Gruza**	**1.73**	**222**	*e*Pn		**Pn**	**10 27 07.0**	**0.0**
ZAPS	**Zavoj**	**1.92**	**173**	*e*Pn		**Pb**	**10 27 12.2**	**+0.5**
ZAPS				*e*Sg		**Sg**	**10 27 37.4**	**-0.3**
BARS	**Barje**	**2.39**	**189**	*e*Pn		**Pn**	**10 27 16.5**	**+0.4**
BARS				*e*Sn		**Sn**	**10 27 45.9**	**-0.1**
BARS	**Barje**	**2.39**	**189**	*e*Pn		**Pn**	**10 27 16.5**	**+0.4**
BARS				*e*Sn		**Sn**	**10 27 45.9**	**-0.1**

*DDA **16** 10:27:09.0, 36°77N×29°14E, h7km, MD2.9*
*ISK **16** 10:27:09.0, 36°80N×29°13E, h4km, MD2.4*
*CSEM **16** 10:27:09.7±0.2, 36°79N×29°15E, h5km, MD2.4, Error ellipse: s-maj=4.2km s-min=3.5km az=141.0*
ISC 16 10:27:09.8±1.1, 36°81N±0°03×29°17E±0°03, h1km±11km, n20, σ0°99/34, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FETY	**Fethiye**	**0.18**	**201**	*e*Pg		**Pg**	**10 27 13.1**	**-0.2**
FETY				*e*SG		**Sg**	**10 27 16.1**	**+0.3**
FETY	**Fethiye**	**0.18**	**201**	*e*Pg		**Pg**	**10 27 13.1**	**-0.2**
FETY				*e*Sg		**Sg**	**10 27 16.1**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.41**	**272**	*e*PG		**Pg**	**10 27 16.9**	**-0.9**
DALY				*e*SG		**Sg**	**10 27 23.0**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.41**	**272**	*e*Pg		**Pg**	**10 27 16.9**	**-0.9**
DALY				*e*Sg		**Sg**	**10 27 23.0**	**-0.1**
TURN	**Turunc**	**0.46**	**279**	*i* P		**Pn**	**10 27 23.1**	**-0.4**
TURN				*i* S		**Sb**	**10 27 32.5**	**+4.5**
GOLH	**Golhisar**	**0.53**	**36**	*i* P		**Pg**	**10 27 20.0**	**-0.1**
GOLH				*i* S		**Sb**	**10 27 29.6**	**-0.7**
GOLH	**Golhisar**	**0.53**	**36**	*i* P		**Pg**	**10 27 20.0**	**-0.1**
GOLH				*i* S		**Sb**	**10 27 29.6**	**-0.7**
ELL	**Elmali**	**0.60**	**95**	*e*PG		**Pg**	**10 27 21.6**	**+0.4**
ELL	**Elmali**	**0.60**	**95**	*e*Pg		**Pg**	**10 27 21.7**	**+0.4**
AKAS	**Kas**	**0.67**	**148**	*i* P		**Pb**	**10 27 24.4**	**0.0**
AKAS				*i* S		**Sn**	**10 27 37.2**	**-0.6**
YER	**Yerkesik**	**0.78**	**295**	*e*PG		**Pg**	**10 27 24.1**	**-0.7**
YER	**Yerkesik**	**0.78**	**295**	*e*Pg		**Pg**	**10 27 24.1**	**-0.7**
DNZL	**Cakiroluk**	**0.89**	**354**	*i* P		**Pg**	**10 27 27.0**	**+0.1**
DNZL				*i* S		**Sg**	**10 27 39.3**	**+0.9**
DNZL	**Cakiroluk**	**0.89**	**354**	*i* P		**Pg**	**10 27 27.0**	**+0.1**
DNZL				*i* S		**Sg**	**10 27 39.3**	**+0.9**
AYDN	**Tasoluk**	**1.34**	**310**	*i* P		**Pn**	**10 27 34.8**	**-0.9**
AYDN				*i* S		**Sn**	**10 27 54.3**	**+0.2**
AYDN	**Tasoluk**	**1.34**	**310**	*i* P		**Pn**	**10 27 34.8**	**-0.9**
AYDN				*i* S		**Sn**	**10 27 54.3**	**+0.2**
BODT	**Bodrum**	**1.51**	**280**	*e*PN		**Pn**	**10 27 37.4**	**-0.7**
BODT	**Bodrum**	**1.51**	**280**	*e*Pn		**Pn**	**10 27 37.4**	**-0.7**
KHAL	**Karahalli**	**1.58**	**9**	*i* P		**Pn**	**10 27 38.8**	**-0.4**
KHAL				*i* S		**Sg**	**10 28 00.7**	**0.0**
KHAL	**Karahalli**	**1.58**	**9**	*i* P		**Pn**	**10 27 38.8**	**-0.4**
KHAL				*i* S		**Sg**	**10 28 00.7**	**0.0**

IDC 16 10:31:11.2±1.8, 12°10N×86°52W, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.5/4, Error ellipse: s-maj=150.2km s-min=23.9km az=53.0, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TXAR	**Lajitas Array**	**23.43**	**320**	P		P	10 36 22.4	+0.1
	0.3nm,0.4s,baz=144,slow=9.3,SNR=9.3							
PDAR	**Pinedale Array**	**36.52**	**331**	P		P	10 38 18.8	0.0
	0.3nm,0.4s,baz=124,slow=12,SNR=5.3							
SIV	**San Ignacio**	**37.59**	**137**	P		P	10 38 27.8	-0.1
	1.8nm,0.6s,baz=317,slow=8.4,SNR=6.9							
YKA	**Yellowknife Ar**	**54.19**	**344**	P		P	10 40 37.9	-0.4
	0.3nm,0.7s,baz=144,slow=7.4,SNR=5.7							

*NEIC **16** 10:45:17.9, 30°26S×68°53W, h127km, MD4.2(GUC), After GUC.*
GUC 16 10:45:17.9±0.5, 30°26S×68°53W, h127km±34km, MD4.2, ML4.3, 4C-8D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TLL	**Tololo Astrono**	**1.97**	**272**	⇓*i*P		Pn	10 45 52.4	+0.8
TLL				*i* S		Sn	10 46 18.5	+1.0
TLL	**Tololo Astrono**	**1.97**	**272**	⇓*i*P		Pn	10 45 52.4	+0.8
TLL				*i* S		Sn	10 46 18.5	+1.0
LCO	**Las Campanas**	**2.26**	**303**	⇓*e*P		Pn	10 45 55.9	+0.6
LCO				*i* S		Sn	10 46 24.9	+1.0
LCO	**Las Campanas**	**2.26**	**303**	⇓*e*P		Pn	10 45 55.9	+0.6
LCO				*i* S		Sn	10 46 24.9	+1.0
LCO				AML		AML	10 46 29.8	
	comp=E,1μm,0.5s							
CMCH	**Combarbala**	**2.31**	**246**	⇑*i*P		Pn	10 45 55.3	-0.4
CMCH				*i* S		Sn	10 46 24.4	-0.3
CMCH	**Combarbala**	**2.31**	**246**	⇑*i*P		Pn	10 45 55.3	-0.4
CMCH				*i* S		Sn	10 46 24.4	-0.3
JACH	**Jahuel**	**2.99**	**216**	*i* P		Pn	10 46 05.4	+1.0
JACH	**Jahuel**	**2.99**	**216**	*i* P		Pn	10 46 05.4	+1.0
CHNG	**Los Chungos**	**3.02**	**237**	*i* P		Pn	10 46 03.9	-0.7
CHNG				*i* S		Sn	10 46 39.6	-1.0
CHNG	**Los Chungos**	**3.02**	**237**	*i* P		Pn	10 46 03.9	-0.7
CHNG				*i* S		Sn	10 46 39.6	-1.0
	comp=E,528nm,0.3s							
PEL	**Peldehue**	**3.41**	**212**	⇓*i*P		Pn	10 46 10.5	+0.6
PEL				*i* S		Sn	10 46 50.6	+0.5
PEL				AML		AML	10 47 06.1	
	comp=E,722nm,0.7s							
CLCH	**Cerro Calan**	**3.56**	**208**	⇓*i*P		Pn	10 46 12.8	+0.9
CLCH				*i* S		Sn	10 46 54.1	+0.4
CLCH				AML		AML	10 47 09.3	
	comp=E,675nm,0.6s							
SAN	**Santiago**	**3.66**	**209**	AML		AML	10 47 22.1	
	comp=N,238nm,0.8s							
PCH	**Pirque**	**3.75**	**206**	*i* P		Pn	10 46 15.2	+0.8
PCH				*i* S		Sn	10 46 58.6	+0.4
PCH	**Pirque**	**3.75**	**206**	*i* P		Pn	10 46 15.2	+0.8
PCH				*i* S		Sn	10 46 58.6	+0.4
LMEL	**Las Melosas**	**3.85**	**201**	*i* P		Pn	10 46 16.7	+0.9
LMEL				*i* S		Sn	10 47 01.1	+0.4
LMEL	**Las Melosas**	**3.85**	**201**	*i* P		Pn	10 46 16.7	+0.9
LMEL				*i* S		Sn	10 47 01.1	+0.4
LMEL				AML		AML	10 47 10.3	
	comp=N,124nm,0.0s							
TACH	**Talagante**	**3.95**	**210**	⇑*i*P		Pn	10 46 16.7	-0.3
TACH				*i* S		Sn	10 47 02.2	-0.6
TACH	**Talagante**	**3.95**	**210**	⇑*i*P		Pn	10 46 16.7	-0.3
TACH				*i* S		Sn	10 47 02.2	-0.6
CHCH	**Chadas Angostu**	**4.08**	**206**	*i* P		Pn	10 46 19.3	+0.5
CHCH				*i* S		Sn	10 47 06.2	+0.3
CHCH	**Chadas Angostu**	**4.08**	**206**	*i* P		Pn	10 46 19.3	+0.5
CHCH				*i* S		Sn	10 47 06.2	+0.3
CACH	**El Canelo**	**4.23**	**204**	⇓*i*P		Pn	10 46 21.9	+1.1
CACH				*i* S		Sn	10 47 10.9	+1.4
CACH	**El Canelo**	**4.23**	**204**	⇓*i*P		Pn	10 46 21.9	+1.1
CACH				*i* S		Sn	10 47 10.9	+1.4
LVC	**Limon Verde**	**7.62**	**357**	*e*Pn		Pn	10 47 07.2	+0.6
	comp=N,11nm,0.8s							

GUC 16 11:28:33.1±0.5, 32°51S×71°81W, h15km±2km, MD3.6, ML3.2, 4C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IHA	**Instituto Hidr**	**0.54**	**165**	⇑*i*P		Pg	11 28 43.4	-0.4
IHA				*i* S		Sg	11 28 51.1	+0.1
CHNG	**Los Chungos**	**0.67**	**23**	⇓*i*P		Pg	11 28 45.4	-0.8
CHNG				*i* S		Sg	11 28 54.9	-0.2
ROCH	**El Roble**	**0.82**	**125**	*e*P		Pb	11 28 48.0	-1.3
ROCH				*i* S		Sg	11 29 00.0	-0.3
JACH	**Jahuel**	**1.04**	**100**	*e*P		Pb	11 28 51.6	-1.4
JACH				*i* S		Sb	11 29 05.4	-1.1
PEL	**Peldehue**	**1.14**	**124**	⇑*i*P		Pn	11 28 53.2	-1.4
PEL				*i* S		Sb	11 29 08.6	-0.7
PEL				AML		AML	11 29 12.1	
	comp=N,2μm,0.5s							
SAN	**Santiago**	**1.35**	**135**	⇑*i*P		Pn	11 28 56.5	-1.0
SAN				*i* S		Sn	11 29 14.2	-1.0
SAN				AML		AML	11 29 20.9	
	comp=N,649nm,0.3s							
TACH	**Talagante**	**1.36**	**148**	⇑*i*P		Pn	11 28 56.7	-0.8
TACH				*i* S		Sn	11 29 14.2	-1.2
CLCH	**Cerro Calan**	**1.39**	**130**	⇓*i*P		Pn	11 28 57.2	-0.8
CLCH				*i* S		Sn	11 29 15.3	-0.9
CLCH				AML		AML	11 29 21.8	
	comp=E,780nm,0.7s							
ANTU	**Antumapu**	**1.45**	**137**	AML		AML	11 29 19.1	
	comp=E,602nm,0.9s							
LNV	**Longovilo**	**1.48**	**167**	*i* P		Pn	11 28 58.5	-0.7
LNV				*i* S		Sn	11 29 17.5	-0.9
CMCH	**Combarbala**	**1.49**	**28**	*i* P		Pn	11 28 58.2	-1.3
CMCH				*i* S		Sn	11 29 17.6	-1.2
PCH	**Pirque**	**1.56**	**136**	⇓*i*P		Pn	11 28 59.7	-0.6
PCH				*i* S		Sn	11 29 20.2	-0.2
SJCH	**San Jose de Ma**	**1.67**	**133**	AML		AML	11 29 28.2	
	comp=N,273nm,0.5s							
CHCH	**Chadas Angostu**	**1.72**	**146**	*i* P		Pn	11 29 02.4	-0.2
CHCH				*i* S		Sn	11 29 24.3	-0.1
LMEL	**Las Melosas**	**1.90**	**135**	⇓*i*P		Pn	11 29 05.4	+0.3
LMEL				*i* S		Sn	11 29 30.1	+1.1
LMEL				AML		AML	11 29 32.4	
	comp=N,368nm,0.2s							
CACH	**El Canelo**	**1.90**	**148**	*e*P		Pn	11 29 05.8	+0.6
CACH				*i* S		Sb	11 29 31.1	-0.2

MAN 16 11:40:12, 10°59N×122°38E, h31km, mb4.6, ML3.5, MS3.4, 2C-1D, Panay

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUIM	**Jordan**	**0.21**	**81**	*e*P		Pn	11 40 19.8	+0.8
RCP	**Roxas**	**1.03**	**20**	⇓*e*P		Pn	11 40 30.2	-0.1
RCP				*e*S		Sb	11 40 44.4	0.0
CUYO	**Cuyo Island**	**1.36**	**281**	*e*P		Pn	11 40 35.5	+0.5
LLP	**Lapu-Lapu**	**1.58**	**100**	⇓*e*P		Pn	11 40 38.0	+0.1
LLP				*e*S		Sn	11 40 57.7	+0.3
TBP	**Tagbilaran**	**1.71**	**121**	*e*P		Pn	11 40 40.5	+0.8
OTRP	**Odiongan**	**1.79**	**349**	*e*P		Pn	11 40 40.8	0.0
DCPH	**Dipolog City**	**2.22**	**154**	*i* P		Pn	11 40 47.6	+1.0
SJMP	**San Jose**	**2.23**	**326**	*e*P		Pn	11 40 47.0	+0.1
MSLP	**Maasin**	**2.48**	**100**	*e*P		Pn	11 40 51.0	+0.7
IPIL	**Ipil**	**2.79**	**176**	*e*P		Pn	11 40 55.4	+0.8
PAGZ	**Pagadian**	**2.90**	**160**	*e*P		Pn	11 40 59.3	+3.2
ENPP	**El Nido**	**2.96**	**282**	*e*P		Pn	11 40 57.8	+0.9
CTBH	**Cotabato--PC H**	**3.83**	**151**	⇑*i*P		Pb	11 41 20.1	+1.2

SKHL 16 11:52:39.3±0.1, 49°18N×130°54E, h10km±4km, mb3.5/3, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KLR	**Kul'dur**	**0.80**	**86**	*e*Pg		Pg	11 52 53.6	-1.1
KLR				*e*Sg		Sg	11 53 04.0	-1.1
GRNR	**Gornyy**	**4.12**	**65**	*e*Pg		Pb	11 53 55.0	+3.2
GRNR				*e*Sg		Sg	11 54 48.6	-2.9
GRNR				A		A	11 54 53.1	
	19nm,0.6s							
EKMR	**Ekimchan**	**4.18**	**20**	*e*Pn		Pn	11 53 43.4	+0.3
EKMR				*e*Pg		Pb	11 53 54.5	+1.5
EKMR				AMB		AMB	11 53 58.6	
	4.0nm,0.5s							
EKMR				*e*Sg		Sg	11 54 49.5	-4.1
EKMR				A		A	11 54 53.4	
	28nm,0.6s							
EKMR				A		A	11 54 53.4	
	31nm,0.6s							
EKMR				A		A	11 54 53.4	
	22nm,0.6s							
ZEA	**Zeya**	**5.01**	**337**	*e*Sg		Sg	11 55 16.0	-4.0
BMKR	**Bomnak**	**5.64**	**350**	*e*Pn		Pn	11 54 03.2	+0.1
BMKR				AMB		AMB	11 54 03.5	
	4.0nm,0.4s							
BMKR				*e*Sg		Sg	11 55 35.0	-5.2
BMKR				A		A	11 55 39.4	
	11nm,0.5s							
KROS	**Kirovskiy**	**5.71**	**339**	*e*Pn		Pn	11 54 04.0	-0.1
KROS				AMB		AMB	11 54 04.4	
	2.0nm,0.4s							
KROS				*e*Sg		Sg	11 55 37.7	-4.8
KROS				A		A	11 55 43.6	
	6.0nm,0.5s							
NKL	**Nikolayevsk**	**7.51**	**54**	*e*Sg		Sg	11 56 35.0	-5.1

IDC 16 11:59:30.6±4.8, 23°90S×177°43W, h120km±46km, mb3.7/6, mb1 3.9/7, mb1mx3.6/22, mbtmp3.8/7, Error ellipse: s-maj=33.2km s-min=24.7km az=165.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**11.28**	**29**	P		Pn	12 02 08.3	-0.2
	1.7nm,0.3s,baz=105,slow=20,SNR=3.0							
AFI				S		Sn	12 04 04.7	-8.1
	2.8nm,0.3s,baz=145,slow=22,SNR=4.0							
DZM	**Mont Dzumac**	**14.96**	**274**	P		P	12 03 02.5	+4.0
	0.6nm,0.3s,baz=114,slow=20,SNR=7.8							
CTA	**Charters Tower**	**33.82**	**269**	P		P	12 06 03.3	+1.8
	4.1nm,0.4s,baz=111,slow=9.0,SNR=7.9							
STKA	**Stephens Creek**	**36.90**	**248**	P		P	12 06 27.3	-0.5
	1.5nm,0.4s,baz=97,slow=12,SNR=9.7							
ASAR	**Alice Springs**	**44.35**	**260**	P		P	12 07 28.4	-0.7
	1.0nm,0.5s,baz=95,slow=6.3,SNR=24							
ASAR				PcP		PcP	12 09 10.1	-1.1
	0.3nm,0.4s,baz=112,slow=3.9,SNR=5.1							
WRA	**Warramunga Arr**	**44.75**	**265**	P		P	12 07 31.5	-0.8
	0.5nm,0.3s,baz=100,slow=8.5,SNR=29							
FITZ	**Fitzroy Crossi**	**53.17**	**265**	P		P	12 08 36.7	+0.2
	2.6nm,0.8s,baz=100,slow=11,SNR=5.7							
QSPA	**South Pole Qui**	**66.19**	**180**	P		P	12 10 05.2	+0.1
	0.9nm,0.9s,baz=137,slow=1.6,SNR=4.8							
FINES	**FINESS Array B**	**139.16**	**343**	PKP		PKPdf	12 18 44.5	+1.9
	0.9nm,0.9s,baz=106,slow=6.8,SNR=4.6							
AKASG	**Malin Array Be**	**146.21**	**329**	PKPbc		PKPdf	12 18 56.0	+0.6
	1.3nm,0.4s,baz=38,slow=4.2,SNR=9.5							

*IDC **16** 12:08:18.3±1.3, 27°38N×140°27E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/23, mbtmp3.6/4, Error ellipse: s-maj=75.3km s-min=30.7km az=91.0*
*ISCJB **16** 12:08:44.9±0.8, 27°30N±0°07×140°9E±0°2, h250km, mb3.2/4, Error ellipse: s-maj=19.8km s-min=6.6km az=160.4*
*JMA **16** 12:08:45.9±0.1, 27°35N×141°11E, h257km, M3.9*
ISC 16 12:08:45.7±1.1, 27°33N±0°09×140°9E±0°2, h250km, n14, σ1°01/17, mb3.4/4, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.14**	**102**	P		**Pn**	**12 09 21.9**	**+0.4**
CBIJ				*e*S		**S**	**12 09 49.5**	**-0.1**
JHHJ	**Haha-jima-NKT**	**1.31**	**122**	P		**Pn**	**12 09 22.8**	**+0.2**
JHHJ				S		**S**	**12 09 51.2**	**-0.5**
JHJ2	**Mitsune**	**5.84**	**351**	P		**Pn**	**12 10 13.3**	**+1.5**
JHJ2				*e*S		**S**	**12 11 21.0**	**+0.4**
BSO1	**Boso 1**	**7.30**	**0**	P		**Pn**	**12 10 30.9**	**+1.4**
BSO1				*e*S		**S**	**12 11 51.8**	**-1.3**
BSO2	**Boso 2**	**7.40**	**359**	*e*S		**S**	**12 11 54.0**	**-1.7**
BSO3	**Boso 3**	**7.46**	**357**	P		**Pn**	**12 10 32.7**	**+1.0**
JOD2	**Odawara 2**	**8.06**	**349**	P		**Pn**	**12 10 40.9**	**+1.2**
JHU	**Hanno**	**8.61**	**351**	P		**Pn**	**12 10 47.1**	**+

FSR	**Penalolen**	**0.94**	**135**	*i*	P		**Pn**	**12 14 29.9**	**+0.3**
FSR					*i*	S	**Sn**	**12 14 42.8**	**+0.3**
FSR	**Penalolen**	**0.94**	**135**	*i*	P		**Pn**	**12 14 29.9**	**+0.3**
FSR					*i*	S	**Sn**	**12 14 42.8**	**+0.3**
ANTU	**Antumapu**	**0.95**	**143**	⇑*i*	P		**Pn**	**12 14 29.9**	**+0.2**
ANTU					*i*	S	**Sn**	**12 14 43.2**	**+0.6**
ANTU	**Antumapu**	**0.95**	**143**	⇑*i*	P		**Pn**	**12 14 29.9**	**+0.2**
ANTU					*i*	S	**Sn**	**12 14 43.2**	**+0.6**
ANTU						AML	AML	12 14 43.4	
	comp=E,6μm,0.2s								
LNV	**Longovilo**	**1.14**	**184**		P		**Pn**	**12 14 31.9**	**-0.3**
LNV	**Longovilo**	**1.14**	**184**	*i*	P		**Pn**	**12 14 31.9**	**-0.3**
SJCH	**San Jose de Ma**	**1.16**	**136**	⇑*i*	P		**Pn**	**12 14 31.8**	**-0.7**
SJCH					*i*	S	**Sn**	**12 14 47.3**	**-0.2**
SJCH	**San Jose de Ma**	**1.16**	**136**	⇑*i*	P		**Pn**	**12 14 31.8**	**-0.7**
SJCH					*i*	S	**Sn**	**12 14 47.3**	**-0.2**
SJCH						AML	AML	12 14 47.3	
	comp=E,2μm,0.2s								
LMEL	**Las Melosas**	**1.39**	**138**	*i*	P		**Pn**	**12 14 36.2**	**+0.6**
LMEL					*i*	S	**Sn**	**12 14 54.3**	**+1.1**
LMEL	**Las Melosas**	**1.39**	**138**	*i*	P		**Pn**	**12 14 36.2**	**+0.6**
LMEL					*i*	S	**Sn**	**12 14 54.3**	**+1.1**
LMEL						AML	AML	12 14 56.3	
	comp=N,5μm,0.1s								
CACH	**El Canelo**	**1.43**	**155**	*i*	P		**Pn**	**12 14 37.4**	**+1.3**
CACH	**El Canelo**	**1.43**	**155**	*i*	P		**Pn**	**12 14 37.4**	**+1.3**
CMCH	**Combarbala**	**1.66**	**10**	⇑*i*	P		**Pn**	**12 14 38.8**	**-0.3**
CMCH					*i*	S	**Sn**	**12 14 59.4**	**-0.1**
CMCH	**Combarbala**	**1.66**	**10**	⇑*i*	P		**Pn**	**12 14 38.8**	**-0.3**
CMCH					*i*	S	**Sn**	**12 14 59.4**	**-0.1**
CMCH						AML	AML	12 15 03.7	
	comp=N,7μm,0.5s								
LCO	**Las Campanas**	**3.83**	**8**	*eP*			**Pn**	**12 15 08.8**	**-0.1**
LCO					*eS*		**Sn**	**12 15 52.8**	**0.0**
PLCA	**Paso Flores**	**7.93**	**176**		P		Pn	12 16 09.9	+5.0
PLCA	**Paso Flores**	**7.93**	**176**		P		Pn	12 16 09.9	+5.0
	comp=N,0.2nm,0.3s,baz=335,slow=9.7,SNR=2.8								
TRQA	**Tornquist**	**9.24**	**127**		Pn		**Pn**	**12 16 23.4**	**+0.6**
LPAZ	**La Paz**	**16.71**	**11**	*eP*			**Pn**	**12 18 03.1**	**+0.2**
LPAZ	**La Paz**	**16.71**	**11**		P		**Pn**	**12 18 02.9**	**0.0**
	comp=N,0.2nm,0.3s,baz=182,slow=6.5,SNR=11								
SIV	**San Ignacio**	**19.15**	**31**		P		**P**	**12 18 29.4**	**-1.4**
SIV	**San Ignacio**	**19.15**	**31**		P		**P**	**12 18 29.4**	**-1.4**
	comp=N,0.6nm,0.3s,baz=224,slow=10,SNR=12								
SAML	**Samuel**	**24.91**	**19**	*eP*			**P**	**12 19 31.1**	**+1.5**
	comp=N,2.2nm,0.8s								
BDFB	**Brasilia**	**27.18**	**57**		P		**P**	**12 19 49.0**	**-1.3**
BDFB	**Brasilia**	**27.18**	**57**		P		**P**	**12 19 49.0**	**-1.3**
	comp=N,4.8nm,1.0s,baz=203,slow=7.7,SNR=4.0								
BDFB						LR	LR	12 31 15.1	
	comp=N,54nm,18.6s,baz=162,slow=38								
QSPA	**South Pole Qui**	**57.42**	**180**		P		**P**	**12 23 55.4**	**+1.0**
QSPA	**South Pole Qui**	**57.42**	**180**		P		**P**	**12 23 55.4**	**+1.0**
	comp=N,1.8nm,0.7s,baz=176,slow=1.9,SNR=16								
TORD	**Torodi Ar. Bea**	**83.24**	**70**		P		**P**	**12 26 32.5**	**0.0**
TORD	**Torodi Ar. Bea**	**83.24**	**70**		P		**P**	**12 26 32.5**	**0.0**
	comp=N,0.5nm,0.8s,baz=241,slow=4.6,SNR=4.5								
WRA	**Warramunga Arr**	**122.09**	**209**		PKP		**PKPdf**	**12 32 59.6**	**-0.9**
WRA	**Warramunga Arr**	**122.09**	**209**		PKP		**PKPdf**	**12 32 59.6**	**-0.9**
	comp=N,0.2nm,0.4s,baz=147,slow=1.2,SNR=5.5								

GUC 16 12:17:04.0±0.4, 22°.85S×66°.77W, h250km, ML3.9, 1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PB09	**Plate Boundary**	**2.52**	**294**	*i*	P	Pn	12 17 54.6	+3.0
PB09					*i* S	S	12 18 32.7	+3.5
PB09					AML	AML	12 18 37.8	
	comp=N,178nm,0.2s							
PB07	**Plate Boundary**	**3.09**	**291**	*e*	P	Pn	12 18 00.2	+2.5
PB07					*i* S	S	12 18 42.2	+2.0
PB01	**Plate Boundary**	**3.10**	**305**	*i*	P	Pn	12 17 60.0	+2.3
PB01					*i* S	S	12 18 42.6	+2.5
CEN1	**Los Morros**	**3.20**	**260**	*i*	P	Pn	12 18 02.9	+4.1
CEN1					*i* S	S	12 18 47.8	+5.6
ANCH	**Antofagasta**	**3.45**	**255**	⇓*i*	P	Pn	12 18 04.0	+2.6
ANCH					*i* S	S	12 18 49.0	+2.1
HMBC	**Humberstone**	**3.87**	**311**	*i*	P	Pn	12 18 09.3	+2.8
HMBC					*i* S	S	12 18 58.8	+2.8
PSGC	**Pisagua**	**4.50**	**315**	*i*	P	Pn	12 18 15.3	+1.3
PSGC					*i* S	S	12 19 10.6	+1.0
MNMC	**Minimini**	**4.54**	**324**	*e*	P	Pn	12 18 16.5	+1.8
MNMC					*e* S	S	12 19 12.6	+1.7

KRSC 16 12:21:05.9±0.7, 55°.98N×164°.50E, h11km±11km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KBTR	**Krutoberegovo**	**0.97**	**284**	*e*	P	Pg	12 21 23.0	-1.6
KBTR					*e*	Sg	12 21 35.6	-1.6
KBG	**Krutoberegovo**	**1.04**	**286**	*e*	P	Pb	12 21 24.3	-1.6
KBG					*e*	Sg	12 21 38.5	-1.0
BKI	**Bering**	**1.14**	**132**	*e*	P	Pb	12 21 26.3	-1.3
BKI					*e*	Sb	12 21 40.7	-1.7
SMKR	**Semkarok**	**1.79**	**291**	*e*	P	Pn	12 21 36.4	-0.5
SMKR					*e*	Sn	12 21 59.0	-0.8
BDR	**Baidarnaya**	**1.93**	**289**	*e*	P	Pn	12 21 39.0	+0.3
BDR					*e*	Sn	12 22 03.7	+0.7
SRKR	**Sorokina**	**1.98**	**291**	*e*	P	Pn	12 21 39.2	-0.2
ZLN	**Zelenaya**	**2.08**	**273**	*e*	P	Pn	12 21 41.8	+1.0
ZLN					*e*	Sb	12 22 08.4	-1.2
CIRR	**Tsirk**	**2.11**	**275**	*e*	P	Pn	12 21 41.8	+0.5
CIRR					*e*	Sn	12 22 08.1	+0.5
MKZ	**Mys Kozlova**	**2.13**	**229**	*e*	P	Pn	12 21 40.8	-0.6
MKZ					*e*	Sn	12 22 06.5	-1.3
BZGR	**Bezymyannyi-Gr**	**2.14**	**270**	*e*	P	Pn	12 21 42.7	+1.0
BZGR					*e*	Sn	12 22 09.2	+0.9
KLY	**Klyuchi**	**2.18**	**280**	*e*	P	Pn	12 21 41.2	-0.8
KLY					*e*	Sn	12 22 07.6	-1.4
BZWR	**Bezymyannyi-We**	**2.25**	**271**	*e*	P	Pn	12 21 44.9	+1.6
BZMR	**Bezymyannaya**	**2.25**	**271**	*e*	P	Pn	12 21 44.5	+1.2
KIRR	**Kirishev**	**2.34**	**271**	*e*	P	Pn	12 21 45.6	+1.1
KIRR					*e*	Sn	12 22 13.9	+0.6
KPT	**Kopyto**	**2.41**	**271**	*e*	P	Pn	12 21 46.9	+1.6
KMNR	**Kamenistaya**	**2.41**	**266**	*e*	P	Pn	12 21 47.0	+1.6
KMNR					*e*	Sb	12 22 17.6	-1.7
TUMR	**Tumrok**	**2.57**	**256**	*e*	P	Pn	12 21 49.1	+1.6
KOZ	**Kozyrevsk**	**2.60**	**274**	*e*	P	Pb	12 21 51.3	-1.2
SRDR	**Sredinnyy**	**2.70**	**279**	*e*	P	Pn	12 21 50.2	+0.9
ESO	**Esso**	**3.26**	**271**	*e*	P	Pb	12 22 01.0	-2.8
NLC	**Nalytchevo**	**4.11**	**229**	*e*	S	Sn	12 22 56.0	-0.6
SDLR	**Sedlovina**	**4.24**	**233**	*e*	P	Pn	12 22 11.7	+1.2
SDLR					*e*	Sn	12 22 59.1	-1.0
KRER	**Koryakskii**	**4.28**	**234**	*e*	P	Pn	12 22 12.8	+1.6
SMAR	**Somma**	**4.29**	**233**	*e*	P	Pn	12 22 12.3	+1.0
UGLR	**Uglovaya**	**4.31**	**232**	*e*	P	Pn	12 22 18.7	+1.2
AVH	**Avacha**	**4.31**	**233**	*e*	P	Pn	12 22 13.1	+1.6
KOK	**Koryaka**	**4.34**	**234**	*e*	P	Pn	12 22 15.0	+3.1
GNL	**Ganaly**	**4.43**	**242**	*e*	P	Pn	12 22 15.5	+2.4
PET	**Petropavlovsk**	**4.51**	**231**	*e*	S	Sn	12 23 06.5	0.0
RUS	**Russkaya**	**5.00**	**227**	*e*	P	Pn	12 22 21.2	+0.5
MTVR	**Mutnovka**	**5.10**	**229**	*e*	P	Pn	12 22 24.2	+1.8
ASAK	**Asacha**	**5.29**	**230**	*e*	P	Pn	12 22 27.3	+2.4

IDC 16 12:30:45.5±6.2, 17°.21S×178°.71W, h598km±72km, mb2.8/6, mb1 3.1/6, mb1mx2.9/19, mbtmp2.8/6, Error ellipse: s-maj=81.3km s-min=28.9km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STKA	**Stephens Creek**	**38.72**	**240**		P	P	12 37 19.6	-0.3
	0.4nm,0.3s,baz=90,slow=13,SNR=2.3							
WRA	**Warramunga Arr**	**44.48**	**259**		P	P	12 38 05.7	+0.3
	0.4nm,0.4s,baz=94,slow=7.3,SNR=9.1							
ASAR	**Alice Springs**	**44.70**	**254**		P	P	12 38 06.8	-0.3
	1.3nm,0.6s,baz=88,slow=8.7,SNR=30							
ASAR						PcP	PcP	12 39 35.4	-0.9
	0.3nm,0.4s,baz=104,slow=3.8,SNR=8.3							
ILAR	**Eielson Array**	**85.28**	**13**		P	P	12 42 18.2	-1.5
	0.2nm,0.4s,baz=219,slow=5.0,SNR=5.5							
TXAR	**Lajitas Array**	**85.87**	**58**		P	P	12 42 23.1	-0.4
	0.4nm,0.6s,baz=218,slow=5.9,SNR=5.3							
PDAR	**Pinedale Array**	**87.05**	**44**		P	P	12 42 29.9	+1.0
	0.3nm,0.6s,baz=193,slow=3.7,SNR=3.3							
ARCES	**ARCESS Array B**	**125.58**	**350**		PKP	PKPdf	12 48 38.2	-1.0
	0.5nm,0.8s,baz=116,slow=2.8,SNR=3.7							
BRTR	**Keskin Array B**	**144.09**	**315**		PKP	PKPab	12 49 14.9	+0.4
	0.4nm,0.5s,baz=39,slow=4.7,SNR=3.7							
GERES	**GERESS Array B**	**146.87**	**345**		PKPbc	PKPbc	12 49 22.1	+0.3
	0.4nm,0.4s,baz=20,slow=4.3,SNR=4.4							

IDC 16 12:30:55.8±1.3, 57°.90S×147°.96W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.7/14, mbtmp3.7/2, MS4.0/8, Ms1 4.0/8, ms1mx3.7/27, Error ellipse: s-maj=156.3km s-min=40.5km az=178.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VNDA	**Vanda**	**25.89**	**203**		LR	LR	12 44 08.9	
	comp=Z,244nm,20.5s,baz=58,slow=31							
RPZ	**Rata Peaks**	**29.01**	**281**		LR	LR	12 45 08.1	
	comp=Z,307nm,20.6s,baz=74,slow=29							
TBI	**Tubuai**	**34.53**	**358**	*e*	LR	LR	12 46 04.1	
	374nm,27.0s							
PPT2	**Papeete2**	**40.27**	**358**	*e*	LR	LR	12 48 44.2	
	342nm,26.0s							
PPT	**Papeete**	**40.29**	**358**		LR	LR	12 51 25.6	
	comp=Z,232nm,19.5s,baz=178,slow=30							
PLCA	**Paso Flores**	**50.35**	**106**		LR	LR	12 56 37.4	
	comp=Z,146nm,19.7s,baz=185,slow=31							
MAW	**Mawson**	**52.75**	**194**		LR	LR	13 00 03.3	
	comp=Z,184nm,20.6s,baz=316,slow=33							
ASAR	**Alice Springs**	**64.02**	**267**		P	P	12 41 30.8	-0.3
	1.2nm,0.9s,baz=139,slow=6.4,SNR=6.1							
WRA	**Warramunga Arr**	**66.82**	**269**		P	P	12 41 48.7	-0.5
	1.0nm,1.0s,baz=145,slow=5.6,SNR=4.5							
CPUP	**Villa Florida**	**68.42**	**105**		LR	LR	13 07 59.0	
	comp=Z,43nm,19.2s,baz=321,slow=32							
KAPI	**Kappang**	**87.01**	**265**		LR	LR	13 20 38.7	
	comp=Z,96nm,18.3s,baz=0.5,slow=34							
BOSA	**Boshof**	**93.63**	**174**		LR	LR	13 21 32.3	
	comp=Z,104nm,20.5s,baz=164,slow=32							
ILAR	**Eielson Array**	**122.35**	**1**		PKP	PKPdf	12 49 50.5	-0.6
	0.7nm,0.9s,baz=250,slow=1.8,SNR=6.5							
MKAR	**Makanchi Array**	**148.10**	**272**		PKPbc	PKPbc	12 50 43.2	+0.9
	2.2nm,0.9s,baz=105,slow=2.9,SNR=17							
ESDC	**Sonseca Array**	**150.58**	**113**		PKPbc	PKPbc	12 50 48.0	-0.8
	1.5nm,1.0s,baz=242,slow=2.8,SNR=4.3							

*NNC **16** 12:35:03.3±1.2, 42°.36N×76°.16E, h0km, mb2.7, mpv2.3, Error ellipse: s-maj=8.2km s-min=5.1km az=16.0*
*KNET **16** 12:35:03.0±0.6, 42°.34N×76°.15E, h0km, ml1.9, Error ellipse: s-maj=7.4km s-min=2.0km az=37.0*
ISC 16 12:35:02.8±1.1, 42°.30N±0°.06×76°.13E±0°.06, h9km±11km, n9, σ0s85/14, 5C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ULHL	**Ulahol**	**0.10**	**124**	⇑	P	**Pg**	**12 35 05.4**	**0.0**
	216nm,0.1s,SNR=2816							
ULHL				⇑	S	**Sg**	**12 35 07.3**	**0.0**
	1μm,0.1s							
KZA	**Kyzart**	**0.69**	**251**		P	**Pb**	**12 35 17.5**	**+0.2**
	6.5nm,0.2s,SNR=6.2							
TKM2	**Tokmak 2**	**0.73**	**328**	⇓	P	**Pg**	**12 35 16.9**	**-0.1**
	2.1nm,0.2s							
TKM2				⇑	S	**Sg**	**12 35 26.8**	**+0.2**
	11nm,0.3s							
TKM2	**Tokmak 2**	**0.73**	**328**	⇓	P	**Pg**	**12 35 17.0**	**0.0**
	9.4nm,0.2s,SNR=77							
TKM2				⇓	S	**Sg**	**12 35 26.6**	**0.0**
	40nm,0.1s							
KBK	**Karagaybulak**	**0.94**	**292**	⇓	P	**Pb**	**12 35 21.7**	**+0.2**
	16nm,0.1s,SNR=13							
KBK				⇓	S	**Sb**	**12 35 35.7**	**+1.5**
	24nm,0.1s							
KNDC	**Almaty**	**1.10**	**34**	⇓	S	**Sb**	**12 35 37.9**	**-0.8**
AAK	**Ala-Archa**	**1.26**	**286**	⇑	P	**Pb**	**12 35 27.3**	**+0.5**
	3.8nm,0.1s							
AAK				⇑	S	**Sn**	**12 35 44.3**	**+0.4**
	11nm,0.2s							
USP	**Ospenovka**	**1.54**	**309**	⇓	P	**Pb**	**12 35 31.8**	**+0.2**
	7.0nm,0.2s,SNR=5.7							
KK31	**Karatay Array**	**4.22**	**283**		Pg	**Pg**	**12 36 21.6**	**-2.0**
	0.2nm,0.3s,baz=97,slow=16,SNR=9.4							
KK31				⇓	Lg	Lg	12 37 15.0	
	1.1nm,0.5s,baz=98,slow=29,SNR=7.9							

IDC 16 12:39:30.2±6.2, 37°.25N×72°.34E, h171km±41km, mb3.0/3, mb1 3.2/4, mb1mx2.8/27, mbtmp3.0/4, Error ellipse: s-maj=91.3km s-min=39.7km az=128.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AAK	**Ala-Archa**	**5.63**	**16**		P	Pn	12 40 53.1	+0.7
	2.6nm,0.3s,baz=165,slow=7.0,SNR=18							
AAK					S	Sn	12 41 56.7	-0.3
	0.3nm,0.3s,baz=349,slow=16,SNR=3.3							
ARCES	**ARCESS Array B**	**40.87**	**337**		P	P	12 46 55.2	+0.2
	2.0nm,1.1s,baz=102,slow=8.4,SNR=4.6							
TORD	**Torodi Ar. Bea**	**56.81**	**269**		P	P	12 50 03.4	-0.3
	0.2nm,0.7s,baz=48,slow=5.7,SNR=4.1							
YKA	**Yellowknife Ar**	**80.45**	**3**		P	P	12 51 22.4	0.0
	0.1nm,0.4s,baz=348,slow=5.5,SNR=4.8							

IDC 16 12:54:18.4±16.0, 18°.07S×178°.09W, h565km±140km, mb3.2/4, mb1 3.4/4, mb1mx2.9/20, mbtmp3.2/4, Error ellipse: s-maj=199.7km s-min=40.4km az=133.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**44.90**	**260**		P	P	13 01 43.0	-0.6
	1.0nm,0.3s,baz=94,slow=7.4,SNR=77							
WRA					PcP	PcP	13 03 12.4	-0.5
	0.3nm,0.3s,baz=90,slow=3.8,SNR=4.8							
ASAR	**Alice Springs**	**45.04**	**254**		P	P	13 01 44.8	+0.1
	4.4nm,0.6s,baz=88,slow=8.6,SNR=107							
ASAR					PcP	PcP	13 03 12.9	-0.4
	0.6nm,0.4s,baz=104,slow=3.8,SNR=9.4							
FITZ	**Fitzroy Crossi**	**53.30**	**261**		P	P	13 02 45.6	+0.1
	2.6nm,0.9s,baz=37,slow=5.1,SNR=5.7							
ILAR	**Eielson Array**	**85.97**	**13**		P	P	13 05 58.5	-0.3
	0.2nm,0.4s,baz=221,slow=5.2,SNR=6.7							
ARCES	**ARCESS Array B**	**126.52**	**350**		PKP	PKPdf	13 12 16.3	-0.8
	1.4nm,0.9s,baz=20,slow=3.9,SNR=4.0							
BRTR	**Keskin Array B**	**145.11**	**315**		PKPbc	PKPdf	13 12 52.1	-0.2
	0.7nm,0.6s,baz=145,slow=4.5,SNR=5.0							
GERES	**GERESS Array B**	**147.84**	**345**		PKPbc	PKPbc	13 13 00.5	+0.2
	0.5nm,0.4s,baz=4.6,slow=3.3,SNR=7.3							

*ISCJB **16** 12:56:19.5±0.5, 38°.11N±0°.02×22°.69E±0°.02, h14km±3km, mb3.6/5, Error ellipse: s-maj=3.2km s-min=3.1km az=167.7*
*THE **16** 12:56:19.6, 38°.11N×22°.69E, h0km±1km, ML3.5/9, Error ellipse: s-maj=1.7km s-min=0.5km az=74.0*
*ATH **16** 12:56:19.2, 38°.11N×22°.69E, h19km, MD3.4/23, ML3.2*
*CSEM **16** 12:56:19.6±0.1, 38°.12N×22°.69E, h10km, MD3.4, Error ellipse: s-maj=3.2km s-min=3.0km az=93.0*
*IDC **16** 12:56:21.0±5.0, 38°.73N×22°.61E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.4/27, mbtmp3.6/6, Error ellipse: s-maj=149.0km s-min=24.1km az=177.0*
ISC 16 12:56:19.7±0.8, 38°.12N±0°.02×22°.68E±0°.02, h12km±6km, n116, σ0s71/149, mb3.6/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LTK	**Loutraki**	**0.25**	**113**		P	**Pg**	**12 56 24.8**	**-0.2**
LTK	**Loutraki**	**0.25**	**113**	*e*	PB	**Pg**	**12 56 24.7**	**-0.2**
LTK				*e*	SB	**Sg**	**12 56 28.8**	**+0.3**
LTK	**Loutraki**	**0.25**	**113**		P	**Pg**	**12 56 24.8**	**-0.2**
LTK				*e*	Sb	**Sg**	**12 56 28.8**	**+0.3**
DSF	**Desfina**	**0.31**	**338**		P	**Pg**	**12 56 25.9**	**-0.3**
DSF					S	**Sg**	**12 56 31.3**	**+0.8**
DSF	**Desfina**	**0.31**	**338**		P	**Pg**	**12 56 25.9**	**-0.3**
DSF					S	**Sg**	**12 56 31.3**	**+0.8**
GUR	**Goura**	**0.32**	**235**		P	**Pg**	**12 56 26.1**	**-0.3**
GUR					S	**Sg**	**12 56 30.6**	**-0.2**
GUR	**Goura**	**0.32**	**235**	*e*	PB	**Pg**	**12 56 26.0**	**-0.3**
GUR				*e*	SB	**Sg**	**12 56 30.9**	**+0.1**
GUR	**Goura**	**0.32**	**235**	*e*	Pb	**Pg**	**12 56 26.0**	**-0.3**
GUR					S	**Sg**	**12 56 30.6**	**-0.2**
GUR				*e*	Sb	**Sg**	**12 56 30.9**	**+0.1**
KALE	**Kalithea**	**0.50**	**303**		P	**Pg**	**12 56 29.5**	**-0.2**
KALE					S	**Sg**	**12 56 37.1**	**+0.7**
KALE	**Kalithea**	**0.50**	**303**	*e*	PN	**Pg**	**12 56 29.5**	**-0.2**
KALE				*e*	SN	**Sg**	**12 56 36.6**	**+0.2**
KALE	**Kalithea**	**0.50**	**303**		P	**Pg**	**12 56 29.5**	**-0.2**
KALE				*e*	Sn	**Sg**	**12 56 36.6**	**+0.2**
KALE					S	**Sg**	**12 56 37.1**	**+0.7**
TRIZ	**Trizonia**	**0.54**	**297**		P	**Pg**	**12 56 30.0**	**-0.2**
TRIZ					S	**Sb**	**12 56 38.3**	**-0.5**
TRIZ	**Trizonia**	**0.54**	**297**	*e*	PN	**Pg**	**12 56 30.1**	**-0.2**
TRIZ				*e*	SN	**Sb**	**12 56 38.2**	**-0.5**
TRIZ	**Trizonia**	**0.54**	**297**		P	**Pg**	**12 56 30.0**	**-0.2**
TRIZ				*e*	Sn	**Sb**	**12 56 38.2**	**-0.5**
LAKA	**Lakka**	**0.56**	**282**		P	**Pg**	**12 56 30.7**	**-0.1**
LAKA					S	**Sg**	**12 56 38.5**	**+0.2**
LAKA	**Lakka**	**0.56**	**282**	*e*	PN	**Pg**	**12 56 30.7**	**-0.1**
LAKA	**Lakka**	**0.56**	**282**		P	**Pg**	**12 56 30.7**	**-0.1**
LAKA					S	**Sg**	**12 56 38.5**	**+0.2**
LKR	**Lokris**	**0.59**	**25**		P	**Pg**	**12 56 30.4**	**-0.8**
LKR					S	**Sb**	**12 56 40.1**	**-0.1**
LKR	**Lokris**	**0.59**	**25**	*e*	PN	**Pg**	**12 56 30.4**	**-0.8**
LKR				*e*	SN	**Sb**	**12 56 39.8**	**-0.4**
LKR	**Lokris**	**0.59**	**25**		P	**Pg**	**12 56 30.4**	**-0.8**
LKR				*e*	Sn	**Sb**	**12 56 39.8**	**-0.4**
LKR					S	**Sb**	**12 56 40.1**	**-0.1**
ATAL	**Atalanti**	**0.63**	**25**		P	**Pg**	**12 56 31.3**	**-0.8**
ATAL	**Atalanti**	**0.63**	**25**		P	**Pg**	**12 56 31.3**	**-0.8**
AXAR	**Agios Charalam**	**0.65**	**359**		P	**Pg**	**12 56 31.6**	**-0.7**
AXAR	**Agios Charalam**	**0.65**	**359**		P	**Pg**	**12 56 31.6**	**-0.7**
EFP	**Efpalio**	**0.68**	**297**		P	**Pg**	**12 56 32.6**	**-0.4**
EFP					S	**Sb**	**12 56 43.1**	**+0.2**
EFP	**Efpalio**	**0.68**	**297**	*e*	PB	**Pg**	**12 56 32.1**	**-0.9**
EFP	**Efpalio**	**0.68**	**297**	*e*	Pb	**Pg**	**12 56 32.1**	**-0.9**
EFP	**Efpalio**	**0.68**	**297**		P	**Pg**	**12 56 32.6**	**-0.4**
EFP					S	**Sb**	**12 56 43.1**	**+0.2**
DID	**Didima**	**0.76**	**144**		P	**Pg**	**12 56 33.8**	**-0.6**
DID	**Didima**	**0.76**	**144**	*e*	PN	**Pg**	**12 56 33.8**	**-0.6**
DID	**Didima**	**0.76**	**144**		P	**Pg**	**12 56 33.8**	**-0.6**
VLX	**Vlachokerasia**	**0.79**	**198**		P	**Pg**	**12 56 34.4**	**-0.5**
VLX					S	**Sg**	**12 56 44.9**	**-0.4**
VLX	**Vlachokerasia**	**0.79**	**198**	*e*	PN	**Pg**	**12 56 34.5**	**-0.5**
VLX	**Vlachokerasia**	**0.79**	**198**		P	**Pg**	**12 56 34.4**	**-0.5**
VLX					S	**Sg**	**12 56 44.9**	**-0.4**
ATH	**Athens Observa**	**0.83**	**100**	*e*	PN	**Pg**	**12 56 35.1**	**-0.7**
ATH	**Athens Observa**	**0.83**	**100**	*e*	Pn	**Pg**	**12 56 35.1**	**-0.7**
SMIA	**Simia**	**0.86**	**29**		P	**Pg**	**12 56 35.6**	**-0.9**
SMIA	**Simia**	**0.86**	**29**		P	**Pg**	**12 56 35.6**	**-0.9**
MRKA	**Markates**	**0.92**	**50**		P	**Pg**	**12 56 36.2**	**-1.4**
MRKA	**Markates**	**0.92**	**50**		P	**Pg**	**12 56 36.2**	**-1.4**
PTL	**Penteli**	**0.94**	**94**		P	**Pb**	**12 56 38.0**	**+0.1**
PTL	**Penteli**	**0.94**	**94**		P	**Pb**	**12 56 38.0**	**+0.1**
AGG	**Agios Georgios**	**0.94**	**343**		P	**Pg**	**12 56 37.3**	**-0.6**
AGG	**Agios Georgios**	**0.94**	**343**	*e*	PN	**Pg**	**12 56 37.1**	**-0.8**
AGG				*e*	SN	**Sb**	**12 56 51.0**	**+0.6**
AGG	**Agios Georgios**	**0.94**	**343**		P	**Pg**	**12 56 37.3**	**-0.6**
AGG				*e*	Sn	**Sb**	**12 56 51.0**	**+0.6**
RLS	**Riolos of Patr**	**0.96**	**267**		P	**Pg**	**12 56 37.6**	**-0.6**
RLS	**Riolos of Patr**	**0.96**	**267**		P	**Pg**	**12 56 37.6**	**-0.6**
MAKR	**Makrakomi, Fth**	**0.99**	**334**		P	**Pb**	**12 56 38.5**	**-0.3**
MAKR					S	**Sn**	**12 56 53.6**	**+0.2**
MAKR	**Makrakomi, Fth**	**0.99

HAWK				eS		Sb	13 01 56.2	-1.0
	comp=N,38nm,0.5s,SNR=59							
RCY	**Rachaya**	**0.58**	**210**	*e*P		**Pb**	**13 01 49.3**	**-0.3**
RCY				eS		**Sg**	**13 01 56.6**	**+0.8**
BRBR	**Barbar**	**0.62**	**199**	*e*P		Pg	13 01 45.0	-3.9
BRBR				eS		**Sg**	**13 01 54.7**	**-2.3**
BRBR				eS		**Sg**	**13 01 54.9**	**-2.1**
BRBR				AML		AML	13 01 59.0	
	comp=E,33nm,0.6s							
BRBR				AML		AML	13 02 01.0	
	comp=N,46nm,0.4s							
BRBR	**Barbar**	**0.62**	**199**	*e*P		Pg	13 01 45.0	-3.9
	SNR=91							
BRBR				eS		**Sg**	**13 01 54.9**	**-2.1**
	comp=N,46nm,0.4s,SNR=92							
TOTH	**TOTAH**	**0.67**	**162**	*e*P		**Pg**	**13 01 49.2**	**-0.6**
TOTH				eS		**Sb**	**13 02 00.9**	**+0.5**
TOTH				AML		AML	13 02 02.0	
	comp=N,23nm,0.5s							
TOTH				AML		AML	13 02 05.5	
	comp=E,28nm,0.5s							
TOTH	**TOTAH**	**0.67**	**162**	*e*P		**Pg**	**13 01 49.2**	**-0.6**
	SNR=75							
TOTH				eS		**Sb**	**13 02 00.9**	**+0.5**
	comp=E,28nm,0.5s,SNR=59							
ZALF	**Zalf**	**1.44**	**138**	*e*P		**Pg**	**13 02 04.8**	**+0.2**
ZALF				eS		**Sg**	**13 02 24.9**	**+1.6**
ZALF				eS		**Sg**	**13 02 25.6**	**+2.3**
ZALF	**Zalf**	**1.44**	**138**	*e*P		**Pg**	**13 02 04.8**	**+0.2**
	SNR=57							
ZALF				eS		**Sg**	**13 02 25.5**	**+2.3**
	SNR=57							

IDC ***16*** *13:02:36.5±0.6,31°.43S×177°.68W,h0km,mb4.6/14, mb1 4.8/15,mb1mx4.6/22,mbtmp4.6/15,ML4.2/1,MS4.2/16, Ms1 4.2/16,ms1mx3.9/41,Error ellipse: s-maj=21.3km s-min=18.0km az=136.0*

ISCJB ***16*** *13:02:38.7±0.5,31°.56S±0°.07×177°.7W±0°.1,h26km, mb4.7/19,MS4.2/14,Error ellipse: s-maj=13.2km s-min=9.5km az=21.8*

NEIC ***16*** *13:02:43.5±0.3,31°.64S×177°.67W,mb5.0/7,Error ellipse: s-maj=11.0km s-min=9.2km az=142.0*

ISC 16 13:02:41.1±0.4,31°.68S±0°.08×177°.60W±0°.08,h26km, n131,σi°66/115,mb4.7/19,MS4.2/14,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.43**	**353**	*e*Pn	Pn	13 03 11.9	-7.3
RAO				eSn	Sn	13 03 41.8	-6.3
RAO	**Raoul Island**	**2.43**	**353**	Pn	Pn	13 03 10.6	-8.6
	129nm,0.3s,baz=26,slow=23,SNR=7.7						
RAO				Sn	Sn	13 03 38.7	-9.4
	328nm,0.3s,baz=287,slow=19,SNR=5.0						
RAO				LR	LR	13 03 41.2	
	comp=Z,1μm,18.2s,baz=214,slow=30						
URZ	**Urewera**	**7.87**	**212**	Pn	Pn	13 04 32.5	-1.4
URZ				*e*Pn	**Pn**	**13 04 33.1**	**-0.8**
URZ	**Urewera**	**7.87**	**212**	Pn	Pn	13 04 32.5	-1.4
	3.1nm,0.3s,baz=302,slow=8.4,SNR=16						
URZ				Sn	**Sn**	**13 06 00.0**	**-2.1**
	9.1nm,0.3s,baz=176,slow=19,SNR=9.4						
OUZ	**Omahuta**	**8.16**	**242**	*e*Pn	**Pn**	**13 04 39.5**	**+1.7**
	84nm,0.9s						
DZM	**Mont Dzumac**	**17.14**	**300**	*e*P	**P**	**13 06 40.9**	**+0.5**
	145nm,1.4s						
DZM				*e*LR	LR	13 10 46.0	
	1μm,22.5s						
DZM	**Mont Dzumac**	**17.14**	**300**	Pn	**Pn**	**13 06 40.2**	**+1.3**
DZM	**Mont Dzumac**	**17.14**	**300**	Pn	**Pn**	**13 06 40.2**	**+1.3**
	0.2nm,0.3s,baz=87,slow=17,SNR=8.4						
DZM				LR	LR	13 11 47.6	
	comp=Z,1μm,20.6s,baz=128,slow=32						
TBI	**Tubuai**	**26.24**	**79**	*e*LR	LR	13 14 39.6	
	446nm,23.0s						
PPT2	**Papeete2**	**28.97**	**68**	*e*LR	LR	13 15 55.6	
	239nm,20.8s						
PPT	**Papeete**	**28.98**	**68**	LR	LR	13 18 04.5	
	comp=Z,290nm,20.2s,baz=206,slow=32						
HNR	**Honiara**	**30.40**	**312**	LR	LR	13 19 39.0	
	comp=Z,296nm,18.2s,baz=172,slow=34						
CTA	**Charters Tower**	**34.36**	**281**	P	**P**	**13 09 26.0**	**0.0**
CTA	**Charters Tower**	**34.36**	**281**	P	**P**	**13 09 26.0**	**0.0**
	29nm,0.8s,baz=103,slow=12,SNR=25						
CTA				LR	LR	13 21 54.6	
	comp=Z,470nm,20.6s,baz=139,slow=34						
CTAO	**Charters Tower**	**34.36**	**281**	*e*P	**P**	**13 09 24.5**	**-1.5**
	35nm,0.8s						
CTAO				*e*pP	**pP**	**13 09 37.5**	**+3.7**
STKA	**Stephens Creek**	**34.55**	**259**	P	**P**	**13 09 27.5**	**-0.1**
STKA				PcP	**PcP**	**13 12 00.7**	**-1.4**
STKA	**Stephens Creek**	**34.55**	**259**	P	**P**	**13 09 27.5**	**-0.1**
	8.2nm,0.8s,baz=104,slow=7.8,SNR=15						
STKA				PcP	**PcP**	**13 12 00.7**	**-1.4**
	3.5nm,0.7s,baz=53,slow=5.3,SNR=3.0						
STKA				LR	LR	13 22 32.7	
	comp=Z,434nm,20.2s,baz=289,slow=35						
AS31	**Alice Springs**	**43.40**	**268**	*e*P	**P**	**13 10 40.0**	**-1.8**
AS31				*e*pP	**pP**	**13 10 54.3**	**+4.6**
ASAR	**Alice Springs**	**43.40**	**268**	P	**P**	**13 10 40.5**	**-1.2**
ASAR	**Alice Springs**	**43.40**	**268**	P	**P**	**13 10 40.5**	**-1.2**
	13nm,0.7s,baz=109,slow=7.7,SNR=100						
ASAR				LR	LR	13 28 56.1	
	comp=Z,324nm,18.2s,baz=52,slow=36						
WRAB	**Tennant Creek**	**44.50**	**273**	*e*P	P	13 10 48.4	-2.1
	72nm,0.7s						
WRAB				*e*pP	pP	13 11 03.4	+4.9
WRA	**Warramunga Arr**	**44.50**	**273**	P	**P**	**13 10 49.1**	**-1.5**
WRA	**Warramunga Arr**	**44.50**	**273**	P	**P**	**13 10 49.1**	**-1.5**
	41nm,0.8s,baz=113,slow=7.7,SNR=178						
WRA				LR	LR	13 29 20.6	
	comp=Z,652nm,18.1s,baz=120,slow=36						
SBA	**Scott Base**	**46.79**	**184**	*e*P	**P**	**13 11 07.0**	**-0.9**
	7.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**52.71**	**271**	P	P	13 11 52.0	-1.8
FITZ	**Fitzroy Crossi**	**52.71**	**271**	P	P	13 11 52.0	-1.8
	12nm,0.8s,baz=118,slow=7.4,SNR=12						
FITZ				LR	LR	13 34 02.7	
	comp=Z,440nm,19.9s,baz=134,slow=36						
QSPA	**South Pole Qui**	**58.44**	**180**	*e*P	**P**	**13 12 35.2**	**+0.7**
	40nm,0.9s						
QSPA				P	**P**	**13 12 36.5**	**+2.1**
QSPA	**South Pole Qui**	**58.44**	**180**	P	**P**	**13 12 36.5**	**+2.1**
	3.5nm,0.9s,baz=19,slow=3.3,SNR=9.2						
MAW	**Mawson**	**71.24**	**201**	P	**P**	**13 13 58.0**	**+0.5**
MAW	**Mawson**	**71.24**	**201**	P	**P**	**13 13 58.0**	**+0.5**
	9.2nm,1.1s,baz=191,slow=5.2,SNR=7.1						
KSM	**Kuching**	**75.60**	**281**	*e*P	P	13 14 21.3	-2.8
	3.8nm,0.6s						
KSM				*e*PcP	pP	13 14 34.6	+2.2
SNAA	**Sanae**	**76.87**	**178**	*e*P	P	13 14 28.9	-1.6
	10.0nm,0.8s						
SNAA				*e*PcP	pP	13 14 39.7	+0.9
SNAA				*e*pP	**PcP**	**13 14 45.9**	**+4.3**
MAIT	**Maitri**	**77.62**	**183**	*e*P	P	13 14 23.9	-11
MJAR	**Matsushiro Arr**	**79.48**	**325**	P	P	13 14 42.4	-2.9
MJAR	**Matsushiro Arr**	**79.48**	**325**	P	P	13 14 42.4	-2.9
	2.5nm,0.9s,baz=169,slow=7.2,SNR=7.9						
ASAJ	**Asahikawa**	**83.73**	**332**	LR	LR	13 50 54.7	
	comp=Z,134nm,18.6s,baz=341,slow=35						
KSRS	**Korea Array**	**85.54**	**319**	P	P	13 15 15.1	-1.7
	2.0nm,1.0s,baz=141,slow=6.0,SNR=4.2						
KSRS				LR	LR	13 48 13.9	
	comp=Z,39nm,20.8s,baz=145,slow=32						
KSAR	**Wonju Array Be**	**85.55**	**319**	P	P	13 15 15.1	-1.7
MONP	**Monument Peak**	**86.36**	**48**	P	**P**	**13 15 22.1**	**+0.9**
	baz=87						
EDW2	**Edwards Air Fo**	**86.72**	**45**	P	**P**	**13 15 23.2**	**+0.4**
	baz=87						
SWSC	**Sam W. Stewart**	**86.79**	**48**	P	**P**	**13 15 23.3**	**+0.3**
	baz=87						
ISA	**Isabella**	**86.96**	**44**	*e*P	P	13 15 22.3	-1.6
	6.2nm,1.2s						
ISA	**Isabella**	**86.96**	**44**	P	**P**	**13 15 24.5**	**+0.6**
	baz=87						
PETK	**Petropavlovsk-**	**87.13**	**345**	P	**P**	**13 15 23.3**	**-0.9**
PETK	**Petropavlovsk-**	**87.13**	**345**	P	**P**	**13 15 23.3**	**-0.9**
	7.3nm,0.8s,baz=134,slow=8.5,SNR=9.7						
BELC	**Belle Mtn. Jos**	**87.36**	**47**	P	**P**	**13 15 26.2**	**+0.2**
	baz=88						
BC3	**Big Chuckawall**	**87.47**	**48**	P	**P**	**13 15 26.9**	**+0.3**
	baz=88						
GSC	**Goldstone**	**87.72**	**46**	P	**P**	**13 15 27.7**	**+0.1**
	baz=88						
MPMC	**Manual Prospec**	**87.82**	**45**	P	**P**	**13 15 28.4**	**+0.2**
	baz=88						
IRM	**Iron Mountain**	**88.00**	**47**	P	**P**	**13 15 29.6**	**+0.6**
	baz=88						
GMRC	**Granite Mounta**	**88.08**	**47**	P	**P**	**13 15 30.1**	**+0.6**
	baz=88						
USRK	**Ussuriysk Arra**	**88.41**	**326**	P	**P**	**13 15 29.5**	**-1.1**
	3.1nm,0.8s,baz=64,slow=4.1,SNR=4.9						
USRK				LR	LR	13 52 43.1	
	comp=Z,96nm,18.1s,baz=31,slow=34						
SHOC	**Shoshone**	**88.44**	**45**	P	**P**	**13 15 31.5**	**+0.5**
	baz=89						
YBH	**Yreka Blue Hor**	**88.82**	**38**	LR	LR	13 51 16.0	
	comp=Z,168nm,18.3s,baz=191,slow=33						
NVAR	**Mina Array Bea**	**88.94**	**42**	P	**P**	**13 15 33.2**	**-0.3**
NVAR	**Mina Array Bea**	**88.94**	**42**	P	**P**	**13 15 33.2**	**-0.3**
	3.0nm,1.0s,baz=218,slow=8.5,SNR=12						
Y14A	**Wickenburg**	**89.21**	**49**	P	**P**	**13 15 35.1**	**+0.4**
	baz=90						
W13A	**Hualapai Mount**	**89.40**	**47**	P	**P**	**13 15 36.0**	**+0.3**
	baz=90						
R11A	**Troy Canyon, C**	**90.47**	**44**	P	**P**	**13 15 41.1**	**+0.4**
	baz=91						
X16A	**Lo Mia Camp, P**	**90.52**	**49**	P	**P**	**13 15 41.6**	**+0.6**
	baz=91						
320A	**Kipp Ranch, An**	**90.56**	**53**	P	**P**	**13 15 41.6**	**+0.4**
	baz=91						
U15A	**North Rim**	**91.24**	**47**	P	**P**	**13 15 45.5**	**+1.1**
	baz=92						
WUAZ	**Wupatki**	**91.25**	**48**	P	**P**	**13 15 45.3**	**+1.0**
	baz=92						
X18A	**Snowflake**	**91.56**	**50**	P	**P**	**13 15 46.6**	**+0.8**
	baz=92						
Y20A	**Horse Springs,**	**92.21**	**51**	P	**P**	**13 15 49.2**	**+0.3**
	baz=92						
ELK	**Elko**	**92.25**	**42**	LR	LR	13 52 53.0	
	comp=Z,198nm,19.0s,baz=273,slow=33						
626A	**Big Bend Ranch**	**92.58**	**57**	P	**P**	**13 15 50.9**	**+0.4**
	baz=93						
425A	**Indio Mountain**	**92.69**	**55**	P	**P**	**13 15 51.4**	**+0.3**
	baz=93						
TXAR	**Lajitas Array**	**92.79**	**57**	P	**P**	**13 15 52.0**	**+0.5**
TXAR	**Lajitas Array**	**92.79**	**57**	P	**P**	**13 15 52.0**	**+0.5**
	0.3nm,0.5s,baz=230,slow=3.1,SNR=3.7						
W20A	**Ramah**	**92.86**	**50**	P	**P**	**13 15 52.7**	**+0.8**
	baz=93						
627A	**Terlingua Ranc**	**93.05**	**57**	P	**P**	**13 15 52.7**	**0.0**
	baz=93						
124A	**Stringfield Ra**	**93.47**	**54**	P	**P**	**13 15 54.6**	**-0.1**
	baz=94						
U20A	**Newcomb**	**93.60**	**49**	P	**P**	**13 15 55.0**	**-0.2**
	baz=94						
MFID	**Camas Ranch**	**93.67**	**40**	P	**P**	**13 15 55.7**	**+0.4**
	baz=94						
SRU	**San Rafael**	**94.01**	**46**	P	**P**	**13 15 57.2**	**+0.2**
	baz=94						
ATAH	**Atahualpa**	**94.06**	**101**	LR	LR	13 46 47.7	
	comp=Z,64nm,21.8s,baz=340,slow=28						
I12A	**Atlanta**	**94.30**	**40**	P	**P**	**13 15 58.6**	**+0.4**
	baz=95						
HLID	**Hailey**	**94.55**	**41**	P	**P**	**13 15 58.5**	**-0.8**
	baz=95						
J13A	**Cove Ranch, Pi**	**94.57**	**41**	P	**P**	**13 15 59.7**	**+0.2**
	baz=95						
J14A	**Carey**	**94.89**	**41**	P	**P**	**13 16 00.8**	**-0.1**
	baz=95						
H12A	**Diamond D Ranc**	**94.94**	**40**	P	**P**	**13 16 00.9**	**-0.2**
	baz=95						
G12A	**Big Creek, Yel**	**95.06**	**39**	P	**P**	**13 16 01.6**	**-0.1**
	baz=95						
H13A	**Challis**	**95.28**	**40**	P	**P**	**13 16 02.7**	**+0.1**
	baz=96						
F12A	**Elk City**	**95.51**	**39**	P	**P**	**13 16 04.0**	**+0.3**
	baz=96						
G13A	**Cobalt**	**95.63**	**40**	P	**P**	**13 16 03.7**	**-0.6**
	baz=96						
H14A	**Leadore**	**95.80**	**40**	P	**P**	**13 16 05.4**	**+0.3**
	baz=96						
C11A	**Tepee Creek (N**	**96.36**	**36**	P	**P**	**13 16 08.1**	**+0.7**
	baz=97						
G15A	**Dillon**	**96.63**	**40**	P	**P**	**13 16 09.0**	**+0.1**
	baz=97						
PDAR	**Pinedale Array**	**96.82**	**43**	P	P	**13 16 09.1**	**-0.7**
PDAR	**Pinedale Array**	**96.82**	**43**	P	P	**13 16 09.1**	**-0.7**
	0.5nm,0.9s,baz=197,slow=2.8,SNR=3.6						
R24A	**Sanders Place,**	**96.89**	**49**	P	**P**	**13 16 09.8**	**-0.4**
	baz=97						
LPAZ	**La Paz**	**97.31**	**114**	LR	LR	13 53 24.9	
	comp=Z,42nm,18.5s,baz=14,slow=31						
MK31	**Makanchi Array**	**118.85**	**309**	*e*PKPdf	**PKPdf**	**13 21 24.0**	**-2.9**
MKAR	**Makanchi Array**	**118.85**	**309**	PKP	**PKPdf**	**13 21 24.3**	**-2.6**
MKAR	**Makanchi Array**	**118.85**	**309**	PKP	**PKPdf**	**13 21 24.3**	**-2.6**
	0.9nm,0.8s,baz=62,slow=5.6,SNR=7.4						
KURK	**Kurchatov**	**122.18**	**313**	*e*PKPdf	**PKPdf**	**13 21 30.7**	**-2.4**
KKAR	**Karatay Array**	**126.06**	**303**	*e*PKPdf	**PKPdf**	**13 21 38.9**	**-1.9**
ARCES	**ARCESS Array B**	**139.91**	**348**	PKPpre	PKPpre	13 22 00.1	
ARCES	**ARCESS Array B**	**139.91**	**348**	PKhKP	PKPpre	13 22 00.1	
	0.9nm,0.8s,baz=29,slow=2.8,SNR=4.4						
JOF	**Joensuu**	**143.73**	**338**	*e*pkp	PKPab	13 22 09.2	-0.6
	2.9nm,0.7s						
DUS	**Dusheti**	**144.92**	**299**	P	PKPbc	13 22 16.8	+1.7
GNI	**Garni**	**144.95**	**296**	PKP	**PKPab**	**13 22 14.2**	**-1.2**
GNI	**Garni**	**144.95**	**296**	PKP	**PKPab**	**13 22 14.2**	**-1.2**
	2.7nm,0.3s,baz=185,slow=11,SNR=5.9						
GUDG	**Gudauri**	**145.07**	**300**	P	PKPbc	13 22 15.1	-0.6
ONI	**Oni**	**145.81**	**300**	P	**PKPdf**	**13 22 17.3**	**-0.1**
AKH	**Akhalkalaki**	**145.86**	**298**	P	**PKPdf**	**13 22 17.7**	**+0.1**
KBZ	**Khabaz**	**146.10**	**302**	PKPbc	**PKPdf**	**13 22 17.6**	**-0.1**
KBZ	**Khabaz**	**146.10**	**302**	PKPbc	**PKPdf**	**13 22 17.6**	**-0.1**
	15nm,1.0s,baz=91,slow=2.4,SNR=27						
FIA1	**FINESS Array S**	**146.46**	**340**	*e*PKPdf	**PKPdf**	**13 22 14.3**	**-3.4**
FIA1				*e*PKPab	**PKPbc**	**13 22 17.3**	**-1.8**
FINES	**FINESS Array B**	**146.46**	**340**	PKPbc	**PKPdf**	**13 22 17.4**	**-0.3**
FINES	**FINESS Array B**	**146.46**	**340**	PKPbc	**PKPdf**	**13 22 17.4**	**-0.3**
	28nm,0.8s,baz=60,slow=4.6,SNR=59						
CHVG	**Ch'k'valeri**	**146.80**	**301**	P	**PKPdf**	**13 22 20.2**	**+1.3**
NB2	**NORSAR Subarra**	**150.06**	**351**	PKP	**PKPdf**	**13 22 26.4**	**+2.7**
	comp=Z,0.4nm,0.7s,baz=34,slow=3.0						
NOA	**NORSAR Array B**	**150.06**	**351**	PKPbc	**PKPdf**	**13 22 26.9**	**+3.1**
NOA	**NORSAR Array B**	**150.06**	**351**	PKPbc	**PKPdf**	**13 22 26.9**	**+3.1**
	comp=Z,3.2nm,0.8s,baz=14,slow=4.1,SNR=8.7						
AKASG	**Malin Array Be**	**152.52**	**322**	PKPbc	**PKPdf**	**13 22 32.0**	**+4.3**
AKASG				PKPab	**PKPab**	**13 22 43.1**	**-2.0**
AKASG	**Malin Array Be**	**152.52**	**322**	PKPbc	**PKPdf**	**13 22 32.0**	**+4.3**
	comp=Z,5.1nm,1.0s,baz=48,slow=2.7,SNR=12						
AKASG				PKPab	**PKPab**	**13 22 43.1**	**-2.0**
	comp=Z,6.0nm,0.8s,baz=52,slow=3.1,SNR=8.8						
AK01	**Malin Array Si**	**152.53**	**322**	*e*PKPbc	**PKPbc**	**13 22 33.0**	**-1.6**
KIEV	**Kiev**	**152.53**	**322**	*e*PKPdf	**PKPdf**	**13 22 25.2**	**-2.5**
KIEV				*e*PKPbc	**PKPbc**	**13 22 32.5**	**-2.2**
AK02	**Malin Array Si**	**152.55**	**321**	*e*PKPbc	**PKPdf**	**13 22 32.9**	**+5.2**
SUW	**Suwalki**	**153.17**	**332**	*e*PKPdf	**PKPdf**	**13 22 26.4**	**-2.2**
SUW				*e*PKPbc	**PKPbc**	**13 22 34.3**	**-1.6**
SUW				*e*PKPab	**PKPab**	**13 22 45.2**	**-2.5**
BR131	**Keskin Array S**	**153.49**	**296**	*e*PKPdf	**PKPdf**	**13 22 27.7**	**-2.0**
BR131				*e*PKPbc	**PKPbc**	**13 22 35.5**	**-1.9**
BRTR	**Keskin Array B**	**153.49**	**296**	PKPbc	PKPdf	13 22 35.3	+5.6
BRTR	**Keskin Array B**	**153.49**	**296**	PKPbc	PKPdf	13 22 35.3	+5.6
	comp=Z,2.0nm,0.8s,baz=124,slow=3.3,SNR=9.2						
BUR08	**Bucovina Ar. S**	**156.42**	**319**	*e*PKPab	**PKPab**	**13 22 59.2**	**-2.8**
KHC	**Kasperske Hory**	**160.64**	**337**	*e*PKPAB	**PKPab**	**13 23 18.0**	**-2.0**
GERES	**GERESS Array B**	**160.84**	**337**	PKPab	**PKPab**	**13 23 19.3**	**-1.7**
GERES	**GERESS Array B**	**160.84**	**337**	PKPab	**PKPab**	**13 23 19.3**	**-1.7**
	comp=Z,1.3nm,0.8s,baz=67,slow=4.5,SNR=8.8						
TORD	**Torodi Ar. Bea**	**161.55**	**178**	PKPab	**PKPab**	**13 23 25.2**	**+0.6**
TORD	**Torodi Ar. Bea**	**161.55**	**178**	PKPab	**PKPab**	**13 23 25.2**	**+0.6**
	comp=Z,3.0nm,1.0s,baz=180,slow=3.5,SNR=7.7						

ISCJB ***16*** *13:16:05.7±0.8,38°.11N±0°.04×22°.67E±0°.04,h10km±12km, Error ellipse: s-maj=6.0km s-min=4.6km az=15.9*

THE ***16*** *13:16:05.2,38°.10N×22°.67E,h17km±3km,ML1.8/4,Error ellipse: s-maj=3.0km s-min=0.6km az=170.0*

CSEM ***16*** *13:16:05.5±0.1,38°.10N×22°.70E,h10km,ML1.8/4,Error ellipse: s-maj=3.2km s-min=2.6km az=23.0*

ATH ***16*** *13:16:06.2,38°.10N×22°.67E,h4km,MD2.9/4*

ISC 16 13:16:05.5±0.9,38°.13N±0°.03×22°.67E±0°.02,h14km±10km, n18,σ0°23/34,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	**Loutraki**	**0.25**	**114**	P	**Pg**	**13 16 10.7**	**-0.2**
LTK				S	**Sg**	**13 16 15.0**	**+0.4**
LTK	**Loutraki**	**0.25**	**114**	*e*PG	**Pg**	**13 16 10.7**	**-0.2**
LTK				*e*SG	**Sg**	**13 16 14.8**	**+0.2**
LTK	**Loutraki**	**0.25**	**114**	P	**Pg**	**13 16 10.7**	**-0.2**
LTK				S	**Sg**	**13 16 15.0**	**+0.4**
DSF	**Desfina**	**0.31**	**338**	P	**Pg**	**13 16 11.9**	**0.0**
DSF				S	**Sb**	**13 16 17.5**	**-0.3**
DSF	**Desfina**	**0.31**	**338**	P	**Pg**	**13 16 11.9**	**0.0**
DSF				S	**Sb**	**13 16 17.5**	**-0.3**
GUR	**Goura**	**0.32**	**234**	P	**Pg**	**13 16 12.2**	**0.0**
GUR				S	**Sg**	**13 16 16.4**	**-0.3**
GUR	**Goura**	**0.32**	**234**	*e*PG	**Pg**	**13 16 12.1**	**-0.1**
GUR				*e*SG	**Sg**	**13 16 16.4**	**-0.3**
GUR	**Goura**	**0.32**	**234**	*e*Pg	**Pg**	**13 16 12.1**	**-0.1**
GUR				S	**Sg**	**13 16 16.4**	**-0.3**
KALE	**Kalithea**	**0.50**	**302**	*e*PG	**Pb**	**13 16 16.4**	**+0.3**
KALE				*e*SG	**Sb**	**13 16 23.2**	**-0.1**
KALE	**Kalithea**	**0.50**	**302**	*e*Pg	**Pb**	**13 16 16.4**	**+0.3**
KALE				*e*Sg	**Sb**	**13 16 23.2**	**-0.1**
TRIZ	**Trizonia**	**0.53**	**297**	*e*PG	**Pb**	**13 16 16.7**	**+0.1**
TRIZ				*e*SG	**Sb**	**13 16 23.9**	**-0.2**
TRIZ	**Trizonia**	**0.53**	**297**	*e*Pg	**Pb**	**13 16 16.7**	**+0.1**
TRIZ				*e*Sg	**Sb**	**13 16 23.9**	**-0.2**
LAKA	**Lakka**	**0.56**	**282**	*e*PG	**Pg**	**13 16 16.7**	**+0.2**
LAKA				*e*SG	**Sg**	**13 16 23.9**	**0.0**
LAKA	**Lakka**	**0.56**	**282**	*e*Pg	**Pg**	**13 16 16.7**	**+0.2**
LAKA				*e*Sg	**Sg**	**13 16 23.9**	**0.0**
LKR	**Lokris**	**0.58**	**26**	P	**Pg**	**13 16 16.7**	**-0.3**
LKR				S	**Sb**	**13 16 25.8**	**+0.1**
LKR	**Lokris**	**0.58**	**26**	P	**Pg**	**13 16 16.7**	**-0.3**
LKR				S	**Sb**	**13 16 25.8**	**+0.1**
DID	**Didima**	**0.76**	**144**	*e*PB	**Pb**	**13 16 20.8**	**+0.2**
DID	**Didima**	**0.76**	**144**	*e*Pb	**Pb**	**13 16 20.8**	**+0.2**

IDC 16 13:20:28.6±4.3,4°.33S×103°.45W,h0km,mb3.8/5, mb1 4.1/5,mb1mx3.9/16,mbtmp3.8/5,MS3.6/6,Ms1 3.6/6, ms1mx3.3/26,Error ellipse: s-maj=153.6km s-min=30.9km az=51.0,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**25.09**	**98**	LR	LR	13 32 59.4	
	comp=Z,53nm,20.8s,baz=33,slow=30						
TEIG	**Tepich**	**28.60**	**31**	LR	LR	13 35 54.5	
	comp=Z,139nm,21.1s,baz=144,slow=32						
TXAR	**Lajitas Array**	**33.47**	**360**	P	P	13 27 10.9	+1.1
	0.1nm,0.4s,baz=194,slow=11,SNR=3.2						
TXAR				LR	LR	13 38 39.6	
	comp=Z,142nm,19.3s,baz=175,slow=33						
LPAZ	**La Paz**	**36.65**	**112**	P	P	13 27 38.2	+0.1
	1.2nm,0.9s,baz=302,slow=9.5,SNR=4.0						
LPAZ				LR	LR	13 39 45.4	
	comp=Z,40nm,20.0s,baz=95,slow=32						
PPT	**Papeete**	**47.01**	**250**	LR	LR	13 44 13.2	
	comp=Z,175nm,20.1s,baz=153,slow=30						
PDAR	**Pinedale Array**	**47.20**	**354**	P	P	13 29 03.9	+0.3
	0.8nm,1.0s,baz=197,slow=4.6,SNR=5.2						
YKA	**Yellowknife Ar**	**67.18**	**354**	P	P	13 31 22.6	-1.5
	1.6nm,0.9s,baz=162,slow=6.2,SNR=19						
INK	**Inuvik**	**75.45**	**349**	P	P	13 32 14.7	+0.6
	5.1nm,1.2s,baz=146,slow=5.7,SNR=9.1						
ILAR	**Eielson Array**	**75.96**	**342**	P	P	13 32 20.6	+3.5
	1.2nm,0.9s,baz=169,slow=5.1,SNR=9.4						
FX1	**Attu Island--F**	**89.43**	**323**	LR	LR	14 03 21.6	
	comp=Z,54nm,19.8s,baz=246,slow=29						

IDC ***16*** *13:29:52.1±1.6,56°.44N×152°.25W,h0km,mb3.6/5, mb1 3.8/8,mb1mx3.5/28,mbtmp3.6/8,ML2.9/2,Error ellipse: s-maj=33.2km s-min=19.0km az=47.0*

ISCJB ***16*** *13:29:53.2±0.8,56°.48N±0°.06×152°.01W±0°.09,h18km, mb3.5/5,Error ellipse: s-maj=9.6km s-min=5.7km az=29.1*

NEIC ***16*** *13:29:55.9,56°.49N×152°.30W,h10km,ML3.2(AEIC),After AEIC.*

ISC 16 13:29:55.0±1.1,56°.50N±0°.10×152°.21W±0°.07,h18km,n42, σ0°82/44,mb3.4/5,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.94**	**321**	P	**Pb**	**13 30 11.4**	**-1.3**
KDAK	**Kodiak Island**	**1.30**	**351**	P	**Pn**	**13 30 17.6**	**-0.6**
KDAK				S	**Sn**

	46nm,0.3s,baz=118,slow=7.4,SNR=705							
MJAR				S		Sn	13 41 58.7	0.0
	16nm,0.3s,baz=98,slow=16,SNR=11							
MAT	**Matsushiro**	**0.99**	**273**	P		**Pn**	**13 41 42.7**	**+0.4**
MAT				S		**Sn**	**13 41 59.2**	**+0.5**
MAT	**Matsushiro**	**0.99**	**273**	P		**Pn**	**13 41 42.7**	**+0.4**
MAT				S		**Sn**	**13 41 59.3**	**+0.5**
JOD2	**Odawara 2**	**1.26**	**193**	P		**Pn**	**13 41 44.6**	**-0.6**
JSD	**Sado**	**1.80**	**329**	P		**Pn**	**13 41 51.6**	**+0.1**
JSZ	**Suzu**	**1.91**	**301**	P		**Pn**	**13 41 53.2**	**+0.4**
JAW	**Awa shima**	**1.96**	**356**	P		**Pn**	**13 41 54.2**	**+0.7**
JHJ	**Hachijo jima 2**	**3.38**	**175**	P		**Pn**	**13 42 11.9**	**+0.1**
	146nm,0.3s,baz=246,slow=22,SNR=57							
JHJ				S		**Sn**	**13 42 51.5**	**+0.1**
	51nm,0.3s,baz=78,slow=23,SNR=4.3							
JNU	**Nakatsue**	**7.80**	**247**	P		Pn	13 43 14.9	+3.5
	0.5nm,0.3s,baz=56,slow=18,SNR=5.8							
ASAJ	**Asahikawa**	**7.99**	**17**	P		**Pn**	**13 43 12.6**	**-1.2**
	0.8nm,0.3s,baz=325,slow=21,SNR=8.2							
ZALV	**Zalesovo Beam**	**41.11**	**313**	P		**P**	**13 48 52.3**	**-0.5**
	1.0nm,0.5s,baz=89,slow=7.1,SNR=4.7							
MKAR	**Makanchi Array**	**43.06**	**302**	P		**P**	**13 49 08.4**	**-0.4**
	0.3nm,0.6s,baz=82,slow=8.7,SNR=4.8							
ILAR	**Eielson Array**	**50.80**	**32**	P		**P**	**13 50 09.3**	**+0.7**
	0.3nm,0.6s,baz=262,slow=4.4,SNR=6.1							
WRA	**Warramunga Arr**	**56.34**	**186**	P		**P**	**13 50 49.2**	**-0.2**
	0.4nm,0.4s,baz=1.1,slow=7.7,SNR=11							
ASAR	**Alice Springs**	**60.06**	**186**	P		**P**	**13 51 15.4**	**+0.1**
	0.1nm,0.5s,baz=359,slow=6.9,SNR=2.9							
ARCES	**ARCESS Array B**	**63.94**	**339**	P		**P**	**13 51 40.6**	**-0.1**
	2.3nm,1.1s,baz=52,slow=8.0,SNR=4.1							
FINES	**FINESS Array B**	**68.54**	**332**	P		**P**	**13 52 09.4**	**-0.7**
	0.2nm,0.4s,baz=49,slow=5.8,SNR=5.2							

MOS ***16*** *13:53:45.9±1.6,53.°47N×109.°11E,h12km,mb4.3/1,Error ellipse: s-maj=18.3km s-min=9.0km az=56.0*
BYKL ***16*** *13:53:45.7±0.2,53.°59N×109.°04E,h19km±3km*

ISC 16 13:53:44.5±1.1,53.°55N±0.°03×109.°11E±0.°02,h3km±10km, n40,σ1.970/77,7C-1D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.36**	**218**	⇑*i*	*e*Pg		**Pb**	**13 53 53.8**	**+0.3**
MXMB					*e*Sg		**Sb**	**13 53 59.9**	**+0.4**
MXMB					Pmax				
	324nm,0.1s								
MXMB					Smax				
	3μm,0.2s								
SYVR	**Suvo**	**0.54**	**78**		*e*PG		**Pg**	**13 53 56.0**	**+1.1**
SYVR					*e*			13 54 04.3	
SYVR					pmax	pmax			
	comp=Z,445nm,0.3s								
SYVR					smax	smax			
	comp=N,940nm,0.3s								
SYVR	**Suvo**	**0.54**	**78**	⇑*i*	*e*Pg		**Pb**	**13 53 56.7**	**0.0**
SYVR					*e*Sg		**Sb**	**13 54 04.6**	**-0.4**
SYVR					Pmax				
	comp=N,247nm,0.2s								
SYVR					Smax				
	comp=N,841nm,0.1s								
OGRR	**Ongureny**	**0.91**	**277**		*e*PG		**Pg**	**13 54 02.2**	**+0.3**
OGRR					*e*			13 54 13.8	
OGRR					pmax	pmax			
	comp=Z,289nm,0.4s								
OGRR					smax	smax			
	comp=N,764nm,0.3s								
OGRR	**Ongureny**	**0.91**	**277**		*e*Sg		**Sg**	**13 54 13.7**	**+0.1**
OGRR					*e*Sb		**Sb**	**13 54 15.9**	**+0.5**
OGRR					max				
	comp=N,753nm,0.3s								
ZRHB	**Zarechye**	**1.54**	**231**		*e*Pg		**Pg**	**13 54 14.1**	**+0.1**
ZRHB					*e*Sg		**Sg**	**13 54 35.0**	**+1.0**
YLYR	**Ulyunkhan**	**1.80**	**41**		*e*PN		**Pn**	**13 54 16.3**	**-0.2**
YLYR					*e*			13 54 41.2	
YLYR					pmax	pmax			
	comp=Z,59nm,0.4s								
YLYR					smax	smax			
	comp=N,278nm,0.5s								
YLYR	**Ulyunkhan**	**1.80**	**41**	⇑*i*	*e*Pn		**Pn**	**13 54 16.5**	**0.0**
YLYR				⇑*i*	*e*Pg		**Pb**	**13 54 17.5**	**-0.6**
YLYR					*e*Sg		**Sb**	**13 54 41.6**	**+0.5**
YLYR					Pmax				
	comp=N,69nm,0.4s								
YLYR					Smax				
	comp=N,278nm,0.3s								
TRG	**Tyrgan**	**1.84**	**246**		*e*PN		**Pn**	**13 54 16.7**	**-0.3**
TRG					*e*			13 54 17.8	
TRG					*e*			13 54 41.1	
TRG					pmax	pmax			
	comp=Z,42nm,0.2s								
TRG					smax	smax			
	comp=N,529nm,0.1s								
TRG	**Tyrgan**	**1.84**	**246**	⇑*i*	*e*Pn		**Pn**	**13 54 16.8**	**-0.3**
TRG					*e*Pg		**Pb**	**13 54 18.0**	**-0.8**
TRG					*e*Sg		**Sb**	**13 54 42.2**	**0.0**
TRG					*e*			13 54 48.4	
TRG					Pmax				
	comp=N,36nm,0.2s								
TRG					Smax				
	comp=N,520nm,0.2s								
UUDB	**Ulan-Yde**	**1.90**	**208**		*e*Pn		**Pn**	**13 54 18.3**	**+0.5**
UUDB				⇓	*i*Pg		**Pb**	**13 54 20.0**	**+0.2**
UUDB					*e*Sg		**Sg**	**13 54 45.6**	**+0.2**
UUDB					Pmax				
	comp=N,91nm,0.2s								
UUDB					Smax				
	comp=N,390nm,0.2s								
FFNB	**Fofonovo**	**2.07**	**224**		*e*Pn		**Pn**	**13 54 20.7**	**+0.5**
FFNB					*e*Pg		**Pg**	**13 54 23.9**	**-0.2**
FFNB					*e*Sg		**Sg**	**13 54 50.6**	**-0.3**
FFNB					Pmax				
	comp=N,28nm,0.1s								
FFNB					Smax				
	comp=N,387nm,0.2s								
KAB	**Kabansk**	**2.11**	**226**		*e*PN		**Pb**	**13 54 23.1**	**-0.3**
KAB					*e*			13 54 52.0	
KAB					pmax	pmax			
	comp=Z,151nm,0.3s								
KAB					smax	smax			
	comp=N,922nm,0.7s								
KAB	**Kabansk**	**2.11**	**226**		*e*Sg		**Sg**	**13 54 52.0**	**-0.3**
KAB					Smax				
	comp=N,897nm,0.4s								
NIZ	**Nizh Angarsk**	**2.25**	**6**		*e*PN		**Pn**	**13 54 22.9**	**+0.2**
NIZ					*e*			13 54 25.5	
NIZ					*e*			13 54 54.2	
NIZ					pmax	pmax			
	comp=Z,23nm,0.3s								
NIZ					smax	smax			
	comp=N,216nm,0.5s								
NIZ	**Nizh Angarsk**	**2.25**	**6**		*e*Pn		**Pn**	**13 54 22.8**	**+0.1**
NIZ				⇑	*i*Pg		**Pb**	**13 54 25.6**	**-0.2**
NIZ					*e*Sg		**Sb**	**13 54 54.2**	**+0.1**
NIZ					Pmax				
	comp=N,23nm,0.3s								
NIZ					Smax				
	comp=N,217nm,0.4s								
KMO	**Kumora**	**2.64**	**27**		*e*PN		**Pn**	**13 54 27.9**	**-0.2**
KMO					*e*			13 54 31.9	
KMO	**Kumora**	**2.64**	**27**		*e*Pn		**Pn**	**13 54 27.6**	**-0.5**
KMO					*e*Pg		**Pb**	**13 54 33.0**	**+0.5**
KMO					*e*PgPg		**PbPb**	**13 54 37.8**	**+2.2**
KMO					*e*Sg		**Sb**	**13 55 07.1**	**+1.7**
KMO					max				
	comp=N,73nm,0.4s								
KMO					Smax				
	comp=N,380nm,0.6s								
YOA	**Uoyan**	**3.00**	**29**		*e*PN		**Pg**	**13 54 41.2**	**-0.8**
YOA					*i*			13 55 19.8	
YOA					pmax	pmax			
	comp=Z,87nm,0.3s								
YOA					smax	smax			
	comp=N,818nm,0.4s								
YOA	**Uoyan**	**3.00**	**29**		*e*Pg		**Pb**	**13 54 40.5**	**+1.9**
YOA					*e*Sg		**Sg**	**13 55 19.8**	**-1.1**
YOA					Pmax				
	comp=N,84nm,0.4s								
YOA					Smax				
	comp=N,826nm,0.4s								
LSTR	**Listvyanka**	**3.10**	**239**		*e*Pn		**Pn**	**13 54 34.0**	**-0.3**
LSTR					*e*Pg		**Pb**	**13 54 40.6**	**+0.4**
LSTR					*e*Sn		**Sn**	**13 55 09.3**	**-2.5**
LSTR					*e*Sg		**Sb**	**13 55 19.6**	**+1.2**
LSTR					Pmax				
	comp=N,11nm,0.4s								
LSTR					Smax				
	comp=N,108nm,1.0s								
CIT	**Chita**	**3.10**	**118**		*e*PN		**Pn**	**13 54 34.7**	**+0.3**
CIT					*e*			13 54 41.9	
CIT					*e*			13 55 21.2	
CIT					pmax	pmax			
	comp=Z,66nm,0.6s								
CIT					smax	smax			
	comp=E,426nm,0.7s								
CIT	**Chita**	**3.10**	**118**		*e*Sg		**Sg**	**13 55 23.2**	**-0.8**
CIT					Smax				
	comp=E,354nm,0.2s								
IRK	**Irkutsk**	**3.21**	**248**		*e*Sg		**Sb**	**13 55 22.5**	**+1.0**
IRK					Smax				
	comp=E,443nm,0.4s								
UKT	**Uakit**	**3.28**	**52**		*e*PN		**Pg**	**13 54 46.8**	**-0.5**
UKT					*e*			13 55 26.4	
UKT					pmax	pmax			
	comp=Z,31nm,0.9s								
UKT					smax	smax			
	comp=N,98nm,0.8s								
UKT	**Uakit**	**3.28**	**52**	⇑*i*	*e*Pn		**Pn**	**13 54 37.0**	**+0.1**
UKT					*e*Pg		**Pb**	**13 54 43.7**	**+0.3**
UKT					*e*PgPg		**PbPb**	**13 54 46.0**	**-0.5**
UKT					*e*Sg		**Sb**	**13 55 26.9**	**+3.2**
UKT					max				
	comp=N,31nm,0.9s								
UKT					Smax				
	comp=N,73nm,0.3s								
TLY	**Talaya**	**3.82**	**243**		*e*PN		**Pn**	**13 54 45.8**	**+1.6**
TLY					*e*			13 54 53.9	
TLY					*e*			13 55 40.7	
TLY					pmax	pmax			
	comp=Z,8.0nm,0.3s								
TLY					smax	smax			
	comp=N,76nm,0.5s								
TLY	**Talaya**	**3.82**	**243**		*e*Pn		**Pn**	**13 54 43.6**	**-0.6**
TLY					*e*Pg		**Pb**	**13 54 53.3**	**+0.8**
TLY					*e*Sn		**Sn**	**13 55 28.4**	**-1.2**
TLY					*e*			13 55 40.0	
TLY					*e*Sg		**Sg**	**13 55 43.1**	**-3.9**
TLY					Pmax				
	comp=N,8.0nm,0.3s								
TLY					Smax				
	comp=N,76nm,0.4s								
KPC	**Khapcheranga**	**4.35**	**151**		*e*Pn		**Pn**	**13 54 51.1**	**-0.5**
KPC					*e*Pg		**Pb**	**13 55 04.0**	**+2.3**
KPC					*e*Sg		**Sg**	**13 56 00.5**	**-3.7**
KPC					Pmax				
	comp=N,6.0nm,0.2s								
KPC					Smax				
	comp=N,78nm,0.4s								
ARS	**Arshan**	**4.38**	**251**		*e*PN		**Pb**	**13 55 02.7**	**+0.6**
ARS	**Arshan**	**4.38**	**251**		*e*Pg		**Pb**	**13 55 03.4**	**+1.3**
ARS					*e*			13 55 56.7	
ARS					*e*Sg		**Sb**	**13 55 58.6**	**+3.3**
ARS					Pmax				
	comp=N,23nm,0.5s								
ARS					Smax				
	comp=N,343nm,0.4s								
ZAK	**Zakamensk**	**4.80**	**231**		*e*Pg		**Pb**	**13 55 12.0**	**+2.8**
ZAK					*e*Sn		**Sn**	**13 55 51.2**	**-2.7**
ZAK					*e*Sg		**Sg**	**13 56 13.9**	**-4.6**
ZAK					Pmax				
	comp=N,3.0nm,0.2s								
ZAK					Smax				
	comp=N,30nm,0.7s								
NLYR	**Nelyaty**	**4.81**	**49**		*e*Pn		**Pn**	**13 54 56.8**	**-1.0**
NLYR	**Nelyaty**	**4.81**	**49**		*e*Pn		**Pn**	**13 54 57.8**	**0.0**
NLYR					*e*Sg		**Sg**	**13 56 15.8**	**-3.0**
NLYR					Smax				
	comp=N,175nm,1.3s								
BOD	**Bodaibo**	**5.10**	**31**		*e*Pn		**Pn**	**13 55 01.7**	**-0.1**
BOD					*e*Sg		**Sb**	**13 56 21.4**	**+5.4**
BOD					Smax				
	comp=N,53nm,0.8s								
MOY	**Mondy**	**5.29**	**252**		*e*Pn		**Pn**	**13 55 05.5**	**+1.0**
MOY					*e*			13 56 05.0	
MOY					*e*Sg		**Sb**	**13 56 26.6**	**+5.0**
MOY					Smax				
	comp=N,67nm,1.1s								
ORL	**Orlik**	**5.70**	**264**		*e*PN		**Pn**	**13 55 10.9**	**+0.7**
ORL					*e*			13 55 28.2	
ORL					*e*S		**Sn**	**13 56 14.3**	**-1.8**
ORL					*e*			13 56 42.2	
ORL					pmax	pmax			
	comp=Z,7.0nm,0.4s								
ORL					smax	smax			
	comp=N,39nm,1.0s								
ORL	**Orlik**	**5.70**	**264**		*e*Pn		**Pn**	**13 55 11.1**	**+0.9**
ORL					*e*			13 55 21.0	
ORL					*e*Pg		Pb	13 55 28.0	+3.4
ORL					*e*Sn		**Sn**	**13 56 12.7**	**-3.4**
ORL					*e*Sg		Sg	13 56 40.8	-6.6
ORL					Pmax				
	comp=N,7.0nm,0.4s								
ORL					Smax				
	comp=N,33nm,1.1s								
CRS	**Chara**	**6.23**	**54**		*e*PN		**Pn**	**13 55 17.5**	**+0.2**
CRS					*e*			13 55 38.6	
CRS					*e*			13 56 58.1	
CRS					pmax	pmax			
	comp=Z,14nm,1.5s								
CRS					smax	smax			
	comp=E,68nm,0.7s								
TUP	**Tupik**	**6.46**	**78**		*e*Pn		**Pn**	**13 55 20.3**	**-0.2**
TUP					*e*			13 55 28.8	
TUP					*e*Pg		Pb	13 55 41.4	+3.9
TUP					*e*Sg		Sg	13 57 05.3	-6.5
TUP					Pmax				
	comp=E,4.0nm,0.4s								
TUP					Smax				
	comp=E,47nm,1.0s								

IDC 16 14:07:09.0±1.8,3.°34S×126.°32E,h0km,mb3.4/2, mb1 3.7/3,mb1mx3.4/22,mbtmp3.5/3,Error ellipse: s-maj=155.1km s-min=25.5km az=64.0,Buru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.26**	**155**	P		Pn		14 11 23.6	-0.5
	0.1nm,0.3s,baz=334,slow=11,SNR=6.7								
ASAR	**Alice Springs**	**21.50**	**161**	P		P		14 11 58.9	-0.7
	1.2nm,0.6s,baz=342,slow=12,SNR=22								
MKAR	**Makanchi Array**	**63.19**	**328**	P		P		14 17 39.4	+0.4
	0.2nm,0.6s,baz=141,slow=9.3,SNR=3.1								

IDC 16 14:08:32.3±1.9,4.°52N×126.°71E,h0km,mb3.5/4, mb1 3.7/4,mb1mx3.4/23,mbtmp3.5/4,Error ellipse: s-maj=143.0km s-min=24.1km az=65.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.44**	**163**	P		P		14 14 02.0	0.0
	0.5nm,0.4s,baz=344,slow=10.0,SNR=9.6								
ASAR	**Alice Springs**	**28.88**	**166**	P		P		14 14 32.0	-0.9
	0.2nm,0.4s,baz=350,slow=7.2,SNR=11								
STKA	**Stephens Creek**	**38.87**	**160**	P		P		14 16 00.6	+1.1
	1.0nm,0.6s,baz=322,slow=12,SNR=3.0								
MKAR	**Makanchi Array**	**56.90**	**325**	P		P		14 18 19.1	-0.1
	0.1nm,0.4s,baz=135,slow=9.1,SNR=3.4								

IDC ***16*** *14:15:05.6±1.4,38.°04N×20.°88E,h0km,mb3.6/4, mb1 3.5/5,mb1mx3.3/27,mbtmp3.5/5,ML2.7/1,Error ellipse: s-maj=52.6km s-min=24.0km az=134.0*
ATH ***16*** *14:15:07.4,37.°81N×21.°20E,h21km±2km,MD3.1/13*
CSEM ***16*** *14:15:07.5±0.3,37.°80N×21.°20E,h8km,ML3.4,Error ellipse: s-maj=5.2km s-min=3.9km az=42.0*
THE ***16*** *14:15:08.2,37.°84N×21.°20E,h0km±3km,ML3.5/3,Error ellipse: s-maj=3.0km s-min=0.7km az=197.0*

ISC 16 14:15:07.4±1.3,37.°83N±0.°02×21.°18E±0.°02,h11km±10km, n76,σ0.976/106,mb3.6/4,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.32**	**45**	P		**Pg**		**14 15 14.2**	**+0.4**
RLS				S		**Sb**		**14 15 19.3**	**-1.1**
RLS	**Riolos of Patr**	**0.32**	**45**	*e*PB		**Pg**		**14 15 14.3**	**+0.4**
RLS				*e*SB		**Sb**		**14 15 19.3**	**-1.1**
RLS	**Riolos of Patr**	**0.32**	**45**	*e*Pb		**Pg**		**14 15 14.3**	**+0.4**
RLS					S		**Sb**	**14 15 19.3**	**-1.0**
KFL	**Anninata**	**0.42**	**312**		P		**Pb**	**14 15 16.5**	**-0.3**
KFL					S		**Sb**	**14 15 22.8**	**-0.3**
KFL	**Anninata**	**0.42**	**312**		P		**Pb**	**14 15 16.5**	**-0.3**
KFL					S		**Sb**	**14 15 22.8**	**-0.3**
VLS	**Valsamata**	**0.58**	**307**		P		**Pb**	**14 15 19.1**	**-0.5**
VLS					S		**Sb**	**14 15 28.8**	**+1.0**
VLS	**Valsamata**	**0.58**	**307**	*e*PB			**Pb**	**14 15 19.1**	**-0.5**
VLS				*e*SN			**Sb**	**14 15 29.2**	**+1.4**
VLS	**Valsamata**	**0.58**	**307**		P		**Pb**	**14 15 19.1**	**-0.5**
VLS					S		**Sb**	**14 15 28.6**	**+0.8**
VLS				*e*Sn			**Sb**	**14 15 29.2**	**+1.4**
UPR	**University Cam**	**0.66**	**47**		P		**Pb**	**14 15 20.4**	**-0.5**
LAKA	**Lakka**	**0.75**	**57**	*e*PN			**Pg**	**14 15 21.9**	**-0.1**
LAKA				*e*SN			**Sb**	**14 15 33.3**	**+0.4**
LAKA	**Lakka**	**0.75**	**57**		P		**Pg**	**14 15 21.5**	**-0.5**
LAKA	**Lakka**	**0.75**	**57**	*e*Pn			**Pg**	**14 15 21.9**	**-0.1**
LAKA					S		**Sb**	**14 15 32.5**	**-0.4**
LAKA				*e*Sn			**Sb**	**14 15 33.3**	**+0.4**
KLV	**Kalavryta, Ach**	**0.80**	**74**	*e*PN			**Pg**	**14 15 22.2**	**-0.6**
KLV				*e*SN			**Sb**	**14 15 34.2**	**0.0**
KLV	**Kalavryta, Ach**	**0.80**	**74**	*e*Pn			**Pg**	**14 15 22.2**	**-0.6**
KLV				*e*Sn			**Sb**	**14 15 34.2**	**0.0**
EFP	**Efpalio**	**0.83**	**44**		P		**Pg**	**14 15 23.2**	**-0.2**
EFP					S		**Sn**	**14 15 36.2**	**-1.0**
EFP	**Efpalio**	**0.83**	**44**	*e*PN			**Pb**	**14 15 23.5**	**-0.3**
EFP				*e*SN			**Sb**	**14 15 35.7**	**+0.8**
EFP	**Efpalio**	**0.83**	**44**		P		**Pg**	**14 15 23.2**	**-0.2**
EFP	**Efpalio**	**0.83**	**44**	*e*Pn			**Pb**	**14 15 23.5**	**-0.3**
EFP					S		**Sb**	**14 15 35.4**	**+0.5**
EFP				*e*Sn			**Sb**	**14 15 35.7**	**+0.8**
ITM	**Ithomi**	**0.88**	**137**		P		**Pb**	**14 15 24.4**	**-0.3**
ITM	**Ithomi**	**0.88**	**137**	*e*PN			**Pb**	**14 15 24.4**	**-0.3**
ITM				*e*SN			**Sb**	**14 15 36.6**	**+0.1**
ITM	**Ithomi**	**0.88**	**137**		P		**Pg**	**14 15 24.1**	**-0.3**
ITM	**Ithomi**	**0.88**	**137**	*e*Pn			**Pb**	**14 15 24.4**	**-0.3**
ITM				*e*Sn			**Sb**	**14 15 36.6**	**+0.1**
TRIZ	**Trizonia**	**0.89**	**53**		P		**Pg**	**14 15 24.1**	**-0.4**
TRIZ					S		**Sb**	**14 15 37.1**	**+0.5**
TRIZ	**Trizonia**	**0.89**	**53**	*e*PN			**Pg**	**14 15 24.1**	**-0.4**
TRIZ				*e*SN			**Sb**	**14 15 36.6**	**0.0**
TRIZ	**Trizonia**	**0.89**	**53**		P		**Pg**	**14 15 24.1**	**-0.4**
TRIZ					S		**Sb**	**14 15 36.8**	**+0.2**
GUR	**Goura**	**0.93**	**83**		P		**Pg**	**14 15 24.7**	**-0.6**
GUR	**Goura**	**0.93**	**83**	*e*PB			**Pg**	**14 15 24.1**	**-1.2**
GUR	**Goura**	**0.93**	**83**	*e*Pb			**Pg**	**14 15 24.1**	**-1.2**
GUR	**Goura**	**0.93**	**83**		P		**Pg**	**14 15 24.7**	**-0.6**
GUR					S		**Sb**	**14 15 37.8**	**-0.1**
KALE	**Kalithea**	**0.94**	**53**	*e*PN			**Pg**	**14 15 25.0**	**-0.6**
KALE	**Kalithea**	**0.94**	**53**	*e*Pn			**Pg**	**14 15 25.0**	**-0.6**
PYL	**PYLOS**	**1.03**	**154**	*e*PN			**Pg**	**14 15 26.6**	**-0.8**
PYL	**PYLOS**	**1.03**	**154**		P		**Pg**	**14 15 26.5**	**-0.8**
LKD2	**Lefkada island**	**1.04**	**337**		P		**Pb**	**14 15 27.3**	**-0.2**
LKD2					S		**Sn**	**14 15 43.3**	**+0.8**
LKD2	**Lefkada island**	**1.04**	**337**		P		**Pb**	**14 15 27.3**	**-0.2**
LKD2					S		**Sn**	**14 15 43.3**	**+0.8**
VLX	**Vlachokerasia**	**1.06**	**115**		P		**Pb**	**14 15 27.9**	**+0.1**
VLX					S		**Sn**	**14 15 43.9**	**+0.8**
VLX	**Vlachokerasia**	**1.06**	**115**	*e*PN			**Pb**	**14 15 27.9**	**+0.1**
VLX	**Vlachokerasia**	**1.06**	**115**		P		**Pg**	**14 15 26.8**	**-1.0**
VLX	**Vlachokerasia**	**1.06**	**115**	*e*Pn			**Pb**	**14 15 27.9**	**+0.1**
VLX					S		**Sn**	**14 15 43.9**	**+0.8**
EVR	**Evrytania**	**1.19**	**24**		P		**Pb**	**14 15 29.9**	**-0.1**
EVR	**Evrytania**	**1.19**	**24**	*e*PN			**Pb**	**14 15 30.0**	**-0.1**
EVR	**Evrytania**	**1.19**	**24**	*e*Pn			**Pb**	**14 15 30.0**	**-0.1**
DSF	**Desfina**	**1.21**	**61**		P		**Pb**	**14 15 29.6**	**-0.8**
DSF					S		**Sn**	**14 15 48.1**	**+1.8**
DSF	**Desfina**	**1.21**	**61**		P		**Pb**	**14 15 29.6**	**-0.8**
DSF					S		**Sn**	**14 15 48.6**	**+1.8**
MAKR	**Makrakomi, Fth**	**1.40**	**32**		P		**Pb**	**14 15 33.4**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.40**	**32**		P		**Pb**	**14 15 33.4**	**-0.2**
DYR	**Agios Nikonas**	**1.41**	**139**		P		**Pg**	**14 15 34.0**	**-0.4**
DYR	**Agios Nikonas**	**1.41**	**139**	*e*PN			**Pg**	**14 15 34.0**	**-0.4**
DYR	**Agios Nikonas**	**1.41**	**139**		P		**Pg**	**14 15 34.0**	**-0.4**
LTK	**Loutraki**	**1.43**	**82**		P		**Pb**	**14 15 33.6**	**-0.5**
LTK	**Loutraki**	**1.43**	**82**	*e*PN			**Pb**	**14 15 33.5**	**-0.5**
LTK	**Loutraki**	**1.43**	**82**	*e*Pn			**Pb**	**14 15 33.5**	**-0.5**
AXAR	**Agios Charalam**	**1.49**	**51**		P		**Pb**	**14 15 35.0**	**-0.2**
AXAR	**Agios Charalam**	**1.49**	**51**		P		**Pb**	**14 15 35.0**	**-0.2**
AGG	**Agios Georgios**	**1.50**	**37**		P		**Pg**	**14 15 35.7**	**-0.4**
AGG	**Agios Georgios**	**1.50**	**37**		P		**Pg**	**14 15 35.7**	**-0.4**
LKR	**Lokris**	**1.65**	**60**		P		**Pb**	**14 15 38.0**	**+0.2**
LKR	**Lokris**	**1.65**	**60**		P		**Pb**	**14 15 38.0**	**+0.2**
DID	**Didima**	**1.67**	**101**		P		**Pb**	**14 15 38.5**	**+0.4**
DID	**Didima**	**1.67**	**101**		P		**Pb**	**14 15 38.5**	**+0.4**
ATAL	**Atalanti**	**1.69**	**59**		P		**Pb**	**14 15 37.6**	**-0.9**
ATAL	**Atalanti**	**1.69**	**59**		P		**Pb**	**14 15 37.6**	**-0.9**
IGT	**Igoumenitsa**	**1.82**	**339**		P		**Pb**	**14 15 40.7**	**-0.1**
IGT	**Igoumenitsa**	**1.82**	**339**		P		**Pb**	**14 15 40.7**	**-0.1**
MRKA	**Markates**	**2.09**	**65**		P		**Pb**	**14 15 44.0**	**-1.3**
MRKA	**Markates**	**2.09**	**65**		P		**Pb**	**14 15 44.0**	**-1.3**
PTL	**Penteli**	**2.14**	**83**		P		**Pn**	**14 15 44.5**	**+1.5**
PTL	**Penteli**	**2.14**	**83**		P		**Pn**	**14 15 44.5**	**+1.5**
AOS	**Alonnisos**	**2.51**	**57**		P		**Pn**	**14 15 49.8**	**+1.7**
AOS	**Alonnisos**	**2.51**	**57**		P		**Pn**	**14 15 49.8**	**+1.7

ENEZ	**Enez**	**0.47**	**74**	*e*Pg	**Pb**	**14 25 38.7**	**+0.3**
ENEZ				*e*Sg	**Sb**	**14 25 44.4**	**-0.8**
ERIK	**Erikli-Kesan**	**0.73**	**85**	*e*PG	**Pb**	**14 25 42.9**	**0.0**
ERIK	**Erikli-Kesan**	**0.73**	**85**	*e*Pg	**Pb**	**14 25 42.9**	**0.0**
GELI	**Tayfur-Gelibol**	**0.73**	**107**	*e*PG	**Pb**	**14 25 42.8**	**-0.1**
GELI				*e*SG	**Sb**	**14 25 53.0**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.73**	**107**	*e*Pg	**Pb**	**14 25 42.8**	**-0.1**
GELI				*e*Sg	**Sb**	**14 25 53.0**	**+0.3**
BOZC	**Bozcaada**	**0.86**	**154**	*i* P	**Pn**	**14 25 45.9**	**0.0**
BOZC				*i* S	**Sn**	**14 25 58.3**	**0.0**
LPK	**Lapseki**	**0.95**	**104**	*e*PG	**Pn**	**14 25 47.4**	**+0.2**
LPK	**Lapseki**	**0.95**	**104**	*e*Pg	**Pn**	**14 25 47.4**	**+0.2**
EZN	**Ezine**	**0.98**	**143**	*e*PG	**Pn**	**14 25 47.7**	**0.0**
EZN	**Ezine**	**0.98**	**143**	*e*Pg	**Pn**	**14 25 47.7**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.23**	**86**	*e*PN	**Pb**	**14 25 51.6**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.23**	**86**	*e*Pn	**Pb**	**14 25 51.6**	**+0.1**
MFT	**Murefte**	**1.32**	**82**	*e*PN	**Pg**	**14 25 53.6**	**-0.3**
MFT	**Murefte**	**1.32**	**82**	*e*Pn	**Pg**	**14 25 53.6**	**-0.3**
KRBG	**Karabiga-Canak**	**1.34**	**99**	*e*PN	**Pg**	**14 25 53.9**	**-0.4**
KRBG	**Karabiga-Canak**	**1.34**	**99**	*e*Pn	**Pg**	**14 25 53.9**	**-0.4**
EDRB	**Edirne**	**1.52**	**36**	*e*PN	**Pn**	**14 25 55.4**	**+0.2**
EDRB	**Edirne**	**1.52**	**36**	*e*Pn	**Pn**	**14 25 55.4**	**+0.2**
MRMT	**Marmara Adasi**	**1.55**	**90**	*e*PN	**Pn**	**14 25 55.6**	**0.0**
MRMT	**Marmara Adasi**	**1.55**	**90**	*e*Pn	**Pn**	**14 25 55.6**	**0.0**
GONE	**Gonen-Balikesi**	**1.72**	**108**	*e*PN	**Pn**	**14 25 58.5**	**+0.6**
GONE	**Gonen-Balikesi**	**1.72**	**108**	*e*Pn	**Pn**	**14 25 58.5**	**+0.6**
AOS	**Alonnisos**	**1.93**	**222**	*e*PB	**Pn**	**14 26 00.4**	**-0.4**
AOS	**Alonnisos**	**1.93**	**222**	*e*Pb	**Pn**	**14 26 00.4**	**-0.4**
CHOS	**Chios island**	**2.25**	**170**	*e*PN	**Pn**	**14 26 06.3**	**+1.0**
CHOS	**Chios island**	**2.25**	**170**	*e*Pn	**Pn**	**14 26 06.3**	**+1.0**

IDC 16 14:37:47.0±1.9, 15°67'S×175°15'W, h280km±21km, mb3.3/6, mb1 3.7/7, mb1mx3.3/19, mbtmp3.3/7, Error ellipse: s-maj=86.9km s-min=13.7km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.70**	**62**	P	Pn	14 38 49.0	0.0
	20nm,0.3s,baz=154,slow=0.4,SNR=27						
AFI				S	S	14 39 34.8	-3.6
	33nm,0.3s,baz=1.4,slow=19,SNR=11						
STKA	**Stephens Creek**	**42.45**	**240**	P	P	14 45 14.8	-0.2
	2.4nm,0.6s,baz=52,slow=11,SNR=4.8						
WRA	**Warramunga Arr**	**48.15**	**257**	P	P	14 45 59.6	-0.1
	3.0nm,0.7s,baz=94,slow=6.7,SNR=60						
ASAR	**Alice Springs**	**48.43**	**252**	P	P	14 46 01.9	-0.1
	22nm,0.6s,baz=86,slow=7.9,SNR=288						
NVAR	**Mina Array Bea**	**75.66**	**43**	P	P	14 49 02.3	+0.3
	1.1nm,0.7s,baz=226,slow=9.9,SNR=8.1						
TXAR	**Lajitas Array**	**82.16**	**57**	P	P	14 49 37.3	0.0
	0.3nm,0.6s,baz=215,slow=6.2,SNR=4.3						
ILAR	**Eielson Array**	**83.04**	**12**	P	P	14 49 40.8	-0.1
	0.3nm,0.6s,baz=224,slow=5.8,SNR=8.1						
PDAR	**Pinedale Array**	**83.59**	**42**	P	P	14 49 44.1	-0.3
	1.0nm,0.7s,baz=199,slow=3.8,SNR=8.0						

*IDC **16** 14:46:11.9±1.1, 1°41'S×120°57'E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.4/24, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=68.4km s-min=19.8km az=65.0*

*ISCJB **16** 14:46:14.6±2.2, 1°46'S±0°05'×120°17'E±0°06, h8km±14km, mb3.5/4, Error ellipse: s-maj=12.1km s-min=5.8km az=29.5*

*DJA **16** 14:46:19.3±0.4, 2°S±3'×12°0E±°, h10km, M4.0/7, mb4.4/1, MLv3.7/7*

ISC 16 14:46:13.0±3.1, 1°44'S±0°06×120°3'E±0°1, h2km±19km, n14, σ1°83/20, mb3.7/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKSI	**Soroako, Sulaw**	**1.49**	**137**	P	**Pb**	**14 46 41.6**	**+0.2**
SKSI				S	**Sg**	**14 47 01.3**	**+0.4**
TTSI	**Tana Toraja**	**1.68**	**197**	P	**Pn**	**14 46 42.3**	**-1.0**
TTSI				S	**Sn**	**14 47 05.4**	**0.0**
LUWI	**Luwuk**	**2.48**	**81**	P	**Pg**	**14 47 00.4**	**-0.3**
LUWI				S	**Sg**	**14 47 31.6**	**-1.4**
MRSI	**Marisa**	**2.50**	**41**	P	**Pn**	**14 46 56.4**	**+1.7**
MRSI				S	**Sb**	**14 47 29.7**	**-0.1**
SPSI	**Sidrap Palu**	**2.57**	**192**	P	**Pn**	**14 46 57.5**	**+1.8**
SPSI				S	**Sn**	**14 47 28.8**	**+1.3**
KAPI	**Kappang**	**3.60**	**189**	P	**Pn**	**14 47 13.0**	**+3.2**
KAPI	**Kappang**	**3.60**	**189**	Pn	**Pn**	**14 47 10.4**	**+0.6**
	2.2nm,0.3s,baz=352,slow=7.4,SNR=8.2						
KAPI				Sn	**Sn**	**14 47 49.5**	**-3.4**
	1.4nm,0.3s,baz=138,slow=18,SNR=3.6						
BKSI	**Bulukumba**	**3.87**	**183**	P	**Pn**	**14 47 16.5**	**+3.0**
BKSI				S	**Sn**	**14 48 00.6**	**+1.1**
KMSI	**Cibinong**	**4.17**	**61**	P	Pb	14 47 23.5	-3.7
KMSI				S	**Sb**	**14 48 18.9**	**+0.8**
MYLDM	**Lahad Datu**	**6.82**	**345**	P	Pn	14 48 02.2	+8.1
WRA	**Warramunga Arr**	**22.94**	**144**	P	**P**	**14 51 16.9**	**-1.8**
	2.0nm,0.9s,baz=320,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**25.73**	**150**	P	**P**	**14 51 43.0**	**-2.0**
	0.4nm,0.9s,baz=324,slow=7.6,SNR=4.2						
MKAR	**Makanchi Array**	**56.47**	**330**	P	**P**	**14 56 11.6**	**+1.0**
	0.6nm,0.7s,baz=130,slow=8.4,SNR=7.5						
KURBB	**Kurchatov Arra**	**62.90**	**332**	P	**P**	**14 56 39.5**	**-1.0**
	0.4nm,0.5s,baz=132,slow=7.3,SNR=4.5						

IDC 16 15:02:07.5±1.3, 16°85N×145°90E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/26, mbtmp3.7/6, MS3.3/1, Ms1 3.3/1, ms1mx2.3/41, Error ellipse: s-maj=38.4km s-min=22.1km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**17.11**	**342**	LR	LR	15 11 29.9	
	comp=Z,101nm,19.7s,baz=12,slow=33						
WRA	**Warramunga Arr**	**38.29**	**198**	P	P	15 09 30.6	+0.6
	0.9nm,0.9s,baz=19,slow=8.3,SNR=8.2						
FITZ	**Fitzroy Crossi**	**40.05**	**211**	P	P	15 09 43.9	-0.8
	2.1nm,1.0s,baz=19,slow=14,SNR=7.3						
CMAR	**Chiang Mai Arr**	**44.68**	**279**	P	P	15 10 22.3	-0.2
	0.6nm,0.7s,baz=80,slow=6.2,SNR=3.6						
SONM	**Songino Array**	**44.71**	**322**	P	P	15 10 23.9	+1.4
	0.6nm,1.0s,baz=123,slow=5.3,SNR=3.5						
MKAR	**Makanchi Array**	**59.88**	**315**	P	P	15 12 14.4	-0.9
	0.9nm,0.4s,baz=91,slow=8.4,SNR=21						
ILAR	**Eielson Array**	**65.21**	**26**	P	P	15 12 50.4	-0.2
	0.1nm,0.4s,baz=249,slow=5.6,SNR=8.4						

*IDC **16** 15:14:40.9±0.6, 12°90N×145°70E, h0km, mb4.2/17, mb1 4.4/17, mb1mx4.3/25, mbtmp4.2/17, Error ellipse: s-maj=19.4km s-min=14.1km az=70.0*

*ISCJB **16** 15:14:45.7±0.4, 12°85N±0°07'×145°48E±0°08, h43km, mb4.3/30, Error ellipse: s-maj=11.8km s-min=9.0km az=147.6*

*NEIC **16** 15:14:46.6±1.9, 12°87N×145°53E, h38km±16km, mb4.5/13, Error ellipse: s-maj=12.7km s-min=9.9km az=103.0*

ISC 16 15:14:47.1±0.5, 12°86N±0°09'×145°6E±0°1, h43km, n60, σ1°95/67, mb4.3/30, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.99**	**317**	*e*Pn	**Pn**	**15 15 04.2**	**-0.4**
GUMO				*e*Sn	**Sn**	**15 15 15.2**	**-2.2**
GUMO	**Guam**	**0.99**	**317**	Pn	**Pn**	**15 15 04.1**	**-0.5**
	142nm,0.3s,baz=155,slow=9.0,SNR=174						
GUMO				Sn	**Sn**	**15 15 18.6**	**+1.2**
	309nm,0.3s,baz=347,slow=19,SNR=20						
MJAR	**Matsushiro Arr**	**24.49**	**346**	P	**P**	**15 19 59.9**	**-2.4**
MJAR	**Matsushiro Arr**	**24.49**	**346**	P	**P**	**15 19 59.9**	**-2.4**
	2.4nm,0.8s,baz=176,slow=11,SNR=7.8						
MAJO	**Matsushiro**	**24.49**	**346**	*e*P	**P**	**15 20 02.0**	**-0.4**
	8.0nm,0.9s						
MAT	**Matsushiro**	**24.49**	**346**	P	**P**	**15 20 02.3**	**0.0**
KSRS	**Korea Array**	**29.12**	**330**	P	**P**	**15 20 44.1**	**+0.1**
	2.4nm,1.0s,baz=150,slow=10,SNR=3.7						
KSAR	**Wonju Array Be**	**29.14**	**330**	P	**P**	**15 20 44.1**	**0.0**
WRA	**Warramunga Arr**	**34.42**	**199**	P	**P**	**15 21 31.0**	**+0.3**
WRA	**Warramunga Arr**	**34.42**	**199**	P	**P**	**15 21 31.0**	**+0.3**
	4.0nm,1.0s,baz=20,slow=9.5,SNR=20						
KSM	**Kuching**	**36.70**	**255**	*e*P	**P**	**15 21 49.7**	**-0.7**
	8.9nm,1.0s						
ASAR	**Alice Springs**	**38.05**	**197**	P	**P**	**15 22 02.1**	**+0.4**
ASAR	**Alice Springs**	**38.05**	**197**	P	**P**	**15 22 02.1**	**+0.4**
	2.2nm,0.8s,baz=20,slow=9.1,SNR=35						
STKA	**Stephens Creek**	**44.65**	**185**	P	**P**	**15 22 53.6**	**-2.0**
	3.4nm,1.0s,baz=11,slow=11,SNR=3.8						
CMAR	**Chiang Mai Arr**	**45.14**	**283**	P	**P**	**15 23 00.8**	**+1.0**
CMAR				PcP	**PcP**	**15 24 42.2**	**+2.3**
CMAR	**Chiang Mai Arr**	**45.14**	**283**	P	**P**	**15 23 00.8**	**+1.0**
	1.8nm,0.8s,baz=84,slow=6.3,SNR=13						
CMAR				PcP	**PcP**	**15 24 42.2**	**+2.3**
	0.9nm,0.8s,baz=80,slow=2.4,SNR=5.0						
SONM	**Songino Array**	**47.71**	**325**	P	**P**	**15 23 20.1**	**+0.3**
SONM				PcP	**PcP**	**15 24 48.6**	**0.0**
SONM	**Songino Array**	**47.71**	**325**	P	**P**	**15 23 20.1**	**+0.3**
	0.9nm,0.8s,baz=137,slow=7.8,SNR=8.3						
SONM				PcP	**PcP**	**15 24 48.6**	**0.0**
	1.1nm,0.9s,baz=145,slow=3.5,SNR=5.1						
BILL	**Bilibino**	**56.76**	**9**	*e*P	**P**	**15 24 25.9**	**-0.6**
	4.4nm,0.9s						
MK31	**Makanchi Array**	**62.48**	**316**	*e*P	**P**	**15 25 05.8**	**-0.5**
MKAR	**Makanchi Array**	**62.48**	**316**	P	**P**	**15 25 06.9**	**+0.7**
MKAR	**Makanchi Array**	**62.48**	**316**	P	**P**	**15 25 06.9**	**+0.7**
	0.8nm,0.7s,baz=93,slow=8.4,SNR=8.5						
ZALV	**Zalesovo Beam**	**62.60**	**324**	P	**P**	**15 25 06.8**	**-0.1**
ZALV	**Zalesovo Beam**	**62.60**	**324**	P	**P**	**15 25 06.8**	**-0.1**
	1.1nm,0.7s,baz=93,slow=5.4,SNR=6.2						
KURK	**Kurchatov**	**65.57**	**320**	*e*P	**P**	**15 25 26.7**	**+0.3**
	7.6nm,0.9s						
PPLA	**Purkeypile**	**66.13**	**26**	*e*P	**P**	**15 25 28.4**	**-1.6**
SML	**Sawmill**	**67.53**	**28**	*e*P	**P**	**15 25 40.2**	**+1.4**
	2.1nm,0.8s						
ILAR	**Eielson Array**	**68.93**	**25**	P	**P**	**15 25 46.3**	**-1.2**
ILAR	**Eielson Array**	**68.93**	**25**	P	**P**	**15 25 46.3**	**-1.2**
	1.3nm,0.8s,baz=250,slow=5.9,SNR=16						
DOT	**Dot Lake**	**69.87**	**27**	*e*P	**P**	**15 25 53.3**	**0.0**
	3.9nm,0.9s						
KKAR	**Karatay Array**	**70.44**	**311**	*e*P	**P**	**15 25 57.0**	**-0.2**
KKAR				*e*PcP	**PcP**	**15 26 19.0**	**+0.5**
BRVK	**Borovoye**	**70.98**	**322**	*e*P	**P**	**15 26 00.6**	**+0.3**
	5.8nm,0.8s						
ABKAR	**Akbulak array**	**77.53**	**318**	*e*P	**P**	**15 26 38.9**	**+0.4**
YBH	**Yreka Blue Hor**	**82.84**	**49**	*e*P	**P**	**15 27 08.4**	**+1.0**
	2.7nm,0.8s						
YKA	**Yellowknife Ar**	**83.19**	**27**	P	**P**	**15 27 08.7**	**+0.1**
YKA	**Yellowknife Ar**	**83.19**	**27**	P	**P**	**15 27 08.7**	**+0.1**
	2.7nm,0.9s,baz=288,slow=5.4,SNR=23						
MOD	**Modoc**	**84.56**	**48**	*e*P	**P**	**15 27 17.8**	**+1.4**
	3.2nm,0.9s						
NEW	**Newport**	**85.32**	**42**	*e*P	**P**	**15 27 21.0**	**+1.2**
	4.0nm,0.8s						
NVAR	**Mina Array Bea**	**86.84**	**51**	P	**P**	**15 27 29.3**	**+1.5**
NVAR	**Mina Array Bea**	**86.84**	**51**	P	**P**	**15 27 29.3**	**+1.5**
	1.7nm,0.7s,baz=260,slow=4.5,SNR=16						
MFID	**Camas Ranch**	**87.41**	**46**	*e*P	**P**	**15 27 29.1**	**-1.2**
	5.3nm,0.9s						
ARCES	**ARCESS Array B**	**87.98**	**342**	P	**P**	**15 27 32.5**	**+0.1**
ARCES	**ARCESS Array B**	**87.98**	**342**	P	**P**	**15 27 32.5**	**+0.1**
	4.6nm,0.8s,baz=63,slow=5.6,SNR=16						
HLID	**Hailey**	**88.36**	**46**	*e*P	**P**	**15 27 36.4**	**+1.5**
	2.6nm,1.0s						
GSC	**Goldstone**	**88.78**	**54**	*e*P	**P**	**15 27 38.9**	**+2.0**
	24nm,2.0s						
PDAR	**Pinedale Array**	**91.99**	**45**	P	**P**	**15 27 51.5**	**-0.4**
PDAR	**Pinedale Array**	**91.99**	**45**	P	**P**	**15 27 51.5**	**-0.4**
	0.3nm,0.3s,baz=222,slow=2.0,SNR=3.8						
FINES	**FINESS Array B**	**92.10**	**335**	P	**P**	**15 27 51.0**	**-0.7**
FINES	**FINESS Array B**	**92.10**	**335**	P	**P**	**15 27 51.0**	**-0.7**
	1.4nm,0.7s,baz=122,slow=2.5,SNR=4.8						
NOA	**NORSAR Array B**	**97.96**	**339**	P	**P**	**15 28 17.9**	**-0.6**
NOA	**NORSAR Array B**	**97.96**	**339**	P	**P**	**15 28 17.9**	**-0.6**
	0.3nm,0.6s,baz=46,slow=4.8,SNR=2.7						
BRTR	**Keskin Array B**	**98.05**	**314**	P	**P**	**15 28 19.4**	**-0.2**
BRTR	**Keskin Array B**	**98.05**	**314**	P	**P**	**15 28 19.4**	**-0.2**
	0.5nm,0.8s,baz=90,slow=7.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**135.83**	**304**	PKP	**PKPdf**	**15 34 04.9**	**+0.7**
TORD	**Torodi Ar. Bea**	**135.83**	**304**	PKP	**PKPdf**	**15 34 04.9**	**+0.7**
	0.3nm,0.6s,baz=32,slow=2.5,SNR=4.4						
DBIC	**Dimbokro**	**144.78**	**302**	PKP	**PKPdf**	**15 34 20.4**	**0.0**
DBIC	**Dimbokro**	**144.78**	**302**	PKP	**PKPdf**	**15 34 20.4**	**0.0**
	7.3nm,0.7s,baz=50,slow=3.3,SNR=18						
LPAZ	**La Paz**	**147.24**	**100**	PKPbc	**PKPbc**	**15 34 26.9**	**-0.7**
LPAZ	**La Paz**	**147.24**	**100**	PKPbc	**PKPbc**	**15 34 26.9**	**-0.7**
	1.6nm,0.8s,baz=294,slow=2.6,SNR=7.3						

*CSEM **16** 15:27:43.8±0.1, 38°82N×23°15E, h11km, ML1.8/4, Error ellipse: s-maj=2.5km s-min=1.9km az=125.0*

*ISCJB **16** 15:27:44.1±0.4, 38°84N±0°02×23°15E±0°03, h11km±3km, Error ellipse: s-maj=4.7km s-min=3.5km az=25.2*

*THE **16** 15:27:44.4, 38°82N×23°17E, h10km±1km, ML1.8/4, Error ellipse: s-maj=1.4km s-min=0.4km az=281.0*

*ATH **16** 15:27:44.4, 38°83N×23°15E, h5km, MD2.8/6, ML2.1*

ISC 16 15:27:44.5±1.0, 38°82N±0°02×23°16E±0°02, h10km±6km, n28, σ0°36/54, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIA	**Simia**	**0.07**	**34**	P	**Pg**	**15 27 46.5**	**-0.2**
SMIA				S	**Sg**	**15 27 48.0**	**-0.3**
SMIA	**Simia**	**0.07**	**34**	P	**Pg**	**15 27 46.5**	**-0.2**
SMIA				S	**Sg**	**15 27 48.0**	**-0.3**
ATAL	**Atalanti**	**0.17**	**220**	P	**Pg**	**15 27 48.2**	**0.0**
ATAL				S	**Sg**	**15 27 50.9**	**+0.2**
ATAL	**Atalanti**	**0.17**	**220**	P	**Pg**	**15 27 48.2**	**0.0**
ATAL				S	**Sg**	**15 27 50.9**	**+0.2**
LKR	**Lokris**	**0.21**	**216**	P	**Pg**	**15 27 48.9**	**0.0**
LKR				S	**Sg**	**15 27 52.3**	**+0.4**
LKR	**Lokris**	**0.21**	**216**	*e*PG	**Pg**	**15 27 48.8**	**-0.1**
LKR				*e*SG	**Sg**	**15 27 51.8**	**-0.1**
LKR	**Lokris**	**0.21**	**216**	P	**Pg**	**15 27 48.9**	**0.0**
LKR				*e*Sg	**Sg**	**15 27 51.8**	**-0.1**
LKR				S		15 27 52.3	
MRKA	**Markates**	**0.35**	**109**	P	**Pg**	**15 27 51.3**	**-0.2**
MRKA				S	**Sg**	**15 27 56.7**	**+0.5**
MRKA	**Markates**	**0.35**	**109**	P	**Pg**	**15 27 51.3**	**-0.2**
MRKA				S	**Sg**	**15 27 56.7**	**+0.5**
SKIA	**Skiathos**	**0.42**	**35**	P	**Pg**	**15 27 52.9**	**+0.2**
SKIA				S	**Sg**	**15 27 58.4**	**+0.2**
SKIA	**Skiathos**	**0.42**	**35**	P	**Pg**	**15 27 52.9**	**+0.2**
SKIA				S	**Sg**	**15 27 58.4**	**+0.2**
NEO	**Neokhori**	**0.48**	**6**	*e*PB	**Pg**	**15 27 53.9**	**-0.1**
NEO				*e*SB	**Sg**	**15 28 00.5**	**+0.1**
NEO	**Neokhori**	**0.48**	**6**	*e*Pb	**Pg**	**15 27 53.9**	**-0.1**
NEO				*e*Sb	**Sg**	**15 28 00.5**	**+0.1**
XOR	**Xorichti**	**0.54**	**2**	P	**Pg**	**15 27 55.0**	**0.0**
XOR				S	**Sg**	**15 28 02.9**	**+0.7**
XOR	**Xorichti**	**0.54**	**2**	P	**Pg**	**15 27 55.0**	**0.0**
XOR				S	**Sg**	**15 28 02.9**	**+0.7**
DSF	**Desfina**	**0.65**	**231**	P	**Pg**	**15 27 56.5**	**-0.5**
DSF				S	**Sg**	**15 28 05.7**	**+0.3**
DSF	**Desfina**	**0.65**	**231**	P	**Pg**	**15 27 56.5**	**-0.5**
DSF				S	**Sg**	**15 28 05.7**	**+0.3**
AOS	**Alonnisos**	**0.66**	**58**	P	**Pg**	**15 27 56.5**	**-0.7**
AOS				S	**Sg**	**15 28 05.5**	**-0.4**
AOS	**Alonnisos**	**0.66**	**58**	*e*PB	**Pg**	**15 27 56.9**	**-0.3**
AOS				*e*SB	**Sg**	**15 28 05.3**	**-0.6**
AOS	**Alonnisos**	**0.66**	**58**	P	**Pg**	**15 27 56.5**	**-0.7**
AOS	**Alonnisos**	**0.66**	**58**	*e*Pb	**Pg**	**15 27 56.9**	**-0.3**
AOS				S	**Sg**	**15 28 05.5**	**-0.4**
AGG	**Agios Georgios**	**0.68**	**287**	*e*PB	**Pg**	**15 27 57.1**	**-0.5**
AGG				*e*SB	**Sg**	**15 28 06.1**	**-0.4**
AGG	**Agios Georgios**	**0.68**	**287**	*e*Pb	**Pg**	**15 27 57.1**	**-0.5**
AGG				*e*Sb	**Sg**	**15 28 06.1**	**-0.4**
PTL	**Penteli**	**0.95**	**144**	*e*PB	**Pg**	**15 28 02.3**	**-0.5**
PTL				*e*SB	**Sb**	**15 28 15.9**	**+0.2**
PTL	**Penteli**	**0.95**	**144**	*e*Pb	**Pg**	**15 28 02.3**	**-0.5**
PTL				*e*Sb	**Sb**	**15 28 15.9**	**+0.2**
ATH	**Athens Observa**	**0.95**	**153**	*e*PN	**Pb**	**15 28 03.3**	**+0.2**
ATH				*e*SB	**Sb**	**15 28 15.9**	**+0.1**
ATH	**Athens Observa**	**0.95**	**153**	*e*Pn	**Pb**	**15 28 03.3**	**+0.2**
ATH				*e*Sb	**Sb**	**15 28 15.9**	**+0.1**
NAIG	**Nisos Aigina**	**1.09**	**166**	*e*PG	**Pg**	**15 28 05.0**	**-0.5**

*ISCJB **16** 15:28:29.0±0.6, 57°87N±0°05×21°80E±0°06, h0km, Error ellipse: s-maj=7.1km s-min=3.3km az=154.0*

*HEL **16** 15:28:29.5±0.1, 57°72N×21°83E, h0km, ML1.9, ML2.3(UPP), Explosion*

*CSEM **16** 15:28:29.9±0.3, 57°77N×21°83E, h2km, ML1.9, Error ellipse: s-maj=8.0km s-min=3.1km az=155.0, Mining explosion.*

*IDC **16** 15:28:30.1±3.3, 57°75N×21°86E, h0km, mb1 3.0/3, mb1mx2.9/26, mbtmp2.9/3, ML2.2/2, Error ellipse: s-maj=34.5km s-min=12.9km az=160.0*

*UPP **16** 15:28:31.7, 57°83N×21°56E, h0km, ML2.3, Mining explosion.*

ISC 16 15:28:28.9±1.2, 57°71N±0°06×21°84E±0°03, h0km, n56, σ1°61/87, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTSE	**Matsula**	**1.45**	**45**	*e*P	**Pn**	**15 28 55.3**	**-1.2**
MTSE				*e*S	**Sg**	**15 29 13.8**	**-1.8**
MTSE	**Matsula**	**1.45**	**45**	P	**Pn**	**15 28 55.2**	**-1.2**
MTSE				S	**Sg**	**15 29 13.7**	**-1.8**
GOTU	**Gotland**	**1.76**	**271**	*e*P	**Pn**	**15 29 00.6**	**+0.1**
GOTU	**Gotland**	**1.76**	**271**	P	**Pn**	**15 29 00.6**	**+0.1**
NYNU	**Nynaeshamn**	**2.41**	**304**	*e*P	**Pn**	**15 29 10.0**	**+0.5**
NYNU	**Nynaeshamn**	**2.41**	**304**	P	**Pn**	**15 29 09.9**	**+0.5**
NRTU	**Norrtaelje**	**2.59**	**321**	*e*P	**Pn**	**15 29 12.4**	**+0.4**
NRTU	**Norrtaelje**	**2.59**	**321**	P	**Pn**	**15 29 12.4**	**+0.4**
BYXU	**Byxelkrok**	**2.64**	**263**	*e*P	**Pn**	**15 29 13.5**	**+0.8**
BYXU	**Byxelkrok**	**2.64**	**263**	P	**Pn**	**15 29 13.5**	**+0.8**
AAL	**Aland**	**2.66**	**340**	*e*P	**Pn**	**15 29 12.8**	**-0.2**
AAL				*e*SG	**Sb**	**15 29 51.5**	**+1.1**
AAL	**Aland**	**2.66**	**340**	P	**Pn**	**15 29 12.7**	**-0.2**
AAL				Sg	**Sb**	**15 29 51.5**	**+1.1**
VSU	**Vasula**	**2.71**	**72**	*e*P	**Pn**	**15 29 14.2**	**+0.6**
VSU				*e*S	**Sn**	**15 29 47.4**	**+0.4**
VSU	**Vasula**	**2.71**	**72**	P	**Pn**	**15 29 14.2**	**+0.6**
VSU				S	**Sn**	**15 29 47.4**	**+0.4**
ASPU	**Aespoe**	**2.84**	**266**	*e*P	**Pn**	**15 29 16.9**	**+1.4**
ASPU	**Aespoe**	**2.84**	**266**	P	**Pn**	**15 29 16.8**	**+1.4**
VIKU	**Vikbolandet**	**2.84**	**288**	*e*P	**Pn**	**15 29 16.2**	**+0.6**
VIKU	**Vikbolandet**	**2.84**	**288**	P	**Pn**	**15 29 16.1**	**+0.6**
MEF	**Metsahovi**	**2.85**	**27**	*e*P	**Pn**	**15 29 17.2**	**+1.7**
MEF				*e*S	**Sn**	**15 29 49.9**	**-0.5**
MEF	**Metsahovi**	**2.85**	**27**	P	**Pn**	**15 29 17.2**	**+1.7**
MEF				S	**Sn**	**15 29 49.9**	**-0.5**
RAF	**Rauma**	**3.33**	**359**	*e*P	**Pn**	**15 29 23.2**	**+1.0**
RAF				*e*S	**Sn**	**15 30 03.0**	**+0.7**
RAF	**Rauma**	**3.33**	**359**	P	**Pn**	**15 29 23.1**	**+1.0**
RAF				S	**Sn**	**15 30 03.0**	**+0.7**
LNKU	**Linkoeping**	**3.42**	**281**	*e*P	**Pn**	**15 29 24.2**	**+0.9**
LNKU	**Linkoeping**	**3.42**	**281**	P	**Pn**	**15 29 24.2**	**+0.9**
PVF	**Pernaja**	**3.52**	**34**	*e*P	**Pn**	**15 29 26.0**	**+1.2**
PVF				*e*S	**Sn**	**15 30 05.8**	**-1.3**
PVF	**Pernaja**	**3.52**	**34**	P	**Pn**	**15 29 26.0**	**+1.2**
PVF				S	**Sn**	**15 30 05.8**	**-1.3**
NRAU	**Nora**	**4.02**	**301**	*e*P	**Pn**	**15 29 32.3**	**+0.6**
NRAU	**Nora**	**4.02**	**301**	P	**Pn**	**15 29 32.2**	**+0.6**
VJF	**Virojoki**	**4.09**	**44**	*e*P	**Pn**	**15 29 32.4**	**-0.3**
VJF				*e*S	**Sn**	**15 30 19.0**	**-2.1**
VJF				*e*SG	**Sg**	**15 30 36.3**	**-3.9**
VJF				MSG		15 30 40.1	
	comp=Z,2.3nm,0.3s						
VJF	**Virojoki**	**4.09**	**44**	P	**Pn**	**15 29 32.3**	**-0.3**
VJF				S	**Sn**	**15 30 19.0**	**-2.1**
FIA0	**FINESS Array S**	**4.32**	**28**	*e*P	**Pn**	**15 29 36.3**	**+0.4**
FIA0				*e*S	**Sn**	**15 30 25.5**	**-1.4**
FIA0				*e*SG	**Sb**	**15 30 41.8**	**+3.4**
FIA0				MSG		15 30 46.9	
	comp=Z,2.1nm,0.3s						
FIA0	**FINESS Array S**	**4.32**	**28**	P	**Pn**	**15 29 36

BRG				*e*Pg		**Pb**	**15 38 05.6**	**+0.2**
BRG				*e*Sg		**Sn**	**15 38 25.6**	**+0.6**
BRG	**Berggiesshubel**	**1.48**	**246**	Pn		**Pn**	**15 38 04.2**	**-0.7**
PRU	**Pruhonice**	**1.80**	**214**	*i* PG		**Pb**	**15 38 10.5**	**-0.3**
PRU				*e*SG		**Sg**	**15 38 34.2**	**-0.5**
	comp=Z,124nm,0.4s							
PRU	**Pruhonice**	**1.80**	**214**	Pg		**Pb**	**15 38 10.5**	**-0.3**
PRU				Sg		**Sg**	**15 38 34.2**	**-0.5**
	124nm,0.4s							
GKP	**Gorka Klasztor**	**1.91**	**21**	*e*Pn		Pn	15 38 19.0	+5.3
GKP				*e*Pg		Pb	15 38 19.9	+7.1
GKP				*e*Sn		**Sg**	**15 38 40.7**	**+2.2**
GKP				*e*Sg		**Sb**	**15 38 41.7**	**+4.5**
CLL	**Collm**	**1.94**	**266**	*e*Pn		**Pn**	**15 38 10.5**	**-0.7**
CLL				*e*Pg		**Pg**	**15 38 13.7**	**-0.4**
CLL	**Collm**	**1.94**	**266**	*e*Pn		**Pn**	**15 38 11.0**	**-0.2**
CLL				*e*Pg		**Pg**	**15 38 14.0**	**-0.1**
CLL				*i*			15 38 17.4	
CLL				*e*Sg		**Sg**	**15 38 39.0**	**-0.2**
	comp=Z,113nm,0.6s							
CLL				*i*			15 38 48.6	
CLL	**Collm**	**1.94**	**266**	Pn		**Pn**	**15 38 10.5**	**-0.7**
RAC	**Raciborz**	**1.95**	**136**	*e*Pg		**Pg**	**15 38 14.2**	**-0.2**
RAC				*e*Sg		**Sg**	**15 38 40.5**	**+0.9**
MORC	**Moravsky Berou**	**1.96**	**151**	*e*Pn		**Pn**	**15 38 10.6**	**-0.9**
MORC	**Moravsky Berou** baz=336	**1.96**	**151**	*e*Pn		**Pn**	**15 38 10.7**	**-0.9**
MORC				*e*Sg		**Sb**	**15 38 37.9**	**-0.6**
	comp=Z,124nm,0.6s,baz=336							
OKC	**Ostrava-Krasne**	**2.12**	**141**	*e*Pn		**Pn**	**15 38 12.8**	**-0.9**
OKC				*e*Pg		**Pb**	**15 38 16.7**	**+0.4**
OKC				*e*Sg		**Sb**	**15 38 43.6**	**+0.5**
OKC	**Ostrava-Krasne**	**2.12**	**141**	Pn		**Pn**	**15 38 12.8**	**-0.9**
VRAC	**Vranov**	**2.21**	**171**	Pn		**Pn**	**15 38 14.9**	**-0.1**
	comp=Z,3.7nm,0.3s,baz=329,slow=14,SNR=30							
VRAC				Lg		Lg	15 38 46.7	
	comp=Z,15nm,0.3s,baz=265,slow=23,SNR=16							
VRAC	**Vranov**	**2.21**	**171**	*e*Pn		**Pn**	**15 38 14.8**	**-0.2**
VRAC				*e*Sg		**Sg**	**15 38 47.2**	**-0.9**
	comp=Z,220nm,0.7s,baz=354							
TREC	**Trest**	**2.24**	**190**	*e*PN		**Pn**	**15 38 16.1**	**+0.8**
TREC				*i* PG		**Pb**	**15 38 18.9**	**+0.6**
TREC	**Trest**	**2.24**	**190**	Pn		**Pn**	**15 38 16.1**	**+0.8**
KRUC	**Moravsky** baz=358	**2.44**	**175**	*e*Pn		**Pn**	**15 38 18.1**	**-0.1**
KRUC				*e*Sg		**Sg**	**15 38 55.5**	**0.0**
	comp=Z,146nm,1.0s,baz=358							
TANN	**Tannenbergstha**	**2.53**	**246**	*e*Pn		**Pn**	**15 38 19.4**	**0.0**
TANN				*e*Sg		**Sg**	**15 38 57.2**	**-1.1**
TANN	**Tannenbergstha**	**2.53**	**246**	Pn		**Pn**	**15 38 19.4**	**0.0**
TANN				Sg		**Sg**	**15 38 57.2**	**-1.1**
WERD	**Werda**	**2.61**	**248**	*e*Pn		**Pn**	**15 38 20.5**	**+0.1**
WERD				*e*Sg		**Sg**	**15 39 00.3**	**-0.4**
WERD	**Werda**	**2.61**	**248**	Pn		**Pn**	**15 38 20.5**	**+0.1**
WERD				Sg		**Sg**	**15 39 00.3**	**-0.4**
NKC	**Novy Kostel**	**2.62**	**243**	*i* PN		**Pn**	**15 38 20.7**	**0.0**
NKC				*i* PG		**Pg**	**15 38 27.4**	**+0.1**
NKC				*e*SG		**Sg**	**15 39 02.8**	**+1.5**
	comp=Z,128nm,0.6s							
NKC	**Novy Kostel**	**2.62**	**243**	Pn		**Pn**	**15 38 20.7**	**0.0**
OJC	**Ojcow**	**2.68**	**117**	*e*Pn		**Pn**	**15 38 19.2**	**-2.2**
OJC				*e*Pg		**Pg**	**15 38 28.0**	**-0.4**
OJC				*e*Sg		**Sg**	**15 39 03.9**	**+0.8**
OJC	**Ojcow**	**2.68**	**117**	*e*Pn		**Pn**	**15 38 19.1**	**-2.3**
OJC				*e*Pg		**Pg**	**15 38 27.8**	**-0.6**
OJC				*e*Sg		**Sg**	**15 39 02.8**	**+0.3**
OJC	**Ojcow**	**2.68**	**117**	Pn		**Pn**	**15 38 19.2**	**-2.2**
JAVC	**Velka Javorina** comp=Z,120nm,0.8s	**2.83**	**158**	*e*Sg		**Sg**	**15 39 08.3**	**+0.4**
KHC	**Kasperske Hory**	**2.86**	**215**	*i* PN		**Pn**	**15 38 23.4**	**-0.5**
KHC				*i* PG		**Pb**	**15 38 29.8**	**+0.9**
KHC				*e*SN		**Sn**	**15 38 58.4**	**-0.6**
KHC				*e*SG		**Sg**	**15 39 09.1**	**+0.3**
	comp=Z,91nm,0.7s							
KHC	**Kasperske Hory**	**2.86**	**215**	Pn		**Pn**	**15 38 23.4**	**-0.5**
KHC	**Kasperske Hory**	**2.86**	**215**	Pg		**Pb**	**15 38 29.8**	**+0.9**
KHC				Sn		**Sn**	**15 38 58.4**	**-0.6**
KHC				Sg		**Sg**	**15 39 09.1**	**+0.3**
	comp=Z,91nm,0.7s							
MANZ	**Manzenberg**	**2.94**	**241**	*e*Pn		**Pn**	**15 38 25.6**	**+0.6**
MANZ				*e*Pg		**Pg**	**15 38 33.3**	**-0.1**
MANZ				*e*Sg		**Sg**	**15 39 11.6**	**+0.2**
MANZ	**Manzenberg**	**2.94**	**241**	Pn		**Pn**	**15 38 25.6**	**+0.6**
MOX	**Moxa**	**2.94**	**255**	*e*Pn		**Pn**	**15 38 24.9**	**-0.1**
MOX				*e*Pg		**Pg**	**15 38 33.3**	**-0.1**
MOX				*e*Sg		**Sg**	**15 39 11.9**	**+0.4**
MOX	**Moxa**	**2.94**	**255**	Pn		**Pn**	**15 38 24.9**	**-0.1**
ROTZ	**Rotzenmuhle**	**3.01**	**236**	*e*Pn		**Pn**	**15 38 26.3**	**+0.3**
ROTZ	**Rotzenmuhle**	**3.01**	**236**	Pn		**Pn**	**15 38 26.3**	**+0.3**
GEC2	**GERESS Array S**	**3.06**	**211**	*e*Pn		**Pn**	**15 38 27.3**	**+0.5**
GEC2	**GERESS Array S**	**3.06**	**211**	Pn		**Pn**	**15 38 27.3**	**+0.5**
GERES	**GERESS Array B**	**3.06**	**211**	Pn		**Pn**	**15 38 26.6**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=32,slow=12,SNR=117							
GERES				Sn		**Sn**	**15 39 03.6**	**-0.5**
	comp=Z,5.0nm,0.3s,baz=32,slow=25,SNR=8.6							
GERES				Lg		Lg	15 39 13.9	
	comp=Z,11nm,0.3s,baz=32,slow=27,SNR=11							
SMOL	**Smolenice**	**3.11**	**163**	*e*PG		**Pg**	**15 38 35.7**	**-0.9**
SMOL				*e*SG		**Sb**	**15 39 12.6**	**+1.0**
SMOL	**Smolenice**	**3.11**	**163**	*e*Pg		**Pg**	**15 38 35.7**	**-0.9**
SMOL				*e*Sg		**Sb**	**15 39 12.6**	**+1.0**
WET	**Wettzell**	**3.12**	**222**	*e*Pn		**Pn**	**15 38 27.5**	**0.0**
WET	**Wettzell**	**3.12**	**222**	Pn		**Pn**	**15 38 27.5**	**0.0**
ZST	**Bratislava**	**3.37**	**168**	*e*PG		**Pb**	**15 38 46.6**	**+1.0**
ZST				*e*SG		**Sb**	**15 39 20.6**	**+1.5**
ZST	**Bratislava**	**3.37**	**168**	*e*Pg		**Pb**	**15 38 38.6**	**+1.0**
ZST				*e*Sg		**Sb**	**15 39 20.7**	**+1.6**
NIE	**Niedzica**	**3.41**	**126**	*e*P		**Sg**	**15 38 41.4**	**-1.0**
NIE				*e*S		**Sg**	**15 39 24.8**	**-1.8**
VYHS	**Vyhne**	**3.49**	**148**	*e*PN		Pn	15 38 25.2	-7.4
VYHS				*e*PG		**Pg**	**15 38 42.7**	**-1.2**
VYHS				*e*SG		**Sb**	**15 39 24.6**	**+2.0**
CONA	**Conrad Observa** SNR=17	**3.57**	**182**	⇑*i*Pn		**Pn**	**15 38 34.0**	**+0.2**
CONA				⇑*i*Sg		**Sg**	**15 39 30.9**	**-0.9**
	comp=Z,77nm,0.5s							
CONA	**Conrad Observa** SNR=17	**3.57**	**182**	Pn		**Pn**	**15 38 34.0**	**+0.2**
CONA				Sg		**Sg**	**15 39 30.9**	**-0.9**
	comp=Z,77nm,0.5s							
GRA1	**Grafenberg Arr**	**3.58**	**242**	Pn		**Pn**	**15 38 34.3**	**+0.4**
GRA1	**Grafenberg Arr**	**3.58**	**242**	Pg		**Pg**	**15 38 46.6**	**+0.9**
GRA1				Sg		**Sg**	**15 39 31.7**	**-0.4**
GRF	**Grafenberg Arr**	**3.58**	**242**	*e*Pn		**Pn**	**15 38 34.3**	**+0.4**
GRF				*e*Pg		**Pg**	**15 38 46.6**	**+0.9**
GRF				*e*Sg		**Sg**	**15 39 31.7**	**-0.4**
BSD	**Bornholm Skovb**	**3.69**	**350**	*i* P		**Pn**	**15 38 34.1**	**-1.2**
BSD				*i* S		**Sn**	**15 39 14.4**	**-5.0**
MOA	**Molln** SNR=20	**3.83**	**199**	⇑*i*Pn		**Pn**	**15 38 37.5**	**+0.2**
MOA				⇑*i*Sg		**Sg**	**15 39 39.8**	**-0.4**
	comp=Z,81nm,0.7s							
MOA	**Molln** SNR=20	**3.83**	**199**	Pn		**Pn**	**15 38 37.5**	**+0.2**
MOA				Sg		**Sg**	**15 39 39.8**	**-0.4**
	comp=Z,81nm,0.7s							
ARSA	**Arzberg**	**4.26**	**185**	⇑*i*Pn		**Pn**	**15 38 42.7**	**-0.5**
ARSA				⇓*e*Sg		**Sg**	**15 39 52.4**	**-1.6**
	comp=Z,88nm,0.8s,SNR=5.4							
ARSA	**Arzberg**	**4.26**	**185**	Pn		**Pn**	**15 38 42.7**	**-0.5**
ARSA				Sg		**Sg**	**15 39 52.4**	**-1.6**
	comp=Z,88nm,0.8s,SNR=5.4							
CRVS	**Cervenica-Dubn**	**4.32**	**125**	*e*PN		Pn	15 38 37.7	-6.3
CRVS				*e*PG		**Pg**	**15 38 58.5**	**-1.3**
CRVS				*e*SG		**Sb**	**15 39 49.6**	**+3.0**
KWP	**Kalwaria Pacla**	**4.62**	**111**	*e*Pn		**Pn**	**15 38 48.5**	**+0.5**
KWP				*e*Pb		**Pb**	**15 39 00.7**	**+1.8**
KWP				*e*Sg		Sg	15 40 14.8	+9.5
KWP	**Kalwaria Pacla**	**4.62**	**111**	*e*Pn		**Pn**	**15 38 48.6**	**+0.5**
KOLS	**Kolonicke sedl**	**4.73**	**120**	*e*PN		Pn	15 38 42.8	-6.8
KOLS				*e*PG		**Pb**	**15 39 03.6**	**+2.8**
KOLS				*e*SG		**Sb**	**15 40 01.4**	**+3.1**
KBA	**Koelnbreinsper** SNR=13	**4.77**	**203**	⇑*i*Pn		**Pn**	**15 38 49.7**	**-0.6**
KBA	**Koelnbreinsper** SNR=13	**4.77**	**203**	Pn		**Pn**	**15 38 49.7**	**-0.6**
SUW	**Suwalki**	**5.00**	**57**	*e*Pg		Pg	15 39 17.8	+5.1
SUW				*e*Sn		**Sn**	**15 39 49.5**	**-2.1**
MOTA	**Moosalm** SNR=8.8	**5.27**	**220**	⇑*i*Pn		**Pn**	**15 38 56.5**	**-0.7**
MOTA				⇑*i*Sg		**Sg**	**15 40 27.1**	**+0.8**
	comp=Z,18nm,0.7s							
MOTA	**Moosalm**	**5.27**	**220**	Pn		**Pn**	**15 38 56.5**	**-0.7**
	SNR=8.8							
MOTA				Sg		**Sg**	**15 40 27.1**	**+0.8**
	comp=Z,18nm,0.7s							
DAVOX	**Davos/Dischmat**	**6.23**	**223**	Pn		**Pn**	**15 39 11.0**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=27,slow=16,SNR=6.7							
DAVOX				Lg		Lg	15 40 57.8	
	comp=Z,1.1nm,0.3s,baz=332,slow=22,SNR=4.1							
MICGM	**Minsk**	**7.73**	**62**	*e*			15 41 12.0	
AKASG	**Malin Array Be**	**8.31**	**90**	Pn		**Pn**	**15 39 36.8**	**-2.0**
	comp=Z,1.6nm,0.3s,baz=281,slow=12,SNR=11							
AKASG				Sn		Sn	15 41 07.1	-6.2
	comp=Z,0.9nm,0.3s,baz=282,slow=23,SNR=3.7							
HFS	**Hagfors**	**8.76**	**352**	Pn		**Pn**	**15 39 43.3**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=164,slow=13,SNR=4.4							
HFS				Lg		Lg	15 42 19.9	
	comp=Z,0.3nm,0.3s,baz=173,slow=25,SNR=4.3							
NOA	**NORSAR Array B**	**9.94**	**346**	Pn		**Pn**	**15 39 58.8**	**-2.2**
	comp=Z,0.2nm,0.3s,baz=157,slow=10,SNR=4.5							
FINES	**FINESS Array B**	**11.38**	**25**	Pn		Pn	15 40 17.3	-3.4
	comp=Z,0.2nm,0.3s,baz=201,slow=9.4,SNR=9.2							
FINES				Sn		Sn	15 42 21.9	-6.6
	comp=Z,0.4nm,0.3s,baz=206,slow=20,SNR=5.9							
ARCES	**ARCESS Array B**	**18.64**	**10**	Pn		P	15 41 51.3	-4.6
	comp=Z,0.3nm,0.3s,baz=195,slow=12,SNR=14							
AKTO	**Aktyubinsk**	**26.18**	**76**	P		**P**	**15 43 12.6**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=281,slow=10,SNR=5.7							
TORD	**Torodi Ar. Bea**	**39.98**	**202**	P		**P**	**15 45 13.0**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=4.3,slow=7.2,SNR=5.5							
MKAR	**Makanchi Array**	**42.24**	**69**	P		**P**	**15 45 31.9**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=338,slow=2.0,SNR=4.2							
SONM	**Songino Array**	**54.94**	**55**	P		**P**	**15 47 10.5**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=292,slow=8.9,SNR=3.1							
YKA	**Yellowknife Ar**	**59.86**	**336**	P		**P**	**15 47 44.1**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=28,slow=6.9,SNR=9.7							
PDAR	**Pinedale Array**	**74.94**	**322**	P		**P**	**15 49 20.5**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=66,slow=9.0,SNR=3.3							

NEIC ***16*** *15:44:11.6, 18.74N×66.54W, h55km, MD2.8(RSPR), After RSPR.*

RSPR 16 15:44:11.6, 18.74N×66.54W, h55km±3km, 8C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CELP	**Cerrillos**	**0.67**	**183**⇓	*e*P	Pn	15 44 24.6	-0.6
CELP				*e*S	Sn	15 44 33.2	-1.9
CELP	**Cerrillos**	**0.67**	**183**⇓	*e*P	Pn	15 44 24.6	-0.6
CELP				*e*S	Sn	15 44 33.2	-1.9
CBYP	**Canovanas**	**0.80**	**126**⇑	*e*P	Pn	15 44 26.2	-0.8
CBYP	**Canovanas**	**0.80**	**126**⇑	*e*P	Pn	15 44 26.4	-0.6
CBYP	**Canovanas**	**0.80**	**126**⇑	*e*P	Pn	15 44 26.2	-0.8
CBYP				*e*S	Sn	15 44 37.3	-1.0
CRPR	**Cabo Rojo, PR**	**0.91**	**216**⇑	*e*P	Pn	15 44 27.4	-0.9
CRPR	**Cabo Rojo, PR**	**0.91**	**216**⇑	*e*P	Pn	15 44 27.9	-0.5
CRPR	**Cabo Rojo, PR**	**0.91**	**216**⇑	*e*P	Pn	15 44 27.4	-0.9
CRPR				*e*S	Sn	15 44 39.9	-0.7
MTP	**Monte Pirata**	**1.14**	**124**⇑	*e*P	Pn	15 44 30.5	-0.9
MTP	**Monte Pirata**	**1.14**	**124**	*e*S	Sn	15 44 45.2	-0.8
MTP	**Monte Pirata**	**1.14**	**124**⇑	*e*P	Pn	15 44 30.5	-0.9
MTP				*e*S	Sn	15 44 45.2	-0.8

IDC ***16*** *15:54:38.8±1.1, 22.34N×93.92E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.5/27, mbtmp3.7/8, Error ellipse: s-maj=86.0km s-min=18.2km az=56.0*
ISCJB ***16*** *15:54:49.0±0.7, 22.6N±0.2×94.2E±0.1, h88km, mb3.6/8, Error ellipse: s-maj=26.7km s-min=5.5km az=32.5*

ISC 16 15:54:50.2±0.8, 22.5N±0.2×94.2E±0.2, h88km, n20, σ1§48/30, mb3.7/8, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.01**	**131**	Pn	**Pn**	**15 56 16.8**	**+0.1**
	0.3nm,0.3s,baz=312,slow=13,SNR=10						
CMAR				Pg		15 56 32.0	
	0.4nm,0.3s,baz=304,slow=17,SNR=6.9						
CMAR				Lg	Lg	15 57 48.5	
	0.1nm,0.3s,baz=313,slow=31,SNR=3.1						
ODAN	**Odare**	**7.55**	**306**	*e*Pn	**Pn**	**15 56 40.5**	**+2.7**
ODAN				*e*Sn	**Sn**	**15 58 02.9**	**+1.0**
	76nm,0.4s						
TAPN	**Taplejung**	**7.60**	**311**	*e*Pn	**Pn**	**15 56 40.5**	**+1.9**
TAPN				*e*Sn	**Sn**	**15 58 02.8**	**-0.5**
	36nm,0.4s						
RAMN	**Ramite**	**8.19**	**304**	*e*Pn	**Pn**	**15 56 49.6**	**+3.0**
RAMN				*e*Sn	**Sn**	**15 58 17.2**	**-0.4**
	30nm,0.3s						
GUN	**Gumba**	**9.25**	**307**	*e*Pn	**Pn**	**15 57 02.8**	**+1.8**
GUN				*e*Sn	**Sn**	**15 58 42.2**	**-1.3**
	58nm,0.5s						
PKI	**Pulchoki**	**9.42**	**304**	*e*Pn	**Pn**	**15 57 05.1**	**+1.7**
PKI				*e*Sn	**Sn**	**15 58 47.9**	**+0.2**
	30nm,0.6s						
PKIN	**Phulchoki**	**9.43**	**304**	*e*Pn	**Pn**	**15 57 05.2**	**+1.7**
PKIN				*e*Sn	**Sn**	**15 58 47.8**	**-0.1**
	22nm,0.4s						
KKN	**Kakani**	**9.63**	**305**	*e*Pn	**Pn**	**15 57 07.8**	**+1.7**
KKN				*e*Sn	**Sn**	**15 58 52.5**	**-0.2**
	11nm,0.2s						
DMN	**Daman**	**9.67**	**304**	*e*Pn	**Pn**	**15 57 09.0**	**+2.3**
KOLN	**Koldanda**	**10.93**	**301**	*e*Pn	**Pn**	**15 57 24.9**	**+1.1**
KOLN				*e*Sn	**Sn**	**15 59 22.7**	**-1.5**
	26nm,0.3s						
DANN	**Dangsing**	**11.07**	**304**	*e*Pn	**Pn**	**15 57 26.5**	**+0.7**
DANN				*e*Sn	**Sn**	**15 59 25.6**	**-2.3**
	18nm,0.5s						
PYUN	**Piuthan**	**11.55**	**301**	*e*Pn	**Pn**	**15 57 32.4**	**+0.1**
PYUN				*e*Sn	**Sn**	**15 59 37.3**	**-2.3**
	28nm,0.5s						
MKAR	**Makanchi Array**	**26.07**	**341**	P	**P**	**16 00 16.3**	**+0.9**
	0.9nm,0.6s,baz=152,slow=9.6,SNR=14						
ZALV	**Zalesovo Beam**	**32.19**	**350**	P	**P**	**16 01 09.1**	**-0.5**
	0.7nm,0.4s,baz=174,slow=8.6,SNR=5.2						
WRA	**Warramunga Arr**	**57.59**	**134**	P	**P**	**16 04 30.8**	**-0.4**
	0.2nm,0.4s,baz=320,slow=7.5,SNR=8.8						
ASAR	**Alice Springs**	**59.98**	**137**	P	**P**	**16 04 48.1**	**+0.3**
	0.2nm,0.5s,baz=319,slow=7.5,SNR=7.3						
FINES	**FINESS Array B**	**60.04**	**329**	P	**P**	**16 04 46.1**	**-1.4**
	0.5nm,0.5s,baz=54,slow=3.3,SNR=6.1						
ARCES	**ARCESS Array B**	**61.67**	**338**	P	**P**	**16 04 58.0**	**-0.5**
	0.6nm,0.6s,baz=99,slow=7.7,SNR=11						
HFS	**Hagfors**	**66.05**	**327**	P	**P**	**16 05 26.5**	**-0.9**
	0.7nm,0.4s,baz=120,slow=5.3,SNR=5.5						
GERES	**GERESS Array B**	**67.25**	**315**	P	**P**	**16 05 35.9**	**+0.5**
	0.4nm,0.4s,baz=61,slow=6.9,SNR=5.0						

ISCJB ***16*** *16:06:34.9±0.7, 39.78N±0.04×41.50E±0.05, h23km±4km, Error ellipse: s-maj=7.3km s-min=6.4km az=0.4*
ISK ***16*** *16:06:34.8, 39.95N×41.08E, h3km, MD2.7*
CSEM ***16*** *16:06:34.4±0.4, 39.77N×41.49E, h18km±2km, MD2.7, Error ellipse: s-maj=10.1km s-min=8.4km az=10.0*
DDA ***16*** *16:06:35.1, 39.78N×41.60E, h13km, MD3.0*

ISC 16 16:06:34.8±1.3, 39.81N±0.04×41.53E±0.03, h14km±10km, n19, σ1§09/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERZM	**Erzurum**	**0.16**	**307**	*i* P	**Pb**	**16 06 39.9**	**+0.2**
ERZM				*i* S	**Sb**	**16 06 43.6**	**+0.6**
ERZM	**Erzurum**	**0.16**	**307**	*i* P	**Pb**	**16 06 39.9**	**+0.2**
ERZM				*i* S	**Sb**	**16 06 43.6**	**+0.6**
EZM	**Erzurum**	**0.16**	**307**	PG	**Pb**	**16 06 40.0**	**+0.2**
EZM				*e*SG	**Sb**	**16 06 43.9**	**+0.8**
HOMI	**Horasan**	**0.37**	**50**	*i* P	**Pg**	**16 06 42.2**	**-0.2**
HOMI				*i* S	**Sg**	**16 06 48.6**	**+0.9**
VRTB	**Varto-Mus**	**0.65**	**185**	*e*PG	**Pn**	**16 06 51.9**	**+2.2**
KOPT	**Kop Dagi**	**0.82**	**285**	*i* P	**Pn**	**16 06 51.7**	**-0.5**
KOPT				*i* S	**Sn**	**16 07 06.1**	**+1.8**
KOPT	**Kop Dagi**	**0.82**	**285**	*i* P	**Pn**	**16 06 51.7**	**-0.5**
TUTA	**Tutak**	**1.07**	**112**	*e*P	**Pb**	**16 06 54.2**	**-1.0**
TUTA				*e*S	**Sn**	**16 07 10.1**	**-0.1**
TUTA	**Tutak**	**1.07**	**112**	*e*P	**Pb**	**16 06 54.2**	**-1.0**
TUTA				*e*S	**Sn**	**16 07 10.1**	**-0.1**
DDEM	**Demirkent**	**1.10**	**9**	*i* P	**Pn**	**16 06 55.8**	**0.0**
DDEM				*i* S	**Sb**	**16 07 09.8**	**+0.1**
DDEM	**Demirkent**	**1.10**	**9**	*i* P	**Pn**	**16 06 55.8**	**0.0**
DDEM				*i* S	**Sb**	**16 07 09.8**	**+0.1**
DBAD	**Bademkaya**	**1.22**	**6**	*i* P	**Pn**	**16 06 58.0**	**+0.6**
DBAD				*i* S	**Sb**	**16 07 12.6**	**-0.6**
DBAD	**Bademkaya**	**1.22**	**6**	*i* P	**Pn**	**16 06 58.0**	**+0.6**
DBAD				*i* S	**Sb**	**16 07 12.6**	**-0.6**
DAGI	**Agillar**	**1.30**	**13**	*i* P	**Pn**	**16 06 59.2**	**+0.6**
DAGI				*i* S	**Sn**	**16 07 16.4**	**+0.6**
ERZN	**Erzincan**	**1.42**	**262**	*e*PN	Pn	16 06 56.5	-3.6
GUMT	**Gumushane**	**1.70**	**293**	*e*PN	**Pn**	**16 07 01.5**	**-2.6**
GUMT	**Gumushane**	**1.70**	**293**	*e*Pn	**Pn**	**16 07 01.5**	**-2.6**
PTK	**Pertek**	**1.90**	**242**	*e*PN	**Pn**	**16 07 05.9**	**-0.9**
PTK	**Pertek**	**1.90**	**242**	*e*Pn	**Pn**	**16 07 05.9**	**-0.9**

IDC 16 16:09:28.1±3.1, 58.92S×16.89W, h0km, mb3.5/1, mb1 3.5/1, mb1mx3.3/17, mbtmp3.5/1, MS3.6/2, Ms1 3.5/2, ms1mx3.1/15, Error ellipse: s-maj=184.5km s-min=82.3km az=87.0, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**34.41**	**138**	LR	LR	16 28 32.4	
	comp=Z,124nm,19.8s,baz=343,slow=33						
BOSA	**Boshof**	**41.80**	**62**	LR	LR	16 31 17.1	
	comp=Z,69nm,19.3s,baz=159,slow=31						
TORD	**Torodi Ar. Bea**	**73.40**	**19**	P	P	16 21 01.8	0.0
	0.5nm,1.0s,baz=207,slow=5.3,SNR=2.4						
FINES	**FINESS Array B**	**124.57**	**23**	PKP	PKPdf	16 28 27.1	-0.6
	0.7nm,0.5s,baz=190,slow=0.8,SNR=5.7						
ARCES	**ARCESS Array B**	**131.73**	**19**	PKP	PKPdf	16 28 41.2	0.0
	1.3nm,0.9s,baz=188,slow=2.7,SNR=4.4						
SONM	**Songino Array**	**145.44**	**83**	PKPbc	PKPdf	16 29 06.4	-0.7
	0.8nm,0.9s,baz=228,slow=5.8,SNR=6.2						

ISK ***16*** *16:10:29.1, 41.19N×42.42E, h5km, MD3.1*
TIF ***16*** *16:10:30.4, 41.10N×42.44E, h10km±1km*
CSEM ***16*** *16:10:30.7±0.2, 41.10N×42.35E, h2km, MD3.1, Error ellipse: s-maj=5.9km s-min=3.6km az=165.0*
DDA ***16*** *16:10:31.2, 41.13N×42.26E, h20km, MD3.1*

ISC 16 16:10:30.1±1.1, 41.09N±0.03×42.40E±0.02, h1km±11km, n31, σ0§79/56, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAGI	**Agillar**	**0.36**	**268**	*i* P	**Pg**	**16 10 36.9**	**-0.2**
DAGI				*i* S	**Sg**	**16 10 42.8**	**+0.9**
DDEM	**Demirkent**	**0.53**	**248**	*i* P	**Pg**	**16 10 40.0**	**-0.2**
DDEM				*i* S	**Sg**	**16 10 47.0**	**0.0**
DDEM	**Demirkent**	**0.53**	**248**	*i* P	**Pg**	**16 10 40.0**	**-0.2**
DDEM				*i* S	**Sg**	**16 10 47.0**	**0.0**
DBAD	**Bademkaya**	**0.54**	**263**	*i* P	**Pg**	**16 10 40.0**	**-0.3**
DBAD				*i* S	**Sg**	**16 10 47.5**	**+0.2**
DBAD	**Bademkaya**	**0.54**	**263**	*i* P	**Pg**	**16 10 40.0**	**-0.3**
DBAD				*i* S	**Sg**	**16 10 47.5**	**+0.2**
BCA	**Borcka**	**0.68**	**302**	*e*PG	**Pg**	**16 10 42.3**	**-0.9**
BCA				*e*SG	**Sg**	**16 10 51.3**	**-0.8**
BCA	**Borcka**	**0.68**	**302**	*e*Pg	**Pg**	**16 10 42.3**	**-0.9**
BCA				*e*Sg	**Sg**	**16 10 51.3**	**-0.8**
KARS	**Kars**	**0.69**	**131**	*e*PG	**Pb**	**16 10 44.3**	**-0.8**
KARS				*e*SG	**Sb**

UPC	**Upice**	**0.99**	**183**	*e*PG	**Pg**	**16 22 42.2**	**+0.2**
UPC	**Upice**	**0.99**	**183**	Pg	**Pg**	**16 22 42.2**	**+0.2**
DPC	**Dobruska-Polom**	**1.16**	**172**	*e*PG	**Pg**	**16 22 45.0**	**-0.2**
DPC	comp=Z,8.0nm,0.4s			*e*SG	**Sg**	**16 22 59.1**	**-1.1**
DPC	**Dobruska-Polom**	**1.16**	**172**	Pg	**Pg**	**16 22 45.0**	**-0.2**
DPC	8.0nm,0.4s			Sg	**Sg**	**16 22 59.1**	**-1.1**
PVCC	**Panska Ves**	**1.36**	**225**	*e*PG	**Pb**	**16 22 49.6**	**+0.2**
PVCC	comp=Z,16nm,0.2s			*e*SG	**Sg**	**16 23 06.7**	**0.0**
PVCC	**Panska Ves**	**1.36**	**225**	Pg	**Pb**	**16 22 49.6**	**+0.2**
PVCC	16nm,0.2s			Sg	**Sg**	**16 23 06.7**	**0.0**
BRG	**Berggiesshubel**	**1.48**	**246**	PG	**Pb**	**16 22 51.8**	**+0.3**
BRG	14nm,0.4s			SG	**Sn**	**16 23 11.9**	**+0.8**
BRG				PG		17 24 27.2	
BRG	6.3nm,0.3s			SG		17 24 47.1	
PRU	**Pruhonice**	**1.80**	**214**	*e*PG	**Pb**	**16 22 56.8**	**-0.1**
PRU	comp=Z,4.2nm,0.3s			*e*SG	**Sg**	**16 23 20.3**	**-0.5**
PRU	**Pruhonice**	**1.80**	**214**	Pg	**Pb**	**16 22 56.8**	**-0.1**
PRU	4.2nm,0.3s			Sg	**Sg**	**16 23 20.3**	**-0.5**
CLL	**Collm**	**1.94**	**266**	*e*Pg	**Pb**	**16 22 59.0**	**-0.3**
CLL				*e*		16 23 03.0	
CLL	comp=Z,8.0nm,1.0s			*e*Sg	**Sg**	**16 23 25.0**	**-0.3**
MORC	**Moravsky Berou**	**1.96**	**151**	*e*Pn	**Pn**	**16 22 57.0**	**-0.6**
MORC				*e*Sg	**Sb**	**16 23 24.2**	**-0.3**
OKC	**Ostrava-Krasne**	**2.12**	**141**	*e*PG	**Pg**	**16 23 03.0**	**-0.7**
OKC				*e*SG	**Sb**	**16 23 28.8**	**-0.3**
OKC	**Ostrava-Krasne**	**2.12**	**141**	Pg	**Pg**	**16 23 03.0**	**-0.7**
OKC				Sg	**Sb**	**16 23 28.8**	**-0.3**
TREC	**Trest**	**2.23**	**190**	*e*PN	**Pn**	**16 23 02.2**	**+0.8**
TREC				*e*PG	**Pb**	**16 23 04.7**	**+0.3**
TREC	**Trest**	**2.23**	**190**	Pn	**Pn**	**16 23 02.2**	**+0.8**
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**16 23 06.8**	**0.0**
NKC				*e*PG	**Pg**	**16 23 13.4**	**0.0**
NKC	comp=Z,5.7nm,0.3s			*e*SG	**Sg**	**16 23 47.8**	**+0.4**
NKC	**Novy Kostel**	**2.62**	**243**	Pn	**Pn**	**16 23 06.8**	**0.0**
NKC	**Novy Kostel**	**2.62**	**243**	Pg	**Pg**	**16 23 13.4**	**0.0**
NKC	comp=Z,5.7nm,0.3s			Sg	**Sg**	**16 23 47.8**	**+0.4**
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pg**	**16 23 14.0**	**-0.5**
OJC				*e*Sg	**Sg**	**16 23 50.1**	**+0.9**
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pg**	**16 23 14.0**	**-0.5**
OJC				*e*Sg	**Sg**	**16 23 50.1**	**+0.9**
KHC	**Kasperske Hory**	**2.86**	**215**	*e*PN	**Pn**	**16 23 09.4**	**-0.6**
KHC				*e*PG	**Pb**	**16 23 16.1**	**+1.1**
KHC				*e*SN	**Sn**	**16 23 45.0**	**-0.1**
KHC	comp=Z,3.4nm,0.6s			*e*SG	**Sg**	**16 23 53.9**	**-1.0**
KHC	**Kasperske Hory**	**2.86**	**215**	Pn	**Pn**	**16 23 09.4**	**-0.6**

*ISCJB **16** 16:24:04.3±0.3, 32°.76N±0°.03×97°.06W±0°.03, h10km, mb3.3/3, Error ellipse: s-maj=4.0km s-min=3.3km az=179.0*

*NEIC **16** 16:24:06.6±1.3, 32°.80N×97°.02W, h9km±10km, MN3.3, Error ellipse: s-maj=6.8km s-min=5.8km az=181.0*

NEIC Felt [IV] at Fort Worth; [III] at Bedford, Colleyville, Dallas, Euless, Grand Prairie, Grapevine, Hurst, Irving and Roanoke; [II] at Argyle, Arlington, Keller, North Richland Hills and Southlake. Felt widely in the Dallas-Fort Worth area.

*IDC **16** 16:24:06.6±2.7, 32°.90N×97°.09W, h0km, mb3.4/3, mb1 3.7/6, mb1mx3.5/30, mbtmp3.3/6, ML3.7/3, Error ellipse: s-maj=40.1km s-min=13.1km az=122.0*

ISC 16 16:24:05.4±0.6, 32.82N±0°.03×97.09W±0.02, h0km, n81, σ1s50/110, mb3.4/3, 21C-18D, Central Texas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RFTA	**Plano**	**0.38**	**60**	*e*Pg	**Pg**	**16 24 13.9**	**+1.1**
RFTA				*e*Sg	**Sg**	**16 24 17.1**	**-0.7**
WHTX	**Lake Whitney**	**0.89**	**201**	⇓P	**Pb**	**16 24 24.0**	**+0.3**
WHTX	baz=1.0			⇓S	**Sb**	**16 24 35.6**	**-0.4**
Z32A	**Haskell**	**2.07**	**284**	⇓P	**Pb**	**16 24 43.0**	**-0.8**
Z32A	baz=2.2,SNR=273			⇓Sn	**Sg**	**16 25 11.7**	**-0.1**
ABTX	**Abilene, Hawle**	**2.16**	**265**	⇓P	**Pn**	**16 24 43.9**	**+1.2**
ABTX	baz=2.3			⇓Sn	**Sg**	**16 25 15.2**	**+0.3**
Y32A	**R-V Farms, Ver**	**2.30**	**302**	P	**Pb**	**16 24 46.4**	**-1.4**
Y32A	baz=2.5			⇑Sn	**Sb**	**16 25 18.1**	**+1.4**
NATX	**Nacogdoches**	**2.31**	**117**	*e*Pn	**Pn**	**16 24 43.7**	**-1.1**
NATX				*e*Pg	**Pg**	**16 24 49.4**	**-0.3**
NATX				*e*Sn	**Sn**	**16 25 11.9**	**-2.0**
232A	**Coleman**	**2.36**	**247**	⇑P	**Pn**	**16 24 46.8**	**+1.3**
232A	baz=2.5,SNR=101			⇑Sn	**Sg**	**16 25 20.6**	**-0.6**
WMOK	**Wichita Mounta**	**2.38**	**324**	*e*Pn	**Pn**	**16 24 47.0**	**+1.3**
WMOK				*e*Pg	**Pg**	**16 24 51.9**	**+0.9**
WMOK				*e*Sn	**Sn**	**16 25 15.1**	**-0.4**
Z31A	**Sharp Cattle R**	**2.61**	**282**	⇑P	**Pn**	**16 24 50.5**	**+1.5**
	baz=2.8,SNR=24						
332A	**Millersview**	**2.67**	**238**	⇑P	**Pn**	**16 24 50.8**	**+1.1**
	baz=2.8,SNR=19						
131A	**Roby**	**2.79**	**268**	⇑P	**Pn**	**16 24 52.3**	**+1.0**
	baz=3.0						
231A	**Bronte**	**2.87**	**253**	⇓P	**Pn**	**16 24 53.5**	**+1.0**
	baz=3.0,SNR=47						
Y31A	**Rekieta Farm,**	**2.89**	**294**	P	**Pn**	**16 24 55.1**	**+2.4**
	baz=3.1						
432A	**Menard**	**3.01**	**231**	⇑P	**Pn**	**16 24 55.9**	**+1.5**
	baz=3.2,SNR=25						
HKT	**Hockley**	**3.06**	**159**	*e*Pn	**Pn**	**16 24 55.3**	**+0.4**
HKT				*e*Pg	**Pg**	**16 25 04.3**	**+0.3**
HKT				*e*Sg	**Sg**	**16 25 43.0**	**-0.6**
331A	**San Angelo**	**3.21**	**243**	⇓P	**Pn**	**16 24 58.3**	**+1.1**
	baz=3.4,SNR=17						
130A	**Snyder**	**3.28**	**267**	P	**Pn**	**16 24 59.0**	**+0.9**
	baz=3.5						
JCT	**Junction City**	**3.29**	**225**	*e*Pn	**Pn**	**16 24 59.3**	**+1.1**
JCT				*e*Pg	**Pg**	**16 25 08.3**	**-0.2**
JCT				*e*Sg	**Sg**	**16 25 50.8**	**-0.3**
JCT	**Junction City**	**3.29**	**225**	⇑P	**Pn**	**16 24 59.5**	**+1.2**
	baz=3.4						
Y30A	**Stafford Cattl**	**3.36**	**289**	⇑P	**Pn**	**16 25 01.0**	**+1.7**
	baz=3.5,SNR=18						
Z30A	**Sanderson Ranc**	**3.43**	**279**	⇑P	**Pn**	**16 25 01.2**	**+1.1**
	baz=3.6,SNR=31						
230A	**Sterling City**	**3.53**	**256**	⇓P	**Pn**	**16 25 02.5**	**+0.9**
	baz=3.7,SNR=15						
X30A	**Coker Ranch, T**	**3.55**	**298**	⇑P	**Pn**	**16 25 04.0**	**+2.1**
	baz=3.7,SNR=74						
532A	**Rocksprings**	**3.61**	**223**	⇑P	**Pn**	**16 25 04.0**	**+1.3**
	baz=3.7						
431A	**Sonora**	**3.68**	**236**	⇑P	**Pn**	**16 25 05.0**	**+1.4**
	baz=3.8,SNR=18						
330A	**Mertzon**	**3.75**	**249**	⇑P	**Pn**	**16 25 05.5**	**+0.9**
	baz=3.9,SNR=53						
Z29A	**Hungry Hill Ra**	**3.91**	**278**	P	**Pn**	**16 25 08.0**	**+1.2**
	baz=4.1,SNR=26						
531A	**Rocksprings**	**3.97**	**229**	P	**Pn**	**16 25 09.2**	**+1.6**
	baz=4.1,SNR=364						
Y29A	**Porterfield Fa**	**3.98**	**286**	⇓P	**Pn**	**16 25 09.6**	**+1.9**
	baz=4.2,SNR=13						
632A	**Uvalde**	**4.03**	**216**	⇑P	**Pn**	**16 25 10.1**	**+1.7**
	baz=4.1						
X29A	**Tulia**	**4.18**	**294**	⇓P	**Pn**	**16 25 12.5**	**+2.0**
	baz=4.3,SNR=38						
AMTX	**Amarillo**	**4.34**	**300**	*e*Pn	**Pn**	**16 25 14.5**	**+1.7**
AMTX				*e*Pg	**Pg**	**16 25 26.8**	**-1.9**
AMTX				*e*Sn	**Sn**	**16 26 04.6**	**+0.5**
AMTX				*e*Sg	**Sg**	**16 26 24.1**	**-0.9**
329A	**Wagon Wheel Ra**	**4.36**	**254**	⇓P	**Pn**	**16 25 14.2**	**+1.2**
	baz=4.5,SNR=9.2						
W29A	**Amraillo**	**4.43**	**302**	⇓P	**Pn**	**16 25 15.9**	**+1.9**
	baz=4.6,SNR=7.2						
Y28A	**McKinney Farm,**	**4.45**	**285**	⇑P	**Pn**	**16 25 16.0**	**+1.7**
	baz=4.6,SNR=21						
Z28A	**Tucker Farm, M**	**4.47**	**277**	⇓P	**Pn**	**16 25 16.1**	**+1.5**
	baz=4.7,SNR=12						
530A	**J-C Ranch, Com**	**4.50**	**235**	⇓P	**Pn**	**16 25 16.9**	**+1.9**
	baz=4.7,SNR=31						
631A	**Perdido Creek**	**4.53**	**222**	⇑P	**Pn**	**16 25 17.1**	**+1.8**
	baz=4.7						
128A	**Castleberry Fa**	**4.55**	**269**	⇑P	**Pn**	**16 25 16.8**	**+1.2**
	baz=4.7						
429A	**Davenport Ranc**	**4.64**	**243**	P	**Pn**	**16 25 18.2**	**+1.3**
	baz=4.8,SNR=24						
529A	**Stev Forest Ra**	**5.14**	**240**	P	**Pn**	**16 25 25.0**	**+1.2**
	baz=5.3,SNR=34						
Z27A	**Tatum**	**5.17**	**277**	⇑P	**Pn**	**16 25 25.2**	**+1.0**
	baz=5.3,SNR=20						
428A	**Kincaid Ranch,**	**5.21**	**248**	⇓P	**Pn**	**16 25 25.7**	**+1.0**
	baz=5.4,SNR=78						
X27A	**F and S Farms,**	**5.33**	**292**	⇑P	**Pn**	**16 25 27.3**	**+0.9**
	baz=5.5						
W27A	**Bowe Ranch, En**	**5.45**	**296**	P	**Pn**	**16 25 28.8**	**+0.8**
	baz=5.6,SNR=15						
427A	**Hayter Ranch,**	**5.72**	**252**	P	**Pn**	**16 25 33.1**	**+1.3**
	baz=5.9,SNR=48						
CLNB	**Carlsbad**	**5.76**	**266**	*e*Pn	**Pn**	**16 25 33.0**	**+0.7**
CLNB				*e*Sg	**Sg**	**16 27 09.0**	**-1.6**
628A	**Black Gap, Mar**	**5.98**	**238**	P	**Pn**	**16 25 36.7**	**+1.4**
	baz=6.1,SNR=42						
326A	**Caldwell Ranch**	**6.04**	**257**	⇑P	**Pn**	**16 25 36.8**	**+0.7**
	baz=6.2,SNR=18						
R30A	**Dighton**	**6.04**	**335**	⇓P	**Pn**	**16 25 36.5**	**+0.4**
	baz=6.1						
527A	**Woodward Ranch**	**6.18**	**246**	P	**Pn**	**16 25 38.9**	**+0.9**
	baz=6.3,SNR=16						
GDL2	**Guadalupe Moun**	**6.18**	**266**	*e*Pn	**Pn**	**16 25 38.2**	**+0.2**
GDL2				*e*Pg	**Pg**	**16 26 01.3**	**-2.6**
GDL2				*e*Sg	**Sg**	**16 27 25.0**	**+1.1**
KSU1	**Kansas State U**	**6.28**	**3**	Pn	**Pn**	**16 25 39.1**	**-0.2**
KSU1				*e*Pg	**Pb**	**16 25 57.3**	**+1.7**
KSU1				*e*Sg	**Sg**	**16 27 25.6**	**-1.5**
426A	**McDonald Obser**	**6.29**	**252**	P	**Pn**	**16 25 40.6**	**+1.0**
	baz=6.5,SNR=36						
X25A	**Clemmons Ranch**	**6.54**	**287**	P	**Pn**	**16 25 43.8**	**+0.8**
	baz=6.7,SNR=15						
OXF	**Oxford**	**6.62**	**73**	*e*Pn	**Pn**	**16 25 42.8**	**-1.1**
OXF				*e*Sn	**Sn**	**16 26 59.2**	**-0.9**
TXAR	**Lajitas Array**	**6.63**	**240**	Pn	**Pn**	**16 25 44.5**	**+0.3**
TXAR	0.6nm,0.3s,baz=61,slow=12,SNR=11			Sn	**Sn**	**16 27 00.6**	**0.0**
TXAR				Lg		16 27 34.0	
TXAR	**Lajitas Array**	**6.63**	**240**	Pn	**Pn**	**16 25 44.5**	**+0.3**
TXAR	0.8nm,0.3s,baz=38,slow=18,SNR=2.3			Sn	**Sn**	**16 27 00.6**	**0.0**
TXAR	2.9nm,0.3s,baz=56,slow=16,SNR=5.1			Lg	Lg	16 27 34.0	
V25A	**Rancho No Teng**	**6.92**	**298**	P	**Pn**	**16 25 49.7**	**+1.5**
	baz=7.1,SNR=26						
Z24A	**Sheeppen Canyo**	**6.97**	**276**	P	**Pn**	**16 25 49.6**	**+0.7**
	baz=7.1,SNR=7.0						
MNTX	**Cornudas Mount**	**7.12**	**263**	*e*Pn	**Pn**	**16 25 50.1**	**-0.7**
MNTX				*e*Pg	**Pg**	**16 26 21.1**	**-0.7**
MNTX				*e*Sn	**Sn**	**16 27 12.6**	**+0.1**
MNTX				*e*Sg	**Sg**	**16 27 54.3**	**+0.3**
R27A	**Eads**	**7.17**	**321**	⇓P	**Pn**	**16 25 52.0**	**+0.4**
	baz=7.3						
ANMO	**Albuquerque**	**8.07**	**288**	Pg	Pg	16 26 36.2	-3.9
ANMO				Lg	Lg	16 28 17.6	
ANMO	**Albuquerque**	**8.07**	**288**	Pg	Pg	16 26 36.2	-3.9
ANMO	0.8nm,0.3s,baz=104,slow=18,SNR=19			Lg	Lg	16 28 17.6	
SIUC	**Southern Illin**	**8.08**	**51**	Sn	**Sn**	**16 27 30.7**	**-5.3**
BNM	**Barren Site**	**8.08**	**282**	Pn	**Pn**	**16 26 02.0**	**-2.3**
BNM				*e*Pg	Pg	16 26 35.2	-5.1
BNM				*e*Sg	**Sg**	**16 28 22.4**	**-2.5**
WVT	**Waverly**	**8.32**	**64**	*e*Pn	**Pn**	**16 26 06.2**	**-1.2**
WVT				*e*Sn	**Sn**	**16 27 37.5**	**-4.6**
SDCO	**Great Sand Dun**	**8.45**	**308**	*e*Pn	**Pn**	**16 26 11.0**	**+1.6**
SDCO				*e*Pg	Pg	16 26 40.4	-7.0
SDCO				*e*Sg	**Sg**	**16 28 32.3**	**-4.5**
ISCO	**Idaho Springs**	**9.79**	**318**	*e*Pn	**Pn**	**16 26 27.7**	**0.0**
ISCO				*e*Lg	Lg	16 29 13.4	
CPCT	**Cooper Cave**	**10.74**	**72**	Pn	**Pn**	**16 26 40.9**	**+0.5**
ECSD	**EROS Data Cent**	**10.90**	**2**	*e*Pn	**Pn**	**16 26 39.9**	**-2.7**
PDAR	**Pinedale Array**	**13.98**	**319**	Pn	**Pn**	**16 27 25.7**	**+0.8**
PDAR				Lg	Lg	16 31 17.5	
PDAR	**Pinedale Array**	**13.98**	**319**	Pn	**Pn**	**16 27 25.7**	**+0.8**
PDAR	0.1nm,0.3s,baz=127,slow=18,SNR=3.2			Lg	Lg	16 31 17.5	
	0.1nm,0.3s,baz=120,slow=18,SNR=2.5						
NVAR	**Mina Array Bea**	**18.12**	**294**	P	**P**	**16 28 21.3**	**+2.1**
NVAR	**Mina Array Bea**	**18.12**	**294**	P	**P**	**16 28 21.3**	**+2.1**
	0.1nm,0.3s,baz=92,slow=11,SNR=2.8						
NEW	**Newport**	**21.58**	**322**	P	**P**	**16 28 58.2**	**+1.6**
NEW	**Newport**	**21.58**	**322**	P	**P**	**16 28 58.2**	**+1.6**
	2.0nm,0.6s,baz=131,slow=10,SNR=6.1						
YKA	**Yellowknife Ar**	**31.72**	**345**	P	**P**	**16 30 30.6**	**-0.1**
YKA	**Yellowknife Ar**	**31.72**	**345**	P	**P**	**16 30 30.6**	**-0.1**
	0.4nm,0.8s,baz=145,slow=8.7,SNR=6.5						
ILAR	**Eielson Array**	**43.92**	**332**	P	**P**	**16 32 15.2**	**+1.6**
ILAR	**Eielson Array**	**43.92**	**332**	P	**P**	**16 32 15.2**	**+1.6**
	0.2nm,0.7s,baz=105,slow=9.4,SNR=3.9						

IDC 16 16:33:25.1±2.3, 42°.92N×123°.87E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.3/27, mbtmp3.4/4, ML2.7/2, Error ellipse: s-maj=39.4km s-min=32.0km az=169.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USRK	**Ussuriysk Arra**	**6.05**	**75**	Pn	Pn	16 34 53.6	-2.1
USRK	0.6nm,0.3s,baz=257,slow=12,SNR=5.9			Pg	Pb	16 35 15.0	+3.8
USRK	0.6nm,0.3s,baz=241,slow=18,SNR=7.2			Lg	Lg	16 36 38.4	
	1.2nm,0.3s,baz=247,slow=28,SNR=13						
KSRS	**Korea Array**	**6.28**	**149**	Pn	Pn	16 34 59.4	+0.5
	0.5nm,0.3s,baz=330,slow=17,SNR=7.6						
ILAR	**Eielson Array**	**51.89**	**33**	P	P	16 42 35.1	+0.2
	0.3nm,0.6s,baz=287,slow=6.2,SNR=5.3						
NVAR	**Mina Array Bea**	**81.33**	**45**	P	P	16 45 43.6	0.0
	0.3nm,0.5s,baz=304,slow=6.4,SNR=4.0						

KRSC 16 16:36:39.5±1.2, 49°.94N×156°.79E, h5km±5km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.86**	**330**	*e*P	Pb	16 36 56.6	-0.3
SKR				*i* S	Sb	16 37 08.8	+0.1
ASAK	**Asacha**	**2.54**	**16**	*e*P	Pn	16 37 22.6	+1.1
MTVR	**Mutnovka**	**2.69**	**18**	*e*P	Pn	16 37 25.2	+1.5
MTVR				*i* S	Sn	16 37 59.0	+2.2
RUS	**Russkaya**	**2.72**	**23**	*e*P	Pn	16 37 24.9	+1.1
RUS				*i* S	Sn	16 37 58.6	+1.5
UGLR	**Uglovaya**	**3.51**	**20**	*e*P	Pn	16 37 36.1	+1.3
SDLR	**Sedlovina**	**3.59**	**21**	P	Pn	16 37 36.8	+0.9

*IDC **16** 16:42:37.8±1.0, 54°.93N×162°.51E, h0km, mb3.6/3, mb1 3.7/5, mb1mx3.3/29, mbtmp3.6/5, ML3.6/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/34, Error ellipse: s-maj=30.4km s-min=11.8km az=5.0*

*MOS **16** 16:42:39.6±0.6, 54°.96N×162°.55E, h29km, mb4.2/1, Error ellipse: s-maj=47.7km s-min=27.5km az=49.6*

*KRSC **16** 16:42:41.5±0.3, 54°.81N×162°.38E, h24km±24km, ML4.0*

*ISCJB **16** 16:42:42.3±0.4, 54°.78N±0°.02×162°.47E±0°.05, h45km±8km, mb3.6/3, MS3.4/2, Error ellipse: s-maj=4.7km s-min=2.7km az=19.1*

ISC 16 16:42:43.0±1.6, 54°.78N±0°.03×162°.47E±0°.04, h37km±2km, n45, σ1s23/84, mb3.6/3, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.48**	**243**	*e*P	**Pn**	**16 42 51.6**	**-1.7**
MKZ				*i* S	**Sn**	**16 42 58.3**	**-2.3**
TUMR	**Tumrok**	**1.43**	**292**	*e*P	**Pn**	**16 43 05.8**	**-0.7**
TUMR				*i* S	**Sn**	**16 43 23.9**	**-0.2**
KBTR	**Krutoberegovo**	**1.45**	**8**	*e*P	**Pn**	**16 43 06.9**	**+0.3**
KBTR				*i* S	**Sn**	**16 43 25.8**	**+1.5**
KBG	**Krutoberegovo**	**1.48**	**5**	*e*P	**Pn**	**16 43 07.8**	**+0.7**
KBG				*i* S	**Sn**	**16 43 27.2**	**+2.0**
BZGR	**Bezymyannyi-Gr**	**1.54**	**320**	*e*P	**Pn**	**16 43 07.5**	**-0.5**
BZGR				*i* S	**Sn**	**16 43 27.1**	**+0.3**
ZLN	**Zelenaya**	**1.56**	**323**	*e*P	**Pn**	**16 43 08.3**	**0.0**
ZLN				*i* S	**Sn**	**16 43 28.0**	**+0.7**
KMNR	**Kamenistaya**	**1.61**	**308**	*e*P	**Pn**	**16 43 08.6**	**-0.3**
KMNR				*i* S	**Sn**	**16 43 27.9**	**-0.6**
BZMR	**Bezymyannaya**	**1.62**	**316**	*e*P	**Pn**	**16 43 08.8**	**-0.3**
BZMR				*i* S	**Sn**	**16 43 29.0**	**+0.3**
BZWR	**Bezymyannyi-We**	**1.64**	**317**	*e*P	**Pn**	**16 43 09.3**	**-0.1**
BZWR				*i* S	**Sn**	**16 43 29.5**	**+0.3**
LGNR	**Loginova**	**1.65**	**323**	*e*P	**Pn**	**16 43 09.8**	**+0.1**
LGNR				*i* S	**Sn**	**16 43 30.2**	**+0.4**
CIRR	**Tsirk**	**1.66**	**324**	*e*P	**Pn**	**16 43 09.5**	**-0.2**
CIRR				*i* S	**Sn**	**16 43 29.7**	**-0.1**
KIRR	**Kirishev**	**1.69**	**315**	*e*P	**Pn**	**16 43 10.8**	**+0.7**
KIRR				*i* S	**Sn**	**16 43 32.2**	**+1.7**
KPT	**Kopyto**	**1.75**	**314**	*e*P	**Pn**	**16 43 10.7**	**-0.1**
KPT				*i* S	**Sn**	**16 43 31.9**	**0.0**
KRSR	**Krestovskiy**	**1.80**	**324**	*e*P	**Pn**	**16 43 11.0**	**-0.6**
KRSR				*i* S	**Sn**	**16 43 32.3**	**-0.9**
KLY	**Klyuchi**	**1.85**	**327**	*e*P	**Pn**	**16 43 10.6**	**-1.5**
KLY				*i* S	**Sn**	**16 43 31.6**	**-2.6**
SMKR	**Semkarok**	**1.89**	**343**	*e*P	**Pn**	**16 43 12.7**	**-0.1**
SMKR				*i* S	**Sn**	**16 43 35.0**	**-0.4**
KII	**Karymskiy**	**1.92**	**248**	*e*P	**Pn**	**16 43 13.2**	**+0.1**
KII				*i* S	**Sn**	**16 43 36.2**	**+0.2**
BDR	**Baidarnaya**	**1.93**	**339**	*e*P	**Pn**	**16 43 13.4**	**+0.1**
BDR				*i* S	**Sn**	**16 43 36.6**	**+0.3**
KOZ	**Kozyrevsk**	**1.96**	**312**	*e*P	**Pn**	**16 43 14.2**	**+0.6**
KOZ				*i* S	**Sn**	**16 43 37.6**	**+0.7**
SRKR	**Sorokina**	**2.02**	**339**	*e*P	**Pn**	**16 43 14.7**	**+0.2**
SRKR				*i* S	**Sn**	**16 43 39.3**	**+0.8**
BKI	**Bering**	**2.06**	**77**	*e*P	**Pn**	**16 43 15.6**	**+0.6**
BKI				*i* S	**Sn**	**16 43 40.1**	**+0.7**
SRDR	**Sredinnyy**	**2.19**	**316**	*e*P	**Pn**	**16 43 17.1**	**+0.1**
SRDR				*i* S	**Sn**	**16 43 43.1**	**+0.2**
SPN	**Mys Shipunski**	**2.22**	**222**	*e*P	**Pn**	**16 43 15.9**	**-1.3**
SPN				*i* S	**Sn**	**16 43 41.4**	**-2.0**
ESO	**Esso**	**2.44**	**300**	*e*P	**Pn**	**16 43 20.2**	**-0.1**
ESO				*i* S	**Sn**	**16 43 48.7**	**-0.1**
SDLR	**Sedlovina**	**2.60**	**236**	*e*P	**Pn**	**16 43 23.3**	**+0.8**
SDLR				*i* S	**Sn**	**16 43 53.8**	**+1.0**
SMAR	**Somma**	**2.65**	**236**	*e*P	**Pn**	**16 43 23.8**	**+0.5**
SMAR				*i* S	**Sn**	**16 43 54.3**	**+0.1**
KRER	**Koryakskii**	**2.65**	**238**	*e*P	**Pn**	**16 43 24.1**	**+0.8**
KRER				*i* S	**Sn**	**16 43 55.2**	**+1.0**
UGLR	**Uglovaya**	**2.67**	**235**	*e*P	**Pn**	**16 43 24.1**	**+0.6**
UGLR				*i* S	**Sn**	**16 43 55.0**	**+0.5**
AVH	**Avacha**	**2.67**	**237**	*e*P	**Pn**	**16 43 24.5**	**+0.9**
AVH				*i* S	**Sn**	**16 43 55.1**	**+0.4**
KOK	**Koryaka**	**2.71**	**238**	*e*P	**Pn**	**16 43 25.4**	**+1.4**
KOK				*i* S	**Sn**	**16 43 57.2**	**+1.6**
PET	**Petropavlovsk**	**2.86**	**234**	*e*PN	**Pn**	**16 43 26.6**	**+0.6**
PET				*e*S	**Sn**	**16 44 01.6**	**+2.4**
PET	comp=Z,32nm,0.4s			pmax	pmax		
PET	comp=N,165nm,0.4s			smax	smax		
PET	comp=E,73nm,0.4s			smax	smax		
PET	**Petropavlovsk**	**2.86**	**234**	*e*P	**Pn**	**16 43 26.4**	**+0.4**
PET				*i* S	**Sn**	**16 43 59.0**	**-0.2**
GNL	**Ganaly**	**2.87**	**250**	*e*P	**Pn**	**16 43 27.2**	**+0.9**
GNL				*i* S	**Sn**	**16 44 00.1**	**+0.5**
PETK	**Petropavlovsk-**	**3.28**	**241**	PN	**Pn**	**16 43 32.6**	**+0.8**
PETK						16 44 14.0	
PETK	comp=Z,3.0nm,0.3s			pmax	pmax		
PETK	comp=N,6.0nm,0.3s			smax	smax		
PETK	**Petropavlovsk-**	**3.28**	**241**	Pn	**Pn**	**16 43 32.6**	**+0.8**
	comp=N,2.9nm,0.3s,baz=73,slow=18,SNR=71						
PETK				Sn	**Sn**	**16 44 13.9**	**+4.4**
	comp=N,5.8nm,0.3s,baz=21,slow=8.6,SNR=9.4						
RUS	**Russkaya**	**3.33**	**227**	*e*P	**Pn**	**16 43 33.1**	**+0.6**
RUS				*i* S	**Sn**	**16 44 10.5**	**-0.2**
MTVR	**Mutnovka**	**3.44**	**230**	*e*P	**Pn**	**16 43 35.9**	**+1.8**
MTVR				*i* S	**Sn**	**16 44 15.2**	**+1.6**
GRL	**Gorelyy**	**3.44**	**231**	*e*P	**Pn**	**16 43 36.6**	**+2.5**
GRL				*i* S	**Sn**	**16 44 16.6**	**+3.0**
ASAK	**Asacha**	**3.63**	**230**	*e*P	**Pn**	**16 43 38.0**	**+1.3**
ASAK				*i* S	**Sn**	**16 44 19.0**	**+0.7**
APC	**Apacha**	**3.65**	**242**	*e*P	**Pn**	**16 43 38.7**	**+1.8**
APC				*i* S	**Sn**	**16 44 19.6**	**+0.9**
FX1	**Attu Island--F**	**6.61**	**102**	Pn	**Pn**	**16 44 17.3**	**-0.2**
	comp=N,5.2nm,0.3s,baz=270,slow=5.2,SNR=19						
FX1				Sn	**Sn**	**16 45 27

	comp=E,1μm,0.2s						
BTCH					AML	AML	16 51 32.2
	comp=N,783nm,0.4s						
BTCH	**Batrach**	**0.42**	**108**	*e*P	**Pb**	**16 51 16.8**	**-0.1**
	SNR=93						
BTCH				*e*S	**Sb**	**16 51 23.4**	**+0.3**
	comp=N,783nm,0.4s,SNR=59						
KRTS	**Karatas**	**0.62**	**310**	*e*PG	**Pb**	**16 51 20.3**	**+0.1**
KRTS				*e*SG	**Sb**	**16 51 29.3**	**+0.5**
KRTS	**Karatas**	**0.62**	**310**	*e*Pg	**Pb**	**16 51 20.3**	**+0.1**
KRTS				*e*Sg	**Sb**	**16 51 29.3**	**+0.5**
DRWC	**Darouich**	**0.72**	**51**	*e*P	**Pn**	**16 51 22.6**	**-0.8**
DRWC				*e*S	**Sb**	**16 51 32.6**	**+0.8**
DRWC				AML	AML	16 51 35.9	
	comp=N,366nm,0.3s						
DRWC				AML	AML	16 51 38.2	
	comp=E,182nm,0.6s						
DRWC	**Darouich**	**0.72**	**51**	*e*P	**Pn**	**16 51 22.6**	**-0.8**
	SNR=75						
DRWC				*e*S	**Sb**	**16 51 32.6**	**+0.8**
	comp=E,182nm,0.6s,SNR=59						
WRDH	**Warideh**	**0.76**	**151**	*e*P	**Pg**	**16 51 22.0**	**-0.3**
WRDH				*e*S	**Sg**	**16 51 32.4**	**+0.1**
WRDH				AML	AML	16 51 36.5	
	comp=E,845nm,0.1s						
WRDH	**Warideh**	**0.76**	**151**	*e*P	**Pg**	**16 51 22.0**	**-0.3**
	SNR=75						
WRDH				*e*S	**Sg**	**16 51 32.4**	**+0.1**
	comp=E,845nm,0.1s,SNR=59						
CEYT	**Ceyhan**	**0.85**	**348**	*e*PG	**Pg**	**16 51 24.1**	**-0.1**
CEYT	**Ceyhan**	**0.85**	**348**	*e*Pg	**Pg**	**16 51 24.1**	**-0.1**
KUZU	**Kuzuini**	**1.08**	**56**	*i* P	**Pn**	**16 51 28.2**	**-0.1**
KUZU				*i* S	**Sn**	**16 51 43.5**	**+0.5**
KUZU	**Kuzuini**	**1.08**	**56**	*i* P	**Pn**	**16 51 28.2**	**-0.1**
KUZU				*i* S	**Sn**	**16 51 43.5**	**+0.5**
KOZT	**Kozan**	**1.31**	**355**	*e*PN	**Pb**	**16 51 31.7**	**-0.3**
KOZT				*e*SN	**Sn**	**16 51 48.4**	**-0.3**
KOZT	**Kozan**	**1.31**	**355**	*e*Pn	**Pb**	**16 51 31.7**	**-0.3**
KOZT				*e*Sn	**Sn**	**16 51 48.4**	**-0.3**
AYKD	**Aykdinkavak**	**1.41**	**28**	*i* P	**Pb**	**16 51 34.0**	**+0.2**
AYKD				*i* S	**Sn**	**16 51 50.3**	**-1.0**
GAZ	**Gaziantep**	**1.42**	**45**	*e*PN	**Pb**	**16 51 33.3**	**-0.5**
GAZ				*e*SN	**Sn**	**16 51 51.2**	**-0.1**
GAZ	**Gaziantep**	**1.42**	**45**	*e*Pn	**Pb**	**16 51 33.3**	**-0.5**
GAZ				*e*Sn	**Sn**	**16 51 51.2**	**-0.1**
ANDN	**Andirin**	**1.44**	**12**	*e*P	**Pn**	**16 51 32.9**	**-0.4**
ANDN				*e*S	**Sn**	**16 51 51.4**	**-0.6**
ANDN	**Andirin**	**1.44**	**12**	*e*P	**Pn**	**16 51 32.9**	**-0.4**
ANDN				*e*S	**Sn**	**16 51 51.4**	**-0.6**
GULE	**Gulek**	**1.46**	**320**	*i* P	**Pn**	**16 51 33.6**	**-0.1**
GULE				*i* S	**Sn**	**16 51 52.0**	**-0.7**
GULE	**Gulek**	**1.46**	**320**	*i* P	**Pn**	**16 51 33.6**	**-0.1**
GULE				*i* S	**Sn**	**16 51 52.0**	**-0.7**
KMRS	**Kahramanmaras**	**1.53**	**29**	*e*PN	**Pn**	**16 51 34.3**	**-0.1**
KMRS	**Kahramanmaras**	**1.53**	**29**	*e*Pn	**Pn**	**16 51 34.3**	**-0.1**
EREN	**Erenkoy**	**1.59**	**247**	*e*PN	**Pg**	**16 51 38.9**	**+0.6**
GZT	**Gaziantep**	**1.75**	**47**	*i* P	**Pn**	**16 51 37.6**	**0.0**
GZT				*i* S	**Sb**	**16 52 00.6**	**-0.7**
LFK	**Lefkose**	**2.17**	**246**	*e*PN	**Pb**	**16 51 46.5**	**-0.1**
NIG	**Nigde**	**2.22**	**331**	*e*PN	**Pn**	**16 51 45.2**	**+1.1**
NIG	**Nigde**	**2.22**	**331**	*e*Pn	**Pn**	**16 51 45.2**	**+1.1**
SARI	**SarD1z-Kayseri**	**2.26**	**9**	*e*PN	**Pn**	**16 51 45.2**	**+0.6**
CSS	**Prodhromos**	**2.46**	**241**	*e*PN	**Pb**	**16 51 51.5**	**-0.1**
ERMK	**Ermenek**	**2.51**	**282**	*i* P	**Pn**	**16 51 49.4**	**+1.4**
ERMK				*i* S	**Sb**	**16 52 21.3**	**-1.9**
ERMK	**Ermenek**	**2.51**	**282**	*i* P	**Pn**	**16 51 49.4**	**+1.4**
ERMK				*i* S	**Sb**	**16 52 21.3**	**-1.9**
URFA	**Urfa**	**2.62**	**60**	*e*PN	**Pn**	**16 51 50.0**	**+0.5**
URFA	**Urfa**	**2.62**	**60**	*e*Pn	**Pn**	**16 51 50.0**	**+0.5**
DARE	**Darende-Malaty**	**2.68**	**26**	*e*PN	**Pn**	**16 51 51.1**	**+0.7**
LEF	**Lefka**	**2.71**	**248**	*e*PN	**Pb**	**16 51 55.0**	**-0.8**
GAZI	**Gazipasa**	**2.95**	**272**	*i* P	**Pn**	**16 51 55.0**	**+1.0**
GAZI				*i* S	**Sn**	**16 52 28.6**	**-0.6**
GAZI	**Gazipasa**	**2.95**	**272**	*i* P	**Pn**	**16 51 55.0**	**+1.0**
GAZI				*i* S	**Sn**	**16 52 28.6**	**-0.6**
SVRC	**Sivrice-ELAZID**	**3.46**	**49**	*e*PN	**Pn**	**16 52 02.2**	**+1.1**
SVRC	**Sivrice-ELAZID**	**3.46**	**49**	*e*Pn	**Pn**	**16 52 02.2**	**+1.1**
PTK	**Pertek**	**3.85**	**44**	*e*PN	**Pn**	**16 52 07.5**	**+1.1**
PTK	**Pertek**	**3.85**	**44**	*e*Pn	**Pn**	**16 52 07.5**	**+1.1**
CORM	**Corum**	**4.14**	**346**	*e*PN	**Pn**	**16 52 12.3**	**+1.9**
CORM	**Corum**	**4.14**	**346**	*e*Pn	**Pn**	**16 52 12.3**	**+1.9**

*IDC **16** 16:52:11.7±1.2,32.°92S×178.°85W,h0km,mb4.2/5, mb1 4.4/6,mb1mx4.0/21,mbtmp4.3/6,ML4.1/1,Error ellipse: s-maj=34.0km s-min=25.7km az=47.0*

ISC 16 16:52:16.8±1.3,33.°3S±0.°1×178.°8W±0.°2,h41km,n30, σ1°27/29,mb4.3/5,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.91**	**208**	PN	**Pn**	**16 53 28.9**	**+0.9**
MXZ				SN	**Sn**	**16 54 25.0**	**+1.6**
PUZ	**Puketiti**	**5.37**	**206**	PN	**Pn**	**16 53 34.8**	**+0.4**
PUZ				SN	**Sn**	**16 54 35.5**	**+0.6**
CNGZ	**Carnagh Statio**	**5.76**	**204**	*e*PN	**Pn**	**16 53 41.1**	**+0.5**
MWZ	**Matawai**	**5.88**	**210**	*e*PN	**Pn**	**16 53 41.2**	**-0.3**
MWZ				SN	**Sn**	**16 54 49.7**	**+2.1**
URZ	**Urewera**	**6.00**	**213**	*e*PN	**Pn**	**16 53 43.1**	**+0.1**
URZ	**Urewera**	**6.00**	**213**	Pn	**Pn**	**16 53 43.8**	**+0.8**
	4.2nm,0.3s,baz=285,slow=3.1,SNR=112						
URZ				Sn	**Sn**	**16 54 47.6**	**-2.8**
	2.9nm,0.3s,baz=295,slow=19,SNR=2.4						
PRGZ	**Paritu Road**	**6.26**	**205**	*e*PN	**Pn**	**16 53 46.9**	**+0.3**
WCZ	**Waipu Caves**	**6.26**	**243**	PN	Pn	16 53 50.2	+3.6
KNZ	**Kokohu**	**6.42**	**205**	*e*PN	**Pn**	**16 53 47.8**	**-1.0**
MHGZ	**Mahia Peninsul**	**6.46**	**203**	*e*PN	**Pn**	**16 53 48.9**	**-0.4**
OUZ	**Omahuta**	**6.60**	**251**	PN	Pn	16 53 54.5	+3.3
BKZ	**Black Stump Fm**	**7.02**	**212**	PN	**Pn**	**16 53 57.4**	**+0.3**
KAHZ	**Kahuranaki**	**7.40**	**207**	PN	**Pn**	**16 54 00.5**	**-1.7**
WPHZ	**Waipukurau**	**7.80**	**208**	*e*PN	**Pn**	**16 54 05.7**	**-2.0**
MRZ	**Mangatainoka R**	**8.65**	**210**	*e*PN	**Pn**	**16 54 16.7**	**-2.7**
OGWZ	**Otaki Gorge**	**8.96**	**211**	*e*PN	**Pn**	**16 54 21.3**	**-2.2**
THZ	**Tophouse**	**10.75**	**215**	*e*PN	Pn	16 54 44.4	-3.6
CTA	**Charters Tower**	**33.72**	**284**	P	**P**	**16 58 55.4**	**+1.1**
	2.4nm,0.5s,baz=108,slow=8.9,SNR=5.7						
ASAR	**Alice Springs**	**42.37**	**270**	P	**P**	**17 00 07.2**	**-0.1**
	0.9nm,0.3s,baz=111,slow=7.8,SNR=50						
WRA	**Warramunga Arr**	**43.62**	**276**	P	**P**	**17 00 17.1**	**-0.2**
	3.1nm,0.6s,baz=115,slow=8.0,SNR=73						
FITZ	**Fitzroy Crossi**	**51.75**	**273**	P	**P**	**17 01 20.2**	**-0.1**
	0.9nm,0.3s,baz=138,slow=5.1,SNR=15						
QSPA	**South Pole Qui**	**56.86**	**180**	P	P	17 02 01.6	+4.6
	1.4nm,0.6s,baz=101,slow=1.1,SNR=15						
ARCES	**ARCESS Array B**	**141.22**	**347**	PKhKP	PKPpre	17 11 37.6	
	2.1nm,1.0s,baz=29,slow=2.8,SNR=6.1						
JOF	**Joensuu**	**144.80**	**337**	*ep*	**PKPab**	**17 11 46.6**	**-0.7**
	1.0nm,0.5s						
KAF	**Kangasniemi**	**146.99**	**339**	*ep*	**PKPbc**	**17 11 53.4**	**-0.7**
	1.9nm,0.5s						
FINES	**FINESS Array B**	**147.56**	**338**	PKPbc	**PKPbc**	**17 11 55.9**	**+0.2**
	2.6nm,0.5s,baz=36,slow=4.6,SNR=26						
NB2	**NORSAR Subarra**	**151.45**	**350**	PKP	**PKPbc**	**17 12 05.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=14,slow=2.5						
NOA	**NORSAR Array B**	**151.45**	**350**	PKPbc	**PKPbc**	**17 12 06.1**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=14,slow=4.1,SNR=5.8						
BRTR	**Keskin Array B**	**153.24**	**293**	PKPbc	**PKPbc**	**17 12 09.5**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=130,slow=5.8,SNR=3.0						
TORD	**Torodi Ar. Bea**	**159.97**	**181**	PKPab	**PKPab**	**17 12 52.5**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=168,slow=4.1,SNR=2.7						

*IDC **16** 16:56:15.9±0.9,31.°59S×178.°14W,h0km,mb4.5/6, mb1 4.6/8,mb1mx4.2/23,mbtmp4.5/8,ML4.3/2,MS3.4/1, Ms1 3.4/1,ms1mx2.9/21,Error ellipse: s-maj=25.7km s-min=22.6km az=103.0*

*ISCJB **16** 16:56:17.7±1.4,31.°89S±0.°05×177.°9W±0.°2,h35km, mb4.6/8,Error ellipse: s-maj=28.4km s-min=6.2km az=7.5*

*NEIC **16** 16:56:20.0±3.9,31.°62S×178.°18W,h27km±26km,mb4.8/4, Error ellipse: s-maj=18.9km s-min=13.5km az=105.0*

*AUST **16** 16:57:21.6,31.°23S×178.°77E,h450km*

ISC 16 16:56:19.9±0.9,31.°73S±0.°07×178.°0W±0.°2,h35km,n54, σ1°29/51,mb4.7/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.47**	**2**	Pn	**Pn**	**16 56 57.6**	**-0.1**
RAO				Sn	**Sn**	**16 57 23.6**	**-2.9**
RAO	**Raoul Island**	**2.47**	**2**	Pn	**Pn**	**16 56 57.6**	**-0.1**
	156nm,0.3s,baz=62,slow=21,SNR=8.8						
RAO				Sn	**Sn**	**16 57 23.6**	**-2.9**
	658nm,0.3s,baz=160,slow=21,SNR=12						

PUZ	**Puketiti**	**7.04**	**205**	*e*PN	**Pn**	**16 58 00.5**	**0.0**
PUZ				*e*SN	**Sn**	**16 59 15.8**	**-3.5**
CNGZ	**Carnagh Statio**	**7.42**	**204**	*e*PN	**Pn**	**16 58 05.4**	**-0.3**
CNGZ				*e*SN	**Sn**	**16 59 25.6**	**-3.1**
WCZ	**Waipu Caves**	**7.63**	**235**	PN	Pn	16 58 13.0	+4.4
URZ	**Urewera**	**7.65**	**210**	Pn	**Pn**	**16 58 08.2**	**-0.7**
URZ				Sn	**Sn**	**16 59 33.1**	**-1.2**
URZ	**Urewera**	**7.65**	**210**	Pn	**Pn**	**16 58 08.2**	**-0.7**
	2.3nm,0.3s,baz=293,slow=4.6,SNR=10						
URZ				Sn	**Sn**	**16 59 33.1**	**-1.2**
	6.6nm,0.3s,baz=202,slow=23,SNR=14						
OUZ	**Omahuta**	**7.84**	**241**	PN	Pn	16 58 16.4	+5.0
PRGZ	**Paritu Road**	**7.93**	**204**	*e*PN	**Pn**	**16 58 12.0**	**-0.7**
MHGZ	**Mahia Peninsul**	**8.13**	**203**	*e*PN	**Pn**	**16 58 14.6**	**-0.8**
DZM	**Mont Dzumac**	**16.86**	**301**	LR	LR	17 03 58.8	
	comp=Z,130nm,18.9s,baz=24,slow=28						
MCQ	**Macquarie Isla**	**28.06**	**209**	P	P	17 02 27.1	+19
	baz=27,SNR=6.2						
CMSA	**Cobar Meteorol**	**30.83**	**261**	P	**P**	**17 02 34.5**	**+1.9**
	baz=28,SNR=9.2						
CTA	**Charters Tower**	**34.03**	**281**	P	**P**	**17 03 02.4**	**+1.6**
CTA	**Charters Tower**	**34.03**	**281**	P	**P**	**17 03 02.4**	**+1.6**
	11nm,0.7s,baz=98,slow=10,SNR=13						
CTAO	**Charters Tower**	**34.03**	**281**	*e*P	**P**	**17 03 01.8**	**+1.0**
	9.6nm,0.8s						
STKA	**Stephens Creek**	**34.20**	**259**	P	**P**	**17 03 03.5**	**+1.3**
STKA	**Stephens Creek**	**34.20**	**259**	P	**P**	**17 03 03.5**	**+1.3**
	1.5nm,0.6s,baz=104,slow=10,SNR=5.3						
MTSU	**Mount Surprise**	**36.56**	**283**	P	**P**	**17 03 24.3**	**+1.7**
	baz=34,SNR=10						
COEN	**Coen**	**39.65**	**287**	P	**P**	**17 03 49.8**	**+1.1**
	baz=37,SNR=5.6						
AS31	**Alice Springs**	**43.05**	**268**	*e*P	**P**	**17 04 15.9**	**-0.7**
ASAR	**Alice Springs**	**43.05**	**268**	P	**P**	**17 04 16.0**	**-0.6**
ASAR	**Alice Springs**	**43.05**	**268**	P	**P**	**17 04 16.0**	**-0.6**
	8.5nm,0.6s,baz=104,slow=7.6,SNR=143						
WRAB	**Tennant Creek**	**44.16**	**274**	*e*P	**P**	**17 04 24.8**	**-0.7**
	22nm,0.8s						
WRA	**Warramunga Arr**	**44.16**	**274**	P	**P**	**17 04 24.9**	**-0.6**
WRA	**Warramunga Arr**	**44.16**	**274**	P	**P**	**17 04 24.9**	**-0.6**
	24nm,0.7s,baz=111,slow=8.0,SNR=212						
KDU	**Kakadu**	**49.16**	**281**	P	**P**	**17 05 03.8**	**-0.8**
	baz=46,SNR=4.3						
MTN	**Manton Dam**	**50.20**	**280**	P	**P**	**17 05 12.0**	**-0.6**
	baz=47,SNR=6.3						
KNRA	**Kununurra**	**50.82**	**275**	P	**P**	**17 05 17.2**	**0.0**
	baz=48,SNR=4.5						
FITZ	**Fitzroy Crossi**	**52.37**	**271**	P	**P**	**17 05 28.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**52.37**	**271**	P	**P**	**17 05 28.9**	**+0.1**
	3.6nm,1.0s,baz=56,slow=8.9,SNR=8.1						
FITZ	**Fitzroy Crossi**	**52.37**	**271**	P	**P**	**17 05 28.9**	**+0.1**
	baz=50,SNR=4.3						
SWI	**Sorong**	**56.84**	**292**	S	S	17 13 13.3	-39
	baz=54,SNR=8.7						
QSPA	**South Pole Qui**	**58.39**	**180**	*e*P	P	17 06 15.7	+4.0
	8.8nm,0.8s						
QSPA				*e*		17 06 21.7	
QSPA	**South Pole Qui**	**58.39**	**180**	P	P	17 06 15.0	+3.3
	1.4nm,0.7s,baz=58,slow=0.3,SNR=11						
SNAA	**Sanae**	**76.83**	**178**	P	P	17 08 10.9	+3.1
	7.5nm,0.8s						
SNAA				*i*		17 08 16.1	
MKAR	**Makanchi Array**	**118.62**	**310**	PKP	**PKPdf**	**17 15 03.0**	**-0.8**
MKAR	**Makanchi Array**	**118.62**	**310**	PKP	**PKPdf**	**17 15 03.0**	**-0.8**
	0.4nm,0.8s,baz=110,slow=1.4,SNR=4.4						
ARCES	**ARCESS Array B**	**139.88**	**347**	PKPpre	PKPpre	17 15 38.0	
ARCES				PKP	**PKiKP**	**17 15 46.5**	**+0.7**
ARCES	**ARCESS Array B**	**139.88**	**347**	PKhKP	PKPpre	17 15 38.0	
	0.3nm,0.4s,baz=29,slow=2.8,SNR=3.5						
ARCES				PKP	**PKiKP**	**17 15 46.5**	**+0.7**
	1.6nm,0.7s,baz=93,slow=2.3,SNR=9.8						
JOF	**Joensuu**	**143.64**	**338**	*ep*	PKPab	17 15 47.1	+0.1
KAF	**Kangasniemi**	**145.79**	**340**	*ep*	**PKPdf**	**17 15 53.6**	**-0.4**
	3.0nm,0.6s						
FIA1	**FINESS Array S**	**146.38**	**339**	*e*PKPdf	**PKPbc**	**17 15 56.2**	**-0.2**
FINES	**FINESS Array B**	**146.38**	**339**	PKPbc	**PKPbc**	**17 15 56.5**	**+0.1**
FINES	**FINESS Array B**	**146.38**	**339**	PKPbc	**PKPbc**	**17 15 56.5**	**+0.1**
	4.9nm,0.6s,baz=50,slow=3.9,SNR=28						
NB2	**NORSAR Subarra**	**150.06**	**351**	PKP	**PKPbc**	**17 16 06.5**	**+0.3**
	comp=Z,2.5nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.06**	**351**	PKPbc	**PKPbc**	**17 16 07.1**	**+1.0**
NOA	**NORSAR Array B**	**150.06**	**351**	PKPbc	**PKPbc**	**17 16 07.1**	**+1.0**
	comp=Z,1.8nm,0.5s,baz=15,slow=4.2,SNR=13						
AKASG	**Malin Array Be**	**152.34**	**321**	PKPbc	**PKPbc**	**17 16 12.0**	**+0.3**
AKASG	**Malin Array Be**	**152.34**	**321**	PKPbc	**PKPbc**	**17 16 12.0**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=90,slow=1.3,SNR=4.6						
BRTR	**Keskin Array B**	**153.21**	**296**	PKPbc	**PKPbc**	**17 16 13.9**	**-0.3**
BRTR	**Keskin Array B**	**153.21**	**296**	PKPbc	**PKPbc**	**17 16 13.9**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=151,slow=2.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**161.51**	**179**	PKPab	**PKPab**	**17 17 04.3**	**+2.3**
TORD	**Torodi Ar. Bea**	**161.51**	**179**	PKPab	**PKPab**	**17 17 04.3**	**+2.3**
	comp=Z,0.8nm,0.6s,baz=178,slow=3.9,SNR=6.5						

*ISCJB **16** 17:03:16.1±0.3,39.°13N±0.°03×29.°02E±0.°03,h0km,Error ellipse: s-maj=3.8km s-min=2.7km az=156.8*

*ISK **16** 17:03:16.1,39.°13N×29.°04E,h5km,MD2.9*

*DDA **16** 17:03:16.7,39.°15N×29.°04E,h15km,MD2.5*

*CSEM **16** 17:03:16.4±0.1,39.°14N×29.°03E,h1km,MD2.5,Error ellipse: s-maj=2.8km s-min=2.1km az=155.0*

ISC 16 17:03:16.5±1.0,39.°14N±0.°02×29.°03E±0.°02,h0km,n44, σ0°68/64,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.26**	**248**	*i* P	**Pg**	**17 03 22.3**	**+0.8**
DEMI				*i* S	**Sg**	**17 03 25.8**	**+0.9**
DEMI	**Demirci**	**0.26**	**248**	*i* P	**Pg**	**17 03 22.3**	**+0.8**
DEMI				*i* S	**Sg**	**17 03 25.8**	**+0.9**
GDZ	**Gediz**	**0.36**	**98**	*i* P	**Pg**	**17 03 23.8**	**+0.4**
GDZ				*i* S	**Sg**	**17 03 28.2**	**+0.1**
GDZ	**Gediz**	**0.36**	**98**	*i* P	**Pg**	**17 03 23.8**	**+0.4**
GDZ				*i* S	**Sg**	**17 03 28.2**	**+0.1**
TVSB	**Tavsanli**	**0.46**	**48**	PG	**Pg**	**17 03 25.6**	**+0.3**
TVSB				SG	**Sg**	**17 03 32.2**	**+0.9**
TVSB	**Tavsanli**	**0.46**	**48**	*i* Pg	**Pg**	**17 03 27.6**	**+0.3**
TVSB				*i* Sg	**Sg**	**17 03 32.2**	**+0.9**
DURS	**Dursunbey**	**0.63**	**317**	*i* P	**Pg**	**17 03 28.9**	**+0.4**
DURS				*e*S	**Sg**	**17 03 37.9**	**+1.2**
DURS	**Dursunbey**	**0.63**	**317**	*i* P	**Pg**	**17 03 28.9**	**+0.4**
DURS				*e*S	**Sg**	**17 03 37.9**	**+1.2**
KULA	**Kula-Manisa**	**0.69**	**205**	*e*PG	**Pg**	**17 03 29.6**	**-0.1**
KULA				*e*SG	**Sg**	**17 03 38.4**	**-0.2**
KULA	**Kula-Manisa**	**0.69**	**205**	*e*Pg	**Pg**	**17 03 29.6**	**-0.1**
KULA				*e*Sg	**Sg**	**17 03 38.4**	**-0.2**
MANT	**Manisa**	**0.75**	**209**	*i* P	**Pg**	**17 03 30.9**	**+0.1**
MANT				*i* S	**Sg**	**17 03 39.9**	**-0.6**
MANT	**Manisa**	**0.75**	**209**	*i* P	**Pg**	**17 03 30.9**	**+0.1**
MANT				*i* S	**Sg**	**17 03 39.9**	**-0.6**
ALT	**Altintas**	**0.85**	**96**	*e*PG	**Pg**	**17 03 33.2**	**+0.4**
ALT				*e*SG	**Sg**	**17 03 44.8**	**+1.0**
ALT	**Altintas**	**0.85**	**96**	*e*Pg	**Pg**	**17 03 33.2**	**+0.4**
ALT				*e*Sg	**Sg**	**17 03 44.8**	**+1.0**
AKHS	**Akhisar**	**0.98**	**255**	*e*P	**Pg**	**17 03 34.3**	**-1.0**
AKHS				*e*S	**Sg**	**17 03 48.9**	**+0.9**
AKHS	**Akhisar**	**0.98**	**255**	*e*P	**Pg**	**17 03 34.3**	**-1.0**
AKHS				*e*S	**Sg**	**17 03 48.9**	**+0.9**
AKS	**Akhisar**	**0.98**	**255**	*e*PG	**Pg**	**17 03 35.4**	**+0.1**
AKS	**Akhisar**	**0.98**	**255**	*e*Pg	**Pg**	**17 03 35.4**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.23**	**355**	*e*PN	**Pg**	**17 03 40.2**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.23**	**355**	*e*Pn	**Pg**	**17 03 40.2**	**+0.1**
CAVI	**Cavuskoy**	**1.23**	**31**	*e*PN	**Pg**	**17 03 39.9**	**-0.3**
CAVI	**Cavuskoy**	**1.23**	**31**	*e*Pn	**Pg**	**17 03 39.9**	**-0.3**
KCTX	**Karacabey (Bur**	**1.23**	**336**	*e*PN	**Pg**	**17 03 40.5**	**+0.3**
KCTX	**Karacabey (Bur**	**1.23**	**336**	*e*Pn	**Pg**	**17 03 40.5**	**+0.3**
BALY	**Balya**	**1.24**	**299**	*e*P	**Pg**	**17 03 40.4**	**0.0**
BALY				*e*S	**Sg**	**17 03 54.3**	**-2.2**
BALY	**Balya**	**1.24**	**299**	*e*P	**Pg**	**17 03 40.4**	**0.0**
BALY				*e*S	**Sg**	**17 03 54.3**	**-2.2**
IZI	**Iznik**	**1.24**	**16**	*e*PN	**Pg**	**17 03 40.2**	**-0.2**
IZI	**Iznik**	**1.24**	**16**	*e*Pn	**Pg**	**17 03 40.2**	**-0.2**
GEMT	**Gemlik**	**1.30**	**6**	*e*PN	**Pg**	**17 03 41.5**	**+0.1**
GEMT	**Gemlik**	**1.30**	**6**	*e*Pn	**Pg**	**17 03 41.5**	**+0.1**
BORA	**Eskisehir**	**1.33**	**56**	*i* P	**Pg**	**17 03 41.0**	**-1.0**
BORA				*i* S	**Sg**	**17 03 59.1**	**-0.1**
BORA	**Eskisehir**	**1.33**	**56**	*i* P	**Pg**	**17 03 41.0**	**-1.0**
BORA				*i* S	**Sg**	**17 03 59.1**	**-0.1**
GONE	**Gonen-Balikesi**	**1.37**	**312**	*e*PN	**Pg**	**17 03 43.1**	**+0.2**
GONE	**Gonen-Balikesi**	**1.37**	**312**	*e*Pn	**Pg**	**17 03 43.1**	**+0.2**
ARMT	**Armutlu**	**1.43**	**355**	*e*PN	**Pn**	**17 03 43.4**	**-0.4**
ARMT	**Armutlu**	**1.43**	**355**	*e*Pn	**Pn**	**17 03 43.4**	**-0.4**
BNT	**Bandirma**	**1.48**	**325**	*e*PN	**Pn**	**17 03 44.2**	**-0.3**
BNT	**Bandirma**	**1.48**	**325**	*e*Pn	**Pn**	**17 03 44.2**	**-0.3**
GULT	**Gulveren**	**1.73**	**41**	*e*PN	**Pn**	**17 03 47.3**	**-0.6**
GULT	**Gulveren**	**1.73**	**41**	*e*Pn	**Pn**	**17 03 47.3**	**-0.6**
MRMT	**Marmara Adasi**	**1.83**	**323**	*e*PN	**Pn**	**17 03 49.5**	**+0.2**
MRMT	**Marmara Adasi**	**1.83**	**323**	*e*Pn	**Pn**	**17 03 49.5**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.10**	**318**	*e*PN	**Pn**	**17 03 53.4**	**+0.4**
RKY	**Sarkoy-Tekirda**	**2.10**	**318**	*e*Pn	**Pn**	**17 03 53.4**	**+0.4**

MAN 16 17:31:29,9.°06N×122.°64E,h27km,mb4.6,ML3.5,MS3.4, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPIL	**Ipil**	**1.26**	**183**	*e*P	Pb	17 31 51.8	-0.4
PAGZ	**Pagadian**	**1.41**	**149**	*e*P	Pb	17 31 54.2	-0.5
GUIM	**Jordan**	**1.56**	**358**	*e*P	Pn	17 31 55.1	+0.1
GUIM				*e*S	Sn	17 32 10.6	-3.8

GUC 16 17:37:45.5±0.4,23.°73S×67.°47W,h250km,ML4.0,2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.36**	**308**	*e*P	Pn	17 38 38.7	+7.3
PB04				*i* S	S	17 39 19.4	+12
PB04				AML	AML	17 39 22.5	
	comp=N,227nm,0.5s						
PB09	**Plate Boundary**	**2.52**	**319**	*e*P	Pn	17 38 35.5	+2.2
PB09				*e*S	S	17 39 12.8	+1.9
PB09				AML	AML	17 39 18.0	
	comp=E,501nm,0.6s						
CEN1	**Los Morros**	**2.53**	**277**	*i* P	Pn	17 38 36.4	+3.2
CEN1				*i* S	S	17 39 14.4	+3.6
CEN1				AML	AML	17 39 16.4	
	comp=N,106nm,0.5s						
ANCH	**Antofagasta**	**2.69**	**270**	*i* P	Pn	17 38 36.4	+1.7
ANCH				*i* S	S	17 39 15.3	+1.7
PB07	**Plate Boundary**	**2.99**	**311**	*e*P	Pn	17 38 40.4	+2.2
PB07				*e*S	S	17 39 22.3	+2.5
PB01	**Plate Boundary**	**3.26**	**325**	⇓*i*P	Pn	17 38 43.0	+2.0
PB01				*e*S	S	17 39 27.0	+2.0
HMBC	**Humberstone**	**4.10**	**326**	⇓*i*P

EYAK Cordova Ski Ar 5.41 37 P Pn 18 22 39.0 -1.9
PMR Palmer 5.47 16 P Pn 18 22 40.2 -1.4
PMR Palmer 5.47 16 P Pn 18 22 40.2 -1.4
RAGM Ragged Mountai 5.67 42 ePn Pn 18 22 42.9 -1.6
VLZ Valdez 5.68 31 P Pn 18 22 42.8 -1.7
DT1 Dutton Round H 5.76 261 P Pn 18 22 43.8 -1.9
SML Sawmill 5.80 19 P Pn 18 22 45.3 -1.0
SML Sawmill 5.80 19 P Pn 18 22 45.3 -1.0
DIV Divide 5.84 33 P Pn 18 22 44.7 -2.2
FALS False Pass 6.46 261 ePn Pn 18 22 53.6 -1.7
PPLA Purkeypile 6.52 1 P Pn 18 22 55.7 -0.5
MESA MESA 6.66 51 P Pn 18 22 54.5 -3.7
VRDI Verde Repeater 6.69 40 P Pn 18 22 56.2 -2.3
TT01 Tatalina 6.79 346 P Pn 18 22 59.2 -0.5
KIAG Kiagna River 6.90 45 P Pn 18 22 59.1 -2.4
MCARA McCarthy VSAT 6.94 40 P Pn 18 23 00.4 -1.5
BALM Baldy 6.97 44 P Pn 18 23 00.3 -2.1
BALM Baldy 6.97 44 P Pn 18 23 00.3 -2.1
GRNC Granite Creek 7.03 47 P Pn 18 23 01.1 -2.2
HARP HAARP 7.05 28 P Pn 18 23 01.8 -1.6
DHY Denali Highway 7.15 18 P Pn 18 23 03.7 -1.2
TRF Thorofare Moun 7.15 7 P Pn 18 23 03.2 -1.7
RND Reindeer 7.25 13 P Pn 18 23 04.7 -1.4
RND Reindeer 7.25 13 P Pn 18 23 04.7 -1.4
BARN Barnard Glacie 7.26 46 P Pn 18 23 03.5 -2.9
PAX Paxson 7.45 25 eP Pn 18 23 06.8 -2.1
PAX Paxson 7.45 25 ePn Pn 18 23 06.8 -2.1
MCK McKinley 7.55 12 P Pn 18 23 09.4 -0.9
MCK McKinley 7.55 12 P Pn 18 23 09.4 -0.9
PNL Peninsula 7.61 59 P Pn 18 23 08.6 -2.4
MENT Mentasta 7.87 30 ePn Pn 18 23 14.6 0.0
AKUT Akutan 8.00 259 ePn Pn 18 23 13.2 -3.2
DDM Donnelly Dome 8.08 21 P Pn 18 23 15.7 -1.9
DOT Dot Lake 8.36 26 ePn Pn 18 23 21.5 +0.1
WRH Wood River Hil 8.37 13 P Pn 18 23 19.3 -2.0
UNV Unalaska Valle 8.51 258 ePn Pn 18 23 19.2 -4.1
32nm,0.9s
BCA3 Beaver Creek A 8.54 34 P Pn 18 23 20.2 -3.6
MLY Manley 8.70 4 P Pn 18 23 24.0 -1.9
COLA College 8.78 13 P Pn 18 23 25.0 -2.0
COLA College 8.78 13 P Pn 18 23 25.0 -2.0
IL1 Eielson Array 8.81 15 P Pn 18 23 25.0 -2.5
ILAR Eielson Array 8.81 15 Pn Pn 18 23 26.7 -0.8
ILAR Eielson Array 8.81 15 Pn Pn 18 23 26.7 -0.8
9.0nm,0.3s,baz=203,slow=12,SNR=256
MDM Murphy Dome 8.82 11 P Pn 18 23 25.8 -1.9
SKAG Skagway 9.55 94 ePn Pn 18 23 37.2 -0.3
IM3 Indian Mountai 9.64 357 P Pn 18 23 37.2 -1.6
EGAK Eagle 10.03 28 ePn Pn 18 23 44.7 +0.7
CRAG Craig 10.82 87 ePn Pn 18 23 50.0 -4.9
COLD Coldfoot 10.91 4 ePn Pn 18 23 51.3 -4.9
TNA Tin City 11.86 327 ePn Pn 18 24 11.4 +2.2
292nm,0.4s
GAMB Gambell 12.13 315 ePn Pn 18 24 12.4 -0.4
25nm,1.0s
DLBC Dease Lake 12.18 71 ePn Pn 18 24 14.7 +1.0
INK Inuvik 14.70 28 Pn Pn 18 24 46.6 -1.3
INK Inuvik 14.70 28 Pn Pn 18 24 46.6 -1.3
0.2nm,0.3s,baz=222,slow=17,SNR=21
NLWA Neilton Lookou 19.62 105 eP P 18 25 48.3 -0.1
76nm,2.1s
YKW3 Yellowknife Ar 19.89 56 eP P 18 25 51.1 -0.1
0.9nm,1.4s
YKA Yellowknife Ar 19.89 57 P P 18 25 51.5 +0.2
YKA Yellowknife Ar 19.89 57 P P 18 25 51.4 +0.2
0.7nm,0.3s,baz=268,slow=11,SNR=70
FX1 Attu Island--F 20.14 275 eP P 18 25 53.0 -1.1
FX1 Attu Island--F 20.14 275 P P 18 25 52.9 -1.1
14nm,0.6s,baz=16,slow=8.5,SNR=15
LON Longmire 21.12 104 eP P 18 26 05.8 +1.0
LON pmax pmax
comp=Z,14nm,1.4s
LON Longmire 21.12 104 eP P 18 26 05.8 +1.0
comp=Z,14nm,1.4s
EBG Ellensburg 21.69 102 P P 18 26 12.2 +1.3
COR Corvallis 21.74 111 eP P 18 26 14.4 +3.0
COR pmax pmax
comp=Z,17nm,1.0s
COR Corvallis 21.74 111 eP P 18 26 14.4 +3.0
comp=Z,17nm,1.0s
BILL Bilibino 22.02 318⇑ iP P 18 26 13.7 -0.5
BILL i 18 26 23.4
BILL pmax pmax
comp=Z,56nm,1.3s
VFP Flag Point 22.22 107 P P 18 26 17.6 +0.9
BROR Big Rock Looko 22.41 110 P P 18 26 19.9 +1.4
OD2 Odessa Site #2 22.42 99 P P 18 26 19.3 +0.7
HAWA Hanford 22.57 102 eP P 18 26 22.8 +2.4
comp=Z,11nm,1.0s
CROR Criterion Ridg 22.70 107 P P 18 26 23.0 +1.3
NEW Newport 22.79 96 eP P 18 26 23.0 +0.4
comp=Z,6.1nm,0.9s
NEW Newport 22.79 96 P P 18 26 23.8 +1.2
comp=Z,4.1nm,0.8s,baz=326,slow=9.9,SNR=8.0
HUMO Hull Mountain 23.32 114 eP P 18 26 28.4 +0.4
comp=Z,26nm,1.5s
YBH Yreka Blue Hor 24.08 115 P P 18 26 37.9 +2.4
YBH Yreka Blue Hor 24.08 115 P P 18 26 37.9 +2.4
comp=Z,5.3nm,0.8s,baz=344,slow=3.6,SNR=13
BSMT Bassoo Peak 24.32 95 eP P 18 26 38.2 +0.5
BLMT Blacktail Moun 24.46 94 eP P 18 26 34.1 -5.0
comp=Z,6.7nm,0.9s
JTMT Jette 24.66 94 eP P 18 26 41.2 +0.5
YBMT Yellow Bay 24.74 94 eP P 18 26 42.0 +0.5
comp=Z,7.9nm,1.2s
BMO Blue Mountains 24.76 103 eP P 18 26 41.6 -0.1
comp=Z,11nm,1.6s
SWMT Swartz Lake 24.95 95 eP P 18 26 45.2 +1.8
WDC Whiskeytown Da 25.03 117 eP P 18 26 45.2 +1.2
WDC pmax pmax
comp=Z,13nm,1.2s
WDC Whiskeytown Da 25.03 117 eP P 18 26 45.2 +1.2
comp=Z,13nm,1.2s
MOD Modoc 25.19 112 eP P 18 26 47.3 +1.6
comp=Z,8.8nm,0.9s
F12A Elk City 25.30 99 P P 18 26 47.4 +0.8
baz=25,SNR=6.7
MSO Missoula 25.38 96 eP P 18 26 49.4 +2.1
comp=Z,4.6nm,1.3s
SLMT Seeley Lake 25.38 95 eP P 18 26 47.8 +0.4
E13A Victor 25.47 97 P P 18 26 49.9 +1.8
baz=25,SNR=5.3
C15A Salmond Ranch, 25.57 93 P P 18 26 50.5 +1.4
baz=25,SNR=8.6
WVOR Wild Horse Val 25.68 109 eP P 18 26 51.7 +1.6
WVOR pmax pmax
comp=Z,18nm,1.1s
WVOR Wild Horse Val 25.68 109 eP P 18 26 51.7 +1.6
comp=Z,18nm,1.1s
CHMT Chamberlain Mo 25.71 95 eP P 18 26 49.7 -0.7
comp=Z,11nm,1.8s
MFID Camas Ranch 26.51 104 eP P 18 26 58.5 +1.0
comp=Z,6.0nm,0.9s
LRM Limekiln Ridge 26.81 96 eP P 18 27 00.9 +0.5
comp=Z,28nm,1.0s
EGMT Eagleton 27.01 90 P P 18 27 01.8 -0.2
comp=Z,7.3nm,0.8s
HLID Hailey 27.18 102 eP P 18 27 04.7 +1.0
comp=Z,7.0nm,1.4s
MCMT McKenzie Canyo 27.21 98 eP P 18 27 04.1 0.0
comp=Z,1.5nm,1.0s
SEY Seymchan 27.88 306⇑ iP P 18 27 08.5 -1.0
FFC Flin Flon 28.02 72 eP P 18 27 11.6 +0.8
FFC Flin Flon 28.02 72 eP P 18 27 11.6 +0.8
RES Resolute Bay 28.26 28 eP P 18 27 12.4 -0.4
comp=Z,0.2nm,0.9s
RES Resolute Bay 28.26 28 P P 18 27 13.1 +0.4
comp=Z,2.8nm,0.8s,baz=250,slow=10,SNR=15
PETK Petropavlovsk- 28.51 285 P P 18 27 14.3 -1.0
PETK Petropavlovsk- 28.51 285 P P 18 27 14.2 -1.0
PETK Petropavlovsk- 28.51 285 P P 18 27 14.2 -1.0
comp=Z,7.0nm,0.8s,baz=82,slow=10.0,SNR=9.5
ELK Elko 28.67 107 P P 18 27 18.4 +1.3
ELK Elko 28.67 107 P P 18 27 18.4 +1.3
comp=Z,1.7nm,0.8s,baz=285,slow=8.0,SNR=9.0
NVAR Mina Array Bea 28.79 114 P P 18 27 19.8 +1.7
NVAR Mina Array Bea 28.79 114 P P 18 27 19.8 +1.7
comp=Z,4.0nm,0.8s,baz=302,slow=9.1,SNR=30
IMW Indian Meadow 28.86 98 eP P 18 27 20.2 +1.4
comp=Z,3.0nm,0.8s
NV11 Mina Array Sit 28.86 114 eP P 18 27 18.7 0.0
REDW Red Top Meadow 29.25 99 P P 18 27 23.0 +0.7
MTUM Tungsten Hills 29.49 116 eP P 18 27 26.6 +2.3
R11A Troy Canyon, C 30.25 111 P P 18 27 32.2 +1.2
baz=30,SNR=9.7
PDAR Pinedale Array 30.36 98 P P 18 27 32.9 +0.9
PDAR Pinedale Array 30.36 98 P P 18 27 32.9 +0.9
comp=Z,1.9nm,0.7s,baz=314,slow=5.1,SNR=14
DUG Dugway 30.36 105 eP P 18 27 33.0 +1.1
DUG pmax pmax
comp=Z,22nm,1.9s
DUG Dugway 30.36 105 eP P 18 27 33.0 +1.1
comp=Z,22nm,1.9s
TCUT Toone Canyon 30.47 103 eP P 18 27 32.8 -0.3
comp=Z,57nm,1.3s
J20A Shoshoni 30.79 96 P P 18 27 37.0 +1.3
baz=30,SNR=5.6
MPMC Manual Prospec 31.04 116 P P 18 27 37.1 -0.9
baz=31,SNR=6.6
MVU Marysvale 31.91 107 eP P 18 27 47.7 +2.0
comp=Z,5.5nm,0.9s
MSU Marysvale 31.92 107 eP P 18 27 47.8 +2.0
MSU Marysvale 31.92 107 eP P 18 27 47.8 +2.0
GSC Goldstone 31.97 116 eP P 18 27 47.5 +1.3
GSC pmax pmax
comp=Z,7.0nm,1.1s
GSC Goldstone 31.97 116 eP P 18 27 47.5 +1.3
comp=Z,7.2nm,1.1s
CCUT Cedar City 32.01 109 eP P 18 27 47.8 +1.2
comp=Z,11nm,1.6s
SRU San Rafael 32.37 104 P P 18 27 50.7 +1.0
baz=32,SNR=10
N20A Spence Gulch, 32.38 100 P P 18 27 51.1 +1.2
baz=32,SNR=6.7
RSSD Black Hills 32.54 91 eP P 18 27 52.3 +1.1
RSSD Black Hills 32.54 91 eP P 18 27 52.3 +1.1
comp=Z,2.5nm,0.8s
P19A Cripple Cowboy 32.83 102 P P 18 27 54.4 +0.6
baz=32,SNR=6.7
L23A Garrett 32.92 96 P P 18 27 55.1 +0.5
baz=33,SNR=8.5
ULM Lac du Bonnet 33.44 76 P P 18 28 00.6 +1.9
ULM Lac du Bonnet 33.44 76 P P 18 28 00.6 +1.9
comp=Z,9.2nm,0.9s,baz=286,slow=8.4,SNR=4.7
S18A Hurst Farm, Bl 33.69 106 P P 18 28 01.9 +0.6
baz=33,SNR=5.9
IRM Iron Mountain 33.71 115 P P 18 28 02.6 +1.3
baz=33,SNR=13
SMCO Snowmass 34.25 101 eP P 18 28 13.8 +7.4
AGMN Agassiz Nation 34.53 79 eP P 18 28 09.5 +1.3
comp=Z,15nm,0.8s
WUAZ Wupatki 34.59 110 eP P 18 28 10.1 +1.1
comp=Z,9.0nm,1.2s
TIXI Tiksi 34.66 327 c iP P 18 28 08.5 -0.5
TIXI pmax pmax
comp=Z,10.0nm,1.2s
Y14A Wickenburg 34.97 113 P P 18 28 11.9 -0.3
baz=35,SNR=5.3
SDCO Great Sand Dun 36.08 101 eP P 18 28 23.1 +1.2
comp=Z,5.9nm,1.5s
X21A Alamocita Cree 37.30 107 P P 18 28 33.3 +0.9
baz=37,SNR=7.0
TUC Tucson 37.39 112 eP P 18 28 34.5 +1.6
TUC Tucson 37.39 112 eP P 18 28 34.5 +1.6
comp=Z,0.7nm,1.1s
ANMO Albuquerque 37.63 105 P P 18 28 36.7 +1.6
ANMO Albuquerque 37.63 105 P P 18 28 36.7 +1.6
comp=Z,0.5nm,0.4s,baz=321,slow=6.6,SNR=3.8
YAK Yakutsk 38.04 312 eP P 18 28 36.7 -1.3
YAK e 18 28 45.2
YAK pmax pmax
comp=Z,42nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,13nm,1.0s
220A Playas Peak, P 38.88 110 P P 18 28 46.7 +1.1
baz=39,SNR=6.2
AMTX Amarillo 40.27 100 eP P 18 28 57.7 +0.7
comp=E,4.2nm,0.8s
MNTX Cornudas Mount 40.70 107 eP P 18 29 01.9 +1.4
comp=E,6.7nm,1.4s
ASAJ Asahikawa 41.81 282 eP P 18 29 09.0 -0.5
comp=E,15nm,1.2s
ASAJ Asahikawa 41.81 282 P P 18 29 09.5 0.0
comp=E,18nm,1.0s,baz=327,slow=8.8,SNR=8.6
WMOK Wichita Mounta 41.97 98 eP P 18 29 05.2 -5.8
WMOK pmax pmax
comp=Z,6.0nm,0.9s
WMOK Wichita Mounta 41.97 98 eP P 18 29 05.2 -5.8
comp=Z,5.7nm,0.9s
ERM Erimo 42.90 279 c iP P 18 29 18.9 +0.5
ERM pmax pmax
comp=Z,45nm,1.2s
ERM Erimo 42.90 279 eP P 18 29 18.6 +0.2
comp=Z,52nm,1.2s
HABR Khabarovsk 43.03 291 eP P 18 29 18.5 -0.9
HABR e*PP pP 18 29 28.3 +4.2
HABR e*SP sP 18 29 32.5 +6.5
HABR e 18 30 58.6
HABR e 18 31 08.5
HABR ePPP PPP 18 31 31.6
HABR eS S 18 35 42.1 -2.0
HABR e*SS sS 18 35 58.4 +6.5
HABR eSS SS 18 38 55.4 -0.5
HABR e 18 39 16.4
HABR eSSS SSS 18 39 31.5
HABR pmax pmax
comp=E,24nm,1.2s
HABR pmax pmax
comp=N,12nm,1.2s
HABR pmax pmax
comp=Z,53nm,1.2s
HABR MLR MLR
comp=Z,17μm,20.0s
TXAR Lajitas Array 43.47 108 P P 18 29 24.1 +0.9
TXAR PP PP 18 31 06.2 +2.0
TXAR Lajitas Array 43.47 108 P P 18 29 24.1 +0.9
comp=Z,1.5nm,0.8s,baz=318,slow=6.9,SNR=11
TXAR PP PP 18 31 06.2 +2.0
comp=Z,9.4nm,1.0s,baz=316,slow=7.0,SNR=4.2
SUMG Summit 43.55 24 eP P 18 29 24.1 +0.3
SUMG pmax pmax
comp=Z,28nm,0.8s
SUMG Summit 43.55 24 eP P 18 29 24.1 +0.3
comp=Z,28nm,0.8s
SFJD Kangerlussuaq 43.95 34 eP P 18 29 25.1 -1.4
comp=Z,42nm,1.1s
SFJD Kangerlussuaq 43.95 34 P P 18 29 27.3 +0.7
comp=Z,27nm,0.9s,baz=322,slow=8.9,SNR=11
KLR Kul'dur 44.24 294 eP P 18 29 25.1 -4.0
KLR pmax pmax
comp=Z,52nm,1.4s
JCT Junction City 44.64 103 eP P 18 29 32.3 -0.3
JCT pmax pmax
comp=Z,28nm,1.5s
JCT Junction City 44.64 103 eP P 18 29 32.3 -0.3
comp=Z,28nm,1.5s
SCHQ Schefferville 45.32 54 eP P 18 29 37.4 -0.3
comp=Z,8.7nm,0.8s
SCHQ Schefferville 45.32 54 P P 18 29 37.8 +0.2
comp=Z,9.3nm,0.8s,baz=324,slow=8.8,SNR=15
SPITS Spitsbergen Ar 45.50 3 P P 18 29 38.7 -0.1
SPITS Spitsbergen Ar 45.50 3 P P 18 29 38.7 -0.1
comp=Z,9.6nm,0.6s,baz=8.8,slow=6.0,SNR=27
WVT Waverly 47.02 87 P P 18 29 52.7 +1.4
WVT pmax pmax
comp=Z,7.0nm,0.8s
WVT Waverly 47.02 87 P P 18 29 52.7 +1.4
comp=Z,7.0nm,0.8s
USRK Ussuriysk Arra 47.44 289 P P 18 29 52.9 -1.5
comp=Z,2.9nm,0.8s,baz=38,slow=9.6,SNR=5.0
PLAL Pickwick Lake 47.73 88 eP P 18 29 59.3 +2.5
comp=Z,14nm,1.0s
VLA Vladivostok 48.23 288 α iP P 18 30 00.0 -0.6
VLA e 18 31 26.7
VLA 18 31 52.6
VLA S S 18 36 57.2 -2.0
VLA pmax pmax
comp=Z,15nm,1.2s
MDJ Mudanjiang 48.41 291 P P 18 30 01.0 -0.9
MDJ pmax pmax
comp=Z,8.0nm,0.9s
MDJ pmax pmax
comp=Z,110nm,3.8s
MDJ Mudanjiang 48.41 291 eP P 18 30 01.2 -0.7
comp=Z,10.0nm,1.0s
SSPA Standing Stone 49.26 75 eP P 18 30 07.7 -0.8
comp=Z,25nm,1.4s
MAJO Matsushiro 49.47 277 eP P 18 30 10.2 0.0
MAJO pmax pmax
comp=Z,15nm,0.8s
MAJO Matsushiro 49.47 277 eP P 18 30 10.2 0.0
comp=Z,15nm,0.8s
MAT Matsushiro 49.47 277 P P 18 30 10.1 -0.1
MJAR Matsushiro Arr 49.47 277 P P 18 30 09.3 -0.8
MJAR Matsushiro Arr 49.47 277 P P 18 30 09.3 -0.8
comp=Z,3.2nm,0.8s,baz=25,slow=6.2,SNR=15
HIA Hailar 50.12 301 eP P 18 30 13.8 -1.2
comp=Z,15nm,0.9s
CIT Chita 51.03 308 eP P 18 30 19.5 -2.4
CIT e 18 30 26.5
CN2 Changchun 51.11 293 eP P 18 30 22.0 -0.5
CN2 pmax pmax
comp=Z,40nm,0.9s
KEV Kevo 54.15 0 eP P 18 30 44.0 -0.6
KEV pmax pmax
comp=Z,14nm,0.7s
KEV Kevo 54.15 0 ep P 18 30 44.0 -0.6
comp=Z,14nm,0.7s
KEV Kevo 54.15 0 eP P 18 30 43.9 -0.7
comp=Z,19nm,0.8s
ARCES ARCESS Array B 54.36 1 P P 18 30 45.8 -0.4
ARCES ARCESS Array B 54.36 1 P P 18 30 45.8 -0.4
comp=Z,6.6nm,0.7s,baz=8.3,slow=6.9,SNR=52
ARE0 ARCESS Array S 54.36 1 eP P 18 30 45.5 -0.7
KSRS Korea Array 54.40 286 P P 18 30 47.2 +0.3
comp=Z,4.8nm,0.9s,baz=37,slow=6.5,SNR=9.7
KSAR Wonju Array Be 54.43 286 P P 18 30 47.2 +0.1
IRK Irkutsk 54.81 313 eP P 18 30 49.6 -0.1
IRK pmax pmax
comp=Z,27nm,2.0s
TLY Talaya 55.49 313 eP P 18 30 55.3 +0.7
TLY pmax pmax
comp=Z,18nm,1.1s
LVZ Lovozero 55.91 357 c iP P 18 30 57.5 +0.1
LVZ pmax pmax
comp=Z,46nm,1.3s
JNU Nakatsue 56.03 280 P P 18 30 54.6 -4.2
APA Apatity 56.27 357‖ eP P 18 31 06.8 +6.9
APA MLR MLR
comp=Z,6μm,17.0s
ZAK Zakamensk 56.63 312⇑ iP P 18 31 03.0 +0.1
ZAK pmax pmax
comp=Z,34nm,0.9s
ULN Ulaanbaatar 56.94 308 eP P 18 31 05.1 -0.1
comp=Z,11nm,1.0s
SONM Songino Array 57.25 308 P P 18 31 07.9 +0.6
SONM Songino Array 57.25 308 P P 18 31 07.9 +0.6
comp=Z,19nm,0.8s,baz=44,slow=6.4,SNR=151
HVS Khovu-Aksy 59.79 318 c iP P 18 31 24.9 0.0
HVS pmax pmax
comp=Z,85nm,1.1s
HHC Hu-ho-hao-te 60.22 300 eP P 18 31 27.5 -0.5
HHC sP sP 18 31 35.1 +0.3
HHC PcP PcP 18 32 13.9 +0.5
HHC PP PP 18 33 41.3 +0.9
HHC S S 18 39 36.8 -4.3
HHC sS sS 18 39 45.1 -4.1
HHC ScS SKKSac 18 41 14.3 -3.5
HHC SS SS 18 43 33.5 -4.1
HHC pmax pmax
comp=Z,19nm,0.6s
HHC pmax pmax
comp=Z,160nm,3.9s
HHC LR LR
comp=N,980nm,14.3s
HHC LR LR
comp=E,810nm,15.5s
HHC LR LR
comp=Z,970nm,14.9s
NVS Novosibirsk 60.25 327 i P P 18 31 26.4 -1.5
NVS pmax pmax
comp=N,10.0nm,1.0s
NVS pmax pmax
comp=Z,22nm,1.0s
NVS pmax pmax
comp=E,9.0nm,1.2s
ZAA0 Zalesovo Array 60.52 325 eP P 18 31 29.6 -0.1
ZALV Zalesovo Beam 60.52 325 i P P 18 31 29.8 +0.1
ZALV pmax pmax
comp=Z,16nm,0.8s
ZALV Zalesovo Beam 60.52 325 P P 18 31 29.9 +0.2
ZALV Zalesovo Beam 60.52 325 P P 18 31 29.9 +0.2
comp=Z,16nm,0.8s,baz=28,slow=6.8,SNR=81
JOF Joensuu 60.98 358 eP P 18 31 32.3 -0.5
JOF pmax pmax
comp=Z,11nm,0.7s
JOF Joensuu 60.98 358 ep P 18 31 32.3 -0.5
comp=Z,10nm,0.7s
KAF Kangasniemi 61.82 1 eP P 18 31 37.2 -1.2
KAF pmax pmax
comp=Z,9.0nm,0.7s
KAF Kangasniemi 61.82 1 ep P 18 31 37.2 -1.2
comp=Z,9.4nm,0.7s
SOKR Solikamsk 62.06 344 d iP P 18 31 40.2 +0.2
SOKR pmax pmax
comp=Z,20nm,0.7s
SOKR MLR MLR
comp=Z,7μm,19.0s
NB2 NORSAR Subarra 62.19 9 P P 18 31 41.1 +0.1
comp=Z,1.8nm,0.7s,baz=352,slow=6.9
NOA NORSAR Array B 62.19 9 P P 18 31 41.1 +0.1
NOA NORSAR Array B 62.19 9 P P 18 31 41.1 +0.1
comp=Z,14nm,0.8s,baz=350,slow=6.7,SNR=61
NAO01 NORSAR Array S 62.35 9 eP P 18 31 41.8 -0.3
comp=Z,12nm,0.8s
FIA1 FINESS Array S 62.49 1 eP P 18 31 42.9 0.0
FINES FINESS Array B 62.49 1 P P 18 31 42.9 0.0
FINES FINESS Array B 62.49 1 P P 18 31 42.9 0.0
comp=Z,21nm,0.9s,baz=4.6,slow=9.6,SNR=59
NJ2 Nanjing 63.34 288 eP P 18 31 48.1 -0.9
NJ2 pmax pmax
comp=Z,20nm,1.0s
KONO Kongsberg 63.41 10 eP P 18 31 49.5 +0.4
KONO pmax pmax
comp=Z,32nm,1.3s
KONO Kongsberg 63.41 10 eP P 18 31 49.5 +0.4
comp=Z,32nm,1.3s
SVE Sverdlovsk 64.03 341⇑ iP P 18 31 53.6 +0.4
SVE pmax pmax
comp=Z,30nm,1.1s
ARU Arti 64.78 342 c iP P 18 31 57.7 -0.4
ARU 18 34 17.2
ARU S S 18 40 35.9 -1.9
ARU pmax pmax
comp=Z,28nm,1.2s
KURK Kurchatov 65.23 327 c iP P 18 32 00.8 -0.3
KURK pmax pmax
comp=Z,12nm,1.3s
KURK Kurchatov 65.23 327 eP P 18 32 00.9 -0.3
comp=Z,16nm,1.2s
BRVK Borovoye 65.43 333 eP P 18 32 01.2 -1.2
BRVK pmax pmax
comp=Z,18nm,0.9s
BRVK Borovoye 65.43 333 eP P 18 32 01.2 -1.2
comp=Z,18nm,0.9s
VSU Vasula 65.49 1 c iP P 18 32 03.0 +0.3
VSU pmax pmax
comp=Z,47nm,1.0s
GTA Gaotai 66.83 307 ⇑P P 18 32 11.5 -0.3
GTA pP pP 18 32 16.3 -0.4
GTA sP sP 18 32 18.5 -0.1
GTA PP PP 18 34 41.0 +2.5
GTA S S 18 41 04.1 +0.5
GTA sS sS 18 41 12.3 +0.6
GTA pmax pmax
comp=Z,9.0nm,1.3s
GTA pmax pmax
comp=Z,78nm,5.7s
XAN Xi'an 66.86 297 P P 18 32 11.6 -0.4
XAN pmax pmax
comp=Z,2.0nm,0.9s
XAN pmax pmax
comp=Z,24nm,6.3s
WHN Wuhan 66.89 291 P P 18 32 12.1 0.0
MK31 Makanchi Array 67.49 323 eP P 18 32 15.4 -0.4
MK31 Makanchi Array 67.49 323 eP P 18 32 15.4 -0.4
MKAR Makanchi Array 67.49 323 c eP P 18 32 15.3 -0.5
MKAR pmax pmax
comp=Z,7.0nm,0.9s
MKAR Makanchi Array 67.49 323 P P 18 32 15.4 -0.4
MKAR Makanchi Array 67.49 323 P P 18 32 15.4 -0.4
comp=Z,7.0nm,0.9s,baz=48,slow=6.9,SNR=58
LZH Lanzhou 67.68 302 eP P 18 32 16.9 -0.4

LZH pP **pP** 18 32 20.0 -2.2
LZH sP **sP** 18 32 22.0 -2.0
LZH pmax pmax
comp=Z,21nm,1.1s
WMQ Urumqi 68.13 317 P **P** 18 32 20.8 +0.9
WMQ pP **pP** 18 32 25.4 +0.6
WMQ sP **sP** 18 32 27.8 +1.1
WMQ PcP **PcP** 18 32 47.0 +1.2
WMQ PP **PP** 18 34 52.8 +3.2
WMQ PcS 18 36 50.5
WMQ S **S** 18 41 18.0 -1.0
WMQ sS **sS** 18 41 25.8 -1.3
WMQ ScS **SKiKP** 18 42 15.5 +1.4
WMQ SS **SS** 18 45 41.3 +0.7
WMQ pmax pmax
comp=Z,12nm,0.5s
WMQ pmax pmax
comp=Z,110nm,4.6s
WMQ LR LR
comp=N,3µm,14.0s
WMQ LR LR
comp=E,3µm,13.4s
WMQ LR LR
comp=Z,3µm,28.0s
HLG Helgoland 68.60 12 *e*P **P** 18 32 25.0 +2.5
comp=Z,156nm,1.4s
OBN Obninsk 68.61 355 ⇧*i*P **P** 18 32 22.2 -0.3
OBN *e* 18 32 29.6
OBN *e*S **S** 18 41 20.6 -3.5
OBN pmax pmax
comp=Z,30nm,0.8s
OBN MLR MLR
comp=Z,4µm,21.0s
RGN Rugen 68.80 9 *e*P **P** 18 32 25.3 +1.6
comp=Z,110nm,1.2s
BSEG Bad Segeberg 69.11 11 *e*P **P** 18 32 27.0 +1.3
BSEG pmax pmax
comp=Z,26nm,0.9s
BSEG Bad Segeberg 69.11 11 *e*P **P** 18 32 27.0 +1.3
comp=Z,26nm,0.9s
TWG Pinlang 69.45 280 *e*P **P** 18 32 29.1 +0.8
ENH Enshi 69.61 294 *e*P **P** 18 32 28.4 -0.8
comp=Z,9.0nm,1.0s
SUW Suwalki 69.89 3 *e*P **P** 18 32 29.9 -0.6
SUW pmax pmax
comp=Z,33nm,0.7s
SUW Suwalki 69.89 3 *e*P **P** 18 32 29.9 -0.6
comp=Z,32nm,0.7s
IBBN Ibbenburen 70.42 13 *e*P **P** 18 32 35.0 +1.2
comp=Z,15nm,0.9s
NRDL Niedersach Rie 70.51 11 *e*P **P** 18 32 35.3 +1.0
comp=Z,20nm,1.0s
RUE Ruedersdorf 70.88 9 *e*P **P** 18 32 37.8 +1.2
comp=Z,22nm,0.7s
BUG Bochum-Univer 71.21 13 *e*P **P** 18 32 39.2 +0.6
comp=Z,27nm,0.8s
ABKAR Akbulak array 71.34 338 *e*P **P** 18 32 39.0 -0.4
comp=Z,6.7nm,0.6s
NEUB Neuenburg 71.96 10 *e*P **P** 18 32 44.2 +1.1
comp=Z,20nm,0.8s
CLL Collm 71.98 10 *i*P **P** 18 32 43.3 +0.1
CLL *i* 18 32 50.3
CLL pmax pmax
comp=Z,8.0nm,0.9s
CLL Collm 71.98 10 *e*P **P** 18 32 43.9 +0.7
comp=Z,8.0nm,0.9s
CLL Collm 71.98 10 *i*P **P** 18 32 43.3 +0.1
comp=Z,8.0nm,0.9s
CLL *i* (sP) **sP** 18 32 50.3 +0.3
BAIF Baives 72.14 16 *e*P **P** 18 32 45.0 +0.8
comp=Z,14nm,0.8s
BAIF Baives 72.14 16 *e*P **P** 18 32 45.0 +0.8
BAIF pmax pmax
comp=Z,14nm,0.8s
BAIF Baives 72.14 16 *e*P **P** 18 32 45.0 +0.8
comp=Z,14nm,0.8s
UBBA Unterbreizbach 72.15 12 *e*P **P** 18 32 45.5 +1.3
GIVF Givet 72.19 15 *e*P **P** 18 32 45.0 +0.5
comp=Z,30nm,0.9s
GIVF Givet 72.19 15 *e*P **P** 18 32 45.0 +0.5
GIVF pmax pmax
comp=Z,31nm,0.9s
GIVF Givet 72.19 15 *e*P **P** 18 32 45.0 +0.5
comp=Z,30nm,0.9s
VRHR Novokhopersk 72.25 351 *e*P **P** 18 32 43.0 -1.9
VRHR pmax pmax
comp=Z,20nm,1.4s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,7.0nm,0.7s
VSR Storozhevoye 72.33 352 *e*P **P** 18 32 44.7 -0.6
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s
BRG Berggiesshubel 72.49 9 *e*P **P** 18 32 47.0 +0.7
comp=Z,14nm,1.1s
BRG *e* 18 32 53.3
comp=Z,5.6nm,0.9s
BRG Berggiesshubel 72.49 9 *e*P **P** 18 32 47.0 +0.7
BRG *e* 18 32 53.3
BRG pmax pmax
comp=Z,14nm,1.2s
BRG pmax pmax
comp=Z,6.0nm,0.9s
BRG Berggiesshubel 72.49 9 *e*P **P** 18 32 47.0 +0.7
comp=Z,14nm,1.1s
MOX Moxa 72.50 11 *e*P **P** 18 32 47.4 +1.0
MOX pmax pmax
comp=Z,16nm,1.0s
MOX Moxa 72.50 11 *e*P **P** 18 32 47.4 +1.0
comp=Z,16nm,1.0s
TNS Taunus Mts 72.56 13 *e*P **P** 18 32 47.8 +1.0
TNS pmax pmax
comp=Z,16nm,1.4s
TNS Taunus Mts 72.56 13 *e*P **P** 18 32 47.8 +1.0
comp=Z,16nm,1.4s
FLN La Foliniere 72.61 19 *e*P **P** 18 32 47.3 +0.2
comp=Z,47nm,1.0s
FLN La Foliniere 72.61 19 *e*P **P** 18 32 47.3 +0.2
FLN pmax pmax
comp=Z,47nm,1.0s
FLN La Foliniere 72.61 19 *e*P **P** 18 32 47.3 +0.2
comp=Z,47nm,1.0s
PLN Plauen 72.71 10 *e*P **P** 18 32 48.7 +1.0
comp=Z,42nm,0.9s
SGMF Saint Gilles 72.71 21 *e*P **P** 18 32 48.2 +0.5
SGMF Saint Gilles 72.71 21 *e*P **P** 18 32 48.2 +0.5
SGMF Saint Gilles 72.71 21 *e*P **P** 18 32 48.2 +0.5
KSP Ksiaz 72.71 8 *e*P **P** 18 32 48.1 +0.5
WERD Werda 72.76 10 *e*P **P** 18 32 49.0 +1.0
comp=Z,6.0nm,0.9s
WLF Walferdange 72.80 14 *e*P **P** 18 32 45.8 -2.4
WLF pmax pmax
comp=Z,17nm,1.0s
WLF Walferdange 72.80 14 *e*P **P** 18 32 49.5 +1.3
comp=Z,32nm,1.4s
WLF Walferdange 72.80 14 *e*P **P** 18 32 45.8 -2.4
comp=Z,17nm,1.0s
TANN Tannenbergstha 72.81 10 *e*P **P** 18 32 49.4 +1.1
comp=Z,8.0nm,1.1s
LDF La Druitiere 72.84 19 *e*P **P** 18 32 48.5 +0.1
comp=Z,109nm,1.5s
LDF La Druitiere 72.84 19 *e*P **P** 18 32 48.5 +0.1
LDF pmax pmax
comp=Z,109nm,1.5s
LDF La Druitiere 72.84 19 *e*P **P** 18 32 48.5 +0.1
comp=Z,109nm,1.5s
GUNZ Gunzen 72.85 10 *e*P **P** 18 32 49.4 +0.9
comp=Z,13nm,1.2s
PVCC Panska Ves 72.89 9 *i*P **P** 18 32 49.8 +1.1
PVCC *e* 18 32 56.3
PVCC Panska Ves 72.89 9 *i*P **P** 18 32 49.8 +1.1
PVCC *ex* x 18 32 56.3
GRR Gorron 72.90 19 *e*P **P** 18 32 49.3 +0.5
comp=Z,26nm,0.9s
GRR Gorron 72.90 19 *e*P **P** 18 32 49.3 +0.5
GRR pmax pmax
comp=Z,26nm,0.9s
GRR Gorron 72.90 19 *e*P **P** 18 32 49.3 +0.5
comp=Z,26nm,0.9s
QUIF Quistinic 72.91 21 *e*P **P** 18 32 49.3 +0.5
QUIF Quistinic 72.91 21 *e*P **P** 18 32 49.3 +0.5
QUIF Quistinic 72.91 21 *e*P **P** 18 32 49.3 +0.5
WERN Wernitzgruen 72.93 10 *e*P **P** 18 32 50.1 +1.1
comp=Z,11nm,1.1s
NKC Novy Kostel 72.99 10 *i*P **P** 18 32 50.3 +1.0
NKC Novy Kostel 72.99 10 *i*P **P** 18 32 50.3 +1.0
UPC Upice 73.02 8 *i*P **P** 18 32 50.2 +0.7
UPC Upice 73.02 8 *i*P **P** 18 32 50.2 +0.7
TKM2 Tokmak 2 73.12 325 *i*P **P** 18 32 51.1 +0.6
TKM2 Tokmak 2 73.12 325 *e*P **P** 18 32 50.9 +0.4
comp=Z,12nm,0.9s
TKM2 Tokmak 2 73.12 325 P **P** 18 32 51.2 +0.6
SNR=11
USP Ospenovka 73.15 326 P **P** 18 32 51.2 +0.7
SNR=8.5
MANZ Manzenberg 73.20 10 *e*P **P** 18 32 51.1 +0.5
comp=Z,15nm,1.8s
DPC Dobruska-Polom 73.20 8 *i*P **P** 18 32 51.6 +1.0
DPC *e* 18 32 58.1
DPC Dobruska-Polom 73.20 8 *e*P **P** 18 32 51.7 +1.0
comp=Z,23nm,0.9s
DPC Dobruska-Polom 73.20 8 *i*P **P** 18 32 51.6 +1.0
DPC *ex* x 18 32 58.1
AKASG Malin Array Be 73.26 359 *ce*P **P** 18 32 50.7 -0.2
AKASG pmax pmax
comp=Z,16nm,0.7s
AKASG Malin Array Be 73.26 359 P **P** 18 32 50.4 -0.4
AKASG Malin Array Be 73.26 359 P **P** 18 32 50.4 -0.4
comp=Z,16nm,0.7s,baz=1.8,slow=5.9,SNR=38
KIEV Kiev 73.27 359 *e*P **P** 18 32 50.3 -0.6
KIEV pmax pmax
comp=Z,16nm,0.7s
KIEV Kiev 73.27 359 *e*P **P** 18 32 50.3 -0.6
comp=Z,16nm,0.7s
AK01 Malin Array Si 73.27 359 *e*P **P** 18 32 50.1 -0.8
AK02 Malin Array Si 73.30 359 *e*P **P** 18 32 50.5 -0.7
CHMS Chumysh 73.32 326 P **P** 18 32 52.5 +1.1
SNR=7.2
GRF Grafenberg Arr 73.40 11 *e*P **P** 18 32 52.7 +1.0
GRF pmax pmax
comp=Z,10.0nm,0.8s
GRF Grafenberg Arr 73.40 11 *e*P **P** 18 32 52.7 +1.0
comp=Z,10.0nm,0.8s
PRU Pruhonice 73.42 9 *i*P **P** 18 32 52.4 +0.5
PRU *e* 18 32 59.4
PRU Pruhonice 73.42 9 *i*P **P** 18 32 52.4 +0.5
PRU *ex* x 18 32 59.4
ROTZ Rotzenmuhle 73.42 10 *e*P **P** 18 32 52.9 +1.0
comp=Z,9.0nm,0.9s
KRLC Kraliky 73.51 7 *i*P **P** 18 32 53.1 +0.7
KRLC Kraliky 73.51 7 *i*P **P** 18 32 53.1 +0.7
FRU Bishkek 73.51 326 *e*P **P** 18 32 52.0 -0.6
OJC Ojcow 73.55 5 *e*P **P** 18 32 53.5 +0.9
OJC pmax pmax
comp=Z,5.0nm,0.9s
OJC Ojcow 73.55 5 *e*P **P** 18 32 53.5 +0.9
comp=Z,5.1nm,0.9s
KBK Karagaybulak 73.57 326 P **P** 18 32 53.7 +0.6
SNR=11
AAK Ala-Archa 73.73 326 *i*P **P** 18 32 54.7 +0.7
AAK Ala-Archa 73.73 326 *e*P **P** 18 32 54.4 +0.4
comp=Z,2.1nm,0.9s
AAK Ala-Archa 73.73 326 P **P** 18 32 54.8 +0.7
SNR=7.1
MEZF Maizieres J'vi 73.78 15 *e*P **P** 18 32 54.8 +0.8
comp=Z,11nm,0.6s
MEZF Maizieres J'vi 73.78 15 *e*P **P** 18 32 54.8 +0.8
comp=Z,11nm,0.6s
PAGF Fort de Pagny 73.83 15 *e*P **P** 18 32 55.1 +0.8
comp=Z,3.0nm,0.7s
PAGF Fort de Pagny 73.83 15 *e*P **P** 18 32 55.1 +0.8
comp=Z,3.0nm,0.7s
OKC Ostrava-Krasne 73.84 6 *i*P **P** 18 32 54.8 +0.5
OKC Ostrava-Krasne 73.84 6 *i*P **P** 18 32 54.8 +0.5
MORC Moravsky Berou 73.86 7 *e*P **P** 18 32 54.3 -0.2
MORC pmax pmax
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 73.86 7 *e*P **P** 18 32 54.2 -0.2
comp=Z,4.0nm,0.8s
EKS2 Erkin-Say 73.92 326 *e*P **P** 18 32 55.4 +0.3
EKS2 pmax pmax
comp=Z,13nm,0.9s
EKS2 Erkin-Say 73.92 326 *e*P **P** 18 32 55.4 +0.3
comp=Z,13nm,0.9s
EKS2 Erkin-Say 73.92 326 P **P** 18 32 55.9 +0.8
SNR=12
KZA Kyzart 73.99 325 P **P** 18 32 56.4 +0.5
SNR=5.3
SFTF Sexfontaines 74.07 16 *e*P **P** 18 32 56.2 +0.5
comp=Z,57nm,1.3s
SFTF Sexfontaines 74.07 16 *e*P **P** 18 32 56.2 +0.5
comp=Z,57nm,1.3s
STU Stuttgart 74.07 13 *e*P **P** 18 32 56.8 +1.1
comp=Z,10.0nm,0.9s
WET Wettzell 74.11 10 *e*P **P** 18 32 56.6 +0.7
WET pmax pmax
comp=Z,17nm,1.4s
WET Wettzell 74.11 10 *e*P **P** 18 32 56.6 +0.7
comp=Z,17nm,1.4s
GYA Guiyang 74.14 294 P **P** 18 32 57.0 +0.4
GYA PP **PP** 18 35 44.3 +2.6
GYA S **S** 18 42 29.8 +0.6
GYA SKS **SKSac** 18 43 01.3 -2.3
GYA SS **SS** 18 47 15.6 +1.9
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.2s
GYA LR LR
comp=N,520nm,19.5s
GYA LR LR
comp=E,440nm,20.6s
GYA LR LR
comp=Z,560nm,19.0s
CDF Champ du Feu 74.18 14 *e*P **P** 18 32 57.1 +0.6
comp=Z,18nm,1.0s
CDF Champ du Feu 74.18 14 *e*P **P** 18 32 57.1 +0.6
CDF pmax pmax
comp=Z,18nm,1.0s
CDF Champ du Feu 74.18 14 *e*P **P** 18 32 57.1 +0.6
comp=Z,18nm,1.0s
KHC Kasperske Hory 74.19 10 *e*P **P** 18 32 56.5 +0.1
KHC pmax pmax
comp=Z,8.0nm,0.9s
KHC Kasperske Hory 74.19 10 *e*P **P** 18 32 56.5 +0.1
comp=Z,8.4nm,0.9s
KHC Kasperske Hory 74.19 10 *i*P **P** 18 32 57.7 +1.3
KHC *e*pP **pP** 18 33 03.7 +2.3
ECH Echery 74.36 14 *e*P **P** 18 32 57.1 -0.3
ECH pmax pmax
comp=Z,27nm,1.4s
ECH Echery 74.36 14 *e*P **P** 18 32 57.0 -0.3
comp=Z,27nm,1.4s
BFO Black Forest 74.40 13 *e*P **P** 18 32 56.8 -0.8
BFO pmax pmax
comp=Z,82nm,2.4s
BFO Black Forest 74.40 13 *e*P **P** 18 32 58.3 +0.6
comp=Z,11nm,1.1s
BFO Black Forest 74.40 13 *e*P **P** 18 32 56.8 -0.8
comp=Z,82nm,2.4s
AML Almayashu 74.43 326 P **P** 18 32 59.3 +0.9
SNR=11
HAU Haudompre 74.45 15 *e*P **P** 18 32 58.5 +0.5
comp=Z,13nm,0.7s
HAU Haudompre 74.45 15 *e*P **P** 18 32 58.5 +0.5
HAU pmax pmax
comp=Z,13nm,0.7s
HAU Haudompre 74.45 15 *e*P **P** 18 32 58.5 +0.5
comp=Z,13nm,0.7s
GEC2 GERESS Array S 74.48 10 *e*P **P** 18 32 58.7 +0.5
GEC2 pmax pmax
comp=Z,5.0nm,0.8s
GEC2 GERESS Array S 74.48 10 *e*P **P** 18 32 58.7 +0.5
comp=Z,5.0nm,0.8s
GEC2 GERESS Array S 74.48 10 *e*P **P** 18 32 59.1 +0.9
GERES GERESS Array B 74.48 10 P **P** 18 32 58.7 +0.5
GERES GERESS Array B 74.48 10 P **P** 18 32 58.7 +0.5
comp=Z,3.5nm,0.8s,baz=352,slow=4.6,SNR=39
KKAR Karatay Array 74.49 329 *e*P **P** 18 32 57.9 -0.4
KKAR Karatay Array 74.49 329 *e*P **P** 18 32 57.9 -0.4
HYF Humbligny 74.60 17 *e*P **P** 18 32 59.5 +0.7
HYF Humbligny 74.60 17 *e*P **P** 18 32 59.5 +0.7
HINF Hinteralfeld 74.71 14 *e*P **P** 18 32 59.9 +0.4
comp=Z,28nm,1.2s
HINF Hinteralfeld 74.71 14 *e*P **P** 18 32 59.9 +0.4
HINF pmax pmax
comp=Z,28nm,1.2s
HINF Hinteralfeld 74.71 14 *e*P **P** 18 32 59.9 +0.4
comp=Z,28nm,1.2s
MFF Saint Martin d 74.76 19 *e*P **P** 18 33 00.2 +0.5
comp=Z,42nm,1.0s
MFF Saint Martin d 74.76 19 *e*P **P** 18 33 00.2 +0.5
MFF pmax pmax
comp=Z,42nm,1.0s
MFF Saint Martin d 74.76 19 *e*P **P** 18 33 00.2 +0.5
comp=Z,42nm,1.0s
LOR Lormes 74.80 17 *e*P **P** 18 33 00.5 +0.5
comp=Z,26nm,0.9s
LOR Lormes 74.80 17 *e*P **P** 18 33 00.5 +0.5
comp=Z,26nm,0.9s
FUR Furstenfeldbru 74.91 11 *e*P **P** 18 33 01.5 +0.9
FUR pmax pmax
comp=Z,13nm,1.0s
FUR Furstenfeldbru 74.91 11 *e*P **P** 18 33 01.5 +0.9
comp=Z,13nm,1.0s
CRVS Cervenica-Dubn 74.94 4 *e*P **P** 18 33 00.0 -0.8
KOLS Kolonicke sedl 74.94 4 *e*P **P** 18 33 01.2 +0.4
KOLS pmax pmax
comp=Z,9.0nm,1.5s
KOLS Kolonicke sedl 74.94 4 *e*P **P** 18 33 01.2 +0.4
SSF Saint Saulge 74.94 17 *e*P **P** 18 33 01.3 +0.5
comp=Z,46nm,1.1s
SSF Saint Saulge 74.94 17 *e*P **P** 18 33 01.3 +0.5
SSF pmax pmax
comp=Z,46nm,1.1s
SSF Saint Saulge 74.94 17 *e*P **P** 18 33 01.3 +0.5
comp=Z,46nm,1.1s
AVF Avril sur Loir 75.18 17 *e*P **P** 18 33 02.4 +0.2
comp=Z,13nm,0.5s
AVF Avril sur Loir 75.18 17 *e*P **P** 18 33 02.4 +0.2
AVF pmax pmax
comp=Z,13nm,0.5s
AVF Avril sur Loir 75.18 17 *e*P **P** 18 33 02.4 +0.2
comp=Z,13nm,0.5s
VYHS Vyhne 75.22 6 *e*P **P** 18 33 03.2 +0.8
VYHS pmax pmax
comp=Z,6.0nm,1.1s
VYHS Vyhne 75.22 6 *e*P **P** 18 33 03.2 +0.8
BGF Bois d'Agland 75.33 17 *e*P **P** 18 33 03.3 +0.3
comp=Z,27nm,0.9s
BGF Bois d'Agland 75.33 17 *e*P **P** 18 33 03.3 +0.3
BGF pmax pmax
comp=Z,27nm,0.9s
BGF Bois d'Agland 75.33 17 *e*P **P** 18 33 03.3 +0.3
comp=Z,27nm,0.9s
SMF Signal de Mont 75.40 17 *e*P **P** 18 33 03.6 +0.1
comp=Z,13nm,0.7s
SMF Signal de Mont 75.40 17 *e*P **P** 18 33 03.6 +0.1
SMF pmax pmax
comp=Z,13nm,0.7s
SMF Signal de Mont 75.40 17 *e*P **P** 18 33 03.6 +0.1
comp=Z,13nm,0.7s
ZST Bratislava 75.40 7 *e*P **P** 18 33 03.4 0.0
ZST pmax pmax
comp=Z,6.0nm,1.0s
ZST Bratislava 75.40 7 *e*P **P** 18 33 03.4 0.0
TCF Toulx Ste Croi 75.48 18 *e*P **P** 18 33 04.2 +0.3
comp=Z,52nm,1.4s
TCF Toulx Ste Croi 75.48 18 *e*P **P** 18 33 04.2 +0.3
TCF pmax pmax
comp=Z,53nm,1.4s
TCF Toulx Ste Croi 75.48 18 *e*P **P** 18 33 04.2 +0.3
comp=Z,52nm,1.4s
RJOB Jochberg 75.49 10 *e*P **P** 18 33 04.7 +0.7
comp=Z,10.0nm,0.9s
CABF La Chapelle 75.78 15 *e*P **P** 18 33 06.4 +0.7
comp=Z,41nm,1.2s
CABF La Chapelle 75.78 15 *e*P **P** 18 33 06.4 +0.7
CABF pmax pmax
comp=Z,41nm,1.2s
CABF La Chapelle 75.78 15 *e*P **P** 18 33 06.4 +0.7
comp=Z,41nm,1.2s
PSZ Piszkesteto 75.85 5 *e*P **P** 18 33 05.5 -0.6
PSZ pmax pmax
comp=Z,15nm,1.2s
PSZ Piszkesteto 75.85 5 *e*P **P** 18 33 05.5 -0.6
comp=Z,15nm,1.2s
KSH Kashi 76.07 323 P P 18 33 11.1 +3.5
KSH *e*pP pP 18 33 16.0 +3.4
KSH *e*sP sP 18 33 18.3 +3.9
KSH *e*PcP **PcP** **18 33 22.8 +3.0**
KSH *e*PP PP 18 36 04.4 +6.8
KSH *e*S **S** **18 42 54.4 +4.1**
KSH *e*sS sS 18 43 02.1 +3.5
KSH *e*SKS **SKSac** **18 43 16.8 -0.9**
KSH *e*ScS **ScS** **18 43 22.9 +1.2**
KSH *e*SS SS 18 47 52.1 +10
KSH pmax pmax
comp=Z,14nm,0.8s
KSH pmax pmax
comp=Z,180nm,4.3s
KSH LR LR
comp=N,620nm,5.6s
KSH LR LR
comp=E,360nm,6.9s
KSH LR LR
comp=Z,310nm,4.9s
BUR08 Bucovina Ar. S 76.31 2 *e*P **P** **18 33 08.1 -0.6**
RJF Les Rejaudoux 76.31 19 *e*P **P** **18 33 08.7 0.0**
RJF Les Rejaudoux 76.31 19 *e*P **P** **18 33 08.7 0.0**
RJF Les Rejaudoux 76.31 19 *e*P **P** **18 33 08.7 0.0**
FUORN Ofenpass-Fuorn 76.32 12 *e*P **P** **18 33 10.5 +1.5**
comp=Z,15nm,1.4s
LFF La Frestale 76.52 19 *e*P **P** **18 33 10.4 +0.6**
comp=Z,32nm,0.8s
LFF La Frestale 76.52 19 *e*P **P** **18 33 10.4 +0.6**
LFF pmax pmax
comp=Z,32nm,0.8s
LFF La Frestale 76.52 19 *e*P **P** **18 33 10.4 +0.6**
comp=Z,32nm,0.8s
CAF Calviac 76.77 18 *e*P **P** **18 33 11.7 +0.4**
comp=Z,35nm,1.2s
CAF Calviac 76.77 18 *e*P **P** **18 33 11.7 +0.4**
CAF pmax pmax
comp=Z,35nm,1.2s
CAF Calviac 76.77 18 *e*P **P** **18 33 11.7 +0.4**
comp=Z,35nm,1.2s
LPL La Plagne 76.94 15 *e*P **P** **18 33 13.8 +1.3**
LPL La Plagne 76.94 15 *e*P **P** **18 33 13.8 +1.3**
LPL La Plagne 76.94 15 *e*P **P** **18 33 13.8 +1.3**
LPG La Plagne 76.96 15 *e*P **P** **18 33 14.3 +1.6**
LPG La Plagne 76.96 15 *e*P **P** **18 33 14.3 +1.6**
LPG La Plagne 76.96 15 *e*P **P** **18 33 14.3 +1.6**
KMI Kunming 77.22 296 P **P** **18 33 12.9 -1.5**
KMI pP **pP** **18 33 18.8 -0.6**
KMI pmax pmax
comp=Z,9.0nm,0.9s
VIVF Saint-Julien-l 77.28 17 *e*P **P** **18 33 14.8 +0.6**
comp=Z,13nm,0.8s
VIVF Saint-Julien-l 77.28 17 *e*P **P** **18 33 14.8 +0.6**
VIVF pmax pmax
comp=Z,13nm,0.8s
VIVF Saint-Julien-l 77.28 17 *e*P **P** **18 33 14.8 +0.6**
comp=Z,13nm,0.8s
ORIF Oris-en-Rattie 77.40 16 *e*P **P** **18 33 15.6 +0.7**
comp=Z,7.0nm,0.7s
ORIF Oris-en-Rattie 77.40 16 *e*P **P** **18 33 15.6 +0.7**
ORIF pmax pmax
comp=Z,7.0nm,0.7s
ORIF Oris-en-Rattie 77.40 16 *e*P **P** **18 33 15.6 +0.7**
comp=Z,7.0nm,0.7s
SJPF Ste Jean 77.90 21 *e*P **P** **18 33 18.0 +0.3**
SJPF Ste Jean 77.90 21 *e*P **P** **18 33 18.0 +0.3**
SJPF Ste Jean 77.90 21 *e*P **P** **18 33 18.0 +0.3**
LASF Ste Croix 77.91 17 *e*P **P** **18 33 18.5 +0.8**
LASF Ste Croix 77.91 17 *e*P **P** **18 33 18.5 +0.8**
ETSF Etsaut 78.24 21 *e*P **P** **18 33 20.5 +0.9**
comp=Z,31nm,0.9s
ETSF Etsaut 78.24 21 *e*P **P** **18 33 20.5 +0.9**
ETSF pmax pmax
comp=Z,31nm,0.9s
ETSF Etsaut 78.24 21 *e*P **P** **18 33 20.5 +0.9**
comp=Z,31nm,0.9s
SMRF Simiane la Rot 78.28 16 *e*P **P** **18 33 21.1 +1.4**
comp=Z,27nm,1.0s
SMRF Simiane la Rot 78.28 16 *e*P **P** **18 33 21.1 +1.4**
comp=Z,27nm,1.0s
EPF Esparros 78.29 20 *e*P **P** **18 33 19.7 -0.2**
EPF Esparros 78.29 20 *e*P **P** **18 33 19.7 -0.2**
EPF Esparros 78.29 20 *e*P **P** **18 33 19.7 -0.2**
MTLF Montolieu 78.34 19 *e*P **P** **18 33 20.6 +0.6**
comp=Z,16nm,0.9s

MTLF	**Montolieu**	**78.34**	**19**	*e*P		**P**		**18 33 20.6**	**+0.6**
MTLF				pmax		pmax			
	comp=Z,16nm,0.9s								
MTLF	**Montolieu**	**78.34**	**19**	*e*P		**P**		**18 33 20.6**	**+0.6**
	comp=Z,16nm,0.9s								
SBF	**Sospel**	**78.66**	**15**	*e*P		**P**		**18 33 22.3**	**+0.4**
	comp=Z,50nm,1.1s								
SBF	**Sospel**	**78.66**	**15**	*e*P		**P**		**18 33 22.3**	**+0.4**
SBF				pmax		pmax			
	comp=Z,51nm,1.1s								
SBF	**Sospel**	**78.66**	**15**	*e*P		**P**		**18 33 22.3**	**+0.4**
	comp=Z,50nm,1.1s								
LSA	**Lhasa**	**78.83**	**307**	*e*P		**P**		**18 33 24.2**	**+0.6**
LSA				pmax		pmax			
	comp=Z,9.0nm,0.9s								
LSA	**Lhasa**	**78.83**	**307**	*e*P		**P**		**18 33 24.2**	**+0.6**
	comp=Z,9.1nm,0.9s								
FRF	**La Foret Royal**	**78.84**	**15**	*e*P		**P**		**18 33 23.3**	**+0.5**
FRF	**La Foret Royal**	**78.84**	**15**	*e*P		**P**		**18 33 23.3**	**+0.5**
FRF	**La Foret Royal**	**78.84**	**15**	*e*P		**P**		**18 33 23.3**	**+0.5**
LMR	**La Mourre**	**79.05**	**16**	*e*P		**P**		**18 33 24.6**	**+0.7**
	comp=Z,11nm,0.9s								
LMR	**La Mourre**	**79.05**	**16**	*e*P		**P**		**18 33 24.6**	**+0.7**
LMR				pmax		pmax			
	comp=Z,11nm,0.9s								
LMR	**La Mourre**	**79.05**	**16**	*e*P		**P**		**18 33 24.6**	**+0.7**
	comp=Z,11nm,0.9s								
KBZ	**Khabaz**	**79.42**	**349**	P		**P**		**18 33 27.1**	**+1.2**
KBZ	**Khabaz**	**79.42**	**349**	P		**P**		**18 33 27.1**	**+1.2**
KBZ	**Khabaz**	**79.42**	**349**	P		**P**		**18 33 27.1**	**+1.2**
	comp=Z,9.5nm,0.9s,baz=318,slow=3.4,SNR=29								
MAK	**Makhachkala**	**79.60**	**345**	*e*P		**P**		**18 33 26.8**	**-0.1**
ZEI	**Tsey**	**80.24**	**348**	*e*P		**P**		**18 33 29.3**	**-1.4**
ZEI				pmax		pmax			
	comp=Z,9.0nm,1.1s								
ESDC	**Sonseca Array**	**80.61**	**24**	P		**P**		**18 33 33.7**	**+1.1**
ESDC	**Sonseca Array**	**80.61**	**24**	P		**P**		**18 33 33.7**	**+1.1**
	comp=Z,6.9nm,0.8s,baz=340,slow=5.1,SNR=35								
ESLA	**Sonseca Array**	**80.61**	**24**	*e*P		**P**		**18 33 32.6**	**0.0**
	comp=Z,3.2nm,1.0s								
EVOP	**Sao Brissos**	**80.69**	**28**	*e*P		**P**		**18 33 33.3**	**+0.4**
EVOP				pmax		pmax			
	comp=Z,28nm,1.3s								
EVOP	**Sao Brissos**	**80.69**	**28**	*e*P		**P**		**18 33 33.3**	**+0.4**
	comp=Z,28nm,1.3s								
EVO	**Evora**	**80.71**	**28**	*e*P		**P**		**18 33 33.3**	**+0.3**
	comp=Z,28nm,1.3s								
PMG	**Port Moresby**	**82.23**	**240**	P		**P**		**18 33 40.6**	**-0.7**
PMG	**Port Moresby**	**82.23**	**240**	P		**P**		**18 33 40.6**	**-0.7**
	comp=Z,19nm,0.9s,baz=270,slow=5.7,SNR=3.3								
TAPN	**Taplejung**	**82.36**	**309**	*e*P		**P**		**18 33 42.6**	**+0.3**
	comp=Z,24nm,0.7s								
GUN	**Gumba**	**82.66**	**311**	*e*P		**P**		**18 33 44.2**	**+0.3**
	comp=Z,53nm,1.0s								
GNI	**Garni**	**82.74**	**347**	*e*P		**P**		**18 33 45.2**	**+1.3**
	comp=Z,9.6nm,0.9s								
KBL	**Kabul**	**82.83**	**327**	*e*P		**P**		**18 33 43.2**	**-1.4**
KBL				pmax		pmax			
	comp=Z,7.0nm,1.0s								
KBL	**Kabul**	**82.83**	**327**	*e*P		**P**		**18 33 43.2**	**-1.4**
	comp=Z,6.5nm,1.0s								
ODAN	**Odare**	**82.93**	**309**	*e*P		**P**		**18 33 45.3**	**+0.1**
	comp=Z,18nm,0.9s								
KKN	**Kakani**	**83.01**	**311**	*e*P		**P**		**18 33 45.7**	**+0.1**
	comp=Z,22nm,1.0s								
DANN	**Dangsing**	**83.15**	**313**	*e*P		**P**		**18 33 46.8**	**+0.4**
	comp=Z,88nm,0.8s								
PKI	**Pulchoki**	**83.15**	**311**	*e*P		**P**		**18 33 46.4**	**-0.1**
	comp=Z,32nm,0.8s								
PKIN	**Phulchoki**	**83.15**	**311**	*e*P		**P**		**18 33 46.2**	**-0.2**
	comp=Z,23nm,0.8s								
RAMN	**Ramite**	**83.19**	**310**	*e*P		**P**		**18 33 46.5**	**-0.1**
	comp=Z,56nm,0.8s								
DMN	**Daman**	**83.24**	**311**	*e*P		**P**		**18 33 47.1**	**+0.2**
	comp=Z,37nm,0.9s								
PYUN	**Piuthan**	**83.69**	**313**	*e*P		**P**		**18 33 49.0**	**-0.1**
	comp=Z,88nm,1.0s								
KOLN	**Koldanda**	**83.73**	**312**	*e*P		**P**		**18 33 49.3**	**0.0**
	comp=Z,22nm,0.9s								
BR131	**Keskin Array S**	**84.11**	**355**	*e*P		**P**		**18 33 50.4**	**-0.6**
	comp=Z,4.9nm,0.9s								
BRTR	**Keskin Array B**	**84.11**	**355**	P		**P**		**18 33 50.9**	**-0.1**
BRTR	**Keskin Array B**	**84.11**	**355**	P		**P**		**18 33 50.9**	**-0.1**
	comp=Z,5.6nm,0.9s,baz=28,slow=2.7,SNR=40								
BRTR				LR		LR		19 14 57.2	
	comp=Z,2µm,21.3s,baz=128,slow=38								
CHTO	**Chiang Mai**	**84.41**	**296**	*e*P		**P**		**18 33 51.3**	**-1.3**
CHTO				pmax		pmax			
	comp=Z,6.0nm,1.3s								
CHTO	**Chiang Mai**	**84.41**	**296**	*e*P		**P**		**18 33 51.3**	**-1.3**
	comp=Z,6.1nm,1.3s								
CMAR	**Chiang Mai Arr**	**84.71**	**295**	P		**P**		**18 33 53.6**	**-0.5**
CMAR	**Chiang Mai Arr**	**84.71**	**295**	P		**P**		**18 33 53.6**	**-0.5**
	comp=Z,3.6nm,0.9s,baz=19,slow=5.3,SNR=28								
DZM	**Mont Dzumac**	**85.56**	**218**	LR		LR		19 08 03.0	
	comp=Z,4µm,19.8s,baz=34,slow=33								
CSS	**Prodhromos**	**88.87**	**355**	*e*P		**P**		**18 34 14.7**	**+0.5**
	comp=Z,14nm,1.2s								
ASAR	**Alice Springs**	**100.91**	**244**	P		**Pdif**		**18 35 10.7**	**+1.5**
ASAR	**Alice Springs**	**100.91**	**244**	P		**Pdif**		**18 35 10.7**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=34,slow=3.5,SNR=2.9								
BOSA	**Boshof**	**152.18**	**5**	PKPbc		**PKPbc**		**18 41 15.2**	**-0.2**
BOSA				PKPab		**PKPab**		**18 41 22.1**	**-3.0**
BOSA	**Boshof**	**152.18**	**5**	PKPbc		**PKPbc**		**18 41 15.2**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=321,slow=6.5,SNR=4.2								
BOSA				PKPab		**PKPab**		**18 41 22.1**	**-3.0**
	comp=Z,8.5nm,0.9s,baz=334,slow=3.7,SNR=5.6								

IDC ***16*** *18:22:24.4±0.7,56.°47N×152.°47W,h0km,mb4.7/25, mb1 4.8/26,mb1mx4.7/33,mbtmp4.7/26,ML3.9/1,MS5.6/1, Ms1 5.6/1,ms1mx4.6/12,Error ellipse: s-maj=18.1km s-min=11.0km az=25.0*

ISC 16 18:22:26.0±0.3,56.°55N±0.°03×152.°50W±0.°03,h20km, n337,σ1°§19/245,mb5.3/159,MS5.8/54,3C-1D,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**1.24**	**358**	P	**Pb**	**18 22 50.4**	**+1.7**
KDAK	**Kodiak Island**	**1.24**	**358**	Pn	**Pb**	**18 22 49.9**	**+1.1**
	61nm,0.3s,baz=169,slow=21,SNR=8.1						
KDAK				Sn	**Sb**	**18 23 07.1**	**+2.9**
	1µm,0.3s,baz=148,slow=11,SNR=15						
KABR	**Katmai Barrier**	**2.08**	**321**	P	**Pb**	**18 23 03.6**	**+0.6**
KAKN	**Katmai Knife C**	**2.23**	**323**	P	**Pb**	**18 23 05.6**	**-0.2**
KAPH	**Katmai Pasha**	**2.28**	**335**	P	**Pb**	**18 23 05.8**	**-0.7**
KABU	**Katmai Buttres**	**2.29**	**320**	P	**Pb**	**18 23 06.8**	**+0.1**
FOSS	**Fourpeaked Sta**	**2.35**	**345**	P	**Pb**	**18 23 06.6**	**-1.0**
FONW	**Fourpeaked Sta**	**2.42**	**342**	P	**Pb**	**18 23 08.0**	**-0.9**
MCNL	**McNeil River**	**2.82**	**340**	P	Pb	18 23 13.2	-2.4
AUI	**Augustine Isla**	**2.84**	**350**	P	Pb	18 23 13.3	-2.7
AUE	**Augustine Isla**	**2.86**	**351**	P	**Pb**	**18 23 14.3**	**-2.0**
AUL	**Augustine Lava**	**2.89**	**350**	P	**Pb**	**18 23 14.6**	**-2.2**
ANNE	**Aniakchak Nort**	**3.08**	**279**	P	Pn	18 23 15.2	+1.7
ANPK	**Aniakchak Peak**	**3.12**	**278**	P	Pn	18 23 15.7	+1.6
OPT	**Oil Point**	**3.14**	**353**	P	Pb	18 23 17.3	-3.8
CHGN	**Chignik**	**3.29**	**268**	Pn	**Pn**	**18 23 14.2**	**-2.2**
BRLK	**Bradley Lake**	**3.34**	**14**	P	**Pn**	**18 23 17.1**	**0.0**
PDB	**Pedro Bay**	**3.37**	**345**	P	Pb	18 23 20.5	-4.5
PDB	**Pedro Bay**	**3.37**	**345**	P	Pb	18 23 20.5	-4.5
ILS	**Iliamna Low So**	**3.43**	**355**	P	Pb	18 23 21.6	-4.5
IVE	**Iliamna Volcan**	**3.49**	**356**	P	Pn	18 23 21.5	+2.3
ILW	**Iliamna West**	**3.54**	**355**	P	Pn	18 23 22.4	+2.5
SEW	**Seward**	**3.91**	**23**	P	**Pn**	**18 23 26.1**	**+1.2**
RSO	**Redoubt South**	**3.93**	**358**	*e*Pn	Pn	18 23 28.0	+2.7
RDT	**Redoubt**	**4.04**	**1**	P	**Pn**	**18 23 28.7**	**+2.0**
MID	**Middleton Isla**	**4.37**	**46**	P	**Pn**	**18 23 29.9**	**-1.3**
MID				S	**Sn**	**18 24 20.9**	**-0.5**
MID	**Middleton Isla**	**4.37**	**46**	P	**Pn**	**18 23 29.9**	**-1.3**
MID				S	**Sn**	**18 24 20.9**	**-0.5**
SDPT	**Sand Point**	**4.64**	**258**	*e*Pn	Pn	18 23 29.3	-5.6
SVW2	**Sparrevohn**	**4.84**	**342**	P	Pn	18 23 40.6	+3.0
SVW2				S	Sb	18 24 40.7	-7.0
SUA	**Susitna One**	**5.01**	**10**	P	**Pn**	**18 23 41.6**	**+1.5**
EYAK	**Cordova Ski Ar**	**5.35**	**39**	P	**Pn**	**18 23 43.6**	**-1.0**
EYAK				S	**Sn**	**18 24 46.7**	**+1.2**
PMR	**Palmer**	**5.35**	**18**	P	**Pn**	**18 23 45.8**	**+1.2**
PMR	**Palmer**	**5.35**	**18**	P	**Pn**	**18 23 45.8**	**+1.2**
DOL	**Dolgoi Island**	**5.46**	**259**	P	**Pn**	**18 23 45.5**	**-0.6**
VLZ	**Valdez**	**5.60**	**32**	P	**Pn**	**18 23 47.2**	**-0.8**
SML	**Sawmill**	**5.70**	**20**	P	**Pn**	**18 23 51.2**	**+1.8**
SML	**Sawmill**	**5.70**	**20**	P	**Pn**	**18 23 51.2**	**+1.8**
DT1	**Dutton Round H**	**5.70**	**259**	P	**Pn**	**18 23 48.7**	**-0.7**
DIV	**Divide**	**5.77**	**34**	P	**Pn**	**18 23 50.0**	**-0.5**
DIV				S	**Sn**	**18 24 57.1**	**+1.0**
KLU	**Klutina**	**6.01**	**32**	P	**Pn**	**18 23 52.7**	**-1.1**
PPLA	**Purkeypile**	**6.37**	**1**	P	**Pn**	**18 24 00.3**	**+1.5**
FALS	**False Pass**	**6.40**	**259**	P	**Pn**	**18 23 58.4**	**-0.6**
FALS				S	**Sn**	**18 25 12.4**	**+1.1**
TT01	**Tatalina**	**6.62**	**346**	P	Pn	18 24 04.7	+2.6
GLB	**Gilahina Butte**	**6.65**	**39**	P	**Pn**	**18 24 00.8**	**-1.7**
MCARA	**McCarthy VSAT**	**6.89**	**41**	P	**Pn**	**18 24 04.0**	**-1.8**
DHY	**Denali Highway**	**7.04**	**19**	P	**Pn**	**18 24 09.0**	**+1.0**
SAMH	**Samovar Hills**	**7.14**	**55**	P	Pn	18 24 05.6	-3.7
PAX	**Paxson**	**7.35**	**26**	P	**Pn**	**18 24 11.4**	**-0.8**
PAX	**Paxson**	**7.35**	**26**	P	**Pn**	**18 24 11.4**	**-0.8**
MCK	**McKinley**	**7.42**	**12**	P	**Pn**	**18 24 14.3**	**+1.2**
MCK	**McKinley**	**7.42**	**12**	P	**Pn**	**18 24 14.3**	**+1.2**
PNL	**Peninsula**	**7.61**	**60**	P	Pn	18 24 12.5	-3.2
MENT	**Mentasta**	**7.79**	**31**	*e*Pn	Pn	18 24 21.2	+3.1
AKUT	**Akutan**	**7.94**	**258**	*e*Pn	**Pn**	**18 24 20.3**	**+0.1**
WRH	**Wood River Hil**	**8.24**	**13**	P	**Pn**	**18 24 24.8**	**+0.6**
UNV	**Unalaska Valle**	**8.45**	**257**	P	**Pn**	**18 24 25.7**	**-1.4**
MSW	**Makushin Switc**	**8.58**	**258**	P	**Pn**	**18 24 28.2**	**-0.7**
COLA	**College**	**8.66**	**13**	P	**Pn**	**18 24 30.4**	**+0.5**
COLA	**College**	**8.66**	**13**	P	**Pn**	**18 24 30.4**	**+0.5**
IL1	**Eielson Array**	**8.70**	**16**	P	**Pn**	**18 24 30.6**	**0.0**
ILAR	**Eielson Array**	**8.70**	**16**	Sn	**Sn**	**18 26 10.5**	**+2.7**
ILAR	**Eielson Array**	**8.70**	**16**	Pn	Pn	18 24 33.0	+2.5
	7.2nm,0.3s,baz=203,slow=14,SNR=12						
ILAR	**Eielson Array**	**8.70**	**16**	Pn	Pn	18 24 33.0	+2.5
ILAR	**Eielson Array**	**8.70**	**16**	Sn	**Sn**	**18 26 10.5**	**+2.7**
	1.6nm,0.3s,baz=253,slow=7.0,SNR=2.6						
SKAG	**Skagway**	**9.57**	**65**	*e*Pn	**Pn**	**18 24 43.5**	**+1.1**
GAMB	**Gambell**	**11.95**	**315**	*e*Pn	Pn	18 25 18.3	+3.3
	145nm,1.1s						
INK	**Inuvik**	**14.61**	**29**	Pn	**P**	**18 25 58.4**	**+0.9**
INK				Sn	**S**	**18 28 46.0**	**-5.3**
INK	**Inuvik**	**14.61**	**29**	Pn	**P**	**18 25 58.4**	**+0.9**
	1.0nm,0.3s,baz=213,slow=14,SNR=18						
INK				Sn	**S**	**18 28 46.0**	**-5.3**
	baz=227,slow=30,SNR=1.5						
BBB	**Bella Bella**	**14.84**	**97**	LR	LR	18 30 20.1	
	comp=Z,22µm,19.5s,baz=308,slow=32						
AMKA	**Amchitka**	**17.30**	**265**	*e*Pn	**P**	**18 26 26.1**	**-1.4**
	353nm,1.0s						
NLWA	**Neilton Lookou**	**19.75**	**105**	*e*P	**Pn**	**18 26 54.3**	**-1.6**
	308nm,1.6s						
YKW3	**Yellowknife Ar**	**19.88**	**57**	*e*P	**Pn**	**18 26 56.2**	**-1.1**
YKA	**Yellowknife Ar**	**19.89**	**57**	P	**Pn**	**18 26 57.1**	**-0.3**
	0.5nm,0.3s,baz=272,slow=10,SNR=11						
YKA	**Yellowknife Ar**	**19.89**	**57**	P	**Pn**	**18 26 57.1**	**-0.3**
FX1	**Attu Island--F**	**20.04**	**274**	P	Pn	18 27 00.1	+0.8
	20nm,0.5s,baz=356,slow=17,SNR=6.5						
FX1	**Attu Island--F**	**20.04**	**274**	*e*P	Pn	18 26 59.2	-0.1
BILL	**Bilibino**	**21.85**	**318**	*e*P	**P**	**18 27 19.4**	**+2.5**
BILL				pmax	pmax		
	comp=Z,55nm,1.2s						
COR	**Corvallis**	**21.88**	**111**	*e*P	**P**	**18 27 15.2**	**-2.2**
COR				pmax	pmax		
	comp=Z,262nm,1.5s						
COR	**Corvallis**	**21.88**	**111**	*e*P	**P**	**18 27 15.2**	**-2.2**
	comp=Z,44nm,1.5s						
KEBM	**Edson Butte**	**22.58**	**115**	*e*P	**P**	**18 27 26.0**	**+1.1**
	comp=Z,350nm,1.5s						
HAWA	**Hanford**	**22.70**	**103**	*e*P	**P**	**18 27 26.1**	**0.0**
	comp=Z,286nm,1.5s						
NEW	**Newport**	**22.90**	**96**	*e*P	**P**	**18 27 28.1**	**-0.1**
	comp=Z,204nm,1.7s						
KBO	**Bosley Butte**	**23.12**	**116**	*e*P	**P**	**18 27 31.0**	**+0.4**
	comp=Z,205nm,1.4s						
HUMO	**Hull Mountain**	**23.46**	**114**	*e*P	**P**	**18 27 34.5**	**+0.5**
	comp=Z,38nm,0.9s						
YBH	**Yreka Blue Hor**	**24.23**	**115**	P	**P**	**18 27 43.2**	**+1.8**
	comp=Z,5.9nm,0.8s,baz=320,slow=4.1,SNR=8.1						
YBH	**Yreka Blue Hor**	**24.23**	**115**	P	**P**	**18 27 43.2**	**+1.8**
WALA	**Waterton Lakes**	**24.23**	**92**	*e*P	**P**	**18 27 42.7**	**+1.3**
	comp=Z,3.5nm,1.4s						
KHMM	**Horse Mountain**	**24.37**	**118**	*e*P	**P**	**18 27 43.1**	**+0.4**
	comp=Z,551nm,2.2s						
BSMT	**Bassoo Peak**	**24.42**	**95**	*e*P	**P**	**18 27 43.4**	**+0.2**
	comp=Z,73nm,1.3s						
BLMT	**Blacktail Moun**	**24.57**	**94**	*e*P	**P**	**18 27 46.2**	**+1.7**
	comp=Z,91nm,1.3s						
JTMT	**Jette**	**24.76**	**94**	*e*P	**P**	**18 27 46.7**	**+0.5**
	comp=Z,70nm,1.3s						
YBMT	**Yellow Bay**	**24.84**	**94**	*e*P	**P**	**18 27 46.2**	**-0.8**
	comp=Z,18nm,0.7s						
BMO	**Blue Mountains**	**24.88**	**103**	*e*P	**P**	**18 27 47.2**	**-0.1**
	comp=Z,113nm,1.6s						
SWMT	**Swartz Lake**	**25.05**	**95**	*e*P	**P**	**18 27 50.1**	**+1.3**
	comp=Z,78nm,1.4s						
WDC	**Whiskeytown Da**	**25.18**	**117**	*e*P	**P**	**18 27 50.2**	**+0.3**
WDC				pmax	pmax		
	comp=Z,93nm,1.3s						
WDC	**Whiskeytown Da**	**25.18**	**117**	*e*P	**P**	**18 27 50.1**	**+0.3**
	comp=Z,93nm,1.3s						
KIPM	**Iron Peak**	**25.31**	**119**	*e*P	**P**	**18 27 52.4**	**+1.1**
	comp=Z,256nm,1.4s						
MOD	**Modoc**	**25.33**	**112**	*e*P	**P**	**18 27 51.9**	**+0.5**
	comp=Z,36nm,1.3s						
KCPM	**Ochto Peak**	**25.36**	**119**	*e*P	**P**	**18 27 53.6**	**+2.0**
	comp=Z,90nm,1.4s						
MSO	**Missoula**	**25.49**	**96**	P	**P**	**18 27 54.9**	**+2.1**
	comp=Z,39nm,1.2s						
SLMT	**Seeley Lake**	**25.49**	**95**	*e*P	**P**	**18 27 53.6**	**+0.8**
CHMT	**Chamberlain Mo**	**25.82**	**95**	*e*P	**P**	**18 27 55.7**	**-0.1**
	comp=Z,50nm,1.5s						
MFID	**Camas Ranch**	**26.63**	**104**	*e*P	**P**	**18 28 03.7**	**+0.6**
	comp=Z,59nm,1.2s						
HRY	**Holter Researc**	**26.72**	**94**	*e*P	**P**	**18 28 03.4**	**-0.5**
	comp=Z,155nm,0.7s						
LRM	**Limekiln Ridge**	**26.92**	**96**	*e*P	**P**	**18 28 05.9**	**0.0**
	comp=Z,126nm,0.9s						
EGMT	**Eagleton**	**27.11**	**90**	*e*P	**P**	**18 28 06.2**	**-1.1**
	comp=Z,63nm,1.2s						
DLMT	**Dillon**	**27.12**	**97**	*e*P	**P**	**18 28 07.8**	**+0.2**
	comp=Z,91nm,1.4s						
HLID	**Hailey**	**27.30**	**102**	*e*P	**P**	**18 28 09.7**	**+0.5**
	comp=Z,28nm,1.0s						
MCMT	**McKenzie Canyo**	**27.32**	**98**	*e*P	**P**	**18 28 09.8**	**+0.3**
	comp=Z,12nm,1.0s						
BOZ	**Bozeman (W)**	**27.48**	**96**	*e*P	**P**	**18 28 09.8**	**-1.0**
BOZ	**Bozeman (W)**	**27.48**	**96**	*e*P	**P**	**18 28 09.8**	**-1.0**
	comp=Z,21nm,1.3s						
WCN	**Washoe City**	**27.54**	**115**	*e*P	**P**	**18 28 10.4**	**-1.0**
WCN				pmax	pmax		
	comp=Z,53nm,1.2s						
WCN	**Washoe City**	**27.54**	**115**	*e*P	**P**	**18 28 10.4**	**-1.0**
	comp=Z,53nm,1.2s						
BMN	**Battle Mountai**	**28.00**	**110**	*e*P	**P**	**18 28 15.6**	**+0.2**
BMN				pmax	pmax		
	comp=Z,100nm,1.7s						
BMN				MLR	MLR		
	comp=Z,15µm,21.0s						
BMN	**Battle Mountai**	**28.00**	**110**	*e*P	**P**	**18 28 15.6**	**+0.2**
	comp=Z,100nm,1.7s						
BMN				LR	LR		
	comp=Z,15µm,21.0s						
FFC	**Flin Flon**	**28.06**	**72**	*e*P	P	18 28 17.4	+1.7
FFC				MLR	MLR		
	comp=Z,30µm,19.0s						
FFC	**Flin Flon**	**28.06**	**72**	*e*P	P	18 28 17.4	+1.7
FFC				LR	LR		
	comp=Z,54µm,19.0s						
QLMT	**Earthquake Lak**	**28.10**	**97**	*e*P	**P**	**18 28 16.7**	**+0.3**
	comp=Z,8.7nm,1.5s						
RES	**Resolute Bay**	**28.17**	**28**	*e*P	**P**	**18 28 17.8**	**+1.3**
CMB	**Columbia Colle**	**28.20**	**117**	*e*P	**P**	**18 28 16.9**	**-0.3**
CMB				pmax	pmax		
	comp=Z,96nm,1.6s						
CMB	**Columbia Colle**	**28.20**	**117**	*e*P	**P**	**18 28 16.9**	**-0.3**
	comp=Z,96nm,1.6s						
PEA0B	**Petropavlovsk-**	**28.38**	**284**	*e*P	P	18 28 20.5	+1.9
YMR	**Madison River**	**28.46**	**97**	*e*P	**P**	**18 28 17.8**	**-1.8**
	comp=Z,49nm,1.1s						
ELK	**Elko**	**28.81**	**107**	P	**P**	**18 28 23.3**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=307,slow=9.0,SNR=9.1						
ELK	**Elko**	**28.81**	**107**	*e*P	**P**	**18 28 23.2**	**+0.5**
	comp=Z,46nm,1.3s						
NVAR	**Mina Array Bea**	**28.94**	**114**	P	**P**	**18 28 24.4**	**+0.5**
	comp=Z,4.2nm,0.7s,baz=305,slow=8.8,SNR=12						
NVAR	**Mina Array Bea**	**28.94**	**114**	P	**P**	**18 28 24.4**	**+0.5**
IMW	**Indian Meadow**	**28.97**	**98**	*e*P	**P**	**18 28 24.8**	**+0.6**
	comp=Z,59nm,1.4s						
NV11	**Mina Array Sit**	**29.01**	**114**	*e*P	**P**	**18 28 24.6**	**+0.1**
RRI2	**Red Ridge**	**29.12**	**99**	*e*P	**P**	**18 28 25.8**	**+0.2**
	comp=Z,58nm,1.4s						
TPAW	**Teton Pass**	**29.23**	**99**	*e*P	P	18 28 27.8	+1.3
	comp=Z,42nm,1.4s						
LOHW	**Long Hollow**	**29.34**	**98**	*e*P	**P**	**18 28 27.4**	**-0.1**
	comp=Z,34nm,1.4s						
SNOW	**Snow King Moun**	**29.36**	**99**	P	**P**	**18 28 28.4**	**+0.8**
HVU	**Hansel Valley**	**29.39**	**103**	*e*P	P	18 28 29.3	+1.4
HVU				pmax	pmax		
	comp=Z,142nm,1.8s						
HVU	**Hansel Valley**	**29.39**	**103**	*e*P	P	18 28 29.3	+1.4
	comp=Z,142nm,1.8s						
HWUT	**Hardware Ranch**	**30.17**	**102**	*e*P	P	18 28 35.7	+1.0
	comp=Z,14nm,0.8s						
HWUT				LR	LR		
	comp=Z,13µm,20.0s						
SKR	**Severo-Kuril's**	**30.42**	**281**	*e*P	P	18 28 33.0	-3.6
SKR				*e*		18 28 52.0	
SKR				*e*		18 29 46.0	
SKR				*e*		18 31 38.0	
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=N,2µm,12.0s						
SKR				pmax	pmax		
	comp=Z,3µm,12.0s						
SKR				pmax	pmax		
	comp=Z,2µm,12.0s						
SKR				MLR	MLR		
	comp=N,13µm,18.0s						
SKR				MLR	MLR		
	comp=E,16µm,18.0s						
SKR				MLR	MLR		
	comp=Z,22µm,18.0s						
PDAR	**Pinedale Array**	**30.48**	**98**	P	**P**	**18 28 38.0**	**+0.5**
	comp=Z,2.9nm,0.6s,baz=312,slow=5.1,SNR=11						
PDAR	**Pinedale Array**	**30.48**	**98**	P	**P**	**18 28 38.0**	**+0.5**
DUG	**Dugway**	**30.49**	**105**	*e*P	P	18 28 38.5	+0.9
DUG				pmax	pmax		
	comp=Z,82nm,1.6s						
DUG				MLR	MLR		
	comp=Z,12µm,19.0s						
DUG	**Dugway**	**30.49**	**105**	*e*P	P	18 28 38.5	+0.9
	comp=Z,82nm,1.6s						
DUG				LR	LR		
	comp=Z,12µm,19.0s						
JLU	**Jordanelle**	**30.93**	**103**	P	**P**	**18 28 41.7**	**+0.2**
	comp=Z,28nm,1.3s						
DAC	**Darwin (Calif)**	**30.96**	**116**	*e*P	**P**	**18 28 42.0**	**+0.2**
DAC				pmax	pmax		
	comp=Z,70nm,1.4s						
DAC				MLR	MLR		
	comp=Z,16µm,21.0s						
DAC	**Darwin (Calif)**	**30.96**	**116**	*e*P	**P**	**18 28 42.0**	**+0.2**
	comp=Z,70nm,1.4s						
DAC				LR	LR		
	comp=Z,16µm,21.0s						
ISA	**Isabella**	**31.01**	**118**	*e*P	**P**	**18 28 42.2**	**+0.1**
ISA				pmax	pmax		
	comp=Z,96nm,1.5s						
ISA	**Isabella**	**31.01**	**118**	*e*P	**P**	**18 28 42.1**	**+0.1**
	comp=Z,23nm,1.5s						
DAU	**Daniels Canyon**	**31.17**	**103**	*e*P	**P**	**18 28 44.1**	**+0.3**
DAU				pmax	pmax		
	comp=Z,43nm,1.3s						
DAU	**Daniels Canyon**	**31.17**	**103**	*e*P	**P**	**18 28 44.1**	**+0.3**
	comp=Z,43nm,1.3s						
MPU	**Maple Canyon**	**31.25**	**104**	P	**P**	**18 28 43.0**	**-1.3**
	comp=Z,32nm,1.5s						
OSI	**Osito Adit**	**31.73**	**119**	P	**P**	**18 28 48.9**	**+0.4**
	comp=Z,20nm,0.6s					

	comp=E,171nm,1.2s								
YUK					pmax	pmax			
	comp=Z,528nm,1.2s								
YUK					pmax	pmax			
	comp=Z,979nm,1.4s								
YUK					MLR	MLR			
	comp=N,1μm,20.0s								
YUK					MLR	MLR			
	comp=Z,11μm,20.0s								
YUK					MLR	MLR			
	comp=E,4μm,20.0s								
SCIA	**State Center**	**40.08**	**85**		P	P	18 29 55.2	-4.5	
SCIA					LR	LR			
	comp=Z,15μm,20.0s								
KSU1	**Kansas State U**	**40.12**	**91**	*e*P	**P**		**18 30 00.1**	**-0.1**	
	comp=Z,44nm,1.1s								
KSU1					LR	LR			
	comp=Z,31μm,19.0s								
AMTX	**Amarillo**	**40.39**	**100**	*e*P	**P**		**18 30 02.5**	**0.0**	
	comp=Z,96nm,1.4s								
AMTX					LR	LR			
	comp=Z,9μm,19.0s								
MNTX	**Cornudas Mount**	**40.83**	**107**	P	P		18 30 07.4	+1.3	
	comp=Z,46nm,1.3s								
MNTX					LR	LR			
	comp=Z,10μm,20.0s								
GDL2	**Guadalupe Moun**	**40.98**	**106**	P	P		18 30 08.4	+0.9	
	comp=Z,43nm,0.9s								
CLNB	**Carlsbad**	**41.19**	**105**	*e*P	**P**		**18 30 09.6**	**+0.5**	
	comp=Z,16nm,1.5s								
ASAJ	**Asahikawa**	**41.69**	**281**	P	P		18 30 15.6	+2.6	
	comp=Z,62nm,1.1s,baz=27,slow=4.9,SNR=4.3								
ASAJ	**Asahikawa**	**41.69**	**281**	*e*P	P		18 30 15.1	+2.2	
	comp=Z,48nm,1.1s								
WMOK	**Wichita Mounta**	**42.08**	**98**	*e*P	**P**		**18 30 17.2**	**+0.9**	
WMOK					pmax	pmax			
	comp=Z,52nm,1.0s								
WMOK					MLR	MLR			
	comp=Z,5μm,19.0s								
WMOK	**Wichita Mounta**	**42.08**	**98**	*e*P	**P**		**18 30 17.2**	**+0.9**	
	comp=Z,52nm,1.0s								
WMOK					LR	LR			
	comp=Z,5μm,19.0s								
ERM	**Erimo**	**42.78**	**279**	*e*P	P		18 30 24.0	+2.2	
	comp=Z,217nm,1.2s								
ERM					LR	LR			
	comp=Z,11μm,19.0s								
HDIL	**Hopedale**	**43.16**	**84**	*e*P	**P**		**18 30 24.8**	**-0.1**	
	comp=Z,200nm,1.0s								
HDIL					LR	LR			
	comp=Z,17μm,20.0s								
SUMG	**Summit**	**43.45**	**24**	*e*P	P		18 30 29.1	+1.7	
SUMG					pmax	pmax			
	comp=Z,168nm,1.1s								
SUMG	**Summit**	**43.45**	**24**	*e*P	P		18 30 29.1	+1.7	
	comp=Z,168nm,1.1s								
TXAR	**Lajitas Array**	**43.60**	**108**	P	P		18 30 29.8	+1.0	
	comp=Z,2.6nm,0.9s,baz=316,slow=6.2,SNR=6.0								
TXAR	**Lajitas Array**	**43.60**	**108**	P	P		18 30 29.8	+1.0	
SFJD	**Kangerlussuaq**	**43.88**	**34**	*e*P	**P**		**18 30 31.8**	**+1.4**	
	comp=Z,153nm,1.1s								
SFJD					LR	LR			
	comp=Z,26μm,20.0s								
SFJD	**Kangerlussuaq**	**43.88**	**34**	P	P		18 30 33.3	+2.9	
	comp=Z,18nm,0.8s,baz=330,slow=7.5,SNR=4.5								
SLM	**Saint Louis**	**43.98**	**87**	P	P		18 30 32.8	+1.2	
SLM					pmax	pmax			
	comp=Z,78nm,1.1s								
SLM	**Saint Louis**	**43.98**	**87**	P	P		18 30 32.8	+1.2	
	comp=Z,78nm,1.1s								
KLR	**Kul'dur**	**44.10**	**294**	*e*P	**P**		**18 30 30.0**	**-2.4**	
KLR					pmax	pmax			
	comp=N,62nm,1.4s								
KLR					pmax	pmax			
	comp=Z,300nm,1.4s								
JCT	**Junction City**	**44.77**	**103**	*e*P	**P**		**18 30 38.2**	**+0.1**	
JCT					pmax	pmax			
	comp=Z,80nm,0.9s								
JCT					MLR	MLR			
	comp=Z,9μm,20.0s								
JCT	**Junction City**	**44.77**	**103**	*e*P	**P**		**18 30 38.2**	**+0.1**	
	comp=Z,80nm,0.9s								
JCT					LR	LR			
	comp=Z,9μm,20.0s								
OLIL	**Olney**	**45.09**	**85**	*e*P	P		18 30 41.7	+1.2	
	comp=Z,105nm,1.0s								
SIUC	**Southern Illin**	**45.20**	**87**	*e*P	**P**		**18 30 41.5**	**+0.2**	
	comp=Z,53nm,1.0s								
SCHQ	**Schefferville**	**45.31**	**54**	S	**S**		**18 37 19.9**	**-1.2**	
SCHQ	**Schefferville**	**45.31**	**54**	P	**P**		**18 30 43.2**	**+1.2**	
	comp=Z,8.7nm,0.7s,baz=319,slow=7.1,SNR=11								
SCHQ	**Schefferville**	**45.31**	**54**	*e*P	**P**		**18 30 42.5**	**+0.5**	
	comp=Z,58nm,1.0s								
SCHQ	**Schefferville**	**45.31**	**54**	S	**S**		**18 37 19.9**	**-1.2**	
	comp=Z,1.2nm,0.8s,baz=72,slow=10,SNR=2.0								
SPITS	**Spitsbergen Ar**	**45.36**	**3**	P	P		18 30 45.1	+3.0	
SPITS	**Spitsbergen Ar**	**45.36**	**3**	P	P		18 30 45.1	+3.0	
	comp=Z,4.9nm,0.5s,baz=15,slow=4.6,SNR=12								
BLO	**Bloomington**	**45.65**	**83**	P	**P**		**18 30 45.2**	**+0.3**	
BLO					pmax	pmax			
	comp=Z,83nm,0.9s								
BLO	**Bloomington**	**45.65**	**83**	P	**P**		**18 30 45.2**	**+0.3**	
	comp=Z,83nm,0.9s								
PARMO	**Parma**	**45.66**	**88**	P	P		18 30 47.3	+2.3	
USIN	**University of**	**45.88**	**85**	*e*P	**P**		**18 30 46.3**	**-0.4**	
UTMT	**University of**	**46.38**	**88**	P	**P**		**18 30 48.0**	**-2.7**	
WCI	**Wyandotte Cave**	**46.45**	**84**	P	P		18 30 52.5	+1.3	
WCI	**Wyandotte Cave**	**46.45**	**84**	P	P		18 30 52.5	+1.3	
WVT	**Waverly**	**47.11**	**87**	P	**P**		**18 30 55.0**	**-1.4**	
WVT					pmax	pmax			
	comp=Z,31nm,0.9s								
WVT	**Waverly**	**47.11**	**87**	P	**P**		**18 30 55.0**	**-1.4**	
	comp=Z,31nm,0.9s								
ERPA	**Erie**	**47.15**	**75**	*e*P	**P**		**18 30 57.1**	**+0.5**	
	comp=Z,158nm,1.3s								
ERPA					LR	LR			
	comp=Z,15μm,20.0s								
USRK	**Ussuriysk Arra**	**47.30**	**289**	P	**P**		**18 30 58.0**	**+0.3**	
	comp=Z,3.9nm,1.0s,baz=19,slow=6.2,SNR=4.4								
HKT	**Hockley**	**47.34**	**100**	*e*P	**P**		**18 30 58.0**	**-0.1**	
HKT					pmax	pmax			
	comp=Z,157nm,1.7s								
HKT	**Hockley**	**47.34**	**100**	*e*P	**P**		**18 30 58.0**	**-0.1**	
	comp=Z,156nm,1.7s								
OXF	**Oxford**	**47.42**	**90**	P	**P**		**18 30 58.4**	**-0.4**	
OXF					pmax	pmax			
	comp=Z,122nm,0.9s								
OXF					MLR	MLR			
	comp=Z,20μm,20.0s								
OXF	**Oxford**	**47.42**	**90**	P	**P**		**18 30 58.4**	**-0.4**	
	comp=Z,122nm,0.9s								
OXF					LR	LR			
	comp=Z,20μm,20.0s								
MSNY	**Massena**	**47.87**	**69**	*e*P	**P**		**18 31 01.2**	**-0.9**	
	comp=Z,206nm,0.8s								
MDJ	**Mudanjiang**	**48.27**	**291**	*e*P	**P**		**18 31 05.4**	**+0.2**	
	comp=Z,78nm,1.3s								
MDJ					LR	LR			
	comp=Z,12μm,20.0s								
LONY	**Lake Ozonia**	**48.27**	**69**	*e*P	P		18 31 07.1	+1.8	
	comp=Z,31nm,1.3s								
LONY					LR	LR			
	comp=Z,14μm,19.0s								
VBMS	**Vicksburg**	**48.53**	**93**	P	**P**		**18 31 07.8**	**+0.4**	
	comp=Z,155nm,1.1s								
VBMS					LR	LR			
	comp=Z,24μm,20.0s								
FRNY	**Flat Rock**	**48.64**	**68**	*e*P	**P**		**18 31 07.8**	**-0.3**	
	comp=Z,47nm,1.0s								
BJO	**Bjornoya**	**49.11**	**3**	*e*P	P		18 31 13.7	+2.4	
BJO				*e*PP	**PP**		**18 33 07.8**	**+3.3**	
BJO				*e*S	S		18 38 20.3	+5.6	
BJO				AMS	AMS		18 51 15.9		
	comp=Z,9μm,23.8s								
TZTN	**Tazewell**	**49.17**	**83**	*e*P	**P**		**18 31 12.7**	**+0.3**	
	comp=Z,100nm,1.4s								
BINY	**Binghamton**	**49.22**	**73**	*e*P	**P**		**18 31 13.2**	**+0.5**	
	comp=Z,155nm,1.1s								
BINY					LR	LR			
	comp=Z,22μm,20.0s								
SSPA	**Standing Stone**	**49.31**	**75**	*e*P	P		18 31 14.9	+1.6	
	comp=Z,138nm,1.3s								
MAJO	**Matsushiro**	**49.36**	**277**	*e*P	**P**		**18 31 14.8**	**+1.1**	
MAJO					pmax	pmax			
	comp=Z,64nm,1.1s								
MAJO					MLR	MLR			
	comp=Z,9μm,21.0s								
MAJO	**Matsushiro**	**49.36**	**277**	*e*P	**P**		**18 31 14.8**	**+1.1**	
	comp=Z,11nm,1.1s								
MAJO					LR	LR			
	comp=Z,6μm,21.0s								
MAT	**Matsushiro**	**49.36**	**277**	P	**P**		**18 31 14.5**	**+0.7**	
CPCT	**Cooper Cave**	**49.44**	**85**	*e*P	**P**		**18 31 14.7**	**+0.4**	
ACCN	**Adirondack Com**	**49.60**	**70**	*e*P	**P**		**18 31 12.6**	**-2.9**	
	comp=Z,132nm,1.4s								
LRAL	**Lakeview Retre**	**49.86**	**89**	*e*P	**P**		**18 31 17.5**	**-0.1**	
	comp=Z,46nm,1.3s								
LRAL					LR	LR			
	comp=Z,12μm,19.0s								
LBNH	**Lisbon**	**49.91**	**68**	*e*P	**P**		**18 31 18.8**	**+1.0**	
LBNH					pmax	pmax			
	comp=Z,58nm,1.3s								
LBNH					MLR	MLR			
	comp=Z,27μm,20.0s								
LBNH	**Lisbon**	**49.91**	**68**	*e*P	**P**		**18 31 18.8**	**+1.0**	
	comp=Z,58nm,1.3s								
LBNH					LR	LR			
	comp=Z,27μm,20.0s								
HIA	**Hailar**	**49.96**	**301**	*e*P	**P**		**18 31 19.5**	**+1.3**	
	comp=Z,90nm,1.3s								
HIA					LR	LR			
	comp=Z,13μm,19.0s								
TRY	**Troy**	**50.06**	**71**	*e*P	**P**		**18 31 19.9**	**+0.9**	
	comp=Z,57nm,1.1s								
BLA	**Blacksburg**	**50.40**	**80**	P	**P**		**18 31 22.4**	**+0.7**	
BLA					pmax	pmax			
	comp=Z,53nm,1.0s								
BLA	**Blacksburg**	**50.40**	**80**	P	**P**		**18 31 22.4**	**+0.7**	
	comp=Z,53nm,1.0s								
VWCC	**Virginia Weste**	**50.62**	**80**	*e*P	**P**		**18 31 24.3**	**+1.0**	
SDMD	**Soldier's Deli**	**50.75**	**76**	*e*P	P		18 31 26.6	+2.3	
	comp=Z,115nm,1.2s								
CN2	**Changchun**	**50.97**	**293**	*e*P	**P**		**18 31 25.6**	**-0.2**	
CN2				*e*S	S		18 38 46.8	+5.4	
CN2					pmax	pmax			
	comp=Z,90nm,1.0s								
CN2					pmax	pmax			
	comp=Z,200nm,6.0s								
CN2					LR	LR			
	comp=N,10μm,18.0s								
CN2					LR	LR			
	comp=E,10μm,18.0s								
CN2					LR	LR			
	comp=Z,6μm,16.0s								
HRV	**Adam Dziewonsk**	**51.32**	**69**	*e*P	P		18 31 30.7	+2.2	
HRV					pmax	pmax			
	comp=Z,50nm,1.4s								
HRV	**Adam Dziewonsk**	**51.32**	**69**	*e*P	P		18 31 30.7	+2.2	
	comp=Z,50nm,1.4s								
YLE	**Yale**	**51.45**	**71**	P	**P**		**18 31 30.2**	**+0.7**	
	comp=Z,130nm,1.1s								
WES	**Weston**	**51.53**	**69**	*e*P	**P**		**18 31 30.8**	**+0.8**	
WES					pmax	pmax			
	comp=Z,229nm,1.2s								
WES	**Weston**	**51.53**	**69**	*e*P	**P**		**18 31 30.8**	**+0.8**	
	comp=Z,131nm,1.2s								
EMMW	**East Machias**	**51.84**	**65**	*e*P	**P**		**18 31 33.2**	**+0.9**	
	comp=Z,27nm,0.7s								
JSC	**Jenkinsville**	**52.10**	**84**	*e*P	**P**		**18 31 32.1**	**-2.3**	
JSC	**Jenkinsville**	**52.10**	**84**	*e*P	**P**		**18 31 32.1**	**-2.3**	
BORG	**Borgarnes**	**53.44**	**24**	*e*P	**P**		**18 31 44.6**	**+0.8**	
	comp=Z,108nm,1.4s								
BORG					LR	LR			
	comp=Z,14μm,20.0s								
NHSC	**New Hope**	**53.58**	**84**	*e*P	**P**		**18 31 45.4**	**+0.1**	
	comp=Z,135nm,1.1s								
NHSC					LR	LR			
	comp=Z,23μm,19.0s								
KEV	**Kevo**	**54.00**	**0**	*e*P	**P**		**18 31 48.6**	**+0.7**	
KEV					pmax	pmax			
	comp=Z,27nm,0.7s								
KEV	**Kevo**	**54.00**	**0**	*e*p	**P**		**18 31 48.6**	**+0.7**	
	comp=Z,27nm,0.7s								
KEV	**Kevo**	**54.00**	**0**	*e*P	**P**		**18 31 48.5**	**+0.5**	
KEV					LR	LR			
	comp=Z,7μm,20.0s								
ARCES	**ARCESS Array B**	**54.21**	**1**	P	**P**		**18 31 50.2**	**+0.7**	
ARCES	**ARCESS Array B**	**54.21**	**1**	P	**P**		**18 31 50.2**	**+0.7**	
	comp=Z,6.5nm,0.7s,baz=3.5,slow=6.7,SNR=13								
ARE0	**ARCESS Array S**	**54.21**	**1**	*e*P	**P**		**18 31 50.1**	**+0.6**	
KSRS	**Korea Array**	**54.27**	**285**	P	P		18 31 52.1	+1.8	
	comp=Z,4.9nm,1.0s,baz=52,slow=7.2,SNR=4.9								
KSAR	**Wonju Array Be**	**54.30**	**285**	P	P		18 31 52.1	+1.6	
ULN	**Ulaanbaatar**	**56.77**	**308**	*e*P	P		18 32 10.5	+2.1	
	comp=Z,66nm,1.1s								
ULN					LR	LR			
	comp=Z,36μm,20.0s								
ULN	**Ulaanbaatar**	**56.77**	**308**	P	P		18 32 05.0	-3.4	
	comp=Z,51nm,1.2s,comp=Z,1μm								
SONM	**Songino Array**	**57.08**	**308**	P	P		18 32 13.4	+2.9	
	comp=Z,18nm,0.8s,baz=42,slow=7.4,SNR=13								
SONM	**Songino Array**	**57.08**	**308**	P	P		18 32 13.4	+2.9	
MOR8	**Moi Rana**	**57.21**	**6**	*e*P	**P**		**18 32 12.1**	**+1.1**	
MOR8					AMB	AMB	18 32 20.4		
	comp=Z,96nm,1.1s								
BJT	**Baijiatuan**	**58.44**	**296**	P	P		18 32 22.3	+2.2	
BJT					LR	LR			
	comp=Z,10μm,19.0s								
HVS	**Khovu-Aksy**	**59.61**	**318**	*e*P	P		18 32 30.7	+2.6	
HVS					pmax	pmax			
	comp=Z,82nm,1.0s								
ZAA0	**Zalesovo Array**	**60.34**	**325**	*e*P	P		18 32 35.1	+2.2	
ZALV	**Zalesovo Beam**	**60.34**	**325**	P	P		18 32 35.5	+2.6	
ZALV	**Zalesovo Beam**	**60.34**	**325**	P	P		18 32 35.5	+2.6	
ZALV	**Zalesovo Beam**	**60.34**	**325**	P	P		18 32 35.5	+2.6	
	comp=Z,16nm,0.8s,baz=34,slow=6.7,SNR=15								
JOF	**Joensuu**	**60.83**	**358**	*e*P	**P**		**18 32 36.6**	**+0.5**	
JOF					pmax	pmax			
	comp=Z,16nm,0.7s								
JOF	**Joensuu**	**60.83**	**358**	*e*p	**P**		**18 32 36.6**	**+0.5**	
	comp=Z,16nm,0.7s								
TIA	**Tai'an**	**60.87**	**292**	⇑P	**P**		**18 32 37.5**	**+0.7**	
TIA					LR	LR			
	comp=N,9μm,17.3s								
TIA					LR	LR			
	comp=E,16μm,19.0s								
TIA					LR	LR			
	comp=Z,9μm,19.0s								
KAF	**Kangasniemi**	**61.67**	**1**	*e*P	**P**		**18 32 43.0**	**+1.1**	
KAF					pmax	pmax			
	comp=Z,13nm,0.7s								
SOKR	**Solikamsk**	**61.89**	**344**	*c i*P	P		18 32 51.5	+8.2	
SOKR					PPP	PPP	18 36 39.0		
SOKR					S	S	18 41 14.7	+9.3	
SOKR					SS	SS	18 45 15.8	+9.3	
SOKR					pmax	pmax			
	comp=Z,220nm,1.4s								
SOKR					MLR	MLR			
	comp=Z,10μm,25.0s								
NOA	**NORSAR Array B**	**62.05**	**9**	P	**P**		**18 32 46.0**	**+1.5**	
NOA	**NORSAR Array B**	**62.05**	**9**	P	**P**		**18 32 46.0**	**+1.5**	
	comp=Z,14nm,0.8s,baz=350,slow=6.7,SNR=19								
JOW	**Kunigami**	**62.20**	**277**	*e*P	**P**		**18 32 45.8**	**-0.2**	
	comp=Z,45nm,1.2s								
FINES	**FINESS Array B**	**62.34**	**1**	P	P		18 32 48.0	+1.7	
	comp=Z,18nm,0.8s,baz=4.6,slow=9.6,SNR=16								
FINES	**FINESS Array B**	**62.34**	**1**	P	P		18 32 48.0	+1.7	
TGUH	**Tegucigalpa,Un**	**64.78**	**103**	P	**P**		**18 33 02.9**	**-0.1**	
	comp=Z,60nm,0.9s								
TGUH					LR	LR			
	comp=Z,7μm,20.0s								
KURK	**Kurchatov**	**65.06**	**327**	*e*P	**P**		**18 33 04.9**	**+0.5**	
	comp=Z,81nm,1.3s								
KURK					LR	LR			
	comp=Z,15μm,21.0s								
ESK	**Eskdalemuir**	**65.73**	**19**	*e*P	**P**		**18 33 08.9**	**+0.2**	
ESK					pmax	pmax			
	comp=Z,57nm,1.1s								
ESK					MLR	MLR			
	comp=Z,8μm,19.0s								
ESK	**Eskdalemuir**	**65.73**	**19**	*e*P	**P**		**18 33 08.9**	**+0.2**	
	comp=Z,57nm,1.1s								
ESK					LR	LR			
	comp=Z,8μm,19.0s								
MKAR	**Makanchi Array**	**67.32**	**323**	P	P		18 33 20.9	+1.8	
	comp=Z,7.5nm,0.9s,baz=46,slow=6.1,SNR=10.0								
MKAR	**Makanchi Array**	**67.32**	**323**	P	P		18 33 20.9	+1.8	
MKAR	**Makanchi Array**	**67.32**	**323**	P	P		18 33 20.9	+1.8	
NACB	**Ninganchiao**	**67.96**	**281**	P	**P**		**18 33 22.7**	**-0.7**	
	comp=Z,87nm,1.3s								
SSLB	**Suanglung**	**68.62**	**281**	*e*P	**P**		**18 33 27.4**	**-0.1**	
	comp=Z,85nm,1.3s								
RGN	**Rugen**	**68.66**	**9**	P	**P**		**18 33 26.3**	**-1.0**	
YULB	**Yu-li**	**68.75**	**280**	*e*P	**P**		**18 33 26.8**	**-1.5**	
	comp=Z,185nm,2.1s								
NACGM	**Naroch**	**68.91**	**0**	*e*P	**P**		**18 33 28.0**	**-0.8**	
MNK	**Minsk**	**69.31**	**360**	*e*P	**P**		**18 33 32.0**	**+0.7**	
MNK				*e*			18 36 14.0		
MNK				*e*S	**S**		**18 42 34.0**	**-2.4**	
ENH	**Enshi**	**69.46**	**294**	*e*P	**P**		**18 33 32.1**	**-0.6**	
	comp=Z,90nm,1.4s								
ENH					LR	LR			
	comp=Z,6μm,19.0s								
SDDR	**Presa de Saban**	**69.56**	**86**	*e*P	**P**		**18 33 31.7**	**-1.7**	
	comp=Z,58nm,1.0s								
SDDR					LR	LR			
	comp=Z,7μm,19.0s								
CELP	**Cerrillos**	**72.89**	**83**	*e*P	**P**		**18 33 52.1**	**-1.5**	
SJG	**San Juan**	**73.10**	**83**	P	**P**		**18 33 55.2**	**+0.4**	
SJG					LR	LR			
	comp=Z,5μm,20.0s								
AKASG	**Malin Array Be**	**73.11**	**359**	P	P		18 33 56.0	+1.6	
AKASG	**Malin Array Be**	**73.11**	**359**	P	P		18 33 56.0	+1.6	
	comp=Z,15nm,0.7s,baz=2.1,slow=5.9,SNR=14								
AKASG	**Malin Array Be**	**73.11**	**359**	P	P		18 33 56.0	+1.6	
KIEV	**Kiev**	**73.11**	**359**	*e*P	**P**		**18 33 54.6**	**+0.2**	
KIEV					pmax	pmax			
	comp=Z,106nm,1.1s								
KIEV					MLR	MLR			
	comp=Z,6μm,20.0s								
KIEV	**Kiev**	**73.11**	**359**	*e*P	**P**		**18 33 54.6**	**+0.2**	
	comp=Z,106nm,1.1s								
KIEV					LR	LR			
	comp=Z,6μm,20.0s								
AK01	**Malin Array Si**	**73.12**	**359**	*e*P	**P**		**18 33 55.0**	**+0.6**	
AK02	**Malin Array Si**	**73.15**	**359**	*e*P	**P**		**18 33 54.8**	**+0.1**	
GERES	**GERESS Array B**	**74.35**	**9**	P	P		18 34 04.2	+2.4	
	comp=Z,4.5nm,0.7s,baz=352,slow=4.6,SNR=16								
GERES	**GERESS Array B**	**74.35**	**9**	P	P		18 34 04.2	+2.4	
ESDC	**Sonseca Array**	**80.51**	**24**	P	P		18 34 38.7	+2.3	
	comp=Z,7.2nm,0.7s,baz=340,slow=5.1,SNR=12								
ESDC	**Sonseca Array**	**80.51**	**24**	P	P		18 34 38.7	+2.3	
KBL	**Kabul**	**82.66**	**326**	*e*P	**P**		**18 34 46.3**	**-1.7**	
KBL					pmax	pmax			
	comp=Z,25nm,1.0s								
KBL	**Kabul**	**82.66**	**326**	*e*P	**P**		**18 34 46.3**	**-1.7**	
	comp=Z,25nm,1.0s								
BRTR	**Keskin Array B**	**83.95**	**355**	P	**P**		**18 34 55.8**	**+1.3**	
BRTR	**Keskin Array B**	**83.95**	**355**	P	**P**		**18 34 55.8**	**+1.3**	
	comp=Z,5.3nm,0.8s,baz=37,slow=2.3,SNR=11								
CMAR	**Chiang Mai Arr**	**84.56**	**295**	P	P		18 34 59.2	+1.5	
CMAR	**Chiang Mai Arr**	**84.56**	**295**	P	P		18 34 59.2	+1.5	
	comp=Z,3.8nm,0.9s,baz=17,slow=5.5,SNR=7.8								
JBP	**Jabalpur**	**89.12**	**313**	*e*PKP	P		18 35 21.8	+2.0	
JBP				*ex*	x		18 45 53.4		
NGP	**Nagpur**	**91.31**	**313**	⇓*e*PKP	**P**		**18 35 31.0**	**+0.9**	
NGP				*ex*	x		18 46 06.7		
MIB	**Mutribah**	**92.35**	**343**	*e*P	**P**		**18 35 36.1**	**+1.2**	
MIB				AMb	AMB		18 35 48.5		
	comp=Z,79nm,1.0s								
KSM	**Kuching**	**92.75**	**277**	P	**P**		**18 35 37.6**	**+0.8**	
	comp=Z,12nm,1.0s								
KSM					LR	LR			
	comp=Z,2μm,21.0s								
NAY	**Al-Naaiem**	**92.91**	**343**	*e*P	P		18 35 39.0	+1.6	
NAY				AMb	AMB		18 35 46.8		
	comp=Z,20nm,1.4s								
RDF	**Al-Radifah**	**93.18**	**342**	*e*P	**P**		**18 35 40.0**	**+1.4**	
RDF				AMb	AMB		18 35 51.7		
	comp=Z,67nm,1.5s								
SAML	**Samuel**	**97.02**	**96**	P	**P**		**18 35 56.3**	**0.0**	
	comp=Z,2.6nm,1.2s								
SAML					LR	LR			
	comp=Z,5μm,22.0s								
TRD	**Trivandrum**	**103.51**	**309**	⇑*e*PKP	**Pdif**		**18 36 23.5**	**-1.9**	
TRD				*ex*	x		18 39 53.5		
SNAA	**Sanae**	**160.24**	**152**	*e*P	**PKPab**		**18 43 00.9**	**-2.0**	

NEIC ***16*** *18:22:26.9±0.2,56°.45N×152°.43W,h20km,mb5.3/209, ME5.6,MS5.8/123,MW5.8,MW5.8,ML5.2(AEIC),Error ellipse: s-maj=3.7km s-min=2.4km az=35.0 Broadband fault plane solution: P waves. NP1:φ=45.00000°, δ85.00000°,λ90.00000°. NP2:φ=225.00000°,δ5.00000°, λ90.00000°. Principal axes: T Plg50.0000°, Azm315.0000°; N Plg0.0000°, Azm0.0000°; P Plg40.0000°, Azm135.0000°; Moment Tensor Solution. s96 Moment tensor: Scale 10¹⁷ Nm; Mrr0.92; Mθθ-2.36; Mφφ1.44; Mrθ.87; Mrφ-1.64; Mθφ3.30; Best double couple: M=7.20000×10¹⁷ NP1:φ=59.00000°,δ82.00000°, λ83.00000°. NP2:φ283.00000°,δ11.00000°,λ134.00000°. Principal axes: T 6.0800, Plg52.0000°, Azm320.0000°; N 1.9100, Plg7.0000°, Azm59.0000°; P -8.0000, Plg36.0000°, Azm155.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

ISCJB ***16*** *18:22:26.5±0.1,56°.51N±0°.02×152°.21W±0°.03,h20km, mb5.3/339,MS5.9/164 Error ellipse: s-maj=3.3km s-min=2.0km az=37.6*

MOS ***16*** *18:22:28.3±1.2,56°.64N×152°.06W,h33km,mb5.6/135, MS5.8/73,Error ellipse: s-maj=8.7km s-min=5.2km az=99.3*

IDC ***16*** *18:22:30.0±0.3,56°.51N×152°.33W,h0km,mb5.1/35, mb1 5.1/38,mb1mx5.1/40,mbtmp5.1/38,ML4.3/3,Error ellipse: s-maj=9.5km s-min=5.6km az=18.0*

ISCJB ***16*** *18:22:32.1±0.3,56°.42N±0°.04×152°.51W±0°.07,h20km, mb5.2/72,MS5.6/7,Error ellipse: s-maj=6.6km s-min=5.1km az=18.1*

BJI ***16*** *18:22:32.9,56°.40N×152°.60W,h70km,mB5.9/64, mb5.2/57,Ms6.2/75,Ms7 6.0/67*

DJA ***16*** *18:22:34.5±2.2,58°N± 18°×15°5W±5°0,h10km,M5.5/8, mB6.0/7,mb5.3/8,Mw(mB)5.6/7*

GCMT ***16*** *18:22:35.

PGC	**Sidney**	19.22	102	*e*P		P		18 26 51.3	-3.5
	5.2nm,1.1s								
YKA	**Yellowknife Ar**	19.97	57	PcP		PcP		18 31 19.9	+1.4
YKA				ScP		ScP		18 34 54.1	+0.2
YKA	**Yellowknife Ar**	19.97	57	P		Pn		18 27 02.1	-2.5
	2.1nm,0.3s,baz=270,slow=10.0,SNR=17								
YKA				PcP		PcP		18 31 19.9	+1.4
	0.1nm,0.3s,baz=272,slow=1.6,SNR=5.5								
YKA				ScP		ScP		18 34 54.1	+0.2
	baz=274,slow=2.1,SNR=5.0								
FX1	**Attu Island--F**	20.02	274	S		Sn		18 30 53.0	+3.0
FX1	**Attu Island--F**	20.02	274	P		P		18 27 04.8	+1.3
	65nm,0.6s,baz=267,slow=7.8,SNR=12								
FX1				S		Sn		18 30 53.0	+3.0
	10.0nm,0.7s,baz=306,slow=19,SNR=3.3								
LON	**Longmire**	21.24	104	*e*P		P		18 27 12.8	-4.1
LON				pmax		pmax			
	comp=Z,339nm,1.9s								
LON	**Longmire**	21.24	104	*e*P		P		18 27 12.8	-4.1
	comp=Z,339nm,1.9s								
NEW	**Newport**	22.91	96	S		S		18 31 46.6	+2.8
NEW	**Newport**	22.91	96	P		P		18 27 31.2	-3.5
	comp=Z,5.4nm,0.9s,baz=335,slow=6.7,SNR=6.1								
NEW	**Newport**	22.91	96	P		P		18 27 34.1	-0.6
	comp=Z,18nm,0.8s,baz=309,slow=8.8,SNR=18								
NEW	**Newport**	22.91	96	S		S		18 31 46.6	+2.8
	comp=Z,2.4nm,0.9s,baz=356,slow=17,SNR=1.6								
NEW	**Newport**	22.91	96	⇑P		P		18 27 33.5	-1.2
	baz=23,SNR=7.5								
A12A	**Yaak River Ran**	23.36	93	⇓P		P		18 27 38.6	-0.6
	baz=23,SNR=5.7								
B12A	**Libby**	23.64	94	⇓P		P		18 27 42.0	-0.1
	baz=24								
A13A	**Flathead Natio**	24.04	92	⇓P		P		18 27 45.3	-0.6
	baz=24								
A13A				⇓S		S		18 32 02.8	+0.4
	baz=24								
A13A				⇓S		S		18 32 02.8	+0.4
	baz=24								
A13A				⇓S		S		18 32 02.8	+0.4
	baz=24								
YBH	**Yreka Blue Hor**	24.20	115	S		S		18 32 14.7	+10
YBH	**Yreka Blue Hor**	24.20	115	P		P		18 27 47.5	0.0
	comp=Z,21nm,0.8s,baz=34,slow=1.7,SNR=22								
YBH				S		S		18 32 14.7	+10
	comp=Z,1.3nm,0.8s,baz=266,slow=17,SNR=2.8								
B13A	**Whitefish**	24.32	93	⇓P		P		18 27 47.2	-1.2
	baz=24,SNR=9.5								
A14A	**Double T Ranch**	24.57	91	⇓P		P		18 27 50.5	-0.3
	baz=24,SNR=6.8								
C13A	**Hot Springs**	24.65	95	⇑P		P		18 27 51.0	-0.5
	baz=24								
A15A	**Johnson Ranch,**	24.95	90	⇑P		P		18 27 53.8	-0.4
	baz=25,SNR=10								
B14A	**Marquette Ranc**	24.99	92	⇑P		P		18 27 54.0	-0.6
	baz=25								
D13A	**Huson**	25.06	96	⇑P		P		18 27 53.7	-1.4
	baz=25,SNR=8.5								
B15A	**Bradely Ranch,**	25.41	92	⇑P		P		18 27 56.5	-1.8
	baz=25,SNR=7.5								
F12A	**Elk City**	25.43	99	⇑P		P		18 27 56.9	-1.6
	baz=25,SNR=7.7								
MSO	**Missoula**	25.50	96	⇑P		P		18 27 57.8	-1.4
	baz=25,SNR=8.5								
D14A	**Greenough**	25.59	95	⇑P		P		18 27 58.5	-1.5
	baz=25,SNR=7.1								
E13A	**Victor**	25.59	97	⇓P		P		18 27 58.3	-1.7
	baz=25								
C15A	**Salmond Ranch,**	25.69	93	⇓P		P		18 27 59.8	-1.1
	baz=26,SNR=8.2								
B16A	**M & M Farms, S**	25.83	91	⇑P		P		18 27 59.8	-2.3
	baz=26								
F13A	**Darby**	25.91	98	⇓P		P		18 28 02.3	-0.6
	baz=26,SNR=6.6								
E14A	**Clinton**	25.99	96	⇑P		P		18 28 01.9	-1.8
	baz=26,SNR=5.5								
A17A	**Triple J Farms**	26.10	89	⇓P		P		18 28 02.4	-2.1
	baz=26,SNR=11								
HOPS	**Hopland**	26.11	119	*e*P		P		18 28 00.8	-3.8
	comp=Z,352nm,1.8s								
C16A	**Fuhringer Ranc**	26.15	92	⇑P		P		18 28 03.5	-1.6
	baz=26								
D15A	**Lincoln**	26.16	94	⇑P		P		18 28 03.6	-1.6
	baz=26								
B17A	**L&G Farms, Che**	26.40	90	⇑P		P		18 28 05.0	-2.3
	baz=26								
G13A	**Cobalt**	26.40	99	⇑P		P		18 28 07.4	0.0
	baz=26,SNR=9.7								
H12A	**Diamond D Ranc**	26.41	101	⇑P		P		18 28 07.0	-0.5
	baz=26,SNR=6.1								
F14A	**Wisdom**	26.43	97	⇓P		P		18 28 05.4	-2.3
	baz=26								
E15A	**Deer Lodge**	26.46	95	⇓P		P		18 28 05.9	-2.0
	baz=26								
A18A	**Metzger Ranch,**	26.59	88	⇓P		P		18 28 07.3	-1.6
	baz=26								
MFID	**Camas Ranch**	26.63	104	⇓P		P		18 28 07.9	-1.5
	baz=26								
D16A	**Dana Ranch, Ca**	26.70	93	⇑P		P		18 28 09.2	-0.9
	baz=26,SNR=6.1								
H13A	**Challis**	26.73	100	⇑P		P		18 28 09.8	-0.6
	baz=27,SNR=7.9								
G14A	**Jackson**	26.73	98	⇓P		P		18 28 10.1	-0.4
	baz=27,SNR=6.0								
I12A	**Atlanta**	26.75	102	⇑P		P		18 28 08.5	-2.1
	baz=27								
BEKR	**Beckworth**	26.78	115	*e*P		P		18 28 08.4	-2.5
	comp=Z,58nm,1.5s								
C17A	**Wharram Farm,**	26.79	91	⇑P		P		18 28 09.3	-1.6
	baz=27								
F15A	**Butte**	26.90	96	⇑P		P		18 28 12.3	+0.4
	baz=27								
B18A	**Beardsley Farm**	26.91	89	⇑P		P		18 28 11.0	-0.9
	baz=27								
E16A	**East Helena**	26.93	94	⇓P		P		18 28 11.5	-0.6
	baz=27,SNR=9.7								
D17A	**Six Diamond Ra**	27.11	92	⇓P		P		18 28 13.6	-0.2
	baz=27								
EGMT	**Eagleton**	27.13	90	⇑P		P		18 28 12.9	-0.9
	baz=27,SNR=7.1								
H14A	**Leadore**	27.18	99	⇑P		P		18 28 13.9	-0.6
	baz=27,SNR=7.4								
A19A	**Klindworth Far**	27.20	87	⇓P		P		18 28 13.6	-0.9
	baz=27,SNR=9.9								
I13A	**Wildhorse Cree**	27.23	101	⇑P		P		18 28 14.4	-0.5
	baz=27,SNR=5.7								
HLID	**Hailey**	27.30	102	⇑P		P		18 28 15.3	-0.2
	baz=27,SNR=9.0								
G15A	**Dillon**	27.32	97	⇑P		P		18 28 15.2	-0.5
	baz=27,SNR=9.5								
B19A	**Brinkman Farms**	27.34	88	⇑P		P		18 28 15.1	-0.6
	baz=27								
F16A	**Kennard Place,**	27.41	95	⇓P		P		18 28 15.4	-1.0
	baz=27								
E17A	**Martinsdale**	27.43	93	⇓P		P		18 28 16.2	-0.4
	baz=27								
J13A	**Cove Ranch, Pi**	27.54	102	⇓P		P		18 28 17.6	0.0
	baz=27,SNR=6.9								
D18A	**Linhart Farms,**	27.58	91	⇑P		P		18 28 16.8	-1.1
	baz=27								
H15A	**Lima**	27.58	98	⇓P		P		18 28 17.3	-0.7
	baz=27,SNR=6.4								
I14A	**Mackay**	27.58	100	⇓P		P		18 28 17.9	-0.2
	baz=27,SNR=9.3								
G16A	**Moss Hill, Enn**	27.66	96	⇓P		P		18 28 18.2	-0.5
	baz=28,SNR=7.8								
A20A	**Cobblestone Ra**	27.67	87	⇑P		P		18 28 17.5	-1.2
	baz=28								
C19A	**Slack Wire Ran**	27.69	90	⇓P		P		18 28 18.3	-0.6
	baz=28,SNR=11								
SEY	**Seymchan**	27.76	306	*e*P		P		18 28 16.5	-2.7
B20A	**Solberg Farm,**	27.86	88	⇑P		P		18 28 19.2	-1.2
	baz=28								
F17A	**Fitzpatrick Pl**	27.87	94	⇓P		P		18 28 20.0	-0.6
	baz=28								
E18A	**Harlowton**	27.89	92	⇓P		P		18 28 20.8	+0.1
	baz=28								
PET	**Petropavlovsk**	27.91	284	α *i*P		P		18 28 20.6	0.0
PET				*e*S		S		18 33 00.7	-2.7
PET				pmax		pmax			
	comp=Z,2μm,9.2s								
PET				pmax		pmax			
	comp=Z,181nm,1.2s								
PET				pmax		pmax			
	comp=Z,2μm,16.0s								
PET				MLR		MLR			
	comp=Z,17μm,20.0s								
PET				MLR		MLR			
	comp=Z,14μm,19.0s								
J14A	**Carey**	27.94	101	⇑P		P		18 28 21.6	+0.3
	baz=28,SNR=7.4								
D19A	**Cripps Ranch,**	28.11	91	⇓P		P		18 28 23.2	+0.6
	baz=28								
FFC	**Flin Flon**	28.12	72	P		P		18 28 21.8	-0.7
	comp=Z,84nm,1.5s,SNR=5.7								
G17A	**Pierce Place,**	28.19	95	⇓P		P		18 28 23.3	-0.1
	baz=28								
C20A	**Veseth Ranch,**	28.28	89	⇑P		P		18 28 23.7	-0.4
	baz=28								
RES	**Resolute Bay**	28.28	28	S		S		18 33 10.6	+1.7
RES	**Resolute Bay**	28.28	28	P		P		18 28 23.6	-0.1
	comp=Z,7.2nm,0.7s,baz=241,slow=14,SNR=11								
RES				S		S		18 33 10.6	+1.7
	comp=Z,5.2nm,1.1s,baz=116,slow=22,SNR=1.9								
H16A	**Russell Place,**	28.29	97	⇑P		P		18 28 24.1	-0.3
	baz=28,SNR=7.1								
PETK	**Petropavlovsk-**	28.38	285	P		P		18 28 25.8	+0.9
PETK	**Petropavlovsk-**	28.38	285	P		P		18 28 25.8	+0.9
PETK	**Petropavlovsk-**	28.38	285	P		P		18 28 25.8	+0.9
	comp=Z,14nm,0.8s,baz=87,slow=11,SNR=5.8								
F18A	**Big Timber**	28.39	93	⇓P		P		18 28 25.1	-0.1
	baz=28								
B21A	**Ellsworth Farm**	28.43	87	⇓P		P		18 28 25.2	-0.2
	baz=28								
GCMT	**Greycliff**	28.49	94	*e*P		P		18 28 22.3	-3.8
	comp=Z,19nm,1.0s								
D20A	**Manuel Ranch,**	28.57	90	⇑P		P		18 28 26.1	-0.6
	baz=28,SNR=10								
E19A	**Rath Farm, Rou**	28.57	92	⇓P		P		18 28 26.5	-0.3
	baz=28,SNR=6.5								
C21A	**Desert Coulee**	28.72	88	⇓P		P		18 28 27.4	-0.7
	baz=28								
A22A	**Carney Farms,**	28.73	85	⇓P		P		18 28 27.8	-0.3
	baz=28								
ELK	**Elko**	28.80	107	S		S		18 33 15.7	-2.4
ELK				ScP		ScP		18 35 20.1	+1.1
ELK	**Elko**	28.80	107	P		P		18 28 29.2	+0.2
	comp=Z,9.5nm,0.9s,baz=308,slow=6.6,SNR=18								
ELK				S		S		18 33 15.7	-2.4
	comp=Z,0.3nm,0.3s,baz=155,slow=5.9,SNR=1.6								
ELK				ScP		ScP		18 35 20.1	+1.1
	comp=Z,3.8nm,1.1s,baz=54,slow=2.3,SNR=4.4								
G18A	**Lazy EL Ranch,**	28.84	94	⇑P		P		18 28 29.3	+0.1
	baz=29								
F19A	**Roth Farm, Mol**	28.85	93	⇓P		P		18 28 29.2	-0.1
	baz=29								
H17A	**Grant Village**	28.86	97	⇑P		P		18 28 30.6	+1.0
	baz=29								
NVAR	**Mina Array Bea**	28.91	114	PcP		PcP		18 31 41.3	+2.5
NVAR				S		S		18 33 19.3	-0.6
NVAR				ScP		ScP		18 35 19.9	+0.6
NVAR	**Mina Array Bea**	28.91	114	P		P		18 28 29.7	-0.3
	comp=Z,17nm,0.8s,baz=306,slow=8.1,SNR=29								
NVAR				PcP		PcP		18 31 41.3	+2.5
	comp=Z,4.2nm,0.8s,baz=251,slow=2.6,SNR=4.3								
NVAR				S		S		18 33 19.3	-0.6
	comp=Z,0.1nm,0.3s,baz=170,slow=33,SNR=1.4								
NVAR				ScP		ScP		18 35 19.9	+0.6
	comp=Z,2.4nm,0.9s,baz=277,slow=2.2,SNR=7.2								
E20A	**Meyer Farm, Mu**	28.91	91	⇑P		P		18 28 29.5	-0.3
	baz=29,SNR=9.7								
B22A	**Reddig Ranch S**	29.06	86	⇑P		P		18 28 32.3	+1.2
	baz=29								
MOOW	**Moose Ponds**	29.18	98	*e*P		P		18 28 28.3	-4.1
	comp=Z,11nm,1.1s								
H18A	**Shoshone NF, C**	29.18	95	⇓P		P		18 28 32.2	-0.2
	baz=29								
D21A	**La Casta Ranch**	29.21	89	⇑P		P		18 28 34.0	+1.5
	baz=29								
MLAC	**Mammoth Lakes**	29.26	116	⇓P		P		18 28 34.2	+1.1
	baz=29								
A23A	**Redstone**	29.32	84	⇑P		P		18 28 33.8	+0.5
	baz=29								
F20A	**Billings**	29.33	92	⇑P		P		18 28 33.6	+0.1
	baz=29								
C22A	**Vida**	29.44	87	⇓P		P		18 28 33.9	-0.4
	baz=29								
J17A	**Brown Place, J**	29.45	98	⇑P		P		18 28 33.9	-0.8
	baz=29								
E21A	**Keefer Ranch,**	29.48	90	⇓P		P		18 28 34.4	-0.4
	baz=29								
B23A	**Brockton**	29.53	85	⇓P		P		18 28 34.7	-0.5
	baz=29								
H19A	**Powell**	29.56	95	⇑P		P		18 28 36.0	+0.4
	baz=29								
D22A	**Cohagen**	29.62	88	⇓P		P		18 28 35.5	-0.5
	baz=29,SNR=9.0								
AHID	**Auburn Hatcher**	29.64	100	PFAKE				18 28 40.0	+3.6
AHID				LR		LR			
	comp=Z,7μm,21.0s								
G20A	**Bridger**	29.65	93	⇓P		P		18 28 35.5	-0.9
	baz=30								
TPH	**Tonopah**	29.73	113	PFAKE				18 28 40.0	+2.7
TPH				LR		LR			
	comp=Z,4μm,22.0s								
C23A	**Lambert**	29.79	86	⇓P		P		18 28 36.7	-0.9
	baz=30,SNR=9.3								
A24A	**Westby**	29.82	84	⇑P		P		18 28 37.5	-0.3
	baz=30								
F21A	**Absaloka Mine,**	29.88	91	⇑P		P		18 28 38.2	-0.1
	baz=30								
J18A	**Kendall Valley**	29.93	98	⇓P		P		18 28 38.5	-0.6
	baz=30,SNR=6.2								
DGMT	**Dagmar**	29.96	85	P		P		18 28 38.5	-0.5
	comp=Z,22nm,0.8s								
DGMT				LR		LR			
	comp=Z,31μm,19.0s								
DGMT	**Dagmar**	29.96	85	⇓P		P		18 28 38.8	-0.2
	baz=30								
TIN	**Tinemaha**	30.01	116	⇓P		P		18 28 40.1	+0.5
	baz=30								
RCTC	**Rector, Farmer**	30.09	118	⇑P		P		18 28 40.5	+0.3
	baz=30								
D23A	**Lindsay**	30.14	88	⇑P		P		18 28 40.7	0.0
	baz=30								
E22A	**Miles City**	30.16	89	⇑P		P		18 28 40.9	+0.1
	baz=30								
G21A	**Lodge Grass**	30.20	92	⇑P		P		18 28 40.9	-0.4
	baz=30								
H20A	**Greybull**	30.23	94	⇓P		P		18 28 40.9	-0.6
	baz=30								
R11A	**Troy Canyon, C**	30.37	111	⇓P		P		18 28 43.1	+0.2
	baz=30,SNR=12								
C24A	**Savage**	30.37	86	⇓P		P		18 28 41.5	-1.1
	baz=30,SNR=13								
F22A	**Rosebud**	30.39	91	⇓P		P		18 28 42.5	-0.4
	baz=30								
J19A	**Crowheart**	30.43	97	⇓P		P		18 28 42.3	-1.1
	baz=30								
BW06	**Boulder Array**	30.48	98	PFAKE				18 28 50.0	+6.1
BW06				LR		LR			
	comp=Z,7μm,19.0s								
PDAR	**Pinedale Array**	30.48	98	S		S		18 33 43.4	-1.1
PDAR				ScP		ScP		18 35 23.9	-0.5
PDAR	**Pinedale Array**	30.48	98	P		P		18 28 43.0	-0.9
	comp=Z,9.2nm,0.6s,baz=310,slow=5.2,SNR=23								
PDAR				S		S		18 33 43.4	-1.1
	comp=Z,0.2nm,0.3s,baz=275,slow=33,SNR=2.7								
PDAR				ScP		ScP		18 35 23.9	-0.5
	comp=Z,1.6nm,1.0s,baz=302,slow=2.8,SNR=4.3								
DUG	**Dugway**	30.48	105	⇑P		P		18 28 44.3	+0.4
	baz=30,SNR=5.5								
GRAC	**Grapevine Rang**	30.48	115	⇓P		P		18 28 44.4	+0.6
	baz=30,SNR=10.0								
E23A	**Ismay**	30.49	89	⇓P		P		18 28 42.3	-1.4
	baz=30								
SMMC	**Simmler**	30.52	120	⇓P		P		18 28 44.6	+0.5
	baz=30								
VES	**Vestal, Richgr**	30.54	118	⇑P		P		18 28 44.2	+0.1
	baz=30,SNR=6.5								
CWC	**Cottonwood Cre**	30.56	116	⇑P		P		18 28 45.0	+0.4
	baz=30								
D24A	**Glendive**	30.67	87	⇑P		P		18 28 44.5	-0.7
	baz=30								
H21A	**Big Horn, Sher**	30.67	93	⇓P		P		18 28 44.7	-0.7
	baz=30								
G22A	**Birney**	30.71	92	⇑P		P		18 28 45.3	-0.4
	baz=30								
M17A	**Scullys Gap (B**	30.75	101	⇓P		P		18 28 45.8	-0.4
	baz=31,SNR=12								
L18A	**Fontenelle, Gr**	30.79	100	⇓P		P		18 28 46.3	-0.3
	baz=31								
K19A	**Absolon Red Bu**	30.84	97	⇑P		P		18 28 45.9	-1.1
	baz=31								
F23A	**Volborg**	30.90	90	⇑P		P		18 28 47.7	+0.3
	baz=31								
J20A	**Shoshoni**	30.91	96	⇓P		P		18 28 48.0	+0.5
	baz=31,SNR=7.4								
PKM	**Peak Mountain**	30.94	120	⇓P		P		18 28 48.5	+0.5
	baz=31,SNR=11								
ISA	**Isabella**	30.98	118	⇑P		P		18 28 48.2	+0.1
	baz=31,SNR=9.9								
E24A	**Baker**	31.00	88	⇑P		P		18 28 48.8	+0.5
	baz=31								
L19A	**Farson**	31.04	99	⇓P		P		18 28 48.2	-0.6
	baz=31								
I21A	**Big Trails, Te**	31.05	95	⇑P		P		18 28 48.1	-0.7
	baz=31								
H22A	**Clearmont**	31.07	93	⇑P		P		18 28 48.8	-0.2
	baz=31								
M18A	**Lyman**	31.11	101	⇑P		P		18 28 48.8	-0.6
	baz=31,SNR=5.7								
FURC	**Furnace Creek,**	31.15	115	⇑P		P		18 28 50.2	+0.7
	baz=31,SNR=9.8								
MPMC	**Manual Prospec**	31.16	116	⇓P		P		18 28 50.4	+0.6
	baz=31,SNR=18								
K20A	**Yellowstone Ra**	31.22	97	⇓P		P		18 28 49.3	-1.1
	baz=31								
G23A	**Biddle**	31.23	91	⇓P		P		18 28 50.3	+0.1
	baz=31								
ARVC	**Arvin**	31.24	119	⇑P		P		18 28 49.6	-0.7
	baz=31								
J21A	**Lysite**	31.27	95	⇑P		P		18 28 50.1	-0.7
	baz=31								
F24A	**Ekalaka**	31.36	89	⇑P		P		18 28 51.2	-0.2
	baz=31,SNR=7.6								
SBC	**Santa Barbara**	31.36	121	⇓P		P		18 28 51.8	+0.4
	baz=31								
I22A	**9 Mile Ranch,**	31.44	94	⇓P		P		18 28 51.8	-0.4
	baz=31								
LRMC	**Laurel Mountai**	31.52	117	⇑P		P		18 28 52.9	0.0
	baz=31,SNR=6.5								
M19A	**Rock Springs**	31.55	100	⇑P		P		18 28 52.5	-0.9
	baz=31,SNR=7.1								
H23A	**Clabaugh Cattl**	31.62	92	⇑P		P		18 28 52.1	-1.7
	baz=31								
L20A	**Wamsutter**	31.66	98	⇓P		P		18 28 52.7	-1.6
	baz=32								
G24A	**Alzada**	31.69	90	⇑P		P		18 28 52.1	-2.2
	baz=32								
OSI	**Osito Adit**	31.70	119	⇓P		P		18 28 55.2	+0.7
	baz=32								
J22A	**Midwest**	31.76	94	⇑P		P		18 28 54.1	-0.9
	baz=32								
BSC	**Santa Cruz Isl**	31.77	121	⇑P		P		18 28 55.1	+0.1
	baz=32								
EDW2	**Edwards Air Fo**	31.84	118	⇓P		P		18 28 55.4	-0.3
	baz=32,SNR=6.4								
SHOC	**Shoshone**	31.89	115	⇓P		P		18 28 56.3	+0.3
	baz=32,SNR=9.4								
BLG	**Laguna Peak**	31.95	120	⇑P		P		18 28 56.1	-0.4
	baz=32								
I23A	**Meade Ranch, G**	31.97	93	⇓P		P		18 28 57.1	+0.3
	baz=32								
H24A	**Dirks Ranch, A**	31.97	91	⇓P		P		18 28 55.9	-1.0
	baz=32								
M20A	**Sweetwater, Wa**	32.09	99	⇑P		P		18 28 57.9	-0.2
	baz=32,SNR=6.1								
GSC	**Goldstone**	32.10	116	⇑P		P		18 28 58.3	+0.3
	baz=32,SNR=10.0								
P17A	**Butcher Ranch,**	32.12	104	⇓P		P		18 28 58.2	0.0
	baz=32,SNR=5.1								
DECC	**Green Verdugo**	32.19	119	⇓P		P		18 28 58.6	-0.1
	baz=32								
L21A	**Rawlins**	32.22	97	⇓P		P		18 28 58.7	-0.5
	baz=32,SNR=6.3								
K22A	**Casper**	32.23	95	⇑P		P		18 28 58.9	-0.3
	baz=32,SNR=5.1								
P18A	**Preston Nutter**	32.27	103	⇓P		P		18 28 59.9	+0.1
	baz=32,SNR=6.4								
J23A	**Dilts Ranch, B**	32.28	94	⇑P		P		18 28 59.1	-0.4
	baz=32								
Q16A	**Castle Valley**	32.28	105	⇓P		P		18 29 00.3	+0.6
	baz=32,SNR=8.5								
RRX	**Edison Barstow**	32.33	117	⇑P		P		18 29 00.4	+0.4
	baz=32								
MWC	**Mount Wilson**	32.34	119	P		P		18 28 56.5	-3.7
MWC				pmax		pmax			
	comp=Z,62nm,1.1s								
MWC	**Mount Wilson**	32.34	119	P		P		18 28 56.5	-3.7
	comp=Z,62nm,1.1s								
O19A	**Miners Draw (B**	32.41	101	⇑P		P		18 29 00.9	+0.1
	baz=32,SNR=5.6								
TUQ	**Turquoise Moun**	32.43	115	⇑P		P		18 29 01.4	+0.4
	baz=32								
M21A	**Separation Pea**	32.47	98	⇓P		P		18 29 00.5	-0.9
	baz=32,SNR=6.4								
SRU	**San Rafael**	32.49	104	⇓P		P		18 29 01.6	+0.1
	baz=32,SNR=8.4								
I24A	**Kuemmerle Ranc**	32.50	92	⇓P		P		18 29 01.0	-0.5
	baz=32								
N20A	**Spence Gulch,**	32.50	100	⇑P		P		18 29 01.9	+0.2
	baz=32,SNR=7.5								
BFSC	**Mount Baldy Ra**	32.52	118	⇑P		P		18 29 02.3	+0.5
	baz=32,SNR=7.9								
FMP	**Fort Macarthur**	32.64	120	⇑P		P		18 29 03.2

S18A **Hurst Farm, Bl** 33.81 105 ⇓P P 18 29 12.8 -0.4
baz=34,SNR=9.7
IRM **Iron Mountain** 33.83 115 ⇓P P 18 29 13.3 +0.3
baz=34,SNR=14
P21A **Newcastle** 33.87 101 ⇓P P 18 29 13.5 -0.1
baz=34
109C **Camp Elliot, M** 33.88 119 ⇓P P 18 29 14.5 +1.0
baz=34
O22A **Kremmling** 33.91 99 ⇑P P 18 29 14.3 +0.2
baz=34
M24A **Cheyenne** 33.96 96 ⇓P P 18 29 14.6 +0.3
baz=34
L25A **Engebretsen Ra** 33.98 94 ⇓P P 18 29 14.4 0.0
baz=34
K26A **Motz Farm, Whi** 34.05 92 ⇓P P 18 29 14.5 -0.5
baz=34
BC3 **Big Chuckawall** 34.08 116 ⇓P P 18 29 15.4 0.0
baz=34,SNR=8.2
P22A **Eagle** 34.19 100 ⇓P P 18 29 16.4 -0.1
baz=34,SNR=6.5
MONP **Monument Peak** 34.22 118 ⇑P P 18 29 17.3 +0.6
baz=34,SNR=10
O23A **Lake Granby, G** 34.22 98 ⇓P P 18 29 16.6 -0.2
baz=34,SNR=7.3
PDMCI **Parker Dam,Lak** 34.23 114 ⇓P P 18 29 16.8 +0.3
baz=34,SNR=5.2
Q21A **Lamborn Mesa,** 34.29 102 ⇑P P 18 29 16.7 -0.5
baz=34
R20A **Redvale** 34.32 103 ⇓P P 18 29 17.4 0.0
baz=34,SNR=7.2
N24A **Carr** 34.37 96 ⇑P P 18 29 18.4 +0.5
baz=34
M25A **Palm-Egli Farm** 34.41 95 ⇑P P 18 29 18.5 +0.3
baz=34
Y12C **Blythe** 34.47 115 ⇑P P 18 29 18.8 +0.3
baz=34,SNR=9.7
SWSC **Sam W. Stewart** 34.48 117 ⇑P P 18 29 19.2 +0.5
baz=34,SNR=6.9
ALE **Alert** 34.50 13 P P 18 29 19.6 +1.2
comp=Z,510nm,1.0s,SNR=7.0
L26A **Underwood Farm** 34.55 93 ⇓P P 18 29 19.8 +0.5
baz=34
TIXI **Tiksi** 34.56 327 ⇑*i*P P 18 29 14.3 -4.6
TIXI pmax pmax
comp=Z,12nm,1.3s
DVTC **Desert V Tower** 34.56 118 ⇓P P 18 29 19.9 +0.4
baz=34,SNR=6.1
K27A **Flueckinger Fa** 34.57 92 ⇓P P 18 29 19.5 0.0
baz=34
S20A **Disappointment** 34.59 104 ⇓P P 18 29 19.7 -0.2
baz=34,SNR=7.1
Q22A **Crested Butte,** 34.63 101 ⇓P P 18 29 20.6 +0.3
baz=34
R21A **Cimarron** 34.64 102 ⇓P P 18 29 20.2 -0.1
baz=34,SNR=5.9
ISCO **Idaho Springs** 34.68 98 ⇑P P 18 29 20.9 +0.2
baz=34
WUAZ **Wupatki** 34.71 109 ⇑P P 18 29 21.3 +0.4
baz=35,SNR=8.0
O24A **Longmont** 34.75 98 ⇓P P 18 29 21.7 +0.6
baz=35
N25A **Grover** 34.82 96 ⇑P P 18 29 21.8 0.0
baz=35
P23A **Jefferson** 34.85 99 ⇓P P 18 29 22.3 0.0
baz=35,SNR=5.4
GLA **Glamis** 34.88 116 ⇓P P 18 29 22.5 +0.4
baz=35,SNR=6.2
M26A **McRoberts Ranc** 34.90 94 ⇓P P 18 29 22.1 -0.2
baz=35
L27A **T5 Ranch, Ells** 34.94 93 ⇓P P 18 29 22.7 0.0
baz=35
S21A **Coal Bank Pass** 35.02 103 ⇑P P 18 29 23.6 -0.1
baz=35
Y14A **Wickenburg** 35.09 113 ⇑P P 18 29 24.2 +0.2
baz=35,SNR=10
R22A **Saguache, Gunn** 35.17 101 ⇓P P 18 29 25.3 +0.3
baz=35
Q23A **Hartsel** 35.19 100 ⇑P P 18 29 25.9 +0.7
baz=35
KIP **Kipapa** 35.20 189 PFAKE 18 29 30.0 +5.1
KIP LR LR
comp=Z,8µm,21.0s
P24A **Kohler Place,** 35.26 98 ⇑P P 18 29 26.2 +0.6
baz=35
M27A **Reverse DX Ran** 35.27 93 ⇓P P 18 29 25.6 0.0
baz=35
BRSD **Miller** 35.27 87 ⇑P P 18 29 26.1 +0.7
baz=35
O25A **Wiggins** 35.28 97 ⇓P P 18 29 26.0 +0.3
baz=35
N26A **Koester Ranch,** 35.28 95 ⇓P P 18 29 26.3 +0.5
baz=35
S22A **4UR Ranch, Cre** 35.48 102 ⇓P P 18 29 27.7 +0.1
baz=35,SNR=6.6
Q24A **Divide** 35.52 99 ⇓P P 18 29 28.7 +0.7
baz=35
U20A **Newcomb** 35.58 105 ⇓P P 18 29 28.7 +0.4
baz=35
Z14A **Wintersburg** 35.58 114 ⇓P P 18 29 28.6 +0.4
baz=35,SNR=7.0
113A **Mohawk Valley,** 35.63 115 ⇓P P 18 29 28.8 +0.1
baz=36,SNR=10.0
O26A **Horse Wrangler** 35.64 96 ⇓P P 18 29 28.8 +0.1
baz=36
T21A **Navajo Lake** 35.65 104 ⇓P P 18 29 29.0 0.0
baz=36
P25A **Willow Gulch B** 35.67 97 ⇑P P 18 29 29.2 +0.1
baz=36
N27A **Anderson Farm,** 35.68 94 ⇑P P 18 29 29.4 +0.3
baz=36
R23A **Moffat** 35.70 101 ⇑P P 18 29 29.8 +0.3
baz=36
OGNE **Ogallala** 35.86 94 ⇑P P 18 29 30.4 -0.2
baz=36
W18A **Petrified Fore** 35.88 108 ⇑P P 18 29 30.7 -0.2
baz=36
S23A **Nye Farm, Mont** 35.96 101 ⇑P P 18 29 32.3 +0.6
baz=36
T22A **Edith** 35.97 103 ⇓P P 18 29 32.2 +0.4
baz=36,SNR=11
U21A **Nageezi** 36.00 104 ⇓P P 18 29 32.0 0.0
baz=36,SNR=7.0
V20A **Brimhall** 36.04 106 ⇓P P 18 29 32.5 +0.2
baz=36,SNR=6.5
Q25A **Bedland, Calha** 36.05 98 ⇑P P 18 29 32.7 +0.3
baz=36
R24A **Sanders Place,** 36.07 100 ⇑P P 18 29 33.1 +0.6
baz=36,SNR=6.2
P26A **Davis Ranch, A** 36.09 97 ⇓P P 18 29 32.8 +0.1
baz=36,SNR=7.3
O27A **Beecher Island** 36.13 95 ⇓P P 18 29 33.1 +0.1
baz=36
X18A **Snowflake** 36.22 109 ⇓P P 18 29 34.6 +0.7
baz=36,SNR=5.3
T23A **Casias Ranch,** 36.43 102 ⇓P P 18 29 35.6 -0.1
baz=36
S24A **Houchin Ranch,** 36.44 101 ⇓P P 18 29 36.1 +0.2
baz=36,SNR=6.5
Q26A **Hugo** 36.45 98 ⇓P P 18 29 36.0 +0.3
baz=36,SNR=6.8
U22A **Llaves** 36.47 104 ⇑P P 18 29 36.3 +0.2
baz=36
V21A **Milan** 36.48 105 ⇓P P 18 29 36.5 +0.4
baz=36,SNR=5.6
P27A **Ficken Ranch,** 36.52 96 ⇓P P 18 29 35.2 -1.2
baz=36
W20A **Ramah** 36.53 107 ⇑P P 18 29 36.5 0.0
baz=36,SNR=9.7
R25A **Fountain Ranch** 36.58 99 ⇓P P 18 29 36.6 -0.3
baz=36,SNR=7.4
214A **Organ Pipe Nat** 36.77 115 ⇑P P 18 29 38.9 +0.6
baz=37,SNR=11
V22A **San Miguel Ran** 36.79 104 ⇑P P 18 29 38.8 +0.1
baz=37,SNR=7.8
S25A **Robets Cordova** 36.85 100 ⇑P P 18 29 39.3 +0.1
baz=37
U23A **El Rito** 36.86 103 ⇓P P 18 29 39.8 +0.4
baz=37,SNR=8.0
KSCO **Kaye Shedlock'** 36.88 97 ⇓P P 18 29 39.4 0.0
baz=37,SNR=6.0
R26A **Arlington** 36.93 98 ⇑P P 18 29 40.0 +0.2
baz=37,SNR=6.2
T24A **Torres, Weston** 36.94 101 ⇓P P 18 29 40.7 +0.7
baz=37,SNR=5.3
X20A **Quemado** 36.97 107 ⇓P P 18 29 40.7 +0.4
baz=37,SNR=7.4
W21A **San Fidel** 36.99 106 ⇑P P 18 29 40.6 +0.1
baz=37

T25A **Trinidad** 37.24 100 ⇑P P 18 29 42.8 +0.2
baz=37,SNR=8.3
R27A **Eads** 37.30 98 ⇑P P 18 29 43.3 +0.3
baz=37,SNR=8.7
U24A **Moreno Valley** 37.30 102 ⇓P P 18 29 43.8 +0.6
baz=37
V23A **Ortiz Mt. (NFS** 37.30 104 ⇑P P 18 29 43.6 +0.5
baz=37
S26A **Kim** 37.40 99 ⇓P P 18 29 44.0 +0.1
baz=37,SNR=7.4
X21A **Alamocita Cree** 37.42 107 ⇓P P 18 29 44.9 +0.7
baz=37,SNR=11
W22A **Albuquerque** 37.44 105 ⇑P P 18 29 44.6 +0.3
baz=37
Y20A **Horse Springs,** 37.52 108 ⇑P P 18 29 46.0 +1.0
baz=37,SNR=7.7
T26A **Comanche Natio** 37.66 100 ⇓P P 18 29 46.0 0.0
baz=38,SNR=6.4
S27A **Las Animas** 37.67 98 ⇑P P 18 29 46.0 -0.1
baz=38
BGNE **Belgrade** 37.70 90 ⇑P P 18 29 45.5 -0.8
baz=38
ANMO **Albuquerque** 37.76 105 PcP PcP 18 32 06.5 +2.9
ANMO S S 18 35 39.7 +2.8
ANMO ScP ScP 18 35 50.8 +0.6
ANMO LR LR
comp=Z,8µm,19.0s
ANMO **Albuquerque** 37.76 105 P P 18 29 46.8 -0.1
comp=Z,2.7nm,0.7s,baz=328,slow=9.9,SNR=13
ANMO PcP PcP 18 32 06.5 +2.9
comp=Z,9.3nm,1.0s,baz=300,slow=2.8,SNR=5.9
ANMO S S 18 35 39.7 +2.8
comp=Z,0.4nm,0.5s,baz=1.0,slow=9.7,SNR=2.0
ANMO ScP ScP 18 35 50.8 +0.6
comp=Z,5.7nm,1.0s,baz=280,slow=4.3,SNR=7.7
W23A **Werner Place,** 37.76 104 ⇓P P 18 29 47.3 +0.3
baz=38
U25A **Circle Dot Ran** 37.78 101 ⇑P P 18 29 47.6 +0.4
baz=38
X22A **Bernardo** 37.79 106 ⇑P P 18 29 47.9 +0.7
baz=38
R28A **Tribune** 37.80 97 ⇑P P 18 29 47.8 +0.6
baz=38
V24A **Rampart Ranch,** 37.81 103 ⇑P P 18 29 48.4 +0.9
baz=38
Y21A **Point of Rocks** 37.82 107 ⇓P P 18 29 48.4 +0.8
baz=38,SNR=8.4
YAK **Yakutsk** 37.93 311 *e**PP P 18 29 51.2 +3.4
YAK *e* 18 31 14.3
YAK *e* 18 32 00.2
YAK *e*S S 18 35 34.0 -4.5
YAK *e**SS ScP 18 35 49.3 -0.7
YAK *e*SSS SSS 18 38 41.8
YAK *e* 18 39 56.0
YAK pmax pmax
comp=Z,213nm,1.2s
YAK pmax pmax
comp=E,100nm,1.4s
YAK pmax pmax
comp=N,33nm,1.3s
YAK pmax pmax
comp=Z,997nm,4.8s
YAK pmax pmax
comp=E,207nm,2.8s
YAK pmax pmax
comp=N,209nm,3.3s
YAK smax smax
comp=N,277nm,4.1s
YAK smax smax
comp=E,495nm,4.1s
YAK MLR MLR
comp=Z,16µm,18.0s
YAK MLR MLR
comp=E,13µm,18.0s
YAK MLR MLR
comp=N,10µm,16.0s
Z20A **Nine Sixteen R** 38.03 109 ⇓P P 18 29 50.1 +0.9
baz=38,SNR=9.2
LENM **Lemitar** 38.07 106 P P 18 29 50.2 +0.6
comp=N,21nm,1.1s
V25A **Rancho No Teng** 38.08 102 ⇓P P 18 29 50.2 +0.5
baz=38,SNR=7.0
R29A **Marienthal** 38.11 96 ⇓P P 18 29 50.1 +0.4
baz=38
W24A **Lazy 6 Ranch,** 38.12 104 ⇑P P 18 29 50.5 +0.5
baz=38,SNR=7.4
U26A **Atchley Ranch,** 38.15 101 ⇑P P 18 29 50.6 +0.4
baz=38,SNR=6.8
Y22D **IRIS PASSCAL I** 38.17 106 ⇑P P 18 29 51.1 +0.7
baz=38
SPMN **St. Paul** 38.18 81 ⇓P P 18 29 50.7 +0.5
baz=38
X23A **Hourglass Bar** 38.18 105 ⇑P P 18 29 50.3 -0.2
baz=38
T27A **Campo** 38.22 99 ⇓P P 18 29 50.7 -0.1
baz=38
Y22A **Socorro** 38.25 106 ⇓P P 18 29 51.6 +0.5
baz=38,SNR=7.8
BNM **Barren Site** 38.27 106 P P 18 29 49.1 -2.2
comp=N,31nm,1.3s
S28A **Manter** 38.29 98 ⇑P P 18 29 51.7 +0.4
baz=38,SNR=7.3
Z21A **St. Cloud Mine** 38.36 108 ⇓P P 18 29 52.8 +0.8
baz=38,SNR=11
120A **U Bar Ranch, L** 38.45 110 ⇓P P 18 29 53.3 +0.5
baz=38,SNR=6.0
V26A **Tequesquite Ra** 38.56 101 ⇑P P 18 29 54.0 +0.3
baz=38,SNR=6.9
X24A **Lazy VL Ranch,** 38.59 104 ⇑P P 18 29 54.5 +0.5
baz=38
U27A **Thompson Grove** 38.63 100 ⇑P P 18 29 54.6 +0.4
baz=38,SNR=6.9
W25A **X Bar L Ranch,** 38.63 103 ⇑P P 18 29 54.5 +0.3
baz=38,SNR=8.2
R30A **Dighton** 38.69 95 ⇑P P 18 29 54.5 0.0
baz=38,SNR=5.0
S29A **Ulysses** 38.70 97 ⇓P P 18 29 54.4 -0.3
baz=38
Y23A **Lovelace Mesa,** 38.74 106 ⇑P P 18 29 55.4 +0.1
baz=39
Z22A **Elephant Butte** 38.78 107 ⇑P P 18 29 55.7 +0.2
baz=39
121A **Cookes Peak, D** 38.90 109 ⇓P P 18 29 57.3 +0.7
baz=39,SNR=8.2
T29A **Hugoton** 38.94 97 ⇓P P 18 29 56.7 0.0
baz=39,SNR=5.4
U28A **Mallet** 38.99 99 ⇑P P 18 29 56.7 -0.5
baz=39
220A **Playas Peak, P** 39.01 110 ⇓P P 18 29 57.9 +0.5
baz=39,SNR=11
319A **Douglas** 39.03 111 ⇑P P 18 29 57.6 0.0
baz=39
X25A **Clemmons Ranch** 39.04 103 ⇓P P 18 29 57.8 +0.1
baz=39
S30A **Montezuma** 39.04 96 ⇓P P 18 29 57.7 +0.1
baz=39
Y24A **Capitan** 39.08 105 ⇑P P 18 29 58.4 +0.3
baz=39,SNR=8.1
W26A **Owens Ranch, T** 39.10 102 ⇓P P 18 29 57.9 -0.3
baz=39
V27A **Dan Oppiter Fa** 39.11 100 ⇓P P 18 29 57.7 -0.5
baz=39
Z23A **Rita Site, Whi** 39.16 106 ⇓P P 18 29 58.9 +0.2
baz=39
122A **Conniff Cattle** 39.19 108 ⇑P P 18 30 00.2 +1.3
baz=39
221A **Mesquite Ranch** 39.32 109 ⇓P P 18 30 00.8 +0.9
baz=39
T30A **Plains** 39.43 97 ⇓P P 18 30 00.5 -0.3
baz=39
V28A **Chnning** 39.45 100 ⇓P P 18 30 00.8 -0.3
baz=39
320A **Kipp Ranch, An** 39.45 111 ⇑P P 18 30 02.2 +1.0
baz=39,SNR=7.6
U29A **Oasis Ranch, S** 39.46 98 ⇑P P 18 30 00.8 -0.3
baz=39
Y25A **Mesa, Roswell** 39.48 104 ⇓P P 18 30 01.4 +0.1
baz=39,SNR=8.8
X26A **CR and CF Fran** 39.48 103 ⇓P P 18 30 01.5 +0.1
baz=39,SNR=5.1
W27A **Bowe Ranch, En** 39.50 101 ⇓P P 18 30 01.3 -0.2
baz=39
Z24A **Sheeppen Canyo** 39.57 105 ⇑P P 18 30 02.5 +0.3
baz=39,SNR=6.4
222A **Williams Famil** 39.60 108 ⇓P P 18 30 02.7 +0.3
baz=40
S31A **Mullinville** 39.60 95 ⇑P P 18 30 02.1 -0.1
baz=39

COWI **Conover** 39.62 77 P P 18 29 59.3 -3.0
comp=N,108nm,1.2s
COWI LR LR
comp=Z,15µm,19.0s
123A **Bell Site, Whi** 39.63 107 ⇓P P 18 30 02.6 0.0
baz=40
U30A **WK&E Inc. Balk** 39.74 98 ⇓P P 18 30 03.7 +0.3
baz=40,SNR=7.3
V29A **Stinnett** 39.75 99 ⇑P P 18 30 03.0 -0.5
baz=40
YSS **Yuzh-Sakhalins** 39.79 285 *c i*P P 18 30 06.0 +2.4
YSS *e* 18 30 19.0
YSS *e*PPP PPP 18 32 09.0
YSS *e*S S 18 36 04.0 -2.9
YSS pmax pmax
comp=Z,70nm,1.1s
YSS pmax pmax
comp=N,1µm,9.0s
YSS pmax pmax
comp=Z,2µm,9.0s
YSS MLR MLR
comp=E,10µm,20.0s
YSS MLR MLR
comp=Z,16µm,20.0s
X27A **F and S Farms,** 39.80 102 ⇓P P 18 30 04.0 +0.1
baz=40
W28A **Vega** 39.83 100 ⇑P P 18 30 04.2 0.0
baz=40
T31A **Randall Ranch,** 39.87 96 ⇑P P 18 30 04.6 +0.2
baz=40
Y26A **Elida** 39.95 103 ⇑P P 18 30 05.8 +0.6
baz=40
Z25A **Roswell** 39.96 105 ⇓P P 18 30 05.7 +0.4
baz=40
124A **Stringfield Ra** 40.01 106 ⇓P P 18 30 06.2 +0.3
baz=40,SNR=8.0
223A **Chaparral, Ant** 40.03 108 ⇓P P 18 30 06.5 +0.6
baz=40
W29A **Amraillo** 40.23 100 ⇓P P 18 30 07.3 -0.2
baz=40
V30A **Spur Ranch, Mi** 40.28 98 ⇑P P 18 30 07.9 0.0
baz=40
U31A **Nine Bar Ranch** 40.30 97 ⇑P P 18 30 07.8 -0.3
baz=40
Y27A **Causey** 40.34 103 ⇑P P 18 30 08.5 +0.1
baz=40,SNR=7.0
Z26A **Caprock** 40.36 104 ⇓P P 18 30 09.0 +0.4
baz=40
X28A **Dimmitt** 40.38 101 ⇑P P 18 30 09.6 +0.8
baz=40
224A **Cornudas Mount** 40.45 107 ⇑P P 18 30 09.5 +0.1
baz=40,SNR=7.6
125A **Gardner Draw,** 40.47 105 ⇑P P 18 30 09.8 +0.3
baz=40,SNR=7.1
MSTX **Muleshoe** 40.48 102 ⇓P P 18 30 09.2 -0.5
baz=40,SNR=5.1
X29A **Tulia** 40.71 101 ⇑P P 18 30 12.3 +0.8
baz=40
Z27A **Tatum** 40.74 103 ⇓P P 18 30 11.5 -0.3
baz=41,SNR=7.1
V31A **Spring Creek L** 40.74 98 ⇓P P 18 30 11.9 +0.2
baz=41
W30A **Crocket Farms** 40.77 99 ⇑P P 18 30 12.0 0.0
baz=41
225A **Deer Hill, Car** 40.80 106 ⇓P P 18 30 12.3 -0.1
baz=41
Y28A **McKinney Farm,** 40.81 102 ⇑P P 18 30 11.8 -0.6
baz=41,SNR=5.7
126A **Clayton Basin,** 40.82 105 ⇓P P 18 30 12.4 +0.1
baz=41,SNR=5.7
324A **Moseley Ranch,** 40.97 107 ⇓P P 18 30 13.6 -0.1
baz=41,SNR=6.0
JFWS **Jewell Farm** 41.07 82 P P 18 30 13.1 -1.2
JFWS pmax pmax
comp=Z,82nm,1.0s
JFWS MLR MLR
comp=Z,31µm,20.0s
JFWS **Jewell Farm** 41.07 82 P P 18 30 13.1 -1.2
comp=Z,82nm,1.0s
JFWS LR LR
comp=Z,31µm,20.0s
W31A **Holland Ranch,** 41.12 98 ⇓P P 18 30 14.3 -0.5
baz=41
127A **Arkansas Junct** 41.15 104 ⇓P P 18 30 14.6 -0.6
baz=41
X30A **Coker Ranch, T** 41.16 100 ⇓P P 18 30 14.8 -0.3
baz=41,SNR=7.6
Y29A **Porterfield Fa** 41.16 101 ⇑P P 18 30 15.0 -0.2
baz=41,SNR=6.7
226B **Tecolote Peak,** 41.18 105 ⇑P P 18 30 15.5 +0.1
baz=41,SNR=9.0
Z28A **Tucker Farm, M** 41.21 103 ⇓P P 18 30 15.2 -0.4
baz=41
X31A **McDonald Ranch** 41.51 99 ⇑P P 18 30 17.6 -0.4
baz=41
Y30A **Stafford Cattl** 41.57 101 ⇓P P 18 30 17.4 -1.1
baz=41
Z29A **Hungry Hill Ra** 41.60 102 ⇑P P 18 30 18.2 -0.6
baz=41
ASAJ **Asahikawa** 41.68 281 S S 18 36 38.5 +3.4
ASAJ **Asahikawa** 41.68 281 P P 18 30 21.1 +1.9
comp=Z,48nm,0.7s,baz=62,slow=12,SNR=19
ASAJ S S 18 36 38.5 +3.4
comp=Z,5.3nm,1.0s,baz=315,slow=27,SNR=1.8
227A **Bennet, Jal** 41.70 105 ⇑P P 18 30 19.1 -0.5
baz=42
425A **Indio Mountain** 41.75 107 ⇓P P 18 30 20.4 +0.3
baz=42,SNR=6.9
Y31A **Rekieta Farm,** 41.86 100 ⇑P P 18 30 20.2 -0.6
baz=42
326A **Caldwell Ranch** 41.87 106 ⇑P P 18 30 21.3 +0.3
baz=42,SNR=8.6
Z30A **Sanderson Ranc** 41.89 101 ⇓P P 18 30 21.0 -0.2
baz=42,SNR=5.4
129A **Stewart Farms,** 41.99 103 ⇑P P 18 30 21.7 -0.3
baz=42
228A **UT Block 9, Go** 41.99 104 ⇑P P 18 30 22.1 0.0
baz=42,SNR=5.9
327A **Balmorhea Ranc** 42.09 105 ⇓P P 18 30 22.9 +0.1
baz=42
Y32A **R-V Farms, Ver** 42.27 99 ⇑P P 18 30 23.6 -0.6
baz=42
426A **McDonald Obser** 42.35 107 ⇓P P 18 30 25.0 -0.1
baz=42
Z31A **Sharp Cattle R** 42.41 100 ⇓P P 18 30 24.9 -0.4
baz=42,SNR=6.3
328A **Wristen Ranch,** 42.44 105 ⇓P P 18 30 25.5 -0.2
baz=42
130A **Snyder** 42.51 102 ⇓P P 18 30 26.1 -0.1
baz=42
229A **Bryant Ranch,** 42.53 103 ⇑P P 18 30 26.4 0.0
baz=42
427A **Hayter Ranch,** 42.54 106 ⇑P P 18 30 27.1 +0.5
baz=42
CLNS **Chul'man** 42.76 307 *e*P P 18 30 26.9 -1.0
CLNS *e* 18 32 08.9
CLNS *e* 18 32 16.8
CLNS *e*S S 18 36 50.4 -0.5
CLNS *e*SS SnSn 18 40 13.8 -2.4
CLNS pmax pmax
comp=Z,69nm,1.3s
CLNS pmax pmax
comp=N,23nm,1.1s
CLNS pmax pmax
comp=E,45nm,1.1s
CLNS pmax pmax
comp=N,6.0nm,1.0s
CLNS pmax pmax
comp=Z,21nm,1.2s
CLNS pmax pmax
comp=E,20nm,1.1s
CLNS smax smax
comp=E,4µm,15.9s
CLNS smax smax
comp=N,1µm,13.8s
CLNS MLR MLR
comp=E,20µm,14.0s
CLNS MLR MLR
comp=Z,20µm,14.0s
CLNS MLR MLR
comp=N,7µm,14.0s
131A **Roby** 42.76 101 ⇓P P 18 30 27.9 -0.3
baz=43
ERM **Erimo** 42.77 279 *e*P P 18 30 27.7 -0.4
ERM pmax pmax
comp=Z,100nm,1.1s
ERM **Erimo** 42.77 279 P P 18 30 30.7 +2.6
comp=Z,831nm,1.4s,SNR=11

Z32A Haskell 42.78 100 ⇓P P 18 30 27.9 -0.4
baz=43,SNR=7.3
526A Mary Lane Ranc 42.79 107 ⇑P P 18 30 28.6 0.0
baz=43,SNR=7.3
329A Wagon Wheel Ra 42.81 104 ⇓P P 18 30 28.4 -0.3
baz=43,SNR=6.0
TUL1 Tulsa 42.88 94 ⇓P P 18 30 27.3 -1.8
baz=43
HABR Khabarovsk 42.91 291 *ce*P P 18 30 27.4 -1.8
HABR *e**PP 18 30 36.6
HABR *e**SP 18 30 40.8
HABR *e* 18 32 07.1
HABR *e* 18 32 17.2
HABR PPP PPP 18 32 40.8
HABR *e*S **S** **18 36 50.6 -2.5**
HABR *e**SS *SS 18 37 06.4
HABR *e*SS **SS** **18 40 03.5 -0.7**
HABR *e* 18 40 24.8
HABR *e*SSS SSS 18 40 39.3
HABR pmax pmax
comp=Z,222nm,1.4s
HABR pmax pmax
comp=N,55nm,1.4s
HABR pmax pmax
comp=E,126nm,1.4s
HABR MLR MLR
comp=N,15μm,19.0s
HABR MLR MLR
comp=Z,17μm,19.0s
HABR MLR MLR
comp=E,15μm,19.0s
230A Sterling City 42.97 103 ⇓P P 18 30 29.6 -0.3
baz=43,SNR=5.5
527A Woodward Ranch 42.98 107 ⇓P P 18 30 29.8 -0.4
baz=43,SNR=6.1
428A Kincaid Ranch, 43.02 105 ⇑P P 18 30 30.4 0.0
baz=43,SNR=8.3
626A Big Bend Ranch 43.17 108 ⇑P P 18 30 31.9 +0.2
baz=43,SNR=7.8
ABTX Abilene, Hawle 43.21 101 ⇓P P 18 30 31.2 -0.6
baz=43,SNR=6.6
330A Mertzon 43.31 103 ⇑P P 18 30 32.2 -0.4
baz=43,SNR=7.2
231A Bronte 43.37 102 ⇑P P 18 30 32.5 -0.6
baz=43,SNR=5.6
528A Cox Ranch, San 43.41 106 ⇓P P 18 30 33.4 -0.1
baz=43,SNR=9.5
429A Davenport Ranc 43.52 105 ⇑P P 18 30 34.3 -0.1
baz=43,SNR=7.4
SUMG Summit 43.56 24 *i* P P 18 30 36.2 +1.5
comp=E,86nm,0.9s
SUMG
comp=Z,16μm,17.0s
TXAR Lajitas Array 43.59 107 PcP **PcP** 18 32 26.4 +4.1
TXAR S **S** **18 37 04.2 +0.5**
TXAR Lajitas Array 43.59 107 P P 18 30 35.8 +0.8
comp=Z,11nm,0.9s,baz=324,slow=6.2,SNR=20
TXAR PcP **PcP** 18 32 26.4 +4.1
comp=Z,1.6nm,0.4s,baz=242,slow=0.3,SNR=8.6
TXAR S **S** **18 37 04.2 +0.5**
comp=Z,0.3nm,0.6s,baz=229,slow=32,SNR=2.1
627A Terlingua Ranc 43.65 107 ⇓P P 18 30 35.3 -0.2
baz=44,SNR=6.6
529A Stev Forest Ra 43.74 105 ⇓P P 18 30 36.1 -0.1
baz=44,SNR=9.3
430A Baggett Ranch, 43.75 104 ⇓P P 18 30 36.0 -0.3
baz=44,SNR=7.1
232A Coleman 43.77 101 ⇑P P 18 30 35.8 -0.6
baz=44
331A San Angelo 43.79 103 ⇓P P 18 30 36.0 -0.5
baz=44
628A Black Gap, Mar 43.88 107 ⇓P P 18 30 37.6 +0.2
baz=44,SNR=10.0
DAG Danmarks Havn 43.90 14 *i* P P 18 30 37.5 +0.6
DAG *i* 18 32 23.8
DAG pmax pmax
comp=Z,66nm,0.9s
DAG MLR MLR
comp=Z,11μm,16.0s
DAG Danmarks Havn 43.90 14 *i* P P 18 30 37.5 +0.6
comp=Z,79nm,0.9s
DAG *i* 18 32 23.8
DAG
comp=Z,11μm,15.0s
SFJD Kangerlussuaq 43.98 34 ⇑*i* P P 18 30 39.1 +1.5
comp=Z,58nm,1.0s
SFJD
comp=Z,19μm,19.0s
SFJD Kangerlussuaq 43.98 34 P P 18 30 39.0 +1.4
comp=Z,74nm,0.9s,baz=312,slow=9.4,SNR=14
332A Millersview 44.10 102 ⇑P P 18 30 38.3 -0.8
baz=44
431A Sonora 44.17 103 ⇑P P 18 30 39.4 -0.3
baz=44,SNR=6.6
530A J-C Ranch, Com 44.20 104 ⇑P P 18 30 39.6 -0.2
baz=44,SNR=5.8
432A Menard 44.47 102 ⇑P P 18 30 41.4 -0.6
baz=44,SNR=6.6
SFIN Scholer Farm 44.53 82 ⇓P P 18 30 41.4 -0.9
baz=44
KBS Kingsbay 44.57 4 *e*P P 18 30 44.4 +2.2
KBS *e*S **S** **18 37 12.9 -3.8**
KBS *e*SS **ScS** **18 40 39.2 +0.7**
KBS AMS AMS 18 49 57.3
comp=Z,10μm,18.3s
JCT Junction City 44.77 103 ⇓P P 18 30 43.7 -0.7
baz=45,SNR=7.0
WHTX Lake Whitney 44.88 99 ⇑P P 18 30 45.7 +0.4
baz=45
532A Rocksprings 44.98 103 ⇑P P 18 30 45.4 -0.7
baz=45
631A Perdido Creek 45.18 104 ⇓P P 18 30 47.0 -0.7
baz=45,SNR=7.0
SCHQ Schefferville 45.39 54 P P 18 30 50.4 +1.3
comp=Z,25nm,0.7s,baz=310,slow=8.4,SNR=21
SPA0 Spitsbergen Ar 45.47 3 *e*P P 18 30 50.4 +1.0
SPITS Spitsbergen Ar 45.47 3 P P 18 30 50.2 +0.8
comp=Z,55nm,0.8s,baz=29,slow=5.3,SNR=26
632A Uvalde 45.53 103 ⇑P P 18 30 49.7 -0.7
baz=45,SNR=6.0
732A Laxson Ranch, 46.04 104 ⇑P P 18 30 54.9 +0.4
baz=46
NATX Nacogdoches 46.60 97 PFAKE 18 31 00.0 +1.2
NATX LR LR
comp=Z,12μm,20.0s
ACSO Alum Creek Sta 46.89 79 PFAKE 18 31 00.0 -1.0
ACSO LR LR
comp=Z,8μm,20.0s
USRK Ussuriysk Arra 47.31 289 P P 18 31 04.6 +0.4
comp=Z,9.7nm,1.0s,baz=61,slow=6.9,SNR=12
WAKE Wake Island 47.92 236 PFAKE 18 31 10.0 +0.8
WAKE LR LR
comp=Z,8μm,21.0s
VLA Vladivostok 48.11 288 ⇓*i*P P 18 31 08.9 -1.5
VLA *e*S **S** **18 38 05.6 -2.6**
VLA pmax pmax
comp=Z,69nm,1.3s
MDJ Mudanjiang 48.28 291 P P 18 31 09.6 -2.1
MDJ pP pP 18 31 27.3 +11
MDJ sP sP 18 31 35.4 +17
MDJ PcP **PcP** **18 32 36.9 -1.5**
MDJ PP **PP** **18 33 02.4 -1.5**
MDJ ScP ScP 18 36 25.1 -7.0
MDJ PcS **PcS** **18 36 32.8 -1.4**
MDJ S S 18 37 59.6 -11
MDJ ScS ScS 18 40 55.8 -7.9
MDJ pmax pmax
comp=Z,12nm,1.3s
MDJ pmax pmax
comp=Z,1μm,7.9s
MDJ LR LR
comp=N,18μm,19.6s
MDJ LR LR
comp=E,10μm,25.4s
MDJ LR LR
comp=Z,11μm,19.6s
SCO Scoresbysund 48.57 20 ⇑*i*P P 18 31 15.1 +1.5
SCO pmax pmax
comp=Z,26nm,1.0s
SCO MLR MLR
comp=Z,11μm,16.0s
SCO Scoresbysund 48.57 20 ⇑*i*P P 18 31 15.1 +1.5
comp=Z,26nm,1.0s
SCO *i* 18 33 08.3
SCO
comp=Z,11μm,16.0s

NCB Newcomb 48.97 70 PFAKE 18 31 20.0 +2.9
NCB LR LR
comp=Z,20μm,19.0s
MAT Matsushiro 49.35 277 S **S** **18 38 30.6 +4.7**
MJAR Matsushiro Arr 49.35 277 P **P** **18 31 20.4 +0.4**
MJAR Matsushiro Arr 49.35 277 P **P** **18 31 20.4 +0.4**
comp=Z,14nm,1.0s,baz=19,slow=4.4,SNR=7.7
JMIC Jan Mayen 50.34 14 *e*P **P** **18 31 28.5 +1.4**
JMIC AMS AMS 18 56 17.9
comp=Z,5μm,16.9s
CIT Chita 50.92 307 *e*P P 18 31 28.4 -3.4
CIT *e* 18 31 44.0
CIT *e*S **S** **18 38 53.2 +5.7**
CIT pmax pmax
comp=Z,369nm,1.4s
QUA2 Belchertown 51.13 70 *e*P P 18 31 29.6 -3.8
comp=Z,47nm,1.3s
BRAL Brewton 51.38 91 *e*P P 18 31 31.2 -4.2
comp=Z,348nm,1.5s
BRAL LR LR
comp=Z,16μm,19.0s
KMSC Kings Mountain 51.46 83 ⇑P **P** **18 31 36.9 +0.9**
baz=51
BRYW Bryant College 51.81 70 *e*P P 18 31 34.6 -4.0
comp=Z,93nm,1.3s
TIGA Tifton 52.98 88 ⇑P **P** **18 31 48.2 +0.9**
baz=53
CNNC Cliffs of the 53.28 80 PFAKE 18 31 50.0 +0.6
CNNC LR LR
comp=Z,12μm,20.0s
SNY Shenyang 53.36 292 ⇑P **P** **18 31 50.5 +0.5**
SNY pmax pmax
comp=Z,2μm,5.5s
SNY LR LR
comp=N,5μm,15.3s
SNY LR LR
comp=E,10μm,14.9s
SNY LR LR
comp=Z,11μm,18.1s
TRO Tromso 54.08 4 ⇑*i*P **P** **18 31 54.6 -0.2**
TRO AMB AMB 18 32 04.4
comp=Z,150nm,1.9s
TRO *e*S **S** **18 39 24.9 -5.2**
TRO AMS AMS 18 54 12.1
comp=Z,11μm,21.0s
KSRS Korea Array 54.28 285 P **P** **18 31 57.3 +0.6**
comp=Z,35nm,1.2s,baz=45,slow=6.7,SNR=16
ARCES ARCESS Array B 54.33 1 P **P** **18 31 56.6 -0.1**
comp=Z,14nm,0.5s,baz=3.0,slow=6.6,SNR=30
ARE0 ARCESS Array S 54.33 1 *e*P **P** **18 31 55.7 -1.0**
XMAS Kiritimati 54.37 186 PFAKE 18 32 00.0 +2.4
XMAS LR LR
comp=Z,6μm,19.0s
IRK Irkutsk 54.70 313 *e*P **P** **18 32 00.8 +1.1**
IRK pmax pmax
comp=Z,135nm,1.8s
KTK1 Kautokeino 54.82 2 *e*P P 18 31 56.7 -3.6
KTK1 AMB AMB 18 32 07.4
comp=Z,274nm,1.6s
INCN Inchon 54.95 286 PFAKE 18 32 10.0 +8.3
INCN LR LR
comp=Z,5μm,20.0s
TLY Talaya 55.38 313 *c*P **P** **18 32 05.2 +0.6**
TLY *e*S S 18 39 54.3 +6.2
TLY *e*PS **PnS** **18 40 04.6 +6.4**
TLY pmax pmax
comp=Z,94nm,1.2s
TLY MLR MLR
comp=Z,6μm,18.0s
TLY Talaya 55.38 313 P **P** **18 32 01.6 -3.0**
comp=Z,311nm,1.1s,SNR=14
STEI Steigen 55.62 6 *e*P P 18 32 01.6 -4.4
LVZ Lovozero 55.87 357 *e*P P 18 32 02.8 -5.1
LVZ pmax pmax
comp=Z,26nm,0.9s
LVZ Lovozero 55.87 357 P P 18 32 03.8 -4.1
comp=Z,913nm,1.1s,SNR=9.6
JNU Nakatsue 55.91 280 P **P** **18 32 09.9 +1.2**
JNU Nakatsue 55.91 280 P **P** **18 32 09.9 +1.2**
comp=Z,33nm,1.2s,baz=58,slow=6.3,SNR=3.6
APA Apatity 56.23 357 ⇓*i*P **P** **18 32 12.0 +1.6**
APA *e*S **S** **18 39 56.0 -2.9**
APA *i*PS **PnS** **18 40 06.0 -3.3**
APA pmax pmax
comp=Z,52nm,1.0s
DL2 Dalian 56.52 291 ⇑*i*P **P** **18 32 13.1 +0.2**
DL2 sP sP 18 32 35.3 +16
DL2 S S 18 39 59.8 -3.7
DL2 sS sS 18 40 22.0 +11
DL2 pmax pmax
comp=Z,53nm,1.1s
DL2 pmax pmax
comp=Z,970nm,7.0s
DL2 LR LR
comp=N,6μm,19.1s
DL2 LR LR
comp=E,6μm,18.9s
DL2 LR LR
comp=Z,5μm,21.3s
ULN Ulaanbaatar 56.82 308 P **P** **18 32 15.8 +0.7**
SNR=16
FLOS Flostrand 57.09 7 *e*P **P** **18 32 18.1 +1.6**
SONM Songino Array 57.13 308 S S 18 40 20.6 +8.9
SONM Songino Array 57.13 308 P **P** **18 32 18.1 +0.8**
comp=Z,138nm,1.2s,baz=44,slow=5.7,SNR=25
SONM S S 18 40 20.6 +8.9
comp=Z,1.0nm,1.1s,baz=52,slow=9.9,SNR=4.2
BJI Beijing 58.44 296 P **P** **18 32 23.8 -2.6**
BJI S S 18 40 18.9 -10
BJI SS SS 18 44 10.8 -10
BJI pmax pmax
comp=Z,11nm,0.6s
BJI pmax pmax
comp=Z,1μm,7.8s
BJI LR LR
comp=N,14μm,21.1s
BJI LR LR
comp=E,13μm,19.9s
BJI LR LR
comp=Z,14μm,23.7s
TBLU Trondheim 59.91 9 ⇑*i*P **P** **18 32 33.7 -2.5**
TBLU AMB AMB 18 32 37.2
comp=Z,169nm,1.1s
HHC Hu-ho-hao-te 60.10 299 *e*P **P** **18 32 38.5 +0.5**
HHC PcP **PcP** **18 33 25.1 +1.4**
HHC PP **PP** **18 34 53.1 +3.0**
HHC SS SS 18 44 44.6 -2.0
HHC pmax pmax
comp=Z,130nm,1.2s
HHC pmax pmax
comp=Z,3μm,5.8s
HHC LR LR
comp=N,7μm,16.7s
HHC LR LR
comp=E,6μm,13.1s
HHC LR LR
comp=Z,6μm,13.1s
NVS Novosibirsk 60.16 327 ⇓*i*P **P** **18 32 36.6 -1.4**
NVS *i* 18 34 46.0
NVS *i*S **S** **18 40 47.4 -3.1**
NVS pmax pmax
comp=N,48nm,1.3s
NVS pmax pmax
comp=E,52nm,1.3s
NVS pmax pmax
comp=Z,123nm,1.3s
NVS pmax pmax
comp=Z,62nm,1.6s
NVS pmax pmax
comp=N,45nm,1.8s
NVS pmax pmax
comp=E,40nm,1.5s
NVS smax smax
comp=N,371nm,3.8s
NVS smax smax
comp=E,715nm,4.3s
MOL Molde 60.32 10 *e*P **P** **18 32 38.6 -0.5**
ZALV Zalesovo Beam 60.42 325 P **P** **18 32 39.9 0.0**
comp=E,71nm,1.0s,baz=33,slow=5.9,SNR=29
BTO Baotou 61.03 300 *e*P **P** **18 32 44.9 +0.5**
KAF Kangasniemi 61.79 1 *e*p P 18 32 43.0 -6.0
comp=E,12nm,0.7s
TIY Taiyuan 62.10 297 *e*P P 18 32 47.5 -4.1
TIY S **S** **18 41 15.6 -0.3**
TIY pmax pmax
comp=Z,1μm,7.2s
TIY LR LR
comp=N,9μm,13.4s
TIY LR LR
comp=E,7μm,12.4s
TIY LR LR
comp=Z,13μm,14.8s
NB2 NORSAR Subarra 62.17 9 P P 18 32 45.7 -6.0
comp=Z,108nm,1.1s,baz=350,slow=6.9
NB2 NORSAR Subarra 62.17 9 P P 18 32 45.7 -6.0
baz=350,slow=6.9
NOA NORSAR Array B 62.17 9 P **P** **18 32 50.9 -0.8**
comp=Z,43nm,0.9s,baz=350,slow=6.7,SNR=17
BER Bergen 62.22 12 *e*P P 18 32 47.6 -4.3
BER AMB AMB 18 32 58.0
comp=Z,127nm,1.0s
BER *e*S **S** **18 41 11.9 -4.6**
BER AMS AMS 19 02 20.7
comp=Z,5μm,17.7s
NAO01 NORSAR Array S 62.33 9 *e*P P 18 32 46.7 -6.0
comp=Z,56nm,0.9s
FIA1 FINESS Array S 62.45 1 *e*P P 18 32 47.9 -5.5
FINES FINESS Array B 62.46 1 S **S** **18 41 20.7 +1.2**
FINES FINESS Array B 62.46 1 P **P** **18 32 54.1 +0.7**
comp=Z,70nm,1.0s,baz=1.4,slow=7.6,SNR=32
FINES S **S** **18 41 20.7 +1.2**
comp=Z,0.7nm,0.8s,baz=322,slow=27,SNR=2.9
NC602 NORSAR Array S 62.50 9 *e*P **P** **18 32 53.6 -0.2**
BBSR BB Station 62.57 72 P **P** **18 32 53.8 -0.8**
comp=Z,109nm,1.1s
BBSR LR LR
comp=Z,5μm,20.0s
SSE Sheshan 62.72 286 P **P** **18 32 57.4 +1.7**
SSE sS sS 18 41 44.1 +12
SSE pmax pmax
comp=Z,26nm,0.8s
SSE pmax pmax
comp=Z,1μm,6.9s
SSE LR LR
comp=N,6μm,22.8s
SSE LR LR
comp=E,3μm,22.8s
SSE LR LR
comp=Z,4μm,22.5s
ODD1 Odda 62.83 12 *e*P **P** **18 32 54.5 -1.5**
NJ2 Nanjing 63.21 288 *e*P **P** **18 32 57.3 -1.7**
NJ2 pP pP 18 33 15.0 +11
NJ2 sP sP 18 33 23.4 +18
NJ2 PP **PP** **18 35 15.8 -1.9**
NJ2 S **S** **18 41 28.0 -1.8**
NJ2 sS sS 18 41 53.5 +16
NJ2 pmax pmax
comp=Z,40nm,1.0s
NJ2 pmax pmax
comp=Z,1μm,8.9s
NJ2 LR LR
comp=N,7μm,27.5s
NJ2 LR LR
comp=E,12μm,22.8s
NJ2 LR LR
comp=Z,7μm,23.5s
KONO Kongsberg 63.39 10 *i*P **P** **18 32 59.3 -0.5**
KONO AMB AMB 18 33 07.5
comp=Z,202nm,1.4s
KONO *e*S **S** **18 41 27.3 -4.0**
KONO AMS AMS 19 00 43.3
comp=Z,5μm,21.9s
KONO Kongsberg 63.39 10 *e*P P 18 32 54.6 -5.2
KONO pmax pmax
comp=Z,129nm,1.2s
KONO MLR MLR
comp=Z,7μm,22.0s
KONO Kongsberg 63.39 10 *e*P P 18 32 54.6 -5.2
comp=Z,31nm,1.2s
KONO LR LR
comp=Z,7μm,22.0s
GUMO Guam 63.72 254 PFAKE 18 33 10.0 +7.5
GUMO LR LR
comp=Z,3μm,22.0s
SVE Sverdlovsk 63.96 340 ⇑*e*P **P** **18 33 03.7 +0.2**
SVE *e* 18 45 43.2
SVE pmax pmax
comp=Z,152nm,1.4s
PUL Pulkovo 64.12 358 *e*P P 18 32 59.5 -5.0
PUL pmax pmax
comp=Z,32nm,0.7s
HOMB Homborsund 64.64 11 *e*P **P** **18 33 09.2 +1.2**
ARU Arti 64.71 341 *d*iP P 18 33 02.9 -5.6
ARU 18 33 32.6
ARU 18 35 26.2
ARU PPP PPP 18 36 59.8
ARU S S 18 41 38.7 -9.0
ARU 18 42 56.9
ARU SS **SS** **18 45 57.9 +0.4**
ARU SSS SSS 18 48 37.4
ARU pmax pmax
comp=Z,19nm,1.0s
ARU MLR MLR
comp=Z,11μm,21.0s
ARU Arti 64.71 341 P P 18 33 03.2 -5.3
comp=Z,394nm,1.1s,SNR=12
KURK Kurchatov 65.14 327 *c*iP P 18 33 07.5 -3.8
KURK Kurchatov 65.14 327 P **P** **18 33 11.7 +0.4**
SNR=19
KURK Kurchatov 65.14 327 P **P** **18 33 12.9 +1.6**
comp=Z,284nm,1.3s,SNR=12
BRVK Borovoye 65.35 333 *e*P P 18 33 07.5 -5.2
BRVK pmax pmax
comp=Z,134nm,1.3s
BRVK MLR MLR
comp=Z,16μm,21.0s
BRVK Borovoye 65.35 333 *e*P P 18 33 07.5 -5.2
comp=Z,134nm,1.3s
BRVK LR LR
comp=Z,16μm,21.0s
BRVK Borovoye 65.35 333 P **P** **18 33 14.3 +1.7**
SNR=19
BRVK Borovoye 65.35 333 P P 18 33 08.8 -3.9
comp=Z,369nm,1.2s,SNR=12
VSU Vasula 65.45 0 *e*P P 18 33 08.0 -5.2
VSU pmax pmax
comp=Z,36nm,0.9s
TAOE Nuku Hiva Isla 65.86 167 *e*P **P** **18 33 14.6 -1.8**
comp=Z,348nm,1.5s
TAOE *e*S S 18 41 54.1 -8.7
TAOE comp=Z,12μm,25.4s *e*LQ LQ 18 49 42.1
TAOE comp=Z,4μm,28.8s *e*LR LR 18 52 59.0
comp=Z,8μm,28.8s,baz=1.4
MUD Monsted U'grnd 66.50 11 *i*P **P** **18 33 22.1 +2.1**
MUD pmax pmax
comp=Z,50nm,1.0s
MUD MLR MLR
comp=Z,6μm,19.0s
MUD Monsted U'grnd 66.50 11 *i*P **P** **18 33 22.1 +2.1**
comp=Z,50nm,1.0s
MUD
comp=Z,6μm,18.0s
GTBY Guantanamo Bay 66.71 89 PFAKE 18 33 30.0 +8.2
GTBY LR LR
comp=Z,15μm,20.0s
GTA Gaotai 66.71 307 ⇑P **P** **18 33 21.8 0.0**
GTA pP pP 18 33 40.0 +13
GTA sP sP 18 33 48.4 +20
GTA PP **PP** **18 35 51.8 +3.6**
GTA S S 18 42 07.0 -5.9
GTA sS sS 18 42 39.3 +18
GTA SS **SS** **18 46 27.1 -2.6**
GTA pmax pmax
comp=Z,27nm,1.8s
GTA pmax pmax
comp=Z,1μm,7.4s
GTA LR LR
comp=N,18μm,18.1s
GTA LR LR
comp=E,21μm,18.5s
GTA LR LR
comp=Z,28μm,19.5s
MTDJ Mount Denham 66.73 92 PFAKE 18 33 30.0 +7.8
MTDJ LR LR
comp=Z,9μm,20.0s
XAN Xi'an 66.74 297 P **P** **18 33 21.8 -0.2**
XAN PcS 18 37 46.1
XAN pmax pmax
comp=Z,10.0nm,1.4s
XAN pmax pmax

comp=Z,370nm,6.3s
XAN LR LR
comp=N,8µm,19.0s
XAN LR LR
comp=E,4µm,19.0s
XAN LR LR
comp=Z,3µm,12.6s
WHN Wuhan 66.76 290 P P 18 33 22.1 0.0
WHN S S **18 42 12.4 -1.1**
WHN LR LR
comp=N,12µm,18.3s
WHN LR LR
comp=E,12µm,14.8s
WHN LR LR
comp=Z,21µm,18.9s
TATO Taipei 67.38 281 PFAKE 18 33 30.0 +3.9
TATO LR LR
comp=Z,5µm,20.0s
MKAR Makanchi Array 67.39 323 S S **18 42 24.2 +3.4**
MKAR Makanchi Array 67.39 323 PP PP 18 36 01.5 +7.7
MKAR S S **18 42 24.2 +3.4**
MKAR ⇑*e* 19 01 55.6
MKAR Makanchi Array 67.39 323 P P **18 33 25.6 -0.3**
comp=Z,8.9nm,0.6s,baz=40,slow=6.4,SNR=24
MKAR PP PP 18 36 01.5 +7.7
comp=Z,6.4nm,0.9s,baz=20,slow=5.7,SNR=3.6
MKAR S S **18 42 24.2 +3.4**
comp=Z,1.0nm,1.1s,baz=38,slow=12,SNR=4.0
MKAR PKP2bc 19 01 55.6
comp=Z,1.6nm,1.1s,baz=236,slow=3.7,SNR=6.0
LZH Lanzhou 67.56 302 *e*P P **18 33 27.4 +0.1**
LZH pP pP 18 33 45.4 +13
LZH sP sP 18 33 55.4 +21
LZH PP PP **18 35 58.0 +2.3**
LZH *e*S S 18 42 16.8 -6.5
LZH sS sS 18 42 43.3 +12
LZH SS SS 18 46 32.6 -11
LZH pmax pmax
comp=Z,87nm,1.4s
LZH pmax pmax
comp=Z,490nm,6.4s
LZH LR LR
comp=N,10µm,14.9s
LZH LR LR
comp=E,13µm,16.1s
LZH LR LR
comp=Z,16µm,19.2s
COP Copenhagen 67.57 9 *i*P P **18 33 27.8 +1.0**
COP pmax pmax
comp=Z,37nm,0.9s
COP MLR MLR
comp=Z,2µm,17.0s
COP Copenhagen 67.57 9 *i*P P **18 33 27.8 +1.0**
comp=Z,37nm,0.9s
COP
comp=Z,2µm,17.0s
VAL Valentia 67.61 24 *e*P P **18 33 24.2 -2.9**
VAL Valentia 67.61 24⇑*i*S S **18 42 22.7 -0.3**
GRTK Grand Turk 67.64 85 PFAKE 18 33 30.0 +2.2
GRTK LR LR
comp=Z,7µm,19.0s
YHNB Yeheng 67.68 281 PFAKE 18 33 30.0 +1.9
YHNB LR LR
comp=Z,5µm,21.0s
MOS Moscow 67.88 354 *e*P P **18 33 28.7 0.0**
MOS *i*S S **18 42 24.4 -1.8**
MOS *e*PS PnS **18 42 56.2 +7.3**
MOS *e*SS SS **18 46 40.3 -6.3**
MOS pmax pmax
comp=Z,105nm,1.3s
MOS MLR MLR
comp=N,5µm,22.0s
MOS MLR MLR
comp=E,6µm,22.0s
MOS MLR MLR
comp=E,4µm,21.0s
LLD Lille Linde 67.90 9 *i*P P 18 33 36.4 +7.5
LLD pmax pmax
comp=Z,88nm,0.8s
WMQ Urumqi 68.03 317 P P **18 33 27.0 -3.0**
WMQ PcP PcP **18 33 53.3 -2.8**
WMQ PP PP **18 35 59.0 -0.5**
WMQ PcS 18 37 56.8
WMQ S S **18 42 24.3 -4.2**
WMQ SS SS **18 46 47.6 -2.1**
WMQ pmax pmax
comp=Z,56nm,1.6s
WMQ pmax pmax
comp=Z,2µm,6.6s
WMQ LR LR
comp=N,14µm,14.0s
WMQ LR LR
comp=E,11µm,16.2s
WMQ LR LR
comp=Z,9µm,19.0s
IZAR Zarasai 68.17 1 *e*P P 18 33 26.0 -4.5
IZAR AMB AMB 18 33 33.1
comp=Z,34nm,1.3s
BSD Bornholm Skovb 68.34 8 *i*P P **18 33 31.7 0.0**
BSD pmax pmax
comp=Z,52nm,0.9s
BSD MLR MLR
comp=Z,4µm,18.0s
BSD Bornholm Skovb 68.34 8 *i*P P **18 33 31.7 0.0**
comp=Z,52nm,0.9s
BSD
comp=Z,4µm,17.0s
ISAL Salakas 68.35 1 *e*P P 18 33 27.2 -4.5
ISAL AMB AMB 18 33 34.3
comp=Z,35nm,1.3s
OBN Obninsk 68.56 354 *e*P P 18 33 27.9 -5.1
OBN *i* 18 33 38.6
OBN pmax pmax
comp=Z,19nm,0.7s
OBN MLR MLR
comp=Z,7µm,19.0s
OBN Obninsk 68.56 354 P P 18 33 27.8 -5.2
comp=Z,489nm,1.3s,SNR=7.5
IIGN Ignalina 68.57 1 *e*P P 18 33 28.5 -4.6
IIGN AMB AMB 18 33 35.6
comp=Z,33nm,1.4s
RGN Rugen 68.78 9 *e*P P 18 33 30.7 -3.7
comp=Z,172nm,1.2s
FUNA Funafuti 68.81 210 PFAKE 18 33 40.0 +5.0
FUNA LR LR
comp=Z,6µm,19.0s
QZH Quanzhou 68.98 284⇑*i*P P **18 33 38.0 +1.9**
QZH pmax pmax
comp=Z,2µm,7.5s
QZH LR LR
comp=N,7µm,11.9s
QZH LR LR
comp=E,3µm,12.1s
QZH LR LR
comp=Z,8µm,15.3s
BSEG Bad Segeberg 69.10 11 *e*P P 18 33 32.4 -4.0
BSEG pmax pmax
comp=Z,134nm,1.1s
BSEG Bad Segeberg 69.10 11 *e*P P 18 33 32.4 -4.0
comp=Z,134nm,1.1s
JTS JuntasAbangare 69.15 103 PFAKE 18 33 40.0 +2.7
JTS LR LR
comp=Z,6µm,20.0s
TPUB Ta-pu 69.19 281 P P 18 33 33.3 -4.1
comp=Z,32nm,1.1s
SUW Suwalki 69.86 3 *e*P P 18 33 35.2 -5.9
SUW pmax pmax
comp=Z,202nm,1.0s
SUW Suwalki 69.86 3 *e*P P 18 33 35.2 -5.9
comp=Z,202nm,1.0s
SUW Suwalki 69.86 3 *e*P P 18 33 35.6 -5.5
SUW Suwalki 69.86 3 *e*P **P** **18 33 42.1 +1.0**
SUW *e*S **S** **18 42 51.8 +2.1**
SUW LMZ LR 19 03 21.2
GKP Gorka Klasztor 70.34 6 *e*P **P** **18 33 45.9 +1.9**
GKP *e*S **S** **18 42 58.8 +3.5**
GKP LMZ LR 19 03 50.9
IBBN Ibbenburen 70.41 13 *e*P P 18 33 40.6 -3.9
comp=Z,68nm,1.0s
NRDL Niedersach Rie 70.50 11 *e*P P 18 33 40.8 -4.2
comp=Z,143nm,1.5s
WTSB Winterswijk 70.63 13 *e*P P 18 33 41.8 -4.0
comp=Z,222nm,1.8s
RUE Ruedersdorf 70.87 9 *e*P P 18 33 43.2 -4.1
comp=Z,123nm,1.0s
RUE Ruedersdorf 70.87 9 P P 18 33 43.1 -4.2
comp=Z,120nm,1.0s
BUG Bochum--Univer 71.20 13 *e*P P 18 33 45.0 -4.3
comp=Z,113nm,1.2s
ABKAR Akbulak array 71.26 338 *e*P P 18 33 42.8 -7.0
comp=Z,20nm,0.7s
PMOR Pomariorio Ree 71.27 175 *e*P **P** **18 33 48.2 -1.8**
comp=Z,146nm,1.1s
HGN Heimansgroeve 71.69 14 *e*P P 18 33 47.1 -5.1
comp=Z,186nm,1.5s
HGN *e*PP **PP** **18 36 34.1 +3.5**
HGN *e*S **S** **18 43 15.5 +4.4**
HGN *e*SS **SS** **18 47 45.2 -0.2**
HGN *e*SSS SSS 18 51 53.5
CD2 Chengdu 71.82 298 P **P** **18 33 53.1 -0.4**
CD2 PcP **PcP** **18 34 12.8 +0.5**
CD2 PP **PP** **18 36 33.9 +1.4**
CD2 S **S** **18 43 09.6 -3.7**
CD2 SS **SS** **18 47 46.6 -2.0**
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 pmax pmax
comp=Z,2µm,6.4s
CD2 LR LR
comp=N,8µm,15.6s
CD2 LR LR
comp=E,11µm,16.7s
CD2 LR LR
comp=Z,7µm,18.6s
MEM Membach 71.85 14 P P 18 33 48.6 -4.6
comp=Z,42nm,1.5s
AFI Afiamalu 71.90 200 PFAKE
AFI LR LR
comp=Z,4µm,20.0s
BCLA Clavier 71.94 15 P P 18 33 49.0 -4.9
comp=Z,39nm,1.5s
NEUB Neuenburg 71.94 10 *e*P P 18 33 49.4 -4.4
comp=Z,110nm,1.1s
BEL Belsk 71.95 4 *e*P P 18 33 49.1 -4.8
BEL Belsk 71.95 4 *e*P **P** **18 33 55.7 +1.8**
BEL *e*S **S** **18 43 09.6 -4.5**
BEL LMZ LR 19 05 12.3
CLL Collm 71.96 9 *i*P P 18 33 49.1 -4.8
CLL *e* 18 33 55.0
CLL pmax pmax
comp=Z,56nm,1.3s
CLL MLR MLR
comp=Z,6µm,19.2s
CLL Collm 71.96 9 *e*P P 18 33 49.3 -4.6
comp=Z,48nm,1.1s
CLL Collm 71.96 9 *i*P P 18 33 49.1 -4.8
comp=Z,8.0nm,0.9s
CLL *e* 18 33 53.0
CLL *e*Pmax 18 33 55.0
comp=Z,56nm,1.3s
CLL *e* 18 33 59.0
CLL *i* 18 34 05.4
CLL *e*PP PP 18 36 38.0 +5.0
CLL *e*S **S** **18 43 19.0 +4.8**
CLL *e*PS PnS 18 43 54.0 +10
CLL *e*SS SS 18 48 12.0 +23
CLL *e* 18 51 54.0
CLL LmH 19 10 00.0
comp=N,4µm,19.0s
CLL LmH 19 10 00.0
comp=E,2µm,18.9s
CLL LmV 19 11 00.0
comp=Z,6µm,19.2s
BAIF Baives 72.13 16 *e*P P 18 33 50.5 -4.5
comp=Z,24nm,0.9s
BAIF Baives 72.13 16⇑*i*P **P** **18 33 56.8 +1.8**
comp=Z,96nm,1.0s
BAIF Baives 72.13 16 *e*P P 18 33 50.5 -4.5
BAIF pmax pmax
comp=Z,24nm,0.9s
BAIF Baives 72.13 16 *e*P P 18 33 50.5 -4.5
comp=Z,24nm,0.9s
UBBA Unterbreizbach 72.14 12 *e*P P 18 33 50.7 -4.2
comp=Z,75nm,1.5s
DOU Dourbes 72.15 15 P P 18 33 50.6 -4.5
comp=Z,22nm,1.3s
GIVF Givet 72.18 15 *e*P P 18 33 50.7 -4.6
comp=Z,26nm,0.8s
GIVF Givet 72.18 15⇑*i*P **P** **18 33 57.0 +1.7**
comp=Z,160nm,1.0s
GIVF Givet 72.18 15 *e*P P 18 33 50.7 -4.6
GIVF pmax pmax
comp=Z,26nm,0.8s
GIVF Givet 72.18 15 *e*P P 18 33 50.7 -4.6
comp=Z,26nm,0.8s
VRHR Novokhopersk 72.19 351 *e*P **P** **18 33 54.4 -0.9**
VRHR *e* 18 36 31.4
VRHR *e*PPP PPP 18 38 16.7
VRHR *e*S S 18 43 11.2 -5.7
VRHR pmax pmax
comp=N,30nm,1.1s
VRHR pmax pmax
comp=E,20nm,1.1s
VRHR pmax pmax
comp=Z,40nm,1.1s
VRHR pmax pmax
comp=N,290nm,3.3s
VRHR pmax pmax
comp=Z,150nm,3.3s
VRHR pmax pmax
comp=E,30nm,1.1s
VRHR smax smax
comp=N,480nm,4.5s
VRHR smax smax
comp=Z,50nm,2.3s
VRHR smax smax
comp=E,420nm,4.5s
VRHR MLR MLR
comp=N,6µm,22.0s
VRHR MLR MLR
comp=E,3µm,22.0s
VRHR MLR MLR
comp=Z,7µm,22.0s
AAA Alma-Ata 72.28 324 *i*P **P** **18 33 56.5 +0.5**
AAA pmax pmax
comp=Z,2µm,3.1s
AAA MLR MLR
comp=Z,8µm,8.0s
VSR Storozhevoye 72.28 352 *e*P **P** **18 33 56.5 +0.7**
VSR *e*PP PcP 18 34 07.9 -6.0
VSR *e*SP 18 34 12.4
VSR *e* 18 36 35.1
VSR *e*PPP PPP 18 38 19.4
VSR *e*S **S** **18 43 13.3 -4.5**
VSR *e*SS SS 18 47 44.5 -10
VSR pmax pmax
comp=N,50nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,50nm,1.0s
VSR pmax pmax
comp=Z,310nm,3.8s
VSR pmax pmax
comp=N,50nm,1.3s
VSR pmax pmax
comp=E,40nm,1.3s
VSR smax smax
comp=N,430nm,4.7s
VSR smax smax
comp=E,400nm,4.7s
VSR smax smax
comp=Z,110nm,4.7s
VSR MLR MLR
comp=N,3µm,18.0s
VSR MLR MLR
comp=E,1µm,18.0s
VSR MLR MLR
comp=Z,7µm,18.0s
BRG Berggiesshubel 72.47 9 *i*P **P** **18 33 58.9 +1.9**
comp=Z,75nm,1.4s
BRG PP **PP** **18 36 38.0 +0.6**
BRG S **S** **18 43 21.0 +0.9**
BRG SS **SS** **18 48 02.0 +4.6**
BRG
comp=N,4µm,18.8s
BRG
comp=E,2µm,20.1s
BRG
comp=Z,5µm,19.2s
BRG Berggiesshubel 72.47 9 *i*P **P** **18 33 58.9 +1.9**
BRG 18 36 38.0
BRG pmax pmax
comp=Z,75nm,1.4s
BRG MLR MLR
comp=N,4µm,18.8s
BRG MLR MLR
comp=E,2µm,20.1s
BRG MLR MLR
comp=Z,5µm,19.2s
BRG Berggiesshubel 72.47 9 P P 18 33 52.7 -4.3
comp=Z,80nm,1.4s
MOX Moxa 72.48 10 *e*P P 18 33 52.8 -4.3
MOX *e* 18 36 36.7
MOX *e*SS SS 18 47 50.6 -7.0
MOX pmax pmax
comp=Z,99nm,1.1s
MOX MLR MLR
comp=Z,4µm,19.1s
MOX Moxa 72.48 10 *e*P P 18 33 52.8 -4.3
comp=Z,99nm,1.1s
MOX *e* 18 34 32.5
MOX *e*PP **PP** **18 36 36.7 -0.8**
MOX *e*S **S** **18 43 21.0 +0.8**
MOX *e*SS SS 18 47 50.6 -7.0
MOX *e*L L 19 10 05.2
comp=Z,4µm,19.1s
ROSF Rostrenen 72.50 21 *e*P P 18 33 52.4 -4.8
ROSF Rostrenen 72.50 21⇑*i*P **P** **18 33 58.8 +1.6**
comp=Z,210nm,1.5s
ROSF Rostrenen 72.50 21 *e*P P 18 33 52.4 -4.8
ROSF Rostrenen 72.50 21 *e*P P 18 33 52.4 -4.8
VORD Divnogorie 72.52 352 *e*P **P** **18 33 57.7 +0.5**
VORD pmax pmax
comp=N,140nm,1.0s
VORD pmax pmax
comp=E,40nm,1.0s
VORD pmax pmax
comp=Z,50nm,1.0s
TNS Taunus Mts 72.55 13 *e*P P 18 33 53.3 -4.2
TNS pmax pmax
comp=Z,64nm,1.1s
TNS Taunus Mts 72.55 13 *e*P P 18 33 53.3 -4.2
comp=Z,64nm,1.1s
LRS Lares 72.61 83 P P 18 33 54.7 -3.6
FLN La Foliniere 72.62 19 *e*P P 18 33 53.0 -4.9
comp=Z,21nm,0.9s
FLN La Foliniere 72.62 19⇑*i*P **P** **18 33 59.1 +1.2**
comp=Z,228nm,1.3s
FLN *e*R
comp=Z,21µm,19.5s
FLN La Foliniere 72.62 19 *e*P P 18 33 53.0 -4.9
FLN pmax pmax
comp=Z,21nm,0.9s
FLN La Foliniere 72.62 19 *e*P P 18 33 53.0 -4.9
comp=Z,21nm,0.9s
KSP Ksiaz 72.69 7 *e*P P 18 33 53.2 -5.1
KSP *e* 18 36 39.8
KSP MLR MLR
comp=Z,8µm,20.2s
KSP Ksiaz 72.69 7 *e*P P 18 33 53.7 -4.6
KSP Ksiaz 72.69 7 *e*P **P** **18 34 00.2 +1.9**
KSP *e*S **S** **18 43 27.8 +5.2**
KSP LMZ LR 19 10 10.3
PLN Plauen 72.69 10 *e*P P 18 33 54.0 -4.3
comp=Z,371nm,1.2s
SGMF Saint Gilles 72.72 20 *e*P P 18 33 53.8 -4.7
comp=Z,66nm,1.2s
SGMF Saint Gilles 72.72 20⇑*i*P **P** **18 34 00.0 +1.5**
comp=Z,207nm,1.1s
SGMF Saint Gilles 72.72 20 *e*P P 18 33 53.8 -4.7
SGMF pmax pmax
comp=Z,66nm,1.2s
SGMF Saint Gilles 72.72 20 *e*P P 18 33 53.8 -4.7
comp=Z,66nm,1.2s
WERD Werda 72.75 10 *e*P P 18 33 54.5 -4.2
comp=Z,52nm,1.1s
TANN Tannenbergstha 72.79 10 *e*P P 18 33 54.7 -4.3
comp=Z,56nm,1.2s
WLF Walferdange 72.80 14 P P 18 33 54.4 -4.5
comp=Z,68nm,1.7s
WLF Walferdange 72.80 14 *e*P P 18 33 54.9 -4.0
WLF pmax pmax
comp=Z,92nm,1.3s
WLF MLR MLR
comp=Z,8µm,20.0s
WLF Walferdange 72.80 14 *e*P P 18 33 55.2 -3.7
comp=Z,72nm,1.1s
WLF Walferdange 72.80 14 *e*P P 18 33 54.9 -4.0
comp=Z,92nm,1.3s
WLF LR LR
comp=Z,8µm,20.0s
GUNZ Gunzen 72.83 10 *e*P P 18 33 54.9 -4.3
comp=Z,65nm,1.3s
LDF La Druitiere 72.84 19 *e*P P 18 33 54.4 -4.8
LDF La Druitiere 72.84 19⇑*i*P **P** **18 34 00.5 +1.3**
comp=Z,121nm,1.1s
LDF La Druitiere 72.84 19 *e*P P 18 33 54.4 -4.8
LDF La Druitiere 72.84 19 *e*P P 18 33 54.4 -4.8
BCIP Isla Barro Col 72.86 99 PFAKE 18 34 00.0 +0.2
BCIP LR LR
comp=Z,4µm,19.0s
PVCC Panska Ves 72.87 9 *e* **P** **18 34 01.1 +1.7**
PVCC MLR MLR
comp=Z,7µm,18.3s
PVCC Panska Ves 72.87 9 *e*pP **P** **18 34 01.1 +1.7**
PVCC *e*S **S** **18 43 28.0 +3.4**
PVCC AMS AMS 19 13 10.0
comp=Z,7µm,18.3s
PVCC Panska Ves 72.87 9 *e*P P 18 33 55.4 -4.0
PVCC Panska Ves 72.87 9 *e*P P 18 33 55.4 -4.0
GRR Gorron 72.91 19 *e*P P 18 33 54.9 -4.7
comp=Z,21nm,0.9s
GRR Gorron 72.91 19⇑*i*P **P** **18 34 01.1 +1.5**
comp=Z,147nm,1.1s
GRR Gorron 72.91 19 *e*P P 18 33 54.9 -4.7
GRR pmax pmax
comp=Z,21nm,0.9s
GRR Gorron 72.91 19 *e*P P 18 33 54.9 -4.7
comp=Z,21nm,0.9s
WERN Wernitzgruen 72.91 10 *e*P P 18 33 55.5 -4.2
comp=Z,133nm,1.6s
QUIF Quistinic 72.92 21 *e*P P 18 33 54.9 -4.8
comp=Z,56nm,1.1s
QUIF Quistinic 72.92 21⇑*i*P **P** **18 34 01.2 +1.5**
comp=Z,170nm,1.3s
QUIF Quistinic 72.92 21 *e*P P 18 33 54.9 -4.8
QUIF pmax pmax
comp=Z,56nm,1.1s
QUIF Quistinic 72.92 21 *e*P P 18 33 54.9 -4.8
comp=Z,56nm,1.1s
OBIP Obispado Ponce 72.94 83 P **P** **18 33 57.2 -3.0**
comp=Z,90nm,1.2s
NKC Novy Kostel 72.97 10 *e*P P 18 33 55.8 -4.2
NKC Novy Kostel 72.97 10 *e*P P 18 33 55.8 -4.2
NKC *e*S **S** **18 43 29.3 +3.4**
UPC Upice 73.00 8 *e*P P 18 33 55.8 -4.4
UPC Upice 73.00 8 *e*P P 18 33 55.8 -4.4
UPC Upice 73.00 8 *e* **P** **18 34 01.8 +1.6**
UPC Upice 73.00 8 *e*pP **P** **18 34 01.8 +1.6**
TKM2 Tokmak 2 73.03 325 *i*P P 18 33 55.7 -5.0
TKM2 Tokmak 2 73.03 325 *e*P P 18 33 55.5 -5.2
comp=Z,99nm,1.2s
TKM2 LR LR
comp=Z,7µm,22.0s
TKM2 Tokmak 2 73.03 325 P P 18 33 55.8 -5.0
SNR=7.1
USP Ospenovka 73.06 326 P P 18 33 57.1 -3.5
SNR=6.4
DPC Dobruska-Polom 73.18 7 *e*P P 18 33 56.5 -4.8
DPC MLR MLR
comp=Z,4µm,17.2s
DPC Dobruska-Polom 73.18 7 *e*pP **P** **18 34 01.0 -0.3**
DPC *e*S **S** **18 43 28.6 +0.3**
DPC AMS AMS 19 15 10.0
comp=Z,4µm,17.2s
DPC Dobruska-Polom 73.18 7 *e*P P 18 33 56.5 -4.8
MANZ Manzenberg 73.18 10 *e*P P 18 33 57.0 -4.3
comp=Z,40nm,1.2s
TOD Tromm 73.19 13 *e*P **P** **18 34 02.6 +1.3**
TOD Tromm 73.19 13 *e*P **P** **18 34 02.6 +1.3**
AKASG Malin Array Be 73.22 359 S **S** **18 43 29.8 +1.2**
AKASG Malin Array Be 73.22 359 P **P** **18 34 00.4 -1.0**
comp=Z,21nm,0.5s,baz=3.3,slow=5.7,SNR=26
AKASG Malin Array Be 73.22 359 S **S** **18 43 29.8 +1.2**
comp=Z,0.4nm,0.5s,baz=84,slow=19,SNR=5.2
CHMS Chumysh 73.22 326 P **P** **18 34 01.9 +0.3**
SNR=9.3

GZH	**Guangzhou**	**73.29**	**286**	P	**P**	**18 33 59.5**	**-2.7**
GZH				PP	**PP**	**18 36 41.6**	**-3.6**
GZH				S	**S**	**18 43 28.0**	**-2.1**
GZH				LR	LR		
	comp=N,6µm,21.0s						
GZH				LR	LR		
	comp=E,13µm,20.2s						
PRA	**Prague**	**73.31**	**9**	P	**P**	**18 34 02.0**	**0.0**
PRA				S	**SKiKP**	**18 43 35.0**	**+2.8**
PRA				AMS	AMS	19 15 00.0	
GRF	**Grafenberg Arr**	**73.38**	**11**	*e*P	P	18 33 58.3	-4.1
GRF				*e*		18 36 44.3	
GRF				*e*S	**S**	**18 43 27.7**	**-2.8**
GRF				pmax	pmax		
	comp=Z,72nm,1.0s						
GRF				MLR	MLR		
	comp=Z,6µm,18.0s						
GRF	**Grafenberg Arr**	**73.38**	**11**	*e*P	P	18 33 58.3	-4.1
	comp=Z,72nm,1.0s						
GRF				*e*		18 34 37.8	
GRF				*e*PP	**PP**	**18 36 44.3**	**-0.9**
GRF				*e*S	**S**	**18 43 27.7**	**-2.8**
GRF				*e*SS	SS	18 48 22.8	+11
GRF				*e*L	L	19 12 15.7	
	comp=Z,6µm,18.0s						
GRFO	**Grafenberg**	**73.38**	**11**	*e*P	P	18 33 57.8	-4.6
GRFO				pmax	pmax		
	comp=Z,70nm,1.0s						
GRFO	**Grafenberg**	**73.38**	**11**	*e*P	P	18 33 57.8	-4.6
	comp=Z,70nm,1.0s						
PRU	**Pruhonice**	**73.40**	**9**	*e*P	P	18 33 58.0	-4.5
PRU				MLR	MLR		
	comp=Z,6µm,17.6s						
PRU	**Pruhonice**	**73.40**	**9**	*e*pP	**P**	**18 34 02.0**	**-0.5**
PRU				*e*S	**SKiKP**	**18 43 34.2**	**+1.9**
PRU				AMS	AMS	19 14 10.0	
	comp=Z,6µm,17.6s						
PRU	**Pruhonice**	**73.40**	**9**	*e*P	P	18 33 58.0	-4.5
ROTZ	**Rotzenmuhle**	**73.41**	**10**	*e*P	P	18 33 58.5	-4.1
	comp=Z,68nm,1.3s						
FRU	**Bishkek**	**73.41**	**326**	⇑*i*P	**P**	**18 34 03.0**	**+0.2**
FRU				*e*		18 36 47.0	
FRU				*e*PPP	PPP	18 38 30.0	
FRU				pmax	pmax		
	comp=Z,280nm,1.9s						
ULHL	**Ulahol**	**73.43**	**324**	P	**P**	**18 34 03.3**	**+0.2**
	SNR=5.8						
KBK	**Karagaybulak**	**73.47**	**325**	P	**P**	**18 34 04.0**	**+0.7**
	SNR=12						
MTP	**Monte Pirata**	**73.47**	**82**	P	P	18 33 58.4	-5.0
	comp=Z,65nm,1.1s						
HKC	**Hong Kong Obse**	**73.48**	**285**	⇓*i*P	**P**	**18 34 02.0**	**-1.4**
KRLC	**Kraliky**	**73.49**	**7**	*e*P	P	18 33 58.1	-5.0
KRLC	**Kraliky**	**73.49**	**7**	*e*P	P	18 33 58.1	-5.0
KRLC	**Kraliky**	**73.49**	**7**	*e*pP	**P**	**18 34 02.7**	**-0.4**
OJC	**Ojcow**	**73.52**	**5**	*e*P	**P**	**18 34 02.9**	**-0.3**
OJC				*e*		18 36 43.7	
OJC				MLR	MLR		
	comp=Z,7µm,21.6s						
OJC	**Ojcow**	**73.52**	**5**	*e*P	**P**	**18 34 02.9**	**-0.3**
OJC				*i* pP	pP	18 34 04.9	-3.3
OJC				*e*PP	**PP**	**18 36 43.7**	**-2.6**
OJC				*i* S	**SKiKP**	**18 43 35.6**	**+3.1**
OJC				L	L	19 05 25.7	
	comp=Z,7µm,21.6s						
AAK	**Ala-Archa**	**73.63**	**326**	*e*P	P	18 33 59.2	-5.1
AAK				MLR	MLR		
	comp=Z,11µm,20.0s						
AAK	**Ala-Archa**	**73.63**	**326**	*e*P	P	18 33 59.1	-5.1
AAK				LR	LR		
	comp=Z,11µm,20.0s						
AAK	**Ala-Archa**	**73.63**	**326**	P	**P**	**18 34 05.9**	**+1.6**
	SNR=18						
AAK	**Ala-Archa**	**73.63**	**326**	P	**P**	**18 34 06.3**	**+2.0**
	SNR=8.8						
LANF	**Langenberg**	**73.69**	**13**	*e*P	**P**	**18 34 04.3**	**+0.1**
LANF	**Langenberg**	**73.69**	**13**	*e*P	**P**	**18 34 04.3**	**+0.1**
LANF	**Langenberg**	**73.69**	**13**	*e*P	**P**	**18 34 04.3**	**+0.1**
TIAR	**Tiarei**	**73.75**	**177**	*e*P	**P**	**18 34 02.9**	**-1.9**
	comp=Z,136nm,1.0s						
MEZF	**Maizieres J'vi**	**73.78**	**15**	*e*P	P	18 34 00.4	-4.3
MEZF	**Maizieres J'vi**	**73.78**	**15**	⇑*i*P	**P**	**18 34 06.6**	**+1.9**
	comp=Z,152nm,1.1s						
MEZF	**Maizieres J'vi**	**73.78**	**15**	*e*P	P	18 34 00.4	-4.3
PPT2	**Papeete2**	**73.78**	**177**	*e*S	**SKiKP**	**18 43 28.9**	**-4.6**
	comp=Z,11µm,28.5s						
PPT2				*e*SS	SS	18 48 14.1	-5.9
	comp=Z,2µm,26.5s						
PPT2				*e*LQ	LQ	18 52 55.5	
	comp=Z,5µm,27.8s						
PPT2				*e*LR	LR	18 56 36.3	
	comp=Z,7µm,24.0s,baz=350						
OKC	**Ostrava-Krasne**	**73.81**	**6**	*e*P	P	18 34 00.5	-4.4
OKC				MLR	MLR		
	comp=Z,4µm,16.2s						
OKC	**Ostrava-Krasne**	**73.81**	**6**	*e*P	P	18 34 00.5	-4.4
OKC				*e*S	**S**	**18 43 36.0**	**+0.7**
OKC				AMS	AMS	19 16 10.0	
	comp=Z,4µm,16.2s						
PAGF	**Fort de Pagny**	**73.82**	**15**	*e*P	P	18 34 00.7	-4.3
PAGF	**Fort de Pagny**	**73.82**	**15**	⇑*i*P	**P**	**18 34 07.1**	**+2.1**
	comp=Z,68nm,1.3s						
PAGF	**Fort de Pagny**	**73.82**	**15**	*e*P	P	18 34 00.7	-4.3
EKS2	**Erkin-Say**	**73.83**	**326**	*e*P	P	18 34 00.1	-5.2
EKS2				pmax	pmax		
	comp=Z,119nm,1.3s						
EKS2				MLR	MLR		
	comp=Z,10µm,19.0s						
EKS2	**Erkin-Say**	**73.83**	**326**	*e*P	P	18 34 00.1	-5.2
	comp=Z,119nm,1.3s						
EKS2				LR	LR		
	comp=Z,10µm,19.0s						
EKS2	**Erkin-Say**	**73.83**	**326**	P	P	18 34 02.0	-3.3
	SNR=7.1						
MORC	**Moravsky Berou**	**73.83**	**7**	*e*P	P	18 33 59.8	-5.3
MORC				pmax	pmax		
	comp=Z,107nm,1.7s						
MORC	**Moravsky Berou**	**73.83**	**7**	*e*P	P	18 33 59.8	-5.5
	comp=Z,107nm,1.7s						
MORC	**Moravsky Berou**	**73.83**	**7**	⇓*i*P	P	18 33 59.6	-5.5
KZA	**Kyzart**	**73.90**	**325**	P	**P**	**18 34 08.3**	**+2.2**
	SNR=6.8						
TVO	**Taravao**	**73.98**	**177**	*e*P	**P**	**18 34 03.8**	**-2.4**
	comp=Z,143nm,1.1s						
GYA	**Guiyang**	**74.02**	**294**	P	**P**	**18 34 06.3**	**-0.4**
GYA				pP	**PcP**	**18 34 25.0**	**+3.1**
GYA				sP	sP	18 34 33.6	+20
GYA				PP	**PP**	**18 36 53.6**	**+2.1**
GYA				pmax	pmax		
	comp=Z,90nm,1.0s						
GYA				pmax	pmax		
	comp=Z,940nm,7.2s						
GYA				LR	LR		
	comp=N,5µm,22.2s						
GYA				LR	LR		
	comp=E,5µm,21.3s						
GYA				LR	LR		
	comp=Z,6µm,24.4s						
STU	**Stuttgart**	**74.06**	**12**	P	P	18 34 01.2	-5.3
STU				pmax	pmax		
	comp=Z,61nm,1.0s						
STU	**Stuttgart**	**74.06**	**12**	*e*P	P	18 34 02.3	-4.1
	comp=Z,52nm,0.9s						
STU	**Stuttgart**	**74.06**	**12**	P	P	18 34 01.1	-5.3
	comp=Z,61nm,1.0s						
SFTF	**Sexfontaines**	**74.06**	**15**	*e*P	P	18 34 01.8	-4.6
SFTF	**Sexfontaines**	**74.06**	**15**	⇑*i*P	**P**	**18 34 08.0**	**+1.6**
	comp=Z,175nm,1.1s						
SFTF	**Sexfontaines**	**74.06**	**15**	*e*P	P	18 34 01.8	-4.6
LVV	**L'vov**	**74.08**	**2**	*e*P	**P**	**18 34 07.4**	**+0.9**
LVV				*e*S	**SKiKP**	**18 43 32.4**	**-1.0**
LVV				MLR	MLR		
	comp=Z,5µm,22.0s						
WET	**Wettzell**	**74.09**	**10**	*e*P	P	18 34 02.4	-4.2
WET				pmax	pmax		
	comp=Z,97nm,1.7s						
WET	**Wettzell**	**74.09**	**10**	*e*P	P	18 34 02.4	-4.2
	comp=Z,97nm,1.7s						
TREC	**Trest**	**74.17**	**8**	*e*S	**S**	**18 43 43.0**	**+3.6**
TREC				AMS	AMS	19 15 10.0	
	comp=Z,7µm,15.3s						
KHC	**Kasperske Hory**	**74.17**	**9**	*e*	**P**	**18 34 09.1**	**+2.0**
KHC				*e*		18 34 13.5	
KHC				MLR	MLR		
	comp=Z,8µm,17.2s						
KHC	**Kasperske Hory**	**74.17**	**9**	*e*P	P	18 34 00.9	-6.2
	comp=Z,63nm,1.1s						
KHC	**Kasperske Hory**	**74.17**	**9**	*e*pP	**P**	**18 34 09.1**	**+2.0**
KHC				*e*x	x	18 34 13.5	
KHC				*e*PCP	**PcP**	**18 34 18.0**	**-4.1**
KHC				*e*S	**S**	**18 43 43.0**	**+3.5**
KHC				AMS	AMS	19 13 10.0	
	comp=Z,8µm,17.2s						
KHC	**Kasperske Hory**	**74.17**	**9**	*e*P	P	18 34 03.1	-4.0
KHC	**Kasperske Hory**	**74.17**	**9**	*e*P	P	18 34 03.1	-4.0
CDF	**Champ du Feu**	**74.17**	**14**	*e*P	P	18 34 02.6	-4.6
	comp=Z,16nm,0.9s						
CDF	**Champ du Feu**	**74.17**	**14**	⇑*i*P	**P**	**18 34 09.0**	**+1.8**
	comp=Z,99nm,1.0s						
CDF	**Champ du Feu**	**74.17**	**14**	*e*P	P	18 34 02.6	-4.6
CDF				pmax	pmax		
	comp=Z,16nm,0.9s						
CDF	**Champ du Feu**	**74.17**	**14**	*e*P	P	18 34 02.6	-4.6
	comp=Z,16nm,0.9s						
THEF	**They Montfort**	**74.18**	**15**	*e*P	**P**	**18 34 06.2**	**-0.9**
THEF	**They Montfort**	**74.18**	**15**	*e*P	**P**	**18 34 06.2**	**-0.9**
THEF	**They Montfort**	**74.18**	**15**	*e*P	**P**	**18 34 06.2**	**-0.9**
KWP	**Kalwaria Pacla**	**74.23**	**3**	PFAKE		18 34 10.0	+2.6
KWP				LR	LR		
	comp=Z,6µm,19.0s						
KWP	**Kalwaria Pacla**	**74.23**	**3**	*e*P	**P**	**18 34 09.4**	**+2.0**
KWP				LMZ	LR	19 07 34.3	
VRAC	**Vranov**	**74.24**	**7**	⇑*i*P	P	18 34 02.9	-4.6
AML	**Almayashu**	**74.34**	**326**	P	**P**	**18 34 08.9**	**+0.2**
	SNR=6.7						
NIE	**Niedzica**	**74.35**	**5**	*e*P	**P**	**18 34 08.8**	**+0.7**
NIE				*e*		18 36 46.8	
NIE				*e*SS	SS	18 48 26.9	+0.8
NIE	**Niedzica**	**74.35**	**5**	*e*P	**P**	**18 34 08.8**	**+0.7**
NIE				*e*PP	PP	18 36 46.8	-6.6
NIE				*e*SS	SS	18 48 26.9	+0.8
ECH	**Echery**	**74.35**	**14**	*e*P	P	18 34 02.4	-5.7
ECH				pmax	pmax		
	comp=Z,73nm,1.0s						
ECH				MLR	MLR		
	comp=Z,5µm,19.0s						
ECH	**Echery**	**74.35**	**14**	*e*P	P	18 34 02.4	-5.7
	comp=Z,73nm,1.0s						
ECH				LR	LR		
	comp=Z,5µm,19.0s						
ECH	**Echery**	**74.35**	**14**	*e*P	**P**	**18 34 09.5**	**+1.3**
BFO	**Black Forest**	**74.39**	**13**	*e*P	P	18 34 03.1	-5.3
BFO				pmax	pmax		
	comp=Z,27nm,0.9s						
BFO				MLR	MLR		
	comp=Z,5µm,19.0s						
BFO	**Black Forest**	**74.39**	**13**	*e*P	P	18 34 04.2	-4.2
	comp=Z,32nm,1.0s						
BFO	**Black Forest**	**74.39**	**13**	*e*P	P	18 34 03.1	-5.3
	comp=Z,27nm,0.9s						
BFO				LR	LR		
	comp=Z,5µm,19.0s						
KKAR	**Karatay Array**	**74.40**	**329**	*e*P	P	18 34 03.0	-5.5
KKAR	**Karatay Array**	**74.40**	**329**	*e*P	P	18 34 03.0	-5.5
	comp=Z,6.7nm,0.8s						
HAU	**Haudompre**	**74.44**	**15**	*e*P	P	18 34 04.0	-4.7
	comp=Z,20nm,0.8s						
HAU	**Haudompre**	**74.44**	**15**	⇑*i*P	**P**	**18 34 10.3**	**+1.6**
	comp=Z,100nm,0.9s						
HAU				*e*R			
	comp=Z,11µm,19.5s						
HAU	**Haudompre**	**74.44**	**15**	*e*P	P	18 34 04.0	-4.7
HAU				pmax	pmax		
	comp=Z,21nm,0.8s						
HAU	**Haudompre**	**74.44**	**15**	*e*P	P	18 34 04.0	-4.7
	comp=Z,20nm,0.8s						
GEC2	**GERESS Array S**	**74.46**	**9**	*e*P	P	18 34 04.7	-4.2
GEC2				pmax	pmax		
	comp=Z,53nm,1.4s						
GEC2	**GERESS Array S**	**74.46**	**9**	*e*P	P	18 34 04.7	-4.2
	comp=Z,53nm,1.4s						
GERES	**GERESS Array B**	**74.46**	**9**	S	**S**	**18 43 45.0**	**+2.1**
GERES	**GERESS Array B**	**74.46**	**9**	P	**P**	**18 34 08.8**	**-0.1**
	comp=Z,7.1nm,0.7s,baz=353,slow=5.4,SNR=15						
GERES				S	**S**	**18 43 45.0**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=144,slow=35,SNR=3.1						
LIBD	**Limburg**	**74.47**	**14**	*e*P	**P**	**18 34 10.1**	**+1.3**
LIBD	**Limburg**	**74.47**	**14**	*e*P	**P**	**18 34 10.1**	**+1.3**
HYF	**Humbligny**	**74.60**	**17**	*e*P	P	18 34 05.1	-4.5
HYF	**Humbligny**	**74.60**	**17**	⇑*i*P	**P**	**18 34 11.4**	**+1.8**
HYF	**Humbligny**	**74.60**	**17**	*e*P	P	18 34 05.1	-4.5
SPAK	**Spaichingen-Ko**	**74.67**	**13**	*e*P	**P**	**18 34 09.9**	**-0.2**
HINF	**Hinteralfeld**	**74.70**	**14**	*e*P	P	18 34 05.5	-4.7
	comp=Z,11nm,0.9s						
HINF	**Hinteralfeld**	**74.70**	**14**	⇑*i*P	**P**	**18 34 11.8**	**+1.6**
	comp=Z,85nm,1.1s						
HINF	**Hinteralfeld**	**74.70**	**14**	*e*P	P	18 34 05.5	-4.7
HINF				pmax	pmax		
	comp=Z,11nm,0.9s						
HINF	**Hinteralfeld**	**74.70**	**14**	*e*P	P	18 34 05.5	-4.7
	comp=Z,11nm,0.9s						
MOF	**Molkenrain**	**74.70**	**14**	*e*P	**P**	**18 34 09.5**	**-0.8**
MOF	**Molkenrain**	**74.70**	**14**	*e*P	**P**	**18 34 09.5**	**-0.8**
MOF	**Molkenrain**	**74.70**	**14**	*e*P	**P**	**18 34 09.5**	**-0.8**
MFF	**Saint Martin d**	**74.76**	**19**	*e*P	P	18 34 05.9	-4.6
	comp=Z,18nm,0.7s						
MFF	**Saint Martin d**	**74.76**	**19**	⇑*i*P	**P**	**18 34 12.1**	**+1.6**
	comp=Z,182nm,1.1s						
MFF	**Saint Martin d**	**74.76**	**19**	*e*P	P	18 34 05.9	-4.6
MFF				pmax	pmax		
	comp=Z,18nm,0.7s						
MFF	**Saint Martin d**	**74.76**	**19**	*e*P	P	18 34 05.9	-4.6
	comp=Z,18nm,0.7s						
FELD	**Feldberg im Sc**	**74.80**	**13**	*e*P	**P**	**18 34 11.8**	**+0.9**
FELD	**Feldberg im Sc**	**74.80**	**13**	*e*P	**P**	**18 34 11.8**	**+0.9**
LOR	**Lormes**	**74.80**	**16**	*e*P	P	18 34 06.0	-4.7
	comp=Z,20nm,0.8s						
LOR	**Lormes**	**74.80**	**16**	⇑*i*P	**P**	**18 34 12.3**	**+1.6**
	comp=Z,161nm,1.0s						
LOR				*e*R			
	comp=Z,13µm,19.5s						
LOR	**Lormes**	**74.80**	**16**	*e*P	P	18 34 06.0	-4.7
	comp=Z,20nm,0.8s						
FUR	**Furstenfeldbru**	**74.90**	**11**	*e*P	P	18 34 07.2	-4.1
FUR				pmax	pmax		
	comp=Z,54nm,0.9s						
FUR	**Furstenfeldbru**	**74.90**	**11**	*e*P	P	18 34 07.2	-4.1
	comp=Z,54nm,0.9s						
KOLS	**Kolonicke sedl**	**74.91**	**4**	*e*P	P	18 34 07.4	-4.0
KOLS				pmax	pmax		
	comp=Z,50nm,1.5s						
KOLS	**Kolonicke sedl**	**74.91**	**4**	*e*P	P	18 34 07.4	-4.0
CRVS	**Cervenica-Dubn**	**74.91**	**4**	*e*P	P	18 34 07.0	-4.4
CRVS				pmax	pmax		
	comp=Z,173nm,2.5s						
CRVS	**Cervenica-Dubn**	**74.91**	**4**	*e*P	P	18 34 07.0	-4.4
SSF	**Saint Saulge**	**74.94**	**17**	*e*P	P	18 34 06.9	-4.7
	comp=Z,22nm,0.8s						
SSF	**Saint Saulge**	**74.94**	**17**	⇑*i*P	**P**	**18 34 13.2**	**+1.6**
	comp=Z,224nm,1.0s						
SSF	**Saint Saulge**	**74.94**	**17**	*e*P	P	18 34 06.9	-4.7
SSF				pmax	pmax		
	comp=Z,22nm,0.8s						
SSF	**Saint Saulge**	**74.94**	**17**	*e*P	P	18 34 06.9	-4.7
	comp=Z,22nm,0.8s						
BBS	**Basel-Blauen**	**75.13**	**14**	*e*P	**P**	**18 34 12.7**	**0.0**
BBS	**Basel-Blauen**	**75.13**	**14**	*e*P	**P**	**18 34 12.7**	**0.0**
LOMF	**Lomont**	**75.15**	**14**	*e*P	**P**	**18 34 12.8**	**-0.1**
LOMF	**Lomont**	**75.15**	**14**	*e*P	**P**	**18 34 12.8**	**-0.1**
LOMF	**Lomont**	**75.15**	**14**	*e*P	**P**	**18 34 12.8**	**-0.1**
AVF	**Avril sur Loir**	**75.18**	**17**	*e*P	P	18 34 08.0	-4.9
	comp=Z,16nm,0.7s						
AVF	**Avril sur Loir**	**75.18**	**17**	⇑*i*P	**P**	**18 34 14.2**	**+1.3**
	comp=Z,157nm,1.0s						
AVF	**Avril sur Loir**	**75.18**	**17**	*e*P	P	18 34 08.0	-4.9
AVF				pmax	pmax		
	comp=Z,16nm,0.7s						
AVF	**Avril sur Loir**	**75.18**	**17**	*e*P	P	18 34 08.0	-4.9
	comp=Z,16nm,0.7s						
VYHS	**Vyhne**	**75.19**	**6**	*e*P	P	18 34 09.0	-4.0
VYHS				pmax	pmax		
	comp=Z,34nm,1.4s						
VYHS	**Vyhne**	**75.19**	**6**	*e*P	P	18 34 09.0	-4.0
UZH	**Uzhgorod**	**75.21**	**4**	*e*P	**P**	**18 34 13.4**	**+0.3**
UZH				*e*		18 37 04.6	
UZH				*e*S	**S**	**18 43 47.4**	**-3.6**
UZH				MLR	MLR		
	comp=N,2µm,21.0s						
UZH				MLR	MLR		
	comp=E,3µm,21.0s						
UZH				MLR	MLR		
	comp=Z,800nm,21.0s						
BGF	**Bois d'Agland**	**75.32**	**17**	*e*P	P	18 34 09.0	-4.8
	comp=Z,15nm,0.7s						
BGF	**Bois d'Agland**	**75.32**	**17**	⇑*i*P	**P**	**18 34 15.2**	**+1.4**
	comp=Z,120nm,0.9s						
BGF	**Bois d'Agland**	**75.32**	**17**	*e*P	P	18 34 09.0	-4.8
BGF				pmax	pmax		
	comp=Z,15nm,0.7s						
BGF	**Bois d'Agland**	**75.32**	**17**	*e*P	P	18 34 09.0	-4.8
	comp=Z,15nm,0.7s						
ZST	**Bratislava**	**75.38**	**7**	*e*P	P	18 34 09.5	-4.5
ZST				pmax	pmax		
	comp=Z,42nm,1.3s						
ZST	**Bratislava**	**75.38**	**7**	*e*P	P	18 34 09.5	-4.5
SMF	**Signal de Mont**	**75.40**	**17**	*e*P	P	18 34 09.4	-4.8
	comp=Z,12nm,0.8s						
SMF	**Signal de Mont**	**75.40**	**17**	⇑*i*P	**P**	**18 34 15.6**	**+1.4**
	comp=Z,149nm,1.0s						
SMF	**Signal de Mont**	**75.40**	**17**	*e*P	P	18 34 09.4	-4.8
SMF				pmax	pmax		
	comp=Z,12nm,0.8s						
SMF	**Signal de Mont**	**75.40**	**17**	*e*P	P	18 34 09.4	-4.8
	comp=Z,12nm,0.8s						
RJOB	**Jochberg**	**75.48**	**10**	*e*P	P	18 34 10.9	-3.8
	comp=Z,74nm,0.9s						
TCF	**Toulx Ste Croi**	**75.48**	**18**	*e*P	P	18 34 09.7	-5.0
	comp=Z,12nm,0.8s						
TCF	**Toulx Ste Croi**	**75.48**	**18**	⇑*i*P	**P**	**18 34 16.1**	**+1.4**
	comp=Z,104nm,1.0s						
TCF	**Toulx Ste Croi**	**75.48**	**18**	*e*P	P	18 34 09.7	-5.0
TCF				pmax	pmax		
	comp=Z,12nm,0.8s						
TCF	**Toulx Ste Croi**	**75.48**	**18**	*e*P	P	18 34 09.7	-5.0
	comp=Z,12nm,0.8s						
MOA	**Molln**	**75.50**	**9**	⇑*i*pP	P	18 34 10.9	-3.9
	comp=Z,49nm,1.1s,SNR=9.1						
CONA	**Conrad Observa**	**75.56**	**8**	⇑*i*pP	P	18 34 11.4	-3.8
	comp=Z,54nm,1.0s,SNR=13						
MOTA	**Moosalm**	**75.69**	**11**	⇑*i*pP	P	18 34 11.9	-4.2
	comp=Z,83nm,1.1s,SNR=7.4						
TRPA	**Tarpa**	**75.72**	**3**	⇑*i*P	P	18 34 11.4	-4.6
TRPA	**Tarpa**	**75.72**	**3**	⇑*e*P	**P**	**18 34 18.1**	**+2.1**
WATA	**Walderalm**	**75.75**	**11**	⇑*i*pP	P	18 34 12.4	-3.9
	comp=Z,60nm,0.9s,SNR=5.3						
CABF	**La Chapelle**	**75.77**	**15**	*e*P	P	18 34 12.0	-4.5
	comp=Z,22nm,1.0s						
CABF	**La Chapelle**	**75.77**	**15**	⇑*i*P	**P**	**18 34 18.4**	**+1.9**
	comp=Z,96nm,0.9s						
CABF	**La Chapelle**	**75.77**	**15**	*e*P	P	18 34 12.0	-4.5
CABF				pmax	pmax		
	comp=Z,22nm,1.0s						
CABF	**La Chapelle**	**75.77**	**15**	*e*P	P	18 34 12.0	-4.5
	comp=Z,22nm,1.0s						
PSZ	**Piszkesteto**	**75.82**	**5**	*e*P	P	18 34 11.3	-5.4
PSZ				pmax	pmax		
	comp=Z,55nm,1.1s						
PSZ				MLR	MLR		
	comp=Z,6µm,21.0s						
PSZ	**Piszkesteto**	**75.82**	**5**	*e*P	P	18 34 11.3	-5.4
	comp=Z,55nm,1.1s						
PSZ				LR	LR		
	comp=Z,6µm,21.0s						
PSZ	**Piszkesteto**	**75.82**	**5**	⇓*i*P	P	18 34 13.5	-3.2
PSZ	**Piszkesteto**	**75.82**	**5**	⇑*e*P	**P**	**18 34 18.9**	**+2.2**
WTTA	**Wattenberg**	**75.83**	**11**	⇑*i*pP	P	18 34 11.5	-5.3
	comp=Z,97nm,1.0s,SNR=9.2						
SOP	**Sopron**	**75.85**	**8**	⇑*e*P	**P**	**18 34 18.8**	**+2.0**
ANWB	**Willy Bob**	**75.89**	**79**	PFAKE		18 34 20.0	+2.6
ANWB				LR	LR		
	comp=Z,4µm,20.0s						
FETA	**Feichten**	**75.97**	**12**	⇑*i*pP	P	18 34 13.9	-3.8
	comp=Z,66nm,1.0s,SNR=7.1						
KSH	**Kashi**	**75.97**	**323**	P	**P**	**18 34 16.9**	**-0.9**
KSH				*e*PcP	**PcP**	**18 34 28.1**	**-2.0**
KSH				*e*PP	**PP**	**18 37 09.0**	**+1.4**
KSH				*e*S	**S**	**18 43 58.3**	**-1.7**
KSH				*e*SKS	SKSac	18 44 22.0	-5.8
KSH				ScS	**SKSac**	**18 44 27.9**	**-0.3**
KSH				*e*SS	**SS**	**18 48 54.3**	**+2.9**
KSH				pmax	pmax		
	comp=Z,11nm,0.6s						
KSH				LR	LR		
	comp=N,1µm,6.6s						
KSH				LR	LR		
	comp=E,2µm,14.9s						
KSH				LR	LR		
	comp=Z,2µm,8.8s						
CMLA	**Cha da Macela**	**75.99**	**41**	PFAKE		18 34 20.0	+2.2
CMLA				LR	LR		
	comp=Z,9µm,19.0s						
OG01	**Vacheresse**	**76.13**	**15**	*e*P	P	18 34 21.2	+2.7
OG01	**Vacheresse**	**76.13**	**15**	*e*P	P	18 34 21.2	+2.7
KBA	**Koelnbreinsper**	**76.18**	**10**	⇑*i*pP	P	18 34 15.3	-3.6
	comp=Z,114nm,1.1s,SNR=12						
ARSA	**Arzberg**	**76.20**	**8**	⇑*i*pP	P	18 34 15.1	-3.7
	comp=Z,35nm,1.4s,SNR=8.2						
BMR	**Baia Mare**	**76.21**	**3**	⇑*i*P	P	18 34 15.4	-3.4
BUD	**Budapest**	**76.21**	**6**	⇑*e*P	**P**	**18 34 20.1**	**+1.3**
PKSG		**76.27**	**6**	⇑*e*P	**P**	**18 34 21.1**	**+2.0**
BUR08	**Bucovina Ar. S**	**76.27**	**2**	*e*P	P	18 34 14.0	-5.3
BURAR	**Bucovina Array**	**76.30**	**2**	⇓*i*P	P	18 34 14.9	-4.6
RJF	**Les Rejaudoux**	**76.31**	**19**	*e*P	P	18 34 14.3	-5.2
	comp=Z,20nm,0.9s						
RJF	**Les Rejaudoux**	**76.31**	**19**	⇑*i*P	**P**	**18 34 20.7**	**+1.2**
	comp=Z,101nm,1.0s						
RJF				*e*R			
	comp=Z,17µm,18.8s						
RJF	**Les Rejaudoux**	**76.31**	**19**	*e*P	P	18 34 14.3	-5.2
RJF				pmax	pmax		
	comp=Z,20nm,0.9s						
RJF	**Les Rejaudoux**	**76.31**	**19**	*e*P	P	18 34

KIS ePPP PPP 18 39 00.0
KIS e 18 44 29.0
KIS ePS **PnS** **18 44 52.0 +3.7**
KIS pmax pmax
comp=Z,200nm,2.0s
KIS pmax pmax
comp=Z,1µm,12.0s
KIS MLR MLR
comp=Z,5µm,19.0s
KIS MLR MLR
comp=N,4µm,18.0s
KIS MLR MLR
comp=E,2µm,17.0s
KIS Kishinev 76.93 359⇑ iP P 18 34 23.0 +0.1
comp=E,200nm,2.0s
KIS Kishinev 76.93 359 ePcP **PcP 18 34 35.0 +1.1**
KIS Kishinev 76.93 359 ePP PP 18 37 10.0 -5.2
KIS Kishinev 76.93 359 e PP 18 37 10.0 -5.2
LPL La Plagne 76.94 15 eP P 18 34 19.5 -3.8
LPL La Plagne 76.94 15⇑ iP P 18 34 25.9 +2.6
comp=E,96nm,1.2s
LPL La Plagne 76.94 15 eP P 18 34 19.5 -3.8
LPL La Plagne 76.94 15 eP P 18 34 19.5 -3.8
LPG La Plagne 76.96 15 eP P 18 34 20.0 -3.5
comp=E,12nm,1.1s
LPG La Plagne 76.96 15⇑ iP P 18 34 26.2 +2.7
comp=E,234nm,1.6s
LPG La Plagne 76.96 15 eP P 18 34 20.0 -3.5
LPG pmax pmax
comp=Z,12nm,1.1s
LPG La Plagne 76.96 15 eP P 18 34 20.0 -3.5
comp=Z,12nm,1.1s
GRN Grenoble 77.06 16 eP **P 18 34 25.9 +2.1**
GRN Grenoble 77.06 16 eP **P 18 34 25.9 +2.1**
GRN Grenoble 77.06 16 eP **P 18 34 25.9 +2.1**
BEHE Becsehely 77.07 8⇑ eP **P 18 34 26.0 +2.3**
KMI Kunming 77.10 296 P **P 18 34 25.1 +0.6**
KMI pP PcP 18 34 41.5 +6.2
KMI sP sP 18 34 49.3 +18
KMI PP **PP 18 37 17.8 +0.2**
KMI S S 18 44 05.8 -7.2
KMI sS **SKSac 18 44 36.3 -0.4**
KMI SS SS 18 49 01.5 -8.1
KMI pmax pmax
comp=Z,13nm,1.4s
KMI pmax pmax
comp=Z,950nm,7.0s
KMI LR LR
comp=N,9µm,19.5s
KMI LR LR
comp=E,7µm,18.7s
KMI LR LR
comp=Z,7µm,15.7s
GDM Grand'Maison 77.15 15 eP **P 18 34 26.1 +1.7**
GDM Grand'Maison 77.15 15 eP **P 18 34 26.1 +1.7**
VOY Vojsko 77.27 10 eP **P 18 34 23.3 -1.7**
VOY e 18 34 25.5
VOY e 18 34 33.8
VOY e 18 34 36.0
VOY e 18 34 54.6
VIVF Saint-Julien-l 77.28 16 eP P 18 34 20.4 -4.5
comp=Z,12nm,0.7s
VIVF Saint-Julien-l 77.28 16⇑ iP **P 18 34 26.7 +1.8**
comp=Z,98nm,0.9s
VIVF Saint-Julien-l 77.28 16 eP P 18 34 20.4 -4.5
VIVF pmax pmax
comp=Z,12nm,0.7s
VIVF Saint-Julien-l 77.28 16 eP P 18 34 20.4 -4.5
comp=Z,12nm,0.7s
ORIF Oris-en-Rattie 77.40 16 eP P 18 34 21.2 -4.5
comp=Z,12nm,0.9s
ORIF Oris-en-Rattie 77.40 16⇑ iP **P 18 34 27.6 +1.9**
comp=Z,61nm,1.1s
ORIF eR
comp=Z,7µm,18.5s
ORIF Oris-en-Rattie 77.40 16 eP P 18 34 21.2 -4.5
ORIF pmax pmax
comp=Z,12nm,0.9s
ORIF Oris-en-Rattie 77.40 16 eP P 18 34 21.2 -4.5
comp=Z,12nm,0.9s
TESR Tescani 77.42 1⇑ iP **P 18 34 25.4 -0.3**
JAVS Javornik 77.42 10 i P **P 18 34 26.6 +0.8**
JAVS eS **S 18 44 17.2 +1.6**
PGAV Gavieira, Arco 77.43 26 eP **P 18 34 26.1 +0.2**
comp=Z,151nm,1.6s
PGAV eS **S 18 44 20.6 +4.8**
PGAV eLR LR 19 03 34.1
comp=Z,14µm,20.0s
PKSM Moragy 77.46 6⇑ eP P 18 34 21.4 -4.4
PKSM Moragy 77.46 6⇑ eP **P 18 34 25.7 -0.1**
LEOM Leova 77.46 359⇑ eP P 18 34 19.5 -6.3
TRI Trieste 77.58 10 P P 18 34 22.0 -4.5
TRI pmax pmax
comp=Z,14nm,0.9s
TRI Trieste 77.58 10 P P 18 34 22.0 -4.5
comp=Z,14nm,0.9s
RAR Rarotonga 77.58 187 PFAKE 18 34 30.0 +3.4
RAR LR LR
comp=Z,4µm,19.0s
MBDF Montbardon 77.72 15 eP P 18 34 23.7 -3.8
MBDF Montbardon 77.72 15⇑ iP **P 18 34 30.0 +2.5**
comp=Z,128nm,1.2s
MBDF Montbardon 77.72 15 eP P 18 34 23.7 -3.8
MBDF Montbardon 77.72 15 eP P 18 34 23.7 -3.8
SKDS Skadanscina 77.76 10 i P **P 18 34 28.5 +0.8**
LASF Ste Croix 77.90 17⇑ iP **P 18 34 30.3 +1.9**
comp=Z,78nm,1.2s
LASF Ste Croix 77.90 17⇑ iP **P 18 34 30.3 +1.9**
comp=Z,78nm,1.2s
MSVF Nonsavu 77.91 209 PFAKE 18 34 30.0 +1.3
MSVF LR LR
comp=Z,3µm,20.0s
SJPF Ste Jean 77.91 21 eP P 18 34 24.2 -4.3
SJPF Ste Jean 77.91 21⇑ iP **P 18 34 30.4 +1.9**
comp=Z,53nm,1.1s
SJPF Ste Jean 77.91 21 eP P 18 34 24.2 -4.3
SJPF Ste Jean 77.91 21 eP P 18 34 24.2 -4.3
BOJS Bojanci 77.92 9 i P **P 18 34 28.1 -0.3**
BOJS eS S 18 44 13.4 -7.3
PBRG Braganca 77.95 25 eP P 18 34 24.6 -4.2
comp=Z,77nm,1.7s
SURF Saint Ours 77.96 15 eP **P 18 34 30.4 +1.4**
SURF Saint Ours 77.96 15 eP **P 18 34 30.4 +1.4**
OG25 Le Caire 77.96 16 eP **P 18 34 30.8 +1.9**
OG25 Le Caire 77.96 16 eP **P 18 34 30.8 +1.9**
LARF Larrau 78.03 21 eP **P 18 34 29.6 +0.4**
LARF Larrau 78.03 21 eP **P 18 34 29.6 +0.4**
SISC Sisak 78.04 8 i P **P 18 34 30.7 +1.6**
VRI Vrincioaia 78.07 1⇓ iP **P 18 34 30.0 +0.7**
PLOR Plostina 78.08 1⇑ iP P 18 34 25.3 -4.1
POLO Lamas de Olo 78.10 26 eP P 18 34 26.1 -3.6
comp=Z,46nm,1.6s
BZS Buzias 78.20 4⇑ iP P 18 34 25.6 -4.4
PVRL Vila Real 78.22 26 eP **P 18 34 31.0 +0.8**
comp=Z,86nm,1.8s
ETSF Etsaut 78.25 21 eP P 18 34 26.2 -4.2
comp=Z,20nm,0.7s
ETSF Etsaut 78.25 21⇑ iP **P 18 34 32.4 +2.0**
comp=Z,152nm,1.1s
ETSF Etsaut 78.25 21 eP P 18 34 26.2 -4.2
ETSF pmax pmax
comp=Z,21nm,0.7s
ETSF Etsaut 78.25 21 eP P 18 34 26.2 -4.2
comp=Z,20nm,0.7s
SMRF Simiane la Rot 78.27 16 eP P 18 34 26.6 -3.9
comp=Z,16nm,0.8s
SMRF Simiane la Rot 78.27 16⇑ iP **P 18 34 33.0 +2.5**
comp=Z,83nm,1.0s
SMRF Simiane la Rot 78.27 16 eP P 18 34 26.6 -3.9
comp=Z,16nm,0.8s
EPF Esparros 78.30 20 eP P 18 34 25.4 -5.3
comp=Z,16nm,0.9s
EPF Esparros 78.30 20⇑ iP **P 18 34 31.6 +0.9**
comp=Z,38nm,0.9s
EPF Esparros 78.30 20 eP P 18 34 25.4 -5.3
EPF pmax pmax
comp=Z,16nm,0.9s
EPF Esparros 78.30 20 eP P 18 34 25.4 -5.3
comp=Z,16nm,0.9s
MTLF Montolieu 78.34 19 eP P 18 34 26.2 -4.6
comp=Z,14nm,0.8s
MTLF Montolieu 78.34 19⇑ iP **P 18 34 32.4 +1.6**
comp=Z,97nm,1.0s
MTLF Montolieu 78.34 19 eP P 18 34 26.2 -4.6
MTLF pmax pmax
comp=Z,14nm,0.8s
MTLF Montolieu 78.34 19 eP P 18 34 26.2 -4.6
comp=Z,14nm,0.8s
MLR Muntele Rosu 78.44 1⇑ iP **P 18 34 29.2 -2.3**
LOT Lotru 78.44 3⇑ iP P 18 34 26.9 -4.6
QIZ Qiongzhong 78.47 287 P **P 18 34 30.8 -1.1**
QIZ pP PcP 18 34 50.5 +9.5
QIZ S S 18 44 19.0 -8.4
QIZ sS **ScS 18 44 55.8 +3.7**
QIZ pmax pmax
comp=Z,910nm,7.8s
QIZ LR LR
comp=N,5µm,19.7s
QIZ LR LR
comp=E,3µm,17.9s
QIZ LR LR
comp=Z,4µm,20.7s
QIZ Qiongzhong 78.47 287 P P 18 34 26.7 -5.2
comp=Z,32nm,1.3s
QIZ LR LR
comp=Z,4µm,21.0s
TOUF Mont Tournerai 78.48 15 eP **P 18 34 33.5 +1.6**
TOUF Mont Tournerai 78.48 15 eP **P 18 34 33.5 +1.6**
TOUF Mont Tournerai 78.48 15 eP **P 18 34 33.5 +1.6**
MVO Moncorvo 78.49 26 eP P 18 34 28.1 -3.7
comp=Z,96nm,1.4s
MVO eS **S 18 44 28.4 +1.2**
MVO eLR LR 19 02 11.0
comp=Z,10µm,18.0s
MLS Moulis 78.51 19 eP **P 18 34 31.6 -0.2**
MLS Moulis 78.51 19 eP **P 18 34 31.6 -0.2**
RESF Ens 78.51 20 eP **P 18 34 32.4 +0.5**
RESF Ens 78.51 20 eP **P 18 34 32.4 +0.5**
AUTN L'Aution 78.53 15 eP **P 18 34 32.6 +0.5**
AUTN L'Aution 78.53 15 eP **P 18 34 32.6 +0.5**
AUTN L'Aution 78.53 15 eP **P 18 34 32.6 +0.5**
ARR Arges 78.54 2⇑ iP **P 18 34 32.9 +0.9**
SAOF Saorge 78.55 15 eP **P 18 34 31.6 -0.4**
SAOF Saorge 78.55 15 eP **P 18 34 31.6 -0.4**
SAOF Saorge 78.55 15 eP **P 18 34 31.6 -0.4**
MVIF Mont Vial 78.58 15 eP **P 18 34 32.3 -0.1**
MVIF Mont Vial 78.58 15 eP **P 18 34 32.3 -0.1**
MVIF Mont Vial 78.58 15 eP **P 18 34 32.3 -0.1**
FDF Fort de France 78.64 81 PFAKE 18 34 40.0 +7.1
FDF LR LR
comp=Z,7µm,19.0s
SBF Sospel 78.66 15 eP P 18 34 27.9 -4.8
comp=Z,20nm,0.8s
SBF Sospel 78.66 15⇑ iP **P 18 34 34.1 +1.4**
comp=Z,160nm,0.9s
SBF Sospel 78.66 15 eP P 18 34 27.9 -4.8
SBF pmax pmax
comp=Z,20nm,0.8s
SBF Sospel 78.66 15 eP P 18 34 27.9 -4.8
comp=Z,20nm,0.8s
PVIS Viseu 78.70 27 eP **P 18 34 32.9 0.0**
comp=Z,108nm,2.2s
LSA Lhasa 78.71 307 P P 18 34 47.3 +14
LSA Lhasa 78.71 307 eP P 18 34 28.6 -5.1
LSA pmax pmax
comp=Z,61nm,1.1s
LSA Lhasa 78.71 307 eP P 18 34 28.6 -5.1
comp=Z,61nm,1.1s
LSA LR LR
comp=Z,23µm,20.0s
TLCR 78.74 359⇑ iP P 18 34 28.4 -4.6
VLC Villacollemand 78.75 12 PFAKE 18 34 40.0 +6.9
VLC LR LR
comp=Z,6µm,19.0s
CFR Carcaliu 78.75 360⇓ iP P 18 34 28.4 -4.6
REVF Revere 78.77 15 eP **P 18 34 34.5 +1.3**
REVF Revere 78.77 15 eP **P 18 34 34.5 +1.3**
REVF Revere 78.77 15 eP **P 18 34 34.5 +1.3**
ANN Anapa 78.79 353 eP **P 18 34 32.2 -1.0**
ANN e 18 37 30.1
ANN ePPP PPP 18 39 20.4
ANN eS **S 18 44 28.6 -1.4**
ANN pmax pmax
comp=Z,73nm,1.4s
ANN MLR MLR
comp=N,4µm,20.0s
ANN MLR MLR
comp=E,1µm,20.0s
ANN MLR MLR
comp=Z,4µm,20.0s
LRDF Laroque-de-Fa 78.79 18 eP **P 18 34 33.4 +0.1**
LRDF Laroque-de-Fa 78.79 18 eP **P 18 34 33.4 +0.1**
ISR Istrita 78.81 1⇑ iP **P 18 34 34.6 +1.1**
NVLJ Novalja 78.81 9 i P **P 18 34 34.8 +1.4**
SIM Simferopol' 78.83 355 *c* iP **P 18 34 33.4 -0.1**
SIM *i* 18 37 35.0
SIM eS **S 18 44 32.9 +2.3**
SIM pmax pmax
comp=Z,29nm,1.0s
SIM pmax pmax
comp=Z,390nm,15.0s
FRF La Foret Royal 78.84 15 eP P 18 34 28.9 -4.7
comp=Z,14nm,0.9s
FRF La Foret Royal 78.84 15⇑ iP **P 18 34 35.3 +1.7**
comp=Z,78nm,0.9s
FRF La Foret Royal 78.84 15 eP P 18 34 28.9 -4.7
FRF pmax pmax
comp=Z,14nm,0.9s
FRF La Foret Royal 78.84 15 eP P 18 34 28.9 -4.7
comp=Z,14nm,0.9s
LMR La Mourre 79.04 15 eP P 18 34 30.3 -4.4
LMR La Mourre 79.04 15⇑ iP **P 18 34 36.5 +1.8**
comp=Z,72nm,1.0s
LMR La Mourre 79.04 15 eP P 18 34 30.3 -4.4
LMR La Mourre 79.04 15 eP P 18 34 30.3 -4.4
MTE Manteigas 79.09 26 eP P 18 34 30.5 -4.6
comp=Z,102nm,1.5s
MTE eS **S 18 44 35.5 +1.9**
MTE eLR LR 19 03 02.4
comp=Z,10µm,20.0s
MTE Manteigas 79.09 26 eP P 18 34 29.5 -5.6
comp=Z,51nm,0.9s
MTE LR LR
comp=Z,11µm,21.0s
KIV Kislovodsk 79.16 349 P P 18 34 31.6 -3.8
comp=Z,379nm,1.0s,SNR=8.9
VALF Valcebollere 79.22 19 eP **P 18 34 36.0 +0.1**
VALF Valcebollere 79.22 19 eP **P 18 34 36.0 +0.1**
ROSC El Rosal 79.46 97 P P **18 34 39.2 +1.4**
ROSC El Rosal 79.46 97 P P **18 34 39.2 +1.4**
comp=Z,6.0nm,0.4s,baz=286,slow=18,SNR=4.4
TIRR Tirgusor 79.47 359 eP P 18 34 31.5 -5.5
TIRR pmax pmax
comp=Z,41nm,0.9s
TIRR Tirgusor 79.47 359 eP P 18 34 31.4 -5.5
comp=Z,41nm,0.9s
TIRR Tirgusor 79.47 359⇑ iP P 18 34 31.5 -5.5
TBI Tubuai 79.51 177 eS **S 18 44 34.1 -3.7**
comp=Z,5µm,28.8s
TBI eSS **SS 18 49 43.0 -3.4**
comp=Z,1µm,24.8s
TBI eLQ LQ 18 55 20.7
comp=Z,2µm,25.0s
TBI eLR LR 18 59 20.4
comp=Z,7µm,29.2s,baz=355
MAK Makhachkala 79.54 345 eP **P 18 34 37.6 +0.2**
MAK e 18 34 43.4
MAK e 18 37 33.3
MAK ePPP PPP 18 39 22.0
MAK eS **S 18 44 38.7 +0.6**
MAK e 18 44 53.0
MAK pmax pmax
comp=Z,141nm,1.4s
PTOM Tomar 79.61 27 eP **P 18 34 39.3 +1.5**
comp=Z,117nm,1.9s
PCBR Castelo Branco 79.63 27 eP **P 18 34 37.7 -0.3**
comp=Z,98nm,1.4s
DIVS Divibare 79.64 5 P **P 18 34 36.6 -1.5**
DAV Davao City (W) 79.65 267 PFAKE 18 34 40.0 +1.6
DAV LR LR
comp=Z,9µm,22.0s
SOC Sochi 79.82 351 *c* iP **P 18 34 38.4 -0.5**
SOC *i* 18 37 42.9
SOC *i* S **S 18 44 41.0 0.0**
SOC e 18 44 55.7
SOC eSSS SSS 18 53 07.9
SOC pmax pmax
comp=Z,44nm,1.0s
SOC pmax pmax
comp=Z,1µm,6.2s
SOC MLR MLR
comp=Z,5µm,20.0s
PMAFR Mafra 80.00 28 eP P 18 34 35.9 -4.1
comp=Z,170nm,1.9s
PMRV Marv??o 80.04 27 eP **P 18 34 37.3 -2.9**
comp=Z,82nm,1.5s
PMRV eS **S 18 44 43.9 +0.3**
PMRV eLR LR 19 02 45.4
comp=Z,8µm,18.0s
PGF Pioggiola 80.16 14 eP P 18 34 36.1 -4.8
PGF Pioggiola 80.16 14⇑ iP **P 18 34 42.5 +1.6**
comp=Z,79nm,1.0s
PGF Pioggiola 80.16 14 eP P 18 34 36.1 -4.8
PGF Pioggiola 80.16 14 eP P 18 34 36.1 -4.8
PMTG Montargil 80.17 27 eP P 18 34 36.2 -4.7
comp=Z,60nm,1.7s
ZEI Tsey 80.17 348 eP P 18 34 36.6 -4.5
ZEI eS **S 18 44 42.0 -3.3**
ZEI e 18 45 27.5
ZEI eSS **SS 18 49 52.0 -2.4**
ZEI pmax pmax
comp=Z,37nm,1.0s
PSN Preselentsi 80.25 359 P P **18 34 42.1 +0.9**
LIS Lisbon 80.26 28 eP P 18 34 36.1 -5.3
LIS AMb AMB 18 34 44.0
comp=Z,87nm,1.4s
LIS eS **S 18 44 41.9 -4.0**
LIS Lisbon 80.26 28 eP P 18 34 36.1 -5.3
comp=Z,87nm,1.4s
LIS eS **S 18 44 41.9 -4.0**
LIS Lisbon 80.26 28 eP P 18 34 36.0 -5.3
LIS eS **S 18 44 41.8 -4.0**
CTBH Cotabato--PC H 80.27 268⇑ iP **P 18 34 42.8 +1.1**
ONI Oni 80.42 348 P P **18 34 44.4 +2.1**
CHVG Ch'k'valeri 80.45 349 P P 18 34 49.1 +6.7
GRGR Grenville 80.49 83 PFAKE 18 34 50.0 +7.1
GRGR LR LR
comp=Z,6µm,19.0s
PESTR Estremoz 80.52 27 eP **P 18 34 42.1 -0.7**
comp=Z,80nm,1.6s
MPEP Malo Peshtene 80.53 3 P **P 18 34 41.1 -1.7**
ESDC Sonseca Array 80.62 24 S **S 18 44 51.1 +1.3**
ESDC Sonseca Array 80.62 24 P **P 18 34 43.6 +0.2**
comp=Z,26nm,0.8s,baz=341,slow=4.2,SNR=21
ESDC S **S 18 44 51.1 +1.3**
comp=Z,0.1nm,0.3s,baz=198,slow=42,SNR=2.1
ESLA Sonseca Array 80.62 24 eP P 18 34 38.5 -4.9
comp=Z,10.0nm,0.9s
RKT Rikitea 80.63 164 eS S 18 44 40.9 -8.7
comp=Z,4µm,27.5s
RKT eLQ LQ 18 56 23.8
comp=Z,1µm,28.0s
RKT eLR LR 18 59 46.7
comp=Z,6µm,24.5s,baz=350
PAB San Pablo 80.66 24 eP P 18 34 39.2 -4.4
PAB pmax pmax
comp=Z,49nm,1.3s
PAB MLR MLR
comp=Z,10µm,19.0s
PAB San Pablo 80.66 24 eP P 18 34 39.2 -4.4
comp=Z,8.1nm,1.3s
PAB LR LR
comp=Z,7µm,19.0s
SZH Strazhica 80.66 1 P **P 18 34 43.1 -0.4**
EVOP Sao Brissos 80.71 28 eP P 18 34 39.1 -4.7
EVOP pmax pmax
comp=Z,7.0nm,0.8s
EVOP Sao Brissos 80.71 28 eP P 18 34 39.1 -4.7
comp=Z,7.0nm,0.8s
STON Ston 80.72 7 *i* P **P 18 34 42.2 -1.5**
EVO Evora 80.73 27 eP P 18 34 39.1 -4.8
comp=Z,7.0nm,0.8s
EVO Evora 80.73 27⇑ iP **P 18 34 44.9 +1.0**
comp=Z,212nm,1.6s
EVO eR
comp=Z,17µm,18.8s
EVO Evora 80.73 27 eP **P 18 34 41.0 -2.9**
comp=Z,79nm,1.7s
PRD Provadia 80.73 0 P **P 18 34 44.4 +0.6**
BBGH Gun Hill 80.81 80 PFAKE 18 34 50.0 +5.4
BBGH LR LR
comp=Z,11µm,19.0s
AQU L'Aquila 80.87 11 P P 18 34 39.2 -5.5
comp=Z,26nm,0.9s
AQU LR LR
comp=Z,4µm,20.0s
AQU L'Aquila 80.87 11⇓ iP P 18 34 39.7 -5.0
PNCL Nicolau / Gran 80.99 28 eP P 18 34 41.4 -3.9
comp=Z,88nm,1.3s
OTAV Otavalo 81.05 103 P P 18 34 39.7 -6.7
comp=Z,77nm,1.7s
OTAV LR LR
comp=Z,3µm,20.0s
TBLG Delisi 81.12 347 P **P 18 34 48.0 +2.1**
PBEJ Beja 81.25 28 eP **P 18 34 47.7 +1.0**
comp=Z,43nm,1.5s
VTS Vitosha 81.28 3 P **P 18 34 45.5 -1.5**
VTS Vitosha 81.28 3⇑ iP P 18 34 42.0 -5.0
VTS Vitosha 81.28 3 P P 18 34 43.0 -4.0
DGRG David-gareji 81.31 346 P **P 18 34 49.3 +2.3**
PBAR Barrancos 81.32 27 eP **P** 18 34 43.3 -3.7
MESJ Messejana 81.33 28 eP P 18 34 42.1 -5.0
MESJ AMb AMB 18 35 07.2
comp=Z,46nm,2.0s
MESJ eS **S 18 44 53.7 -3.4**
MESJ Messejana 81.33 28 eP P 18 34 42.1 -5.0
comp=Z,46nm,2.0s
MESJ eS **S 18 44 53.7 -3.4**
MESJ Messejana 81.33 28 eP P 18 34 42.1 -5.0
MESJ eS **S 18 44 53.7 -3.4**
BCI Bajram Curri 81.37 6 ePN **P 18 34 48.2 +0.9**
JMB Yambol 81.47 1 P **P 18 34 49.0 +1.3**
PCVE Castro Verde 81.57 28 eP P 18 34 44.5 -3.9
comp=Z,44nm,1.4s
AKH Akhalkalaki 81.58 348 P **P 18 34 48.6 -0.1**
PUK Puka 81.68 6 ePN **P 18 34 50.7 +1.7**
MORF Marmelete 81.72 28 eP **P 18 34 48.4 -0.9**
comp=Z,79nm,2.1s
MORF Marmelete 81.72 28 eP P 18 34 44.1 -5.2
MORF eS **S 18 44 57.7 -3.6**
PLD Plovdiv 81.80 2 P **P 18 34 49.0 -0.5**
DIM Dimitrovgrad 81.87 1 P **P 18 34 50.2 +0.3**
PVAQ Vaqueiros 81.87 28 eP **P 18 34 49.8 -0.2**
comp=Z,96nm,1.5s
PVAQ eS **S 18 45 04.2 +1.5**
PVAQ eLQ LQ 18 56 25.9
PVAQ eLR LR 19 02 57.4
comp=Z,9µm,18.0s
SHL Shillong 81.93 305 ePKP **P 18 34 50.0 -0.7**
SHL eS **S 18 45 04.0 0.0**
PBDV Barranco-do-Ve 81.97 28 eP **P 18 34 48.0 -2.5**
comp=Z,102nm,1.6s
KKB Krupnik 82.00 3 P **P 18 34 50.5 -0.1**
PHP Peshkopia 82.07 5 ePN **P 18 34 50.6 -0.4**
PMG Port Moresby 82.15 240 P P 18 34 55.9 +4.3
PMG LR LR
comp=Z,6µm,20.0s
PMG Port Moresby 82.15 240 P **P 18 34 51.3 -0.3**
comp=Z,53nm,1.6s
PMG Port Moresby 82.15 240 P P 18 34 55.9 +4.3
comp=Z,49nm,1.1s,baz=335,slow=9.1,SNR=5.8
RZN Rozhen 82.22 2 P P 18 34 46.4 -5.6
TAPN Taplejung 82.25 309 eP P 18 34 47.1 -5.4
comp=Z,245nm,1.2s
MMB Musomiste 82.29 3 P P 18 34 47.5 -4.7
TIR Tirane 82.37 6 ePN P 18 34 58.1 +5.5
TIR Tirane 82.37 6 PFAKE 18 35 00.0 +7.4
TIR LR LR
comp=Z,10µm,19.0s
DHRM DHARAMSHALA 82.42 320 *ex* x 18 37 57.0
DHRM AMB AMB 18 38 02.8
comp=Z,39nm,1.3s
ABKT Ailbek 82.46 336 P **P 18 34 54.3 +1.2**
comp=Z,252nm,1.2s,SNR=9.8
NVR Nevrokopi 82.54 3 P **P 18 34 51.5 -2.0**
NVR Nevrokopi 82.54 3 eP **P 18 34 54.7 +1.2**
GUN Gumba 82.54 311 eP P 18 34 48.9 -5.2
comp=Z,465nm,1.3s
GNI Garni 82.67 347 eP P 18 34 49.5 -4.8
comp=Z,74nm,1.3s
GNI LR LR
comp=Z,4µm,21.0s
KNT Kendrikon 82.69 3 P **P 18 34 53.8 -0.5**
SRS Serrai 82.76 3 P **P 18 34 54.3 -0.3**
ODAN Odare 82.81 309 eP P 18 34 51.0 -4.4

	comp=Z,147nm,1.1s								
GRG	**Griva**	**82.88**	**4**	P		**P**	**18 34 56.0**	**+0.7**	
KKN	**Kakani**	**82.90**	**311**	*e*P		P	18 34 50.7	-5.1	
	comp=Z,213nm,1.1s								
FNA	**Florina**	**83.01**	**5**	P		**P**	**18 34 55.8**	**-0.2**	
ALN	**Alexandroupoli**	**83.03**	**1**	P		**P**	**18 34 55.0**	**-0.9**	
PKI	**Pulchoki**	**83.04**	**311**	*e*P		P	18 34 51.3	-5.4	
	comp=Z,243nm,1.2s								
PKIN	**Phulchoki**	**83.04**	**311**	*e*P		P	18 34 51.5	-5.1	
	comp=Z,53nm,0.6s								
DANN	**Dangsing**	**83.04**	**312**	*e*P		P	18 34 51.7	-4.9	
	comp=Z,863nm,1.2s								
RAMN	**Ramite**	**83.08**	**309**	*e*P		P	18 34 52.0	-4.8	
	comp=Z,257nm,0.9s								
SMLA	**Simla**	**83.12**	**319**	*i* P		P	18 34 50.6	-6.0	
DMN	**Daman**	**83.13**	**311**	*e*P		P	18 34 52.9	-4.2	
	comp=Z,257nm,1.1s								
VSL	**Villasalto**	**83.21**	**14**	PFAKE			18 35 00.0	+3.0	
VSL				LR		LR			
	comp=Z,6µm,19.0s								
PMOZ	**Porto Moniz, M**	**83.35**	**37**	*e*S		**S**	**18 45 22.5**	**+4.4**	
PMOZ				*e*LR		LR	19 04 13.2		
	comp=Z,9µm,18.0s								
CUC	**Castrocucco**	**83.43**	**9**	PFAKE			18 35 00.0	+1.9	
CUC				LR		LR			
	comp=Z,4µm,20.0s								
SMTH	**Samothraki Isl**	**83.45**	**1**	*e*P		**P**	**18 34 59.9**	**+1.7**	
PLG	**Polygyros**	**83.50**	**3**	*e*P		**P**	**18 35 00.9**	**+2.4**	
KZN	**Kozani**	**83.50**	**4**	*e*P		**P**	**18 34 59.7**	**+1.2**	
DDI	**Dehra Dun**	**83.52**	**318**	*ex*		x	18 38 08.3		
DDI				AMB		AMB	18 38 20.8		
	comp=Z,149nm,1.7s								
PMAR	**Madeira**	**83.53**	**36**	*e*P		**P**	**18 35 00.3**	**+1.4**	
	comp=Z,226nm,1.5s								
PYUN	**Piuthan**	**83.57**	**313**	*e*P		P	18 34 53.6	-5.7	
	comp=Z,314nm,0.9s								
KOLN	**Koldanda**	**83.61**	**312**	*e*P		P	18 34 54.7	-4.8	
	comp=Z,82nm,0.9s								
LIT	**Litokhoron**	**83.74**	**4**	P		**P**	**18 34 58.0**	**-1.7**	
UBPT	**Khong Chiam**	**83.89**	**288**	P		P	18 34 57.2	-3.5	
	comp=Z,33nm,1.1s,comp=Z,1µm								
ANTO	**Ankara**	**83.96**	**356**	*e*P		P	18 34 55.6	-5.3	
ANTO				pmax		pmax			
	comp=Z,39nm,0.9s								
ANTO				MLR		MLR			
	comp=Z,3µm,22.0s								
ANTO	**Ankara**	**83.96**	**356**	*e*P		P	18 34 55.6	-5.3	
	comp=Z,39nm,0.9s								
ANTO				LR		LR			
	comp=Z,3µm,22.0s								
ANTO	**Ankara**	**83.96**	**356**	P		**P**	**18 35 03.2**	**+2.3**	
	SNR=16								
KEK	**Kerkira**	**84.00**	**6**	*e*P		**P**	**18 35 02.6**	**+1.6**	
LIA	**Limnos Island**	**84.02**	**2**	P		**P**	**18 35 00.0**	**-1.0**	
LIA	**Limnos Island**	**84.02**	**2**	*e*P		**P**	**18 35 02.4**	**+1.4**	
BR131	**Keskin Array S**	**84.06**	**355**	*e*P		P	18 34 55.4	-6.1	
	comp=Z,22nm,0.9s								
BRTR	**Keskin Array B**	**84.06**	**355**	P		**P**	**18 35 01.1**	**-0.4**	
	comp=Z,14nm,0.9s,baz=20,slow=4.1,SNR=17								
JAN	**Janina**	**84.11**	**5**	*e*P		**P**	**18 35 04.2**	**+2.6**	
THL	**Klokotos Trika**	**84.26**	**4**	P		**P**	**18 35 01.3**	**-1.0**	
THL	**Klokotos Trika**	**84.26**	**4**	*e*P		**P**	**18 35 04.1**	**+1.8**	
CMMT	**Chiang Mai**	**84.29**	**295**	P		P	18 34 57.1	-5.7	
	comp=Z,18nm,1.3s,comp=Z,936nm								
CHTO	**Chiang Mai**	**84.29**	**295**	*e*P		P	18 34 57.4	-5.4	
CHTO				pmax		pmax			
	comp=Z,31nm,1.3s								
CHTO				MLR		MLR			
	comp=Z,5µm,19.0s								
CHTO	**Chiang Mai**	**84.29**	**295**	*e*P		P	18 34 57.4	-5.4	
	comp=Z,7.6nm,1.3s								
CHTO				LR		LR			
	comp=Z,5µm,19.0s								
CHTO	**Chiang Mai**	**84.29**	**295**	P		**P**	**18 35 03.0**	**+0.3**	
	SNR=9.7								
CHTO	**Chiang Mai**	**84.29**	**295**	P		P	18 34 57.3	-5.5	
	comp=Z,20nm,1.3s,comp=Z,975nm								
TIP	**Timpagrande**	**84.32**	**8**	*e*P		**P**	**18 35 01.9**	**-0.8**	
	comp=Z,23nm,0.8s								
TIP				LR		LR			
	comp=Z,7µm,20.0s								
XOR	**Xorichti**	**84.50**	**3**	P		**P**	**18 35 01.8**	**-1.8**	
NEO	**Neokhori**	**84.56**	**3**	*e*P		**P**	**18 35 05.5**	**+1.6**	
CMAR	**Chiang Mai Arr**	**84.59**	**295**	P		**P**	**18 35 04.7**	**+0.4**	
	comp=Z,8.7nm,0.8s,baz=4.5,slow=4.9,SNR=15								
PRK	**Paraskevi**	**84.68**	**1**	*e*P		**P**	**18 35 06.4**	**+2.0**	
SIGR	**SIGRI**	**84.71**	**1**	P		**P**	**18 35 04.0**	**-0.6**	
AOS	**Alonnisos**	**84.71**	**3**	P		**P**	**18 35 03.5**	**-1.1**	
MAKR	**Makrakomi, Fth**	**84.81**	**4**	P		**P**	**18 35 06.5**	**+1.3**	
EVR	**Evrytania**	**84.89**	**4**	P		**P**	**18 35 05.4**	**-0.3**	
EVR	**Evrytania**	**84.89**	**4**	*e*P		P	18 35 09.9	+4.2	
CEL	**Celeste**	**85.16**	**9**	PFAKE			18 35 10.0	+3.0	
CEL				LR		LR			
	comp=Z,5µm,19.0s								
LKR	**Lokris**	**85.20**	**3**	*e*P		**P**	**18 35 07.5**	**+0.4**	
RTC	**Rabat Centre**	**85.33**	**28**	PFAKE			18 35 10.0	+2.3	
RTC				LR		LR			
	comp=Z,6µm,19.0s								
EFP	**Efpalio**	**85.39**	**4**	P		**P**	**18 35 08.1**	**+0.1**	
EFP	**Efpalio**	**85.39**	**4**	*e*P		**P**	**18 35 08.5**	**+0.5**	
DZM	**Mont Dzumac**	**85.52**	**218**	*e*S		S	18 45 35.3	-4.3	
	comp=Z,5µm,25.1s								
DZM				*e*SS		**SS**	**18 51 14.7**	**-1.2**	
	comp=Z,3µm,25.3s								
DZM				*e*LQ		LQ	18 58 05.6		
	comp=Z,5µm,28.7s								
DZM				*e*LR		LR	19 02 03.2		
	comp=Z,4µm,20.7s								
DZM	**Mont Dzumac**	**85.52**	**218**	P		P	18 35 14.0	+5.3	
DZM	**Mont Dzumac**	**85.52**	**218**	P		P	18 35 14.0	+5.3	
	comp=Z,9.4nm,1.0s,baz=55,slow=17,SNR=3.0								
CHOS	**Chios island**	**85.54**	**1**	P		**P**	**18 35 08.2**	**-0.6**	
VLS	**Valsamata**	**85.57**	**5**	*e*P		P	18 35 17.4	+8.4	
KKM	**Kota Kinabalu**	**85.70**	**274**	P		P	18 35 13.2	+3.2	
	comp=Z,38nm,1.1s								
KKM				LR		LR			
	comp=Z,2µm,19.0s								
RLS	**Riolos of Patr**	**85.73**	**5**	P		**P**	**18 35 10.2**	**+0.5**	
RLS	**Riolos of Patr**	**85.73**	**5**	*e*P		**P**	**18 35 11.5**	**+1.8**	
KLV	**Kalavryta, Ach**	**85.78**	**4**	*e*P		**P**	**18 35 11.3**	**+1.3**	
PTL	**Penteli**	**85.83**	**3**	*e*P		**P**	**18 35 10.1**	**-0.2**	
GUR	**Goura**	**85.89**	**4**	P		**P**	**18 35 10.0**	**-0.7**	
ATH	**Athens Observa**	**85.90**	**3**	*e*P		**P**	**18 35 12.8**	**+2.2**	
ISP	**Isparta**	**86.07**	**358**	PFAKE			18 35 20.0	+8.4	
ISP				LR		LR			
	comp=Z,5µm,20.0s								
KBSD	**Kabsdagh**	**86.26**	**350**	*e*P		P	18 35 04.9	-7.5	
DID	**Didima**	**86.35**	**3**	P		P	18 35 08.5	-4.4	
DID	**Didima**	**86.35**	**3**	*e*P		**P**	**18 35 11.2**	**-1.7**	
ITM	**Ithomi**	**86.63**	**4**	*e*P		**P**	**18 35 16.3**	**+2.1**	
APE	**Apeiranthos**	**86.84**	**2**	*e*P		**P**	**18 35 14.4**	**-0.9**	
SFNV	**Sufian**	**86.88**	**350**	*e*P		**P**	**18 35 16.5**	**+1.0**	
KEST	**Kesra**	**86.91**	**15**	P		**P**	**18 35 13.1**	**-2.6**	
KEST	**Kesra**	**86.91**	**15**	P		P	18 35 20.2	+4.5	
	comp=Z,5.0nm,1.0s,baz=263,slow=6.3,SNR=5.4								
DYR	**Agios Nikonas**	**87.06**	**4**	*e*P		**P**	**18 35 17.1**	**+0.8**	
VLI	**Veliai**	**87.13**	**4**	P		**P**	**18 35 14.5**	**-2.1**	
VLI	**Veliai**	**87.13**	**4**	*e*P		**P**	**18 35 15.9**	**-0.7**	
WDD	**Wield Dalam**	**87.40**	**10**	PFAKE			18 35 20.0	+2.1	
WDD				LR		LR			
	comp=Z,5µm,20.0s								
MZRK	**Al-Mazaregh**	**87.42**	**349**	*e*P		**P**	**18 35 19.0**	**+1.0**	
SANT	**Santorini**	**87.54**	**2**	PFAKE			18 35 20.0	+1.3	
SANT				LR		LR			
	comp=Z,4µm,21.0s								
SANT	**Santorini**	**87.54**	**2**	*e*P		**P**	**18 35 16.5**	**-2.2**	
CHBT	**CHBT**	**87.65**	**289**	P		**P**	**18 35 16.7**	**-2.7**	
ARG	**Arkhangelos**	**87.71**	**359**	*e*P		**P**	**18 35 19.6**	**+0.2**	
ARNB	**Al Arnab**	**87.78**	**353**	*e*P		**P**	**18 35 20.8**	**+0.9**	
ARNB	**Al Arnab**	**87.78**	**353**	*e*P		P	18 35 14.1	-5.8	
ANKY	**Antikythira Is**	**87.99**	**3**	*e*P		**P**	**18 35 23.4**	**+2.6**	
RAO	**Raoul Island**	**88.03**	**202**	PFAKE			18 35 30.0	+9.3	
RAO				LR		LR			
	comp=Z,3µm,20.0s								
WRDH	**Warideh**	**88.10**	**353**	*e*P		**P**	**18 35 21.0**	**-0.3**	
WRDH	**Warideh**	**88.10**	**353**	*e*P		**P**	**18 35 21.5**	**+0.1**	
KARP	**Karpathos**	**88.38**	**0**	*e*P		**P**	**18 35 22.9**	**+0.2**	
KARN	**Karanos**	**88.47**	**3**	*e*P		**P**	**18 35 24.0**	**+0.9**	
VAM	**Vamos**	**88.47**	**3**	*e*P		**P**	**18 35 21.2**	**-1.9**	
BIDA	**Albida**	**88.60**	**353**	*e*P		P	18 35 18.5	-5.3	
BIDA	**Albida**	**88.60**	**353**	*e*P		P	18 35 20.3	-3.5	
IDI	**Anoyia**	**88.61**	**2**	P		**P**	**18 35 21.6**	**-2.1**	
	comp=Z,17nm,0.8s								
IDI	**Anoyia**	**88.61**	**2**	*e*P		**P**	**18 35 22.0**	**-1.8**	
NPS	**Neapolis**	**88.65**	**2**	*e*P		**P**	**18 35 24.2**	**+0.3**	
LAST	**Lasithi**	**88.75**	**2**	P		**P**	**18 35 23.3**	**-1.2**	
LAST	**Lasithi**	**88.75**	**2**	*e*P		**P**	**18 35 23.6**	**-0.9**	
ZKR	**Zakros**	**88.80**	**1**	*e*P		**P**	**18 35 24.9**	**+0.3**	
CSS	**Prodhromos**	**88.82**	**355**	P		**P**	**18 35 23.1**	**-1.6**	
CSS	**Prodhromos**	**88.82**	**355**	*e*P		P	18 35 19.9	-4.8	
	comp=Z,11nm,0.9s								
CSS				LR		LR			
	comp=Z,704nm,21.0s								
SIVA	**Sivas**	**88.88**	**2**	P		**P**	**18 35 24.4**	**-0.6**	
SIVA	**Sivas**	**88.88**	**2**	*e*P		**P**	**18 35 24.6**	**-0.4**	
GVD	**Gavdhos**	**89.04**	**3**	P		P	18 35 22.1	-3.6	
	comp=Z,196nm,0.9s								
GVD	**Gavdhos**	**89.04**	**3**	*e*P		**P**	**18 35 26.5**	**+0.8**	
HAWK	**Haweek**	**89.08**	**353**	*e*P		**P**	**18 35 26.3**	**+0.3**	
HAWK	**Haweek**	**89.08**	**353**	*e*P		**P**	**18 35 26.8**	**+0.7**	
BHPL	**Bhopal**	**90.13**	**315**	*ex*		x	18 38 59.5		
BHPL				AMB		AMB	18 39 05.3		
	comp=Z,39nm,1.7s								
BRBR	**Barbar**	**90.22**	**353**	*e*P		**P**	**18 35 32.4**	**+0.8**	
SALA	**Sala**	**90.86**	**352**	*e*P		**P**	**18 35 35.1**	**+0.7**	
SALA	**Sala**	**90.86**	**352**	*e*P		**P**	**18 35 35.4**	**+0.9**	
TCHB	**Talchebab**	**90.95**	**353**	*e*P		P	18 35 30.4	-4.4	
CTA	**Charters Tower**	**91.86**	**235**	P		**P**	**18 35 39.8**	**+0.9**	
CTA	**Charters Tower**	**91.86**	**235**	P		**P**	**18 35 39.8**	**+0.9**	
	comp=Z,4.1nm,0.8s,baz=143,slow=5.5,SNR=3.0								
CTAO	**Charters Tower**	**91.86**	**235**	PFAKE			18 35 40.0	+1.1	
CTAO				LR		LR			
	comp=Z,4µm,20.0s								
KAPI	**Kappang**	**92.87**	**265**	PFAKE			18 35 50.0	+6.3	
KAPI				LR		LR			
	comp=Z,1µm,21.0s								
HYB	**Hyderabad**	**94.91**	**312**	*i* P		**P**	**18 35 52.0**	**-1.2**	
HYB				*e*PP		**PP**	**18 39 42.0**	**+0.5**	
HYB				*e*SKS		**SKSac**	**18 46 26.0**	**-2.3**	
HYB				*e*			18 48 32.0		
HYB				LR		LR	19 22 32.0		
	comp=Z,12nm,22.0s								
POO	**Poona**	**95.79**	**316**	*ex*		**P**	**18 35 55.0**	**-2.2**	
WRAB	**Tennant Creek**	**97.47**	**245**	PFAKE			18 36 10.0	+5.4	
WRAB				LR		LR			
	comp=Z,4µm,22.0s								
WRA	**Warramunga Arr**	**97.48**	**245**	P		Pdif	18 36 07.7	+3.0	
WRA	**Warramunga Arr**	**97.48**	**245**	P		Pdif	18 36 07.7	+3.0	
	comp=Z,1.0nm,1.0s,baz=39,slow=5.5,SNR=3.0								
LPAZ	**La Paz**	**100.36**	**104**	P		**Pdif**	**18 36 17.5**	**-0.8**	
LPAZ	**La Paz**	**100.36**	**104**	P		**Pdif**	**18 36 17.5**	**-0.8**	
	comp=Z,0.5nm,0.4s,baz=297,slow=2.3,SNR=2.9								
ASAR	**Alice Springs**	**100.82**	**244**	P		**Pdif**	**18 36 21.5**	**+2.0**	
ASAR	**Alice Springs**	**100.82**	**244**	P		**Pdif**	**18 36 21.5**	**+2.0**	
	comp=Z,0.4nm,0.8s,baz=32,slow=5.5,SNR=3.2								
TORD	**Torodi Ar. Bea**	**107.42**	**26**	PKKPbc	PKKPbc		18 52 10.5	+0.3	
TORD	**Torodi Ar. Bea**	**107.42**	**26**	PP	PP		18 41 24.4	+8.6	
	comp=Z,1.3nm,0.9s,baz=329,slow=6.0,SNR=3.6								
TORD	**Torodi Ar. Bea**	**107.42**	**26**	PKKPbc	PKKPbc		18 52 10.5	+0.3	
	comp=Z,1.0nm,0.8s,baz=149,slow=2.2,SNR=5.0								
TORD	**Torodi Ar. Bea**	**107.42**	**26**	PP	PP		18 41 24.4	+8.6	
KMBO	**Kilima Mbogo**	**124.30**	**348**	*e*PKP	**PKPdf**		**18 41 29.6**	**-0.6**	
KMBO	**Kilima Mbogo**	**124.30**	**348**	PKP	**PKPdf**		**18 41 31.8**	**+1.7**	
	comp=Z,2.9nm,0.7s,baz=50,slow=23,SNR=5.4								
KMBO	**Kilima Mbogo**	**124.30**	**348**	PKP	**PKPdf**		**18 41 31.8**	**+1.7**	
VNDA	**Vanda**	**136.64**	**193**	PKP	**PKPdf**		**18 41 53.0**	**+1.9**	
VNDA	**Vanda**	**136.64**	**193**	PKP	**PKPdf**		**18 41 53.0**	**+1.9**	
	comp=Z,0.9nm,0.9s,baz=252,slow=0.8,SNR=2.9								
ABPO	**Ambohimpanom**	**139.81**	**330**	PFAKE			18 42 00.0	+1.0	
ABPO				LR		LR			
	comp=Z,2µm,21.0s								
LBTB	**Lobatse**	**148.58**	**3**	*e*P		**PKPbc**	**18 42 16.3**	**-1.3**	
LBTB				AMS		AMS	19 16 09.2		
	comp=Z,687nm,17.5s								
LBTB	**Lobatse**	**148.58**	**3**	*e*PKPbc		**PKPdf**	**18 42 11.6**	**-2.4**	
SLR	**Silverton**	**149.32**	**359**	*e*P		**PKPdf**	**18 42 13.0**	**-2.2**	
ERPM	**east rand prop**	**149.93**	**359**	*e*P		**PKPbc**	**18 42 20.1**	**-1.0**	
KLOF	**Kloof**	**149.94**	**360**	*e*P		**PKPbc**	**18 42 20.1**	**-1.0**	
PRYS	**Parys**	**150.51**	**0**	*e*P		**PKPdf**	**18 42 19.3**	**+2.2**	
SWZ	**Schweizer**	**150.73**	**4**	*e*P		**PKPdf**	**18 42 18.0**	**+0.6**	
POGA	**Pongola**	**150.80**	**352**	*e*P		**PKPbc**	**18 42 20.1**	**-2.9**	
SEK	**Senekal**	**151.91**	**360**	*e*P		**PKPdf**	**18 42 19.6**	**+0.4**	
BOSA	**Boshof**	**152.15**	**4**	*e*P		**PKPdf**	**18 42 19.2**	**-0.3**	
BOSA				AMS		AMS	19 24 39.5		
	comp=Z,944nm,5.8s								
BOSA	**Boshof**	**152.15**	**4**	*e*PKPbc		**PKPdf**	**18 42 19.1**	**-0.4**	
BOSA	**Boshof**	**152.15**	**4**	PKPbc		**PKPbc**	**18 42 27.6**	**+1.5**	
	comp=Z,20nm,0.9s,baz=338,slow=4.1,SNR=15								
BOSA				PKPab		**PKPab**	**18 42 36.4**	**+0.6**	
	comp=Z,50nm,1.1s,baz=56,slow=2.0,SNR=9.3								
BOSA	**Boshof**	**152.15**	**4**	PKPab		**PKPab**	**18 42 36.4**	**+0.6**	
SYO	**Syowa Base**	**166.25**	**199**	*e*P		**PKPdf**	**18 42 39.0**	**+4.7**	

IDC ***16*** *18:37:38.8±0.4, 56.˚49N×152.˚52W, h0km, mb5.0/35, mb1 5.1/37, mb1mx5.1/39, mbtmp5.0/37, ML4.3/2, MS5.1/9, Ms1 5.1/9, ms1mx4.7/46, Error ellipse: s-maj=12.4km s-min=8.4km az=22.0*

BJI ***16*** *18:37:39.6, 56.˚61N×153.˚06W, h11km, mB5.7/30, mb5.3/52, Ms5.9/36, Ms7 5.6/36*

ISCJB ***16*** *18:37:40.4±0.1, 56.˚48N±0.˚02×152.˚49W±0.˚03, h20km, mb5.3/330, MS5.4/25, Error ellipse: s-maj=3.0km s-min=2.0km az=30.3*

NEIC ***16*** *18:37:40.4, 56.˚25N×152.˚22W, h21km, mb5.4/128, ML5.0(AEIC), After AEIC.*

MOS ***16*** *18:37:42.5±1.0, 56.˚53N×152.˚46W, h33km, mb5.7/129, MS5.4/7, Error ellipse: s-maj=7.7km s-min=3.3km az=88.6*

GCMT ***16*** *18:37:43.7±0.2, 56.˚17N×152.˚05W, h14km, MW5.3, Moment Tensor Solution. s26,c34; s99,c174; Moment tensor: Scale 10^17Nm; Mrr=0.00; Mθθ=0.00; Mφφ=0.00; Mrθ=0.00; Mφθ=0.00; Mφr=0.00; Best double couple: M=1.2000×10^17 NP1:φs=233.00000°, δ=21.00000°, λ=88.00000°. NP2:φs=55.00000°, δ=69.00000°, λ=91.00000°. Principal axes: T 1.1800, Plg66.0000°, Azm326.0000°; N 0.0100, Plg1.0000°, Azm235.0000°; P -1.1900, Plg24.0000°, Azm144.0000°; Data Used: II IC IU CN G.*

SZGRF ***16*** *18:37:51.9, 56.˚84N×153.˚47W, h69km, mb5.6, Kodiak Island, Alaska, United States, region*

ISC 16 18:37:41.3±0.3, 56.˚46N±0.˚04×152.˚55W±0.˚03, h16km±1km, h16km:pP-P, n1263, σ1s05/1384, mb5.5/342, MS5.5/25, 124C-59D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.87**	**332**	P	**Pg**	**18 37 58.5**	**+0.3**
KDAK	**Kodiak Island**	**1.33**	**359**	P	**Pn**	**18 38 04.9**	**-0.2**
KDAK	**Kodiak Island**	**1.33**	**359**	Pn	**Pn**	**18 38 04.2**	**-0.9**
	208nm,0.3s,baz=185,slow=9.0,SNR=513						
KDAK				Sn	**Sb**	**18 38 22.9**	**+0.3**
	763nm,0.3s,baz=258,slow=16,SNR=24						
KABR	**Katmai Barrier**	**2.13**	**323**	P	**Pn**	**18 38 16.8**	**+0.6**
KAWH	**Katmai**	**2.29**	**329**	P	**Pn**	**18 38 19.6**	**+1.3**
KCE	**Katmai Mt Cerb**	**2.29**	**323**	P	**Pn**	**18 38 19.9**	**+1.4**
KAKN	**Katmai Knife C**	**2.29**	**325**	P	**Pn**	**18 38 19.8**	**+1.4**
KABU	**Katmai Buttres**	**2.35**	**322**	P	**Pn**	**18 38 20.9**	**+1.7**
FOSS	**Fourpeaked Sta**	**2.43**	**346**	P	**Pn**	**18 38 21.8**	**+1.5**
FONW	**Fourpeaked Sta**	**2.50**	**343**	P	**Pn**	**18 38 22.9**	**+1.7**
KELA	**Mount Kelaz**	**2.63**	**320**	P	**Pn**	**18 38 24.7**	**+1.6**
AUI	**Augustine Isla**	**2.93**	**351**	P	**Pn**	**18 38 28.6**	**+1.6**
AUW	**Augustine West**	**2.96**	**351**	P	**Pn**	**18 38 29.2**	**+1.6**
AUNW	**Augustine NWes**	**2.97**	**351**	P	**Pn**	**18 38 29.4**	**+1.7**
ANPK	**Aniakchak Peak**	**3.11**	**279**	P	**Pn**	**18 38 30.0**	**+0.4**
ANNW	**Aniakchak Nort**	**3.17**	**282**	P	**Pn**	**18 38 31.3**	**+0.9**
OPT	**Oil Point**	**3.23**	**354**	P	**Pn**	**18 38 32.6**	**+1.4**
HOM	**Homer**	**3.25**	**8**	P	**Pn**	**18 38 32.0**	**+0.6**
CHGN	**Chignik**	**3.27**	**270**	P	**Pn**	**18 38 31.0**	**-0.7**
BRLK	**Bradley Lake**	**3.43**	**14**	P	**Pn**	**18 38 32.9**	**-1.2**
IVE	**Iliamna Volcan**	**3.58**	**356**	P	**Pn**	**18 38 37.1**	**+0.9**
ILW	**Iliamna West**	**3.63**	**355**	P	**Pn**	**18 38 37.9**	**+1.0**
VNHG	**Veniaminof 1**	**3.69**	**269**	P	**Pn**	**18 38 38.1**	**+0.5**
VNWF	**Veniaminof 8**	**3.92**	**268**	P	**Pn**	**18 38 41.5**	**+0.7**
SEW	**Seward**	**4.01**	**23**	P	**Pn**	**18 38 40.0**	**-1.9**
RSO	**Redoubt South**	**4.02**	**359**	*e*Pn	**Pn**	**18 38 42.1**	**-0.2**
DFR	**Drift River**	**4.15**	**359**	P	**Pn**	**18 38 44.3**	**+0.3**
SLKM	**Skilak Lake**	**4.24**	**16**	P	**Pn**	**18 38 44.3**	**-0.9**
SLKM	**Skilak Lake**	**4.24**	**16**	P	**Pn**	**18 38 44.3**	**-0.9**
MID	**Middleton Isla**	**4.45**	**45**	P	**Pn**	**18 38 46.1**	**-1.9**
MID				S	**Sn**	**18 39 36.0**	**-3.4**
MID	**Middleton Isla**	**4.45**	**45**	P	**Pn**	**18 38 46.1**	**-1.9**
MID				S	**Sn**	**18 39 36.0**	**-3.4**
SPU	**Mount Spurr**	**4.75**	**3**	P	**Pn**	**18 38 51.9**	**-0.3**
CKL	**Chakachamna La**	**4.76**	**1**	P	**Pn**	**18 38 52.5**	**+0.2**
BGL	**Barrier Glacie**	**4.82**	**1**	P	**Pn**	**18 38 54.2**	**+1.0**
SVW2	**Sparrevohn**	**4.92**	**343**	P	**Pn**	**18 38 55.3**	**+0.9**
STLK	**Strandline Lak**	**5.07**	**4**	P	**Pn**	**18 38 56.5**	**0.0**
PS4A	**Pavlof South-4**	**5.36**	**262**	P	**Pn**	**18 38 59.6**	**-0.8**
DOL	**Dolgoi Island**	**5.42**	**260**	P	**Pn**	**18 39 00.2**	**-1.1**
EYAK	**Cordova Ski Ar**	**5.44**	**38**	P	**Pn**	**18 38 60.0**	**-1.5**
EYAK				S	**Sn**	**18 40 00.2**	**-3.4**
DT1	**Dutton Round H**	**5.66**	**260**	P	**Pn**	**18 39 03.3**	**-1.3**
DRIA	**Deer Island**	**5.69**	**259**	P	**Pn**	**18 39 03.5**	**-1.5**
VLZ	**Valdez**	**5.69**	**32**	P	**Pn**	**18 39 03.4**	**-1.6**
RAGM	**Ragged Mountai**	**5.71**	**43**	P	**Pn**	**18 39 03.2**	**-2.1**
RAGM				S	**Sn**	**18 40 06.4**	**-4.1**
SML	**Sawmill**	**5.79**	**20**	*e*P	**Pn**	**18 39 05.1**	**-1.3**
SML	**Sawmill**	**5.79**	**20**	*e*Pn	**Pn**	**18 39 05.1**	**-1.3**
DIV	**Divide**	**5.86**	**34**	P	**Pn**	**18 39 05.5**	**-1.9**
FALS	**False Pass**	**6.36**	**260**	*e*Pn	**Pn**	**18 39 13.2**	**-0.9**
PPLA	**Purkeypile**	**6.47**	**1**	P	**Pn**	**18 39 16.2**	**+0.4**
TT01	**Tatalina**	**6.71**	**346**	P	**Pn**	**18 39 19.2**	**+0.3**
KIAG	**Kiagna River**	**6.94**	**46**	P	**Pn**	**18 39 19.8**	**-2.5**
MCARA	**McCarthy VSAT**	**6.98**	**41**	P	**Pn**	**18 39 20.6**	**-2.1**
BALM	**Baldy**	**7.02**	**45**	P	**Pn**	**18 39 21.2**	**-2.1**
BALM	**Baldy**	**7.02**	**45**	P	**Pn**	**18 39 21.2**	**-2.1**
HARP	**HAARP**	**7.06**	**29**	P	**Pn**	**18 39 22.7**	**-1.0**
GRNC	**Granite Creek**	**7.08**	**48**	P	**Pn**	**18 39 22.1**	**-2.1**
TRF	**Thorofare Moun**	**7.11**	**8**	P	**Pn**	**18 39 23.2**	**-1.4**
DHY	**Denali Highway**	**7.13**	**19**	P	**Pn**	**18 39 24.1**	**-0.9**
SAMH	**Samovar Hills**	**7.21**	**54**	P	**Pn**	**18 39 24.4**	**-1.5**
RND	**Reindeer**	**7.21**	**13**	P	**Pn**	**18 39 25.8**	**-0.2**
RND	**Reindeer**	**7.21**	**13**	P	**Pn**	**18 39 25.8**	**-0.2**
PAX	**Paxson**	**7.45**	**26**	P	**Pn**	**18 39 27.8**	**-1.4**
PAX	**Paxson**	**7.45**	**26**	P	**Pn**	**18 39 27.8**	**-1.4**
MCK	**McKinley**	**7.52**	**12**	P	**Pn**	**18 39 30.1**	**0.0**
MCK	**McKinley**	**7.52**	**12**	P	**Pn**	**18 39 30.1**	**0.0**
PNL	**Peninsula**	**7.68**	**60**	P	**Pn**	**18 39 30.8**	**-1.5**
MENT	**Mentasta**	**7.88**	**31**	*e*Pn	**Pn**	**18 39 33.7**	**-1.4**
AKUT	**Akutan**	**7.90**	**258**	*e*Pn	**Pn**	**18 39 33.6**	**-1.7**
DDM	**Donnelly Dome**	**8.07**	**22**	P	**Pn**	**18 39 36.6**	**-1.1**
NEA

JTMT Jette 24.78 94 eP P 18 43 02.1 0.0
YBMT Yellow Bay 24.86 94 eP P 18 43 02.6 -0.3
comp=Z,83nm,1.5s
BMO Blue Mountains 24.89 103 eP P 18 43 02.7 -0.4
comp=Z,238nm,2.2s
A15A Johnson Ranch, 24.95 90 P P 18 43 03.1 -0.5
baz=25,SNR=23
B14A Marquette Ranc 24.99 92 P P 18 43 03.8 -0.2
baz=25,SNR=13
D13A Huson 25.06 96 P P 18 43 04.1 -0.5
baz=25,SNR=12
C14A Swan Lake 25.06 94 ⇑P P 18 43 04.4 -0.2
baz=25
SWMT Swartz Lake 25.07 94 eP P 18 43 04.6 -0.2
KIPM Iron Peak 25.29 119 eP P 18 43 07.5 +0.7
comp=Z,183nm,1.4s
MOD Modoc 25.32 111 eP P 18 43 07.4 +0.3
comp=Z,56nm,1.3s
B15A Bradely Ranch, 25.41 92 ⇑P P 18 43 07.0 -0.8
baz=25
F12A Elk City 25.43 99 P P 18 43 07.8 -0.2
baz=25,SNR=17
MSO Missoula 25.50 96 eP P 18 43 08.3 -0.4
comp=Z,36nm,1.2s
MSO Missoula 25.50 96 P P 18 43 08.0 -0.6
baz=25,SNR=16
SLMT Seeley Lake 25.51 94 eP P 18 43 09.8 +1.1
D14A Greenough 25.59 95 ⇓P P 18 43 08.7 -0.8
baz=25,SNR=18
E13A Victor 25.60 97 ⇓P P 18 43 09.0 -0.5
baz=25,SNR=28
A16A West Butte Ran 25.60 90 ⇓P P 18 43 08.9 -0.7
baz=25
C15A Salmond Ranch, 25.69 93 ⇓P P 18 43 10.0 -0.4
baz=25,SNR=30
G12A Big Creek, Yel 25.79 100 ⇓P P 18 43 10.9 -0.4
baz=26
WVOR Wild Horse Val 25.81 108 eP P 18 43 11.4 -0.1
WVOR pmax pmax
comp=Z,145nm,1.3s
WVOR Wild Horse Val 25.81 108 eP P 18 43 11.4 -0.1
comp=Z,145nm,1.3s
B16A M & M Farms, S 25.83 91 ⇓P P 18 43 10.7 -0.9
baz=26
CHMT Chamberlain Mo 25.83 95 eP P 18 43 11.1 -0.6
F13A Darby 25.92 98 ⇑P P 18 43 12.3 -0.2
baz=26,SNR=21
E14A Clinton 26.00 96 P P 18 43 12.9 -0.3
baz=26,SNR=9.9
A17A Triple J Farms 26.10 89 ⇑P P 18 43 13.4 -0.6
baz=26,SNR=13
C16A Fuhringer Ranc 26.15 92 P P 18 43 14.0 -0.6
baz=26,SNR=7.0
B17A L&G Farms, Che 26.40 90 ⇑P P 18 43 16.4 -0.4
baz=26,SNR=6.9
G13A Cobalt 26.41 99 P P 18 43 17.0 +0.1
baz=26,SNR=15
H12A Diamond D Ranc 26.41 101 P P 18 43 17.0 -0.1
baz=26,SNR=23
F14A Wisdom 26.43 97 ⇑P P 18 43 17.3 +0.1
baz=26
E15A Deer Lodge 26.46 95 ⇑P P 18 43 17.2 -0.2
baz=26
A18A Metzger Ranch, 26.59 88 ⇓P P 18 43 17.7 -0.7
baz=26
OHCM Honcut 26.63 117 eP P 18 43 18.7 -0.1
MFID Camas Ranch 26.63 104 eP P 18 43 19.2 +0.2
comp=Z,30nm,1.0s
MFID Camas Ranch 26.63 104 P P 18 43 19.0 +0.1
baz=26,SNR=15
D16A Dana Ranch, Ca 26.71 93 P P 18 43 19.3 -0.3
baz=26,SNR=14
H13A Challis 26.73 100 P P 18 43 19.7 -0.1
baz=26,SNR=28
G14A Jackson 26.74 98 ⇓P P 18 43 19.9 -0.1
baz=26,SNR=7.9
HRY Holter Researc 26.74 94 eP P 18 43 23.5 +3.6
I12A Atlanta 26.76 102 P P 18 43 20.2 +0.1
baz=26,SNR=23
BEKR Beckworth 26.79 115 eP P 18 43 20.2 -0.3
comp=Z,27nm,1.4s
F15A Butte 26.90 96 ⇓P P 18 43 21.3 -0.1
baz=27
B18A Beardsley Farm 26.91 89 P P 18 43 21.0 -0.3
baz=27,SNR=17
E16A East Helena 26.93 94 P P 18 43 21.7 +0.1
baz=27,SNR=13
LRM Limekiln Ridge 26.93 96 eP P 18 43 22.2 +0.5
D17A Six Diamond Ra 27.11 92 P P 18 43 22.6 -0.7
baz=27,SNR=7.7
EGMT Eagleton 27.13 90 eP P 18 43 23.5 +0.1
comp=Z,295nm,2.0s
EGMT eScP ScP 18 50 23.2 +0.5
EGMT Eagleton 27.13 90 P P 18 43 23.1 -0.2
baz=27,SNR=6.3
DLMT Dillon 27.14 97 eP P 18 43 23.4 -0.1
comp=Z,190nm,2.1s
H14A Leadore 27.18 99 P P 18 43 24.1 +0.1
baz=27,SNR=12
A19A Klindworth Far 27.19 87 P P 18 43 23.5 -0.4
baz=27,SNR=9.6
I13A Wildhorse Cree 27.23 101 ⇑P P 18 43 24.2 -0.3
baz=27,SNR=20
HLID Hailey 27.30 102 eP P 18 43 25.3 +0.3
comp=Z,38nm,1.4s
HLID eScP ScP 18 50 24.2 +0.7
HLID Hailey 27.30 102 P P 18 43 25.0 0.0
baz=27,SNR=16
G15A Dillon 27.32 97 P P 18 43 24.8 -0.4
baz=27,SNR=8.8
MCMT McKenzie Canyo 27.34 98 eP P 18 43 25.1 -0.3
comp=Z,11nm,1.2s
B19A Brinkman Farms 27.34 88 P P 18 43 25.0 -0.2
baz=27,SNR=11
E17A Martinsdale 27.43 94 P P 18 43 25.9 -0.2
baz=27
WCN Washoe City 27.52 115 eP P 18 43 27.1 0.0
WCN pmax pmax
comp=Z,311nm,2.1s
WCN Washoe City 27.52 115 eP P 18 43 27.1 0.0
comp=Z,311nm,2.1s
J13A Cove Ranch, Pi 27.54 102 P P 18 43 27.4 +0.2
baz=27,SNR=14
H15A Lima 27.58 98 P P 18 43 27.4 -0.1
baz=27,SNR=20
I14A Mackay 27.58 100 P P 18 43 28.0 +0.5
baz=27,SNR=11
G16A Moss Hill, Enn 27.66 96 P P 18 43 27.8 -0.4
baz=27,SNR=14
A20A Cobblestone Ra 27.67 87 ⇓P P 18 43 28.0 -0.1
baz=27
C19A Slack Wire Ran 27.69 90 P P 18 43 28.8 +0.4
baz=27,SNR=11
SEY Seymchan 27.75 306 ⇑iP P 18 43 27.1 -1.5
B20A Solberg Farm, 27.86 88 ⇓P P 18 43 29.7 -0.1
baz=28
F17A Fitzpatrick Pl 27.87 94 ⇑P P 18 43 29.9 -0.2
baz=28
E18A Harlowton 27.89 92 P P 18 43 30.9 +0.7
baz=28
PET Petropavlovsk 27.90 284 ⇑iP P 18 43 29.0 -1.1
PET pmax pmax
comp=Z,119nm,1.2s
PET MLR MLR
comp=Z,7μm,17.0s
J14A Carey 27.95 101 P P 18 43 31.5 +0.7
baz=28,SNR=12
I15A Monteview 28.07 99 P P 18 43 32.6 +0.8
baz=28
D19A Cripps Ranch, 28.11 91 ⇑P P 18 43 32.5 +0.4
baz=28
FFC Flin Flon 28.11 72 eP P 18 43 31.9 0.0
FFC pmax pmax
comp=Z,46nm,1.5s
FFC Flin Flon 28.11 72 eP P 18 43 31.9 0.0
comp=Z,46nm,1.5s
QLMT Earthquake Lak 28.11 97 eP P 18 43 33.4 +1.1
CMB Columbia Colle 28.18 117 eP P 18 43 33.3 +0.5
CMB pmax pmax
comp=Z,152nm,2.1s
CMB Columbia Colle 28.18 117 eP P 18 43 33.3 +0.5
comp=Z,152nm,2.1s
G17A Pierce Place, 28.19 95 ⇑P P 18 43 33.5 +0.6
baz=28
RES Resolute Bay 28.26 28 eP P 18 43 33.0 0.0
comp=Z,344nm,1.0s
RES Resolute Bay 28.26 28 P P 18 43 33.8 +0.7
comp=Z,8.2nm,0.7s,baz=251,slow=11,SNR=25
RES LR LR 18 56 41.1
comp=Z,6μm,18.1s,baz=91,slow=40
C20A Veseth Ranch, 28.28 89 P P 18 43 33.7 +0.1
baz=28,SNR=20
H16A Russell Place, 28.30 97 P P 18 43 34.3 +0.3
baz=28
PETK Petropavlovsk- 28.38 284 P P 18 43 34.1 -0.3
PETK Petropavlovsk- 28.38 284 P P 18 43 34.1 -0.3
PETK Petropavlovsk- 28.38 284 P P 18 43 34.1 -0.3
comp=Z,14nm,0.9s,baz=79,slow=14,SNR=14
PETK LR LR 18 54 16.6
comp=Z,5μm,18.1s,baz=71,slow=35
F18A Big Timber 28.39 93 P P 18 43 35.0 +0.3
baz=28
B21A Ellsworth Farm 28.43 87 P P 18 43 35.2 +0.3
baz=28
GCMT Greycliff 28.49 94 P P 18 43 34.3 -1.3
comp=Z,12nm,1.0s
D20A Manuel Ranch, 28.57 90 P P 18 43 36.5 +0.4
baz=28,SNR=13
E19A Rath Farm, Rou 28.58 92 P P 18 43 37.2 +0.9
baz=28
C21A Desert Coulee 28.72 88 ⇑P P 18 43 37.6 +0.1
baz=28
A22A Carney Farms, 28.73 85 ⇓P P 18 43 37.9 +0.3
baz=28
ELK Elko 28.80 107 P P 18 43 39.5 +0.9
ELK ScP ScP 18 50 28.6 +0.4
ELK eScP SS 18 50 29.3 0.0
ELK Elko 28.80 107 P P 18 43 39.5 +0.9
comp=Z,8.6nm,0.9s,baz=310,slow=6.4,SNR=29
ELK ScP ScP 18 50 28.6 +0.4
comp=Z,3.3nm,1.1s,baz=343,slow=2.7,SNR=7.2
F19A Roth Farm, Mol 28.85 93 P P 18 43 39.4 +0.6
baz=29,SNR=9.1
H17A Grant Village 28.86 97 P P 18 43 40.6 +1.5
baz=29
E20A Meyer Farm, Mu 28.91 91 ⇓P P 18 43 39.2 -0.1
baz=29,SNR=9.3
NVAR Mina Array Bea 28.92 114 P P 18 43 40.2 +0.7
NVAR PcP PcP 18 46 48.6 +0.4
NVAR ScP ScP 18 50 28.9 +0.3
NVAR Mina Array Bea 28.92 114 P P 18 43 40.2 +0.7
comp=Z,16nm,0.9s,baz=300,slow=9.0,SNR=81
NVAR PcP PcP 18 46 48.6 +0.4
comp=Z,1.0nm,0.7s,baz=270,slow=2.7,SNR=4.2
NVAR ScP ScP 18 50 28.9 +0.3
comp=Z,2.5nm,0.9s,baz=273,slow=3.0,SNR=12
NVAR LR LR 18 53 07.8
comp=Z,4μm,20.1s,baz=31,slow=32
IMW Indian Meadow 28.98 98 eP P 18 43 41.0 +0.9
comp=Z,35nm,1.4s
B22A Reddig Ranch S 29.06 86 P P 18 43 41.1 +0.6
baz=29
RRI2 Red Ridge 29.13 99 eP P 18 43 42.4 +0.9
comp=Z,97nm,1.9s
I17A Pilgrim Ck. 29.17 97 ⇑P P 18 43 40.9 -0.8
baz=29
MOOW Moose Ponds 29.18 98 eP P 18 43 42.4 +0.5
comp=Z,133nm,2.7s
H18A Shoshone NF, C 29.19 95 P P 18 43 42.1 +0.3
baz=29
D21A La Casta Ranch 29.21 89 ⇑P P 18 43 42.2 +0.3
baz=29
TPAW Teton Pass 29.24 98 eP P 18 43 43.2 +0.8
comp=Z,75nm,1.7s
MLAC Mammoth Lakes 29.27 116 ⇑P P 18 43 44.4 +1.7
baz=29,SNR=6.0
F20A Billings 29.33 92 P P 18 43 43.1 +0.2
baz=29
LOHW Long Hollow 29.35 98 eP P 18 43 44.0 +0.7
comp=Z,51nm,1.7s
LOHW ePcP PcP 18 46 52.7 +3.5
LOHW eScP ScP 18 50 29.3 -0.6
HVU Hansel Valley 29.40 103 eP P 18 43 44.6 +0.9
HVU pmax pmax
comp=Z,312nm,2.8s
HVU Hansel Valley 29.40 103 eP P 18 43 44.6 +0.9
comp=Z,312nm,2.8s
J17A Brown Place, J 29.46 98 P P 18 43 45.4 +1.1
baz=29
E21A Keefer Ranch, 29.48 90 ⇓P P 18 43 44.9 +0.7
baz=29
B23A Brockton 29.53 85 ⇑P P 18 43 44.4 -0.2
baz=29
H19A Powell 29.57 95 ⇑P P 18 43 45.9 +0.8
baz=29
D22A Cohagen 29.62 88 P P 18 43 46.2 +0.7
baz=29
MTUM Tungsten Hills 29.62 116 eP P 18 43 47.0 +1.3
G20A Bridger 29.65 93 ⇑P P 18 43 45.7 -0.1
baz=29
C23A Lambert 29.79 87 ⇑P P 18 43 47.4 +0.4
baz=30,SNR=10.0
A24A Westby 29.82 84 P P 18 43 47.6 +0.4
baz=30
J18A Kendall Valley 29.94 98 ⇓P P 18 43 48.7 +0.2
baz=30,SNR=13
TIN Tinemaha 30.02 116 P P 18 43 50.4 +1.3
baz=30
RCTC Rector, Farmer 30.10 118 P P 18 43 50.4 +0.7
baz=30
D23A Lindsay 30.14 88 ⇓P P 18 43 50.7 +0.6
baz=30
E22A Miles City 30.16 89 ⇓P P 18 43 50.8 +0.5
baz=30,SNR=7.3
HWUT Hardware Ranch 30.17 102 eP P 18 43 51.0 +0.4
comp=Z,20nm,1.1s
HWUT ePcP PcP 18 46 55.5 +4.2
G21A Lodge Grass 30.20 92 P P 18 43 51.0 +0.3
baz=30
H20A Greybull 30.23 94 ⇑P P 18 43 51.0 +0.1
baz=30
C24A Savage 30.37 86 P P 18 43 53.3 +1.2
baz=30,SNR=12
R11A Troy Canyon, C 30.38 111 P P 18 43 52.9 +0.5
baz=30,SNR=42
F22A Rosebud 30.39 91 ⇑P P 18 43 52.6 +0.3
baz=30
J19A Crowheart 30.43 97 ⇓P P 18 43 52.9 +0.1
baz=30,SNR=5.1
PDAR Pinedale Array 30.48 98 P P 18 43 52.5 -0.8
PDAR ScP ScP 18 50 32.9 -0.7
PDAR Pinedale Array 30.48 98 P P 18 43 52.5 -0.8
comp=Z,4.9nm,0.7s,baz=315,slow=4.8,SNR=29
PDAR ScP ScP 18 50 32.9 -0.7
comp=Z,2.4nm,1.1s,baz=321,slow=1.9,SNR=7.6
E23A Ismay 30.49 89 ⇑P P 18 43 53.7 +0.5
baz=30
DUG Dugway 30.49 105 eP P 18 43 53.5 +0.2
DUG e 18 46 52.0
DUG e 18 50 33.8
DUG pmax pmax
comp=Z,17nm,1.0s
DUG Dugway 30.49 105 eP P 18 43 53.5 +0.2
comp=Z,16nm,1.0s
DUG ePcP PcP 18 46 52.0 -0.2
DUG eScP ScP 18 50 33.8 +0.3
DUG Dugway 30.49 105 P P 18 43 53.8 +0.4
baz=30,SNR=11
GRAC Grapevine Rang 30.49 115 P P 18 43 54.6 +1.4
baz=30,SNR=28
SMMC Simmler 30.53 120 P P 18 43 54.7 +1.1
baz=30,SNR=5.0
VES Vestal, Richgr 30.55 118 ⇑P P 18 43 54.3 +0.6
baz=30
D24A Glendive 30.66 87 P P 18 43 56.3 +1.6
baz=30,SNR=10
G22A Birney 30.71 92 P P 18 43 55.4 +0.2
baz=30
M17A Scullys Gap (B 30.75 101 P P 18 43 55.9 +0.1
baz=30,SNR=9.3
L18A Fontenelle, Gr 30.79 100 P P 18 43 56.1 0.0
baz=30
K19A Absolon Red Bu 30.84 97 P P 18 43 55.8 -0.6
baz=30
F23A Volborg 30.90 90 ⇓P P 18 43 56.8 0.0
baz=31
J20A Shoshoni 30.91 96 P P 18 43 57.8 +0.8
baz=31,SNR=25
JLU Jordanelle 30.93 103 eP P 18 43 57.9 +0.5
comp=Z,28nm,1.1s
JLU eScP ScP 18 50 35.8 +0.7
DAC Darwin (Calif) 30.94 116 eP P 18 43 57.7 +0.2
DAC pmax pmax
comp=Z,35nm,1.3s
DAC Darwin (Calif) 30.94 116 eP P 18 43 57.7 +0.2
comp=Z,35nm,1.3s
PKM Peak Mountain 30.95 120 P P 18 43 58.5 +1.0
baz=31,SNR=6.2
ISA Isabella 30.99 118 eP P 18 43 58.1 +0.4
ISA pmax pmax
comp=Z,37nm,1.3s
ISA Isabella 30.99 118 eP P 18 43 58.0 +0.4
comp=Z,37nm,1.3s
ISA Isabella 30.99 118 P P 18 43 57.8 +0.1
baz=31,SNR=16
E24A Baker 31.00 88 ⇓P P 18 43 58.0 +0.3
baz=31
H22A Clearmont 31.07 93 ⇓P P 18 43 58.7 +0.3
baz=31
M18A Lyman 31.11 101 ⇑P P 18 43 59.0 +0.1
baz=31
FURC Furnace Creek, 31.16 115 P P 18 44 00.1 +1.0
baz=31,SNR=13
MPMC Manual Prospec 31.17 116 P P 18 43 59.9 +0.5
baz=31,SNR=34
DAU Daniels Canyon 31.17 103 eP P 18 44 00.3 +0.7
DAU Daniels Canyon 31.17 103 eP P 18 44 00.3 +0.7
K20A Yellowstone Ra 31.23 97 P P 18 43 59.3 -0.5
baz=31,SNR=11
G23A Biddle 31.23 91 ⇑P P 18 44 00.0 +0.3
baz=31
ARVC Arvin 31.25 119 ⇓P P 18 43 59.7 -0.2
baz=31
MPU Maple Canyon 31.25 104 eP P 18 43 59.9 -0.2
J21A Lysite 31.27 95 P P 18 44 00.4 +0.2
baz=31,SNR=13
F24A Ekalaka 31.36 89 P P 18 44 01.7 +0.8
baz=31,SNR=10
I22A 9 Mile Ranch, 31.45 94 P P 18 44 02.0 +0.3
baz=31
LRMC Laurel Mountai 31.53 117 P P 18 44 03.0 +0.5
baz=31
M19A Rock Springs 31.56 100 P P 18 44 02.9 0.0
baz=31
L20A Wamsutter 31.66 98 ⇓P P 18 44 03.0 -0.7
baz=31
G24A Alzada 31.69 90 P P 18 44 03.6 -0.2
baz=31
OSI Osito Adit 31.71 119 eP P 18 44 04.0 0.0
comp=Z,11nm,0.3s
J22A Midwest 31.76 94 P P 18 44 05.0 +0.5
baz=32,SNR=14
K21A Alcova 31.84 96 ⇓P P 18 44 05.1 -0.2
baz=32
EDW2 Edwards Air Fo 31.85 118 P P 18 44 05.2 -0.1
baz=32,SNR=7.0
SHOC Shoshone 31.90 115 P P 18 44 06.6 +0.9
baz=32
ARUT Antelope Range 31.92 109 eP P 18 44 06.1 +0.1
ARUT pmax pmax
comp=Z,33nm,1.1s
ARUT Antelope Range 31.92 109 eP P 18 44 06.1 +0.1
comp=Z,33nm,1.1s
MSU Marysvale 32.05 107 eP P 18 44 08.0 +0.8
MSU e 18 46 56.9
MSU Marysvale 32.05 107 eP P 18 44 08.0 +0.8
MSU ePcP PcP 18 46 56.9 +0.4
MSU eScP ScP 18 50 39.5 +0.6
M20A Sweetwater, Wa 32.10 99 P P 18 44 07.8 +0.2
baz=32,SNR=12
GSC Goldstone 32.10 116 eP P 18 44 07.8 +0.3
GSC Goldstone 32.10 116 eP P 18 44 07.8 +0.3
GSC Goldstone 32.10 116 P P 18 44 08.2 +0.7
baz=32,SNR=17
P17A Butcher Ranch, 32.12 104 P P 18 44 08.1 +0.4
baz=32,SNR=6.6
CCUT Cedar City 32.14 109 eP P 18 44 08.7 +0.7
comp=Z,81nm,1.7s
L21A Rawlins 32.23 97 P P 18 44 08.5 -0.2
baz=32,SNR=14
K22A Casper 32.23 96 ⇓P P 18 44 07.7 -1.0
baz=32
P18A Preston Nutter 32.28 103 P P 18 44 09.8 +0.6
baz=32,SNR=11
Q16A Castle Valley 32.29 105 P P 18 44 10.1 +0.8
baz=32,SNR=11
RRX Edison Barstow 32.34 117 P P 18 44 10.5 +1.0
baz=32
MWC Mount Wilson 32.35 119 eP P 18 44 10.4 +0.6
MWC pmax pmax
comp=Z,105nm,1.7s
MWC Mount Wilson 32.35 119 eP P 18 44 10.4 +0.6
comp=Z,105nm,1.7s
O19A Miners Draw (B 32.41 101 P P 18 44 10.7 +0.4
baz=32,SNR=8.7
TUQ Turquoise Moun 32.44 115 P P 18 44 11.6 +1.0
baz=32
M21A Separation Pea 32.47 98 P P 18 44 10.7 -0.1
baz=32,SNR=11
SRU San Rafael 32.50 104 P P 18 44 11.9 +0.9
baz=32,SNR=58
N20A Spence Gulch, 32.51 100 P P 18 44 11.8 +0.6
baz=32,SNR=29
BFSC Mount Baldy Ra 32.53 118 P P 18 44 11.9 +0.5
baz=32
RSSD Black Hills 32.66 91 eP P 18 44 12.9 +0.4
RSSD pmax pmax
comp=Z,86nm,1.7s
RSSD Black Hills 32.66 91 eP P 18 44 12.9 +0.4
comp=Z,86nm,1.7s
K23A Bowen Ranch, D 32.66 95 P P 18 44 12.5 +0.1
baz=32
L22A Ellis Ranch, M 32.70 96 P P 18 44 13.4 +0.6
baz=32,SNR=15
HEC Hector,Ludlow 32.72 116 P P 18 44 13.7 +0.8
baz=32,SNR=6.2
MDND Maddock 32.85 82 ⇑P P 18 44 14.7 +0.9
baz=33
P19A Cripple Cowboy 32.96 102 P P 18 44 15.5 +0.3
baz=33,SNR=25
N21A Black Mountain 32.97 99 P P 18 44 15.3 +0.1
baz=33,SNR=14
O20A White River Ci 33.01 101 P P 18 44 15.6 +0.1
baz=33,SNR=12
M22A Cedar Creek Ra 33.03 97 ⇓P P 18 44 15.8 0.0
baz=33
L23A Garrett 33.05 96 P P 18 44 16.0 +0.1
baz=33,SNR=30
GMRC Granite Mounta 33.09 115 P P 18 44 16.6 +0.4
baz=33,SNR=14
SCI San Clemente I 33.12 121 P P 18 44 16.6 +0.2
baz=33
MURC Murrieta 33.27 118 P P 18 44 17.9 +0.2
baz=33
O21A Pagoda 33.37 100 P P 18 44 18.9 +0.1
baz=33
P20A De Beque 33.37 102 P P 18 44 18.8 +0.1
baz=33
L24A Wheatland 33.52 95 P P 18 44 20.6 +0.7
baz=33
N22A Wattenberg Ran 33.52 98 P P 18 44 20.5 +0.4
baz=33,SNR=12
ULM Lac du Bonnet 33.54 76 P P 18 44 19.4 -0.3
ULM Lac du Bonnet 33.54 76 P P 18 44 19.4 -0.3
comp=Z,23nm,0.9s,baz=302,slow=10.0,SNR=10
ULM LR LR 18 57 47.6
comp=Z,4μm,18.7s,baz=212,slow=36
BELC Belle Mtn. Jos 33.54 116 P P 18 44 20.4 +0.2
baz=33,SNR=16
U15A North Rim 33.54 109 P P 18 44 20.9 +0.6
baz=33,SNR=17
NEE2 Needles Airpor 33.63 114 P P 18 44 21.5 +0.7
baz=33
PFO Pinyon Flat Ob 33.63 117 P P 18 44 20.9 0.0
comp=Z,101nm,1.3s,SNR=7.7
PFO Pinyon Flat Ob 33.63 117 P P 18 44 21.1 +0.1
PFO ScP ScP 18 50 46.5 +2.2
PFO Pinyon Flat Ob 33.63 117 P P 18 44 20.6 -0.3
comp=Z,97nm,1.4s,SNR=7.7
PFO Pinyon Flat Ob 33.63 117 P P 18 44 21.1 +0.1
comp=Z,11nm,1.1s,baz=329,slow=7.7,SNR=18
PFO ScP ScP 18 50 46.5 +2.2
comp=Z,2.0nm,0.4s,baz=116,slow=16,SNR=6.4
PFO LR LR 18 56 17.7
comp=Z,537nm,19.7s,baz=343,slow=33
PFO Pinyon Flat Ob 33.63 117 P P 18 44 20.9 0.0
baz=33,SNR=10
N23A Red Feather La 33.74 97 ⇑P P 18 44 21.8 -0.2
baz=33
W13A Hualapai Mount 33.74 113 P P 18 44 22.9 +0.9
baz=33,SNR=22
Q20A Ridgley Place, 33.81 102 P P 18 44 21.6 -0.9
baz=34,SNR=8.7

S18A Hurst Farm, BI 33.82 105 P P 18 44 22.6 -0.1
baz=34,SNR=27
IRM Iron Mountain 33.84 115 P P 18 44 23.6 +1.0
baz=34,SNR=22
P21A Newcastle 33.87 101 P P 18 44 23.3 +0.2
baz=34,SNR=11
PV04 Paradox Valley 33.89 103 eP P 18 44 23.6 +0.4
109C Camp Elliot, M 33.89 119 P P 18 44 23.8 +0.7
baz=34
O22A Kremmling 33.91 99 P P 18 44 23.4 -0.2
baz=34,SNR=8.3
BC3 Big Chuckawall 34.09 116 P P 18 44 24.8 -0.1
baz=34,SNR=14
P22A Eagle 34.20 100 P P 18 44 25.7 -0.2
baz=34
O23A Lake Granby, G 34.23 98 P P 18 44 26.8 +0.5
baz=34,SNR=11
MONP Monument Peak 34.23 118 P P 18 44 26.8 +0.6
baz=34,SNR=19
PDMCI Parker Dam,Lak 34.24 114 P P 18 44 26.4 +0.4
baz=34
PV01 Paradox Valley 34.26 103 eP P 18 44 26.3 -0.2
comp=Z,5µm,1.3s
BAR Barrett 34.27 119 eP P 18 44 27.2 +0.8
comp=Z,247nm,2.5s
Q21A Lamborn Mesa, 34.29 102 P P 18 44 26.5 -0.2
baz=34,SNR=6.1
R20A Redvale 34.32 103 P P 18 44 27.2 +0.2
baz=34,SNR=23
SMCO Snowmass 34.37 101 eP P 18 44 28.9 +1.2
comp=Z,33nm,1.4s
Y12C Blythe 34.48 115 P P 18 44 28.7 +0.5
baz=34,SNR=18
ALE Alert 34.48 13 P P 18 44 28.8 +1.1
comp=Z,319nm,1.0s,SNR=6.5
SWSC Sam W. Stewart 34.49 117 P P 18 44 28.6 +0.4
baz=34,SNR=8.1
TIXI Tiksi 34.54 327c iP P 18 44 27.3 -1.0
TIXI pmax pmax
comp=Z,41nm,1.3s
DVTC Desert V Tower 34.57 118 P P 18 44 29.2 +0.2
baz=34
S20A Disappointment 34.59 104 P P 18 44 29.4 0.0
baz=34,SNR=17
Q22A Crested Butte, 34.63 101 P P 18 44 29.7 -0.1
baz=34
AGMN Agassiz Nation 34.64 79 eP P 18 44 29.6 +0.2
comp=Z,74nm,0.9s
R21A Cimarron 34.64 102 P P 18 44 30.1 +0.3
baz=34,SNR=7.9
ISCO Idaho Springs 34.68 98 eP P 18 44 31.3 +1.1
ISCO pmax pmax
comp=Z,96nm,2.3s
ISCO Idaho Springs 34.68 98 eP P 18 44 31.3 +1.1
comp=Z,96nm,2.3s
ISCO Idaho Springs 34.68 98 P P 18 44 30.3 +0.1
baz=34
WUAZ Wupatki 34.72 109 eP P 18 44 30.4 0.0
comp=Z,99nm,1.6s
WUAZ Wupatki 34.72 109 P P 18 44 31.0 +0.6
baz=34,SNR=16
O24A Longmont 34.75 98 P P 18 44 31.6 +1.0
baz=34
P23A Jefferson 34.85 99 P P 18 44 32.8 +1.0
baz=34,SNR=13
GLA Glamis 34.88 116 eP P 18 44 32.4 +0.7
GLA pmax pmax
comp=Z,63nm,1.3s
GLA Glamis 34.88 116 eP P 18 44 32.4 +0.7
comp=Z,63nm,1.3s
GLA Glamis 34.88 116 P P 18 44 32.2 +0.5
baz=35,SNR=9.4
M26A McRoberts Ranc 34.90 94 P P 18 44 32.6 +0.8
baz=35
L27A T5 Ranch, Ells 34.94 93 P P 18 44 32.1 -0.1
baz=35
S21A Coal Bank Pass 35.02 103 P P 18 44 33.7 +0.5
baz=35,SNR=7.3
Y14A Wickenburg 35.10 113 P P 18 44 34.5 +0.9
baz=35,SNR=5.8
R22A Saguache, Gunn 35.17 101 P P 18 44 35.2 +0.7
baz=35,SNR=11
Q23A Hartsel 35.19 100 P P 18 44 35.2 +0.6
baz=35
BRSD Miller 35.27 87 P P 18 44 35.8 +0.9
baz=35
O25A Wiggins 35.28 97 P P 18 44 35.7 +0.5
baz=35
S22A 4UR Ranch, Cre 35.48 102 P P 18 44 37.7 +0.6
baz=35,SNR=9.6
Q24A Divide 35.52 99 ⇓P P 18 44 38.1 +0.6
baz=35
X16A Lo Mia Camp, P 35.53 111 ⇑P P 18 44 38.7 +1.2
baz=35
U20A Newcomb 35.58 105 ⇓P P 18 44 38.6 +0.8
baz=35
Z14A Wintersburg 35.59 114 P P 18 44 38.3 +0.7
baz=35,SNR=9.8
113A Mohawk Valley, 35.64 115 P P 18 44 38.4 +0.3
baz=35,SNR=18
P25A Willow Gulch B 35.68 97 P P 18 44 39.5 +0.9
baz=35
N27A Anderson Farm, 35.68 94 ⇑P P 18 44 39.0 +0.4
baz=35
R23A Moffat 35.71 101 P P 18 44 39.6 +0.5
baz=35,SNR=8.0
OGNE Ogallala 35.87 94 eP P 18 44 39.8 -0.3
comp=Z,109nm,1.4s
OGNE Ogallala 35.87 94 ⇓P P 18 44 40.7 +0.6
baz=36
W18A Petrified Fore 35.88 108 P P 18 44 41.0 +0.6
baz=36
T22A Edith 35.98 103 P P 18 44 42.2 +0.9
baz=36,SNR=26
U21A Nageezi 36.01 104 P P 18 44 41.9 +0.4
baz=36,SNR=19
V20A Brimhall 36.04 106 P P 18 44 42.0 +0.2
baz=36,SNR=13
Q25A Bedland, Calha 36.05 98 P P 18 44 42.3 +0.4
baz=36
R24A Sanders Place, 36.07 100 P P 18 44 42.9 +0.8
baz=36,SNR=9.5
P26A Davis Ranch, A 36.09 97 P P 18 44 42.9 +0.8
baz=36,SNR=7.2
SDCO Great Sand Dun 36.20 101 eP P 18 44 43.5 +0.2
comp=Z,199nm,2.4s
X18A Snowflake 36.22 109 P P 18 44 44.0 +0.6
baz=36,SNR=7.3
S24A Houchin Ranch, 36.44 101 P P 18 44 46.2 +0.9
baz=36,SNR=15
Q26A Hugo 36.45 98 P P 18 44 45.9 +0.7
baz=36,SNR=11
U22A Llaves 36.48 104 P P 18 44 46.1 +0.6
baz=36
V21A Milan 36.48 105 ⇑P P 18 44 46.2 +0.6
baz=36
P27A Ficken Ranch, 36.52 96 P P 18 44 46.0 +0.2
baz=36
W20A Ramah 36.53 107 P P 18 44 46.6 +0.6
baz=36,SNR=6.8
R25A Fountain Ranch 36.58 99 P P 18 44 47.1 +0.8
baz=36,SNR=13
214A Organ Pipe Nat 36.77 115 P P 18 44 48.6 +0.7
baz=36,SNR=23
V22A San Miguel Ran 36.79 104 P P 18 44 48.8 +0.6
baz=36,SNR=11
S25A Robets Cordova 36.85 100 P P 18 44 49.0 +0.3
baz=36,SNR=9.6
U23A El Rito 36.87 103 P P 18 44 49.9 +1.0
baz=37,SNR=22
KSCO Kaye Shedlock' 36.88 97 P P 18 44 49.7 +0.9
baz=37,SNR=10
R26A Arlington 36.93 98 P P 18 44 50.1 +0.8
baz=37,SNR=8.8
T24A Torres, Weston 36.94 101 P P 18 44 50.6 +1.0
baz=37,SNR=14
P28A Saint Francis 36.97 95 P P 18 44 50.1 +0.5
baz=37
X20A Quemado 36.98 107 P P 18 44 50.5 +0.6
baz=37,SNR=7.8
ECSD EROS Data Cent 37.02 86 eP P 18 44 49.3 -0.6
comp=Z,26nm,1.0s
EYMN Ely 37.22 77 eP P 18 44 52.4 +0.9
comp=Z,134nm,0.9s
T25A Trinidad 37.24 100 P P 18 44 52.6 +0.6
baz=37,SNR=9.4
Q28A Sharon Springs 37.28 96 ⇑P P 18 44 52.4 +0.2
baz=37

R27A Eads 37.30 98 P P 18 44 53.1 +0.7
baz=37,SNR=12
V23A Ortiz Mt. (NFS 37.31 104 ⇓P P 18 44 53.8 +1.2
baz=37
S26A Kim 37.41 99 P P 18 44 53.9 +0.6
baz=37,SNR=9.6
X21A Alamocita Cree 37.43 107 P P 18 44 54.6 +0.9
baz=37,SNR=32
W22A Albuquerque 37.45 105 P P 18 44 55.0 +1.2
baz=37
TUC Tucson 37.52 112 eP P 18 44 55.3 +1.0
TUC pmax pmax
comp=Z,12nm,1.6s
TUC Tucson 37.52 112 eP P 18 44 55.2 +1.0
comp=Z,12nm,1.6s
Y20A Horse Springs, 37.53 108 P P 18 44 55.7 +1.1
baz=37,SNR=8.4
T26A Comanche Natio 37.66 100 P P 18 44 55.7 +0.1
baz=37,SNR=10
S27A Las Animas 37.67 98 P P 18 44 56.2 +0.6
baz=37
BGNE Belgrade 37.70 90 P P 18 44 56.5 +0.8
baz=37
ANMO Albuquerque 37.76 105 eP P 18 44 55.9 -0.5
comp=Z,20nm,1.4s
ANMO ePcP PcP 18 47 13.2 +0.1
ANMO Albuquerque 37.76 105 P P 18 44 56.8 +0.4
comp=Z,3.1nm,1.1s,baz=314,slow=11,SNR=15
W23A Werner Place, 37.76 104 ⇓P P 18 44 57.1 +0.6
baz=37
U25A Circle Dot Ran 37.78 101 P P 18 44 57.3 +0.6
baz=38,SNR=21
X22A Bernardo 37.80 106 P P 18 44 58.0 +1.3
baz=38
R28A Tribune 37.80 97 ⇓P P 18 44 57.1 +0.4
baz=38
LAZ Ladron 37.81 106 eP P 18 44 57.3 +0.4
comp=Z,23nm,1.5s
V24A Rampart Ranch, 37.81 103 P P 18 44 57.9 +1.0
baz=38,SNR=10
Y21A Point of Rocks 37.83 107 ⇑P P 18 44 58.2 +1.1
baz=38
YAK Yakutsk 37.91 311 eP P 18 44 56.4 -0.8
YAK e*PP pP 18 45 05.5 +3.3
YAK eS S 18 50 44.1 -3.6
YAK eSS SnSn 18 53 25.2 -3.7
YAK e 18 55 10.5
YAK pmax pmax
comp=N,18nm,1.1s
YAK pmax pmax
comp=E,53nm,1.1s
YAK pmax pmax
comp=Z,127nm,0.9s
YAK smax smax
comp=N,17nm,1.5s
YAK smax smax
comp=E,14nm,1.4s
Z20A Nine Sixteen R 38.03 109 P P 18 44 59.8 +1.1
baz=38,SNR=25
LENM Lemitar 38.08 106 eP P 18 45 00.0 +0.9
V25A Rancho No Teng 38.09 102 P P 18 44 59.8 +0.7
baz=38,SNR=11
R29A Marienthal 38.11 96 ⇑P P 18 44 60.0 +0.7
baz=38
W24A Lazy 6 Ranch, 38.13 104 P P 18 45 00.3 +0.7
baz=38,SNR=12
LPM Los Pinos Moun 38.15 106 eP P 18 45 00.6 +0.9
U26A Atchley Ranch, 38.15 101 P P 18 45 00.3 +0.6
baz=38,SNR=14
SPMN St. Paul 38.17 81 P P 18 44 59.7 +0.1
baz=38
X23A Hourglass Bar 38.18 105 P P 18 45 00.3 +0.3
baz=38,SNR=7.8
T27A Campo 38.22 99 ⇑P P 18 45 00.5 +0.3
baz=38
Y22A Socorro 38.26 106 P P 18 45 01.1 +0.5
baz=38,SNR=9.6
BNM Barren Site 38.27 106 eP P 18 45 01.2 +0.4
comp=E,44nm,1.6s
S28A Manter 38.29 98 P P 18 45 01.5 +0.7
baz=38,SNR=14
Z21A St. Cloud Mine 38.37 108 P P 18 45 02.8 +1.2
baz=38,SNR=12
120A U Bar Ranch, L 38.45 110 P P 18 45 03.0 +0.7
baz=38,SNR=6.9
T28A Walsh 38.51 98 ⇑P P 18 45 03.3 +0.6
baz=38
V26A Tequesquite Ra 38.57 101 P P 18 45 03.7 +0.6
baz=38,SNR=19
U27A Thompson Grove 38.63 100 P P 18 45 04.1 +0.4
baz=38,SNR=9.5
W25A X Bar L Ranch, 38.63 103 P P 18 45 04.2 +0.5
baz=38,SNR=13
R30A Dighton 38.69 95 P P 18 45 04.7 +0.7
baz=38,SNR=7.3
S29A Ulysses 38.70 97 P P 18 45 03.7 -0.5
baz=38
Y23A Lovelace Mesa, 38.75 106 P P 18 45 05.4 +0.7
baz=38,SNR=9.1
Z22A Elephant Butte 38.78 107 P P 18 45 06.1 +1.1
baz=38,SNR=6.4
T29A Hugoton 38.94 97 P P 18 45 07.0 +0.9
baz=39,SNR=8.1
U28A Mallet 38.99 99 P P 18 45 06.7 0.0
baz=39
220A Playas Peak, P 39.01 110 P P 18 45 07.7 +0.7
baz=39,SNR=19
319A Douglas 39.04 111 P P 18 45 07.7 +0.6
baz=39,SNR=9.1
X25A Clemmons Ranch 39.04 104 P P 18 45 07.8 +0.6
baz=39
S30A Montezuma 39.05 96 P P 18 45 06.6 -0.5
baz=39
Y24A Capitan 39.08 105 P P 18 45 08.4 +0.8
baz=39,SNR=12
W26A Owens Ranch, T 39.11 102 ⇓P P 18 45 08.0 +0.4
baz=39
V27A Dan Oppiter Fa 39.12 100 P P 18 45 08.3 +0.6
baz=39
Z23A Rita Site, Whi 39.17 106 P P 18 45 08.7 +0.5
baz=39
221A Mesquite Ranch 39.32 109 P P 18 45 10.6 +1.1
baz=39
T30A Plains 39.44 97 ⇓P P 18 45 10.2 -0.1
baz=39
320A Kipp Ranch, An 39.46 111 P P 18 45 11.3 +0.6
baz=39
U29A Oasis Ranch, S 39.46 98 P P 18 45 11.0 +0.4
baz=39
Y25A Mesa, Roswell 39.48 104 P P 18 45 11.2 +0.4
baz=39,SNR=24
X26A CR and CF Fran 39.49 103 P P 18 45 11.2 +0.4
baz=39,SNR=8.3
W27A Bowe Ranch, En 39.51 101 ⇓P P 18 45 10.4 -0.6
baz=39
Z24A Sheeppen Canyo 39.58 105 P P 18 45 12.1 +0.4
baz=39,SNR=8.8
S31A Mullinville 39.60 95 P P 18 45 11.9 +0.2
baz=39
222A Williams Famil 39.60 108 P P 18 45 12.4 +0.5
baz=39
U30A WK&E Inc. Balk 39.75 98 P P 18 45 13.1 +0.2
baz=39,SNR=9.2
V29A Stinnett 39.75 99 P P 18 45 12.6 -0.4
baz=39
YSS Yuzh-Sakhalins 39.78 285 eP P 18 45 14.3 +1.3
YSS pmax pmax
comp=Z,30nm,1.0s
X27A F and S Farms, 39.80 102 ⇑P P 18 45 13.8 +0.3
baz=40
W28A Vega 39.83 100 P P 18 45 13.6 0.0
baz=40
T31A Randall Ranch, 39.87 96 P P 18 45 14.1 +0.2
baz=40,SNR=7.3
YUK Yuzh-Kuril'sk 39.95 279 P P 18 45 13.6 -0.8
YUK S S 18 51 16.8 -1.9
YUK MLR MLR
comp=N,803nm,17.0s
YUK MLR MLR
comp=E,741nm,17.0s
YUK MLR MLR
comp=Z,3µm,17.0s
Y26A Elida 39.95 103 ⇑P P 18 45 15.0 +0.3
baz=40
Z25A Roswell 39.96 105 ⇑P P 18 45 15.0 +0.2
baz=40
124A Stringfield Ra 40.01 106 P P 18 45 15.8 +0.4
baz=40,SNR=8.9

KSU1 Kansas State U 40.15 91 eP P 18 45 16.1 0.0
comp=Z,33nm,0.9s
V30A Spur Ranch, Mi 40.29 98 P P 18 45 17.8 +0.3
baz=40
U31A Nine Bar Ranch 40.30 97 P P 18 45 17.5 -0.1
baz=40
Y27A Causey 40.34 103 P P 18 45 18.3 +0.3
baz=40,SNR=11
Z26A Caprock 40.37 104 P P 18 45 18.5 +0.3
baz=40,SNR=8.8
AMTX Amarillo 40.40 100 eP P 18 45 18.6 +0.3
comp=Z,267nm,1.9s
224A Cornudas Mount 40.46 107 P P 18 45 19.5 +0.5
baz=40,SNR=9.1
125A Gardner Draw, 40.47 105 P P 18 45 19.6 +0.6
baz=40,SNR=11
MSTX Muleshoe 40.49 102 P P 18 45 19.2 0.0
baz=40
V31A Spring Creek L 40.74 98 P P 18 45 21.5 +0.4
baz=40
Z27A Tatum 40.74 103 P P 18 45 21.3 0.0
baz=40,SNR=10
W30A Crocket Farms 40.78 99 P P 18 45 21.6 +0.1
baz=40
225A Deer Hill, Car 40.81 106 P P 18 45 22.1 +0.2
baz=40
Y28A McKinney Farm, 40.82 102 ⇑P P 18 45 21.7 -0.1
baz=40
126A Clayton Basin, 40.82 105 P P 18 45 22.0 +0.1
baz=40
MNTX Cornudas Mount 40.83 107 eP P 18 45 22.1 +0.3
comp=Z,27nm,1.2s
MNTX ePcP PcP 18 47 26.2 +3.7
MNTX eScP ScP 18 51 10.8 -0.3
324A Moseley Ranch, 40.98 107 P P 18 45 23.3 +0.1
baz=41,SNR=7.7
GDL2 Guadalupe Moun 40.98 106 eP P 18 45 23.9 +0.6
JFWS Jewell Farm 41.07 82 eP P 18 45 23.8 0.0
JFWS pmax pmax
comp=Z,56nm,1.0s
JFWS Jewell Farm 41.07 82 eP P 18 45 23.8 0.0
comp=Z,56nm,1.0s
W31A Holland Ranch, 41.12 98 P P 18 45 23.5 -0.8
baz=41
127A Arkansas Junct 41.16 104 P P 18 45 24.3 -0.4
baz=41
X30A Coker Ranch, T 41.16 100 P P 18 45 24.7 +0.1
baz=41,SNR=9.8
Y29A Porterfield Fa 41.17 101 P P 18 45 24.9 +0.1
baz=41,SNR=12
226B Tecolote Peak, 41.18 105 P P 18 45 25.4 +0.5
baz=41,SNR=12
CLNB Carlsbad 41.19 105 P P 18 45 25.3 +0.4
comp=Z,6.5nm,1.3s
Z28A Tucker Farm, M 41.21 103 P P 18 45 24.2 -0.9
baz=41
X31A McDonald Ranch 41.52 99 P P 18 45 27.9 +0.4
baz=41
Z29A Hungry Hill Ra 41.60 102 P P 18 45 28.0 -0.3
baz=41,SNR=5.1
128A Castleberry Fa 41.67 103 ⇑P P 18 45 28.9 0.0
baz=41
ASAJ Asahikawa 41.68 281 P P 18 45 29.1 +0.4
ASAJ Asahikawa 41.68 281 P P 18 45 29.1 +0.4
comp=Z,63nm,1.1s,baz=1.0,slow=3.9,SNR=17
227A Bennet, Jal 41.70 105 P P 18 45 29.2 +0.1
baz=41
425A Indio Mountain 41.75 108 P P 18 45 30.6 +1.0
baz=41,SNR=14
326A Caldwell Ranch 41.87 106 P P 18 45 31.3 +0.8
baz=42,SNR=19
Z30A Sanderson Ranc 41.90 101 P P 18 45 30.0 -0.7
baz=42,SNR=8.6
129A Stewart Farms, 42.00 103 P P 18 45 30.9 -0.6
baz=42
228A UT Block 9, Go 42.00 104 P P 18 45 32.1 +0.5
baz=42,SNR=9.8
WMOK Wichita Mounta 42.09 98 eP P 18 45 31.5 -0.7
WMOK pmax pmax
comp=Z,45nm,1.1s
WMOK Wichita Mounta 42.09 98 eP P 18 45 31.5 -0.7
comp=Z,44nm,1.1s
Y32A R-V Farms, Ver 42.28 99 P P 18 45 33.2 -0.5
baz=42
426A McDonald Obser 42.35 107 P P 18 45 34.8 +0.2
baz=42,SNR=9.2
Z31A Sharp Cattle R 42.41 100 P P 18 45 34.2 -0.6
baz=42
328A Wristen Ranch, 42.45 105 P P 18 45 35.1 -0.1
baz=42
130A Snyder 42.51 102 P P 18 45 35.7 0.0
baz=42
427A Hayter Ranch, 42.55 106 ⇑P P 18 45 36.1 0.0
baz=42
131A Roby 42.77 101 ⇓P P 18 45 37.7 -0.1
baz=42
ERM Erimo 42.77 279 eP P 18 45 38.5 +0.9
ERM pmax pmax
comp=Z,152nm,1.2s
ERM Erimo 42.77 279 eP P 18 45 38.1 +0.5
comp=Z,146nm,1.2s
ERM Erimo 42.77 279 P P 18 45 38.4 +0.9
comp=Z,538nm,1.2s,SNR=8.4
Z32A Haskell 42.78 100 P P 18 45 37.3 -0.5
baz=42
526A Mary Lane Ranc 42.80 107 P P 18 45 38.0 -0.2
baz=42,SNR=12
329A Wagon Wheel Ra 42.81 104 P P 18 45 38.2 0.0
baz=42,SNR=14
TUL1 Tulsa 42.88 94 ⇓P P 18 45 37.9 -0.6
baz=43
HABR Khabarovsk 42.90 291 eP P 18 45 36.4 -2.2
HABR e*SP sP 18 45 47.1 +1.4
HABR eS S 18 52 00.2 -2.1
HABR e*SS sS 18 52 13.0 +2.3
HABR eSS SS 18 55 13.6 +0.1
HABR e 18 55 35.4
HABR pmax pmax
comp=E,79nm,1.2s
HABR pmax pmax
comp=Z,170nm,1.2s
HABR pmax pmax
comp=N,41nm,1.5s
HABR MLR MLR
comp=Z,3µm,18.0s
230A Sterling City 42.97 103 ⇑P P 18 45 39.2 -0.2
baz=43
527A Woodward Ranch 42.99 107 P P 18 45 39.9 +0.2
baz=43,SNR=8.9
428A Kincaid Ranch, 43.03 105 P P 18 45 40.7 +0.8
baz=43,SNR=18
626A Big Bend Ranch 43.18 108 P P 18 45 41.5 +0.3
baz=43,SNR=13
HDIL Hopedale 43.19 84 eP P 18 45 40.9 -0.2
comp=Z,94nm,0.9s
ABTX Abilene, Hawle 43.21 101 ⇑P P 18 45 41.0 -0.3
baz=43
330A Mertzon 43.31 103 P P 18 45 42.0 -0.2
baz=43,SNR=16
231A Bronte 43.37 102 ⇓P P 18 45 41.9 -0.7
baz=43
528A Cox Ranch, San 43.41 106 P P 18 45 43.4 +0.3
baz=43,SNR=16
429A Davenport Ranc 43.53 105 P P 18 45 43.6 -0.3
baz=43,SNR=14
SUMG Summit 43.55 24 eP P 18 45 44.2 +0.2
SUMG pmax pmax
comp=Z,111nm,1.0s
SUMG Summit 43.55 24 eP P 18 45 44.2 +0.2
comp=Z,111nm,1.0s
SUMG Summit 43.55 24⇑iP P 18 45 44.5 +0.5
comp=Z,57nm,1.0s
TXAR Lajitas Array 43.60 107 P P 18 45 45.0 +0.5
TXAR PcP PcP 18 47 30.9 -1.0
TXAR ScP ScP 18 51 22.8 +0.4
TXAR Lajitas Array 43.60 107 P P 18 45 45.0 +0.5
comp=Z,8.0nm,0.9s,baz=318,slow=6.7,SNR=44
TXAR PcP PcP 18 47 30.9 -1.0
comp=Z,1.0nm,0.4s,baz=153,slow=0.3,SNR=11
TXAR ScP ScP 18 51 22.8 +0.4
comp=Z,1.9nm,1.1s,baz=328,slow=4.4,SNR=6.4
627A Terlingua Ranc 43.65 107 P P 18 45 45.3 +0.2
baz=43,SNR=14
529A Stev Forest Ra 43.75 105 P P 18 45 45.8 +0.1
baz=43,SNR=26
430A Baggett Ranch, 43.76 104 P P 18 45 45.6 -0.2
baz=43,SNR=15

232A Coleman 43.77 101 P P 18 45 45.4 -0.4
baz=44,SNR=8.3
331A San Angelo 43.79 103 ⇑P P 18 45 45.3 -0.7
baz=44
DAG Danmarks Havn 43.88 14⇑ iP P 18 45 46.0 -0.2
DAG i 18 45 54.6
DAG pmax pmax
comp=Z,48nm,1.0s
DAG Danmarks Havn 43.88 14⇑ iP P 18 45 46.0 -0.2
comp=Z,48nm,1.0s
DAG i 18 45 54.6
628A Black Gap, Mar 43.89 107 P P 18 45 47.4 +0.6
baz=44,SNR=22
SFJD Kangerlussuaq 43.97 34 eP P 18 45 47.3 +0.4
comp=Z,153nm,1.1s
SFJD Kangerlussuaq 43.97 34 iP P 18 45 47.7 +0.8
comp=Z,55nm,0.9s
332A Millersview 44.11 102 ⇑P P 18 45 47.9 -0.6
baz=44
KLR Kul'dur 44.11 294⇓ iP P 18 45 44.8 -3.6
KLR pmax pmax
comp=N,67nm,1.4s
KLR pmax pmax
comp=Z,260nm,1.4s
431A Sonora 44.18 103 P P 18 45 49.0 -0.1
baz=44,SNR=13
530A J-C Ranch, Com 44.20 104 P P 18 45 49.1 -0.2
baz=44,SNR=11
432A Menard 44.47 102 ⇑P P 18 45 51.2 -0.3
baz=44
SFIN Scholer Farm 44.52 82 P P 18 45 51.8 +0.1
baz=44
RFTA Plano 44.53 97 P P 18 45 50.3 -1.6
KBS Kingsbay 44.55 4 eP P 18 45 51.4 -0.1
KBS pmax pmax
comp=Z,57nm,1.2s
531A Rocksprings 44.61 104 ⇓P P 18 45 52.5 -0.1
baz=44
JCT Junction City 44.77 103 eP P 18 45 53.9 0.0
JCT pmax pmax
comp=Z,91nm,1.1s
JCT Junction City 44.77 103 eP P 18 45 53.9 0.0
comp=Z,91nm,1.1s
JCT Junction City 44.77 103 P P 18 45 53.8 -0.1
baz=44,SNR=22
532A Rocksprings 44.99 103 P P 18 45 55.1 -0.5
baz=45,SNR=7.4
OLIL Olney 45.12 85 eP P 18 45 56.4 -0.1
comp=Z,521nm,2.1s
631A Perdido Creek 45.19 104 P P 18 45 56.3 -0.9
baz=45,SNR=10
SIUC Southern Illin 45.23 87 eP P 18 45 56.9 -0.4
comp=Z,33nm,0.9s
SCHQ Schefferville 45.38 54 P P 18 45 58.0 -0.4
SCHQ Schefferville 45.38 54 P P 18 45 58.0 -0.4
comp=Z,19nm,0.8s,baz=316,slow=8.1,SNR=29
SPITS Spitsbergen Ar 45.45 3 P P 18 45 58.2 -0.5
SPITS Spitsbergen Ar 45.45 3 P P 18 45 58.2 -0.5
comp=Z,27nm,0.7s,baz=18,slow=5.6,SNR=21
632A Uvalde 45.54 104 P P 18 45 59.4 -0.6
baz=45,SNR=12
BLO Bloomington 45.69 83 eP P 18 46 06.3 +5.3
BLO pmax pmax
comp=Z,57nm,0.8s
BLO Bloomington 45.69 83 eP P 18 46 06.3 +5.3
comp=Z,57nm,0.8s
PARMO Parma 45.69 88 eP P 18 46 04.6 +3.6
USIN University of 45.91 85 eP P 18 46 06.6 +3.8
comp=Z,439nm,2.0s
732A Laxson Ranch, 46.05 104 P P 18 46 03.2 -0.7
baz=46
ACSO Alum Creek Sta 46.88 79 eP P 18 46 10.2 -0.2
comp=Z,67nm,1.1s
WVT Waverly 47.14 87 eP P 18 46 11.9 -0.5
WVT pmax pmax
comp=Z,26nm,0.9s
WVT Waverly 47.14 87 eP P 18 46 11.9 -0.5
comp=Z,26nm,0.9s
ERPA Erie 47.19 75 eP P 18 46 14.9 +2.2
comp=Z,120nm,1.1s
USRK Ussuriysk Arra 47.31 289 P P 18 46 12.9 -0.8
comp=Z,7.7nm,0.9s,baz=56,slow=7.3,SNR=12
USRK LR LR 19 06 03.2
comp=Z,5μm,19.4s,baz=297,slow=36
HKT Hockley 47.34 99 eP P 18 46 15.0 +1.0
HKT pmax pmax
comp=Z,248nm,1.9s
HKT Hockley 47.34 99 eP P 18 46 15.0 +1.0
comp=Z,248nm,1.9s
OXF Oxford 47.45 90 eP P 18 46 14.9 0.0
OXF pmax pmax
comp=Z,82nm,0.9s
OXF Oxford 47.45 90 eP P 18 46 14.8 0.0
comp=Z,82nm,0.9s
PLAL Pickwick Lake 47.84 88 eP P 18 46 17.1 -0.8
comp=Z,542nm,1.9s
VLA Vladivostok 48.10 288⇓ iP P 18 46 18.6 -1.2
VLA eS S 18 53 16.5 -1.0
VLA pmax pmax
comp=Z,53nm,1.3s
MDJ Mudanjiang 48.27 291 P P 18 46 21.0 -0.1
MDJ pmax pmax
comp=Z,30nm,1.4s
MDJ Mudanjiang 48.27 291 eP P 18 46 20.7 -0.5
comp=Z,14nm,0.8s
LONY Lake Ozonia 48.33 69 eP P 18 46 22.1 +0.5
comp=Z,25nm,1.0s
VBMS Vicksburg 48.55 93 P P 18 46 22.4 -0.9
comp=Z,300nm,1.4s
SCO Scoresbysund 48.55 20 iP P 18 46 23.2 +0.3
SCO pmax pmax
comp=Z,15nm,1.1s
SCO Scoresbysund 48.55 20 iP P 18 46 23.2 +0.3
comp=Z,15nm,1.1s
FRNY Flat Rock 48.69 68 eP P 18 46 23.2 -1.1
comp=Z,24nm,0.9s
SWET Sewanee 48.86 86 eP P 18 46 25.9 +0.1
comp=Z,390nm,2.0s
NCB Newcomb 48.96 70 eP P 18 46 26.9 +0.5
comp=Z,49nm,1.1s
TZTN Tazewell 49.21 83 eP P 18 46 30.3 +1.9
comp=Z,460nm,2.7s
BINY Binghamton 49.27 72 eP P 18 46 27.6 -1.2
comp=Z,115nm,1.2s
MJAR Matsushiro Arr 49.34 277 P P 18 46 28.9 -0.6
MJAR Matsushiro Arr 49.34 277 P P 18 46 28.9 -0.6
comp=Z,13nm,0.9s,baz=34,slow=5.8,SNR=38
MAJO Matsushiro 49.34 277 eP P 18 46 29.7 +0.2
MAJO pmax pmax
comp=Z,44nm,0.9s
MAJO Matsushiro 49.34 277 eP P 18 46 29.7 +0.2
comp=Z,44nm,0.9s
MAT Matsushiro 49.34 277 P P 18 46 29.6 +0.1
SSPA Standing Stone 49.36 75 eP P 18 46 28.4 -1.1
comp=Z,101nm,1.3s
CPCT Cooper Cave 49.47 85 eP P 18 46 30.5 +0.1
ACCN Adirondack Com 49.66 70 eP P 18 46 32.4 +0.6
comp=Z,40nm,1.1s
TKL Tuckaleechee C 49.73 84 eP P 18 46 32.7 +0.3
LRAL Lakeview Retre 49.89 89 eP P 18 46 32.4 -1.2
comp=Z,23nm,0.9s
LBNH Lisbon 49.96 68 eP P 18 46 32.0 -2.1
LBNH pmax pmax
comp=Z,78nm,1.5s
LBNH Lisbon 49.96 68 eP P 18 46 32.0 -2.1
comp=Z,78nm,1.5s
HIA Hailar 49.99 301 eP P 18 46 33.9 -0.4
comp=Z,54nm,1.0s
BLA Blacksburg 50.44 80 P P 18 46 36.1 -1.7
BLA pmax pmax
comp=Z,128nm,1.6s
BLA Blacksburg 50.44 80 P P 18 46 36.1 -1.7
comp=Z,128nm,1.6s
MVL Millersville 50.63 75 eP P 18 46 41.4 +2.2
comp=Z,59nm,1.3s
SDMD Soldier's Deli 50.79 76 eP P 18 46 40.6 +0.2
comp=Z,48nm,1.0s
CIT Chita 50.91 307 eP P 18 46 42.2 +1.0
CIT e 18 46 58.7
CIT pmax pmax
comp=Z,312nm,2.4s
CN2 Changchun 50.98 293 ⇑P P 18 46 41.5 -0.3
CN2 eS S 18 53 54.0 -3.8
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,6μm,18.0s
CN2 LR LR
comp=E,5μm,18.0s
CN2 LR LR
comp=Z,3μm,16.0s
QUA2 Belchertown 51.12 70 eP P 18 46 42.2 -0.6
comp=Z,41nm,0.9s
CPNY Central Park 51.34 72 P P 18 46 46.4 +2.0
comp=Z,106nm,1.5s
KMSC Kings Mountain 51.45 83 P P 18 46 44.7 -0.7
baz=51
JSRW J. Sargeant Re 51.47 78 eP P 18 46 47.9 +2.4
YLE Yale 51.51 71 P P 18 46 45.7 0.0
comp=Z,216nm,1.1s
WES Weston 51.58 69 eP P 18 46 45.0 -1.3
WES pmax pmax
comp=Z,76nm,1.0s
WES Weston 51.58 69 eP P 18 46 45.0 -1.3
comp=Z,76nm,1.0s
BRYW Bryant College 51.80 70 eP P 18 46 47.1 -0.8
comp=Z,302nm,1.5s
EMMW East Machias 51.90 65 eP P 18 46 47.0 -1.6
comp=Z,40nm,0.9s
JSC Jenkinsville 52.13 83 eP P 18 46 49.6 -0.9
JSC Jenkinsville 52.13 83 eP P 18 46 49.6 -0.9
SNY Shenyang 53.35 292 ⇑P P 18 46 59.9 +0.5
SNY pmax pmax
comp=Z,76nm,1.4s
BORG Borgarnes 53.53 24 eP P 18 47 02.6 +2.2
comp=Z,141nm,1.3s
NHSC New Hope 53.61 84 eP P 18 47 00.4 -1.0
comp=Z,202nm,1.4s
KEV Kevo 54.09 0 eP P 18 47 03.8 -0.6
KEV pmax pmax
comp=Z,31nm,0.8s
KEV Kevo 54.09 0 eP P 18 47 04.2 -0.2
KEV pmax pmax
comp=Z,157nm,1.5s
KEV Kevo 54.09 0 ep P 18 47 03.8 -0.6
comp=Z,30nm,0.8s
KEV Kevo 54.09 0 eP P 18 47 04.2 -0.2
comp=Z,157nm,1.5s
KSRS Korea Array 54.27 285 P P 18 47 06.8 +0.7
comp=Z,18nm,1.0s,baz=46,slow=6.8,SNR=30
KSAR Wonju Array Be 54.30 285 P P 18 47 06.8 +0.5
ARCES ARCESS Array B 54.31 1 P P 18 47 05.1 -0.9
ARCES PcP PcP 18 48 07.1 -2.8
ARCES ARCESS Array B 54.31 1 P P 18 47 05.1 -0.9
comp=Z,17nm,0.7s,baz=4.1,slow=7.7,SNR=107
ARCES PcP PcP 18 48 07.1 -2.8
comp=Z,11nm,0.9s,baz=12,slow=6.2,SNR=4.6
ARE0 ARCESS Array S 54.31 1 eP P 18 47 05.3 -0.7
ARE0 ePcP PcP 18 48 09.2 -0.7
ZIIG Zihuatanejo 54.36 114 S P 18 47 05.2 -1.8
IRK Irkutsk 54.69 313 eP P 18 47 08.7 -0.3
IRK e 18 49 08.7
IRK pmax pmax
comp=Z,145nm,2.6s
PLIG Platanillo 54.70 112 P P 18 47 12.4 +2.8
PLIG S PcP 18 48 11.2 -1.0
INCN Inchon 54.94 286 P P 18 47 09.8 -1.3
TLY Talaya 55.37 313 iP P 18 47 14.6 +0.6
TLY Talaya 55.37 313 P P 18 47 14.8 +0.8
comp=Z,295nm,1.2s,SNR=12
LVZ Lovozero 55.84 357 iP P 18 47 17.3 +0.1
LVZ pmax pmax
comp=Z,137nm,1.3s
LVZ Lovozero 55.84 357 P P 18 47 18.2 +1.0
comp=Z,659nm,1.0s,SNR=17
JNU Nakatsue 55.91 280 P P 18 47 19.0 +0.8
JNU Nakatsue 55.91 280 P P 18 47 19.0 +0.8
comp=Z,23nm,1.0s,baz=241,slow=3.6,SNR=4.6
UTMO Hunajuapan 56.05 110 P P 18 47 17.7 -1.8
APA Apatity 56.21 357⇑ eP P 18 47 20.6 +0.9
APA MLR MLR
comp=Z,2μm,16.0s
ZAK Zakamensk 56.50 312 eP P 18 47 22.1 -0.1
ZAK pmax pmax
comp=Z,20nm,1.1s
DL2 Dalian 56.51 291 P P 18 47 23.0 +0.7
DL2 pmax pmax
comp=Z,39nm,1.1s
ULN Ulaanbaatar 56.81 308 eP P 18 47 24.4 -0.1
comp=Z,26nm,0.9s
ULN Ulaanbaatar 56.81 308 P P 18 47 25.2 +0.7
SNR=17
SONM Songino Array 57.12 308 P P 18 47 27.4 +0.8
SONM PcP PcP 18 48 21.5 +0.2
SONM ⇑e 19 17 31.2
SONM Songino Array 57.12 308 P P 18 47 27.4 +0.8
comp=Z,64nm,0.9s,baz=45,slow=6.1,SNR=254
SONM PcP PcP 18 48 21.5 +0.2
comp=Z,11nm,0.8s,baz=44,slow=3.3,SNR=2.4
SONM PKP2bc 19 17 31.2
comp=Z,0.4nm,1.0s,baz=225,slow=0.2,SNR=4.3
BJI Beijing 58.44 296 P P 18 47 35.6 -0.2
BJI pmax pmax
comp=Z,23nm,0.9s
BJI pmax pmax
comp=Z,1μm,6.0s
BJT Baijiatuan 58.46 296 eP P 18 47 35.5 -0.5
HVS Khovu-Aksy 59.67 318 iP P 18 47 44.7 +0.4
HVS pmax pmax
comp=Z,414nm,1.3s
HHC Hu-ho-hao-te 60.09 299 eP P 18 47 47.5 +0.1
HHC sP sP 18 47 53.6 -1.1
HHC PcP PcP 18 48 34.1 +1.0
HHC PP PP 18 50 02.1 +2.6
HHC S S 18 55 56.5 -3.1
HHC sS sS 18 56 04.8 -3.4
HHC ScS SKKSac 18 57 34.0 -2.9
HHC SS SS 18 59 54.4 -1.3
HHC pmax pmax
comp=Z,170nm,0.9s
HHC pmax pmax
comp=Z,2μm,7.1s
HHC LR LR
comp=N,2μm,17.8s
HHC LR LR
comp=E,4μm,20.2s
HHC LR LR
comp=Z,4μm,17.8s
NVS Novosibirsk 60.14 327⇑ iP P 18 47 46.0 -1.4
NVS i S S 18 56 01.4 +1.8
NVS pmax pmax
comp=Z,108nm,1.3s
NVS pmax pmax
comp=N,46nm,1.6s
NVS pmax pmax
comp=E,41nm,1.4s
NVS pmax pmax
comp=Z,46nm,1.8s
NVS pmax pmax
comp=N,31nm,2.0s
NVS pmax pmax
comp=E,35nm,2.0s
NVS smax smax
comp=N,63nm,2.0s
NVS smax smax
comp=E,98nm,2.3s
ZAA0 Zalesovo Array 60.40 325⇑ iP P 18 47 49.0 -0.2
ZALV Zalesovo Beam 60.40 325 P P 18 47 49.5 +0.3
ZALV 18 48 33.8
ZALV Zalesovo Beam 60.40 325 P P 18 47 49.5 +0.3
ZALV PcP PcP 18 48 33.8 -0.2
ZALV ⇑e 19 17 23.2
ZALV Zalesovo Beam 60.40 325 P P 18 47 49.5 +0.3
comp=E,41nm,0.9s,baz=30,slow=6.6,SNR=156
ZALV PcP PcP 18 48 33.8 -0.2
comp=E,5.7nm,0.8s,baz=44,slow=4.8,SNR=2.0
ZALV PKP2bc 19 17 23.2
comp=E,0.2nm,0.3s,baz=316,slow=4.1,SNR=3.8
JOF Joensuu 60.92 358 eP P 18 47 51.5 -1.1
JOF pmax pmax
comp=Z,24nm,0.7s
JOF Joensuu 60.92 358 ep P 18 47 51.5 -1.1
comp=Z,24nm,0.7s
KAF Kangasniemi 61.77 1 eP P 18 47 58.0 -0.3
KAF pmax pmax
comp=Z,19nm,0.7s
KAF Kangasniemi 61.77 1 ep P 18 47 58.0 -0.3
comp=Z,19nm,0.7s
SOKR Solikamsk 61.97 344 iP P 18 47 59.6 -0.1
SOKR pmax pmax
comp=Z,180nm,1.5s
NB2 NORSAR Subarra 62.15 9 P P 18 48 01.1 +0.1
comp=Z,72nm,0.9s,baz=350,slow=6.9
NOA NORSAR Array B 62.15 9 P P 18 48 00.9 0.0
NOA PcP PcP 18 48 40.9 -0.1
NOA NORSAR Array B 62.15 9 P P 18 48 00.9 0.0
comp=Z,40nm,0.8s,baz=350,slow=6.6,SNR=120
NOA PcP PcP 18 48 40.9 -0.1
comp=Z,2.5nm,0.7s,baz=351,slow=6.9,SNR=1.7
NAO01 NORSAR Array S 62.31 9⇑ eP P 18 48 01.6 -0.5
comp=Z,49nm,0.9s
NAO01 e 18 48 11.3
FIA1 FINESS Array S 62.44 1 eP P 18 48 02.4 -0.4
FINES FINESS Array B 62.44 1 P P 18 48 02.9 0.0
FINES PcP PcP 18 48 42.2 +0.1
FINES FINESS Array B 62.44 1 P P 18 48 02.9 0.0
comp=Z,52nm,0.9s,baz=3.4,slow=6.5,SNR=109
FINES PcP PcP 18 48 42.2 +0.1
comp=Z,5.9nm,0.7s,baz=343,slow=7.7,SNR=1.6
NJ2 Nanjing 63.21 288 eP P 18 48 08.8 +0.4
NJ2 pP pP 18 48 17.8 +4.1
NJ2 sP sP 18 48 21.8 +6.1
NJ2 pmax pmax
comp=Z,70nm,1.3s
KONO Kongsberg 63.38 10 eP P 18 48 09.7 +0.6
KONO pmax pmax
comp=Z,188nm,1.4s
KONO Kongsberg 63.38 10 eP P 18 48 09.7 +0.6
comp=Z,188nm,1.4s
SVE Sverdlovsk 63.94 340⇑ iP P 18 48 13.4 +0.5
SVE pmax pmax
comp=Z,98nm,1.3s
PUL Pulkovo 64.10 358 eP P 18 48 15.0 +1.1
PUL pmax pmax
comp=Z,119nm,1.0s
ARU Arti 64.69 341 cP P 18 48 17.3 -0.5
ARU 18 50 36.0
ARU S S 18 56 57.5 +0.7
ARU SS SS 19 01 05.8 -0.8
ARU pmax pmax
comp=Z,95nm,1.2s
ARU Arti 64.69 341 P P 18 48 17.2 -0.5
comp=Z,334nm,1.0s,SNR=26
TGUH Tegucigalpa,Un 64.78 103 P P 18 48 18.7 -0.2
KURK Kurchatov 65.12 327 cP P 18 48 21.0 +0.3
KURK pmax pmax
comp=Z,67nm,1.2s
KURK Kurchatov 65.12 327 P P 18 48 20.9 +0.3
SNR=23
KURK Kurchatov 65.12 327 P P 18 48 20.6 -0.1
comp=Z,204nm,1.1s,SNR=8.8
BRVK Borovoye 65.33 333 eP P 18 48 21.7 -0.3
BRVK pmax pmax
comp=Z,49nm,0.9s
BRVK Borovoye 65.33 333 eP P 18 48 21.7 -0.3
comp=Z,49nm,0.9s
BRVK Borovoye 65.33 333 P P 18 48 22.3 +0.3
SNR=27
BRVK Borovoye 65.33 333 P P 18 48 22.4 +0.3
comp=Z,310nm,1.0s,SNR=21
VSU Vasula 65.43 0 cP P 18 48 23.4 +0.9
VSU pmax pmax
comp=Z,120nm,1.0s
MUD Monsted U'grnd 66.48 11⇑ iP P 18 48 30.1 +0.8
MUD pmax pmax
comp=Z,33nm,0.9s
MUD Monsted U'grnd 66.48 11⇑ iP P 18 48 30.1 +0.8
comp=Z,33nm,0.9s
GTA Gaotai 66.70 306 ⇑P P 18 48 31.1 -0.1
GTA pP pP 18 48 35.9 -0.6
GTA sP sP 18 48 38.3 -0.2
GTA PP PP 18 51 00.5 +2.9
GTA S S 18 57 22.8 +0.7
GTA sS sS 18 57 30.5 -0.4
GTA pmax pmax
comp=Z,36nm,1.7s
GTA pmax pmax
comp=Z,400nm,5.7s
GTA LR LR
comp=N,5μm,16.9s
GTA LR LR
comp=E,4μm,17.1s
GTA LR LR
comp=Z,6μm,17.6s
MTDJ Mount Denham 66.73 92 eP P 18 48 37.0 +5.4
comp=Z,351nm,1.7s
XAN Xi'an 66.73 297 P P 18 48 31.0 -0.4
XAN pmax pmax
comp=Z,9.0nm,1.5s
WHN Wuhan 66.76 290 P P 18 48 32.3 +0.8
WHN eS S 18 57 24.0 +1.3
WHN LR LR
comp=Z,8μm,15.4s
MK31 Makanchi Array 67.38 323 eP P 18 48 34.9 -0.4
MK31 Makanchi Array 67.38 323 eP P 18 48 34.9 -0.4
MKAR Makanchi Array 67.38 323 P P 18 48 35.1 -0.2
MKAR 18 49 02.2
MKAR Makanchi Array 67.38 323 P P 18 48 35.1 -0.2
MKAR PcP PcP 18 49 02.1 -0.6
MKAR ⇑e 19 17 03.8
MKAR Makanchi Array 67.38 323 P P 18 48 35.1 -0.2
comp=Z,21nm,0.9s,baz=44,slow=6.1,SNR=128
MKAR PcP PcP 18 49 02.1 -0.6
comp=Z,6.2nm,0.9s,baz=31,slow=5.7,SNR=3.7
MKAR PKP2bc 19 17 03.8
comp=Z,1.0nm,1.0s,baz=198,slow=0.8,SNR=5.4
LZH Lanzhou 67.55 302 eP P 18 48 36.5 -0.2
LZH pP pP 18 48 40.4 -1.6
LZH sP sP 18 48 43.9 -0.1
LZH PcP PcP 18 49 02.8 -1.0
LZH PP PP 18 51 05.0 -0.1
LZH eS S 18 57 30.5 -2.0
LZH sS sS 18 57 37.4 -3.9
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,86nm,4.5s
LZH LR LR
comp=N,2μm,10.0s
LZH LR LR
comp=E,1μm,12.2s
LZH LR LR
comp=Z,2μm,14.8s
COP Copenhagen 67.55 9⇑ iP P 18 48 37.3 +1.2
COP pmax pmax
comp=Z,21nm,0.9s
COP Copenhagen 67.55 9⇑ iP P 18 48 37.3 +1.2
comp=Z,21nm,0.9s
MOS Moscow 67.86 354 eP P 18 48 36.0 -2.1
MOS e 18 49 00.2
MOS eS S 18 57 36.9 +1.6
MOS e 18 57 52.6
MOS e 18 58 36.5
MOS pmax pmax
comp=Z,99nm,1.3s
MOS MLR MLR
comp=Z,5μm,18.0s
WMQ Urumqi 68.01 317 P P 18 48 40.8 +1.4
WMQ pP pP 18 48 45.5 +0.8
WMQ sP sP 18 48 47.8 +1.1
WMQ PcP PcP 18 49 07.1 +1.6
WMQ PP PP 18 51 12.8 +4.0
WMQ PcS 18 53 10.6
WMQ S S 18 57 38.1 +0.4
WMQ sS sS 18 57 45.9 -0.5
WMQ ScS SKSac 18 58 35.6 -1.3
WMQ SS SS 19 02 01.4 +2.6
WMQ pmax pmax
comp=Z,48nm,1.2s
WMQ pmax pmax
comp=Z,1μm,5.2s
WMQ LR LR
comp=N,6μm,16.0s
WMQ LR LR
comp=E,6μm,16.0s
WMQ LR LR
comp=Z,4μm,18.2s
IZAR Zarasai 68.15 1 eP P 18 48 40.6 +0.7
IZAR AMB AMB 18 48 41.5
comp=Z,23nm,1.0s
BSD Bornholm Skovb 68.32 8 iP P 18 48 41.3 +0.3
BSD pmax pmax
comp=Z,32nm,0.9s
BSD Bornholm Skovb 68.32 8 iP P 18 48 41.3 +0.3
comp=Z,32nm,0.8s
ISAL Salakas 68.33 1 eP P 18 48 41.8 +0.8

ISAL AMB AMB 18 48 42.5
comp=Z,25nm,1.5s
OBN Obninsk 68.54 354c iP P 18 48 42.0 -0.4
OBN e 18 51 11.8
OBN eS S 18 57 45.7 +2.3
OBN pmax pmax
comp=Z,98nm,1.3s
OBN MLR MLR
comp=Z,5μm,17.0s
OBN Obninsk 68.54 354 P P 18 48 42.8 +0.4
comp=Z,465nm,0.7s,SNR=5.4
IIGN Ignalina 68.55 1 eP P 18 48 43.2 +0.8
IIGN AMB AMB 18 48 45.2
comp=Z,23nm,1.4s
HLG Helgoland 68.56 12 eP P 18 48 44.0 +1.5
comp=Z,165nm,1.1s
RGN Rugen 68.76 9 eP P 18 48 45.2 +1.5
comp=Z,208nm,1.1s
NACGM Naroch 69.00 0 e P 18 48 43.0 -2.3
BSEG Bad Segeberg 69.08 11 eP P 18 48 47.2 +1.5
BSEG pmax pmax
comp=Z,127nm,1.1s
BSEG Bad Segeberg 69.08 11 eP P 18 48 47.2 +1.5
comp=Z,127nm,1.1s
MICGM Minsk 69.40 360 eP P 18 48 46.0 -1.8
MNK Minsk 69.41 360 eP P 18 48 46.0 -1.8
ENH Enshi 69.47 294 eP P 18 48 47.7 -1.0
comp=Z,71nm,1.4s
SUW Suwalki 69.84 3 eP P 18 48 49.8 -0.6
SUW Suwalki 69.84 3 eP P 18 48 49.8 -0.6
SUW Suwalki 69.84 3 eP P 18 48 49.9 -0.5
SUW e 18 48 55.7
GKP Gorka Klasztor 70.32 6 eP P 18 48 54.0 +0.6
GKP e 18 48 59.6
IBBN Ibbenburen 70.39 13 eP P 18 48 55.2 +1.3
comp=Z,82nm,1.3s
NRDL Niedersach Rie 70.48 11 eP P 18 48 55.7 +1.4
comp=Z,66nm,1.0s
RUE Ruedersdorf 70.85 9 eP P 18 48 57.7 +1.1
comp=Z,91nm,1.1s
RUE Ruedersdorf 70.85 9 eP P 18 48 58.1 +1.5
comp=Z,39nm,0.9s
BUG Bochum--Univer 71.18 13 eP P 18 48 59.8 +1.1
comp=Z,90nm,1.0s
ABKAR Akbulak array 71.25 338 eP P 18 48 58.6 -0.5
comp=Z,22nm,0.8s
BEBN Eben Emael 71.60 14 P P 18 49 02.7 +1.5
comp=Z,16nm,1.2s
CD2 Chengdu 71.81 298 P P 18 49 02.3 -0.6
CD2 pP pP 18 49 07.0 -1.2
CD2 sP sP 18 49 09.3 -0.9
CD2 PcP PcP 18 49 21.8 0.0
CD2 PP PP 18 51 43.0 +1.1
CD2 S S 18 58 20.3 -2.2
CD2 sS sS 18 58 27.6 -3.8
CD2 SKS SKSac 18 59 01.3 -4.6
CD2 SS SS 19 02 57.1 -0.8
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 pmax pmax
comp=Z,560nm,6.5s
CD2 LR LR
comp=N,5μm,16.6s
CD2 LR LR
comp=E,6μm,19.6s
CD2 LR LR
comp=Z,3μm,18.6s
MEM Membach 71.83 14 P P 18 49 02.6 0.0
comp=Z,21nm,1.0s
BCLA Clavier 71.92 15 P P 18 49 03.3 +0.1
comp=Z,27nm,1.7s
AFI Afiamalu 71.92 200 LR LR 19 14 41.6
comp=Z,2μm,18.9s,baz=344,slow=31
NEUB Neuenburg 71.92 10 eP P 18 49 04.6 +1.5
comp=Z,72nm,1.1s
BEL Belsk 71.93 4 eP P 18 49 03.8 +0.6
BEL e 18 49 09.2
CLL Collm 71.94 9 iP P 18 49 03.5 +0.2
CLL i 18 49 09.9
CLL i 18 49 20.9
CLL pmax pmax
comp=Z,38nm,1.2s
CLL pmax pmax
comp=Z,37nm,1.5s
CLL Collm 71.94 9 eP P 18 49 04.1 +0.8
comp=Z,38nm,1.2s
CLL Collm 71.94 9 iP P 18 49 03.5 +0.2
comp=Z,38nm,1.2s
CLL ipP pP 18 49 09.9 +1.3
CLL iPcP PcP 18 49 20.9 -1.0
comp=Z,37nm,1.5s
CLL ePP PP 18 51 50.0 +7.7
BAIF Baives 72.11 16 eP P 18 49 04.7 +0.4
comp=Z,141nm,1.3s
BAIF Baives 72.11 16 eP P 18 49 04.7 +0.4
BAIF pmax pmax
comp=Z,141nm,1.3s
BAIF Baives 72.11 16 eP P 18 49 04.7 +0.4
comp=Z,141nm,1.3s
DOU Dourbes 72.13 15 P P 18 49 04.9 +0.4
comp=Z,28nm,1.6s
GIVF Givet 72.16 15 eP P 18 49 04.8 +0.2
comp=Z,147nm,1.2s
GIVF Givet 72.16 15 eP P 18 49 04.8 +0.2
GIVF pmax pmax
comp=Z,147nm,1.2s
GIVF Givet 72.16 15 eP P 18 49 04.8 +0.2
comp=Z,147nm,1.2s
VRHR Novokhopersk 72.18 351 eP P 18 49 03.5 -1.2
VRHR pmax pmax
comp=N,20nm,1.1s
VRHR pmax pmax
comp=Z,40nm,1.1s
VRHR pmax pmax
comp=E,8.0nm,0.6s
VSR Storozhevoye 72.26 352 eP P 18 49 04.2 -1.0
VSR e 18 51 43.2
VSR eS S 18 58 21.6 -5.3
VSR pmax pmax
comp=N,40nm,1.0s
VSR pmax pmax
comp=E,9.0nm,1.0s
VSR pmax pmax
comp=Z,50nm,1.0s
VSR pmax pmax
comp=Z,280nm,4.1s
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=E,70nm,4.1s
VSR smax smax
comp=N,260nm,4.9s
VSR smax smax
comp=Z,80nm,4.9s
VSR smax smax
comp=E,20nm,1.6s
BRG Berggiesshubel 72.45 9 iP P 18 49 06.9 +0.5
comp=E,48nm,1.2s
BRG Berggiesshubel 72.45 9 iP P 18 49 06.9 +0.5
BRG pmax pmax
comp=Z,48nm,1.2s
BRG Berggiesshubel 72.45 9 eP P 18 49 06.8 +0.5
comp=Z,48nm,1.2s
MOX Moxa 72.46 10 eP P 18 49 07.7 +1.3
MOX e*PP PcP 18 49 25.5 +1.3
MOX pmax pmax
comp=Z,67nm,1.2s
MOX Moxa 72.46 10 eP P 18 49 07.7 +1.3
comp=Z,67nm,1.2s
MOX epP PcP 18 49 25.5 +1.3
MOX esP sP 18 49 33.4 +20
ROSF Rostrenen 72.48 21 eP P 18 49 06.6 +0.1
comp=Z,94nm,1.2s
ROSF Rostrenen 72.48 21 eP P 18 49 06.6 +0.1
ROSF pmax pmax
comp=Z,94nm,1.2s
ROSF Rostrenen 72.48 21 eP P 18 49 06.6 +0.1
comp=Z,94nm,1.2s
VORD Divnogorie 72.50 352 eP P 18 49 06.0 -0.6
VORD pmax pmax
comp=N,40nm,1.1s
VORD pmax pmax
comp=E,30nm,1.1s
VORD pmax pmax
comp=Z,40nm,1.1s
TNS Taunus Mts 72.53 13 eP P 18 49 08.1 +1.2
TNS pmax pmax
comp=Z,48nm,1.2s
TNS Taunus Mts 72.53 13 eP P 18 49 08.1 +1.2
comp=Z,48nm,1.2s
FLN La Foliniere 72.60 19 eP P 18 49 07.0 -0.2
comp=Z,260nm,1.6s
FLN La Foliniere 72.60 19 eP P 18 49 07.0 -0.2
FLN pmax pmax
comp=Z,260nm,1.6s
FLN La Foliniere 72.60 19 eP P 18 49 07.0 -0.2
comp=Z,260nm,1.6s
KSP Ksiaz 72.67 7⇑eP P 18 49 08.0 +0.4
KSP e*PP pP 18 49 14.5 +1.5
KSP Ksiaz 72.67 7 eP P 18 49 08.0 +0.4
KSP e 18 49 13.8
PLN Plauen 72.67 10 eP P 18 49 08.2 +0.5
comp=Z,190nm,1.2s
SGMF Saint Gilles 72.70 20 eP P 18 49 08.0 +0.2
comp=Z,217nm,1.4s
SGMF Saint Gilles 72.70 20 eP P 18 49 08.0 +0.2
SGMF pmax pmax
comp=Z,217nm,1.4s
SGMF Saint Gilles 72.70 20 eP P 18 49 08.0 +0.2
comp=Z,217nm,1.4s
WERD Werda 72.73 10 eP P 18 49 09.1 +1.1
comp=Z,42nm,1.5s
ABH Alteburg 72.75 13 eP P 18 49 08.9 +0.7
TANN Tannenbergstha 72.77 10 eP P 18 49 09.3 +1.0
comp=Z,69nm,1.8s
WLF Walferdange 72.78 14 P P 18 49 09.3 +1.0
comp=Z,56nm,1.8s
WLF Walferdange 72.78 14 eP P 18 49 08.9 +0.6
WLF pmax pmax
comp=Z,39nm,1.1s
WLF Walferdange 72.78 14 eP P 18 49 09.7 +1.4
comp=Z,154nm,1.6s
WLF Walferdange 72.78 14 eP P 18 49 08.9 +0.6
comp=Z,39nm,1.1s
GUNZ Gunzen 72.81 10 eP P 18 49 09.6 +1.1
comp=Z,52nm,1.6s
LDF La Druitiere 72.83 19 eP P 18 49 08.3 -0.3
comp=Z,210nm,1.6s
LDF La Druitiere 72.83 19 eP P 18 49 08.3 -0.3
LDF pmax pmax
comp=Z,210nm,1.6s
LDF La Druitiere 72.83 19 eP P 18 49 08.3 -0.3
comp=Z,210nm,1.6s
PVCC Panska Ves 72.85 9 eP P 18 49 10.1 +1.4
PVCC e 18 49 17.0
PVCC Panska Ves 72.85 9 eP P 18 49 10.1 +1.4
PVCC epP pP 18 49 17.0 +2.9
RUP Ruppelstein 72.86 14 eP P 18 49 08.9 0.0
RUP Ruppelstein 72.86 14 eP P 18 49 08.9 0.0
GRR Gorron 72.89 19 eP P 18 49 09.0 0.0
comp=Z,102nm,1.2s
GRR Gorron 72.89 19 eP P 18 49 09.0 0.0
GRR pmax pmax
comp=Z,102nm,1.2s
GRR Gorron 72.89 19 eP P 18 49 09.0 0.0
comp=Z,102nm,1.2s
WERN Wernitzgruen 72.89 10 eP P 18 49 10.6 +1.6
comp=Z,61nm,1.4s
QUIF Quistinic 72.90 21 eP P 18 49 09.3 +0.3
comp=Z,320nm,1.7s
QUIF Quistinic 72.90 21 eP P 18 49 09.3 +0.3
QUIF pmax pmax
comp=Z,320nm,1.7s
QUIF Quistinic 72.90 21 eP P 18 49 09.3 +0.3
comp=Z,320nm,1.7s
CELP Cerrillos 72.92 83 eP P 18 49 07.4 -2.2
NKC Novy Kostel 72.95 10 eP P 18 49 10.8 +1.4
NKC e 18 49 16.2
NKC Novy Kostel 72.95 10 eP P 18 49 10.8 +1.4
NKC epP pP 18 49 16.2 +1.5
UPC Upice 72.98 8 eP P 18 49 09.9 +0.4
UPC e 18 49 16.6
UPC Upice 72.98 8 eP P 18 49 09.9 +0.4
UPC epP pP 18 49 16.6 +1.7
TKM2 Tokmak 2 73.01 325 eP P 18 49 10.6 +0.5
TKM2 pmax pmax
comp=Z,56nm,1.0s
TKM2 Tokmak 2 73.01 325 eP P 18 49 10.6 +0.5
comp=Z,56nm,1.0s
TKM2 Tokmak 2 73.01 325 P P 18 49 10.8 +0.7
SNR=14
USP Ospenovka 73.04 326 P P 18 49 11.3 +1.3
SNR=12
SJG San Juan 73.13 83 eP P 18 49 16.6 +5.8
DPC Dobruska-Polom 73.16 7 eP P 18 49 11.5 +0.9
DPC e 18 49 18.1
DPC Dobruska-Polom 73.16 7 eP P 18 49 11.5 +0.9
DPC epP pP 18 49 18.1 +2.1
MANZ Manzenberg 73.16 10 eP P 18 49 10.9 +0.3
comp=Z,43nm,1.5s
TOD Tromm 73.17 13 eP P 18 49 11.6 +0.9
TOD Tromm 73.17 13 eP P 18 49 11.6 +0.9
AKASG Malin Array Be 73.20 359 P P 18 49 10.2 -0.6
AKASG Malin Array Be 73.20 359 P P 18 49 10.2 -0.6
AKASG Malin Array Be 73.20 359 P P 18 49 10.2 -0.6
comp=Z,45nm,0.9s,baz=2.1,slow=5.9,SNR=75
CHMS Chumysh 73.20 326 P P 18 49 11.8 +0.8
SNR=19
AK01 Malin Array Si 73.21 359 eP P 18 49 10.2 -0.6
AK02 Malin Array Si 73.24 359 eP P 18 49 10.3 -0.7
PRA Prague 73.29 9 P P 18 49 12.0 +0.7
GRF Grafenberg Arr 73.36 11 eP P 18 49 12.5 +0.7
GRF e*PP PcP 18 49 31.0 +3.0
GRF pmax pmax
comp=Z,55nm,1.3s
GRF Grafenberg Arr 73.36 11 eP P 18 49 12.5 +0.7
comp=Z,55nm,1.3s
GRF epP PcP 18 49 31.0 +3.0
GRF esP sP 18 49 38.9 +20
PRU Pruhonice 73.38 9 eP P 18 49 12.3 +0.4
PRU e 18 49 18.8
PRU Pruhonice 73.38 9 eP P 18 49 12.3 +0.4
PRU epP pP 18 49 18.8 +1.6
ROTZ Rotzenmuhle 73.39 10 eP P 18 49 13.6 +1.7
comp=Z,39nm,1.1s
FRU Bishkek 73.40 326 iP P 18 49 12.0 -0.1
FRU eSSS SSS 19 06 30.0
FRU pmax pmax
comp=Z,250nm,2.1s
ULHL Ulahol 73.41 324 P P 18 49 13.7 +1.2
SNR=7.4
KBK Karagaybulak 73.45 325 P P 18 49 13.4 +0.8
SNR=19
OJC Ojcow 73.50 5 eP P 18 49 12.7 +0.1
OJC Ojcow 73.50 5 eP P 18 49 12.7 +0.1
AAK Ala-Archa 73.62 326ceP P 18 49 15.1 +1.5
AAK Ala-Archa 73.62 326 eP P 18 49 14.0 +0.4
comp=Z,36nm,0.9s
AAK Ala-Archa 73.62 326 P P 18 49 14.5 +0.9
SNR=13
AAK Ala-Archa 73.62 326 P P 18 49 15.2 +1.5
SNR=13
AAK Ala-Archa 73.62 326 P P 18 49 14.0 +0.4
comp=Z,202nm,0.9s,SNR=9.6
LANF Langenberg 73.67 13 eP P 18 49 14.6 +1.0
LANF Langenberg 73.67 13 eP P 18 49 14.6 +1.0
LANF Langenberg 73.67 13 eP P 18 49 14.6 +1.0
MEZF Maizieres J'vi 73.76 15 eP P 18 49 14.5 +0.4
comp=Z,109nm,1.2s
MEZF Maizieres J'vi 73.76 15 eP P 18 49 14.5 +0.4
comp=Z,109nm,1.2s
PPT Papeete 73.78 177 LR LR 19 18 32.6
comp=Z,2μm,18.9s,baz=154,slow=33
OKC Ostrava-Krasne 73.79 6 eP P 18 49 15.0 +0.7
OKC Ostrava-Krasne 73.79 6 eP P 18 49 15.0 +0.7
PAGF Fort de Pagny 73.80 15 eP P 18 49 14.9 +0.5
comp=Z,39nm,1.4s
PAGF Fort de Pagny 73.80 15 eP P 18 49 14.9 +0.5
comp=Z,39nm,1.4s
EKS2 Erkin-Say 73.81 326 eP P 18 49 15.3 +0.6
EKS2 pmax pmax
comp=Z,70nm,1.1s
EKS2 Erkin-Say 73.81 326 eP P 18 49 15.2 +0.6
comp=Z,70nm,1.1s
EKS2 Erkin-Say 73.81 326 P P 18 49 15.6 +0.9
SNR=16
MORC Moravsky Berou 73.82 7 ⇑P P 18 49 15.3 +0.8
MORC Moravsky Berou 73.82 7⇑iP P 18 49 15.3 +0.8
KZA Kyzart 73.88 325 P P 18 49 16.5 +1.0
SNR=7.4
GYA Guiyang 74.01 294⇓iP P 18 49 16.5 +0.4
GYA PP PP 18 52 03.9 +3.0
GYA S S 18 58 50.3 +2.4
GYA SKS SKSac 18 59 20.5 -2.2
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,370nm,7.5s
GYA LR LR
comp=N,1μm,17.3s
GYA LR LR
comp=E,1μm,17.0s
GYA LR LR
comp=Z,1μm,16.7s
STU Stuttgart 74.04 12 eP P 18 49 16.3 +0.5
STU Stuttgart 74.04 12 eP P 18 49 16.5 +0.7
comp=Z,50nm,1.5s
STU Stuttgart 74.04 12 eP P 18 49 16.3 +0.5
SFTF Sexfontaines 74.04 15 eP P 18 49 15.9 +0.1
comp=Z,150nm,1.4s
SFTF Sexfontaines 74.04 15 eP P 18 49 15.9 +0.1
comp=Z,150nm,1.4s
LVV L'vov 74.06 2 eP P 18 49 15.4 -0.4
LVV MLR MLR
comp=N,4μm,20.0s
LVV MLR MLR
comp=E,3μm,20.0s
LVV MLR MLR
comp=Z,3μm,20.0s
WET Wettzell 74.07 10 eP P 18 49 16.9 +0.9
WET pmax pmax
comp=Z,75nm,1.6s
WET Wettzell 74.07 10 eP P 18 49 16.9 +0.9
comp=Z,75nm,1.6s
TREC Trest 74.15 8 eP P 18 49 17.4 +1.0
TREC e 18 49 23.1
TREC Trest 74.15 8 eP P 18 49 17.4 +1.0
TREC epP pP 18 49 23.1 +1.3
KHC Kasperske Hory 74.15 9 eP P 18 49 17.0 +0.6
KHC Kasperske Hory 74.15 9 eP P 18 49 17.0 +0.6
KHC epP pP 18 49 24.0 +2.2
CDF Champ du Feu 74.15 14 eP P 18 49 16.8 +0.3
comp=Z,138nm,1.5s
CDF Champ du Feu 74.15 14 eP P 18 49 16.8 +0.3
CDF pmax pmax
comp=Z,138nm,1.5s
CDF Champ du Feu 74.15 14 eP P 18 49 16.8 +0.3
comp=Z,138nm,1.5s
THEF They Montfort 74.16 15 eP P 18 49 16.8 +0.3
THEF They Montfort 74.16 15 eP P 18 49 16.8 +0.3
THEF They Montfort 74.16 15 eP P 18 49 16.8 +0.3
VRAC Vranov 74.22 7⇑iP P 18 49 18.6 +1.8
AML Almayashu 74.32 326 P P 18 49 20.0 +2.0
SNR=8.6
ECH Echery 74.33 14 eP P 18 49 17.9 +0.4
ECH pmax pmax
comp=Z,54nm,1.3s
ECH Echery 74.33 14 eP P 18 49 17.9 +0.4
comp=Z,54nm,1.3s
ECH Echery 74.33 14 eP P 18 49 17.7 +0.2
BFO Black Forest 74.37 13 eP P 18 49 18.3 +0.6
BFO pmax pmax
comp=Z,31nm,1.3s
BFO Black Forest 74.37 13 eP P 18 49 18.3 +0.6
comp=Z,31nm,1.3s
HAU Haudompre 74.43 15 eP P 18 49 18.2 +0.1
comp=Z,85nm,1.2s
HAU Haudompre 74.43 15 eP P 18 49 18.2 +0.1
HAU pmax pmax
comp=Z,85nm,1.2s
HAU Haudompre 74.43 15 eP P 18 49 18.2 +0.1
comp=Z,85nm,1.2s
GEC2 GERESS Array S 74.44 9 eP P 18 49 18.6 +0.4
GEC2 pmax pmax
comp=Z,31nm,1.4s
GEC2 GERESS Array S 74.44 9 eP P 18 49 18.6 +0.4
comp=Z,31nm,1.4s
GERES GERESS Array B 74.44 9 P P 18 49 18.9 +0.6
GERES GERESS Array B 74.44 9 P P 18 49 18.9 +0.6
comp=Z,7.9nm,0.9s,baz=355,slow=4.7,SNR=55
LIBD Limburg 74.45 14 eP P 18 49 18.6 +0.4
LIBD Limburg 74.45 14 eP P 18 49 18.6 +0.4
HYF Humbligny 74.58 17 eP P 18 49 19.2 +0.3
HYF Humbligny 74.58 17 eP P 18 49 19.2 +0.3
SPAK Spaichingen-Ko 74.65 13 eP P 18 49 19.7 +0.3
HINF Hinteralfeld 74.68 14 eP P 18 49 19.6 0.0
comp=Z,123nm,1.5s
HINF Hinteralfeld 74.68 14 eP P 18 49 19.6 0.0
HINF pmax pmax
comp=Z,123nm,1.5s
HINF Hinteralfeld 74.68 14 eP P 18 49 19.6 0.0
comp=Z,123nm,1.5s
MOF Molkenrain 74.69 14 eP P 18 49 20.3 +0.7
MOF Molkenrain 74.69 14 eP P 18 49 20.3 +0.7
MOF Molkenrain 74.69 14 eP P 18 49 20.3 +0.7
MFF Saint Martin d 74.74 19 eP P 18 49 20.0 +0.1
comp=Z,259nm,1.5s
MFF Saint Martin d 74.74 19 eP P 18 49 20.0 +0.1
MFF pmax pmax
comp=Z,259nm,1.5s
MFF Saint Martin d 74.74 19 eP P 18 49 20.0 +0.1
comp=Z,259nm,1.5s
FELD Feldberg im Sc 74.78 13 eP P 18 49 20.4 +0.2
FELD Feldberg im Sc 74.78 13 eP P 18 49 20.4 +0.2
LOR Lormes 74.78 16 eP P 18 49 20.2 +0.1
comp=Z,65nm,0.9s
LOR Lormes 74.78 16 eP P 18 49 20.2 +0.1
comp=Z,65nm,0.9s
FUR Furstenfeldbru 74.88 11 eP P 18 49 22.2 +1.5
FUR pmax pmax
comp=Z,62nm,1.3s
FUR Furstenfeldbru 74.88 11 eP P 18 49 22.2 +1.5
comp=Z,62nm,1.3s
KOLS Kolonicke sedl 74.89 4 eP P 18 49 21.2 +0.5
KOLS pmax pmax
comp=Z,43nm,1.5s
KOLS Kolonicke sedl 74.89 4 eP P 18 49 21.2 +0.5
CRVS Cervenica-Dubn 74.89 4 eP P 18 49 18.7 -2.0
CRVS pmax pmax
comp=Z,18nm,0.8s
CRVS Cervenica-Dubn 74.89 4 eP P 18 49 18.7 -2.0
SSF Saint Saulge 74.92 17 eP P 18 49 21.1 +0.2
comp=Z,169nm,1.3s
SSF Saint Saulge 74.92 17 eP P 18 49 21.1 +0.2
SSF pmax pmax
comp=Z,169nm,1.3s
SSF Saint Saulge 74.92 17 eP P 18 49 21.1 +0.2
comp=Z,169nm,1.3s
SMOL Smolenice 75.07 7 eP P 18 49 23.8 +2.1
SMOL Smolenice 75.07 7 eP P 18 49 23.8 +2.1
LOMF Lomont 75.13 14 eP P 18 49 21.4 -0.8
LOMF Lomont 75.13 14 eP P 18 49 21.4 -0.8
LOMF Lomont 75.13 14 eP P 18 49 21.4 -0.8
AVF Avril sur Loir 75.16 17 eP P 18 49 22.1 -0.2
comp=Z,165nm,1.4s
AVF Avril sur Loir 75.16 17 eP P 18 49 22.1 -0.2
AVF pmax pmax
comp=Z,165nm,1.4s
AVF Avril sur Loir 75.16 17 eP P 18 49 22.1 -0.2
comp=Z,165nm,1.4s
VYHS Vyhne 75.17 6 eP P 18 49 22.8 +0.5
VYHS pmax pmax
comp=Z,21nm,1.2s
VYHS Vyhne 75.17 6 eP P 18 49 22.8 +0.5
BGF Bois d'Agland 75.31 17 eP P 18 49 23.1 0.0
comp=Z,141nm,1.3s
BGF Bois d'Agland 75.31 17 eP P 18 49 23.1 0.0
BGF pmax pmax
comp=Z,141nm,1.3s
BGF Bois d'Agland 75.31 17 eP P 18 49 23.1 0.0
comp=Z,141nm,1.3s
ZST Bratislava 75.36 7 eP P 18 49 22.8 -0.6
ZST pmax pmax
comp=Z,32nm,1.2s
ZST Bratislava 75.36 7 eP P 18 49 22.8 -0.6
SMF Signal de Mont 75.38 17 eP P 18 49 23.4 -0.2
comp=Z,170nm,1.4s
SMF Signal de Mont 75.38 17 eP P 18 49 23.4 -0.2
SMF pmax pmax
comp=Z,170nm,1.4s
SMF Signal de Mont 75.38 17 eP P 18 49 23.4 -0.2
comp=Z,170nm,1.4s
RJOB Jochberg 75.46 10 eP P 18 49 25.4 +1.3
comp=Z,28nm,1.0s
TCF Toulx Ste Croi 75.46 18 eP P 18 49 23.9 -0.2
comp=Z,124nm,1.5s

TCF **Toulx Ste Croi** 75.46 18 *e*P P 18 49 23.9 -0.2
TCF pmax pmax
comp=Z,124nm,1.5s
TCF **Toulx Ste Croi** 75.46 18 *e*P P 18 49 23.9 -0.2
comp=Z,124nm,1.5s
MOA **Molln** 75.48 9⇑*i*P P 18 49 24.8 +0.6
comp=Z,16nm,1.5s,SNR=6.9
CONA **Conrad Observa** 75.54 8⇑*i*P P 18 49 25.1 +0.6
comp=Z,39nm,1.2s,SNR=19
MOTA **Moosalm** 75.67 11⇑*i*P P 18 49 25.8 +0.4
comp=Z,24nm,1.1s,SNR=13
TRPA **Tarpa** 75.70 3⇑*i*P P 18 49 27.1 +1.8
TRPA **Tarpa** 75.70 3⇑*e*P P 18 49 26.4 +1.1
CABF **La Chapelle** 75.75 15 *e*P P 18 49 26.2 +0.4
comp=Z,90nm,1.2s
CABF **La Chapelle** 75.75 15 *e*P P 18 49 26.2 +0.4
CABF pmax pmax
comp=Z,90nm,1.3s
CABF **La Chapelle** 75.75 15 *e*P P 18 49 26.2 +0.4
comp=Z,90nm,1.3s
PSZ **Piszkesteto** 75.80 5⇓P P 18 49 27.9 +1.8
PSZ **Piszkesteto** 75.80 5⇓*i*P P 18 49 27.9 +1.8
PSZ **Piszkesteto** 75.80 5⇑*e*P P 18 49 27.3 +1.2
WTTA **Wattenberg** 75.81 11⇑*i*P P 18 49 26.9 +0.7
comp=Z,57nm,1.2s,SNR=20
SOP **Sopron** 75.83 8⇑*e*P P 18 49 27.5 +1.4
AGO **Saint Agoulin** 75.84 17 *e*P P 18 49 26.7 +0.5
AGO **Saint Agoulin** 75.84 17 *e*P P 18 49 26.7 +0.5
FETA **Feichten** 75.95 12⇑*i*P P 18 49 27.9 +0.9
comp=Z,27nm,1.1s,SNR=14
KSH **Kashi** 75.96 323 P P 18 49 30.8 +3.7
KSH *e*pP pP 18 49 35.3 +2.8
KSH sP sP 18 49 37.8 +3.3
KSH *e*PcP **PcP** **18 49 42.3 +2.8**
KSH *e*PP PP 18 52 24.0 +7.1
KSH *e*S **S** **18 59 13.5 +4.3**
KSH *e*sS sS 18 59 21.8 +3.8
KSH *e*SKS **SKSac** **18 59 36.5 -0.5**
KSH *e*ScS **ScS** **18 59 42.3 +1.5**
KSH *e*SS SS 19 04 11.3 +11
KSH pmax pmax
comp=Z,68nm,1.4s
KSH pmax pmax
comp=Z,260nm,3.3s
KSH LR LR
comp=N,2μm,8.7s
KSH LR LR
comp=E,920nm,7.5s
KSH LR LR
comp=Z,550nm,6.9s
OG01 **Vacheresse** 76.11 15 *e*P P 18 49 27.9 0.0
OG01 **Vacheresse** 76.11 15 *e*P P 18 49 27.9 0.0
PYM **Petit Puy Mans** 76.12 17 *e*P P 18 49 28.7 +0.8
PYM **Petit Puy Mans** 76.12 17 *e*P P 18 49 28.7 +0.8
PYM **Petit Puy Mans** 76.12 17 *e*P P 18 49 28.7 +0.8
KBA **Koelnbreinsper** 76.16 10⇑*p*P P 18 49 29.2 +1.0
comp=Z,65nm,1.2s,SNR=20
ARSA **Arzberg** 76.18 8⇑*i*P P 18 49 29.1 +0.9
comp=Z,22nm,1.2s
BMR **Baia Mare** 76.19 3⇑P P 18 49 29.9 +1.8
BMR **Baia Mare** 76.19 3⇑*i*P P 18 49 29.9 +1.8
BUD **Budapest** 76.19 6⇑*e*P P 18 49 29.3 +1.2
PKSG 76.25 6⇓*e*P P 18 49 30.3 +1.8
BURAR **Bucovina Array** 76.28 2⇓*i*P P 18 49 30.1 +1.3
RJF **Les Rejaudoux** 76.29 19 *e*P P 18 49 28.6 -0.2
comp=Z,72nm,1.2s
RJF **Les Rejaudoux** 76.29 19 *e*P P 18 49 28.6 -0.2
RJF pmax pmax
comp=Z,72nm,1.2s
RJF **Les Rejaudoux** 76.29 19 *e*P P 18 49 28.6 -0.2
comp=Z,72nm,1.2s
PKST **T"'s** 76.36 7⇓*e*P P 18 49 30.9 +1.8
ABTA **Abfaltersbach** 76.41 11 *i*P P 18 49 30.5 +0.9
comp=Z,18nm,1.2s,SNR=7.3
LFF **La Frestale** 76.51 19 *e*P P 18 49 30.2 +0.2
comp=Z,183nm,1.4s
LFF **La Frestale** 76.51 19 *e*P P 18 49 30.2 +0.2
LFF pmax pmax
comp=Z,183nm,1.4s
LFF **La Frestale** 76.51 19 *e*P P 18 49 30.2 +0.2
comp=Z,183nm,1.4s
LBL **Lubilhac** 76.66 17 *e*P P 18 49 31.8 +0.8
LBL **Lubilhac** 76.66 17 *e*P P 18 49 31.8 +0.8
LBL **Lubilhac** 76.66 17 *e*P P 18 49 31.8 +0.8
SOKA **Soboth** 76.71 9⇑*i*P P 18 49 31.8 +0.5
comp=Z,49nm,1.3s
RSL **Roselend** 76.73 15 *e*P P 18 49 32.0 +0.5
RSL **Roselend** 76.73 15 *e*P P 18 49 32.0 +0.5
RSL **Roselend** 76.73 15 *e*P P 18 49 32.0 +0.5
CAF **Calviac** 76.76 18 *e*P P 18 49 31.4 -0.1
comp=Z,89nm,1.3s
CAF **Calviac** 76.76 18 *e*P P 18 49 31.4 -0.1
CAF pmax pmax
comp=Z,89nm,1.3s
CAF **Calviac** 76.76 18 *e*P P 18 49 31.4 -0.1
comp=Z,89nm,1.3s
PERS **Pernice** 76.76 9 *i*P P 18 49 31.9 +0.4
SSB **Saint Sauveur** 76.82 16 *e*P P 18 49 31.9 0.0
SSB pmax pmax
comp=Z,33nm,1.8s
SSB **Saint Sauveur** 76.82 16 *e*P P 18 49 31.9 0.0
comp=Z,33nm,1.8s
OBKA **Obir** 76.84 9 *i*P P 18 49 32.5 +0.5
comp=Z,60nm,1.2s,SNR=19
KIS **Kishinev** 76.91 359⇑*i*P P 18 49 31.5 -0.7
KIS pmax pmax
comp=Z,200nm,2.0s
KIS **Kishinev** 76.91 359⇑*i*P P 18 49 31.5 -0.7
comp=Z,200nm,2.0s
LPL **La Plagne** 76.92 15 *e*P P 18 49 33.6 +1.0
comp=Z,83nm,1.6s
LPL **La Plagne** 76.92 15 *e*P P 18 49 33.6 +1.0
LPL pmax pmax
comp=Z,83nm,1.5s
LPL **La Plagne** 76.92 15 *e*P P 18 49 33.6 +1.0
comp=Z,83nm,1.5s
LPG **La Plagne** 76.94 15 *e*P P 18 49 33.9 +1.1
comp=Z,112nm,1.5s
LPG **La Plagne** 76.94 15 *e*P P 18 49 33.9 +1.1
LPG pmax pmax
comp=Z,112nm,1.5s
LPG **La Plagne** 76.94 15 *e*P P 18 49 33.9 +1.1
comp=Z,112nm,1.5s
PKS9 **Tamasi** 77.04 6⇓*e*P P 18 49 34.3 +1.3
DRGR 77.05 3⇓P P 18 49 34.2 +1.1
DRGR 77.05 3⇓*i*P P 18 49 34.2 +1.1
BEHE **Becsehely** 77.06 8⇑*e*P P 18 49 34.3 +1.2
KMI **Kunming** 77.09 296 P P 18 49 32.8 -1.1
KMI pP **pP** **18 49 38.0 -1.3**
KMI sP **sP** **18 49 39.6 -1.7**
KMI PP **PP** **18 52 30.1 +3.1**
KMI pmax pmax
comp=Z,14nm,1.8s
KMI LR LR
comp=N,3μm,18.5s
KMI LR LR
comp=E,4μm,17.5s
KMI LR LR
comp=Z,3μm,15.8s
PKS6 **Bocsa** 77.10 6⇓*e*P P 18 49 31.4 -1.9
PKS2 **Kecel** 77.19 6⇓*e*P P 18 49 35.5 +1.7
VOY **Vojsko** 77.25 10 *e*P P 18 49 34.2 -0.1
VIVF **Saint-Julien-I** 77.26 16 *e*P P 18 49 34.5 +0.2
comp=Z,76nm,1.3s
VIVF **Saint-Julien-I** 77.26 16 *e*P P 18 49 34.5 +0.2
VIVF pmax pmax
comp=Z,76nm,1.3s
VIVF **Saint-Julien-I** 77.26 16 *e*P P 18 49 34.5 +0.2
comp=Z,76nm,1.3s
ORIF **Oris-en-Rattie** 77.38 16 *e*P P 18 49 35.4 +0.4
comp=Z,22nm,0.9s
ORIF **Oris-en-Rattie** 77.38 16 *e*P P 18 49 35.4 +0.4
ORIF pmax pmax
comp=Z,22nm,0.9s
ORIF **Oris-en-Rattie** 77.38 16 *e*P P 18 49 35.4 +0.4
comp=Z,22nm,0.9s
JAVS **Javornik** 77.40 10 *i*P P 18 49 34.9 -0.3
PGAV **Gavieira, Arco** 77.41 26 *e*P P 18 49 36.8 +1.5
comp=Z,98nm,1.6s
PKSM **Moragy** 77.44 6⇑P P 18 49 36.3 +1.1
PKSM **Moragy** 77.44 6⇑*i*P P 18 49 36.3 +1.1
PKSM **Moragy** 77.44 6⇑*e*P P 18 49 36.0 +0.8
MBDF **Montbardon** 77.70 15 *e*P P 18 49 37.9 +1.0
comp=Z,73nm,1.4s
MBDF **Montbardon** 77.70 15 *e*P P 18 49 37.9 +1.0
MBDF pmax pmax
comp=Z,73nm,1.4s
MBDF **Montbardon** 77.70 15 *e*P P 18 49 37.9 +1.0
comp=Z,73nm,1.4s
PCAB **Cabril** 77.71 26 *e*P P 18 49 37.0 +0.1
comp=Z,70nm,1.7s
SKDS **Skadanscina** 77.74 10 *i*P P 18 49 38.1 +1.1
LASF **Ste Croix** 77.89 17 *e*P P 18 49 38.4 +0.6
comp=Z,30nm,1.1s
LASF **Ste Croix** 77.89 17 *e*P P 18 49 38.4 +0.6
comp=Z,30nm,1.1s
BOJS **Bojanci** 77.89 9 *i*P P 18 49 37.6 -0.1
PBRG **Braganca** 77.93 25 *e*P P 18 49 39.4 +1.3
comp=Z,51nm,1.8s
VRI **Vrincioaia** 78.05 1⇑P P 18 49 39.4 +0.8
VRI **Vrincioaia** 78.05 1⇑*i*P P 18 49 39.4 +0.8
PLOR **Plostina** 78.06 1⇑P P 18 49 40.3 +1.5
PLOR **Plostina** 78.06 1⇑*i*P P 18 49 40.3 +1.5
POLO **Lamas de Olo** 78.09 26 *e*P P 18 49 40.6 +1.6
comp=Z,28nm,1.3s
BZS **Buzias** 78.18 4⇑P P 18 49 40.5 +1.1
BZS **Buzias** 78.18 4⇑*i*P P 18 49 40.5 +1.1
PVRL **Vila Real** 78.20 26 *e*P P 18 49 41.1 +1.5
comp=Z,80nm,2.8s
ETSF **Etsaut** 78.23 21 *e*P P 18 49 40.4 +0.6
comp=Z,67nm,1.1s
ETSF **Etsaut** 78.23 21 *e*P P 18 49 40.4 +0.6
ETSF pmax pmax
comp=Z,67nm,1.1s
ETSF **Etsaut** 78.23 21 *e*P P 18 49 40.4 +0.6
comp=Z,67nm,1.1s
SMRF **Simiane la Rot** 78.25 16 *e*P P 18 49 40.8 +0.9
comp=Z,35nm,0.9s
SMRF **Simiane la Rot** 78.25 16 *e*P P 18 49 40.8 +0.9
comp=Z,35nm,0.9s
EPF **Esparros** 78.28 20 *e*P P 18 49 39.5 -0.5
comp=Z,43nm,1.2s
EPF **Esparros** 78.28 20 *e*P P 18 49 39.5 -0.5
EPF pmax pmax
comp=Z,43nm,1.2s
EPF **Esparros** 78.28 20 *e*P P 18 49 39.5 -0.5
comp=Z,43nm,1.2s
MTLF **Montolieu** 78.32 19 *e*P P 18 49 40.3 +0.1
comp=Z,90nm,1.3s
MTLF **Montolieu** 78.32 19 *e*P P 18 49 40.3 +0.1
MTLF pmax pmax
comp=Z,90nm,1.3s
MTLF **Montolieu** 78.32 19 *e*P P 18 49 40.3 +0.1
comp=Z,90nm,1.3s
MLR **Muntele Rosu** 78.42 1⇑*i*P P 18 49 42.2 +1.4
LOT **Lotru** 78.42 3⇑*i*P P 18 49 41.6 +0.8
TOUF **Mont Tournerai** 78.46 15 *e*P P 18 49 41.7 +0.5
TOUF **Mont Tournerai** 78.46 15 *e*P P 18 49 41.7 +0.5
TOUF **Mont Tournerai** 78.46 15 *e*P P 18 49 41.7 +0.5
MVO **Moncorvo** 78.47 26 *e*P P 18 49 41.7 +0.6
comp=Z,73nm,1.5s
MLS **Moulis** 78.49 19 *e*P P 18 49 41.2 +0.1
MLS **Moulis** 78.49 19 *e*P P 18 49 41.2 +0.1
AUTN **L'Aution** 78.51 15 *e*P P 18 49 43.0 +1.5
AUTN **L'Aution** 78.51 15 *e*P P 18 49 43.0 +1.5
AUTN **L'Aution** 78.51 15 *e*P P 18 49 43.0 +1.5
ARR **Arges** 78.52 2⇑*i*P P 18 49 44.0 +2.7
SAOF **Saorge** 78.53 15 *e*P P 18 49 40.8 -0.6
SAOF **Saorge** 78.53 15 *e*P P 18 49 40.8 -0.6
SAOF **Saorge** 78.53 15 *e*P P 18 49 40.8 -0.6
SBF **Sospel** 78.64 15 *e*P P 18 49 42.0 0.0
comp=Z,38nm,0.8s
SBF **Sospel** 78.64 15 *e*P P 18 49 42.0 0.0
SBF pmax pmax
comp=Z,38nm,0.8s
SBF **Sospel** 78.64 15 *e*P P 18 49 42.0 0.0
comp=Z,38nm,0.8s
PVIS **Viseu** 78.68 27 *e*P P 18 49 43.6 +1.3
comp=Z,57nm,1.3s
LSA **Lhasa** 78.70 307 *e*P P 18 49 43.9 +0.8
LSA pmax pmax
comp=Z,36nm,1.0s
LSA **Lhasa** 78.70 307 *e*P P 18 49 43.9 +0.8
comp=Z,36nm,1.0s
VLC **Villacollemand** 78.73 12 P P 18 49 42.5 +0.1
CFR **Carcaliu** 78.74 360⇓P P 18 49 42.8 +0.4
CFR **Carcaliu** 78.74 360⇓*i*P P 18 49 42.8 +0.4
REVF **Revere** 78.75 15 *e*P P 18 49 43.1 +0.5
REVF **Revere** 78.75 15 *e*P P 18 49 43.1 +0.5
REVF **Revere** 78.75 15 *e*P P 18 49 43.1 +0.5
ANN **Anapa** 78.77 353 *e*P P 18 49 39.6 -3.0
ANN *e**PP **pP** **18 49 48.1 +0.1**
ANN *e*S S 18 59 35.7 -3.4
ANN pmax pmax
comp=Z,38nm,1.7s
ISR **Istrita** 78.79 1⇓P P 18 49 44.3 +1.5
ISR **Istrita** 78.79 1⇓*i*P P 18 49 44.3 +1.5
SIM **Simferopol'** 78.81 355*ce*P P 18 49 43.1 +0.3
SIM pmax pmax
comp=Z,19nm,1.1s
FRF **La Foret Royal** 78.82 15 *e*P P 18 49 43.1 +0.2
comp=Z,57nm,1.2s
FRF **La Foret Royal** 78.82 15 *e*P P 18 49 43.1 +0.2
FRF pmax pmax
comp=Z,57nm,1.3s
FRF **La Foret Royal** 78.82 15 *e*P P 18 49 43.1 +0.2
comp=Z,57nm,1.3s
LMR **La Mourre** 79.02 15 *e*P P 18 49 44.4 +0.4
comp=Z,166nm,1.6s
LMR **La Mourre** 79.02 15 *e*P P 18 49 44.4 +0.4
LMR pmax pmax
comp=Z,166nm,1.6s
LMR **La Mourre** 79.02 15 *e*P P 18 49 44.4 +0.4
comp=Z,166nm,1.6s
MTE **Manteigas** 79.07 26 *e*P P 18 49 45.6 +1.2
comp=Z,93nm,1.8s
MTE **Manteigas** 79.07 26 *e*P P 18 49 44.8 +0.4
comp=Z,60nm,1.3s
KIV **Kislovodsk** 79.14 349 P P 18 49 45.2 +0.4
comp=Z,265nm,1.1s,SNR=12
KBZ **Khabaz** 79.34 349 P P 18 49 47.3 +1.6
KBZ **Khabaz** 79.34 349 P P 18 49 47.3 +1.6
KBZ **Khabaz** 79.34 349 P P 18 49 47.3 +1.6
comp=Z,24nm,0.9s,baz=324,slow=3.7,SNR=56
TIRR **Tirgusor** 79.45 359⇑P P 18 49 46.5 +0.2
TIRR **Tirgusor** 79.45 359⇑*i*P P 18 49 46.5 +0.2
ROSC **El Rosal** 79.46 97 P P 18 49 48.8 +1.5
ROSC **El Rosal** 79.46 97 P P 18 49 48.8 +1.5
comp=Z,4.4nm,0.3s,baz=291,slow=23,SNR=6.7
MAK **Makhachkala** 79.52 345 *e*P P 18 49 46.7 0.0
MAK *e* 18 49 53.7
MAK *e* 18 52 50.0
MAK *e*PPP PPP 18 54 41.5
MAK *e*S **S** **18 59 45.4 -1.8**
MAK *e* 19 00 08.1
MAK *e*SS **SS** **19 04 58.6 +5.1**
MAK pmax pmax
comp=Z,189nm,1.6s
PTOM **Tomar** 79.59 27 *e*P P 18 49 48.2 +1.0
comp=Z,61nm,1.3s
PCBR **Castelo Branco** 79.61 27 *e*P P 18 49 47.9 +0.6
comp=Z,46nm,2.3s
SOC **Sochi** 79.80 351*ci*P P 18 49 48.0 -0.2
SOC *e* 18 49 54.4
SOC *e* 18 52 53.7
SOC *e*S **S** **18 59 50.2 0.0**
SOC pmax pmax
comp=Z,39nm,1.0s
PMAFR **Mafra** 79.98 28 *e*P P 18 49 50.0 +0.6
comp=Z,125nm,2.3s
PMRV **Marv??o** 80.02 27 *e*P P 18 49 50.4 +0.8
comp=Z,53nm,1.7s
PGF **Pioggiola** 80.14 14 *e*P P 18 49 50.1 -0.2
comp=Z,158nm,1.6s
PGF **Pioggiola** 80.14 14 *e*P P 18 49 50.1 -0.2
PGF pmax pmax
comp=Z,158nm,1.6s
PGF **Pioggiola** 80.14 14 *e*P P 18 49 50.1 -0.2
comp=Z,158nm,1.6s
PMTG **Montargil** 80.15 27 *e*P P 18 49 51.3 +1.1
comp=Z,41nm,2.0s
ZEI **Tsey** 80.16 348 *e*P P 18 49 49.0 -1.5
ZEI pmax pmax
comp=Z,55nm,1.7s
LIS **Lisbon** 80.25 28 *e*P P 18 49 50.3 -0.4
LIS AMb AMb 18 49 52.7
comp=Z,116nm,1.2s
LIS **Lisbon** 80.25 28 *e*P P 18 49 50.3 -0.4
LIS **Lisbon** 80.25 28 *e*P P 18 49 50.3 -0.4
ESDC **Sonseca Array** 80.61 24 P P 18 49 53.1 +0.4
comp=Z,17nm,0.9s,baz=341,slow=5.1,SNR=67
ESLA **Sonseca Array** 80.61 24 *e*P P 18 49 53.6 +0.8
comp=Z,9.3nm,1.1s
EVOP **Sao Brissos** 80.69 28⇑*i*P P 18 49 53.1 0.0
EVOP pmax pmax
comp=Z,60nm,1.3s
EVOP **Sao Brissos** 80.69 28⇑*i*P P 18 49 53.1 0.0
comp=Z,60nm,1.3s
EVO **Evora** 80.71 27⇑*i*P P 18 49 53.1 -0.2
comp=Z,60nm,1.3s
EVO **Evora** 80.71 27 *e*P P 18 49 54.1 +0.8
comp=Z,34nm,1.9s
PNCL **Nicolau / Gran** 80.98 28 *e*P P 18 49 55.8 +1.1
comp=Z,42nm,1.1s
PBEJ **Beja** 81.23 28 *e*P P 18 49 57.0 +1.0
comp=Z,24nm,1.8s
VTS **Vitosha** 81.26 3⇑P P 18 49 56.9 +0.6
VTS **Vitosha** 81.26 3⇑*i*P P 18 49 56.9 +0.6
PBAR **Barrancos** 81.30 27 *e*P P 18 49 57.5 +1.1
MESJ **Messejana** 81.31 28 *e*P P 18 49 56.0 -0.5
MESJ AMb AMb 18 50 06.7
comp=Z,40nm,2.2s
MESJ **Messejana** 81.31 28 *e*P P 18 49 56.0 -0.5
comp=Z,40nm,2.3s
MESJ **Messejana** 81.31 28 *e*P P 18 49 56.0 -0.5
PCVE **Castro Verde** 81.56 28 *e*P P 18 49 58.7 +0.9
comp=Z,47nm,1.8s
MORF **Marmelete** 81.70 28 *e*P P 18 49 58.0 -0.6
PVAQ **Vaqueiros** 81.86 28 *e*P P 18 50 00.7 +1.3
comp=Z,66nm,1.9s
SHL **Shillong** 81.92 305 *e*PKP P 18 49 59.7 -0.4
PBDV **Barranco-do-Ve** 81.95 28 *e*P P 18 50 01.5 +1.6
comp=Z,57nm,1.7s
PMG **Port Moresby** 82.16 240 P P 18 50 03.1 +2.0
PMG **Port Moresby** 82.16 240 P P 18 50 03.1 +2.0
comp=Z,70nm,1.3s,baz=329,slow=12,SNR=3.5
TAPN **Taplejung** 82.23 309 *e*P P 18 50 02.1 +0.2
comp=Z,110nm,1.0s
DHRM **DHARAMSHALA** 82.41 320 *e*PKP P 18 50 02.4 -0.2
DHRM AMb AMb 18 50 03.5
comp=Z,52nm,1.1s
ABKT **Ailbek** 82.44 336 P P 18 50 03.6 +1.1
comp=Z,186nm,1.0s,SNR=14
NVR **Nevrokopi** 82.52 3 P P 18 50 03.2 +0.4
GUN **Gumba** 82.53 310 *e*P P 18 50 03.7 +0.2
comp=Z,195nm,1.2s
GNI **Garni** 82.65 347 *e*P P 18 50 04.8 +1.1
comp=Z,50nm,1.3s
KNT **Kendrikon** 82.67 3 P P 18 50 03.4 -0.2
SRS **Serrai** 82.74 3 P P 18 50 04.0 0.0
ODAN **Odare** 82.80 309 *e*P P 18 50 04.8 0.0
comp=Z,108nm,1.2s
GRG **Griva** 82.86 4 P P 18 50 05.1 +0.5
KKN **Kakani** 82.89 311 *e*P P 18 50 05.4 +0.2
comp=Z,138nm,1.3s
ALN **Alexandroupoli** 83.01 1 P P 18 50 05.3 0.0
PKI **Pulchoki** 83.02 311 *e*P P 18 50 05.8 -0.2
comp=Z,148nm,1.1s
PKIN **Phulchoki** 83.02 311 *e*P P 18 50 05.8 -0.2
comp=Z,70nm,0.9s
DANN **Dangsing** 83.03 312 *e*P P 18 50 06.3 +0.3
comp=Z,275nm,0.9s
RAMN **Ramite** 83.06 309 *e*P P 18 50 06.4 +0.3
comp=Z,243nm,1.1s
SMLA **Simla** 83.11 319 *e*PKP P 18 50 05.0 -1.0
SMLA AMb AMb 18 50 08.1
comp=Z,87nm,2.5s
DMN **Daman** 83.12 311 *e*P P 18 50 06.8 +0.4
comp=Z,138nm,1.1s
DDI **Dehra Dun** 83.50 318 *e*PKP P 18 50 04.8 -3.3
DDI AMb AMb 18 50 08.6
comp=Z,211nm,3.2s
PYUN **Piuthan** 83.56 313 *e*P P 18 50 08.6 0.0
comp=Z,270nm,1.1s
KOLN **Koldanda** 83.60 312 *e*P P 18 50 08.8 -0.1
comp=Z,73nm,1.0s
LIT **Litokhoron** 83.72 4 P P 18 50 07.3 -1.7
ANTO **Ankara** 83.94 356 *e*P P 18 50 10.7 +0.5
ANTO pmax pmax
comp=Z,39nm,1.1s
ANTO **Ankara** 83.94 356 *e*P P 18 50 10.7 +0.5
comp=Z,39nm,1.1s
ANTO **Ankara** 83.94 356 P P 18 50 11.2 +1.0
SNR=13
BR131 **Keskin Array S** 84.04 355 *e*P P 18 50 10.7 -0.2
comp=Z,14nm,0.9s
BRTR **Keskin Array B** 84.04 355 P P 18 50 10.9 0.0
BRTR PP **PP** **18 53 26.6 +2.8**
BRTR **Keskin Array B** 84.04 355 P P 18 50 10.9 0.0
comp=Z,14nm,0.9s,baz=12,slow=2.1,SNR=77
BRTR PP **PP** **18 53 26.6 +2.8**
comp=Z,1.2nm,0.9s,baz=20,slow=3.9,SNR=3.7
THL **Klokotos Trika** 84.24 4 P P 18 50 09.8 -1.8
CHTO **Chiang Mai** 84.28 295 P P 18 50 11.6 -0.6
SNR=7.2
XOR **Xorichti** 84.48 3 P P 18 50 12.0 -0.9
CMAR **Chiang Mai Arr** 84.58 295 P P 18 50 13.1 -0.6
CMAR **Chiang Mai Arr** 84.58 295 P P 18 50 13.1 -0.6
comp=Z,9.5nm,0.9s,baz=18,slow=5.2,SNR=73
EFP **Efpalio** 85.37 4 P P 18 50 17.5 +0.2
GUR **Goura** 85.87 4 P P 18 50 19.2 -0.8
DID **Didima** 86.33 3 P P 18 50 20.6 -1.6
KEST **Kesra** 86.89 15 P P 18 50 26.3 +1.2
VLI **Veliai** 87.11 4 P P 18 50 22.0 -4.0
ATAH **Atahualpa** 87.26 107 P P 18 50 30.6 +3.3
ATAH **Atahualpa** 87.26 107 P P 18 50 30.6 +3.3
comp=Z,11nm,1.0s,baz=344,slow=3.1,SNR=10
ARNB **Al Arnab** 87.76 353 *e*P P 18 50 29.7 +0.4
SLNF **Slenfeh** 88.01 353 *e*P P 18 50 27.6 -2.9
WRDH **Warideh** 88.08 353 *e*P P 18 50 23.3 -7.5
IDI **Anoyia** 88.59 2 *e*P P 18 50 31.6 -1.6
comp=Z,21nm,1.1s
CSS **Prodhromos** 88.80 355 P P 18 50 33.8 -0.3
CSS **Prodhromos** 88.80 355 *e*P P 18 50 33.1 -1.0
comp=Z,75nm,1.3s
GVD **Gavdhos** 89.02 3 *e*P P 18 50 34.5 -0.6
comp=Z,72nm,0.9s
HAWK **Haweek** 89.06 353 *e*P P 18 50 36.6 +1.2
BHPL **Bhopal** 90.12 315 *e*PKP P 18 50 39.3 -1.1
BHPL AMb AMb 18 50 40.0
comp=Z,32nm,1.6s
BRBR **Barbar** 90.20 353 *e*P P 18 50 41.0 +0.1
SALA **Sala** 90.83 352 *e*P P 18 50 44.2 +0.4
CTA **Charters Tower** 91.87 235 P P 18 50 49.8 +1.4
CTA **Charters Tower** 91.87 235 P P 18 50 49.8 +1.4
comp=Z,9.8nm,1.0s,baz=18,slow=7.4,SNR=4.1
DGPR **DIGLIPUR** 92.06 298 *e*PKP P 18 50 49.2 -0.3
DGPR AMb AMb 18 50 51.6
comp=Z,42nm,1.9s
NNA **Nana** 92.15 108 P P 18 50 52.8 +2.9
NNA **Nana** 92.15 108 P P 18 50 52.8 +2.9
comp=Z,3.4nm,0.3s,baz=259,slow=6.0,SNR=6.0
MIB **Mutribah** 92.43 343 *e*P P 18 50 50.8 -0.3
MIB AMb AMb 18 50 52.6
comp=Z,63nm,0.9s
KSM **Kuching** 92.74 277 *e*P P 18 50 52.0 -0.6
comp=Z,81nm,0.9s
NAY **Al-Naaiem** 92.99 343 *e*P P 18 50 53.0 -0.6
NAY AMb AMb 18 50 55.0
comp=Z,16nm,1.2s
RDF **Al-Radifah** 93.26 342 *e*P P 18 50 54.8 -0.1
RDF AMb AMb 18 50 57.2
comp=Z,46nm,1.3s
HYB **Hyderabad** 94.90 312 *i*P P 18 51 01.5 -1.1
HYB **Hyderabad** 94.90 312 *e*PKP P 18 50 59.6 -3.0
HYB AMb AMb 18 51 13.8
comp=Z,20nm,2.8s
WRA **Warramunga Arr** 97.49 245 P P 18 51 14.3 +0.2
WRA **Warramunga Arr** 97.49 245 P P 18 51 14.4 +0.2
comp=Z,0.9nm,0.9s,baz=37,slow=5.7,SNR=3.3
LPAZ **La Paz** 100.37 104 P Pdif 18 51 27.9 +0.1
LPAZ **La Paz** 100.37 104 P Pdif 18 51 27.9 +0.1
comp=Z,0.8nm,0.8s,baz=262,slow=2.3,SNR=2.9
ASAR **Alice Springs** 100.83 244 P Pdif 18 51 30.6 +1.6
ASAR **Alice Springs** 100.83 244 P Pdif 18 51 30.6 +1.6
comp=Z,0.3nm,0.9s,baz=23,slow=22,SNR=4.0
TORD **Torodi Ar. Bea** 107.40 26 PP PP 18 56 28.6 +3.5
TORD PKKPbc **PKKPbc** **19 07 19.0 -0.7**
TORD **Torodi Ar. Bea** 107.40 26 PP PP 18 56 28.6 +3.5
comp=Z,2.4nm,1.2s,baz=338,slow=6.3,SNR=3.8
TORD PKKPbc **PKKPbc** **19 07 19.0 -0.7**
comp=Z,0.8nm,0.9s,baz=169,slow=1.7,SNR=4.2
SBA **Scott Base** 136.36 192 *e*PKIKP **PKPdf** **18 57 00.6 +0.5**
SBA **Scott Base** 136.36 192 *e*PKPdf **PKPdf** **18 57 00.6 +0.5**

TSUM	**Tsumeb**	**142.08**	**15**	PKPpre	PKPpre	18 57 08.4		
TSUM	**Tsumeb**	**142.08**	**15**	PKhKP	PKPpre	18 57 08.4		
	comp=Z,2.4nm,0.8s,baz=20,slow=5.9,SNR=3.1							
LBTB	**Lobatse**	**148.56**	**3**	*e*PKPbc	**PKPbc**	**18 57 26.5**	**-0.6**	
BOSA	**Boshof**	**152.13**	**4**	PKPbc	**PKPbc**	**18 57 35.0**	**-0.5**	
BOSA				PKPab	**PKPab**	**18 57 45.1**	**0.0**	
BOSA	**Boshof**	**152.13**	**4**	PKPbc	**PKPbc**	**18 57 35.0**	**-0.5**	
	comp=Z,11nm,0.8s,baz=24,slow=1.9,SNR=10.0							
BOSA				PKPab	**PKPab**	**18 57 45.1**	**0.0**	
	comp=Z,16nm,0.9s,baz=349,slow=5.1,SNR=7.5							
SNAA	**Sanae**	**160.16**	**152**	PKP	**PKPdf**	**18 57 39.3**	**+1.3**	
SNAA				PKPab	**PKPab**	**18 58 16.7**	**-1.7**	
SNAA	**Sanae**	**160.16**	**152**	PKP	**PKPdf**	**18 57 39.3**	**+1.3**	
	comp=Z,1.1nm,1.1s,baz=360,slow=4.5,SNR=3.9							
SNAA				PKPab	**PKPab**	**18 58 16.7**	**-1.7**	
	comp=Z,6.0nm,1.2s,baz=218,slow=3.6,SNR=6.5							

IDC ***16*** *18:44:56.3±1.3, 56°.25N×152°.39W, h0km, mb3.9/10, mb1 4.1/11, mb1mx3.9/27, mbtmp3.9/11, ML3.8/1, Error ellipse: s-maj=29.9km s-min=20.0km az=41.0*
ISCJB ***16*** *18:44:57.4±0.6, 56°.33N±0°.05×152°.08W±0°.07, h18km, mb3.9/11, Error ellipse: s-maj=7.3km s-min=5.4km az=178.0*
NEIC ***16*** *18:44:58.3, 56°.25N×152°.22W, h6km, mb3.8/2, ML3.5(AEIC), After AEIC.*

ISC 16 18:45:00.0±0.9, 56°.39N±0°.09×152°.18W±0°.06, h18km, n58, σ0882/56, mb4.0/11, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.03**	**324**	P	Pb	18 45 17.8	-1.5
KDAK	**Kodiak Island**	**1.41**	**351**	P	**Pn**	**18 45 24.4**	**-0.4**
KDAK				Sn	**Sn**	**18 45 42.4**	**-0.5**
KDAK	**Kodiak Island**	**1.41**	**351**	Pn	**Pn**	**18 45 24.4**	**-0.4**
	9.1nm,0.3s,baz=186,slow=8.4,SNR=38						
KDAK				Sn	**Sn**	**18 45 42.4**	**-0.5**
	23nm,0.3s,baz=149,slow=21,SNR=32						
KABR	**Katmai Barrier**	**2.31**	**320**	P	**Pn**	**18 45 36.5**	**-0.8**
KAWH	**Katmai**	**2.45**	**326**	P	**Pn**	**18 45 39.3**	**+0.2**
KAKN	**Katmai Knife C**	**2.47**	**322**	P	**Pn**	**18 45 39.8**	**+0.4**
KAPH	**Katmai Pasha**	**2.50**	**333**	P	**Pn**	**18 45 40.7**	**+0.8**
FOSS	**Fourpeaked Sta**	**2.55**	**342**	P	**Pn**	**18 45 41.1**	**+0.7**
AUI	**Augustine Isla**	**3.03**	**348**	P	**Pn**	**18 45 47.9**	**+0.9**
MCNL	**McNeil River**	**3.03**	**338**	P	**Pn**	**18 45 47.8**	**+0.8**
AUW	**Augustine West**	**3.06**	**348**	P	**Pn**	**18 45 47.8**	**+0.3**
ANNE	**Aniakchak Nort**	**3.29**	**282**	P	Pn	18 45 47.7	-3.0
OPT	**Oil Point**	**3.32**	**351**	P	**Pn**	**18 45 52.2**	**+1.2**
ANNW	**Aniakchak Nort**	**3.38**	**282**	P	Pn	18 45 49.6	-2.3
BRLK	**Bradley Lake**	**3.45**	**11**	P	**Pn**	**18 45 52.5**	**-0.3**
ILW	**Iliamna West**	**3.71**	**353**	P	**Pn**	**18 45 57.4**	**+0.8**
SEW	**Seward**	**3.99**	**20**	P	**Pn**	**18 45 59.5**	**-0.7**
RSO	**Redoubt South**	**4.09**	**356**	*e*Pn	**Pn**	**18 46 02.2**	**+0.4**
DFR	**Drift River**	**4.22**	**357**	P	**Pn**	**18 46 04.0**	**+0.5**
STLK	**Strandline Lak**	**5.12**	**2**	P	**Pn**	**18 46 16.2**	**+0.3**
EYAK	**Cordova Ski Ar**	**5.36**	**36**	P	**Pn**	**18 46 18.7**	**-0.3**
RAGM	**Ragged Mountai**	**5.62**	**41**	P	**Pn**	**18 46 22.4**	**-0.3**
RAGM				S	**Sn**	**18 47 26.5**	**-0.2**
VLZ	**Valdez**	**5.64**	**30**	P	**Pn**	**18 46 22.8**	**-0.1**
SML	**Sawmill**	**5.78**	**18**	P	**Pn**	**18 46 25.5**	**+0.6**
SML				S	**Sn**	**18 47 31.8**	**+1.1**
DIV	**Divide**	**5.80**	**32**	P	**Pn**	**18 46 24.7**	**-0.5**
VRDI	**Verde Repeater**	**6.63**	**39**	P	Pn	18 46 34.9	-1.8
TT01	**Tatalina**	**6.82**	**345**	P	**Pn**	**18 46 38.5**	**-0.5**
RKAV	**Rock Avalanche**	**6.92**	**51**	P	**Pn**	**18 46 39.8**	**-0.7**
RKAV				S	**Sn**	**18 47 59.5**	**+0.8**
BALM	**Baldy**	**6.92**	**44**	P	**Pn**	**18 46 40.5**	**+0.1**
GRNC	**Granite Creek**	**6.97**	**47**	P	**Pn**	**18 46 41.8**	**+0.4**
TRF	**Thorofare Moun**	**7.14**	**7**	P	Pn	18 46 41.7	-2.0
ILAR	**Eielson Array**	**8.80**	**15**	Pn	**Pn**	**18 47 06.5**	**+0.4**
ILAR				Sn	**Sn**	**18 48 43.0**	**-1.7**
ILAR	**Eielson Array**	**8.80**	**15**	Pn	**Pn**	**18 47 06.5**	**+0.4**
	0.7nm,0.3s,baz=200,slow=14,SNR=20						
ILAR				Sn	**Sn**	**18 48 43.0**	**-1.7**
	0.2nm,0.3s,baz=199,slow=21,SNR=5.0						
INK	**Inuvik**	**14.66**	**28**	Pn	Pn	18 48 30.5	+4.3
INK	**Inuvik**	**14.66**	**28**	Pn	Pn	18 48 30.5	+4.3
	0.3nm,0.3s,baz=198,slow=15,SNR=6.9						
YKA	**Yellowknife Ar**	**19.82**	**57**	P	**P**	**18 49 31.6**	**+2.3**
YKA	**Yellowknife Ar**	**19.82**	**57**	P	**P**	**18 49 31.6**	**+2.3**
	1.7nm,0.7s,baz=267,slow=11,SNR=8.4						
BILL	**Bilibino**	**22.09**	**318**	*e*P	**P**	**18 49 52.5**	**-1.2**
	3.5nm,0.9s						
BSMT	**Bassoo Peak**	**24.23**	**95**	*e*P	**P**	**18 50 14.3**	**-1.5**
	1.7nm,0.7s						
NVAR	**Mina Array Bea**	**28.71**	**114**	P	**P**	**18 50 56.3**	**+0.1**
NVAR	**Mina Array Bea**	**28.71**	**114**	P	**P**	**18 50 56.3**	**+0.1**
	0.8nm,0.7s,baz=308,slow=9.0,SNR=3.9						
PDAR	**Pinedale Array**	**30.27**	**98**	P	**P**	**18 51 08.8**	**-1.3**
PDAR	**Pinedale Array**	**30.27**	**98**	P	**P**	**18 51 08.8**	**-1.3**
	0.7nm,0.9s,baz=188,slow=1.0,SNR=3.6						
ARCES	**ARCESS Array B**	**54.37**	**1**	P	**P**	**18 54 24.6**	**-0.3**
ARCES	**ARCESS Array B**	**54.37**	**1**	P	**P**	**18 54 24.6**	**-0.3**
	2.0nm,1.0s,baz=10,slow=7.4,SNR=6.4						
SONM	**Songino Array**	**57.32**	**308**	P	**P**	**18 54 46.7**	**+0.1**
SONM	**Songino Array**	**57.32**	**308**	P	**P**	**18 54 46.7**	**+0.1**
	1.6nm,0.8s,baz=45,slow=6.1,SNR=11						
ZALV	**Zalesovo Beam**	**60.57**	**325**	P	**P**	**18 55 08.9**	**+0.1**
ZALV	**Zalesovo Beam**	**60.57**	**325**	P	**P**	**18 55 08.9**	**+0.1**
	0.7nm,0.6s,baz=34,slow=5.8,SNR=4.3						
NB2	**NORSAR Subarra**	**62.18**	**9**	P	**P**	**18 55 20.5**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=350,slow=6.9						
NOA	**NORSAR Array B**	**62.18**	**9**	P	**P**	**18 55 19.4**	**-0.3**
NOA	**NORSAR Array B**	**62.18**	**9**	P	**P**	**18 55 19.4**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=352,slow=6.7,SNR=5.2						
FINES	**FINESS Array B**	**62.49**	**1**	P	**P**	**18 55 21.3**	**-0.4**
FINES	**FINESS Array B**	**62.49**	**1**	P	**P**	**18 55 21.3**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=1.1,slow=9.5,SNR=4.9						
MKAR	**Makanchi Array**	**67.55**	**323**	P	P	18 55 53.0	-1.8
MKAR	**Makanchi Array**	**67.55**	**323**	P	P	18 55 53.0	-1.8
	comp=Z,1.1nm,1.0s,baz=36,slow=6.4,SNR=4.2						
AKASG	**Malin Array Be**	**73.27**	**359**	P	**P**	**18 56 29.5**	**-0.1**
AKASG	**Malin Array Be**	**73.27**	**359**	P	**P**	**18 56 29.5**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=357,slow=5.4,SNR=3.1						

IDC 16 18:54:26.3±5.1, 15°.93S×165°.11E, h0km, mb4.3/3, mb1 4.3/5, mb1mx3.8/21, mbtmp4.3/5, ML3.6/2, Error ellipse: s-maj=91.3km s-min=28.0km az=63.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.24**	**169**	Pn	Pn	18 56 00.5	+0.6
	0.2nm,0.3s,baz=323,slow=20,SNR=3.0						
DZM				Sn	Sn	18 57 14.9	+2.8
	0.1nm,0.3s,baz=80,slow=16,SNR=3.2						
HNR	**Honiara**	**8.19**	**321**	Pn	Pn	18 56 25.2	-1.3
	6.1nm,0.3s,baz=107,slow=19,SNR=4.9						
STKA	**Stephens Creek**	**26.64**	**229**	P	P	19 00 04.8	-2.0
	1.2nm,0.3s,baz=72,slow=11,SNR=10						
WRA	**Warramunga Arr**	**29.52**	**258**	P	P	19 00 33.8	+1.0
	0.4nm,0.3s,baz=91,slow=8.7,SNR=25						
ASAR	**Alice Springs**	**30.30**	**250**	P	P	19 00 40.5	+0.8
	4.9nm,0.4s,baz=76,slow=9.3,SNR=235						

DJA ***16*** *18:54:16.2±1.5, 30°N±10°×13°8E±2°2, h10km, M5.1/8, mb5.1/8*
JMA ***16*** *18:54:50.0±0.3, 30°.38N×139°.01E, h473km±4km, M4.4*
ISCJB ***16*** *18:54:51.9±0.3, 30°.37N±0°.03×138°.59E±0°.04, h439km±2km, mb4.2/66, Error ellipse: s-maj=6.6km s-min=4.3km az=39.7*
IDC ***16*** *18:54:52.4±0.7, 30°.38N×138°.51E, h429km±6km, mb3.8/31, mb1 3.9/36, mb1mx3.9/40, mbtmp3.8/36, Error ellipse: s-maj=9.8km s-min=7.2km az=107.0*
BJI ***16*** *18:54:52.2, 30°.36N×138°.48E, h434km, mB5.0/4, mb4.6/17*
NEIC ***16*** *18:54:53.1±0.5, 30°.36N×138°.49E, h438km±5km, mb4.3/34, Error ellipse: s-maj=5.7km s-min=3.8km az=129.0*

ISC 16 18:54:52.5±0.6, 30°.33N±0°.05×138°.57E±0°.05, h435km±5km, n248, σ1921/280, mb4.3/70, 26C-28D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.93**	**21**	P	**P**	**18 55 57.7**	**0.0**
JHCJ				*e*S	**S**	**18 56 50.7**	**-0.1**
JHJ	**Hachijo jima 2**	**2.97**	**20**	P	**P**	**18 55 58.1**	**+0.1**
	336nm,0.3s,baz=62,slow=17,SNR=109						
JHJ				S	**S**	**18 56 49.1**	**-2.2**
	142nm,0.3s,baz=75,slow=22,SNR=3.5						
JHJ2	**Mitsune**	**2.97**	**21**	P	**P**	**18 55 58.0**	**0.0**
JHJ2				*e*S	**S**	**18 56 51.4**	**+0.1**
TK01	**Tokai 1**	**3.53**	**347**	P	**P**	**18 56 04.2**	**+2.1**
TK01				*e*S	**S**	**18 57 02.0**	**+3.2**
TTO1	**TONANKAI O.B.S**	**3.62**	**336**	P	**P**	**18 56 05.4**	**+2.5**
TK02	**Tokai 2**	**3.68**	**349**	P	**P**	**18 56 05.7**	**+2.3**
JMY	**Miyakejima3**	**3.82**	**12**	P	**P**	**18 56 04.8**	**-0.2**
JWZ	**Kozaga**	**4.01**	**324**	P	**P**	**18 56 08.5**	**+1.8**
JIE	**Ise**	**4.35**	**339**	P	**P**	**18 56 11.4**	**+1.7**
JIE				*e*S	**S**	**18 57 13.6**	**+0.9**
CBIJ	**Chichi jima**	**4.52**	**135**	P	**P**	**18 56 09.6**	**-1.9**
CBIJ				*e*S	**S**	**18 57 11.1**	**-4.7**
BSO1	**Boso 1**	**4.77**	**25**	P	**P**	**18 56 12.3**	**-0.8**
BSO1				*e*S	**S**	**18 57 16.7**	**-2.3**
JOD2	**Odawara 2**	**4.94**	**5**	P	**P**	**18 56 14.6**	**-0.8**
JOD2				*e*S	**S**	**18 57 20.0**	**-3.1**
JTO	**Tosashimizu**	**5.53**	**299**	P	**P**	**18 56 23.7**	**+2.4**
JRY	**Ryogami san**	**5.68**	**3**	P	**P**	**18 56 22.3**	**-0.5**
JRY				*e*S	**S**	**18 57 31.7**	**-5.0**
MJAR	**Matsushiro Arr**	**6.21**	**357**	P	**P**	**18 56 27.4**	**-0.9**
MJAR				S	**S**	**18 57 43.8**	**-2.9**
MJAR	**Matsushiro Arr**	**6.21**	**357**	P	**P**	**18 56 27.4**	**-0.9**
	7.7nm,0.3s,baz=170,slow=12,SNR=101						
MJAR				S	**S**	**18 57 43.8**	**-2.9**
	2.4nm,0.3s,baz=172,slow=16,SNR=5.2						
MAJO	**Matsushiro**	**6.21**	**357**	*e*P	**P**	**18 56 27.3**	**-0.9**
	48nm,0.6s						
MAT	**Matsushiro**	**6.21**	**357**	P	**P**	**18 56 27.5**	**-0.7**
MAT				S	**S**	**18 57 43.2**	**-3.5**
MAT	**Matsushiro**	**6.21**	**357**	P	**P**	**18 56 27.6**	**-0.7**
MAT				*e*S	**S**	**18 57 42.9**	**-3.8**
JHS	**Saijyo**	**6.55**	**317**	P	**P**	**18 56 34.0**	**+1.9**
JHS				*e*S	**S**	**18 57 55.0**	**+1.7**
JNU	**Nakatsue**	**7.12**	**295**	P	**P**	**18 56 39.9**	**+1.7**
JNU				S	S	18 57 56.8	-7.9
JNU	**Nakatsue**	**7.12**	**295**	P	**P**	**18 56 39.9**	**+1.7**
	1.0nm,0.3s,baz=84,slow=5.4,SNR=7.6						
JNU				S	S	18 57 56.8	-7.9
	0.5nm,0.3s,baz=72,slow=8.7,SNR=4.3						
JAM	**Amami Oshima**	**8.05**	**259**	P	**P**	**18 56 50.6**	**+2.3**
JMK	**Ichinoseki**	**8.88**	**14**	P	**P**	**18 56 57.3**	**+0.2**
JMK				*e*S	S	18 58 33.6	-6.2
JOW	**Kunigami**	**9.70**	**251**	P	**P**	**18 57 08.9**	**+2.5**
JKE	**Kume jima 2**	**11.12**	**252**	P	**P**	**18 57 23.6**	**+1.7**
JOT	**Ohata**	**11.21**	**10**	P	**P**	**18 57 23.1**	**+0.4**
KSRS	**Korea Array**	**11.34**	**312**	P	**P**	**18 57 25.6**	**+1.3**
	2.7nm,0.3s,baz=125,slow=10.0,SNR=85						
KSAR	**Wonju Array Be**	**11.36**	**311**	P	**P**	**18 57 25.6**	**+1.1**
JKB	**Kayabe**	**11.71**	**9**	P	**P**	**18 57 28.3**	**+0.2**
JOSM	**Okushiri--Mats**	**11.76**	**3**	P	**P**	**18 57 29.0**	**+0.4**
ERM	**Erimo**	**12.24**	**16**	*e*P	**P**	**18 57 34.8**	**+0.9**
	17nm,0.8s						
ERM				*e*S	**S**	**18 59 45.5**	**-1.7**
ASAJ	**Asahikawa**	**14.13**	**12**	P	**P**	**18 57 55.5**	**+1.1**
ASAJ				S	**S**	**19 00 27.6**	**+2.8**
ASAJ	**Asahikawa**	**14.13**	**12**	P	**P**	**18 57 55.5**	**+1.1**
ASAJ				S	**S**	**19 00 27.6**	**+2.8**
	0.6nm,0.3s,baz=58,slow=24,SNR=3.6						
USRK	**Ussuriysk Arra**	**14.80**	**341**	P	**P**	**18 58 01.9**	**+0.3**
	4.6nm,0.3s,baz=158,slow=8.1,SNR=64						
MDJ	**Mudanjiang**	**15.93**	**336**	P	**P**	**18 58 13.5**	**-0.2**
MDJ				pmax	pmax		
	comp=Z,32nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,6μm,12.8s						
MDJ	**Mudanjiang**	**15.93**	**336**	*e*P	**P**	**18 58 13.5**	**-0.2**
	comp=Z,31nm,0.9s						
SNY	**Shenyang**	**16.66**	**318**	⇑P	**P**	**18 58 21.6**	**+0.1**
SNY				pmax	pmax		
	comp=Z,33nm,0.5s						
YULB	**Yu-li**	**16.88**	**250**	*e*P	**P**	**18 58 22.7**	**-1.4**
	comp=Z,14nm,0.8s						
SSLB	**Suanglung**	**16.98**	**252**	*e*P	**P**	**18 58 24.6**	**-0.5**
	comp=Z,24nm,0.9s						
SSLB				*e*S	**S**	**19 01 15.0**	**-6.0**
CN2	**Changchun**	**17.02**	**326**	*e*P	**P**	**18 58 25.9**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TPUB	**Ta-pu**	**17.46**	**251**	*e*P	**P**	**18 58 29.4**	**-0.9**
	comp=Z,9.5nm,0.7s						
HIA	**Hailar**	**23.70**	**328**	*e*P	**P**	**18 59 27.9**	**-0.1**
	comp=Z,9.1nm,0.8s						
ENH	**Enshi**	**25.08**	**277**	*e*P	**P**	**18 59 40.5**	**-0.2**
	comp=Z,36nm,0.4s						
ENH				*e*S	**S**	**19 03 28.9**	**-4.3**
XAN	**Xi'an**	**25.32**	**286**	P	**P**	**18 59 42.8**	**0.0**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
PETK	**Petropavlovsk-**	**26.71**	**26**	P	**P**	**18 59 54.9**	**+0.1**
PETK	**Petropavlovsk-**	**26.71**	**26**	P	**P**	**18 59 54.9**	**+0.1**
	comp=Z,6.2nm,1.0s,baz=202,slow=4.8,SNR=7.2						
ULN	**Ulaanbaatar**	**29.80**	**315**	*e*P	**P**	**19 00 22.0**	**-0.1**
	comp=Z,538nm,3.5s						
ULN	**Ulaanbaatar**	**29.80**	**315**	P	**P**	**19 00 21.8**	**-0.4**
SONM	**Songino Array**	**30.19**	**314**	P	**P**	**19 00 25.8**	**+0.2**
SONM				ScP	**ScP**	**19 06 13.6**	**-0.5**
SONM	**Songino Array**	**30.19**	**314**	P	**P**	**19 00 25.8**	**+0.2**
	comp=Z,2.2nm,0.4s,baz=124,slow=8.6,SNR=68						
SONM				ScP	**ScP**	**19 06 13.6**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=134,slow=2.9,SNR=12						
MYLDM	**Lahad Datu**	**31.36**	**221**	P	**P**	**19 00 38.4**	**+2.5**
MYLDM	**Lahad Datu**	**31.36**	**221**	P	**P**	**19 00 34.5**	**-1.3**
	comp=Z,27nm,1.2s						
SDKM	**Sandakan**	**31.75**	**224**	P	**P**	**19 00 40.7**	**+1.4**
SWI	**Sorong**	**31.79**	**194**	P	**P**	**19 00 38.1**	**-1.4**
	comp=Z,57nm,0.8s						
KKM	**Kota Kinabalu**	**32.02**	**226**	P	P	19 00 46.1	+4.4
TSM	**Tawau**	**32.44**	**221**	P	**P**	**19 00 46.6**	**+1.5**
GTA	**Gaotai**	**32.86**	**297**	*e*P	**P**	**19 00 48.9**	**+0.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
FX1	**Attu Island--F**	**33.80**	**38**	P	**P**	**19 00 57.9**	**+1.6**
FX1	**Attu Island--F**	**33.80**	**38**	P	**P**	**19 00 57.9**	**+1.6**
	comp=Z,14nm,0.6s,baz=161,slow=1.4,SNR=12						
UBPT	**Khong Chiam**	**33.84**	**251**	P	**P**	**19 00 54.9**	**-2.2**
	comp=Z,15nm,1.2s						
BTM	**Bintulu**	**36.18**	**227**	P	**P**	**19 01 17.5**	**+0.7**
SBUM	**Sibu**	**37.30**	**227**	P	**P**	**19 01 27.5**	**+1.5**
SBUM	**Sibu**	**37.30**	**227**	P	**P**	**19 01 23.3**	**-2.8**
	comp=Z,12nm,1.1s						
CMMT	**Chiang Mai**	**37.64**	**262**	P	**P**	**19 01 29.1**	**+0.3**
	comp=Z,24nm,1.0s						
CHTO	**Chiang Mai**	**37.64**	**262**	⇓*i*P	**P**	**19 01 29.3**	**+0.5**
	comp=Z,12nm,0.7s						
CHTO	**Chiang Mai**	**37.64**	**262**	P	**P**	**19 01 28.6**	**-0.3**
	comp=Z,26nm,1.0s						
CHBT	**CHBT**	**37.76**	**250**	P	**P**	**19 01 29.3**	**-0.5**
	comp=Z,32nm,0.8s						
CM31	**Chiang Mai Arr**	**37.79**	**261**	*e*P	**P**	**19 01 30.7**	**+0.6**
	comp=Z,6.3nm,0.6s						
CMAR	**Chiang Mai Arr**	**37.79**	**261**	P	**P**	**19 01 30.9**	**+0.8**
CMAR				ScP	**ScP**	**19 06 41.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**37.79**	**261**	P	**P**	**19 01 30.9**	**+0.8**
	comp=Z,5.1nm,0.7s,baz=59,slow=6.4,SNR=60						
CMAR				ScP	**ScP**	**19 06 41.7**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=29,slow=4.9,SNR=7.1						
KSM	**Kuching**	**39.27**	**228**	⇓*i*P	**P**	**19 01 43.8**	**+1.5**
	comp=Z,31nm,0.9s						
KSM	**Kuching**	**39.27**	**228**	P	**P**	**19 01 44.3**	**+2.1**
KSM	**Kuching**	**39.27**	**228**	P	**P**	**19 01 42.8**	**+0.6**
KAPI	**Kappang**	**39.49**	**210**	⇓*i*P	**P**	**19 01 43.8**	**-0.2**
	comp=Z,13nm,0.6s						
KAPI	**Kappang**	**39.49**	**210**	P	**P**	**19 01 43.9**	**-0.1**
	comp=Z,17nm,0.5s,baz=38,slow=3.1,SNR=16						
BILL	**Bilibino**	**41.11**	**15**	*e*P	**P**	**19 01 56.6**	**+0.3**
	comp=Z,26nm,1.0s						
KTGM	**Kuala Trenggan**	**41.60**	**240**	P	**P**	**19 02 02.2**	**+1.2**
KULM	**Kulim**	**43.51**	**243**	P	**P**	**19 02 17.2**	**+1.1**
KGM	**Kluang**	**43.68**	**237**	P	**P**	**19 02 19.0**	**+1.5**
IPM	**Ipoh**	**43.74**	**241**	⇓*i*P	**P**	**19 02 18.1**	**+0.2**
	comp=Z,16nm,0.5s						
FRIM	**Kepong**	**44.10**	**240**	P	P	**19 02 21.9**	**+1.1**
TAPN	**Taplejung**	**44.35**	**279**	*e*P	**P**	**19 02 23.3**	**+0.4**
ODAN	**Odare**	**44.77**	**279**	*e*P	**P**	**19 02 26.8**	**+0.7**
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	**44.97**	**318**	P	**P**	**19 02 25.5**	**-1.5**
ZALV				PcP	**PcP**	**19 03 58.9**	**-0.4**
ZALV				ScP	**ScP**	**19 07 08.2**	**-1.4**
ZALV	**Zalesovo Beam**	**44.97**	**318**	P	**P**	**19 02 25.5**	**-1.5**
	comp=Z,2.4nm,0.5s,baz=101,slow=8.4,SNR=12						
ZALV				PcP	**PcP**	**19 03 58.9**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=115,slow=3.5,SNR=3.4						
ZALV				ScP	**ScP**	**19 07 08.2**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=119,slow=4.4,SNR=7.0						
RAMN	**Ramite**	**45.41**	**279**	*e*P	**P**	**19 02 31.2**	**+0.1**
GUN	**Gumba**	**45.76**	**281**	*e*P	**P**	**19 02 34.3**	**+0.5**
MK31	**Makanchi Array**	**45.99**	**307**	*e*P	**P**	**19 02 34.7**	**-0.2**
MKAR	**Makanchi Array**	**45.99**	**307**	P	**P**	**19 02 34.9**	**-0.1**
MKAR				ScP	**ScP**	**19 07 12.8**	**-1.3**
MKAR	**Makanchi Array**	**45.99**	**307**	P	**P**	**19 02 34.9**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=85,slow=10,SNR=18						
MKAR				ScP	**ScP**	**19 07 12.8**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=85,slow=5.1,SNR=5.5						
PKIN	**Phulchoki**	**46.26**	**280**	*e*P	**P**	**19 02 37.4**	**-0.2**
KKN	**Kakani**	**46.30**	**281**	*e*P	**P**	**19 02 37.9**	**0.0**
	comp=Z,11nm,0.8s						
PSI	**Prapat**	**46.42**	**242**	P	**P**	**19 02 39.4**	**+0.6**
PSI	**Prapat**	**46.42**	**242**	P	**P**	**19 02 39.4**	**+0.6**
	comp=Z,10nm,0.7s,baz=166,slow=15,SNR=4.4						
DMN	**Daman**	**46.50**	**281**	*e*P	**P**	**19 02 39.9**	**+0.5**
DANN	**Dangsing**	**47.43**	**282**	*e*P	**P**	**19 02 47.6**	**+1.1**
KOLN	**Koldanda**	**47.73**	**281**	*e*P	**P**	**19 02 49.2**	**+0.5**
	comp=Z,19nm,0.8s						
PYUN	**Piuthan**	**48.15**	**282**	*e*P	**P**	**19 02 52.7**	**+0.8**
	comp=Z,20nm,0.5s						
KURK	**Kurchatov**	**48.47**	**313**	*e*P	**P**	**19 02 52.8**	**-0.8**
	comp=Z,6.6nm,0.8s						
WRAB	**Tennant Creek**	**50.13**	**185**	⇓*e*P	**P**	**19 03 06.5**	**+0.1**
	comp=Z,7.1nm,0.4s						
WRA	**Warramunga Arr**	**50.14**	**185**	P	**P**	**19 03 06.7**	**+0.2**
WRA				ScP	**ScP**	**19 07 31.6**	**-0.3**
WRA	**Warramunga Arr**	**50.14**	**185**	P	**P**	**19 03 06.7**	**+0.2**
	comp=Z,12nm,0.4s,baz=1.4,slow=8.0,SNR=187						
WRA				ScP	**ScP**	**19 07 31.6**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=355,slow=4.7,SNR=5.5						
CTA	**Charters Tower**	**50.66**	**171**	P	**P**	**19 03 11.2**	**+0.9**
CTA	**Charters Tower**	**50.66**	**171**	P	**P**	**19 03 11.2**	**+0.9**
	comp=Z,2.6nm,0.5s,baz=41,slow=4.1,SNR=3.7						
BRVK	**Borovoye**	**53.59**	**316**	*e*P	**P**	**19 03 30.6**	**-0.5**
	comp=Z,22nm,1.6s						
AS31	**Alice Springs**	**53.87**	**185**	*e*P	**P**	**19 03 33.6**	**+0.1**
ASAR	**Alice Springs**	**53.87**	**185**	P	**P**	**19 03 33.8**	**+0.3**
ASAR	**Alice Springs**	**53.87**	**185**	P	**P**	**19 03 33.8**	**+0.3**
	comp=Z,4.6nm,0.4s,baz=356,slow=5.7,SNR=256						
MBWA	**Marble Bar**	**54.30**	**202**	*e*P	**P**	**19 03 36.7**	**+0.2**
	comp=Z,23nm,1.0s						
KKAR	**Karatay Array**	**54.64**	**304**	⇑*i*P	**P**	**19 03 38.9**	**+0.1**
	comp=Z,4.9nm,0.7s						
SEW	**Seward**	**55.33**	**35**	*e*P	**P**	**19 03 43.4**	**+0.1**
	comp=Z,12nm,0.7s						
MCK	**McKinley**	**55.55**	**31**	*e*P	**P**	**19 03 44.6**	**-0.2**
	comp=Z,20nm,1.1s						
SML	**Sawmill**	**55.84**	**33**	*e*P	**P**	**19 03 47.4**	**+0.5**
	comp=Z,4.9nm,0.9s						
ILAR	**Eielson Array**	**56.45**	**30**	P	**P**	**19 03 50.5**	**-0.6**
ILAR	**Eielson Array**	**56.45**	**30**	P	**P**	**19 03 50.5**	**-0.6**
	comp=Z,1.9nm

	comp=Z,1.3nm,0.8s						
HLID	**Hailey**	**80.73**	**45**	⇑P	**P**	19 06 20.2	+0.7
	baz=80						
D17A	**Six Diamond Ra**	**80.90**	**40**	P	**P**	19 06 20.6	+0.3
	baz=81,SNR=5.9						
EGMT	**Eagleton**	**80.91**	**39**	*e*P	**P**	19 06 20.5	+0.3
	comp=Z,4.6nm,0.7s						
EGMT	**Eagleton**	**80.91**	**39**	P	**P**	19 06 20.8	+0.6
	baz=81,SNR=5.1						
A19A	**Klindworth Far**	**80.93**	**38**	⇑P	**P**	19 06 20.8	+0.6
	baz=81						
NVAR	**Mina Array Bea**	**80.98**	**51**	P	**P**	19 06 21.9	+1.0
NVAR	**Mina Array Bea**	**80.98**	**51**	P	**P**	19 06 21.9	+1.0
	comp=Z,1.0nm,0.5s,baz=292,slow=5.9,SNR=14						
G15A	**Dillon**	**81.00**	**43**	P	**P**	19 06 21.4	+0.6
	baz=81,SNR=8.2						
I14A	**Mackay**	**81.11**	**44**	P	**P**	19 06 22.8	+1.3
	baz=81,SNR=14						
F16A	**Kennard Place,**	**81.15**	**42**	P	**P**	19 06 22.4	+0.9
	baz=81,SNR=6.3						
E17A	**Martinsdale**	**81.20**	**41**	P	**P**	19 06 22.9	+1.1
	baz=81,SNR=7.1						
G16A	**Moss Hill, Enn**	**81.36**	**42**	P	**P**	19 06 23.2	+0.5
	baz=81,SNR=5.9						
J14A	**Carey**	**81.41**	**45**	P	**P**	19 06 24.0	+1.0
	baz=81,SNR=5.7						
C19A	**Slack Wire Ran**	**81.47**	**39**	P	**P**	19 06 23.9	+0.8
	baz=81,SNR=6.2						
BR131	**Keskin Array S**	**81.49**	**311**	*e*P	**P**	19 06 23.5	+0.1
	comp=Z,1.9nm,0.8s						
BRTR	**Keskin Array B**	**81.49**	**311**	P	**P**	19 06 23.7	+0.3
BRTR	**Keskin Array B**	**81.49**	**311**	P	**P**	19 06 23.7	+0.3
	comp=Z,2.6nm,0.8s,baz=90,slow=3.9,SNR=16						
F17A	**Fitzpatrick Pl**	**81.63**	**41**	⇓P	**P**	19 06 24.9	+0.9
	baz=81						
E18A	**Harlowton**	**81.67**	**40**	P	**P**	19 06 25.1	+0.9
	baz=81,SNR=8.1						
ELK	**Elko**	**81.75**	**48**	*e*P	**P**	19 06 25.2	+0.3
	comp=Z,1.4nm,0.6s						
ELK	**Elko**	**81.75**	**48**	P	**P**	19 06 25.6	+0.7
	comp=Z,0.6nm,0.3s,baz=313,slow=6.0,SNR=6.0						
D19A	**Cripps Ranch,**	**81.89**	**40**	⇑P	**P**	19 06 26.1	+0.8
	baz=82						
G17A	**Pierce Place,**	**81.92**	**42**	⇓P	**P**	19 06 26.6	+1.1
	baz=82						
BUR08	**Bucovina Ar. S**	**82.06**	**321**	*e*P	**P**	19 06 26.0	-0.1
F18A	**Big Timber**	**82.17**	**41**	P	**P**	19 06 27.6	+0.8
	baz=82,SNR=8.0						
D20A	**Manuel Ranch,**	**82.35**	**39**	⇑P	**P**	19 06 28.0	+0.4
	baz=82						
E19A	**Rath Farm, Rou**	**82.36**	**40**	P	**P**	19 06 28.3	+0.6
	baz=82,SNR=6.2						
C21A	**Desert Coulee**	**82.47**	**38**	⇓P	**P**	19 06 28.6	+0.4
	baz=82						
MPMC	**Manual Prospec**	**82.78**	**52**	⇑P	**P**	19 06 30.4	+0.2
	baz=83						
R11A	**Troy Canyon, C**	**82.83**	**50**	⇓P	**P**	19 06 31.0	+0.6
	baz=83						
EDW2	**Edwards Air Fo**	**83.06**	**54**	⇓P	**P**	19 06 31.8	+0.4
	baz=83						
B23A	**Brockton**	**83.18**	**37**	⇓P	**P**	19 06 32.0	+0.2
	baz=83						
E21A	**Keefer Ranch,**	**83.26**	**39**	⇑P	**P**	19 06 32.7	+0.5
	baz=83						
I18A	**Diamond G Ranc**	**83.40**	**43**	⇑P	**P**	19 06 32.7	-0.5
	baz=83						
G20A	**Bridger**	**83.42**	**41**	⇑P	**P**	19 06 33.1	-0.1
	baz=83						
DUG	**Dugway**	**83.60**	**47**	*e*P	**P**	19 06 35.0	+0.8
	comp=Z,2.0nm,0.5s						
DUG	**Dugway**	**83.60**	**47**	⇓P	**P**	19 06 35.0	+0.8
	baz=83						
RRX	**Edison Barstow**	**83.75**	**53**	⇓P	**P**	19 06 34.0	-0.8
	baz=84						
H20A	**Greybull**	**83.99**	**41**	⇑P	**P**	19 06 36.8	+0.9
	baz=84						
PDAR	**Pinedale Array**	**84.11**	**43**	P	**P**	19 06 37.0	+0.3
PDAR	**Pinedale Array**	**84.11**	**43**	P	**P**	19 06 37.0	+0.3
	comp=Z,2.0nm,0.8s,baz=297,slow=2.2,SNR=15						
J19A	**Crowheart**	**84.11**	**43**	⇓P	**P**	19 06 37.3	+0.7
	baz=84						
F22A	**Rosebud**	**84.18**	**40**	⇓P	**P**	19 06 37.1	+0.3
	baz=84						
M17A	**Scullys Gap (B**	**84.20**	**45**	⇑P	**P**	19 06 37.6	+0.4
	baz=84						
HEC	**Hector,Ludlow**	**84.24**	**53**	⇓P	**P**	19 06 37.9	+0.5
	baz=84						
M18A	**Lyman**	**84.59**	**45**	⇑P	**P**	19 06 39.4	+0.3
	baz=84						
L19A	**Farson**	**84.62**	**44**	⇓P	**P**	19 06 40.1	+0.9
	baz=84						
PFO	**Pinyon Flat Ob**	**84.82**	**54**	P	**P**	19 06 41.1	+0.8
PFO	**Pinyon Flat Ob**	**84.82**	**54**	P	**P**	19 06 41.1	+0.8
	comp=Z,3.5nm,0.6s,baz=287,slow=4.1,SNR=5.1						
PFO	**Pinyon Flat Ob**	**84.82**	**54**	⇑P	**P**	19 06 40.7	+0.4
	baz=85						
P17A	**Butcher Ranch,**	**85.32**	**47**	⇓P	**P**	19 06 43.5	+0.9
	baz=85						
J22A	**Midwest**	**85.51**	**42**	⇑P	**P**	19 06 43.8	+0.3
	baz=85						
K21A	**Alcova**	**85.55**	**42**	⇓P	**P**	19 06 44.1	+0.3
	baz=85						
SRU	**San Rafael**	**85.67**	**47**	⇓P	**P**	19 06 44.9	+0.5
	baz=86						
L21A	**Rawlins**	**85.88**	**43**	⇑P	**P**	19 06 45.7	+0.2
	baz=86						
M21A	**Separation Pea**	**86.11**	**43**	⇑P	**P**	19 06 46.8	+0.3
	baz=86						
RSSD	**Black Hills**	**86.44**	**40**	*e*P	**P**	19 06 48.0	0.0
O20A	**White River Ci**	**86.47**	**45**	⇑P	**P**	19 06 48.8	+0.5
	baz=86						
N21A	**Black Mountain**	**86.53**	**44**	⇓P	**P**	19 06 49.0	+0.4
	baz=86						
L23A	**Garrett**	**86.77**	**42**	⇓P	**P**	19 06 49.6	0.0
	baz=86						
GERES	**GERESS Array B**	**87.10**	**327**	P	**P**	19 06 49.6	-1.3
GERES	**GERESS Array B**	**87.10**	**327**	P	**P**	19 06 49.6	-1.3
	comp=Z,0.6nm,0.5s,baz=36,slow=5.0,SNR=8.1						
TXAR	**Lajitas Array**	**96.13**	**51**	P	**P**	19 07 34.6	+1.7
TXAR	**Lajitas Array**	**96.13**	**51**	P	**P**	19 07 34.6	+1.7
	comp=Z,0.5nm,0.7s,baz=315,slow=5.0,SNR=4.2						
LPAZ	**La Paz**	**151.87**	**66**	PKPbc	**PKPbc**	19 13 59.1	+0.6
LPAZ				PKPab	**PKPab**	19 14 09.1	-0.5
LPAZ	**La Paz**	**151.87**	**66**	PKPbc	**PKPbc**	19 13 59.1	+0.6
	comp=Z,0.4nm,0.5s,baz=210,slow=3.1,SNR=3.9						
LPAZ				PKPab	**PKPab**	19 14 09.1	-0.5
	comp=Z,0.8nm,0.6s,baz=74,slow=1.9,SNR=4.8						

*IDC **16** 18:55:25.8±2.4,56˚42N×152˚44W,h0km,mb3.9/2, mb1 3.9/4,mb1mx3.5/27,mbtmp3.8/4,ML3.3/1,Error ellipse: s-maj=40.9km s-min=31.3km az=137.0*
*ISCJB **16** 18:55:26.6±0.9,56˚51N±0˚07×151˚95W±0˚08,h18km, mb4.0/2,Error ellipse: s-maj=10.6km s-min=6.0km az=175.4*
*NEIC **16** 18:55:29.9,56˚64N×152˚14W,h4km,ML3.0(AEIC),After AEIC.*

ISC 16 18:55:28.8±1.1,56˚60N±0˚07×152˚10W±0˚06,h18km,n41, σ0s90/47,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.91**	**314**	P	**Pb**	18 55 45.2	-0.7
KDAK	**Kodiak Island**	**1.22**	**348**	P	**Pn**	18 55 50.9	0.0
KDAK				Sn	**Sg**	18 56 09.1	+0.8
KDAK	**Kodiak Island**	**1.22**	**348**	Pn	**Pn**	18 55 50.9	0.0
	6.0nm,0.3s,baz=187,slow=9.4,SNR=37						
KDAK				Sn	**Sg**	18 56 09.1	+0.8
	18nm,0.3s,baz=284,slow=19,SNR=8.6						
KABR	**Katmai Barrier**	**2.19**	**316**	P	**Pn**	18 56 03.9	-0.4
KAKN	**Katmai Knife C**	**2.34**	**318**	P	**Pn**	18 56 07.0	+0.7
FOSS	**Fourpeaked Sta**	**2.37**	**339**	P	**Pn**	18 56 08.2	+1.5
MCNL	**McNeil River**	**2.86**	**336**	P	**Pn**	18 56 14.8	+1.3
AUW	**Augustine West**	**2.88**	**346**	P	**Pn**	18 56 15.4	+1.7
OPT	**Oil Point**	**3.12**	**349**	P	**Pn**	18 56 18.8	+1.7
BRLK	**Bradley Lake**	**3.24**	**11**	P	**Pn**	18 56 18.9	+0.1
ANNE	**Aniakchak Nort**	**3.30**	**278**	P	**Pn**	18 56 20.3	+0.8
ILW	**Iliamna West**	**3.52**	**351**	P	**Pn**	18 56 22.6	0.0
SEW	**Seward**	**3.78**	**21**	P	**Pn**	18 56 25.7	-0.4
SEW				S	**Sn**	18 57 10.6	+0.5
RSO	**Redoubt South**	**3.89**	**355**	*e*Pn	**Pn**	18 56 27.8	0.0
STLK	**Strandline Lak**	**4.92**	**1**	P	**Pn**	18 56 43.0	+1.2
SUA	**Susitna One**	**4.93**	**8**	P	**Pn**	18 56 42.1	+0.1
EYAK	**Cordova Ski Ar**	**5.17**	**37**	P	**Pn**	18 56 45.4	+0.3
RAGM	**Ragged Mountai**	**5.44**	**43**	P	**Pn**	18 56 49.1	+0.2
RAGM				S	**Sn**	18 57 52.0	+1.1
SML	**Sawmill**	**5.57**	**19**	P	**Pn**	18 56 51.2	+0.5
KLU	**Klutina**	**5.85**	**30**	P	**Pn**	18 56 54.7	+0.1
VRDI	**Verde Repeater**	**6.45**	**40**	P	**Pn**	18 57 02.7	-0.2
TT01	**Tatalina**	**6.63**	**344**	P	**Pn**	18 57 05.9	+0.7
KIAG	**Kiagna River**	**6.67**	**45**	P	**Pn**	18 57 07.4	+1.5
BALM	**Baldy**	**6.74**	**45**	P	**Pn**	18 57 07.8	+1.0
GRNC	**Granite Creek**	**6.80**	**48**	P	**Pn**	18 57 07.9	+0.2
DHY	**Denali Highway**	**6.92**	**18**	P	**Pn**	18 57 10.0	+0.7
SAMH	**Samovar Hills**	**6.92**	**55**	P	**Pn**	18 57 10.4	+1.1
RND	**Reindeer**	**7.02**	**12**	P	**Pn**	18 57 11.3	+0.7
PNL	**Peninsula**	**7.39**	**60**	P	**Pn**	18 57 16.3	+0.7
ILAR	**Eielson Array**	**8.59**	**15**	Pn	**Pn**	18 57 33.6	+1.6
ILAR				Sn	**Sn**	18 59 07.9	-0.4
ILAR	**Eielson Array**	**8.59**	**15**	Pn	**Pn**	18 57 33.6	+1.6
	0.7nm,0.3s,baz=201,slow=14,SNR=38						
ILAR				Sn	**Sn**	18 59 07.9	-0.4
	0.1nm,0.3s,baz=201,slow=24,SNR=3.2						
IM3	**Indian Mountai**	**9.45**	**356**	P	**Pn**	18 57 43.4	-0.5
BM3	**Burnt Mountain**	**11.40**	**15**	P	**Pn**	18 58 09.1	-1.4
INK	**Inuvik**	**14.46**	**28**	Pn	**P**	18 58 57.5	-1.4
INK	**Inuvik**	**14.46**	**28**	Pn	**P**	18 58 57.5	-1.4
	0.1nm,0.3s,baz=214,slow=8.3,SNR=7.6						
YKA	**Yellowknife Ar**	**19.67**	**57**	P	**Pn**	18 59 58.4	+0.5
YKA	**Yellowknife Ar**	**19.67**	**57**	P	**Pn**	18 59 58.3	+0.5
	0.1nm,0.3s,baz=269,slow=11,SNR=7.7						
SONM	**Songino Array**	**57.23**	**308**	P	**P**	19 05 14.2	-0.5
SONM	**Songino Array**	**57.23**	**308**	P	**P**	19 05 14.2	-0.5
	1.1nm,0.8s,baz=51,slow=8.0,SNR=8.5						
ZALV	**Zalesovo Beam**	**60.43**	**325**	P	**P**	19 05 36.8	+0.1
ZALV	**Zalesovo Beam**	**60.43**	**325**	P	**P**	19 05 36.8	+0.1
	1.0nm,0.6s,baz=29,slow=7.1,SNR=5.5						

IDC 16 18:57:15.5±2.3,56˚12S×27˚20W,h0km,mb3.7/2, mb1 3.6/3,mb1mx3.5/16,mbtmp3.4/3,ML2.8/1,Error ellipse: s-maj=122.8km s-min=29.9km az=96.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**18.68**	**156**	P	Pn	19 01 35.4	+0.3
	0.0nm,0.3s,baz=314,slow=12,SNR=5.3						
VNDA	**Vanda**	**46.51**	**183**	P	P	19 05 44.0	+0.2
	0.5nm,0.6s,baz=185,slow=5.9,SNR=6.0						
TORD	**Torodi Ar. Bea**	**73.12**	**29**	P	P	19 08 48.3	+0.8
	0.5nm,0.4s,baz=199,slow=5.9,SNR=7.2						
SONM	**Songino Array**	**150.74**	**87**	PKPbc	PKPbc	19 17 07.0	-1.7
	0.4nm,0.5s,baz=222,slow=3.8,SNR=8.6						

*CSEM **16** 19:04:40.5±0.5,37˚30N×20˚78E,h2km,ML2.8/3,Error ellipse: s-maj=9.1km s-min=4.2km az=60.0*
*ATH **16** 19:04:41.0,37˚29N×20˚78E,h10km±2km,MD3.2/11*
*THE **16** 19:04:41.0,37˚32N×20˚82E,h4km±1km,ML2.8/3,Error ellipse: s-maj=1.3km s-min=0.5km az=237.0*

ISC 16 19:04:40.7±1.4,37˚29N±0˚03×20˚78E±0˚05,h3km±10km, n58,σ0s82/99,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.82**	**0**	P	**Pg**	19 04 55.6	-0.8
KFL				S	**Sg**	19 05 07.1	+0.1
KFL	**Anninata**	**0.82**	**0**	P	**Pg**	19 04 55.6	-0.8
KFL				S	**Sg**	19 05 07.1	+0.1
PYL	**PYLOS**	**0.86**	**117**	P	**Pg**	19 04 56.9	-0.3
PYL				S	**Sg**	19 05 09.7	+1.3
PYL	**PYLOS**	**0.86**	**117**	*e*PG	**Pg**	19 04 56.9	-0.3
PYL				*e*SB	**Sb**	19 05 10.0	-0.3
PYL	**PYLOS**	**0.86**	**117**	*e*PG	**Pg**	19 04 56.9	-0.3
PYL				*e*SB	**Sg**	19 05 09.7	+1.3
PYL	**PYLOS**	**0.86**	**117**	P	**Pg**	19 04 56.9	-0.3
PYL				S	**Sg**	19 05 09.7	+1.3
VLS	**Valsamata**	**0.90**	**350**	P	**Pg**	19 04 57.3	-0.6
VLS				S	**Sb**	19 05 10.6	-0.8
VLS	**Valsamata**	**0.90**	**350**	*e*PG	**Pg**	19 04 57.2	-0.7
VLS				*e*SB	**Sb**	19 05 11.3	-0.1
VLS	**Valsamata**	**0.90**	**350**	P	**Pg**	19 04 57.3	-0.6
VLS				S	**Sb**	19 05 10.6	-0.8
ITM	**Ithomi**	**0.92**	**96**	P	**Pg**	19 04 57.8	-0.5
ITM				S	**Sg**	19 05 10.2	-0.1
ITM	**Ithomi**	**0.92**	**96**	*e*PG	**Pg**	19 04 58.2	-0.1
ITM				*e*SB	**Sb**	19 05 11.6	-0.4
ITM	**Ithomi**	**0.92**	**96**	*e*PB	**Pg**	19 04 57.8	-0.5
ITM				*e*SB	**Sb**	19 05 11.6	-0.4
ITM	**Ithomi**	**0.92**	**96**	P	**Pg**	19 04 57.8	-0.5
ITM				S	**Sg**	19 05 10.2	-0.1
ITM				*e*Sb	**Sb**	19 05 11.6	-0.4
RLS	**Riolos of Patr**	**0.94**	**35**	P	**Pg**	19 04 57.5	-1.2
RLS				S	**Sg**	19 05 10.9	0.0
RLS	**Riolos of Patr**	**0.94**	**35**	*e*PB	**Pg**	19 04 58.0	-0.7
RLS				*e*SB	**Sb**	19 05 12.0	-0.5
RLS	**Riolos of Patr**	**0.94**	**35**	P	**Pg**	19 04 57.5	-1.2
RLS				S	**Sg**	19 05 10.9	0.0
VLX	**Vlachokerasia**	**1.28**	**86**	P	**Pg**	19 05 04.2	-1.0
VLX				S	**Sb**	19 05 22.7	+0.4
VLX	**Vlachokerasia**	**1.28**	**86**	*e*PB	**Pb**	19 05 05.8	+0.4
VLX	**Vlachokerasia**	**1.28**	**86**	*e*PB	**Pb**	19 05 05.8	+0.4
VLX				*e*SB	**Sb**	19 05 22.5	+0.2
VLX	**Vlachokerasia**	**1.28**	**86**	P	**Pg**	19 05 04.2	-1.0
VLX	**Vlachokerasia**	**1.28**	**86**	*e*Pb	**Pb**	19 05 05.8	+0.4
VLX				*e*Sb	**Sb**	19 05 22.5	+0.2
KLV	**Kalavryta, Ach**	**1.32**	**55**	*e*PG	**Pn**	19 05 05.7	-0.4
KLV				*e*SB	**Sn**	19 05 24.0	-0.3
KLV	**Kalavryta, Ach**	**1.32**	**55**	*e*PB	**Pn**	19 05 05.9	-0.2
KLV				*e*SB	**Sn**	19 05 24.0	-0.3
KLV	**Kalavryta, Ach**	**1.32**	**55**	*e*Pb	**Pn**	19 05 05.9	-0.2
KLV				*e*Sb	**Sn**	19 05 24.0	-0.3
LAKA	**Lakka**	**1.34**	**45**	P	**Pn**	19 05 04.7	-1.7
LAKA	**Lakka**	**1.34**	**45**	*e*PN	**Pn**	19 05 05.2	-1.2
LAKA				*e*SB	**Sn**	19 05 25.4	+0.6
LAKA	**Lakka**	**1.34**	**45**	P	**Pn**	19 05 04.7	-1.7
DYR	**Agios Nikonas**	**1.35**	**112**	P	**Pn**	19 05 05.4	-1.1
DYR				S	**Sg**	19 05 24.3	+0.3
DYR	**Agios Nikonas**	**1.35**	**112**	*e*PB	**Pn**	19 05 06.1	-0.4
DYR				*e*SB	**Sn**	19 05 24.4	+0.4
DYR	**Agios Nikonas**	**1.35**	**112**	*e*PB	**Pn**	19 05 06.7	+0.2
DYR				*e*SB	**Sg**	19 05 24.4	+0.4
DYR	**Agios Nikonas**	**1.35**	**112**	P	**Pn**	19 05 05.4	-1.1
DYR	**Agios Nikonas**	**1.35**	**112**	*e*Pb	**Pn**	19 05 06.7	+0.2
DYR				*e*Sb	**Sg**	19 05 24.4	+0.4
GUR	**Goura**	**1.40**	**62**	P	**Pn**	19 05 05.6	-1.6
GUR				S	**Sb**	19 05 24.7	-1.1
GUR	**Goura**	**1.40**	**62**	*e*PN	**Pn**	19 05 06.0	-1.2
GUR				*e*SB	**Sn**	19 05 28.4	+2.2
GUR	**Goura**	**1.40**	**62**	*e*PG	**Pn**	19 05 07.2	0.0
GUR				*e*SB	**Sn**	19 05 26.7	+0.5
GUR	**Goura**	**1.40**	**62**	P	**Pn**	19 05 05.6	-1.6
GUR	**Goura**	**1.40**	**62**	*e*Pg	**Pn**	19 05 07.2	0.0
GUR				S	**Sb**	19 05 24.7	-1.1
GUR				*e*Sb	**Sn**	19 05 26.7	+0.5
EFP	**Efpalio**	**1.44**	**38**	*e*PB	**Pb**	19 05 08.2	0.0
EFP				*e*SB	**Sg**	19 05 29.2	+2.1
EFP	**Efpalio**	**1.44**	**38**	*e*PB	**Pb**	19 05 08.3	+0.1
EFP				*e*SB	**Sg**	19 05 27.9	+0.8
EFP	**Efpalio**	**1.44**	**38**	*e*Pb	**Pb**	19 05 08.3	+0.1
EFP				*e*Sb	**Sg**	19 05 27.9	+0.8
TRIZ	**Trizonia**	**1.48**	**43**	*e*PB	**Pb**	19 05 08.9	0.0
LKD2	**Lefkada island**	**1.50**	**356**	*e*PB	**Pg**	19 05 10.2	+0.7
LKD2				*e*SB	**Sg**	19 05 30.7	+1.8
KALE	**Kalithea**	**1.54**	**44**	P	**Pn**	19 05 08.0	-1.1
KALE	**Kalithea**	**1.54**	**44**	*e*PB	**Pb**	19 05 09.9	0.0
KALE				*e*SB	**Sg**	19 05 31.3	+1.2
KALE	**Kalithea**	**1.54**	**44**	*e*PB	**Pg**	19 05 10.4	+0.2
KALE				*e*SB	**Sg**	19 05 31.3	+1.2
KALE	**Kalithea**	**1.54**	**44**	P	**Pn**	19 05 08.0	-1.1
KALE	**Kalithea**	**1.54**	**44**	*e*Pb	**Pg**	19 05 10.4	+0.2
KALE				*e*Sb	**Sg**	19 05 31.3	+1.2
EVR	**Evrytania**	**1.82**	**26**	*e*PG	**Pb**	19 05 15.0	+0.4
EVR				*e*SN	**Sb**	19 05 38.0	+0.2
VLI	**Veliai**	**1.82**	**108**	*e*PN	**Pb**	19 05 14.8	+0.2
VLI	**Veliai**	**1.82**	**108**	*e*Pn	**Pb**	19 05 14.8	+0.2
LTK	**Loutraki**	**1.88**	**66**	*e*PN	**Pb**	19 05 15.6	-0.1
LTK	**Loutraki**	**1.88**	**66**	*e*Pn	**Pb**	19 05 15.6	-0.1
DID	**Didima**	**1.97**	**83**	*e*PN	**Pb**	19 05 16.9	-0.3
DID	**Didima**	**1.97**	**83**	*e*PN	**Pn**	19 05 16.0	+1.0
DID	**Didima**	**1.97**	**83**	*e*Pn	**Pn**	19 05 16.0	+1.0
KYTH	**Kithira**	**2.07**	**118**	*e*PN	**Pb**	19 05 18.4	-0.5
KYTH	**Kithira**	**2.07**	**118**	*e*Pn	**Pb**	19 05 18.4	-0.5
THL	**Klokotos Trika**	**2.47**	**23**	*e*PN	**Pn**	19 05 23.4	+1.6

*ISCJB **16** 19:06:31.4±1.1,23˚90N±0˚02×122˚39E±0˚02,h10km±8km, Error ellipse: s-maj=4.3km s-min=2.8km az=164.5*
*TAP **16** 19:06:32.7,23˚96N×122˚31E,h14km±2km,ML2.7,C*
*JMA **16** 19:06:33.7±0.3,24˚05N×122˚40E,h20km,M2.0*

ISC 16 19:06:32.2±1.0,23˚91N±0˚03×122˚37E±0˚02,h20km±8km, n35,σ0s79/58,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.73**	**284**	*e*P	**Pb**	19 06 46.1	-0.1
	baz=279						
TWD				*e*S	**Sb**	19 06 56.0	+0.3
	baz=279						
ENA	**Nanau**	**0.77**	**312**	*e*P	**Pb**	19 06 47.0	0.0
	baz=311						
ENA				*e*S	**Sb**	19 06 57.5	+0.5
	baz=311						
YOJ	**Yonaguni jima**	**0.81**	**46**	P	**Pb**	19 06 46.9	-0.6
YOJ				*e*S	**Sb**	19 06 56.3	-1.7
TWC	**Suao**	**0.85**	**326**	*e*P	**Pb**	19 06 47.2	-1.0
	baz=326						
TWC				*e*S	**Sb**	19 06 59.2	0.0
	baz=326						
ESL	**Shilin**	**0.86**	**264**	P	**Pb**	19 06 47.7	-0.8
	baz=259						
ESL				*e*S	**Sb**	19 06 59.4	-0.2
	baz=259						
EGS		**1.02**	**337**	*e*P	**Pb**	19 06 51.4	+0.3
	baz=338						
TWE	**Neicheng**	**1.03**	**322**	P	**Pn**	19 06 51.6	+0.1
	baz=321						
TWE				*e*S	**Sb**	19 07 04.0	-0.6
	baz=321						
ENTT	**Nioudou**	**1.03**	**315**	*e*P	**Pn**	19 06 51.4	-0.2
	baz=313						
ENTT				*e*S	**Sb**	19 07 03.4	-1.2
	baz=313						
WHF	**Hehuan Shan**	**1.04**	**283**	*e*P	**Pn**	19 06 51.1	-0.8
	baz=279						
WHF				*e*S	**Sb**	19 07 05.4	+0.4
	baz=279						
EHY	**Hungye**	**1.04**	**248**	*e*P	**Pn**	19 06 51.2	-0.5
	baz=243						
EHY				*e*S	**Sb**	19 07 05.2	+0.5
	baz=243						
NNS	**Nan Shan**	**1.05**	**300**	*e*P	**Pn**	19 06 52.0	0.0
	baz=283						
NNS				*e*S	**Sb**	19 07 06.2	+1.0
	baz=283						
TWF1	**Yuli**	**1.13**	**241**	P	**Pn**	19 06 52.9	+0.1
	baz=236						
TWF1				*e*S	**Sn**	19 07 08.2	+0.4
	baz=236						
NSK	**Sanguang**	**1.20**	**310**	*e*P	**Pn**	19 06 54.0	+0.1
	baz=307						
NSK				*e*S	**Sn**	19 07 08.9	-0.8
	baz=307						
CHKT	**Chengkung**	**1.22**	**229**	*e*P	**Pn**	19 06 53.0	-1.1
	baz=225						
CHKT				*e*S	**Sn**	19 07 08.4	-1.7
	baz=225						
IRIF	**Iriomote-Funau**	**1.31**	**71**	P	**Pn**	19 06 56.0	+0.6
IRIF				*e*S	**Sn**	19 07 12.7	+0.4
HATJ	**Hateruma jima**	**1.32**	**83**	*e*S	**Sn**	19 07 11.8	-0.7
SMLT	**Sun Moon Lake**	**1.35**	**269**	*e*P	**Pn**	19 06 56.0	0.0
	baz=253						
TYC	**Yuchr**	**1.39**	**270**	*e*P	**Pb**	19 06 57.8	+0.5
	baz=267						
ELDTW	**Lidau**	**1.43**	**240**	*e*P	**Pn**	19 06 56.7	-0.4
	baz=236						
ELDTW				*e*S	**Sn**	19 07 14.8	-0.6
	baz=236						
NSTT	**Nanjuang**	**1.44**	**300**	*e*P	**Pn**	19 06 58.0	+0.9
	baz=282						
NSTT				S	**Sb**	19 07 17.1	+0.7
	baz=282						
ALS	**Alishan**	**1.49**	**255**	*e*P	**Pn**	19 06 58.9	+0.8
	baz=251						
TWQ1	**Liyutan**	**1.52**	**287**	*e*P	**Pb**	19 06 59.7	-0.1
	baz=284						
JKRS

25nm,1.3s
LPAZ **La Paz** 24.83 140 P P 19 18 07.4 +0.5
9.5nm,1.0s,baz=326,slow=8.9,SNR=19
BBGH **Gun Hill** 26.56 66 P P 19 18 23.4 +1.5
942nm,1.5s
LVC **Limon Verde** 29.41 150 P P 19 18 45.8 -1.8
SIV **San Ignacio** 29.63 130 P P 19 18 50.2 +0.9
SIV **San Ignacio** 29.63 130 P P 19 18 50.2 +0.9
0.5nm,0.3s,baz=313,slow=17,SNR=3.0
431A **Sonora** 31.71 333 P P 19 19 08.9 +1.2
baz=32,SNR=5.5
332A **Millersview** 31.93 335 P P 19 19 10.6 +1.2
baz=32,SNR=6.2
TXAR **Lajitas Array** 32.15 327 P P 19 19 12.2 +0.6
TXAR PcP PcP 19 22 00.7 +0.4
TXAR **Lajitas Array** 32.15 327 P P 19 19 12.2 +0.6
0.6nm,0.7s,baz=150,slow=10,SNR=4.2
TXAR PcP PcP 19 22 00.7 +0.4
0.9nm,0.7s,baz=162,slow=6.2,SNR=5.2
232A **Coleman** 32.32 335 P P 19 19 13.7 +0.7
baz=32,SNR=5.7
TKL **Tuckaleechee C** 32.69 1 P P 19 19 16.5 +0.4
TKL **Tuckaleechee C** 32.69 1 P P 19 19 16.5 +0.4
3.9nm,0.8s,baz=178,slow=12,SNR=4.0
WVT **Waverly** 33.31 355 P P 19 19 20.5 -1.1
5.0nm,0.9s
324A **Moseley Ranch,** 34.77 327 ⇑P P 19 19 34.9 +0.5
baz=35
225A **Deer Hill, Car** 34.94 329 ⇓P P 19 19 37.0 +1.0
baz=35
SIUC **Southern Illin** 35.03 353 eP P 19 19 36.9 +0.5
20nm,0.9s
X30A **Coker Ranch, T** 35.05 336 ⇓P P 19 19 37.5 +0.8
baz=35
Z26A **Caprock** 35.45 331 P P 19 19 41.2 +1.0
baz=36,SNR=6.0
Z25A **Roswell** 35.82 330 ⇑P P 19 19 44.4 +0.9
baz=36
Z24A **Sheeppen Canyo** 36.19 329 P P 19 19 48.1 +1.4
baz=36,SNR=5.9
Y25A **Mesa, Roswell** 36.33 331 P P 19 19 49.0 +1.2
baz=36,SNR=6.4
W27A **Bowe Ranch, En** 36.51 334 P P 19 19 50.3 +1.0
baz=37,SNR=6.1
Y24A **Capitan** 36.70 330 ⇓P P 19 19 52.3 +1.3
baz=37
220A **Playas Peak, P** 36.83 324 ⇓P P 19 19 51.9 -0.2
baz=37
Y23A **Lovelace Mesa,** 37.01 329 P P 19 19 55.0 +1.3
baz=37,SNR=9.7
W25A **X Bar L Ranch,** 37.27 332 P P 19 19 57.1 +1.3
baz=37,SNR=9.0
V26A **Tequesquite Ra** 37.44 334 P P 19 19 58.6 +1.3
baz=38,SNR=7.4
Y22A **Socorro** 37.49 328 P P 19 19 59.5 +1.7
baz=38,SNR=6.4
U27A **Thompson Grove** 37.55 335 ⇑P P 19 19 59.1 +0.9
baz=38
W24A **Lazy 6 Ranch,** 37.71 331 P P 19 20 01.1 +1.4
baz=38,SNR=9.5
V25A **Rancho No Teng** 37.85 333 P P 19 20 02.2 +1.4
baz=38,SNR=15
Y21A **Point of Rocks** 37.92 328 ⇑P P 19 20 03.6 +2.2
baz=38
U26A **Atchley Ranch,** 37.92 334 P P 19 20 02.9 +1.5
baz=38,SNR=9.4
LAZ **Ladron** 37.94 329 eP P 19 20 03.2 +1.6
2.0nm,1.0s
ANMO **Albuquerque** 38.02 330 eP P 19 20 03.6 +1.4
6.6nm,1.0s
ANMO e pP 19 20 11.4 +0.8
V24A **Rampart Ranch,** 38.06 332 P P 19 20 04.1 +1.4
baz=38,SNR=5.9
S28A **Manter** 38.19 337 ⇓P P 19 20 04.9 +1.5
baz=38
R30A **Dighton** 38.20 340 ⇓P P 19 20 04.9 +1.4
baz=38
U25A **Circle Dot Ran** 38.22 333 P P 19 20 05.2 +1.2
baz=38,SNR=5.3
R28A **Tribune** 38.81 338 P P 19 20 09.6 +0.9
baz=39,SNR=7.7
T25A **Trinidad** 38.84 334 P P 19 20 11.0 +1.9
baz=39,SNR=6.4
S26A **Kim** 38.85 335 P P 19 20 10.7 +1.6
baz=39,SNR=7.6
S25A **Robets Cordova** 39.29 334 P P 19 20 14.2 +1.4
baz=40,SNR=6.2
U22A **Llaves** 39.35 331 P P 19 20 15.1 +1.7
baz=40,SNR=8.5
R26A **Arlington** 39.42 336 P P 19 20 15.5 +1.7
baz=40,SNR=6.4
214A **Organ Pipe Nat** 39.48 320 P P 19 20 15.7 +1.4
baz=40,SNR=6.2
T23A **Casias Ranch,** 39.49 332 ⇑P P 19 20 16.1 +1.5
baz=40
S24A **Houchin Ranch,** 39.61 334 P P 19 20 17.4 +1.8
baz=40,SNR=5.0
SDCO **Great Sand Dun** 39.83 333 eP P 19 20 18.9 +1.4
12nm,1.3s
SDCO e pP 19 20 26.7 +1.0
SDCO ePcP PcP 19 22 23.1 -0.1
WUAZ **Wupatki** 41.07 326 eP P 19 20 28.3 +0.7
9.2nm,1.4s
WUAZ e pP 19 20 36.9 +0.9
WUAZ **Wupatki** 41.07 326 ⇑P P 19 20 29.1 +1.5
baz=41
N27A **Anderson Farm,** 41.24 339 ⇓P P 19 20 30.3 +1.4
baz=41
P23A **Jefferson** 41.32 335 P P 19 20 31.6 +1.8
baz=42,SNR=7.9
Q22A **Crested Butte,** 41.37 333 P P 19 20 31.5 +1.2
baz=42,SNR=8.7
PV01 **Paradox Valley** 41.57 331 P P 19 20 31.6 -0.2
ISCO **Idaho Springs** 41.58 335 ⇑P P 19 20 33.0 +1.1
baz=42
PV10 **Paradox Valley** 41.99 331 eP P 19 20 35.0 -0.2
31nm,0.6s
P21A **Newcastle** 42.16 333 P P 19 20 38.1 +1.6
baz=42,SNR=7.6
U15A **North Rim** 42.24 326 P P 19 20 39.2 +1.8
baz=42,SNR=6.1
BC3 **Big Chuckawall** 42.27 320 P P 19 20 38.4 +1.1
baz=42,SNR=5.1
IRM **Iron Mountain** 42.40 321 P P 19 20 39.6 +1.2
baz=42,SNR=6.3
N23A **Red Feather La** 42.63 336 ⇓P P 19 20 41.4 +1.0
baz=43
N21A **Black Mountain** 43.19 334 P P 19 20 46.4 +1.5
baz=43,SNR=6.5
SRU **San Rafael** 43.29 330 ⇓P P 19 20 46.9 +1.2
baz=43
K25A **Mack Ranch, Ha** 43.31 339 ⇓P P 19 20 47.2 +1.5
baz=44
Q16A **Castle Valley** 43.48 329 ⇓P P 19 20 48.4 +1.2
baz=44
O19A **Miners Draw (B** 43.54 332 ⇑P P 19 20 49.0 +1.3
baz=44
P18A **Preston Nutter** 43.55 331 ⇑P P 19 20 49.4 +1.4
baz=44
L23A **Garrett** 43.57 337 P P 19 20 49.2 +1.3
baz=44,SNR=5.4
N20A **Spence Gulch,** 43.58 333 P P 19 20 49.2 +1.1
baz=44,SNR=5.9
P17A **Butcher Ranch,** 43.68 330 ⇑P P 19 20 49.6 +0.8
baz=44
MSU **Marysvale** 43.70 328 eP P 19 20 49.9 +0.9
4.5nm,1.3s
L20A **Wamsutter** 44.57 334 ⇓P P 19 20 56.6 +0.6
baz=45
DAU **Daniels Canyon** 44.65 331 eP P 19 20 55.7 -1.1
8.9nm,1.4s
RSSD **Black Hills** 44.69 340 eP P 19 20 57.8 +1.0
4.2nm,0.8s
RSSD e pP 19 21 05.8 +0.5
MPMC **Manual Prospec** 45.09 321 ⇑P P 19 21 00.7 +0.5
baz=45
K20A **Yellowstone Ra** 45.10 335 P P 19 21 00.5 +0.4
baz=45,SNR=9.6
M17A **Scullys Gap (B** 45.19 332 ⇑P P 19 21 01.2 +0.3
baz=45
L18A **Fontenelle, Gr** 45.25 333 P P 19 21 01.9 +0.5
baz=45,SNR=6.0
J21A **Lysite** 45.30 336 P P 19 21 02.8 +1.1
baz=46,SNR=7.2
K19A **Absolon Red Bu** 45.45 335 P P 19 21 03.2 +0.3
baz=46,SNR=9.9
R11A **Troy Canyon, C** 45.46 325 ⇓P P 19 21 04.0 +0.9
baz=46

ISA **Isabella** 45.46 320 P P 19 21 03.7 +0.7
TRQA **Tornquist** 45.62 155 P P 19 20 58.4 -5.7
3.5nm,1.2s
PDAR **Pinedale Array** 45.71 334 P P 19 21 05.2 +0.2
PDAR PcP PcP 19 22 42.6 -0.1
PDAR **Pinedale Array** 45.71 334 P P 19 21 05.2 +0.2
2.6nm,1.0s,baz=138,slow=7.1,SNR=13
PDAR PcP PcP 19 22 42.6 -0.1
2.3nm,0.9s,baz=145,slow=5.4,SNR=8.9
HWUT **Hardware Ranch** 45.72 331 eP P 19 21 04.5 -0.5
13nm,1.3s
HWUT e pP 19 21 13.3 -0.2
H22A **Clearmont** 45.93 338 ⇓P P 19 21 06.8 +0.2
baz=46
J18A **Kendall Valley** 46.27 334 P P 19 21 09.4 -0.1
baz=46,SNR=5.3
F23A **Volborg** 46.56 340 P P 19 21 11.7 +0.3
baz=47,SNR=5.7
G21A **Lodge Grass** 46.78 338 ⇓P P 19 21 13.0 -0.2
baz=47
F22A **Rosebud** 46.91 339 ⇓P P 19 21 14.5 +0.3
baz=47
ELK **Elko** 46.94 328 P P 19 21 15.8 +1.1
ELK PcP PcP 19 22 47.4 +0.3
ELK **Elko** 46.94 328 P P 19 21 15.8 +1.1
1.2nm,0.6s,baz=152,slow=5.1,SNR=7.6
ELK PcP PcP 19 22 47.4 +0.3
0.5nm,0.4s,baz=198,slow=2.7,SNR=3.8
NVAR **Mina Array Bea** 47.10 323 P P 19 21 17.3 +1.2
NVAR PcP PcP 19 22 48.5 +0.8
NVAR **Mina Array Bea** 47.10 323 P P 19 21 17.3 +1.2
2.2nm,0.8s,baz=132,slow=7.3,SNR=20
NVAR PcP PcP 19 22 48.5 +0.8
1.7nm,0.7s,baz=133,slow=4.7,SNR=9.5
E23A **Ismay** 47.20 340 ⇑P P 19 21 16.7 +0.3
baz=47
D24A **Glendive** 47.42 342 ⇑P P 19 21 19.0 +0.8
baz=48
C24A **Savage** 47.82 342 ⇓P P 19 21 22.1 +0.9
baz=48
G17A **Pierce Place,** 48.27 335 ⇓P P 19 21 26.1 +1.2
baz=48
F18A **Big Timber** 48.32 336 ⇓P P 19 21 25.6 +0.3
baz=48
C22A **Vida** 48.48 341 ⇑P P 19 21 27.3 +0.9
baz=49
H15A **Lima** 48.54 333 P P 19 21 28.1 +1.0
baz=49,SNR=7.0
HLID **Hailey** 48.57 331 P P 19 21 25.4 -1.8
I13A **Wildhorse Cree** 48.69 331 P P 19 21 29.0 +0.8
baz=49,SNR=6.9
C21A **Desert Coulee** 48.96 340 ⇑P P 19 21 30.6 +0.6
baz=49
C19A **Slack Wire Ran** 49.58 338 P P 19 21 35.3 +0.5
baz=50,SNR=5.5
WVOR **Wild Horse Val** 49.95 327 eP P 19 21 37.4 -0.4
1.6nm,0.5s
D13A **Huson** 51.26 334 ⇓P P 19 21 48.0 +0.4
baz=51
B14A **Marquette Ranc** 51.74 336 ⇑P P 19 21 52.0 +0.8
baz=52
WALA **Waterton Lakes** 52.55 336 P P 19 21 57.5 +0.3
0.3nm,1.1s
FFC **Flin Flon** 53.72 347 P P 19 22 05.6 +0.2
4.2nm,1.1s
SCHQ **Schefferville** 53.78 12 eP P 19 22 04.4 -1.5
8.2nm,1.4s
SCHQ **Schefferville** 53.78 12 P P 19 22 05.0 -1.0
4.7nm,0.9s,baz=183,slow=3.3,SNR=6.4
EFI **East Falkland** 58.69 161 P P 19 22 42.3 +1.3
77nm,1.2s
USHA **Ushuaia** 58.93 169 P P 19 22 44.3 +1.7
USHA **Ushuaia** 58.93 169 P P 19 22 44.3 +1.7
9.5nm,0.9s,baz=9.3,slow=14,SNR=3.1
FRB **Frobisher Bay** 61.90 8 P P 19 23 01.7 -1.0
FRB **Frobisher Bay** 61.90 8 P P 19 23 01.7 -1.0
9.1nm,0.9s,baz=216,slow=7.9,SNR=4.2
YKA **Yellowknife Ar** 63.67 345 P P 19 23 14.2 -0.4
YKA PcP PcP 19 23 50.6 0.0
YKA **Yellowknife Ar** 63.67 345 P P 19 23 14.2 -0.4
1.6nm,1.1s,baz=143,slow=7.0,SNR=5.3
YKA PcP PcP 19 23 50.6 0.0
1.1nm,0.8s,baz=144,slow=4.2,SNR=6.5
RES **Resolute Bay** 72.07 357 P P 19 24 05.7 -1.5
2.7nm,1.0s
SUMG **Summit** 75.17 13 eP P 19 24 26.0 0.0
9.5nm,0.1s
EVOP **Sao Brissos** 77.47 51 eP P 19 24 39.7 +0.5
18nm,1.0s
EVO **Evora** 77.55 51 eP P 19 24 39.7 0.0
18nm,1.0s
ESDC **Sonseca Array** 80.79 50 P P 19 24 56.9 -0.6
ESDC **Sonseca Array** 80.79 50 P P 19 24 56.9 -0.6
2.6nm,0.9s,baz=269,slow=4.6,SNR=10
EKA **Eskdalemuir Ar** 82.67 35 P P 19 25 06.0 -1.0
EKA **Eskdalemuir Ar** 82.67 35 P P 19 25 06.0 -1.0
7.3nm,0.9s,baz=258,slow=3.3,SNR=6.1
SJPF **Ste Jean** 83.05 47 eP P 19 25 09.3 0.0
19nm,1.0s
SJPF **Ste Jean** 83.05 47 eP P 19 25 09.3 0.0
19nm,1.0s
GRR **Gorron** 83.57 42 eP P 19 25 11.9 +0.1
78nm,1.4s
GRR **Gorron** 83.57 42 eP P 19 25 11.9 +0.1
78nm,1.4s
EPF **Esparros** 84.19 47 eP P 19 25 15.8 +0.6
15nm,1.1s
EPF **Esparros** 84.19 47 eP P 19 25 15.8 +0.6
15nm,1.1s
LFF **La Frestale** 84.53 45 eP P 19 25 16.1 -0.7
45nm,1.2s
LFF **La Frestale** 84.53 45 eP P 19 25 16.1 -0.7
45nm,1.2s
RJF **Les Rejaudoux** 85.09 45 eP P 19 25 20.0 +0.4
25nm,1.2s
RJF **Les Rejaudoux** 85.09 45 eP P 19 25 20.0 +0.4
25nm,1.2s
TOA0 **Torodi Ar. Sit** 85.50 77 eP P 19 25 21.3 -0.9
TORD **Torodi Ar. Bea** 85.50 77 P P 19 25 22.4 +0.2
TORD **Torodi Ar. Bea** 85.50 77 P P 19 25 22.4 +0.2
1.1nm,0.8s,baz=256,slow=4.3,SNR=4.9
MTLF **Montolieu** 85.57 47 eP P 19 25 22.3 +0.3
24nm,1.1s
MTLF **Montolieu** 85.57 47 eP P 19 25 22.3 +0.3
24nm,1.1s
TCF **Toulx Ste Croi** 85.59 44 eP P 19 25 22.1 0.0
48nm,1.4s
TCF **Toulx Ste Croi** 85.59 44 eP P 19 25 22.1 0.0
48nm,1.4s
BGF **Bois d'Agland** 86.03 44 eP P 19 25 24.4 +0.2
35nm,1.1s
BGF **Bois d'Agland** 86.03 44 eP P 19 25 24.4 +0.2
35nm,1.1s
AVF **Avril sur Loir** 86.38 43 eP P 19 25 25.4 -0.5
AVF **Avril sur Loir** 86.38 43 eP P 19 25 25.4 -0.5
SSF **Saint Saulge** 86.48 43 eP P 19 25 26.1 -0.4
15nm,1.2s
SSF **Saint Saulge** 86.48 43 eP P 19 25 26.1 -0.4
15nm,1.2s
SMF **Signal de Mont** 86.72 44 eP P 19 25 27.2 -0.4
SMF **Signal de Mont** 86.72 44 eP P 19 25 27.2 -0.4
LOR **Lormes** 86.72 43 eP P 19 25 27.4 -0.3
5.6nm,0.8s
LOR **Lormes** 86.72 43 eP P 19 25 27.4 -0.3
5.6nm,0.8s
GIVF **Givet** 87.32 40 eP P 19 25 30.7 +0.3
56nm,1.2s
GIVF **Givet** 87.32 40 eP P 19 25 30.7 +0.3
56nm,1.2s
VIVF **Saint-Julien-l** 87.33 45 eP P 19 25 30.2 -0.5
18nm,1.2s
VIVF **Saint-Julien-l** 87.33 45 eP P 19 25 30.2 -0.5
18nm,1.2s
MEZF **Maizieres J'vi** 87.50 42 eP P 19 25 31.6 +0.2
20nm,1.1s
MEZF **Maizieres J'vi** 87.50 42 eP P 19 25 31.6 +0.2
20nm,1.1s
PAGF **Fort de Pagny** 87.95 42 eP P 19 25 33.9 +0.4
16nm,1.3s
PAGF **Fort de Pagny** 87.95 42 eP P 19 25 33.9 +0.4
16nm,1.3s
HINF **Hinteralfeld** 88.73 42 eP P 19 25 37.1 -0.2
HINF **Hinteralfeld** 88.73 42 eP P 19 25 37.1 -0.2
LPG **La Plagne** 88.78 45 eP P 19 25 38.0 +0.1
LPG **La Plagne** 88.78 45 eP P 19 25 38.0 +0.1
CDF **Champ du Feu** 88.99 42 eP P 19 25 39.6 +1.1
37nm,1.6s
QSPA **South Pole Qui** 92.84 180 P P 19 25 57.0 +0.9
QSPA **South Pole Qui** 92.84 180 P P 19 25 57.0 +0.9
2.7nm,1.0s,baz=179,slow=2.2,SNR=9.5
GERES **GERESS Array B** 93.19 41 P P 19 25 56.7 -1.4
GERES **GERESS Array B** 93.19 41 P P 19 25 56.7 -1.4
0.3nm,0.4s,baz=259,slow=1.4,SNR=5.0
ZALV **Zalesovo Beam** 122.72 8 PKP PKPdf 19 31 38.6 -0.7
ZALV **Zalesovo Beam** 122.72 8 PKP PKPdf 19 31 38.6 -0.7
0.7nm,0.7s,baz=316,slow=4.0,SNR=3.0
KSRS **Korea Array** 130.00 326 PKP PKPdf 19 31 53.6 -0.1
2.6nm,1.1s,baz=48,slow=1.9,SNR=5.8
KSAR **Wonju Array Be** 130.03 326 PKP PKPdf 19 31 53.6 -0.1
WMQ **Urumqi** 133.03 8 ePKP PKPdf 19 31 59.5 +0.1
ASAR **Alice Springs** 137.63 237 PKP PKPdf 19 32 07.2 -1.2
ASAR **Alice Springs** 137.63 237 PKP PKPdf 19 32 07.2 -1.2
0.7nm,0.8s,baz=104,slow=1.7,SNR=7.7
GTA **Gaotai** 137.81 355 ePKP PKPdf 19 32 12.8 +4.3
GTA sPKP 19 32 27.4
WRA **Warramunga Arr** 138.60 243 PKP PKPdf 19 32 09.1 -1.3
WRA **Warramunga Arr** 138.60 243 PKP PKPdf 19 32 09.1 -1.3
0.9nm,0.8s,baz=88,slow=2.4,SNR=6.3
LZH **Lanzhou** 140.56 350 ePKP PKPdf 19 32 11.0 -2.7
ENH **Enshi** 144.56 339 ePKPdf PKPab 19 32 18.7 -0.4
GYA **Guiyang** 149.02 341 ePKPbc PKPdf 19 32 25.6 -2.9
GYA sPKP 19 32 45.3
GYA PKS PP 19 36 01.3 -0.7
GYA PP PP 19 36 04.3 +2.3
GYA AMB AMB
comp=Z,80nm,7.8s
KMI **Kunming** 151.40 347 PKPbc PKPdf 19 32 29.9 -2.5
CMAR **Chiang Mai Arr** 158.62 351 PKPab PKPab 19 33 14.7 -2.4
CMAR **Chiang Mai Arr** 158.62 351 PKPab PKPab 19 33 14.7 -2.4
comp=Z,1.4nm,1.0s,baz=358,slow=5.9,SNR=6.2

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*BJI **16** 19:17:00.0,56˙.30N×152˙.40W,h10km,mB4.6/1,mb4.4/4, Ms5.1/2,Ms7.4/3*
*IDC **16** 19:17:02.1±0.9,56˙.41N×152˙.47W,h0km,mb4.0/20, mb1 4.1/22,mb1mx4.1/31,mbtmp4.0/22,ML3.6/1,Error ellipse: s-maj=23.7km s-min=12.5km az=39.0*
*ISCJB **16** 19:17:03.2±0.4,56˙.44N±0˙.04×152˙.22W±0˙.07,h20km, mb4.0/24,MS4.8/1,Error ellipse: s-maj=5.8km s-min=4.8km az=38.0*
*NEIC **16** 19:17:03.8,56˙.24N×152˙.19W,h20km,mb4.1/3, ML4.0(AEIC),After AEIC.*

ISC 16 19:17:04.9±0.5,56˚.45N±0˙.06×152˚.37W±0˙.05,h20km, n100,σ1°37/111,mb4.1/24,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	Old Harbor	0.93	327	P	Pn	19 17 22.7	0.0
KDAK	Kodiak Island	1.34	355	Sn	Sb	19 17 46.2	+0.2
KDAK				S	Sn	19 17 46.5	+0.8
KDAK	Kodiak Island	1.34	355	Pn	Pn	19 17 28.3	-0.1
	15nm,0.3s,baz=225,slow=6.3,SNR=15						
KDAK				Sn	Sb	19 17 46.2	+0.2
	123nm,0.3s,baz=12,slow=20,SNR=35						
KAKN	Katmai Knife C	2.36	323	P	Pn	19 17 43.1	+0.6
FOSS	Fourpeaked Sta	2.46	344	P	Pn	19 17 45.2	+1.3
MCNL	McNeil River	2.94	340	P	Pn	19 17 52.1	+1.6
AUI	Augustine Isla	2.95	349	P	Pn	19 17 52.1	+1.5
AUI				S	Sb	19 18 29.3	-3.0
AUW	Augustine West	2.99	349	P	Pn	19 17 52.9	+1.8
ANNE	Aniakchak Nort	3.17	281	P	Pn	19 17 53.2	-0.5
ANPK	Aniakchak Peak	3.21	279	P	Pn	19 17 53.8	-0.3
OPT	Oil Point	3.25	352	P	Pn	19 17 56.3	+1.7
CHGN	Chignik	3.37	270	ePn	Pn	19 17 54.4	-1.9
BRLK	Bradley Lake	3.42	13	P	Pn	19 17 56.7	-0.3
ILW	Iliamna West	3.64	354	P	Pn	19 18 01.1	+0.8
SEW	Seward	3.98	22	ePn	Pn	19 18 02.5	-2.1
RSO	Redoubt South	4.03	357	ePn	Pn	19 18 06.1	+0.5
DFR	Drift River	4.16	358	P	Pn	19 18 08.8	+1.6
SDPT	Sand Point	4.70	260	S	Sn	19 19 05.2	-3.2
CKL	Chakachamna La	4.76	0	P	Pn	19 18 15.4	-0.2
SVW2	Sparrevohn	4.95	342	P	Pn	19 18 18.8	+0.8
STLK	Strandline Lak	5.07	3	P	Pn	19 18 20.8	+1.0
EYAK	Cordova Ski Ar	5.38	37	P	Pn	19 18 23.3	-0.6
PMR	Palmer	5.42	17	ePn	Pn	19 18 24.6	+0.1
	49nm,1.0s						
VLZ	Valdez	5.64	31	P	Pn	19 18 27.1	-0.5
SML	Sawmill	5.76	19	ePn	Pn	19 18 29.3	+0.1
	15nm,1.0s						
DIV	Divide	5.81	33	P	Pn	19 18 29.6	-0.3
PPLA	Purkeypile	6.47	1	ePn	Pn	19 18 38.6	-0.4
	9.2nm,0.5s						
TT01	Tatalina	6.74	346	P	Pn	19 18 42.7	+0.1
BALM	Baldy	6.95	44	P	Pn	19 18 45.4	-0.2
GRNC	Granite Creek	7.01	48	P	Pn	19 18 46.0	-0.5
TRF	Thorofare Moun	7.10	8	P	Pn	19 18 47.5	-0.2
SAMH	Samovar Hills	7.13	54	P	Pn	19 18 47.9	-0.2
RND	Reindeer	7.20	13	P	Pn	19 18 49.6	+0.7
PAX	Paxson	7.41	25	ePn	Pn	19 18 52.5	+0.7
	12nm,0.6s						
MCK	McKinley	7.50	12	ePn	Pn	19 18 54.2	+1.1
	29nm,0.9s						
PNL	Peninsula	7.60	60	P	Pn	19 18 54.1	-0.2
AKUT	Akutan	8.00	259	Pn	Pn	19 18 56.4	-3.4
WRH	Wood River Hil	8.32	13	P	Pn	19 19 04.1	-0.1
UNV	Unalaska Valle	8.51	258	Pn	Pn	19 19 05.1	-1.7
COLA	College	8.73	13	ePn	Pn	19 19 10.5	+0.7
IL1	Eielson Array	8.77	16	P	Pn	19 19 09.7	-0.7
ILAR	Eielson Array	8.77	16	Pn	Pn	19 19 10.3	-0.1
ILAR				Sn	Sn	19 20 44.7	-3.8
ILAR	Eielson Array	8.77	16	Pn	Pn	19 19 10.3	-0.1
	1.0nm,0.3s,baz=200,slow=14,SNR=27						
ILAR				Sn	Sn	19 20 44.7	-3.8
	1.3nm,0.3s,baz=204,slow=22,SNR=5.7						
SKAG	Skagway	9.54	65	ePn	Pn	19 19 20.6	-0.3
	12nm,0.5s						
IM3	Indian Mountai	9.59	357	P	Pn	19 19 20.6	-1.0
DIB	Dawson Inlet,	11.91	97	T	T	19 32 01.3	
	SNR=21						
DLBC	Dease Lake	12.18	71	Pn	Pn	19 19 57.8	+0.6
INK	Inuvik	14.66	28	Pn	P	19 20 34.9	-2.0
INK	Inuvik	14.66	28	Pn	P	19 20 34.9	-2.0
	0.2nm,0.3s,baz=226,slow=13,SNR=9.8						
YKW3	Yellowknife Ar	19.87	57	eP	P	19 21 34.8	+0.4
	0.1nm,1.1s						
YKA	Yellowknife Ar	19.88	57	P	P	19 21 35.2	+0.7
YKA	Yellowknife Ar	19.88	57	P	P	19 21 35.2	+0.7
	0.2nm,0.3s,baz=269,slow=9.6,SNR=35						
BILL	Bilibino	21.97	318	eP	P	19 21 55.7	-1.4
	8.3nm,1.0s						
NEW	Newport	22.81	96	eP	P	19 22 02.4	-3.9
	2.5nm,0.8s						
NEW	Newport	22.81	96	P	P	19 22 07.5	+1.2
	1.7nm,0.7s,baz=298,slow=14,SNR=3.7						
YBH	Yreka Blue Hor	24.12	115	P	P	19 22 21.3	+2.1
YBH	Yreka Blue Hor	24.12	115	P	P	19 22 21.3	+2.1
	2.9nm,0.9s,baz=216,slow=2.5,SNR=5.8						
WVOR	Wild Horse Val	25.71	109	eP	P	19 22 34.8	+1.1
	7.7nm,1.0s						
ELK	Elko	28.71	107	P	P	19 23 01.9	+1.2
ELK	Elko	28.71	107	P	P	19 23 01.9	+1.2
	1.0nm,0.8s,baz=303,slow=5.9,SNR=4.3						
NVAR	Mina Array Bea	28.83	114	P	P	19 23 03.2	+1.4
NVAR	Mina Array Bea	28.83	114	P	P	19 23 03.2	+1.4
	1.7nm,0.7s,baz=299,slow=9.2,SNR=10.0						
PDAR	Pinedale Array	30.38	98	P	P	19 23 16.4	+0.8
PDAR	Pinedale Array	30.38	98	P	P	19 23 16.4	+0.8
	1.3nm,0.6s,baz=312,slow=5.3,SNR=7.9						
ULM	Lac du Bonnet	33.44	76	P	P	19 23 41.0	-1.1
ULM	Lac du Bonnet	33.44	76	P	P	19 23 41.0	-1.1
	6.8nm,0.8s,baz=330,slow=8.6,SNR=3.3						
TXAR	Lajitas Array	43.50	108	P	P	19 25 06.2	-0.7
TXAR	Lajitas Array	43.50	108	P	P	19 25 06.2	-0.7
	1.6nm,0.9s,baz=324,slow=8.2,SNR=6.5						
SCHQ	Schefferville	45.30	54	P	P	19 25 21.6	+0.7
SCHQ	Schefferville	45.30	54	P	P	19 25 21.6	+0.7
	2.9nm,0.6s,baz=320,slow=8.6,SNR=10.0						
ARCES	ARCESS Array B	54.31	1	P	P	19 26 29.6	+0.5
ARCES	ARCESS Array B	54.31	1	P	P	19 26 29.6	+0.5
	1.3nm,0.8s,baz=359,slow=7.3,SNR=5.4						
SONM	Songino Array	57.20	308	P	P	19 26 51.3	+1.0
SONM	Songino Array	57.20	308	P	P	19 26 51.3	+1.0
	2.0nm,0.7s,baz=40,slow=6.7,SNR=19						
HHC	Hu-ho-hao-te	60.17	300	eP	P	19 27 11.1	0.0
HHC				sP	sP	19 27 17.1	-2.8
HHC				PcP	PcP	19 27 55.4	-1.1
HHC				PP	PP	19 29 25.8	+2.4
HHC				S	S	19 35 22.5	-0.9

HHC					sS	**sS**	19 35 32.0	-2.0
HHC					ScS	SKKSac	19 36 57.8	-2.4
HHC					SS	**SS**	**19 39 23.9**	**+4.0**
HHC					LR	LR		
	comp=N,390nm,13.1s							
HHC					LR	LR		
	comp=E,580nm,16.7s							
HHC					LR	LR		
	comp=Z,460nm,16.7s							
ZALV	**Zalesovo Beam**	**60.46**	**325**		P	**P**	**19 27 13.3**	**+0.7**
ZALV	**Zalesovo Beam**	**60.46**	**325**		P	**P**	**19 27 13.3**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=32,slow=6.4,SNR=8.1							
NB2	**NORSAR Subarra**	**62.14**	**9**		P	**P**	**19 27 24.7**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=350,slow=6.9							
NOA	**NORSAR Array B**	**62.14**	**9**		P	**P**	**19 27 24.8**	**+0.8**
NOA	**NORSAR Array B**	**62.14**	**9**		P	**P**	**19 27 24.8**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=351,slow=6.7,SNR=8.4							
FINES	**FINESS Array B**	**62.44**	**1**		P	**P**	**19 27 26.5**	**+0.6**
FINES	**FINESS Array B**	**62.44**	**1**		P	**P**	**19 27 26.5**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=359,slow=9.9,SNR=6.8							
HFS	**Hagfors**	**63.24**	**8**		P	**P**	**19 27 31.8**	**+0.6**
HFS	**Hagfors**	**63.24**	**8**		P	**P**	**19 27 31.8**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=27,slow=3.6,SNR=11							
MKAR	**Makanchi Array**	**67.44**	**323**		P	**P**	**19 27 58.8**	**+0.1**
MKAR	**Makanchi Array**	**67.44**	**323**		P	**P**	**19 27 58.8**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=27,slow=6.6,SNR=7.4							
WMQ	**Urumqi**	**68.08**	**317**		*e*P	**P**	**19 28 04.8**	**+1.9**
CLL	**Collm**	**71.93**	**10**		*e*P	**P**	**19 28 27.0**	**+0.8**
AKASG	**Malin Array Be**	**73.21**	**359**		P	**P**	**19 28 34.4**	**+0.5**
AKASG	**Malin Array Be**	**73.21**	**359**		P	**P**	**19 28 34.4**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=0.8,slow=6.0,SNR=4.5							
GERES	**GERESS Array B**	**74.43**	**10**		P	**P**	**19 28 42.1**	**+0.9**
GERES	**GERESS Array B**	**74.43**	**10**		P	**P**	**19 28 42.1**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=13,slow=6.1,SNR=3.3							
AVF	**Avril sur Loir**	**75.14**	**17**		*e*P	**P**	**19 28 46.1**	**+0.9**
	comp=Z,10.0nm,0.9s							
KSH	**Kashi**	**76.02**	**323**		*e*P	P	19 28 54.5	+4.0
KSH					*ep*P	pP	19 28 59.3	+2.2
KSH					*es*P	sP	19 29 01.3	+1.8
KSH					*e*PcP	**PcP**	**19 29 05.8**	**+3.0**
KSH					*e*PP	PP	19 31 48.1	+7.6
KSH					*e*S	S	19 38 39.3	+6.8
KSH					*es*S	sS	19 38 46.1	+2.7
KSH					*e*SKS	**SKKSac**	**19 39 00.9**	**+0.4**
KSH					*e*ScS	**ScS**	**19 39 06.3**	**+2.3**
KSH					*es*S	SS	19 43 37.3	+13
KSH					pmax	pmax		
	comp=Z,3.0nm,0.9s							
KSH					LR	LR		
	comp=N,180nm,3.7s							
KSH					LR	LR		
	comp=E,250nm,5.5s							
KSH					LR	LR		
	comp=Z,270nm,5.0s							
ESDC	**Sonseca Array**	**80.57**	**24**		P	**P**	**19 29 16.8**	**+1.2**
ESDC	**Sonseca Array**	**80.57**	**24**		P	**P**	**19 29 16.8**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=337,slow=5.1,SNR=6.1							
BRTR	**Keskin Array B**	**84.06**	**355**		P	**P**	**19 29 33.6**	**-0.3**
BRTR	**Keskin Array B**	**84.06**	**355**		P	**P**	**19 29 33.6**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=27,slow=8.3,SNR=4.3							
CMAR	**Chiang Mai Arr**	**84.67**	**295**		P	**P**	**19 29 36.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**84.67**	**295**		P	**P**	**19 29 36.8**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=13,slow=5.4,SNR=4.5							

IDC ***16*** *19:20:00.8±0.7,56˚.44N×152˚.52W,h0km,mb4.1/23, mb1 4.3/25,mb1mx4.2/31,mbtmp4.1/25,ML3.4/1,Error ellipse: s-maj=17.9km s-min=12.9km az=16.0*

ISCJB ***16*** *19:20:01.2±0.3,56˚.39N±0˚.04×152˚.38W±0˚.05,h20km, mb4.3/55,MS4.5/1,Error ellipse: s-maj=5.5km s-min=3.9km az=160.3*

BJI ***16*** *19:20:01.1,56˚.43N×153˚.19W,h9km,mB5.4/6,mb4.7/13, Ms5.2/6,Ms7 4.9/6*

NEIC ***16*** *19:20:01.2,56˚.26N×152˚.30W,h3km,mb4.5/13, ML3.9(AEIC),After AEIC.*

MOS ***16*** *19:20:04.2±1.0,56˚.57N×152˚.61W,h33km,mb4.7/22, Error ellipse: s-maj=15.1km s-min=6.0km az=92.3*

ISC 16 19:20:03.4±0.4,56˚.45N±0˚.05×152˚.60W±0˚.04,h20km, n177,σ1ϕ40/199,mb4.4/55,4C-2D,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.86**	**334**	P		**Pn**	**19 20 20.7**	**+0.3**
KDAK	**Kodiak Island**	**1.34**	**0**	P		**Pb**	**19 20 27.4**	**-0.4**
KDAK				Sn		**Sb**	**19 20 45.5**	**+1.1**
KDAK	**Kodiak Island**	**1.34**	**0**	Pn		**Pn**	**19 20 27.2**	**+0.4**
	20nm,0.3s,baz=191,slow=8.3,SNR=33							
KDAK				Sn		**Sb**	**19 20 45.5**	**+1.1**
	80nm,0.3s,baz=33,slow=15,SNR=27							
KABR	**Katmai Barrier**	**2.12**	**324**	P		**Pn**	**19 20 39.4**	**+1.7**
KAWH	**Katmai**	**2.27**	**329**	P		**Pb**	**19 20 42.0**	**-1.8**
KCE	**Katmai Mt Cerb**	**2.28**	**323**	P		**Pb**	**19 20 42.2**	**-1.6**
KAKN	**Katmai Knife C**	**2.28**	**325**	P		**Pn**	**19 20 41.9**	**+2.0**
KABU	**Katmai Buttres**	**2.33**	**323**	P		**Pb**	**19 20 43.2**	**-1.6**
FONW	**Fourpeaked Sta**	**2.49**	**344**	P		**Pn**	**19 20 45.1**	**+2.3**
KELA	**Mount Kelaz**	**2.62**	**321**	P		**Pn**	**19 20 46.3**	**+1.7**
AUW	**Augustine West**	**2.96**	**351**	P		**Pn**	**19 20 51.4**	**+2.1**
AUNW	**Augustine NWes**	**2.97**	**351**	P		**Pn**	**19 20 51.5**	**+2.2**
ANNE	**Aniakchak Nort**	**3.05**	**281**	P		**Pn**	**19 20 50.8**	**+0.3**
ANNW	**Aniakchak Nort**	**3.14**	**282**	P		**Pn**	**19 20 52.4**	**+0.7**
OPT	**Oil Point**	**3.23**	**354**	P		**Pn**	**19 20 54.8**	**+1.9**
CHGN	**Chignik**	**3.24**	**270**	*e*Pn		**Pn**	**19 20 51.7**	**-1.3**
BRLK	**Bradley Lake**	**3.45**	**15**	P		**Pn**	**19 20 55.6**	**-0.3**
IVE	**Iliamna Volcan**	**3.58**	**357**	P		**Pn**	**19 20 59.6**	**+1.8**
VNHG	**Veniaminof 1**	**3.66**	**269**	P		**Pn**	**19 20 60.0**	**+1.1**
SEW	**Seward**	**4.02**	**23**	P		**Pn**	**19 21 02.7**	**-1.1**
RSO	**Redoubt South**	**4.03**	**359**	*e*Pn		**Pn**	**19 21 04.8**	**+0.8**
DFR	**Drift River**	**4.16**	**359**	P		**Pn**	**19 21 07.0**	**+1.3**
SDPT	**Sand Point**	**4.57**	**259**	*e*Pn		**Pn**	**19 21 10.3**	**-1.0**
SPU	**Mount Spurr**	**4.75**	**3**	*e*Pn		**Pn**	**19 21 11.9**	**-2.0**
BGL	**Barrier Glacie**	**4.83**	**1**	P		**Pn**	**19 21 16.4**	**+1.5**
SVW2	**Sparrevohn**	**4.91**	**343**	P		**Pn**	**19 21 17.8**	**+1.8**
STLK	**Strandline Lak**	**5.08**	**4**	P		**Pn**	**19 21 19.5**	**+1.1**
EYAK	**Cordova Ski Ar**	**5.46**	**38**	P		**Pn**	**19 21 22.5**	**-1.0**
PMR	**Palmer**	**5.46**	**18**	*e*P		**Pn**	**19 21 23.2**	**-0.2**
PMR	**Palmer**	**5.46**	**18**	*e*Pn		**Pn**	**19 21 23.2**	**-0.2**
VLZ	**Valdez**	**5.71**	**32**	P		**Pn**	**19 21 26.0**	**-0.9**
RAGM	**Ragged Mountai**	**5.74**	**43**	P		**Pn**	**19 21 25.9**	**-1.5**
SML	**Sawmill**	**5.80**	**20**	*e*P		**Pn**	**19 21 25.9**	**-2.4**
SML	**Sawmill**	**5.80**	**20**	*e*Pn		**Pn**	**19 21 25.9**	**-2.4**
DIV	**Divide**	**5.88**	**34**	P		**Pn**	**19 21 28.2**	**-1.1**
KLU	**Klutina**	**6.12**	**32**	P		**Pn**	**19 21 31.3**	**-1.4**
FALS	**False Pass**	**6.33**	**260**	Pn		**Pn**	**19 21 33.6**	**-1.8**
MCARA	**McCarthy VSAT**	**7.00**	**41**	P		**Pn**	**19 21 42.7**	**-2.0**
MCARA				S		**Sn**	**19 23 00.5**	**-3.0**
BALM	**Baldy**	**7.04**	**45**	P		**Pn**	**19 21 44.2**	**-1.1**
BALM	**Baldy**	**7.04**	**45**	P		**Pn**	**19 21 44.1**	**-1.1**
GRNC	**Granite Creek**	**7.11**	**48**	P		**Pn**	**19 21 44.9**	**-1.4**
SAMH	**Samovar Hills**	**7.24**	**54**	P		**Pn**	**19 21 46.2**	**-1.7**
MCK	**McKinley**	**7.53**	**13**	*e*P		**Pn**	**19 21 51.8**	**-0.1**
MCK	**McKinley**	**7.53**	**13**	*e*Pn		**Pn**	**19 21 51.8**	**-0.1**
PNL	**Peninsula**	**7.71**	**60**	P		**Pn**	**19 21 52.5**	**-1.9**
AKUT	**Akutan**	**7.87**	**258**	*e*Pn		**Pn**	**19 21 58.0**	**+1.5**
UNV	**Unalaska Valle**	**8.38**	**258**	Pn		**Pn**	**19 22 03.3**	**-0.2**
COLA	**College**	**8.77**	**13**	*e*P		Pn	19 22 03.6	-5.1
COLA	**College**	**8.77**	**13**	*e*Pn		Pn	19 22 03.6	-5.1
ILAR	**Eielson Array**	**8.80**	**16**	Pn		**Pn**	**19 22 08.8**	**-0.5**
ILAR				Sn		**Sn**	**19 23 44.6**	**-3.3**
ILAR	**Eielson Array**	**8.80**	**16**	Pn		**Pn**	**19 22 08.8**	**-0.5**
	1.5nm,0.3s,baz=200,slow=14,SNR=13							
ILAR				Sn		**Sn**	**19 23 44.6**	**-3.3**
	1.5nm,0.3s,baz=208,slow=22,SNR=7.1							
IM3	**Indian Mountai**	**9.58**	**357**	P		**Pn**	**19 22 19.7**	**-0.3**
SKAG	**Skagway**	**9.66**	**65**	*e*Pn		**Pn**	**19 22 20.3**	**-0.7**
EGAK	**Eagle**	**10.05**	**29**	*e*Pn		**Pn**	**19 22 24.8**	**-1.6**
TNA	**Tin City**	**11.74**	**327**	*e*Pn		**Pn**	**19 22 48.3**	**-1.1**
DIB	**Dawson Inlet,**	**12.04**	**97**	T		T	19 35 00.6	
	SNR=5.9							
INK	**Inuvik**	**14.72**	**29**	Pn		**Pn**	**19 23 30.1**	**0.0**
INK	**Inuvik**	**14.72**	**29**	Pn		**Pn**	**19 23 30.1**	**0.0**
	0.1nm,0.3s,baz=220,slow=13,SNR=4.1							
YKW3	**Yellowknife Ar**	**19.98**	**57**	*e*P		**P**	**19 24 32.8**	**-1.3**
YKA	**Yellowknife Ar**	**19.99**	**57**	P		**P**	**19 24 34.3**	**+0.1**
YKA	**Yellowknife Ar**	**19.99**	**57**	P		**P**	**19 24 34.3**	**+0.1**
	0.3nm,0.3s,baz=269,slow=11,SNR=19							
FX1	**Attu Island--F**	**19.99**	**274**	*e*P		**P**	**19 24 34.3**	**0.0**
FX1	**Attu Island--F**	**19.99**	**274**	P		**Pn**	**19 24 36.6**	**+0.6**
	5.2nm,0.6s,baz=93,slow=16,SNR=5.6							
BILL	**Bilibino**	**21.89**	**318**	*c*	*i*P	**P**	**19 24 53.2**	**-1.4**
BILL				pmax		pmax		
	comp=Z,12nm,0.8s							
BILL	**Bilibino**	**21.89**	**318**	*e*P		**P**	**19 24 55.0**	**+0.4**
	comp=Z,15nm,0.9s							
YBH	**Yreka Blue Hor**	**24.24**	**115**	P		**P**	**19 25 20.3**	**+1.5**
YBH	**Yreka Blue Hor**	**24.24**	**115**	P		**P**	**19 25 20.3**	**+1.5**
	comp=Z,1.7nm,0.7s,baz=193,slow=1.6,SNR=4.9							
JTMT	**Jette**	**24.81**	**94**	*e*P		**P**	**19 25 24.9**	**+1.0**
YBMT	**Yellow Bay**	**24.89**	**94**	*e*P		**P**	**19 25 25.6**	**+0.9**
	comp=Z,3.5nm,0.6s							
WVOR	**Wild Horse Val**	**25.84**	**108**	*e*P		**P**	**19 25 33.4**	**+0.1**
WVOR				pmax		pmax		
	comp=Z,6.0nm,1.0s							
WVOR	**Wild Horse Val**	**25.84**	**108**	*e*P		**P**	**19 25 33.4**	**+0.1**
	comp=Z,6.1nm,1.0s							
SEY	**Seymchan**	**27.73**	**306**	*e*P		**P**	**19 25 49.9**	**-0.1**
PETK	**Petropavlovsk-**	**28.35**	**284**	P		**P**	**19 25 56.6**	**+0.9**
PETK	**Petropavlovsk-**	**28.35**	**284**	P		**P**	**19 25 56.5**	**+0.9**
PETK	**Petropavlovsk-**	**28.35**	**284**	P		**P**	**19 25 56.5**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=289,slow=11,SNR=3.5							
ELK	**Elko**	**28.83**	**107**	P		**P**	**19 26 00.9**	**+0.6**
ELK	**Elko**	**28.83**	**107**	P		**P**	**19 26 00.9**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=263,slow=3.7,SNR=4.0							
NVAR	**Mina Array Bea**	**28.95**	**114**	P		**P**	**19 26 01.2**	**-0.1**
NVAR	**Mina Array Bea**	**28.95**	**114**	P		**P**	**19 26 01.2**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=304,slow=8.2,SNR=7.8							
PDAR	**Pinedale Array**	**30.51**	**98**	P		**P**	**19 26 15.3**	**+0.1**
PDAR	**Pinedale Array**	**30.51**	**98**	P		**P**	**19 26 15.4**	**+0.1**
	comp=Z,0.6nm,0.8s,baz=313,slow=4.7,SNR=3.4							
TIXI	**Tiksi**	**34.53**	**327**	*e*	P	**P**	**19 26 48.7**	**-1.0**
TIXI				pmax		pmax		
	comp=Z,3.0nm,1.2s							
YAK	**Yakutsk**	**37.90**	**311**	*e*P		**P**	**19 27 17.7**	**-0.9**
YAK				pmax		pmax		
	comp=E,4.0nm,1.1s							
YAK				pmax		pmax		
	comp=Z,17nm,1.0s							
SUMG	**Summit**	**43.56**	**24**	*e*P		**P**	**19 28 06.0**	**+0.3**
SUMG				pmax		pmax		
	comp=Z,12nm,0.7s							
SUMG	**Summit**	**43.56**	**24**	*e*P		**P**	**19 28 06.0**	**+0.3**
	comp=Z,12nm,0.7s							
SCHQ	**Schefferville**	**45.41**	**54**	P		**P**	**19 28 20.4**	**+0.2**
SCHQ	**Schefferville**	**45.41**	**54**	P		**P**	**19 28 20.4**	**+0.2**
	comp=Z,2.4nm,0.8s,baz=275,slow=9.6,SNR=4.4							
PLAL	**Pickwick Lake**	**47.87**	**88**	*e*P		**P**	**19 28 42.0**	**+2.3**
	comp=Z,9.4nm,1.1s							
MJAR	**Matsushiro Arr**	**49.31**	**277**	P		**P**	**19 28 51.1**	**+0.3**
MJAR	**Matsushiro Arr**	**49.31**	**277**	P		**P**	**19 28 51.1**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=35,slow=6.0,SNR=7.0							
MAJO	**Matsushiro**	**49.32**	**277**	*e*P		**P**	**19 28 50.8**	**0.0**
MAJO				pmax		pmax		
	comp=Z,6.0nm,0.8s							
MAJO	**Matsushiro**	**49.32**	**277**	*e*P		**P**	**19 28 50.8**	**0.0**
	comp=Z,5.9nm,0.8s							
CN2	**Changchun**	**50.95**	**293**	*e*P		**P**	**19 29 03.8**	**+0.7**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
KEV	**Kevo**	**54.10**	**0**	*e*P		**P**	**19 29 25.4**	**-0.6**
KEV				pmax		pmax		
	comp=Z,4.0nm,0.7s							
KEV	**Kevo**	**54.10**	**0**	*e*p		**P**	**19 29 25.4**	**-0.6**
	comp=Z,4.4nm,0.7s							
KSRS	**Korea Array**	**54.24**	**285**	P		**P**	**19 29 28.8**	**+1.3**
	comp=Z,1.1nm,0.9s,baz=30,slow=8.6,SNR=4.2							
KSAR	**Wonju Array Be**	**54.27**	**285**	P		**P**	**19 29 28.8**	**+1.1**
ARCES	**ARCESS Array B**	**54.31**	**1**	P		**P**	**19 29 28.1**	**+0.6**
ARCES	**ARCESS Array B**	**54.31**	**1**	P		**P**	**19 29 28.1**	**+0.6**
	comp=Z,1.7nm,0.5s,baz=3.0,slow=6.7,SNR=14							
ARE0	**ARCESS Array S**	**54.31**	**1**	P		**P**	**19 29 27.8**	**+0.2**
LVZ	**Lovozero**	**55.85**	**357**	*e*P		**P**	**19 29 38.1**	**-0.6**
LVZ				pmax		pmax		
	comp=Z,15nm,1.2s							
ZAK	**Zakamensk**	**56.48**	**312**	*e*P		**P**	**19 29 44.6**	**+1.0**
ZAK				pmax		pmax		
	comp=Z,2.0nm,1.0s							
ULN	**Ulaanbaatar**	**56.79**	**308**	*e*P		**P**	**19 29 46.0**	**+0.1**
	comp=Z,2.8nm,1.0s							
SONM	**Songino Array**	**57.10**	**308**	P		**P**	**19 29 49.8**	**+1.7**
SONM	**Songino Array**	**57.10**	**308**	P		**P**	**19 29 49.8**	**+1.7**
	comp=Z,5.6nm,0.9s,baz=43,slow=6.5,SNR=33							
HVS	**Khovu-Aksy**	**59.65**	**318**	*e*P		**P**	**19 30 06.9**	**+1.1**
HVS				pmax		pmax		
	comp=Z,35nm,1.3s							
HHC	**Hu-ho-hao-te**	**60.06**	**299**	*e*P		**P**	**19 30 08.4**	**-0.4**
HHC				sP		**sP**	**19 30 15.1**	**-2.5**
HHC				PcP		**PcP**	**19 30 55.4**	**+0.9**
HHC				PP		**PP**	**19 32 22.3**	**+1.4**
HHC				S		**S**	**19 38 16.6**	**-3.8**
HHC				sS		**sS**	**19 38 26.1**	**-4.9**
HHC				ScS		SKKSac	19 39 55.3	-2.5
HHC				SS		**SS**	**19 42 14.4**	**-2.2**
HHC				pmax		pmax		
	comp=Z,34nm,0.7s							
HHC				pmax		pmax		
	comp=Z,1μm,8.9s							
HHC				LR		LR		
	comp=N,300nm,15.5s							
HHC				LR		LR		
	comp=E,220nm,15.5s							
HHC				LR		LR		
	comp=Z,220nm,16.7s							
NVS	**Novosibirsk**	**60.13**	**326**	*i*	P	**P**	**19 30 08.4**	**-0.4**
ZAA0	**Zalesovo Array**	**60.39**	**325**	*e*P		**P**	**19 30 11.2**	**+0.5**
ZALV	**Zalesovo Beam**	**60.39**	**325**	P		**P**	**19 30 11.4**	**+0.8**
ZALV	**Zalesovo Beam**	**60.39**	**325**	P		**P**	**19 30 11.4**	**+0.8**
ZALV	**Zalesovo Beam**	**60.39**	**325**	P		**P**	**19 30 11.4**	**+0.8**
	comp=Z,5.1nm,0.9s,baz=26,slow=6.6,SNR=18							
JOF	**Joensuu**	**60.93**	**358**	*e*P		**P**	**19 30 13.9**	**-0.3**
JOF				pmax		pmax		
	comp=Z,3.0nm,0.7s							
JOF	**Joensuu**	**60.93**	**358**	*ep*		**P**	**19 30 13.9**	**-0.3**
	comp=Z,3.1nm,0.7s							
KAF	**Kangasniemi**	**61.77**	**1**	*e*P		**P**	**19 30 19.6**	**-0.3**
KAF				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KAF	**Kangasniemi**	**61.77**	**1**	*e*p		**P**	**19 30 19.6**	**-0.3**
	comp=Z,3.1nm,0.7s							
NB2	**NORSAR Subarra**	**62.16**	**9**	P		**P**	**19 30 23.1**	**+0.5**
	comp=Z,5.5nm,0.8s,baz=350,slow=6.9							
NOA	**NORSAR Array B**	**62.16**	**9**	P		**P**	**19 30 23.1**	**+0.5**
NOA	**NORSAR Array B**	**62.16**	**9**	P		**P**	**19 30 23.1**	**+0.5**
	comp=Z,3.6nm,0.8s,baz=351,slow=6.6,SNR=16							
NAO01	**NORSAR Array S**	**62.32**	**9**	P		**P**	**19 30 23.6**	**-0.1**
FINES	**FINESS Array B**	**62.44**	**1**	P		**P**	**19 30 25.3**	**+0.9**
FINES	**FINESS Array B**	**62.44**	**1**	P		**P**	**19 30 25.3**	**+0.9**
	comp=Z,4.3nm,0.8s,baz=12,slow=9.8,SNR=17							
HFS	**Hagfors**	**63.25**	**8**	P		**P**	**19 30 30.6**	**+0.7**
HFS	**Hagfors**	**63.25**	**8**	P		**P**	**19 30 30.6**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=42,slow=4.6,SNR=14							
ARU	**Arti**	**64.69**	**341**	*d*	*i*P	**P**	**19 30 38.9**	**-0.4**
ARU							19 32 58.3	
ARU				S		**S**	**19 39 18.7**	**+0.8**
ARU				SS		**SS**	**19 43 26.6**	**-1.1**
ARU				pmax		pmax		
	comp=Z,7.0nm,1.2s							
KURK	**Kurchatov**	**65.11**	**327**	*i*	P	**P**	**19 30 42.4**	**+0.3**
KURK				pmax		pmax		
	comp=Z,4.0nm,1.2s							
EKA	**Eskdalemuir Ar**	**65.84**	**19**	P		**P**	**19 30 46.8**	**0.0**
EKA	**Eskdalemuir Ar**	**65.84**	**19**	P		**P**	**19 30 46.8**	**0.0**
	comp=Z,2.4nm,0.7s,baz=353,slow=6.0,SNR=4.7							
GTA	**Gaotai**	**66.68**	**306**	*e*P		**P**	**19 30 53.4**	**+0.8**
GTA				pP		**pP**	**19 30 59.8**	**+0.7**
GTA				sP		**sP**	**19 31 03.0**	**+1.5**
GTA				pmax		pmax		
	comp=Z,3.0nm,1.1s							
MKAR	**Makanchi Array**	**67.36**	**322**	*e*P		**P**	**19 30 56.1**	**-0.6**
MKAR	**Makanchi Array**	**67.36**	**322**	*ce*P		**P**	**19 30 57.5**	**+0.8**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
MKAR	**Makanchi Array**	**67.36**	**322**	*e*P		**P**	**19 30 56.1**	**-0.6**
MKAR	**Makanchi Array**	**67.36**	**322**	P		**P**	**19 30 57.5**	**+0.8**
	comp=Z,2.1nm,0.8s,baz=50,slow=7.0,SNR=18							
WMQ	**Urumqi**	**68.00**	**317**	*e*P		**P**	**19 31 02.9**	**+2.1**
OBN	**Obninsk**	**68.54**	**354**	*e*	P	**P**	**19 31 03.9**	**0.0**
OBN				*e*			19 31 10.1	
OBN				*e*			19 31 22.7	
OBN				pmax		pmax		
	comp=Z,7.0nm,0.9s							
ABKAR	**Akbulak array**	**71.24**	**338**	*e*P		**P**	**19 31 20.8**	**+0.2**
	comp=Z,2.1nm,0.6s							
CD2	**Chengdu**	**71.79**	**298**	P		**P**	**19 31 23.8**	**-0.5**
CD2				pP		**pP**	**19 31 28.4**	**-2.4**
CD2				sP		**sP**	**19 31 30.8**	**-2.4**
CD2				PcP		**PcP**	**19 31 43.4**	**+0.2**
CD2				PP		**PP**	**19 34 04.3**	**+1.1**
CD2				S		**S**	**19 40 41.0**	**-2.4**
CD2				sS		sS	19 40 48.3	-5.9
CD2				SKS		**SKSac**	**19 41 22.5**	**-4.3**
CD2				SS		**SS**	**19 45 17.6**	**-1.1**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,80nm,5.4s							
VRHR	**Novokhopersk**	**72.17**	**351**	*e*P		**P**	**19 31 23.5**	**-2.7**
VRHR				pmax		pmax		
	comp=N,8.0nm,0.6s							
VRHR				pmax		pmax		
	comp=Z,4.0nm,0.6s							
VRHR				pmax		pmax		
	comp=E,1.0nm,0.3s							
VSR	**Storozhevoye**	**72.26**	**352**	*e*P		**P**	**19 31 26.3**	**-0.4**
VSR				pmax		pmax		
	comp=Z,4.0nm,0.8s							
VSR				pmax		pmax		
	comp=N,1.0nm,0.4s							
VSR				pmax		pmax		
	comp=E,1.0nm,0.4s							
VORD	**Divnogorie**	**72.50**	**352**	*e*P		**P**	**19 31 27.6**	**-0.5**
VORD				pmax		pmax		
	comp=N,4.0nm,0.8s							
VORD				pmax		pmax		
	comp=Z,3.0nm,0.8s							
VORD				pmax		pmax		
	comp=E,2.0nm,0.4s							
UPC	**Upice**	**72.99**	**8**	*e*P		**P**	**19 31 32.1**	**+1.0**
UPC	**Upice**	**72.99**	**8**	*e*P		**P**	**19 31 32.1**	**+1.0**
TKM2	**Tokmak 2**	**73.00**	**325**	*e*P		**P**	**19 31 32.4**	**+0.9**
TKM2				pmax		pmax		
	comp=Z,4.0nm,0.8s							
TKM2	**Tokmak 2**	**73.00**	**325**	*e*P		**P**	**19 31 32.4**	**+0.9**
	comp=Z,3.9nm,0.8s							
DPC	**Dobruska-Polom**	**73.17**	**7**	*e*P		**P**	**19 31 33.3**	**+1.1**
DPC	**Dobruska-Polom**	**73.17**	**7**	*e*P		**P**	**19 31 33.8**	**+1.6**
	comp=Z,8.0nm,1.1s							
DPC	**Dobruska-Polom**	**73.17**	**7**	*e*P		**P**	**19 31 33.3**	**+1.1**
AKASG	**Malin Array Be**	**73.20**	**359**	P		**P**	**19 31 31.8**	**-0.5**
AKASG	**Malin Array Be**	**73.20**	**359**	P		**P**	**19 31 31.8**	**-0.5**
AKASG	**Malin Array Be**	**73.20**	**359**	P		**P**	**19 31 31.8**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=358,slow=5.7,SNR=7.6							
AAK	**Ala-Archa**	**73.60**	**326**	*e*P		**P**	**19 31 36.3**	**+1.3**
AAK				pmax		pmax		
	comp=Z,3.0nm,0.8s							
AAK	**Ala-Archa**	**73.60**	**326**	*e*P		**P**	**19 31 36.3**	**+1.3**
	comp=Z,2.8nm,0.8s							
EKS2	**Erkin-Say**	**73.80**	**326**	*e*P		**P**	**19 31 36.1**	**-0.1**
EKS2				pmax		pmax		
	comp=Z,6.0nm,1.1s							
EKS2	**Erkin-Say**	**73.80**	**326**	*e*P		**P**	**19 31 36.1**	**-0.1**
	comp=Z,6.3nm,1.1s							
KHC	**Kasperske Hory**	**74.16**	**9**	*e*P		**P**	**19 31 39.6**	**+1.6**
KHC	**Kasperske Hory**	**74.16**	**9**	*e*P		**P**	**19 31 39.6**	**+1.6**
KKAR	**Karatay Array**	**74.37**	**329

TRIZ	**Trizonia**	**0.54**	**297**	*e*Pb	**Pb**	**19 42 43.9**	**0.0**
TRIZ				*e*Sb	**Sb**	**19 42 51.5**	**-0.1**
LAKA	**Lakka**	**0.56**	**282**	*e*PB	**Pg**	**19 42 43.5**	**-0.1**
LAKA				*e*SB	**Sg**	**19 42 51.1**	**0.0**
LAKA	**Lakka**	**0.56**	**282**	*e*Pb	**Pg**	**19 42 43.5**	**-0.1**
LAKA				*e*Sb	**Sg**	**19 42 51.1**	**0.0**
LKR	**Lokris**	**0.58**	**26**	P	**Pg**	**19 42 43.2**	**-0.8**
LKR				S	**Sg**	**19 42 51.5**	**-0.2**
LKR	**Lokris**	**0.58**	**26**	*e*PB	**Pg**	**19 42 43.1**	**-0.9**
LKR				*e*SB	**Sg**	**19 42 52.3**	**+0.6**
LKR	**Lokris**	**0.58**	**26**	P	**Pg**	**19 42 43.2**	**-0.8**
LKR				S	**Sg**	**19 42 51.5**	**-0.2**
LKR				*e*Sb	**Sg**	**19 42 52.3**	**+0.6**
AXAR	**Agios Charalam**	**0.64**	**359**	P	**Pg**	**19 42 44.9**	**-0.2**
AXAR	**Agios Charalam**	**0.64**	**359**	P	**Pg**	**19 42 44.9**	**-0.2**
EFP	**Efpalio**	**0.68**	**297**	*e*PB	**Pg**	**19 42 45.8**	**0.0**
EFP	**Efpalio**	**0.68**	**297**	*e*Pb	**Pg**	**19 42 45.8**	**0.0**
DID	**Didima**	**0.76**	**144**	P	**Pg**	**19 42 47.0**	**-0.3**
DID				S	**Sb**	**19 42 58.0**	**0.0**
DID	**Didima**	**0.76**	**144**	*e*PB	**Pg**	**19 42 47.3**	**0.0**
DID				*e*SB	**Sg**	**19 42 57.8**	**+0.5**
DID	**Didima**	**0.76**	**144**	*e*Pb	**Pg**	**19 42 47.3**	**0.0**
DID				*e*Sb	**Sg**	**19 42 57.8**	**+0.5**
VLX	**Vlachokerasia**	**0.79**	**198**	P	**Pg**	**19 42 47.7**	**-0.2**
VLX	**Vlachokerasia**	**0.79**	**198**	*e*PB	**Pg**	**19 42 47.7**	**-0.2**
VLX				*e*SB	**Sg**	**19 42 58.3**	**+0.1**
VLX	**Vlachokerasia**	**0.79**	**198**	*e*Pb	**Pg**	**19 42 47.7**	**-0.2**
VLX				*e*Sb	**Sg**	**19 42 58.3**	**+0.1**
RLS	**Riolos of Patr**	**0.96**	**266**	*e*PG	**Pg**	**19 42 50.5**	**-0.6**
RLS				*e*SB	**Sb**	**19 43 04.4**	**+0.6**
RLS	**Riolos of Patr**	**0.96**	**266**	*e*Pg	**Pg**	**19 42 50.5**	**-0.6**
RLS				*e*Sb	**Sb**	**19 43 04.4**	**+0.6**
NEO	**Neokhori**	**1.25**	**20**	*e*PG	**Pn**	**19 42 56.1**	**+0.1**
NEO	**Neokhori**	**1.25**	**20**	*e*Pg	**Pn**	**19 42 56.1**	**+0.1**

CSEM ***16*** *19:44:05.0, 40.68N×30.48E, h14km, MD2.6, After ISK*
ISK 16 19:44:05.0, 40.68N×30.48E, h14km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPNC	**Sapanca-Adapaz**	**0.13**	**275**	*e*PG	Pb	19 44 09.6	+0.3
SPNC				*e*SG	Sg	19 44 11.4	+0.5
SPNC	**Sapanca-Adapaz**	**0.13**	**275**	*e*Pg	Pb	19 44 09.6	+0.3
SPNC				*e*Sg	Sg	19 44 11.4	+0.5
GULT	**Gulveren**	**0.24**	**174**	*e*PG	Pb	19 44 11.2	-0.2
GULT				*e*SG	Sg	19 44 14.6	+0.5
GULT	**Gulveren**	**0.24**	**174**	*e*Pg	Pb	19 44 11.2	-0.1
GULT				*e*Sg	Sg	19 44 14.6	+0.5
MDUB	**Mudurnu**	**0.58**	**110**	*e*PG	Pg	19 44 16.4	-0.2
MDUB				*e*SG	Sb	19 44 25.4	0.0
MDUB	**Mudurnu**	**0.58**	**110**	*e*Pg	Pg	19 44 16.4	-0.2
MDUB				*e*Sg	Sb	19 44 25.5	+0.1
ADVT	**Abdulvahap**	**0.61**	**247**	*e*PG	Pb	19 44 17.4	-0.2
ADVT				*e*SG	Sb	19 44 26.1	0.0
ADVT	**Abdulvahap**	**0.61**	**247**	*e*Pg	Pb	19 44 17.4	-0.1
ADVT				*e*Sg	Sb	19 44 26.1	+0.1
SILT	**Sile**	**0.79**	**307**	*e*PG	Pb	19 44 20.8	+0.2
SILT	**Sile**	**0.79**	**307**	*e*Pg	Pb	19 44 20.8	+0.2
IZI	**Iznik**	**0.84**	**247**	*e*PG	Pn	19 44 22.0	-0.5
IZI	**Iznik**	**0.84**	**247**	*e*Pg	Pn	19 44 22.0	-0.5
YLV	**Yalova**	**0.85**	**263**	*e*PG	Pb	19 44 21.7	0.0
YLV	**Yalova**	**0.85**	**263**	*e*Pg	Pb	19 44 21.7	+0.1
BUY	**Buyukada**	**1.05**	**280**	*e*PG	Pn	19 44 25.5	+0.2
BUY	**Buyukada**	**1.05**	**280**	*e*Pg	Pn	19 44 25.5	+0.2
ARMT	**Armutlu**	**1.24**	**265**	*e*PN	Pg	19 44 28.5	-0.3
ARMT	**Armutlu**	**1.24**	**265**	*e*Pn	Pb	19 44 28.5	+0.3
TVSB	**Tavsanli**	**1.45**	**213**	*e*PN	Pb	19 44 31.7	-0.3
TVSB	**Tavsanli**	**1.45**	**213**	*e*Pn	Pb	19 44 31.7	-0.3
CTKS	**Kestanelik-??a**	**1.60**	**291**	*e*PN	Pn	19 44 33.4	+0.6
CTKS	**Kestanelik-??a**	**1.60**	**291**	*e*Pn	Pn	19 44 33.4	+0.6

IDC ***16*** *19:56:51.5±2.0, 56.32N×152.47W, h0km, mb3.6/6, mb1 3.8/8, mb1mx3.6/28, mbtmp3.7/8, ML3.2/2, Error ellipse: s-maj=40.2km s-min=30.1km az=142.0*
ISCJB ***16*** *19:56:52.5±0.9, 56.38N±0.06×152.09W±0.09, h20km, mb3.7/6, Error ellipse: s-maj=9.2km s-min=7.3km az=4.1*
NEIC ***16*** *19:56:56.6, 56.51N×152.35W, h10km, ML3.1(AEIC), After AEIC.*
ISC 16 19:56:54.7±1.1, 56.46N±0.09×152.32W±0.07, h20km, n33, σ1=30/38, mb3.9/6, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.94**	**326**	P	**Pb**	**19 57 12.0**	**-0.2**
KDAK	**Kodiak Island**	**1.34**	**354**	P	**Pn**	**19 57 18.6**	**+0.4**
KDAK	**Kodiak Island**	**1.34**	**354**	Pn	**Pn**	**19 57 18.6**	**+0.4**
	5.1nm,0.3s,baz=195,slow=7.9,SNR=73						
KDAK				Sn	**Sb**	**19 57 36.5**	**+0.7**
	16nm,0.3s,baz=298,slow=18,SNR=30						
KABR	**Katmai Barrier**	**2.21**	**321**	P	**Pn**	**19 57 30.8**	**+0.5**
KAKN	**Katmai Knife C**	**2.37**	**322**	P	**Pn**	**19 57 33.3**	**+0.8**
FOSS	**Fourpeaked Sta**	**2.46**	**343**	P	**Pn**	**19 57 35.3**	**+1.6**
MCNL	**McNeil River**	**2.94**	**339**	P	**Pn**	**19 57 42.1**	**+1.8**
AUW	**Augustine West**	**2.99**	**349**	P	**Pn**	**19 57 41.8**	**+0.9**
OPT	**Oil Point**	**3.24**	**352**	P	**Pn**	**19 57 46.5**	**+2.0**
CHGN	**Chignik**	**3.39**	**270**	*e*Pn	**Pn**	**19 57 43.5**	**-2.9**
BRLK	**Bradley Lake**	**3.41**	**12**	P	**Pn**	**19 57 46.9**	**+0.2**
BRLK				S	**Sn**	**19 58 26.8**	**+0.4**
INE	**Iliamna NE**	**3.64**	**354**	P	**Pn**	**19 57 51.4**	**+1.4**
RSO	**Redoubt South**	**4.03**	**357**	*e*Pn	**Pn**	**19 57 56.1**	**+0.8**
RSO				*e*Sn	**Sn**	**19 58 42.4**	**+0.5**
DFR	**Drift River**	**4.15**	**358**	P	**Pn**	**19 57 59.0**	**+2.0**
SDPT	**Sand Point**	**4.72**	**260**	*e*Pn	**Pn**	**19 58 01.6**	**-3.1**
SDPT				*e*Sn	Sn	19 58 48.7	-10
STLK	**Strandline Lak**	**5.07**	**3**	P	**Pn**	**19 58 10.5**	**+1.0**
PPLA	**Purkeypile**	**6.46**	**1**	*e*Pn	**Pn**	**19 58 29.0**	**+0.3**
	23nm,1.4s						
TT01	**Tatalina**	**6.74**	**345**	P	**Pn**	**19 58 32.9**	**+0.5**
BALM	**Baldy**	**6.93**	**44**	P	**Pn**	**19 58 35.5**	**+0.4**
GRNC	**Granite Creek**	**6.99**	**48**	P	**Pn**	**19 58 36.2**	**+0.2**
TRF	**Thorofare Moun**	**7.09**	**7**	*e*Pn	**Pn**	**19 58 35.3**	**-2.1**
	7.7nm,0.9s						
PNL	**Peninsula**	**7.57**	**59**	*e*Pn	**Pn**	**19 58 44.4**	**+0.5**
PNL				*e*Sn	**Sn**	**20 00 07.9**	**-1.1**
IL1	**Eielson Array**	**8.76**	**15**	P	**Pn**	**19 58 59.4**	**-0.7**
ILAR	**Eielson Array**	**8.76**	**15**	Pn	**Pn**	**19 59 00.1**	**+0.1**
	0.4nm,0.3s,baz=200,slow=14,SNR=42						
ILAR				Sn	**Sn**	**20 00 35.2**	**-2.8**
	0.2nm,0.3s,baz=233,slow=6.4,SNR=6.3						
INK	**Inuvik**	**14.65**	**28**	Pn	**P**	**20 00 25.2**	**-1.4**
	0.2nm,0.3s,baz=225,slow=9.0,SNR=11						
YKA	**Yellowknife Ar**	**19.85**	**57**	P	**Pn**	**20 01 25.5**	**-0.2**
	0.1nm,0.3s,baz=270,slow=11,SNR=11						
ARCES	**ARCESS Array B**	**54.30**	**1**	P	**P**	**20 06 18.1**	**-0.7**
	0.5nm,0.7s,baz=3.3,slow=8.5,SNR=3.6						
SONM	**Songino Array**	**57.22**	**308**	P	**P**	**20 06 41.2**	**+0.9**
	0.9nm,0.7s,baz=41,slow=5.8,SNR=7.6						
NB2	**NORSAR Subarra**	**62.13**	**9**	P	**P**	**20 07 14.7**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=351,slow=6.9						
NOA	**NORSAR Array B**	**62.13**	**9**	P	**P**	**20 07 14.8**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=352,slow=6.5,SNR=4.4						
FINES	**FINESS Array B**	**62.43**	**1**	P	**P**	**20 07 16.6**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=331,slow=11,SNR=3.4						
BVAR	**Borovoye Array**	**65.39**	**333**	P	**P**	**20 07 35.7**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=33,slow=5.7,SNR=4.2						
MKAR	**Makanchi Array**	**67.45**	**323**	P	**P**	**20 07 48.6**	**0.0**
	comp=Z,0.2nm,0.7s,baz=61,slow=5.7,SNR=4.2						

NIED ***16*** *20:05:00, 44.60N×149.00E, h23km, Mw4.2 Best double couple: M0 2.45000×10^15 NP1:φs=354.00000°, δ64.00000°, λ66.00000°. NP2:φs=220.00000°, δ35.00000°, λ130.00000°.*
JMA ***16*** *20:05:27.6±0.6, 44.57N×149.05E, h30km, M4.9*
MOS ***16*** *20:05:28.3±1.5, 44.33N×148.91E, h40km, mb4.4/28, Error ellipse: s-maj=9.5km s-min=6.9km az=93.7*
ISCJB ***16*** *20:05:28.6±0.8, 44.20N±0.04×148.95E±0.06, h44km±6km, mb4.1/35, MS4.7/2, Error ellipse: s-maj=8.8km s-min=5.7km az=44.5*
SZGRF ***16*** *20:05:31.0, 44.63N×149.89E, h33km, Kuril Islands, Russia*
SKHL ***16*** *20:05:31.4±1.4, 44.38N×148.91E, h38km±5km, mb4.9/3*
IDC ***16*** *20:05:32.0±2.4, 44.41N×148.72E, h51km±21km, mb3.7/19, mb1 3.9/24, mb1mx3.8/32, mbtmp3.7/24, ML3.4/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/43, Error ellipse: s-maj=17.1km s-min=12.7km az=130.0*
ISC 16 20:05:30.6±0.9, 44.28N±0.05×148.90E±0.07, h45km±7km, n124, σ1=42/141, mb4.2/35, 6C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.21**	**323**	⇓*i* PN	**Pn**	**20 05 49.5**	**-1.5**
KUR				*e*S	**Sn**	**20 06 02.0**	**-4.2**
KUR				pmax	pmax		
	comp=Z,5μm,1.6s						
KUR				pmax	pmax		
	comp=N,2μm,2.0s						
KUR				pmax	pmax		
	comp=E,2μm,2.0s						
KUR				pmax	pmax		
	comp=N,2μm,0.8s						
KUR				pmax	pmax		
	comp=N,1μm,0.5s						
KUR				pmax	pmax		
	comp=E,460nm,0.6s						
KUR				smax	smax		
	comp=N,2μm,0.5s						
KUR				smax	smax		
	comp=E,3μm,0.5s						
KUR				smax	smax		
	comp=N,10μm,1.8s						
KUR				smax	smax		
	comp=E,9μm,1.2s						
KUR	**Kuril'sk**	**1.21**	**323**	⇓*i* P	**Pn**	**20 05 49.5**	**-1.5**
KUR				AMB	AMB	20 05 50.4	
	comp=E,5μm,1.6s						
KUR				AMB	AMB	20 05 50.4	
	comp=E,2μm,2.0s						
KUR				AMB	AMB	20 05 51.0	
	comp=E,460nm,0.6s						
KUR				AMB	AMB	20 05 51.0	
	comp=E,1μm,0.8s						
KUR				AMB	AMB	20 05 51.0	
	comp=E,2μm,0.8s						
KUR				*e*S	**Sn**	**20 06 02.0**	**-4.2**
KUR				A	A	20 06 05.0	
	comp=E,10μm,1.5s						
KUR				A	A	20 06 05.0	
	comp=E,9μm,1.5s						
KUR				A	A	20 06 05.5	
	comp=E,2μm,0.5s						
KUR				A	A	20 06 05.5	
	comp=E,3μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**2.20**	**265**	*i* PN	**Pn**	**20 06 04.8**	**+0.2**
YUK				*i* S	**Sn**	**20 06 30.9**	**+0.4**
YUK				pmax	pmax		
	comp=N,49nm,0.2s						
YUK				pmax	pmax		
	comp=E,109nm,0.2s						
YUK				pmax	pmax		
	comp=Z,236nm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=E,832nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.20**	**265**	⇓*i* P	**Pn**	**20 06 04.9**	**+0.3**
YUK				AMB	AMB	20 06 07.5	
	comp=E,49nm,0.2s						
YUK				AMB	AMB	20 06 07.5	
	comp=E,109nm,0.2s						
YUK				AMB	AMB	20 06 07.5	
	comp=E,236nm,0.2s						
YUK				*i* S	**Sn**	**20 06 31.0**	**+0.4**
YUK				A	A	20 06 38.0	
	comp=E,2μm,0.4s						
YUK				A	A	20 06 38.0	
	comp=E,832nm,0.4s						
NEM2	**Nemuro 2**	**2.46**	**249**	P	**Pn**	**20 06 07.3**	**-0.8**
NEM2				*e*S	**Sn**	**20 06 36.5**	**-0.4**
JRA	**Rausu**	**2.74**	**264**	P	**Pn**	**20 06 12.1**	**+0.1**
JNK	**Nakash**	**3.10**	**259**	P	**Pn**	**20 06 16.6**	**-0.3**
JNK				*e*S	**Sn**	**20 06 52.6**	**0.0**
JAK	**Akkeshi**	**3.31**	**249**	P	**Pn**	**20 06 19.2**	**-0.6**
JAK				*e*S	**Sn**	**20 06 57.8**	**0.0**
JTKR	**Abashiri--Toko**	**3.60**	**267**	P	**Pn**	**20 06 25.7**	**+1.8**
JAR	**Ashorobuto**	**3.84**	**257**	P	**Pn**	**20 06 27.8**	**+0.7**
JOB	**Onbets**	**3.92**	**251**	P	**Pn**	**20 06 28.7**	**+0.4**
JOB				*e*S	**Sn**	**20 07 14.2**	**+1.2**
JMP	**Maruseppu**	**4.00**	**268**	P	**Pn**	**20 06 31.0**	**+1.7**
JCH	**Churui**	**4.36**	**250**	P	**Pn**	**20 06 34.3**	**+0.1**
JCH				*e*S	**Sn**	**20 07 24.2**	**+0.5**
JKK2	**Kamakawa 2**	**4.45**	**267**	P	**Pn**	**20 06 37.9**	**+2.4**
ASAJ	**Asahikawa**	**4.53**	**270**	P	Pn	20 06 39.8	+3.2
ASAJ	**Asahikawa**	**4.53**	**270**	P	**Pn**	**20 06 38.1**	**+1.5**
	comp=E,3.0nm,0.3s,baz=64,slow=14,SNR=25						
ASAJ				S	Sn	20 07 40.1	+12
	comp=E,2.5nm,0.3s,baz=163,slow=26,SNR=2.3						
ASAJ				LR	LR	20 08 31.7	
	comp=E,454nm,20.6s,baz=357,slow=41						
JEM	**Erimo**	**4.77**	**244**	P	**Pn**	**20 06 41.0**	**+1.2**
ERM	**Erimo**	**4.77**	**244**	*c i* PN	**Pn**	**20 06 40.5**	**+0.7**
ERM				pmax	pmax		
	comp=Z,132nm,1.0s						
JAB	**Ashibetsu**	**4.88**	**263**	P	Pn	20 06 45.1	+3.7
JNBK	**Urakawa-nobuka**	**4.91**	**248**	P	**Pn**	**20 06 41.7**	**-0.1**
JNBK				*e*S	**Sn**	**20 07 37.9**	**+0.6**
JBT2	**Biratori 2**	**4.98**	**255**	P	**Pn**	**20 06 43.6**	**+0.8**
YSS	**Yuzh-Sakhalins**	**5.07**	**304**	⇑*e* PN	**Pn**	**20 06 46.7**	**+2.7**
YSS				*e*S	**Sn**	**20 07 43.2**	**+1.9**
YSS				smax	smax		
	comp=N,40nm,0.8s						
YSS				smax	smax		
	comp=E,30nm,0.7s						
YSS	**Yuzh-Sakhalins**	**5.07**	**304**	⇑*e* P	**Pn**	**20 06 46.7**	**+2.7**
YSS				*e*S	**Sn**	**20 07 43.2**	**+1.9**
YSS				A	A	20 07 48.0	
	comp=E,40nm,0.8s						
YSS				A	A	20 07 48.0	
	comp=E,30nm,0.8s						
JEW	**Eniwo**	**5.60**	**258**	P	**Pn**	**20 06 53.7**	**+2.5**
JNB	**Noboribetsu**	**6.01**	**255**	P	**Pn**	**20 06 58.0**	**+1.2**
JKB	**Kayabe**	**6.23**	**250**	P	**Pn**	**20 07 00.1**	**+0.2**
JKB				*e*S	**Sn**	**20 08 07.1**	**-2.7**
JYM2	**Yakumo 2**	**6.59**	**254**	P	**Pn**	**20 07 05.7**	**+0.8**
JYM2				*e*S	**Sn**	**20 08 20.0**	**+1.3**
JANG	**Nango**	**6.72**	**237**	P	**Pn**	**20 07 05.1**	**-1.5**
JANG				*e*S	**Sn**	**20 08 16.0**	**-5.8**
JTM	**Tenmabayashi**	**6.75**	**242**	P	**Pn**	**20 07 06.6**	**-0.5**
JTM				*e*S	**Sn**	**20 08 17.6**	**-5.0**
JTH	**Tanohata**	**6.79**	**233**	P	**Pn**	**20 07 05.7**	**-1.9**
JTH				*e*S	Sn	20 08 16.0	-7.6
JSR	**Shiriuchi**	**6.80**	**249**	P	**Pn**	**20 07 07.5**	**-0.3**
JSR				*e*S	**Sn**	**20 08 21.2**	**-2.7**
JOSM	**Okushiri--Mats**	**7.23**	**256**	P	**Pn**	**20 07 14.6**	**+1.0**
OFUJ	**Ofunato**	**7.50**	**229**	P	**Pn**	**20 07 15.2**	**-2.1**
OFUJ				*e*S	Sn	20 08 33.6	-7.3
TYV	**Tymovskoe**	**7.82**	**330**	*e*P	**Pn**	**20 07 23.5**	**+1.8**
TYV				AMB	AMB	20 07 24.8	
	comp=E,5.0nm,0.6s						
TYV				AMB	AMB	20 07 24.8	
	comp=E,9.0nm,0.6s						
JRG	**Rokugo**	**7.86**	**235**	P	**Pn**	**20 07 21.5**	**-0.8**
SKR	**Severo-Kuril's**	**8.06**	**35**	*e*PN	Pn	20 07 20.9	-4.0
JIO	**Ouri**	**8.12**	**227**	P	**Pn**	**20 07 24.5**	**-1.4**
JIO				*e*S	Sn	20 08 48.8	-7.5
PETK	**Petropavlovsk-**	**10.57**	**30**	PN	**Pn**	**20 07 59.0**	**-0.4**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**10.57**	**30**	P	**Pn**	**20 07 59.0**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=208,slow=15,SNR=13						
MAJO	**Matsushiro**	**11.22**	**230**	*e*PN	**Pn**	**20 08 07.3**	**-1.0**
MAT	**Matsushiro**	**11.22**	**230**	P	**Pn**	**20 08 07.3**	**-1.0**
MAT				*e*S	Sn	20 10 21.5	+9.2
MJAR	**Matsushiro Arr**	**11.22**	**230**	P	**Pn**	**20 08 07.8**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=27,slow=13,SNR=16						
USRK	**Ussuriysk Arra**	**12.12**	**276**	P	**Pn**	**20 08 20.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=86,slow=13,SNR=12						
KSRS	**Korea Array**	**17.24**	**254**	P	**Pn**	**20 09 27.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=281,slow=39,SNR=2.8						
SEY	**Seymchan**	**18.80**	**5**	*ce* P	**Pn**	**20 09 47.4**	**+0.6**
YAK	**Yakutsk**	**21.04**	**334**	*e* P	**P**	**20 10 07.1**	**-3.2**
YAK				*e*		20 10 23.6	
YAK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.3s						
SONM	**Songino Array**	**29.44**	**292**	P	**P**	**20 11 29.9**	**0.0**
	comp=N,0.7nm,0.6s,baz=79,slow=8.4,SNR=9.0						
ILAR	**Eielson Array**	**40.32**	**37**	P	**P**	**20 13 03.5**	**+0.3**
	comp=N,0.7nm,0.7s,baz=274,slow=8.6,SNR=7.7						
INK	**Inuvik**	**45.31**	**31**	P	**P**	**20 13 44.1**	**+0.7**
	comp=N,0.9nm,0.6s,baz=309,slow=7.9,SNR=9.3						
MKAR	**Makanchi Array**	**45.46**	**298**	P	**P**	**20 13 44.1**	**-0.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**45.46**	**298**	P	**P**	**20 13 44.1**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=78,slow=9.3,SNR=18						
KURK	**Kurchatov**	**46.28**	**304**	*e*P	**P**	**20 13 50.5**	**-0.9**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**48.88**	**255**	P	**P**	**20 14 13.2**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=41,slow=7.1,SNR=5.2						
TAPN	**Taplejung**	**51.25**	**272**	*e*P	**P**	**20 14 30.4**	**+0.2**
ODAN	**Odare**	**51.77**	**272**	*e*P	**P**	**20 14 33.9**	**-0.1**
GUN	**Gumba**	**52.24**	**274**	*e*P	**P**	**20 14 38.2**	**+0.6**
	comp=Z,12nm,0.4s						
RAMN	**Ramite**	**52.29**	**273**	*e*P	**P**	**20 14 38.1**	**+0.2**
KKN	**Kakani**	**52.74**	**274**	*e*P	**P**	**20 14 42.1**	**+0.9**
PKI	**Pulchoki**	**52.77**	**274**	*e*P	**P**	**20 14 41.9**	**+0.3**
PKIN	**Phulchoki**	**52.78**	**274**	*e*P	**P**	**20 14 41.6**	**+0.1**
DMN	**Daman**	**52.97**	**274**	*e*P	**P**	**20 14 43.5**	**+0.6**
DANN	**Dangsing**	**53.50**	**276**	*e*P	**P**	**20 14 47.7**	**+0.9**
KOLN	**Koldanda**	**53.95**	**275**	*e*P	**P**	**20 14 50.7**	**+0.6**
RES	**Resolute Bay**	**54.10**	**17**	P	**P**	**20 14 49.9**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=295,slow=7.3,SNR=9.0						
PYUN	**Piuthan**	**54.20**	**276**	*e*P	**P**	**20 14 52.4**	**+0.6**
	comp=Z,15nm,0.8s						
YKA	**Yellowknife Ar**	**54.66**	**34**	P	**P**	**20 14 55.7**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=296,slow=6.9,SNR=6.3						
ARU	**Arti**	**54.82**	**317**	*d i* P	**P**	**20 14 55.6**	**-0.1**
ARU						20 16 56.4	
ARU				S	**S**	**20 22 33.6**	**+0.5**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO	**Aktyubinsk**	**58.14**	**311**	P	**P**	**20 15 18.5**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTO	**Aktyubinsk**	**58.14**	**311**	P	**P**	**20 15 18.4**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=48,slow=6.5,SNR=5.0						
JOF	**Joensuu**	**62.20**	**333**	*e*P	**P**	**20 15 44.9**	**-2.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**62.20**	**333**	*e*p	**P**	**20 15 44.9**	**-2.1**
	comp=Z,1.4nm,0.5s						
KAF	**Kangasniemi**	**64.40**	**334**	*e*P	**P**	**20 16 00.3**	**-1.2**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KAF	**Kangasniemi**	**64.40**	**334**	*e*p	**P**	**20 16 00.3**	**-1.2**
	comp=Z,0.9nm,0.5s						
FINES	**FINESS Array B**	**64.97**	**334**	P	**P**	**20 16 03.3**	**-1.9**
	comp=Z,1.7nm,0.6s,baz=42,slow=5.3,SNR=23						
WRA	**Warramunga Arr**	**65.28**	**195**	P	**P**	**20 16 07.8**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=17,slow=7.1,SNR=8.1						
VRHR	**Novokhopersk**	**66.08**	**319**	*e*P	**P**	**20 16 11.3**	**-1.3**
VRHR				pmax	pmax		
	comp=N,7.0nm,0.9s						
VRHR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VRHR				pmax	pmax		
	comp=E,9.0nm,0.6s						
NVAR	**Mina Array Bea**	**66.23**	**59**	P	**P**	**20 16 15.4**	**+1.4**
	comp=E,0.4nm,0.6s,baz=293,slow=7.9,SNR=6.0						
VSR	**Storozhevoye**	**67.15**	**320**	*e*P	**P**	**20 16 18.6**	**-0.8**
VSR				pmax	pmax		
	comp=N,4.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,1.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ASAR	**Alice Springs**	**68.99**	**195**	P	**P**	**20 16 32.5**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=8.8,slow=5.5,SNR=17						
NB2	**NORSAR Subarra**	**69.56**	**340**	P	**P**	**20 16 33.7**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**69.56**	**340**	P	**P**	**20 16 33.8**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=31,slow=6.3,SNR=10						
KBZ	**Khabaz**	**70.39**	**312**	P	**P**	**20 16 40.4**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ	**Khabaz**	**70.39**	**312**	P	**P**	**20 16 40.4**	**+0.8**
	comp=Z,2.5nm,0.7s,baz=50,slow=3.3,SNR=8.1						
ZEI	**Tsey**	**70.50**	**311**	*e*P	**P**	**20 16 39.8**	**-0.9**
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
AKASG	**Malin Array Be**	**71.89**	**324**	*i* P	**P**	**20 16 48.2**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	**71.

*ISCJB **16** 20:06:57.7±1.0,56˚.50N±0˚.07×152˚.0W±0˚.1,h20km, mb3.4/2,Error ellipse: s-maj=11.0km s-min=10.0km az=146.2*

*IDC **16** 20:06:57.1±2.4,56˚.51N×152˚.47W,h0km,mb3.4/2, mb1 3.4/4,mb1mx3.2/27,mbtmp3.3/4,ML2.9/1,Error ellipse: s-maj=40.7km s-min=31.1km az=138.0*

*NEIC **16** 20:07:00.6,56˚.51N×152˚.35W,h19km,ML2.8(AEIC),After AEIC.*

ISC 16 20:06:57.6±1.3,56˚.5N±0˚.1×152˚.30W±0˚.07,h20km,n15, σ1°97/18,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.94**	**325**	P	**Pn**	**20 07 15.8**	**+0.3**
KDAK	**Kodiak Island**	**1.33**	**353**	P	**Pn**	**20 07 21.4**	**+0.4**
KDAK				S	**Sn**	**20 07 38.3**	**+0.2**
KDAK	**Kodiak Island**	**1.33**	**353**	Pn	**Pn**	**20 07 21.5**	**+0.4**
	3.3nm,0.3s,baz=184,slow=9.0,SNR=53						
KDAK				Sn	**Sn**	**20 07 38.3**	**+0.2**
	32nm,0.3s,baz=182,slow=7.9,SNR=23						
KAKN	**Katmai Knife C**	**2.37**	**322**	P	**Pn**	**20 07 35.8**	**+0.4**
FOSS	**Fourpeaked Sta**	**2.46**	**343**	P	**Pn**	**20 07 38.3**	**+1.7**
AUH	**Augustine H**	**2.97**	**349**	P	**Pn**	**20 07 45.3**	**+1.7**
OPT	**Oil Point**	**3.24**	**352**	P	**Pn**	**20 07 49.0**	**+1.8**
CHGN	**Chignik**	**3.40**	**270**	*e*Pn	**Pb**	**20 07 54.1**	**-3.0**
RSO	**Redoubt South**	**4.02**	**357**	*e*Pn	**Pn**	**20 07 58.9**	**+0.8**
PNL	**Peninsula**	**7.56**	**60**	*e*Pn	**Pn**	**20 08 46.6**	**+0.1**
	15nm,0.4s						
ILAR	**Eielson Array**	**8.75**	**15**	Pn	**Pn**	**20 09 04.2**	**+1.4**
	0.3nm,0.3s,baz=209,slow=14,SNR=16						
ILAR				Sn	**Sn**	**20 10 36.0**	**-4.6**
	0.3nm,0.3s,baz=12,slow=21,SNR=6.8						
INK	**Inuvik**	**14.63**	**28**	Pn	**P**	**20 10 27.4**	**-2.0**
	0.0nm,0.3s,baz=215,slow=12,SNR=2.0						
YKA	**Yellowknife Ar**	**19.84**	**57**	P	**Pn**	**20 11 29.4**	**+1.0**
	0.0nm,0.3s,baz=268,slow=9.7,SNR=4.5						
SONM	**Songino Array**	**57.22**	**308**	P	**P**	**20 16 46.0**	**+2.9**
	0.4nm,0.7s,baz=35,slow=5.8,SNR=3.6						
MKAR	**Makanchi Array**	**67.45**	**323**	P	**P**	**20 17 53.0**	**+1.5**
	0.2nm,0.6s,baz=38,slow=7.3,SNR=3.2						

*IDC **16** 20:44:02.8±4.6,38˚.31N×73˚.35E,h75km±42km,mb3.3/5, mb1 3.5/11,mb1mx3.2/33,mbtmp3.5/11,ML3.8/6,MS3.0/1, Ms1 3.0/1,ms1mx2.5/28,Error ellipse: s-maj=33.4km s-min=22.8km az=11.0*

*ISCJB **16** 20:44:03.7±0.4,38˚.30N±0˚.03×73˚.60E±0˚.07,h107km, mb3.4/6,Error ellipse: s-maj=8.5km s-min=3.5km az=169.1*

*BJI **16** 20:44:07.5,38˚.49N×73˚.46E,h119km,mb3.5/1*

*NNC **16** 20:44:10.4±4.7,38˚.78N×73˚.20E,h124km±38km,mb3.0, mpv3.7,Error ellipse: s-maj=49.4km s-min=17.5km az=22.0*

ISC 16 20:44:04.4±0.6,38˚.39N±0˚.05×73˚.62E±0˚.09,h107km,n53, σ2°34/50,mb3.5/6,5C-5D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**2.15**	**58**	⇓*i*P	**Pn**	**20 44 38.8**	**-0.5**
KSH				S	Sn	20 45 00.3	-5.7
KSH				smax	smax		
	comp=N,8μm,0.5s						
KSH				smax	smax		
	comp=E,4μm,0.4s						
AML	**Almayashu**	**3.74**	**1**	P	**Pn**	**20 45 02.5**	**+1.9**
	SNR=637						
KZA	**Kyzart**	**3.89**	**18**	P	**Pn**	**20 45 05.2**	**+2.6**
	SNR=82						
UCH	**Uchtor**	**3.89**	**10**	P	**Pn**	**20 45 05.2**	**+2.5**
	SNR=28						
EKS2	**Erkin-Say**	**4.27**	**2**	P	**Pn**	**20 45 09.8**	**+2.4**
	SNR=125						
AAK	**Ala-Archa**	**4.29**	**9**	P	**Pn**	**20 45 10.7**	**+2.9**
	SNR=84						
AAK	**Ala-Archa**	**4.29**	**9**	P	**Pn**	**20 45 09.2**	**+1.4**
	comp=E,21nm,0.3s,baz=160,slow=6.6,SNR=267						
AAK				S	**Sn**	**20 45 58.1**	**+1.2**
	comp=E,6.7nm,0.3s,baz=51,slow=20,SNR=9.8						
AAK				LR	LR	20 47 21.4	
	comp=E,168nm,18.2s,baz=215,slow=45						
ULHL	**Ulahol**	**4.34**	**27**	P	**Pn**	**20 45 11.5**	**+3.0**
	SNR=92						
KBK	**Karagaybulak**	**4.38**	**13**	P	**Pn**	**20 45 12.1**	**+3.1**
	SNR=94						
CHMS	**Chumysh**	**4.68**	**10**	P	**Pn**	**20 45 15.6**	**+2.7**
	SNR=22						
CHCP	**Chirah Chowk**	**4.73**	**184**	P	Pn	20 45 18.1	+4.4
CHCP				S	**Sn**	**20 46 07.0**	**-0.4**
CEP	**Cherat**	**4.76**	**197**	P	Pn	20 45 17.8	+3.6
TKM2	**Tokmak 2**	**4.77**	**18**	⇑Pn	**Pn**	**20 45 16.8**	**+2.6**
	comp=E,10.0nm,0.4s						
TKM2	**Tokmak 2**	**4.77**	**18**	P	**Pn**	**20 45 17.2**	**+3.0**
	SNR=34						
USP	**Ospenovka**	**4.92**	**8**	P	**Pn**	**20 45 18.7**	**+2.6**
	SNR=28						
KK31	**Karatay Array**	**5.27**	**334**	⇓Pn	**Pn**	**20 45 21.2**	**+0.4**
	comp=E,2.6nm,0.3s,baz=144,slow=12,SNR=138						
KK31				⇓Sn	**Sn**	**20 46 15.7**	**-4.6**
	comp=E,92nm,0.6s,baz=156,slow=24,SNR=20						
THW	**Thamme Wali**	**5.79**	**196**	P	Pn	20 45 31.0	+3.0
DLH	**Dalhousie**	**6.14**	**161**	*e*PKP	**Pn**	**20 45 34.0**	**+1.1**
DLH				*ex*	x	20 46 33.0	
SARP	**Sargodha**	**6.50**	**187**	P	**Pn**	**20 45 39.8**	**+2.2**
DHRM	**DHARAMSHALA**	**6.51**	**160**	*e*PKP	Pn	20 45 41.4	+3.5
DHRM				*e*S	**Sn**	**20 46 47.8**	**-3.0**
DHRM				AML	AML	20 46 53.2	
	comp=E,248nm,0.3s						
DHRM				AML	AML	20 46 55.3	
	comp=E,239nm,0.2s						
SDNR	**Sundarnagar**	**7.40**	**157**	*e*PKP	Pn	20 45 55.0	+5.1
SDNR				*e*S	Sn	20 47 07.0	-5.3
SMLA	**Simla**	**7.81**	**157**	*e*PKP	**Pn**	**20 45 57.8**	**+2.5**
SMLA				*i* S	**Sn**	**20 47 17.6**	**-4.5**
SMLA				AML	AML	20 47 21.4	
	comp=E,148nm,0.2s						
SMLA				AML	AML	20 47 22.4	
	comp=N,232nm,0.4s						
DDI	**Dehra Dun**	**8.84**	**154**	*e*S	**Sn**	**20 47 42.6**	**-4.8**
DDI				AML	AML	20 47 47.7	
	comp=E,428nm,0.2s						
DDI				AML	AML	20 47 50.6	
	comp=N,452nm,0.3s						
MK31	**Makanchi Array**	**10.55**	**34**	Pn	**Pn**	**20 46 34.2**	**+1.9**
	comp=N,0.9nm,0.8s,baz=220,slow=15,SNR=8.3						
MKAR	**Makanchi Array**	**10.55**	**34**	P	**Pn**	**20 46 33.5**	**+1.1**
	comp=N,0.1nm,0.3s,baz=222,slow=16,SNR=9.1						
KUR16	**Kurchatov Arra**	**12.71**	**14**	⇓P	**Pn**	**20 47 03.4**	**+2.2**
	comp=N,0.1nm,0.6s						
KURBB	**Kurchatov Arra**	**12.72**	**14**	P	**Pn**	**20 47 00.6**	**-0.6**
	comp=N,0.0nm,0.3s,baz=205,slow=11,SNR=5.1						
KURK	**Kurchatov**	**12.82**	**14**	⇑P	P	20 47 06.8	-2.5
	comp=N,1.7nm,0.7s						
PYUN	**Piuthan**	**12.91**	**140**	*e*P	**Pn**	**20 47 02.6**	**-1.5**
	comp=N,17nm,0.3s						
DANN	**Dangsing**	**13.11**	**137**	*e*P	**Pn**	**20 47 04.9**	**-1.9**
	comp=N,17nm,0.5s						
KOLN	**Koldanda**	**13.49**	**139**	*e*P	**Pn**	**20 47 10.0**	**-1.6**
KKN	**Kakani**	**14.38**	**134**	*e*P	**Pn**	**20 47 21.9**	**-1.3**
DMN	**Daman**	**14.42**	**135**	*e*P	**Pn**	**20 47 22.6**	**-1.2**
	comp=N,5.3nm,0.3s						
VOSK	**Vostochnaya**	**14.45**	**354**	⇑P	**Pn**	**20 47 24.9**	**+1.3**
	comp=N,2.6nm,1.2s						
PKIN	**Phulchoki**	**14.61**	**134**	*e*P	**Pn**	**20 47 24.9**	**-1.3**
PKI	**Pulchoki**	**14.62**	**134**	*e*P	**Pn**	**20 47 25.0**	**-1.4**
GUN	**Gumba**	**14.64**	**132**	*e*P	**Pn**	**20 47 25.5**	**-1.1**
	comp=N,4.7nm,0.2s						
AB31	**Akbulak array**	**14.65**	**322**	P	**Pn**	**20 47 23.6**	**-2.6**
	comp=N,2.5nm,0.5s,baz=131,slow=14,SNR=70						
AB31				S	Sn	20 49 56.0	-12
	comp=N,4.3nm,0.7s,baz=149,slow=21,SNR=16						
BVA0	**Borovoye Array**	**14.81**	**352**	⇓P	**Pn**	**20 47 29.9**	**+1.7**
	comp=N,0.3nm,0.5s,baz=164,slow=9.3,SNR=21						
BVAR	**Borovoye Array**	**14.81**	**352**	P	**Pn**	**20 47 27.9**	**-0.3**
	comp=N,0.2nm,0.3s,baz=166,slow=12,SNR=5.8						
BVAR				S	**Sn**	**20 50 05.8**	**-5.6**
	comp=N,0.4nm,0.3s,baz=163,slow=22,SNR=5.6						
ZRNK	**Zerenda**	**14.91**	**349**	⇑P	**Pn**	**20 47 28.3**	**-1.1**
	comp=N,1.9nm,0.8s						
BHPL	**Bhopal**	**15.45**	**167**	*e*S	Sn	20 50 13.8	-14
BHPL				AML	AML	20 50 21.7	
	comp=E,7.2nm,0.3s						
BHPL				AML	AML	20 50 22.1	
	comp=N,12nm,0.5s						
TAPN	**Taplejung**	**16.14**	**129**	*e*P	**Pn**	**20 47 44.1**	**-1.3**
	comp=N,3.4nm,0.4s						
AKTO	**Aktyubinsk**	**16.37**	**322**	⇑P	**Pn**	**20 47 47.1**	**-0.6**
	comp=N,0.5nm,0.7s						
AKTO	**Aktyubinsk**	**16.37**	**322**	P	**Pn**	**20 47 46.6**	**-1.1**
	comp=N,1.0nm,0.3s,baz=127,slow=9.4,SNR=10						
AKTO				S	Sn	20 50 37.5	-12
	comp=N,0.3nm,0.3s,baz=175,slow=21,SNR=7.3						
ZALV	**Zalesovo Beam**	**17.35**	**23**	P	**Pn**	**20 48 00.8**	**+1.1**
	comp=N,1.7nm,0.3s,baz=215,slow=12,SNR=35						
GTA	**Gaotai**	**20.39**	**79**	*e*P	Pn	20 48 40.9	+4.9
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GNI	**Garni**	**22.39**	**284**	P	**P**	**20 48 53.1**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=190,slow=7.6,SNR=2.2						
SONM	**Songino Array**	**25.55**	**58**	P	P	20 49 30.2	+6.9
	comp=Z,0.2nm,0.5s,baz=252,slow=11,SNR=3.9						
FINES	**FINESS Array B**	**37.13**	**324**	P	**P**	**20 51 05.5**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=115,slow=10,SNR=5.4						
ARCES	**ARCESS Array B**	**40.23**	**336**	P	**P**	**20 51 32.1**	**+2.0**
	comp=Z,1.0nm,0.8s,baz=116,slow=8.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**67.83**	**269**	P	**P**	**20 54 51.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=49,slow=5.3,SNR=12						
WRA	**Warramunga Arr**	**81.26**	**124**	P	**P**	**20 56 11.7**	**+2.9**
	comp=Z,0.3nm,0.6s,baz=330,slow=5.1,SNR=3.3						

*IDC **16** 20:44:59.7±1.9,56˚.44N×152˚.06W,h0km,mb3.4/3, mb1 3.6/4,mb1mx3.3/26,mbtmp3.3/4,ML2.7/1,Error ellipse: s-maj=67.3km s-min=28.2km az=22.0*

*ISCJB **16** 20:45:00.1±1.0,56˚.62N±0˚.08×151˚.93W±0˚.09,h18km, mb3.3/3,Error ellipse: s-maj=11.7km s-min=6.9km az=16.1*

*NEIC **16** 20:45:03.4,56˚.80N×152˚.25W,h1km,ML2.8(AEIC),After AEIC.*

ISC 16 20:45:01.6±1.3,56˚.6N±0˚.1×152˚.14W±0˚.06,h18km,n19, σ0°84/20,mb3.3/3,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.86**	**313**	P	**Pb**	**20 45 17.1**	**-0.8**
OHAK				S	**Sn**	**20 45 30.3**	**-0.5**
KDAK	**Kodiak Island**	**1.17**	**348**	P	**Pn**	**20 45 22.9**	**-0.1**
KABR	**Katmai Barrier**	**2.14**	**315**	P	**Pn**	**20 45 36.7**	**+0.3**
KAKN	**Katmai Knife C**	**2.29**	**318**	P	**Pn**	**20 45 39.4**	**+0.9**
KELA	**Mount Kelaz**	**2.65**	**314**	P	**Pn**	**20 45 43.4**	**0.0**
AUW	**Augustine West**	**2.83**	**346**	P	**Pn**	**20 45 46.3**	**+0.5**
OPT	**Oil Point**	**3.07**	**350**	P	**Pn**	**20 45 51.2**	**+2.0**
BRLK	**Bradley Lake**	**3.20**	**11**	P	**Pn**	**20 45 51.4**	**+0.4**
BRLK				S	**Sn**	**20 46 28.8**	**+0.2**
CHGN	**Chignik**	**3.50**	**267**	*e*Pn	Pn	20 45 50.5	-4.5
RSO	**Redoubt South**	**3.84**	**355**	*e*Pn	**Pn**	**20 46 00.6**	**+0.7**
KIAG	**Kiagna River**	**6.65**	**46**	P	**Pn**	**20 46 38.4**	**-0.1**
BALM	**Baldy**	**6.72**	**45**	P	**Pn**	**20 46 39.1**	**-0.3**
PNL	**Peninsula**	**7.39**	**60**	*e*Pn	**Pn**	**20 46 47.9**	**-0.5**
	9.5nm,0.3s						
ILAR	**Eielson Array**	**8.55**	**15**	Pn	**Pn**	**20 47 05.5**	**+1.2**
	0.3nm,0.3s,baz=202,slow=14,SNR=12						
ILAR				Sn	**Sn**	**20 48 39.2**	**-1.0**
	0.1nm,0.3s,baz=206,slow=26,SNR=3.9						
IM3	**Indian Mountai**	**9.41**	**356**	P	**Pn**	**20 47 14.7**	**-1.3**
YKA	**Yellowknife Ar**	**19.67**	**57**	P	**P**	**20 49 30.0**	**+0.8**
	0.0nm,0.3s,baz=268,slow=10,SNR=5.6						
NVAR	**Mina Array Bea**	**28.79**	**115**	P	**P**	**20 50 58.4**	**-0.1**
	0.3nm,0.5s,baz=320,slow=8.3,SNR=3.6						
SONM	**Songino Array**	**57.18**	**308**	P	**P**	**20 54 47.4**	**+0.2**
	0.2nm,0.5s,baz=50,slow=5.8,SNR=4.4						
MKAR	**Makanchi Array**	**67.36**	**323**	P	P	20 55 59.4	+4.1
	0.1nm,0.4s,baz=27,slow=7.7,SNR=4.8						

*IDC **16** 20:56:17.1±2.9,43˚.03N×105˚.09W,h0km,mb3.2/2, mb1 3.8/4,mb1mx3.4/28,mbtmp3.6/4,ML3.7/2,MS3.4/1, Ms1 3.3/1,ms1mx2.6/18,Error ellipse: s-maj=62.6km s-min=9.8km az=160.0*

*ISCJB **16** 20:56:20.6±0.3,43˚.69N±0˚.02×105˚.30W±0˚.03,h0km, mb3.9/1,Error ellipse: s-maj=3.3km s-min=2.7km az=165.3*

*NEIC **16** 20:56:21.4±0.3,43˚.73N×105˚.24W,h0km,ML2.9,Error ellipse: s-maj=5.1km s-min=4.4km az=179.0,Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

ISC 16 20:56:21.4±0.7,43˚.69N±0˚.02×105˚.32W±0˚.02,h0km,n120, σ0°93/131,32C-24D,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
J23A	**Dilts Ranch, B**	**0.33**	**211**	P	**Pg**	**20 56 28.1**	**+0.4**
	baz=0.4,SNR=1000						
J23A	**Dilts Ranch, B**	**0.33**	**211**	P	**Pg**	**20 56 28.1**	**+0.4**
	baz=0.4,SNR=1000						
J24A	**Dixon Ranch, L**	**0.60**	**126**	P	**Pg**	**20 56 32.7**	**-0.1**
	baz=0.6,SNR=83						
J24A	**Dixon Ranch, L**	**0.60**	**126**	P	**Pg**	**20 56 32.7**	**-0.1**
	baz=0.6,SNR=83						
H23A	**Clabaugh Cattl**	**0.88**	**356**	⇑P	**Pg**	**20 56 38.0**	**-0.2**
	baz=0.8,SNR=11						
H23A	**Clabaugh Cattl**	**0.88**	**356**	⇑P	**Pg**	**20 56 38.0**	**-0.2**
	baz=0.8,SNR=11						
J22A	**Midwest**	**0.89**	**252**	⇑P	**Pg**	**20 56 37.9**	**-0.5**
	baz=1.0,SNR=207						
J22A	**Midwest**	**0.89**	**252**	⇑P	**Pg**	**20 56 37.9**	**-0.5**
	baz=1.0,SNR=207						
K23A	**Bowen Ranch, D**	**0.96**	**194**	⇑P	**Pg**	**20 56 39.4**	**-0.4**
	baz=1.0						
K23A				⇑S	**Sg**	**20 56 52.4**	**+0.3**
	baz=1.0						
K23A	**Bowen Ranch, D**	**0.96**	**194**	⇑P	**Pg**	**20 56 39.4**	**-0.4**
	baz=1.0						
K23A				⇑S	**Sg**	**20 56 52.4**	**+0.3**
	baz=1.0						
RSSD	**Black Hills**	**1.02**	**64**	*e*Pg	**Pg**	**20 56 40.4**	**-0.5**
K24A	**Anderson Ranch**	**1.03**	**159**	⇓P	**Pg**	**20 56 40.5**	**-0.6**
	baz=1.1,SNR=64						
K24A	**Anderson Ranch**	**1.03**	**159**	⇓P	**Pg**	**20 56 40.5**	**-0.6**
	baz=1.1,SNR=64						
H22A	**Clearmont**	**1.17**	**321**	⇓P	**Pg**	**20 56 44.0**	**+0.2**
	baz=1.2,SNR=22						
H22A	**Clearmont**	**1.17**	**321**	⇓P	**Pg**	**20 56 44.0**	**+0.2**
	baz=1.2,SNR=22						
H24A	**Dirks Ranch, A**	**1.20**	**27**	⇑P	**Pg**	**20 56 43.5**	**-0.8**
	baz=1.1,SNR=443						
H24A	**Dirks Ranch, A**	**1.20**	**27**	⇑P	**Pg**	**20 56 43.5**	**-0.8**
	baz=1.1,SNR=443						
K22A	**Casper**	**1.36**	**221**	⇓P	**Pg**	**20 56 46.2**	**-1.3**
	baz=1.4						
K22A	**Casper**	**1.36**	**221**	⇓P	**Pg**	**20 56 46.2**	**-1.3**
	baz=1.4						
I21A	**Big Trails, Te**	**1.44**	**276**	⇓P	**Pn**	**20 56 47.1**	**-1.8**
	baz=1.5						
I21A	**Big Trails, Te**	**1.44**	**276**	⇓P	**Pn**	**20 56 47.1**	**-1.8**
	baz=1.5						
K25A	**Mack Ranch, Ha**	**1.51**	**135**	⇑P	**Pn**	**20 56 49.7**	**-0.1**
	baz=1.5,SNR=69						
K25A	**Mack Ranch, Ha**	**1.51**	**135**	⇑P	**Pn**	**20 56 49.7**	**-0.1**
	baz=1.5,SNR=69						
G23A	**Biddle**	**1.52**	**358**	⇑P	**Pn**	**20 56 49.4**	**-0.5**
	baz=1.5,SNR=146						
G23A	**Biddle**	**1.52**	**358**	⇑P	**Pn**	**20 56 49.4**	**-0.5**
	baz=1.5,SNR=146						
H21A	**Big Horn, Sher**	**1.56**	**308**	P	**Pn**	**20 56 50.5**	**0.0**
	baz=1.6						
H21A	**Big Horn, Sher**	**1.56**	**308**	P	**Pn**	**20 56 50.5**	**0.0**
	baz=1.6						
J21A	**Lysite**	**1.58**	**258**	P	**Pn**	**20 56 49.9**	**-1.0**
	baz=1.6,SNR=208						
J21A	**Lysite**	**1.58**	**258**	P	**Pn**	**20 56 49.9**	**-1.0**
	baz=1.6,SNR=208						
L23A	**Garrett**	**1.60**	**190**	⇓P	**Pn**	**20 56 50.2**	**-0.9**
	baz=1.7,SNR=286						
L23A	**Garrett**	**1.60**	**190**	⇓P	**Pn**	**20 56 50.2**	**-0.9**
	baz=1.7,SNR=286						
L24A	**Wheatland**	**1.67**	**170**	⇓P	**Pn**	**20 56 51.6**	**-0.4**
	baz=1.7,SNR=41						
L24A	**Wheatland**	**1.67**	**170**	⇓P	**Pn**	**20 56 51.6**	**-0.4**
	baz=1.7,SNR=41						
G22A	**Birney**	**1.68**	**336**	⇑Pb	**Pn**	**20 56 52.5**	**+0.3**
	baz=1.7,SNR=55						
G22A	**Birney**	**1.68**	**336**	⇑Pb	**Pn**	**20 56 52.5**	**+0.3**
	baz=1.7,SNR=55						
G24A	**Alzada**	**1.76**	**21**	⇑Pb	**Pn**	**20 56 53.9**	**+0.6**
	baz=1.7,SNR=14						
G24A	**Alzada**	**1.76**	**21**	⇑Pb	**Pn**	**20 56 53.9**	**+0.6**
	baz=1.7,SNR=14						
K21A	**Alcova**	**1.76**	**234**	Pb	**Pn**	**20 56 53.3**	**0.0**
	baz=1.8						
K21A				S	**Sn**	**20 57 16.5**	**-0.1**
	baz=1.8						
K21A	**Alcova**	**1.76**	**234**	Pb	**Pn**	**20 56 53.3**	**0.0**
	baz=1.8						
K21A				S	**Sn**	**20 57 16.5**	**-0.1**
	baz=1.8						
L25A	**Engebretsen Ra**	**1.82**	**147**	Pb	**Pb**	**20 56 55.0**	**-0.7**
	baz=1.8,SNR=42						
L25A				Sb	**Sg**	**20 57 19.8**	**-0.2**
	baz=1.8						
L25A	**Engebretsen Ra**	**1.82**	**147**	Pb	**Pb**	**20 56 55.0**	**-0.7**
	baz=1.8,SNR=42						
L25A				Sb	**Sg**	**20 57 19.8**	**-0.2**
	baz=1.8						
L22A	**Ellis Ranch, M**	**1.85**	**207**	⇓Pb	**Pn**	**20 56 54.6**	**+0.1**
	baz=1.9,SNR=108						
L22A				S	**Sn**	**20 57 18.9**	**+0.2**
	baz=1.9						
L22A	**Ellis Ranch, M**	**1.85**	**207**	⇓Pb	**Pn**	**20 56 54.6**	**+0.1**
	baz=1.9,SNR=108						
L22A				S	**Sn**	**20 57 18.9**	**+0.2**
	baz=1.9						
K26A	**Motz Farm, Whi**	**1.85**	**121**	⇑Pb	**Pn**	**20 56 55.0**	**+0.5**
	baz=1.8,SNR=6.9						
K26A	**Motz Farm, Whi**	**1.85**	**121**	⇑Pb	**Pn**	**20 56 55.0**	**+0.5**
	baz=1.8,SNR=6.9						
F23A	**Volborg**	**2.04**	**358**	⇑P	**Pn**	**20 56 57.3**	**+0.3**
	baz=2.0,SNR=112						
F23A	**Volborg**	**2.04**	**358**	⇑P	**Pn**	**20 56 57.3**	**+0.3**
	baz=2.0,SNR=112						
J20A	**Shoshoni**	**2.04**	**262**	Pb	**Pb**	**20 56 58.7**	**-0.7**
	baz=2.1						
J20A				Sb	**Sb**	**20 57 25.8**	**+0.4**
	baz=2.1						
J20A	**Shoshoni**	**2.04**	**262**	Pb	**Pb**	**20 56 58.7**	**-0.7**
	baz=2.1						
J20A				Sb	**Sb**	**20 57 25.8**	**+0.4**
	baz=2.1						
G21A	**Lodge Grass**	**2.05**	**319**	⇑P	**Pn**	**20 56 57.7**	**+0.5**
	baz=2.0,SNR=22						
G21A	**Lodge Grass**	**2.05**	**319**	⇑P	**Pn**	**20 56 57.7**	**+0.5**
	baz=2.0,SNR=22						
I20A	**Worland**	**2.05**	**278**	⇓Pb	**Pn**	**20 56 58.4**	**+1.1**
	baz=2.1,SNR=104						
I20A				Sb	**Sb**	**20 57 25.8**	**+0.1**
	baz=2.1						
I20A	**Worland**	**2.05**	**278**	⇓Pb	**Pn**	**20 56 58.4**	**+1.1**
	baz=2.1,SNR=104						
I20A				Sb	**Sb**	**20 57 25.8**	**+0.1**
	baz=2.1						
H20A	**Greybull**	**2.09**	**293**	⇑P	**Pn**	**20 56 57.9**	**+0.1**
	baz=2.1,SNR=36						
H20A	**Greybull**	**2.09**	**293**	⇑P	**Pn**	**20 56 57.9**	**+0.1**
	baz=2.1,SNR=36						
F22A	**Rosebud**	**2.20**	**343**	Pb	**Pb**	**20 57 00.8**	**-1.3**
	baz=2.2,SNR=74						
F22A	**Rosebud**	**2.20**	**343**	Pb	**Pb**	**20 57 00.8**	**-1.3**
	baz=2.2,SNR=74						
M23A	**Laramie**	**2.24**	**188**	Pb	**Pn**	**20 57 01.4**	**+1.5**
	baz=2.3,SNR=67						
M23A	**Laramie**	**2.24**	**188**	Pb	**Pn**	**20 57 01.4**	**+1.5**
	baz=2.3,SNR=67						
M24A	**Cheyenne**	**2.25**	**171**	Pb	**Pb**	**20 57 02.5**	**-0.4**
	baz=2.3,SNR=142						
M24A	**Cheyenne**	**2.25**	**171**	Pb	**Pb**	**20 57 02.5**	**-0.4**
	baz=2.3,SNR=142						
PHWY	**Pilot Hill**	**2.39**	**183**	*e*Pn	**Pn**	**20 57 01.8**	**-0.2**
K20A	**Yellowstone Ra**	**2.44**	**246**	Pb	**Pb**	**20 57 04.9**	**-1.3**
	baz=2.5						
K20A	**Yellowstone Ra**	**2.44**	**246**	Pb	**Pb**	**20 57 04.9**	**-1.3**
	baz=2.5						
M21A	**Separation Pea**	**2.57**	**217**	⇓P	**Pn**	**20 57 05.9**	**+1.4**
	baz=2.6,SNR=122						
M21A	**Separation Pea**	**2.57**	**217**	⇓P	**Pn**	**20 57 05.9**	**+1.4**
	baz=2.6,SNR=122						
G20A	**Bridger**	**2.58**	**307**	⇓P	**Pn**	**20 57 04.2**	**-0.3**
	baz=2.6,SNR=83						
G20A	**Bridger**	**2.58**	**307**	⇓P	**Pn**	**20 57 04.2**	**-0.3**
	baz=2.6,SNR=83						
I19A	**Meeteetse**	**2.68**	**279**	P	**Pn**	**20 57 07.0**	**+1.0**
	baz=2.7,SNR=56						
I19A	**Meeteetse**	**2.68**	**279**	P	**Pn**	**20 57 07.0**	**+1.0**
	baz=2.7,SNR=56						
K19A	**Absolon Red Bu**	**2.72**	**253**	Pb	**Pb**	**20 57 09.5**	**-1.4**
	baz=2.8						
K19A	**Absolon Red Bu**	**2.72**	**253**	Pb	**Pb**	**20 57 09.5**	**-1.4**
	baz=2.8						
J19A	**Crowheart**	**2.75**	**262**	⇓P	**Pn**	**20 57 08.3**	**+1.4**
	baz=2.8,SNR=144						
J19A	**Crowheart**	**2.75**	**262**	⇓P	**Pn**	**20 57 08.3**	**+1.4**
	baz=2.8,

YKA **Yellowknife Ar** 19.61 347 P Pn 21 00 55.8 +3.6
YKA **Yellowknife Ar** 19.61 347 P Pn 21 00 55.8 +3.6
0.3nm,0.3s,baz=155,slow=8.7,SNR=5.3
ARCES **ARCESS Array B** 61.48 18 P P 21 06 38.0 -1.2
ARCES **ARCESS Array B** 61.48 18 P P 21 06 38.0 -1.2
0.4nm,0.4s,baz=339,slow=6.8,SNR=9.0

IDC 16 21:07:33.1±2.3, 1.77S×132.79E, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.4/22, mbtmp3.6/4, ML3.2/2, Error ellipse: s-maj=95.3km s-min=25.3km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	17.69	203	P	Pn	21 11 41.0	-0.1
	0.0nm,0.3s,baz=27,slow=9.9,SNR=6.6						
WRA	**Warramunga Arr**	18.13	175	P	P	21 11 46.8	-0.2
	0.1nm,0.3s,baz=354,slow=12,SNR=4.6						
ASAR	**Alice Springs**	21.80	177	P	P	21 12 26.9	-0.1
	1.1nm,0.6s,baz=0.6,slow=13,SNR=22						
MKAR	**Makanchi Array**	65.51	324	P	P	21 18 18.4	0.0
	0.4nm,1.0s,baz=106,slow=6.5,SNR=3.0						

IDC 16 21:22:33.7±2.3, 4.17N×126.31E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/23, mbtmp3.2/3, Error ellipse: s-maj=198.1km s-min=25.5km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	25.23	162	P	P	21 28 01.1	-0.4
	0.5nm,0.5s,baz=341,slow=11,SNR=5.0						
ASAR	**Alice Springs**	28.64	165	P	P	21 28 32.5	+0.3
	0.1nm,0.4s,baz=341,slow=7.4,SNR=3.7						
MKAR	**Makanchi Array**	56.96	325	P	P	21 32 21.0	0.0
	0.2nm,0.7s,baz=121,slow=7.0,SNR=3.0						

*ISCJB **16** 21:29:23.8±1.0, 56.61N±0.03×152.33W±0.04, h2km±6km, mb4.5/91, MS4.0/4, Error ellipse: s-maj=4.4km s-min=3.5km az=179.9*
*BJI **16** 21:29:24.3, 56.55N×152.67W, h11km, mB5.1/7, mb4.6/18, Ms4.8/3, Ms7 4.6/4*
*IDC **16** 21:29:25.4±0.6, 56.60N×152.43W, h0km, mb4.3/25, mb1 4.4/28, mb1mx4.4/34, mbtmp4.2/28, ML3.5/3, MS4.1/2, Ms1 4.1/2, ms1mx3.4/39, Error ellipse: s-maj=16.9km s-min=10.6km az=23.0*
*NEIC **16** 21:29:26.7, 56.40N×152.17W, h10km, mb4.6/45, ML4.0(AEIC), After AEIC.*
*MOS **16** 21:29:28.8±1.0, 56.67N×152.38W, h33km, mb4.8/47, Error ellipse: s-maj=11.0km s-min=4.2km az=88.4*
ISC 16 21:29:27.5±0.5, 56.51N±0.05×152.28W±0.03, h20km±2km, h19km:pP-P, n397, σ1s29/432, mb4.6/91, MS4.1/5, 30C-24D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	0.90	323	P	Pb	21 29 43.9	-0.5
KDAK	**Kodiak Island**	1.28	353	Sn	Sn	21 30 06.6	-0.2
KDAK	**Kodiak Island**	1.28	353	Pn	Pn	21 29 49.9	-0.4
	40nm,0.3s,baz=181,slow=8.6,SNR=347						
KDAK				Sn	Sn	21 30 06.6	-0.2
	128nm,0.3s,baz=197,slow=14,SNR=18						
KDAK				LR	LR	21 30 11.4	
	comp=Z,2μm,21.8s,baz=203,slow=39						
KABR	**Katmai Barrier**	2.18	319	P	Pn	21 30 02.5	-0.1
KAWH	**Katmai**	2.32	325	P	Pn	21 30 05.9	+1.4
KAKN	**Katmai Knife C**	2.34	321	P	Pn	21 30 06.1	+1.3
KCE	**Katmai Mt Cerb**	2.34	319	P	Pn	21 30 06.3	+1.5
KABU	**Katmai Buttres**	2.40	319	P	Pn	21 30 07.2	+1.5
KELA	**Mount Kelaz**	2.69	317	P	Pn	21 30 10.4	+0.8
AUW	**Augustine West**	2.94	348	P	Pn	21 30 14.5	+1.6
OPT	**Oil Point**	3.19	351	P	Pn	21 30 17.9	+1.4
ANPK	**Aniakchak Peak**	3.24	278	P	Pn	21 30 16.9	-0.3
ANPK				S	Sn	21 30 56.8	+1.5
ANNW	**Aniakchak Nort**	3.30	280	P	Pn	21 30 17.8	-0.2
BRLK	**Bradley Lake**	3.34	12	P	Pn	21 30 17.7	-0.9
BRLK				S	Sn	21 30 59.0	+1.3
CHGN	**Chignik**	3.41	269	*e*Pn	Pn	21 30 17.7	-1.7
CHGN				*e*Sn	Sn	21 30 56.8	-2.5
VNHG	**Veniaminof 1**	3.84	269	P	Pn	21 30 25.1	-0.3
VNHG				S	Sn	21 31 09.9	0.0
SEW	**Seward**	3.90	21	*e*Pn	Pn	21 30 24.6	-1.5
SEW				*e*Sn	Sn	21 31 06.3	-5.0
RSO	**Redoubt South**	3.97	357	*e*Pn	Pn	21 30 27.8	+0.4
DFR	**Drift River**	4.10	357	P	Pn	21 30 29.4	+0.4
MID	**Middleton Isla**	4.31	45	*e*P	Pn	21 30 31.4	-0.3
MID				*e*		21 31 21.7	
MID	**Middleton Isla**	4.31	45	*e*Pn	Pn	21 30 31.4	-0.3
MID				*e*Sn	Sn	21 31 21.7	+0.4
SPU	**Mount Spurr**	4.69	1	P	Pn	21 30 37.7	+0.7
CKL	**Chakachamna La**	4.70	360	P	Pn	21 30 37.2	-0.1
SDPT	**Sand Point**	4.75	259	P	Pn	21 30 36.5	-1.4
BGL	**Barrier Glacie**	4.77	359	P	Pn	21 30 38.8	+0.7
SVW2	**Sparrevohn**	4.91	341	P	Pn	21 30 40.7	+0.7
STLK	**Strandline Lak**	5.01	2	P	Pn	21 30 41.8	+0.3
EYAK	**Cordova Ski Ar**	5.30	38	P	Pn	21 30 44.8	-0.6
PMR	**Palmer**	5.35	16	*e*P	Pn	21 30 46.1	+0.1
PMR				*e*		21 31 42.9	
PMR	**Palmer**	5.35	16	*e*Pn	Pn	21 30 46.1	+0.1
PMR				*e*Sn	Sn	21 31 42.9	-4.1
VLZ	**Valdez**	5.57	31	P	Pn	21 30 48.1	-0.9
RAGM	**Ragged Mountai**	5.57	43	*e*Pn	Pn	21 30 47.9	-1.3
RAGM				*e*Sn	Sn	21 31 48.1	-4.4
SML	**Sawmill**	5.69	19	*e*P	Pn	21 30 50.0	-0.7
SML	**Sawmill**	5.69	19	*e*Pn	Pn	21 30 50.0	-0.7
DIV	**Divide**	5.73	33	P	Pn	21 30 50.5	-0.9
DT1	**Dutton Round H**	5.81	260	P	Pn	21 30 50.6	-1.8
PPLA	**Purkeypile**	6.41	0	P	Pn	21 31 00.9	+0.2
FALS	**False Pass**	6.51	260	*e*Pn	Pn	21 30 59.7	-2.3
FALS				*e*Sn	Sn	21 32 12.3	-3.3
VRDI	**Verde Repeater**	6.58	40	P	Pn	21 31 02.0	-1.1
TT01	**Tatalina**	6.69	345	P	Pn	21 31 04.2	-0.2
KIAG	**Kiagna River**	6.80	45	P	Pn	21 31 05.8	-0.3
MCARA	**McCarthy VSAT**	6.84	41	P	Pn	21 31 06.2	-0.3
BALM	**Baldy**	6.87	45	P	Pn	21 31 06.1	-0.9
BALM	**Baldy**	6.87	45	P	Pn	21 31 06.1	-0.9
GRNC	**Granite Creek**	6.93	48	P	Pn	21 31 07.2	-0.8
HARP	**HAARP**	6.94	29	P	Pn	21 31 08.0	+0.2
DHY	**Denali Highway**	7.03	19	P	Pn	21 31 09.1	-0.2
TRF	**Thorofare Moun**	7.03	7	P	Pn	21 31 08.4	-0.9
SAMH	**Samovar Hills**	7.06	54	P	Pn	21 31 09.3	-0.3
RND	**Reindeer**	7.13	13	P	Pn	21 31 10.0	-0.5
RND	**Reindeer**	7.13	13	P	Pn	21 31 10.0	-0.5
BARN	**Barnard Glacie**	7.16	46	P	Pn	21 31 10.3	-0.7
PAX	**Paxson**	7.33	25	*e*P	Pn	21 31 13.9	+0.5
PAX				*e*		21 32 33.3	
PAX	**Paxson**	7.33	25	*e*Pn	Pn	21 31 13.9	+0.5
PAX				*e*Sn	Sn	21 32 33.3	-2.6
MCK	**McKinley**	7.43	12	P	Pn	21 31 14.9	+0.2
MCK	**McKinley**	7.43	12	P	Pn	21 31 14.9	+0.2
PNL	**Peninsula**	7.53	60	P	Pn	21 31 15.7	-0.3
MENT	**Mentasta**	7.76	30	*e*Pn	Pn	21 31 19.1	0.0
MENT				*e*Sn	Sn	21 32 46.7	+0.4
DDM	**Donnelly Dome**	7.97	21	P	Pn	21 31 22.0	0.0
AKUT	**Akutan**	8.05	258	*e*Pn	Pn	21 31 20.4	-2.8
AKUT				*e*Sn	Sn	21 32 46.8	-6.7
DOT	**Dot Lake**	8.25	26	*e*Pn	Pn	21 31 26.9	+1.0
WRH	**Wood River Hil**	8.25	13	P	Pn	21 31 25.3	-0.5
BCA3	**Beaver Creek A**	8.43	34	P	Pn	21 31 27.0	-1.3
CCB	**Clear Creek Bu**	8.45	13	P	Pn	21 31 27.9	-0.7
MTBL	**Makushin Table**	8.61	259	P	Pn	21 31 28.5	-2.4
COLA	**College**	8.66	13	P	Pn	21 31 30.9	-0.6
COLA	**College**	8.66	13	P	Pn	21 31 30.9	-0.6
IL1	**Eielson Array**	8.70	15	P	Pn	21 31 30.5	-1.4
ILAR	**Eielson Array**	8.70	15	Pn	Pn	21 31 31.4	-0.6
ILAR				Sn	Sn	21 33 01.4	-7.9
ILAR	**Eielson Array**	8.70	15	Pn	Pn	21 31 31.4	-0.6
	3.3nm,0.3s,baz=201,slow=14,SNR=137						
ILAR				Sn	Sn	21 33 01.4	-7.9
	0.2nm,0.3s,baz=208,slow=29,SNR=2.5						
MDM	**Murphy Dome**	8.70	11	P	Pn	21 31 30.9	-1.1
HYT	**Haines Junctio**	8.82	55	P	Pn	21 31 32.1	-1.8
SKAG	**Skagway**	9.47	65	*e*Pn	Pn	21 31 42.7	+0.2
IM3	**Indian Mountai**	9.53	356	P	Pn	21 31 42.7	-0.7
EGAK	**Eagle**	9.91	29	*e*Pn	Pn	21 31 49.6	+1.1
COLD	**Coldfoot**	10.80	4	*e*Pn	Pn	21 31 59.3	-1.4
DLBC	**Dease Lake**	12.12	72	Pn	Pn	21 32 20.5	+1.6
DLBC				Sn	Sn	21 34 31.4	-1.9
DLBC	**Dease Lake**	12.12	72	Pn	Pn	21 32 20.5	+1.6
	0.3nm,0.3s,baz=265,slow=9.1,SNR=3.0						
DLBC				Sn	Sn	21 34 31.4	-1.9
	0.2nm,0.3s,baz=294,slow=20,SNR=2.7						
INK	**Inuvik**	14.59	28	Pn	Pn	21 32 52.4	+0.1
INK	**Inuvik**	14.59	28	Pn	Pn	21 32 52.4	+0.1
	0.1nm,0.3s,baz=217,slow=13,SNR=7.4						
INK				LR	LR	21 39 50.5	
	comp=Z,505nm,18.5s,baz=38,slow=43						
NLWA	**Neilton Lookou**	19.62	106	*e*P	Pn	21 33 56.3	+0.5
	15nm,1.3s						
YKW3	**Yellowknife Ar**	19.80	57	*e*Pn	P	21 33 56.7	+0.5
	1.0nm,1.8s						
YKA	**Yellowknife Ar**	19.81	57	P	P	21 33 56.9	+0.6
YKA	**Yellowknife Ar**	19.81	57	P	P	21 33 56.9	+0.6
	0.1nm,0.3s,baz=271,slow=11,SNR=28						
FX1	**Attu Island--F**	20.16	274	*e*P	P	21 34 00.5	+0.2
FX1	**Attu Island--F**	20.16	274	P	P	21 33 59.0	-1.2
	4.0nm,0.5s,baz=343,slow=20,SNR=5.7						
LON	**Longmire**	21.12	105	*e*P	P	21 34 12.0	+1.3
LON	**Longmire**	21.12	105	*e*P	P	21 34 12.0	+1.3
	6.4nm,1.0s						
BILL	**Bilibino**	21.96	318	*c i*P	P	21 34 19.2	-0.3
BILL				*i*		21 34 35.1	
BILL				pmax	pmax		
	comp=Z,13nm,0.8s						
BROR	**Big Rock Looko**	22.42	110	P	P	21 34 26.3	+1.7
HAWA	**Hanford**	22.57	103	*e*P	P	21 34 27.1	+0.9
	comp=Z,6.3nm,0.8s						
NEW	**Newport**	22.77	96	*e*P	P	21 34 30.1	+1.7
	comp=Z,4.1nm,0.9s						
NEW	**Newport**	22.77	96	P	P	21 34 30.1	+1.7
	comp=Z,2.8nm,0.7s,baz=310,slow=6.4,SNR=5.4						
NEW	**Newport**	22.77	96	⇓P	P	21 34 29.9	+1.5
	baz=23						
VIPM	**Ingram Point**	23.21	108	P	P	21 34 34.5	+1.4
VIPM	**Ingram Point**	23.21	108	P	P	21 34 34.5	+1.4
HUMO	**Hull Mountain**	23.34	114	*e*P	P	21 34 36.0	+1.8
	comp=Z,26nm,1.5s						
YBH	**Yreka Blue Hor**	24.11	115	*e*P	P	21 34 43.9	+2.2
	comp=Z,6.4nm,0.9s						
YBH	**Yreka Blue Hor**	24.11	115	P	P	21 34 44.4	+2.7
	comp=Z,6.6nm,0.8s,baz=345,slow=2.8,SNR=16						
B13A	**Whitefish**	24.18	94	⇑P	P	21 34 44.0	+1.8
	baz=24						
LAMM	**Antelope Mount**	24.24	115	P	P	21 34 45.4	+2.4
BSMT	**Bassoo Peak**	24.30	95	*e*P	P	21 34 41.1	-2.5
A14A	**Double T Ranch**	24.43	91	⇑P	P	21 34 46.5	+1.9
	baz=24						
LHEM	**Herd Peak**	24.43	115	P	P	21 34 47.1	+2.4
C13A	**Hot Springs**	24.51	95	⇑P	P	21 34 47.2	+1.8
	baz=24						
JTMT	**Jette**	24.64	95	*e*P	P	21 34 47.0	+0.5
	comp=Z,2.2nm,0.7s						
YBMT	**Yellow Bay**	24.72	94	*e*P	P	21 34 49.6	+2.3
C14A	**Swan Lake**	24.92	94	P	P	21 34 50.5	+1.5
	baz=25,SNR=8.1						
SWMT	**Swartz Lake**	24.93	95	*e*P	P	21 34 46.6	-2.5
WDC	**Whiskeytown Da**	25.05	117	*e*P	P	21 34 49.0	-1.2
WDC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WDC	**Whiskeytown Da**	25.05	117	*e*P	P	21 34 49.0	-1.2
	comp=Z,8.6nm,0.9s						
LTIM	**Timbered Crate**	25.13	114	P	P	21 34 53.6	+2.6
MOD	**Modoc**	25.20	112	*e*P	P	21 34 53.8	+2.1
	comp=Z,9.1nm,1.1s						
SLMT	**Seeley Lake**	25.36	95	*e*P	P	21 34 48.8	-4.4
E13A	**Victor**	25.46	97	⇑P	P	21 34 56.9	+3.0
	baz=25						
WVOR	**Wild Horse Val**	25.69	109	*e*P	P	21 34 57.2	+1.1
WVOR				pmax	pmax		
	comp=Z,16nm,1.1s						
WVOR	**Wild Horse Val**	25.69	109	*e*P	P	21 34 57.1	+1.1
	comp=Z,16nm,1.1s						
F13A	**Darby**	25.78	98	⇓P	P	21 34 58.4	+1.5
	baz=26						
B17A	**L&G Farms, Che**	26.26	90	⇓P	P	21 35 02.8	+1.7
	baz=26						
G13A	**Cobalt**	26.27	99	⇑P	P	21 35 03.8	+2.4
	baz=26						
MFID	**Camas Ranch**	26.51	104	*e*P	P	21 35 03.8	+0.3
	comp=Z,4.6nm,0.8s						
H13A	**Challis**	26.60	100	⇓P	P	21 35 05.8	+1.5
	baz=26						
HLID	**Hailey**	27.17	102	*e*P	P	21 35 09.8	+0.3
	comp=Z,2.6nm,0.9s						
MCMT	**McKenzie Canyo**	27.20	99	*e*P	P	21 35 08.3	-1.5
SEY	**Seymchan**	27.83	306	*i*P	P	21 35 13.7	-1.3
RES	**Resolute Bay**	28.14	28	*e*P	P	21 35 18.5	+0.9
	comp=Z,4.7nm,1.1s						
RES	**Resolute Bay**	28.14	28	P	P	21 35 17.0	-0.7
	comp=Z,12nm,0.9s,baz=240,slow=6.3,SNR=3.9						
PETK	**Petropavlovsk-**	28.51	285	P	P	21 35 20.7	-0.5
PETK	**Petropavlovsk-**	28.51	285	P	P	21 35 20.7	-0.5
PETK	**Petropavlovsk-**	28.51	285	P	P	21 35 20.7	-0.5
	comp=Z,3.5nm,1.0s,baz=82,slow=12,SNR=6.5						
ELK	**Elko**	28.68	108	P	P	21 35 25.4	+2.4
ELK	**Elko**	28.68	108	P	P	21 35 25.4	+2.4
	comp=Z,1.9nm,0.8s,baz=279,slow=11,SNR=9.4						
NVAR	**Mina Array Bea**	28.81	114	P	P	21 35 26.0	+1.8
NVAR	**Mina Array Bea**	28.81	114	P	P	21 35 26.0	+1.8
	comp=Z,2.9nm,0.8s,baz=304,slow=8.8,SNR=23						
R11A	**Troy Canyon, C**	30.26	111	P	P	21 35 38.6	+1.6
	baz=30,SNR=8.4						
PDAR	**Pinedale Array**	30.35	99	P	P	21 35 39.2	+1.4
PDAR	**Pinedale Array**	30.35	99	P	P	21 35 39.2	+1.4
	comp=Z,1.3nm,0.7s,baz=311,slow=5.1,SNR=13						
I20A	**Worland**	30.36	95	⇓P	P	21 35 38.6	+0.8
	baz=30						
GRAC	**Grapevine Rang**	30.38	115	⇑P	P	21 35 40.6	+2.6
	baz=30						
D24A	**Glendive**	30.52	87	⇓P	P	21 35 37.7	-1.3
	baz=30						
I21A	**Big Trails, Te**	30.91	95	⇓P	P	21 35 43.5	+0.8
	baz=31						
MPMC	**Manual Prospec**	31.06	116	⇓P	P	21 35 44.3	+0.2
	baz=31,SNR=8.4						
MVU	**Marysvale**	31.91	107	*e*P	P	21 35 54.3	+2.7
	comp=Z,4.5nm,1.0s						
MSU	**Marysvale**	31.93	107	*e*P	P	21 35 53.3	+1.6
MSU	**Marysvale**	31.93	107	*e*P	P	21 35 53.3	+1.6
GSC	**Goldstone**	32.00	116	*e*P	P	21 35 53.3	+1.0
GSC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GSC	**Goldstone**	32.00	116	*e*P	P	21 35 53.3	+1.0
	comp=Z,5.3nm,1.1s						
SRU	**San Rafael**	32.37	105	⇓P	P	21 35 57.3	+1.7
	baz=32,SNR=6.0						
N20A	**Spence Gulch,**	32.37	100	⇓P	P	21 35 58.3	+2.6
	baz=32						
HEC	**Hector,Ludlow**	32.61	116	⇑P	P	21 35 59.6	+2.0
	baz=32						
N21A	**Black Mountain**	32.83	99	⇓P	P	21 36 01.3	+1.6
	baz=33						
O20A	**White River Ci**	32.87	101	⇑P	P	21 36 01.8	+1.8
	baz=33						
L23A	**Garrett**	32.91	96	P	P	21 36 01.6	+1.3
	baz=33,SNR=5.7						
GMRC	**Granite Mounta**	32.98	116	⇓P	P	21 36 02.6	+1.7
	baz=33						
S18A	**Hurst Farm, Bl**	33.69	106	⇓P	P	21 36 08.1	+0.9
	baz=34						
IRM	**Iron Mountain**	33.73	116	P	P	21 36 09.3	+2.0
	baz=34,SNR=9.7						
MONP	**Monument Peak**	34.13	119	⇑P	P	21 36 12.8	+1.8
	baz=34						
PV01	**Paradox Valley**	34.13	104	*e*P	P	21 36 08.0	-3.0
	comp=Z,212nm,0.8s						
Y12C	**Blythe**	34.37	115	⇑P	P	21 36 15.1	+2.2
	baz=34						
TIXI	**Tiksi**	34.58	327	⇑*i*P	P	21 36 12.9	-1.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WUAZ	**Wupatki**	34.60	110	⇓P	P	21 36 17.0	+2.0
	baz=34						
O24A	**Longmont**	34.61	98	⇑P	P	21 36 14.2	-0.9
	baz=34						
M26A	**McRoberts Ranc**	34.76	94	⇓P	P	21 36 14.4	-1.9
	baz=35						
GLA	**Glamis**	34.78	116	*e*P	P	21 36 18.6	+2.2
GLA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GLA	**Glamis**	34.78	116	*e*P	P	21 36 18.6	+2.2
	comp=Z,9.2nm,1.2s						
V21A	**Milan**	36.35	106	⇑P	P	21 36 32.3	+2.1
	baz=36						
214A	**Organ Pipe Nat**	36.67	115	⇓P	P	21 36 34.6	+1.9
	baz=36						
EYMN	**Ely**	37.06	77	*e*P	P	21 36 35.7	-0.1
S26A	**Kim**	37.27	99	P	P	21 36 39.3	+1.5
	baz=37,SNR=5.3						
U25A	**Circle Dot Ran**	37.65	102	⇓P	P	21 36 43.5	+2.4
	baz=38						
Z20A	**Nine Sixteen R**	37.91	109	⇓P	P	21 36 45.6	+2.2
	baz=38						
YAK	**Yakutsk**	37.99	311	*e*P	P	21 36 42.5	-0.9
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				MLR	MLR		
	comp=N,183nm,16.0s						
YAK				MLR	MLR		
	comp=Z,176nm,18.0s						
W24A	**Lazy 6 Ranch,**	38.00	104	⇑P	P	21 36 44.8	+0.7
	baz=38						
U26A	**Atchley Ranch,**	38.02	101	⇓P	P	21 36 46.0	+1.8
	baz=38						
V26A	**Tequesquite Ra**	38.44	102	P	P	21 36 49.8	+2.1
	baz=38,SNR=9.8						
U27A	**Thompson Grove**	38.50	100	⇓P	P	21 36 49.5	+1.3
	baz=38						
W25A	**X Bar L Ranch,**	38.50	103	⇑P	P	21 36 48.9	+0.6
	baz=38						
FRB	**Frobisher Bay**	39.44	44	LR	LR	21 53 50.5	
	comp=Z,312nm,18.5s,baz=20,slow=37						
527A	**Woodward Ranch**	42.86	107	⇑P	P	21 37 25.9	+1.6
	baz=43						
428A	**Kincaid Ranch,**	42.90	106	P	P	21 37 26.6	+2.0
	baz=43,SNR=6.2						
ERM	**Erimo**	42.91	279	*e*P	P	21 37 25.4	+1.1
ERM				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HABR	**Khabarovsk**	43.02	291	*e*P	P	21 37 23.4	-1.7
HABR				*e**SP	sP	21 37 33.7	-0.1
HABR						21 39 13.9	
HABR				S	S	21 43 46.9	-2.4
HABR				*e**SS	sS	21 43 59.7	+0.2
HABR				SS	SS	21 47 00.0	-1.1
HABR				SSS	SSS	21 47 35.7	
HABR				pmax	pmax		
	comp=E,27nm,1.4s						
HABR				pmax	pmax		
	comp=Z,44nm,1.7s						
HABR				pmax	pmax		
	comp=N,7.0nm,1.1s						
HABR				MLR	MLR		
	comp=Z,88nm,17.0s						
330A	**Mertzon**	43.18	103	⇓P	P	21 37 27.2	+0.4
	baz=43						
429A	**Davenport Ranc**	43.40	105	⇑P	P	21 37 30.1	+1.5
	baz=43						
SUMG	**Summit**	43.44	24	*i*P	P	21 37 29.7	+1.0
SUMG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SUMG	**Summit**	43.44	24	*e*P	P	21 37 26.0	-2.7
	comp=Z,23nm,1.4s						
SUMG	**Summit**	43.44	24	*i*P	P	21 37 29.7	+1.0
	comp=Z,4.7nm,1.0s						
TXAR	**Lajitas Array**	43.48	108	P	P	21 37 31.6	+2.4
TXAR	**Lajitas Array**	43.48	108	P	P	21 37 31.6	+2.4
	comp=Z,2.0nm,0.9s,baz=298,slow=6.1,SNR=8.8						
627A	**Terlingua Ranc**	43.53	107	⇓P	P	21 37 31.2	+1.5
	baz=43						
430A	**Baggett Ranch,**	43.63	104	⇑P	P	21 37 31.8	+1.4
	baz=44						
628A	**Black Gap, Mar**	43.77	107	⇑P	P	21 37 33.4	+1.9
	baz=44						
DAG	**Danmarks Havn**	43.79	14	*i*P	P	21 37 30.7	-0.4
DAG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DAG	**Danmarks Havn**	43.79	14	*i*P	P	21 37 30.7	-0.4
	comp=Z,3.9nm,0.7s						
431A	**Sonora**	44.05	104	⇑P	P	21 37 35.0	+1.2
	baz=44						
530A	**J-C Ranch, Com**	44.07	105	⇑P	P	21 37 35.5	+1.6
	baz=44						
531A	**Rocksprings**	44.49	104	⇑P	P	21 37 38.6	+1.3
	baz=44						
JCT	**Junction City**	44.64	103	*e*P	P	21 37 40.4	+1.9
JCT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
JCT	**Junction City**	44.64	103	*e*P	P	21 37 40.4	+1.9
	comp=Z,7.5nm,0.9s						
JCT	**Junction City**	44.64	103	⇑P	P	21 37 39.3	+0.8
	baz=44						
SCHQ	**Schefferville**	45.23	54	P	P	21 37 43.3	+0.5
SCHQ	**Schefferville**	45.23	54	P	P	21 37 43.3	+0.5
	comp=Z,3.4nm,0.8s,baz=297,slow=5.2,SNR=5.5						
MAJO	**Matsushiro**	49.48	277	*e*P	P	21 38 16.4	+0.2
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAJO	**Matsushiro**	49.48	277	*e*P	P	21 38 16.4	+0.2
	comp=Z,6.1nm,0.8s						
MJAR	**Matsushiro Arr**	49.48	277	P	P	21 38 16.7	+0.5
MJAR	**Matsushiro Arr**	49.48	277	P	P	21 38 16.7	+0.5
	comp=Z,1.2nm,0.8s,baz=39,slow=7.5,SNR=4.8						
CN2	**Changchun**	51.09

	comp=Z,3.0nm,0.7s								
KAF	**Kangasniemi**	**61.71**	**1**	*ep*		**P**		**21 39 41.8**	**-1.7**
	comp=Z,2.9nm,0.7s								
NB2	**NORSAR Subarra**	**62.07**	**9**	P		**P**		**21 39 46.5**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=351,slow=6.9								
NOA	**NORSAR Array B**	**62.07**	**9**	P		**P**		**21 39 46.9**	**+0.8**
NOA	**NORSAR Array B**	**62.07**	**9**	P		**P**		**21 39 46.9**	**+0.8**
	comp=Z,3.5nm,0.8s,baz=350,slow=6.6,SNR=16								
FINES	**FINESS Array B**	**62.38**	**1**	P		**P**		**21 39 48.5**	**+0.4**
FINES	**FINESS Array B**	**62.38**	**1**	P		**P**		**21 39 48.5**	**+0.4**
	comp=Z,5.4nm,0.8s,baz=0.0,slow=8.4,SNR=22								
SVE	**Sverdlovsk**	**63.93**	**341**	*eP*		**P**		**21 39 58.7**	**+0.3**
SVE				pmax	pmax				
	comp=Z,12nm,1.1s								
ARU	**Arti**	**64.68**	**342**	*c iP*		**P**		**21 40 03.2**	**-0.2**
ARU								21 40 36.2	
ARU								21 42 25.7	
ARU				S		**S**		**21 48 41.7**	**-0.3**
ARU				pmax	pmax				
	comp=Z,12nm,1.7s								
KURK	**Kurchatov**	**65.15**	**327**	*c iP*		**P**		**21 40 06.7**	**+0.2**
KURK				pmax	pmax				
	comp=Z,6.0nm,1.0s								
KURK	**Kurchatov**	**65.15**	**327**	*eP*		**P**		**21 40 06.9**	**+0.4**
	comp=Z,6.1nm,1.0s								
BRVK	**Borovoye**	**65.34**	**333**	*eP*		**P**		**21 40 08.3**	**+0.6**
BRVK				pmax	pmax				
	comp=Z,7.0nm,0.9s								
BRVK	**Borovoye**	**65.34**	**333**	*eP*		**P**		**21 40 08.3**	**+0.6**
	comp=Z,7.3nm,0.9s								
BVAR	**Borovoye Array**	**65.35**	**333**	P		**P**		**21 40 08.0**	**+0.2**
BVAR	**Borovoye Array**	**65.35**	**333**	P		**P**		**21 40 08.0**	**+0.2**
BVAR	**Borovoye Array**	**65.35**	**333**	P		**P**		**21 40 08.0**	**+0.2**
	comp=Z,7.4nm,0.8s,baz=38,slow=7.5,SNR=43								
VSU	**Vasula**	**65.37**	**1**	*c iP*		**P**		**21 40 08.6**	**+0.8**
VSU				pmax	pmax				
	comp=Z,18nm,0.9s								
GTA	**Gaotai**	**66.78**	**307**	*eP*		**P**		**21 40 17.5**	**+0.2**
GTA				pP		**pP**		**21 40 22.1**	**-1.7**
GTA				sP		**sP**		**21 40 24.6**	**-1.6**
GTA				pmax	pmax				
	comp=Z,5.0nm,1.3s								
MK31	**Makanchi Array**	**67.42**	**323**	*eP*		**P**		**21 40 20.9**	**-0.3**
MK31	**Makanchi Array**	**67.42**	**323**	*eP*		**P**		**21 40 20.9**	**-0.3**
MKAR	**Makanchi Array**	**67.42**	**323**	P		**P**		**21 40 21.2**	**0.0**
MKAR	**Makanchi Array**	**67.42**	**323**	P		**P**		**21 40 21.2**	**0.0**
MKAR	**Makanchi Array**	**67.42**	**323**	P		**P**		**21 40 21.2**	**0.0**
	comp=Z,3.3nm,0.8s,baz=44,slow=6.2,SNR=35								
LZH	**Lanzhou**	**67.64**	**302**	*eP*		**P**		**21 40 23.5**	**+0.6**
LZH				pP		**pP**		**21 40 28.3**	**-1.1**
LZH				sP		**sP**		**21 40 30.6**	**-1.2**
LZH				pmax	pmax				
	comp=Z,17nm,1.3s								
OBN	**Obninsk**	**68.50**	**355**	*eP*		**P**		**21 40 28.1**	**+0.4**
OBN				*e*				21 40 33.9	
OBN				pmax	pmax				
	comp=Z,5.0nm,0.6s								
SUW	**Suwalki**	**69.77**	**3**	*eP*		**P**		**21 40 35.1**	**-0.5**
SUW				pmax	pmax				
	comp=Z,14nm,0.8s								
SUW	**Suwalki**	**69.77**	**3**	*eP*		**P**		**21 40 35.1**	**-0.5**
	comp=Z,14nm,0.8s								
ABKAR	**Akbulak array**	**71.25**	**338**	*eP*		**P**		**21 40 44.8**	**+0.1**
	comp=Z,4.2nm,0.8s								
CLL	**Collm**	**71.86**	**10**	*eP*		**P**		**21 40 49.0**	**+0.6**
CLL				*e**PP		**pP**		**21 40 55.0**	**+0.1**
CLL	**Collm**	**71.86**	**10**	*eP*		**P**		**21 40 49.0**	**+0.6**
CLL				*ep*P		**pP**		**21 40 55.0**	**+0.1**
CLL				Lm		MLR		22 26 00.0	
	comp=Z,100nm,18.9s								
BAIF	**Baives**	**72.02**	**16**	*eP*		**P**		**21 40 50.6**	**+1.2**
BAIF	**Baives**	**72.02**	**16**	*eP*		**P**		**21 40 50.6**	**+1.2**
BAIF	**Baives**	**72.02**	**16**	*eP*		**P**		**21 40 50.6**	**+1.2**
GIVF	**Givet**	**72.07**	**15**	*eP*		**P**		**21 40 50.6**	**+0.9**
GIVF	**Givet**	**72.07**	**15**	*eP*		**P**		**21 40 50.6**	**+0.9**
GIVF	**Givet**	**72.07**	**15**	*eP*		**P**		**21 40 50.6**	**+0.9**
VRHR	**Novokhopersk**	**72.14**	**351**	*eP*		**P**		**21 40 47.8**	**-2.3**
VRHR				pmax	pmax				
	comp=Z,7.0nm,1.2s								
VRHR				pmax	pmax				
	comp=N,2.0nm,0.6s								
VRHR				pmax	pmax				
	comp=E,2.0nm,0.6s								
VSR	**Storozhevoye**	**72.22**	**352**	*eP*		**P**		**21 40 50.1**	**-0.4**
VSR				pmax	pmax				
	comp=E,6.0nm,1.2s								
VSR				pmax	pmax				
	comp=Z,10.0nm,1.2s								
VSR				pmax	pmax				
	comp=N,5.0nm,0.6s								
BRG	**Berggiesshubel**	**72.37**	**9**	*eP*		**P**		**21 40 52.5**	**+1.0**
	comp=N,14nm,1.8s								
BRG	**Berggiesshubel**	**72.37**	**9**	*eP*		**P**		**21 40 52.5**	**+1.0**
BRG				pmax	pmax				
	comp=Z,14nm,1.8s								
VORD	**Divnogorie**	**72.46**	**352**	*eP*		**P**		**21 40 51.2**	**-0.8**
VORD				pmax	pmax				
	comp=N,7.0nm,0.6s								
VORD				pmax	pmax				
	comp=E,8.0nm,0.6s								
VORD				pmax	pmax				
	comp=Z,4.0nm,0.6s								
KSP	**Ksiaz**	**72.59**	**8**	*eP*		**P**		**21 40 54.1**	**+1.3**
GRR	**Gorron**	**72.79**	**19**	*eP*		**P**		**21 40 54.8**	**+0.8**
GRR	**Gorron**	**72.79**	**19**	*eP*		**P**		**21 40 54.8**	**+0.8**
GRR	**Gorron**	**72.79**	**19**	*eP*		**P**		**21 40 54.8**	**+0.8**
NKC	**Novy Kostel**	**72.87**	**10**	*i P*		**P**		**21 40 55.8**	**+1.3**
NKC				*e*				21 41 01.5	
NKC	**Novy Kostel**	**72.87**	**10**	*i P*		**P**		**21 40 55.8**	**+1.3**
NKC				*ep*P		**pP**		**21 41 01.5**	**+0.5**
UPC	**Upice**	**72.91**	**8**	*i P*		**P**		**21 40 55.8**	**+1.1**
UPC				*e*				21 41 01.5	
UPC	**Upice**	**72.91**	**8**	*i P*		**P**		**21 40 55.8**	**+1.1**
UPC				*ep*P		**pP**		**21 41 01.5**	**+0.3**
TKM2	**Tokmak 2**	**73.05**	**325**	*eP*		**P**		**21 40 56.3**	**+0.4**
TKM2				pmax	pmax				
	comp=Z,5.0nm,1.0s								
TKM2	**Tokmak 2**	**73.05**	**325**	*eP*		**P**		**21 40 56.3**	**+0.4**
	comp=Z,4.9nm,1.0s								
DPC	**Dobruska-Polom**	**73.09**	**8**	*i P*		**P**		**21 40 57.2**	**+1.4**
DPC	**Dobruska-Polom**	**73.09**	**8**	*eP*		**P**		**21 40 54.4**	**-1.4**
	comp=Z,9.4nm,0.9s								
DPC	**Dobruska-Polom**	**73.09**	**8**	*i P*		**P**		**21 40 57.2**	**+1.4**
DPC				*ep*P		**pP**		**21 41 01.7**	**-0.6**
AKASG	**Malin Array Be**	**73.15**	**359**	*ceP*		**P**		**21 40 56.0**	**0.0**
AKASG				pmax	pmax				
	comp=Z,2.0nm,0.4s								
AKASG	**Malin Array Be**	**73.15**	**359**	P		**P**		**21 40 56.0**	**0.0**
AKASG	**Malin Array Be**	**73.15**	**359**	P		**P**		**21 40 56.0**	**0.0**
	comp=Z,2.3nm,0.5s,baz=3.1,slow=6.1,SNR=14								
KIEV	**Kiev**	**73.15**	**359**	*eP*		**P**		**21 40 55.6**	**-0.5**
KIEV				pmax	pmax				
	comp=Z,9.0nm,1.1s								
KIEV	**Kiev**	**73.15**	**359**	*eP*		**P**		**21 40 55.6**	**-0.5**
	comp=Z,9.3nm,1.1s								
AK01	**Malin Array Si**	**73.16**	**359**	*eP*		**P**		**21 40 55.2**	**-0.9**
AK02	**Malin Array Si**	**73.19**	**359**	*eP*		**P**		**21 40 55.9**	**-0.4**
GRF	**Grafenberg Arr**	**73.28**	**11**	*eP*		**P**		**21 40 58.5**	**+1.6**
PRU	**Pruhonice**	**73.30**	**9**	*eP*		**P**		**21 40 58.3**	**+1.3**
PRU	**Pruhonice**	**73.30**	**9**	*eP*		**P**		**21 40 58.3**	**+1.3**
KRLC	**Kraliky**	**73.39**	**7**	*i P*		**P**		**21 40 58.7**	**+1.1**
KRLC	**Kraliky**	**73.39**	**7**	*i P*		**P**		**21 40 58.7**	**+1.1**
AAK	**Ala-Archa**	**73.65**	**326**	*eP*		**P**		**21 40 59.9**	**+0.5**
AAK				*e*				21 43 42.4	
AAK				pmax	pmax				
	comp=Z,6.0nm,1.3s								
AAK	**Ala-Archa**	**73.65**	**326**	*eP*		**P**		**21 40 59.9**	**+0.5**
	comp=Z,6.2nm,1.3s								
AAK				*ePP*		**PP**		**21 43 42.4**	**-0.6**
MEZF	**Maizieres J'vi**	**73.66**	**15**	*eP*		**P**		**21 41 00.1**	**+1.0**
MEZF	**Maizieres J'vi**	**73.66**	**15**	*eP*		**P**		**21 41 00.1**	**+1.0**
EKS2	**Erkin-Say**	**73.85**	**326**	*eP*		**P**		**21 41 00.0**	**-0.5**
EKS2				pmax	pmax				
	comp=Z,5.0nm,1.0s								
EKS2	**Erkin-Say**	**73.85**	**326**	*eP*		**P**		**21 40 60.0**	**-0.5**
	comp=Z,4.6nm,1.0s								
SFTF	**Sexfontaines**	**73.95**	**16**	*eP*		**P**		**21 41 01.8**	**+1.0**
	comp=Z,14nm,0.9s								
SFTF	**Sexfontaines**	**73.95**	**16**	*eP*		**P**		**21 41 01.8**	**+1.0**
	comp=Z,14nm,0.9s								
CDF	**Champ du Feu**	**74.06**	**14**	*eP*		**P**		**21 41 02.7**	**+1.1**
CDF	**Champ du Feu**	**74.06**	**14**	*eP*		**P**		**21 41 02.7**	**+1.1**
CDF	**Champ du Feu**	**74.06**	**14**	*eP*		**P**		**21 41 02.7**	**+1.1**
KHC	**Kasperske Hory**	**74.07**	**10**	*i P*		**P**		**21 41 03.3**	**+1.7**
KHC	**Kasperske Hory**	**74.07**	**10**	*i P*		**P**		**21 41 03.3**	**+1.7**
KWP	**Kalwaria Pacla**	**74.14**	**3**	*eP*		**P**		**21 41 03.5**	**+1.5**
HAU	**Haudompre**	**74.33**	**15**	*eP*		**P**		**21 41 04.0**	**+0.9**
	comp=Z,11nm,0.9s								
HAU				*eR*					
	comp=Z,170nm,19.8s								
HAU	**Haudompre**	**74.33**	**15**	*eP*		**P**		**21 41 04.0**	**+0.9**
HAU				pmax	pmax				
	comp=Z,11nm,0.9s								
HAU	**Haudompre**	**74.33**	**15**	*eP*		**P**		**21 41 04.0**	**+0.9**
	comp=Z,11nm,0.9s								
GERES	**GERESS Array B**	**74.36**	**10**	P		**P**		**21 41 04.5**	**+1.2**
GERES	**GERESS Array B**	**74.36**	**10**	P		**P**		**21 41 04.5**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=350,slow=4.5,SNR=15								
KKAR	**Karatay Array**	**74.41**	**329**	*eP*		**P**		**21 41 04.2**	**+0.5**
KKAR	**Karatay Array**	**74.41**	**329**	*eP*		**P**		**21 41 04.2**	**+0.5**
HINF	**Hinteralfeld**	**74.59**	**14**	*eP*		**P**		**21 41 05.3**	**+0.7**
HINF	**Hinteralfeld**	**74.59**	**14**	*eP*		**P**		**21 41 05.3**	**+0.7**
HINF	**Hinteralfeld**	**74.59**	**14**	*eP*		**P**		**21 41 05.3**	**+0.7**
MFF	**Saint Martin d**	**74.64**	**20**	*eP*		**P**		**21 41 05.8**	**+0.9**
	comp=Z,19nm,0.9s								
MFF	**Saint Martin d**	**74.64**	**20**	*eP*		**P**		**21 41 05.8**	**+0.9**
MFF				pmax	pmax				
	comp=Z,19nm,0.9s								
MFF	**Saint Martin d**	**74.64**	**20**	*eP*		**P**		**21 41 05.8**	**+0.9**
	comp=Z,19nm,0.9s								
LOR	**Lormes**	**74.68**	**17**	*eP*		**P**		**21 41 06.0**	**+0.9**
	comp=Z,12nm,0.9s								
LOR				*eR*					
	comp=Z,212nm,19.5s								
LOR	**Lormes**	**74.68**	**17**	*eP*		**P**		**21 41 06.0**	**+0.9**
	comp=Z,12nm,0.9s								
SSF	**Saint Saulge**	**74.83**	**17**	*eP*		**P**		**21 41 06.9**	**+0.9**
	comp=Z,42nm,1.3s								
SSF	**Saint Saulge**	**74.83**	**17**	*eP*		**P**		**21 41 06.9**	**+0.9**
SSF				pmax	pmax				
	comp=Z,42nm,1.3s								
SSF	**Saint Saulge**	**74.83**	**17**	*eP*		**P**		**21 41 06.9**	**+0.9**
	comp=Z,42nm,1.3s								
AVF	**Avril sur Loir**	**75.06**	**17**	*eP*		**P**		**21 41 08.0**	**+0.7**
	comp=Z,5.1nm,0.6s								
AVF	**Avril sur Loir**	**75.06**	**17**	*eP*		**P**		**21 41 08.0**	**+0.7**
AVF				pmax	pmax				
	comp=Z,5.0nm,0.6s								
AVF	**Avril sur Loir**	**75.06**	**17**	*eP*		**P**		**21 41 08.0**	**+0.7**
	comp=Z,5.1nm,0.6s								
BGF	**Bois d'Agland**	**75.21**	**17**	*eP*		**P**		**21 41 08.9**	**+0.7**
	comp=Z,11nm,0.8s								
BGF	**Bois d'Agland**	**75.21**	**17**	*eP*		**P**		**21 41 08.9**	**+0.7**
BGF				pmax	pmax				
	comp=Z,11nm,0.8s								
BGF	**Bois d'Agland**	**75.21**	**17**	*eP*		**P**		**21 41 08.9**	**+0.7**
	comp=Z,11nm,0.8s								
SMF	**Signal de Mont**	**75.28**	**17**	*eP*		**P**		**21 41 09.2**	**+0.6**
	comp=Z,12nm,0.9s								
SMF	**Signal de Mont**	**75.28**	**17**	*eP*		**P**		**21 41 09.2**	**+0.6**
SMF				pmax	pmax				
	comp=Z,12nm,0.9s								
SMF	**Signal de Mont**	**75.28**	**17**	*eP*		**P**		**21 41 09.2**	**+0.6**
	comp=Z,12nm,0.9s								
TCF	**Toulx Ste Croi**	**75.36**	**18**	*eP*		**P**		**21 41 09.7**	**+0.6**
TCF	**Toulx Ste Croi**	**75.36**	**18**	*eP*		**P**		**21 41 09.7**	**+0.6**
TCF	**Toulx Ste Croi**	**75.36**	**18**	*eP*		**P**		**21 41 09.7**	**+0.6**
CABF	**La Chapelle**	**75.66**	**15**	*eP*		**P**		**21 41 12.1**	**+1.2**
CABF	**La Chapelle**	**75.66**	**15**	*eP*		**P**		**21 41 12.1**	**+1.2**
CABF	**La Chapelle**	**75.66**	**15**	*eP*		**P**		**21 41 12.1**	**+1.2**
KSH	**Kashi**	**76.00**	**324**	P		P		21 41 16.8	+3.8
KSH				*ep*P		**PcP**		**21 41 24.8**	**-0.5**
KSH				*es*P		sP		21 41 27.9	+6.0
KSH				*ePcP*		pP		21 41 28.9	+9.4
KSH				*eP*P		PP		21 44 10.1	+7.2
KSH				*eS*		**S**		**21 50 58.6**	**+3.8**
KSH				*es*S		sS		21 51 12.0	+6.4
KSH				*e*SKS		**SKSac**		**21 51 21.8**	**-0.7**
KSH				*e*ScS		**ScS**		**21 51 27.5**	**+1.1**
KSH				*e*SS		SS		21 55 57.0	+11
KSH				pmax	pmax				
	comp=Z,6.0nm,0.9s								
KSH				pmax	pmax				
	comp=Z,150nm,3.0s								
KSH				LR	LR				
	comp=Z,110nm,5.3s								
BUR08	**Bucovina Ar. S**	**76.19**	**2**	*eP*		**P**		**21 41 14.6**	**+0.7**
RJF	**Les Rejaudoux**	**76.19**	**19**	*eP*		**P**		**21 41 14.2**	**+0.4**
	comp=Z,34nm,1.2s								
RJF				*eR*					
	comp=Z,166nm,22.0s								
RJF	**Les Rejaudoux**	**76.19**	**19**	*eP*		**P**		**21 41 14.2**	**+0.4**
RJF				pmax	pmax				
	comp=Z,34nm,1.2s								
RJF	**Les Rejaudoux**	**76.19**	**19**	*eP*		**P**		**21 41 14.2**	**+0.4**
	comp=Z,34nm,1.2s								
LFF	**La Frestale**	**76.41**	**19**	*eP*		**P**		**21 41 15.9**	**+0.9**
LFF	**La Frestale**	**76.41**	**19**	*eP*		**P**		**21 41 15.9**	**+0.9**
LFF	**La Frestale**	**76.41**	**19**	*eP*		**P**		**21 41 15.9**	**+0.9**
CAF	**Calviac**	**76.66**	**18**	*eP*		**P**		**21 41 17.4**	**+0.9**
CAF	**Calviac**	**76.66**	**18**	*eP*		**P**		**21 41 17.4**	**+0.9**
CAF	**Calviac**	**76.66**	**18**	*eP*		**P**		**21 41 17.4**	**+0.9**
LPG	**La Plagne**	**76.85**	**15**	*eP*		**P**		**21 41 19.8**	**+1.9**
LPG	**La Plagne**	**76.85**	**15**	*eP*		**P**		**21 41 19.8**	**+1.9**
LPG	**La Plagne**	**76.85**	**15**	*eP*		**P**		**21 41 19.8**	**+1.9**
VIVF	**Saint-Julien-l**	**77.16**	**17**	*eP*		**P**		**21 41 20.3**	**+1.0**
VIVF	**Saint-Julien-l**	**77.16**	**17**	*eP*		**P**		**21 41 20.3**	**+1.0**
VIVF	**Saint-Julien-l**	**77.16**	**17**	*eP*		**P**		**21 41 20.3**	**+1.0**
ORIF	**Oris-en-Rattie**	**77.28**	**16**	*eP*		**P**		**21 41 21.3**	**+1.2**
ORIF				*eR*					
	comp=Z,218nm,22.8s								
ORIF	**Oris-en-Rattie**	**77.28**	**16**	*eP*		**P**		**21 41 21.3**	**+1.2**
ORIF	**Oris-en-Rattie**	**77.28**	**16**	*eP*		**P**		**21 41 21.3**	**+1.2**
MBDF	**Montbardon**	**77.60**	**15**	*eP*		**P**		**21 41 23.4**	**+1.4**
MBDF	**Montbardon**	**77.60**	**15**	*eP*		**P**		**21 41 23.4**	**+1.4**
MBDF	**Montbardon**	**77.60**	**15**	*eP*		**P**		**21 41 23.4**	**+1.4**
ETSF	**Etsaut**	**78.13**	**21**	*eP*		**P**		**21 41 26.1**	**+1.3**
	comp=Z,14nm,0.8s								
ETSF	**Etsaut**	**78.13**	**21**	*eP*		**P**		**21 41 26.1**	**+1.3**
ETSF				pmax	pmax				
	comp=Z,14nm,0.8s								
ETSF	**Etsaut**	**78.13**	**21**	*eP*		**P**		**21 41 26.1**	**+1.3**
	comp=Z,14nm,0.8s								
SMRF	**Simiane la Rot**	**78.16**	**16**	*eP*		**P**		**21 41 26.6**	**+1.7**
	comp=Z,60nm,1.5s								
SMRF	**Simiane la Rot**	**78.16**	**16**	*eP*		**P**		**21 41 26.6**	**+1.7**
	comp=Z,60nm,1.5s								
EPF	**Esparros**	**78.17**	**20**	*eP*		**P**		**21 41 25.2**	**+0.1**
EPF	**Esparros**	**78.17**	**20**	*eP*		**P**		**21 41 25.2**	**+0.1**
EPF	**Esparros**	**78.17**	**20**	*eP*		**P**		**21 41 25.2**	**+0.1**
MTLF	**Montolieu**	**78.22**	**19**	*eP*		**P**		**21 41 26.0**	**+0.8**
	comp=Z,13nm,1.0s								
MTLF	**Montolieu**	**78.22**	**19**	*eP*		**P**		**21 41 26.0**	**+0.8**
MTLF				pmax	pmax				
	comp=Z,13nm,1.0s								
MTLF	**Montolieu**	**78.22**	**19**	*eP*		**P**		**21 41 26.0**	**+0.8**
	comp=Z,13nm,1.0s								
SBF	**Sospel**	**78.55**	**15**	*eP*		**P**		**21 41 28.0**	**+0.9**
	comp=Z,23nm,1.0s								
SBF	**Sospel**	**78.55**	**15**	*eP*		**P**		**21 41 28.0**	**+0.9**
SBF				pmax	pmax				
	comp=Z,23nm,1.0s								
SBF	**Sospel**	**78.55**	**15**	*eP*		**P**		**21 41 28.0**	**+0.9**
	comp=Z,23nm,1.0s								
FRF	**La Foret Royal**	**78.73**	**15**	*eP*		**P**		**21 41 28.9**	**+0.9**
	comp=Z,3.3nm,0.7s								
FRF	**La Foret Royal**	**78.73**	**15**	*eP*		**P**		**21 41 28.9**	**+0.9**
FRF				pmax	pmax				
	comp=Z,3.0nm,0.7s								
FRF	**La Foret Royal**	**78.73**	**15**	*eP*		**P**		**21 41 28.9**	**+0.9**
	comp=Z,3.3nm,0.7s								
LMR	**La Mourre**	**78.93**	**16**	*eP*		**P**		**21 41 30.4**	**+1.3**
LMR	**La Mourre**	**78.93**	**16**	*eP*		**P**		**21 41 30.4**	**+1.3**
LMR	**La Mourre**	**78.93**	**16**	*eP*		**P**		**21 41 30.4**	**+1.3**
KBZ	**Khabaz**	**79.31**	**349**	P		**P**		**21 41 32.9**	**+1.7**
KBZ	**Khabaz**	**79.31**	**349**	P		**P**		**21 41 32.9**	**+1.7**
KBZ	**Khabaz**	**79.31**	**349**	P		**P**		**21 41 32.9**	**+1.7**
	comp=Z,5.1nm,0.9s,baz=4.8,slow=3.2,SNR=14								
PGF	**Pioggiola**	**80.05**	**14**	*eP*		**P**		**21 41 36.7**	**+1.3**
	comp=Z,8.2nm,0.8s								
PGF	**Pioggiola**	**80.05**	**14**	*eP*		**P**		**21 41 36.7**	**+1.3**
PGF				pmax	pmax				
	comp=Z,8.0nm,0.8s								
PGF	**Pioggiola**	**80.05**	**14**	*eP*		**P**		**21 41 36.7**	**+1.3**
	comp=Z,8.2nm,0.8s								
ZEI	**Tsey**	**80.13**	**348**	*eP*		**P**		**21 41 35.0**	**-0.9**
ZEI				pmax	pmax				
	comp=Z,3.0nm,0.5s								
ESDC	**Sonseca Array**	**80.49**	**24**	P		**P**		**21 41 39.0**	**+1.2**
ESDC	**Sonseca Array**	**80.49**	**24**	P		**P**		**21 41 39.0**	**+1.2**
	comp=Z,2.4nm,0.7s,baz=337,slow=5.2,SNR=19								
BR131	**Keskin Array S**	**84.00**	**355**	*eP*		**P**		**21 41 55.9**	**-0.4**
	comp=Z,2.0nm,0.9s								
BRTR	**Keskin Array B**	**84.00**	**355**	P		**P**		**21 41 56.9**	**+0.7**
BRTR	**Keskin Array B**	**84.00**	**355**	P		**P**		**21 41 56.9**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=13,slow=3.0,SNR=15								
CMAR	**Chiang Mai Arr**	**84.69**	**296**	P		**P**		**21 41 59.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**84.69**	**296**	P		**P**		**21 41 59.7**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=9.8,slow=5.9,SNR=20								

CSEM ***16*** *21:38:15.6±0.6, 67.55N×20.59E, h2km, ML0.9, Error ellipse: s-maj=16.3km s-min=7.6km az=102.0, Mining explosion.*
UPP ***16*** *21:38:22.0, 67.15N×20.70E, h0km, ML0.9, Mining explosion.*

HEL 16 21:38:18.9±1.0, 67.83N×20.58E, h0km, ML1.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
LANU	**Lannavaara**	**0.57**	**67**	PG	Pg		21 38 28.7	-1.2
LANU				SG	Sg		21 38 36.9	-0.5
LANU				RG	Rg		21 38 38.6	
LANU	**Lannavaara**	**0.57**	**67**	Pg	Pg		21 38 28.7	-1.3
LANU				Sg	Sg		21 38 36.9	-0.5
DUNU	**Dundret**	**0.72**	**180**	P	Pg		21 38 23.3	-9.4
KIF	**Kilpisjarvi**	**1.18**	**4**	PG	Pn		21 38 43.0	+0.4
	baz=183							
KIF				SG	Sg		21 38 55.9	-0.8
KIF				MSG			21 38 55.9	
	comp=Z,2.0nm,0.4s							
KIF				RG	Rg		21 39 00.8	
KIF	**Kilpisjarvi**	**1.18**	**4**	Pg	Pn		21 38 43.0	+0.4
HEF	**Hetta**	**1.29**	**62**	PG	Pn		21 38 44.7	+0.5
	baz=239							
HEF				SG	Sn		21 39 02.0	-0.1
HEF				MSG			21 39 02.0	
	comp=Z,0.9nm,0.4s							
HEF				RG	Rg		21 39 06.3	
HEF	**Hetta**	**1.29**	**62**	Pg	Pn		21 38 44.7	+0.5
HEF				Sg	Sn		21 39 02.0	-0.1
ERTU	**Ertsjaerv**	**1.43**	**153**	P	Pn		21 38 37.7	-8.4
SJUU	**Sjulsmark**	**2.37**	**170**	P	Pn		21 38 52.7	-6.3
RNF	**Rovaniemi**	**2.45**	**118**	PN	Pn		21 39 00.6	+0.5
	baz=295							
RNF				SG	Sn		21 39 30.4	-0.2
RNF				MSG			21 39 30.4	
	comp=Z,0.7nm,0.4s							
ARA0	**ARCESS Array S**	**2.48**	**44**	PN	Pn		21 39 01.0	+0.5
	baz=221							
ARA0				SG	Sb		21 39 35.5	+0.1
ARA0				MSG			21 39 35.5	
	comp=Z,0.8nm,0.3s							
ARA0	**ARCESS Array S**	**2.48**	**44**	Pn	Pn		21 39 01.0	+0.5

ISCJB ***16*** *21:47:57.9±0.5, 39.19N±0.02×38.80E±0.04, h10km±5km, Error ellipse: s-maj=5.0km s-min=4.1km az=172.4*
ISK ***16*** *21:47:57.2, 39.23N×38.80E, h25km, MD2.9*
CSEM ***16*** *21:47:57.9±0.2, 39.19N×38.79E, h15km, MD2.9, Error ellipse: s-maj=4.8km s-min=3.2km az=85.0*
DDA ***16*** *21:47:58.6, 39.17N×38.75E, h7km, MD2.9*

ISC 16 21:47:57.8±0.9, 39.20N±0.02×38.82E±0.03, h15km±8km, n28, σ0.8s9.59/42, Turkey

| Code | Station Name | Δ° | AZ° | Phase | | ISC | Time | Res |
|---|---|---|---

0.9nm,0.5s,baz=22,slow=3.8,SNR=9.2

IDC 16 22:47:11.2±1.9, 0°93N×127°07E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/22, mbtmp3.3/4, Error ellipse: s-maj=179.9km s-min=22.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.94**	**161**	P	P	22 52 06.5	-0.1
	0.6nm,0.5s,baz=340,slow=11,SNR=4.8						
ASAR	**Alice Springs**	**25.34**	**165**	P	P	22 52 40.1	+0.1
	0.5nm,0.6s,baz=342,slow=12,SNR=6.5						
MKAR	**Makanchi Array**	**60.04**	**326**	P	P	22 57 19.9	-0.1
	0.1nm,0.3s,baz=119,slow=7.7,SNR=5.5						
KURBB	**Kurchatov Arra**	**64.27**	**328**	P	P	22 57 48.3	0.0
	0.1nm,0.3s,baz=121,slow=6.2,SNR=2.7						

IDC 16 22:53:48.6±1.1, 18°.74N×121°.32E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.4/25, mbtmp3.4/5, MS3.1/1, Ms1 3.1/1, ms1mx2.1/21, Error ellipse: s-maj=74.3km s-min=21.9km az=66.0

ISCJB 16 22:53:55.9±0.8, 19°.17N±0°.09×121°.1E±0°.2, h39km, mb3.4/5, MS3.0/1, Error ellipse: s-maj=22.8km s-min=8.6km az=154.1

MAN 16 22:54:05, 18°.35N×121°.17E, h17km, mb4.2, ML3.1, MS2.9

ISC 16 22:53:57.1±1.1, 19°07N±0°.09×121°0E±0°.1, h39km, n13, σ2s12/11, mb3.5/5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APYP	**Conner**	**1.22**	**170**	*e*P	**Pn**	**22 54 17.2**	**-0.4**
APYP				*e*S	Sn	22 54 26.1	-6.7
ABRA	**Dolores**	**1.44**	**192**	*e*P	**Pn**	**22 54 20.5**	**-0.1**
ABRA				*e*S	**Sn**	**22 54 34.5**	**-3.8**
CVP	**Callao Caves**	**1.55**	**151**	⇑*i*P	**Pn**	**22 54 21.9**	**-0.3**
CVP				*i* S	**Sn**	**22 54 43.2**	**+2.1**
CAUP	**Cauayan**	**2.24**	**160**	*e*P	Pn	22 54 34.9	+3.2
PALP	**Palanan**	**2.40**	**146**	*e*P	**Pn**	**22 54 34.8**	**+1.0**
BOLP	**Bolinao**	**2.87**	**202**	*e*P	**Pn**	**22 54 43.5**	**+3.1**
BALP	**Baler**	**3.35**	**171**	*e*P	**Pn**	**22 54 48.6**	**+1.8**
SONM	**Songino Array**	**31.07**	**341**	LR	LR	23 13 06.4	
	comp=Z,35nm,18.8s,baz=261,slow=37						
WRA	**Warramunga Arr**	**40.91**	**161**	P	P	23 01 31.1	-4.6
	0.8nm,0.6s,baz=343,slow=9.0,SNR=6.4						
MKAR	**Makanchi Array**	**42.02**	**320**	P	**P**	**23 01 45.4**	**+0.7**
	0.1nm,0.4s,baz=108,slow=7.8,SNR=3.7						
ASAR	**Alice Springs**	**44.29**	**163**	P	P	23 01 55.5	-7.7
	0.2nm,0.6s,baz=336,slow=6.4,SNR=2.9						
KURBB	**Kurchatov Arra**	**46.01**	**323**	P	**P**	**23 02 17.0**	**+0.4**
	0.4nm,0.7s,baz=111,slow=7.0,SNR=5.3						
YKA	**Yellowknife Ar**	**87.73**	**23**	P	**P**	**23 06 39.9**	**-1.6**
	0.5nm,0.7s,baz=312,slow=4.5,SNR=7.9						

ATH 16 22:54:08.8, 36°.17N×27°.73E, h25km±3km, MD3.3/6

ISK 16 22:54:09.2, 36°.17N×27°.78E, h12km, MD3.0

CSEM 16 22:54:09.1±0.2, 36°.13N×27°.70E, h10km, MD3.3, Error ellipse: s-maj=6.9km s-min=3.8km az=147.0

DDA 16 22:54:18.2, 36°.45N×27°.84E, h3km, MD3.1, ML3.1

ISC 16 22:54:09.5±1.1, 36°18N±0°.04×27°73E±0°.03, h14km±10km, n32, σ0s48/48, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.32**	**83**	*e*PB	**Pb**	**22 54 16.7**	**-0.4**
ARG				*e*SB	**Sb**	**22 54 21.6**	**-0.6**
ARG	**Arkhangelos**	**0.32**	**83**	*e*Pb	**Pb**	**22 54 16.7**	**-0.4**
ARG				*e*Sb	**Sb**	**22 54 21.6**	**-0.6**
KARP	**Karpathos**	**0.78**	**217**	*e*PN	**Pg**	**22 54 24.7**	**0.0**
KARP				*e*SN	**Sg**	**22 54 35.0**	**0.0**
KARP	**Karpathos**	**0.78**	**217**	*e*Pn	**Pg**	**22 54 24.7**	**0.0**
KARP				*e*Sn	**Sg**	**22 54 35.0**	**0.0**
BODT	**Bodrum**	**0.94**	**339**	*e*PG	**Pn**	**22 54 28.3**	**-0.2**
BODT				*e*SG	**Sn**	**22 54 41.9**	**+0.1**
BODT	**Bodrum**	**0.94**	**339**	*e*Pg	**Pn**	**22 54 28.3**	**-0.2**
BODT				*e*Sg	**Sn**	**22 54 41.9**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.98**	**49**	*e*PG	**Pb**	**22 54 28.1**	**-0.2**
DALY				*e*SG	**Sg**	**22 54 41.3**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.98**	**49**	*e*Pg	**Pb**	**22 54 28.1**	**-0.2**
DALY				*e*Sg	**Sg**	**22 54 41.3**	**+0.1**
TURN	**Turunc**	**0.99**	**45**	*i* P	Pb	22 54 23.5	-5.0
TURN				*i* S	Sb	22 54 34.1	-7.2
YER	**Yerkesik**	**1.05**	**25**	*e*PG	**Pn**	**22 54 30.1**	**+0.1**
YER				*e*SG	**Sn**	**22 54 44.8**	**+0.3**
YER	**Yerkesik**	**1.05**	**25**	*e*Pg	**Pn**	**22 54 30.1**	**+0.1**
YER				*e*Sg	**Sn**	**22 54 44.8**	**+0.3**
MLSB	**Milas**	**1.11**	**2**	*e*PN	**Pb**	**22 54 30.7**	**0.0**
MLSB	**Milas**	**1.11**	**2**	*e*Pn	**Pb**	**22 54 30.7**	**0.0**
FETY	**Fethiye**	**1.18**	**67**	*e*PN	**Pb**	**22 54 31.7**	**-0.1**
FETY	**Fethiye**	**1.18**	**67**	*e*Pn	**Pb**	**22 54 31.7**	**-0.1**
AKAS	**Kas**	**1.52**	**87**	*i* P	**Pb**	**22 54 37.7**	**+0.2**
AKAS				*i* S	Sg	22 55 04.3	+5.9
AKAS	**Kas**	**1.52**	**87**	*i* P	**Pb**	**22 54 37.7**	**+0.2**
GOLH	**Golhisar**	**1.81**	**54**	*i* P	**Pb**	**22 54 42.6**	**+0.1**
GOLH				*i* S	**Sg**	**22 55 09.6**	**+1.7**
GOLH	**Golhisar**	**1.81**	**54**	*i* P	**Pb**	**22 54 42.6**	**+0.1**
DNZL	**Cakiroluk**	**1.84**	**35**	*i* P	**Pn**	**22 54 41.4**	**+0.5**
DNZL				*i* S	**Sg**	**22 55 07.9**	**-0.9**
DNZL	**Cakiroluk**	**1.84**	**35**	*i* P	**Pn**	**22 54 41.4**	**+0.5**
DNZL				*i* S	**Sg**	**22 55 07.9**	**-0.9**
ELL	**Elmali**	**1.84**	**71**	*e*PN	**Pn**	**22 54 41.2**	**+0.3**
ELL	**Elmali**	**1.84**	**71**	*e*Pn	**Pn**	**22 54 41.3**	**+0.3**
NPS	**Neapolis**	**1.95**	**243**	*e*PB	**Pn**	**22 54 42.6**	**+0.3**
NPS				*e*SN	**Sn**	**22 55 05.9**	**-0.7**
NPS	**Neapolis**	**1.95**	**243**	*e*Pb	**Pn**	**22 54 42.6**	**+0.3**
NPS				*e*Sn	**Sn**	**22 55 05.9**	**-0.7**
APE	**Apeiranthos**	**1.98**	**297**	*e*PN	**Pn**	**22 54 43.7**	**+0.9**
APE	**Apeiranthos**	**1.98**	**297**	*e*PN	**Pn**	**22 54 43.0**	**+0.2**
APE	**Apeiranthos**	**1.98**	**297**	*e*Pn	**Pn**	**22 54 43.0**	**+0.2**
IDI	**Anoyia**	**2.48**	**250**	*e*PN	**Pn**	**22 54 49.8**	**+0.2**
IDI				*e*SN	**Sn**	**22 55 20.0**	**+0.3**
IDI	**Anoyia**	**2.48**	**250**	*e*Pn	**Pn**	**22 54 49.8**	**+0.2**
IDI				*e*Sn	**Sn**	**22 55 20.0**	**+0.3**
KARN	**Karanos**	**3.20**	**257**	*e*PN	**Pn**	**22 55 00.1**	**+0.7**
KARN	**Karanos**	**3.20**	**257**	*e*Pn	**Pn**	**22 55 00.1**	**+0.7**

ISCJB 16 22:57:50.6±0.3, 51°.51N±0°.02×16°.14E±0°.03, h0km, Error ellipse: s-maj=2.9km s-min=2.4km az=154.6

IPEC 16 22:57:51.6±0.2, 51°.59N×16°.23E, h0km, ML2.5/4, Error ellipse: s-maj=1.6km s-min=1.5km az=155.0

CSEM 16 22:57:52.6±0.1, 51°.50N×16°.11E, h2km, ML3.3/12, Error ellipse: s-maj=2.5km s-min=1.8km az=86.0

PRU 16 22:57:53.6, 51°.48N×16°.12E, h0km

WAR 16 22:57:53.6, 51°.51N×16°.12E

IDC 16 22:57:53.9±0.8, 51°.49N×16°.02E, h0km, mb1 3.2/5, mb1mx3.1/27, mbtmp3.1/5, ML2.7/4, Error ellipse: s-maj=15.1km s-min=7.3km az=97.0

VIE 16 22:57:55.3±0.6, 51°.29N×16°.04E, h0km, mb2.3/4, ML2.8/4, Error ellipse: s-maj=4.0km s-min=3.5km az=25.0 71 km WNW of Wroclaw Suspected Mining induced.

UPP 16 22:58:19.8, 53°.49N×15°.62E, h0km, ML1.9, Suspected Mining explosion.

ISC 16 22:57:52.0±0.7, 51°54N±0°.03×16°13E±0°.02, h0km, n57, σ0s81/99, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.70**	**171**	*e*Pg	**Pg**	**22 58 06.2**	**+0.8**
KSP				*e*Sg	**Sg**	**22 58 15.2**	**+0.7**
UPC	**Upice**	**1.03**	**184**	*e*PG	**Pg**	**22 58 12.2**	**+0.4**
UPC	**Upice**	**1.03**	**184**	Pg	**Pg**	**22 58 12.2**	**+0.4**
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	**Pg**	**22 58 15.1**	**+0.2**
DPC				*e*SG	**Sg**	**22 58 29.6**	**-0.7**
	comp=Z,41nm,0.4s						
DPC	**Dobruska-Polom**	**1.20**	**174**	Pg	**Pg**	**22 58 15.1**	**+0.2**
DPC				Sg	**Sg**	**22 58 29.6**	**-0.7**
	41nm,0.4s						
PVCC	**Panska Ves**	**1.41**	**225**	*e*PG	**Pn**	**22 58 19.2**	**+0.3**
PVCC				*e*SG	**Sb**	**22 58 38.1**	**+0.5**
	comp=Z,102nm,0.2s						
PVCC	**Panska Ves**	**1.41**	**225**	Pg	**Pn**	**22 58 19.2**	**+0.3**
PVCC				Sg	**Sb**	**22 58 38.1**	**+0.5**
	102nm,0.2s						
KRLC	**Kraliky**	**1.52**	**164**	*e*PG	**Pn**	**22 58 21.0**	**+0.5**
KRLC				*e*SG	**Sg**	**22 58 40.3**	**-0.5**
KRLC	**Kraliky**	**1.52**	**164**	Pg	**Pn**	**22 58 21.0**	**+0.5**
KRLC				Sg	**Sg**	**22 58 40.3**	**-0.5**
BRG	**Berggiesshubel**	**1.52**	**245**	PN	**Pn**	**22 58 20.2**	**-0.3**
BRG				PG	**Pb**	**22 58 21.6**	**+0.5**
BRG				SG	**Sg**	**22 58 41.6**	**+0.7**
	72nm,0.4s						
PRU	**Pruhonice**	**1.85**	**214**	*e*PN	**Pn**	**22 58 24.7**	**-0.2**
PRU				*e*PG	**Pb**	**22 58 26.5**	**-0.1**
PRU				*e*SG	**Sb**	**22 58 50.5**	**+0.2**
	comp=Z,19nm,0.4s						
PRU	**Pruhonice**	**1.85**	**214**	Pn	**Pn**	**22 58 24.7**	**-0.2**
CLL	**Collm**	**1.97**	**265**	*e*Pn	**Pn**	**22 58 26.0**	**-0.6**
CLL				*e*Pg	**Pb**	**22 58 29.0**	**+0.3**
CLL				*i*		22 58 33.6	
CLL				*i* Sg	**Sg**	**22 58 55.5**	**+0.3**
	comp=Z,28nm,0.4s						
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**22 58 26.7**	**-0.1**
	baz=336						
MORC				*e*Sg	**Sb**	**22 58 54.1**	**0.0**
	comp=Z,23nm,0.4s,baz=336						
OKC	**Ostrava-Krasne**	**2.13**	**142**	*e*PN	**Pn**	**22 58 28.8**	**0.0**
OKC				*e*PG	**Pg**	**22 58 32.6**	**-0.2**
OKC				*e*SG	**Sb**	**22 58 59.0**	**+0.5**
	comp=Z,22nm,0.5s						
OKC	**Ostrava-Krasne**	**2.13**	**142**	Pn	**Pn**	**22 58 28.8**	**0.0**
VRAC	**Vranov**	**2.25**	**172**	Pn	**Pn**	**22 58 31.3**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=352,slow=16,SNR=20						
VRAC				Pg	**Pg**	**22 58 35.2**	**+0.1**
	comp=Z,2.3nm,0.3s,baz=348,slow=17,SNR=23						
VRAC				Sn	**Sb**	**22 59 01.0**	**-0.9**
	comp=Z,1.6nm,0.3s,baz=60,slow=18,SNR=7.3						
VRAC				Lg	Lg	22 59 05.9	
	comp=Z,5.0nm,0.3s,baz=354,slow=11,SNR=13						
VRAC	**Vranov**	**2.25**	**172**	*e*Pn	**Pn**	**22 58 30.9**	**+0.4**
VRAC				*e*Sg	**Sb**	**22 59 03.2**	**+1.3**
	comp=Z,18nm,0.3s,baz=354						
TREC	**Trest**	**2.28**	**191**	*e*PN	**Pn**	**22 58 31.5**	**+0.6**
TREC				*e*PG	**Pb**	**22 58 35.0**	**+1.0**
TREC	**Trest**	**2.28**	**191**	Pn	**Pn**	**22 58 31.5**	**+0.6**
KRUC	**Moravsky**	**2.48**	**176**	*e*Pn	**Pn**	**22 58 34.5**	**+0.8**
	baz=358						
KRUC				*e*Sg	**Sg**	**22 59 11.3**	**-0.4**
	comp=Z,20nm,0.4s,baz=358						
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN	**Pn**	**22 58 37.3**	**+1.1**
NKC				*e*PG	**Pg**	**22 58 43.2**	**+0.1**
NKC				*e*SG	**Sg**	**22 59 18.8**	**+1.1**
	comp=Z,37nm,0.4s						
NKC	**Novy Kostel**	**2.67**	**242**	Pn	**Pn**	**22 58 37.3**	**+1.1**
NKC	**Novy Kostel**	**2.67**	**242**	Pg	**Pg**	**22 58 43.2**	**+0.1**
NKC				Sg	**Sg**	**22 59 18.8**	**+1.1**
	comp=Z,37nm,0.4s						
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**22 58 43.8**	**+0.6**
OJC				*e*Sg	**Sg**	**22 59 19.1**	**+1.2**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	**Pg**	**22 58 43.8**	**+0.6**
OJC				*e*Sg	**Sg**	**22 59 19.1**	**+1.2**
JAVC	**Velka Javorina**	**2.86**	**159**	*e*Sg	**Sg**	**22 59 23.9**	**+0.1**
	comp=Z,21nm,0.7s						
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**22 58 39.4**	**-0.2**
KHC				*e*PG	**Pb**	**22 58 46.1**	**+1.4**
KHC				*e*SN	**Sn**	**22 59 14.5**	**-0.7**
KHC				*e*SG	**Sg**	**22 59 24.0**	**-1.4**
	comp=Z,9.0nm,0.4s						
KHC	**Kasperske Hory**	**2.91**	**215**	Pn	**Pn**	**22 58 39.4**	**-0.2**
KHC	**Kasperske Hory**	**2.91**	**215**	Pg	**Pb**	**22 58 46.1**	**+1.4**
KHC				Sn	**Sn**	**22 59 14.5**	**-0.7**
KHC				Sg	**Sg**	**22 59 24.0**	**-1.4**
	comp=Z,9.0nm,0.4s						
GERES	**GERESS Array B**	**3.11**	**211**	Pn	**Pn**	**22 58 42.3**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=29,slow=12,SNR=53						
GERES				Pg	**Pb**	**22 58 49.8**	**+1.6**
	comp=Z,3.2nm,0.3s,baz=29,slow=17,SNR=39						
GERES				Sn	**Sn**	**22 59 20.4**	**+0.1**
	comp=Z,1.8nm,0.3s,baz=30,slow=24,SNR=8.0						
GERES				Lg	Lg	22 59 30.6	
	comp=Z,3.3nm,0.3s,baz=33,slow=28,SNR=8.1						
SMOL	**Smolenice**	**3.14**	**164**	*e*SG	**Sg**	**22 59 33.2**	**+0.4**
SMOL	**Smolenice**	**3.14**	**164**	*e*Sg	**Sg**	**22 59 33.2**	**+0.4**
ZST	**Bratislava**	**3.40**	**169**	*e*SG	**Sg**	**22 59 40.1**	**-1.2**
ZST	**Bratislava**	**3.40**	**169**	*e*Sg	**Sg**	**22 59 40.1**	**-1.2**
NIE	**Niedzica**	**3.41**	**127**	*e*P	**Pg**	**22 58 57.3**	**-0.1**
NIE				*e*S	**Sg**	**22 59 40.5**	**-1.1**
VYHS	**Vyhne**	**3.51**	**149**	*e*PN	**Pn**	**22 58 48.0**	**+0.2**
VYHS				*e*SG	**Sg**	**22 59 44.8**	**0.0**
VYHS	**Vyhne**	**3.51**	**149**	*e*Pn	**Pn**	**22 58 48.0**	**+0.2**
VYHS				*e*Sg	**Sg**	**22 59 44.8**	**0.0**
CONA	**Conrad Observa**	**3.62**	**183**	⇑*i*Pn	**Pn**	**22 58 50.0**	**+0.7**
CONA				⇓*i*Sg	**Sg**	**22 59 46.5**	**-1.6**
	comp=Z,16nm,0.7s						
CONA	**Conrad Observa**	**3.62**	**183**	Pn	**Pn**	**22 58 50.0**	**+0.7**
CONA				Sg	**Sg**	**22 59 46.5**	**-1.6**
	comp=Z,16nm,0.7s						
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	**Pn**	**22 58 50.2**	**+0.5**
BSD				*i* S	**Sn**	**22 59 31.0**	**-2.5**
MOA	**Molln**	**3.88**	**199**	⇑*i*Pn	**Pn**	**22 58 53.6**	**+0.7**
MOA				⇓*i*Sg	**Sg**	**22 59 56.4**	**-0.3**
	comp=Z,10nm,0.4s						
MOA	**Molln**	**3.88**	**199**	Pn	**Pn**	**22 58 53.6**	**+0.7**
MOA				Sg	**Sg**	**22 59 56.4**	**-0.3**
	comp=Z,10nm,0.4s						
CRVS	**Cervenica-Dubn**	**4.32**	**126**	*e*PN	**Pn**	**22 58 59.2**	**+0.2**
CRVS				*e*SG	**Sg**	**23 00 10.1**	**-0.7**
CRVS	**Cervenica-Dubn**	**4.32**	**126**	*e*Pn	**Pn**	**22 58 59.2**	**+0.2**
KOLS	**Kolonicke sedl**	**4.73**	**121**	*e*PN	**Pn**	**22 59 05.2**	**+0.7**
KOLS	**Kolonicke sedl**	**4.73**	**121**	*e*Pn	**Pn**	**22 59 05.2**	**+0.7**
BLEU	**Blekinge**	**4.78**	**358**	P	**Pn**	**22 59 06.0**	**+0.8**
DEL	**Delary**	**5.12**	**346**	P	**Pn**	**22 59 10.5**	**+0.7**
VXJU	**Vaexsjoe**	**5.44**	**353**	P	**Pn**	**22 59 14.8**	**+0.6**
OSKU	**Oskarshamn**	**5.67**	**360**	P	**Pn**	**22 59 18.4**	**+1.0**
BYXU	**Byxelkrok**	**5.79**	**5**	P	**Pn**	**22 59 20.0**	**+1.0**
ASPU	**Aespoe**	**5.90**	**2**	P	**Pn**	**22 59 22.0**	**+1.5**
EKSU	**Eksjoe**	**6.07**	**356**	P	**Pn**	**22 59 23.6**	**+0.8**
HFS	**Hagfors**	**8.72**	**352**	Pn	**Pn**	**22 59 59.2**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=156,slow=18,SNR=5.5						
FINES	**FINESS Array B**	**11.33**	**25**	Pn	**Pn**	**23 00 34.0**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=5.8						
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn	**P**	**23 02 08.2**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=189,slow=13,SNR=5.3						

THE 16 23:10:21.8, 37°.91N×20°.97E, h16km, ML2.8/2, Error ellipse: s-maj=1.5km s-min=0.5km az=200.0

CSEM 16 23:10:21.8±0.3, 37°.93N×21°.01E, h2km, ML2.8, Error ellipse: s-maj=5.9km s-min=4.2km az=29.0

ATH 16 23:10:22.0, 37°.94N×20°.97E, h5km±2km, MD3.1/29, ML2.5

ISC 16 23:10:22.6±1.0, 37°95N±0°.03×21°01E±0°.02, h10km±8km, n72, σ0s91/111, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.24**	**312**	P	**Pg**	**23 10 27.3**	**-0.2**
KFL				S	**Sg**	**23 10 31.6**	**+0.8**
KFL	**Anninata**	**0.24**	**312**	P	**Pg**	**23 10 27.2**	**-0.2**
KFL				S	**Sg**	**23 10 31.1**	**+0.3**
RLS	**Riolos of Patr**	**0.38**	**73**	P	**Pg**	**23 10 30.2**	**+0.1**
RLS				S	**Sb**	**23 10 36.7**	**-0.6**
RLS	**Riolos of Patr**	**0.38**	**73**	*e*PB	**Pg**	**23 10 30.2**	**+0.1**
RLS				*e*SB	**Sb**	**23 10 36.6**	**-0.7**
RLS	**Riolos of Patr**	**0.38**	**73**	P	**Pg**	**23 10 30.0**	**-0.1**
RLS				S	**Sg**	**23 10 35.8**	**+0.7**
RLS				*e*Sb	**Sb**	**23 10 36.6**	**-0.7**
VLS	**Valsamata**	**0.40**	**304**	P	**Pg**	**23 10 29.8**	**-0.8**
VLS				S	**Sg**	**23 10 36.0**	**+0.1**
VLS	**Valsamata**	**0.40**	**304**	*e*PB	**Pg**	**23 10 29.9**	**-0.7**
VLS	**Valsamata**	**0.40**	**304**	*e*Pb	**Pg**	**23 10 29.9**	**-0.7**
VLS				S	**Sg**	**23 10 35.5**	**-0.4**
LAKA	**Lakka**	**0.82**	**69**	P	**Pg**	**23 10 37.9**	**-0.5**
LAKA				S	**Sb**	**23 10 50.6**	**+0.6**
LAKA	**Lakka**	**0.82**	**69**	*e*PG	**Pg**	**23 10 37.8**	**-0.6**
LAKA				*e*SB	**Sg**	**23 10 49.4**	**+0.3**
LAKA	**Lakka**	**0.82**	**69**	P	**Pg**	**23 10 37.9**	**-0.5**
LAKA				*e*Sb	**Sg**	**23 10 49.4**	**+0.3**
LAKA				S	**Sb**	**23 10 50.6**	**+0.6**
EFP	**Efpalio**	**0.85**	**56**	P	**Pg**	**23 10 38.3**	**-0.7**
EFP				S	**Sb**	**23 10 51.4**	**+0.4**
EFP	**Efpalio**	**0.85**	**56**	*e*PG	**Pg**	**23 10 38.3**	**-0.7**
EFP				*e*SB	**Sg**	**23 10 51.1**	**+0.1**
EFP	**Efpalio**	**0.85**	**56**	P	**Pg**	**23 10 38.3**	**-0.7**
EFP				S	**Sg**	**23 10 50.1**	**0.0**
EFP				*e*Sb	**Sb**	**23 10 51.1**	**+0.1**
LKD2	**Lefkada island**	**0.88**	**342**	P	**Pg**	**23 10 38.3**	**-1.3**
LKD2				S	**Sb**	**23 10 51.9**	**0.0**
LKD2	**Lefkada island**	**0.88**	**342**	*e*PB	**Pg**	**23 10 38.1**	**-1.5**
LKD2				*e*SB	**Sg**	**23 10 51.2**	**+0.1**
LKD2	**Lefkada island**	**0.88**	**342**	P	**Pg**	**23 10 38.3**	**-1.3**
LKD2				S	**Sg**	**23 10 51.4**	**+0.3**
KLV	**Kalavryta, Ach**	**0.91**	**84**	*e*PB	**Pg**	**23 10 39.0**	**-1.1**
KLV				*e*SB	**Sg**	**23 10 52.4**	**+0.5**
KLV	**Kalavryta, Ach**	**0.91**	**84**	*e*Pb	**Pg**	**23 10 39.0**	**-1.1**
KLV				*e*Sb	**Sg**	**23 10 52.4**	**+0.5**
TRIZ	**Trizonia**	**0.93**	**63**	P	**Pg**	**23 10 39.6**	**-1.1**
TRIZ	**Trizonia**	**0.93**	**63**	*e*PB	**Pg**	**23 10 39.5**	**-1.1**
TRIZ				*e*SB	**Sn**	**23 10 54.9**	**-0.3**
TRIZ	**Trizonia**	**0.93**	**63**	P	**Pg**	**23 10 39.7**	**-0.9**
TRIZ				S	**Sb**	**23 10 53.8**	**+0.4**
TRIZ				*e*Sb	**Sn**	**23 10 54.9**	**-0.3**
KALE	**Kalithea**	**0.99**	**63**	P	**Pg**	**23 10 40.6**	**-1.1**
KALE	**Kalithea**	**0.99**	**63**	*e*PB	**Pg**	**23 10 40.6**	**-1.1**
KALE				*e*SB	**Sg**	**23 10 55.3**	**+0.6**
KALE	**Kalithea**	**0.99**	**63**	P	**Pg**	**23 10 40.6**	**-1.1**
KALE				*e*Sb	**Sg**	**23 10 55.3**	**+0.6**
GUR	**Goura**	**1.05**	**90**	P	**Pg**	**23 10 41.5**	**-1.3**
GUR	**Goura**	**1.05**	**90**	*e*PB	**Pg**	**23 10 41.6**	**-1.3**
GUR				*e*SB	**Sn**	**23 10 58.0**	**-0.3**
GUR	**Goura**	**1.05**	**90**	*e*Pb	**Pg**	**23 10 41.6**	**-1.3**
GUR				*e*Sb	**Sn**	**23 10 58.0**	**-0.3**
EVR	**Evrytania**	**1.15**	**33**	P	**Pb**	**23 10 43.9**	**-0.8**
EVR	**Evrytania**	**1.15**	**33**	*e*PB	**Pb**	**23 10 44.2**	**-0.5**
EVR				*e*SB	**Sn**	**23 11 01.2**	**+0.5**
EVR	**Evrytania**	**1.15**	**33**	P	**Pb**	**23 10 43.9**	**-0.8**
EVR	**Evrytania**	**1.15**	**33**	*e*Pb	**Pb**	**23 10 44.2**	**-0.5**
EVR				*e*Sb	**Sn**	**23 11 01.2**	**+0.5**
PYL	**PYLOS**	**1.20**	**151**	*e*PB	**Pb**	**23 10 43.7**	**-1.8**
PYL				*e*SB	**Sn**	**23 11 02.4**	**+0.5**
PYL	**PYLOS**	**1.20**	**151**	*e*Pb	**Pb**	**23 10 43.7**	**-1.8**
PYL				*e*Sb	**Sn**	**23 11 02.4**	**+0.5**
VLX	**Vlachokerasia**	**1.23**	**118**	*e*PB	**Pg**	**23 10 46.4**	**+0.1**
VLX	**Vlachokerasia**	**1.23**	**118**	*e*Pb	**Pg**	**23 10 46.4**	**+0.1**
DSF	**Desfina**	**1.28**	**69**	P	**Pn**	**23 10 45.3**	**-1.3**
DSF	**Desfina**	**1.28**	**69**	P	**Pn**	**23 10 45.3**	**-1.3**
DSF				S	**Sb**	**23 11 03.6**	**+0.2**
AGG	**Agios Georgios**	**1.49**	**44**	*e*PG	**Pn**	**23 10 49.8**	**+0.3**
AGG				*e*SB	**Sg**	**23 11 10.9**	**+0.4**
AGG	**Agios Georgios**	**1.49**	**44**	*e*Pg	**Pn**	**23 10 49.8**	**+0.3**
AGG				*e*Sb	**Sg**	**23 11 10.9**	**+0.4**
LTK	**Loutraki**	**1.55**	**87**	*e*PG	**Pb**	**23 10 51.3**	**-0.1**
LTK	**Loutraki**	**1.55**	**87**	*e*Pg	**Pb**	**23 10 51.3**	**-0.1**
DYR	**Agios Nikonas**	**1.59**	**138**	*e*PB	**Pb**	**23 10 52.1**	**0.0**
DYR	**Agios Nikonas**	**1.59**	**138**	*e*Pb	**Pb**	**23 10 52.1**	**0.0**
JAN	**Janina**	**1.71**	**356**	*e*PN	**Pb**	**23 10 54.8**	**+0.7**
JAN	**Janina**	**1.71**	**356**	*e*Pn	**Pb**	**23 10 54.8**	**+0.7**
LKR	**Lokris**	**1.71**	**65**	*e*PG	**Pn**	**23 10 53.2**	**+0.7**
LKR				*e*SN	**Sg**	**23 11 18.8**	**+1.1**
LKR	**Lokris**	**1.71**	**65**	*e*Pg	**Pn**	**23 10 53.2**	**+0.7**
LKR				*e*Sn	**Sg**	**23 11 18.8**	**+1.1**
THL	**Klokotos Trika**	**1.79**	**26**	*e*PG	**Pb**	**23 10 55.8**	**+0.3**
THL				*e*SN	**Sg**	**23 11 20.9**	**+0.6**
THL	**Klokotos Trika**	**1.79**	**26**	*e*Pg	**Pb**	**23 10 55.8**	**+0.3**
THL				*e*Sn	**Sg**	**23 11 20.9**	**+0.6**
DID	**Didima**	**1.82**	**103**	*e*PG	**

ASHO				S		Sn	23 27 06.9	+0.7
ASUD	**Al Ashush, Dub**	**2.44**	**184**	⇑P		**Pn**	**23 26 37.9**	**+1.3**
	SNR=13							
ASUD	**Al Ashush, Dub**	**2.44**	**184**	P		**Pn**	**23 26 37.9**	**+1.3**
	SNR=13							
GHIR	**Ghir-Karzin**	**2.53**	**299**	*e*Pn		**Pb**	**23 26 42.2**	**-0.2**
GHIR				*e*Sg		**Sg**	**23 27 21.5**	**+3.1**
NASN	**Na'in**	**6.17**	**338**	*e*Pn		**Pn**	**23 27 30.3**	**+2.2**
RDF	**Al-Radifah**	**7.26**	**287**	*e*P		**Pn**	**23 27 43.6**	**+0.7**
RDF					AML	AML	23 29 00.7	
	comp=Z,3.0nm,0.8s							
RDF				*e*S		**Sn**	**23 29 03.6**	**-1.8**
RDF	**Al-Radifah**	**7.26**	**287**	*e*P		**Pn**	**23 27 43.6**	**+0.7**
NAY	**Al-Naaiem**	**7.60**	**288**	*e*P		**Pn**	**23 27 48.1**	**+0.5**
NAY				*e*S		**Sn**	**23 29 10.7**	**-3.0**
NAY					AML	AML	23 29 14.2	
	comp=Z,1.8nm,0.6s							
NAY	**Al-Naaiem**	**7.60**	**288**	*e*P		**Pn**	**23 27 48.1**	**+0.5**
MIB	**Mutribah**	**7.68**	**293**	*e*P		**Pn**	**23 27 48.7**	**+0.1**
MIB				*e*S		**Sn**	**23 29 10.9**	**-4.7**
MIB					AML	AML	23 29 13.2	
	comp=Z,1.7nm,0.4s							
MIB	**Mutribah**	**7.68**	**293**	*e*P		**Pn**	**23 27 48.7**	**+0.1**

*ISCJB **16** 23:42:41.1±0.4, 27°.87N±0°.07×128°.92E±0°.09, h53km±5km, mb3.5/10, Error ellipse: s-maj=16.8km s-min=4.6km az=41.1*
*JMA **16** 23:42:41.6±0.1, 27°.95N×128°.85E, h43km±1km, M3.3*
JMA Felt II J1.
*IDC **16** 23:42:46.5±8.3, 27°.95N×128°.82E, h88km±53km, mb3.3/8, mb1 3.5/10, mb1mx3.3/28, mbtmp3.3/10, ML3.1/2, MS2.9/1, Ms1 2.9/1, ms1mx2.1/19, Error ellipse: s-maj=71.6km s-min=27.4km az=166.0*

ISC 16 23:42:41.5±0.9, 27°.83N±0°.08×128°.95E±0°.09, h44km±7km, n21, σ1§47/27, mb3.6/10, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.05**	**180**	P	**Pn**	**23 42 49.0**	**+0.5**
JTK				S	**Sn**	**23 42 54.0**	**+0.6**
JAMN	**Amaminishikomi**	**0.45**	**26**	P	**Pn**	**23 42 51.3**	**-0.6**
JAMN				S	**Sn**	**23 42 58.2**	**-1.0**
JAM	**Amami Oshima**	**0.82**	**45**	P	**Pn**	**23 42 56.3**	**-0.3**
JAM				S	**Sn**	**23 43 07.1**	**-0.5**
JZK	**Kikaishima**	**1.02**	**62**	P	**Pn**	**23 43 01.0**	**+1.6**
JZK				*e*S	**Sn**	**23 43 13.9**	**+1.3**
JOW	**Kunigami**	**1.17**	**211**	P	**Pn**	**23 43 02.3**	**+0.9**
JOW				S	**Sn**	**23 43 17.1**	**+1.0**
JIH	**Iheya**	**1.18**	**228**	P	**Pn**	**23 43 02.1**	**+0.5**
JIH				S	**Sn**	**23 43 17.5**	**+1.0**
JAGN	**Aguni-jima**	**1.96**	**231**	P	**Pn**	**23 43 13.1**	**+0.8**
JAGN				S	**Sn**	**23 43 36.4**	**+0.7**
JKE	**Kume jima 2**	**2.44**	**233**	P	**Pn**	**23 43 20.2**	**+1.2**
JNU	**Nakatsue**	**5.53**	**17**	P	**Pn**	**23 44 04.2**	**+2.8**
	0.9nm,0.3s,baz=334,slow=6.9,SNR=6.7						
JNU				S	**Sn**	**23 45 07.4**	**+3.8**
	baz=202,slow=19,SNR=1.7						
KSRS	**Korea Array**	**9.63**	**355**	P	Pn	23 45 01.9	+4.4
	0.1nm,0.3s,baz=173,slow=13,SNR=4.9						
MJAR	**Matsushiro Arr**	**11.69**	**40**	LR	LR	23 49 37.7	
	comp=Z,51nm,18.7s,baz=130,slow=35						
SONM	**Songino Array**	**26.59**	**325**	P	**P**	**23 48 18.1**	**+2.5**
	0.1nm,0.3s,baz=132,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**40.97**	**310**	P	**P**	**23 50 19.5**	**-0.5**
	0.3nm,0.5s,baz=92,slow=9.9,SNR=7.0						
ZALV	**Zalesovo Beam**	**41.38**	**321**	P	**P**	**23 50 21.8**	**-1.4**
	0.4nm,0.5s,baz=104,slow=9.2,SNR=4.6						
BVAR	**Borovoye Array**	**49.52**	**317**	P	**P**	**23 51 27.0**	**-0.6**
	0.3nm,0.4s,baz=88,slow=9.4,SNR=4.3						
INK	**Inuvik**	**67.17**	**24**	P	**P**	**23 53 30.9**	**+0.4**
	0.4nm,0.4s,baz=278,slow=7.4,SNR=5.3						
KBZ	**Khabaz**	**68.65**	**309**	P	**P**	**23 53 40.3**	**+0.2**
	0.5nm,0.5s,baz=212,slow=6.4,SNR=4.3						
JOF	**Joensuu**	**68.96**	**331**	*e*p	**P**	**23 53 39.9**	**-1.9**
	0.9nm,0.5s						
FINES	**FINESS Array B**	**71.79**	**330**	P	**P**	**23 53 57.8**	**-1.3**
	0.8nm,0.4s,baz=67,slow=5.7,SNR=19						
AKASG	**Malin Array Be**	**74.73**	**319**	P	**P**	**23 54 15.4**	**-1.3**
	0.3nm,0.4s,baz=62,slow=7.8,SNR=2.7						
YKA	**Yellowknife Ar**	**76.81**	**25**	P	**P**	**23 54 28.1**	**-0.2**
	0.1nm,0.5s,baz=299,slow=6.1,SNR=3.7						

*RSPR **16** 23:45:15.7, 18°.26N×68°.33W, h52km±4km, MD3.4/6*
NEIC 16 23:45:15.7, 18°.26N×68°.33W, h52km, MD3.4(RSPR), **10C-1D, After RSPR., Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DR12	**Loma Pena Alta**	**1.13**	**298**	⇑*e*P	Pn	23 45 33.2	-2.1
DR12				*e*S	Sn	23 45 48.7	-1.2
DR12	**Loma Pena Alta**	**1.13**	**298**	⇑*e*P	Pn	23 45 33.2	-2.1
DR12				*e*S	Sn	23 45 48.7	-1.2
LSP	**Las Mesas**	**1.19**	**94**	⇑*e*P	Pn	23 45 35.1	-0.9
LSP	**Las Mesas**	**1.19**	**94**	⇑*e*P	Pn	23 45 35.1	-0.9
CRPR	**Cabo Rojo, PR**	**1.19**	**102**	⇑*e*P	Pn	23 45 35.3	-0.7
CRPR	**Cabo Rojo, PR**	**1.19**	**102**	*e*S	Sn	23 45 50.1	-1.0
CRPR	**Cabo Rojo, PR**	**1.19**	**102**	*e*Pn	Pn	23 45 36.0	0.0
CRPR				*e*Sn	Sn	23 45 50.6	-0.4
SMN1	**Samana, DR**	**1.29**	**316**	⇓*e*P	Pn	23 45 36.5	-0.9
SMN1				*e*S	Sn	23 45 52.6	-1.0
LRS	**Lares**	**1.41**	**88**	*e*Pn	Pn	23 45 37.7	-1.4
AOPR	**Arecibo Observ**	**1.50**	**86**	⇑*e*P	Pn	23 45 39.7	-0.6
AOPR	**Arecibo Observ**	**1.50**	**86**	*e*S	Sn	23 45 57.9	-0.9
AOPR	**Arecibo Observ**	**1.50**	**86**	*e*Pn	Pn	23 45 40.4	+0.1
AOPR				*e*Sn	Sn	23 46 01.0	+2.2
OBIP	**Obispado Ponce**	**1.65**	**97**	⇑*e*P	Pn	23 45 41.2	-1.2
OBIP	**Obispado Ponce**	**1.65**	**97**	*e*S	Sn	23 46 01.5	-1.0
OBIP	**Obispado Ponce**	**1.65**	**97**	*e*Pn	Pn	23 45 41.9	-0.4
OBIP				*e*Sn	Sn	23 46 02.6	+0.1
CELP	**Cerrillos**	**1.67**	**96**	⇑*e*P	Pn	23 45 42.0	-0.6
CELP	**Cerrillos**	**1.67**	**96**	*e*Pn	Pn	23 45 42.0	-0.6
CELP				*e*Sn	Sn	23 46 02.9	-0.1
SJG	**San Juan**	**2.08**	**94**	*e*Pn	Pn	23 45 49.7	+1.5
SJG				*e*Sn	Sn	23 46 11.0	-1.9
CPD	**Cerro la Pandu**	**2.31**	**95**	*e*Pn	Pn	23 45 51.1	-0.3
CPD				*e*Sn	Sn	23 46 16.9	-1.7
CBYP	**Canovanas**	**2.35**	**89**	⇑*e*P	Pn	23 45 50.8	-1.2
CBYP	**Canovanas**	**2.35**	**89**	*e*S	Sn	23 46 18.4	-1.3
CBYP	**Canovanas**	**2.35**	**89**	*e*Pn	Pn	23 45 50.9	-1.1
CBYP				*e*Sn	Sn	23 46 18.7	-1.1
MTP	**Monte Pirata**	**2.65**	**93**	⇑*e*P	Pn	23 45 55.2	-0.7
MTP	**Monte Pirata**	**2.65**	**93**	*e*S	Sn	23 46 26.4	-0.4
MTP	**Monte Pirata**	**2.65**	**93**	*e*Pn	Pn	23 45 55.6	-0.3
MTP				*e*Sn	Sn	23 46 26.2	-0.6
SDDR	**Presa de Saban**	**2.90**	**285**	*e*Pn	Pn	23 45 58.8	-0.7
STVI	**Saint Thomas**	**3.21**	**88**	*e*Pn	Pn	23 46 03.0	-0.6
STVI				*e*Sn	Sn	23 46 40.5	-0.1

*THE **16** 23:52:14.7, 36°.13N×22°.36E, h0km±2km, ML3.4/4, Error ellipse: s-maj=2.3km s-min=0.7km az=238.0*
*ATH **16** 23:52:14.1, 36°.13N×22°.41E, h16km±1km, MD3.5/40, ML3.1*
*CSEM **16** 23:52:14.3±0.3, 36°.12N×22°.40E, h2km, MD3.5, Error ellipse: s-maj=6.6km s-min=2.9km az=47.0*
*ISCJB **16** 23:52:15.5±0.9, 36°.11N±0°.04×22°.38E±0°.05, h23km±6km, mb3.6/6, MS2.7/2, Error ellipse: s-maj=8.2km s-min=3.9km az=137.0*
*IDC **16** 23:52:25.9±4.2, 36°.39N×22°.49E, h118km±43km, mb3.3/6, mb1 3.3/9, mb1mx3.1/30, mbtmp3.2/9, MS2.8/2, Ms1 2.8/2, ms1mx2.2/26, Error ellipse: s-maj=28.9km s-min=19.8km az=130.0*

ISC 16 23:52:13.9±1.2, 36°.11N±0°.03×22°.37E±0°.04, h16km±8km, n122, σ1§49/147, mb3.6/6, 1C, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	**0.57**	**72**	*e*PN	**Pg**	**23 52 24.9**	**-0.2**
KYTH	**Kithira**	**0.57**	**72**	*e*Pn	**Pg**	**23 52 24.9**	**-0.2**
DYR	**Agios Nikonas**	**0.65**	**358**	P	**Pg**	**23 52 26.2**	**-0.5**
DYR				S	**Sb**	**23 52 35.8**	**-0.1**
DYR	**Agios Nikonas**	**0.65**	**358**	*e*PB	**Pg**	**23 52 26.0**	**-0.7**
DYR				*e*SN	**Sb**	**23 52 35.6**	**-0.3**
DYR	**Agios Nikonas**	**0.65**	**358**	P	**Pg**	**23 52 26.2**	**-0.5**
DYR				*e*Sn	**Sb**	**23 52 35.6**	**-0.3**
VLI	**Veliai**	**0.76**	**37**	P	**Pg**	**23 52 28.3**	**-0.5**
VLI				S	**Sb**	**23 52 40.3**	**+1.3**
VLI	**Veliai**	**0.76**	**37**	*e*PN	**Pg**	**23 52 28.0**	**-0.8**
VLI				*e*SN	**Sg**	**23 52 38.1**	**-0.8**
VLI	**Veliai**	**0.76**	**37**	*e*Pn	**Pg**	**23 52 28.0**	**-0.8**
VLI	**Veliai**	**0.76**	**37**	P	**Pg**	**23 52 28.3**	**-0.5**
VLI				*e*Sn	**Sg**	**23 52 38.1**	**-0.8**
VLI				S	**Sb**	**23 52 40.3**	**+1.3**
ANKY	**Antikythira Is**	**0.80**	**107**	*e*PN	**Pg**	**23 52 29.1**	**-0.3**
ANKY				*e*SN	**Sg**	**23 52 39.5**	**-0.4**
ANKY	**Antikythira Is**	**0.80**	**107**	*e*Pn	**Pg**	**23 52 29.1**	**-0.3**
ANKY				*e*Sn	**Sg**	**23 52 39.5**	**-0.4**
PYL	**PYLOS**	**0.93**	**328**	P	**Pg**	**23 52 31.4**	**-0.6**
PYL				S	**Sn**	**23 52 45.7**	**+0.2**
PYL	**PYLOS**	**0.93**	**328**	*e*PB	**Pg**	**23 52 31.2**	**-0.8**
PYL				*e*SN	**Sb**	**23 52 44.7**	**+0.8**
PYL	**PYLOS**	**0.93**	**328**	P	**Pg**	**23 52 31.4**	**-0.6**
PYL				S	**Sn**	**23 52 45.7**	**+0.2**
ITM	**Ithomi**	**1.13**	**342**	P	**Pb**	**23 52 35.0**	**0.0**
ITM				S	**Sn**	**23 52 51.6**	**+1.3**
ITM	**Ithomi**	**1.13**	**342**	*e*PN	**Pb**	**23 52 35.0**	**0.0**
ITM				*e*SN	**Sn**	**23 52 50.8**	**+0.5**
ITM	**Ithomi**	**1.13**	**342**	P	**Pb**	**23 52 35.0**	**0.0**
ITM				S	**Sn**	**23 52 51.6**	**+1.3**
VLX	**Vlachokerasia**	**1.26**	**1**	P	**Pb**	**23 52 37.3**	**-0.1**
VLX				S	**Sg**	**23 52 56.3**	**+1.6**
VLX	**Vlachokerasia**	**1.26**	**1**	*e*PN	**Pb**	**23 52 37.3**	**-0.1**
VLX				*e*SN	**Sg**	**23 52 54.5**	**-0.2**
VLX	**Vlachokerasia**	**1.26**	**1**	P	**Pb**	**23 52 37.3**	**-0.1**
VLX				*e*Sn	**Sg**	**23 52 54.5**	**-0.2**
VLX				S	**Sg**	**23 52 56.3**	**+1.6**
KARN	**Karanos**	**1.45**	**119**	P	**Pb**	**23 52 40.8**	**+0.3**
KARN	**Karanos**	**1.45**	**119**	*e*PN	**Pb**	**23 52 40.4**	**-0.1**
KARN				*e*SN	**Sg**	**23 53 01.0**	**+0.5**
KARN	**Karanos**	**1.45**	**119**	*e*Pn	**Pb**	**23 52 40.4**	**-0.1**
KARN				*e*Sn	**Sg**	**23 53 01.0**	**+0.5**
DID	**Didima**	**1.56**	**26**	P	**Pb**	**23 52 42.6**	**+0.1**
DID				S	**Sg**	**23 53 04.5**	**+0.3**
DID	**Didima**	**1.56**	**26**	*e*PN	**Pb**	**23 52 42.0**	**-0.5**
DID				*e*SN	**Sg**	**23 53 04.2**	**0.0**
DID	**Didima**	**1.56**	**26**	*e*Pn	**Pb**	**23 52 42.0**	**-0.5**
DID	**Didima**	**1.56**	**26**	P	**Pb**	**23 52 42.6**	**+0.1**
DID				*e*Sn	**Sg**	**23 53 04.2**	**0.0**
DID				S	**Sg**	**23 53 04.5**	**+0.3**
VAM	**Vamos**	**1.65**	**115**	P	**Pb**	**23 52 44.6**	**+0.7**
VAM				S	**Sg**	**23 53 07.7**	**+0.7**
VAM	**Vamos**	**1.65**	**115**	*e*PN	**Pb**	**23 52 44.7**	**+0.8**
VAM	**Vamos**	**1.65**	**115**	*e*Pn	**Pb**	**23 52 44.7**	**+0.8**
VAM				*e*Sn	**Sg**	**23 53 07.7**	**+0.7**
GUR	**Goura**	**1.82**	**359**	P	**Pb**	**23 52 46.7**	**-0.3**
GUR	**Goura**	**1.82**	**359**	*e*PN	**Pb**	**23 52 47.2**	**+0.2**
GUR	**Goura**	**1.82**	**359**	P	**Pb**	**23 52 46.7**	**-0.3**
GUR	**Goura**	**1.82**	**359**	*e*Pn	**Pb**	**23 52 47.2**	**+0.2**
NAIG	**Nisos Aigina**	**1.88**	**28**	*e*PN	**Pb**	**23 52 47.1**	**-0.7**
NAIG	**Nisos Aigina**	**1.88**	**28**	*e*Pn	**Pb**	**23 52 47.1**	**-0.7**
KLV	**Kalavryta, Ach**	**1.94**	**355**	*e*PN	**Pb**	**23 52 49.0**	**+0.1**
KLV	**Kalavryta, Ach**	**1.94**	**355**	*e*Pn	**Pb**	**23 52 49.0**	**+0.1**
LTK	**Loutraki**	**1.97**	**14**	P	**Pb**	**23 52 48.8**	**-0.6**
LTK	**Loutraki**	**1.97**	**14**	*e*PN	**Pb**	**23 52 48.9**	**-0.5**
LTK	**Loutraki**	**1.97**	**14**	P	**Pb**	**23 52 48.8**	**-0.6**
RLS	**Riolos of Patr**	**2.08**	**340**	*e*PN	**Pb**	**23 52 50.4**	**-0.8**
RLS	**Riolos of Patr**	**2.08**	**340**	*e*Pn	**Pb**	**23 52 50.4**	**-0.8**
LAKA	**Lakka**	**2.15**	**352**	*e*PN	**Pb**	**23 52 51.1**	**-1.4**
LAKA	**Lakka**	**2.15**	**352**	*e*Pn	**Pb**	**23 52 51.1**	**-1.4**
ATH	**Athens Observa**	**2.15**	**30**	*e*PN	**Pb**	**23 52 51.0**	**-1.5**
ATH	**Athens Observa**	**2.15**	**30**	*e*Pn	**Pb**	**23 52 51.0**	**-1.5**
IDI	**Anoyia**	**2.21**	**111**	P	**Pb**	**23 52 52.6**	**-0.9**
IDI	**Anoyia**	**2.21**	**111**	*e*PN	**Pb**	**23 52 52.8**	**-0.8**
IDI	**Anoyia**	**2.21**	**111**	*e*Pn	**Pb**	**23 52 52.8**	**-0.8**
TRIZ	**Trizonia**	**2.27**	**354**	*e*PN	**Pb**	**23 52 53.4**	**-1.0**
TRIZ	**Trizonia**	**2.27**	**354**	*e*Pn	**Pb**	**23 52 53.4**	**-1.0**
SIVA	**Sivas**	**2.27**	**118**	P	**Pb**	**23 52 53.1**	**-1.4**
SIVA	**Sivas**	**2.27**	**118**	*e*PN	**Pb**	**23 52 52.9**	**-1.6**
SIVA	**Sivas**	**2.27**	**118**	*e*Pn	**Pb**	**23 52 52.9**	**-1.6**
PTL	**Penteli**	**2.28**	**31**	P	**Pn**	**23 52 52.4**	**+1.5**
PTL	**Penteli**	**2.28**	**31**	*e*PN	**Pn**	**23 52 52.7**	**+1.8**
PTL	**Penteli**	**2.28**	**31**	P	**Pn**	**23 52 52.4**	**+1.5**
PTL	**Penteli**	**2.28**	**31**	*e*Pn	**Pn**	**23 52 52.7**	**+1.8**
KALE	**Kalithea**	**2.29**	**356**	*e*PN	**Pb**	**23 52 53.6**	**-1.2**
KALE	**Kalithea**	**2.29**	**356**	*e*Pn	**Pb**	**23 52 53.6**	**-1.2**
DSF	**Desfina**	**2.30**	**3**	P	**Pb**	**23 52 53.5**	**-1.6**
DSF	**Desfina**	**2.30**	**3**	P	**Pb**	**23 52 53.5**	**-1.6**
EFP	**Efpalio**	**2.34**	**351**	*e*PN	**Pb**	**23 52 54.4**	**-1.4**
EFP	**Efpalio**	**2.34**	**351**	*e*Pn	**Pb**	**23 52 54.4**	**-1.4**
SANT	**Santorini**	**2.52**	**83**	*e*PN	**Pn**	**23 52 55.3**	**+1.1**
SANT	**Santorini**	**2.52**	**83**	*e*Pn	**Pn**	**23 52 55.3**	**+1.1**
LKR	**Lokris**	**2.59**	**11**	P	**Pn**	**23 52 57.2**	**+2.1**
LKR	**Lokris**	**2.59**	**11**	*e*PN	**Pn**	**23 52 56.6**	**+1.5**
LKR	**Lokris**	**2.59**	**11**	*e*Pn	**Pn**	**23 52 56.6**	**+1.5**
LKR	**Lokris**	**2.59**	**11**	P	**Pn**	**23 52 57.2**	**+2.1**
ATAL	**Atalanti**	**2.63**	**11**	P	**Pn**	**23 52 57.4**	**+1.6**
ATAL	**Atalanti**	**2.63**	**11**	P	**Pn**	**23 52 57.4**	**+1.6**
NPS	**Neapolis**	**2.77**	**107**	*e*PN	**Pn**	**23 52 59.7**	**+2.0**
NPS	**Neapolis**	**2.77**	**107**	*e*Pn	**Pn**	**23 52 59.7**	**+2.0**
EVR	**Evrytania**	**2.84**	**351**	*e*PN	**Pn**	**23 53 01.0**	**+2.3**
EVR	**Evrytania**	**2.84**	**351**	*e*Pn	**Pn**	**23 53 01.0**	**+2.3**
SMIA	**Simia**	**2.85**	**13**	P	**Pn**	**23 53 00.8**	**+2.1**
SMIA	**Simia**	**2.85**	**13**	P	**Pn**	**23 53 00.8**	**+2.1**
AGG	**Agios Georgios**	**2.91**	**359**	*e*PN	**Pn**	**23 53 02.3**	**+2.7**
AGG	**Agios Georgios**	**2.91**	**359**	*e*Pn	**Pn**	**23 53 02.3**	**+2.7**
LKD2	**Lefkada island**	**3.00**	**334**	*e*PN	**Pn**	**23 53 03.2**	**+2.3**
LKD2	**Lefkada island**	**3.00**	**334**	*e*Pn	**Pn**	**23 53 03.2**	**+2.3**
AOS	**Alonnisos**	**3.29**	**21**	*e*PN	**Pn**	**23 53 05.6**	**+0.9**
AOS	**Alonnisos**	**3.29**	**21**	*e*Pn	**Pn**	**23 53 05.6**	**+0.9**
CHOS	**Chios island**	**3.72**	**51**	*e*PN	**Pn**	**23 53 11.9**	**+1.1**
CHOS	**Chios island**	**3.72**	**51**	*e*Pn	**Pn**	**23 53 11.9**	**+1.1**
JAN	**Janina**	**3.74**	**342**	*e*PN	**Pn**	**23 53 13.9**	**+2.9**
JAN	**Janina**	**3.74**	**342**	*e*Pn	**Pn**	**23 53 13.9**	**+2.9**
KARP	**Karpathos**	**3.94**	**97**	*e*PN	**Pn**	**23 53 15.6**	**+1.9**
KARP	**Karpathos**	**3.94**	**97**	*e*Pn	**Pn**	**23 53 15.6**	**+1.9**
LIT	**Litokhoron**	**3.99**	**1**	*e*PN	**Pn**	**23 53 17.4**	**+3.0**
LIT	**Litokhoron**	**3.99**	**1**	*e*Pn	**Pn**	**23 53 17.4**	**+3.0**
KEK	**Kerkira**	**4.13**	**331**	*e*PN	**Pn**	**23 53 18.4**	**+2.0**
KEK	**Kerkira**	**4.13**	**331**	*e*Pn	**Pn**	**23 53 18.4**	**+2.0**
KZN	**Kozani**	**4.22**	**354**	*e*PN	**Pn**	**23 53 20.1**	**+2.5**
KZN	**Kozani**	**4.22**	**354**	*e*Pn	**Pn**	**23 53 20.1**	**+2.5**
PLG	**Polygyros**	**4.34**	**11**	*e*PN	**Pn**	**23 53 21.8**	**+2.5**
PLG	**Polygyros**	**4.34**	**11**	*e*Pn	**Pn**	**23 53 21.8**	**+2.5**
PRK	**Paraskevi**	**4.41**	**44**	*e*PN	**Pn**	**23 53 22.3**	**+2.2**
PRK	**Paraskevi**	**4.41**	**44**	*e*Pn	**Pn**	**23 53 22.3**	**+2.2**
FNA	**Florina**	**4.73**	**351**	*e*PN	**Pn**	**23 53 27.6**	**+2.9**
FNA	**Florina**	**4.73**	**351**	*e*Pn	**Pn**	**23 53 27.6**	**+2.9**
SOH	**Sokhos**	**4.77**	**9**	*e*PN	**Pn**	**23 53 28.4**	**+3.0**
SOH	**Sokhos**	**4.77**	**9**	*e*Pn	**Pn**	**23 53 28.2**	**+3.0**
GRG	**Griva**	**4.84**	**0**	*e*PN	**Pn**	**23 53 28.0**	**+1.9**
GRG	**Griva**	**4.84**	**0**	*e*Pn	**Pn**	**23 53 28.0**	**+1.9**
STON	**Ston**	**7.66**	**333**	*e*Pn	**Pn**	**23 54 03.7**	**-1.0**
STON					Sn	**Sn**	**23 55 25.8**	**-5.3**
GRUS	**Gruza**	**7.87**	**351**	⇑*i*Pn	**Pn**	**23 54 07.7**	**0.0**
BRTR	**Keskin Array B**	**9.61**	**65**	P	Pn	23 54 37.5	+5.8
	0.0nm,0.3s,baz=247,slow=14,SNR=5.0						
NVLJ	**Novalja**	**10.20**	**328**	*e*Pn	**Pn**	**23 54 39.3**	**-0.2**
NVLJ					Sn	23 56 27.0	-6.4
MMAI	**Mount Meron Ar**	**11.18**	**102**	P	**Pn**	**23 54 55.0**	**+1.8**
	0.3nm,0.3s,baz=290,slow=9.1,SNR=3.0						
GERES	**GERESS Array B**	**14.23**	**336**	P	**Pn**	**23 55 34.4**	**-0.4**
	0.1nm,0.3s,baz=162,slow=16,SNR=3.6						
AKASG	**Malin Array Be**	**15.40**	**17**	P	**P**	**23 55 54.6**	**-0.4**
	0.7nm,0.3s,baz=205,slow=9.2,SNR=4.1						
KBZ	**Khabaz**	**17.47**	**58**	P	**P**	**23 56 20.3**	**+2.4**
	0.1nm,0.3s,baz=237,slow=7.9,SNR=5.4						
HFS	**Hagfors**	**24.69**	**350**	P	**P**	**23 57 33.0**	**-0.9**
	0.6nm,0.4s,baz=144,slow=13,SNR=9.4						
FINES	**FINESS Array B**	**25.47**	**4**	P	**P**	**23 57 40.0**	**-0.9**
	0.6nm,0.5s,baz=154,slow=11,SNR=8.9						
NOA	**NORSAR Array B**	**25.94**	**349**	LR	LR	00 08 02.5	
	comp=Z,12nm,19.0s,baz=245,slow=36						
TORD	**Torodi Ar. Bea**	**29.46**	**224**	P	P	23 58 21.3	+4.1
	0.5nm,1.1s,baz=20,slow=9.9,SNR=2.6						
ARCES	**ARCESS Array B**	**33.53**	**2**	P	**P**	**23 58 51.3**	**-1.1**
	0.6nm,0.7s,baz=190,slow=10.0,SNR=7.5						
MKAR	**Makanchi Array**	**45.16**	**57**	P	**P**	**00 00 28.9**	**-0.9**
	1.4nm,0.5s,baz=268,slow=7.8,SNR=27						
ZALV	**Zalesovo Beam**	**46.00**	**47**	P	**P**	**00 00 34.7**	**-1.6**
	0.9nm,0.4s,baz=262,slow=7.3,SNR=9.2						
ZALV				LR	LR	00 22 43.9	
	comp=Z,18nm,20.9s,baz=66,slow=40						

BUC 17 00:10:13.0±1.4, 45°.70N×26°.56E, h70km, MD2.5/1, 8C-4D, Error ellipse: s-maj=24.7km s-min=11.5km az=14.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.17**	**21**	⇑*i*P	Pn	00 10 24.2	+0.6
PLOR				*i* S	Sn	00 10 33.1	+1.8
PLOR	**Plostina**	**0.17**	**21**	⇑*i*P	Pn	00 10 24.2	+0.6
VRI	**Vrincioaia**	**0.20**	**34**	⇓*i*P	Pn	00 10 24.5	+0.8
VRI				*i* S	Sn	00 10 33.0	+1.5
VRI	**Vrincioaia**	**0.20**	**34**	⇓*i*P	Pn	00 10 24.5	+0.8
MLR	**Muntele Rosu**	**0.48**	**245**	⇑*i*P	Pn	00 10 25.3	-0.5
MLR				*i* S	Sn	00 10 36.2	+1.0
MLR	**Muntele Rosu**	**0.48**	**245**	⇑*i*P	Pn	00 10 25.3	-0.5
TESR	**Tescani**	**0.82**	**4**	⇑*i*P	Pn	00 10 29.3	0.0
TESR				*i* S	Sn	00 10 40.0	-1.4
TESR	**Tescani**	**0.82**	**4**	⇑*i*P	Pn	00 10 29.3	0.0
CFR	**Carcaliu**	**1.22**	**115**	⇑*i*P	Pn	00 10 35.0	+0.7
CFR				*i* S	Sn	00 10 50.2	0.0
CFR	**Carcaliu**	**1.22**	**115**	⇑*i*P	Pn	00 10 35.0	+0.7
TIRR	**Tirgusor**	**1.80**	**133**	⇓*i*P	Pn	00 10 43.0	+1.0
TIRR				*i* S	Sn	00 11 04.1	+0.2
TIRR	**Tirgusor**	**1.80**	**133**	⇓*i*P	Pn	00 10 43.0	+1.0

*DDA **17** 00:22:54.9, 39°.08N×29°.73E, h7km, MD2.6*
*CSEM **17** 00:22:54.9, 39°.08N×29°.73E, h7km, MD2.6, After DDA*
*ISCJB **17** 00:22:55.5±0.6, 39°.07N±0°.04×29°.74E±0°.04, h9km±6km, Error ellipse: s-maj=7.0km s-min=4.9km az=169.1*

ISC 17 00:22:55.6±1.1, 39°.05N±0°.03×29°.74E±0°.03, h10km±9km, n13, σ0§69/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.21**	**280**	*i* P	**Pg**	**00 23 00.1**	**+0.1**
GDZ				*i* S	**Sg**	**00 23 03.0**	**0.0**
GDZ	**Gediz**	**0.21**	**280**	*i* P	**Pg**	**00 23 00.1**	**+0.1**
GDZ				*i* S	**Sg**	**00 23 03.0**	**0.0**
ALT	**Altintas**	**0.29**	**89**	*e*PG	**Pg**	**00 23 00.9**	**-0.5**
ALT				*e*SG	**Sg**	**00 23 05.7**	**+0.4**
TVSB	**Tavsanli**	**0.45**	**331**	*e*PG	**Pg**	**00 23 04.1**	**-0.4**
KHAL	**Karahalli**	**0.71**	**196**	*i* P	**Pg**	**00 23 08.1**	**-1.2**
KH

COLD Coldfoot 10.88 4 *e*Pn **Pn** **00 32 57.6 -1.5**
DIB Dawson Inlet, 11.88 97 T T 00 45 26.5
SNR=19
DLBC Dease Lake 12.16 71 Pn **Pn** **00 33 18.1 +1.3**
DLBC Sn **Sn** **00 35 31.4 -0.1**
DLBC Dease Lake 12.16 71 Pn **Pn** **00 33 18.1 +1.3**
0.3nm,0.3s,baz=248,slow=10,SNR=6.1
DLBC Sn **Sn** **00 35 31.4 -0.1**
0.1nm,0.3s,baz=288,slow=20,SNR=2.1
INK Inuvik 14.66 28 Pn **Pn** **00 33 50.0 -0.7**
INK Inuvik 14.66 28 Pn **Pn** **00 33 50.0 -0.7**
0.1nm,0.3s,baz=223,slow=10,SNR=3.3
INK LR LR 00 40 19.9
comp=Z,368nm,19.3s,baz=258,slow=41
NLWA Neilton Lookou 19.61 105 *e*P **Pn** **00 34 53.2 +0.1**
47nm,1.9s
YKW3 Yellowknife Ar 19.86 57 *e*P **P** **00 34 54.8 +0.6**
0.5nm,1.3s
YKA Yellowknife Ar 19.86 57 P **P** **00 34 54.7 +0.5**
YKA Yellowknife Ar 19.86 57 P **P** **00 34 54.7 +0.5**
0.4nm,0.3s,baz=268,slow=10,SNR=83
LON Longmire 21.12 104 *e*P **P** **00 35 07.8 -0.2**
LON pmax pmax
comp=Z,6.0nm,1.0s
LON Longmire 21.12 104 *e*P **P** **00 35 07.8 -0.2**
comp=Z,5.6nm,1.0s
BILL Bilibino 22.00 318⇓ *e*P **P** **00 35 17.0 -0.3**
BILL *e* 00 35 38.6
BILL 00 39 21.0
BILL pmax pmax
comp=Z,8.0nm,1.3s
HAWA Hanford 22.57 102 *e*P **P** **00 35 24.6 +1.1**
comp=Z,19nm,1.3s
NEW Newport 22.78 96 *e*P **P** **00 35 26.1 +0.3**
comp=Z,14nm,1.5s
NEW Newport 22.78 96 P **P** **00 35 25.8 0.0**
comp=Z,3.5nm,0.8s,baz=296,slow=9.3,SNR=7.8
NEW Newport 22.78 96 ⇓P **P** **00 35 26.1 +0.3**
baz=23
HUMO Hull Mountain 23.32 114 *e*P **P** **00 35 32.6 +1.3**
comp=Z,20nm,1.4s
A13A Flathead Natio 23.91 92 ⇓P **P** **00 35 38.0 +0.9**
baz=24
YBH Yreka Blue Hor 24.09 115 *e*P **P** **00 35 40.2 +1.4**
comp=Z,5.9nm,0.9s
YBH Yreka Blue Hor 24.09 115 P **P** **00 35 40.8 +2.0**
comp=Z,5.3nm,0.9s,baz=313,slow=5.0,SNR=12
WALA Waterton Lakes 24.12 91 *e*P **P** **00 35 40.5 +1.4**
BSMT Bassoo Peak 24.31 95 *e*P **P** **00 35 38.5 -2.4**
A14A Double T Ranch 24.44 91 P **P** **00 35 42.7 +0.6**
baz=24,SNR=11
C13A Hot Springs 24.52 95 P **P** **00 35 43.3 +0.5**
baz=24,SNR=7.1
JTMT Jette 24.65 94 *e*P **P** **00 35 44.5 +0.6**
YBMT Yellow Bay 24.73 94 *e*P **P** **00 35 45.4 +0.7**
A15A Johnson Ranch, 24.82 91 P **P** **00 35 46.0 +0.6**
baz=25,SNR=7.4
B14A Marquette Ranc 24.86 92 ⇑P **P** **00 35 46.4 +0.5**
baz=25
D13A Huson 24.93 96 ⇓P **P** **00 35 46.8 +0.5**
baz=25
C14A Swan Lake 24.93 94 ⇓P **P** **00 35 47.1 +0.6**
baz=25
SWMT Swartz Lake 24.94 95 *e*P **P** **00 35 47.1 +0.6**
WDC Whiskeytown Da 25.03 117 *e*P **P** **00 35 48.2 +0.9**
WDC pmax pmax
comp=Z,9.0nm,1.0s
WDC Whiskeytown Da 25.03 117 *e*P **P** **00 35 48.2 +0.9**
comp=Z,8.7nm,1.0s
MOD Modoc 25.19 112 *e*P **P** **00 35 48.5 -0.3**
comp=Z,10nm,1.1s
B15A Bradely Ranch, 25.28 92 P **P** **00 35 50.3 +0.7**
baz=25,SNR=8.2
F12A Elk City 25.30 99 P **P** **00 35 50.6 +0.7**
baz=25,SNR=9.3
MSO Missoula 25.37 96 *e*P **P** **00 35 47.4 -3.0**
comp=Z,5.1nm,1.3s
SLMT Seeley Lake 25.37 95 *e*P **P** **00 35 50.2 -0.3**
D14A Greenough 25.46 95 ⇓P **P** **00 35 50.8 -0.4**
baz=25
A16A West Butte Ran 25.47 90 ⇑P **P** **00 35 51.4 +0.1**
baz=25
C15A Salmond Ranch, 25.56 93 P **P** **00 35 53.2 +1.1**
baz=26,SNR=10
WVOR Wild Horse Val 25.68 109 *e*P **P** **00 35 54.4 +1.1**
WVOR pmax pmax
comp=Z,13nm,1.1s
WVOR Wild Horse Val 25.68 109 *e*P **P** **00 35 54.4 +1.1**
comp=Z,13nm,1.1s
F13A Darby 25.79 98 ⇑P **P** **00 35 55.1 +0.8**
baz=26
E14A Clinton 25.86 96 ⇓P **P** **00 35 55.7 +0.7**
baz=26
A17A Triple J Farms 25.97 89 ⇓P **P** **00 35 56.2 +0.3**
baz=26
G13A Cobalt 26.27 99 P **P** **00 35 59.5 +0.8**
baz=26,SNR=7.0
E15A Deer Lodge 26.33 95 ⇓P **P** **00 35 59.7 +0.6**
baz=26
MFID Camas Ranch 26.50 104 *e*P **P** **00 36 00.8 0.0**
comp=Z,5.0nm,1.0s
D16A Dana Ranch, Ca 26.57 93 ⇓P **P** **00 36 01.8 +0.4**
baz=26
H13A Challis 26.60 100 ⇑P **P** **00 36 02.2 +0.6**
baz=26
I12A Atlanta 26.62 102 ⇑P **P** **00 36 02.7 +0.8**
baz=27
BEKR Beckworth 26.66 115 *e*P **P** **00 36 02.2 0.0**
comp=Z,4.4nm,1.4s
E16A East Helena 26.80 94 P **P** **00 36 03.7 +0.3**
baz=27,SNR=5.3
D17A Six Diamond Ra 26.98 92 ⇑P **P** **00 36 04.2 -0.8**
baz=27
A19A Klindworth Far 27.06 87 ⇑P **P** **00 36 06.0 +0.3**
baz=27
I13A Wildhorse Cree 27.10 101 ⇓P **P** **00 36 06.9 +0.7**
baz=27
HLID Hailey 27.17 102 *e*P **P** **00 36 07.2 +0.4**
comp=Z,4.4nm,1.3s
HLID Hailey 27.17 102 P **P** **00 36 07.4 +0.6**
baz=27,SNR=5.3
G15A Dillon 27.19 97 ⇑P **P** **00 36 07.4 +0.5**
baz=27
MCMT McKenzie Canyo 27.20 98 *e*P **P** **00 36 04.2 -3.0**
B19A Brinkman Farms 27.21 88 P **P** **00 36 07.7 +0.7**
baz=27,SNR=5.6
E17A Martinsdale 27.30 94 ⇑P **P** **00 36 08.8 +0.9**
baz=27
J13A Cove Ranch, Pi 27.41 102 ⇑P **P** **00 36 09.8 +0.9**
baz=27
I14A Mackay 27.45 100 ⇑P **P** **00 36 10.3 +1.0**
baz=27
C19A Slack Wire Ran 27.56 90 P **P** **00 36 11.0 +0.9**
baz=28,SNR=6.1
F17A Fitzpatrick Pl 27.74 94 ⇓P **P** **00 36 12.7 +0.8**
baz=28
E18A Harlowton 27.76 93 ⇑P **P** **00 36 12.8 +0.8**
baz=28
FFC Flin Flon 27.99 72*ce*P **P** **00 36 15.8 +2.0**
RES Resolute Bay 28.22 28 P **P** **00 36 15.3 -0.3**
RES Resolute Bay 28.22 28 P **P** **00 36 15.3 -0.3**
comp=Z,0.6nm,0.7s,baz=242,slow=14,SNR=4.3
RES LR LR 00 49 10.2
comp=Z,212nm,18.0s,baz=295,slow=40
PETK Petropavlovsk- 28.51 285 LR LR 00 47 56.3
comp=Z,42nm,18.6s,baz=235,slow=37
ELK Elko 28.67 107 P **P** **00 36 21.6 +1.2**
ELK Elko 28.67 107 P **P** **00 36 21.6 +1.2**
comp=Z,2.3nm,0.8s,baz=321,slow=7.6,SNR=9.3
NVAR Mina Array Bea 28.79 114 P **P** **00 36 22.9 +1.5**
NVAR PcP **PcP** **00 39 30.6 -0.1**
NVAR Mina Array Bea 28.79 114 P **P** **00 36 22.9 +1.5**
comp=Z,3.2nm,0.8s,baz=300,slow=9.3,SNR=25
NVAR PcP **PcP** **00 39 30.6 -0.1**
comp=Z,0.4nm,0.7s,baz=264,slow=1.8,SNR=3.7
IMW Indian Meadow 28.85 98 *e*P **P** **00 36 22.6 +0.7**
comp=Z,8.2nm,1.5s
NV11 Mina Array Sit 28.87 114 *e*P **P** **00 36 23.3 +1.3**
C24A Savage 30.24 87 P **P** **00 36 35.1 +1.2**
baz=30,SNR=5.3
R11A Troy Canyon, C 30.25 111 P **P** **00 36 34.8 +0.5**
baz=30,SNR=9.7
PDAR Pinedale Array 30.35 98 P **P** **00 36 35.7 +0.5**
PDAR Pinedale Array 30.35 98 P **P** **00 36 35.7 +0.5**
comp=Z,2.2nm,0.7s,baz=314,slow=4.9,SNR=19
DUG Dugway 30.36 105 *e*P **P** **00 36 36.3 +1.2**
DUG pmax pmax
comp=Z,4.0nm,1.2s
DUG Dugway 30.36 105 *e*P **P** **00 36 36.3 +1.2**
comp=Z,3.8nm,1.2s
DUG Dugway 30.36 105 ⇑P **P** **00 36 36.1 +1.0**
baz=30
GRAC Grapevine Rang 30.36 115 P **P** **00 36 37.0 +1.8**
baz=30,SNR=5.6
I20A Worland 30.37 95 ⇑P **P** **00 36 36.8 +1.6**
baz=30
D24A Glendive 30.54 87 ⇓P **P** **00 36 38.0 +1.5**
baz=30
M17A Scullys Gap (B 30.62 101 ⇓P **P** **00 36 38.3 +0.7**
baz=31
J20A Shoshoni 30.78 96 ⇑P **P** **00 36 40.1 +1.3**
baz=31,SNR=7.8
PKM Peak Mountain 30.83 121 ⇓P **P** **00 36 40.8 +1.4**
baz=31
I21A Big Trails, Te 30.92 95 ⇓P **P** **00 36 40.4 +0.4**
baz=31
MPMC Manual Prospec 31.04 116 P **P** **00 36 42.2 +1.0**
baz=31,SNR=8.0
J21A Lysite 31.14 96 ⇑P **P** **00 36 42.8 +0.8**
baz=31
F24A Ekalaka 31.23 89 ⇑P **P** **00 36 44.0 +1.3**
baz=31
LRMC Laurel Mountai 31.40 117 P **P** **00 36 45.6 +1.2**
baz=31,SNR=8.0
J22A Midwest 31.63 95 ⇑P **P** **00 36 47.5 +1.2**
baz=32
H24A Dirks Ranch, A 31.84 91 ⇑P **P** **00 36 49.2 +1.1**
baz=32
MVU Marysvale 31.91 107 *e*P **P** **00 36 50.3 +1.4**
comp=Z,6.6nm,1.1s
MSU Marysvale 31.92 107 *e*P **P** **00 36 50.2 +1.2**
MSU Marysvale 31.92 107 *e*P **P** **00 36 50.2 +1.2**
L21A Rawlins 32.09 97 ⇓P **P** **00 36 50.9 +0.4**
baz=32
P18A Preston Nutter 32.14 103 ⇓P **P** **00 36 51.9 +0.9**
baz=32
Q16A Castle Valley 32.16 105 ⇑P **P** **00 36 52.5 +1.4**
baz=32
M21A Separation Pea 32.34 98 ⇑P **P** **00 36 53.3 +0.6**
baz=32
SRU San Rafael 32.37 104 P **P** **00 36 54.3 +1.5**
baz=32,SNR=12
N20A Spence Gulch, 32.38 100 P **P** **00 36 54.1 +1.1**
baz=32,SNR=7.3
RSSD Black Hills 32.53 91 *e*P **P** **00 36 54.4 +0.1**
RSSD pmax pmax
comp=Z,8.0nm,1.4s
RSSD Black Hills 32.53 91 *e*P **P** **00 36 54.4 +0.1**
comp=Z,8.0nm,1.4s
HEC Hector,Ludlow 32.59 116 ⇑P **P** **00 36 55.6 +0.9**
baz=32
J24A Dixon Ranch, L 32.69 93 ⇓P **P** **00 36 57.3 +1.7**
baz=33
P19A Cripple Cowboy 32.83 102 P **P** **00 36 57.9 +0.9**
baz=33,SNR=6.3
N21A Black Mountain 32.83 99 ⇓P **P** **00 36 57.8 +0.8**
baz=33
O20A White River Ci 32.87 101 P **P** **00 36 58.3 +1.0**
baz=33,SNR=5.9
L23A Garrett 32.91 96 P **P** **00 36 58.6 +0.9**
baz=33,SNR=9.8
GMRC Granite Mounta 32.97 115 P **P** **00 36 59.0 +0.9**
baz=33,SNR=6.1
N22A Wattenberg Ran 33.39 98 ⇓P **P** **00 37 02.5 +0.6**
baz=33
ULM Lac du Bonnet 33.41 76 *e*P **P** **00 37 02.1 +0.4**
comp=Z,18nm,1.1s
ULM Lac du Bonnet 33.41 76 P **P** **00 37 02.0 +0.3**
comp=Z,14nm,1.0s,baz=296,slow=9.7,SNR=7.4
U15A North Rim 33.41 110 ⇓P **P** **00 37 03.4 +1.2**
baz=33
S18A Hurst Farm, Bl 33.69 106 P **P** **00 37 05.4 +0.9**
baz=34,SNR=7.6
IRM Iron Mountain 33.71 116 P **P** **00 37 05.7 +1.3**
baz=34,SNR=11
O23A Lake Granby, G 34.09 98 ⇑P **P** **00 37 09.5 +1.4**
baz=34
MONP Monument Peak 34.10 118 ⇓P **P** **00 37 09.2 +1.1**
baz=34
PV01 Paradox Valley 34.13 104 *e*P **P** **00 37 06.4 -1.9**
Y12C Blythe 34.35 115 P **P** **00 37 11.4 +1.5**
baz=34,SNR=5.1
AGMN Agassiz Nation 34.51 79 *e*P **P** **00 37 11.2 -0.1**
comp=Z,17nm,0.9s
WUAZ Wupatki 34.59 110 *e*P **P** **00 37 13.5 +1.3**
comp=Z,8.3nm,1.2s
WUAZ Wupatki 34.59 110 ⇓P **P** **00 37 13.3 +1.1**
baz=34
TIXI Tiksi 34.63 327 *e*P **P** **00 37 11.2 -0.8**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
Y14A Wickenburg 34.97 113 P **P** **00 37 16.6 +1.2**
baz=35,SNR=5.0
X16A Lo Mia Camp, P 35.40 111 P **P** **00 37 20.8 +1.5**
baz=35,SNR=6.4
T22A Edith 35.85 103 P **P** **00 37 24.3 +1.2**
baz=36,SNR=5.1
U21A Nageezi 35.87 105 ⇓P **P** **00 37 24.6 +1.3**
baz=36
P26A Davis Ranch, A 35.96 97 ⇓P **P** **00 37 24.9 +0.9**
baz=36
X18A Snowflake 36.09 109 ⇓P **P** **00 37 26.3 +1.1**
baz=36
S24A Houchin Ranch, 36.31 101 ⇑P **P** **00 37 28.5 +1.4**
baz=36
W20A Ramah 36.40 107 ⇓P **P** **00 37 28.7 +0.8**
baz=36
214A Organ Pipe Nat 36.65 115 P **P** **00 37 31.1 +1.3**
baz=37,SNR=5.7
T24A Torres, Weston 36.81 101 P **P** **00 37 32.9 +1.5**
baz=37,SNR=5.4
EYMN Ely 37.09 77 *e*P **P** **00 37 32.5 -0.9**
comp=Z,26nm,0.8s
T25A Trinidad 37.11 101 ⇑P **P** **00 37 34.7 +0.8**
baz=37
X21A Alamocita Cree 37.30 107 P **P** **00 37 36.7 +1.1**
baz=37,SNR=8.8
TUC Tucson 37.40 112 *e*P **P** **00 37 37.3 +1.1**
TUC pmax pmax
comp=Z,3.0nm,1.1s
TUC Tucson 37.40 112 *e*P **P** **00 37 37.3 +1.1**
comp=Z,3.4nm,1.1s
U25A Circle Dot Ran 37.65 101 ⇓P **P** **00 37 39.3 +0.8**
baz=38,SNR=5.3
Y21A Point of Rocks 37.70 107 ⇑P **P** **00 37 40.5 +1.6**
baz=38
Z20A Nine Sixteen R 37.90 109 P **P** **00 37 42.4 +1.8**
baz=38,SNR=5.2
V25A Rancho No Teng 37.95 102 ⇓P **P** **00 37 42.4 +1.4**
baz=38
W24A Lazy 6 Ranch, 37.99 104 ⇑P **P** **00 37 42.5 +1.1**
baz=38
S28A Manter 38.16 98 ⇑P **P** **00 37 44.0 +1.4**
baz=38
T28A Walsh 38.38 98 ⇓P **P** **00 37 45.3 +0.8**
baz=38
V26A Tequesquite Ra 38.44 102 P **P** **00 37 46.2 +1.2**
baz=38,SNR=13
U27A Thompson Grove 38.50 100 ⇑P **P** **00 37 46.1 +0.6**
baz=38
Y23A Lovelace Mesa, 38.62 106 ⇑P **P** **00 37 47.7 +1.1**
baz=38
Z22A Elephant Butte 38.65 107 ⇓P **P** **00 37 48.2 +1.3**
baz=39
121A Cookes Peak, D 38.78 109 ⇑P **P** **00 37 49.0 +1.0**
baz=39
T29A Hugoton 38.80 98 ⇓P **P** **00 37 49.5 +1.5**
baz=39
Y25A Mesa, Roswell 39.35 104 P **P** **00 37 53.7 +1.0**
baz=39,SNR=5.8
Y27A Causey 40.21 103 ⇓P **P** **00 38 00.5 +0.7**
baz=40
Z26A Caprock 40.23 104 ⇑P **P** **00 38 00.3 +0.4**
baz=40
Y29A Porterfield Fa 41.04 101 P **P** **00 38 07.3 +0.7**
baz=41,SNR=5.4
ASAJ Asahikawa 41.81 282 LR LR 00 56 55.4
comp=Z,62nm,20.1s,baz=331,slow=38
WMOK Wichita Mounta 41.96 98 *e*P **P** **00 38 15.0 +0.9**
WMOK pmax pmax
comp=Z,7.0nm,0.9s
WMOK Wichita Mounta 41.96 98 *e*P **P** **00 38 15.0 +0.9**
comp=Z,7.2nm,0.9s
TUL1 Tulsa 42.75 94 ⇓P **P** **00 38 20.8 +0.3**
baz=43
527A Woodward Ranch 42.86 107 ⇑P **P** **00 38 22.3 +0.7**
baz=43
HABR Khabarovsk 43.03 291 *e*P **P** **00 38 21.1 -1.4**
HABR *e**SP **sP** **00 38 31.9 +0.3**
HABR *e*S **S** **00 44 45.3 -1.4**
HABR *e**SS **sS** **00 44 58.2 +0.8**
HABR SS **SS** **00 47 58.6 0.0**
HABR *e* 00 48 20.1
HABR pmax pmax
comp=Z,15nm,1.1s
HABR pmax pmax
comp=N,8.0nm,1.1s
HABR pmax pmax
comp=E,24nm,1.1s
HABR MLR MLR
comp=Z,89nm,21.0s
626A Big Bend Ranch 43.05 108 ⇓P **P** **00 38 23.0 0.0**
baz=43
330A Mertzon 43.18 103 P **P** **00 38 24.2 +0.2**
baz=43,SNR=5.7
429A Davenport Ranc 43.40 105 ⇑P **P** **00 38 25.9 +0.1**
baz=43
TXAR Lajitas Array 43.47 108 P **P** **00 38 27.8 +1.4**
TXAR PcP **PcP** **00 40 13.7 -0.6**
TXAR Lajitas Array 43.47 108 P **P** **00 38 27.8 +1.4**
comp=Z,2.6nm,0.9s,baz=310,slow=4.7,SNR=11
TXAR PcP **PcP** **00 40 13.7 -0.6**
comp=Z,0.2nm,0.5s,baz=298,slow=1.9,SNR=3.6
SUMG Summit 43.51 24 *i* P **P** **00 38 27.6 +1.0**
SUMG pmax pmax
comp=Z,6.0nm,1.1s
SUMG Summit 43.51 24 *e*P **P** **00 38 26.4 -0.2**
comp=Z,19nm,1.3s
SUMG Summit 43.51 24 *i* P **P** **00 38 27.6 +1.0**
comp=Z,6.0nm,1.1s
529A Stev Forest Ra 43.61 106 ⇓P **P** **00 38 28.7 +1.1**
baz=44
430A Baggett Ranch, 43.63 104 ⇑P **P** **00 38 28.2 +0.5**
baz=44
SFJD Kangerlussuaq 43.91 34 *i* P **P** **00 38 30.8 +1.4**
comp=Z,8.5nm,0.9s
431A Sonora 44.05 103 ⇓P **P** **00 38 30.5 -0.6**
baz=44
530A J-C Ranch, Com 44.07 105 ⇓P **P** **00 38 31.0 -0.2**
baz=44
KLR Kul'dur 44.24 294 *e*P P 00 38 27.9 -4.4
531A Rocksprings 44.48 104 ⇓P **P** **00 38 34.9 +0.4**
baz=44
JCT Junction City 44.64 103 *e*P **P** **00 38 36.5 +0.7**
JCT pmax pmax
comp=Z,13nm,1.0s
JCT Junction City 44.64 103 *e*P **P** **00 38 36.5 +0.7**
comp=Z,13nm,1.0s
JCT Junction City 44.64 103 P **P** **00 38 36.3 +0.6**
baz=45,SNR=5.3
631A Perdido Creek 45.05 105 ⇓P **P** **00 38 38.7 -0.3**
baz=45
SCHQ Schefferville 45.28 54 *e*P **P** **00 38 39.3 -1.2**
comp=Z,8.7nm,0.8s
SCHQ Schefferville 45.28 54 P **P** **00 38 41.1 +0.5**
comp=Z,6.6nm,0.7s,baz=305,slow=8.0,SNR=15
NATX Nacogdoches 46.47 97 *e*P **P** **00 38 48.4 -1.8**
comp=Z,29nm,0.8s
HKT Hockley 47.21 100 *e*P **P** **00 38 56.7 +0.8**
HKT pmax pmax
comp=Z,7.0nm,1.1s
HKT Hockley 47.21 100 *e*P **P** **00 38 56.7 +0.8**
comp=Z,7.4nm,1.1s
PLAL Pickwick Lake 47.71 88 *e*P **P** **00 39 00.0 +0.2**
comp=Z,23nm,1.3s
SWET Sewanee 48.73 86 *e*P **P** **00 39 06.9 -0.8**
comp=Z,25nm,1.4s
SSPA Standing Stone 49.23 75 *e*P **P** **00 39 10.4 -1.1**
comp=Z,17nm,1.2s
LUPA Lehigh Univers 50.61 74 *e*P **P** **00 39 22.5 +0.6**
comp=Z,173nm,1.0s
ARCES ARCESS Array B 54.32 1 P **P** **00 39 47.9 -1.2**
ARCES ARCESS Array B 54.32 1 P **P** **00 39 47.9 -1.2**
comp=Z,1.6nm,0.9s,baz=8.9,slow=8.6,SNR=7.6
KSRS Korea Array 54.40 286 LR LR 01 02 11.0
comp=Z,33nm,18.4s,baz=125,slow=35
SONM Songino Array 57.23 308 P **P** **00 40 11.3 +0.9**
SONM Songino Array 57.23 308 P **P** **00 40 11.3 +0.9**
comp=Z,1.6nm,0.7s,baz=42,slow=6.4,SNR=12
SONM LR LR 01 06 33.7
comp=Z,169nm,18.1s,baz=273,slow=38
HVS Khovu-Aksy 59.77 318 *e*P **P** **00 40 28.5 +0.5**
HHC Hu-ho-hao-te 60.21 300 *e*P **P** **00 40 32.4 +1.2**
HHC sP **sP** **00 40 39.6 -0.8**
HHC PcP **PcP** **00 41 18.4 +1.9**
HHC PP **PP** **00 42 47.3 +3.7**
HHC S **S** **00 48 42.8 -0.8**
HHC ScS SKKSac 00 50 19.1 -1.1
HHC SS **SS** **00 52 40.6 +0.4**
HHC pmax pmax
comp=Z,41nm,0.6s
HHC pmax pmax
comp=Z,130nm,6.2s
HHC LR LR
comp=N,140nm,17.5s
HHC LR LR
comp=E,190nm,17.0s
HHC LR LR
comp=Z,140nm,19.0s
NVS Novosibirsk 60.23 327 *e*P P 00 40 35.4 +4.5
ZAA0 Zalesovo Array 60.49 325 *e*P **P** **00 40 32.2 -0.5**
ZALV Zalesovo Beam 60.49 325 P **P** **00 40 33.4 +0.7**
ZALV Zalesovo Beam 60.49 325 P **P** **00 40 33.4 +0.7**
ZALV Zalesovo Beam 60.49 325 P **P** **00 40 33.4 +0.7**
comp=Z,1.4nm,0.6s,baz=28,slow=6.7,SNR=7.7
JOF Joensuu 60.95 358 *e*P **P** **00 40 36.4 +0.7**
JOF pmax pmax
comp=Z,2.0nm,0.8s
JOF Joensuu 60.95 358 *ep* **P** **00 40 36.4 +0.7**
comp=Z,1.8nm,0.8s
KAF Kangasniemi 61.78 1 *e*P **P** **00 40 41.1 -0.2**
KAF pmax pmax
comp=Z,1.0nm,0.6s
KAF Kangasniemi 61.78 1 *ep* **P** **00 40 41.1 -0.2**
comp=Z,0.9nm,0.6s
NB2 NORSAR Subarra 62.15 9 P **P** **00 40 43.9 0.0**
comp=Z,1.1nm,0.6s,baz=350,slow=6.9
NOA NORSAR Array B 62.15 9 P **P** **00 40 44.2 +0.3**
NOA NORSAR Array B 62.15 9 P **P** **00 40 44.2 +0.3**
comp=Z,2.0nm,0.8s,baz=350,slow=6.7,SNR=9.8
FINES FINESS Array B 62.45 1 P **P** **00 40 45.9 0.0**
FINES FINESS Array B 62.45 1 P **P** **00 40 45.9 0.0**
comp=Z,2.5nm,1.0s,baz=11,slow=9.4,SNR=8.6
ARU Arti 64.75 342*d i* P **P** **00 41 02.6 +1.5**
ARU 00 43 21.5
ARU S **S** **00 49 42.7 +2.7**
ARU SS **SS** **00 53 48.6 -1.4**
ARU pmax pmax
comp=Z,6.0nm,1.7s
KURK Kurchatov 65.21 327*ce*P **P** **00 41 03.7 -0.4**
KURK pmax pmax
comp=Z,1.0nm,1.0s
VSU Vasula 65.45 1 *e*P **P** **00 41 05.1 -0.5**
VSU pmax pmax
comp=Z,7.0nm,1.0s
MK31 Makanchi Array 67.47 323 *e*P **P** **00 41 17.2 -1.6**
MK31 Makanchi Array 67.47 323 *e*P **P** **00 41 17.2 -1.6**
MKAR Makanchi Array 67.47 323 P **P** **00 41 18.9 +0.1**
MKAR Makanchi Array 67.47 323 P **P** **00 41 18.9 +0.1**
MKAR Makanchi Array 67.47 323 P **P** **00 41 18.9 +0.1**
comp=Z,0.5nm,0.5s,baz=38,slow=6.1,SNR=7.9
OBN Obninsk 68.57 355‖ *e*P **P** **00 41 27.1 +1.6**
OBN pmax pmax
comp=Z,13nm,1.7s
ABKAR Akbulak array 71.31 338 *e*P **P** **00 41 39.8 -2.6**
CLL Collm 71.94 10 *e*P **P** **00 41 47.0 +0.9**
CLL Collm 71.94 10 *e*P **P** **00 41 47.0 +0.9**
CLL *e*(sP) **sP** **00 41 57.0 +1.5**
CLL *e*PcP **PcP** **00 42 05.0 +0.2**
AFI Afiamalu 71.95 200 *e*P P 00 41 43.7 -2.9
BAIF Baives 72.10 16 *e*P **P** **00 41 47.2 +0.1**
BAIF Baives 72.10 16 *e*P **P** **00 41 47.2 +0.1**
BAIF Baives 72.10 16 *e*P **P** **00 41 47.2 +0.1**
BRG Berggiesshubel 72.45 9 *e*PKP P 00 42 00.3 +11
comp=Z,3.4nm,1.1s
BRG Berggiesshubel 72.45 9 *e*P P 00 42 00.3 +11
BRG pmax pmax
comp=Z,3.0nm,1.1s
TKM2 Tokmak 2 73.10 325 *e*P **P** **00 41 52.9 -0.6**
TKM2 Tokmak 2 73.10 325 *e*P **P** **00 41 52.9 -0.6**

DPC	**Dobruska-Polom**	**73.16**	**8**	*e*P		**P**		**00 41 54.1**	**+0.6**
DPC					pmax	pmax				
	comp=Z,80nm,2.6s									
DPC	**Dobruska-Polom**	**73.16**	**8**	*e*P		**P**		**00 41 54.1**	**+0.6**
	comp=Z,80nm,2.6s									
AKASG	**Malin Array Be**	**73.22**	**359**	*c*e*P*		**P**		**00 41 54.5**	**+0.7**
AKASG					pmax	pmax				
	comp=Z,1.0nm,0.5s									
AKASG	**Malin Array Be**	**73.22**	**359**	P		**P**		**00 41 50.8**	**-3.0**
AKASG	**Malin Array Be**	**73.22**	**359**	P		**P**		**00 41 50.8**	**-3.0**
	comp=Z,0.7nm,0.5s,baz=3.3,slow=6.1,SNR=5.9									
KIEV	**Kiev**	**73.23**	**359**	*e*P		**P**		**00 41 53.5**	**-0.3**
KIEV					pmax	pmax				
	comp=Z,26nm,2.1s									
KIEV	**Kiev**	**73.23**	**359**	*e*P		**P**		**00 41 53.5**	**-0.3**
	comp=Z,26nm,2.1s									
AK01	**Malin Array Si**	**73.23**	**359**	*e*P		**P**		**00 41 53.0**	**-0.8**
AK02	**Malin Array Si**	**73.27**	**359**	*e*P		**P**		**00 41 53.4**	**-0.6**
KHC	**Kasperske Hory**	**74.15**	**10**	*e*P		**P**		**00 42 00.0**	**+0.7**
KHC	**Kasperske Hory**	**74.15**	**10**	*e*P		**P**		**00 42 00.0**	**+0.7**
GERES	**GERESS Array B**	**74.44**	**10**	P		**P**		**00 42 00.1**	**-1.0**
GERES	**GERESS Array B**	**74.44**	**10**	P		**P**		**00 42 00.1**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=353,slow=4.4,SNR=7.2									
KKAR	**Karatay Array**	**74.47**	**329**	*e*P		**P**		**00 42 01.7**	**+0.4**
KKAR	**Karatay Array**	**74.47**	**329**	*e*P		**P**		**00 42 01.7**	**+0.4**
LOR	**Lormes**	**74.76**	**17**	*e*P		**P**		**00 42 03.0**	**+0.1**
	comp=Z,39nm,1.5s									
LOR	**Lormes**	**74.76**	**17**	*e*P		**P**		**00 42 03.0**	**+0.1**
	comp=Z,39nm,1.5s									
SSF	**Saint Saulge**	**74.90**	**17**	*e*P		**P**		**00 42 03.8**	**+0.1**
	comp=Z,58nm,1.6s									
SSF	**Saint Saulge**	**74.90**	**17**	*e*P		**P**		**00 42 03.8**	**+0.1**
SSF					pmax	pmax				
	comp=Z,58nm,1.6s									
SSF	**Saint Saulge**	**74.90**	**17**	*e*P		**P**		**00 42 03.8**	**+0.1**
	comp=Z,58nm,1.6s									
BGF	**Bois d'Agland**	**75.28**	**17**	*e*P		**P**		**00 42 06.0**	**+0.1**
	comp=Z,38nm,1.4s									
BGF	**Bois d'Agland**	**75.28**	**17**	*e*P		**P**		**00 42 06.0**	**+0.1**
BGF					pmax	pmax				
	comp=Z,39nm,1.4s									
BGF	**Bois d'Agland**	**75.28**	**17**	*e*P		**P**		**00 42 06.0**	**+0.1**
	comp=Z,38nm,1.4s									
KSH	**Kashi**	**76.05**	**323**	*e*P		P		00 42 16.6	+6.0
KSH				*ep*P		**PcP**		**00 42 24.3**	**+1.5**
KSH				*es*P		sP		00 42 27.9	+8.0
KSH				*e*PP		PP		00 45 10.3	+10
KSH				*e*S		S		00 52 00.4	+7.8
KSH				*es*S		SKSac		00 52 13.0	-7.0
KSH				*e*SKS		**ScS**		**00 52 22.6**	**-1.4**
KSH				*e*ScS		SKKSac		00 52 28.3	+7.9
KSH				*e*SS		SS		00 56 58.8	+14
KSH					pmax	pmax				
	comp=Z,3.0nm,0.8s									
KSH					pmax	pmax				
	comp=Z,130nm,3.8s									
KSH					LR	LR				
	comp=N,43nm,3.3s									
KSH					LR	LR				
	comp=E,51nm,3.4s									
KSH					LR	LR				
	comp=Z,63nm,3.5s									
KBZ	**Khabaz**	**79.39**	**349**	P		**P**		**00 42 30.3**	**+1.5**
KBZ	**Khabaz**	**79.39**	**349**	P		**P**		**00 42 30.3**	**+1.5**
KBZ	**Khabaz**	**79.39**	**349**	P		**P**		**00 42 30.3**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=22,slow=1.8,SNR=4.3									
ZEI	**Tsey**	**80.20**	**348**	*e*P		P		00 42 49.4	+16
ZEI					pmax	pmax				
	comp=Z,2.0nm,0.5s									
ESDC	**Sonseca Array**	**80.57**	**24**	P		**P**		**00 42 35.6**	**+0.2**
ESDC	**Sonseca Array**	**80.57**	**24**	P		**P**		**00 42 35.6**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=342,slow=5.5,SNR=9.8									
BRTR	**Keskin Array B**	**84.07**	**355**	P		**P**		**00 42 54.2**	**+0.3**
BRTR	**Keskin Array B**	**84.07**	**355**	P		**P**		**00 42 54.2**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=9.1,slow=3.1,SNR=7.6									
CMAR	**Chiang Mai Arr**	**84.71**	**295**	P		**P**		**00 42 57.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**84.71**	**295**	P		**P**		**00 42 57.0**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=3.8,slow=4.1,SNR=3.6									

CSEM ***17*** *00:31:49.6, 12°.10N×44°.00E, h14km, ML3.5, After DHMR*
DHMR 17 00:31:49.6±1.1, 12°.10N×44°.00E, h15km±4km, ML3.5, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
TRBA	**At Turbah**	**1.13**	**6**	*i* P		Pb	00 32 11.0	-0.2
TRBA				*i* S		Sn	00 32 26.5	-0.3
TRBA				AML		AML	00 32 33.0	
	comp=Z,809nm,0.3s							
ADEN	**Aden**	**1.17**	**55**	*i* P		Pn	00 32 11.1	-0.4
ADEN				*i* S		Sg	00 32 27.7	+0.1
ADEN				AML		AML	00 32 35.6	
	comp=E,2μm,0.5s							
ADEN	**Aden**	**1.17**	**55**	*i* P		Pn	00 32 11.1	-0.4
ADEN				*i* S		Sg	00 32 27.7	+0.1
	comp=E,913nm,0.5s							
UDYN	**Al 'Udayn**	**1.86**	**359**	*i* P		Pn	00 32 21.4	+0.3
UDYN				*i* S		Sb	00 32 47.9	+1.1
UDYN				AML		AML	00 32 59.1	
	comp=Z,343nm,0.5s							
UDYN	**Al 'Udayn**	**1.86**	**359**	*i* P		Pn	00 32 21.4	+0.2
UDYN				*i* S		Sb	00 32 47.9	+1.2
	comp=Z,172nm,0.5s							
LBOS		**2.14**	**35**	*i* P		Pb	00 32 27.2	-1.4
LBOS				*i* S		Sb	00 32 55.5	+0.3
BDHA	**Al Bayda'**	**2.41**	**39**	*i* P		Pb	00 32 31.1	-2.0
BDHA				*i* S		Sb	00 33 03.8	+0.9
BDHA				AML		AML	00 33 15.2	
	comp=E,385nm,0.6s							
BDHA	**Al Bayda'**	**2.41**	**39**	*i* P		Pb	00 32 31.1	-2.0
BDHA				*i* S		Sb	00 33 03.8	+0.9
	comp=E,192nm,0.6s							
DHBB	**Dhamar BB**	**2.49**	**9**	*i* P		Pb	00 32 32.5	-1.9
DHBB				*i* S		Sb	00 33 06.1	+1.0
DHBB	**Dhamar BB**	**2.49**	**9**	*i* P		Pb	00 32 32.5	-1.9
DHBB				*i* S		Sb	00 33 06.1	+0.9
HAJJ	**Hajjah**	**3.60**	**354**	*i* P		Pn	00 32 47.6	+2.4
HAJJ				*i* S		Sb	00 33 32.9	-4.1
HAJJ				AML		AML	00 33 45.4	
	comp=Z,217nm,0.5s							
HAJJ	**Hajjah**	**3.60**	**354**	*i* P		Pn	00 32 47.6	+2.4
HAJJ				*i* S		Sb	00 33 32.9	-4.1
	comp=Z,108nm,0.5s							

IDC 17 00:36:37.6±2.0, 1°.74N×127°.44E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/22, mbtmp3.7/4, ML3.5/1, Error ellipse: s-maj=122.7km s-min=23.6km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.80**	**185**	P		P	00 41 10.2	+0.5
	0.1nm,0.3s,baz=6.2,slow=16,SNR=3.1							
WRA	**Warramunga Arr**	**22.59**	**163**	P		P	00 41 39.8	-0.1
	0.7nm,0.3s,baz=341,slow=11,SNR=7.6							
ASAR	**Alice Springs**	**26.02**	**166**	P		P	00 42 12.4	-0.2
	0.3nm,0.4s,baz=348,slow=13,SNR=6.9							
MKAR	**Makanchi Array**	**59.59**	**326**	P		P	00 46 43.2	-0.1
	0.3nm,0.3s,baz=116,slow=7.8,SNR=8.7							

IDC 17 00:45:05.5±4.3, 5°.97N×126°.86E, h110km±33km, mb3.5/7, mb1 3.6/7, mb1mx3.3/24, mbtmp3.5/7, 1C, Error ellipse: s-maj=100.9km s-min=14.7km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DAV	**Davao City (W)**	**1.68**	**311**	P		Pn	00 45 33.5	-0.9
	51nm,0.3s,baz=0.0,slow=9.1,SNR=5.0							
DAV				S		Sn	00 45 56.7	+0.2
	153nm,0.3s,baz=190,slow=12,SNR=8.4							
CTBH	**Cotabato--PC H**	**2.88**	**296**	*i* /P		Pn	00 45 46.7	-3.2
FITZ	**Fitzroy Crossi**	**23.95**	**183**	P		P	00 50 10.1	+0.4
	2.4nm,0.9s,baz=12,slow=9.3,SNR=4.4							
WRA	**Warramunga Arr**	**26.78**	**164**	P		P	00 50 35.9	+0.6
	0.6nm,0.4s,baz=342,slow=10,SNR=5.1							
ASAR	**Alice Springs**	**30.25**	**167**	P		P	00 51 05.5	-0.6
	0.5nm,0.4s,baz=346,slow=7.0,SNR=10.0							
ASAR				PcP		PcP	00 54 04.1	-0.3
	0.3nm,0.5s,baz=351,slow=1.4,SNR=4.5							
MKAR	**Makanchi Array**	**55.81**	**324**	P		P	00 54 30.4	-1.1
	0.3nm,0.4s,baz=116,slow=7.3,SNR=7.4							
ZALV	**Zalesovo Beam**	**58.67**	**332**	P		P	00 54 52.6	+1.3
	0.4nm,0.3s,baz=131,slow=7.6,SNR=2.7							
ARCES	**ARCESS Array B**	**88.41**	**340**	P		P	00 57 45.0	+0.1
	1.4nm,0.7s,baz=84,slow=5.9,SNR=8.3							
FINES	**FINESS Array B**	**89.93**	**332**	P		P	00 57 52.4	+0.2
	0.8nm,0.8s,baz=57,slow=5.1,SNR=3.2							
TORD	**Torodi Ar. Bea**	**122.32**	**290**	PKP		PKPdf	01 03 48.3	-0.5
	0.2nm,0.3s,baz=66,slow=1.5,SNR=14							

FUNV 17 00:51:11.6, 6°.39N×72°.67W, h28km, MW4.0, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CAPV	**Capacho**	**1.51**	**13**	*i* /P		Pn	00 51 37.2	+0.1
CAPV				*e*S		Sn	00 51 54.5	-1.5
SOCV	**Socops**	**2.60**	**44**	*e*P		Pn	00 51 50.7	-1.2
SOCV				*e*S		Sn	00 52 20.2	-2.4
VIGV	**El Vigia**	**2.76**	**28**	*e*P		Pn	00 51 54.0	0.0
VIGV				*e*S		Sn	00 52 24.6	-1.9
ELOV	**Elorza**	**3.22**	**79**	*e*P		Pn	00 51 59.3	-1.1
ELOV				*e*S		Sn	00 52 34.9	-3.0
QARV	**Quebrada Arrib**	**4.35**	**29**	*e*S		Sn	00 53 01.4	-4.4
SANV	**Sanarito**	**4.38**	**45**	*e*P		Pn	00 52 14.6	-1.9
CURV	**Curarigua**	**4.49**	**36**	*e*P		Pn	00 52 16.2	-1.7
CURV				*e*S		Sn	00 53 04.5	-4.8
DABV	**Dabajuro**	**4.93**	**24**	*e*P		Pn	00 52 22.3	-1.6
DABV				*e*S		Sn	00 53 13.8	-6.3
SIQV	**Siquisique**	**5.09**	**34**	*e*S		Sn	00 53 18.3	-5.9
BAUV	**El Baul**	**5.24**	**61**	*e*P		Pn	00 52 26.2	-2.0
BAUV				*e*S		Sn	00 53 21.6	-6.1
MAPV	**Macapo**	**5.39**	**50**	*e*P		Pn	00 52 28.2	-2.0
MAPV				*e*S		Sn	00 53 25.8	-5.7
MONV	**Montecano**	**6.14**	**26**	*e*P		Pn	00 52 38.5	-2.0
MONV				*e*S		Sn	00 53 42.8	-7.1

ISCJB ***17*** *00:54:37.7±0.4, 38°.82N±0°.02×26°.35E±0°.03, h11km±3km, Error ellipse: s-maj=4.6km s-min=2.8km az=156.3*
ISK ***17*** *00:54:37.4, 38°.80N×26°.34E, h16km, MD3.4*
DDA ***17*** *00:54:37.3, 38°.85N×26°.37E, h27km, MD3.2*
THE ***17*** *00:54:38.1, 38°.83N×26°.34E, h4km, ML2.2/4, Error ellipse: s-maj=1.3km s-min=0.4km az=95.0*
CSEM ***17*** *00:54:38.0±0.1, 38°.81N×26°.35E, h12km, ML2.2/4, Error ellipse: s-maj=3.3km s-min=2.1km az=74.0*
ISC 17 00:54:38.2±0.9, 38°.82N±0°.02×26°.34E±0°.02, h14km±8km, n85, σ0.967/116, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PRK	**Paraskevi**	**0.43**	**353**	P		**Pg**	**00 54 46.3**	**-0.4**
PRK				S		**Sg**	**00 54 52.5**	**-0.1**
PRK	**Paraskevi**	**0.43**	**353**	P		**Pg**	**00 54 46.3**	**-0.4**
PRK				S		**Sg**	**00 54 52.5**	**-0.1**
CHOS	**Chios island**	**0.49**	**207**	P		**Pg**	**00 54 48.0**	**+0.1**
CHOS				S		**Sg**	**00 54 55.1**	**+0.7**
CHOS	**Chios island**	**0.49**	**207**	P		**Pg**	**00 54 48.0**	**+0.1**
CHOS				S		**Sg**	**00 54 55.1**	**+0.7**
URLA	**Izmir**	**0.50**	**157**	*i* P		**Pg**	**00 54 47.8**	**-0.3**
URLA				*i* S		**Sg**	**00 54 55.1**	**+0.3**
URLA	**Izmir**	**0.50**	**157**	*i* P		**Pg**	**00 54 47.8**	**-0.3**
URLA				*i* S		**Sg**	**00 54 55.1**	**+0.3**
SIGR	**SIGRI**	**0.54**	**316**	P		**Pg**	**00 54 48.6**	**-0.3**
SIGR				S		**Sg**	**00 54 56.5**	**+0.4**
SIGR	**SIGRI**	**0.54**	**316**	P		**Pg**	**00 54 48.6**	**-0.3**
SIGR				S		**Sg**	**00 54 56.5**	**+0.4**
AYVA	**Ayvalik**	**0.56**	**29**	*i* P		**Pg**	**00 54 48.8**	**-0.3**
AYVA				*i* S		**Sg**	**00 54 55.5**	**-1.1**
AYVA	**Ayvalik**	**0.56**	**29**	*i* P		**Pg**	**00 54 48.8**	**-0.3**
AYVA				*i* S		**Sg**	**00 54 55.5**	**-1.1**
BLCB	**Balcova**	**0.70**	**128**	*e*PG		**Pg**	**00 54 51.6**	**-0.2**
BLCB				*e*SG		**Sg**	**00 55 01.0**	**0.0**
BLCB	**Balcova**	**0.70**	**128**	*e*Pg		**Pg**	**00 54 51.6**	**-0.2**
BLCB				*e*Sg		**Sg**	**00 55 01.0**	**0.0**
IZM	**Izmir**	**0.84**	**120**	*e*PG		**Pg**	**00 54 54.1**	**-0.2**
IZM				*e*SG		**Sb**	**00 55 06.0**	**+0.4**
IZM	**Izmir**	**0.84**	**120**	*e*Pg		**Pg**	**00 54 54.2**	**-0.2**
IZM				*e*Sg		**Sb**	**00 55 06.0**	**+0.4**
EZN	**Ezine**	**1.00**	**359**	*e*PG		**Pg**	**00 54 57.6**	**0.0**
EZN	**Ezine**	**1.00**	**359**	*e*Pg		**Pg**	**00 54 57.6**	**0.0**
BOZC	**Bozcaada**	**1.04**	**348**	*i* P		**Pb**	**00 54 57.3**	**-0.8**
BOZC				*i* S		**Sb**	**00 55 11.4**	**-0.2**
AKHS	**Akhisar**	**1.15**	**87**	*i* P		**Pn**	**00 54 59.4**	**-0.5**
AKHS				*i* S		**Sn**	**00 55 15.4**	**0.0**
AKHS	**Akhisar**	**1.15**	**87**	*i* P		**Pn**	**00 54 59.4**	**-0.5**
AKHS				*i* S		**Sn**	**00 55 15.4**	**0.0**
AKS	**Akhisar**	**1.15**	**87**	*e*PN		**Pg**	**00 55 00.1**	**-0.2**
AKS	**Akhisar**	**1.15**	**87**	*e*Pn		**Pg**	**00 55 00.1**	**-0.2**
GCAM	**G?zelcaml?**	**1.32**	**148**	*i* P		**Pn**	**00 55 02.3**	**+0.1**
GCAM				*i* S		**Sg**	**00 55 20.3**	**-0.5**
GCAM	**G?zelcaml?**	**1.32**	**148**	*i* P		**Pn**	**00 55 02.3**	**+0.1**
GCAM				*i* S		**Sg**	**00 55 20.3**	**-0.5**
BALY	**Balya**	**1.35**	**47**	*i* P		**Pn**	**00 55 02.6**	**-0.1**
BALY				*i* S		**Sn**	**00 55 20.2**	**-0.2**
BALY	**Balya**	**1.35**	**47**	*i* P		**Pn**	**00 55 02.6**	**-0.1**
BALY				*i* S		**Sn**	**00 55 20.2**	**-0.2**
LIA	**Limnos Island**	**1.40**	**321**	P		**Pn**	**00 55 03.0**	**-0.3**
LIA				S		**Sg**	**00 55 22.7**	**-0.7**
LIA	**Limnos Island**	**1.40**	**321**	P		**Pn**	**00 55 03.0**	**-0.3**
LIA				S		**Sg**	**00 55 22.7**	**-0.7**
BALB	**Balikesir**	**1.45**	**55**	*e*PN		**Pn**	**00 55 03.7**	**-0.2**
BALB	**Balikesir**	**1.45**	**55**	*e*Pn		**Pn**	**00 55 03.7**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.58**	**4**	*e*PN		**Pn**	**00 55 05.5**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.58**	**4**	*e*Pn		**Pn**	**00 55 05.5**	**-0.2**
LPK	**Lapseki**	**1.58**	**12**	*e*PN		**Pn**	**00 55 06.1**	**+0.3**
LPK	**Lapseki**	**1.58**	**12**	*e*Pn		**Pn**	**00 55 06.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.61**	**40**	*e*PN		**Pn**	**00 55 05.8**	**-0.3**
GONE	**Gonen-Balikesi**	**1.61**	**40**	*e*Pn		**Pn**	**00 55 05.8**	**-0.3**
AYDN	**Tasoluk**	**1.68**	**133**	*i* P		**Pn**	**00 55 05.1**	**-2.0**
AYDN				*i* S		**Sn**	**00 55 26.7**	**-1.7**
AYDN	**Tasoluk**	**1.68**	**133**	*i* P		**Pn**	**00 55 05.1**	**-2.0**
AYDN				*i* S		**Sn**	**00 55 26.7**	**-1.7**
KRBG	**Karabiga-Canak**	**1.73**	**25**	*e*PN		**Pn**	**00 55 07.5**	**-0.4**
KRBG	**Karabiga-Canak**	**1.73**	**25**	*e*Pn		**Pn**	**00 55 07.5**	**-0.4**
DURS	**Dursunbey**	**1.83**	**64**	*i* P		**Pn**	**00 55 09.1**	**-0.2**
DURS				*i* S		**Sn**	**00 55 31.5**	**-0.8**
DURS	**Dursunbey**	**1.83**	**64**	*i* P		**Pn**	**00 55 09.1**	**-0.2**
DURS				*i* S		**Sn**	**00 55 31.5**	**-0.8**
KULA	**Kula-Manisa**	**1.84**	**99**	*e*PN		**Pn**	**00 55 09.7**	**+0.3**
KULA	**Kula-Manisa**	**1.84**	**99**	*e*Pn		**Pn**	**00 55 09.7**	**+0.3**
ERIK	**Erikli-Kesan**	**1.85**	**4**	*e*PN		**Pn**	**00 55 09.6**	**+0.1**
ERIK	**Erikli-Kesan**	**1.85**	**4**	*e*Pn		**Pn**	**00 55 09.6**	**+0.1**
APE	**Apeiranthos**	**1.86**	**200**	*e*PN		**Pn**	**00 55 09.3**	**-0.3**
APE	**Apeiranthos**	**1.86**	**200**	*e*Pn		**Pn**	**00 55 09.3**	**-0.3**
DEMI	**Demirci**	**1.86**	**82**	*i* P		**Pn**	**00 55 09.6**	**-0.1**
DEMI				*i* S		**Sn**	**00 55 36.0**	**+0.7**
DEMI	**Demirci**	**1.86**	**82**	*i* P		**Pn**	**00 55 09.6**	**-0.1**
DEMI				*i* S		**Sn**	**00 55 36.0**	**+0.7**
MLSB	**Milas**	**1.90**	**143**	*e*PN		**Pn**	**00 55 09.9**	**-0.3**
MLSB	**Milas**	**1.90**	**143**	*e*Pn		**Pn**	**00 55 09.9**	**-0.3**
BODT	**Bodrum**	**1.92**	**156**	*e*PN		**Pn**	**00 55 09.9**	**-0.5**
BODT	**Bodrum**	**1.92**	**156**	*e*Pn		**Pn**	**00 55 09.9**	**-0.5**
ENEZ	**Enez**	**1.92**	**356**	*e*PN		**Pn**	**00 55 10.8**	**+0.4**
ENEZ	**Enez**	**1.92**	**356**	*e*Pn		**Pn**	**00 55 10.8**	**+0.4**
BNT	**Bandirma**	**1.96**	**38**	*e*PN		**Pn**	**00 55 10.1**	**-0.9**
BNT	**Bandirma**	**1.96**	**38**	*e*Pn		**Pn**	**00 55 10.1**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.97**	**19**	*e*PN		**Pn**	**00 55 11.9**	**+0.8**
RKY	**Sarkoy-Tekirda**	**1.97**	**19**	*e*Pn		**Pn**	**00 55 12.0**	**+0.8**
SART	**Tekirdag**	**1.97**	**19**	*i* P		**Pn**	**00 55 12.0**	**+0.8**
SART				*i* S		**Sn**	**00 55 36.5**	**+0.7**
SART	**Tekirdag**	**1.97**	**19**	*i* P		**Pn**	**00 55 12.0**	**+0.8**
SART				*i* S		**Sn**	**00 55 36.5**	**+0.7**
MRMT	**Marmara Adasi**	**2.03**	**28**	*e*PN		**Pn**	**00 55 11.8**	**-0.1**
MRMT	**Marmara Adasi**	**2.03**	**28**	*e*Pn		**Pn**	**00 55 11.8**	**-0.1**
MFT	**Murefte**	**2.09**	**20**	*e*PN		**Pn**	**00 55 14.0**	**+1.1**
MFT	**Murefte**	**2.09**	**20**	*e*Pn		**Pn**	**00 55 14.0**	**+1.1**
KCTX	**Karacabey (Bur**	**2.12**	**47**	*e*PN		**Pn**	**00 55 12.8**	**-0.5**
KCTX	**Karacabey (Bur**	**2.12**	**47**	*e*Pn		**Pn**	**00 55 12.8**	**-0.5**
GDZ	**Gediz**	**2.46**	**83**	*i* P		**Pb**	**00 55 23.3**	**+1.0**
TVSB	**Tavsanli**	**2.51**	**75**	*e*PN		**Pn**	**00 55 19.2**	**+0.6**
TVSB	**Tavsanli**	**2.51**	**75**	*e*Pn		**Pn**	**00 55 19.2**	**+0.6**
KHAL	**Karahalli**	**2.51**	**99**	*i* P		**Pb**	**00 55 24.0**	**+0.9**
CRLT	**Corlu**	**2.54**	**24**	*e*PN		**Pn**	**00 55 19.7**	**+0.7**
CRLT	**Corlu**	**2.54**	**24**	*e*Pn		**Pn**	**00 55 19.7**	**+0.7**
ARMT	**Armutlu**	**2.61**	**47**	*e*PN		**Pn**	**00 55 18.8**	**-1.1**
ARMT	**Armutlu**	**2.61**	**47**	*e*Pn		**Pn**	**00 55 18.8**	**-1.1**
ELBA	**Catalca**	**2.82**	**34**	*i* P		**Pn**	**00 55 22.6**	**-0.3**
ELBA	**Catalca**	**2.82**	**34**	*i* P		**Pn**	**00 55 22.6**	**-0.3**
YLV	**Yalova**	**2.92**	**52**	*e*PN		**Pn**	**00 55 24.8**	**+0.6**
YLV	**Yalova**	**2.92**	**52**	*e*Pn		**Pn**	**00 55 24.8**	**+0.6**
CTKS	**Kestanelik-??a**	**2.93**	**34**	*e*PN		**Pn**	**00 55 25.5**	**+1.2**
CTKS	**Kestanelik-??a**	**2.93**	**34**	*e*Pn		**Pn**	**00 55 25.5**	**+1.2**
EDRB	**Edirne**	**3.04**	**6**	*e*PN		**Pn**	**00 55 26.0**	**+0.2**
EDRB	**Edirne**	**3.04**	**6**	*e*Pn		**Pn**	**00 55 26.0**	**+0.2**
GULT	**Gulveren**	**3.60**	**62**	*e*PN		**Pn**	**00 55 35.3**	**+1.7**
GULT	**Gulveren**	**3.60**	**62**	*e*Pn		**Pn**	**00 55 35.3**	**+1.7**

ISCJB ***17*** *01:05:10.5±1.2, 27°.59N×0°.04×52°.33E±0°.04, h4km±8km, mb3.7/16, MS3.3/1, Error ellipse: s-maj=7.5km s-min=4.5km az=39.9*
IDC ***17*** *01:05:10.6±1.6, 27°.50N×52°.36E, h0km, mb3.7/14, mb1 3.8/16, mb1mx3.7/32, mbtmp3.7/16, ML4.1/2, MS3.3/1, Ms1 3.3/1, ms1mx2.3/39, Error ellipse: s-maj=35.7km s-min=18.7km az=159.0*
THR ***17*** *01:05:11.2±0.4, 27°.71N×52°.21E, h17km±5km, ML3.9*
CSEM ***17*** *01:05:12.3±0.2, 27°.58N×52°.42E, h2km, ML3.9, Error ellipse: s-maj=6.4km s-min=4.2km az=52.0*
TEH ***17*** *01:05:20.1, 27°.85N×52°.38E, h35km, ML3.9*
ISC 17 01:05:11.3±1.8, 27°.53N±0°.05×52°.45E±0°.05, h4km±12km, n74, σ1.907/79, mb3.7/16, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GHIR	**Ghir-Karzin**	**0.89**	**32**	*e*Pg		**Pg**	**01 05 28.2**	**-0.2**
GHIR				*e*Sg		**Sg**	**01 05 40.5**	**+0.5**
GHIR				AML		AML	01 05 46.5	
	comp=N,7μm,0.3s							
GHIR				AML		AML	01 05 47.7	
	comp=E,4μm,0.4s							
GHIR	**Ghir-Karzin**	**0.89**	**32**	*e*Pg		**Pg**	**01 05 28.2**	**-0.2**
GHIR				*e*Sg		**Sg**	**01 05 40.5**	**+0.5**
ISRV	**Sarvestan**	**1.94**	**18**	*e*Pn		**Pb**	**01 05 46.9**	**-0.5**
ISRV				*e*Sg		**Sg**	**01 06 13.2**	**-0.4**
ISRV				*e*			01 06 27.2	
	comp=Z,15μm,0.3s							
ISRV	**Sarvestan**	**1.94**	**18**	*e*Pn		**Pb**	**01 05 46.9**	**-0.5**
ISRV				*e*Sg		**Sg**	**01 06 13.2**	**-0.4**
SHI	**Shiraz**	**2.10**	**2**	*e*Pn		**Pn**	**01 05 48.0**	**+0.5**
SHI				*e*Sg		**Sb**	**01 06 16.6**	**-0.2**
SHI				*e*			01 06 22.2	
	comp=N,10μm,0.3s							
SHI	**Shiraz**	**2.10**	**2**	*e*Pn		**Pn**	**01 05 48.0**	**+0.5**
SHI				*e*Sg		**Sb**	**01 06 16.6**	**-0.2**
BNDS	**Bandar-Abbas**	**3.31**	**91**	*e*Pn		Pn	01 06 07.5	+3.4
BNDS				Sn		**Sb**	**01 06 48.7**	**-2.8**
BNDS				AML		AML	01 07 23.2	
	comp=N,192nm,0.5s							
BNDS	**Bandar-Abbas**	**3.31**	**91**	*e*Pn		Pn	01 06 07.5	+3.4
IBND	**Bandar-abas**	**3.64**	**90**	*e*Pn		**Pb**	**01 06 15.4**	**-0.8**
IBND				*e*Sg		Sg	01 07 16.1	+7.9
IBND	

comp=Z,32nm,18.9s,baz=14,slow=40
SONM Songino Array 46.22 49 P **P** **01 13 38.8 +1.2**
comp=Z,0.7nm,1.1s,baz=258,slow=6.9,SNR=3.2
TORD Torodi Ar. Bea 49.37 264 P **P** **01 14 01.8 -0.5**
comp=Z,0.5nm,0.7s,baz=49,slow=6.2,SNR=3.7
DBIC Dimbokro 58.02 260 P **P** **01 15 05.2 -0.6**
comp=Z,1.5nm,0.8s,baz=45,slow=7.1,SNR=4.3
YKA Yellowknife Ar 89.69 354 P **P** **01 18 10.1 -0.3**
comp=Z,0.2nm,0.7s,baz=1.9,slow=3.7,SNR=2.6

*ISCJB **17** 01:19:15.0±0.6, 17°.8S±0°.1×178°.3W±0°.1, h579km, mb3.7/15, Error ellipse: s-maj=21.2km s-min=11.1km az=144.3*
*IDC **17** 01:19:21.1±2.5, 17°.93S×178°.42W, h642km±30km, mb3.2/15, mb1 3.5/15, mb1mx3.4/20, mbtmp3.2/15, Error ellipse: s-maj=19.9km s-min=11.0km az=147.0*
*AUST **17** 01:19:32.9, 18°.97S×173°.16E, h30km*
ISC 17 01:19:16.0±0.7, 17°.8S±0°.2×178°.3W±0°.1, h579km, n56, σ1s07/64, mb3.8/15, 9C-5D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNB	**Canberra Magne**	**33.52**	**232**	P	**P**	**01 25 10.1**	**+1.3**
	baz=27,SNR=23						
COEN	**Coen**	**37.17**	**270**	P	**P**	**01 25 41.3**	**+2.1**
	baz=29,SNR=16						
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**01 25 52.1**	**+0.5**
	2.1nm,0.5s,baz=72,slow=9.5,SNR=6.7						
STKA	**Stephens Creek**	**38.72**	**241**	P	**P**	**01 25 52.7**	**+1.1**
	baz=31,SNR=5.4						
WRA	**Warramunga Arr**	**44.71**	**259**	P	**P**	**01 26 39.0**	**+0.1**
	2.2nm,0.4s,baz=94,slow=7.3,SNR=20						
WRA				PcP	**PcP**	**01 28 06.8**	**-1.8**
	0.5nm,0.4s,baz=96,slow=3.4,SNR=3.0						
WRA				S	**S**	**01 32 30.7**	**-3.6**
	0.9nm,0.9s,baz=93,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**44.87**	**254**	P	**P**	**01 26 40.4**	**+0.3**
	5.4nm,0.6s,baz=87,slow=8.8,SNR=81						
ASAR				PcP	**PcP**	**01 28 08.2**	**-0.9**
	1.3nm,0.5s,baz=103,slow=3.9,SNR=12						
ASAR				S	**S**	**01 32 33.5**	**-3.1**
	1.8nm,1.0s,baz=88,slow=17,SNR=8.5						
KDU	**Kakadu**	**47.62**	**269**	P	**P**	**01 27 01.4**	**+0.5**
	baz=40,SNR=5.1						
MTN	**Manton Dam**	**48.86**	**268**	P	**P**	**01 27 10.5**	**+0.3**
	baz=41,SNR=3.5						
MTN				S	S	01 33 11.1	-21
	baz=41,SNR=3.4						
KNRA	**Kununurra**	**50.56**	**264**	P	**P**	**01 27 22.8**	**+0.2**
	baz=42,SNR=3.1						
FITZ	**Fitzroy Crossi**	**53.10**	**260**	P	**P**	**01 27 41.3**	**+0.5**
	baz=45,SNR=3.5						
VNDA	**Vanda**	**60.52**	**185**	P	**P**	**01 28 30.3**	**-0.1**
	0.3nm,0.5s,baz=54,slow=1.9,SNR=5.0						
MJAR	**Matsushiro Arr**	**67.89**	**323**	P	**P**	**01 29 17.9**	**+0.2**
	3.0nm,0.6s,baz=153,slow=5.7,SNR=12						
MAT	**Matsushiro**	**67.89**	**323**	P	**P**	**01 29 18.1**	**+0.4**
CISI	**Cisompet, Garu**	**72.39**	**268**	P	**PcP**	**01 30 01.5**	**+2.6**
	baz=64,SNR=112						
LEM	**Lembang**	**72.78**	**268**	P	PcP	01 30 06.2	+5.5
	baz=65,SNR=8.0						
PETK	**Petropavlovsk-**	**73.63**	**345**	P	**P**	**01 29 51.5**	**+0.5**
	3.0nm,0.6s,baz=115,slow=7.7,SNR=9.0						
KSRS	**Korea Array**	**74.69**	**318**	P	**P**	**01 29 58.1**	**+0.8**
	0.7nm,0.6s,baz=126,slow=6.8,SNR=3.4						
NVAR	**Mina Array Bea**	**79.33**	**44**	P	**P**	**01 30 23.3**	**+0.5**
	0.5nm,0.6s,baz=221,slow=8.1,SNR=4.6						
ILAR	**Eielson Array**	**85.80**	**13**	P	**P**	**01 30 53.2**	**-1.2**
	0.8nm,0.4s,baz=221,slow=5.0,SNR=19						
TXAR	**Lajitas Array**	**85.90**	**58**	P	**P**	**01 30 56.9**	**+1.1**
	1.2nm,0.9s,baz=206,slow=8.3,SNR=4.8						
PDAR	**Pinedale Array**	**87.26**	**43**	P	**P**	**01 31 01.9**	**-0.2**
	0.6nm,0.6s,baz=227,slow=4.3,SNR=6.3						
CMAR	**Chiang Mai Arr**	**88.92**	**290**	P	**P**	**01 31 11.4**	**+1.4**
	0.8nm,0.3s,baz=108,slow=2.9,SNR=6.9						
INK	**Inuvik**	**91.80**	**15**	P	**P**	**01 31 21.2**	**-1.0**
	1.0nm,0.7s,baz=193,slow=4.2,SNR=6.4						
SONM	**Songino Array**	**93.54**	**319**	P	**P**	**01 31 30.8**	**-0.1**
	0.2nm,0.5s,baz=116,slow=6.6,SNR=2.9						
YKA	**Yellowknife Ar**	**94.24**	**25**	P	**P**	**01 31 32.7**	**-0.8**
	0.2nm,0.6s,baz=242,slow=4.5,SNR=4.3						
MKAR	**Makanchi Array**	**109.13**	**314**	PKiKP	**PKiKP**	**01 36 39.0**	**-1.7**
	0.5nm,0.6s,baz=174,slow=1.3,SNR=9.0						
ARCES	**ARCESS Array B**	**126.26**	**350**	PKP	**PKPdf**	**01 37 11.3**	**-1.6**
	1.1nm,0.7s,baz=17,slow=0.9,SNR=6.9						
FINES	**FINESS Array B**	**133.14**	**344**	PKP	**PKPdf**	**01 37 24.0**	**-2.0**
	0.7nm,0.6s,baz=102,slow=3.2,SNR=5.0						
KWP	**Kalwaria Pacla**	**144.03**	**337**	*i*P	PKPbc	01 37 45.6	-0.2
BURAR	**Bucovina Array**	**144.58**	**332**	*i*P	**PKPab**	**01 37 48.5**	**+0.2**
TESR	**Tescani**	**144.73**	**330**	*i*P	**PKPdf**	**01 37 47.5**	**-0.1**
BRTR	**Keskin Array B**	**147.38**	**315**	PKP	**PKPdf**	**01 37 47.7**	**-0.3**
	2.1nm,0.6s,baz=135,slow=4.8,SNR=18						
CFR	**Carcaliu**	**144.91**	**327**	*i*P	PKPbc	01 37 48.8	+0.2
VRI	**Vrincioaia**	**145.15**	**329**	*i*P	**PKPbc**	**01 37 48.9**	**-0.4**
TRPA	**Tarpa**	**145.31**	**335**	*i*P	**PKPbc**	**01 37 49.4**	**-0.3**
CLL	**Collm**	**145.41**	**347**	*i*PKP	**PKPbc**	**01 37 49.3**	**-0.6**
	comp=Z,9.0nm,0.8s						
OKC	**Ostrava-Krasne**	**145.43**	**341**	*e*PKP	**PKPbc**	**01 37 49.5**	**-0.5**
OKC				*ex*	**PKPab**	**01 37 51.7**	**+0.3**
UPC	**Upice**	**145.44**	**344**	*e*PKP	**PKPbc**	**01 37 49.5**	**-0.5**
UPC				*ex*	**PKPab**	**01 37 51.9**	**+0.5**
DPC	**Dobruska-Polom**	**145.50**	**343**	*e*PKP	**PKPbc**	**01 37 50.2**	**0.0**
DPC				*ex*	**PKPab**	**01 37 52.4**	**+0.7**
BRG	**Berggiesshubel**	**145.61**	**346**	*e*P	**PKPbc**	**01 37 49.7**	**-0.7**
	comp=Z,4.0nm,0.9s						
BRG							
	comp=N,368nm,14.7s						
BRG							
	comp=E,172nm,16.2s						
BRG							
	comp=Z,304nm,20.9s						
KRLC	**Kraliky**	**145.62**	**343**	*e*PKP	**PKPbc**	**01 37 50.2**	**-0.4**
KRLC				*ex*	**PKPab**	**01 37 52.5**	**+0.3**
MORC	**Moravsky Berou**	**145.66**	**342**	*i*P	**PKPbc**	**01 37 50.2**	**-0.5**
PVCC	**Panska Ves**	**145.79**	**345**	*e*PKP	**PKPbc**	**01 37 51.1**	**+0.1**
PVCC				*ex*	**PKPab**	**01 37 53.0**	**+0.2**
MLR	**Muntele Rosu**	**145.80**	**329**	*i*P	**PKPdf**	**01 37 50.4**	**+0.8**
PRU	**Pruhonice**	**146.29**	**345**	*e*PKP	**PKPbc**	**01 37 51.9**	**-0.5**
PRU				*ex*	**PKPab**	**01 37 55.0**	**+0.2**
DRGR		**146.30**	**334**	*i*P	**PKPbc**	**01 37 52.4**	**-0.2**
ARR	**Arges**	**146.53**	**330**	*i*P	**PKPbc**	**01 37 53.6**	**+0.3**
NKC	**Novy Kostel**	**146.54**	**347**	*e*PKP	**PKPbc**	**01 37 52.8**	**-0.3**
KHC	**Kasperske Hory**	**147.32**	**345**	*e*PKP	**PKPbc**	**01 37 54.8**	**-0.4**
KHC				*ex*	**PKPab**	**01 37 59.7**	**+0.6**
GERES	**GERESS Array B**	**147.56**	**345**	PKPbc	**PKPbc**	**01 37 55.3**	**-0.7**
	comp=Z,1.8nm,0.5s,baz=24,slow=3.1,SNR=28						
BZS	**Buzias**	**147.70**	**333**	*i*P	**PKPbc**	**01 37 55.6**	**-0.6**
PKSM	**Moragy**	**148.40**	**337**	*i*P	**PKPbc**	**01 37 56.0**	**-2.0**
VTS	**Vitosha**	**149.26**	**328**	*i*P	**PKPbc**	**01 37 59.8**	**-0.6**
GCIS	**Gornji Cirnik**	**149.73**	**340**	*i*PKPbc	**PKPbc**	**01 38 00.7**	**-0.5**
LJU	**Ljubljana**	**149.91**	**342**	*i*PKPbc	**PKPbc**	**01 38 01.0**	**-0.6**
BOJS	**Bojanci**	**150.18**	**341**	*e*PKPbc	**PKPbc**	**01 38 01.9**	**-0.4**

*ISCJB **17** 01:25:43.0±0.5, 36°.97N±0°.02×28°.23E±0°.03, h4km±4km, Error ellipse: s-maj=3.8km s-min=3.1km az=138.6*
*ISK **17** 01:25:43.2, 36°.99N×28°.24E, h1km, MD3.4*
*DDA **17** 01:25:43.6, 36°.99N×28°.21E, h29km, ML3.5*
*CSEM **17** 01:25:43.4±0.1, 36°.99N×28°.22E, h2km, MD3.4, Error ellipse: s-maj=3.0km s-min=2.5km az=39.0*
*ATH **17** 01:25:44.5, 36°.99N×28°.17E, h20km±2km, MD3.6/5*
ISC 17 01:25:43.7±1.0, 36°.98N±0°.02×28°.24E±0°.02, h3km±9km, n99, σ0s95/131, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.15**	**13**	PG	**Pg**	**01 25 47.0**	**+0.2**
YER				SG	**Sg**	**01 25 50.0**	**+1.1**
YER	**Yerkesik**	**0.15**	**13**	*i* Pg	**Pg**	**01 25 47.0**	**+0.2**
YER				*i* Sg	**Sg**	**01 25 50.0**	**+1.1**
TURN	**Turunc**	**0.31**	**111**	*i* P	**Pg**	**01 25 47.9**	**-1.9**
TURN				*i* S	**Sg**	**01 25 51.2**	**-2.6**
TURN	**Turunc**	**0.31**	**111**	*i* P	**Pg**	**01 25 47.9**	**-1.9**
TURN				*i* S	**Sg**	**01 25 51.2**	**-2.6**
DALY	**Dalyan (Mu˘la**	**0.37**	**116**	PG	**Pg**	**01 25 50.6**	**-0.3**
DALY				SG	**Sg**	**01 25 57.1**	**+1.4**
DALY	**Dalyan (Mu˘la**	**0.37**	**116**	*i* Pg	**Pg**	**01 25 50.6**	**-0.3**
DALY				*i* Sg	**Sg**	**01 25 57.1**	**+1.4**
MLSB	**Milas**	**0.48**	**310**	*e*PG	**Pg**	**01 25 53.0**	**0.0**
MLSB	**Milas**	**0.48**	**310**	*e*Pg	**Pg**	**01 25 53.0**	**0.0**
AYDN	**Tasoluk**	**0.73**	**337**	*i* P	**Pg**	**01 25 58.1**	**+0.2**
AYDN				*i* S	**Sg**	**01 26 07.1**	**-0.3**
AYDN	**Tasoluk**	**0.73**	**337**	*i* P	**Pg**	**01 25 58.1**	**+0.2**
AYDN				*i* S	**Sg**	**01 26 07.1**	**-0.3**
BODT	**Bodrum**	**0.75**	**276**	*e*PG	**Pg**	**01 25 58.3**	**+0.2**
BODT	**Bodrum**	**0.75**	**276**	*e*Pg	**Pg**	**01 25 58.3**	**+0.2**
FETY	**Fethiye**	**0.76**	**117**	*e*PG	**Pg**	**01 25 58.2**	**-0.2**
FETY	**Fethiye**	**0.76**	**117**	*e*Pg	**Pg**	**01 25 58.2**	**-0.2**
ARG	**Arkhangelos**	**0.77**	**187**	*e*PN	**Pb**	**01 25 59.2**	**-0.6**
ARG				*e*SN	**Sb**	**01 26 10.2**	**-0.4**
ARG	**Arkhangelos**	**0.77**	**187**	*e*Pn	**Pb**	**01 25 59.2**	**-0.6**
ARG				*e*Sn	**Sb**	**01 26 10.2**	**-0.4**
NIS1	**Nisyros Isl.**	**0.93**	**246**	*e*PN	**Pg**	**01 26 01.8**	**+0.2**
NIS1	**Nisyros Isl.**	**0.93**	**246**	*e*Pn	**Pg**	**01 26 01.8**	**+0.2**
DNZL	**Cakiroluk**	**0.95**	**42**	*i* P	**Pg**	**01 26 02.4**	**+0.3**
DNZL				*i* S	**Sg**	**01 26 16.7**	**+0.6**
DNZL	**Cakiroluk**	**0.95**	**42**	*i* P	**Pg**	**01 26 02.4**	**+0.3**
DNZL				*i* S	**Sg**	**01 26 16.7**	**+0.6**
DENT	**Denizli**	**1.00**	**39**	*e*PG	**Pg**	**01 26 02.3**	**-0.6**
DENT	**Denizli**	**1.00**	**39**	*e*Pg	**Pg**	**01 26 02.3**	**-0.6**
GCAM	**G?zelcaml?**	**1.07**	**312**	*i* P	**Pg**	**01 26 04.3**	**-0.1**
GCAM				*i* S	**Sn**	**01 26 19.8**	**-1.2**
GCAM	**G?zelcaml?**	**1.07**	**312**	*i* P	**Pg**	**01 26 04.3**	**-0.1**
GCAM				*i* S	**Sn**	**01 26 19.8**	**-1.2**
GOLH	**Golhisar**	**1.09**	**76**	*i* P	**Pg**	**01 26 04.9**	**+0.3**
GOLH				*i* S	**Sg**	**01 26 19.6**	**+0.9**
GOLH	**Golhisar**	**1.09**	**76**	*i* P	**Pg**	**01 26 04.9**	**+0.3**
GOLH				*i* S	**Sg**	**01 26 19.6**	**+0.9**
AKAS	**Kas**	**1.33**	**124**	*i* P	**Pn**	**01 26 09.1**	**-0.2**
AKAS				*i* S	**Sg**	**01 26 30.7**	**+4.2**
AKAS	**Kas**	**1.33**	**124**	*i* P	**Pn**	**01 26 09.1**	**-0.2**
AKAS				*i* S	**Sg**	**01 26 30.7**	**+4.2**
ELL	**Elmali**	**1.36**	**99**	*e*PN	**Pn**	**01 26 09.2**	**-0.5**
ELL	**Elmali**	**1.36**	**99**	*e*Pn	**Pn**	**01 26 09.2**	**-0.5**
KSL	**Kastellorizon**	**1.36**	**127**	*e*PN	**Pg**	**01 26 11.3**	**+1.4**
MANT	**Manisa**	**1.53**	**9**	*i* P	**Pn**	**01 26 11.8**	**-0.3**
MANT				*i* S	**Sn**	**01 26 32.3**	**-0.2**
MANT	**Manisa**	**1.53**	**9**	*i* P	**Pn**	**01 26 11.8**	**-0.3**
MANT				*i* S	**Sn**	**01 26 32.3**	**-0.2**
KULA	**Kula-Manisa**	**1.56**	**12**	*e*PN	**Pn**	**01 26 11.3**	**-1.2**
KULA	**Kula-Manisa**	**1.56**	**12**	*e*Pn	**Pn**	**01 26 11.3**	**-1.2**
IZM	**Izmir**	**1.61**	**332**	*e*PN	**Pn**	**01 26 12.4**	**-0.7**
IZM	**Izmir**	**1.61**	**332**	*e*Pn	**Pn**	**01 26 12.4**	**-0.7**
KARP	**Karpathos**	**1.68**	**212**	*e*PN	**Pb**	**01 26 14.3**	**-0.9**
KARP				*e*SN	**Sb**	**01 26 36.2**	**-0.5**
KARP	**Karpathos**	**1.68**	**212**	*e*Pn	**Pb**	**01 26 14.3**	**-0.9**
KARP				*e*Sn	**Sb**	**01 26 36.2**	**-0.5**
KHL	**Karahalli**	**1.68**	**37**	*e*PN	**Pn**	**01 26 13.2**	**-0.9**
KHL	**Karahalli**	**1.68**	**37**	*e*Pn	**Pn**	**01 26 13.2**	**-0.9**
KORT	**Korkueli**	**1.69**	**89**	*i* P	**Pg**	**01 26 16.2**	**+0.1**
KORT				*i* S	**Sn**	**01 26 35.6**	**-0.9**
KORT	**Korkueli**	**1.69**	**89**	*i* P	**Pg**	**01 26 16.2**	**+0.1**
KORT				*i* S	**Sn**	**01 26 35.6**	**-0.9**
BLCB	**Balcova**	**1.69**	**326**	*e*PN	**Pn**	**01 26 13.3**	**-0.9**
BLCB	**Balcova**	**1.69**	**326**	*e*Pn	**Pn**	**01 26 13.3**	**-0.9**
KHAL	**Karahalli**	**1.70**	**35**	*i* P	**Pn**	**01 26 14.2**	**-0.2**
KHAL				*i* S	**Sn**	**01 26 36.2**	**-0.6**
KHAL	**Karahalli**	**1.70**	**35**	*i* P	**Pn**	**01 26 14.2**	**-0.2**
KHAL				*i* S	**Sn**	**01 26 36.2**	**-0.6**
URLA	**Izmir**	**1.90**	**317**	*i* P	**Pn**	**01 26 15.7**	**-1.3**
URLA				*i* S	**Sg**	**01 26 46.3**	**+1.7**
URLA	**Izmir**	**1.90**	**317**	*i* P	**Pn**	**01 26 15.7**	**-1.3**
AKHS	**Akhisar**	**1.92**	**350**	*i* P	**Pn**	**01 26 16.3**	**-1.0**
AKHS				*i* S	**Sn**	**01 26 42.6**	**+0.6**
AKHS	**Akhisar**	**1.92**	**350**	*i* P	**Pn**	**01 26 16.3**	**-1.0**
AKHS				*i* S	**Sn**	**01 26 42.6**	**+0.6**
AKS	**Akhisar**	**1.92**	**350**	*e*PN	**Pn**	**01 26 16.7**	**-0.7**
AKS	**Akhisar**	**1.92**	**350**	*e*Pn	**Pn**	**01 26 16.7**	**-0.7**
BCK	**Bucak**	**1.94**	**75**	*e*PN	**Pn**	**01 26 17.3**	**-0.3**
BCK	**Bucak**	**1.94**	**75**	*e*Pn	**Pn**	**01 26 17.3**	**-0.3**
ANTB	**Antalya**	**1.94**	**92**	*e*PN	**Pn**	**01 26 16.7**	**-0.8**
ANTB	**Antalya**	**1.94**	**92**	*e*Pn	**Pn**	**01 26 16.7**	**-0.8**
DEMI	**Demirci**	**2.09**	**10**	*i* P	**Pn**	**01 26 19.5**	**-0.2**
DEMI				*i* S	**Sn**	**01 26 46.1**	**-0.1**
DEMI	**Demirci**	**2.09**	**10**	*i* P	**Pn**	**01 26 19.5**	**-0.2**
DEMI				*i* S	**Sn**	**01 26 46.1**	**-0.1**
APE	**Apeiranthos**	**2.17**	**273**	*e*PN	**Pn**	**01 26 20.2**	**-0.5**
APE	**Apeiranthos**	**2.17**	**273**	*e*Pn	**Pn**	**01 26 20.2**	**-0.5**
GDZ	**Gediz**	**2.32**	**25**	*i* P	**Pn**	**01 26 23.3**	**+0.4**
GDZ	**Gediz**	**2.32**	**25**	*i* P	**Pn**	**01 26 23.3**	**+0.4**
SHUT	**Suhut-Afyon**	**2.41**	**49**	*e*PN	**Pn**	**01 26 24.1**	**-0.1**
SHUT	**Suhut-Afyon**	**2.41**	**49**	*e*Pn	**Pn**	**01 26 24.1**	**-0.1**
ALT	**Altintas**	**2.54**	**35**	*e*PN	**Pn**	**01 26 25.4**	**-0.5**
ALT	**Altintas**	**2.54**	**35**	*e*Pn	**Pn**	**01 26 25.4**	**-0.5**
DURS	**Dursunbey**	**2.62**	**4**	*i* P	**Pn**	**01 26 26.8**	**-0.2**
DURS	**Dursunbey**	**2.62**	**4**	*i* P	**Pn**	**01 26 26.8**	**-0.2**
AYVA	**Ayvalik**	**2.62**	**333**	*i* P	**Pb**	**01 26 30.6**	**-0.7**
AYVA				*i* S	**Sg**	**01 27 10.9**	**+2.9**
AYVA	**Ayvalik**	**2.62**	**333**	*i* P	**Pb**	**01 26 30.6**	**-0.7**
DST	**Dursunbey**	**2.63**	**6**	*e*PN	**Pn**	**01 26 26.5**	**-0.6**
DST	**Dursunbey**	**2.63**	**6**	*e*Pn	**Pn**	**01 26 26.5**	**-0.6**
TVSB	**Tavsanli**	**2.64**	**21**	*e*PN	**Pn**	**01 26 26.8**	**-0.5**
TVSB	**Tavsanli**	**2.64**	**21**	*e*Pn	**Pn**	**01 26 26.8**	**-0.5**
BALB	**Balikesir**	**2.67**	**354**	*e*PN	**Pn**	**01 26 27.1**	**-0.5**
BALB	**Balikesir**	**2.67**	**354**	*e*Pn	**Pn**	**01 26 27.1**	**-0.5**
NPS	**Neapolis**	**2.73**	**232**	*e*PN	**Pn**	**01 26 29.2**	**+0.7**
NPS	**Neapolis**	**2.73**	**232**	*e*Pn	**Pn**	**01 26 29.2**	**+0.7**
PRK	**Paraskevi**	**2.74**	**326**	*e*PN	**Pn**	**01 26 29.0**	**+0.4**
PRK	**Paraskevi**	**2.74**	**326**	*e*Pn	**Pn**	**01 26 29.0**	**+0.4**
BALY	**Balya**	**2.80**	**350**	*i* P	**Pn**	**01 26 29.1**	**-0.3**
BALY	**Balya**	**2.80**	**350**	*i* P	**Pn**	**01 26 29.1**	**-0.3**
GONE	**Gonen-Balikesi**	**3.09**	**352**	*e*PN	**Pn**	**01 26 33.1**	**-0.3**
GONE	**Gonen-Balikesi**	**3.09**	**352**	*e*Pn	**Pn**	**01 26 33.1**	**-0.3**
GAZI	**Gazipasa**	**3.36**	**102**	*i* P	**Pn**	**01 26 37.1**	**-0.1**
GAZI	**Gazipasa**	**3.36**	**102**	*i* P	**Pn**	**01 26 37.1**	**-0.1**
KONT	**Konya--Tatoy**	**3.42**	**72**	*e*PN	**Pn**	**01 26 38.2**	**+0.3**
KONT	**Konya--Tatoy**	**3.42**	**72**	*e*Pn	**Pn**	**01 26 38.2**	**+0.3**
SVRH	**Sivrihisar-ESK**	**3.57**	**45**	*e*PN	**Pn**	**01 26 40.1**	**+0.1**
SVRH	**Sivrihisar-ESK**	**3.57**	**45**	*e*Pn	**Pn**	**01 26 40.2**	**+0.1**
LEF	**Lefka**	**4.20**	**115**	*e*PN	**Pn**	**01 26 48.9**	**+0.2**
LEF	**Lefka**	**4.20**	**115**	*e*Pn	**Pn**	**01 26 48.9**	**+0.2**
SULT	**Sultanhani-AKS**	**4.36**	**72**	*e*PN	**Pn**	**01 26 51.9**	**+0.9**
SULT	**Sultanhani-AKS**	**4.36**	**72**	*e*Pn	**Pn**	**01 26 51.9**	**+0.9**
AFSR	**Af˘ar-Bala (A**	**4.53**	**56**	*e*PN	**Pn**	**01 26 53.5**	**+0.2**
AFSR	**Af˘ar-Bala (A**	**4.53**	**56**	*e*Pn	**Pn**	**01 26 53.5**	**+0.2**
CSS	**Prodhromos**	**4.59**	**115**	*e*PN	**Pn**	**01 26 55.2**	**+1.1**
CSS	**Prodhromos**	**4.59**	**115**	*e*Pn	**Pn**	**01 26 55.2**	**+1.1**

*ISCJB **17** 01:34:19.9±3.1, 5°.5S±0°.4×105°.6W±0°.3, h10km, mb4.1/25, MS4.1/17, Error ellipse: s-maj=70.9km s-min=23.9km az=31.0*
*IDC **17** 01:34:19.2±4.8, 5°.58S×105°.14W, h0km, mb3.8/8, mb1 4.1/8, mb1mx3.9/18, mbtmp3.8/8, MS4.1/17, Ms1 4.1/17, ms1mx4.1/26, Error ellipse: s-maj=156.1km s-min=63.5km az=114.0*
*NEIC **17** 01:34:21.7±1.7, 5°.47S×105°.55W, h10km, mb4.3/17, Error ellipse: s-maj=37.6km s-min=23.6km az=31.0*
*GCMT **17** 01:34:31.2±0.4, 4°.56S×104°.94W, h21km±1km, MW5.0, Moment Tensor Solution. s28,c32; s74,c103; Moment tensor: Scale 10^16Nm; Mrr=0.12±.16; Mθθ=0.85±.14; Mφφ=0.73±.15; Mrθ=0.78±.26; Mrφ=3.23±.12; Mθφ=0.46±.26; Best double couple: M0=3.50000×10^16 NP1:φ=8.00000°, δ=76.00000°, λ=-174.00000°. NP2:φ=276.00000°, δ=84.00000°, λ=-14.00000°. Principal axes: T 3.4200, Plg5.0000°, Azm323.0000°; N 0.0600, Plg75.0000°, Azm73.0000°; P -3.4800, Plg14.0000°, Azm231.0000°; Data Used: ll IU CN G IC.*
ISC 17 01:34:21.7±2.4, 5°.5S±0°.4×105°.6W±0°.3, h10km, n52, σ1s04/36, mb4.2/25, MS4.1/17, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**27.05**	**95**	LR	LR	01 48 10.4	
	comp=Z,260nm,19.3s,baz=96,slow=31						
OTAV	**Otavalo**	**27.65**	**79**	*e*P	**P**	**01 40 10.8**	**+0.3**
	12nm,1.4s						
NNA	**Nana**	**29.09**	**105**	LR	LR	01 48 44.4	
	comp=Z,407nm,19.8s,baz=301,slow=30						
LPIG	**La Paz**	**29.76**	**351**	LR	LR	01 49 01.0	
	comp=Z,48nm,20.6s,baz=321,slow=30						
TEIG	**Tepich**	**30.67**	**33**	LR	LR	01 50 36.6	
	comp=Z,624nm,20.6s,baz=263,slow=32						
RKT	**Rikitea**	**33.35**	**235**	*e*LR	LR	01 49 52.2	
	860nm,27.5s						
TXAR	**Lajitas Array**	**34.65**	**3**	LR	LR	01 52 31.2	
	comp=Z,248nm,21.3s,baz=0,slow=31						
LPAZ	**La Paz**	**38.22**	**109**	LR	LR	01 55 18.3	
	comp=Z,131nm,18.1s,baz=85,slow=33						
LAZ	**Ladron**	**39.69**	**358**	*e*P	**P**	**01 41 55.5**	**+1.1**
	3.1nm,1.1s						
ANMO	**Albuquerque**	**40.21**	**359**	P	**P**	**01 41 59.9**	**+1.1**
	0.9nm,0.7s,baz=167,slow=18,SNR=3.0						
ANMO				LR	LR	01 55 16.4	
	comp=Z,109nm,21.8s,baz=185,slow=31						
PFO	**Pinyon Flat Ob**	**40.22**	**346**	LR	LR	01 54 39.4	
	comp=Z,480nm,18.0s,baz=161,slow=30						
WUAZ	**Wupatki**	**41.13**	**353**	*e*P	**P**	**01 42 07.4**	**+1.1**
	5.0nm,1.0s						
MVCO	**Mesa Verde**	**42.55**	**357**	*e*P	**P**	**01 42 18.9**	**+0.9**
	7.0nm,1.0s						
PV01	**Paradox Valley**	**43.47**	**357**	*e*P	**P**	**01 42 25.0**	**-0.4**
SMCO	**Snowmass**	**44.44**	**358**	P	**P**	**01 42 32.7**	**-0.8**
	4.3nm,1.1s						
PPT	**Papeete**	**44.66**	**251**	LR	LR	01 56 57.3	
	comp=Z,354nm,21.5s,baz=11,slow=30						
PPT2	**Papeete2**	**44.66**	**251**	*e*LQ	LQ	01 53 07.1	
	348nm,28.5s						
PPT2				*e*LR	LR	01 55 06.6	
	699nm,26.2s						
SIV	**San Ignacio**	**44.84**	**107**	LR	LR	01 58 38.9	
	comp=Z,305nm,21.2s,slow=33						
ISCO	**Idaho Springs**	**45.04**	**360**	*e*P	**P**	**01 42 37.7**	**-0.4**
	5.7nm,1.3s						
NVAR	**Mina Array Bea**	**45.25**	**346**	P	**P**	**01 42 39.0**	**-0.6**
NVAR	**Mina Array Bea**	**45.25**	**346**	P	**P**	**01 42 39.0**	**-0.6**
	0.3nm,0.7s,baz=174,slow=8.9,SNR=2.2						
NVAR				LR	LR	01 57 36.4	
	comp=Z,244nm,18.1s,baz=222,slow=31						
TBI	**Tubuai**	**45.85**	**243**	*e*LR	LR	01 55 37.9	
	532nm,27.8s						
DAU	**Daniels Canyon**	**45.96**	**354**	*e*P	**P**	**01 42 46.6**	**+1.3**
	5.0nm,1.1s						
BW06	**Boulder Array**	**48.15**	**356**	*e*P	**P**	**01 43 02.3**	**0.0**
	4.7nm,1.1s						
PDAR	**Pinedale Array**	**48.15**	**356**	P	**P**	**01 43 01.1**	**-1.2**
PDAR	**Pinedale Array**	**48.15**	**356**	P	**P**	**01 43 01.1**	**-1.2**
	1.8nm,0.9s,baz=165,slow=6.2,SNR=7.2						
PDAR				LR	LR	02 00 35.1	
	comp=Z,200nm,18.7s,baz=195,slow=33						
TPAW	**Teton Pass**	**48.98**	**355**	*e*P	**P**	**01 43 08.9**	**+0.2**
	3.6nm,0.9s						
IMW	**Indian Meadow**	**49.38**	**355**	*e*P	**P**	**01 43 12.1**	**+0.3**
	2.6nm,0.9s						
RSSD	**Black Hills**	**49.

s-maj=172.9km s-min=24.8km az=53.0
*ISCJB **17** 01:37:41.7±0.4,6.77S±0.05×108.90E±0.03,h10km, mb3.5/4,Error ellipse: s-maj=7.0km s-min=4.4km az=9.3*
*DJA **17** 01:37:44.9±0.3,7.S±3.×10.9E±.,h20km±4km,M4.1/18, mb4.7/5,mB6.1/1,MLv3.8/18,Mw(mB)5.7/1*
ISC 17 01:37:43.3±0.8,**6.925**±0.07×**108.87E**±0.04,**h10**km,**n25,** σ1§**27**/27,**mb3.5**/4,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGJI	**Tegal**	**0.26**	**77**	P	**Pg**	**01 37 51.2**	**+2.7**
CLJI	**Cilicap**	**0.80**	**170**	P	**Pb**	**01 37 59.8**	**+0.4**
BJII	**Banjamegara**	**0.93**	**116**	P	**Pb**	**01 38 01.8**	**+0.3**
CISI	**Cisompet, Garu**	**1.22**	**239**	P	**Pn**	**01 38 05.5**	**-1.0**
CISI				S	**Sb**	**01 38 22.4**	**0.0**
LEM	**Lembang**	**1.25**	**274**	P	**Pn**	**01 38 06.0**	**-1.0**
LEM				S	**Sn**	**01 38 25.3**	**+1.4**
SMRI	**Semarang**	**1.56**	**95**	P	**Pn**	**01 38 10.1**	**-1.1**
SMRI				S	**Sb**	**01 38 32.4**	**+0.1**
YOGI	**Yogyakarta**	**1.67**	**122**	P	**Pn**	**01 38 11.6**	**-1.0**
UGM	**Wanagama**	**1.91**	**121**	P	**Pn**	**01 38 15.9**	**-0.1**
DBJI	**Dramaga**	**2.14**	**280**	P	**Pn**	**01 38 21.5**	**+2.4**
WOJI	**Wonogiri, Jawa**	**2.23**	**114**	P	**Pn**	**01 38 20.9**	**+0.6**
PCJI	**Pacitan**	**2.61**	**119**	P	**Pn**	**01 38 25.6**	**0.0**
SBJI	**Serang**	**2.84**	**286**	P	**Pn**	**01 38 29.4**	**+0.7**
PWJI	**Pagerwojo**	**3.11**	**111**	P	**Pn**	**01 38 31.8**	**-0.6**
KRKI	**Karangkates**	**3.76**	**109**	P	**Pn**	**01 38 41.0**	**-0.4**
TPI	**Tanjungpandan**	**4.31**	**344**	P	**Pn**	**01 38 50.7**	**+1.7**
BLJI	**Banyuglugur**	**4.76**	**100**	P	**Pn**	**01 38 54.3**	**-0.8**
KSI	**Kapahiang** 82nm,1.4s,0.6nm	**7.04**	**297**	P	**Pn**	**01 39 26.0**	**-0.7**
MBSI	**MBSI** 577nm,1.2s,3.6nm	**7.28**	**295**	P	**Pn**	**01 39 31.8**	**+1.9**
MTKI	**Muara Teweh, K** 67nm,0.4s,10µm	**8.45**	**46**	P	**Pn**	**01 39 45.3**	**-0.6**
SBUM	**Sibu** 9.0nm,2.0s	**9.89**	**20**	P	**Pn**	**01 40 04.8**	**-0.9**
MYKOM	**Kota Tinggi**	**10.00**	**330**	P	**Pn**	**01 40 06.4**	**-0.8**
WRA	**Warramunga Arr** 0.6nm,0.8s,baz=294,slow=11,SNR=3.0	**27.89**	**120**	P	**P**	**01 43 32.2**	**-1.5**
ASAR	**Alice Springs** 0.5nm,0.8s,baz=298,slow=9.1,SNR=5.2	**29.24**	**127**	P	**P**	**01 43 44.0**	**-1.7**
SONM	**Songino Array** 0.3nm,0.3s,baz=169,slow=8.6,SNR=3.7	**54.56**	**358**	P	**P**	**01 47 10.1**	**-1.8**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=150,slow=7.0,SNR=4.2	**58.47**	**339**	P	P	01 47 37.0	-2.6

IDC 17 01:43:22.9±14.0,**4.68S**×**105.32W**,**h0**km,**mb3.3**/3, **mb1 3.7**/3,**mb1mx3.5**/14,**mbtmp3.3**/3,**MS3.6**/6,**Ms1 3.6**/6, **ms1mx3.5**/12,**Error ellipse: s-maj=510.7km s-min=173.8km az=117.0,Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa** comp=Z,82nm,18.6s,baz=73,slow=31	**26.89**	**97**	LR	LR	01 57 15.1	
LPIG	**La Paz** comp=Z,16nm,20.8s,baz=180,slow=30	**29.02**	**351**	LR	LR	01 57 58.5	
TEIG	**Tepich** comp=Z,215nm,18.4s,baz=75,slow=32	**29.89**	**34**	LR	LR	01 59 32.3	
TXAR	**Lajitas Array** comp=Z,72nm,20.3s,baz=185,slow=32	**33.86**	**3**	LR	LR	02 01 28.1	
SIV	**San Ignacio** comp=Z,119nm,20.5s,slow=32	**44.85**	**108**	LR	LR	02 07 12.2	
PPT	**Papeete** comp=Z,175nm,18.5s,baz=22,slow=30	**45.15**	**250**	LR	LR	02 05 42.8	
PDAR	**Pinedale Array** 0.3nm,0.6s,baz=173,slow=8.2,SNR=2.8	**47.38**	**356**	P	P	01 51 59.0	-0.2
YKA	**Yellowknife Ar** 0.1nm,0.3s,baz=165,slow=5.9,SNR=3.2	**67.36**	**355**	P	P	01 54 19.7	+0.1
ILAR	**Eielson Array** 0.3nm,0.9s,baz=159,slow=5.3,SNR=3.2	**75.74**	**343**	P	P	01 55 10.1	0.0

*ISCJB **17** 01:44:05.1±0.3,43.18N±0.02×0.28W±0.02,h9km±3km, Error ellipse: s-maj=3.2km s-min=2.3km az=154.9*
*CSEM **17** 01:44:06.2±0.1,43.15N×0.30W,h8km,ML2.4/15,Error ellipse: s-maj=2.1km s-min=1.6km az=154.0*
*STR **17** 01:44:06.5±0.1,43.08N×0.32W,h5km,Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*MDD **17** 01:44:07.4±0.2,43.10N×0.32W,h0km,mb3.1/1, mbLg1.9/23,Error ellipse: s-maj=2.9km s-min=1.6km az=176.0,PRXIMO*
*LDG **17** 01:44:07.2±0.1,43.12N×0.32W,h2km,Md2.5/3,Ml2.6/11, Error ellipse: s-maj=1.7km s-min=1.3km az=163.0*
ISC 17 01:44:07.2±0.6,**43.12N**±0.02×**0.31W**±0.01,**h6**km±4km,**n97,** σ1§**48**/132,**Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
REYF	**Montagne du Re**	**0.08**	**233**	Pg	**Pg**	**01 44 08.4**	**-0.7**
REYF				Sg	**Sg**	**01 44 09.3**	**-1.1**
REYF	**Montagne du Re**	**0.08**	**233**	Pg	**Pg**	**01 44 08.4**	**-0.7**
REYF				Sg	**Sg**	**01 44 09.3**	**-1.1**
REYF				Lg	Lg	01 44 09.5	
ETSF	**Etsaut** SNR=1.0	**0.29**	**221**	*e*Pg	**Pg**	**01 44 11.8**	**-1.0**
ETSF	50nm,0.2s,SNR=1.0			*e*Sg	**Sg**	**01 44 15.1**	**-1.5**
ETSF	**Etsaut** 25nm,0.2s,SNR=1.0	**0.29**	**221**	Pg	**Pg**	**01 44 11.8**	**-1.0**
ETSF				*e*Sg	**Sg**	**01 44 15.1**	**-1.5**
LABF	**Labassere**	**0.29**	**104**	Pg	**Pg**	**01 44 12.3**	**-0.5**
LABF				Sg	**Sg**	**01 44 16.4**	**-0.2**
LABF	**Labassere**	**0.29**	**104**	Pg	**Pg**	**01 44 12.2**	**-0.5**
LABF				Sg	**Sg**	**01 44 16.4**	**-0.2**
LABF				Lg	Lg	01 44 17.0	
VIEF	**Viey**	**0.34**	**134**	Pg	**Pg**	**01 44 13.1**	**-0.6**
VIEF				Sg	**Sg**	**01 44 17.3**	**-0.9**
VIEF	**Viey**	**0.34**	**134**	Pg	**Pg**	**01 44 13.1**	**-0.6**
VIEF				Lg	Lg	01 44 17.3	
VIEF				Sg	**Sg**	**01 44 17.3**	**-0.9**
FDAF	**Les Forges d'A**	**0.35**	**213**	Pg	**Pg**	**01 44 13.1**	**-1.0**
FDAF				Lg	Lg	01 44 17.7	
ORDF	**Ordiarp**	**0.47**	**282**	Pg	**Pg**	**01 44 15.8**	**-0.4**
ORDF				Sg	**Sg**	**01 44 22.3**	**-0.1**
ORDF	**Ordiarp**	**0.47**	**282**	Pg	**Pg**	**01 44 15.9**	**-0.3**
ORDF				Sg	**Sg**	**01 44 22.3**	**-0.1**
ORDF				Lg	Lg	01 44 22.6	
EPF	**Esparros** SNR=1.0	**0.48**	**100**	*e*Pg	**Pg**	**01 44 16.3**	**-0.1**
EPF	18nm,0.2s			*e*Sg	**Sg**	**01 44 23.2**	**+0.5**
EPF	**Esparros** 9.0nm,0.2s	**0.48**	**100**	Pg	**Pg**	**01 44 16.3**	**-0.1**
EPF				*e*Sg	**Sg**	**01 44 23.2**	**+0.5**
LARF	**Larrau**	**0.51**	**261**	Pg	**Pg**	**01 44 16.1**	**-0.8**
LARF				Sg	**Sg**	**01 44 22.8**	**-0.7**
LARF	**Larrau**	**0.51**	**261**	Pg	**Pg**	**01 44 16.1**	**-0.8**
LARF				Sg	**Sg**	**01 44 22.8**	**-0.7**
LARF				Lg	Lg	01 44 22.9	
RESF	**Ens**	**0.56**	**123**	Pg	**Pg**	**01 44 17.4**	**-0.7**
RESF				Sg	**Sg**	**01 44 25.4**	**0.0**
RESF	**Ens**	**0.56**	**123**	Pg	**Pg**	**01 44 17.7**	**-0.4**
RESF				Sg	**Sg**	**01 44 25.4**	**0.0**
RESF				Lg	Lg	01 44 25.5	
SJPF	**Ste Jean** SNR=1.0	**0.67**	**270**	*e*Pg	**Pg**	**01 44 19.3**	**-0.8**
SJPF	11nm,0.2s			*e*Sg	**Sg**	**01 44 27.9**	**-0.9**
SJPF	**Ste Jean** 5.3nm,0.2s	**0.67**	**270**	Pg	**Pg**	**01 44 19.3**	**-0.8**
SJPF				*e*Sg	**Sg**	**01 44 27.9**	**-0.9**
IELO	**Elcoad** 1.1nm,0.1s,SNR=7.9	**0.74**	**248**	Pg	**Pg**	**01 44 20.2**	**-1.1**
IELO	19nm,0.1s,SNR=7.9			Lg	Lg	01 44 30.2	
IELO	**Elcoad** 1.1nm,0.1s,SNR=7.9	**0.74**	**248**	Pg	**Pg**	**01 44 20.2**	**-1.1**
IELO	19nm,0.1s,SNR=7.9			Lg	Lg	01 44 30.2	
IEPA	**Eparoz** 1.9nm,0.1s,SNR=7.9	**0.78**	**245**	Pg	**Pg**	**01 44 22.5**	**+0.3**
IEPA	13nm,0.1s,SNR=7.9			Lg	Lg	01 44 32.5	
IEPA	**Eparoz** 1.9nm,0.1s,SNR=7.9	**0.78**	**245**	Pg	**Pg**	**01 44 22.5**	**+0.3**
IEPA	13nm,0.1s,SNR=7.9			Lg	Lg	01 44 32.5	
MELF	**Melles**	**0.82**	**107**	Pg	**Pg**	**01 44 22.7**	**-0.2**
MELF				Lg	Lg	01 44 34.1	
ELIZ	**Elizondo** 2.1nm,0.2s,SNR=8.3	**0.90**	**273**	Pg	**Pg**	**01 44 23.6**	**-0.8**
ELIZ	7.0nm,0.1s,SNR=8.1			Lg	Lg	01 44 36.0	
ELIZ	**Elizondo** 2.1nm,0.2s,SNR=8.3	**0.90**	**273**	Pg	**Pg**	**01 44 23.6**	**-0.8**
ELIZ	7.0nm,0.1s,SNR=8.1			Lg	Lg	01 44 36.0	
IUSE	**Utxeti** 1.2nm,0.1s,SNR=7.9	**0.93**	**260**	Pg	**Pg**	**01 44 24.9**	**-0.1**
IUSE	10nm,0.1s,SNR=7.9			Lg	Lg	01 44 37.8	
IUSE	**Utxeti** 1.2nm,0.1s,SNR=7.9	**0.93**	**260**	Pg	**Pg**	**01 44 24.9**	**-0.1**
IUSE	10nm,0.1s,SNR=7.9			Lg	Lg	01 44 37.8	
IUNC	**Unciti** 1.1nm,0.1s,SNR=7.9	**0.95**	**248**	Pg	**Pg**	**01 44 25.3**	**-0.1**
IUNC	10.0nm,0.2s,SNR=7.9			Lg	Lg	01 44 37.8	
IUNC	**Unciti** 1.1nm,0.1s,SNR=7.9	**0.95**	**248**	Pg	**Pg**	**01 44 25.3**	**-0.1**
IUNC	10.0nm,0.2s,SNR=7.9			Lg	Lg	01 44 37.8	
EARA	**Aranguren** 1.2nm,0.2s,SNR=4.0	**1.00**	**250**	Pg	**Pg**	**01 44 26.1**	**-0.2**
EARA	9.1nm,0.2s,SNR=4.0			Lg	Lg	01 44 39.0	
EARA	**Aranguren** 1.2nm,0.2s,SNR=4.0	**1.00**	**250**	Pg	**Pg**	**01 44 26.1**	**-0.2**
EARA	9.1nm,0.2s,SNR=4.0			Lg	Lg	01 44 39.0	
CEST	**Esterri de Car** 5.9nm,0.1s	**1.26**	**114**	Pg	**Pn**	**01 44 33.3**	**+1.9**
CEST				Lg	Lg	01 44 49.6	
CEST	**Esterri de Car** 5.9nm,0.1s	**1.26**	**114**	Pg	**Pn**	**01 44 33.3**	**+1.9**
CEST				Lg	Lg	01 44 49.6	
CSOR	**Sort** 2.8nm,0.1s,SNR=34	**1.29**	**124**	Pg	**Pg**	**01 44 31.1**	**-0.8**
CSOR	8.6nm,0.2s,SNR=5.0			Lg	Lg	01 44 49.1	
CSOR	**Sort** 2.8nm,0.1s,SNR=34	**1.29**	**124**	Pg	**Pg**	**01 44 31.1**	**-0.8**
CSOR	8.6nm,0.2s,SNR=5.0			Lg	Lg	01 44 49.1	
ESAC	**San Caprasio** 8.6nm,0.1s,SNR=13	**1.40**	**185**	Pg	**Pg**	**01 44 33.6**	**-0.4**
ESAC	48nm,0.3s,SNR=11			Lg	Lg	01 44 51.1	
ESAC	**San Caprasio** 8.6nm,0.1s,SNR=13	**1.40**	**185**	Pg	**Pg**	**01 44 33.6**	**-0.4**
ESAC	48nm,0.3s,SNR=11			Lg	Lg	01 44 51.1	
CAVN	**Les Avellanes** 16nm,0.3s	**1.46**	**147**	Pg	**Pn**	**01 44 34.4**	**+0.3**
CAVN				Sn	**Sg**	**01 44 50.9**	**-3.2**
CAVN	**Les Avellanes** 16nm,0.3s	**1.46**	**147**	Pg	**Pn**	**01 44 34.4**	**+0.3**
CAVN				Sn	**Sg**	**01 44 50.9**	**-3.2**
CORG	**Organya**	**1.49**	**126**	Pg	**Pg**	**01 44 36.0**	**+0.3**
CORG				Lg	Lg	01 44 53.9	
CORG	**Organya**	**1.49**	**126**	Pg	**Pg**	**01 44 36.0**	**+0.3**
CORG				Lg	Lg	01 44 53.9	
CLLI	**Llivia** 0.5nm,0.2s,SNR=7.5	**1.79**	**110**	Pg	**Pg**	**01 44 42.4**	**+0.8**
CLLI	1.3nm,0.1s,SNR=5.0			Lg	Lg	01 45 05.6	
CLLI	**Llivia** 0.5nm,0.2s,SNR=7.5	**1.79**	**110**	Pg	**Pg**	**01 44 42.4**	**+0.8**
CLLI	1.3nm,0.1s,SNR=5.0			Lg	Lg	01 45 05.6	
EMIR	**Miracle** 1.7nm,0.1s,SNR=12	**1.81**	**131**	Pg	**Pb**	**01 44 41.4**	**+0.6**
EMIR	3.6nm,0.2s,SNR=5.0			Lg	Lg	01 45 06.2	
EMIR	**Miracle** 1.7nm,0.1s,SNR=12	**1.81**	**131**	Pg	**Pb**	**01 44 41.4**	**+0.6**
EMIR	3.6nm,0.2s,SNR=5.0			Lg	Lg	01 45 06.2	
MTLF	**Montolieu** SNR=1.0	**1.86**	**82**	*e*Pn	**Pn**	**01 44 39.0**	**-0.6**
MTLF	**Montolieu** SNR=1.0	**1.86**	**82**	*e*Pg	**Pg**	**01 44 42.6**	**-0.2**
MTLF	2.8nm,0.2s,SNR=1.0			*e*Sg	**Sn**	**01 45 04.0**	**+0.6**
MTLF	**Montolieu**	**1.86**	**82**	Pn	**Pn**	**01 44 39.0**	**-0.6**
MTLF	**Montolieu** SNR=1.0	**1.86**	**82**	*e*Pg	**Pg**	**01 44 42.6**	**-0.2**
MTLF	1.4nm,0.2s,SNR=1.0			*e*Sg	**Sn**	**01 45 04.0**	**+0.6**
LFF	**La Frestale** SNR=1.0	**1.97**	**22**	*e*Pn	**Pn**	**01 44 39.9**	**-1.2**
LFF	**La Frestale** SNR=1.0	**1.97**	**22**	*e*Pg	**Pb**	**01 44 44.4**	**+0.9**
LFF	17nm,0.3s,SNR=1.0			*e*Sg	**Sb**	**01 45 09.8**	**+1.5**
LFF	**La Frestale**	**1.97**	**22**	Pn	**Pn**	**01 44 39.9**	**-1.2**
LFF	**La Frestale**	**1.97**	**22**	Pg	**Pb**	**01 44 44.4**	**+0.9**
LFF				*e*Sg	**Sb**	**01 45 09.8**	**+1.5**
EPOB	**Poblet** 0.5nm,0.2s,SNR=7.9	**2.04**	**149**	Pg	**Pb**	**01 44 44.4**	**-0.3**
EPOB	1.6nm,0.1s,SNR=7.9			Lg	Lg	01 45 11.0	
EPOB	**Poblet** 0.5nm,0.2s,SNR=7.9	**2.04**	**149**	Pg	**Pb**	**01 44 44.4**	**-0.3**
EPOB	1.6nm,0.1s,SNR=7.9			Lg	Lg	01 45 11.0	
ERTA	**Horta de San J** 0.7nm,0.2s,SNR=7.3	**2.21**	**167**	Pg	**Pb**	**01 44 47.4**	**-0.2**
ERTA	3.8nm,0.2s,SNR=5.0			Lg	Lg	01 45 15.6	
ERTA	**Horta de San J** 0.7nm,0.2s,SNR=7.3	**2.21**	**167**	Pg	**Pb**	**01 44 47.4**	**-0.2**
ERTA	3.8nm,0.2s,SNR=5.0			Lg	Lg	01 45 15.6	
CFON	**Fontmartina** 1.4nm,0.2s,SNR=7.9	**2.44**	**123**	Pg	**Pb**	**01 44 52.5**	**+1.0**
CFON	12nm,0.2s,SNR=7.9			Lg	Lg	01 45 24.3	
CFON	**Fontmartina** 1.4nm,0.2s,SNR=7.9	**2.44**	**123**	Pg	**Pb**	**01 44 52.5**	**+1.0**
CFON	12nm,0.2s,SNR=7.9			Lg	Lg	01 45 24.3	
EJON	**La Jonquera** 0.1nm,0.1s,SNR=7.9	**2.44**	**105**	Pg	**Pg**	**01 44 54.0**	**0.0**
EJON	2.2nm,0.3s,SNR=7.9			Lg	Lg	01 45 26.2	
EJON	**La Jonquera** 0.1nm,0.1s,SNR=7.9	**2.44**	**105**	Pg	**Pg**	**01 44 54.0**	**0.0**
EJON	2.2nm,0.3s,SNR=7.9			Lg	Lg	01 45 26.2	
CAF	**Calviac** SNR=1.0	**2.49**	**43**	*e*Pg	**Pb**	**01 44 53.7**	**+1.4**
CAF	SNR=1.0			*e*Sn	**Sn**	**01 45 16.1**	**-2.9**
CAF	4.1nm,0.2s,SNR=1.0			*e*Sg	**Sb**	**01 45 25.5**	**+2.3**
CAF	**Calviac**	**2.49**	**43**	Pg	**Pb**	**01 44 53.7**	**+1.4**
CAF				Sn	**Sn**	**01 45 16.1**	**-2.9**
CAF				*e*Sg	**Sb**	**01 45 25.5**	**+2.3**
RJF	**Les Rejaudoux** SNR=1.0	**2.55**	**30**	*e*Pn	**Pn**	**01 44 48.0**	**-1.1**
RJF	**Les Rejaudoux** 3.9nm,0.2s,SNR=1.0	**2.55**	**30**	*e*Pg	**Pb**	**01 44 54.7**	**+1.4**
RJF				*e*Sg	**Sb**	**01 45 27.8**	**+2.9**
RJF	**Les Rejaudoux**	**2.55**	**30**	Pn	**Pn**	**01 44 48.0**	**-1.1**
RJF	**Les Rejaudoux** 2.0nm,0.2s,SNR=1.0	**2.55**	**30**	*e*Pg	**Pb**	**01 44 54.7**	**+1.4**
RJF				*e*Sg	**Sb**	**01 45 27.8**	**+2.9**
ETOR	**Torete** 3.3nm,0.1s,SNR=8.4	**2.64**	**210**	Pn	**Pn**	**01 44 50.5**	**+0.1**
ETOR	3.0nm,0.3s,SNR=7.9			Sn	**Sn**	**01 45 22.3**	**-0.5**
ETOR	6.1nm,0.2s,SNR=5.0			Lg	Lg	01 45 31.5	
ETOR	**Torete** 3.3nm,0.1s,SNR=8.4	**2.64**	**210**	Pn	**Pn**	**01 44 50.5**	**+0.1**
ETOR	3.0nm,0.3s,SNR=7.9			Sn	**Sn**	**01 45 22.3**	**-0.5**
ETOR	6.1nm,0.2s,SNR=5.0			Lg	Lg	01 45 31.5	
EMOS	**Mosqueruela** 0.3nm,0.2s,SNR=7.9	**2.75**	**183**	Pn	**Pn**	**01 44 52.7**	**+0.7**
EMOS	1.0nm,0.2s,SNR=7.9			Lg	Lg	01 45 31.5	
EMOS	**Mosqueruela**	**2.75**	**183**	Pn	**Pn**	**01 44 52.7**	**+0.7**
EMOS	0.3nm,0.2s,SNR=7.9			Lg	Lg	01 45 31.5	
LASF	**Ste Croix** 1.0nm,0.2s,SNR=7.9	**3.17**	**71**	*e*Pn	**Pn**	**01 44 56.0**	**-1.7**
LASF	**Ste Croix** SNR=1.0	**3.17**	**71**	*e*Pg	**Pb**	**01 45 06.0**	**+2.0**
LASF	2.5nm,0.3s,SNR=1.0			*e*Sg	**Sg**	**01 45 47.4**	**-1.6**
LASF	**Ste Croix**	**3.17**	**71**	Pn	**Pn**	**01 44 56.0**	**-1.7**
LASF	**Ste Croix**	**3.17**	**71**	Pg	**Pb**	**01 45 06.0**	**+2.0**
LASF	1.2nm,0.3s,SNR=1.0			*e*Sg	**Sg**	**01 45 47.4**	**-1.6**
MFF	**Saint Martin d**	**3.49**	**2**	*e*Pn	**Pn**	**01 45 00.3**	**-1.6**
MFF	**Saint Martin d**	**3.49**	**2**	*e*Pg	Pb	01 45 11.8	+2.5
MFF	3.1nm,0.3s,SNR=1.0			*e*Sg	**Sb**	**01 45 55.8**	**+3.9**
MFF	**Saint Martin d**	**3.49**	**2**	Pn	**Pn**	**01 45 00.3**	**-1.6**
MFF	**Saint Martin d**	**3.49**	**2**	*e*Pg	Pb	01 45 11.8	+2.5
MFF	1.5nm,0.3s,SNR=1.0			*e*Sg	**Sb**	**01 45 55.8**	**+3.9**
TCF	**Toulx Ste Croi**	**3.64**	**29**	*e*Pg	Pb	01 45 14.4	+2.4
TCF				*e*Sn	**Sn**	**01 45 43.5**	**-3.9**
TCF	**Toulx Ste Croi**	**3.64**	**29**	Pg	Pb	01 45 14.4	+2.4
TCF				Sn	**Sn**	**01 45 43.5**	**-3.9**
GUD	**Guadarrama** 0.6nm,0.4s,SNR=7.9	**3.79**	**231**	Pn	**Pn**	**01 45 07.1**	**+0.9**
GUD	0.5nm,0.4s,SNR=7.9			Sn	**Sn**	**01 45 50.1**	**-1.2**
GUD	**Guadarrama** 0.6nm,0.4s,SNR=7.9	**3.79**	**231**	Pn	**Pn**	**01 45 07.1**	**+0.9**
GUD	0.5nm,0.4s,SNR=7.9			Sn	**Sn**	**01 45 50.1**	**-1.2**
VIVF	**Saint-Julien-l**	**3.99**	**62**	*e*Pn	**Pn**	**01 45 07.7**	**-1.2**
VIVF	**Saint-Julien-l**	**3.99**	**62**	*e*Pg	Pb	01 45 21.1	+3.2
VIVF	0.6nm,0.2s			*e*Sg	**Sg**	**01 46 12.7**	**-2.6**
VIVF	**Saint-Julien-l**	**3.99**	**62**	Pn	**Pn**	**01 45 07.7**	**-1.2**
VIVF	**Saint-Julien-l**	**3.99**	**62**	Pg	Pb	01 45 21.1	+3.2
VIVF	0.2nm,0.2s			Lg	Lg	01 46 12.7	
VIVF	0.3nm,0.2s			*e*Sg	**Sg**	**01 46 12.7**	**-2.6**
BGF	**Bois d'Agland** SNR=1.0	**4.11**	**32**	*e*Pn	**Pn**	**01 45 09.0**	**-1.5**
BGF	9.1nm,0.4s,SNR=1.0			*e*Sg	**Sg**	**01 46 15.7**	**-3.3**
BGF	**Bois d'Agland**	**4.11**	**32**	Pn	**Pn**	**01 45 09.0**	**-1.5**
BGF	4.6nm,0.4s,SNR=1.0			*e*Sg	**Sg**	**01 46 15.7**	**-3.3**
ESDC	**Sonseca Array** 0.1nm,0.1s,baz=42,slow=14,SNR=4.7	**4.40**	**220**	Pn	**Pn**	**01 45 13.5**	**-1.1**
ESDC	**Sonseca Array** 0.1nm,0.1s,slow=14,SNR=4.7	**4.40**	**220**	Pn	**Pn**	**01 45 13.5**	**-1.1**
LOR	**Lormes** 1.8nm,0.4s,SNR=1.0	**5.09**	**34**	*e*Sg	**Sg**	**01 46 47.3**	**-3.2**
LOR	**Lormes** 0.4nm,0.4s	**5.09**	**34**	Lg	Lg	01 46 47.3	
LOR	0.9nm,0.4s,SNR=1.0			*e*Sg	**Sg**	**01 46 47.3**	**-3.2**
SGMF	**Saint Gilles** 12nm,0.8s,SNR=1.0	**5.37**	**344**	*e*Sn	Sn	01 46 23.2	-6.8
SGMF	**Saint Gilles** 3.0nm,0.8s	**5.37**	**344**	Sn	Sn	01 46 23.2	-6.8
LDF	**La Druitiere** 5.3nm,0.9s,SNR=1.0	**5.48**	**1**	*e*Sn	Sn	01 46 27.2	-5.4

IDC 17 01:57:30.3±2.1,**2.20N**×**126.76E**,**h0**km,**mb3.4**/4, **mb1 3.7**/4,**mb1mx3.4**/22,**mbtmp3.5**/4,**Error ellipse: s-maj=117.6km s-min=26.0km az=70.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 2.0nm,0.7s,baz=15,slow=9.5,SNR=4.2	**20.20**	**183**	P	P	02 02 07.3	+0.5
WRA	**Warramunga Arr** 0.9nm,0.5s,baz=340,slow=11,SNR=4.1	**23.23**	**162**	P	P	02 02 38.5	-0.8
ASAR	**Alice Springs** 0.2nm,0.4s,baz=343,slow=10,SNR=3.5	**26.63**	**165**	P	P	02 03 11.4	+0.6
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=119,slow=8.5,SNR=4.2	**58.83**	**326**	P	P	02 07 30.5	-0.2

*ISK **17** 01:57:47.5,37.11N×28.31E,h25km,MD2.5*
*ISCJB **17** 01:57:48.7±0.7,36.96N±0.04×28.28E±0.05,h1km±14km, Error ellipse: s-maj=8.6km s-min=4.8km az=36.0*
*DDA **17** 01:57:48.8,36.98N×28.26E,h7km,MD2.6*
*CSEM **17** 01:57:48.9±0.2,36.96N×28.27E,h2km,MD2.5,Error ellipse: s-maj=6.8km s-min=3.9km az=39.0*
ISC 17 01:57:49.0±1.1,**36.98N**±0.04×**28.26E**±0.03,**h4**km±14km, **n16,**σ1§**49**/27,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.16**	**7**	PG	**Pg**	**01 57 52.5**	**+0.4**
YER				SG	**Sg**	**01 57 54.9**	**+0.6**
YER	**Yerkesik**	**0.16**	**7**	*i* Pg	**Pg**	**01 57 52.6**	**+0.4**
YER				*i* Sg	**Sg**	**01 57 54.9**	**+0.6**
TURN	**Turunc**	**0.30**	**111**	*i* P	**Pg**	**01 57 53.4**	**-1.3**
TURN				*i* S	**Sg**	**01 57 56.7**	**-1.9**
TURN	**Turunc**	**0.30**	**111**	*i* P	**Pg**	**01 57 53.4**	**-1.3**
TURN				*i* S	**Sg**	**01 57 56.7**	**-1.9**
DALY	**Dalyan (Mu˘la**	**0.36**	**117**	*e*PG	**Pg**	**01 57 56.2**	**+0.3**
DALY				*e*SG	**Sb**	**01 58 03.4**	**-0.4**
DALY	**Dalyan (Mu˘la**	**0.36**	**117**	*e*PG	**Pg**	**01 57 56.2**	**+0.3**
AYDN	**Tasoluk**	**0.75**	**336**	*i* P	**Pg**	**01 58 03.1**	**-0.2**
AYDN				*i* S	**Sb**	**01 58 14.4**	**-0.7**
AYDN	**Tasoluk**	**0.75**	**336**	*i* P	**Pg**	**01 58 03.1**	**-0.2**
AYDN				*i* S	**Sb**	**01 58 14.4**	**-0.7**
FETY	**Fethiye**	**0.75**	**117**	*e*PG	**Pg**	**01 58 03.3**	**0.0**
FETY	**Fethiye**	**0.75**	**117**	*e*PG	**Pg**	**01 58 03.3**	**0.0**
BODT	**Bodrum**	**0.76**	**277**	*e*PG	**Pg**	**01 58 03.5**	**-0.1**
BODT				*e*SG	**Sb**	**01 58 15.3**	**-0.2**
BODT	**Bodrum**	**0.76**	**277**	*e*Pg	**Pg**	**01 58 03.5**	**-0.1**
BODT				*e*Sg	**Sb**	**01 58 15.3**	**-0.2**
DNZL	**Cakiroluk**	**0.95**	**41**	*i* P	**Pg**	**01 58 07.5**	**+0.3**
DNZL	**Cakiroluk**	**0.95**	**41**	*i* P	**Pg**	**01 58 07.5**	**+0.3**
AKAS	**Kas**	**1.31**	**124**	*i* P	**Pb**	**01 58 13.7**	**-0.6**
AKAS				*i* S	**Sg**	**01 58 35.5**	**+4.3**
AKAS	**Kas**	**1.31**	**124**	*i* P	**Pb**	**01 58 13.7**	**-0.6**
AKAS				*i* S	**Sg**	**01 58 35.5**	**+4.3**

*CSEM **17** 01:59:02.9,42.32N×13.53E,h9km,MD2.2/11,After ROM*
ROM 17 01:59:02.9±0.1,**42.32N**×**13.53E**,**h9**km±1km,**Md2.2**/11, **Ml1.3**/7,**Error ellipse: s-maj=1.5km s-min=1.0

FIAM	**Fiamignano**	**0.31 260**	Pg	Pg	01 59 09.5	+0.2	
FIAM			Sg	Sb	01 59 15.0	-1.2	
	33nm,0.9s						
PTQR	**Pietraquaria**	**0.32 198**	Pg	Pg	01 59 09.8	+0.5	
PTQR			Sg	Sb	01 59 15.1	-1.1	
	3.0nm,0.3s						
PTQR	**Pietraquaria**	**0.32 198**	Pg	Pg	01 59 09.8	+0.5	
PTQR			Sg	Sb	01 59 15.1	-1.1	
	3.0nm,0.3s						
INTR	**Introdacqua**	**0.42 138**	Pg	Pg	01 59 11.2	0.0	
INTR			Sg	Sb	01 59 18.5	-0.6	
INTR	**Introdacqua**	**0.42 138**	Pg	Pg	01 59 11.2	0.0	
INTR			Sg	Sb	01 59 18.5	-0.6	
LNSS	**Leonessa**	**0.46 308**	Pg	Pg	01 59 12.5	+0.5	
LNSS			Sg	Sb	01 59 20.4	0.0	
LNSS	**Leonessa**	**0.46 308**	Pg	Pg	01 59 12.5	+0.5	
LNSS			Sg	Sb	01 59 20.4	0.0	
LPEL	**Lama dei Pelig**	**0.56 120**	Pg	Pg	01 59 13.9	+0.1	
LPEL			Sg	Sb	01 59 22.7	-0.4	
LPEL	**Lama dei Pelig**	**0.56 120**	Pg	Pg	01 59 13.9	+0.1	
LPEL			Sg	Sb	01 59 22.7	-0.4	
NRCA	**Norcia**	**0.59 329**	Pg	Pg	01 59 14.4	-0.2	
NRCA			Sg	Sb	01 59 24.0	-0.3	
	10.0nm,0.1s						
NRCA	**Norcia**	**0.59 329**	Pg	Pg	01 59 14.4	-0.2	
NRCA			Sg	Sb	01 59 24.0	-0.3	
	10.0nm,0.1s						
SDI	**San Donato**	**0.65 161**	Pg	Pb	01 59 16.3	-0.2	
SDI			Sg	Sb	01 59 25.5	-0.2	
	3.0nm,0.2s						
SDI	**San Donato**	**0.65 161**	Pg	Pb	01 59 16.3	-0.2	
SDI			Sg	Sb	01 59 25.5	-0.2	
	3.0nm,0.2s						

IDC ***17*** *02:03:24.1±0.5,54°.26N×169°.20E,h0km,mb4.1/26, mb1 4.4/28,mb1mx4.3/32,mbtmp4.2/28,ML3.9/2,MS4.4/29, Ms1 4.4/29,ms1mx4.2/44,Error ellipse: s-maj=13.2km s-min=8.6km az=10.0*

MOS ***17*** *02:03:24.4±1.2,54°.15N×169°.12E,h16km,mb4.7/50, MS4.5/18,Error ellipse: s-maj=7.1km s-min=5.3km az=110.6*

KRSC ***17*** *02:03:25.7±0.3,53°.89N×168°.65E,h5km±5km,ML5.4*

BJI ***17*** *02:03:25.5,54°.47N×169°.05E,h22km,mB5.0/35,mb4.8/37, Ms5.1/38,Ms7 4.8/30*

ISCJB ***17*** *02:03:26.6±0.7,54°.08N±0°.03×169°.04E±0°.02,h33km±5km, mb4.5/128,MS4.6/57,Error ellipse: s-maj=5.0km s-min=2.1km az=4.2*

NEIC ***17*** *02:03:27.7±0.9,54°.09N×169°.12E,h28km±6km,mb4.7/63, Error ellipse: s-maj=8.2km s-min=3.9km az=170.0*

GCMT ***17*** *02:03:29.0±0.2,54°.37N×169°.18E,h18km±1km,MW5.2, Moment Tensor Solution. s60,c91; s94,c164; Moment tensor: Scale 10¹⁶Nm; Mrr=0.29±.15; Mθθ=6.96±.15; Mφφ=7.25±.15; Mrθ=0.37±.35; Mrφ=-1.09±.14; Mθφ=-0.63±.32; Best double couple: M₀7.20000×10¹⁶ NP1:φs221.00000°, δ85.00000°,λ2.00000°. NP2:φs131.00000°,δ88.00000°, λ175.00000°. Principal axes: T 7.3900, Plg5.0000°, Azm86.0000°; N -0.3300, Plg84.0000°, Azm295.0000°; P -7.0600, Plg3.0000°, Azm176.0000°; Data Used: II IU IC G CN.*

SZGRF ***17*** *02:03:37.3,55°.37N×169°.77E,h33km,mb4.4, Komandorsky Islands, Russia, region*

ISC 17 02:03:27.3±0.3,53°.97N±0°.04×169°.12E±0°.03,h26km±1km, h26km:pP-P,n365,σ1s72/478,mb4.6/128,MS4.6/57, 11C-18D,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.21**	**305**	PN	**Pn**	**02 03 59.5**	**-2.6**
BKI				S	**Sn**	**02 04 25.0**	**-3.5**
BKI	**Bering**	**2.21**	**305**	*e*P	**Pn**	**02 03 59.5**	**-2.6**
BKI				*i* S	**Sn**	**02 04 25.0**	**-3.5**
FX1	**Attu Island--F**	**2.66**	**113**	*e*Pn	**Pn**	**02 04 07.0**	**-1.3**
FX1				*e*Sn	**Sn**	**02 04 40.2**	**+0.5**
FX1				Sn	**Sn**	**02 04 40.4**	**+0.7**
FX1	**Attu Island--F**	**2.66**	**113**	Pn	**Pn**	**02 04 07.1**	**-1.3**
	33nm,0.3s,baz=312,slow=12,SNR=153						
FX1				Sn	**Sn**	**02 04 40.4**	**+0.7**
	135nm,0.3s,baz=17,slow=23,SNR=6.2						
KBTR	**Krutoberegovo**	**4.25**	**304**	PN	**Pn**	**02 04 30.2**	**-0.1**
KBTR				S	**Sn**	**02 05 17.2**	**-1.8**
KBTR	**Krutoberegovo**	**4.25**	**304**	*e*P	**Pn**	**02 04 30.2**	**-0.1**
KBTR				*i* S	**Sn**	**02 05 17.2**	**-1.8**
MKZ	**Mys Kozlova**	**4.37**	**281**	PN	**Pn**	**02 04 31.2**	**-0.7**
MKZ	**Mys Kozlova**	**4.37**	**281**	*e*P	**Pn**	**02 04 31.2**	**-0.7**
MKZ				*i* S	**Sn**	**02 05 17.2**	**-4.7**
SMKR	**Semkarok**	**5.09**	**304**	*e*P	**Pn**	**02 04 43.0**	**+1.1**
SMKR				*i* S	**Sn**	**02 05 39.6**	**-0.2**
ZLN	**Zelenaya**	**5.21**	**296**	*e*P	**Pn**	**02 04 43.4**	**-0.1**
ZLN				*i* S	**Sn**	**02 05 40.1**	**-2.5**
BDR	**Baidarnaya**	**5.22**	**303**	*e*P	**Pn**	**02 04 45.3**	**+1.7**
BDR				*i* S	**Sn**	**02 05 43.3**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**5.24**	**295**	*e*P	**Pn**	**02 04 44.2**	**+0.3**
BZGR				*i* S	**Sn**	**02 05 41.9**	**-1.5**
CIRR	**Tsirk**	**5.27**	**297**	P	**Pn**	**02 04 45.4**	**+1.0**
CIRR				*i* S	**Sn**	**02 05 43.7**	**-0.5**
SRKR	**Sorokina**	**5.27**	**304**	*e*P	**Pn**	**02 04 44.2**	**-0.2**
SRKR				*i* S	**Sn**	**02 05 41.0**	**-3.3**
LGNR	**Loginova**	**5.29**	**297**	P	**Pn**	**02 04 45.5**	**+0.7**
LGNR				*i* S	**Sn**	**02 05 43.7**	**-1.2**
BZMR	**Bezymyannaya**	**5.35**	**295**	*e*P	**Pn**	**02 04 45.5**	**+0.1**
BZMR				*i* S	**Sn**	**02 05 43.2**	**-2.9**
BZWR	**Bezymyannyi-We**	**5.35**	**295**	*e*P	**Pn**	**02 04 46.1**	**+0.6**
BZWR				*i* S	**Sn**	**02 05 44.7**	**-1.6**
TUMR	**Tumrok**	**5.38**	**288**	*e*P	**Pn**	**02 04 45.9**	**+0.1**
TUMR				*e*S	**Sn**	**02 05 44.4**	**-2.4**
KLY	**Klyuchi**	**5.39**	**299**	PN	**Pn**	**02 04 46.3**	**+0.4**
KLY				S	**Sn**	**02 05 45.0**	**-2.0**
KLY	**Klyuchi**	**5.39**	**299**	*e*P	**Pn**	**02 04 46.3**	**+0.4**
KLY				*i* S	**Sn**	**02 05 45.0**	**-2.0**
KRSR	**Krestovskiy**	**5.40**	**298**	*e*P	**Pn**	**02 04 47.6**	**+1.5**
KRSR				*i* S	**Sn**	**02 05 46.4**	**-1.0**
KIRR	**Kirishev**	**5.43**	**295**	*e*P	**Pn**	**02 04 47.1**	**+0.5**
KIRR				*i* S	**Sn**	**02 05 45.7**	**-2.5**
KMNR	**Kamenistaya**	**5.43**	**293**	*e*P	**Pn**	**02 04 47.2**	**+0.6**
KMNR				*i* S	**Sn**	**02 05 47.2**	**-1.0**
KPT	**Kopyto**	**5.50**	**295**	*e*P	**Pn**	**02 04 48.2**	**+0.7**
KPT				*i* S	**Sn**	**02 05 48.0**	**-1.8**
KII	**Karymskiy**	**5.70**	**275**	*e*P	**Pn**	**02 04 50.4**	**+0.1**
KII				*i* S	**Sn**	**02 05 51.8**	**-3.1**
KOZR	**Kozyr**	**5.70**	**295**	PN	**Pn**	**02 04 51.7**	**+1.5**
KOZ	**Kozyrevsk**	**5.71**	**295**	*e*P	**Pn**	**02 04 51.7**	**+1.3**
KOZ				*i* S	**Sn**	**02 05 54.7**	**-0.3**
NLC	**Nalytchevo**	**5.88**	**266**	PN	**Pn**	**02 04 52.6**	**0.0**
NLC	**Nalytchevo**	**5.88**	**266**	*e*P	**Pn**	**02 04 52.6**	**0.0**
NLC				*i* S	**Sn**	**02 05 54.7**	**-4.3**
SRDR	**Sredinnyy**	**5.88**	**297**	*e*P	**Pn**	**02 04 55.0**	**+2.3**
SRDR				*i* S	**Sn**	**02 05 59.1**	**0.0**
SDLR	**Sedlovina**	**6.13**	**268**	*e*P	**Pn**	**02 04 56.4**	**+0.2**
SDLR				*i* S	**Sn**	**02 06 02.0**	**-3.4**
UGLR	**Uglovaya**	**6.18**	**267**	*e*P	**Pn**	**02 04 57.3**	**+0.5**
UGLR				*i* S	**Sn**	**02 06 03.6**	**-3.0**
KRER	**Koryakskii**	**6.21**	**268**	*e*P	**Pn**	**02 04 57.8**	**+0.5**
KRER				*i* S	**Sn**	**02 06 05.0**	**-2.4**
AVH	**Avacha**	**6.22**	**268**	*e*P	**Pn**	**02 04 58.2**	**+0.9**
AVH				*i* S	**Sn**	**02 06 06.4**	**-1.1**
KOK	**Koryaka**	**6.27**	**268**	*e*P	**Pn**	**02 04 58.5**	**+0.4**
KOK				*i* S	**Sn**	**02 06 05.5**	**-3.4**
ESO	**Esso**	**6.31**	**292**	PN	**Pn**	**02 04 58.7**	**+0.1**
ESO	**Esso**	**6.31**	**292**	*e*P	**Pn**	**02 04 58.7**	**+0.1**
ESO				*i* S	**Sn**	**02 06 06.3**	**-3.5**
PET	**Petropavlovsk**	**6.32**	**266***c*	*i* PN	**Pn**	**02 04 58.8**	**+0.2**
PET				pmax	pmax		
	comp=Z,126nm,0.8s						
PET				MLR	MLR		
	comp=Z,3μm,17.0s						
PET				MLR	MLR		
	comp=Z,3μm,17.0s						
PET	**Petropavlovsk**	**6.32**	**266**	P	**Pn**	**02 04 58.9**	**+0.3**
PET				*i* S	**Sn**	**02 06 06.6**	**-3.2**
INSR	**Institute**	**6.34**	**266**	P	**Pn**	**02 04 59.0**	**+0.1**
INSR				*i* S	**Sn**	**02 06 07.5**	**-2.8**
RUS	**Russkaya**	**6.56**	**261**	PN	**Pn**	**02 05 02.1**	**+0.2**
RUS	**Russkaya**	**6.56**	**261**	*e*P	**Pn**	**02 05 02.1**	**+0.2**
RUS				*i* S	**Sn**	**02 06 12.1**	**-3.6**
GNL	**Ganaly**	**6.62**	**272**	*e*P	**Pn**	**02 05 03.8**	**+0.9**
GNL				*e*S	**Sn**	**02 06 15.6**	**-1.9**
MTVR	**Mutnovka**	**6.74**	**262**	*e*P	**Pn**	**02 05 05.3**	**+0.8**
MTVR				*i* S	**Sn**	**02 06 16.8**	**-3.5**
GRL	**Gorelyy**	**6.78**	**262**	P	**Pn**	**02 05 05.7**	**+0.6**
GRL				*i* S	**Sn**	**02 06 18.1**	**-3.3**
PEA0B	**Petropavlovsk-**	**6.86**	**267**	*e*Pn	**Pn**	**02 05 06.7**	**+0.6**
PEA0B				*e*Sn	**Sn**	**02 06 25.1**	**+1.8**
PETK	**Petropavlovsk-**	**6.86**	**267**	PN	**Pn**	**02 05 06.2**	**+0.1**
PETK	**Petropavlovsk-**	**6.86**	**267**	Pn	**Pn**	**02 05 06.2**	**+0.1**
PETK				Sn	**Sn**	**02 06 25.3**	**+2.0**
PETK	**Petropavlovsk-**	**6.86**	**267**	Pn	**Pn**	**02 05 06.2**	**+0.1**
	comp=Z,16nm,0.3s,baz=103,slow=17,SNR=100						
PETK				Sn	**Sn**	**02 06 25.3**	**+2.0**
	comp=Z,15nm,0.3s,baz=198,slow=27,SNR=8.9						
PETK				LR	LR	02 07 50.2	
	comp=Z,2μm,19.5s,baz=266,slow=38						
ASAK	**Asacha**	**6.93**	**261**	*e*P	**Pn**	**02 05 08.3**	**+1.2**
ASAK				*i* S	**Sn**	**02 06 22.5**	**-2.5**
PALN	**Palana**	**7.20**	**319**	P	**Pn**	**02 05 13.3**	**+2.6**
PALN				*i* S	**Sn**	**02 06 32.1**	**+0.6**
APC	**Apacha**	**7.22**	**266**	P	**Pn**	**02 05 11.3**	**+0.3**
APC				*i* S	**Sn**	**02 06 29.5**	**-2.6**
MIPR	**Malaya Ipel'ka**	**7.63**	**262**	P	**Pn**	**02 05 16.9**	**+0.3**
SKR	**Severo-Kuril's**	**8.62**	**253**	*e*PN	Pn	02 05 27.2	-2.9
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				MLR	MLR		
	comp=N,5μm,12.0s						
SKR				MLR	MLR		
	comp=E,3μm,12.0s						
SKR				MLR	MLR		
	comp=Z,3μm,12.0s						
SKR	**Severo-Kuril's**	**8.62**	**253**	P	**Pn**	**02 05 29.2**	**-0.9**
SKR				*i* S	**Sn**	**02 07 01.9**	**-4.5**
ATKA	**Atka Island**	**10.20**	**93**	*e*Pn	**Pn**	**02 05 51.3**	**-0.4**
SEY	**Seymchan**	**12.50**	**323**	*e*PN	**Pn**	**02 06 20.3**	**-2.9**
GAMB	**Gambell**	**13.89**	**37**	*e*Pn	**Pn**	**02 06 44.1**	**+1.9**
	comp=Z,43nm,1.0s						
BILL	**Bilibino**	**14.18**	**356**	P	**Pn**	**02 06 44.0**	**-2.1**
BILL				MLR	MLR		
	comp=Z,300nm,14.0s						
BILL	**Bilibino**	**14.18**	**356**	*e*Pn	**Pn**	**02 06 43.6**	**-2.5**
	comp=Z,122nm,1.5s						
UNV	**Unalaska Valle**	**14.35**	**81**	*e*Pn	**Pn**	**02 06 49.2**	**+0.7**
AKUT	**Akutan**	**14.73**	**79**	*e*Pn	**Pn**	**02 06 54.9**	**+1.3**
TNA	**Tin City**	**16.25**	**35**	*e*Pn	**P**	**02 07 14.8**	**-1.5**
	comp=Z,24nm,0.8s						
UGL	**Uglegorsk**	**17.48**	**265**	P	**P**	**02 07 33.0**	**+3.1**
UGL				pmax	pmax		
	comp=Z,112nm,1.0s						
UGL				pmax	pmax		
	comp=N,300nm,5.0s						
UGL				pmax	pmax		
	comp=E,1μm,5.0s						
UGL				MLR	MLR		
	comp=E,2μm,18.0s						
UGL				MLR	MLR		
	comp=N,2μm,16.0s						
SDPT	**Sand Point**	**17.58**	**73**	*e*Pn	**P**	**02 07 31.6**	**+0.6**
	comp=N,23nm,0.9s						
YSS	**Yuzh-Sakhalins**	**18.12**	**258**	*e*P	**P**	**02 07 38.0**	**+1.0**
YSS				*e*S	**Sn**	**02 10 57.0**	**-1.1**
YSS				MLR	MLR		
	comp=Z,1μm,18.0s						
YSS				MLR	MLR		
	comp=N,2μm,16.0s						
YSS				MLR	MLR		
	comp=E,900nm,16.0s						
YUK	**Yuzh-Kuril'sk**	**18.13**	**246**	*d* iP	**P**	**02 07 41.2**	**+4.0**
YUK				*i* S	**S**	**02 11 04.7**	**+1.3**
YUK				pmax	pmax		
	comp=N,282nm,1.5s						
YUK				pmax	pmax		
	comp=E,82nm,0.8s						
YUK				pmax	pmax		
	comp=Z,358nm,1.5s						
YUK				MLR	MLR		
	comp=E,560nm,18.0s						
YUK				MLR	MLR		
	comp=Z,1μm,18.0s						
YUK				MLR	MLR		
	comp=N,401nm,18.0s						
CHGN	**Chignik**	**18.61**	**70**	*e*P	**Pn**	**02 07 43.6**	**+0.9**
ASAJ	**Asahikawa**	**19.88**	**251**	*e*P	**Pn**	**02 07 58.9**	**+0.9**
	comp=N,15nm,1.0s						
ASAJ	**Asahikawa**	**19.88**	**251**	P	**Pn**	**02 07 57.6**	**-0.4**
	comp=N,11nm,0.8s,baz=59,slow=20,SNR=5.6						
ASAJ				LR	LR	02 14 14.9	
	comp=N,863nm,21.7s,baz=161,slow=32						
ERM	**Erimo**	**20.96**	**246**	*e*P	Pn	02 08 09.9	-0.8
ERM				pmax	pmax		
	comp=Z,23nm,1.0s						
ERM	**Erimo**	**20.96**	**246**	*e*P	**P**	**02 08 08.3**	**+0.3**
	comp=Z,37nm,1.2s						
ERM				*e*pP	**pP**	**02 08 16.1**	**+0.9**
OHAK	**Old Harbor**	**21.30**	**66**	*e*P	**P**	**02 08 09.6**	**-2.1**
	comp=Z,43nm,1.0s						
RSO	**Redoubt South**	**21.39**	**57**	*e*P	**P**	**02 08 14.8**	**+2.0**
KDAK	**Kodiak Island**	**21.61**	**64**	P	**P**	**02 08 13.2**	**-1.7**
KDAK	**Kodiak Island**	**21.61**	**64**	P	**P**	**02 08 13.2**	**-1.7**
	comp=Z,2.8nm,0.5s,baz=238,slow=9.5,SNR=5.4						
SPU	**Mount Spurr**	**21.75**	**55**	*e*P	**P**	**02 08 16.6**	**+0.1**
PPLA	**Purkeypile**	**21.81**	**50**	*e*P	**P**	**02 08 17.3**	**+0.1**
	comp=Z,238nm,1.8s						
HABR	**Khabarovsk**	**21.89**	**269**	*e*P	**P**	**02 08 17.8**	**-0.1**
HABR				*e**PP	**pP**	**02 08 23.3**	**-1.9**
HABR						02 08 38.1	
HABR				*e*		02 12 15.6	
HABR				*e*S	**S**	**02 12 18.5**	**+0.3**
HABR				*e**SS	Sn	02 12 28.6	-0.1
HABR				*e*SSS	SSS	02 12 57.3	
HABR				pmax	pmax		
	comp=E,43nm,2.3s						
HABR				pmax	pmax		
	comp=Z,72nm,2.6s						
HABR				pmax	pmax		
	comp=N,13nm,1.3s						
HABR				MLR	MLR		
	comp=Z,769nm,16.0s						
YAK	**Yakutsk**	**22.08**	**307**	*e*P	**P**	**02 08 17.0**	**-2.9**
YAK				*e**PP	**pP**	**02 08 27.3**	**+0.2**
YAK				*e*		02 08 40.0	
YAK				*e*S	**S**	**02 12 16.1**	**-5.5**
YAK				*e*SSS	SSS	02 12 51.5	
YAK				pmax	pmax		
	comp=Z,53nm,1.0s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,49nm,1.5s						
YAK				pmax	pmax		
	comp=N,26nm,1.3s						
YAK				pmax	pmax		
	comp=Z,72nm,1.1s						
YAK				pmax	pmax		
	comp=E,138nm,1.4s						
YAK				smax	smax		
	comp=N,482nm,4.2s						
YAK				smax	smax		
	comp=E,413nm,3.0s						
YAK				MLR	MLR		
	comp=E,962nm,12.0s						
YAK				MLR	MLR		
	comp=Z,745nm,11.0s						
YAK				MLR	MLR		
	comp=N,2μm,16.0s						
TRF	**Thorofare Moun**	**22.72**	**49**	*e*P	**P**	**02 08 26.3**	**-0.6**
	comp=N,25nm,0.8s						
PMR	**Palmer**	**23.16**	**54**	*e*P	**P**	**02 08 30.4**	**-0.9**
PMR				pmax	pmax		
	comp=Z,11nm,0.9s						
PMR	**Palmer**	**23.16**	**54**	*e*P	**P**	**02 08 30.4**	**-0.9**
	comp=Z,10nm,0.9s						
MCK	**McKinley**	**23.35**	**49**	*e*P	**P**	**02 08 32.3**	**-0.9**
MCK				pmax	pmax		
	comp=Z,32nm,1.2s						
MCK	**McKinley**	**23.35**	**49**	*e*P	**P**	**02 08 32.3**	**-0.9**
	comp=Z,32nm,1.2s						
COLD	**Coldfoot**	**23.42**	**40**	*e*P	**P**	**02 08 33.0**	**-0.9**
	comp=Z,15nm,0.9s						
KLR	**Kul'dur**	**23.50**	**274**	*e*P	**P**	**02 08 31.2**	**-3.5**
KLR				*e*S	**S**	**02 12 49.5**	**+2.9**
KLR				smax	smax		
	comp=N,1.0nm,12.0s						
KLR				smax	smax		
	comp=E,2.0nm,12.0s						
SML	**Sawmill**	**23.54**	**54**	*e*P	**P**	**02 08 33.3**	**-1.8**
SML				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SML	**Sawmill**	**23.54**	**54**	*e*P	**P**	**02 08 33.3**	**-1.8**
	comp=Z,9.8nm,1.0s						
COLA	**College**	**23.94**	**46**	*e*P	**P**	**02 08 37.7**	**-1.0**
COLA				pmax	pmax		
	comp=Z,31nm,0.7s						
COLA	**College**	**23.94**	**46**	*e*P	**P**	**02 08 37.7**	**-1.0**
	comp=Z,31nm,0.7s						
ILAR	**Eielson Array**	**24.34**	**46**	P	**P**	**02 08 40.5**	**-2.0**
ILAR	**Eielson Array**	**24.34**	**46**	P	**P**	**02 08 40.4**	**-2.0**
	comp=Z,4.6nm,0.8s,baz=254,slow=8.5,SNR=26						
ILAR				LR	LR	02 18 50.6	
	comp=Z,665nm,19.0s,baz=85,slow=38						
TIXI	**Tiksi**	**24.75**	**331**	*e*P	**P**	**02 08 43.3**	**-2.9**
TIXI				pmax	pmax		
	comp=Z,44nm,1.7s						
DIV	**Divide**	**24.80**	**55**	*e*P	**P**	**02 08 48.9**	**+2.1**
	comp=Z,22nm,1.1s						
PAX	**Paxson**	**24.88**	**51**	*e*P	**P**	**02 08 46.7**	**-0.9**
PAX				pmax	pmax		
	comp=Z,28nm,1.0s						
PAX	**Paxson**	**24.88**	**51**	*e*P	**P**	**02 08 46.7**	**-0.9**
	comp=Z,28nm,1.0s						
CLNS	**Chul'man**	**24.94**	**295**	*e*P	P	02 08 36.1	-12
CLNS				*e*SS		02 14 27.4	
CLNS				pmax	pmax		
	comp=N,6.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CLNS				MLR	MLR		
	comp=N,4μm,16.0s						
CLNS				MLR	MLR		
	comp=Z,1μm,17.0s						
CLNS				MLR	MLR		
	comp=E,6μm,16.0s						
RAGM	**Ragged Mountai**	**25.40**	**57**	*e*P	**P**	**02 08 55.3**	**+3.1**
	comp=E,62nm,1.3s						
DOT	**Dot Lake**	**25.52**	**49**	*e*P	**P**	**02 08 53.0**	**-0.2**
	comp=E,60nm,0.8s						
MENT	**Mentasta**	**25.68**	**51**	*e*P	**P**	**02 08 55.8**	**+1.1**
USRK	**Ussuriysk Arra**	**25.92**	**263**	P	**P**	**02 08 58.1**	**+1.1**
	comp=E,3.0nm,0.9s,baz=46,slow=11,SNR=5.8						
USRK				LR	LR	02 19 44.8	
	comp=E,998nm,19.0s,baz=53,slow=38						
EGAK	**Eagle**	**26.79**	**46**	*e*P	**P**	**02 09 03.1**	**-1.5**
	comp=E,30nm,0.9s						
MDJ	**Mudanjiang**	**27.10**	**266**	P	**P**	**02 09 09.8**	**+2.1**
MDJ				pP	**pP**	**02 09 15.9**	**+0.5**
MDJ				sP	**sP**	**02 09 18.6**	**-0.1**
MDJ				PcP	**PcP**	**02 12 29.8**	**+2.0**
MDJ				S	**S**	**02 13 44.8**	**+0.8**
MDJ				sS	**sS**	**02 14 00.5**	**+3.6**
MDJ				pmax	pmax		
	comp=Z,12nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,100nm,5.9s						
MDJ				LR	LR		
	comp=N,2μm,20.1s						
MDJ				LR	LR		
	comp=E,890nm,19.5s						
MDJ				LR	LR		
	comp=Z,1μm,19.5s						
MAJO	**Matsushiro**	**27.56**	**243**	*e*P	**P**	**02 09 12.3**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,26nm,0.8s						
MAJO	**Matsushiro**	**27.56**	**243**	*e*P	**P**	**02 09 12.3**	**+0.4**
	comp=Z,26nm,0.8s						
MAT	**Matsushiro**	**27.56**	**243**	P	**P**	**02 09 13.9**	**+2.0**
MAT				S	**S**	**02 13 57.0**	**+5.5**
MJAR	**Matsushiro Arr**	**27.56**	**243**	P	**P**	**02 09 14.3**	**+2.4**
MJAR	**Matsushiro Arr**	**27.56**	**243**	P	**P**	**02 09 14.3**	**+2.4**
	comp=Z,1.7nm,0.6s,baz=34,slow=9.0,SNR=4.8						
INK	**Inuvik**	**29.83**	**39**	P	**P**	**02 09 30.9**	**-0.8**
INK	**Inuvik**	**29.83**	**39**	P	**P**	**02 09 30.9**	**-0.8**
	comp=Z,2.8nm,0.5s,baz=288,slow=7.2,SNR=16						
INK				LR	LR	02 21 49.5	
	comp=Z,558nm,19.9s,baz=83,slow=37						
CN2	**Changchun**	**30.01**	**268**	P	**P**	**02 09 33.8**	**+0.2**
CN2				*e*sP	**sP**	**02 09 45.9**	**+1.3**
CN2				*e*S	**S**	**02 14 27.6**	**-2.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,14.0s						
CN2				LR	LR		
	comp=E,500nm,14.0s						
CN2				LR	LR		
	comp=Z,900nm,16.0s						
KSRS	**Korea Array**	**32.61**	**257**	P	**P**	**02 09 58.9**	**+2.4**
	comp=Z,3.3nm,0.9s,baz=51,slow=9.2,SNR=7.1						
KSRS				LR	LR	02 23 43.2	
	comp=Z,176nm,18.5s,baz=51,slow=37						
KSAR	**Wonju Array Be**	**32.64**	**257**	P	**P**	**02 09 58.9**	**+2.1**
JNU	**Nakatsue**	**34.09**	**248**	LR	LR	02 22 33.4	
	comp=Z,364nm,21.3s,baz=61,slow=34						
BJI	**Beijing**	**37.78**	**270**	P	**P**	**02 10 40.5**	**-0.5**
BJI				PP	**PnPn**	**02 12 10.9**	**+2.4**
BJI				pmax	pmax		
	comp=Z,11nm,0.5s						
BJI				pmax	pmax		
	comp=Z,120nm,3.9s						
BJI				LR	LR		
	comp=N,3μm,16.1s						
BJI				LR	LR		
	comp=E,1μm,15.8s						
TLY	**Talaya**	**38.37**	**294**	*e*P	P	02 10 49.8	+4.0
TLY				*e*		02 12 14.6	
TLY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,1μm,17.0s						
ULN	**Ulaanbaatar**	**38.48**	**287**	*e*P	**P**	**02 10 46.9**	**0.0**
	comp=Z,11nm,1.1s						
YKW3	**Yellowknife Ar**	**38.74**	**46**	*e*P	**P**	**02 10 48.9**	**+0.1**
	comp=Z,0.1nm,0.8s						
YKA	**Yellowknife Ar**	**38.77**	**46**	P	**P**	**02 10 48.0**	**-1.0**
YKA	**Yellowknife Ar**	**38.77**	**46**	P	**P**	**02 10 48.0**	**-1.0**
	comp=Z,4.9nm,0.8s,baz=294,slow=8.1,SNR=14						
SONM	**Songino Array**	**38.86**	**287**	P	**P**	**02 10 50.9**	**+0.8**
SONM	**Songino Array**	**

	comp=E,680nm,19.4s									
NJ2					LR	LR				
	comp=Z,490nm,19.8s									
HVS	**Khovu-Aksy**	**43.92**	**298**		*e*P	**P**	**02 11 31.5**	**0.0**		
NEW	**Newport**	**44.71**	**66**		*e*P	**P**	**02 11 39.8**	**+1.9**		
	comp=Z,18nm,1.6s									
WHN	**Wuhan**	**45.41**	**262**		P	P	02 11 53.8	+10		
WHN					S	**S**	**02 18 27.6**	**+4.6**		
WHN					LR	LR				
	comp=N,2µm,16.2s									
WHN					LR	LR				
	comp=E,2µm,16.7s									
WHN					LR	LR				
	comp=Z,1µm,14.5s									
WALA	**Waterton Lakes**	**45.95**	**63**		*e*P	**P**	**02 11 48.7**	**+1.0**		
	comp=Z,0.7nm,1.2s									
NACB	**Ninganchiao**	**46.14**	**249**		*e*P	**P**	**02 11 48.5**	**-0.9**		
	comp=Z,78nm,0.7s									
BSMT	**Bassoo Peak**	**46.21**	**65**		*e*P	**P**	**02 11 48.5**	**-1.4**		
BLMT	**Blacktail Moun**	**46.34**	**65**		*e*P	**P**	**02 11 50.3**	**-0.6**		
	comp=Z,10nm,0.8s									
WDC	**Whiskeytown Da**	**46.46**	**78**		*e*P	**P**	**02 11 52.2**	**+0.5**		
WDC					pmax	pmax				
	comp=Z,8.0nm,1.2s									
WDC	**Whiskeytown Da**	**46.46**	**78**		*e*P	**P**	**02 11 52.2**	**+0.5**		
	comp=Z,8.3nm,1.2s									
JTMT	**Jette**	**46.54**	**65**		*e*P	**P**	**02 11 52.1**	**-0.3**		
YBMT	**Yellow Bay**	**46.62**	**64**		*e*P	**P**	**02 11 52.7**	**-0.3**		
	comp=Z,6.0nm,0.8s									
ZAA0	**Zalesovo Array**	**46.73**	**306**		*e*P	**P**	**02 11 52.8**	**-0.8**		
ZALV	**Zalesovo Beam**	**46.73**	**306**		P	**P**	**02 11 53.5**	**-0.1**		
ZALV	**Zalesovo Beam**	**46.73**	**306**		P	**P**	**02 11 53.5**	**-0.1**		
ZALV	**Zalesovo Beam**	**46.73**	**306**		P	**P**	**02 11 53.5**	**-0.1**		
	comp=Z,0.4nm,0.3s,baz=64,slow=6.9,SNR=5.0									
ZALV					LR	LR	02 32 02.2			
	comp=Z,593nm,18.2s,baz=45,slow=37									
SWMT	**Swartz Lake**	**46.84**	**65**		*e*P	**P**	**02 11 55.0**	**+0.3**		
SWMT					*e*pP	**pP**	**02 12 02.7**	**-0.1**		
MOD	**Modoc**	**46.88**	**75**		*e*P	**P**	**02 11 54.9**	**-0.3**		
	comp=Z,7.6nm,1.0s									
NVS	**Novosibirsk**	**46.94**	**308**	⇑	*i*P	**P**	**02 11 53.8**	**-1.5**		
NVS					*e*S	**S**	**02 18 40.2**	**-4.2**		
NVS					pmax	pmax				
	comp=Z,48nm,2.0s									
NVS					pmax	pmax				
	comp=N,21nm,2.2s									
NVS					pmax	pmax				
	comp=E,25nm,2.2s									
NVS					pmax	pmax				
	comp=N,11nm,1.8s									
NVS					pmax	pmax				
	comp=E,16nm,1.8s									
NVS					pmax	pmax				
	comp=Z,24nm,1.8s									
NVS					smax	smax				
	comp=N,23nm,2.7s									
NVS					smax	smax				
	comp=E,38nm,2.5s									
SLMT	**Seeley Lake**	**47.28**	**65**		*e*P	**P**	**02 11 58.0**	**-0.2**		
CHMT	**Chamberlain Mo**	**47.61**	**65**		*e*P	**P**	**02 12 02.3**	**+1.5**		
CHMT					*e*pP	**pP**	**02 12 10.8**	**+1.9**		
LZH	**Lanzhou**	**47.68**	**276**		*e*P	**P**	**02 12 03.5**	**+2.0**		
LZH					pP	**pP**	**02 12 14.4**	**+4.9**		
LZH					sP	**sP**	**02 12 17.0**	**+4.3**		
LZH					S	**S**	**02 18 57.1**	**+1.4**		
LZH					sS	**sS**	**02 19 10.3**	**+1.4**		
LZH					SS	SS	02 22 15.0	-8.6		
LZH					pmax	pmax				
	comp=Z,24nm,1.0s									
LZH					pmax	pmax				
	comp=Z,120nm,4.3s									
LZH					LR	LR				
	comp=N,2µm,13.2s									
LZH					LR	LR				
	comp=E,2µm,14.2s									
LZH					LR	LR				
	comp=Z,2µm,17.3s									
GTA	**Gaotai**	**47.78**	**282**	⇓	*e*P	**P**	**02 12 03.3**	**+1.1**		
GTA					pP	**pP**	**02 12 11.1**	**+0.9**		
GTA					sP	**sP**	**02 12 14.4**	**+1.0**		
GTA					PP	**PP**	**02 13 54.9**	**+1.1**		
GTA					S	**S**	**02 18 59.4**	**+2.3**		
GTA					sS	**sS**	**02 19 12.5**	**+2.2**		
GTA					pmax	pmax				
	comp=Z,6.0nm,1.0s									
GTA					pmax	pmax				
	comp=Z,47nm,3.8s									
GTA					LR	LR				
	comp=N,990nm,18.5s									
GTA					LR	LR				
	comp=E,1µm,17.6s									
GTA					LR	LR				
	comp=Z,1µm,21.4s									
BEKR	**Beckworth**	**48.18**	**77**		*e*P	**P**	**02 12 05.3**	**-0.1**		
	comp=Z,2.6nm,1.0s									
FFC	**Flin Flon**	**48.41**	**51**		*e*P	**P**	**02 12 07.7**	**+1.0**		
FFC					pmax	pmax				
	comp=Z,6.0nm,1.1s									
FFC	**Flin Flon**	**48.41**	**51**		*e*P	**P**	**02 12 07.7**	**+1.0**		
	comp=Z,6.3nm,1.1s									
MFID	**Camas Ranch**	**48.42**	**70**		*e*P	**P**	**02 12 07.4**	**+0.3**		
MFID					*e*pP	**pP**	**02 12 17.1**	**+1.9**		
ENH	**Enshi**	**48.47**	**266**		*e*P	**P**	**02 12 09.6**	**+2.1**		
	comp=Z,10nm,0.4s									
EGMT	**Eagleton**	**48.76**	**62**		*e*P	**P**	**02 12 07.8**	**-1.8**		
	comp=Z,4.1nm,0.7s									
BOZ	**Bozeman (W)**	**49.28**	**65**		*e*P	**P**	**02 12 15.1**	**+1.4**		
BOZ					pmax	pmax				
	comp=Z,2.0nm,0.5s									
BOZ	**Bozeman (W)**	**49.28**	**65**		*e*P	**P**	**02 12 15.1**	**+1.4**		
	comp=Z,2.4nm,0.5s									
NVAR	**Mina Array Bea**	**50.33**	**77**		P	**P**	**02 12 22.2**	**+0.4**		
NVAR	**Mina Array Bea**	**50.33**	**77**		P	**P**	**02 12 22.2**	**+0.4**		
	comp=Z,2.5nm,0.9s,baz=287,slow=7.9,SNR=13									
NVAR					LR	LR	02 30 17.2			
	comp=Z,309nm,20.0s,baz=55,slow=32									
NV11	**Mina Array Sit**	**50.41**	**77**		*e*P	**P**	**02 12 23.4**	**+1.0**		
IMW	**Indian Meadow**	**50.80**	**67**		*e*P	**P**	**02 12 25.6**	**+0.2**		
IMW					*e*pP	**pP**	**02 12 35.4**	**+1.9**		
LOHW	**Long Hollow**	**51.17**	**67**		*e*P	**P**	**02 12 28.2**	**+0.1**		
	comp=Z,12nm,1.6s									
CD2	**Chengdu**	**51.38**	**271**		P	**P**	**02 12 30.1**	**+0.5**		
CD2					pP	**pP**	**02 12 38.9**	**+1.2**		
CD2					sP	**sP**	**02 12 42.5**	**+1.6**		
CD2					PcP	**PcP**	**02 13 45.3**	**+1.3**		
CD2					PP	**PP**	**02 14 27.8**	**+1.2**		
CD2					PcS	**PcS**	**02 17 41.5**	**-0.4**		
CD2					S	**S**	**02 19 45.4**	**-2.0**		
CD2					sS	**sS**	**02 20 00.3**	**-0.5**		
CD2					SS	**SS**	**02 23 18.8**	**-4.2**		
CD2					pmax	pmax				
	comp=Z,20nm,0.5s									
CD2					pmax	pmax				
	comp=Z,160nm,5.5s									
CD2					LR	LR				
	comp=N,960nm,16.5s									
CD2					LR	LR				
	comp=E,1µm,12.9s									
CD2					LR	LR				
	comp=Z,760nm,14.9s									
WMQ	**Urumqi**	**51.65**	**294**		P	**P**	**02 12 31.6**	**+0.1**		
WMQ					pP	**pP**	**02 12 41.6**	**+2.0**		
WMQ					sP	**sP**	**02 12 45.5**	**+2.8**		
WMQ					PcP	**PcP**	**02 13 45.3**	**+0.5**		
WMQ					PP	**PP**	**02 14 29.8**	**+1.0**		
WMQ					PcS	**PcS**	**02 17 41.8**	**-1.0**		
WMQ					S	**S**	**02 19 48.8**	**-2.0**		
WMQ					sS	**sS**	**02 20 05.4**	**+1.2**		
WMQ					SKS	**ScS**	**02 22 16.1**	**-3.5**		
WMQ					pmax	pmax				
	comp=Z,13nm,0.4s									
WMQ					pmax	pmax				
	comp=Z,170nm,4.0s									
WMQ					LR	LR				
	comp=Z,1µm,23.2s									
KURK	**Kurchatov**	**51.72**	**306**		*e*P	**P**	**02 12 30.7**	**-1.1**		
KURK					pmax	pmax				
	comp=Z,26nm,2.5s									
KURK	**Kurchatov**	**51.72**	**306**		*e*P	**P**	**02 12 30.9**	**-0.8**		
	comp=Z,15nm,0.9s									
KURK					*e*pP	**pP**	**02 12 38.9**	**-1.0**		
SUMG	**Summit**	**52.29**	**10**		*i*P	**P**	**02 12 39.3**	**+3.0**		
SUMG	**Summit**	**52.29**	**10**		*e*P	**P**	**02 12 36.0**	**-0.2**		
SUMG	**Summit**	**52.29**	**10**		*i*P	**P**	**02 12 39.3**	**+3.0**		
BW06	**Boulder Array**	**52.30**	**67**		*e*P	**P**	**02 12 35.9**	**-0.7**		
	comp=Z,5.2nm,1.0s									
PDAR	**Pinedale Array**	**52.30**	**67**		P	**P**	**02 12 36.4**	**-0.2**		
PDAR	**Pinedale Array**	**52.30**	**67**		P	**P**	**02 12 36.4**	**-0.2**		
	comp=Z,2.0nm,1.0s,baz=318,slow=4.2,SNR=7.2									
PDAR					LR	LR	02 36 18.6			
	comp=Z,194nm,19.6s,baz=328,slow=38									
MK31	**Makanchi Array**	**52.50**	**300**		*e*P	**P**	**02 12 36.5**	**-1.2**		
MK31	**Makanchi Array**	**52.50**	**300**		*e*P	**P**	**02 12 36.5**	**-1.2**		
MKAR	**Makanchi Array**	**52.50**	**300**		*c*eP	**P**	**02 12 36.5**	**-1.2**		
MKAR					pmax	pmax				
	comp=Z,1.0nm,0.6s									
MKAR	**Makanchi Array**	**52.50**	**300**		P	**P**	**02 12 36.8**	**-0.9**		
MKAR	**Makanchi Array**	**52.50**	**300**		P	**P**	**02 12 36.8**	**-0.9**		
	comp=Z,1.4nm,0.7s,baz=49,slow=7.2,SNR=16									
MKAR					LR	LR	02 35 39.8			
	comp=Z,712nm,18.0s,baz=36,slow=37									
GYA	**Guiyang**	**52.95**	**265**		P	**P**	**02 12 43.5**	**+2.1**		
GYA					pP	**pP**	**02 12 50.0**	**+0.5**		
GYA					PP	**PP**	**02 14 43.0**	**+2.0**		
GYA					ScP	**ScP**	**02 17 43.8**	**-1.6**		
GYA					S	**S**	**02 20 08.3**	**-0.9**		
GYA					SS	**SS**	**02 23 45.1**	**-3.0**		
GYA					pmax	pmax				
	comp=Z,20nm,1.0s									
GYA					pmax	pmax				
	comp=Z,80nm,4.8s									
GYA					LR	LR				
	comp=N,660nm,17.3s									
GYA					LR	LR				
	comp=E,700nm,17.6s									
GYA					LR	LR				
	comp=Z,950nm,16.8s									
GSC	**Goldstone**	**53.36**	**79**		*e*P	**P**	**02 12 45.6**	**+1.3**		
GSC					pmax	pmax				
	comp=Z,11nm,1.3s									
GSC	**Goldstone**	**53.36**	**79**		*e*P	**P**	**02 12 45.6**	**+1.3**		
	comp=Z,10nm,1.3s									
KEV	**Kevo**	**53.55**	**345**		*e*P	**P**	**02 12 43.6**	**-1.4**		
KEV					pmax	pmax				
	comp=Z,1.0nm,0.4s									
KEV	**Kevo**	**53.55**	**345**		*e*p	**P**	**02 12 43.6**	**-1.4**		
	comp=Z,0.6nm,0.4s									
ARUT	**Antelope Range**	**53.55**	**74**		*e*P	**P**	**02 12 44.0**	**-1.8**		
ARUT	**Antelope Range**	**53.55**	**74**		*e*P	**P**	**02 12 44.0**	**-1.8**		
	comp=Z,0.4nm,0.3s									
CCUT	**Cedar City**	**53.76**	**74**		*e*P	**P**	**02 12 45.7**	**-1.7**		
	comp=Z,24nm,2.2s									
MSU	**Marysvale**	**53.76**	**73**		*e*P	**P**	**02 12 45.3**	**-2.1**		
MSU					*e**PP	**pP**	**02 12 55.3**	**-0.2**		
MSU	**Marysvale**	**53.76**	**73**		*e*P	**P**	**02 12 45.3**	**-2.1**		
MSU					*e*pP	**pP**	**02 12 55.3**	**-0.2**		
BVA0	**Borovoye Array**	**53.92**	**312**		*i*P	**P**	**02 12 46.7**	**-1.4**		
BVA0					pmax	pmax				
	comp=Z,2.0nm,0.7s									
BRVK	**Borovoye**	**53.95**	**312**		*e*P	**P**	**02 12 47.5**	**-0.7**		
BRVK					pmax	pmax				
	comp=Z,17nm,0.7s									
BRVK	**Borovoye**	**53.95**	**312**		*e*P	**P**	**02 12 47.5**	**-0.7**		
	comp=Z,17nm,0.7s									
ARCES	**ARCESS Array B**	**53.98**	**345**		P	**P**	**02 12 46.4**	**-1.9**		
ARCES	**ARCESS Array B**	**53.98**	**345**		P	**P**	**02 12 46.4**	**-1.9**		
	comp=Z,3.2nm,0.7s,baz=46,slow=8.7,SNR=13									
ARCES					LR	LR	02 40 19.9			
	comp=Z,390nm,18.6s,baz=15,slow=41									
ARE0	**ARCESS Array S**	**53.98**	**345**		*e*P	**P**	**02 12 48.4**	**+0.1**		
ULM	**Lac du Bonnet**	**54.16**	**52**		LR	LR	02 37 47.3			
	comp=Z,510nm,19.2s,baz=333,slow=38									
RSSD	**Black Hills**	**54.33**	**62**		*e*P	**P**	**02 12 52.4**	**+1.0**		
RSSD					pmax	pmax				
	comp=Z,4.0nm,0.7s									
RSSD	**Black Hills**	**54.33**	**62**		*e*P	**P**	**02 12 52.4**	**+1.0**		
	comp=Z,4.4nm,0.7s									
SVE	**Sverdlovsk**	**55.18**	**321**		*e*P	**P**	**02 12 58.2**	**+1.1**		
AGMN	**Agassiz Nation**	**55.52**	**54**		*e*P	**P**	**02 13 00.3**	**+0.6**		
	comp=Z,9.8nm,1.0s									
PV04	**Paradox Valley**	**55.68**	**70**		*e*pP	pP	02 13 08.7	-0.7		
PV01	**Paradox Valley**	**56.05**	**70**		*e*P	**P**	**02 13 04.3**	**+0.4**		
	comp=Z,441nm,0.9s									
SMCO	**Snowmass**	**56.19**	**68**		*e*P	**P**	**02 13 02.9**	**-2.2**		
SMCO					*e*pP	**pP**	**02 13 11.2**	**-2.1**		
ARU	**Arti**	**56.24**	**321**	*d*	*i*P	**P**	**02 13 03.3**	**-1.4**		
ARU							02 15 06.0			
ARU					S	**S**	**02 20 49.1**	**-3.3**		
ARU					pmax	pmax				
	comp=Z,16nm,1.7s									
ARU					MLR	MLR				
	comp=Z,482nm,17.0s									
KMI	**Kunming**	**56.27**	**267**		P	P	02 13 11.0	+5.4		
KMI					pP	pP	02 13 18.6	+4.8		
KMI					sP	sP	02 13 21.3	+4.3		
KMI					S	S	02 21 00.9	+6.9		
KMI					sS	sS	02 21 12.8	+5.3		
KMI					pmax	pmax				
	comp=Z,13nm,1.6s									
KMI					pmax	pmax				
	comp=Z,99nm,4.1s									
KMI					LR	LR				
	comp=N,850nm,18.7s									
KMI					LR	LR				
	comp=E,400nm,18.1s									
KMI					LR	LR				
	comp=Z,560nm,25.4s									
ISCO	**Idaho Springs**	**56.50**	**67**		*e*P	**P**	**02 13 07.1**	**-0.1**		
ISCO					*e**PP	**pP**	**02 13 13.9**	**-1.5**		
ISCO					pmax	pmax				
	comp=Z,24nm,1.5s									
ISCO	**Idaho Springs**	**56.50**	**67**		*e*P	**P**	**02 13 07.0**	**-0.1**		
	comp=Z,24nm,1.5s									
ISCO					*e*pP	**pP**	**02 13 13.9**	**-1.5**		
MVCO	**Mesa Verde**	**56.74**	**71**		*e*P	**P**	**02 13 08.9**	**0.0**		
	comp=Z,7.4nm,1.0s									
QIZ	**Qiongzhong**	**56.84**	**256**		P	**P**	**02 13 09.3**	**-0.1**		
QIZ					S	**S**	**02 21 03.0**	**+1.9**		
QIZ					SS	**SS**	**02 24 49.5**	**+0.2**		
QIZ					LR	LR				
	comp=N,260nm,16.0s									
QIZ					LR	LR				
	comp=E,170nm,16.7s									
QIZ					LR	LR				
	comp=Z,320nm,16.7s									
SDCO	**Great Sand Dun**	**58.02**	**69**		*e*P	**P**	**02 13 18.1**	**+0.1**		
	comp=Z,5.9nm,1.2s									
SDCO					*e*pP	**pP**	**02 13 24.5**	**-1.7**		
ECSD	**EROS Data Cent**	**58.40**	**58**		*e*P	**P**	**02 13 19.7**	**-0.5**		
	comp=Z,7.4nm,1.1s									
ECSD					*e*pP	**pP**	**02 13 26.2**	**-2.1**		
TKM2	**Tokmak 2**	**58.61**	**301**		*e*P	**P**	**02 13 21.2**	**-0.7**		
TKM2					pmax	pmax				
	comp=Z,15nm,1.6s									
TKM2	**Tokmak 2**	**58.61**	**301**		*e*P	**P**	**02 13 21.2**	**-0.7**		
	comp=Z,15nm,1.6s									
JOF	**Joensuu**	**58.86**	**339**		*e*P	**P**	**02 13 21.7**	**-1.3**		
JOF					pmax	pmax				
	comp=Z,3.0nm,0.5s									
JOF	**Joensuu**	**58.86**	**339**		*e*p	**P**	**02 13 21.7**	**-1.3**		
	comp=Z,2.8nm,0.5s									
TUC	**Tucson**	**58.99**	**77**		*e*P	**P**	**02 13 23.0**	**-1.5**		
TUC					*e**PP	**pP**	**02 13 31.1**	**-1.6**		
TUC	**Tucson**	**58.99**	**77**		*e*P	**P**	**02 13 23.0**	**-1.5**		
TUC					*e*pP	**pP**	**02 13 31.1**	**-1.6**		
FRU	**Bishkek**	**59.17**	**301**		*e*P	**P**	**02 13 26.0**	**+0.4**		
AAK	**Ala-Archa**	**59.38**	**301**		*e*P	**P**	**02 13 27.4**	**+0.2**		
AAK					*e**PP	**pP**	**02 13 34.6**	**-0.8**		
AAK	**Ala-Archa**	**59.38**	**301**		*e*P	**P**	**02 13 27.4**	**+0.2**		
AAK					*e*pP	**pP**	**02 13 34.6**	**-0.8**		
AAK					*es*P	**sP**	**02 13 37.7**	**-0.8**		
ANMO	**Albuquerque**	**59.52**	**72**		*e*P	**P**	**02 13 26.5**	**-1.8**		
	comp=Z,1.5nm,0.8s									
LAZ	**Ladron**	**59.53**	**72**		*e*P	**P**	**02 13 29.9**	**+1.4**		
	comp=Z,2.0nm,1.0s									
LSA	**Lhasa**	**59.68**	**280**		*e*P	**P**	**02 13 31.4**	**+1.6**		
LSA	**Lhasa**	**59.68**	**280**		*e*P	**P**	**02 13 31.4**	**+1.6**		
EKS2	**Erkin-Say**	**59.72**	**302**		*e*P	**P**	**02 13 28.9**	**-0.6**		
EKS2					pmax	pmax				
	comp=Z,6.0nm,0.9s									
EKS2	**Erkin-Say**	**59.72**	**302**		*e*P	**P**	**02 13 28.9**	**-0.6**		
	comp=Z,6.2nm,0.9s									
KAF	**Kangasniemi**	**60.60**	**341**		*e*P	**P**	**02 13 33.9**	**-1.1**		
KAF					pmax	pmax				
	comp=Z,2.0nm,0.5s									
KAF	**Kangasniemi**	**60.60**	**341**		*e*p	**P**	**02 13 33.9**	**-1.1**		
	comp=Z,1.8nm,0.5s									
KSH	**Kashi**	**60.90**	**298**		*e*P	P	02 13 41.5	+3.9		
KSH					*e*pP	pP	02 13 49.1	+3.3		
KSH					*es*P	sP	02 13 52.3	+3.3		
KSH					*e*PcP	**PcP**	**02 14 24.3**	**+3.3**		
KSH					*e*PP	PP	02 15 58.3	+6.8		
KSH					*e*ScP	**ScP**	**02 18 22.6**	**+2.3**		
KSH					*e*PcS	**PcS**	**02 18 25.6**	**+1.9**		
KSH					*e*S	**S**	**02 21 56.1**	**+2.3**		
KSH					*es*S	sS	02 22 09.1	+1.8		
KSH					*e*ScS	**ScS**	**02 23 27.1**	**+0.3**		
KSH					*e*SS	**SS**	**02 25 57.4**	**+4.9**		
KSH					pmax	pmax				
	comp=Z,7.0nm,0.8s									
KSH					pmax	pmax				
	comp=Z,110nm,5.0s									
KSH					LR	LR				
	comp=E,97nm,5.0s									
KSH					LR	LR				
	comp=Z,130nm,3.3s									
KK31	**Karatay Array**	**61.01**	**304**		P	**P**	**02 13 36.9**	**-1.3**		
KK31					pmax	pmax				
	comp=Z,2.0nm,0.6s									
KKAR	**Karatay Array**	**61.01**	**304**		*e*P	**P**	**02 13 36.9**	**-1.3**		
KKAR					pmax	pmax				
	comp=Z,3.0nm,0.8s									
KKAR	**Karatay Array**	**61.01**	**304**		*e*P	**P**	**02 13 36.9**	**-1.3**		
	comp=Z,3.2nm,0.8s									
AB31	**Akbulak array**	**61.16**	**315**		*i*P	**P**	**02 13 38.1**	**-0.9**		
AB31					pmax	pmax				
	comp=Z,1.0nm,0.4s									
ABKAR	**Akbulak array**	**61.16**	**315**		*e*P	**P**	**02 13 37.4**	**-1.6**		
FIA1	**FINESS Array S**	**61.26**	**341**		*e*P	**P**	**02 13 37.1**	**-2.4**		
FINES	**FINESS Array B**	**61.26**	**341**		P	**P**	**02 13 38.4**	**-1.1**		
FINES	**FINESS Array B**	**61.26**	**341**		P	**P**	**02 13 38.4**	**-1.1**		
	comp=Z,2.1nm,0.7s,baz=32,slow=7.6,SNR=9.1									
FINES					LR	LR	02 42 12.3			
	comp=Z,420nm,21.4s,baz=90,slow=38									
SCHQ	**Schefferville**	**62.18**	**33**		*e*P	**P**	**02 13 45.2**	**-0.6**		
	comp=Z,11nm,1.0s									
SCHQ	**Schefferville**	**62.18**	**33**		P	**P**	**02 13 44.5**	**-1.4**		
	comp=Z,6.4nm,0.8s,baz=330,slow=6.2,SNR=8.3									
SCHQ					LR	LR	02 43 53.4			
	comp=Z,338nm,18.3s,baz=333,slow=39									
MNTX	**Cornudas Mount**	**62.52**	**73**		*e*P	**P**	**02 13 48.1**	**-0.3**		
	comp=Z,3.8nm,0.8s									
CMAR	**Chiang Mai Arr**	**63.64**	**265**		P	**P**	**02 13 58.3**	**+2.3**		
CMAR	**Chiang Mai Arr**	**63.64**	**265**		P	**P**	**02 13 58.3**	**+2.3**		
	comp=Z,2.1nm,0.7s,baz=22,slow=7.6,SNR=7.8									
CMAR					LR	LR	02 41 40.9			
	comp=Z,332nm,19.7s,baz=52,slow=36									
HNR	**Honiara**	**63.64**	**190**		LR	LR	02 36 10.9			
	comp=Z,371nm,21.6s,baz=314,slow=31									
WMOK	**Wichita Mounta**	**63.91**	**66**		*e*P	**P**	**02 13 56.4**	**-1.2**		
WMOK					pmax	pmax				
	comp=Z,6.0nm,0.8s									
WMOK	**Wichita Mounta**	**63.91**	**66**		*e*P	**P**	**02 13 56.4**	**-1.2**		
	comp=Z,6.3nm,0.8s									
KKM	**Kota Kinabalu**	**63.98**	**242**		*e*P	**P**	**02 13 57.1**	**-1.2**		
NB2	**NORSAR Subarra**	**63.99**	**348**		P	**P**	**02 13 56.2**	**-1.6**		
	comp=Z,2.9nm,0.6s,baz=16,slow=6.5									
NOA	**NORSAR Array B**	**63.99**	**348**		P	**P**	**02 13 56.6**	**-1.2**		
NOA	**NORSAR Array B**	**63.99**	**348**		P	**P**	**02 13 56.6**	**-1.2**		
	comp=Z,2.8nm,0.5s,baz=17,slow=6.7,SNR=21									
NOA					LR	LR	02 42 05.4			
	comp=Z,123nm,21.9s,baz=20,slow=36									
HDIL	**Hopedale**	**64.39**	**56**		*e*P	**P**	**02 13 57.8**	**-2.9**		
	comp=Z,19nm,0.9s									
HDIL					*e*pP	**pP**	**02 14 06.2**	**-2.7**		
OBN	**Obninsk**	**64.47**	**332**		P	**P**	**02 14 01.0**	**+0.1**		
OBN							02 14 10.0			
OBN					*e*		02 14 30.2			
OBN					S	**S**	**02 22 40.0**	**+2.2**		
OBN					SS	SS	02 26 54.0	+6.9		
OBN					pmax	pmax				
	comp=Z,6.0nm,1.4s									
OBN					MLR	MLR				
	comp=Z,300nm,15.0s									
TXAR	**Lajitas Array**	**65.27**	**74**		P	**P**	**02 14 07.0**	**+0.3**		
TXAR	**Lajitas Array**	**65.27**	**74**		P	**P**	**02 14 07.0**	**+0.3**		
	comp=Z,1.2nm,0.5s,baz=296,slow=4.1,SNR=8.3									
PMG	**Port Moresby**	**65.82**	**204**		LR	LR	02 37 55.3			
	comp=Z,314nm,21.9s,baz=288,slow=31									
IZAR	**Zarasai**	**66.47**	**338**		*e*P	**P**	**02 14 13.7**	**-0.1**		
IZAR					AMB	AMB	02 14 23.6			
	comp=Z,3.9nm,1.0s									
JCT	**Junction City**	**66.57**	**70**		*e*P	**P**	**02 14 15.2**	**+0.2**		
JCT					pmax	pmax				
	comp=Z,23nm,1.4s									
JCT	**Junction City**	**66.57**	**70**		*e*P	**P**	**02 14 15.2**	**+0.2**		
	comp=Z,23nm,1.4s									
ISAL	**Salakas**	**66.66**	**338**		*e*P	**P**	**02 14 15.1**	**0.0**		
ISAL					AMB	AMB	02 14 25.0			

CLL				*e*pP		**pP**	02 15 02.0 -1.7
CLL				*e*			02 15 09.0
CLL				*e*			02 15 26.0
CLL				*e*PPP		PPP	02 19 24.0
CLL				*e*S		**S**	**02 24 21.0 -0.3**
CLL				*e*PS		**PnS**	**02 24 55.0 +0.5**
CLL				*e*SS		**SS**	**02 29 06.0 +4.5**
CLL				*e*SSS		SSS	02 32 12.0
CLL				Lm		MLR	02 54 00.0
	comp=Z,200nm,19.4s						
ANN	**Anapa**	**73.33 326**		*e*P		**P**	**02 14 57.0 +0.9**
ANN				MLR		MLR	
	comp=N,789nm,22.0s						
ANN				MLR		MLR	
	comp=E,282nm,22.0s						
ANN				MLR		MLR	
	comp=Z,474nm,22.0s						
UPC	**Upice**	**73.47 342**		*e*P		**P**	**02 14 58.4 +1.5**
UPC	**Upice**	**73.47 342**		*e*P		**P**	**02 14 58.4 +1.5**
DPC	**Dobruska-Polom**	**73.56 342**		*e*P		**P**	**02 14 59.4 +1.9**
DPC	**Dobruska-Polom**	**73.56 342**		*e*P		**P**	**02 14 59.4 +1.9**
PVCC	**Panska Ves**	**73.70 343**		AMS		AMS	02 55 00.0
	comp=Z,400nm,17.4s						
OKC	**Ostrava-Krasne**	**73.71 341**		*e*P		**P**	**02 14 58.8 +0.4**
OKC				*e*SS		SS	02 29 10.6 +1.1
OKC				MLR		MLR	
	comp=Z,400nm,19.4s						
OKC	**Ostrava-Krasne**	**73.71 341**		*e*P		**P**	**02 14 58.8 +0.4**
OKC				*e*SS		SS	02 29 10.6 +1.1
OKC				AMS		AMS	02 48 50.0
	comp=Z,400nm,19.4s						
KOLS	**Kolonicke sedl**	**73.71 338**		*e*P		**P**	**02 15 00.0 +1.5**
KOLS				pmax		pmax	
	comp=Z,2.0nm,1.1s						
KOLS	**Kolonicke sedl**	**73.71 338**		*e*P		**P**	**02 14 59.9 +1.5**
KRLC	**Kraliky**	**73.74 342**		*e*P		**P**	**02 15 01.7 +3.1**
KRLC	**Kraliky**	**73.74 342**		*e*pP		**P**	**02 15 01.7 +3.1**
MORC	**Moravsky Berou**	**73.89 341**	⇑	iP		**P**	**02 15 00.3 +0.8**
MORC	**Moravsky Berou**	**73.89 341**		*e*P		**P**	**02 15 00.1 +0.7**
	comp=Z,8.7nm,1.3s						
MORC	**Moravsky Berou**	**73.89 341**	⇑	*i*P		**P**	**02 15 00.3 +0.8**
CRVS	**Cervenica-Dubn**	**73.92 338**		*e*P		**P**	**02 14 59.8 +0.2**
CRVS				pmax		pmax	
	comp=Z,6.0nm,1.5s						
CRVS	**Cervenica-Dubn**	**73.92 338**		*e*P		**P**	**02 14 59.8 +0.2**
UZH	**Uzhgorod**	**73.99 338**		*e*P		**P**	**02 14 58.9 -1.1**
UZH				*e*			02 15 03.7
PRU	**Pruhonice**	**74.22 343**		*e*P		P	02 15 05.8 +4.5
PRU				MLR		MLR	
	comp=Z,300nm,16.5s						
PRU	**Pruhonice**	**74.22 343**		*e*pP		**P**	**02 15 05.8 +4.5**
PRU				AMS		AMS	02 49 30.0
	comp=Z,300nm,16.5s						
BUR08	**Bucovina Ar. S**	**74.24 336**		*e*P		**P**	**02 15 01.1 -0.6**
SIM	**Simferopol'**	**74.25 329**		*e*P		**P**	**02 15 04.0 +2.4**
SIM				*e*S		**S**	**02 24 35.0 +1.7**
SIM				MLR		MLR	
	comp=Z,500nm,16.0s						
BURAR	**Bucovina Array**	**74.26 336**	⇓	*i*P		**P**	**02 15 02.0 +0.2**
TRPA	**Tarpa**	**74.41 337**	⇓	*i*P		**P**	**02 15 03.3 +0.9**
VRAC	**Vranov**	**74.51 342**	⇓	*i*P		**P**	**02 15 03.0 -0.1**
TREC	**Trest**	**74.73 342**		*e*SS		SS	02 29 27.9 +2.9
TREC				AMS		AMS	02 55 20.0
	comp=Z,300nm,16.7s						
VYHS	**Vyhne**	**74.86 340**		*e*P		**P**	**02 15 08.2 +3.1**
VYHS				pmax		pmax	
	comp=Z,4.0nm,1.6s						
VYHS	**Vyhne**	**74.86 340**		*e*P		**P**	**02 15 08.2 +3.1**
GRF	**Grafenberg Arr**	**75.04 345**		*e*P		**P**	**02 15 06.6 +0.5**
GRF				pmax		pmax	
	comp=Z,6.0nm,1.3s						
GRF	**Grafenberg Arr**	**75.04 345**		*e*P		**P**	**02 15 06.6 +0.5**
	comp=Z,6.0nm,1.3s						
PSZ	**Piszkesteto**	**75.19 339**	⇓	P		**P**	**02 15 07.3 +0.2**
PSZ	**Piszkesteto**	**75.19 339**		*e*P		**P**	**02 15 06.5 -0.6**
	comp=Z,12nm,1.2s						
PSZ	**Piszkesteto**	**75.19 339**	⇓	*i*P		**P**	**02 15 07.3 +0.2**
KHC	**Kasperske Hory**	**75.21 344**		*e*P		**P**	**02 15 08.5 +1.3**
KHC				*e*			02 15 12.0
KHC				MLR		MLR	
	comp=Z,400nm,21.7s						
KHC	**Kasperske Hory**	**75.21 344**		*e*P		**P**	**02 15 07.6 +0.4**
	comp=Z,5.9nm,1.1s						
KHC	**Kasperske Hory**	**75.21 344**		*e*P		**P**	**02 15 08.5 +1.3**
KHC				*e*pP		**pP**	**02 15 12.0 -3.6**
KHC				AMS		AMS	02 50 10.0
	comp=Z,400nm,21.7s						
GERES	**GERESS Array B**	**75.47 344**		P		**P**	**02 15 08.4 -0.3**
GERES	**GERESS Array B**	**75.47 344**		P		**P**	**02 15 08.4 -0.3**
	comp=Z,0.7nm,0.6s,baz=33,slow=5.2,SNR=11						
GERES				LR		LR	02 50 56.9
	comp=Z,376nm,19.5s,baz=157,slow=38						
ZST	**Bratislava**	**75.48 341**		*e*P		**P**	**02 15 09.8 +1.1**
ZST				pmax		pmax	
	comp=Z,2.0nm,1.1s						
ZST	**Bratislava**	**75.48 341**		*e*P		**P**	**02 15 09.8 +1.1**
DRGR		**75.63 337**	⇑	P		**P**	**02 15 09.4 -0.2**
DRGR		**75.63 337**	⇑	*i*P		**P**	**02 15 09.4 -0.2**
DZM	**Mont Dzumac**	**75.76 183**		eLR		LR	02 38 38.4
	comp=Z,533nm,23.9s						
CFR	**Carcaliu**	**75.77 333**	⇓	P		**P**	**02 15 09.3 -1.0**
CFR	**Carcaliu**	**75.77 333**	⇓	*i*P		**P**	**02 15 09.3 -1.0**
MLR	**Muntele Rosu**	**76.06 334**	⇓	*i*P		**P**	**02 15 12.7 +0.5**
CTA	**Charters Tower**	**76.34 202**		LR		LR	02 45 35.6
	comp=Z,165nm,20.6s,baz=50,slow=33						
CTAO	**Charters Tower**	**76.34 202**		*e*P		**P**	**02 15 11.3 -2.5**
CTAO				*e*PP		**pP**	**02 15 19.7 -2.5**
CTAO				pmax		pmax	
	comp=Z,11nm,1.1s						
CTAO	**Charters Tower**	**76.34 202**		*e*P		**P**	**02 15 11.3 -2.5**
	comp=Z,12nm,1.1s						
CTAO				*e*pP		**pP**	**02 15 19.7 -2.5**
TIRR	**Tirgusor**	**76.36 332**	⇓	*i*P		P	02 15 07.2 -6.5
ARR	**Arges**	**76.51 335**	⇓	*i*P		**P**	**02 15 15.1 +0.5**
BZS	**Buzias**	**76.99 337**	⇓	P		**P**	**02 15 17.1 -0.2**
BZS	**Buzias**	**76.99 337**	⇓	*i*P		**P**	**02 15 17.1 -0.2**
SOKA	**Soboth**	**77.33 342**	⇓	*i*P		P	02 15 15.9 -3.3
	comp=Z,15nm,1.4s						
OBKA	**Obir**	**77.58 342**	⇑	*i*P		**P**	**02 15 20.0 -0.7**
	comp=Z,16nm,1.2s						
BR131	**Keskin Array S**	**79.12 327**		*e*P		**P**	**02 15 29.2 -0.2**
	comp=Z,3.3nm,0.8s						
BRTR	**Keskin Array B**	**79.12 327**		P		**P**	**02 15 29.6 +0.2**
BRTR	**Keskin Array B**	**79.12 327**		P		**P**	**02 15 29.6 +0.2**
	comp=Z,1.8nm,0.8s,baz=63,slow=3.7,SNR=11						
BRTR				LR		LR	02 55 54.3
	comp=Z,217nm,18.7s,baz=181,slow=40						
WRA	**Warramunga Arr**	**79.46 213**		P		**P**	**02 15 33.6 +2.5**
WRA	**Warramunga Arr**	**79.46 213**		P		**P**	**02 15 33.6 +2.5**
	comp=Z,1.9nm,0.8s,baz=28,slow=5.7,SNR=7.8						
VTS	**Vitosha**	**79.47 335**	⇓	P		**P**	**02 15 31.6 +0.4**
VTS	**Vitosha**	**79.47 335**	⇓	*i*P		**P**	**02 15 31.6 +0.4**
PPT	**Papeete**	**79.56 140**		LR		LR	02 44 34.4
	comp=Z,375nm,19.2s,baz=347,slow=31						
PPT2	**Papeete2**	**79.58 140**		eLR		LR	02 40 23.8
	comp=Z,475nm,22.5s,baz=335						
LPL	**La Plagne**	**79.75 348**		*e*P		P	02 15 36.8 +4.0
LPL	**La Plagne**	**79.75 348**		*e*P		P	02 15 36.8 +4.0
LPL	**La Plagne**	**79.75 348**		*e*P		P	02 15 36.8 +4.0
LPG	**La Plagne**	**79.77 347**		*e*P		P	02 15 37.1 +4.1
	comp=Z,27nm,1.4s						
LPG	**La Plagne**	**79.77 347**		*e*P		P	02 15 37.1 +4.1
LPG	**La Plagne**	**79.77 347**		*e*P		P	02 15 37.1 +4.1
AS31	**Alice Springs**	**83.08 212**		*e*P		**P**	**02 15 50.3 0.0**
ASAR	**Alice Springs**	**83.08 212**		P		**P**	**02 15 53.0 +2.7**
ASAR	**Alice Springs**	**83.08 212**		P		**P**	**02 15 53.0 +2.7**
	comp=Z,1.7nm,0.8s,baz=22,slow=4.9,SNR=14						
ASAR				LR		LR	02 48 04.6
	comp=Z,176nm,20.5s,baz=17,slow=32						
CSS	**Prodhromos**	**83.54 325**		*e*P		**P**	**02 15 51.5 -1.2**
	comp=Z,6.1nm,0.7s						
TBI	**Tubuai**	**84.89 142**		eLR		LR	02 42 52.2
	comp=Z,338nm,24.0s,baz=331						
ESDC	**Sonseca Array**	**86.53 355**		P		**P**	**02 16 08.4 +0.7**
ESDC	**Sonseca Array**	**86.53 355**		P		**P**	**02 16 08.4 +0.7**
	comp=Z,0.5nm,0.5s,baz=353,slow=4.8,SNR=6.7						
STKA	**Stephens Creek**	**88.76 203**		LR		LR	02 52 26.3
	comp=Z,226nm,19.2s,baz=23,slow=33						
KEST	**Kesra**	**88.96 344**		LR		LR	02 58 16.7
	comp=Z,76nm,20.4s,baz=277,slow=37						
QSPA	**South Pole Qui**	**143.72 180**		*e*PKPdf		PKPab	02 22 56.0 +0.7
MAW	**Mawson**	**143.96 219**		PKP		**PKPdf**	**02 22 59.3 +0.8**
MAW	**Mawson**	**143.96 219**		PKP		**PKPdf**	**02 22 59.3 +0.8**
	comp=Z,4.8nm,1.1s,baz=63,slow=2.3,SNR=4.1						

CSEM **17** *02:13:21.4, 37.88N×29.24E, h2km, MD2.4, After DDA*
DDA 17 02:13:21.4, 37.88N×29.24E, h2km, MD2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DNZL	**Cakiroluk**	**0.24**	**219**	*i* P	Pg	02 13 26.5	+0.1
DNZL				*i* S	Sg	02 13 30.8	+1.0
DNZL	**Cakiroluk**	**0.24**	**219**	*i* P	Pg	02 13 26.5	+0.1
DNZL				*i* S	Sg	02 13 30.8	+1.0
KHAL	**Karahalli**	**0.53**	**22**	*i* P	Pg	02 13 31.5	-0.2
KHAL				*i* S	Sg	02 13 39.0	+0.4
KHAL	**Karahalli**	**0.53**	**22**	*i* P	Pg	02 13 31.5	-0.2
KHAL				*i* S	Sg	02 13 39.0	+0.3
MANT	**Manisa**	**0.81**	**319**	*i* P	Pb	02 13 38.7	+0.1
MANT				*i* S	Sg	02 13 48.2	+0.1
MANT	**Manisa**	**0.81**	**319**	*i* P	Pb	02 13 38.7	+0.2
MANT				*i* S	Sg	02 13 48.2	+0.1
GDZ	**Gediz**	**1.22**	**9**	*i* P	Pn	02 13 45.9	+0.2
GDZ				*i* S	Sn	02 14 02.8	0.0
GDZ	**Gediz**	**1.22**	**9**	*i* P	Pn	02 13 45.9	+0.3
GDZ				*i* S	Sn	02 14 02.8	-0.1

CSEM **17** *02:15:59.5, 12.09N×43.97E, h4km, ML3.9, After DHMR*
DHMR 17 02:15:59.5±1.4, 12.09N×43.97E, h5km±6km, ML3.9, 1C-4D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**1.15**	**7**	⇑ *i*P	Pg	02 16 21.8	-0.1
TRBA				*i* S	Sg	02 16 37.2	+0.2
TRBA				AML	AML	02 16 38.5	
	comp=Z,2μm,0.3s						
ADEN	**Aden**	**1.21**	**55**	⇓ *i*P	Pg	02 16 22.0	-0.7
ADEN				*i* S	Sb	02 16 38.8	0.0
ADEN				AML	AML	02 16 46.6	
	comp=E,4μm,0.4s						
ADEN	**Aden**	**1.21**	**55**	⇓ *i*P	Pg	02 16 22.0	-0.7
ADEN				*i* S	Sb	02 16 38.8	0.0
	comp=E,2μm,0.4s						
UDYN	**Al 'Udayn**	**1.87**	**0**	⇓ *i*P	Pn	02 16 32.6	+0.1
UDYN				*i* S	Sg	02 16 59.6	-0.5
UDYN				AML	AML	02 17 10.1	
	comp=Z,775nm,0.7s						
UDYN	**Al 'Udayn**	**1.87**	**0**	⇓ *i*P	Pn	02 16 32.6	+0.2
UDYN				*i* S	Sg	02 16 59.6	-0.5
	comp=Z,387nm,0.7s						
LBOS		**2.17**	**35**	*i* P	Pn	02 16 38.1	+1.3
LBOS				*i* S	Sb	02 17 08.0	+0.8
BDHA	**Al Bayda'**	**2.44**	**40**	*i* P	Pb	02 16 42.4	-1.9
BDHA				*i* S	Sb	02 17 16.2	+1.3
BDHA				AML	AML	02 17 26.2	
	comp=E,835nm,0.6s						
BDHA	**Al Bayda'**	**2.44**	**40**	*i* P	Pb	02 16 42.4	-1.9
BDHA				*i* S	Sb	02 17 16.2	+1.3
	comp=E,418nm,0.6s						
DHBB	**Dhamar BB**	**2.50**	**9**	*i* P	Pb	02 16 44.0	-1.4
DHBB				*i* S	Sb	02 17 17.9	+1.0
HAJJ	**Hajjah**	**3.61**	**354**	*i* P	Pn	02 16 58.1	+1.7
HAJJ				*i* S	Sb	02 17 45.0	-3.5
HAJJ				AML	AML	02 17 56.7	
	comp=Z,528nm,0.3s						
HAJJ	**Hajjah**	**3.61**	**354**	*i* P	Pn	02 16 58.1	+1.7
HAJJ				*i* S	Sb	02 17 45.0	-3.5
	comp=Z,264nm,0.3s						

IDC **17** *02:25:36.4±0.5, 54.25N×169.17E, h0km, mb3.9/24, mb1 4.1/27, mb1mx4.1/31, mbtmp3.9/27, ML4.1/2, MS3.6/1, Ms1 3.6/1, ms1mx3.0/36, Error ellipse: s-maj=13.7km s-min=8.9km az=13.0*
ISCJB **17** *02:25:37.8±0.2, 54.14N±0.04×169.08E±0.03, h25km, mb4.0/55, MS3.5/1, Error ellipse: s-maj=5.3km s-min=2.1km az=5.9*
MOS **17** *02:25:37.2±0.9, 54.11N×169.20E, h21km, mb4.2/13, Error ellipse: s-maj=9.1km s-min=8.0km az=123.6*
NEIC **17** *02:25:37.7±1.8, 54.24N×169.18E, h9km±11km, mb4.3/25, Error ellipse: s-maj=6.0km s-min=3.0km az=172.0*
KRSC **17** *02:25:38.7±0.9, 53.94N×168.60E, h5km±5km, ML4.7*
ISC 17 02:25:39.0±0.4, 53.99N±0.05×169.11E±0.04, h25km, n179, σ1§46/214, mb4.1/55, 1C, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.19**	**305**	PN	**Pn**	**02 26 13.2**	**-0.6**
BKI				S	**Sn**	**02 26 38.8**	**-1.3**
BKI	**Bering**	**2.19**	**305**	*e*P	**Pn**	**02 26 13.2**	**-0.6**
BKI				*i* S	**Sn**	**02 26 38.8**	**-1.3**
FX1	**Attu Island--F**	**2.67**	**113**	Pn	**Pn**	**02 26 19.7**	**-0.7**
FX1				Sn	**Sn**	**02 26 52.7**	**+0.8**
FX1	**Attu Island--F**	**2.67**	**113**	Pn	**Pn**	**02 26 19.7**	**-0.7**
	73nm,0.3s,baz=333,slow=6.1,SNR=72						
FX1				Sn	**Sn**	**02 26 52.7**	**+0.8**
	179nm,0.3s,baz=166,slow=19,SNR=10.0						
KBTR	**Krutoberegovo**	**4.24**	**304**	PN	**Pn**	**02 26 43.1**	**+1.1**
KBTR	**Krutoberegovo**	**4.24**	**304**	*e*P	**Pn**	**02 26 43.1**	**+1.1**
KBTR				*i* S	**Sn**	**02 27 29.9**	**-0.7**
MKZ	**Mys Kozlova**	**4.36**	**280**	PN	**Pn**	**02 26 44.1**	**+0.5**
MKZ	**Mys Kozlova**	**4.36**	**280**	*e*P	**Pn**	**02 26 44.1**	**+0.5**
MKZ				*i* S	**Sn**	**02 27 30.7**	**-2.9**
SMKR	**Semkarok**	**5.08**	**304**	P	**Pn**	**02 26 54.2**	**+0.6**
SMKR				*i* S	**Sn**	**02 27 48.8**	**-2.6**
ZLN	**Zelenaya**	**5.19**	**296**	*e*P	**Pn**	**02 26 56.4**	**+1.2**
ZLN				*e*S	**Sn**	**02 27 52.8**	**-1.5**
BDR	**Baidarnaya**	**5.20**	**303**	P	**Pn**	**02 26 56.4**	**+1.1**
BDR				*i* S	**Sn**	**02 27 52.2**	**-2.2**
BZGR	**Bezymyannyi-Gr**	**5.23**	**295**	*e*P	**Pn**	**02 26 57.8**	**+2.2**
BZGR				*i* S	**Sn**	**02 27 55.5**	**+0.4**
SRKR	**Sorokina**	**5.26**	**304**	*e*P	**Pn**	**02 26 57.3**	**+1.3**
SRKR				*e*S	**Sn**	**02 27 55.0**	**-0.8**
LGNR	**Loginova**	**5.28**	**297**	P	**Pn**	**02 26 58.4**	**+1.9**
LGNR				*i* S	**Sn**	**02 27 56.1**	**-0.4**
BZMR	**Bezymyannaya**	**5.33**	**295**	*e*P	**Pn**	**02 26 58.9**	**+1.8**
BZMR				*i* S	**Sn**	**02 27 57.0**	**-0.8**
BZWR	**Bezymyannyi-We**	**5.34**	**295**	*e*P	**Pn**	**02 26 58.4**	**+1.2**
BZWR				*i* S	**Sn**	**02 27 55.7**	**-2.3**
TUMR	**Tumrok**	**5.37**	**288**	P	**Pn**	**02 26 58.5**	**+1.0**
TUMR				*i* S	**Sn**	**02 27 55.0**	**-3.5**
KLY	**Klyuchi**	**5.38**	**299**	PN	**Pn**	**02 26 58.7**	**+1.1**
KLY	**Klyuchi**	**5.38**	**299**	P	**Pn**	**02 26 58.7**	**+1.1**
KLY				*i* S	**Sn**	**02 27 55.9**	**-2.7**
KRSR	**Krestovskiy**	**5.39**	**298**	P	**Pn**	**02 27 00.2**	**+2.4**
KRSR				*i* S	**Sn**	**02 27 58.3**	**-0.7**
KMNR	**Kamenistaya**	**5.42**	**293**	*e*P	**Pn**	**02 26 58.2**	**-0.1**
KMNR				*e*S	**Sn**	**02 27 56.1**	**-3.7**
KPT	**Kopyto**	**5.49**	**295**	*e*P	**Pn**	**02 27 00.4**	**+1.2**
KPT				*e*S	**Sn**	**02 27 59.7**	**-1.8**
SPN	**Mys Shipunski**	**5.49**	**264**	PN	**Pn**	**02 26 59.9**	**+0.7**
SPN	**Mys Shipunski**	**5.49**	**264**	*e*P	**Pn**	**02 26 59.9**	**+0.7**
SPN				*i* S	**Sn**	**02 27 58.8**	**-2.7**
KOZR	**Kozyr**	**5.69**	**295**	PN	Pn	02 27 05.1	+3.2
KII	**Karymskiy**	**5.70**	**274**	P	**Pn**	**02 27 02.5**	**+0.4**
KII				*i* S	**Sn**	**02 28 02.9**	**-3.7**
KOZ	**Kozyrevsk**	**5.70**	**295**	P	Pn	02 27 05.1	+3.0
KOZ				*i* S	**Sn**	**02 28 06.4**	**-0.2**
SRDR	**Sredinnyy**	**5.87**	**297**	P	**Pn**	**02 27 06.3**	**+1.9**
SRDR				*i* S	**Sn**	**02 28 09.3**	**-1.5**
SDLR	**Sedlovina**	**6.13**	**267**	*e*P	**Pn**	**02 27 09.0**	**+1.0**
SDLR				*i* S	**Sn**	**02 28 15.1**	**-2.2**
UGLR	**Uglovaya**	**6.17**	**267**	*e*P	**Pn**	**02 27 10.0**	**+1.4**
UGLR				*e*S	**Sn**	**02 28 14.8**	**-3.6**
SMAR	**Somma**	**6.18**	**267**	*e*P	**Pn**	**02 27 09.7**	**+0.9**
SMAR				*e*S	**Sn**	**02 28 16.1**	**-2.6**
KRER	**Koryakskii**	**6.20**	**268**	*e*P	**Pn**	**02 27 10.6**	**+1.5**
KRER				*i* S	**Sn**	**02 28 17.0**	**-2.2**
AVH	**Avacha**	**6.21**	**267**	*e*P	**Pn**	**02 27 10.1**	**+1.3**
AVH				*i* S	**Sn**	**02 28 16.6**	**-2.8**
KOK	**Koryaka**	**6.27**	**268**	*e*P	**Pn**	**02 27 11.1**	**+1.2**
KOK				*e*S	**Sn**	**02 28 17.8**	**-3.0**
ESO	**Esso**	**6.30**	**292**	PN	**Pn**	**02 27 11.1**	**+0.8**
ESO	**Esso**	**6.30**	**292**	*e*P	**Pn**	**02 27 11.1**	**+0.8**
ESO				*e*S	**Sn**	**02 28 18.4**	**-3.0**
PET	**Petropavlovsk**	**6.32**	**265**	*e*PN	**Pn**	**02 27 11.9**	**+1.5**
PET	**Petropavlovsk**	**6.32**	**265**	P	**Pn**	**02 27 11.8**	**+1.4**
PET				*i* S	**Sn**	**02 28 19.8**	**-1.9**
RUS	**Russkaya**	**6.56**	**261**	PN	**Pn**	**02 27 14.7**	**+1.0**
RUS	**Russkaya**	**6.56**	**261**	P	**Pn**	**02 27 14.7**	**+1.0**
RUS				*i* S	**Sn**	**02 28 24.3**	**-3.3**
GNL	**Ganaly**	**6.62**	**272**	*e*P	**Pn**	**02 27 16.5**	**+1.8**
GNL				*i* S	**Sn**	**02 28 27.5**	**-1.8**
MTVR	**Mutnovka**	**6.73**	**261**	*e*P	**Pn**	**02 27 17.4**	**+1.1**
MTVR				*i* S	**Sn**	**02 28 29.4**	**-2.8**
GRL	**Gorelyy**	**6.78**	**262**	P	**Pn**	**02 27 18.2**	**+1.3**
GRL				*i* S	**Sn**	**02 28 29.6**	**-3.7**
PEA0B	**Petropavlovsk-**	**6.86**	**267**	*e*Pn	**Pn**	**02 27 19.6**	**+1.7**
PEA0B				*e*Sn	**Sn**	**02 28 36.5**	**+1.4**
PETK	**Petropavlovsk-**	**6.86**	**267**	PN	**Pn**	**02 27 19.6**	**+1.7**
PETK	**Petropavlovsk-**	**6.86**	**267**	Pn	**Pn**	**02 27 19.6**	**+1.7**
PETK				Sn	**Sn**	**02 28 36.1**	**+0.9**
PETK	**Petropavlovsk-**	**6.86**	**267**	Pn	**Pn**	**02 27 19.6**	**+1.7**
	11nm,0.3s,baz=99,slow=20,SNR=102						
PETK				Sn	**Sn**	**02 28 36.1**	**+0.9**
	5.3nm,0.3s,baz=20,slow=30,SNR=6.2						
ASAK	**Asacha**	**6.93**	**261**	*e*P	**Pn**	**02 27 20.8**	**+1.8**
ASAK				*i* S	**Sn**	**02 28 33.7**	**-3.2**
PALN	**Palana**	**7.18**	**319**	P	**Pn**	**02 27 23.2**	**+0.9**
APC	**Apacha**	**7.22**	**266**	*e*P	**Pn**	**02 27 24.2**	**+1.4**
APC				*i* S	**Sn**	**02 28 41.4**	**-2.5**
MIPR	**Malaya Ipel'ka**	**7.63**	**262**	P	**Pn**	**02 27 28.3**	**-0.2**
SKR	**Severo-Kuril's**	**8.62**	**253**	*e*PN	**Pn**	**02 27 40.2**	**-1.8**
SKR				pmax	pmax		
	comp=Z,30nm,0.5s						
SKR	**Severo-Kuril's**	**8.62**	**253**	P	**Pn**	**02 27 43.2**	**+1.2**
SKR				*i* S	**Sn**	**02 29 14.2**	**-4.1**
BILL	**Bilibino**	**14.16**	**356**	‖ *e*P	**Pn**	**02 28 58.0**	**+0.3**
BILL				pmax	pmax		
	comp=Z,50nm,1.4s						
BILL	**Bilibino**	**14.16**	**356**	*e*Pn	Pn	02 28 53.3	-4.4
	comp=Z,8.5nm,0.9s						
UNV	**Unalaska Valle**	**14.36**	**81**	*e*Pn	**Pn**	**02 29 00.9**	**+0.5**
AKUT	**Akutan**	**14.73**	**79**	*e*Pn	**Pn**	**02 29 06.4**	**+1.0**
TNA	**Tin City**	**16.24**	**35**	*e*Pn	**Pn**	**02 29 23.6**	**-1.6**
ASAJ	**Asahikawa**	**19.88**	**251**	P	**Pn**	**02 30 10.5**	**+0.6**
ASAJ	**Asahikawa**	**19.88**	**251**	P	**Pn**	**02 30 10.5**	**+0.6**
	baz=90,slow=8.9,SNR=2.2						
OHAK	**Old Harbor**	**21.30**	**66**	*e*P	**P**	**02 30 21.8**	**-1.7**
	comp=Z,16nm,0.9s						
PPLA	**Purkeypile**	**21.80**	**50**	*e*P	**P**	**02 30 28.2**	**-0.8**
	comp=Z,20nm,1.3s						
YAK	**Yakutsk**	**22.07**	**307**	*e*P	**P**	**02 30 27.9**	**-3.7**
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,26nm,0.9s						
TRF	**Thorofare Moun**	**22.71**	**49**	*e*P	**P**	**02 30 37.8**	**-1.0**
	comp=Z,7.4nm,0.9s						
MCK	**McKinley**	**23.34**	**49**	*e*P	**P**	**02 30 44.1**	**-1.0**
MCK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MCK	**McKinley**	**23.34**	**49**	*e*P	**P**	**02 30 44.1**	**-1.0**
	comp=Z,4.0nm,0.8s						
COLD	**Coldfoot**	**23.41**	**40**	*e*P	**P**	**02 30 44.5**	**-1.1**
	comp=Z,2.1nm,0.8s						
KLR	**Kul'dur**	**23.49**	**274**	*e*P	**P**	**02 30 43.8**	**-2.8**
SML	**Sawmill**	**23.54**	**54**	*e*P	**P**	**02 30 46.2**	**-0.8**
SML				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SML	**Sawmill**	**23.54**	**54**	*e*P	**P**	**02 30 46.2**	**-0.8**
	comp=Z,1.7nm,0.7s						
COLA	**College**	**23.93**	**46**	*e*P	**P**	**02 30 49.0**	**-1.6**
COLA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
COLA	**College**	**23.93**	**46**	*e*P	**P**	**02 30 49.0**	**-1.6**
	comp=Z,4.1nm,0.7s						
ILAR	**Eielson Array**	**24.33**	**46**	P	**P**	**02 30 52.9**	**-1.4**
ILAR	**Eielson Array**	**24.33**	**46**	P	**P**	**02 30 52.9**	**-1.4**
	comp=Z,1.6nm,0.6s,baz=257,slow=7.8,SNR=15						
DOT	**Dot Lake**	**25.51**	**49**	*e*P	**P**	**02 31 04.8**	**-0.3**
	comp=Z,9.6nm,0.9s						
USRK	**Ussuriysk Arra**	**25.92**	**263**	P	**P**	**02 31 10.1**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=90,slow=5.8,SNR=3.7					

MVCO	**Mesa Verde**	**56.74**	**71**	*e*P		**P**	**02 35 20.6**	**-0.2**
	comp=Z,1.6nm,0.5s								
SDCO	**Great Sand Dun**	**58.02**	**69**	*e*P		**P**	**02 35 30.7**	**+0.8**
TKM2	**Tokmak 2**	**58.60**	**301**	*e*P		**P**	**02 35 34.6**	**+0.8**
TKM2				pmax	pmax				
	comp=Z,1.0nm,0.5s								
TKM2	**Tokmak 2**	**58.60**	**301**	*e*P		**P**	**02 35 34.6**	**+0.8**
	comp=Z,0.9nm,0.5s								
AAK	**Ala-Archa**	**59.37**	**301**	*e*P		**P**	**02 35 39.6**	**+0.6**
AAK				pmax	pmax				
	comp=Z,2.0nm,0.9s								
AAK	**Ala-Archa**	**59.37**	**301**	*e*P		**P**	**02 35 39.6**	**+0.6**
	comp=Z,2.2nm,0.9s								
EKS2	**Erkin-Say**	**59.71**	**302**	*e*P		**P**	**02 35 41.4**	**+0.1**
EKS2				pmax	pmax				
	comp=Z,2.0nm,0.8s								
EKS2	**Erkin-Say**	**59.71**	**302**	*e*P		**P**	**02 35 41.4**	**+0.1**
	comp=Z,1.6nm,0.8s								
KKAR	**Karatay Array**	**61.00**	**304**	*e*P		**P**	**02 35 49.8**	**-0.2**
KKAR				pmax	pmax				
	comp=Z,1.0nm,0.8s								
KKAR	**Karatay Array**	**61.00**	**304**	*e*P		**P**	**02 35 49.8**	**-0.2**
	comp=Z,1.4nm,0.8s								
ABKAR	**Akbulak array**	**61.14**	**315**	*e*P		**P**	**02 35 50.8**	**0.0**
FINES	**FINESS Array B**	**61.24**	**341**	P		**P**	**02 35 51.4**	**+0.1**
FINES	**FINESS Array B**	**61.24**	**341**	P		**P**	**02 35 51.4**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=26,slow=7.9,SNR=4.9								
SCHQ	**Schefferville**	**62.16**	**33**	*e*P		**P**	**02 35 58.1**	**+0.4**
	comp=Z,7.2nm,1.2s								
SCHQ	**Schefferville**	**62.16**	**33**	P		**P**	**02 35 58.0**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=339,slow=8.6,SNR=4.0								
MNTX	**Cornudas Mount**	**62.52**	**73**	*e*P		**P**	**02 36 00.9**	**+0.5**
	comp=Z,2.3nm,1.0s								
CMAR	**Chiang Mai Arr**	**63.63**	**265**	P		**P**	**02 36 10.5**	**+2.6**
CMAR	**Chiang Mai Arr**	**63.63**	**265**	P		**P**	**02 36 10.5**	**+2.6**
	comp=Z,0.5nm,0.3s,baz=26,slow=6.4,SNR=3.0								
WMOK	**Wichita Mounta**	**63.90**	**66**	*e*P		P	02 36 06.4	-3.2	
WMOK				pmax	pmax				
	comp=Z,2.0nm,0.9s								
WMOK	**Wichita Mounta**	**63.90**	**66**	*e*P		P	02 36 06.4	-3.2	
	comp=Z,2.3nm,0.9s								
NB2	**NORSAR Subarra**	**63.98**	**348**	P		**P**	**02 36 08.9**	**-0.7**
	comp=Z,2.4nm,0.6s,baz=16,slow=6.9								
NOA	**NORSAR Array B**	**63.98**	**348**	P		**P**	**02 36 09.1**	**-0.6**
NOA	**NORSAR Array B**	**63.98**	**348**	P		**P**	**02 36 09.1**	**-0.6**
	comp=Z,2.3nm,0.6s,baz=17,slow=6.7,SNR=14								
HDIL	**Hopedale**	**64.39**	**56**	*e*P		**P**	**02 36 12.2**	**-0.4**
TXAR	**Lajitas Array**	**65.27**	**74**	P		**P**	**02 36 19.1**	**+0.5**
TXAR	**Lajitas Array**	**65.27**	**74**	P		**P**	**02 36 19.1**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=301,slow=4.7,SNR=7.0								
AKASG	**Malin Array Be**	**70.39**	**334**	P		**P**	**02 36 51.1**	**+0.7**
AKASG	**Malin Array Be**	**70.39**	**334**	P		**P**	**02 36 51.1**	**+0.7**
AKASG	**Malin Array Be**	**70.39**	**334**	P		**P**	**02 36 51.1**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=27,slow=6.9,SNR=4.1								
AK02	**Malin Array Si**	**70.43**	**334**	*e*P		**P**	**02 36 50.2**	**-0.4**
KBZ	**Khabaz**	**72.36**	**322**	P		**P**	**02 37 01.9**	**-0.5**
KBZ	**Khabaz**	**72.36**	**322**	P		**P**	**02 37 01.9**	**-0.5**
KBZ	**Khabaz**	**72.36**	**322**	P		**P**	**02 37 01.9**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=43,slow=1.9,SNR=5.0								
KWP	**Kalwaria Pacla**	**72.94**	**338**	*e*P		**P**	**02 37 05.9**	**+0.1**
KWP				pmax	pmax				
	comp=Z,12nm,1.2s								
KWP	**Kalwaria Pacla**	**72.94**	**338**	*e*P		**P**	**02 37 05.8**	**+0.1**
	comp=Z,12nm,1.2s								
MORC	**Moravsky Berou**	**73.87**	**341**	*e*P		**P**	**02 37 11.9**	**+0.6**
MORC				pmax	pmax				
	comp=Z,2.0nm,0.9s								
MORC	**Moravsky Berou**	**73.87**	**341**	*e*P		**P**	**02 37 11.9**	**+0.6**
	comp=Z,2.1nm,0.9s								
BUR08	**Bucovina Ar. S**	**74.22**	**336**	*e*P		**P**	**02 37 13.9**	**+0.4**
GERES	**GERESS Array B**	**75.45**	**344**	P		**P**	**02 37 20.2**	**-0.3**
GERES	**GERESS Array B**	**75.45**	**344**	P		**P**	**02 37 20.2**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=23,slow=5.3,SNR=3.4								
BR131	**Keskin Array S**	**79.10**	**327**	*e*P		**P**	**02 37 42.0**	**+0.7**
	comp=Z,1.4nm,0.8s								
BRTR	**Keskin Array B**	**79.10**	**327**	P		**P**	**02 37 41.6**	**+0.4**
BRTR	**Keskin Array B**	**79.10**	**327**	P		**P**	**02 37 41.6**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=43,slow=3.5,SNR=8.2								
WRA	**Warramunga Arr**	**79.47**	**213**	P		**P**	**02 37 45.5**	**+2.3**
WRA	**Warramunga Arr**	**79.47**	**213**	P		**P**	**02 37 45.5**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=30,slow=6.5,SNR=3.0								
ASAR	**Alice Springs**	**83.09**	**212**	P		**P**	**02 38 04.8**	**+2.5**
ASAR	**Alice Springs**	**83.09**	**212**	P		**P**	**02 38 04.8**	**+2.5**
	comp=Z,1.1nm,0.8s,baz=19,slow=5.3,SNR=9.5								
ESDC	**Sonseca Array**	**86.51**	**355**	P		**P**	**02 38 19.9**	**+0.3**
ESDC	**Sonseca Array**	**86.51**	**355**	P		**P**	**02 38 19.9**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=351,slow=5.0,SNR=3.3								

NIED ***17*** *02:43:00, 47.00N×153.00E, h5km, Mw4.3 Best double couple: M◎3.25000×10^15 NP1:φ=35.00000°, δ80.00000°, λ62.00000°. NP2:φ=288.00000°, δ29.00000°, λ160.00000°.*
JMA ***17*** *02:43:04.8±0.8, 46.99N×152.97E, h30km, M4.7*
ISCJB ***17*** *02:43:05.7±0.5, 46.67N±0.08×152.97E±0.09, h40km, mb3.9/19, MS3.5/4, Error ellipse: s-maj=13.7km s-min=4.0km az=141.1*
MOS ***17*** *02:43:06.1±1.3, 46.73N×153.03E, h44km, mb4.2/13, Error ellipse: s-maj=12.9km s-min=7.6km az=65.9*
SKHL ***17*** *02:43:07.5±0.3, 46.81N×153.13E, h58km±19km, mb5.1/3, msh5.2/1*
IDC ***17*** *02:43:09.9±2.8, 46.77N×152.84E, h60km±25km, mb3.6/17, mb1 3.9/20, mb1mx3.8/29, mbtmp3.7/20, ML3.6/3, MS3.5/6, Ms1 3.6/6, ms1mx3.2/40, Error ellipse: s-maj=20.3km s-min=12.9km az=142.0*

ISC 17 02:43:07.0±0.7, 46.6N±0.1×153.08E±0.09, h40km, n72, σ1°59/75, mb3.9/19, MS3.5/4, 7C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**3.88**	**252**	*e*PN		**Pn**	**02 44 05.5**	**+1.4**
KUR				*e*S		**Sn**	**02 44 49.2**	**+0.8**
KUR				pmax	pmax			
	comp=N,110nm,0.4s							
KUR				pmax	pmax			
	comp=Z,240nm,0.4s							
KUR				pmax	pmax			
	comp=E,110nm,0.3s							
KUR				smax	smax			
	comp=N,2μm,2.0s							
KUR				smax	smax			
	comp=N,530nm,0.5s							
KUR				smax	smax			
	comp=E,570nm,0.5s							
KUR	**Kuril'sk**	**3.88**	**252**	*e*P		**Pn**	**02 44 05.5**	**+1.4**
KUR				AMB	AMB		02 44 07.7	
	comp=E,110nm,0.3s							
KUR				AMB	AMB		02 44 07.7	
	comp=E,110nm,0.4s							
KUR				AMB	AMB		02 44 07.7	
	comp=E,240nm,0.4s							
KUR				*e*S		**Sn**	**02 44 49.2**	**+0.8**
KUR				A	A		02 44 55.0	
	comp=E,2μm,2.0s							
KUR				A	A		02 44 58.3	
	comp=E,530nm,0.5s							
KUR				A	A		02 44 58.3	
	comp=E,210nm,0.5s							
SKR	**Severo-Kuril's**	**4.58**	**25**	*e*PN		Pn	02 44 10.4	-3.3
SKR				pmax	pmax			
	comp=N,100nm,0.8s							
SKR				pmax	pmax			
	comp=Z,140nm,0.8s							
SKR	**Severo-Kuril's**	**4.58**	**25**	*e*P		Pn	02 44 10.4	-3.3
SKR				AMB	AMB		02 44 12.5	
	comp=Z,100nm,0.8s							
SKR				AMB	AMB		02 44 12.5	
	comp=Z,140nm,0.8s							
SKR				*e*S		Sn	02 44 57.4	-8.2
SKR				A	A		02 45 22.1	
	comp=Z,470nm,0.8s							
SKR				A	A		02 45 22.1	
	comp=Z,140nm,0.8s							
SKR				A	A		02 45 22.1	
	comp=Z,310nm,0.8s							
YUK	**Yuzh-Kuril'sk**	**5.69**	**246**	*d*	*i* PN	**Pn**	**02 44 30.7**	**+1.7**
YUK					*i* S	**Sn**	**02 45 36.4**	**+3.4**
YUK				pmax	pmax			
	comp=N,26nm,0.3s							
YUK				pmax	pmax			
	comp=E,27nm,0.3s							
YUK				pmax	pmax			
	comp=Z,115nm,0.3s							
YUK				smax	smax			
	comp=E,65nm,0.3s							
YUK				smax	smax			
	comp=N,175nm,0.6s							
YUK	**Yuzh-Kuril'sk**	**5.69**	**246**		*i* P	**Pn**	**02 44 30.7**	**+1.7**
YUK				AMB	AMB		02 44 34.1	
	comp=N,26nm,0.3s							
YUK				AMB	AMB		02 44 34.1	
	comp=N,27nm,0.3s							
YUK				AMB	AMB		02 44 34.1	
	comp=N,115nm,0.3s							
YUK					*i* S	**Sn**	**02 45 36.4**	**+3.4**
YUK				A	A		02 45 57.9	
	comp=N,180nm,0.3s							
YUK				A	A		02 45 57.9	
	comp=N,70nm,0.3s							
NEM2	**Nemuro 2**	**6.11**	**241**	P		**Pn**	**02 44 33.9**	**-0.9**
NEM2				*e*S		**Sn**	**02 45 40.4**	**-3.0**
JRA	**Rausu**	**6.21**	**248**	P		**Pn**	**02 44 37.8**	**+1.8**
JNK	**Nakash**	**6.63**	**246**	P		**Pn**	**02 44 43.1**	**+1.2**
JAK	**Akkeshi**	**6.96**	**242**	P		**Pn**	**02 44 45.3**	**-1.0**
JAK				*e*S		**Sn**	**02 45 59.7**	**-4.4**
JTKR	**Abashiri--Toko**	**6.98**	**251**	P		**Pn**	**02 44 48.3**	**+1.7**
YSS	**Yuzh-Sakhalins**	**7.11**	**277**	PN		Pn	02 44 52.6	+4.2
YSS	**Yuzh-Sakhalins**	**7.11**	**277**	*e*P		Pn	02 44 52.6	+4.2
PETK	**Petropavlovsk-**	**7.19**	**23**	*e*PN		**Pn**	**02 44 50.0**	**+0.5**
PETK				pmax	pmax			
	comp=Z,1.0nm,0.3s							
PETK	**Petropavlovsk-**	**7.19**	**23**	P		**Pn**	**02 44 49.6**	**+0.1**
	comp=Z,1.0nm,0.3s,baz=185,slow=14,SNR=25							
PETK				LR	LR		02 47 37.6	
	comp=Z,235nm,19.7s,baz=272,slow=38							
JMP	**Maruseppu**	**7.32**	**253**	P		**Pn**	**02 44 53.4**	**+2.0**
JAR	**Ashorobuto**	**7.38**	**247**	P		**Pn**	**02 44 53.4**	**+1.3**
JAR				*e*S		**Sn**	**02 46 13.9**	**-0.6**
JOB	**Onbets**	**7.54**	**244**	*e*S		**Sn**	**02 46 15.9**	**-2.5**
JKK2	**Kamakawa 2**	**7.78**	**253**	P		**Pn**	**02 45 00.0**	**+2.3**
ASAJ	**Asahikawa**	**7.79**	**255**	P		**Pn**	**02 45 00.7**	**+3.0**
ASAJ	**Asahikawa**	**7.79**	**255**	P		**Pn**	**02 45 00.1**	**+2.4**
	comp=Z,2.5nm,0.3s,baz=86,slow=16,SNR=13							
JCH	**Churui**	**7.99**	**244**	P		**Pn**	**02 45 00.5**	**0.0**
JCH				*e*S		**Sn**	**02 46 24.8**	**-4.6**
JEM	**Erimo**	**8.45**	**241**	P		**Pn**	**02 45 07.7**	**+0.9**
ERM	**Erimo**	**8.45**	**241**	*e*PN		**Pn**	**02 45 07.3**	**+0.5**
JBT2	**Biratori 2**	**8.53**	**247**	P		**Pn**	**02 45 08.9**	**+1.0**
JNBK	**Urakawa-nobuka**	**8.55**	**244**	P		**Pn**	**02 45 07.1**	**-1.0**
JNBK				*e*S		Sn	02 46 37.5	-5.7
JKB	**Kayabe**	**9.83**	**246**	P		**Pn**	**02 45 24.3**	**-1.5**
JKB				*e*S		Sn	02 47 07.4	-7.4
JTM	**Tenmabayashi**	**10.44**	**241**	P		**Pn**	**02 45 32.0**	**-2.1**
JTM				*e*S		Sn	02 47 21.4	-8.3
JRG	**Rokugo**	**11.59**	**236**	P		**Pn**	**02 45 47.6**	**-2.2**
MJA0	**Matsu Arr-Jizo**	**14.93**	**233**	*e*P		**Pn**	**02 46 37.5**	**+2.2**
MAT	**Matsushiro**	**14.96**	**233**	P		**P**	**02 46 42.2**	**+1.7**
MJAR	**Matsushiro Arr**	**14.96**	**233**	LR		LR	02 51 49.2	
	comp=Z,227nm,19.0s,baz=25,slow=35							
USRK	**Ussuriysk Arra**	**15.00**	**269**	P		**Pn**	**02 46 36.2**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=73,slow=13,SNR=4.3							
SEY	**Seymchan**	**16.40**	**359**	*e*P		**Pn**	**02 46 52.5**	**-1.5**
KSRS	**Korea Array**	**20.72**	**253**	P		**P**	**02 47 43.8**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=66,slow=11,SNR=4.3							
JNU	**Nakatsue**	**21.61**	**239**	LR		LR	02 55 56.4	
	comp=Z,132nm,20.4s,baz=233,slow=36							
BILL	**Bilibino**	**22.57**	**13**	P		**P**	**02 48 02.0**	**-1.5**
BILL				*e*			02 48 15.6	
BILL				*e*			02 48 19.7	
BILL				*e*			02 48 24.8	
BILL				*e*			02 52 02.5	
BILL				pmax	pmax			
	comp=Z,3.0nm,1.0s							
COLA	**College**	**36.29**	**38**	*e*P		**P**	**02 50 06.6**	**+0.4**
ILAR	**Eielson Array**	**36.70**	**38**	P		**P**	**02 50 10.4**	**+0.7**
	comp=Z,1.5nm,1.0s,baz=265,slow=7.4,SNR=15							
INK	**Inuvik**	**41.81**	**32**	P		**P**	**02 50 52.5**	**+0.2**
	comp=Z,4.1nm,0.8s,baz=285,slow=7.6,SNR=20							
MKAR	**Makanchi Array**	**47.01**	**297**	P		**P**	**02 51 32.5**	**-1.6**
MKAR							02 53 05.1	
MKAR	**Makanchi Array**	**47.01**	**297**	P		**P**	**02 51 32.5**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=63,slow=7.4,SNR=4.0							
MKAR				PcP		**PcP**	**02 53 05.1**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=73,slow=3.6,SNR=2.7							
KURK	**Kurchatov**	**47.45**	**304**	*e*P		**P**	**02 51 36.2**	**-1.2**
KURK				pmax	pmax			
	comp=Z,2.0nm,1.2s							
YKA	**Yellowknife Ar**	**51.08**	**37**	P		**P**	**02 52 05.5**	**+0.5**
	comp=Z,1.7nm,0.8s,baz=298,slow=7.5,SNR=14							
CMAR	**Chiang Mai Arr**	**52.31**	**256**	P		**P**	**02 52 15.8**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=40,slow=7.1,SNR=4.3							
CMAR				LR	LR		03 16 29.4	
	comp=Z,40nm,19.9s,baz=315,slow=38							
ARCES	**ARCESS Array B**	**58.01**	**341**	P		**P**	**02 52 54.0**	**-1.2**
	comp=Z,1.4nm,0.8s,baz=27,slow=8.2,SNR=4.1							
ARCES				LR	LR		03 20 07.4	
	comp=Z,69nm,19.7s,baz=356,slow=38							
SUMG	**Summit**	**60.88**	**4**	*i* P		**P**	**02 53 15.7**	**+0.3**
SUMG				pmax	pmax			
	comp=Z,6.0nm,1.0s							
SUMG	**Summit**	**60.88**	**4**	*i* P		**P**	**02 53 15.7**	**+0.3**
	comp=Z,5.8nm,1.0s							
NVAR	**Mina Array Bea**	**62.53**	**62**	P		**P**	**02 53 28.1**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=294,slow=7.7,SNR=6.6							
FINES	**FINESS Array B**	**64.19**	**335**	P		**P**	**02 53 35.8**	**-1.4**
	comp=Z,0.8nm,0.4s,baz=38,slow=7.1,SNR=20							
PDAR	**Pinedale Array**	**64.87**	**54**	P		**P**	**02 53 43.0**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=318,slow=2.0,SNR=4.9							
WRA	**Warramunga Arr**	**68.34**	**199**	P		**P**	**02 54 04.6**	**+0.5**
	comp=Z,2.6nm,1.2s,baz=18,slow=6.7,SNR=3.7							
NB2	**NORSAR Subarra**	**68.39**	**341**	P		**P**	**02 54 02.8**	**-1.3**
	comp=Z,3.3nm,0.7s,baz=28,slow=6.5							
NOA	**NORSAR Array B**	**68.39**	**341**	P		**P**	**02 54 03.2**	**-0.9**
	comp=Z,3.1nm,0.8s,baz=29,slow=6.3,SNR=14							
NOA				LR	LR		03 31 22.6	
	comp=Z,27nm,18.3s,baz=90,slow=42							
AKASG	**Malin Array Be**	**71.68**	**326**	P		**P**	**02 54 23.0**	**-1.4**
AKASG	**Malin Array Be**	**71.68**	**326**	P		**P**	**02 54 23.0**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=35,slow=6.1,SNR=5.3							
KIEV	**Kiev**	**71.69**	**326**	*e*P		**P**	**02 54 23.0**	**-1.4**
ASAR	**Alice Springs**	**72.03**	**198**	P		**P**	**02 54 28.1**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=12,slow=5.6,SNR=14							
BURAR	**Bucovina Array**	**75.72**	**327**	*i* P		**P**	**02 54 47.7**	**-0.6**
TESR	**Tescani**	**76.08**	**325**	*i* P		**P**	**02 54 49.4**	**-0.8**
TRPA	**Tarpa**	**76.29**	**328**	*i* P		**P**	**02 54 51.3**	**0.0**
MORC	**Moravsky Berou**	**76.59**	**332**	*i* P		**P**	**02 54 53.1**	**0.0**
MORC	**Moravsky Berou**	**76.59**	**332**	*i* P		**P**	**02 54 53.1**	**0.0**
MLR	**Muntele Rosu**	**77.20**	**325**	*i* P		**P**	**02 54 57.2**	**+0.5**
DRGR		**77.35**	**328**	*i* P		**P**	**02 54 57.3**	**-0.1**
DRGR		**77.35**	**328**	*i* P		**P**	**02 54 57.3**	**-0.1**
TXAR	**Lajitas Array**	**77.60**	**60**	P		**P**	**02 54 59.9**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=294,slow=4.3,SNR=9.1							
ARR	**Arges**	**77.82**	**326**	*i* P		**P**	**02 55 01.2**	**+1.1**
BRTR	**Keskin Array B**	**78.50**	**317**	P		**P**	**02 55 03.9**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=44,slow=4.4,SNR=5.9							
GERES	**GERESS Array B**	**78.61**	**334**	P		**P**	**02 55 03.7**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=20,slow=4.3,SNR=6.4							
VTS	**Vitosha**	**80.70**	**325**	*i* P		**P**	**02 55 15.6**	**-0.4**
VTS	**Vitosha**	**80.70**	**325**	*i* P		**P**	**02 55 15.6**	**-0.4**

CSEM ***17*** *02:52:56.3, 46.39N×13.68E, h9km, ML0.6, After LJU*

LJU 17 02:52:56.3, 46.39N×13.68E, h9km, ML0.6, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CADS	**Cadrg**	**0.17**	**167**	*i* Pg		Pg	02 52 59.9	-0.1
CADS				*i* Sg		Sg	02 53 02.7	+0.2
CADS								
	comp=Z,3.0nm,0.1s							
CADS	**Cadrg**	**0.17**	**167**	*i* Pg		Pg	02 52 59.9	-0.1
CADS				*i* Sg		Sg	02 53 02.7	+0.2
	comp=Z,3.0nm,0.1s							
ROBS	**Robic**	**0.19**	**219**	*i* Pg		Pg	02 53 00.2	0.0
ROBS				*i* Sg		Sg	02 53 03.4	+0.4
ROBS	**Robic**	**0.19**	**219**	*i* Pg		Pg	02 53 00.2	-0.1
ROBS				*i* Sg		Sg	02 53 03.3	+0.3
GORS	**Gorjuse**	**0.23**	**109**	*i* Pg		Pg	02 53 01.0	-0.1
GORS				*i* Sg		Sg	02 53 04.7	+0.3
GORS								
	comp=Z,3.0nm,0.1s							
GORS	**Gorjuse**	**0.23**	**109**	*i* Pg		Pg	02 53 01.0	-0.1
GORS				*i* Sg		Sg	02 53 04.7	+0.3
	comp=Z,3.0nm,0.1s							
VOJS	**Vojsko**	**0.39**	**159**	*i* Pg		Pg	02 53 04.0	-0.1
VOJS	**Vojsko**	**0.39**	**159**	*i* Pg		Pg	02 53 04.0	-0.1
CRNS	**Crni Vrh**	**0.51**	**128**	*i* Pg		Pg	02 53 06.5	+0.3

KRSC 17 02:57:15.9±1.0, 54.07N×168.74E, h10km±10km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
BKI	**Bering**	**1.97**	**306**	P		Pn	02 57 49.7	+0.4
BKI				*e*S		Sn	02 58 14.6	+0.6
KBTR	**Krutoberegovo**	**4.02**	**305**	P		Pn	02 58 19.4	+2.0
MKZ	**Mys Kozlova**	**4.13**	**280**	*e*P		Pn	02 58 21.2	+2.2
MKZ				*e*S		Sn	02 59 07.6	+0.3
TUMR	**Tumrok**	**5.13**	**287**	P		Pn	02 58 35.4	+2.5
SPN	**Mys Shipunski**	**5.28**	**263**	S		Sn	02 59 37.2	+1.5
SDLR	**Sedlovina**	**5.91**	**266**	P		Pn	02 58 46.5	+2.9
SDLR				S		Sn	02 59 52.4	+0.9
UGLR	**Uglovaya**	**5.96**	**266**	P		Pn	02 58 47.9	+3.6
SMAR	**Somma**	**5.96**	**266**	P		Pn	02 58 47.0	+2.5
KRER	**Koryakskii**	**5.99**	**267**	P		Pn	02 58 47.6	+2.8
AVH	**Avacha**	**6.00**	**266**	P		Pn	02 58 47.6	+2.8
RUS	**Russkaya**	**6.35**	**259**	P		Pn	02 58 52.2	+2.7
GNL	**Ganaly**	**6.40**	**271**	P		Pn	02 58 54.2	+3.9
MTVR	**Mutnovka**	**6.53**	**260**	P		Pn	02 58 55.2	+3.1
MTVR				S		Sn	03 00 07.0	+0.3
ASAK	**Asacha**	**6.72**	**260**	P		Pn	02 58 58.6	+3.9

ISCJB ***17*** *02:59:57.8±0.8, 37.50N±0.05×35.60E±0.06, h22km±11km, Error ellipse: s-maj=8.3km s-min=7.0km az=44.3*
ISK ***17*** *02:59:57.2, 37.56N×35.57E, h15km, MD2.5*
CSEM ***17*** *02:59:57.6±0.3, 37.53N×35.58E, h20km, MD2.5, Error ellipse: s-maj=7.5km s-min=4.6km az=34.0*
DDA ***17*** *02:59:59.3, 37.36N×35.53E, h7km, MD2.5*

ISC 17 02:59:57.4±1.0, 37.49N±0.04×35.59E±0.04, h23km±9km, n11, σ0°83/21, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KOZT	**Kozan**	**0.19**	**93**	*e*PG		**Pb**	**03 00 02.9**	**+0.1**
KOZT				*e*SG		**Sb**	**03 00 06.2**	**-0.2**
KOZT	**Kozan**	**0.19**	**93**	*e*Pg		**Pb**	**03 00 02.9**	**+0.1**
KOZT				*e*Sg		**Sb**	**03 00 06.2**	**-0.2**
CEYT	**Ceyhan**	**0.50**	**165**	*e*PG		**Pb**	**03 00 08.2**	**+0.7**
CEYT				*e*SG		**Sn**	**03 00 17.4**	**+0.4**
CEYT	**Ceyhan**	**0.50**	**165**	*e*Pg		**Pb**	**03 00 08.2**	**+0.7**
CEYT				*e*Sg		**Sn**	**03 00 17.4**	**+0.4**
YURE	**YUREGIR**	**0.66**	**177**	*i* P		**Pb**	**03 00 10.7**	**+0.4**
YURE				*i* S		**Sb**	**03 00 17.3**	**-1.8**
YURE	**YUREGIR**	**0.66**	**177**	*i* P		**Pb**	**03 00 10.7**	**+0.4**
YURE				*i* S		**Sb**	**03 00 17.3**	**-1.8**
GULE	**Gulek**	**0.68**	**253**	*i* P		**Pb**	**03 00 10.6**	**0.0**
GULE				*i* S		**Sb**	**03 00 20.7**	**+1.0**
GULE	**Gulek**	**0.68**	**253**	*i* P		**Pb**	**03 00 10.6**	**0.0**
GULE				*i* S		**Sb**	**03 00 20.7**	**+1.0**
NIG	**Nigde**	**0.99**	**309**	*e*PG		**Pn**	**03 00 16.0**	**-0.2**
NIG				*e*SG		**Sn**	**03 00 29.0**	**-0.6**
NIG	**Nigde**	**0.99**	**309**	*e*Pg		**Pn**	**03 00 16.0**	**-0.2**
NIG				*e*Sg		**Sn**	**03 00 29.0**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.13**	**35**	*e*PN		**Pn**	**03 00 18.4**	**+0.4**

IDC 17 04:23:28.0±1.4, 13.65N×145.16E, h85km±9km, mb3.3/6, mb1 3.6/6, mb1mx3.3/26, mbtmp3.3/6, Error ellipse: s-maj=41.1km s-min=22.8km az=107.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.29**	**258**	P		Pn	04 23 42.1	+1.4
	297nm,0.3s,baz=136,slow=7.1,SNR=124							
GUMO				S		Sn	04 23 52.3	+2.0
	2μm,0.3s,baz=12,slow=20,SNR=164							
WRA	**Warramunga Arr**	**35.04**	**198**	P		P	04 30 12.4	-0.5
	0.6nm,0.6s,baz=21,slow=9.8,SNR=7.4							

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.44**	**233**	P	Pb	04 33 18.2	+0.8
MKZ				*i* S	Sb	04 33 24.7	+1.2
TUMR	**Tumrok**	**1.34**	**291**	P	Pn	04 33 32.4	+0.3
TUMR				*i* S	Sn	04 33 49.4	-0.1
KBTR	**Krutoberegovo**	**1.42**	**11**	P	Pn	04 33 33.6	+0.6
KBTR				*i* S	Sb	04 33 51.6	-0.2
KBG	**Krutoberegovo**	**1.45**	**8**	P	Pn	04 33 33.8	+0.3
KBG				*i* S	Sb	04 33 52.9	+0.1
BZGR	**Bezymyannyi-Gr**	**1.46**	**321**	P	Pn	04 33 34.1	+0.3
BZGR				*i* S	Sb	04 33 52.9	-0.3
ZLN	**Zelenaya**	**1.48**	**325**	P	Pb	04 33 34.8	-0.6
ZLN				*i* S	Sb	04 33 54.3	+0.4
KMNR	**Kamenistaya**	**1.52**	**309**	P	Pn	04 33 34.9	+0.3
KMNR				*i* S	Sb	04 33 54.5	-0.5
BZMR	**Bezymyannaya**	**1.53**	**318**	P	Pn	04 33 35.4	+0.6
BZMR				*i* S	Sb	04 33 55.3	-0.2
BZWR	**Bezymyannyi-We**	**1.55**	**318**	P	Pn	04 33 35.4	+0.3
LGNR	**Loginova**	**1.57**	**324**	P	Pb	04 33 36.5	-0.7
LGNR				*i* S	Sb	04 33 57.4	+0.5
CIRR	**Tsirk**	**1.58**	**326**	P	Pn	04 33 36.2	+0.7
KIRR	**Kirishev**	**1.60**	**316**	P	Pb	04 33 37.2	-0.4
KIRR				*i* S	Sb	04 33 58.5	+1.0
KPT	**Kopyto**	**1.66**	**315**	P	Pn	04 33 37.3	+0.8
KPT				*i* S	Sb	04 33 58.9	-0.2
KRSR	**Krestovskiy**	**1.72**	**325**	P	Pn	04 33 37.6	+0.2
KRSR				*i* S	Sn	04 33 59.3	+0.4
KLY	**Klyuchi**	**1.77**	**328**	P	Pn	04 33 37.8	-0.1
KLY				*i* S	Sn	04 33 59.7	-0.1
SMKR	**Semkarok**	**1.83**	**345**	P	Pn	04 33 39.4	+0.6
SMKR				*i* S	Sn	04 34 02.1	+0.6
BDR	**Baidarnaya**	**1.86**	**341**	P	Pn	04 33 40.2	+0.9
BDR				*i* S	Sn	04 34 03.4	+1.1
KOZ	**Kozyrevsk**	**1.87**	**313**	P	Pb	04 33 41.0	-0.9
KOZ				*i* S	Sb	04 34 04.5	-0.4
SRKR	**Sorokina**	**1.95**	**341**	P	Pn	04 33 41.2	+0.7
SRKR				*i* S	Sn	04 34 05.1	+0.6
SRDR	**Sredinnyy**	**2.11**	**316**	P	Pb	04 33 44.5	-1.5
SRDR				*i* S	Sb	04 34 10.7	-1.2
BKI	**Bering**	**2.13**	**78**	P	Pn	04 33 41.6	-1.2
BKI				*i* S	Sn	04 34 05.2	-3.5
ESO	**Esso**	**2.35**	**300**	P	Pn	04 33 47.9	+2.0
ESO				*i* S	Sb	04 34 17.4	-1.2
NLC	**Nalytchevo**	**2.42**	**228**	P	Pn	04 33 47.7	+1.0
NLC				*i* S	Sn	04 34 15.8	+0.2
SDLR	**Sedlovina**	**2.55**	**234**	P	Pn	04 33 50.2	+1.4
SDLR				*i* S	Sn	04 34 20.0	+0.6
KRER	**Koryakskii**	**2.60**	**236**	P	Pn	04 33 50.7	+1.2
KRER				*i* S	Sn	04 34 21.2	+0.5
SMAR	**Somma**	**2.60**	**235**	P	Pn	04 33 50.4	+0.8
SMAR				*i* S	Sn	04 34 21.5	+0.8
UGLR	**Uglovaya**	**2.62**	**233**	P	Pn	04 33 50.8	+1.0
UGLR				*i* S	Sn	04 34 21.4	+0.3
AVH	**Avacha**	**2.63**	**235**	P	Pn	04 33 51.5	+1.7
AVH				*i* S	Sn	04 34 22.5	+1.3
KOK	**Koryaka**	**2.66**	**236**	P	Pn	04 33 51.9	+1.6
KOK				*i* S	Sn	04 34 22.9	+0.9
GNL	**Ganaly**	**2.81**	**248**	P	Pn	04 33 53.5	+1.2
GNL				*i* S	Sn	04 34 26.7	+1.0
PET	**Petropavlovsk**	**2.82**	**232**	P	Pn	04 33 53.9	+1.6
PET				*i* S	Sn	04 34 26.4	+0.7
RUS	**Russkaya**	**3.30**	**225**	P	Pn	04 33 59.8	+1.0
RUS				*i* S	Sn	04 34 37.0	-0.4
MTVR	**Mutnovka**	**3.40**	**228**	P	Pn	04 34 02.1	+1.6
MTVR				*i* S	Sn	04 34 41.7	+1.4
ASAK	**Asacha**	**3.59**	**229**	P	Pn	04 34 04.2	+1.1
ASAK				*i* S	Sn	04 34 45.5	+0.5

ISCJB ***17*** *04:44:16.1±0.3, 19°.90S±0°.03×69°.05W±0°.05, h105km±3km, mb4.1/32, Error ellipse: s-maj=7.8km s-min=4.2km az=168.2*

IDC ***17*** *04:44:18.0±0.7, 19°.86S×68°.97W, h106km±5km, mb3.9/17, mb1 4.1/20, mb1mx4.0/26, mbtmp3.9/20, Error ellipse: s-maj=18.3km s-min=12.0km az=32.0*

NEIC ***17*** *04:44:17.5, 20°.00S×69°.29W, h106km, mb4.2/23, After GUC.*

GUC ***17*** *04:44:17.5±0.3, 20°.00S×69°.29W, h106km±2km, ML4.8*

ISC 17 04:44:17.7±0.4, 19°.91S±0°.03×69°.10W±0°.05, h101km±3km, n176, σ1§23/208, mb4.2/32, 46C-29D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberstone**	**0.83**	**243**	⇑*i*P	**Pn**	**04 44 35.4**	**-1.1**
HMBC				*i* S	**Sn**	**04 44 49.0**	**-1.8**
HMBC	**Humberstone**	**0.83**	**243**	⇑*i*P	**Pn**	**04 44 35.4**	**-1.1**
HMBC				*i* S	**Sn**	**04 44 49.0**	**-1.8**
HMBC				AML	AML	04 44 50.1	
	comp=E,54μm,0.4s						
MNMC	**Minimini**	**0.90**	**329**	⇑*i*P	**Pn**	**04 44 38.2**	**+0.7**
MNMC	**Minimini**	**0.90**	**329**	⇑*i*P	**Pn**	**04 44 38.2**	**+0.7**
MNMC				AML	AML	04 44 55.0	
	comp=E,86μm,0.3s						
PSGC	**Pisagua**	**1.01**	**288**	⇑*i*P	**Pn**	**04 44 37.7**	**-0.8**
PSGC				*i* S	**Sn**	**04 44 52.9**	**-1.2**
PSGC	**Pisagua**	**1.01**	**288**	⇑*i*P	**Pn**	**04 44 37.7**	**-0.8**
PSGC				*i* S	**Sn**	**04 44 52.9**	**-1.2**
PSGC				AML	AML	04 44 53.6	
	comp=E,11μm,0.1s						
PB01	**Plate Boundary**	**1.19**	**198**	*i* P	**Pn**	**04 44 39.5**	**-0.9**
PB01				*i* S	**Sn**	**04 44 56.2**	**-1.3**
PB01	**Plate Boundary**	**1.19**	**198**	*i* P	**Pn**	**04 44 39.5**	**-0.9**
PB01				*i* S	**Sn**	**04 44 56.2**	**-1.3**
PB01				AML	AML	04 44 57.3	
	comp=E,18μm,0.4s						
ARCH	**Arica**	**1.81**	**321**	⇑*i*P	**Pn**	**04 44 48.1**	**+0.2**
ARCH				*i* S	**Sn**	**04 45 11.3**	**+0.4**
ARCH	**Arica**	**1.81**	**321**	⇑*i*P	**Pn**	**04 44 48.1**	**+0.2**
ARCH				*i* S	**Sn**	**04 45 11.3**	**+0.4**
ARCH				AML	AML	04 45 18.5	
	comp=N,17μm,0.3s						
PB09	**Plate Boundary**	**1.88**	**184**	*e*P	**Pn**	**04 44 48.6**	**-0.4**
PB09				*i* S	**Sn**	**04 45 12.4**	**-0.4**
PB09	**Plate Boundary**	**1.88**	**184**	*e*P	**Pn**	**04 44 48.6**	**-0.4**
PB09				*i* S	**Sn**	**04 45 12.4**	**-0.4**
PB09				AML	AML	04 45 17.1	
	comp=E,15μm,0.6s						
PB04	**Plate Boundary**	**2.37**	**189**	⇓*i*P	**Pn**	**04 44 57.4**	**+2.3**
PB04				*i* S	**Sn**	**04 45 28.2**	**+4.3**
PB04	**Plate Boundary**	**2.37**	**189**	⇓*i*P	**Pn**	**04 44 57.4**	**+2.3**
PB04				*i* S	**Sn**	**04 45 28.2**	**+4.3**
PB04				AML	AML	04 45 49.4	
	comp=N,3μm,0.6s						
LVC	**Limon Verde**	**2.70**	**176**	*e*Pn	**Pn**	**04 45 00.0**	**+0.3**
LVC				*e*Sn	**Sn**	**04 45 33.1**	**+1.2**
MECH	**Mejillones**	**3.42**	**201**	⇑*i*P	**Pn**	**04 45 07.6**	**-1.5**
MECH				*i* S	**Sn**	**04 45 46.3**	**-2.4**
MECH	**Mejillones**	**3.42**	**201**	⇑*i*P	**Pn**	**04 45 07.6**	**-1.5**
MECH				*i* S	**Sn**	**04 45 46.3**	**-2.4**
MECH				AML	AML	04 46 14.2	
	comp=N,1μm,0.5s						
CEN1	**Los Morros**	**3.61**	**196**	*e*P	**Pn**	**04 45 13.4**	**+1.7**
CEN1				*i* S	**Sn**	**04 45 56.7**	**+3.1**
CEN1	**Los Morros**	**3.61**	**196**	*e*P	**Pn**	**04 45 13.4**	**+1.7**
CEN1				*i* S	**Sn**	**04 45 56.7**	**+3.1**
LPAZ	**La Paz**	**3.72**	**14**	P	**Pn**	**04 45 16.6**	**+2.9**
LPAZ				S	**Sn**	**04 45 55.8**	**-1.1**
LPAZ	**La Paz**	**3.72**	**14**	P	**Pn**	**04 45 16.6**	**+2.9**
	comp=N,6.9nm,0.3s,baz=196,slow=7.9,SNR=282						
LPAZ				S	**Sn**	**04 45 55.8**	**-1.1**
	comp=N,4.4nm,0.3s,baz=212,slow=15,SNR=4.2						
ANCH	**Antofagasta**	**3.95**	**198**	*e*P	**Pn**	**04 45 14.1**	**-2.1**
ANCH				*i* S	**Sn**	**04 45 58.4**	**-3.1**
ANCH	**Antofagasta**	**3.95**	**198**	*e*P	**Pn**	**04 45 14.1**	**-2.1**
ANCH				*i* S	**Sn**	**04 45 58.4**	**-3.1**
ARE	**Arequipa**	**4.11**	**326**	*e*P	**Pn**	**04 45 17.0**	**-1.7**
SIV	**San Ignacio**	**8.57**	**64**	P	**Pn**	**04 46 17.8**	**-1.2**
SIV	**San Ignacio**	**8.57**	**64**	P	**Pn**	**04 46 17.8**	**-1.2**
	comp=N,16nm,0.3s,baz=256,slow=14,SNR=348						
LCO	**Las Campanas**	**9.18**	**189**	*e*Pn	Pn	04 46 31.4	+3.9
	comp=N,23nm,0.6s						
LCO				*e*Sn	**Sn**	**04 48 08.4**	**-0.7**
NNA	**Nana**	**10.84**	**315**	*e*Pn	**Pn**	**04 46 50.0**	**+0.1**
	comp=N,7.2nm,0.6s						
NNA				*e*Sn	**Sn**	**04 48 49.6**	**+0.3**
NNA	**Nana**	**10.84**	**315**	P	**Pn**	**04 46 50.5**	**+0.7**
	comp=N,0.9nm,0.3s,baz=150,slow=14,SNR=3.1						
NNA				S	**Sn**	**04 48 49.5**	**+0.3**
	comp=N,4.2nm,0.3s,baz=226,slow=17,SNR=5.5						
SAML	**Samuel**	**12.31**	**29**	*e*Pn	**Pn**	**04 47 07.4**	**-2.1**
	comp=N,2.4nm,0.7s						
CPUP	**Villa Florida**	**12.57**	**123**	P	**Pn**	**04 47 11.2**	**-1.6**
CPUP	**Villa Florida**	**12.57**	**123**	P	**Pn**	**04 47 11.2**	**-1.6**
	comp=N,2.9nm,0.3s,baz=276,slow=12,SNR=28						
TRQA	**Tornquist**	**19.11**	**163**	*e*P	**P**	**04 48 33.7**	**+1.1**
	comp=N,4.7nm,1.1s						
BDFB	**Brasilia**	**20.52**	**81**	P	**P**	**04 48 46.7**	**-1.4**
BDFB	**Brasilia**	**20.52**	**81**	P	**P**	**04 48 46.7**	**-1.4**
	comp=N,4.4nm,0.4s,baz=259,slow=11,SNR=18						
PLCA	**Paso Flores**	**20.79**	**183**	*e*P	Pn	04 48 52.7	-1.5
	comp=N,13nm,0.9s						
PLCA	**Paso Flores**	**20.79**	**183**	P	**P**	**04 48 50.8**	**-0.1**
	comp=N,7.4nm,0.7s,baz=3.6,slow=11,SNR=15						
OTAV	**Otavalo**	**22.02**	**334**	*e*P	**P**	**04 49 06.6**	**+2.1**
	comp=N,14nm,1.3s						
JTS	**JuntasAbangare**	**33.83**	**331**	*e*P	**P**	**04 50 52.0**	**+1.5**
	comp=N,31nm,0.8s						
RCBR	**Riachuelo**	**35.16**	**71**	*e*P	**P**	**04 51 02.1**	**0.0**
	comp=N,8.2nm,0.8s						
RCBR	**Riachuelo**	**35.16**	**71**	P	**P**	**04 51 01.3**	**-0.8**
	comp=N,7.1nm,0.8s,baz=250,slow=9.4,SNR=8.9						
TEIG	**Tepich**	**44.09**	**334**	P	**P**	**04 52 15.5**	**-0.4**
TEIG	**Tepich**	**44.09**	**334**	P	**P**	**04 52 15.5**	**-0.4**
	comp=N,6.4nm,0.6s,baz=312,slow=13,SNR=8.4						
TKL	**Tuckaleechee C**	**56.99**	**346**	P	**P**	**04 53 51.5**	**-1.2**
TKL	**Tuckaleechee C**	**56.99**	**346**	P	**P**	**04 53 51.5**	**-1.2**
	comp=N,1.3nm,0.5s,baz=153,slow=16,SNR=4.6						
531A	**Rocksprings**	**58.27**	**328**	⇑P	**P**	**04 54 02.7**	**+0.8**
	baz=58						
WVT	**Waverly**	**58.48**	**342**	*e*P	**P**	**04 54 01.6**	**-1.6**
	comp=N,12nm,0.9s						
TXAR	**Lajitas Array**	**59.23**	**325**	P	**P**	**04 54 08.4**	**-0.2**
TXAR	**Lajitas Array**	**59.23**	**325**	P	**P**	**04 54 08.4**	**-0.2**
	comp=N,0.2nm,0.4s,baz=142,slow=6.4,SNR=3.5						
WCI	**Wyandotte Cave**	**60.04**	**344**	*e*P	**P**	**04 54 12.4**	**-1.5**
	comp=N,4.4nm,0.7s						
MNTX	**Cornudas Mount**	**61.99**	**325**	*e*P	**P**	**04 54 26.3**	**-0.9**
	comp=N,2.6nm,1.1s						
SNAA	**Sanae**	**63.84**	**161**	*e*P	**P**	**04 54 38.3**	**-0.7**
	comp=N,11nm,1.6s						
Y22A	**Socorro**	**64.56**	**326**	⇑P	**P**	**04 54 45.2**	**+0.8**
	baz=65						
W24A	**Lazy 6 Ranch,**	**64.75**	**328**	⇑P	**P**	**04 54 46.3**	**+0.8**
	baz=65						
U26A	**Atchley Ranch,**	**64.87**	**330**	⇓P	**P**	**04 54 46.9**	**+0.5**
	baz=65						
ANMO	**Albuquerque**	**65.08**	**327**	P	**P**	**04 54 48.1**	**+0.4**
ANMO	**Albuquerque**	**65.08**	**327**	P	**P**	**04 54 48.1**	**+0.4**
	comp=N,0.2nm,0.3s,baz=162,slow=7.0,SNR=3.9						
V22A	**San Miguel Ran**	**66.06**	**327**	⇓P	**P**	**04 54 55.0**	**+1.0**
	baz=66						
214A	**Organ Pipe Nat**	**66.43**	**320**	P	**P**	**04 54 57.3**	**+1.0**
	baz=67,SNR=5.6						
SDCO	**Great Sand Dun**	**66.80**	**329**	*e*P	**P**	**04 54 59.0**	**+0.3**
	comp=N,4.6nm,1.1s						
R24A	**Sanders Place,**	**66.99**	**330**	⇓P	**P**	**04 55 00.9**	**+0.9**
	baz=67						
WUAZ	**Wupatki**	**68.15**	**324**	⇓P	**P**	**04 55 08.7**	**+1.5**
	baz=68						
DBIC	**Dimbokro**	**68.46**	**74**	P	**P**	**04 55 08.3**	**-1.1**
DBIC				pP	**pP**	**04 55 35.6**	**+0.7**
DBIC	**Dimbokro**	**68.46**	**74**	P	**P**	**04 55 08.3**	**-1.1**
	comp=N,5.5nm,0.7s,baz=213,slow=7.4,SNR=11						
DBIC				pP	**pP**	**04 55 35.6**	**+0.7**
	comp=N,1.9nm,0.6s,baz=199,slow=7.7,SNR=2.3						
O23A	**Lake Granby, G**	**68.95**	**331**	⇑P	**P**	**04 55 13.3**	**+1.0**
	baz=69						
S18A	**Hurst Farm, Bl**	**69.01**	**326**	⇓P	**P**	**04 55 13.3**	**+0.7**
	baz=69						
BC3	**Big Chuckawall**	**69.21**	**320**	P	**P**	**04 55 14.8**	**+1.0**
	baz=69,SNR=5.1						
W13A	**Hualapai Mount**	**69.28**	**322**	⇑P	**P**	**04 55 15.2**	**+0.9**
	baz=70						
U15A	**North Rim**	**69.32**	**324**	⇑P	**P**	**04 55 16.1**	**+1.5**
	baz=70						
N23A	**Red Feather La**	**69.51**	**331**	⇑P	**P**	**04 55 16.4**	**+0.7**
	baz=70						
N22A	**Wattenberg Ran**	**69.67**	**331**	⇑P	**P**	**04 55 17.2**	**+0.6**
	baz=70						
PFO	**Pinyon Flat Ob**	**69.79**	**319**	P	**P**	**04 55 18.2**	**+0.8**
PFO	**Pinyon Flat Ob**	**69.79**	**319**	P	**P**	**04 55 18.2**	**+0.8**
	comp=N,2.1nm,0.7s,baz=90,slow=5.1,SNR=4.3						
PFO	**Pinyon Flat Ob**	**69.79**	**319**	⇓P	**P**	**04 55 18.8**	**+1.4**
	baz=70						
M23A	**Lamie**	**69.86**	**331**	⇑P	**P**	**04 55 18.6**	**+0.8**
	baz=70						
P19A	**Cripple Cowboy**	**69.97**	**328**	⇑P	**P**	**04 55 19.6**	**+1.1**
	baz=70						
O20A	**White River Ci**	**69.99**	**329**	⇑P	**P**	**04 55 19.4**	**+0.8**
	baz=70						
GMRC	**Granite Mounta**	**70.10**	**321**	P	**P**	**04 55 20.6**	**+1.3**
	baz=70,SNR=6.5						
N21A	**Black Mountain**	**70.13**	**330**	⇑P	**P**	**04 55 20.9**	**+1.5**
	baz=70						
SRU	**San Rafael**	**70.35**	**327**	⇑P	**P**	**04 55 21.7**	**+0.9**
	baz=71						
HEC	**Hector,Ludlow**	**70.54**	**320**	⇑P	**P**	**04 55 23.4**	**+1.6**
	baz=71						
N20A	**Spence Gulch,**	**70.54**	**329**	⇑P	**P**	**04 55 23.0**	**+1.1**
	baz=71						
Q16A	**Castle Valley**	**70.54**	**326**	⇓P	**P**	**04 55 22.9**	**+1.0**
	baz=71						
O19A	**Miners Draw (B**	**70.55**	**329**	⇑P	**P**	**04 55 22.7**	**+0.8**
	baz=71						
P18A	**Preston Nutter**	**70.60**	**327**	⇓P	**P**	**04 55 23.8**	**+1.4**
	baz=71						
P17A	**Butcher Ranch,**	**70.73**	**327**	⇑P	**P**	**04 55 24.1**	**+1.1**
	baz=71						
ARUT	**Antelope Range**	**70.94**	**324**	*e*P	**P**	**04 55 25.9**	**+1.6**
	comp=N,2.8nm,0.8s						
RSSD	**Black Hills**	**71.29**	**334**	*e*P	**P**	**04 55 26.6**	**+0.2**
K21A	**Alcova**	**71.48**	**331**	⇑P	**P**	**04 55 28.2**	**+0.7**
	baz=72						
EDW2	**Edwards Air Fo**	**71.58**	**319**	⇓P	**P**	**04 55 29.0**	**+0.9**
	baz=72						
AGMN	**Agassiz Nation**	**72.00**	**342**	*e*P	**P**	**04 55 29.1**	**-1.1**
	comp=N,5.6nm,0.8s						
L19A	**Farson**	**72.04**	**330**	⇑P	**P**	**04 55 31.7**	**+0.8**
	baz=72						
MPMC	**Manual Prospec**	**72.07**	**320**	⇓P	**P**	**04 55 32.2**	**+1.0**
	baz=72						
I22A	**9 Mile Ranch,**	**72.14**	**333**	⇑P	**P**	**04 55 31.7**	**+0.3**
	baz=72						
DUG	**Dugway**	**72.34**	**326**	*e*P	**P**	**04 55 32.9**	**+0.2**
	comp=N,1.9nm,0.8s						
DUG	**Dugway**	**72.34**	**326**	⇓P	**P**	**04 55 33.6**	**+0.9**
	baz=73						
ISA	**Isabella**	**72.40**	**320**	P	**P**	**04 55 34.4**	**+1.4**
	baz=73,SNR=5.6						
R11A	**Troy Canyon, C**	**72.53**	**323**	⇑P	**P**	**04 55 35.6**	**+1.7**
	baz=73						
BW06	**Boulder Array**	**72.65**	**330**	*e*P	**P**	**04 55 34.5**	**-0.1**
	comp=N,3.1nm,1.2s						
PDAR	**Pinedale Array**	**72.65**	**330**	P	**P**	**04 55 34.5**	**-0.1**
PDAR	**Pinedale Array**	**72.65**	**330**	P	**P**	**04 55 34.5**	**-0.1**
	comp=N,0.3nm,0.5s,baz=124,slow=9.3,SNR=5.1						
HWUT	**Hardware Ranch**	**72.75**	**328**	*e*P	**P**	**04 55 34.8**	**-0.3**
	comp=N,3.1nm,0.8s						
F23A	**Volborg**	**73.16**	**334**	⇑P	**P**	**04 55 38.4**	**+1.1**
	baz=73						
J18A	**Kendall Valley**	**73.21**	**330**	⇑P	**P**	**04 55 38.5**	**+0.6**
	baz=74						
I18A	**Diamond G Ranc**	**73.49**	**330**	⇑P	**P**	**04 55 40.4**	**+0.9**
	baz=74						
ULM	**Lac du Bonnet**	**73.75**	**342**	P	**P**	**04 55 39.9**	**-0.7**
ULM	**Lac du Bonnet**	**73.75**	**342**	P	**P**	**04 55 39.9**	**-0.7**
	comp=N,2.6nm,0.5s,baz=144,slow=6.1,SNR=3.9						
LOHW	**Long Hollow**	**73.79**	**330**	*e*P	**P**	**04 55 41.3**	**+0.1**
	comp=N,2.0nm,0.9s						
TPAW	**Teton Pass**	**73.86**	**330**	*e*P	**P**	**04 55 41.9**	**+0.2**
	comp=N,4.0nm,1.2s						
MOOW	**Moose Ponds**	**73.96**	**330**	*e*P	**P**	**04 55 42.2**	**0.0**
	comp=N,1.1nm,0.7s						
ELK	**Elko**	**74.02**	**325**	P	**P**	**04 55 42.9**	**+0.3**
ELK	**Elko**	**74.02**	**325**	P	**P**	**04 55 42.9**	**+0.3**
	comp=N,0.8nm,0.7s,baz=21,slow=5.6,SNR=4.5						
NVAR	**Mina Array Bea**	**74.14**	**322**	P	**P**	**04 55 44.2**	**+0.9**
NVAR	**Mina Array Bea**	**74.14**	**322**	P	**P**	**04 55 44.2**	**+0.9**
	comp=N,2.1nm,0.9s,baz=152,slow=6.5,SNR=11						
D23A	**Lindsay**	**74.27**	**335**	⇑P	**P**	**04 55 44.7**	**+1.0**
	baz=74						
SCHQ	**Schefferville**	**74.46**	**1**	P	**P**	**04 55 43.6**	**-1.0**
SCHQ	**Schefferville**	**74.46**	**1**	P	**P**	**04 55 43.6**	**-1.0**
	comp=N,2.5nm,0.7s,baz=107,slow=7.6,SNR=4.8						
G18A	**Lazy EL Ranch,**	**74.62**	**332**	⇓P	**P**	**04 55 46.8**	**+0.8**
	baz=75						
E20A	**Meyer Farm, Mu**	**74.92**	**333**	⇑P	**P**	**04 55 48.5**	**+1.0**
	baz=75						
DGMT	**Dagmar**	**74.95**	**337**	⇓P	**P**	**04 55 48.7**	**+1.1**
	baz=75						
J14A	**Carey**	**74.99**	**328**	⇓P	**P**	**04 55 49.2**	**+1.1**
	baz=75						
F18A	**Big Timber**	**75.14**	**332**	P	**P**	**04 55 49.4**	**+0.6**
	baz=75,SNR=6.8						
E19A	**Rath Farm, Rou**	**75.17**	**333**	P	**P**	**04 55 49.6**	**+0.6**
	baz=75,SNR=9.3						
B23A	**Brockton**	**75.24**	**336**	⇑P	**P**	**04 55 50.5**	**+1.2**
	baz=76						
A24A	**Westby**	**75.25**	**337**	⇓P	**P**	**04 55 50.5**	**+1.2**
	baz=76						
J13A	**Cove Ranch, Pi**	**75.37**	**328**	⇓P	**P**	**04 55 51.6**	**+1.3**
	baz=76						
D20A	**Manuel Ranch,**	**75.39**	**334**	⇓P	**P**	**04 55 51.2**	**+1.0**
	baz=76						
F17A	**Fitzpatrick Pl**	**75.56**	**331**	⇓P	**P**	**04 55 52.3**	**+1.0**
	baz=76						
HLID	**Hailey**	**75.61**	**328**	*e*P	**P**	**04 55 52.4**	**+0.7**
	comp=N,3.6nm,1.0s						
HLID	**Hailey**	**75.61**	**328**	P	**P**	**04 55 52.7**	**+1.0**
	baz=76,SNR=5.9						
I13A	**Wildhorse Cree**	**75.72**	**328**	⇓P	**P**	**04 55 53.8**	**+1.5**
	baz=76						
E18A	**Harlowton**	**75.74**	**332**	⇑P	**P**	**04 55 53.4**	**+1.1**
	baz=76						
BOZ	**Bozeman (W)**	**75.81**	**331**	*e*P	**P**	**04 55 52.8**	**0.0**
	comp=N,2.4nm,1.2s						
H14A	**Leadore**	**75.86**	**329**	⇓P	**P**	**04 55 54.3**	**+1.2**
	baz=76						
E17A	**Martinsdale**	**76.08**	**332**	⇓P	**P**	**04 55 55.2**	**+0.9**
	baz=76						
I12A	**Atlanta**	**76.14**	**328**	⇓P	**P**	**04 55 55.9**	**+1.2**
	baz=76						
D18A	**Linhart Farms,**	**76.18**	**333**	⇓P	**P**	**04 55 55.6**	**+0.9**
	baz=76						
H13A	**Challis**	**76.25**	**329**	⇑P	**P**	**04 55 56.6**	**+1.3**
	baz=76						
C19A	**Slack Wire Ran**	**76.28**	**334**	⇑P	**P**	**04 55 56.0**	**+0.7**
	baz=76						
F15A	**Butte**	**76.35**	**330**	⇓P	**P**	**04 55 56.8**	**+0.9**
	baz=77						
D17A	**Six Diamond Ra**	**76.53**	**332**	⇑P	**P**	**04 55 57.7**	**+0.9**
	baz=77						
G13A	**Cobalt**	**76.63**	**329**	P	**P**	**04 55 58.6**	**+1.2**
	baz=77,SNR=6.3						
D16A	**Dana Ranch, Ca**	**76.82**	**332**	P	**P**	**04 55 59.4**	**+1.0**
	baz=77,SNR=5.5						
TOA0	**Torodi Ar. Sit**	**77.00**	**71**	*e*P	**P**	**04 55 58.4**	**-1.5**
TORD	**Torodi Ar. Bea**	**77.00**	**71**	P	**P**	**04 55 58.8**	**-1.1**
TORD				pP	**pP**	**04 56 26.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**77.00**	**71**	P	**P**	**04 55 58.8**	**-1.1**
	comp=N,3.0nm,0.7s,baz=254,slow=5.5,SNR=48						
TORD				pP	**pP**	**04 56 26.0**	**+0.1**
	comp=N,4.0nm,0.8s,baz=251,slow=5.3,SNR=7.7						
B18A	**Beardsley Farm**	**77.10**	**334**	P	**P**	**04 56 00.2**	**+0.4**
	baz=77,SNR=5.6						
F13A	**Darby**	**77.18**	**329**	P	**P**	**04 56 01.5**	**+1.0**
	baz=77,SNR=6.1						
E14A	**Clinton**	**77.25**	**330**	⇑P	**P**	**04 56 02.0**	**+1.1**
	baz=78						
D15A	**Lincoln**	**77.26**	**331**	⇓P	**P**	**04 56 02.1**	**+1.2**
	baz=78						
E13A	**Victor**	**77.59**	**330**	⇑P	**P**	**04 56 03.9**	**+1.2**
	baz=78						
C15A	**Salmond Ranch,**	**77.85**	**332**	P	**P**	**04 56 04.9**	**+0.7**
	baz=78,SNR=8.5						
A17A	**Triple J Farms**	**77.91**	**333**	⇑P	**P**	**04 56 05.0**	**+0.6**
	baz=78						
B15A	**Bradely Ranch,**	**78.24**	**332**	P	**P**	**04 56 06.1**	**-0.1**
	baz=78,SNR=5.2						
A16A	**West Butte Ran**	**78.30**	**333**	P	**P**	**04 56 07.0**	**+0.4**
	baz=78,SNR=10						
C14A	**Swan Lake**	**78.36**	**331**

0.6nm,0.7s,baz=309,slow=4.8,SNR=7.2
GERES GERESS Array B 83.83 321 LR LR 05 43 32.0
comp=Z,22nm,18.3s,baz=274,slow=39

BJI **17** *05:17:58.4, 4.˚14N×127.˚68E, h35km, mB5.0/17, mb4.8/30, Ms4.8/10, Ms7 4.6/4*
MOS **17** *05:18:02.1±0.8, 4.˚89N×127.˚49E, h33km, mb5.0/24, Error ellipse: s-maj=19.7km s-min=7.0km az=115.7*
NEIC **17** *05:18:04.2±0.3, 4.˚86N×127.˚58E, h35km, mb4.7/14, Error ellipse: s-maj=11.2km s-min=5.8km az=79.0*
MAN **17** *05:18:08, 4.˚40N×127.˚15E, h82km, mb5.2, ML4.2, MS4.4*
ISCJB **17** *05:18:09.8±0.5, 4.˚81N±0.˚02×127.˚43E±0.˚05, h101km±4km, mb4.6/72, Error ellipse: s-maj=7.7km s-min=3.7km az=166.2*
AUST **17** *05:18:09.3, 5.˚00N×127.˚51E, h100km*
IDC **17** *05:18:11.5±0.7, 4.˚81N×127.˚44E, h102km±6km, mb4.3/28, mb1 4.3/29, mb1mx4.3/34, mbtmp4.3/29, MS3.0/2, Ms1 3.0/2, ms1mx2.7/32, Error ellipse: s-maj=18.8km s-min=8.3km az=69.0*
DJA **17** *05:18:12.3±0.5, 5.˚N±4.˚×12.˚7E±.˚, h109km±5km, M4.7/4, mb4.7/4*
ISC 17 05:18:10.3±0.5, 4.˚83N±0.˚03×127.˚57E±0.˚05, h86km±4km, n208, σ1♀79/246, mb4.7/72, 10C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
MATI	**Mati**	**2.47**	**328**	*eP*		**Pn**	**05 18 49.5**	**+0.8**
MATI				*eS*		Sn	05 19 09.9	-8.2
DAV	**Davao City (W)**	**2.98**	**318**	Pn		Pn	05 18 49.9	-5.6
DAV				*e*Sn		**Sn**	**05 19 27.4**	**-2.9**
DAV				S			05 19 30.1	
DAV				*e*			05 20 04.3	
DAV	**Davao City (W)**	**2.98**	**318**	P		**Pn**	**05 18 58.2**	**+2.7**
DAV	**Davao City (W)**	**2.98**	**318**	P		**Pn**	**05 18 55.8**	**+0.3**
	177nm,0.3s,baz=170,slow=8.0,SNR=8.3							
DAV				S		**Sn**	**05 19 30.1**	**-0.2**
	136nm,0.3s,baz=66,slow=19,SNR=6.3							
GAMI	**Galela, Maluku**	**2.98**	**176**	P		**Pn**	**05 18 55.7**	**+0.1**
GAMI	**Galela, Maluku**	**2.98**	**176**	P		**Pn**	**05 18 55.7**	**+0.1**
GAMI				S		Sn	05 19 37.5	+7.1
DMPH	**Davao City--Mi**	**3.04**	**318**	*eP*		**Pn**	**05 18 58.8**	**+2.5**
DMPH				*eS*		**Sn**	**05 19 37.0**	**+5.3**
TNTI	**Ternate**	**4.04**	**183**	P		**Pn**	**05 19 11.0**	**+1.1**
TNTI	**Ternate**	**4.04**	**183**	P		**Pn**	**05 19 11.4**	**+1.5**
TNTI				S		**Sn**	**05 19 58.9**	**+2.8**
CTBH	**Cotabato--PC H**	**4.07**	**306**	*i P*		**Pn**	**05 19 08.9**	**-1.4**
MNI	**Manado**	**4.33**	**219**	P		**Pn**	**05 19 12.4**	**-1.5**
MNI	**Manado**	**4.33**	**219**	P		**Pn**	**05 19 12.6**	**-1.3**
MNI				S		**Sn**	**05 20 03.4**	**+0.1**
CGP	**Cagayan de Oro**	**4.60**	**322**	*eP*		**Pn**	**05 19 19.5**	**+2.1**
CGP				*i* S		Sn	05 20 16.0	+6.4
PAGZ	**Pagadian**	**5.13**	**306**	*eP*		**Pn**	**05 19 23.5**	**-1.2**
LBMI	**Labuha**	**5.44**	**181**	P		**Pn**	**05 19 29.6**	**+0.7**
LBMI	**Labuha**	**5.44**	**181**	P		**Pn**	**05 19 30.6**	**+1.7**
	190nm,0.9s,3μm1.0nm							
LBMI				S		**Sn**	**05 20 33.4**	**+3.3**
	190nm,0.9s,3μm1.0nm							
MSLP	**Maasin**	**5.91**	**333**	*eP*		**Pn**	**05 19 37.5**	**+2.1**
MRSI	**Marisa**	**7.10**	**233**	P		**Pn**	**05 19 49.5**	**-2.0**
MRSI	**Marisa**	**7.10**	**233**	P		**Pn**	**05 19 49.5**	**-2.0**
	322nm,0.6s,4μm1.3nm							
PALU	**Palau**	**7.30**	**70**	P		**Pn**	**05 19 54.7**	**+0.4**
	baz=7.3,SNR=7.9							
PALU				S		**Sn**	**05 21 11.9**	**-3.8**
	baz=7.3,SNR=10.0							
LUWI	**Luwuk**	**7.55**	**220**	P		**Pn**	**05 19 55.4**	**-2.4**
LUWI	**Luwuk**	**7.55**	**220**	P		**Pn**	**05 19 59.3**	**+1.5**
	231nm,1.1s,2μm0.7nm							
LUWI	**Luwuk**	**7.55**	**220**	P		**Pn**	**05 19 58.5**	**+0.7**
	baz=7.7,SNR=12							
NLAI	**Namlea**	**8.03**	**183**	P		**Pn**	**05 20 03.9**	**-0.4**
	60nm,0.8s,923nm							
FAKI	**Fak Fak**	**9.01**	**149**	P		**Pn**	**05 20 18.7**	**+1.1**
FAKI	**Fak Fak**	**9.01**	**149**	P		**Pn**	**05 20 19.9**	**+2.3**
	27nm,1.1s							
FAKI	**Fak Fak**	**9.01**	**149**	P		**Pn**	**05 20 19.3**	**+1.7**
	baz=9.2,SNR=7.3							
MYLDM	**Lahad Datu**	**9.05**	**273**	P		**Pn**	**05 20 16.2**	**-1.9**
	115nm,1.1s							
MYLDM	**Lahad Datu**	**9.05**	**273**	P		**Pn**	**05 20 16.2**	**-1.9**
	115nm,1.1s							
RKPI	**Ransiki, Papua**	**9.12**	**134**	P		**Pn**	**05 20 17.7**	**-1.5**
	79nm,0.6s,4μm							
SKSI	**Soroako, Sulaw**	**9.61**	**221**	P		**Pn**	**05 20 23.3**	**-2.6**
SKSI	**Soroako, Sulaw**	**9.61**	**221**	P		**Pn**	**05 20 23.3**	**-2.6**
	48nm,1.0s,489nm							
BAKI	**Biak**	**10.42**	**125**	P		Pn	05 20 31.1	-5.7
	131nm,0.9s							
TTSI	**Tana Toraja**	**11.01**	**225**	P		**Pn**	**05 20 42.4**	**-2.5**
TTSI	**Tana Toraja**	**11.01**	**225**	P		**Pn**	**05 20 42.4**	**-2.5**
	30nm,0.9s,1μm							
SPSI	**Sidrap Palu**	**11.71**	**222**	P		**Pn**	**05 20 51.6**	**-2.8**
SPSI	**Sidrap Palu**	**11.71**	**222**	P		**Pn**	**05 20 51.6**	**-2.8**
	30nm,0.7s							
KAPI	**Kappang**	**12.52**	**219**	*e*Pn		Pn	05 21 00.2	-5.1
KAPI				*e*Sn		**Sn**	**05 23 25.9**	**+2.9**
KAPI	**Kappang**	**12.52**	**219**	P		Pn	05 21 02.0	-3.3
	0.8nm,0.3s,baz=34,slow=9.8,SNR=6.7							
KAPI				LR		LR	05 26 09.8	
	comp=Z,54nm,18.8s,baz=177,slow=38							
BBKI	**Banjar Baru**	**15.16**	**237**	P		**Pn**	**05 21 35.9**	**-3.9**
BBKI	**Banjar Baru**	**15.16**	**237**	P		**Pn**	**05 21 35.8**	**-4.0**
SBUM	**Sibu**	**15.50**	**262**	P		**P**	**05 21 46.2**	**-0.6**
SBUM	**Sibu**	**15.50**	**262**	P		**Pn**	**05 21 42.8**	**-1.4**
	53nm,0.9s							
SBUM	**Sibu**	**15.50**	**262**	P		**Pn**	**05 21 42.8**	**-1.4**
WBSI	**Waikabubak, Su**	**16.53**	**210**	P		**Pn**	**05 21 55.3**	**-1.7**
KSM	**Kuching**	**17.56**	**260**	*eP*		**P**	**05 22 07.6**	**-1.9**
	26nm,0.6s							
KSM	**Kuching**	**17.56**	**260**	P		**P**	**05 22 07.9**	**-1.6**
KSM	**Kuching**	**17.56**	**260**	P		**P**	**05 22 06.0**	**-3.5**
	36nm,0.8s							
KSM	**Kuching**	**17.56**	**260**	P		**P**	**05 22 06.8**	**-2.7**
KSM	**Kuching**	**17.56**	**260**	P		**P**	**05 22 07.7**	**-1.9**
	baz=18,SNR=12							
KDU	**Kakadu**	**18.07**	**164**	P		**Pn**	**05 22 18.2**	**+2.4**
	baz=18,SNR=6.9							
GUMO	**Guam**	**19.15**	**62**	LR		LR	05 27 55.0	
	comp=Z,63nm,21.2s,baz=124,slow=30							
TPUB	**Ta-pu**	**19.55**	**341**	*eP*		**P**	**05 22 30.1**	**-1.1**
	16nm,0.7s							
TPUB				*eS*		**S**	**05 26 05.7**	**-1.8**
KNRA	**Kununurra**	**20.41**	**177**	P		**P**	**05 22 41.0**	**+0.5**
	baz=21,SNR=9.6							
YHNB	**Yeheng**	**20.60**	**344**	*eP*		Pn	05 22 44.4	-1.3
	218nm,2.3s							
FITZ	**Fitzroy Crossi**	**22.87**	**185**	P		**P**	**05 23 06.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**22.87**	**185**	P		**P**	**05 23 06.1**	**-0.6**
	8.8nm,0.7s,baz=4.4,slow=9.4,SNR=11							
FITZ	**Fitzroy Crossi**	**22.87**	**185**	P		**P**	**05 23 06.5**	**-0.2**
	baz=23,SNR=6.4							
WRAB	**Tennant Creek**	**25.50**	**165**	*eP*		**P**	**05 23 30.2**	**-0.6**
WRAB				pmax		pmax		
	comp=Z,18nm,0.7s							
WRAB	**Tennant Creek**	**25.50**	**165**	*eP*		**P**	**05 23 30.2**	**-0.6**
	comp=Z,18nm,0.7s							
WRA	**Warramunga Arr**	**25.50**	**165**	P		**P**	**05 23 30.1**	**-0.8**
WRA	**Warramunga Arr**	**25.50**	**165**	P		**P**	**05 23 30.1**	**-0.8**
	comp=Z,18nm,0.6s,baz=343,slow=10,SNR=72							
XMIS	**Christmas Isla**	**26.61**	**235**	P		P	05 23 33.0	-7.8
	baz=27,SNR=3.7							
QIS	**Mount Isa**	**27.86**	**155**	S		S	05 28 55.3	+26
	baz=28,SNR=4.8							
NJ2	**Nanjing**	**28.28**	**344**	*eP*		**P**	**05 23 57.3**	**+1.7**
NJ2				pmax		pmax		
	comp=Z,10.0nm,1.0s							
WHN	**Wuhan**	**28.45**	**336**	P		**P**	**05 23 58.0**	**+0.9**
AS31	**Alice Springs**	**28.99**	**168**	*eP*		**P**	**05 24 01.9**	**-0.2**
ASAR	**Alice Springs**	**28.99**	**168**	P		**P**	**05 24 01.6**	**-0.4**
ASAR				PcP		**PcP**	**05 27 09.1**	**+0.2**
ASAR	**Alice Springs**	**28.99**	**168**	P		**P**	**05 24 01.6**	**-0.4**
	comp=Z,1.5nm,0.4s,baz=350,slow=7.1,SNR=23							
ASAR				PcP		**PcP**	**05 27 09.1**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=345,slow=2.2,SNR=7.9							
GYA	**Guiyang**	**29.36**	**319**	P		**P**	**05 24 06.9**	**+1.5**
GYA				pP		pP	05 24 16.3	-8.9
GYA				PP		**PnPn**	**05 25 02.6**	**-0.6**
GYA				S		**S**	**05 28 57.9**	**+4.9**
GYA				sS		sS	05 29 14.3	-13
GYA				ScP		**ScP**	**05 30 50.5**	**+6.3**
GYA				ScS		**ScS**	**05 34 42.8**	**+3.8**
GYA						pmax	pmax	
	comp=Z,10.0nm,0.8s							
GYA						pmax	pmax	
	comp=Z,90nm,4.8s							
GYA						LR	LR	
	comp=N,460nm,17.8s							
GYA						LR	LR	
	comp=E,300nm,17.9s							
ENH	**Enshi**	**30.52**	**328**	*eP*		**P**	**05 24 14.9**	**-0.7**
	comp=E,4.4nm,0.5s							
CMAR	**Chiang Mai Arr**	**31.07**	**298**	P		**P**	**05 24 19.2**	**-1.3**
CMAR				PcP		**PcP**	**05 27 14.7**	**+0.2**
CMAR	**Chiang Mai Arr**	**31.07**	**298**	P		**P**	**05 24 19.2**	**-1.3**
	comp=E,0.4nm,0.4s,baz=113,slow=7.4,SNR=4.3							
CMAR				PcP		**PcP**	**05 27 14.7**	**+0.2**
	comp=E,0.7nm,0.3s,baz=129,slow=1.3,SNR=4.5							
CMMT	**Chiang Mai**	**31.20**	**299**	P		**P**	**05 24 19.8**	**-1.9**
KMI	**Kunming**	**31.23**	**313**	P		**P**	**05 24 23.8**	**+1.7**
KMI				pP		pP	05 24 33.5	-8.4
KMI				sP		sP	05 24 38.1	-14
KMI				pmax		pmax		
	comp=Z,5.0nm,0.5s							
KSAR	**Wonju Array Be**	**32.46**	**0**	P		**P**	**05 24 31.7**	**-0.7**
MEEK	**Meekatharra**	**32.47**	**195**	P		**P**	**05 24 31.9**	**-0.7**
	baz=33,SNR=4.9							
KSRS	**Korea Array**	**32.47**	**1**	P		**P**	**05 24 31.7**	**-0.8**
	comp=Z,2.0nm,0.8s,baz=191,slow=10,SNR=6.8							
XAN	**Xi'an**	**33.83**	**332**	P		**P**	**05 24 44.3**	**-0.2**
XAN				pmax		pmax		
	comp=Z,7.0nm,0.8s							
CD2	**Chengdu**	**34.28**	**322**	P		**P**	**05 24 49.6**	**+1.2**
CD2				pP		pP	05 24 59.8	-8.6
CD2				sP		sP	05 25 03.8	-15
CD2				PP		**PnPn**	**05 26 05.6**	**0.0**
CD2				S		**S**	**05 30 14.0**	**+4.6**
CD2				sS		sS	05 30 30.8	-13
CD2				PcS		**PcS**	**05 31 10.4**	**+0.8**
CD2				pmax		pmax		
	comp=Z,30nm,0.4s							
CD2				pmax		pmax		
	comp=Z,120nm,5.0s							
QLP	**Quilpie**	**35.15**	**154**	P		**P**	**05 24 57.7**	**+1.8**
	baz=36,SNR=4.6							
FORT	**Forrest**	**35.41**	**179**	P		**P**	**05 24 57.8**	**-0.3**
	baz=36,SNR=9.1							
MORW	**Morawa**	**35.48**	**198**	P		**P**	**05 24 58.1**	**-0.7**
	baz=36,SNR=4.2							
KMBL	**Kambalda**	**36.41**	**188**	P		**P**	**05 25 06.3**	**-0.2**
	baz=37,SNR=8.0							
BJI	**Beijing**	**36.53**	**345**	P		**P**	**05 25 08.3**	**+0.8**
BJI				pmax		pmax		
	comp=Z,11nm,0.8s							
BLDU	**Ballidu**	**36.75**	**196**	P		**P**	**05 25 08.8**	**-0.7**
	baz=37,SNR=5.7							
KLBR	**Kellerberrin**	**37.41**	**194**	P		**P**	**05 25 14.7**	**-0.5**
	baz=38,SNR=4.5							
LZH	**Lanzhou**	**38.00**	**328**	*eP*		**P**	**05 25 20.0**	**-0.2**
LZH				pP		pP	05 25 31.1	-9.4
LZH				sP		sP	05 25 35.5	-15
LZH				pmax		pmax		
	comp=Z,14nm,1.0s							
BBOO	**Buckleboo**	**38.29**	**168**	P		**P**	**05 25 23.0**	**+0.5**
	baz=39,SNR=6.4							
HHC	**Hu-ho-hao-te**	**38.63**	**340**	*eP*		**P**	**05 25 25.6**	**+0.2**
HHC				pP		pP	05 25 35.5	-10
HHC				sP		sP	05 25 39.3	-16
HHC				S		**ScP**	**05 31 21.1**	**+4.5**
HHC				ScS		**ScS**	**05 35 31.1**	**+3.8**
HHC				pmax		pmax		
	comp=Z,42nm,0.5s							
HHC				pmax		pmax		
	comp=Z,180nm,7.6s							
HHC				LR		LR		
	comp=N,410nm,24.7s							
HHC				LR		LR		
	comp=E,2μm,21.2s							
NWAO	**Narrogin (SRO)**	**38.81**	**194**	P		**P**	**05 25 25.9**	**-0.9**
NWAO	**Narrogin (SRO)**	**38.81**	**194**	P		**P**	**05 25 25.9**	**-0.9**
	comp=E,6.5nm,0.7s,baz=14,slow=8.1,SNR=6.0							
CN2	**Changchun**	**38.85**	**358**	*eP*		**P**	**05 25 30.0**	**+2.9**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
STKA	**Stephens Creek**	**38.87**	**161**	*eP*		**P**	**05 25 27.0**	**-0.4**
	comp=Z,3.7nm,0.6s							
STKA	**Stephens Creek**	**38.87**	**161**	P		**P**	**05 25 26.9**	**-0.4**
	comp=Z,14nm,0.5s,baz=338,slow=8.0,SNR=59							
STKA	**Stephens Creek**	**38.87**	**161**	P		**P**	**05 25 26.9**	**-0.4**
	baz=39,SNR=55							
USRK	**Ussuriysk Arra**	**39.40**	**5**	P		**P**	**05 25 32.0**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=187,slow=7.5,SNR=3.7							
CMSA	**Cobar Meteorol**	**40.08**	**156**	P		**P**	**05 25 38.8**	**+1.4**
	baz=40,SNR=6.3							
ASAJ	**Asahikawa**	**41.30**	**16**	P		**P**	**05 25 47.7**	**+0.4**
ASAJ	**Asahikawa**	**41.30**	**16**	P		**P**	**05 25 47.7**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=188,slow=7.1,SNR=5.1							
ARMA	**Armidale**	**41.94**	**148**	P		**P**	**05 25 55.3**	**+2.5**
	baz=42,SNR=5.3							
GTA	**Gaotai**	**42.60**	**328**	*eP*		**P**	**05 25 59.3**	**+1.1**
GTA				pP		pP	05 26 08.9	-10
GTA				sP		sP	05 26 13.0	-16
GTA				pmax		pmax		
	comp=Z,6.0nm,1.1s							
ARPS	**Mount Arapiles**	**43.48**	**163**	P		**P**	**05 26 07.0**	**+1.9**
	baz=44,SNR=7.1							
HABR	**Khabarovsk**	**43.95**	**7**	P		P	05 26 04.4	-4.2
HABR				*e*SS		**S**	**05 32 33.4**	**-0.5**
HABR				*e**SS		sS	05 32 50.2	-19
HABR				*e*SS		**SS**	**05 35 51.5**	**-2.1**
HABR				*e*			05 36 00.8	
HABR				*e*SSS		SSS	05 36 31.7	
HABR				pmax		pmax		
	comp=E,8.0nm,0.7s							
HABR				pmax		pmax		
	comp=N,7.0nm,1.1s							
HABR				pmax		pmax		
	comp=Z,10.0nm,1.1s							
ULN	**Ulaanbaatar**	**46.35**	**341**	*eP*		**P**	**05 26 28.4**	**+0.5**
	comp=Z,4.1nm,0.7s							
ULN	**Ulaanbaatar**	**46.35**	**341**	P		**P**	**05 26 26.7**	**-1.2**
SONM	**Songino Array**	**46.54**	**340**	P		**P**	**05 26 29.4**	**0.0**
SONM	**Songino Array**	**46.54**	**340**	P		**P**	**05 26 29.4**	**0.0**
	comp=Z,1.3nm,0.5s,baz=162,slow=8.0,SNR=3.6							
WMQ	**Urumqi**	**52.32**	**324**	P		**P**	**05 27 14.5**	**+1.1**
WMQ				pP		pP	05 27 24.5	-10
WMQ				sP		sP	05 27 28.4	-16
WMQ				PcP		**PcP**	**05 28 25.6**	**+2.1**
WMQ				PP		**PP**	**05 29 14.1**	**+1.3**
WMQ				PcS		**PcS**	**05 32 22.1**	**+0.2**
WMQ				S		**S**	**05 34 36.0**	**+3.6**
WMQ				sS		sS	05 34 52.8	-16
WMQ				ScS		**ScS**	**05 36 58.5**	**+3.3**
WMQ				pmax		pmax		
	comp=Z,14nm,0.4s							
WMQ				pmax		pmax		
	comp=Z,140nm,4.8s							
WMQ				LR		LR		
	comp=N,120nm,5.2s							
WMQ				LR		LR		
	comp=E,110nm,4.6s							
PETK	**Petropavlovsk-**	**54.10**	**22**	P		**P**	**05 27 26.2**	**0.0**
PETK	**Petropavlovsk-**	**54.10**	**22**	P		**P**	**05 27 26.2**	**0.0**
PETK				pP		**pP**	**05 27 51.6**	**+4.1**
PETK	**Petropavlovsk-**	**54.10**	**22**	P		**P**	**05 27 26.2**	**0.0**
	comp=E,4.5nm,0.8s,baz=180,slow=1.0,SNR=5.2							
PETK				pP		**pP**	**05 27 51.6**	**+4.1**
	comp=E,3.2nm,0.7s,baz=185,slow=8.6,SNR=3.9							
MK31	**Makanchi Array**	**57.14**	**324**	*eP*		**P**	**05 27 48.0**	**-0.1**
MK31	**Makanchi Array**	**57.14**	**324**	*eP*		**P**	**05 27 48.0**	**-0.1**
MKAR	**Makanchi Array**	**57.14**	**324**	P		**P**	**05 27 48.0**	**-0.1**
MKAR	**Makanchi Array**	**57.14**	**324**	P		**P**	**05 27 48.0**	**-0.1**
MKAR				pP		**pP**	**05 28 12.7**	**+3.0**
MKAR	**Makanchi Array**	**57.14**	**324**	P		**P**	**05 27 48.0**	**-0.1**
	comp=E,9.4nm,0.4s,baz=114,slow=7.8,SNR=180							
MKAR				pP		**pP**	**05 28 12.7**	**+3.0**
	comp=E,3.1nm,0.6s,baz=128,slow=7.9,SNR=2.6							
KSH	**Kashi**	**57.87**	**314**	*eP*		**P**	**05 27 52.8**	**-0.7**
KSH				*e*pP		pP	05 28 05.0	-10
KSH				*e*sP		sP	05 28 11.1	-14
KSH				*e*PcP		**PcP**	**05 28 45.1**	**0.0**
KSH				*e*PP		**PP**	**05 30 02.3**	**-0.3**
KSH				*e*ScP		**ScP**	**05 32 40.3**	**+2.7**
KSH				*e*PcS		**PcS**	**05 32 45.1**	**-1.5**
KSH				*e*S		**S**	**05 35 45.9**	**-1.0**
KSH				*e*ScS		**ScS**	**05 37 34.5**	**-0.8**
KSH				pmax		pmax		
	comp=Z,5.0nm,0.4s							
KSH				pmax		pmax		
	comp=Z,120nm,4.4s							
KSH				LR		LR		
	comp=N,58nm,3.2s							
KSH				LR		LR		
	comp=E,63nm,3.1s							
KSH				LR		LR		
	comp=Z,77nm,3.7s							
KZA	**Kyzart**	**59.38**	**317**	P		**P**	**05 28 04.5**	**+0.2**
	SNR=11							
TKM2	**Tokmak 2**	**59.49**	**318**	P		**P**	**05 28 04.3**	**-0.5**
TKM2				pmax		pmax		
	comp=Z,11nm,1.0s							
TKM2	**Tokmak 2**	**59.49**	**318**	*eP*		**P**	**05 28 04.2**	**-0.5**
	comp=Z,9.3nm,0.9s							
TKM2	**Tokmak 2**	**59.49**	**318**	P		**P**	**05 28 04.5**	**-0.3**
	SNR=13							
ZAA0	**Zalesovo Array**	**60.00**	**332**	*eP*		**P**	**05 28 06.9**	**-0.8**
ZALV	**Zalesovo Beam**	**60.00**	**332**	P		**P**	**05 28 06.9**	**-0.9**
ZALV	**Zalesovo Beam**	**60.00**	**332**	P		**P**	**05 28 06.9**	**-0.9**
ZALV	**Zalesovo Beam**	**60.00**	**332**	P		**P**	**05 28 06.9**	**-0.9**
	comp=Z,3.8nm,0.4s,baz=121,slow=6.6,SNR=18							
AAK	**Ala-Archa**	**60.12**	**317**	*eP*		**P**	**05 28 08.8**	**-0.3**
AAK	**Ala-Archa**	**60.12**	**317**	*eP*		**P**	**05 28 08.8**	**-0.3**
	comp=Z,0.7nm,0.7s							
AAK	**Ala-Archa**	**60.12**	**317**	P		**P**	**05 28 08.7**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=144,slow=8.2,SNR=7.7							
USP	**Ospenovka**	**60.37**	**318**	P		**P**	**05 28 10.2**	**-0.4**
	SNR=14							
AML	**Almayashu**	**60.47**	**316**	P		**P**	**05 28 11.8**	**+0.1**
	SNR=13							
EKS2	**Erkin-Say**	**60.62**	**317**	*eP*		**P**	**05 28 12.4**	**0.0**
EKS2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
EKS2	**Erkin-Say**	**60.62**	**317**	*eP*		**P**	**05 28 12.4**	**0.0**
	comp=Z,9.5nm,0.8s							
EKS2	**Erkin-Say**	**60.62**	**317**	P		**P**	**05 28 12.8**	**+0.4**
	SNR=15							
KURK	**Kurchatov**	**61.27**	**327**	*ceP*		**P**	**05 28 15.8**	**-0.7**
KURK				pmax		pmax		
	comp=Z,50nm,0.7s							
KURK	**Kurchatov**	**61.27**	**327**	*eP*		**P**	**05 28 16.4**	**-0.1**
	comp=Z,50nm,0.6s							
KURK				pP		**pP**	**05 28 40.0**	**+1.7**
KURBB	**Kurchatov Arra**	**61.28**	**327**	P		**P**	**05 28 16.4**	**-0.1**
	comp=Z,36nm,0.6s,baz=128,slow=6.5,SNR=459							
KURBB				pP		**pP**	**05 28 40.0**	**+1.7**
	comp=Z,5.6nm,0.6s,baz=124,slow=6.3,SNR=3.4							
NVS	**Novosibirsk**	**61.28**	**333**	*i P*		**P**	**05 28 14.6**	**-1.8**
KK31	**Karatay Array**	**63.01**	**316**	P		**P**	**05 28 27.3**	**-1.0**
KK31				pmax		pmax		
	comp=Z,11nm,0.8s							
KKAR	**Karatay Array**	**63.01**	**316**	*eP*		**P**	**05 28 27.5**	**-0.8**
KKAR	**Karatay Array**	**63.01**	**316**	*eP*		**P**	**05 28 27.5**	**-0.8**
VOSK	**Vostochnaya**	**66.41**	**326**	P		**P**	**05 28 49.2**	**-1.0**
VOSK				pmax		pmax		
	comp=Z,12nm,0.5s							
TIXI	**Tiksi**	**66.74**	**0**	*ceP*		**P**	**05 28 50.6**	**-1.3**
TIXI				pmax		pmax		
	comp=Z,6.0nm,1.7s							
BVA0	**Borovoye Array**	**66.86**	**326**	P		**P**	**05 28 52.3**	**-0.8**
BVA0				pmax		pmax		
	comp=Z,2.0nm,0.7s							
BVAR	**Borovoye Array**	**66.86**	**326**	P		**P**	**05 28 52.9**	**-0.2**
BVAR				*PP		**PcP**	**05 29 18.5**	**-2.7**
BVAR	**Borovoye Array**	**66.86**	**326**	P		**P**	**05 28 52.9**	**-0.2**
BVAR				pP		**PcP**	**05 29 18.5**	**-2.7**
BVAR	**Borovoye Array**	**66.86**	**326**	P		**P**	**05 28 52.9**	**-0.2**
	comp=Z,14nm,0.7s,baz=120,slow=8.5,SNR=47							
BVAR				pP		**PcP**	**05 29 18.5**	**-2.7**
	comp=Z,3.0nm,0.7s,baz=138,slow=6.9,SNR=2.1							
BRVK	**Borovoye**	**66.94**	**326**	*eP*		**P**	**05 28 53.2**	**-0.3**
	comp=Z,22nm,0.9s							
ZRNK	**Zerenda**	**67.60**	**326**	P		**P**	**05 28 57.1**	**-0.6**
ZRNK				pmax		pmax		
	comp=Z,29nm,0.9s							
BILL	**Bilibino**	**68.28**	**15**	P		**P**	**05 29 00.0**	**-1.7**
BILL				*e*			05 29 18.7	
BILL				*e*			05 29 28.3	
BILL				pmax		pmax		
	comp=Z,15nm,1.8s							
AB31	**Akbulak array**	**71.84**	**320**	P		**P**	**05 29 23.1**	**-0.7**
AB31				pmax		pmax		
	comp=Z,4.0nm,0.4s							
ABKAR	**Akbulak array**	**71.84**	**320**	*eP*		**P**	**05 29 23.2**	**-0.6**
	comp=Z,11nm,0.7s							
AKTO	**Aktyubinsk**	**73.33**	**321**	P		**P**	**05 29 32.2**	**-0.4**
AKTO	**Aktyubinsk**	**73.33**	**321**	P		**P**	**05 29 32.2**	**-0.4**
AKTO	**Aktyubinsk**	**73.33**	**321**	P		**P**	**05 29 32.2**	**-

SPITS	**Spitsbergen Ar**	**89.56**	**349**	P		**P**	**05 30 57.4**	**-0.4**
	comp=Z,19nm,1.1s,baz=359,slow=5.0,SNR=4.5							
ARCES	**ARCESS Array B**	**89.71**	**340**	P		**P**	**05 30 57.2**	**-1.4**
ARCES	**ARCESS Array B**	**89.71**	**340**	P		**P**	**05 30 57.2**	**-1.4**
	comp=Z,4.3nm,0.4s,baz=86,slow=6.1,SNR=80							
ARE0	**ARCESS Array S**	**89.71**	**340**	*e*P		**P**	**05 30 57.2**	**-1.3**
BRTR	**Keskin Array B**	**89.97**	**310**	P		**P**	**05 30 59.3**	**-1.3**
BRTR	**Keskin Array B**	**89.97**	**310**	P		**P**	**05 30 59.3**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=83,slow=4.5,SNR=2.4							
KAF	**Kangasniemi**	**91.01**	**333**	*e*P		**P**	**05 31 02.5**	**-2.2**
KAF				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KAF	**Kangasniemi**	**91.01**	**333**	*e*p		**P**	**05 31 02.5**	**-2.2**
	comp=Z,1.1nm,0.4s							
FINES	**FINESS Array B**	**91.26**	**332**	P		**P**	**05 31 04.2**	**-1.7**
FINES	**FINESS Array B**	**91.26**	**332**	P		**P**	**05 31 04.2**	**-1.7**
	comp=Z,1.8nm,0.4s,baz=65,slow=4.6,SNR=33							
AKASG	**Malin Array Be**	**91.57**	**321**	*c*eP		**P**	**05 31 05.6**	**-2.0**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**91.57**	**321**	P		**P**	**05 31 05.7**	**-1.8**
AKASG	**Malin Array Be**	**91.57**	**321**	P		**P**	**05 31 05.7**	**-1.8**
	comp=Z,1.1nm,0.4s,baz=69,slow=4.5,SNR=5.4							
VRI	**Vrincioaia**	**94.08**	**317**⇑	*i*P		**P**	**05 31 18.8**	**-0.5**
MLR	**Muntele Rosu**	**94.69**	**316**	P		**P**	**05 31 21.0**	**-1.3**
MLR	**Muntele Rosu**	**94.69**	**316**⇑	*i*P		**P**	**05 31 21.4**	**-0.9**
MLR	**Muntele Rosu**	**94.69**	**316**	P		**P**	**05 31 21.0**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=45,slow=2.9,SNR=8.4							
ARR	**Arges**	**95.62**	**316**⇑	*i*P		**P**	**05 31 25.5**	**-0.9**
DRGR		**96.59**	**318**⇑	*i*P		**P**	**05 31 28.6**	**-2.2**
HFS	**Hagfors**	**97.44**	**333**	P		**P**	**05 31 32.1**	**-2.1**
HFS	**Hagfors**	**97.44**	**333**	P		**P**	**05 31 32.1**	**-2.1**
	comp=Z,1.5nm,0.4s,baz=108,slow=8.0,SNR=25							
NOA	**NORSAR Array B**	**98.18**	**334**	P		**P**	**05 31 35.6**	**-2.0**
NOA	**NORSAR Array B**	**98.18**	**334**	P		**P**	**05 31 35.6**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=64,slow=4.8,SNR=3.9							
CLL	**Collm**	**101.24**	**324**	*e*P		**Pdif**	**05 31 56.0**	**+4.6**
TORD	**Torodi Ar. Bea**	**123.37**	**289**	PKP		**PKPdf**	**05 36 57.4**	**-1.1**
TORD	**Torodi Ar. Bea**	**123.37**	**289**	PKP		**PKPdf**	**05 36 57.4**	**-1.1**
	comp=Z,2.1nm,0.6s,baz=58,slow=1.9,SNR=22							
DBIC	**Dimbokro**	**131.16**	**283**	PKP		**PKPdf**	**05 37 12.8**	**-0.6**
DBIC	**Dimbokro**	**131.16**	**283**	PKP		**PKPdf**	**05 37 12.8**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=96,slow=2.7,SNR=3.4							

ISCJB ***17*** *05:19:48.6±0.3, 67.16°N±0.02°×20.75E±0.05, h0km, mb3.2/1, Error ellipse: s-maj=3.0km s-min=2.5km az=17.4*
CSEM ***17*** *05:19:49.6±0.1, 67.18°N×20.71°E, h2km, ML2.9, Error ellipse: s-maj=2.8km s-min=2.5km az=95.0, Suspected Mining explosion.*
IDC ***17*** *05:19:49.9±0.7, 67.13°N×21.00°E, h0km, mb3.2/1, mb1 3.5/6, mb1mx3.2/31, mbtmpg3.5/6, ML3.4/5, Error ellipse: s-maj=12.5km s-min=6.4km az=112.0*
NAO ***17*** *05:19:49.8±0.8, 67.13°N×20.92E, ML3.3*
UPP ***17*** *05:19:49.3, 67.19°N×20.73E, h0km, ML2.9, Suspected Mining explosion.*
HEL ***17*** *05:19:50.1±0.1, 67.18°N×20.70E, h1km, ML2.9, ML2.9(UPP), ML3.0(BER), Suspected explosion*
BER ***17*** *05:19:51.9, 67.15°N×20.65E, h0km, MD2.9, ML3.0, ML3.3(NAO)*

ISC 17 05:19:48.5±0.6, 67.16N±0.02×20.72E±0.02, h0km, n99, σ1839/158, 2C, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DUNU	**Dundret**	**0.07**	**235**	*i* P		**Pg**	**05 19 51.4**	**+1.5**
DUNU				*i* S		**Sg**	**05 19 52.5**	**+1.7**
DUNU	**Dundret**	**0.07**	**235**	P		**Pg**	**05 19 51.3**	**+1.5**
DUNU				S		**Sg**	**05 19 52.4**	**+1.7**
ERTU	**Ertsjaerv**	**0.84**	**136**	*i* P		**Pg**	**05 20 05.3**	**+0.7**
ERTU				*i* S		**Sg**	**05 20 16.9**	**+1.4**
ERTU	**Ertsjaerv**	**0.84**	**136**	P		**Pg**	**05 20 05.3**	**+0.7**
ERTU				S		**Sg**	**05 20 16.9**	**+1.4**
SALU	**Saltoluokta**	**0.89**	**285**	*i* P		**Pg**	**05 20 05.8**	**+0.3**
SALU				*i* S		**Sg**	**05 20 17.6**	**+0.7**
SALU	**Saltoluokta**	**0.89**	**285**	P		**Pg**	**05 20 05.8**	**+0.3**
SALU				S		**Sg**	**05 20 17.6**	**+0.7**
NIKU	**Nikkaluokta**	**0.96**	**318**	*e*P		**Pg**	**05 20 06.8**	**0.0**
NIKU	**Nikkaluokta**	**0.96**	**318**	P		**Pg**	**05 20 06.8**	**0.0**
HARU	**Harads**	**1.01**	**174**	*e*P		**Pg**	**05 20 08.3**	**+0.5**
HARU				*e*S		**Sb**	**05 20 22.6**	**0.0**
HARU	**Harads**	**1.01**	**174**	P		**Pg**	**05 20 08.3**	**+0.5**
HARU				S		**Sb**	**05 20 22.5**	**0.0**
LANU	**Lannavaara**	**1.01**	**28**	*e*P		**Pg**	**05 20 07.9**	**0.0**
LANU				*e*SB		**Sb**	**05 20 22.4**	**-0.4**
LANU	**Lannavaara**	**1.01**	**28**	P		**Pg**	**05 20 07.9**	**0.0**
LANU				Sb		**Sb**	**05 20 22.4**	**-0.4**
HEF	**Hetta**	**1.68**	**40**⇑	*i*P		**Pn**	**05 20 19.5**	**+0.4**
HEF				*e*S		**Sn**	**05 20 40.6**	**-0.6**
HEF	**Hetta**	**1.68**	**40**	*e*P		**Pn**	**05 20 19.4**	**+0.4**
HEF				*e*S		**Sn**	**05 20 41.3**	**+0.1**
HEF	**Hetta**	**1.68**	**40**⇑	*i*P		**Pn**	**05 20 19.5**	**+0.4**
	SNR=50							
HEF				S		**Sn**	**05 20 41.3**	**+0.1**
KALU	**Kalix**	**1.68**	**140**	*e*P		**Pn**	**05 20 20.2**	**+1.1**
KALU				*e*S		**Sb**	**05 20 42.7**	**+0.8**
KALU	**Kalix**	**1.68**	**140**	P		**Pn**	**05 20 20.2**	**+1.1**
KALU				S		**Sb**	**05 20 42.7**	**+0.8**
SJUU	**Sjulsmark**	**1.70**	**167**	*e*P		**Pb**	**05 20 20.6**	**+0.1**
SJUU	**Sjulsmark**	**1.70**	**167**	P		**Pb**	**05 20 20.6**	**+0.1**
KIF	**Kilpisjarvi**	**1.85**	**1**	*e*P		**Pb**	**05 20 22.9**	**-0.3**
KIF				*e*S		**Sg**	**05 20 47.7**	**-0.2**
KIF				MSG			05 20 51.5	
	comp=Z,188nm,0.1s							
KIF	**Kilpisjarvi**	**1.85**	**1**	P		**Pb**	**05 20 22.8**	**-0.3**
KIF				S		**Sg**	**05 20 47.6**	**-0.2**
LILU	**Lilltraesk**	**1.92**	**191**	*e*P		**Pb**	**05 20 23.7**	**-0.5**
LILU	**Lilltraesk**	**1.92**	**191**	P		**Pb**	**05 20 23.7**	**-0.5**
KTK1	**Kautokeino**	**2.08**	**26**	*e*P		**Pb**	**05 20 26.6**	**-0.5**
KTK1				*e*S		**Sb**	**05 20 53.9**	**+0.4**
KTK1				AML		AML	05 20 55.7	
	comp=Z,391nm,0.5s							
KTK1	**Kautokeino**	**2.08**	**26**	*e*P		**Pb**	**05 20 26.6**	**-0.5**
KTK1				*e*S		**Sb**	**05 20 53.9**	**+0.4**
KTK1				AML		AML	05 20 55.7	
	comp=Z,391nm,0.5s							
KTK1	**Kautokeino**	**2.08**	**26**	*e*P		**Pb**	**05 20 26.6**	**-0.5**
	SNR=50							
KTK1				*e*S		**Sb**	**05 20 53.9**	**+0.4**
	comp=Z,148nm,0.7s,SNR=50							
RNF	**Rovaniemi**	**2.16**	**102**	*e*P		**Pn**	**05 20 27.5**	**+1.8**
RNF				*e*SG		**Sb**	**05 20 57.2**	**+1.5**
RNF	**Rovaniemi**	**2.16**	**102**	P		**Pn**	**05 20 27.5**	**+1.8**
RNF				Sg		**Sb**	**05 20 57.2**	**+1.5**
STEI	**Steigen**	**2.24**	**293**	*e*P		**Pb**	**05 20 29.4**	**-0.4**
STEI				*e*Sg		**Sb**	**05 20 58.9**	**+1.0**
STEI				AML		AML	05 21 03.9	
	comp=Z,148nm,0.7s							
STEI	**Steigen**	**2.24**	**293**	*e*P		**Pb**	**05 20 29.4**	**-0.4**
STEI				*e*SG		**Sb**	**05 20 58.9**	**+1.0**
STEI				AML		AML	05 21 03.9	
	comp=Z,148nm,0.7s							
STEI	**Steigen**	**2.24**	**293**	P		**Pb**	**05 20 29.3**	**-0.4**
STEI				Sg		**Sb**	**05 20 58.9**	**+1.0**
	comp=Z,148nm,0.7s							
SGF	**Sodankyl**	**2.27**	**80**	*e*P		**Pn**	**05 20 28.6**	**+1.5**
SGF				*e*SG		**Sb**	**05 20 59.9**	**+1.1**
SGF	**Sodankyl**	**2.27**	**80**	P		**Pn**	**05 20 28.6**	**+1.5**
SGF				Sg		**Sb**	**05 20 59.9**	**+1.1**
TRO	**Tromso**	**2.57**	**346**	*e*P		**Pn**	**05 20 32.9**	**+1.6**
TRO				*e*S		**Sb**	**05 21 05.9**	**-1.5**
TRO				AML		AML	05 21 10.2	
	comp=Z,110nm,0.3s							
TRO	**Tromso**	**2.57**	**346**	*e*P		**Pn**	**05 20 32.9**	**+1.6**
TRO				*e*S		**Sb**	**05 21 05.9**	**-1.5**
TRO				AML		AML	05 21 10.2	
	comp=Z,110nm,0.3s							
TRO	**Tromso**	**2.57**	**346**	*e*P		**Pn**	**05 20 32.9**	**+1.6**
	SNR=50							
TRO				*e*S		**Sb**	**05 21 05.9**	**-1.5**
	comp=Z,110nm,0.3s,SNR=50							
BURU	**Burvik**	**2.60**	**174**	*e*P		**Pn**	**05 20 33.8**	**+2.0**
BURU	**Burvik**	**2.60**	**174**	P		**Pn**	**05 20 33.7**	**+2.0**
MOR8	**Moi Rana**	**2.69**	**251**	*e*P		**Pn**	**05 20 33.5**	**+0.5**
MOR8				*e*Sg		**Sn**	**05 21 07.3**	**+1.1**
MOR8				AML		AML	05 21 10.2	
	comp=Z,165nm,0.5s							
MOR8	**Moi Rana**	**2.69**	**251**	*e*P		**Pn**	**05 20 33.5**	**+0.5**
MOR8				*e*SG		**Sn**	**05 21 07.3**	**+1.1**
MOR8				AML		AML	05 21 10.2	
	comp=Z,165nm,0.5s							
MOR8	**Moi Rana**	**2.69**	**251**	P		**Pn**	**05 20 33.5**	**+0.5**
MOR8				*e*Sg		**Sn**	**05 21 07.3**	**+1.1**
	comp=Z,165nm,0.5s,SNR=90							
LOF	**Lofoten**	**2.91**	**293**	*e*P		Sg	05 21 29.0	+7.1
LOF				AML		AML	05 22 22.9	
	comp=Z,141nm,0.6s							
LOF	**Lofoten**	**2.91**	**293**	*e*P		Sg	05 21 29.0	+7.1
	SNR=50							
OUL	**Oulu**	**2.96**	**132**	*e*P		**Pn**	**05 20 38.5**	**+1.8**
OUL				*e*SG		**Sg**	**05 21 22.0**	**-1.5**
OUL	**Oulu**	**2.96**	**132**	P		**Pn**	**05 20 38.4**	**+1.8**
ARA0	**ARCESS Array S**	**2.97**	**34**	Pn		**Pn**	**05 20 37.5**	**+0.7**
	baz=210,slow=16							
ARA0				Sn		**Sn**	**05 21 13.4**	**+0.3**
	baz=216,slow=28							
ARA0	**ARCESS Array S**	**2.97**	**34**	Pn		**Pn**	**05 20 37.5**	**+0.7**
	baz=210,slow=16							
ARA0				Sn		**Sn**	**05 21 13.4**	**+0.3**
	baz=216,slow=28							
ARA0	**ARCESS Array S**	**2.97**	**34**	*e*P		**Pn**	**05 20 37.5**	**+0.7**
ARA0				*e*S		**Sn**	**05 21 13.4**	**+0.3**
ARA0	**ARCESS Array S**	**2.97**	**34**	P		**Pn**	**05 20 37.5**	**+0.7**
ARA0				S		**Sn**	**05 21 13.4**	**+0.3**
ARCES	**ARCESS Array B**	**2.97**	**34**	Pn		**Pn**	**05 20 38.1**	**+1.3**
	comp=Z,7.3nm,0.3s,baz=213,slow=13,SNR=564							
ARCES				Sn		**Sn**	**05 21 14.2**	**+1.1**
	comp=Z,20nm,0.3s,baz=215,slow=26,SNR=15							
FLOS	**Flostrand**	**3.03**	**258**	*e*P		**Pn**	**05 20 39.0**	**+1.4**
FLOS				AML		AML	05 21 26.5	
	comp=Z,165nm,0.5s							
FLOS	**Flostrand**	**3.03**	**258**	*e*P		**Pn**	**05 20 39.0**	**+1.4**
FLOS				AML		AML	05 21 26.5	
	comp=Z,165nm,0.5s							
FLOS	**Flostrand**	**3.03**	**258**	P		**Pn**	**05 20 39.0**	**+1.4**
KONS	**Konsvik**	**3.08**	**261**	*e*P		Pn	05 20 33.4	-4.9
KONS				AML		AML	05 21 25.9	
	comp=Z,93nm,0.6s							
KONS	**Konsvik**	**3.08**	**261**	*e*P		Pn	05 20 33.4	-4.9
KONS				AML		AML	05 21 25.9	
	comp=Z,93nm,0.6s							
STOK	**Stokkvaagen**	**3.17**	**258**	*e*P		**Pn**	**05 20 41.6**	**+2.1**
STOK				*e*Sg		**Sg**	**05 21 29.9**	**-0.3**
STOK	**Stokkvaagen**	**3.17**	**258**	*e*P		**Pn**	**05 20 41.6**	**+2.1**
STOK				*e*SG		**Sg**	**05 21 29.9**	**-0.3**
STOK	**Stokkvaagen**	**3.17**	**258**	P		**Pn**	**05 20 41.5**	**+2.1**
STOK				Sg		**Sg**	**05 21 29.8**	**-0.3**
UMAU	**Umeaa**	**3.29**	**180**	*e*P		**Pn**	**05 20 43.1**	**+1.8**
UMAU	**Umeaa**	**3.29**	**180**	P		**Pn**	**05 20 43.0**	**+1.8**
BREU	**Bredtraesk**	**3.41**	**196**	*e*P		**Pn**	**05 20 44.3**	**+1.6**
BREU	**Bredtraesk**	**3.41**	**196**	P		**Pn**	**05 20 44.3**	**+1.6**
VRF	**Varrio**	**3.47**	**76**	*e*P		**Pn**	**05 20 44.3**	**+0.6**
VRF				*e*SB		**Sb**	**05 21 34.7**	**+1.2**
VRF				MSG			05 21 39.7	
	comp=Z,41nm,0.2s							
VRF	**Varrio**	**3.47**	**76**	P		**Pn**	**05 20 44.3**	**+0.6**
KEV	**Kevo**	**3.49**	**39**	*e*P		**Pn**	**05 20 44.5**	**+0.7**
KEV				*e*S		**Sn**	**05 21 25.4**	**-0.3**
KEV				MSG			05 21 41.6	
	comp=Z,20nm,0.1s							
KEV	**Kevo**	**3.49**	**39**	P		**Pn**	**05 20 44.5**	**+0.7**
KEV				S		**Sn**	**05 21 25.4**	**-0.3**
MSF	**Maaselka**	**3.56**	**107**	*e*P		**Pn**	**05 20 46.5**	**+1.6**
MSF				*e*SG		**Sg**	**05 21 40.1**	**-2.5**
MSF	**Maaselka**	**3.56**	**107**	P		**Pn**	**05 20 46.5**	**+1.6**
SOLU	**Sollefteaa**	**4.19**	**202**	*e*P		**Pn**	**05 20 54.9**	**+1.3**
SOLU	**Sollefteaa**	**4.19**	**202**	P		**Pn**	**05 20 54.9**	**+1.3**
VAF	**Ylistaro**	**4.22**	**168**	*e*P		**Pn**	**05 20 55.8**	**+1.9**
VAF				*e*S		**Sn**	**05 21 43.3**	**-0.5**
VAF				*e*SG		**Sg**	**05 22 00.1**	**-3.7**
VAF				MSG			05 22 05.2	
	comp=Z,18nm,0.3s							
VAF	**Ylistaro**	**4.22**	**168**	P		**Pn**	**05 20 55.8**	**+1.9**
KJN	**Kajaani**	**4.24**	**134**	*e*P		**Pn**	**05 20 55.9**	**+1.7**
KJN	**Kajaani**	**4.24**	**134**	P		**Pn**	**05 20 55.8**	**+1.7**
NOD	**Norderasen**	**4.47**	**216**	*e*P		**Pn**	**05 20 58.4**	**+1.0**
NOD	**Norderasen**	**4.47**	**216**	P		**Pn**	**05 20 58.4**	**+1.0**
HEMU	**Hemsoen**	**4.65**	**195**	*e*P		**Pn**	**05 21 00.9**	**+1.1**
HEMU	**Hemsoen**	**4.65**	**195**	P		**Pn**	**05 21 00.9**	**+1.1**
FIA0	**FINESS Array S**	**6.19**	**155**	Pn		**Pn**	**05 21 22.9**	**+1.9**
	baz=347,slow=14							
FIA0				Sn		**Sn**	**05 22 31.4**	**-1.1**
	baz=342,slow=18							
FIA0				Lg		Lg	05 23 01.8	
	baz=335,slow=37							
FIA0	**FINESS Array S**	**6.19**	**155**	Pn		**Pn**	**05 21 22.9**	**+1.9**
	baz=347,slow=14							
FIA0				Sn		**Sn**	**05 22 31.4**	**-1.1**
	baz=342,slow=18							
FIA0				Lg		Lg	05 23 01.8	
	baz=335,slow=37							
FIA0	**FINESS Array S**	**6.19**	**155**	*e*P		**Pn**	**05 21 22.9**	**+1.9**
FIA0				*e*S		**Sn**	**05 22 31.4**	**-1.1**
FIA0				*e*SG		Sg	05 23 01.8	-5.4
FIA0	**FINESS Array S**	**6.19**	**155**	P		**Pn**	**05 21 22.9**	**+1.9**
FIA0				Lg		Lg	05 23 01.8	
	baz=335,slow=30,SNR=9.9							
FINES	**FINESS Array B**	**6.19**	**155**	Pn		**Pn**	**05 21 21.3**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=346,slow=12,SNR=52							
FINES				Sn		**Sn**	**05 22 32.2**	**-0.2**
	comp=Z,4.6nm,0.3s,baz=345,slow=22,SNR=14							
FINES				Lg		Lg	05 23 03.3	
	comp=Z,6.9nm,0.3s,baz=346,slow=31,SNR=19							
NB2	**NORSAR Subarra**	**7.41**	**219**	Pn		**Pn**	**05 21 38.1**	**+0.3**
	baz=32,slow=14							
NB2				Sn		**Sn**	**05 22 59.7**	**-2.9**
	baz=33,slow=28							
NB2				Lg		Lg	05 23 39.6	
	baz=30,slow=37							
NB2	**NORSAR Subarra**	**7.41**	**219**	Pn		**Pn**	**05 21 38.1**	**+0.3**
	baz=32,slow=14							
NB2				Sn		**Sn**	**05 22 59.7**	**-2.9**
	baz=33,slow=28							
NB2				Lg		Lg	05 23 39.6	
	baz=30,slow=37							
NB2	**NORSAR Subarra**	**7.41**	**219**	*e*P		**Pn**	**05 21 38.1**	**+0.3**
NB2				*e*S		**Sn**	**05 22 59.7**	**-2.9**
NB2				*e*SG		Sg	05 23 39.6	-6.7
NB2	**NORSAR Subarra**	**7.41**	**219**	Pn		**Pn**	**05 21 38.2**	**+0.3**
	baz=32,slow=13,SNR=9.4							
NB2				Sn		**Sn**	**05 22 59.7**	**-2.9**
	SNR=50							
NB2				Lg		Lg	05 23 39.6	
	baz=30,slow=33,SNR=3.0							
NOA	**NORSAR Array B**	**7.41**	**219**	Pn		**Pn**	**05 21 38.5**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=28,slow=11,SNR=28							
NOA				Sn		**Sn**	**05 22 59.8**	**-2.7**
	comp=Z,1.2nm,0.3s,baz=39,slow=24,SNR=5.4							
NOA				Lg		Lg	05 23 44.1	
	comp=Z,2.5nm,0.3s,baz=30,slow=15,SNR=6.2							
HFS	**Hagfors**	**7.71**	**207**	Pn		**Pn**	**05 21 41.9**	**+0.1**
	baz=14,slow=12							
HFS				Sn		**Sn**	**05 23 06.5**	**-3.3**
	baz=30,slow=28							
HFS				Lg		Lg	05 23 50.6	
	baz=21,slow=28							
HFS	**Hagfors**	**7.71**	**207**	Pn		**Pn**	**05 21 41.9**	**+0.1**
	baz=14,slow=12							
HFS				Sn		**Sn**	**05 23 06.5**	**-3.3**
	baz=30,slow=28							
HFS				Lg		Lg	05 23 50.6	
	baz=21,slow=28							
HFS	**Hagfors**	**7.71**	**207**	*e*P		**Pn**	**05 21 41.9**	**+0.1**
HFS				*e*S		**Sn**	**05 23 06.5**	**-3.3**
HFS				*e*SG		**Sg**	**05 23 50.6**	**-5.2**
HFS	**Hagfors**	**7.71**	**207**	Pn		**Pn**	**05 21 41.8**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=22,slow=13,SNR=66							
HFS				Sn		**Sn**	**05 23 07.4**	**-2.4**
	comp=Z,1.4nm,0.3s,baz=20,slow=22,SNR=8.2							
HFS				Lg		Lg	05 23 53.0	
	comp=Z,1.5nm,0.3s,baz=24,slow=26,SNR=7.3							
HFS	**Hagfors**	**7.71**	**207**	P		**Pn**	**05 21 41.9**	**+0.1**
HFS				Sn		**Sn**	**05 23 06.5**	**-3.3**
	SNR=50							
HFS				Lg		Lg	05 23 50.7	
	baz=21,slow=28,SNR=5.1							
SPA0	**Spitsbergen Ar**	**11.14**	**355**	Pn		**Pn**	**05 22 29.0**	**+0.2**
	baz=170,slow=14							
SPA0	**Spitsbergen Ar**	**11.14**	**355**	Pn		**Pn**	**05 22 29.0**	**+0.2**
	baz=170,slow=14							
SPA0	**Spitsbergen Ar**	**11.14**	**355**	*e*P		**Pn**	**05 22 29.0**	**+0.2**
SPA0	**Spitsbergen Ar**	**11.14**	**355**	Pn		**Pn**	**05 22 29.0**	**+0.2**
	baz=170,slow=13,SNR=50							
SPITS	**Spitsbergen Ar**	**11.14**	**355**	Pn		**Pn**	**05 22 28.8**	**0.0**
	baz=176,slow=16,SNR=14							
KURBB	**Kurchatov Arra**	**32.63**	**91**	P		**P**	**05 26 21.8**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=319,slow=8.3,SNR=4.3							

KRSC 17 05:22:27.2±0.4, 54.83N×162.34E, h21km±20km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MKZ	**Mys Kozlova**	**0.45**	**232**	P		Pb	05 22 37.3	+1.0
MKZ				*i* S		Sb	05 22 44.0	+1.6
TUMR	**Tumrok**	**1.34**	**291**	P		Pb	05 22 51.4	-0.4
TUMR				*i* S		Sn	05 23 08.3	+0.2
KBTR	**Krutoberegovo**	**1.41**	**11**	P		Pn	05 22 51.9	+0.3
KBTR				*i* S		Sb	05 23 10.8	+0.6
KBG	**Krutoberegovo**	**1.44**	**8**	P		Pn	05 22 52.4	+0.4
KBG				*i* S		Sb	05 23 11.5	+0.3
BZGR	**Bezymyannyi-Gr**	**1.46**	**321**	P		Pn	05 22 52.8	+0.4
BZGR				*i* S		Sn	05 23 11.4	+0.5
ZLN	**Zelenaya**	**1.48**	**324**	P		Pn	05 22 53.2	+0.5
ZLN				*i* S		Sb	05 23 12.8	+0.3
KMNR	**Kamenistaya**	**1.52**	**309**	P		Pn	05 22 54.0	+0.7
KMNR				*i* S		Sb	05 23 13.7	0.0
BZMR	**Bezymyannaya**	**1.53**	**317**	P		Pn	05 22 53.9	+0.4
BZWR	**Bezymyannyi-We**	**1.55**	**318**	P		Pn	05 22 54.1	+0.3
BZWR				*i* S		Sn	05 23 13.9	+0.5
LGNR	**Loginova**	**1.57**	**324**	P		Pb	05 22 55.5	-0.4
CIRR	**Tsirk**	**1.57**	**326**	P		Pn	05 22 54.4	+0.3
KIRR	**Kirishev**	**1.60**	**315**	P		Pb	05 22 56.2	-0.1
KPT	**Kopyto**	**1.66**	**314**	P		Pb	05 22 56.3	-0.9
KRSR	**Krestovskiy**	**1.72**	**325**	P		Pn	05 22 56.4	+0.4
KRSR				*i* S		Sn	05 23 17.1	-0.3
KLY	**Klyuchi**	**1.77**	**328**	P		Pn	05 22 56.3	-0.2
KLY				*i* S		Sn	05 23 16.9	-1.5
SMKR	**Semkarok**	**1.82**	**345**	P		Pn	05 22 58.1	+0.7
SMKR				*i* S		Sb	05 23 21.2	-1.2
BDR	**Baidarnaya**	**1.86**	**340**	P		Pn	05 22 58.8	+0.9
BDR				*i* S		Sn	05 23 21.8	+1.0
KOZ	**Kozyrevsk**	**1.87**	**312**	P		Pb	05 22 59.7	-0.9
KOZ				*i* S		Sb	05 23 23.0	+0.5
SRKR	**Sorokina**	**1.94**	**341**	P		Pn	05 22 59.9	+0.8
SRKR				*i* S		Sn	05 23 23.6	+0.7
SRDR	**Sredinnyy**	**2.11**	**316**	P		Pn	05 23 02.4	+1.1
SRDR				*i* S		Sn	05 23 28.3	+1.4
BKI	**Bering**	**2.12**	**78**	P		Pn	05 22 59.8	-1.6
BKI				*i* S		Sn	05 23 24.0	-3.1
SPN	**Mys Shipunski**	**2.21**	**219**	P		Pn	05 23 01.5	-1.1
SPN				*i* S		Sn	05 23 27.1	-2.2
ESO	**Esso**	**2.35**	**299**	P		Pn	05 23 06.2	+1.6
ESO				*i* S		Sb	05 23 35.2	-2.2
NLC	**Nalytchevo**	**2.43**	**228**	P		Pn	05 23 06.4	+0.9
NLC				*i* S		Sn	05 23 35.1	+0.6
SDLR	**Sedlovina**	**2.56**	**234**	P		Pn	05 23 08.7	+1.1
SDLR				*i* S		Sn	05 23 39.2	+0.9
KRER	**Koryakskii**	**2.61**	**236**	P		Pn	05 23 09.7	+1.3
KRER				*i* S		Sn	05 23 40.7	+1.1
SMAR	**Somma**	**2.61**	**234**	P		Pn	05 23 09.5	+1.1
SMAR				*i* S		Sn	05 23 40.1	+0.4
UGLR	**Uglovaya**	**2.63**	**233**	P		Pn	05 23 09.8	+1.2
UGLR				*i* S		Sn	05 23 41.4	+1.4
AVH	**Avacha**	**2.64**	**235**	P		Pn	05 23 09.8	+1.2
AVH				*i* S		Sn	05 23 41.5	+1.4
KOK	**Koryaka**	**2.67**	**236**	P

BKI	**Bering**	**2.10**	**78**	P	Pn	05 41 12.3	+0.1
BKI				*i* S	Sn	05 41 36.3	-1.2
SRDR	**Sredinnyy**	**2.13**	**316**	P	Pn	05 41 14.1	+1.3
SRDR				*i* S	Sn	05 41 40.4	+1.9
SPN	**Mys Shipunski**	**2.23**	**220**	P	Pn	05 41 14.8	+0.7
SPN				*i* S	Sn	05 41 40.8	0.0
ESO	**Esso**	**2.37**	**299**	P	Pn	05 41 18.3	+2.2
ESO				*i* S	Sn	05 41 47.0	+2.5
NLC	**Nalytchevo**	**2.45**	**228**	P	Pn	05 41 18.7	+1.6
NLC				*i* S	Sn	05 41 47.2	+1.0
SDLR	**Sedlovina**	**2.59**	**234**	P	Pn	05 41 20.3	+1.1
SDLR				*i* S	Sn	05 41 50.5	+0.5
KRER	**Koryakskii**	**2.63**	**236**	P	Pn	05 41 21.7	+1.7
KRER				*i* S	Sn	05 41 52.9	+1.6
SMAR	**Somma**	**2.63**	**235**	P	Pn	05 41 21.3	+1.3
SMAR				*i* S	Sn	05 41 51.4	0.0
UGLR	**Uglovaya**	**2.66**	**234**	P	Pn	05 41 21.6	+1.4
UGLR				*i* S	Sn	05 41 52.9	+1.2
AVH	**Avacha**	**2.66**	**235**	P	Pn	05 41 22.6	+2.4
AVH				*i* S	Sn	05 41 54.3	+2.5
KOK	**Koryaka**	**2.70**	**237**	P	Pn	05 41 22.2	+1.5
KOK				*i* S	Sn	05 41 53.9	+1.3
GNL	**Ganaly**	**2.85**	**248**	P	Pn	05 41 24.6	+1.9
GNL				*i* S	Sn	05 41 58.5	+2.2
PET	**Petropavlovsk**	**2.86**	**232**	P	Pn	05 41 24.2	+1.5
PET				*i* S	Sn	05 41 57.4	+1.1
RUS	**Russkaya**	**3.33**	**225**	P	Pn	05 41 31.2	+2.0
RUS				*i* S	Sn	05 42 09.4	+1.4
MTVR	**Mutnovka**	**3.43**	**229**	P	Pn	05 41 33.0	+2.1
MTVR				*i* S	Sn	05 42 12.6	+1.7
ASAK	**Asacha**	**3.63**	**229**	P	Pn	05 41 35.7	+2.3
ASAK				*i* S	Sn	05 42 16.9	+1.4

IDC 17 05:41:12.7±1.6, 4°71′N×127°14′E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/24, mbtmpg3.9/5, Error ellipse: s-maj=95.5km s-min=21.7km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.72**	**184**	P	P	05 46 16.7	+0.4
	2.4nm,0.9s,baz=13,slow=9.9,SNR=3.9						
WRA	**Warramunga Arr**	**25.51**	**164**	P	P	05 46 42.8	-0.2
	2.8nm,0.6s,baz=344,slow=10,SNR=11						
ASAR	**Alice Springs**	**28.97**	**167**	P	P	05 47 13.9	-0.3
	0.4nm,0.5s,baz=353,slow=7.4,SNR=5.5						
STKA	**Stephens Creek**	**38.91**	**160**	P	P	05 48 40.1	-0.1
	1.1nm,0.4s,baz=339,slow=9.5,SNR=9.6						
MKAR	**Makanchi Array**	**56.99**	**325**	P	P	05 51 00.1	-0.1
	1.1nm,0.5s,baz=123,slow=8.0,SNR=15						

*IDC **17** 05:59:54.5±0.9, 9°01′S×124°15′E, h0km, mb4.2/4, mb1 4.4/8, mb1mx4.0/21, mbtmp4.2/8, ML4.3/4, MS4.0/2, Ms1 4.0/2, ms1mx2.9/32, Error ellipse: s-maj=51.4km s-min=18.7km az=63.0*

*AUST **17** 05:59:58.9±3.0, 9°38′S×123°66′E, h13km, Error ellipse: s-maj=1.0km s-min=0.8km az=24.0*

*ISCJB **17** 05:59:59.7±0.3, 9°48′S±0°05′×123°62′E±0°05′, h66km, mb4.0/5, Error ellipse: s-maj=9.1km s-min=3.5km az=45.0*

*NEIC **17** 05:59:59.3±0.4, 9°08′S×124°16′E, h35km, mb4.3/1, Error ellipse: s-maj=16.7km s-min=6.5km az=61.0*

*DJA **17** 06:00:18.9±0.7, 9°S±6′×12°2E±1′2, h13km±12km, M3.8/9, mb3.8/1, MLv3.8/9*

ISC 17 06:00:01.7±0.5, 9°43S±0°06×123°69E±0°06, h66km, n53, σ1ᵎ974/49, mb4.0/5, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**1.64**	**299**	P	**Pn**	**06 00 26.1**	**-2.3**
MMRI				S	**Sn**	**06 00 46.7**	**-1.9**
BASI	**Baing, Sumba**	**3.16**	**255**	P	Pn	06 00 52.9	+3.8
WSI	**Waingapu**	**3.35**	**266**	P	Pn	06 00 48.1	-3.6
WSI	**Waingapu**	**3.35**	**266**	P	**Pn**	**06 00 49.5**	**-2.2**
	baz=3.3,SNR=3.5						
BBSI	**Bau Bau**	**4.07**	**344**	P	Pn	06 01 09.8	+8.2
WBSI	**Waikabubak, Su**	**4.24**	**267**	P	**Pn**	**06 01 03.0**	**-1.0**
BSSI	**Bau Bau, Buton**	**4.55**	**316**	P	**Pn**	**06 01 06.6**	**-1.5**
BKSI	**Bulukumba**	**5.40**	**319**	P	**Pn**	**06 01 18.5**	**-1.3**
KAPI	**Kappang**	**5.88**	**318**	*e*Pn	**Pn**	**06 01 24.4**	**-1.8**
	12nm,0.3s						
KAPI				*e*Sn	Sn	06 02 38.1	+5.9
KAPI	**Kappang**	**5.88**	**318**	P	**Pn**	**06 01 25.9**	**-0.4**
KAPI	**Kappang**	**5.88**	**318**	Pn	**Pn**	**06 01 25.2**	**-1.1**
	1.1nm,0.3s,baz=164,slow=15,SNR=7.2						
KNRA	**Kununurra**	**7.94**	**142**	P	**Pn**	**06 01 54.6**	**+0.1**
	baz=8.0,SNR=164						
KNRA				S	**Sn**	**06 03 24.2**	**+1.3**
	baz=8.0,SNR=6.1						
MTN	**Manton Dam**	**8.05**	**116**	P	**Pn**	**06 01 55.5**	**-0.5**
	baz=8.1,SNR=144						
MTN				S	**Sn**	**06 03 26.4**	**+0.7**
	baz=8.1,SNR=4.7						
KHKI	**Kahang-Kahang**	**8.05**	**277**	P	Pn	06 01 50.6	-5.5
FITZ	**Fitzroy Crossi**	**8.82**	**168**	Pn	**Pn**	**06 02 07.4**	**+0.8**
FITZ				Sn	**Sn**	**06 03 43.1**	**-1.5**
FITZ	**Fitzroy Crossi**	**8.82**	**168**	Pn	**Pn**	**06 02 07.4**	**+0.8**
	2.3nm,0.3s,baz=10,slow=12,SNR=58						
FITZ				Sn	**Sn**	**06 03 43.1**	**-1.5**
	4.1nm,0.3s,baz=88,slow=16,SNR=10.0						
FITZ				LR	LR	06 06 29.4	
	comp=Z,96nm,20.3s,baz=2.5,slow=43						
FITZ	**Fitzroy Crossi**	**8.82**	**168**	P	**Pn**	**06 02 07.3**	**+0.7**
	baz=8.9,SNR=39						
KDU	**Kakadu**	**9.21**	**111**	P	**Pn**	**06 02 10.7**	**-1.2**
	baz=9.3,SNR=72						
FAKI	**Fak Fak**	**10.69**	**53**	P	Pn	06 02 35.3	+3.2
	baz=11,SNR=4.5						
FAKI				S	Sn	06 05 04.7	+34
	baz=11,SNR=3.5						
MBWA	**Marble Bar**	**12.27**	**198**	*e*Pn	Pn	06 02 58.3	+4.7
WRA	**Warramunga Arr**	**14.66**	**137**	Pn	Pn	06 03 22.6	-3.1
WRA				Sn	Sn	06 05 60.0	-7.2
WRA	**Warramunga Arr**	**14.66**	**137**	Pn	Pn	06 03 22.6	-3.1
	2.4nm,0.3s,baz=316,slow=14,SNR=83						
WRA				Sn	Sn	06 05 60.0	-7.2
	1.0nm,0.3s,baz=311,slow=25,SNR=5.9						
WRAB	**Tennant Creek**	**14.67**	**137**	*e*Pn	Pn	06 03 22.5	-3.2
	8.5nm,0.6s						
WRAB				*e*Sn	Sn	06 05 59.8	-7.3
AS31	**Alice Springs**	**17.20**	**147**	*e*Pn	**P**	**06 03 58.1**	**-0.3**
AS31				*e*Sn	**Sn**	**06 07 05.3**	**-3.1**
ASAR	**Alice Springs**	**17.20**	**147**	P	**P**	**06 03 57.5**	**-0.9**
ASAR				S	**Sn**	**06 07 04.7**	**-3.8**
ASAR	**Alice Springs**	**17.20**	**147**	P	**P**	**06 03 57.5**	**-0.9**
	1.7nm,0.3s,baz=319,slow=11,SNR=119						
ASAR				S	**Sn**	**06 07 04.7**	**-3.8**
	0.3nm,0.3s,baz=316,slow=23,SNR=4.6						
MEEK	**Meekatharra**	**17.78**	**195**	P	Pn	06 04 10.6	+5.8
	baz=18,SNR=6.0						
QIS	**Mount Isa**	**18.92**	**128**	P	**Pn**	**06 04 20.2**	**+1.5**
	baz=19,SNR=13						
COEN	**Coen**	**19.60**	**105**	P	**Pn**	**06 04 27.2**	**+0.5**
	baz=20,SNR=7.5						
MORW	**Morawa**	**20.81**	**199**	P	Pn	06 04 42.5	+1.6
	baz=21,SNR=6.1						
MTSU	**Mount Surprise**	**21.80**	**116**	P	**P**	**06 04 51.6**	**+3.1**
	baz=22,SNR=4.5						
BLDU	**Ballidu**	**22.06**	**196**	P	**P**	**06 04 55.6**	**+4.4**
	baz=22,SNR=8.2						
STKA	**Stephens Creek**	**27.83**	**146**	P	**P**	**06 05 47.2**	**+2.2**
STKA	**Stephens Creek**	**27.83**	**146**	P	**P**	**06 05 47.2**	**+2.2**
	1.4nm,0.5s,baz=318,slow=9.8,SNR=4.2						
TAPN	**Taplejung**	**50.52**	**317**	*e*P	**P**	**06 08 54.9**	**+1.0**
	5.1nm,0.4s						
RAMN	**Ramite**	**51.01**	**316**	*e*P	**P**	**06 08 57.4**	**-0.2**
	11nm,0.5s						
GUN	**Gumba**	**52.12**	**317**	*e*P	**P**	**06 09 06.6**	**+0.7**
	16nm,0.7s						
PKI	**Pulchoki**	**52.22**	**316**	*e*P	**P**	**06 09 06.3**	**-0.4**
	5.9nm,0.4s						
PKIN	**Phulchoki**	**52.23**	**316**	*e*P	**P**	**06 09 06.6**	**-0.1**
	3.1nm,0.3s						
KOLN	**Koldanda**	**53.60**	**315**	*e*P	**P**	**06 09 16.4**	**-0.3**
DANN	**Dangsing**	**53.85**	**316**	*e*P	**P**	**06 09 18.1**	**-0.5**
	15nm,0.6s						
PYUN	**Piuthan**	**54.23**	**315**	*e*P	**P**	**06 09 21.2**	**-0.1**
	12nm,0.8s						
RAO	**Raoul Island**	**57.92**	**119**	LR	LR	06 31 26.6	
	comp=Z,1μm,20.8s,baz=24,slow=33						
MK31	**Makanchi Array**	**67.03**	**330**	*e*P	**P**	**06 10 48.6**	**+0.7**
MKAR	**Makanchi Array**	**67.03**	**330**	P	**P**	**06 10 48.5**	**+0.7**
MKAR	**Makanchi Array**	**67.03**	**330**	P	**P**	**06 10 48.5**	**+0.7**
	3.1nm,0.7s,baz=135,slow=7.5,SNR=38						
PETK	**Petropavlovsk-**	**68.70**	**21**	P	**P**	**06 10 56.9**	**-1.3**
PETK	**Petropavlovsk-**	**68.70**	**21**	P	**P**	**06 10 56.9**	**-1.3**
	1.0nm,0.6s,baz=206,slow=9.6,SNR=3.0						
ZALV	**Zalesovo Beam**	**71.17**	**337**	P	**P**	**06 11 12.7**	**-0.6**
ZALV	**Zalesovo Beam**	**71.17**	**337**	P	**P**	**06 11 12.7**	**-0.6**
	0.7nm,0.4s,baz=107,slow=4.8,SNR=3.3						
KURK	**Kurchatov**	**71.50**	**332**	*e*P	**P**	**06 11 15.6**	**+0.2**
	2.9nm,0.9s						
TORD	**Torodi Ar. Bea**	**123.09**	**280**	PKP	**PKPdf**	**06 18 54.7**	**+2.9**
TORD	**Torodi Ar. Bea**	**123.09**	**280**	PKP	**PKPdf**	**06 18 54.7**	**+2.9**
	0.3nm,0.4s,baz=58,slow=2.0,SNR=5.6						

IDC 17 06:11:27.2±1.3, 4°73N×128°15E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.5/23, mbtmpg3.7/4, Error ellipse: s-maj=49.2km s-min=23.8km az=75.0, North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.26**	**166**	P	P	06 16 55.3	-0.1
	0.6nm,0.4s,baz=345,slow=11,SNR=12						
ASAR	**Alice Springs**	**28.77**	**169**	P	P	06 17 26.9	0.0
	0.3nm,0.8s,baz=350,slow=8.6,SNR=4.6						
CMAR	**Chiang Mai Arr**	**31.62**	**298**	P	P	06 17 52.5	+0.2
	0.5nm,0.3s,baz=102,slow=8.7,SNR=4.1						
MJAR	**Matsushiro Arr**	**32.98**	**15**	P	P	06 18 03.8	-0.2
	1.2nm,0.4s,baz=174,slow=8.5,SNR=5.2						

*IDC **17** 06:15:08.0±1.5, 19°27N×108°56W, h0km, mb3.6/8, mb1 3.9/12, mb1mx3.8/27, mbtmpg3.6/12, ML3.2/3, MS4.0/11, Ms1 4.0/11, ms1mx3.8/27, Error ellipse: s-maj=49.3km s-min=18.1km az=59.0*

*NEIC **17** 06:15:09.7±0.8, 19°19N×108°40W, h10km, mb4.3/26, MD4.4(MEX), Error ellipse: s-maj=13.9km s-min=7.0km az=219.0*

*ISCJB **17** 06:15:10.7±0.6, 19°31N±0°06×108°18W±0°04, h22km, mb4.0/20, MS4.0/7, Error ellipse: s-maj=8.8km s-min=4.0km az=27.1*

*GCMT **17** 06:15:11.5±0.3, 19°37N×108°43W, h19km±1km, MW5.1, Moment Tensor Solution. s46,c62; s78,c127; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.34±.19; $M_{\theta\theta}$-4.27±.16; $M_{\phi\phi}$5.61±.19; $M_{r\theta}$-1.15±.35; $M_{\theta\phi}$-2.70±.14; $M_{\phi r}$1.22±.36; Best double couple: $M_0$5.90000×10^{16} NP1:ϕ_s31.00000°, δ73.00000°, λ-2.00000°. NP2:ϕ_s121.00000°, δ89.00000°, λ-163.00000°. Principal axes: T 6.5700, Plg11.0000°, Azm255.0000°; N -1.4300, Plg73.0000°, Azm126.0000°; P -5.1400, Plg13.0000°, Azm347.0000°; Data Used: II IU CN G IC.*

*MEX **17** 06:15:11.6±0.4, 19°39N×108°29W, h10km, MD4.4*

ISC 17 06:15:10.5±0.6, 19°29N±0°06×108°26W±0°04, h10km, n186, σ1ᵎ53/157, mb4.2/20, MS4.0/7, 44C-41D, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**3.04**	**86**	*e*P	**Pn**	**06 15 57.4**	**-1.4**
CJM				*i* S	**Sn**	**06 16 33.1**	**-2.2**
CJM	**Chamela**	**3.04**	**86**	*e*P	**Pn**	**06 15 57.4**	**-1.4**
CJM				*i* S	**Sn**	**06 16 33.1**	**-2.2**
ANIG	**Ahuacatlan**	**3.93**	**63**	*i* P	**Pn**	**06 16 10.6**	**-0.4**
ANIG				*i* S	**Sn**	**06 16 55.4**	**-1.8**
ANIG	**Ahuacatlan**	**3.93**	**63**	*i* P	**Pn**	**06 16 10.6**	**-0.4**
ANIG				*i* S	**Sn**	**06 16 55.4**	**-1.8**
MAIG	**Mazatlaan**	**4.24**	**23**	*i* P	**Pn**	**06 16 12.6**	**-2.6**
MAIG				*i* S	Sn	06 16 60.0	-4.8
MAIG	**Mazatlaan**	**4.24**	**23**	*i* P	**Pn**	**06 16 12.6**	**-2.6**
MAIG				*i* S	Sn	06 16 60.0	-4.8
SFJM	**Santa Fe**	**5.05**	**75**	*i* P	**Pn**	**06 16 28.5**	**+1.9**
SFJM	**Santa Fe**	**5.05**	**75**	*i* P	**Pn**	**06 16 28.5**	**+1.9**
LPIG	**La Paz**	**5.15**	**339**	Pn	**Pn**	**06 16 25.6**	**-2.2**
LPIG				*i* S	Px	06 16 33.4	
LPIG	**La Paz**	**5.15**	**339**	*i* P	x	06 16 35.7	
LPIG				*i* S	Px	06 16 33.4	
LPIG	**La Paz**	**5.15**	**339**	Pn	**Pn**	**06 16 25.6**	**-2.2**
	0.3nm,0.3s,baz=138,slow=6.3,SNR=4.4						
LPIG				LR	LR	06 18 14.8	
	comp=Z,266nm,20.4s,baz=89,slow=37						
ZAIG	**Zacatecas**	**6.34**	**56**	*i* P	**Pn**	**06 16 42.6**	**-1.8**
ZAIG				*i* S	**Sn**	**06 17 54.9**	**-2.2**
ZAIG	**Zacatecas**	**6.34**	**56**	*i* P	**Pn**	**06 16 42.6**	**-1.8**
ZAIG				*i* S	**Sn**	**06 17 54.9**	**-2.2**
ZIIG	**Zihuatanejo**	**6.66**	**103**	*i* P	**Pn**	**06 16 48.9**	**+0.4**
ZIIG				*i* S	**Sn**	**06 18 03.2**	**-1.3**
ZIIG	**Zihuatanejo**	**6.66**	**103**	*i* P	**Pn**	**06 16 48.9**	**+0.4**
ZIIG				*i* S	**Sn**	**06 18 03.2**	**-1.3**
ARIG	**Puente Sto Nin**	**7.56**	**96**	*i* P	**Pn**	**06 17 01.0**	**+0.1**
ARIG				*i* S	**Sn**	**06 18 25.4**	**-1.3**
UTMO	**Huajuapan**	**10.02**	**97**	*i* P	**Pn**	**06 17 34.9**	**+0.1**
UTMO	**Huajuapan**	**10.02**	**97**	*i* P	**Pn**	**06 17 34.9**	**+0.1**
TXAR	**Lajitas Array**	**10.84**	**22**	Pn	**Pn**	**06 17 46.7**	**+0.8**
TXAR	**Lajitas Array**	**10.84**	**22**	Pn	**Pn**	**06 17 46.7**	**+0.8**
	0.1nm,0.3s,baz=201,slow=14,SNR=18						
TXAR				LR	LR	06 21 32.4	
	comp=Z,1μm,19.7s,baz=155,slow=35						
626A	**Big Bend Ranch**	**10.89**	**19**	⇓P	Pn	06 17 50.6	+4.1
	baz=11						
627A	**Terlingua Ranc**	**11.05**	**23**	⇑P	Pn	06 17 52.2	+3.4
	baz=11						
527A	**Woodward Ranch**	**11.60**	**20**	⇓P	Pn	06 18 01.7	+5.3
	baz=12,SNR=13						
425A	**Indio Mountain**	**11.82**	**14**	⇑P	Pn	06 18 03.8	+4.4
	baz=12						
426A	**McDonald Obser**	**11.96**	**18**	⇑P	Pn	06 18 05.3	+3.9
	baz=12,SNR=11						
319A	**Douglas**	**12.07**	**356**	⇓P	Pn	06 18 07.0	+4.2
	baz=12,SNR=8.6						
529A	**Stev Forest Ra**	**12.10**	**26**	⇑P	Pn	06 18 06.1	+2.9
	baz=12						
631A	**Perdido Creek**	**12.27**	**33**	P	Pn	06 18 08.5	+3.2
	baz=12,SNR=7.1						
427A	**Hayter Ranch,**	**12.32**	**20**	⇑P	Pn	06 18 10.4	+4.2
	baz=12						
220A	**Playas Peak, P**	**12.56**	**359**	P	Pn	06 18 12.8	+3.2
	baz=13,SNR=9.9						
326A	**Caldwell Ranch**	**12.59**	**17**	⇑P	Pn	06 18 15.0	+5.2
	baz=13,SNR=9.4						
MNTX	**Cornudas Mount**	**12.63**	**11**	*e*Pn	**Pn**	**06 18 10.3**	**0.0**
	7.1nm,1.3s						
MNTX				*e*		06 22 38.9	
327A	**Balmorhea Ranc**	**12.78**	**19**	⇑P	Pn	06 18 18.9	+6.5
	baz=13						
222A	**Williams Famil**	**12.80**	**4**	⇑P	Pn	06 18 17.2	+4.3
	baz=13						
531A	**Rocksprings**	**12.89**	**31**	⇓P	Pn	06 18 18.0	+4.1
	baz=13						
224A	**Cornudas Mount**	**12.97**	**10**	⇓P	Pn	06 18 19.8	+4.7
	baz=13,SNR=6.0						
TUC	**Tucson**	**13.16**	**351**	*e*Pn	**Pn**	**06 18 19.6**	**+1.9**
TUC				*e*		06 22 30.6	
532A	**Rocksprings**	**13.19**	**33**	⇓P	Pn	06 18 23.3	+5.4
	baz=13,SNR=8.0						
226B	**Tecolote Peak,**	**13.26**	**15**	⇑P	P	06 18 24.6	-4.3
	baz=13						
214A	**Organ Pipe Nat**	**13.26**	**343**	⇑P	Pn	06 18 21.6	+2.6
	baz=13						
431A	**Sonora**	**13.29**	**30**	⇓P	Pn	06 18 24.3	+4.9
	baz=14						
227A	**Bennet, Jal**	**13.44**	**18**	⇑P	Pn	06 18 25.8	+4.4
	baz=14						
JCT	**Junction City**	**13.52**	**33**	*e*Pn	Pn	06 18 26.1	+3.6
JCT				*e*		06 23 10.3	
JCT	**Junction City**	**13.52**	**33**	⇑P	Pn	06 18 27.1	+4.6
	baz=14						
124A	**Stringfield Ra**	**13.59**	**10**	⇑P	**P**	**06 18 29.8**	**-2.9**
	baz=14						
330A	**Mertzon**	**13.65**	**27**	⇑P	Pn	06 18 27.4	+3.0
	baz=14						
125A	**Gardner Draw,**	**13.70**	**13**	⇓P	**P**	**06 18 31.2**	**-2.6**
	baz=14						
228A	**UT Block 9, Go**	**13.76**	**21**	⇑P	Pn	06 18 28.8	+3.0
	baz=14						
Z20A	**Nine Sixteen R**	**13.77**	**359**	⇓P	Pn	06 18 28.8	+2.8
	baz=14						
126A	**Clayton Basin,**	**13.84**	**15**	⇓P	P	06 18 31.4	-3.9
	baz=14						
432A	**Menard**	**13.85**	**32**	⇑P	P	06 18 31.8	-3.5
	baz=14						
331A	**San Angelo**	**13.90**	**29**	⇑P	**P**	**06 18 33.3**	**-2.7**
	baz=14						
Z22A	**Elephant Butte**	**13.96**	**5**	⇓P	Pn	06 18 32.2	+3.6
	baz=14						
127A	**Arkansas Junct**	**14.04**	**17**	⇓P	P	06 18 34.0	-3.6
	baz=14						
Z24A	**Sheeppen Canyo**	**14.22**	**10**	⇓P	**P**	**06 18 39.6**	**-0.1**
	baz=14						
128A	**Castleberry Fa**	**14.25**	**20**	⇑P	**P**	**06 18 38.8**	**-1.1**
	baz=14						
332A	**Millersview**	**14.29**	**31**	⇑P	Pn	06 18 36.1	+3.1
	baz=14						
Z25A	**Roswell**	**14.29**	**12**	⇓P	**P**	**06 18 38.3**	**-2.0**
	baz=14						
113A	**Mohawk Valley,**	**14.30**	**341**	⇓P	**Pn**	**06 18 34.8**	**+1.6**
	baz=14						
129A	**Stewart Farms,**	**14.47**	**22**	⇑P	**P**	**06 18 42.5**	**+0.2**
	baz=15						
Y20A	**Horse Springs,**	**14.56**	**360**	⇓P	**Pn**	**06 18 39.1**	**+2.2**
	baz=15						
Z14A	**Wintersburg**	**14.63**	**344**	⇓P	**Pn**	**06 18 38.9**	**+1.2**
	baz=15						
Y22A	**Socorro**	**14.64**	**4**	P	**Pn**	**06 18 39.5**	**+1.6**
	baz=15,SNR=8.2						
Y21A	**Point of Rocks**	**14.67**	**2**	P	**P**	**06 18 41.9**	**-2.8**
	baz=15,SNR=8.4						
Y23A	**Lovelace Mesa,**	**14.72**	**7**	P	**P**	**06 18 42.6**	**-2.6**
	baz=15,SNR=6.9						
LENM	**Lemitar**	**14.86**	**4**	*e*Pn	**Pn**	**06 18 43.5**	**+2.5**
BNM	**Barren Site**	**14.87**	**5**	*e*Pn	**Pn**	**06 18 42.6**	**+1.4**
GLA	**Glamis**	**14.91**	**338**	*e*Pn	**Pn**	**06 18 41.8**	**+0.2**
	59nm,2.0s						
GLA				*e*S	**S**	**06 21 47.4**	**+2.4**
LAZ	**Ladron**	**15.09**	**4**	*e*Pn	**Pn**	**06 18 45.7**	**+1.7**
Z29A	**Hungry Hill Ra**	**15.10**	**22**	⇓P	**P**	**06 18 47.0**	**-2.3**
	baz=15						
X21A	**Alamocita Cree**	**15.10**	**2**	P	**Pn**	**06 18 45.9**	**+1.7**
	baz=15,SNR=16						
Y26A	**Elida**	**15.10**	**14**	⇓P	**P**	**06 18 47.1**	**-2.3**
	baz=15						
Y14A	**Wickenburg**	**15.19**	**345**	⇑P	**Pn**	**06 18 46.5**	**+1.3**
	baz=15						
X20A	**Quemado**	**15.20**	**359**	⇑P	**Pn**	**06 18 47.2**	**+1.8**
	baz=15						
X22A	**Bernardo**	**15.20**	**4**	⇑P	**P**	**06 18 50.0**	**-0.5**
	baz=15						
Y27A	**Causey**	**15.23**	**16**	⇑P	**P**	**06 18 51.5**	**+0.7**
	baz=15						
X18A	**Snowflake**	**15.26**	**355**	P	**Pn**	**06 18 47.3**	**+1.1**
	baz=15,SNR=7.5						
X16A	**Lo Mia Camp, P**	**15.33**	**350**	P	**Pn**	**06 18 47.9**	**+0.6**
	baz=16,SNR=8.7						
X23A	**Hourglass Bar**	**15.34**	**6**	⇑P	**P**	**06 18 52.4**	**+0.2**
	baz=16						
Y12C	**Blythe**	**15.45**	**340**	⇑P	**Pn**	**06 18 49.7**	**+1.1**
	baz=16						
HKT	**Hockley**	**15.49**	**44**	*e*Pn	**P**	**06 18 52.9**	**-0.6**
	102nm,2.0s						
X25A	**Clemmons Ranch**	**15.51**	**11**	⇑P	**P**	**06 18 52.8**	**-1.2**
	baz=16						
ANMO	**Albuquerque**	**15.68**	**5**	Pn	**Pn**	**06 18 51.2**	**-0.5**
	9.6nm,1.0s						
ANMO	**Albuquerque**	**15.68**	**5**	Pn	**Pn**	**06 18 51.2**	**-0.5**
	0.1nm,0.3s,baz=185,slow=9.1,SNR=2.2						
ANMO				LR	LR	06 24 39.5	
	comp=Z,875nm,18.4s,baz=20,slow=36						
X26A	**CR and CF Fran**	**15.71**	**14**	⇑P	**P**	**06 18 57.6**	**+1.4**
	baz=16						
W20A	**Ramah**	**15.78**	**359**	⇑P	**P**	**06 18 55.7**	**-1.3**
	baz=16						
W21A	**San Fidel**	**15.78**	**2**	⇑P	**P**	**06 18 58.0**	**+1.0**
	baz=16						
W18A	**Petrified Fore**	**15.82**	**356**	⇑P	**P**	**06 18 58.4**	**+0.9**
	baz=16						
PDMCI	**Parker Dam,Lak**	**15.84**	**342**	⇓P	**P**	**06 18 56.8**	**-0.6**
	baz=16						
WHTX	**Lake Whitney**	**15.95**	**35**	⇓P	**P**	**06 18 59.8**	**+1.1**
	baz=16						
X27A	**F and S Farms,**	**15.97**	**16**	⇓P	**P**	**06 19 00.5**	**+1.4**
	baz=16						
Z32A	**Haskell**	**16.02**	**28**	P	**P**	**06 19 00.9**	**+1.4**
	baz=16,SNR=9.9						
PFO	**Pinyon Flat Ob**	**16.03**	**334**	LR	LR	06 24 41.1	
	comp=Z,1μm,18.5s,baz=160,slow=36						
IRM	**Iron Mountain**	**16.03**	**339**	⇓P	**P**	**06 18 57.4**	**-2.2**
	baz=16						
W24A	**Lazy 6 Ranch,**	**16.06**	**8**	⇑P	**P**	**06 19 00.9**	**+0.7**
	baz=16						
BELC	**Belle Mtn. Jos**	**16.19**	**336**	P	**P**	**06 19 01.4**	**-0.1**
	baz=16,SNR=6.2						
W25A	**X Bar L Ranch,**	**16.22**	**11**	⇓P	**P**	**06 19 03.8**	**+1.9**
	baz=16						
W27A	**Bowe Ranch, En**	**16.37**	**15**	⇑P	**P**	**06 19 03.8**	**+0.3**
	baz=17						
WUAZ	**Wupatki**	**16.40**	**351**	*e*Pn	**P**	**06 19 02.0**	**-1.9**
	17nm,1.3s						

comp=Z,781nm,21.7s,baz=208,slow=34
DUG Dugway 21.20 350 *e*P **P** 06 19 56.5 0.0
DUG Dugway 21.20 350 ⇓P **P** 06 19 57.0 +0.6
baz=21,SNR=13
DAU Daniels Canyon 21.21 354 *e*P **P** 06 19 57.4 +0.7
JLU Jordanelle 21.42 353 *e*P **P** 06 19 59.2 +0.3
12nm,1.2s
ELK Elko 22.21 346 P **P** 06 20 06.6 -0.7
7.4nm,1.4s
ELK Elko 22.21 346 P **P** 06 20 06.6 -0.7
2.3nm,1.1s,baz=191,slow=5.3,SNR=5.7
ELK LR LR 06 28 24.4
comp=Z,280nm,18.3s,baz=325,slow=36
WCN Washoe City 22.28 336 *e*P **P** 06 20 08.0 -0.1
15nm,1.4s
HWUT Hardware Ranch 22.43 353 *e*P **P** 06 20 10.6 +0.9
6.0nm,1.2s
L26A Underwood Farm 23.10 10 ⇑P **P** 06 20 20.0 +3.4
baz=23
K21A Alcova 23.29 2 ⇓P **P** 06 20 20.1 +1.4
baz=24
PDAR Pinedale Array 23.43 358 P **P** 06 20 19.9 -0.3
PDAR Pinedale Array 23.43 358 P **P** 06 20 19.9 -0.3
1.0nm,0.9s,baz=167,slow=7.4,SNR=6.2
K25A Mack Ranch, Ha 23.55 8 ⇑P **P** 06 20 24.3 +3.1
baz=24
J18A Kendall Valley 23.90 357 ⇓P **P** 06 20 26.6 +1.9
baz=24
SNOW Snow King Moun 24.19 356 *e*P **P** 06 20 26.5 -0.9
17nm,1.3s
TPAW Teton Pass 24.23 355 *e*P **P** 06 20 28.1 +0.2
22nm,1.6s
LOHW Long Hollow 24.33 356 *e*P **P** 06 20 27.9 -0.8
9.0nm,1.0s
MOOW Moose Ponds 24.48 356 *e*P **P** 06 20 29.9 -0.1
43nm,2.3s
IMW Indian Meadow 24.64 355 *e*P **P** 06 20 31.5 -0.1
8.7nm,1.4s
I16A Newdale 24.66 354 ⇓P **P** 06 20 34.1 +2.4
baz=25
WVOR Wild Horse Val 24.69 341 *e*P **P** 06 20 31.2 -0.7
8.8nm,1.2s
HLID Hailey 24.75 349 *e*P **P** 06 20 31.9 -0.5
6.4nm,1.1s
MOD Modoc 24.76 338 *e*P **P** 06 20 29.9 -2.7
16nm,1.4s
I13A Wildhorse Cree 25.04 350 ⇓P **P** 06 20 35.3 +0.2
baz=25,SNR=9.8
YBH Yreka Blue Hor 25.53 334 LR LR 06 30 41.6
comp=Z,225nm,18.1s,baz=157,slow=37
H14A Leadore 25.61 352 ⇑P **P** 06 20 40.4 +0.1
baz=26
H13A Challis 25.70 350 ⇓P **P** 06 20 40.9 0.0
baz=26
MCMT McKenzie Canyo 25.75 352 *e*P **P** 06 20 41.8 +0.2
F16A Kennard Place, 26.57 355 ⇓P **P** 06 20 48.9 0.0
baz=27
F17A Fitzpatrick Pl 26.62 356 ⇑P **P** 06 20 49.6 +0.3
baz=27
CHMT Chamberlain Mo 27.86 353 *e*P **P** 06 21 00.2 -0.3
MSO Missoula 27.86 352 *e*P **P** 06 21 03.0 +2.5
7.7nm,1.5s
SLMT Seeley Lake 28.21 352 *e*P **P** 06 21 03.1 -0.5
ULM Lac du Bonnet 32.43 15 LR LR 06 34 52.0
comp=Z,342nm,20.7s,baz=188,slow=36
OTAV Otavalo 34.82 119 *e*P **P** 06 22 03.8 +1.3
1.7nm,1.2s
YKA Yellowknife Ar 43.39 356 P **P** 06 23 10.9 -2.1
YKA Yellowknife Ar 43.39 356 P **P** 06 23 10.9 -2.1
0.2nm,0.4s,baz=172,slow=7.9,SNR=6.4
INK Inuvik 51.51 348 P **P** 06 24 14.7 -1.4
INK Inuvik 51.51 348 P **P** 06 24 14.7 -1.4
2.0nm,0.9s,baz=137,slow=6.4,SNR=6.7
ILAR Eielson Array 52.20 340 P **P** 06 24 19.4 -1.9
ILAR Eielson Array 52.20 340 P **P** 06 24 19.4 -1.9
0.9nm,0.9s,baz=151,slow=6.1,SNR=7.9
LPAZ La Paz 52.98 129 P **P** 06 24 29.4 +1.0
LPAZ La Paz 52.98 129 P **P** 06 24 29.4 +1.0
0.7nm,0.8s,baz=273,slow=4.3,SNR=4.6
LPAZ LR LR 06 41 52.1
comp=Z,69nm,21.7s,baz=299,slow=30
CPUP Villa Florida 67.08 131 P **P** 06 26 04.5 +0.1
CPUP Villa Florida 67.08 131 P **P** 06 26 04.5 +0.1
1.6nm,0.8s,baz=318,slow=15,SNR=3.3
ESDC Sonseca Array 88.35 48 LR LR 07 06 55.6
comp=Z,104nm,20.5s,baz=170,slow=35
HHC Hu-ho-hao-te 109.66 329 Pdif **Pdif** 06 29 37.8 -1.5
HHC PP **PP** 06 34 13.3 +1.0
HHC Hu-ho-hao-te 109.66 329 SKS **SKSdf** 06 40 50.4 -4.1
HHC Hu-ho-hao-te 109.66 329 SS SS 06 49 30.4 -4.6
HHC AMB AMB
comp=Z,250nm,9.2s
HHC LR LR
comp=N,300nm,30.4s
HHC LR LR
comp=E,320nm,31.4s
HHC LR LR
comp=Z,300nm,35.7s

DJA **17** *06:22:57.3±0.4, 17˚S×9˚×17˚4W±˚, h10km, M5.4/9, mB5.9/2, mb5.4/9, Mw(mB)5.5/2*
MOS **17** *06:22:59.1±1.5, 16˚.78S×173˚.47W, h33km, mb5.6/53, MS4.5/7, Error ellipse: s-maj=8.5km s-min=6.1km az=55.9*
BJI **17** *06:22:59.9, 16˚.80S×173˚.50W, h35km, mB5.3/27, mb5.0/32, Ms5.1/30, Ms7 4.8/29*
AUST **17** *06:23:03.8, 17˚.00S×172˚.80W, h100km*
ISCJB **17** *06:23:03.3±0.1, 16˚.80S±0˚.03×173˚.54W±0˚.03, h78km, mb5.2/195, Error ellipse: s-maj=5.0km s-min=2.8km az=42.7*
NEIC **17** *06:23:03.5±0.1, 16˚.83S×173˚.49W, h67km, mb5.5/140, MW5.6, MW5.6, Error ellipse: s-maj=5.4km s-min=3.0km az=140.0, Moment Tensor Solution. s31 Moment tensor: Scale 10¹⁷Nm; Mrr-1.66; Mθθ 1.79; Mϕϕ-0.12; Mrθ-0.61; Mθϕ-1.06; Mϕr 2.00; Best double couple: M☐2.90000×10¹⁷ NP1:☐s145.00000°, δ70.00000°, λ-61.00000°. NP2: ϕs267.00000°, δ35.00000°, λ-144.00000°. Principal axes: T 2.7700, Plg20.0000°, Azm213.0000°; N 0.2700, Plg27.0000°, Azm314.0000°; P -3.0400, Plg55.0000°, Azm92.0000°;*
IDC **17** *06:23:04.5±0.5, 16˚.86S×173˚.51W, h74km±3km, mb4.9/33, mb1 5.0/34, mb1mx4.9/36, mbtmp4.9/34, MS4.5/33, Ms1 4.5/33, ms1mx4.4/37 Error ellipse: s-maj=12.9km s-min=8.7km az=147.0*
GCMT **17** *06:23:08.0±0.1, 16˚.86S×173˚.07W, h73km±1km, MW5.5, Moment Tensor Solution. s100,c180; s26,c26; Moment tensor: Scale 10¹⁷Nm; Mrr-1.25±.04; Mθθ1.03±.04; Mϕϕ0.22±.04; Mrθ-0.72±.03; Mθϕ-1.33±.03; Mϕr1.78±.03; Best double couple: M☐2.60000×10¹⁷ NP1:☐s275.00000°, δ30.00000°, λ-144.00000°. NP2:☐s153.00000°, δ73.00000°, λ-65.00000°. Principal axes: T 2.7400, Plg24.0000°, Azm224.0000°; N -0.2900, Plg24.0000°, Azm325.0000°; P -2.4500, Plg55.0000°, Azm95.0000°; Data Used: II IU IC G CN. Surface waves: sta=105, comp=193, per= 50.*
NEIC **17** *06:23:37.2±0.0, 16˚.71S×173˚.20W, h61km, Moment Tensor Solution. s121 Moment tensor: Scale 10¹⁷Nm; Mrr-1.77; Mθθ0.91; Mϕϕ0.86; Mrθ-0.82; Mθϕ-0.67; Mϕr2.53; Best double couple: M☐3.10000×10¹⁷ NP1:☐s304.00000°, δ18.00000°, λ-121.00000°. NP2:☐s157.00000°, δ75.00000°, λ-79.00000°. Principal axes: T 2.9000, Plg28.0000°, Azm238.0000°; N 0.4400, Plg9.0000°, Azm334.0000°; P -3.3400, Plg59.0000°, Azm80.0000°;*
ISC 17 06:23:04.1±0.3, 16°.95S±0°.04×173°.28W±0°.04, h74km±2km, h74km:pP-P,n1183,σ1s19/1302, mb5.4/194, 78C-49D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**3.35**	**26**	*e*Pn		Pn	06 23 49.3	-4.9
AFI				S		Sn	06 24 23.8	-9.2
AFI	**Afiamalu**	**3.35**	**26**	P		Pn	06 23 49.1	-5.1
	888nm,0.3s,baz=214,slow=2.8,SNR=621							
AFI				S		Sn	06 24 23.8	-9.2
	3μm,0.3s,baz=239,slow=19,SNR=13							
NIUE	**Niue**	**3.83**	**124**	P		**Pn**	**06 23 59.7**	**-0.9**
	baz=3.4,SNR=397							
NIUE				S		Sn	06 24 39.5	-4.9
	baz=3.4,SNR=19							
MSVF	**Nonsavu**	**8.32**	**263**	*e*P		Pn	06 25 07.2	+5.1
MSVF	**Nonsavu**	**8.32**	**263**	Pn		Pn	06 25 07.0	+5.0
	7μm,0.9s							
RAO	**Raoul Island**	**12.96**	**198**	*e*Pn		**Pn**	**06 26 02.8**	**-2.4**
RAO				S		Sn	06 28 20.3	-7.4
RAO	**Raoul Island**	**12.96**	**198**	P		Pn	06 26 02.0	-3.2
	250nm,0.3s,baz=68,slow=19,SNR=9.6							
RAO				S		Sn	06 28 20.3	-7.4
	166nm,0.3s,baz=64,slow=22,SNR=7.3							
RAR	**Rarotonga**	**13.45**	**110**	*e*Pn		**Pn**	**06 26 10.4**	**-1.4**
RAR	**Rarotonga**	**13.45**	**110**	P		**Pn**	**06 26 10.7**	**-1.1**
	21nm,0.3s,baz=222,slow=0.0,SNR=33							
DZM	**Mont Dzumac**	**19.77**	**252**	*e*P		**P**	**06 27 26.8**	**-1.7**
	571nm,1.2s							
DZM				*e*LQ		LQ	06 31 17.2	
	5μm,35.7s							
DZM				*e*LR		LR	06 32 06.5	
	14μm,28.5s							
DZM	**Mont Dzumac**	**19.77**	**252**	*e*P		**P**	**06 27 26.6**	**-1.8**
	227nm,1.1s							
DZM	**Mont Dzumac**	**19.77**	**252**	P		**P**	**06 27 26.1**	**-2.3**
	3.0nm,0.3s,baz=82,slow=17,SNR=25							
DZM				LR		LR	06 32 45.7	
	comp=Z,1μm,20.7s,baz=84,slow=30							
NOUC	**Port Laguerre**	**19.91**	**252**	*e*P		**Pn**	**06 27 33.9**	**+1.8**
OUZ	**Omahuta**	**21.64**	**210**	*e*P		**P**	**06 27 49.3**	**+1.0**
	454nm,1.2s							
WCZ	**Waipu Caves**	**21.88**	**208**	PN		**P**	**06 27 51.8**	**+1.0**
KUZ	**Kuaotunu**	**21.99**	**204**	PN		**P**	**06 27 53.3**	**+1.2**
PUZ	**Puketiti**	**22.32**	**198**	PN		**P**	**06 27 55.5**	**-0.1**
PUZ				*e*SN		**S**	**06 31 51.4**	**-4.9**
MKAZ	**Moumakai**	**22.53**	**205**	PN		**P**	**06 27 58.8**	**+1.0**
WTAZ	**Waiatarua**	**22.62**	**206**	PN		**P**	**06 28 00.3**	**+1.5**
PAE	**Paea**	**22.64**	**95**	*e*P		**P**	**06 27 59.8**	**+0.7**
	26nm,1.1s							
PPT2	**Papeete2**	**22.64**	**95**	*e*P		**P**	**06 28 00.3**	**+1.0**
	205nm,1.4s							
PPT2				*e*LQ		LQ	06 32 27.9	
	5μm,32.2s							
PPT2				*e*LR		LR	06 33 12.0	
	8μm,29.2s,baz=271							
PPT	**Papeete**	**22.64**	**95**	P		**P**	**06 28 00.9**	**+1.7**
PPT	**Papeete**	**22.64**	**95**	P		**P**	**06 28 00.9**	**+1.7**
	136nm,1.1s,baz=252,slow=1.2,SNR=7.4							
OPRZ	**Ohinepanea**	**22.66**	**201**	PN		**P**	**06 28 00.5**	**+1.3**
CNGZ	**Carnagh Statio**	**22.72**	**198**	PN		**P**	**06 28 02.5**	**+2.8**
MWZ	**Matawai**	**22.78**	**199**	PN		**P**	**06 28 01.5**	**+1.0**
URZ	**Urewera**	**22.85**	**200**	*e*P		**P**	**06 28 01.3**	**+0.2**
URZ				S		**S**	**06 32 01.9**	**-2.9**
URZ	**Urewera**	**22.85**	**200**	P		**P**	**06 28 00.7**	**-0.4**
	260nm,0.6s,baz=29,slow=3.2,SNR=112							
URZ				S		**S**	**06 32 01.9**	**-2.9**
	14nm,0.6s,baz=66,slow=20,SNR=5.1							
TIAR	**Tiarei**	**22.86**	**95**	*e*P		**P**	**06 28 02.1**	**+0.6**
	105nm,0.9s							
TOZ	**Tahuroa Road**	**22.94**	**203**	PN		**P**	**06 28 03.8**	**+1.7**
TVO	**Taravao**	**22.95**	**96**	*e*P		**P**	**06 28 03.2**	**+0.8**
	273nm,1.4s							
PRGZ	**Paritu Road**	**23.22**	**198**	PN		**P**	**06 28 07.6**	**+2.8**
TBI	**Tubuai**	**23.23**	**110**	*e*LQ		LQ	06 32 30.8	
	4μm,33.5s							
TBI				*e*LR		LR	06 33 37.2	
	6μm,32.0s,baz=291							
KNZ	**Kokohu**	**23.37**	**198**	PN		**P**	**06 28 07.3**	**+1.1**
KNZ				SN		**S**	**06 32 14.3**	**+1.1**
MHGZ	**Mahia Peninsul**	**23.42**	**197**	PN		**P**	**06 28 08.6**	**+2.0**
NMHZ	**Naumai**	**23.71**	**199**	PN		**P**	**06 28 10.5**	**+1.2**
MCHZ	**McNeill Hill**	**24.06**	**199**	PN		**P**	**06 28 14.1**	**+1.8**
BHHZ	**Black Hill Sta**	**24.30**	**200**	PN		**P**	**06 28 13.9**	**-0.8**
KAHZ	**Kahuranaki**	**24.32**	**199**	PN		**P**	**06 28 16.9**	**+2.1**
PMOR	**Pomariorio Ree**	**24.48**	**89**	*e*P		**P**	**06 28 17.3**	**+0.9**
	427nm,1.1s							
XMAS	**Kiritimati**	**24.50**	**41**	*e*P		**P**	**06 28 16.9**	**+0.4**
	220nm,1.0s							
PXZ	**Pawanui**	**24.54**	**198**	PN		**P**	**06 28 17.6**	**+0.9**
NEZ	**North Egmont**	**24.82**	**204**	PN		**P**	**06 28 23.5**	**+4.1**
TSZ	**Takapari Road**	**24.85**	**200**	PN		**P**	**06 28 20.4**	**+0.8**
ANWZ	**Angora Road**	**25.05**	**199**	PN		**P**	**06 28 22.4**	**+1.0**
SNZO	**South Karori**	**26.39**	**201**	*e*P		**P**	**06 28 35.6**	**+2.2**
	206nm,1.1s							
TCW	**Tory Channel**	**26.45**	**201**	PN		**P**	**06 28 33.2**	**-0.8**
TUWZ	**Tuamarina**	**26.76**	**202**	PN		**P**	**06 28 38.8**	**+2.0**
QRZ	**Quartz Range**	**26.77**	**204**	PN		**P**	**06 28 37.9**	**+1.0**
NNZ	**Nelson**	**26.78**	**203**	PN		**P**	**06 28 38.4**	**+1.4**
HNR	**Honiara**	**27.09**	**283**	*e*P		**P**	**06 28 40.4**	**+0.3**
HNR	**Honiara**	**27.09**	**283**	P		**P**	**06 28 39.6**	**-0.5**
	56nm,0.5s,baz=159,slow=2.5,SNR=5.6							
HNR				LR		LR	06 37 55.5	
	comp=Z,4μm,19.9s,baz=115,slow=33							
THZ	**Tophouse**	**27.43**	**203**	PN		**P**	**06 28 42.9**	**0.0**
KHZ	**Kahutara**	**27.77**	**201**	*e*P		**P**	**06 28 45.1**	**-0.8**
	117nm,0.6s							
LTZ	**Lake Taylor**	**28.55**	**203**	PN		P	06 28 56.8	+4.0
WVZ	**Waitaha Valley**	**29.38**	**204**	PN		**P**	**06 29 00.4**	**+0.3**
RPZ	**Rata Peaks**	**29.80**	**203**	P		**P**	**06 29 05.1**	**+1.2**
RPZ	**Rata Peaks**	**29.80**	**203**	P		**P**	**06 29 05.1**	**+1.2**
	55nm,0.4s,baz=352,slow=1.9,SNR=10							
ODZ	**Otahua Downs**	**31.09**	**202**	*e*P		**P**	**06 29 16.5**	**+1.3**
	522nm,2.2s							
KWAJ	**Kwajalein Atol**	**31.81**	**322**	*e*P		**P**	**06 29 21.3**	**-0.5**
KWAJ				pmax		pmax		
	comp=Z,112nm,1.0s							
KWAJ	**Kwajalein Atol**	**31.81**	**322**	*e*P		**P**	**06 29 21.2**	**-0.5**
	comp=Z,112nm,1.0s							
WHZ	**Wether Hill Ro**	**32.84**	**204**	*e*P		**P**	**06 29 32.0**	**+1.5**
	comp=Z,87nm,0.8s							
EIDS	**Eidsvold**	**34.19**	**250**	P		**P**	**06 29 40.1**	**-2.5**
	baz=35,SNR=8.8							
ARMA	**Armidale**	**34.67**	**241**	P		**P**	**06 29 45.3**	**-1.5**
	baz=35,SNR=100							
MGCD	**Mangrove Creek**	**35.88**	**236**	P		**P**	**06 29 55.6**	**-1.4**
	baz=36,SNR=30							
RMQ	**Roma**	**36.41**	**248**	P		**P**	**06 29 59.8**	**-1.8**
	baz=37,SNR=22							
RKT	**Rikitea**	**36.43**	**106**	*e*LR		LR	06 39 39.2	
	comp=Z,4μm,30.5s,baz=278							
CNB	**Canberra Magne**	**37.92**	**234**	P		**P**	**06 30 13.0**	**-1.4**
	baz=38,SNR=73							
CAN	**Canberra**	**38.20**	**234**	*e*P		**P**	**06 30 14.7**	**-2.0**
CAN				pmax		pmax		
	comp=Z,54nm,1.0s							
CAN				MLR		MLR		
	comp=Z,1μm,19.0s							
CAN	**Canberra**	**38.20**	**234**	*e*P		**P**	**06 30 14.7**	**-2.0**
	comp=Z,54nm,1.0s							
CAN				LR		LR		
	comp=Z,1μm,19.0s							
YNG	**Young**	**38.36**	**236**	P		**P**	**06 30 16.4**	**-1.6**
	baz=39,SNR=20							
CTA	**Charters Tower**	**38.43**	**259**	P		**P**	**06 30 15.8**	**-3.0**
CTA	**Charters Tower**	**38.43**	**259**	P		**P**	**06 30 15.8**	**-3.0**
	comp=Z,31nm,0.7s,baz=77,slow=11,SNR=31							
CTA				LR		LR	06 44 28.4	
	comp=Z,632nm,18.9s,baz=81,slow=34							
CTAO	**Charters Tower**	**38.43**	**259**	*e*P		**P**	**06 30 15.9**	**-3.0**
CTAO				pmax		pmax		
	comp=Z,36nm,0.9s							
CTAO	**Charters Tower**	**38.43**	**259**	*e*P		**P**	**06 30 15.9**	**-3.0**
	comp=Z,36nm,0.9s							
MILA	**Mila**	**38.67**	**231**	P		**P**	**06 30 19.3**	**-1.4**
	baz=39,SNR=6.0							
PMG	**Port Moresby**	**39.18**	**276**	*e*P		**P**	**06 30 23.1**	**-2.1**
	comp=Z,58nm,1.2s							
PMG	**Port Moresby**	**39.18**	**276**	P		**P**	**06 30 24.0**	**-1.2**
	comp=Z,36nm,1.0s,baz=51,slow=0.4,SNR=4.1							
CMSA	**Cobar Meteorol**	**39.89**	**241**	P		**P**	**06 30 28.9**	**-1.9**
	baz=40,SNR=123							
MTSU	**Mount Surprise**	**40.39**	**262**	P		**P**	**06 30 33.0**	**-2.1**
	baz=41,SNR=7.8							
QLP	**Quilpie**	**40.45**	**249**	P		**P**	**06 30 33.2**	**-2.3**
	baz=41,SNR=30							
KIP	**Kipapa**	**40.97**	**22**	⇑*i*P		**P**	**06 30 40.1**	**+0.4**
KIP				pmax		pmax		
	comp=Z,181nm,1.3s							
KIP	**Kipapa**	**40.97**	**22**	*e*P		**P**	**06 30 39.9**	**+0.2**
	comp=Z,164nm,1.2s							
TOO	**Toolangi**	**41.59**	**232**	P		**P**	**06 30 43.3**	**-1.5**
	baz=42,SNR=64							
COEN	**Coen**	**42.02**	**268**	P		**P**	**06 30 47.8**	**-0.7**
	baz=42,SNR=20							
STKA	**Stephens Creek**	**43.38**	**241**	*e*P		**P**	**06 30 58.0**	**-1.4**
	comp=Z,28nm,0.9s							
STKA	**Stephens Creek**	**43.38**	**241**	P		**P**	**06 30 57.9**	**-1.4**
	comp=Z,88nm,0.8s,baz=85,slow=9.0,SNR=106							
STKA				LR		LR	06 47 40.1	
	comp=Z,1μm,18.1s,baz=67,slow=34							
STKA	**Stephens Creek**	**43.38**	**241**	P		**P**	**06 30 58.0**	**-1.4**
	baz=44,SNR=63							
ARPS	**Mount Arapiles**	**44.17**	**234**	P		**P**	**06 31 03.9**	**-1.8**
	baz=44,SNR=27							
JAY	**Jayapura**	**47.42**	**282**	P		**P**	**06 31 31.0**	**-0.5**
	baz=48,SNR=4.7							
BBOO	**Buckleboo**	**48.15**	**241**	P		P	06 31 33.3	-3.6
	baz=48,SNR=5.3							
WRAB	**Tennant Creek**	**49.61**	**258**	*e*P		**P**	**06 31 45.6**	**-2.8**
WRAB				pmax		pmax		
	comp=Z,57nm,1.1s							
WRAB				MLR		MLR		
	comp=Z,1μm,20.0s							
WRAB	**Tennant Creek**	**49.61**	**258**	*e*P		**P**	**06 31 45.5**	**-2.8**
	comp=Z,57nm,1.1s							
WRAB				LR		LR		
	comp=Z,1μm,20.0s							
WRAB	**Tennant Creek**	**49.61**	**258**	P		P	06 31 45.0	-3.3
	comp=Z,220nm,0.6s,SNR=16							
WRA	**Warramunga Arr**	**49.62**	**258**	P		**P**	**06 31 45.3**	**-3.1**
WRA				pP		**pP**	**06 32 05.2**	**-1.7**
WRA				ScP		**ScP**	**06 36 59.9**	**+1.8**
WRA	**Warramunga Arr**	**49.62**	**258**	P		**P**	**06 31 45.3**	**-3.1**
	comp=Z,17nm,0.5s,baz=96,slow=7.0,SNR=108							
WRA				pP		**pP**	**06 32 05.2**	**-1.7**
	comp=Z,23nm,0.9s,baz=92,slow=7.6,SNR=6.2							
WRA				ScP		**ScP**	**06 36 59.9**	**+1.8**
	comp=Z,1.9nm,1.1s,baz=77,slow=4.5,SNR=7.2							
WRA				LR		LR	06 51 59.9	
	comp=Z,1μm,18.6s,baz=100,slow=35							
AS31	**Alice Springs**	**49.76**	**253**	*e*P		**P**	**06 31 47.2**	**-2.2**
ASAR	**Alice Springs**	**49.76**	**253**	P		**P**	**06 31 47.2**	**-2.2**
ASAR				pP		**pP**	**06 32 06.7**	**-1.3**
ASAR				ScP		**ScP**	**06 36 58.5**	**-0.2**
ASAR				S		S	06 38 44.6	-8.9
ASAR	**Alice Springs**	**49.76**	**253**	P		**P**	**06 31 47.2**	**-2.2**
	comp=Z,329nm,0.6s,baz=88,slow=8.4,SNR=1734							
ASAR				pP		**pP**	**06 32 06.7**	**-1.3**
	comp=Z,98nm,1.0s,baz=85,slow=8.7,SNR=3.2							
ASAR				ScP		**ScP**	**06 36 58.5**	**-0.2**
	comp=Z,0.7nm,1.0s,baz=92,slow=4.6,SNR=2.4							
ASAR				S		S	06 38 44.6	-8.9
	comp=Z,12nm,1.2s,baz=86,slow=15,SNR=17							
ASAR				LR		LR	06 50 45.0	
	comp=Z,1μm,21.5s,baz=89,slow=34							
GUMO	**Guam**	**51.28**	**304**	LR		LR	06 52 24.3	
	comp=Z,189nm,18.4s,baz=232,slow=34							
KDU	**Kakadu**	**52.48**	**267**	P		**P**	**06 32 08.1**	**-1.8**
	baz=53,SNR=17							
MTN	**Manton Dam**	**53.73**	**266**	P		**P**	**06 32 17.0**	**-2.1**
	baz=54,SNR=10.0							
FORT	**Forrest**	**54.83**	**244**	P		**P**	**06 32 24.6**	**-2.2**
	baz=55,SNR=32							
FAKI	**Fak Fak**	**55.24**	**278**	P		**P**	**06 32 28.8**	**-1.3**
	baz=56,SNR=4.5							
KNRA	**Kununurra**	**55.46**	**262**	P		**P**	**06 32 29.5**	**-2.0**
	baz=56,SNR=12							
PALU	**Palau**	**57.01**	**291**	P		**P**	**06 32 43.4**	**+0.8**
	baz=58,SNR=6.0							
FITZ	**Fitzroy Crossi**	**58.02**	**259**	P		**P**	**06 32 47.6**	**-2.1**
FITZ	**Fitzroy Crossi**	**58.02**	**259**	P		**P**	**06 32 47.6**	**-2.1**
	comp=Z,5.1nm,0.6s,baz=100,slow=4.1,SNR=12							
FITZ	**Fitzroy Crossi**	**58.02**	**259**	P		**P**	**06 32 48.1**	**-1.6**
	baz=58,SNR=9.2							
DRV	**Dumont d'Urvil**	**58.19**	**200**	S		S	06 40 21.0	-25
DRV				SS		SS	06 44 30.0	-8.1
DRV				L		L	06 47 00.0	
DRV				R			06 50 00.0	
KMBL	**Kambalda**	**60.12**	**243**	P		**P**	**06 33 02.6**	**-1.5**
	baz=60,SNR=4.9							
SBA	**Scott Base**	**61.72**	**185**	*e*P		**P**	**06 33 16.2**	**+2.1**
SBA				pmax		pmax		
	comp=Z,36nm,0.9s							
SBA	**Scott Base**	**61.72**	**185**	*e*P		**P**	**06 33 16.1**	**+2.1**
	comp=Z,36nm,0.9s							
VNDA	**Vanda**	**61.85**	**186**	*e*P		**P**	**06 33 17.2**	**+2.2**
	comp=Z,15nm,0.8s							
VNDA	**Vanda**	**61.85**	**186**	P		**P**	**06 33 17.5**	**+2.5**
	comp=Z,5.7nm,0.8s,baz=11,slow=6.3,SNR=28							
MBWA	**Marble Bar**	**63.05**	**255**	*e*P		**P**	**06 33 22.0**	**-1.9**
	comp=Z,34nm,0.6s							
MBWA				LR		LR		
	comp=Z,1μm,22.0s							
MEEK	**Meekatharra**	**63.34**	**248**	P		**P**	**06 33 23.9**	**-2.0**
	baz=64,SNR=26							
KLBR	**Kellerberrin**	**63.63**	**243**	P		**P**	**06 33 26.1**	**-1.5**
	baz=64,SNR=78							
NWAO	**Narrogin (SRO)**	**63.97**	**241**	*e*P		**P**	**06 33 29.1**	**-0.7**
	comp=Z,14nm,0.6s							
RKGY	**Rocky Gully**	**64.08**	**239**	P		**P**	**06 33 30.7**	**+0.2**
	baz=64,SNR=20							
BLDU	**Ballidu**	**64.60**	**244**	P		**P**	**06 33 32.4**	**-1.7**
	baz=65,SNR=90							
MORW	**Morawa**	**65.34**	**245**	P		**P**	**06 33 37.2**	**-1.6**
	baz=66,SNR=25							
KAPI	**Kappang**	**66.53**	**272**	*e*P		**P**	**06 33 44.9**	**-1.9**
	comp=Z,25nm,1.0s							
KAPI	**Kappang**	**66.53**	**272**	P		**P**	**06 33 43.9**	**-2.8**
	comp=Z,9.0nm,0.9s,baz=164,slow=16,SNR=5.5							
KAPI				LR		LR	06 59 31.5	
	comp=Z,92nm,19.6s,baz=110,slow=33							
CASY	**Casey**	**69.06**	**205**	*e*P		**P**	**06 34 02.5**	**+0.9**
	comp=Z,32nm,0.9s							
MJAR	**Matsushiro Arr**	**70.19**	**320**	P		**P**	**06 34 08.6**	**-0.5**
MJAR				pP		**pP**	**06 34 27.4**	**-1.3**
MJAR	**Matsushiro Arr**	**70.19**	**320**	P		**P**	**06 34 08.6**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=158,slow=7.1,SNR=6.2							
MJAR				pP		**pP**	**06 34 27.4**	**-1.3**
	comp=Z,7.1nm,1.0s,baz=162,slow=5.2,SNR=4.1							
MJAR				LR		LR	06 59 34.5	
	comp=Z,200nm,21.9s,baz=140,slow=31							
MAT	**Matsushiro**	**70.19**	**320**	P		**P**	**06 34 09.1**	**0.0**
MAT				S		**S**	**06 43 11.0**	**-4.0**
FX1	**Attu Island--F**	**70.52**	**351**	LR		LR	06 58 06.2	
	comp=Z,260nm,20.3s,baz=349,slow=30							
UNV	**Unalaska Valle**	**70.75**	**4**	*e*P		**P**	**06 34 10.8**	**-1.2**
	comp=Z,19nm,0.7s							
MYLDM	**Lahad Datu**	**70.87**	**282**	P		**P**	**06 34 15.3**	**+1.6**
MYLDM	**Lahad Datu**	**70.87**	**282**	P

comp=Z,190nm,21.1s,baz=142,slow=32
JNU **Nakatsue** 72.94 313 P P 06 34 25.0 -0.7
JNU **Nakatsue** 72.94 313 P P 06 34 25.0 -0.7
comp=Z,9.7nm,0.7s,baz=79,slow=3.0,SNR=7.2
JNU LR LR 07 01 21.9
comp=Z,140nm,21.3s,baz=103,slow=32
DECC **Green Verdugo** 72.96 45 P P 06 34 26.2 +0.4
baz=73,SNR=5.4
PASC **Pasadena Art C** 73.02 45 eP P 06 34 26.6 +0.5
comp=Z,64nm,1.2s
109C **Camp Elliot, M** 73.04 47 P P 06 34 26.9 +0.6
baz=73,SNR=6.3
KIPM **Iron Peak** 73.08 38 eP P 06 34 27.9 +1.4
comp=Z,195nm,1.9s
QSPA **South Pole Qui** 73.10 180 eP P 06 34 27.8 +1.5
comp=Z,40nm,1.1s
ARVC **Arvin** 73.13 44 P P 06 34 27.3 +0.6
baz=73,SNR=13
MWC **Mount Wilson** 73.13 45 eP P 06 34 27.2 +0.2
MWC pmax pmax
comp=Z,84nm,1.1s
MWC **Mount Wilson** 73.13 45 eP P 06 34 27.2 +0.2
comp=Z,84nm,1.1s
BAR **Barrett** 73.23 47 eP P 06 34 27.3 -0.1
comp=Z,61nm,1.5s
KKM **Kota Kinabalu** 73.30 282 eP P 06 34 26.9 -1.4
comp=Z,15nm,0.7s
KKM **Kota Kinabalu** 73.30 282 P P 06 34 28.6 +0.2
baz=74,SNR=3.6
MURC **Murrieta** 73.37 46 P P 06 34 28.8 +0.5
baz=74,SNR=18
VES **Vestal, Richgr** 73.38 43 P P 06 34 28.7 +0.6
baz=74,SNR=36
BFSC **Mount Baldy Ra** 73.41 46 P P 06 34 28.8 +0.2
baz=74,SNR=21
MONP **Monument Peak** 73.52 47 P P 06 34 29.7 +0.4
baz=74,SNR=41
EDW2 **Edwards Air Fo** 73.55 45 P P 06 34 30.0 +0.7
baz=74,SNR=73
KHMM **Horse Mountain** 73.62 37 eP P 06 34 26.9 -2.7
comp=Z,46nm,1.2s
DVTC **Desert V Tower** 73.62 48 P P 06 34 30.5 +0.8
baz=74,SNR=8.0
ISA **Isabella** 73.68 44 eP P 06 34 30.7 +0.7
ISA eS S 06 44 07.4 +12
ISA pmax pmax
comp=Z,119nm,1.4s
ISA **Isabella** 73.68 44 eP P 06 34 30.7 +0.7
comp=Z,119nm,1.4s
ISA eS S 06 44 07.4 +12
ISA **Isabella** 73.68 44 P P 06 34 30.8 +0.7
baz=74,SNR=68
SRIG **Santa Rosalia** 73.74 54 P P 06 34 30.7 +0.2
LPIG **La Paz** 73.75 58 LR LR 06 57 55.6
comp=Z,38nm,20.7s,baz=240,slow=28
PET **Petropavlovsk** 73.78 343 eP P 06 34 29.6 -0.5
PET e 06 34 53.0
PET eS S 06 43 54.7 -0.6
PET ePS PnS 06 44 26.0 -12
PET MLR MLR
comp=Z,100nm,20.0s
CMB **Columbia Colle** 73.85 41 eP P 06 34 31.5 +0.5
CMB e 06 37 15.4
CMB pmax pmax
comp=Z,61nm,1.1s
CMB **Columbia Colle** 73.85 41 eP P 06 34 31.4 +0.5
comp=Z,60nm,1.1s
CMB ePP PP 06 37 15.4 -1.5
PFO **Pinyon Flat Ob** 73.89 47 P P 06 34 31.0 -0.4
comp=Z,166nm,1.0s,SNR=30
PFO **Pinyon Flat Ob** 73.89 47 eP P 06 34 31.7 +0.3
comp=Z,39nm,1.3s
PFO **Pinyon Flat Ob** 73.89 47 P P 06 34 31.7 +0.3
comp=Z,20nm,0.9s,baz=247,slow=4.8,SNR=48
PFO LR LR 06 59 08.7
comp=Z,518nm,22.0s,baz=241,slow=29
PFO **Pinyon Flat Ob** 73.89 47 P P 06 34 31.8 +0.4
baz=74,SNR=36
BBRC **Big Bear Solar** 73.93 46 P P 06 34 32.3 +0.6
baz=74,SNR=6.2
SWSC **Sam W. Stewart** 73.99 48 P P 06 34 32.3 +0.5
baz=74,SNR=14
CHGN **Chignik** 74.03 9 eP P 06 34 30.2 -1.3
LRMC **Laurel Mountai** 74.09 44 P P 06 34 33.3 +0.7
baz=74,SNR=32
WDC **Whiskeytown Da** 74.12 38 eP P 06 34 32.0 -0.4
WDC pmax pmax
comp=Z,140nm,1.5s
WDC **Whiskeytown Da** 74.12 38 eP P 06 34 32.0 -0.4
comp=Z,140nm,1.5s
PEA0B **Petropavlovsk-** 74.13 342 eP P 06 34 31.6 -0.6
PETK **Petropavlovsk-** 74.13 342 P P 06 34 31.8 -0.4
PETK **Petropavlovsk-** 74.13 342 P P 06 34 31.8 -0.4
PETK **Petropavlovsk-** 74.13 342 P P 06 34 31.8 -0.4
comp=Z,17nm,0.8s,baz=141,slow=9.6,SNR=12
PETK LR LR 06 59 37.9
comp=Z,118nm,21.9s,baz=144,slow=30
RRX **Edison Barstow** 74.22 45 ⇑P P 06 34 33.7 +0.6
baz=74
BELC **Belle Mtn. Jos** 74.42 47 P P 06 34 35.1 +0.6
baz=75,SNR=46
MPMC **Manual Prospec** 74.56 44 P P 06 34 36.2 +0.8
baz=75,SNR=89
UGM **Wanagama** 74.58 266 P P 06 34 35.4 -0.4
baz=75,SNR=9.5
MLAC **Mammoth Lakes** 74.59 42 ⇑P P 06 34 36.5 +1.0
baz=75,SNR=6.7
GSC **Goldstone** 74.59 45 eP P 06 34 35.9 +0.5
GSC pmax pmax
comp=Z,94nm,1.3s
GSC **Goldstone** 74.59 45 eP P 06 34 35.9 +0.5
comp=Z,94nm,1.3s
GSC **Goldstone** 74.59 45 P P 06 34 35.8 +0.5
baz=75,SNR=56
KEBM **Edson Butte** 74.59 35 eP P 06 34 36.3 +1.1
comp=Z,229nm,1.4s
DAC **Darwin (Calif)** 74.61 44 eP P 06 34 36.4 +0.8
DAC pmax pmax
comp=Z,68nm,1.4s
DAC **Darwin (Calif)** 74.61 44 eP P 06 34 36.4 +0.8
comp=Z,68nm,1.4s
BC3 **Big Chuckawall** 74.62 47 ⇑P P 06 34 36.4 +0.8
baz=75,SNR=33
TIN **Tinemaha** 74.65 43 P P 06 34 36.7 +1.0
baz=75,SNR=14
HEC **Hector,Ludlow** 74.65 46 P P 06 34 36.0 +0.3
baz=75,SNR=53
GLA **Glamis** 74.73 48 eP P 06 34 37.1 +0.9
GLA pmax pmax
comp=Z,64nm,1.3s
GLA **Glamis** 74.73 48 eP P 06 34 37.1 +0.9
comp=Z,64nm,1.3s
GLA **Glamis** 74.73 48 P P 06 34 37.2 +1.0
baz=75,SNR=14
YBH **Yreka Blue Hor** 74.76 37 eP P 06 34 37.3 +1.1
comp=Z,140nm,1.3s
YBH **Yreka Blue Hor** 74.76 37 P P 06 34 37.4 +1.1
comp=Z,77nm,1.1s,baz=205,slow=2.6,SNR=78
YBH LR LR 06 59 40.4
comp=Z,821nm,21.6s,baz=274,slow=29
YSS **Yuzh-Sakhalins** 74.88 330 eP P 06 34 38.3 +1.7
YSS e 06 34 44.0
YSS eS S 06 44 07.0 -0.9
YSS ePPS PPS 06 44 48.0
BEKR **Beckworth** 74.98 39 eP P 06 34 38.2 +0.5
comp=Z,51nm,1.3s
WCN **Washoe City** 75.01 40 eP P 06 34 38.4 +0.6
WCN e 06 37 26.0
WCN pmax pmax
comp=Z,72nm,1.1s
WCN **Washoe City** 75.01 40 eP P 06 34 38.4 +0.6
comp=Z,72nm,1.1s
WCN ePP PP 06 37 26.0 -0.8
GMRC **Granite Mounta** 75.08 46 P P 06 34 38.8 +0.5
baz=75,SNR=24
IRM **Iron Mountain** 75.10 47 P P 06 34 39.1 +0.8
baz=75,SNR=50
GRAC **Grapevine Rang** 75.18 43 P P 06 34 39.7 +1.1
baz=75,SNR=60
HUMO **Hull Mountain** 75.18 36 eP P 06 34 39.6 +1.0
comp=Z,229nm,1.8s
FURC **Furnace Creek,** 75.21 44 P P 06 34 39.5 +0.8
baz=75,SNR=40
TUQ **Turquoise Moun** 75.26 45 P P 06 34 39.9 +0.6
baz=76,SNR=38
SHOC **Shoshone** 75.28 45 P P 06 34 39.7 +0.5
baz=76,SNR=50
Y12C **Blythe** 75.32 47 P P 06 34 40.2 +0.7
baz=76,SNR=21
113A **Mohawk Valley,** 75.34 49 P P 06 34 40.2 +0.6
baz=76,SNR=40
NVAR **Mina Array Bea** 75.40 42 P P 06 34 40.8 +0.7
NVAR pP pP 06 35 00.9 +1.0
NVAR **Mina Array Bea** 75.40 42 P P 06 34 40.8 +0.7
comp=Z,58nm,1.0s,baz=227,slow=9.1,SNR=213
NVAR pP pP 06 35 00.9 +1.0
comp=Z,20nm,1.1s,baz=222,slow=9.1,SNR=3.5
NVAR LR LR 07 00 04.4
comp=Z,756nm,21.6s,baz=146,slow=29
NV11 **Mina Array Sit** 75.50 42 eP P 06 34 41.2 +0.6
RNO **Roman Nose** 75.60 35 P P 06 34 42.2 +1.2
214A **Organ Pipe Nat** 75.62 50 P P 06 34 42.1 +0.8
baz=76,SNR=36
LDFC **Landfair** 75.63 46 eP P 06 34 42.5 +1.1
comp=Z,211nm,1.4s
HOG **Hogback Mounta** 75.66 37 P P 06 34 42.4 +0.9
OHAK **Old Harbor** 75.75 11 eP P 06 34 40.3 -1.0
comp=Z,26nm,0.8s
NEE2 **Needles Airpor** 75.80 46 P P 06 34 43.1 +0.9
baz=76
PDMCI **Parker Dam,Lak** 75.88 47 ⇓P P 06 34 43.5 +0.8
baz=76,SNR=19
SSLB **Suanglung** 75.90 301 eP P 06 34 41.9 -1.2
comp=Z,7.7nm,0.7s
SBUM **Sibu** 75.92 277 P P 06 34 43.7 +0.3
SBUM **Sibu** 75.92 277 P P 06 34 42.2 -1.2
comp=Z,14nm,1.2s
TPUB **Ta-pu** 75.95 300 eP P 06 34 41.0 -2.4
comp=Z,19nm,0.7s
MPOR **Mary's Peak** 76.10 34 P P 06 34 45.0 +1.1
Z14A **Wintersburg** 76.24 48 P P 06 34 45.8 +1.0
baz=76,SNR=22
MOD **Modoc** 76.27 38 eP P 06 34 45.5 +0.6
comp=Z,130nm,1.3s
COR **Corvallis** 76.28 34 eP P 06 34 45.5 +0.8
COR pmax pmax
comp=Z,100nm,1.4s
COR **Corvallis** 76.28 34 eP P 06 34 45.5 +0.8
comp=Z,100nm,1.4s
KDAK **Kodiak Island** 76.41 11 eP P 06 34 45.2 +0.1
comp=Z,13nm,0.6s
KDAK ePP PP 06 37 34.1 -3.8
KDAK **Kodiak Island** 76.41 11 LR LR 07 01 19.7
comp=Z,467nm,21.8s,baz=207,slow=30
W13A **Hualapai Mount** 76.48 47 P P 06 34 47.2 +0.8
baz=77,SNR=40
Y14A **Wickenburg** 76.50 48 P P 06 34 46.9 +0.6
baz=77,SNR=79
H04A **Detroit Lake** 76.95 35 P P 06 34 48.9 +0.3
R11A **Troy Canyon, C** 77.11 43 ⇑P P 06 34 50.3 +0.5
baz=77
MMIG **Aquila** 77.19 66 P P 06 34 51.5 +1.0
BMN **Battle Mountai** 77.25 40 eP P 06 34 50.8 +0.3
BMN pmax pmax
comp=Z,108nm,1.3s
BMN **Battle Mountai** 77.25 40 eP P 06 34 50.8 +0.3
comp=Z,108nm,1.3s
TUC **Tucson** 77.28 50 eP P 06 34 51.6 +0.8
TUC pmax pmax
comp=Z,34nm,1.6s
TUC **Tucson** 77.28 50 eP P 06 34 51.6 +0.8
comp=Z,34nm,1.6s
TUC ePP PP 06 37 39.8 -6.3
KSRS **Korea Array** 77.34 316 P P 06 34 51.0 +0.2
comp=Z,3.8nm,1.0s,baz=130,slow=6.0,SNR=7.1
KSRS LR LR 07 06 02.7
comp=Z,126nm,19.6s,baz=296,slow=33
KSAR **Wonju Array Be** 77.36 316 P P 06 34 51.0 +0.1
KSM **Kuching** 77.44 275 eP P 06 34 51.3 -0.7
comp=Z,85nm,1.1s
KSM **Kuching** 77.44 275 P P 06 34 52.6 +0.6
KSM **Kuching** 77.44 275 P P 06 34 50.9 -1.1
comp=Z,75nm,1.1s,comp=Z,782nm
KSM **Kuching** 77.44 275 P P 06 34 52.4 +0.4
baz=78,SNR=21
WVOR **Wild Horse Val** 77.57 38 eP P 06 34 52.8 +0.6
WVOR pmax pmax
comp=Z,121nm,1.3s
WVOR **Wild Horse Val** 77.57 38 eP P 06 34 52.8 +0.6
comp=Z,121nm,1.3s
LEM **Lembang** 77.65 267 P P 06 34 53.9 +0.6
baz=78,SNR=4.6
VIPM **Ingram Point** 77.70 36 P P 06 34 53.5 +0.5
VIPM **Ingram Point** 77.70 36 P P 06 34 53.5 +0.5
VLL **Laurance Lake** 77.73 34 P P 06 34 53.7 +0.7
VFP **Flag Point** 77.75 35 P P 06 34 53.7 +0.5
NLWA **Neilton Lookou** 77.85 32 eP P 06 34 54.0 +0.5
comp=Z,84nm,1.4s
X16A **Lo Nia Camp, P** 77.85 48 P P 06 34 55.2 +1.1
baz=78,SNR=81
SWFL **Southwest Flan** 77.92 34 P P 06 34 51.1 -3.1
VALT **Mount Saint He** 77.94 34 P P 06 34 55.3 +1.0
319A **Douglas** 77.95 52 P P 06 34 55.7 +1.2
baz=78,SNR=21
CCUT **Cedar City** 78.14 45 eP P 06 34 56.8 +1.1
comp=Z,93nm,1.2s
CCUT ePP PP 06 37 51.8 -1.5
ARUT **Antelope Range** 78.22 44 eP P 06 34 56.9 +1.0
ARUT pmax pmax
comp=Z,69nm,1.0s
ARUT **Antelope Range** 78.22 44 eP P 06 34 56.9 +1.0
comp=Z,69nm,1.0s
U15A **North Rim** 78.28 46 ⇑P P 06 34 57.7 +1.2
baz=78
SFJM **Santa Fe** 78.31 64 P P 06 34 59.1 +2.2
QZH **Quanzhou** 78.34 301 eP P 06 34 58.5 +1.9
QZH S S 06 44 49.0 +2.5
WUAZ **Wupatki** 78.46 47 eP P 06 34 58.2 +0.9
comp=Z,94nm,1.5s
WUAZ **Wupatki** 78.46 47 ⇑P P 06 34 58.5 +1.1
baz=79
CGIG 78.47 53 P P 06 34 58.4 +0.9
LON **Longmire** 78.49 33 eP P 06 34 57.2 +0.1
LON pmax pmax
comp=Z,80nm,1.6s
LON **Longmire** 78.49 33 eP P 06 34 57.2 +0.1
comp=Z,80nm,1.6s
320A **Kipp Ranch, An** 78.50 52 P P 06 34 59.2 +1.5
baz=79,SNR=18
WPW **White Pass** 78.59 33 P P 06 34 58.1 +0.4
ZIIG **Zihuatanejo** 78.59 68 P P 06 34 54.8 -3.4
ELK **Elko** 78.67 41 eP P 06 34 58.9 +0.4
comp=Z,38nm,0.9s
ELK **Elko** 78.67 41 P P 06 34 59.0 +0.6
comp=Z,45nm,1.0s,baz=224,slow=4.8,SNR=127
USRK **Ussuriysk Arra** 78.69 323 P P 06 34 59.5 +1.3
comp=Z,6.4nm,1.1s,baz=89,slow=12,SNR=3.8
USRK LR LR 07 03 27.8
comp=Z,250nm,21.5s,baz=125,slow=31
HPIG 78.76 57 P P 06 34 59.5 +0.3
220A **Playas Peak, P** 78.77 52 P P 06 35 00.5 +1.4
baz=79,SNR=62
PGC **Sidney** 78.90 31 eP P 06 34 58.2 -1.0
comp=Z,6.5nm,1.3s
X18A **Snowflake** 78.98 49 ⇑P P 06 35 01.2 +1.0
baz=79
120A **U Bar Ranch, L** 78.99 51 ⇑P P 06 35 01.7 +1.4
baz=79
SEW **Seward** 79.17 12 eP P 06 34 59.8 -0.6
comp=Z,18nm,0.6s
BBB **Bella Bella** 79.21 26 LR LR 07 01 08.5
comp=Z,280nm,21.2s,baz=271,slow=29
Z20A **Nine Sixteen R** 79.29 51 P P 06 35 03.3 +1.3
baz=80,SNR=57
221A **Mesquite Ranch** 79.38 52 ⇑P P 06 35 03.8 +1.4
baz=80
TBM **Table Mountain** 79.39 34 P P 06 35 02.5 +0.4
MVU **Marysvale** 79.42 44 eP P 06 35 03.9 +1.3
comp=Z,75nm,1.0s
W18A **Petrified Fore** 79.42 48 P P 06 35 03.7 +1.1
baz=80
MSU **Marysvale** 79.44 44 eP P 06 35 04.0 +1.3
MSU pmax pmax
comp=Z,98nm,1.1s
MSU **Marysvale** 79.44 44 eP P 06 35 04.0 +1.3
comp=Z,98nm,1.1s
CAIG **El Cayaco** 79.45 69 P P 06 35 00.1 -2.8
HAWA **Hanford** 79.48 35 eP P 06 35 03.0 +0.6
comp=Z,163nm,1.5s
ZAIG **Zacatecas** 79.61 62 P P 06 35 04.8 +0.7
HABR **Khabarovsk** 79.70 328 P P 06 35 08.5 +4.9
HABR e 06 38 03.4
HABR e 06 45 10.5
HABR e*SS S 06 45 55.4 +55
HABR eSSS SSS 06 53 28.8
HABR pmax pmax
comp=N,9.0nm,0.8s
HABR pmax pmax
comp=E,52nm,2.4s
HABR pmax pmax
comp=Z,31nm,1.6s
HABR MLR MLR
comp=Z,77nm,18.0s
BMO **Blue Mountains** 79.79 37 eP P 06 35 04.4 +0.1
BMO pmax pmax
comp=Z,91nm,1.3s
BMO **Blue Mountains** 79.79 37 eP P 06 35 04.3 +0.1
comp=Z,90nm,1.3s
ETW **Entiat** 79.81 33 P P 06 35 04.6 +0.2
MFID **Camas Ranch** 79.82 39 eP P 06 35 04.5 0.0
comp=Z,68nm,1.1s
MFID **Camas Ranch** 79.82 39 P P 06 35 04.9 +0.3
baz=80,SNR=68
Y20A **Horse Springs,** 79.82 50 P P 06 35 06.5 +1.6
baz=80,SNR=36
DUG **Dugway** 79.91 43 eP P 06 35 05.4 +0.2
DUG pmax pmax
comp=Z,60nm,1.2s
DUG **Dugway** 79.91 43 eP P 06 35 05.4 +0.2
comp=Z,60nm,1.2s
DUG **Dugway** 79.91 43 P P 06 35 05.6 +0.5
baz=80,SNR=56
222A **Williams Famil** 79.93 52 ⇓P P 06 35 06.5 +1.1
baz=80
X20A **Quemado** 80.03 49 P P 06 35 07.4 +1.4
baz=80,SNR=47
Z21A **St. Cloud Mine** 80.06 51 P P 06 35 07.7 +1.5
baz=80,SNR=83
W20A **Ramah** 80.31 49 P P 06 35 09.0 +1.5
baz=80,SNR=90
MDJ **Mudanjiang** 80.32 323 P P 06 35 09.3 +2.3
MDJ pP PcP 06 35 19.1 +5.2
MDJ sP sP 06 35 22.6 -12
MDJ PP PP 06 38 13.3 +2.3
MDJ S S 06 45 10.3 +3.5
MDJ sS ScS 06 45 29.1 +2.8
MDJ SS SS 06 50 24.8 +4.7
MDJ pmax pmax
comp=Z,8.0nm,1.1s
MDJ pmax pmax
comp=Z,170nm,5.8s
MDJ LR LR
comp=N,150nm,22.0s
MDJ LR LR
comp=E,250nm,28.9s
MDJ LR LR
comp=Z,380nm,28.0s
Q16A **Castle Valley** 80.33 44 P P 06 35 08.7 +1.2
baz=81,SNR=46
Y21A **Point of Rocks** 80.38 50 P P 06 35 09.5 +1.5
baz=81,SNR=44
223A **Chaparral, Ant** 80.40 52 P P 06 35 09.2 +1.3
baz=81
I12A **Atlanta** 80.45 39 P P 06 35 08.7 +0.8
baz=81,SNR=120
X21A **Alamocita Cree** 80.50 50 P P 06 35 09.8 +1.3
baz=81,SNR=25
S18A **Hurst Farm, Bl** 80.51 46 P P 06 35 09.2 +0.7
baz=81,SNR=19
Z22A **Elephant Butte** 80.56 51 P P 06 35 10.1 +1.3
baz=81,SNR=8.3
MPU **Maple Canyon** 80.59 43 eP P 06 35 09.7 +0.9
comp=Z,39nm,1.1s
PMR **Palmer** 80.61 11 eP P 06 35 07.1 -1.1
PMR pmax pmax
comp=Z,31nm,0.6s
PMR **Palmer** 80.61 11 eP P 06 35 07.0 -1.1
comp=Z,31nm,0.6s
PLIG **Platanillo** 80.62 68 P P 06 35 10.8 +1.5
V20A **Brimhall** 80.66 48 P P 06 35 10.1 +0.8
baz=81,SNR=18
HLID **Hailey** 80.75 39 eP P 06 35 10.4 +0.8
comp=Z,57nm,0.9s
HLID **Hailey** 80.75 39 P P 06 35 10.4 +0.8
baz=81,SNR=146
HVU **Hansel Valley** 80.79 41 eP P 06 35 10.2 +0.4
HVU pmax pmax
comp=Z,103nm,1.3s
HVU **Hansel Valley** 80.79 41 eP P 06 35 10.2 +0.4
comp=Z,103nm,1.3s
J13A **Cove Ranch, Pi** 80.80 39 P P 06 35 10.9 +1.0
baz=81,SNR=122
SRU **San Rafael** 80.86 44 P P 06 35 11.1 +0.8
baz=81,SNR=52
324A **Moseley Ranch,** 80.87 53 P P 06 35 11.3 +0.8
baz=81,SNR=32
DIV **Divide** 80.87 13 eP P 06 35 09.1 -0.5
comp=Z,46nm,0.7s
Y22A **Socorro** 80.87 50 P P 06 35 11.6 +1.1
baz=81,SNR=48
U20A **Newcomb** 80.89 48 P P 06 35 11.6 +1.1
baz=81,SNR=19
P17A **Butcher Ranch,** 80.90 44 P P 06 35 11.5 +1.1
baz=81,SNR=18
W21A **San Fidel** 80.92 49 P P 06 35 12.0 +1.3
baz=81
LAZ **Ladron** 80.96 50 eP P 06 35 12.2 +1.2
comp=Z,65nm,1.7s
SML **Sawmill** 80.96 12 eP P 06 35 09.8 -0.3
SML e 06 38 14.4
SML pmax pmax
comp=Z,13nm,1.5s
SML **Sawmill** 80.96 12 eP P 06 35 09.8 -0.3
comp=Z,13nm,1.5s
SML ePP PP 06 38 14.4 -1.6
425A **Indio Mountain** 80.96 54 P P 06 35 12.1 +1.1
baz=81,SNR=19
Y22D **IRIS PASSCAL I** 80.97 50 P P 06 35 12.5 +1.6
baz=81,SNR=7.1
LENM **Lemitar** 80.97 50 eP P 06 35 11.9 +0.9
comp=Z,16nm,0.8s
H12A **Diamond D Ranc** 81.04 38 P P 06 35 11.3 +0.2
baz=81,SNR=68
MNTX **Cornudas Mount** 81.06 53 eP P 06 35 12.2 +0.9
comp=Z,94nm,1.5s
G12A **Big Creek, Yel** 81.09 37 ⇓P P 06 35 11.8 +0.4
baz=81
X22A **Bernardo** 81.10 50 P P 06 35 13.3 +1.7
baz=81,SNR=15
626A **Big Bend Ranch** 81.10 56 P P 06 35 12.9 +1.2
baz=81,SNR=15
Z23A **Rita Site, Whi** 81.11 51 P P 06 35 12.7 +1.0
baz=81,SNR=20
224A **Cornudas Mount** 81.11 53 P P 06 35 12.7 +0.9
baz=81,SNR=50
I13A **Wildhorse Cree** 81.12 39 P P 06 35 12.3 +0.7
baz=81,SNR=53
PNIG **Pinotepa** 81.13 70 P P 06 35 13.0 +1.0
J14A **Carey** 81.16 40 ⇓P P 06 35 13.0 +1.3
baz=81
YAIG **Yautepec** 81.17 67 P P 06 35 12.8 +0.5
NJ2 **Nanjing** 81.19 307 eP P 06 35 14.1 +2.2
NJ2 pP PcP 06 35 23.0 +5.0
NJ2 sP sP 06 35 26.9 -13
NJ2 PP PP 06 38 18.8 +0.4
NJ2 S S 06 45 19.5 +3.2
NJ2 sS ScS 06 45 37.5 +3.5
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,210nm,9.8s
NJ2 LR LR
comp=N,600nm,25.1s
NJ2 LR LR
comp=E,190nm,22.7s
NJ2 LR LR
comp=Z,590nm,23.4s
BNM **Barren Site** 81.22 50 eP P 06 35 13.3 +0.9
comp=Z,44nm,1.2s
V21A **Milan** 81.25 49 P P 06 35 13.7 +1.2
baz=82,SNR=16
LPM **Los Pinos Moun** 81.29 50 eP P 06 35 13.7 +1.0
comp=Z,32nm,1.2s
PPLA **Purkeypile** 81.29 10 eP P 06 35 10.5 -1.5
comp=Z,24nm,1.1s
P18A **Preston Nutter** 81.31 44 ⇑P P 06 35 13.7 +0.8
baz=82
MVCO **Mesa Verde** 81.31 47 eP P 06 35 13.4 +0.6
comp=Z,25nm,1.1s
MVCO **Mesa Verde** 81.31 47 P P 06 35 13.5 +0.6

baz=82,SNR=12
526A Mary Lane Ranc 81.35 55 P P 06 35 14.2 +1.1
baz=82,SNR=18
TXAR Lajitas Array 81.38 56 P P 06 35 14.2 +1.0
TXAR Lajitas Array 81.38 56 P P 06 35 14.2 +1.0
comp=Z,33nm,1.2s,baz=225,slow=4.8,SNR=106
TXAR LR LR 07 03 10.9
comp=Z,332nm,21.9s,baz=80,slow=30
H13A Challis 81.40 38 P P 06 35 13.4 +0.4
baz=82,SNR=77
HWUT Hardware Ranch 81.46 42 eP P 06 35 13.5 +0.1
comp=Z,98nm,1.6s
W22A Albuquerque 81.47 49 P P 06 35 15.2 +1.5
baz=82,SNR=8.3
F12A Elk City 81.49 37 P P 06 35 13.6 +0.2
baz=82,SNR=197
U21A Nageezi 81.53 48 P P 06 35 15.0 +1.0
baz=82,SNR=110
I14A Mackay 81.53 39 P P 06 35 14.5 +0.8
baz=82,SNR=30
Y23A Lovelace Mesa, 81.54 51 P P 06 35 14.8 +0.8
baz=82,SNR=31
PV04 Paradox Valley 81.60 46 eP P 06 35 14.7 +0.5
PV04 ePP PP 06 38 21.2 -0.7
PPM Popocatepetl 81.63 67 P P 06 35 16.8 +1.6
PPM Popocatepetl 81.63 67 P P 06 35 16.8 +1.6
627A Terlingua Ranc 81.65 56 P P 06 35 15.7 +1.1
baz=82,SNR=57
426A McDonald Obser 81.66 55 P P 06 35 15.7 +0.9
baz=82,SNR=60
225A Deer Hill, Car 81.66 53 P P 06 35 15.8 +1.1
baz=82,SNR=34
S20A Disappointment 81.70 46 P P 06 35 15.9 +1.0
baz=82,SNR=59
PV01 Paradox Valley 81.70 46 eP P 06 35 15.5 +0.7
comp=Z,8µm,1.2s
ANMO Albuquerque 81.71 50 eP P 06 35 15.5 +0.7
comp=Z,228nm,1.8s
ANMO ePP PP 06 38 23.3 +0.4
ANMO Albuquerque 81.71 50 P P 06 35 15.6 +0.7
comp=Z,12nm,0.6s,baz=241,slow=4.5,SNR=84
G13A Cobalt 81.71 38 P P 06 35 14.9 +0.3
baz=82,SNR=42
X23A Hourglass Bar 81.74 50 P P 06 35 16.0 +0.9
baz=82,SNR=34
527A Woodward Ranch 81.76 55 P P 06 35 16.0 +0.7
baz=82,SNR=44
Z24A Sheeppen Canyo 81.79 52 P P 06 35 16.2 +0.8
baz=82,SNR=30
V22A San Miguel Ran 81.82 49 P P 06 35 16.5 +0.9
baz=82,SNR=23
R20A Redvale 81.86 46 P P 06 35 16.4 +0.7
baz=82,SNR=40
KLR Kul'dur 81.88 327 eP P 06 35 12.1 -3.1
KLR eS S 06 45 18.5 -4.2
T21A Navajo Lake 81.88 48 P P 06 35 16.9 +1.1
baz=82,SNR=35
NEW Newport 81.92 34 eP P 06 35 15.2 -0.2
comp=Z,39nm,1.3s
NEW Newport 81.92 34 P P 06 35 15.3 -0.2
baz=82,SNR=23
UTMO Huajuapan 81.92 69 P P 06 35 17.8 +1.4
H14A Leadore 81.96 39 P P 06 35 16.7 +0.7
baz=82,SNR=80
M17A Scullys Gap (B 81.97 42 P P 06 35 16.1 -0.1
baz=82,SNR=26
326A Caldwell Ranch 81.97 54 P P 06 35 16.8 +0.5
baz=82,SNR=20
Y24A Capitan 82.00 51 P P 06 35 17.4 +1.0
baz=82,SNR=48
S21A Coal Bank Pass 82.02 47 P P 06 35 17.6 +1.0
baz=82,SNR=48
125A Gardner Draw, 82.03 52 P P 06 35 17.3 +0.8
baz=82,SNR=27
W23A Werner Place, 82.03 50 P P 06 35 17.5 +0.9
baz=82,SNR=40
F13A Darby 82.04 37 P P 06 35 16.3 -0.1
baz=82,SNR=65
GDL2 Guadalupe Moun 82.05 53 eP P 06 35 17.8 +1.1
comp=Z,31nm,0.7s
628A Black Gap, Mar 82.06 56 P P 06 35 17.6 +0.9
baz=82,SNR=32
U22A Llaves 82.08 48 ⇓P P 06 35 17.8 +0.9
baz=82
TRF Thorofare Moun 82.12 10 eP P 06 35 14.8 -1.6
comp=Z,60nm,0.5s
C11A Tepee Creek (N 82.14 35 ⇓P P 06 35 17.0 +0.3
baz=82
226B Tecolote Peak, 82.15 53 P P 06 35 18.1 +0.9
baz=82,SNR=86
I15A Monteview 82.16 39 P P 06 35 17.9 +1.0
baz=82,SNR=29
P19A Cripple Cowboy 82.16 45 P P 06 35 17.7 +0.5
baz=82,SNR=56
SKAG Skagway 82.17 18 eP P 06 35 16.9 +0.5
comp=Z,129nm,1.7s
D12A Red Ives Fores 82.18 36 P P 06 35 16.7 -0.3
baz=82
427A Hayter Ranch, 82.22 55 P P 06 35 18.7 +1.1
baz=82,SNR=69
G14A Jackson 82.25 38 P P 06 35 18.1 +0.6
baz=82,SNR=16
Z25A Roswell 82.25 52 P P 06 35 18.8 +1.1
baz=82,SNR=29
V23A Ortiz Mt. (NFS 82.27 49 P P 06 35 19.5 +1.7
baz=82,SNR=36
Q20A Ridgley Place, 82.29 45 P P 06 35 18.6 +0.7
baz=82,SNR=72
M18A Lyman 82.33 43 P P 06 35 18.4 +0.3
baz=83,SNR=19
T22A Edith 82.34 48 P P 06 35 19.1 +0.8
baz=83,SNR=26
CN2 Changchun 82.34 320 eP P 06 35 20.6 +2.9
CN2 esP sP 06 35 36.1 -10
CN2 eS **SKSac** 06 45 32.5 +0.5
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,18.0s
CN2 LR LR
comp=E,700nm,18.0s
CN2 LR LR
comp=Z,1µm,19.0s
TNA Tin City 82.36 2 eP P 06 35 17.7 +0.4
comp=Z,124nm,1.5s
AHID Auburn Hatcher 82.36 41 eP P 06 35 18.9 +0.7
comp=Z,31nm,1.1s
327A Balmorhea Ranc 82.37 54 ⇓P P 06 35 19.3 +1.0
baz=83
MCMT McKenzie Canyo 82.38 39 eP P 06 35 18.9 +0.6
comp=Z,45nm,1.1s
O19A Miners Draw (B 82.39 44 P P 06 35 18.7 +0.4
baz=83,SNR=22
H15A Lima 82.39 39 P P 06 35 19.1 +0.9
baz=83,SNR=138
528A Cox Ranch, San 82.42 55 P P 06 35 19.7 +1.1
baz=83,SNR=48
C12B Naegeli Ranch, 82.49 35 ⇓P P 06 35 18.7 +0.2
baz=83
P20A De Beque 82.49 45 P P 06 35 19.6 +0.7
baz=83,SNR=118
E13A Victor 82.49 37 P P 06 35 18.4 -0.3
baz=83,SNR=104
126A Clayton Basin, 82.51 53 P P 06 35 19.7 +0.7
baz=83,SNR=22
R21A Cimarron 82.52 46 P P 06 35 20.3 +1.2
baz=83,SNR=47
TPIG Tehuac#an 82.53 68 P P 06 35 20.9 +1.5
RRI2 Red Ridge 82.53 40 eP P 06 35 19.9 +0.8
comp=Z,134nm,1.2s
U23A El Rito 82.53 49 P P 06 35 20.4 +1.1
baz=83,SNR=125
Y25A Mesa, Roswell 82.55 51 P P 06 35 20.0 +0.8
baz=83,SNR=51
PAX Paxson 82.59 12 eP P 06 35 17.7 -1.0
PAX pmax pmax
comp=Z,22nm,1.2s
PAX Paxson 82.59 12 eP P 06 35 17.7 -1.0
comp=Z,22nm,1.2s
W24A Lazy 6 Ranch, 82.59 50 P P 06 35 20.1 +0.5
baz=83,SNR=50
L18A Fontenelle, Gr 82.61 42 P P 06 35 19.4 -0.1
baz=83,SNR=17
F14A Wisdom 82.61 38 P P 06 35 19.6 +0.3
baz=83,SNR=14
MCK McKinley 82.61 11 eP P 06 35 18.3 -0.4
MCK pmax pmax
comp=Z,59nm,0.8s
MCK McKinley 82.61 11 eP P 06 35 18.3 -0.4
comp=Z,59nm,0.8s
VHO Vista Hermosa 82.62 70 P P 06 35 21.5 +1.5
I16A Newdale 82.70 40 P P 06 35 21.0 +1.1
baz=83,SNR=94
D13A Huson 82.70 36 P P 06 35 19.2 -0.4
baz=83,SNR=106
Q21A Lamborn Mesa, 82.73 46 P P 06 35 21.2 +1.0
baz=83,SNR=27
428A Kincaid Ranch, 82.73 55 ⇑P P 06 35 21.4 +1.2
baz=83
S22A 4UR Ranch, Cre 82.73 47 P P 06 35 21.5 +1.2
baz=83,SNR=140
HUIG Huatulco 82.74 71 P P 06 35 19.1 -1.3
DCID1 Drake Creek 82.74 40 eP P 06 35 20.6 +0.6
comp=Z,156nm,1.3s
G15A Dillon 82.78 38 P P 06 35 20.8 +0.6
baz=83,SNR=145
227A Bennet, Jal 82.80 54 ⇑P P 06 35 21.2 +0.7
baz=83
Z26A Caprock 82.81 52 P P 06 35 21.3 +0.8
baz=83,SNR=58
DLMT Dillon 82.83 38 eP P 06 35 21.1 +0.6
comp=Z,141nm,1.3s
DLMT ePcP PcP 06 35 25.2 +0.1
DLMT ePP PP 06 38 26.1 -5.8
REDW Red Top Meadow 82.83 41 eP P 06 35 21.0 +0.4
comp=Z,2.0nm,1.3s
TPAW Teton Pass 82.83 41 eP P 06 35 21.2 +0.6
comp=Z,115nm,1.2s
X25A Clemmons Ranch 82.84 51 P P 06 35 21.3 +0.5
baz=83,SNR=29
529A Stev Forest Ra 82.85 56 P P 06 35 21.6 +0.8
baz=83,SNR=22
MSO Missoula 82.85 37 eP P 06 35 20.0 -0.5
comp=Z,66nm,1.4s
MSO ePP PP 06 38 29.9 -2.1
MSO Missoula 82.85 37 P P 06 35 20.0 -0.5
baz=83,SNR=67
B12A Libby 82.87 35 P P 06 35 20.8 +0.3
baz=83,SNR=14
E14A Clinton 82.88 37 P P 06 35 20.9 +0.2
baz=83,SNR=131
O20A White River Ci 82.90 44 P P 06 35 21.4 +0.4
baz=83,SNR=34
328A Wristen Ranch, 82.91 54 P P 06 35 21.6 +0.6
baz=83
V24A Rampart Ranch, 82.92 49 P P 06 35 22.2 +0.9
baz=83,SNR=49
MENT Mentasta 82.93 13 eP P 06 35 20.3 -0.1
BSMT Bassoo Peak 82.95 35 eP P 06 35 21.0 -0.1
comp=Z,42nm,0.8s
BSMT ePP PP 06 38 32.1 -0.7
T23A Casias Ranch, 82.96 48 P P 06 35 22.5 +1.0
baz=83,SNR=46
M19A Rock Springs 82.97 43 P P 06 35 21.6 +0.2
baz=83,SNR=24
C13A Hot Springs 82.97 36 P P 06 35 20.6 -0.4
baz=83,SNR=51
R22A Saguache, Gunn 83.01 47 P P 06 35 23.0 +1.3
baz=83,SNR=100
127A Arkansas Junct 83.03 53 P P 06 35 22.2 +0.5
baz=83,SNR=17
LNIG Linares 83.05 61 P P 06 35 21.7 -0.2
MOOW Moose Ponds 83.09 40 eP P 06 35 22.2 +0.2
comp=Z,106nm,1.6s
DLBC Dease Lake 83.09 21 eP P 06 35 21.2 -0.2
DLBC Dease Lake 83.09 21 P P 06 35 21.9 +0.5
comp=Z,18nm,1.1s,baz=230,slow=6.7,SNR=13
DLBC LR LR 07 03 48.3
comp=Z,343nm,21.4s,baz=260,slow=29
A12A Yaak River Ran 83.10 34 P P 06 35 22.1 +0.4
baz=83,SNR=6.3
LOHW Long Hollow 83.11 41 eP P 06 35 22.4 +0.3
comp=Z,64nm,1.1s
LOHW ePP PP 06 38 32.7 -1.6
L19A Farson 83.13 42 P P 06 35 22.5 +0.3
baz=83,SNR=59
P21A Newcastle 83.14 45 P P 06 35 23.1 +0.8
baz=83,SNR=56
F15A Butte 83.14 38 P P 06 35 22.3 +0.2
baz=83,SNR=55
LRM Limekiln Ridge 83.16 38 eP P 06 35 22.4 +0.2
comp=Z,524nm,1.2s
JTMT Jette 83.17 36 eP P 06 35 21.5 -0.6
comp=Z,11nm,0.8s
SWMT Swartz Lake 83.20 36 eP P 06 35 22.0 -0.3
comp=Z,25nm,1.3s
SWMT ePcP PcP 06 35 26.6 0.0
Q22A Crested Butte, 83.20 46 P P 06 35 23.7 +1.0
baz=83,SNR=62
Y26A Elida 83.20 52 P P 06 35 23.2 +0.5
baz=83,SNR=30
N20A Spence Gulch, 83.22 44 P P 06 35 23.2 +0.5
baz=83,SNR=82
G16A Moss Hill, Enn 83.22 39 P P 06 35 22.9 +0.4
baz=83,SNR=65
U24A Moreno Valley 83.22 49 P P 06 35 24.0 +1.1
baz=83,SNR=23
D14A Greenough 83.24 36 P P 06 35 21.9 -0.6
baz=83,SNR=76
QLMT Earthquake Lak 83.24 39 eP P 06 35 23.9 +1.2
comp=Z,27nm,1.2s
J18A Kendall Valley 83.27 41 P P 06 35 23.3 +0.4
baz=84,SNR=189
BLMT Blacktail Moun 83.28 35 eP P 06 35 22.2 -0.5
comp=Z,15nm,0.8s
BLMT ePP PP 06 38 34.5 -1.0
H16A Russell Place, 83.28 39 P P 06 35 24.2 +1.3
baz=84,SNR=215
I17A Pilgrim Ck. 83.29 40 P P 06 35 24.0 +1.1
baz=84,SNR=18
CHMT Chamberlain Mo 83.29 37 eP P 06 35 22.5 -0.3
comp=Z,37nm,1.0s
W25A X Bar L Ranch, 83.29 50 P P 06 35 23.3 +0.3
baz=84,SNR=59
S23A Nye Farm, Mont 83.29 47 P P 06 35 24.1 +0.9
baz=84,SNR=14
SMCO Snowmass 83.30 46 eP P 06 35 24.1 +0.7
comp=Z,110nm,1.2s
SMCO ePP PP 06 38 34.9 -1.3
429A Davenport Ranc 83.31 55 P P 06 35 23.7 +0.5
baz=84,SNR=70
SLMT Seeley Lake 83.33 36 eP P 06 35 22.3 -0.7
comp=Z,45nm,1.3s
BW06 Boulder Array 83.34 42 eP P 06 35 23.1 -0.1
comp=Z,90nm,1.1s
PDAR Pinedale Array 83.34 42 P P 06 35 23.2 -0.1
PDAR Pinedale Array 83.34 42 P P 06 35 23.2 -0.1
comp=Z,62nm,0.9s,baz=212,slow=3.3,SNR=262
PDAR LR LR 07 05 06.1
comp=Z,501nm,21.7s,baz=233,slow=30
E15A Deer Lodge 83.37 37 P P 06 35 23.2 -0.1
baz=84,SNR=63
228A UT Block 9, Go 83.38 54 P P 06 35 24.1 +0.5
baz=84,SNR=10
YBMT Yellow Bay 83.39 36 eP P 06 35 23.1 -0.2
comp=Z,18nm,1.1s
YBMT epP pP 06 35 44.8 +1.4
Z27A Tatum 83.40 52 P P 06 35 23.8 +0.2
baz=84,SNR=28
B13A Whitefish 83.42 35 P P 06 35 22.8 -0.6
baz=84,SNR=49
YMR Madison River 83.44 39 eP P 06 35 24.9 +1.2
comp=Z,272nm,1.4s
V25A Rancho No Teng 83.45 50 P P 06 35 24.5 +0.6
baz=84,SNR=84
O21A Pagoda 83.45 45 P P 06 35 24.0 +0.1
baz=84,SNR=18
C14A Swan Lake 83.48 36 P P 06 35 22.9 -0.8
baz=84
DOT Dot Lake 83.48 13 eP P 06 35 23.0 -0.2
comp=Z,12nm,0.6s
DOT epP pP 06 35 45.3 +2.0
X26A CR and CF Fran 83.48 51 P P 06 35 24.4 +0.3
baz=84,SNR=40
H17A Grant Village 83.53 40 P P 06 35 25.8 +1.6
baz=84,SNR=58
530A J-C Ranch, Com 83.56 56 P P 06 35 25.0 +0.5
baz=84,SNR=16
QIZ Qiongzhong 83.59 292 P P 06 35 25.8 +1.1
QIZ pP PcP 06 35 35.8 +7.0
QIZ PP **PP** 06 38 38.3 -0.1
QIZ S **S** 06 45 44.8 +3.4
QIZ SS **SS** 06 51 12.3 +2.7
QIZ pmax pmax
comp=Z,10.0nm,1.7s
QIZ LR LR
comp=E,100nm,24.1s
QIZ LR LR
comp=Z,480nm,25.2s
M20A Sweetwater, Wa 83.59 43 P P 06 35 25.2 +0.7
baz=84,SNR=49
329A Wagon Wheel Ra 83.59 55 P P 06 35 25.3 +0.7
baz=84,SNR=25
F16A Kennard Place, 83.63 38 P P 06 35 25.0 +0.5
baz=84,SNR=52
R23A Moffat 83.64 47 P P 06 35 25.8 +0.8
baz=84,SNR=62
P22A Eagle 83.64 45 P P 06 35 25.4 +0.5
baz=84,SNR=41
I18A Diamond G Ranc 83.65 41 P P 06 35 25.2 +0.4
baz=84,SNR=47
SDCO Great Sand Dun 83.67 48 eP P 06 35 25.4 +0.3
comp=Z,70nm,1.4s
SDCO LR LR
comp=Z,273nm,20.0s
128A Castleberry Fa 83.67 53 P P 06 35 25.7 +0.7
baz=84,SNR=32
N21A Black Mountain 83.68 44 P P 06 35 25.7 +0.7
baz=84,SNR=94
T24A Torres, Weston 83.68 48 P P 06 35 26.2 +1.0
baz=84,SNR=48
Y27A Causey 83.68 52 P P 06 35 25.5 +0.4
baz=84,SNR=56
MYKOM Kota Tinggi 83.70 274 P P 06 35 22.5 -3.0
comp=Z,25nm,1.0s
L20A Wamsutter 83.74 43 P P 06 35 26.2 +0.9
baz=84,SNR=85
W26A Owens Ranch, T 83.75 51 P P 06 35 25.5 +0.1
baz=84,SNR=16
A13A Flathead Natio 83.77 35 ⇑P P 06 35 25.1 -0.1
baz=84
D15A Lincoln 83.78 37 P P 06 35 25.5 +0.2
baz=84,SNR=86
K19A Absolon Red Bu 83.82 42 P P 06 35 25.3 -0.3
baz=84,SNR=39
S24A Houchin Ranch, 83.82 48 P P 06 35 27.0 +1.0
baz=84,SNR=8.8
U25A Circle Dot Ran 83.85 49 P P 06 35 26.3 +0.3
baz=84,SNR=60
COLA College 83.86 11 eP P 06 35 24.4 -0.6
COLA pmax pmax
comp=Z,46nm,0.8s
COLA College 83.86 11 eP P 06 35 24.4 -0.6
comp=Z,46nm,0.8s
631A Perdido Creek 83.87 57 P P 06 35 26.6 +0.6
baz=84,SNR=34
430A Baggett Ranch, 83.89 55 P P 06 35 26.4 +0.3
baz=84,SNR=11
J19A Crowheart 83.91 41 P P 06 35 26.2 +0.1
baz=84,SNR=80
G17A Pierce Place, 83.91 39 P P 06 35 27.0 +0.9
baz=84,SNR=33
229A Bryant Ranch, 83.92 54 P P 06 35 26.9 +0.6
baz=84,SNR=10
ILAR Eielson Array 83.94 11 P P 06 35 24.8 -0.7
ILAR Eielson Array 83.94 11 P P 06 35 24.8 -0.7
comp=Z,11nm,0.6s,baz=228,slow=5.9,SNR=188
ILAR LR LR 07 05 25.7
comp=Z,161nm,20.8s,baz=20,slow=30
Q23A Hartsel 83.96 46 P P 06 35 27.3 +0.7
baz=84,SNR=14
E16A East Helena 84.00 38 P P 06 35 26.5 +0.1
baz=84,SNR=75
HRY Holter Researc 84.00 37 eP P 06 35 26.9 +0.5
comp=Z,79nm,0.7s
HRY ePcP PcP 06 35 30.3 +0.1
MSTX Muleshoe 84.01 52 P P 06 35 27.2 +0.5
baz=84,SNR=71
Z28A Tucker Farm, M 84.02 53 P P 06 35 27.1 +0.3
baz=84,SNR=36
SEY Seymchan 84.04 345 ceP P 06 35 24.9 -1.1
V26A Tequesquite Ra 84.04 50 P P 06 35 26.8 0.0
baz=84,SNR=37
O22A Kremmling 84.05 45 P P 06 35 27.4 +0.4
baz=84,SNR=37
X27A F and S Farms, 84.06 51 P P 06 35 27.5 +0.5
baz=84,SNR=31
K20A Yellowstone Ra 84.06 42 P P 06 35 26.6 -0.3
baz=84,SNR=36
B14A Marquette Ranc 84.08 36 P P 06 35 26.3 -0.5
baz=84,SNR=71
732A Laxson Ranch, 84.09 58 P P 06 35 27.7 +0.6
baz=84,SNR=13
WALA Waterton Lakes 84.11 35 eP P 06 35 26.8 -0.1
comp=Z,2.5nm,1.1s
C15A Salmon Ranch, 84.13 36 P P 06 35 26.8 -0.3
baz=84,SNR=75
129A Stewart Farms, 84.15 54 P P 06 35 28.2 +0.7
baz=84,SNR=6.5
R24A Sanders Place, 84.16 47 P P 06 35 28.2 +0.6
baz=84,SNR=43
P23A Jefferson 84.17 46 P P 06 35 28.8 +1.0
baz=84,SNR=24
T25A Trinidad 84.17 49 P P 06 35 28.0 +0.4
baz=84,SNR=24
330A Mertzon 84.19 55 P P 06 35 27.7 0.0
baz=84,SNR=10
M21A Separation Pea 84.19 43 P P 06 35 27.7 +0.1
baz=84,SNR=61
531A Rocksprings 84.19 56 ⇑P P 06 35 28.3 +0.6
baz=84
H18A Shoshone NF, C 84.24 40 P P 06 35 28.3 +0.5
baz=84,SNR=20
W27A Bowe Ranch, En 84.26 51 P P 06 35 28.3 +0.3
baz=84,SNR=55
F17A Fitzpatrick Pl 84.27 39 P P 06 35 28.6 +0.8
baz=84,SNR=66
U26A Atchley Ranch, 84.33 49 P P 06 35 28.7 +0.3
baz=84,SNR=36
I19A Meeteetse 84.33 41 P P 06 35 28.8 +0.6
baz=84,SNR=52
A14A Double T Ranch 84.33 35 P P 06 35 28.0 0.0
baz=84,SNR=61
D16A Dana Ranch, Ca 84.33 37 P P 06 35 28.3 +0.2
baz=84,SNR=73
431A Sonora 84.35 56 P P 06 35 28.7 +0.2
baz=85,SNR=9.6
L21A Rawlins 84.36 43 P P 06 35 28.3 -0.1
baz=85,SNR=39
S25A Robets Cordova 84.38 48 P P 06 35 29.0 +0.4
baz=85,SNR=55
N22A Wattenberg Ran 84.41 45 P P 06 35 29.4 +0.6
baz=85,SNR=46
230A Sterling City 84.43 54 P P 06 35 29.2 +0.3
baz=85,SNR=11
E17A Martinsdale 84.44 38 P P 06 35 29.0 +0.3
baz=85,SNR=30
B15A Bradely Ranch, 84.45 36 P P 06 35 27.8 -0.8
baz=85,SNR=66
Q24A Divide 84.46 47 P P 06 35 29.7 +0.5
baz=85,SNR=17
O23A Lake Granby, G 84.50 45 P P 06 35 29.7 +0.4
baz=85,SNR=24
ISCO Idaho Springs 84.52 46 eP P 06 35 29.8 +0.4
ISCO e 06 38 45.8
ISCO pmax pmax
comp=Z,59nm,1.8s
ISCO MLR MLR
comp=Z,274nm,19.0s
ISCO Idaho Springs 84.52 46 eP P 06 35 29.8 +0.4
comp=Z,59nm,1.8s
ISCO ePP PP 06 38 45.8 -0.2
ISCO LR LR
comp=Z,274nm,19.0s
ISCO Idaho Springs 84.52 46 P P 06 35 29.9 +0.4
baz=85,SNR=16
Z29A Hungry Hill Ra 84.53 53 P P 06 35 29.6 +0.2
baz=85,SNR=36
632A Uvalde 84.54 57 P P 06 35 30.2 +0.8
baz=85,SNR=20
J20A Shoshoni 84.57 42 P P 06 35 29.8 +0.4
baz=85,SNR=66
M22A Cedar Creek Ra 84.60 44 P P 06 35 29.8 +0.1
baz=85,SNR=17
G18A Lazy EL Ranch, 84.62 39 P P 06 35 30.0 +0.4
baz=85,SNR=48
C16A Fuhringer Ranc 84.63 37 P P 06 35 29.2 -0.3
baz=85,SNR=82
H19A Powell 84.65 40 P P 06 35 30.6 +0.9
baz=85,SNR=40
X28A Dimmitt 84.68 52 P P 06 35 30.3 +0.2

baz=85,SNR=40
532A Rocksprings 84.69 56 P P 06 35 30.8 +0.6
baz=85,SNR=23
R25A Fountain Ranch 84.71 48 P P 06 35 30.2 0.0
baz=85,SNR=16
A15A Johnson Ranch, 84.72 35 P P 06 35 29.6 -0.4
baz=85,SNR=93
V27A Dan Oppiter Fa 84.72 50 P P 06 35 30.6 +0.3
baz=85
331A San Angelo 84.74 55 P P 06 35 30.4 0.0
baz=85,SNR=21
K21A Alcova 84.75 43 ⇑P P 06 35 30.4 0.0
baz=85
T26A Comanche Natio 84.78 49 P P 06 35 30.3 -0.3
baz=85,SNR=8.8
N23A Red Feather La 84.80 45 P P 06 35 31.1 +0.3
baz=85,SNR=23
Y29A Porterfield Fa 84.80 52 P P 06 35 31.3 +0.5
baz=85,SNR=66
F18A Big Timber 84.83 39 P P 06 35 31.3 +0.7
baz=85,SNR=56
I20A Worland 84.83 41 P P 06 35 30.9 +0.3
baz=85,SNR=61
130A Snyder 84.83 54 P P 06 35 31.3 +0.4
baz=85,SNR=11
P24A Kohler Place, 84.88 46 P P 06 35 31.5 +0.4
baz=85
D17A Six Diamond Ra 84.90 37 P P 06 35 31.5 +0.5
baz=85,SNR=101
JCT Junction City 84.91 56 *e*P P 06 35 31.7 +0.5
JCT pmax pmax
comp=Z,25nm,1.0s
JCT Junction City 84.91 56 *e*P P 06 35 31.7 +0.5
comp=Z,25nm,1.0s
JCT Junction City 84.91 56 P P 06 35 31.4 +0.1
baz=85,SNR=13
J21A Lysite 84.97 42 P P 06 35 31.8 +0.3
baz=85,SNR=58
W28A Vega 84.98 51 P P 06 35 31.6 0.0
baz=85,SNR=6.4
B16A M & M Farms, S 84.98 36 P P 06 35 30.7 -0.6
baz=85,SNR=31
Z30A Sanderson Ranc 84.98 53 P P 06 35 31.8 +0.2
baz=85,SNR=47
L22A Ellis Ranch, M 85.00 43 P P 06 35 32.3 +0.6
baz=85,SNR=35
U27A Thompson Grove 85.01 50 P P 06 35 31.6 -0.2
baz=85,SNR=23
X29A Tulia 85.02 52 P P 06 35 32.3 +0.5
baz=85,SNR=18
O24A Longmont 85.04 46 P P 06 35 32.4 +0.6
baz=85,SNR=11
E18A Harlowton 85.05 38 P P 06 35 32.4 +0.6
baz=85,SNR=58
S26A Kim 85.06 48 P P 06 35 31.8 -0.2
baz=85,SNR=24
432A Menard 85.07 56 P P 06 35 32.1 0.0
baz=85,SNR=39
Q25A Bedland, Calha 85.07 47 P P 06 35 32.0 -0.1
baz=85,SNR=7.8
231A Bronte 85.07 55 P P 06 35 32.1 0.0
baz=85,SNR=29
EGAK Eagle 85.09 13 *e*P P 06 35 31.0 -0.3
C17A Wharram Farm, 85.11 37 P P 06 35 32.0 +0.1
baz=85,SNR=122
V28A Channing 85.17 51 P P 06 35 32.8 +0.2
baz=85,SNR=16
H20A Greybull 85.17 41 P P 06 35 31.9 -0.4
baz=85,SNR=18
M23A Laramie 85.21 44 P P 06 35 33.1 +0.3
baz=85,SNR=5.8
AMTX Amarillo 85.21 52 *e*P P 06 35 33.0 +0.3
comp=Z,79nm,0.9s
AMTX *e*PP PP 06 38 48.9 -2.5
K22A Casper 85.23 43 P P 06 35 32.8 +0.1
baz=85,SNR=15
F19A Roth Farm, Mol 85.27 39 P P 06 35 32.9 +0.1
baz=86,SNR=36
I21A Big Trails, Te 85.29 42 P P 06 35 32.7 -0.4
baz=86,SNR=39
332A Millersview 85.31 55 P P 06 35 33.5 +0.2
baz=86,SNR=55
131A Roby 85.31 54 P P 06 35 33.6 +0.4
baz=86,SNR=20
PHWY Pilot Hill 85.31 44 *e*P P 06 35 33.2 -0.2
comp=Z,26nm,1.3s
A16A West Butte Ran 85.33 36 P P 06 35 32.9 -0.1
baz=86,SNR=137
W29A Amraillo 85.34 51 P P 06 35 33.7 +0.4
baz=86,SNR=27
PCIG 85.34 72 P P 06 35 35.3 +1.7
T27A Campo 85.36 49 P P 06 35 33.6 +0.1
baz=86,SNR=8.3
R26A Arlington 85.37 48 P P 06 35 33.5 0.0
baz=86,SNR=55
P25A Willow Gulch B 85.39 46 ⇑P P 06 35 34.0 +0.4
baz=86
Y30A Stafford Cattl 85.40 53 P P 06 35 34.0 +0.3
baz=86,SNR=11
G20A Bridger 85.40 40 P P 06 35 33.3 -0.2
baz=86,SNR=9.8
B17A L&G Farms, Che 85.43 36 P P 06 35 33.4 0.0
baz=86,SNR=28
U28A Mallet 85.43 50 ⇓P P 06 35 33.8 -0.1
baz=86
D18A Linhart Farms, 85.44 38 P P 06 35 34.1 +0.5
baz=86,SNR=29
N24A Carr 85.49 45 P P 06 35 34.3 +0.3
baz=86,SNR=9.8
S27A Las Animas 85.49 49 P P 06 35 34.2 +0.1
baz=86
L23A Garrett 85.52 44 P P 06 35 34.3 0.0
baz=86,SNR=25
232A Coleman 85.58 55 P P 06 35 35.0 +0.4
baz=86,SNR=72
Q26A Hugo 85.58 47 P P 06 35 34.5 -0.1
baz=86,SNR=9.6
J22A Midwest 85.62 42 P P 06 35 34.4 -0.2
baz=86,SNR=26
X30A Coker Ranch, T 85.64 52 P P 06 35 35.0 +0.1
baz=86,SNR=9.6
COLD Coldfoot 85.65 9 *e*P P 06 35 34.3 +0.3
comp=Z,66nm,1.4s
E19A Rath Farm, Rou 85.67 39 P P 06 35 35.0 +0.3
baz=86,SNR=29
O25A Wiggins 85.69 46 P P 06 35 35.2 +0.1
baz=86
F20A Billings 85.72 40 P P 06 35 35.4 +0.3
baz=86,SNR=13
V29A Stinnett 85.74 51 P P 06 35 35.5 +0.2
baz=86,SNR=5.2
Z31A Sharp Cattle R 85.75 53 P P 06 35 35.5 +0.1
baz=86,SNR=60
TGIG 85.78 71 P P 06 35 36.9 +1.0
M24A Cheyenne 85.81 44 P P 06 35 36.0 +0.3
baz=86,SNR=8.7
R27A Eads 85.82 48 P P 06 35 35.4 -0.4
baz=86,SNR=12
T28A Walsh 85.82 49 ⇑P P 06 35 35.5 -0.2
baz=86
A17A Triple J Farms 85.83 36 P P 06 35 35.5 +0.1
baz=86,SNR=56
H21A Big Horn, Sher 85.84 41 P P 06 35 35.7 0.0
baz=86,SNR=7.0
I22A 9 Mile Ranch, 85.84 42 P P 06 35 35.9 +0.2
baz=86,SNR=11
ABTX Abilene, Hawle 85.87 54 P P 06 35 36.5 +0.6
baz=86,SNR=73
EGMT Eagleton 85.89 37 *e*P P 06 35 35.4 -0.4
comp=Z,136nm,1.7s
EGMT *e*PP PP 06 38 54.0 -2.6
EGMT Eagleton 85.89 37 P P 06 35 35.6 -0.2
baz=86,SNR=22
Y31A Rekieta Farm, 85.92 53 P P 06 35 36.6 +0.4
baz=86,SNR=30
D19A Cripps Ranch, 85.96 38 P P 06 35 36.6 +0.4
baz=86,SNR=27
L24A Wheatland 86.00 44 ⇑P P 06 35 37.1 +0.5
baz=86
G21A Lodge Grass 86.02 40 P P 06 35 36.5 0.0
baz=86
BILL Bilibino 86.05 352 *d* *i*P P 06 35 35.8 -0.2
BILL *i* *PP PcP 06 35 45.9 +7.3
BILL *e**SP sP 06 35 50.4 -14
BILL *i* 06 46 03.8
BILL PS PnS 06 47 23.0 +12
BILL pmax pmax
comp=Z,75nm,1.2s

B18A Beardsley Farm 86.07 37 P P 06 35 36.7 0.0
baz=86,SNR=24
E20A Meyer Farm, Mu 86.08 39 P P 06 35 37.2 +0.4
baz=86,SNR=16
C19A Slack Wire Ran 86.15 38 P P 06 35 37.6 +0.6
baz=86,SNR=48
U29A Oasis Ranch, S 86.16 50 P P 06 35 37.7 +0.3
baz=86
W30A Crocket Farms 86.16 52 P P 06 35 37.9 +0.4
baz=86
S28A Manter 86.17 49 P P 06 35 37.2 -0.2
baz=86,SNR=9.9
J23A Dilts Ranch, B 86.22 43 P P 06 35 37.5 -0.1
baz=86
H22A Clearmont 86.26 41 P P 06 35 37.7 0.0
baz=86,SNR=5.1
Z32A Haskell 86.26 54 P P 06 35 38.7 +0.8
baz=86,SNR=132
UBPT Khong Chiam 86.30 287 P P 06 35 37.6 -0.8
A18A Metzger Ranch, 86.30 36 P P 06 35 37.5 -0.2
baz=86,SNR=40
O26A Horse Wrangler 86.30 46 P P 06 35 37.9 -0.2
baz=86
V30A Spur Ranch, Mi 86.31 51 P P 06 35 38.9 +0.7
baz=86,SNR=6.0
M25A Palm-Egli Farm 86.32 45 ⇑P P 06 35 38.1 0.0
baz=86
F21A Absaloka Mine, 86.36 40 P P 06 35 38.8 +0.7
baz=87
D20A Manuel Ranch, 86.37 38 P P 06 35 38.6 +0.5
baz=87,SNR=28
MAW Mawson 86.37 199 P P 06 35 38.9 +1.1
MAW pP pP 06 35 59.4 +1.4
MAW Mawson 86.37 199 P P 06 35 38.9 +1.1
comp=Z,10nm,0.7s,baz=144,slow=9.1,SNR=32
MAW pP pP 06 35 59.4 +1.4
comp=Z,16nm,1.0s,baz=154,slow=0.8,SNR=5.0
MAW LR LR 07 10 15.8
comp=Z,307nm,19.2s,baz=122,slow=33
MAW Mawson 86.37 199 P P 06 35 38.8 +1.1
baz=86,SNR=25
X31A McDonald Ranch 86.39 52 P P 06 35 38.5 0.0
baz=87,SNR=6.5
CCIG Comitan 86.51 72 P P 06 35 40.7 +1.0
R28A Tribune 86.55 48 P P 06 35 39.2 -0.1
baz=87,SNR=30
Y32A R-V Farms, Ver 86.56 53 P P 06 35 39.8 +0.5
baz=87,SNR=40
B19A Brinkman Farms 86.58 37 P P 06 35 39.4 +0.3
baz=87,SNR=15
G22A Birney 86.59 41 ⇑P P 06 35 39.1 -0.2
baz=87
BJT Baijiatuau 86.61 313 *e*P P 06 35 38.1 -1.3
comp=Z,37nm,1.3s
BJI Beijing 86.61 314 P P 06 35 41.1 +1.7
BJI pP pP 06 35 51.0 -8.6
BJI sP sP 06 35 54.8 -13
BJI PP PP 06 39 02.5 0.0
BJI SKS SKKSac 06 46 03.9 -4.0
BJI S ScS 06 46 15.9 -2.4
BJI sS sS 06 46 32.6 -12
BJI pmax pmax
comp=Z,11nm,0.7s
BJI LR LR
comp=N,100nm,20.3s
BJI LR LR
comp=E,120nm,18.9s
BJI LR LR
comp=Z,120nm,27.8s
W31A Holland Ranch, 86.64 52 ⇓P P 06 35 40.0 +0.3
baz=87,SNR=22
U30A WK&E Inc. Balk 86.65 50 P P 06 35 39.8 0.0
baz=87
E21A Keefer Ranch, 86.74 39 P P 06 35 40.6 +0.7
baz=87,SNR=7.2
S29A Ulysses 86.75 49 P P 06 35 40.3 0.0
baz=87,SNR=8.8
C20A Veseth Ranch, 86.75 38 P P 06 35 40.4 +0.4
baz=87,SNR=37
J24A Dixon Ranch, L 86.76 43 P P 06 35 40.1 -0.1
baz=87
Q28A Sharon Springs 86.83 48 P P 06 35 41.3 +0.7
baz=87
O27A Beecher Island 86.85 46 P P 06 35 41.5 +0.7
baz=87
F22A Rosebud 86.88 40 ⇓P P 06 35 41.0 +0.3
baz=87
A19A Klindworth Far 86.93 37 P P 06 35 40.9 +0.1
baz=87,SNR=32
V31A Spring Creek L 86.95 51 ⇓P P 06 35 42.4 +1.1
baz=87,SNR=9.4
K25A Mack Ranch, Ha 86.96 44 ⇓P P 06 35 41.9 +0.6
baz=87
I24A Kuemmerle Ranc 87.02 42 P P 06 35 41.0 -0.5
baz=87
D21A La Casta Ranch 87.04 39 P P 06 35 42.1 +0.7
baz=87,SNR=6.8
R29A Marienthal 87.06 48 ⇑P P 06 35 42.0 +0.2
baz=87
N27A Anderson Farm, 87.08 46 P P 06 35 41.5 -0.3
baz=87,SNR=5.5
B20A Solberg Farm, 87.10 37 P P 06 35 41.9 +0.2
baz=87,SNR=16
P28A Saint Francis 87.10 47 P P 06 35 42.0 0.0
baz=87
G23A Biddle 87.15 41 P P 06 35 41.8 -0.2
baz=87,SNR=7.9
U31A Nine Bar Ranch 87.18 51 P P 06 35 42.4 +0.1
baz=87,SNR=7.0
IPM Ipoh 87.18 276 *e*P P 06 35 42.7 -0.1
comp=Z,35nm,0.8s
IPM Ipoh 87.18 276 P P 06 35 43.6 +0.8
IPM Ipoh 87.18 276 P P 06 35 42.4 -0.4
comp=Z,45nm,0.9s
WHTX Lake Whitney 87.34 56 P P 06 35 43.8 +0.6
baz=88,SNR=9.2
C21A Desert Coulee 87.34 38 P P 06 35 43.0 +0.1
baz=88,SNR=10
WMOK Wichita Mounta 87.34 53 *e*P P 06 35 42.7 -0.5
WMOK pmax pmax
comp=Z,22nm,1.3s
WMOK Wichita Mounta 87.34 53 *e*P P 06 35 42.6 -0.5
comp=Z,22nm,1.3s
A20A Cobblestone Ra 87.37 37 P P 06 35 43.0 +0.1
baz=88,SNR=20
E22A Miles City 87.37 40 ⇑P P 06 35 43.5 +0.5
baz=88
F23A Volborg 87.38 41 P P 06 35 43.1 0.0
baz=88,SNR=18
K26A Motz Farm, Whi 87.46 44 P P 06 35 43.7 +0.1
baz=88,SNR=5.8
H24A Dirks Ranch, A 87.47 42 P P 06 35 42.9 -0.7
baz=88,SNR=22
RSSD Black Hills 87.52 42 *e*P P 06 35 43.2 -0.8
RSSD pmax pmax
comp=Z,15nm,0.8s
RSSD Black Hills 87.52 42 *e*P P 06 35 43.1 -0.8
comp=Z,15nm,0.8s
D22A Cohagen 87.57 39 P P 06 35 44.2 +0.3
baz=88,SNR=16
T31A Randall Ranch, 87.59 50 P P 06 35 44.3 0.0
baz=88,SNR=5.5
R30A Dighton 87.63 49 P P 06 35 44.3 -0.1
baz=88,SNR=13
B21A Ellsworth Farm 87.68 38 P P 06 35 44.9 +0.4
baz=88,SNR=28
KULM Kulim 87.78 276 *e*P P 06 35 45.7 +0.1
comp=Z,14nm,1.0s
E23A Ismay 87.80 40 P P 06 35 45.3 +0.2
baz=88,SNR=6.6
G24A Alzada 87.82 41 P P 06 35 45.3 +0.1
baz=88
ENH Enshi 87.84 302 *e*P P 06 35 46.2 +0.6
comp=Z,8.7nm,0.4s
HKT Hockley 87.90 58 *e*P P 06 35 47.0 +1.2
HKT pmax pmax
comp=Z,257nm,2.5s
HKT Hockley 87.90 58 *e*P P 06 35 47.0 +1.2
comp=Z,257nm,2.5s
C22A Vida 88.02 39 P P 06 35 46.2 +0.1
baz=88,SNR=5.5
F24A Ekalaka 88.03 41 P P 06 35 46.2 -0.1
baz=88,SNR=8.7
K27A Flueckinger Fa 88.09 44 ⇑P P 06 35 46.7 +0.1
baz=88
D23A Lindsay 88.17 39 ⇑P P 06 35 47.5 +0.7
baz=88
B22A Reddig Ranch S 88.22 38 P P 06 35 47.4 +0.4
baz=88,SNR=12
RFTA Plano 88.31 55 *e*P P 06 35 47.9 +0.2
PLCA Paso Flores 88.39 132 P P 06 35 49.9 +1.7
PLCA Paso Flores 88.39 132 P P 06 35 49.9 +1.7
comp=Z,1.8nm,0.8s,baz=220,slow=8.1,SNR=6.3
PLCA LR LR 07 06 03.1
comp=Z,243nm,20.2s,baz=233,slow=29
E24A Baker 88.44 40 P P 06 35 48.2 +0.1
baz=89
C23A Lambert 88.47 39 P P 06 35 48.6 +0.4
baz=89,SNR=15
A22A Carney Farms, 88.59 37 P P 06 35 48.9 +0.1
baz=89,SNR=9.0
M29A Burnside Ranch 88.61 46 P P 06 35 48.9 -0.2
baz=89
D24A Glendive 88.67 40 P P 06 35 49.6 +0.4
baz=89,SNR=9.9
PSI Prapat 88.70 273 P P 06 35 49.6 -0.6
PSI pP **pP** 06 36 10.9 +0.4
PSI Prapat 88.70 273 P P 06 35 49.1 -1.1
PSI Prapat 88.70 273 P P 06 35 49.6 -0.6
comp=Z,24nm,1.0s,baz=202,slow=5.7,SNR=8.5
PSI pP **pP** 06 36 10.9 +0.4
comp=Z,17nm,1.0s,baz=170,slow=5.1,SNR=3.4
PSI Prapat 88.70 273 P P 06 35 50.0 -0.2
baz=89,SNR=8.5
C24A Savage 88.80 39 P P 06 35 50.2 +0.5
baz=89,SNR=9.9
GYA Guiyang 88.87 298 P P 06 35 52.1 +1.4
GYA pP pP 06 36 02.8 -8.2
GYA sP sP 06 36 06.6 -12
GYA PP **PP** 06 39 24.4 +3.3
GYA SKS **SKSac** 06 46 17.3 +3.2
GYA S **ScS** 06 46 35.4 -2.5
GYA sS sS 06 46 53.5 -14
GYA SS **SS** 06 52 32.4 +5.3
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,210nm,5.3s
GYA LR LR
comp=N,950nm,17.6s
GYA LR LR
comp=E,880nm,17.3s
GYA LR LR
comp=Z,1μm,18.2s
B23A Brockton 88.89 38 P P 06 35 50.8 +0.7
baz=89,SNR=22
DGMT Dagmar 89.36 38 *e*P P 06 35 52.9 +0.6
comp=Z,73nm,1.1s
DGMT Dagmar 89.36 38 P P 06 35 52.8 +0.4
baz=90,SNR=13
NATX Nacogdoches 89.48 57 *e*P P 06 35 54.2 +0.9
comp=Z,48nm,1.2s
XAN Xi'an 89.63 306 P **pP** 06 36 16.8 +2.5
XAN pmax pmax
comp=Z,5.0nm,1.5s
CLNS Chul'man 89.64 331 *e*P P 06 35 52.2 -1.3
CLNS pmax pmax
comp=Z,10.0nm,1.4s
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS pmax pmax
comp=N,7.0nm,1.5s
A24A Westby 89.68 38 ⇑P P 06 35 53.9 0.0
baz=90
INK Inuvik 89.74 14 LR LR 07 08 58.5
comp=N,292nm,20.6s,baz=200,slow=31
TUL1 Tulsa 90.05 52 ⇑P P 06 35 56.0 +0.2
baz=90
TGUH Tegucigalpa,Un 90.30 75 *e*P P 06 35 58.6 +1.2
comp=N,117nm,1.8s
BGNE Belgrade 90.35 47 ⇓P P 06 35 57.2 +0.1
baz=91
YAK Yakutsk 90.57 337 *e*P P 06 35 55.6 -2.0
YAK *e**PP PcP 06 36 03.9 +5.2
YAK *e*S **SKSac** 06 46 21.9 -0.3
YAK *e* 06 46 49.2
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=Z,6.0nm,0.8s
YAK smax smax
comp=E,60nm,10.5s
YAK smax smax
comp=N,117nm,11.1s
KSU1 Kansas State U 90.59 49 *e*P P 06 35 59.0 +0.7
comp=N,12nm,0.7s
BRSD Miller 90.97 44 P P 06 35 59.4 -0.6
baz=91
SYO Syowa Base 91.11 191 ⇓*e*P P 06 36 00.0 -0.2
SYO Syowa Base 91.11 191 ⇑*e*X 06 36 06.6
TEIG Tepich 91.22 69 LR LR 07 08 36.5
comp=N,312nm,22.0s,baz=236,slow=30
SNAA Sanae 91.36 177 *e*P P 06 36 02.3 +0.9
comp=N,16nm,1.1s
JTS JuntasAbangare 91.37 80 *e*P P 06 36 04.3 +1.9
comp=N,2μm,1.8s
JTS *e*PP PP 06 39 39.6 -1.5
YKA Yellowknife Ar 91.47 23 P P 06 36 01.4 -0.4
YKA pP **pP** 06 36 21.3 -0.7
YKA PP PP 06 39 35.6 -5.1
YKA Yellowknife Ar 91.47 23 P P 06 36 01.4 -0.4
comp=N,9.9nm,1.1s,baz=238,slow=4.4,SNR=62
YKA pP **pP** 06 36 21.3 -0.7
comp=N,9.1nm,1.1s,baz=236,slow=4.2,SNR=4.4
YKA PP PP 06 39 35.6 -5.1
comp=N,1.6nm,1.0s,baz=232,slow=8.1,SNR=5.7
YKW3 Yellowknife Ar 91.50 23 *e*P P 06 36 02.1 +0.2
comp=N,0.7nm,1.4s
YKW3 *e*PP PP 06 39 37.0 -4.0
KMI Kunming 91.80 296 P P 06 36 07.3 +2.8
KMI pP **pP** 06 36 21.1 -3.7
KMI SKS **SKSac** 06 46 34.0 +2.7
KMI S **ScS** 06 47 03.6 +1.1
KMI pmax pmax
comp=Z,13nm,1.1s
KMI pmax pmax
comp=Z,93nm,5.9s
KMI LR LR
comp=N,120nm,19.9s
KMI LR LR
comp=E,150nm,19.2s
KMI LR LR
comp=Z,430nm,36.4s
MDND Maddock 91.89 40 ⇑P P 06 36 03.6 -0.6
baz=92
UALR University of 92.31 54 *e*P P 06 36 07.4 +1.1
comp=Z,36nm,0.9s
LCO Las Campanas 92.45 121 P P 06 36 10.8 +3.2
baz=92,SNR=6.9
CD2 Chengdu 92.71 301 P P 06 36 09.5 +1.1
CD2 pP pP 06 36 20.6 -8.1
CD2 sP sP 06 36 24.8 -12
CD2 PP **PP** 06 39 54.0 +2.6
CD2 SKS **SKSac** 06 46 38.8 +3.0
CD2 S **ScS** 06 47 08.8 -0.7
CD2 sS sS 06 47 27.3 -15
CD2 SS **SS** 06 53 25.5 +3.2
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,5.8s
CD2 LR LR
comp=N,260nm,32.3s
CD2 LR LR
comp=E,270nm,31.3s
CD2 LR LR
comp=Z,290nm,32.3s
VBMS Vicksburg 92.95 57 *e*P P 06 36 11.2 +1.9
comp=Z,14nm,0.3s
CM31 Chiang Mai Arr 93.21 288 *e*P P 06 36 11.7 +0.9
comp=Z,5.7nm,0.6s
CMAR Chiang Mai Arr 93.21 288 P P 06 36 11.8 +0.9
CMAR Chiang Mai Arr 93.21 288 P P 06 36 11.8 +0.9
comp=Z,8.5nm,0.8s,baz=102,slow=2.6,SNR=37
CMAR LR LR 07 12 18.5
comp=Z,184nm,20.9s,baz=269,slow=32
CMMT Chiang Mai 93.30 289 P P 06 36 11.9 +0.6
FFC Flin Flon 93.33 33 *i* P P 06 36 10.3 -0.2
FFC Flin Flon 93.33 33 *e*P P 06 36 10.1 -0.4
comp=Z,64nm,1.8s
FFC *e*PP PP 06 39 51.7 -3.9
FFC Flin Flon 93.33 33 P P 06 36 10.9 +0.4
comp=Z,69nm,1.4s,SNR=6.5
HBAR Harrisburg 93.87 54 P P 06 36 14.4 +0.9

HBAR ePP PP 06 39 55.7 -4.6
LZH Lanzhou 94.23 306 eP P 06 36 16.8 +1.4
LZH pP pP 06 36 27.0 -8.8
LZH sP sP 06 36 30.5 -13
LZH SKS SKSac 06 46 42.4 -1.8
LZH eS S 06 47 20.0 -1.0
LZH sS ScS 06 47 39.0 +17
LZH pmax pmax
comp=Z,14nm,1.0s
LZH pmax pmax
comp=Z,86nm,6.4s
LZH LR LR
comp=N,230nm,17.8s
LZH LR LR
comp=E,370nm,18.0s
LZH LR LR
comp=Z,280nm,19.3s
AGMN Agassiz Nation 94.39 41 eP P 06 36 14.2 -1.4
comp=Z,48nm,1.4s
ULM Lac du Bonnet 95.06 39 P P 06 36 17.9 -0.7
ULM Lac du Bonnet 95.06 39 P P 06 36 17.9 -0.7
comp=Z,9.7nm,0.7s,baz=277,slow=4.2,SNR=10
ULM LR LR 07 12 30.4
comp=Z,757nm,21.6s,baz=70,slow=31
SPMN St. Paul 95.34 44 P P 06 36 19.6 -0.4
baz=96
SONM Songino Array 96.07 318 LR LR 07 12 54.2
comp=Z,116nm,21.1s,baz=281,slow=31
JFWS Jewell Farm 96.39 47 eP P 06 36 24.6 -0.3
JFWS e 06 40 16.9
JFWS pmax pmax
comp=Z,27nm,1.0s
JFWS Jewell Farm 96.39 47 eP P 06 36 24.6 -0.3
comp=Z,27nm,1.0s
JFWS ePP PP 06 40 16.9 -2.8
TIXI Tiksi 96.52 344 ceP P 06 36 23.7 -1.0
TIXI pmax pmax
comp=Z,9.0nm,1.3s
GTA Gaotai 98.23 309 eP Pdif 06 36 34.6 +1.1
GTA pP pP 06 36 48.3 -5.5
GTA sP sP 06 36 53.4 -8.4
GTA PP PP 06 40 37.3 +3.2
GTA SKS SKSac 06 47 07.0 +2.1
GTA S S 06 47 54.3 -1.0
GTA sS sS 06 48 17.3 -13
GTA SS SS 06 54 40.9 +0.5
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,100nm,4.8s
GTA LR LR
comp=N,150nm,18.5s
GTA LR LR
comp=E,210nm,19.0s
GTA LR LR
comp=Z,280nm,20.9s
LPAZ La Paz 99.17 110 LR LR 07 14 31.0
comp=Z,126nm,20.6s,baz=263,slow=31
TKL Tuckaleechee C 99.29 56 P Pdif 06 36 38.5 +0.4
TKL Tuckaleechee C 99.29 56 P Pdif 06 36 38.5 +0.4
comp=Z,5.7nm,1.0s,baz=193,slow=11,SNR=4.9
RES Resolute Bay 103.18 16 Pdif Pdif 06 36 54.8 +0.3
RES Resolute Bay 103.18 16 Pdiff Pdif 06 36 54.8 +0.3
comp=Z,1.2nm,0.7s,baz=226,slow=6.0,SNR=5.0
WMQ Urumqi 107.97 311 ePdif Pdif 06 37 17.6 +1.0
WMQ PP PP 06 41 49.6 +2.9
WMQ S Sdif 06 49 16.4 +0.1
WMQ SS SS 06 56 56.3 +2.1
WMQ LR LR
comp=N,160nm,26.6s
WMQ LR LR
comp=E,270nm,26.0s
WMQ LR LR
comp=Z,140nm,26.0s
MK31 Makanchi Array 111.99 314 ePKIKP **PKiKP 06 41 30.3 -0.5**
MK31 Makanchi Array 111.99 314 ePKPdf **PKiKP 06 41 30.3 -0.5**
MKAR Makanchi Array 111.99 314 PKiKP **PKiKP 06 41 29.6 -1.2**
MKAR Makanchi Array 111.99 314 PKiKP **PKiKP 06 41 29.6 -1.2**
MKAR PKKPbc **PKKPbc 06 52 23.0 -1.4**
MKAR Makanchi Array 111.99 314 PKiKP **PKiKP 06 41 29.6 -1.2**
comp=Z,1.7nm,0.7s,baz=104,slow=0.9,SNR=15
MKAR PKKPbc **PKKPbc 06 52 23.0 -1.4**
comp=Z,0.4nm,0.7s,baz=279,slow=3.2,SNR=4.5
KURK Kurchatov 114.37 318 c *i* PKIKP PKPdf 06 41 34.4 -0.8
KURK pmax pmax
comp=Z,8.0nm,1.7s
KURK Kurchatov 114.37 318 ePKPdf PKPdf 06 41 34.8 -0.4
BVAR Borovoye Array 119.17 322 PKIKP **PKPdf 06 41 44.3 -0.1**
BVAR Borovoye Array 119.17 322 PKP **PKPdf 06 41 44.3 -0.1**
BVAR Borovoye Array 119.17 322 PKP **PKPdf 06 41 44.3 -0.1**
comp=Z,4.2nm,0.7s,baz=82,slow=2.1,SNR=22
KKAR Karatay Array 120.45 310 ePKIKP **PKPdf 06 41 46.6 -0.6**
KKAR Karatay Array 120.45 310 ePKPdf **PKPdf 06 41 46.6 -0.6**
KBL Kabul 122.04 300 ePKIKP **PKPdf 06 41 51.9 +1.1**
KBL e 06 43 25.6
KBL Kabul 122.04 300 ePKPdf **PKPdf 06 41 51.9 +1.1**
KBL ePP PP 06 43 25.6 -0.7
ARU Arti 124.71 328 *i* PKIKP **PKPdf 06 41 54.8 -0.1**
ARU 06 43 49.0
ARU SS SS 07 00 30.2 -1.1
KEV Kevo 125.74 351 ePKIKP **PKPdf 06 41 56.0 -0.5**
KEV Kevo 125.74 351 epkp **PKPdf 06 41 56.0 -0.5**
LVZ Lovozero 126.03 347 c *i* PKIKP **PKPdf 06 41 55.3 -1.9**
LVZ pmax pmax
comp=Z,22nm,2.5s
ARCES ARCESS Array B 126.15 352 PKP **PKPdf 06 41 57.5 +0.2**
ARCES ARCESS Array B 126.15 352 PKP **PKPdf 06 41 57.5 +0.2**
comp=Z,9.5nm,0.7s,baz=28,slow=1.0,SNR=34
ABKAR Akbulak array 126.47 319 ePKPdf **PKPdf 06 41 58.8 +0.3**
JOF Joensuu 130.99 345 ePKIKP **PKPdf 06 42 06.6 -0.1**
JOF Joensuu 130.99 345 epkp **PKPdf 06 42 06.6 -0.1**
KAF Kangasniemi 132.82 348 ePKIKP **PKPdf 06 42 07.5 -2.7**
KAF Kangasniemi 132.82 348 epkp **PKPdf 06 42 07.5 -2.7**
FINES FINESS Array B 133.47 347 PKP **PKPdf 06 42 11.8 +0.4**
FINES FINESS Array B 133.47 347 PKhKP PKPpre 06 42 00.8
comp=Z,0.6nm,0.7s,baz=27,slow=0.6,SNR=4.9
FINES PKP **PKPdf 06 42 11.8 +0.4**
comp=Z,4.8nm,0.8s,baz=45,slow=2.2,SNR=6.1
OBN Obninsk 135.57 336 *i* PKIKP **PKPdf 06 42 12.0 -3.5**
OBN SS SS 07 02 49.0 +5.1
OBN SSS SSS 07 07 48.0
OBN pmax pmax
comp=Z,23nm,1.7s
NB2 NORSAR Subarra135.85 357 PKP PKPpre 06 42 04.8
comp=Z,1.6nm,0.8s,baz=17,slow=2.6
NOA NORSAR Array B 135.85 357 PKP **PKPdf 06 42 15.4 -0.5**
NOA NORSAR Array B 135.85 357 PKP **PKPdf 06 42 15.4 -0.5**
comp=Z,1.8nm,0.7s,baz=14,slow=4.0,SNR=5.7
VSR Storozhevoye 137.16 330 ePKIKP **PKPdf 06 42 18.9 +0.3**
VSR pmax pmax
comp=Z,10.0nm,1.4s
VSR pmax pmax
comp=N,10.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.3s
VORD Divnogorie 137.26 330 ePKIKP **PKPdf 06 42 18.2 -0.6**
VORD pmax pmax
comp=Z,10.0nm,1.2s
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,8.0nm,0.6s
ZEI Tsey 139.24 317 *i* PKIKP **PKPdf 06 42 25.3 +2.3**
ZEI pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 141.80 337 PKHKP PKPpre 06 42 21.4
AKASG Malin Array Be 141.80 337 PKPpre PKPpre 06 42 21.4
AKASG Malin Array Be 141.80 337 PKPpre PKPpre 06 42 21.4
comp=Z,1.3nm,0.5s,baz=38,slow=3.9,SNR=6.6
KIEV Kiev 141.81 337 ePKHKP PKPpre 06 42 23.1
KIEV Kiev 141.81 337 ePKPdf PKPpre 06 42 23.1
AK01 Malin Array Si 141.82 337 PKPdf **PKPdf 06 42 24.9 -2.2**
AK02 Malin Array Si 141.85 337 ePKPdf **PKPdf 06 42 24.0 -3.1**
ANN Anapa 142.12 324 *i* PKIKP **PKPdf 06 42 29.2 +1.4**
ANN pmax pmax
comp=Z,15nm,1.5s
BEL Belsk 143.44 345 ePKP PKPbc 06 42 27.8 +0.5
LVV L'vov 144.35 341 ↑*i* PKIKP **PKPab 06 42 29.5 -0.3**
KIS Kishinev 144.91 333 ePKIKP **PKPab 06 42 31.0 -0.9**
KIS Kishinev 144.91 333 ePKP **PKPab 06 42 31.0 -0.9**
KIS eSKKS 06 52 52.0
KWP Kalwaria Pacla 144.92 342 ePKP PKPbc 06 42 32.2 +0.2
KMBO Kilima Mbogo 144.94 242 ePKPdf **PKPdf 06 42 34.1 +0.1**
KMBO PKP PKPbc 06 42 34.4 +0.9
KMBO ePKPbc **PKPab 06 42 34.8 +1.4**
KMBO pPKP **pPKPdf 06 42 55.7 +0.5**
KMBO Kilima Mbogo 144.94 242 PKP **PKPdf 06 42 34.4 +0.3**
comp=Z,24nm,0.9s,baz=56,slow=4.2,SNR=42
KMBO pPKP **pPKPdf 06 42 55.7 +0.5**
comp=Z,58nm,1.0s,baz=64,slow=4.3,SNR=14
WTSB Winterswijk 145.06 360 ePKP **PKPbc 06 42 32.1 -0.2**
comp=Z,50nm,0.9s
WTSB eX 06 42 54.1
OJC Ojcow 145.18 345 ePKIKP **PKPab 06 42 32.8 -0.1**
OJC Ojcow 145.18 345 ePKPbc **PKPab 06 42 32.8 -0.1**
OJC ePKiKP **PKiKP 06 42 36.5 -0.4**
KSP Ksiaz 145.33 349 ePKIKP **PKPdf 06 42 33.6 +0.3**
KSP Ksiaz 145.33 349 ePKP **PKPdf 06 42 33.7 +0.4**
CLL Collm 145.36 353 ↓*i* PKIKP **PKPbc 06 42 33.0 -0.2**
CLL pmax pmax
comp=Z,101nm,1.3s
CLL Collm 145.36 353 ePKP **PKPbc 06 42 32.8 -0.4**
CLL epPKP **pPKPdf 06 42 55.7 +1.2**
CLL Collm 145.36 353 ↓*i* PKPbc **PKPbc 06 42 33.0 -0.2**
comp=Z,101nm,1.3s
CLL *i* pPKiKP **pPKiKP 06 42 56.4 -2.0**
CLL esPKiKP sPKiKP 06 43 04.0 -2.2
CLL e 06 43 16.0
CLL ePP PP 06 45 48.0 -4.6
CLL ePSKS 06 56 12.0
LEOM Leova 145.56 333 ↑↑PKIKP **PKPab 06 42 35.4 +1.0**
LEOM Leova 145.56 333 ↑*i*P **PKPab 06 42 35.4 +1.0**
BUG Bochum--Univer 145.59 359 ePKP **PKPdf 06 42 33.3 -0.3**
BRG Berggiesshubel 145.67 352 *i* PKP **PKPbc 06 42 34.3 +0.1**
comp=Z,93nm,1.3s
BRG *i* 06 42 57.0
comp=Z,32nm,1.2s
BRG Berggiesshubel 145.67 352 *i* PKIKP **PKPbc 06 42 34.3 +0.1**
BRG pmax pmax
comp=Z,93nm,1.3s
BRG pmax pmax
comp=Z,32nm,1.2s
BRG Berggiesshubel 145.67 352 ePKP **PKPbc 06 42 34.1 -0.1**
KOLS Kolonicke sedl 145.68 342 ePKIKP **PKPbc 06 42 34.5 +0.1**
KOLS Kolonicke sedl 145.68 342 ePKP **PKPbc 06 42 34.5 +0.1**
RAC Raciborz 145.68 347 ePKIKP **PKPab 06 42 34.9 +0.2**
UPC Upice 145.70 349 ePKP2 **PKPab 06 42 35.0 +0.2**
UPC Upice 145.70 349 ePKP **PKPab 06 42 35.0 +0.2**
UPC ex x 06 42 57.7
NIE Niedzica 145.79 344 *i* PKP2 **PKPab 06 42 39.2 +4.0**
NIE Niedzica 145.79 344 ePKPbc **PKPab 06 42 35.1 -0.1**
NIE ePKIKP **PKPab 06 42 39.2 +4.0**
DPC Dobruska-Polom 145.80 349 ePKP2 **PKPab 06 42 35.4 +0.2**
DPC Dobruska-Polom 145.80 349 ePKP **PKPab 06 42 35.4 +0.2**
DPC ex x 06 42 58.8
BUR08 Bucovina Ar. S 145.82 338 ePKPbc **PKPab 06 42 35.7 +0.3**
BURAR Bucovina Array 145.84 338 ↑*i*P **PKPab 06 42 35.9 +0.4**
PVCC Panska Ves 145.91 351 ePKP2 **PKPab 06 42 35.3 -0.3**
PVCC Panska Ves 145.91 351 ePKP **PKPab 06 42 35.3 -0.3**
PVCC epPKP **pPKPdf 06 42 58.8 +3.4**
OKC Ostrava-Krasne 145.92 347 ePKP2 **PKPab 06 42 35.7 +0.1**
OKC Ostrava-Krasne 145.92 347 ePKP **PKPab 06 42 35.7 +0.1**
OKC epPKP **pPKPdf 06 42 58.2 +2.7**
UZH Uzhgorod 145.94 341 ↑*i*PKP2 **PKPbc 06 42 35.3 +0.2**
CRVS Cervenica-Dubn 145.94 343 ePKP2 **PKPbc 06 42 34.9 -0.3**
CRVS Cervenica-Dubn 145.94 343 ePKP **PKPbc 06 42 34.9 -0.3**
KRLC Kraliky 145.97 348 ePKP2 **PKPbc 06 42 35.5 +0.2**
KRLC Kraliky 145.97 348 ePKP **PKPbc 06 42 35.5 +0.2**
KRLC ex x 06 42 59.1
MORC Moravsky Berou 146.10 347 ePKIKP **PKPdf 06 42 34.9 +0.2**
MORC e 06 42 35.8
MORC Moravsky Berou 146.10 347 ePKPdf **PKPdf 06 42 34.9 +0.2**
MORC ePKPbc **PKPbc 06 42 35.8 +0.1**
MORC Moravsky Berou 146.10 347 ↓*i*P **PKPbc 06 42 36.0 +0.3**
UBBA Unterbreizbach 146.11 356 ePKP **PKPbc 06 42 35.4 -0.1**
MOX Moxa 146.16 354 ePKP2 **PKPbc 06 42 35.5 -0.3**
MOX Moxa 146.16 354 ePKP **PKPbc 06 42 35.5 -0.3**
MOX epPKP **pPKPdf 06 42 58.0 +2.1**
TESR Tescani 146.20 335 ↑*i*P **PKPab 06 42 36.5 -0.3**
BEBN Eben Emael 146.22 1 PKP **PKPab 06 42 36.5 -0.2**
BEBN SPKiKP 06 42 59.1
HGN Heimansgroeve 146.26 1 ePKP **PKPbc 06 42 36.2 +0.1**
comp=Z,351nm,1.9s
HGN eX 06 42 59.3
TANN Tannenbergstha 146.30 353 ePKP **PKPdf 06 42 35.7 +0.7**
TLCR 146.31 331 ↓↓PKP2 **PKPab 06 42 37.8 +0.6**
TLCR 146.31 331 ↓↓*i*P **PKPab 06 42 37.8 +0.6**
TRPA Tarpa 146.31 341 ↑*i*P **PKPab 06 42 37.3 +0.2**
TRPA Tarpa 146.31 341 ↓↓ePKPdf **PKPbc 06 42 36.5 +0.3**
PRA Prague 146.38 351 PKP **PKPab 06 42 37.0 -0.3**
PRA pPKP **pPKPdf 06 43 00.0 +3.8**
MEM Membach 146.42 1 PKPbc **PKPdf 06 42 35.9 +0.8**
MEM SPKiKP 06 42 59.7
PRU Pruhonice 146.44 351 ePKP2 **PKPbc 06 42 37.1 +0.5**
PRU Pruhonice 146.44 351 ePKP **PKPbc 06 42 37.1 +0.5**
PRU epPKP **pPKPdf 06 42 59.9 +3.5**
NKC Novy Kostel 146.48 353 ePKP2 **PKPbc 06 42 37.0 +0.2**
NKC Novy Kostel 146.48 353 ePKP **PKPbc 06 42 37.0 +0.2**
NKC epPKP **pPKPdf 06 43 00.1 +3.6**
BCLA Clavier 146.59 2 PKPbc **PKPab 06 42 37.8 -0.3**
BCLA SPKiKP 06 42 56.5
CFR Carcaliu 146.62 332 ↑↑PKP2 **PKPbc 06 42 36.5 -0.8**
CFR Carcaliu 146.62 332 ↑*i*P **PKPbc 06 42 36.5 -0.8**
VRI Vrincioaia 146.69 334 ↑↑PKP2 **PKPab 06 42 38.1 -0.6**
VRI Vrincioaia 146.69 334 ↑*i*P **PKPab 06 42 38.1 -0.6**
PLOR Plostina 146.73 334 ↓↓PKP2 **PKPab 06 42 38.6 -0.3**
PLOR Plostina 146.73 334 ↓*i*P **PKPab 06 42 38.6 -0.3**
VRAC Vranov 146.74 348 ↑*i*P **PKPab 06 42 38.5 -0.3**
TNS Taunus Mts 146.78 358 ePKP2 **PKPbc 06 42 37.5 -0.2**
TNS Taunus Mts 146.78 358 ePKP **PKPbc 06 42 37.5 -0.2**
DOU Dourbes 146.89 3 PKPbc **PKPbc 06 42 38.4 +0.5**
DOU APKP **PKiKP 06 42 45.5 +5.1**
DOU SPKiKP 06 43 01.4
TREC Trest 146.96 349 ePKIKP **PKPdf 06 42 36.8 +0.7**
TREC e 06 42 39.1
TREC Trest 146.96 349 ePKP **PKPdf 06 42 36.8 +0.7**
TREC ex x 06 42 39.1
TREC epPKP **pPKPdf 06 43 01.9 +4.6**
ROTZ Rotzenmuhle 146.97 353 ePKP **PKPbc 06 42 38.4 +0.3**
VYHS Vyhne 147.02 345 ePKP2 **PKPbc 06 42 38.8 +0.5**
VYHS Vyhne 147.02 345 ePKP **PKPbc 06 42 38.8 +0.5**
TIRR Tirgusor 147.04 331 ePKP2 **PKPbc 06 42 39.1 +0.6**
TIRR Tirgusor 147.04 331 ePKPbc **PKPbc 06 42 39.1 +0.6**
TIRR Tirgusor 147.04 331 ↑*i*P **PKPbc 06 42 39.2 +0.7**
HARR Harsova 147.09 332 ↑↑PKP2 **PKPab 06 42 40.5 +0.2**
HARR Harsova 147.09 332 ↑*i*P **PKPab 06 42 40.5 +0.2**
GRF Grafenberg Arr 147.14 355 ePKP2 **PKPbc 06 42 39.0 +0.4**
GRF MLR MLR
comp=Z,200nm,21.1s
GRF Grafenberg Arr 147.14 355 ePKP **PKPbc 06 42 39.0 +0.4**
GRF eL L 07 50 44.0
comp=Z,157nm,21.1s
GRFO Grafenberg 147.14 355 ePKP2 **PKPbc 06 42 39.4 +0.8**
GRFO Grafenberg 147.14 355 ePKPbc **PKPbc 06 42 39.4 +0.8**
GRFO ePKPab **PKiKP 06 42 41.5 +0.5**
ABH Alteburg 147.14 359 PKP **PKPbc 06 42 38.1 -0.6**
DOPR Dopca 147.15 336 ↑*i*P **PKPab 06 42 40.0 -0.5**
PSZ Piszkesteto 147.27 344 ↑↑PKP2 **PKPbc 06 42 39.5 +0.3**
PSZ Piszkesteto 147.27 344 ePKPdf **PKPdf 06 42 36.8 0.0**
PSZ ePKPbc **PKPbc 06 42 39.8 +0.6**
PSZ Piszkesteto 147.27 344 ↑*i*P **PKPbc 06 42 39.5 +0.3**
PSZ Piszkesteto 147.27 344 ↓↓ePKPdf **PKPbc 06 42 39.7 +0.6**
MLR Muntele Rosu 147.31 335 ↓*i*P **PKPbc 06 42 39.6 +0.2**
SMOL Smolenice 147.32 347 ePKP2 **PKPab 06 42 40.9 -0.2**
SMOL Smolenice 147.32 347 ePKP **PKPab 06 42 40.9 -0.2**
RUP Ruppelstein 147.33 360 PKIKP **PKPdf 06 42 37.6 +0.8**
RUP Ruppelstein 147.33 360 PKP **PKPdf 06 42 37.6 +0.8**
ISR Istrita 147.36 334 ↓↓PKP2 **PKPab 06 42 40.9 -0.6**
ISR Istrita 147.36 334 ↓*i*P **PKPab 06 42 40.9 -0.6**
WLF Walferdange 147.36 1 PKPbc **PKPbc 06 42 39.4 +0.2**
WLF APKP PKiKP 06 42 46.8 +5.4
WLF SPKiKP 06 43 01.2
WLF Walferdange 147.36 1 ePKIKP **PKPdf 06 42 37.4 +0.6**
WLF e 06 42 40.5
WLF Walferdange 147.36 1 ePKP **PKPbc 06 42 39.9 +0.7**
WLF epPKP **pPKPdf 06 43 01.2 +3.3**
WLF Walferdange 147.36 1 ePKPdf **PKPdf 06 42 37.4 +0.6**
WLF ePKPbc **PKPab 06 42 40.5 -0.8**
TOD Tromm 147.38 357 PKIKP **PKPdf 06 42 38.1 +1.3**
TOD Tromm 147.38 357 PKP **PKPdf 06 42 38.1 +1.3**
BR131 Keskin Array S 147.42 320 ePKPdf **PKPdf 06 42 38.0 +0.7**
BR131 ePKPbc **PKPbc 06 42 40.4 +0.5**
BRTR Keskin Array B 147.42 320 PKPbc **PKPbc 06 42 39.9 0.0**
BRTR pPKPbc **pPKPbc 06 43 00.6 -0.3**
BRTR Keskin Array B 147.42 320 PKPbc **PKPbc 06 42 39.9 0.0**
comp=Z,16nm,1.1s,baz=98,slow=2.2,SNR=28
BRTR pPKPbc **pPKPbc 06 43 00.6 -0.3**
comp=Z,48nm,0.9s,baz=90,slow=1.5,SNR=17
KHC Kasperske Hory 147.42 352 ePKIKP **PKPdf 06 42 37.6 +0.7**
KHC e 06 42 40.7
KHC Kasperske Hory 147.42 352 ePKPdf **PKPdf 06 42 37.6 +0.7**
KHC ePKPbc **PKPbc 06 42 40.5 +1.0**
KHC Kasperske Hory 147.42 352 ePKP **PKPdf 06 42 37.6 +0.7**
KHC ex x 06 42 40.7
KHC epPKP **pPKPdf 06 42 57.0 -1.1**
KHC ex x 06 43 01.9
DRGR 147.43 339 ↑↑PKIKP **PKPdf 06 42 38.2 +1.1**
DRGR 147.43 339 ↑*i*P **PKPdf 06 42 38.2 +1.1**
WET Wettzell 147.50 352 ePKP2 **PKPbc 06 42 39.7 0.0**
WET Wettzell 147.50 352 ePKP **PKPbc 06 42 39.7 0.0**
ROSF Rostrenen 147.64 12 ePKIKP **PKPdf 06 42 37.2 0.0**
comp=Z,21nm,1.0s
ROSF Rostrenen 147.64 12 ePKIKP **PKPdf 06 42 37.2 0.0**
ROSF Rostrenen 147.64 12 ePKPdf **PKPdf 06 42 37.2 0.0**
GEC2 GERESS Array S 147.68 351 ePKP2 **PKPbc 06 42 40.4 +0.1**
GEC2 GERESS Array S 147.68 351 ePKP **PKPbc 06 42 40.4 +0.1**
GERES GERESS Array B 147.68 351 PKP **PKPdf 06 42 38.1 +0.7**
GERES PKPbc **PKPbc 06 42 40.4 +0.1**
GERES GERESS Array B 147.68 351 PKP **PKPdf 06 42 38.1 +0.7**
comp=Z,16nm,1.1s,baz=29,slow=2.2,SNR=69
GERES PKPbc **PKPbc 06 42 40.4 +0.1**
comp=Z,16nm,1.1s,baz=31,slow=1.8,SNR=56
KTD Kalmit 147.69 358 PKP2 **PKPbc 06 42 40.1 -0.1**
KTD Kalmit 147.69 358 PKP **PKPbc 06 42 40.1 -0.1**
ZST Bratislava 147.69 347 ePKP2 **PKPbc 06 42 40.2 0.0**
ZST Bratislava 147.69 347 ePKP **PKPbc 06 42 40.2 0.0**
FLN La Foliniere 147.73 9 ePKIKP **PKPdf 06 42 37.2 -0.2**
FLN eR
comp=Z,283nm,23.0s
FLN La Foliniere 147.73 9 ePKIKP **PKPdf 06 42 37.2 -0.2**
FLN La Foliniere 147.73 9 ePKPdf **PKPdf 06 42 37.2 -0.2**
PSN Preselentsi 147.74 330 eP **PKPbc 06 42 41.0 +0.6**
ANTO Ankara 147.85 321 ePKP2 **PKPbc 06 42 42.2 +1.2**
ANTO Ankara 147.85 321 ePKPbc **PKPbc 06 42 42.2 +1.2**
SGMF Saint Gilles 147.87 12 ePKIKP **PKPdf 06 42 37.3 -0.3**
comp=Z,228nm,1.6s
SGMF Saint Gilles 147.87 12 ePKIKP **PKPdf 06 42 37.3 -0.3**
SGMF Saint Gilles 147.87 12 ePKPdf **PKPdf 06 42 37.3 -0.3**
BUD Budapest 147.91 344 ↓↓ePKPdf **PKPbc 06 42 41.1 +0.3**
ARR Arges 147.94 336 ↑↑*i*P **PKPdf 06 42 39.2 +1.3**
GRR Gorron 148.04 10 ePKIKP **PKPdf 06 42 37.5 -0.4**
GRR Gorron 148.04 10 ePKIKP **PKPdf 06 42 37.5 -0.4**
GRR Gorron 148.04 10 ePKPdf **PKPdf 06 42 37.5 -0.4**
LANF Langenberg 148.04 359 PKP2 **PKPbc 06 42 41.0 -0.1**
LANF Langenberg 148.04 359 PKP **PKPbc 06 42 41.0 -0.1**
LANF Langenberg 148.04 359 PKP **PKPbc 06 42 41.0 -0.1**
DEV Deva 148.15 338 ↑↑PKP2 **PKPbc 06 42 41.2 -0.3**
DEV Deva 148.15 338 ↑*i*P **PKPbc 06 42 41.2 -0.3**
PKSG 148.15 345 ↓↓ePKPdf **PKPbc 06 42 42.0 +0.6**
STU Stuttgart 148.20 357 ePKP2 **PKPbc 06 42 42.4 +0.9**
STU Stuttgart 148.20 357 ePKP **PKPbc 06 42 41.3 -0.2**
STU epPKP **pPKPdf 06 43 05.1 +5.8**
STU Stuttgart 148.20 357 ePKPbc **PKPbc 06 42 42.4 +0.9**
LOT Lotru 148.20 337 ↓↓*i*P **PKPbc 06 42 42.4 +0.6**
CONA Conrad Observa 148.21 348 ↑↑*i*PKPbc **PKPdf 06 42 39.0 +0.7**
comp=Z,6.1nm,1.2s
CONA ↓↓*i*PKiKP **PKPbc 06 42 42.5 +0.8**
comp=Z,68nm,1.3s
SOP Sopron 148.30 347 ↓↓ePKPdf **PKPbc 06 42 42.6 +0.8**
PKST T^s 148.36 345 ↑↑ePKPdf **PKPbc 06 42 42.5 +0.5**
PRD Provadia 148.48 330 eP **PKPbc 06 42 42.7 +0.3**
MOA Molln 148.57 350 ↑↑*i*PKPdf **PKPdf 06 42 39.1 +0.3**
comp=Z,3.2nm,1.1s
MOA ↓↓*i*PKiKP **PKPbc 06 42 42.8 +0.3**
comp=Z,28nm,1.1s
FUR Furstenfeldbru 148.65 354 ePKP2 **PKPbc 06 42 43.0 +0.3**
FUR Furstenfeldbru 148.65 354 ePKP **PKPbc 06 42 43.0 +0.3**
FUR epPKP **pPKPdf 06 43 05.1 +5.0**
BFO Black Forest 148.68 358 ePKP2 **PKPbc 06 42 42.5 -0.3**
BFO Black Forest 148.68 358 ePKP **PKPbc 06 42 42.5 -0.3**
BFO Black Forest 148.68 358 ePKPdf **PKPdf 06 42 39.1 +0.1**
BFO ePKPbc **PKPbc 06 42 43.3 +0.5**
BFO ePKPab **PKPab 06 42 46.8 +0.3**
THEF They Montfort 148.80 1 PKP2 **PKPbc 06 42 42.5 -0.6**
THEF They Montfort 148.80 1 PKP **PKPbc 06 42 42.5 -0.6**
THEF They Montfort 148.80 1 PKP **PKPbc 06 42 42.5 -0.6**
ECH Echery 148.82 359 ePKP2 **PKPbc 06 42 43.9 +0.7**
ECH Echery 148.82 359 ePKPbc **PKPbc 06 42 43.9 +0.7**
ECH ePKPab **PKPab 06 42 47.4 +0.3**
ECH Echery 148.82 359 PKP **PKPbc 06 42 43.2 0.0**
BZS Buzias 148.82 340 ↑↑PKP2 **PKPbc 06 42 44.0 +0.8**
BZS Buzias 148.82 340 ↑↑*i*P **PKPbc 06 42 44.0 +0.8**
LIBD Limburg 148.88 359 PKP2 **PKPbc 06 42 44.2 +0.9**
LIBD Limburg 148.88 359 PKP **PKPbc 06 42 44.2 +0.9**
SPAK Spaichingen-Ko 148.88 357 PKP **PKPbc 06 42 43.5 +0.1**
RJOB Jochberg 148.89 352 ePKP **PKPbc 06 42 43.4 0.0**
ARSA Arzberg 148.92 348 ↑↑PKPdf **PKPdf 06 42 39.8 +0.4**
comp=Z,4.2nm,1.1s
ARSA ↑↑*i*PKiKP **PKPbc 06 42 44.0 +0.5**
comp=Z,28nm,1.2s
SZH Strazhica 149.10 332 eP **PKPbc 06 42 43.2 -0.8**
FELD Feldberg im Sc 149.14 358 PKP **PKPbc 06 42 43.6 -0.5**
FELD Feldberg im Sc 149.14 358 PKP **PKPbc 06 42 43.6 -0.5**
MOF Molkenrain 149.18 359 PKIKP **PKPbc 06 42 42.9 -1.3**
MOF Molkenrain 149.18 359 PKP **PKPbc 06 42 42.9 -1.3**
MOF Molkenrain 149.18 359 PKP **PKPbc 06 42 42.9 -1.3**
PKSM Moragy 149.18 344 ↓↓PKP2 **PKPbc 06 42 44.2 +0.1**
PKSM Moragy 149.18 344 ↓↓*i*P **PKPbc 06 42 44.2 +0.1**
PKSM Moragy 149.18 344 ↓↓ePKPdf **PKPbc 06 42 44.1 0.0**
RETA Reutte 149.37 355 ↑↑*i*PKPdf **PKPdf 06 42 39.9 -0.3**
comp=Z,2.4nm,1.1s
RETA ↓↓*i*PKiKP **PKPbc 06 42 44.9 +0.2**
comp=Z,44nm,1.2s
BEHE Becsehely 149.40 346 ↑↑ePKPdf **PKPbc 06 42 45.2 +0.6**
PVL Pavlikeni 149.41 333 eP **PKPab 06 42 48.0 -1.6**
JMB Yambol 149.42 330 eP **PKPbc 06 42 45.8 +1.0**
WATA Walderalm 149.43 353 ↑↑*i*PKPbc **PKPdf 06 42 41.8 +1.4**
comp=Z,1.0nm,0.5s
WATA ↓↓*i*PKiKP **PKPbc 06 42 45.1 +0.2**
comp=Z,14nm,0.5s
KBA Koelnbreinsper 149.46 351 ↑↑*i*PKPdf **PKPdf 06 42 40.5 0.0**
comp=Z,4.8nm,0.9s
KBA ↓↓*i*PKPbc **PKPbc 06 42 44.3 -0.7**
comp=Z,15nm,0.7s
MOTA Moosalm 149.47 354 ↑↑*i*PKPdf **PKPdf 06 42 40.8 +0.4**
comp=Z,5.7nm,1.2s
MOTA ↓↓*i*PKiKP **PKPbc 06 42 45.2 +0.2**
comp=Z,42nm,1.0s
WTTA Wattenberg 149.50 353 ↑↑*i*PKPdf **PKPdf 06 42 41.2 +0.6**
comp=Z,5.7nm,1.2s
WTTA ↓↓*i*PKiKP **PKPbc 06 42 45.6 +0.5**
comp=Z,39nm,0.7s
KOGS Kog 149.54 347 ePKPbc **PKPbc 06 42 45.0 0.0**
KOGS *i* pPKPbc **pPKPbc 06 43 07.7 +1.7**
BBS Basel-Blauen 149.56 359 PKHKP **PKPbc 06 42 43.7 -1.4**
BBS Basel-Blauen 149.56 359 PKP **PKPbc 06 42 43.7 -1.4**
SOKA Soboth 149.56 349 ↑↑*i*PKPdf **PKPdf 06 42 40.0 -0.6**
comp=Z,5.5nm,1.4s
SOKA ↑↑*i*PKPbc **PKPbc 06 42 44.8 -0.4**
comp=Z,47nm,1.3s
DAVA Damuels 149.63 356 ↑↑*i*PKPdf **PKPdf 06 42 41.6 +0.8**
comp=Z,4.7nm,1.3s
DAVA ↑↑*i*PKiKP **PKPbc 06 42 45.7 +0.2**
comp=Z,66nm,1.1s
LOR Lormes 149.67 4 ePKIKP **PKPdf 06 42 40.8 +0.2**
LOR eR
comp=Z,306nm,22.8s
LOR Lormes 149.67 4 ePKPdf **PKPdf 06 42 40.8 +0.2**
LOMF Lomont 149.68 360 PKP2 **PKPbc 06 42 45.5 +0.1**
LOMF Lomont 149.68 360 PKP **PKPbc 06 42 45.5 +0.1**
LOMF Lomont 149.68 360 PKP **PKPbc 06 42 45.5 +0.1**
FETA Feichten 149.83 355 ↑↑*i*PKPdf **PKPdf 06 42 42.0 +0.9**
comp=Z,7.4nm,1.1s
FETA ↓↓*i*PKiKP **PKiKP 06 42 46.6 -0.3**
comp=Z,57nm,1.0s
MYKA Terra Mystica 149.85 350 ↑↑*i*PKPdf **PKPdf 06 42 40.9 -0.1**
comp=Z,3.6nm,1.2s
MYKA ↓↓*i*PKPbc **PKPbc 06 42 45.0 -0.9**
comp=Z,52nm,1.7s
SSF Saint Saulge 149.85 4 ePKIKP **PKPdf 06 42 41.1 +0.2**
comp=Z,22nm,1.1s
SSF Saint Saulge 149.85 4 ePKHKP **PKPdf 06 42 41.1 +0.2**
SSF Saint Saulge 149.85 4 ePKPdf **PKPdf 06 42 41.1 +0.2**
MFF Saint Martin d 149.89 9 ePKIKP **PKPdf 06 42 41.0 +0.1**
comp=Z,86nm,1.5s
**MFF Saint Martin d

ABTA	**Abfaltersbach**	**149.90**	**352**	⇑*i*PKPdf	**PKPdf**	**06 42 41.2**	**+0.1**
	comp=Z,9.4nm,1.5s							
ABTA				⇓*i*PKiKP	**PKPbc**	**06 42 46.0**	**0.0**
	comp=Z,77nm,1.1s							
MPEP	**Malo Peshtene**	**149.97**	**335**	*e*P	**PKPbc**	**06 42 46.7**	**+0.6**
AVF	**Avril sur Loir**	**150.11**	**5**	*e*PKIKP	**PKPdf**	**06 42 41.4**	**+0.1**
AVF	**Avril sur Loir**	**150.11**	**5**	*e*PKIKP	**PKPdf**	**06 42 41.4**	**+0.1**
AVF	**Avril sur Loir**	**150.11**	**5**	*e*PKPdf	**PKPdf**	**06 42 41.4**	**+0.1**
CSS	**Prodhromos**	**150.24**	**312**	*e*PKPbc	**PKPbc**	**06 42 47.8**	**+0.7**
CSS				*e*PKPab	**PKPab**	**06 42 54.5**	**+1.1**
LJU	**Ljubljana**	**150.27**	**349**	*i* PKPdf	**PKPdf**	**06 42 42.4**	**+0.8**
LJU				*e*PKPbc	**PKPbc**	**06 42 47.0**	**+0.2**
LJU				*e*pPKPbc	**pPKPbc**	**06 43 09.8**	**+2.0**
SMF	**Signal de Mont**	**150.29**	**4**	*e*PKIKP	**PKPdf**	**06 42 41.7**	**+0.1**
SMF	**Signal de Mont**	**150.29**	**4**	*e*PKIKP	**PKPdf**	**06 42 41.7**	**+0.1**
SMF	**Signal de Mont**	**150.29**	**4**	*e*PKPdf	**PKPdf**	**06 42 41.7**	**+0.1**
VOY	**Vojsko**	**150.39**	**350**	*e*PKPdf	**PKPdf**	**06 42 42.0**	**+0.1**
VOY				*e*		06 42 47.0	
VOY				*e*		06 42 54.6	
VOY				*e*		06 43 07.6	
CABF	**La Chapelle**	**150.42**	**1**	*e*PKIKP	**PKPdf**	**06 42 42.4**	**+0.5**
	comp=Z,127nm,1.7s							
CABF	**La Chapelle**	**150.42**	**1**	*e*PKIKP	**PKPdf**	**06 42 42.4**	**+0.5**
CABF	**La Chapelle**	**150.42**	**1**	*e*PKPdf	**PKPdf**	**06 42 42.4**	**+0.5**
PGB	**Panagyurishte**	**150.45**	**333**	*e*P	**PKPbc**	**06 42 47.9**	**+0.5**
TUE	**Stuetta**	**150.48**	**356**	*e*PKPdf	**PKPdf**	**06 42 43.0**	**+0.8**
TUE				*e*PKPbc	**PKiKP**	**06 42 48.5**	**+0.3**
TUE				*e*PKPab	**PKPab**	**06 42 54.6**	**+0.4**
TCF	**Toulx Ste Croi**	**150.51**	**6**	*e*PKIKP	**PKPdf**	**06 42 42.1**	**+0.1**
	comp=Z,220nm,1.2s							
TCF	**Toulx Ste Croi**	**150.51**	**6**	*e*PKIKP	**PKPdf**	**06 42 42.1**	**+0.1**
TCF	**Toulx Ste Croi**	**150.51**	**6**	*e*PKPdf	**PKPdf**	**06 42 42.1**	**+0.1**
KDZ	**Kurdzhali**	**150.61**	**331**	*e*P	**PKPbc**	**06 42 47.5**	**-0.2**
BOJS	**Bojanci**	**150.65**	**348**	*e*PKPdf	**PKPdf**	**06 42 42.8**	**+0.7**
BOJS				*e*PKPbc	**PKiKP**	**06 42 48.3**	**0.0**
BOJS				*e*pPKPbc	**pPKPbc**	**06 43 11.3**	**+2.6**
DIVS	**Divibare**	**150.70**	**340**	P	**PKPbc**	**06 42 48.2**	**+0.2**
TRI	**Trieste**	**150.73**	**350**	*e*PKIKP	**PKPdf**	**06 42 42.6**	**+0.3**
TRI				*e*		06 42 48.2	
TRI	**Trieste**	**150.73**	**350**	*e*PKPdf	**PKPdf**	**06 42 42.6**	**+0.3**
TRI				*e*PKPbc	**PKPbc**	**06 42 48.2**	**+0.4**
VTS	**Vitosha**	**150.82**	**335**	⇓PKIKP	**PKPbc**	**06 42 49.5**	**+1.1**
VTS	**Vitosha**	**150.82**	**335**	P	**PKPbc**	**06 42 48.5**	**+0.1**
VTS	**Vitosha**	**150.82**	**335**	⇓*i*P	**PKPbc**	**06 42 49.5**	**+1.1**
VTS	**Vitosha**	**150.82**	**335**	*e*P	**PKPbc**	**06 42 47.5**	**-0.9**
AGO	**Saint Agoulin**	**150.83**	**5**	PKP	**PKPbc**	**06 42 48.5**	**+0.4**
ALN	**Alexandroupoli**	**150.88**	**329**	P	**PKPbc**	**06 42 47.8**	**-0.6**
MMB	**Musomiste**	**151.42**	**333**	*e*P	**PKPbc**	**06 42 49.6**	**-0.1**
FRNF	**Fournols**	**151.44**	**6**	PKP	**PKPbc**	**06 42 50.3**	**+0.7**
KKB	**Krupnik**	**151.47**	**334**	*e*P	**PKPbc**	**06 42 49.6**	**-0.2**
LPL	**La Plagne**	**151.52**	**360**	*e*PKIKP	**PKPdf**	**06 42 44.4**	**+0.6**
LPL	**La Plagne**	**151.52**	**360**	*e*PKIKP	**PKPdf**	**06 42 44.4**	**+0.6**
LPL	**La Plagne**	**151.52**	**360**	*e*PKPdf	**PKPdf**	**06 42 44.4**	**+0.6**
LPG	**La Plagne**	**151.54**	**360**	*e*PKIKP	**PKPdf**	**06 42 44.5**	**+0.6**
LPG	**La Plagne**	**151.54**	**360**	*e*PKIKP	**PKPdf**	**06 42 44.5**	**+0.6**
LPG	**La Plagne**	**151.54**	**360**	*e*PKPdf	**PKPdf**	**06 42 44.5**	**+0.6**
KAVA	**Kavala**	**151.54**	**331**	P	**PKPbc**	**06 42 49.8**	**-0.1**
NVR	**Nevrokopi**	**151.56**	**332**	P	**PKPbc**	**06 42 49.9**	**-0.1**
LBL	**Lubilhac**	**151.65**	**5**	PKP	**PKPbc**	**06 42 51.1**	**+1.0**
SSB	**Saint Sauveur**	**151.70**	**3**	*e*PKIKP	**PKPdf**	**06 42 44.7**	**+0.9**
SSB				*e*		06 42 51.0	
SSB				*e*		06 42 59.7	
SSB	**Saint Sauveur**	**151.70**	**3**	*e*PKPdf	**PKPdf**	**06 42 44.7**	**+0.9**
SSB				*e*PKPbc	**PKPbc**	**06 42 51.0**	**+0.7**
SSB				*e*PKPab	**PKPab**	**06 42 59.7**	**+0.6**
SSB	**Saint Sauveur**	**151.70**	**3**	PKP	**PKPbc**	**06 42 50.9**	**+0.7**
PGAV	**Gavieira, Arco**	**151.95**	**24**	*e*PKP	**PKPbc**	**06 42 52.2**	**+1.3**
ORIF	**Oris-en-Rattie**	**152.11**	**1**	*e*PKIKP	**PKPdf**	**06 42 45.0**	**+0.5**
	comp=Z,28nm,1.2s							
ORIF				*e*R				
	comp=Z,67nm,21.2s							
ORIF	**Oris-en-Rattie**	**152.11**	**1**	*e*PKIKP	**PKPdf**	**06 42 45.0**	**+0.5**
ORIF	**Oris-en-Rattie**	**152.11**	**1**	*e*PKPdf	**PKPdf**	**06 42 45.0**	**+0.5**
VIVF	**Saint-Julien-l**	**152.12**	**3**	*e*PKIKP	**PKPdf**	**06 42 45.1**	**+0.6**
VIVF	**Saint-Julien-l**	**152.12**	**3**	*e*PKIKP	**PKPdf**	**06 42 45.1**	**+0.6**
VIVF	**Saint-Julien-l**	**152.12**	**3**	*e*PKPdf	**PKPdf**	**06 42 45.1**	**+0.6**
PCAB	**Cabril**	**152.26**	**24**	*e*PKP	**PKPbc**	**06 42 52.3**	**+0.7**
MBDF	**Montbardon**	**152.31**	**360**	*e*PKIKP	**PKPdf**	**06 42 45.2**	**+0.3**
	comp=Z,39nm,1.4s							
MBDF	**Montbardon**	**152.31**	**360**	*e*PKIKP	**PKPdf**	**06 42 45.2**	**+0.3**
MBDF	**Montbardon**	**152.31**	**360**	*e*PKPdf	**PKPdf**	**06 42 45.2**	**+0.3**
POLO	**Lamas de Olo**	**152.64**	**24**	*e*PKP	**PKPbc**	**06 42 53.0**	**+0.5**
PBRG	**Braganca**	**152.66**	**22**	*e*PKP	**PKPbc**	**06 42 53.3**	**+0.8**
CHOS	**Chios island**	**152.74**	**325**	P	**PKPbc**	**06 42 52.8**	**0.0**
PVRL	**Vila Real**	**152.75**	**24**	*e*PKP	**PKPbc**	**06 42 53.6**	**+0.9**
LASF	**Ste Croix**	**152.85**	**5**	*e*PKIKP	**PKPdf**	**06 42 46.1**	**+0.5**
	comp=Z,62nm,1.3s							
LASF	**Ste Croix**	**152.85**	**5**	*e*PKPdf	**PKPdf**	**06 42 46.1**	**+0.5**
TOUF	**Mont Tournerai**	**153.02**	**359**	PKP	**PKPbc**	**06 42 53.0**	**-0.4**
AUTN	**L'Aution**	**153.03**	**359**	PKP	**PKPbc**	**06 42 54.4**	**+0.9**
SAOF	**Saorge**	**153.04**	**359**	PKP	**PKPbc**	**06 42 52.9**	**-0.3**
SMRF	**Simiane la Rot**	**153.04**	**2**	*e*PKIKP	**PKPdf**	**06 42 46.5**	**+0.6**
SMRF	**Simiane la Rot**	**153.04**	**2**	*e*PKPdf	**PKPdf**	**06 42 46.5**	**+0.6**
SJPF	**Ste Jean**	**153.06**	**13**	*e*PKIKP	**PKPdf**	**06 42 47.0**	**+1.1**
SJPF	**Ste Jean**	**153.06**	**13**	*e*PKIKP	**PKPdf**	**06 42 47.0**	**+1.1**
SJPF	**Ste Jean**	**153.06**	**13**	*e*PKPdf	**PKPdf**	**06 42 47.0**	**+1.1**
MVO	**Moncorvo**	**153.11**	**23**	*e*PKP	**PKPbc**	**06 42 54.3**	**+0.8**
MVIF	**Mont Vial**	**153.14**	**359**	PKIKP	**PKPbc**	**06 42 50.9**	**-2.7**
MVIF	**Mont Vial**	**153.14**	**359**	PKP	**PKPbc**	**06 42 50.9**	**-2.7**
MVIF	**Mont Vial**	**153.14**	**359**	PKP	**PKPbc**	**06 42 50.9**	**-2.7**
PVIS	**Viseu**	**153.16**	**25**	*e*PKP	**PKPbc**	**06 42 54.6**	**+1.0**
SBF	**Sospel**	**153.16**	**359**	*e*PKIKP	**PKPdf**	**06 42 47.0**	**+0.9**
SBF	**Sospel**	**153.16**	**359**	*e*PKIKP	**PKPdf**	**06 42 47.0**	**+0.9**
SBF	**Sospel**	**153.16**	**359**	*e*PKPdf	**PKPdf**	**06 42 47.0**	**+0.9**
CALN	**Calern**	**153.28**	**360**	PKP	**PKPbc**	**06 42 54.6**	**+0.7**
REVF	**Revere**	**153.29**	**359**	PKP	**PKPbc**	**06 42 53.8**	**0.0**
ETSF	**Etsaut**	**153.40**	**12**	*e*PKIKP	**PKPdf**	**06 42 47.4**	**+0.9**
ETSF	**Etsaut**	**153.40**	**12**	*e*PKIKP	**PKPdf**	**06 42 47.4**	**+0.9**
ETSF	**Etsaut**	**153.40**	**12**	*e*PKPdf	**PKPdf**	**06 42 47.4**	**+0.9**
FRF	**La Foret Royal**	**153.47**	**0**	*e*PKIKP	**PKPdf**	**06 42 47.3**	**+0.8**
FRF	**La Foret Royal**	**153.47**	**0**	*e*PKIKP	**PKPdf**	**06 42 47.3**	**+0.8**
FRF	**La Foret Royal**	**153.47**	**0**	*e*PKPdf	**PKPdf**	**06 42 47.3**	**+0.8**
MTE	**Manteigas**	**153.56**	**25**	*e*PKP	**PKPbc**	**06 42 55.0**	**+0.5**
LMR	**La Mourre**	**153.70**	**0**	*e*PKIKP	**PKPdf**	**06 42 47.8**	**+1.0**
LMR	**La Mourre**	**153.70**	**0**	*e*PKIKP	**PKPdf**	**06 42 47.8**	**+1.0**
LMR	**La Mourre**	**153.70**	**0**	*e*PKPdf	**PKPdf**	**06 42 47.8**	**+1.0**
PTOM	**Tomar**	**153.85**	**27**	*e*PKP	**PKPbc**	**06 42 55.9**	**+0.8**
PCBR	**Castelo Branco**	**154.06**	**26**	*e*PKP	**PKPbc**	**06 42 56.7**	**+1.2**
PMRV	**Marv??o**	**154.45**	**26**	*e*PKP	**PKPbc**	**06 42 57.3**	**+0.9**
PESTR	**Estremoz**	**154.83**	**27**	*e*PKP	**PKPbc**	**06 42 58.0**	**+0.8**
EVOP	**Sao Brissos**	**154.87**	**28**	*e*PKPab	**PKPab**	**06 43 12.7**	**+0.1**
EVO	**Evora**	**154.92**	**28**	*e*PKP2	**PKPab**	**06 43 12.7**	**-0.2**
	comp=Z,17nm,0.8s							
EVO				*e*R				
	comp=Z,496nm,22.5s							
PBEJ	**Beja**	**155.40**	**29**	*e*PKP	PKPdf	06 42 59.6	+10	
ESDC	**Sonseca Array**	**155.52**	**20**	PKP	**PKPdf**	**06 42 51.1**	**+1.6**	
ESDC				PKPbc	PKPab	06 42 59.2	-16	
ESDC	**Sonseca Array**	**155.52**	**20**	PKP	**PKPdf**	**06 42 51.1**	**+1.6**	
	comp=Z,0.4nm,0.6s,baz=340,slow=3.0,SNR=4.2							
ESDC				PKPbc	PKPab	06 42 59.2	-16	
	comp=Z,0.8nm,0.5s,baz=327,slow=2.7,SNR=13							
KEST	**Kesra**	**161.15**	**353**	PKP	**PKPdf**	**06 42 58.3**	**+1.9**	
KEST	**Kesra**	**161.15**	**353**	PKP	**PKPdf**	**06 42 58.3**	**+1.9**	
	comp=Z,3.0nm,1.0s,baz=42,slow=6.1,SNR=3.9							
DBIC	**Dimbokro**	**164.75**	**131**	PKP	**PKPdf**	**06 43 00.6**	**+0.2**	
DBIC				PKPab	**PKPab**	**06 43 57.5**	**+1.1**	
DBIC	**Dimbokro**	**164.75**	**131**	PKP	**PKPdf**	**06 43 00.6**	**+0.2**	
	comp=Z,3.3nm,0.8s,baz=147,slow=2.8,SNR=5.3							
DBIC				PKPab	**PKPab**	**06 43 57.5**	**+1.1**	
	comp=Z,4.0nm,0.8s,baz=195,slow=6.9,SNR=5.0							
TOA0	**Torodi Ar. Sit**	**173.85**	**127**	*e*PKPdf	**PKPdf**	**06 43 05.6**	**-0.4**	
TOA0				*e*PKPab	**PKPab**	**06 44 37.6**	**+1.1**	
TORD	**Torodi Ar. Bea**	**173.85**	**127**	PKP	**PKPdf**	**06 43 05.1**	**-0.9**	
TORD				PKPab	**PKPab**	**06 43 57.5**	**+1.0**	
TORD				PP	**PP**	**06 48 28.2**	**-0.1**	
TORD	**Torodi Ar. Bea**	**173.85**	**127**	PKP	**PKPdf**	**06 43 05.1**	**-0.9**	
	comp=Z,3.6nm,0.8s,baz=304,slow=2.4,SNR=21							
TORD				PKPab	**PKPab**	**06 44 37.5**	**+1.0**	
	comp=Z,6.8nm,0.7s,baz=257,slow=4.5,SNR=17							
TORD				PP	**PP**	**06 48 28.2**	**-0.1**	
	comp=Z,0.3nm,0.5s,baz=258,slow=4.4,SNR=4.0							

*CSEM **17** 06:26:54.6±0.5,38.28N×37.82E,h10km,MD3.0, Error ellipse: s-maj=15.5km s-min=10.3km az=141.0*
*ISCJB **17** 06:26:55.6±0.8,38.08N±0.05×38.00E±0.05,h7km±8km, Error ellipse: s-maj=8.7km s-min=4.8km az=147.4*
*DDA **17** 06:26:55.5,38.07N×38.02E,h7km,MD3.0*
*ISK **17** 06:26:55.0,38.10N×37.96E,h9km,MD2.7*

ISC 17 06:26:55.8±0.9,38.11N±0.03×37.98E±0.03,h18km±8km, n19,σ0961/29,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.19**	**347**	*i* P		**Pb**		**06 27 00.8**	**-0.2**
AKCD				*i* S		**Sg**		**06 27 04.7**	**+0.6**
AKCD	**Akcadag**	**0.19**	**347**	*i* P		**Pb**		**06 27 00.8**	**-0.2**
AKCD				*i* S		**Sg**		**06 27 04.7**	**+0.6**
MYA	**Malataya**	**0.41**	**58**	*e*Pg		**Pg**		**06 27 03.8**	**-0.6**
MYA				*e*SG		**Sg**		**06 27 10.3**	**+0.2**
MYA	**Malataya**	**0.41**	**58**	*e*Pg		**Pg**		**06 27 03.8**	**-0.6**
MYA				*e*Sg		**Sg**		**06 27 10.3**	**+0.2**
DARE	**Darende-Malaty**	**0.60**	**320**	*e*PG		**Pb**		**06 27 07.0**	**-0.9**
DARE				*e*SG		**Sb**		**06 27 16.1**	**-0.1**
DARE	**Darende-Malaty**	**0.60**	**320**	*e*Pg		**Pb**		**06 27 07.1**	**-0.9**
DARE				*e*Sg		**Sb**		**06 27 16.1**	**-0.1**
GZT	**Gaziantep**	**0.82**	**204**	*i* P		**Pb**		**06 27 12.2**	**+0.4**
GZT				*i* S		**Sb**		**06 27 22.3**	**-0.2**
ELZG	**Elazig**	**0.88**	**64**	*i* P		**Pb**		**06 27 12.1**	**-0.7**
ELZG				*i* S		**Sb**		**06 27 24.1**	**-0.2**
ELZG	**Elazig**	**0.88**	**64**	*i* P		**Pb**		**06 27 12.1**	**-0.7**
ELZG				*i* S		**Sb**		**06 27 24.1**	**-0.2**
KMRS	**Kahramanmaras**	**1.04**	**235**	*e*PG		**Pb**		**06 27 14.7**	**-0.8**
KMRS	**Kahramanmaras**	**1.04**	**235**	*e*Pg		**Pb**		**06 27 14.7**	**-0.8**
GAZ	**Gaziantep**	**1.12**	**213**	*e*PN		**Pn**		**06 27 17.0**	**+0.3**
GAZ	**Gaziantep**	**1.12**	**213**	*e*Pn		**Pn**		**06 27 17.0**	**+0.3**
AYKD	**Aykdinkavak**	**1.16**	**234**	*i* P		**Pn**		**06 27 17.5**	**+0.3**
AYKD				*i* S		**Sg**		**06 27 34.8**	**+1.3**
SARI	**SarD1z-Kayseri**	**1.26**	**284**	*e*PN		**Pn**		**06 27 19.2**	**+0.4**
PTK	**Pertek**	**1.36**	**54**	*e*PN		**Pn**		**06 27 20.7**	**+0.6**
PTK	**Pertek**	**1.36**	**54**	*e*Pn		**Pn**		**06 27 20.7**	**+0.6**
ILIC	**ilic-Erzincan**	**1.42**	**19**	*e*PN		**Pb**		**06 27 22.6**	**+0.7**
ILIC	**ilic-Erzincan**	**1.42**	**19**	*e*Pn		**Pb**		**06 27 22.6**	**+0.7**

MEX 17 06:28:43.2±0.9,16.85N×99.60W,h12km±5km,MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.25**	**275**	*e*P		Pb		06 28 49.4	-0.3
ACX				*i* S		Sb		06 28 53.3	-0.8
CAIG	**El Cayaco**	**0.67**	**287**	*i* P		Pg		06 28 54.5	-1.8
CAIG				*i* S		Sg		06 29 03.2	-2.0
MEIG	**Mezcala**	**1.07**	**359**	*i* P		Pb		06 28 59.8	-4.1
MEIG				*i* S		Sb		06 29 13.2	-4.7
PNIG	**Pinotepa**	**1.48**	**108**	*e*P		Pn		06 29 06.8	-2.9
PNIG				*i* S		Sn		06 29 23.5	-5.4
PLIG	**Platanillo**	**1.54**	**3**	*i* P		Pn		06 29 06.8	-3.8
PLIG				*i* S		Sn		06 29 26.4	-4.2
ARIG	**Puente Sto Nin**	**1.60**	**333**	*i* P		Pn		06 29 08.2	-3.1
ARIG				*i* S		Sn		06 29 27.7	-4.2
YAIG	**Yautepec**	**2.07**	**14**	*i* P		Pn		06 29 14.3	-3.7
YAIG				*i* S		Sn		06 29 39.4	-4.4

TRN 17 06:31:44.3,15.60N×60.50W,h35km,MD3.5,M3.0(FDF), Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DWS	**Wesley**	**0.78**	**268**	*e*P		Pb		06 32 00.9	+1.3
DWS				*e*S		Sb		06 32 12.8	+2.8
MGG	**Marie-Galante**	**0.85**	**292**	*e*P		Pb		06 32 00.7	+0.1
DVCT	**Vielle Casse P**	**0.87**	**271**	*e*P		Pb		06 32 02.4	+1.3
DVCT				*e*S		Sb		06 32 13.6	+1.0
DBCT	**Belle View Cho**	**0.88**	**248**	*e*P		Pb		06 32 00.8	-0.5
DBCT				*e*S		Sb		06 32 14.5	+1.6
MDN	**Morne-Daniel**	**0.91**	**252**	*e*P		Pb		06 32 01.8	+0.1
MDN				*e*S		Sb		06 32 15.2	+1.7
DPMT	**Pointe Michel**	**0.91**	**248**	*e*P		Pb		06 32 02.5	+0.8
DPMT				*e*S		Sb		06 32 15.2	+1.6
DSHT	**Scott's Head**	**0.93**	**246**	*e*P		Pb		06 32 01.7	-0.4
FDF	**Fort de France**	**1.07**	**216**	*e*P		Pb		06 32 04.0	-0.4
FDF				*e*S		Sb		06 32 19.0	+0.8
MVM	**Montagne Vaucl**	**1.11**	**200**	*e*P		Pb		06 32 04.3	-0.8
TBG	**Guadaloupe-3**	**1.13**	**283**	*e*P		Pb		06 32 05.1	-0.3
DOG	**Dongo Capester**	**1.16**	**292**	*e*P		Pb		06 32 05.5	-0.4
PHG	**Guadaloupe-2**	**1.18**	**291**	*e*P		Pb		06 32 05.8	-0.5
BCG	**Bois Riant Cap**	**1.18**	**294**	*e*P		Pb		06 32 05.8	-0.4
SCG	**Saint Claude**	**1.21**	**291**	*e*P		Pb		06 32 06.4	-0.5
SCG				*e*S		Sb		06 32 22.6	+0.2
HMG	**Houelmont**	**1.22**	**288**	*e*P		Pb		06 32 06.4	-0.5
HMG				*e*S		Sb		06 32 22.6	+0.2
SEG	**Port Louis**	**1.25**	**310**	*e*P		Pn		06 32 06.3	+1.0
SLW	**Petit Monier**	**1.63**	**195**	*e*P		Pn		06 32 12.0	+1.4
SLW				*e*S		Sn		06 32 31.7	+1.3
SLPE	**Piton Saint Es**	**1.81**	**195**	*e*P		Pn		06 32 15.2	-1.8
SLPE				*e*S		Sn		06 32 36.9	+2.0
SLB	**Belfond**	**1.84**	**197**	*e*P		Pb		06 32 15.6	-1.8
SLB				*e*S		Sb		06 32 38.4	-1.8
MCLT	**Moule a Chique**	**1.93**	**193**	*e*P		Pn		06 32 16.5	+1.8
MCLT				*e*S		Sn		06 32 40.2	+2.4
SVV	**Soufriere Volc**	**2.37**	**197**	*e*P		Pn		06 32 22.7	+1.9
SVV				*e*S		Sn		06 32 50.2	+1.4
SVB	**Belmont**	**2.43**	**198**	*e*P		Pn		06 32 24.3	+2.7
SVB				*e*S		Sn		06 32 51.1	+1.0

IDC 17 06:42:19.3±6.2,13.83N×93.02E,h0km,mb3.7/3, mb1 3.7/4,mb1mx3.4/27,mbtmp3.6/4,ML3.6/1,Error ellipse: s-maj=137.8km s-min=41.8km az=160.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.32**	**50**	Pn		Pn		06 44 07.3	-0.2
	0.3nm,0.3s,baz=217,slow=15,SNR=3.1								
MKAR	**Makanchi Array**	**34.07**	**347**	P		P		06 49 05.4	0.0
	0.9nm,0.8s,baz=161,slow=9.2,SNR=5.9								
BRTR	**Keskin Array B**	**57.80**	**308**	P		P		06 52 12.4	-0.5
	0.4nm,0.5s,baz=87,slow=7.1,SNR=3.3								
GERES	**GERESS Array B**	**72.70**	**317**	P		P		06 53 49.8	+0.5
	0.5nm,0.7s,baz=64,slow=3.1,SNR=4.7								

*IDC **17** 06:45:15.8±0.7,42.62N×108.10W,h0km,mb3.9/6, mb1 4.0/11,mb1mx3.8/34,mbtmp3.8/11,ML3.2/5,MS3.0/1, Ms1 3.0/1,ms1mx2.5/43,Error ellipse: s-maj=8.9km s-min=7.0km az=169.0*
*NEIC **17** 06:45:18.2±0.3,42.54N×108.12W,h5km,MW3.7(USGS), Error ellipse: s-maj=4.1km s-min=2.9km az=56.0*
NEIC Felt [III] at Lander and [II] at Rock Springs. Also felt at Fort Washakie, Jeffrey City, Riverton and Thermopolis.
ISC 17 06:45:17.5±0.9,42.58N±0.02×108.11W±0.01,h11km±6km, n134,σ1943/190,mb4.1/4,28C-20D,Wyoming

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
K20A	**Yellowstone Ra**	**0.19**	**295**	P		**Pg**		**06 45 22.1**	**+0.5**
	baz=0.2,SNR=1000								
K20A				⇓S		**Sg**		**06 45 25.8**	**+1.2**
	baz=0.2								
L20A	**Wamsutter**	**0.59**	**197**	⇑P		**Pg**		**06 45 29.0**	**-0.1**
	baz=0.6,SNR=1000								
L20A				⇓S		**Sg**		**06 45 37.1**	**+0.2**
	baz=0.6								
K19A	**Absolon Red Bu**	**0.60**	**295**	⇑P		**Pg**		**06 45 29.0**	**-0.2**
	baz=0.6,SNR=1000								
K19A				⇑S		**Sg**		**06 45 37.3**	**+0.2**
	baz=0.6								
K21A	**Alcova**	**0.64**	**85**	⇑P		**Pg**		**06 45 29.4**	**-0.5**
	baz=0.6								
K21A				⇑S		**Sg**		**06 45 38.1**	**-0.2**
	baz=0.6								
J20A	**Shoshoni**	**0.78**	**1**	P		**Pb**		**06 45 33.4**	**+0.2**
	baz=0.8,SNR=1000								
J20A				⇑S		**Sb**		**06 45 45.0**	**+1.2**
	baz=0.8								
L21A	**Rawlins**	**0.82**	**138**	P		**Pg**		**06 45 33.1**	**-0.3**
	baz=0.8,SNR=1000								
L21A				⇑S		**Sg**		**06 45 43.9**	**-0.3**
	baz=0.8								
J21A	**Lysite**	**0.91**	**32**	⇑P		**Pb**		**06 45 35.6**	**+0.1**
	baz=0.9,SNR=1000								
J21A				⇑S		**Sb**		**06 45 48.5**	**+0.8**
	baz=0.9								
J19A	**Crowheart**	**0.98**	**315**	⇓P		**Pb**		**06 45 36.1**	**-0.5**
	baz=1.0,SNR=1000								
J19A				⇓S		**Sb**		**06 45 49.4**	**-0.2**
	baz=1.0								
L19A	**Farson**	**1.04**	**243**	⇓P		**Pg**		**06 45 37.2**	**-0.3**
	baz=1.0,SNR=1000								
L19A				⇑S		**Sg**		**06 45 51.4**	**+0.3**
	baz=1.0								
BW06	**Boulder Array**	**1.08**	**281**	*e*Pg		**Pg**		**06 45 37.1**	**-1.4**
BW06				*e*Sg		**Sg**		**06 45 51.4**	**-1.2**
PDAR	**Pinedale Array**	**1.08**	**281**	Pg		**Pg**		**06 45 37.0**	**-1.5**
PDAR				Lg		Lg		06 45 51.4	
PDAR	**Pinedale Array**	**1.08**	**281**	Pg		**Pg**		**06 45 37.0**	**-1.5**
	191nm,0.3s,baz=99,slow=20,SNR=2499								
PDAR				Lg		Lg		06 45 51.4	
	1µm,0.3s,baz=101,slow=32,SNR=99								
M20A	**Sweetwater, Wa**	**1.09**	**183**	P		**Pg**		**06 45 37.9**	**-0.5**
	baz=1.1,SNR=1000								
M20A				S		**Sg**		**06 45 51.9**	**-0.7**
	baz=1.1								
M21A	**Separation Pea**	**1.12**	**150**	P		**Pg**		**06 45 38.3**	**-0.7**
	baz=1.1,SNR=1000								
M21A				⇓S		**Sg**		**06 45 52.7**	**-0.8**
	baz=1.1								
K22A	**Casper**	**1.17**	**86**	⇓P		**Pg**		**06 45 39.2**	**-0.9**
	baz=1.2								
K22A				⇑S		**Sg**		**06 45 54.8**	**-0.5**
	baz=1.2								
M19A	**Rock Springs**	**1.32**	**216**	⇓P		**Pg**		**06 45 41.7**	**-1.2**
	baz=1.3,SNR=808								
M19A				⇑S		**Sg**		**06 45 59.0**	**-1.2**
	baz=1.3								
L22A	**Ellis Ranch, M**	**1.36**	**113**	⇑P		**Pg**		**06 45 42.4**	**-1.2**
	baz=1.3,SNR=516								
I21A	**Big Trails, Te**	**1.37**	**26**	⇑P		**Pg**		**06 45 42.8**	**-1.0**
	baz=1.4								
I21A				S		**Sb**		**06 46 00.7**	**-0.3**
	baz=1.4								
I20A	**Worland**	**1.37**	**359**	⇓P		**Pb**		**06 45 43.1**	**-0.2**
	baz=1.4,S

RSSD	**Black Hills**	**3.35**	**61**	*e*Pn	**Pn**	**06 46 10.9**	**+0.9**
RSSD				*e*Sn	**Sn**	**06 46 53.7**	**+3.8**
ISCO	**Idaho Springs**	**3.35**	**145**	*e*Pn	**Pn**	**06 46 11.6**	**+1.4**
GCMT	**Greycliff**	**3.40**	**341**	*e*Pn	**Pn**	**06 46 12.6**	**+1.9**
GCMT				*e*Sn	**Sb**	**06 46 57.4**	**-2.0**
SMCO	**Snowmass**	**3.50**	**165**	*e*Pn	**Pn**	**06 46 13.6**	**+1.3**
HVU	**Hansel Valley**	**3.56**	**259**	*e*Pn	**Pn**	**06 46 13.3**	**+0.4**
MPU	**Maple Canyon**	**3.69**	**227**	*e*Pn	**Pn**	**06 46 15.8**	**+1.1**
BOZ	**Bozeman (W)**	**3.98**	**322**	*e*Pn	**Pn**	**06 46 20.7**	**+2.0**
BOZ				*e*Pb	**Pb**	**06 46 29.9**	**+2.1**
BOZ				*e*Pg	**Pg**	**06 46 33.9**	**+0.2**
BOZ				*e*Sn	**Sn**	**06 47 06.3**	**+0.9**
MCMT	**McKenzie Canyo**	**4.11**	**305**	*e*Pn	Pn	06 46 24.4	+3.9
MCMT				*e*Sg	**Sg**	**06 47 29.5**	**+0.1**
PV04	**Paradox Valley**	**4.22**	**189**	*e*Pn	**Pn**	**06 46 22.9**	**+0.9**
DUG	**Dugway**	**4.26**	**238**	*e*Pn	**Pn**	**06 46 22.3**	**-0.3**
DLMT	**Dillon**	**4.27**	**312**	*e*Pn	Pn	06 46 26.4	+3.8
PV01	**Paradox Valley**	**4.45**	**185**	*e*Pn	**Pn**	**06 46 25.8**	**+0.6**
PV01				*e*Sn	**Sn**	**06 47 17.7**	**+0.5**
LRM	**Limekiln Ridge**	**4.50**	**318**	*e*Pn	**Pn**	**06 46 29.0**	**+3.0**
LRM				*e*Sg	**Sg**	**06 47 39.7**	**-2.3**
HLID	**Hailey**	**4.72**	**284**	*e*Pn	**Pn**	**06 46 31.4**	**+2.5**
OGNE	**Ogallala**	**4.83**	**108**	*e*Pn	**Pn**	**06 46 31.7**	**+1.5**
OGNE				*e*Sg	**Sg**	**06 47 53.0**	**+0.5**
HRY	**Holter Researc**	**4.91**	**329**	*e*Pn	**Pn**	**06 46 33.0**	**+1.6**
HRY				*e*Sg	**Sg**	**06 47 49.7**	**-5.5**
MSU	**Marysvale**	**5.11**	**219**	*e*Pn	**Pn**	**06 46 36.1**	**+1.9**
MVU	**Marysvale**	**5.13**	**219**	*e*Pn	**Pn**	**06 46 36.4**	**+1.8**
SDCO	**Great Sand Dun**	**5.22**	**157**	*e*Pn	**Pn**	**06 46 36.8**	**+0.9**
SDCO				*e*Pg	Pb	06 46 52.3	+3.3
ELK	**Elko**	**5.64**	**253**	*e*Pn	**Pn**	**06 46 42.8**	**+1.2**
ELK				Lg	Lg	06 48 10.2	
ELK	**Elko**	**5.64**	**253**	Pn	**Pn**	**06 46 43.1**	**+1.5**
	0.8nm,0.3s,baz=64,slow=11,SNR=19						
ELK				Lg	Lg	06 48 10.2	
	4.3nm,0.3s,baz=167,slow=19,SNR=8.8						
ELK				LR	LR	06 49 16.4	
	comp=Z,164nm,20.6s,baz=52,slow=42						
CHMT	**Chamberlain Mo**	**5.68**	**322**	*e*Pn	**Pn**	**06 46 44.4**	**+2.4**
CHMT				*e*Sg	**Sg**	**06 48 24.2**	**+4.6**
MFID	**Camas Ranch**	**5.72**	**281**	*e*Pn	**Pn**	**06 46 45.2**	**+2.7**
MFID				*e*Sg	**Sg**	**06 48 18.0**	**-3.1**
MSO	**Missoula**	**5.95**	**318**	*e*Pn	**Pn**	**06 46 48.3**	**+2.7**
MSO				*e*Sg	**Sg**	**06 48 27.5**	**-0.7**
SLMT	**Seeley Lake**	**6.03**	**323**	*e*Pn	**Pn**	**06 46 48.3**	**+1.5**
SLMT				*e*Sg	**Sg**	**06 48 25.9**	**-5.1**
BLMT	**Blacktail Moun**	**7.00**	**323**	*e*Pg	Pg	06 47 26.3	-5.1
BLMT				*e*Sg	Sg	06 48 55.6	-6.3
BMO	**Blue Mountains**	**7.04**	**292**	*e*Pn	**Pn**	**06 47 03.7**	**+3.0**
BMO				*e*Sg	**Sg**	**06 49 00.2**	**-3.2**
BSMT	**Bassoo Peak**	**7.07**	**321**	*e*Pn	**Pn**	**06 47 02.9**	**+1.8**
BSMT				*e*Sg	**Sg**	**06 49 03.9**	**-0.5**
WUAZ	**Wupatki**	**7.49**	**201**	*e*Pn	**Pn**	**06 47 06.6**	**-0.3**
WUAZ				*e*Sg	Sb	06 49 07.4	+10
WALA	**Waterton Lakes**	**7.64**	**330**	*e*Pn	**Pn**	**06 47 09.5**	**+0.6**
WALA				*e*Sg	Sb	06 49 10.3	+9.1
ANMO	**Albuquerque**	**7.73**	**170**	Pn	Pn	06 47 14.9	+4.8
	29nm,0.7s						
ANMO				Pg	Pb	06 47 37.7	+6.1
ANMO				Lg	Lg	06 49 22.9	
ANMO				*e*Sg	**Sg**	**06 49 26.7**	**+1.2**
ANMO	**Albuquerque**	**7.73**	**170**	Pn	Pn	06 47 14.9	+4.8
	0.1nm,0.3s,baz=30,slow=16,SNR=2.4						
ANMO				Pg	Pb	06 47 37.7	+6.1
	0.6nm,0.3s,baz=347,slow=14,SNR=10						
ANMO				Lg	Lg	06 49 22.9	
	0.7nm,0.3s,baz=353,slow=16,SNR=3.1						
WVOR	**Wild Horse Val**	**7.78**	**273**	*e*Pn	**Pn**	**06 47 12.7**	**+1.9**
WVOR				*e*Sg	**Sg**	**06 49 25.5**	**-1.7**
LAZ	**Ladron**	**8.20**	**174**	*e*Pn	**Pn**	**06 47 16.6**	**0.0**
LAZ				*e*Sg	**Sg**	**06 49 39.4**	**-1.2**
ECSD	**EROS Data Cent**	**8.48**	**78**	*e*Pn	**Pn**	**06 47 21.3**	**+0.9**
BNM	**Barren Site**	**8.49**	**172**	*e*Pg	Pg	06 47 55.2	-4.9
BNM				*e*Sg	Sg	06 49 42.6	-7.5
NEW	**Newport**	**8.51**	**315**	*e*Pn	**Pn**	**06 47 21.3**	**+0.5**
NEW				Lg	Lg	06 49 40.8	
NEW	**Newport**	**8.51**	**315**	Pn	**Pn**	**06 47 21.1**	**+0.3**
	0.1nm,0.3s,baz=109,slow=15,SNR=5.3						
NEW				Lg	Lg	06 49 40.8	
	0.4nm,0.3s,baz=60,slow=20,SNR=3.1						
NVAR	**Mina Array Bea**	**8.80**	**245**	Pn	**Pn**	**06 47 27.4**	**+2.5**
NVAR				Lg	Lg	06 49 51.3	
NVAR	**Mina Array Bea**	**8.80**	**245**	Pn	**Pn**	**06 47 27.4**	**+2.5**
	0.6nm,0.3s,baz=60,slow=13,SNR=20						
NVAR				Lg	Lg	06 49 51.3	
	0.6nm,0.3s,baz=59,slow=28,SNR=3.6						
KSU1	**Kansas State U**	**9.38**	**108**	*e*Pn	**Pn**	**06 47 33.8**	**+1.1**
AGMN	**Agassiz Nation**	**10.33**	**52**	Pn	**Pn**	**06 47 43.9**	**-1.7**
TUC	**Tucson**	**10.47**	**193**	Pn	Pn	06 47 43.4	-4.2
WMOK	**Wichita Mounta**	**10.69**	**134**	*e*Pn	Pn	06 47 46.0	-4.6
ULM	**Lac du Bonnet**	**11.40**	**43**	Pn	**Pn**	**06 47 58.0**	**-2.2**
ULM				Lg	Lg	06 51 08.5	
ULM	**Lac du Bonnet**	**11.40**	**43**	Pn	**Pn**	**06 47 58.0**	**-2.2**
	0.9nm,0.3s,baz=233,slow=11,SNR=4.2						
ULM				Lg	Lg	06 51 08.5	
	0.6nm,0.3s,baz=163,slow=19,SNR=2.2						
FFC	**Flin Flon**	**12.81**	**16**	*e*Pn	**Pn**	**06 48 19.0**	**-0.5**
TXAR	**Lajitas Array**	**13.69**	**163**	Pn	**Pn**	**06 48 33.2**	**+1.5**
TXAR				Lg	Lg	06 52 25.3	
TXAR	**Lajitas Array**	**13.69**	**163**	Pn	**Pn**	**06 48 33.2**	**+1.5**
	0.1nm,0.3s,baz=335,slow=12,SNR=3.6						
TXAR				Lg	Lg	06 52 25.3	
	0.1nm,0.3s,baz=353,slow=29,SNR=3.2						
JCT	**Junction City**	**13.79**	**148**	*e*Pn	**Pn**	**06 48 33.4**	**+0.5**
YKA	**Yellowknife Ar**	**20.32**	**351**	P	**P**	**06 49 52.8**	**-0.5**
YKA	**Yellowknife Ar**	**20.32**	**351**	P	**P**	**06 49 52.8**	**-0.5**
	1.5nm,0.5s,baz=165,slow=11,SNR=17						
YKA				Lg	Lg	06 55 44.9	
	1.1nm,0.7s,baz=158,slow=28,SNR=4.0						
DLBC	**Dease Lake**	**20.97**	**327**	P	**P**	**06 50 01.5**	**+1.0**
DLBC	**Dease Lake**	**20.97**	**327**	P	**P**	**06 50 01.5**	**+1.0**
	4.0nm,0.8s,baz=131,slow=11,SNR=7.0						
ILAR	**Eielson Array**	**31.15**	**329**	P	**P**	**06 51 36.5**	**+0.5**
ILAR	**Eielson Array**	**31.15**	**329**	P	**P**	**06 51 36.5**	**+0.5**
	0.6nm,0.6s,baz=124,slow=7.9,SNR=12						
RES	**Resolute Bay**	**32.76**	**6**	P	**P**	**06 51 49.5**	**-0.5**
RES	**Resolute Bay**	**32.76**	**6**	P	**P**	**06 51 49.5**	**-0.5**
	1.9nm,0.8s,baz=206,slow=11,SNR=5.9						
ARCES	**ARCESS Array B**	**63.14**	**17**	P	**P**	**06 55 43.2**	**-1.6**
	2.5nm,0.9s,baz=316,slow=8.5,SNR=3.6						
MKAR	**Makanchi Array**	**90.54**	**353**	P	**P**	**06 58 18.7**	**-0.8**
	0.7nm,0.7s,baz=4.4,slow=4.4,SNR=10						
WRA	**Warramunga Arr**	**123.37**	**273**	PKP	**PKPdf**	**07 04 13.8**	**-1.1**
	0.2nm,0.6s,baz=58,slow=2.4,SNR=4.5						

IDC 17 06:51:48.9±3.5, 19°.17N×145°.09E, h213km±29km, mb3.3/5, mb1 3.5/6, mb1mx3.1/26, mbtmp3.3/6, MS3.7/1, Ms1 3.7/1, ms1mx2.7/16, Error ellipse: s-maj=64.4km s-min=24.7km az=104.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.55**	**182**	P	Pn	06 53 11.9	+1.2
	2.5nm,0.3s,baz=352,slow=15,SNR=3.5						
GUMO				S	S	06 54 14.7	-0.5
	8.7nm,0.3s,baz=0.0,slow=20,SNR=3.5						
PMG	**Port Moresby**	**28.46**	**176**	LR	LR	07 07 25.9	
	comp=Z,127nm,18.0s,baz=306,slow=33						
WRA	**Warramunga Arr**	**40.27**	**196**	P	P	06 59 05.7	+0.3
	1.2nm,0.4s,baz=18,slow=8.7,SNR=34						
ASAR	**Alice Springs**	**43.95**	**195**	P	P	06 59 34.9	-0.1
	0.6nm,0.5s,baz=16,slow=7.4,SNR=9.3						
STKA	**Stephens Creek**	**50.86**	**184**	P	P	07 00 27.6	-0.5
	0.3nm,0.3s,baz=5.7,slow=10,SNR=2.8						
NVAR	**Mina Array Bea**	**83.30**	**52**	P	P	07 03 52.5	+0.2
	0.4nm,0.7s,baz=267,slow=3.0,SNR=4.4						
FINES	**FINESS Array B**	**86.22**	**335**	P	P	07 04 05.4	-0.6
	0.3nm,0.3s,baz=69,slow=4.7,SNR=4.9						

MOS 17 06:52:24.5±1.9, 49°.83N×154°.45E, h214km, mb4.1/2, Error ellipse: s-maj=35.5km s-min=9.3km az=63.8
KRSC 17 06:52:25.7±0.5, 49°.66N×155°.23E, h213km±36km, ML4.0
IDC 17 06:52:28.5±2.4, 50°.23N×153°.97E, h210km±23km, mb3.0/4, mb1 3.2/6, mb1mx2.9/27, mbtmp3.1/6, Error ellipse: s-maj=64.1km s-min=20.2km az=147.0

ISC 17 06:52:24.8±1.3, 49°.7N±0°.2×154°.9E±0°.1, h226km±8km, n37, σ2s10/44, mb3.2/4, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.25**	**39**	*e*PN	Pn	06 52 55.0	-3.8
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,140nm,0.5s						
SKR	**Severo-Kuril's**	**1.25**	**39**	P	**Pn**	**06 52 59.1**	**+0.3**
SKR				*i* S	**S**	**06 53 22.8**	**-2.6**
MIPR	**Malaya Ipel'ka**	**2.82**	**24**	*i* P	**Pn**	**06 53 14.3**	**+0.6**
MIPR				*i* S	**S**	**06 53 50.8**	**-1.2**
ASAK	**Asacha**	**3.27**	**34**	P	**Pn**	**06 53 20.6**	**+1.7**
ASAK				*i* S	**S**	**06 54 01.2**	**-0.2**
MTVR	**Mutnovka**	**3.46**	**36**	P	**Pn**	**06 53 23.3**	**+2.2**
MTVR				*i* S	**S**	**06 54 04.8**	**-0.6**
APC	**Apacha**	**3.51**	**23**	P	**Pn**	**06 53 22.3**	**+0.8**
RUS	**Russkaya**	**3.55**	**39**	PN	**Pn**	**06 53 23.5**	**+1.5**
RUS				S	**S**	**06 54 05.4**	**-1.6**
RUS	**Russkaya**	**3.55**	**39**	P	**Pn**	**06 53 23.5**	**+1.5**
RUS				*i* S	**S**	**06 54 05.4**	**-1.6**
PETK	**Petropavlovsk-**	**3.82**	**26**	PN	**Pn**	**06 53 26.9**	**+1.6**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.82**	**26**	P	**Pn**	**06 53 26.9**	**+1.6**
	comp=Z,4.1nm,0.3s,baz=191,slow=12,SNR=99						
UGLR	**Uglovaya**	**4.27**	**34**	P	Pn	06 53 34.1	+3.3
KOK	**Koryaka**	**4.27**	**32**	P	**Pn**	**06 53 33.7**	**+2.9**
AVH	**Avacha**	**4.29**	**33**	P	**Pn**	**06 53 33.8**	**+2.8**
SMAR	**Somma**	**4.31**	**33**	P	Pn	06 53 34.3	+2.9
KRER	**Koryakskii**	**4.32**	**32**	P	Pn	06 53 34.7	+3.2
SDLR	**Sedlovina**	**4.35**	**34**	P	**Pn**	**06 53 34.4**	**+2.6**
GNL	**Ganaly**	**4.41**	**24**	P	**Pn**	**06 53 33.5**	**+1.0**
NLC	**Nalytchevo**	**4.44**	**37**	PN	**Pn**	**06 53 33.6**	**+0.9**
NLC				S	**S**	**06 54 24.3**	**-2.1**
NLC	**Nalytchevo**	**4.44**	**37**	P	**Pn**	**06 53 33.6**	**+0.9**
NLC				*i* S	**S**	**06 54 24.3**	**-2.1**
SPN	**Mys Shipunski**	**4.66**	**42**	PN	**Pn**	**06 53 37.0**	**+1.5**
SPN				S	**S**	**06 54 28.7**	**-2.8**
SPN	**Mys Shipunski**	**4.66**	**42**	P	**Pn**	**06 53 37.0**	**+1.5**
SPN				*i* S	**S**	**06 54 28.7**	**-2.8**
MKZ	**Mys Kozlova**	**6.42**	**38**	PN	**Pn**	**06 53 58.3**	**+0.8**
MKZ				S	**S**	**06 55 07.1**	**-4.3**
MKZ	**Mys Kozlova**	**6.42**	**38**	P	**Pn**	**06 53 58.3**	**+0.8**
MKZ				*i* S	**S**	**06 55 07.1**	**-4.3**
ESO	**Esso**	**6.63**	**19**	PN	**Pn**	**06 54 02.9**	**+2.6**
ESO	**Esso**	**6.63**	**19**	P	**Pn**	**06 54 02.9**	**+2.6**
KBG	**Krutoberegovo**	**8.06**	**33**	PN	**Pn**	**06 54 21.6**	**+3.0**
KBG	**Krutoberegovo**	**8.06**	**33**	P	**Pn**	**06 54 21.6**	**+3.0**
KBTR	**Krutoberegovo**	**8.07**	**33**	PN	**Pn**	**06 54 20.8**	**+2.1**
KBTR	**Krutoberegovo**	**8.07**	**33**	P	**Pn**	**06 54 20.8**	**+2.1**
BKI	**Bering**	**8.71**	**47**	PN	**Pn**	**06 54 29.0**	**+2.1**
BKI	**Bering**	**8.71**	**47**	P	**Pn**	**06 54 29.0**	**+2.1**
BKI				*i* S	S	06 55 59.9	-5.2
ASAJ	**Asahikawa**	**10.10**	**241**	P	**Pn**	**06 54 45.5**	**+0.7**
	comp=Z,1.3nm,0.3s,baz=71,slow=11,SNR=8.7						
ILAR	**Eielson Array**	**33.51**	**41**	P	P	06 58 47.9	+5.3
	comp=Z,0.1nm,0.5s,baz=262,slow=7.6,SNR=4.9						
MKAR	**Makanchi Array**	**46.67**	**296**	P	**P**	**07 00 30.1**	**-0.6**
MKAR	**Makanchi Array**	**46.67**	**296**	P	**P**	**07 00 30.1**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=72,slow=6.2,SNR=5.5						
FINES	**FINESS Array B**	**61.85**	**335**	P	**P**	**07 02 20.3**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=53,slow=7.4,SNR=5.2						
NOA	**NORSAR Array B**	**65.79**	**342**	P	**P**	**07 02 45.8**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=26,slow=6.2,SNR=3.0						

IDC 17 07:15:42.1±65.0, 14°.89S×165°.37E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.7/3, Error ellipse: s-maj=1088.0km s-min=105.6km az=65.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**27.50**	**228**	P	P	07 21 30.4	0.0
	1.1nm,0.4s,baz=66,slow=10,SNR=8.8						
WRA	**Warramunga Arr**	**30.00**	**256**	P	P	07 21 52.5	-0.3
	0.2nm,0.6s,baz=86,slow=9.2,SNR=4.6						
ASAR	**Alice Springs**	**30.90**	**249**	P	P	07 22 00.9	+0.2
	0.5nm,0.4s,baz=78,slow=8.8,SNR=13						

WEL 17 07:37:20.8±0.5, 35°.39S×179°.18E, h259km±13km, ML3.6/5, Error ellipse: s-maj=12.3km s-min=10.2km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**2.78**	**195**	PN	Pn	07 38 10.9	-0.6
PUZ				SN	S	07 38 50.6	-1.2
CNGZ	**Carnagh Statio**	**3.19**	**194**	*e*PN	Pn	07 38 16.6	+0.9
MWZ	**Matawai**	**3.23**	**204**	PN	Pn	07 38 16.3	0.0
URZ	**Urewera**	**3.31**	**209**	*e*PN	Pn	07 38 16.8	-0.3
URZ				SN	S	07 39 02.0	0.0
KNZ	**Kokohu**	**3.82**	**198**	PN	Pn	07 38 22.6	-0.2
KNZ				SN	S	07 39 11.9	-0.3
MHGZ	**Mahia Peninsul**	**3.90**	**195**	*e*PN	Pn	07 38 24.2	+0.5
RAHZ	**Arahi**	**3.90**	**205**	PN	Pn	07 38 24.2	+0.4
WCZ	**Waipu Caves**	**3.98**	**261**	PN	Pn	07 38 24.7	0.0
NMHZ	**Naumai**	**4.16**	**206**	PN	Pn	07 38 27.4	+0.5
BKZ	**Black Stump Fm**	**4.34**	**209**	PN	Pn	07 38 29.2	+0.2
MCHZ	**McNeill Hill**	**4.51**	**205**	PN	Pn	07 38 31.2	+0.4
BHHZ	**Black Hill Sta**	**4.79**	**210**	PN	Pn	07 38 34.7	+0.4
TSZ	**Takapari Road**	**5.32**	**208**	PN	Pn	07 38 39.7	-0.9
OGWZ	**Otaki Gorge**	**6.28**	**209**	PN	Pn	07 38 51.7	-0.7

ISCJB 17 07:41:39.5±0.3, 46°.57N±0°.02×9°.30E±0°.02, h12km±3km, Error ellipse: s-maj=3.6km s-min=2.5km az=154.5
CSEM 17 07:41:39.9±0.1, 46°.59N×9°.30E, h12km, ML2.4/13, Error ellipse: s-maj=3.7km s-min=2.1km az=151.0
ROM 17 07:41:39.5±0.4, 46°.60N×9°.31E, h7km±3km, Md2.2/7, Ml1.5/2, Error ellipse: s-maj=4.4km s-min=2.2km az=157.0
ZUR 17 07:41:40.4, 46°.56N×9°.33E, h5km±2km, ML1.9/8
LDG 17 07:41:40.5±0.1, 46°.57N×9°.35E, h5km, Md2.7/1, Ml2.3/8, Error ellipse: s-maj=1.6km s-min=1.4km az=108.0
VIE 17 07:41:40.2±0.2, 46°.57N×9°.37E, h10km±1km, mb1.6/1, ML1.9/5, Error ellipse: s-maj=1.6km s-min=1.2km az=74.0
19 km WSW of Tiefencastel

ISC 17 07:41:40.0±0.8, 46°.57N±0°.02×9°.32E±0°.02, h11km±5km, n52, σ1s14/93, 7C-9D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TUE	**Stuetta**	**0.10**	**170**	Pg	**Pg**	**07 41 42.8**	**-0.1**
TUE				Sg	**Sg**	**07 41 44.3**	**-0.7**
TUE	**Stuetta**	**0.10**	**170**	Pg	**Pg**	**07 41 42.8**	**-0.1**
TUE				Sg	**Sg**	**07 41 44.3**	**-0.7**
VDL	**Val di Lei**	**0.12**	**134**	⇓*i*Pg	**Pg**	**07 41 43.2**	**0.0**
	558nm,0.9s						
LLS	**Linth-Limmern**	**0.35**	**322**	*i* Pg	**Pg**	**07 41 47.7**	**+0.6**
	165nm,0.5s						
LLS				*e*Sg	**Sg**	**07 41 52.7**	**+0.9**
	165nm,0.5s						
DAVOX	**Davos/Dischmat**	**0.44**	**61**	⇓*i*Pg	**Pg**	**07 41 49.0**	**+0.3**
	135nm,0.5s						
DAVOX	**Davos/Dischmat**	**0.44**	**61**	Pg	**Pg**	**07 41 49.0**	**+0.3**
DAVOX				Sg	**Sb**	**07 41 55.7**	**-0.9**
DAVOX	**Davos/Dischmat**	**0.44**	**61**	Pg	**Pg**	**07 41 49.0**	**+0.3**
DAVOX				Sg	**Sb**	**07 41 55.7**	**-0.9**
FUSIO	**Fusio**	**0.47**	**256**	*e*Pg	**Pg**	**07 41 49.7**	**+0.5**
	112nm,0.2s						
FUSIO	**Fusio**	**0.47**	**256**	Pg	**Pg**	**07 41 50.1**	**+0.9**
FUSIO				Sg	**Sg**	**07 41 55.5**	**0.0**
FUSIO	**Fusio**	**0.47**	**256**	Pg	**Pg**	**07 41 50.1**	**+0.9**
FUSIO				Sg	**Sg**	**07 41 55.5**	**0.0**
PLONS	**Plons/SG**	**0.48**	**5**	⇑*i*Pg	**Pg**	**07 41 50.1**	**+0.6**
	134nm,0.2s						
PLONS				*e*Sg	**Sg**	**07 41 56.7**	**+0.8**
	134nm,0.2s						
FUORN	**Ofenpass-Fuorn**	**0.65**	**85**	⇓*i*Pg	**Pg**	**07 41 52.7**	**+0.1**
	85nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**0.65**	**85**	Pg	**Pg**	**07 41 52.8**	**+0.1**
FUORN				Sg	**Sg**	**07 42 01.8**	**+0.5**
FUORN	**Ofenpass-Fuorn**	**0.65**	**85**	Pg	**Pg**	**07 41 52.8**	**+0.1**
FUORN				Sg	**Sg**	**07 42 01.8**	**+0.5**
MUGIO	**Muggio**	**0.68**	**197**	*e*Pg	**Pg**	**07 41 53.7**	**+0.6**
	45nm,0.6s						
MUGIO	**Muggio**	**0.68**	**197**	Pg	**Pb**	**07 41 53.9**	**0.0**
MUGIO				Sg	**Sb**	**07 42 03.6**	**+0.3**
MUGIO	**Muggio**	**0.68**	**197**	Pg	**Pb**	**07 41 53.9**	**0.0**
MUGIO				Sg	**Sb**	**07 42 03.6**	**+0.3**
BRMO	**Bormio**	**0.73**	**97**	Pg	**Pg**	**07 41 54.1**	**-0.1**
BRMO				Sg	**Sb**	**07 42 05.2**	**+0.2**
	10.0nm,0.5s						
BRMO	**Bormio**	**0.73**	**97**	Pg	**Pg**	**07 41 54.1**	**-0.1**
BRMO				Sg	**Sb**	**07 42 05.2**	**+0.2**
	10.0nm,0.5s						
DAVA	**Damuels**	**0.81**	**28**	⇑*i*Pg	**Pg**	**07 41 55.7**	**0.0**
DAVA				⇓*i*Sg	**Sb**	**07 42 07.2**	**-0.1**
	11nm,0.2s						
DAVA	**Damuels**	**0.81**	**28**	Pg	**Pg**	**07 41 55.7**	**0.0**
DAVA				Sg	**Sb**	**07 42 07.2**	**-0.1**
	11nm,0.2s						
HASLI	**Hasliberg/Brie**	**0.83**	**283**	⇓*i*Pg	**Pg**	**07 41 56.5**	**+0.5**
	58nm,0.6s						
MDI	**Monti di Nese**	**0.84**	**161**	Pg	**Pb**	**07 41 57.3**	**+0.7**
	28nm,0.6s						
MDI	**Monti di Nese**	**0.84**	**161**	Pg	**Pb**	**07 41 57.3**	**+0.7**
	28nm,0.6s						
FETA	**Feichten**	**1.07**	**64**	⇑*i*Pg	**Pb**	**07 42 00.3**	**-0.3**
FETA				⇑*i*Sg	**Sg**	**07 42 14.8**	**+0.4**
	5.8nm,0.3s						
FETA	**Feichten**	**1.07**	**64**	Pg	**Pb**	**07 42 00.3**	**-0.3**
FETA				Sg	**Sg**	**07 42 14.8**	**+0.4**
	5.8nm,0.3s						
MOTA	**Moosalm**	**1.45**	**57**	⇓*i*Pn	**Pn**	**07 42 06.2**	**-0.1**
MOTA				⇑*i*Pg	**Pb**	**07 42 07.7**	**+0.6**
MOTA				⇓*i*Sg	**Sg**	**07 42 27.4**	**+0.8**
	11nm,0.5s						
MOTA	**Moosalm**	**1.45**	**57**	Pn	**Pn**	**07 42 06.2**	**-0.1**
WTTA	**Wattenberg**	**1.73**	**66**	⇓*i*Pn	**Pn**	**07 42 10.1**	**-0.1**
WTTA				⇑*i*Pg	**Pg**	**07 42 12.9**	**-0.4**
WTTA				⇓*i*Sn	**Sn**	**07 42 32.7**	**+0.3**
WTTA				⇑*i*Sg	**Sg**	**07 42 37.1**	**+1.4**
	9.6nm,0.5s						
WTTA	**Wattenberg**	**1.73**	**66**	Pn	**Pn**	**07 42 10.1**	**-0.1**
LPG	**La Plagne**	**2.09**	**240**	*e*Pn	**Pn**	**07 42 15.3**	**+0.1**
LPG	**La Plagne**	**2.09**	**240**	*e*Pg	**Pg**	**07 42 19.6**	**-0.4**
LPG				*e*Sg	**Sg**	**07 42 46.9**	**-0.2**
	3.9nm,0.5s						
LPG	**La Plagne**	**2.09**	**240**	*e*Pn	**Pn**	**07 42 15.3**	**+0.1**
LPG	**La Plagne**	**2.09**	**240**	*e*Pg	**Pg**	**07 42 19.6**	**-0.4**
LPG				*e*Sg	**Sg**	**07 42 46.9**	**-0.2**
	2.0nm,0.5s						
LPL	**La Plagne**	**2.09**	**241**	*e*Pg	**Pg**	**07 42 19.7**	**-0.4**
LPL				*e*Sg	**Sg**	**07 42 46.5**	**-0.6**
	3.7nm,0.4s						
LPL	**La Plagne**	**2.09**	**241**	*e*Pg	**Pg**	**07 42 19.7**	**-0.4**
LPL				*e*Sg	**Sg**	**07 42 46.5**	**-0.6**
	1.9nm,0.4s						
HINF	**Hinteralfeld**	**2.10**	**307**	*e*P	**Pb**	**07 42 17.2**	**-0.9**
HINF				*e*Sn	**Sn**	**07 42 39.9**	**-1.3**
	7.8nm,0.6s						
HINF	**Hinteralfeld**	**2.10**	**307**	*e*P	**Pb**	**07 42 17.2**	**-0.9**
HINF				*e*Sn	**Sn**	**07 42 39.9**	**-1.3**
	3.9nm,0.6s						
CABF	**La Chapelle**	**2.23**	**272**	*e*P	**Pb**	**07 42 19.8**	**-0.6**
CABF				*e*Sg	**Sg**	**07 42 52.2**	**+0.5**
	3.4nm,0.3s						
CABF	**La Chapelle**	**2.23**	**272**	*e*P	**Pb**	**07 42 19.8**	**-0.6**
CABF				*e*Sg	**Sg**	**07 42 52.2**	**+

DNZL				*i* S		**Sb**	**08 12 13.1**	**-0.5**
AKAS	**Kas**	**0.79**	**161**	*i* P		**Pg**	**08 12 02.4**	**-0.1**
AKAS				*i* S		**Sn**	**08 12 17.8**	**-0.6**
AKAS	**Kas**	**0.79**	**161**	*i* P		**Pg**	**08 12 02.4**	**-0.1**
DENT	**Denizli**	**0.79**	**345**	*e*PG		**Pg**	**08 12 02.0**	**-0.6**
DENT	**Denizli**	**0.79**	**345**	*e*Pg		**Pg**	**08 12 02.0**	**-0.6**
YER	**Yerkesik**	**0.82**	**281**	*e*PG		**Pg**	**08 12 03.4**	**+0.4**
YER	**Yerkesik**	**0.82**	**281**	*e*Pg		**Pg**	**08 12 03.4**	**+0.4**
ANTB	**Antalya**	**1.10**	**94**	*e*PN		**Pb**	**08 12 09.2**	**0.0**
ANTB	**Antalya**	**1.10**	**94**	*e*Pn		**Pb**	**08 12 09.2**	**0.0**
BCK	**Bucak**	**1.14**	**65**	*e*PN		**Pg**	**08 12 09.4**	**+0.1**
BCK	**Bucak**	**1.14**	**65**	*e*Pn		**Pg**	**08 12 09.4**	**+0.1**
MLSB	**Milas**	**1.25**	**285**	*e*PN		**Pg**	**08 12 10.5**	**-0.7**
MLSB	**Milas**	**1.25**	**285**	*e*Pn		**Pg**	**08 12 10.5**	**-0.7**
ISP	**Isparta**	**1.29**	**49**	*e*PN		**Pg**	**08 12 11.8**	**-0.3**
ISP	**Isparta**	**1.29**	**49**	*e*Pn		**Pg**	**08 12 11.8**	**-0.3**
AYDN	**Tasoluk**	**1.31**	**301**	*i* P		**Pn**	**08 12 12.9**	**-0.1**
AYDN				*i* S		**Sn**	**08 12 30.6**	**-0.5**
AYDN	**Tasoluk**	**1.31**	**301**	*i* P		**Pn**	**08 12 12.9**	**-0.1**
AYDN				*i* S		**Sn**	**08 12 30.6**	**-0.5**
KHL	**Karahalli**	**1.35**	**8**	*e*PN		**Pn**	**08 12 12.6**	**-0.9**
KHL	**Karahalli**	**1.35**	**8**	*e*Pn		**Pn**	**08 12 12.6**	**-0.9**
KHAL	**Karahalli**	**1.39**	**7**	*i* P		**Pn**	**08 12 13.8**	**-0.3**
KHAL				*i* S		**Sn**	**08 12 34.6**	**+1.3**
KHAL	**Karahalli**	**1.39**	**7**	*i* P		**Pn**	**08 12 13.8**	**-0.3**
KHAL				*i* S		**Sn**	**08 12 34.6**	**+1.3**
BODT	**Bodrum**	**1.58**	**273**	*e*PN		**Pn**	**08 12 15.5**	**-1.2**
BODT	**Bodrum**	**1.58**	**273**	*e*Pn		**Pn**	**08 12 15.5**	**-1.2**
KULA	**Kula-Manisa**	**1.60**	**342**	*e*PN		**Pn**	**08 12 16.1**	**-0.9**
KULA	**Kula-Manisa**	**1.60**	**342**	*e*Pn		**Pn**	**08 12 16.1**	**-0.9**
MANT	**Manisa**	**1.61**	**339**	*i* P		**Pn**	**08 12 17.0**	**-0.3**
MANT				*i* S		**Sn**	**08 12 38.9**	**+0.1**
MANT	**Manisa**	**1.61**	**339**	*i* P		**Pn**	**08 12 17.0**	**-0.3**
MANT				*i* S		**Sn**	**08 12 38.9**	**+0.1**
BALY	**Balya**	**3.05**	**335**	*i* P		**Pn**	**08 12 37.0**	**+0.2**
BALY				*i* S		**Sn**	**08 13 15.1**	**+1.1**
BALY	**Balya**	**3.05**	**335**	*i* P		**Pn**	**08 12 37.0**	**+0.2**
BALY				*i* S		**Sn**	**08 13 15.1**	**+1.1**

*NNC **17** 08:14:57.6±6.8, 41.°12N×78.°00E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=51.8km s-min=28.4km az=175.0*

ISC 17 08:14:53.6±3.1, **40.°8N**±0.°2×**77.°9E**±0.°1, **h19**km, **n14, σ1°45/16, 5C-5b, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**1.91**	**319**	P	**Pg**	**08 15 30.8**	**+0.5**
	SNR=124						
KZA	**Kyzart**	**2.38**	**303**	P	**Pg**	**08 15 40.7**	**+1.5**
	SNR=111						
KNDC	**Almaty**	**2.50**	**344**	⇑Pg	**Pg**	**08 15 41.9**	**+0.3**
KNDC				⇑Lg	Lg	08 16 07.8	
TKM2	**Tokmak 2**	**2.73**	**321**	⇓Pg	**Pg**	**08 15 45.1**	**-0.8**
	32nm,0.4s						
TKM2				⇓Lg	Lg	08 16 13.8	
	151nm,0.6s						
TKM2	**Tokmak 2**	**2.73**	**321**	P	**Pg**	**08 15 45.7**	**-0.2**
	SNR=129						
KBK	**Karagaybulak**	**2.89**	**310**	P	**Pg**	**08 15 49.1**	**+0.1**
	SNR=21						
UCH	**Uchtor**	**2.93**	**300**	P	**Pg**	**08 15 51.0**	**+1.2**
	SNR=8.4						
AAK	**Ala-Archa**	**3.15**	**306**	P	**Pg**	**08 15 54.3**	**+0.4**
	SNR=62						
CHMS	**Chumysh**	**3.22**	**314**	P	**Pg**	**08 15 54.7**	**-0.6**
	SNR=21						
AML	**Almayashu**	**3.45**	**294**	P	**Pg**	**08 16 01.0**	**+1.4**
	SNR=148						
USP	**Ospenovka**	**3.54**	**315**	P	**Pg**	**08 15 59.8**	**-1.6**
	SNR=18						
EKS2	**Erkin-Say**	**3.62**	**302**	P	**Pg**	**08 16 03.6**	**+0.8**
	SNR=13						
KK31	**Karatay Array**	**5.99**	**295**	⇓Pg	**Pg**	**08 16 46.0**	**-2.1**
	3.0nm,0.6s,baz=112,slow=15,SNR=34						
KK31				⇑Lg	Lg	08 17 60.0	
	8.3nm,0.5s,baz=117,slow=26						
MK31	**Makanchi Array**	**6.75**	**26**	⇑Pn	**Pn**	**08 16 29.2**	**-2.4**
	0.3nm,0.2s,baz=201,slow=13,SNR=61						
MK31				⇑Pg	**Pb**	**08 16 51.7**	**+1.4**
	1.1nm,0.5s,baz=206,slow=15,SNR=3.6						
MK31				⇓Sn	**Sn**	**08 17 50.2**	**+2.2**
	1.0nm,0.3s						
MK31				⇓Lg	Lg	08 18 26.0	
	2.4nm,0.5s,baz=212,slow=29						

IDC 17 08:22:31.0±2.9, **17.°87N×95.°98E, h0**km, **mb3.7**/7, **mb1 3.8**/8, **mb1mx3.5**/27, **mbtmp3.6**/8, **ML3.7**/1, **Error ellipse: s-maj=70.4km s-min=15.5km az=0.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**2.88**	**78**	Pn	Pn	08 23 17.6	-0.6
	2.9nm,0.3s,baz=251,slow=18,SNR=14						
CMAR				Pg	Pb	08 23 24.4	+1.1
	16nm,0.3s,baz=251,slow=19,SNR=74						
CMAR				Lg	Lg	08 24 02.4	
	11nm,0.3s,baz=249,slow=32,SNR=12						
MKAR	**Makanchi Array**	**30.98**	**342**	P	P	08 28 50.8	+0.7
	0.9nm,0.6s,baz=152,slow=8.6,SNR=12						
SONM	**Songino Array**	**31.07**	**14**	P	P	08 28 50.6	-0.5
	0.5nm,0.5s,baz=180,slow=7.2,SNR=3.2						
BRTR	**Keskin Array B**	**57.65**	**306**	P	P	08 32 23.4	0.0
	0.5nm,0.7s,baz=101,slow=6.6,SNR=3.5						
FINES	**FINESS Array B**	**64.86**	**330**	P	P	08 33 11.2	-0.5
	0.4nm,0.5s,baz=104,slow=5.9,SNR=3.0						
ARCES	**ARCESS Array B**	**66.58**	**339**	P	P	08 33 22.4	-0.4
	1.6nm,0.7s,baz=94,slow=3.7,SNR=4.1						
GERES	**GERESS Array B**	**71.73**	**316**	P	P	08 33 55.8	+0.6
	0.3nm,0.6s,baz=83,slow=4.2,SNR=3.5						
NOA	**NORSAR Array B**	**72.01**	**329**	P	P	08 33 56.7	+0.1
	0.5nm,0.7s,baz=86,slow=6.4,SNR=3.5						

*AUST **17** 08:46:30.9, 4.°29S×148.°56E, h15km*
*IDC **17** 08:46:54.3±2.2, 6.°22S×147.°70E, h59km±17km, mb3.8/3, mb1 4.1/5, mb1mx3.7/17, mbtmp3.9/5, MS3.2/3, Ms1 3.2/3, ms1mx2.9/25, Error ellipse: s-maj=36.0km s-min=14.5km az=107.0*
*ISCJB **17** 08:46:55.1±0.8, 6.°18S±0.°08×147.°64E±0.°09, h77km, mb4.0/5, Error ellipse: s-maj=13.0km s-min=11.2km az=4.6*

ISC 17 08:46:56.8±1.0, **6.°23S**±0.°09×**147.°6E**±0.°2, **h77**km, **n28, σ1°57/29, mb4.0/5, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.18**	**187**	P	**Pn**	**08 47 44.2**	**-0.4**
	27nm,0.3s,baz=345,slow=5.2,SNR=5						
PMG				S	**Sn**	**08 48 18.9**	**-2.5**
	102nm,0.3s,baz=53,slow=20,SNR=16						
COEN	**Coen**	**8.81**	**209**	P	**Pn**	**08 49 02.3**	**+0.8**
	baz=11,SNR=4.3						
MTSU	**Mount Surprise**	**12.25**	**195**	P	**Pn**	**08 49 49.4**	**+1.1**
	baz=14,SNR=20						
CTA	**Charters Tower**	**13.83**	**185**	P	**Pn**	**08 50 08.8**	**-0.7**
	0.1nm,0.3s,baz=360,slow=17,SNR=2.6						
CTA				LR	LR	08 55 08.4	
	comp=Z,98nm,21.1s,baz=232,slow=36						
KDU	**Kakadu**	**16.21**	**246**	P	**P**	**08 50 40.5**	**-1.3**
	baz=18,SNR=11						
SWI	**Sorong**	**17.13**	**288**	S	Sn	08 53 34.7	-27
	baz=18,SNR=6.7						
MTN	**Manton Dam**	**17.48**	**247**	P	**P**	**08 50 58.2**	**+2.3**
	baz=19,SNR=5.5						
WRA	**Warramunga Arr**	**18.73**	**222**	P	**Pn**	**08 51 09.9**	**-0.9**
	2.1nm,0.3s,baz=45,slow=11,SNR=114						
WRA				S	**S**	**08 54 34.4**	**-4.3**
	0.2nm,0.3s,baz=42,slow=22,SNR=4.9						
WRA				ScP	**ScP**	**08 59 05.5**	**+1.8**
	baz=26,slow=2.6,SNR=4.9						
EIDS	**Eidsvold**	**19.32**	**170**	P	**Pn**	**08 51 17.0**	**-0.7**
	baz=21,SNR=16						
RMQ	**Roma**	**20.17**	**177**	P	Pn	08 51 27.1	-0.7
	baz=22,SNR=14						
QLP	**Quilpie**	**20.48**	**189**	P	Pn	08 51 29.8	-1.6
	baz=23,SNR=40						
KNRA	**Kununurra**	**20.70**	**242**	P	**P**	**08 51 31.3**	**+0.4**
	baz=22,SNR=14						
ASAR	**Alice Springs**	**21.75**	**216**	P	**P**	**08 51 43.2**	**+1.0**
	9.5nm,0.6s,baz=50,slow=9.1,SNR=224						
ASAR				S	**S**	**08 55 39.4**	**+0.6**
	2.6nm,0.7s,baz=33,slow=19,SNR=5.8						
ASAR				ScP	**ScP**	**08 59 12.8**	**+2.0**
	1.3nm,0.8s,baz=34,slow=2.8,SNR=8.0						
ARMA	**Armidale**	**24.36**	**171**	P	**P**	**08 52 09.0**	**+1.2**
	baz=26,SNR=16						
FITZ	**Fitzroy Crossi**	**24.43**	**239**	P	**P**	**08 52 09.9**	**+1.4**
	83nm,0.5s,baz=64,slow=8.1,SNR=350						
FITZ				LR	LR	09 02 55.9	
	comp=Z,45nm,21.1s,baz=260,slow=39						
FITZ	**Fitzroy Crossi**	**24.43**	**239**	P	**P**	**08 52 09.8**	**+1.3**
	baz=26,SNR=190						
CMSA	**Cobar Meteorol**	**25.23**	**184**	P	**P**	**08 52 17.2**	**+1.5**
	baz=27,SNR=9.0						
STKA	**Stephens Creek**	**26.12**	**192**	P	**P**	**08 52 24.3**	**+0.7**
	2.6nm,0.5s,baz=345,slow=10,SNR=8.2						
STKA	**Stephens Creek**	**26.12**	**192**	P	**P**	**08 52 24.1**	**+0.4**
	baz=28,SNR=6.5						
MEEK	**Meekatharra**	**34.24**	**230**	P	**P**	**08 53 36.8**	**+1.2**
	baz=36,SNR=21						
KMBL	**Kambalda**	**34.69**	**221**	P	**P**	**08 53 40.5**	**+1.1**
	baz=37,SNR=7.7						
MORW	**Morawa**	**37.44**	**229**	P	**P**	**08 54 04.2**	**+1.3**
	baz=40,SNR=7.7						
KLBR	**Kellerberrin**	**37.60**	**224**	P	**P**	**08 54 05.0**	**+0.8**
	baz=40,SNR=13						
BLDU	**Ballidu**	**37.78**	**226**	P	**P**	**08 54 06.7**	**+1.0**
	baz=40,SNR=11						
KSRS	**Korea Array**	**47.17**	**339**	LR	LR	09 11 01.5	
	comp=Z,32nm,21.3s,baz=192,slow=31						
MKAR	**Makanchi Array**	**78.04**	**320**	P	**P**	**08 58 45.7**	**-1.5**
	0.2nm,0.3s,baz=103,slow=4.6,SNR=5.0						
ILAR	**Eielson Array**	**85.47**	**23**	P	**P**	**08 59 23.9**	**-2.0**
	0.3nm,0.8s,baz=254,slow=4.9,SNR=6.4						
TORD	**Torodi Ar. Bea**	**145.70**	**284**	PKPbc	**PKPdf**	**09 06 27.4**	**-0.1**
	1.1nm,0.4s,baz=80,slow=2.8,SNR=17						

*ATH **17** 08:52:39.5, 38.°68N×25.°20E, h38km±3km, MD3.0/6*
*ISCJB **17** 08:52:40.4±0.6, 38.°67N±0.°04×25.°22E±0.°04, h28km±7km, Error ellipse: s-maj=6.4km s-min=5.5km az=143.1*
*CSEM **17** 08:52:40.4±0.2, 38.°67N×25.°23E, h25km±2km, ML2.7/3, Error ellipse: s-maj=3.6km s-min=2.2km az=127.0*
*THE **17** 08:52:41.3, 38.°66N×25.°25E, h32km±38km, ML2.7/3, Error ellipse: s-maj=38.5km s-min=1.1km az=84.0*

ISC 17 08:52:40.4±1.1, **38.°67N**±0.°03×**25.°23E**±0.°03, **h27**km±13km, **n23, σ0°31/34, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.71**	**113**	P	**Pb**	**08 52 54.2**	**+0.1**
CHOS				S	**Sn**	**08 53 04.5**	**-0.3**
CHOS	**Chios island**	**0.71**	**113**	*e*PN	**Pb**	**08 52 54.3**	**+0.1**
CHOS				*e*SN	**Sn**	**08 53 05.0**	**+0.2**
CHOS	**Chios island**	**0.71**	**113**	P	**Pb**	**08 52 54.2**	**+0.1**
CHOS				S	**Sn**	**08 53 04.5**	**-0.3**
SIGR	**SIGRI**	**0.73**	**42**	P	**Pb**	**08 52 54.1**	**-0.4**
SIGR				S	**Sb**	**08 53 04.2**	**0.0**
SIGR	**SIGRI**	**0.73**	**42**	P	**Pb**	**08 52 54.1**	**-0.4**
SIGR				S	**Sb**	**08 53 04.2**	**0.0**
MRMA	**Marmari**	**0.90**	**228**	P	**Pn**	**08 52 57.3**	**-0.1**
MRMA				S	**Sb**	**08 53 08.9**	**-0.1**
MRMA	**Marmari**	**0.90**	**228**	P	**Pn**	**08 52 57.3**	**-0.1**
MRMA				S	**Sb**	**08 53 08.9**	**-0.1**
PRK	**Paraskevi**	**1.00**	**54**	*e*PN	**Pn**	**08 52 58.9**	**+0.2**
PRK	**Paraskevi**	**1.00**	**54**	*e*Pn	**Pn**	**08 52 58.9**	**+0.2**
AOS	**Alonnisos**	**1.17**	**296**	P	**Pn**	**08 53 01.4**	**+0.4**
AOS				S	**Sb**	**08 53 17.2**	**+0.6**
AOS	**Alonnisos**	**1.17**	**296**	P	**Pn**	**08 53 01.4**	**+0.4**
AOS				S	**Sb**	**08 53 17.2**	**+0.6**
LIA	**Limnos Island**	**1.23**	**358**	*e*PN	**Pn**	**08 53 01.9**	**0.0**
LIA				*e*SN	**Sn**	**08 53 17.4**	**-0.2**
LIA	**Limnos Island**	**1.23**	**358**	*e*Pn	**Pn**	**08 53 01.9**	**0.0**
LIA				*e*Sn	**Sn**	**08 53 17.4**	**-0.2**
PTL	**Penteli**	**1.24**	**241**	P	**Pn**	**08 53 02.1**	**+0.1**
PTL	**Penteli**	**1.24**	**241**	P	**Pn**	**08 53 02.1**	**+0.1**
APE	**Apeiranthos**	**1.61**	**171**	*e*PN	**Pn**	**08 53 07.5**	**+0.3**
APE	**Apeiranthos**	**1.61**	**171**	*e*Pn	**Pn**	**08 53 07.5**	**+0.3**
SMTH	**Samothraki Isl**	**1.82**	**7**	*e*PN	**Pn**	**08 53 09.9**	**-0.1**
SMTH	**Samothraki Isl**	**1.82**	**7**	*e*Pn	**Pn**	**08 53 09.9**	**-0.1**
DID	**Didima**	**1.95**	**234**	P	**Pn**	**08 53 11.4**	**-0.4**
DID	**Didima**	**1.95**	**234**	P	**Pn**	**08 53 11.4**	**-0.4**
ALN	**Alexandroupoli**	**2.32**	**16**	*e*PN	**Pn**	**08 53 17.1**	**+0.3**
ALN	**Alexandroupoli**	**2.32**	**16**	*e*Pn	**Pn**	**08 53 17.1**	**+0.3**

TAP 17 08:53:28.5, 21.°03N×120.°01E, h71km±1km, **ML3.7, 1D, D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWK1	**Hengchun**	**1.17**	**39**	⇓*i*P	Pn	08 53 49.8	+0.5
	baz=40						
TWK1				S	Sn	08 54 05.3	+0.6
	baz=40						
HEN	**Hengchun**	**1.18**	**35**	*e*P	Pn	08 53 49.2	-0.1
	baz=42						
HEN				S	Sn	08 54 06.3	+1.4
	baz=42						
TSEB	**Hengchuen, Pin**	**1.19**	**44**	P	Pn	08 53 49.5	-0.1
	baz=42						
TSEB				*e*S	Sn	08 54 05.1	-0.2
	baz=42						
TWP	**Hsiaoliuchiu**	**1.34**	**14**	*e*P	Pn	08 53 53.2	+1.7
	baz=14						
TWP				*e*S	Sn	08 54 11.2	+2.4
	baz=14						
SCZT	**Fangliau**	**1.45**	**23**	*e*P	Pn	08 53 53.7	+0.8
	baz=33						
SCZT				*e*S	Sn	08 54 12.1	+0.9
	baz=33						
EAST	**Anshuo**	**1.55**	**30**	*e*P	Pn	08 53 55.8	+1.6
	baz=38						
EAST				*e*S	Sn	08 54 14.5	+0.8
	baz=38						
KAU	**Kaohsiung**	**1.55**	**10**	*e*P	Pn	08 53 55.0	+0.8
	baz=11						
KAU				*e*S	Sn	08 54 15.7	+2.1
	baz=11						
LAY	**Lan-yu**	**1.75**	**55**	*e*P	Pn	08 53 56.3	-0.6
	baz=55						
SSD	**Sandimen**	**1.80**	**19**	*e*P	Pn	08 53 58.7	+1.2
	baz=19						
SSD				*e*S	Sn	08 54 20.5	+1.0
	baz=19						
TWM1	**Shoushan**	**1.82**	**12**	*e*P	Pn	08 54 00.4	+2.5
	baz=2.0						
TWM1				*e*S	Sn	08 54 21.7	+1.5
	baz=2.0						
TWG	**Pinlang**	**2.03**	**29**	*e*P	Pn	08 54 01.5	+0.8
	baz=39						
TWG				*e*S	Sn	08 54 26.1	+0.9
	baz=39						
CHN1	**Nanshi**	**2.19**	**12**	*e*P	Pn	08 54 03.5	+0.6
	baz=13						
CHN1				*e*S	Sn	08 54 29.4	+0.3
	baz=13						
WDGT	**Dungji**	**2.24**	**352**	*e*P	Pn	08 54 05.0	+1.5
	baz=352						
TWK	**Hsinying**	**2.27**	**11**	*e*P	Pn	08 54 05.2	+1.3
	baz=12						
TWK				*e*S	Sn	08 54 30.9	0.0
	baz=12						
WTP	**Ta-pu**	**2.27**	**14**	*e*P	Pn	08 54 05.2	+1.2
	baz=15						
WTP				*e*S	Sn	08 54 32.3	+1.3
	baz=15						
ELDTW	**Lidau**	**2.34**	**23**	*e*P	Pn	08 54 06.5	+1.5
	baz=24						
ELDTW				*e*S	Sn	08 54 32.1	-0.7
	baz=24						
CHN4	**Tsaushan**	**2.37**	**13**	*e*P	Pn	08 54 06.5	+1.3
	baz=13						
CHN4				*e*S	Sn	08 54 33.5	+0.2
	baz=13						
CHKT	**Chengkung**	**2.41**	**31**	*e*P	Pn	08 54 06.8	+1.1
	baz=31						
CHKT				*e*S	Sn	08 54 35.5	+1.3
	baz=31						
ALS	**Alishan**	**2.57**	**16**	*e*P	Pn	08 54 09.3	+1.0
	baz=9.0						
ALS				*e*S	Sn	08 54 39.4	+0.6
	baz=9.0						
TWF1	**Yuli**	**2.60**	**27**	*e*P	Pn	08 54 10.4	+2.1
	baz=40						
TWF1				*e*S	Sn	08 54 40.8	+2.0
	baz=40						
CHN5	**Tsauling**	**2.62**	**13**	*e*P	Pn	08 54 09.8	+1.0
	baz=14						
CHN5				*e*S	Sn	08 54 41.1	+1.4
	baz=14						
WGK	**Gukeng**	**2.69**	**11**	*e*P	Pn	08 54 11.0	+1.5
	baz=11						
WGK				*e*S	Sn	08 54 42.5	+1.5
	baz=11						
EHY	**Hungye**	**2.74**	**26**	*e*P	Pn	08 54 11.8	+1.5
	baz=26						
EHY				*e*S	Sn	08 54 43.2	+0.8
	baz=26						
SMLT	**Sun Moon Lake**	**2.95**	**16**	*e*P	Pn	08 54 15.2	+1.9
	baz=16						
SMLT				*e*S	Sn	08 54 49.4	+1.7
	baz=16						
TYC	**Yuchr**	**2.96**	**15**	*e*P	Pn	08 54 12.7	-0.5
	baz=16						
TYC				*e*S	Sn	08 54 49.3	+1.7
	baz=16						
WHF	**Hehuan Shan**	**3.31**	**20**	*e*P	Pn	08 54 19.4	+0.9
	baz=21						
WHF				*e*S	Sn	08 54 58.7	+1.6
	baz=21						
TWQ1	**Liyutan**	**3.37**	**12**	*e*P	Pn	08 54 19.5	+0.7
	baz=12						
TWQ1				*e*S	Sn	08 55 00.7	+2.9
	baz=12						
TWT	**Tachien**	**3.38**	**18**	*e*P	Pn	08 54 20.8	+1.6
	baz=12						
TWT				*e*S	Sn	08 54 58.8	+0.5
	baz=12						
NNS	**Nan Shan**	**3.62**	**20**	*e*P	Pn	08 54 23.8	+1.5
	baz=20						
NNS				*e*S	Sn	08 55 04.0	0.0
	baz=20						
ENTT	**Nioudou**	**3.86**	**21**	*e*P	Pn	08 54 29.5	+3.9
	baz=12						
ENTT				*e*S	Sn	08 55 10.3	+0.5
	baz=12						

*NEIC **17** 09:07:04.8, 19.°01N×67.°46W, h10km, MD3.1(RSPR), After RSPR.*

RSPR 17 09:07:04.8, 19.°01N×67.°46W, h10km±1km, **MD3.1**/14, **15C-9D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	**0.63**	**149**	⇑*e*P	Pg	09 07 16.2	-0.8
AGPR	**Aguadilla, PR**	**0.63**	**149**	*e*S	Sg	09 07 25.2	-0.2
AGPR	**Aguadilla, PR**	**0.63**	**149**	⇑*e*P	Pg	09 07 16.2	-0.8
AGPR				*e*S	Sg	09 07 25.2	-0.2
MPR	**Mayaguez**	**0.85**	**159**	⇑*e*P	Pg	09 07 19.5	-1.7
MPR	**Mayaguez**	**0.85**	**159**	*e*S	Sg	09 07 31.0	-1.3
MPR	**Mayaguez**	**0.85**	**159**	⇑*e*P	Pg	09 07 19.5	-1.7
MPR				*e*S	Sg	09 07 31.0	-1.3
LSP	**Las Mesas**	**0.90**	**157**	⇑*i*P	Pg	09 07 20.5	-1.8
LSP				*e*S	Sg	09 07 32.6	-1.5
LSP	**Las Mesas**	**0.90**	**157**	*i* Pu	Pg	09 07 20.5	-1.8
LSP				*e*S	Sg	09 07 32.6	-1.5
LRS	**Lares**	**0.92**	**141**	⇑*i*P	Pg	09 07 20.3	-2.3
LRS				*e*S	Sg	09 07 32.5	-2.3
LRS	**Lares**	**0.92**	**141**	*i* Pu	Pg	09 07 20.3	-2.3
LRS				*e*S	Sg	09 07 32.5	-2.3
AOPR	**Arecibo Observ**	**0.94**	**135**	⇑*e*P	Pg	09 07 20.5	-2.4
AOPR	**Arecibo Observ**	**0.94**	**135**	*e*S	Sg	09 07 33.3	-1.9
AOPR	**Arecibo Observ**	**0.94**	**135**	⇑*e*P	Pg	09 07 20.5	-2.4
AOPR				*e*S	Sg	09 07 33.3	-1.9
CRPR	**Cabo Rojo, PR**	**1.05**	**162**	⇓*e*P	Pg	09 07 22.4	-2.6
CRPR	**Cabo Rojo, PR**	**1.05**	**162**	*e*S	Sg	09 07 36.1	-2.6
CRPR	**Cabo Rojo, PR**	**1.05**	**162**	⇓*e*P	Pg	09 07 22.4	-2.6
CRPR				*e*S	Sg	09 07 36.1	-2.6
GBPR	**Guanica, Bosqu**	**1.17**	**152**	⇑*e*P	Pb	09 07 24.3	-2.8
GBPR				*e*S	Sb	09 07 38.9	-3.3
GBPR	**Guanica, Bosqu**	**1.17**	**152**	⇑*e*P	Pb	09 07 24.3	-2.8
GBPR				*e*S	Sb	09 07 38.9	-3.3
CELP	**Cerrillos**	**1.25**	**138**	⇑*e*P	Pn	09 07 25.2	-3.1
CELP	**Cerrillos**	**1.25**	**138**	⇑*e*P	Pn	09 07 25.2	-3.1
OBIP	**Obispado Ponce**	**1.26**	**140**	⇓*e*P	Pn	09 07 25.5	-2.9
OBIP	**Obispado Ponce**	**1.26**	**140**	⇓*e*P	Pn	09 07 25.5	-2.9
SJG	**San Juan**	**1.53**	**126**	⇓*e*P	Pn	09 07 29.1	-3.0
SJG	**San Juan**	**1.53**	**126**	⇓*i*P	Pn	09 07 29.1	-3.0
SJG				*e*S	Sn	09 07 48.2	-3.9
SJG	**San Juan**	**1.53**	**126**	⇓*e*P	Pn	09 07 29.1	-3.0
SJG				*e*S	Sn	09 07 48.0	-4.0
SJG				*e*S	Sb	09 07 48.2	-4.4
CBYP	**Canovanas**	**1.69**	**116**	⇑*e*P	Pn	09 07 31.4	-3.0
CBYP	**Canovanas**	**1.69**	**116**	⇑*e*P	Pn	09 07 31.4	-3.0
SMN1	**Samana, DR**	**1.73**	**276**	⇑*e*P	Pn	09 07 31.9	-3.0
HUMP	**Col San Antoni**	**1.75**	**119**	⇑*e*P	Pn	09 07 32.4	-2.8
HUMP	**Col San Antoni**	**1.75**	**119**	⇑*e*P	Pn	09 07 32.4	-2.8
DR12	**Loma Pena Alta**	**1.84**	**263**	⇓*i*P	Pn	09 07 33.4	-3.1
DR12	**Loma Pena Alta**	**1.84**	**263**	⇓*i*P	Pn	09 07 33.4	-3.1
SDDR	**Presa de Saban**	**3.63**	**270**	*e*Pn	Pn	09 08 04.1	+3.0

*IDC **17** 09:22:56.0±1.3, 36.°30N×22.°30E, h0km, mb3.5/7, mb1 3.6/10, mb

BARS	**Barje**	**6.68**	**356**	*e*Pn	**Pn**	**09 24 37.3**	**+1.6**
GRUS	**Gruza**	**7.85**	**351**	*e*Pn	**Pn**	**09 24 51.9**	**+0.2**
DIVS	**Divibare**	**8.16**	**348**	*e*Pn	**Pn**	**09 24 55.5**	**-0.6**
BRTR	**Keskin Array B**	**9.55**	**65**	Pn	**Pn**	**09 25 17.2**	**+2.0**
	0.1nm,0.3s,baz=246,slow=14,SNR=2.4						
GERES	**GERESS Array B**	**14.22**	**336**	Pn	**Pn**	**09 26 18.0**	**-0.9**
	0.1nm,0.3s,baz=154,slow=16,SNR=4.3						
KBZ	**Khabaz**	**17.41**	**58**	Pn	**P**	**09 27 03.6**	**+2.1**
	0.1nm,0.3s,baz=299,slow=6.5,SNR=3.9						
ESDC	**Sonseca Array**	**21.09**	**288**	P	**P**	**09 27 40.5**	**-1.5**
	0.7nm,0.6s,baz=90,slow=11,SNR=6.0						
HFS	**Hagfors**	**24.66**	**350**	P	**P**	**09 28 16.7**	**-1.3**
	1.6nm,1.0s,baz=167,slow=15,SNR=2.9						
FINES	**FINESS Array B**	**25.43**	**4**	P	**P**	**09 28 22.3**	**-2.6**
	1.0nm,0.8s,baz=163,slow=14,SNR=4.4						
EKA	**Eskdalemuir Ar**	**25.96**	**326**	P	**P**	**09 28 29.0**	**-0.9**
	1.6nm,0.6s,baz=136,slow=8.7,SNR=4.7						
TORD	**Torodi Ar. Bea**	**29.52**	**224**	P	**P**	**09 29 02.7**	**+0.6**
	0.5nm,1.0s,baz=31,slow=10.0,SNR=2.3						
JMIC	**Jan Mayen**	**38.52**	**344**	LR	LR	09 45 26.1	
	comp=Z,20nm,18.8s,baz=248,slow=35						
MKAR	**Makanchi Array**	**45.10**	**57**	P	**P**	**09 31 13.2**	**-0.4**
	0.6nm,0.6s,baz=276,slow=7.3,SNR=7.0						
ZALV	**Zalesovo Beam**	**45.95**	**47**	P	**P**	**09 31 19.7**	**-0.5**
	0.7nm,0.4s,baz=285,slow=7.3,SNR=2.3						
ASAJ	**Asahikawa**	**83.44**	**39**	LR	LR	10 16 56.0	
	comp=Z,32nm,19.0s,baz=27,slow=39						

DHMR 17 09:30:03.7±1.3, 11°36N×42°48E, h6km±16km, ML3.5, 1D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**2.45**	**41**	*i*↓*iP*	Pn	09 30 45.7	+1.2
TRBA				*i* S	Sb	09 31 20.4	+1.2
TRBA				AML	AML	09 31 29.4	
	comp=Z,420nm,0.5s						
UDYN	**Al 'Udayn**	**2.97**	**29**	*i* P	Pb	09 30 54.7	-2.5
UDYN				*i* S	Sb	09 31 33.8	-0.2
UDYN				AML	AML	09 31 47.3	
	comp=E,226nm,0.6s						
LBOS		**3.68**	**47**	*i* P	Pn	09 31 04.5	+2.9
LBOS				*i* S	Sb	09 31 50.6	-4.0
BDHA	**Al Bayda'**	**3.98**	**49**	*i* S	Sb	09 31 58.1	-5.2

*ISK **17** 09:49:43.8, 39.06N×29.76E, h4km, MD3.1*
*DDA **17** 09:49:44.0, 39.06N×29.77E, h11km, MD3.3*
*CSEM **17** 09:49:44.3±0.1, 39.05N×29.78E, h2km, MD3.3, Error ellipse: s-maj=2.4km s-min=2.2km az=112.0*

ISC 17 09:49:44.3±1.1, 39.05N±0.02×29.77E±0.02, h2km±10km, n111, σ0.59/138, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.23**	**279**	*i* P	**Pg**	**09 49 48.7**	**+0.1**
GDZ				*i* S	**Sg**	**09 49 52.4**	**+0.9**
GDZ	**Gediz**	**0.23**	**279**	*i* P	**Pg**	**09 49 48.7**	**+0.1**
GDZ				*i* S	**Sg**	**09 49 52.4**	**+0.9**
ALT	**Altintas**	**0.27**	**89**	*e*PG	**Pg**	**09 49 49.9**	**+0.5**
ALT				*e*SG	**Sg**	**09 49 54.0**	**+1.1**
ALT	**Altintas**	**0.27**	**89**	*e*Pg	**Pg**	**09 49 49.9**	**+0.5**
ALT				*e*Sg	**Sg**	**09 49 54.0**	**+1.1**
TVSB	**Tavsanli**	**0.46**	**329**	*e*PG	**Pg**	**09 49 52.8**	**-0.3**
TVSB				*e*SG	**Sg**	**09 49 59.3**	**+0.2**
TVSB	**Tavsanli**	**0.46**	**329**	*e*Pg	**Pg**	**09 49 52.8**	**-0.3**
TVSB				*e*Sg	**Sg**	**09 49 59.3**	**+0.2**
KHAL	**Karahalli**	**0.71**	**198**	*i* P	**Pg**	**09 49 57.8**	**-0.2**
KHAL				*i* S	**Sg**	**09 50 07.2**	**0.0**
KHAL	**Karahalli**	**0.71**	**198**	*i* P	**Pg**	**09 49 57.8**	**-0.2**
KHAL				*i* S	**Sg**	**09 50 07.2**	**0.0**
KHL	**Karahalli**	**0.75**	**195**	*e*PG	**Pg**	**09 49 58.6**	**-0.1**
KHL				*e*SG	**Sg**	**09 50 07.8**	**-0.6**
KHL	**Karahalli**	**0.75**	**195**	*e*Pg	**Pg**	**09 49 58.6**	**-0.1**
KHL				*e*Sg	**Sg**	**09 50 07.8**	**-0.6**
SHUT	**Suhut-Afyon**	**0.79**	**129**	*e*PG	**Pb**	**09 50 00.3**	**-0.5**
SHUT				*e*SG	**Sb**	**09 50 11.2**	**-0.8**
SHUT	**Suhut-Afyon**	**0.79**	**129**	*e*Pg	**Pb**	**09 50 00.3**	**-0.5**
SHUT				*e*Sg	**Sb**	**09 50 11.2**	**-0.8**
DEMI	**Demirci**	**0.82**	**270**	*i* P	**Pg**	**09 49 59.7**	**-0.2**
DEMI				*i* S	**Sg**	**09 50 10.7**	**+0.2**
DEMI	**Demirci**	**0.82**	**270**	*i* P	**Pg**	**09 49 59.7**	**-0.2**
DEMI				*i* S	**Sg**	**09 50 10.7**	**+0.2**
ESKT	**Eskisehir**	**0.96**	**61**	*e*PG	**Pg**	**09 50 02.4**	**-0.3**
ESKT	**Eskisehir**	**0.96**	**61**	*e*Pg	**Pg**	**09 50 02.4**	**-0.3**
BORA	**Eskisehir**	**0.98**	**33**	*i* P	**Pg**	**09 50 02.6**	**-0.5**
BORA				*i* S	**Sg**	**09 50 16.3**	**+0.4**
BORA	**Eskisehir**	**0.98**	**33**	*i* P	**Pg**	**09 50 02.6**	**-0.5**
BORA				*i* S	**Sg**	**09 50 16.3**	**+0.4**
KULA	**Kula-Manisa**	**1.02**	**238**	*e*PG	**Pg**	**09 50 03.2**	**-0.6**
KULA	**Kula-Manisa**	**1.02**	**238**	*e*Pg	**Pg**	**09 50 03.2**	**-0.6**
DST	**Dursunbey**	**1.05**	**302**	*e*PG	**Pb**	**09 50 04.6**	**-0.5**
DST	**Dursunbey**	**1.05**	**302**	*e*Pg	**Pb**	**09 50 04.6**	**-0.5**
MANT	**Manisa**	**1.10**	**240**	*i* P	**Pg**	**09 50 04.6**	**-0.7**
MANT				*i* S	**Sg**	**09 50 19.3**	**-0.3**
MANT	**Manisa**	**1.10**	**240**	*i* P	**Pg**	**09 50 04.6**	**-0.7**
MANT				*i* S	**Sg**	**09 50 19.3**	**-0.3**
DURS	**Dursunbey**	**1.14**	**299**	*i* P	**Pg**	**09 50 05.6**	**-0.5**
DURS				*i* S	**Sn**	**09 50 23.3**	**-0.4**
DURS	**Dursunbey**	**1.14**	**299**	*i* P	**Pg**	**09 50 05.6**	**-0.5**
DURS				*i* S	**Sn**	**09 50 23.3**	**-0.4**
CAVI	**Cavuskoy**	**1.15**	**3**	*e*PN	**Pg**	**09 50 05.8**	**-0.5**
CAVI	**Cavuskoy**	**1.15**	**3**	*e*Pn	**Pg**	**09 50 05.8**	**-0.5**
ORLT	**Orhaneli**	**1.20**	**326**	*e*PN	**Pg**	**09 50 06.9**	**-0.3**
ORLT	**Orhaneli**	**1.20**	**326**	*e*Pn	**Pg**	**09 50 06.9**	**-0.3**
IZI	**Iznik**	**1.30**	**350**	*e*PN	**Pn**	**09 50 09.4**	**-0.2**
IZI	**Iznik**	**1.30**	**350**	*e*Pn	**Pn**	**09 50 09.4**	**-0.2**
GPA	**Golpazari**	**1.30**	**19**	*e*PN	**Pg**	**09 50 08.8**	**-0.5**
GPA	**Golpazari**	**1.30**	**19**	*e*Pn	**Pg**	**09 50 08.8**	**-0.5**
ISP	**Isparta**	**1.36**	**154**	*e*PN	**Pb**	**09 50 10.5**	**-0.1**
ISP	**Isparta**	**1.36**	**154**	*e*Pn	**Pb**	**09 50 10.5**	**-0.1**
ADVT	**Abdulvahap**	**1.38**	**359**	*e*PN	**Pb**	**09 50 10.5**	**-0.2**
ADVT	**Abdulvahap**	**1.38**	**359**	*e*Pn	**Pb**	**09 50 10.5**	**-0.2**
DENT	**Denizli**	**1.42**	**204**	*e*PN	**Pn**	**09 50 10.7**	**-0.5**
DENT	**Denizli**	**1.42**	**204**	*e*Pn	**Pn**	**09 50 10.7**	**-0.5**
SVRH	**Sivrihisar-ESK**	**1.42**	**73**	*e*PN	**Pn**	**09 50 10.8**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.42**	**73**	*e*Pn	**Pn**	**09 50 10.8**	**-0.4**
GEMT	**Gemlik**	**1.45**	**342**	*e*PN	**Pn**	**09 50 11.1**	**-0.4**
GEMT	**Gemlik**	**1.45**	**342**	*e*Pn	**Pn**	**09 50 11.1**	**-0.4**
DNZL	**Cakiroluk**	**1.47**	**203**	*i* P	**Pn**	**09 50 12.1**	**+0.1**
DNZL				*i* S	**Sn**	**09 50 33.6**	**+1.6**
DNZL	**Cakiroluk**	**1.47**	**203**	*i* P	**Pn**	**09 50 12.1**	**+0.1**
DNZL				*i* S	**Sn**	**09 50 33.6**	**+1.6**
MDNY	**Mudanya-Bursa**	**1.48**	**333**	*e*PN	**Pb**	**09 50 12.1**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.48**	**333**	*e*Pn	**Pb**	**09 50 12.1**	**-0.4**
GULT	**Gulveren**	**1.49**	**23**	*e*PN	**Pn**	**09 50 12.3**	**+0.1**
GULT	**Gulveren**	**1.49**	**23**	*e*Pn	**Pn**	**09 50 12.3**	**+0.1**
AKHS	**Akhisar**	**1.53**	**264**	*i* P	**Pg**	**09 50 13.8**	**+0.2**
AKHS				*i* S	**Sg**	**09 50 33.8**	**+0.3**
AKHS	**Akhisar**	**1.53**	**264**	*i* P	**Pg**	**09 50 13.8**	**+0.2**
AKHS				*i* S	**Sg**	**09 50 33.8**	**+0.3**
AKS	**Akhisar**	**1.53**	**264**	*e*PN	**Pn**	**09 50 12.2**	**-0.4**
AKS	**Akhisar**	**1.53**	**264**	*e*Pn	**Pn**	**09 50 12.3**	**-0.4**
YLV	**Yalova**	**1.54**	**349**	*e*PN	**Pn**	**09 50 12.2**	**-0.7**
YLV	**Yalova**	**1.54**	**349**	*e*Pn	**Pn**	**09 50 12.2**	**-0.7**
BALB	**Balikesir**	**1.57**	**292**	*e*PN	**Pn**	**09 50 13.0**	**-0.2**
BALB	**Balikesir**	**1.57**	**292**	*e*Pn	**Pn**	**09 50 13.0**	**-0.2**
KCTX	**Karacabey (Bur**	**1.63**	**319**	*e*PN	**Pn**	**09 50 14.2**	**+0.2**
KCTX	**Karacabey (Bur**	**1.63**	**319**	*e*Pn	**Pn**	**09 50 14.2**	**+0.2**
ARMT	**Armutlu**	**1.66**	**336**	*e*PN	**Pn**	**09 50 14.4**	**-0.1**
ARMT	**Armutlu**	**1.66**	**336**	*e*Pn	**Pn**	**09 50 14.4**	**-0.1**
SPNC	**Sapanca-Adapaz**	**1.68**	**14**	*e*PN	**Pn**	**09 50 15.1**	**+0.4**
SPNC	**Sapanca-Adapaz**	**1.68**	**14**	*e*Pn	**Pn**	**09 50 15.1**	**+0.4**
BCK	**Bucak**	**1.72**	**158**	*e*PN	**Pn**	**09 50 14.8**	**-0.4**
BCK	**Bucak**	**1.72**	**158**	*e*Pn	**Pn**	**09 50 14.9**	**-0.4**
HRT	**Hereke**	**1.77**	**358**	*e*PN	**Pn**	**09 50 16.1**	**+0.2**
HRT	**Hereke**	**1.77**	**358**	*e*Pn	**Pn**	**09 50 16.1**	**+0.2**
MDUB	**Mudurnu**	**1.79**	**37**	*e*PN	**Pn**	**09 50 16.5**	**+0.1**
MDUB	**Mudurnu**	**1.79**	**37**	*e*Pn	**Pn**	**09 50 16.5**	**+0.1**
BALY	**Balya**	**1.80**	**293**	*i* P	**Pn**	**09 50 16.4**	**0.0**
BALY				*i* S	**Sn**	**09 50 39.7**	**-0.1**
BALY	**Balya**	**1.80**	**293**	*i* P	**Pn**	**09 50 16.4**	**0.0**
BALY				*i* S	**Sn**	**09 50 39.7**	**-0.1**
BUY	**Buyukada**	**1.86**	**345**	*e*PN	**Pn**	**09 50 17.6**	**+0.5**
BUY	**Buyukada**	**1.86**	**345**	*e*Pn	**Pn**	**09 50 17.7**	**+0.5**
GONE	**Gonen-Balikesi**	**1.89**	**302**	*e*PN	**Pn**	**09 50 18.2**	**+0.7**
GONE	**Gonen-Balikesi**	**1.89**	**302**	*e*Pn	**Pn**	**09 50 18.2**	**+0.7**
BNT	**Bandirma**	**1.93**	**313**	*e*PN	**Pn**	**09 50 18.1**	**0.0**
BNT	**Bandirma**	**1.93**	**313**	*e*Pn	**Pn**	**09 50 18.1**	**0.0**
AYDN	**Tasoluk**	**2.03**	**227**	*i* P	**Pb**	**09 50 22.3**	**+0.3**
AYDN				*i* S	**Sg**	**09 50 50.5**	**+1.0**
IZM	**Izmir**	**2.06**	**252**	*e*PN	**Pn**	**09 50 20.0**	**0.0**
IZM	**Izmir**	**2.06**	**252**	*e*Pn	**Pn**	**09 50 20.0**	**0.0**
ISK	**Istanbul-Kandi**	**2.08**	**345**	*e*PN	**Pn**	**09 50 20.7**	**+0.5**
ISK	**Istanbul-Kandi**	**2.08**	**345**	*e*Pn	**Pn**	**09 50 20.7**	**+0.5**
SILT	**Sile**	**2.10**	**357**	*e*PN	**Pn**	**09 50 21.2**	**+0.8**
SILT	**Sile**	**2.10**	**357**	*e*Pn	**Pn**	**09 50 21.2**	**+0.8**
BLCB	**Balcova**	**2.23**	**253**	*e*PN	**Pn**	**09 50 23.0**	**+0.7**
BLCB	**Balcova**	**2.23**	**253**	*e*Pn	**Pn**	**09 50 23.0**	**+0.7**
BGKT	**Bogazkoy**	**2.26**	**341**	*e*PN	**Pn**	**09 50 22.6**	**0.0**
BGKT	**Bogazkoy**	**2.26**	**341**	*e*Pn	**Pn**	**09 50 22.6**	**0.0**
MRMT	**Marmara Adasi**	**2.28**	**313**	*e*PN	**Pn**	**09 50 23.2**	**+0.3**
MRMT	**Marmara Adasi**	**2.28**	**313**	*e*Pn	**Pn**	**09 50 23.3**	**+0.3**
KRBG	**Karabiga-Canak**	**2.33**	**306**	*e*PN	**Pn**	**09 50 24.2**	**+0.6**
KRBG	**Karabiga-Canak**	**2.33**	**306**	*e*Pn	**Pn**	**09 50 24.2**	**+0.6**
CTKS	**Kestanelik-??a**	**2.38**	**337**	*e*PN	**Pn**	**09 50 25.4**	**+1.0**
CTKS	**Kestanelik-??a**	**2.38**	**337**	*e*Pn	**Pn**	**09 50 25.4**	**+1.0**
SLVT	**Silivri**	**2.48**	**332**	*e*PN	**Pn**	**09 50 26.5**	**+0.8**
SLVT	**Silivri**	**2.48**	**332**	*e*Pn	**Pn**	**09 50 26.5**	**+0.8**
RKY	**Sarkoy-Tekirda**	**2.58**	**310**	*e*PN	**Pn**	**09 50 27.9**	**+0.9**
RKY	**Sarkoy-Tekirda**	**2.58**	**310**	*e*Pn	**Pn**	**09 50 27.9**	**+0.9**
MFT	**Murefte**	**2.58**	**313**	*e*PN	**Pn**	**09 50 27.9**	**+0.8**
MFT	**Murefte**	**2.58**	**313**	*e*Pn	**Pn**	**09 50 27.9**	**+0.8**
LPK	**Lapseki**	**2.67**	**301**	*e*PN	**Pn**	**09 50 29.1**	**+0.9**
LPK	**Lapseki**	**2.67**	**301**	*e*Pn	**Pn**	**09 50 29.1**	**+0.9**
EZN	**Ezine**	**2.77**	**287**	*e*PN	**Pn**	**09 50 30.9**	**+1.3**
EZN	**Ezine**	**2.77**	**287**	*e*Pn	**Pn**	**09 50 31.0**	**+1.3**
GELI	**Tayfur-Gelibol**	**2.87**	**299**	*e*PN	**Pn**	**09 50 32.2**	**+1.1**
GELI	**Tayfur-Gelibol**	**2.87**	**299**	*e*Pn	**Pn**	**09 50 32.2**	**+1.1**
ERIK	**Erikli-Kesan**	**2.98**	**304**	*e*PN	**Pn**	**09 50 33.5**	**+1.0**
ERIK	**Erikli-Kesan**	**2.98**	**304**	*e*Pn	**Pn**	**09 50 33.5**	**+1.0**
EDRB	**Edirne**	**3.62**	**321**	*e*PN	**Pn**	**09 50 42.5**	**+1.2**
EDRB	**Edirne**	**3.62**	**321**	*e*Pn	**Pn**	**09 50 42.5**	**+1.2**

*BJI **17** 09:58:30.7, 56.10N×151.90W, h5km, mB4.9/5, mb4.7/6, Ms4.8/3, Ms7.4.4/2*
*NEIC **17** 09:58:32.8, 56.08N×151.94W, h4km, mb4.3/9, ML3.8(AEIC), After AEIC.*
*IDC **17** 09:58:35.0±0.8, 56.40N×152.41W, h0km, mb4.1/19, mb1 4.3/21, mb1mx4.2/29, mbtmp4.1/21, ML3.5/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/34, Error ellipse: s-maj=22.1km s-min=12.5km az=31.0*
*ISCJB **17** 09:58:36.3±1.1, 56.46N±0.04×152.22W±0.05, h20km±7km, mb4.2/36, MS3.6/7, Error ellipse: s-maj=6.9km s-min=4.5km az=175.4*
*MOS **17** 09:58:38.8±1.1, 56.59N×152.41W, h33km, mb4.5/14, Error ellipse: s-maj=18.6km s-min=6.2km az=88.8*

ISC 17 09:58:37.7±0.5, 56.37N±0.06×152.33W±0.04, h21km±4km, n142, σ1.59/159, mb4.3/36, MS3.7/7, 4C-2D, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**1.00**	**329**	P	**Pb**	**09 58 55.2**	**-1.1**
OHAK				S	**Sn**	**09 59 14.6**	**+4.6**
KDAK	**Kodiak Island**	**1.42**	**355**	P	**Pn**	**09 59 01.2**	**-1.0**
KDAK				Sn	**Sn**	**09 59 18.9**	**-1.4**
KDAK				S	**Sb**	**09 59 25.2**	**+4.2**
KDAK	**Kodiak Island**	**1.42**	**355**	Pn	**Pn**	**09 59 01.2**	**-1.0**
	24nm,0.3s,baz=186,slow=9.1,SNR=132						
KDAK				Sn	**Sn**	**09 59 18.9**	**-1.4**
	89nm,0.3s,baz=192,slow=20,SNR=17						
KABR	**Katmai Barrier**	**2.27**	**322**	P	**Pn**	**09 59 14.5**	**+0.4**
KAWH	**Katmai**	**2.42**	**327**	P	**Pn**	**09 59 16.7**	**+0.7**
KAKN	**Katmai Knife C**	**2.43**	**324**	P	**Pn**	**09 59 17.1**	**+0.9**
KCE	**Katmai Mt Cerb**	**2.43**	**322**	P	**Pn**	**09 59 17.2**	**+1.0**
KCG	**Knife Ck. Glac**	**2.46**	**323**	P	**Pn**	**09 59 17.3**	**+0.8**
KABU	**Katmai Buttres**	**2.49**	**321**	P	**Pn**	**09 59 17.7**	**+0.7**
FOSS	**Fourpeaked Sta**	**2.54**	**344**	P	**Pn**	**09 59 18.3**	**+0.6**
FONW	**Fourpeaked Sta**	**2.61**	**342**	P	**Pn**	**09 59 19.6**	**+0.9**
KELA	**Mount Kelaz**	**2.77**	**320**	P	**Pn**	**09 59 21.6**	**+0.6**
MCNL	**McNeil River**	**3.02**	**340**	P	**Pn**	**09 59 25.2**	**+1.0**
AUW	**Augustine West**	**3.07**	**349**	P	**Pn**	**09 59 25.9**	**+1.1**
AUNW	**Augustine NWes**	**3.08**	**349**	P	**Pn**	**09 59 26.0**	**+1.1**
ANPK	**Aniakchak Peak**	**3.24**	**281**	P	**Pn**	**09 59 27.2**	**-0.1**
ANNW	**Aniakchak Nort**	**3.30**	**283**	P	**Pn**	**09 59 28.4**	**+0.2**
ANNW				S	**Sn**	**10 00 08.6**	**+1.8**
OPT	**Oil Point**	**3.32**	**352**	P	**Pn**	**09 59 29.2**	**+0.8**
CHGN	**Chignik**	**3.39**	**271**	*e*Pn	**Pn**	**09 59 29.3**	**-1.0**
BRLK	**Bradley Lake**	**3.49**	**112**	P	**Pn**	**09 59 29.0**	**-1.7**
VNHG	**Veniaminof 1**	**3.81**	**271**	P	**Pn**	**09 59 35.5**	**+0.3**
VNHG				S	**Sn**	**10 00 19.9**	**+0.6**
SEW	**Seward**	**4.04**	**21**	P	**Pn**	**09 59 35.7**	**-2.5**
RSO	**Redoubt South**	**4.11**	**357**	*e*Pn	**Pn**	**09 59 39.0**	**-0.3**
DFR	**Drift River**	**4.24**	**358**	P	**Pn**	**09 59 40.7**	**-0.3**
SDPT	**Sand Point**	**4.70**	**261**	P	**Pn**	**09 59 46.5**	**-0.8**
SDPT				S	**Sn**	**10 00 38.4**	**-2.7**
SPU	**Mount Spurr**	**4.83**	**2**	P	**Pn**	**09 59 48.6**	**-0.5**
CKL	**Chakachamna La**	**4.84**	**360**	P	**Pn**	**09 59 48.5**	**-0.9**
SVW2	**Sparrevohn**	**5.03**	**342**	P	**Pn**	**09 59 51.9**	**+0.1**
STLK	**Strandline Lak**	**5.15**	**3**	P	**Pn**	**09 59 52.9**	**-0.6**
EYAK	**Cordova Ski Ar**	**5.43**	**37**	P	**Pn**	**09 59 55.6**	**-1.7**
PMR	**Palmer**	**5.49**	**16**	P	**Pn**	**09 59 56.2**	**-1.9**
PMR	**Palmer**	**5.49**	**16**	P	**Pn**	**09 59 56.2**	**-1.9**
VLZ	**Valdez**	**5.70**	**31**	P	**Pn**	**09 59 59.4**	**-1.6**
SML	**Sawmill**	**5.83**	**19**	P	**Pn**	**10 00 01.3**	**-1.5**
SML	**Sawmill**	**5.83**	**19**	P	**Pn**	**10 00 01.5**	**-1.5**
DIV	**Divide**	**5.86**	**33**	P	**Pn**	**10 00 01.6**	**-1.7**
PPLA	**Purkeypile**	**6.54**	**1**	P	**Pn**	**10 00 11.8**	**-0.9**
VRDI	**Verde Repeater**	**6.70**	**40**	P	Pn	10 00 11.6	-3.4
VRDI				S	Sn	10 01 23.5	-7.2
TT01	**Tatalina**	**6.81**	**346**	P	**Pn**	**10 00 15.5**	**-0.8**
TRF	**Thorofare Moun**	**7.17**	**7**	*e*Pn	**Pn**	**10 00 19.8**	**-1.6**
TRF				*e*Sn	**Sn**	**10 01 44.5**	**+2.2**
PAX	**Paxson**	**7.47**	**25**	*e*P	**Pn**	**10 00 25.4**	**0.0**
PAX	**Paxson**	**7.47**	**25**	*e*Pn	**Pn**	**10 00 25.4**	**0.0**
MCK	**McKinley**	**7.58**	**12**	*e*P	**Pn**	**10 00 27.0**	**+0.2**
MCK				*e*		10 01 48.5	
MCK	**McKinley**	**7.58**	**12**	*e*Pn	**Pn**	**10 00 27.0**	**+0.2**
MCK				*e*Sn	**Sn**	**10 01 48.5**	**-3.4**
PNL	**Peninsula**	**7.62**	**59**	*e*Pn	**Pn**	**10 00 26.4**	**-1.0**
	39nm,0.3s						
MENT	**Mentasta**	**7.89**	**30**	*e*Pn	**Pn**	**10 00 30.4**	**-0.7**
DOT	**Dot Lake**	**8.38**	**26**	*e*Pn	**Pn**	**10 00 38.2**	**+0.4**
COLA	**College**	**8.81**	**13**	*e*P	**Pn**	**10 00 42.2**	**-1.4**
COLA	**College**	**8.81**	**13**	*e*Pn	**Pn**	**10 00 42.2**	**-1.4**
ILAR	**Eielson Array**	**8.84**	**15**	Pn	**Pn**	**10 00 42.9**	**-1.1**
ILAR				Sn	**Sn**	**10 02 16.9**	**-6.0**
ILAR	**Eielson Array**	**8.84**	**15**	Pn	**Pn**	**10 00 42.9**	**-1.1**
	2.4nm,0.3s,baz=204,slow=10,SNR=156						
ILAR				Sn	**Sn**	**10 02 16.9**	**-6.0**
	0.3nm,0.3s,baz=202,slow=24,SNR=3.5						
SKAG	**Skagway**	**9.56**	**64**	*e*Pn	**Pn**	**10 00 54.1**	**+0.3**
EGAK	**Eagle**	**10.04**	**28**	*e*Pn	**Pn**	**10 01 00.3**	**-0.2**
COLD	**Coldfoot**	**10.94**	**4**	*e*Pn	**Pn**	**10 01 11.3**	**-1.4**
DIB	**Dawson Inlet,**	**11.88**	**97**	T	T	10 13 23.4	
DLBC	**Dease Lake**	**12.19**	**71**	Pn	**Pn**	**10 01 31.2**	**+1.3**
DLBC	**Dease Lake**	**12.19**	**71**	Pn	**Pn**	**10 01 31.2**	**+1.3**
	0.2nm,0.3s,baz=239,slow=18,SNR=2.5						
INK	**Inuvik**	**14.72**	**28**	Pn	**Pn**	**10 02 02.5**	**-1.8**
INK	**Inuvik**	**14.72**	**28**	Pn	**Pn**	**10 02 02.5**	**-1.8**
	0.1nm,0.3s,baz=213,slow=11,SNR=4.7						
INK				LR	LR	10 08 31.6	
	comp=Z,322nm,18.4s,baz=240,slow=40						
YKW3	**Yellowknife Ar**	**19.90**	**56**	*e*P	**P**	**10 03 06.9**	**-0.5**
	0.3nm,1.4s						
YKA	**Yellowknife Ar**	**19.90**	**57**	P	**P**	**10 03 07.8**	**+0.4**
YKA	**Yellowknife Ar**	**19.90**	**57**	P	**P**	**10 03 07.8**	**+0.4**
	0.1nm,0.3s,baz=271,slow=11,SNR=17						
BILL	**Bilibino**	**22.04**	**318**	*c* *iP*	**P**	**10 03 30.2**	**-0.3**
BILL				*i*		10 03 46.1	
BILL				*e*		10 03 52.0	
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
BILL	**Bilibino**	**22.04**	**318**	*e*P	**P**	**10 03 29.9**	**-0.6**
	comp=Z,32nm,1.4s						
NEW	**Newport**	**22.79**	**96**	P	**P**	**10 03 39.5**	**+0.9**
NEW	**Newport**	**22.79**	**96**	P	**P**	**10 03 39.5**	**+0.9**
	comp=Z,0.9nm,0.5s,baz=326,slow=5.7,SNR=4.5						
YBH	**Yreka Blue Hor**	**24.07**	**115**	P	**P**	**10 03 53.3**	**+1.8**
YBH	**Yreka Blue Hor**	**24.07**	**115**	P	**P**	**10 03 53.3**	**+1.8**
	comp=Z,2.5nm,0.8s,baz=286,slow=3.0,SNR=5.8						
YBH				LR	LR	10 11 13.1	
	comp=Z,77nm,18.8s,baz=349,slow=31						
WVOR	**Wild Horse Val**	**25.67**	**109**	*e*P	**P**	**10 04 07.9**	**+1.9**
WVOR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WVOR	**Wild Horse Val**	**25.67**	**109**	*e*P	**P**	**10 04 07.9**	**+1.9**
	comp=Z,7.8nm,1.3s						

PETK	**Petropavlovsk-**	**28.52**	**285**	P	**P**	**10 04 31.3**	**0.0**
PETK	**Petropavlovsk-**	**28.52**	**285**	P	**P**	**10 04 31.3**	**0.0**
PETK	**Petropavlovsk-**	**28.52**	**285**	P	**P**	**10 04 31.3**	**0.0**
	comp=Z,0.9nm,0.5s,baz=92,slow=11,SNR=7.7						
NVAR	**Mina Array Bea**	**28.78**	**114**	P	**P**	**10 04 35.4**	**+1.4**
NVAR	**Mina Array Bea**	**28.78**	**114**	P	**P**	**10 04 35.4**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=304,slow=9.3,SNR=12						
PDAR	**Pinedale Array**	**30.35**	**98**	P	**P**	**10 04 47.7**	**-0.3**
PDAR	**Pinedale Array**	**30.35**	**98**	P	**P**	**10 04 47.7**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=304,slow=4.3,SNR=9.1						
MVU	**Marysvale**	**31.90**	**107**	*e*P	**P**	**10 05 03.9**	**+2.2**
	comp=Z,3.2nm,1.4s						
ULM	**Lac du Bonnet**	**33.44**	**76**	LR	LR	10 19 02.3	
	comp=Z,71nm,19.5s,baz=155,slow=37						
TIXI	**Tiksi**	**34.68**	**327**	*ce*P	**P**	**10 05 24.8**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
EYMN	**Ely**	**37.12**	**77**	*e*P	**P**	**10 05 46.9**	**+0.5**
	comp=Z,5.8nm,0.7s						
WMOK	**Wichita Mounta**	**41.96**	**98**	*e*P	**P**	**10 06 27.8**	**+0.9**
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WMOK	**Wichita Mounta**	**41.96**	**98**	*e*P	**P**	**10 06

*ISK **17** 10:00:51.6, 39.07N×29.74E, h8km, MD2.6*
*ISCJB **17** 10:00:52.0±0.5, 39.04N±0.03×29.77E±0.03, h4km±5km, Error ellipse: s-maj=5.3km s-min=3.7km az=166.6*
*DDA **17** 10:00:52.2, 39.03N×29.77E, h7km, MD2.9*
*CSEM **17** 10:00:52.2±0.1, 39.05N×29.76E, h2km, MD2.9, Error ellipse: s-maj=2.2km s-min=1.6km az=152.0*

ISC 17 10:00:52.1±0.9, 39.05N±0.03×29.75E±0.02, h14km±7km, n26, σ0.66/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.21**	**281**	*i* P	**Pg**	**10 00 56.9**	**0.0**
GDZ				*i* S	**Sg**	**10 01 00.3**	**+0.1**
GDZ	**Gediz**	**0.21**	**281**	*i* P	**Pg**	**10 00 56.9**	**0.0**
GDZ				*i* S	**Sg**	**10 01 00.3**	**+0.1**
ALT	**Altintas**	**0.28**	**88**	*e*PG	**Pg**	**10 00 57.9**	**-0.2**
ALT				*e*SG	**Sg**	**10 01 02.5**	**+0.3**
ALT	**Altintas**	**0.28**	**88**	*e*Pg	**Pg**	**10 00 57.9**	**-0.2**
ALT				*e*Sg	**Sg**	**10 01 02.5**	**+0.3**
TVSB	**Tavsanli**	**0.46**	**331**	*e*PG	**Pg**	**10 01 00.9**	**-0.4**
TVSB				*e*SG	**Sg**	**10 01 07.2**	**-0.3**
TVSB	**Tavsanli**	**0.46**	**331**	*e*Pg	**Pg**	**10 01 00.9**	**-0.4**
TVSB				*e*Sg	**Sg**	**10 01 07.2**	**-0.3**
KHAL	**Karahalli**	**0.70**	**197**	*i* P	**Pb**	**10 01 06.4**	**+0.2**
KHAL				*i* S	**Sg**	**10 01 15.1**	**0.0**
KHAL	**Karahalli**	**0.70**	**197**	*i* P	**Pb**	**10 01 06.4**	**+0.2**
KHAL				*i* S	**Sg**	**10 01 15.1**	**0.0**
KHL	**Karahalli**	**0.74**	**194**	*e*PG	**Pb**	**10 01 06.7**	**-0.2**
KHL	**Karahalli**	**0.74**	**194**	*e*Pg	**Pb**	**10 01 06.7**	**-0.2**
DEMI	**Demirci**	**0.80**	**270**	*i* P	**Pb**	**10 01 08.2**	**-0.8**
DEMI				*i* S	**Sb**	**10 01 19.4**	**+0.8**
DEMI	**Demirci**	**0.80**	**270**	*i* P	**Pn**	**10 01 08.2**	**-0.8**
DEMI				*i* S	**Sb**	**10 01 19.4**	**+0.8**
SEYT	**Eskypehyr**	**0.98**	**61**	*i* P	**Pb**	**10 01 10.9**	**+0.1**
SEYT				*i* S	**Sg**	**10 01 22.8**	**-1.0**
SEYT	**Eskypehyr**	**0.98**	**61**	*i* P	**Pb**	**10 01 10.9**	**+0.1**
SEYT				*i* S	**Sg**	**10 01 22.8**	**-1.0**
BORA	**Eskisehir**	**0.99**	**33**	*i* P	**Pb**	**10 01 11.2**	**0.0**
BORA				*i* S	**Sb**	**10 01 24.5**	**+0.4**
BORA	**Eskisehir**	**0.99**	**33**	*i* P	**Pb**	**10 01 11.2**	**0.0**
BORA				*i* S	**Sb**	**10 01 24.5**	**+0.4**
KULA	**Kula-Manisa**	**1.00**	**238**	*e*PG	**Pn**	**10 01 11.2**	**-0.5**
KULA	**Kula-Manisa**	**1.00**	**238**	*e*Pg	**Pn**	**10 01 11.3**	**-0.5**
MANT	**Manisa**	**1.08**	**240**	*i* P	**Pn**	**10 01 13.2**	**+0.2**
MANT				*i* S	**Sn**	**10 01 27.3**	**-0.6**
MANT	**Manisa**	**1.08**	**240**	*i* P	**Pn**	**10 01 13.2**	**+0.2**
MANT				*i* S	**Sn**	**10 01 27.3**	**-0.6**
DURS	**Dursunbey**	**1.13**	**300**	*i* P	**Pn**	**10 01 14.0**	**+0.4**
DURS				*i* S	**Sn**	**10 01 31.6**	**+2.6**
DURS	**Dursunbey**	**1.13**	**300**	*i* P	**Pn**	**10 01 14.0**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.44**	**73**	*e*PN	**Pb**	**10 01 18.6**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.44**	**73**	*e*Pn	**Pb**	**10 01 18.7**	**0.0**
BALY	**Balya**	**1.79**	**293**	*i* P	**Pb**	**10 01 24.6**	**0.0**
BALY				*i* S	**Sg**	**10 01 48.4**	**-1.3**
BALY	**Balya**	**1.79**	**293**	*i* P	**Pb**	**10 01 24.6**	**0.0**
BALY				*i* S	**Sg**	**10 01 48.4**	**-1.3**

IDC 17 10:04:44.5±7.2, 6.55S×146.80E, h118km±72km, mb3.1/2, mb1 3.1/4, mb1mx3.0/19, mbtmp3.0/4, Error ellipse: s-maj=83.7km s-min=51.4km az=132.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.86**	**173**	P	Pn	10 05 28.3	-0.6
	2.7nm,0.3s,baz=349,slow=16,SNR=7.6						
PMG				S	Sn	10 06 03.9	+0.7
	4.4nm,0.3s,baz=323,slow=20,SNR=9.0						
WRA	**Warramunga Arr**	**17.99**	**221**	P	P	10 08 45.7	-0.4
	0.1nm,0.3s,baz=39,slow=11,SNR=5.9						
ASAR	**Alice Springs**	**21.06**	**215**	P	P	10 09 19.8	+0.5
	0.5nm,0.7s,baz=52,slow=8.9,SNR=6.3						
FITZ	**Fitzroy Crossi**	**23.61**	**239**	P	P	10 09 44.1	-0.9
	2.2nm,0.8s,baz=63,slow=11,SNR=3.9						
TORD	**Torodi Ar. Bea**	**145.03**	**284**	PKPbc	PKPbc	10 24 08.2	-0.3
	0.4nm,0.4s,baz=72,slow=2.9,SNR=6.7						

*NSSC **17** 10:09:09.1±1.4, 35.97N×36.68E, h0km±13km, ML2.0*
*CSEM **17** 10:09:10.5±0.6, 35.89N×36.67E, h2km, ML2.0, Error ellipse: s-maj=13.3km s-min=8.2km az=107.0*
*DDA **17** 10:09:11.2, 36.02N×36.70E, h6km, MD2.9*

ISC 17 10:09:09.5±1.4, 35.96N±0.03×36.69E±0.05, h0km±13km, n13, σ0.70/26, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTCH	**Batrach**	**0.20**	**293**	*e*P	**Pg**	**10 09 12.9**	**-0.4**
BTCH				*e*S	**Sg**	**10 09 15.7**	**-0.3**
BTCH				AML	AML	10 09 19.2	
	comp=N,923nm,0.3s						
BTCH				AML	AML	10 09 20.5	
	comp=E,821nm,0.7s						
BTCH	**Batrach**	**0.20**	**293**	*e*P	**Pg**	**10 09 12.9**	**-0.4**
	SNR=92						
BTCH				*e*S	**Sg**	**10 09 15.6**	**-0.3**
	comp=E,821nm,0.7s,SNR=92						
YAYL	**Yayladag**	**0.48**	**279**	*i* P	**Pb**	**10 09 19.8**	**-1.0**
YAYL				*i* S	**Sb**	**10 09 28.5**	**+0.1**
YAYL	**Yayladag**	**0.48**	**279**	*i* P	**Pb**	**10 09 19.8**	**-1.0**
YAYL				*i* S	**Sb**	**10 09 28.5**	**+0.1**
WRDH	**Warideh**	**0.50**	**207**	*e*P	**Pg**	**10 09 18.1**	**-1.0**
WRDH				*e*S	**Sg**	**10 09 26.6**	**+1.0**
WRDH				AML	AML	10 09 30.1	
	comp=E,63nm,0.3s						
WRDH				AML	AML	10 09 34.5	
	comp=N,81nm,0.6s						
WRDH	**Warideh**	**0.50**	**207**	*e*P	**Pg**	**10 09 18.1**	**-1.0**
	SNR=91						
WRDH				*e*S	**Sg**	**10 09 26.6**	**+1.0**
	comp=N,81nm,0.6s,SNR=59						
ARNB	**Al Arnab**	**0.59**	**261**	*e*P	**Pg**	**10 09 21.4**	**+0.7**
ARNB				*e*S	**Sg**	**10 09 29.5**	**+1.1**
ARNB				AML	AML	10 09 33.1	
	comp=N,51nm,0.5s						
ARNB				AML	AML	10 09 35.2	
	comp=E,44nm,0.3s						
ARNB	**Al Arnab**	**0.59**	**261**	*e*P	**Pg**	**10 09 21.4**	**+0.7**
	SNR=91						
ARNB				*e*S	**Sg**	**10 09 29.5**	**+1.1**
	comp=E,44nm,0.3s,SNR=59						
KUZU	**Kuzuini**	**0.87**	**21**	*i* P	**Pn**	**10 09 29.3**	**+0.2**
KUZU				*i* S	**Sn**	**10 09 42.8**	**+0.3**
KUZU	**Kuzuini**	**0.87**	**21**	*i* P	**Pn**	**10 09 29.3**	**+0.2**
KUZU				*i* S	**Sn**	**10 09 42.8**	**+0.3**
BIDA	**Albida**	**0.99**	**198**	*e*P	**Pg**	**10 09 28.4**	**+0.1**
BIDA				*e*S	**Sg**	**10 09 41.6**	**+0.4**
BIDA	**Albida**	**0.99**	**198**	*e*P	**Pg**	**10 09 28.5**	**+0.1**
	SNR=67						
BIDA				*e*S	**Sg**	**10 09 41.6**	**+0.4**
	SNR=59						
AYKD	**Aykdinkavak**	**1.46**	**4**	*i* P	**Pg**	**10 09 37.9**	**+0.5**
AYKD				*i* S	**Sg**	**10 09 56.3**	**0.0**

*ISK **17** 10:17:46.9, 39.07N×29.75E, h5km, MD3.2*
*DDA **17** 10:17:46.9, 39.06N×29.75E, h7km, MD3.2*
*CSEM **17** 10:17:47.3±0.1, 39.07N×29.77E, h2km, MD3.2, Error ellipse: s-maj=2.3km s-min=2.1km az=9.0*

ISC 17 10:17:47.5±0.9, 39.07N±0.02×29.77E±0.02, h8km±8km, n69, σ0.56/100, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.22**	**276**	*i* P	**Pg**	**10 17 51.9**	**-0.1**
GDZ				*i* S	**Sg**	**10 17 54.9**	**-0.2**
GDZ	**Gediz**	**0.22**	**276**	*i* P	**Pg**	**10 17 51.9**	**-0.1**
GDZ				*i* S	**Sg**	**10 17 54.9**	**-0.2**
ALT	**Altintas**	**0.27**	**92**	*e*PG	**Pg**	**10 17 52.9**	**0.0**
ALT				*e*SG	**Sg**	**10 17 56.9**	**+0.4**
ALT	**Altintas**	**0.27**	**92**	*e*Pg	**Pg**	**10 17 52.9**	**0.0**
ALT				*e*Sg	**Sg**	**10 17 56.9**	**+0.4**
TVSB	**Tavsanli**	**0.45**	**328**	*e*PG	**Pg**	**10 17 56.0**	**-0.3**
TVSB				*e*SG	**Sg**	**10 18 02.3**	**+0.1**
TVSB	**Tavsanli**	**0.45**	**328**	*e*Pg	**Pg**	**10 17 56.0**	**-0.3**
TVSB				*e*Sg	**Sg**	**10 18 02.3**	**+0.1**
KHAL	**Karahalli**	**0.73**	**197**	*i* P	**Pg**	**10 18 01.0**	**-0.5**
KHAL				*i* S	**Sg**	**10 18 10.3**	**-0.7**
KHAL	**Karahalli**	**0.73**	**197**	*i* P	**Pg**	**10 18 01.0**	**-0.5**
KHAL				*i* S	**Sg**	**10 18 10.3**	**-0.7**
KHL	**Karahalli**	**0.76**	**194**	*e*PG	**Pg**	**10 18 01.7**	**-0.5**
KHL	**Karahalli**	**0.76**	**194**	*e*Pg	**Pg**	**10 18 01.7**	**-0.5**
SHUT	**Suhut-Afyon**	**0.80**	**130**	*e*PG	**Pb**	**10 18 03.7**	**-0.1**
SHUT				*e*SG	**Sb**	**10 18 14.5**	**-0.3**
SHUT	**Suhut-Afyon**	**0.80**	**130**	*e*Pg	**Pb**	**10 18 03.7**	**-0.1**
SHUT				*e*Sg	**Sb**	**10 18 14.5**	**-0.3**
DEMI	**Demirci**	**0.82**	**269**	*i* P	**Pg**	**10 18 02.9**	**-0.3**
DEMI				*i* S	**Sg**	**10 18 13.9**	**0.0**
DEMI	**Demirci**	**0.82**	**269**	*i* P	**Pg**	**10 18 02.9**	**-0.3**
DEMI				*i* S	**Sg**	**10 18 13.9**	**0.0**
ESKT	**Eskisehir**	**0.96**	**61**	*e*PG	**Pg**	**10 18 05.5**	**-0.4**
ESKT	**Eskisehir**	**0.96**	**61**	*e*Pg	**Pg**	**10 18 05.5**	**-0.4**
SEYT	**Eskypehyr**	**0.96**	**61**	*i* P	**Pg**	**10 18 05.6**	**-0.3**
SEYT				*i* S	**Sg**	**10 18 18.1**	**-0.2**
SEYT	**Eskypehyr**	**0.96**	**61**	*i* P	**Pg**	**10 18 05.6**	**-0.3**
SEYT				*i* S	**Sg**	**10 18 18.1**	**-0.2**
BORA	**Eskisehir**	**0.97**	**33**	*i* P	**Pg**	**10 18 05.9**	**-0.3**
BORA				*i* S	**Sg**	**10 18 19.2**	**+0.4**
BORA	**Eskisehir**	**0.97**	**33**	*i* P	**Pg**	**10 18 05.9**	**-0.3**
BORA				*i* S	**Sg**	**10 18 19.2**	**+0.4**
KULA	**Kula-Manisa**	**1.02**	**238**	*e*PG	**Pg**	**10 18 06.3**	**-0.9**
KULA	**Kula-Manisa**	**1.02**	**238**	*e*Pg	**Pg**	**10 18 06.3**	**-0.9**
DST	**Dursunbey**	**1.04**	**302**	*e*PG	**Pg**	**10 18 07.1**	**-0.4**
DST				*e*SG	**Sb**	**10 18 21.7**	**0.0**
DST	**Dursunbey**	**1.04**	**302**	*e*Pg	**Pg**	**10 18 07.1**	**-0.4**
DST				*e*Sg	**Sb**	**10 18 21.7**	**0.0**
MANT	**Manisa**	**1.10**	**239**	*i* P	**Pg**	**10 18 07.9**	**-0.8**
MANT	**Manisa**	**1.10**	**239**	*i* P	**Pg**	**10 18 07.9**	**-0.8**
DURS	**Dursunbey**	**1.14**	**299**	*i* P	**Pg**	**10 18 08.4**	**-0.9**
DURS				*i* S	**Sn**	**10 18 26.3**	**+0.6**
DURS	**Dursunbey**	**1.14**	**299**	*i* P	**Pg**	**10 18 08.4**	**-0.9**
DURS				*i* S	**Sn**	**10 18 26.3**	**+0.6**
CAVI	**Cavuskoy**	**1.14**	**3**	*e*PN	**Pg**	**10 18 09.1**	**-0.3**
CAVI				*e*SN	**Sn**	**10 18 25.1**	**-0.6**
CAVI	**Cavuskoy**	**1.14**	**3**	*e*Pn	**Pg**	**10 18 09.1**	**-0.3**
CAVI				*e*Sn	**Sn**	**10 18 25.1**	**-0.6**
ORLT	**Orhaneli**	**1.19**	**326**	*e*PN	**Pg**	**10 18 10.1**	**-0.2**
ORLT				*e*SN	**Sn**	**10 18 26.8**	**-0.1**
ORLT	**Orhaneli**	**1.19**	**326**	*e*Pn	**Pg**	**10 18 10.1**	**-0.2**
ORLT				*e*Sn	**Sn**	**10 18 26.8**	**-0.1**
GPA	**Golpazari**	**1.29**	**19**	*e*PN	**Pn**	**10 18 11.7**	**-0.3**
GPA	**Golpazari**	**1.29**	**19**	*e*Pn	**Pn**	**10 18 11.7**	**-0.3**
ISP	**Isparta**	**1.38**	**154**	*e*PN	**Pb**	**10 18 13.6**	**0.0**
ISP	**Isparta**	**1.38**	**154**	*e*Pn	**Pb**	**10 18 13.6**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.42**	**74**	*e*PN	**Pb**	**10 18 14.4**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.42**	**74**	*e*Pn	**Pb**	**10 18 14.4**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.47**	**333**	*e*PN	**Pn**	**10 18 14.3**	**0.0**
MDNY	**Mudanya-Bursa**	**1.47**	**333**	*e*Pn	**Pn**	**10 18 14.3**	**0.0**
DNZL	**Cakiroluk**	**1.48**	**203**	*i* P	**Pn**	**10 18 15.1**	**+0.4**
DNZL				*i* S	**Sg**	**10 18 35.5**	**+0.2**
DNZL	**Cakiroluk**	**1.48**	**203**	*i* P	**Pn**	**10 18 15.1**	**+0.4**
DNZL				*i* S	**Sg**	**10 18 35.5**	**+0.2**
AKHS	**Akhisar**	**1.53**	**264**	*i* P	**Pb**	**10 18 16.5**	**+0.3**
AKHS				*i* S	**Sg**	**10 18 37.4**	**+0.6**
AKHS	**Akhisar**	**1.53**	**264**	*i* P	**Pb**	**10 18 16.5**	**+0.3**
AKHS				*i* S	**Sg**	**10 18 37.4**	**+0.6**
AKS	**Akhisar**	**1.53**	**264**	*e*PN	**Pn**	**10 18 14.7**	**-0.6**
AKS	**Akhisar**	**1.53**	**264**	*e*Pn	**Pn**	**10 18 14.7**	**-0.6**
BALB	**Balikesir**	**1.57**	**292**	*e*PN	**Pn**	**10 18 16.2**	**+0.4**
BALB	**Balikesir**	**1.57**	**292**	*e*Pn	**Pn**	**10 18 16.2**	**+0.4**
KCTX	**Karacabey (Bur**	**1.62**	**318**	*e*PN	**Pb**	**10 18 17.4**	**-0.3**
KCTX	**Karacabey (Bur**	**1.62**	**318**	*e*Pn	**Pb**	**10 18 17.4**	**-0.3**
BCK	**Bucak**	**1.73**	**158**	*e*PN	**Pn**	**10 18 18.0**	**0.0**
BCK	**Bucak**	**1.73**	**158**	*e*Pn	**Pn**	**10 18 18.0**	**0.0**
BALY	**Balya**	**1.79**	**293**	*i* P	**Pn**	**10 18 19.4**	**+0.5**
BALY				*i* S	**Sb**	**10 18 42.6**	**-0.8**
BALY	**Balya**	**1.79**	**293**	*i* P	**Pn**	**10 18 19.4**	**+0.5**
BALY				*i* S	**Sb**	**10 18 42.6**	**-0.8**
GONE	**Gonen-Balikesi**	**1.88**	**302**	*e*PN	**Pn**	**10 18 21.0**	**+1.0**
GONE	**Gonen-Balikesi**	**1.88**	**302**	*e*Pn	**Pn**	**10 18 21.0**	**+1.0**
AYDN	**Tasoluk**	**2.04**	**227**	*i* P	**Pb**	**10 18 25.4**	**+0.5**
AYDN				*i* S	**Sg**	**10 18 53.6**	**+0.5**
YER	**Yerkesik**	**2.25**	**212**	*e*PN	**Pn**	**10 18 25.5**	**+0.3**
YER	**Yerkesik**	**2.25**	**212**	*e*Pn	**Pn**	**10 18 25.5**	**+0.3**
KRBG	**Karabiga-Canak**	**2.32**	**306**	*e*PN	**Pn**	**10 18 26.7**	**+0.7**
KRBG	**Karabiga-Canak**	**2.32**	**306**	*e*Pn	**Pn**	**10 18 26.7**	**+0.7**
FETY	**Fethiye**	**2.48**	**193**	*e*PN	**Pn**	**10 18 29.7**	**+1.4**
FETY	**Fethiye**	**2.48**	**193**	*e*Pn	**Pn**	**10 18 29.7**	**+1.4**
LPK	**Lapseki**	**2.66**	**300**	*e*PN	**Pn**	**10 18 31.6**	**+0.9**
LPK	**Lapseki**	**2.66**	**300**	*e*Pn	**Pn**	**10 18 31.7**	**+0.9**
EZN	**Ezine**	**2.77**	**287**	*e*PN	**Pn**	**10 18 33.6**	**+1.4**
EZN	**Ezine**	**2.77**	**287**	*e*Pn	**Pn**	**10 18 33.6**	**+1.4**
GELI	**Tayfur-Gelibol**	**2.87**	**299**	*e*PN	**Pn**	**10 18 34.6**	**+1.1**
GELI	**Tayfur-Gelibol**	**2.87**	**299**	*e*Pn	**Pn**	**10 18 34.6**	**+1.1**

*ISK **17** 10:27:30.8, 39.19N×26.78E, h12km, MD2.9*
*ISCJB **17** 10:27:31.6±0.5, 39.18N±0.02×26.86E±0.04, h10km±4km, Error ellipse: s-maj=4.8km s-min=4.0km az=150.8*
*DDA **17** 10:27:31.6, 39.15N×26.85E, h7km, MD2.8*
*CSEM **17** 10:27:31.6±0.1, 39.18N×26.82E, h12km, MD2.8, Error ellipse: s-maj=3.5km s-min=3.2km az=117.0*
*THE **17** 10:27:32.6, 39.14N×26.78E, h15km±4km, ML1.9/3, Error ellipse: s-maj=5.6km s-min=0.6km az=7.0*

ISC 17 10:27:31.8±0.9, 39.16N±0.02×26.80E±0.02, h13km±7km, n35, σ0.54/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.18**	**330**	*i* P	**Pg**	**10 27 35.8**	**-0.1**
AYVA				*i* S	**Sg**	**10 27 39.0**	**+0.3**
AYVA	**Ayvalik**	**0.18**	**330**	*i* P	**Pg**	**10 27 35.8**	**-0.1**
AYVA				*i* S	**Sg**	**10 27 39.0**	**+0.3**
PRK	**Paraskevi**	**0.42**	**283**	P	**Pb**	**10 27 41.0**	**-0.1**
PRK				S	**Sb**	**10 27 47.0**	**-0.3**
PRK	**Paraskevi**	**0.42**	**283**	P	**Pb**	**10 27 41.0**	**-0.1**
PRK				S	**Sb**	**10 27 47.0**	**-0.3**
SIGR	**SIGRI**	**0.74**	**275**	P	**Pg**	**10 27 46.2**	**+0.1**
SIGR				S	**Sb**	**10 27 57.0**	**+0.6**
SIGR	**SIGRI**	**0.74**	**275**	P	**Pg**	**10 27 46.2**	**+0.1**
SIGR				S	**Sb**	**10 27 57.0**	**+0.6**
BLCB	**Balcova**	**0.79**	**166**	*e*PG	**Pg**	**10 27 47.1**	**0.0**
BLCB				*e*SG	**Sb**	**10 27 58.6**	**+0.7**
BLCB	**Balcova**	**0.79**	**166**	*e*Pg	**Pg**	**10 27 47.1**	**0.0**
BLCB				*e*Sg	**Sb**	**10 27 58.6**	**+0.7**
URLA	**Izmir**	**0.81**	**192**	*i* P	**Pg**	**10 27 46.8**	**-0.6**
URLA				*i* S	**Sn**	**10 28 00.8**	**0.0**
URLA	**Izmir**	**0.81**	**192**	*i* P	**Pg**	**10 27 46.8**	**-0.6**
URLA				*i* S	**Sn**	**10 28 00.8**	**0.0**
AKS	**Akhisar**	**0.83**	**109**	*e*PG	**Pb**	**10 27 48.5**	**+0.4**
AKS	**Akhisar**	**0.83**	**109**	*e*Pg	**Pb**	**10 27 48.5**	**+0.4**
IZM	**Izmir**	**0.84**	**154**	*e*PG	**Pg**	**10 27 47.4**	**-0.6**
IZM				*e*SG	**Sn**	**10 28 01.4**	**0.0**
IZM	**Izmir**	**0.84**	**154**	*e*Pg	**Pg**	**10 27 47.4**	**-0.6**
IZM				*e*Sg	**Sn**	**10 28 01.4**	**0.0**
BALY	**Balya**	**0.86**	**47**	*i* P	**Pg**	**10 27 48.2**	**-0.3**
BALY				*i* S	**Sn**	**10 28 03.4**	**+1.4**
BALY	**Balya**	**0.86**	**47**	*i* P	**Pg**	**10 27 48.2**	**-0.3**
BOZC	**Bozcaada**	**0.90**	**320**	*i* P	**Pn**	**10 27 50.0**	**-0.1**
BOZC				*i* S	**Sn**	**10 28 03.9**	**+1.0**
BALB	**Balikesir**	**0.96**	**60**	*e*PG	**Pb**	**10 27 49.2**	**-1.1**
BALB	**Balikesir**	**0.96**	**60**	*e*Pg	**Pb**	**10 27 49.2**	**-1.1**
CHOS	**Chios island**	**0.96**	**218**	P	**Pb**	**10 27 49.7**	**-0.6**
CHOS				S	**Sg**	**10 28 03.4**	**+0.4**
CHOS	**Chios island**	**0.96**	**218**	P	**Pb**	**10 27 49.7**	**-0.6**
CHOS				S	**Sg**	**10 28 03.4**	**+0.4**
GONE	**Gonen-Balikesi**	**1.12**	**37**	*e*PN	**Pb**	**10 27 52.4**	**-0.6**
GONE	**Gonen-Balikesi**	**1.12**	**37**	*e*Pn	**Pb**	**10 27 52.4**	**-0.6**
LPK	**Lapseki**	**1.22**	**358**	*e*PN	**Pb**	**10 27 54.6**	**0.0**
LPK	**Lapseki**	**1.22**	**358**	*e*Pn	**Pb**	**10 27 54.6**	**0.0**
GELI	**Tayfur-Gelibol**	**1.27**	**349**	*e*PN	**Pn**	**10 27 54.2**	**-0.9**
GELI	**Tayfur-Gelibol**	**1.27**	**349**	*e*Pn	**Pn**	**10 27 54.2**	**-0.9**
KRBG	**Karabiga-Canak**	**1.29**	**17**	*e*PN	**Pn**	**10 27 54.9**	**-0.6**
KRBG	**Karabiga-Canak**	**1.29**	**17**	*e*Pn	**Pn**	**10 27 54.9**	**-0.6**
KULA	**Kula-Manisa**	**1.58**	**113**	*e*PN	**Pn**	**10 27 59.6**	**0.0**
KULA	**Kula-Manisa**	**1.58**	**113**	*e*Pn	**Pn**	**10 27 59.6**	**0.0**
TVSB	**Tavsanli**	**2.08**	**81**	*e*PN	**Pn**	**10 28 06.6**	**+0.1**
TVSB	**Tavsanli**	**2.08**	**81**	*e*Pn	**Pn**	**10 28 06.6**	**+0.1**
ARMT	**Armutlu**	**2.12**	**48**	*e*PN	**Pn**	**10 28 06.8**	**-0.1**
ARMT	**Armutlu**	**2.12**	**48**	*e*Pn	**Pn**	**10 28 06.8**	**-0.1**

MAN 17 10:36:00, 7.18N×126.67E, h57km, mb4.4, ML3.2, MS3.1, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.47**	**241**	*e*P	Pn	10 36 14.5	+3.0
MATI				*e*S	Sn	10 36 19.4	-0.3
DMPH	**Davao City--Mi**	**1.16**	**265**	*e*P	Pn	10 36 26.1	+6.1
DMPH				*e*S	Sn	10 36 42.4	+7.4
CGP	**Cagayan de Oro**	**2.33**	**303**	*i*P	Pn	10 36 38.3	+2.3
CGP				*i* S	Sn	10 37 05.6	+2.1
PAGZ	**Pagadian**	**3.33**	**282**	*e*P	Pn	10 36 51.0	+1.4
MSLP	**Maasin**	**3.44**	**329**	*e*P	Pn	10 36 52.3	+1.2

*ISCJB **17** 10:59:03.5±0.5, 21.04S±0.03×68.70W±0.08, h109km±9km, mb4.1/3, Error ellipse: s-maj=11.7km s-min=5.8km az=179.4*
*GUC **17** 10:59:04.6±0.6, 21.16S×69.02W, h115km±4km, ML4.0*
*IDC **17** 10:59:11.9±6.7, 20.63S×68.52W, h154km±46km, mb3.8/4, mb1 3.6/6, mb1mx3.4/20, mbtmp3.7/6, Error ellipse: s-maj=64.2km s-min=30.0km az=28.0*

ISC 17 10:59:04.8±0.8, 21.04S±0.04×68.78W±0.09, h112km±10km, n16, σ1.8/87/24, mb4.2/3, 7C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.66**	**270**	*i*P	**Pn**	**10 59 22.5**	**-0.8**
PB01				*i* S	**Sn**	**10 59 35.3**	**-1.7**
PB01				AML	AML	10 59 36.3	
	comp=E,10μm,0.2s						
HMBC	**Humberstone**	**1.29**	**306**	*i*P	**Pn**	**10 59 29.0**	**-0.5**
HMBC				*i* S	**Sn**	**10 59 47.4**	**-0.7**
HMBC				AML	AML	10 59 48.9	
	comp=N,4μm,0.2s						
PB04	**Plate Boundary**	**1.39**	**208**	*i*P	Pn	10 59 33.8	+3.3
PB04				*i* S	**Sn**	**10 59 55.4**	**+5.6**
PB04				AML	AML	11 00 02.7	
	comp=N,1μm,0.5s						
LVC	**Limon Verde**	**1.57**	**184**	*i*P	**Pn**	**10 59 32.5**	**-0.4**
LVC				*i* S	**Sn**	**10 59 53.1**	**-1.1**
PSGC	**Pisagua**	**1.91**	**318**	*i*P	**Pn**	**10 59 36.4**	**-0.6**
PSGC				*i* S	**Sn**	**11 00 01.1**	**-0.3**
PSGC				AML	AML	11 00 02.0	
	comp=N,962nm,0.5s						
MNMC	**Minimini**	**2.05**	**338**	*e*P	**Pn**	**10 59 39.9**	**+1.0**
MNMC				*i* S	**Sn**	**11 00 07.2**	**+2.3**
MNMC				AML	AML	11 00 08.3	
	comp=N,3μm,0.2s						
MECH	**Mejillones**	**2.57**	**217**	AML	AML	11 00 18.5	
	comp=E,657nm,0.4s						
CEN1	**Los Morros**	**2.68**	**209**	*i* P	**Pn**	**10 59 46.5**	**-0.3**
CEN1				AML	AML	11 00 18.4	
	comp=N,248nm,0.5s						
CEN1				*i* S	**Sn**	**11 00 19.4**	**+0.3**
ARCH	**Arica**	**2.91**	**330**	*i*P	**Pn**	**10 59 49.4**	**-0.4**
ARCH				*i* S	**Sn**	**11 00 24.5**	**+0.1**
ARCH				AML	AML	11 00 30.8	
	comp=N,780nm,0.4s						
ANCH	**Antofagasta**	**3.03**	**210**	*i*P	**Pn**	**10 59 49.4**	**-1.9**
ANCH				*i* S	**Sn**	**11 00 23.5**	**-3.7**
ANCH				AML	AML	11 00 24.7	
	comp=N,438nm,0.1s						
LPAZ	**La Paz**	**4.77**	**8**	P	Pn	11 00 18.6	+3.5
	comp=N,1.0nm,0.3s,baz=191,slow=7.8,SNR=25						
LPAZ				S	**Sn**	**11 01 08.0**	**-1.8**
	comp=N,0.7nm,0.3s,baz=190,slow=7.7,SNR=5.5						
SIV	**San Ignacio**	**8.87**	**57**	P	**Pn**	**11 01 09.6**	**-0.6**
	comp=N,2.4nm,0.3s,baz=246,slow=13,SNR=33						
SIV				S	**Sn**	**

LVC	**Limon Verde**	**2.21**	**183**	*e*P		**Pn**	**11 24 54.3**	**+1.4**
LVC				*i* S		**Sn**	**11 25 22.7**	**+1.8**
ARCH	**Arica**	**2.37**	**323**	*i* P		**Pn**	**11 24 55.5**	**+0.9**
ARCH				*i* S		**Sn**	**11 25 24.6**	**+0.5**
ARCH				AML	AML		11 25 26.6	
	comp=E,687nm,0.2s							
CEN1	**Los Morros**	**3.25**	**203**⇑	*i* P		**Pn**	**11 25 06.3**	**+0.1**
CEN1				*i* S		**Sn**	**11 25 46.6**	**+1.8**
CEN1				AML	AML		11 26 03.3	
	comp=E,44nm,0.9s							
LPAZ	**La Paz**	**4.13**	**9**	P		**Pn**	**11 25 20.7**	**+2.4**
	comp=E,0.7nm,0.3s,baz=187,slow=8.7,SNR=42							
LPAZ				S		**Sn**	**11 26 08.7**	**+2.4**
	comp=E,0.3nm,0.3s,baz=338,slow=6.3,SNR=3.7							
SIV	**San Ignacio**	**8.54**	**60**	P		**Pn**	**11 26 14.4**	**-2.7**
	comp=E,1.8nm,0.3s,baz=264,slow=11,SNR=28							
CPUP	**Villa Florida**	**12.07**	**121**	P		**Pn**	**11 27 02.2**	**-1.9**
	comp=E,0.7nm,0.3s,baz=290,slow=16,SNR=5.6							
TORD	**Torodi Ar. Bea**	**76.88**	**71**	P		**P**	**11 35 55.0**	**-0.1**
	comp=E,0.4nm,0.7s,baz=249,slow=5.8,SNR=4.2							
YKA	**Yellowknife Ar**	**90.19**	**341**	pP		pP	11 37 35.3	+1.0
	comp=E,0.6nm,0.8s,baz=134,slow=5.0,SNR=8.8							

MAN 17 11:37:01,9.32N×126.14E,h25km,mb4.2,ML3.0,MS2.8, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.50**	**303**	*e*P	Pn	11 37 25.4	-0.9
MSLP				*e*S	Sn	11 37 45.0	0.0
CGP	**Cagayan de Oro**	**1.67**	**239**⇑	*e*P	Pn	11 37 29.0	+0.3
CGP				*e*S	Sn	11 37 49.7	+0.4
PLP	**Palo**	**2.16**	**328**⇓	*e*P	Pn	11 37 36.0	+0.6
PLP				*e*S	Sn	11 38 02.8	+1.4
MATI	**Mati**	**2.37**	**177**	*e*P	Pn	11 37 38.6	+0.3
PAGZ	**Pagadian**	**3.10**	**242**	*e*P	Pn	11 37 50.6	+2.3

CSEM ***17*** *11:47:28.1,38.76N×23.48E,h10km,ML1.5/2,After THE*
THE 17 11:47:28.1,38.76N×23.48E,h10km±2km,ML1.5/2,Error ellipse: s-maj=2.3km s-min=0.4km az=153.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKA	**Markates**	**0.10**	**123**	P	Pg	11 47 30.7	0.0
MRKA				S	Sg	11 47 32.7	+0.1
MRKA	**Markates**	**0.10**	**123**	P	Pg	11 47 30.7	0.0
MRKA				S	Sg	11 47 32.7	+0.1
SMIA	**Simia**	**0.24**	**299**	P	Pg	11 47 33.2	+0.1
SMIA				S	Sg	11 47 36.7	+0.3
SMIA	**Simia**	**0.24**	**299**	P	Pg	11 47 33.2	+0.1
SMIA				S	Sg	11 47 36.7	+0.3
ATAL	**Atalanti**	**0.36**	**259**	P	Pg	11 47 34.8	-0.5
ATAL				S	Sg	11 47 40.7	+0.5
ATAL	**Atalanti**	**0.36**	**259**	P	Pg	11 47 34.8	-0.5
ATAL				S	Sg	11 47 40.7	+0.5
LKR	**Lokris**	**0.39**	**254**	P	Pg	11 47 35.5	-0.3
LKR				S	Sg	11 47 41.7	+0.7
LKR	**Lokris**	**0.39**	**254**	P	Pg	11 47 35.5	-0.3
LKR				S	Sg	11 47 41.7	+0.7
AOS	**Alonnisos**	**0.52**	**37**	P	Pg	11 47 38.0	-0.2
AOS				S	Sg	11 47 44.9	-0.1
AOS	**Alonnisos**	**0.52**	**37**	P	Pg	11 47 38.0	-0.2
AOS				S	Sg	11 47 44.9	-0.1
XOR	**Xorichti**	**0.64**	**340**	P	Pg	11 47 40.6	-0.1
XOR	**Xorichti**	**0.64**	**340**	P	Pg	11 47 40.6	-0.1

SZGRF ***17*** *11:57:36.2,36.98N×72.00E,h33km,mb4.9, Afghanistan-Tajikistan border region*
BJI ***17*** *11:57:56.8,36.75N×70.93E,h233km,mB4.7/23,mb4.8/40*
ISCJB ***17*** *11:57:56.5±0.2,36.62N±0.02×71.03E±0.02,h227km±2km, mb4.5/152,Error ellipse: s-maj=3.0km s-min=2.5km az=149.9*
MOS ***17*** *11:57:57.5±0.8,36.66N×71.04E,h235km,mb4.6/60,Error ellipse: s-maj=5.3km s-min=3.6km az=107.7*
DJA ***17*** *11:57:58.0±0.5,37°N±7°×7°1E±°,h228km±6km,M4.8/4, mb4.8/4*
IDC ***17*** *11:57:58.9±0.5,36.57N×71.10E,h241km±4km,mb4.2/33, mb1 4.4/39,mb1mx4.3/42,mbtmp4.3/39,Error ellipse: s-maj=9.0km s-min=6.6km az=4.0*
NEIC ***17*** *11:57:58.9±0.2,36.64N×71.05E,mb4.6/68,Error ellipse: s-maj=4.7km s-min=3.5km az=186.0*
NEIC Felt at Kabul.
NNC ***17*** *11:58:05.3±4.6,37.28N×71.18E,h238km±39km,mb4.1, mpv5.3,Error ellipse: s-maj=42.5km s-min=21.7km az=4.0*
ISC 17 11:57:58.3±0.3,36.64N±0.03×71.08E±0.03,h232km±2km, h232km:pP-P,n494,σ1938/617,mb4.6/152,21C-18D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**2.67**	**219**	*e*PN	**Pn**	**11 58 45.2**	**-1.2**
KBL				*e*S	**S**	**11 59 20.9**	**-3.1**
KBL	**Kabul**	**2.67**	**219**	*e*Pn	**Pn**	**11 58 45.2**	**-1.2**
KBL				*e*S	**S**	**11 59 20.9**	**-3.1**
CEP	**Cherat**	**2.90**	**166**	⇓P	**Pn**	**11 58 48.7**	**0.0**
CEP				S	**S**	**11 59 24.0**	**-4.3**
CHCP	**Chirah Chowk**	**3.48**	**148**	P	**Pn**	**11 58 55.6**	**+0.4**
THW	**Thamme Wali**	**3.88**	**172**	⇑P	**Pn**	**11 58 59.6**	**-0.4**
THW				S	**S**	**11 59 45.0**	**-3.6**
KSH	**Kashi**	**4.81**	**52**⇓	*i*P	Pn	11 59 06.6	-4.7
KSH				*es*P	sP	11 59 50.8	
KSH				S	S	11 59 58.3	-11
KSH				pmax	pmax		
	comp=Z,3μm,0.3s						
SARP	**Sargodha**	**4.89**	**164**	P	**Pn**	**11 59 11.5**	**-0.7**
SARP				S	**S**	**12 00 06.0**	**-4.8**
JMU	**Jammu**	**5.03**	**140**	*e*PKP	**Pn**	**11 59 11.5**	**-2.4**
JMU				*ex*	x	12 00 01.5	
DLH	**Dalhousie**	**5.75**	**134**	*e*PKP	**Pn**	**11 59 20.0**	**-3.1**
DLH				*ex*	x	12 00 24.0	
AML	**Almayashu**	**5.84**	**20**	*i* PN	**Pn**	**11 59 24.0**	**-0.4**
AML	**Almayashu**	**5.84**	**20**	P	**Pn**	**11 59 24.0**	**-0.4**
	SNR=2587						
DHRM	**DHARAMSHALA**	**6.15**	**134**	*e*PKP	**Pn**	**11 59 27.7**	**-0.6**
DHRM				*e*S	**S**	**12 00 36.7**	**-3.1**
UCH	**Uchtor**	**6.18**	**24**	*i* PN	**Pn**	**11 59 28.8**	**+0.1**
UCH	**Uchtor**	**6.18**	**24**	P	**Pn**	**11 59 28.8**	**+0.1**
	SNR=184						
KZA	**Kyzart**	**6.32**	**30**	*i* PN	**Pn**	**11 59 30.1**	**-0.3**
KZA	**Kyzart**	**6.32**	**30**	P	**Pn**	**11 59 30.1**	**-0.3**
	SNR=247						
EKS2	**Erkin-Say**	**6.36**	**18**	*e*PN	**Pn**	**11 59 30.5**	**-0.1**
EKS2				*e*S	**S**	**12 00 40.8**	**-3.5**
EKS2	**Erkin-Say**	**6.36**	**18**	*e*Pn	**Pn**	**11 59 30.5**	**-0.1**
EKS2				*e*S	**S**	**12 00 40.8**	**-3.5**
EKS2	**Erkin-Say**	**6.36**	**18**	P	**Pn**	**11 59 30.8**	**+0.1**
	SNR=246						
KK31	**Karatay Array**	**6.47**	**356**	P	**Pn**	**11 59 31.2**	**-0.7**
	comp=Z,73nm,0.5s,baz=177,slow=13,SNR=1223						
KK31				⇑S	**S**	**12 00 40.7**	**-5.9**
	comp=Z,177nm,0.4s,baz=179,slow=20,SNR=24						
KK31	**Karatay Array**	**6.47**	**356**	*i* PN	**Pn**	**11 59 31.2**	**-0.7**
KK31				pmax	pmax		
	comp=Z,135nm,0.4s						
KKAR	**Karatay Array**	**6.47**	**356**	*e*PN	**Pn**	**11 59 31.2**	**-0.7**
KKAR				*e*S	**S**	**12 00 44.4**	**-2.2**
KKAR	**Karatay Array**	**6.47**	**356**	*e*Pn	**Pn**	**11 59 31.1**	**-0.7**
KKAR				*e*S	**S**	**12 00 44.4**	**-2.2**
AAK	**Ala-Archa**	**6.54**	**23**	*d* iPN	**Pn**	**11 59 33.1**	**+0.2**
AAK				pmax	pmax		
	comp=Z,1μm,0.6s						
AAK	**Ala-Archa**	**6.54**	**23**	*e*Pn	**Pn**	**11 59 33.2**	**+0.2**
AAK				S	**S**	**12 00 45.3**	**-3.1**
AAK				*e*S	S	12 00 47.1	-1.6
AAK	**Ala-Archa**	**6.54**	**23**	P	**Pn**	**11 59 33.2**	**+0.2**
	SNR=202						
AAK	**Ala-Archa**	**6.54**	**23**	P	**Pn**	**11 59 33.2**	**+0.2**
	comp=Z,109nm,0.3s,baz=192,slow=5.7,SNR=1452						
AAK				S	**S**	**12 00 45.3**	**-3.1**
	comp=Z,53nm,0.3s,baz=150,slow=22,SNR=14						
KBK	**Karagaybulak**	**6.71**	**25**	*i* PN	**Pn**	**11 59 35.6**	**+0.5**
KBK	**Karagaybulak**	**6.71**	**25**	P	**Pn**	**11 59 35.6**	**+0.5**
	SNR=228						
FRU	**Bishkek**	**6.76**	**23**	⇓*i* PN	**Pn**	**11 59 35.6**	**0.0**
FRU				*e*S	**S**	**12 00 50.0**	**-3.4**
FRU				pmax	pmax		
	comp=Z,315nm,1.2s						
FRU				smax	smax		
	comp=E,2μm,1.2s						
ULHL	**Ulahol**	**6.88**	**34**	*i* PN	**Pn**	**11 59 37.2**	**-0.1**
ULHL	**Ulahol**	**6.88**	**34**	P	**Pn**	**11 59 37.2**	**-0.1**
	SNR=358						
CHMS	**Chumysh**	**6.95**	**23**	*i* PN	**Pn**	**11 59 37.7**	**-0.3**
CHMS	**Chumysh**	**6.95**	**23**	P	**Pn**	**11 59 37.7**	**-0.3**
	SNR=204						
SDNR	**Sundarnagar**	**7.09**	**135**	*e*PKP	**Pn**	**11 59 38.5**	**-1.4**
SDNR				*ex*	x	12 00 52.5	
USP	**Ospenovka**	**7.12**	**21**	*i* PN	**Pn**	**11 59 39.3**	**-0.9**
USP	**Ospenovka**	**7.12**	**21**	P	**Pn**	**11 59 39.3**	**-0.9**
	SNR=295						
TKM2	**Tokmak 2**	**7.17**	**28**	⇓P	**Pn**	**11 59 40.7**	**-0.3**
	comp=E,225nm,0.5s						
TKM2				⇑S	**S**	**12 00 58.4**	**-4.8**
	comp=E,356nm,0.8s						
TKM2	**Tokmak 2**	**7.17**	**28**	PN	**Pn**	**11 59 40.7**	**-0.3**
TKM2				pmax	pmax		
	comp=Z,225nm,0.5s						
TKM2	**Tokmak 2**	**7.17**	**28**	*e*Pn	**Pn**	**11 59 41.0**	**0.0**
TKM2	**Tokmak 2**	**7.17**	**28**	P	**Pn**	**11 59 41.1**	**0.0**
	SNR=612						
SMLA	**Simla**	**7.47**	**136**	*i* P	**Pn**	**11 59 44.6**	**-0.2**
SMLA				*e*S	**S**	**12 01 06.5**	**-3.6**
KNDC	**Almaty**	**7.97**	**33**	⇓P	**Pn**	**11 59 51.8**	**+0.7**
KNDC				⇑S	S	12 01 12.2	-9.5
AAA	**Alma-Ata**	**8.01**	**32**	*i* PN	**Pn**	**11 59 51.4**	**-0.2**
AAA				*e*S	**S**	**12 01 20.0**	**-2.5**
AAA				pmax	pmax		
	comp=Z,2μm,1.5s						
AAA				smax	smax		
	comp=N,1μm,3.0s						
DDI	**Dehra Dun**	**8.58**	**135**	*e*PKP	**Pn**	**11 59 57.0**	**-2.1**
DDI				*e*PKP		11 59 58.0	
DDI				AMB	AMB	11 59 59.2	
	comp=Z,729nm,1.5s						
DDI				*ex*	x	12 01 26.5	
PTH	**Pithoragarh**	**10.43**	**130**	*e*PKP	**Pn**	**12 00 22.0**	**-0.7**
PTH				*ex*	x	12 02 03.0	
MK31	**Makanchi Array**	**13.14**	**36**	⇓P	**Pn**	**12 00 55.8**	**-0.5**
	comp=Z,85nm,0.6s,baz=224,slow=11,SNR=1027						
MK31	**Makanchi Array**	**13.14**	**36**	*e*P	**Pn**	**12 00 55.4**	**-0.9**
MK31				pmax	pmax		
	comp=Z,132nm,0.6s						
MK31	**Makanchi Array**	**13.14**	**36**	*e*Pn	**Pn**	**12 00 55.3**	**-1.1**
MKAR	**Makanchi Array**	**13.14**	**36**	*i* P	**Pn**	**12 00 55.5**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,85nm,0.6s						
MKAR	**Makanchi Array**	**13.14**	**36**	*e*Pn	**Pn**	**12 00 55.6**	**-0.8**
MKAR	**Makanchi Array**	**13.14**	**36**	P	**Pn**	**12 00 55.5**	**-0.8**
	comp=Z,17nm,0.3s,baz=225,slow=14,SNR=396						
PYUN	**Piuthan**	**13.18**	**127**	*e*P	**Pn**	**12 00 55.8**	**-1.4**
	comp=Z,223nm,0.4s						
PYUN				*e*S	S	12 03 13.0	-10
BHJ	**Bhuj**	**13.40**	**186**	*e*PKP	**P**	**12 01 00.8**	**-0.7**
BHJ				AMB	AMB	12 01 01.4	
	comp=Z,180nm,1.0s						
DANN	**Dangsing**	**13.52**	**124**	*e*P	**Pn**	**12 01 00.4**	**-1.0**
	comp=Z,244nm,0.4s						
DANN				*e*S	S	12 03 20.3	-11
KOLN	**Koldanda**	**13.80**	**126**	*e*P	**Pn**	**12 01 04.6**	**-0.2**
	comp=Z,98nm,0.4s						
KOLN				*e*S	S	12 03 28.1	-10
BHPL	**Bhopal**	**14.44**	**156**	*e*PKP	**P**	**12 01 13.8**	**+0.7**
BHPL				*ex*	x	12 03 46.0	
WMQ	**Urumqi**	**14.57**	**55**	P	**Pn**	**12 01 14.1**	**+0.2**
WMQ				S	**S**	**12 03 50.8**	**-4.1**
WMQ				PcP	**PcP**	**12 06 13.6**	**+3.4**
WMQ				PcS	**PcS**	**12 09 47.5**	**+2.3**
WMQ				ScS	**ScS**	**12 13 03.3**	**+3.9**
WMQ				LR	LR		
	comp=N,370nm,3.2s						
WMQ				LR	LR		
	comp=E,480nm,5.2s						
WMQ				LR	LR		
	comp=Z,120nm,16.0s						
DMN	**Daman**	**14.90**	**123**	*e*P	**Pn**	**12 01 17.7**	**-0.6**
	comp=Z,360nm,0.6s						
KKN	**Kakani**	**14.90**	**122**	*e*P	**Pn**	**12 01 17.7**	**-0.5**
	comp=Z,316nm,0.6s						
KKN				*e*S	S	12 03 52.3	-11
KURBB	**Kurchatov Arra**	**14.97**	**19**	P	**Pn**	**12 01 17.3**	**-1.2**
	comp=Z,6.6nm,0.3s,baz=207,slow=11,SNR=275						
AB31	**Akbulak array**	**14.99**	**331**	P	**P**	**12 01 17.4**	**-1.4**
	comp=Z,11nm,0.4s,baz=145,slow=12,SNR=381						
AB31	**Akbulak array**	**14.99**	**331**	*e*P	**P**	**12 01 17.4**	**-1.4**
AB31				*e*S	**S**	**12 04 04.2**	**-0.1**
AB31				pmax	pmax		
	comp=Z,24nm,0.4s						
AB31				smax	smax		
	comp=N,50nm,0.9s						
ABKAR	**Akbulak array**	**14.99**	**331**	*e*P	**P**	**12 01 17.2**	**-1.6**
ABKAR				*e*S	**S**	**12 04 04.4**	**+0.1**
KURK	**Kurchatov**	**15.08**	**19**	⇑P	**P**	**12 01 17.8**	**-2.0**
	comp=N,89nm,0.7s						
KURK	**Kurchatov**	**15.08**	**19**	⇓*i* P	**P**	**12 01 18.4**	**-1.4**
KURK				pmax	pmax		
	comp=Z,167nm,1.1s						
KURK	**Kurchatov**	**15.08**	**19**	*e*P	**P**	**12 01 18.8**	**-1.0**
	comp=Z,97nm,0.7s						
PKIN	**Phulchoki**	**15.12**	**123**	*e*P	**P**	**12 01 20.1**	**-0.7**
	comp=Z,176nm,0.3s						
PKI	**Pulchoki**	**15.13**	**123**	*e*P	**P**	**12 01 20.3**	**-0.7**
	comp=Z,142nm,0.3s						
GUN	**Gumba**	**15.24**	**121**	*e*P	**P**	**12 01 21.7**	**-0.5**
	comp=Z,155nm,0.3s						
JBP	**Jabalpur**	**15.48**	**148**⇑	*e*PKP	**Pn**	**12 01 24.8**	**-0.2**
JBP				*i* x	x	12 01 29.0	
	comp=Z,28nm,0.4s						
JBP				*ex*	x	12 04 09.1	
VOSK	**Vostochnaya**	**16.08**	**360**	⇓P	**Pn**	**12 01 31.5**	**-0.4**
	comp=Z,34nm,0.8s						
VOSK	**Vostochnaya**	**16.08**	**360**	P	**P**	**12 01 30.8**	**0.0**
VOSK				S	**S**	**12 04 23.7**	**-3.8**
VOSK				pmax	pmax		
	comp=Z,34nm,0.8s						
VOSK				smax	smax		
	comp=N,45nm,0.9s						
RAMN	**Ramite**	**16.34**	**122**	*e*P	**Pn**	**12 01 35.1**	**-0.4**
	comp=N,196nm,0.4s						
ZRNK	**Zerenda**	**16.37**	**356**	⇑P	**Pn**	**12 01 34.7**	**-0.6**
	comp=N,35nm,0.5s						
ZRNK	**Zerenda**	**16.37**	**356**	P	**Pn**	**12 01 34.7**	**-0.6**
ZRNK				S	**S**	**12 04 30.0**	**-3.4**
ZRNK				pmax	pmax		
	comp=Z,35nm,0.5s						
ZRNK				smax	smax		
	comp=N,72nm,1.5s						
BVA0	**Borovoye Array**	**16.39**	**359**	⇓P	**Pn**	**12 01 35.4**	**-0.2**
	comp=N,3.4nm,0.4s,baz=160,slow=12,SNR=234						
BVA0	**Borovoye Array**	**16.39**	**359**	*i* P	**Pn**	**12 01 35.1**	**-0.4**
BVA0				*i* S	**S**	**12 04 32.0**	**-1.8**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BVA0				smax	smax		
	comp=N,4.0nm,0.8s						
BVAR	**Borovoye Array**	**16.39**	**359**	P	**Pn**	**12 01 34.9**	**-0.6**
BVAR				S	**S**	**12 04 30.2**	**-3.6**
BVAR	**Borovoye Array**	**16.39**	**359**	P	**Pn**	**12 01 34.9**	**-0.6**
	comp=N,20nm,0.3s,baz=156,slow=10,SNR=103						
BVAR				S	**S**	**12 04 30.2**	**-3.6**
	baz=164,slow=16,SNR=2.2						
BRVK	**Borovoye**	**16.42**	**358**	⇓P	**Pn**	**12 01 35.6**	**-0.3**
	comp=N,28nm,0.5s						
BRVK	**Borovoye**	**16.42**	**358**	*d* iP	**Pn**	**12 01 35.5**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,82nm,1.7s						
BRVK	**Borovoye**	**16.42**	**358**	*e*P	**Pn**	**12 01 35.6**	**-0.3**
	comp=Z,36nm,0.6s						
AKTO	**Aktyubinsk**	**16.69**	**330**	⇑P	**P**	**12 01 38.2**	**+0.8**
	comp=Z,22nm,0.7s						
AKTO	**Aktyubinsk**	**16.69**	**330**	P	**Pn**	**12 01 38.5**	**-0.6**
AKTO	**Aktyubinsk**	**16.69**	**330**	P	**Pn**	**12 01 38.5**	**-0.6**
AKTO	**Aktyubinsk**	**16.69**	**330**	P	**Pn**	**12 01 38.5**	**-0.6**
	comp=Z,19nm,0.3s,baz=137,slow=11,SNR=340						
TAPN	**Taplejung**	**16.86**	**119**	*e*P	**Pn**	**12 01 41.8**	**+0.1**
	comp=Z,170nm,0.4s						
NGP	**Nagpur**	**16.93**	**154**	*e*PKP	**P**	**12 01 39.9**	**-0.6**
NGP				*ex*	x	12 04 36.7	
ODAN	**Odare**	**16.94**	**121**	*e*P	**Pn**	**12 01 42.7**	**+0.2**
	comp=Z,158nm,0.5s						
BOK	**Bokaro**	**18.07**	**131**	*e*PKP	**P**	**12 01 53.9**	**+1.1**
BOK				AMB	AMB	12 01 55.0	
	comp=Z,67nm,0.5s						
BOK				*e*S	**S**	**12 05 06.1**	**-1.8**
LSA	**Lhasa**	**18.16**	**107**	P	**Pn**	**12 01 58.8**	**+1.7**
LSA				pmax	pmax		
	comp=Z,90nm,1.1s						
LSA	**Lhasa**	**18.16**	**107**	*e*P	**Pn**	**12 01 56.8**	**-0.3**
LSA				pmax	pmax		
	comp=Z,74nm,0.6s						
LSA	**Lhasa**	**18.16**	**107**	*e*P	**Pn**	**12 01 56.8**	**-0.3**
	comp=Z,74nm,0.6s						
POO	**Poona**	**18.21**	**172**	*e*PKP	**P**	**12 01 53.8**	**-0.6**
MAK	**Makhachkala**	**19.15**	**296**	*e*P	**P**	**12 02 04.2**	**0.0**
MAK				*e*S	**S**	**12 05 31.8**	**+3.2**
MAK				pmax	pmax		
	comp=Z,34nm,0.3s						
MAK				MLR	MLR		
	comp=Z,388nm,20.0s						
ZAA0	**Zalesovo Array**	**19.76**	**25**	*e*P	**P**	**12 02 10.8**	**+0.1**
ZALV	**Zalesovo Beam**	**19.76**	**25**	P	**P**	**12 02 10.9**	**+0.2**
ZALV				S	**S**	**12 05 37.5**	**-2.8**
ZALV	**Zalesovo Beam**	**19.76**	**25**	P	**P**	**12 02 10.8**	**+0.2**
ZALV				S	**S**	**12 05 37.5**	**-2.8**
ZALV	**Zalesovo Beam**	**19.76**	**25**	P	**P**	**12 02 10.8**	**+0.2**
	comp=Z,35nm,0.3s,baz=218,slow=12,SNR=305						
ZALV				S	**S**	**12 05 37.5**	**-2.8**
	baz=220,slow=22,SNR=2.3						
NVS	**Novosibirsk**	**20.03**	**21**	*e*P	**P**	**12 02 13.8**	**+0.3**
NVS				*i* S	**S**	**12 05 45.5**	**+0.1**
NVS				pmax	pmax		
	comp=Z,77nm,0.5s						
NVS				pmax	pmax		
	comp=N,39nm,0.6s						
NVS				pmax	pmax		
	comp=E,9.0nm,0.2s						
NVS				smax	smax		
	comp=N,11nm,0.6s						
NVS				smax	smax		
	comp=E,22nm,0.6s						
HYB	**Hyderabad**	**20.26**	**159**	*i* P	Pn	12 02 22.0	+0.4
HYB				*e*S	**S**	**12 05 50.0**	**-0.5**
DGRG	**David-gareji**	**20.50**	**291**	P	**P**	**12 02 21.5**	**+2.7**
UMR	**Umm Al-Rimmam**	**20.78**	**257**	*e*P	**P**	**12 02 21.4**	**-0.4**
UMR				AMb	AMB	12 02 23.9	
	comp=Z,387nm,0.7s						
GNI	**Garni**	**20.91**	**288**	*e*P	**P**	**12 02 24.4**	**+1.2**
	comp=Z,52nm,0.9s						
GNI	**Garni**	**20.91**	**288**	P	**P**	**12 02 25.2**	**+2.0**
	comp=Z,30nm,0.7s,baz=316,slow=4.3,SNR=22						
SHL	**Shillong**	**20.92**	**116**⇓	*i*P	**P**	**12 02 24.0**	**+0.5**
SHL				AMB	AMB	12 02 25.6	
	comp=Z,110nm,1.0s						
SHL				*e*S	**S**	**12 06 04.0**	**+1.7**
KBD	**Kabd**	**20.96**	**256**	*e*P	**P**	**12 02 23.3**	**-0.4**
KBD				AMb	AMB	12 02 26.2	
	comp=Z,149nm,0.6s						
MIB	**Mutribah**	**20.97**	**258**	*e*P	**P**	**12 02 23.4**	**-0.3**
MIB				AMb	AMB	12 02 25.7	
	comp=Z,302nm,0.8s						
TBLG	**Delisi**	**21.00**	**292**	P	**P**	**12 02 25.8**	**+1.8**
DUS	**Dusheti**	**21.06**	**293**	P	P	12 02 29.8	+5.1
RDF	**Al-Radifah**	**21.19**	**255**	*e*P	**P**	**12 02 25.3**	**-0.7**
RDF				AMb	AMB	12 02 27.9	
	comp=Z,287nm,0.7s						
GUDG	**Gudauri**	**21.27**	**294**	P	**P**	**12 02 30.8**	**+3.9**
NAY	**Al-Naaiem**	**21.28**	**257**	*e*P	**P**	**12 02 26.2**	**-0.7**
NAY				AMb	AMB	12 02 29.1	
	comp=Z,135nm,0.8s						
SVE	**Sverdlovsk**	**21.37**	**344**⇑	*e*P	**P**	**12 02 28.2**	**+0.7**
SVE				*e*S	**S**	**12 06 08.4**	**-0.5**
SVE				pmax	pmax		
	comp=Z,33nm,1.4s						
ARU	**Arti**	**21.52**	**341**	*c* iP	**P**	**12 02 29.3**	**+0.4**
ARU				S	**S**	**12 06 15.1**	**+3.9**
ARU				pmax	pmax		
	comp=Z,57nm,1.7s						
HVS	**Khovu-Aksy**	**21.69**	**41**	*i* P	**P**	**12 02 31.6**	**+0.9**
ZEI	**Tsey**	**21.73**	**295**	*e*P	**P**	**12 02 32.1**	**+0.7**
ZEI				*e*S	S	12 06 23.1	+7.6
ZEI				pmax	pmax		
	comp=Z,23nm,0.7s						
AKH	**Akhalkalaki**	**21.91**	**291**	P	**P**	**12 02 35.1**	**+2.0**
ONI	**Oni**	**22.04**	**294**	P	**P**	**12 02 36.3**	**+2.2**
KBZ	**Khabaz**	**22.59**	**297**	P	**P**	**12 02 39.1**	**+0.1**
KBZ	**Khabaz**	**22.59**	**297**	P	**P**	**12 02 39.1**	**+0.1**
KBZ	**Khabaz**	**22.59**	**297**	P	**P**	**12 02 39.1**	**+0.1**
KBZ	**Khabaz**	**22.59**	**297**	P	**P**	**12 02 39.1**	**+0.1**
	comp=Z,11nm,0.8s,baz=121,slow=7.5,SNR=49						
GTA	**Gaotai**	**22.77**	**74**	⇓P	**P**	**12 02 42.8**	**+2.0**
GTA				pP	**pP**	**12 03 24.6**	**+3.3**
GTA				sP	**sP**	**12 03 51.5**	**+0.8**
GTA				S	**S**	**12 06 36.1**	**+4.1**
GTA				SS	SS	12 07 47.4	-29
GTA				ScP	**ScP**	**12 09 38.9**	**-1.1**
GTA				ScS	**ScS**	**12 13 23.3**	**-2.7**
GTA				pmax	pmax		
	comp=Z,65nm,0.7s						
GTA				pmax	pmax		
	comp=Z,270nm,4.5s						
GTA				LR	LR		
	comp=N,91nm,10.0s						
GTA				LR	LR		
	comp=E,100nm,11.4s						
GTA				LR	LR		
	comp=Z,91nm,10.4s						
VRHR	**Novokhopersk**	**25.47**	**314**	*e*P	**P**	**12 03 04.7**	**-0.2**
VRHR				pmax	pmax		
	comp=Z,20nm,0.9s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,20nm,1.2s						
VRHR	**Novokhopersk**	**25.47**	**314**	*e*P	**P**	**12 03 04.7**	**

	comp=Z,11nm,0.7s									
CD2	**Chengdu**	**27.68**	**92**	P	**P**	**12 03 27.4 +2.4**
CD2				pP	**pP**	**12 04 11.8 +0.9**
CD2				PP	**PnPn**	**12 04 27.1 +2.3**
CD2				sP	**sP**	**12 04 37.6 -0.3**
CD2				PcP	**PcP**	**12 06 38.6 +2.9**
CD2				S	**S**	**12 07 51.5 +1.8**
CD2				sS	**sS**	**12 09 10.1 -2.5**
CD2				SS	ScP	12 09 33.3 -21
CD2				pmax	pmax	
	comp=Z,30nm,0.6s					
CD2				pmax	pmax	
	comp=Z,160nm,6.5s					
SONM	**Songino Array**	**28.20**	**56**	P	**P**	**12 03 31.1 +1.5**
SONM				pP	**pP**	**12 04 18.8 +3.2**
SONM	**Songino Array**	**28.20**	**56**	P	**P**	**12 03 31.1 +1.5**
	comp=Z,20nm,0.8s,baz=256,slow=9.9,SNR=119					
SONM				pP	**pP**	**12 04 18.8 +3.2**
	comp=Z,5.5nm,0.9s,baz=254,slow=11,SNR=3.0					
ASF	**Jabal al Asfar**	**28.46**	**271**	P	**P**	**12 03 32.9 +1.0**
ASF	**Jabal al Asfar**	**28.46**	**271**	P	**P**	**12 03 32.9 +1.0**
	comp=Z,7.6nm,0.7s,baz=274,slow=6.3,SNR=4.2					
ULN	**Ulaanbaatar**	**28.65**	**56**	*eP*	**P**	**12 03 34.9 +1.4**
	comp=Z,20nm,0.9s					
ULN	**Ulaanbaatar**	**28.65**	**56**	P	**P**	**12 03 34.5 +1.0**
	comp=Z,27nm,0.9s					
KMI	**Kunming**	**29.37**	**104**	P	**P**	**12 03 40.8 +0.6**
KMI				pmax	pmax	
	comp=Z,9.0nm,0.9s					
MMAI	**Mount Meron Ar**	**29.40**	**274**	P	**P**	**12 03 40.7 +0.4**
MMAI	**Mount Meron Ar**	**29.40**	**274**	P	**P**	**12 03 40.7 +0.4**
	comp=Z,3.6nm,0.5s,baz=67,slow=16,SNR=3.9					
BR131	**Keskin Array S**	**29.45**	**288**	*eP*	**P**	**12 03 40.9 +0.2**
BRTR	**Keskin Array B**	**29.45**	**288**	P	**P**	**12 03 41.0 +0.4**
BRTR	**Keskin Array B**	**29.45**	**288**	P	**P**	**12 03 41.0 +0.4**
	comp=Z,14nm,0.7s,baz=102,slow=8.8,SNR=30					
MOS	**Moscow**	**29.59**	**321**	*eP*	**P**	**12 03 39.2 -2.2**
MOS				pmax	pmax	
	comp=Z,76nm,0.9s					
MOS	**Moscow**	**29.59**	**321**	*eP*	**P**	**12 03 39.2 -2.2**
MOS				*e*		12 04 01.4
MOS				pmax	pmax	
	comp=Z,76nm,0.9s					
MOS	**Moscow**	**29.59**	**321**	*eP*	**P**	**12 03 39.2 -2.2**
	comp=Z,76nm,0.9s					
OBN	**Obninsk**	**29.87**	**319**	*α iP*	**P**	**12 03 44.3 +0.4**
OBN				*PP	**pP**	**12 04 31.0 +0.7**
OBN						12 04 57.0
OBN				pmax	pmax	
	comp=Z,77nm,0.7s					
CHTO	**Chiang Mai**	**30.23**	**118**	*eP*	**P**	**12 03 49.0 +1.4**
CHTO				*e*		12 04 37.1
CHTO				pmax	pmax	
	comp=Z,5.0nm,0.8s					
CHTO	**Chiang Mai**	**30.23**	**118**	*eP*	**P**	**12 03 49.0 +1.4**
	comp=Z,5.3nm,0.8s					
CHTO				*e*		12 04 37.1
CHTO	**Chiang Mai**	**30.23**	**118**	P	**P**	**12 03 47.9 +0.3**
	comp=Z,13nm,0.7s					
CMMT	**Chiang Mai**	**30.24**	**118**	P	**P**	**12 03 48.4 +0.8**
CM31	**Chiang Mai Arr**	**30.47**	**119**	*eP*	**P**	**12 03 51.0 +1.3**
	comp=Z,19nm,0.9s					
CMAR	**Chiang Mai Arr**	**30.47**	**119**	P	**P**	**12 03 50.1 +0.4**
CMAR				pP	**pP**	**12 04 37.5 +1.4**
CMAR				ScP	**ScP**	**12 10 00.6 -2.5**
CMAR	**Chiang Mai Arr**	**30.47**	**119**	P	**P**	**12 03 50.1 +0.4**
	comp=Z,13nm,0.9s,baz=302,slow=8.2,SNR=67					
CMAR				pP	**pP**	**12 04 37.5 +1.4**
	comp=Z,7.5nm,0.8s,baz=304,slow=8.9,SNR=5.6					
CMAR				ScP	**ScP**	**12 10 00.6 -2.5**
	comp=Z,1.9nm,0.9s,baz=302,slow=5.2,SNR=4.5					
XAN	**Xi'an**	**30.85**	**83**	P	**P**	**12 03 53.8 +0.9**
XAN				pmax	pmax	
	comp=Z,10.0nm,0.7s					
HHC	**Hu-ho-hao-te**	**31.66**	**70**	*eP*	**P**	**12 04 00.9 +0.9**
HHC				pP	**pP**	**12 04 46.6 +0.1**
HHC				PP	**PP**	**12 05 15.5 -0.9**
HHC				S	**S**	**12 08 54.5 +2.7**
HHC				sS	**sS**	**12 10 11.3 -3.9**
HHC				SS	**SS**	**12 11 04.6 -9.0**
HHC				ScS	**ScS**	**12 14 05.3 -0.2**
HHC				pmax	pmax	
	comp=Z,35nm,0.5s					
HHC				pmax	pmax	
	comp=Z,190nm,5.1s					
GYA	**Guiyang**	**31.82**	**98**	*eP*	**P**	**12 04 02.8 +1.2**
GYA				pP	**pP**	**12 04 48.8 +0.6**
GYA				sP	**sP**	**12 05 15.9 +1.0**
GYA				PP	**PP**	**12 05 20.4 +1.9**
GYA				PcP	**PcP**	**12 06 47.5 +0.8**
GYA				S	**S**	**12 08 55.4 +0.7**
GYA				ScP	**ScP**	**12 10 08.3 +0.6**
GYA				PcS	**PcS**	**12 10 31.9 +0.1**
GYA				ScS	**ScS**	**12 14 05.6 -1.2**
GYA				pmax	pmax	
	comp=Z,10.0nm,0.8s					
KIS	**Kishinev**	**32.79**	**302**	*eP*	**P**	**12 04 09.0 -0.6**
KIS	**Kishinev**	**32.79**	**302**	*eP*	**P**	**12 04 09.0 -0.6**
AKASG	**Malin Array Be**	**32.90**	**309**	P	**P**	**12 04 10.3 -0.2**
AKASG						12 05 27.0
AKASG	**Malin Array Be**	**32.90**	**309**	P	**P**	**12 04 10.3 -0.2**
AKASG				PP	**PnPn**	**12 05 27.0 -2.4**
AKASG	**Malin Array Be**	**32.90**	**309**	P	**P**	**12 04 10.3 -0.2**
	comp=Z,19nm,0.7s,baz=79,slow=7.4,SNR=40					
AKASG				PP	**PnPn**	**12 05 27.0 -2.4**
	comp=Z,8.9nm,0.7s,baz=97,slow=13,SNR=6.0					
AK02	**Malin Array Si**	**32.91**	**309**	*eP*	**P**	**12 04 10.6 0.0**
AK01	**Malin Array Si**	**32.91**	**309**	*eP*	**P**	**12 04 10.6 +0.1**
KIEV	**Kiev**	**32.91**	**309**	*eP*	**P**	**12 04 10.2 -0.4**
KIEV				pmax	pmax	
	comp=Z,18nm,0.6s					
KIEV	**Kiev**	**32.91**	**309**	*eP*	**P**	**12 04 10.2 -0.4**
	comp=Z,18nm,0.6s					
MLR	**Muntele Rosu**	**34.76**	**299**	P	**P**	**12 04 28.9 +2.1**
MLR	**Muntele Rosu**	**34.76**	**299**	P	**P**	**12 04 28.9 +2.1**
	comp=Z,6.0nm,0.8s,baz=95,slow=2.6,SNR=4.7					
BJI	**Beijing**	**35.25**	**70**	P	**P**	**12 04 32.3 +1.5**
BJI				pmax	pmax	
	comp=Z,14nm,0.7s					
BUR08	**Bucovina Ar. S**	**35.27**	**303**	*eP*	**P**	**12 04 31.2 +0.2**
IIGN	**Ignalina**	**35.57**	**316**	*eP*	**P**	**12 04 33.9 +0.7**
IIGN				AMB	AMB	12 04 34.8
	comp=Z,18nm,0.7s					
IZAR	**Zarasai**	**35.64**	**317**	*eP*	**P**	**12 04 34.6 +0.7**
IZAR				AMB	AMB	12 04 35.4
	comp=Z,17nm,0.7s					
ISAL	**Salakas**	**35.67**	**317**	*eP*	**P**	**12 04 34.8 +0.7**
ISAL				AMB	AMB	12 04 35.6
	comp=Z,12nm,0.9s					
WHN	**Wuhan**	**36.32**	**87**	P	**P**	**12 04 40.0 0.0**
SANT	**Santorini**	**36.40**	**284**	*eP*	**P**	**12 04 39.6 -1.1**
	comp=Z,102nm,1.5s					
KWP	**Kalwaria Pacla**	**36.97**	**306**	*eP*	**P**	**12 04 46.5 +1.2**
KWP				pmax	pmax	
	comp=Z,70nm,0.5s					
KWP	**Kalwaria Pacla**	**36.97**	**306**	*eP*	**P**	**12 04 46.5 +1.2**
	comp=Z,70nm,0.5s					
SUW	**Suwalki**	**37.06**	**313**	*eP*	**P**	**12 04 45.9 0.0**
SUW				pmax	pmax	
	comp=Z,18nm,0.5s					
SUW	**Suwalki**	**37.06**	**313**	*eP*	**P**	**12 04 45.9 0.0**
	comp=Z,18nm,0.5s					
KOLS	**Kolonicke sedl**	**37.24**	**305**	*eP*	**P**	**12 04 46.7 -0.9**
KOLS				pmax	pmax	
	comp=Z,7.0nm,1.0s					
KOLS	**Kolonicke sedl**	**37.24**	**305**	*eP*	**P**	**12 04 46.7 -0.9**
LVZ	**Lovozero**	**37.35**	**338**	*ceP*	**P**	**12 04 48.6 +0.4**
LVZ				pmax	pmax	
	comp=Z,13nm,0.7s					
FIA1	**FINESS Array S**	**37.40**	**326**	*eP*	**P**	**12 04 49.0 +0.3**
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**12 04 49.0 +0.4**
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**12 04 49.0 +0.4**
	comp=Z,31nm,0.4s,baz=120,slow=9.5,SNR=111					
APA	**Apatity**	**37.53**	**337**	*⇑ iP*	**P**	**12 04 50.4 +0.8**
APA				MLR	MLR	
	comp=Z,100nm,12.0s					
KAF	**Kangasniemi**	**37.54**	**327**	*eP*	**P**	**12 04 49.5 -0.3**
KAF				pmax	pmax	
	comp=Z,12nm,0.5s					
KAF	**Kangasniemi**	**37.54**	**327**	*ep*	**P**	**12 04 49.5 -0.3**
	comp=Z,12nm,0.5s					
CRVS	**Cervenica-Dubn**	**37.78**	**305**	*eP*	**P**	**12 04 49.1 -2.9**
CRVS				pmax	pmax	
	comp=Z,2.0nm,1.2s					
CRVS	**Cervenica-Dubn**	**37.78**	**305**	*eP*	**P**	**12 04 49.1 -2.9**
NIE	**Niedzica**	**38.53**	**306**	*eP*	**P**	**12 04 59.7 +1.4**
NIE	**Niedzica**	**38.53**	**306**	*eP*	**P**	**12 04 59.7 +1.4**
OJC	**Ojcow**	**38.87**	**307**	*eP*	**P**	**12 05 01.7 +0.7**
OJC				*e*		12 06 36.3
OJC				pmax	pmax	
	comp=Z,21nm,1.1s					
OJC	**Ojcow**	**38.87**	**307**	*eP*	**P**	**12 05 01.7 +0.7**
	comp=Z,21nm,1.1s					
OJC				*ePP*	**PP**	**12 06 36.3 +1.1**
OJC	**Ojcow**	**38.87**	**307**	*eP*	**P**	**12 05 01.4 +0.4**
OJC				*ePP*	**PP**	**12 06 33.9 -1.3**
NJ2	**Nanjing**	**39.40**	**82**	*eP*	**P**	**12 05 06.3 +0.7**
NJ2				pmax	pmax	
	comp=Z,10.0nm,0.5s					
VYHS	**Vyhne**	**39.53**	**304**	*eP*	**P**	**12 05 07.3 +0.8**
VYHS				pmax	pmax	
	comp=Z,9.0nm,1.6s					
VYHS	**Vyhne**	**39.53**	**304**	*eP*	**P**	**12 05 07.3 +0.8**
OKC	**Ostrava-Krasne**	**39.93**	**306**	*eP*	**P**	**12 05 10.8 +1.0**
OKC				*e*		12 06 46.3
OKC	**Ostrava-Krasne**	**39.93**	**306**	*eP*	**P**	**12 05 10.8 +1.0**
OKC				*ePP*	**PP**	**12 06 46.3 -0.4**
MORC	**Moravsky Berou**	**40.33**	**306**	*eP*	**P**	**12 05 13.4 +0.3**
MORC				pmax	pmax	
	comp=Z,6.0nm,0.8s					
MORC	**Moravsky Berou**	**40.33**	**306**	*eP*	**P**	**12 05 13.4 +0.3**
	comp=Z,6.0nm,0.8s					
SMOL	**Smolenice**	**40.46**	**304**	*eP*	**P**	**12 05 15.4 +1.2**
SMOL	**Smolenice**	**40.46**	**304**	*eP*	**P**	**12 05 15.4 +1.2**
KEV	**Kevo**	**40.69**	**338**	*ep*	**P**	**12 05 15.4 -0.3**
	comp=Z,13nm,0.5s					
KEV	**Kevo**	**40.69**	**338**	*eP*	**P**	**12 05 16.2 +0.4**
	comp=Z,18nm,0.8s					
ZST	**Bratislava**	**40.70**	**304**	*eP*	**P**	**12 05 14.0 -2.1**
ZST				pmax	pmax	
	comp=Z,7.0nm,0.5s					
ZST	**Bratislava**	**40.70**	**304**	*eP*	**P**	**12 05 14.0 -2.1**
KRLC	**Kraliky**	**40.81**	**307**	*eP*	**P**	**12 05 17.9 +0.8**
KRLC	**Kraliky**	**40.81**	**307**	*eP*	**P**	**12 05 17.9 +0.8**
VRAC	**Vranov**	**40.97**	**306**	P	**P**	**12 05 19.8 +1.5**
VRAC	**Vranov**	**40.97**	**306**	P	**P**	**12 05 19.8 +1.5**
	comp=Z,6.9nm,0.8s,baz=83,slow=7.8,SNR=9.1					
ARCES	**ARCESS Array B**	**41.04**	**338**	P	**P**	**12 05 19.2 +0.6**
ARCES				pP	**pP**	**12 06 09.8 +2.8**
ARCES	**ARCESS Array B**	**41.04**	**338**	P	**P**	**12 05 19.2 +0.6**
	comp=Z,23nm,0.5s,baz=114,slow=8.3,SNR=245					
ARCES				pP	**pP**	**12 06 09.8 +2.8**
	comp=Z,3.3nm,0.7s,baz=114,slow=9.0,SNR=1.8					
ARE0	**ARCESS Array S**	**41.04**	**338**	*eP*	**P**	**12 05 18.9 +0.4**
DPC	**Dobruska-Polom**	**41.09**	**307**	*eP*	**P**	**12 05 20.1 +0.7**
DPC				*e*		12 07 00.1
DPC	**Dobruska-Polom**	**41.09**	**307**	*eP*	**P**	**12 05 20.0 +0.7**
	comp=Z,15nm,1.0s					
DPC	**Dobruska-Polom**	**41.09**	**307**	*eP*	**P**	**12 05 20.1 +0.7**
DPC				*ePP*	**PP**	**12 07 00.1 +0.9**
KSP	**Ksiaz**	**41.10**	**308**	*eP*	**P**	**12 05 19.6 +0.3**
KSP				*e*		12 06 58.4
UPC	**Upice**	**41.28**	**308**	*⇓ iP*	**P**	**12 05 22.1 +1.2**
UPC				*e*		12 07 05.8
UPC	**Upice**	**41.28**	**308**	*⇓ iP*	**P**	**12 05 22.1 +1.2**
UPC				*ePP*	**PnPn**	**12 07 05.8 -2.6**
KULM	**Kulim**	**41.33**	**132**	P	**P**	**12 05 20.5 -1.0**
CN2	**Changchun**	**41.49**	**63**	*eP*	**P**	**12 05 24.0 +1.4**
CN2				*es*P	**sP**	**12 06 37.0 -0.4**
CN2				*e*S	**S**	**12 11 21.3 +1.1**
CN2				pmax	pmax	
	comp=Z,20nm,0.6s					
CN2				pmax	pmax	
	comp=Z,200nm,4.0s					
KTK1	**Kautokeino**	**41.51**	**336**	*eP*	**P**	**12 05 20.9 -1.5**
KTK1				AMS	AMS	12 18 46.0
	comp=Z,806nm,14.7s					
CONA	**Conrad Observa**	**41.55**	**304**	*⇑ iP*	**P**	**12 05 23.2 0.0**
	comp=Z,12nm,1.1s					
TREC	**Trest**	**41.69**	**306**	*eP*	**P**	**12 05 25.5 +1.3**
TREC	**Trest**	**41.69**	**306**	*eP*	**P**	**12 05 25.5 +1.3**
IPM	**Ipoh**	**42.19**	**132**	*eP*	**P**	**12 05 29.0 +0.4**
	comp=Z,22nm,1.0s					
IPM	**Ipoh**	**42.19**	**132**	P	**P**	**12 05 29.2 +0.6**
IPM	**Ipoh**	**42.19**	**132**	P	**P**	**12 05 27.5 -1.1**
	comp=Z,23nm,1.0s					
SOKA	**Soboth**	**42.24**	**302**	*⇑ iP*	**P**	**12 05 29.3 +0.5**
	comp=Z,16nm,1.0s					
PRU	**Pruhonice**	**42.26**	**307**	*eP*	**P**	**12 05 29.6 +0.9**
PRU	**Pruhonice**	**42.26**	**307**	*eP*	**P**	**12 05 29.6 +0.9**
TIP	**Timpagrande**	**42.39**	**291**	*eP*	**P**	**12 05 30.5 +0.4**
	comp=Z,87nm,1.7s					
BRG	**Berggiesshubel**	**42.58**	**308**	*eP*	**P**	**12 05 32.3 +1.0**
	comp=Z,20nm,1.1s					
BRG						
	comp=N,437nm,17.1s					
BRG						
	comp=E,1μm,14.7s					
BRG						
	comp=Z,767nm,19.7s					
BRG	**Berggiesshubel**	**42.58**	**308**	*eP*	**P**	**12 05 32.3 +1.0**
BRG				pmax	pmax	
	comp=Z,20nm,1.1s					
BRG				MLR	MLR	
	comp=N,437nm,17.1s					
BRG				MLR	MLR	
	comp=E,1μm,14.7s					
BRG				MLR	MLR	
	comp=Z,767nm,19.7s					
GERES	**GERESS Array B**	**42.90**	**305**	P	**P**	**12 05 34.6 +0.7**
GERES				PP	**PP**	**12 07 15.8 -2.6**
GERES				ScP	**ScP**	**12 10 46.6 -2.2**
GERES	**GERESS Array B**	**42.90**	**305**	P	**P**	**12 05 34.6 +0.7**
	comp=Z,0.9nm,0.4s,baz=72,slow=7.3,SNR=11					
GERES				PP	**PP**	**12 07 15.9 -2.6**
	comp=Z,2.1nm,0.8s,baz=82,slow=7.4,SNR=4.8					
GERES				ScP	**ScP**	**12 10 46.6 -2.2**
	comp=Z,0.6nm,0.7s,baz=83,slow=3.4,SNR=4.2					
CUC	**Castrocucco**	**42.90**	**292**	*eP*	**P**	**12 05 34.6 +0.5**
	comp=Z,24nm,0.8s					
KHC	**Kasperske Hory**	**42.95**	**306**	*eP*	**P**	**12 05 35.5 +1.1**
KHC				pmax	pmax	
	comp=Z,4.0nm,0.9s					
KHC	**Kasperske Hory**	**42.95**	**306**	*eP*	**P**	**12 05 35.5 +1.1**
	comp=Z,4.3nm,0.9s					
KHC	**Kasperske Hory**	**42.95**	**306**	*eP*	**P**	**12 05 35.3 +0.9**
KHC				*epP*	**pP**	**12 06 19.4 -3.8**
KHC				*ePP*	**PP**	**12 07 19.0 0.0**
HFS	**Hagfors**	**42.99**	**322**	P	**P**	**12 05 34.6 +0.1**
HFS	**Hagfors**	**42.99**	**322**	P	**P**	**12 05 34.6 +0.1**
	comp=Z,47nm,0.6s,baz=99,slow=9.6,SNR=58					
CLL	**Collm**	**43.15**	**309**	*eP*	**P**	**12 05 36.0 +0.2**
CLL				pmax	pmax	
	comp=Z,9.0nm,1.0s					
CLL	**Collm**	**43.15**	**309**	*eP*	**P**	**12 05 36.0 +0.2**
	comp=Z,9.0nm,1.0s					
CLL				*ePP*	**PP**	**12 07 23.0 +2.0**
TRO	**Tromso**	**43.16**	**336**	*eP*	**P**	**12 05 36.4 +0.8**
TRO				AMS	AMS	12 19 28.8
	comp=Z,434nm,10.8s					
FRIM	**Kepong**	**43.54**	**133**	P	**P**	**12 05 40.7 +1.3**
NKC	**Novy Kostel**	**43.58**	**307**	*eP*	**P**	**12 05 40.0 +0.7**
NKC	**Novy Kostel**	**43.58**	**307**	*eP*	**P**	**12 05 40.0 +0.7**
MOR8	**Moi Rana**	**43.72**	**331**	*eP*	**P**	**12 05 40.0 -0.2**
MOR8				AMB	AMB	12 05 40.6
	comp=Z,91nm,0.6s					
YAK	**Yakutsk**	**43.81**	**36**	*eP*	**P**	**12 05 40.3 -0.6**
YAK				*e*		12 07 22.6
YAK				*e*		12 07 26.3
YAK				*eS*	**S**	**12 11 53.2 -0.3**
YAK				pmax	pmax	
	comp=E,9.0nm,1.0s					
YAK				pmax	pmax	
	comp=Z,36nm,0.8s					
YAK				pmax	pmax	
	comp=N,4.0nm,0.9s					
YAK				smax	smax	
	comp=N,33nm,1.7s					
YAK				smax	smax	
	comp=E,17nm,1.0s					
STEI	**Steigen**	**43.87**	**333**	*eP*	**P**	**12 05 42.1 +0.8**
FLOS	**Flostrand**	**44.18**	**331**	*eP*	**P**	**12 05 44.4 +0.6**
FLOS				AMB	AMB	12 05 46.2
	comp=Z,103nm,1.7s					
NB2	**NORSAR Subarra**	**44.30**	**323**	P	**P**	**12 05 44.7 -0.3**
	comp=Z,25nm,0.5s,baz=96,slow=7.9					
NB2	**NORSAR Subarra**	**44.30**	**323**	P	**P**	**12 05 44.7 -0.3**
	baz=96,slow=7.9					
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**12 05 44.6 -0.3**
NOA				PP	**PP**	**12 07 31.2 -1.9**
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**12 05 44.6 -0.3**
	comp=Z,37nm,0.7s,baz=96,slow=7.7,SNR=97					
NOA				PP	**PP**	**12 07 31.2 -1.9**
	comp=Z,4.4nm,0.7s,baz=98,slow=7.8,SNR=3.3					
GRF	**Grafenberg Arr**	**44.42**	**307**	*eP*	**P**	**12 05 46.3 +0.3**
GRF				pmax	pmax	
	comp=Z,13nm,0.9s					
GRF	**Grafenberg Arr**	**44.42**	**307**	*eP*	**P**	**12 05 46.3 +0.3**
	comp=Z,13nm,0.9s					
NAO01	**NORSAR Array S**	**44.45**	**323**	*eP*	**P**	**12 05 45.6 -0.4**
	comp=Z,5.9nm,0.5s					
SSLB	**Suanglung**	**44.51**	**92**	*eP*	**P**	**12 05 48.9 +1.8**
	comp=Z,7.3nm,0.6s					
LOF	**Lofoten**	**44.54**	**333**	*eP*	pP	12 06 38.6 +2.8
KSAR	**Wonju Array Be**	**44.75**	**71**	P	**P**	**12 05 49.1 +0.4**
KSRS	**Korea Array**	**44.78**	**71**	P	**P**	**12 05 49.1 +0.2**
	comp=Z,2.5nm,0.9s,baz=281,slow=7.5,SNR=5.4					
YULB	**Yul-li**	**44.98**	**93**	*eP*	**P**	**12 05 52.8 +2.1**
	comp=Z,6.3nm,0.8s					
KLR	**Kul'dur**	**45.01**	**54**	*eP*	**P**	**12 05 48.2 -2.4**
KONO	**Kongsberg**	**45.01**	**321**	*eP*	**P**	**12 05 50.6 +0.1**
KONO	**Kongsberg**	**45.01**	**321**	*eP*	**P**	**12 05 50.3 -0.1**
KONO				pmax	pmax	
	comp=Z,15nm,0.6s					
KONO	**Kongsberg**	**45.01**	**321**	*eP*	**P**	**12 05 50.3 -0.1**
	comp=Z,15nm,0.6s					
TWG	**Pinlang**	**45.07**	**93**	*eP*	**P**	**12 05 54.2 +2.7**
	comp=Z,113nm,0.9s					
KGM	**Kluang**	**45.52**	**132**	P	**P**	**12 05 56.2 +1.1**
TIXI	**Tiksi**	**45.62**	**22**	*d iP*	**P**	**12 05 55.6 +0.6**
TIXI				pmax	pmax	
	comp=Z,42nm,0.7s					
DAVA	**Damuels**	**45.65**	**303**	*⇑ iP*	**P**	**12 05 55.5 -0.3**
DAVOX	**Davos/Dischmat**	**45.73**	**303**	P	**P**	**12 05 56.8 +0.2**
DAVOX	**Davos/Dischmat**	**45.73**	**303**	P	**P**	**12 05 56.8 +0.2**
	comp=Z,3.6nm,0.3s,baz=73,slow=11,SNR=6.4					
MYKOM	**Kota Tinggi**	**46.02**	**131**	P	**P**	**12 05 60.0 +1.1**
MYKOM	**Kota Tinggi**	**46.02**	**131**	P	**P**	**12 05 58.0 -0.9**
USRK	**Ussuriysk Arra**	**46.05**	**61**	P	**P**	**12 05 59.2 +0.4**
	comp=Z,3.4nm,0.6s,baz=312,slow=9.9,SNR=7.8					
CDF	**Champ du Feu**	**47.18**	**305**	*eP*	**P**	**12 06 07.7 +0.1**
CDF	**Champ du Feu**	**47.18**	**305**	*eP*	**P**	**12 06 07.7 +0.1**
CDF	**Champ du Feu**	**47.18**	**305**	*eP*	**P**	**12 06 07.7 +0.1**
PGF	**Pioggiola**	**47.26**	**297**	*eP*	**P**	**12 06 07.5 -0.8**
	comp=Z,15nm,0.7s					
PGF				*epP*	**pP**	**12 06 58.5 +0.4**
PGF	**Pioggiola**	**47.26**	**297**	*eP*	**P**	**12 06 07.5 -0.8**
PGF				*e*PP	**pP**	**12 06 58.5 +0.4**
PGF				pmax	pmax	
	comp=Z,15nm,0.7s					
PGF	**Pioggiola**	**47.26**	**297**	*eP*	**P**	**12 06 07.5 -0.8**
	comp=Z,15nm,0.7s					
PGF				*epP*	**pP**	**12 06 58.5 +0.4**
HABR	**Khabarovsk**	**47.28**	**54**	*eP*	**P**	**12 06 07.3 -1.0**
HABR				*PP	**pP**	**12 06 54.6 -3.4**
HABR				*e*		12 07 33.8
HABR						12 08 00.6
HABR				*eS*	**S**	**12 12 44.9 +1.5**
HABR				*e*SS	**sS**	**12 14 08.9 -2.2**
HABR				*e*		12 15 37.1
HABR				*eSS*	**SS**	**12 16 17.0 +3.4**
HABR				pmax	pmax	
	comp=N,4.0nm,0.8s					
HABR				pmax	pmax	
	comp=E,7.0nm,0.9s					
HABR				pmax	pmax	
	comp=Z,12nm,0.9s					
HINF	**Hinteralfeld**	**47.57**	**305**	*eP*	**P**	**12 06 10.4 -0.1**
	comp=Z,10nm,0.7s					
HINF	**Hinteralfeld**	**47.57**	**305**	*eP*	**P**	**12 06 10.4 -0.1**
HINF				pmax	pmax	
	comp=Z,10.0nm,0.7s					
HINF	**Hinteralfeld**	**47.57**	**305**	*eP*	**P**	**12 06 10.4 -0.1**
	comp=Z,10nm,0.7s					
WLF	**Walferdange**	**47.69**	**307**	*eP*	**P**	**12 06 12.5 +1.2**
WLF				pmax	pmax	
	comp=Z,12nm,0.7s					
WLF	**Walferdange**	**47.69**	**307**	*eP*	**P**	**12 06 12.5 +1.2**
	comp=Z,12nm,0.7s					
HAU	**Haudompre**	**47.86**	**305**	*eP*	**P**	**12 06 12.8 0.0**
	comp=Z,9.2nm,0.5s					
HAU	**Haudompre**	**47.86**	**305**	*eP*	**P**	**12 06 12.8 0.0**
HAU				pmax	pmax	
	comp=Z,9.0nm,0.5s					
HAU	**Haudompre**	**47.86**	**305**	*eP*	**P**	**12 06 12.8 0.0**
	comp=Z,9.2nm,0.5s					
SBF	**Sospel**	**48.04**	**299**	*eP*	**P**	**12 06 14.5 +0.3**
	comp=Z,36nm,0.9s					
SBF	**Sospel**	**48.04**	**299**	*eP*	**P**	**12 06 14.5 +0.3**
SBF				pmax	pmax	
	comp=Z,36nm,0.9s					
SBF	**Sospel**	**48.04**	**299**	*eP*	**P**	**12 06 14.5 +0.3**
	comp=Z,36nm,0.9s					
LPG	**La Plagne**	**48.12**	**302**	*eP*	**P**	**12 06 15.4 +0.3**
	comp=Z,9.2nm,0.5s					
LPG	**La Plagne**	**48.12**	**302**	*eP*	**P**	**12 06 15.4 +0.3**
LPG				pmax	pmax	
	comp=Z,9.0nm,0.5s					
LPG	**La Plagne**	**48.12**	**302**	*eP*	**P**	**12 06 15.4 +0.3**
	comp=Z,9.2nm,0.5s					
LPL	**La Plagne**	**48.13**	**302**	*eP*	**P**	**12 06 15.5 +0.4**
	comp=Z,12nm,0.5s					
LPL	**La Plagne**	**48.13**	**302**	*eP*	**P**	**12 06 15.5 +0.4**
LPL				pmax	pmax	
	comp=Z,12nm,0.5s					
LPL	**La Plagne**	**48.13**	**302**	*eP*	**P**	**12 06 15.5 +0.4**
	comp=Z,12nm,0.5s					
PAGF	**Fort de Pagny**	**48.16**	**306**	*eP*	**P**	**12 06 15.8 +0.7**
	comp=Z,8.5nm,0.7s					
PAGF	**Fort de Pagny**	**48.16**	**306**	*eP*	**P**	**12 06

JOW	**Kunigami**	**49.00**	**84**	*e*P		**P**	**12 06 21.8**	**+0.1**
	comp=Z,5.2nm,0.6s							
KEST	**Kesra**	**49.05**	**288**	*e*P		**P**	**12 06 22.6**	**+0.5**
KEST	**Kesra**	**49.05**	**288**	P		**P**	**12 06 22.0**	**-0.1**
	comp=Z,5.8nm,0.5s,baz=342,slow=2.9,SNR=43							
SMRF	**Simiane la Rot**	**49.31**	**300**	*e*P		**P**	**12 06 23.7**	**-0.2**
SMRF	**Simiane la Rot**	**49.31**	**300**	*e*P		**P**	**12 06 23.7**	**-0.2**
VIVF	**Saint-Julien-l**	**49.70**	**301**	*e*P		**P**	**12 06 26.8**	**0.0**
	comp=Z,14nm,0.6s							
VIVF	**Saint-Julien-l**	**49.70**	**301**	*e*P		**P**	**12 06 26.8**	**0.0**
VIVF				pmax	pmax			
	comp=Z,14nm,0.6s							
VIVF	**Saint-Julien-l**	**49.70**	**301**	*e*P		**P**	**12 06 26.8**	**0.0**
	comp=Z,14nm,0.6s							
SMF	**Signal de Mont**	**49.82**	**304**	*e*P		**P**	**12 06 27.5**	**-0.2**
	comp=Z,35nm,0.8s							
SMF				*e*pP		**pP**	**12 07 18.2**	**+0.3**
SMF	**Signal de Mont**	**49.82**	**304**	*e*P		**P**	**12 06 27.5**	**-0.2**
SMF				*e**PP		**pP**	**12 07 18.2**	**+0.3**
SMF				pmax	pmax			
	comp=Z,35nm,0.8s							
SMF	**Signal de Mont**	**49.82**	**304**	*e*P		**P**	**12 06 27.5**	**-0.2**
	comp=Z,35nm,0.8s							
SMF				*e*pP		**pP**	**12 07 18.2**	**+0.3**
SSF	**Saint Saulge**	**49.95**	**304**	*e*P		**P**	**12 06 28.3**	**-0.3**
	comp=Z,6.1nm,0.6s							
SSF	**Saint Saulge**	**49.95**	**304**	*e*P		**P**	**12 06 28.3**	**-0.3**
SSF				pmax	pmax			
	comp=Z,6.0nm,0.6s							
SSF	**Saint Saulge**	**49.95**	**304**	*e*P		**P**	**12 06 28.3**	**-0.3**
	comp=Z,6.1nm,0.6s							
AVF	**Avril sur Loir**	**50.12**	**304**	*e*P		**P**	**12 06 29.6**	**-0.2**
	comp=Z,26nm,0.6s							
AVF	**Avril sur Loir**	**50.12**	**304**	*e*P		**P**	**12 06 29.6**	**-0.2**
AVF				pmax	pmax			
	comp=Z,26nm,0.6s							
AVF	**Avril sur Loir**	**50.12**	**304**	*e*P		**P**	**12 06 29.6**	**-0.2**
	comp=Z,26nm,0.6s							
KSM	**Kuching**	**50.36**	**125**	P		**P**	**12 06 33.5**	**+1.5**
HYF	**Humbligny**	**50.47**	**305**	*e*P		**P**	**12 06 32.8**	**+0.3**
HYF	**Humbligny**	**50.47**	**305**	*e*P		**P**	**12 06 32.8**	**+0.3**
LASF	**Ste Croix**	**50.48**	**301**	*e*P		**P**	**12 06 33.0**	**+0.4**
	comp=Z,52nm,1.1s							
LASF	**Ste Croix**	**50.48**	**301**	*e*P		**P**	**12 06 33.0**	**+0.4**
	comp=Z,52nm,1.1s							
BGF	**Bois d'Agland**	**50.51**	**304**	*e*P		**P**	**12 06 32.5**	**-0.3**
BGF	**Bois d'Agland**	**50.51**	**304**	*e*P		**P**	**12 06 32.5**	**-0.3**
BGF	**Bois d'Agland**	**50.51**	**304**	*e*P		**P**	**12 06 32.5**	**-0.3**
TCF	**Toulx Ste Croi**	**51.01**	**304**	*e*P		**P**	**12 06 36.7**	**+0.2**
	comp=Z,10nm,0.5s							
TCF				*e*pP		**pP**	**12 07 27.9**	**+0.9**
TCF	**Toulx Ste Croi**	**51.01**	**304**	*e*P		**P**	**12 06 36.7**	**+0.2**
TCF				*e**PP		**pP**	**12 07 27.9**	**+0.9**
TCF				pmax	pmax			
	comp=Z,10.0nm,0.5s							
TCF	**Toulx Ste Croi**	**51.01**	**304**	*e*P		**P**	**12 06 36.7**	**+0.2**
	comp=Z,10nm,0.5s							
TCF				*e*pP		**pP**	**12 07 27.9**	**+0.9**
CAF	**Calviac**	**51.47**	**302**	*e*P		**P**	**12 06 40.3**	**+0.3**
	comp=Z,8.2nm,0.6s							
CAF	**Calviac**	**51.47**	**302**	*e*P		**P**	**12 06 40.3**	**+0.3**
CAF				pmax	pmax			
	comp=Z,8.0nm,0.6s							
CAF	**Calviac**	**51.47**	**302**	*e*P		**P**	**12 06 40.3**	**+0.3**
	comp=Z,8.2nm,0.6s							
RJF	**Les Rejaudoux**	**51.74**	**303**	*e*P		**P**	**12 06 41.2**	**-0.7**
RJF	**Les Rejaudoux**	**51.74**	**303**	*e*P		**P**	**12 06 41.2**	**-0.7**
RJF	**Les Rejaudoux**	**51.74**	**303**	*e*P		**P**	**12 06 41.2**	**-0.7**
MTLF	**Montolieu**	**51.83**	**300**	*e*P		**P**	**12 06 42.6**	**0.0**
MTLF	**Montolieu**	**51.83**	**300**	*e*P		**P**	**12 06 42.6**	**0.0**
MTLF	**Montolieu**	**51.83**	**300**	*e*P		**P**	**12 06 42.6**	**0.0**
FLN	**La Foliniere**	**52.13**	**307**	*e*P		**P**	**12 06 44.3**	**-0.4**
FLN	**La Foliniere**	**52.13**	**307**	*e*P		**P**	**12 06 44.3**	**-0.4**
FLN	**La Foliniere**	**52.13**	**307**	*e*P		**P**	**12 06 44.3**	**-0.4**
EKA	**Eskdalemuir Ar**	**52.23**	**316**	P		**P**	**12 06 45.3**	**0.0**
EKA				pP		**pP**	**12 07 38.1**	**+2.0**
EKA	**Eskdalemuir Ar**	**52.23**	**316**	P		**P**	**12 06 45.3**	**0.0**
	comp=Z,4.0nm,0.6s,baz=83,slow=7.0,SNR=16							
EKA				pP		**pP**	**12 07 38.1**	**+2.0**
	comp=Z,2.1nm,0.7s,baz=71,slow=6.9,SNR=2.4							
LFF	**La Frestale**	**52.37**	**302**	*e*P		**P**	**12 06 46.8**	**+0.3**
	comp=Z,13nm,0.4s							
LFF	**La Frestale**	**52.37**	**302**	*e*P		**P**	**12 06 46.8**	**+0.3**
LFF				pmax	pmax			
	comp=Z,13nm,0.4s							
LFF	**La Frestale**	**52.37**	**302**	*e*P		**P**	**12 06 46.8**	**+0.3**
	comp=Z,13nm,0.4s							
GRR	**Gorron**	**52.47**	**307**	*e*P		**P**	**12 06 46.7**	**-0.5**
GRR	**Gorron**	**52.47**	**307**	*e*P		**P**	**12 06 46.7**	**-0.5**
GRR	**Gorron**	**52.47**	**307**	*e*P		**P**	**12 06 46.7**	**-0.5**
MFF	**Saint Martin d**	**52.49**	**305**	*e*P		**P**	**12 06 46.9**	**-0.5**
MFF	**Saint Martin d**	**52.49**	**305**	*e*P		**P**	**12 06 46.9**	**-0.5**
MFF	**Saint Martin d**	**52.49**	**305**	*e*P		**P**	**12 06 46.9**	**-0.5**
YSS	**Yuzh-Sakhalins**	**52.69**	**55**	*e*P		**P**	**12 06 48.3**	**-0.6**
MJAR	**Matsushiro Arr**	**52.84**	**69**	P		**P**	**12 06 48.6**	**-1.6**
MJAR				pP		**pP**	**12 07 44.1**	**+3.0**
MJAR	**Matsushiro Arr**	**52.84**	**69**	P		**P**	**12 06 48.6**	**-1.6**
	comp=Z,1.7nm,0.9s,baz=283,slow=10.0,SNR=4.6							
MJAR				pP		**pP**	**12 07 44.1**	**+3.0**
	comp=Z,2.5nm,0.7s,baz=285,slow=9.8,SNR=4.8							
EPF	**Esparros**	**53.23**	**300**	*e*P		**P**	**12 06 52.8**	**-0.1**
	comp=Z,5.4nm,0.6s							
EPF	**Esparros**	**53.23**	**300**	*e*P		**P**	**12 06 52.8**	**-0.1**
EPF				pmax	pmax			
	comp=Z,5.0nm,0.6s							
EPF	**Esparros**	**53.23**	**300**	*e*P		**P**	**12 06 52.8**	**-0.1**
	comp=Z,5.4nm,0.6s							
SGMF	**Saint Gilles**	**53.59**	**307**	*e*P		**P**	**12 06 55.3**	**-0.1**
SGMF	**Saint Gilles**	**53.59**	**307**	*e*P		**P**	**12 06 55.3**	**-0.1**
SGMF	**Saint Gilles**	**53.59**	**307**	*e*P		**P**	**12 06 55.3**	**-0.1**
ETSF	**Etsaut**	**53.90**	**300**	*e*P		**P**	**12 06 57.9**	**+0.1**
	comp=Z,14nm,0.5s							
ETSF	**Etsaut**	**53.90**	**300**	*e*P		**P**	**12 06 57.9**	**+0.1**
ETSF				pmax	pmax			
	comp=Z,14nm,0.5s							
ETSF	**Etsaut**	**53.90**	**300**	*e*P		**P**	**12 06 57.9**	**+0.1**
	comp=Z,14nm,0.5s							
ROSF	**Rostrenen**	**54.03**	**307**	*e*P		**P**	**12 06 58.2**	**-0.3**
ROSF	**Rostrenen**	**54.03**	**307**	*e*P		**P**	**12 06 58.2**	**-0.3**
ROSF	**Rostrenen**	**54.03**	**307**	*e*P		**P**	**12 06 58.2**	**-0.3**
QUIF	**Quistinic**	**54.08**	**307**	*e*P		**P**	**12 06 58.4**	**-0.5**
QUIF	**Quistinic**	**54.08**	**307**	*e*P		**P**	**12 06 58.4**	**-0.5**
QUIF	**Quistinic**	**54.08**	**307**	*e*P		**P**	**12 06 58.4**	**-0.5**
SEY	**Seymchan**	**54.27**	**34**	*ce*P		**P**	**12 07 00.6**	**+0.6**
SJPF	**Ste Jean**	**54.29**	**301**	*e*P		**P**	**12 07 00.3**	**-0.2**
SJPF	**Ste Jean**	**54.29**	**301**	*e*P		**P**	**12 07 00.3**	**-0.2**
SJPF	**Ste Jean**	**54.29**	**301**	*e*P		**P**	**12 07 00.3**	**-0.2**
ESDC	**Sonseca Array**	**57.44**	**298**	P		**P**	**12 07 23.0**	**0.0**
ESDC	**Sonseca Array**	**57.44**	**298**	P		**P**	**12 07 23.0**	**0.0**
	comp=Z,6.2nm,0.7s,baz=59,slow=7.2,SNR=34							
ESLA	**Sonseca Array**	**57.44**	**298**	*e*P		**P**	**12 07 22.9**	**-0.1**
	comp=Z,1.5nm,0.7s							
TAM	**Tamanrasset**	**57.58**	**276**	*e*P		**P**	**12 07 23.7**	**-0.6**
TAM				pmax	pmax			
	comp=Z,8.0nm,0.7s							
TAM	**Tamanrasset**	**57.58**	**276**	*e*P		**P**	**12 07 23.6**	**-0.6**
	comp=Z,8.3nm,0.7s							
PAB	**San Pablo**	**57.77**	**298**	*e*P		**P**	**12 07 25.5**	**+0.2**
PAB	**San Pablo**	**57.77**	**298**	*e*P		**P**	**12 07 25.5**	**+0.2**
BILL	**Bilibino**	**58.45**	**26**	*d*iP		**P**	**12 07 30.7**	**+1.3**
BILL				*e**PP		**pP**	**12 08 24.5**	**+3.2**
BILL				*e**SP		**sP**	**12 08 48.8**	**+2.0**
BILL				*i*			12 09 41.6	
BILL				pmax	pmax			
	comp=Z,23nm,0.9s							
PGAV	**Gavieira, Arco**	**59.55**	**302**	*e*P		**P**	**12 07 38.3**	**+0.8**
	comp=Z,50nm,1.7s							
MTE	**Manteigas**	**59.68**	**300**	*e*P		**P**	**12 07 39.4**	**+1.0**
	comp=Z,56nm,1.7s							
PVIS	**Viseu**	**59.80**	**300**	*e*P		**P**	**12 07 39.9**	**+0.7**
	comp=Z,35nm,1.6s							
PETK	**Petropavlovsk-**	**59.82**	**44**	P		**P**	**12 07 38.9**	**-0.2**
PETK	**Petropavlovsk-**	**59.82**	**44**	P		**P**	**12 07 38.9**	**-0.2**
PETK	**Petropavlovsk-**	**59.82**	**44**	P		**P**	**12 07 38.9**	**-0.2**
	comp=Z,1.6nm,0.5s,baz=290,slow=2.0,SNR=5.0							
PCBR	**Castelo Branco**	**59.86**	**299**	*e*P		**P**	**12 07 40.6**	**+1.1**
	comp=Z,27nm,1.9s							
PMRV	**Marv??o**	**59.97**	**299**	*e*P		**P**	**12 07 40.9**	**+0.6**
	comp=Z,24nm,1.9s							
PBAR	**Barrancos**	**60.24**	**297**	*e*P		**P**	**12 07 42.3**	**+0.1**
	comp=Z,29nm,1.5s							
PESTR	**Estremoz**	**60.34**	**298**	*e*P		**P**	**12 07 42.9**	**0.0**
	comp=Z,29nm,1.6s							
PTOM	**Tomar**	**60.61**	**299**	*e*P		**P**	**12 07 45.1**	**+0.5**
	comp=Z,53nm,1.4s							
EVO	**Evora**	**60.79**	**298**	*d*iP		**P**	**12 07 46.2**	**+0.4**
	comp=Z,24nm,1.2s							
MDT	**Midelt**	**60.80**	**291**	P		**P**	**12 07 46.1**	**0.0**
MDT	**Midelt**	**60.80**	**291**	P		**P**	**12 07 46.1**	**0.0**
	comp=Z,4.3nm,0.7s,baz=58,slow=9.5,SNR=8.1							
EVOP	**Sao Brissos**	**60.87**	**298**	*d*iP		**P**	**12 07 46.2**	**-0.1**
EVOP				pmax	pmax			
	comp=Z,24nm,1.2s							
EVOP	**Sao Brissos**	**60.87**	**298**	*d*iP		**P**	**12 07 46.2**	**-0.1**
	comp=Z,24nm,1.2s							
PBEJ	**Beja**	**60.90**	**297**	*e*P		**P**	**12 07 46.9**	**+0.3**
	comp=Z,9.8nm,0.7s							
SUMG	**Summit**	**60.95**	**341**	*e*P		**P**	**12 07 48.1**	**+1.2**
SUMG				pmax	pmax			
	comp=Z,25nm,1.1s							
SUMG	**Summit**	**60.95**	**341**	*e*P		**P**	**12 07 48.1**	**+1.2**
	comp=Z,25nm,1.1s							
SUMG	**Summit**	**60.95**	**341**	*i* P		**P**	**12 07 48.0**	**+1.2**
	comp=Z,14nm,0.8s							
SUMG				*i*			12 08 43.7	
PVAQ	**Vaqueiros**	**61.06**	**297**	*e*P		**P**	**12 07 47.8**	**+0.1**
	comp=Z,30nm,1.9s							
PCVE	**Castro Verde**	**61.19**	**297**	*e*P		**P**	**12 07 48.4**	**-0.1**
	comp=Z,29nm,1.8s							
PBDV	**Barranco-do-Ve**	**61.28**	**297**	*e*P		**P**	**12 07 49.9**	**+0.7**
	comp=Z,42nm,1.4s							
PNCL	**Nicolau / Gran**	**61.33**	**298**	*e*P		**P**	**12 07 50.0**	**+0.5**
	comp=Z,19nm,1.7s							
PMAFR	**Mafra**	**61.50**	**299**	*e*P		**P**	**12 07 51.5**	**+0.9**
	comp=Z,116nm,1.6s							
PTEO	**Sao Teotonio**	**61.72**	**297**	*e*P		**P**	**12 07 52.8**	**+0.7**
	comp=Z,65nm,1.1s							
LSZ	**Lusaka**	**65.60**	**226**	*e*P		**P**	**12 08 17.6**	**0.0**
	comp=Z,17nm,0.7s							
TOA0	**Torodi Ar. Sit**	**65.78**	**269**	*e*P		**P**	**12 08 16.9**	**-2.0**
TORD	**Torodi Ar. Bea**	**65.78**	**269**	P		**P**	**12 08 16.8**	**-2.0**
TORD				pP		**pP**	**12 09 12.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**65.78**	**269**	P		**P**	**12 08 16.8**	**-2.0**
	comp=Z,23nm,0.4s,baz=50,slow=5.8,SNR=261							
TORD				pP		**pP**	**12 09 12.0**	**-0.1**
	comp=Z,6.1nm,0.6s,baz=50,slow=5.6,SNR=4.2							
FX1	**Attu Island--F**	**68.25**	**40**	P		**P**	**12 08 33.0**	**-0.7**
FX1	**Attu Island--F**	**68.25**	**40**	P		**P**	**12 08 33.0**	**-0.7**
	comp=Z,18nm,0.7s,baz=257,slow=3.2,SNR=6.6							
COLD	**Coldfoot**	**71.82**	**16**	*e*P		**P**	**12 08 55.7**	**+0.5**
	comp=Z,8.3nm,0.9s							
MBWA	**Marble Bar**	**73.58**	**133**	*e*P		**P**	**12 09 05.5**	**-0.6**
	comp=Z,9.1nm,0.6s							
COLA	**College**	**74.32**	**16**	*e*P		**P**	**12 09 10.5**	**+0.7**
COLA				pmax	pmax			
	comp=Z,13nm,0.8s							
COLA	**College**	**74.32**	**16**	*e*P		**P**	**12 09 10.5**	**+0.7**
	comp=Z,14nm,0.8s							
ILAR	**Eielson Array**	**74.62**	**16**	P		**P**	**12 09 11.5**	**-0.1**
ILAR				pP		**pP**	**12 10 08.3**	**+2.1**
ILAR				PP		**PP**	**12 12 01.2**	**+0.2**
ILAR	**Eielson Array**	**74.62**	**16**	P		**P**	**12 09 11.5**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=312,slow=4.9,SNR=27							
ILAR				pP		**pP**	**12 10 08.3**	**+2.1**
	comp=Z,1.4nm,0.9s,baz=314,slow=3.6,SNR=4.1							
ILAR				PP		**PP**	**12 12 01.2**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=320,slow=6.5,SNR=4.4							
DBIC	**Dimbokro**	**74.77**	**267**	*e*P		**P**	**12 09 11.4**	**-1.8**
	comp=Z,16nm,0.9s							
DBIC				pP		**pP**	**12 10 07.5**	**-0.3**
DBIC	**Dimbokro**	**74.77**	**267**	P		**P**	**12 09 11.7**	**-1.5**
	comp=Z,13nm,0.8s,baz=30,slow=7.1,SNR=15							
DBIC				pP		**pP**	**12 10 07.5**	**-0.3**
	comp=Z,3.5nm,0.7s,baz=26,slow=12,SNR=2.7							
PPLA	**Purkeypile**	**74.93**	**19**	*e*P		**P**	**12 09 13.9**	**+0.4**
	comp=Z,4.4nm,0.5s							
MCK	**McKinley**	**75.04**	**17**	*e*P		**P**	**12 09 14.4**	**+0.3**
MCK				pmax	pmax			
	comp=Z,5.0nm,0.5s							
MCK	**McKinley**	**75.04**	**17**	*e*P		**P**	**12 09 14.4**	**+0.3**
	comp=Z,5.0nm,0.5s							
TSUM	**Tsumeb**	**75.05**	**232**	*e*P		**P**	**12 09 14.5**	**-0.4**
LIC	**Lamto**	**75.16**	**267**	*e*P		**P**	**12 09 13.4**	**-2.1**
	comp=Z,24nm,0.6s							
LIC	**Lamto**	**75.16**	**267**	*e*P		**P**	**12 09 13.4**	**-2.1**
	comp=Z,24nm,0.6s							
PAX	**Paxson**	**76.50**	**16**	*e*P		**P**	**12 09 22.8**	**+0.4**
PAX				pmax	pmax			
	comp=Z,7.0nm,0.5s							
PAX	**Paxson**	**76.50**	**16**	*e*P		**P**	**12 09 22.8**	**+0.4**
	comp=Z,6.9nm,0.5s							
PMR	**Palmer**	**76.81**	**18**	*e*P		**P**	**12 09 23.4**	**-0.6**
PMR				pmax	pmax			
	comp=Z,4.0nm,0.9s							
PMR	**Palmer**	**76.81**	**18**	*e*P		**P**	**12 09 23.4**	**-0.6**
	comp=Z,3.5nm,0.9s							
SML	**Sawmill**	**76.83**	**18**	*e*P		**P**	**12 09 25.0**	**+0.8**
SML				pmax	pmax			
	comp=Z,3.0nm,0.6s							
SML	**Sawmill**	**76.83**	**18**	*e*P		**P**	**12 09 25.0**	**+0.8**
	comp=Z,2.9nm,0.6s							
BOSA	**Boshof**	**77.89**	**220**	*e*P		**P**	**12 09 29.8**	**-0.8**
	comp=Z,6.7nm,0.5s							
BOSA	**Boshof**	**77.89**	**220**	P		**P**	**12 09 29.9**	**-0.7**
	comp=Z,8.0nm,0.6s,baz=45,slow=10.0,SNR=23							
YKA	**Yellowknife Ar**	**81.10**	**3**	P		**P**	**12 09 47.9**	**+0.7**
YKA	**Yellowknife Ar**	**81.10**	**3**	P		**P**	**12 09 47.9**	**+0.7**
	comp=Z,4.8nm,0.5s,baz=349,slow=5.4,SNR=63							
WRA	**Warramunga Arr**	**82.02**	**122**	P		**P**	**12 09 51.5**	**-1.2**
WRA				pP		**pP**	**12 10 49.2**	**+0.9**
WRA	**Warramunga Arr**	**82.02**	**122**	P		**P**	**12 09 51.5**	**-1.2**
	comp=Z,6.8nm,0.6s,baz=326,slow=4.9,SNR=108							
WRA				pP		**pP**	**12 10 49.2**	**+0.9**
	comp=Z,5.3nm,0.7s,baz=323,slow=5.2,SNR=8.2							
WRAB	**Tennant Creek**	**82.02**	**122**	*e*P		**P**	**12 09 51.1**	**-1.5**
WRAB				*e*			12 10 48.7	
WRAB				pmax	pmax			
	comp=Z,7.0nm,0.7s							
WRAB	**Tennant Creek**	**82.02**	**122**	*e*P		**P**	**12 09 51.1**	**-1.5**
	comp=Z,6.7nm,0.7s							
WRAB				*e*			12 10 48.7	
AS31	**Alice Springs**	**84.29**	**125**	*e*P		**P**	**12 10 02.8**	**-1.4**
ASAR	**Alice Springs**	**84.29**	**125**	P		**P**	**12 10 03.0**	**-1.2**
ASAR				pP		**pP**	**12 11 00.9**	**+0.9**
ASAR	**Alice Springs**	**84.29**	**125**	P		**P**	**12 10 03.0**	**-1.2**
	comp=Z,6.7nm,0.6s,baz=311,slow=4.6,SNR=156							
ASAR				pP		**pP**	**12 11 00.9**	**+0.9**
	comp=Z,1.9nm,0.8s,baz=318,slow=5.1,SNR=3.6							
QSPA	**South Pole Qui**	**126.44**	**180**	PKP		**PKPdf**	**12 16 31.4**	**-1.2**
QSPA	**South Pole Qui**	**126.44**	**180**	PKP		**PKPdf**	**12 16 31.4**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=203,slow=0.8,SNR=3.6							
CPUP	**Villa Florida**	**135.28**	**268**	PKP		**PKPdf**	**12 16 49.3**	**-1.1**
CPUP	**Villa Florida**	**135.28**	**268**	PKP		**PKPdf**	**12 16 49.3**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=63,slow=4.8,SNR=6.5							
LPAZ	**La Paz**	**138.62**	**288**	PKP		**PKPdf**	**12 16 56.4**	**-1.2**
LPAZ	**La Paz**	**138.62**	**288**	PKP		**PKPdf**	**12 16 56.4**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=105,slow=3.7,SNR=4.9							
USHA	**Ushuaia**	**146.99**	**224**	PKPbc		**PKPbc**	**12 17 12.2**	**-0.6**
USHA	**Ushuaia**	**146.99**	**224**	PKPbc		**PKPbc**	**12 17 12.2**	**-0.6**
	comp=Z,8.7nm,0.9s,baz=103,slow=5.3,SNR=5.4							
LCO	**Las Campanas**	**147.16**	**272**	*e*PKPdf		**PKPdf**	**12 17 11.2**	**-0.7**
PLCA	**Paso Flores**	**149.93**	**250**	PKPbc		**PKPbc**	**12 17 20.6**	**-0.4**
PLCA	**Paso Flores**	**149.93**	**250**	PKPbc		**PKPbc**	**12 17 20.5**	**-0.4**
	comp=Z,11nm,1.1s,baz=75,slow=5.9,SNR=8.6							

*PDG **17** 11:58:59.0±0.3, 37°.83N×22°.96E, h4km±1km, ML4.1/8, Error ellipse: s-maj=1.8km s-min=1.2km az=90.0*
*IDC **17** 11:59:01.4±0.6, 38°.15N×22°.79E, h0km, mb4.4/22, mb1 4.4/32, mb1mx4.3/41, mbtmp4.3/32, ML3.8/9, MS3.9/23, Ms1 3.9/23, ms1mx3.7/49, Error ellipse: s-maj=13.1km s-min=12.0km az=174.0*
*BEO **17** 11:59:01.0±1.2, 37°.92N×22°.79E, h0km, ML4.3/1*
*ISCJB **17** 11:59:02.8±0.3, 38°.14N±0'.01×22°.73E±0'.01, h11km±2km, mb4.7/87, MS4.0/22, Error ellipse: s-maj=2.1km s-min=1.7km az=21.6*
*NEIC **17** 11:59:03.1, 38°.12N×22°.69E, h19km, mb4.7/65, ML4.5(ATH), After ATH.*
*ATH **17** 11:59:03.1, 38°.12N×22°.69E, h19km, MD3.4/39*
*THE **17** 11:59:03.6, 38°.13N×22°.69E, h5km, ML4.5/11, Error ellipse: s-maj=0.9km s-min=0.4km az=218.0*
*CSEM **17** 11:59:04.3±0.1, 38°.12N×22°.72E, h15km, mb4.6/16, Ms3.5, Mw4.8, Error ellipse: s-maj=3.1km s-min=2.7km az=25.0*
*BJI **17** 11:59:04.0, 38°.29N×21°.86E, h45km, mB5.0/12, mb4.8/17, Ms4.8/10, Ms7 4.4/10*
*GCMT **17** 11:59:04.5±0.6, 37°.83N×22°.64E, h21km±1km, MW4.9, Moment Tensor Solution. s20,c23; s54,c73; Moment tensor: Scale 10^16^Nm; Mrr=2.66±.20; Mθθ2.16±.13; Mφφ0.50±.12; Mrθ-1.06±.20; Mrφ-0.70±.07; Mθφ-0.15±.22; Best double couple: M₀2.80000×10^16^ NP1:φ=298.00000°, δ35.00000°, λ-75.00000°; NP2:φ=101.00000°, δ56.00000°, λ-100.00000°. Principal axes: T 2.5900, Plg10.0000°, Azm198.0000°; N 0.3200, Plg8.0000°, Azm106.0000°; P -2.9100, Plg77.0000°, Azm338.0000°; Data Used: II IC IU CN G.*
*MOS **17** 11:59:05.7±1.2, 38°.19N×22°.80E, h33km, mb5.0/25 Error ellipse: s-maj=5.0km s-min=2.8km az=110.4*
*SOF **17** 11:59:22.7, 39°.49N×23°.46E, h19km, MD4.3*
ISC 17 11:59:04.3±0.6, 38°.12N±0'.01×22°.69E±0'.01, h14km±3km, n1019, σ1.932/1058, mb4.8/87, MS4.0/23, 107C-109D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THAL	**Thalero**	**0.09**	**197**	P	**Pg**	**11 59 06.1**	**-1.2**
THAL				S	**Sg**	**11 59 07.4**	**-1.9**
THAL	**Thalero**	**0.09**	**197**	P	**Pg**	**11 59 06.1**	**-1.2**
THAL				S	**Sg**	**11 59 07.4**	**-1.9**
LTK	**Loutraki**	**0.24**	**114**	P	**Pg**	**11 59 08.6**	**-0.9**
LTK				S	**Sg**	**11 59 12.4**	**-0.5**
LTK	**Loutraki**	**0.24**	**114**	*e*Pb	**Pg**	**11 59 08.6**	**-0.9**
LTK				*e*Sb	**Sg**	**11 59 12.5**	**-0.5**
LTK	**Loutraki**	**0.24**	**114**	*e*PB	**Pg**	**11 59 08.6**	**-0.9**
LTK				*e*SB	**Sg**	**11 59 12.5**	**-0.5**
LTK	**Loutraki**	**0.24**	**114**	P	**Pg**	**11 59 08.6**	**-0.9**
LTK				S	**Sg**	**11 59 12.4**	**-0.5**
DSF	**Desfina**	**0.32**	**336**	P	**Pg**	**11 59 09.6**	**-1.4**
DSF				S	**Sg**	**11 59 14.6**	**-0.9**
DSF	**Desfina**	**0.32**	**336**	P	**Pg**	**11 59 09.6**	**-1.4**
DSF				S	**Sg**	**11 59 14.6**	**-0.9**
GUR	**Goura**	**0.33**	**237**	P	**Pg**	**11 59 10.0**	**-1.2**
GUR				S	**Sg**	**11 59 14.5**	**-1.4**
GUR	**Goura**	**0.33**	**237**	*e*Pb	**Pg**	**11 59 10.0**	**-1.2**
GUR				*e*Sb	**Sg**	**11 59 15.2**	**-0.7**
GUR	**Goura**	**0.33**	**237**	*e*PB	**Pg**	**11 59 10.0**	**-1.2**
GUR				*e*SB	**Sg**	**11 59 15.2**	**-0.7**
GUR	**Goura**	**0.33**	**237**	*e*Pb	**Pg**	**11 59 10.0**	**-1.2**
GUR				S	**Sg**	**11 59 14.5**	**-1.4**
GUR				*e*Sb	**Sg**	**11 59 15.2**	**-0.7**
KLV	**Kalavryta, Ach**	**0.44**	**260**	*e*Pb	**Pg**	**11 59 11.7**	**-1.4**
KLV				*e*Sb	**Sg**	**11 59 17.7**	**-1.3**
KLV	**Kalavryta, Ach**	**0.44**	**260**	*e*PB	**Pg**	**11 59 11.7**	**-1.4**
KLV				*e*SB	**Sg**	**11 59 17.7**	**-1.3**
KLV	**Kalavryta, Ach**	**0.44**	**260**	*e*Pb	**Pg**	**11 59 11.7**	**-1.4**
KLV				*e*Sb	**Sg**	**11 59 17.7**	**-1.3**
KALE	**Kalithea**	**0.51**	**302**	P	**Pg**	**11 59 13.3**	**-1.2**
KALE				S	**Sg**	**11 59 20.7**	**-0.6**
KALE	**Kalithea**	**0.51**	**302**	*e*Pn	**Pg**	**11 59 13.5**	**-1.0**
KALE				*e*Sn	**Sg**	**11 59 20.8**	**-0.6**
KALE	**Kalithea**	**0.51**	**302**	*e*PN	**Pg**	**11 59 13.5**

AOS	Alonnisos	1.40	41	ePB	Pn	11 59 28.4	-1.1	GONE	Gonen-Balikesi	4.33	62	eP	Pn	12 00 08.8	-1.0	PLOR	Plostina	8.27	20 ⇓P	Pn	12 01 04.7	+0.9
AOS	Alonnisos	1.40	41	ePb	Pn	11 59 28.4	-1.1	KARP	Karpathos	4.41	124	ePn	Pn	12 00 12.5	+1.6	PLOR	Plostina	8.27	20 ⇓iP	Pn	12 01 04.7	+0.9
VLI	Veliai	1.41	172	P	Pn	11 59 29.2	-0.4	KARP	Karpathos	4.41	124	ePN	Pn	12 00 12.5	+1.6	PLOR	Plostina	8.27	20 P	Pn	12 01 04.7	+0.9
VLI	Veliai	1.41	172	ePn	Pn	11 59 29.3	-0.4	KARP	Karpathos	4.41	124	ePn	Pn	12 00 12.5	+1.6	AQU	L'Aquila	8.27	304 ePn	Pn	12 01 06.5	+2.6
VLI	Veliai	1.41	172	ePN	Pn	11 59 29.3	-0.4	PUK	Puka	4.47	332	*i* PN	Pn	12 00 06.2	-5.5	AQU			eSn	Sn	12 02 37.5	+0.4
VLI	Veliai	1.41	172	ePn	Pn	11 59 29.3	-0.4	VTS	Vitosha	4.48	5 ⇓P	Pn	12 00 12.7	+0.7	AQU	L'Aquila	8.27	304 ⇑iP	Pn	12 01 06.5	+2.6
PYL	PYLOS	1.44	212	P	Pn	11 59 30.2	+0.2	VTS	Vitosha	4.48	5 ⇑iPn	Pn	12 00 12.6	+0.6	AQU	L'Aquila	8.27	304 P	Pn	12 01 06.5	+2.6
PYL	PYLOS	1.44	212	ePn	Pn	11 59 30.1	+0.1	VTS				eSn	Sn	12 01 05.0	+0.9	AQU			eSn	Sn	12 02 37.5	+0.4
PYL	PYLOS	1.44	212	ePN	Pn	11 59 30.1	+0.1	VTS	Vitosha	4.48	5 ⇓iP	Pn	12 00 12.7	+0.7	VRI	Vrincioaia	8.30	20 ⇓P	Pn	12 01 05.1	+0.8
PYL	PYLOS	1.44	212	P	Pn	11 59 30.2	+0.2	VTS	Vitosha	4.48	5 *i* P	Pn	12 00 12.9	+0.9	VRI	Vrincioaia	8.30	20 ⇓iP	Pn	12 01 05.1	+0.8
THL	Klokotos Trika	1.54	340	P	Pn	11 59 31.2	-0.1	VTS	Vitosha	4.48	5 ⇑iPn	Pn	12 00 12.6	+0.6	VRI	Vrincioaia	8.30	20 P	Pn	12 01 05.1	+0.8
THL			S		Sn	11 59 51.5	+0.4	VTS				eSn	Sn	12 01 05.0	+0.9	TLCR		8.41	31 ⇓P	Pn	12 01 05.4	-0.4
THL	Klokotos Trika	1.54	340	ePn	Pn	11 59 31.3	-0.1	MRMT	Marmara Adasi	4.54	55	eP	Pn	12 00 10.9	-1.8	TLCR		8.41	31 ⇓iP	Pn	12 01 05.4	-0.4
THL	Klokotos Trika	1.54	340	ePN	Pn	11 59 31.3	-0.1	YER	Yerkesik	4.54	101	eP	Pn	12 00 14.3	+1.6	TLCR		8.41	31 P	Pn	12 01 05.4	-0.4
THL	Klokotos Trika	1.54	340	ePn	Pn	11 59 31.3	-0.1	PGB	Panagyurishte	4.57	14	*i* P	Pn	12 00 10.6	-2.5	PKSM	Moragy	8.63	341 ⇑P	Pn	12 01 08.4	-0.3
THL			S		Sn	11 59 51.5	+0.4	PGB	Panagyurishte	4.57	14	*i* P	Pn	12 00 10.6	-2.5	PKSM	Moragy	8.63	341 ⇑iP	Pn	12 01 08.4	-0.3
VLS	Valsamata	1.66	273	eP	Pn	11 59 33.8	+0.7	MANT	Manisa	4.63	84	*i* P	Pn	12 00 15.2	+1.1	PKSM	Moragy	8.63	341 ePn	Pn	12 01 08.5	-0.3
VLS	Valsamata	1.66	273	ePn	Pn	11 59 33.8	+0.7	MANT	Manisa	4.63	84	*i* P	Pn	12 00 15.2	+1.1	PKSM	Moragy	8.63	341 P	Pn	12 01 08.4	-0.3
VLS	Valsamata	1.66	273	ePN	Pn	11 59 33.8	+0.7	BNT	Bandirma	4.63	60	eP	Pn	12 00 11.7	-2.2	DRGR		8.67	0 ⇓P	Pn	12 01 10.4	+1.1
VLS	Valsamata	1.66	273	ePn	Pn	11 59 33.8	+0.7	ULC	Ulcinj	4.66	326 ⇑iPn	Pn	12 00 17.4	+3.0	DRGR		8.67	0 ⇓iP	Pn	12 01 10.4	+1.1
LKD2	Lefkada island	1.73	293	ePn	Pb	11 59 35.4	-0.6	ULC				eSn	Sn	12 01 14.5	+6.2	DRGR		8.67	0 P	Pn	12 01 10.4	+1.1
LKD2	Lefkada island	1.73	293	ePN	Pb	11 59 35.4	-0.6	ULC	Ulcinj	4.66	326 ⇑iPn	Pn	12 00 17.4	+3.0	BR131	Keskin Array S	8.68	76 ePn	Pn	12 01 09.2	-0.4
LKD2	Lefkada island	1.73	293	ePn	Pb	11 59 35.4	-0.6	KULA	Kula-Manisa	4.71	83	eP	Pn	12 00 15.7	+0.6		7.0nm,0.6s					
KYTH	Kithira	1.86	171	ePn	Pn	11 59 36.5	+0.7	ARG	Arkhangelos	4.74	112	eP	Pn	12 00 17.4	+2.1	BRTR	Keskin Array B	8.68	76 Pn	Pn	12 01 09.2	-0.4
KYTH	Kithira	1.86	171	ePN	Pn	11 59 36.5	+0.7	ARG	Arkhangelos	4.74	112	ePn	Pn	12 00 17.4	+2.1	BRTR	Keskin Array B	8.68	76 Pn	Pn	12 01 09.2	-0.4
KYTH	Kithira	1.86	171	ePn	Pn	11 59 36.5	+0.7	ARG	Arkhangelos	4.74	112	ePN	Pn	12 00 17.4	+2.1		0.6nm,0.3s,baz=255,slow=15,SNR=26					
KZN	Kozani	2.30	342	eP	Pn	11 59 42.3	+0.3	ARG	Arkhangelos	4.74	112	ePn	Pn	12 00 17.4	+2.1	BRTR			LR	LR	12 04 49.8	
KZN	Kozani	2.30	342	P	Pn	11 59 42.2	+0.3	BARS	Barje	4.74	352	ePn	Pn	12 00 16.0	+0.6		comp=Z,621nm,20.1s,baz=256,slow=40					
KZN	Kozani	2.30	342	ePb	Pn	11 59 42.3	+0.3	BARS	Barje	4.74	352	ePn	Pn	12 00 16.0	+0.6	BRTR	Keskin Array B	8.68	76 Pn	Pn	12 01 09.2	-0.4
KZN	Kozani	2.30	342	ePB	Pn	11 59 42.3	+0.3	DURS	Dursunbey	4.75	70	*i* P	Pn	12 00 16.1	+0.5	TESR	Tescani	8.88	18 ⇑iP	Pn	12 01 13.2	+1.0
KZN	Kozani	2.30	342	P	Pn	11 59 42.2	+0.3	DURS	Dursunbey	4.75	70	*i* P	Pn	12 00 16.1	+0.5	BALT	Daday	8.90	64 *i* P	Pn	12 01 13.9	+1.2
ANKY	Antikythira Is	2.30	168	ePn	Pn	11 59 41.9	+0.1	TIP	Timpagrande	4.77	285	ePn	Pn	12 00 17.1	+1.3	BALT	Daday	8.90	64 *i* P	Pn	12 01 13.9	+1.2
ANKY	Antikythira Is	2.30	168	ePN	Pn	11 59 41.9	+0.1	TIP	Timpagrande	4.77	285	ePn	Pn	12 00 17.1	+1.3	CSS	Prodhromos	9.12	107 ePn	Pn	12 01 19.9	+4.3
ANKY	Antikythira Is	2.30	168	ePn	Pn	11 59 41.9	+0.1	DEMI	Demirci	4.81	77	*i* P	Pn	12 00 17.4	+1.0	BEHE	Becsehely	9.42	334 ⇑ePn	Pn	12 01 19.0	-0.6
PLG	Polygyros	2.33	14	eP	Pn	11 59 41.5	-0.7	DEMI	Demirci	4.81	77	*i* P	Pn	12 00 17.4	+1.0	BUR08	Bucovina Ar. S	9.70	10 ePn	Pn	12 01 24.6	+1.2
PLG	Polygyros	2.33	14	ePn	Pn	11 59 41.5	-0.7	EDRB	Edirne	4.85	39	eP	Pn	12 00 15.4	-1.5	BUR08	Bucovina Ar. S	9.70	10 ePn	Pn	12 01 24.6	+1.2
PLG	Polygyros	2.33	14	ePN	Pn	11 59 41.5	-0.7	DST	Dursunbey	4.86	70	eP	Pn	12 00 15.9	-1.1	BUD	Budapest	9.74	345 epPn	Pn	12 01 26.5	+2.6
PLG	Polygyros	2.33	14	ePn	Pn	11 59 41.5	-0.7	KCTX	Karacabey (Bur	4.89	62	eP	Pn	12 00 15.9	-1.6	KIS	Kishinev	9.95	25 eP	Pn	12 01 30.0	+3.1
APE	Apeiranthos	2.48	114	eP	Pn	11 59 44.6	+0.1	DALY	Dalyan (Mu la	4.92	104	eP	Pn	12 00 19.6	+1.9	KIS			*e*		12 03 20.0	
APE	Apeiranthos	2.48	114	eP	Pn	11 59 44.1	-0.3	PVY	Plav	4.93	336 ⇑iPn	Pn	12 00 20.1	+1.9	KIS			MLR	MLR		
APE	Apeiranthos	2.48	114	P	Pn	11 59 44.2	-0.2	PVY				eSn	Sn	12 01 21.6	+6.5		comp=Z,800nm,9.0s					
APE	Apeiranthos	2.48	114	ePn	Pn	11 59 44.1	-0.3	PVY	Plav	4.93	336 ⇑iPn	Pn	12 00 20.1	+1.9	KIS			MLR	MLR		
APE	Apeiranthos	2.48	114	ePN	Pn	11 59 44.1	-0.3	DENT	Denizli	5.02	92	eP	Pn	12 00 20.2	+0.9		comp=Z,900nm,12.0s					
APE	Apeiranthos	2.48	114 ⇑iP		Pn	11 59 44.7	+0.3	PDG	Podgorica	5.04	330	ePn	Pn	12 00 20.0	+0.4	KIS	Kishinev	9.95	25 eP	Pn	12 01 30.0	+3.1
APE	Apeiranthos	2.48	114	ePn	Pn	11 59 44.1	-0.3	PDG	Podgorica	5.04	330	ePn	Pn	12 00 20.0	+0.4	KIS			LRM	MLR	12 06 38.0	
LIA	Limnos Island	2.63	47	ePn	Pn	11 59 45.3	-1.1	TTG	Podgorica	5.04	330 ⇑iPn	Pn	12 00 21.4	+1.8		comp=Z,900nm,12.0s					
LIA	Limnos Island	2.63	47	ePN	Pn	11 59 45.3	-1.1	TTG				eSn	Sn	12 01 24.4	+6.8	PSZ	Piszkesteto	10.01	349 ⇓P	Pn	12 01 28.4	+0.7
LIA	Limnos Island	2.63	47	ePn	Pn	11 59 45.3	-1.1	BUM	Brajici-Budva	5.09	326 ⇓iPn	Pn	12 00 22.2	+2.0	PSZ	Piszkesteto	10.01	349 ePn	Pn	12 01 31.2	+3.5
CHOS	Chios island	2.66	83	P	Pn	11 59 46.6	-0.3	BUM				eSn	Sn	12 01 24.8	+6.0	PSZ	Piszkesteto	10.01	349 ⇓iP	Pn	12 01 28.4	+0.7
CHOS	Chios island	2.66	83	ePn	Pn	11 59 46.8	-0.1	BUM	Brajici-Budva	5.09	326 ⇓iPn	Pn	12 00 22.2	+2.0	PSZ	Piszkesteto	10.01	349 ⇓ePn	Pn	12 01 30.8	+3.1
CHOS	Chios island	2.66	83	ePN	Pn	11 59 46.8	-0.1	ZAPS	Zavoj	5.15	360 ⇑iPn	Pn	12 00 21.8	+0.8	PSZ	Piszkesteto	10.01	349 P	Pn	12 01 28.4	+0.7
CHOS	Chios island	2.66	83	P	Pn	11 59 46.6	-0.3	ORLT	Orhaneli	5.19	66	eP	Pn	12 00 21.0	-0.6	TRPA	Tarpa	10.01	359 ⇓ePn	Pn	12 01 30.4	+2.8
SOH	Sokhos	2.75	11	eP	Pn	11 59 48.2	+0.2	BEY	Berane	5.21	337 ⇓iPn	Pn	12 00 24.0	+2.1	SOKA	Soboth	10.25	329 ⇑iPn	Pn	12 01 29.9	-1.2
SOH	Sokhos	2.75	11	P	Pn	11 59 47.7	-0.3	IVA	Berane	5.21	337 ⇓iPn	Pn	12 00 24.0	+2.1	SOKA	Soboth	10.25	329 Pn	Pn	12 01 29.9	-1.2
SOH	Sokhos	2.75	11	ePn	Pn	11 59 48.2	+0.2	IVA				eSn	Sn	12 01 27.6	+5.9	VOY	Vojsko	10.26	323 ePn	Pn	12 01 31.1	0.0
SOH	Sokhos	2.75	11	ePN	Pn	11 59 48.2	+0.2	JMB	Yambol	5.26	33 ⇓iPn	Pn	12 00 21.7	-0.8	VOY			*e*		12 01 34.3	
SOH	Sokhos	2.75	11	P	Pn	11 59 47.7	-0.3	JMB	Yambol	5.26	33 ⇓iPn	Pn	12 00 21.7	-0.8	VOY			eSn	Sn	12 03 20.8	-5.1
SOH	Sokhos	2.75	11	ePn	Pn	11 59 48.2	+0.2	SLVT	Silivri	5.27	52	eP	Pn	12 00 20.7	-1.9	VOY			*e*		12 03 25.5	
KEK	Kerkira	2.76	306	ePb	Pn	11 59 49.7	+1.5	FETY	Fethiye	5.30	104	eP	Pn	12 00 24.4	+1.3	UZH	Uzhgorod	10.51	359 eP	Pn	12 01 36.7	+2.2
KEK	Kerkira	2.76	306	ePB	Pn	11 59 49.7	+1.5	MDNY	Mudanya-Bursa	5.30	63	eP	Pn	12 00 22.3	-0.8	UZH			eS	Sn	12 03 35.3	+3.3
KEK	Kerkira	2.76	306	ePb	Pn	11 59 49.7	+1.5	KHAL	Karahalli	5.36	85	*i* P	Pn	12 00 25.7	+1.7	UZH	Uzhgorod	10.51	359 eP	Pn	12 01 36.7	+2.2
SANT	Santorini	2.81	128	ePn	Pn	11 59 49.3	+0.4	KHAL	Karahalli	5.36	85	*i* P	Pn	12 00 25.7	+1.7	SOP	Sopron	10.56	337 ⇓epPn	Pn	12 01 42.0	+6.8
SANT	Santorini	2.81	128	ePN	Pn	11 59 49.3	+0.4	CEL	Celeste	5.36	274 ePn	Pn	12 00 24.6	+0.7	VYHS	Vyhne	10.74	346 eP	Pn	12 01 44.5	+6.8
SANT	Santorini	2.81	128	ePn	Pn	11 59 49.3	+0.4	CEL				eSn	Sn	12 01 23.9	-1.6	VYHS	Vyhne	10.74	346 ePN	Pn	12 01 44.5	+6.8
GRG	Griva	2.84	356	eP	Pn	11 59 49.2	-0.1	CEL	Celeste	5.36	274 ePn	Pn	12 00 24.6	+0.7	KOLS	Kolonicke sedl	10.81	359 eP	Pn	12 01 41.3	+2.6
GRG	Griva	2.84	356	P	Pn	11 59 49.3	-0.1	CEL				eSn	Sn	12 01 23.9	-1.6	KOLS	Kolonicke sedl	10.81	359 ePN	Pn	12 01 41.3	+2.6
GRG	Griva	2.84	356	ePn	Pn	11 59 49.2	-0.1	ARMT	Armutlu	5.37	61	eP	Pn	12 00 25.8	-0.2	CRVS	Cervenica-Dubn	10.82	356 eP	Pn	12 01 40.2	+1.5
GRG	Griva	2.84	356	ePN	Pn	11 59 49.2	-0.1	KHL	Karahalli	5.38	86	eP	Pn	12 00 25.5	+1.2	CRVS	Cervenica-Dubn	10.82	356 ePN	Pn	12 01 40.2	+1.5
GRG	Griva	2.84	356	ePn	Pn	11 59 49.2	-0.1	HCY	Herceg Novi	5.38	325 ⇑iPn	Pn	12 00 26.4	+2.2	CRVS	Cervenica-Dubn	10.82	356 eP	Pn	12 01 40.2	+1.5
FNA	Florina	2.85	339	eP	Pn	11 59 50.7	+1.2	HCY				eSn	Sn	12 01 32.1	+6.1	YAYL	Yayladag	10.92	97 *i* P	Pn	12 01 43.1	+2.9
FNA	Florina	2.85	339	ePb	Pn	11 59 50.7	+1.2	HCY	Herceg Novi	5.38	325 ⇑iPn	Pn	12 00 26.4	+2.2	SIM	Simferopol'	10.94	48 eP	Pn	12 01 35.0	-5.4
FNA	Florina	2.85	339	ePB	Pn	11 59 50.7	+1.2	GDZ	Gediz	5.40	78	*i* P	Pn	12 00 25.8	+1.1	SIM			MLR	MLR		
FNA	Florina	2.85	339	ePb	Pn	11 59 50.7	+1.2	GDZ	Gediz	5.40	78	*i* P	Pn	12 00 25.8	+1.1		comp=Z,300nm,14.0s					
KARN	Karanos	2.88	160	ePb	Pn	11 59 51.5	+1.6	TVSB	Tavsanli	5.45	74	eP	Pn	12 00 25.3	0.0	KEST	Kesra	10.95	262 ePn	Pn	12 01 41.1	+0.5
KARN	Karanos	2.88	160	ePB	Pn	11 59 51.5	+1.6	CTKS	Kestanelik-??a	5.46	53	eP	Pn	12 00 23.9	-1.4	KEST	Kesra	10.95	262 Pn	Pn	12 01 38.9	-1.7
KARN	Karanos	2.88	160	ePb	Pn	11 59 51.5	+1.6	CTYL	Yal??k??y-??at	5.46	50	eP	Pn	12 00 24.4	-0.8		comp=Z,0.0nm,0.3s,baz=44,slow=11,SNR=2.1					
KBN	Korca	2.91	330	*i* PN	Pn	11 59 51.9	+1.7	NKY	Niksic	5.47	330 ⇓iPn	Pn	12 00 28.6	+3.1	KEST			LR	LR	12 06 58.1	
KBN	Korca	2.91	330	*i* Pn	Pn	11 59 51.9	+1.7	NKY				eSn	Sn	12 01 35.1	+6.8		comp=Z,131nm,19.9s,baz=12,slow=43					
VAM	Vamos	2.96	155	eP	Pn	11 59 51.7	+0.7	PVL	Pavlikeni	5.47	21	*i* P	Pn	12 00 23.2	-2.2	KEST	Kesra	10.95	262 ePn	Pn	12 01 41.1	+0.5
VAM	Vamos	2.96	155	ePn	Pn	11 59 51.7	+0.7	GOLH	Golhisar	5.52	97	*i* P	Pn	12 00 29.7	+3.5	PGF	Pioggiola	11.35	297 eP	Pn	12 01 48.9	+2.8
VAM	Vamos	2.96	155	ePN	Pn	11 59 51.7	+0.7	GEMT	Gemlik	5.54	63	eP	Pn	12 00 25.6	-0.9		comp=Z,51nm,1.1s					
VAM	Vamos	2.96	155	ePn	Pn	11 59 51.7	+0.7	BGKT	Bogazkoy	5.60	55	eP	Pn	12 00 25.7	-1.4	PGF	Pioggiola	11.35	297 eP	Pn	12 01 48.9	+2.8
PRK	Paraskevi	3.02	67	eP	Pn	11 59 51.3	-0.4	CUC	Castrocucco	5.67	291 ePn	Pn	12 00 30.1	+1.9	PGF			pmax	pmax		
PRK	Paraskevi	3.02	67	ePn	Pn	11 59 51.3	-0.4	CUC	Castrocucco	5.67	291 ePn	Pn	12 00 30.1	+1.9		comp=Z,51nm,1.1s					
PRK	Paraskevi	3.02	67	ePN	Pn	11 59 51.3	-0.4	SZH	Strazhica	5.77	25	eP	Pn	12 00 27.9	-0.9	PGF	Pioggiola	11.35	297 eP	Pn	12 01 48.9	+2.8
PRK	Paraskevi	3.02	67	ePn	Pn	11 59 51.3	-0.4	IZI	Iznik	5.71	65	eP	Pn	12 00 27.9	-0.9		comp=Z,51nm,1.1s					
BIA	Bitola	3.08	340	ePn	Pb	11 59 56.1	-2.9	YLV	Yalova	5.72	63	eP	Pn	12 00 28.6	-0.4	PGF	Pioggiola	11.35	297 eP	Pn	12 01 48.9	+2.8
BIA	Bitola	3.08	340	ePn	Pb	11 59 56.1	-2.9	ISK	Istanbul-Kandi	5.73	57	eP	Pn	12 00 28.1	-0.8		comp=Z,26nm,1.1s					
VAY	Valandovo	3.20	358	ePn	Pn	11 59 54.3	+0.1	BRY	Bratogost	5.73	328 ⇓iPn	Pn	12 00 30.9	+1.8	NIE	Niedzica	11.43	352 eP	Pn	12 01 49.8	+2.7
VAY			eSn		Sg	12 00 47.4	+0.3	BRY				eSn	Sn	12 01 40.6	+5.9	NIE	Niedzica	11.43	352 eP	Pn	12 01 49.8	+2.7
VAY	Valandovo	3.20	358 ⇑iPn		Pn	11 59 53.6	-0.6	BRY	Bratogost	5.73	328 ⇓iPn	Pn	12 00 30.9	+1.8	KWP	Kalwaria Pacla	11.51	0 eP	Pn	12 01 52.5	+4.3
VAY	Valandovo	3.20	358 ⇑iPn		Pn	11 59 53.6	-0.6	CDT	Castel del Mon	5.77	303 ePn	Pn	12 00 30.2	+0.6	KWP	Kalwaria Pacla	11.51	0 ePn	Pn	12 01 52.5	+4.3
EZN	Ezine	3.30	58	eP	Pn	11 59 51.4	-4.2	AKAS	Kas	5.83	107	*i* P	Pn	12 00 36.3	+5.8	KWP	Kalwaria Pacla	11.51	0 eP	Pn	12 01 52.4	+4.3
IDI	Anoyia	3.33	147	ePn	Pn	11 59 55.9	-0.2	UPM	Unac-Piva	5.84	332 ⇑iPn	Pn	12 00 31.9	+1.3	MMAI	Mount Meron Ar	11.53	112 Pn	Pn	12 01 47.1	-1.5
IDI	Anoyia	3.33	147	ePN	Pn	11 59 55.9	-0.2	UPM				eSn	Sn	12 01 44.0	+6.5		comp=Z,4.1nm,0.3s,baz=305,slow=13,SNR=8.2					
IDI	Anoyia	3.33	147	ePn	Pn	11 59 55.9	-0.2	UPM	Unac-Piva	5.84	332 ⇑iPn	Pn	12 00 31.9	+1.3	MMAI	Mount Meron Ar	11.53	112 Pn	Pn	12 01 47.1	-1.5
NVR	Nevrokopi	3.35	15	ePn	Pn	11 59 56.1	-0.2	ALT	Altintas	5.88	79	eP	Pn	12 00 31.0	-0.2		comp=Z,400nm,10.0s					
NVR	Nevrokopi	3.35	15	ePN	Pn	11 59 56.1	-0.2	ELL	Elmali	5.90	101	eP	Pn	12 00 33.9	+2.5	VRAC	Vranov	12.02	340 Pn	Pn	12 01 54.5	-0.7
NVR	Nevrokopi	3.35	15	ePn	Pn	11 59 56.1	-0.2	CAVI	Cavuskoy	5.93	67	eP	Pn	12 00 31.0	-0.7	VRAC	Vranov	12.02	340 Pn	Pn	12 01 54.5	-0.7
BLCB	Balcova	3.43	84	eP	Pn	11 59 57.4	0.0	ADVT	Abdulvahap	5.93	65	eP	Pn	12 00 31.3	-0.5		comp=Z,0.2nm,0.3s,baz=160,slow=15,SNR=2.1					
GVD	Gavdhos	3.46	161	ePb	Pn	12 00 00.3	+2.5	GRUS	Gruza	5.96	346 ⇑iPn	Pn	12 00 33.7	+1.6	VRAC	Vranov	12.02	340 P	Pn	12 01 54.5	-0.7
GVD	Gavdhos	3.46	161	ePB	Pn	12 00 00.3	+2.5	GRUS	Gruza	5.96	346 ⇑iPn	Pn	12 00 33.7	+1.6	OKC	Ostrava-Krasne	12.16	346 AMS	AMS	12 07 30.0	
GVD	Gavdhos	3.46	161	ePb	Pn	12 00 00.3	+2.5	HRT	Hereke	6.03	61	eP	Pn	12 00 32.9	-0.3		comp=Z,1µm,11.1s					
SIVA	Sivas	3.53	151	ePb	Pn	12 00 01.4	+2.6	SILT	Sile	6.16	58	eP	Pn	12 00 34.2	-0.6	WTTA	Wattenberg	12.22	322 ⇓iPn	Pn	12 01 57.5	-0.6
SIVA	Sivas	3.53	151	ePB	Pn	12 00 01.4	+2.6	KORT	Korkueli	6.18	98	*i* P	Pn	12 00 42.3	+6.9	WTTA	Wattenberg	12.22	322 Pn	Pn	12 01 57.5	-0.6
SIVA	Sivas	3.53	151	ePb	Pn	12 00 01.4	+2.6	ISP	Isparta	6.19	90	eP	Pn	12 00 37.1	+1.6	OJC	Ojcow	12.27	351 eP	Pn	12 02 02.8	+4.2
MMB	Musomiste	3.56	13	*i* P	Pn	11 59 58.4	-0.8	ISP	Isparta	6.19	90	eP	Pn	12 00 39.1	+3.7	OJC	Ojcow	12.27	351 eP	Pn	12 02 02.8	+4.2
MMB	Musomiste	3.56	13	*i* P	Pn	11 59 58.4	-0.8	ISP	Isparta	6.19	90	ePn	Pn	12 00 39.1	+3.7	TREC	Trest	12.32	337 AMS	AMS	12 07 20.0	
IZM	Izmir	3.61	84	eP	Pn	11 59 59.0	-0.9	ISP	Isparta	6.19	90 ⇓iP	Pn	12 00 38.3	+2.9		comp=Z,700nm,12.3s					
GCAM	G?zelcaml?	3.61	95	*i* P	Pn	12 00 02.3	+2.4	SHUT	Suhut-Afyon	6.19	84	eP	Pn	12 00 36.1	+0.6	FUORN	Ofenpass-Fuorn	12.50	317 ePn	Pn	12 02 04.2	+2.2
GCAM	G?zelcaml?	3.61	95	*i* P	Pn	12 00 02.3	+2.4	PRD	Provadia	6.21	34	*i* P	Pn	12 00 34.6	-0.9	FUORN	Ofenpass-Fuorn	12.50	317 ePn	Pn	12 02 04.2	+2.2
NPS	Neapolis	3.69	140	eP	Pn	12 00 02.1	+1.1	BCK	Bucak	6.29	94	eP	Pn	12 00 37.6	+0.9	GEC2	GERESS Array S	12.54	332 eP	Pn	12 02 04.6	+2.2
NPS	Neapolis	3.69	140	ePn	Pn	12 00 02.1	+1.1	BORA	Eskisehir	6.29	71	*i* P	Pn	12 00 38.0	+1.2	GEC2			pmax	pmax		
NPS	Neapolis	3.69	140	ePN	Pn	12 00 02.1	+1.1	BORA	Eskisehir	6.29	71	*i* P	Pn	12 00 38.0	+1.2		comp=Z,2µm,1.0s					
NPS	Neapolis	3.69	140	ePn	Pn	12 00 02.1	+1.1	GPA	Golpazari	6.30	68	eP	Pn	12 00 37.1	+0.3	GEC2	GERESS Array S	12.54	332 ePn	Pn	12 02 04.6	+2.2
LAST	Lasithi	3.71	142	ePn	Pn	12 00 01.8	+0.6	DIVS	Divibare	6.31	342 ePn	Pn	12 00 37.2	+0.1		comp=Z,2µm,1.0s						
LAST	Lasithi	3.71	142	ePN	Pn	12 00 01.8	+0.6	DIVS	Divibare	6.31	342 ePn	Pn	12 00 37.2	+0.1	GEC2	GERESS Array S	12.54	332 eP	Pn	12 02 04.6	+2.2
LAST	Lasithi	3.71	142	ePn	Pn	12 00 01.8	+0.6	SPNC	Sapanca-Adapaz	6.43	64	eP	Pn	12 00 39.0	+0.4		comp=Z,2µm,1.0s					
GELI	Tayfur-Gelibol	3.71	51	eP	Pn	12 00 00.6	-0.7	ANTB	Antalya	6.44	98	eP	Pn	12 00 40.6	+1.8	GERES	GERESS Array B	12.54	332 Pn	Pn	12 02 02.3	-0.1
ENEZ	Enez	3.74	45	eP	Pn	12 00 03.5	-2.1	GULT	Gulveren	6.49	52	eP	Pn	12 00 41.0	+2.0	GERES			ScP	ScP	12 11 12.4	-1.2
KKB	Krupnik	3.75	4	*i* P	Pn	12 00 02.1	+0.2	TEKS	Tekeris	6.85	341 ⇑iPn	Pn	12 00 43.6	-0.8	GERES	GERESS Array B	12.54	332 Pn	Pn	12 02 02.3	-0.1
KKB	Krupnik	3.75	4	*i* P	Pn	12 00 02.1	+0.2	TEKS	Tekeris	6.85	341 ⇑iPn	Pn	12 00 43.6	-0.8		comp=Z,0.2nm,0.3s,baz=161,slow=13,SNR=10					
BODT	Bodrum	3.81	105	eP	Pn	12 00 04.6	+1.9	HENT	Hendek	6.90	64	*i* P	Pn	12 00 45.6	+0.5	GERES			ScP	ScP	12 11 12.4	-1.2
LPK	Lapseki	3.88	53	eP	Pn	12 00 01.6	-1.9	HENT	Hendek	6.90	64	*i* P	Pn	12 00 45.6	+0.5		comp=Z,0.1nm,0.3s,baz=126,slow=1.8,SNR=17					
RZN	Rozhen	3.89	23	*i* P	Pn	12 00

EIL **Elat** 13.21 126 Pn **Pn** 12 02 10.7 -0.7
EIL **Elat** 13.21 126 Pn **Pn** 12 02 10.7 -0.7
comp=Z,1.8nm,0.3s,baz=321,slow=9.2,SNR=6.3
EIL **Elat** 13.21 126 Pn **Pn** 12 02 10.7 -0.7
PRU **Pruhonice** 13.22 336 eP Pn 12 02 15.6 +4.0
PRU MLR MLR
comp=Z,600nm,11.1s
PRU **Pruhonice** 13.22 336 eP Pn 12 02 15.6 +4.0
PRU AMS AMS 12 07 50.0
comp=Z,600nm,11.1s
FRF **La Foret Royal** 13.30 299 eP **Pn** 12 02 14.4 +1.7
FRF **La Foret Royal** 13.30 299 eP **Pn** 12 02 14.4 +1.7
FRF **La Foret Royal** 13.30 299 eP **Pn** 12 02 14.4 +1.7
FRF **La Foret Royal** 13.30 299 eP **Pn** 12 02 14.4 +1.7
LMR **La Mourre** 13.33 298 eP **Pn** 12 02 14.9 +1.8
LMR **La Mourre** 13.33 298 eP **Pn** 12 02 14.9 +1.8
LMR **La Mourre** 13.33 298 eP **Pn** 12 02 14.9 +1.8
LMR **La Mourre** 13.33 298 eP **Pn** 12 02 14.9 +1.8
AKASG **Malin Array Be** 13.41 18 P **Pn** 12 02 12.4 -1.7
AKASG **Malin Array Be** 13.41 18 Pn **Pn** 12 02 12.4 -1.7
AKASG **Malin Array Be** 13.41 18 Pn **Pn** 12 02 12.4 -1.7
comp=Z,0.3nm,0.3s,baz=204,slow=12,SNR=4.0
AKASG **Malin Array Be** 13.41 18 P **Pn** 12 02 12.4 -1.7
KSP **Ksiaz** 13.51 342 eP **P** 12 02 25.5 +0.8
KSP **Ksiaz** 13.51 342 eP **P** 12 02 26.3 +1.6
MBDF **Montbardon** 13.64 304 eP **Pn** 12 02 19.8 +2.4
comp=Z,17nm,0.7s
MBDF **Montbardon** 13.64 304 eP **Pn** 12 02 19.8 +2.4
MBDF pmax pmax
comp=Z,17nm,0.7s
MBDF **Montbardon** 13.64 304 eP **Pn** 12 02 19.8 +2.4
comp=Z,17nm,0.7s
MBDF **Montbardon** 13.64 304 eP **Pn** 12 02 19.8 +2.4
comp=Z,8.6nm,0.7s
PVCC **Panska Ves** 13.69 338 eP P 12 02 22.4 -4.3
PVCC MLR MLR
comp=Z,700nm,12.7s
PVCC **Panska Ves** 13.69 338 eP P 12 02 22.4 -4.3
PVCC ex x 12 02 31.4
PVCC AMS AMS 12 08 40.0
comp=Z,700nm,12.7s
PVCC **Panska Ves** 13.69 338 eP P 12 02 22.4 -4.3
comp=Z,700nm,12.7s
LPG **La Plagne** 13.98 307 eP **Pn** 12 02 24.4 +2.2
comp=Z,18nm,0.7s
LPG **La Plagne** 13.98 307 eP **Pn** 12 02 24.4 +2.2
LPG pmax pmax
comp=Z,18nm,0.7s
LPG **La Plagne** 13.98 307 eP **Pn** 12 02 24.4 +2.2
comp=Z,18nm,0.7s
LPL **La Plagne** 14.00 307 eP **Pn** 12 02 24.5 +2.1
LPL **La Plagne** 14.00 307 eP **Pn** 12 02 24.5 +2.1
LPL **La Plagne** 14.00 307 eP **Pn** 12 02 24.5 +2.1
SENIN **Lac Senin/Sane** 14.05 311 ePn Pn 12 02 26.4 +3.3
SENIN eSn **Sn** 12 04 56.7 -2.2
NKC **Novy Kostel** 14.15 332 AMS AMS 12 09 00.0
comp=Z,1µm,14.1s
SMRF **Simiane la Rot** 14.17 300 eP **Pn** 12 02 26.6 +2.0
SMRF **Simiane la Rot** 14.17 300 eP **Pn** 12 02 26.6 +2.0
BRG **Berggiesshubel** 14.18 337 eP **P** 12 02 32.4 +0.2
comp=Z,7.9nm,1.5s
BRG **Berggiesshubel** 14.18 337 eP **P** 12 02 32.3 +0.2
BRG pmax pmax
comp=Z,8.0nm,1.5s
BRG **Berggiesshubel** 14.18 337 eP **P** 12 02 32.3 +0.2
comp=Z,8.0nm,1.5s
GRA1 **Grafenberg Arr** 14.20 328 eP **P** 12 02 32.3 -0.1
comp=Z,1µm,20.0s
GRF **Grafenberg Arr** 14.20 328 eP **P** 12 02 32.3 -0.1
GRF MLR MLR
comp=Z,1µm,20.0s
GRF **Grafenberg Arr** 14.20 328 eP **P** 12 02 32.3 -0.1
GRF eL L 12 08 38.2
comp=Z,1µm,20.0s
GRFO **Grafenberg** 14.20 328 eP **P** 12 02 33.9 +1.6
GRFO **Grafenberg** 14.20 328 eP **P** 12 02 33.9 +1.6
GRFO **Grafenberg** 14.20 328 eP **P** 12 02 33.9 +1.6
ORIF **Oris-en-Rattie** 14.30 304 eP **P** 12 02 31.7 -1.9
comp=Z,10nm,0.7s
ORIF eR
comp=Z,527nm,17.8s
ORIF **Oris-en-Rattie** 14.30 304 eP **P** 12 02 31.7 -1.9
ORIF pmax pmax
comp=Z,10.0nm,0.7s
ORIF **Oris-en-Rattie** 14.30 304 eP **P** 12 02 31.7 -1.9
comp=Z,10nm,0.7s
ORIF **Oris-en-Rattie** 14.30 304 eP **P** 12 02 31.7 -1.9
comp=Z,5.2nm,0.7s
CLL **Collm** 14.86 336 eP **P** 12 02 38.0 -1.6
CLL **Collm** 14.86 336 eP **P** 12 02 38.0 -1.6
CABF **La Chapelle** 14.90 310 eP **P** 12 02 38.0 -2.3
comp=Z,47nm,1.0s
CABF **La Chapelle** 14.90 310 eP **P** 12 02 38.0 -2.3
CABF pmax pmax
comp=Z,47nm,1.0s
CABF **La Chapelle** 14.90 310 eP **P** 12 02 38.0 -2.3
comp=Z,47nm,1.0s
CABF **La Chapelle** 14.90 310 eP **P** 12 02 38.0 -2.3
comp=Z,24nm,1.0s
VIVF **Saint-Julien-l** 15.07 302 eP **Pn** 12 02 39.0 +2.1
comp=Z,15nm,1.0s
VIVF **Saint-Julien-l** 15.07 302 eP **Pn** 12 02 39.0 +2.1
VIVF pmax pmax
comp=Z,15nm,1.0s
VIVF **Saint-Julien-l** 15.07 302 eP **Pn** 12 02 39.0 +2.1
comp=Z,15nm,1.0s
HINF **Hinteralfeld** 15.09 315 eP **Pn** 12 02 36.4 -0.6
comp=Z,12nm,0.7s
HINF **Hinteralfeld** 15.09 315 eP **Pn** 12 02 36.4 -0.6
HINF pmax pmax
comp=Z,12nm,0.7s
HINF **Hinteralfeld** 15.09 315 eP **Pn** 12 02 36.4 -0.6
comp=Z,12nm,0.7s
CDF **Champ du Feu** 15.20 318 eP **Pn** 12 02 40.2 +1.6
comp=Z,33nm,1.2s
CDF **Champ du Feu** 15.20 318 eP **Pn** 12 02 40.2 +1.6
CDF pmax pmax
comp=Z,33nm,1.2s
CDF **Champ du Feu** 15.20 318 eP **Pn** 12 02 40.2 +1.6
comp=Z,33nm,1.2s
LASF **Ste Croix** 15.39 299 eP **Pn** 12 02 42.1 +1.1
comp=Z,31nm,1.1s
LASF **Ste Croix** 15.39 299 eP **Pn** 12 02 42.1 +1.1
comp=Z,31nm,1.1s
CHVG **Ch'k'valeri** 15.46 67 P **P** 12 02 45.8 -0.6
HAU **Haudompre** 15.47 315 eP **Pn** 12 02 42.8 +0.7
comp=Z,43nm,1.0s
HAU eR
comp=Z,279nm,20.5s
HAU **Haudompre** 15.47 315 eP **Pn** 12 02 42.8 +0.7
HAU pmax pmax
comp=Z,43nm,1.0s
HAU **Haudompre** 15.47 315 eP **Pn** 12 02 42.8 +0.7
comp=Z,43nm,1.0s
SUW **Suwalki** 15.90 1 eP **P** 12 02 51.4 +0.2
SUW pmax pmax
comp=Z,38nm,0.9s
SUW **Suwalki** 15.90 1 ePn **P** 12 02 51.4 +0.2
comp=Z,38nm,0.9s
SUW **Suwalki** 15.90 1 eP **P** 12 02 51.4 +0.2
comp=Z,38nm,0.9s
PAGF **Fort de Pagny** 16.12 316 eP **P** 12 02 54.6 +0.9
PAGF **Fort de Pagny** 16.12 316 eP **P** 12 02 54.6 +0.9
PAGF **Fort de Pagny** 16.12 316 eP **P** 12 02 54.6 +0.9
KBZ **Khabaz** 16.25 63 LR LR 12 10 04.8
comp=Z,256nm,20.9s,baz=358,slow=41
SMF **Signal de Mont** 16.30 308 eP **Pn** 12 02 53.7 +1.0
comp=Z,53nm,1.2s
SMF **Signal de Mont** 16.30 308 eP **Pn** 12 02 53.7 +1.0
SMF pmax pmax
comp=Z,53nm,1.2s
SMF **Signal de Mont** 16.30 308 eP **Pn** 12 02 53.7 +1.0
comp=Z,53nm,1.2s
SMF **Signal de Mont** 16.30 308 eP **Pn** 12 02 53.7 +1.0
comp=Z,26nm,1.2s
SFTF **Sexfontaines** 16.32 314 eP **P** 12 02 56.3 +0.4
SFTF **Sexfontaines** 16.32 314 eP **P** 12 02 56.3 +0.4
SFTF **Sexfontaines** 16.32 314 eP **P** 12 02 56.3 +0.4
MTLF **Montolieu** 16.36 295 eP **Pn** 12 02 54.6 +1.0
comp=Z,24nm,0.9s
MTLF **Montolieu** 16.36 295 eP **Pn** 12 02 54.6 +1.0
MTLF pmax pmax
comp=Z,24nm,0.9s
MTLF **Montolieu** 16.36 295 eP **Pn** 12 02 54.6 +1.0
comp=Z,24nm,0.9s
MTLF **Montolieu** 16.36 295 eP **Pn** 12 02 54.6 +1.0
comp=Z,12nm,0.9s
MEZF **Maizieres J'vi** 16.47 315 eP **P** 12 02 58.7 +1.2
MEZF **Maizieres J'vi** 16.47 315 eP **P** 12 02 58.7 +1.2
MEZF **Maizieres J'vi** 16.47 315 eP **P** 12 02 58.7 +1.2
LOR **Lormes** 16.56 310 eP **P** 12 02 58.1 -0.5
comp=Z,41nm,1.1s
LOR eR
comp=Z,362nm,18.8s
LOR **Lormes** 16.56 310 eP **P** 12 02 58.1 -0.5
comp=Z,41nm,1.1s
LOR **Lormes** 16.56 310 eP **P** 12 02 58.1 -0.5
comp=Z,20nm,1.1s
AVF **Avril sur Loir** 16.66 307 eP **P** 12 02 59.2 -0.5
comp=Z,85nm,1.3s
AVF **Avril sur Loir** 16.66 307 eP **P** 12 02 59.2 -0.5
AVF pmax pmax
comp=Z,85nm,1.3s
AVF **Avril sur Loir** 16.66 307 eP **P** 12 02 59.2 -0.5
comp=Z,85nm,1.3s
AVF **Avril sur Loir** 16.66 307 eP **P** 12 02 59.2 -0.5
comp=Z,42nm,1.3s
SSF **Saint Saulge** 16.68 308 eP **P** 12 03 00.5 +0.6
comp=Z,87nm,1.1s
SSF **Saint Saulge** 16.68 308 eP **P** 12 03 00.5 +0.6
SSF pmax pmax
comp=Z,87nm,1.1s
SSF **Saint Saulge** 16.68 308 eP **P** 12 03 00.5 +0.6
comp=Z,87nm,1.1s
SSF **Saint Saulge** 16.68 308 eP **P** 12 03 00.5 +0.6
comp=Z,43nm,1.1s
CAF **Calviac** 16.86 300 eP **Pn** 12 03 00.4 +0.5
CAF **Calviac** 16.86 300 eP **Pn** 12 03 00.4 +0.5
CAF **Calviac** 16.86 300 eP **Pn** 12 03 00.4 +0.5
CAF **Calviac** 16.86 300 eP **Pn** 12 03 00.4 +0.5
BGF **Bois d'Agland** 16.89 306 eP **Pn** 12 03 00.3 0.0
comp=Z,86nm,1.1s
BGF **Bois d'Agland** 16.89 306 eP **Pn** 12 03 00.3 0.0
BGF pmax pmax
comp=Z,86nm,1.1s
BGF **Bois d'Agland** 16.89 306 eP **Pn** 12 03 00.3 0.0
comp=Z,86nm,1.1s
BGF **Bois d'Agland** 16.89 306 eP **Pn** 12 03 00.3 0.0
comp=Z,43nm,1.1s
NACGM **Naroch** 17.01 8 e **P** 12 03 06.0 +2.5
TCF **Toulx Ste Croi** 17.20 305 eP **P** 12 03 05.7 0.0
comp=Z,95nm,1.6s
TCF **Toulx Ste Croi** 17.20 305 eP **P** 12 03 05.7 0.0
TCF pmax pmax
comp=Z,95nm,1.6s
TCF **Toulx Ste Croi** 17.20 305 eP **P** 12 03 05.7 0.0
comp=Z,95nm,1.6s
TCF **Toulx Ste Croi** 17.20 305 eP **P** 12 03 05.7 0.0
comp=Z,48nm,1.6s
GNI **Garni** 17.22 76 LR LR 12 09 32.9
comp=Z,261nm,21.2s,baz=78,slow=37
RJF **Les Rejaudoux** 17.34 301 eP **P** 12 03 07.1 -0.1
comp=Z,40nm,1.1s
RJF eR
comp=Z,475nm,17.2s
RJF **Les Rejaudoux** 17.34 301 eP **P** 12 03 07.1 -0.1
RJF pmax pmax
comp=Z,40nm,1.1s
RJF **Les Rejaudoux** 17.34 301 eP **P** 12 03 07.1 -0.1
comp=Z,40nm,1.1s
RJF **Les Rejaudoux** 17.34 301 eP **P** 12 03 07.1 -0.1
comp=Z,20nm,1.1s
GIVF **Givet** 17.50 319 eP **P** 12 03 10.4 +1.5
GIVF **Givet** 17.50 319 eP **P** 12 03 10.4 +1.5
GIVF **Givet** 17.50 319 eP **P** 12 03 10.4 +1.5
GIVF **Givet** 17.50 319 eP **P** 12 03 10.4 +1.5
EPF **Esparros** 17.66 293 eP **P** 12 03 11.2 +0.4
EPF **Esparros** 17.66 293 eP **P** 12 03 11.2 +0.4
EPF **Esparros** 17.66 293 eP **P** 12 03 11.2 +0.4
EPF **Esparros** 17.66 293 eP **P** 12 03 11.2 +0.4
LFF **La Frestale** 17.77 300 eP **Pn** 12 03 10.5 -0.6
comp=Z,69nm,1.1s
LFF **La Frestale** 17.77 300 eP **Pn** 12 03 10.5 -0.6
LFF pmax pmax
comp=Z,69nm,1.1s
LFF **La Frestale** 17.77 300 eP **Pn** 12 03 10.5 -0.6
comp=Z,69nm,1.1s
LFF **La Frestale** 17.77 300 eP **Pn** 12 03 10.5 -0.6
comp=Z,34nm,1.1s
BAIF **Baives** 17.80 318 eP **P** 12 03 12.5 +0.3
comp=Z,28nm,1.1s
BAIF **Baives** 17.80 318 eP **P** 12 03 12.5 +0.3
BAIF pmax pmax
comp=Z,28nm,1.0s
BAIF **Baives** 17.80 318 eP **P** 12 03 12.5 +0.3
comp=Z,28nm,1.0s
BAIF **Baives** 17.80 318 eP **P** 12 03 12.5 +0.3
comp=Z,14nm,1.1s
ETSF **Etsaut** 18.30 292 eP **P** 12 03 19.0 +1.1
comp=Z,49nm,1.1s
ETSF **Etsaut** 18.30 292 eP **P** 12 03 19.0 +1.1
ETSF pmax pmax
comp=Z,49nm,1.1s
ETSF **Etsaut** 18.30 292 eP **P** 12 03 19.0 +1.1
comp=Z,49nm,1.1s
ETSF **Etsaut** 18.30 292 eP **P** 12 03 19.0 +1.1
comp=Z,25nm,1.1s
SJPF **Ste Jean** 18.81 293 eP **P** 12 03 22.8 -0.6
SJPF **Ste Jean** 18.81 293 eP **P** 12 03 22.8 -0.6
SJPF **Ste Jean** 18.81 293 eP **P** 12 03 22.8 -0.6
SJPF **Ste Jean** 18.81 293 eP **P** 12 03 22.8 -0.6
MFF **Saint Martin d** 18.84 304 eP **Pn** 12 03 24.8 +0.6
comp=Z,80nm,1.1s
MFF **Saint Martin d** 18.84 304 eP **Pn** 12 03 24.8 +0.6
MFF pmax pmax
comp=Z,80nm,1.1s
MFF **Saint Martin d** 18.84 304 eP **Pn** 12 03 24.8 +0.6
comp=Z,80nm,1.1s
MFF **Saint Martin d** 18.84 304 eP **Pn** 12 03 24.8 +0.6
comp=Z,40nm,1.1s
OBN **Obninsk** 19.42 24 jeP **P** 12 03 28.6 -1.4
OBN pmax pmax
comp=Z,23nm,1.9s
OBN MLR MLR
comp=Z,100nm,12.0s
OBN **Obninsk** 19.42 24 eP **P** 12 03 28.6 -1.4
comp=Z,100nm,12.0s
FLN **La Foliniere** 19.83 310 eP **P** 12 03 35.3 +0.8
comp=Z,164nm,1.4s
FLN eR
comp=Z,415nm,17.2s
FLN **La Foliniere** 19.83 310 eP **P** 12 03 35.3 +0.8
FLN pmax pmax
comp=Z,164nm,1.4s
FLN **La Foliniere** 19.83 310 eP **P** 12 03 35.3 +0.8
comp=Z,164nm,1.4s
FLN **La Foliniere** 19.83 310 eP **P** 12 03 35.3 +0.8
comp=Z,82nm,1.4s
GRR **Gorron** 19.91 309 eP **P** 12 03 36.0 +0.5
comp=Z,31nm,0.6s
GRR **Gorron** 19.91 309 eP **P** 12 03 36.0 +0.5
GRR pmax pmax
comp=Z,31nm,0.6s
GRR **Gorron** 19.91 309 eP **P** 12 03 36.0 +0.5
comp=Z,31nm,0.6s
GRR **Gorron** 19.91 309 eP **P** 12 03 36.0 +0.5
comp=Z,16nm,0.6s
VSU **Vasula** 20.53 6 iP **P** 12 03 41.2 -0.8
VSU pmax pmax
comp=Z,77nm,1.6s
VSU **Vasula** 20.53 6 iP **P** 12 03 41.2 -0.8
comp=Z,77nm,1.6s
ESDC **Sonseca Array** 20.78 283 P **P** 12 03 44.3 -0.7
ESDC **Sonseca Array** 20.78 283 P **P** 12 03 44.3 -0.7
comp=Z,5.4nm,0.6s,baz=76,slow=11,SNR=40
ESDC **Sonseca Array** 20.78 283 P **P** 12 03 44.3 -0.7
ESLA **Sonseca Array** 20.78 283 eP **P** 12 03 45.0 0.0
comp=Z,14nm,1.4s
ESLA **Sonseca Array** 20.78 283 eP **P** 12 03 45.0 0.0
comp=Z,14nm,1.4s
SGMF **Saint Gilles** 20.93 307 eP **P** 12 03 45.6 -0.8
comp=Z,96nm,1.2s
SGMF **Saint Gilles** 20.93 307 eP **P** 12 03 45.6 -0.8
SGMF pmax pmax
comp=Z,97nm,1.2s
SGMF **Saint Gilles** 20.93 307 eP **P** 12 03 45.6 -0.8
comp=Z,96nm,1.2s
SGMF **Saint Gilles** 20.93 307 eP **P** 12 03 45.6 -0.8
comp=Z,48nm,1.2s
PAB **San Pablo** 21.09 282 eP **P** 12 03 48.5 +0.1
PAB pmax pmax
comp=Z,16nm,0.9s
PAB **San Pablo** 21.09 282 eP **P** 12 03 48.5 +0.1
comp=Z,16nm,0.9s
QUIF **Quistinic** 21.20 306 eP **P** 12 03 49.6 +0.2
comp=Z,102nm,1.0s
QUIF **Quistinic** 21.20 306 eP **P** 12 03 49.6 +0.2
QUIF pmax pmax
comp=Z,102nm,1.0s
QUIF **Quistinic** 21.20 306 eP **P** 12 03 49.6 +0.2
comp=Z,102nm,1.0s
QUIF **Quistinic** 21.20 306 eP **P** 12 03 49.6 +0.2
comp=Z,51nm,1.0s
TAM **Tamanrasset** 21.22 229 eP **P** 12 03 50.9 +1.0
TAM pmax pmax
comp=Z,11nm,1.2s
TAM **Tamanrasset** 21.22 229 eP **P** 12 03 50.9 +1.0
comp=Z,11nm,1.2s
TAM **Tamanrasset** 21.22 229 eP **P** 12 03 50.9 +1.0
comp=Z,11nm,1.2s
ROSF **Rostrenen** 21.41 307 eP **P** 12 03 51.6 0.0
comp=Z,66nm,0.9s
ROSF **Rostrenen** 21.41 307 eP **P** 12 03 51.6 0.0
ROSF pmax pmax
comp=Z,66nm,0.9s
ROSF **Rostrenen** 21.41 307 eP **P** 12 03 51.6 0.0
comp=Z,66nm,0.9s
ROSF **Rostrenen** 21.41 307 eP **P** 12 03 51.6 0.0
comp=Z,33nm,0.9s
HFS **Hagfors** 22.77 348 P **P** 12 04 04.0 -2.0
HFS **Hagfors** 22.77 348 P **P** 12 04 04.0 -2.0
comp=Z,2.6nm,0.5s,baz=152,slow=13,SNR=18
HFS LR LR 12 14 05.9
comp=Z,436nm,18.5s,baz=168,slow=40
HFS **Hagfors** 22.77 348 P **P** 12 04 04.0 -2.0
PBRG **Braganca** 22.81 289 eP **P** 12 04 05.5 -1.2
comp=Z,40nm,1.6s
PBRG **Braganca** 22.81 289 eP **P** 12 04 05.5 -1.2
comp=Z,40nm,1.6s
MDT **Midelt** 22.82 265 P **P** 12 04 07.1 +0.1
MDT **Midelt** 22.82 265 P **P** 12 04 07.1 +0.1
comp=Z,4.5nm,1.0s,baz=79,slow=10,SNR=3.3
MDT **Midelt** 22.82 265 P **P** 12 04 07.1 +0.1
MVO **Moncorvo** 23.04 287 eP **P** 12 04 09.1 -0.1
comp=Z,36nm,1.6s
MVO **Moncorvo** 23.04 287 eP **P** 12 04 09.1 -0.1
comp=Z,36nm,1.6s
FINES **FINESS Array B** 23.44 4 P **P** 12 04 10.9 -2.0
FINES **FINESS Array B** 23.44 4 P **P** 12 04 10.9 -2.0
comp=Z,1.5nm,0.7s,baz=177,slow=11,SNR=11
FINES LR LR 12 14 21.1
comp=Z,691nm,18.7s,baz=270,slow=39
FINES **FINESS Array B** 23.44 4 P **P** 12 04 10.9 -2.0
FIA1 **FINESS Array S** 23.45 4 eP **P** 12 04 15.2 +2.2
FIA1 **FINESS Array S** 23.45 4 eP **P** 12 04 15.2 +2.2
PCBR **Castelo Branco** 23.47 284 eP **P** 12 04 09.7 -3.7
comp=Z,27nm,1.7s
PVRL **Vila Real** 23.55 287 eP P 12 04 09.1 -5.2
comp=Z,46nm,1.6s
PESTR **Estremoz** 23.67 281 eP **P** 12 04 17.2 +1.8
comp=Z,24nm,1.5s
PESTR **Estremoz** 23.67 281 eP **P** 12 04 17.2 +1.8
comp=Z,24nm,1.5s
NAO01 **NORSAR Array S** 23.93 346 eP **P** 12 04 17.2 -0.5
comp=Z,9.4nm,0.9s
NAO01 **NORSAR Array S** 23.93 346 eP **P** 12 04 17.2 -0.5
comp=Z,9.4nm,0.9s
NB2 **NORSAR Subarra** 24.05 346 P **P** 12 04 16.3 -2.5
comp=Z,44nm,1.4s,baz=159,slow=9.3
NB2 **NORSAR Subarra** 24.05 346 P **P** 12 04 16.3 -2.5
baz=159,slow=9.3
NB2 **NORSAR Subarra** 24.05 346 P **P** 12 04 16.3 -2.5
comp=Z,44nm,1.4s,SNR=2.0
NOA **NORSAR Array B** 24.05 346 P **P** 12 04 17.0 -1.8
NOA **NORSAR Array B** 24.05 346 P **P** 12 04 17.0 -1.8
comp=Z,2.1nm,0.5s,baz=148,slow=9.8,SNR=15
NOA LR LR 12 15 00.7
comp=Z,250nm,18.9s,baz=160,slow=40
NOA **NORSAR Array B** 24.05 346 P **P** 12 04 17.0 -1.8
KAF **Kangasniemi** 24.12 4 eP P 12 04 11.1 -8.4
KAF pmax pmax
comp=Z,1.0nm,0.5s
KAF **Kangasniemi** 24.12 4 ep P 12 04 11.1 -8.4
comp=Z,1.1nm,0.5s
PBDV **Barranco-do-Ve** 24.20 277 eP **P** 12 04 22.0 +1.5
comp=Z,45nm,2.1s
PBDV **Barranco-do-Ve** 24.20 277 eP **P** 12 04 22.0 +1.5
comp=Z,45nm,2.1s
EKA **Eskdalemuir Ar** 24.48 323 P **P** 12 04 22.3 -0.5
EKA **Eskdalemuir Ar** 24.48 323 P **P** 12 04 22.3 -0.5
comp=Z,7.8nm,0.6s,baz=126,slow=9.8,SNR=15
EKA **Eskdalemuir Ar** 24.48 323 P **P** 12 04 22.3 -0.5
ESK **Eskdalemuir** 24.50 323 eP **P** 12 04 24.8 +1.9
ESK pmax pmax
comp=Z,21nm,0.9s
ESK **Eskdalemuir** 24.50 323 eP **P** 12 04 24.8 +1.9
comp=Z,21nm,0.9s
ESK **Eskdalemuir** 24.50 323 eP **P** 12 04 24.8 +1.9
comp=Z,21nm,0.9s
JOF **Joensuu** 25.38 9 ep **P** 12 04 35.4 +4.6
comp=Z,77nm,0.5s
AKTO **Aktyubinsk** 27.85 52 LR LR 12 18 12.8
comp=Z,150nm,19.8s,baz=113,slow=42
TOA0 **Torodi Ar. Sit** 31.10 223 eP **P** 12 05 20.6 -1.8
TOA0 **Torodi Ar. Sit** 31.10 223 eP **P** 12 05 20.6 -1.8
TORD **Torodi Ar. Bea** 31.10 223 P **P** 12 05 21.9 -0.5
TORD **Torodi Ar. Bea** 31.10 223 P **P** 12 05 21.9 -0.5
comp=Z,2.6nm,0.5s,baz=32,slow=8.9,SNR=16
TORD LR LR 12 18 48.8
comp=Z,315nm,19.4s,baz=25,slow=38
TORD **Torodi Ar. Bea** 31.10 223 P **P** 12 05 21.9 -0.5
ARCES **ARCESS Array B** 31.51 2 LR LR 12 19 19.7
comp=Z,443nm,18.0s,baz=192,slow=39
BVAR **Borovoye Array** 35.85 50 P **P** 12 06 01.3 -2.1
BVAR **Borovoye Array** 35.85 50 P **P** 12 06 01.3 -2.1
BVAR **Borovoye Array** 35.85 50 P **P** 12 06 01.3 -2.1
comp=Z,4.6nm,0.7s,baz=264,slow=5.4,SNR=3.3
BVAR **Borovoye Array** 35.85 50 P **P** 12 06 01.3 -2.1
DBIC **Dimbokro** 40.04 226 P **P** 12 06 39.3 +0.2
DBIC **Dimbokro** 40.04 226 P **P** 12 06 39.3 +0.2
comp=Z,1.7nm,0.3s,baz=26,slow=10,SNR=5.1
DBIC LR LR 12 24 18.5
comp=Z,163nm,18.1s,baz=17,slow=38
DBIC **Dimbokro** 40.04 226 P **P** 12 06 39.3 +0.2
LIC **Lamto** 40.51 225 eP **P** 12 06 42.3 -0.7
comp=Z,8.9nm,0.4s
LIC eR
comp=Z,244nm,21.8s
LIC **Lamto** 40.51 225 eP **P** 12 06 42.3 -0.7
comp=Z,8.9nm,0.4s
LIC **Lamto** 40.51 225 eP **P** 12 06 42.3 -0.7
comp=Z,4.4nm,0.4s
KURBB **Kurchatov Arra** 40.88 54 P **P** 12 06 43.9 -1.9
comp=Z,4.4nm,0.6s,baz=275,slow=8.5,SNR=4.4
KURBB ScP **ScP** 12 12 34.2 -1.1
comp=Z,1.0nm,0.8s,baz=276,slow=4.6,SNR=4.5
KURK **Kurchatov** 40.94 53 P **P** 12 06 43.9 -2.3
KURK **Kurchatov** 40.94 53 P **P** 12 06 43.9 -2.3
KURK ScP **ScP** 12 12 34.2 -1.3
KURK **Kurchatov** 40.94 53 P **P** 12 06 43.9 -2.3
KMBO **Kilima Mbogo** 41.30 158 LR LR 12 24 04.3
comp=Z,143nm,18.4s,baz=93,slow=36
DAG **Danmarks Havn** 42.73 347 iP **P** 12 07 03.1 +2.6
comp=Z,10.0nm,0.7s
DAG i 12 07 57.8
NVS **Novosibirsk** 43.46 47 eP **P** 12 07 06.9 +0.2
NVS **Novosibirsk** 43.46 47 eP **P** 12 07 06.9 +0.2
MKAR **Makanchi Array** 43.87 59 P **P** 12 07 08.6 -1.6
MKAR **Makanchi Array** 43.87 59 P **P** 12 07 08.6 -1.6
MKAR ScP **ScP** 12 12 46.2 -1.3
MKAR **Makanchi Array** 43.87 59 P **P** 12 07 08.6 -1.6
comp=Z,5.1nm,0.4s,baz=268,slow=7.5,SNR=6.7
MKAR ScP **ScP** 12 12 46.2 -1.3
comp=Z,0.6nm,0.5s,baz=263,slow=3.2,SNR=7.5
MKAR LR LR 12 28 45.8
comp=Z,106nm,20.3s,baz=276,slow=41
MKAR **Makanchi Array** 43.87 59 P **P** 12 07 08.6 -1.6
ZAA0 **Zalesovo Array** 44.45 48 eP **P** 12 07 13.3 -1.4
ZAA0 **Zalesovo Array** 44.45 48 eP **P** 12 07 13.3 -1.4
ZALV **Zalesovo Beam** 44.45 48 iP **P** 12 07 15.1 +0.4
ZALV pmax pmax
comp=Z,15nm,0.4s
ZALV **Zalesovo Beam** 44.45 48 P **P** 12 07 13.6 -1.1
ZALV **Zalesovo Beam** 44.45 48 P **P** 12 07 13.6 -1.1
comp=Z,15nm,0.5s,baz=272,slow=7.5,SNR=12

ZALV LR LR 12 29 45.0
comp=Z,60nm,21.0s,baz=347,slow=42
ZALV Zalesovo Beam 44.45 48 *i* P **P 12 07 15.1 +0.4**
comp=Z,15nm,0.4s
WMQ Urumqi 48.28 62 *e*P **P 12 07 47.5 +2.4**
WMQ pP pP 12 07 59.9 +10
WMQ sP sP 12 08 05.3 +14
WMQ PcP **PcP 12 09 13.8 +2.0**
WMQ PP **PP 12 09 40.0 +2.7**
WMQ PcS **PcS 12 13 08.3 +0.6**
WMQ S **S 12 14 43.8 -0.6**
WMQ sS sS 12 15 04.8 +13
WMQ ScS **ScS 12 17 33.4 -4.3**
WMQ SS **SS 12 18 08.8 -4.7**
WMQ LR LR
comp=N,180nm,12.2s
WMQ LR LR
comp=E,270nm,7.8s
WMQ LR LR
comp=Z,140nm,19.6s
TLY Talaya 56.06 48 *e*P P 12 08 47.3 +4.6
TLY pmax pmax
comp=Z,9.0nm,1.0s
TLY MLR MLR
comp=Z,73nm,17.0s
DRLN Deer Lake 56.47 309 *e*P **P 12 08 45.6 0.0**
DRLN Deer Lake 56.47 309 *e*P **P 12 08 45.6 0.0**
GTA Gaotai 58.34 63 *e*P **P 12 09 00.9 +1.8**
GTA pP pP 12 09 13.8 +10
GTA sP sP 12 09 18.9 +14
GTA PP **PP 12 11 13.0 +5.0**
GTA S **S 12 17 01.8 +0.5**
GTA sS sS 12 17 22.6 +14
GTA SS **SS 12 20 56.1 +3.2**
GTA pmax pmax
comp=Z,4.0nm,1.4s
GTA pmax pmax
comp=Z,60nm,5.2s
GTA LR LR
comp=N,85nm,17.1s
GTA LR LR
comp=E,97nm,17.3s
GTA LR LR
comp=Z,91nm,16.1s
TIXI Tiksi 59.10 21⇑ *e*P **P 12 09 02.9 -0.8**
TIXI pmax pmax
comp=Z,10.0nm,2.0s
TIXI Tiksi 59.10 21 *e*P **P 12 09 02.9 -0.8**
comp=Z,10.0nm,2.0s
SONM Songino Array 59.16 51 P **P 12 09 03.5 -1.3**
SONM Songino Array 59.16 51 P **P 12 09 03.5 -1.3**
comp=Z,1.7nm,0.6s,baz=276,slow=7.9,SNR=6.0
SONM LR LR 12 39 10.6
comp=Z,94nm,18.8s,baz=174,slow=41
SONM Songino Array 59.16 51 P **P 12 09 03.5 -1.3**
ULN Ulaanbaatar 59.56 51 *e*P **P 12 09 08.8 +1.3**
comp=Z,2.6nm,0.5s
ULN Ulaanbaatar 59.56 51 *e*P **P 12 09 08.8 +1.3**
comp=Z,2.6nm,0.5s
SCHQ Schefferville 59.66 318 P **P 12 09 07.5 -0.3**
SCHQ Schefferville 59.66 318 P **P 12 09 07.5 -0.3**
comp=Z,11nm,0.6s,baz=59,slow=8.0,SNR=19
SCHQ LR LR 12 33 57.5
comp=Z,86nm,20.8s,baz=71,slow=35
SCHQ Schefferville 59.66 318 P **P 12 09 07.6 -0.3**
RES Resolute Bay 60.30 344 LR LR 12 37 13.2
comp=Z,117nm,18.5s,baz=340,slow=38
LZH Lanzhou 62.69 64 *e*P P 12 09 32.5 +3.6
LZH pP pP 12 09 38.0 +4.6
LZH pmax pmax
comp=Z,13nm,1.0s
CD2 Chengdu 65.19 69 P **P 12 09 46.6 +1.2**
CD2 pP pP 12 09 59.6 +10
CD2 sP sP 12 10 04.8 +13
CD2 PP **PP 12 12 12.3 +3.7**
CD2 PcS 12 14 21.6
CD2 S **S 12 18 24.5 -3.7**
CD2 sS sS 12 18 46.4 +11
CD2 SS **SS 12 22 39.3 -1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
HHC Hu-ho-hao-te 65.65 56 *e*P **P 12 09 48.8 +0.6**
HHC pP pP 12 10 02.3 +10
HHC sP sP 12 10 07.0 +13
HHC S **S 12 18 29.4 -4.2**
HHC ScS SKSac 12 19 35.8 -7.7
HHC SS **SS 12 22 45.3 -1.8**
HHC pmax pmax
comp=Z,51nm,0.8s
HHC pmax pmax
comp=Z,200nm,9.0s
HHC LR LR
comp=N,270nm,21.2s
HHC LR LR
comp=E,270nm,20.2s
HHC LR LR
comp=Z,360nm,26.0s
BOSA Boshof 66.43 178 LR LR 12 41 18.9
comp=Z,165nm,20.8s,baz=349,slow=38
KMI Kunming 67.47 75 P **P 12 10 02.4 +2.2**
KMI pP pP 12 10 13.4 +8.6
KMI sP sP 12 10 18.8 +12
KMI S **S 12 18 52.0 -4.3**
KMI sS sS 12 19 15.3 +12
KMI pmax pmax
comp=Z,8.0nm,1.0s
KMI pmax pmax
comp=Z,100nm,4.2s
KMI LR LR
comp=N,76nm,15.8s
KMI LR LR
comp=E,94nm,18.6s
KMI LR LR
comp=Z,76nm,20.6s
CMAR Chiang Mai Arr 68.20 83 LR LR 12 42 05.3
comp=Z,33nm,21.2s,baz=310,slow=38
GYA Guiyang 69.71 72 *e*P **P 12 10 14.8 +0.7**
GYA sP sP 12 10 33.3 +13
GYA PP **PP 12 12 51.3 +3.2**
GYA S **S 12 19 18.9 -3.9**
GYA SKS **SKiKP 12 20 07.3 +5.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,5.0s
BILL Bilibino 70.68 14 P **P 12 10 22.0 +2.8**
BILL *e* 12 10 31.1
BILL pmax pmax
comp=Z,27nm,2.2s
CN2 Changchun 72.67 48 *e*P **P 12 10 33.3 +1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
KLR Kul'dur 72.82 40 *e*P **P 12 10 31.0 -1.3**
KLR Kul'dur 72.82 40 *e*P **P 12 10 31.0 -1.3**
YKA Yellowknife Ar 74.02 341 P **P 12 10 39.4 +0.3**
YKA Yellowknife Ar 74.02 341 P **P 12 10 39.4 +0.3**
comp=Z,0.9nm,0.5s,baz=38,slow=5.7,SNR=12
NJ2 Nanjing 75.36 61 *e*P **P 12 10 48.3 +0.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
FFC Flin Flon 76.09 331 *e*P **P 12 10 51.5 +0.2**
FFC pmax pmax
comp=Z,11nm,1.2s
FFC Flin Flon 76.09 331 *e*P **P 12 10 51.5 +0.2**
comp=Z,11nm,1.2s
ULM Lac du Bonnet 76.75 325 P **P 12 10 54.6 -0.4**
ULM Lac du Bonnet 76.75 325 P **P 12 10 54.7 -0.4**
comp=Z,10nm,0.9s,baz=38,slow=4.1,SNR=5.4
ULM LR LR 12 44 51.2
comp=Z,184nm,19.4s,baz=360,slow=36
ILAR Eielson Array 77.12 355 P **P 12 10 56.5 -0.4**
ILAR Eielson Array 77.12 355 P **P 12 10 56.5 -0.4**
comp=Z,1.5nm,0.5s,baz=349,slow=3.1,SNR=8.4
KSAR Wonju Array Be 78.02 52 P **P 12 11 01.7 -0.7**
DOT Dot Lake 78.02 354 *e*P **P 12 11 02.0 -0.1**
comp=Z,7.1nm,0.7s
KSRS Korea Array 78.03 52 P **P 12 11 01.7 -0.8**
comp=Z,1.6nm,0.8s,baz=316,slow=4.8,SNR=4.2
KSRS LR LR 12 50 58.7
comp=Z,74nm,18.2s,baz=47,slow=40
MCK McKinley 78.27 356 *e*P **P 12 11 02.9 -0.5**
MCK pmax pmax
comp=Z,6.0nm,0.7s
MCK McKinley 78.27 356 *e*P **P 12 11 02.9 -0.5**
comp=Z,5.7nm,0.7s
KMSC Kings Mountain 78.72 306 ⇑P **P 12 11 06.0 -0.4**
baz=78
SFIN Scholer Farm 78.89 313 ⇑P **P 12 11 07.1 -0.1**
baz=79
JFWS Jewell Farm 78.98 316 *e*P **P 12 11 07.6 0.0**
comp=Z,9.6nm,0.8s
BLO Bloomington 79.34 312 *e*P **P 12 11 10.0 +0.3**
BLO pmax pmax
comp=Z,11nm,0.8s
BLO Bloomington 79.34 312 *e*P **P 12 11 10.0 +0.3**
comp=Z,11nm,0.8s
WCI Wyandotte Cave 79.82 311 *e*P **P 12 11 13.1 +0.8**
WCI pmax pmax
comp=Z,5.0nm,0.7s
WCI Wyandotte Cave 79.82 311 *e*P **P 12 11 13.1 +0.8**
comp=Z,4.8nm,0.7s
CPCT Cooper Cave 80.54 308 *e*P **P 12 11 16.7 +0.4**
SPU Mount Spurr 80.95 357 *e*P **P 12 11 18.2 +0.1**
PETK Petropavlovsk- 81.13 26 LR LR 12 53 19.6
comp=Z,62nm,18.1s,baz=309,slow=40
ECSD EROS Data Cent 81.74 320 *e*P **P 12 11 22.5 0.0**
comp=Z,7.6nm,1.0s
SIUC Southern Illin 81.89 312 *e*P **P 12 11 24.0 +0.6**
comp=Z,4.4nm,0.4s
A22A Carney Farms, 82.05 329 ⇓P **P 12 11 24.5 +0.4**
baz=82
B23A Brockton 82.08 328 ⇑P **P 12 11 25.1 +0.8**
baz=82
WVT Waverly 82.13 310 *e*P **P 12 11 23.7 -0.9**
WVT pmax pmax
comp=Z,5.0nm,0.9s
WVT Waverly 82.13 310 *e*P **P 12 11 23.7 -0.9**
comp=Z,5.1nm,0.9s
C22A Vida 83.01 328 ⇑P **P 12 11 29.6 +0.5**
baz=83
D23A Lindsay 83.17 327 ⇓P **P 12 11 30.5 +0.5**
baz=83
C21A Desert Coulee 83.45 329 ⇑P **P 12 11 31.9 +0.5**
baz=83
D22A Cohagen 83.60 328 ⇓P **P 12 11 32.2 0.0**
baz=83
LRAL Lakeview Retre 83.67 307 *e*P **P 12 11 33.0 +0.3**
comp=Z,8.6nm,0.9s
A18A Metzger Ranch, 83.67 331 ⇑P **P 12 11 32.5 0.0**
baz=83
E23A Isnay 83.74 327 ⇓P **P 12 11 33.5 +0.6**
baz=83
F24A Ekalaka 83.87 326 ⇑P **P 12 11 34.2 +0.6**
baz=84
C20A Veseth Ranch, 83.91 329 ⇑P **P 12 11 34.7 +0.9**
baz=84,SNR=11
B18A Beardsley Farm 84.07 330 ⇓P **P 12 11 35.1 +0.5**
baz=84
BGNE Belgrade 84.21 320 ⇓P **P 12 11 36.3 +0.9**
baz=84
A16A West Butte Ran 84.31 332 ⇓P **P 12 11 35.5 -0.4**
baz=84
C19A Slack Wire Ran 84.31 330 ⇓P **P 12 11 34.9 -1.0**
baz=84
EGMT Eagleton 84.36 330 *e*P **P 12 11 36.8 +0.7**
comp=Z,24nm,1.0s
EGMT Eagleton 84.36 330 ⇓P **P 12 11 36.5 +0.4**
baz=84,SNR=16
F23A Vosburg 84.39 326 ⇑P **P 12 11 36.3 +0.1**
baz=84
D20A Manuel Ranch, 84.46 329 ⇓P **P 12 11 37.3 +0.7**
baz=84
A15A Johnson Ranch, 84.71 332 ⇑P **P 12 11 38.1 +0.2**
baz=84,SNR=5.1
D19A Cripps Ranch, 84.71 329 ⇑P **P 12 11 38.2 +0.4**
baz=84
F22A Rosebud 84.72 327 ⇓P **P 12 11 38.3 +0.4**
baz=84
H24A Dirks Ranch, A 84.77 325 ⇓P **P 12 11 38.4 +0.1**
baz=84
G23A Biddle 84.79 326 ⇑P **P 12 11 39.0 +0.7**
baz=84
B16A M & M Farms, S 84.79 331 ⇑P **P 12 11 38.7 +0.4**
baz=84
E20A Meyer Farm, Mu 84.93 328 ⇑P **P 12 11 39.7 +0.7**
baz=85
A14A Double T Ranch 84.96 333 ⇓P **P 12 11 39.4 +0.2**
baz=85,SNR=14
RSSD Black Hills 85.02 325 *e*P **P 12 11 39.4 -0.3**
RSSD pmax pmax
comp=Z,6.0nm,1.0s
RSSD Black Hills 85.02 325 *e*P **P 12 11 39.4 -0.3**
comp=Z,6.2nm,1.0s
D18A Linhart Farms, 85.05 330 ⇑P **P 12 11 40.6 +1.0**
baz=85
WALA Waterton Lakes 85.07 333 *e*P **P 12 11 41.0 +1.4**
comp=Z,0.2nm,0.8s
C17A Wharram Farm, 85.07 330 ⇑P **P 12 11 39.4 -0.3**
baz=85
KSU1 Kansas State U 85.08 317 *e*P **P 12 11 40.3 +0.5**
comp=Z,9.4nm,0.5s
B15A Bradely Ranch, 85.20 332 P **P 12 11 40.0 -0.3**
baz=85,SNR=20
E19A Rath Farm, Rou 85.24 329 ⇓P **P 12 11 40.9 +0.4**
baz=85,SNR=9.7
C16A Ehringer Ranc 85.31 331 ⇑P **P 12 11 39.9 -1.1**
baz=85
B14A Marquette Ranc 85.42 332 ⇓P **P 12 11 41.4 0.0**
baz=85
D17A Six Diamond Ra 85.44 330 ⇓P **P 12 11 42.2 +0.6**
baz=85
F20A Billings 85.50 328 ⇓P **P 12 11 43.2 +1.3**
baz=85
E18A Harlowton 85.61 329 ⇓P **P 12 11 43.2 +0.7**
baz=85
C15A Salmond Ranch, 85.66 332 ⇓P **P 12 11 42.3 -0.4**
baz=85
F19A Roth Farm, Mol 85.79 328 P **P 12 11 44.2 +0.9**
baz=86,SNR=13
B13A Whitefish 85.84 333 ⇓P **P 12 11 43.8 +0.4**
baz=86
D16A Dana Ranch, Ca 85.87 331 ⇑P **P 12 11 44.1 +0.4**
baz=86,SNR=8.0
J24A Dixon Ranch, L 85.92 324 ⇓P **P 12 11 46.6 +2.6**
baz=86
H21A Big Horn, Sher 85.97 327 ⇓P **P 12 11 45.0 +0.7**
baz=86
G20A Bridger 86.00 328 ⇓P **P 12 11 45.1 +0.8**
baz=86,SNR=6.3
F18A Big Timber 86.07 329 ⇑P **P 12 11 45.5 +0.8**
baz=86
E17A Martinsdale 86.07 330 ⇑P **P 12 11 45.6 +0.8**
baz=86,SNR=7.1
C14A Swan Lake 86.09 332 ⇓P **P 12 11 45.3 +0.6**
baz=86
YBMT Yellow Bay 86.11 332 *e*P **P 12 11 45.4 +0.5**
GCMT Greycliff 86.14 329 *e*P **P 12 11 44.7 -0.4**
comp=Z,5.9nm,0.9s
D15A Lincoln 86.24 331 ⇓P **P 12 11 47.0 +1.4**
baz=86
I22A 9 Mile Ranch, 86.30 326 ⇑P **P 12 11 46.3 +0.4**
baz=86
JTMT Jette 86.30 333 *e*P **P 12 11 46.5 +0.6**
E16A East Helena 86.33 330 ⇓P **P 12 11 46.7 +0.6**
baz=86
BSMT Bassoo Peak 86.40 333 *e*P **P 12 11 47.0 +0.6**
SWMT Swartz Lake 86.40 332 *e*P **P 12 11 46.5 +0.2**
SLMT Seeley Lake 86.44 332 *e*P P 12 11 50.0 +3.5
F17A Fitzpatrick Pl 86.45 329 ⇑P **P 12 11 47.7 +1.1**
baz=86,SNR=5.0
C13A Hot Springs 86.47 333 ⇑P **P 12 11 47.2 +0.6**
baz=86
H20A Greybull 86.49 327 ⇓P **P 12 11 47.6 +0.8**
baz=86
D14A Greenough 86.58 332 ⇑P **P 12 11 47.4 +0.2**
baz=86
CHMT Chamberlain Mo 86.62 331 *e*P **P 12 11 48.5 +1.0**
J22A Midwest 86.68 326 ⇓P **P 12 11 47.7 -0.1**
baz=86
I21A Big Trails, Te 86.72 326 ⇓P **P 12 11 48.2 +0.1**
baz=86
H19A Powell 86.76 328 ⇓P **P 12 11 48.8 +0.7**
baz=86
E15A Deer Lodge 86.80 331 ⇓P **P 12 11 49.0 +0.7**
baz=86
NEW Newport 86.86 334 *e*P **P 12 11 48.7 +0.2**
comp=Z,9.3nm,1.0s
NEW Newport 86.86 334 ⇑P **P 12 11 49.1 +0.6**
baz=86
D13A Huson 86.92 332 P **P 12 11 49.2 +0.4**
baz=87,SNR=18
C11A Tepee Creek (N 86.93 334 ⇑P **P 12 11 49.0 +0.2**
baz=87
TUL1 Tulsa 86.93 314 ⇑P **P 12 11 49.8 +0.8**
baz=87
MSO Missoula 86.95 332 *e*P **P 12 11 49.1 +0.1**
comp=Z,6.0nm,1.3s
MSO Missoula 86.95 332 ⇑P **P 12 11 49.4 +0.4**
baz=87
I20A Worland 86.98 327 P **P 12 11 49.7 +0.4**
baz=87,SNR=9.7
H18A Shoshone NF, C 87.04 328 ⇑P **P 12 11 49.9 +0.2**
baz=87
BOZ Bozeman (W) 87.05 330 *e*P **P 12 11 49.4 -0.2**
BOZ pmax pmax
comp=Z,72nm,1.1s
BOZ Bozeman (W) 87.05 330 *e*P **P 12 11 49.4 -0.2**
comp=Z,72nm,1.1s
E14A Clinton 87.13 331 ⇓P **P 12 11 50.5 +0.6**
baz=87
J21A Lysite 87.16 326 ⇓P **P 12 11 50.4 +0.2**
baz=87
F15A Butte 87.22 330 ⇓P **P 12 11 48.1 -2.4**
baz=87
D12A Red Ives Fores 87.28 333 ⇓P **P 12 11 50.6 0.0**
baz=87
I19A Meeteetse 87.28 327 ⇓P **P 12 11 50.7 -0.1**
baz=87,SNR=14
K22A Casper 87.30 325 ⇑P **P 12 11 50.2 -0.7**
baz=87
L23A Garrett 87.35 324 ⇓P **P 12 11 52.1 +0.9**
baz=87
E13A Victor 87.37 332 ⇓P **P 12 11 51.4 +0.3**
baz=87,SNR=6.0
J20A Shoshoni 87.44 326 ⇓P **P 12 11 51.9 +0.5**
baz=87
G16A Moss Hill, Enn 87.46 330 ⇓P **P 12 11 52.1 +0.4**
baz=87
K21A Alcova 87.64 326 ⇑P **P 12 11 52.0 -0.6**
baz=87
DLMT Dillon 87.66 330 *e*P **P 12 11 54.1 +1.5**
comp=Z,6.6nm,1.1s
H16A Russell Place, 87.67 329 ⇑P **P 12 11 52.3 -0.4**
baz=87
L22A Ellis Ranch, M 87.75 325 ⇑P **P 12 11 54.0 +0.9**
baz=87
G15A Dillon 87.78 330 ⇑P **P 12 11 54.3 +1.1**
baz=88
M23A Laramie 87.87 324 ⇓P **P 12 11 54.7 +1.0**
baz=88
PHWY Pilot Hill 87.87 324 *e*P **P 12 11 54.0 +0.1**
comp=Z,9.7nm,1.0s
I18A Diamond G Ranc 87.90 328 ⇓P **P 12 11 54.5 +0.7**
baz=88
J19A Crowheart 87.93 327 ⇓P **P 12 11 54.8 +0.9**
baz=88
F13A Darby 87.97 331 ⇑P **P 12 11 54.2 +0.2**
baz=88
K20A Yellowstone Ra 88.11 326 ⇓P **P 12 11 55.3 +0.5**
baz=88
K19A Absolon Red Bu 88.19 327 ⇑P **P 12 11 54.8 -0.4**
baz=88
IMW Indian Meadow 88.21 328 *e*P **P 12 11 58.2 +2.9**
comp=Z,4.9nm,1.1s
L21A Rawlins 88.23 325 ⇓P **P 12 11 56.1 +0.7**
baz=88
MOOW Moose Ponds 88.25 328 *e*P **P 12 11 56.4 +0.9**
comp=Z,18nm,2.3s
F12A Elk City 88.34 332 P **P 12 11 56.4 +0.7**
baz=88,SNR=11
J18A Kendall Valley 88.38 327 ⇓P **P 12 11 56.3 +0.2**
baz=88,SNR=14
N23A Red Feather La 88.42 324 ⇑P **P 12 11 56.9 +0.5**
baz=88
M21A Separation Pea 88.51 325 ⇑P **P 12 11 56.8 +0.1**
baz=88,SNR=5.6
TPAW Teton Pass 88.55 328 *e*P **P 12 11 58.1 +1.2**
comp=Z,4.4nm,1.1s
BW06 Boulder Array 88.55 327 *e*P **P 12 11 57.9 +0.9**
comp=Z,8.4nm,1.5s
PDAR Pinedale Array 88.55 327 P **P 12 11 56.2 -0.7**
PDAR Pinedale Array 88.55 327 P **P 12 11 56.2 -0.7**
comp=Z,2.0nm,0.8s,baz=61,slow=4.2,SNR=11
L20A Wamsutter 88.63 326 ⇑P **P 12 11 57.1 -0.2**
baz=88
N22A Wattenberg Ran 88.73 324 ⇓P **P 12 11 57.7 -0.2**
baz=88
G12A Big Creek, Yel 88.90 332 ⇑P **P 12 11 58.2 -0.3**
baz=89
M20A Sweetwater, Wa 88.97 325 ⇓P **P 12 11 59.6 +0.6**
baz=89
H13A Challis 88.97 331 ⇑P **P 12 11 59.4 +0.6**
baz=89
S28A Manter 88.99 319 ⇓P **P 12 11 58.8 -0.1**
baz=89
L19A Farson 89.00 326 ⇓P **P 12 11 59.0 0.0**
baz=89
ISCO Idaho Springs 89.12 323 *e*P **P 12 12 00.1 +0.3**
ISCO pmax pmax
comp=Z,5.0nm,1.0s
ISCO Idaho Springs 89.12 323 *e*P **P 12 12 00.1 +0.3**
comp=Z,4.8nm,1.0s
ISCO Idaho Springs 89.12 323 ⇑P **P 12 12 00.3 +0.5**
baz=89
R26A Arlington 89.23 321 ⇑P **P 12 11 58.7 -1.3**
baz=89
N21A Black Mountain 89.26 325 ⇓P **P 12 12 00.7 +0.4**
baz=89
O22A Kremmling 89.28 324 ⇑P **P 12 12 00.9 +0.4**
baz=89
HAWA Hanford 89.30 335 *e*P **P 12 12 00.6 +0.6**
comp=Z,8.7nm,1.1s
M19A Rock Springs 89.39 326 ⇑P **P 12 12 01.1 +0.2**
baz=89
WMOK Wichita Mounta 89.45 315 *e*P **P 12 12 01.7 +0.6**
comp=Z,12nm,0.9s
I13A Wildhorse Cree 89.47 330 ⇓P **P 12 12 02.2 +1.0**
baz=89,SNR=6.0
N20A Spence Gulch, 89.53 325 ⇑P **P 12 12 02.2 +0.6**
baz=89
P23A Jefferson 89.57 323 ⇑P **P 12 12 02.3 +0.4**
baz=89
M18A Lyman 89.86 326 ⇓P **P 12 12 02.7 -0.4**
baz=90
BMO Blue Mountains 89.87 333 *e*P **P 12 12 02.0 -0.9**
comp=Z,4.2nm,1.1s
M17A Scullys Gap (B 90.08 327 ⇓P **P 12 12 04.0 -0.1**
baz=90
O20A White River Ci 90.09 325 ⇑P **P 12 12 04.2 +0.1**
baz=90
X31A McDonald Ranch 90.19 316 ⇑P **P 12 12 05.2 +0.7**
baz=90
SMCO Snowmass 90.26 323 *e*P **P 12 12 04.7 -0.5**
comp=Z,2.9nm,0.8s
HWUT Hardware Ranch 90.35 328 *e*P **P 12 12 04.6 -0.7**
comp=Z,12nm,1.1s
O19A Miners Draw (B 90.36 325 ⇓P **P 12 12 05.4 +0.1**
baz=90
Q22A Crested Butte, 90.48 323 ⇓P **P 12 12 06.6 +0.5**
baz=90
MFID Camas Ranch 90.55 331 *e*P **P 12 12 06.7 +0.6**
comp=Z,7.0nm,1.1s
MFID Camas Ranch 90.55 331 ⇑P **P 12 12 06.5 +0.3**
baz=90
P20A De Beque 90.67 324 ⇓P **P 12 12 06.7 -0.1**
baz=90
SDCO Great Sand Dun 90.68 321 *e*P **P 12 12 06.2 -0.8**
comp=Z,3.2nm,1.1s
X30A Coker Ranch, T 90.82 316 P **P 12 12 08.1 +0.7**
baz=90,SNR=6.0
P19A Cripple Cowboy 90.83 325 ⇓P **P 12 12 07.5 -0.2**
baz=90
U26A Atchley Ranch, 90.85 320 ⇓P **P 12 12 08.4 +0.6**
baz=91
Z32A Haskell 90.90 315 ⇑P **P 12 12 08.2 +0.4**
baz=91,SNR=16
T24A Torres, Weston 90.98 321 ⇓P **P 12 12 09.2 +0.7**
baz=91
Q20A Ridgley Place, 91.06 324 ⇑P **P 12 12 08.3 -0.4**
baz=91
JLU Jordanelle 91.13 327 *e*P **P 12 12 08.6 -0.5**
comp=Z,5.6nm,0.9s
U25A Circle Dot Ran 91.18 320 ⇓P **P 12 12 08.9 -0.4**
baz=91
Z31A Sharp Cattle R 91.26 315 ⇓P **P 12 12 10.4 +0.8**
baz=91
S22A 4UR Ranch, Cre 91.33 322 ⇓P **P 12 12 10.8 +0.8**
baz=91
P18A Preston Nutter 91.40 326 ⇑P **P 12 12 10.4 0.0**

	baz=91								
ABTX	**Abilene, Hawle**	**91.50**	**315**	⇓P		**P**		**12 12 11.7**	**+1.1**
	baz=91,SNR=6.6								
R20A	**Redvale**	**91.71**	**324**	⇑P		**P**		**12 12 12.2**	**+0.4**
	baz=91								
PV04	**Paradox Valley**	**91.79**	**324**	*e*P		**P**		**12 12 11.8**	**-0.3**
Z30A	**Sanderson Ranc**	**91.83**	**316**	⇑P		**P**		**12 12 12.2**	**0.0**
	baz=92								
PV01	**Paradox Valley**	**91.84**	**324**	*e*P		**P**		**12 12 12.5**	**+0.1**
PV10	**Paradox Valley**	**91.87**	**324**	*e*P		**P**		**12 12 12.8**	**+0.3**
	comp=Z,216nm,0.9s								
T22A	**Edith**	**91.94**	**322**	⇑P		**P**		**12 12 12.9**	**0.0**
	baz=92								
SRU	**San Rafael**	**91.95**	**325**	⇓P		**P**		**12 12 12.6**	**-0.1**
	baz=92								
S20A	**Disappointment**	**91.99**	**323**	⇓P		**P**		**12 12 13.5**	**+0.4**
	baz=92								
232A	**Coleman**	**92.05**	**314**	P		**P**		**12 12 14.3**	**+1.1**
	baz=92,SNR=8.3								
DUG	**Dugway**	**92.05**	**328**	*e*P		**P**		**12 12 13.9**	**+0.7**
DUG				pmax		pmax			
	comp=Z,6.0nm,0.9s								
DUG	**Dugway**	**92.05**	**328**	*e*P		**P**		**12 12 13.9**	**+0.7**
	comp=Z,5.8nm,0.9s								
DUG	**Dugway**	**92.05**	**328**	⇓P		**P**		**12 12 13.4**	**+0.3**
	baz=92,SNR=5.1								
W25A	**X Bar L Ranch,**	**92.13**	**319**	⇓P		**P**		**12 12 12.1**	**-1.5**
	baz=92								
X26A	**CR and CF Fran**	**92.31**	**318**	⇓P		**P**		**12 12 14.2**	**-0.2**
	baz=92								
231A	**Bronte**	**92.39**	**314**	⇑P		**P**		**12 12 15.8**	**+1.0**
	baz=92								
Q16A	**Castle Valley**	**92.39**	**326**	⇑P		**P**		**12 12 15.0**	**+0.1**
	baz=92								
332A	**Millersview**	**92.48**	**314**	⇓P		**P**		**12 12 16.7**	**+1.5**
	baz=92								
ROSC	**El Rosal**	**92.55**	**278**	P		**P**		**12 12 17.5**	**+1.4**
ROSC	**El Rosal**	**92.55**	**278**	P		**P**		**12 12 17.5**	**+1.4**
	comp=Z,3.2nm,0.4s,baz=276,slow=16,SNR=2.5								
MVCO	**Mesa Verde**	**92.55**	**323**	*e*P		**P**		**12 12 15.5**	**-0.2**
	comp=Z,4.3nm,1.0s								
MVCO	**Mesa Verde**	**92.55**	**323**	⇑P		**P**		**12 12 16.0**	**+0.3**
	baz=92								
330A	**Mertzon**	**93.27**	**315**	⇓P		**P**		**12 12 19.6**	**+0.7**
	baz=93								
Z26A	**Caprock**	**93.38**	**318**	⇑P		**P**		**12 12 19.9**	**+0.4**
	baz=93								
431A	**Sonora**	**93.50**	**314**	⇑P		**P**		**12 12 20.8**	**+0.9**
	baz=93								
532A	**Rocksprings**	**93.51**	**313**	⇓P		**P**		**12 12 20.6**	**+0.6**
	baz=93								
MOD	**Modoc**	**93.51**	**333**	*e*P		**P**		**12 12 22.1**	**+2.2**
	comp=Z,3.6nm,1.0s								
329A	**Wagon Wheel Ra**	**93.66**	**315**	⇑P		**P**		**12 12 21.6**	**+0.9**
	baz=93								
Z25A	**Roswell**	**93.77**	**318**	⇓P		**P**		**12 12 21.7**	**+0.5**
	baz=94								
430A	**Baggett Ranch,**	**93.77**	**314**	⇑P		**P**		**12 12 21.3**	**+0.1**
	baz=94								
531A	**Rocksprings**	**93.85**	**313**	⇓P		**P**		**12 12 22.3**	**+0.7**
	baz=94								
631A	**Perdido Creek**	**94.43**	**313**	⇓P		**P**		**12 12 24.1**	**0.0**
	baz=94								
R11A	**Troy Canyon, C**	**94.76**	**328**	⇑P		**P**		**12 12 26.2**	**+0.4**
	baz=94								
529A	**Stev Forest Ra**	**94.83**	**315**	P		**P**		**12 12 26.5**	**+0.4**
	baz=95,SNR=7.3								
326A	**Caldwell Ranch**	**94.89**	**316**	⇑P		**P**		**12 12 25.9**	**-0.4**
	baz=95								
427A	**Hayter Ranch,**	**94.93**	**316**	⇑P		**P**		**12 12 26.9**	**+0.3**
	baz=95								
U15A	**North Rim**	**94.95**	**325**	⇓P		**P**		**12 12 25.3**	**-1.5**
	baz=95								
Z22A	**Elephant Butte**	**94.95**	**320**	⇑P		**P**		**12 12 26.4**	**-0.2**
	baz=95								
528A	**Cox Ranch, San**	**95.12**	**315**	⇑P		**P**		**12 12 27.0**	**-0.4**
	baz=95								
MNTX	**Cornudas Mount**	**95.35**	**318**	*e*P		**P**		**12 12 27.7**	**-0.6**
	comp=Z,1.7nm,0.9s								
426A	**McDonald Obser**	**95.42**	**316**	P		**P**		**12 12 29.4**	**+0.5**
	baz=95,SNR=7.5								
324A	**Moseley Ranch,**	**95.60**	**318**	⇑P		**P**		**12 12 29.5**	**-0.1**
	baz=95								
628A	**Black Gap, Mar**	**95.69**	**315**	⇓P		**P**		**12 12 29.7**	**-0.2**
	baz=95								
NVAR	**Mina Array Bea**	**95.79**	**330**	P		**P**		**12 12 30.4**	**0.0**
NVAR	**Mina Array Bea**	**95.79**	**330**	P		**P**		**12 12 30.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=55,slow=6.7,SNR=2.9								
Z20A	**Nine Sixteen R**	**95.89**	**321**	⇑P		**P**		**12 12 31.1**	**+0.1**
	baz=96								
X16A	**Lo Mia Camp, P**	**96.21**	**323**	⇓P		**P**		**12 12 32.0**	**-0.5**
	baz=96								
TXAR	**Lajitas Array**	**96.24**	**315**	P		**P**		**12 12 32.9**	**+0.4**
TXAR	**Lajitas Array**	**96.24**	**315**	P		**P**		**12 12 32.9**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=83,slow=3.0,SNR=10								
626A	**Big Bend Ranch**	**96.33**	**315**	⇑P		**P**		**12 12 33.2**	**+0.2**
	baz=96								
WRA	**Warramunga Arr**	**118.82**	**94**	PKP		**PKPdf**		**12 17 51.1**	**-1.4**
WRA	**Warramunga Arr**	**118.82**	**94**	PKP		**PKPdf**		**12 17 51.2**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=322,slow=2.0,SNR=17								
WRAB	**Tennant Creek**	**118.83**	**94**	*e*PKIKP		**PKPdf**		**12 17 54.4**	**+1.8**
WRAB	**Tennant Creek**	**118.83**	**94**	*e*PKPdf		**PKPdf**		**12 17 54.4**	**+1.8**
AS31	**Alice Springs**	**120.47**	**97**	*e*PKPdf		**PKPdf**		**12 17 54.3**	**-1.4**
ASAR	**Alice Springs**	**120.47**	**97**	PKP		**PKPdf**		**12 17 54.1**	**-1.6**
ASAR	**Alice Springs**	**120.47**	**97**	PKP		**PKPdf**		**12 17 54.1**	**-1.6**
	comp=Z,1.1nm,0.5s,baz=311,slow=1.6,SNR=21								
STKA	**Stephens Creek**	**130.34**	**102**	PKP		**PKPdf**		**12 18 13.6**	**-0.7**
STKA				SKPbc		**SKPab**		**12 21 35.6**	**-1.4**
STKA	**Stephens Creek**	**130.34**	**102**	PKP		**PKPdf**		**12 18 13.6**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=326,slow=5.1,SNR=4.2								
STKA				SKPbc		**SKPab**		**12 21 35.6**	**-1.4**
	comp=Z,1.7nm,0.7s,baz=34,slow=3.6,SNR=5.3								

IDC 17 12:31:20.5±12.0, 57.91S×25.61W, h59km±109km, mb3.7/2, mb1 3.4/3, mb1mx3.3/18, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=86.9km s-min=37.1km az=110.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**16.68**	**155**	P	Pn	12 35 09.2	-0.7
	0.1nm,0.3s,baz=327,slow=16,SNR=12						
QSPA	**South Pole Qui**	**32.33**	**180**	P	P	12 37 44.0	+0.3
	3.6nm,1.2s,baz=88,slow=5.1,SNR=5.6						
TORD	**Torodi Ar. Bea**	**74.28**	**28**	P	P	12 42 51.4	+0.2
	0.7nm,0.6s,baz=200,slow=6.1,SNR=9.1						
TORD				pP	pP	12 43 07.9	+0.4
	0.6nm,0.6s,baz=198,slow=7.2,SNR=3.5						
YKA	**Yellowknife Ar**	**138.13**	**316**	PKP	PKPdf	12 50 36.8	-0.2
	0.5nm,0.7s,baz=131,slow=2.8,SNR=3.2						
SONM	**Songino Array**	**149.94**	**88**	PKPbc	PKPbc	12 51 02.5	-0.6
	0.5nm,0.6s,baz=230,slow=2.8,SNR=2.8						
ILAR	**Eielson Array**	**151.98**	**309**	PKPbc	PKPbc	12 51 06.8	-0.4
	1.0nm,0.5s,baz=132,slow=2.4,SNR=18						
ILAR				pPKPbc	pPKPbc	12 51 24.1	-0.4
	0.1nm,0.4s,baz=129,slow=1.6,SNR=1.3						

*ISCJB **17** 12:35:19.7±0.4, 27.17S±0.03×69.66W±0.04, h83km±3km, mb5.1/159, Error ellipse: s-maj=6.5km s-min=4.5km az=170.9*

*GUC **17** 12:35:20.2±0.7, 27.21S×69.99W, h106km±6km, ML5.7*

*NEIC **17** 12:35:21.9±0.1, 27.20S×69.64W, mb5.2/128, Error ellipse: s-maj=5.1km s-min=3.5km az=71.0*

NEIC Felt [V] at Copiapo; [IV] at El Salvador and Tierra Amarilla; [III] at Caldera, Diego de Almagro and Vallenar; [II] at Alto del Carmen, Chanaral, Freirina and Huasco.

*BJI **17** 12:35:21.9, 27.20S×69.60W, h93km, mB5.2/20*

*MOS **17** 12:35:22.5±1.0, 26.99S×69.64W, h101km, mb5.2/32, Error ellipse: s-maj=10.9km s-min=6.4km az=102.0*

*IDC **17** 12:35:22.4±0.3, 27.23S×69.75W, h97km±2km, mb4.8/20, mb1 4.8/22, mb1mx4.8/24, mbtmp4.8/22, MS4.2/13, Ms1 4.2/13, ms1mx4.0/20, Error ellipse: s-maj=12.4km s-min=8.6km az=74.0*

*GCMT **17** 12:35:25.2±0.2, 27.39S×70.24W, h102km±1km, MW5.2, Moment Tensor Solution. s65,c88; s77,c113; Moment tensor: Scale 10^{16}Nm; M_{rr}-7.62±.17; $M_{\theta\theta}$1.79±.17; $M_{\phi\phi}$5.83±.22; $M_{r\theta}$-1.92±.14; $M_{\theta\phi}$-0.58±.19; $M_{\phi r}$4.01±.18; Best double couple: M_o8.10000×10^{16} NP1:ϕ_s356.00000°, δ29.00000°, λ-79.00000°. NP2:ϕ_s163.00000°, δ62.00000°, λ-96.00000°. Principal axes: T 7.1600, Plg16.0000°, Azm258.0000°; N 1.8400, Plg5.0000°, Azm166.0000°; P*

-8.9900, Plg73.0000°, Azm58.0000°; Data Used: II IU G CN IC.

*DJA **17** 12:35:59.6±10.0, 29.3S×43.6°9W±3.1, h375km±90km, M5.3/8, mb5.3/8*

ISC 17 12:35:22.0±0.2, 27.22S±0.03×69.74W±0.05, h98km±1km, h98km:pP-P, n902, σ1%10/1552, mb5.2/158, 222C-226D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**0.56**	**256**	⇓*i*P	**Pn**	**12 35 36.2**	**-1.9**
CPCH				*i* S	**Sn**	**12 35 47.6**	**-2.6**
CPCH	**Copiapo**	**0.56**	**256**	⇓*i*P	**Pn**	**12 35 36.2**	**-1.9**
CPCH				*i* S	**Sn**	**12 35 47.6**	**-2.6**
CDCH	**Caldera**	**0.97**	**279**	⇓*i*P	**Pn**	**12 35 41.1**	**-0.9**
CDCH				*i* S	**Sn**	**12 35 55.5**	**-1.6**
CDCH	**Caldera**	**0.97**	**279**	⇓*i*P	**Pn**	**12 35 41.1**	**-0.9**
CDCH				*i* S	**Sn**	**12 35 55.5**	**-1.6**
LCO	**Las Campanas**	**1.97**	**205**	⇑*i*P	**Pn**	**12 35 53.0**	**-1.5**
LCO				*i* S	**Sn**	**12 36 17.4**	**-1.7**
LCO	**Las Campanas**	**1.97**	**205**	⇑*i*P	**Pn**	**12 35 53.0**	**-1.5**
LCO				*i* S	**Sn**	**12 36 17.4**	**-1.7**
LCO				AML	AML	12 36 19.4	
	comp=E,62μm,0.5s						
TLL	**Tololo Astrono**	**3.08**	**197**	⇑*i*P	**Pn**	**12 36 07.8**	**-1.3**
TLL				*e*S	**Sn**	**12 36 43.4**	**-1.8**
TLL	**Tololo Astrono**	**3.08**	**197**	⇑*i*P	**Pn**	**12 36 07.8**	**-1.3**
TLL				*e*S	**Sn**	**12 36 43.4**	**-1.8**
TLL	**Tololo Astrono**	**3.08**	**197**	⇑*i*P	**Pn**	**12 36 07.8**	**-1.3**
TLL				*e*S	**Sn**	**12 36 43.4**	**-1.8**
TLL				AML	AML	12 36 47.4	
	comp=N,16μm,0.4s						
ANCH	**Antofagasta**	**3.58**	**350**	⇑*i*P	**Pn**	**12 36 13.8**	**-1.7**
ANCH				*i* S	**Sn**	**12 36 54.0**	**-2.8**
ANCH	**Antofagasta**	**3.58**	**350**	⇑*i*P	**Pn**	**12 36 13.8**	**-1.7**
ANCH				*i* S	**Sn**	**12 36 54.0**	**-2.8**
MECH	**Mejillones**	**4.15**	**351**	*e*P	**Pn**	**12 36 21.7**	**-1.6**
MECH	**Mejillones**	**4.15**	**351**	*e*P	**Pn**	**12 36 21.7**	**-1.6**
LVC	**Limon Verde**	**4.65**	**10**	⇑*i*P	**Pn**	**12 36 29.9**	**-0.4**
LVC	**Limon Verde**	**4.65**	**10**	⇑*i*P	**Pn**	**12 36 29.9**	**-0.4**
ARE	**Arequipa**	**10.83**	**351**	*e*P	Pn	12 37 50.0	-4.4
ARE	**Arequipa**	**10.83**	**351**	*e*P	Pn	12 37 50.0	-4.4
ARE				*e*		12 38 19.0	
LPAZ	**La Paz**	**10.98**	**8**	*e*Pn	**Pn**	**12 37 54.4**	**-2.4**
	comp=N,38nm,0.8s						
LPAZ	**La Paz**	**10.98**	**8**	P	**Pn**	**12 37 54.5**	**-2.2**
	comp=N,2.7nm,0.3s,baz=181,slow=7.1,SNR=98						
CPUP	**Villa Florida**	**11.13**	**88**	P	**Pn**	**12 37 57.0**	**-1.1**
CPUP	**Villa Florida**	**11.13**	**88**	P	**Pn**	**12 37 57.0**	**-1.1**
	comp=N,0.8nm,0.3s,baz=251,slow=12,SNR=16						
CPUP				LR	LR	12 42 46.1	
	comp=N,1μm,19.2s,baz=255,slow=40						
TRQA	**Tornquist**	**12.62**	**151**	*e*Pn	**Pn**	**12 38 16.0**	**-2.0**
	comp=N,22nm,0.9s						
PLCA	**Paso Flores**	**13.49**	**183**	P	Pn	12 38 25.9	-3.5
PLCA	**Paso Flores**	**13.49**	**183**	P	Pn	12 38 26.0	-3.5
	comp=N,0.5nm,0.3s,baz=1.8,slow=13,SNR=7.8						
PLCA				LR	LR	12 44 02.3	
	comp=N,945nm,19.2s,baz=0.4,slow=39						
SIV	**San Ignacio**	**13.77**	**38**	P	Pn	12 38 28.7	-4.5
SIV	**San Ignacio**	**13.77**	**38**	P	Pn	12 38 28.7	-4.5
	comp=N,4.2nm,0.3s,baz=243,slow=12,SNR=44						
SIV				LR	LR	12 45 08.9	
	comp=N,830nm,21.6s,slow=43						
NNA	**Nana**	**16.56**	**335**	*e*P	**P**	**12 39 10.0**	**+0.7**
	comp=N,8.0nm,0.7s						
NNA				S	**Sn**	**12 42 06.0**	**-6.2**
NNA	**Nana**	**16.56**	**335**	P	**Pn**	**12 39 08.8**	**+0.4**
	comp=N,0.4nm,0.3s,baz=179,slow=13,SNR=6.3						
NNA				S	**Sn**	**12 42 06.0**	**-6.2**
	comp=N,1.2nm,0.3s,baz=202,slow=19,SNR=2.5						
NNA				LR	LR	12 44 27.2	
	comp=N,250nm,18.1s,baz=142,slow=33						
SAML	**Samuel**	**19.21**	**20**	*e*P	**P**	**12 39 38.8**	**+0.5**
	comp=N,140nm,1.2s						
SAML				*e*		12 40 10.6	
ATAH	**Atahualpa**	**21.60**	**336**	P	**P**	**12 40 04.9**	**+0.3**
ATAH	**Atahualpa**	**21.60**	**336**	P	**P**	**12 40 04.9**	**+0.3**
	comp=N,5.0nm,0.8s,baz=205,slow=13,SNR=6.5						
BDFB	**Brasilia**	**23.24**	**65**	P	**P**	**12 40 20.2**	**-0.8**
BDFB	**Brasilia**	**23.24**	**65**	P	**P**	**12 40 20.2**	**-0.8**
	comp=N,56nm,1.0s,baz=233,slow=9.3,SNR=45						
BDFB				LR	LR	12 50 40.2	
	comp=N,1μm,18.3s,baz=207,slow=40						
CAM4	**Nova Friburgo**	**25.12**	**85**	⇑*i*P	**P**	**12 40 38.7**	**+0.5**
CAM4				*i*		12 40 42.4	
CAM4				*i*		12 41 01.0	
CAM4				*i*		12 41 11.9	
CAM4				*i*		12 41 23.4	
CAM4				*i*		12 41 26.7	
CAM4				*i*		12 41 47.5	
CAM4				*i*		12 41 59.7	
EFI	**East Falkland**	**25.97**	**163**	*e*P	**P**	**12 40 44.7**	**-0.5**
EFI				pmax	pmax		
	comp=Z,58nm,0.7s						
EFI	**East Falkland**	**25.97**	**163**	*e*P	**P**	**12 40 44.7**	**-0.5**
	comp=Z,58nm,0.7s						
USHA	**Ushuaia**	**27.60**	**178**	P	**P**	**12 41 00.3**	**+0.5**
USHA	**Ushuaia**	**27.60**	**178**	P	**P**	**12 41 00.3**	**+0.5**
	comp=Z,30nm,0.7s,baz=339,slow=8.0,SNR=15						
OTAV	**Otavalo**	**28.56**	**342**	*e*P	**P**	**12 41 11.0**	**+1.7**
	comp=Z,2.6nm,0.7s						
ROSC	**El Rosal**	**32.20**	**351**	*e*P	**P**	**12 41 43.3**	**+2.0**
ROSC	**El Rosal**	**32.20**	**351**	P	**P**	**12 41 42.6**	**+1.3**
	comp=Z,12nm,0.7s,baz=251,slow=23,SNR=7.2						
ROSC				LR	LR	12 54 20.1	
	comp=Z,302nm,21.0s,baz=194,slow=35						
SDV	**Santo Domingo**	**35.90**	**358**	*e*P	**P**	**12 42 11.6**	**-1.5**
	comp=Z,0.1nm,0.6s						
RCBR	**Riachuelo**	**38.58**	**63**	*e*P	**P**	**12 42 37.1**	**+1.4**
	comp=Z,48nm,1.3s						
RCBR				*e*pP	**pP**	**12 42 59.5**	**+1.1**
RCBR	**Riachuelo**	**38.58**	**63**	P	**P**	**12 42 37.6**	**+1.9**
	comp=Z,32nm,1.0s,baz=220,slow=9.3,SNR=10						
GRGR	**Grenville**	**39.90**	**12**	*e*P	**P**	**12 42 45.9**	**-0.6**
	comp=Z,145nm,0.9s						
JTS	**JuntasAbamgare**	**40.10**	**336**	*e*P	**P**	**12 42 50.7**	**+2.5**
	comp=Z,570nm,2.0s						
FDF	**Fort de France**	**42.53**	**12**	*e*P	**P**	**12 43 06.6**	**-1.5**
FDF				pmax	pmax		
	comp=Z,81nm,0.8s						
FDF	**Fort de France**	**42.53**	**12**	*e*P	**P**	**12 43 06.6**	**-1.5**
	comp=Z,81nm,0.8s						
TGUH	**Tegucigalpa,Un**	**44.42**	**335**	*e*P	**P**	**12 43 24.5**	**+1.3**
TGUH				*es*P	**sP**	**12 43 57.5**	**+0.1**
CELP	**Cerrillos**	**45.13**	**4**	*e*P	**P**	**12 43 28.6**	**-0.2**
SJG	**San Juan**	**45.20**	**5**	*e*P	**P**	**12 43 27.9**	**-1.5**
	comp=Z,23nm,0.8s						
GTBY	**Guantanamo Bay**	**47.16**	**353**	*e*P	**P**	**12 43 44.7**	**0.0**
	comp=Z,79nm,0.8s						
GTBY				*e*pP	**pP**	**12 44 07.4**	**-0.6**
GTBY				*es*P	**sP**	**12 44 18.2**	**-0.9**
TEIG	**Tepich**	**50.47**	**337**	*e*P	**P**	**12 44 10.1**	**+0.1**
	comp=Z,72nm,1.3s						
TEIG				*e*pP	**pP**	**12 44 33.0**	**-0.6**
TEIG	**Tepich**	**50.47**	**337**	P	**P**	**12 44 10.2**	**+0.2**
	comp=Z,19nm,0.7s,baz=144,slow=5.1,SNR=9.8						
SNAA	**Sanae**	**57.17**	**160**	*e*P	**P**	**12 44 58.5**	**+0.2**
	comp=Z,179nm,1.4s						
SNAA				*e*pP	**pP**	**12 45 22.6**	**+0.2**
SNAA	**Sanae**	**57.17**	**160**	P	**P**	**12 44 58.6**	**+0.2**
	comp=Z,18nm,0.7s,baz=284,slow=7.0,SNR=292						
SNAA				pP	**pP**	**12 45 22.7**	**+0.3**
	comp=Z,7.5nm,0.5s,baz=285,slow=8.0,SNR=5.7						
BRAL	**Brewton**	**60.22**	**343**	*e*P	**P**	**12 45 20.8**	**+0.9**
	comp=Z,24nm,0.9s						
BRAL				*e*pP	**pP**	**12 45 43.9**	**-0.2**
NHSC	**New Hope**	**60.81**	**350**	*e*P	**P**	**12 45 24.5**	**+0.7**
	comp=Z,184nm,1.5s						
NHSC				*e*pP	**pP**	**12 45 48.1**	**0.0**
NHSC				*es*P	**sP**	**12 45 58.2**	**-0.7**
MAIT	**Maitri**	**61.77**	**158**	*e*P	P	12 45 20.3	-10
MAIT				*e*		12 45 44.9	
HKT	**Hockley**	**62.09**	**334**	*e*P	**P**	**12 45 33.7**	**+1.3**
HKT				*e*PP	**pP**	**12 45 56.2**	**-0.6**
HKT				*e*SP	**sP**	**12 46 08.2**	**+0.6**
HKT				pmax	pmax		
	comp=Z,27nm,1.2s						
HKT	**Hockley**	**62.09**	**334**	*e*P	**P**	**12 45 33.7**	**+1.3**
	comp=Z,27nm,1.2s						
HKT				*e*pP	**pP**	**12 45 56.2**	**-0.6**
HKT				*es*P	**sP**	**12 46 08.2**	**+0.6**
LRAL	**Lakeview Retre**	**62.13**	**344**	*e*P	**P**	**12 45 31.6**	**-1.1**
	comp=Z,45nm,1.7s						
LRAL				*e*pP	**pP**	**12 45 55.2**	**-1.9**
JSC	**Jenkinsville**	**62.14**	**349**	*e*P	**P**	**12 45 32.7**	**0.0**
JSC				*e*PP	**pP**	**12 45 56.6**	**-0.5**
JSC				*e*SP	**sP**	**12 46 07.1**	**-0.8**
JSC	**Jenkinsville**	**62.14**	**349**	*e*P	**P**	**12 45 32.7**	**0.0**
JSC				*e*pP	**pP**	**12 45 56.6**	**-0.5**
JSC				*es*P	**sP**	**12 46 07.1**	**-0.8**
CNNC	**Cliffs of the**	**62.60**	**352**	*e*P	**P**	**12 45 36.4**	**+0.7**
	comp=Z,13nm,0.6s						
CNNC				*e*pP	**pP**	**12 46 00.4**	**+0.2**
732A	**Laxson Ranch,**	**62.73**	**330**	P	**P**	**12 45 37.8**	**+1.0**
	baz=63,SNR=29						
732A				⇑pP	**pP**	**12 46 00.2**	**-1.1**
	baz=63,SNR=8.4						
KMSC	**Kings Mountain**	**62.99**	**349**	⇑P	**P**	**12 45 38.8**	**+0.5**
	baz=63,SNR=6.8						
KMSC				⇓pP	**pP**	**12 46 01.7**	**-1.1**
	baz=63						
QSPA	**South Pole Qui**	**62.99**	**180**	*e*P	**P**	**12 45 39.2**	**+0.9**
QSPA				pP	**pP**	**12 46 03.3**	**+0.6**
QSPA	**South Pole Qui**	**62.99**	**180**	P	**P**	**12 45 39.2**	**+0.9**
	comp=Z,59nm,0.9s,baz=152,slow=2.4,SNR=248						
QSPA				pP	**pP**	**12 46 03.3**	**+0.6**
	comp=Z,78nm,0.9s,baz=135,slow=2.7,SNR=15						
632A	**Uvalde**	**63.32**	**331**	P	**P**	**12 45 41.8**	**+1.1**
	baz=64,SNR=18						
632A				⇓pP	**pP**	**12 46 04.8**	**-0.4**
	baz=64						
631A	**Perdido Creek**	**63.59**	**330**	P	**P**	**12 45 42.9**	**+0.5**
	baz=64,SNR=16						
631A				⇓pP	**pP**	**12 46 05.9**	**-1.0**
	baz=64,SNR=6.5						
CPCT	**Cooper Cave**	**63.88**	**347**	*e*P	**P**	**12 45 44.0**	**-0.2**
CPCT				*e*pP	**pP**	**12 46 08.1**	**-0.7**
532A	**Rocksprings**	**63.91**	**331**	P	**P**	**12 45 45.6**	**+1.0**
	baz=64,SNR=17						
532A				⇑pP	**pP**	**12 46 08.4**	**-0.7**
	baz=64,SNR=5.9						
TKL	**Tuckaleechee C**	**63.93**	**347**	*e*P	**P**	**12 45 43.6**	**-1.0**
TKL				*e*pP	**pP**	**12 46 07.6**	**-1.5**
SWET	**Sewanee**	**63.96**	**345**	*e*P	**P**	**12 45 44.6**	**-0.2**
	comp=Z,95nm,0.7s						
SWET				*e*pP	**pP**	**12 46 07.7**	**-1.6**
SWET				*es*P	**sP**	**12 46 19.0**	**-1.0**
OXF	**Oxford**	**64.16**	**342**	*e*P	**P**	**12 45 45.7**	**-0.4**
OXF				*e*PP	**pP**	**12 46 09.2**	**-1.4**
OXF				pmax	pmax		
	comp=Z,51nm,1.0s						
OXF	**Oxford**	**64.16**	**342**	*e*P	**P**	**12 45 45.7**	**-0.4**
	comp=Z,51nm,1.0s						
OXF				*e*pP	**pP**	**12 46 09.2**	**-1.4**
JCT	**Junction City**	**64.17**	**331**	*e*P	**P**	**12 45 47.1**	**+0.8**
JCT				*e*PP	**pP**	**12 46 11.0**	**+0.2**
JCT				pmax	pmax		
	comp=Z,28nm,0.8s						
JCT	**Junction City**	**64.17**	**331**	*e*P	**P**	**12 45 47.1**	**+0.8**
	comp=Z,28nm,0.8s						
JCT				*e*pP	**pP**	**12 46 11.0**	**+0.2**
JCT	**Junction City**	**64.17**	**331**	P	**P**	**12 45 47.1**	**+0.8**
	baz=64,SNR=14						
JCT				⇓pP	**pP**	**12 46 10.5**	**-0.3**
	baz=64,SNR=5.0						
531A	**Rocksprings**	**64.22**	**330**	⇑P	**P**	**12 45 47.8**	**+1.1**
	baz=65						
531A				⇑pP	**pP**	**12 46 10.7**	**-0.5**
	baz=65						
PLAL	**Pickwick Lake**	**64.25**	**343**	*e*P	**P**	**12 45 46.0**	**-0.6**
	comp=Z,28nm,0.9s						
PLAL				*e*pP	**pP**	**12 46 09.8**	**-1.4**
432A	**Menard**	**64.51**	**332**	P	**P**	**12 45 49.1**	**+0.6**
	baz=65,SNR=24						
432A				⇓pP	**pP**	**12 46 12.2**	**-0.9**
	baz=65,SNR=5.5						
WHTX	**Lake Whitney**	**64.53**	**334**	⇓P	**P**	**12 45 49.0**	**+0.4**
	baz=65						
WHTX				⇑pP	**pP**	**12 46 12.6**	**-0.5**
	baz=65						
530A	**J-C Ranch, Com**	**64.56**	**330**	P	**P**	**12 45 49.9**	**+1.1**
	baz=65,SNR=19						
431A	**Sonora**	**64.69**	**331**	P	**P**	**12 45 50.2**	**+0.5**
	baz=65,SNR=12						
431A				⇓pP	**pP**	**12 46 13.6**	**-0.7**
	baz=65						
628A	**Black Gap, Mar**	**64.71**	**328**	P	**P**	**12 45 51.

baz=66
GNAR Gosnell 65.70 342 *e*P P 12 45 56.3 +0.4
comp=Z,884nm,0.9s
GNAR *e*pP pP 12 46 20.9 +0.3
526A Mary Lane Ranc 65.76 328 P P 12 45 58.2 +1.5
baz=66,SNR=36
526A ⇓pP pP 12 46 20.7 -0.6
baz=66,SNR=6.2
230A Sterling City 65.95 331 P P 12 45 57.9 +0.2
baz=66,SNR=11
230A ⇑pP pP 12 46 21.7 -0.8
baz=66
ABTX Abilene, Hawle 65.97 333 P P 12 45 58.5 +0.6
baz=66,SNR=21
ABTX ⇑pP pP 12 46 21.7 -0.8
baz=66
329A Wagon Wheel Ra 65.98 330 P P 12 45 58.8 +0.7
baz=66,SNR=22
329A ⇑pP pP 12 46 22.3 -0.4
baz=66
427A Hayter Ranch, 66.09 329 P P 12 45 59.8 +1.0
baz=66,SNR=16
427A ⇓pP pP 12 46 23.4 0.0
baz=66
426A McDonald Obser 66.23 328 P P 12 46 01.1 +1.2
baz=67,SNR=38
426A ⇑pP pP 12 46 24.7 +0.2
baz=67,SNR=6.5
328A Wristen Ranch, 66.27 329 P P 12 46 00.6 +0.8
baz=67,SNR=14
328A ⇑pP pP 12 46 24.5 0.0
baz=67,SNR=5.9
PARMO Parma 66.28 343 *e*P P 12 46 00.1 +0.4
PARMO *e*pP pP 12 46 24.1 -0.3
131A Roby 66.32 332 P P 12 46 00.8 +0.7
baz=67,SNR=20
131A ⇓pP pP 12 46 24.7 -0.1
baz=67,SNR=6.6
229A Bryant Ranch, 66.32 330 P P 12 46 00.7 +0.5
baz=67,SNR=6.7
229A ⇓pP pP 12 46 24.4 -0.5
baz=67
130A Snyder 66.49 332 P P 12 46 01.8 +0.5
baz=67,SNR=6.3
Z32A Haskell 66.50 333 P P 12 46 01.7 +0.5
baz=67,SNR=14
Z32A ⇓pP pP 12 46 25.6 -0.3
baz=67
327A Balmorhea Ranc 66.57 329 ⇓P P 12 46 03.0 +1.2
baz=67
326A Caldwell Ranch 66.75 328 P P 12 46 04.0 +1.0
baz=67,SNR=18
326A pP pP 12 46 27.8 +0.2
baz=67,SNR=6.9
Z31A Sharp Cattle R 66.78 333 P P 12 46 03.7 +0.7
baz=67,SNR=29
Z31A ⇓pP pP 12 46 27.5 -0.2
baz=67,SNR=5.1
425A Indio Mountain 66.79 327 P P 12 46 03.9 +0.6
baz=67,SNR=31
425A ⇑pP pP 12 46 28.0 0.0
baz=67
228A UT Block 9, Go 66.79 330 P P 12 46 03.8 +0.5
baz=67,SNR=15
228A ⇓pP pP 12 46 27.6 -0.3
baz=67,SNR=5.6
129A Stewart Farms, 66.91 331 P P 12 46 04.4 +0.5
baz=67,SNR=12
129A ⇓pP pP 12 46 28.1 -0.6
baz=67
WCI Wyandotte Cave 66.93 346 *e*P P 12 46 02.8 -1.1
WCI *e**PP pP 12 46 27.1 -1.5
WCI pmax pmax
comp=Z,39nm,1.4s
WCI Wyandotte Cave 66.93 346 *e*P P 12 46 02.8 -1.1
comp=Z,39nm,1.4s
WCI *e*pP pP 12 46 27.1 -1.5
USIN University of 66.99 345 *e*P P 12 46 03.8 -0.4
comp=Z,70nm,1.3s
USIN *e*pP pP 12 46 27.6 -1.4
227A Bennet, Jal 67.02 329 P P 12 46 05.9 +1.2
baz=67,SNR=12
227A ⇓pP pP 12 46 29.3 0.0
baz=67
Y32A R-V Farms, Ver 67.09 333 P P 12 46 05.5 +0.5
baz=67,SNR=12
Y32A pP pP 12 46 29.3 -0.4
baz=67,SNR=5.3
SIUC Southern Illin 67.13 343 *e*P P 12 46 04.6 -0.5
comp=Z,64nm,0.8s
SIUC *e*pP pP 12 46 28.8 -1.1
Z30A Sanderson Ranc 67.16 332 P P 12 46 05.8 +0.3
baz=68,SNR=20
Z30A ⇓pP pP 12 46 29.5 -0.7
baz=68
128A Castleberry Fa 67.17 330 P P 12 46 06.1 +0.4
baz=68,SNR=21
128A ⇑pP pP 12 46 29.7 -0.6
baz=68
Z29A Hungry Hill Ra 67.38 331 P P 12 46 07.0 +0.1
baz=68,SNR=19
Z29A ⇑pP pP 12 46 30.7 -0.9
baz=68
Y31A Rekieta Farm, 67.38 333 P P 12 46 07.5 +0.6
baz=68,SNR=23
Y31A ⇑pP pP 12 46 31.0 -0.6
baz=68
TUL1 Tulsa 67.43 337 P P 12 46 07.3 +0.2
baz=68,SNR=14
TUL1 ⇑pP pP 12 46 30.9 -0.9
baz=68,SNR=5.2
226B Tecolote Peak, 67.47 329 P P 12 46 08.8 +1.3
baz=68,SNR=34
226B ⇑pP pP 12 46 32.7 +0.4
baz=68,SNR=5.5
WMOK Wichita Mounta 67.48 334 *e*P P 12 46 07.0 -0.4
WMOK Wichita Mounta 67.48 334 *e*P P 12 46 07.0 -0.4
comp=Z,7.5nm,0.8s
324A Moseley Ranch, 67.57 327 P P 12 46 08.1 -0.1
baz=68,SNR=20
324A ⇑pP pP 12 46 32.0 -0.9
baz=68,SNR=11
GDL2 Guadalupe Moun 67.67 329 *e*P P 12 46 10.0 +1.2
GDL2 *e*pP pP 12 46 34.1 +0.6
Z28A Tucker Farm, M 67.70 331 P P 12 46 09.3 +0.3
baz=68,SNR=14
Z28A ⇑pP pP 12 46 33.0 -0.7
baz=68
MNTX Cornudas Mount 67.73 328 *e*P P 12 46 08.8 -0.3
comp=Z,19nm,0.8s
MNTX *e*pP pP 12 46 32.7 -1.1
225A Deer Hill, Car 67.81 328 P P 12 46 10.4 +0.6
baz=68,SNR=15
225A ⇓pP pP 12 46 34.1 -0.4
baz=68
OLIL Olney 67.82 345 *e*P P 12 46 08.9 -0.5
comp=Z,33nm,1.0s
OLIL *e*pP pP 12 46 32.8 -1.4
X31A McDonald Ranch 67.85 333 P P 12 46 10.2 +0.4
baz=68,SNR=26
X31A ⇑pP pP 12 46 34.0 -0.6
baz=68
Y29A Porterfield Fa 67.88 332 P P 12 46 10.4 +0.4
baz=68,SNR=38
Y29A ⇑pP pP 12 46 34.2 -0.6
baz=68
BLO Bloomington 67.89 346 *e*P P 12 46 08.8 -1.0
BLO *e**PP pP 12 46 33.0 -1.6
BLO pmax pmax
comp=Z,23nm,0.7s
BLO Bloomington 67.89 346 *e*P P 12 46 08.8 -1.0
comp=Z,23nm,0.7s
BLO *e*pP pP 12 46 33.0 -1.6
SSPA Standing Stone 67.94 353 *e*P P 12 46 10.9 +0.8
comp=Z,41nm,1.2s
SSPA *e*pP pP 12 46 34.9 0.0
X30A Coker Ranch, T 68.05 333 P P 12 46 11.3 +0.2
baz=68,SNR=5.1
X30A ⇓pP pP 12 46 35.3 -0.6
baz=68
Z27A Tatum 68.08 330 P P 12 46 11.7 +0.3
baz=68,SNR=24
Z27A ⇑pP pP 12 46 35.5 -0.6
baz=68
224A Cornudas Mount 68.11 328 P P 12 46 11.9 +0.3
baz=68,SNR=15
224A ⇑pP pP 12 46 35.7 -0.7
baz=68,SNR=6.7

Y28A McKinney Farm, 68.17 331 P P 12 46 12.0 +0.2
baz=68,SNR=8.2
Y28A ⇑pP pP 12 46 36.0 -0.6
baz=68
ACSO Alum Creek Sta 68.23 349 *e*P P 12 46 12.1 +0.1
comp=Z,66nm,0.8s
ACSO *e*pP pP 12 46 35.9 -0.8
SLM Saint Louis 68.26 343 *e*P P 12 46 12.2 0.0
SLM *e**PP pP 12 46 36.0 -1.0
SLM pmax pmax
comp=Z,30nm,0.9s
SLM Saint Louis 68.26 343 *e*P P 12 46 12.2 0.0
comp=Z,30nm,0.9s
SLM *e*pP pP 12 46 36.0 -1.0
W31A Holland Ranch, 68.32 334 P P 12 46 12.8 +0.1
baz=69
W31A ⇓pP pP 12 46 36.8 -0.7
baz=69
Z26A Caprock 68.39 330 P P 12 46 14.0 +0.7
baz=69,SNR=48
Z26A ⇓pP pP 12 46 37.9 -0.2
baz=69,SNR=6.8
X29A Tulia 68.40 332 P P 12 46 13.7 +0.5
baz=69,SNR=13
X29A ⇑pP pP 12 46 37.6 -0.5
baz=69
MSTX Muleshoe 68.45 331 P P 12 46 14.0 +0.4
baz=69,SNR=41
MSTX ⇑pP pP 12 46 38.0 -0.4
baz=69
223A Chaparral, Ant 68.49 327 ⇓pP pP 12 46 38.9 +0.2
baz=69
Y27A Causey 68.54 331 P P 12 46 14.4 +0.1
baz=69,SNR=9.3
Y27A ⇑pP pP 12 46 38.3 -0.8
baz=69
124A Stringfield Ra 68.59 328 P P 12 46 15.6 +0.9
baz=69,SNR=28
124A ⇓pP pP 12 46 39.6 +0.1
baz=69,SNR=6.1
X28A Dimmitt 68.67 332 P P 12 46 15.6 +0.6
baz=69,SNR=5.6
X28A ⇓pP pP 12 46 39.3 -0.5
baz=69
Z25A Roswell 68.73 329 P P 12 46 15.7 +0.3
baz=69,SNR=19
Z25A ⇓pP pP 12 46 39.7 -0.5
baz=69,SNR=5.9
AMTX Amarillo 68.77 332 *e*P P 12 46 16.1 +0.5
comp=Z,42nm,1.4s
AMTX *e*pP PcP 12 46 40.0 +0.4
V31A Spring Creek L 68.80 334 P P 12 46 16.6 +0.9
baz=69,SNR=5.8
V31A ⇑pP pP 12 46 40.7 +0.2
baz=69
BRYW Bryant College 68.81 359 *e*P P 12 46 16.6 +1.0
comp=Z,117nm,1.1s
BRYW *e*pP PcP 12 46 40.0 +0.5
Y26A Elida 68.87 330 P P 12 46 16.7 +0.4
baz=69,SNR=15
Y26A ⇓pP pP 12 46 42.1 +0.9
baz=69
222A Williams Famil 68.90 326 P P 12 46 18.0 +1.5
baz=69,SNR=6.4
222A ⇑pP pP 12 46 42.1 +0.8
baz=69,SNR=5.4
123A Bell Site, Whi 68.92 327 ⇑P P 12 46 17.9 +1.3
baz=69
W29A Amraillo 68.96 332 P P 12 46 17.1 +0.4
baz=69,SNR=5.5
W29A ⇓pP PcP 12 46 41.0 +0.6
baz=69
320A Kipp Ranch, An 68.99 325 P P 12 46 18.7 +1.6
baz=69,SNR=7.2
320A ⇓pP pP 12 46 42.5 +0.6
baz=69
Z24A Sheeppen Canyo 69.07 329 P P 12 46 18.6 +0.9
baz=69,SNR=28
Z24A pP pP 12 46 42.7 +0.2
baz=69,SNR=5.8
V30A Spur Ranch, Mi 69.12 333 ⇑P P 12 46 19.1 +1.4
baz=70
221A Mesquite Ranch 69.16 326 ⇓P P 12 46 19.5 +1.4
baz=70
221A ⇑pP pP 12 46 43.1 +0.1
baz=70
X27A F and S Farms, 69.16 331 ⇓P P 12 46 18.3 +0.3
baz=70
SFIN Scholer Farm 69.17 346 P P 12 46 16.6 -1.1
baz=70,SNR=9.1
Y25A Mesa, Roswell 69.26 329 P P 12 46 18.9 +0.2
baz=70,SNR=12
Y25A ⇓pP PcP 12 46 42.8 +1.1
baz=70
W28A Vega 69.31 332 ⇑P P 12 46 19.8 +0.9
baz=70
W28A ⇓pP pP 12 46 43.5 -0.3
baz=70
BINY Binghamton 69.31 355 *e*P P 12 46 19.4 +0.7
comp=Z,66nm,1.3s
BINY *e*pP pP 12 46 43.9 +0.4
122A Conniff Cattle 69.33 327 ⇓P P 12 46 21.2 +2.0
baz=70
122A ⇑pP pP 12 46 44.7 +0.6
baz=70
X26A CR and CF Fran 69.39 330 P P 12 46 20.3 +0.8
baz=70,SNR=23
X26A ⇓pP pP 12 46 43.9 -0.5
baz=70
319A Douglas 69.41 324 P P 12 46 21.4 +1.7
baz=70,SNR=15
319A ⇑pP pP 12 46 44.9 +0.4
baz=70,SNR=8.2
Z23A Rita Site, Whi 69.42 328 P P 12 46 21.3 +1.6
baz=70,SNR=18
Z23A ⇓pP pP 12 46 45.2 +0.6
baz=70,SNR=6.4
W27A Bowe Ranch, En 69.50 331 P P 12 46 20.8 +0.6
baz=70,SNR=7.8
W27A ⇓pP pP 12 46 44.6 -0.4
baz=70
121A Cookes Peak, D 69.58 326 P P 12 46 22.6 +1.8
baz=70,SNR=13
121A ⇓pP pP 12 46 45.8 +0.2
baz=70
Y24A Capitan 69.60 329 P P 12 46 21.6 +0.7
baz=70
Y24A ⇑pP PcP 12 46 44.5 +1.2
baz=70
ERPA Erie 69.64 352 *e*P P 12 46 21.1 +0.4
comp=Z,44nm,0.8s
ERPA *e*pP pP 12 46 45.3 -0.2
TRY Troy 69.70 357 *e*P P 12 46 22.4 +1.4
comp=Z,242nm,1.3s
TRY *e*pP pP 12 46 47.1 +1.2
TRY *e*sP sP 12 46 57.8 +1.3
V28A Channing 69.74 332 P P 12 46 22.3 +0.8
baz=70,SNR=13
V28A ⇓pP pP 12 46 46.4 0.0
baz=70
X25A Clemmons Ranch 69.75 330 ⇓P P 12 46 22.1 +0.4
baz=70
Z22A Elephant Butte 69.77 327 P P 12 46 23.6 +1.8
baz=70,SNR=19
Z22A ⇑pP pP 12 46 47.4 +0.6
baz=70,SNR=5.6
U30A WK&E Inc. Balk 69.78 334 ⇓P P 12 46 22.5 +0.8
baz=70
W26A Owens Ranch, T 69.83 331 P P 12 46 23.3 +1.2
baz=70,SNR=25
W26A ⇓pP pP 12 46 47.3 +0.3
baz=70
HDIL Hopedale 69.84 344 *e*P P 12 46 21.1 -0.8
comp=Z,76nm,0.6s
HDIL *e*pP PcP 12 46 44.7 +0.9
Y23A Lovelace Mesa, 69.89 328 P P 12 46 24.0 +1.4
baz=70,SNR=18
Y23A ⇓pP pP 12 46 47.7 +0.2
baz=70
T31A Randall Ranch, 69.90 335 P P 12 46 23.2 +0.8
baz=70,SNR=8.9
T31A ⇑pP pP 12 46 47.1 -0.2
baz=70
U29A Oasis Ranch, S 69.95 333 ⇑P P 12 46 23.7 +0.9
baz=70
V27A Dan Oppiter Fa 70.00 332 P P 12 46 24.0 +0.9
baz=70,SNR=9.1
V27A ⇑pP pP 12 46 48.2 +0.1

baz=70
120A U Bar Ranch, L 70.02 326 P P 12 46 25.2 +1.8
baz=70,SNR=8.1
120A ⇑pP pP 12 46 49.1 +0.8
baz=70
SBA Scott Base 70.09 191 *e*P P 12 46 24.7 +1.6
SBA pmax pmax
comp=Z,29nm,1.3s
SBA Scott Base 70.09 191 *e*P P 12 46 24.7 +1.6
comp=Z,29nm,1.3s
X24A Lazy VL Ranch, 70.13 329 P P 12 46 25.1 +1.0
baz=70
X24A ⇓pP pP 12 46 49.5 +0.5
baz=70
Z21A St. Cloud Mine 70.15 327 P P 12 46 25.9 +1.6
baz=70,SNR=18
Z21A ⇓pP pP 12 46 49.6 +0.3
baz=70
T30A Plains 70.18 334 P P 12 46 25.0 +0.8
baz=70
T30A ⇓pP pP 12 46 48.9 -0.2
baz=70
W25A X Bar L Ranch, 70.24 330 P P 12 46 25.3 +0.6
baz=71,SNR=23
W25A ⇑pP pP 12 46 49.4 -0.2
baz=71
U28A Mallet 70.28 333 ⇑P P 12 46 25.5 +0.7
baz=71
U28A ⇑pP pP 12 46 49.5 -0.3
baz=71
S31A Mullinville 70.28 335 ⇓P P 12 46 25.5 +0.8
baz=71
S31A ⇑pP pP 12 46 49.7 0.0
baz=71
Y22A Socorro 70.33 328 P P 12 46 26.7 +1.4
baz=71,SNR=8.7
Y22A ⇑pP pP 12 46 50.1 -0.1
baz=71
BNM Barren Site 70.34 328 *e*P P 12 46 26.9 +1.4
comp=Z,57nm,2.1s
BNM *e*pP pP 12 46 52.1 +1.7
ACCN Adirondack Com 70.35 357 *e*P P 12 46 26.1 +1.1
comp=Z,74nm,1.8s
V26A Tequesquite Ra 70.43 331 P P 12 46 26.4 +0.6
baz=71,SNR=12
V26A ⇓pP pP 12 46 50.5 -0.3
baz=71
Z20A Nine Sixteen R 70.45 326 P P 12 46 27.9 +1.9
baz=71,SNR=22
Z20A ⇓pP pP 12 46 51.7 +0.8
baz=71,SNR=6.1
LPM Los Pinos Moun 70.48 328 *e*P P 12 46 27.8 +1.6
LPM *e*pP pP 12 46 52.1 +0.9
X23A Hourglass Bar 70.49 329 ⇑P P 12 46 27.8 +1.5
baz=71
LENM Lemitar 70.52 328 *e*P P 12 46 28.5 +2.0
LENM *e*pP pP 12 46 52.8 +1.4
U27A Thompson Grove 70.56 332 P P 12 46 27.4 +0.8
baz=71,SNR=9.0
U27A ⇑pP pP 12 46 51.3 -0.3
baz=71
T29A Hugoton 70.57 334 ⇑P P 12 46 27.2 +0.7
baz=71
T29A ⇓pP pP 12 46 51.3 -0.2
baz=71
KSU1 Kansas State U 70.59 338 *e*P P 12 46 26.5 0.0
comp=Z,38nm,1.2s
KSU1 *e*pP pP 12 46 50.9 -0.6
W24A Lazy 6 Ranch, 70.66 330 P P 12 46 28.2 +0.9
baz=71,SNR=13
W24A ⇓pP pP 12 46 52.3 +0.1
baz=71
S30A Montezuma 70.67 335 P P 12 46 28.0 +0.9
baz=71
Y21A Point of Rocks 70.72 327 P P 12 46 29.7 +1.9
baz=71,SNR=15
Y21A ⇓pP pP 12 46 53.9 +1.2
baz=71
LIC Lamto 70.78 72 ⇓*i*P P 12 46 28.7 +0.4
comp=Z,48nm,0.9s,baz=252
LIC Lamto 70.78 72 ⇓*i*P P 12 46 28.7 +0.4
comp=Z,48nm,0.9s
LAZ Ladron 70.79 328 *e*P P 12 46 29.3 +1.2
comp=Z,16nm,1.3s
LAZ *e*pP pP 12 46 53.6 +0.5
X22A Bernardo 70.81 328 P P 12 46 29.8 +1.6
baz=71
X22A ⇓pP pP 12 46 54.2 +1.0
baz=71
V25A Rancho No Teng 70.83 331 P P 12 46 29.2 +0.9
baz=71,SNR=31
V25A ⇑pP pP 12 46 53.4 +0.1
baz=71
T28A Walsh 70.87 333 ⇓P P 12 46 28.8 +0.3
baz=71
S29A Ulysses 70.91 334 P P 12 46 29.5 +0.9
baz=71,SNR=8.0
S29A ⇑pP pP 12 46 53.8 +0.2
baz=71
ANMO Albuquerque 70.92 329 *e*P P 12 46 29.8 +0.9
comp=Z,10nm,0.9s
ANMO *e*pP pP 12 46 54.6 +0.8
U26A Atchley Ranch, 70.92 331 P P 12 46 29.8 +1.0
baz=71,SNR=7.7
U26A ⇑pP pP 12 46 53.9 +0.1
baz=71
TUC Tucson 70.93 324 *e*P P 12 46 30.0 +1.1
TUC *e**PP pP 12 46 54.8 +0.9
TUC pmax pmax
comp=Z,4.0nm,1.3s
TUC Tucson 70.93 324 *e*P P 12 46 29.9 +1.1
comp=Z,4.2nm,1.3s
TUC *e*pP pP 12 46 54.8 +0.9
W23A Werner Place, 70.95 329 P P 12 46 30.6 +1.4
baz=71,SNR=21
W23A ⇑pP pP 12 46 54.7 +0.6
baz=71
Y20A Horse Springs, 70.98 327 P P 12 46 31.0 +1.7
baz=71,SNR=26
Y20A ⇓pP pP 12 46 55.1 +0.8
baz=71
TBI Tubuai 71.01 253 *e*S S 12 55 44.5 +6.4
comp=Z,171nm,29.0s
TBI *e*LR LR 13 08 29.9
comp=Z,260nm,36.8s
V24A Rampart Ranch, 71.03 330 P P 12 46 30.4 +0.8
baz=71,SNR=20
V24A ⇑pP pP 12 46 54.7 +0.2
baz=71
T27A Campo 71.06 333 P P 12 46 30.4 +0.8
baz=71,SNR=18
T27A ⇑pP pP 12 46 54.6 0.0
baz=71
VNDA Vanda 71.11 190 *e*P P 12 46 30.8 +1.5
comp=Z,19nm,1.3s
VNDA Vanda 71.11 190 P P 12 46 31.1 +1.8
comp=Z,8.9nm,1.0s,baz=140,slow=4.0,SNR=25
X21A Alamocita Cree 71.13 327 P P 12 46 32.0 +1.8
baz=72,SNR=22
X21A ⇑pP pP 12 46 56.1 +0.9
baz=72
DBIC Dimbokro 71.16 72 *e*P P 12 46 31.0 +0.4
comp=Z,70nm,1.0s
DBIC *e*pP pP 12 46 57.0 +1.4
DBIC Dimbokro 71.16 72 P P 12 46 31.1 +0.6
comp=Z,49nm,0.9s,baz=207,slow=6.5,SNR=67
DBIC pP pP 12 46 57.4 +1.9
comp=Z,19nm,0.7s,baz=218,slow=6.0,SNR=5.5
DBIC LR LR 13 14 42.7
comp=Z,151nm,19.7s,baz=133,slow=33
R30A Dighton 71.17 335 P P 12 46 30.8 +0.6
baz=72
S28A Manter 71.19 333 P P 12 46 31.0 +0.7
baz=72,SNR=17
S28A ⇓pP pP 12 46 55.0 -0.3
baz=72
W22A Albuquerque 71.21 328 ⇑P P 12 46 32.5 +1.9
baz=72
W22A ⇓pP pP 12 46 56.4 +0.8
baz=72
U25A Circle Dot Ran 71.21 331 P P 12 46 31.6 +1.0
baz=72,SNR=19
U25A ⇑pP pP 12 46 55.7 +0.1
baz=72
SYO Syowa Base 71.44 159 ⇑*i*P P 12 46 30.0 -1.4
SYO Syowa Base 71.44 159 ⇓*i*PcP PcP 12 46 46.5 -3.9
V23A Ortiz Mt. (NFS 71.45 329 P P 12 46 33.8 +1.7
baz=72,SNR=12

V23A ⇑pP **pP** **12 46 58.0 +0.9**
baz=72
T26A **Comanche Natio** **71.52 332** P **P** **12 46 33.5 +1.0**
baz=72,SNR=25
T26A ⇑pP **pP** **12 46 57.7 +0.2**
baz=72
X20A **Quemado** **71.55 327** P **P** **12 46 34.4 +1.6**
baz=72,SNR=14
X20A ⇑pP **pP** **12 46 58.6 +0.8**
baz=72
U24A **Moreno Valley** **71.60 330** P **P** **12 46 34.6 +1.5**
baz=72,SNR=5.7
U24A ⇑pP **pP** **12 46 58.5 +0.4**
baz=72
W21A **San Fidel** **71.61 328** P **P** **12 46 34.9 +1.8**
baz=72,SNR=13
W21A ⇓pP **pP** **12 46 58.8 +0.7**
baz=72
R29A **Marienthal** **71.61 334** P **P** **12 46 33.7 +0.9**
baz=72
LONY **Lake Ozonia** **71.63 356** *eP* **P** **12 46 33.4 +0.7**
comp=Z,37nm,1.2s
LONY *epP* **pP** **12 46 57.4 -0.3**
214A **Organ Pipe Nat** **71.74 322** ⇓P **P** **12 46 35.5 +1.8**
baz=72
214A ⇓pP **pP** **12 46 59.6 +0.8**
baz=72
FRNY **Flat Rock** **71.80 357** *eP* **P** **12 46 34.5 +0.8**
comp=Z,26nm,1.0s
FRNY *epP* **pP** **12 46 59.2 +0.5**
R28A **Tribune** **71.80 334** P **P** **12 46 34.6 +0.6**
baz=72,SNR=12
R28A ⇑pP **pP** **12 46 59.1 +0.1**
baz=72
T25A **Trinidad** **71.84 331** P **P** **12 46 35.9 +1.5**
baz=72,SNR=25
T25A ⇓pP **pP** **12 47 00.0 +0.6**
baz=72
S26A **Kim** **71.85 332** P **P** **12 46 35.7 +1.3**
baz=72,SNR=28
S26A ⇓pP **pP** **12 47 00.0 +0.6**
baz=72
V22A **San Miguel Ran** **71.92 329** P **P** **12 46 36.9 +1.9**
baz=72,SNR=23
V22A ⇑pP **pP** **12 47 00.8 +0.9**
baz=72
U23A **El Rito** **71.94 330** P **P** **12 46 36.6 +1.6**
baz=72,SNR=8.5
U23A ⇓pP **pP** **12 47 00.5 +0.4**
baz=72
W20A **Ramah** **72.03 327** P **P** **12 46 37.3 +1.7**
baz=72,SNR=17
W20A pP **pP** **12 47 01.3 +0.7**
baz=72,SNR=5.0
T24A **Torres, Weston** **72.06 331** P **P** **12 46 37.5 +1.7**
baz=72,SNR=15
T24A ⇑pP **pP** **12 47 01.2 +0.4**
baz=72
SCIA **State Center** **72.13 342** *eP* **P** **12 46 36.4 +0.7**
comp=Z,69nm,1.4s
R27A **Eads** **72.15 333** P **P** **12 46 36.7 +0.6**
baz=72,SNR=9.2
R27A ⇑pP **pP** **12 47 00.8 -0.3**
baz=72
V21A **Milan** **72.17 328** P **P** **12 46 38.2 +1.7**
baz=72,SNR=7.3
V21A ⇓pP **pP** **12 47 02.1 +0.7**
baz=72
X18A **Snowflake** **72.26 326** P **P** **12 46 38.7 +1.8**
baz=73,SNR=9.4
X18A ⇑pP **pP** **12 47 02.4 +0.4**
baz=73
U22A **Llaves** **72.28 329** P **P** **12 46 39.2 +2.1**
baz=73,SNR=25
U22A ⇑pP **pP** **12 47 02.7 +0.6**
baz=73
S25A **Robets Cordova** **72.29 332** P **P** **12 46 38.3 +1.3**
baz=73,SNR=27
S25A ⇓pP **pP** **12 47 02.3 +0.3**
baz=73
JFWS **Jewell Farm** **72.30 344** *eP* **P** **12 46 36.8 0.0**
JFWS *e*PP **pP** **12 47 01.0 -0.8**
JFWS pmax pmax
comp=Z,30nm,0.8s
JFWS **Jewell Farm** **72.30 344** *eP* **P** **12 46 36.8 0.0**
comp=Z,30nm,0.8s
JFWS *epP* **pP** **12 47 01.0 -0.8**
R26A **Arlington** **72.42 333** P **P** **12 46 38.8 +1.1**
baz=73,SNR=26
R26A ⇓pP **pP** **12 47 02.8 +0.1**
baz=73
Q28A **Sharon Springs** **72.44 334** ⇓P **P** **12 46 38.7 +0.9**
baz=73
Q28A ⇓pP **pP** **12 47 02.8 0.0**
baz=73
T23A **Casias Ranch,** **72.46 330** P **P** **12 46 39.6 +1.4**
baz=73,SNR=7.5
T23A ⇓pP **pP** **12 47 03.5 +0.3**
baz=73
V20A **Brimhall** **72.56 328** P **P** **12 46 40.1 +1.4**
baz=73,SNR=6.3
V20A ⇓pP **pP** **12 47 04.2 +0.5**
baz=73
S24A **Houchin Ranch,** **72.60 331** P **P** **12 46 40.8 +1.8**
baz=73,SNR=37
W18A **Petrified Fore** **72.62 326** P **P** **12 46 40.6 +1.5**
baz=73,SNR=9.5
W18A ⇑pP **pP** **12 47 04.8 +0.7**
baz=73
R25A **Fountain Ranch** **72.64 332** P **P** **12 46 40.0 +1.0**
baz=73,SNR=5.8
R25A ⇑pP **pP** **12 47 04.9 +0.8**
baz=73
U21A **Nageezi** **72.69 329** P **P** **12 46 41.0 +1.5**
baz=73,SNR=22
U21A ⇑pP **pP** **12 47 04.9 +0.3**
baz=73
KSCO **Kaye Shedlock'** **72.70 334** P **P** **12 46 40.7 +1.3**
baz=73,SNR=11
KSCO ⇓pP **pP** **12 47 04.8 +0.3**
baz=73
SDCO **Great Sand Dun** **72.81 331** *eP* **P** **12 46 41.6 +1.4**
comp=Z,50nm,1.5s
SDCO *epP* **pP** **12 47 05.2 -0.1**
T22A **Edith** **72.83 330** P **P** **12 46 42.1 +1.7**
baz=73,SNR=22
P28A **Saint Francis** **72.85 335** ⇓P **P** **12 46 41.3 +1.1**
baz=73
113A **Mohawk Valley,** **72.88 322** P **P** **12 46 41.8 +1.4**
baz=73,SNR=13
113A ⇓pP **pP** **12 47 05.9 +0.4**
baz=73
Z14A **Wintersburg** **72.89 323** ⇓P **P** **12 46 41.8 +1.3**
baz=73
Z14A ⇑pP **pP** **12 47 06.1 +0.6**
baz=73
X16A **Lo Mia Camp, P** **72.92 325** P **P** **12 46 42.5 +1.6**
baz=73,SNR=26
X16A ⇑pP **pP** **12 47 06.6 +0.6**
baz=73
Q26A **Hugo** **72.98 333** P **P** **12 46 42.4 +1.3**
baz=73,SNR=11
Q26A ⇓pP **pP** **12 47 06.6 +0.4**
baz=73
S23A **Nye Farm, Mont** **73.00 331** ⇓P **P** **12 46 42.9 +1.5**
baz=73,SNR=5.7
S23A ⇑pP **pP** **12 47 07.0 +0.6**
baz=73
U20A **Newcomb** **73.05 328** ⇓P **P** **12 46 42.7 +1.2**
baz=73,SNR=7.3
U20A ⇓pP **pP** **12 47 07.2 +0.6**
baz=73
R24A **Sanders Place,** **73.05 332** P **P** **12 46 43.2 +1.6**
baz=73,SNR=25
R24A ⇑pP **pP** **12 47 07.3 +0.7**
baz=73
P27A **Ficken Ranch,** **73.15 334** ⇓P **P** **12 46 43.2 +1.1**
baz=74
BGNE **Belgrade** **73.18 338** ⇑P **P** **12 46 42.6 +0.6**
baz=74
BGNE ⇑pP **pP** **12 47 06.9 -0.2**
baz=74
Q25A **Bedland, Calha** **73.27 333** ⇑P **P** **12 46 43.8 +0.9**
baz=74
Q25A ⇑pP **pP** **12 47 07.8 -0.2**
baz=74
R23A **Moffat** **73.33 331** P **P** **12 46 44.7 +1.4**
baz=74,SNR=20
R23A ⇑pP **pP** **12 47 08.6 +0.2**
baz=74
PPT2 **Papeete2** **73.35 259** *eS* **SKiKP** **12 56 06.5 +1.0**
comp=Z,143nm,23.5s
PPT2 *eLR* LR 13 09 25.6
comp=Z,190nm,28.0s
PPT **Papeete** **73.36 259** LR LR 13 11 44.1
comp=Z,210nm,20.6s,baz=164,slow=30
Y14A **Wickenburg** **73.37 324** P **P** **12 46 44.7 +1.3**
baz=74,SNR=18
Y14A ⇓pP **pP** **12 47 08.7 +0.3**
baz=74
S22A **4UR Ranch, Cre** **73.40 330** P **P** **12 46 45.1 +1.3**
baz=74,SNR=9.3
S22A ⇑pP **pP** **12 47 09.1 +0.3**
baz=74
P26A **Davis Ranch, A** **73.46 333** P **P** **12 46 44.9 +1.1**
baz=74,SNR=7.9
P26A ⇑pP **pP** **12 47 09.1 +0.1**
baz=74
O27A **Beecher Island** **73.66 334** P **P** **12 46 46.5 +1.5**
baz=74,SNR=12
O27A ⇑pP **pP** **12 47 10.6 +0.5**
baz=74
GLA **Glamis** **73.68 322** *eP* **P** **12 46 46.6 +1.4**
GLA *e*PP **pP** **12 47 11.2 +0.9**
GLA pmax pmax
comp=Z,48nm,1.8s
GLA **Glamis** **73.68 322** *eP* **P** **12 46 46.6 +1.4**
comp=Z,48nm,1.8s
GLA *epP* **pP** **12 47 11.2 +0.9**
GLA **Glamis** **73.68 322** ⇓P **P** **12 46 46.4 +1.3**
baz=74
GLA ⇓pP **pP** **12 47 10.4 +0.1**
baz=74
Q24A **Divide** **73.69 332** P **P** **12 46 46.7 +1.3**
baz=74,SNR=43
Q24A ⇓pP **pP** **12 47 10.9 +0.3**
baz=74
MVCO **Mesa Verde** **73.72 329** *eP* **P** **12 46 47.0 +1.5**
comp=Z,46nm,1.1s
MVCO **Mesa Verde** **73.72 329** P **P** **12 46 46.9 +1.4**
baz=74,SNR=26
MVCO pP **pP** **12 47 10.9 +0.2**
baz=74
P25A **Willow Gulch B** **73.75 333** P **P** **12 46 47.2 +1.6**
baz=74,SNR=12
P25A ⇑pP **pP** **12 47 11.3 +0.6**
baz=74
WUAZ **Wupatki** **73.75 326** *eP* **P** **12 46 47.5 +1.8**
comp=Z,32nm,1.0s
WUAZ *epP* **pP** **12 47 11.8 +1.0**
WUAZ **Wupatki** **73.75 326** P **P** **12 46 47.5 +1.8**
baz=74,SNR=18
WUAZ ⇓pP **pP** **12 47 11.6 +0.8**
baz=74
S21A **Coal Bank Pass** **73.76 329** ⇓P **P** **12 46 47.4 +1.6**
baz=74,SNR=9.8
S21A ⇑pP **pP** **12 47 11.4 +0.4**
baz=74
R22A **Saguache, Gunn** **73.76 330** ⇑P **P** **12 46 47.5 +1.6**
baz=74
Q23A **Hartsel** **73.93 331** ⇑P **P** **12 46 48.5 +1.7**
baz=74
Q23A ⇑pP **pP** **12 47 12.0 0.0**
baz=74
O26A **Horse Wrangler** **74.03 334** ⇑P **P** **12 46 48.4 +1.2**
baz=74
O26A ⇓pP **pP** **12 47 13.0 +0.7**
baz=74
Y12C **Blythe** **74.04 322** ⇓P **P** **12 46 48.8 +1.6**
baz=74
Y12C ⇑pP **pP** **12 47 13.0 +0.7**
baz=74
P24A **Kohler Place,** **74.05 332** ⇑P **P** **12 46 48.9 +1.5**
baz=74
P24A ⇓pP **pP** **12 47 13.1 +0.6**
baz=74
DVTC **Desert V Tower** **74.10 321** P **P** **12 46 49.5 +1.8**
baz=74,SNR=7.2
DVTC ⇓pP **pP** **12 47 13.4 +0.6**
baz=74
SWSC **Sam W. Stewart** **74.13 321** P **P** **12 46 49.3 +1.6**
baz=74
SWSC ⇑pP **pP** **12 47 13.6 +0.7**
baz=74
OGNE **Ogallala** **74.15 335** P **P** **12 46 48.7 +1.0**
baz=74
OGNE ⇓pP **pP** **12 47 13.8 +0.8**
baz=74
S20A **Disappointment** **74.16 329** P **P** **12 46 49.9 +1.8**
baz=74,SNR=29
S20A ⇑pP **pP** **12 47 14.1 +0.8**
baz=74
N27A **Anderson Farm,** **74.22 335** P **P** **12 46 49.4 +1.2**
baz=75
N27A ⇓pP **pP** **12 47 13.6 +0.3**
baz=75
R21A **Cimarron** **74.23 330** P **P** **12 46 50.2 +1.7**
baz=75,SNR=11
O25A **Wiggins** **74.24 333** ⇓P **P** **12 46 50.3 +1.9**
baz=75
O25A ⇓pP **pP** **12 47 14.4 +0.9**
baz=75
P23A **Jefferson** **74.32 332** P **P** **12 46 50.9 +1.7**
baz=75,SNR=9.3
Q22A **Crested Butte,** **74.36 331** P **P** **12 46 51.0 +1.7**
baz=75,SNR=8.6
Q22A ⇑pP **pP** **12 47 15.0 +0.6**
baz=75
BAR **Barrett** **74.44 320** *eP* **P** **12 46 50.9 +1.4**
comp=Z,11nm,0.9s
BAR *epP* **pP** **12 47 15.5 +0.7**
MONP **Monument Peak** **74.45 321** P **P** **12 46 51.3 +1.4**
baz=75,SNR=7.5
MONP ⇑pP **pP** **12 47 15.4 +0.4**
baz=75
R20A **Redvale** **74.46 329** P **P** **12 46 51.6 +1.8**
baz=75,SNR=18
R20A ⇓pP **pP** **12 47 15.9 +0.9**
baz=75
BC3 **Big Chuckawall** **74.47 322** P **P** **12 46 51.3 +1.4**
baz=75,SNR=19
BC3 ⇓pP **pP** **12 47 15.6 +0.6**
baz=75,SNR=6.7
N26A **Koester Ranch,** **74.50 334** ⇑P **P** **12 46 51.2 +1.3**
baz=75
N26A ⇓pP **pP** **12 47 15.5 +0.5**
baz=75
PV01 **Paradox Valley** **74.50 329** *eP* **P** **12 46 51.7 +1.6**
comp=Z,3µm,1.3s
ISCO **Idaho Springs** **74.58 332** *eP* **P** **12 46 51.9 +1.3**
ISCO pmax pmax
comp=Z,32nm,1.3s
ISCO **Idaho Springs** **74.58 332** *eP* **P** **12 46 51.9 +1.3**
comp=Z,32nm,1.3s
ISCO **Idaho Springs** **74.58 332** P **P** **12 46 51.9 +1.3**
baz=75,SNR=30
ISCO ⇑pP **pP** **12 47 16.3 +0.5**
baz=75
Q21A **Lamborn Mesa,** **74.62 330** ⇓P **P** **12 46 52.4 +1.6**
baz=75,SNR=5.4
Q21A ⇑pP **pP** **12 47 16.6 +0.7**
baz=75
O24A **Longmont** **74.63 333** P **P** **12 46 52.1 +1.4**
baz=75
SMCO **Snowmass** **74.64 331** *eP* **P** **12 46 52.9 +1.8**
comp=Z,50nm,1.2s
SMCO *epP* **pP** **12 47 16.7 +0.4**
IRM **Iron Mountain** **74.69 322** P **P** **12 46 52.5 +1.5**
baz=75,SNR=12
IRM pP **pP** **12 47 16.8 +0.6**
baz=75,SNR=6.9
W13A **Hualapai Mount** **74.72 324** P **P** **12 46 53.2 +1.7**
baz=75,SNR=13
W13A pP **pP** **12 47 17.6 +1.1**
baz=75,SNR=5.9
ECSD **EROS Data Cent** **74.79 340** *eP* **P** **12 46 51.6 +0.3**
comp=Z,52nm,0.9s
ECSD *epP* **pP** **12 47 16.2 -0.3**
ECSD *esP* **sP** **12 47 25.8 -1.3**
S18A **Hurst Farm, Bl** **74.80 328** P **P** **12 46 53.6 +1.7**
baz=75,SNR=84
S18A ⇓pP **pP** **12 47 18.0 +0.9**
baz=75
N25A **Grover** **74.82 334** P **P** **12 46 53.4 +1.6**
baz=75
N25A pP **pP** **12 47 17.6 +0.7**
baz=75
PV04 **Paradox Valley** **74.86 329** *eP* **P** **12 46 54.0 +1.9**
P22A **Eagle** **74.90 331** P **P** **12 46 53.8 +1.4**
baz=75,SNR=13
P22A ⇑pP **pP** **12 47 18.3 +0.8**
baz=75
PV10 **Paradox Valley** **74.91 329** *eP* **P** **12 46 53.5 +1.0**
comp=Z,360nm,0.9s
PV10 *epP* **pP** **12 47 17.2 -0.4**
U15A **North Rim** **74.93 326** P **P** **12 46 54.6 +2.0**
baz=75,SNR=40
U15A ⇑pP **pP** **12 47 18.8 +1.0**
baz=75
PFO **Pinyon Flat Ob** **75.00 321** P **P** **12 46 54.0 +1.1**
comp=Z,52nm,1.4s,SNR=5.5
PFO **Pinyon Flat Ob** **75.00 321** *eP* **P** **12 46 54.1 +1.2**
comp=Z,36nm,1.9s
PFO *epP* **pP** **12 47 19.0 +0.9**
PFO **Pinyon Flat Ob** **75.00 321** P **P** **12 46 54.5 +1.6**
baz=75,SNR=7.4
PFO ⇑pP **pP** **12 47 18.8 +0.7**
baz=75
M26A **McRoberts Ranc** **75.02 335** ⇓P **P** **12 46 54.2 +1.4**
baz=75
BELC **Belle Mtn. Jos** **75.03 322** P **P** **12 46 54.6 +1.5**
baz=75,SNR=7.0
BELC ⇑pP **pP** **12 47 19.0 +0.7**
baz=75
Q20A **Ridgley Place,** **75.04 330** ⇑P **P** **12 46 54.3 +1.1**
baz=75,SNR=5.3
Q20A ⇑pP **pP** **12 47 18.2 -0.1**
baz=75
O23A **Lake Granby, G** **75.06 332** P **P** **12 46 54.9 +1.6**
baz=75,SNR=20
SPMN **St. Paul** **75.10 343** P **P** **12 46 52.9 -0.2**
baz=76,SNR=16
SPMN ⇓pP **pP** **12 47 17.3 -0.9**
baz=76,SNR=5.5
P21A **Newcastle** **75.14 331** ⇓P **P** **12 46 55.6 +1.9**
baz=76,SNR=9.9
N24A **Carr** **75.15 333** P **P** **12 46 55.5 +1.8**
baz=76,SNR=6.8
N24A ⇓pP **pP** **12 47 19.3 +0.4**
baz=76
L27A **T5 Ranch, Ells** **75.24 336** ⇑P **P** **12 46 55.5 +1.4**
baz=76
O22A **Kremmling** **75.28 332** P **P** **12 46 55.8 +1.2**
baz=76,SNR=13
O22A ⇑pP **pP** **12 47 19.9 +0.1**
baz=76
M25A **Palm-Egli Farm** **75.34 334** ⇑P **P** **12 46 56.1 +1.4**
baz=76
M25A ⇓pP **pP** **12 47 20.2 +0.3**
baz=76
MURC **Murrieta** **75.41 321** P **P** **12 46 56.9 +1.7**
baz=76,SNR=5.9
MURC ⇑pP **pP** **12 47 20.8 +0.5**
baz=76
GMRC **Granite Mounta** **75.43 322** P **P** **12 46 57.1 +1.7**
baz=76,SNR=18
GMRC pP **pP** **12 47 21.5 +0.9**
baz=76,SNR=6.1
P20A **De Beque** **75.53 330** P **P** **12 46 57.5 +1.6**
baz=76,SNR=22
P20A pP **pP** **12 47 21.5 +0.4**
baz=76
N23A **Red Feather La** **75.64 332** P **P** **12 46 58.1 +1.5**
baz=76,SNR=16
N23A ⇑pP **pP** **12 47 22.1 +0.2**
baz=76
M24A **Cheyenne** **75.67 334** P **P** **12 46 58.4 +1.8**
baz=76,SNR=13
M24A ⇑pP **pP** **12 47 22.6 +0.7**
baz=76
O21A **Pagoda** **75.72 331** ⇓P **P** **12 46 58.9 +1.9**
baz=76
BBRC **Big Bear Solar** **75.74 321** ⇑pP pP 12 47 23.3 +0.8
baz=76
K27A **Flueckinger Fa** **75.75 336** P **P** **12 46 58.5 +1.5**
baz=76,SNR=8.3
K27A ⇓pP **pP** **12 47 22.6 +0.4**
baz=76
N22A **Wattenberg Ran** **75.78 332** P **P** **12 46 59.1 +1.7**
baz=76,SNR=16
N22A ⇓pP **pP** **12 47 23.2 +0.6**
baz=76
PHWY **Pilot Hill** **75.78 333** *eP* **P** **12 46 58.7 +1.3**
comp=Z,59nm,1.6s
PHWY *epP* **pP** **12 47 22.4 -0.3**
HEC **Hector,Ludlow** **75.83 322** ⇓P **P** **12 46 59.3 +1.7**
baz=76,SNR=5.5
HEC ⇓pP **pP** **12 47 23.6 +0.7**
baz=76
P19A **Cripple Cowboy** **75.91 330** P **P** **12 46 59.8 +1.7**
baz=76,SNR=63
P19A ⇑pP **pP** **12 47 24.1 +0.7**
baz=76
L25A **Engebretsen Ra** **75.92 334** P **P** **12 46 59.7 +1.7**
baz=76
CIS **Catalina Islan** **75.96 320** P **P** **12 46 59.8 +1.5**
baz=76
CIS ⇑pP **pP** **12 47 24.1 +0.6**
baz=76
O20A **White River Ci** **75.99 331** P **P** **12 47 00.1 +1.6**
baz=76,SNR=31
O20A pP **pP** **12 47 24.2 +0.5**
baz=76
M23A **Laramie** **76.03 333** ⇓P **P** **12 47 00.1 +1.4**
baz=76,SNR=6.2
M23A ⇑pP **pP** **12 47 24.3 +0.3**
baz=76
TUQ **Turquoise Moun** **76.06 323** P **P** **12 47 00.7 +1.7**
baz=76
K26A **Motz Farm, Whi** **76.09 335** ⇓P **P** **12 47 00.3 +1.3**
baz=76
K26A ⇑pP **pP** **12 47 24.6 +0.5**
baz=76
BFSC **Mount Baldy Ra** **76.14 321** P **P** **12 47 00.7 +1.3**
baz=76,SNR=12
BFSC ⇓pP **pP** **12 47 25.0 +0.3**
baz=76
BRSD **Miller** **76.16 339** ⇑P **P** **12 46 59.3 +0.2**
baz=76
BRSD ⇑pP **pP** **12 47 24.0 -0.5**
baz=76
N21A **Black Mountain** **76.19 331** ⇑P **P** **12 47 01.6 +1.9**
baz=76,SNR=12
N21A ⇑pP **pP** **12 47 25.3 +0.3**
baz=76
SRU **San Rafael** **76.19 328** P **P** **12 47 00.9 +1.3**
baz=76,SNR=33
SRU ⇓pP **pP** **12 47 25.3 +0.4**
baz=76
L24A **Wheatland** **76.20 334** P **P** **12 47 01.0 +1.4**
baz=77
L24A ⇓pP **pP** **12 47 25.4 +0.5**
baz=77
RRX **Edison Barstow** **76.24 322** ⇑P **P** **12 47 01.6 +1.8**
baz=77
K25A **Mack Ranch, Ha** **76.28 335** P **P** **12 47 01.5 +1.5**
baz=77
M22A **Cedar Creek Ra** **76.34 332** ⇓P **P** **12 47 01.9 +1.4**
baz=77,SNR=6.1
M22A ⇓pP **pP** **12 47 26.3 +0.5**
baz=77
CCUT **Cedar City** **76.34 326** *eP* **P** **12 47 02.9 +2.2**
comp=Z,44nm,1.0s
CCUT *epP* **pP** **12 47 26.9 +1.0**
Q16A **Castle Valley** **76.34 328** P **P** **12 47 02.0 +1.5**
baz=77,SNR=34
Q16A ⇑pP **pP** **12 47 26.5 +0.7**
baz=77
MWC **Mount Wilson** **76.35 320** *eP* **P** **12 47 02.1 +1.4**
MWC *e*PP **pP** **12 47 26.8 +0.8**
MWC pmax pmax
comp=Z,13nm,1.0s
MWC **Mount Wilson** **76.35 320** *eP* **P** **12 47 02.1 +1.4**
comp=Z,13nm,1.0s
MWC *epP* **pP** **12 47 26.8 +0.8**
PASC **Pasadena Art C** **76.39 320** *eP* **P** **12 47 02.1 +1.4**
comp=Z,19nm,1.3s
GSC **Goldstone** **76.44 322** *eP* **P** **12 47 02.6 +1.5**
GSC *e*PP **pP** **12 47 27.4 +1.0**
GSC pmax pmax
comp=Z,11nm,0.8s
GSC **Goldstone** **76.44 322** *eP* **P** **12 47 02.6 +1.5**
comp=Z,11nm,0.8s
GSC *epP* **pP** **12 47 27.4 +1.0**

GSC **Goldstone** 76.44 322 P P 12 47 02.6 +1.5
baz=77,SNR=10
P18A **Preston Nutter** 76.47 329 ⇑P P 12 47 03.0 +1.6
baz=77
P18A ⇓pP pP 12 47 27.4 +0.7
baz=77
MSU **Marysvale** 76.50 327 eP P 12 47 03.3 +1.8
MSU e*PP pP 12 47 27.5 +0.7
MSU e*SP sP 12 47 39.1 +1.8
MSU **Marysvale** 76.50 327 eP P 12 47 03.3 +1.8
MSU epP pP 12 47 27.5 +0.7
MSU esP sP 12 47 39.1 +1.8
O19A **Miners Draw (B** 76.51 330 P P 12 47 02.8 +1.4
baz=77,SNR=18
O19A ⇑pP pP 12 47 27.2 +0.5
baz=77
MVU **Marysvale** 76.51 327 eP P 12 47 03.3 +1.7
comp=Z,26nm,0.9s
MVU epP pP 12 47 27.2 +0.4
DECC **Green Verdugo** 76.53 320 ⇓P P 12 47 03.1 +1.6
baz=77
DECC ⇑pP pP 12 47 27.2 +0.4
baz=77
ARUT **Antelope Range** 76.56 326 eP P 12 47 03.9 +2.1
ARUT e*PP pP 12 47 27.8 +0.8
ARUT pmax pmax
comp=Z,88nm,1.5s
ARUT **Antelope Range** 76.56 326 eP P 12 47 03.9 +2.1
comp=Z,88nm,1.5s
ARUT epP pP 12 47 27.8 +0.8
L23A **Garrett** 76.57 333 P P 12 47 02.8 +1.0
baz=77,SNR=7.7
L23A ⇑pP pP 12 47 27.2 +0.2
baz=77
N20A **Spence Gulch,** 76.57 331 P P 12 47 03.3 +1.4
baz=77,SNR=14
N20A ⇑pP pP 12 47 27.8 +0.7
baz=77
P17A **Butcher Ranch,** 76.58 329 P P 12 47 03.2 +1.4
baz=77,SNR=21
P17A ⇑pP pP 12 47 27.7 +0.6
baz=77
K24A **Anderson Ranch** 76.73 334 P P 12 47 04.2 +1.6
baz=77,SNR=13
K24A ⇓pP pP 12 47 28.5 +0.6
baz=77
EDW2 **Edwards Air Fo** 76.79 321 P P 12 47 04.0 +1.0
baz=77,SNR=11
EDW2 ⇑pP pP 12 47 28.5 +0.2
baz=77,SNR=5.7
L22A **Ellis Ranch, M** 76.79 333 ⇓P P 12 47 04.7 +1.7
baz=77,SNR=9.8
L22A pP pP 12 47 28.9 +0.5
baz=77
M21A **Separation Pea** 76.82 332 P P 12 47 04.6 +1.3
baz=77,SNR=14
M21A ⇑pP pP 12 47 28.7 +0.1
baz=77
BLG **Laguna Peak** 76.84 320 P P 12 47 04.6 +1.4
baz=77
BLG ⇑pP pP 12 47 29.4 +0.8
baz=77
LRMC **Laurel Mountai** 77.06 322 ⇑P P 12 47 05.8 +1.2
baz=77,SNR=13
LRMC ⇑pP pP 12 47 30.2 +0.3
baz=77
M20A **Sweetwater, Wa** 77.08 331 P P 12 47 06.0 +1.3
baz=77,SNR=17
M20A ⇓pP pP 12 47 30.2 +0.2
baz=77
K23A **Bowen Ranch, D** 77.08 334 P P 12 47 05.8 +1.3
baz=77,SNR=15
K23A ⇓pP pP 12 47 30.1 +0.2
baz=77
BSC **Santa Cruz Isl** 77.09 319 ⇑P P 12 47 05.8 +1.2
baz=77
BSC ⇑pP pP 12 47 30.3 +0.3
baz=77
L21A **Rawlins** 77.12 332 P P 12 47 06.1 +1.2
baz=78,SNR=39
L21A ⇑pP pP 12 47 30.2 0.0
baz=78
J24A **Dixon Ranch, L** 77.19 335 P P 12 47 06.9 +1.8
baz=78,SNR=15
J24A ⇑pP pP 12 47 31.2 +0.8
baz=78
EYMN **Ely** 77.34 345 eP P 12 47 05.4 -0.3
comp=Z,29nm,0.9s
EYMN epP pP 12 47 30.3 -0.7
K22A **Casper** 77.35 333 P P 12 47 07.4 +1.3
baz=78,SNR=15
K22A ⇓pP pP 12 47 31.7 +0.3
baz=78
MPMC **Manual Prospec** 77.38 322 P P 12 47 07.5 +1.1
baz=78,SNR=10
MPMC ⇓pP pP 12 47 31.9 +0.1
baz=78
MPU **Maple Canyon** 77.43 328 eP P 12 47 08.2 +1.6
comp=Z,40nm,1.1s
MPU epP pP 12 47 33.0 +1.0
ARVC **Arvin** 77.44 321 ⇓P P 12 47 07.9 +1.3
baz=78
ARVC ⇓pP pP 12 47 32.2 +0.3
baz=78
M19A **Rock Springs** 77.51 331 ⇑P P 12 47 08.0 +1.0
baz=78
L20A **Wamsutter** 77.57 332 P P 12 47 08.6 +1.2
baz=78,SNR=29
L20A ⇓pP pP 12 47 32.9 +0.2
baz=78
DAU **Daniels Canyon** 77.57 329 eP P 12 47 09.1 +1.6
DAU e*PP pP 12 47 33.4 +0.5
DAU **Daniels Canyon** 77.57 329 eP P 12 47 09.1 +1.6
DAU epP pP 12 47 33.4 +0.5
DAC **Darwin (Calif)** 77.59 322 eP P 12 47 09.0 +1.4
DAC e*PP pP 12 47 33.5 +0.6
DAC pmax pmax
comp=Z,62nm,1.8s
DAC **Darwin (Calif)** 77.59 322 eP P 12 47 09.0 +1.4
comp=Z,62nm,1.8s
DAC epP pP 12 47 33.5 +0.6
J23A **Dilts Ranch, B** 77.60 334 ⇑P P 12 47 08.7 +1.2
baz=78
J23A ⇓pP pP 12 47 33.1 +0.3
baz=78
I24A **Kuemmerle Ranc** 77.63 335 P P 12 47 08.8 +1.2
baz=78,SNR=6.6
I24A ⇑pP pP 12 47 33.2 +0.3
baz=78
K21A **Alcova** 77.63 333 ⇓P P 12 47 09.1 +1.4
baz=78
K21A ⇓pP pP 12 47 33.5 +0.5
baz=78
ISA **Isabella** 77.63 321 eP P 12 47 09.3 +1.6
ISA e*PP pP 12 47 34.0 +1.0
ISA pmax pmax
comp=Z,24nm,1.4s
ISA **Isabella** 77.63 321 eP P 12 47 09.3 +1.6
comp=Z,24nm,1.4s
ISA epP pP 12 47 34.0 +1.0
ISA **Isabella** 77.63 321 P P 12 47 09.3 +1.6
baz=78,SNR=15
ISA ⇓pP pP 12 47 33.7 +0.7
baz=78
RSSD **Black Hills** 77.63 335 eP P 12 47 08.4 +0.7
RSSD e*PP pP 12 47 33.2 +0.2
RSSD pmax pmax
comp=Z,14nm,0.7s
RSSD **Black Hills** 77.63 335 eP P 12 47 08.4 +0.7
comp=Z,14nm,0.7s
RSSD epP pP 12 47 33.2 +0.2
JLU **Jordanelle** 77.81 329 eP P 12 47 10.3 +1.5
comp=Z,184nm,2.0s
JLU epP pP 12 47 35.6 +1.5
PKM **Peak Mountain** 77.84 320 ⇓P P 12 47 10.6 +1.6
baz=78,SNR=10.0
PKM ⇓pP pP 12 47 34.6 +0.2
baz=78
M18A **Lyman** 77.84 330 P P 12 47 09.7 +0.8
baz=78,SNR=11
M18A pP pP 12 47 34.1 -0.2
baz=78
J22A **Midwest** 77.97 334 P P 12 47 10.3 +0.8
baz=78,SNR=27
J22A ⇑pP pP 12 47 34.6 -0.2
baz=78
GRAC **Grapevine Rang** 78.01 323 ⇑P P 12 47 11.4 +1.7
baz=78
R11A **Troy Canyon, C** 78.08 325 P P 12 47 11.9 +1.7
baz=78,SNR=42
R11A ⇑pP pP 12 47 36.2 +0.6
baz=78
L19A **Farson** 78.08 331 P P 12 47 11.6 +1.4
baz=78,SNR=50
L19A ⇓pP pP 12 47 36.0 +0.4
baz=78
K20A **Yellowstone Ra** 78.10 332 P P 12 47 11.1 +0.8
baz=78,SNR=16
K20A ⇓pP pP 12 47 35.6 0.0
baz=78
DUG **Dugway** 78.13 328 eP P 12 47 12.0 +1.5
DUG e*PP pP 12 47 36.1 +0.3
DUG pmax pmax
comp=Z,97nm,1.8s
DUG **Dugway** 78.13 328 eP P 12 47 11.9 +1.5
comp=Z,96nm,1.8s
DUG epP pP 12 47 36.1 +0.3
DUG **Dugway** 78.13 328 P P 12 47 11.9 +1.5
baz=78,SNR=34
DUG ⇑pP pP 12 47 36.4 +0.7
baz=78
M17A **Scullys Gap (B** 78.15 330 P P 12 47 11.3 +0.7
baz=78,SNR=20
M17A ⇓pP pP 12 47 35.6 -0.3
baz=78
L18A **Fontenelle, Gr** 78.23 330 P P 12 47 12.2 +1.1
baz=79,SNR=35
L18A ⇓pP pP 12 47 36.6 +0.2
baz=79
SMMC **Simmler** 78.24 320 ⇑P P 12 47 12.9 +1.8
baz=79
J21A **Lysite** 78.30 333 P P 12 47 12.5 +1.1
baz=79,SNR=14
J21A ⇑pP pP 12 47 36.9 +0.2
baz=79
H24A **Dirks Ranch, A** 78.36 335 P P 12 47 12.2 +0.7
baz=79,SNR=28
H24A ⇓pP pP 12 47 36.6 -0.3
baz=79
I22A **9 Mile Ranch,** 78.37 334 P P 12 47 12.5 +0.8
baz=79,SNR=29
I22A ⇓pP pP 12 47 37.0 -0.1
baz=79
K19A **Absolon Red Bu** 78.45 332 P P 12 47 13.0 +0.7
baz=79,SNR=25
K19A ⇑pP pP 12 47 37.4 -0.2
baz=79
H23A **Clabaugh Cattl** 78.52 335 ⇓P P 12 47 13.2 +0.7
baz=79
H23A ⇓pP pP 12 47 37.8 -0.1
baz=79
PMPS **Porto Santo** 78.54 43 eP P 12 47 13.6 +1.0
comp=Z,236nm,1.5s
J20A **Shoshoni** 78.57 333 P P 12 47 14.3 +1.5
baz=79,SNR=38
I21A **Big Trails, Te** 78.63 333 P P 12 47 13.8 +0.7
baz=79,SNR=36
I21A ⇓pP pP 12 47 38.1 -0.4
baz=79
HWUT **Hardware Ranch** 78.66 329 eP P 12 47 14.3 +0.9
comp=Z,36nm,0.7s
HWUT epP pP 12 47 39.1 +0.4
BW06 **Boulder Array** 78.71 331 eP P 12 47 14.1 +0.4
comp=Z,34nm,1.3s
PDAR **Pinedale Array** 78.71 331 P P 12 47 14.3 +0.6
PDAR pP pP 12 47 39.0 -0.1
PDAR PKKPbc PKKPbc 13 06 07.5 -2.5
PDAR **Pinedale Array** 78.71 331 P P 12 47 14.3 +0.6
comp=Z,12nm,0.9s,baz=130,slow=5.7,SNR=57
PDAR pP pP 12 47 38.9 -0.1
comp=Z,1.6nm,0.5s,baz=127,slow=5.4,SNR=3.5
PDAR PKKPbc PKKPbc 13 06 07.5 -2.5
comp=Z,0.6nm,0.8s,baz=124,slow=2.7,SNR=5.2
AGMN **Agassiz Nation** 78.75 343 eP P 12 47 13.6 +0.2
comp=Z,23nm,0.8s
AGMN epP pP 12 47 38.1 -0.7
G24A **Alzada** 78.81 336 ⇑P P 12 47 14.9 +0.9
baz=79,SNR=7.8
G24A ⇓pP pP 12 47 39.3 -0.1
baz=79
J19A **Crowheart** 78.90 332 P P 12 47 15.7 +1.0
baz=79,SNR=38
J19A pP pP 12 47 40.0 -0.1
baz=79
H22A **Clearmont** 78.91 334 P P 12 47 15.3 +0.7
baz=79,SNR=10
H22A ⇓pP pP 12 47 39.8 -0.2
baz=79
MTUM **Tungsten Hills** 78.91 322 eP P 12 47 16.3 +1.4
G23A **Biddle** 79.06 335 P P 12 47 16.0 +0.6
baz=79,SNR=12
G23A ⇑pP pP 12 47 40.6 -0.2
baz=79
I20A **Worland** 79.08 333 P P 12 47 16.7 +1.2
baz=79,SNR=21
I20A ⇓pP pP 12 47 41.0 +0.1
baz=79
MAW **Mawson** 79.09 163 P P 12 47 15.9 +0.7
MAW pP pP 12 47 40.7 +0.2
MAW **Mawson** 79.09 163 P P 12 47 15.9 +0.7
comp=Z,34nm,0.9s,baz=216,slow=6.6,SNR=42
MAW pP pP 12 47 40.7 +0.2
comp=Z,18nm,0.9s,baz=210,slow=7.7,SNR=5.1
F24A **Ekalaka** 79.26 336 P P 12 47 17.1 +0.7
baz=80,SNR=24
F24A ⇓pP pP 12 47 41.8 0.0
baz=80
MLAC **Mammoth Lakes** 79.26 322 ⇑P P 12 47 18.1 +1.2
baz=80,SNR=6.7
J18A **Kendall Valley** 79.27 331 P P 12 47 17.6 +0.8
baz=80,SNR=61
J18A ⇑pP pP 12 47 42.1 0.0
baz=80
HVU **Hansel Valley** 79.35 329 eP P 12 47 18.5 +1.4
HVU e*PP pP 12 47 42.1 -0.5
HVU pmax pmax
comp=Z,24nm,0.9s
HVU **Hansel Valley** 79.35 329 eP P 12 47 18.5 +1.4
comp=Z,24nm,0.9s
HVU epP pP 12 47 42.1 -0.5
AHID **Auburn Hatcher** 79.38 330 eP P 12 47 18.6 +1.3
comp=Z,17nm,0.8s
AHID epP pP 12 47 42.4 -0.3
MDND **Maddock** 79.41 340 ⇑P P 12 47 18.0 +0.9
baz=80
MDND ⇑pP pP 12 47 42.6 +0.1
baz=80
G22A **Birney** 79.41 335 P P 12 47 17.9 +0.6
baz=80,SNR=6.4
H20A **Greybull** 79.47 333 P P 12 47 18.3 +0.6
baz=80,SNR=27
H20A ⇓pP pP 12 47 42.8 -0.3
baz=80
I19A **Meeteetse** 79.50 332 P P 12 47 19.2 +1.2
baz=80,SNR=35
I19A ⇑pP pP 12 47 43.6 +0.2
baz=80
F23A **Volborg** 79.51 335 P P 12 47 18.5 +0.7
baz=80,SNR=22
F23A ⇓pP pP 12 47 42.9 -0.2
baz=80
NVAR **Mina Array Bea** 79.56 323 P P 12 47 19.7 +1.3
NVAR pP pP 12 47 44.0 +0.2
NVAR PKKPbc PKKPbc 13 06 04.7 -3.1
NVAR **Mina Array Bea** 79.56 323 P P 12 47 19.7 +1.3
comp=Z,6.1nm,0.9s,baz=149,slow=5.8,SNR=39
NVAR pP pP 12 47 44.0 +0.2
comp=Z,2.4nm,0.7s,baz=161,slow=6.9,SNR=4.5
NVAR PKKPbc PKKPbc 13 06 04.7 -3.1
comp=Z,0.5nm,0.7s,baz=318,slow=1.2,SNR=3.9
NVAR LR LR 13 19 38.7
comp=Z,54nm,19.4s,baz=327,slow=33
I18A **Diamond G Ranc** 79.58 332 P P 12 47 19.7 +1.3
baz=80,SNR=56
I18A ⇓pP pP 12 47 43.9 +0.1
baz=80
ELK **Elko** 79.72 327 eP P 12 47 20.3 +1.0
comp=Z,312nm,1.0s
ELK epP pP 12 47 45.0 +0.3
G21A **Lodge Grass** 79.77 334 P P 12 47 20.1 +0.8
baz=80,SNR=11
G21A ⇓pP pP 12 47 44.7 0.0
baz=80
SNOW **Snow King Moun** 79.78 331 eP P 12 47 20.9 +1.3
comp=Z,28nm,0.9s
E24A **Baker** 79.83 337 P P 12 47 20.6 +1.1
baz=80,SNR=16
E24A ⇑pP pP 12 47 45.2 +0.3
baz=80,SNR=5.1
LOHW **Long Hollow** 79.84 331 eP P 12 47 20.9 +1.1
comp=Z,19nm,1.0s
LOHW epP pP 12 47 44.6 -0.6
F22A **Rosebud** 79.87 335 P P 12 47 20.5 +0.7
baz=80,SNR=29
F22A ⇓pP pP 12 47 44.9 -0.3
baz=80,SNR=5.1
TPAW **Teton Pass** 79.89 331 eP P 12 47 21.4 +1.2
comp=Z,35nm,1.0s
TPAW epP pP 12 47 45.2 -0.4
RRI2 **Red Ridge** 79.94 331 eP P 12 47 22.0 +1.6
comp=Z,45nm,1.2s
RRI2 epP pP 12 47 46.5 +0.6
MOOW **Moose Ponds** 80.01 331 eP P 12 47 21.5 +0.8
comp=Z,7.8nm,0.9s
MOOW epP pP 12 47 45.4 -0.8
TOA0 **Torodi Ar. Sit** 80.02 70 eP P 12 47 21.6 +0.5
TOA0 epP pP 12 47 47.2 +0.6
TORD **Torodi Ar. Bea** 80.02 70 P P 12 47 21.7 +0.5
TORD pP pP 12 47 47.2 +0.6
TORD **Torodi Ar. Bea** 80.02 70 P P 12 47 21.7 +0.5
comp=Z,117nm,0.8s,baz=256,slow=5.1,SNR=546
TORD pP pP 12 47 47.2 +0.6
comp=Z,25nm,0.7s,baz=274,slow=4.9,SNR=5.4
TORD LR LR 13 21 50.3
comp=Z,101nm,19.3s,baz=230,slow=35
H19A **Powell** 80.02 333 P P 12 47 21.7 +1.1
baz=80,SNR=16
H19A ⇓pP pP 12 47 46.1 0.0
baz=80
I17A **Pilgrim Ck.** 80.08 331 P P 12 47 22.7 +1.6
baz=80,SNR=10
I17A ⇓pP pP 12 47 47.1 +0.6
baz=80
DCID1 **Drake Creek** 80.08 331 eP P 12 47 22.6 +1.5
E23A **Ismay** 80.13 336 ⇑P P 12 47 21.4 +0.4
baz=80
E23A ⇓pP pP 12 47 46.3 -0.2
baz=80
G20A **Bridger** 80.16 333 P P 12 47 22.0 +0.6
baz=80,SNR=57
G20A ⇓pP pP 12 47 46.5 -0.3
baz=80
IMW **Indian Meadow** 80.21 331 eP P 12 47 23.1 +1.3
comp=Z,40nm,1.2s
IMW epP pP 12 47 46.7 -0.6
F21A **Absaloka Mine,** 80.24 334 ⇓P P 12 47 22.7 +1.0
baz=81
F21A ⇑pP pP 12 47 47.2 0.0
baz=81
H18A **Shoshone NF, C** 80.31 332 P P 12 47 23.3 +1.0
baz=81,SNR=67
H18A ⇑pP pP 12 47 47.8 0.0
baz=81
D24A **Glendive** 80.31 337 ⇑P P 12 47 23.1 +1.1
baz=81
E22A **Miles City** 80.31 336 P P 12 47 22.5 +0.4
baz=81,SNR=8.4
E22A ⇑pP pP 12 47 47.2 -0.3
baz=81
CMB **Columbia Colle** 80.40 322 eP P 12 47 23.6 +0.9
CMB pmax pmax
comp=Z,14nm,1.4s
CMB **Columbia Colle** 80.40 322 eP P 12 47 23.6 +0.9
comp=Z,14nm,1.4s
I16A **Newdale** 80.43 331 P P 12 47 24.2 +1.3
baz=81,SNR=13
I16A pP pP 12 47 48.7 +0.3
baz=81
H17A **Grant Village** 80.46 332 P P 12 47 25.0 +1.8
baz=81,SNR=7.0
RLMT **Red Lodge** 80.51 333 eP P 12 47 24.3 +0.9
comp=Z,23nm,1.2s
RLMT epP pP 12 47 49.2 +0.4
ULM **Lac du Bonnet** 80.54 343 P P 12 47 23.1 0.0
ULM pP pP 12 47 47.6 -1.0
ULM **Lac du Bonnet** 80.54 343 P P 12 47 23.1 0.0
comp=Z,41nm,1.0s,baz=175,slow=2.5,SNR=25
ULM pP pP 12 47 47.6 -1.0
comp=Z,35nm,0.8s,baz=193,slow=2.9,SNR=9.3
F20A **Billings** 80.62 334 ⇓P P 12 47 24.5 +0.7
baz=81
F20A ⇑pP pP 12 47 49.1 -0.1
baz=81
D23A **Lindsay** 80.67 336 P P 12 47 25.3 +1.3
baz=81,SNR=26
D23A pP pP 12 47 49.8 +0.4
baz=81,SNR=6.4
C24A **Savage** 80.70 337 P P 12 47 25.3 +1.2
baz=81,SNR=22
C24A ⇑pP pP 12 47 49.9 +0.4
baz=81,SNR=7.6
G18A **Lazy EL Ranch,** 80.79 333 P P 12 47 25.6 +0.9
baz=81,SNR=19
G18A ⇓pP pP 12 47 50.3 +0.1
baz=81
E21A **Keefer Ranch,** 80.82 335 P P 12 47 25.7 +0.9
baz=81,SNR=20
E21A ⇑pP pP 12 47 50.5 +0.2
baz=81
YMR **Madison River** 80.84 332 eP P 12 47 27.0 +1.9
comp=Z,72nm,1.1s
YMR epP pP 12 47 51.7 +1.0
J14A **Carey** 80.90 329 P P 12 47 26.9 +1.5
baz=81,SNR=8.4
J14A ⇓pP pP 12 47 51.3 +0.3
baz=81
I15A **Monteview** 80.97 330 P P 12 47 27.4 +1.7
baz=81,SNR=12
I15A ⇓pP pP 12 47 52.0 +0.7
baz=81
WCN **Washoe City** 80.97 323 eP P 12 47 27.4 +1.5
WCN pmax pmax
comp=Z,3.0nm,0.9s
WCN **Washoe City** 80.97 323 eP P 12 47 27.4 +1.5
comp=Z,2.9nm,0.9s
F19A **Roth Farm, Mol** 80.98 333 P P 12 47 26.5 +0.8
baz=81,SNR=27
F19A ⇑pP pP 12 47 51.2 0.0
baz=81,SNR=5.7
H16A **Russell Place,** 80.99 331 P P 12 47 27.4 +1.4
baz=81,SNR=24
H16A ⇓pP pP 12 47 52.1 +0.6
baz=81
D22A **Cohagen** 81.00 336 P P 12 47 26.8 +1.1
baz=81,SNR=19
D22A ⇑pP pP 12 47 51.5 +0.3
baz=81
QLMT **Earthquake Lak** 81.17 331 eP P 12 47 29.1 +2.3
QLMT epP pP 12 47 53.7 +1.3
E20A **Meyer Farm, Mu** 81.19 334 P P 12 47 27.9 +1.1
baz=82,SNR=41
E20A ⇑pP pP 12 47 52.5 +0.2
baz=82,SNR=7.1
C23A **Lambert** 81.20 337 P P 12 47 27.7 +0.9
baz=82,SNR=16
C23A ⇑pP pP 12 47 52.2 0.0
baz=82
GCMT **Greycliff** 81.22 333 eP P 12 47 27.8 +0.8
comp=Z,37nm,1.3s
GCMT epP pP 12 47 52.8 +0.3
D21A **La Casta Ranch** 81.23 335 P P 12 47 27.9 +1.0
baz=82,SNR=12
D21A ⇑pP pP 12 47 52.7 +0.2
baz=82
J13A **Cove Ranch, Pi** 81.26 329 P P 12 47 28.7 +1.4
baz=82,SNR=22
J13A ⇑pP pP 12 47 53.4 +0.6
baz=82
G17A **Pierce Place,** 81.28 332 ⇓P P 12 47 28.6 +1.2
baz=82
G17A ⇓pP pP 12 47 54.1 +1.2
baz=82
F18A **Big Timber** 81.33 333 P P 12 47 28.5 +0.9
baz=82,SNR=41
F18A pP pP 12 47 53.2 +0.1
baz=82,SNR=6.6
I14A **Mackay** 81.34 330 P P 12 47 29.4 +1.6
baz=82,SNR=19
I14A ⇑pP pP 12 47 54.1 +0.8
baz=82
C22A **Vida** 81.40 336 P P 12 47 28.6 +0.8

baz=82,SNR=8.7
C22A ⇓pP **pP** 12 47 53.1 -0.2
baz=82
E19A Rath Farm, Rou 81.41 334 P **P** 12 47 28.9 +0.9
baz=82,SNR=94
E19A ⇑pP **pP** 12 47 53.5 0.0
baz=82,SNR=8.0
DGMT Dagmar 81.43 338 *e*P **P** 12 47 29.3 +1.4
comp=Z,76nm,0.6s
DGMT *ep*P **pP** 12 47 54.3 +0.8
DGMT Dagmar 81.43 338 P **P** 12 47 29.2 +1.2
baz=82,SNR=5.9
DGMT ⇑pP **pP** 12 47 53.6 +0.2
baz=82
BOSA Boshof 81.46 118 P **P** 12 47 29.1 +0.3
BOSA pP **pP** 12 47 54.6 +0.2
BOSA Boshof 81.46 118 P **P** 12 47 29.1 +0.3
comp=Z,25nm,0.8s,baz=228,slow=4.0,SNR=20
BOSA pP **pP** 12 47 54.6 +0.2
comp=Z,8.9nm,0.8s,baz=202,slow=4.3,SNR=3.2
BOSA LR LR 13 18 23.1
comp=Z,198nm,19.4s,baz=275,slow=32
HLID Hailey 81.50 329 *e*P **P** 12 47 30.2 +1.6
comp=Z,33nm,1.2s
HLID *ep*P **pP** 12 47 55.0 +0.9
HLID Hailey 81.50 329 P **P** 12 47 30.1 +1.6
baz=82,SNR=41
HLID ⇑pP **pP** 12 47 54.7 +0.6
baz=82,SNR=5.3
H15A Lima 81.53 331 P **P** 12 47 30.3 +1.6
baz=82
H15A ⇓pP **pP** 12 47 54.9 +0.6
baz=82
I13A Wildhorse Cree 81.63 329 P **P** 12 47 31.0 +1.6
baz=82,SNR=42
I13A ⇓pP **pP** 12 47 55.3 +0.4
baz=82
G16A Moss Hill, Enn 81.65 331 P **P** 12 47 30.2 +0.9
baz=82,SNR=8.1
G16A ⇓pP **pP** 12 47 54.8 -0.1
baz=82
D20A Manuel Ranch, 81.68 335 P **P** 12 47 30.1 +0.8
baz=82,SNR=40
D20A ⇑pP **pP** 12 47 54.8 -0.1
baz=82,SNR=6.8
B23A Brockton 81.70 337 P **P** 12 47 30.2 +0.9
baz=82,SNR=7.7
B23A ⇓pP **pP** 12 47 54.8 -0.1
baz=82,SNR=5.8
BEKR Beckworth 81.70 323 *e*P **P** 12 47 30.6 +0.9
comp=Z,32nm,1.8s
BEKR *ep*P **pP** 12 47 55.3 0.0
F17A Fitzpatrick Pl 81.71 332 P **P** 12 47 30.8 +1.1
baz=82,SNR=28
F17A ⇓pP **pP** 12 47 55.4 +0.2
baz=82,SNR=5.1
A24A Westby 81.75 338 ⇓P **P** 12 47 30.7 +1.1
baz=82,SNR=5.1
A24A ⇑pP **pP** 12 47 55.6 +0.5
baz=82,SNR=5.2
SCHQ Schefferville 81.75 2 P **P** 12 47 29.4 -0.1
SCHQ pP **pP** 12 47 54.9 -0.1
SCHQ Schefferville 81.75 2 P **P** 12 47 29.4 -0.1
comp=Z,13nm,1.1s,baz=202,slow=6.7,SNR=9.9
SCHQ pP **pP** 12 47 54.9 -0.1
comp=Z,10.0nm,1.1s,baz=154,slow=4.6,SNR=3.6
MCMT McKenzie Canyo 81.78 331 *e*P **P** 12 47 31.8 +1.7
comp=Z,11nm,0.9s
MCMT *ep*P **pP** 12 47 56.4 +0.7
MCMT *es*P **sP** 12 48 08.2 +2.0
H14A Leadore 81.84 330 P **P** 12 47 31.9 +1.4
baz=82,SNR=29
H14A ⇓pP **pP** 12 47 56.5 +0.5
baz=82
G15A Dillon 81.89 331 P **P** 12 47 31.7 +1.1
baz=82,SNR=25
G15A ⇓pP **pP** 12 47 56.3 +0.1
baz=82,SNR=5.1
C21A Desert Coulee 81.91 336 P **P** 12 47 31.1 +0.6
baz=82,SNR=29
C21A pP **pP** 12 47 55.8 -0.2
baz=82,SNR=7.5
B22A Reddig Ranch S 81.91 336 P **P** 12 47 31.4 +0.9
baz=82,SNR=8.7
B22A pP **pP** 12 47 56.0 0.0
baz=82,SNR=6.9
BOZ Bozeman (W) 81.91 332 *e*P **P** 12 47 31.2 +0.5
BOZ *e**PP **pP** 12 47 55.6 -0.6
BOZ pmax pmax
comp=Z,8.0nm,1.3s
BOZ Bozeman (W) 81.91 332 *e*P **P** 12 47 31.2 +0.5
comp=Z,8.2nm,1.3s
BOZ *ep*P **pP** 12 47 55.6 -0.6
OHCM Honcut 81.93 322 *e*P **P** 12 47 31.9 +1.2
E18A Harlowton 81.95 333 P **P** 12 47 31.7 +0.9
baz=82,SNR=13
E18A ⇑pP **pP** 12 47 56.5 +0.1
baz=82,SNR=5.2
I12A Atlanta 82.01 329 P **P** 12 47 32.3 +1.0
baz=82,SNR=13
I12A ⇑pP **pP** 12 47 57.2 +0.3
baz=82
F16A Kennard Place, 82.02 332 P **P** 12 47 32.0 +0.8
baz=82,SNR=6.4
F16A ⇑pP **pP** 12 47 56.6 -0.2
baz=82
D19A Cripps Ranch, 82.03 334 P **P** 12 47 31.8 +0.6
baz=82,SNR=37
D19A ⇑pP **pP** 12 47 56.6 -0.2
baz=82,SNR=5.5
MFID Camas Ranch 82.04 328 *e*P **P** 12 47 32.4 +1.0
comp=Z,56nm,1.9s
MFID *ep*P **pP** 12 47 56.1 -0.8
MFID Camas Ranch 82.04 328 P **P** 12 47 32.3 +1.0
baz=82,SNR=11
MFID ⇑pP **pP** 12 47 57.0 0.0
baz=82
C20A Veseth Ranch, 82.15 335 P **P** 12 47 32.1 +0.4
baz=82,SNR=18
C20A ⇓pP **pP** 12 47 56.8 -0.5
baz=82,SNR=5.6
H13A Challis 82.20 330 P **P** 12 47 33.6 +1.4
baz=82,SNR=41
H13A ⇓pP **pP** 12 47 58.1 +0.3
baz=82
E17A Martinsdale 82.24 333 P **P** 12 47 33.3 +0.8
baz=83,SNR=16
E17A ⇑pP **pP** 12 47 58.0 0.0
baz=83
G14A Jackson 82.38 330 ⇓pP pP 12 47 59.0 +0.2
baz=83
B21A Ellsworth Farm 82.38 336 P **P** 12 47 33.9 +0.9
baz=83,SNR=16
B21A pP **pP** 12 47 58.6 +0.1
baz=83,SNR=9.2
LRM Limekiln Ridge 82.40 331 *e*P **P** 12 47 34.5 +1.2
LRM *ep*P **pP** 12 47 59.1 +0.1
D18A Linhart Farms, 82.42 334 P **P** 12 47 34.1 +0.9
baz=83,SNR=16
D18A ⇑pP **pP** 12 47 58.7 -0.1
baz=83,SNR=5.8
F15A Butte 82.43 331 P **P** 12 47 34.6 +1.1
baz=83,SNR=45
F15A ⇑pP **pP** 12 47 59.3 +0.3
baz=83,SNR=5.0
H12A Diamond D Ranc 82.46 329 P **P** 12 47 34.5 +0.9
baz=83,SNR=12
H12A ⇓pP **pP** 12 47 59.4 +0.2
baz=83
A22A Carney Farms, 82.47 337 P **P** 12 47 34.2 +0.8
baz=83,SNR=27
A22A ⇓pP **pP** 12 47 59.0 +0.1
baz=83,SNR=6.5
C19A Slack Wire Ran 82.56 334 P **P** 12 47 34.6 +0.6
baz=83,SNR=19
C19A ⇓pP **pP** 12 47 59.4 -0.1
baz=83
G13A Cobalt 82.60 330 P **P** 12 47 35.7 +1.4
baz=83,SNR=32
G13A ⇑pP **pP** 12 48 00.3 +0.4
baz=83
E16A East Helena 82.64 332 P **P** 12 47 35.5 +1.0
baz=83,SNR=31
E16A ⇓pP **pP** 12 48 00.1 +0.1
baz=83
WVOR Wild Horse Val 82.67 326 *e*P **P** 12 47 35.4 +0.7
WVOR *e**PP **pP** 12 48 00.1 -0.2
WVOR pmax pmax
comp=Z,14nm,1.4s
WVOR Wild Horse Val 82.67 326 *e*P **P** 12 47 35.4 +0.7
comp=Z,14nm,1.4s
WVOR *ep*P **pP** 12 48 00.1 -0.2
D17A Six Diamond Ra 82.73 333 P **P** 12 47 35.8 +0.9
baz=83,SNR=66
D17A ⇑pP **pP** 12 48 00.5 0.0
baz=83
B20A Solberg Farm, 82.76 335 P **P** 12 47 35.5 +0.6
baz=83,SNR=22
B20A pP **pP** 12 48 00.2 -0.3
baz=83,SNR=6.4
HRY Holter Researc 82.84 332 *e*P **P** 12 47 37.1 +1.6
HRY *ep*P **pP** 12 48 01.9 +0.8
E15A Deer Lodge 82.95 332 P **P** 12 47 37.2 +1.1
baz=83,SNR=14
E15A ⇓pP **pP** 12 48 01.8 +0.1
baz=83
D16A Dana Ranch, Ca 82.98 333 P **P** 12 47 37.5 +1.3
baz=83,SNR=61
D16A ⇓pP **pP** 12 48 02.1 +0.3
baz=83
EGMT Eagleton 83.07 334 *e*P **P** 12 47 37.4 +0.8
comp=Z,46nm,1.3s
EGMT *ep*P **pP** 12 48 01.7 -0.5
EGMT *es*P **sP** 12 48 14.0 +1.4
EGMT Eagleton 83.07 334 P **P** 12 47 36.8 +0.3
baz=83,SNR=18
EGMT ⇓pP **pP** 12 48 01.6 -0.5
baz=83,SNR=5.2
A20A Cobblestone Ra 83.09 336 ⇓P **P** 12 47 37.1 +0.5
baz=83,SNR=6.5
A20A ⇑pP **pP** 12 48 01.9 -0.3
baz=83,SNR=6.0
B19A Brinkman Farms 83.12 335 ⇑P **P** 12 47 37.3 +0.5
baz=84,SNR=6.5
B19A ⇑pP **pP** 12 48 02.1 -0.3
baz=84
G12A Big Creek, Yel 83.12 329 P **P** 12 47 37.7 +0.7
baz=84,SNR=14
G12A ⇓pP **pP** 12 48 02.4 -0.2
baz=84
MOD Modoc 83.14 325 *e*P **P** 12 47 38.2 +1.0
comp=Z,12nm,1.0s
MOD *ep*P **pP** 12 48 03.2 +0.5
C17A Wharram Farm, 83.15 333 P **P** 12 47 37.5 +0.5
baz=84,SNR=20
C17A ⇓pP **pP** 12 48 02.2 -0.4
baz=84
F13A Darby 83.19 330 P **P** 12 47 38.2 +0.9
baz=84,SNR=28
F13A pP **pP** 12 48 02.9 0.0
baz=84,SNR=5.0
E14A Clinton 83.31 331 P **P** 12 47 39.2 +1.2
baz=84,SNR=13
E14A ⇓pP **pP** 12 48 03.8 +0.3
baz=84
WDC Whiskeytown Da 83.38 322 *e*P **P** 12 47 37.9 -0.4
WDC pmax pmax
comp=Z,3.0nm,0.8s
WDC Whiskeytown Da 83.38 322 *e*P **P** 12 47 37.9 -0.4
comp=Z,2.8nm,0.8s
B18A Beardsley Farm 83.39 334 P **P** 12 47 38.8 +0.6
baz=84,SNR=26
B18A pP **pP** 12 48 03.6 -0.2
baz=84,SNR=8.1
D15A Lincoln 83.39 332 P **P** 12 47 39.5 +1.1
baz=84,SNR=24
D15A ⇓pP **pP** 12 48 04.3 +0.4
baz=84
A19A Klindworth Far 83.43 335 P **P** 12 47 38.7 +0.3
baz=84,SNR=8.6
A19A ⇑pP **pP** 12 48 03.7 -0.3
baz=84
F12A Elk City 83.57 330 P **P** 12 47 39.9 +0.6
baz=84,SNR=12
CHMT Chamberlain Mo 83.60 332 *e*P **P** 12 47 40.4 +0.9
CHMT *ep*P **pP** 12 48 05.4 +0.3
E13A Victor 83.63 331 P **P** 12 47 40.7 +1.1
baz=84,SNR=15
E13A ⇓pP **pP** 12 48 05.4 +0.3
baz=84
C16A Fuhringer Ranc 83.68 333 P **P** 12 47 40.5 +0.8
baz=84,SNR=40
C16A pP **pP** 12 48 05.1 -0.2
baz=84,SNR=6.4
B17A L&G Farms, Che 83.70 334 ⇑P **P** 12 47 40.1 +0.4
baz=84
B17A ⇓pP **pP** 12 48 04.8 -0.6
baz=84
BMO Blue Mountains 83.83 328 *e*P **P** 12 47 41.3 +0.8
comp=Z,24nm,1.7s
BMO *ep*P **pP** 12 48 06.0 -0.2
MSO Missoula 83.83 331 *e*P **P** 12 47 41.6 +1.1
comp=Z,2.5nm,0.8s
MSO *ep*P **pP** 12 48 06.2 0.0
MSO Missoula 83.83 331 P **P** 12 47 41.5 +1.1
baz=84,SNR=5.6
MSO ⇑pP **pP** 12 48 06.1 0.0
baz=84
D14A Greenough 83.84 332 ⇑P **P** 12 47 41.4 +0.8
baz=84,SNR=15
D14A ⇑pP **pP** 12 48 06.2 0.0
baz=84
A18A Metzger Ranch, 83.84 335 P **P** 12 47 40.7 +0.3
baz=84,SNR=15
A18A ⇓pP **pP** 12 48 05.4 -0.7
baz=84,SNR=5.6
SLMT Seeley Lake 83.96 332 *e*P **P** 12 47 41.9 +0.6
SLMT *ep*P **pP** 12 48 06.6 -0.3
C15A Salmond Ranch, 84.01 333 P **P** 12 47 42.6 +1.2
baz=84,SNR=43
C15A ⇓pP **pP** 12 48 07.4 +0.3
baz=84,SNR=6.0
B16A M & M Farms, S 84.16 333 ⇓P **P** 12 47 42.4 +0.3
baz=84,SNR=9.0
B16A ⇑pP **pP** 12 48 07.2 -0.5
baz=84,SNR=5.9
A17A Triple J Farms 84.19 334 P **P** 12 47 42.6 +0.4
baz=84,SNR=24
A17A ⇑pP **pP** 12 48 07.6 -0.4
baz=84,SNR=9.0
D13A Huson 84.26 331 P **P** 12 47 43.6 +0.9
baz=85,SNR=13
D13A ⇓pP **pP** 12 48 08.3 0.0
baz=85
YBH Yreka Blue Hor 84.28 323 *e*P **P** 12 47 42.3 -0.6
comp=Z,2.1nm,0.7s
SWMT Swartz Lake 84.38 332 *e*P **P** 12 47 44.3 +1.0
SWMT *ep*P **pP** 12 48 09.3 +0.3
B15A Bradely Ranch, 84.42 333 P **P** 12 47 43.6 +0.1
baz=85,SNR=28
B15A ⇓pP **pP** 12 48 08.4 -0.8
baz=85,SNR=6.9
C14A Swan Lake 84.48 332 ⇓P **P** 12 47 44.6 +0.8
baz=85
C14A ⇓pP **pP** 12 48 09.4 -0.1
baz=85
A16A West Butte Ran 84.54 334 ⇓P **P** 12 47 44.6 +0.5
baz=85
A16A ⇓pP **pP** 12 48 09.5 -0.3
baz=85
D12A Red Ives Fores 84.61 331 P **P** 12 47 45.1 +0.6
baz=85,SNR=44
D12A ⇑pP **pP** 12 48 09.9 -0.3
baz=85
YBMT Yellow Bay 84.67 332 *e*P **P** 12 47 45.7 +0.9
comp=Z,13nm,1.1s
YBMT *ep*P **pP** 12 48 10.1 -0.3
JTMT Jette 84.69 332 *e*P **P** 12 47 45.9 +1.0
JTMT *ep*P **pP** 12 48 10.4 -0.2
B14A Marquette Ranc 84.75 333 P **P** 12 47 45.4 +0.2
baz=85,SNR=12
B14A ⇓pP **pP** 12 48 10.1 -0.8
baz=85
C13A Hot Springs 84.76 331 P **P** 12 47 46.1 +1.0
baz=85,SNR=20
C13A ⇑pP **pP** 12 48 10.9 +0.1
baz=85
BLMT Blacktail Moun 84.93 332 *e*P **P** 12 47 47.2 +1.0
BLMT *ep*P **pP** 12 48 12.2 +0.3
BSMT Bassoo Peak 84.98 331 *e*P **P** 12 47 47.3 +0.9
BSMT *ep*P **pP** 12 48 11.8 -0.4
A15A Johnson Ranch, 85.02 333 P **P** 12 47 46.4 -0.1
baz=85,SNR=8.3
A15A ⇓pP **pP** 12 48 11.1 -1.1
baz=85
VIPM Ingram Point 85.17 326 P **P** 12 47 48.5 +1.1
VIPM Ingram Point 85.17 326 P **P** 12 47 48.5 +1.1
B13A Whitefish 85.25 332 ⇓P **P** 12 47 48.2 +0.6
baz=86,SNR=21
B13A ⇓pP **pP** 12 48 13.1 -0.3
baz=86
A14A Double T Ranch 85.29 333 P **P** 12 47 48.0 +0.2
baz=86,SNR=12
A14A ⇑pP **pP** 12 48 13.0 -0.6
baz=86
GMO Grizzlie Mount 85.29 326 P **P** 12 47 49.5 +1.5
WALA Waterton Lakes 85.56 333 *e*P **P** 12 47 50.0 +0.8
comp=Z,2.0nm,1.4s
WALA *ep*P **pP** 12 48 14.3 -0.6
C11A Tepee Creek (N 85.61 331 ⇑P **P** 12 47 49.7 +0.4
baz=86
C11A ⇑pP **pP** 12 48 14.6 -0.5
baz=86
A13A Flathead Natio 85.67 332 ⇓P **P** 12 47 50.7 +1.0
baz=86
A13A ⇑pP **pP** 12 48 15.4 0.0
baz=86
B12A Libby 85.80 331 P **P** 12 47 51.3 +1.0
baz=86,SNR=12
PFVI Vila Bisbo 85.85 44 *e*P **P** 12 47 52.0 +1.3
comp=Z,123nm,1.8s
MDT Midelt 85.99 50 P **P** 12 47 52.2 +0.5
MDT pP **pP** 12 48 19.1 +1.7
MDT Midelt 85.99 50 P **P** 12 47 52.2 +0.5
comp=Z,19nm,1.1s,baz=238,slow=6.1,SNR=12
MDT pP **pP** 12 48 19.1 +1.7
comp=Z,3.0nm,0.8s,baz=238,slow=6.1,SNR=2.3
HAWA Hanford 86.02 328 *e*P **P** 12 47 52.2 +0.8
comp=Z,17nm,1.0s
HAWA *ep*P **pP** 12 48 17.3 +0.3
MORF Marmelete 86.06 44 *e*P **P** 12 47 53.4 +1.5
comp=Z,70nm,1.8s
PTEO Sao Teotonio 86.17 44 *e*P **P** 12 47 54.3 +2.0
comp=Z,83nm,1.0s
PTEO *ep*P **pP** 12 48 19.8 +1.8
A12A Yaak River Ran 86.19 332 ⇑P **P** 12 47 52.8 +0.6
baz=86
A12A ⇓pP **pP** 12 48 17.6 -0.4
baz=86
FFC Flin Flon 86.20 342 *i* P **P** 12 47 52.1 +0.1
FFC Flin Flon 86.20 342 *e*P **P** 12 47 51.8 -0.3
comp=Z,7.4nm,0.9s
FFC *ep*P **pP** 12 48 16.6 -1.1
NEW Newport 86.31 330 *e*P **P** 12 47 52.7 -0.2
comp=Z,24nm,1.4s
NEW *ep*P **pP** 12 48 17.2 -1.4
NEW *es*P **sP** 12 48 29.2 +0.2
NEW Newport 86.31 330 P **P** 12 47 52.6 -0.2
baz=87,SNR=10
NEW ⇑pP **pP** 12 48 17.4 -1.1
baz=87
PBDV Barranco-do-Ve 86.47 45 *e*P **P** 12 47 55.7 +1.8
comp=Z,90nm,1.2s
PBDV *ep*P **pP** 12 48 21.6 +2.0
COR Corvallis 86.58 325 *e*P **P** 12 47 55.7 +1.6
COR pmax pmax
comp=Z,67nm,1.3s
COR Corvallis 86.58 325 *e*P **P** 12 47 55.7 +1.6
comp=Z,67nm,1.3s
PNCL Nicolau / Gran 86.64 44 *e*P **P** 12 47 56.4 +1.8
comp=Z,33nm,1.3s
PNCL *ep*P **pP** 12 48 21.8 +1.4
PCVE Castro Verde 86.65 44 *e*P **P** 12 47 56.4 +1.8
comp=Z,55nm,1.4s
PCVE *ep*P **pP** 12 48 22.4 +2.0
MPOR Mary's Peak 86.65 325 P **P** 12 47 56.0 +1.4
PVAQ Vaqueiros 86.71 45 *e*P **P** 12 47 56.4 +1.5
comp=Z,60nm,1.6s
PVAQ *ep*P **pP** 12 48 22.7 +2.0
CASY Casey 86.80 180 *e*P **P** 12 47 55.9 +0.9
comp=Z,98nm,1.3s
CASY *ep*P **pP** 12 48 20.7 -0.1
CASY *es*P **sP** 12 48 31.4 +0.1
PBEJ Beja 87.00 44 *ep*P **P** 12 47 58.0 +1.6
PBEJ A A 12 48 00.0
comp=Z,31nm,1.7s
PBEJ *ep*P **pP** 12 48 23.8 +1.7
F04A Amboy 87.08 326 P **P** 12 47 56.9 +0.4
EVOP Sao Brissos 87.15 44 *e*P **P** 12 47 58.1 +1.1
EVOP pmax pmax
comp=Z,50nm,1.3s
EVOP Sao Brissos 87.15 44 *e*P **P** 12 47 58.1 +1.1
comp=Z,50nm,1.3s
EVO Evora 87.22 44 *e*P **P** 12 47 58.1 +0.7
comp=Z,50nm,1.3s
TDL Tradedollar La 87.28 327 P **P** 12 47 58.1 +0.5
LON Longmire 87.36 327 *e*P **P** 12 47 58.3 +0.4
LON pmax pmax
comp=Z,6.0nm,0.9s
LON Longmire 87.36 327 *e*P **P** 12 47 58.3 +0.4
comp=Z,6.0nm,0.9s
PMTG Montargil 87.42 43 *e*P **P** 12 47 59.8 +1.4
comp=Z,56nm,1.6s
PMTG *ep*P **pP** 12 48 25.5 +1.3
PESTR Estremoz 87.69 44 *e*P **P** 12 48 01.4 +1.7
comp=Z,33nm,1.4s
BMW Boistfort Moun 87.86 326 P **P** 12 48 01.1 +0.8
BMW Boistfort Moun 87.86 326 P **P** 12 48 01.1 +0.8
TAM Tamanrasset 88.07 63 *e*P **P** 12 48 02.4 +0.4
TAM pmax pmax
comp=Z,11nm,1.1s
TAM Tamanrasset 88.07 63 *e*P **P** 12 48 02.4 +0.4
comp=Z,11nm,1.1s
PMRV Marv??o 88.15 43 *e*P **P** 12 48 03.2 +1.3
comp=Z,23nm,1.7s
NLWA Neilton Lookou 88.81 327 *e*P **P** 12 48 05.4 +0.6
comp=Z,18nm,1.2s
NLWA *ep*P **pP** 12 48 30.9 +0.2
LSZ Lusaka 89.97 107 *e*P **P** 12 48 12.6 +1.4
comp=Z,50nm,1.3s
LSZ *ep*P **pP** 12 48 39.0 +1.9
ESDC Sonseca Array 90.42 45 P **P** 12 48 13.1 +0.6
ESDC pP **pP** 12 48 39.3 +0.8
ESDC Sonseca Array 90.42 45 P **P** 12 48 13.1 +0.6
comp=Z,1.7nm,0.8s,baz=236,slow=4.3,SNR=11
ESDC pP **pP** 12 48 39.3 +0.8
comp=Z,0.8nm,0.7s,baz=234,slow=5.3,SNR=4.1
ESDC LR LR 13 28 29.9
comp=Z,114nm,18.4s,baz=260,slow=35
ETSF Etsaut 94.36 44 *e*P **P** 12 48 31.5 +0.8
comp=Z,36nm,1.3s
ETSF Etsaut 94.36 44 *e*P **P** 12 48 31.5 +0.8
ETSF pmax pmax
comp=Z,36nm,1.3s
ETSF Etsaut 94.36 44 *e*P **P** 12 48 31.5 +0.8
comp=Z,36nm,1.3s
EPF Esparros 94.99 44 *e*P **P** 12 48 34.0 +0.5
comp=Z,24nm,1.3s
EPF Esparros 94.99 44 *e*P **P** 12 48 34.0 +0.5
EPF pmax pmax
comp=Z,24nm,1.3s
EPF Esparros 94.99 44 *e*P **P** 12 48 34.0 +0.5
comp=Z,24nm,1.3s
YKA Yellowknife Ar 96.31 341 P **P** 12 48 38.9 -0.1
YKA pP **pP** 12 49 03.9 -1.1
YKA PKKP **PKKPbc** 13 05 23.4 -3.5
YKA Yellowknife Ar 96.31 341 P **P** 12 48 38.8 -0.1
comp=Z,5.9nm,0.8s,baz=138,slow=4.7,SNR=76
YKA pP **pP** 12 49 03.9 -1.1
comp=Z,6.5nm,0.8s,baz=137,slow=4.7,SNR=13
YKA PKKP **PKKPbc** 13 05 23.4 -3.5
comp=Z,0.3nm,0.8s,baz=295,slow=3.2,SNR=3.7
MTLF Montolieu 96.31 44 *e*P **P** 12 48 39.2 -0.3
comp=Z,28nm,1.2s
MTLF Montolieu 96.31 44 *e*P **P** 12 48 39.2 -0.3
MTLF pmax pmax
comp=Z,28nm,1.2s
MTLF Montolieu 96.31 44 *e*P **P** 12 48 39.2 -0.3
comp=Z,28nm,1.2s
KEST Kesra 97.32 54 LR LR 13 35 05.0
comp=Z,82nm,19.8s,baz=274,slow=37
VIVF Saint-Julien-l 98.61 44 *e*P **P** 12 48 50.4 +0.6
comp=Z,14nm,1.1s
VIVF Saint-Julien-l 98.61 44 *e*P **P** 12 48 50.4 +0.6
VIVF pmax pmax
comp=Z,14nm,1.1s
VIVF Saint-Julien-l 98.61 44 *e*P **P** 12 48 50.4 +0.6
comp=Z,14nm,1.1s
SMRF Simiane la Rot 98.74 45 *e*P Pdif 12 48 51.4 +1.0
comp=Z,23nm,1.0s

SMRF Simiane la Rot 98.74 45 *e*P Pdif 12 48 51.4 +1.0
comp=Z,23nm,1.0s
AVF Avril sur Loir 98.78 42 *e*P Pdif 12 48 51.3 +0.8
AVF Avril sur Loir 98.78 42 *e*P Pdif 12 48 51.3 +0.8
AVF Avril sur Loir 98.78 42 *e*P Pdif 12 48 51.3 +0.8
SMF Signal de Mont 99.00 42 *e*P **P 12 48 51.6 +0.1**
comp=Z,55nm,1.5s
SMF Signal de Mont 99.00 42 *e*P **P 12 48 51.6 +0.1**
SMF Signal de Mont 99.00 42 *e*P **P 12 48 51.6 +0.1**
comp=Z,55nm,1.5s
LMR La Mourre 99.02 46 *e*P 12 48 52.1
comp=Z,48nm,1.4s
LMR La Mourre 99.02 46 *e*P 12 48 52.1
LMR pmax pmax
comp=Z,48nm,1.4s
LMR La Mourre 99.02 46 *e*P 12 48 52.1
comp=Z,48nm,1.4s
FRF La Foret Royal 99.21 46 *e*P **Pdif 12 48 51.8 -0.7**
comp=Z,27nm,1.2s
FRF La Foret Royal 99.21 46 *e*P **Pdif 12 48 51.8 -0.7**
FRF pmax pmax
comp=Z,27nm,1.2s
FRF La Foret Royal 99.21 46 *e*P **Pdif 12 48 51.8 -0.7**
comp=Z,27nm,1.2s
LOR Lormes 99.32 41 *e*P **Pdif 12 48 52.5 -0.4**
LOR Lormes 99.32 41 *e*P **Pdif 12 48 52.5 -0.4**
ORIF Oris-en-Rattie 99.39 44 *e*P **Pdif 12 48 54.3 +0.9**
comp=Z,32nm,1.1s
ORIF Oris-en-Rattie 99.39 44 *e*P **Pdif 12 48 54.3 +0.9**
ORIF pmax pmax
comp=Z,32nm,1.1s
ORIF Oris-en-Rattie 99.39 44 *e*P **Pdif 12 48 54.3 +0.9**
comp=Z,32nm,1.1s
MBDF Montbardon 99.85 45 *e*P **Pdif 12 48 54.7 -0.8**
MBDF Montbardon 99.85 45 *e*P **Pdif 12 48 54.7 -0.8**
MBDF Montbardon 99.85 45 *e*P **Pdif 12 48 54.7 -0.8**
SBF Sospel 99.86 46 *e*P **Pdif 12 48 56.1 +0.6**
comp=Z,32nm,1.1s
SBF Sospel 99.86 46 *e*P **Pdif 12 48 56.1 +0.6**
SBF pmax pmax
comp=Z,32nm,1.1s
SBF Sospel 99.86 46 *e*P **Pdif 12 48 56.1 +0.6**
comp=Z,32nm,1.1s
LPL La Plagne 100.20 44 *e*P **Pdif 12 48 58.2 +1.0**
comp=Z,20nm,1.0s
LPL La Plagne 100.20 44 *e*P **Pdif 12 48 58.2 +1.0**
LPL pmax pmax
comp=Z,20nm,1.0s
LPL La Plagne 100.20 44 *e*P **Pdif 12 48 58.2 +1.0**
comp=Z,20nm,1.0s
LPG La Plagne 100.21 44 *e*P **Pdif 12 48 58.4 +1.1**
comp=Z,31nm,1.1s
LPG La Plagne 100.21 44 *e*P **Pdif 12 48 58.4 +1.1**
LPG pmax pmax
comp=Z,31nm,1.1s
LPG La Plagne 100.21 44 *e*P **Pdif 12 48 58.4 +1.1**
comp=Z,31nm,1.1s
PGF Pioggiola 100.26 47 *e*P **Pdif 12 48 57.7 +0.4**
comp=Z,10nm,1.0s
PGF Pioggiola 100.26 47 *e*P **Pdif 12 48 57.7 +0.4**
PGF pmax pmax
comp=Z,10.0nm,1.0s
PGF Pioggiola 100.26 47 *e*P **Pdif 12 48 57.7 +0.4**
comp=Z,10nm,1.0s
CABF La Chapelle 100.33 43 *e*P **Pdif 12 48 57.8 +0.3**
comp=Z,19nm,1.0s
CABF La Chapelle 100.33 43 *e*P **Pdif 12 48 57.8 +0.3**
CABF pmax pmax
comp=Z,19nm,1.0s
CABF La Chapelle 100.33 43 *e*P **Pdif 12 48 57.8 +0.3**
comp=Z,19nm,1.0s
PAGF Fort de Pagny 101.05 41 *e*P **Pdif 12 49 00.8 +0.3**
comp=Z,13nm,1.3s
PAGF Fort de Pagny 101.05 41 *e*P **Pdif 12 49 00.8 +0.3**
comp=Z,13nm,1.3s
CDF Champ du Feu 101.89 42 *e*P **Pdif 12 49 04.3 -0.1**
comp=Z,12nm,1.1s
CDF Champ du Feu 101.89 42 *e*P **Pdif 12 49 04.3 -0.1**
CDF pmax pmax
comp=Z,12nm,1.1s
CDF Champ du Feu 101.89 42 *e*P **Pdif 12 49 04.3 -0.1**
comp=Z,12nm,1.1s
DAVOX Davos/Dischmat 102.73 44 P **Pdif 12 49 08.8 +0.4**
DAVOX Davos/Dischmat 102.73 44 P **Pdif 12 49 08.7 +0.4**
comp=Z,2.9nm,0.8s,baz=252,slow=5.5,SNR=5.8
GERES GERESS Array B 105.93 43 Pdif **Pdif 12 49 22.4 0.0**
GERES PKiKP **PKiKP 12 53 34.5 +0.2**
GERES PP **PP 12 53 43.9 -3.2**
GERES GERESS Array B 105.93 43 Pdiff **Pdif 12 49 22.4 0.0**
comp=Z,0.3nm,0.5s,baz=232,slow=4.8,SNR=4.6
GERES PKiKP **PKiKP 12 53 34.4 +0.2**
comp=Z,0.6nm,0.8s,baz=241,slow=5.2,SNR=5.2
GERES PP **PP 12 53 43.9 -3.2**
comp=Z,0.7nm,0.8s,baz=259,slow=4.6,SNR=5.5
KHC Kasperske Hory 105.97 43 *e*P **Pdif 12 49 23.6 +1.1**
KHC Kasperske Hory 105.97 43 *e*PDIFF **Pdif 12 49 23.6 +1.1**
CLL Collm 106.48 40 *e*PKiKP **PKiKP 12 53 36.0 +1.0**
DPC Dobruska-Polom 108.07 42 *e*P **Pdif 12 49 33.8 +2.0**
DPC Dobruska-Polom 108.07 42 *e*PDIFF **Pdif 12 49 33.8 +2.0**
ILAR Eielson Array 109.04 334 *e*P **pPdif 12 50 01.9 +0.1**
ILAR PKiKP **PKiKP 12 53 39.1 -0.3**
ILAR PKKPbc **PKKPbc 13 04 46.1 -2.9**
ILAR Eielson Array 109.04 334 pPdiff **pPdif 12 50 01.9 +0.1**
comp=Z,0.1nm,0.5s,baz=138,slow=4.1,SNR=4.2
ILAR PKiKP **PKiKP 12 53 39.1 -0.3**
comp=Z,0.5nm,0.9s,baz=182,slow=1.6,SNR=4.9
ILAR PKKPbc **PKKPbc 13 04 46.1 -2.9**
comp=Z,0.9nm,0.9s,baz=282,slow=2.9,SNR=7.7
STKA Stephens Creek 114.08 209 PKP PKPdf 12 53 50.4 +0.2
STKA PKKPbc **PKKPbc 13 04 29.7 -1.7**
STKA Stephens Creek 114.08 209 PKP PKPdf 12 53 50.4 +0.2
comp=Z,1.8nm,1.0s,baz=347,slow=9.2,SNR=2.6
STKA PKKPbc **PKKPbc 13 04 29.7 -1.7**
comp=Z,3.7nm,1.1s,baz=286,slow=4.8,SNR=3.1
AKASG Malin Array Be 116.07 44 PKIKP **PKPdf 12 53 52.6 -0.6**
AKASG 12 54 19.3
AKASG 12 54 57.0
AKASG Malin Array Be 116.07 44 PKP **PKPdf 12 53 52.6 -0.6**
AKASG pPKP pPKPdf 12 54 19.2 -1.0
AKASG PP **PP 12 54 57.0 -2.7**
AKASG Malin Array Be 116.07 44 PKP **PKPdf 12 53 52.6 -0.6**
comp=Z,3.9nm,0.8s,baz=265,slow=3.7,SNR=8.2
AKASG pPKP pPKPdf 12 54 19.3 -1.0
comp=Z,0.6nm,0.4s,baz=271,slow=2.7,SNR=2.1
AKASG PP **PP 12 54 57.0 -2.7**
comp=Z,1.6nm,0.9s,baz=255,slow=6.4,SNR=4.7
FINES FINESS Array B 116.26 32 PKP **PKPdf 12 53 52.9 -0.4**
FINES pPKP pPKPdf 12 54 20.7 +0.4
FINES FINESS Array B 116.26 32 PKP **PKPdf 12 53 52.9 -0.4**
comp=Z,1.9nm,0.9s,baz=339,slow=9.0,SNR=4.4
FINES pPKP pPKPdf 12 54 20.7 +0.4
comp=Z,1.4nm,0.9s,baz=180,slow=3.4,SNR=2.1
BRTR Keskin Array B 116.65 57 PKP **PKPdf 12 53 55.0 0.0**
BRTR pPKP pPKPdf 12 54 22.0 +0.1
BRTR Keskin Array B 116.65 57 PKP **PKPdf 12 53 55.0 0.0**
comp=Z,2.2nm,0.8s,baz=184,slow=3.7,SNR=14
BRTR pPKP pPKPdf 12 54 22.0 +0.1
comp=Z,1.2nm,0.7s,baz=132,slow=1.8,SNR=4.0
ARCES ARCESS Array B 117.04 23 PKP **PKPdf 12 53 54.5 -0.1**
ARCES PKKP **PKKPdf 13 04 45.9 -3.2**
ARCES ARCESS Array B 117.04 23 PKP **PKPdf 12 53 54.5 -0.1**
comp=Z,3.8nm,0.9s,baz=261,slow=3.5,SNR=3.9
ARCES PKKP **PKKPdf 13 04 45.9 -3.2**
comp=Z,2.4nm,0.9s,baz=151,slow=2.1,SNR=6.6
ASF Jabal al Asfar 117.22 66 PKP **PKPdf 12 53 57.3 +1.1**
ASF pPKP **pPKPdf 12 54 24.2 +1.0**
ASF Jabal al Asfar 117.22 66 PKP **PKPdf 12 53 57.3 +1.1**
comp=Z,2.7nm,0.8s,baz=83,slow=4.5,SNR=5.3
ASF pPKP **pPKPdf 12 54 24.2 +1.0**
comp=Z,0.8nm,0.4s,baz=5.0,slow=12,SNR=1.9
ANN Anapa 120.45 52 *i* PKIKP **PKPdf 12 54 01.5 -0.3**
ANN pmax pmax
comp=Z,17nm,1.0s
OBN Obninsk 121.07 40 *d i* PKIKP **PKPdf 12 54 02.4 -0.3**
OBN *e* 12 54 29.6
OBN pmax pmax
comp=Z,40nm,1.7s
KBZ Khabaz 124.19 54 PKIKP **PKPdf 12 54 09.6 +0.6**
KBZ Khabaz 124.19 54 PKP **PKPdf 12 54 09.6 +0.6**
KBZ Khabaz 124.19 54 PKP **PKPdf 12 54 09.6 +0.6**
comp=Z,9.4nm,0.9s,baz=241,slow=2.3,SNR=22
ASAR Alice Springs 124.49 206 PKP **PKPdf 12 54 09.8 -0.7**
ASAR pPKP **pPKPdf 12 54 35.9 -1.6**
ASAR SKP 12 57 35.8
ASAR PKKPbc **PKKPbc 13 03 53.7 +0.4**
comp=Z,9.6nm,0.7s,baz=136,slow=1.9,SNR=141
ASAR pPKP **pPKPdf 12 54 35.9 -1.6**
comp=Z,9.2nm,0.8s,baz=132,slow=1.8,SNR=13
ASAR SKP 12 57 35.8
comp=Z,0.8nm,0.9s,baz=144,slow=3.3,SNR=3.5
ASAR PKKPbc **PKKPbc 13 03 53.7 +0.4**
comp=Z,1.4nm,0.8s,baz=330,slow=3.2,SNR=11
AS31 Alice Springs 124.49 207 *e*PKPdf **PKPdf 12 54 09.7 -0.8**
AS31 *ep*PKPdf **pPKPdf 12 54 36.0 -1.5**
ZEI Tsey 124.81 55 *i* PKIKP **PKPdf 12 54 10.6 0.0**
ZEI pmax pmax
comp=Z,13nm,1.3s
GNI Garni 125.11 59 PKP **PKPdf 12 54 12.5 +1.3**
GNI Garni 125.11 59 PKP **PKPdf 12 54 12.5 +1.3**
comp=Z,3.6nm,0.4s,baz=44,slow=20,SNR=4.7
BILL Bilibino 127.50 337 *d i* PKIKP **PKPdf 12 54 15.0 +0.3**
BILL *i* 12 54 41.7
BILL *e* 12 56 17.5
BILL pmax pmax
comp=Z,61nm,1.2s
WRA Warramunga Arr 127.63 209 PKP **PKPdf 12 54 16.2 -0.3**
WRA pPKP **pPKPdf 12 54 42.3 -1.2**
WRA Warramunga Arr 127.63 209 PKP **PKPdf 12 54 16.2 -0.3**
comp=Z,17nm,0.7s,baz=162,slow=1.7,SNR=102
WRA pPKP **pPKPdf 12 54 42.3 -1.2**
comp=Z,16nm,0.7s,baz=160,slow=1.6,SNR=14
WRAB Tennant Creek 127.63 209 *e*PKIKP **PKPdf 12 54 16.3 -0.2**
WRAB *e* 12 54 42.3
WRAB Tennant Creek 127.63 209 *e*PKPdf **PKPdf 12 54 16.2 -0.2**
WRAB *ep*PKPdf **pPKPdf 12 54 42.3 -1.3**
FITZ Fitzroy Crossi 132.54 200 PKPpre PKPpre 12 54 18.1
FITZ PKP **PKPdf 12 54 25.9 +0.1**
FITZ pPKP pPKPdf 12 54 52.4 -0.4
FITZ SKPbc **SKPbc 12 57 42.7 -1.4**
FITZ Fitzroy Crossi 132.54 200 PKhKP PKPpre 12 54 18.1
comp=Z,1.4nm,0.8s,baz=262,slow=18,SNR=3.0
FITZ PKP **PKPdf 12 54 25.9 +0.1**
comp=Z,5.7nm,0.7s,baz=203,slow=6.7,SNR=21
FITZ pPKP pPKPdf 12 54 52.4 -0.4
comp=Z,8.0nm,0.8s,baz=187,slow=4.0,SNR=6.4
FITZ SKPbc **SKPbc 12 57 42.7 -1.4**
comp=Z,3.2nm,0.9s,baz=190,slow=8.0,SNR=3.0
FITZ Fitzroy Crossi 132.54 200 P **PKPdf 12 54 26.2 +0.4**
baz=11,SNR=10
ARU Arti 133.23 37 *i* PKIKP **PKPdf 12 54 26.7 +0.8**
ARU 12 56 56.0
KNRA Kununurra 133.73 205 P **PKPdf 12 54 27.4 -0.7**
baz=11,SNR=3.7
TIXI Tiksi 134.34 352 *c i* PKIKP **PKPdf 12 54 28.0 +0.5**
TIXI pmax pmax
comp=Z,20nm,2.5s
SEY Seymchan 134.97 334 *i* PKIKP **PKPdf 12 54 29.6 +0.7**
MTN Manton Dam 135.31 210 P PKPdf 12 54 24.8 -6.3
baz=11,SNR=3.2
AB31 Akbulak array 135.75 46 *i* PKIKP **PKPdf 12 54 29.6 -1.2**
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 135.75 46 *e*PKPdf **PKPdf 12 54 31.5 +0.7**
PETK Petropavlovsk- 136.56 320 PKIKP **PKPdf 12 54 32.9 +0.7**
PETK 12 54 59.4
PETK Petropavlovsk- 136.56 320 PKP **PKPdf 12 54 32.9 +0.7**
PETK pPKP **pPKPdf 12 54 59.4 +0.2**
PETK Petropavlovsk- 136.56 320 PKP **PKPdf 12 54 32.9 +0.7**
comp=Z,7.3nm,0.8s,baz=121,slow=7.2,SNR=9.0
PETK pPKP **pPKPdf 12 54 59.4 +0.2**
comp=Z,5.9nm,0.8s,baz=123,slow=5.5,SNR=4.4
BRVK Borovoye 140.78 38 *i* PKIKP **PKPdf 12 54 41.0 +1.1**
BRVK Borovoye 140.78 38 *e*PKPdf **PKPdf 12 54 41.2 +1.3**
BVA0 Borovoye Array 140.85 38 *i* PKIKP **PKPdf 12 54 39.7 -0.4**
BVA0 pmax pmax
comp=Z,2.0nm,1.1s
MMRI Maumere 142.51 200 PKP **PKPdf 12 54 48.7 +4.4**
YAK Yakutsk 142.86 345 *e*PKHKP PKPpre 12 54 38.0
YAK pmax pmax
comp=Z,19nm,1.1s
FAKI Fak Fak 143.28 219 PKP **PKPdf 12 54 46.0 +0.3**
FAKI Fak Fak 143.28 219 P PKPbc 12 54 44.1 +1.1
baz=12,SNR=4.9
KBL Kabul 144.07 68 *e*PKIKP **PKPab 12 54 44.6 +0.2**
KBL *e* 12 55 12.8
KBL Kabul 144.07 68 *e*PKPdf **PKPab 12 54 44.6 +0.2**
KBL *ep*PKPdf **pPKPdf 12 55 12.8 -0.9**
KK31 Karatay Array 144.22 53 *i* PKIKP **PKPab 12 54 45.0 +0.5**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 144.22 53 *e*PKIKP **PKPab 12 54 44.9 +0.4**
KKAR Karatay Array 144.22 53 *e*PKPdf **PKPab 12 54 44.9 +0.4**
KHKI Kahang-Kahang 144.25 189 PKP **PKPab 12 54 45.6 +0.3**
AAI Ambon 144.73 212 PKP **PKPab 12 54 46.5 -0.6**
GUMO Guam 144.97 254 *e*PKPdf **PKPbc 12 54 47.8 -0.1**
GUMO PKP **PKPbc 12 54 48.0 0.0**
GUMO *ep*PKPdf **pPKPdf 12 55 13.2 -2.3**
GUMO pPKP **pPKPdf 12 55 13.6 -2.0**
GUMO Guam 144.97 254 PKP **PKPbc 12 54 48.0 0.0**
comp=Z,112nm,0.8s,baz=139,slow=2.1,SNR=5.4
GUMO pPKP **pPKPdf 12 55 13.6 -2.0**
comp=Z,314nm,1.0s,baz=179,slow=7.5,SNR=8.3
CISI Cisompet, Garu 145.35 176 P **PKPbc 12 54 49.9 +0.6**
baz=13,SNR=4.0
BBSI Bau Bau 145.37 202 PKP **PKPab 12 54 50.8 +1.3**
POO Poona 145.46 97 *j i x* **PKPdf 12 54 47.0 -2.3**
comp=Z,23nm,1.0s
SWI Sorong 145.53 219 PKP **PKPdf 12 54 50.2 +0.7**
SWI Sorong 145.53 219 P **PKPdf 12 54 50.5 +0.9**
baz=13,SNR=6.8
BJII Banjamegara 145.65 179 PKP **PKPab 12 54 53.1 +2.5**
SMRI Semarang 145.93 180 PKP **PKPbc 12 54 51.9 +0.9**
LEM Lembang 146.06 175 P **PKPab 12 54 53.0 +0.8**
baz=13,SNR=16
CGJI Cibinong 146.07 172 PKP **PKPbc 12 54 51.8 +0.4**
NVS Novosibirsk 146.10 28 *j i* PKIKP **PKPdf 12 54 48.9 -0.3**
NVS pmax pmax
comp=N,8.0nm,0.9s
NVS pmax pmax
comp=Z,50nm,0.9s
NVS pmax pmax
comp=E,10.0nm,0.7s
KURK Kurchatov 146.43 37 *c i* PKP2 **PKPdf 12 54 51.3 +1.4**
KURK pmax pmax
comp=Z,105nm,1.7s
KURK Kurchatov 146.43 37 *e*PKPbc **PKPdf 12 54 51.0 +1.1**
EKS2 Erkin-Say 146.66 53 *e*PKP2 **PKPbc 12 54 52.5 0.0**
EKS2 Erkin-Say 146.66 53 *e*PKPbc **PKPbc 12 54 52.5 0.0**
EKS2 Erkin-Say 146.66 53 P **PKPbc 12 54 52.6 0.0**
SNR=24
KAPI Kappang 146.66 197 *e*PKPdf **PKPdf 12 54 52.3 +0.8**
KAPI PKPbc **PKPdf 12 54 52.6 +1.1**
KAPI *ep*PKPdf **pPKPdf 12 55 18.4 -0.1**
KAPI pPKPbc pPKPbc 12 55 18.8 -1.0
KAPI Kappang 146.66 197 PKPbc **PKPdf 12 54 52.6 +1.1**
comp=Z,98nm,0.9s,baz=197,slow=3.2,SNR=30
KAPI pPKPbc pPKPbc 12 55 18.8 -1.1
comp=Z,77nm,0.7s,baz=268,slow=2.4,SNR=9.4
AML Almayashu 146.74 54 P **PKPdf 12 54 52.9 +1.6**
SNR=55
USP Ospenovka 146.99 52 P **PKPdf 12 54 52.6 +1.4**
SNR=24
AAK Ala-Archa 147.17 53 *i* PKP2 **PKPdf 12 54 53.1 +1.4**
AAK Ala-Archa 147.17 53 *e*PKPbc **PKPdf 12 54 53.5 +1.9**
AAK *ep*PKPdf **pPKPdf 12 55 22.2 +3.5**
AAK Ala-Archa 147.17 53 P **PKPdf 12 54 53.4 +1.7**
SNR=56
FRU Bishkek 147.20 52 *j i* PKIKP **PKPdf 12 54 52.0 +0.5**
FRU *i* 12 54 55.0
FRU pmax pmax
comp=Z,247nm,1.8s
CHMS Chumysh 147.25 52 P **PKPdf 12 54 53.0 +1.4**
SNR=15
ZAA0 Zalesovo Array 147.39 28 *e*PKPdf **PKPdf 12 54 51.8 +0.4**
ZAA0 *e*PKPbc **PKPbc 12 54 54.9 +0.9**
ZAA0 *ep*PKPdf **pPKPdf 12 55 20.7 +2.2**
ZALV Zalesovo Beam 147.39 28 PKIKP **PKPdf 12 54 52.3 +0.9**
ZALV 12 55 21.3
ZALV Zalesovo Beam 147.39 28 PKPbc **PKPdf 12 54 52.3 +0.9**
ZALV pPKPbc **pPKPbc 12 55 21.3 +0.5**
ZALV Zalesovo Beam 147.39 28 PKPbc **PKPdf 12 54 52.3 +0.9**
comp=Z,98nm,0.8s,baz=298,slow=3.2,SNR=105
ZALV pPKPbc **pPKPbc 12 55 21.3 +0.5**
comp=Z,46nm,0.6s,baz=306,slow=3.2,SNR=7.4
KBK Karagaybulak 147.49 52 P **PKPdf 12 54 53.9 +1.7**
SNR=35
SPSI Sidrap Palu 147.66 198 PKP **PKPbc 12 54 55.9 -0.1**
YSS Yuzh-Sakhalins 147.78 316 *e*PKP2 **PKPbc 12 54 55.0 -0.3**
YSS pmax pmax
comp=Z,40nm,1.1s
TKM2 Tokmak 2 147.86 52 PKIKP **PKPdf 12 54 53.1 +0.2**
TKM2 pmax pmax
comp=Z,59nm,1.0s
TKM2 Tokmak 2 147.86 52 *e*PKPdf **PKPdf 12 54 53.8 +0.9**
TKM2 Tokmak 2 147.86 52 P **PKPdf 12 54 53.9 +1.0**
SNR=58
KZA Kyzart 147.86 53 P **PKPdf 12 54 54.8 +1.6**
SNR=29
KSI Kapahiang 148.43 165 PKP **PKPbc 12 54 58.4 +0.3**
ULHL Ulahol 148.52 53 P **PKPdf 12 54 55.6 +1.7**
SNR=27
CLNS Chul'man 148.61 345 *e*PKP2 **PKPbc 12 54 56.7 -0.5**
CLNS pmax pmax
comp=Z,29nm,1.0s
CLNS pmax pmax
comp=N,8.0nm,1.1s
CLNS pmax pmax
comp=E,7.0nm,1.3s
KSH Kashi 149.04 58 PKPbc **PKPdf 12 54 55.8 +1.0**
KSH pPKP **pPKPdf 12 55 22.3 +0.4**
KSH *es*PKP 12 55 33.0
KSH *e*PKS **PKSdf 12 58 30.3 +0.5**
KSH *e*SKS **SKSdf 13 01 53.8 -0.4**
KSH AMB AMB
comp=Z,430nm,5.6s
KSH LR LR
comp=N,110nm,5.9s
KSH LR LR
comp=E,130nm,4.3s
KSH LR LR
comp=Z,120nm,5.0s
ASAJ Asahikawa 149.04 311 *e*PKPbc **PKPbc 12 54 59.0 +0.3**
ASAJ *ep*PKPdf **pPKPbc 12 55 25.1 -0.4**
ASAJ Asahikawa 149.04 311 PKPbc **PKPbc 12 54 59.3 +0.6**
comp=Z,21nm,1.0s,baz=265,slow=9.3,SNR=6.3
ASAJ pPKPbc **pPKPbc 12 55 25.2 -0.4**
comp=Z,22nm,0.8s,baz=306,slow=9.5,SNR=4.5
HYB Hyderabad 149.17 102 *i* PKP **PKPdf 12 54 55.0 -0.5**
HYB *e* 12 54 59.0
HYB *ep*PKP **pPKPdf 12 55 25.0 +2.4**
HYB *es*PKP 12 55 29.5
BBKI Banjar Baru 149.18 189 PKP **PKPbc 12 54 59.8 -0.1**
LUWI Luwuk 149.43 205 PKP **PKPbc 12 55 01.4 +0.9**
MK31 Makanchi Array 150.57 41 *e*PKIKP **PKPdf 12 54 57.1 +0.3**
MK31 Makanchi Array 150.57 41 *e*PKPdf **PKPdf 12 54 57.1 +0.3**
MK31 *e*PKPbc **PKPbc 12 55 02.6 +0.3**
MKAR Makanchi Array 150.57 41 PKIKP **PKPdf 12 54 57.0 +0.2**
MKAR 12 55 29.3
MKAR Makanchi Array 150.57 41 PKP **PKPdf 12 54 57.0 +0.2**
MKAR PKPbc **PKPbc 12 55 02.7 +0.3**
MKAR pPKPbc **pPKPbc 12 55 29.3 +0.1**
MKAR Makanchi Array 150.57 41 PKP **PKPdf 12 54 57.0 +0.2**
comp=Z,3.3nm,0.9s,baz=321,slow=1.6,SNR=22
MKAR PKPbc **PKPbc 12 55 02.7 +0.3**
comp=Z,42nm,0.8s,baz=322,slow=2.2,SNR=204
MKAR pPKPbc **pPKPbc 12 55 29.3 +0.1**
comp=Z,19nm,0.6s,baz=296,slow=2.0,SNR=8.8
HABR Khabarovsk 151.35 324 PKIKP **PKPdf 12 54 57.1 -0.8**
HABR *e* 12 55 12.1
HABR *e* 12 55 22.3
HABR 12 55 36.6
HABR *e* 12 58 43.6
HABR *e* 13 01 56.5
HABR *e*PPP PPP 13 02 08.1
HABR *e*SS SS 13 18 01.6 +2.2
HABR *e*SSS SSS 13 23 46.3
HABR pmax pmax
comp=Z,98nm,1.5s
HABR pmax pmax
comp=E,25nm,1.5s
HABR pmax pmax
comp=N,24nm,1.5s
GSI Gunungsitoli 151.50 153 PKP **PKPbc 12 55 06.7 +1.2**
BKNI Bangkinang 151.83 160 PKP **PKPbc 12 55 05.5 -0.7**
KLR Kul'dur 152.47 329 *e*PKIKP **PKPdf 12 54 55.8 -3.8**
KLR *e* 12 55 28.8
PSI Prapat 153.40 154 PKPbc **PKPbc 12 55 09.5 -0.4**
PSI pPKPbc **pPKPbc 12 55 35.9 -0.9**
PSI Prapat 153.40 154 PKPbc **PKPbc 12 55 09.5 -0.4**
comp=N,14nm,0.7s,baz=212,slow=4.3,SNR=5.9
PSI pPKPbc **pPKPbc 12 55 35.9 -0.9**
comp=N,12nm,0.7s,baz=178,slow=4.3,SNR=3.2
KSM Kuching 154.40 180 *e*PKPab **PKPab 12 55 26.7 +0.6**
MJAR Matsushiro Arr 154.59 298 PKP **PKPdf 12 55 03.0 -0.1**
MJAR PKPbc **PKPbc 12 55 11.7 +0.1**
MJAR PKPab **PKPab 12 55 27.8 +1.2**
MJAR pPKPbc **pPKPbc 12 55 38.0 -0.5**
MJAR pPKPab **pPKPab 12 55 52.5 -0.2**
MJAR Matsushiro Arr 154.59 298 PKP **PKPdf 12 54 03.0 -0.1**
comp=N,2.2nm,0.8s,baz=207,slow=1.4,SNR=5.4
MJAR PKPbc **PKPbc 12 55 11.7 +0.1**
comp=N,5.7nm,1.0s,baz=102,slow=1.2,SNR=8.5
MJAR PKPab **PKPab 12 55 27.8 +1.2**
comp=N,5.3nm,0.9s,baz=87,slow=1.3,SNR=7.1
MJAR pPKPbc **pPKPbc 12 55 38.0 -0.5**
comp=N,1.4nm,0.7s,baz=35,slow=40,SNR=3.8
MJAR pPKPab **pPKPab 12 55 52.5 -0.2**
comp=N,7.4nm,0.8s,baz=135,slow=2.1,SNR=5.8
MAT Matsushiro 154.59 298 PKP **PKPdf 12 55 03.2 +0.1**
MOY Mondy 154.60 14 *e*PKIKP **PKPdf 12 55 04.3 +1.6**
MOY pmax pmax
comp=Z,35nm,3.1s
TLY Talaya 155.07 10 *e*PKIKP **PKPdf 12 55 04.9 +1.7**
TLY *e* 12 55 29.6
TLY pmax pmax
comp=Z,19nm,1.4s
WMQ Urumqi 155.39 42 *e*PKP **PKPdf 12 55 02.4 -1.6**
WMQ pPKP **PKPab 12 55 29.3 -0.6**
WMQ sPKP 12 55 39.8
WMQ SKS **SKSdf 13 01 57.4 -4.2**
WMQ SKKS **SKKSac 13 05 45.8 -1.4**
WMQ SS **SS 13 18 43.6 -0.4**
WMQ LR LR
comp=N,89nm,28.4s
WMQ LR LR
comp=E,63nm,28.0s
WMQ LR LR
comp=Z,79nm,34.8s
USRK Ussuriysk Arra 155.66 320 PKP **PKPdf 12 55 05.0 +0.8**
comp=Z,5.1nm,1.1s,baz=206,slow=8.3,SNR=4.1
USRK PKPab **PKPab 12 55 30.9 0.0**
comp=Z,4.0nm,1.0s,baz=79,slow=3.0,SNR=4.6
IPM Ipoh 155.73 157 *e*PKPdf **PKPdf 12 55 05.7 +0.4**
PYUN Piuthan 155.85 82 *e*P **PKPdf 12 55 05.6 +0.3**
comp=Z,58nm,1.0s
ZAK Zakamensk 156.26 11 *j i* PKIKP **PKPdf 12 55 06.2 +1.2**
ZAK *e* 12 55 34.2
ZAK *e* 12 59 08.1
ZAK pmax pmax
comp=Z,6.0nm,1.3s
KOLN Koldanda 156.36 82 *e*P **PKPdf 12 55 06.1 +0.1**
DANN Dangsing 156.54 81 *e*P **PKPdf 12 55 06.9 +0.6**
comp=Z,108nm,0.9s
MDJ Mudanjiang 156.72 323 PKP **PKPdf 12 55 06.0 +0.4**
MDJ PP **PP 12 59 18.3 +4.6**
MDJ AMB AMB
comp=Z,110nm,6.4s
MDJ LR LR
comp=N,39nm,31.6s
MDJ LR LR
comp=E,28nm,25.7s
MDJ LR LR
comp=Z,60nm,28.6s
DMN Daman 157.68 83 *e*P **PKPdf 12 55 08.0 +0.3**
KKN Kakani 157.84 83 *e*P **PKPdf 12 55 08.5 +0.6**
PKIN Phulchoki 157.93 83 *e*P **PKPdf 12 55 08.8 +0.8**
PKI Pulchoki 157.94 83 *e*P **PKPdf 12 55 08.2 +0.1**
GUN Gumba 158.38 83 *e*P **PKPdf 12 55 08.9 +0.2**
RAMN Ramite 158.94 85 *e*P **PKPdf 12 55 09.8 +0.6**
SONM Songino Array 159.20 7 PKP **PKPdf 12 55 09.5 +0.8**
SONM pPKP **pPKPdf 12 55 36.1 +0.2**
SONM PKPab **PKPab 12 55 47.2 +1.1**
SONM pPKPab **pPKPab 12 56 12.7 +0.4**
SONM PP **PP 12 59 27.4 +0.6**
SONM Songino Array 159.20 7 PKP **PKPdf 12 55 09.5 +0.8**
comp=Z,8.4nm,0.9s,baz=353,slow=0.5,SNR=48
SONM pPKP **pPKPdf 12 55 36.1 +0.2**
comp=Z,4.2nm,1.0s,baz=352,slow=0.6,SNR=4.6
SONM PKPab **PKPab 12 55 47.2 +1.1**
comp=Z,4.3nm,0.8s,baz=325,slow=4.7,SNR=9.6
SONM pPKPab **pPKPab 12 56 12.7 +0.4**
comp=Z,3.6nm,0.8s,baz=330,slow=4.7,SNR=4.0

SONM				PP	**PP**	12 59 27.3	+0.6		
	comp=Z,2.4nm,1.1s,baz=341,slow=3.5,SNR=5.5								
ULN	**Ulaanbaatar**	**159.24**	**6**	*e*PKPdf	**PKPdf**	12 55 09.8	+1.0		
ULN	**Ulaanbaatar**	**159.24**	**6**	PKP	**PKPdf**	12 55 09.7	+0.9		
CN2	**Changchun**	**159.40**	**327**	*e*PKP	**PKPdf**	12 55 08.9	0.0		
ODAN	**Odare**	**159.63**	**86**	*e*P	**PKPdf**	12 55 10.4	+0.4		
	comp=Z,41nm,0.9s								
TAPN	**Taplejung**	**159.96**	**84**	*e*P	**PKPdf**	12 55 10.5	0.0		
	comp=Z,36nm,1.2s								
KSRS	**Korea Array**	**161.95**	**309**	PKP	**PKPdf**	12 55 11.6	-0.2		
	comp=Z,3.5nm,0.9s,baz=118,slow=0.5,SNR=11								
KSRS				pPKP	**pPKPdf**	12 55 38.9	-0.1		
	comp=Z,4.5nm,1.0s,baz=77,slow=1.2,SNR=6.9								
KSRS				PKPab	**PKPab**	12 56 00.2	+1.8		
	comp=Z,2.7nm,0.9s,baz=72,slow=4.1,SNR=4.7								
KSRS				pPKPab	**pPKPab**	12 56 25.0	+0.5		
	comp=Z,2.0nm,0.9s,baz=76,slow=5.3,SNR=3.5								
KSAR	**Wonju Array Be**	**161.98**	**309**	PKP	**PKPdf**	12 55 11.6	-0.3		
KSAR				pPKP	**pPKPdf**	12 55 38.9	-0.2		
KSAR				PKPab	**PKPab**	12 56 00.2	+1.6		
KSAR				pPKPab	**pPKPab**	12 56 25.0	+0.4		
GTA	**Gaotai**	**165.05**	**33**	PKP	**PKPdf**	12 55 16.3	+1.4		
GTA				pPKP	**pPKPdf**	12 55 43.3	+1.2		
GTA				sPKP		12 55 53.8			
GTA				PKPab	**PKPab**	12 56 14.9	+2.8		
GTA				PKS	**PKSdf**	12 58 47.9	+0.1		
GTA				PP	**PP**	13 00 02.4	+4.0		
GTA				SKS	**SKSdf**	13 02 08.5	-1.9		
GTA				SKKS	**SKKSac**	13 06 38.3	+0.8		
GTA				SS	**SS**	13 20 25.4	+0.3		
GTA				AMB	AMB				
	comp=Z,73nm,5.0s								
GTA				LR	LR				
	comp=N,56nm,16.6s								
GTA				LR	LR				
	comp=E,56nm,17.6s								
GTA				LR	LR				
	comp=Z,87nm,16.6s								
BJI	**Beijing**	**166.30**	**340**	PKP	**PKPdf**	12 55 16.1	+0.4		
BJI				PP	**PP**	13 00 06.8	+2.5		
BJI				AMB	AMB				
	comp=Z,69nm,6.2s								
BJI				LR	LR				
	comp=Z,68nm,25.0s								
HHC	**Hu-ho-hao-te**	**166.36**	**356**	*e*PKP	**PKPdf**	12 55 12.8	-3.1		
HHC				pPKP	**pPKPdf**	12 55 38.8	-4.3		
HHC				sPKP		12 55 48.3			
HHC				PKS	**PKSdf**	12 58 44.6	-4.1		
HHC				PP	**PP**	13 00 05.6	+1.0		
HHC				SKKS		13 06 41.8			
HHC				SS	**SS**	13 20 38.6	+1.4		
HHC				AMB	AMB				
	comp=Z,210nm,8.8s								
HHC				LR	LR				
	comp=N,200nm,19.6s								
HHC				LR	LR				
	comp=E,310nm,17.2s								
HHC				LR	LR				
	comp=Z,270nm,19.6s								
CMAR	**Chiang Mai Arr**	**166.41**	**128**	PKP	**PKPdf**	12 55 16.9	+0.5		
CMAR				pPKP	**pPKPdf**	12 55 43.3	-0.3		
CMAR				PKPab	**PKPab**	12 56 17.9	-0.6		
CMAR				pPKPab	**pPKPab**	12 56 44.1	-0.5		
CMAR				PP	**PP**	13 00 05.3	-0.7		
CMAR	**Chiang Mai Arr**	**166.41**	**128**	PKP	**PKPdf**	12 55 16.9	+0.5		
	comp=Z,4.1nm,1.0s,baz=252,slow=2.0,SNR=23								
CMAR				pPKP	**pPKPdf**	12 55 43.3	-0.3		
	comp=Z,0.4nm,0.3s,baz=259,slow=2.3,SNR=2.7								
CMAR				PKPab	**PKPab**	12 56 17.9	-0.6		
	comp=Z,2.2nm,0.9s,baz=249,slow=3.4,SNR=4.9								
CMAR				pPKPab	**pPKPab**	12 56 44.1	-0.5		
	comp=Z,1.2nm,0.8s,baz=226,slow=3.9,SNR=2.4								
CMAR				PP	**PP**	13 00 05.3	-0.7		
	comp=Z,0.6nm,0.7s,baz=226,slow=4.8,SNR=4.0								
CHTO	**Chiang Mai**	**166.65**	**126**	*e*PKIKP	**PKPdf**	12 55 16.9	+0.3		
CHTO				*e*		12 56 18.4			
CHTO	**Chiang Mai**	**166.65**	**126**	*e*PKPdf	**PKPdf**	12 55 16.9	+0.3		
CHTO				*e*PKPab	**PKPab**	12 56 18.4	-1.2		
LZH	**Lanzhou**	**169.61**	**30**	*e*PKP	**PKPdf**	12 55 19.5	+1.1		
LZH				sPKP		12 56 54.0			
LZH				PKPab	**PKPab**	12 56 33.0	+0.6		
KMI	**Kunming**	**172.93**	**106**	PKP	**PKPdf**	12 55 21.5	+1.1		
KMI				pPKP	**pPKPdf**	12 55 46.9	-0.7		
CD2	**Chengdu**	**173.23**	**56**	PKP	**PKPdf**	12 55 18.6	-1.5		
CD2				pPKP	**pPKPdf**	12 55 45.3	-2.1		
CD2				sPKP		12 55 55.5			
CD2				PKPab	**PKPab**	12 56 47.9	-0.7		
CD2				PKS	**PKSdf**	12 58 49.4	-3.1		
CD2				PP	**PP**	13 00 40.3	-0.1		
CD2				SKS	**SKSdf**	13 02 10.4	-4.2		
CD2				SKKS	**SKKSac**	13 07 16.3	-1.7		
CD2				SS	**SS**	13 21 43.5	-4.3		
CD2				AMB	AMB				
	comp=Z,180nm,6.5s								
GYA	**Guiyang**	**176.70**	**103**	PKP	**PKPdf**	12 55 20.0	-1.4		
GYA				pPKP	**pPKPdf**	12 55 46.9	-1.7		
GYA				sPKP		12 55 57.3			
GYA				PKPab	**PKPab**	12 57 03.8	-0.5		
GYA				PKS	**PKSdf**	12 58 51.0	-2.7		
GYA				PP	**PP**	13 00 56.3	-1.5		
GYA				SKKS		13 07 32.1			
GYA				SS	SS	13 22 15.6	-6.7		
GYA				AMB	AMB				
	comp=Z,130nm,8.2s								
GYA				LR	LR				
	comp=N,150nm,22.6s								
GYA				LR	LR				
	comp=E,120nm,23.3s								
GYA				LR	LR				
	comp=Z,190nm,24.2s								

MAN 17 12:46:29, 11°.26N×124°.53E, *h*5km, *mb*4.5, ML3.4, MS3.3, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.22**	**160**	*e*P	Pg	12 46 34.8	+1.5
OCLP				*e*S	Sg	12 46 45.7	+10
PLP	**Palo**	**0.45**	**102**	*i*P	Pg	12 46 38.0	+0.4
PLP				*e*S	Sg	12 46 44.0	+0.5
LLP	**Lapu-Lapu**	**1.09**	**211**	*e*P	Pg	12 46 49.8	-0.1
LLP				*e*S	Sn	12 47 06.5	+0.2
MSLP	**Maasin**	**1.16**	**164**	*e*P	Pg	12 46 51.3	0.0
MSLP				*e*S	Sn	12 47 09.5	+1.3
CNP	**Catarman**	**1.25**	**6**	*e*P	Pg	12 46 52.8	-0.3

GUC 17 12:48:46.7±0.8, 27°.36S×69°.86W, *h*87km±8km, ML3.7, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	**0.44**	**271**	*i*P	Pn	12 49 00.5	-0.1
CPCH				*i*S	Sn	12 49 11.7	+0.7
CPCH				AML	AML	12 49 13.8	
	comp=N,16μm,0.1s						
CDCH	**Caldera**	**0.91**	**289**	*e*P	Pn	12 49 05.3	+0.3
CDCH				*i*S	Sn	12 49 19.3	+0.5
LCO	**Las Campanas**	**1.80**	**204**	*e*P	Pn	12 49 17.7	+1.1
LCO				*i*S	Sn	12 49 40.5	+1.2
LCO				AML	AML	12 49 43.4	
	comp=E,503nm,0.2s						
TLL	**Tololo Astrono**	**2.91**	**196**	*e*P	Pn	12 49 32.1	+0.7
TLL				*e*S	Sn	12 50 06.5	+0.8
TLL				AML	AML	12 50 36.1	
	comp=N,93nm,0.5s						
ANCH	**Antofagasta**	**3.70**	**352**	*i*P	Pn	12 49 38.1	-3.6
ANCH				*i*S	Sn	12 50 20.1	-4.0
CEN1	**Los Morros**	**3.97**	**355**	*e*P	Pn	12 49 40.1	-5.4
CEN1				*e*S	Sn	12 50 23.5	-7.5

MEX 17 12:49:04.7±0.5, 18°.31N×100°.61W, *h*54km±4km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.25**	**97**	*e*P	Pn	12 49 12.2	-1.7
ARIG				*e*S	Sn	12 49 18.7	-1.7
PLIG	**Platanillo**	**1.06**	**85**	*i*P	Pn	12 49 22.0	-1.4
PLIG				*i*S	Sn	12 49 35.1	-2.2
CAIG	**El Cayaco**	**1.30**	**165**	*i*P	Pn	12 49 25.1	-1.4
CAIG				*i*S	Sn	12 49 40.6	-2.3
UTMO	**Huajuapan**	**2.71**	**100**	*i*P	Pn	12 49 44.7	-1.5
UTMO				*i*S	Sn	12 50 16.2	-1.8

MEX 17 13:01:59.4±0.8, 15°.42N×93°.22W, *h*94km±8km, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.29**	**1**	*i*P	Pn	13 02 11.9	-1.4
PCIG				*e*S	Sn	13 02 22.1	-1.4
THIG		**1.05**	**119**	*i*P	Pn	13 02 18.1	-1.8
THIG				*i*S	Sn	13 02 33.7	-1.7
CCIG	**Comitan**	**1.35**	**50**	*i*P	Pn	13 02 23.1	-0.6
CCIG				*i*S	Sn	13 02 40.3	-1.9
TGIG		**1.36**	**4**	*i*P	Pn	13 02 22.2	-1.5
TGIG				*e*S	Sn	13 02 40.0	-2.0
HUIG	**Huatulco**	**2.80**	**278**	*i*P	Pn	13 02 41.9	-0.5
HUIG				*i*S	Sn	13 03 13.9	-1.6

CASC 17 13:26:13.3±3.5, 8°.47N×82°.87W, *h*0km±9km, MD4.1, 1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.34**	**302**	*e*P	Pg	13 26 20.8	+0.9
TBS2		**0.39**	**34**	*e*P	Pb	13 26 22.8	-0.4
TBS2				*e*S	Sb	13 26 31.7	+1.7
BUS	**Buena Vista**	**1.39**	**321**	*e*P	Pg	13 26 38.4	-2.1
BUS				*e*S	Sg	13 26 58.9	0.0
QCR	**Quepos**	**1.59**	**307**	*e*P	Pn	13 26 41.2	-1.5
QCR				*e*S	Sn	13 27 04.0	0.0
LAJ	**Bijagual**	**1.85**	**318**	*e*P	Pb	13 26 47.9	-0.5
LAJ				*e*S	Sg	13 27 19.1	+5.7
SJS	**Escuela Geolog**	**1.87**	**321**	*e*P	Pn	13 26 47.5	+0.7
SJS				*e*S	Sg	13 27 14.1	+0.4
CGA2	**Cerro Gallo 2**	**2.20**	**314**	*e*P	Pn	13 26 52.2	+1.0
CGA2				*e*S	Sb	13 27 22.4	+0.3
FORC	**Fortuna**	**2.66**	**318**	*e*P	Pn	13 26 58.6	+1.1
BCIP	**Isla Barro Col**	**3.08**	**77**	*e*P	Pn	13 27 04.3	+1.1
BCIP				*e*S	Sn	13 27 42.7	+1.9

IDC 17 13:26:25.3±6.3, 3°.24S×149°.83E, *h*0km, *mb*3.3/3, *mb*1 3.5/3, *mb*1*mx*3.3/18, *mbtmp*3.4/3, Error ellipse: s-maj=199.6km s-min=33.4km az=101.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.46**	**221**	P	P	13 31 25.0	-1.3
	1.2nm,0.8s,baz=46,slow=10,SNR=5.6						
ASAR	**Alice Springs**	**25.49**	**216**	P	P	13 31 56.5	+0.9
	0.4nm,0.8s,baz=50,slow=9.7,SNR=4.9						
MKAR	**Makanchi Array**	**77.21**	**319**	P	P	13 38 21.5	+0.1
	0.2nm,0.6s,baz=97,slow=9.3,SNR=3.2						

IDC 17 13:28:06.0±3.7, 3°.34S×148°.70E, *h*0km, *mb*3.9/3, *mb*1 4.1/3, *mb*1*mx*3.6/18, *mbtmp*3.9/3, *MS*3.3/3, *Ms*1 3.4/3, *ms*1*mx*2.9/31, Error ellipse: s-maj=114.6km s-min=47.1km az=109.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.22**	**194**	LR	LR	13 31 36.7	
	comp=Z,200nm,22.0s,baz=37,slow=34						
WRA	**Warramunga Arr**	**21.65**	**219**	P	P	13 32 57.8	-0.5
	3.7nm,0.8s,baz=42,slow=10,SNR=16						
ASAR	**Alice Springs**	**24.76**	**214**	P	P	13 33 29.6	0.0
	0.7nm,0.7s,baz=52,slow=8.0,SNR=10						
FITZ	**Fitzroy Crossi**	**26.94**	**235**	P	P	13 33 49.8	+0.5
	5.0nm,0.8s,baz=51,slow=9.2,SNR=6.5						
STKA	**Stephens Creek**	**29.17**	**192**	LR	LR	13 45 26.8	
	comp=Z,140nm,21.9s,baz=28,slow=96						
CMAR	**Chiang Mai Arr**	**53.56**	**296**	LR	LR	14 00 23.6	
	comp=Z,24nm,20.2s,baz=245,slow=36						
TORD	**Torodi Ar. Bea**	**145.97**	**289**	PKPbc	PKPdf	13 47 47.9	-0.3
	0.3nm,0.7s,baz=358,slow=1.4,SNR=3.1						

IDC 17 13:30:27.3±7.4, 3°.52S×148°.63E, *h*0km, *mb*3.7/4, *mb*1 3.9/4, *mb*1*mx*3.6/18, *mbtmp*3.7/4, *MS*3.6/6, *Ms*1 3.6/6, *ms*1*mx*3.2/32, Error ellipse: s-maj=155.8km s-min=40.7km az=85.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**12.68**	**118**	LR	LR	13 36 41.8	
	comp=Z,86nm,20.4s,baz=304,slow=30						
WRA	**Warramunga Arr**	**21.46**	**219**	P	P	13 35 16.6	-1.0
	1.9nm,0.8s,baz=43,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**24.57**	**214**	P	P	13 35 48.7	-0.5
	1.1nm,0.8s,baz=48,slow=8.5,SNR=4.4						
DZM	**Mont Dzumac**	**25.27**	**138**	LR	LR	13 44 25.7	
	comp=Z,265nm,19.2s,baz=37,slow=33						
FITZ	**Fitzroy Crossi**	**26.77**	**236**	P	P	13 36 10.8	+1.6
	4.4nm,0.9s,baz=62,slow=8.7,SNR=5.2						
FITZ				LR	LR	13 47 33.5	
	comp=Z,178nm,21.7s,baz=58,slow=38						
MJAR	**Matsushiro Arr**	**41.03**	**347**	LR	LR	13 52 23.8	
	comp=Z,72nm,18.6s,baz=160,slow=32						
NWAO	**Narrogin (SRO)**	**41.45**	**221**	LR	LR	13 54 31.0	
	comp=Z,144nm,21.4s,baz=27,slow=35						
CMAR	**Chiang Mai Arr**	**53.58**	**296**	P	P	13 39 50.2	-0.4
	0.5nm,0.8s,baz=96,slow=4.8,SNR=4.4						
PETK	**Petropavlovsk-**	**56.94**	**7**	LR	LR	14 05 18.9	
	comp=Z,22nm,19.0s,baz=210,slow=37						

IDC 17 13:38:34.3±16.0, 16°.48S×174°.63W, *h*0km, *mb*4.1/5, *mb*1 4.3/5, *mb*1*mx*3.8/21, *mbtmp*4.1/5, Error ellipse: s-maj=312.3km s-min=151.3km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.25**	**258**	P	P	13 45 48.5	+0.5
	1.3nm,0.4s,baz=75,slow=9.4,SNR=2.7						
STKA	**Stephens Creek**	**42.47**	**241**	P	P	13 46 31.9	+0.5
	0.8nm,0.4s,baz=11,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**48.45**	**258**	P	P	13 47 18.4	-0.6
	1.2nm,0.5s,baz=95,slow=7.3,SNR=29						
ASAR	**Alice Springs**	**48.65**	**253**	P	P	13 47 19.9	-0.6
	6.6nm,0.6s,baz=87,slow=8.6,SNR=100						
FITZ	**Fitzroy Crossi**	**56.83**	**259**	P	P	13 48 21.0	0.0
	1.0nm,0.7s,baz=128,slow=12,SNR=6.1						

*IDC **17** 14:03:35.8±1.6, 9°.67S×112°.55E, h0km, mb3.5/5, mb1 3.7/7, mb1mx3.6/23, mbtmp3.6/7, ML3.5/2, Error ellipse: s-maj=56.5km s-min=20.2km az=48.0*
*ISCJB **17** 14:03:42.7±1.0, 9°.64S±0°.08×112°.79E±0°.05, h69km±11km, mb3.5/5, Error ellipse: s-maj=13.7km s-min=6.7km az=15.1*
*DJA **17** 14:03:44.5±1.1, 10°.5S±5°×11°.3E±°, h29km±12km, M3.8/10, MLv3.8/10*

ISC 17 14:03:43.1±1.6, 9°.7S±0°.1×112°.80E±0°.05, *h*53km±17km, *n*19, σ*t*²29/25, *mb*3.7/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.53**	**25**	P	**Pn**	**14 04 07.1**	**-1.0**
GMJI				S	**Sn**	**14 04 25.0**	**-1.8**
KRKI	**Karangkates**	**1.54**	**347**	P	**Pn**	**14 04 08.6**	**+0.4**
KRKI				S	**Sn**	**14 04 29.7**	**+2.6**
PWJI	**Pagerwojo**	**1.91**	**329**	P	**Pn**	**14 04 13.2**	**-0.1**
PWJI				S	**Sn**	**14 04 34.0**	**-2.1**
BLJI	**Banyuglugur**	**2.07**	**23**	P	**Pn**	**14 04 16.7**	**+1.2**
BLJI				S	**Sn**	**14 04 41.0**	**+0.9**
PCJI	**Pacitan**	**2.17**	**312**	P	**Pn**	**14 04 17.0**	**+0.2**
PCJI				S	**Sn**	**14 04 42.0**	**-0.5**
SJI	**Sawahan**	**2.17**	**332**	P	**Pn**	**14 04 17.8**	**+0.8**
IGBI	**Denpasar**	**2.47**	**70**	P	**Pn**	**14 04 22.1**	**+1.2**
WOJI	**Wonogiri, Jawa**	**2.59**	**314**	P	**Pn**	**14 04 23.3**	**+0.6**
UGM	**Wanagama**	**2.84**	**308**	P	**Pn**	**14 04 27.1**	**+1.0**
UGM				S	**Sn**	**14 04 59.7**	**+0.5**
KMMI	**Kalianget**	**2.85**	**24**	P	**Pn**	**14 04 27.7**	**+1.6**
SRBI	**Singaraja**	**2.86**	**57**	P	**Pn**	**14 04 27.5**	**+1.2**
KHKI	**Kahang-Kahang**	**3.06**	**65**	P	**Pn**	**14 04 29.0**	**-0.1**
KAPI	**Kappang**	**8.30**	**57**	Pn	**Pn**	**14 05 39.7**	**-1.3**
	0.5nm,0.3s,baz=44,slow=21,SNR=1.8						
FITZ	**Fitzroy Crossi**	**15.02**	**125**	Pn	**Pn**	**14 07 10.6**	**-1.6**
	0.2nm,0.3s,baz=316,slow=13,SNR=6.8						
FITZ				Sn	Sn	14 09 46.5	-11
	0.1nm,0.3s,baz=308,slow=22,SNR=2.0						
WRA	**Warramunga Arr**	**23.17**	**119**	P	**P**	**14 08 46.2**	**+0.8**
	0.5nm,0.5s,baz=291,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**24.50**	**127**	P	**P**	**14 08 59.5**	**+1.8**
	1.1nm,0.7s,baz=304,slow=8.9,SNR=27						
SONM	**Songino Array**	**57.53**	**355**	P	**P**	**14 13 27.1**	**-0.1**
	0.2nm,0.3s,baz=181,slow=8.5,SNR=3.7						
MKAR	**Makanchi Array**	**62.46**	**337**	P	**P**	**14 14 00.7**	**-0.2**
	0.3nm,0.4s,baz=158,slow=8.1,SNR=6.4						
ZALV	**Zalesovo Beam**	**67.66**	**343**	P	**P**	**14 14 33.4**	**-1.0**
	0.4nm,0.4s,baz=128,slow=8.4,SNR=3.8						

KRSC 17 14:15:11.4±0.7, 55°.90N×164°.61E, *h*11km±10km, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.04**	**131**	P	Pb	14 15 30.6	-0.8
BKI				*i*S	Sg	14 15 44.2	-0.8
KBTR	**Krutoberegovo**	**1.05**	**288**	P	Pb	14 15 30.8	-0.8
KBTR				*i*S	Sg	14 15 44.8	-0.5
KBG	**Krutoberegovo**	**1.13**	**289**	P	Pb	14 15 32.0	-0.8
KBG				*i*S	Sb	14 15 47.0	-0.5
MKZ	**Mys Kozlova**	**2.13**	**232**	P	Pn	14 15 47.1	+0.3
MKZ				*i*S	Sn	14 16 12.7	-0.5
BZGR	**Bezymyannyi-Gr**	**2.20**	**273**	P	Pn	14 15 49.2	+1.1
KLY	**Klyuchi**	**2.25**	**282**	P	Pn	14 15 48.0	-0.6
KLY				*i*S	Sn	14 16 15.3	-1.1
BZWR	**Bezymyannyi-We**	**2.32**	**273**	P	Pn	14 15 50.9	+1.2
BZWR				*i*S	Sn	14 16 19.1	+0.8
BZMR	**Bezymyannaya**	**2.32**	**273**	P	Pn	14 15 50.9	+1.2
BZMR				*i*S	Sn	14 16 19.0	+0.7
KIRR	**Kirishev**	**2.40**	**273**	P	Pn	14 15 52.1	+1.3
KIRR				*i*S	Sn	14 16 21.8	+1.4
KPT	**Kopyto**	**2.47**	**273**	P	Pn	14 15 53.2	+1.5
KMNR	**Kamenistaya**	**2.47**	**268**	P	Pn	14 15 53.2	+1.5
TUMR	**Tumrok**	**2.61**	**258**	P	Pn	14 15 55.1	+1.5
KOZ	**Kozyrevsk**	**2.67**	**275**	P	Pn	14 15 56.3	+2.0
KOZ				*i*S	Sn	14 16 28.6	+2.0
SRDR	**Sredinnyy**	**2.77**	**281**	P	Pn	14 15 57.4	+1.6
SRDR				*i*S	Sn	14 16 30.8	+1.5
ESO	**Esso**	**3.33**	**273**	P	Pn	14 16 05.4	+2.0
SPN	**Mys Shipunski**	**3.88**	**225**	P	Pn	14 16 12.2	+1.3
SPN				*i*S	Sn	14 16 56.2	-0.2
SDLR	**Sedlovina**	**4.24**	**234**	P	Pn	14 16 18.6	+2.5
SDLR				*i*S	Sn	14 17 07.4	+1.7
KRER	**Koryakskii**	**4.29**	**235**	P	Pn	14 16 19.4	+2.6
KRER				*i*S	Sn	14 17 09.1	+2.2
SMAR	**Somma**	**4.29**	**234**	P	Pn	14 16 19.0	+2.2
SMAR				*i*S	Sn	14 17 08.6	+1.6
UGLR	**Uglovaya**	**4.31**	**234**	P	Pn	14 16 19.9	+2.9
UGLR				*i*S	Sn	14 17 09.3	+1.9
AVH	**Avacha**	**4.32**	**235**	P	Pn	14 16 19.3	+2.3
AVH				*i*S	Sn	14 17 08.9	+1.5
GNL	**Ganaly**	**4.45**	**243**	P	Pn	14 16 22.2	+3.3
PET	**Petropavlovsk**	**4.51**	**233**	P	Pn	14 16 22.2	+2.6
PET				*i*S	Sn	14 17 13.4	+1.4
RUS	**Russkaya**	**4.99**	**228**	P	Pn	14 16 28.6	+2.5
RUS				*i*S	Sn	14 17 24.6	+0.9
ASAK	**Asacha**	**5.29**	**231**	P	Pn	14 16 33.3	+2.9
ASAK				*i*S	Sn	14 17 33.0	+1.7

*IDC **17** 14:15:33.9±1.7, 3°.57S×149°.47E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/18, mbtmp3.9/7, MS4.2/25, Ms1 4.2/25, ms1mx4.1/39, Error ellipse: s-maj=56.2km s-min=22.0km az=113.0*
*ISCJB **17** 14:15:36.0±1.4, 3°.55S±0°.1×149°.4E±0°.3, h20km, mb3.9/8, MS4.2/22, Error ellipse: s-maj=45.3km s-min=15.2km az=19.8*
*NEIC **17** 14:15:39.5±1.3, 3°.55S×149°.43E, h35km, mb4.5/1, Error ellipse: s-maj=43.5km s-min=14.2km az=111.0*
*GCMT **17** 14:15:41.2±0.2, 3°.45S×149°.31E, h16km±1km, MW5.0, Moment Tensor Solution. s34,c40; s87,c127; Moment tensor: Scale 10¹⁶Nm; Mrr 0.04±.12; Mθθ 1.55±.11; Mφφ -1.59±.12; Mrθ -0.47±.33; Mrφ 3.85±.10; Mθφ -0.07±.32; Best double couple: M₀ 4.20000×10¹⁶ NP1: φs 191.00000°, δ 84.00000°, λ 178.00000°. NP2: φs 281.00000°, δ 88.00000°, λ 6.00000°. Principal axes: T 4.1800, Plg 6.0000°, Azm 146.0000°; N 0.0100, Plg 83.0000°, Azm 301.0000°; P -4.1900, Plg 3.0000°, Azm 56.0000°; Data Used: II IU IC G CN.*

ISC 17 14:15:37.3±1.6, 3°.6S±0°.2×149°.4E±0°.3, *h*20km, *n*40, σ*t*²90/18, *mb*3.9/8, *MS*4.3/22, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.24**	**201**	LR	LR	14 19 40.5	
	comp=Z,2μm,20.8s,baz=30,slow=40						
CTA	**Charters Tower**	**16.73**	**190**	LR	LR	14 25 19.9	
	comp=Z,402nm,20.6s,baz=11,slow=35						
GUMO	**Guam**	**17.63**	**345**	LR	LR	14 24 57.2	
	comp=Z,781nm,21.6s,baz=154,slow=32						
WRAB	**Tennant Creek**	**21.95**	**221**	*e*P	**P**	**14 20 31.6**	**+1.6**
	21nm,1.0s						
WRA	**Warramunga Arr**	**21.96**	**221**	P	**P**	**14 20 29.0**	**-1.1**
WRA	**Warramunga Arr**	**21.96**	**221**	P	**P**	**14 20 29.0**	**-1.1**
	8.8nm,1.0s,baz=41,slow=11,SNR=28						
WRA				LR	LR	14 29 44.5	
	comp=Z,1μm,18.6s,baz=45,slow=39						
DZM	**Mont Dzumac**	**24.72**	**140**	*e*LR	LR	14 27 05.2	
	2μm,25.3s						
DZM	**Mont Dzumac**	**24.72**	**140**	LR	LR	14 29 17.6	
	comp=Z,1μm,20.2s,baz=308,slow

comp=Z,203nm,19.5s,baz=88,slow=33
NVAR Mina Array Bea 93.95 52 LR LR 15 05 01.3
comp=Z,138nm,18.4s,baz=162,slow=32
PFO Pinyon Flat Ob 95.37 57 LR LR 15 04 27.2
comp=Z,153nm,19.5s,baz=183,slow=31
TORD Torodi Ar. Bea 146.74 289 PKPbc **PKPbc 14 35 19.2 +0.2**
TORD Torodi Ar. Bea 146.74 289 PKPbc **PKPbc 14 35 19.2 +0.2**
1.9nm,1.1s,baz=53,slow=3.1,SNR=6.0

MEX 17 14:21:37.1±0.3, **16°.06N×95°.54W, h31**km±12km, **MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.62**	**242**	*eP*	Pb	14 21 47.4	-2.1
HUIG				*i* S	Sb	14 21 55.6	-2.4
VHO	**Vista Hermosa**	**1.53**	**312**	*i* P	Pn	14 22 00.6	-2.0
VHO				*i* S	Sn	14 22 18.6	-3.0
PCIG		**2.26**	**99**	*i* P	Pn	14 22 11.2	-1.1
PCIG				*i* S	Sn	14 22 36.2	-3.0
PNIG	**Pinotepa**	**2.51**	**278**	*i* P	Pn	14 22 14.4	-1.4
PNIG				*i* S	Sn	14 22 42.9	-2.5

IDC 17 14:39:46.5±1.3, **25°.36N×37°.62E, h0**km, **mb3.5**/9, **mb1 3.7**/10, **mb1mx3.6**/27, **mbtmp3.6**/10, **ML4.2**/1, **MS2.7**/1, **Ms1 2.7**/1, **ms1mx2.1**/36, **Error ellipse: s-maj=22.9km s-min=18.4km az=58.0, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EIL	**Elat**	**4.90**	**332**	Pg	Pb	14 41 16.2	+2.9
	4.4nm,0.3s,baz=155,slow=13,SNR=7.7						
EIL				Lg	Lg	14 42 20.9	
	34nm,0.3s,baz=357,slow=19,SNR=15						
EIL				LR	LR	14 43 05.9	
	comp=Z,93nm,20.4s,baz=212,slow=41						
ASF	**Jabal al Asfar**	**6.81**	**355**	Pn	Pn	14 41 34.8	+6.9
	0.6nm,0.3s,baz=38,slow=10,SNR=2.4						
ASF				Pg	Pg	14 41 52.4	-4.9
	1.4nm,0.3s,baz=31,slow=5.1,SNR=17						
ASF				Lg	Lg	14 43 22.6	
	9.2nm,0.3s,baz=50,slow=20,SNR=9.7						
MMAI	**Mount Meron Ar**	**7.87**	**346**	Pn	Pn	14 41 43.0	+0.6
	3.7nm,0.3s,baz=149,slow=16,SNR=10						
MMAI				Lg	Lg	14 43 54.4	
	6.3nm,0.3s,baz=160,slow=28,SNR=5.7						
BRTR	**Keskin Array B**	**14.71**	**348**	Pn	P	14 43 19.3	-3.2
	0.1nm,0.3s,baz=159,slow=17,SNR=2.3						
MLR	**Muntele Rosu**	**22.18**	**338**	P	P	14 44 45.1	+0.8
	0.3nm,0.6s,baz=180,slow=9.1,SNR=2.3						
AKASG	**Malin Array Be**	**26.11**	**348**	P	P	14 45 21.2	-0.8
	0.6nm,0.5s,baz=143,slow=7.8,SNR=5.6						
GERES	**GERESS Array B**	**29.99**	**328**	P	P	14 45 57.9	+1.2
	0.3nm,0.7s,baz=174,slow=3.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**35.91**	**257**	P	P	14 46 48.1	-0.6
	0.3nm,0.8s,baz=53,slow=9.6,SNR=3.4						
FINES	**FINESS Array B**	**36.91**	**351**	P	P	14 46 56.5	-0.3
	1.4nm,0.9s,baz=133,slow=9.6,SNR=3.3						
NOA	**NORSAR Array B**	**39.96**	**340**	P	P	14 47 22.9	+0.4
	1.0nm,0.9s,baz=139,slow=8.8,SNR=4.4						
MKAR	**Makanchi Array**	**41.27**	**47**	P	P	14 47 33.9	+0.4
	1.1nm,0.6s,baz=250,slow=6.8,SNR=13						
ZALV	**Zalesovo Beam**	**45.01**	**38**	P	P	14 48 02.4	-1.2
	0.5nm,0.4s,baz=251,slow=9.0,SNR=3.5						
SONM	**Songino Array**	**57.62**	**48**	P	P	14 49 38.5	-0.1
	0.8nm,0.8s,baz=256,slow=5.8,SNR=3.2						

CASC 17 14:43:36.3±4.0, **8°.26N×82°.83W, h0**km±18km, **MD3.8, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACR	**Cerro Adams**	**0.51**	**320**	*eP*	Pb	14 43 47.7	-0.5
ACR				*eS*	Sb	14 43 55.8	-0.5
TBS2		**0.56**	**18**	*eP*	Pb	14 43 50.2	+1.0
TBS2				*eS*	Sb	14 43 59.5	+1.6
BUS	**Buena Vista**	**1.58**	**325**	*eP*	Pn	14 44 05.8	-0.4
QCR	**Quepos**	**1.75**	**311**	*eP*	Pn	14 44 07.2	-0.8
QCR				*eS*	Sn	14 44 30.7	-0.3
LAJ	**Bijagual**	**2.04**	**321**	*eP*	Pb	14 44 14.9	+0.4
LAJ				*eS*	Sg	14 44 46.5	+4.1
SJS	**Escuela Geolog**	**2.06**	**324**	*eS*	Sb	14 44 41.0	0.0
CGA2	**Cerro Gallo 2**	**2.38**	**317**	*eP*	Pb	14 44 18.6	-1.6
CGA2				*eS*	Sb	14 44 49.1	-1.1
FORC	**Fortuna**	**2.84**	**321**	*eP*	Pn	14 44 23.8	+0.8
FORC				*eS*	Sn	14 45 00.2	+2.1

IDC 17 15:02:03.5±6.7, **12°.31N×125°.09E, h0**km, **mb3.5**/4, **mb1 3.8**/4, **mb1mx3.5**/25, **mbtmp3.5**/4, **Error ellipse: s-maj=203.5km s-min=29.5km az=47.0, Samar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**25.93**	**287**	P	P	15 07 37.7	0.0
	0.3nm,0.4s,baz=100,slow=9.0,SNR=5.0						
FITZ	**Fitzroy Crossi**	**30.22**	**179**	P	P	15 08 15.9	-0.1
	4.5nm,1.0s,baz=10,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**33.31**	**164**	P	P	15 08 43.7	+0.5
	0.4nm,0.9s,baz=345,slow=9.3,SNR=2.9						
ASAR	**Alice Springs**	**36.77**	**166**	P	P	15 09 12.6	-0.5
	0.3nm,0.7s,baz=351,slow=6.6,SNR=5.1						

ISCJB ***17*** *15:02:50.8*±*0.6, 37°.20N*±*0°.04×28°.20E*±*0°.04, h0km, Error ellipse: s-maj=6.9km s-min=3.6km az=28.1*
ISK ***17*** *15:02:50.2, 37°.15N×28°.16E, h7km, MD2.5*
DDA ***17*** *15:02:51.0, 37°.19N×28°.25E, h7km, MD2.6*
CSEM ***17*** *15:02:50.7*±*0.2, 37°.20N×28°.20E, h1km, MD2.5, Error ellipse: s-maj=8.0km s-min=4.2km az=25.0*

ISC 17 15:02:50.8±1.0, **37°.19N**±0°.04×**28°.19E**±0°.03, **h0**km, **n16, s0**86/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.09**	**130**	PG	**Pg**	**15 02 52.6**	**0.0**
YER				*e*SG	**Sg**	**15 02 55.2**	**+1.4**
YER	**Yerkesik**	**0.09**	**130**	*i* Pg	**Pg**	**15 02 52.6**	**0.0**
YER				*e*Sg	**Sg**	**15 02 55.2**	**+1.4**
MLSB	**Milas**	**0.35**	**287**	*e*PG	**Pg**	**15 02 57.0**	**-0.5**
MLSB				*e*SG	**Sg**	**15 03 02.8**	**+0.8**
MLSB	**Milas**	**0.35**	**287**	*e*Pg	**Pg**	**15 02 57.0**	**-0.5**
MLSB				*e*Sg	**Sg**	**15 03 02.8**	**+0.8**
TURN	**Turunc**	**0.46**	**134**	*i* P	**Pg**	**15 02 59.3**	**-0.3**
TURN				*i* S	**Sb**	**15 03 07.5**	**-1.6**
TURN	**Turunc**	**0.46**	**134**	*i* P	**Pg**	**15 02 59.3**	**-0.3**
TURN				*i* S	**Sb**	**15 03 07.5**	**-1.6**
DALY	**Dalyan (Mu˘la**	**0.53**	**135**	*e*PG	**Pg**	**15 03 00.7**	**-0.2**
DALY	**Dalyan (Mu˘la**	**0.53**	**135**	*e*Pg	**Pg**	**15 03 00.7**	**-0.2**
BODT	**Bodrum**	**0.72**	**260**	*e*PG	**Pg**	**15 03 03.9**	**-0.7**
BODT	**Bodrum**	**0.72**	**260**	*e*Pg	**Pg**	**15 03 03.9**	**-0.7**
DNZL	**Cakiroluk**	**0.84**	**54**	*i* P	**Pg**	**15 03 06.1**	**-0.8**
DNZL				*i* S	**Sg**	**15 03 18.9**	**+1.0**
DNZL	**Cakiroluk**	**0.84**	**54**	*i* P	**Pg**	**15 03 06.1**	**-0.8**
DNZL				*i* S	**Sg**	**15 03 18.9**	**+1.0**
FETY	**Fethiye**	**0.91**	**128**	*e*PG	**Pg**	**15 03 08.1**	**-0.1**
FETY	**Fethiye**	**0.91**	**128**	*e*Pg	**Pg**	**15 03 08.1**	**-0.1**
GCAM	**G?zelcaml?**	**0.92**	**304**	*i* P	**Pb**	**15 03 09.4**	**-0.2**
GCAM				*i* S	**Sb**	**15 03 23.1**	**+0.8**
GCAM	**G?zelcaml?**	**0.92**	**304**	*i* P	**Pb**	**15 03 09.4**	**-0.2**
GCAM				*i* S	**Sb**	**15 03 23.1**	**+0.8**

KISR ***17*** *15:02:55.1*±*2.8, 46°.14N×37°.34E, h0km, mb5.0*
IDC ***17*** *15:03:47.4*±*0.4, 43°.22N×46°.10E, h0km, mb4.1/24, mb1 4.2/32, mb1mx4.1/40, mbtmp4.1/32, ML4.0/7, MS3.5/11, Ms1 3.5/11, ms1mx3.2/44, Error ellipse: s-maj=8.6km s-min=7.0km az=120.0*
TIF ***17*** *15:03:48.5, 43°.30N×46°.17E, h7km*±*3km*
MOS ***17*** *15:03:49.1*±*1.4, 43°.45N×46°.22E, h15km, mb4.7/13, Error ellipse: s-maj=4.8km s-min=3.6km az=41.3*
ISCJB ***17*** *15:03:50.2*±*0.4, 43°.47N*±*0°.02×46°.26E*±*0°.02, h25km*±*3km, mb4.2/54, MS3.7/14, Error ellipse: s-maj=2.7km s-min=2.2km az=16.6*
CSEM ***17*** *15:03:50.1*±*0.1, 43°.40N×46°.19E, h12km, mb4.7, Ms4.5, Error ellipse: s-maj=4.0km s-min=2.7km az=25.0*
NEIC ***17*** *15:03:53.6*±*0.5, 43°.30N×46°.12E, h48km*±*5km, mb4.5/17, Error ellipse: s-maj=6.0km s-min=3.9km az=169.0*

NNC ***17*** *15:03:57.3*±*3.8, 43°.19N×47°.50E, h0km, mb4.1, Error ellipse: s-maj=60.8km s-min=29.7km az=106.0*
AZER ***17*** *15:04:04.0, 42°.37N×46°.47E, h71km*

ISC 17 15:03:51.4±0.6, **43°.27N**±0°.02×**46°.21E**±0°.02, **h29**km±4km, **n435, s1**162/493, **mb4.4**/54, **MS3.6**/14, **54C-29D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRO	**Groznyy**	**0.34**	**279**	⇓*i*PG	**Pb**	**15 03 57.4**	**-1.8**
GRO				*i* S	**Sb**	**15 04 03.2**	**-1.3**
GRO	**Groznyy**	**0.34**	**279**	*i* Pg	**Pb**	**15 03 57.4**	**-1.8**
GRO				*i* Sg	**Sb**	**15 04 03.2**	**-1.3**
DBC	**Dubki**	**0.52**	**118**	PG	**Pb**	**15 04 01.0**	**-1.1**
DBC				S	**Sb**	**15 04 08.4**	**-1.0**
DBC	**Dubki**	**0.52**	**118**	Pg	**Pb**	**15 04 01.0**	**-1.1**
DBC				Sg	**Sb**	**15 04 08.4**	**-1.0**
KRNR	**Karanay**	**0.68**	**130**	⇑*i*PG	**Pb**	**15 04 03.0**	**-1.7**
KRNR				*e*S	**Sb**	**15 04 12.0**	**-1.9**
KRNR				pmax	pmax		
	comp=Z,2μm,0.2s						
KRNR	**Karanay**	**0.68**	**130**	*i* Pg	**Pb**	**15 04 03.0**	**-1.7**
	comp=Z,2μm,0.2s						
KRNR				*e*Sg	**Sb**	**15 04 12.0**	**-1.9**
UNCR	**Uncukul**	**0.70**	**142**	⇑*i*PG	**Pb**	**15 04 03.5**	**-1.6**
UNCR				pmax	pmax		
	comp=Z,3μm,1.0s						
UNCR	**Uncukul**	**0.70**	**142**	*i* Pg	**Pb**	**15 04 03.5**	**-1.6**
	comp=Z,3μm,1.0s						
BUJR	**Buynaksk**	**0.80**	**124**	*e*PG	**Pn**	**15 04 09.0**	**+2.3**
BUJR				*e*S	**Sn**	**15 04 20.5**	**+2.9**
BUJR				pmax	pmax		
	comp=Z,338nm,0.3s						
BUJR	**Buynaksk**	**0.80**	**124**	*e*Pg	**Pn**	**15 04 09.0**	**+2.3**
	comp=Z,338nm,0.3s						
BUJR				*e*Sg	**Sn**	**15 04 20.5**	**+2.9**
MAK	**Makhachkala**	**1.00**	**107**	*e*PG	**Pb**	**15 04 11.1**	**+1.0**
MAK				*e*		15 04 23.3	
MAK				pmax	pmax		
	comp=Z,606nm,0.2s						
MAK	**Makhachkala**	**1.00**	**107**	*e*P	**Pb**	**15 04 11.0**	**+1.0**
MAK	**Makhachkala**	**1.00**	**107**	*e*P	**Pb**	**15 04 11.0**	**+1.0**
MAK				*e*Sg	**Sb**	**15 04 23.3**	**+0.5**
SNJR	**Sundja**	**1.04**	**259**	⇑*i*PG	**Pn**	**15 04 10.5**	**+0.5**
SNJR				*i* S	**Sb**	**15 04 26.1**	**+2.1**
SNJR	**Sundja**	**1.04**	**259**	*i* Pg	**Pn**	**15 04 10.5**	**+0.5**
SNJR				*i* Sg	**Sb**	**15 04 26.1**	**+2.1**
GNBR	**Gunib**	**1.04**	**147**	PG	**Pn**	**15 04 10.2**	**+0.1**
GNBR				S	**Sb**	**15 04 25.4**	**+1.3**
GNBR	**Gunib**	**1.04**	**147**	Pg	**Pn**	**15 04 10.2**	**+0.1**
GNBR				Sg	**Sb**	**15 04 25.4**	**+1.3**
VLKR	**Vladikavkaz**	**1.14**	**259**	*e*PG	**Pb**	**15 04 12.5**	**0.0**
VLKR				*e*S	**Sb**	**15 04 29.3**	**+2.4**
VLKR	**Vladikavkaz**	**1.14**	**259**	*e*Pg	**Pb**	**15 04 12.5**	**0.0**
VLKR				*e*Sg	**Sb**	**15 04 29.3**	**+2.4**
TRKR	**Terskaya**	**1.16**	**293**	⇓*i*PG	**Pb**	**15 04 13.4**	**+0.6**
TRKR				*i* S	**Sb**	**15 04 31.1**	**+3.6**
TRKR	**Terskaya**	**1.16**	**293**	*i* Pg	**Pb**	**15 04 13.4**	**+0.6**
TRKR				*i* Sg	**Sb**	**15 04 31.1**	**+3.6**
BTKR	**Batakoyurt**	**1.22**	**275**	⇓*i*PG	**Pb**	**15 04 14.4**	**+0.6**
BTKR				*e*S	**Sb**	**15 04 32.6**	**+3.5**
BTKR	**Batakoyurt**	**1.22**	**275**	*i* Pg	**Pb**	**15 04 14.4**	**+0.6**
BTKR				*e*Sg	**Sb**	**15 04 32.6**	**+3.5**
MNSR	**Manas**	**1.25**	**116**	⇓*i*PG	**Pb**	**15 04 15.0**	**+0.8**
MNSR				*i* S	**Sb**	**15 04 33.5**	**+3.6**
MNSR				pmax	pmax		
	comp=Z,1μm,0.3s						
MNSR	**Manas**	**1.25**	**116**	*i* Pg	**Pb**	**15 04 15.0**	**+0.8**
	comp=Z,1μm,0.3s						
MNSR				*i* Sg	**Sb**	**15 04 33.5**	**+3.6**
ARNR	**Ardon**	**1.41**	**267**	⇑*i*PG	**Pb**	**15 04 16.7**	**-0.3**
ARNR				*i* S	**Sb**	**15 04 36.7**	**+2.1**
ARNR	**Ardon**	**1.41**	**267**	*i* Pg	**Pb**	**15 04 16.7**	**-0.3**
ARNR				*i* Sg	**Sb**	**15 04 36.7**	**+2.1**
PRTR	**Priterechnaya**	**1.48**	**290**	⇓*i*PG	**Pb**	**15 04 17.7**	**-0.5**
PRTR				*i* S	**Sb**	**15 04 39.2**	**+2.6**
PRTR	**Priterechnaya**	**1.48**	**290**	*i* Pg	**Pb**	**15 04 17.7**	**-0.5**
PRTR				*i* Sg	**Sb**	**15 04 39.2**	**+2.6**
GUDG	**Gudauri**	**1.50**	**238**	P	**Pn**	**15 04 16.8**	**+0.2**
GUDG				S	**Sn**	**15 04 36.5**	**+1.2**
KORR	**Kora**	**1.57**	**264**	⇑*i*PG	**Pn**	**15 04 18.6**	**+1.2**
KORR				*e*S	**Sb**	**15 04 40.9**	**+1.6**
KORR	**Kora**	**1.57**	**264**	*i* Pg	**Pn**	**15 04 18.6**	**+1.2**
KORR				*e*Sg	**Sb**	**15 04 40.9**	**+1.6**
DUS	**Dusheti**	**1.62**	**224**	P	**Sn**	**15 04 42.0**	**+4.0**
LSNR	**Lesken**	**1.75**	**271**	⇑*i*PN	**Pn**	**15 04 20.6**	**+0.9**
LSNR				*e*S	**Sb**	**15 04 44.5**	**+0.3**
LSNR	**Lesken**	**1.75**	**271**	*i* Pn	**Pn**	**15 04 20.6**	**+0.9**
LSNR				*e*Sg	**Sb**	**15 04 44.5**	**+0.3**
ZEI	**Tsey**	**1.76**	**254**	⇓*i*PN	**Pn**	**15 04 19.7**	**-0.5**
ZEI	**Tsey**	**1.76**	**254**	*i* Pn	**Pn**	**15 04 19.7**	**-0.5**
SEAG	**Tbilisi Sea**	**1.83**	**215**	P	**Pb**	**15 04 22.7**	**-1.4**
SEAG				S	**Sb**	**15 04 47.2**	**+0.6**
TBLG	**Delisi**	**1.88**	**216**	PN	**Pb**	**15 04 23.7**	**-1.4**
TBLG	**Delisi**	**1.88**	**216**	P	**Pb**	**15 04 23.7**	**-1.4**
TBLG	**Delisi**	**1.88**	**216**	P	**Pb**	**15 04 23.7**	**-1.4**
TBLG				S	**Sb**	**15 04 49.8**	**+1.7**
TBLG	**Delisi**	**1.88**	**216**	Pn	**Pb**	**15 04 23.7**	**-1.4**
TBLG				S	**Sb**	**15 04 49.8**	**+1.7**
DGRG	**David-gareji**	**1.92**	**199**	PN	**Pb**	**15 04 25.9**	**+0.2**
DGRG	**David-gareji**	**1.92**	**199**	P	**Pb**	**15 04 25.9**	**+0.2**
DGRG	**David-gareji**	**1.92**	**199**	P	**Pb**	**15 04 25.9**	**+0.2**
DGRG				S	**Sb**	**15 04 52.9**	**+3.6**
DGRG	**David-gareji**	**1.92**	**199**	P	**Pb**	**15 04 25.9**	**+0.2**
DIGR	**Digorskoe uzhe**	**1.96**	**260**	⇑*i*PN	**Pn**	**15 04 22.4**	**-0.4**
DIGR	**Digorskoe uzhe**	**1.96**	**260**	*i* Pn	**Pn**	**15 04 22.4**	**-0.4**
DRN	**Derbent**	**2.00**	**128**	*e*PN	**Pb**	**15 04 26.2**	**-0.8**
DRN				*e*S	**Sb**	**15 04 53.5**	**+2.1**
DRN	**Derbent**	**2.00**	**128**	*e*Pn	**Pb**	**15 04 26.2**	**-0.8**
DRN				*e*Sb	**Sb**	**15 04 53.5**	**+2.1**
GOR	**Gori**	**2.01**	**231**	P	**Pb**	**15 04 26.0**	**-1.2**
GOR				S	**Sb**	**15 04 52.1**	**+0.3**
ONI	**Oni**	**2.13**	**252**	PN	**Pn**	**15 04 26.6**	**+1.5**
ONI	**Oni**	**2.13**	**252**	P	**Pn**	**15 04 26.6**	**+1.5**
ONI	**Oni**	**2.13**	**252**	P	**Pn**	**15 04 26.6**	**+1.5**
ONI				S	**Sb**	**15 04 54.0**	**+0.5**
ONI	**Oni**	**2.13**	**252**	Pn	**Pn**	**15 04 26.6**	**+1.5**
SEKA	**Sheki**	**2.19**	**160**	P	**Pn**	**15 04 28.1**	**+2.3**
	SNR=137						
SEKA				⇓S	**Sb**	**15 04 56.5**	**-0.4**
SEKA	**Sheki**	**2.19**	**160**	P	**Pn**	**15 04 28.1**	**+2.3**
	SNR=137						
SEKA				S	**Sb**	**15 04 56.5**	**-0.4**
KSMR	**Kasumkent**	**2.19**	**139**	⇑*i*PN	**Pb**	**15 04 30.0**	**-0.3**
KSMR				*e*S	**Sb**	**15 05 00.0**	**+2.9**
KSMR	**Kasumkent**	**2.19**	**139**	*i* Pn	**Pb**	**15 04 30.0**	**-0.3**
KSMR				*e*Sn	**Sb**	**15 05 00.0**	**+2.9**
KZR	**Kazreti**	**2.31**	**216**	P	**Pn**	**15 04 29.0**	**+1.5**
KZR	**Kazreti**	**2.31**	**216**	P	**Pn**	**15 04 29.0**	**+1.5**
KZR				S	**Sb**	**15 05 00.3**	**0.0**
KZR	**Kazreti**	**2.31**	**216**	P	**Pn**	**15 04 29.0**	**+1.5**
KBZ	**Khabaz**	**2.45**	**282**	PN	**Pn**	**15 04 29.2**	**-0.2**
KBZ						15 05 05.4	
KBZ	**Khabaz**	**2.45**	**282**	Pn	**Pn**	**15 04 29.2**	**-0.2**
KBZ				Sn	**Sb**	**15 05 05.4**	**+1.0**
KBZ	**Khabaz**	**2.45**	**282**	Pn	**Pn**	**15 04 29.2**	**-0.2**
	comp=Z,45nm,0.3s,baz=159,slow=3.1,SNR=566						
KBZ				Sn	**Sb**	**15 05 05.4**	**+1.0**
	comp=Z,159nm,0.3s,baz=282,slow=16,SNR=9.4						
KBZ	**Khabaz**	**2.45**	**282**	Pn	**Pn**	**15 04 29.2**	**-0.2**
KBZ				Sb	**Sb**	**15 05 05.4**	**+1.0**
QUBA	**Quba, Azerbaij**	**2.56**	**138**	⇑P	**Pb**	**15 04 35.4**	**-1.2**
	SNR=141						
QUBA				⇓S	**Sb**	**15 05 10.4**	**+2.9**
QUBA	**Quba, Azerbaij**	**2.56**	**138**	P	**Pb**	**15 04 35.4**	**-1.2**
	SNR=141						
GANJ	**Ganja**	**2.62**	**178**	⇑P	**Pn**	**15 04 32.8**	**+1.0**
	SNR=14						
GANJ				⇓S	**Sn**	**15 05 04.2**	**+1.5**
GANJ	**Ganja**	**2.62**	**178**	P	**Pn**	**15 04 32.8**	**+1.0**
	SNR=14						
GANJ				S	**Sn**	**15 05 04.2**	**+1.5**
AKH	**Akhalkalaki**	**2.74**	**228**	PN	**Pn**	**15 04 36.0**	**+2.5**
AKH	**Akhalkalaki**	**2.74**	**228**	P	**Pn**	**15 04 36.0**	**+2.5**
AKH	**Akhalkalaki**	**2.74**	**228**	P	**Pn**	**15 04 36.0**	**+2.5**
AKH				S	**Sb**	**15 05 12.9**	**0.0**
AKH	**Akhalkalaki**	**2.74**	**228**	Pn	**Pn**	**15 04 36.0**	**+2.5**
IML	**Ismayilli**	**2.88**	**149**	⇑P	**Pn**	**15 04 38.1**	**+2.8**
	SNR=33						
IML				⇓S	**Sb**	**15 05 14.4**	**-2.4**
IML	**Ismayilli**	**2.88**	**149**	P	**Pn**	**15 04 38.1**	**+2.8**
	SNR=33						
IML				S	**Sb**	**15 05 14.4**	**-2.4**
SIZA	**Siyzn**	**2.97**	**137**	P	**Pb**	**15 04 40.5**	**-3.1**
	SNR=38						
SIZA				⇑S	Sb	15 05 26.0	+6.6
SIZA	**Siyzn**	**2.97**	**137**	P	**Pb**	**15 04 40.5**	**-3.1**
	SNR=38						
PQL	**Pirkuli**	**3.05**	**144**	⇓P	Pn	15 04 41.1	+3.3
	SNR=40						
PQL	**Pirkuli**	**3.05**	**144**	P	Pn	15 04 41.1	+3.3
	SNR=40						
CHVG	**Ch'k'valeri**	**3.07**	**261**	P	**Pn**	**15 04 39.6**	**+1.6**
CHVG				S	**Sb**	**15 05 19.0**	**-3.4**
BRDA	**Brd**	**3.09**	**166**	⇓P	**Pn**	**15 04 40.9**	**+2.7**
	SNR=8.9						
BRDA				⇑S	**Sb**	**15 05 20.0**	**-2.8**
BRDA	**Brd**	**3.09**	**166**	P	**Pn**	**15 04 40.9**	**+2.7**
	SNR=8.9						
BRDA				S	**Sb**	**15 05 20.0**	**-2.8**
GNI	**Garni**	**3.30**	**200**	*e*P	**Pn**	**15 04 43.2**	**+1.9**
GNI				Sn	**Sn**	**15 05 23.9**	**+4.2**
GNI	**Garni**	**3.30**	**200**	Pn	**Pn**	**15 04 43.2**	**+1.9**
	comp=Z,35nm,0.3s,baz=303,slow=2.6,SNR=26						
GNI				Pg	**Pb**	**15 04 48.3**	**-1.0**
	comp=Z,37nm,0.3s,baz=308,slow=6.8,SNR=36						
GNI				Sn	**Sn**	**15 05 23.8**	**+4.2**
	comp=Z,51nm,0.3s,baz=15,slow=19,SNR=2.3						
GNI				LR	LR	15 05 45.1	
	comp=Z,292nm,19.8s,baz=185,slow=36						
GNI	**Garni**	**3.30**	**200**	*e*Pn	**Pn**	**15 04 43.2**	**+1.9**
GNI				Sn	**Sn**	**15 05 23.9**	**+4.2**
ALIB	**Äli-Bayra**	**3.92**	**147**	⇑P	**Pn**	**15 04 52.2**	**+2.6**
	SNR=27						
ALIB				⇑S	**Sb**	**15 05 44.1**	**-2.5**
ALIB	**Äli-Bayra**	**3.92**	**147**	P	**Pn**	**15 04 52.2**	**+2.6**
	SNR=27						
NAX	**Nakhchivan**	**4.13**	**188**	⇓P	**Pn**	**15 04 55.2**	**+2.7**
	SNR=18						
NAX				⇑S	**Sb**	**15 05 56.2**	**+3.5**
NAX	**Nakhchivan**	**4.13**	**188**	P	**Pn**	**15 04 55.2**	**+2.7**
	SNR=18						
GLBA	**Clilabad**	**4.35**	**157**	P	**Pn**	**15 04 57.3**	**+1.8**
	SNR=23						
GLBA				⇑S	**Sn**	**15 05 48.8**	**+3.6**
GLBA	**Clilabad**	**4.35**	**157**	P	**Pn**	**15 04 57.3**	**+1.8**
	SNR=23						
GLBA				S	**Sn**	**15 05 48.8**	**+3.6**
SOC	**Sochi**	**4.74**	**276**	PN	**Pn**	**15 05 00.6**	**-0.2**
SOC	**Sochi**	**4.74**	**276**	Pn	**Pn**	**15 05 00.6**	**-0.2**
LKRN	**Lenkeran, Azer**	**4.95**	**156**	⇓P	**Pn**	**15 05 05.0**	**+1.2**
	SNR=9.2						
LKRN				⇑S	**Sn**	**15 06 00.1**	**0.0**
LKRN	**Lenkeran, Azer**	**4.95**	**156**	P	**Pn**	**15 05 05.0**	**+1.2**
	SNR=9.2						
LKRN				S	**Sn**	**15 06 00.1**	**0.0**
ANN	**Anapa**	**6.51**	**287**	*e*P	**Pn**	**15 05 27.9**	**+2.8**
ANN				*e*S	Sn	15 06 44.7	+6.4
ANN				pmax	pmax		
	comp=Z,39nm,1.2s						
ANN				MLR	MLR		
	comp=N,46nm,9.0s						
ANN				MLR	MLR		
	comp=E,144nm,9.0s						
ANN				MLR	MLR		
	comp=Z,174nm,9.0s						
ANN	**Anapa**	**6.51**	**287**	*e*P	**Pn**	**15 05 27.9**	**+2.8**
	comp=Z,39nm,1.2s						
ANN				*e*S	Sn	15 06 44.7	+6.4
VRHR	**Novokhopersk**	**8.43**	**340**	*e*P	**Pn**	**15 05 52.0**	**+0.6**
VRHR				pmax	pmax		
	comp=E,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=N,20nm,0.6s						
VRHR	**Novokhopersk**	**8.43**	**340**	*e*P	**Pn**	**15 05 52.0**	**+0.6**
	comp=N,20nm,0.6s						
SIM	**Simferopol'**	**8.86**	**285**	P	**Pn**	**15 05 58.4**	**+1.0**
SIM				*e*S	**Sn**	**15 07 32.0**	**-4.2**
SIM	**Simferopol'**	**8.86**	**285**	P	**Pn**	**15 05 58.4**	**+1.0**
SIM				*e*S	**Sn**	**15 07 32.0**	**-4.2**
VORD	**

AKASG Sn Sn 15 09 26.7 -9.1
AKASG Malin Array Be 13.75 309 Pn Pn 15 06 59.9 -4.3
comp=Z,1.7nm,0.3s,baz=108,slow=12,SNR=7.8
AKASG Sn Sn 15 09 26.7 -9.1
comp=Z,1.0nm,0.3s,baz=44,slow=30,SNR=2.8
AK01 Malin Array Si 13.75 309 *eP* Pn 15 07 00.6 -3.6
KIEV Kiev 13.76 309 *eP* Pn 15 07 00.7 -3.6
KIEV pmax pmax
comp=Z,22nm,0.7s
KIEV Kiev 13.76 309 *eP* Pn 15 07 00.7 -3.6
comp=Z,22nm,0.7s
KIEV Kiev 13.76 309 *eP* Pn 15 07 00.7 -3.6
comp=Z,22nm,0.7s
NAY Al-Naaiem 14.02 176 *eP* **P 15 07 13.5 -2.0**
NAY AMb AMB 15 07 16.8
comp=Z,26nm,1.5s
VRI Vrincioaia 14.12 287 ⇑*iP* **Pn 15 07 11.8 +2.4**
VRI Vrincioaia 14.12 287 ⇑*iP* **Pn 15 07 11.8 +2.4**
VRI Vrincioaia 14.12 287 P **Pn 15 07 11.8 +2.4**
TESR Tescani 14.23 290 ⇓*iP* **Pn 15 07 10.9 0.0**
RDF Al-Radifah 14.35 175 *eP* **P 15 07 17.6 -1.7**
RDF AMb AMB 15 07 21.8
comp=Z,100nm,0.8s
QRN Al-Qurain 14.56 174 *eP* **P 15 07 21.1 -0.5**
MLR Muntele Rosu 14.66 286 Pn **Pn 15 07 17.0 +0.3**
MLR Muntele Rosu 14.66 286 ⇓*iP* **Pn 15 07 17.6 +0.9**
MLR Muntele Rosu 14.66 286 Pn **Pn 15 07 17.0 +0.3**
comp=Z,0.0nm,0.3s,baz=142,slow=7.8,SNR=6.4
DOPR Dopca 15.06 288 ⇓*iP* **P 15 07 25.8 -1.3**
DOPR Dopca 15.06 288 ⇓*iP* **P 15 07 25.8 -1.3**
BURAR Bucovina Array 15.35 294 ⇑*iP* **Pn 15 07 24.8 -1.1**
ARU Arti 15.36 27*c iP* **Pn 15 07 22.3 -3.6**
ARU S **Sn 15 10 10.0 -5.0**
ARU pmax pmax
comp=Z,8.0nm,0.5s
BUR08 Bucovina Ar. S 15.36 294 *eP* Pn 15 07 21.2 -4.9
ARR Arges 15.58 285 ⇑*iP* **Pn 15 07 29.3 +0.4**
EIL Elat 16.29 217 Pn **Pn 15 07 37.5 -0.5**
EIL Elat 16.29 217 Pn **Pn 15 07 37.5 -0.5**
comp=Z,0.2nm,0.3s,baz=74,slow=15,SNR=1.7
EIL LR LR 15 14 19.3
comp=Z,41nm,19.7s,baz=70,slow=39
SVE Sverdlovsk 16.38 29⇑*eP* **Pn 15 07 36.2 -2.8**
SVE *eS* Sn 15 10 29.3 -10
SVE pmax pmax
comp=Z,49nm,0.8s
SVE Sverdlovsk 16.38 29 *eP* **Pn 15 07 36.2 -2.8**
comp=Z,49nm,0.8s
SVE *eS* Sn 15 10 29.3 -10
LVV L'vov 16.57 301 *eP* **P 15 07 44.1 +0.4**
LVV MLR MLR
comp=E,100nm,11.0s
LVV MLR MLR
comp=Z,100nm,11.0s
LVV MLR MLR
comp=N,100nm,12.0s
LVV L'vov 16.57 301 *eP* **P 15 07 44.1 +0.4**
comp=N,100nm,12.0s
VTS Vitosha 16.85 276 ⇑*iP* **P 15 07 48.4 +1.3**
VTS Vitosha 16.85 276 ⇑*iP* **P 15 07 48.4 +1.3**
VTS Vitosha 16.85 276 P **P 15 07 48.4 +1.3**
DRGR 16.96 290 ⇓*iP* **P 15 07 50.2 +2.0**
DRGR 16.96 290 ⇓*iP* **P 15 07 50.2 +2.0**
DRGR 16.96 290 P **P 15 07 50.2 +2.0**
NACGM Naroch 17.17 319 *e* Pn 15 07 44.0 -5.0
KWP Kalwaria Pacla 17.36 300 ⇑*iP* **P 15 07 55.3 +2.8**
KWP Kalwaria Pacla 17.36 300 *eP* **P 15 07 53.2 +0.7**
KWP Kalwaria Pacla 17.36 300 ⇓*iP* **P 15 07 54.7 +2.2**
KWP Kalwaria Pacla 17.36 300 ⇑*iP* **P 15 07 55.3 +2.8**
KWP Kalwaria Pacla 17.36 300 P **P 15 07 55.3 +2.8**
UZH Uzhgorod 17.44 296 *eP* **Pn 15 07 50.1 -2.2**
KOLS Kolonicke sedl 17.50 297 *eP* **P 15 07 56.3 +2.2**
KOLS pmax pmax
comp=Z,11nm,1.6s
KOLS Kolonicke sedl 17.50 297 *eP* **P 15 07 56.2 +2.2**
KOLS Kolonicke sedl 17.50 297 *eP* **P 15 07 56.3 +2.2**
comp=Z,11nm,1.6s
BZS Buzias 17.70 286 ⇑*iP* **P 15 07 57.2 +1.0**
BZS Buzias 17.70 286 ⇑*iP* **P 15 07 57.2 +1.0**
BZS Buzias 17.70 286 P **P 15 07 57.2 +1.0**
KK31 Karatay Array 17.72 82 ⇓*P* **P 15 07 56.4 -0.1**
comp=Z,4.6nm,0.7s,baz=281,slow=13,SNR=7.5
KK31 Karatay Array 17.72 82 P **P 15 07 56.4 -0.1**
comp=Z,4.6nm,0.7s,SNR=7.5
ZRNK Zerenda 17.97 49 ⇓*P* **P 15 07 59.4 +0.2**
comp=Z,22nm,0.8s
ZRNK Zerenda 17.97 49 P **P 15 07 59.4 +0.2**
comp=Z,22nm,0.8s
CRVS Cervenica-Dubn 18.03 297 *eP* **P 15 08 02.3 +2.4**
CRVS pmax pmax
comp=Z,5.0nm,1.1s
CRVS Cervenica-Dubn 18.03 297 *eP* **P 15 08 02.3 +2.4**
CRVS Cervenica-Dubn 18.03 297 *eP* **P 15 08 02.3 +2.4**
comp=Z,5.0nm,1.1s
BRVK Borovoye 18.73 50*ceP* **Pn 15 08 08.0 0.0**
BRVK pmax pmax
comp=Z,20nm,1.0s
BRVK MLR MLR
comp=Z,224nm,22.0s
BRVK Borovoye 18.73 50 *eP* **Pn 15 08 08.1 0.0**
comp=Z,14nm,0.5s
BRVK Borovoye 18.73 50 *eP* **Pn 15 08 08.0 0.0**
comp=Z,224nm,22.0s
BVA0 Borovoye Array 18.77 50 ⇑*P* **Pn 15 08 12.1 +3.4**
comp=Z,4.2nm,0.8s,baz=240,slow=12,SNR=6.0
BVAR Borovoye Array 18.77 50 P **Pn 15 08 09.1 +0.4**
BVAR S Sn 15 11 25.9 -12
BVAR Borovoye Array 18.77 50 P **Pn 15 08 09.1 +0.4**
BVAR S Sn 15 11 25.9 -12
BVAR Borovoye Array 18.77 50 P **Pn 15 08 09.1 +0.4**
comp=Z,1.9nm,0.3s,baz=242,slow=14,SNR=16
BVAR S Sn 15 11 25.9 -12
comp=Z,1.1nm,0.3s,baz=232,slow=24,SNR=5.2
BVAR LR LR 15 16 38.2
comp=Z,164nm,18.2s,baz=256,slow=41
BVAR Borovoye Array 18.77 50 P **Pn 15 08 09.1 +0.4**
NIE Niedzica 18.85 298 *eP* **Pn 15 08 09.6 0.0**
NIE Niedzica 18.85 298 *eP* **Pn 15 08 09.6 0.0**
NIE Niedzica 18.85 298 *eP* **Pn 15 08 09.6 0.0**
VOSK Vostochnaya 19.00 52 ⇓*P* **P 15 08 10.6 +0.1**
comp=Z,23nm,0.8s
BANOM Banah 19.17 151 P **Pn 15 08 15.3 +1.7**
OJC Ojcow 19.32 300 *eP* **P 15 08 13.6 -0.4**
OJC Ojcow 19.32 300 *eP* **P 15 08 13.6 -0.4**
OJC Ojcow 19.32 300 *eP* **P 15 08 13.6 -0.4**
VSU Vasula 19.44 328 ⇑*iP* **P 15 08 14.1 -1.1**
VSU Vasula 19.44 328 *i P* **P 15 08 14.1 -1.1**
VYHS Vyhne 19.70 295 *eP* **Pn 15 08 19.8 0.0**
VYHS pmax pmax
comp=Z,7.0nm,1.8s
VYHS Vyhne 19.70 295 *eP* **Pn 15 08 19.8 0.0**
VYHS Vyhne 19.70 295 *eP* **Pn 15 08 19.8 0.0**
comp=Z,7.0nm,1.8s
KBL Kabul 19.75 109 *eP* **Pn 15 08 22.6 +1.9**
KBL pmax pmax
comp=Z,14nm,1.1s
KBL Kabul 19.75 109 *eP* **Pn 15 08 22.6 +1.9**
comp=Z,14nm,1.1s
KBL Kabul 19.75 109 *eP* **Pn 15 08 22.6 +1.9**
comp=Z,14nm,1.1s
PKSM Moragy 19.76 288 ⇑*iP* **Pn 15 08 20.2 -0.3**
PKSM Moragy 19.76 288 ⇑*iP* **Pn 15 08 20.2 -0.3**
PKSM Moragy 19.76 288 P **Pn 15 08 20.2 -0.3**
NAZ Nazwa, Dubai 19.82 154 P **Pn 15 08 23.5 +2.2**
SNR=6.8
NAZ ⇓*P* **Pn 15 08 23.6 +2.2**
NAZ Nazwa, Dubai 19.82 154 P **Pn 15 08 22.9 +1.6**
FAQ Al Faqa, Dubai 20.02 154 P Pn 15 08 25.2 +1.5
HATD Hatta, Dubai 20.12 153 P Pn 15 08 26.1 +1.1
AML Almayashu 20.21 84 P Pn 15 08 28.7 +2.4
SNR=6.9
ASHO Ashiyiah 20.23 153 P Pn 15 08 27.6 +1.3
SNR=8.0
ASHO Ashiyiah 20.23 153 P Pn 15 08 27.5 +1.3
SNR=8.0
OKC Ostrava-Krasne 20.31 299 AMS AMS 15 17 30.0
comp=Z,300nm,12.1s
SMOL Smolenice 20.64 295 *eP* **P 15 08 27.6 -0.8**
SMOL Smolenice 20.64 295 *eP* **P 15 08 27.6 -0.8**
SMOL Smolenice 20.64 295 *eP* **P 15 08 27.6 -0.8**
AAK Ala-Archa 20.68 82*ceP* Pn 15 08 30.9 -0.7
AAK pmax pmax
comp=Z,6.0nm,0.6s
AAK MLR MLR
comp=Z,298nm,15.0s
AAK Ala-Archa 20.68 82 P Pn 15 08 30.8 -0.8
AAK Ala-Archa 20.68 82 P **PcP 15 12 39.3 +1.0**
SNR=9.3
AAK Ala-Archa 20.68 82 P Pn 15 08 30.8 -0.8
comp=Z,4.1nm,0.6s,baz=226,slow=3.6,SNR=14
AAK LR LR 15 16 13.0
comp=Z,39nm,21.6s,baz=50,slow=36
AAK Ala-Archa 20.68 82 *eP* Pn 15 08 30.9 -0.7
comp=Z,298nm,15.0s
MORC Moravsky Berou 20.69 298 *eP* **P 15 08 29.2 +0.2**
MORC pmax pmax
comp=Z,8.0nm,1.1s
MORC Moravsky Berou 20.69 298 *eP* **P 15 08 29.1 +0.2**
comp=Z,7.9nm,1.1s
MORC Moravsky Berou 20.69 298 *eP* **P 15 08 29.2 +0.2**
comp=Z,8.0nm,1.1s
ZST Bratislava 20.84 294 *eP* **P 15 08 31.0 +0.5**
ZST pmax pmax
comp=Z,8.0nm,1.0s
ZST Bratislava 20.84 294 *eP* **P 15 08 31.0 +0.5**
ZST Bratislava 20.84 294 *eP* **P 15 08 31.0 +0.5**
comp=Z,8.0nm,1.0s
VRAC Vranov 21.25 297 P **P 15 08 36.3 +1.3**
VRAC Vranov 21.25 297 P **P 15 08 36.3 +1.3**
comp=Z,1.5nm,0.5s,baz=112,slow=12,SNR=3.3
VRAC Vranov 21.25 297 P **P 15 08 36.3 +1.3**
TKM2 Tokmak 2 21.42 81 ⇑*P* **P 15 08 37.8 +0.7**
comp=Z,2.6nm,0.7s
TKM2 Tokmak 2 21.42 81 P **P 15 08 37.8 +0.7**
comp=Z,2.6nm,0.7s
JOF Joensuu 21.51 341 *eP* **P 15 08 37.2 -0.5**
JOF pmax pmax
comp=Z,65nm,0.6s
JOF Joensuu 21.51 341 *ep* **P 15 08 37.2 -0.5**
comp=Z,65nm,0.6s
JOF Joensuu 21.51 341 *eP* **P 15 08 37.2 -0.5**
comp=Z,65nm,0.6s
DPC Dobruska-Polom 21.54 300 *eP* **P 15 08 38.6 +0.4**
DPC *e* 15 08 42.0
DPC MLR MLR
comp=Z,200nm,13.8s
DPC Dobruska-Polom 21.54 300 *eP* **P 15 08 38.6 +0.4**
DPC *ex* x 15 08 42.0
DPC *epP* **pP 15 08 48.9 +2.9**
DPC AMS AMS 15 18 40.0
comp=Z,200nm,13.8s
DPC Dobruska-Polom 21.54 300 *eP* **P 15 08 38.6 +0.4**
KSP Ksiaz 21.63 301 *eP* **P 15 08 39.3 +0.3**
KSP *e*'PP **pP 15 08 46.0 -0.9**
KSP Ksiaz 21.63 301 *eP* **P 15 08 39.3 +0.3**
CONA Conrad Observa 21.66 293 ⇑*iP* **P 15 08 39.9 +0.4**
comp=Z,14nm,1.0s
CONA Conrad Observa 21.66 293 P **P 15 08 39.9 +0.4**
comp=Z,14nm,1.0s
UPC Upice 21.76 300 *eP* **P 15 08 44.8 +4.4**
UPC *e* 15 08 51.9
UPC Upice 21.76 300 *eP* **P 15 08 44.8 +4.4**
UPC *ex* x 15 08 47.8
UPC *epP* **pP 15 08 51.9 +3.7**
FIA1 FINESS Array S 21.80 334 *eP* **P 15 08 40.2 -0.5**
FINES FINESS Array B 21.80 334 P **P 15 08 40.6 -0.1**
FINES S S 15 12 29.4 -11
FINES FINESS Array B 21.80 334 P **P 15 08 40.6 -0.1**
comp=Z,72nm,0.6s,baz=131,slow=9.5,SNR=96
FINES S S 15 12 29.4 -11
comp=Z,2.3nm,0.6s,baz=140,slow=12,SNR=1.6
FINES FINESS Array B 21.80 334 P **P 15 08 40.6 -0.1**
TREC Trest 21.97 297 AMS AMS 15 18 40.0
comp=Z,200nm,15.4s
KAF Kangasniemi 22.22 335 *eP* **P 15 08 44.9 -0.4**
KAF pmax pmax
comp=Z,17nm,0.5s
KAF Kangasniemi 22.22 335 *ep* **P 15 08 44.9 -0.4**
comp=Z,16nm,0.5s
KAF Kangasniemi 22.22 335 *eP* **P 15 08 44.9 -0.4**
comp=Z,16nm,0.5s
SOKA Soboth 22.24 290 ⇑*iP* **P 15 08 46.9 +1.2**
comp=Z,13nm,0.9s
SOKA Soboth 22.24 290 P **P 15 08 46.9 +1.2**
comp=Z,13nm,0.9s
PRU Pruhonice 22.64 298 *eP* **P 15 08 51.1 +1.2**
PRU *e* 15 08 58.5
PRU MLR MLR
comp=Z,200nm,16.7s
PRU Pruhonice 22.64 298 *eP* **P 15 08 51.1 +1.2**
PRU *epP* **pP 15 08 58.5 +0.8**
PRU AMS AMS 15 18 50.0
comp=Z,200nm,16.7s
PRU Pruhonice 22.64 298 P **P 15 08 51.1 +1.2**
PVCC Panska Ves 22.68 300 *eP* **P 15 08 51.9 +1.7**
PVCC *e* 15 08 57.3
PVCC Panska Ves 22.68 300 *eP* **P 15 08 51.9 +1.7**
PVCC *epP* **pP 15 08 57.3 -0.7**
PVCC Panska Ves 22.68 300 P **P 15 08 51.9 +1.7**
CUC Castrocucco 22.89 272 *eP* **P 15 08 53.0 +0.4**
comp=Z,42nm,1.1s
KUR17 Kurchatov Arra 23.09 60 ⇑*P* **P 15 08 56.8 +2.3**
comp=Z,0.5nm,0.8s
KUR17 Kurchatov Arra 23.09 60 P **P 15 08 56.8 +2.3**
comp=Z,0.5nm,0.8s
BRG Berggiesshubel 23.11 300 *eP* **P 15 08 56.2 +1.5**
comp=Z,2.1nm,1.1s
BRG *e* 15 09 03.1
comp=Z,12nm,1.3s
BRG Berggiesshubel 23.11 300 *eP* **P 15 08 56.2 +1.5**
BRG *e* 15 09 03.1
BRG pmax pmax
comp=Z,2.0nm,1.1s
BRG Berggiesshubel 23.11 300 *eP* **P 15 08 56.2 +1.5**
comp=Z,2.0nm,1.1s
GERES GERESS Array B 23.12 295 P **P 15 08 55.6 +0.6**
GERES GERESS Array B 23.12 295 P **P 15 08 55.6 +0.6**
comp=Z,1.5nm,0.5s,baz=99,slow=7.7,SNR=18
GERES LR LR 15 19 13.2
comp=Z,156nm,19.4s,baz=81,slow=40
GERES GERESS Array B 23.12 295 P **P 15 08 55.6 +0.6**
KURBB Kurchatov Arra 23.12 60 P **P 15 08 56.5 +1.6**
comp=Z,2.3nm,0.6s,baz=270,slow=10,SNR=34
KURBB LR LR 15 19 30.9
comp=Z,182nm,18.4s,baz=270,slow=41
KURK Kurchatov 23.19 60 ⇓*P* **P 15 08 58.3 +2.8**
comp=Z,10nm,1.0s
KURK Kurchatov 23.19 60*ceP* **P 15 08 58.1 +2.6**
KURK pmax pmax
comp=Z,9.0nm,1.2s
KURK MLR MLR
comp=Z,198nm,16.0s
KURK Kurchatov 23.19 60 *eP* **P 15 08 57.1 +1.6**
comp=Z,17nm,1.0s
KURK Kurchatov 23.19 60 P **P 15 08 58.3 +2.8**
comp=Z,10nm,1.0s
KHC Kasperske Hory 23.21 296 *eP* **P 15 08 56.5 +0.7**
KHC *e* 15 09 03.1
KHC MLR MLR
comp=Z,300nm,16.6s
KHC Kasperske Hory 23.21 296 P **P 15 08 54.9 -0.9**
comp=Z,5.1nm,0.8s
KHC Kasperske Hory 23.21 296 *eP* **P 15 08 56.5 +0.7**
KHC *epP* **pP 15 09 03.1 -0.7**
KHC AMS AMS 15 19 30.0
comp=Z,300nm,16.6s
KHC Kasperske Hory 23.21 296 P **P 15 08 56.5 +0.7**
KBA Koelnbreinsper 23.38 291 ⇑*iP* **P 15 08 58.1 +0.5**
comp=Z,7.7nm,0.6s
KBA Koelnbreinsper 23.38 291 P **P 15 08 58.1 +0.5**
comp=Z,7.7nm,0.6s
RUE Ruedersdorf 23.45 304 P **P 15 08 58.5 +0.5**
CLL Collm 23.75 301 *eP* **P 15 09 01.0 0.0**
CLL *e* 15 09 05.0
CLL *e* 15 09 10.0
CLL Collm 23.75 301 *eP* **P 15 09 01.0 0.0**
CLL *e* 15 09 05.0
CLL *e*(pP) **pP 15 09 10.0 +0.8**
CLL *e* 15 09 14.0
CLL *e*SSS SSS 15 14 06.0
CLL LmV 15 29 00.0
comp=Z,100nm,21.1s
CLL Collm 23.75 301 *eP* **P 15 09 01.0 0.0**
NKC Novy Kostel 24.00 299 *eP* **P 15 09 04.4 +1.0**
NKC *e* 15 09 12.3
NKC Novy Kostel 24.00 299 *eP* **P 15 09 04.4 +1.0**
NKC *epP* **pP 15 09 12.3 +0.6**
NKC Novy Kostel 24.00 299 P **P 15 09 04.4 +1.0**
WTTA Wattenberg 24.53 291 ⇑*iP* **P 15 09 07.9 -0.6**
comp=Z,16nm,0.9s
WTTA Wattenberg 24.53 291 ⇑*iP* **P 15 09 07.9 -0.6**
comp=Z,16nm,0.9s
MOTA Moosalm 24.89 292 ⇑*iP* **P 15 09 09.1 -2.5**
comp=Z,10.0nm,0.7s
FETA Feichten 25.16 291 ⇑*iP* **P 15 09 14.4 +0.2**
comp=Z,13nm,1.0s
FETA Feichten 25.16 291 P **P 15 09 14.4 +0.2**
comp=Z,13nm,1.0s
MK31 Makanchi Array 25.60 69 P **P 15 09 18.9 +0.9**
comp=Z,1.8nm,0.6s,baz=272,slow=8.1,SNR=24
MK31 Makanchi Array 25.60 69 *eP* **P 15 09 18.5 +0.5**
MK31 Makanchi Array 25.60 69 *eP* **P 15 09 18.5 +0.5**
MK31 Makanchi Array 25.60 69 *eP* **P 15 09 18.5 +0.5**
MKAR Makanchi Array 25.60 69 P **P 15 09 19.1 +1.1**
MKAR Makanchi Array 25.60 69 P **P 15 09 19.1 +1.1**
MKAR S S 15 14 04.1 +20
MKAR Makanchi Array 25.60 69 P **P 15 09 19.1 +1.1**
comp=Z,1.1nm,0.5s,baz=269,slow=8.1,SNR=18
MKAR S S 15 14 04.1 +20
comp=Z,0.6nm,0.9s,baz=292,slow=22,SNR=2.5
MKAR LR LR 15 21 10.2
comp=Z,127nm,20.9s,baz=273,slow=41
MKAR Makanchi Array 25.60 69 P **P 15 09 19.1 +1.1**
DAVA Damuels 25.72 292 ⇑*iP* **P 15 09 20.1 +0.9**
comp=Z,8.9nm,1.0s
DAVA Damuels 25.72 292 P **P 15 09 20.1 +0.9**
comp=Z,8.9nm,1.0s
DAVOX Davos/Dischmat 25.77 291 P **P 15 09 20.3 +0.6**
DAVOX Davos/Dischmat 25.77 291 P **P 15 09 20.3 +0.6**
comp=Z,1.4nm,0.3s,baz=49,slow=9.6,SNR=4.1
DAVOX Davos/Dischmat 25.77 291 P **P 15 09 20.3 +0.6**
HFS Hagfors 25.90 322 P **P 15 09 20.5 0.0**
HFS Hagfors 25.90 322 P **P 15 09 20.5 0.0**
comp=Z,17nm,0.5s,baz=111,slow=11,SNR=48
HFS Hagfors 25.90 322 P **P 15 09 20.5 0.0**
ABTO Aybut 26.52 165 ⇑*P* **P 15 09 26.6 0.0**
SNR=37
RBK Rabkut 26.57 163 ⇓*P* **P 15 09 27.3 +0.4**
SNR=13
ZALV Zalesovo Beam 27.34 53 *i P* **P 15 09 35.7 +2.1**
ZALV Zalesovo Beam 27.34 53 P **P 15 09 34.4 +0.9**
ZALV Zalesovo Beam 27.34 53 P **P 15 09 34.4 +0.9**
comp=Z,0.4nm,0.3s,baz=261,slow=9.9,SNR=3.6
ZALV Zalesovo Beam 27.34 53 *i P* **P 15 09 35.7 +2.1**
NB2 NORSAR Subarra 27.39 323 P **P 15 09 33.3 -0.7**
comp=Z,2.9nm,0.4s,baz=116,slow=10
NB2 NORSAR Subarra 27.39 323 P **P 15 09 33.3 -0.7**
comp=Z,2.9nm,0.4s,SNR=8.1
NOA NORSAR Array B 27.39 323 P **P 15 09 33.6 -0.4**
NOA NORSAR Array B 27.39 323 P **P 15 09 33.6 -0.4**
comp=Z,4.5nm,0.6s,baz=122,slow=8.7,SNR=21
NOA LR LR 15 21 41.6
comp=Z,75nm,19.5s,baz=115,slow=39
NOA NORSAR Array B 27.39 323 P **P 15 09 33.6 -0.4**
NAO01 NORSAR Array S 27.46 322 *eP* **P 15 09 33.8 -0.8**
comp=Z,3.4nm,0.5s
SBF Sospel 27.93 285 *eP* **P 15 09 37.7 -1.3**
comp=Z,26nm,1.0s
SBF Sospel 27.93 285 *eP* **P 15 09 37.7 -1.3**
SBF pmax pmax
comp=Z,26nm,1.0s
SBF Sospel 27.93 285 *eP* **P 15 09 37.7 -1.3**
comp=Z,26nm,1.0s
SBF Sospel 27.93 285 *eP* **P 15 09 37.7 -1.3**
comp=Z,26nm,1.0s
HAU Haudompre 28.04 294 *eP* **P 15 09 38.9 -1.0**
comp=Z,15nm,1.0s
HAU Haudompre 28.04 294 *eP* **P 15 09 38.9 -1.0**
HAU pmax pmax
comp=Z,15nm,1.0s
HAU Haudompre 28.04 294 *eP* **P 15 09 38.9 -1.0**
comp=Z,15nm,1.0s
HAU Haudompre 28.04 294 *eP* **P 15 09 38.9 -1.0**
comp=Z,15nm,1.0s
LPG La Plagne 28.09 288 *eP* **P 15 09 39.3 -1.4**
comp=Z,7.2nm,0.9s
LPG La Plagne 28.09 288 *eP* **P 15 09 39.3 -1.4**
LPG pmax pmax
comp=Z,7.0nm,0.9s
LPG La Plagne 28.09 288 *eP* **P 15 09 39.3 -1.4**
comp=Z,7.2nm,0.9s
LPG La Plagne 28.09 288 *eP* **P 15 09 39.3 -1.4**
comp=Z,7.0nm,0.9s
LPL La Plagne 28.10 288 *eP* **P 15 09 39.2 -1.5**
LPL La Plagne 28.10 288 *eP* **P 15 09 39.2 -1.5**
LPL La Plagne 28.10 288 *eP* **P 15 09 39.2 -1.5**
LPL La Plagne 28.10 288 *eP* **P 15 09 39.2 -1.5**
MBDF Montbardon 28.22 287 *eP* **P 15 09 40.2 -1.5**
comp=Z,17nm,0.8s
MBDF Montbardon 28.22 287 *eP* **P 15 09 40.2 -1.5**
MBDF pmax pmax
comp=Z,17nm,0.8s
MBDF Montbardon 28.22 287 *eP* **P 15 09 40.2 -1.5**
comp=Z,17nm,0.8s
MBDF Montbardon 28.22 287 *eP* **P 15 09 40.2 -1.5**
comp=Z,16nm,0.8s
KEV Kevo 28.31 346 *eP* **P 15 09 42.5 +0.5**
KEV pmax pmax
comp=Z,4.0nm,0.5s
KEV Kevo 28.31 346 *ep* **P 15 09 42.5 +0.5**
comp=Z,3.6nm,0.5s
KEV Kevo 28.31 346 *eP* **P 15 09 42.5 +0.5**
comp=Z,3.6nm,0.5s
ARCES ARCESS Array B 28.40 345 P **P 15 09 43.7 +0.8**
ARCES ARCESS Array B 28.40 345 P **P 15 09 43.7 +0.8**
comp=Z,2.2nm,0.4s,baz=156,slow=11,SNR=45
ARCES ARCESS Array B 28.40 345 P **P 15 09 43.7 +0.8**
FRF La Foret Royal 28.55 284 *eP* **P 15 09 43.5 -1.0**
comp=Z,15nm,0.8s
FRF La Foret Royal 28.55 284 *eP* **P 15 09 43.5 -1.0**
FRF pmax pmax
comp=Z,15nm,0.8s
FRF La Foret Royal 28.55 284 *eP* **P 15 09 43.5 -1.0**
comp=Z,15nm,0.8s
FRF La Foret Royal 28.55 284 *eP* **P 15 09 43.5 -1.0**
comp=Z,14nm,0.8s
ORIF Oris-en-Rattie 28.80 287 *eP* **P 15 09 45.5 -1.3**
ORIF Oris-en-Rattie 28.80 287 *eP* **P 15 09 45.5 -1.3**
ORIF Oris-en-Rattie 28.80 287 *eP* **P 15 09 45.5 -1.3**
ORIF Oris-en-Rattie 28.80 287 *eP* **P 15 09 45.5 -1.3**
KEST Kesra 29.24 268 P **P 15 09 51.6 +0.8**
KEST Kesra 29.24 268 P **P 15 09 51.6 +0.8**
comp=Z,0.7nm,0.6s,baz=11,slow=5.2,SNR=4.2
VIVF Saint-Julien-l 29.66 288 *eP* **P 15 09 53.5 -0.8**
comp=Z,13nm,1.0s
VIVF Saint-Julien-l 29.66 288 *eP* **P 15 09 53.5 -0.8**
VIVF pmax pmax
comp=Z,13nm,1.0s
VIVF Saint-Julien-l 29.66 288 *eP* **P 15 09 53.5 -0.8**
comp=Z,13nm,1.0s
VIVF Saint-Julien-l 29.66 288 *eP* **P 15 09 53.5 -0.8**
comp=Z,12nm,1.0s
PYUN Piuthan 33.19 105 *eP* **P 15 10 27.2 +1.4**
comp=Z,18nm,0.4s
DANN Dangsing 33.59 104 *eP* **P 15 10 30.9 +1.5**
EKA Eskdalemuir Ar 33.66 309 P **P 15 10 29.2 -0.1**
EKA Eskdalemuir Ar 33.66 309 P **P 15 10 29.2 -0.1**
comp=Z,0.5nm,0.4s,baz=95,slow=9.0,SNR=6.3
EKA Eskdalemuir Ar 33.66 309 P **P 15 10 29.2 -0.1**
KOLN Koldanda 33.82 105 *eP* **P 15 10 32.5 +1.2**
comp=Z,23nm,0.8s
DMN Daman 34.99 104 *eP* **P 15 10 42.5 +1.1**
comp=Z,12nm,0.5s
KKN Kakani 35.00 103 *eP* **P 15 10 42.3 +0.8**
comp=Z,9.7nm,0.5s
PKIN Phulchoki 35.21 103 *eP* **P 15 10 44.6 +1.2**
comp=Z,10nm,0.4s
PKI Pulchoki 35.22 103 *eP* **P 15 10 44.7 +1.2**
GUN Gumba 35.36 102 *eP* **P 15 10 45.5 +0.8**
SPITS Spitsbergen Ar 36.97 350 P **P 15 10 59.1 +1.6**
SPITS Spitsbergen Ar 36.97 350 P **P 15 10 59.1 +1.6**
comp=Z,5.6nm,0.4s,baz=148,slow=16,SNR=67
SPITS Spitsbergen Ar 36.97 350 P **P 15 10 59.1 +1.6**
TAPN Taplejung 37.00 102 *eP* **P 15 10 59.8 +1.1**
ODAN Odare 37.06 103 *eP* **P 15 11 00.5 +1.4**
comp=Z,38nm,0.6s
ESDC Sonseca Array 37.31 282 P **P 15 10 59.9 -1.0**
ESDC Sonseca Array 37.31 282 P **P 15 10 59.9 -1.0**
comp=Z,0.1nm,0.3s,baz=46,slow=9.0,SNR=4.5
LSA Lhasa 38.14 96 *eP* **P 15 11 10.1 +1.5**
LSA pmax pmax
comp=Z,7.0nm,0.7s
LSA Lhasa 38.14 96 *eP* **P 15 11 10.1 +1.5**
comp=Z,7.5nm,0.7s
LSA Lhasa 38.14 96 *eP* **P 15 11 10.1 +1.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,7.0nm,0.7s						
TAM	Tamanrasset	39.26	252	eP	P	15 11 17.9	+0.3
TAM				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TAM	Tamanrasset	39.26	252	eP	P	15 11 17.9	+0.3
	comp=Z,8.9nm,1.1s						
TAM	Tamanrasset	39.26	252	eP	P	15 11 17.9	+0.3
	comp=Z,9.0nm,1.1s						
SONM	Songino Array	41.47	62	P	P	15 11 36.3	+0.7
SONM				PcP	PcP	15 13 32.8	-0.1
SONM	Songino Array	41.47	62	P	P	15 11 36.3	+0.7
	comp=Z,0.5nm,0.5s,baz=274,slow=8.8,SNR=3.8						
SONM				PcP	PcP	15 13 32.8	-0.1
	comp=Z,0.9nm,0.6s,baz=251,slow=2.5,SNR=3.4						
SONM				LR	LR	15 30 39.9	
	comp=Z,239nm,18.5s,baz=244,slow=39						
SONM	Songino Array	41.47	62	P	P	15 11 36.3	+0.7
SONM	Songino Array	41.47	62	PcP	PcP	15 13 32.8	-0.1
BORG	Borgarnes	42.55	324	P	P	15 11 43.5	-0.4
BORG	Borgarnes	42.55	324	P	P	15 11 43.5	-0.4
	comp=Z,9.8nm,0.9s,baz=74,slow=7.4,SNR=2.5						
BORG	Borgarnes	42.55	324	P	P	15 11 43.6	-0.4
TIXI	Tiksi	47.36	25	ceP	P	15 12 23.0	+0.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s						
TIXI	Tiksi	47.36	25	eP	P	15 12 23.0	+0.8
	comp=Z,7.0nm,2.5s						
TOA0	Torodi Ar. Sit	48.56	246	eP	P	15 12 30.9	-1.3
TORD	Torodi Ar. Bea	48.56	246	P	P	15 12 31.0	-1.2
TORD	Torodi Ar. Bea	48.56	246	P	P	15 12 31.0	-1.2
	comp=Z,3.9nm,0.6s,baz=31,slow=8.8,SNR=52						
CHTO	Chiang Mai	50.37	102	eP	P	15 12 46.2	+0.2
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	Chiang Mai	50.37	102	eP	P	15 12 46.2	+0.2
	comp=Z,4.6nm,0.8s						
CHTO	Chiang Mai	50.37	102	eP	P	15 12 46.2	+0.2
	comp=Z,5.0nm,0.8s						
CMAR	Chiang Mai Arr	50.60	102	P	P	15 12 48.2	+0.5
CMAR	Chiang Mai Arr	50.60	102	P	P	15 12 48.2	+0.5
	comp=Z,2.4nm,0.6s,baz=303,slow=8.4,SNR=21						
CMAR	Chiang Mai Arr	50.60	102	P	P	15 12 48.2	+0.5
DBIC	Dimbokro	57.67	246	P	P	15 13 37.9	-1.4
DBIC	Dimbokro	57.67	246	P	P	15 13 37.9	-1.4
	comp=Z,3.0nm,0.5s,baz=24,slow=8.1,SNR=13						
DBIC	Dimbokro	57.67	246	P	P	15 13 37.9	-1.4
LIC	Lamto	58.11	246	⇑iP	P	15 13 40.9	-1.4
	comp=Z,13nm,0.5s						
LIC	Lamto	58.11	246	⇑iP	P	15 13 40.9	-1.4
	comp=Z,13nm,0.5s						
SEY	Seymchan	59.05	31	ceP	P	15 13 49.3	+1.0
SEY	Seymchan	59.05	31	eP	P	15 13 49.3	+1.0
KSAR	Wonju Array Be	60.16	65	P	P	15 13 56.6	+0.3
KSAR	Wonju Array Be	60.16	65	P	P	15 13 56.6	+0.3
KSRS	Korea Array	60.18	65	P	P	15 13 56.6	+0.2
	comp=Z,1.6nm,0.5s,baz=303,slow=6.3,SNR=11						
KSRS				LR	LR	15 42 59.1	
	comp=Z,152nm,19.3s,baz=305,slow=39						
KSRS	Korea Array	60.18	65	P	P	15 13 56.6	+0.2
	comp=Z,152nm,19.3s						
PSI	Prapat	61.64	115	P	P	15 14 04.8	-1.9
PSI	Prapat	61.64	115	P	P	15 14 04.8	-1.9
	comp=Z,7.1nm,0.8s,baz=336,slow=10.0,SNR=4.5						
MJAR	Matsushiro Arr	67.40	61	LR	LR	15 47 18.6	
	comp=Z,72nm,19.2s,baz=190,slow=39						
INK	Inuvik	68.75	360	P	P	15 14 52.5	+0.6
INK	Inuvik	68.75	360	P	P	15 14 52.5	+0.6
	comp=Z,1.1nm,0.5s,baz=329,slow=8.6,SNR=11						
INK	Inuvik	68.75	360	P	P	15 14 52.5	+0.6
ILAR	Eielson Array	71.81	6	P	P	15 15 11.6	+0.9
ILAR				PP	PP	15 17 59.1	+10
ILAR	Eielson Array	71.81	6	P	P	15 15 11.6	+0.9
	comp=Z,0.1nm,0.6s,baz=352,slow=7.2,SNR=4.7						
ILAR				PP	PP	15 17 59.1	+10
	comp=Z,0.4nm,0.8s,baz=334,slow=8.0,SNR=4.1						
ILAR	Eielson Array	71.81	6	P	P	15 15 11.6	+0.9
COCO	West Island	71.96	127	iP	P	15 15 19.9	+7.7
YKA	Yellowknife Ar	73.47	351	P	P	15 15 20.5	-0.1
YKA	Yellowknife Ar	73.47	351	P	P	15 15 20.5	-0.1
	comp=Z,0.3nm,0.5s,baz=11,slow=6.4,SNR=7.5						
YKA	Yellowknife Ar	73.47	351	P	P	15 15 20.5	-0.1
BOSA	Boshof	74.08	199	P	P	15 15 24.1	-0.5
BOSA	Boshof	74.08	199	P	P	15 15 24.1	-0.5
	comp=Z,2.7nm,0.5s,baz=76,slow=15,SNR=7.8						
BOSA	Boshof	74.08	199	P	P	15 15 24.1	-0.5
PLCA	Paso Flores	133.93	250	PKP	PKPdf	15 23 04.8	-0.6
PLCA	Paso Flores	133.93	250	PKP	PKPdf	15 23 04.8	-0.6
	comp=Z,2.0nm,0.8s,baz=232,slow=9.1,SNR=3.2						
PLCA	Paso Flores	133.93	250	PKIKP	PKPdf	15 23 04.8	-0.6

IDC 17 15:04:41.6±9.8**,22°.28N**×**145°.08E,h0km,mb3.1**/3, **mb1 3.3**/3**,mb1mx3.1**/25**,mbtmp3.1**/3**,Error ellipse: s-maj=331.5km s-min=32.1km az=72.0,North Pacific Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	21.16	319	P	P	15 09 28.6	+0.2
	0.7nm,0.3s,baz=146,slow=8.9,SNR=6.8						
WRA	Warramunga Arr	43.26	195	P	P	15 12 45.3	+0.3
	0.1nm,0.3s,baz=16,slow=8.6,SNR=5.6						
ASAR	Alice Springs	46.95	194	P	P	15 13 13.7	-0.7
	0.1nm,0.3s,baz=16,slow=6.4,SNR=3.1						

*ISCJB **17** 15:06:35.8±0.8, 51°.5N±0°.1×178°.14W±0°.05, h73km±6km, mb3.7/9, Error ellipse: s-maj=22.0km s-min=4.6km az=176.6*
*NEIC **17** 15:06:35.4, 51°.36N×178°.13W, h8km, ML3.6(AEIC), After AEIC.*
*IDC **17** 15:06:36.4±3.5, 51°.44N×178°.06W, h59km±29km, mb3.4/10, mb1 3.6/12, mb1mx3.4/33, mbtmp3.5/12, ML3.6/2, Error ellipse: s-maj=30.5km s-min=14.8km az=172.0*
ISC 17 15:06:36.4±1.4**,51°.4N**±0°.2×**178°.13W**±0°.04**,h61**km±11km**, n27,σ0^{s}97**/34**,mb3.8**/9**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CERAA	Semis' Rag'd T	1.46	292	P	Pn	15 06 59.8	-0.6
CERAA				S	Sn	15 07 18.8	+0.2
CEAP	Semis' Anvil P	1.55	294	P	Pn	15 07 01.3	-0.4
CETU	Semis' Tuman	1.59	292	P	Pn	15 07 01.9	-0.3
CETU				S	Sn	15 07 22.1	+0.3
AMKA	Amchitka	1.61	271	P	Pn	15 07 01.0	-1.4
AMKA				S	Sn	15 07 23.4	+1.2
LSSE	Little Sitkin	2.13	286	P	Pn	15 07 09.4	-0.1
LSPA	Little Sitkin	2.13	287	P	Pn	15 07 09.4	-0.2
LSPA				S	Sn	15 07 36.8	+2.0
LSNW	Little Sitkin	2.17	287	P	Pn	15 07 09.3	-0.7
ATKA	Atka Island	2.58	70	P	Pn	15 07 14.8	-0.8
ATKA				S	Sn	15 07 45.7	-0.1
KOWE	Korovin West	2.60	66	P	Pn	15 07 16.8	+0.8
KOWE				S	Sn	15 07 48.1	+1.7
KOKV	Korovin Volcan	2.65	67	P	Pn	15 07 17.5	+0.8
KOFP	Korovin Flat P	2.66	69	P	Pn	15 07 17.5	+0.7
FX1	Attu Island--F	5.56	289	P	Pn	15 07 57.1	+0.6
FX1	Attu Island--F	5.56	289	P	Pn	15 07 57.0	+0.6
	2.8nm,0.3s,baz=195,slow=24,SNR=9.5						
FX1				S	Sn	15 09 00.1	+1.0
	2.1nm,0.3s,baz=235,slow=22,SNR=1.5						
KDAK	Kodiak Island	16.07	57	P	Pn	15 10 16.0	-2.1
	1.1nm,0.3s,baz=197,slow=21,SNR=10.0						
ILAR	Eielson Array	20.98	38	P	P	15 11 14.4	+0.3
	0.2nm,0.5s,baz=321,slow=32,SNR=7.5						
INK	Inuvik	27.21	35	P	P	15 12 12.6	-1.3
	0.3nm,0.3s,baz=326,slow=2.8,SNR=5.4						
YKA	Yellowknife Ar	34.92	47	P	P	15 13 21.6	-0.1
	0.3nm,0.5s,baz=277,slow=6.5,SNR=4.0						
PDAR	Pinedale Array	45.91	73	P	P	15 14 53.5	+0.6
	1.5nm,0.4s,baz=339,slow=2.7,SNR=15						
SPITS	Spitsbergen Ar	50.40	356	P	P	15 15 26.4	-0.4
	0.6nm,0.4s,baz=343,slow=4.1,SNR=3.5						
ARCES	ARCESS Array B	58.15	350	P	P	15 16 21.9	-1.3
	2.4nm,0.8s,baz=13,slow=8.3,SNR=2.6						
TXAR	Lajitas Array	58.24	82	P	P	15 16 23.8	-0.7
	0.2nm,0.5s,baz=220,slow=23,SNR=3.9						
MKAR	Makanchi Array	60.35	309	P	P	15 16 40.0	+1.3
	0.8nm,0.9s,baz=58,slow=8.4,SNR=2.6						
BVAR	Borovoye Array	61.15	320	P	P	15 16 44.4	+0.4
	0.6nm,0.5s,baz=32,slow=5.6,SNR=3.7						
ASAR	Alice Springs	85.78	223	P	P	15 19 09.5	+0.7
	0.3nm,0.7s,baz=24,slow=5.9,SNR=4.9						
TORD	Torodi Ar. Bea	115.74	0	PKP	PKPdf	15 25 11.2	-0.8
	0.2nm,0.6s,baz=310,slow=2.0,SNR=3.5						
MAW	Mawson	146.74	218	PKPbc	PKPdf	15 26 08.4	+0.5
	1.1nm,0.5s,baz=49,slow=9.3,SNR=4.1						
BOSA	Boshof	151.28	313	PKPbc	PKPbc	15 26 23.4	+0.6
	1.2nm,0.3s,baz=142,slow=17,SNR=5.5						

IDC 17 15:09:08.2±1.9**,30°.76S**×**178°.10W,h0km,mb4.2**/3**, mb1 4.3**/4**,mb1mx3.8**/19**,mbtmp4.1**/4**,ML3.2**/1**,Error ellipse: s-maj=43.6km s-min=40.8km az=30.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	8.46	207	Pn	Pn	15 11 12.3	+0.3
	0.3nm,0.3s,baz=38,slow=12,SNR=7.0						
URZ				Sn	Sn	15 12 40.1	-8.1
	3.8nm,0.3s,baz=144,slow=21,SNR=20						
STKA	Stephens Creek	34.32	257	P	P	15 15 57.2	+0.7
	1.0nm,0.5s,baz=103,slow=14,SNR=4.4						
ASAR	Alice Springs	43.01	267	P	P	15 17 09.2	-0.4
	1.7nm,0.5s,baz=106,slow=7.2,SNR=77						
WRA	Warramunga Arr	44.03	273	P	P	15 17 17.4	-0.5
	2.6nm,0.6s,baz=112,slow=8.0,SNR=47						
FINES	FINESS Array B	145.45	340	PKPbc	PKPbc	15 28 47.3	-0.1
	0.6nm,0.5s,baz=26,slow=4.9,SNR=6.8						
TORD	Torodi Ar. Bea	162.47	179	PKPab	PKPab	15 29 59.0	-1.1
	0.5nm,0.7s,baz=153,slow=2.0,SNR=2.9						

*ISCJB **17** 15:55:15.0±0.6, 33°.75N±0°.02×35°.85E±0°.06, h6km±8km, Error ellipse: s-maj=8.1km s-min=4.0km az=179.9*
*NSSC **17** 15:55:14.6±2.5, 33°.72N×35°.88E, h0km±8km, ML1.4*
*CSEM **17** 15:55:14.9±0.3, 33°.76N×35°.79E, h10km, ML3.0, Error ellipse: s-maj=9.7km s-min=4.6km az=91.0*
*GRAL **17** 15:55:16.4±0.3, 33°.78N×35°.77E, h0km±32km, MD3.0*
ISC 17 15:55:14.8±1.1**,33°.75N**±0°.02×**35°.82E**±0°.05**,h15**km±10km**, n14,σ0^{s}90**/25**,Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BHL	Bhannes	0.21	319	eP	Pg	15 55 19.2	-0.4
BHL	Bhannes	0.21	319	eP	Pg	15 55 19.2	-0.4
RCY	Rachaya	0.25	176	eP	Pg	15 55 21.5	+1.1
RCY				eS	Sg	15 55 25.4	+1.2
BRBR	Barbar	0.35	162	eP	Pg	15 55 20.5	-1.6
BRBR				eS	Sg	15 55 25.8	-1.4
BRBR				AML	AML	15 55 31.1	
	comp=E,89nm,0.3s						
BRBR				AML	AML	15 55 34.9	
	comp=N,70nm,0.4s						
MATL	Matarih	0.48	238	eP	Pb	15 55 25.0	0.0
HWQ	Hawqa	0.54	11	eP	Pg	15 55 25.6	+0.1
HWQ				eS	Sg	15 55 32.5	-0.3
HWQ	Hawqa	0.54	11	eP	Pg	15 55 25.6	+0.1
HWQ				eS	Sg	15 55 32.5	-0.3
TOTH	TOTAH	0.64	127	eP	Pg	15 55 25.6	-1.8
TOTH				eS	Sg	15 55 35.9	0.0
TOTH				AML	AML	15 55 42.2	
	comp=E,30nm,0.7s						
TOTH				AML	AML	15 55 50.7	
	comp=N,13nm,0.5s						
FKH	Fakeheh	0.70	45	eP	Pg	15 55 29.2	+0.7
FKH				eS	Sg	15 55 38.4	+0.6
FKH	Fakeheh	0.70	45	eP	Pg	15 55 29.2	+0.7
FKH				eS	Sg	15 55 38.4	+0.6
HAWK	Haweek	0.91	32	eP	Pg	15 55 31.3	-1.2
HAWK				eS	Sg	15 55 44.9	+0.4
HAWK				AML	AML	15 55 53.8	
	comp=N,21nm,0.4s						
HAWK				AML	AML	15 55 55.4	
	comp=E,14nm,0.4s						
HAWK	Haweek	0.91	32	eP	Pg	15 55 31.3	-1.2
	SNR=67						
HAWK				eS	Sg	15 55 44.9	+0.4
	comp=E,14nm,0.4s,SNR=59						
SALA	Sala	1.29	143	eP	Pg	15 55 40.3	+0.7
SALA				eS	Sb	15 55 55.4	+0.2
SALA				AML	AML	15 56 04.9	
	comp=N,22nm,0.3s						
SALA				AML	AML	15 56 05.0	
	comp=E,1.9nm,0.3s						
SALA	Sala	1.29	143	eP	Pg	15 55 40.3	+0.7
	SNR=57						
SALA				eS	Sb	15 55 55.4	+0.2
	comp=E,1.9nm,0.3s,SNR=49						

*ISK **17** 16:20:17.8, 37°.62N×35°.54E, h15km, MD2.5*
*DDA **17** 16:20:17.7, 37°.58N×35°.55E, h9km, MD2.8*
*CSEM **17** 16:20:18.2±0.2, 37°.61N×35°.53E, h10km, MD2.5, Error ellipse: s-maj=4.6km s-min=3.6km az=18.0*
ISC 17 16:20:18.2±1.1**,37°.58N**±0°.04×**35°.55E**±0°.03**,h12**km±11km**, n19,σ0^{s}79**/28**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOZT	Kozan	0.24	114	PG	Pb	16 20 24.0	-0.5
KOZT				SG	Sb	16 20 28.4	+1.7
KOZT	Kozan	0.24	114	iPg	Pb	16 20 24.0	-0.5
KOZT				iSg	Sb	16 20 28.4	+1.7
CEYT	Ceyhan	0.59	165	ePG	Pb	16 20 30.4	0.0
CEYT	Ceyhan	0.59	165	ePg	Pb	16 20 30.4	0.0
ANDN	Andirin	0.63	89	iP	Pg	16 20 30.6	+0.1
ANDN				iS	Sg	16 20 38.9	+0.1
ANDN	Andirin	0.63	89	iP	Pg	16 20 30.6	+0.1
ANDN				iS	Sg	16 20 38.9	+0.1
GULE	Gulek	0.68	245	iP	Pg	16 20 30.7	-0.9
GULE				iS	Sb	16 20 42.1	+0.5
GULE	Gulek	0.68	245	iP	Pg	16 20 30.7	-0.9
GULE				iS	Sb	16 20 42.1	+0.5
YURE	YUREGIR	0.75	175	iP	Pb	16 20 33.5	+0.3
YURE	YUREGIR	0.75	175	iP	Pb	16 20 33.5	+0.3
NIG	Nigde	0.92	306	ePG	Pg	16 20 35.3	-0.7
NIG	Nigde	0.92	306	ePg	Pg	16 20 35.3	-0.7
KRTS	Karatas	1.01	188	ePG	Pn	16 20 38.4	+0.2
KRTS	Karatas	1.01	188	ePg	Pn	16 20 38.4	+0.2
KMRS	Kahramanmaras	1.07	93	ePN	Pn	16 20 39.7	+0.6
KMRS	Kahramanmaras	1.07	93	ePn	Pn	16 20 39.7	+0.6
SARI	SarD1z-Kayseri	1.07	39	ePG	Pg	16 20 38.3	-0.7
SARI				eSG	Sn	16 20 53.4	-0.8
AVNT	Avonos	1.32	336	iP	Pg	16 20 43.0	-0.7
AVNT				iS	Sg	16 21 02.0	+1.2
AVNT	Avonos	1.32	336	iP	Pg	16 20 43.0	-0.7
AVNT				iS	Sg	16 21 02.0	+1.2

IDC 17 16:21:11.9±1.3**,4°.13N**×**126°.91E,h0km,mb3.7**/7**, mb1 3.9**/7**,mb1mx3.7**/24**,mbtmp3.7**/7**,Error ellipse: s-maj=74.8km s-min=16.6km az=66.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	22.12	183	P	P	16 26 08.7	-0.5
	1.6nm,0.4s,baz=40,slow=5.3,SNR=15						
WRA	Warramunga Arr	25.01	163	P	P	16 26 37.5	-0.2
	2.3nm,0.6s,baz=343,slow=10,SNR=31						
ASAR	Alice Springs	28.46	166	P	P	16 27 08.5	-0.3
	0.5nm,0.6s,baz=345,slow=7.1,SNR=22						
CMAR	Chiang Mai Arr	30.83	300	P	P	16 27 30.4	+0.5
	0.5nm,0.5s,baz=108,slow=7.0,SNR=5.6						
STKA	Stephens Creek	38.44	160	P	P	16 28 36.2	+0.7
	0.9nm,0.5s,baz=319,slow=14,SNR=5.6						
MKAR	Makanchi Array	57.33	325	P	P	16 31 01.4	-0.4
	0.3nm,0.4s,baz=122,slow=7.2,SNR=6.7						
MKAR				PcP	PcP	16 31 56.3	+0.3
	0.3nm,0.6s,baz=125,slow=3.6,SNR=4.2						
ZALV	Zalesovo Beam	60.32	333	P	P	16 31 22.0	-0.4
	0.2nm,0.3s,baz=74,slow=5.1,SNR=2.2						
TORD	Torodi Ar. Bea	122.96	288	PKP	PKPdf	16 40 10.8	-0.5
	0.4nm,0.9s,baz=306,slow=2.7,SNR=2.8						

*ISK **17** 16:23:44.2, 37°.11N×28°.32E, h24km, MD2.3*
*DDA **17** 16:23:46.0, 37°.00N×28°.23E, h7km, MD2.8*
*CSEM **17** 16:23:45.8±0.3, 36°.97N×28°.27E, h2km, MD2.8, Error ellipse: s-maj=6.3km s-min=4.6km az=29.0*
ISC 17 16:23:45.6±1.2**,36°.97N**±0°.04×**28°.26E**±0°.03**,h3**km±16km**, n12,σ0^{s}40**/22**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.17	5	ePG	Pg	16 23 49.0	+0.1
YER				eSG	Sg	16 23 51.3	+0.2
YER	Yerkesik	0.17	5	ePg	Pg	16 23 49.0	+0.1
YER				eSg	Sg	16 23 51.3	+0.2
TURN	Turunc	0.29	109	iP	Pg	16 23 50.6	-0.6
TURN				iS	Sg	16 23 54.5	-0.4
TURN	Turunc	0.29	109	iP	Pg	16 23 50.6	-0.6
TURN				iS	Sg	16 23 54.5	-0.4
DALY	Dalyan (Mu˜la	0.35	116	ePG	Pg	16 23 53.2	+0.9
DALY	Dalyan (Mu˜la	0.35	116	ePg	Pg	16 23 53.2	+0.9
AYDN	Tasoluk	0.76	336	iP	Pg	16 23 59.9	-0.2
AYDN				iS	Sg	16 24 09.9	0.0
AYDN	Tasoluk	0.76	336	iP	Pg	16 23 59.9	-0.2
AYDN				iS	Sg	16 24 09.9	0.0
BODT	Bodrum	0.77	277	ePG	Pg	16 24 00.4	0.0
BODT				eSG	Sb	16 24 12.5	+0.1
BODT	Bodrum	0.77	277	ePg	Pg	16 24 00.4	0.0
BODT				eSg	Sb	16 24 12.5	+0.1
DNZL	Cakiroluk	0.95	41	iP	Pg	16 24 04.1	+0.2
DNZL				iS	Sb	16 24 17.9	-0.1
DNZL	Cakiroluk	0.95	41	iP	Pg	16 24 04.1	+0.2
DNZL				iS	Sb	16 24 17.9	-0.1

PGC 17 16:27:50.8±18.0**,47°.43N**×**128°.86W,h10km,Mw3.5**/5**,7D, 290km Wsw of Tofino, Bc Off Coast Of Washington,Off coast of Washington**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EDB	Eliza Dome	2.71	25	⇓Pn	Pn	16 28 32.8	-1.6
OZB	Mount Ozzard	2.73	54	⇓Pn	Pn	16 28 33.1	-1.6
BPBC	Brooks Peninsu	2.83	14	⇓Pn	Pn	16 28 34.3	-1.8
GDR	Gold River	3.01	37	⇓Pn	Pn	16 28 36.9	-1.6
BTB	Buttle Lake	3.02	46	⇑Pn	Pn	16 28 37.2	-1.7
PFB	Port Renfrew	3.18	67	⇓Pn	Pn	16 28 39.4	-1.5
PFB				⇓Sn	Sn	16 29 15.4	-3.6
HOLB	Holberg	3.25	8	⇑Pn	Pn	16 28 40.8	-1.1
LZB	Mount Lazard	3.58	69	⇓Pn	Pn	16 28 45.9	-0.7

*NNC **17** 16:34:16.8±12.0, 39°.27N×76°.54E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=111.1km s-min=74.3km az=122.0*
ISC 17 16:34:05.7±4.6**,38°.9N**±0°.2×**78°.1E**±0°.3**,h10km,n12, σ1^{s}70**/12**,3C-4D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	3.63	338	P	Pn	16 35 01.9	-0.3
	SNR=7.2						
KZA	Kyzart	3.84	327	P	Pn	16 35 03.5	-1.7
	SNR=31						
UCH	Uchtor	4.29	322	P	Pn	16 35 11.8	+0.3
	SNR=8.1						
KNDC	Almaty	4.41	350	⇑Pn	Pb	16 35 23.9	+0.7
	13nm,0.6s						
KNDC				⇑Sn	Sn	16 36 05.0	+0.8
	36nm,0.5s						
TKM2	Tokmak 2	4.44	336	⇓Pn	Pn	16 35 09.8	-3.6
	3.7nm,0.3s						
TKM2				⇓Sn	Sn	16 36 03.5	-1.7
	22nm,0.5s						
TKM2	Tokmak 2	4.44	336	P	Pn	16 35 10.6	-2.7
	SNR=13						
KBK	Karagaybulak	4.44	329	P	Pn	16 35 14.6	+1.3
	SNR=18						
AAK	Ala-Archa	4.62	325	P	Pn	16 35 18.1	+2.4
	SNR=12						
AML	Almayashu	4.64	316	P	Pn	16 35 10.3	-5.9
	SNR=18						
CHMS	Chumysh	4.81	330	P	Sn	16 36 14.0	0.0
	SNR=5.7						
EKS2	Erkin-Say	4.98	321	P	Pn	16 35 22.1	+1.5
	SNR=8.2						
KK31	Karatay Array	7.09	309	⇓Pn	Pn	16 35 48.0	-1.5
	0.2nm,0.3s,baz=128,slow=12,SNR=6.1						
KK31				⇑Pg	Pb	16 36 00.6	-8.3
	0.9nm,0.3s,baz=126,slow=16,SNR=7.2						
KK31				⇓Lg	Lg	16 37 29.5	
	1.9nm,0.5s,baz=126,slow=28,SNR=3.8						

*CSEM **17** 16:39:22.2±1.3, 22°.74N×36°.66E, h10km, mb4.7/6, Error ellipse: s-maj=33.7km s-min=12.3km az=35.0*
*KISR **17** 16:39:42.0±0.3, 25°.21N×37°.61E, h2km, ML4.4*
*IDC **17** 16:39:52.9±1.4, 25°.47N×37°.68E, h0km, mb3.6/9, mb1 3.7/12, mb1mx3.5/30, mbtmp3.6/12, ML3.3/3, MS2.7/3, Ms1 2.7/3, ms1mx2.4/40, Error ellipse: s-maj=22.7km s-min=18.8km az=57.0*
ISC 17 16:39:56.8±1.3**,25°.8N**±0°.1×**37°.9E**±0°.1**,h10km,n32, σ1^{s}41**/36**,mb3.5**/9**,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EIL	Elat	4.63	327	Pn	Pn	16 41 07.0	+0.3
	0.9nm,0.3s,baz=100,slow=3.8,SNR=9.5						
EIL				Pg	Pb	16 41 20.6	+2.6
	7.6nm,0.3s,baz=142,slow=10,SNR=17						
EIL				Lg	Lg	16 42 25.4	
	48nm,0.3s,baz=24,slow=15,SNR=13						
EIL				LR	LR	16 43 12.6	
	comp=Z,89nm,20.9s,baz=38,slow=41						
EIL	Elat	4.63	327	Pn	Pn	16 41 07.1	+0.3
EIL				Sn	Sg	16 42 26.3	+0.9
MBRI	Mt Berech	4.75	327	Pn	Pn	16 41 08.3	-0.2
MBRI				Sn	Sg	16 42 30.0	+0.7
HRFI	Mount Harif	4.89	330	Pn	Pn	16 41 10.8	+0.3
HRFI				Sn	Sg	16 42 33.6	-0.3
KRMI	Paran Flat	5.11	328	Pn	Pn	16 41 13.2	-0.2
KRMI				Sn	Sg	16 42 39.6	-1.2
PRNI	Paran	5.18	331	Pn	Pn	16 41 15.1	+0.7
PRNI				Sn	Sg	16 42 41.9	-1.2
ZFRI	Zfri	5.28	334	Pn	Pn	16 41 16.4	+0.6
ZFRI				Sn	Sg	16 42 46.0	-0.4
KZIT	Kziot	5.92	330	Pn	Pn	16 41 25.5	+0.9
KZIT				Sn	Sg	16 42 59.6	-7.3
DSI	Dead Sea	6.13	340	Pn	Pn	16 41 30.3	+2.8
ASF	Jabal al Asfar	6.39	353	Pg	Pg	16 41 56.0	-3.2
	1.0nm,0.3s,baz=40,slow=13,SNR=10						
ASF				Lg	Lg	16 43 25.9	
	5.7nm,0.3s,baz=19,slow=23,SNR=9.7						
SLTI	Sal'it	6.86	339	Pn	Pn	16 41 39.8	+2.3
MMLI	Mount Malkishu	6.93	343	Pn	Pn	16 41 40.8	+2.3
OFRI	'Ofer	7.23	340	Pn	Pn	16 41 44.4	+1.8
MMA0	Mount Meron ar	7.49	344	Pn	Pn	16 41 47.8	+1.7
MMAI	Mount Meron Ar	7.49	344	Pn	Pn	16 41 47.9	+1.7
	4.1nm,0.3s,baz=150,slow=15,SNR=17						
MMAI				Pg	Pg	16 42 15.8	-4.4
	1.9nm,0.3s,baz=160,slow=15,SNR=4.1						
MMAI				Lg	Lg	16 43 59.6	
	4.5nm,0.3s,baz=155,slow=26,SNR=4.8						
KSDI	Kefar Szold	7.60	346	Pn	Pn	16 41 49.5	+2.0
NAY	Al-Naaiem	8.99	66	eP	Pn	16 42 05.9	-0.8
NAY				AML	AML	16 44 36.5	
	comp=Z,10nm,0.7s						
NAY	Al-Naaiem	8.99	66	eP	Pn	16 42 05.9	-0.8
RDF	Al-Radifah	9.14	68	eP	Pn	16 42 07.9	-0.9
RDF				AML	AML	16 44 42.8	
	comp=Z,16nm,0.6s						
RDF	Al-Radifah	9.14	68	eP	Pn	16 42 07.9	-0.9
QRN	Al-Qurain	9.40	70	eP	Pn	16 42 11.4	-0.9
BRTR	Keskin Array B	14.31	347	Pn	P	16 43 23.3	-3.6
	comp=Z,0.0nm,0.3s,baz=167,slow=13,SNR=2.6						
MLR	Muntele Rosu	21.84	337	LR	LR	16 54 20.0	
	comp=Z,13nm,20.3s,baz=231,slow=39						
AKASG	Malin Array Be	25.72	347	P	P	16 45 27.1	-0.1
	comp=Z,0.3nm,0.4s,baz=164,slow=8.2,SNR=3.9						
GERES	GERESS Array B	29.73	327	P	P	16 46 04.2	+1.0
	comp=Z,0.5nm,0.9s,baz=128,slow=6.4,SNR=4.7						
GERES				LR	LR	16 58 39.5	
	comp=Z,15nm,18.5s,baz=92,slow=38						
TORD	Torodi Ar. Bea	36.23	257	P	P	16 46 55.2	-5.0
	comp=Z,0.3nm,0.5s,baz=59,slow=8.6,SNR=2.8						
BVAR	Borovoye Array	36.46	33	P	P	16 47 03.0	+1.2
	comp=Z,0.3nm,0.6s,baz=197,slow=4.4,SNR=2.9						
FINES	FINESS Array B	36.50	350	P	P	16 47 01.6	-0.4
	comp=Z,0.9nm,0.8s,baz=200,slow=16,SNR=3.0						
ESDC	Sonseca Array	37.47	302	P	P	16 47 08.9	-1.6
	comp=Z,0.3nm,0.3s,baz=175,slow=19,SNR=5.0						
NOA	NORSAR Array B	39.61	340	P	P	16 47 27.3	-1.0
	comp=Z,1.0nm,0.8s,baz=138,slow=8.7,SNR=4.0						
KURBB	Kurchatov Arra	39.70	41	P	P	16 47 29.8	+0.7
	comp=Z,0.6nm,0.5s,baz=252,slow=8.6,SNR=5.8						
MKAR	Makanchi Array	40.80	47	P	P	16 47 38.7	+0.4
	comp=Z,1.0nm,0.7s,baz=252,slow=7.1,SNR=11						

DJA ***17*** *16:40:39.1±3.0,7°S±16″×12°8E±2″0,h467km±37km, M4.3/6,mB4.3/1,mb4.2/6,MLv4.3/4,Mw(mB)3.5/1*
ISCJB ***17*** *16:40:42.4±0.3,6°55S±0″05×127°30E±0″05,h408km, mb3.7/8,Error ellipse: s-maj=6.5km s-min=5.9km az=136.7*
AUST ***17*** *16:40:43.8,6°49S×127°52E,h450km*
IDC ***17*** *16:40:44.2±1.7,6°59S×127°27E,h414km±19km,mb3.4/8, mb1 3.3/12,mb1mx3.2/23,mbtmp3.3/12,Error ellipse: s-maj=22.4km s-min=12.1km az=63.0*

ISC 17 16:40:43.3±0.5,**6°56S**±0″07×**127°36E**±0″07,**h408**km,**n47,** σ1⚲**68/49,mb3.9/8,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.97**	**16**	P	**P**	**16 41 49.5**	**+2.6**
AAI	**Ambon**	**2.97**	**16**	P	**P**	**16 41 49.7**	**+2.9**
	baz=2.9,SNR=9.3						
BBSI	**Bau Bau**	**4.88**	**282**	P	**P**	**16 42 05.9**	**+1.5**
	94nm,1.2s,775nm0.3nm						
MMRI	**Maumere**	**5.48**	**248**	P	**P**	**16 42 10.8**	**+0.3**
	51nm,0.9s,0.2nm						
FAKI	**Fak Fak**	**6.06**	**54**	P	**P**	**16 42 17.7**	**+1.0**
	baz=5.9,SNR=24						
FAKI				S	**S**	**16 43 28.5**	**-4.8**
	baz=5.9,SNR=4.3						
BSSI	**Bau Bau, Buton**	**6.84**	**273**	P	**P**	**16 42 25.8**	**-0.1**
	66nm,0.8s						
SWI	**Sorong**	**6.87**	**35**	P	**P**	**16 42 27.9**	**+1.8**
	baz=6.8,SNR=7.4						
SWI				S	**S**	**16 43 47.5**	**-1.8**
	baz=6.8,SNR=3.3						
MTN	**Manton Dam**	**7.27**	**150**	P	**P**	**16 42 31.2**	**+0.6**
	baz=7.3,SNR=38						
BKSI	**Bulukumba**	**7.31**	**279**	P	**P**	**16 42 31.3**	**+0.3**
	34nm,0.7s,0.1nm						
WSI	**Waingapu**	**7.65**	**246**	S	S	16 43 57.9	-7.5
	baz=7.8,SNR=8.1						
KAPI	**Kappang**	**7.73**	**281**	P	**P**	**16 42 35.8**	**+0.1**
	28nm,0.9s						
KAPI	**Kappang**	**7.73**	**281**	P	**P**	**16 42 35.5**	**-0.2**
	1.9nm,0.3s,baz=147,slow=3.3,SNR=18						
KDU	**Kakadu**	**7.90**	**141**	P	**P**	**16 42 38.2**	**+0.6**
	baz=7.9,SNR=9.4						
WBSI	**Waikabubak, Su**	**8.47**	**248**	P	**P**	**16 42 40.8**	**-3.0**
KNRA	**Kununurra**	**9.16**	**172**	P	**P**	**16 42 52.1**	**+0.6**
	baz=9.3,SNR=10						
FITZ	**Fitzroy Crossi**	**11.60**	**188**	P	**P**	**16 43 18.3**	**-0.1**
	0.3nm,0.3s,baz=0.9,slow=8.0,SNR=9.7						
FITZ	**Fitzroy Crossi**	**11.60**	**188**	P	**P**	**16 43 18.3**	**-0.1**
	baz=12,SNR=5.7						
BBKI	**Banjar Baru**	**12.85**	**283**	P	**P**	**16 43 34.6**	**+2.4**
WRA	**Warramunga Arr**	**14.93**	**154**	P	**P**	**16 43 55.3**	**+0.5**
	0.4nm,0.3s,baz=206,slow=15,SNR=36						
STKI	**Sintang**	**17.16**	**292**	P	P	16 44 27.5	+8.7
COEN	**Coen**	**17.20**	**117**	P	**P**	**16 44 20.2**	**+1.1**
	baz=17,SNR=7.7						
ASAR	**Alice Springs**	**18.14**	**160**	P	**P**	**16 44 29.8**	**+0.8**
	0.4nm,0.3s,baz=350,slow=12,SNR=44						
ASAR				ScP	**ScP**	**16 51 36.4**	**-1.0**
	baz=318,slow=1.9,SNR=5.8						
QIS	**Mount Isa**	**18.29**	**141**	P	**P**	**16 44 33.0**	**+2.3**
	baz=18,SNR=7.4						
KSM	**Kuching**	**18.80**	**295**	P	**P**	**16 44 37.8**	**+1.7**
KSM	**Kuching**	**18.80**	**295**	P	**P**	**16 44 38.2**	**+2.2**
	baz=19,SNR=7.2						
CISI	**Cisompet, Garu**	**19.43**	**266**	P	**P**	**16 44 41.0**	**-1.2**
	baz=20,SNR=10						
MEEK	**Meekatharra**	**21.64**	**202**	P	**P**	**16 45 01.2**	**-1.0**
	baz=22,SNR=5.9						
STKA	**Stephens Creek**	**28.48**	**154**	P	**P**	**16 46 04.0**	**+0.7**
	1.3nm,0.5s,baz=345,slow=9.1,SNR=6.4						
PSI	**Prapat**	**29.88**	**287**	P	**P**	**16 46 15.4**	**-0.4**
	12nm,0.7s,baz=191,slow=4.3,SNR=9.0						
CMAR	**Chiang Mai Arr**	**37.47**	**312**	P	**P**	**16 47 20.1**	**-0.1**
	1.0nm,0.7s,baz=142,slow=7.1,SNR=9.8						
CMAR				ScP	**ScP**	**16 52 30.2**	**-6.4**
	0.3nm,0.6s,baz=121,slow=3.3,SNR=4.9						
MJAR	**Matsushiro Arr**	**44.06**	**13**	P	**P**	**16 48 13.1**	**+0.1**
	4.2nm,0.8s,baz=194,slow=9.9,SNR=9.2						
ODAN	**Odare**	**51.01**	**312**	*e*P	**P**	**16 49 05.8**	**-0.4**
	5.3nm,0.5s						
TAPN	**Taplejung**	**51.06**	**313**	*e*P	**P**	**16 49 06.2**	**-0.4**
	4.4nm,0.5s						
RAMN	**Ramite**	**51.64**	**312**	*e*P	**P**	**16 49 11.0**	**+0.2**
GUN	**Gumba**	**52.71**	**313**	*e*P	**P**	**16 49 18.4**	**-0.3**
	13nm,0.7s						
PKI	**Pulchoki**	**52.87**	**312**	*e*P	**P**	**16 49 19.4**	**-0.4**
PKIN	**Phulchoki**	**52.88**	**312**	*e*P	**P**	**16 49 19.6**	**-0.2**
KKN	**Kakani**	**53.08**	**312**	*e*P	**P**	**16 49 20.8**	**-0.4**
	4.5nm,0.6s						
DMN	**Daman**	**53.11**	**312**	*e*P	**P**	**16 49 21.0**	**-0.5**
KOLN	**Koldanda**	**54.32**	**311**	*e*P	**P**	**16 49 29.7**	**-0.4**
	8.8nm,0.7s						
DANN	**Dangsing**	**54.51**	**312**	*e*P	**P**	**16 49 31.1**	**-0.4**
PYUN	**Piuthan**	**54.95**	**311**	*e*P	**P**	**16 49 34.4**	**-0.2**
	19nm,0.8s						
PETK	**Petropavlovsk-**	**64.76**	**20**	P	**P**	**16 50 41.1**	**+1.5**
	3.0nm,0.8s,baz=170,slow=5.5,SNR=6.9						
MKAR	**Makanchi Array**	**66.44**	**328**	P	**P**	**16 50 50.8**	**+0.3**
	1.3nm,0.5s,baz=124,slow=8.2,SNR=22						
ZALV	**Zalesovo Beam**	**70.05**	**335**	P	**P**	**16 51 12.3**	**-0.1**
	1.7nm,0.6s,baz=134,slow=5.4,SNR=12						
QSPA	**South Pole Qui**	**83.42**	**180**	P	**P**	**16 52 25.7**	**-0.4**
	0.7nm,0.8s,baz=352,slow=12,SNR=5.3						
TORD	**Torodi Ar. Bea**	**126.16**	**281**	PKP	**PKPdf**	**16 58 59.0**	**-0.1**
	0.3nm,0.6s,baz=66,slow=1.7,SNR=2.3						

ISCJB ***17*** *16:45:47.3±2.5,32°3S±0″1×177°7W±0″4,h21km,mb3.5/2, Error ellipse: s-maj=49.8km s-min=11.1km az=14.5*
IDC ***17*** *16:45:48.7±3.0,32°10S×178°07W,h0km,mb3.6/2, mb1 3.8/3,mb1mx3.6/19,mbtmp3.6/3,ML3.2/1,Error ellipse: s-maj=69.0km s-min=36.2km az=116.0*

ISC 17 16:45:48.7±2.7,**32°3S**±0″2×**177°6W**±0″4,**h21**km,**n8,** σ0⚲**94/13,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**6.72**	**209**	*e*Pn	**Pn**	**16 47 26.3**	**+0.1**
PUZ				SN	**Sn**	**16 48 43.1**	**+1.0**
MWZ	**Matawai**	**7.26**	**212**	*e*Pn	**Pn**	**16 47 33.8**	**+0.3**
MWZ				SN	**Sn**	**16 48 54.8**	**-0.6**
URZ	**Urewera**	**7.39**	**215**	*e*Pn	**Pn**	**16 47 34.8**	**-0.6**
URZ				SN	**Sn**	**16 48 57.4**	**-1.1**
URZ	**Urewera**	**7.39**	**215**	Pn	**Pn**	**16 47 37.0**	**+1.6**
	0.4nm,0.3s,baz=61,slow=10,SNR=7.4						
URZ				Sn	**Sn**	**16 48 59.8**	**+1.3**
	1.4nm,0.3s,baz=168,slow=18,SNR=8.5						
KNZ	**Kokohu**	**7.77**	**209**	*e*Pn	**Pn**	**16 47 40.2**	**-0.3**
KNZ				SN	**Sn**	**16 49 06.7**	**-1.1**
ASAR	**Alice Springs**	**43.40**	**269**	P	**P**	**16 53 50.0**	**-0.1**
	0.3nm,0.4s,baz=109,slow=7.6,SNR=17						
WRA	**Warramunga Arr**	**44.56**	**274**	P	**P**	**16 53 58.9**	**-0.5**
	0.5nm,0.3s,baz=112,slow=8.0,SNR=21						
FINES	**FINESS Array B**	**147.02**	**339**	PKPbc	**PKPab**	**17 05 30.8**	**+0.3**
	0.5nm,0.4s,baz=56,slow=3.9,SNR=7.2						

SKO ***17*** *16:49:10.2,38°47N×21°48E,h0km*
THE ***17*** *16:49:17.8,39°02N×21°51E,h11km,ML3.3/9,Error ellipse: s-maj=0.8km s-min=0.4km az=178.0*
ISCJB ***17*** *16:49:17.6±0.6,39°06N±0°02×21°52E±0°02,h13km±4km, mb3.6/7,Error ellipse: s-maj=3.4km s-min=2.6km az=136.7*
ATH ***17*** *16:49:17.6,39°06N×21°56E,h19km±1km,MD3.2/20*
CSEM ***17*** *16:49:17.8±0.1,39°00N×21°52E,h10km,MD3.2,Error ellipse: s-maj=3.7km s-min=2.7km az=37.0*
IDC ***17*** *16:49:21.2±5.6,39°04N×21°61E,h33km±45km,mb3.5/7, mb1 3.5/9,mb1mx3.3/29,mbtmp3.4/9,ML2.9/2,Error ellipse: s-maj=29.6km s-min=25.0km az=122.0*

ISC 17 16:49:17.9±0.9,**39°03N**±0°02×**21°52E**±0°02,**h11**km±7km, **n110,** σ0⚲**81/148,mb3.7/7,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVR	**Evrytania**	**0.25**	**116**	P	**Pg**	**16 49 22.9**	**-0.1**
EVR				S	**Sg**	**16 49 27.6**	**+1.1**
EVR	**Evrytania**	**0.25**	**116**	*e*PB	**Pg**	**16 49 22.9**	**-0.1**
EVR				*e*SB	**Sg**	**16 49 27.0**	**+0.5**
EVR	**Evrytania**	**0.25**	**116**	P	**Pg**	**16 49 22.9**	**-0.1**
EVR				*e*Sb	**Sg**	**16 49 27.0**	**+0.5**
EVR				S		16 49 27.6	
MAKR	**Makrakomi, Fth**	**0.47**	**91**	P	**Pg**	**16 49 27.1**	**-0.1**
MAKR				S	**Sb**	**16 49 34.9**	**-0.4**
MAKR	**Makrakomi, Fth**	**0.47**	**91**	P	**Pg**	**16 49 27.1**	**-0.1**
MAKR				S	**Sb**	**16 49 34.9**	**-0.4**
AGG	**Agios Georgios**	**0.63**	**90**	P	**Pg**	**16 49 29.6**	**-0.5**
AGG				S	**Sg**	**16 49 39.2**	**+0.8**
AGG	**Agios Georgios**	**0.63**	**90**	*e*PN	**Pg**	**16 49 29.7**	**-0.4**
AGG				*e*SN	**Sg**	**16 49 38.5**	**+0.1**
AGG	**Agios Georgios**	**0.63**	**90**	P	**Pg**	**16 49 29.6**	**-0.5**
AGG				*e*Sn	**Sg**	**16 49 38.5**	**+0.1**
AGG				S	**Sg**	**16 49 39.2**	**+0.8**
THL	**Klokotos Trika**	**0.66**	**35**	*e*PB	**Pg**	**16 49 29.4**	**-1.3**
THL				*e*SN	**Sg**	**16 49 39.1**	**-0.3**
EFFP	**Efpalio**	**0.67**	**153**	P	**Pg**	**16 49 30.8**	**0.0**
EFFP				S	**Sb**	**16 49 40.8**	**0.0**
EFP	**Efpalio**	**0.67**	**153**	*e*PN	**Pg**	**16 49 30.8**	**0.0**
EFP	**Efpalio**	**0.67**	**153**	P	**Pg**	**16 49 30.8**	**0.0**
EFP				S	**Sb**	**16 49 40.8**	**0.0**
LKD2	**Lefkada island**	**0.71**	**251**	P	**Pg**	**16 49 31.4**	**-0.3**
LKD2				S	**Sb**	**16 49 42.0**	**-0.2**
LKD2	**Lefkada island**	**0.71**	**251**	*e*PB	**Pg**	**16 49 31.3**	**-0.4**
LKD2				*e*SN	**Sb**	**16 49 43.3**	**+1.1**
LKD2	**Lefkada island**	**0.71**	**251**	P	**Pg**	**16 49 31.4**	**-0.3**
LKD2				S	**Sb**	**16 49 42.0**	**-0.2**
LKD2				*e*Sn	**Sb**	**16 49 43.3**	**+1.1**
TRIZ	**Trizonia**	**0.79**	**147**	P	**Pg**	**16 49 32.4**	**-0.7**
TRIZ				S	**Sb**	**16 49 44.3**	**+0.1**
TRIZ	**Trizonia**	**0.79**	**147**	*e*PB	**Pg**	**16 49 32.6**	**-0.5**
TRIZ				*e*SN	**Sb**	**16 49 44.5**	**+0.3**
TRIZ	**Trizonia**	**0.79**	**147**	*e*Pb	**Pg**	**16 49 32.6**	**-0.5**
TRIZ				*e*Sn	**Sb**	**16 49 44.5**	**+0.3**
KALE	**Kalithea**	**0.80**	**142**	P	**Pg**	**16 49 32.8**	**-0.5**
KALE				S	**Sb**	**16 49 44.9**	**+0.3**
KALE	**Kalithea**	**0.80**	**142**	*e*PN	**Pg**	**16 49 32.8**	**-0.5**
KALE	**Kalithea**	**0.80**	**142**	P	**Pg**	**16 49 32.8**	**-0.5**
KALE				S	**Sb**	**16 49 44.9**	**+0.3**
JAN	**Janina**	**0.82**	**321**	P	**Pg**	**16 49 32.9**	**-0.8**
JAN				S	**Sg**	**16 49 44.7**	**+0.3**
JAN	**Janina**	**0.82**	**321**	*e*PN	**Pg**	**16 49 32.9**	**-0.8**
JAN				*e*SN	**Sg**	**16 49 44.8**	**+0.3**
JAN	**Janina**	**0.82**	**321**	P	**Pg**	**16 49 32.9**	**-0.8**
JAN				S	**Sg**	**16 49 44.7**	**+0.3**
LAKA	**Lakka**	**0.86**	**155**	*e*PN	**Pg**	**16 49 34.7**	**+0.2**
LAKA	**Lakka**	**0.86**	**155**	*e*Pn	**Pg**	**16 49 34.7**	**+0.2**
AXAR	**Agios Charalam**	**0.92**	**106**	P	**Pb**	**16 49 36.0**	**0.0**
AXAR				S	**Sb**	**16 49 48.9**	**+0.7**
AXAR	**Agios Charalam**	**0.92**	**106**	P	**Pb**	**16 49 36.0**	**0.0**
AXAR				S	**Sb**	**16 49 48.9**	**+0.7**
RLS	**Riolos of Patr**	**0.97**	**183**	*e*PN	**Pb**	**16 49 36.7**	**0.0**
RLS				*e*SN	**Sn**	**16 49 51.0**	**-0.1**
RLS	**Riolos of Patr**	**0.97**	**183**	*e*Pn	**Pb**	**16 49 36.7**	**0.0**
DSF	**Desfina**	**1.00**	**128**	P	**Pb**	**16 49 36.1**	**-1.1**
DSF				S	**Sb**	**16 49 51.1**	**+0.7**
DSF	**Desfina**	**1.00**	**128**	P	**Pb**	**16 49 36.1**	**-1.1**
DSF				S	**Sb**	**16 49 51.1**	**+0.7**
IGT	**Igoumenitsa**	**1.05**	**299**	P	**Pb**	**16 49 37.1**	**-1.1**
IGT				S	**Sg**	**16 49 52.0**	**+0.1**
IGT	**Igoumenitsa**	**1.05**	**299**	P	**Pb**	**16 49 37.1**	**-1.1**
IGT				S	**Sg**	**16 49 52.0**	**+0.1**
KLV	**Kalavryta, Ach**	**1.10**	**153**	*e*PN	**Pb**	**16 49 39.0**	**+0.1**
KLV				*e*SN	**Sn**	**16 49 54.5**	**0.0**
KLV	**Kalavryta, Ach**	**1.10**	**153**	*e*Pn	**Pb**	**16 49 39.0**	**+0.1**
KLV				*e*Sn	**Sn**	**16 49 54.5**	**0.0**
VLS	**Valsamata**	**1.12**	**221**	P	**Pb**	**16 49 38.0**	**-1.2**
VLS				S	**Sn**	**16 49 54.6**	**-0.3**
VLS	**Valsamata**	**1.12**	**221**	*e*PB	**Pb**	**16 49 38.1**	**-1.2**
VLS	**Valsamata**	**1.12**	**221**	*e*Pb	**Pb**	**16 49 38.1**	**-1.2**
VLS				S	**Sn**	**16 49 54.6**	**-0.3**
LKR	**Lokris**	**1.21**	**107**	P	**Pn**	**16 49 40.2**	**-0.6**
LKR				S	**Sg**	**16 49 56.9**	**0.0**
LKR	**Lokris**	**1.21**	**107**	*e*PN	**Pn**	**16 49 40.6**	**-0.2**
LKR	**Lokris**	**1.21**	**107**	P	**Pn**	**16 49 40.2**	**-0.6**
LKR	**Lokris**	**1.21**	**107**	*e*Pn	**Pn**	**16 49 40.6**	**-0.2**
LKR				S	**Sg**	**16 49 56.9**	**0.0**
ATAL	**Atalanti**	**1.22**	**105**	P	**Pn**	**16 49 40.2**	**-0.7**
ATAL	**Atalanti**	**1.22**	**105**	P	**Pn**	**16 49 40.2**	**-0.7**
GUR	**Goura**	**1.26**	**149**	P	**Pn**	**16 49 40.7**	**-0.9**
GUR	**Goura**	**1.26**	**149**	*e*PN	**Pb**	**16 49 41.8**	**0.0**
GUR				*e*SN	**Sg**	**16 49 59.9**	**+1.3**
GUR	**Goura**	**1.26**	**149**	P	**Pn**	**16 49 40.7**	**-0.9**
GUR	**Goura**	**1.26**	**149**	*e*Pn	**Pb**	**16 49 41.8**	**0.0**
KZN	**Kozani**	**1.29**	**8**	P	**Pn**	**16 49 41.0**	**-1.0**
KZN	**Kozani**	**1.29**	**8**	P	**Pn**	**16 49 41.0**	**-1.0**
XOR	**Xorichti**	**1.34**	**75**	P	**Pn**	**16 49 42.2**	**-0.4**
XOR				S	**Sn**	**16 50 00.7**	**+0.2**
XOR	**Xorichti**	**1.34**	**75**	P	**Pn**	**16 49 42.2**	**-0.4**
XOR				S	**Sn**	**16 50 00.7**	**+0.2**
NEO	**Neokhori**	**1.35**	**77**	*e*PN	**Pn**	**16 49 42.7**	**-0.1**
NEO	**Neokhori**	**1.35**	**77**	*e*Pn	**Pn**	**16 49 42.7**	**-0.1**
KEK	**Kerkira**	**1.50**	**298**	*e*PN	**Pg**	**16 49 46.6**	**-0.1**
KEK	**Kerkira**	**1.50**	**298**	*e*Pn	**Pg**	**16 49 46.6**	**-0.1**
LTK	**Loutraki**	**1.51**	**131**	*e*PN	**Pb**	**16 49 46.2**	**+0.2**
LTK	**Loutraki**	**1.51**	**131**	*e*Pn	**Pb**	**16 49 46.2**	**+0.2**
SKIA	**Skiathos**	**1.52**	**84**	P	**Pn**	**16 49 45.1**	**+0.1**
SKIA	**Skiathos**	**1.52**	**84**	P	**Pn**	**16 49 45.1**	**+0.1**
KBN	**Korca**	**1.69**	**341**	*i* PN	**Sg**	**16 50 17.0**	**+4.6**
FNA	**Florina**	**1.76**	**356**	*e*PN	**Pn**	**16 49 49.1**	**+0.7**
FNA	**Florina**	**1.76**	**356**	*e*Pn	**Pn**	**16 49 49.1**	**+0.7**
VLX	**Vlachokerasia**	**1.78**	**158**	*e*PN	**Pb**	**16 49 50.7**	**0.0**
AOS	**Alonnisos**	**1.84**	**85**	P	**Pn**	**16 49 49.0**	**-0.4**
AOS	**Alonnisos**	**1.84**	**85**	*e*PB	**Pn**	**16 49 49.0**	**-0.4**
AOS	**Alonnisos**	**1.84**	**85**	P	**Pn**	**16 49 49.0**	**-0.4**
NAIG	**Nisos Aigina**	**2.00**	**126**	*e*PN	**Pb**	**16 49 53.3**	**-0.9**
BIA	**Bitola**	**2.00**	**356**	*e*Sn	**Sg**	**16 50 23.9**	**+1.8**
PLG	**Polygyros**	**2.00**	**47**	*e*PB	**Pn**	**16 49 50.8**	**-1.0**
PLG	**Polygyros**	**2.00**	**47**	*e*Pb	**Pn**	**16 49 50.8**	**-1.0**
ATH	**Athens Observa**	**2.02**	**121**	*e*PB	**Pn**	**16 49 52.0**	**+0.1**
ATH	**Athens Observa**	**2.02**	**121**	*e*Pb	**Pn**	**16 49 52.0**	**+0.1**
DID	**Didima**	**2.03**	**138**	*e*PN	**Pb**	**16 49 53.6**	**-1.2**
GRG	**Griva**	**2.04**	**19**	P	**Pn**	**16 49 51.8**	**-0.5**
GRG	**Griva**	**2.04**	**19**	*e*PB	**Pn**	**16 49 51.9**	**-0.4**
GRG	**Griva**	**2.04**	**19**	*e*Pb	**Pn**	**16 49 51.9**	**-0.4**
PTL	**Penteli**	**2.08**	**117**	*e*PN	**Pn**	**16 49 53.8**	**+1.0**
PTL	**Penteli**	**2.08**	**117**	*e*PN	**Pb**	**16 49 54.7**	**-1.0**
PTL	**Penteli**	**2.08**	**117**	*e*Pn	**Pn**	**16 49 53.8**	**+1.0**
SOH	**Sokhos**	**2.28**	**38**	P	**Pn**	**16 49 55.6**	**0.0**
SOH	**Sokhos**	**2.28**	**38**	*e*PB	**Pn**	**16 49 55.6**	**0.0**
SOH	**Sokhos**	**2.28**	**38**	P	**Pn**	**16 49 55.6**	**0.0**
VAY	**Valandovo**	**2.43**	**19**	*e*Pn	**Pn**	**16 49 58.9**	**+1.4**
VAY	**Valandovo**	**2.43**	**19**	*e*Pn	**Pn**	**16 49 58.9**	**+1.8**
VLI	**Veliai**	**2.56**	**154**	*e*PB	**Pb**	**16 50 02.8**	**+1.0**
PHP	**Peshkopia**	**2.78**	**343**	*i* PN	**Pb**	**16 50 06.8**	**-0.9**
PHP	**Peshkopia**	**2.78**	**343**	*i* Pn	**Pb**	**16 50 06.8**	**-0.9**
NVR	**Nevrokopi**	**2.93**	**37**	*e*PN	**Pn**	**16 50 04.9**	**+0.4**
NVR	**Nevrokopi**	**2.93**	**37**	*e*Pn	**Pn**	**16 50 04.9**	**+0.4**
LIA	**Limnos Island**	**2.96**	**72**	*e*PN	**Pn**	**16 50 04.8**	**-0.1**
LIA	**Limnos Island**	**2.96**	**72**	*e*Pn	**Pn**	**16 50 04.8**	**-0.1**
KYTH	**Kithira**	**2.99**	**156**	*e*PB	**Pb**	**16 50 08.6**	**-2.6**
BCI	**Bajram Curri**	**3.52**	**342**	*i* PN	Pn	16 50 16.0	+3.5
BCI	**Bajram Curri**	**3.52**	**342**	*i* Pn	Pn	16 50 16.0	+3.5
CHOS	**Chios island**	**3.60**	**99**	*e*PN	**Pn**	**16 50 14.7**	**+0.9**
CHOS	**Chios island**	**3.60**	**99**	*e*Pn	**Pn**	**16 50 14.7**	**+0.9**
BARS	**Barje**	**3.79**	**3**	*e*Pn	**Pn**	**16 50 17.3**	**+1.0**
BBLS	**Lazići**	**5.09**	**342**	*e*Pn	**Pn**	**16 50 35.9**	**+1.7**
DIVS	**Divibare**	**5.20**	**348**	*e*Pn	**Pn**	**16 50 35.9**	**+0.2**
MLR	**Muntele Rosu**	**7.25**	**25**	Pn	**Pn**	**16 51 05.5**	**+1.7**
	0.1nm,0.3s,baz=265,slow=11,SNR=5.2						
BRTR	**Keskin Array B**	**9.41**	**82**	Pn	**Pn**	**16 51 33.1**	**-0.5**
	0.1nm,0.3s,baz=257,slow=16,SNR=3.4						
HFS	**Hagfors**	**21.70**	**349**	P	**P**	**16 54 09.2**	**+0.6**
	3.8nm,1.1s,baz=142,slow=7.2,SNR=4.2						
FINES	**FINESS Array B**	**22.62**	**6**	P	**P**	**16 54 17.8**	**-0.7**
	0.5nm,0.7s,baz=160,slow=8.6,SNR=3.5						
NOA	**NORSAR Array B**	**22.96**	**347**	P	**P**	**16 54 23.3**	**+1.3**
	0.8nm,0.9s,baz=157,slow=9.0,SNR=3.4						
ARCES	**ARCESS Array B**	**30.65**	**3**	P	**P**	**16 55 31.3**	**-0.6**
	1.7nm,0.9s,baz=186,slow=9.8,SNR=5.0						
TORD	**Torodi Ar. Bea**	**31.18**	**220**	P	**P**	**16 55 37.6**	**+0.5**
	0.2nm,0.4s,baz=34,slow=8.7,SNR=4.1						
MKAR	**Makanchi Array**	**44.19**	**59**	P	**P**	**16 57 27.1**	**+0.3**
	0.8nm,0.6s,baz=297,slow=6.2,SNR=7.7						
ZALV	**Zalesovo Beam**	**44.54**	**49**	P	**P**	**16 57 28.3**	**-1.2**
	2.2nm,0.6s,baz=278,slow=8.7,SNR=11						

IDC 17 16:55:20.6±53.0,**15°55S×171°34W,h0**km,**mb4.0/3, mb1 4.2/3,mb1mx3.6/21,mbtmp4.0/3,Error ellipse: s-maj=1034.0km s-min=186.2km az=79.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**45.69**	**241**	P	P	17 03 43.9	+0.5
	2.4nm,0.9s,baz=106,slow=7.8,SNR=5.0						
WRA	**Warramunga Arr**	**51.74**	**257**	P	P	17 04 29.8	-0.5
	0.3nm,0.5s,baz=96,slow=6.9,SNR=14						
ASAR	**Alice Springs**	**51.95**	**252**	P	P	17 04 31.6	-0.2
	3.9nm,0.6s,baz=90,slow=7.8,SNR=176						

IDC 17 17:12:06.0±1.8,**4°40N×126°74E,h0**km,**mb3.5/6, mb1 3.7/6,mb1mx3.5/24,mbtmp3.5/6,MS3.4/1,Ms1 3.4/1, ms1mx2.3/28,1C,Error ellipse: s-maj=80.7km s-min=19.4km az=61.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**3.74**	**319**	*i* P	Pn	17 13 04.3	-0.7
FITZ	**Fitzroy Crossi**	**22.38**	**183**	P	P	17 17 05.9	-0.1
	1.1nm,0.7s,baz=12,slow=12,SNR=3.5						
WRA	**Warramunga Arr**	**25.32**	**163**	P	P	17 17 33.8	-0.8
	0.9nm,0.8s,baz=342,slow=10,SNR=13						
ASAR	**Alice Springs**	**28.76**	**166**	P	P	17 18 05.5	-0.1
	0.5nm,0.7s,baz=352,slow=7.3,SNR=14						
ASAR				LR	LR	17 28 51.3	
	comp=Z,76nm,21.6s,baz=258,slow=35						
CMAR	**Chiang Mai Arr**	**30.55**	**299**	P	P	17 18 21.5	0.0
	0.4nm,0.7s,baz=106,slow=6.7,SNR=3.8						
STKA	**Stephens Creek**	**38.75**	**160**	P	P	17 19 33.1	+0.9
	1.1nm,0.5s,baz=332,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**57.02**	**325**	P	P	17 21 53.6	-0.1
	0.3nm,0.4s,baz=112,slow=7.6,SNR=4.6						

ISCJB ***17*** *17:14:28.0±0.4,6°86S±0°06×155°80E±0°05,h62km, mb4.2/16,Error ellipse: s-maj=8.3km s-min=6.7km az=15.1*
NEIC ***17*** *17:14:28.8±0.4,6°84S×155°80E,mb4.3/3,Error ellipse: s-maj=10.6km s-min=9.8km az=136.0*
IDC ***17*** *17:14:29.4±0.7,6°90S×155°73E,h58km±5km,mb3.9/13, mb1 4.1/15,mb1mx4.0/21,mbtmp4.0/15,MS3.4/12, Ms1 3.4/12,ms1mx3.2/38,Error ellipse: s-maj=17.8km s-min=14.1km az=96.0*
AUST ***17*** *17:14:44.3,7°96S×155°24E,h100km*

ISC 17 17:14:29.3±0.4,**6°82S**±0°07×**155°78E**±0°06,**h62**km,**n73,** σ1⚲**06/89,mb4.1/16,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.87**	**122**	*e*Pn	**Pn**	**17 15 39.8**	**-0.2**
HNR				*e*Sn	**Sn**	**17 16 34.3**	**-0.8**
HNR	**Honiara**	**4.87**	**122**	P	**Pn**	**17 15 42.1**	**+2.1**
	3.7nm,0.3s,baz=332,slow=1.1,SNR=5.9						
HNR				S	**Sn**	**17 16 37.0**	**+1.9**
	9.0nm,0.3s,baz=95,slow=11,SNR=3.6						
PMG	**Port Moresby**	**8.92**	**253**	*e*Pn	**Pn**	**17 16 35.8**	**+0.4**
	41nm,0.6s						
PMG				*e*Sn	**Sn**	**17 18 15.4**	**+0.9**
PMG	**Port Moresby**	**8.92**	**253**	P	Pn	17 16 39.1	+3.6
	8.2nm,0.3s,baz=61,slow=9

3.4nm,1.0s,baz=111,slow=4.8,SNR=10
CMAR LR LR 17 52 05.1
comp=Z,14nm,18.4s,baz=225,slow=37
ULN Ulaanbaatar 69.28 327 *e*P **P 17 25 30.5 +0.4**
3.1nm,1.0s
ULN *e*pP **pP 17 25 44.7 -2.2**
SONM Songino Array 69.62 327 P P **17 25 33.9 +1.7**
SONM Songino Array 69.62 327 P P **17 25 33.9 +1.7**
3.0nm,0.8s,baz=108,slow=4.8,SNR=7.7
VNDA Vanda 70.73 179 P P **17 25 37.5 -0.9**
VNDA Vanda 70.73 179 P P **17 25 37.5 -0.9**
1.0nm,0.8s,baz=295,slow=6.5,SNR=4.9
ILAR Eielson Array 82.93 21 P P **17 26 47.7 +0.6**
ILAR Eielson Array 82.93 21 P P **17 26 47.7 +0.6**
0.7nm,1.0s,baz=251,slow=5.7,SNR=5.1
ILAR LR LR 18 00 36.4
comp=Z,43nm,19.5s,baz=283,slow=33
MENT Mentasta 83.18 24 *e*P P **17 26 46.5 -2.1**
MK31 Makanchi Array 83.80 318 *e*P P **17 26 52.2 +0.2**
MK31 *e*pP **pP 17 27 09.4 +0.1**
MKAR Makanchi Array 83.80 318 P P **17 26 53.0 +1.0**
MKAR pP **pP 17 27 09.4 +0.1**
MKAR Makanchi Array 83.80 318 P P **17 26 53.0 +1.0**
3.5nm,0.9s,baz=102,slow=5.7,SNR=23
MKAR pP **pP 17 27 09.4 +0.1**
2.3nm,0.7s,baz=104,slow=5.8,SNR=13
ZALV Zalesovo Beam 84.48 326 P P **17 26 55.4 +0.1**
ZALV pP **pP 17 27 12.2 -0.4**
ZALV Zalesovo Beam 84.48 326 P P **17 26 55.4 +0.1**
0.9nm,0.5s,baz=110,slow=5.6,SNR=7.5
ZALV pP **pP 17 27 12.2 -0.4**
1.5nm,0.5s,baz=117,slow=5.5,SNR=6.8
DLBC Dease Lake 87.60 30 P P **17 27 10.6 -0.1**
DLBC Dease Lake 87.60 30 P P **17 27 10.6 -0.1**
3.0nm,0.8s,baz=114,slow=24,SNR=3.2
INK Inuvik 89.29 21 P P **17 27 16.3 -2.0**
INK Inuvik 89.29 21 P P **17 27 16.3 -2.0**
0.5nm,0.7s,baz=232,slow=12,SNR=6.3
INK LR LR 18 02 14.5
comp=Z,55nm,20.6s,baz=346,slow=32
YKA Yellowknife Ar 95.82 29 pP pP 17 28 05.0 -1.1
YKA Yellowknife Ar 95.82 28 pP pP 17 28 05.0 -1.1
0.4nm,0.7s,baz=264,slow=4.4,SNR=4.1
LPIG La Paz 96.30 67 LR LR 18 03 30.8
comp=Z,3.1nm,18.2s,baz=194,slow=30
FINES FINESS Array B 114.10 336 pPKiKP PKPdf 17 33 15.8 +15
0.7nm,0.8s,baz=88,slow=4.9,SNR=4.8
BRTR Keskin Array B 118.86 312 PKP **PKPdf 17 33 10.3 -1.0**
BRTR Keskin Array B 118.86 312 PKP **PKPdf 17 33 10.3 -1.0**
0.5nm,0.8s,baz=24,slow=3.9,SNR=3.0
GERES GERESS Array B 127.31 329 PKP **PKPdf 17 33 27.4 +0.3**
GERES GERESS Array B 127.31 329 PKP **PKPdf 17 33 27.4 +0.3**
0.3nm,0.6s,baz=42,slow=2.2,SNR=4.6
BDFB Brasilia 147.54 134 PKPbc **PKPab 17 34 09.2 -0.6**
BDFB Brasilia 147.54 134 PKPbc **PKPab 17 34 09.2 -0.6**
2.5nm,0.6s,baz=241,slow=9.4,SNR=4.5
TORD Torodi Ar. Bea 153.73 286 PKPbc **PKPbc 17 34 21.6 -0.8**
TORD PKPab **PKPab 17 34 35.0 -0.3**
TORD Torodi Ar. Bea 153.73 286 PKPbc **PKPbc 17 34 21.6 -0.8**
1.1nm,0.9s,baz=102,slow=1.7,SNR=5.2
TORD PKPab **PKPab 17 34 35.0 -0.3**
0.2nm,0.3s,baz=119,slow=36,SNR=4.3
DBIC Dimbokro 160.77 271 PKPab **PKPab 17 35 06.0 +0.2**
DBIC Dimbokro 160.77 271 PKPab **PKPab 17 35 06.0 +0.2**
2.2nm,0.8s,baz=89,slow=9.9,SNR=4.3

CSEM ***1*** *7 17:20:06.7, 38.35N×22.07E, h8km, MD2.2, After ATH*
ATH ***1*** *7 17:20:06.7, 38.35N×22.07E, h8km±1km, MD2.2/5*
IDC ***1*** *7 17:20:17.4±1.7, 39.04N×22.01E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.2/27, mbtmp3.5/4, ML2.7/1, Error ellipse: s-maj=102.3km s-min=24.8km az=141.0*
ISC 17 17:20:06.8±2.1, 38.35N±0.04×22.08E±0.04, h8km±10km, n14, σ0 16/18, mb3.6/3, 4C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRIZ	**Trizonia**	**0.02**	**334**	⇓*i*PG	**Pg**	**17 20 08.2**	**-0.1**
TRIZ				*e*SG	**Sg**	**17 20 09.3**	**-0.1**
TRIZ	**Trizonia**	**0.02**	**334**	⇓*i*Pg	**Pg**	**17 20 08.2**	**-0.1**
TRIZ				*e*Sg	**Sg**	**17 20 09.3**	**-0.1**
KALE	**Kalithea**	**0.06**	**46**	⇑*i*PG	**Pg**	**17 20 08.9**	**+0.1**
KALE				*e*SG	**Sg**	**17 20 10.3**	**+0.1**
KALE	**Kalithea**	**0.06**	**46**	⇑*i*Pg	**Pg**	**17 20 08.9**	**+0.1**
KALE				*e*Sg	**Sg**	**17 20 10.3**	**+0.1**
LAKA	**Lakka**	**0.14**	**217**	⇑*i*PG	**Pg**	**17 20 09.9**	**+0.1**
LAKA				*e*SG	**Sg**	**17 20 12.1**	**+0.2**
LAKA	**Lakka**	**0.14**	**217**	⇑*i*Pg	**Pg**	**17 20 09.9**	**+0.1**
LAKA				*e*Sg	**Sg**	**17 20 12.1**	**+0.2**
EFP	**Efpalio**	**0.16**	**299**	*e*PG	**Pg**	**17 20 10.3**	**+0.1**
EFP				*e*SG	**Sg**	**17 20 12.3**	**-0.2**
EFP	**Efpalio**	**0.16**	**299**	*e*Pg	**Pg**	**17 20 10.3**	**+0.1**
EFP				*e*Sg	**Sg**	**17 20 12.3**	**-0.2**
KLV	**Kalavryta, Ach**	**0.31**	**170**	*e*PG	**Pg**	**17 20 12.8**	**-0.2**
KLV	**Kalavryta, Ach**	**0.31**	**170**	*e*Pg	**Pg**	**17 20 12.8**	**-0.2**
BRTR	**Keskin Array B**	**1.10**	**78**	Pn	Pn	17 22 29.4	+11
	0.1nm,0.3s,baz=262,slow=13,SNR=4.1						
TORD	**Torodi Ar. Bea**	**30.95**	**221**	P	P	17 26 40.5	+16
	0.3nm,0.6s,baz=26,slow=8.6,SNR=3.4						
MKAR	**Makanchi Array**	**44.16**	**59**	P	P	17 28 25.3	+9.3
	0.4nm,0.4s,baz=277,slow=6.9,SNR=6.5						
ZALV	**Zalesovo Beam**	**44.66**	**48**	P	P	17 28 27.9	+8.2
	1.4nm,0.7s,baz=275,slow=9.3,SNR=6.5						

IDC 17 17:31:00.6±1.9, 20.92S×178.79W, h574km±22km, mb3.1/14, mb1 3.4/17, mb1mx3.3/24, mbtmp3.2/17, Error ellipse: s-maj=19.2km s-min=12.0km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.66**	**45**	P	P	17 33 15.1	-0.6
	8.6nm,0.3s,baz=233,slow=5.1,SNR=13						
AFI				S	S	17 35 02.4	-4.2
	2.1nm,0.3s,baz=319,slow=19,SNR=4.6						
DZM	**Mont Dzumac**	**13.79**	**263**	P	P	17 33 58.4	+0.5
	0.2nm,0.3s,baz=101,slow=16,SNR=2.8						
URZ	**Urewera**	**17.64**	**191**	P	P	17 34 32.3	-1.7
	3.0nm,0.3s,baz=4.4,slow=5.3,SNR=23						
CTA	**Charters Tower**	**32.72**	**265**	P	P	17 36 47.1	+0.1
	2.5nm,0.6s,baz=85,slow=9.3,SNR=4.8						
STKA	**Stephens Creek**	**36.94**	**245**	P	P	17 37 22.7	+0.6
	1.4nm,0.7s,baz=105,slow=13,SNR=7.2						
ASAR	**Alice Springs**	**43.71**	**257**	P	P	17 38 15.9	-0.1
	1.3nm,0.7s,baz=92,slow=8.6,SNR=38						
ASAR				PcP	PcP	17 39 49.1	-1.0
	0.7nm,0.6s,baz=100,slow=3.8,SNR=10						
ASAR				S	S	17 44 01.8	-3.6
	1.0nm,0.7s,baz=92,slow=16,SNR=8.3						
WRA	**Warramunga Arr**	**43.81**	**263**	P	P	17 38 16.1	-0.7
	1.5nm,0.7s,baz=97,slow=7.4,SNR=23						
FITZ	**Fitzroy Crossi**	**52.24**	**263**	P	P	17 39 19.5	-0.1
	1.5nm,0.7s,baz=67,slow=15,SNR=3.0						
VNDA	**Vanda**	**57.43**	**185**	P	P	17 39 55.5	+0.8
	0.4nm,0.4s,baz=9.3,slow=5.7,SNR=7.2						
PETK	**Petropavlovsk-**	**76.49**	**346**	P	P	17 41 51.6	-0.2
	1.8nm,0.7s,baz=134,slow=8.4,SNR=4.1						
USRK	**Ussuriysk Arra**	**78.89**	**326**	P	P	17 42 05.7	+0.8
	1.6nm,0.7s,baz=176,slow=7.8,SNR=4.0						
YBH	**Yreka Blue Hor**	**81.08**	**39**	P	P	17 42 17.7	+1.1
	1.7nm,0.6s,baz=101,slow=2.8,SNR=4.1						
NVAR	**Mina Array Bea**	**81.83**	**44**	P	P	17 42 21.2	+0.4
	1.1nm,0.6s,baz=225,slow=7.9,SNR=12						
TXAR	**Lajitas Array**	**87.90**	**58**	P	P	17 42 50.9	+0.7
	1.0nm,0.8s,baz=218,slow=5.9,SNR=8.8						
ILAR	**Eielson Array**	**88.88**	**13**	P	P	17 42 52.4	-1.4
	0.6nm,0.6s,baz=218,slow=5.3,SNR=7.6						
CMAR	**Chiang Mai Arr**	**89.56**	**290**	P	P	17 42 59.1	+1.1
	1.0nm,0.9s,baz=121,slow=3.2,SNR=7.9						
PDAR	**Pinedale Array**	**89.77**	**44**	P	P	17 42 58.4	-0.4
	0.9nm,0.6s,baz=213,slow=3.7,SNR=9.8						
ARCES	**ARCESS Array B**	**128.19**	**349**	PKP	PKPdf	17 49 01.8	-1.7
	1.1nm,0.6s,baz=46,slow=3.5,SNR=6.5						
FINES	**FINESS Array B**	**135.96**	**343**	PKP	PKPdf	17 49 15.5	-0.8
	1.7nm,0.9s,baz=350,slow=6.4,SNR=4.2						
AKASG	**Malin Array Be**	**143.01**	**330**	PKhKP	PKPpre	17 49 25.6	
	3.2nm,0.4s,baz=43,slow=4.3,SNR=23						
BRTR	**Keskin Array B**	**146.56**	**311**	PKPbc	PKPdf	17 49 37.4	+1.3
	1.2nm,0.6s,baz=146,slow=4.8,SNR=10						
GERES	**GERESS Array B**	**150.39**	**343**	PKPbc	PKPbc	17 49 46.8	-1.0
	0.8nm,0.6s,baz=17,slow=1.8,SNR=9.6						

WEL 17 17:43:24.5±0.2, 37.10S×177.39E, h152km±1km, ML3.9/12,

6C-3D, Error ellipse: s-maj=1.7km s-min=1.5km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.86**	**123**	⇑PN	Pn	17 43 48.2	-0.1
MXZ				SN	Sn	17 44 06.6	+0.1
OPRZ	**Ohinepanea**	**1.00**	**221**	PN	Pn	17 43 49.6	+0.2
OPRZ				SN	Sn	17 44 08.4	-0.1
URZ	**Urewera**	**1.18**	**191**	PN	Pn	17 43 50.8	-0.1
URZ				SN	Sn	17 44 11.4	0.0
PUZ	**Puketiti**	**1.19**	**145**	PN	Pn	17 43 51.1	0.0
PUZ				SN	Sn	17 44 10.7	-0.8
MWZ	**Matawai**	**1.24**	**175**	⇓PN	Pn	17 43 51.5	-0.1
MWZ				SN	Sn	17 44 12.9	+0.5
KUZ	**Kuaotunu**	**1.39**	**284**	⇑PN	Pn	17 43 53.1	+0.2
CNGZ	**Carnagh Statio**	**1.53**	**155**	PN	Pn	17 43 54.8	+0.4
RAHZ	**Arahi**	**1.83**	**188**	⇓PN	Pn	17 43 57.7	-0.1
RAHZ				SN	Sn	17 44 23.6	0.0
KNZ	**Kokohu**	**1.93**	**174**	PN	Pn	17 43 58.3	-0.6
NMHZ	**Naumai**	**2.05**	**193**	PN	Pn	17 44 00.4	0.0
MHGZ	**Mahia Peninsul**	**2.09**	**169**	PN	Pn	17 44 00.4	-0.3
BKZ	**Black Stump Fm**	**2.19**	**199**	⇑PN	Pn	17 44 00.8	-1.2
RITZ	**Rihia Road**	**2.23**	**212**	PN	Pn	17 44 02.0	-0.5
MCHZ	**McNeill Hill**	**2.41**	**193**	PN	Pn	17 44 03.9	-0.6
WPVZ	**Whakapapa**	**2.56**	**214**	*e*PN	Pn	17 44 05.9	-0.6
CKHZ	**Cape Kidnapper**	**2.57**	**185**	PN	Pn	17 44 05.3	-1.2
FWVZ	**Far West T-bar**	**2.60**	**213**	⇑PN	Pn	17 44 06.2	-0.9
BHHZ	**Black Hill Sta**	**2.61**	**203**	PN	Pn	17 44 05.6	-1.5
WNVZ	**Wahianoa**	**2.64**	**212**	PN	Pn	17 44 06.3	-1.3
MOVZ	**Moawhango**	**2.64**	**209**	PN	Pn	17 44 05.8	-1.7
KAHZ	**Kahuranaki**	**2.73**	**188**	PN	Pn	17 44 07.2	-1.3
PXZ	**Pawanui**	**2.96**	**188**	⇑PN	Pn	17 44 09.3	-2.1
PNHZ	**Pukenui**	**2.96**	**198**	PN	Pn	17 44 09.4	-2.1
WPHZ	**Waipukarau**	**3.06**	**194**	PN	Pn	17 44 10.5	-2.1
TSZ	**Takapari Road**	**3.16**	**200**	PN	Pn	17 44 11.6	-2.4
PRHZ	**Porangahau**	**3.22**	**190**	PN	Pn	17 44 12.5	-2.2
WAZ	**Wanganui**	**3.26**	**215**	PN	Pn	17 44 13.7	-1.4
DVHZ	**Dannevirke**	**3.34**	**196**	PN	Pn	17 44 13.6	-2.6
POWZ	**Post Office Ro**	**3.53**	**201**	PN	Pn	17 44 16.1	-2.5
BFZ	**Birch Farm**	**3.69**	**194**	⇓PN	Pn	17 44 17.8	-2.9
MRZ	**Mangatainoka R**	**3.83**	**201**	⇑PN	Pn	17 44 19.1	-3.4
TIWZ	**Tintock**	**3.86**	**197**	PN	Pn	17 44 19.8	-3.1
HOWZ	**Holdsworth Sta**	**4.07**	**200**	PN	Pn	17 44 21.9	-3.7
OGWZ	**Otaki Gorge**	**4.10**	**204**	PN	Pn	17 44 22.6	-3.4
TMWZ	**Te Maipa**	**4.17**	**196**	PN	Pn	17 44 23.5	-3.5
KIW	**Kapiti Island**	**4.23**	**206**	PN	Pn	17 44 24.0	-3.7
MTW	**Mount Morrison**	**4.31**	**199**	PN	Pn	17 44 24.8	-4.0
CAW	**Cannon Point**	**4.39**	**204**	PN	Pn	17 44 25.8	-4.1
TRWZ	**Traveller**	**4.50**	**197**	PN	Pn	17 44 27.4	-3.8
PAWZ	**Paruwai Farm**	**4.54**	**199**	PN	Pn	17 44 27.7	-4.2
DUWZ	**D'Urville Isla**	**4.58**	**215**	PN	Pn	17 44 28.5	-3.9
MSWZ	**Moikau Station**	**4.62**	**200**	PN	Pn	17 44 28.4	-4.5
WEL	**Wellington**	**4.65**	**205**	PN	Pn	17 44 29.0	-4.2
SNZO	**South Karori**	**4.70**	**206**	PN	Pn	17 44 29.3	-4.5
BHW	**Baring Head**	**4.73**	**204**	PN	Pn	17 44 29.7	-4.6
PLWZ	**Palliser**	**4.76**	**200**	PN	Pn	17 44 30.2	-4.6
TCW	**Tory Channel**	**4.77**	**210**	PN	Pn	17 44 30.4	-4.4
TUWZ	**Tuamarina**	**5.09**	**211**	PN	Pn	17 44 34.3	-4.7
NNZ	**Nelson**	**5.16**	**216**	PN	Pn	17 44 35.8	-4.2

ISCJB ***1*** *7 17:54:06.9±0.3, 82.48N±0.04×8.7W±0.3, h10km, mb4.1/59, MS3.6/12, Error ellipse: s-maj=7.7km s-min=4.5km az=43.9*
CSEM ***1*** *7 17:54:06.8±0.1, 82.49N×8.58W, h2km, mb4.4/34, Error ellipse: s-maj=7.0km s-min=3.9km az=42.0*
IDC ***1*** *7 17:54:07.0±0.5, 82.48N×8.78W, h0km, mb3.8/25, mb1 4.1/28, mb1mx4.0/38, mbtmp3.9/28, ML3.9/3, MS3.7/15, Ms1 3.6/15, ms1mx3.2/49, Error ellipse: s-maj=16.0km s-min=9.3km az=37.0*
MOS ***1*** *7 17:54:07.0±0.9, 82.45N×8.49W, h10km, mb4.7/18, Error ellipse: s-maj=67.8km s-min=6.2km az=92.7*
NEIC ***1*** *7 17:54:08.5±0.2, 82.51N×8.51W, h10km, mb4.4/30, Error ellipse: s-maj=7.3km s-min=3.9km az=223.0*
ISC 17 17:54:08.2±0.4, 82.46N±0.07×8.53W±0.06, h10km, n237, σ1 9/15/235, mb4.2/59, MS3.7/12, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.82**	**126**	*e*P	**Pn**	**17 55 18.4**	**-2.2**
KBS	**Kingsbay**	**4.82**	**126**	*e*Pn	**Pn**	**17 55 18.4**	**-2.2**
KBS	**Kingsbay**	**4.82**	**126**	*e*Pn	**Pn**	**17 55 18.4**	**-2.2**
KBS	**Kingsbay**	**4.82**	**126**	*i* P	**Pn**	**17 55 20.0**	**-0.6**
	SNR=46						
KBS				*e*S	**Sn**	**17 56 14.1**	**-2.3**
	SNR=46						
SPITS	**Spitsbergen Ar**	**5.93**	**123**	Pn	**Pn**	**17 55 35.3**	**-0.6**
SPITS				Sn	Sn	17 56 38.5	-5.3
SPITS	**Spitsbergen Ar**	**5.93**	**123**	Pn	**Pn**	**17 55 35.3**	**-0.6**
	baz=339,slow=9.0,SNR=244						
SPITS				Sn	Sn	17 56 38.5	-5.3
	baz=322,slow=24,SNR=1.2						
SPITS	**Spitsbergen Ar**	**5.93**	**123**	P	**Pn**	**17 55 35.3**	**-0.6**
DAG	**Danmarks Havn**	**5.99**	**203**	*i* P	**Pn**	**17 55 35.1**	**-1.5**
DAG				*i* S	Sn	17 56 38.7	-6.4
DAG	**Danmarks Havn**	**5.99**	**203**	*i* P	**Pn**	**17 55 35.1**	**-1.5**
DAG				*i* S	Sn	17 56 38.7	-6.4
DAG	**Danmarks Havn**	**5.99**	**203**	*i* P	**Pn**	**17 55 35.1**	**-1.5**
HSP	**Hornsund**	**6.87**	**129**	*e*P	**Pn**	**17 55 48.5**	**-0.2**
JMIC	**Jan Mayen**	**11.54**	**180**	Pn	**Pn**	**17 56 52.8**	**+0.2**
JMIC	**Jan Mayen**	**11.54**	**180**	Pn	**Pn**	**17 56 52.8**	**+0.2**
	3.5nm,0.3s,baz=147,slow=18,SNR=5.6						
SUMG	**Summit**	**11.57**	**229**	*e*P	Pn	17 56 49.7	-3.7
SUMG				pmax	pmax		
	comp=Z,19nm,0.6s						
SUMG	**Summit**	**11.57**	**229**	*e*Pn	Pn	17 56 49.7	-3.7
	comp=Z,19nm,0.6s						
SUMG	**Summit**	**11.57**	**229**	*i* P	Pn	17 56 49.0	-4.4
SUMG				eS	Sn	17 58 49.1	-14
SUMG				*i* S		17 58 50.3	
SCO	**Scoresbysund**	**12.37**	**201**	*i* P	**Pn**	**17 57 07.0**	**+3.0**
SCO	**Scoresbysund**	**12.37**	**201**	*i* P	**Pn**	**17 57 07.0**	**+3.0**
KEV	**Kevo**	**14.83**	**128**	*e*P	**P**	**17 57 42.9**	**-0.5**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KEV	**Kevo**	**14.83**	**128**	*e*p	**P**	**17 57 42.9**	**-0.5**
	comp=Z,4.8nm,0.7s						
KEV	**Kevo**	**14.83**	**128**	*e*P	**P**	**17 57 42.9**	**-0.5**
	comp=Z,5.0nm,0.7s						
ARCES	**ARCESS Array B**	**14.89**	**130**	Pn	**Pn**	**17 57 36.8**	**-1.6**
ARCES				PcP	**PcP**	**18 02 47.4**	**0.0**
ARCES	**ARCESS Array B**	**14.89**	**130**	Pn	**Pn**	**17 57 36.8**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=351,slow=9.9,SNR=9.3						
ARCES				PcP	**PcP**	**18 02 47.4**	**0.0**
	comp=Z,0.1nm,0.3s,baz=316,slow=3.8,SNR=3.7						
RES	**Resolute Bay**	**16.70**	**293**	Pn	**Pn**	**17 57 58.0**	**-3.7**
RES				Sn	Sn	18 00 50.8	-16
RES	**Resolute Bay**	**16.70**	**293**	Pn	**Pn**	**17 57 58.0**	**-3.7**
	comp=Z,0.4nm,0.3s,baz=38,slow=14,SNR=7.0						
RES				Sn	Sn	18 00 50.8	-16
	comp=Z,0.3nm,0.3s,baz=156,slow=19,SNR=2.6						
RES				LR	LR	18 04 28.7	
	comp=Z,203nm,18.9s,baz=35,slow=37						
BORG	**Borgarnes**	**18.07**	**198**	LR	LR	18 04 53.1	
	comp=Z,67nm,18.9s,baz=152,slow=36						
SFJD	**Kangerlussuaq**	**18.20**	**238**	P	Pn	17 58 14.2	-6.2
SFJD	**Kangerlussuaq**	**18.20**	**238**	P	Pn	17 58 14.2	-6.2
	comp=Z,0.7nm,0.3s,baz=13,slow=11,SNR=4.3						
SFJD				LR	LR	18 05 34.4	
	comp=Z,363nm,19.2s,baz=13,slow=38						
JOF	**Joensuu**	**21.91**	**128**	*e*P	**P**	**17 59 00.9**	**-0.1**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
JOF	**Joensuu**	**21.91**	**128**	*e*p	**P**	**17 59 00.9**	**-0.1**
	comp=Z,2.0nm,0.6s						
JOF	**Joensuu**	**21.91**	**128**	*e*P	**P**	**17 59 00.9**	**-0.1**
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**22.11**	**154**	P	**P**	**17 59 03.7**	**+0.5**
	comp=Z,6.2nm,1.1s,baz=353,slow=11						
NB2	**NORSAR Subarra**	**22.11**	**154**	P	**P**	**17 59 03.7**	**+0.5**
	comp=Z,6.2nm,1.1s,SNR=4.7						
NOA	**NORSAR Array B**	**22.11**	**154**	P	**P**	**17 59 03.9**	**+0.6**
NOA	**NORSAR Array B**	**22.11**	**154**	P	**P**	**17 59 03.9**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=349,slow=12,SNR=5.4						
NOA	**NORSAR Array B**	**22.11**	**154**	P	**P**	**17 59 03.9**	**+0.6**
KAF	**Kangasniemi**	**22.21**	**135**	*e*P	**P**	**17 59 04.4**	**+0.2**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KAF	**Kangasniemi**	**22.21**	**135**	*e*p	**P**	**17 59 04.4**	**+0.2**
	comp=Z,2.8nm,0.7s						
KAF	**Kangasniemi**	**22.21**	**135**	*e*P	**P**	**17 59 04.4**	**+0.2**
	comp=Z,3.0nm,0.7s						
FINES	**FINESS Array B**	**22.84**	**135**	P	**P**	**17 59 11.5**	**+0.6**
FINES				PcP	**PcP**	**18 03 01.3**	**+0.1**
FINES	**FINESS Array B**	**22.84**	**135**	P	**P**	**17 59 11.5**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=359,slow=11,SNR=13						
FINES				PcP	**PcP**	**18 03 01.3**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=5.7,slow=4.2,SNR=7.4						
FINES	**FINESS Array B**	**22.84**	**135**	P	**P**	**17 59 11.5**	**+0.6**
FINES	**FINESS Array B**	**22.84**	**135**	PcP	**PcP**	**18 03 01.3**	**+0.1**
HFS	**Hagfors**	**23.17**	**151**	P	**P**	**17 59 14.6**	**+0.3**
HFS	**Hagfors**	**23.17**	**151**	P	**P**	**17 59 14.6**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=358,slow=7.7,SNR=17						
HFS	**Hagfors**	**23.17**	**151**	P	**P**	**17 59 14.6**	**+0.3**
FRB	**Frobisher Bay**	**23.48**	**255**	P	**P**	**17 59 17.6**	**+0.2**
FRB	**Frobisher Bay**	**23.48**	**255**	P	**P**	**17 59 17.6**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=28,slow=8.2,SNR=4.5						
FRB				LR	LR	18 08 30.2	
	comp=Z,166nm,19.8s,baz=207,slow=37						
FRB	**Frobisher Bay**	**23.48**	**255**	P	**P**	**17 59 17.6**	**+0.2**
INK	**Inuvik**	**26.87**	**318**	P	**P**	**17 59 47.5**	**-0.9**
INK	**Inuvik**	**26.87**	**318**	P	**P**	**17 59 47.5**	**-0.9**
	comp=Z,3.9nm,0.8s,baz=11,slow=7.4,SNR=12						
INK				LR	LR	18 12 34.1	
	comp=Z,34nm,19.2s,baz=119,slow=41						
INK	**Inuvik**	**26.87**	**318**	P	**P**	**17 59 47.5**	**-0.9**
EKA	**Eskdalemuir Ar**	**27.30**	**173**	P	**P**	**17 59 53.2**	**+1.0**
EKA	**Eskdalemuir Ar**	**27.30**	**173**	P	**P**	**17 59 53.2**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=359,slow=9.2,SNR=3.9						
EKA	**Eskdalemuir Ar**	**27.30**	**173**	P	**P**	**17 59 53.3**	**+1.0**
BILL	**Bilibino**	**29.66**	**4**	P	**P**	**18 00 15.0**	**+1.7**
BILL				*e*		18 00 20.3	
BILL				pmax	pmax		
	comp=Z,37nm,1.3s						
BILL	**Bilibino**	**29.66**	**4**	P	**P**	**18 00 15.0**	**+1.7**
	comp=Z,37nm,1.3s						
YKA	**Yellowknife Ar**	**30.58**	**299**	P	**P**	**18 00 20.8**	**-0.6**
YKA				PcP	**PcP**	**18 03 19.6**	**+0.2**
YKA	**Yellowknife Ar**	**30.58**	**299**	P	**P**	**18 00 20.8**	**-0.6**
	comp=Z,1.7nm,1.1s,baz=18,slow=9.1,SNR=12						
YKA				PcP	**PcP**	**18 03 19.6**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=5.4,slow=2.8,SNR=6.3						
YKA	**Yellowknife Ar**	**30.58**	**299**	PcP	**PcP**	**18 03 19.6**	**+0.2**
ILAR	**Eielson Array**	**31.43**	**327**	P	**P**	**18 00 28.9**	**0.0**
ILAR				PcP	**PcP**	**18 03 21.2**	**-0.4**
ILAR	**Eielson Array**	**31.43**	**327**	P	**P**	**18 00 28.9**	**0.0**
	comp=Z,2.6nm,1.1s,baz=5.3,slow=7.3,SNR=14						
ILAR				PcP	**PcP**	**18 03 21.2**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=340,slow=3.7,SNR=5.5						
ILAR	**Eielson Array**	**31.43**	**327**	PcP	**PcP**	**18 03 21.2**	**-0.4**
SCHQ	**Schefferville**	**31.93**	**249**	P	**P**	**18 00 33.8**	**+0.4**
SCHQ	**Schefferville**	**31.93**	**249**	P	**P**	**18 00 33.8**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=37,slow=3.0,SNR=2.7						
SCHQ				LR	LR	18 13 17.0	
	comp=Z,173nm,21.7s,baz=352,slow=36						
AKASG	**Malin Array Be**	**33.75**	**136**	P	**P**	**18 00 49.1**	**-0.2**
AKASG	**Malin Array Be**	**33.75**	**136**	P	**P**	**18 00 49.1**	**-0.2**
AKASG	**Malin Array Be**	**33.75**	**136**	P	**P**	**18 00 49.1**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=351,slow=9.2,SNR=7.4						
MEZF	**Maizieres J'vi**	**34.35**	**164**	*e*P	**P**	**18 00 55.4**	**+0.9**
MEZF	**Maizieres J'vi**	**34.35**	**164**	*e*P	**P**	**18 00 55.4**	**+0.9**
MEZF	**Maizieres J'vi**	**34.35**	**164**	*e*P	**P**	**18 00 55.4**	**+0.9**
GERES	**GERESS Array B**	**34.42**	**154**	P	**P**	**18 00 56.5**	**+1.3**
GERES	**GERESS

comp=Z,3.2nm,0.5s
LPG La Plagne 37.41 162 *e*P **P** 18 01 23.2 +2.1
comp=Z,3.2nm,0.5s
RJF Les Rejaudoux 37.43 168 *e*P **P** 18 01 21.9 +0.9
comp=Z,21nm,0.8s
RJF Les Rejaudoux 37.43 168 *e*P **P** 18 01 21.9 +0.9
RJF pmax pmax
comp=Z,21nm,0.8s
RJF Les Rejaudoux 37.43 168 *e*P **P** 18 01 21.9 +0.9
comp=Z,21nm,0.8s
RJF Les Rejaudoux 37.43 168 *e*P **P** 18 01 21.9 +0.9
comp=Z,21nm,0.8s
CAF Calviac 37.82 168 *e*P **P** 18 01 25.3 +1.0
comp=Z,8.9nm,0.8s
CAF Calviac 37.82 168 *e*P **P** 18 01 25.3 +1.0
CAF pmax pmax
comp=Z,9.0nm,0.8s
CAF Calviac 37.82 168 *e*P **P** 18 01 25.3 +1.0
comp=Z,8.9nm,0.8s
CAF Calviac 37.82 168 *e*P **P** 18 01 25.3 +1.0
comp=Z,8.9nm,0.8s
ORIF Oris-en-Rattie 37.96 163 *e*P **P** 18 01 27.0 +1.5
comp=Z,5.4nm,0.6s
ORIF Oris-en-Rattie 37.96 163 *e*P **P** 18 01 27.0 +1.5
ORIF pmax pmax
comp=Z,5.0nm,0.6s
ORIF Oris-en-Rattie 37.96 163 *e*P **P** 18 01 27.0 +1.5
comp=Z,5.4nm,0.6s
ORIF Oris-en-Rattie 37.96 163 *e*P **P** 18 01 27.0 +1.5
comp=Z,5.4nm,0.6s
KDAK Kodiak Island 38.77 330 P **P** 18 01 32.0 -0.1
KDAK Kodiak Island 38.77 330 P **P** 18 01 32.0 -0.1
comp=Z,3.7nm,0.7s,baz=2.7,slow=5.3,SNR=4.5
KDAK Kodiak Island 38.77 330 P **P** 18 01 32.0 -0.1
SBF Sospel 39.07 162 *e*P **P** 18 01 36.8 +1.9
comp=Z,14nm,0.8s
SBF Sospel 39.07 162 *e*P **P** 18 01 36.8 +1.9
SBF pmax pmax
comp=Z,14nm,0.8s
SBF Sospel 39.07 162 *e*P **P** 18 01 36.8 +1.9
comp=Z,14nm,0.8s
SBF Sospel 39.07 162 *e*P **P** 18 01 36.8 +1.9
comp=Z,14nm,0.9s
FRF La Foret Royal 39.34 163 *e*P **P** 18 01 38.4 +1.4
comp=Z,14nm,0.9s
FRF La Foret Royal 39.34 163 *e*P **P** 18 01 38.4 +1.4
FRF pmax pmax
comp=Z,15nm,0.9s
FRF La Foret Royal 39.34 163 *e*P **P** 18 01 38.4 +1.4
comp=Z,14nm,0.9s
FRF La Foret Royal 39.34 163 *e*P **P** 18 01 38.4 +1.4
comp=Z,14nm,0.9s
MTLF Montolieu 39.41 168 *e*P **P** 18 01 38.9 +1.3
comp=Z,3.2nm,0.5s
MTLF Montolieu 39.41 168 *e*P **P** 18 01 38.9 +1.3
MTLF pmax pmax
comp=Z,3.0nm,0.5s
MTLF Montolieu 39.41 168 *e*P **P** 18 01 38.9 +1.3
comp=Z,3.2nm,0.5s
MTLF Montolieu 39.41 168 *e*P **P** 18 01 38.9 +1.3
comp=Z,3.2nm,0.5s
EPF Esparros 39.67 170 *e*P **P** 18 01 40.5 +0.6
comp=Z,3.2nm,0.4s
EPF Esparros 39.67 170 *e*P **P** 18 01 40.5 +0.6
comp=Z,3.0nm,0.4s
KURK Kurchatov 39.71 84 *e*P **P** 18 01 41.3 +1.3
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK Kurchatov 39.71 84 *e*P **P** 18 01 41.2 +1.3
comp=Z,3.8nm,1.0s
KURK Kurchatov 39.71 84 *e*P **P** 18 01 41.2 +1.3
comp=Z,3.8nm,1.0s
ULM Lac du Bonnet 40.19 276 LR LR 18 18 11.5
comp=Z,125nm,19.7s,baz=328,slow=36
KBZ Khabaz 42.05 122 P **P** 18 02 01.3 +1.9
KBZ Khabaz 42.05 122 P **P** 18 02 01.2 +1.9
KBZ Khabaz 42.05 122 P **P** 18 02 01.2 +1.9
comp=Z,1.5nm,0.9s,baz=272,slow=3.2,SNR=4.6
KBZ Khabaz 42.05 122 P **P** 18 02 01.2 +1.9
ESDC Sonseca Array 42.95 175 P **P** 18 02 07.7 +0.9
ESDC Sonseca Array 42.95 175 P **P** 18 02 07.7 +0.9
comp=Z,0.4nm,0.4s,baz=1.9,slow=7.6,SNR=6.3
ESDC Sonseca Array 42.95 175 P **P** 18 02 07.7 +0.9
SADO Sadowa 43.37 258 LR LR 18 20 29.9
comp=Z,161nm,18.6s,baz=275,slow=36
MK31 Makanchi Array 44.03 81 *e*P **P** 18 02 15.0 -0.4
MK31 Makanchi Array 44.03 81 *e*P **P** 18 02 15.0 -0.4
MK31 Makanchi Array 44.03 81 *e*P **P** 18 02 15.0 -0.4
MKAR Makanchi Array 44.03 81 P **P** 18 02 16.8 +1.3
MKAR Makanchi Array 44.03 81 P **P** 18 02 16.8 +1.3
MKAR Makanchi Array 44.03 81 P **P** 18 02 16.8 +1.3
comp=Z,0.5nm,0.6s,baz=352,slow=6.1,SNR=7.6
MKAR LR LR 18 24 31.3
comp=Z,83nm,18.3s,baz=259,slow=41
MKAR Makanchi Array 44.03 81 P **P** 18 02 16.8 +1.3
NEW Newport 44.82 296 P **P** 18 02 22.7 +1.0
NEW Newport 44.82 296 P **P** 18 02 22.7 +1.0
comp=Z,2.9nm,0.9s,baz=355,slow=8.2,SNR=5.0
NEW LR LR 18 21 11.2
comp=Z,102nm,18.0s,baz=196,slow=36
NEW Newport 44.82 296 P **P** 18 02 22.7 +1.0
BSMT Bassoo Peak 44.95 294 *e*P **P** 18 02 23.7 +0.8
comp=Z,5.2nm,1.0s
BSMT Bassoo Peak 44.95 294 *e*P **P** 18 02 23.7 +0.8
comp=Z,5.2nm,1.0s
BRTR Keskin Array B 45.05 133 P **P** 18 02 25.2 +1.5
BRTR Keskin Array B 45.05 133 P **P** 18 02 25.2 +1.5
comp=Z,0.9nm,0.8s,baz=342,slow=5.0,SNR=6.6
BRTR Keskin Array B 45.05 133 P **P** 18 02 25.2 +1.5
SWMT Swartz Lake 45.19 293 *e*P **P** 18 02 23.7 -1.1
comp=Z,4.1nm,1.0s
SWMT Swartz Lake 45.19 293 *e*P **P** 18 02 23.7 -1.1
comp=Z,4.1nm,1.0s
SLMT Seeley Lake 45.39 292 *e*P **P** 18 02 26.8 +0.4
comp=Z,5.5nm,1.1s
SLMT Seeley Lake 45.39 292 *e*P **P** 18 02 26.8 +0.4
comp=Z,5.5nm,1.1s
CHMT Chamberlain Mo 45.68 292 *e*P **P** 18 02 29.1 +0.3
comp=Z,3.5nm,1.2s
CHMT Chamberlain Mo 45.68 292 *e*P **P** 18 02 29.1 +0.3
comp=Z,3.5nm,1.2s
MSO Missoula 45.85 293 *e*P **P** 18 02 28.9 -1.1
comp=Z,5.6nm,1.1s
MSO Missoula 45.85 293 *e*P **P** 18 02 28.9 -1.1
comp=Z,5.6nm,1.1s
SONM Songino Array 45.98 58 P **P** 18 02 31.7 +0.7
SONM Songino Array 45.98 58 P **P** 18 02 31.7 +0.7
comp=Z,0.7nm,0.6s,baz=328,slow=5.2,SNR=3.1
SONM LR LR 18 22 28.9
comp=Z,104nm,18.8s,baz=78,slow=37
SONM Songino Array 45.98 58 P **P** 18 02 31.7 +0.7
ULN Ulaanbaatar 46.02 58 *e*P **P** 18 02 32.5 +1.1
comp=Z,2.1nm,0.8s
ULN Ulaanbaatar 46.02 58 *e*P **P** 18 02 32.5 +1.1
comp=Z,2.1nm,0.8s
LRM Limekiln Ridge 46.66 291 *e*P **P** 18 02 36.4 -0.1
comp=Z,35nm,1.1s
LRM Limekiln Ridge 46.66 291 *e*P **P** 18 02 36.4 -0.1
comp=Z,35nm,1.1s
BOZ Bozeman (W) 46.73 290 *e*P **P** 18 02 38.8 +1.8
BOZ pmax pmax
comp=Z,1.0nm,0.6s
BOZ Bozeman (W) 46.73 290 *e*P **P** 18 02 38.8 +1.8
comp=Z,1.1nm,0.6s
BOZ Bozeman (W) 46.73 290 *e*P **P** 18 02 38.8 +1.8
comp=Z,1.1nm,0.6s
MALT Malatya 46.93 128 *e*P **P** 18 02 38.0 -0.5
MALT pmax pmax
comp=Z,2.0nm,0.6s
MALT Malatya 46.93 128 *e*P **P** 18 02 38.0 -0.5
comp=Z,1.7nm,0.6s
MALT Malatya 46.93 128 *e*P **P** 18 02 38.0 -0.5
comp=Z,1.7nm,0.6s
MCMT McKenzie Canyo 47.69 291 *e*P **P** 18 02 42.2 -2.4
comp=Z,2.1nm,1.2s
BMO Blue Mountains 48.20 295 *e*P **P** 18 02 47.8 -0.6
comp=Z,4.5nm,1.2s
BMO Blue Mountains 48.20 295 *e*P **P** 18 02 47.8 -0.6
comp=Z,4.5nm,1.2s
PDAR Pinedale Array 49.31 288 P **P** 18 02 57.5 +0.5
PDAR Pinedale Array 49.31 288 P **P** 18 02 57.5 +0.5
comp=Z,1.4nm,1.0s,baz=24,slow=5.0,SNR=7.1
PDAR LR LR 18 24 14.3
comp=Z,86nm,20.3s,baz=197,slow=37
PDAR Pinedale Array 49.31 288 P **P** 18 02 57.5 +0.5
HWUT Hardware Ranch 50.70 289 *e*P **P** 18 03 08.3 +0.7
comp=Z,2.9nm,1.0s
HWUT Hardware Ranch 50.70 289 *e*P **P** 18 03 08.3 +0.7
comp=Z,2.9nm,1.0s
YBH Yreka Blue Hor 51.92 300 LR LR 18 24 21.5
comp=Z,54nm,20.9s,baz=356,slow=35
ELK Elko 52.01 293 P **P** 18 03 18.2 +0.8
ELK Elko 52.01 293 P **P** 18 03 18.2 +0.8
comp=Z,1.6nm,0.9s,baz=50,slow=7.4,SNR=4.5
ELK Elko 52.01 293 P **P** 18 03 18.2 +0.8
SMCO Snowmass 52.51 284 *e*P **P** 18 03 21.4 0.0
comp=Z,1.9nm,0.8s
SMCO Snowmass 52.51 284 *e*P **P** 18 03 21.4 0.0
comp=Z,1.9nm,0.8s
PV01 Paradox Valley 53.74 286 *e*P **P** 18 03 30.4 +0.1
PV01 Paradox Valley 53.74 286 *e*P **P** 18 03 30.4 +0.1
NVAR Mina Array Bea 54.66 295 P **P** 18 03 37.3 +0.4
NVAR Mina Array Bea 54.66 295 P **P** 18 03 37.3 +0.4
comp=Z,2.0nm,1.1s,baz=22,slow=5.5,SNR=7.9
NVAR Mina Array Bea 54.66 295 P **P** 18 03 37.3 +0.4
TXAR Lajitas Array 61.78 279 P **P** 18 04 26.9 +0.2
TXAR Lajitas Array 61.78 279 P **P** 18 04 26.9 +0.2
comp=Z,0.5nm,1.0s,baz=7.8,slow=7.3,SNR=3.5
TXAR Lajitas Array 61.78 279 P **P** 18 04 26.9 +0.2
TORD Torodi Ar. Bea 69.47 169 P **P** 18 05 16.1 -0.2
TORD Torodi Ar. Bea 69.47 169 P **P** 18 05 16.1 -0.2
comp=Z,1.5nm,0.5s,baz=356,slow=6.2,SNR=27
TORD Torodi Ar. Bea 69.47 169 P **P** 18 05 16.1 -0.2
CMAR Chiang Mai Arr 74.08 70 P **P** 18 05 43.7 -0.3
CMAR Chiang Mai Arr 74.08 70 P **P** 18 05 43.7 -0.3
comp=Z,0.8nm,0.9s,baz=338,slow=6.2,SNR=5.6
CMAR Chiang Mai Arr 74.08 70 P **P** 18 05 43.7 -0.3
ROSC El Rosal 82.11 247 LR LR 18 41 02.3
comp=Z,44nm,20.3s,baz=126,slow=34
ASAR Alice Springs 119.45 40 PKP **PKPdf** 18 12 56.1 -0.9
ASAR Alice Springs 119.45 40 PKP **PKPdf** 18 12 56.1 -0.9
comp=Z,0.3nm,0.5s,baz=8.6,slow=1.7,SNR=10.0
ASAR Alice Springs 119.45 40 PKIKP **PKPdf** 18 12 56.2 -0.9

MAN 17 17:54:47.11˝.66N×125˚.23E, h46km, mb4.2, ML3.0, MS2.8, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**0.55**	**207**	*e*P	Pn	17 54 56.8	-1.9
PLP				*e*S	Sn	17 55 06.7	-0.3
OCLP	**Ormoc**	**0.86**	**226**	*e*P	Pn	17 55 03.8	+1.0
MSLP	**Maasin**	**1.56**	**194**	*e*P	Pn	17 55 13.2	+1.0
MSLP				*e*S	Sn	17 55 27.3	-4.0
GUIM	**Jordan**	**2.79**	**249**	*e*P	Pn	17 55 30.6	+1.5

SKHL 17 17:56:37.5±0.9, 47˚.59N×130˚.13E, h10km±10km, mb3.5/2, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLR	**Kul'dur**	**1.96**	**33**	*e*Pg	Pb	17 57 12.2	-1.2
KLR				*e*Sg	Sb	17 57 38.2	+0.3
TEY	**Ternei**	**5.16**	**117**	*e*Sg	Sg	17 59 18.0	-5.1
TEY				A	A	17 59 21.2	
	17nm,0.8s						
GRNR	**Gornyy**	**5.21**	**50**	*e*Pg	Pb	17 58 10.2	+1.5
GRNR				AMB	AMB	17 58 11.2	
	8.0nm,0.8s						
GRNR				AMB	AMB	17 58 11.2	
	5.0nm,0.8s						
GRNR				*e*Sg	Sg	17 59 22.0	-2.8
GRNR				A	A	17 59 28.5	
	14nm,0.8s						
EKMR	**Ekimchan**	**5.78**	**17**	*e*Pn	Pn	17 58 05.8	+2.6
EKMR				*e*Pg	Pb	17 58 22.5	+4.2
EKMR				AMB	AMB	17 58 30.5	
	3.0nm,0.5s						
EKMR				*e*Sg	Sg	17 59 38.5	-4.4
EKMR				A	A	17 59 42.7	
	6.0nm,0.5s						
EKMR				A	A	17 59 42.7	
	12nm,0.5s						
EKMR				A	A	17 59 42.7	
	7.0nm,0.5s						
KROS	**Kirovskiy**	**7.13**	**345**	*e*Sg	Sg	18 00 20.6	-5.8
KROS				A	A	18 00 25.0	
	3.0nm,0.5s						
BMKR	**Bomnak**	**7.18**	**354**	*e*Sg	Sg	18 00 22.5	-5.2
BMKR				A	A	18 00 31.4	
	4.0nm,0.7s						

*BJI **17** 17:57:08.2,9.˝77S×159.˚59E, h5km, mB5.1/26, mb4.9/35, Ms4.9/31, Ms7 4.5/24*
*IDC **17** 17:57:10.8±0.4,9.˚58S×159.˚52E, h0km, mb4.7/28, mb1 4.8/29, mb1mx4.8/30, mbtmp4.7/29, ML4.2/1, MS4.2/19, Ms1 4.2/19, ms1mx4.1/29, Error ellipse: s-maj=14.5km s-min=9.9km az=144.0*
*ISCJB **17** 17:57:12.1±0.2, 9.˚54S±0.˚05×159.˚36E±0.˚03, h15km, mb4.9/97, MS4.3/30, Error ellipse: s-maj=6.7km s-min=4.8km az=176.0*
*NEIC **17** 17:57:12.8±0.1, 9.˚50S×159.˚35E, h10km, mb5.1/52, Error ellipse: s-maj=6.0km s-min=4.1km az=152.0*
NEIC Felt [III] at Honiara.
*MOS **17** 17:57:15.1±1.0, 9.˚43S×159.˚21E, h33km, mb5.2/30, Error ellipse: s-maj=10.6km s-min=7.7km az=53.0*
*GCMT **17** 17:57:16.0±0.2, 9.˚68S×159.˚35E, h22km, MW5.1, Moment Tensor Solution. s39,c53; s79,c112; Moment tensor: Scale 10^16^Nm; Mrr=4.19±.22; Mθθ=-1.71±.14; Mθθ=-2.48±.13; Mrθ=0.31±.23; Mθφ=2.03±.08; Mθr=-3.12±.22; Best double couple: M=5.20000×10^16^ NP1:φs305.00000°, δ31.00000°, λ60.00000°. NP2:φs159.00000°, δ63.00000°, λ107.00000°. Principal axes: T 5.4500, Plg67.0000°, Azm100.0000°; N -0.5000, Plg15.0000°, Azm331.0000°; P -4.9500, Plg17.0000°, Azm237.0000°; Data Used: IU II G CN IC.*
*DJA **17** 17:57:19.4±1.0, 10˚S×7˚×16˚0E±˚, h90km±10km, M4.9/7, mB5.4/2, mb4.9/7, Mw(mB)4.8/2*
ISC 17 17:57:13.3±0.3, 9.˚59S±0.˚05×159.˚46E±0.˚04, h15km±1km, h15km:pP-P, n345, σ1s28/391, mb5.0/102, MS4.3/32, 17C-16D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.51**	**72**	*e*Pg	**Pg**	**17 57 23.6**	**+0.1**
HNR	**Honiara**	**0.51**	**72**	Pn	**Pg**	**17 57 23.1**	**-0.5**
	18μm,0.3s,baz=225,slow=6.2						
HNR				Sn	**Sg**	**17 57 30.7**	**+0.3**
	22μm,0.3s,baz=246,slow=20,SNR=35						
PMG	**Port Moresby**	**12.13**	**270**	*e*Pn	**Pn**	**18 00 03.7**	**-2.0**
PMG	**Port Moresby**	**12.13**	**270**	P	Pn	18 00 10.5	+4.8
PMG	**Port Moresby**	**12.13**	**270**	Pn	P	18 00 12.9	-5.5
	0.5nm,0.3s,baz=82,slow=4.5,SNR=4.9						
PMG				LR	LR	18 04 38.2	
	comp=Z,4μm,18.7s,baz=353,slow=37						
DZM	**Mont Dzumac**	**14.11**	**152**	*e*LR	LR	18 03 46.7	
	2μm,25.1s						
DZM	**Mont Dzumac**	**14.11**	**152**	Pn	**Pn**	**18 00 35.3**	**+2.5**
DZM	**Mont Dzumac**	**14.11**	**152**	Pn	**Pn**	**18 00 35.3**	**+2.5**
	0.6nm,0.3s,baz=208,slow=22,SNR=6.8						
DZM				LR	LR	18 04 51.7	
	comp=Z,1μm,20.9s,baz=26,slow=33						
CTA	**Charters Tower**	**16.47**	**229**	Pn	**Pn**	**18 01 05.4**	**+1.4**
CTA	**Charters Tower**	**16.47**	**229**	Pn	**Pn**	**18 01 05.4**	**+1.4**
	0.6nm,0.3s,baz=54,slow=12,SNR=28						
CTAO	**Charters Tower**	**16.47**	**229**	*e*P	**Pn**	**18 01 05.2**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,171nm,1.1s						
CTAO	**Charters Tower**	**16.47**	**229**	*e*Pn	**Pn**	**18 01 05.2**	**+1.2**
	comp=Z,171nm,1.1s						
TARA	**Tarawa**	**17.27**	**52**	*e*Pn	**Pn**	**18 01 14.4**	**+0.3**
	comp=Z,117nm,0.8s						
FUNA	**Funafuti**	**19.52**	**88**	*e*P	**P**	**18 01 41.1**	**+0.8**
	comp=Z,141nm,1.1s						
MSVF	**Nonsavu**	**19.78**	**116**	*e*P	**P**	**18 01 43.7**	**+0.4**
MSVF				pmax	pmax		
	comp=Z,62nm,1.3s						
MSVF	**Nonsavu**	**19.78**	**116**	*e*P	**P**	**18 01 43.7**	**+0.4**
	comp=Z,62nm,1.3s						
MSVF				*e*Pn	**Pn**	**18 01 43.9**	**-0.9**
JAY	**Jayapura**	**19.92**	**289**	P	**P**	**18 01 43.9**	**-0.8**
BAKI	**Biak**	**24.68**	**288**	P	**P**	**18 02 32.4**	**-1.5**
WRAB	**Tennant Creek**	**26.32**	**244**	*e*P	**P**	**18 02 44.5**	**-4.3**
WRAB	**Tennant Creek**	**26.32**	**244**	*e*P	**P**	**18 02 44.5**	**-4.3**
WRAB				*e*P	pP	18 02 48.1	-5.4
WRAB	**Tennant Creek**	**26.32**	**244**	P	**P**	**18 02 49.3**	**+0.5**
	comp=Z,136nm,1.1s,SNR=13						
WRA	**Warramunga Arr**	**26.34**	**244**	P	**P**	**18 02 49.0**	**0.0**
WRA				PcP	**PcP**	**18 06 15.8**	**+0.9**
WRA				ScP	**ScP**	**18 09 55.2**	**+0.7**
WRA	**Warramunga Arr**	**26.34**	**244**	P	**P**	**18 02 49.0**	**0.0**
	comp=Z,22nm,1.1s,baz=70,slow=9.7,SNR=48						
WRA				PcP	**PcP**	**18 06 15.8**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=71,slow=2.2,SNR=6.9						
WRA				ScP	**ScP**	**18 09 55.2**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=80,slow=3.3,SNR=4.8						
WRA				LR	LR	18 12 36.5	
	comp=Z,638nm,19.9s,baz=65,slow=35						
RKPI	**Ransiki, Papua**	**26.39**	**286**	P	**P**	**18 02 47.0**	**-2.4**
GUMO	**Guam**	**27.20**	**328**	LR	LR	18 12 07.4	
	comp=Z,372nm,21.2s,baz=293,slow=33						
STKA	**Stephens Creek**	**27.67**	**214**	*e*P	**P**	**18 03 01.4**	**+0.6**
STKA				ScP	**ScP**	**18 09 59.6**	**+1.4**
STKA	**Stephens Creek**	**27.67**	**214**	P	**P**	**18 03 01.1**	**+0.4**
	comp=Z,13nm,0.9s,baz=26,slow=11,SNR=11						
STKA				ScP	**ScP**	**18 09 59.6**	**+1.4**
	comp=Z,4.5nm,1.0s,baz=354,slow=6.3,SNR=4.3						
STKA				LR	LR	18 13 44.4	
	comp=Z,852nm,18.6s,baz=34,slow=36						
AS31	**Alice Springs**	**28.13**	**237**	*e*P	P	18 03 00.8	-4.2
ASAR	**Alice Springs**	**28.13**	**237**	P	**P**	**18 03 04.3**	**-0.7**
ASAR				PcP	**PcP**	**18 06 19.8**	**+0.5**
ASAR				ScP	**ScP**	**18 10 00.6**	**+0.7**
ASAR	**Alice Springs**	**28.13**	**237**	P	**P**	**18 03 04.3**	**-0.7**
	comp=Z,7.1nm,0.9s,baz=65,slow=9.6,SNR=58						
ASAR				PcP	**PcP**	**18 06 19.8**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=66,slow=2.7,SNR=6.6						
ASAR				ScP	**ScP**	**18 10 00.6**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=56,slow=3.9,SNR=6.9						
ASAR				LR	LR	18 13 43.9	
	comp=Z,542nm,19.4s,baz=155,slow=35						
AFI	**Afiamalu**	**28.48**	**101**	LR	LR	18 12 25.5	
	comp=Z,1μm,19.4s,baz=282,slow=32						
URZ	**Urewera**	**32.66**	**154**	P	**P**	**18 03 47.3**	**+2.5**
URZ	**Urewera**	**32.66**	**154**	P	**P**	**18 03 47.3**	**+2.5**
	comp=Z,9.8nm,0.7s,baz=14,slow=5.6,SNR=8.2						
FITZ	**Fitzroy Crossi**	**33.86**	**252**	P	**P**	**18 03 54.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**33.86**	**252**	P	**P**	**18 03 54.9**	**-0.7**
	comp=Z,11nm,1.0s,baz=96,slow=9.2,SNR=12						
KAPI	**Kappang**	**39.62**	**274**	*e*P	**P**	**18 04 43.6**	**-1.1**
	comp=Z,46nm,1.2s						
KAPI	**Kappang**	**39.62**	**274**	P	**P**	**18 04 44.8**	**0.0**
	comp=Z,195nm,1.2s,SNR=6.4						
KAPI	**Kappang**	**39.62**	**274**	P	**P**	**18 04 42.1**	**-2.7**
	comp=Z,34nm,1.3s,comp=Z,468nm						
MBWA	**Marble Bar**	**39.88**	**248**	*e*P	**P**	**18 04 46.8**	**0.0**
	comp=Z,29nm,1.0s						
NWAO	**Narrogin (SRO)**	**45.27**	**233**	P	**P**	**18 05 29.9**	**-0.6**
NWAO	**Narrogin (SRO)**	**45.27**	**233**	P	**P**	**18 05 29.9**	**-0.6**
	comp=Z,7.6nm,1.1s,baz=45,slow=3.5,SNR=3.7						
PPT	**Papeete**	**50.05**	**105**	LR	LR	18 22 55.1	
	comp=Z,502nm,18.7s,baz=199,slow=31						
PPT2	**Papeete2**	**50.05**	**105**	*e*S	**S**	**18 13 13.7**	**-5.2**
	comp=Z,222nm,27.2s						
PPT2				*e*LQ	LQ	18 18 17.7	
	comp=Z,443nm,33.0s						
PPT2				*e*LR	LR	18 20 24.5	
	comp=Z,692nm,22.5s,baz=276						
MJAR	**Matsushiro Arr**	**50.05**	**338**	P	**P**	**18 06 06.4**	**-1.1**
MJAR	**Matsushiro Arr**	**50.05**	**338**	P	**P**	**18 06 06.4**	**-1.1**
	comp=Z,2.3nm,0.8s,baz=167,slow=9.3,SNR=7.8						
JNU	**Nakatsue**	**50.45**	**329**	LR	LR	18 23 08.2	
	comp=Z,101nm,19.7s,baz=64,slow=31						
TBI	**Tubuai**	**50.61**	**112**	*e*LQ	LQ	18 18 35.6	
	comp=Z,1μm,32.2s						
TBI				*e*LR	LR	18 20 43.6	
	comp=Z,436nm,24.0s						
KIP	**Kipapa**	**51.90**	**53**	*ce*P	**P**	**18 06 22.3**	**+0.6**
KIP				pmax	pmax		
	comp=Z,126nm,2.5s						
POHA	**Pohakuloa**	**53.06**	**56**	*e*P	**P**	**18 06 31.0**	**+0.4**
	comp=Z,108nm,0.9s						
SSE	**Sheshan**	**54.61**	**319**	P	**P**	**18 06 39.1**	**-2.3**
SSE				S	**S**	**18 14 21.3**	**+0.5**
SSE				sS	**sS**	**18 14 29.8**	**+0.9**
SSE				ScS	**ScS**	**18 16 30.3**	**-0.2**
SSE				pmax	pmax		
	comp=Z,15nm,0.7s						
SSE				pmax	pmax		
	comp=Z,51nm,5.1s						
KSRS	**Korea Array**	**55.34**	**330**	P	**P**	**18 06 47.4**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=143,slow=8.2,SNR=9.6						
KSAR	**Wonju Array Be**	**55.35**	**330**	P	**P**	**18 06 47.4**	**+0.7**
ASAJ	**Asahikawa**	**55.60**	**345**	P	**P**	**18 06 48.6**	**+0.2**
ASAJ	**Asahikawa**	**55.60**	**345**	P	**P**	**18 06 48.6**	**+0.2**
	comp=Z,5.9nm,0.7s,baz=104,slow=4.2,SNR=3.7						
QIZ	**Qiongzhong**	**56.57**	**300**	P	**P**	**18 06 56.3**	**+0.5**
QIZ				S	**S**	**18 14 48.0**	**+0.6**
QIZ				SS	**SS**	**18 18 35.0**	**-0.3**
QIZ				LR	LR		
	comp=E,120nm,16.1s						
QIZ				LR	LR		
	comp=Z,340nm,24.9s						
NJ2	**Nanjing**	**56.74**	**319**	*e*P	**P**	**18 06 57.3**	**+0.6**
NJ2				pP	**pP**	**18 07 00.1**	**-1.6**
NJ2				sP	**sP**	**18 07 02.1**	**-1.5**
NJ2				PP	**PP**	**18 09 04.0**	**+0.8**
NJ2				S	**S**	**18 14 51.0**	**+1.8**
NJ2				sS	**sS**	**18 15 02.0**	**+4.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,90nm,7.2s						
NJ2				LR	LR		
	comp=N,190nm,21.4s						
NJ2				LR	LR		
	comp=E,170nm,26.2s						
WHN	**Wuhan**	**58.88**	**314**	P	P	18 07 29.9	+18
WHN				S	**S**	**18 15 19.5**	**+2.2**
WHN				LR	LR		
	comp=N,340nm,21.0s						
WHN				LR	LR		
	comp=E,360nm,21.5s						
WHN				LR	LR		
	comp=Z,560nm,18.2s						
USRK	**Ussuriysk Arra**	**59.05**	**337**	P	**P**	**18 07 13.4**	**+0.7**
	comp=Z,3.2nm,0.8s,baz=124,slow=5.0,SNR=5.8						
USRK				LR	LR	18 30 55.4	
	comp=Z,176nm,20.4s,baz=324,slow=34						
MDJ	**Mudanjiang**	**60.34**	**336**	P	**P**	**18 07 23.0**	**+1.4**
MDJ				pP	**pP**	**18 07 26.1**	**-0.5**
MDJ				sP	**sP**	**18 07 27.3**	**-1.2**
MDJ				PP	**PP**	**18 09 37.3**	**+2.4**
MDJ				S	S	18 15 42.4	+6.8
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,90nm,4.2s						
MDJ				LR	LR		
	comp=N,220nm,18.6s						
MDJ				LR	LR		
	comp=E,180nm,18.1s						
MDJ				LR	LR		
	comp=Z,170nm,20.7s						
CN2	**Changchun**	**61.46**	**333**	*e*P	**P**	**18 07 30.1**	**+0.8**
CN2				*es*P	**sP**	**18 07 36.0**	**-0.1**
CN2				*e*S	**S**	**18 15 50.0**	**0.0**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,18.0s						
CN2				LR	LR		
	comp=E,200nm,18.0s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
HABR	**Khabarovsk**	**61.70**	**342**	*e*P	**P**	**18 07 29.0**	**-1.7**
HABR						18 08 09.6	
HABR				*e*		18 09 44.7	
HABR				S	**S**	**18 15 52.7**	**-0.1**
HABR				*e**SS	**sS**	**18 15 58.3**	**-2.7**
HABR				*e*		18 17 20.4	
HABR				*e*SS	**SS**	**18 19 55.8**	**+0.9**
HABR				pmax	pmax		
	comp=E,36nm,2.3s						
HABR				pmax	pmax		

PET Petropavlovsk 62.37 359 *e*P P 18 07 46.2 +11
PET *e*S **S** **18 16 06.2 +5.1**
PET MLR MLR
comp=Z,200nm,17.0s
PETK Petropavlovsk- 62.47 359 P P **18 07 36.3 +0.4**
PETK Petropavlovsk- 62.47 359 P P **18 07 36.2 +0.4**
PETK Petropavlovsk- 62.47 359 P P **18 07 36.2 +0.4**
comp=Z,7.6nm,1.0s,baz=137,slow=14,SNR=5.0
PETK LR LR 18 32 11.4
comp=Z,159nm,19.9s,baz=167,slow=34
GYA Guiyang 62.53 306 P P **18 07 38.6 +1.6**
GYA PP **PP** **18 09 58.0 +3.2**
GYA S **S** **18 16 04.8 +0.4**
GYA SKS **SKSac** **18 17 27.4 -2.0**
GYA SS **SS** **18 20 09.9 +1.0**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,650nm,19.6s
GYA LR LR
comp=E,520nm,20.3s
GYA LR LR
comp=Z,690nm,19.2s
FX1 Attu Island--F 63.33 9 *e*P **P** **18 07 41.4 -0.1**
PBKT Sadao Pong 63.42 294 P P **18 07 39.9 -3.0**
KLR Kul'dur 63.43 340 *e*P P 18 07 38.8 -3.5
BJI Beijing 63.57 324 P **P** **18 07 44.3 +0.9**
BJI PP **PP** **18 10 04.1 +0.6**
BJI S **S** **18 16 18.8 +2.2**
BJI SS **SS** **18 20 25.0 +0.6**
BJI pmax pmax
comp=Z,9.0nm,0.6s
BJI LR LR
comp=N,180nm,17.5s
BJI LR LR
comp=E,160nm,18.1s
SRDT SRDT 64.39 291 P P 18 07 45.8 -3.5
XAN Xi'an 64.64 315 P **P** **18 07 50.3 -0.4**
XAN pmax pmax
comp=Z,3.0nm,0.7s
XAN LR LR
comp=N,85nm,17.6s
XAN LR LR
comp=E,58nm,23.0s
KMI Kunming 65.12 303 P **P** **18 07 52.3 -1.9**
KMI pP **pP** **18 07 59.3 +0.1**
KMI sP **sP** **18 08 02.3 +1.2**
KMI PP **PP** **18 10 21.4 +3.7**
KMI S **S** **18 16 34.8 -2.1**
KMI sS **sS** **18 16 43.9 -1.3**
KMI SS **SS** **18 20 51.8 +2.2**
KMI pmax pmax
comp=Z,9.0nm,1.1s
KMI pmax pmax
comp=Z,99nm,6.2s
KMI LR LR
comp=N,100nm,18.5s
KMI LR LR
comp=E,170nm,21.6s
KMI LR LR
comp=Z,240nm,19.5s
CMAR Chiang Mai Arr 65.88 295 P **P** **18 08 00.1 +1.2**
CMAR ⇑*e* 18 36 39.2
CMAR Chiang Mai Arr 65.88 295 P **P** **18 08 00.1 +1.2**
comp=Z,3.0nm,0.8s,baz=128,slow=5.1,SNR=31
CMAR LR LR 18 35 59.0
comp=Z,121nm,18.7s,baz=352,slow=35
CMAR PKP2bc 18 36 39.2
comp=Z,2.6nm,0.9s,baz=258,slow=3.4,SNR=15
CMMT Chiang Mai 65.99 296 P **P** **18 07 58.9 -0.8**
CHTO Chiang Mai 66.00 296 *e*P **P** **18 07 59.0 -0.7**
CHTO pmax pmax
comp=Z,12nm,1.3s
CHTO Chiang Mai 66.00 296 *e*P **P** **18 07 59.0 -0.7**
comp=Z,12nm,1.3s
CHTO Chiang Mai 66.00 296 P **P** **18 07 57.4 -2.3**
comp=Z,7.9nm,1.4s
HHC Hu-ho-hao-te 66.81 322 *e*P **P** **18 08 03.3 -1.3**
HHC pP **pP** **18 08 07.8 -1.9**
HHC sP **sP** **18 08 10.8 -0.7**
HHC PcS 18 12 37.0
HHC S **S** **18 16 53.9 -2.8**
HHC sS **sS** **18 17 03.4 -1.6**
HHC ScS **SKSac** **18 17 57.0 -4.2**
HHC SS **SS** **18 21 15.4 +0.3**
HHC pmax pmax
comp=Z,20nm,0.7s
HHC pmax pmax
comp=Z,190nm,6.0s
HHC LR LR
comp=N,290nm,17.3s
HHC LR LR
comp=E,220nm,14.7s
HHC LR LR
comp=Z,260nm,16.3s
CD2 Chengdu 66.86 309 P **P** **18 08 06.3 +1.3**
CD2 pP **pP** **18 08 11.0 +0.9**
CD2 sP **sP** **18 08 13.3 +1.4**
CD2 PP **PP** **18 10 35.3 +2.8**
CD2 PcS 18 12 38.3
CD2 S **S** **18 16 57.6 +0.1**
CD2 sS **sS** **18 17 04.8 -1.0**
CD2 SKS **SKSac** **18 18 00.5 -1.4**
CD2 SS **SS** **18 21 17.3 +1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,400nm,20.1s
CD2 LR LR
comp=Z,270nm,20.1s
VNDA Vanda 67.92 179 *e*P **P** **18 08 11.5 +0.6**
comp=Z,12nm,1.0s
VNDA Vanda 67.92 179 P **P** **18 08 11.9 +1.0**
comp=Z,4.1nm,0.9s,baz=330,slow=5.1,SNR=16
VNDA LR LR 18 32 31.4
comp=Z,220nm,20.4s,baz=357,slow=31
SBA Scott Base 68.34 178 *e*P **P** **18 08 14.9 +1.3**
SBA pmax pmax
comp=Z,15nm,1.1s
SBA Scott Base 68.34 178 *e*P **P** **18 08 14.9 +1.3**
comp=Z,15nm,1.1s
LZH Lanzhou 69.26 314 *e*P P 18 08 27.1 +6.9
LZH pP pP 18 08 32.0 +6.7
LZH sP sP 18 08 34.1 +7.0
LZH S S 18 17 33.1 +6.8
LZH sS sS 18 17 37.5 +2.9
LZH Lanzhou 69.26 314 SS SS 18 21 58.5 +5.1
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,130nm,5.8s
LZH LR LR
comp=N,220nm,15.4s
LZH LR LR
comp=E,200nm,15.2s
LZH LR LR
comp=Z,160nm,14.3s
ULN Ulaanbaatar 73.58 326 *e*P **P** **18 08 46.0 0.0**
comp=Z,10nm,1.0s
ULN Ulaanbaatar 73.58 326 P P 18 08 42.3 -3.7
GTA Gaotai 73.65 316⇑*e*P **P** **18 08 47.5 +0.9**
GTA pP **pP** **18 08 52.3 +0.6**
GTA sP **sP** **18 08 54.5 +0.9**
GTA PP **PP** **18 11 33.5 +2.4**
GTA S **S** **18 18 17.0 +0.1**
GTA sS **sS** **18 18 24.6 -0.7**
GTA SKS **SKSac** **18 18 49.1 -4.0**
GTA SS **SS** **18 23 03.3 +2.7**
GTA pmax pmax
comp=Z,8.0nm,1.4s
GTA pmax pmax
comp=Z,75nm,6.2s
GTA LR LR
comp=N,94nm,19.0s
GTA LR LR
comp=E,120nm,18.1s
GTA LR LR
comp=Z,200nm,18.5s
SONM Songino Array 73.92 326 P **P** **18 08 48.4 +0.4**
SONM Songino Array 73.92 326 P **P** **18 08 48.4 +0.4**
comp=Z,5.7nm,0.7s,baz=136,slow=5.9,SNR=21

YAK Yakutsk 75.08 346 *e*P **P** **18 08 52.7 -1.5**
YAK pmax pmax
comp=Z,10.0nm,0.9s
LSA Lhasa 76.38 304 *e*P **P** **18 09 01.1 -1.9**
LSA pmax pmax
comp=Z,7.0nm,0.9s
LSA Lhasa 76.38 304 *e*P **P** **18 09 01.1 -1.9**
comp=Z,7.0nm,0.9s
ZAK Zakamensk 77.04 327 *e*P **P** **18 09 05.6 -0.2**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
TLY Talaya 77.56 328 *e*P **P** **18 09 09.6 +1.0**
TLY *e* 18 09 26.6
TLY pmax pmax
comp=Z,5.0nm,1.0s
BILL Bilibino 77.59 3*c i*P **P** **18 09 08.7 +0.3**
BILL *i* 18 09 14.9
BILL *i* 18 09 20.3
BILL *e* 18 09 24.3
BILL 18 12 01.0
BILL pmax pmax
comp=Z,38nm,1.2s
BILL Bilibino 77.59 3 *e*P **P** **18 09 07.9 -0.5**
comp=Z,32nm,1.0s
KDAK Kodiak Island 77.65 24 P **P** **18 09 09.1 +0.2**
KDAK Kodiak Island 77.65 24 P **P** **18 09 09.1 +0.2**
comp=Z,18nm,0.9s,baz=232,slow=12,SNR=8.2
TAPN Taplejung 78.52 300 *e*P **P** **18 09 14.8 0.0**
comp=Z,32nm,1.4s
ODAN Odare 78.64 300 *e*P **P** **18 09 16.5 +1.1**
comp=Z,15nm,0.6s
SVW2 Spaarevohn 78.80 20 *e*P **P** **18 09 16.1 +0.8**
comp=Z,47nm,1.4s
GUN Gumba 80.23 301 *e*P **P** **18 09 24.9 +0.7**
comp=Z,19nm,1.0s
SEW Seward 80.39 23 *e*P **P** **18 09 24.1 +0.2**
comp=Z,26nm,0.8s
QSPA South Pole Qui 80.40 180 P **P** **18 09 24.5 +0.4**
QSPA South Pole Qui 80.40 180 P **P** **18 09 24.5 +0.4**
comp=Z,6.7nm,1.0s,baz=62,slow=1.4,SNR=20
PKI Pulchoki 80.54 300 *e*P **P** **18 09 26.2 +0.4**
KKN Kakani 80.71 300 *e*P **P** **18 09 27.0 +0.4**
DMN Daman 80.81 300 *e*P **P** **18 09 28.0 +0.8**
comp=Z,61nm,1.4s
PMR Palmer 81.45 22 *e*P **P** **18 09 29.3 -0.1**
PMR pmax pmax
comp=Z,36nm,0.9s
PMR Palmer 81.45 22 *e*P **P** **18 09 29.3 -0.1**
comp=Z,36nm,0.9s
SML Sawmill 81.88 22 *e*P **P** **18 09 33.1 +1.2**
SML pmax pmax
comp=Z,12nm,1.0s
SML Sawmill 81.88 22 *e*P **P** **18 09 33.1 +1.2**
comp=Z,12nm,1.0s
KOLN Koldanda 82.14 300 *e*P **P** **18 09 34.8 +0.6**
comp=Z,20nm,0.7s
DANN Dangsing 82.15 300 *e*P **P** **18 09 34.4 0.0**
comp=Z,13nm,0.7s
TRF Thorofare Moun 82.22 20 *e*P **P** **18 09 32.1 -1.7**
comp=Z,22nm,1.0s
PYUN Piuthan 82.74 300 *e*P **P** **18 09 37.1 -0.2**
comp=Z,27nm,1.0s
MCK McKinley 82.86 21 *e*P **P** **18 09 36.9 0.0**
MCK McKinley 82.86 21 *e*P **P** **18 09 36.9 0.0**
comp=Z,76nm,1.0s
TIXI Tiksi 83.58 351*ce*P **P** **18 09 39.9 -0.5**
TIXI pmax pmax
comp=Z,9.0nm,1.7s
MAW Mawson 83.71 203 P **P** **18 09 41.8 +0.6**
MAW Mawson 83.71 203 P **P** **18 09 41.8 +0.6**
comp=Z,4.9nm,1.0s,baz=14,slow=4.3,SNR=5.3
MAW LR LR 18 41 11.3
comp=Z,140nm,20.2s,baz=263,slow=32
WMQ Urumqi 83.73 316 P **P** **18 09 41.9 0.0**
WMQ pP **pP** **18 09 46.8 -0.3**
WMQ sP **sP** **18 09 48.9 0.0**
WMQ PP **PP** **18 12 56.3 +1.2**
WMQ S **SKSac** **18 20 02.3 -2.1**
WMQ sS **SKKSac** **18 20 10.3 +1.1**
WMQ SS **SS** **18 25 31.6 -0.2**
WMQ pmax pmax
comp=Z,17nm,0.8s
WMQ pmax pmax
comp=Z,130nm,4.2s
WMQ LR LR
comp=N,140nm,9.0s
WMQ LR LR
comp=E,140nm,5.6s
COLA College 83.95 20 *e*P **P** **18 09 41.9 -0.5**
COLA pmax pmax
comp=Z,37nm,0.8s
COLA College 83.95 20 *e*P **P** **18 09 41.9 -0.5**
comp=Z,37nm,0.8s
ILAR Eielson Array 84.21 20 P **P** **18 09 43.0 -0.9**
ILAR Eielson Array 84.21 20 P **P** **18 09 43.0 -0.9**
comp=Z,13nm,1.1s,baz=258,slow=4.4,SNR=14
ILAR LR LR 18 45 02.5
comp=Z,95nm,19.5s,baz=260,slow=34
DOT Dot Lake 84.56 22 *e*P **P** **18 09 46.3 +0.7**
KHMM Horse Mountain 86.41 48 *e*P **P** **18 09 55.6 +0.1**
comp=Z,24nm,1.1s
WDC Whiskeytown Da 87.20 48 *e*P **P** **18 09 58.0 -1.2**
WDC pmax pmax
comp=Z,17nm,1.3s
WDC Whiskeytown Da 87.20 48 *e*P **P** **18 09 58.0 -1.2**
comp=Z,17nm,1.3s
YBH Yreka Blue Hor 87.38 47 P **P** **18 10 01.1 +0.9**
YBH Yreka Blue Hor 87.38 47 P **P** **18 10 01.1 +0.9**
comp=Z,7.1nm,0.9s,baz=252,slow=1.1,SNR=12
HUMO Hull Mountain 87.43 46 *e*P **P** **18 10 00.5 +0.1**
comp=Z,15nm,1.0s
OHCM Honcut 87.67 50 *e*P **P** **18 10 02.6 +1.1**
BSC Santa Cruz Isl 87.86 55 P **P** **18 10 03.8 +1.2**
baz=88
PKM Peak Mountain 87.92 54 P **P** **18 10 04.4 +1.3**
baz=88
CMB Columbia Colle 88.19 51 *e*P **P** **18 10 03.1 -1.0**
CMB pmax pmax
comp=Z,6.0nm,1.3s
CMB Columbia Colle 88.19 51 *e*P **P** **18 10 03.1 -1.0**
comp=Z,5.9nm,1.3s
MK31 Makanchi Array 88.27 318 *e*P **P** **18 10 03.5 -0.7**
MK31 Makanchi Array 88.27 318 *e*P **P** **18 10 03.5 -0.7**
MKAR Makanchi Array 88.27 318 P **P** **18 10 03.8 -0.5**
MKAR Makanchi Array 88.27 318 P **P** **18 10 03.8 -0.5**
MKAR Makanchi Array 88.27 318 P **P** **18 10 03.8 -0.5**
comp=Z,4.5nm,0.7s,baz=102,slow=6.0,SNR=51
MKAR LR LR 18 49 08.7
comp=Z,70nm,18.4s,baz=242,slow=35
SCI San Clemente I 88.53 56 P **P** **18 10 06.5 +0.8**
baz=89
BEKR Beckworth 88.64 49 *e*P **P** **18 10 06.4 0.0**
comp=Z,20nm,1.8s
RCTC Rector, Farmer 88.69 53 P **P** **18 10 07.4 +0.9**
baz=89
VES Vestal, Richgr 88.71 53 P **P** **18 10 07.2 +0.6**
baz=89
CIS Catalina Islan 88.74 56⇑P **P** **18 10 07.1 +0.4**
baz=89
ARVC Arvin 88.76 54 P **P** **18 10 08.1 +1.3**
baz=89
ZALV Zalesovo Beam 88.80 325 P **P** **18 10 04.9 -1.6**
ZALV Zalesovo Beam 88.80 325 P **P** **18 10 04.9 -1.6**
ZALV Zalesovo Beam 88.80 325 P **P** **18 10 04.9 -1.6**
comp=Z,1.9nm,0.8s,baz=98,slow=6.4,SNR=9.2
ZALV LR LR 18 49 33.2
comp=Z,60nm,19.0s,baz=71,slow=35
WCN Washoe City 88.97 50 *e*P **P** **18 10 09.2 +1.3**
WCN pmax pmax
comp=Z,8.0nm,0.8s
WCN Washoe City 88.97 50 *e*P **P** **18 10 09.2 +1.3**
comp=Z,7.7nm,0.8s
DECC Green Verdugo 88.97 55 P **P** **18 10 08.9 +1.0**
baz=89
PASC Pasadena Art C 89.08 55 *e*P **P** **18 10 07.6 -0.7**
comp=Z,13nm,0.9s
ISA Isabella 89.16 54 *e*P **P** **18 10 10.0 +1.3**
ISA pmax pmax
comp=Z,14nm,1.1s
ISA Isabella 89.16 54 *e*P **P** **18 10 10.0 +1.3**
comp=Z,14nm,1.1s
ISA Isabella 89.16 54⇑P **P** **18 10 08.1 -0.7**
baz=89,SNR=8.4
MOD Modoc 89.16 47 *e*P **P** **18 10 10.2 +1.5**
comp=Z,16nm,1.6s
MWC Mount Wilson 89.19 55 *e*P **P** **18 10 09.4 +0.3**
MWC pmax pmax
comp=Z,44nm,1.0s
MWC Mount Wilson 89.19 55 *e*P **P** **18 10 09.4 +0.3**
comp=Z,44nm,1.0s
EDW2 Edwards Air Fo 89.38 55 P **P** **18 10 11.1 +1.3**
baz=90,SNR=20
MTUM Tungsten Hills 89.45 52 *e*P **P** **18 10 10.2 0.0**
BFSC Mount Baldy Ra 89.52 55⇓P **P** **18 10 10.4 -0.1**
baz=90,SNR=12
109C Camp Elliot, M 89.70 57 P **P** **18 10 12.3 +1.1**
baz=90
LRMC Laurel Mountai 89.75 54 P **P** **18 10 12.4 +0.9**
baz=90
MURC Murrieta 89.76 56⇑P **P** **18 10 12.3 +0.7**
baz=90
NVAR Mina Array Bea 89.88 51 P **P** **18 10 13.3 +1.0**
NVAR Mina Array Bea 89.88 51 P **P** **18 10 13.3 +1.0**
comp=Z,13nm,1.0s,baz=238,slow=6.2,SNR=52
DAC Darwin (Calif) 89.99 53 *e*P **P** **18 10 13.4 +0.6**
DAC pmax pmax
comp=Z,29nm,1.6s
DAC Darwin (Calif) 89.99 53 *e*P **P** **18 10 13.4 +0.6**
comp=Z,30nm,1.6s
NV11 Mina Array Sit 90.00 51 *e*P **P** **18 10 12.1 -0.6**
BAR Barrett 90.01 57 *e*P **P** **18 10 14.1 +1.3**
comp=Z,15nm,1.0s
MPMC Manual Prospec 90.02 54⇓P **P** **18 10 13.5 +0.5**
baz=90,SNR=21
MONP Monument Peak 90.26 57⇑P **P** **18 10 15.0 +0.9**
baz=90,SNR=27
GRAC Grapevine Rang 90.31 53 P **P** **18 10 15.2 +1.2**
baz=90
PFO Pinyon Flat Ob 90.37 56 P **P** **18 10 15.9 +1.4**
comp=Z,50nm,0.9s,SNR=6.5
PFO Pinyon Flat Ob 90.37 56 *e*P **P** **18 10 15.0 +0.4**
comp=Z,4.6nm,0.9s
PFO Pinyon Flat Ob 90.37 56 P **P** **18 10 15.3 +0.8**
comp=Z,48nm,0.9s
PFO Pinyon Flat Ob 90.37 56 P **P** **18 10 15.3 +0.8**
comp=Z,4.6nm,0.8s,baz=266,slow=4.3,SNR=12
PFO Pinyon Flat Ob 90.37 56 P **P** **18 10 15.3 +0.8**
baz=90,SNR=8.5
GSC Goldstone 90.42 54 *e*P **P** **18 10 14.0 -0.7**
GSC pmax pmax
comp=Z,13nm,1.0s
GSC Goldstone 90.42 54 *e*P **P** **18 10 14.0 -0.7**
comp=Z,13nm,1.0s
GSC Goldstone 90.42 54⇓P **P** **18 10 15.7 +1.1**
baz=90,SNR=9.3
DVTC Desert V Tower 90.48 57 P **P** **18 10 16.1 +1.1**
baz=91
FURC Furnace Creek, 90.61 53⇓P **P** **18 10 16.4 +1.0**
baz=91,SNR=25
INK Inuvik 90.61 20 P **P** **18 10 14.4 -0.2**
INK PKKPbc **PKKPdf** **18 27 40.8 -0.2**
INK Inuvik 90.61 20 P **P** **18 10 14.4 -0.2**
comp=Z,0.8nm,0.6s,baz=265,slow=2.7,SNR=5.4
INK PKKPbc **PKKPdf** **18 27 40.8 -0.2**
comp=Z,1.4nm,1.0s,baz=62,slow=2.8,SNR=3.7
HEC Hector,Ludlow 90.71 55 P **P** **18 10 16.6 +0.6**
baz=91,SNR=5.5
SWSC Sam W. Stewart 90.79 57 P **P** **18 10 17.3 +1.0**
baz=91
BELC Belle Mtn. Jos 90.82 56 P **P** **18 10 17.4 +0.8**
baz=91,SNR=18
SHOC Shoshone 90.95 54⇑P **P** **18 10 17.3 +0.2**
baz=91
KSH Kashi 91.05 310 *e*P **P** **18 10 19.3 +1.7**
KSH pP **pP** **18 10 23.8 +1.1**
KSH sP **sP** **18 10 26.0 +1.4**
KSH *e*PP **PP** **18 13 58.6 +4.4**
KSH *e*SKS **SKSac** **18 20 49.1 -0.3**
KSH *e*S **S** **18 21 14.5 -0.6**
KSH *e*sS **sS** **18 21 22.3 -1.4**
KSH *e*SS **SS** **18 27 22.4 +3.3**
KSH pmax pmax
comp=Z,6.0nm,0.7s
KSH LR LR
comp=N,100nm,4.5s
KSH LR LR
comp=E,85nm,4.0s
KSH LR LR
comp=Z,150nm,4.7s
BMN Battle Mountai 91.11 49 *e*P **P** **18 10 19.6 +1.7**
BMN pmax pmax
comp=Z,19nm,0.9s
BMN Battle Mountai 91.11 49 *e*P **P** **18 10 19.6 +1.7**
comp=Z,19nm,0.9s
TUQ Turquoise Moun 91.15 54⇓P **P** **18 10 18.5 +0.4**
baz=91,SNR=11
BC3 Big Chuckawall 91.20 56 P **P** **18 10 19.3 +0.9**
baz=91
GMRC Granite Mounta 91.24 55⇓P **P** **18 10 19.5 +1.0**
baz=91,SNR=16
IRM Iron Mountain 91.54 56 P **P** **18 10 20.8 +1.0**
baz=92
KURK Kurchatov 91.60 321*c i*P **P** **18 10 18.6 -1.0**
KURK pmax pmax
comp=Z,12nm,2.6s
GLA Glamis 91.61 57 *e*P **P** **18 10 20.9 +0.7**
GLA pmax pmax
comp=Z,11nm,0.9s
GLA Glamis 91.61 57 *e*P **P** **18 10 20.9 +0.7**
comp=Z,11nm,0.9s
GLA Glamis 91.61 57 P **P** **18 10 21.6 +1.4**
baz=92
LDFC Landfair 91.74 55 *e*P **P** **18 10 20.8 0.0**
comp=Z,39nm,1.0s
BMO Blue Mountains 91.94 45 *e*P **P** **18 10 20.7 -0.8**
BMO pmax pmax
comp=Z,20nm,1.3s
BMO Blue Mountains 91.94 45 *e*P **P** **18 10 20.7 -0.8**
comp=Z,20nm,1.3s
R11A Troy Canyon, C 91.96 52 P **P** **18 10 22.7 +0.9**
baz=92,SNR=20
Y12C Blythe 91.98 56 P **P** **18 10 22.9 +1.0**
baz=92
ELK Elko 92.66 49 *e*P **P** **18 10 26.7 +1.6**
ELK Elko 92.66 49 P **P** **18 10 26.1 +1.0**
comp=Z,8.6nm,1.0s,baz=228,slow=4.4,SNR=20
MFID Camas Ranch 92.71 47 *e*P **P** **18 10 26.5 +1.3**
comp=Z,29nm,1.7s
MFID Camas Ranch 92.71 47⇓P **P** **18 10 26.0 +0.9**
baz=93,SNR=11
NEW Newport 92.73 42 *e*P **P** **18 10 24.4 -0.7**
comp=Z,5.7nm,0.9s
NEW Newport 92.73 42 P **P** **18 10 25.1 0.0**
comp=Z,7.4nm,1.1s,baz=244,slow=5.1,SNR=7.3
NEW Newport 92.73 42⇑P **P** **18 10 24.6 -0.5**
baz=93,SNR=6.3
AAK Ala-Archa 92.74 313⇑*i*P **P** **18 10 23.4 -2.0**
AAK pmax pmax
comp=Z,9.0nm,1.9s
C11A Tepee Creek (N 93.22 42⇓P **P** **18 10 27.1 -0.2**
baz=93
I12A Atlanta 93.27 46⇑P **P** **18 10 28.5 +0.7**
baz=93,SNR=14
G12A Big Creek, Yel 93.37 45⇓P **P** **18 10 28.0 -0.2**
baz=94
F12A Elk City 93.53 44 P **P** **18 10 28.7 -0.1**
baz=94,SNR=14
CCUT Cedar City 93.55 53 *e*P **P** **18 10 29.7 +0.4**
comp=Z,4.3nm,0.9s
H12A Diamond D Ranc 93.60 46⇑P **P** **18 10 29.7 +0.4**
baz=94,SNR=5.6
D12A Red Ives Fores 93.69 43⇓P **P** **18 10 29.7 +0.1**
baz=94
HLID Hailey 93.75 47 *e*P **P** **18 10 30.5 +0.5**
comp=Z,10nm,1.1s
HLID Hailey 93.75 47⇑P **P** **18 10 30.9 +0.9**
baz=94,SNR=13
J13A Cove Ranch, Pi 93.89 47⇓P **P** **18 10 31.8 +1.1**
baz=94
I13A Wildhorse Cree 94.02 46⇓P **P** **18 10 32.1 +0.9**
baz=94,SNR=24
H13A Challis 94.03 46 P **P** **18 10 32.1 +0.8**
baz=94
G13A Cobalt 94.13 45⇓P **P** **18 10 32.1 +0.4**
baz=94,SNR=7.6
F13A Darby 94.17 44 P **P** **18 10 31.9 0.0**
baz=94,SNR=10
E13A Victor 94.38 44⇑P **P** **18 10 33.4 +0.7**
baz=94
I14A Mackay 94.49 46⇓P **P** **18 10 34.4 +1.0**
baz=95,SNR=9.3
B13A Whitefish 94.50 42⇓P **P** **18 10 33.6 +0.4**
baz=95

MVU	**Marysvale**	**94.60**	**52**	*e*P		**P**		**18 10 36.7**	**+2.6**
	comp=Z,4.8nm,1.3s								
HVU	**Hansel Valley**	**94.66**	**49**	*e*P		**P**		**18 10 34.9**	**+0.7**
HVU				pmax		pmax			
	comp=Z,18nm,1.0s								
HVU	**Hansel Valley**	**94.66**	**49**	*e*P		**P**		**18 10 34.9**	**+0.7**
	comp=Z,18nm,1.0s								
H14A	**Leadore**	**94.66**	**46**	P		**P**		**18 10 35.2**	**+1.0**
	baz=95								
WUAZ	**Wupatki**	**94.83**	**55**	*e*P		**P**		**18 10 36.3**	**+1.2**
	comp=Z,2.6nm,0.8s								
TUC	**Tucson**	**94.85**	**58**	*e*P		**P**		**18 10 36.9**	**+1.7**
TUC				pmax		pmax			
	comp=Z,2.0nm,0.9s								
TUC	**Tucson**	**94.85**	**58**	*e*P		**P**		**18 10 36.9**	**+1.7**
	comp=Z,2.0nm,0.9s								
H15A	**Lima**	**95.17**	**46**	P		**P**		**18 10 37.5**	**+0.9**
	baz=95								
E15A	**Deer Lodge**	**95.43**	**44**	P		**P**		**18 10 37.9**	**+0.3**
	baz=96								
F15A	**Butte**	**95.45**	**45**	P		**P**		**18 10 38.4**	**+0.6**
	baz=96								
LRM	**Limekiln Ridge**	**95.48**	**45**	*e*P		**P**		**18 10 38.6**	**+0.6**
JLU	**Jordanelle**	**95.48**	**50**	*e*P		**P**		**18 10 40.0**	**+1.9**
	comp=Z,8.6nm,1.4s								
HWUT	**Hardware Ranch**	**95.53**	**49**	*e*P		**P**		**18 10 37.6**	**-0.6**
	comp=Z,2.1nm,0.8s								
C15A	**Salmond Ranch,**	**95.64**	**43**	P		**P**		**18 10 38.6**	**+0.1**
	baz=96								
F16A	**Kennard Place,**	**96.04**	**45**	P		**P**		**18 10 41.0**	**+0.6**
	baz=96								
E16A	**East Helena**	**96.11**	**44**	P		**P**		**18 10 41.1**	**+0.4**
	baz=96								
C16A	**Fuhringer Ranc**	**96.22**	**43**	P		**P**		**18 10 41.7**	**+0.6**
	baz=96								
TPAW	**Teton Pass**	**96.23**	**47**	*e*P		**P**		**18 10 42.8**	**+1.3**
	comp=Z,3.6nm,0.6s								
D16A	**Dana Ranch, Ca**	**96.25**	**43**	P		**P**		**18 10 41.8**	**+0.5**
	baz=96								
IMW	**Indian Meadow**	**96.29**	**47**	*e*P		**P**		**18 10 43.2**	**+1.4**
MOOW	**Moose Ponds**	**96.41**	**47**	*e*P		**P**		**18 10 43.2**	**+1.0**
LOHW	**Long Hollow**	**96.49**	**47**	*e*P		**P**		**18 10 43.7**	**+1.1**
YKA	**Yellowknife Ar**	**96.56**	**28**	P		**P**		**18 10 41.4**	**-0.8**
YKA				PKKPbc		**PKKPbc**		**18 27 26.1**	**-2.7**
YKA	**Yellowknife Ar**	**96.56**	**28**	P		**P**		**18 10 41.3**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=258,slow=4.7,SNR=29								
YKA				PKKPbc		**PKKPbc**		**18 27 26.0**	**-2.7**
	comp=Z,0.5nm,0.8s,baz=79,slow=3.0,SNR=6.2								
E17A	**Martinsdale**	**96.66**	**44**	P		**P**		**18 10 43.7**	**+0.5**
	baz=97								
F17A	**Fitzpatrick Pl**	**96.73**	**45**	P		**P**		**18 10 44.4**	**+0.9**
	baz=97								
D17A	**Six Diamond Ra**	**96.85**	**43**	P		**P**		**18 10 45.0**	**+1.0**
	baz=97								
C17A	**Wharram Farm,**	**96.86**	**43**	P		**P**		**18 10 44.5**	**+0.5**
	baz=97								
BVAR	**Borovoye Array**	**97.02**	**323**	LR		LR		18 54 00.5	
	comp=Z,84nm,19.4s,baz=201,slow=35								
I18A	**Diamond G Ranc**	**97.07**	**47**	P		Pdif		18 10 45.6	+0.2
	baz=97								
BRVK	**Borovoye**	**97.09**	**323**	⇓*e*P		**P**		**18 10 42.8**	**-2.0**
BRVK				pmax		pmax			
	comp=Z,7.0nm,2.2s								
BW06	**Boulder Array**	**97.15**	**48**	*e*P		**P**		**18 10 45.6**	**0.0**
	comp=Z,5.0nm,1.1s								
PDAR	**Pinedale Array**	**97.15**	**48**	P		**P**		**18 10 45.6**	**0.0**
PDAR	**Pinedale Array**	**97.15**	**48**	P		**P**		**18 10 45.6**	**0.0**
	comp=Z,3.2nm,0.9s,baz=239,slow=2.2,SNR=21								
PDAR				LR		LR		18 51 09.6	
	comp=Z,100nm,18.2s,baz=154,slow=33								
H18A	**Shoshone NF, C**	**97.29**	**46**	P		**P**		**18 10 46.2**	**0.0**
	baz=97								
E18A	**Harlowton**	**97.32**	**44**	P		Pdif		18 10 46.8	+0.6
	baz=97								
F18A	**Big Timber**	**97.38**	**45**	P		Pdif		18 10 47.1	+0.6
	baz=98								
J19A	**Crowheart**	**97.58**	**47**	P		Pdif		18 10 47.9	+0.3
	baz=98								
EGMT	**Eagleton**	**97.58**	**43**	P		Pdif		18 10 48.2	+0.9
	baz=98								
B18A	**Beardsley Farm**	**97.60**	**42**	P		Pdif		18 10 48.7	+1.3
	baz=98								
K19A	**Absolon Red Bu**	**97.68**	**48**	P		Pdif		18 10 48.3	+0.3
	baz=98								
I19A	**Meeteetse**	**97.70**	**47**	P		Pdif		18 10 48.6	+0.5
	baz=98								
F19A	**Roth Farm, Mol**	**97.91**	**45**	P		Pdif		18 10 50.1	+1.2
	baz=98								
C19A	**Slack Wire Ran**	**98.02**	**43**	P		Pdif		18 10 49.8	+0.5
	baz=98								
SNAA	**Sanae**	**98.06**	**186**	P		Pdif		18 10 49.7	+0.7
SNAA	**Sanae**	**98.06**	**186**	P		Pdif		18 10 49.7	+0.7
	comp=Z,0.7nm,1.0s,baz=284,slow=7.2,SNR=3.0								
E19A	**Rath Farm, Rou**	**98.08**	**44**	P		Pdif		18 10 50.2	+0.6
	baz=98								
D19A	**Cripps Ranch,**	**98.08**	**44**	P		Pdif		18 10 50.1	+0.5
	baz=98								
Z22A	**Elephant Butte**	**98.16**	**58**	P		Pdif		18 10 51.2	+0.8
	baz=98								
E20A	**Meyer Farm, Mu**	**98.54**	**44**	P		Pdif		18 10 52.3	+0.7
	baz=99								
D20A	**Manuel Ranch,**	**98.58**	**44**	P		Pdif		18 10 52.5	+0.7
	baz=99								
C20A	**Veseth Ranch,**	**98.72**	**43**	P		Pdif		18 10 52.9	+0.6
	baz=99								
J21A	**Lysite**	**98.75**	**47**	P		Pdif		18 10 53.5	+0.7
	baz=99								
ANMO	**Albuquerque**	**98.75**	**56**	*e*P		Pdif		18 10 55.2	+2.2
	comp=Z,2.3nm,1.0s								
B20A	**Solberg Farm,**	**98.77**	**42**	P		Pdif		18 10 53.1	+0.6
	baz=99								
E21A	**Keefer Ranch,**	**99.27**	**44**	P		**Pdif**		**18 10 55.6**	**+0.8**
	baz=99								
124A	**Stringfield Ra**	**99.37**	**58**	P		**Pdif**		**18 10 56.8**	**+1.0**
	baz=100								
B21A	**Ellsworth Farm**	**99.44**	**42**	P		**Pdif**		**18 10 56.2**	**+0.7**
	baz=100								
425A	**Indio Mountain**	**99.59**	**60**	P		**Pdif**		**18 10 57.6**	**+0.9**
	baz=100								
N23A	**Red Feather La**	**99.67**	**50**	P		**Pdif**		**18 10 58.5**	**+1.5**
	baz=100								
Y25A	**Mesa, Roswell**	**100.11**	**57**	P		**Pdif**		**18 10 59.6**	**+0.6**
	baz=100								
Q24A	**Divide**	**100.14**	**52**	P		**Pdif**		**18 10 59.1**	**-0.1**
	baz=100								
C23A	**Lambert**	**100.63**	**43**	P		**Pdif**		**18 11 01.4**	**+0.6**
	baz=101								
527A	**Woodward Ranch**	**100.71**	**61**	P		**Pdif**		**18 11 02.2**	**+0.4**
	baz=101								
FRB	**Frobisher Bay**	**116.22**	**22**	PKP		**PKPdf**		**18 15 54.8**	**-0.8**
FRB	**Frobisher Bay**	**116.22**	**22**	PKP		**PKPdf**		**18 15 54.8**	**-0.8**
	comp=Z,4.4nm,1.0s,baz=204,slow=2.9,SNR=3.1								
BOSA	**Boshof**	**121.71**	**228**	PKP		**PKPdf**		**18 16 07.7**	**+0.2**
BOSA	**Boshof**	**121.71**	**228**	PKP		**PKPdf**		**18 16 07.7**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=155,slow=18,SNR=5.0								
AKASG	**Malin Array Be**	**122.20**	**325**	PKIKP		**PKPdf**		**18 16 06.5**	**-1.1**
AKASG	**Malin Array Be**	**122.20**	**325**	PKP		**PKPdf**		**18 16 06.5**	**-1.1**
AKASG	**Malin Array Be**	**122.20**	**325**	PKP		**PKPdf**		**18 16 06.5**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=78,slow=2.0,SNR=4.8								
BRTR	**Keskin Array B**	**123.40**	**311**	PKP		**PKPdf**		**18 16 09.7**	**-0.8**
BRTR	**Keskin Array B**	**123.40**	**311**	PKP		**PKPdf**		**18 16 09.7**	**-0.8**
	comp=Z,1.3nm,1.0s,baz=141,slow=4.3,SNR=7.6								
NB2	**NORSAR Subarra**	**123.56**	**342**	PKPdf		**PKPdf**		**18 16 09.3**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=38,slow=1.7								
NOA	**NORSAR Array B**	**123.56**	**342**	PKP		**PKPdf**		**18 16 09.2**	**-0.7**
NOA	**NORSAR Array B**	**123.56**	**342**	PKP		**PKPdf**		**18 16 09.2**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=152,slow=0.6,SNR=4.6								
LPAZ	**La Paz**	**126.35**	**118**	PKP		**PKPdf**		**18 16 17.0**	**-0.3**
LPAZ	**La Paz**	**126.35**	**118**	PKP		**PKPdf**		**18 16 17.0**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=306,slow=1.2,SNR=24								
ROSC	**El Rosal**	**126.48**	**91**	PKP		**PKPdf**		**18 16 16.8**	**-0.6**
ROSC	**El Rosal**	**126.48**	**91**	PKP		**PKPdf**		**18 16 16.8**	**-0.6**
	comp=Z,6.2nm,0.6s,baz=54,slow=23,SNR=5.1								
CPUP	**Villa Florida**	**129.48**	**136**	PKP		**PKPdf**		**18 16 22.3**	**0.0**
CPUP	**Villa Florida**	**129.48**	**136**	PKP		**PKPdf**		**18 16 22.3**	**0.0**
	comp=Z,5.4nm,0.9s,baz=203,slow=1.0,SNR=11								
BRG	**Berggiesshubel**	**130.03**	**332**	*e*P		**PKPdf**		**18 16 22.3**	**-0.3**
	comp=Z,21nm,2.1s								
BRG	**Berggiesshubel**	**130.03**	**332**	*e*PKIKP		**PKPdf**		**18 16 22.3**	**-0.3**
BRG				pmax		pmax			
	comp=Z,21nm,2.1s								
KHC	**Kasperske Hory**	**131.38**	**331**	*e*PKIKP		**PKPdf**		**18 16 23.0**	**-2.3**
KHC	**Kasperske Hory**	**131.38**	**331**	*e*PKPdf		**PKPdf**		**18 16 23.0**	**-2.3**
GERES	**GERESS Array B**	**131.52**	**330**	PKP		**PKPdf**		**18 16 25.5**	**-0.1**
GERES	**GERESS Array B**	**131.52**	**330**	PKP		**PKPdf**		**18 16 25.5**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=54,slow=2.3,SNR=7.8								
BDFB	**Brasilia**	**143.00**	**132**	PKPpre		PKPpre		18 16 44.0	
	comp=Z,6.9nm,0.8s,baz=196,slow=3.6,SNR=10								
PBRG	**Braganca**	**145.69**	**342**	*e*PKP		**PKPab**		**18 16 52.4**	**+0.2**
POLO	**Lamas de Olo**	**146.40**	**343**	*e*PKP		**PKPbc**		**18 16 54.5**	**+0.4**
ESDC	**Sonseca Array**	**146.59**	**336**	PKPbc		**PKPbc**		**18 16 54.8**	**+0.1**
ESDC	**Sonseca Array**	**146.59**	**336**	PKPbc		**PKPbc**		**18 16 54.8**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=27,slow=3.7,SNR=6.8								
MTE	**Manteigas**	**147.22**	**342**	*e*PKP		**PKPab**		**18 16 57.5**	**-0.6**
PCBR	**Castelo Branco**	**147.71**	**341**	*e*PKP		**PKPbc**		**18 16 58.5**	**+0.8**
PMRV	**Marv??o**	**148.05**	**341**	*e*PKP		**PKPbc**		**18 16 59.3**	**+0.6**
PTOM	**Tomar**	**148.20**	**342**	*e*PKP		**PKPbc**		**18 16 59.4**	**+0.3**
PESTR	**Estremoz**	**148.62**	**340**	*e*PKP		**PKPbc**		**18 17 00.2**	**0.0**
PMTG	**Montargil**	**148.65**	**341**	*e*PKP		**PKPbc**		**18 17 00.3**	**+0.1**
EVO	**Evora**	**149.07**	**341**	*e*PKP		**PKPbc**		**18 17 01.7**	**+0.4**
PBEJ	**Beja**	**149.48**	**340**	*e*PKP		**PKPbc**		**18 17 02.7**	**+0.3**
PCVE	**Castro Verde**	**149.89**	**340**	*e*PKP		**PKPbc**		**18 17 04.4**	**+1.0**
TORD	**Torodi Ar. Bea**	**157.92**	**281**	PKP		**PKPdf**		**18 17 09.8**	**-0.7**
TORD				PKPab		**PKPab**		**18 17 41.4**	**-2.1**
TORD	**Torodi Ar. Bea**	**157.92**	**281**	PKP		**PKPdf**		**18 17 09.8**	**-0.7**
	comp=Z,2.2nm,0.9s,baz=21,slow=1.3,SNR=12								
TORD				PKPab		**PKPab**		**18 17 41.4**	**-2.1**
	comp=Z,1.6nm,0.9s,baz=99,slow=2.7,SNR=3.9								
DBIC	**Dimbokro**	**164.20**	**261**	PKP		**PKPdf**		**18 17 16.7**	**-0.6**
DBIC				PKPab		**PKPab**		**18 18 11.2**	**+0.2**
DBIC	**Dimbokro**	**164.20**	**261**	PKP		**PKPdf**		**18 17 16.7**	**-0.6**
	comp=Z,5.1nm,0.9s,baz=166,slow=1.6,SNR=5.0								
DBIC				PKPab		**PKPab**		**18 18 11.2**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=75,slow=6.8,SNR=4.2								

*ISCJB **17** 18:04:45.6±0.3, 60.25N±0.03×152.76W±0.07, h125km±3km, mb3.8/11, Error ellipse: s-maj=6.0km s-min=3.9km az=34.7*
*IDC **17** 18:04:45.9±1.7, 60.34N×152.97W, h105km±16km, mb3.4/11,mb1 3.6/15, mb1mx3.4/34, mbtmp3.5/15, MS4.1/1, Ms1 4.1/1, ms1mx2.6/29, Error ellipse: s-maj=21.5km s-min=15.2km az=58.0*
*NEIC **17** 18:04:47.3, 60.25N×152.80W, h121km, MG3.5(AEIC), After AEIC.*

ISC 17 18:04:46.5±0.6, 60.24N±0.03×152.75W±0.04, h117km±4km, n92, σ1 912/109, mb3.8/11, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RED	**Redoubt Volcan**	**0.18**	**357**	P	**Pn**	**18 05 03.2**	**+0.3**
RED				S	**Sn**	**18 05 15.0**	**-0.2**
RSO	**Redoubt South**	**0.23**	**360**	*e*Pn	**Pn**	**18 05 03.5**	**+0.3**
DFR	**Drift River**	**0.36**	**5**	P	**Pn**	**18 05 03.8**	**+0.3**
OPT	**Oil Point**	**0.63**	**203**	P	**Pn**	**18 05 05.7**	**+0.6**
OPT				S	**Sn**	**18 05 18.5**	**-0.6**
HOM	**Homer**	**0.80**	**136**	P	**Pn**	**18 05 07.6**	**+1.1**
HOM				S	**Sn**	**18 05 23.3**	**+1.8**
AUNW	**Augustine NWes**	**0.94**	**203**	P	**Pn**	**18 05 08.2**	**+0.5**
AUW	**Augustine West**	**0.94**	**203**	P	**Pn**	**18 05 08.2**	**+0.5**
CKL	**Chakachamna La**	**0.98**	**12**	P	**Pn**	**18 05 09.0**	**+0.7**
CKL				S	**Sn**	**18 05 24.9**	**+0.2**
SPU	**Mount Spurr**	**1.01**	**20**	P	**Pn**	**18 05 09.0**	**+0.5**
BGL	**Barrier Glacie**	**1.05**	**10**	P	**Pn**	**18 05 09.8**	**+0.9**
BRLK	**Bradley Lake**	**1.05**	**116**	P	**Pn**	**18 05 09.2**	**+0.4**
SLKM	**Skilak Lake**	**1.29**	**77**	P	**Pn**	**18 05 12.1**	**+0.7**
STLK	**Strandline Lak**	**1.34**	**19**	P	**Pn**	**18 05 12.8**	**+0.8**
FOSS	**Fourpeaked Sta**	**1.52**	**199**	P	**Pn**	**18 05 14.0**	**0.0**
SVW2	**Sparrevohn**	**1.64**	**303**	P	**Pn**	**18 05 15.2**	**-0.2**
SEW	**Seward**	**1.66**	**93**	P	**Pn**	**18 05 15.3**	**-0.2**
SEW				S	**Sn**	**18 05 36.4**	**-1.2**
KAWH	**Katmai**	**2.13**	**210**	P	**Pn**	**18 05 21.6**	**+0.1**
PMR	**Palmer**	**2.23**	**51**	P	**Pn**	**18 05 22.4**	**-0.2**
PMR				S	**Sn**	**18 05 49.0**	**-1.4**
KAKN	**Katmai Knife C**	**2.28**	**212**	P	**Pn**	**18 05 23.6**	**+0.2**
KCE	**Katmai Mt Cerb**	**2.36**	**213**	P	**Pn**	**18 05 25.0**	**+0.7**
KABU	**Katmai Buttres**	**2.36**	**214**	P	**Pn**	**18 05 24.9**	**+0.4**
KELA	**Mount Kelaz**	**2.37**	**222**	P	**Pn**	**18 05 24.5**	**0.0**
KABR	**Katmai Barrier**	**2.40**	**209**	P	**Pn**	**18 05 25.0**	**0.0**
KDAK	**Kodiak Island**	**2.46**	**178**	P	**Pn**	**18 05 24.5**	**-1.2**
KDAK				S	**Sn**	**18 05 52.7**	**-3.0**
KDAK	**Kodiak Island**	**2.46**	**178**	P	**Pn**	**18 05 24.5**	**-1.2**
	34nm,0.3s,baz=37,slow=9.9,SNR=303						
KDAK				S	**Sn**	**18 05 52.7**	**-3.0**
	41nm,0.3s,baz=125,slow=22,SNR=10						
SML	**Sawmill**	**2.67**	**52**	*e*Pn	**Pn**	**18 05 28.6**	**+0.3**
PPLA	**Purkeypile**	**2.68**	**6**	P	**Pn**	**18 05 29.7**	**+1.1**
OHAK	**Old Harbor**	**3.04**	**186**	P	**Pn**	**18 05 31.7**	**-1.4**
TT01	**Tatalina**	**3.10**	**331**	P	**Pn**	**18 05 33.8**	**-0.2**
VLZ	**Valdez**	**3.28**	**71**	P	**Pn**	**18 05 36.5**	**+0.2**
MID	**Middleton Isla**	**3.34**	**101**	P	**Pn**	**18 05 37.1**	**+0.1**
TRF	**Thorofare Moun**	**3.43**	**19**	P	**Pn**	**18 05 38.1**	**-0.4**
EYAK	**Cordova Ski Ar**	**3.49**	**82**	P	**Pn**	**18 05 39.2**	**+0.1**
DIV	**Divide**	**3.55**	**72**	P	**Pn**	**18 05 39.2**	**-0.7**
KLU	**Klutina**	**3.57**	**66**	P	**Pn**	**18 05 39.7**	**-0.5**
CHUM	**Lake Minchumin**	**3.67**	**3**	P	**Pn**	**18 05 41.6**	**+0.2**
RND	**Reindeer**	**3.68**	**28**	P	**Pn**	**18 05 41.7**	**0.0**
DHY	**Denali Highway**	**3.83**	**40**	P	**Pn**	**18 05 44.1**	**+0.3**
MCK	**McKinley**	**3.94**	**26**	P	**Pn**	**18 05 45.7**	**+0.5**
RAGM	**Ragged Mountai**	**4.02**	**84**	*e*Pn	**Pn**	**18 05 48.4**	**+2.2**
HAAR	**HAARP**	**4.26**	**56**	P	**Pn**	**18 05 49.4**	**0.0**
ANNW	**Aniakchak Nort**	**4.35**	**223**	P	**Pn**	**18 05 51.6**	**+0.9**
PAX	**Paxson**	**4.43**	**49**	P	**Pn**	**18 05 51.8**	**+0.1**
VRDI	**Verde Repeater**	**4.67**	**74**	P	**Pn**	**18 05 55.1**	**0.0**
NEA	**Nenana**	**4.68**	**20**	P	**Pn**	**18 05 55.2**	**+0.3**
WRH	**Wood River Hil**	**4.77**	**25**	P	**Pn**	**18 05 55.9**	**-0.3**
DDM	**Donnelly Dome**	**4.82**	**39**	P	**Pn**	**18 05 58.1**	**+1.2**
MLY	**Manley**	**4.90**	**10**	P	**Pn**	**18 05 58.2**	**+0.2**
CHGN	**Chignik**	**4.95**	**220**	*e*Pn	**Pn**	**18 05 58.0**	**-0.6**
CCB	**Clear Creek Bu**	**4.99**	**25**	P	**Pn**	**18 05 58.8**	**-0.3**
KIAG	**Kiagna River**	**5.17**	**78**	P	**Pn**	**18 06 02.4**	**+0.6**
COLA	**College**	**5.18**	**24**	P	**Pn**	**18 06 01.8**	**+0.1**
MDM	**Murphy Dome**	**5.18**	**22**	P	**Pn**	**18 06 01.5**	**-0.2**
BALM	**Baldy**	**5.18**	**77**	P	**Pn**	**18 06 02.1**	**+0.2**
ILAR	**Eielson Array**	**5.30**	**28**	P	**Pn**	**18 06 02.9**	**-0.4**
ILAR				S	**Sn**	**18 06 59.4**	**-3.7**
ILAR	**Eielson Array**	**5.30**	**28**	P	**Pn**	**18 06 02.9**	**-0.4**
	13nm,0.3s,baz=215,slow=14,SNR=1055						
ILAR				S	**Sn**	**18 06 59.4**	**-3.7**
	5.5nm,0.3s,baz=221,slow=20,SNR=11						
IL1	**Eielson Array**	**5.30**	**28**	P	**Pn**	**18 06 02.9**	**-0.4**
DOT	**Dot Lake**	**5.34**	**46**	P	**Pn**	**18 06 04.0**	**0.0**
GLM	**Gilmore Dome**	**5.37**	**25**	P	**Pn**	**18 06 04.0**	**-0.3**
GRNC	**Granite Creek**	**5.46**	**80**	P	**Pn**	**18 06 06.6**	**+0.9**
BARN	**Barnard Glacie**	**5.52**	**77**	P	**Pn**	**18 06 07.5**	**+1.1**
COLD	**Coldfoot**	**7.11**	**8**	*e*Pn	**Pn**	**18 06 28.6**	**+0.8**
INK	**Inuvik**	**11.57**	**38**	P	**Pn**	**18 07 26.6**	**-1.2**
INK	**Inuvik**	**11.57**	**38**	P	**Pn**	**18 07 26.6**	**-1.2**
	0.1nm,0.3s,baz=235,slow=12,SNR=6.5						
DLBC	**Dease Lake**	**11.72**	**89**	P	**P**	**18 07 37.0**	**-1.3**
	0.6nm,0.3s,baz=225,slow=20,SNR=7.4						
YKA	**Yellowknife Ar**	**18.24**	**66**	P	**Pn**	**18 08 51.4**	**-0.3**
YKA				PcP	**PcP**	**18 13 17.3**	**+0.3**
YKA				ScP	**ScP**	**18 16 41.5**	**+0.2**
YKA	**Yellowknife Ar**	**18.24**	**66**	P	**Pn**	**18 08 51.4**	**-0.3**
	0.3nm,0.3s,baz=277,slow=9.8,SNR=25						
YKA				PcP	**PcP**	**18 13 17.3**	**+0.3**
	0.1nm,0.3s,baz=279,slow=1.4,SNR=7.8						
YKA				ScP	**ScP**	**18 16 41.5**	**+0.2**
	0.1nm,0.3s,baz=294,slow=2.3,SNR=4.6						
NVAR	**Mina Array Bea**	**30.73**	**120**	P	**P**	**18 10 53.2**	**+2.7**
NVAR	**Mina Array Bea**	**30.73**	**120**	P	**P**	**18 10 53.2**	**+2.7**
	1.9nm,0.8s,baz=301,slow=7.2,SNR=3.2						
ASAJ	**Asahikawa**	**40.97**	**277**	LR	LR	18 30 47.9	
	comp=Z,255nm,18.4s,baz=13,slow=38						
SPITS	**Spitsbergen Ar**	**41.67**	**3**	P	**P**	**18 12 22.8**	**+0.1**
SPITS	**Spitsbergen Ar**	**41.67**	**3**	P	**P**	**18 12 22.8**	**+0.1**
	0.2nm,0.3s,baz=3.3,slow=5.8,SNR=11						
TXAR	**Lajitas Array**	**44.95**	**111**	P	**P**	**18 12 51.9**	**+2.2**
TXAR				pP	**pP**	**18 13 14.2**	**-2.4**
TXAR	**Lajitas Array**	**44.95**	**111**	P	**P**	**18 12 51.9**	**+2.2**
	0.9nm,0.9s,baz=324,slow=6.2,SNR=5.3						
TXAR				pP	**pP**	**18 13 14.2**	**-2.4**
	0.1nm,0.4s,baz=329,slow=12,SNR=2.3						
ARCES	**ARCESS Array B**	**50.52**	**1**	P	**P**	**18 13 31.6**	**-0.4**
ARCES	**ARCESS Array B**	**50.52**	**1**	P	**P**	**18 13 31.6**	**-0.4**
	2.1nm,0.9s,baz=12,slow=6.2,SNR=4.9						
SONM	**Songino Array**	**54.75**	**306**	P	**P**	**18 14 05.0**	**+1.4**
SONM	**Songino Array**	**54.75**	**306**	P	**P**	**18 14 05.0**	**+1.4**
	1.3nm,0.6s,baz=68,slow=7.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**57.26**	**324**	P	**P**	**18 14 21.2**	**+0.1**
ZALV				pP	**pP**	**18 14 50.2**	**+1.1**
ZALV	**Zalesovo Beam**	**57.26**	**324**	P	**P**	**18 14 21.2**	**+0.1**
	0.4nm,0.4s,baz=29,slow=5.1,SNR=3.0						
ZALV				pP	**pP**	**18 14 50.2**	**+1.1**
	0.7nm,0.6s,baz=36,slow=7.7,SNR=3.1						
FINES	**FINESS Array B**	**58.65**	**1**	P	**P**	**18 14 30.3**	**-0.4**
	1.3nm,0.9s,baz=24,slow=11,SNR=3.4						
HFS	**Hagfors**	**59.50**	**8**	P	**P**	**18 14 35.6**	**-1.0**
HFS	**Hagfors**	**59.50**	**8**	P	**P**	**18 14 35.6**	**-1.0**
	1.3nm,0.9s,baz=5.7,slow=6.0,SNR=6.2						
KURK	**Kurchatov**	**61.90**	**326**	P	**P**	**18 14 53.5**	**+0.5**
BVAR	**Borovoye Array**	**61.92**	**332**	P	**P**	**18 14 51.9**	**-1.2**
BVAR	**Borovoye Array**	**61.92**	**332**	P	**P**	**18 14 51.9**	**-1.2**
	0.8nm,0.7s,baz=20,slow=4.9,SNR=5.3						
KURBB	**Kurchatov Arra**	**62.01**	**326**	P	**P**	**18 14 53.5**	**-0.2**
	0.4nm,0.5s,baz=26,slow=6.5,SNR=3.5						
EKA	**Eskdalemuir Ar**	**62.27**	**19**	P	**P**	**18 14 55.7**	**+0.3**
EKA	**Eskdalemuir Ar**	**62.27**	**19**	P	**P**	**18 14 55.7**	**+0.3**
	0.2nm,0.3s,baz=338,slow=5.4,SNR=4.2						
BOSA	**Boshof**	**148.35**	**3**	PKPbc	**PKPbc**	**18 24 18.3**	**-0.4**
BOSA	**Boshof**	**148.35**	**3**	PKPbc	**PKPbc**	**18 24 18.3**	**-0.4**
	4.4nm,1.1s,baz=288,slow=11,SNR=3.9						

*NNC **17** 18:11:55.0±5.7, 38.87N×76.70E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=52.2km s-min=36.0km az=116.0*

ISC 17 18:11:52.5±5.1, 38.7N±0.3×76.6E±0.2, h10km, n12, σ1 975/13, 4C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZA	**Kyzart**	**3.54**	**344**	P	**Pn**	**18 12 47.6**	**-0.2**
	SNR=47						
ULHL	**Ulahol**	**3.57**	**356**	P	**Pn**	**18 12 48.7**	**+0.6**
	SNR=38						
UCH	**Uchtor**	**3.87**	**337**	P	**Pb**	**18 12 58.4**	**-2.7**
	SNR=10						
AML	**Almayashu**	**4.09**	**328**	P	**Pn**	**18 12 57.4**	**+2.1**
	SNR=14						
KBK	**Karagaybulak**	**4.16**	**343**	P	**Pn**	**18 12 56.4**	**+0.3**
	SNR=6.0						
AAK	**Ala-Archa**	**4.25**	**339**	P	**Pn**	**18 12 58.4**	**+0.9**
	SNR=5.8	

KURBB	**Kurchatov Arra**	**11.08**	**9**	Lg	Lg	18 20 54.5	
	comp=E,0.1nm,0.3s,baz=202,slow=30,SNR=10						
KUR17	**Kurchatov Arra**	**11.08**	**9**	⇑P	Pn	18 17 53.2	+10
	comp=E,0.7nm,1.1s						
KURK	**Kurchatov**	**11.18**	**10**	⇑P	Pn	18 17 51.3	+6.9
	comp=E,9.6nm,1.1s						
KURK	**Kurchatov**	**11.18**	**10**	*i* P	Pn	18 17 48.2	+3.8
PYUN	**Piuthan**	**13.07**	**150**	*e*P	**Pn**	**18 18 07.7**	**-2.8**
DANN	**Dangsing**	**13.16**	**147**	*e*P	**Pn**	**18 18 11.0**	**-0.8**
	comp=E,20nm,0.4s						
VOSK	**Vostochnaya**	**13.40**	**348**	⇑P	**Pn**	**18 18 14.9**	**+0.2**
	comp=E,2.9nm,0.8s						
KOLN	**Koldanda**	**13.61**	**149**	*e*P	**Pn**	**18 18 16.4**	**-1.4**
	comp=E,9.4nm,0.4s						
BVA0	**Borovoye Array**	**13.79**	**346**	⇓P	**Pn**	**18 18 18.5**	**-1.5**
	comp=E,1.0nm,0.7s,baz=160,slow=9.2,SNR=8.0						
BVAR	**Borovoye Array**	**13.79**	**346**	P	**Pn**	**18 18 20.1**	**+0.1**
BVAR	**Borovoye Array**	**13.79**	**346**	Pn	**Pn**	**18 18 20.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=148,slow=14,SNR=7.4						
BVAR				Lg	Lg	18 22 17.7	
	comp=E,0.2nm,0.3s,baz=154,slow=27,SNR=7.7						
BVAR				LR	LR	18 23 48.4	
	comp=E,158nm,20.1s,baz=358,slow=38						
BRVK	**Borovoye**	**13.84**	**346**	*i* P	**Pn**	**18 18 22.1**	**+1.4**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ZRNK	**Zerenda**	**14.00**	**343**	⇓P	**Pn**	**18 18 22.3**	**-0.6**
	comp=Z,5.2nm,1.1s						
KKN	**Kakani**	**14.31**	**143**	*e*P	**Pn**	**18 18 27.5**	**0.0**
	comp=Z,31nm,0.5s						
DMN	**Daman**	**14.39**	**144**	*e*P	**Pn**	**18 18 28.5**	**-0.1**
	comp=Z,11nm,0.4s						
GUN	**Gumba**	**14.50**	**141**	*e*P	**Pn**	**18 18 29.6**	**-0.5**
PKIN	**Phulchoki**	**14.55**	**143**	*e*P	**Pn**	**18 18 30.5**	**-0.3**
PKI	**Pulchoki**	**14.56**	**143**	*e*P	**Pn**	**18 18 30.8**	**-0.2**
	comp=Z,14nm,0.5s						
AB31	**Akbulak array**	**14.71**	**316**	⇑P	**Pn**	**18 18 31.2**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=127,slow=12,SNR=2.7						
ZALV	**Zalesovo Beam**	**15.52**	**21**	*i* P	**P**	**18 18 45.5**	**-2.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**15.52**	**21**	Pn	**P**	**18 18 45.6**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=211,slow=10,SNR=11						
ZALV				Lg	Lg	18 23 21.0	
	comp=Z,0.1nm,0.3s,baz=220,slow=22,SNR=3.0						
RAMN	**Ramite**	**15.65**	**141**	*e*P	**Pn**	**18 18 43.6**	**-1.8**
	comp=Z,66nm,0.7s						
TAPN	**Taplejung**	**15.88**	**137**	*e*P	**Pn**	**18 18 47.0**	**-1.4**
NVS	**Novosibirsk**	**15.95**	**16**	*e*P	**P**	**18 18 54.3**	**+1.8**
NVS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,1.0nm,0.3s						
ODAN	**Odare**	**16.11**	**139**	*e*P	**Pn**	**18 18 50.2**	**-1.2**
	comp=E,45nm,0.6s						
AKTO	**Aktyubinsk**	**16.40**	**317**	⇓P	**Pn**	**18 18 54.4**	**-0.4**
	comp=E,0.5nm,0.8s						
AKTO	**Aktyubinsk**	**16.40**	**317**	P	**Pn**	**18 18 54.4**	**-0.4**
AKTO	**Aktyubinsk**	**16.40**	**317**	Pn	**Pn**	**18 18 54.4**	**-0.4**
	comp=E,0.2nm,0.3s,baz=113,slow=19,SNR=9.0						
ARU	**Arti**	**20.16**	**332**	*c i*P	Pn	18 19 40.4	-0.3
ARU						18 20 12.6	
ARU				S	S	18 23 17.2	-8.0
ARU				SS	**SnSn**	**18 23 43.5**	**+1.5**
ARU				pmax	pmax		
	comp=Z,13nm,2.5s						
ZAK	**Zakamensk**	**22.09**	**52**	*e*P	**P**	**18 20 03.4**	**+3.5**
SONM	**Songino Array**	**23.49**	**60**	P	**P**	**18 20 17.5**	**+2.9**
	comp=Z,0.8nm,0.7s,baz=266,slow=10,SNR=2.6						
GNI	**Garni**	**23.68**	**281**	P	**P**	**18 20 18.3**	**+1.7**
	comp=Z,2.6nm,0.5s,baz=346,slow=4.2,SNR=3.0						
BRTR	**Keskin Array B**	**32.13**	**284**	P	**P**	**18 21 32.6**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=91,slow=7.8,SNR=15						
FINES	**FINESS Array B**	**37.03**	**323**	P	**P**	**18 22 14.4**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=101,slow=9.9,SNR=7.1						
FINES				LR	LR	18 38 05.4	
	comp=Z,64nm,19.2s,baz=270,slow=37						
ARCES	**ARCESS Array B**	**39.69**	**335**	P	**P**	**18 22 37.0**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=112,slow=9.6,SNR=18						
ARCES				LR	LR	18 39 34.8	
	comp=Z,61nm,18.4s,baz=31,slow=37						
TIXI	**Tiksi**	**41.40**	**23**	*i* P	**P**	**18 22 51.4**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HABR	**Khabarovsk**	**42.55**	**58**	*e*P	**P**	**18 23 02.0**	**+1.7**
HABR						18 24 42.0	
HABR				*e*		18 24 52.2	
HABR				PPP	PPP	18 25 17.9	
HABR				*e*S	S	**18 29 17.3**	**-5.6**
HABR				*e*SS	**SS**	**18 32 31.7**	**-0.5**
HABR				*e*		18 32 53.1	
HABR				*e*SSS	SSS	18 33 11.8	
HABR				MLR	MLR		
	comp=Z,81nm,20.0s						
BRG	**Berggiesshubel**	**43.63**	**306**	*e*P	**P**	**18 23 09.2**	**+0.2**
	comp=Z,1.7nm,0.8s						
BRG	**Berggiesshubel**	**43.63**	**306**	*e*P	**P**	**18 23 09.2**	**+0.2**
BRG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NB2	**NORSAR Subarra**	**44.13**	**321**	P	**P**	**18 23 12.4**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=90,slow=8.6						
NOA	**NORSAR Array B**	**44.13**	**321**	P	**P**	**18 23 12.5**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=90,slow=8.0,SNR=5.3						
NOA				LR	LR	18 42 36.5	
	comp=Z,38nm,19.4s,baz=90,slow=37						
CLL	**Collm**	**44.14**	**307**	*e*P	**P**	**18 23 13.0**	**-0.1**
CLL	**Collm**	**44.14**	**307**	*e*P	**P**	**18 23 13.0**	**-0.1**
GERES	**GERESS Array B**	**44.18**	**303**	P	**P**	**18 23 13.7**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=72,slow=8.6,SNR=11						
HINF	**Hinteralfeld**	**48.86**	**303**	*e*P	**P**	**18 23 50.0**	**-0.3**
CABF	**La Chapelle**	**49.73**	**302**	*e*P	**P**	**18 23 56.4**	**-0.6**
FRF	**La Foret Royal**	**50.38**	**298**	*e*P	**P**	**18 24 01.6**	**-0.3**
	comp=Z,18nm,1.1s						
LMR	**La Mourre**	**50.56**	**298**	*e*P	**P**	**18 24 02.1**	**-1.1**
LOR	**Lormes**	**50.96**	**304**	*e*P	**P**	**18 24 05.8**	**-0.4**
SMF	**Signal de Mont**	**51.18**	**303**	*e*P	**P**	**18 24 07.5**	**-0.4**
VIVF	**Saint-Julien-l**	**51.25**	**300**	*e*P	**P**	**18 24 07.8**	**-0.7**
	comp=Z,2.3nm,0.6s						
AVF	**Avril sur Loir**	**51.44**	**303**	*e*P	**P**	**18 24 09.4**	**-0.4**
	comp=Z,10nm,0.8s						
MTLF	**Montolieu**	**53.46**	**299**	*e*P	**P**	**18 24 24.2**	**-0.6**
ESDC	**Sonseca Array**	**59.22**	**298**	P	**P**	**18 25 05.6**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=50,slow=6.9,SNR=11						
TORD	**Torodi Ar. Bea**	**59.45**	**270**	P	**P**	**18 26 12.3**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=47,slow=5.3,SNR=14						
INK	**Inuvik**	**70.08**	**11**	P	**P**	**18 26 17.1**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=11,slow=8.1,SNR=8.5						
ILAR	**Eielson Array**	**70.63**	**18**	P	**P**	**18 26 19.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=329,slow=5.4,SNR=5.2						
YKA	**Yellowknife Ar**	**77.79**	**5**	P	**P**	**18 27 01.8**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=346,slow=5.5,SNR=15						
SCHQ	**Schefferville**	**80.50**	**339**	LR	LR	19 05 43.1	
	comp=Z,113nm,18.3s,baz=65,slow=38						
WRA	**Warramunga Arr**	**80.70**	**125**	P	**P**	**18 27 19.1**	**+1.1**
	comp=Z,0.4nm,0.9s,baz=325,slow=4.8,SNR=3.1						
ASAR	**Alice Springs**	**83.20**	**128**	P	**P**	**18 27 32.2**	**+1.0**
	comp=Z,0.2nm,0.7s,baz=320,slow=4.6,SNR=3.6						

HLW ***17*** *18:34:14.7, 35°.21N×27°.58E, h33km±30km, Md0.0, Ml3.2*
ISK ***17*** *18:34:17.8, 35°.04N×27°.60E, h33km, MD3.5*
ATH ***17*** *18:34:17.2, 35°.17N×27°.51E, h61km±2km*
CSEM ***17*** *18:34:17.5±0.1, 35°.00N×27°.54E, h30km, MD3.5, Error ellipse: s-maj=4.4km s-min=3.6km az=20.0*
DDA ***17*** *18:34:19.3, 35°.16N×27°.65E, h21km, MD3.5*
ISC 17 18:34:17.5±4.4, 35°.00N±0°.04×27°.55E±0°.03, h35km±13km, n85, σ1°27/107, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.63**	**330**	*e*P	**Pn**	**18 34 30.2**	**+0.2**
KARP				*e*S	**Sn**	**18 34 38.0**	**-0.9**
KARP	**Karpathos**	**0.63**	**330**	*e*P	**Pn**	**18 34 30.2**	**+0.2**
KARP				*e*S	**Sn**	**18 34 38.0**	**-0.9**
ZKR	**Zakros**	**1.10**	**276**	*e*P	**Pn**	**18 34 36.9**	**+0.5**
ZKR				*e*S	**Sn**	**18 34 51.3**	**+0.9**
ZKR	**Zakros**	**1.10**	**276**	*e*P	**Pn**	**18 34 36.9**	**+0.5**
ZKR				*e*S	**Sn**	**18 34 51.3**	**+0.9**
ARG	**Arkhangelos**	**1.30**	**21**	*e*P	**Pn**	**18 34 38.2**	**-0.9**
ARG				*e*S	**Sn**	**18 34 54.1**	**-1.1**
ARG	**Arkhangelos**	**1.30**	**21**	*e*P	**Pn**	**18 34 38.2**	**-0.9**
ARG				*e*S	**Sn**	**18 34 54.1**	**-1.1**
NPS	**Neapolis**	**1.61**	**280**	*e*P	**Pn**	**18 34 43.8**	**+0.4**
NPS				*e*S	**Sn**	**18 35 03.1**	**+0.1**
NPS	**Neapolis**	**1.61**	**280**	*e*P	**Pn**	**18 34 43.8**	**+0.4**
NPS				*e*S	**Sn**	**18 35 03.1**	**+0.1**
LAST	**Lasithi**	**1.71**	**276**	*e*P	**Pn**	**18 34 46.1**	**+1.3**
LAST				*e*S	**Sn**	**18 35 05.9**	**+0.5**
LAST	**Lasithi**	**1.71**	**276**	*e*P	**Pn**	**18 34 46.1**	**+1.3**
LAST				*e*S	**Sn**	**18 35 05.9**	**+0.5**
DALY	**Dalyan (Mu¨la**	**2.02**	**26**	*e*PN	**Pn**	**18 34 50.4**	**+1.4**
DALY				*e*SN	**Sn**	**18 35 12.8**	**-0.2**
DALY	**Dalyan (Mu¨la**	**2.02**	**26**	*e*Pn	**Pn**	**18 34 50.4**	**+1.4**
DALY				*e*Sn	**Sn**	**18 35 12.8**	**-0.2**
TURN	**Turunc**	**2.05**	**24**	*i* P	**Pn**	**18 34 48.2**	**-1.3**
TURN				*i* S	**Sn**	**18 35 08.7**	**-5.1**
TURN	**Turunc**	**2.05**	**24**	*i* P	**Pn**	**18 34 48.2**	**-1.3**
BODT	**Bodrum**	**2.06**	**355**	*e*PN	**Pn**	**18 34 49.7**	**0.0**
BODT	**Bodrum**	**2.06**	**355**	*e*Pn	**Pn**	**18 34 49.7**	**0.0**
AKAS	**Kas**	**2.08**	**53**	*i* P	**Pn**	**18 34 51.7**	**+1.8**
AKAS				*i* S	**Sn**	**18 35 16.1**	**+1.5**
AKAS	**Kas**	**2.08**	**53**	*i* P	**Pn**	**18 34 51.7**	**+1.8**
AKAS				*i* S	**Sn**	**18 35 16.1**	**+1.5**
SANT	**Santorini**	**2.18**	**309**	*e*P	**Pn**	**18 34 50.7**	**-0.6**
SANT	**Santorini**	**2.18**	**309**	*e*P	**Pn**	**18 34 50.7**	**-0.6**
IDI	**Anoyia**	**2.20**	**278**	*e*P	**Pn**	**18 34 52.5**	**+0.9**
IDI	**Anoyia**	**2.20**	**278**	*e*P	**Pn**	**18 34 52.5**	**+0.9**
YER	**Yerkesik**	**2.21**	**15**	*e*PN	**Pn**	**18 34 53.0**	**+1.3**
YER				*e*SN	**Sn**	**18 35 17.8**	**0.0**
YER	**Yerkesik**	**2.21**	**15**	*e*Pn	**Pn**	**18 34 53.0**	**+1.3**
YER				*e*Sn	**Sn**	**18 35 17.8**	**0.0**
MLSB	**Milas**	**2.29**	**4**	*e*PN	**Pn**	**18 34 54.7**	**+1.9**
MLSB	**Milas**	**2.29**	**4**	*e*Pn	**Pn**	**18 34 54.7**	**+1.9**
ELL	**Elmali**	**2.59**	**47**	*e*PN	**Pn**	**18 34 58.2**	**+1.3**
ELL	**Elmali**	**2.59**	**47**	*e*Pn	**Pn**	**18 34 58.3**	**+1.3**
APE	**Apeiranthos**	**2.63**	**322**	*e*P	**Pn**	**18 34 56.4**	**-1.1**
APE	**Apeiranthos**	**2.63**	**322**	*e*P	**Pn**	**18 34 56.4**	**-1.1**
AYDN	**Tasoluk**	**2.67**	**6**	*i* P	**Pn**	**18 34 58.4**	**+0.5**
AYDN				*i* S	**Sn**	**18 35 26.8**	**-2.3**
AYDN	**Tasoluk**	**2.67**	**6**	*i* P	**Pn**	**18 34 58.4**	**+0.5**
AYDN				*i* S	**Sn**	**18 35 26.8**	**-2.3**
GOLH	**Golhisar**	**2.76**	**36**	*i* P	**Pn**	**18 35 01.5**	**+2.2**
GOLH				*i* S	**Sn**	**18 35 33.7**	**+2.2**
GOLH	**Golhisar**	**2.76**	**36**	*i* P	**Pn**	**18 35 01.5**	**+2.2**
GOLH				*i* S	**Sn**	**18 35 33.7**	**+2.2**
VAM	**Vamos**	**2.77**	**279**	*e*P	**Pn**	**18 35 00.9**	**+1.5**
VAM	**Vamos**	**2.77**	**279**	*e*P	**Pn**	**18 35 00.9**	**+1.5**
GVD	**Gavdhos**	**2.85**	**268**	*e*P	**Pn**	**18 35 01.5**	**+1.0**
GVD	**Gavdhos**	**2.85**	**268**	*e*P	**Pn**	**18 35 01.5**	**+1.0**
KARN	**Karanos**	**3.00**	**279**	*e*P	**Pn**	**18 35 04.1**	**+1.5**
KARN	**Karanos**	**3.00**	**279**	*e*P	**Pn**	**18 35 04.1**	**+1.5**
ANKY	**Antikythira Is**	**3.58**	**285**	*e*P	**Pn**	**18 35 10.8**	**+0.4**
ANKY	**Antikythira Is**	**3.58**	**285**	*e*P	**Pn**	**18 35 10.8**	**+0.4**
CHOS	**Chios island**	**3.58**	**341**	*e*P	**Pn**	**18 35 10.0**	**-0.6**
CHOS	**Chios island**	**3.58**	**341**	*e*P	**Pn**	**18 35 10.0**	**-0.6**
KYTH	**Kithira**	**3.89**	**290**	*e*P	**Pn**	**18 35 14.5**	**-0.3**
KYTH	**Kithira**	**3.89**	**290**	*e*P	**Pn**	**18 35 14.5**	**-0.3**
HMAT	**Matruh**	**3.92**	**186**	AMP		18 35 00.0	
	comp=E,30μm,0.1s,logA/T=5.3,baz=186						
HMAT	**Matruh**	**3.92**	**186**	P	**Pn**	**18 35 15.9**	**+0.8**
SLUM		**4.01**	**210**	P	**Pn**	**18 35 16.4**	**0.0**
	baz=209						
SLUM		**4.01**	**210**	P	**Pn**	**18 35 16.4**	**0.0**
GAZI	**Gazipasa**	**4.07**	**71**	*i* P	**Pn**	**18 35 18.3**	**+1.0**
GAZI				*i* S	**Sn**	**18 36 00.2**	**-3.5**
GAZI	**Gazipasa**	**4.07**	**71**	*i* P	**Pn**	**18 35 18.3**	**+1.0**
VLI	**Veliai**	**4.12**	**296**	*e*P	**Pn**	**18 35 17.2**	**-0.7**
VLI	**Veliai**	**4.12**	**296**	*e*P	**Pn**	**18 35 17.2**	**-0.7**
DID	**Didima**	**4.29**	**307**	*e*P	**Pn**	**18 35 19.9**	**-0.4**
DID	**Didima**	**4.29**	**307**	*e*P	**Pn**	**18 35 19.9**	**-0.4**
LEF	**Lefka**	**4.38**	**87**	*e*PN	**Pn**	**18 35 22.0**	**+0.5**
LEF	**Lefka**	**4.38**	**87**	*e*Pn	**Pn**	**18 35 22.0**	**+0.5**
DYR	**Agios Nikonas**	**4.59**	**294**	*e*P	**Pn**	**18 35 24.9**	**+0.6**
DYR	**Agios Nikonas**	**4.59**	**294**	*e*P	**Pn**	**18 35 24.9**	**+0.6**
LTK	**Loutraki**	**4.77**	**311**	*e*P	**Pn**	**18 35 27.2**	**+0.4**
LTK	**Loutraki**	**4.77**	**311**	*e*P	**Pn**	**18 35 27.2**	**+0.4**
LFK	**Lefkose**	**4.91**	**85**	*e*PN	**Pn**	**18 35 31.1**	**+2.3**
LFK	**Lefkose**	**4.91**	**85**	*e*Pn	**Pn**	**18 35 31.1**	**+2.3**
GUR	**Goura**	**5.12**	**306**	*e*P	**Pn**	**18 35 31.5**	**-0.2**
GUR	**Goura**	**5.12**	**306**	*e*P	**Pn**	**18 35 31.5**	**-0.2**
KLV	**Kalavryta, Ach**	**5.30**	**306**	*e*P	**Pn**	**18 35 34.0**	**-0.2**
KLV	**Kalavryta, Ach**	**5.30**	**306**	*e*P	**Pn**	**18 35 34.0**	**-0.2**
KALE	**Kalithea**	**5.51**	**309**	*e*P	**Pn**	**18 35 38.1**	**+1.1**
KALE	**Kalithea**	**5.51**	**309**	*e*P	**Pn**	**18 35 38.1**	**+1.1**
AGG	**Agios Georgios**	**5.79**	**315**	*e*P	**Pn**	**18 35 41.8**	**+0.9**
KOT	**Kottamia**	**6.22**	**143**	P	**Pn**	**18 35 47.1**	**+0.4**
	baz=144						
KOT				S	**Sn**	**18 36 53.4**	**-3.3**
	baz=144						
KOT	**Kottamia**	**6.22**	**143**	P	**Pn**	**18 35 47.2**	**+0.4**
HSAF	**As Saff**	**6.35**	**147**	P	**Pn**	**18 35 49.1**	**+0.5**
	baz=147						
HSAF	**As Saff**	**6.35**	**147**	P	**Pn**	**18 35 49.1**	**+0.5**
AMAG	**Maghara**	**6.45**	**131**	P	**Pn**	**18 35 48.9**	**-1.1**
	baz=132						
AMAG	**Maghara**	**6.45**	**131**	P	**Pn**	**18 35 48.8**	**-1.1**
GLL	**Jalalah**	**6.45**	**146**	P	**Pn**	**18 35 50.3**	**+0.3**
	baz=147						
GLL	**Jalalah**	**6.45**	**146**	P	**Pn**	**18 35 50.3**	**+0.3**
RSH		**6.57**	**126**	P	**Pn**	**18 35 51.1**	**-0.4**
	baz=127						
RSH		**6.57**	**126**	P	**Pn**	**18 35 51.1**	**-0.4**
HNKL	**Nakhl**	**7.42**	**131**	P	**Pn**	**18 36 03.0**	**-0.4**
	baz=132						
HNKL	**Nakhl**	**7.42**	**131**	P	**Pn**	**18 36 02.9**	**-0.4**
HFRF	**Wahat Farafira**	**7.86**	**175**	P	**Pn**	**18 36 10.2**	**+1.0**
	baz=175						
HFRF	**Wahat Farafira**	**7.86**	**175**	P	**Pn**	**18 36 10.2**	**+1.0**

CSEM ***17*** *18:35:39.3±2.3, 35°.68N×31°.85E, h10km, Mw2.7, Error ellipse: s-maj=51.9km s-min=22.6km az=98.0*
NIC 17 18:35:47.2±0.1, 35°.02N×31°.93E, h25km, ML2.4, MW2.7, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKMC	**Akamas**	**0.33**	**88**	P	Pb	18 35 54.5	-0.2
AKMC	**Akamas**	**0.33**	**88**	P	Pb	18 35 54.5	-0.2
PPCY	**Paphos**	**0.37**	**111**	P	Pb	18 35 55.1	-0.1
PPCY	**Paphos**	**0.37**	**111**	P	Pb	18 35 55.1	-0.1
ALFC	**Alevga**	**0.57**	**76**	P	Pb	18 35 57.9	-0.8
	10nm,0.1s						
ALFC				S	Sb	18 36 06.2	-0.3
CSS	**Prodhromos**	**1.16**	**92**	P	Pn	18 36 06.3	-1.5
	0.5nm,0.3s						
CSS				S	Sn	18 36 20.8	-2.0
CSS	**Prodhromos**	**1.16**	**92**	P	Pn	18 36 06.3	-1.5
	0.5nm,0.3s						
CSS				S	Sn	18 36 20.8	-2.0

ISK ***17*** *18:41:43.7, 37°.44N×36°.12E, h25km, MD2.4*
ISCJB ***17*** *18:41:45.0±1.2, 37°.57N±0°.07×36°.08E±0°.05, h21km±13km, Error ellipse: s-maj=11.4km s-min=7.1km az=172.1*
CSEM ***17*** *18:41:45.3±0.5, 37°.49N×36°.11E, h8km, MD2.4, Error ellipse: s-maj=17.4km s-min=9.4km az=177.0*
DDA ***17*** *18:41:45.2, 37°.51N×36°.09E, h7km, MD2.9*
ISC 17 18:41:45.0±1.0, 37°.51N±0°.07×36°.07E±0°.04, h12km±8km, n12, σ1°17/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.19**	**262**	*e*PG	**Pb**	**18 41 50.6**	**+0.1**
KOZT				*e*SG	**Sb**	**18 41 54.8**	**+2.7**
KOZT	**Kozan**	**0.19**	**262**	*e*Pg	**Pb**	**18 41 50.6**	**+0.1**
KOZT				*e*Sg	**Sb**	**18 41 54.8**	**+2.7**
ANDN	**Andirin**	**0.23**	**72**	*i* P	**Pg**	**18 41 49.7**	**-0.2**
ANDN				*i* S	**Sg**	**18 41 53.9**	**+0.6**
ANDN	**Andirin**	**0.23**	**72**	*i* P	**Pg**	**18 41 49.7**	**-0.2**
ANDN				*i* S	**Sg**	**18 41 53.9**	**+0.6**
CEYT	**Ceyhan**	**0.56**	**207**	*e*PG	**Pg**	**18 41 54.8**	**-1.0**
CEYT	**Ceyhan**	**0.56**	**207**	*e*Pg	**Pg**	**18 41 54.8**	**-1.0**
AYKD	**Aykdinkavak**	**0.59**	**99**	*i* P	**Pg**	**18 41 56.4**	**-0.1**
AYKD				*i* S	**Sg**	**18 42 04.4**	**0.0**
KMRS	**Kahramanmaras**	**0.66**	**90**	*e*PG	**Pg**	**18 41 56.9**	**-0.9**
KMRS	**Kahramanmaras**	**0.66**	**90**	*e*Pg	**Pg**	**18 41 56.9**	**-0.9**
SARI	**SarD1z-Kayseri**	**0.94**	**17**	*e*PG	**Pb**	**18 42 02.4**	**-1.0**
KUZU	**Kuzuini**	**1.09**	**132**	*i* P	**Pn**	**18 42 06.4**	**+0.3**
KUZU				*i* S	**Sn**	**18 42 21.5**	**+0.3**
KUZU	**Kuzuini**	**1.09**	**132**	*i* P	**Pn**	**18 42 06.4**	**+0.3**
KUZU				*i* S	**Sn**	**18 42 21.5**	**+0.3**

ISCJB ***17*** *18:50:37.8±0.4, 39°.12N±0°.03×29°.08E±0°.03, h4km±5km, Error ellipse: s-maj=4.6km s-min=3.4km az=168.0*
ISK ***17*** *18:50:37.8, 39°.13N×29°.10E, h8km, MD3.0*
DDA ***17*** *18:50:38.7, 39°.09N×29°.11E, h7km, MD3.1*
CSEM ***17*** *18:50:38.1±0.1, 39°.12N×29°.09E, h5km, MD3.1, Error ellipse: s-maj=2.1km s-min=2.0km az=159.0*
ISC 17 18:50:38.2±0.9, 39°.12N±0°.02×29°.07E±0°.02, h10km±8km, n56, σ0°41/74, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.29**	**254**	*i* P	**Pg**	**18 50 44.0**	**0.0**
DEMI				*i* S	**Sg**	**18 50 47.8**	**-0.1**
DEMI	**Demirci**	**0.29**	**254**	*i* P	**Pg**	**18 50 44.0**	**0.0**
DEMI				*i* S	**Sg**	**18 50 47.8**	**-0.1**
GDZ	**Gediz**	**0.32**	**96**	*i* P	**Pg**	**18 50 44.5**	**-0.1**
GDZ				*i* S	**Sg**	**18 50 49.6**	**+0.7**
GDZ	**Gediz**	**0.32**	**96**	*i* P	**Pg**	**18 50 44.5**	**-0.1**
GDZ				*i* S	**Sg**	**18 50 49.6**	**+0.7**
TVSB	**Tavsanli**	**0.45**	**42**	PG	**Pg**	**18 50 46.5**	**-0.5**
TVSB				SG	**Sg**	**18 50 52.4**	**-0.5**
TVSB	**Tavsanli**	**0.45**	**42**	*i* Pg	**Pg**	**18 50 46.5**	**-0.5**
TVSB				*i* Sg	**Sg**	**18 50 52.4**	**-0.5**
DST	**Dursunbey**	**0.60**	**324**	*e*PG	**Pg**	**18 50 50.1**	**+0.3**
DST	**Dursunbey**	**0.60**	**324**	*e*Pg	**Pg**	**18 50 50.1**	**+0.3**
DURS	**Dursunbey**	**0.67**	**316**	*i* P	**Pg**	**18 50 51.0**	**-0.1**
DURS				*i* S	**Sg**	**18 51 00.4**	**+0.5**
DURS	**Dursunbey**	**0.67**	**316**	*i* P	**Pg**	**18 50 51.0**	**-0.1**
DURS				*i* S	**Sg**	**18 51 00.4**	**+0.5**
KULA	**Kula-Manisa**	**0.69**	**208**	*e*PG	**Pg**	**18 50 50.9**	**-0.6**
KULA	**Kula-Manisa**	**0.69**	**208**	*e*Pg	**Pg**	**18 50 50.9**	**-0.6**
MANT	**Manisa**	**0.75**	**213**	*i* P	**Pg**	**18 50 52.3**	**-0.3**
MANT				*i* S	**Sg**	**18 51 02.3**	**-0.1**
MANT	**Manisa**	**0.75**	**213**	*i* P	**Pg**	**18 50 52.3**	**-0.3**
MANT				*i* S	**Sg**	**18 51 02.3**	**-0.1**
ALT	**Altintas**	**0.81**	**94**	*e*PG	**Pb**	**18 50 54.0**	**-0.4**
ALT				*e*SG	**Sg**	**18 51 04.6**	**+0.2**
ALT	**Altintas**	**0.81**	**94**	*e*Pg	**Pb**	**18 50 54.0**	**-0.4**
ALT				*e*Sg	**Sg**	**18 51 04.6**	**+0.2**
KHAL	**Karahalli**	**0.82**	**156**	*i* P	**Pg**	**18 50 53.9**	**0.0**
KHAL				*i* S	**Sg**	**18 51 04.8**	**+0.2**
KHAL	**Karahalli**	**0.82**	**156**	*i* P	**Pg**	**18 50 53.9**	**0.0**
KHAL				*i* S	**Sg**	**18 51 04.8**	**+0.2**
KHL	**Karahalli**	**0.87**	**156**	*e*PG	**Pg**	**18 50 55.0**	**+0.1**
KHL	**Karahalli**	**0.87**	**156**	*e*Pg	**Pg**	**18 50 55.0**	**+0.1**
AKHS	**Akhisar**	**1.01**	**257**	*i* P	**Pb**	**18 50 57.9**	**+0.2**
AKHS				*i* S	**Sn**	**18 51 12.7**	**0.0**
AKHS	**Akhisar**	**1.01**	**257**	*i* P	**Pb**	**18 50 57.9**	**+0.2**
AKHS				*i* S	**Sn**	**18 51 12.7**	**0.0**
AKS	**Akhisar**	**1.01**	**257**	*e*PG	**Pn**	**18 50 58.6**	**+0.2**
AKS	**Akhisar**	**1.01**	**257**	*e*Pg	**Pn**	**18 50 58.6**	**+0.2**
CAVI	**Cavuskoy**	**1.23**	**29**	*e*PN	**Pn**	**18 51 01.8**	**+0.3**
CAVI	**Cavuskoy**	**1.23**	**29**	*e*Pn	**Pn**	**18 51 01.8**	**+0.3**
IZI	**Iznik**	**1.25**	**14**	*e*PN	**Pg**	**18 51 02.5**	**+0.3**
IZI	**Iznik**	**1.25**	**14**	*e*Pn	**Pg**	**18 51 02.5**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.25**	**

ISC 17 19:14:56.6±0.9, 39°12N±0.03×29°07E±0.03, h13km±11km, n28, σ0923/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	**0.32**	**95**	*i* P	**Pg**	**19 15 03.2**	**+0.1**
GDZ				*i* S	**Sg**	**19 15 07.9**	**+0.4**
GDZ	**Gediz**	**0.32**	**95**	*i* P	**Pg**	**19 15 03.2**	**+0.1**
GDZ				*i* S	**Sg**	**19 15 07.9**	**+0.4**
TVSB	**Tavsanli**	**0.45**	**42**	*e*PG	**Pg**	**19 15 05.2**	**-0.3**
TVSB				*e*SG	**Sg**	**19 15 11.2**	**-0.4**
TVSB	**Tavsanli**	**0.45**	**42**	*e*Pg	**Pg**	**19 15 05.2**	**-0.3**
TVSB				*e*Sg	**Sg**	**19 15 11.2**	**-0.4**
DURS	**Dursunbey**	**0.67**	**316**	*i* P	**Pb**	**19 15 10.3**	**+0.1**
DURS				*i* S	**Sg**	**19 15 18.8**	**+0.2**
DURS	**Dursunbey**	**0.67**	**316**	*i* P	**Pb**	**19 15 10.3**	**+0.1**
DURS				*i* S	**Sg**	**19 15 18.8**	**+0.2**
KULA	**Kula-Manisa**	**0.68**	**208**	*e*PG	**Pg**	**19 15 09.9**	**+0.1**
KULA				*e*SG	**Sg**	**19 15 18.7**	**-0.1**
KULA	**Kula-Manisa**	**0.68**	**208**	*e*Pg	**Pg**	**19 15 09.9**	**+0.1**
KULA				*e*Sg	**Sg**	**19 15 18.7**	**-0.1**
MANT	**Manisa**	**0.74**	**213**	*i* P	**Pg**	**19 15 11.0**	**0.0**
MANT				*i* S	**Sg**	**19 15 20.6**	**-0.2**
MANT	**Manisa**	**0.74**	**213**	*i* P	**Pg**	**19 15 11.0**	**0.0**
MANT				*i* S	**Sg**	**19 15 20.6**	**-0.2**
ALT	**Altintas**	**0.81**	**94**	*e*PG	**Pg**	**19 15 12.2**	**0.0**
ALT	**Altintas**	**0.81**	**94**	*e*Pg	**Pg**	**19 15 12.3**	**0.0**
KHAL	**Karahalli**	**0.81**	**156**	*i* P	**Pg**	**19 15 12.5**	**+0.2**
KHAL				*i* S	**Sg**	**19 15 22.7**	**-0.3**
KHAL	**Karahalli**	**0.81**	**156**	*i* P	**Pg**	**19 15 12.5**	**+0.2**
KHAL				*i* S	**Sg**	**19 15 22.7**	**-0.3**
KHL	**Karahalli**	**0.87**	**156**	*e*PG	**Pg**	**19 15 12.9**	**-0.4**
KHL	**Karahalli**	**0.87**	**156**	*e*Pg	**Pg**	**19 15 12.9**	**-0.4**
IZI	**Iznik**	**1.26**	**14**	*e*PN	**Pn**	**19 15 19.9**	**-0.1**
IZI	**Iznik**	**1.26**	**14**	*e*Pn	**Pn**	**19 15 19.9**	**-0.1**
KCTX	**Karacabey (Bur**	**1.27**	**335**	*e*PN	**Pb**	**19 15 20.5**	**0.0**
KCTX	**Karacabey (Bsi**	**1.27**	**335**	*e*Pn	**Pb**	**19 15 20.5**	**0.0**
GONE	**Gonen-Balikesi**	**1.42**	**311**	*e*PN	**Pb**	**19 15 22.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.42**	**311**	*e*Pn	**Pb**	**19 15 22.8**	**-0.1**
ARMT	**Armutlu**	**1.46**	**354**	*e*PN	**Pn**	**19 15 22.7**	**0.0**
ARMT	**Armutlu**	**1.46**	**354**	*e*Pn	**Pn**	**19 15 22.7**	**0.0**
YLV	**Yalova**	**1.47**	**9**	*e*PN	**Pn**	**19 15 23.2**	**+0.3**
YLV	**Yalova**	**1.47**	**9**	*e*Pn	**Pn**	**19 15 23.2**	**+0.3**
GULT	**Gulveren**	**1.72**	**40**	*e*PN	**Pn**	**19 15 26.6**	**+0.3**
GULT	**Gulveren**	**1.72**	**40**	*e*Pn	**Pn**	**19 15 26.6**	**+0.3**

KISR ***17*** *19:19:58.2±0.4, 25°.21N×37°.61E, h2km, ML4.5*
NSSC ***17*** *19:20:05.6±2.7, 25°.26N×36°.14E, h0km±725km, ML3.4*
ISCJB ***17*** *19:20:06.2±0.5, 25°.34N±0°.05×37°.68E±0°.04, h10km, mb3.8/18, Error ellipse: s-maj=6.8km s-min=5.3km az=167.4*
CSEM ***17*** *19:20:06.5±0.2, 25°.26N×37°.64E, h2km, ML2.9, Error ellipse: s-maj=7.1km s-min=5.4km az=174.0*
IDC ***17*** *19:20:07.5±1.1, 25°.30N×37°.63E, h0km, mb3.8/13, mb1 3.9/18, mb1mx3.8/32, mbtmp3.8/18, ML3.5/3, Error ellipse: s-maj=19.8km s-min=17.3km az=171.0*
NEIC ***17*** *19:20:08.9±0.6, 25°.38N×37°.75E, h10km, mb4.0/5, Error ellipse: s-maj=10.8km s-min=8.5km az=211.0*

ISC 17 19:20:08.8±0.6, 25°.44N±0°.05×37°.56E±0°.06, h10km, n117, σ1971/123, mb3.9/18, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMRS	**Mersa Alam**	**2.50**	**261**	P	**Pn**	**19 20 48.2**	**-1.3**
HAGS	**Hagol**	**2.56**	**246**	P	**Pn**	**19 20 48.7**	**-1.7**
HADB		**2.65**	**269**	P	**Pn**	**19 20 50.8**	**-0.9**
HQSR		**2.88**	**277**	P	**Pn**	**19 20 54.7**	**0.0**
HSFG		**3.45**	**290**	P	**Pn**	**19 21 02.6**	**0.0**
HEDF	**Idfu**	**3.97**	**266**	P	**Pn**	**19 21 09.4**	**-0.4**
HHRG	**Al Ghardaqah**	**3.99**	**297**	P	**Pn**	**19 21 10.1**	**+0.1**
HDHB	**Dhahab**	**4.18**	**322**	P	**Pn**	**19 21 13.2**	**+0.5**
HKAT	**Jabal Katrina**	**4.42**	**315**	P	**Pn**	**19 21 16.2**	**+0.1**
EIL	**Elat**	**4.80**	**332**	Pn	**Pn**	**19 21 22.6**	**+1.4**
EIL				Pg	**Pg**	**19 21 38.4**	**-2.4**
EIL				Sn	**Sb**	**19 22 28.2**	**-2.7**
EIL				Lg	Lg	19 22 40.1	
EIL	**Elat**	**4.80**	**332**	Pn	**Pn**	**19 21 22.6**	**+1.4**
	0.9nm,0.3s,baz=102,slow=7.5,SNR=9.8						
EIL				Pg	**Pg**	**19 21 38.4**	**-2.4**
	9.3nm,0.3s,baz=147,slow=10,SNR=20						
EIL				Sn	**Sb**	**19 22 28.2**	**-2.7**
	12nm,0.3s,baz=114,slow=10,SNR=4.1						
EIL				Lg	Lg	19 22 40.1	
	26nm,0.3s,baz=16,slow=15,SNR=7.0						
EIL	**Elat**	**4.80**	**332**	Pn	**Pn**	**19 21 22.6**	**+1.4**
EIL	**Elat**	**4.80**	**332**	Pg	**Pg**	**19 21 38.4**	**-2.4**
HRFI	**Mount Harif**	**5.09**	**335**	P	**Pn**	**19 21 27.3**	**+2.1**
HRFI	**Mount Harif**	**5.09**	**335**	P	**Pn**	**19 21 27.3**	**+2.1**
GRB	**Gharib**	**5.11**	**305**	P	**Pn**	**19 21 25.0**	**-0.4**
KRMI	**Paran Flat**	**5.29**	**332**	Pn	**Pn**	**19 21 29.9**	**+2.0**
PRNI	**Paran**	**5.38**	**336**	Pn	**Pn**	**19 21 31.1**	**+1.9**
HNKL	**Nakhl**	**5.48**	**325**	P	**Pn**	**19 21 30.6**	**+0.1**
KZIT	**Kziot**	**6.11**	**334**	P	**Pn**	**19 21 41.6**	**+2.3**
KZIT	**Kziot**	**6.11**	**334**	Pn	**Pn**	**19 21 41.5**	**+2.3**
RTMI	**Retamim**	**6.13**	**336**	Pn	**Pn**	**19 21 40.9**	**+1.4**
ASF	**Jabal al Asfar**	**6.73**	**355**	Pn	**Pn**	**19 21 48.5**	**+0.7**
ASF				Pg	Pg	19 22 13.9	-3.8
ASF				Lg	Lg	19 23 42.0	
ASF	**Jabal al Asfar**	**6.73**	**355**	Pn	**Pn**	**19 21 48.5**	**+0.7**
	0.9nm,0.3s,baz=41,slow=16,SNR=7.5						
ASF				Pg	Pg	19 22 13.9	-3.8
	3.5nm,0.3s,baz=44,slow=9.5,SNR=18						
ASF				Lg	Lg	19 23 42.0	
	6.8nm,0.3s,baz=24,slow=23,SNR=11						
HMDT	**Nahal Hemdat**	**7.01**	**346**	Pn	**Pn**	**19 21 54.7**	**+3.1**
SLTI	**Sal'it**	**7.12**	**343**	Pn	**Pn**	**19 21 56.0**	**+2.9**
MMLI	**Mount Malkishu**	**7.21**	**345**	Pn	**Pn**	**19 21 56.2**	**+1.8**
SALA	**Sala**	**7.28**	**355**	*e*P	**Pn**	**19 21 56.5**	**+1.1**
SALA				*e*S	**Sn**	**19 23 17.2**	**-1.0**
SALA	**Sala**	**7.28**	**355**	*e*P	**Pn**	**19 21 56.5**	**+1.1**
	SNR=45						
TCHB	**Talchebab**	**7.33**	**349**	AML	AML	19 22 33.9	
	comp=E,43nm,0.6s						
TCHB				AML	AML	19 22 45.4	
	comp=N,56nm,0.5s						
ZALF	**Zalf**	**7.45**	**359**	*e*P	**Pn**	**19 21 58.4**	**+0.7**
ZALF				*e*S	**Sn**	**19 23 20.8**	**-1.5**
ZALF	**Zalf**	**7.45**	**359**	*e*P	**Pn**	**19 21 58.4**	**+0.7**
	SNR=45						
RAYN	**Ar Rayn**	**7.49**	**103**	P	**Pn**	**19 21 55.2**	**-3.0**
RAYN	**Ar Rayn**	**7.49**	**103**	P	**Pn**	**19 21 55.2**	**-3.0**
OFRI	**'Ofer**	**7.50**	**343**	Pn	**Pn**	**19 22 00.9**	**+2.6**
MMAI	**Mount Meron Ar**	**7.78**	**347**	Pn	**Pn**	**19 22 03.6**	**+1.5**
MMAI				Pg	Pg	19 22 33.8	-3.9
MMAI				Lg	Lg	19 24 16.1	
MMAI	**Mount Meron Ar**	**7.78**	**347**	Pn	**Pn**	**19 22 03.6**	**+1.5**
	comp=N,6.0nm,0.3s,baz=146,slow=15,SNR=23						
MMAI				Pg	Pg	19 22 33.8	-3.9
	comp=N,4.1nm,0.3s,baz=144,slow=16,SNR=4.6						
MMAI				Lg	Lg	19 24 16.1	
	comp=N,8.8nm,0.3s,baz=162,slow=29,SNR=3.8						
MMAI	**Mount Meron Ar**	**7.78**	**347**	Pn	**Pn**	**19 22 03.6**	**+1.5**
MMA1	**Mount Meron ar**	**7.78**	**347**	Pn	**Pn**	**19 22 03.5**	**+1.4**
KSDI	**Kefar Szold**	**7.90**	**348**	Pn	**Pn**	**19 22 05.6**	**+1.9**
TOTH	**TOTAH**	**7.95**	**353**	*e*P	**Pn**	**19 22 06.5**	**+2.0**
TOTH				*e*S	**Sn**	**19 23 33.1**	**-1.5**
TOTH	**TOTAH**	**7.95**	**353**	*e*P	**Pn**	**19 22 06.5**	**+2.0**
	SNR=45						
BRBR	**Barbar**	**8.06**	**350**	*e*P	**Pn**	**19 22 06.2**	**0.0**
BRBR				*e*S	**Sn**	**19 23 33.7**	**-3.8**
BRBR	**Barbar**	**8.06**	**350**	*e*P	**Pn**	**19 22 06.2**	**0.0**
	SNR=45						
HAWK	**Haweek**	**9.10**	**354**	*e*P	**Pn**	**19 22 22.2**	**+1.9**
HAWK				*e*S	**Sn**	**19 24 00.2**	**-2.7**
HAWK	**Haweek**	**9.10**	**354**	*e*P	**Pn**	**19 22 22.2**	**+1.9**
	SNR=45						
NAY	**Al-Naaiem**	**9.41**	**64**	*e*P	**Pn**	**19 22 22.0**	**-2.5**
NAY				AML	AML	19 24 52.7	
	comp=Z,16nm,0.7s						
NAY	**Al-Naaiem**	**9.41**	**64**	*e*P	**Pn**	**19 22 22.0**	**-2.5**
RDF	**Al-Radifah**	**9.55**	**66**	*e*P	**Pn**	**19 22 24.3**	**-2.1**
RDF				AML	AML	19 25 02.2	
	comp=Z,20nm,0.5s						
RDF	**Al-Radifah**	**9.55**	**66**	*e*P	**Pn**	**19 22 24.3**	**-2.1**
QRN	**Al-Qurain**	**9.80**	**68**	*e*P	**Pn**	**19 22 27.6**	**-2.3**
BTCH	**Batrach**	**10.60**	**355**	*e*P	**Pn**	**19 22 42.5**	**+1.6**
BTCH				*e*S	**Sn**	**19 24 35.3**	**-4.4**
BTCH	**Batrach**	**10.60**	**355**	*e*P	**Pn**	**19 22 42.5**	**+1.6**
	SNR=45						
SFNV	**Sufian**	**11.16**	**11**	*e*P	Pn	19 22 55.8	+7.3
BR131	**Keskin Array S**	**14.62**	**348**	*e*Pn	**Pn**	**19 23 35.6**	**-0.1**
BR131	**Keskin Array S**	**14.62**	**348**	*e*Pn	**Pn**	**19 23 35.7**	**-0.1**
BRTR	**Keskin Array B**	**14.62**	**348**	Pn	**Pn**	**19 23 36.1**	**+0.4**
BRTR	**Keskin Array B**	**14.62**	**348**	Pn	**Pn**	**19 23 36.1**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=157,slow=11,SNR=3.0						
BRTR	**Keskin Array B**	**14.62**	**348**	Pn	**Pn**	**19 23 36.2**	**+0.4**
KBZ	**Khabaz**	**18.75**	**12**	P	**Pn**	**19 24 29.8**	**+1.5**
KBZ	**Khabaz**	**18.75**	**12**	P	**Pn**	**19 24 29.8**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=207,slow=14,SNR=2.8						
KBZ	**Khabaz**	**18.75**	**12**	P	**Pn**	**19 24 29.8**	**+1.5**
TIRR	**Tirgusor**	**20.37**	**341**	*e*P	Pn	19 24 48.0	+0.4
	comp=Z,5.0nm,1.0s						
TIRR	**Tirgusor**	**20.37**	**341**	*e*P	Pn	19 24 48.0	+0.4
	comp=Z,5.0nm,1.0s						
MLR	**Muntele Rosu**	**22.08**	**338**	P	**P**	**19 25 07.9**	**+3.8**
MLR	**Muntele Rosu**	**22.08**	**338**	P	**P**	**19 25 07.9**	**+3.8**
	comp=Z,0.6nm,0.9s,baz=217,slow=11						
BUR08	**Bucovina Ar. S**	**24.22**	**339**	*e*P	**P**	**19 25 27.3**	**+1.6**
BUR08	**Bucovina Ar. S**	**24.22**	**339**	*e*P	**P**	**19 25 27.3**	**+1.6**
AK02	**Malin Array Si**	**25.98**	**348**	*e*P	**P**	**19 25 40.7**	**-0.9**
AK02	**Malin Array Si**	**25.98**	**348**	*e*P	**P**	**19 25 40.7**	**-0.9**
AK01	**Malin Array Si**	**26.01**	**348**	*e*P	**P**	**19 25 42.0**	**+0.1**
AK01	**Malin Array Si**	**26.01**	**348**	*e*P	**P**	**19 25 42.0**	**+0.1**
KIEV	**Kiev**	**26.02**	**348**	*e*P	**P**	**19 25 41.9**	**0.0**
	comp=Z,3.8nm,0.9s						
KIEV	**Kiev**	**26.02**	**348**	*e*P	**P**	**19 25 41.9**	**0.0**
	comp=Z,3.8nm,0.9s						
AKASG	**Malin Array Be**	**26.02**	**348**	P	**P**	**19 25 43.2**	**+1.3**
AKASG	**Malin Array Be**	**26.02**	**348**	P	**P**	**19 25 43.2**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=164,slow=8.3,SNR=8.7						
AKASG	**Malin Array Be**	**26.02**	**348**	P	**P**	**19 25 43.2**	**+1.3**
KEST	**Kesra**	**26.28**	**300**	*e*P	**P**	**19 25 48.1**	**+3.6**
KEST	**Kesra**	**26.28**	**300**	P	**P**	**19 25 48.5**	**+4.0**
	comp=Z,2.5nm,0.8s,baz=91,slow=1.7,SNR=5.3						
TAM	**Tamanrasset**	**29.32**	**272**	P	**P**	**19 26 14.4**	**+2.4**
	comp=Z,2.6nm,1.0s						
GERES	**GERESS Array B**	**29.89**	**328**	P	**P**	**19 26 18.4**	**+1.8**
GERES	**GERESS Array B**	**29.89**	**328**	P	**P**	**19 26 18.4**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=142,slow=5.0,SNR=8.3						
GERES	**GERESS Array B**	**29.89**	**328**	P	**P**	**19 26 18.4**	**+1.8**
BRG	**Berggiesshubel**	**31.19**	**331**	*e*P	**P**	**19 26 30.0**	**+1.9**
	comp=Z,3.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**35.87**	**257**	P	**P**	**19 27 09.9**	**+0.7**
TORD	**Torodi Ar. Bea**	**35.87**	**257**	P	**P**	**19 27 09.9**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=60,slow=7.6,SNR=7.3						
TORD	**Torodi Ar. Bea**	**35.87**	**257**	P	**P**	**19 27 09.9**	**+0.7**
FINES	**FINESS Array B**	**36.83**	**351**	P	**P**	**19 27 17.6**	**+0.8**
FINES	**FINESS Array B**	**36.83**	**351**	P	**P**	**19 27 17.6**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=153,slow=13,SNR=5.2						
FINES	**FINESS Array B**	**36.83**	**351**	P	**P**	**19 27 17.6**	**+0.8**
ESDC	**Sonseca Array**	**37.42**	**303**	P	**P**	**19 27 23.5**	**+1.2**
ESDC	**Sonseca Array**	**37.42**	**303**	P	**P**	**19 27 23.5**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=93,slow=8.5,SNR=7.6						
ESDC	**Sonseca Array**	**37.42**	**303**	P	**P**	**19 27 23.5**	**+1.2**
HFS	**Hagfors**	**38.40**	**341**	P	**P**	**19 27 31.0**	**+0.9**
HFS	**Hagfors**	**38.40**	**341**	P	**P**	**19 27 31.0**	**+0.9**
	comp=Z,3.1nm,0.9s,baz=180,slow=10,SNR=4.1						
HFS	**Hagfors**	**38.40**	**341**	P	**P**	**19 27 31.0**	**+0.9**
NB2	**NORSAR Subarra**	**39.86**	**340**	P	**P**	**19 27 42.6**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=139,slow=9.3						
NOA	**NORSAR Array B**	**39.86**	**340**	P	**P**	**19 27 43.2**	**+0.8**
NOA	**NORSAR Array B**	**39.86**	**340**	P	**P**	**19 27 43.2**	**+0.8**
	comp=Z,2.0nm,0.8s,baz=139,slow=8.6,SNR=6.0						
NOA	**NORSAR Array B**	**39.86**	**340**	P	**P**	**19 27 43.2**	**+0.8**
KURBB	**Kurchatov Arra**	**40.17**	**40**	P	**P**	**19 27 46.6**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=252,slow=8.4,SNR=14						
KURK	**Kurchatov**	**40.26**	**40**	*e*P	**P**	**19 27 45.3**	**-0.5**
	comp=Z,1.4nm,1.0s						
KURK	**Kurchatov**	**40.26**	**40**	*e*P	**P**	**19 27 45.3**	**-0.5**
	comp=Z,1.4nm,1.0s						
MK31	**Makanchi Array**	**41.26**	**47**	*e*P	**P**	**19 27 52.4**	**-1.8**
MK31	**Makanchi Array**	**41.26**	**47**	*e*P	**P**	**19 27 52.4**	**-1.8**
MKAR	**Makanchi Array**	**41.26**	**47**	P	**P**	**19 27 55.0**	**+0.8**
MKAR	**Makanchi Array**	**41.26**	**47**	P	**P**	**19 27 55.0**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=251,slow=6.4,SNR=20						
MKAR	**Makanchi Array**	**41.26**	**47**	P	**P**	**19 27 55.0**	**+0.8**
DBIC	**Dimbokro**	**44.57**	**253**	*e*P	**P**	**19 28 21.1**	**-0.2**
	comp=Z,3.0nm,0.8s						
DBIC	**Dimbokro**	**44.57**	**253**	P	**P**	**19 28 21.7**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=37,slow=8.8,SNR=5.0						
DBIC	**Dimbokro**	**44.57**	**253**	*e*P	**P**	**19 28 21.1**	**-0.2**
	comp=Z,3.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**56.95**	**84**	P	**P**	**19 29 54.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**56.95**	**84**	P	**P**	**19 29 54.4**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=285,slow=6.3,SNR=5.0						
CMAR	**Chiang Mai Arr**	**56.95**	**84**	P	**P**	**19 29 54.4**	**-0.3**
SONM	**Songino Array**	**57.61**	**48**	P	**P**	**19 29 58.8**	**-0.3**
SONM	**Songino Array**	**57.61**	**48**	P	**P**	**19 29 58.8**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=243,slow=13,SNR=3.7						
SONM	**Songino Array**	**57.61**	**48**	P	**P**	**19 29 58.8**	**-0.3**

MEX 17 19:22:12.4±0.7, 18°.34N×101°.03W, h76km±9km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.66**	**95**	*e*P	Pn	19 22 26.5	-0.8
ARIG				*e*S	Sn	19 22 36.4	-1.9
ZIIG	**Zihuatanejo**	**0.84**	**209**	*e*P	Pn	19 22 28.1	-1.2
ZIIG				*e*S	Sn	19 22 39.7	-2.2
PLIG	**Platanillo**	**1.46**	**88**	*i* P	Pn	19 22 35.8	-1.3
PLIG				*i* S	Sn	19 22 53.6	-2.2
CAIG	**El Cayaco**	**1.48**	**150**	*e*P	Pn	19 22 35.4	-1.9
CAIG				*i* S	Sn	19 22 55.0	-1.1
YAIG	**Yautepec**	**1.94**	**74**	*i* P	Pn	19 22 41.6	-2.0
YAIG				*i* S	Sn	19 23 05.7	-1.5
MMIG	**Aquila**	**2.20**	**269**	*i* P	Pn	19 22 46.0	-0.8
MMIG				*i* S	Sn	19 23 11.8	-1.3
UTMO	**Huajuapan**	**3.12**	**99**	*i* P	Pn	19 22 57.9	-1.7
UTMO				*i* S	Sn	19 23 33.9	-2.0
PNIG	**Pinotepa**	**3.39**	**125**	*i* P	Pn	19 23 01.8	-1.2
PNIG				*i* S	Sn	19 23 40.9	-1.2

BJI ***17*** *19:24:17.9, 82°.40N×8°.80W, h10km, mB5.2/43, mb5.2/59, Ms5.3/59, Ms7 5.1/56*
ISCJB ***17*** *19:24:17.4±0.7, 82°.53N±0°.01×8°.6W±0°.1, h0km±4km, mb5.4/413, MS4.9/135, Error ellipse: s-maj=2.9km s-min=1.8km az=42.8*
MOS ***17*** *19:24:18.9±0.8, 82°.47N×8°.76W, h10km, mb5.6/134, MS4.9/51, Error ellipse: s-maj=32.4km s-min=3.0km az=93.2*
IDC ***17*** *19:24:19.0±0.3, 82°.55N×8°.92W, h0km, mb5.1/42, mb1 5.2/46, mb1mx5.2/46, mbtmp5.1/46, ML4.6/4, MS4.7/38, Ms1 4.7/38, ms1mx4.6/58, Error ellipse: s-maj=9.6km s-min=7.9km az=39.0*
TEH ***17*** *19:24:20.4, 82°.54N×8°.60W, h10km, ML5.4*
CSEM ***17*** *19:24:20.1±0.0, 82°.53N×8°.59W, h10km, mb5.5/99, Ms4.9, Mw5.5, Error ellipse: s-maj=2.5km s-min=1.4km az=43.0*
NEIC ***17*** *19:24:20.1±0.1, 82°.52N×8°.63W, h6km, mb5.6/241, ME5.1, MS5.0/53, MW5.4, MW5.4, Error ellipse: s-maj=2.9km s-min=1.5km az=44.0 Broadband fault plane solution: P waves. NP1:φs355.00000°, δ65.00000°, λ90.00000°. NP2:φs175.00000°, δ25.00000°, λ90.00000°. Principal axes: T Plg70.0000°, Azm265.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm85.0000°; Moment Tensor Solution. s54 Moment tensor: Scale 10^17 Nm; Mrr-0.35; Mθθ1.28; Mφφ-0.93; Mrθ0.11; Mφθ-0.69; Mφr-0.35; Best double couple: M0 1.40000×10^17 NP1:φs62.00000°, δ72.00000°, λ-171.00000°. NP2:φs329.00000°, δ81.00000°, λ-19.00000°. Principal axes: T 1.5000, Plg6.0000°, Azm16.0000°; N -0.2600, Plg69.0000°, Azm124.0000°; P -1.2400, Plg19.0000°, Azm284.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
GCMT ***17*** *19:24:21.5±0.1, 82°.58N×9°.16W, h12km, MW5.5, Moment Tensor Solution. s80,c116; s28,c28; Moment tensor: Scale 10^17Nm; Mrr1.58±.02; Mθθ-0.23±.03; Mφφ-1.35±.02; Mrθ-0.25±.07; Mφθ0.85±.02; Mφr0.76±.06; Best double couple: M0 1.90000×10^17 NP1:φs146.00000°, δ33.00000°, λ81.00000°. NP2:φs337.00000°, δ58.00000°, λ96.00000°. Principal axes: T 1.7700, Plg77.0000°, Azm264.0000°; N 0.2200, Plg5.0000°, Azm154.0000°; P -1.9800, Plg13.0000°, Azm63.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=215, per= 50.*
SZGRF ***17*** *19:24:23.4, 82°.48N×8°.84W, h33km, mb5.3, MS4.1, North of Svalbard*

BGS ***17*** *19:24:24.0±1.5, 82°.09N×8°.63W, h10km, mb5.3, MS4.6*
NAO ***17*** *19:24:26.7±13.0, 81°.95N×7°.18W, h14km±130km, ML5.2*
NEIC ***17*** *19:24:28.8±0.0, 82°.48N×8°.40W, h10km, Moment Tensor Solution. s140 Moment tensor: Scale 10^17Nm; Mrr1.38; Mθθ-0.42; Mφφ-0.96; Mrθ0.66; Mφθ0.78; Mφr-0.61; Best double couple: M0 1.70000×10^17 NP1:φs332.00000°, δ30.00000°, λ102.00000°. NP2:φs138.00000°, δ61.00000°, λ83.00000°. Principal axes: T 1.6500, Plg73.0000°, Azm30.0000°; N 0.1200, Plg6.0000°, Azm141.0000°; P -1.7600, Plg15.0000°, Azm232.0000°;*

ISC 17 19:24:21.4±0.3, 82°.52N±0°.03×8°.79W±0°.03, h16km±1km, h15km:pP-P, n2214, σ1909/2421, mb5.4/428, MS4.9/135, 311C-109D, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**4.88**	**127**	Pn	**Pn**	**19 25 31.9**	**-2.1**
KBS				Sn	Sn	19 26 23.4	-6.7
KBS	**Kingsbay**	**4.88**	**127**	Pn	**Pn**	**19 25 31.9**	**-2.1**
KBS				Sn	Sn	19 26 23.4	-6.7
KBS	**Kingsbay**	**4.88**	**127**	*ce*P	**Pn**	**19 25 32.5**	**-1.5**
KBS				pmax	pmax		
	comp=Z,122nm,1.0s						
KBS	**Kingsbay**	**4.88**	**127**	*e*Pn	**Pn**	**19 25 32.0**	**-2.1**
KBS	**Kingsbay**	**4.88**	**127**	*i* P	**Pn**	**19 25 32.2**	**-1.8**
	SNR=53						
KBS				Sn	Sn	19 26 23.4	-6.7
	SNR=50						
KBS				*e*S	Sb	19 26 28.0	-17
	SNR=56						
SPA0	**Spitsbergen Ar**	**6.00**	**123**	Pn	**Pn**	**19 25 47.4**	**-1.9**
	baz=334,slow=12						
SPA0	**Spitsbergen Ar**	**6.00**	**123**	Pn	**Pn**	**19 25 47.4**	**-1.9**
	baz=334,slow=12						
SPA0	**Spitsbergen Ar**	**6.00**	**123**	Pn	**Pn**	**19 25 47.4**	**-2.0**
	baz=334,slow=12,SNR=2.8						
SPITS	**Spitsbergen Ar**	**6.00**	**123**	Pn	**Pn**	**19 25 47.3**	**-2.0**
SPITS				Sn	Sn	19 26 50.3	-7.1
SPITS	**Spitsbergen Ar**	**6.00**	**123**	Pn	**Pn**	**19 25 47.3**	**-2.0**
	baz=354,slow=6.7,SNR=464						
SPITS				Sn	Sn	19 26 50.3	-7.1
	baz=306,slow=23,SNR=1.6						
SPITS				LR	LR	19 27 44.1	
	comp=Z,2μm,18.9s,baz=345,slow=34						
SPITS	**Spitsbergen Ar**	**6.00**	**123**	P	**Pn**	**19 25 47.3**	**-2.0**
SPITS				Sn	Sn	19 26 50.3	-7.1
DAG	**Danmarks Havn**	**6.03**	**202**	*i* P	**Pn**	**19 25 47.5**	**-2.2**
DAG	**Danmarks Havn**	**6.03**	**202**	*i* P	**Pn**	**19 25 47.5**	**-2.2**
DAG				*e*S	Sn	19 26 49.4	-8.9
DAG	**Danmarks Havn**	**6.03**	**202**	*i* P	**Pn**	**19 25 47.5**	**-2.2**
	SNR=53						
ALE	**Alert**	**6.78**	**296**	Pn	**Pn**	**19 25 57.0**	**-3.0**
	comp=Z,2μm,0.6s,SNR=95						
HSP	**Hornsund**	**6.94**	**129**	*e*P	**Pn**	**19 26 00.6**	**-1.5**
BJO	**Bjornoya**	**9.60**	**131**	*e*P	Pn	19 26 30.6	-8.0
JNW	**Jan Mayen West**	**11.56**	**179**	*e*P	**Pn**	**19 27 05.1**	**-0.3**
JNW				*e*S	**Sn**	**19 29 10.1**	**-3.8**
JNW	**Jan Mayen West**	**11.56**	**179**	*e*P	**Pn**	**19 27 05.1**	**-0.3**
	SNR=47						
SUMG	**Summit**	**11

comp=Z,38nm,0.9s
JOF Joensuu 21.98 128 *e*P P 19 29 12.4 -1.7
comp=Z,38nm,0.9s
NB2 NORSAR Subarra 22.18 154 P P 19 29 16.3 -0.1
baz=346,slow=11
NB2 NORSAR Subarra 22.18 154 P P 19 29 15.8 -0.5
comp=Z,112nm,1.2s,baz=353,slow=11
NB2 NORSAR Subarra 22.18 154 P P 19 29 16.3 -0.1
baz=346,slow=11
NB2 NORSAR Subarra 22.18 154 P P 19 29 15.8 -0.5
baz=353,slow=11
NB2 NORSAR Subarra 22.18 154 P P 19 29 15.8 -0.5
baz=353,slow=11,SNR=7.0
NOA NORSAR Array B 22.18 154 P P 19 29 15.9 -0.5
NOA PcP **PcP** 19 33 12.4 +0.2
NOA NORSAR Array B 22.18 154 P P 19 29 15.9 -0.5
comp=Z,28nm,0.9s,baz=350,slow=11,SNR=41
NOA PcP **PcP** 19 33 12.4 +0.2
comp=Z,4.0nm,1.0s,baz=349,slow=2.1,SNR=3.3
NOA NORSAR Array B 22.18 154 P P 19 29 15.9 -0.5
KAF Kangasniemi 22.27 135 *e*P P 19 29 16.2 -1.1
KAF pmax pmax
comp=Z,78nm,0.9s
KAF Kangasniemi 22.27 135 *e*p P 19 29 16.2 -1.1
comp=Z,78nm,0.9s
KAF Kangasniemi 22.27 135 *e*P P 19 29 16.2 -1.1
comp=Z,78nm,0.9s
NAO01 NORSAR Array S 22.36 154 *e*P P 19 29 19.0 +0.8
NAO01 NORSAR Array S 22.36 154 *e*P P 19 29 19.0 +0.8
LRW Lerwick 22.59 170 *e*P P 19 29 19.5 -1.1
LRW AMB AMB 19 29 32.6
comp=Z,165nm,4.4s
LRW Lerwick 22.59 170 P P 19 29 19.5 -1.1
LRW AMB AMB 19 29 32.6
comp=Z,165nm,4.4s
LRW Lerwick 22.59 170 *e*P P 19 29 19.5 -1.1
FIA1 FINESS Array S 22.91 135 *e*P P 19 29 23.7 -0.3
FIA1 FINESS Array S 22.91 135 *e*P P 19 29 23.7 -0.3
FIA0 FINESS Array S 22.91 135 P P 19 29 23.2 -0.8
baz=353,slow=12
FIA0 FINESS Array S 22.91 135 P P 19 29 23.2 -0.8
baz=353,slow=12
FIA0 FINESS Array S 22.91 135 P P 19 29 23.2 -0.8
baz=353,slow=11,SNR=142
FINES FINESS Array B 22.91 135 P P 19 29 23.8 -0.2
FINES PcP **PcP** 19 33 13.5 -0.1
FINES FINESS Array B 22.91 135 P P 19 29 23.8 -0.2
comp=Z,45nm,0.8s,baz=353,slow=12,SNR=83
FINES PcP **PcP** 19 33 13.5 -0.1
comp=Z,10nm,0.7s,baz=22,slow=2.6,SNR=14
FINES LR LR 19 37 26.9
comp=Z,342nm,22.0s,baz=270,slow=34
FINES FINESS Array B 22.91 135 P P 19 29 23.8 -0.2
FINES FINESS Array B 22.91 135 PcP **PcP** 19 33 13.5 -0.1
RAF Rauma 22.95 141 *e*P P 19 29 23.2 -1.2
comp=Z,153nm,1.4s,SNR=142
HFS Hagfors 23.24 151 P P 19 29 26.8 -0.6
baz=4.8,slow=7.4
HFS Hagfors 23.24 151 P P 19 29 26.8 -0.6
baz=4.8,slow=7.4
HFS Hagfors 23.24 151 P P 19 29 26.7 -0.6
HFS PcP **PcP** 19 33 14.0 -0.3
HFS Hagfors 23.24 151 P P 19 29 26.7 -0.6
comp=Z,53nm,0.9s,baz=1.0,slow=8.9,SNR=70
HFS PcP **PcP** 19 33 14.0 -0.3
comp=Z,4.7nm,0.8s,baz=132,slow=2.1,SNR=4.8
HFS Hagfors 23.24 151 P P 19 29 26.8 -0.6
baz=4.8,slow=7.3,SNR=0.6
HFS Hagfors 23.24 151 PcP **PcP** 19 33 14.0 -0.3
FRB Frobisher Bay 23.47 255 P P 19 29 29.3 -0.3
FRB S S 19 33 41.7 -0.3
FRB Frobisher Bay 23.47 255 P P 19 29 29.3 -0.3
comp=Z,68nm,0.9s,baz=12,slow=8.9,SNR=48
FRB S S 19 33 41.7 -0.3
comp=Z,6.2nm,0.7s,baz=98,slow=19,SNR=3.7
FRB LR LR 19 38 32.2
comp=Z,5μm,21.3s,baz=16,slow=36
FRB Frobisher Bay 23.47 255 P P 19 29 29.3 -0.3
FRB S S 19 33 41.7 -0.3
KONO Kongsberg 23.48 156 *e*P P 19 29 28.7 -1.1
KONO pmax pmax
comp=Z,152nm,1.7s
KONO Kongsberg 23.48 156 *e*P P 19 29 28.7 -1.1
comp=Z,36nm,1.7s
KONO Kongsberg 23.48 156 *e*P P 19 29 28.7 -1.1
comp=Z,36nm,1.7s
MEF Metsahovi 23.97 138 *e*P P 19 29 34.1 -0.4
comp=Z,157nm,1.6s,SNR=148
TIXI Tiksi 24.54 31⇑ *i*P P 19 29 40.6 +0.9
TIXI pmax pmax
comp=Z,62nm,1.2s
TIXI Tiksi 24.54 31 *i*P P 19 29 40.6 +0.9
comp=Z,62nm,1.2s
MVH1 Achvaich 24.75 174 *e*P P 19 29 41.3 -0.3
MVH1 Achvaich 24.75 174 P P 19 29 41.3 -0.3
MVH1 Achvaich 24.75 174 *e*P P 19 29 41.3 -0.3
PUL Pulkovo 24.97 131⇓ *i*P P 19 29 43.6 0.0
PUL pmax pmax
comp=Z,134nm,0.7s
PUL Pulkovo 24.97 131 *i*P P 19 29 43.6 0.0
comp=Z,134nm,0.7s
MCD Coleburn Disti 25.11 173 *e*P P 19 29 44.9 0.0
MCD Coleburn Disti 25.11 173 P P 19 29 44.9 0.0
MCD Coleburn Disti 25.11 173 *e*P P 19 29 44.9 0.0
KAC Achnashellach 25.16 176⇑ *e*P P 19 29 45.5 +0.1
KAC Achnashellach 25.16 176 P P 19 29 45.5 +0.1
KAC Achnashellach 25.16 176⇑ *e*P P 19 29 45.5 +0.1
MDO Dochfour 25.23 174⇑ *e*P P 19 29 45.8 -0.2
MDO Dochfour 25.23 174 P P 19 29 45.8 -0.2
MDO Dochfour 25.23 174⇑ *e*P P 19 29 45.8 -0.2
KPL Plockton 25.32 176 *e*P P 19 29 45.8 -0.9
KPL AMB AMB 19 29 49.2
comp=Z,96nm,1.1s
KPL AMS AMS 19 40 30.2
comp=Z,2μm,16.1s
KPL Plockton 25.32 176 P P 19 29 45.8 -0.9
KPL AMB AMB 19 29 49.2
comp=Z,96nm,1.1s
KPL AMS AMS 19 40 30.2
comp=Z,2μm,16.1s
KPL Plockton 25.32 176 *e*P P 19 29 45.8 -0.9
MME1 Meikle Cairn 25.38 173⇑ *e*P P 19 29 47.0 -0.3
MME1 Meikle Cairn 25.38 173 P P 19 29 47.0 -0.3
MME1 Meikle Cairn 25.38 173⇑ *e*P P 19 29 47.0 -0.3
KSB Sheil Bridge 25.45 176 *e*P P 19 29 47.7 -0.3
KSB Sheil Bridge 25.45 176 P P 19 29 47.7 -0.3
KSB Sheil Bridge 25.45 176 *e*P P 19 29 47.7 -0.3
DRUM Mains of Drumt 25.79 172 *e*P P 19 29 50.6 -0.4
DRUM AMB AMB 19 29 53.6
comp=Z,160nm,1.0s
DRUM Mains of Drumt 25.79 172 P P 19 29 50.6 -0.4
DRUM AMB AMB 19 29 53.6
comp=Z,160nm,1.0s
DRUM Mains of Drumt 25.79 172 *e*P P 19 29 50.6 -0.4
VSU Vasula 25.91 136*c* *i*P P 19 29 51.6 -0.5
VSU pmax pmax
comp=Z,88nm,1.0s
VSU Vasula 25.91 136 *i*P P 19 29 51.6 -0.5
comp=Z,88nm,1.0s
ELO Logie Almond 26.21 174 *e*P P 19 29 54.2 -0.7
ELO Logie Almond 26.21 174 P P 19 29 54.2 -0.7
ELO Logie Almond 26.21 174 *e*P P 19 29 54.2 -0.7
SLIT Slītere, Latvi 26.35 141 *e*P P 19 29 55.1 -1.0
comp=Z,673nm,1.5s,SNR=144
EAB Aberfoyle 26.49 174 *e*P P 19 29 56.8 -0.6
EAB Aberfoyle 26.49 174 P P 19 29 56.8 -0.6
EAB Aberfoyle 26.49 174 *e*P P 19 29 56.8 -0.6
MUD Monsted U'grnd 26.65 158 *i*P P 19 29 57.8 -1.0
MUD Monsted U'grnd 26.65 158 *i*P P 19 29 57.8 -1.0
MUD Monsted U'grnd 26.65 158 *i*P P 19 29 57.8 -1.0
SNR=32
EDI Edinburgh 26.77 173 AMB AMB 19 29 58.2
comp=Z,82nm,1.1s
EDI Edinburgh 26.77 173 AMB AMB 19 29 58.2
comp=Z,82nm,1.1s
ESY Stoneypath 26.78 172⇑ *e*P P 19 29 59.5 -0.6
ESY Stoneypath 26.78 172 P P 19 29 59.5 -0.6
ESY Stoneypath 26.78 172⇑ *e*P P 19 29 59.5 -0.6
INK Inuvik 26.80 317 P P 19 30 00.1 0.0
INK PcP **PcP** 19 33 22.4 +0.3
INK Inuvik 26.80 317 P P 19 30 00.1 0.0
comp=Z,204nm,1.1s,baz=14,slow=16,SNR=185
INK PcP **PcP** 19 33 22.4 +0.3
comp=Z,8.0nm,0.9s,baz=37,slow=8.9,SNR=3.0
INK LR LR 19 42 24.4
comp=Z,390nm,18.9s,baz=12,slow=40
INK Inuvik 26.80 317 P P 19 30 00.1 0.0
EAU Auchinoon 26.84 173 *e*P P 19 30 00.3 -0.3
EAU Auchinoon 26.84 173 P P 19 30 00.3 -0.3
EAU Auchinoon 26.84 173 *e*P P 19 30 00.3 -0.3
PGBU Glenifferbraes 26.86 175⇑ *e*P P 19 30 00.5 -0.3
PGBU AMB AMB 19 30 01.4
comp=Z,136nm,0.9s
PGBU AMS AMS 19 42 53.8
comp=Z,1μm,14.9s
PGBU Glenifferbraes 26.86 175 P P 19 30 00.5 -0.3
PGBU AMB AMB 19 30 01.4
comp=Z,136nm,0.9s
PGBU AMS AMS 19 42 53.8
comp=Z,1μm,14.9s
PGBU Glenifferbraes 26.86 175⇑ *e*P P 19 30 00.5 -0.3
EBL Broad Law 26.92 173 *e*P P 19 30 00.9 -0.4
EBL Broad Law 26.92 173 P P 19 30 00.9 -0.4
EBL Broad Law 26.92 173 *e*P P 19 30 00.9 -0.4
EKA Eskdalemuir Ar 27.36 173 P P 19 30 05.4 +0.2
EKA PcP **PcP** 19 33 23.4 -0.3
EKA Eskdalemuir Ar 27.36 173 P P 19 30 05.4 +0.2
comp=Z,16nm,0.8s,baz=0.6,slow=8.3,SNR=29
EKA PcP **PcP** 19 33 23.4 -0.3
comp=Z,4.8nm,0.8s,baz=5.0,slow=2.8,SNR=5.8
EKA Eskdalemuir Ar 27.36 173 P P 19 30 05.4 +0.2
EKA Eskdalemuir Ar 27.36 173 PcP **PcP** 19 33 23.4 -0.3
ESK Eskdalemuir 27.38 173 *e*P P 19 30 05.0 -0.4
ESK AMB AMB 19 30 07.3
comp=Z,51nm,3.6s
ESK AMS AMS 19 40 40.8
comp=Z,1μm,13.9s
ESK Eskdalemuir 27.38 173 P P 19 30 05.0 -0.4
ESK AMB AMB 19 30 07.3
comp=Z,51nm,3.6s
ESK AMS AMS 19 40 40.8
comp=Z,1μm,13.9s
ESK Eskdalemuir 27.38 173 *i*P P 19 30 06.1 +0.7
ESK Eskdalemuir 27.38 173 *e*P P 19 30 04.3 -1.1
comp=Z,26nm,0.9s
ESK Eskdalemuir 27.38 173 *i*P P 19 30 06.1 +0.7
ECK Cauldkaine Hil 27.51 173⇑ *e*P P 19 30 06.4 -0.2
ECK Cauldkaine Hil 27.51 173 P P 19 30 06.4 -0.2
ECK Cauldkaine Hil 27.51 173⇑ *e*P P 19 30 06.4 -0.2
COP Copenhagen 27.59 154 *i*P P 19 30 10.7 +3.4
COP Copenhagen 27.59 154 *i*P P 19 30 10.7 +3.4
GAL1 Galloway 27.81 175 AMS AMS 19 42 13.5
comp=Z,2μm,16.1s
XAL Allendale 27.85 172⇑ *e*P P 19 30 09.3 -0.3
XAL Allendale 27.85 172 P P 19 30 09.3 -0.3
XAL Allendale 27.85 172⇑ *e*P P 19 30 09.3 -0.3
KESW Keswick, Cumbr 28.11 173 *e*P P 19 30 11.7 -0.2
KESW AMB AMB 19 30 12.7
comp=Z,102nm,1.5s
KESW AMS AMS 19 41 11.9
comp=Z,1μm,15.8s
KESW Keswick, Cumbr 28.11 173 P P 19 30 11.7 -0.2
KESW AMB AMB 19 30 12.7
comp=Z,102nm,1.5s
KESW AMS AMS 19 41 11.9
comp=Z,1μm,15.8s
KESW Keswick, Cumbr 28.11 173 *e*P P 19 30 11.7 -0.2
SOKR Solikamsk 28.22 102 *e*P P 19 30 05.1 -7.7
SOKR S **S** 19 35 01.2 +3.8
SOKR pmax pmax
comp=Z,60nm,1.2s
SOKR MLR MLR
comp=Z,4μm,20.0s
BSD Bornholm Skovb 28.31 151⇑ *i*P P 19 30 13.3 -0.4
BSD pmax pmax
comp=Z,33nm,0.8s
BSD MLR MLR
comp=Z,710nm,15.0s
BSD Bornholm Skovb 28.31 151⇑ *i*P P 19 30 13.3 -0.4
comp=Z,33nm,0.8s
BSD
comp=Z,710nm,15.0s
BSD Bornholm Skovb 28.31 151⇑ *i*P P 19 30 13.3 -0.4
comp=Z,33nm,0.8s,SNR=31
IZAR Zarasai 28.55 137 *e*P P 19 30 16.5 +0.7
IZAR AMB AMB 19 30 18.4
comp=Z,44nm,0.9s
IZAR Zarasai 28.55 137 *e*P P 19 30 16.5 +0.7
comp=Z,44nm,0.9s,SNR=28
ISAL Salakas 28.72 137 *e*P P 19 30 18.0 +0.7
ISAL AMB AMB 19 30 19.8
comp=Z,30nm,1.3s
ISAL Salakas 28.72 137 *e*P P 19 30 18.0 +0.7
comp=Z,30nm,1.3s,SNR=28
IIGN Ignalina 28.95 137 *e*P P 19 30 20.0 +0.7
IIGN AMB AMB 19 30 22.0
comp=Z,41nm,1.0s
COLD Coldfoot 29.16 330 *e*P P 19 30 21.6 +0.5
comp=Z,64nm,1.0s
COLD Coldfoot 29.16 330 *e*P P 19 30 21.6 +0.5
comp=Z,64nm,1.0s
BSEG Bad Segeberg 29.22 157 *e*P P 19 30 22.2 +0.4
BSEG pmax pmax
comp=Z,131nm,1.4s
BSEG Bad Segeberg 29.22 157 *e*P P 19 30 22.2 +0.4
comp=Z,131nm,1.4s
BSEG Bad Segeberg 29.22 157 *e*P P 19 30 22.2 +0.4
comp=Z,131nm,1.4s
DCN Croghan 29.31 178 *e*P P 19 30 22.5 -0.1
NACGM Naroch 29.44 137 *e*P P 19 30 20.0 -3.7
KBI1 Birley Grange 29.47 171 *e*P P 19 30 23.7 -0.4
KBI1 Birley Grange 29.47 171 P P 19 30 23.7 -0.4
BILL Bilibino 29.61 4*c* *i*P P 19 30 25.2 +0.1
BILL *i* 19 30 31.7
BILL *e* 19 31 21.7
BILL *e* 19 33 29.6
BILL *i*S **S** 19 35 21.7 +2.6
BILL pmax pmax
comp=Z,57nm,1.2s
BILL MLR MLR
comp=Z,500nm,16.0s
BILL Bilibino 29.61 4 *e*P P 19 30 25.1 +0.1
comp=Z,55nm,1.1s
BILL LR LR
comp=Z,1μm,20.0s
BILL Bilibino 29.61 4 *e*P P 19 30 25.1 0.0
comp=Z,55nm,1.1s
BILL Bilibino 29.61 4 *e*PcP **PcP** 19 33 29.6 +0.6
BILL *i*S **S** 19 35 21.7 +2.6
comp=Z,500nm,16.0s
STNC Stoke 29.62 172 *e*P P 19 30 25.3 -0.1
STNC AMB AMB 19 30 31.3
comp=Z,96nm,2.0s
STNC Stoke 29.62 172 P P 19 30 25.3 -0.1
STNC AMB AMB 19 30 31.3
comp=Z,96nm,2.0s
MOS Moscow 29.69 124 *e*P P 19 30 26.5 +0.6
MOS MLR MLR
comp=N,900nm,11.0s
MOS MLR MLR
comp=Z,900nm,11.0s
MOS Moscow 29.69 124 *e*P P 19 30 26.5 +0.6
YRE Yr Eifl 29.70 175 *e*P P 19 30 25.7 -0.3
YRE Yr Eifl 29.70 175 P P 19 30 25.7 -0.3
FOEL Foel Wylfa 29.81 173 *e*P P 19 30 26.8 -0.2
FOEL AMB AMB 19 30 27.5
comp=Z,51nm,1.0s
FOEL AMS AMS 19 43 18.8
comp=Z,818nm,17.5s
FOEL Foel Wylfa 29.81 173 P P 19 30 26.8 -0.2
FOEL AMB AMB 19 30 27.5
comp=Z,51nm,1.0s
FOEL AMS AMS 19 43 18.8
comp=Z,818nm,17.5s
MNK Minsk 29.93 136⇓ *e*P P 19 30 27.0 -1.1
MNK pmax pmax
comp=Z,110nm,1.0s
MNK Minsk 29.93 136 *e*P P 19 30 27.0 -1.1
comp=Z,110nm,1.0s
MICGM Minsk 29.94 136⇓ *e*P P 19 30 27.0 -1.1
SUW Suwalki 30.01 141 *e*P P 19 30 27.6 -1.2
SUW pmax pmax
comp=Z,94nm,0.9s
SUW Suwalki 30.01 141 *e*P P 19 30 27.6 -1.2
comp=Z,94nm,0.9s
SUW Suwalki 30.01 141 *e*P P 19 30 28.3 -0.5
SUW Suwalki 30.01 141 *e*P P 19 30 27.6 -1.2
comp=Z,94nm,0.9s
OBN Obninsk 30.19 126*c* *i*P P 19 30 29.7 -0.7
OBN *i* 19 33 30.8
OBN *e*S **S** 19 35 30.8 +2.3
OBN pmax pmax
comp=Z,88nm,1.0s
OBN MLR MLR
comp=Z,900nm,15.0s
OBN Obninsk 30.19 126 P P 19 30 29.5 -0.9
comp=Z,520nm,0.9s,SNR=9.7
OBN Obninsk 30.19 126 *i*P P 19 30 29.7 -0.7
comp=Z,88nm,1.0s
OBN Obninsk 30.19 126 *i*PcP **PcP** 19 33 30.8 +0.1
OBN *e*S **S** 19 35 30.8 +2.3
comp=Z,900nm,15.0s
GKP Gorka Klasztor 30.30 149 *e*P P 19 30 31.7 +0.3
YKW3 Yellowknife Ar 30.45 298 *e*P P 19 30 32.6 0.0
comp=Z,2.2nm,1.1s
YKW3 *e*PcP **PcP** 19 33 31.5 +0.2
YKW3 Yellowknife Ar 30.45 298 *e*P P 19 30 32.6 0.0
comp=Z,2.2nm,1.1s
YKA Yellowknife Ar 30.52 298 P P 19 30 33.2 0.0
YKA PcP **PcP** 19 33 31.8 +0.3
YKA Yellowknife Ar 30.52 298 P P 19 30 33.2 0.0
comp=Z,72nm,1.1s,baz=15,slow=9.1,SNR=259
YKA PcP **PcP** 19 33 31.8 +0.3
comp=Z,15nm,0.8s,baz=9.4,slow=2.7,SNR=24
YKA Yellowknife Ar 30.52 298 P P 19 30 33.2 0.0
NRDL Niedersach Rie 30.65 157 *e*P P 19 30 34.4 0.0
comp=Z,45nm,1.4s
NRDL *e*PcP **PcP** 19 33 32.2 +0.3
IBBN Ibbenburen 30.72 160 *e*P P 19 30 35.5 +0.4
comp=Z,42nm,1.2s
SSW Stow on the Wo 30.76 172 *e*P P 19 30 35.9 +0.5
SSW Stow on the Wo 30.76 172 P P 19 30 35.9 +0.5
EGAK Eagle 30.92 322 *e*P P 19 30 37.4 +0.7
comp=Z,102nm,1.3s
EGAK *e*PcP **PcP** 19 33 33.5 +1.0
EGAK LR LR
comp=Z,533nm,19.0s
EGAK Eagle 30.92 322 *e*P P 19 30 37.4 +0.7
comp=Z,102nm,1.3s
SKP1 Kophill 31.02 170 *e*P P 19 30 37.1 -0.6
SKP1 Kophill 31.02 170 P P 19 30 37.1 -0.6
WTSB Winterswijk 31.02 161 *e*P P 19 30 38.3 +0.6
comp=Z,77nm,0.8s
COLA College 31.33 327 *e*P P 19 30 41.7 +1.4
COLA pmax pmax
comp=Z,90nm,1.0s
COLA MLR MLR
comp=Z,355nm,20.0s
COLA College 31.33 327 *e*P P 19 30 41.7 +1.4
comp=Z,24nm,1.0s
COLA LR LR
comp=Z,355nm,20.0s
COLA College 31.33 327 *e*P P 19 30 41.7 +1.4
comp=Z,24nm,1.0s
ILAR Eielson Array 31.36 327 P P 19 30 41.8 +1.1
ILAR PcP **PcP** 19 33 33.5 -0.2
ILAR *e* 20 02 19.7
ILAR Eielson Array 31.36 327 P P 19 30 41.8 +1.1
comp=Z,44nm,1.0s,baz=6.1,slow=7.6,SNR=339
ILAR PcP **PcP** 19 33 33.5 -0.2
comp=Z,8.6nm,0.7s,baz=338,slow=3.4,SNR=27
ILAR P3KPbc 20 02 19.7
comp=Z,2.5nm,1.3s,baz=198,slow=5.5,SNR=6.0
ILAR Eielson Array 31.36 327 P P 19 30 41.8 +1.1
SVE Sverdlovsk 31.41 99*de*P P 19 30 42.2 +1.1
SVE *e*S S 19 35 53.6 +6.0
SVE pmax pmax
comp=Z,100nm,1.2s
SVE MLR MLR
comp=Z,3μm,18.0s
SVE Sverdlovsk 31.41 99 *e*P P 19 30 42.2 +1.1
comp=Z,100nm,1.2s
WOL Wolverton 31.42 171 *e*P P 19 30 41.0 -0.3
WOL AMB AMB 19 30 42.5
comp=Z,175nm,2.5s
WOL Wolverton 31.42 171 P P 19 30 41.0 -0.3
WOL AMB AMB 19 30 42.5
comp=Z,175nm,2.5s
ARU Arti 31.53 101*d* *i*P P 19 30 42.9 +0.7
ARU 19 31 42.8
ARU 19 33 33.0
ARU S **S** 19 35 52.7 +3.2
ARU SS **SnSn** 19 37 32.6 -1.7
ARU pmax pmax
comp=Z,70nm,1.0s
ARU MLR MLR
comp=Z,4μm,17.0s
ARU Arti 31.53 101 P P 19 30 43.9 +1.7
comp=Z,299nm,1.2s,SNR=31
ARU Arti 31.53 101 *i*P P 19 30 42.9 +0.7
comp=Z,70nm,1.0s
ARU Arti 31.53 101 PcP **PcP** 19 33 33.0 -1.3
ARU S **S** 19 35 52.7 +3.2
BUG Bochum--Univer 31.57 161 *e*P P 19 30 42.3 -0.2
comp=Z,54nm,1.0s
SCHQ Schefferville 31.93 248 *e*P P 19 30 45.2 -0.5
comp=Z,34nm,0.6s
SCHQ Schefferville 31.93 248 P P 19 30 44.8 -0.9
comp=Z,26nm,0.8s,baz=16,slow=8.2,SNR=33
SCHQ LR LR 19 44 00.5
comp=Z,4μm,18.8s,baz=12,slow=37
SCHQ Schefferville 31.93 248 *e*P P 19 30 45.2 -0.5
comp=Z,34nm,0.6s
BEL Belsk 31.98 145 *e*P P 19 30 46.9 +0.7
CLL Collm 31.99 154⇑ *i*P P 19 30 46.4 +0.1
CLL *i* 19 30 53.6
CLL *i* 19 33 35.9
CLL *e*S **S** 19 35 57.0 +0.3
CLL pmax pmax
comp=Z,128nm,2.1s
CLL pmax pmax
comp=Z,20nm,1.0s
CLL Collm 31.99 154 *e*P P 19 30 45.9 -0.4
comp=Z,44nm,1.3s
CLL *e*PcP **PcP** 19 33 36.0 +0.4
CLL Collm 31.99 154⇑ *i*P P 19 30 46.4 +0.1
comp=Z,128nm,2.1s
CLL *i* 19 30 53.6
CLL *e*PP PP 19 32 06.0 +7.7
CLL ⇑ *i*PcP **PcP** 19 33 35.9 +0.4
comp=Z,20nm,1.0s
CLL *e*S **S** 19 35 57.0 +0.3
CLL *e*SS **SnSn** 19 37 48.0 +2.4
CLL Collm 31.99 154 *i*P P 19 30 46.4 +0.1
comp=Z,128nm,2.1s
BEBN Eben Emael 32.15 163 P P 19 30 48.2 +0.6
comp=Z,7.8nm,1.1s
HGN Heimansgroeve 32.19 162 *e*P P 19 30 48.0 0.0
comp=Z,49nm,0.8s
HGN *e*S S 19 35 35.9 -24
DOT Dot Lake 32.26 324 *e*P P 19 30 49.8 +1.2
comp=Z,222nm,1.2s
DOT Dot Lake 32.26 324 *e*P P 19 30 49.8 +1.2
comp=Z,222nm,1.2s
MENF Mencas 32.26 167 *e*P P 19 30 48.4 -0.2
MENF Mencas 32.26 167 *e*P P 19 30 48.4 -0.2
MENF Mencas 32.26 167 *e*P P 19 30 48.4 -0.2
UBBA Unterbreizbach 32.32 158 *e*P P 19 30 49.4 +0.4
comp=Z,26nm,1.3s
MEM Memba 32.35 162 P P 19 30 49.6 +0.2
comp=Z,19nm,1.1s
BRG Berggiesshubel 32.48 153 *e*P P 19 30 50.9 +0.4
comp=Z,37nm,1.4s
BRG *e*PCP **PcP** 19 33 37.6 +0.6
comp=Z,13nm,0.9s
BRG S **S** 19 36 06.0 +1.7
BRG SS **SnSn** 19 37 54.0 -3.5
BRG
comp=N,633nm,17.9s
BRG
comp=E,496nm,23.3s
BRG
comp=Z,995nm,13.5s
BRG Berggiesshubel 32.48 153 *e*P P 19 30 50.9 +0.4
BRG *e* 19 33 37.6
BRG S **S** 19 36 06.0 +1.7
BRG SS **SnSn** 19 37 54.0 -3.5
BRG pmax pmax
comp=Z,37nm,1.4s
BRG pmax pmax
comp=Z,13nm,0.9s
BRG MLR MLR
comp=N,633nm,17.9s
BRG MLR MLR
comp=E,496nm,23.3s
BRG MLR MLR

comp=Z,995nm,13.5s
BRG Berggiesshubel 32.48 153 *e*P **P** **19 30 50.5 0.0**
comp=Z,34nm,1.2s
BRG *e*PcP **PcP** **19 33 37.2 +0.3**
BRG Berggiesshubel 32.48 153 *e*P **P** **19 30 50.9 +0.4**
comp=Z,37nm,1.4s
BCLA Clavier 32.51 163 P **P** **19 30 51.0 +0.2**
MCK McKinley 32.54 328 *e*P **P** **19 30 52.1 +1.1**
MCK pmax pmax
comp=Z,39nm,0.9s
MCK McKinley 32.54 328 *e*P **P** **19 30 52.1 +1.1**
comp=Z,40nm,0.9s
MCK McKinley 32.54 328 *e*P **P** **19 30 52.1 +1.1**
comp=Z,40nm,0.9s
MOX Moxa 32.57 156 *e*P **P** **19 30 51.9 +0.5**
MOX pmax pmax
comp=Z,47nm,1.5s
MOX Moxa 32.57 156 *e*P **P** **19 30 51.9 +0.5**
comp=Z,47nm,1.5s
MOX Moxa 32.57 156 *e*P **P** **19 30 51.9 +0.5**
comp=Z,47nm,1.5s
KSP Ksiaz 32.66 150⇑ *e*P **P** **19 30 52.6 +0.5**
KSP *e* 19 33 38.2
KSP *e*S **S** **19 36 07.0 -0.1**
KSP Ksiaz 32.66 150 *e*P **P** **19 30 52.5 +0.5**
KSP Ksiaz 32.66 150 *e*P **P** **19 30 52.6 +0.5**
KSP Ksiaz 32.66 150 *e*PcP **PcP** **19 33 38.2 +0.8**
KSP *e*S **S** **19 36 07.0 -0.1**
DOU Dourbes 32.81 164 P **P** **19 30 53.8 +0.4**
GIVF Givet 32.81 164⇑ *i*P **P** **19 30 53.3 -0.1**
comp=Z,101nm,1.1s
GIVF Givet 32.81 164⇑ *i*P **P** **19 30 53.3 -0.1**
GIVF pmax pmax
comp=Z,101nm,1.1s
GIVF Givet 32.81 164⇑ *i*P **P** **19 30 53.3 -0.1**
comp=Z,101nm,1.1s
GIVF Givet 32.81 164⇑ *i*P **P** **19 30 53.3 -0.1**
comp=Z,51nm,1.1s
BAIF Baives 32.83 164⇑ *i*P **P** **19 30 53.9 +0.3**
comp=Z,73nm,0.9s
BAIF Baives 32.83 164⇑ *i*P **P** **19 30 53.9 +0.3**
BAIF pmax pmax
comp=Z,73nm,0.9s
BAIF Baives 32.83 164⇑ *i*P **P** **19 30 53.9 +0.3**
comp=Z,73nm,0.9s
BAIF Baives 32.83 164⇑ *i*P **P** **19 30 53.9 +0.3**
comp=Z,36nm,0.9s
TNS Taunus Mts 32.84 159 *e*P **P** **19 30 54.3 +0.5**
TNS pmax pmax
comp=Z,33nm,1.0s
TNS Taunus Mts 32.84 159 *e*P **P** **19 30 54.3 +0.5**
comp=Z,33nm,1.0s
TNS Taunus Mts 32.84 159 *e*P **P** **19 30 54.3 +0.5**
comp=Z,33nm,1.0s
TANN Tannenbergstha 32.85 155 *e*P **P** **19 30 54.3 +0.4**
comp=Z,44nm,1.2s
TANN *e*PcP **PcP** **19 33 37.8 -0.3**
PVCC Panska Ves 32.86 152 *e*P **P** **19 30 54.9 +1.0**
PVCC *e* 19 33 39.0
PVCC MLR MLR
comp=Z,900nm,16.5s
PVCC Panska Ves 32.86 152⇑ *e*P **P** **19 30 54.9 +1.0**
PVCC *e*PCP **PcP** **19 33 39.0 +1.0**
PVCC AMS AMS 19 54 10.0
comp=Z,900nm,16.5s
PVCC Panska Ves 32.86 152 P **P** **19 30 54.9 +1.0**
PVCC Panska Ves 32.86 152 *e*PcP **PcP** **19 33 39.0 +1.0**
TRF Thorofare Moun 32.91 329 *e*P **P** **19 30 55.3 +0.9**
comp=Z,21nm,0.8s
TRF Thorofare Moun 32.91 329 *e*P **P** **19 30 55.3 +0.9**
comp=Z,21nm,0.8s
UPC Upice 32.97 151 *e*P **P** **19 30 55.6 +0.7**
UPC *e* 19 33 39.2
UPC Upice 32.97 151⇑ *e*P **P** **19 30 55.6 +0.7**
UPC *e*PCP **PcP** **19 33 39.2 +0.9**
UPC Upice 32.97 151 P **P** **19 30 55.6 +0.7**
UPC Upice 32.97 151 *e*PcP **PcP** **19 33 39.2 +0.9**
NKC Novy Kostel 33.03 155⇑ *i*P **P** **19 30 56.5 +1.1**
NKC *e* 19 31 01.2
NKC *e* 19 33 39.5
NKC MLR MLR
comp=Z,600nm,14.1s
NKC Novy Kostel 33.03 155⇑ *i*P **P** **19 30 56.5 +1.1**
NKC *e*pP **pP** **19 31 01.2 +0.9**
NKC *e*PCP **PcP** **19 33 39.5 +1.0**
NKC AMS AMS 19 54 30.0
comp=Z,600nm,14.1s
NKC Novy Kostel 33.03 155 P **P** **19 30 56.5 +1.1**
NKC Novy Kostel 33.03 155 *e*PcP **PcP** **19 33 39.5 +1.0**
comp=Z,600nm,14.1s
PAX Paxson 33.04 325 *e*P **P** **19 30 56.4 +0.9**
PAX pmax pmax
comp=Z,63nm,1.0s
PAX Paxson 33.04 325 *e*P **P** **19 30 56.4 +0.9**
comp=Z,63nm,1.0s
PAX Paxson 33.04 325 *e*P **P** **19 30 56.4 +0.9**
comp=Z,63nm,1.0s
DPC Dobruska-Polom 33.15 150⇑ *i*P **P** **19 30 57.3 +0.8**
DPC *e* 19 31 01.3
DPC *e* 19 33 39.9
DPC *e*S **S** **19 36 16.0 +1.2**
DPC MLR MLR
comp=Z,800nm,16.9s
DPC Dobruska-Polom 33.15 150 *e*P **P** **19 30 57.3 +0.8**
comp=Z,17nm,0.9s
DPC *e*PcP **PcP** **19 33 39.9 +1.0**
DPC Dobruska-Polom 33.15 150⇑ *i*P **P** **19 30 57.3 +0.8**
DPC *e*pP **pP** **19 31 01.3 -0.1**
DPC *e*PCP **PcP** **19 33 39.9 +1.0**
DPC *e*S **S** **19 36 16.0 +1.2**
DPC AMS AMS 19 53 50.0
comp=Z,800nm,16.9s
DPC Dobruska-Polom 33.15 150 P **P** **19 30 57.3 +0.8**
DPC Dobruska-Polom 33.15 150 *e*PcP **PcP** **19 33 39.9 +1.0**
DPC S **S** **19 36 16.0 +1.2**
RUP Ruppelstein 33.30 161 *e*P **P** **19 30 58.2 +0.4**
RUP Ruppelstein 33.30 161 *e*P **P** **19 30 58.2 +0.4**
RUP Ruppelstein 33.30 161 *e*P **P** **19 30 58.2 +0.4**
WLF Walferdange 33.30 162 P **P** **19 30 58.2 +0.6**
comp=Z,25nm,1.4s
WLF Walferdange 33.30 162 *e*P **P** **19 30 57.6 -0.1**
WLF pmax pmax
comp=Z,31nm,1.0s
WLF MLR MLR
comp=Z,716nm,19.0s
WLF Walferdange 33.30 162 *e*P **P** **19 30 58.1 +0.4**
comp=Z,45nm,1.1s
WLF Walferdange 33.30 162 *e*P **P** **19 30 57.6 -0.1**
comp=Z,31nm,1.0s
WLF LR LR
comp=Z,716nm,19.0s
WLF Walferdange 33.30 162 *e*P **P** **19 30 57.6 -0.1**
comp=Z,31nm,1.0s
PRU Pruhonice 33.40 152 *e*P **P** **19 30 59.6 +1.0**
PRU *e* 19 31 06.0
PRU *e* 19 33 40.2
PRU *e*S **S** **19 36 24.5 +5.9**
PRU MLR MLR
comp=Z,1μm,14.1s
PRU Pruhonice 33.40 152⇑ *e*P **P** **19 30 59.6 +1.0**
PRU *e*pP **pP** **19 31 06.0 +2.5**
PRU *e*PCP **PcP** **19 33 40.2 +0.7**
PRU *e*S **S** **19 36 24.5 +5.9**
PRU AMS AMS 19 54 30.0
comp=Z,1μm,14.1s
PRU Pruhonice 33.40 152 P **P** **19 30 59.6 +1.0**
PRU Pruhonice 33.40 152 *e*PcP **PcP** **19 33 40.2 +0.7**
comp=Z,1μm,14.1s
KRLC Kraliky 33.45 150 *e*P **P** **19 30 59.7 +0.6**
KRLC *e* 19 33 40.5
KRLC Kraliky 33.45 150⇑ *e*P **P** **19 30 59.7 +0.6**
KRLC *e*PCP **PcP** **19 33 40.5 +0.8**
KRLC Kraliky 33.45 150 P **P** **19 30 59.7 +0.6**
TOD Tromm 33.47 159 *e*P **P** **19 31 00.0 +0.8**
TOD Tromm 33.47 159 *e*P **P** **19 31 00.0 +0.8**
TOD Tromm 33.47 159 *e*P **P** **19 31 00.0 +0.8**
ROTZ Rotzenmuhle 33.48 155 *e*P **P** **19 31 00.2 +0.9**
comp=Z,17nm,0.8s
GRA1 Grafenberg Arr 33.50 156 *e*P **P** **19 31 00.2 +0.7**
comp=Z,300nm,18.4s
GRF Grafenberg Arr 33.50 156 *e*P **P** **19 31 00.2 +0.7**
GRF pmax pmax
comp=Z,34nm,1.0s
GRF MLR MLR
comp=Z,300nm,18.4s
GRF Grafenberg Arr 33.50 156 *e*P **P** **19 31 00.2 +0.7**
comp=Z,34nm,1.0s
GRF *e*L L 19 42 57.2
comp=Z,332nm,18.4s
GRFO Grafenberg 33.51 156 *e*P **P** **19 30 59.7 +0.2**
GRFO pmax pmax
comp=Z,27nm,0.9s
GRFO Grafenberg 33.51 156 *e*P **P** **19 30 59.7 +0.2**
comp=Z,27nm,0.9s
GRFO Grafenberg 33.51 156 *e*P **P** **19 30 59.7 +0.2**
comp=Z,27nm,0.9s
OJC Ojcow 33.52 146 *e*P **P** **19 31 00.2 +0.5**
OJC *e* 19 33 40.5
OJC pmax pmax
comp=Z,32nm,0.9s
OJC Ojcow 33.52 146 *e*P **P** **19 31 00.2 +0.5**
comp=Z,32nm,0.9s
OJC *e*PcP **PcP** **19 33 40.5 +0.6**
OJC Ojcow 33.52 146 *e*P **P** **19 31 00.1 +0.5**
OJC *e*S **S** **19 36 21.4 +0.9**
OJC Ojcow 33.52 146 *e*P **P** **19 31 00.2 +0.5**
comp=Z,32nm,0.9s
RAC Raciborz 33.54 148 *e*P **P** **19 31 00.3 +0.5**
RAC Raciborz 33.54 148 *e*P **P** **19 31 00.3 +0.5**
PPLA Purkeypile 33.58 330 *e*P **P** **19 31 01.2 +0.9**
comp=Z,94nm,1.1s
PPLA Purkeypile 33.58 330 *e*P **P** **19 31 01.2 +0.9**
comp=Z,94nm,1.1s
GAMB Gambell 33.64 346 *e*P **P** **19 31 00.1 -0.4**
comp=Z,85nm,1.1s
GAMB Gambell 33.64 346 *e*P **P** **19 31 00.1 -0.4**
comp=Z,85nm,1.1s
OKC Ostrava-Krasne 33.78 148⇑ *i*P **P** **19 31 02.5 +0.6**
OKC *e* 19 33 41.2
OKC *e*S **S** **19 36 22.4 -2.1**
OKC MLR MLR
comp=Z,600nm,13.0s
OKC Ostrava-Krasne 33.78 148⇑ *i*P **P** **19 31 02.5 +0.6**
OKC *e*PCP **PcP** **19 33 41.2 +0.6**
OKC *e*S **S** **19 36 22.4 -2.1**
OKC AMS AMS 19 53 40.0
comp=Z,600nm,13.0s
OKC Ostrava-Krasne 33.78 148 P **P** **19 31 02.5 +0.6**
MORC Moravsky Berou 33.80 149 *e*P **P** **19 31 02.3 +0.1**
MORC pmax pmax
comp=Z,34nm,1.1s
MORC Moravsky Berou 33.80 149 *e*P **P** **19 31 02.3 +0.1**
comp=Z,34nm,1.1s
MORC Moravsky Berou 33.80 149⇑ *i*P **P** **19 31 02.7 +0.5**
MORC Moravsky Berou 33.80 149 *e*P **P** **19 31 02.3 +0.1**
comp=Z,34nm,1.1s
AKASG Malin Array Be 33.82 135 P **P** **19 31 01.7 -0.5**
AKASG 19 32 18.3
AKASG 19 33 40.3
AKASG Malin Array Be 33.82 135 P **P** **19 31 01.7 -0.5**
AKASG PP **PP** **19 32 18.2 -0.3**
AKASG PcP **PcP** **19 33 40.3 -0.4**
AKASG Malin Array Be 33.82 135 P **P** **19 31 01.7 -0.5**
comp=Z,28nm,0.8s,baz=350,slow=9.4,SNR=29
AKASG PP **PP** **19 32 18.2 -0.3**
comp=Z,18nm,1.0s,baz=349,slow=12,SNR=4.5
AKASG PcP **PcP** **19 33 40.3 -0.4**
comp=Z,16nm,0.8s,baz=352,slow=3.0,SNR=16
AKASG Malin Array Be 33.82 135 P **P** **19 31 01.7 -0.5**
KIEV Kiev 33.83 135 *e*P **P** **19 31 01.6 -0.7**
KIEV pmax pmax
comp=Z,75nm,1.2s
KIEV MLR MLR
comp=Z,397nm,19.0s
KIEV Kiev 33.83 135 *e*P **P** **19 31 01.6 -0.7**
comp=Z,75nm,1.2s
KIEV LR LR
comp=Z,397nm,19.0s
KIEV Kiev 33.83 135 *e*P **P** **19 31 01.6 -0.7**
comp=Z,75nm,1.2s
AK01 Malin Array Si 33.83 135 *e*P **P** **19 31 00.7 -1.6**
AK01 Malin Array Si 33.83 135 *e*P **P** **19 31 00.7 -1.6**
AK02 Malin Array Si 33.86 135 *e*P **P** **19 31 01.8 -0.8**
AK02 Malin Array Si 33.86 135 *e*P **P** **19 31 01.8 -0.8**
FLN La Foliniere 33.99 170⇑ *i*P **P** **19 31 02.6 -1.1**
comp=Z,42nm,0.7s
FLN *e*R
comp=Z,997nm,18.8s
FLN La Foliniere 33.99 170⇑ *i*P **P** **19 31 02.6 -1.1**
FLN pmax pmax
comp=Z,42nm,0.7s
FLN La Foliniere 33.99 170⇑ *i*P **P** **19 31 02.6 -1.1**
comp=Z,42nm,0.7s
FLN La Foliniere 33.99 170⇑ *i*P **P** **19 31 02.6 -1.1**
comp=Z,21nm,0.7s
LANF Langenberg 34.05 160 *e*P **P** **19 31 04.7 +0.4**
LANF Langenberg 34.05 160 *e*P **P** **19 31 04.7 +0.4**
LANF Langenberg 34.05 160 *e*P **P** **19 31 04.7 +0.4**
LANF Langenberg 34.05 160 *e*P **P** **19 31 04.7 +0.4**
YAK Yakutsk 34.10 34 *e*P **P** **19 31 03.8 -0.8**
YAK *e**PP **pP** **19 31 12.5 +3.0**
YAK *e* 19 32 18.1
YAK *e* 19 33 40.0
YAK *e*S **S** **19 36 25.7 -3.5**
YAK *e*SS **SnSn** **19 38 33.3 -3.2**
YAK pmax pmax
comp=N,36nm,1.3s
YAK pmax pmax
comp=Z,50nm,1.0s
YAK pmax pmax
comp=E,16nm,1.1s
YAK pmax pmax
comp=Z,38nm,1.4s
YAK pmax pmax
comp=N,84nm,1.8s
YAK pmax pmax
comp=E,41nm,1.4s
YAK smax smax
comp=E,167nm,3.7s
YAK smax smax
comp=N,291nm,4.3s
YAK MLR MLR
comp=N,2μm,19.0s
YAK MLR MLR
comp=E,422nm,18.0s
YAK MLR MLR
comp=Z,3μm,22.0s
YAK Yakutsk 34.10 34 *e*P **P** **19 31 03.8 -0.8**
comp=Z,50nm,1.0s
YAK Yakutsk 34.10 34 *e*PcP **PcP** **19 33 40.0 -1.3**
WET Wettzell 34.14 154 *e*P **P** **19 31 06.0 +0.9**
WET pmax pmax
comp=Z,244nm,2.4s
WET Wettzell 34.14 154 *e*P **P** **19 31 06.0 +0.9**
comp=Z,244nm,2.4s
WET Wettzell 34.14 154 *e*P **P** **19 31 06.0 +0.9**
comp=Z,244nm,2.4s
TREC Trest 34.15 151 *e*P **P** **19 31 06.1 +1.0**
TREC *e* 19 33 42.5
TREC *e*S **S** **19 36 35.1 +4.8**
TREC MLR MLR
comp=Z,1μm,16.0s
TREC Trest 34.15 151⇑ *e*P **P** **19 31 06.1 +1.0**
TREC *e*PCP **PcP** **19 33 42.5 +0.8**
TREC *e*S **S** **19 36 35.1 +4.8**
TREC AMS AMS 19 54 30.0
comp=Z,1μm,16.0s
TREC Trest 34.15 151 P **P** **19 31 06.1 +1.0**
KHC Kasperske Hory 34.20 154⇑ *i*P **P** **19 31 06.9 +1.3**
KHC *e* 19 31 14.1
KHC *e* 19 33 42.9
KHC *e*S **S** **19 36 29.6 -1.4**
KHC MLR MLR
comp=Z,1μm,16.8s
KHC Kasperske Hory 34.20 154 *e*P **P** **19 31 06.7 +1.2**
comp=Z,118nm,2.2s
KHC Kasperske Hory 34.20 154⇑ *i*P **P** **19 31 06.9 +1.3**
KHC *ex* x 19 31 14.1
KHC *ex* x 19 31 46.0
KHC *e*PCP **PcP** **19 33 42.9 +1.0**
KHC *e*S **S** **19 36 29.6 -1.4**
KHC AMS AMS 19 54 50.0
comp=Z,1μm,16.8s
KHC Kasperske Hory 34.20 154 *i* P **P** **19 31 06.9 +1.3**
VRAC Vranov 34.20 150 P **P** **19 31 06.4 +0.8**
VRAC PcP **PcP** **19 33 42.5 +0.6**
VRAC Vranov 34.20 150⇑ *i*P **P** **19 31 06.5 +0.8**
VRAC Vranov 34.20 150 P **P** **19 31 06.4 +0.8**
comp=Z,18nm,0.8s,baz=345,slow=8.7,SNR=25
VRAC PcP **PcP** **19 33 42.5 +0.6**
comp=Z,3.2nm,0.3s,baz=138,slow=1.5,SNR=3.5
VRAC LR LR 19 45 25.7
comp=Z,500nm,18.1s,baz=252,slow=37
VRAC Vranov 34.20 150 P **P** **19 31 06.4 +0.8**
VRAC Vranov 34.20 150 PcP **PcP** **19 33 42.5 +0.6**
LVV L'vov 34.24 141 ⇓ *i*P **P** **19 31 05.9 0.0**
LVV *e* 19 32 24.9
LVV *e*S **S** **19 36 28.3 -3.4**
LVV MLR MLR
comp=Z,800nm,15.0s
LVV MLR MLR
comp=N,700nm,16.0s
LVV MLR MLR
comp=E,700nm,16.0s
LVV L'vov 34.24 141 *i* P **P** **19 31 05.9 0.0**
VSR Storozhevoye 34.31 124 *e*P **P** **19 31 05.7 -0.8**
VSR pmax pmax
comp=Z,20nm,1.1s
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR MLR MLR
comp=Z,760nm,13.0s
VSR MLR MLR
comp=N,550nm,14.0s
VSR MLR MLR
comp=E,640nm,22.0s
VSR Storozhevoye 34.31 124 *e*P **P** **19 31 05.7 -0.8**
comp=E,550nm,14.0s
STU Stuttgart 34.32 159 *e*P **P** **19 31 07.7 +1.1**
STU pmax pmax
comp=Z,64nm,1.0s
STU Stuttgart 34.32 159 *e*P **P** **19 31 07.3 +0.7**
comp=Z,59nm,0.9s
STU Stuttgart 34.32 159 *e*P **P** **19 31 07.7 +1.1**
comp=Z,64nm,1.0s
STU Stuttgart 34.32 159 *e*P **P** **19 31 07.7 +1.1**
comp=Z,64nm,1.0s
KWP Kalwaria Pacla 34.33 143 *e*P **P** **19 31 06.3 -0.4**
KWP pmax pmax
comp=Z,191nm,1.4s
KWP MLR MLR
comp=Z,446nm,19.0s
KWP Kalwaria Pacla 34.33 143 *e*P **P** **19 31 06.3 -0.4**
comp=Z,191nm,1.4s
KWP LR LR
comp=Z,446nm,19.0s
KWP Kalwaria Pacla 34.33 143⇑ *i*P **P** **19 31 07.4 +0.7**
KWP Kalwaria Pacla 34.33 143 *e*P **P** **19 31 07.3 +0.6**
KWP Kalwaria Pacla 34.33 143 *e*P **P** **19 31 06.3 -0.4**
comp=Z,191nm,1.4s
NIE Niedzica 34.35 146 *e*P **P** **19 31 08.1 +1.2**
NIE *e*S **S** **19 36 28.9 -4.6**
NIE Niedzica 34.35 146 *e*P **P** **19 31 08.1 +1.2**
NIE *e*S **S** **19 36 28.9 -4.6**
NIE Niedzica 34.35 146 *e*P **P** **19 31 08.1 +1.2**
GRR Gorron 34.36 171⇑ *i*P **P** **19 31 06.2 -0.7**
comp=Z,138nm,0.8s
GRR Gorron 34.36 171⇑ *i*P **P** **19 31 06.2 -0.7**
GRR pmax pmax
comp=Z,138nm,0.8s
GRR Gorron 34.36 171⇑ *i*P **P** **19 31 06.2 -0.7**
comp=Z,138nm,0.8s
GRR Gorron 34.36 171⇑ *i*P **P** **19 31 06.2 -0.7**
comp=Z,69nm,0.8s
PAGF Fort de Pagny 34.39 163⇑ *i*P **P** **19 31 07.9 +0.7**
comp=Z,29nm,0.8s
PAGF Fort de Pagny 34.39 163⇑ *i*P **P** **19 31 07.9 +0.7**
comp=Z,29nm,0.8s
PAGF Fort de Pagny 34.39 163⇑ *i*P **P** **19 31 07.9 +0.7**
comp=Z,15nm,0.8s
SML Sawmill 34.40 327 *e*P **P** **19 31 05.8 -1.4**
SML pmax pmax
comp=Z,37nm,0.9s
SML Sawmill 34.40 327 *e*P **P** **19 31 05.8 -1.4**
comp=Z,37nm,0.9s
SML Sawmill 34.40 327 *e*P **P** **19 31 05.8 -1.4**
comp=Z,37nm,0.9s
MEZF Maizieres J'vi 34.41 164⇑ *i*P **P** **19 31 08.0 +0.6**
comp=Z,70nm,0.9s
MEZF Maizieres J'vi 34.41 164⇑ *i*P **P** **19 31 08.0 +0.6**
comp=Z,70nm,0.9s
MEZF Maizieres J'vi 34.41 164⇑ *i*P **P** **19 31 08.0 +0.6**
comp=Z,35nm,0.9s
SEY Seymchan 34.43 15 *ce*P **P** **19 31 07.1 -0.3**
SEY Seymchan 34.43 15 *e*P **P** **19 31 07.1 -0.3**
SGMF Saint Gilles 34.46 173 *e*P **P** **19 31 07.9 +0.1**
comp=Z,53nm,1.0s
SGMF Saint Gilles 34.46 173 *e*P **P** **19 31 07.9 +0.1**
SGMF pmax pmax
comp=Z,53nm,1.0s
SGMF Saint Gilles 34.46 173 *e*P **P** **19 31 07.9 +0.1**
comp=Z,53nm,1.0s
SGMF Saint Gilles 34.46 173 *e*P **P** **19 31 07.9 +0.1**
comp=Z,27nm,1.0s
GEC2 GERESS Array S 34.49 153 *e*P **P** **19 31 09.5 +1.3**
GEC2 GERESS Array S 34.49 153 *e*P **P** **19 31 09.2 +1.1**
comp=Z,35nm,1.3s
GEC2 GERESS Array S 34.49 153 *e*P **P** **19 31 09.5 +1.3**
GEC2 GERESS Array S 34.49 153 *e*P **P** **19 31 09.5 +1.3**
GERES GERESS Array B 34.49 153 P **P** **19 31 09.3 +1.1**
GERES PcP **PcP** **19 33 43.2 +0.4**
GERES GERESS Array B 34.49 153 P **P** **19 31 09.3 +1.1**
comp=Z,7.0nm,0.7s,baz=5.2,slow=7.4,SNR=58
GERES PcP **PcP** **19 33 43.2 +0.4**
comp=Z,6.4nm,0.9s,baz=9.5,slow=1.6,SNR=6.3
GERES LR LR 19 45 10.4
comp=Z,333nm,19.1s,baz=351,slow=36
GERES GERESS Array B 34.49 153 P **P** **19 31 09.3 +1.1**
GERES GERESS Array B 34.49 153 PcP **PcP** **19 33 43.2 +0.4**
VORD Divnogorie 34.58 124 *e*P **P** **19 31 07.0 -1.8**
VORD pmax pmax
comp=N,40nm,1.3s
VORD pmax pmax
comp=Z,30nm,1.3s
VORD pmax pmax
comp=E,20nm,0.5s
VORD MLR MLR
comp=Z,670nm,12.0s
VORD MLR MLR
comp=N,750nm,13.0s
VORD MLR MLR
comp=E,340nm,10.0s
VORD Divnogorie 34.58 124 *e*P **P** **19 31 07.0 -1.8**
comp=E,750nm,13.0s
CDF Champ du Feu 34.59 161⇑ *i*P **P** **19 31 09.6 +0.5**
comp=E,125nm,0.9s
CDF Champ du Feu 34.59 161⇑ *i*P **P** **19 31 09.6 +0.5**
CDF pmax pmax
comp=Z,125nm,0.9s
CDF Champ du Feu 34.59 161⇑ *i*P **P** **19 31 09.6 +0.5**
comp=Z,125nm,0.9s
CDF Champ du Feu 34.59 161⇑ *i*P **P** **19 31 09.6 +0.5**
comp=Z,62nm,0.9s
PMR Palmer 34.67 328 *e*P **P** **19 31 08.9 -0.6**
PMR pmax pmax
comp=Z,70nm,1.3s
PMR Palmer 34.67 328 *e*P **P** **19 31 08.9 -0.6**
comp=Z,70nm,1.3s
PMR Palmer 34.67 328 *e*P **P** **19 31 08.9 -0.6**
comp=Z,70nm,1.3s
VRHR Novokhopersk 34.70 121 *e*P **P** **19 31 08.4 -1.5**
VRHR *e**PP **pP** **19 31 14.4 -0.4**
VRHR *e* 19 33 43.1
VRHR *e*S **S** **19 36 36.4 -2.3**
VRHR *e*SSS SSS 19 39 20.7
VRHR pmax pmax
comp=E,10.0nm,1.0s
VRHR pmax pmax
comp=Z,40nm,1.0s
VRHR pmax pmax
comp=N,30nm,0.7s
VRHR smax smax
comp=E,60nm,1.8s
VRHR smax smax
comp=Z,8.0nm,0.9s
VRHR smax smax
comp=N,60nm,1.9s
VRHR MLR MLR
comp=N,650nm,11.0s
VRHR MLR MLR
comp=Z,920nm,11.0s
VRHR MLR MLR
comp=E,1μm,13.0s

VRHR Novokhopersk 34.70 121 *e*P **P** **19 31 08.4 -1.5**
comp=E,30nm,0.7s
VRHR Novokhopersk 34.70 121 *e*PcP **PcP** **19 33 43.1 -0.1**
SFTF Sexfontaines 34.71 164⇑*i*P **P** **19 31 10.2 +0.2**
comp=E,152nm,1.4s
SFTF Sexfontaines 34.71 164⇑*i*P **P** **19 31 10.2 +0.2**
comp=E,152nm,1.4s
SFTF Sexfontaines 34.71 164⇑*i*P **P** **19 31 10.2 +0.2**
comp=E,76nm,1.4s
BFO Black Forest 34.72 160 *e*P **P** **19 31 10.8 +0.7**
BFO *e* 19 33 43.4
BFO pmax pmax
comp=Z,50nm,0.9s
BFO Black Forest 34.72 160 *e*P **P** **19 31 10.8 +0.7**
comp=Z,50nm,0.9s
BFO *e*PcP **PcP** **19 33 43.4 0.0**
BFO Black Forest 34.72 160 *e*P **P** **19 31 11.0 +0.9**
comp=Z,44nm,0.9s
BFO *e*PcP **PcP** **19 33 44.1 +0.8**
BFO LR LR
comp=Z,586nm,19.0s
BFO Black Forest 34.72 160 *e*P **P** **19 31 10.8 +0.7**
comp=Z,50nm,0.9s
THEF They Montfort 34.73 163 *e*P **P** **19 31 10.7 +0.6**
THEF They Montfort 34.73 163 *e*P **P** **19 31 10.7 +0.6**
THEF They Montfort 34.73 163 *e*P **P** **19 31 10.7 +0.6**
THEF They Montfort 34.73 163 *e*P **P** **19 31 10.7 +0.6**
ECH Echery 34.78 161 *e*P **P** **19 31 10.6 -0.1**
ECH pmax pmax
comp=Z,74nm,0.8s
ECH MLR MLR
comp=Z,421nm,20.0s
ECH Echery 34.78 161 *e*P **P** **19 31 10.6 -0.1**
comp=Z,74nm,0.8s
ECH LR LR
comp=Z,421nm,20.0s
ECH Echery 34.78 161 *e*P **P** **19 31 11.2 +0.5**
ECH Echery 34.78 161 *e*P **P** **19 31 11.2 +0.5**
QUIF Quistinic 34.79 173 *e*P **P** **19 31 10.5 -0.1**
QUIF Quistinic 34.79 173 *e*P **P** **19 31 10.5 -0.1**
QUIF Quistinic 34.79 173 *e*P **P** **19 31 10.5 -0.1**
QUIF Quistinic 34.79 173 *e*P **P** **19 31 10.5 -0.1**
LIBD Limburg 34.87 161 *e*P **P** **19 31 11.7 +0.4**
LIBD Limburg 34.87 161 *e*P **P** **19 31 11.7 +0.4**
LIBD Limburg 34.87 161 *e*P **P** **19 31 11.7 +0.4**
DIV Divide 34.89 325 *e*P **P** **19 31 12.2 +0.7**
comp=Z,82nm,1.4s
DIV Divide 34.89 325 *e*P **P** **19 31 12.2 +0.7**
comp=Z,82nm,1.4s
CRVS Cervenica-Dubn 34.95 145 *e*P **P** **19 31 11.1 -1.0**
CRVS pmax pmax
comp=Z,36nm,1.8s
CRVS Cervenica-Dubn 34.95 145 *e*P **P** **19 31 11.0 -1.0**
CRVS *e*PCP **PcP** **19 33 43.5 -0.5**
CRVS Cervenica-Dubn 34.95 145 *e*P **P** **19 31 11.1 -1.0**
comp=Z,36nm,1.8s
HAU Haudompre 34.96 162⇑*i*P **P** **19 31 12.6 +0.4**
comp=Z,93nm,0.8s
HAU *e*R
comp=Z,764nm,19.2s
HAU Haudompre 34.96 162⇑*i*P **P** **19 31 12.6 +0.4**
HAU pmax pmax
comp=Z,93nm,0.8s
HAU Haudompre 34.96 162⇑*i*P **P** **19 31 12.6 +0.4**
comp=Z,93nm,0.8s
HAU Haudompre 34.96 162⇑*i*P **P** **19 31 12.6 +0.4**
comp=Z,47nm,0.8s
SPAK Spaichingen-Ko 34.97 159 *e*P **P** **19 31 13.4 +1.1**
SPAK Spaichingen-Ko 34.97 159 *e*P **P** **19 31 13.4 +1.1**
KOLS Kolonicke sedl 34.98 144 *e*P **P** **19 31 12.9 +0.5**
KOLS pmax pmax
comp=Z,24nm,0.9s
KOLS Kolonicke sedl 34.98 144 *e*P **P** **19 31 12.9 +0.5**
KOLS *e*PCP **PcP** **19 33 44.2 +0.1**
KOLS Kolonicke sedl 34.98 144 *e*P **P** **19 31 12.9 +0.5**
comp=Z,24nm,0.9s
FUR Furstenfeldbru 35.03 156 *e*P **P** **19 31 13.7 +0.9**
FUR *e* 19 33 44.4
FUR pmax pmax
comp=Z,31nm,1.0s
FUR Furstenfeldbru 35.03 156 *e*P **P** **19 31 13.7 +0.9**
comp=Z,31nm,1.0s
FUR *e*PcP **PcP** **19 33 44.4 +0.1**
FUR Furstenfeldbru 35.03 156 *e*P **P** **19 31 13.7 +0.9**
comp=Z,31nm,1.0s
SMOL Smolenice 35.05 149 *e*P **P** **19 31 14.6 +1.6**
SMOL *e* 19 33 45.9
SMOL Smolenice 35.05 149 *e*P **P** **19 31 14.5 +1.6**
SMOL *e*PCP **PcP** **19 33 45.9 +1.6**
SMOL Smolenice 35.05 149 *e*P **P** **19 31 14.6 +1.6**
MOF Molkenrain 35.15 161 *e*P **P** **19 31 14.3 +0.4**
MOF Molkenrain 35.15 161 *e*P **P** **19 31 14.3 +0.4**
MOF Molkenrain 35.15 161 *e*P **P** **19 31 14.3 +0.4**
MOF Molkenrain 35.15 161 *e*P **P** **19 31 14.3 +0.4**
FELD Feldberg im Sc 35.16 160 *e*P **P** **19 31 14.7 +0.7**
FELD Feldberg im Sc 35.16 160 *e*P **P** **19 31 14.7 +0.7**
FELD Feldberg im Sc 35.16 160 *e*P **P** **19 31 14.7 +0.7**
VYHS Vyhne 35.17 148 *e*P **P** **19 31 14.4 +0.5**
VYHS pmax pmax
comp=Z,12nm,1.1s
VYHS Vyhne 35.17 148 *e*P **P** **19 31 14.4 +0.5**
VYHS *e*PCP **PcP** **19 33 45.3 +0.7**
VYHS Vyhne 35.17 148 *e*P **P** **19 31 14.4 +0.5**
comp=Z,12nm,1.1s
HINF Hinteralfeld 35.17 162⇑*i*P **P** **19 31 14.3 +0.3**
comp=Z,45nm,0.9s
HINF Hinteralfeld 35.17 162⇑*i*P **P** **19 31 14.3 +0.3**
HINF pmax pmax
comp=Z,45nm,0.9s
HINF Hinteralfeld 35.17 162⇑*i*P **P** **19 31 14.3 +0.3**
comp=Z,45nm,0.9s
HINF Hinteralfeld 35.17 162⇑*i*P **P** **19 31 14.3 +0.3**
comp=Z,22nm,0.9s
SPU Mount Spurr 35.28 330 *e*P **P** **19 31 14.3 -0.5**
SPU *e*PcP **PcP** **19 33 45.1 +0.3**
SPU Mount Spurr 35.28 330 *e*P **P** **19 31 14.3 -0.5**
UZH Uzhgorod 35.29 144⇑*i*P **P** **19 31 14.0 -0.9**
UZH *e*S **S** **19 36 44.0 -3.7**
UZH *i* 19 39 11.0
UZH Uzhgorod 35.29 144 *i* P **P** **19 31 14.0 -0.9**
ZST Bratislava 35.34 150 *e*P **P** **19 31 15.7 +0.3**
ZST pmax pmax
comp=Z,21nm,1.1s
ZST Bratislava 35.34 150 *e*P **P** **19 31 15.7 +0.3**
ZST *e*PCP **PcP** **19 33 45.4 +0.3**
ZST Bratislava 35.34 150 *e*P **P** **19 31 15.7 +0.3**
comp=Z,21nm,1.1s
MOA Molln 35.51 153 *i* P **P** **19 31 17.7 +0.8**
comp=Z,53nm,1.7s,SNR=16
MOA Molln 35.51 153 P **P** **19 31 17.7 +0.8**
comp=Z,53nm,1.7s,SNR=16
CONA Conrad Observa 35.53 151⇑*i*pP **P** **19 31 17.9 +0.8**
comp=Z,36nm,1.5s,SNR=23
RAGM Ragged Mountai 35.54 324 *e*P **P** **19 31 19.0 +1.9**
comp=Z,312nm,1.7s
RAGM Ragged Mountai 35.54 324 *e*P **P** **19 31 19.0 +1.9**
comp=Z,312nm,1.7s
RJOB Jochberg 35.54 155 *e*P **P** **19 31 18.2 +1.0**
comp=Z,18nm,1.0s
RJOB *e*PcP **PcP** **19 33 45.9 +0.1**
BBS Basel-Blauen 35.55 161 *e*P **P** **19 31 17.9 +0.6**
BBS Basel-Blauen 35.55 161 *e*P **P** **19 31 17.9 +0.6**
BBS Basel-Blauen 35.55 161 *e*P **P** **19 31 17.9 +0.6**
HYF Humbligny 35.57 167⇑*i*P **P** **19 31 17.5 +0.1**
HYF Humbligny 35.57 167⇑*i*P **P** **19 31 17.5 +0.1**
HYF Humbligny 35.57 167⇑*i*P **P** **19 31 17.5 +0.1**
SVW2 Sparrevohn 35.59 333 *e*P **P** **19 31 18.3 +0.9**
comp=Z,83nm,1.0s
SVW2 Sparrevohn 35.59 333 *e*P **P** **19 31 18.3 +0.9**
comp=Z,83nm,1.0s
LOR Lormes 35.61 165⇑*i*P **P** **19 31 17.6 -0.1**
comp=Z,82nm,0.8s
LOR *e*R
comp=Z,510nm,18.5s
LOR Lormes 35.61 165⇑*i*P **P** **19 31 17.6 -0.1**
comp=Z,82nm,0.8s
LOR Lormes 35.61 165⇑*i*P **P** **19 31 17.6 -0.1**
comp=Z,41nm,0.8s
LOMF Lomont 35.63 162 *e*P **P** **19 31 18.5 +0.5**
LOMF Lomont 35.63 162 *e*P **P** **19 31 18.5 +0.5**
LOMF Lomont 35.63 162 *e*P **P** **19 31 18.5 +0.5**
LOMF Lomont 35.63 162 *e*P **P** **19 31 18.5 +0.5**
SKAG Skagway 35.66 315 *e*P **P** **19 31 19.3 +1.3**
comp=Z,21nm,1.0s
SKAG Skagway 35.66 315 *e*P **P** **19 31 19.3 +1.3**
comp=Z,21nm,1.0s
RETA Reutte 35.68 157⇑*i*pP **P** **19 31 19.4 +1.0**
comp=Z,20nm,1.3s
SSF Saint Saulge 35.80 166⇑*i*P **P** **19 31 19.4 0.0**
comp=Z,121nm,0.8s
SSF Saint Saulge 35.80 166⇑*i*P **P** **19 31 19.4 0.0**
SSF pmax pmax
comp=Z,121nm,0.8s
SSF Saint Saulge 35.80 166⇑*i*P **P** **19 31 19.4 0.0**
comp=Z,121nm,0.8s
SSF Saint Saulge 35.80 166⇑*i*P **P** **19 31 19.4 0.0**
comp=Z,60nm,0.8s
TRPA Tarpa 35.80 143⇑*i*P **P** **19 31 20.1 +0.7**
TRPA Tarpa 35.80 143⇑*e*P **P** **19 31 20.1 +0.7**
PSZ Piszkesteto 35.81 147 *e*P **P** **19 31 20.7 +1.1**
PSZ pmax pmax
comp=Z,74nm,1.4s
PSZ Piszkesteto 35.81 147 *e*P **P** **19 31 20.7 +1.1**
comp=Z,74nm,1.4s
PSZ Piszkesteto 35.81 147⇑*i*P **P** **19 31 19.2 -0.4**
PSZ Piszkesteto 35.81 147⇑*e*P **P** **19 31 20.1 +0.5**
PSZ Piszkesteto 35.81 147⇑*i*P **P** **19 31 19.2 -0.4**
SOP Sopron 35.82 150⇑*e*P **P** **19 31 20.6 +1.1**
DAVA Damuels 35.84 158⇑*i*pP **P** **19 31 20.8 +0.9**
comp=Z,43nm,1.6s,SNR=9.7
MOTA Moosalm 35.84 157⇑*i*pP **P** **19 31 20.8 +0.9**
comp=Z,13nm,0.7s,SNR=14
WATA Walderalm 35.87 156⇑*i*P **P** **19 31 20.5 +0.3**
comp=Z,12nm,0.9s,SNR=7.0
WATA Walderalm 35.87 156 P **P** **19 31 20.5 +0.3**
comp=Z,12nm,0.9s,SNR=7.0
WTTA Wattenberg 35.95 156⇑*i*pP **P** **19 31 21.9 +1.1**
comp=Z,27nm,1.7s,SNR=12
RSO Redoubt South 36.04 330 *e*P **P** **19 31 21.2 -0.4**
RSO *e*PcP **PcP** **19 33 47.9 +0.7**
RSO Redoubt South 36.04 330 *e*P **P** **19 31 21.2 -0.4**
AVF Avril sur Loir 36.07 166⇑*i*P **P** **19 31 21.6 0.0**
comp=Z,174nm,0.9s
AVF Avril sur Loir 36.07 166⇑*i*P **P** **19 31 21.6 0.0**
AVF pmax pmax
comp=Z,175nm,0.9s
AVF Avril sur Loir 36.07 166⇑*i*P **P** **19 31 21.6 0.0**
comp=Z,174nm,0.9s
AVF Avril sur Loir 36.07 166⇑*i*P **P** **19 31 21.6 0.0**
comp=Z,87nm,0.9s
FETA Feichten 36.14 157⇓*i*pP **P** **19 31 23.5 +1.0**
comp=Z,26nm,2.1s,SNR=6.8
DLBC Dease Lake 36.16 310 *e*P **P** **19 31 23.2 +0.8**
DLBC Dease Lake 36.16 310 *e*P **P** **19 31 23.2 +0.8**
MFF Saint Martin d 36.16 170⇑*i*P **P** **19 31 22.2 -0.2**
comp=Z,108nm,1.1s
MFF Saint Martin d 36.16 170⇑*i*P **P** **19 31 22.2 -0.2**
MFF pmax pmax
comp=Z,108nm,1.1s
MFF Saint Martin d 36.16 170⇑*i*P **P** **19 31 22.2 -0.2**
comp=Z,108nm,1.1s
MFF Saint Martin d 36.16 170⇑*i*P **P** **19 31 22.2 -0.2**
comp=Z,54nm,1.1s
SEW Seward 36.17 327 *e*P **P** **19 31 22.8 +0.4**
comp=Z,41nm,0.9s
SEW *e*PcP **PcP** **19 33 48.5 +1.1**
SEW Seward 36.17 327 *e*P **P** **19 31 22.8 +0.4**
comp=Z,41nm,0.9s
ARSA Arzberg 36.19 152⇑*i*pP **P** **19 31 23.9 +1.2**
comp=Z,22nm,2.1s,SNR=7.0
BUD Budapest 36.19 148⇑*e*P **P** **19 31 22.9 +0.3**
KBA Koelnbreinsper 36.23 154⇓*i*pP **P** **19 31 24.7 +1.5**
comp=Z,29nm,1.2s,SNR=8.0
SMF Signal de Mont 36.23 165⇑*i*P **P** **19 31 22.7 -0.4**
comp=Z,54nm,0.8s
SMF Signal de Mont 36.23 165⇑*i*P **P** **19 31 22.7 -0.4**
SMF pmax pmax
comp=Z,54nm,0.8s
SMF Signal de Mont 36.23 165⇑*i*P **P** **19 31 22.7 -0.4**
comp=Z,54nm,0.8s
SMF Signal de Mont 36.23 165⇑*i*P **P** **19 31 22.7 -0.4**
comp=Z,27nm,0.8s
PKSG 36.23 148⇑*e*P **P** **19 31 24.2 +1.2**
BGF Bois d'Agland 36.28 166⇑*i*P **P** **19 31 23.6 +0.1**
comp=Z,338nm,0.9s
BGF Bois d'Agland 36.28 166⇑*i*P **P** **19 31 23.6 +0.1**
BGF pmax pmax
comp=Z,338nm,0.9s
BGF Bois d'Agland 36.28 166⇑*i*P **P** **19 31 23.6 +0.1**
comp=Z,338nm,0.9s
BGF Bois d'Agland 36.28 166⇑*i*P **P** **19 31 23.6 +0.1**
comp=Z,169nm,0.9s
NVS Novosibirsk 36.29 78 *e*P **P** **19 31 24.8 +1.3**
NVS *e*S S 19 37 10.2 +7.2
NVS pmax pmax
comp=Z,57nm,1.5s
NVS pmax pmax
comp=N,22nm,1.4s
NVS pmax pmax
comp=E,5.0nm,1.4s
NVS smax smax
comp=N,36nm,2.8s
NVS smax smax
comp=E,24nm,2.2s
NVS Novosibirsk 36.29 78 *e*P **P** **19 31 24.8 +1.3**
comp=E,57nm,1.5s
PKST T"s 36.34 149⇑*e*P **P** **19 31 24.8 +0.8**
CABF La Chapelle 36.34 163⇑*i*P **P** **19 31 24.5 +0.4**
comp=E,138nm,0.9s
CABF La Chapelle 36.34 163⇑*i*P **P** **19 31 24.5 +0.4**
CABF pmax pmax
comp=Z,138nm,0.9s
CABF La Chapelle 36.34 163⇑*i*P **P** **19 31 24.5 +0.4**
comp=Z,138nm,0.9s
CABF La Chapelle 36.34 163⇑*i*P **P** **19 31 24.5 +0.4**
comp=Z,69nm,0.9s
BRVK Borovoye 36.35 91*c i*P **P** **19 31 25.0 +1.0**
BRVK pmax pmax
comp=Z,77nm,2.5s
BRVK Borovoye 36.35 91 *e*P **P** **19 31 25.3 +1.3**
comp=Z,317nm,2.4s
BRVK LR LR
comp=Z,3µm,20.0s
BRVK Borovoye 36.35 91 P **P** **19 31 25.8 +1.8**
SNR=29
BRVK Borovoye 36.35 91 P **P** **19 31 25.8 +1.8**
SNR=29
BUR08 Bucovina Ar. S 36.50 141 *e*P **P** **19 31 25.6 +0.1**
BUR08 Bucovina Ar. S 36.50 141 *e*P **P** **19 31 25.6 +0.1**
FUORN Ofenpass-Fuorn 36.52 158 *e*P **P** **19 31 27.2 +1.4**
comp=Z,21nm,1.0s
FUORN *e*PcP **PcP** **19 33 50.2 +1.2**
FUORN Ofenpass-Fuorn 36.52 158 *e*P **P** **19 31 27.2 +1.4**
comp=Z,21nm,1.0s
BURAR Bucovina Array 36.53 141⇑*i*P **P** **19 31 26.0 +0.3**
TCF Toulx Ste Croi 36.53 167⇑*i*P **P** **19 31 25.5 -0.2**
comp=Z,198nm,0.9s
TCF Toulx Ste Croi 36.53 167⇑*i*P **P** **19 31 25.5 -0.2**
TCF pmax pmax
comp=Z,198nm,0.9s
TCF Toulx Ste Croi 36.53 167⇑*i*P **P** **19 31 25.5 -0.2**
comp=Z,198nm,0.9s
TCF Toulx Ste Croi 36.53 167⇑*i*P **P** **19 31 25.5 -0.2**
comp=Z,99nm,0.9s
FFC Flin Flon 36.55 283 *i* P **P** **19 31 25.8 +0.1**
FFC Flin Flon 36.55 283 *e*P **P** **19 31 25.3 -0.4**
comp=Z,21nm,1.4s
FFC Flin Flon 36.55 283 *i* P **P** **19 31 25.8 +0.1**
TUE Stuetta 36.62 159 *e*P **P** **19 31 28.1 +1.5**
comp=Z,40nm,0.8s
TUE *e*PcP **PcP** **19 33 50.0 +0.7**
TUE Stuetta 36.62 159 *e*P **P** **19 31 28.1 +1.5**
comp=Z,40nm,0.8s
SENIN Lac Senin/Sane 36.64 161 *e*P **P** **19 31 27.9 +1.2**
comp=Z,28nm,0.8s
SENIN Lac Senin/Sane 36.64 161 *e*P **P** **19 31 28.0 +1.2**
comp=Z,28nm,0.8s
OG01 Vacheresse 36.65 162 *e*P **P** **19 31 27.2 +0.5**
OG01 Vacheresse 36.65 162 *e*P **P** **19 31 27.2 +0.5**
OG01 Vacheresse 36.65 162 *e*P **P** **19 31 27.2 +0.5**
MYKA Terra Mystica 36.69 154⇓*i*pP **P** **19 31 28.3 +1.2**
comp=Z,26nm,1.0s
SOKA Soboth 36.73 152⇑*i*pP **P** **19 31 28.5 +1.1**
comp=Z,25nm,1.2s
PERS Pernice 36.77 152 *i* P **P** **19 31 28.8 +1.0**
PERS *e* 19 31 42.8
AGO Saint Agoulin 36.80 166 *e*P **P** **19 31 28.2 +0.3**
AGO Saint Agoulin 36.80 166 *e*P **P** **19 31 28.2 +0.3**
AGO Saint Agoulin 36.80 166 *e*P **P** **19 31 28.2 +0.3**
OBKA Obir 36.87 153 *i*pP **P** **19 31 30.0 +1.4**
comp=Z,96nm,1.6s,SNR=22
GROS Grobnik 36.97 152 *i* P **P** **19 31 30.2 +0.7**
PKS9 Tamasi 37.03 149⇓*e*P **P** **19 31 31.3 +1.5**
KOGS Kog 37.03 151 *i* P **P** **19 31 30.6 +0.8**
KOGS *e*S **S** **19 37 19.5 +5.1**
KOGS *e*SS **SS** **19 39 55.1 -1.1**
BEHE Becsehely 37.04 150⇑*e*P **P** **19 31 31.5 +1.5**
VERF Verneugheol 37.08 167 *e*P **P** **19 31 30.7 +0.3**
VERF Verneugheol 37.08 167 *e*P **P** **19 31 30.7 +0.3**
VERF Verneugheol 37.08 167 *e*P **P** **19 31 30.7 +0.3**
PYM Petit Puy Mans 37.09 166 *e*P **P** **19 31 31.4 +0.9**
PYM Petit Puy Mans 37.09 166 *e*P **P** **19 31 31.4 +0.9**
PYM Petit Puy Mans 37.09 166 *e*P **P** **19 31 31.4 +0.9**
PYM Petit Puy Mans 37.09 166 *e*P **P** **19 31 31.4 +0.9**
CADS Cadrg 37.10 154 *i* P **P** **19 31 30.8 +0.3**
DRGR 37.15 144⇑*i*P **P** **19 31 31.5 +0.6**
PKS2 Kecel 37.19 148⇑*e*P **P** **19 31 32.6 +1.4**
RSL Roselend 37.29 162 *e*P **P** **19 31 33.0 +0.8**
RSL Roselend 37.29 162 *e*P **P** **19 31 33.0 +0.8**
RSL Roselend 37.29 162 *e*P **P** **19 31 33.0 +0.8**
RSL Roselend 37.29 162 *e*P **P** **19 31 33.0 +0.8**
VOY Vojsko 37.30 154 *e*P **P** **19 31 32.6 +0.3**
VOY *e* 19 31 38.2
LJU Ljubljana 37.33 153 *e*P **P** **19 31 33.4 +1.0**
LJU *e*PP PnPn 19 33 07.3 +9.3
AKTK Aktyubinsk 37.33 104 P **P** **19 31 32.8 +0.4**
AKTK Aktyubinsk 37.33 104 PcP **PcP** **19 33 51.7 +0.6**
AKTO Aktyubinsk 37.33 104 P **P** **19 31 32.8 +0.5**
AKTO 19 32 59.3
AKTO 19 33 51.7
AKTO Aktyubinsk 37.33 104 P **P** **19 31 32.8 +0.5**
AKTO PP **PnPn** **19 32 59.3 +1.4**
AKTO PcP **PcP** **19 33 51.7 +0.6**
AKTO Aktyubinsk 37.33 104 P **P** **19 31 32.8 +0.5**
comp=Z,34nm,1.0s,baz=350,slow=8.2,SNR=74
AKTO PP **PnPn** **19 32 59.3 +1.4**
comp=Z,16nm,1.0s,baz=325,slow=8.4,SNR=3.6
AKTO PcP **PcP** **19 33 51.7 +0.6**
comp=Z,22nm,0.9s,baz=345,slow=1.7,SNR=4.4
AKTO Aktyubinsk 37.33 104 P **P** **19 31 32.8 +0.5**
ZAA0 Zalesovo Array 37.37 76 *e*P **P** **19 31 32.8 +0.2**
ZAA0 Zalesovo Array 37.37 76 *e*P **P** **19 31 32.8 +0.2**
ZALV Zalesovo Beam 37.37 76 P **P** **19 31 33.3 +0.7**
ZALV 19 33 04.6
ZALV 19 33 51.4
ZALV Zalesovo Beam 37.37 76 P **P** **19 31 33.3 +0.7**
ZALV PP **PnPn** **19 33 04.6 +6.3**
ZALV PcP **PcP** **19 33 51.4 +0.3**
ZALV PKiKP **PKiKP** **19 41 06.0 -1.2**
ZALV Zalesovo Beam 37.37 76 P **P** **19 31 33.3 +0.7**
comp=Z,16nm,0.8s,baz=346,slow=7.8,SNR=52
ZALV PP **PnPn** **19 33 04.6 +6.3**
comp=Z,9.2nm,1.0s,baz=352,slow=7.9,SNR=4.2
ZALV PcP **PcP** **19 33 51.4 +0.3**
comp=Z,11nm,0.9s,baz=254,slow=2.5,SNR=6.9
ZALV PKiKP **PKiKP** **19 41 06.0 -1.2**
comp=Z,1.9nm,0.6s,baz=280,slow=1.7,SNR=8.1
ZALV LR LR 19 50 04.0
comp=Z,3µm,18.8s,baz=162,slow=41
ZALV Zalesovo Beam 37.37 76 P **P** **19 31 33.3 +0.7**
PKSM Moragy 37.42 148⇓*i*P **P** **19 31 33.1 -0.1**
PKSM Moragy 37.42 148⇑*e*P **P** **19 31 33.9 +0.7**
FRNF Fournols 37.45 167 *e*P **P** **19 31 33.9 +0.5**
FRNF Fournols 37.45 167 *e*P **P** **19 31 33.9 +0.5**
FRNF Fournols 37.45 167 *e*P **P** **19 31 33.9 +0.5**
KIS Kishinev 37.46 137 *e*P **P** **19 31 31.0 -2.4**
KIS *e* 19 33 28.0
KIS *e*S **S** **19 37 19.0 -1.9**
KIS *e* 19 40 28.0
KIS MLR MLR
comp=N,600nm,12.0s
KIS MLR MLR
comp=Z,600nm,12.0s
KIS MLR MLR
comp=Z,700nm,14.0s
KIS Kishinev 37.46 137 *e*P **P** **19 31 31.0 -2.4**
KIS *e*S **S** **19 37 19.0 -1.9**
KIS *e*SS SS 19 38 50.0 -75
KIS LRM MLR 19 47 16.0
comp=Z,700nm,14.0s
KIS Kishinev 37.46 137 *e*P **P** **19 31 31.0 -2.4**
KIS *e*S **S** **19 37 19.0 -1.9**
LPL La Plagne 37.46 162⇑*i*P **P** **19 31 34.9 +1.1**
comp=Z,124nm,0.8s
LPL La Plagne 37.46 162⇑*i*P **P** **19 31 34.9 +1.1**
LPL pmax pmax
comp=Z,124nm,0.8s
LPL La Plagne 37.46 162⇑*i*P **P** **19 31 34.9 +1.1**
comp=Z,124nm,0.8s
LPL La Plagne 37.46 162⇑*i*P **P** **19 31 34.9 +1.1**
comp=Z,62nm,0.8s
LPG La Plagne 37.48 162⇑*i*P **P** **19 31 35.2 +1.1**
comp=Z,124nm,0.8s
LPG La Plagne 37.48 162⇑*i*P **P** **19 31 35.2 +1.1**
LPG pmax pmax
comp=Z,124nm,0.8s
LPG La Plagne 37.48 162⇑*i*P **P** **19 31 35.2 +1.1**
comp=Z,124nm,0.8s
LPG La Plagne 37.48 162⇑*i*P **P** **19 31 35.2 +1.1**
comp=Z,62nm,0.8s
RJF Les Rejaudoux 37.50 168⇑*i*P **P** **19 31 33.9 0.0**
comp=Z,370nm,0.8s
RJF *e*R
comp=Z,946nm,21.5s
RJF Les Rejaudoux 37.50 168⇑*i*P **P** **19 31 33.9 0.0**
RJF pmax pmax
comp=Z,370nm,0.8s
RJF Les Rejaudoux 37.50 168⇑*i*P **P** **19 31 33.9 0.0**
comp=Z,370nm,0.8s
RJF Les Rejaudoux 37.50 168⇑*i*P **P** **19 31 33.9 0.0**
comp=Z,185nm,0.8s
SSB Saint Sauveur 37.62 165 *e*P **P** **19 31 35.0 +0.1**
SSB pmax pmax
comp=Z,31nm,0.8s
SSB Saint Sauveur 37.62 165 *e*P **P** **19 31 35.0 +0.1**
comp=Z,31nm,0.8s
SSB Saint Sauveur 37.62 165 *e*P **P** **19 31 35.2 +0.3**
SSB Saint Sauveur 37.62 165 *e*P **P** **19 31 35.2 +0.3**
TRI Trieste 37.62 154 *e*P **P** **19 31 34.9 +0.1**
TRI Trieste 37.62 154 *e*P **P** **19 31 34.9 +0.1**
TRI Trieste 37.62 154 *e*P **P** **19 31 34.9 +0.1**
LBL Lubilhac 37.62 166 *e*P **P** **19 31 35.5 +0.5**
LBL Lubilhac 37.62 166 *e*P **P** **19 31 35.5 +0.5**
LBL Lubilhac 37.62 166 *e*P **P** **19 31 35.5 +0.5**
LBL Lubilhac 37.62 166 *e*P **P** **19 31 35.5 +0.5**
TESR Tescani 37.75 139⇑*i*P **P** **19 31 36.0 +0.1**
LFF La Frestale 37.84 169⇑*i*P **P** **19 31 36.9 +0.2**
comp=Z,87nm,1.1s
LFF La Frestale 37.84 169⇑*i*P **P** **19 31 36.9 +0.2**
LFF pmax pmax
comp=Z,87nm,1.1s
LFF La Frestale 37.84 169⇑*i*P **P** **19 31 36.9 +0.2**
comp=Z,87nm,1.1s
LFF La Frestale 37.84 169⇑*i*P **P** **19 31 36.9 +0.2**
comp=Z,44nm,1.1s
CAF Calviac 37.89 167⇑*i*P **P** **19 31 37.3 +0.1**
comp=Z,86nm,0.8s
CAF Calviac 37.89 167⇑*i*P **P** **19 31 37.3 +0.1**
CAF pmax pmax
comp=Z,86nm,0.8s
CAF Calviac 37.89 167⇑*i*P **P** **19 31 37.3 +0.1**
comp=Z,86nm,0.8s
CAF Calviac 37.89 167⇑*i*P **P** **19 31 37.3 +0.1**
comp=Z,43nm,0.8s
BOJS Bojanci 37.91 152 *e*P **P** **19 31 37.8 +0.5**
BOJS *e*S **S** **19 37 31.1 +3.3**
ORIF Oris-en-Rattie 38.03 163⇑*i*P **P** **19 31 38.9 +0.5**
comp=Z,110nm,0.8s
ORIF *e*R
comp=Z,563nm,17.2s
ORIF Oris-en-Rattie 38.03 163⇑*i*P **P** **19 31 38.9 +0.5**
ORIF pmax pmax
comp=Z,110nm,0.8s
ORIF Oris-en-Rattie 38.03 163⇑*i*P **P** **19 31 38.9 +0.5**
comp=Z,110nm,0.8s
ORIF Oris-en-Rattie 38.03 163⇑*i*P **P** **19 31 38.9 +0.5**
comp=Z,55nm,0.8s
VIVF Saint-Julien-l 38.04 164⇑*i*P **P** **19 31 39.0 +0.5**
comp=Z,105nm,0.9s
VIVF Saint-Julien-l 38.04 164⇑*i*P **P** **19 31 39.0 +0.5**
VIVF pmax pmax
comp=Z,105nm,0.9s
VIVF Saint-Julien-l 38.04 164⇑*i*P **P** **19 31 39.0 +0.5**
comp=Z,105nm,0.9s

VIVF	Saint-Julien-I	38.04	164	⇑	*i*	P	P	19 31 39.0	+0.5
	comp=Z,53nm,0.9s								
BZS	Buzias	38.23	145	⇑	*i*	P	P	19 31 41.0	+1.0
MBDF	Montbardon	38.25	162	⇑	*i*	P	P	19 31 41.6	+1.2
	comp=Z,94nm,0.8s								
MBDF	Montbardon	38.25	162	⇑	*i*	P	P	19 31 41.6	+1.2
MBDF					pmax	pmax			
	comp=Z,94nm,0.8s								
MBDF	Montbardon	38.25	162	⇑	*i*	P	P	19 31 41.6	+1.2
	comp=Z,94nm,0.8s								
MBDF	Montbardon	38.25	162	⇑	*i*	P	P	19 31 41.6	+1.2
	comp=Z,47nm,0.8s								
OCF	Saint Nazaire	38.34	164		*e*	P	P	19 31 41.7	+0.6
OCF	Saint Nazaire	38.34	164		*e*	P	P	19 31 41.7	+0.6
OG26	St.-Nazaire-De	38.34	164		*e*	P	P	19 31 41.7	+0.6
OG26	St.-Nazaire-De	38.34	164		*e*	P	P	19 31 41.7	+0.6
WRAK	Wrangell Islan	38.38	312		*e*	P	P	19 31 41.2	+0.1
	comp=Z,72nm,1.2s								
WRAK	Wrangell Islan	38.38	312		*e*	P	P	19 31 41.2	+0.1
	comp=Z,72nm,1.2s								
VRI	Vrincioaia	38.40	139	⇑	*i*	P	P	19 31 41.8	+0.4
LOT	Lotru	38.57	143	⇑	*i*	P	P	19 31 43.3	+0.3
OG25	Le Caire	38.58	163		*e*	P	P	19 31 44.8	+1.7
OG25	Le Caire	38.58	163		*e*	P	P	19 31 44.8	+1.7
OG25	Le Caire	38.58	163		*e*	P	P	19 31 44.8	+1.7
KDAK	Kodiak Island	38.70	330		*e*	P	P	19 31 43.9	+0.2
	comp=Z,237nm,1.0s								
KDAK	Kodiak Island	38.70	330		*i*	P	P	19 31 44.0	+0.2
MLR	Muntele Rosu	38.70	140		*i*	P	P	19 31 45.1	+1.0
MLR						PP	PnPn	19 33 18.6	+3.9
MLR	Muntele Rosu	38.70	140	⇓	*i*	P	P	19 31 45.5	+1.4
MLR	Muntele Rosu	38.70	140			P	P	19 31 45.1	+1.0
	comp=Z,1.6nm,0.7s,baz=5.2,slow=11								
MLR						PP	PnPn	19 33 18.6	+3.9
	comp=Z,3.5nm,1.0s,baz=167,slow=18,SNR=3.8								
MLR	Muntele Rosu	38.70	140			P	P	19 31 45.1	+1.0
ARR	Arges	38.72	142	⇓	*i*	P	P	19 31 45.2	+1.0
ARR	Arges	38.72	142	⇓	*i*	P	P	19 31 45.2	+1.0
ABKAR	Akbulak array	38.73	103		*e*	P	P	19 31 44.8	+0.6
ABKAR	Akbulak array	38.73	103		*e*	P	P	19 31 44.8	+0.6
LASF	Ste Croix	38.80	165	⇑	*i*	P	P	19 31 45.9	+1.1
	comp=Z,84nm,1.0s								
LASF	Ste Croix	38.80	165	⇑	*i*	P	P	19 31 45.9	+1.1
	comp=Z,84nm,1.0s								
LASF	Ste Croix	38.80	165	⇑	*i*	P	P	19 31 45.9	+1.1
	comp=Z,42nm,1.0s								
CLNS	Chul'man	38.88	39		*e*	P	P	19 31 43.9	-1.5
CLNS					*e*			19 33 16.6	
CLNS					*e*			19 33 53.5	
CLNS					*e*	S	S	19 37 41.2	-1.1
CLNS					*e*			19 37 43.8	
CLNS						pmax	pmax		
	comp=Z,24nm,1.1s								
CLNS						pmax	pmax		
	comp=N,14nm,1.2s								
CLNS						pmax	pmax		
	comp=E,7.0nm,1.1s								
CLNS						pmax	pmax		
	comp=Z,49nm,1.2s								
CLNS						pmax	pmax		
	comp=N,47nm,1.2s								
CLNS						pmax	pmax		
	comp=E,13nm,1.2s								
CLNS						smax	smax		
	comp=E,353nm,15.3s								
CLNS						smax	smax		
	comp=N,756nm,11.6s								
CLNS						MLR	MLR		
	comp=E,613nm,18.0s								
CLNS						MLR	MLR		
	comp=Z,1μm,15.0s								
CLNS						MLR	MLR		
	comp=N,884nm,17.0s								
CLNS	Chul'man	38.88	39		*e*	P	P	19 31 43.9	-1.5
	comp=N,14nm,1.2s								
CLNS					*e*	S	S	19 37 41.2	-1.1
	comp=N,756nm,11.6s								
SMRF	Simiane la Rot	38.95	163	⇑	*i*	P	P	19 31 46.8	+0.6
	comp=N,93nm,0.8s								
SMRF	Simiane la Rot	38.95	163	⇑	*i*	P	P	19 31 46.8	+0.6
	comp=N,93nm,0.8s								
SMRF	Simiane la Rot	38.95	163	⇑	*i*	P	P	19 31 46.8	+0.6
	comp=N,46nm,0.8s								
VLC	Villacollemand	38.98	158		*e*	P	P	19 31 46.7	+0.3
	comp=N,46nm,1.0s								
VLC	Villacollemand	38.98	158		*e*	P	P	19 31 46.7	+0.3
	comp=N,46nm,1.0s								
TOUF	Mont Tournerai	38.98	162		*e*	P	P	19 31 47.7	+1.1
TOUF	Mont Tournerai	38.98	162		*e*	P	P	19 31 47.7	+1.1
TOUF	Mont Tournerai	38.98	162		*e*	P	P	19 31 47.7	+1.1
TOUF	Mont Tournerai	38.98	162		*e*	P	P	19 31 47.7	+1.1
AUTN	L'Aution	39.01	161		*e*	P	P	19 31 47.9	+1.1
AUTN	L'Aution	39.01	161		*e*	P	P	19 31 47.9	+1.1
AUTN	L'Aution	39.01	161		*e*	P	P	19 31 47.9	+1.1
AUTN	L'Aution	39.01	161		*e*	P	P	19 31 47.9	+1.1
SAOF	Saorge	39.02	161		*e*	P	P	19 31 46.9	+0.2
SAOF	Saorge	39.02	161		*e*	P	P	19 31 46.9	+0.2
SAOF	Saorge	39.02	161		*e*	P	P	19 31 46.9	+0.2
SAOF	Saorge	39.02	161		*e*	P	P	19 31 46.9	+0.2
MVIF	Mont Vial	39.10	162		*e*	P	P	19 31 48.5	+1.0
MVIF	Mont Vial	39.10	162		*e*	P	P	19 31 48.5	+1.0
MVIF	Mont Vial	39.10	162		*e*	P	P	19 31 48.5	+1.0
MVIF	Mont Vial	39.10	162		*e*	P	P	19 31 48.5	+1.0
TEKS	Tekeris	39.14	147	⇓	*i*	P	P	19 31 48.3	+0.6
SBF	Sospel	39.14	161	⇑	*i*	P	P	19 31 48.7	+0.9
	comp=N,194nm,0.8s								
SBF	Sospel	39.14	161	⇑	*i*	P	P	19 31 48.7	+0.9
SBF						pmax	pmax		
	comp=Z,194nm,0.8s								
SBF	Sospel	39.14	161	⇑	*i*	P	P	19 31 48.7	+0.9
	comp=Z,194nm,0.8s								
SBF	Sospel	39.14	161	⇑	*i*	P	P	19 31 48.7	+0.9
	comp=Z,97nm,0.8s								
CFR	Carcaliu	39.20	138	⇓	*i*	P	P	19 31 47.9	-0.2
CFR	Carcaliu	39.20	138	⇓	*i*	P	P	19 31 47.9	-0.2
CALN	Calern	39.23	162		*e*	P	P	19 31 49.5	+0.9
CALN	Calern	39.23	162		*e*	P	P	19 31 49.5	+0.9
CALN	Calern	39.23	162		*e*	P	P	19 31 49.5	+0.9
CALN	Calern	39.23	162		*e*	P	P	19 31 49.5	+0.9
TLCR		39.25	137	⇑	*i*	P	P	19 31 49.5	+0.9
TLCR		39.25	137	⇑	*i*	P	P	19 31 49.5	+0.9
REVF	Revere	39.26	161		*e*	P	P	19 31 49.1	+0.4
REVF	Revere	39.26	161		*e*	P	P	19 31 49.1	+0.4
REVF	Revere	39.26	161		*e*	P	P	19 31 49.1	+0.4
REVF	Revere	39.26	161		*e*	P	P	19 31 49.1	+0.4
OHAK	Old Harbor	39.30	330		*e*	P	P	19 31 49.2	+0.4
	comp=Z,147nm,1.0s								
OHAK	Old Harbor	39.30	330		*e*	P	P	19 31 49.2	+0.4
	comp=Z,147nm,1.0s								
FRF	La Foret Royal	39.41	162	⇑	*i*	P	P	19 31 50.4	+0.5
	comp=Z,160nm,0.8s								
FRF	La Foret Royal	39.41	162	⇑	*i*	P	P	19 31 50.4	+0.5
FRF						pmax	pmax		
	comp=Z,160nm,0.8s								
FRF	La Foret Royal	39.41	162	⇑	*i*	P	P	19 31 50.4	+0.5
	comp=Z,160nm,0.8s								
FRF	La Foret Royal	39.41	162	⇑	*i*	P	P	19 31 50.4	+0.5
	comp=Z,80nm,0.8s								
MTLF	Montolieu	39.48	167	⇑	*i*	P	P	19 31 50.9	+0.4
	comp=Z,41nm,0.7s								
MTLF	Montolieu	39.48	167	⇑	*i*	P	P	19 31 50.9	+0.4
MTLF						pmax	pmax		
	comp=Z,41nm,0.7s								
MTLF	Montolieu	39.48	167	⇑	*i*	P	P	19 31 50.9	+0.4
	comp=Z,41nm,0.7s								
MTLF	Montolieu	39.48	167	⇑	*i*	P	P	19 31 50.9	+0.4
	comp=Z,20nm,0.7s								
OSSF	Osses	39.48	171		*e*	P	P	19 31 50.5	0.0
OSSF	Osses	39.48	171		*e*	P	P	19 31 50.5	0.0
OSSF	Osses	39.48	171		*e*	P	P	19 31 50.5	0.0
ORDF	Ordiarp	39.53	171		*e*	P	P	19 31 50.7	-0.2
ORDF	Ordiarp	39.53	171		*e*	P	P	19 31 50.7	-0.2
ORDF	Ordiarp	39.53	171		*e*	P	P	19 31 50.7	-0.2
SULR		39.53	140	⇓	*i*	P	P	19 31 48.0	-2.9
SJPF	Ste Jean	39.62	171	⇑	*i*	P	P	19 31 51.6	-0.1
	comp=Z,60nm,1.0s								
SJPF	Ste Jean	39.62	171	⇑	*i*	P	P	19 31 51.6	-0.1
SJPF						pmax	pmax		
	comp=Z,60nm,1.0s								
SJPF	Ste Jean	39.62	171	⇑	*i*	P	P	19 31 51.6	-0.1
	comp=Z,60nm,1.0s								
SJPF	Ste Jean	39.62	171	⇑	*i*	P	P	19 31 51.6	-0.1
	comp=Z,30nm,1.0s								
DIVS	Divibare	39.62	147	⇑	*i*	P	P	19 31 52.1	+0.3
LMR	La Mourre	39.63	162	⇑	*i*	P	P	19 31 52.2	+0.4
	comp=Z,84nm,0.9s								
LMR	La Mourre	39.63	162	⇑	*i*	P	P	19 31 52.2	+0.4
LMR						pmax	pmax		
	comp=Z,84nm,0.9s								
LMR	La Mourre	39.63	162	⇑	*i*	P	P	19 31 52.2	+0.4
	comp=Z,84nm,0.9s								
LMR	La Mourre	39.63	162	⇑	*i*	P	P	19 31 52.2	+0.4
	comp=Z,42nm,0.9s								
REYF	Montagne du Re	39.68	170		*e*	P	P	19 31 51.8	-0.5
REYF	Montagne du Re	39.68	170		*e*	P	P	19 31 51.8	-0.5
REYF	Montagne du Re	39.68	170		*e*	P	P	19 31 51.8	-0.5
KURK	Kurchatov	39.73	83	*c*	*i*	P	P	19 31 53.4	+0.9
KURK						pmax	pmax		
	comp=Z,91nm,1.0s								
KURK	Kurchatov	39.73	83		*e*	P	P	19 31 53.5	+0.9
	comp=Z,88nm,1.1s								
KURK						PP	PnPn	19 33 25.7	-1.0
KURK						PcP	PcP	19 33 59.1	+0.6
KURK	Kurchatov	39.73	83			P	P	19 31 53.9	+1.4
	SNR=34								
KURK	Kurchatov	39.73	83			P	P	19 31 53.9	+1.4
	SNR=34								
EPF	Esparros	39.74	170	⇑	*i*	P	P	19 31 52.5	-0.2
	comp=Z,190nm,1.2s								
EPF	Esparros	39.74	170	⇑	*i*	P	P	19 31 52.5	-0.2
EPF						pmax	pmax		
	comp=Z,190nm,1.2s								
EPF	Esparros	39.74	170	⇑	*i*	P	P	19 31 52.5	-0.2
	comp=Z,190nm,1.2s								
EPF	Esparros	39.74	170	⇑	*i*	P	P	19 31 52.5	-0.2
	comp=Z,95nm,1.2s								
BBLS	Lazići	39.81	148	⇑	*i*	P	P	19 31 54.1	+0.7
KURBB	Kurchatov Arra	39.81	84			P	P	19 31 54.0	+0.8
	comp=Z,52nm,1.0s,baz=347,slow=7.7,SNR=212								
KURBB						PP	PP	19 33 25.7	+1.3
	comp=Z,14nm,1.0s,baz=352,slow=9.9,SNR=6.3								
KURBB						PcP	PcP	19 33 59.1	+0.3
	comp=Z,14nm,0.9s,baz=339,slow=3.4,SNR=12								
MLS	Moulis	39.83	169		*e*	P	P	19 31 53.8	+0.3
MLS	Moulis	39.83	169		*e*	P	P	19 31 53.8	+0.3
MLS	Moulis	39.83	169		*e*	P	P	19 31 53.8	+0.3
ETSF	Etsaut	39.85	171	⇑	*i*	P	P	19 31 53.8	+0.1
	comp=Z,119nm,1.1s								
ETSF	Etsaut	39.85	171	⇑	*i*	P	P	19 31 53.8	+0.1
ETSF						pmax	pmax		
	comp=Z,119nm,1.1s								
ETSF	Etsaut	39.85	171	⇑	*i*	P	P	19 31 53.8	+0.1
	comp=Z,119nm,1.1s								
ETSF	Etsaut	39.85	171	⇑	*i*	P	P	19 31 53.8	+0.1
	comp=Z,60nm,1.1s								
VIEF	Viey	39.88	170		*e*	P	P	19 31 55.1	+1.2
VIEF	Viey	39.88	170		*e*	P	P	19 31 55.1	+1.2
VIEF	Viey	39.88	170		*e*	P	P	19 31 55.1	+1.2
GRUS	Gruza	39.88	146	⇑	*i*	P	P	19 31 54.2	+0.3
TIRR	Tirgusor	39.94	138		*e*	P	P	19 31 54.4	+0.1
TIRR						pmax	pmax		
	comp=Z,38nm,1.2s								
TIRR	Tirgusor	39.94	138		*e*	P	P	19 31 54.4	+0.1
	comp=Z,38nm,1.2s								
TIRR	Tirgusor	39.94	138	⇑	*i*	P	P	19 31 54.5	+0.1
TIRR	Tirgusor	39.94	138		*e*	P	P	19 31 54.4	+0.1
	comp=Z,38nm,1.2s								
RESF	Ens	39.96	170		*e*	P	P	19 31 56.1	+1.4
RESF	Ens	39.96	170		*e*	P	P	19 31 56.1	+1.4
RESF	Ens	39.96	170		*e*	P	P	19 31 56.1	+1.4
SIM	Simferopol'	39.99	131	*d*	*i*	P	P	19 31 55.0	+0.3
SIM						eS	S	19 37 58.0	-1.1
SIM						pmax	pmax		
	comp=Z,30nm,0.9s								
SIM						MLR	MLR		
	comp=Z,500nm,11.0s								
SIM	Simferopol'	39.99	131		*i*	P	P	19 31 55.0	+0.3
	comp=Z,30nm,0.9s								
SIM						eS	S	19 37 58.0	-1.1
	comp=Z,500nm,11.0s								
PQI	Presque Isle	40.09	247		*e*	P	P	19 31 55.7	+0.2
	comp=Z,29nm,0.9s								
PQI	Presque Isle	40.09	247		*e*	P	P	19 31 55.7	+0.2
	comp=Z,29nm,0.9s								
CARF	Carcanieres	40.10	168		*e*	P	P	19 31 56.3	+0.5
CARF	Carcanieres	40.10	168		*e*	P	P	19 31 56.3	+0.5
CARF	Carcanieres	40.10	168		*e*	P	P	19 31 56.3	+0.5
ULM	Lac du Bonnet	40.15	276			P	P	19 31 55.8	-0.2
ULM						PcP	PcP	19 33 59.5	-0.4
ULM					*e*	PcP	PcP	19 33 59.9	0.0
ULM	Lac du Bonnet	40.15	276			P	P	19 31 55.8	-0.2
	comp=Z,66nm,0.9s,baz=13,slow=7.9,SNR=35								
ULM						PcP	PcP	19 33 59.5	-0.4
	comp=Z,30nm,0.9s,baz=20,slow=3.3,SNR=7.1								
ULM						LR	LR	19 48 23.5	
	comp=Z,3μm,21.0s,baz=126,slow=36								
ULM	Lac du Bonnet	40.15	276			P	P	19 31 55.8	-0.2
SJAF	Saint Jean de	40.35	167		*e*	P	P	19 31 58.7	+0.9
SJAF	Saint Jean de	40.35	167		*e*	P	P	19 31 58.7	+0.9
SJAF	Saint Jean de	40.35	167		*e*	P	P	19 31 58.7	+0.9
VALF	Valcebollere	40.41	168		*e*	P	P	19 31 59.5	+1.1
VALF	Valcebollere	40.41	168		*e*	P	P	19 31 59.5	+1.1
VALF	Valcebollere	40.41	168		*e*	P	P	19 31 59.5	+1.1
SJES	Sjenica	40.45	147		*e*	P	P	19 31 56.6	-2.1
ANN	Anapa	40.47	128		*e*	P	P	19 31 57.7	-1.0
ANN					*e*	PP	pP	19 32 00.3	-3.3
ANN					*e*	S	S	19 38 03.8	-2.4
ANN					*e*	SS	SS	19 41 04.7	-0.5
ANN						pmax	pmax		
	comp=Z,55nm,1.0s								
ANN						MLR	MLR		
	comp=N,375nm,10.0s								
ANN						MLR	MLR		
	comp=E,282nm,10.0s								
ANN						MLR	MLR		
	comp=Z,753nm,10.0s								
ANN	Anapa	40.47	128		*e*	P	P	19 31 57.7	-1.0
	comp=Z,55nm,1.0s								
PGF	Pioggiola	40.52	160	⇑	*i*	P	P	19 31 59.5	+0.2
	comp=Z,36nm,0.8s								
PGF	Pioggiola	40.52	160	⇑	*i*	P	P	19 31 59.5	+0.2
PGF						pmax	pmax		
	comp=Z,36nm,0.8s								
PGF	Pioggiola	40.52	160	⇑	*i*	P	P	19 31 59.5	+0.2
	comp=Z,36nm,0.8s								
PGF	Pioggiola	40.52	160	⇑	*i*	P	P	19 31 59.5	+0.2
	comp=Z,18nm,0.8s								
CHGN	Chignik	40.53	334		*e*	P	P	19 31 58.1	-0.9
CHGN	Chignik	40.53	334		*e*	P	P	19 31 58.1	-0.9
MPEP	Malo Peshtene	40.64	143		*e*	P	P	19 32 00.0	-0.2
PGAV	Gavieira, Arco	40.70	179		*e*	P	P	19 32 01.6	+0.9
	comp=Z,72nm,1.7s								
PGAV						eLR	LR	19 43 55.0	
	comp=Z,591nm,16.0s								
PGAV	Gavieira, Arco	40.70	179		*e*	P	P	19 32 01.6	+0.9
	comp=Z,72nm,1.7s								
PBRG	Braganca	40.86	178		*e*	P	P	19 32 03.1	+1.1
	comp=Z,91nm,1.5s								
PBRG	Braganca	40.86	178		*e*	P	P	19 32 03.1	+1.1
	comp=Z,91nm,1.5s								
SZH	Strazhica	40.91	141		*e*	P	P	19 32 02.0	-0.3
SZH	Strazhica	40.91	141		*e*	P	P	19 32 02.0	-0.3
PCAB	Cabril	40.95	179		*e*	P	P	19 32 03.9	+1.2
	comp=Z,67nm,1.5s								
PCAB	Cabril	40.95	179		*e*	P	P	19 32 03.9	+1.2
	comp=Z,67nm,1.5s								
BARS	Barje	41.03	145	⇑	*i*	P	P	19 32 03.3	-0.1
PRD	Provadia	41.10	139		*e*	P	P	19 32 04.6	+0.7
PRD	Provadia	41.10	139		*e*	P	P	19 32 04.6	+0.7
POLO	Lamas de Olo	41.29	179		*e*	P	P	19 32 06.7	+1.1
	comp=Z,43nm,1.6s								
POLO	Lamas de Olo	41.29	179		*e*	P	P	19 32 06.7	+1.1
	comp=Z,43nm,1.6s								
VTS	Vitosha	41.36	144	⇑	*i*	P	P	19 32 05.6	-0.7
VTS	Vitosha	41.36	144		*e*	P	P	19 32 05.5	-0.7
VTS	Vitosha	41.36	144		*e*	P	P	19 32 05.5	-0.7
PVRL	Vila Real	41.38	179		*e*	P	P	19 32 07.0	+0.7
	comp=Z,78nm,1.5s								
IRK	Irkutsk	41.39	59		*e*	P	P	19 32 05.6	-0.6
IRK					*e*			19 33 42.1	
IRK						pmax	pmax		
	comp=Z,100nm,1.3s								
IRK	Irkutsk	41.39	59		*e*	P	P	19 32 05.6	-0.6
	comp=Z,100nm,1.3s								
MVO	Moncorvo	41.50	178		*e*	P	P	19 32 08.3	+1.0
	comp=Z,64nm,1.5s								
MVO						eS	S	19 38 32.9	+11
MVO						eLQ	LQ	19 41 37.2	
MVO						eLR	LR	19 44 37.3	
	comp=Z,347nm,18.0s								
MVO	Moncorvo	41.50	178		*e*	P	P	19 32 08.3	+1.0
	comp=Z,64nm,1.5s								
MOY	Mondy	41.58	62		*e*	P	P	19 32 09.5	+1.6
MOY					*e*			19 33 46.4	
MOY						pmax	pmax		
	comp=Z,71nm,1.4s								
MOY	Mondy	41.58	62		*e*	P	P	19 32 09.5	+1.6
	comp=Z,71nm,1.4s								
SDPT	Sand Point	41.59	336		*e*	P	P	19 32 08.2	+0.4
	comp=Z,48nm,0.8s								
SDPT	Sand Point	41.59	336		*e*	P	P	19 32 08.2	+0.4
	comp=Z,48nm,0.8s								
JMB	Yambol	41.76	140		*e*	P	P	19 32 09.0	-0.3
JMB	Yambol	41.76	140		*e*	P	P	19 32 09.0	-0.3
EYMN	Ely	41.83	271		*e*	P	P	19 32 10.5	+0.6
	comp=Z,160nm,1.1s								
EYMN						LR	LR		
	comp=Z,6μm,19.0s								
EYMN	Ely	41.83	271		*e*	P	P	19 32 10.5	+0.6
	comp=Z,160nm,1.1s								
KIV	Kislovodsk	41.87	122		*e*	P	P	19 32 10.9	+0.6
KIV					*e*			19 33 47.4	
KIV					*e*			19 34 07.4	
KIV					*e*	S	S	19 38 30.0	+2.7
KIV					*e*	SS	SS	19 41 30.5	-2.7
KIV						pmax	pmax		
	comp=Z,30nm,1.1s								
KIV						MLR	MLR		
	comp=Z,566nm,16.0s								
KIV	Kislovodsk	41.87	122			P	P	19 32 11.6	+1.3
	comp=Z,151nm,1.2s,SNR=8.4								
KIV	Kislovodsk	41.87	122		*e*	P	P	19 32 10.9	+0.6
	comp=Z,30nm,1.1s								
KIV	Kislovodsk	41.87	122		*e*	PcP	PcP	19 34 07.4	+1.7
KIV					*e*	S	S	19 38 30.0	+2.7
TLY	Talaya	41.87	60	*c*	*i*	P	P	19 32 10.6	+0.4
TLY					*e*			19 33 47.3	
TLY					*e*			19 34 04.5	
TLY					*e*	PPP	PPP	19 34 24.4	
TLY					*e*	S	S	19 38 31.9	+4.9
TLY						pmax	pmax		
	comp=Z,33nm,1.4s								
TLY						MLR	MLR		
	comp=Z,5μm,18.0s								
TLY	Talaya	41.87	60			P	P	19 32 10.1	-0.1
	comp=Z,107nm,1.1s,SNR=6.8								
TLY	Talaya	41.87	60		*i*	P	P	19 32 10.6	+0.4
	comp=Z,33nm,1.4s								
TLY	Talaya	41.87	60		*e*	PcP	PcP	19 34 04.5	-1.0
PVIS	Viseu	41.94	179		*e*	P	P	19 32 11.9	+1.0
	comp=Z,73nm,1.4s								
PVIS	Viseu	41.94	179		*e*	P	P	19 32 11.9	+1.0
	comp=Z,73nm,1.4s								
PLD	Plovdiv	41.96	142		*e*	P	P	19 32 10.0	-1.0
PLD	Plovdiv	41.96	142		*e*	P	P	19 32 10.0	-1.0
AGMN	Agassiz Nation	42.06	275		*e*	P	P	19 32 11.9	+0.2
	comp=Z,121nm,1.0s								
AGMN	Agassiz Nation	42.06	275		*e*	P	P	19 32 11.9	+0.2
	comp=Z,121nm,1.0s								
KKB	Krupnik	42.07	144		*e*	P	P	19 32 12.0	+0.1
KKB	Krupnik	42.07	144		*e*	P	P	19 32 12.0	+0.1
KBZ	Khabaz	42.12	122		P	P	P	19 32 13.3	+1.1
KBZ	Khabaz	42.12	122		P	P	P	19 32 13.3	+1.1
KBZ	Khabaz	42.12	122		P	P	P	19 32 13.3	+1.1
	comp=Z,41nm,0.9s,baz=336,slow=8.9,SNR=66								
KBZ	Khabaz	42.12	122		P	P	P	19 32 13.3	+1.1
MTE	Manteigas	42.26	179		*e*	P	P	19 32 14.4	+0.9
	comp=Z,60nm,0.8s								
MTE					*e*	S	S	19 38 34.4	+1.3
MTE					*e*	LR	LR	19 44 50.9	
	comp=Z,496nm,18.0s								
MTE	Manteigas	42.26	179		*e*	P	P	19 32 13.5	-0.1
	comp=Z,35nm,0.8s								
MTE	Manteigas	42.26	179		*e*	P	P	19 32 14.4	+0.9
	comp=Z,60nm,0.8s								
MTE					*e*	S	S	19 38 34.4	+1.3
TIR	Tirane	42.35	148		*e*	P	P	19 32 13.4	-0.8
TIR						pmax	pmax		
	comp=Z,42nm,0.7s								
TIR	Tirane	42.35	148		*e*	P	P	19 32 13.3	-0.8
	comp=Z,42nm,0.7s								
TIR	Tirane	42.35	148		*e*	P	P	19 32 13.4	-0.8
	comp=Z,42nm,0.7s								
RZN	Rozhen	42.38	142		*e*	P	P	19 32 14.3	-0.3
RZN	Rozhen	42.38	142		*e*	P	P	19 32 14.3	-0.3
MMB	Musomiste	42.40	143		*e*	P	P	19

ZEI eS S 19 38 44.7 -1.8
ZEI eSS SS 19 41 56.4 -2.4
ZEI pmax pmax
comp=Z,23nm,1.0s
ZEI Tsey 43.16 121 eP P 19 32 20.8 -0.2
comp=Z,23nm,1.0s
ZEI eS S 19 38 44.7 -1.8
PMRV Marv??o 43.23 178 eP P 19 32 22.3 +1.0
comp=Z,86nm,1.4s
PMRV eS S 19 38 56.1 +8.8
PMRV eLQ LQ 19 42 20.7
PMRV eLR LR 19 45 17.2
comp=Z,515nm,16.0s
PMRV Marv??o 43.23 178 eP P 19 32 22.3 +1.0
comp=Z,86nm,1.4s
A18A Metzger Ranch, 43.24 289 P P 19 32 21.6 +0.2
baz=43,SNR=12
ALN Alexandroupoli 43.27 141 eP P 19 32 23.2 +1.6
ONI Oni 43.30 122 P P 19 32 21.4 -0.5
A17A Triple J Farms 43.32 290 P P 19 32 22.2 +0.2
baz=43,SNR=23
COWI Conover 43.34 268 eP P 19 32 21.7 -0.4
comp=Z,118nm,1.0s
COWI Conover 43.34 268 eP P 19 32 21.7 -0.4
comp=Z,118nm,1.0s
B22A Reddig Ranch S 43.36 285 ⇑P P 19 32 23.2 +0.9
baz=43
B21A Ellsworth Farm 43.37 286 ⇓P P 19 32 23.1 +0.7
baz=43
UNV Unalaska Valle 43.39 341 eP P 19 32 22.1 -0.3
UNV Unalaska Valle 43.39 341 eP P 19 32 22.1 -0.3
MAK Makhachkala 43.40 117 eP P 19 32 22.3 -0.3
MAK e 19 34 03.5
MAK e 19 34 10.1
MAK ePPP PPP 19 34 38.3
MAK eS S 19 38 50.1 +0.6
MAK eSS SS 19 41 53.2 -10
MAK e 19 42 20.5
MAK pmax pmax
comp=Z,82nm,1.1s
MAK MLR MLR
comp=Z,2µm,15.0s
MAK Makhachkala 43.40 117 eP P 19 32 22.3 -0.3
comp=Z,82nm,1.1s
MAK Makhachkala 43.40 117 ePcP PcP 19 34 10.1 -0.6
MAK eS S 19 38 50.1 +0.6
MAK eScS ScS 19 42 20.5 -0.6
comp=Z,2µm,15.0s
A16A West Butte Ran 43.42 291 ⇑P P 19 32 22.4 -0.5
baz=43
CUC Castrocucco 43.43 152 eP P 19 32 22.7 -0.3
comp=Z,22nm,0.9s
CUC Castrocucco 43.43 152 eP P 19 32 22.7 -0.3
comp=Z,22nm,0.9s
B20A Solberg Farm, 43.48 287 P P 19 32 24.1 +0.8
baz=43,SNR=17
NCB Newcomb 43.51 253 eP P 19 32 23.8 +0.3
comp=Z,62nm,1.1s
NCB Newcomb 43.51 253 eP P 19 32 23.8 +0.3
comp=Z,62nm,1.1s
A15A Johnson Ranch, 43.53 292 P P 19 32 23.8 0.0
baz=43,SNR=69
GUDG Gudauri 43.54 121 P P 19 32 25.5 +1.4
B19A Brinkman Farms 43.58 288 P P 19 32 24.9 +0.7
baz=43,SNR=41
PLG Polygyros 43.58 144 eP P 19 32 24.5 +0.3
PMTG Montargil 43.59 179 eP P 19 32 24.8 +0.6
comp=Z,92nm,1.1s
PMTG Montargil 43.59 179 eP P 19 32 24.8 +0.6
comp=Z,92nm,1.1s
WALA Waterton Lakes 43.60 293 eP P 19 32 24.8 +0.4
comp=Z,5.0nm,1.1s
WALA Waterton Lakes 43.60 293 eP P 19 32 24.8 +0.4
comp=Z,4.9nm,1.1s
A14A Double T Ranch 43.62 292 P P 19 32 25.1 +0.6
baz=43,SNR=114
PMAFR Mafra 43.70 181 eP P 19 32 25.6 +0.5
comp=Z,139nm,0.9s
PMAFR Mafra 43.70 181 eP P 19 32 25.6 +0.5
comp=Z,139nm,0.9s
B18A Beardsley Farm 43.74 289 ⇓P P 19 32 25.8 +0.3
baz=44,SNR=14
C23A Lambert 43.75 284 P P 19 32 26.6 +1.1
baz=44,SNR=37
A13A Flathead Natio 43.78 293 P P 19 32 26.6 +0.8
baz=44,SNR=126
LIT Litokhoron 43.78 145 eP P 19 32 26.1 +0.3
PESTR Estremoz 43.79 179 eP P 19 32 26.4 +0.5
comp=Z,87nm,1.2s
PESTR Estremoz 43.79 179 eP P 19 32 26.4 +0.5
comp=Z,87nm,1.2s
C22A Vida 43.89 285 P P 19 32 27.2 +0.6
baz=44,SNR=17
C24A Savage 43.92 284 P P 19 32 28.0 +1.2
baz=44,SNR=37
A12A Yaak River Ran 43.93 295 P P 19 32 28.2 +1.3
baz=44,SNR=24
DUS Dusheti 43.94 120 P P 19 32 29.0 +1.9
LIS Lisbon 43.94 180 eP P 19 32 27.6 +0.6
LIS AMb AMB 19 32 30.9
comp=Z,185nm,1.4s
LIS Lisbon 43.94 180 eP P 19 32 27.6 +0.6
comp=Z,185nm,1.4s
LIS Lisbon 43.94 180 eP P 19 32 27.6 +0.6
LIS Lisbon 43.94 180 eP P 19 32 27.6 +0.6
comp=Z,185nm,1.4s
B16A M & M Farms, S 43.96 291 P P 19 32 27.5 +0.2
baz=44,SNR=38
C21A Desert Coulee 43.97 286 P P 19 32 27.8 +0.6
baz=44,SNR=27
B17A L&G Farms, Che 43.97 290 P P 19 32 27.7 +0.4
baz=44,SNR=29
KEK Kerkira 43.97 148 eP P 19 32 27.5 +0.2
PNT Penticton 44.02 298 P P 19 32 28.6 +1.0
PNT Penticton 44.02 298 P P 19 32 28.6 +1.0
PNT Penticton 44.02 298 P P 19 32 28.6 +1.0
ACCN Adirondack Com 44.02 252 eP P 19 32 28.4 +0.8
comp=Z,94nm,1.4s
ACCN Adirondack Com 44.02 252 eP P 19 32 28.4 +0.8
comp=Z,94nm,1.4s
MK31 Makanchi Array 44.06 81 eP P 19 32 27.6 -0.3
MK31 Makanchi Array 44.06 81 eP P 19 32 27.6 -0.3
MK31 Makanchi Array 44.06 81 eP P 19 32 27.6 -0.3
MKAR Makanchi Array 44.06 81 *i* P P 19 32 28.7 +0.8
MKAR pmax pmax
comp=Z,20nm,1.0s
MKAR Makanchi Array 44.06 81 P P 19 32 28.4 +0.5
MKAR PcP PcP 19 34 12.3 -0.6
MKAR Makanchi Array 44.06 81 P P 19 32 28.4 +0.5
comp=Z,20nm,1.0s,baz=350,slow=6.6,SNR=95
MKAR PcP PcP 19 34 12.3 -0.6
comp=Z,10nm,1.1s,baz=336,slow=5.6,SNR=4.0
MKAR LR LR 19 54 25.2
comp=Z,3µm,19.5s,baz=348,slow=41
MKAR Makanchi Array 44.06 81 P P 19 32 28.4 +0.5
MKAR Makanchi Array 44.06 81 PcP PcP 19 34 12.4 -0.6
JAN Janina 44.10 147 eP P 19 32 29.1 +0.7
EGMT Eagleton 44.11 289 eP P 19 32 28.8 +0.4
comp=Z,47nm,0.9s
EGMT Eagleton 44.11 289 eP P 19 32 28.8 +0.4
comp=Z,47nm,0.9s
EGMT Eagleton 44.11 289 ⇑P P 19 32 29.0 +0.6
baz=44,SNR=6.5
EVO Evora 44.12 179 ⇑*i*P P 19 32 28.7 +0.2
EVO eR
comp=Z,860nm,20.2s
EVO Evora 44.12 179 eP P 19 32 29.0 +0.5
comp=Z,25nm,1.8s
EVO Evora 44.12 179 eP P 19 32 29.0 +0.5
comp=Z,25nm,1.8s
EVOP Sao Brissos 44.13 179 ⇑*i*P P 19 32 28.7 +0.2
EVOP Sao Brissos 44.13 179 ⇑*i*P P 19 32 28.7 +0.2
EVOP Sao Brissos 44.13 179 ⇑*i*P P 19 32 28.7 +0.2
B15A Bradely Ranch, 44.17 291 P P 19 32 28.8 -0.1
baz=44,SNR=146
C20A Veseth Ranch, 44.19 287 P P 19 32 29.6 +0.6
baz=44,SNR=54
B14A Marquette Ranc 44.21 292 P P 19 32 29.5 +0.2
baz=44,SNR=32
SEAG Tbilisi Sea 44.27 120 P P 19 32 34.6 +4.9
THL Klokotos Trika 44.28 145 eP P 19 32 29.5 -0.2
TBLG Delisi 44.30 120 P P 19 32 30.6 +0.7
TIP Timpagrande 44.30 151 eP P 19 32 30.3 +0.3
comp=Z,734nm,2.9s
TIP Timpagrande 44.30 151 eP P 19 32 30.3 +0.3
comp=Z,734nm,2.9s

C19A Slack Wire Ran 44.30 288 ⇓P P 19 32 30.3 +0.3
baz=44,SNR=42
D24A Glendive 44.32 283 ⇑P P 19 32 30.8 +0.8
baz=44,SNR=14
B13A Whitefish 44.34 293 ⇓P P 19 32 30.9 +0.7
baz=44,SNR=144
D23A Lindsay 44.37 284 ⇓P P 19 32 31.4 +0.9
baz=44,SNR=31
B12A Libby 44.38 294 ⇑P P 19 32 31.3 +0.8
baz=44,SNR=23
PETK Petropavlovsk- 44.43 12 P P 19 32 30.2 -0.6
PETK Petropavlovsk- 44.43 12 P P 19 32 30.2 -0.6
PETK Petropavlovsk- 44.43 12 P P 19 32 30.2 -0.6
comp=Z,27nm,1.0s,baz=46,slow=8.5,SNR=16
PETK LR LR 19 51 21.5
comp=Z,408nm,19.2s,baz=347,slow=36
PETK Petropavlovsk- 44.43 12 P P 19 32 30.2 -0.6
AKH Akhalkalaki 44.47 122 P P 19 32 32.6 +1.1
PBAR Barrancos 44.48 178 eP P 19 32 32.2 +0.8
comp=Z,79nm,1.5s
PBAR eS S 19 39 14.7 +9.2
PBAR eLQ LQ 19 43 27.1
PBAR eLR LR 19 45 44.8
comp=Z,542nm,20.0s
PBAR Barrancos 44.48 178 eP P 19 32 32.2 +0.8
comp=Z,79nm,1.5s
D22A Cohagen 44.52 285 ⇑P P 19 32 32.4 +0.8
baz=44,SNR=23
PET Petropavlovsk 44.54 11 eP P 19 32 30.5 -1.1
PET e 19 34 19.4
PET eS S 19 39 06.3 +0.4
PET eSS SS 19 42 26.0 +1.0
PET 19 43 20.8
PET Petropavlovsk 44.54 11 eP P 19 32 30.5 -1.1
PET eS S 19 39 06.3 +0.4
PNCL Nicolau / Gran 44.54 180 eP P 19 32 33.1 +1.3
comp=Z,67nm,1.5s
PNCL Nicolau / Gran 44.54 180 eP P 19 32 33.1 +1.3
comp=Z,67nm,1.5s
C16A Fuhringer Ranc 44.57 291 ⇑P P 19 32 32.1 0.0
baz=44,SNR=124
C17A Wharram Farm, 44.62 290 ⇑P P 19 32 32.5 0.0
baz=44,SNR=58
HRV Adam Dziewonsk 44.62 249 eP P 19 32 32.7 +0.3
HRV pmax pmax
comp=Z,128nm,1.3s
HRV Adam Dziewonsk 44.62 249 eP P 19 32 32.7 +0.3
comp=Z,128nm,1.3s
HRV Adam Dziewonsk 44.62 249 eP P 19 32 32.7 +0.3
comp=Z,128nm,1.3s
NEO Neokhori 44.63 144 eP P 19 32 26.9 -5.7
PBEJ Beja 44.63 179 eP P 19 32 33.7 +1.1
comp=Z,82nm,1.6s
PBEJ Beja 44.63 179 eP P 19 32 33.7 +1.1
comp=Z,82nm,1.6s
DGRG David-gareji 44.65 120 P P 19 32 32.0 -0.7
SPMN St. Paul 44.68 272 ⇑P P 19 32 33.7 +0.8
baz=44,SNR=14
BLMT Blacktail Moun 44.68 293 eP P 19 32 33.8 +0.7
BLMT Blacktail Moun 44.68 293 eP P 19 32 33.8 +0.7
C15A Salmond Ranch, 44.70 291 ⇓P P 19 32 33.1 -0.1
baz=44,SNR=100
D21A La Casta Ranch 44.70 286 ⇓P P 19 32 34.2 +1.1
baz=44,SNR=12
WES Weston 44.71 249 eP P 19 32 33.3 +0.1
WES pmax pmax
comp=Z,277nm,1.3s
WES Weston 44.71 249 eP P 19 32 33.3 +0.1
comp=Z,141nm,1.3s
WES Weston 44.71 249 eP P 19 32 33.3 +0.1
comp=Z,141nm,1.3s
NEW Newport 44.76 296 eP P 19 32 34.8 +1.2
comp=Z,202nm,1.0s
NEW Newport 44.76 296 eP P 19 32 34.8 +1.2
comp=Z,202nm,1.0s
NEW Newport 44.76 296 ⇓P P 19 32 34.8 +1.2
baz=45,SNR=131
YBMT Yellow Bay 44.78 293 eP P 19 32 34.1 +0.2
comp=Z,88nm,1.1s
YBMT Yellow Bay 44.78 293 eP P 19 32 34.1 +0.2
comp=Z,88nm,1.1s
MBW Mount Baker 44.80 300 P P 19 32 34.0 -0.1
MBW Mount Baker 44.80 300 P P 19 32 34.0 -0.1
MESJ Messejana 44.81 179 eP P 19 32 34.6 +0.6
MESJ AMb AMB 19 32 38.0
comp=Z,64nm,0.8s
MESJ eS S 19 39 12.3 +2.0
MESJ Messejana 44.81 179 eP P 19 32 34.6 +0.6
comp=Z,64nm,0.8s
MESJ eS S 19 39 12.3 +2.0
MESJ Messejana 44.81 179 eP P 19 32 34.6 +0.6
MESJ eS S 19 39 12.2 +2.0
MESJ Messejana 44.81 179 eP P 19 32 34.6 +0.6
comp=Z,64nm,0.8s
MESJ eS S 19 39 12.3 +2.0
D20A Manuel Ranch, 44.82 287 ⇑P P 19 32 34.6 +0.6
baz=45,SNR=84
AGG Agios Georgios 44.84 145 eP P 19 32 34.5 +0.2
D19A Cripps Ranch, 44.84 288 P P 19 32 35.1 +0.9
baz=45,SNR=55
C14A Swan Lake 44.85 292 ⇑P P 19 32 34.7 +0.4
baz=45
E24A Baker 44.86 283 ⇓P P 19 32 35.3 +1.0
baz=45,SNR=8.6
BSMT Bassoo Peak 44.89 293 eP P 19 32 35.8 +1.0
BSMT Bassoo Peak 44.89 293 eP P 19 32 35.8 +1.0
ANTO Ankara 44.89 134 eP P 19 32 35.5 +0.8
ANTO pmax pmax
comp=Z,22nm,0.8s
ANTO Ankara 44.89 134 eP P 19 32 35.5 +0.8
comp=Z,22nm,0.8s
ANTO Ankara 44.89 134 P P 19 32 36.0 +1.3
SNR=14
ANTO Ankara 44.89 134 P P 19 32 36.0 +1.3
SNR=14
EVR Evrytania 44.91 146 eP P 19 32 35.9 +1.0
D18A Linhart Farms, 44.93 289 ⇓P P 19 32 35.6 +0.7
baz=45,SNR=6.9
B08A Colville Reser 44.93 298 P P 19 32 36.0 +1.1
B08A Colville Reser 44.93 298 P P 19 32 36.0 +1.1
PRK Paraskevi 44.93 141 eP P 19 32 36.7 +1.8
JTMT Jette 44.93 293 eP P 19 32 35.8 +0.7
JTMT Jette 44.93 293 eP P 19 32 35.8 +0.7
LKD2 Lefkada island 44.95 147 eP P 19 32 35.3 +0.2
PCVE Castro Verde 45.02 179 eP P 19 32 36.5 +0.8
comp=Z,36nm,1.2s
PCVE Castro Verde 45.02 179 eP P 19 32 36.5 +0.8
comp=Z,36nm,1.2s
C13A Hot Springs 45.03 293 P P 19 32 36.9 +1.1
baz=45,SNR=368
E23A Ismay 45.05 284 ⇑P P 19 32 36.9 +1.1
baz=45,SNR=22
C11A Tepee Creek (N 45.08 295 ⇑P P 19 32 36.8 +0.7
baz=45
D17A Six Diamond Ra 45.08 289 P P 19 32 36.2 0.0
baz=45,SNR=62
PGC Sidney 45.11 302 eP P 19 32 36.8 +0.6
comp=Z,7.3nm,1.3s
PGC Sidney 45.11 302 eP P 19 32 36.8 +0.6
comp=Z,7.3nm,1.3s
PTEO Sao Teotonio 45.11 180 eP P 19 32 37.2 +0.8
comp=Z,63nm,1.4s
PTEO Sao Teotonio 45.11 180 eP P 19 32 37.2 +0.8
comp=Z,63nm,1.4s
C12B Naegeli Ranch, 45.11 294 ⇑P P 19 32 37.4 +1.0
baz=45,SNR=20
BR131 Keskin Array S 45.12 133 eP P 19 32 36.5 -0.1
comp=Z,9.5nm,0.7s
BR131 Keskin Array S 45.12 133 eP P 19 32 36.5 -0.1
comp=Z,9.5nm,0.7s
BRTR Keskin Array B 45.12 133 P P 19 32 37.6 +1.0
BRTR PcP PcP 19 34 18.0 +1.2
BRTR Keskin Array B 45.12 133 P P 19 32 37.6 +1.0
comp=Z,20nm,0.9s,baz=350,slow=6.3,SNR=102
BRTR PcP PcP 19 34 18.0 +1.2
comp=Z,3.9nm,0.9s,baz=24,slow=2.5,SNR=2.5
BRTR Keskin Array B 45.12 133 *i* P P 19 32 37.5 +1.0
comp=Z,20nm,0.9s
SWMT Swartz Lake 45.13 293 eP P 19 32 37.2 +0.6
SWMT Swartz Lake 45.13 293 eP P 19 32 37.2 +0.6
CEL Celeste 45.16 152 eP P 19 32 37.0 +0.1
comp=Z,23nm,0.9s
CEL Celeste 45.16 152 eP P 19 32 37.0 +0.1
comp=Z,23nm,0.9s
E22A Miles City 45.19 285 ⇓P P 19 32 37.9 +0.9
baz=45

E21A Keefer Ranch, 45.23 286 ⇓P P 19 32 38.2 +0.9
baz=45,SNR=20
PVAQ Vaqueiros 45.25 179 eP P 19 32 38.5 +1.0
comp=Z,48nm,2.1s
PVAQ eS S 19 39 27.0 +10
PVAQ eLQ LQ 19 43 54.9
PVAQ eLR LR 19 46 03.9
comp=Z,496nm,20.0s
PVAQ Vaqueiros 45.25 179 eP P 19 32 38.5 +1.0
comp=Z,48nm,2.1s
LKR Lokris 45.26 144 eP P 19 32 36.7 -0.9
D16A Dana Ranch, Ca 45.30 290 ⇓P P 19 32 37.9 -0.1
baz=45,SNR=199
ATKA Atka Island 45.31 347 eP P 19 32 39.0 +1.3
comp=Z,164nm,1.0s
ATKA Atka Island 45.31 347 eP P 19 32 39.0 +1.3
comp=Z,164nm,1.0s
SLMT Seeley Lake 45.33 292 eP P 19 32 38.7 +0.4
SLMT Seeley Lake 45.33 292 eP P 19 32 38.7 +0.4
MORF Marmelete 45.35 180 eP P 19 32 39.1 +0.7
comp=Z,64nm,0.9s
MORF Marmelete 45.35 180 eP P 19 32 39.0 +0.7
MORF Marmelete 45.35 180 eP P 19 32 39.1 +0.7
comp=Z,64nm,0.9s
E20A Meyer Farm, Mu 45.40 287 P P 19 32 39.5 +0.8
baz=45,SNR=36
EFP Efpalio 45.40 146 eP P 19 32 40.2 +1.5
PBDV Barranco-do-Ve 45.41 179 eP P 19 32 40.2 +1.4
comp=Z,95nm,1.0s
PBDV Barranco-do-Ve 45.41 179 eP P 19 32 40.2 +1.4
comp=Z,95nm,1.0s
D15A Lincoln 45.41 291 P P 19 32 39.0 +0.2
baz=45,SNR=56
KALE Kalithea 45.45 145 eP P 19 32 39.3 +0.1
TRIZ Trizonia 45.48 146 eP P 19 32 39.0 -0.2
BINY Binghamton 45.48 254 eP P 19 32 39.6 +0.3
comp=Z,194nm,1.2s
BINY Binghamton 45.48 254 eP P 19 32 39.6 +0.3
comp=Z,194nm,1.2s
D14A Greenough 45.49 292 ⇑P P 19 32 39.7 +0.2
baz=45,SNR=211
PFVI Vila Bisbo 45.52 180 eP P 19 32 39.9 +0.3
comp=Z,105nm,1.3s
PFVI Vila Bisbo 45.52 180 eP P 19 32 39.9 +0.3
comp=Z,105nm,1.3s
E19A Rath Farm, Rou 45.52 287 ⇓P P 19 32 40.4 +0.7
baz=45,SNR=89
E18A Harlowton 45.56 289 ⇓P P 19 32 40.4 +0.4
baz=45,SNR=20
F24A Ekalaka 45.58 283 P P 19 32 41.2 +1.0
baz=45,SNR=21
LAKA Lakka 45.59 146 eP P 19 32 41.4 +1.2
D13A Huson 45.60 293 P P 19 32 40.9 +0.6
baz=45,SNR=86
CHMT Chamberlain Mo 45.63 292 eP P 19 32 40.8 +0.1
CHMT Chamberlain Mo 45.63 292 eP P 19 32 40.8 +0.1
HRY Holter Researc 45.65 290 eP P 19 32 41.1 +0.4
HRY Holter Researc 45.65 290 eP P 19 32 41.1 +0.4
RLS Riolos of Patr 45.74 146 eP P 19 32 42.5 +1.2
D12A Red Ives Fores 45.74 294 ⇑P P 19 32 42.7 +1.3
baz=46
LIJA Lijar 45.76 176 *i* P P 19 32 43.2 +1.5
CHOS Chios island 45.77 141 eP P 19 32 42.1 +0.4
E17A Martinsdale 45.78 289 P P 19 32 42.2 +0.4
baz=46,SNR=46
MSO Missoula 45.80 292 eP P 19 32 42.5 +0.6
comp=Z,246nm,1.1s
MSO Missoula 45.80 292 eP P 19 32 42.5 +0.6
comp=Z,246nm,1.1s
MSO Missoula 45.80 292 P P 19 32 42.6 +0.7
baz=46,SNR=349
KLV Kalavryta, Ach 45.80 146 eP P 19 32 42.5 +0.6
E16A East Helena 45.81 290 P P 19 32 42.4 +0.4
baz=46,SNR=132
OD2 Odessa Site #2 45.81 297 P P 19 32 42.2 +0.4
OD2 Odessa Site #2 45.81 297 P P 19 32 42.2 +0.4
F23A Volborg 45.82 284 P P 19 32 42.9 +0.9
baz=46,SNR=52
GNI Garni 45.86 121 P P 19 32 43.5 +1.0
GNI Garni 45.86 121 P P 19 32 44.1 +1.6
SNR=7.8
GNI Garni 45.86 121 P P 19 32 43.5 +1.0
comp=Z,7.5nm,0.7s,baz=5.5,slow=3.7,SNR=7.5
GNI LR LR 19 54 02.5
comp=Z,564nm,18.4s,baz=13,slow=39
GNI Garni 45.86 121 P P 19 32 44.1 +1.6
SNR=7.8
F22A Rosebud 45.87 285 P P 19 32 43.5 +1.1
baz=46,SNR=34
LTK Loutraki 45.88 145 eP P 19 32 42.2 -0.3
GUR Goura 45.92 145 eP P 19 32 43.4 +0.5
PTL Penteli 45.93 144 eP P 19 32 42.9 0.0
HIA Hailar 45.93 45 eP P 19 32 41.7 -1.1
comp=Z,40nm,1.3s
HIA LR LR
comp=Z,1µm,21.0s
HIA Hailar 45.93 45 eP P 19 32 41.7 -1.1
comp=Z,40nm,1.3s
F21A Absaloka Mine, 45.94 286 P P 19 32 44.1 +1.1
baz=46,SNR=8.5
YLE Yale 45.97 251 eP P 19 32 43.9 +0.8
comp=Z,96nm,1.2s
YLE Yale 45.97 251 eP P 19 32 43.9 +0.8
comp=Z,96nm,1.2s
SONM Songino Array 45.97 58 P P 19 32 44.2 +1.0
SONM PcP PcP 19 34 20.1 +0.4
SONM P'P'ab P'P'ab 20 05 14.4 -0.8
SONM Songino Array 45.97 58 P P 19 32 44.2 +1.0
comp=Z,32nm,1.2s,baz=336,slow=5.5,SNR=70
SONM PcP PcP 19 34 20.1 +0.4
comp=Z,9.3nm,1.1s,baz=338,slow=3.1,SNR=4.1
SONM LR LR 19 52 31.4
comp=Z,4µm,20.7s,baz=352,slow=37
SONM PKP2ab 20 05 14.4
comp=Z,0.5nm,1.0s,baz=141,slow=9.6,SNR=3.6
SONM Songino Array 45.97 58 P P 19 32 44.2 +1.0
SONM Songino Array 45.97 58 PcP PcP 19 34 20.1 +0.4
ULN Ulaanbaatar 46.02 57 eP P 19 32 44.6 +1.0
comp=Z,98nm,1.3s
ULN Ulaanbaatar 46.02 57 P P 19 32 45.3 +1.7
SNR=37
ULN Ulaanbaatar 46.02 57 P P 19 32 44.2 +0.6
comp=Z,62nm,1.3s,comp=Z,997nm
ULN Ulaanbaatar 46.02 57 P P 19 32 45.3 +1.7
SNR=37
E15A Deer Lodge 46.03 291 P P 19 32 44.1 +0.4
baz=46,SNR=169
G24A Alzada 46.08 283 ⇓P P 19 32 44.6 +0.5
baz=46
F20A Billings 46.09 287 ⇓P P 19 32 44.3 +0.1
baz=46,SNR=6.8
F19A Roth Farm, Mol 46.14 287 P P 19 32 45.5 +0.9
baz=46,SNR=81
E14A Clinton 46.15 292 P P 19 32 45.3 +0.6
baz=46,SNR=40
KKAR Karatay Array 46.15 94 eP P 19 32 46.0 +1.5
KKAR Karatay Array 46.15 94 eP P 19 32 46.0 +1.5
KKAR Karatay Array 46.15 94 eP P 19 32 46.0 +1.5
NAIG Nisos Aigina 46.19 144 eP P 19 32 44.7 -0.2
F18A Big Timber 46.19 288 P P 19 32 45.6 +0.7
baz=46,SNR=49
E13A Victor 46.21 293 P P 19 32 45.7 +0.6
baz=46,SNR=298
BRSD Miller 46.25 277 ⇑P P 19 32 46.1 +0.7
baz=46,SNR=6.4
F17A Fitzpatrick Pl 46.30 289 ⇓P P 19 32 46.2 +0.3
baz=46,SNR=39
G23A Biddle 46.33 284 P P 19 32 46.6 +0.5
baz=46,SNR=14
CMAH Djebel Manchou 46.36 162 P P 19 32 48.5 +2.1
CMAH Djebel Manchou 46.36 162 P P 19 32 48.5 +2.1
DFRA Djebel Bou Aff 46.38 164 P P 19 32 49.0 +2.4
DFRA Djebel Bou Aff 46.38 164 P P 19 32 49.0 +2.4
NLWA Neilton Lookou 46.40 302 eP P 19 32 48.0 +1.5
comp=Z,159nm,1.1s
NLWA Neilton Lookou 46.40 302 eP P 19 32 48.0 +1.5
comp=Z,159nm,1.1s
DID Didima 46.42 144 eP P 19 32 46.1 -0.6
G22A Birney 46.43 285 P P 19 32 47.7 +0.9
baz=46,SNR=22
VLX Vlachokerasia 46.49 145 eP P 19 32 48.5 +1.1
EBNR Beni Rached 46.50 168 P P 19 32 46.0 -1.4
EBNR Beni Rached 46.50 168 P P 19 32 46.0 -1.4
USP Ospenovka 46.51 90 P P 19 32 48.4 +1.0
SNR=17
LCCM Lewis and Clar 46.52 290 P P 19 32 48.2 +0.6

LCCM **Lewis and Clar** 46.52 290 P P 19 32 48.2 +0.6
WAH2 **Wahluke Slope** 46.53 298 P P 19 32 48.5 +1.0
WAH2 **Wahluke Slope** 46.53 298 P P 19 32 48.5 +1.0
G21A **Lodge Grass** 46.54 286 P P 19 32 48.6 +0.8
baz=46,SNR=9.2
F16A **Kennard Place,** 46.54 290 P P 19 32 48.0 +0.3
baz=46,SNR=46
CKFL **Kef-Lekhel** 46.56 163 P P 19 32 50.0 +2.0
CKFL **Kef-Lekhel** 46.56 163 P P 19 32 50.0 +2.0
F15A **Butte** 46.59 291 P P 19 32 49.0 +0.7
baz=46,SNR=134
LRM **Limekiln Ridge** 46.60 291 eP P 19 32 49.0 +0.6
LRM **Limekiln Ridge** 46.60 291 eP P 19 32 49.0 +0.6
JFWS **Jewell Farm** 46.62 268 eP P 19 32 49.0 +0.8
JFWS pmax pmax
comp=Z,155nm,0.9s
JFWS **Jewell Farm** 46.62 268 eP P 19 32 49.0 +0.8
comp=Z,156nm,0.9s
JFWS **Jewell Farm** 46.62 268 eP P 19 32 49.0 +0.8
comp=Z,156nm,0.9s
EMHD **Djebel Mahouad** 46.63 167 P P 19 32 49.0 +0.5
EMHD **Djebel Mahouad** 46.63 167 P P 19 32 49.0 +0.5
ECHA **Ech Chlef** 46.63 169 P P 19 32 44.0 -4.4
ECSD **EROS Data Cent** 46.64 275 eP P 19 32 49.0 +0.5
comp=Z,127nm,1.0s
ECSD **EROS Data Cent** 46.64 275 eP P 19 32 49.0 +0.5
comp=Z,127nm,1.0s
ITM **Ithomi** 46.64 146 eP P 19 32 48.6 +0.1
G20A **Bridger** 46.67 287 P P 19 32 49.4 +0.6
baz=46,SNR=84
H24A **Dirks Ranch, A** 46.67 283 P P 19 32 48.9 +0.1
baz=46,SNR=20
BOZ **Bozeman (W)** 46.68 290 eP P 19 32 48.5 -0.3
BOZ pmax pmax
comp=Z,133nm,1.4s
BOZ MLR MLR
comp=Z,2µm,20.0s
BOZ **Bozeman (W)** 46.68 290 eP P 19 32 48.5 -0.3
comp=Z,170nm,1.4s
BOZ LR LR
comp=Z,2µm,20.0s
BOZ **Bozeman (W)** 46.68 290 eP P 19 32 48.5 -0.3
comp=Z,170nm,1.4s
CASM **Ain Smara** 46.69 163 P P 19 32 51.0 +2.1
CASM **Ain Smara** 46.69 163 P P 19 32 51.0 +2.1
SET **Setif** 46.71 164 P P 19 32 51.0 +1.9
SET **Setif** 46.71 164 P P 19 32 51.0 +1.9
ISP **Isparta** 46.71 136 eP P 19 32 49.3 +0.2
ISP pmax pmax
comp=Z,300nm,2.5s
ISP MLR MLR
comp=Z,320nm,19.0s
ISP **Isparta** 46.71 136 eP P 19 32 49.3 +0.2
comp=Z,300nm,2.5s
ISP LR LR
comp=Z,320nm,19.0s
ISP **Isparta** 46.71 136 ⇓*i*P P 19 32 49.1 0.0
ISP **Isparta** 46.71 136 eP P 19 32 49.3 +0.2
comp=Z,320nm,19.0s
ABSA **Djebel Ababsia** 46.71 162 P P 19 32 51.0 +1.8
ABSA **Djebel Ababsia** 46.71 162 P P 19 32 51.0 +1.8
F14A **Wisdom** 46.73 292 P P 19 32 50.0 +0.7
baz=46,SNR=13
E08A **Dider Farm, El** 46.74 297 P P 19 32 49.8 +0.7
E08A **Dider Farm, El** 46.74 297 P P 19 32 49.8 +0.7
G18A **Lazy EL Ranch,** 46.74 288 ⇓P P 19 32 49.4 0.0
baz=47,SNR=16
LON **Longmire** 46.80 300 eP P 19 32 50.5 +0.8
LON pmax pmax
comp=Z,119nm,0.9s
LON **Longmire** 46.80 300 eP P 19 32 50.5 +0.8
comp=Z,120nm,0.9s
LON **Longmire** 46.80 300 eP P 19 32 50.5 +0.8
comp=Z,120nm,0.9s
CHMS **Chumysh** 46.80 89 P P 19 32 51.4 +1.7
SNR=60
WPW **White Pass** 46.82 299 P P 19 32 51.1 +1.2
WPW **White Pass** 46.82 299 P P 19 32 51.1 +1.2
WIW **Wooded Island** 46.82 297 P P 19 32 51.2 +1.4
WIW **Wooded Island** 46.82 297 P P 19 32 51.2 +1.4
F13A **Darby** 46.87 293 P P 19 32 50.8 +0.5
baz=47,SNR=147
G17A **Pierce Place,** 46.89 289 ⇑P P 19 32 51.6 +1.1
baz=47,SNR=8.9
HAWA **Hanford** 46.89 298 eP P 19 32 51.1 +0.8
comp=Z,153nm,1.1s
HAWA **Hanford** 46.89 298 eP P 19 32 51.1 +0.8
comp=Z,153nm,1.1s
RLMT **Red Lodge** 46.90 288 eP P 19 32 49.8 -0.9
comp=Z,30nm,1.1s
RLMT **Red Lodge** 46.90 288 eP P 19 32 49.8 -0.9
comp=Z,30nm,1.1s
FRU **Bishkek** 46.95 90 eP P 19 32 52.0 +1.1
FRU pmax pmax
comp=Z,225nm,2.0s
FRU MLR MLR
comp=Z,2µm,15.0s
FRU **Bishkek** 46.95 90 eP P 19 32 52.0 +1.1
comp=Z,2µm,15.0s
KLR **Kul'dur** 46.98 35 eP P 19 32 48.0 -2.9
KLR *e* 19 34 39.5
KLR *e*S S 19 39 35.5 -5.6
KLR pmax pmax
comp=Z,48nm,1.4s
KLR MLR MLR
comp=N,1µm,12.5s
KLR MLR MLR
comp=Z,2µm,12.5s
TKM2 **Tokmak 2** 46.99 89 *i* P P 19 32 53.1 +1.7
TKM2 **Tokmak 2** 46.99 89 eP P 19 32 53.2 +1.7
comp=Z,58nm,1.4s
TKM2 **Tokmak 2** 46.99 89 P P 19 32 53.2 +1.7
SNR=23
TKM2 **Tokmak 2** 46.99 89 *i* P P 19 32 53.1 +1.7
EKS2 **Erkin-Say** 47.01 90 P P 19 32 53.0 +1.6
SNR=17
F12A **Elk City** 47.01 293 P P 19 32 51.5 +0.1
baz=47,SNR=136
APE **Apeiranthos** 47.03 142 eP P 19 32 50.1 -1.5
H22A **Clearmont** 47.05 285 P P 19 32 52.5 +0.8
baz=47,SNR=25
DLMT **Dillon** 47.08 291 eP P 19 32 52.7 +0.8
comp=Z,74nm,1.1s
DLMT **Dillon** 47.08 291 eP P 19 32 52.7 +0.8
comp=Z,74nm,1.1s
DYR **Agios Nikonas** 47.09 145 eP P 19 32 52.8 +0.8
H21A **Big Horn, Sher** 47.11 285 P P 19 32 53.0 +0.8
baz=47,SNR=10
G16A **Moss Hill, Enn** 47.11 290 P P 19 32 53.0 +0.8
baz=47,SNR=161
AAK **Ala-Archa** 47.13 90 *i* P P 19 32 54.0 +1.5
AAK **Ala-Archa** 47.13 90 eP P 19 32 54.1 +1.7
comp=Z,11nm,1.0s
AAK LR LR
comp=Z,1µm,21.0s
AAK **Ala-Archa** 47.13 90 P P 19 32 54.5 +2.1
SNR=34
AAK **Ala-Archa** 47.13 90 P P 19 32 54.0 +1.5
SNR=15
AAK **Ala-Archa** 47.13 90 P P 19 32 54.1 +1.7
comp=Z,29nm,1.0s,baz=300,slow=2.1,SNR=59
AAK **Ala-Archa** 47.13 90 P P 19 32 54.5 +2.1
SNR=34
KBK **Karagaybulak** 47.17 89 P P 19 32 54.5 +1.8
SNR=11
VLI **Veliai** 47.18 145 eP P 19 32 52.0 -0.6
RSSD **Black Hills** 47.22 282 eP P 19 32 53.1 -0.1
RSSD pmax pmax
comp=Z,54nm,1.1s
RSSD **Black Hills** 47.22 282 eP P 19 32 53.1 -0.1
comp=Z,14nm,1.1s
RSSD **Black Hills** 47.22 282 eP P 19 32 53.1 -0.1
comp=Z,14nm,1.1s
BMW **Boistfort Moun** 47.23 301 P P 19 32 54.6 +1.5
BMW **Boistfort Moun** 47.23 301 P P 19 32 54.6 +1.5
BMW **Boistfort Moun** 47.23 301 P P 19 32 54.6 +1.5
G15A **Dillon** 47.26 291 P P 19 32 54.0 +0.6
baz=47,SNR=74
SSPA **Standing Stone** 47.26 255 eP P 19 32 54.1 +0.9
comp=Z,96nm,1.4s
SSPA **Standing Stone** 47.26 255 eP P 19 32 54.1 +0.9
comp=Z,96nm,1.4s
G14A **Jackson** 47.30 292 P P 19 32 54.7 +0.9
baz=47,SNR=25
H19A **Powell** 47.31 287 P P 19 32 55.0 +1.2
baz=47,SNR=54

KEST **Kesra** 47.33 160 eP P 19 32 54.7 +0.7
KEST **Kesra** 47.33 160 P P 19 32 54.5 +0.6
comp=Z,2.6nm,0.6s,baz=328,slow=1.4,SNR=13
KEST **Kesra** 47.33 160 eP P 19 32 54.7 +0.7
ASR **Mount Adams--S** 47.37 299 P P 19 32 55.4 +1.2
ASR **Mount Adams--S** 47.37 299 P P 19 32 55.4 +1.2
H20A **Greybull** 47.37 286 P P 19 32 54.9 +0.7
baz=47,SNR=125
IMRD **Marand** 47.39 120 eP P 19 32 55.1 +0.6
IMRD **Marand** 47.39 120 eP P 19 32 55.1 +0.6
H18A **Shoshone NF, C** 47.39 288 ⇓P P 19 32 54.7 +0.2
baz=47,SNR=45
MPAL **Palemas** 47.45 175 *i* P P 19 32 55.0 +0.1
QLMT **Earthquake Lak** 47.46 290 eP P 19 32 56.0 +1.0
QLMT **Earthquake Lak** 47.46 290 eP P 19 32 56.0 +1.0
AML **Almayashu** 47.52 91 P P 19 33 00.2 +4.4
SNR=11
AML **Almayashu** 47.52 91 P P 19 32 55.9 +0.1
SNR=14
UCH **Uchtor** 47.53 90 P P 19 32 58.8 +2.9
SNR=5.5
G13A **Cobalt** 47.54 292 P P 19 32 56.3 +0.7
baz=47,SNR=173
H16A **Russell Place,** 47.56 289 P P 19 32 56.8 +1.0
baz=47,SNR=91
YMR **Madison River** 47.56 289 eP P 19 32 56.1 +0.4
comp=Z,48nm,1.2s
YMR **Madison River** 47.56 289 eP P 19 32 56.2 +0.4
comp=Z,48nm,1.2s
KYTH **Kithira** 47.62 145 eP P 19 32 57.0 +0.9
NIS1 **Nisyros Isl.** 47.63 140 eP P 19 32 56.4 +0.2
MCMT **McKenzie Canyo** 47.63 291 eP P 19 32 57.4 +1.0
comp=Z,60nm,1.1s
MCMT **McKenzie Canyo** 47.63 291 eP P 19 32 57.4 +1.0
comp=Z,60nm,1.1s
G12A **Big Creek, Yel** 47.64 293 ⇓P P 19 32 56.6 +0.2
baz=47
WMQ **Urumqi** 47.68 77 P P 19 32 58.1 +1.5
WMQ pP pP 19 33 02.6 +1.0
WMQ sP sP 19 33 05.1 +1.6
WMQ PcP PcP 19 34 27.8 +2.1
WMQ PP PP 19 34 49.1 +1.2
WMQ PcS PcS 19 38 21.9 +0.8
WMQ S S 19 39 52.8 +1.4
WMQ sS sS 19 40 00.4 +0.8
WMQ ScS ScS 19 42 48.6 -0.2
WMQ SS SS 19 43 15.1 -3.8
WMQ pmax pmax
comp=Z,53nm,1.2s
WMQ pmax pmax
comp=Z,430nm,7.0s
WMQ LR LR
comp=N,2µm,15.0s
WMQ LR LR
comp=E,2µm,15.0s
WMQ LR LR
comp=Z,2µm,19.0s
MVL **Millersville** 47.69 254 eP P 19 32 57.6 +1.1
comp=Z,59nm,1.1s
MVL **Millersville** 47.69 254 eP P 19 32 57.7 +1.1
comp=Z,59nm,1.1s
TOU **Touzarine** 47.72 174 *i* P P 19 32 56.0 -1.0
ZAI **Zaio** 47.73 173 *i* P P 19 32 56.0 -1.0
ULHL **Ulahol** 47.74 88 P P 19 32 58.8 +1.5
SNR=22
I22A **9 Mile Ranch,** 47.76 285 P P 19 32 58.1 +0.8
baz=48,SNR=56
KZA **Kyzart** 47.78 89 P P 19 32 59.6 +1.9
SNR=10
H17A **Grant Village** 47.78 289 P P 19 32 59.6 +2.1
baz=48,SNR=53
ISHB **Shabestar** 47.80 120 eP P 19 32 58.1 +0.3
ISHB **Shabestar** 47.80 120 eP P 19 32 58.1 +0.3
H15A **Lima** 47.81 291 ⇓P P 19 32 59.0 +1.2
baz=48,SNR=272
VGB **Gordon Butte** 47.90 299 P P 19 32 59.8 +1.6
VGB **Gordon Butte** 47.90 299 P P 19 32 59.8 +1.6
VGB **Gordon Butte** 47.90 299 P P 19 32 59.8 +1.6
H14A **Leadore** 47.90 291 P P 19 32 59.7 +1.2
baz=48,SNR=181
G08A **Pilot Rock** 47.91 297 P P 19 32 59.7 +1.3
G08A **Pilot Rock** 47.91 297 P P 19 32 59.7 +1.3
I20A **Worland** 47.91 286 P P 19 32 59.4 +0.9
baz=48,SNR=68
ITBZ **Tabriz** 47.91 120 eP P 19 32 58.0 -0.6
ITBZ **Tabriz** 47.91 120 eP P 19 32 58.0 -0.6
IHRS **Heris** 47.93 119 eP P 19 32 59.5 +0.7
IHRS **Heris** 47.93 119 eP P 19 32 59.5 +0.7
I19A **Meeteetse** 47.94 287 P P 19 32 59.4 +0.7
baz=48,SNR=68
I21A **Big Trails, Te** 47.94 285 P P 19 32 59.0 +0.3
baz=48,SNR=123
HABR **Khabarovsk** 47.97 32 eP P 19 32 57.7 -0.9
HABR *e**PP pP 19 33 00.8 -2.8
HABR *e**SP sP 19 33 02.1 -3.5
HABR 19 34 25.9
HABR *e*S S 19 39 56.1 +0.9
HABR *e**SS sS 19 40 01.7 -1.7
HABR *e* 19 42 50.9
HABR *e*SS SS 19 43 26.5 +3.3
HABR pmax pmax
comp=N,56nm,2.9s
HABR pmax pmax
comp=E,15nm,1.5s
HABR pmax pmax
comp=Z,46nm,1.0s
HABR MLR MLR
comp=Z,969nm,23.0s
HABR **Khabarovsk** 47.97 32 eP P 19 32 57.7 -0.9
comp=Z,46nm,1.0s
HABR **Khabarovsk** 47.97 32 PcP PcP 19 34 25.9 -0.6
HABR *e*S S 19 39 56.1 +0.9
HABR *e*ScS ScS 19 42 50.9 +0.5
SCIA **State Center** 47.99 271 eP P 19 33 00.0 +1.1
comp=Z,128nm,1.1s
SCIA **State Center** 47.99 271 eP P 19 33 00.0 +1.1
comp=Z,128nm,1.1s
ANKY **Antikythira Is** 48.05 145 eP P 19 32 59.8 +0.4
H13A **Challis** 48.06 292 ⇓P P 19 33 00.7 +1.1
baz=48
J24A **Dixon Ranch, L** 48.08 283 ⇓P P 19 33 00.1 +0.4
baz=48
ARG **Arkhangelos** 48.09 139 eP P 19 32 58.8 -1.0
J23A **Dilts Ranch, B** 48.12 284 P P 19 33 00.5 +0.4
baz=48,SNR=5.6
BMO **Blue Mountains** 48.15 295 P P 19 33 01.0 +0.8
BMO **Blue Mountains** 48.15 295 P P 19 33 01.0 +0.8
H12A **Diamond D Ranc** 48.15 293 P P 19 33 00.7 +0.4
baz=48,SNR=287
VFP **Flag Point** 48.17 299 P P 19 33 01.7 +1.2
VFP **Flag Point** 48.17 299 P P 19 33 01.7 +1.2
J22A **Midwest** 48.23 284 P P 19 33 01.0 0.0
baz=48,SNR=72
I17A **Pilgrim Ck.** 48.25 289 ⇑P P 19 33 02.7 +1.5
baz=48
ACSO **Alum Creek Sta** 48.31 261 eP P 19 33 02.1 +0.7
comp=Z,225nm,1.4s
ACSO **Alum Creek Sta** 48.31 261 eP P 19 33 02.1 +0.7
comp=Z,225nm,1.4s
SDMD **Soldier's Deli** 48.33 254 eP P 19 33 02.9 +1.3
comp=Z,165nm,1.1s
SDMD **Soldier's Deli** 48.33 254 eP P 19 33 02.8 +1.3
comp=Z,165nm,1.1s
I18A **Diamond G Ranc** 48.37 288 P P 19 33 03.1 +1.0
baz=48,SNR=39
I16A **Newdale** 48.40 289 P P 19 33 04.0 +1.7
baz=48,SNR=60
I15A **Monteview** 48.40 290 P P 19 33 03.5 +1.3
baz=48,SNR=64
J21A **Lysite** 48.42 285 P P 19 33 02.9 +0.4
baz=48,SNR=50
MOOW **Moose Ponds** 48.44 289 eP P 19 33 03.7 +1.1
comp=Z,102nm,1.2s
MOOW **Moose Ponds** 48.44 289 eP P 19 33 03.7 +1.1
comp=Z,102nm,1.2s
IAZR **Azarshahr** 48.44 120 eP P 19 33 03.0 +0.2
IAZR **Azarshahr** 48.44 120 eP P 19 33 03.0 +0.2
DRWC **Darouich** 48.49 130 eP P 19 33 02.0 -0.9
DRWC **Darouich** 48.49 130 eP P 19 33 02.0 -0.9
SNR=46
ISRB **Sarab** 48.49 118 eP P 19 33 03.4 +0.3
ISRB **Sarab** 48.49 118 eP P 19 33 03.4 +0.3
J20A **Shoshoni** 48.49 286 P P 19 33 04.2 +1.2
baz=48,SNR=219
K26A **Motz Farm, Whi** 48.51 281 P P 19 33 03.3 +0.3
baz=48,SNR=12
LOHW **Long Hollow** 48.55 288 eP P 19 33 04.5 +1.0
comp=Z,101nm,1.3s
LOHW **Long Hollow** 48.55 288 eP P 19 33 04.5 +1.0
comp=Z,101nm,1.3s
I14A **Mackay** 48.59 291 P P 19 33 04.7 +0.9
baz=48,SNR=91
TGT **Taghat** 48.59 176 *i* P P 19 33 04.0 +0.3
DCID1 **Drake Creek** 48.64 289 eP P 19 33 06.0 +1.9
comp=Z,189nm,1.1s
DCID1 **Drake Creek** 48.64 289 eP P 19 33 06.1 +1.9
comp=Z,189nm,1.1s
RTC **Rabat Centre** 48.66 178 PFAKE 19 33 10.0 +5.8
RTC LR LR
comp=Z,411nm,21.0s
K25A **Mack Ranch, Ha** 48.69 282 ⇓P P 19 33 04.0 -0.5
baz=48
I13A **Wildhorse Cree** 48.69 292 P P 19 33 05.5 +0.9
baz=48,SNR=148
SFIN **Scholer Farm** 48.70 265 ⇑P P 19 33 04.8 +0.4
baz=48,SNR=32
J19A **Crowheart** 48.70 287 P P 19 33 05.5 +0.9
baz=48,SNR=183
TPAW **Teton Pass** 48.72 289 eP P 19 33 05.8 +1.0
comp=Z,85nm,1.0s
TPAW **Teton Pass** 48.72 289 eP P 19 33 05.8 +1.0
comp=Z,85nm,1.0s
SNOW **Snow King Moun** 48.72 289 eP P 19 33 06.0 +1.2
comp=Z,85nm,1.1s
SNOW **Snow King Moun** 48.72 289 eP P 19 33 06.0 +1.2
comp=Z,85nm,1.1s
K23A **Bowen Ranch, D** 48.77 283 P P 19 33 04.8 -0.3
baz=49,SNR=10
HDIL **Hopedale** 48.81 267 eP P 19 33 06.1 +0.9
comp=Z,162nm,1.1s
HDIL **Hopedale** 48.81 267 eP P 19 33 06.1 +0.9
comp=Z,162nm,1.1s
REDW **Red Top Meadow** 48.83 289 eP P 19 33 07.1 +1.4
comp=Z,1.2nm,1.1s
REDW **Red Top Meadow** 48.83 289 eP P 19 33 07.1 +1.4
comp=Z,1.2nm,1.1s
RRI2 **Red Ridge** 48.90 289 eP P 19 33 07.5 +1.3
comp=Z,211nm,1.8s
RRI2 **Red Ridge** 48.90 289 eP P 19 33 07.6 +1.3
comp=Z,211nm,1.8s
I12A **Atlanta** 48.93 293 P P 19 33 06.5 +0.1
baz=49,SNR=125
K22A **Casper** 48.99 284 P P 19 33 06.6 -0.2
baz=49,SNR=75
SFNV **Sufian** 49.04 126 eP P 19 33 04.6 -2.6
SFNV **Sufian** 49.04 126 eP P 19 33 04.6 -2.6
SNR=46
BTCH **Batrach** 49.05 130 eP P 19 33 07.2 0.0
BTCH **Batrach** 49.05 130 eP P 19 33 07.2 0.0
SNR=46
HLID **Hailey** 49.07 292 eP P 19 33 02.2 -5.2
comp=Z,58nm,1.1s
HLID **Hailey** 49.07 292 ⇓P P 19 33 07.7 +0.3
baz=49,SNR=59
K21A **Alcova** 49.10 285 ⇓P P 19 33 07.6 -0.1
baz=49
COR **Corvallis** 49.10 301 eP P 19 33 09.6 +2.2
COR pmax pmax
comp=Z,123nm,1.0s
COR **Corvallis** 49.10 301 eP P 19 33 09.6 +2.2
comp=Z,20nm,1.0s
COR **Corvallis** 49.10 301 eP P 19 33 09.6 +2.2
comp=Z,20nm,1.0s
K19A **Absolon Red Bu** 49.11 287 P P 19 33 07.7 -0.1
baz=49,SNR=30
GVD **Gavdhos** 49.13 144 eP P 19 33 05.0 -2.7
comp=Z,182nm,0.9s
GVD **Gavdhos** 49.13 144 eP P 19 33 05.1 -2.7
comp=Z,182nm,0.9s
ARNB **Al Arnab** 49.17 131 eP P 19 33 05.3 -2.8
ARNB **Al Arnab** 49.17 131 eP P 19 33 05.3 -2.8
SNR=46
J14A **Carey** 49.20 291 ⇑P P 19 33 09.2 +0.8
baz=49,SNR=96
J13A **Cove Ranch, Pi** 49.20 292 ⇑P P 19 33 08.8 +0.3
baz=49,SNR=277
K20A **Yellowstone Ra** 49.21 286 P P 19 33 08.4 -0.1
baz=49,SNR=49
MIF **Mishlifen** 49.25 176 *i* P P 19 33 09.0 0.0
PDAR **Pinedale Array** 49.26 287 P P 19 33 09.0 +0.1
PDAR PKiKP PKiKP 19 41 18.1 -0.8
PDAR **Pinedale Array** 49.26 287 P P 19 33 09.0 +0.1
comp=Z,61nm,1.1s,baz=20,slow=4.7,SNR=148
PDAR PKiKP PKiKP 19 41 18.1 -0.8
comp=Z,0.6nm,0.8s,baz=190,slow=0.9,SNR=3.8
PDAR LR LR 19 54 25.6
comp=Z,1µm,21.6s,baz=21,slow=37
PDAR **Pinedale Array** 49.26 287 P P 19 33 09.0 +0.1
BW06 **Boulder Array** 49.26 287 eP P 19 33 08.9 0.0
comp=Z,77nm,1.1s
BW06 **Boulder Array** 49.26 287 eP P 19 33 08.9 0.0
comp=Z,77nm,1.1s
L24A **Wheatland** 49.38 283 ⇓P P 19 33 10.2 +0.4
baz=49
MFID **Camas Ranch** 49.39 293 eP P 19 33 09.7 -0.1
comp=Z,67nm,1.0s
MFID **Camas Ranch** 49.39 293 eP P 19 33 09.7 -0.1
comp=Z,67nm,1.0s
MFID **Camas Ranch** 49.39 293 P P 19 33 09.8 -0.1
baz=49,SNR=67
L23A **Garrett** 49.41 283 P P 19 33 09.3 -0.8
baz=49,SNR=21
M27A **Reverse DX Ran** 49.56 280 ⇑P P 19 33 11.5 +0.4
baz=49
WRDH **Warideh** 49.56 130 eP P 19 33 15.1 +4.0
WRDH **Warideh** 49.56 130 eP P 19 33 15.1 +4.0
SNR=46
L22A **Ellis Ranch, M** 49.59 284 ⇓P P 19 33 11.5 +0.1
baz=49,SNR=52
CZD **Col de Zad** 49.63 176 *i* P P 19 33 14.5 +2.6
ABKT **Ailbek** 49.65 107 P P 19 33 12.1 +0.4
comp=Z,270nm,1.0s,SNR=31
MZRK **Al-Mazaregh** 49.69 126 eP P 19 33 12.5 +0.5
MZRK **Al-Mazaregh** 49.69 126 eP P 19 33 12.5 +0.5
SNR=46
M26A **McRoberts Ranc** 49.72 281 ⇑P P 19 33 12.1 -0.3
baz=50
L21A **Rawlins** 49.77 285 ⇑P P 19 33 12.8 0.0
baz=50,SNR=55
CSS **Prodhromos** 49.81 134 eP P 19 33 12.8 -0.1
comp=Z,5.7nm,1.0s
CSS LR LR
comp=Z,171nm,20.0s
CSS **Prodhromos** 49.81 134 eP P 19 33 12.8 -0.1
comp=Z,5.7nm,1.0s
BLO **Bloomington** 49.81 264 eP P 19 33 12.7 -0.2
BLO pmax pmax
comp=Z,112nm,0.9s
BLO **Bloomington** 49.81 264 eP P 19 33 12.7 -0.2
comp=Z,112nm,0.9s
BLO **Bloomington** 49.81 264 eP P 19 33 12.7 -0.2
comp=Z,112nm,0.9s
MDT **Midelt** 49.85 175 P P 19 33 13.7 +0.3
MDT **Midelt** 49.85 175 P P 19 33 13.7 +0.3
comp=Z,55nm,0.9s,baz=9.1,slow=6.4,SNR=76
MDT **Midelt** 49.85 175 P P 19 33 13.7 +0.3
L20A **Wamsutter** 49.85 286 ⇓P P 19 33 13.9 +0.4
baz=50,SNR=24
M25A **Palm-Egli Farm** 49.87 282 ⇓P P 19 33 13.8 +0.2
baz=50
L19A **Farson** 49.89 287 P P 19 33 13.8 +0.1
baz=50,SNR=34
PMOZ **Porto Moniz, M** 49.91 189 eP P 19 33 14.7 +0.9
comp=Z,160nm,1.9s
PMOZ *e*LR LR 19 48 00.9
PMOZ **Porto Moniz, M** 49.91 189 eP P 19 33 14.7 +0.9
comp=Z,160nm,1.9s
M24A **Cheyenne** 49.94 282 ⇓P P 19 33 14.4 +0.3
baz=50,SNR=17
YSS **Yuzh-Sakhalins** 49.96 25 eP P 19 33 14.0 +0.1
YSS *e* 19 40 14.0
YSS MLR MLR
comp=N,1µm,17.0s
YSS MLR MLR
comp=Z,2µm,17.0s
YSS **Yuzh-Sakhalins** 49.96 25 eP P 19 33 14.0 +0.1
IMND **Minoodasht** 49.97 110 eP P 19 33 16.9 +2.8
IMND **Minoodasht** 49.97 110 eP P 19 33 16.9 +2.8
ISHV **Shirvan** 49.98 108 eP P 19 33 15.4 +0.9
ISHV **Shirvan** 49.98 108 eP P 19 33 15.4 +0.9
PMAR **Madeira** 50.00 189 eP P 19 33 15.7 +1.1
comp=Z,230nm,1.5s

PMAR	Madeira	50.00	189	*e*P		P	19 33 15.7	+1.1	
	comp=Z,230nm,1.5s								
BIDA	Albida	50.05	131	*e*P		P	19 33 05.8	-9.0	
BIDA	Albida	50.05	131	*e*P		P	19 33 05.8	-9.0	
	SNR=46								
M23A	Laramie	50.05	283	⇓P		P	19 33 15.1	+0.1	
	baz=50,SNR=11								
KIB	El Ksiba	50.08	177	*i* P		P	19 33 16.0	+0.9	
FUL	Funchal	50.08	189	*e*P		P	19 33 16.6	+1.6	
	comp=Z,154nm,1.5s								
OGNE	Ogallala	50.09	280	*e*P		P	19 33 14.8	-0.4	
	comp=Z,147nm,1.2s								
OGNE	Ogallala	50.09	280	*e*P		P	19 33 14.8	-0.4	
	comp=Z,147nm,1.2s								
OGNE	Ogallala	50.09	280	⇓P		P	19 33 15.6	+0.5	
	baz=50,SNR=5.2								
M21A	Separation Pea	50.12	285	⇑P		P	19 33 15.5	-0.1	
	baz=50,SNR=110								
L18A	Fontenelle, Gr	50.15	288	P		P	19 33 15.9	+0.2	
	baz=50,SNR=40								
JSRW	J. Sargeant Re	50.15	255	*e*P		P	19 33 16.4	+0.9	
JSRW	J. Sargeant Re	50.15	255	*e*P		P	19 33 16.4	+0.9	
PHWY	Pilot Hill	50.18	283	*e*P		P	19 33 16.4	+0.3	
	comp=Z,34nm,1.2s								
PHWY	Pilot Hill	50.18	283	*e*P		P	19 33 16.4	+0.3	
	comp=Z,34nm,1.2s								
M22A	Cedar Creek Ra	50.23	284	⇓P		P	19 33 16.5	+0.1	
	baz=50,SNR=25								
N27A	Anderson Farm,	50.29	280	⇓P		P	19 33 17.2	+0.5	
	baz=50								
ALAS	Alassa	50.32	158	*i* P		P	19 33 17.6	+0.8	
	SNR=23								
M20A	Sweetwater, Wa	50.34	286	⇑P		P	19 33 17.6	+0.4	
	baz=50,SNR=42								
N26A	Koester Ranch,	50.36	281	⇓P		P	19 33 17.7	+0.5	
	baz=50								
KSH	Kashi	50.39	89	P		P	19 33 21.6	+4.1	
KSH				*e*pP		pP	19 33 26.3	+3.8	
KSH				*e*sP		sP	19 33 28.5	+4.0	
KSH				*e*PcP		PcP	19 34 33.1	-2.6	
KSH				*e*PP		PP	19 35 20.6	+7.9	
KSH				*e*ScP		ScP	19 38 28.3	-2.1	
KSH				*e*PcS		PcS	19 38 30.3	-2.6	
KSH				*e*S		S	19 40 34.3	+4.6	
KSH				*e*ScS		ScS	19 43 07.8	+0.4	
KSH				pmax		pmax			
	comp=Z,13nm,0.7s								
KSH				LR		LR			
	comp=N,620nm,6.2s								
KSH				LR		LR			
	comp=E,490nm,5.4s								
KSH				LR		LR			
	comp=Z,750nm,11.1s								
OLIL	Olney	50.45	265	*e*P		P	19 33 18.1	+0.4	
	comp=Z,257nm,1.2s								
OLIL	Olney	50.45	265	*e*P		P	19 33 18.1	+0.4	
	comp=Z,257nm,1.2s								
M19A	Rock Springs	50.45	287	⇓P		P	19 33 18.4	+0.4	
	baz=50,SNR=14								
N25A	Grover	50.48	282	⇑P		P	19 33 19.1	+0.9	
	baz=50								
ISFR	Sfrayin	50.50	108	*e*P		P	19 33 19.4	+0.9	
ISFR	Sfrayin	50.50	108	*e*P		P	19 33 19.4	+0.9	
N24A	Carr	50.57	282	⇑P		P	19 33 19.7	+0.9	
	baz=50,SNR=10.0								
HVU	Hansel Valley	50.63	290	*e*P		P	19 33 20.0	+0.7	
HVU				pmax		pmax			
	comp=Z,81nm,1.1s								
HVU	Hansel Valley	50.63	290	*e*P		P	19 33 20.0	+0.7	
	comp=Z,81nm,1.1s								
HVU	Hansel Valley	50.63	290	*e*P		P	19 33 20.0	+0.7	
	comp=Z,81nm,1.1s								
ZFT	Errachidia	50.63	175	*i* P		P	19 33 19.0	-0.4	
M18A	Lyman	50.64	287	P		P	19 33 19.9	+0.4	
	baz=50,SNR=24								
N23A	Red Feather La	50.64	283	⇓P		P	19 33 20.1	+0.6	
	baz=50,SNR=79								
HWUT	Hardware Ranch	50.65	289	*e*P		P	19 33 19.8	+0.4	
	comp=Z,165nm,1.1s								
HWUT	Hardware Ranch	50.65	289	*e*P		P	19 33 19.8	+0.4	
	comp=Z,165nm,1.1s								
M17A	Scullys Gap (B	50.67	288	⇑P		P	19 33 19.4	-0.2	
	baz=50,SNR=46								
WVOR	Wild Horse Val	50.69	296	*e*P		P	19 33 19.8	+0.1	
WVOR	Wild Horse Val	50.69	296	*e*P		P	19 33 19.8	+0.1	
	comp=Z,1μm,1.1s								
WVOR	Wild Horse Val	50.69	296	*e*P		P	19 33 19.8	+0.1	
	comp=Z,1μm,1.1s								
WCI	Wyandotte Cave	50.71	263	*e*P		P	19 33 18.7	-1.0	
WCI				pmax		pmax			
	comp=Z,55nm,1.0s								
WCI	Wyandotte Cave	50.71	263	*e*P		P	19 33 18.7	-1.0	
	comp=Z,55nm,1.0s								
WCI	Wyandotte Cave	50.71	263	*e*P		P	19 33 18.7	-1.0	
	comp=Z,55nm,1.0s								
N22A	Wattenberg Ran	50.80	284	⇑P		P	19 33 20.8	0.0	
	baz=51,SNR=49								
SLM	Saint Louis	50.82	267	*e*P		P	19 33 19.6	-1.0	
SLM				pmax		pmax			
	comp=Z,65nm,1.2s								
SLM	Saint Louis	50.82	267	*e*P		P	19 33 19.6	-1.0	
	comp=Z,65nm,1.2s								
SLM	Saint Louis	50.82	267	*e*P		P	19 33 19.6	-1.0	
	comp=Z,65nm,1.2s								
VWCC	Virginia Weste	50.86	257	*e*P		P	19 33 19.0	-1.9	
VWCC	Virginia Weste	50.86	257	*e*P		P	19 33 19.0	-1.9	
O27A	Beecher Island	50.89	280	⇓P		P	19 33 21.3	+0.1	
	baz=51								
KEBM	Edson Butte	50.91	301	*e*P		P	19 33 23.3	+2.0	
	comp=Z,112nm,1.2s								
KEBM	Edson Butte	50.91	301	*e*P		P	19 33 23.3	+2.0	
	comp=Z,112nm,1.2s								
O26A	Horse Wrangler	50.95	281	P		P	19 33 22.1	+0.5	
	baz=51,SNR=7.0								
BLA	Blacksburg	50.95	257	*e*P		P	19 33 21.6	0.0	
BLA				pmax		pmax			
	comp=Z,135nm,1.0s								
BLA	Blacksburg	50.95	257	*e*P		P	19 33 21.6	0.0	
	comp=Z,135nm,1.0s								
BLA	Blacksburg	50.95	257	*e*P		P	19 33 21.6	0.0	
	comp=Z,135nm,1.0s								
N21A	Black Mountain	50.98	285	⇓P		P	19 33 22.2	+0.2	
	baz=51,SNR=27								
N20A	Spence Gulch,	51.00	286	P		P	19 33 22.7	+0.6	
	baz=51,SNR=68								
HUMO	Hull Mountain	51.02	300	*e*P		P	19 33 23.0	+0.9	
	comp=Z,65nm,1.1s								
HUMO	Hull Mountain	51.02	300	*e*P		P	19 33 23.0	+0.9	
	comp=Z,65nm,1.1s								
IAKL	Akhelmad	51.04	107	*e*P		P	19 33 23.4	+0.9	
CIA	Chichaoua	51.08	180	*i* P		P	19 33 22.0	-0.6	
GHAR	Gharyan	51.11	156	*i* P		P	19 33 23.5	+0.6	
	SNR=22								
ISHM	Shahmirzad	51.15	113	*e*P		P	19 33 24.7	+1.3	
ISHM	Shahmirzad	51.15	113	*e*P		P	19 33 24.7	+1.3	
USIN	University of	51.15	265	*e*P		P	19 33 23.4	+0.4	
	comp=Z,252nm,1.1s								
USIN	University of	51.15	265	*e*P		P	19 33 23.4	+0.4	
	comp=Z,252nm,1.1s								
O25A	Wiggins	51.18	281	⇓P		P	19 33 23.9	+0.5	
	baz=51								
KSU1	Kansas State U	51.20	274	*e*P		P	19 33 21.9	-1.5	
	comp=Z,87nm,1.2s								
KSU1				*e*PcP		PcP	19 34 39.0	+0.5	
KSU1	Kansas State U	51.20	274	*e*P		P	19 33 21.9	-1.5	
	comp=Z,87nm,1.2s								
KSU1	Kansas State U	51.20	274	*e*PcP		PcP	19 34 39.0	+0.5	
O24A	Longmont	51.29	282	P		P	19 33 25.1	+0.8	
	baz=51,SNR=6.0								
O23A	Lake Granby, G	51.31	283	⇓P		P	19 33 25.4	+0.8	
	baz=51,SNR=22								
MDJ	Mudanjiang	51.40	37	P		P	19 33 24.4	-0.4	
MDJ				pP		pP	19 33 27.8	-2.0	
MDJ				PP		PP	19 35 21.8	+0.3	
MDJ				S		S	19 40 46.4	+3.2	
MDJ				pmax		pmax			
	comp=Z,49nm,1.3s								
MDJ				pmax		pmax			
	comp=Z,160nm,4.1s								
MDJ				LR		LR			
	comp=N,380nm,30.3s								
MDJ				LR		LR			
	comp=E,680nm,24.6s								
MDJ				LR		LR			
	comp=Z,640nm,18.3s								
MDJ	Mudanjiang	51.40	37	*e*P		P	19 33 23.2	-1.6	
	comp=Z,70nm,1.2s								
MDJ				LR		LR			
	comp=Z,639nm,19.0s								
MDJ	Mudanjiang	51.40	37	*e*P		P	19 33 23.2	-1.6	
	comp=Z,70nm,1.2s								
P28A	Saint Francis	51.41	279	⇓P		P	19 33 24.8	-0.3	
	baz=51,SNR=7.3								
MOD	Modoc	51.41	297	*e*P		P	19 33 26.6	+1.5	
	comp=Z,24nm,0.9s								
MOD	Modoc	51.41	297	*e*P		P	19 33 26.6	+1.5	
	comp=Z,24nm,0.9s								
O22A	Kremmling	51.44	284	⇑P		P	19 33 26.1	+0.5	
	baz=51,SNR=83								
O21A	Pagoda	51.51	285	⇑P		P	19 33 26.5	+0.5	
	baz=51,SNR=24								
P27A	Ficken Ranch,	51.53	280	⇑P		P	19 33 26.1	+0.1	
	baz=51								
IANJ	Anjilo	51.56	112	*e*P		P	19 33 27.1	+0.7	
IANJ	Anjilo	51.56	112	*e*P		P	19 33 27.1	+0.7	
CTU	Camp Tracy	51.57	289	*e*P		P	19 33 27.2	+0.8	
	comp=Z,53nm,1.2s								
CTU	Camp Tracy	51.57	289	*e*P		P	19 33 27.2	+0.8	
	comp=Z,53nm,1.2s								
SIUC	Southern Illin	51.60	266	*e*P		P	19 33 26.4	+0.1	
	comp=Z,128nm,0.9s								
SIUC	Southern Illin	51.60	266	*e*P		P	19 33 26.4	+0.1	
	comp=Z,128nm,0.9s								
JLU	Jordanelle	51.62	289	*e*P		P	19 33 27.3	+0.5	
	comp=Z,28nm,1.2s								
JLU	Jordanelle	51.62	289	*e*P		P	19 33 27.3	+0.5	
	comp=Z,28nm,1.2s								
P26A	Davis Ranch, A	51.62	281	⇑P		P	19 33 27.4	+0.6	
	baz=52								
O19A	Miners Draw (B	51.63	286	⇓P		P	19 33 27.4	+0.6	
	baz=52,SNR=23								
ISCO	Idaho Springs	51.68	283	⇑P		P	19 33 27.9	+0.6	
	baz=52,SNR=33								
O20A	White River Ci	51.68	285	P		P	19 33 28.1	+0.8	
	baz=52,SNR=111								
P25A	Willow Gulch B	51.78	281	⇑P		P	19 33 28.5	+0.6	
	baz=52,SNR=9.7								
DAU	Daniels Canyon	51.79	288	*e*P		P	19 33 28.9	+0.7	
DAU	Daniels Canyon	51.79	288	*e*P		P	19 33 28.9	+0.7	
DAU	Daniels Canyon	51.79	288	*e*P		P	19 33 28.9	+0.7	
YBH	Yreka Blue Hor	51.85	300	*e*P		P	19 33 28.5	+0.1	
	comp=Z,29nm,1.1s								
YBH	Yreka Blue Hor	51.85	300	*e*P		P	19 33 28.5	+0.1	
	comp=Z,29nm,1.1s								
CN2	Changchun	51.86	41	⇓P		P	19 33 28.8	+0.5	
CN2				*e*sP		sP	19 33 35.0	-0.3	
CN2				*e*S		S	19 40 47.8	-1.8	
CN2				pmax		pmax			
	comp=Z,30nm,1.2s								
CN2				pmax		pmax			
	comp=Z,200nm,5.0s								
CN2				LR		LR			
	comp=N,1μm,19.0s								
CN2				LR		LR			
	comp=E,1μm,19.0s								
CN2				LR		LR			
	comp=Z,2μm,19.0s								
P24A	Kohler Place,	51.87	282	⇑P		P	19 33 29.6	+1.0	
	baz=52,SNR=6.1								
Q28A	Sharon Springs	51.92	279	⇓P		P	19 33 28.9	0.0	
	baz=52								
MMAI	Mount Meron Ar	51.93	132	LR		LR	19 58 28.9		
	comp=Z,197nm,20.0s,baz=60,slow=39								
ELK	Elko	51.95	292	*e*P		P	19 33 30.5	+1.2	
	comp=Z,1μm,1.1s								
ELK	Elko	51.95	292	*e*P		P	19 33 30.5	+1.2	
	comp=Z,1μm,1.1s								
USRK	Ussuriysk Arra	51.99	35	P		P	19 33 28.8	-0.5	
	comp=Z,14nm,1.0s,baz=343,slow=6.4,SNR=14								
USRK				PcP		PcP	19 34 41.1	-0.3	
	comp=Z,5.9nm,0.9s,baz=308,slow=2.0,SNR=3.0								
USRK				LR		LR	19 55 14.8		
	comp=Z,1μm,20.8s,baz=352,slow=36								
TZTN	Tazewell	52.01	260	*e*P		P	19 33 30.0	+0.5	
	comp=Z,167nm,1.4s								
TZTN	Tazewell	52.01	260	*e*P		P	19 33 30.0	+0.5	
	comp=Z,167nm,1.4s								
P22A	Eagle	52.03	284	⇓P		P	19 33 30.6	+0.7	
	baz=52,SNR=44								
KSCO	Kaye Shedlock'	52.07	280	⇑P		P	19 33 30.4	+0.3	
	baz=52,SNR=11								
P23A	Jefferson	52.13	283	⇓P		P	19 33 32.0	+1.2	
	baz=52,SNR=15								
P21A	Newcastle	52.18	285	⇑P		P	19 33 32.4	+1.4	
	baz=52,SNR=62								
DUG	Dugway	52.19	290	*e*P		P	19 33 31.6	+0.6	
DUG				pmax		pmax			
	comp=Z,51nm,1.0s								
DUG				MLR		MLR			
	comp=Z,985nm,22.0s								
DUG	Dugway	52.19	290	*e*P		P	19 33 31.6	+0.6	
	comp=Z,51nm,1.0s								
DUG				LR		LR			
	comp=Z,985nm,22.0s								
DUG	Dugway	52.19	290	*e*P		P	19 33 31.6	+0.6	
	comp=Z,51nm,1.0s								
DUG	Dugway	52.19	290	⇓P		P	19 33 32.0	+1.0	
	baz=52,SNR=68								
MPU	Maple Canyon	52.23	289	*e*P		P	19 33 31.3	0.0	
	comp=Z,37nm,1.0s								
MPU	Maple Canyon	52.23	289	*e*P		P	19 33 31.3	0.0	
	comp=Z,37nm,1.0s								
P19A	Cripple Cowboy	52.27	286	P		P	19 33 32.3	+0.6	
	baz=52,SNR=120								
Q26A	Hugo	52.27	281	⇓P		P	19 33 32.3	+0.7	
	baz=52,SNR=33								
P20A	De Beque	52.33	285	⇑P		P	19 33 32.9	+0.8	
	baz=52,SNR=86								
Q25A	Bedland, Calha	52.38	281	⇓P		P	19 33 32.9	+0.4	
	baz=52,SNR=10.0								
P18A	Preston Nutter	52.43	287	⇑P		P	19 33 33.5	+0.5	
	baz=52,SNR=50								
Q24A	Divide	52.44	282	P		P	19 33 33.4	+0.3	
	baz=52,SNR=29								
R29A	Marienthal	52.46	278	⇑P		P	19 33 33.0	+0.1	
	baz=52,SNR=11								
SMCO	Snowmass	52.47	284	*e*P		P	19 33 33.6	+0.3	
	comp=Z,171nm,1.1s								
SMCO	Snowmass	52.47	284	*e*P		P	19 33 33.6	+0.3	
	comp=Z,171nm,1.1s								
R30A	Dighton	52.48	277	⇑P		P	19 33 33.1	+0.1	
	baz=52,SNR=37								
BMN	Battle Mountai	52.50	294	*e*P		P	19 33 34.5	+1.2	
BMN				pmax		pmax			
	comp=Z,66nm,0.9s								
BMN	Battle Mountai	52.50	294	*e*P		P	19 33 34.5	+1.2	
	comp=Z,66nm,0.9s								
BMN	Battle Mountai	52.50	294	*e*P		P	19 33 34.5	+1.2	
	comp=Z,66nm,0.9s								
CNNC	Cliffs of the	52.58	254	*e*P		P	19 33 35.0	+1.4	
	comp=Z,173nm,1.2s								
CNNC	Cliffs of the	52.58	254	*e*P		P	19 33 35.0	+1.4	
	comp=Z,173nm,1.2s								
Q23A	Hartsel	52.59	283	⇑P		P	19 33 34.8	+0.6	
	baz=52,SNR=7.0								
R28A	Tribune	52.62	279	P		P	19 33 34.0	-0.1	
	baz=52,SNR=27								
P17A	Butcher Ranch,	52.65	288	⇓P		P	19 33 35.3	+0.9	
	baz=52,SNR=25								
PARMO	Parma	52.70	267	*e*P		P	19 33 35.2	+0.6	
PARMO	Parma	52.70	267	*e*P		P	19 33 35.2	+0.6	
LJBD	Adjabya	52.75	148	*i* P		P	19 33 37.0	+2.0	
	SNR=22								
Q22A	Crested Butte,	52.77	284	P		P	19 33 36.6	+1.2	
	baz=53,SNR=64								
ASAJ	Asahikawa	52.78	26	LR		LR	19 55 29.7		
	comp=Z,2μm,20.8s,baz=322,slow=36								
YBT	Youssef Ben Ta	52.79	181	*i* P		P	19 33 37.0	+1.7	
R27A	Eads	52.81	280	⇑P		P	19 33 36.1	+0.6	
	baz=53,SNR=11								
KHMM	Horse Mountain	52.82	300	*e*P		P	19 33 37.5	+1.9	
	comp=Z,106nm,1.1s								
KHMM	Horse Mountain	52.82	300	*e*P		P	19 33 37.5	+1.9	
	comp=Z,106nm,1.1s								
Q20A	Ridgley Place,	52.85	285	P		P	19 33 36.3	+0.4	
	baz=53,SNR=43								
R26A	Arlington	52.88	280	⇑P		P	19 33 36.3	+0.3	
	baz=53,SNR=19								
Q21A	Lamborn Mesa,	52.88	285	P		P	19 33 37.3	+1.1	
	baz=53,SNR=48								
UTMT	University of	52.90	266	*e*P		P	19 33 36.8	+0.7	
	comp=Z,539nm,1.4s								
UTMT	University of	52.90	266	*e*P		P	19 33 36.8	+0.7	
	comp=Z,539nm,1.4s								
TKL	Tuckaleechee C	52.91	260	*e*P		P	19 33 36.5	+0.3	
TKL	Tuckaleechee C	52.91	260	*e*P		P	19 33 36.5	+0.3	
WDC	Whiskeytown Da	52.97	299	*e*P		P	19 33 35.4	-1.2	
WDC				pmax		pmax			
	comp=Z,69nm,1.3s								
WDC	Whiskeytown Da	52.97	299	*e*P		P	19 33 35.4	-1.2	
	comp=Z,69nm,1.3s								
WDC	Whiskeytown Da	52.97	299	*e*P		P	19 33 35.4	-1.2	
	comp=Z,69nm,1.3s								
WVT	Waverly	52.98	265	*e*P		P	19 33 35.4	-1.2	
WVT				pmax		pmax			
	comp=Z,58nm,1.1s								
WVT	Waverly	52.98	265	*e*P		P	19 33 35.4	-1.2	
	comp=Z,58nm,1.1s								
WVT	Waverly	52.98	265	*e*P		P	19 33 35.4	-1.2	
	comp=Z,58nm,1.1s								
SRU	San Rafael	52.98	287	⇓P		P	19 33 37.2	+0.3	
	baz=53,SNR=15								
LGHD	Ghdames	53.03	160	*i* P		P	19 33 36.1	-1.0	
	SNR=22								
S31A	Mullinville	53.03	276	⇓P		P	19 33 37.4	+0.2	
	baz=53								
YUK	Yuzh-Kuril'sk	53.04	23	*c* iP		P	19 33 22.1	-15	
YUK				*i*			19 35 44.8		
YUK				*i* PPP		PPP	19 36 46.9		
YUK				*i* SS		SKiKP	19 44 44.9	-8.9	
YUK				*i* SSS		SSS	19 46 33.5		
YUK				pmax		pmax			
	comp=Z,1μm,1.3s								
YUK				pmax		pmax			
	comp=N,139nm,0.6s								
YUK				pmax		pmax			
	comp=E,595nm,1.3s								
YUK				MLR		MLR			
	comp=E,376nm,19.0s								
YUK				MLR		MLR			
	comp=Z,338nm,19.0s								
YUK				MLR		MLR			
	comp=N,187nm,19.0s								
KMSC	Kings Mountain	53.11	258	P		P	19 33 38.2	+0.6	
	baz=53,SNR=33								
R25A	Fountain Ranch	53.14	281	P		P	19 33 38.1	+0.2	
	baz=53,SNR=9.6								
S30A	Montezuma	53.14	277	⇑P		P	19 33 37.8	-0.1	
	baz=53,SNR=7.7								
R24A	Sanders Place,	53.16	282	P		P	19 33 38.7	+0.4	
	baz=53,SNR=19								
CPCT	Cooper Cave	53.22	261	*e*P		P	19 33 38.5	+0.1	
CPCT	Cooper Cave	53.22	261	*e*P		P	19 33 38.5	+0.1	
S29A	Ulysses	53.25	278	P		P	19 33 38.7	0.0	
	baz=53,SNR=14								
Q16A	Castle Valley	53.25	288	P		P	19 33 40.1	+1.2	
	baz=53,SNR=188								
R23A	Moffat	53.29	283	P		P	19 33 39.8	+0.5	
	baz=53,SNR=33								
LSHF	Shwairf	53.30	155	*i* P		P	19 33 39.4	+0.3	
	SNR=22								
R21A	Cimarron	53.34	284	P		P	19 33 40.8	+1.3	
	baz=53,SNR=60								
R22A	Saguache, Gunn	53.37	284	P		P	19 33 41.3	+1.4	
	baz=53,SNR=62								
S28A	Manter	53.38	279	P		P	19 33 39.7	0.0	
	baz=53,SNR=38								
HALT	Halls	53.39	266	*e*P		P	19 33 39.4	-0.3	
HALT	Halls	53.39	266	*e*P		P	19 33 39.4	-0.3	
IKLH	Kolahrood	53.40	115	*e*P		P	19 33 41.3	+1.2	
IKLH	Kolahrood	53.40	115	*e*P		P	19 33 41.3	+1.2	
S27A	Las Animas	53.41	280	P		P	19 33 40.0	0.0	
	baz=53,SNR=32								
GNAR	Gosnell	53.42	267	*e*P		P	19 33 40.9	+0.9	
	comp=N,4μm,1.3s								
GNAR	Gosnell	53.42	267	*e*P		P	19 33 40.8	+0.9	
	comp=N,4μm,1.3s								
BEKR	Beckworth	53.42	297	*e*P		P	19 33 40.2	+0.1	
	comp=N,33nm,1.3s								
BEKR	Beckworth	53.42	297	*e*P		P	19 33 40.2	+0.1	
	comp=N,33nm,1.3s								
HHC	Hu-ho-hao-te	53.44	55	*e*P		P	19 33 40.1	0.0	
HHC				pP		pP	19 33 44.3	-0.9	
HHC				sP		sP	19 33 47.3	+0.2	
HHC				S		S	19 41 07.9	-3.6	
HHC				ScS		ScS	19 43 24.6	-3.8	
HHC				SS		SS	19 44 51.3	+0.5	
HHC				pmax		pmax			
	comp=Z,42nm,0.6s								
HHC				pmax		pmax			
	comp=Z,320nm,10.0s								
HHC				LR		LR			
	comp=N,2μm,18.4s								
HHC				LR		LR			
	comp=E,1μm,19.8s								
HHC				LR		LR			
	comp=Z,3μm,18.8s								
PV04	Paradox Valley	53.48	286	*e*P		P	19 33 41.4	+0.8	
PV04	Paradox Valley	53.48	286	*e*P		P	19 33 41.4	+0.8	
GTA	Gaotai	53.52	66	⇑P		P	19 33 40.9	+0.1	
GTA				pP		pP	19 33 45.4	-0.5	
GTA				sP		sP	19 33 47.9	+0.1	
GTA				PcP		PcP	19 34 46.5	-0.9	
GTA				PP		PP	19 35 43.0	+2.0	
GTA				S		S	19 41 13.6	+0.9	
GTA				sS		sS	19 41 21.5	+0.4	
GTA				SS		SKiKP	19 44 53.8	-0.9	
GTA				pmax		pmax			
	comp=Z,30nm,1.4s								
GTA				pmax		pmax			
	comp=Z,260nm,5.9s								
GTA				LR		LR			
	comp=N,2μm,19.5s								
GTA				LR		LR			
	comp=E,840nm,20.4s								
GTA				LR		LR			
	comp=Z,2μm,20.9s								
S26A	Kim	53.55	280	P		P	19 33 40.8	-0.2	
	baz=53,SNR=36								
T31A	Randall Ranch,	53.57	276	P		P	19 33 41.1	+0.1	
	baz=53,SNR=8.1								
R20A	Redvale	53.62	285	P		P	19 33 42.6	+1.0	
	baz=53,SNR=56								
SWET	Sewanee	53.63	262	*e*P		P	19 33 40.6

WCN	Washoe City	53.91	296	eP		P	19 33 44.0	+0.3
	comp=Z,91nm,1.4s							
IPIR	Pirpir	53.94	116	eP		P	19 33 45.2	+1.1
IPIR	Pirpir	53.94	116	eP		P	19 33 45.2	+1.1
S20A	Disappointment	53.97	285	P		P	19 33 45.2	+0.9
	baz=54,SNR=207							
KCPM	Cahto Peak	53.97	300	eP		P	19 33 44.4	+0.3
	comp=Z,69nm,1.1s							
KCPM	Cahto Peak	53.97	300	eP		P	19 33 44.4	+0.3
	comp=Z,69nm,1.1s							
T27A	Campo	54.00	279	P		P	19 33 44.3	-0.1
	baz=54,SNR=13							
T26A	Comanche Natio	54.01	280	P		P	19 33 44.5	+0.1
	baz=54,SNR=30							
S21A	Coal Bank Pass	54.06	285	⇓P		P	19 33 45.9	+1.0
	baz=54,SNR=22							
OHCM	Honcut	54.08	298	eP		P	19 33 38.8	-5.8
PLAL	Pickwick Lake	54.14	265	eP		P	19 33 44.9	-0.3
	comp=Z,90nm,1.1s							
PLAL	Pickwick Lake	54.14	265	eP		P	19 33 44.9	-0.3
	comp=Z,90nm,1.1s							
T25A	Trinidad	54.15	281	P		P	19 33 45.3	-0.2
	baz=54,SNR=19							
TUL1	Tulsa	54.23	272	P		P	19 33 45.4	-0.5
	baz=54,SNR=17							
U30A	WK&E Inc. Balk	54.26	277	⇑P		P	19 33 46.3	+0.2
	baz=54,SNR=11							
LJFR	Jufra	54.27	153	*i* P		P	19 33 46.3	+0.1
	SNR=22							
T24A	Torres, Weston	54.29	282	P		P	19 33 47.1	+0.5
	baz=54,SNR=33							
S18A	Hurst Farm, Bl	54.31	287	P		P	19 33 47.5	+0.8
	baz=54,SNR=200							
U31A	Nine Bar Ranch	54.31	277	⇓P		P	19 33 46.0	-0.5
	baz=54,SNR=5.2							
R11A	Troy Canyon, C	54.35	292	⇑P		P	19 33 47.0	+0.1
	baz=54,SNR=159							
KBL	Kabul	54.38	97	eP		P	19 33 47.7	+0.5
KBL				*e*			19 34 45.7	
KBL					pmax	pmax		
	comp=Z,29nm,1.0s							
KBL	Kabul	54.38	97	eP		P	19 33 47.7	+0.5
	comp=Z,29nm,1.0s							
KBL				eP	cP	cP	19 34 45.7	-5.2
KBL	Kabul	54.38	97	eP		P	19 33 47.7	+0.5
	comp=Z,29nm,1.0s							
U29A	Oasis Ranch, S	54.42	278	⇑P		P	19 33 46.6	-0.7
	baz=54,SNR=5.7							
T23A	Casias Ranch,	54.45	283	P		P	19 33 48.5	+0.7
	baz=54,SNR=18							
NV11	Mina Array Sit	54.58	295	eP		P	19 33 49.1	+0.5
NV11	Mina Array Sit	54.58	295	eP		P	19 33 49.1	+0.5
T22A	Edith	54.59	284	P		P	19 33 49.5	+0.8
	baz=54,SNR=31							
HOPS	Hopland	54.60	299	eP		P	19 33 48.5	0.0
	comp=Z,92nm,1.2s							
HOPS	Hopland	54.60	299	eP		P	19 33 48.5	0.0
	comp=Z,92nm,1.2s							
NVAR	Mina Array Bea	54.60	295	P		P	19 33 49.5	+0.8
NVAR					PcP	PcP	19 34 52.9	+1.2
NVAR					P'P'		20 04 02.8	
NVAR	Mina Array Bea	54.60	295	P		P	19 33 49.5	+0.8
	comp=Z,62nm,1.0s,baz=12,slow=4.6,SNR=226							
NVAR					PcP	PcP	19 34 52.9	+1.2
	comp=Z,2.6nm,0.7s,baz=13,slow=3.6,SNR=4.4							
NVAR					LR	LR	19 58 41.9	
	comp=Z,1μm,18.2s,baz=354,slow=38							
NVAR				PKP	PKP	P'P'df	20 04 02.8	+0.2
	comp=Z,0.4nm,0.6s,baz=193,slow=6.1,SNR=3.5							
NVAR	Mina Array Bea	54.60	295	P		P	19 33 49.5	+0.8
NVAR	Mina Array Bea	54.60	295	PcP		PcP	19 34 52.9	+1.2
LUJL	Ujela	54.61	147	*i* P		P	19 33 49.8	+1.2
	SNR=22							
U28A	Mallet	54.61	279	⇓P		P	19 33 48.5	-0.2
	baz=54,SNR=18							
U27A	Thompson Grove	54.65	279	⇓P		P	19 33 48.7	-0.3
	baz=54,SNR=16							
T21A	Navajo Lake	54.69	284	⇑P		P	19 33 50.2	+0.7
	baz=54,SNR=31							
BJI	Beijing	54.72	50	P		P	19 33 49.0	-0.3
BJI				PP		PP	19 35 51.4	-0.1
BJI				S		S	19 41 24.6	-3.9
BJI				pmax	pmax			
	comp=Z,29nm,1.4s							
BJI				pmax	pmax			
	comp=Z,240nm,8.6s							
BJI				LR	LR			
	comp=N,1μm,18.6s							
BJI				LR	LR			
	comp=E,610nm,19.8s							
BJI				LR	LR			
	comp=Z,1μm,20.4s							
OXF	Oxford	54.78	266	eP		P	19 33 49.0	-0.8
OXF				pmax	pmax			
	comp=Z,155nm,1.0s							
OXF	Oxford	54.78	266	eP		P	19 33 49.0	-0.8
	comp=Z,155nm,1.0s							
OXF	Oxford	54.78	266	eP		P	19 33 49.0	-0.8
	comp=Z,155nm,1.0s							
U26A	Atchley Ranch,	54.79	280	⇑P		P	19 33 50.0	-0.2
	baz=55,SNR=27							
CCUT	Cedar City	54.87	290	eP		P	19 33 51.8	+1.0
	comp=Z,62nm,1.0s							
CCUT	Cedar City	54.87	290	eP		P	19 33 51.8	+1.0
	comp=Z,62nm,1.0s							
U25A	Circle Dot Ran	54.87	281	⇓P		P	19 33 50.2	-0.5
	baz=55,SNR=26							
V31A	Spring Creek L	54.90	276	⇓P		P	19 33 50.6	-0.2
	baz=55,SNR=24							
LZLA	Zalla	54.92	151	*i* P		P	19 33 51.8	+0.9
	SNR=22							
NHSC	New Hope	54.97	256	eP		P	19 33 51.0	-0.2
	comp=Z,270nm,1.1s							
NHSC	New Hope	54.97	256	eP		P	19 33 51.0	-0.2
	comp=Z,270nm,1.1s							
U24A	Moreno Valley	54.98	282	⇑P		P	19 33 50.9	-0.7
	baz=55,SNR=10							
V29A	Stinnett	55.02	278	⇓P		P	19 33 51.9	+0.2
	baz=55							
V30A	Spur Ranch, Mi	55.02	277	⇑P		P	19 33 51.1	-0.6
	baz=55,SNR=14							
GOGA	Godfrey	55.09	260	eP		P	19 33 52.1	0.0
GOGA				pmax	pmax			
	comp=Z,125nm,1.2s							
GOGA	Godfrey	55.09	260	eP		P	19 33 52.1	0.0
	comp=Z,125nm,1.2s							
GOGA	Godfrey	55.09	260	eP		P	19 33 52.1	0.0
	comp=Z,125nm,1.2s							
U23A	El Rito	55.17	283	⇓P		P	19 33 53.1	+0.1
	baz=55,SNR=88							
U22A	Llaves	55.21	283	⇓P		P	19 33 53.6	+0.3
	baz=55,SNR=51							
V28A	Channing	55.23	279	⇑P		P	19 33 53.1	-0.1
	baz=55							
CMB	Columbia Colle	55.24	297	eP		P	19 33 54.1	+0.9
CMB				pmax	pmax			
	comp=Z,14nm,0.9s							
CMB	Columbia Colle	55.24	297	eP		P	19 33 54.1	+0.9
	comp=Z,14nm,0.9s							
CMB	Columbia Colle	55.24	297	eP		P	19 33 54.1	+0.9
	comp=Z,14nm,0.9s							
U21A	Nageezi	55.26	284	⇓P		P	19 33 53.4	-0.2
	baz=55,SNR=38							
V27A	Dan Oppiter Fa	55.30	279	⇑P		P	19 33 52.4	-1.3
	baz=55,SNR=6.7							
V26A	Tequesquite Ra	55.39	280	⇑P		P	19 33 53.5	-0.9
	baz=55,SNR=21							
MCCM	Marconi Confer	55.42	299	eP		P	19 33 53.9	-0.5
	comp=Z,73nm,1.0s							
MCCM	Marconi Confer	55.42	299	eP		P	19 33 53.9	-0.5
	comp=Z,73nm,1.0s							
U20A	Newcomb	55.42	285	⇑P		P	19 33 55.5	+0.9
	baz=55,SNR=8.1							
V25A	Rancho No Teng	55.45	281	P		P	19 33 55.2	+0.3
	baz=55,SNR=47							
W31A	Holland Ranch,	55.49	276	⇓P		P	19 33 54.4	-0.6
	baz=55,SNR=5.1							
V24A	Rampart Ranch,	55.65	282	P		P	19 33 57.0	+0.6
	baz=56,SNR=34							
V22A	San Miguel Ran	55.67	283	P		P	19 33 57.4	+0.8
	baz=56,SNR=92							
MTUM	Tungsten Hills	55.69	295	eP		P	19 33 58.2	+1.6
MTUM	Tungsten Hills	55.69	295	eP		P	19 33 58.2	+1.6
W28A	Vega	55.71	279	⇓P		P	19 33 56.9	+0.2
	baz=56							
V23A	Ortiz Mt. (NFS	55.75	283	⇓P		P	19 33 57.4	+0.4
	baz=56,SNR=11							
WMOK	Wichita Mounta	55.78	275	eP		P	19 33 56.9	-0.2
WMOK				pmax	pmax			
	comp=Z,50nm,1.2s							
WMOK	Wichita Mounta	55.78	275	eP		P	19 33 56.9	-0.2
	comp=Z,50nm,1.2s							
WMOK	Wichita Mounta	55.78	275	eP		P	19 33 56.9	-0.2
	comp=Z,50nm,1.2s							
U15A	North Rim	55.84	289	P		P	19 33 58.2	+0.4
	baz=56,SNR=120							
V21A	Milan	55.87	284	P		P	19 33 58.6	+0.6
	baz=56,SNR=48							
GRAC	Grapevine Rang	55.90	294	P		P	19 33 59.1	+1.1
	baz=56,SNR=12							
LRAL	Lakeview Retre	55.92	263	eP		P	19 33 56.1	-1.9
	comp=Z,45nm,1.3s							
LRAL				LR	LR			
	comp=Z,2μm,21.0s							
LRAL	Lakeview Retre	55.92	263	eP		P	19 33 56.1	-1.9
	comp=Z,45nm,1.3s							
SAC	San Andreas	55.92	299	eP		P	19 33 57.7	-0.3
SAC				pmax	pmax			
	comp=Z,105nm,1.3s							
SAC	San Andreas	55.92	299	eP		P	19 33 57.6	-0.3
	comp=Z,105nm,1.3s							
SAC	San Andreas	55.92	299	eP		P	19 33 57.7	-0.3
	comp=Z,105nm,1.3s							
TIN	Tinemaha	55.95	294	P		P	19 34 00.8	+2.4
	baz=56,SNR=16							
V20A	Brimhall	55.98	285	P		P	19 33 59.1	+0.4
	baz=56,SNR=33							
AMTX	Amarillo	56.01	278	eP		P	19 33 57.2	-1.6
	comp=Z,30nm,1.0s							
AMTX				LR	LR			
	comp=Z,2μm,19.0s							
AMTX	Amarillo	56.01	278	eP		P	19 33 57.2	-1.6
	comp=Z,30nm,1.0s							
W27A	Bows Ranch, En	56.02	279	⇓P		P	19 33 58.5	-0.4
	baz=56,SNR=38							
X31A	McDonald Ranch	56.04	276	P		P	19 33 59.8	+0.8
	baz=56,SNR=26							
W25A	X Bar L Ranch,	56.05	281	⇓P		P	19 33 59.0	-0.1
	baz=56,SNR=11							
W24A	Lazy 6 Ranch,	56.17	282	P		P	19 34 00.4	+0.3
	baz=56,SNR=42							
W23A	Werner Place,	56.32	282	P		P	19 34 01.5	+0.4
	baz=56,SNR=13							
X30A	Coker Ranch, T	56.34	277	P		P	19 34 01.9	+0.8
	baz=56,SNR=70							
FURC	Furnace Creek,	56.36	293	P		P	19 34 01.9	+0.8
	baz=56,SNR=15							
MIB	Mutribah	56.38	120	eP		P	19 34 01.5	+0.1
MIB				AMb		AMB	19 34 02.9	
	comp=Z,171nm,0.9s							
MIB	Mutribah	56.38	120	eP		P	19 34 01.5	+0.1
	comp=Z,171nm,0.9s							
X27A	F and S Farms,	56.43	279	P		P	19 34 02.0	+0.2
	baz=56,SNR=8.7							
X28A	Dimmitt	56.44	278	P		P	19 34 02.4	+0.5
	baz=56,SNR=11							
X29A	Tulia	56.45	278	P		P	19 34 02.6	+0.7
	baz=56,SNR=17							
W22A	Albuquerque	56.50	283	⇑P		P	19 34 03.1	+0.7
	baz=56							
CWC	Cottonwood Cre	56.54	294	P		P	19 34 04.1	+1.5
	baz=56,SNR=37							
W21A	San Fidel	56.55	284	⇓P		P	19 34 03.6	+0.8
	baz=56,SNR=23							
ANMO	Albuquerque	56.57	283	eP		P	19 34 02.5	-0.4
	comp=Z,47nm,1.2s							
ANMO				LR	LR			
	comp=Z,3μm,19.0s							
ANMO	Albuquerque	56.57	283	eP		P	19 34 02.5	-0.4
	comp=Z,47nm,1.2s							
Y32A	R-T Farms, Ver	56.59	276	P		P	19 34 03.6	+0.8
	baz=56,SNR=8.8							
SAO	San Andreas Ge	56.62	297	eP		P	19 34 04.7	+1.7
SAO				pmax	pmax			
	comp=Z,61nm,1.0s							
SAO	San Andreas Ge	56.62	297	eP		P	19 34 04.7	+1.7
	comp=Z,61nm,1.0s							
SAO	San Andreas Ge	56.62	297	eP		P	19 34 04.7	+1.7
	comp=Z,61nm,1.0s							
X26A	CR and CF Fran	56.62	280	P		P	19 34 03.0	-0.2
	baz=56,SNR=17							
WUAZ	Wupatki	56.63	288	eP		P	19 34 03.5	+0.2
	comp=Z,108nm,1.1s							
WUAZ				LR	LR			
	comp=Z,1μm,20.0s							
WUAZ	Wupatki	56.63	288	eP		P	19 34 03.5	+0.2
	comp=Z,108nm,1.1s							
WUAZ	Wupatki	56.63	288	⇑P		P	19 34 03.8	+0.5
	baz=56,SNR=88							
DAC	Darwin (Calif)	56.64	294	eP		P	19 34 03.9	+0.5
DAC				pmax	pmax			
	comp=Z,168nm,1.0s							
DAC				MLR	MLR			
	comp=Z,2μm,22.0s							
DAC	Darwin (Calif)	56.64	294	eP		P	19 34 03.9	+0.5
	comp=Z,168nm,1.0s							
DAC				LR	LR			
	comp=Z,2μm,22.0s							
DAC	Darwin (Calif)	56.64	294	eP		P	19 34 03.9	+0.5
	comp=Z,168nm,1.0s							
W20A	Ramah	56.65	285	P		P	19 34 03.3	-0.2
	baz=56,SNR=80							
UMR	Umm Al-Rimmam	56.67	120	eP		P	19 34 03.5	+0.1
UMR				AMb		AMB	19 34 06.4	
	comp=Z,200nm,1.2s							
UMR	Umm Al-Rimmam	56.67	120	eP		P	19 34 03.5	+0.1
	comp=Z,200nm,1.2s							
Y31A	Rekieta Farm,	56.74	276	P		P	19 34 04.7	+0.8
	baz=57,SNR=18							
X25A	Clemmons Ranch	56.75	281	⇓P		P	19 34 04.4	+0.3
	baz=57							
RCTC	Rector, Farmer	56.80	295	⇓P		P	19 34 05.4	+1.1
	baz=57,SNR=14							
X24A	Lazy VL Ranch,	56.81	282	⇓P		P	19 34 05.1	+0.4
	baz=57							
W18A	Petrified Fore	56.81	286	P		P	19 34 05.7	+1.0
	baz=57,SNR=19							
MPMC	Manual Prospec	56.84	294	P		P	19 34 06.2	+1.4
	baz=57,SNR=246							
SHOC	Shoshone	56.85	292	P		P	19 34 06.0	+1.3
	baz=57,SNR=40							
X23A	Hourglass Bar	56.89	282	⇑P		P	19 34 06.0	+0.8
	baz=57							
Y30A	Stafford Cattl	56.91	277	P		P	19 34 05.8	+0.7
	baz=57,SNR=5.5							
NAY	Al-Naaiem	56.91	120	eP		P	19 34 04.8	-0.4
NAY				AMb		AMB	19 34 06.4	
	comp=Z,48nm,0.9s							
NAY	Al-Naaiem	56.91	120	eP		P	19 34 04.8	-0.4
	comp=Z,48nm,0.9s							
Y29A	Porterfield Fa	57.02	278	P		P	19 34 06.8	+0.8
	baz=57,SNR=12							
KBD	Kabd	57.04	120	eP		P	19 34 06.0	-0.1
KBD				AMb		AMB	19 34 07.6	
	comp=Z,108nm,0.8s							
KBD	Kabd	57.04	120	eP		P	19 34 06.0	-0.1
	comp=Z,108nm,0.8s							
TIGA	Tifton	57.05	259	⇑P		P	19 34 06.2	+0.1
	baz=57,SNR=7.9							
Y28A	McKinney Farm,	57.05	278	⇑P		P	19 34 06.6	+0.4
	baz=57,SNR=11							
MSTX	Muleshoe	57.06	279	P		P	19 34 06.3	0.0
	baz=57,SNR=11							
X22A	Bernardo	57.07	283	⇓P		P	19 34 06.5	0.0
	baz=57							
LUMB	Murzuk	57.15	155	*i* P		P	19 34 07.5	+0.6
	SNR=21							
VBMS	Vicksburg	57.18	266	PFAKE			19 34 20.0	+13
VBMS				LR	LR			
	comp=Z,4μm,19.0s							
LAZ	Ladron	57.19	283	eP		P	19 34 07.4	0.0
	comp=Z,22nm,1.3s							
LAZ	Ladron	57.19	283	eP		P	19 34 07.4	0.0
	comp=Z,22nm,1.3s							
Y27A	Causey	57.19	279	P		P	19 34 07.4	+0.1
	baz=57,SNR=44							
RFTA	Plano	57.21	273	eP		P	19 34 08.2	+1.0
RFTA	Plano	57.21	273	eP		P	19 34 08.2	+1.0
LPM	Los Pinos Moun	57.22	283	eP		P	19 34 07.8	+0.3
LPM	Los Pinos Moun	57.22	283	eP		P	19 34 07.8	+0.3
X20A	Quemado	57.23	285	⇑P		P	19 34 08.3	+0.6
	baz=57							
X21A	Alamocita Cree	57.23	284	P		P	19 34 08.0	+0.3
	baz=57,SNR=27							
Y26A	Elida	57.24	280	⇑P		P	19 34 07.5	-0.1
	baz=57,SNR=5.3							
VES	Vestal, Richgr	57.25	295	P		P	19 34 08.3	+0.8
	baz=57,SNR=14							
RDF	Al-Radifah	57.27	120	eP		P	19 34 07.6	-0.1
RDF				AMb		AMB	19 34 09.3	
	comp=Z,127nm,0.9s							
RDF	Al-Radifah	57.27	120	eP		P	19 34 07.6	-0.1
	comp=Z,127nm,0.9s							
TUQ	Turquoise Moun	57.27	292	P		P	19 34 08.9	+1.1
	baz=57,SNR=32							
Z32A	Haskell	57.28	276	P		P	19 34 08.2	+0.4
	baz=57,SNR=62							
LZH	Lanzhou	57.28	63	⇓P		P	19 34 09.8	+1.9
LZH				pP		pP	19 34 14.0	+1.0
LZH				sP		sP	19 34 16.1	+1.1
LZH				S		S	19 42 03.8	+0.7
LZH				sS		sS	19 42 10.0	-1.5
LZH				SS		SS	19 45 50.4	-1.2
LZH				pmax	pmax			
	comp=Z,94nm,1.4s							
LZH				pmax	pmax			
	comp=Z,290nm,6.3s							
LZH				LR	LR			
	comp=N,2μm,18.6s							
LZH				LR	LR			
	comp=E,2μm,20.8s							
LZH				LR	LR			
	comp=Z,4μm,19.8s							
Y25A	Mesa, Roswell	57.35	281	P		P	19 34 08.4	0.0
	baz=57,SNR=39							
ISA	Isabella	57.35	294	eP		P	19 34 09.4	+1.1
ISA				pmax	pmax			
	comp=Z,80nm,1.1s							
ISA	Isabella	57.35	294	eP		P	19 34 09.3	+1.1
	comp=Z,20nm,1.1s							
ISA	Isabella	57.35	294	eP		P	19 34 09.4	+1.1
	comp=Z,20nm,1.1s							
ISA	Isabella	57.35	294	P		P	19 34 09.4	+1.1
	baz=57,SNR=58							
W13A	Hualapai Mount	57.35	290	P		P	19 34 09.7	+1.2
	baz=57,SNR=24							
Z31A	Sharp Cattle R	57.36	276	P		P	19 34 08.7	+0.3
	baz=57,SNR=61							
BNM	Barren Site	57.38	283	eP		P	19 34 08.3	-0.4
	comp=Z,23nm,1.2s							
BNM	Barren Site	57.38	283	eP		P	19 34 08.3	-0.4
	comp=Z,23nm,1.2s							
LENM	Lemitar	57.40	283	eP		P	19 34 09.0	+0.2
LENM	Lemitar	57.40	283	eP		P	19 34 09.0	+0.2
X18A	Snowflake	57.42	286	⇑P		P	19 34 09.0	+0.1
	baz=57,SNR=12							
LRMC	Laurel Mountai	57.44	294	P		P	19 34 10.4	+1.4
	baz=57,SNR=20							
Y24A	Capitan	57.44	282	P		P	19 34 09.5	+0.4
	baz=57,SNR=36							
ISRV	Sarvestan	57.47	114	eP		P	19 34 10.0	+0.5
ISRV	Sarvestan	57.47	114	eP		P	19 34 10.0	+0.5
QRN	Al-Qurain	57.49	119	eP		P	19 34 09.2	-0.1
QRN				AMb		AMB	19 34 10.9	
	comp=Z,121nm,1.0s							
GSC	Goldstone	57.51	293	eP		P	19 34 10.8	+1.4
GSC				pmax	pmax			
	comp=Z,105nm,0.9s							
GSC	Goldstone	57.51	293	eP		P	19 34 10.8	+1.4
	comp=Z,25nm,0.9s							
GSC	Goldstone	57.51	293	eP		P	19 34 10.8	+1.4
	comp=Z,25nm,0.9s							
GSC	Goldstone	57.51	293	P		P	19 34 10.8	+1.4
	baz=57,SNR=132							
Y23A	Lovelace Mesa,	57.52	282	P		P	19 34 09.9	+0.3
	baz=57,SNR=23							
Z30A	Sanderson Ranc	57.52	277	P		P	19 34 09.4	0.0
	baz=57,SNR=7.9							
LDFC	Landfair	57.52	291	eP		P	19 34 11.0	+1.4
	comp=Z,162nm,1.1s							
LDFC	Landfair	57.52	291	eP		P	19 34 11.0	+1.4
	comp=Z,162nm,1.1s							
Z29A	Hungry Hill Ra	57.62	278	P		P	19 34 10.6	+0.4
	baz=58,SNR=95							
Y22A	Socorro	57.63	283	P		P	19 34 11.2	+0.8
	baz=58,SNR=25							
Y21A	Point of Rocks	57.65	284	P		P	19 34 11.4	+0.8
	baz=58,SNR=53							
Z28A	Tucker Farm, M	57.68	278	P		P	19 34 11.0	+0.3
	baz=58,SNR=21							
X16A	Lo Mia Camp, P	57.72	287	P		P	19 34 12.1	+1.1
	baz=58,SNR=45							
Z27A	Tatum	57.76	279	P		P	19 34 11.9	+0.7
	baz=58,SNR=47							
NEE2	Needles Airpor	57.77	291	⇓P		P	19 34 11.9	+0.8
	baz=58							
Y20A	Horse Springs,	57.84	284	P		P	19 34 12.4	+0.4
	baz=58,SNR=29							
SMMC	Simmler	57.88	296	P		P	19 34 13.0	+1.0
	baz=58,SNR=6.0							
GMRC	Granite Mounta	57.88	292	P		P	19 34 13.1	+1.0
	baz=58,SNR=45							
Z26A	Caprock	57.90	280	P		P	19 34 12.2	0.0
	baz=58,SNR=47							
HEC	Hector,Ludlow	57.92	292	P		P	19 34 13.6	+1.3
	baz=58,SNR=58							
BRAL	Brewton	57.92	263	eP		P	19 34 11.1	-1.1
	comp=Z,243nm,1.4s							
BRAL				LR	LR			
	comp=Z,2μm,20.0s							
BRAL	Brewton	57.92	263	eP		P	19 34 11.1	-1.1
	comp=Z,243nm,1.4s							
RRX	Edison Barstow	57.95	293	P		P	19 34 14.8	+2.3
	baz=58,SNR=5.4							
ABTX	Abilene, Hawle	57.98	276	P		P	19 34 12.8	+0.2
	baz=58,SNR=17							
Z25A	Roswell	57.99	281	P		P	19 34 12.9	0.0
	baz=58,SNR=28							
Z24A	Sheeppen Canyo	58.02	281	P		P	19 34 13.6	+0.4
	baz=58,SNR=44							
131A	Roby	58.02	276	⇓P		P	19 34 13.3	+0.3
	baz=58,SNR=17							
EDW2	Edwards Air Fo	58.07	294	P		P	19 34 14.5	+1.2
	baz=58,SNR=49							
PDMCI	Parker Dam,Lak	58.17	290	P		P	19 34 15.3	+1.3
	baz=58,SNR=26							
130A	Snyder	58.17	277	⇑P		P	19 34 14.3	+0.2
	baz=58,SNR=10							
Z23A	Rita Site, Whi	58.20	282	⇓P		P	19 34 14.4	0.0
	baz=58,SNR=14							
INCN	Inchon	58.23	41	PFAKE			19 34 20.0	+5.6
INCN				LR		LR		
	comp=Z,1μm,21.0s							
129A	Stewart Farms,	58.26	278	P		P	19 34 15.3	+0.6
	baz=58,SNR=14							
PKM	Peak Mountain	58.27	296	⇑P		P	19 34 16.4	+1.5
	baz=58,SNR=11							
Z22A	Elephant Butte	58.30	283	P		P	19 34 15.4	+0.4
	baz=58,SNR=9.6							
Z21A	St. Cloud Mine	58.34	284	P		P	19 34 15.8	+0.4
	baz=58,SNR=27							
128A	Castleberry Fa	58.35

baz=58,SNR=27
124A Stringfield Ra 58.65 281 P P 19 34 18.0 +0.4
baz=58,SNR=69
BFSC Mount Baldy Ra 58.66 293 P P 19 34 18.7 +1.2
baz=58,SNR=34
BELC Belle Mtn. Jos 58.69 292 P P 19 34 18.9 +1.1
baz=58,SNR=104
232A Coleman 58.70 275 P P 19 34 17.8 0.0
baz=58,SNR=29
MWC Mount Wilson 58.72 294 eP P 19 34 19.3 +1.2
MWC pmax pmax
comp=Z,143nm,1.1s
MWC Mount Wilson 58.72 294 eP P 19 34 19.2 +1.2
comp=Z,143nm,1.1s
MWC Mount Wilson 58.72 294 eP P 19 34 19.3 +1.2
comp=Z,143nm,1.1s
DECC Green Verdugo 58.73 294 P P 19 34 19.3 +1.4
baz=58,SNR=6.5
231A Bronte 58.74 276 P P 19 34 18.1 +0.1
baz=59,SNR=30
Y12C Blythe 58.76 290 P P 19 34 19.4 +1.3
baz=59,SNR=43
PASC Pasadena Art C 58.79 294 eP P 19 34 17.9 -0.4
comp=Z,96nm,1.2s
PASC Pasadena Art C 58.79 294 eP P 19 34 17.9 -0.4
comp=Z,96nm,1.2s
123A Bell Site, Whi 58.82 282 P P 19 34 19.8 +1.1
baz=59,SNR=8.3
122A Conniff Cattle 58.85 283 P P 19 34 19.8 +0.9
baz=59,SNR=5.6
228A UT Block 9, Go 58.86 278 P P 19 34 19.2 +0.3
baz=59,SNR=7.3
230A Sterling City 58.89 277 P P 19 34 19.2 +0.1
baz=59,SNR=41
229A Bryant Ranch, 58.91 278 P P 19 34 19.4 +0.2
baz=59,SNR=10
Z14A Wintersburg 58.95 289 P P 19 34 20.5 +1.1
baz=59,SNR=33
BLG Laguna Peak 58.96 295 P P 19 34 20.4 +0.9
baz=59,SNR=6.9
BC3 Big Chuckawall 58.97 291 P P 19 34 20.8 +1.1
baz=59,SNR=54
GDL2 Guadalupe Moun 59.01 280 eP P 19 34 19.9 -0.1
GDL2 Guadalupe Moun 59.01 280 eP P 19 34 19.9 -0.1
227A Bennet, Jal 59.05 279 ⇓P P 19 34 21.2 +1.0
baz=59,SNR=5.8
226B Tecolote Peak, 59.10 280 P P 19 34 20.7 +0.1
baz=59,SNR=42
121A Cookes Peak, D 59.12 284 P P 19 34 21.0 +0.2
baz=59,SNR=11
PFO Pinyon Flat Ob 59.14 292 P P 19 34 21.0 +0.1
comp=Z,225nm,0.9s,SNR=38
PFO Pinyon Flat Ob 59.14 292 eP P 19 34 21.5 +0.6
comp=Z,33nm,1.0s
PFO LR LR
comp=Z,1μm,19.0s
PFO Pinyon Flat Ob 59.14 292 eP P 19 34 21.5 +0.6
comp=Z,33nm,1.0s
PFO Pinyon Flat Ob 59.14 292 ⇓P P 19 34 21.9 +1.1
baz=59,SNR=46
BSC Santa Cruz Isl 59.14 295 P P 19 34 22.2 +1.5
baz=59,SNR=5.4
225A Deer Hill, Car 59.15 281 ⇓P P 19 34 20.1 -0.9
baz=59,SNR=6.2
120A U Bar Ranch, L 59.21 284 P P 19 34 22.1 +0.7
baz=59,SNR=28
332A Millersview 59.21 275 P P 19 34 21.5 +0.2
baz=59,SNR=60
MURC Murrieta 59.23 293 ⇓P P 19 34 22.9 +1.4
baz=59
224A Cornudas Mount 59.28 281 ⇑P P 19 34 21.7 -0.2
baz=59
331A San Angelo 59.37 276 P P 19 34 22.9 +0.5
baz=59,SNR=23
330A Mertzon 59.38 277 P P 19 34 22.2 -0.3
baz=59,SNR=26
329A Wagon Wheel Ra 59.40 278 P P 19 34 22.6 0.0
baz=59,SNR=22
GLA Glamis 59.49 290 eP P 19 34 23.9 +0.7
GLA pmax pmax
comp=Z,63nm,0.9s
GLA Glamis 59.49 290 eP P 19 34 23.9 +0.7
comp=Z,16nm,0.9s
GLA Glamis 59.49 290 eP P 19 34 23.9 +0.7
comp=Z,16nm,0.9s
GLA Glamis 59.49 290 P P 19 34 24.5 +1.3
baz=59,SNR=13
CIS Catalina Islan 59.57 294 P P 19 34 25.1 +1.3
baz=59,SNR=9.0
328A Wristen Ranch, 59.61 278 P P 19 34 24.1 0.0
baz=60,SNR=45
MNTX Cornudas Mount 59.63 281 eP P 19 34 23.2 -1.0
comp=Z,18nm,1.3s
MNTX Cornudas Mount 59.63 281 eP P 19 34 23.2 -1.0
comp=Z,18nm,1.3s
113A Mohawk Valley, 59.64 289 P P 19 34 25.0 +0.9
baz=60,SNR=41
LKFR Kufra 59.67 146 i P P 19 34 24.9 +0.4
SNR=20
327A Balmorhea Ranc 59.71 279 ⇓P P 19 34 25.1 +0.3
baz=60
SWSC Sam W. Stewart 59.72 291 P P 19 34 25.8 +1.1
baz=60,SNR=21
TUC Tucson 59.72 286 eP P 19 34 25.3 +0.5
TUC pmax pmax
comp=Z,23nm,1.2s
TUC MLR MLR
comp=Z,1μm,20.0s
TUC Tucson 59.72 286 eP P 19 34 25.3 +0.5
comp=Z,23nm,1.2s
TUC LR LR
comp=Z,1μm,20.0s
TUC Tucson 59.72 286 eP P 19 34 25.3 +0.5
comp=Z,23nm,1.2s
432A Menard 59.72 275 P P 19 34 25.1 +0.3
baz=60,SNR=32
DDI Dehra Dun 59.72 89 ex P 19 34 24.8 0.0
326A Caldwell Ranch 59.83 280 P P 19 34 25.5 -0.1
baz=60,SNR=11
MONP Monument Peak 59.84 292 P P 19 34 26.9 +1.1
baz=60,SNR=34
XAN Xi'an 59.88 58 P P 19 34 27.1 +1.2
XAN S S 19 42 39.3 +2.6
XAN SS SS 19 46 29.8 -2.5
XAN pmax pmax
comp=Z,7.0nm,1.3s
XAN pmax pmax
comp=Z,50nm,5.6s
XAN LR LR
comp=N,1μm,20.2s
XAN LR LR
comp=E,400nm,18.9s
XAN LR LR
comp=Z,540nm,20.2s
324A Moseley Ranch, 59.90 281 ⇑P P 19 34 25.7 -0.4
baz=60
430A Baggett Ranch, 59.99 277 P P 19 34 26.9 +0.1
baz=60,SNR=27
SCI San Clemente I 60.01 294 ⇓P P 19 34 27.2 +0.5
baz=60,SNR=7.6
431A Sonora 60.01 276 P P 19 34 27.3 +0.4
baz=60,SNR=26
MAJO Matsushiro 60.05 30 eP P 19 34 28.1 +1.0
MAJO pmax pmax
comp=Z,75nm,1.5s
MAJO MLR MLR
comp=Z,1μm,22.0s
MAJO Matsushiro 60.05 30 eP P 19 34 28.1 +1.0
comp=Z,12nm,1.5s
MAJO LR LR
comp=Z,698nm,22.0s
MAJO Matsushiro 60.05 30 eP P 19 34 28.0 +1.0
comp=Z,12nm,1.5s
MAT Matsushiro 60.05 30 P P 19 34 26.0 -1.0
MAT S S 19 42 46.2 +7.4
MJAR Matsushiro Arr 60.05 30 P P 19 34 26.2 -0.8
MJAR Matsushiro Arr 60.05 30 P P 19 34 26.2 -0.8
comp=Z,37nm,1.2s,baz=345,slow=6.3,SNR=16
MJAR LR LR 20 00 17.8
comp=Z,657nm,19.7s,baz=355,slow=36
MJAR Matsushiro Arr 60.05 30 P P 19 34 26.2 -0.8
TAM Tamanrasset 60.06 165 eP P 19 34 27.2 -0.2
TAM pmax pmax
comp=Z,28nm,0.8s
TAM Tamanrasset 60.06 165 eP P 19 34 27.2 -0.2
comp=Z,28nm,0.8s
TAM Tamanrasset 60.06 165 eP P 19 34 27.2 -0.2
comp=Z,28nm,0.8s
BAR Barrett 60.08 292 eP P 19 34 28.4 +1.1
comp=Z,50nm,1.0s
BAR Barrett 60.08 292 eP P 19 34 28.4 +1.1
comp=Z,50nm,1.0s
JCT Junction City 60.11 275 eP P 19 34 27.8 +0.3
JCT pmax pmax
comp=Z,145nm,1.2s
JCT MLR MLR
comp=Z,2μm,19.0s
JCT Junction City 60.11 275 eP P 19 34 27.8 +0.3
comp=Z,145nm,1.2s
JCT LR LR
comp=Z,2μm,19.0s
JCT Junction City 60.11 275 eP P 19 34 27.8 +0.3
comp=Z,145nm,1.2s
JCT Junction City 60.11 275 P P 19 34 27.9 +0.3
baz=60,SNR=34
HKT Hockley 60.11 271 eP P 19 34 27.7 +0.3
HKT pmax pmax
comp=Z,50nm,1.4s
HKT Hockley 60.11 271 eP P 19 34 27.7 +0.3
comp=Z,50nm,1.4s
HKT Hockley 60.11 271 eP P 19 34 27.7 +0.3
comp=Z,50nm,1.4s
427A Hayter Ranch, 60.21 279 P P 19 34 28.6 +0.4
baz=60,SNR=30
429A Davenport Ranc 60.24 277 P P 19 34 28.1 -0.3
baz=60,SNR=29
428A Kincaid Ranch, 60.24 278 ⇑P P 19 34 28.9 +0.4
baz=60
214A Organ Pipe Nat 60.32 288 P P 19 34 29.4 +0.5
baz=60,SNR=38
320A Kipp Ranch, An 60.39 284 P P 19 34 30.2 +0.7
baz=60,SNR=23
319A Douglas 60.45 285 P P 19 34 30.4 +0.5
baz=60,SNR=48
532A Rocksprings 60.47 275 P P 19 34 30.4 +0.4
baz=60,SNR=28
426A McDonald Obser 60.47 280 P P 19 34 30.0 -0.2
baz=60,SNR=44
425A Indio Mountain 60.48 281 P P 19 34 30.4 +0.2
baz=60,SNR=130
531A Rocksprings 60.52 276 ⇑P P 19 34 30.2 -0.1
baz=60
530A J-C Ranch, Com 60.63 277 P P 19 34 31.3 +0.2
baz=60,SNR=49
529A Stev Forest Ra 60.77 278 P P 19 34 31.8 -0.3
baz=61,SNR=11
528A Cox Ranch, San 60.81 278 P P 19 34 32.5 +0.1
baz=61,SNR=39
527A Woodward Ranch 60.93 279 P P 19 34 33.4 +0.1
baz=61,SNR=20
632A Uvalde 61.06 275 P P 19 34 34.0 0.0
baz=61,SNR=14
526A Mary Lane Ranc 61.08 280 P P 19 34 34.4 +0.1
baz=61,SNR=35
631A Perdido Creek 61.26 276 P P 19 34 34.9 -0.4
baz=61,SNR=9.7
BANOM Banah 61.27 111 P P 19 34 35.3 -0.1
628A Black Gap, Mar 61.49 278 P P 19 34 36.7 -0.2
baz=61,SNR=23
626A Big Bend Ranch 61.58 279 P P 19 34 37.4 -0.2
baz=61,SNR=36
627A Terlingua Ranc 61.59 279 P P 19 34 37.4 -0.3
baz=61,SNR=40
TXAR Lajitas Array 61.74 279 P P 19 34 38.2 -0.5
TXAR ⇑e 20 03 57.4
TXAR Lajitas Array 61.74 279 P P 19 34 38.2 -0.5
comp=Z,21nm,1.0s,baz=32,slow=4.9,SNR=79
TXAR LR LR 20 00 31.9
comp=Z,1μm,18.3s,baz=0.0,slow=35
TXAR PKP2bc 20 03 57.4
comp=Z,3.8nm,1.2s,baz=149,slow=2.6,SNR=9.9
TXAR Lajitas Array 61.74 279 P P 19 34 38.2 -0.5
732A Laxson Ranch, 61.86 275 P P 19 34 39.5 +0.2
baz=62,SNR=21
LSA Lhasa 62.03 76 eP P 19 34 39.4 -1.7
LSA pmax pmax
comp=Z,28nm,1.1s
LSA MLR MLR
comp=Z,1μm,20.0s
LSA Lhasa 62.03 76 eP P 19 34 39.4 -1.7
comp=Z,28nm,1.1s
LSA LR LR
comp=Z,1μm,20.0s
LSA Lhasa 62.03 76 P P 19 34 39.4 -1.7
NAZ Nazwa, Dubai 62.11 112 P P 19 34 41.1 0.0
HATD Hatta, Dubai 62.33 112 P P 19 34 42.6 +0.1
FAQ Al Faqa, Dubai 62.34 112 P P 19 34 42.4 -0.2
RAYN Ar Rayn 62.38 123 P P 19 34 43.0 +0.1
comp=Z,107nm,1.2s,SNR=13
CD2 Chengdu 62.38 64 P P 19 34 43.4 +0.5
CD2 pP pP 19 34 48.0 0.0
CD2 sP sP 19 34 50.4 +0.4
CD2 PcP PcP 19 35 23.1 +0.8
CD2 PP PP 19 37 02.4 +2.7
CD2 PcS PcS 19 39 24.9 -0.8
CD2 S S 19 43 07.5 -1.1
CD2 SKS ScS 19 44 33.0 -1.1
CD2 SS SS 19 47 12.3 +0.8
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,180nm,7.3s
CD2 LR LR
comp=N,3μm,18.1s
CD2 LR LR
comp=E,1μm,22.5s
CD2 LR LR
comp=Z,4μm,18.6s
DANN Dangsing 62.41 83 eP P 19 34 43.6 +0.2
comp=Z,149nm,1.1s
ASHO Ashiyiah 62.46 112 P P 19 34 43.4 0.0
SNR=6.5
PYUN Piuthan 62.55 84 eP P 19 34 44.1 -0.2
comp=Z,158nm,1.1s
NJ2 Nanjing 62.90 49 eP P 19 34 46.1 -0.1
NJ2 pP pP 19 34 49.8 -1.6
NJ2 PP PP 19 37 04.1 0.0
NJ2 S S 19 43 16.0 +1.1
NJ2 sS sS 19 43 24.5 +1.2
NJ2 SS SS 19 47 28.0 +8.7
NJ2 pmax pmax
comp=Z,40nm,1.1s
NJ2 pmax pmax
comp=Z,170nm,6.5s
NJ2 LR LR
comp=N,570nm,22.6s
NJ2 LR LR
comp=E,680nm,21.0s
NJ2 LR LR
comp=Z,610nm,23.7s
JNU Nakatsue 62.91 38 eP P 19 34 48.0 +1.6
JNU Nakatsue 62.91 38 LR LR 20 02 16.4
comp=Z,564nm,19.1s,baz=358,slow=36
JNU Nakatsue 62.91 38 eP P 19 34 48.0 +1.6
KOLN Koldanda 62.96 84 eP P 19 34 46.8 -0.2
comp=Z,38nm,1.2s
GUN Gumba 63.12 81 eP P 19 34 48.1 -0.1
comp=Z,125nm,1.1s
KKN Kakani 63.16 82 eP P 19 34 48.3 0.0
comp=Z,173nm,1.1s
DMN Daman 63.31 82 eP P 19 34 49.8 +0.4
PKIN Phulchoki 63.38 82 eP P 19 34 50.2 +0.3
comp=Z,21nm,0.9s
PKI Pulchoki 63.39 82 eP P 19 34 50.3 +0.3
comp=Z,112nm,1.2s
JHJ Hachijo jima 2 63.56 29 LR LR 20 03 33.1
comp=Z,737nm,20.1s,baz=106,slow=37
ENH Enshi 63.67 58 eP P 19 34 50.1 -1.3
comp=Z,129nm,1.4s
ENH LR LR
comp=Z,1μm,20.0s
ENH Enshi 63.67 58 eP P 19 34 50.1 -1.3
comp=Z,129nm,1.4s
TAPN Taplejung 63.91 80 eP P 19 34 53.0 -0.3
WHN Wuhan 63.93 54 P P 19 34 51.4 -1.7
WHN PP PP 19 37 12.0 -1.2
WHN S S 19 43 23.3 -4.4
WHN pmax pmax
comp=Z,68nm,1.0s
WHN LR LR
comp=N,2μm,16.0s
WHN LR LR
comp=E,570nm,13.0s
WHN LR LR
comp=Z,2μm,20.9s
SSE Sheshan 64.07 47 P P 19 34 51.6 -2.4
SSE S S 19 43 25.8 -3.7
SSE SS SS 19 47 39.0 +1.3
SSE pmax pmax
comp=Z,16nm,0.8s
SSE pmax pmax
comp=Z,110nm,3.3s
SSE LR LR
comp=N,690nm,19.0s
SSE LR LR
comp=E,400nm,19.1s
SSE LR LR
comp=Z,900nm,22.3s
RAMN Ramite 64.16 81 eP P 19 34 54.0 -0.9
SMDO Samad 64.31 110 ⇑P P 19 34 55.1 -0.6
SNR=6.8
SMDO Samad 64.31 110 P P 19 34 55.1 -0.6
SNR=6.8
ODAN Odare 64.35 80 eP P 19 34 55.9 -0.3
GRTK Grand Turk 65.29 245 PFAKE 19 35 10.0 +8.0
GRTK LR LR
comp=Z,2μm,21.0s
GYA Guiyang 67.12 61 P P 19 35 15.8 +1.9
GYA PP PP 19 37 45.0 +3.6
GYA ScP 19 39 46.0
GYA S S 19 44 08.3 +1.2
GYA SKS ScS 19 45 10.5 -0.1
GYA SS SS 19 48 27.9 +2.4
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,190nm,5.4s
GYA LR LR
comp=N,850nm,19.4s
GYA LR LR
comp=E,720nm,20.0s
GYA LR LR
comp=Z,990nm,19.8s
GTBY Guantanamo Bay 67.33 249 eP P 19 35 14.1 -1.0
comp=Z,132nm,1.0s
GTBY Guantanamo Bay 67.33 249 eP P 19 35 14.1 -1.0
comp=Z,132nm,1.0s
STVI Saint Thomas 67.69 239 eP P 19 35 18.1 +0.7
comp=Z,104nm,1.0s
STVI Saint Thomas 67.69 239 eP P 19 35 18.1 +0.7
comp=Z,104nm,1.0s
LPIG La Paz 67.75 285 LR LR 20 04 59.7
comp=Z,86nm,20.6s,baz=166,slow=36
SDDR Presa de Saban 67.80 245 eP P 19 35 19.1 +0.9
comp=Z,80nm,1.0s
SDDR LR LR
comp=Z,3μm,21.0s
SDDR Presa de Saban 67.80 245 eP P 19 35 19.1 +0.9
comp=Z,80nm,1.0s
SACV Santiago Islan 67.86 195 PFAKE 19 35 30.0 +11
SACV LR LR
comp=Z,883nm,19.0s
AOPR Arecibo Observ 67.90 240 eP P 19 35 19.2 +0.4
comp=Z,233nm,1.6s
AOPR Arecibo Observ 67.90 240 eP P 19 35 19.2 +0.4
comp=Z,233nm,1.6s
KMI Kunming 67.98 65 P P 19 35 18.5 -1.0
KMI pP pP 19 35 25.3 +0.7
KMI sP sP 19 35 27.6 +1.0
KMI PP PP 19 37 49.5 +0.5
KMI S S 19 44 12.0 -5.7
KMI SS SS 19 48 35.0 -4.0
KMI pmax pmax
comp=Z,21nm,1.2s
KMI pmax pmax
comp=Z,170nm,5.0s
KMI LR LR
comp=N,2μm,18.8s
KMI LR LR
comp=E,700nm,19.4s
KMI LR LR
comp=Z,3μm,18.8s
MTP Monte Pirata 68.01 239 eP P 19 35 17.0 -2.4
comp=Z,166nm,1.1s
MTP Monte Pirata 68.01 239 eP P 19 35 17.0 -2.4
comp=Z,166nm,1.1s
SJG San Juan 68.06 240 PFAKE 19 35 30.0 +10
SJG LR LR
comp=Z,883nm,22.0s
TEIG Tepich 68.70 262 eP P 19 35 24.3 +0.5
comp=Z,112nm,1.2s
TEIG LR LR
comp=Z,2μm,21.0s
TEIG Tepich 68.70 262 LR LR 20 06 09.7
comp=Z,2μm,21.1s,baz=226,slow=36
TEIG Tepich 68.70 262 eP P 19 35 24.3 +0.5
comp=Z,112nm,1.2s
SEG Port Louis 69.24 235 eP P 19 35 26.6 -0.5
MTDJ Mount Denham 69.31 251 eP P 19 35 28.9 +1.2
comp=Z,220nm,1.3s
MTDJ LR LR
comp=Z,1μm,21.0s
MTDJ Mount Denham 69.31 251 eP P 19 35 28.9 +1.2
comp=Z,220nm,1.3s
LZG Guadaloupe-1 69.53 235 eP P 19 35 29.9 +1.0
TOA0 Torodi Ar. Sit 69.54 169 eP P 19 35 28.5 -0.5
TOA0 Torodi Ar. Sit 69.54 169 eP P 19 35 28.5 -0.5
TORD Torodi Ar. Bea 69.54 169 P P 19 35 28.4 -0.6
TORD P'P' 20 03 33.1
TORD Torodi Ar. Bea 69.54 169 P P 19 35 28.4 -0.6
comp=Z,30nm,0.7s,baz=355,slow=6.2,SNR=287
TORD PKPPKP P'P'df 20 03 33.1 -2.2
comp=Z,1.2nm,1.0s,baz=159,slow=3.0,SNR=3.5
TORD LR LR 20 04 40.8
comp=Z,269nm,20.4s,baz=20,slow=35
TORD Torodi Ar. Bea 69.54 169 P P 19 35 28.4 -0.6
DOG Dongo Capester 69.62 235 eP P 19 35 29.9 +0.4
SCG Saint Claude 69.63 235 eP P 19 35 31.1 +1.5
HMG Houelmont 69.68 235 eP P 19 35 31.1 +1.3
MGG Marie-Galante 69.70 235 eP P 19 35 31.4 +1.5
TBG Guadaloupe-3 69.80 235 eP P 19 35 31.6 +1.0
YHNB Yeheng 70.45 48 PFAKE 19 35 40.0 +5.4
YHNB LR LR
comp=Z,738nm,19.0s
FDF Fort de France 70.85 234 eP P 19 35 36.8 -0.3
FDF MLR MLR
comp=Z,2μm,22.0s
FDF Fort de France 70.85 234 eP P 19 35 36.8 -0.3
comp=Z,380nm,1.0s
FDF LR LR
comp=Z,2μm,22.0s
FDF Fort de France 70.85 234 eP P 19 35 37.9 +0.8
FDF Fort de France 70.85 234 eP P 19 35 36.8 -0.3
comp=Z,380nm,1.0s
TPUB Ta-pu 71.74 48 eP P 19 35 43.6 +1.3
TPUB Ta-pu 71.74 48 eP P 19 35 43.7 +1.3
HYB Hyderabad 72.50 90 i P P 19 35 46.0 -1.0
GRGR Grenville 73.48 234 eP P 19 35 52.0 -0.7
comp=Z,270nm,1.0s
GRGR Grenville 73.48 234 eP P 19 35 52.0 -0.7
comp=Z,270nm,1.0s
CHTO Chiang Mai 73.74 70 eP P 19 35 53.1 -1.2
CHTO pmax pmax
comp=Z,25nm,1.1s
CHTO Chiang Mai 73.74 70 eP P 19 35 53.1 -1.2
comp=Z,6.2nm,1.1s
CHTO Chiang Mai 73.74 70 P P 19 35 52.5 -1.8
comp=Z,28nm,1.2s,comp=Z,352nm
CHTO Chiang Mai 73.74 70 eP P 19 35 53.1 -1.2
comp=Z,6.2nm,1.1s
CMMT Chiang Mai 73.74 70 P P 19 35 52.9 -1.4
CMAR Chiang Mai Arr 74.09 70 P P 19 35 55.5 -0.8
CMAR P'P' 20 03 23.6
CMAR Chiang Mai Arr 74.09 70 P P 19 35 55.5 -0.8
comp=Z,20nm,1.0s,baz=346,slow=6.8,SNR=102
CMAR PKPPKP P'P'df 20 03 23.6 -6.2
comp=Z,0.8nm,1.1s,baz=220,slow=4.4,SNR=4.6
CMAR LR LR 20 11 46.3
comp=Z,1μm,19.3s,baz=353,slow=38
CMAR Chiang Mai Arr 74.09 70 P P 19 35 55.5 -0.8
TGUH Tegucigalpa,Un 74.65 260 eP P 19 36 01.3 +1.7
comp=Z,126nm,1.2s
TGUH Tegucigalpa,Un 74.65 260 eP P 19 36 01.3 +1.7
comp=Z,126nm,1.2s
QIZ Qiongzhong 74.82 59 P P 19 36 01.8 +1.3
QIZ PP PP 19 38 47.8 +0.3
QIZ S S 19 45 35.3 -1.1
QIZ SS SS 19 50 26.8 +3.2
QIZ pmax pmax
comp=Z,28nm,1.4s
QIZ pmax pmax

comp=Z,140nm,10.7s
QIZ LR LR
comp=N,1µm,17.4s
QIZ LR LR
comp=Z,2µm,19.1s
QIZ Qiongzhong 74.82 59 *e*P **P 19 35 59.9 -0.6**
comp=Z,45nm,1.3s
QIZ LR LR
comp=Z,2µm,19.0s
QIZ Qiongzhong 74.82 59 *e*P **P 19 35 59.9 -0.6**
comp=Z,45nm,1.3s
KIP Kipapa 75.22 330 *e*P **P 19 36 04.4 +1.6**
KIP pmax pmax
comp=Z,117nm,1.2s
KIP Kipapa 75.22 330 *e*P **P 19 36 04.4 +1.6**
comp=Z,117nm,1.2s
KIP Kipapa 75.22 330 *e*P **P 19 36 04.4 +1.6**
comp=Z,117nm,1.2s
DBIC Dimbokro 75.86 176 *e*P **P 19 36 06.1 -0.4**
comp=Z,42nm,1.7s
DBIC Dimbokro 75.86 176 P **P 19 36 05.4 -1.1**
comp=Z,4.9nm,0.7s,baz=342,slow=7.6,SNR=9.7
DBIC Dimbokro 75.86 176 *e*P **P 19 36 06.1 -0.4**
comp=Z,42nm,1.7s
FURI Furi 76.12 131 *e*P **P 19 36 10.9 +2.5**
FURI Furi 76.12 131 *e*P **P 19 36 10.9 +2.5**
PBKT Sadao Pong 76.20 68 P **P 19 36 06.6 -1.9**
LIC Lamto 76.30 176⇑ *i*P **P 19 36 08.5 -0.5**
comp=Z,49nm,1.0s
LIC *e*R
comp=Z,412nm,20.5s
LIC Lamto 76.30 176⇑ *i*P **P 19 36 08.5 -0.5**
comp=Z,49nm,1.0s
LIC Lamto 76.30 176⇑ *i*P **P 19 36 08.5 -0.5**
comp=Z,24nm,1.0s
POHA Pohakuloa 76.71 328 *e*P **P 19 36 12.4 +0.8**
comp=Z,97nm,1.0s
POHA Pohakuloa 76.71 328 *e*P **P 19 36 12.4 +0.8**
comp=Z,97nm,1.0s
SDV Santo Domingo 77.69 243 *e*P **P 19 36 17.5 +0.4**
comp=Z,16nm,0.9s
SDV Santo Domingo 77.69 243 *e*P **P 19 36 17.5 +0.4**
comp=Z,16nm,0.9s
UBPT Khong Chiam 78.02 64 P **P 19 36 18.1 -0.6**
JTS JuntasAbangare 78.06 258 *e*P **P 19 36 16.9 -2.0**
comp=Z,28nm,1.3s
JTS LR LR
comp=Z,2µm,19.0s
JTS JuntasAbangare 78.06 258 *e*P **P 19 36 17.0 -2.0**
comp=Z,28nm,1.3s
SRDT SRDT 78.17 70 P **P 19 36 18.3 -1.2**
CHBT CHBT 80.13 67 P **P 19 36 28.4 -1.9**
TGY Tagaytay City 80.87 49 P **P 19 36 34.4 +0.1**
TGY Tagaytay City 80.87 49 P **P 19 36 34.4 +0.1**
comp=Z,73nm,0.3s,baz=150,slow=3.4,SNR=9.5
TGY Tagaytay City 80.87 49 P **P 19 36 34.4 +0.1**
ROSC El Rosal 82.10 246 *e*P **P 19 36 42.8 +1.6**
ROSC El Rosal 82.10 246 *e*P **P 19 36 42.6 +1.4**
comp=Z,58nm,1.0s,baz=87,slow=4.4,SNR=35
ROSC LR LR 20 17 28.6
comp=Z,579nm,18.4s,baz=359,slow=39
ROSC El Rosal 82.10 246 *e*P **P 19 36 42.8 +1.6**
GUMO Guam 83.27 26 PFAKE 19 37 00.0 +13
GUMO LR LR
comp=Z,494nm,20.0s
MBAR Mbarara 84.79 140 P **P 19 36 54.9 +0.1**
MBAR LR LR
comp=Z,679nm,22.0s
MBAR Mbarara 84.79 140 P **P 19 36 54.9 +0.1**
comp=Z,26nm,1.0s,baz=1.3,slow=5.0,SNR=31
MBAR Mbarara 84.79 140 P **P 19 36 54.9 +0.1**
KMBO Kilima Mbogo 85.89 134 *e*P **P 19 37 01.7 +1.4**
comp=Z,28nm,1.1s
KMBO Kilima Mbogo 85.89 134 P **P 19 37 02.4 +2.0**
SNR=11
KMBO Kilima Mbogo 85.89 134 P **P 19 37 02.0 +1.6**
comp=Z,20nm,1.0s,baz=18,slow=7.1,SNR=40
KMBO Kilima Mbogo 85.89 134 P **P 19 37 02.4 +2.0**
SNR=11
OTAV Otavalo 87.16 250 *e*P **P 19 37 08.1 +1.3**
comp=Z,19nm,1.0s
OTAV Otavalo 87.16 250 *e*P **P 19 37 08.1 +1.3**
comp=Z,19nm,1.0s
KULM Kulim 87.29 70 *e*P **P 19 37 06.2 -0.7**
comp=Z,56nm,1.1s
KULM LR LR
comp=Z,894nm,19.0s
KULM Kulim 87.29 70 P **P 19 37 05.0 -1.9**
comp=Z,48nm,1.2s,comp=Z,654nm
KULM Kulim 87.29 70 *e*P **P 19 37 06.2 -0.7**
comp=Z,56nm,1.1s
IPM Ipoh 88.13 70 *e*P **P 19 37 09.5 -1.5**
IPM Ipoh 88.13 70 P **P 19 37 07.8 -3.2**
comp=Z,57nm,1.2s,comp=Z,811nm
IPM Ipoh 88.13 70 *e*P **P 19 37 09.5 -1.5**
KKM Kota Kinabalu 88.34 55 *e*P **P 19 37 12.1 0.0**
comp=Z,33nm,1.1s
KKM Kota Kinabalu 88.34 55 P P 19 37 08.8 -3.3
comp=Z,33nm,1.3s,comp=Z,681nm
KKM Kota Kinabalu 88.34 55 *e*P **P 19 37 12.1 0.0**
comp=Z,33nm,1.1s
RCBR Riachuelo 89.08 207 LR LR 20 09 30.6
comp=Z,550nm,20.5s,baz=356,slow=30
MYLDM Lahad Datu 89.44 52 P **P 19 37 16.4 -0.7**
comp=Z,47nm,1.8s
PSI Prapat 89.53 72 P **P 19 37 15.1 -2.6**
comp=Z,78nm,1.1s,comp=Z,978nm
SBUM Sibu 91.45 59 P **P 19 37 25.7 -0.8**
comp=Z,19nm,1.3s
KSM Kuching 92.20 61 *e*P **P 19 37 29.9 0.0**
comp=Z,46nm,1.4s
KSM Kuching 92.20 61 P **P 19 37 28.9 -1.0**
comp=Z,23nm,1.3s
KSM Kuching 92.20 61 *e*P **P 19 37 29.9 0.0**
comp=Z,46nm,1.4s
ATAH Atahualpa 94.42 249 P **P 19 37 41.6 +1.0**
ATAH Atahualpa 94.42 249 P **P 19 37 41.6 +1.0**
comp=Z,16nm,0.8s,baz=10,slow=3.1,SNR=8.3
ATAH LR LR 20 20 11.5
comp=Z,595nm,21.8s,baz=214,slow=36
SAML Samuel 94.46 234 *e*P **P 19 37 38.1 -2.2**
comp=Z,3.6nm,1.2s
SAML Samuel 94.46 234 *e*P **P 19 37 38.1 -2.2**
comp=Z,3.6nm,1.2s
NNA Nana 99.01 247 PFAKE 19 38 10.0 +9.1
NNA LR LR
comp=Z,539nm,19.0s
NNA Nana 99.01 247 LR LR 20 22 24.6
comp=Z,303nm,21.6s,baz=353,slow=35
LSZ Lusaka 99.12 144 P **Pdif 19 38 01.5 +0.1**
LSZ Lusaka 99.12 144 P **Pdif 19 38 01.5 +0.1**
comp=Z,1.3nm,0.7s,baz=31,slow=8.5,SNR=5.0
LSZ Lusaka 99.12 144 P **Pdif 19 38 01.5 +0.1**
KAPI Kappang 99.64 52 P **Pdif 19 38 01.9 -1.8**
comp=Z,1.2nm,1.1s
KAPI LR LR
comp=Z,322nm,22.0s
KAPI Kappang 99.64 52 P **Pdif 19 38 00.3 -3.4**
KAPI Kappang 99.64 52 P **Pdif 19 38 01.9 -1.8**
comp=Z,17nm,1.0s,baz=320,slow=4.2,SNR=10
KAPI Kappang 99.64 52 P **Pdif 19 38 01.9 -1.8**
comp=Z,1.2nm,1.1s
BDFB Brasilia 99.66 218 P **Pdif 19 38 03.8 0.0**
BDFB Brasilia 99.66 218 P **Pdif 19 38 03.8 0.0**
comp=Z,3.3nm,0.9s,baz=34,slow=8.0,SNR=3.9
BDFB LR LR 20 19 59.7
comp=Z,617nm,19.8s,baz=31,slow=34
BDFB Brasilia 99.66 218 P **Pdif 19 38 03.8 0.0**
SIV San Ignacio 101.20 231 P **Pdif 19 38 10.2 -0.4**
SIV San Ignacio 101.20 231 P **Pdif 19 38 10.2 -0.4**
comp=Z,5.1nm,0.9s,baz=48,slow=4.2,SNR=14
LVC Limon Verde 108.58 238 PFAKE 19 43 00.0
LVC LR LR
comp=Z,542nm,20.0s
LCO Las Campanas 115.11 239 PFAKE 19 43 10.0 +8.9
LCO LR LR
comp=Z,1µm,20.0s
WRA Warramunga Arr 115.77 39 PKP **PKPdf 19 43 01.1 -1.1**
WRA PKKPbc **PKKPbc 19 53 33.1 +2.1**
WRA SKKPbc SKKPbc 19 57 15.3 +1.4
WRA Warramunga Arr 115.77 39 PKP **PKPdf 19 43 01.1 -1.1**
comp=Z,5.3nm,0.8s,baz=343,slow=2.3,SNR=40
WRA PKKPbc **PKKPbc 19 53 33.1 +2.1**
comp=Z,1.7nm,0.6s,baz=177,slow=3.0,SNR=27
WRA SKKPbc SKKPbc 19 57 15.3 +1.4
comp=Z,2.1nm,1.1s,baz=144,slow=2.8,SNR=4.9
WRA Warramunga Arr 115.77 39 PKIKP **PKPdf 19 43 01.1 -1.1**

CTAO Charters Tower 116.75 26 PFAKE 19 43 10.0 +5.8
CTAO LR LR
comp=Z,302nm,20.0s
AS31 Alice Springs 119.42 40 *e*PKPdf **PKPdf 19 43 07.8 -1.5**
AS31 Alice Springs 119.42 40 *e*PKIKP **PKPdf 19 43 07.8 -1.5**
ASAR Alice Springs 119.43 40 PKP **PKPdf 19 43 08.2 -1.1**
ASAR PKKPbc **PKKPab 19 53 20.9 -1.7**
ASAR SKKPbc SKKPbc 19 57 07.7 +5.0
ASAR Alice Springs 119.43 40 PKP **PKPdf 19 43 08.2 -1.1**
comp=Z,8.0nm,0.9s,baz=9.5,slow=1.7,SNR=73
ASAR PKKPbc **PKKPab 19 53 20.9 -1.7**
comp=Z,1.7nm,0.8s,baz=171,slow=3.7,SNR=26
ASAR SKKPbc SKKPbc 19 57 07.7 +5.0
comp=Z,1.2nm,0.9s,baz=135,slow=2.0,SNR=4.7
ASAR Alice Springs 119.43 40 PKIKP **PKPdf 19 43 08.2 -1.1**
TRQA Tornquist 123.13 229 PFAKE 19 43 30.0 +14
TRQA LR LR
comp=Z,1µm,20.0s
PLCA Paso Flores 126.67 237 PKP **PKPdf 19 43 22.0 -0.6**
PLCA Paso Flores 126.67 237 PKP **PKPdf 19 43 22.0 -0.6**
comp=Z,12nm,0.9s,baz=312,slow=1.6,SNR=9.4
PLCA Paso Flores 126.67 237 PKIKP **PKPdf 19 43 22.0 -0.6**
STKA Stephens Creek 128.17 32 PKP **PKPdf 19 43 24.6 -1.1**
STKA *e*PKPdf **PKPdf 19 43 24.7 -1.0**
STKA Stephens Creek 128.17 32 PKP **PKPdf 19 43 24.6 -1.1**
comp=Z,14nm,1.0s,baz=358,slow=2.5,SNR=15
STKA Stephens Creek 128.17 32 *e*PKIKP **PKPdf 19 43 24.7 -1.0**
SYO Syowa Base 153.31 143‖ *e*P **PKPbc 19 44 14.2 -2.1**
SYO Syowa Base 153.31 143‖ *e*P **PKPab 19 44 28.6 +0.1**
SNAA Sanae 154.05 176 *e*PKPbc **PKPbc 19 44 18.0 0.0**
SNAA Sanae 154.05 176 *e*PKPbc **PKPbc 19 44 18.0 0.0**
MAW Mawson 154.14 123 *e*PKPdf **PKPdf 19 44 11.2 +1.2**
MAW PKPbc **PKPbc 19 44 18.3 +0.2**
MAW *e*PKPbc **PKPbc 19 44 18.6 +0.4**
MAW *e*PKPab **PKPab 19 44 32.2 0.0**
MAW PKPab PKPab 19 44 33.0 +0.8
MAW Mawson 154.14 123 PKPbc **PKPbc 19 44 18.3 +0.2**
comp=Z,16nm,0.8s,baz=320,slow=4.3,SNR=23
MAW PKPab **PKPab 19 44 33.0 +0.9**
comp=Z,8.0nm,0.9s,baz=254,slow=18,SNR=4.4
MAW Mawson 154.14 123 *e*PKIKP **PKPdf 19 44 11.2 +1.2**
MAW Mawson 154.14 123 PKPab **PKPab 19 44 33.0 +0.9**
CASY Casey 158.84 78 PFAKE 19 44 30.0 +14
CASY LR LR
comp=Z,683nm,21.0s
QSPA South Pole Qui 172.53 180 PKP PKPdf 19 44 21.4 -5.9
QSPA PKPab **PKPab 19 45 52.8 -0.1**
QSPA South Pole Qui 172.53 180 PKP PKPdf 19 44 21.4 -5.9
comp=Z,12nm,1.1s,baz=210,slow=0.9,SNR=11
QSPA PKPab **PKPab 19 45 52.8 -0.1**
comp=Z,8.3nm,0.9s,baz=196,slow=2.8,SNR=7.3
QSPA South Pole Qui 172.53 180 PKPab **PKPab 19 45 52.8 -0.1**
VNDA Vanda 174.72 23 PKP **PKPdf 19 44 23.5 -4.3**
VNDA PKPab **PKPab 19 46 01.0 -1.3**
VNDA Vanda 174.72 23 PKP **PKPdf 19 44 23.5 -4.3**
comp=Z,1.0nm,0.4s,baz=294,slow=3.0,SNR=6.6
VNDA PKPab **PKPab 19 46 01.0 -1.3**
comp=Z,2.5nm,1.1s,baz=7.1,slow=2.7,SNR=4.2
SBA Scott Base 175.24 11 PFAKE 19 44 40.0 +12
SBA LR LR
comp=Z,534nm,21.0s

MEX 17 19:25:41.4±1.1, **18°27N**×**100°70W, h56**km±11km, **MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.34**	**87**	*e*P	Pn	19 25 49.4	-2.1
ARIG				*i* S	Sn	19 25 56.9	-1.8
ZIIG	**Zihuatanejo**	**0.98**	**228**	*i* P	Pn	19 25 57.5	-1.5
ZIIG				*i* S	Sn	19 26 10.9	-1.1
PLIG	**Platanillo**	**1.15**	**84**	*i* P	Pn	19 26 00.1	-1.3
PLIG				*i* S	Sn	19 26 15.0	-1.3
CAIG	**El Cayaco**	**1.28**	**161**	*i* P	Pn	19 26 00.9	-2.2
CAIG				*i* S	Sn	19 26 17.5	-1.7
YAIG	**Yautepec**	**1.66**	**69**	*i* P	Pn	19 26 07.5	-0.9
YAIG				*i* S	Sn	19 26 27.7	-1.1

*NSSC **17** 19:49:56.0±2.3, 24°.73N×38°.09E, h0km±288km, ML4.5*
*SZGRF **17** 19:49:57.0, 22°.99N×36°.04E, h33km, mb4.5, Sudan*
*ISCJB **17** 19:50:05.0±0.2, 25°.27N±0°.02×37°.63E±0°.02, h10km, mb4.4/61, MS4.2/9, Error ellipse: s-maj=3.5km s-min=2.6km az=31.1*
*CSEM **17** 19:50:05.1±0.2, 25°.23N×37°.67E, h2km, mb4.6/20, Ms4.8, Error ellipse: s-maj=5.3km s-min=3.8km az=16.0*
*IDC **17** 19:50:06.5±0.6, 25°.37N×37°.60E, h0km, mb4.2/24, mb1 4.3/30, mb1mx4.2/39, mbtmp4.2/30, ML3.6/4, MS4.0/8, Ms1 4.0/8, ms1mx3.5/50, Error ellipse: s-maj=14.7km s-min=11.0km az=93.0*
*BJI **17** 19:50:06.6, 25°.40N×37°.70E, h10km, mB5.0/11, mb4.5/17, Ms4.7/8, Ms7 4.5/6*
*NEIC **17** 19:50:06.2±0.3, 25°.21N×37°.60E, h10km, mb4.6/17, Error ellipse: s-maj=5.5km s-min=5.1km az=183.0*
NEIC Some houses collapsed or damaged at Umm Lajj. Felt in the Al 'Ays area and at Medina and Yanbu' al Bahr. Some people reported a pungent odor from the volcanic fields in the area.
*HLW **17** 19:50:07.3, 25°.30N×37°.47E, h7km±7km, Md3.5, Ml3.3*
*MOS **17** 19:50:09.5±1.1, 25°.41N×37°.63E, h33km, mb4.8/25, Error ellipse: s-maj=10.4km s-min=4.5km az=95.5*

ISC 17 19:50:06.9±0.3, **25°24N**±0°.03×**37°.60E**±0°.03, **h10**km, **n385,** σ**1**§**51**/412, **mb4.5**/61, **MS4.4**/9, **30C-12D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMJS	**Umm Lajj**	**0.26**	**268**	P	**Pg**	**19 50 12.5**	**+0.3**
UMJS				S	**Sb**	**19 50 17.7**	**-0.5**
UMJS	**Umm Lajj**	**0.26**	**268**	P	**Pg**	**19 50 12.5**	**+0.3**
UMJS				S	**Sb**	**19 50 17.7**	**-0.5**
YNBS	**Yanbu' al Bahr**	**0.97**	**158**	P	Pg	19 50 22.2	-3.3
YNBS				S	**Sg**	**19 50 34.7**	**-3.5**
YOBS		**1.36**	**130**	P	Pn	19 50 28.4	-3.7
YOBS				S	**Sb**	**19 50 45.1**	**-4.9**
YOBS		**1.36**	**130**	P	Pn	19 50 28.4	-3.7
EMRS	**Mersa Alam**	**2.51**	**265**	S	**Sn**	**19 51 13.8**	**-4.7**
	baz=264						
EMRS				AMP		19 51 00.0	
	comp=E,140µm,0.3s,logA/T=5.7,baz=264						
EMRS	**Mersa Alam**	**2.51**	**265**	P	**Pn**	**19 50 46.5**	**-1.3**
EMRS				S	**Sn**	**19 51 13.8**	**-4.7**
HAGS	**Hagol**	**2.52**	**251**	P	**Pn**	**19 50 46.6**	**-1.3**
HAGS	**Hagol**	**2.52**	**251**	P	**Pn**	**19 50 46.6**	**-1.3**
	baz=249						
HAGS	**Hagol**	**2.52**	**251**	P	**Pn**	**19 50 46.6**	**-1.3**
HADB		**2.69**	**273**	P	**Pn**	**19 50 49.2**	**-1.1**
HADB		**2.69**	**273**	P	**Pn**	**19 50 49.2**	**-1.1**
	baz=272						
HADB		**2.69**	**273**	P	**Pn**	**19 50 49.2**	**-1.1**
HQSR		**2.94**	**281**	P	**Pn**	**19 50 52.5**	**-1.2**
HQSR		**2.94**	**281**	P	**Pn**	**19 50 52.5**	**-1.2**
	baz=280						
HQSR		**2.94**	**281**	P	**Pn**	**19 50 52.5**	**-1.2**
HSFG		**3.56**	**293**	P	**Pn**	**19 51 00.7**	**-1.5**
HSFG		**3.56**	**293**	P	**Pn**	**19 51 00.7**	**-1.5**
	baz=293						
HSFG		**3.56**	**293**	P	**Pn**	**19 51 00.7**	**-1.5**
HHRG	**Al Ghardaqah**	**4.12**	**299**	P	**Pn**	**19 51 08.0**	**-1.9**
	baz=300						
HHRG	**Al Ghardaqah**	**4.12**	**299**	P	**Pn**	**19 51 08.0**	**-1.9**
NMAN	**Kulet Umm Tihe**	**4.32**	**253**	P	**Pn**	**19 51 12.2**	**-0.5**
	baz=252						
NMAN				AMP		19 54 00.0	
	comp=E,130µm,3.6s,logA/T=4.5,baz=252						
NMAN	**Kulet Umm Tihe**	**4.32**	**253**	P	**Pn**	**19 51 12.2**	**-0.5**
HDHB	**Dhahab**	**4.37**	**323**	P	**Pn**	**19 51 12.3**	**-1.0**
HDHB	**Dhahab**	**4.37**	**323**	P	**Pn**	**19 51 12.3**	**-1.0**
	baz=324						
HDHB	**Dhahab**	**4.37**	**323**	P	**Pn**	**19 51 12.3**	**-1.0**
HKAT	**Jabal Katrina**	**4.58**	**316**	P	**Pn**	**19 51 15.5**	**-1.0**
HKAT	**Jabal Katrina**	**4.58**	**316**	P	**Pn**	**19 51 15.5**	**-1.0**
	baz=317						
HKAT	**Jabal Katrina**	**4.58**	**316**	P	**Pn**	**19 51 15.5**	**-1.0**
AAHD	**Abu Hadid**	**4.66**	**252**	P	**Pn**	**19 51 16.7**	**-0.7**
AAHD	**Abu Hadid**	**4.66**	**252**	P	**Pn**	**19 51 16.7**	**-0.7**
	baz=252						
AAHD	**Abu Hadid**	**4.66**	**252**	P	**Pn**	**19 51 16.7**	**-0.7**
HBST	**Basata**	**4.71**	**328**	P	**Pn**	**19 51 16.8**	**-1.2**
HBST	**Basata**	**4.71**	**328**	P	**Pn**	**19 51 16.8**	**-1.2**
	baz=329						
HBST	**Basata**	**4.71**	**328**	P	**Pn**	**19 51 16.8**	**-1.2**
AKRL	**Khor El Raml**	**4.71**	**252**	P	**Pn**	**19 51 17.1**	**-1.0**
AKRL	**Khor El Raml**	**4.71**	**252**	P	**Pn**	**19 51 17.1**	**-1.0**
	baz=251						
AKRL	**Khor El Raml**	**4.71**	**252**	P	**Pn**	**19 51 17.1**	**-1.0**
EIL	**Elat**	**5.00**	**333**	Pn	**Pn**	**19 51 20.9**	**-1.1**
EIL				Pg	**Pb**	**19 51 35.6**	**+1.1**
EIL				Lg	Lg	19 52 40.9	
EIL	**Elat**	**5.00**	**333**	Pn	**Pn**	**19 51 20.9**	**-1.1**
	comp=E,2.6nm,0.3s,baz=149,slow=4.8,SNR=21						
EIL				Pg	**Pb**	**19 51 35.6**	**+1.1**
	comp=E,28nm,0.3s,baz=160,slow=15,SNR=34						
EIL				Lg	Lg	19 52 40.9	
	comp=E,158nm,0.3s,baz=48,slow=16,SNR=11						
EIL				LR	LR	19 53 26.5	
	comp=E,2µm,19.4s,baz=146,slow=41						
EIL	**Elat**	**5.00**	**333**	Pn	**Pn**	**19 51 20.6**	**-1.4**
EIL				Sn	**Sb**	**19 52 34.1**	**-0.5**
MBRI	**Mt Berech**	**5.12**	**333**	Pn	**Pn**	**19 51 22.7**	**-1.1**
MBRI				Sn	**Sb**	**19 52 35.9**	**-2.4**
GRB	**Gharib**	**5.25**	**306**	P	**Pn**	**19 51 24.2**	**-1.3**
GRB	**Gharib**	**5.25**	**306**	P	**Pn**	**19 51 24.2**	**-1.3**
	baz=307						
GRB	**Gharib**	**5.25**	**306**	P	**Pn**	**19 51 24.2**	**-1.3**
HRFI	**Mount Harif**	**5.29**	**335**	Pn	**Pn**	**19 51 25.0**	**-1.0**
HRFI				Sn	**Sb**	**19 52 41.4**	**-1.6**
KRMI	**Paran Flat**	**5.48**	**333**	Pn	**Pn**	**19 51 27.9**	**-0.8**
KRMI				Sn	**Sb**	**19 52 45.9**	**-2.7**
PRNI	**Paran**	**5.58**	**336**	Pn	**Pn**	**19 51 29.6**	**-0.4**
PRNI				Sn	**Sb**	**19 52 48.1**	**-3.4**
HNKL	**Nakhl**	**5.66**	**326**	P	**Pn**	**19 51 30.2**	**-1.0**
	baz=327						
HNKL	**Nakhl**	**5.66**	**326**	P	**Pn**	**19 51 30.2**	**-1.0**
ZFRI	**Zfri**	**5.71**	**339**	Pn	**Pn**	**19 51 31.0**	**-0.7**
ASUT		**5.82**	**293**	P	**Pn**	**19 51 32.4**	**-1.0**
ASUT		**5.82**	**293**	P	**Pn**	**19 51 32.4**	**-1.0**
	baz=293						
ASUT		**5.82**	**293**	P	**Pn**	**19 51 32.4**	**-1.0**
RMNI	**Mount Ramon**	**5.89**	**335**	Pn	**Pn**	**19 51 33.7**	**-0.7**
KZIT	**Kziot**	**6.31**	**334**	Pn	**Pn**	**19 51 39.8**	**-0.2**
RTMI	**Retamim**	**6.33**	**337**	Pn	**Pn**	**19 51 39.7**	**-0.6**
RTMI				Sn	Sb	19 53 06.4	-6.6
GTR	**Jabal at Tayr**	**6.37**	**274**	P	**Pn**	**19 51 40.1**	**-0.8**
GTR	**Jabal at Tayr**	**6.37**	**274**	P	**Pn**	**19 51 40.1**	**-0.8**
	baz=274						
GTR	**Jabal at Tayr**	**6.37**	**274**	P	**Pn**	**19 51 40.1**	**-0.8**
AKRG	**Al Kharijah**	**6.43**	**274**	P	**Pn**	**19 51 40.5**	**-1.1**
AKRG	**Al Kharijah**	**6.43**	**274**	P	**Pn**	**19 51 40.5**	**-1.1**
	baz=274						
DSI	**Dead Sea**	**6.60**	**343**	Pn	**Pn**	**19 51 43.3**	**-0.7**
ASF	**Jabal al Asfar**	**6.93**	**355**	Pn	**Pn**	**19 51 47.3**	**-1.3**
ASF				Pg	Pb	19 52 12.3	+4.8
ASF				Lg	Lg	19 53 41.6	
ASF	**Jabal al Asfar**	**6.93**	**355**	Pn	**Pn**	**19 51 47.3**	**-1.3**
	comp=E,6.1nm,0.3s,baz=49,slow=3.5,SNR=34						
ASF				Pg	Pb	19 52 12.3	+4.8
	comp=E,13nm,0.3s,baz=35,slow=6.7,SNR=14						
ASF				Lg	Lg	19 53 41.6	
	comp=E,9.1nm,0.3s,baz=232,slow=23,SNR=6.5						
ASF				LR	LR	19 54 38.1	
	comp=E,1µm,20.1s,baz=25,slow=40						
HMDT	**Nahal Hemdat**	**7.22**	**346**	Pn	**Pn**	**19 51 51.4**	**-1.1**
SLTI	**Sal'it**	**7.32**	**343**	Pn	**Pn**	**19 51 53.4**	**-0.5**
RAYN	**Ar Rayn**	**7.41**	**102**	P	**Pn**	**19 51 54.3**	**-0.9**
RAYN	**Ar Rayn**	**7.41**	**102**	P	**Pn**	**19 51 54.3**	**-0.9**
MMLI	**Mount Malkishu**	**7.42**	**346**	Pn	**Pn**	**19 51 54.5**	**-0.8**
SALA	**Sala**	**7.48**	**354**	*e*P	**Pn**	**19 51 54.9**	**-1.3**
SALA				*e*S	**Sn**	**19 53 21.0**	**-0.2**
SALA				AML	AML	19 54 13.3	
	comp=E,91nm,0.6s						
SALA				AML	AML	19 54 19.5	
	comp=N,879nm,0.7s						
SALA				AML	AML	19 54 20.2	
	comp=Z,622nm,0.7s						
SALA	**Sala**	**7.48**	**354**	*e*P	**Pn**	**19 51 54.9**	**-1.3**
	SNR=90						
SALA				*e*S	**Sn**	**19 53 21.0**	**-0.2**
	comp=Z,622nm,0.7s,SNR=90						
TCHB	**Talchebab**	**7.54**	**349**	*e*P	**Pn**	**19 51 56.0**	**-0.8**
TCHB				AML	AML	19 54 28.4	
	comp=E,2µm,0.6s						
TCHB				AML	AML	19 54 28.9	
	comp=N,1µm,0.8s						
TCHB				AML	AML	19 54 33.0	
	comp=Z,709nm,0.8s						
TCHB	**Talchebab**	**7.54**	**349**	*e*P	**Pn**	**19 51 56.0**	**-0.8**
	SNR=90						
ZALF	**Zalf**	**7.66**	**358**	*e*P	**Pn**	**19 51 57.9**	**-0.6**
ZALF				*e*S	**Sn**	**19 53 23.3**	**-2.0**
ZALF				AML	AML	19 54 17.4	
	comp=Z,715nm,0.8s						
ZALF				AML	AML	19 54 35.2	
	comp=N,348nm,0.7s						
ZALF				AML	AML	19 54 38.6	
	comp=E,633nm,0.6s						
ZALF	**Zalf**	**7.66**	**358**	*e*P	**Pn**	**19 51 57.9**	**-0.6**
	SNR=90						
ZALF				*e*S	**Sn**	**19 53 23.3**	**-2.0**
	comp=E,633nm,0.6s,SNR=90						
OFRI	**'Ofer**	**7.70**	**343**	Pn	**Pn**	**19 51 58.6**	**-0.5**
BLGI	**Bet Lehem HaGe**	**7.75**	**345**	Pn	**Pn**	**19 51 59.2**	**-0.6**
KSHT	**Keshet**	**7.87**	**349**	Pn	**Pn**	**19 52 01.1**	**-0.4**
MMAI	**Mount Meron Ar**	**7.98**	**347**	Pn	**Pn**	**19 52 02.3**	**-0.7**
MMAI				Lg	Lg	19 54 19.4	
MMAI	**Mount Meron Ar**	**7.98**	**347**	Pn	**Pn**	**19 52 02.3**	**-0.7**
	comp=E,17nm,0.3s,baz=151,slow=16,SNR=107						
MMAI				Lg	Lg	19 54 19.4	
	comp=E,21nm,0.3s,baz=151,slow=44,SNR=4.8						
MMAI	**Mount Meron Ar**	**7.98**	**347**	Pn	**Pn**	**19 52 02.3**	**-0.7**
MMA1	**Mount Meron ar**	**7.98**	**347**	Pn	**Pn**	**19 52 02.1**	**-0.9**
TOTH	**TOTAH**	**8.15**	**353**	*e*P	**Pn**	**19 52 06.5**	**+1.1**
TOTH	**TOTAH**	**8.15**	**353**	*e*P	**Pn**	**19 52 06.5**	**+1.1**
	SNR=90						
BHL	**Bhannes**	**8.79**	**349**	*e*P	**Pn**	**19 52 14.3**	**+0.1**
HWQ	**Hawqa**	**9.12**	**351**	*e*P	**Pn**	**19 52 19.3**	**+0.6**
NAY	**Al-Naaiem**	**9.46**	**63**	*e*P	**Pn**	**19 52 21.2**	**-2.1**
NAY	**Al-Naaiem**	**9.46**	**63**	*e*P	**Pn**	**19 52 21.2**	**-2.1**
RDF	**Al-Radifah**	**9.60**	**65**	*e*P	**Pn**	**19 52 23.2**	**-2.0**
RDF				AML	AML	19 54 39.6	
	comp=Z,91nm,0.6s						
RDF	**Al-Radifah**	**9.60**	**65**	*e*P	**Pn**	**19 52 23.2**	**-2.0**
MIB	**Mutribah**	**9.77**	**60**	*e*P	**Pn**	**19 52 25.4**	**-2.1**
MIB				AML	AML	19 54 49.0	
	comp=Z,200nm,0.7s						
MIB	**Mutribah**	**9.77**	**60**	*e*P	**Pn**	**19 52 25.4**	**-2.1**
KBD	**Kabd**	**9.80**	**64**	*e*P	**Pn**	**19 52 26.0**	**-1.9**
KBD				AML	AML	19 54 40.4	
	comp=Z,55nm,0.6s						
KBD	**Kabd**	**9.80**	**64**	*e*P	**Pn**	**19 52 26.0**	**-1.9**
QRN	**Al-Qurain**	**9.84**	**67**	*e*P	**Pn**	**19 52 26.7**	**-1.8**
QRN				AML	AML	19 54 42.7	
	comp=Z,95nm,0.5s						
BHD	**Baghdad**	**9.95**	**35**	*ex*	Pn	19 52 25.0	-4.9
BHD				*ex*	**Sn**	**19 54 16.0**	**-5.7**
CSS	**Prodhromos**	**10.37**	**340**	*e*Pn	**Pn**	**19 52 35.5**	**-0.1**
CSS	**Prodhromos**	**10.37**	**340**	Pn	**Pn**	**19 52 34.8**	**-0.9**
BRTR	**Keskin Array B**	**14.82**	**348**	Pn	**Pn**	**19 53 37.5**	**+0.8**
BRTR				Lg	Lg	19 57 57.8	
BRTR	**Keskin Array B**	**14.82**	**348**	Pn

GNI	Garni	16.02	20	P		P		19 54 01.0	+5.0	
	SNR=6.5									
GNI	Garni	16.02	20	Pn		P		19 53 54.3	-1.7	
	comp=Z,0.3nm,0.3s,baz=295,slow=3.2,SNR=11									
GNI				Lg		Lg		19 58 28.9		
	comp=Z,0.1nm,0.3s,baz=347,slow=20,SNR=3.4									
GNI	Garni	16.02	20	*e*Pn		Pn		19 53 52.7	+0.2	
	comp=Z,25nm,1.0s									
GNI	Garni	16.02	20	P		Pn		19 53 53.7	+1.2	
	SNR=11									
ASUD	Al Ashush, Dub	16.10	88	P		Pn		19 53 53.1	-0.3	
FURI	Furi	16.29	176	*e*Pn		P		19 53 59.2	0.0	
	comp=Z,70nm,1.2s									
FAQ	Al Faqa, Dubai	16.32	88	P		Pn		19 53 56.1	-0.2	
NAZ	Nazwa, Dubai	16.37	87	P		Pn		19 53 56.5	-0.3	
LKRN	Lenkeran, Azer	16.42	32	P		P		19 54 01.7	+1.5	
	SNR=3.7									
LKRN	Lenkeran, Azer	16.42	32	Pn		P		19 54 01.7	+1.5	
	SNR=3.7									
GLBA	Clilabad	16.66	30	P		P		19 54 03.9	+1.1	
	SNR=4.5									
GLBA	Clilabad	16.66	30	Pn		P		19 54 03.9	+1.1	
	SNR=4.5									
ASHO	Ashiyiah	16.75	88	⇑P		Pn		19 54 01.6	-0.2	
	SNR=6.4									
ASHO	Ashiyiah	16.75	88	P		Pn		19 54 01.6	-0.2	
	SNR=6.4									
HATD	Hatta, Dubai	16.81	87	P		Pn		19 54 01.8	-0.6	
BANOM	Banah	16.89	84	P		Pn		19 54 01.8	-1.7	
	SNR=8.8									
GANJ	Ganja	17.00	23	P		P		19 54 08.7	+2.0	
	SNR=4.7									
GANJ	Ganja	17.00	23	Pn		P		19 54 08.7	+2.0	
	SNR=4.7									
ARQ	Araqi	17.36	92	⇓P		Pn		19 54 08.8	-0.6	
	SNR=7.6									
ARQ	Araqi	17.36	92	P		Pn		19 54 08.8	-0.6	
	SNR=7.6									
SEKA	Sheki	17.81	24	P		P		19 54 18.3	+2.6	
	SNR=7.5									
SEKA	Sheki	17.81	24	Pn		P		19 54 18.3	+2.6	
	SNR=7.5									
PQL	Pirkuli	18.01	28	P		P		19 54 21.1	+3.1	
	SNR=3.7									
PQL	Pirkuli	18.01	28	Pn		P		19 54 21.1	+3.1	
	SNR=3.7									
HOQ	Hoqain	18.03	91	P		Pn		19 54 17.0	-0.7	
	SNR=13									
HOQ	Hoqain	18.03	91	P		Pn		19 54 17.0	-0.7	
	SNR=13									
BSY	Bisya	18.08	94	⇓P		P		19 54 19.4	+0.6	
	SNR=16									
BSYO	Bisya	18.12	94	P		P		19 54 19.4	+0.2	
	SNR=16									
GOBA	Gobu	18.20	31	P		P		19 54 23.2	+3.3	
	SNR=3.1									
GOBA	Gobu	18.20	31	P		P		19 54 23.2	+3.3	
	SNR=3.1									
ZEI	Tsey	18.23	15	*e*P		P		19 54 20.6	+0.1	
ZEI				pmax		pmax				
	comp=Z,10.0nm,1.2s									
ZEI				MLR		MLR				
	comp=Z,1μm,13.0s									
ZEI	Tsey	18.23	15	*e*P		P		19 54 20.6	+0.1	
	comp=Z,1μm,13.0s									
SIZA	Siyzn	18.38	28	P		P		19 54 23.8	+1.9	
	SNR=6.1									
SIZA	Siyzn	18.38	28	P		P		19 54 23.8	+1.9	
	SNR=6.1									
QUBA	Quba, Azerbaij	18.44	27	P		Pn		19 54 25.0	+2.4	
	SNR=4.2									
QUBA	Quba, Azerbaij	18.44	27	P		Pn		19 54 25.0	+2.4	
	SNR=4.2									
SMDO	Samad	18.79	92	⇓P		P		19 54 26.1	-0.6	
	SNR=8.7									
SMDO	Samad	18.79	92	P		P		19 54 26.1	-0.6	
	SNR=8.7									
KBZ	Khabaz	18.94	12	P		Pn		19 54 28.4	-0.2	
KBZ	Khabaz	18.94	12	P		Pn		19 54 28.4	-0.2	
KBZ	Khabaz	18.94	12	P		Pn		19 54 28.4	-0.2	
	comp=Z,0.1nm,0.3s,baz=207,slow=11,SNR=16									
KBZ				LR		LR		20 01 26.7		
	comp=Z,540nm,18.0s,baz=286,slow=36									
KBZ	Khabaz	18.94	12	P		Pn		19 54 28.4	-0.2	
JMDO	Jabal Madar	18.98	94	⇑P		P		19 54 27.6	-1.0	
	SNR=8.5									
JMDO	Jabal Madar	18.98	94	P		P		19 54 27.6	-1.0	
	SNR=8.5									
KIV	Kislovodsk	19.12	11	*e*P		Pn		19 54 30.7	-0.3	
KIV				pmax		pmax				
	comp=Z,26nm,1.1s									
KIV	Kislovodsk	19.12	11	*e*P		Pn		19 54 30.7	-0.3	
	comp=Z,26nm,1.1s									
ANN	Anapa	19.51	360	*e*P		P		19 54 34.1	-0.1	
ANN				*e*S		S		19 58 14.7	+0.1	
ANN				pmax		pmax				
	comp=Z,52nm,1.7s									
ANN	Anapa	19.51	360	*e*P		P		19 54 34.1	-0.1	
	comp=Z,52nm,1.7s									
TIRR	Tirgusor	20.57	341	*e*P		P		19 54 44.9	-0.9	
TIRR				pmax		pmax				
	comp=Z,58nm,1.5s									
TIRR	Tirgusor	20.57	341	*e*P		P		19 54 44.9	-0.9	
	comp=Z,58nm,1.5s									
TIRR	Tirgusor	20.57	341	⇓*i*P		Pn		19 54 47.1	-0.9	
TIRR	Tirgusor	20.57	341	*e*P		P		19 54 44.9	-0.9	
	comp=Z,58nm,1.5s									
VTS	Vitosha	20.97	329	⇑*i*P		P		19 54 51.4	+1.1	
VTS	Vitosha	20.97	329	⇑*i*P		P		19 54 51.4	+1.1	
CFR	Carcaliu	21.31	341	⇑*i*P		P		19 54 54.6	+0.9	
CFR	Carcaliu	21.31	341	⇑*i*P		P		19 54 54.6	+0.9	
BARS	Barje	21.81	327	⇓*i*P		P		19 55 00.5	+1.4	
MLR	Muntele Rosu	22.28	338	P		P		19 55 05.6	+1.3	
MLR	Muntele Rosu	22.28	338	⇑*i*P		P		19 55 05.8	+1.5	
MLR	Muntele Rosu	22.28	338	P		P		19 55 05.6	+1.3	
	comp=Z,1.5nm,0.9s,baz=219,slow=1.7,SNR=7.2									
MLR	Muntele Rosu	22.28	338	P		P		19 55 05.6	+1.3	
VRI	Vrincioaia	22.36	340	⇑*i*P		P		19 55 05.7	+0.7	
VRI	Vrincioaia	22.36	340	⇑*i*P		P		19 55 05.7	+0.7	
PLOR	Plostina	22.37	340	⇑*i*P		P		19 55 06.6	+1.4	
PLOR	Plostina	22.37	340	⇑*i*P		P		19 55 06.6	+1.4	
ARR	Arges	22.64	336	⇓*i*P		P		19 55 09.0	+0.9	
ARR	Arges	22.64	336	⇓*i*P		P		19 55 09.0	+0.9	
TESR	Tescani	22.96	340	⇑*i*P		P		19 55 11.5	+0.1	
TESR	Tescani	22.96	340	⇑*i*P		P		19 55 11.5	+0.1	
LOT	Lotru	23.04	335	⇑*i*P		P		19 55 13.6	+1.3	
LOT	Lotru	23.04	335	⇑*i*P		P		19 55 13.6	+1.3	
GRUS	Gruza	23.14	328	*e*P		P		19 55 14.2	+0.9	
DIVS	Divibare	23.65	327	⇓*i*P		P		19 55 19.0	+0.6	
BBLS	Lazići	23.77	326	*e*P		P		19 55 22.4	+2.8	
BZS	Buzias	24.05	332	⇑*i*P		P		19 55 23.2	+1.0	
BZS	Buzias	24.05	332	⇑*i*P		P		19 55 23.2	+1.0	
BURAR	Bucovina Array	24.39	339	⇓*i*P		P		19 55 27.1	+1.7	
BURAR	Bucovina Array	24.39	339	⇓*i*P		P		19 55 27.1	+1.7	
BUR08	Bucovina Ar. S	24.42	339	*e*P		P		19 55 24.8	-0.9	
BUR08	Bucovina Ar. S	24.42	339	*e*P		P		19 55 24.8	-0.9	
FGSL	Fruska Gora	24.52	329	⇑*i*P		P		19 55 26.9	+0.4	
DRGR		24.56	335	⇑*i*P		P		19 55 28.6	+1.6	
DRGR		24.56	335	⇑*i*P		P		19 55 28.6	+1.6	
BMR	Baia Mare	25.02	337	⇑*i*P		P		19 55 33.3	+2.4	
BMR	Baia Mare	25.02	337	⇑*i*P		P		19 55 33.3	+2.4	
VORD	Divnogorie	25.71	2	*e*P		P		19 55 35.9	-1.3	
VORD				pmax		pmax				
	comp=Z,10.0nm,0.9s									
VORD				pmax		pmax				
	comp=N,190nm,0.8s									
VORD				pmax		pmax				
	comp=E,90nm,0.5s									
VORD	Divnogorie	25.71	2	*e*P		P		19 55 35.9	-1.3	
	comp=E,190nm,0.8s									
VSR	Storozhevoye	25.96	2	*e*P		P		19 55 39.0	-0.4	
VSR				pmax		pmax				
	comp=Z,30nm,1.0s									
VSR				pmax		pmax				
	comp=N,60nm,1.1s									
VSR				pmax		pmax				
	comp=E,9.0nm,1.1s									
VSR	Storozhevoye	25.96	2	*e*P		P		19 55 39.0	-0.4	
	comp=E,30nm,1.0s									
VRHR	Novokhopersk	26.00	6	*e*P		P		19 55 40.5	+0.7	
VRHR				pmax		pmax				
	comp=N,70nm,1.1s									
VRHR				pmax		pmax				
	comp=Z,40nm,1.1s									
VRHR				pmax		pmax				
	comp=E,8.0nm,0.8s									
VRHR	Novokhopersk	26.00	6	*e*P		P		19 55 40.5	+0.7	
AK02	Malin Array Si	26.19	348	*e*P		P		19 55 41.4	-0.1	
AK02	Malin Array Si	26.19	348	*e*P		P		19 55 41.4	-0.1	
AK01	Malin Array Si	26.22	348	*e*P		P		19 55 41.6	-0.1	
AK01	Malin Array Si	26.22	348	*e*P		P		19 55 41.6	-0.1	
KMBO	Kilima Mbogo	26.22	181	P		P		19 55 45.8	+3.4	
KMBO	Kilima Mbogo	26.22	181	P		P		19 55 45.8	+3.4	
	comp=E,0.5nm,0.3s,baz=4.9,slow=12,SNR=2.8									
KIEV	Kiev	26.22	348	*e*P		P		19 55 40.6	-1.2	
KIEV				pmax		pmax				
	comp=Z,20nm,1.0s									
KIEV	Kiev	26.22	348	*e*P		P		19 55 40.6	-1.2	
	comp=Z,20nm,1.0s									
KIEV	Kiev	26.22	348	*e*P		P		19 55 40.6	-1.2	
	comp=Z,20nm,1.0s									
AKASG	Malin Array Be	26.22	348	P		P		19 55 41.1	-0.7	
AKASG	Malin Array Be	26.22	348	P		P		19 55 41.1	-0.7	
AKASG	Malin Array Be	26.22	348	P		P		19 55 41.1	-0.7	
	comp=Z,7.2nm,0.8s,baz=167,slow=8.7,SNR=34									
AKASG	Malin Array Be	26.22	348	P		P		19 55 41.1	-0.7	
KEST	Kesra	26.41	300	*e*P		P		19 55 42.1	-1.8	
KEST	Kesra	26.41	300	P		P		19 55 44.3	+0.5	
	comp=Z,1.4nm,0.7s,baz=61,slow=10,SNR=3.8									
KOLS	Kolonicke sedl	26.52	337	*e*P		P		19 55 46.4	+1.8	
KOLS				pmax		pmax				
	comp=Z,8.0nm,1.3s									
KOLS	Kolonicke sedl	26.52	337	*e*P		P		19 55 46.4	+1.8	
KOLS	Kolonicke sedl	26.52	337	*e*P		P		19 55 46.4	+1.8	
	comp=Z,8.0nm,1.3s									
MBAR	Mbarara	26.54	196	P		P		19 55 46.4	+1.2	
MBAR	Mbarara	26.54	196	P		P		19 55 46.4	+1.2	
	comp=Z,0.8nm,0.3s,baz=12,slow=20,SNR=3.3									
MBAR	Mbarara	26.54	196	P		P		19 55 46.4	+1.2	
PSZ	Piszkesteto	26.60	333	*e*P		P		19 55 44.5	-0.9	
PSZ				pmax		pmax				
	comp=Z,11nm,1.1s									
PSZ	Piszkesteto	26.60	333	*e*P		P		19 55 44.5	-0.9	
	comp=Z,11nm,1.1s									
PSZ	Piszkesteto	26.60	333	⇑*i*P		P		19 55 46.5	+1.1	
PSZ	Piszkesteto	26.60	333	*e*P		P		19 55 44.5	-0.9	
	comp=Z,11nm,1.1s									
CRVS	Cervenica-Dubn	26.78	336	*e*P		P		19 55 46.6	-0.4	
CRVS				pmax		pmax				
	comp=Z,5.0nm,1.4s									
CRVS	Cervenica-Dubn	26.78	336	*e*P		P		19 55 46.6	-0.4	
CRVS	Cervenica-Dubn	26.78	336	*e*P		P		19 55 46.6	-0.4	
	comp=Z,5.0nm,1.4s									
VYHS	Vyhne	27.49	332	*e*P		P		19 55 54.4	+1.1	
VYHS				pmax		pmax				
	comp=Z,2.0nm,1.2s									
VYHS	Vyhne	27.49	332	*e*P		P		19 55 54.4	+1.1	
VYHS	Vyhne	27.49	332	*e*P		P		19 55 54.4	+1.1	
	comp=Z,2.0nm,1.2s									
ZST	Bratislava	28.02	330	*e*P		P		19 55 58.2	+0.2	
ZST				pmax		pmax				
	comp=Z,4.0nm,1.1s									
ZST	Bratislava	28.02	330	*e*P		P		19 55 58.2	+0.2	
ZST	Bratislava	28.02	330	*e*P		P		19 55 58.2	+0.2	
	comp=Z,4.0nm,1.1s									
SMOL	Smolenice	28.11	331	*e*P		P		19 56 02.1	+3.2	
SMOL	Smolenice	28.11	331	*e*P		P		19 56 02.1	+3.2	
SMOL	Smolenice	28.11	331	*e*P		P		19 56 02.1	+3.2	
OJC	Ojcow	28.48	336	*e*P		P		19 56 01.3	-0.9	
OJC				pmax		pmax				
	comp=Z,7.0nm,1.1s									
OJC	Ojcow	28.48	336	*e*P		P		19 56 01.3	-0.9	
	comp=Z,7.1nm,1.1s									
OJC	Ojcow	28.48	336	*e*P		P		19 56 01.3	-0.9	
	comp=Z,7.0nm,1.1s									
MORC	Moravsky Berou	29.02	333	*e*P		P		19 56 06.0	-1.0	
MORC				pmax		pmax				
	comp=Z,12nm,1.5s									
MORC	Moravsky Berou	29.02	333	*e*P		P		19 56 06.0	-1.0	
	comp=Z,12nm,1.5s									
MORC	Moravsky Berou	29.02	333	*e*P		P		19 56 06.0	-1.0	
	comp=Z,12nm,1.5s									
VRAC	Vranov	29.07	331	P		P		19 56 08.3	+0.9	
VRAC	Vranov	29.07	331	P		P		19 56 08.3	+0.9	
	comp=Z,1.6nm,0.3s,baz=346,slow=16,SNR=3.4									
VRAC	Vranov	29.07	331	P		P		19 56 08.3	+0.9	
TAM	Tamanrasset	29.36	272	*e*P		P		19 56 07.9	-2.6	
TAM				pmax		pmax				
	comp=Z,7.0nm,1.3s									
TAM	Tamanrasset	29.36	272	*e*P		P		19 56 07.9	-2.6	
	comp=Z,7.5nm,1.3s									
TREC	Trest	29.55	330	*e*P		P		19 56 13.0	+1.3	
TREC	Trest	29.55	330	⇑*e*P		P		19 56 13.0	+1.3	
TREC	Trest	29.55	330	*e*P		P		19 56 13.0	+1.3	
AKTK	Aktyubinsk	29.68	27	P		P		19 56 14.4	-2.4	
AKTO	Aktyubinsk	29.68	27	P		P		19 56 10.4	-2.4	
AKTO	Aktyubinsk	29.68	27	P		P		19 56 10.4	-2.4	
AKTO	Aktyubinsk	29.68	27	P		P		19 56 10.4	-2.4	
	comp=Z,0.4nm,0.3s,baz=227,slow=15,SNR=3.3									
AKTO	Aktyubinsk	29.68	27	P		P		19 56 10.4	-2.4	
OBN	Obninsk	29.85	359	*de*P		P		19 56 13.6	-0.5	
OBN								19 57 12.0		
OBN				pmax		pmax				
	comp=Z,28nm,1.3s									
OBN	Obninsk	29.85	359	*e*P		P		19 56 13.6	-0.5	
	comp=Z,28nm,1.3s									
DPC	Dobruska-Polom	29.97	332	*e*P		P		19 56 13.8	-1.6	
DPC				pmax		pmax				
	comp=Z,9.0nm,1.3s									
DPC	Dobruska-Polom	29.97	332	*e*P		P		19 56 13.8	-1.6	
	comp=Z,8.5nm,1.3s									
DPC	Dobruska-Polom	29.97	332	*e*P		P		19 56 15.8	+0.4	
DPC	Dobruska-Polom	29.97	332	*e*P		P		19 56 13.8	-1.6	
	comp=Z,9.0nm,1.3s									
GEC2	GERESS Array S	30.07	328	*e*P		P		19 56 16.1	-0.3	
GEC2	GERESS Array S	30.07	328	*e*P		P		19 56 16.1	-0.3	
GEC2	GERESS Array S	30.07	328	*e*P		P		19 56 16.1	-0.3	
GERES	GERESS Array B	30.07	328	P		P		19 56 17.6	+1.1	
GERES	GERESS Array B	30.07	328	P		P		19 56 17.6	+1.1	
	comp=Z,2.1nm,0.9s,baz=120,slow=7.9,SNR=17									
GERES	GERESS Array B	30.07	328	P		P		19 56 17.5	+1.1	
KHC	Kasperske Hory	30.33	328	*e*P		P		19 56 19.7	+1.1	
KHC				*e*				19 56 35.4		
KHC	Kasperske Hory	30.33	328	*e*P		P		19 56 19.7	+1.1	
KHC				*ex*		x		19 56 35.4		
KHC	Kasperske Hory	30.33	328	*e*P		P		19 56 19.7	+1.1	
SUW	Suwalki	30.68	343	*e*P		P		19 56 21.2	-0.3	
SUW				pmax		pmax				
	comp=Z,43nm,1.0s									
SUW	Suwalki	30.68	343	*e*P		P		19 56 21.2	-0.3	
	comp=Z,43nm,1.0s									
SUW	Suwalki	30.68	343	*e*P		P		19 56 21.2	-0.3	
	comp=Z,43nm,1.0s									
PVCC	Panska Ves	30.86	331	*e*P		P		19 56 23.1	-0.1	
PVCC	Panska Ves	30.86	331	⇑*e*P		P		19 56 23.1	-0.1	
PVCC	Panska Ves	30.86	331	*e*P		P		19 56 23.1	-0.1	
BRG	Berggiesshubel	31.38	331	*e*P		P		19 56 28.7	+0.9	
	comp=Z,10nm,1.1s									
BRG	Berggiesshubel	31.38	331	*e*P		P		19 56 28.7	+0.9	
BRG				pmax		pmax				
	comp=Z,11nm,1.2s									
BRG	Berggiesshubel	31.38	331	*e*P		P		19 56 28.7	+0.9	
	comp=Z,11nm,1.2s									
NKC	Novy Kostel	31.62	329	*e*P		P		19 56 31.3	+1.4	
NKC	Novy Kostel	31.62	329	⇑*e*P		P		19 56 31.3	+1.4	
NKC	Novy Kostel	31.62	329	*e*P		P		19 56 31.3	+1.4	
GRA1	Grafenberg Arr	31.85	327	*e*P		P		19 56 32.6	+0.6	
	comp=Z,9.0nm,1.4s									
GRF	Grafenberg Arr	31.85	327	*e*P		P		19 56 32.6	+0.6	
GRF				pmax		pmax				
	comp=Z,9.0nm,1.4s									
GRF	Grafenberg Arr	31.85	327	*e*P		P		19 56 32.7	+0.7	
	comp=Z,9.0nm,1.4s									
CLL	Collm	32.11	331	*e*P		P		19 56 35.0	+0.8	
CLL				*e*				19 56 46.0		
CLL				pmax		pmax				
	comp=Z,20nm,1.8s									
CLL	Collm	32.11	331	*e*P		P		19 56 35.0	+0.8	
	comp=Z,20nm,1.8s									
CLL				*e*				19 56 46.0		
CLL				*e*PP		PP		19 57 47.0	+0.3	
CLL	Collm	32.11	331	*e*P		P		19 56 35.0	+0.8	
	comp=Z,20nm,1.8s									
KKAR	Karatay Array	32.27	48	*e*P		P		19 56 35.6	-0.1	
KKAR	Karatay Array	32.27	48	*e*P		P		19 56 35.6	-0.1	
KKAR	Karatay Array	32.27	48	*e*P		P		19 56 35.6	-0.1	
LOR	Lormes	34.57	318	*e*P		P		19 56 57.3	+1.6	
	comp=Z,45nm,1.6s									
LOR	Lormes	34.57	318	*e*P		P		19 56 57.3	+1.6	
	comp=Z,45nm,1.6s									
LOR	Lormes	34.57	318	*e*P		P		19 56 57.3	+1.6	
	comp=Z,45nm,1.6s									
ARU	Arti	34.67	20	*d i*P		P		19 56 55.8	-0.6	
ARU								19 58 11.7		
ARU				S		S		20 02 24.1	-1.9	
ARU				SS		SnSn		20 04 31.2	-7.1	
ARU				pmax		pmax				
	comp=Z,12nm,1.2s									
AAK	Ala-Archa	34.85	51	*ce*P		P		19 57 00.4	+2.0	
AAK				pmax		pmax				
	comp=Z,7.0nm,1.2s									
BGF	Bois d'Agland	34.87	317	*e*P		P		19 57 00.2	+1.8	
BGF	Bois d'Agland	34.87	317	*e*P		P		19 57 00.2	+1.8	
BGF	Bois d'Agland	34.87	317	*e*P		P		19 57 00.2	+1.8	
BGF	Bois d'Agland	34.87	317	*e*P		P		19 57 00.2	+1.8	
KSH	Kashi	35.12	57	*e*P		P		19 56 59.0	-1.7	
KSH				*e*PP		PnPn		19 58 16.5	-1.6	
KSH				*e*PcP		PcP		19 59 33.0	+0.8	
KSH				*e*S		S		20 02 25.0	-8.6	
KSH				*e*ScP		ScP		20 03 12.9	-5.1	
KSH				*e*PcS		PcS		20 03 18.3	-0.8	
KSH				*e*SS		SnSn		20 04 38.1	-12	
KSH				*e*ScS		ScS		20 07 15.3	-6.7	
KSH				pmax		pmax				
	comp=Z,13nm,1.7s									
KSH				pmax		pmax				
	comp=Z,270nm,6.6s									
KSH				LR		LR				
	comp=N,91nm,3.7s									
KSH				LR		LR				
	comp=E,61nm,4.4s									
TKM2	Tokmak 2	35.71	51	*e*P		P		19 57 04.8	-1.0	
TKM2				pmax		pmax				
	comp=Z,17nm,1.5s									
TKM2	Tokmak 2	35.71	51	*e*P		P		19 57 04.8	-1.0	
	comp=Z,17nm,1.5s									
TKM2	Tokmak 2	35.71	51	*e*P		P		19 57 04.8	-1.0	
	comp=Z,17nm,1.5s									
ETSF	Etsaut	35.81	309	*e*P		P		19 57 07.9	+1.3	
	comp=Z,19nm,1.0s									
ETSF	Etsaut	35.81	309	*e*P		P		19 57 07.9	+1.3	
ETSF				pmax		pmax				
	comp=Z,19nm,1.0s									
ETSF	Etsaut	35.81	309	*e*P		P		19 57 07.9	+1.3	
	comp=Z,19nm,1.0s									
ETSF	Etsaut	35.81	309	*e*P		P		19 57 07.9	+1.3	
	comp=Z,19nm,1.0s									
TOA0	Torodi Ar. Sit	35.86	257	*e*P		P		19 57 05.6	-1.6	
TORD	Torodi Ar. Bea	35.86	257	P		P		19 57 08.4	+1.2	
TORD	Torodi Ar. Bea	35.86	257	P		P		19 57 08.4	+1.2	
	comp=Z,6.1nm,1.1s,baz=65,slow=5.9,SNR=17									
TORD	Torodi Ar. Bea	35.86	257	P		P		19 57 08.4	+1.2	
FINES	FINESS Array B	37.03	351	P		P		19 57 16.2	-0.3	
FINES	FINESS Array B	37.03	351	P		P		19 57 16.2	-0.3	
	comp=Z,5.8nm,0.8s,baz=149,slow=13,SNR=22									
FINES				LR		LR		20 14 23.3		
	comp=Z,118nm,19.6s,baz=90,slow=40									
FINES	FINESS Array B	37.03	351	P		P		19 57 16.2	-0.3	
BRVK	Borovoye	37.04	33	*e*P		P		19 57 15.6	-1.2	
BRVK				pmax		pmax				
	comp=Z,5.0nm,1.0s									
BRVK	Borovoye	37.04	33	*e*P		P		19 57 15.6	-1.2	
	comp=Z,5.4nm,1.0s									
BRVK	Borovoye	37.04	33	*e*P		P		19 57 15.6	-1.2	
	comp=Z,5.4nm,1.0s									
ESDC	Sonseca Array	37.56	303	P		P		19 57 22.7	+1.2	
ESDC	Sonseca Array	37.56	303	P		P		19 57 22.7	+1.2	
	comp=Z,1.1nm,0.7s,baz=90,slow=7.9,SNR=8.6									
ESDC	Sonseca Array	37.56	303	P		P		19 57 22.7	+1.2	
NB2	NORSAR Subarra	40.06	340	P		P		19 57 41.5	-0.6	
	comp=Z,7.9nm,0.8s,baz=139,slow=9.3									
NOA	NORSAR Array B	40.06	340	P		P		19 57 41.6	-0.6	
NOA	NORSAR Array B	40.06	340	P		P		19 57 41.6	-0.6	
	comp=Z,5.7nm,0.

LZH				LR	LR				
	comp=N,220nm,16.3s								
LZH				LR	LR				
	comp=E,200nm,15.0s								
LZH				LR	LR				
	comp=Z,220nm,19.7s								
SONM	**Songino Array**	**57.72**	**48**	P	**P**		**19 59 58.0**	**0.0**	
SONM	**Songino Array**	**57.72**	**48**	P	**P**		**19 59 58.0**	**0.0**	
	comp=Z,2.0nm,0.9s,baz=266,slow=8.4,SNR=16								
SONM	**Songino Array**	**57.72**	**48**	P	**P**		**19 59 58.0**	**0.0**	
KMI	**Kunming**	**58.39**	**75**	P	P		20 00 06.8	+3.6	
KMI				pmax	pmax				
	comp=Z,6.0nm,1.3s								
GYA	**Guiyang**	**61.45**	**72**	*e*P	**P**		**20 00 24.3**	**+0.3**	
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
HHC	**Hu-ho-hao-te**	**62.22**	**55**	*e*P	**P**		**20 00 28.4**	**-0.6**	
HHC				pP	pP		20 00 38.6	+6.4	
HHC				sP	sP		20 00 43.5	+10	
HHC				PcS	**PcS**		**20 05 14.8**	**+2.6**	
HHC				S	**S**		**20 08 55.8**	**+0.8**	
HHC				sS	**sS**		**20 09 05.3**	**+5.0**	
HHC				ScS	**SKKSac**		**20 10 16.5**	**-5.0**	
HHC				pmax	pmax				
	comp=Z,22nm,0.5s								
HHC				pmax	pmax				
	comp=Z,880nm,12.4s								
HHC				LR	LR				
	comp=N,400nm,17.7s								
HHC				LR	LR				
	comp=E,230nm,22.6s								
HHC				LR	LR				
	comp=Z,270nm,17.1s								
SFJD	**Kangerlussuaq**	**66.36**	**335**	P	**P**		**20 00 55.6**	**+0.1**	
SFJD	**Kangerlussuaq**	**66.36**	**335**	P	**P**		**20 00 55.6**	**+0.1**	
	comp=Z,3.8nm,0.7s,baz=146,slow=7.3,SNR=3.0								
SFJD	**Kangerlussuaq**	**66.36**	**335**	P	**P**		**20 00 55.6**	**+0.1**	
TIXI	**Tiksi**	**66.68**	**20**	⇑*i*P	**P**		**20 00 57.0**	**-0.5**	
TIXI				pmax	pmax				
	comp=Z,3.0nm,1.3s								
NJ2	**Nanjing**	**70.07**	**63**	*e*P	**P**		**20 01 19.3**	**-0.1**	
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
CN2	**Changchun**	**71.51**	**50**	*e*P	**P**		**20 01 29.0**	**+1.0**	
MDJ	**Mudanjiang**	**74.08**	**48**	P	**P**		**20 01 41.8**	**-1.4**	
MDJ				pmax	pmax				
	comp=Z,4.0nm,0.8s								
MDJ				pmax	pmax				
	comp=Z,86nm,4.0s								
BILL	**Bilibino**	**79.62**	**17**	P	**P**		**20 02 15.0**	**+0.9**	
BILL				*e*			20 02 24.4		
BILL				pmax	pmax				
	comp=Z,45nm,1.9s								
YKA	**Yellowknife Ar**	**89.79**	**347**	P	**P**		**20 03 04.4**	**-1.0**	
YKA	**Yellowknife Ar**	**89.79**	**347**	P	**P**		**20 03 04.4**	**-1.0**	
	comp=Z,0.5nm,0.8s,baz=25,slow=4.9,SNR=5.4								
YKA	**Yellowknife Ar**	**89.79**	**347**	P	**P**		**20 03 04.4**	**-1.0**	
ILAR	**Eielson Array**	**90.21**	**2**	P	**P**		**20 03 08.0**	**+0.6**	
ILAR	**Eielson Array**	**90.21**	**2**	P	**P**		**20 03 08.0**	**+0.6**	
	comp=Z,0.3nm,0.8s,baz=327,slow=4.7,SNR=3.2								
ILAR	**Eielson Array**	**90.21**	**2**	P	**P**		**20 03 08.0**	**+0.6**	
NWAO	**Narrogin (SRO)**	**95.30**	**124**	LR	LR		20 41 09.9		
	comp=Z,419nm,20.8s,baz=272,slow=32								

*ISCJB **17** 19:53:01.8±1.2,42°.46N×145°.39E±0°.08,h42km±9km, mb3.8/8,Error ellipse: s-maj=13.3km s-min=7.9km az=142.4*
*MOS **17** 19:53:01.8±1.0,42°.40N×145°.37E,h48km,mb4.1/5,Error ellipse: s-maj=25.8km s-min=15.2km az=90.9*
*JMA **17** 19:53:02.7±0.1,42°.54N×145°.35E,h46km±2km,M3.4*
*IDC **17** 19:53:05.1±3.4,42°.44N×145°.27E,h56km±27km,mb3.6/7, mb1 3.7/9,mb1mx3.3/29,mbtmp3.6/9,ML3.6/2,Error ellipse: s-maj=26.9km s-min=24.2km az=53.0*

ISC 17 19:53:02.2±2.2,42°.50N±0°.09×145°.40E±0°.07,h28km±12km, n18,σ0s85/24,mb3.9/8,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.71**	**314**	P	**Pb**	**19 53 15.9**	**-0.1**
JAK				*e*S	**Sb**	**19 53 25.5**	**+0.1**
NEM2	**Nemuro 2**	**0.90**	**16**	P	**Pn**	**19 53 19.1**	**+0.1**
NEM2				*e*S	**Sb**	**19 53 30.6**	**-0.2**
JNK	**Nakash**	**1.19**	**336**	P	**Pn**	**19 53 22.2**	**-0.8**
JOB	**Onbets**	**1.22**	**290**	P	**Pn**	**19 53 23.3**	**0.0**
JAR	**Ashorobuto**	**1.43**	**304**	P	**Pn**	**19 53 25.8**	**-0.5**
JAR				*e*S	**Sn**	**19 53 43.4**	**-0.9**
JRA	**Rausu**	**1.45**	**352**	P	**Pn**	**19 53 26.4**	**-0.1**
JRA				*e*S	**Sn**	**19 53 44.2**	**-0.4**
JCH	**Churui**	**1.51**	**275**	P	**Pn**	**19 53 27.7**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**1.57**	**12**	*i* PN	**Pn**	**19 53 28.9**	**+0.7**
YUK				*i* S	**Sn**	**19 53 48.5**	**+0.9**
YUK				pmax	pmax		
	comp=E,63nm,0.3s						
YUK				pmax	pmax		
	comp=N,52nm,0.3s						
YUK				pmax	pmax		
	comp=Z,84nm,0.3s						
YUK				smax	smax		
	comp=N,249nm,0.6s						
YUK				smax	smax		
	comp=E,336nm,0.5s						
ASAJ	**Asahikawa**	**2.60**	**309**	P	**Pn**	**19 53 43.9**	**+1.5**
	comp=E,14nm,0.3s,baz=119,slow=14,SNR=43						
ASAJ				S	**Sn**	**19 54 15.3**	**+2.3**
	comp=E,3.0nm,0.3s,baz=22,slow=19,SNR=4.5						
MJAR	**Matsushiro Arr**	**8.14**	**225**	P	**Pn**	**19 54 58.6**	**+0.1**
	comp=E,0.3nm,0.3s,baz=25,slow=14,SNR=3.8						
SONM	**Songino Array**	**27.79**	**295**	P	**P**	**19 58 48.9**	**+0.1**
	comp=E,0.9nm,0.6s,baz=86,slow=8.3,SNR=9.3						
ILAR	**Eielson Array**	**43.25**	**35**	P	**P**	**20 01 01.6**	**+0.8**
	comp=E,0.2nm,0.6s,baz=281,slow=9.1,SNR=5.6						
KURK	**Kurchatov**	**45.17**	**305**	P	**P**	**20 01 16.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**45.25**	**304**	P	**P**	**20 01 16.2**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=72,slow=8.9,SNR=7.1						
INK	**Inuvik**	**48.12**	**30**	P	**P**	**20 01 40.0**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=263,slow=8.1,SNR=6.0						
SPITS	**Spitsbergen Ar**	**55.76**	**349**	P	**P**	**20 02 34.6**	**-1.3**
	comp=Z,5.7nm,1.0s,baz=46,slow=14,SNR=3.0						
FINES	**FINESS Array B**	**65.39**	**333**	P	**P**	**20 03 41.5**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=47,slow=7.2,SNR=12						
NOA	**NORSAR Array B**	**70.29**	**338**	P	**P**	**20 04 12.5**	**-0.1**
	comp=Z,1.0nm,0.9s,baz=36,slow=6.0,SNR=3.4						

*CSEM **17** 19:53:10.4,38°.41N×21°.99E,h11km,MD2.9,After ATH*
ATH 17 19:53:10.4,38°.41N×21°.99E,h11km,MD2.9/10,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.07**	**284**	*e*PG	Pg	19 53 12.8	+0.1
EFP				*e*SG	Sg	19 53 14.5	0.0
EFP	**Efpalio**	**0.07**	**284**	*e*Pg	Pg	19 53 12.8	+0.1
EFP				*e*Sg	Sg	19 53 14.5	0.0
TRIZ	**Trizonia**	**0.08**	**124**	*e*PG	Pg	19 53 12.9	+0.1
TRIZ				*e*SG	Sg	19 53 14.8	+0.2
TRIZ	**Trizonia**	**0.08**	**124**	*e*Pg	Pg	19 53 12.9	+0.1
TRIZ				*e*Sg	Sg	19 53 14.8	+0.2
KALE	**Kalithea**	**0.12**	**99**	*e*PG	Pg	19 53 13.5	0.0
KALE				*e*SG	Sg	19 53 15.9	+0.2
KALE	**Kalithea**	**0.12**	**99**	*e*Pg	Pg	19 53 13.5	0.0
KALE				*e*Sg	Sg	19 53 15.9	+0.2
LAKA	**Lakka**	**0.17**	**183**	*e*PG	Pg	19 53 14.4	+0.2
LAKA				*e*SG	Sg	19 53 17.2	+0.3
LAKA	**Lakka**	**0.17**	**183**	*e*Pg	Pg	19 53 14.4	+0.2
LAKA				*e*Sg	Sg	19 53 17.2	+0.3
KLV	**Kalavryta, Ach**	**0.39**	**161**	*e*PB	Pg	19 53 17.9	-0.3
KLV				*e*SB	Sg	19 53 23.5	+0.1
KLV	**Kalavryta, Ach**	**0.39**	**161**	*e*Pb	Pg	19 53 17.9	-0.3
KLV				*e*Sb	Sg	19 53 23.5	+0.1
EVR	**Evrytania**	**0.53**	**344**	*e*PB	Pg	19 53 20.8	0.0
EVR				*e*SB	Sg	19 53 27.9	0.0
EVR	**Evrytania**	**0.53**	**344**	*e*Pb	Pg	19 53 20.8	0.0
EVR				*e*Sb	Sg	19 53 27.9	0.0
RLS	**Riolos of Patr**	**0.54**	**230**	*e*PB	Pg	19 53 20.8	-0.2
RLS				*e*SB	Sg	19 53 28.7	+0.6
RLS	**Riolos of Patr**	**0.54**	**230**	*e*Pb	Pg	19 53 20.8	-0.2
RLS				*e*Sb	Sg	19 53 28.7	+0.6
GUR	**Goura**	**0.55**	**149**	*e*PB	Pg	19 53 21.2	-0.1
GUR	**Goura**	**0.55**	**149**	*e*Pb	Pg	19 53 21.2	-0.1
AGG	**Agios Georgios**	**0.67**	**23**	*e*PG	Pg	19 53 22.9	-0.5
AGG	**Agios Georgios**	**0.67**	**23**	*e*Pg	Pg	19 53 22.9	-0.5
THL	**Klokotos Trika**	**1.15**	**1**	*e*PB	Pb	19 53 32.3	-0.1
THL	**Klokotos Trika**	**1.15**	**1**	*e*Pb	Pb	19 53 32.3	-0.1
DID	**Didima**	**1.34**	**132**	*e*PG	Pn	19 53 35.2	+0.1
DID	**Didima**	**1.34**	**132**	*e*Pg	Pn	19 53 35.2	+0.1

*ATH **17** 19:59:05.7,38°.13N×22°.68E,h19km±2km,MD2.9/9*
*CSEM **17** 19:59:05.6±0.2,38°.11N×22°.68E,h15km,ML1.6/3,Error ellipse: s-maj=3.9km s-min=3.3km az=33.0*
*THE **17** 19:59:06.4,38°.11N×22°.65E,h9km±2km,ML1.6/3,Error ellipse: s-maj=2.3km s-min=0.6km az=185.0*

ISC 17 19:59:06.7±1.3,38°.12N±0°.02×22°.66E±0°.02,h9km±9km, n29,σ0s61/48,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THAL	**Thalero**	**0.08**	**180**	P	**Pg**	**19 59 08.7**	**-0.1**
THAL				S	**Sg**	**19 59 09.9**	**-0.4**
THAL	**Thalero**	**0.08**	**180**	P	**Pg**	**19 59 08.7**	**-0.1**
THAL				S	**Sg**	**19 59 09.9**	**-0.4**
LTK	**Loutraki**	**0.26**	**111**	P	**Pg**	**19 59 11.6**	**-0.2**
LTK				S	**Sg**	**19 59 16.2**	**+0.9**
LTK	**Loutraki**	**0.26**	**111**	*e*PB	**Pg**	**19 59 11.7**	**-0.1**
LTK				*e*SB	**Sg**	**19 59 16.0**	**+0.7**
LTK	**Loutraki**	**0.26**	**111**	*e*Pb	**Pg**	**19 59 11.7**	**-0.1**
LTK				S	**Sg**	**19 59 16.2**	**+0.9**
GUR	**Goura**	**0.31**	**235**	P	**Pg**	**19 59 12.5**	**-0.3**
GUR				S	**Sg**	**19 59 16.8**	**-0.2**
GUR	**Goura**	**0.31**	**235**	*e*PB	**Pg**	**19 59 12.6**	**-0.3**
GUR				*e*SB	**Sg**	**19 59 17.6**	**+0.6**
GUR	**Goura**	**0.31**	**235**	*e*Pb	**Pg**	**19 59 12.6**	**-0.3**
GUR				S	**Sg**	**19 59 16.8**	**-0.2**
GUR				*e*Sb	**Sg**	**19 59 17.6**	**+0.6**
DSF	**Desfina**	**0.31**	**340**	P	**Pg**	**19 59 12.6**	**-0.3**
DSF				S	**Sg**	**19 59 17.7**	**+0.6**
DSF	**Desfina**	**0.31**	**340**	P	**Pg**	**19 59 12.6**	**-0.3**
DSF				S	**Sg**	**19 59 17.7**	**+0.6**
KLV	**Kalavryta, Ach**	**0.41**	**260**	*e*PB	**Pg**	**19 59 14.3**	**-0.4**
KLV				*e*SB	**Sg**	**19 59 20.6**	**+0.5**
KLV	**Kalavryta, Ach**	**0.41**	**260**	*e*Pb	**Pg**	**19 59 14.3**	**-0.4**
KLV				*e*Sb	**Sg**	**19 59 20.6**	**+0.5**
KALE	**Kalithea**	**0.49**	**304**	*e*PB	**Pg**	**19 59 16.1**	**-0.2**
KALE				*e*SB	**Sg**	**19 59 23.2**	**+0.4**
KALE	**Kalithea**	**0.49**	**304**	*e*Pb	**Pg**	**19 59 16.1**	**-0.2**
KALE				*e*Sb	**Sg**	**19 59 23.2**	**+0.4**
TRIZ	**Trizonia**	**0.53**	**298**	*e*PN	**Pg**	**19 59 16.9**	**0.0**
TRIZ				*e*SN	**Sg**	**19 59 24.4**	**+0.6**
TRIZ	**Trizonia**	**0.53**	**298**	*e*Pn	**Pg**	**19 59 16.9**	**0.0**
LAKA	**Lakka**	**0.55**	**283**	*e*PN	**Pg**	**19 59 16.9**	**-0.5**
LAKA				*e*SN	**Sg**	**19 59 24.8**	**+0.1**
LAKA	**Lakka**	**0.55**	**283**	*e*Pn	**Pg**	**19 59 16.9**	**-0.5**
LKR	**Lokris**	**0.60**	**26**	P	**Pg**	**19 59 17.2**	**-1.0**
LKR	**Lokris**	**0.60**	**26**	*e*PN	**Pg**	**19 59 17.0**	**-1.2**
LKR	**Lokris**	**0.60**	**26**	P	**Pg**	**19 59 17.2**	**-1.0**
AXAR	**Agios Charalam**	**0.65**	**360**	P	**Pg**	**19 59 18.3**	**-0.9**
AXAR				S	**Sg**	**19 59 29.1**	**+1.4**
AXAR	**Agios Charalam**	**0.65**	**360**	P	**Pg**	**19 59 18.3**	**-0.9**
AXAR				S	**Sg**	**19 59 29.1**	**+1.4**
EFP	**Efpalio**	**0.67**	**298**	*e*PN	**Pg**	**19 59 19.5**	**-0.1**
EFP	**Efpalio**	**0.67**	**298**	*e*Pn	**Pg**	**19 59 19.5**	**-0.1**
DID	**Didima**	**0.76**	**143**	P	**Pg**	**19 59 21.0**	**-0.3**
DID	**Didima**	**0.76**	**143**	*e*PN	**Pg**	**19 59 20.6**	**-0.7**
DID	**Didima**	**0.76**	**143**	*e*Pn	**Pg**	**19 59 20.6**	**-0.7**
DID	**Didima**	**0.76**	**143**	P	**Pg**	**19 59 21.0**	**-0.3**

IDC 17 20:04:42.2±6.8,19°.37S×176°.71W,h183km±38km, mb3.4/4,mb1 3.6/4,mb1mx3.2/19,mbtmp3.4/4,Error ellipse: s-maj=115.7km s-min=58.1km az=137.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.38**	**243**	P	P	20 11 53.9	-0.2
	0.6nm,0.4s,baz=84,slow=14,SNR=3.6						
ASAR	**Alice Springs**	**45.97**	**255**	P	P	20 12 47.1	-0.2
	0.5nm,0.4s,baz=91,slow=8.4,SNR=21						
ASAR				PcP	PcP	20 14 20.2	-0.8
	0.4nm,1.0s,baz=107,slow=3.9,SNR=4.6						
ASAR				ScP	ScP	20 17 56.5	-0.4
	0.6nm,1.0s,baz=80,slow=2.3,SNR=6.1						
WRA	**Warramunga Arr**	**45.97**	**261**	P	P	20 12 47.4	+0.1
	0.4nm,0.2s,baz=97,slow=7.6,SNR=43						
CMAR	**Chiang Mai Arr**	**90.89**	**289**	P	P	20 17 25.5	-0.1
	0.5nm,0.7s,baz=147,slow=2.2,SNR=3.1						
AKASG	**Malin Array Be**	**142.59**	**333**	PKP	PKPdf	20 23 54.0	+0.8
	1.1nm,0.5s,baz=40,slow=4.1,SNR=6.4						

*ISCJB **17** 20:21:05.7±0.5,25°.32N±0°.05×37°.60E±0°.05,h10km, mb3.9/20,Error ellipse: s-maj=7.6km s-min=5.4km az=145.6*
*CSEM **17** 20:21:05.5±0.3,25°.22N×37°.63E,h2km,mb4.1/4,Error ellipse: s-maj=7.5km s-min=5.6km az=153.0*
*IDC **17** 20:21:06.4±1.2,25°.29N×37°.66E,h0km,mb3.8/14, mb1 3.9/19,mb1mx3.8/33,mbtmp3.8/19,ML3.5/5,MS3.0/1, Ms1 3.0/1,ms1mx2.4/37,Error ellipse: s-maj=25.2km s-min=16.0km az=160.0*
*NEIC **17** 20:21:07.7±0.6,25°.34N×37°.72E,h10km,mb4.0/8,Error ellipse: s-maj=10.0km s-min=8.4km az=200.0*

ISC 17 20:21:07.4±0.7,25°.24N±0°.06×37°.72E±0°.06,h10km,n128, σ1s37/130,mb3.9/20,7C-1D,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMRS	**Mersa Alam**	**2.62**	**266**	P	**Pn**	**20 21 47.1**	**-2.7**
HAGS	**Hagol**	**2.63**	**251**	P	**Pn**	**20 21 47.3**	**-2.6**
HADB		**2.81**	**273**	P	**Pn**	**20 21 49.8**	**-2.5**
HQSR		**3.06**	**280**	P	**Pn**	**20 21 53.0**	**-2.7**
HSFG		**3.66**	**292**	P	**Pn**	**20 22 01.6**	**-2.5**
HEDF	**Idfu**	**4.12**	**269**	P	**Pn**	**20 22 08.3**	**-2.0**
HHRG	**Al Ghardaqah**	**4.22**	**299**	P	**Pn**	**20 22 08.6**	**-3.1**
HDHB	**Dhahab**	**4.43**	**322**	P	**Pn**	**20 22 12.1**	**-2.6**
HKAT	**Jabal Katrina**	**4.66**	**315**	P	**Pn**	**20 22 15.5**	**-2.5**
AAHD	**Abu Hadid**	**4.77**	**253**	P	**Pn**	**20 22 17.6**	**-1.7**
EIL	**Elat**	**5.05**	**331**	Pn	**Pn**	**20 22 21.4**	**-1.8**
EIL				Pg	**Pb**	**20 22 37.1**	**+1.3**
EIL				Lg	Lg	20 23 40.4	
EIL	**Elat**	**5.05**	**331**	Pn	**Pn**	**20 22 21.4**	**-1.8**
	0.7nm,0.3s,baz=133,slow=8.6,SNR=15						
EIL				Pg	**Pb**	**20 22 37.1**	**+1.3**
	5.0nm,0.3s,baz=136,slow=8.3,SNR=19						
EIL				Lg	Lg	20 23 40.4	
	22nm,0.3s,baz=108,slow=7.6,SNR=5.6						
EIL	**Elat**	**5.05**	**331**	Pn	**Pn**	**20 22 21.4**	**-1.8**
EIL	**Elat**	**5.05**	**331**	Pg	**Pb**	**20 22 37.1**	**+1.3**
MBRI	**Mt Berech**	**5.17**	**332**	Pn	**Pn**	**20 22 23.0**	**-1.9**
HRFI	**Mount Harif**	**5.33**	**334**	P	**Pn**	**20 22 24.1**	**-3.0**
HRFI	**Mount Harif**	**5.33**	**334**	P	**Pn**	**20 22 24.1**	**-3.0**
HRFI	**Mount Harif**	**5.33**	**334**	Pn	**Pn**	**20 22 26.2**	**-0.9**
GRB	**Gharib**	**5.34**	**305**	P	**Pn**	**20 22 24.6**	**-2.6**
KRMI	**Paran Flat**	**5.53**	**332**	Pn	**Pn**	**20 22 28.5**	**-1.4**
PRNI	**Paran**	**5.63**	**335**	Pn	**Pn**	**20 22 30.0**	**-1.1**
HNKL	**Nakhl**	**5.73**	**325**	P	**Pn**	**20 22 30.2**	**-2.3**
ZFRI	**Zfri**	**5.75**	**338**	Pn	**Pn**	**20 22 32.0**	**-0.7**
KZIT	**Kziot**	**6.36**	**333**	P	**Pn**	**20 22 40.0**	**-1.2**
KZIT	**Kziot**	**6.36**	**333**	P	**Pn**	**20 22 40.0**	**-1.2**
KZIT	**Kziot**	**6.36**	**333**	Pn	**Pn**	**20 22 40.3**	**-0.9**
RTMI	**Retamim**	**6.38**	**336**	Pn	**Pn**	**20 22 40.4**	**-1.0**
GTR	**Jabal at Tayr**	**6.48**	**274**	P	**Pn**	**20 22 41.5**	**-1.4**
DSI	**Dead Sea**	**6.63**	**342**	Pn	**Pn**	**20 22 43.8**	**-1.1**
ASF	**Jabal al Asfar**	**6.94**	**354**	Pn	**Pn**	**20 22 47.9**	**-1.3**
ASF				Pg	Pb	20 23 13.3	+5.2
ASF				Lg	Lg	20 24 40.3	
ASF	**Jabal al Asfar**	**6.94**	**354**	Pn	**Pn**	**20 22 47.9**	**-1.3**
	1.3nm,0.3s,baz=23,slow=7.0,SNR=7.9						
ASF				Pg	Pb	20 23 13.3	+5.2
	3.0nm,0.3s,baz=39,slow=11,SNR=10						
ASF				Lg	Lg	20 24 40.3	
	6.8nm,0.3s,baz=70,slow=21,SNR=12						
HMDT	**Nahal Hemdat**	**7.25**	**345**	Pn	**Pn**	**20 22 52.8**	**-0.5**
RAYN	**Ar Rayn**	**7.30**	**102**	P	**Pn**	**20 22 53.6**	**-0.5**
RAYN	**Ar Rayn**	**7.30**	**102**	P	**Pn**	**20 22 53.6**	**-0.5**
SLTI	**Sal'it**	**7.36**	**342**	Pn	**Pn**	**20 22 54.5**	**-0.4**
MMLI	**Mount Malkishu**	**7.45**	**345**	Pn	**Pn**	**20 22 56.0**	**-0.1**
OFRI	**'Ofer**	**7.73**	**343**	Pn	**Pn**	**20 22 59.4**	**-0.6**
MMAI	**Mount Meron Ar**	**8.01**	**346**	Pn	**Pn**	**20 23 02.2**	**-1.6**
MMAI				Lg	Lg	20 25 15.5	
	3.6nm,0.3s,baz=154,slow=16,SNR=25						
MMAI				Lg	Lg	20 25 15.5	
	4.3nm,0.3s,baz=162,slow=34,SNR=3.2						
MMAI	**Mount Meron Ar**	**8.01**	**346**	Pn	**Pn**	**20 23 02.2**	**-1.6**
MMA1	**Mount Meron ar**	**8.01**	**346**	Pn	**Pn**	**20 23 02.8**	**-1.0**
KSDI	**Kefar Szold**	**8.12**	**348**	Pn	**Pn**	**20 23 04.7**	**-0.7**
HWQ	**Hawqa**	**9.13**	**351**	*e*P	**Pn**	**20 23 20.0**	**+0.6**
HWQ	**Hawqa**	**9.13**	**351**	*e*P	**Pn**	**20 23 20.0**	**+0.6**
NAY	**Al-Naaiem**	**9.37**	**63**	*e*P	**Pn**	**20 23 20.2**	**-2.2**
NAY				AML	AML	20 25 48.5	
	comp=Z,17nm,0.5s						
RDF	**Al-Radifah**	**9.50**	**65**	*e*P	**Pn**	**20 23 22.1**	**-2.1**
RDF				AML	AML	20 25 57.8	
	comp=Z,32nm,0.5s						
QRN	**Al-Qurain**	**9.74**	**67**	*e*P	**Pn**	**20 23 26.1**	**-1.4**
BR131	**Keskin Array S**	**14.84**	**348**	*e*Pn	**Pn**	**20 24 37.7**	**+0.3**
BR131	**Keskin Array S**	**14.84**	**348**	*e*Pn	**Pn**	**20 24 37.7**	**+0.3**
BRTR	**Keskin Array B**	**14.84**	**348**	Pn	**Pn**	**20 24 38.1**	**+0.7**
BRTR	**Keskin Array B**	**14.84**	**348**	Pn	**Pn**	**20 24 38.1**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=179,slow=12,SNR=3.6						
BRTR	**Keskin Array B**	**14.84**	**348**	Pn	**Pn**	**20 24 38.2**	**+0.7**
ANTO	**Ankara**	**15.16**	**345**	*e*Pn	**Pn**	**20 24 40.7**	**-0.9**
	comp=Z,10nm,1.1s						
ANTO	**Ankara**	**15.16**	**345**	*e*Pn	**Pn**	**20 24 40.7**	**-0.9**
	comp=Z,10nm,1.1s						
GNI	**Garni**	**15.99**	**20**	*e*Pn	**Pn**	**20 24 50.5**	**-2.0**
	comp=Z,6.8nm,0.9s						
GNI	**Garni**	**15.99**	**20**	Pn	**P**	**20 25 00.5**	**+4.4**
	comp=Z,0.1nm,0.3s,baz=255,slow=6.7,SNR=6.3						
GNI				LR	LR	20 30 14.1	
	comp=Z,50nm,19.2s,baz=117,slow=34						
GNI	**Garni**	**15.99**	**20**	*e*Pn	**Pn**	**20 24 50.5**	**-2.0**
	comp=Z,6.8nm,0.9s						
KBZ	**Khabaz**	**18.92**	**12**	P	**Pn**	**20 25 28.9**	**+0.1**
KBZ	**Khabaz**	**18.92**	**12**	P	**Pn**	**20 25 28.9**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=145,slow=4.1,SNR=3.7						
KBZ	**Khabaz**	**18.92**	**12**	P	**Pn**	**20 25 29.0**	**+0.1**
TIRR	**Tirgusor**	**20.61**	**341**	*e*P	**P**	**20 25 46.4**	**-0.2**
	comp=Z,7.1nm,1.2s						
TIRR	**Tirgusor**	**20.61**	**341**	⇑*i*P	**P**	**20 25 47.3**	**+0.7**
TIRR	**Tirgusor**	**20.61**	**341**	*e*P	**P**	**20 25 46.4**	**-0.2**
	comp=Z,7.1nm,1.2s						
CFR	**Carcaliu**	**21.35**	**341**	⇑*i*P	**P**	**20 25 54.9**	**+0.3**
CFR	**Carcaliu**	**21.35**	**341**	⇑*i*P	**P**	**20 25 54.9**	**+0.3**
MLR	**Muntele Rosu**	**22.32**	**338**	P	**P**	**20 26 08.8**	**+1.6**
MLR	**Muntele Rosu**	**22.32**	**338**	‖*i*P	**P**	**20 26 07.2**	**+1.9**
MLR	**Muntele Rosu**	**22.32**	**338**	P	**P**	**20 26 08.8**	**+1.6**
	comp=Z,0.6nm,1.0s,baz=202,slow=9.4						
MLR	**Muntele Rosu**	**22.32**	**338**	P	**P**	**20 26 08.8**	**+1.6**
ARR	**Arges**	**22.69**	**336**	⇑*i*P	**P**	**20 26 09.7**	**+0.6**
ARR	**Arges**	**22.69**	**336**	⇑*i*P	**P**	**20 26 09.7**	**+0.6**
BUR08	**Bucovina Ar. S**	**24.46**	**339**	*e*P	**P**	**20 26 25.8**	**-0.7**
BUR08	**Bucovina Ar. S**	**24.46**	**339**	*e*P	**P**	**20 26 25.8**	**-0.7**
DRGR		**24.61**	**335**	⇑*i*P	**P**	**20 26 28.9**	**+1.0**
DRGR		**24.61**	**335**	⇑*i*P	**P**	**20 26 28.9**	**+1.0**
AK02	**Malin Array Si**	**26.21**	**348**	*e*P	**P**	**20 26 40.5**	**-1.7**
AK02	**Malin Array Si**	**26.21**	**348**	*e*P	**P**	**20 26 40.5**	**-1.7**
AK01	**Malin Array Si**	**26.24**	**348**	*e*P	**P**	**20 26 41.2**	**-1.2**
AK01	**Malin Array Si**	**26.24**	**348**	*e*P	**P**	**20 26 41.2**	**-1.2**
KIEV	**Kiev**	**26.25**	**348**	*e*P	**P**	**20 26 41.5**	**-1.0**
	comp=Z,4.3nm,1.0s						
KIEV	**Kiev**	**26.25**	**348**	*e*P	**P**	**20 26 41.5**	**-1.0**
	comp=Z,4.3nm,1.0s						
AKASG	**Malin Array Be**	**26.25**	**348**	P	**P**	**20 26 42.1**	**-0.4**
AKASG	**Malin Array Be**	**26.25**	**348**	P	**P**	**20 26 42.1**	**-0.4**
	comp=Z,1.6

KNRA	**Kununurra**	**15.24**	**195**	P	**Pn**	**20 45 37.9**	**+0.8**
	baz=15,SNR=22						
KNRA				S	**Sn**	**20 48 23.9**	**-1.1**
	baz=15,SNR=4.6						
FITZ	**Fitzroy Crossi**	**18.50**	**202**	P	**Pn**	**20 46 19.6**	**+1.5**
	0.2nm,0.3s,baz=34,slow=12,SNR=6.5						
FITZ				S	**Sn**	**20 49 39.0**	**-4.9**
	0.2nm,0.3s,baz=43,slow=19,SNR=3.3						
FITZ	**Fitzroy Crossi**	**18.50**	**202**	P	**Pn**	**20 46 20.0**	**+1.9**
	baz=18,SNR=7.0						
WRA	**Warramunga Arr**	**19.05**	**175**	P	**Pn**	**20 46 25.7**	**+0.9**
	0.4nm,0.3s,baz=355,slow=11,SNR=34						
WRA				S	**Sn**	**20 49 51.3**	**-6.0**
	0.2nm,0.3s,baz=359,slow=23,SNR=5.3						
ASAR	**Alice Springs**	**22.72**	**177**	P	**P**	**20 47 05.0**	**+1.5**
	1.7nm,0.4s,baz=4.9,slow=8.1,SNR=41						
ASAR				S	**S**	**20 51 09.8**	**-0.1**
	0.2nm,0.8s,baz=4.6,slow=24,SNR=2.7						
CTA	**Charters Tower**	**23.28**	**146**	P	**P**	**20 47 10.4**	**+1.1**
	4.1nm,0.8s,baz=340,slow=9.2,SNR=2.8						
STKA	**Stephens Creek**	**32.00**	**166**	P	**P**	**20 48 27.9**	**+0.4**
	1.5nm,0.3s,baz=342,slow=8.1,SNR=15						
STKA	**Stephens Creek**	**32.00**	**166**	P	**P**	**20 48 28.1**	**+0.6**
	baz=32,SNR=13						
DZM	**Mont Dzumac**	**39.05**	**125**	LR	LR	21 05 18.2	
	comp=Z,197nm,19.4s,baz=159,slow=36						
MKAR	**Makanchi Array**	**64.70**	**324**	P	**P**	**20 52 36.9**	**-2.2**
	0.3nm,0.5s,baz=109,slow=8.3,SNR=5.6						
ZALV	**Zalesovo Beam**	**67.37**	**332**	P	**P**	**20 52 53.8**	**-2.3**
	0.2nm,0.3s,baz=116,slow=6.6,SNR=2.4						

*ISCJB **17** 20:53:14.4±0.3,23°.12N±0°.01×121°.48E±0°.02,h30km±2km, Error ellipse: s-maj=3.3km s-min=2.3km az=25.2*
*TAP **17** 20:53:14.8,23°.13N×121°.39E,h38km,ML3.0,C*
*JMA **17** 20:53:15.9±0.3,23°.07N×121°.55E,h74km*
ISC 17 20:53:14.9±1.0,**23°.11N**±0°.02×**121°.45E**±0°.02,**h33**km±3km, **n52**,σ**0s96**/99,**2C-2D**,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.08**	**260**	P	**Pb**	**20 53 21.3**	**+0.8**
	baz=210						
CHKT				*e*S	**Sb**	**20 53 25.6**	**+1.2**
	baz=210						
TWF1	**Yuli**	**0.28**	**330**	⇑*i*P	**Pb**	**20 53 22.1**	**-0.2**
	baz=328						
TWF1				*e*S	**Sn**	**20 53 26.9**	**-0.2**
	baz=328						
ELDTW	**Lidau**	**0.40**	**281**	P	**Pb**	**20 53 23.5**	**-0.6**
	baz=280						
ELDTW				*e*S	**Sb**	**20 53 28.9**	**-1.5**
	baz=280						
EHY	**Hungye**	**0.41**	**344**	P	**Pb**	**20 53 23.5**	**-0.7**
	baz=341						
EHY				S	**Sb**	**20 53 29.2**	**-1.3**
	baz=341						
TTN	**Taitung**	**0.45**	**218**	*e*P	**Pb**	**20 53 24.8**	**+0.1**
	baz=211						
TTN				S	**Sn**	**20 53 32.9**	**+0.9**
	baz=211						
TWG	**Pinlang**	**0.45**	**230**	⇓*i*P	**Pb**	**20 53 23.9**	**-0.8**
	baz=224						
TWG				*i* S	**Sb**	**20 53 30.2**	**-1.3**
	baz=224						
ECL	**Taimali**	**0.69**	**222**	*e*P	**Pn**	**20 53 26.8**	**-1.4**
	baz=217						
ECL				*e*S	**Sn**	**20 53 35.1**	**-2.6**
	baz=217						
ESL	**Shilin**	**0.70**	**359**	*e*P	**Pn**	**20 53 26.9**	**-1.5**
	baz=3.0						
ESL				*e*S	**Sn**	**20 53 35.6**	**-2.5**
	baz=3.0						
ALS	**Alishan**	**0.71**	**304**	P	**Pn**	**20 53 29.0**	**+0.1**
	baz=310						
ALS				S	**Sn**	**20 53 38.4**	**-0.4**
	baz=310						
WTP	**Ta-pu**	**0.78**	**280**	⇑*i*P	**Pn**	**20 53 29.9**	**+0.3**
	baz=279						
WTP				S	**Sb**	**20 53 41.0**	**+0.6**
	baz=279						
CHN4	**Tsaushan**	**0.82**	**287**	P	**Pn**	**20 53 30.7**	**+0.6**
	baz=287						
CHN4				S	**Sb**	**20 53 42.0**	**+0.4**
	baz=287						
SSD	**Sandimen**	**0.83**	**244**	*e*P	**Pb**	**20 53 31.3**	**+0.4**
	baz=242						
SSD				*e*S	**Sn**	**20 53 41.4**	**-0.1**
	baz=242						
CHN1	**Nanshi**	**0.85**	**275**	P	**Pb**	**20 53 31.2**	**0.0**
	baz=281						
CHN1				S	**Sn**	**20 53 42.4**	**+0.6**
	baz=281						
CHN5	**Tsauling**	**0.85**	**305**	*e*P	**Pb**	**20 53 31.5**	**+0.1**
	baz=305						
CHN5				*e*S	**Sb**	**20 53 43.0**	**+0.4**
	baz=305						
TWK	**Hsinying**	**0.90**	**280**	P	**Pn**	**20 53 31.6**	**+0.4**
	baz=280						
TWK				S	**Sn**	**20 53 43.7**	**+0.7**
	baz=280						
TAW	**Tawu**	**0.91**	**214**	*e*P	**Pn**	**20 53 30.1**	**-1.2**
	baz=205						
TAW				*e*S	**Sn**	**20 53 41.2**	**-2.0**
	baz=205						
EAST	**Anshuo**	**0.91**	**217**	*e*P	**Pn**	**20 53 30.4**	**-1.0**
	baz=209						
SMLT	**Sun Moon Lake**	**0.92**	**327**	⇓*i*P	**Pn**	**20 53 31.9**	**+0.3**
	baz=334						
SMLT				S	**Sn**	**20 53 43.2**	**-0.4**
	baz=334						
TYC	**Yuchr**	**0.96**	**326**	*e*P	**Pn**	**20 53 32.5**	**+0.5**
	baz=334						
TYC				*e*S	**Sn**	**20 53 44.7**	**+0.3**
	baz=334						
SGLT	**Jiouru**	**0.96**	**247**	*e*P	**Pb**	**20 53 33.0**	**-0.1**
	baz=235						
SGLT				*e*S	**Sb**	**20 53 47.0**	**+1.5**
	baz=235						
TWD	**Chiawan**	**0.97**	**8**	*e*P	**Pn**	**20 53 31.5**	**-0.8**
TWD				*e*S	**Sn**	**20 53 42.6**	**-2.3**
TWM1	**Shoushan**	**0.99**	**253**	*e*P	**Pb**	**20 53 34.1**	**+0.6**
	baz=261						
TWM1				*e*S	**Sb**	**20 53 48.1**	**+1.9**
	baz=261						
WGK	**Gukeng**	**0.99**	**305**	*e*P	**Pn**	**20 53 33.3**	**+0.8**
	baz=307						
WGK				*e*S	**Sb**	**20 53 46.8**	**+0.4**
	baz=307						
CHN3	**Shinhua**	**1.00**	**268**	*e*P	**Pn**	**20 53 33.0**	**+0.5**
	baz=267						
CHN3				*e*S	**Sb**	**20 53 47.7**	**+1.3**
	baz=267						
CHY	**Chiayi**	**1.01**	**292**	*e*P	**Pn**	**20 53 33.7**	**+0.9**
	baz=293						
CHY				*e*S	**Sn**	**20 53 46.8**	**+0.9**
	baz=293						
WNT	**Mingjian**	**1.03**	**318**	*e*P	**Pn**	**20 53 33.5**	**+0.5**
	baz=319						
WNT				*e*S	**Sn**	**20 53 47.6**	**+1.1**
	baz=319						
WHF	**Hehuan Shan**	**1.04**	**351**	*e*P	**Pn**	**20 53 32.9**	**-0.7**
	baz=360						
WHF				*e*S	**Sn**	**20 53 45.7**	**-1.5**
	baz=360						
SCZT	**Fangliau**	**1.06**	**226**	*e*P	**Pb**	**20 53 34.2**	**-0.6**
	baz=215						
SCZT				*e*S	**Sn**	**20 53 47.7**	**+0.7**
	baz=215						
LAY	**Lan-yu**	**1.07**	**175**	*e*P	**Pn**	**20 53 33.1**	**-0.5**
	baz=165						
LAY				*e*S	**Sb**	**20 53 47.7**	**-1.0**
	baz=165						
TWT	**Tachien**	**1.16**	**348**	*e*P	**Pn**	**20 53 35.0**	**0.0**
	baz=355						
TWT				*e*S	**Sn**	**20 53 49.2**	**-0.7**
	baz=355						
TCU	**Taichung**	**1.25**	**326**	*e*P	**Pn**	**20 53 35.8**	**-0.3**
	baz=328						
HEN	**Hengchun**	**1.28**	**211**	*e*P	**Pb**	**20 53 37.6**	**-0.9**
	baz=198						
HEN				*e*S	**Sn**	**20 53 52.7**	**+0.2**
	baz=198						
TWK1	**Hengchun**	**1.31**	**207**	*e*P	**Pb**	**20 53 37.8**	**-1.0**
	baz=195						
TWK1				*e*S	**Sn**	**20 53 52.6**	**-0.5**
	baz=195						
WTCT	**Ta-ch'eng**	**1.31**	**305**	*e*P	**Pn**	**20 53 36.1**	**-0.7**
	baz=306						
WTCT				*e*S	**Sn**	**20 53 53.5**	**+0.4**
	baz=306						
TSEB	**Hengchuen, Pin**	**1.31**	**203**	*e*P	**Pn**	**20 53 37.6**	**+0.8**
	baz=193						
TSEB				*e*S	**Sn**	**20 53 53.6**	**+0.5**
	baz=193						
NNS	**Nan Shan**	**1.32**	**357**	*e*P	**Pn**	**20 53 37.2**	**0.0**
	baz=7.0						
NNS				*e*S	**Sn**	**20 53 52.9**	**-0.8**
	baz=7.0						
ENA	**Nanau**	**1.34**	**12**	*e*P	**Pn**	**20 53 35.4**	**-1.9**
	baz=3.0						
TWQ1	**Liyutan**	**1.38**	**333**	*e*P	**Pn**	**20 53 38.6**	**+0.8**
	baz=336						
TWQ1				*e*S	**Sn**	**20 53 56.5**	**+1.6**
	baz=336						
NSY	**Sanyi**	**1.44**	**334**	*e*P	**Pb**	**20 53 40.4**	**-0.8**
	baz=336						
NSY				*e*S	**Sb**	**20 53 58.5**	**-0.7**
	baz=336						
ENTT	**Nioudou**	**1.52**	**4**	P	**Pn**	**20 53 39.4**	**-0.4**
	baz=12						
ENTT				*e*S	**Sn**	**20 53 57.5**	**-1.1**
	baz=12						
TWC	**Suao**	**1.54**	**14**	*e*P	**Pn**	**20 53 40.1**	**+0.2**
	baz=4.0						
TWC				*e*S	**Sn**	**20 53 58.4**	**-0.4**
	baz=4.0						
NSK	**Sanguang**	**1.56**	**357**	*e*P	**Pn**	**20 53 40.5**	**+0.2**
	baz=8.0						
NSK				*e*S	**Sn**	**20 53 58.8**	**-0.7**
	baz=8.0						
NSTT	**Nanjuang**	**1.57**	**345**	*e*P	**Pn**	**20 53 40.6**	**+0.2**
	baz=347						
NSTT				*e*S	**Sn**	**20 54 00.1**	**+0.5**
	baz=347						
TWE	**Neicheng**	**1.61**	**7**	*e*P	**Pn**	**20 53 40.7**	**-0.4**
	baz=7.0						
TWE				*e*S	**Sn**	**20 54 00.2**	**-0.5**
	baz=7.0						
WDGT	**Dungji**	**1.65**	**275**	*e*P	**Pn**	**20 53 41.2**	**-0.4**
	baz=274						
PNG	**Penghu**	**1.80**	**285**	*e*P	**Pn**	**20 53 43.2**	**-0.3**
	baz=284						
YOJ	**Yonaguni jima**	**1.96**	**47**	P	**Pn**	**20 53 47.2**	**+1.3**
YOJ				*e*S	**Sn**	**20 54 10.6**	**+1.2**
HATJ	**Hateruma jima**	**2.36**	**66**	P	**Pn**	**20 53 52.1**	**+0.8**
HATJ				*e*S	**Sn**	**20 54 19.6**	**+0.5**
IRIF	**Iriomote-Funau**	**2.42**	**59**	P	**Pn**	**20 53 53.5**	**+1.4**
IRIF				*e*S	**Sn**	**20 54 21.6**	**+1.0**
JKRS	**Kuro-shima**	**2.60**	**64**	P	**Pn**	**20 53 55.9**	**+1.3**
JKRS				S	**Sn**	**20 54 26.1**	**+1.0**
JIJ	**Ishigaki jima**	**2.77**	**63**	P	**Pn**	**20 53 57.6**	**+0.7**
JIJ				S	**Sn**	**20 54 29.1**	**-0.1**
JTJ	**Tarama**	**3.35**	**62**	P	**Pn**	**20 54 06.1**	**+1.2**
JTJ				*e*S	**Sn**	**20 54 44.3**	**+0.8**

IDC 17 21:05:55.5±2.8,**15°.58S**×**173°.32W**,**h0**km,**mb3.6**/4, **mb1 3.9**/5,**mb1mx3.6**/22,**mbtmp3.6**/5,**ML1.5/1**,**Error ellipse: s-maj=172.2km s-min=19.5km az=145.0**,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.23**	**42**	Pn	Pn	21 06 34.4	+0.5
	7.1nm,0.3s,baz=154,slow=2.3,SNR=8.3						
AFI				Sn	Sn	21 07 01.6	-0.6
	15nm,0.3s,baz=356,slow=14,SNR=5.8						
WRA	**Warramunga Arr**	**49.88**	**257**	P	P	21 14 51.1	-0.1
	0.2nm,0.6s,baz=94,slow=7.7,SNR=3.0						
ASAR	**Alice Springs**	**50.13**	**252**	P	P	21 14 52.9	-0.2
	1.0nm,0.6s,baz=89,slow=8.7,SNR=18						
NVAR	**Mina Array Bea**	**74.41**	**42**	P	P	21 17 36.0	+0.2
	0.4nm,0.7s,baz=240,slow=8.9,SNR=3.9						
PDAR	**Pinedale Array**	**82.35**	**42**	P	P	21 18 19.6	-0.1
	0.4nm,0.8s,baz=228,slow=3.8,SNR=3.5						

WEL 17 21:06:38.0±0.3,**37°.77S**×**176°.81E**,**h163**km±2km,**ML4.1**/19, **24C-5D**,**Error ellipse: s-maj=1.9km s-min=1.8km az=90.0**,**North Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPRZ	**Ohinepanea**	**0.21**	**250**	PN	Pn	21 06 59.4	-0.5
OPRZ				SN	Sn	21 07 16.4	-0.1
OMRZ	**Omania**	**0.48**	**226**	⇑PN	Pn	21 07 18.6	+0.1
KARZ	**Kaharoa**	**0.51**	**241**	⇑PN	Pn	21 07 00.9	0.0
KARZ				SN	Sn	21 07 18.9	+0.4
TARZ	**Mount Tarawera**	**0.52**	**207**	⇑PN	Pn	21 07 01.3	+0.3
URZ	**Urewera**	**0.54**	**154**	PN	Pn	21 07 00.1	-0.9
RRRZ	**Republican Roa**	**0.61**	**202**	⇑PN	Pn	21 07 01.4	0.0
RRRZ				SN	Sn	21 07 18.9	-0.6
HRRZ	**Handcock Road**	**0.74**	**214**	PN	Pn	21 07 02.3	+0.1
PRRZ	**Plateau Road**	**0.80**	**204**	⇓PN	Pn	21 07 02.6	+0.1
PRRZ				SN	Sn	21 07 20.8	-0.6
MWZ	**Matawai**	**0.80**	**135**	⇑PN	Pn	21 07 02.2	-0.3
TOZ	**Tahuroa Road**	**1.03**	**272**	PN	Pn	21 07 04.6	+0.3
TOZ				SN	Sn	21 07 24.9	+0.6
RAHZ	**Arahi**	**1.17**	**169**	⇑PN	Pn	21 07 05.9	+0.5
PUZ	**Puketiti**	**1.19**	**105**	⇑PN	Pn	21 07 05.3	-0.3
MXZ	**Matakaoa Point**	**1.21**	**81**	⇑PN	Pn	21 07 05.6	-0.2
HATZ	**Hinemaiaia**	**1.25**	**206**	PN	Pn	21 07 06.0	-0.2
CNGZ	**Carnagh Statio**	**1.31**	**123**	⇑PN	Pn	21 07 07.4	+0.7
NMHZ	**Naumai**	**1.32**	**180**	PN	Pn	21 07 07.4	+0.5
NMHZ				SN	Sn	21 07 29.6	+0.3
KUZ	**Kuaotunu**	**1.34**	**319**	⇓PN	Pn	21 07 06.8	-0.2
KUZ				SN	Sn	21 07 28.9	-0.3
RATZ	**Rangitukua**	**1.36**	**216**	⇑PN	Pn	21 07 07.3	0.0
BKZ	**Black Stump Fm**	**1.42**	**190**	⇑PN	Pn	21 07 07.4	-0.4
BKZ				SN	Sn	21 07 29.4	-1.4
RITZ	**Rihia Road**	**1.42**	**211**	PN	Pn	21 07 08.0	+0.3
KNZ	**Kokohu**	**1.42**	**152**	⇓PN	Pn	21 07 07.9	+0.2
PRGZ	**Paritu Road**	**1.43**	**144**	PN	Pn	21 07 08.0	+0.1
MKAZ	**Moumakai**	**1.46**	**296**	⇓PN	Pn	21 07 08.5	+0.3
KATZ	**Kakaramea**	**1.49**	**216**	PN	Pn	21 07 08.5	-0.1
MHGZ	**Mahia Peninsul**	**1.63**	**148**	⇑PN	Pn	21 07 10.2	+0.3
MCHZ	**McNeill Hill**	**1.67**	**183**	⇑PN	Pn	21 07 10.7	+0.3
MCHZ				SN	Sn	21 07 35.3	-0.1
TWVZ	**Taurewa**	**1.69**	**219**	PN	Pn	21 07 10.1	-0.5
WPVZ	**Whakapapa**	**1.74**	**214**	PN	Pn	21 07 10.8	-0.4
FWVZ	**Far West T-bar**	**1.78**	**213**	PN	Pn	21 07 11.2	-0.5
DRZ	**Dome Shelter**	**1.79**	**213**	PN	Pn	21 07 11.8	-0.2
BHHZ	**Black Hill Sta**	**1.81**	**199**	⇑PN	Pn	21 07 11.3	-0.6
BHHZ				SN	Sn	21 07 36.2	-1.9
TRVZ	**Turoa**	**1.82**	**212**	PN	Pn	21 07 11.9	-0.2
WNVZ	**Wahianoa**	**1.82**	**211**	⇑PN	Pn	21 07 11.8	-0.3
WNVZ				SN	Sn	21 07 37.9	-0.7
MOVZ	**Moawhango**	**1.83**	**206**	⇑PN	Pn	21 07 11.3	-0.8
CKHZ	**Cape Kidnapper**	**1.90**	**174**	⇑PN	Pn	21 07 12.8	+0.1
CKHZ				SN	Sn	21 07 38.9	-0.8
MTVZ	**Mangateitei**	**1.92**	**213**	PN	Pn	21 07 12.9	-0.2
KAHZ	**Kahuranaki**	**2.02**	**178**	⇑PN	Pn	21 07 14.2	0.0
VRZ	**Vera Road**	**2.10**	**229**	PN	Pn	21 07 15.1	+0.1
PNHZ	**Pukenui**	**2.19**	**192**	⇑PN	Pn	21 07 15.2	-1.0
PNHZ				SN	Sn	21 07 43.7	-2.0
PXZ	**Pawanui**	**2.26**	**179**	⇑PN	Pn	21 07 16.2	-0.6
WPHZ	**Waipukurau**	**2.31**	**187**	⇑PN	Pn	21 07 16.6	-0.9
TSZ	**Takapari Road**	**2.38**	**196**	PN	Pn	21 07 17.1	-1.2
WAZ	**Wanganui**	**2.44**	**215**	⇓PN	Pn	21 07 18.6	-0.4
PRHZ	**Porangahau**	**2.50**	**183**	⇑PN	Pn	21 07 18.8	-0.9
PRHZ				SN	Sn	21 07 50.0	-2.1
DVHZ	**Dannevirke**	**2.57**	**191**	PN	Pn	21 07 19.1	-1.5
POWZ	**Post Office Ro**	**2.74**	**197**	PN	Pn	21 07 21.2	-1.4
MRZ	**Mangatainoka R**	**3.04**	**198**	⇑PN	Pn	21 07 24.4	-1.9
TIWZ	**Tintock**	**3.08**	**193**	PN	Pn	21 07 25.3	-1.6
TIWZ				SN	Sn	21 08 01.6	-3.5
OGWZ	**Otaki Gorge**	**3.30**	**202**	PN	Pn	21 07 27.4	-2.1
OGWZ				SN	Sn	21 08 06.0	-3.7
TMWZ	**Te Maipa**	**3.41**	**192**	PN	Pn	21 07 29.0	-2.0
KIW	**Kapiti Island**	**3.42**	**205**	PN	Pn	21 07 28.8	-2.3
MTW	**Mount Morrison**	**3.53**	**196**	PN	Pn	21 07 29.7	-2.8
CAW	**Cannon Point**	**3.59**	**201**	PN	Pn	21 07 30.7	-2.6
CAW				SN	Sn	21 08 11.9	-4.5
TRWZ	**Traveller**	**3.72**	**193**	PN	Pn	21 07 32.4	-2.6
PAWZ	**Paruwai Farm**	**3.76**	**196**	PN	Pn	21 07 32.6	-2.9
DUWZ	**D'Urville Isla**	**3.77**	**216**	PN	Pn	21 07 32.9	-2.7
MSWZ	**Moikau Station**	**3.83**	**198**	PN	Pn	21 07 33.5	-2.9
BHW	**Baring Head**	**3.93**	**202**	PN	Pn	21 07 34.5	-3.0
TCW	**Tory Channel**	**3.96**	**209**	PN	Pn	21 07 34.8	-3.1
TCW				SN	Sn	21 08 19.7	-5.0
PLWZ	**Palliser**	**3.98**	**197**	PN	Pn	21 07 35.0	-3.3
TUWZ	**Tuamarina**	**4.27**	**210**	⇑PN	Pn	21 07 38.7	-3.3
TUWZ				SN	Sn	21 08 26.5	-5.5
NNZ	**Nelson**	**4.34**	**217**	PN	Pn	21 07 40.0	-3.0
QRZ	**Quartz Range**	**4.51**	**226**	PN	Pn	21 07 41.7	-3.4
BSWZ	**Blackbirch Sta**	**4.54**	**209**	PN	Pn	21 07 42.2	-3.4
THZ	**Tophouse**	**4.99**	**216**	PN	Pn	21 07 48.4	-3.2
KHZ	**Kahutara**	**5.27**	**207**	PN	Pn	21 07 51.6	-3.5

*CSEM **17** 21:13:22.8±0.1,38°.89N×26°.91E,h8km,MD2.9,Error ellipse: s-maj=2.2km s-min=1.9km az=47.0*
*ISK **17** 21:13:22.1,38°.89N×26°.88E,h11km,MD3.0*
*ISCJB **17** 21:13:22.6±0.4,38°.89N±0°.02×26°.89E±0°.02,h11km±3km, Error ellipse: s-maj=3.4km s-min=2.9km az=137.9*
*DDA **17** 21:13:22.5,38°.90N×26°.91E,h7km,MD2.9*
*THE **17** 21:13:23.2,38°.86N×26°.86E,h2km±25km,ML2.3/3,Error ellipse: s-maj=26.7km s-min=1.0km az=88.0*
*ATH **17** 21:13:24.2,38°.91N×26°.75E,h24km±2km,MD3.4/4*
ISC 17 21:13:22.0±1.3,**38°.89N**±0°.02×**26°.89E**±0°.02,**h8**km±11km, **n79**,σ**0s58**/109,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.45**	**339**	*i* P	**Pb**	**21 13 31.9**	**-0.3**
AYVA				*i* S	**Sb**	**21 13 38.1**	**-0.9**
AYVA	**Ayvalik**	**0.45**	**339**	*i* P	**Pb**	**21 13 31.9**	**-0.3**
AYVA				*i* S	**Sb**	**21 13 38.1**	**-0.9**
BLCB	**Balcova**	**0.52**	**167**	PG	**Pb**	**21 13 32.9**	**-0.5**
BLCB				SG	**Sb**	**21 13 40.0**	**-1.1**
BLCB	**Balcova**	**0.52**	**167**	*i* Pg	**Pb**	**21 13 32.9**	**-0.5**
BLCB				*i* Sg	**Sb**	**21 13 40.0**	**-1.1**
IZM	**Izmir**	**0.57**	**149**	PG	**Pb**	**21 13 34.1**	**-0.2**
IZM	**Izmir**	**0.57**	**149**	*i* Pg	**Pb**	**21 13 34.1**	**-0.2**
URLA	**Izmir**	**0.58**	**204**	*i* P	**Pb**	**21 13 34.1**	**-0.3**
URLA				*i* S	**Sb**	**21 13 43.7**	**+0.9**
URLA	**Izmir**	**0.58**	**204**	*i* P	**Pb**	**21 13 34.1**	**-0.3**
URLA				*i* S	**Sb**	**21 13 43.7**	**+0.9**
PRK	**Paraskevi**	**0.60**	**306**	P	**Pb**	**21 13 34.8**	**0.0**
PRK				S	**Sb**	**21 13 43.8**	**+0.4**
PRK	**Paraskevi**	**0.60**	**306**	*e*PN	**Pb**	**21 13 34.6**	**-0.2**
PRK				*e*SN	**Sg**	**21 13 41.9**	**+0.5**
PRK	**Paraskevi**	**0.60**	**306**	P	**Pb**	**21 13 34.8**	**0.0**
PRK				*e*Sb	**Sg**	**21 13 41.9**	**+0.5**
PRK				S	**Sb**	**21 13 43.8**	**+0.4**
AKHS	**Akhisar**	**0.72**	**91**	*i* P	**Pb**	**21 13 36.9**	**0.0**
AKHS				*i* S	**Sb**	**21 13 46.9**	**0.0**
AKHS	**Akhisar**	**0.72**	**91**	*i* P	**Pb**	**21 13 36.9**	**0.0**
AKHS				*i* S	**Sb**	**21 13 46.9**	**0.0**
AKS	**Akhisar**	**0.72**	**91**	PG	**Pb**	**21 13 36.7**	**-0.1**
AKS	**Akhisar**	**0.72**	**91**	*i* Pg	**Pb**	**21 13 36.7**	**-0.1**
CHOS	**Chios island**	**0.83**	**233**	P	**Pb**	**21 13 38.7**	**0.0**
CHOS				S	**Sb**	**21 13 49.7**	**-0.3**
CHOS	**Chios island**	**0.83**	**233**	*e*PN	**Pb**	**21 13 38.6**	**-0.1**
CHOS				*e*SN	**Sb**	**21 13 49.9**	**-0.1**
CHOS	**Chios island**	**0.83**	**233**	P	**Pb**	**21 13 38.7**	**0.0**
CHOS				*e*Sn	**Sb**	**21 13 49.9**	**-0.1**
SIGR	**SIGRI**	**0.87**	**292**	P	**Pb**	**21 13 39.5**	**+0.1**
SIGR				S	**Sn**	**21 13 52.8**	**-0.6**
SIGR	**SIGRI**	**0.87**	**292**	P	**Pb**	**21 13 39.5**	**+0.1**
SIGR				S	**Sn**	**21 13 52.8**	**-0.6**
BALY	**Balya**	**1.02**	**33**	*i* P	**Pb**	**21 13 42.2**	**+0.2**
BALY				*i* S	**Sn**	**21 13 57.6**	**+0.3**
BALY	**Balya**	**1.02**	**33**	*i* P	**Pb**	**21 13 42.2**	**+0.2**
BALY				*i* S	**Sn**	**21 13 57.6**	**+0.3**
EZN	**Ezine**	**1.03**	**335**	PG	**Pn**	**21 13 42.6**	**-0.2**
EZN				SG	**Sb**	**21 13 56.1**	**+0.3**
EZN	**Ezine**	**1.03**	**335**	*i* Pg	**Pn**	**21 13 42.6**	**-0.2**
EZN				*i* Sg	**Sb**	**21 13 56.1**	**+0.3**
BALB	**Balikesir**	**1.07**	**45**	*e*PG	**Pn**	**21 13 43.4**	**0.0**
BALB	**Balikesir**	**1.07**	**45**	*e*Pg	**Pn**	**21 13 43.4**	**0.0**
BOZC	**Bozcaada**	**1.15**	**326**	*i* P	**Pn**	**21 13 44.7**	**+0.3**
BOZC				*i* S	**Sb**	**21 13 59.7**	**+0.4**
GONE	**Gonen-Balikesi**	**1.31**	**28**	*e*PN	**Pb**	**21 13 46.7**	**-0.2**
GONE	**Gonen-Balikesi**	**1.31**	**28**	*e*Pn	**Pb**	**21 13 46.7**	**-0.2**
DURS	**Dursunbey**	**1.42**	**60**	*i* P	**Pb**	**21 13 48.5**	**-0.3**
DURS				*i* S	**Sb**	**21 14 06.9**	**-0.2**
DURS	**Dursunbey**	**1.42**	**60**	*i* P	**Pb**	**21 13 48.5**	**-0.3**
DURS				*i* S	**Sb**	**21 14 06.9**	**-0.2**
DEMI	**Demirci**	**1.43**	**83**	*i* P	**Pg**	**21 13 49.2**	**-0.2**
DEMI				*i* S	**Sb**	**21 14 07.7**	**+0.3**
DEMI	**Demirci**	**1.43**	**83**	*i* P	**Pg**	**21 13 49.2**	**-0.2**
DEMI				*i* S	**Sb**	**21 14 07.7**	**+0.3**
KULA	**Kula-Manisa**	**1.43**	**105**	*e*PN	**Pn**	**21 13 48.2**	**-0.3**
KULA	**Kula-Manisa**	**1.43**	**105**	*e*Pn	**Pn**	**21 13 48.2**	**-0.3**
AYDN	**Tasoluk**	**1.45**	**147**	*i* P	**Pn**	**21 13 48.7**	**0.0**
AYDN				*i

SKR	**Severo-Kuril's**	**0.34**	**356**	*i* P		**Pn**	**21 34 51.4**	**+1.0**
SKR				*i* S		**Sn**	**21 35 06.9**	**+1.7**
MIPR	**Malaya Ipel'ka**	**1.97**	**11**	*i* P		**Pn**	**21 35 05.3**	**+0.3**
MIPR				*i* S		**Sn**	**21 35 30.3**	**-1.0**
ASAK	**Asacha**	**2.31**	**28**	*eP*		**Pn**	**21 35 10.9**	**+1.6**
ASAK				*i* S		**Sn**	**21 35 39.3**	**+0.5**
MTVR	**Mutnovka**	**2.49**	**30**	*eP*		**Pn**	**21 35 13.3**	**+1.8**
MTVR				*i* S		**Sn**	**21 35 44.1**	**+1.4**
GRL	**Gorelyy**	**2.51**	**28**	P		**Pn**	**21 35 13.8**	**+2.0**
RUS	**Russkaya**	**2.56**	**34**	PN		**Pn**	**21 35 13.2**	**+1.0**
RUS				S		**Sn**	**21 35 44.3**	**+0.2**
RUS	**Russkaya**	**2.56**	**34**	*eP*		**Pn**	**21 35 13.2**	**+1.0**
RUS				*i* S		**Sn**	**21 35 44.3**	**+0.2**
APC	**Apacha**	**2.66**	**13**	*eP*		**Pn**	**21 35 14.3**	**+0.9**
PETK	**Petropavlovsk-**	**2.93**	**19**	*e*PN		**Pn**	**21 35 18.1**	**+1.2**
PETK					pmax	pmax		
	comp=Z,2.0nm,0.3s							
PETK	**Petropavlovsk-**	**2.93**	**19**	P		**Pn**	**21 35 18.1**	**+1.2**
	comp=Z,1.8nm,0.3s,baz=167,slow=13,SNR=57							
PETK				S		**Sn**	**21 35 53.3**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=201,slow=20,SNR=4.1							
PET	**Petropavlovsk**	**3.10**	**29**	PN		**Pn**	**21 35 19.6**	**+0.5**
PET				S		**Sn**	**21 35 55.6**	**-0.7**
PET	**Petropavlovsk**	**3.10**	**29**	P		**Pn**	**21 35 19.6**	**+0.5**
PET				*i* S		**Sn**	**21 35 55.6**	**-0.7**
UGLR	**Uglovaya**	**3.31**	**29**	*eP*		**Pn**	**21 35 24.6**	**+2.7**
UGLR				*i* S		**Sn**	**21 36 02.9**	**+1.5**
SDLR	**Sedlovina**	**3.39**	**29**	*eP*		**Pn**	**21 35 24.9**	**+1.9**
NLC	**Nalytchevo**	**3.45**	**34**	PN		**Pn**	**21 35 23.9**	**+0.3**
NLC				S		**Sn**	**21 36 02.0**	**-2.5**
NLC	**Nalytchevo**	**3.45**	**34**	*eP*		**Pn**	**21 35 23.9**	**+0.3**
NLC				*i* S		**Sn**	**21 36 02.0**	**-2.5**
GNL	**Ganaly**	**3.53**	**18**	*eP*		**Pn**	**21 35 25.7**	**+0.9**
SPN	**Mys Shipunski**	**3.66**	**40**	PN		**Pn**	**21 35 27.5**	**+1.2**
SPN				S		**Sn**	**21 36 06.8**	**-2.5**
SPN	**Mys Shipunski**	**3.66**	**40**	*eP*		**Pn**	**21 35 27.5**	**+1.2**
SPN				*i* S		**Sn**	**21 36 06.8**	**-2.5**
MKZ	**Mys Kozlova**	**5.42**	**37**	PN		**Pn**	**21 35 49.5**	**-0.1**
MKZ				S		**Sn**	**21 36 46.5**	**-4.5**
MKZ	**Mys Kozlova**	**5.42**	**37**	*eP*		**Pn**	**21 35 49.5**	**-0.1**
MKZ				*i* S		**Sn**	**21 36 46.5**	**-4.5**
TUMR	**Tumrok**	**5.50**	**25**	*eP*		**Pn**	**21 35 52.4**	**+1.5**
ESO	**Esso**	**5.79**	**14**	PN		**Pn**	**21 35 55.7**	**+1.1**
ESO	**Esso**	**5.79**	**14**	P		**Pn**	**21 35 55.7**	**+1.1**
KMNR	**Kamenistaya**	**5.95**	**23**	P		**Pn**	**21 35 57.6**	**+0.8**
BZGR	**Bezymyannyi-Gr**	**6.23**	**24**	P		**Pn**	**21 36 01.1**	**+0.5**
ZLN	**Zelenaya**	**6.33**	**24**	P		**Pn**	**21 36 04.3**	**+2.4**
SRDR	**Sredinnyy**	**6.35**	**18**	P		**Pn**	**21 36 03.4**	**+1.3**
KRSR	**Krestovskiy**	**6.45**	**23**	P		**Pn**	**21 36 03.5**	**0.0**
SRKR	**Sorokina**	**6.99**	**23**	P		**Pn**	**21 36 10.8**	**+0.1**
SMKR	**Semkarok**	**7.00**	**25**	P		**Pn**	**21 36 11.9**	**+1.0**
KBTR	**Krutoberegovo**	**7.10**	**32**	PN		**Pn**	**21 36 11.5**	**-0.6**
KBTR	**Krutoberegovo**	**7.10**	**32**	*eP*		**Pn**	**21 36 11.5**	**-0.6**
BKI	**Bering**	**7.68**	**47**	PN		**Pn**	**21 36 20.7**	**+0.8**
BKI	**Bering**	**7.68**	**47**	P		**Pn**	**21 36 20.7**	**+0.8**
BKI				*i* S		Sn	21 37 37.2	-8.2
FX1	**Attu Island--F**	**10.88**	**70**	P		Pn	21 37 06.9	+4.3
	comp=Z,3.5nm,0.3s,baz=23,slow=5.0,SNR=31							
FX1				S		**Sn**	**21 39 00.6**	**-1.9**
	comp=Z,1.4nm,0.3s,baz=176,slow=19,SNR=4.2							
ASAJ	**Asahikawa**	**11.12**	**241**	P		**Pn**	**21 37 05.3**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=210,slow=20,SNR=5.1							
ERM	**Erimo**	**12.26**	**232**	*i* PN		**P**	**21 37 26.2**	**-1.0**
BILL	**Bilibino**	**18.44**	**12**	P		**P**	**21 38 32.0**	**-3.3**
BILL					pmax	pmax		
	comp=Z,16nm,0.7s							
MJAR	**Matsushiro Arr**	**18.91**	**230**	P		**P**	**21 38 40.3**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=29,slow=7.4,SNR=5.6							
KSRS	**Korea Array**	**23.91**	**248**	P		**P**	**21 39 31.4**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=47,slow=8.7,SNR=3.9							
ILAR	**Eielson Array**	**32.49**	**42**	P		**P**	**21 40 47.7**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=263,slow=5.9,SNR=19							
INK	**Inuvik**	**37.53**	**35**	P		**P**	**21 41 31.4**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=308,slow=7.8,SNR=23							
YKA	**Yellowknife Ar**	**46.84**	**40**	P		**P**	**21 42 46.9**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=297,slow=7.6,SNR=7.4							
MKAR	**Makanchi Array**	**47.14**	**296**	*i* P		P	21 42 45.0	-3.8
MKAR	**Makanchi Array**	**47.14**	**296**	P		P	21 42 44.5	-4.3
	comp=Z,0.1nm,0.4s,baz=54,slow=6.3,SNR=8.8							
CMAR	**Chiang Mai Arr**	**55.18**	**256**	P		**P**	**21 43 48.2**	**-0.8**
	comp=Z,1.2nm,0.7s,baz=32,slow=7.3,SNR=12							
NVAR	**Mina Array Bea**	**59.04**	**66**	P		**P**	**21 44 18.9**	**+2.6**
	comp=Z,0.3nm,0.5s,baz=299,slow=8.6,SNR=4.9							
PDAR	**Pinedale Array**	**61.04**	**57**	P		**P**	**21 44 31.7**	**+1.9**
	comp=Z,0.7nm,0.7s,baz=308,slow=4.0,SNR=7.6							
WRA	**Warramunga Arr**	**72.59**	**201**	P		**P**	**21 45 42.5**	**-0.2**
	comp=Z,0.1nm,0.6s,baz=15,slow=6.2,SNR=3.1							
TXAR	**Lajitas Array**	**74.02**	**63**	P		**P**	**21 45 53.0**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=296,slow=5.2,SNR=3.5							

ISK ***17*** *21:34:34.6,38.89N×26.72E,h10km,MD2.8*
ISCJB ***17*** *21:34:35.5±0.8,38.92N±0.03×26.82E±0.06,h5km±7km,*
Error ellipse: s-maj=7.3km s-min=5.3km az=8.3
DDA ***17*** *21:34:35.7,38.90N×26.87E,h29km,MD3.0*
CSEM ***17*** *21:34:35.7±0.2,38.91N×26.79E,h10km,MD2.8, Error ellipse: s-maj=5.2km s-min=3.3km az=96.0*

ISC 17 21:34:35.3±1.2, 38.89N±0.03×26.79E±0.04, h12km±9km, n26, σ0949/42, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
BLCB	**Balcova**	**0.55**	**159**	*e*PG		**Pb**	**21 34 46.6**		**-0.2**
BLCB				*e*SG		**Sg**	**21 34 53.7**		**+0.5**
BLCB	**Balcova**	**0.55**	**159**	*e*Pg		**Pb**	**21 34 46.6**		**-0.2**
BLCB				*e*Sg		**Sg**	**21 34 53.7**		**+0.5**
URLA	**Izmir**	**0.55**	**196**	*i* P		**Pb**	**21 34 47.2**		**+0.2**
URLA				*i* S		**Sb**	**21 34 55.2**		**+0.3**
URLA	**Izmir**	**0.55**	**196**	*i* P		**Pb**	**21 34 47.2**		**+0.2**
URLA				*i* S		**Sb**	**21 34 55.2**		**+0.3**
IZM	**Izmir**	**0.62**	**143**	*e*PG		**Pb**	**21 34 48.0**		**-0.1**
IZM				*e*SG		**Sb**	**21 34 57.2**		**+0.4**
IZM	**Izmir**	**0.62**	**143**	*e*Pg		**Pb**	**21 34 48.0**		**-0.1**
IZM				*e*Sg		**Sb**	**21 34 57.2**		**+0.4**
AKS	**Akhisar**	**0.80**	**91**	*e*PG		**Pb**	**21 34 51.3**		**+0.1**
AKS	**Akhisar**	**0.80**	**91**	*e*Pg		**Pb**	**21 34 51.3**		**+0.1**
AKHS	**Akhisar**	**0.80**	**91**	*i* P		**Pb**	**21 34 51.2**		**0.0**
AKHS				*i* S		**Sg**	**21 35 01.2**		**-0.1**
AKHS	**Akhisar**	**0.80**	**91**	*i* P		**Pb**	**21 34 51.2**		**0.0**
AKHS				*i* S		**Sg**	**21 35 01.2**		**-0.1**
EZN	**Ezine**	**1.00**	**339**	*e*PG		**Pg**	**21 34 53.8**		**-0.7**
EZN	**Ezine**	**1.00**	**339**	*e*Pg		**Pg**	**21 34 53.8**		**-0.7**
BALY	**Balya**	**1.06**	**37**	*i* P		**Pn**	**21 34 56.8**		**+0.7**
BALY				*i* S		**Sn**	**21 35 11.4**		**+0.5**
BALY	**Balya**	**1.06**	**37**	*i* P		**Pn**	**21 34 56.8**		**+0.7**
BALY				*i* S		**Sn**	**21 35 11.4**		**+0.5**
BALB	**Balikesir**	**1.13**	**48**	*e*PN		**Pg**	**21 34 57.5**		**+0.5**
BALB	**Balikesir**	**1.13**	**48**	*e*Pn		**Pg**	**21 34 57.5**		**+0.5**
GONE	**Gonen-Balikesi**	**1.34**	**31**	*e*PN		**Pg**	**21 35 00.7**		**-0.5**
GONE	**Gonen-Balikesi**	**1.34**	**31**	*e*Pn		**Pg**	**21 35 00.7**		**-0.5**
DURS	**Dursunbey**	**1.49**	**61**	*i* P		**Pn**	**21 35 02.1**		**+0.1**
DURS				*i* S		**Sn**	**21 35 20.8**		**-0.6**
DURS	**Dursunbey**	**1.49**	**61**	*i* P		**Pn**	**21 35 02.1**		**+0.1**
DURS				*i* S		**Sn**	**21 35 20.8**		**-0.6**
AYDN	**Tasoluk**	**1.50**	**145**	*i* P		**Pn**	**21 35 02.5**		**+0.4**
AYDN				*i* S		**Sg**	**21 35 23.4**		**-0.2**
AYDN	**Tasoluk**	**1.50**	**145**	*i* P		**Pn**	**21 35 02.5**		**+0.4**
AYDN				*i* S		**Sg**	**21 35 23.4**		**-0.2**
DEMI	**Demirci**	**1.51**	**84**	*i* P		**Pb**	**21 35 03.5**		**+0.2**
DEMI				*i* S		**Sn**	**21 35 20.7**		**-1.2**
DEMI	**Demirci**	**1.51**	**84**	*i* P		**Pb**	**21 35 03.5**		**+0.2**
DEMI				*i* S		**Sn**	**21 35 20.7**		**-1.2**
KULA	**Kula-Manisa**	**1.51**	**104**	*e*PN		**Pn**	**21 35 02.0**		**-0.3**
KULA	**Kula-Manisa**	**1.51**	**104**	*e*Pn		**Pn**	**21 35 02.0**		**-0.3**

JMA 17 21:35:12.2±0.1, 37.51N×141.77E, h39km±2km, M3.6, 2C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
JFK	**Kawauchi**	**0.73**	**259**	⇑P		Pn	21 35 26.0		0.0
JFK				S		Sn	21 35 35.3		-0.7
JMM	**Marumori**	**0.85**	**295**	⇓P		Pn	21 35 27.8		+0.1
JMM				S		Sn	21 35 38.9		-0.1
ONAJ	**Iwakimizuishiy**	**0.88**	**243**	⇑P		Pn	21 35 27.9		-0.2
ONAJ				S		Sn	21 35 39.2		-0.5
JIO	**Ouri**	**1.00**	**341**	⇓P		Pn	21 35 29.9		+0.2
JIO				*e*S		Sn	21 35 42.0		-0.6
JFT	**Otama**	**1.14**	**271**	P		Pn	21 35 32.8		+1.1
JFT				S		Sn	21 35 46.8		+0.7
JOU	**Okura**	**1.22**	**315**	P		Pn	21 35 33.7		+0.9
JOU				*e*S		Sn	21 35 49.4		+1.2
JMK	**Ichinoseki**	**1.50**	**343**	⇓P		Pn	21 35 37.4		+0.8
JMK				*e*S		Sn	21 35 55.6		+0.6
JYS	**Shirataka**	**1.52**	**298**	P		Pn	21 35 38.6		+1.7
JYS				*e*S		Sn	21 35 57.6		+2.0
JFY	**Yanaizu**	**1.65**	**267**	P		Pn	21 35 40.0		+1.4
JFY				*e*S		Sn	21 36 00.2		+1.6
JYK	**Kaneyama**	**1.79**	**322**	P		Pn	21 35 41.6		+1.0
MAT	**Matsushiro**	**3.01**	**252**	P		Pn	21 36 01.1		+3.7
MAT				S		Sn	21 36 38.5		+6.3

GUC 17 21:45:02.9±0.7, 24.17S×70.35W, h18km±9km, ML3.5, 2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
ANCH	**Antofagasta**	**0.49**	**353**	⇓*i* P		Pg	21 45 11.6		-1.2
ANCH				*i* S		Sg	21 45 18.4		-0.9
ANCH					AML	AML	21 45 18.9		
	comp=E,4μm,0.2s								
CEN1	**Los Morros**	**0.79**	**10**	*e*P		Pb	21 45 14.2		-4.0
CEN1				*i* S		Sb	21 45 22.0		-6.6
MECH	**Mejillones**	**1.06**	**355**	⇓*i* P		Pb	21 45 21.1		-1.7
MECH				*i* S		Sb	21 45 35.4		-1.0
MECH					AML	AML	21 45 39.0		
	comp=E,798nm,0.4s								
LVC	**Limon Verde**	**2.03**	**41**	*e*P		Pn	21 45 37.8		+1.1
LVC				*i* S		Sb	21 46 04.4		-0.5
PB07	**Plate Boundary**	**2.47**	**10**	*e*P		Pn	21 45 40.2		-2.3
PB07				*i* S		Sn	21 46 11.8		-0.5
PB07					AML	AML	21 46 20.6		
	comp=N,237nm,0.6s								
PB09	**Plate Boundary**	**2.57**	**24**	*e*P		Pn	21 45 43.7		-0.2
PB09				*i* S		Sn	21 46 15.9		+1.0
PB09					AML	AML	21 46 31.5		
	comp=N,1μm,0.5s								

ISCJB ***17*** *22:03:45.4±0.4,39.12N±0.03×29.07E±0.03,h5km±5km,*
Error ellipse: s-maj=4.4km s-min=3.5km az=20.6
ISK ***17*** *22:03:45.1,39.12N×29.07E,h6km,MD2.7*
DDA ***17*** *22:03:45.2,39.12N×29.06E,h7km,MD3.2*
CSEM ***17*** *22:03:45.8±0.1,39.11N×29.06E,h8km,MD3.2, Error ellipse: s-maj=2.2km s-min=1.8km az=46.0*

ISC 17 22:03:45.8±0.9, 39.12N±0.02×29.06E±0.02, h12km±10km, n48, σ0935/66, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
DEMI	**Demirci**	**0.28**	**254**	*i* P		**Pg**	**22 03 51.8**		**+0.2**
DEMI				*i* S		**Sg**	**22 03 55.9**		**+0.4**
DEMI	**Demirci**	**0.28**	**254**	*i* P		**Pg**	**22 03 51.8**		**+0.2**
DEMI				*i* S		**Sg**	**22 03 55.9**		**+0.4**
GDZ	**Gediz**	**0.33**	**95**	*i* P		**Pg**	**22 03 52.2**		**-0.2**
GDZ				*i* S		**Sg**	**22 03 56.8**		**-0.1**
GDZ	**Gediz**	**0.33**	**95**	*i* P		**Pg**	**22 03 52.2**		**-0.2**
GDZ				*i* S		**Sg**	**22 03 56.8**		**-0.1**
TVSB	**Tavsanli**	**0.45**	**43**	*e*PG		**Pg**	**22 03 54.3**		**-0.4**
TVSB				*e*SG		**Sg**	**22 04 00.2**		**-0.5**
TVSB	**Tavsanli**	**0.45**	**43**	*e*Pg		**Pg**	**22 03 54.3**		**-0.4**
TVSB				*e*Sg		**Sg**	**22 04 00.2**		**-0.5**
DST	**Dursunbey**	**0.59**	**325**	*e*PG		**Pb**	**22 03 57.8**		**-0.3**
DST				*e*SG		**Sg**	**22 04 05.0**		**-0.3**
DST	**Dursunbey**	**0.59**	**325**	*e*Pg		**Pb**	**22 03 57.8**		**-0.3**
DST				*e*Sg		**Sg**	**22 04 05.0**		**-0.3**
DURS	**Dursunbey**	**0.66**	**317**	*i* P		**Pg**	**22 03 58.8**		**+0.1**
DURS				*i* S		**Sg**	**22 04 07.7**		**+0.3**
DURS	**Dursunbey**	**0.66**	**317**	*i* P		**Pg**	**22 03 58.8**		**+0.1**
DURS				*i* S		**Sg**	**22 04 07.7**		**+0.3**
KULA	**Kula-Manisa**	**0.68**	**208**	*e*PG		**Pg**	**22 03 58.8**		**-0.2**
KULA				*e*SG		**Sg**	**22 04 07.3**		**-0.7**
KULA	**Kula-Manisa**	**0.68**	**208**	*e*Pg		**Pg**	**22 03 58.8**		**-0.2**
KULA				*e*Sg		**Sg**	**22 04 07.3**		**-0.7**
ALT	**Altintas**	**0.82**	**94**	*e*PG		**Pb**	**22 04 02.0**		**0.0**
ALT				*e*SG		**Sg**	**22 04 12.6**		**+0.3**
ALT	**Altintas**	**0.82**	**94**	*e*Pg		**Pb**	**22 04 02.0**		**0.0**
ALT				*e*Sg		**Sg**	**22 04 12.6**		**+0.3**
KHAL	**Karahalli**	**0.82**	**156**	*i* P		**Pg**	**22 04 01.7**		**+0.1**
KHAL				*i* S		**Sg**	**22 04 12.2**		**-0.2**
KHAL	**Karahalli**	**0.82**	**156**	*i* P		**Pg**	**22 04 01.7**		**+0.1**
KHAL				*i* S		**Sg**	**22 04 12.2**		**-0.2**
KHL	**Karahalli**	**0.87**	**156**	*e*PG		**Pg**	**22 04 02.2**		**-0.4**
KHL	**Karahalli**	**0.87**	**156**	*e*Pg		**Pg**	**22 04 02.2**		**-0.4**
ORLT	**Orhaneli**	**0.93**	**352**	*e*PG		**Pb**	**22 04 03.9**		**-0.1**
ORLT	**Orhaneli**	**0.93**	**352**	*e*Pg		**Pb**	**22 04 03.9**		**-0.1**
BALB	**Balikesir**	**1.05**	**300**	*e*PG		**Pn**	**22 04 06.5**		**+0.1**
BALB	**Balikesir**	**1.05**	**300**	*e*Pg		**Pn**	**22 04 06.5**		**+0.1**
IZI	**Iznik**	**1.26**	**14**	*e*PN		**Pg**	**22 04 10.1**		**+0.2**
IZI	**Iznik**	**1.26**	**14**	*e*Pn		**Pg**	**22 04 10.1**		**+0.2**
MDNY	**Mudanya-Bursa**	**1.26**	**354**	*e*PN		**Pn**	**22 04 09.0**		**-0.1**
MDNY	**Mudanya-Bursa**	**1.26**	**354**	*e*Pn		**Pn**	**22 04 09.0**		**-0.1**
KCTX	**Karacabey (Bur**	**1.27**	**335**	*e*PN		**Pb**	**22 04 09.5**		**-0.1**
KCTX	**Karacabey (Bur**	**1.27**	**335**	*e*Pn		**Pb**	**22 04 09.5**		**-0.1**
BALY	**Balya**	**1.28**	**299**	*i* P		**Pg**	**22 04 10.0**		**-0.3**
BALY				*i* S		**Sg**	**22 04 27.0**		**0.0**
BALY	**Balya**	**1.28**	**299**	*i* P		**Pg**	**22 04 10.0**		**-0.3**
BALY				*i* S		**Sg**	**22 04 27.0**		**0.0**
SHUT	**Suhut-Afyon**	**1.29**	**116**	*e*PN		**Pg**	**22 04 10.6**		**0.0**
SHUT	**Suhut-Afyon**	**1.29**	**116**	*e*Pn		**Pg**	**22 04 10.6**		**0.0**
GEMT	**Gemlik**	**1.32**	**4**	*e*PN		**Pn**	**22 04 10.0**		**0.0**
GEMT	**Gemlik**	**1.32**	**4**	*e*Pn		**Pn**	**22 04 10.0**		**0.0**
ADVT	**Abdulvahap**	**1.41**	**21**	*e*PN		**Pb**	**22 04 11.9**		**-0.2**
ADVT	**Abdulvahap**	**1.41**	**21**	*e*Pn		**Pb**	**22 04 11.9**		**-0.2**
GONE	**Gonen-Balikesi**	**1.41**	**311**	*e*PN		**Pb**	**22 04 12.1**		**+0.1**
GONE	**Gonen-Balikesi**	**1.41**	**311**	*e*Pn		**Pb**	**22 04 12.1**		**+0.1**
ARMT	**Armutlu**	**1.45**	**354**	*e*PN		**Pn**	**22 04 11.7**		**-0.2**
ARMT	**Armutlu**	**1.45**	**354**	*e*Pn		**Pn**	**22 04 11.7**		**-0.2**
YLV	**Yalova**	**1.47**	**9**	*e*PN		**Pn**	**22 04 12.1**		**0.0**
YLV	**Yalova**	**1.47**	**9**	*e*Pn		**Pn**	**22 04 12.1**		**0.0**
GPA	**Golpazari**	**1.51**	**39**	*e*PN		**Pb**	**22 04 14.2**		**+0.4**
GPA	**Golpazari**	**1.51**	**39**	*e*Pn		**Pb**	**22 04 14.2**		**+0.4**
GULT	**Gulveren**	**1.72**	**40**	*e*PN		**Pb**	**22 04 16.9**		**-0.5**
GULT	**Gulveren**	**1.72**	**40**	*e*Pn		**Pb**	**22 04 16.9**		**-0.5**
MDUB	**Mudurnu**	**2.13**	**50**	*e*PN		**Pn**	**22 04 22.4**		**+1.1**
MDUB	**Mudurnu**	**2.13**	**50**	*e*Pn		**Pn**	**22 04 22.4**		**+1.1**

ISK ***17*** *22:10:57.5,39.96N×39.62E,h14km,MD2.7*
ISCJB ***17*** *22:10:58.6±0.6,39.95N±0.03×39.57E±0.07,h4km±9km,*
Error ellipse: s-maj=8.6km s-min=4.4km az=168.0
DDA ***17*** *22:10:59.5,40.01N×39.58E,h7km,MD2.9*
CSEM ***17*** *22:10:59.0±0.3,39.98N×39.55E,h20km,MD2.7, Error ellipse: s-maj=11.7km s-min=4.2km az=102.0*

ISC 17 22:10:58.7±1.0, 39.95N±0.02×39.59E±0.04, h10km±12km, n16, σ0955/29, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
EZC	**Erzincan**	**0.27**	**222**	*e*PG		**Pg**	**22 11 04.2**		**-0.1**
EZC	**Erzincan**	**0.27**	**222**	*e*Pg		**Pb**	**22 11 05.3**		**-0.4**
EZC				*e*Sg		**Sb**	**22 11 11.5**		**+1.1**
KELT	**Kelkit**	**0.32**	**308**	*i* P		**Pg**	**22 11 05.4**		**+0.2**
KELT				*i* S		**Sg**	**22 11 09.9**		**+0.3**
KELT	**Kelkit**	**0.32**	**308**	*i* P		**Pg**	**22 11 05.4**		**+0.2**
KELT				*i* S		**Sg**	**22 11 09.9**		**+0.3**
ERZN	**Erzincan**	**0.38**	**164**	*e*PG		**Pg**	**22 11 05.3**		**-1.0**
ERZN				*e*SG		**Sg**	**22 11 11.5**		**+0.2**
GUMT	**Gumushane**	**0.51**	**351**	*e*PG		**Pg**	**22 11 08.5**		**-0.3**
GUMT				*e*SG		**Sg**	**22 11 15.8**		**+0.2**
GUMT	**Gumushane**	**0.51**	**351**	*e*Pg		**Pg**	**22 11 08.5**		**-0.3**
GUMT				*e*Sg		**Sg**	**22 11 15.8**		**+0.2**
ILIC	**ilic-Erzincan**	**0.93**	**238**	*e*PG		**Pg**	**22 11 16.1**		**-0.5**
ILIC				*e*SG		**Sb**	**22 11 29.9**		**+0.4**
ILIC	**ilic-Erzincan**	**0.93**	**238**	*e*Pg		**Pg**	**22 11 16.2**		**-0.5**
ILIC				*e*Sg		**Sb**	**22 11 29.9**		**+0.4**
MACK	**Trabzon**	**1.00**	**8**	*i* P		**Pg**	**22 11 17.5**		**-0.4**
MACK				*i* S		**Sg**	**22 11 31.1**		**+0.1**
MACK	**Trabzon**	**1.00**	**8**	*i* P		**Pg**	**22 11 17.5**		**-0.4**
MACK				*i* S		**Sg**	**22 11 31.1**		**+0.1**
PTK	**Pertek**	**1.07**	**188**	*e*PG		**Pb**	**22 11 18.9**		**-0.5**
PTK				*e*SG		**Sg**	**22 11 34.0**		**+0.8**
PTK	**Pertek**	**1.07**	**188**	*e*Pg		**Pb**	**22 11 18.9**		**-0.5**
PTK				*e*Sg		**Sg**	**22 11 34.0**		**+0.8**
ESPY	**Espiye-Giresun**	**1.17**	**326**	*e*PN		**Pb**	**22 11 20.1**		**-0.8**
ESPY	**Espiye-Giresun**	**1.17**	**326**	*e*Pn		**Pb**	**22 11 20.1**		**-0.8**
DAGI	**Agillar**	**2.10**	**57**	*i* P		**Pb**	**22 11 37.6**		**+0.7**
DAGI				*i* S		**Sb**	**22 12 03.3**		**+0.3**

IDC ***17*** *22:12:54.3±0.6,30.10N×139.93E,h0km,mb4.0/18, mb1 4.2/19,mb1mx4.1/27, mbtmp4.0/19,ML3.7/1, MS3.4/12, Ms1 3.4/12, ms1mx3.1/47, Error ellipse: s-maj=18.0km s-min=16.5km az=94.0*
ISCJB ***17*** *22:12:58.0±0.4,29.84N±0.05×140.15E±0.06,h33km, mb4.2/39, MS3.5/11, Error ellipse: s-maj=7.5km s-min=7.4km az=157.6*
BJI ***17*** *22:13:00.2,29.90N×140.10E,h45km,mB4.7/9,mb4.3/11, Ms4.3/5, Ms7 4.1/5*
NEIC ***17*** *22:13:01.2±1.8,29.93N×140.09E,h45km±15km,mb4.3/17, Error ellipse: s-maj=14.8km s-min=9.8km az=141.0*

ISC 17 22:12:59.9±0.5, 29.82N±0.07×140.26E±0.06, h35km, n87, σ1970/86, mb4.2/39, MS3.5/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
JHJ	**Hachijo jima 2**	**3.31**	**353**		LR	LR	22 14 15.4		
	comp=Z,528nm,21.8s,baz=110,slow=27								
MJAR	**Matsushiro Arr**	**6.92**	**346**		Pn	**Pn**	**22 14 36.0**		**-2.7**
MJAR	**Matsushiro Arr**	**6.92**	**346**		Pn	**Pn**	**22 14 36.0**		**-2.7**
	0.6nm,0.3s,baz=201,slow=15,SNR=12								
MAJO	**Matsushiro**	**6.92**	**346**	*e*Pn		**Pn**	**22 14 40.0**		**+1.3**
MAJO					Sn	**Sn**	**22 15 59.0**		**+2.7**
MAT	**Matsushiro**	**6.92**	**346**	P		**Pn**	**22 14 39.6**		**+0.8**
JNU	**Nakatsue**	**8.66**	**295**	Pn		Pn	22 14 55.0		-7.7
JNU					Sn	Sn	22 16 27.4		-12
JNU	**Nakatsue**	**8.66**	**295**	Pn		Pn	22 14 55.0		-7.7
	0.8nm,0.3s,baz=100,slow=7.1,SNR=5.4								
JNU					Sn	Sn	22 16 27.4		-12
	1.0nm,0.3s,baz=171,slow=19,SNR=4.7								
JNU					LR	LR	22 18 00.4		
	comp=Z,468nm,18.6s,baz=75,slow=37								
KSRS	**Korea Array**	**12.78**	**310**	Pn		**Pn**	**22 15 56.5**		**-2.5**
	0.1nm,0.3s,baz=134,slow=14,SNR=5.1								
KSRS					LR	LR	22 20 27.0		

FINES	**FINES Array B**	**74.76**	**333**	P		P		22 24 31.9	-4.0
	comp=Z,1.4nm,0.9s,baz=38,slow=9.6,SNR=4.5								
KBZ	**Khabaz**	**74.92**	**312**	P		**P**		**22 24 35.3**	**-1.9**
KBZ	**Khabaz**	**74.92**	**312**	P		**P**		**22 24 35.3**	**-1.9**
	comp=Z,2.0nm,0.7s,baz=104,slow=3.6,SNR=4.8								
NEW	**Newport**	**76.04**	**42**	*e*P		**P**		**22 24 44.3**	**+0.7**
	comp=Z,4.1nm,0.9s								
BMO	**Blue Mountains**	**77.60**	**45**	*e*P		**P**		**22 24 53.0**	**+0.4**
	comp=Z,1.5nm,0.8s								
SUMG	**Summit**	**77.87**	**360**	*e*P		P		22 24 58.4	+4.5
	comp=Z,22nm,1.6s								
SWMT	**Swartz Lake**	**78.24**	**42**	*e*P		**P**		**22 24 56.7**	**+0.6**
AKASG	**Malin Array Be**	**79.42**	**323**	P		**P**		**22 25 00.8**	**-1.6**
AKASG	**Malin Array Be**	**79.42**	**323**	P		**P**		**22 25 00.8**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=51,slow=6.0,SNR=6.9								
KIEV	**Kiev**	**79.44**	**323**	*e*P		**P**		**22 25 03.4**	**+1.0**
	comp=Z,2.7nm,0.8s								
LRM	**Limekiln Ridge**	**80.03**	**43**	*e*P		**P**		**22 25 06.9**	**+0.7**
HLID	**Hailey**	**80.05**	**45**	*e*P		**P**		**22 25 07.5**	**+1.3**
	comp=Z,24nm,2.5s								
NVAR	**Mina Array Bea**	**80.16**	**51**	P		**P**		**22 25 08.1**	**+1.1**
NVAR	**Mina Array Bea**	**80.16**	**51**	P		**P**		**22 25 08.1**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=286,slow=6.4,SNR=12								
FFC	**Flin Flon**	**80.32**	**31**	*e*P		**P**		**22 25 06.2**	**-0.9**
	comp=Z,3.9nm,0.8s								
NB2	**NORSAR Subarra**	**80.45**	**337**	P		**P**		**22 25 09.9**	**+2.1**
	comp=Z,2.7nm,0.8s,baz=44,slow=5.9								
NOA	**NORSAR Array B**	**80.45**	**337**	P		**P**		**22 25 07.2**	**-0.6**
NOA	**NORSAR Array B**	**80.45**	**337**	P		**P**		**22 25 07.2**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=43,slow=5.4,SNR=7.4								
BOZ	**Bozeman (W)**	**80.61**	**43**	*e*P		**P**		**22 25 09.9**	**+0.8**
	comp=Z,0.9nm,0.6s								
BRTR	**Keskin Array B**	**82.92**	**312**	P		**P**		**22 25 19.1**	**-2.3**
BRTR	**Keskin Array B**	**82.92**	**312**	P		**P**		**22 25 19.1**	**-2.3**
	comp=Z,0.4nm,0.6s,baz=102,slow=5.3,SNR=4.6								
PDAR	**Pinedale Array**	**83.46**	**44**	P		**P**		**22 25 23.9**	**-0.3**
PDAR	**Pinedale Array**	**83.46**	**44**	P		**P**		**22 25 23.9**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=260,slow=1.8,SNR=4.1								
TXAR	**Lajitas Array**	**95.30**	**52**	P		**P**		**22 26 20.2**	**-0.5**
TXAR	**Lajitas Array**	**95.30**	**52**	P		**P**		**22 26 20.2**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=289,slow=2.8,SNR=5.2								
LPAZ	**La Paz**	**150.71**	**69**	*e*PKPdf		**PKPdf**		**22 32 45.5**	**+1.3**
LPAZ				PKPbc		**PKPbc**		**22 32 50.2**	**+0.5**
LPAZ	**La Paz**	**150.71**	**69**	PKPbc		**PKPbc**		**22 32 50.2**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=359,slow=5.5,SNR=16								

JMA 17 22:14:18.8, 33.83N×135.57E, h23km±1km, M2.0, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.18**	**276**	P	Pb	22 14 23.9	-0.1
JWM				S	Sb	22 14 27.2	-0.4
JWZ	**Kozaga**	**0.32**	**158**	P	Pb	22 14 25.8	-0.2
JWZ				S	Sb	22 14 30.7	-0.2
JWY	**Kouya**	**0.39**	**3**	P	Pb	22 14 27.1	-0.1
JWY				S	Sb	22 14 32.5	-0.4
JKN2	**Miekihoku**	**0.71**	**55**	P	Pb	22 14 31.7	-0.9
JKN2				S	Sb	22 14 40.9	-1.0
JAJ2	**Tsuna**	**0.82**	**316**	P	Pb	22 14 33.8	-0.5
JHE	**Heguri**	**0.83**	**7**	P	Pb	22 14 33.6	-0.9
JHE				S	Sb	22 14 44.2	-1.1

UPP **17** *22:16:03.3, 57.71N×22.21E, h0km, ML2.2, Suspected Mining explosion.*
ISCJB **17** *22:16:04.0±0.4, 57.84N±0.03×21.85E±0.04, h0km, Error ellipse: s-maj=5.2km s-min=3.1km az=161.1*
HEL **17** *22:16:05.1±0.1, 57.79N×21.91E, h0km, ML2.2, ML2.2(UPP), Explosion*
CSEM **17** *22:16:05.0±0.1, 57.77N×21.94E, h2km, ML2.9, Error ellipse: s-maj=4.4km s-min=2.5km az=156.0, Mining explosion.*
IDC **17** *22:16:06.1±2.3, 57.85N×21.97E, h0km, mb1 3.2/4, mb1mx2.9/27, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=23.6km s-min=8.5km az=166.0*
NAO **17** *22:16:07.0±2.0, 57.92N×21.91E, ML2.0*
BER **17** *22:16:08.4±4.7, 57.85N×21.87E, h0km±22km, ML2.0(NAO)*

ISC 17 22:16:03.6±0.8, 57.74N±0.03×21.92E±0.03, h0km, n102, σ1s58/130, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.23**	**119**	*e*P	**Pg**	**22 16 08.9**	**+0.9**
	SNR=90						
MTSE	**Matsula**	**1.40**	**45**	*e*P	**Pg**	**22 16 29.3**	**-1.2**
MTSE				*e*S	**Sg**	**22 16 47.5**	**-1.1**
MTSE	**Matsula**	**1.40**	**45**	P	**Pg**	**22 16 29.2**	**-1.2**
MTSE				S	**Sg**	**22 16 47.4**	**-1.1**
GOTU	**Gotland**	**1.80**	**270**	*e*P	**Pn**	**22 16 37.2**	**+1.4**
GOTU	**Gotland**	**1.80**	**270**	P	**Pn**	**22 16 37.2**	**+1.4**
NYNU	**Nynaeshamn**	**2.42**	**303**	*e*P	**Pn**	**22 16 45.9**	**+1.5**
NYNU	**Nynaeshamn**	**2.42**	**303**	P	**Pn**	**22 16 45.8**	**+1.5**
AAL	**Aland**	**2.64**	**339**	*e*P	**Pn**	**22 16 47.9**	**+0.6**
AAL				*e*SG	**Sg**	**22 17 26.8**	**-1.6**
AAL	**Aland**	**2.64**	**339**	P	**Pn**	**22 16 48.0**	**+0.6**
AAL				Sg	**Sg**	**22 17 26.7**	**-1.6**
VSU	**Vasula**	**2.66**	**72**	Pn	**Pn**	**22 16 50.6**	**+3.0**
VSU				Sn	**Sb**	**22 17 24.3**	**-0.8**
VSU	**Vasula**	**2.66**	**72**	Pn	**Pn**	**22 16 50.6**	**+3.0**
VSU				Sn	**Sb**	**22 17 24.3**	**-0.8**
VSU	**Vasula**	**2.66**	**72**	*e*P	**Pn**	**22 16 48.7**	**+1.0**
VSU				*e*SB	**Sb**	**22 17 24.6**	**-0.6**
VSU	**Vasula**	**2.66**	**72**	P	**Pn**	**22 16 48.6**	**+1.0**
VSU	**Vasula**	**2.66**	**72**	Pn	**Pn**	**22 16 50.6**	**+3.0**
	SNR=50						
VSU				Sb	**Sb**	**22 17 24.5**	**-0.6**
MEF	**Metsahovi**	**2.80**	**26**	*e*P	**Pn**	**22 16 51.1**	**+1.6**
MEF				*e*SG	**Sb**	**22 17 29.6**	**+0.5**
MEF				MSG		22 17 29.9	
	comp=Z,17nm,0.1s						
MEF	**Metsahovi**	**2.80**	**26**	P	**Pn**	**22 16 51.1**	**+1.6**
MEF				Sg	**Sb**	**22 17 29.6**	**+0.5**
VIKU	**Vikbolandet**	**2.87**	**288**	*e*P	**Pn**	**22 16 52.2**	**+1.6**
VIKU	**Vikbolandet**	**2.87**	**288**	P	**Pn**	**22 16 52.2**	**+1.6**
ASPU	**Aespoe**	**2.88**	**266**	*e*P	**Pn**	**22 16 53.0**	**+2.3**
ASPU	**Aespoe**	**2.88**	**266**	P	**Pn**	**22 16 53.0**	**+2.3**
GRAU	**Graesoe**	**3.13**	**328**	*e*P	**Pn**	**22 16 54.9**	**+0.7**
GRAU	**Graesoe**	**3.13**	**328**	P	**Pn**	**22 16 54.9**	**+0.7**
FLYU	**Flymyra**	**3.18**	**321**	*e*P	**Pn**	**22 16 56.2**	**+1.4**
FLYU	**Flymyra**	**3.18**	**321**	P	**Pn**	**22 16 56.1**	**+1.4**
OSKU	**Oskarshamn**	**3.19**	**263**	*e*P	**Pn**	**22 16 56.7**	**+1.7**
OSKU	**Oskarshamn**	**3.19**	**263**	P	**Pn**	**22 16 56.6**	**+1.7**
RAF	**Rauma**	**3.29**	**359**	*e*P	**Pn**	**22 16 57.3**	**+1.0**
RAF				*e*SG	**Sb**	**22 17 46.3**	**+2.9**
RAF				MSG		22 17 52.1	
	comp=Z,5.3nm,0.1s						
RAF	**Rauma**	**3.29**	**359**	P	**Pn**	**22 16 57.3**	**+1.0**
RAF				Sg	**Sb**	**22 17 46.3**	**+2.9**
LNKU	**Linkoeping**	**3.45**	**281**	*e*P	**Pn**	**22 17 00.3**	**+1.8**
LNKU	**Linkoeping**	**3.45**	**281**	P	**Pn**	**22 17 00.3**	**+1.8**
PVF	**Pernaja**	**3.47**	**34**	*e*P	**Pn**	**22 17 00.5**	**+1.7**
PVF				*e*SG	**Sb**	**22 17 50.2**	**+1.8**
PVF				MSG		22 17 57.4	
	comp=Z,5.0nm,0.2s						
PVF	**Pernaja**	**3.47**	**34**	P	**Pn**	**22 17 00.4**	**+1.7**
OSTU	**Oestervaala**	**3.52**	**317**	*e*P	**Pn**	**22 17 00.8**	**+1.3**
OSTU	**Oestervaala**	**3.52**	**317**	P	**Pn**	**22 17 00.7**	**+1.3**
EKSU	**Eksjoe**	**3.56**	**270**	*e*P	**Pn**	**22 17 01.5**	**+1.5**
EKSU	**Eksjoe**	**3.56**	**270**	P	**Pn**	**22 17 01.5**	**+1.5**
BLEU	**Blekinge**	**3.63**	**249**	*e*P	**Pn**	**22 17 02.1**	**+1.1**
BLEU	**Blekinge**	**3.63**	**249**	P	**Pn**	**22 17 02.1**	**+1.1**
VXJU	**Vaexsjoe**	**3.87**	**261**	*e*P	**Pn**	**22 17 05.8**	**+1.5**
VXJU	**Vaexsjoe**	**3.87**	**261**	P	**Pn**	**22 17 05.8**	**+1.5**
ASKU	**Askersund**	**3.91**	**290**	*e*P	**Pn**	**22 17 07.0**	**+2.1**
ASKU	**Askersund**	**3.91**	**290**	P	**Pn**	**22 17 07.0**	**+2.1**
NRAU	**Nora**	**4.03**	**300**	*e*P	**Pn**	**22 17 08.1**	**+1.5**
NRAU	**Nora**	**4.03**	**300**	P	**Pn**	**22 17 08.0**	**+1.5**
VJF	**Virojoki**	**4.04**	**44**	*e*P	**Pn**	**22 17 06.5**	**0.0**
VJF				*e*SG	**Sb**	**22 18 09.1**	**+4.2**
VJF				MSG		22 18 13.1	
	comp=Z,4.7nm,0.1s						
VJF	**Virojoki**	**4.04**	**44**	P	**Pn**	**22 17 06.5**	**0.0**
VJF				Sg	**Sb**	**22 18 09.0**	**+4.2**
FALU	**Falun**	**4.18**	**314**	*e*P	**Pn**	**22 17 09.5**	**+1.0**
FALU	**Falun**	**4.18**	**314**	P	**Pn**	**22 17 09.5**	**+1.0**
FIA0	**FINESS Array S**	**4.27**	**28**	Pn	**Pn**	**22 17 11.1**	**+1.3**
	baz=211,slow=12						
FIA0				Pg	**Pb**	**22 17 19.7**	**+0.2**
	baz=206,slow=16						
FIA0				Sn	**Sn**	**22 18 01.0**	**+0.7**
	baz=210,slow=22						
FIA0				Lg	Lg	22 18 16.5	
	baz=211,slow=28						
FIA0	**FINESS Array S**	**4.27**	**28**	Pn	**Pn**	**22 17 11.1**	**+1.3**
	baz=211,slow=12						
FIA0				Pg	**Pb**	**22 17 19.7**	**+0.2**
	baz=206,slow=16						
FIA0				Sn	**Sn**	**22 18 01.0**	**+0.7**
	baz=210,slow=22						
FIA0				Lg	Lg	22 18 16.5	
	baz=211,slow=28						
FIA0	**FINESS Array S**	**4.27**	**28**	*e*SG	**Sg**	**22 18 17.7**	**-3.0**
FIA0				MSG		22 18 19.4	
	comp=Z,3.6nm,0.1s						
FIA0	**FINESS Array S**	**4.27**	**28**	Pn	**Pn**	**22 17 11.1**	**+1.3**
	baz=211,slow=12,SNR=50						
FIA0				Sn	**Sn**	**22 18 01.0**	**+0.7**
	baz=210,slow=19,SNR=50						
FIA0				Lg	Lg	22 18 16.5	
	baz=211,slow=26,SNR=7.4						
FIA0				Sg	**Sg**	**22 18 17.7**	**-3.0**
FINES	**FINESS Array B**	**4.27**	**28**	Pn	**Pn**	**22 17 11.1**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=208,slow=14,SNR=34						
FINES				Pg	**Pb**	**22 17 20.2**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=212,slow=15,SNR=20						
FINES				Sn	**Sn**	**22 18 01.7**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=206,slow=16,SNR=5.2						
FINES				Lg	Lg	22 18 15.6	
	comp=Z,1.6nm,0.3s,baz=232,slow=27,SNR=16						
FKPU	**Falk**	**4.39**	**279**	P	**Pn**	**22 17 12.8**	**+1.4**
GNOU	**Gnosjoe**	**4.42**	**268**	*e*P	**Pn**	**22 17 13.6**	**+1.7**
GNOU	**Gnosjoe**	**4.42**	**268**	P	**Pn**	**22 17 13.6**	**+1.7**
DEL	**Delary**	**4.57**	**257**	*e*P	**Pn**	**22 17 15.4**	**+1.5**
DEL	**Delary**	**4.57**	**257**	P	**Pn**	**22 17 15.4**	**+1.5**
ARNU	**Arnoeviken**	**4.58**	**332**	*e*P	**Pn**	**22 17 14.5**	**+0.5**
ARNU	**Arnoeviken**	**4.58**	**332**	P	**Pn**	**22 17 14.5**	**+0.5**
HUDU	**Hudiksvall**	**4.69**	**331**	*e*P	**Pn**	**22 17 16.1**	**+0.7**
HUDU	**Hudiksvall**	**4.69**	**331**	P	**Pn**	**22 17 16.1**	**+0.7**
BSD	**Bornholm Skovb**	**4.70**	**239**	*i* P	**Pn**	**22 17 15.8**	**+0.2**
BSD				*i* S	**Sn**	**22 18 10.2**	**-0.5**
BSD	**Bornholm Skovb**	**4.70**	**239**	*i* P	**Pn**	**22 17 15.8**	**+0.2**
	SNR=49						
BSD				*i* S	**Sn**	**22 18 10.2**	**-0.5**
NASU	**Vaermlandsnaes**	**4.75**	**288**	*e*P	**Pn**	**22 17 18.0**	**+1.6**
NASU	**Vaermlandsnaes**	**4.75**	**288**	P	**Pn**	**22 17 18.0**	**+1.6**
ROTU	**Roteberg**	**4.82**	**323**	*e*P	**Pn**	**22 17 17.9**	**+0.6**
ROTU	**Roteberg**	**4.82**	**323**	P	**Pn**	**22 17 17.9**	**+0.6**
HFS	**Hagfors**	**4.89**	**303**	Pn	**Pn**	**22 17 19.5**	**+1.2**
	baz=133,slow=14						
HFS				Sn	**Sn**	**22 18 15.7**	**+0.1**
	baz=112,slow=28						
HFS				Lg	Lg	22 18 36.5	
	baz=105,slow=28						
HFS	**Hagfors**	**4.89**	**303**	Pn	**Pn**	**22 17 19.5**	**+1.2**
	baz=133,slow=14						
HFS				Sn	**Sn**	**22 18 15.7**	**+0.1**
	baz=112,slow=28						
HFS				Lg	Lg	22 18 36.5	
	baz=105,slow=28						
HFS	**Hagfors**	**4.89**	**303**	Pn	**Pn**	**22 17 19.5**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=122,slow=13,SNR=60						
HFS				Sn	**Sn**	**22 18 16.6**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=113,slow=26,SNR=5.7						
HFS				Lg	Lg	22 18 35.2	
	comp=Z,0.6nm,0.3s,baz=128,slow=20,SNR=4.7						
HFS	**Hagfors**	**4.89**	**303**	Pn	**Pn**	**22 17 19.5**	**+1.2**
	baz=133,slow=13,SNR=50						
HFS				Sn	**Sn**	**22 18 15.6**	**+0.1**
	baz=112,slow=27,SNR=50						
HFS				Lg	Lg	22 18 36.5	
	baz=105,slow=25,SNR=4.9						
UDD	**Uddeholm**	**4.91**	**302**	*e*P	**Pn**	**22 17 19.8**	**+1.3**
UDD	**Uddeholm**	**4.91**	**302**	P	**Pn**	**22 17 19.8**	**+1.3**
BORU	**Boraas**	**4.91**	**273**	*e*P	**Pn**	**22 17 20.4**	**+1.8**
BORU	**Boraas**	**4.91**	**273**	P	**Pn**	**22 17 20.3**	**+1.8**
FABU	**Falkenberg**	**5.04**	**265**	*e*P	**Pn**	**22 17 21.9**	**+1.6**
FABU	**Falkenberg**	**5.04**	**265**	P	**Pn**	**22 17 21.9**	**+1.6**
LUNU	**Lund**	**5.13**	**249**	P	**Pn**	**22 17 21.7**	**+0.2**
HASU	**Hassela**	**5.17**	**331**	*e*P	**Pn**	**22 17 22.6**	**+0.5**
HASU	**Hassela**	**5.17**	**331**	P	**Pn**	**22 17 22.6**	**+0.5**
FINU	**Finntorp**	**5.21**	**293**	*e*P	**Pn**	**22 17 24.3**	**+1.6**
FINU	**Finntorp**	**5.21**	**293**	P	**Pn**	**22 17 24.3**	**+1.6**
VANU	**Vaenersborg**	**5.28**	**282**	*e*P	**Pn**	**22 17 24.4**	**+0.8**
VANU	**Vaenersborg**	**5.28**	**282**	P	**Pn**	**22 17 24.4**	**+0.8**
HEMU	**Hemsoen**	**5.32**	**340**	*e*P	**Pn**	**22 17 24.9**	**+0.9**
HEMU	**Hemsoen**	**5.32**	**340**	P	**Pn**	**22 17 25.0**	**+0.9**
VAF	**Ylistaro**	**5.33**	**4**	*e*P	**Pn**	**22 17 25.6**	**+1.2**
VAF				*e*SG	**Sb**	**22 18 47.4**	**+5.4**
VAF	**Ylistaro**	**5.33**	**4**	P	**Pn**	**22 17 25.5**	**+1.2**
TJOU	**Tjoern**	**5.50**	**277**	*e*P	**Pn**	**22 17 27.2**	**+0.6**
TJOU	**Tjoern**	**5.50**	**277**	P	**Pn**	**22 17 27.2**	**+0.6**
STRU	**Stroemstad**	**5.79**	**287**	*e*P	**Pn**	**22 17 31.5**	**+0.8**
STRU	**Stroemstad**	**5.79**	**287**	P	**Pn**	**22 17 31.5**	**+0.8**
NB2	**NORSAR Subarra**	**6.39**	**306**	Pn	**Pn**	**22 17 38.8**	**-0.1**
	baz=125,slow=14						
NB2				Lg	Lg	22 19 23.9	
	baz=115,slow=37						
NB2	**NORSAR Subarra**	**6.39**	**306**	Pn	**Pn**	**22 17 38.8**	**-0.1**
	baz=125,slow=14						
NB2				Lg	Lg	22 19 23.9	
	baz=115,slow=37						
NB2	**NORSAR Subarra**	**6.39**	**306**	Pn	**Pn**	**22 17 38.8**	**-0.1**
	baz=125,slow=12,SNR=50						
NB2				Lg	Lg	22 19 24.0	
	baz=115,slow=35,SNR=3.4						
NOA	**NORSAR Array B**	**6.39**	**306**	Pn	**Pn**	**22 17 38.4**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=7.5,slow=13,SNR=8.5						
NOA				Sn	**Sn**	**22 18 50.7**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=166,slow=8.1,SNR=1.4						
NOA				Lg	Lg	22 19 26.3	
	comp=Z,0.6nm,0.3s,baz=130,slow=10,SNR=5.3						
ARA0	**ARCESS Array S**	**11.95**	**6**	Pn	**Pn**	22 18 51.9	-3.0
	baz=186,slow=14						
ARA0	**ARCESS Array S**	**11.95**	**6**	P	Pn	22 18 51.9	-3.0
	baz=186,slow=14						
ARCES	**ARCESS Array B**	**11.95**	**6**	Pn	Pn	22 18 51.6	-3.2
	comp=Z,0.1nm,0.3s,baz=185,slow=13,SNR=7.9						
SPA0	**Spitsbergen Ar**	**20.62**	**357**	P	**P**	**22 20 41.3**	**-2.7**
	baz=172,slow=18						
SPA0	**Spitsbergen Ar**	**20.62**	**357**	P	**P**	**22 20 41.3**	**-2.7**
	baz=172,slow=18						

CSEM **17** *22:25:21.9, 42.29N×13.49E, h10km, MD2.2/8, After ROM*

ROM 17 22:25:21.9±0.1, 42.29N×13.49E, h10km, Md2.2/8, MI1.4/7, Error ellipse: s-maj=1.1km s-min=0.9km az=61.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.07**	**107**	Pg	Pg	22 25 24.4	+0.2
FAGN				Sg	Sg	22 25 26.1	+0.3
	606nm,0.2s						
FAGN	**Fagnano**	**0.07**	**107**	Pg	Pg	22 25 24.4	+0.2
FAGN				Sg	Sg	22 25 26.1	+0.3
	606nm,0.2s						
AQU	**L'Aquila**	**0.09**	**316**	Pg	Pg	22 25 25.0	+0.5
AQU				Sg	Sg	22 25 26.9	+0.6
	177nm,0.6s						
AQU	**L'Aquila**	**0.09**	**316**	Pg	Pg	22 25 25.0	+0.5
AQU				Sg	Sg	22 25 26.9	+0.6
	177nm,0.6s						
CAMP	**Campotosto**	**0.26**	**346**	Pg	Pg	22 25 27.7	+0.4
CAMP				Sg	Sb	22 25 32.3	-1.2
	25nm,0.7s						
CAMP	**Campotosto**	**0.26**	**346**	Pg	Pg	22 25 27.7	+0.4
CAMP				Sg	Sb	22 25 32.3	-1.2
	25nm,0.7s						
PTQR	**Pietraquaria**	**0.27**	**194**	Pg	Pg	22 25 28.0	+0.5
PTQR				Sg	Sb	22 25 33.2	-0.7
	9.0nm,0.3s						
PTQR	**Pietraquaria**	**0.27**	**194**	Pg	Pg	22 25 28.0	+0.5
PTQR				Sg	Sb	22 25 33.2	-0.7
	9.0nm,0.3s						
FIAM	**Fiamignano**	**0.28**	**266**	Pg	Pg	22 25 28.1	+0.4
FIAM				Sg	Sb	22 25 32.8	-1.3
	35nm,0.6s						
FIAM	**Fiamignano**	**0.28**	**266**	Pg	Pg	22 25 28.1	+0.4
FIAM				Sg	Sb	22 25 32.8	-1.3
	35nm,0.6s						
VCEL	**Villa Celiera**	**0.28**	**67**	Pg	Pb	22 25 28.9	-0.4
VCEL				Sg	Sb	22 25 33.3	-0.9
	92nm,0.3s						
VCEL	**Villa Celiera**	**0.28**	**67**	Pg	Pb	22 25 28.9	-0.4
VCEL				Sg	Sb	22 25 33.3	-0.9
	92nm,0.3s						
TERO	**Teramo**	**0.35**	**14**	Pg	Pg	22 25 29.2	+0.3
TERO				Sg	Sb	22 25 34.9	-1.0
	29nm,0.2s						
TERO	**Teramo**	**0.35**	**14**	Pg	Pg	22 25 29.2	+0.3
TERO				Sg	Sb	22 25 34.9	-1.0
	29nm,0.2s						
VVLD	**Villa Vallelon**	**0.43**	**167**	Pg	Pg	22 25 30.5	+0.1
VVLD				Sg	Sb	22 25 37.8	-0.5
	17nm,0.5s						
VVLD	**Villa Vallelon**	**0.43**	**167**	Pg	Pg	22 25 30.5	+0.1
VVLD				Sg	Sb	22 25 37.8	-0.5
	17nm,0.5s						

ISCJB **17** *22:26:38.9±0.8, 37.50N±0.10×36.10E±0.04, h15km, Error ellipse: s-maj=14.0km s-min=4.9km az=177.2*
ISK **17** *22:26:38.4, 37.43N×36.13E, h5km, MD2.4*
CSEM **17** *22:26:38.3±0.3, 37.64N×36.09E, h12km, MD2.8, Error ellipse: s-maj=14.2km s-min=2.0km az=166.0*
DDA **17** *22:26:43.2, 37.60N×36.39E, h7km, MD2.8*

ISC 17 22:26:38.0±3.2, 37.7N±0.3×36.09E±0.06, h15km, n8, σ0s15/14, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.22**	**109**	*i* P	**Pb**	**22 26 43.6**	**-0.1**
ANDN				*i* S	**Sb**	**22 26 47.6**	**+0.1**
ANDN	**Andirin**	**0.22**	**109**	*i* P	**Pb**	**22 26 43.6**	**-0.1**
ANDN				*i* S	**Sb**	**22 26 47.6**	**+0.1**
KOZT	**Kozan**	**0.27**	**230**	*e*PG	**Pg**	**22 26 43.8**	**0.0**
KOZT				*e*SG	**Sg**	**22 26 47.6**	**-0.1**
KOZT	**Kozan**	**0.27**	**230**	*e*Pg	**Pg**	**22 26 43.8**	**0.0**
KOZT				*e*Sg	**Sg**	**22 26 47.6**	**-0.1**
AYKD	**Aykdinkavak**	**0.62**	**112**	*i* P	**Pg**	**22 26 50.0**	**-0.1**
AYKD				*i* S	**Sg**	**22 26 58.7**	**+0.3**
KMRS	**Kahramanmaras**	**0.66**	**103**	*e*PG	**Pb**	**22 26 51.4**	**+0.1**
KMRS				*e*SG	**Sg**	**22 26 59.6**	**-0.1**
KMRS	**Kahramanmaras**	**0.66**	**103**	*e*Pg	**Pb**	**22 26 51.4**	**+0.1**
KMRS				*e*Sg	**Sg**	**22 26 59.6**	**-0.1**
SARI	**SarD1z-Kayseri**	**0.80**	**19**	*e*PG	Pn	22 26 58.0	+3.2

BJI **17** *22:39:24.1, 38.02N×22.28E, h24km, mB4.9/5, mb4.5/5, Ms4.6/2, Ms7 4.2/2*
BEO **17** *22:39:25.4±0.8, 38.02N×22.92E, h0km, ML3.9/1*
NEIC **17** *22:39:25.8, 38.12N×22.66E, h22km, mb4.5/32, ML4.2(ATH), After ATH.*
ATH **17** *22:39:25.8, 38.12N×22.66E, h22km, MD2.3/18*
ISCJB **17** *22:39:26.4±0.2, 38.11N±0.01×22.69E±0.01, h19km±2km, mb4.3/54, MS3.5/17, Error ellipse: s-maj=2.0km s-min=1.5km az=31.0*
CSEM **17** *22:39:26.2±0.1, 38.10N×22.69E, h8km, mb4.4/27, Ms3.0, Error ellipse: s-maj=2.2km s-min=1.8km az=38.0*
PDG **17** *22:39:26.1±0.4, 38.13N×22.67E, h3km±1km, ML4.0/10, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
THE **17** *22:39:26.4, 38.12N×22.68E, h2km, ML4.2/11, Error ellipse: s-maj=0.9km s-min=0.4km az=276.0*
SKO **17** *22:39:27.0, 38.22N×22.93E, h0km*
MOS **17** *22:39:28.5±1.0, 38.18N×22.79E, h33km, mb4.7/16, Error ellipse: s-maj=5.0km s-min=3.2km az=111.9*
IDC **17** *22:39:29.4±2.1, 38.15N×22.74E, h33km±16km, mb4.0/25, mb1 4.1/35, mb1mx4.0/42, mbtmp4.0/35, ML3.6/10, MS3.5/19, Ms1 3.5/19, ms1mx3.2/46, Error ellipse: s-maj=11.8km s-min=10.3km az=159.0*

ISC 17 22:39:26.3±0.3, 38.11N±0.01×22.69E±0.01, h9km±1km, n784, σ1s16/872, mb4.4/54, MS3.5/17, 28C-27D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THAL	**Thalero**	**0.07**	**198**	P	**Pg**	**22 39 28.6**	**+0.1**
THAL				S	**Sg**	**22 39 29.8**	**-0.2**
THAL	**Thalero**	**0.07**	**198**	P	**Pg**	**22 39 28.6**	**+0.1**
THAL				S	**Sg**	**22 39 29.8**	**-0.2**
LTK	**Loutraki**	**0.23**	**111**	P	**Pg**	**22 39 31.6**	**+0.5**
LTK				S	**Sg**	**22 39 35.4**	**+1.1**

DID	Didima	0.74	144	ePn	Pg	22 39 40.7	+0.1	SANT	Santorini	2.81	127	ePn	Pn	22 40 12.2	+0.8	BRY	Bratogost	5.74	328	⇓iPn	Pn	22 40 53.5	+1.7
DID				eSn	Sb	22 39 52.1	+0.5	SANT	Santorini	2.81	127	ePN	Pn	22 40 12.2	+0.8	BRY				eSn	Sn	22 41 59.4	+1.6
DID	Didima	0.74	144	ePN	Pg	22 39 40.7	+0.1	SANT	Santorini	2.81	127	ePn	Pn	22 40 12.2	+0.8	BOLS	Boljevac	5.74	355	ePn	Pn	22 40 52.4	+0.7
DID				eSN	Sb	22 39 52.1	+0.5	THR1	Thera Island	2.81	127	P	Pn	22 40 12.3	+0.9	BOLS	Boljevac	5.74	355	ePn	Pn	22 40 52.4	+0.7
DID	Didima	0.74	144	P	Pg	22 39 40.5	-0.1	THR1	Thera Island	2.81	127	P	Pn	22 40 12.3	+0.9	CDT	Castel del Mon	5.78	303	ePn	Pn	22 40 53.1	+0.9
DID				S	Sb	22 39 51.9	+0.3	GRG	Griva	2.85	356	eP	Pn	22 40 12.2	+0.2	PLE	Pljevlja	5.79	335	⇓iPn	Pn	22 40 54.2	+1.8
VLX	Vlachokerasia	0.78	199	P	Pg	22 39 41.0	-0.3	GRG	Griva	2.85	356	P	Pn	22 40 12.2	+0.2	PLE				eSn	Sn	22 42 00.1	+1.1
VLX	Vlachokerasia	0.78	199	ePn	Pg	22 39 41.0	-0.3	GRG	Griva	2.85	356	ePn	Pn	22 40 12.2	+0.2	PLE	Pljevlja	5.79	335	⇓iPn	Pn	22 40 54.2	+1.8
VLX				eSn	Sg	22 39 51.8	+0.4	GRG	Griva	2.85	356	ePN	Pn	22 40 12.2	+0.2	PLE				eSn	Sn	22 42 00.1	+1.1
VLX	Vlachokerasia	0.78	199	ePN	Pg	22 39 41.0	-0.3	GRG	Griva	2.85	356	P	Pn	22 40 12.2	+0.2	UPM	Unac-Piva	5.85	332	⇓iPn	Pn	22 40 54.5	+1.2
VLX				eSN	Sg	22 39 51.8	+0.4	FNA	Florina	2.86	340	eP	Pn	22 40 12.9	+0.8	UPM				eSn	Sn	22 42 01.8	+1.3
VLX	Vlachokerasia	0.78	199	P	Pg	22 39 41.0	-0.3	FNA	Florina	2.86	340	P	Pn	22 40 12.8	+0.7	UPM	Unac-Piva	5.85	332	⇓iPn	Pn	22 40 54.5	+1.2
VLX				S	Sg	22 39 51.8	+0.4	FNA	Florina	2.86	340	ePn	Pn	22 40 12.9	+0.8	UPM				eSn	Sn	22 42 01.8	+1.3
ATH	Athens Observa	0.82	99	eP	Pb	22 39 42.6	-0.1	FNA	Florina	2.86	340	ePN	Pn	22 40 12.9	+0.8	ALT	Altintas	5.89	78	eP	Pn	22 40 55.1	+1.3
ATH				e		22 39 53.9		FNA	Florina	2.86	340	P	Pn	22 40 12.8	+0.7	ELL	Elmali	5.90	101	eP	Pn	22 40 56.2	+2.2
ATH	Athens Observa	0.82	99	P	Pg	22 39 42.1	0.0	KARN	Karanos	2.88	160	P	Pn	22 40 12.9	+0.6	CAVI	Cavuskoy	5.94	67	eP	Pn	22 40 55.6	+1.2
ATH				S	Sb	22 39 54.2	+0.3	KARN	Karanos	2.88	160	ePN	Pn	22 40 12.9	+0.6	ADVT	Abdulvahap	5.94	65	eP	Pn	22 40 55.9	+1.5
ATH	Athens Observa	0.82	99	ePn	Pb	22 39 42.6	-0.1	KARN	Karanos	2.88	160	P	Pn	22 40 12.9	+0.6	GRUS	Gruza	5.96	346	ePn	Pn	22 40 56.8	+2.1
ATH				eSn	Sb	22 39 53.9	0.0	KBN	Korca	2.91	330	i PN	Pg	22 40 21.5	-0.6	GRUS	Gruza	5.96	346	ePn	Pn	22 40 56.8	+2.1
ATH	Athens Observa	0.82	99	ePN	Pb	22 39 42.6	-0.1	VAM	Vamos	2.96	155	P	Pn	22 40 13.7	+0.3	HRT	Hereke	6.04	61	eP	Pn	22 40 57.3	+1.5
ATH				eSN	Sb	22 39 53.9	0.0	VAM	Vamos	2.96	155	P	Pn	22 40 13.7	+0.3	STON	Ston	6.09	323	ePn	Pn	22 40 55.4	-1.0
ATH	Athens Observa	0.82	99	P	Pg	22 39 42.1	0.0	PRK	Paraskevi	3.02	67	eP	Pn	22 40 14.2	-0.1	STON				Sn	Sn	22 42 03.0	-3.2
ATH	Athens Observa	0.82	99	ePn	Pb	22 39 42.6	-0.1	PRK	Paraskevi	3.02	67	P	Pn	22 40 14.3	-0.1	STON	Ston	6.09	323	ePn	Pn	22 40 55.4	-1.0
ATH				eSn	Sb	22 39 53.9	0.0	PRK	Paraskevi	3.02	67	ePn	Pn	22 40 14.2	-0.1	SILT	Sile	6.17	58	eP	Pn	22 40 58.6	+1.1
ATH				S	Sb	22 39 54.2	+0.3	PRK	Paraskevi	3.02	67	ePN	Pn	22 40 14.2	-0.1	ISP	Isparta	6.19	90	eP	Pn	22 41 00.8	+2.8
SMIA	Simia	0.87	28	P	Pg	22 39 41.9	-1.2	PRK	Paraskevi	3.02	67	P	Pn	22 40 14.3	-0.1	ISP	Isparta	6.19	90	eP	Pn	22 40 59.5	+1.5
SMIA	Simia	0.87	28	P	Pg	22 39 41.9	-1.2	KNT	Kendrikon	3.05	3	P	Pn	22 40 15.8	+1.0	ISP	Isparta	6.19	90	ePn	Pn	22 40 59.5	+1.5
MRKA	Markates	0.92	49	P	Pg	22 39 42.9	-1.2	KNT	Kendrikon	3.05	3	P	Pn	22 40 15.8	+1.0	ISP				eSg	Sg	22 42 45.7	+0.6
MRKA	Markates	0.92	49	P	Pg	22 39 42.9	-1.2	SRS	Serrai	3.08	13	P	Pn	22 40 15.2	0.0	ISP	Isparta	6.19	90	⇓iP	Pn	22 41 00.6	+2.6
PTL	Penteli	0.93	93	P	Pg	22 39 44.4	+0.3	SRS	Serrai	3.08	13	P	Pn	22 40 15.2	0.0	ISP	Isparta	6.19	90	eP	Pn	22 40 59.5	+1.5
PTL				S	Sb	22 39 58.0	+1.0	BIA	Bitola	3.09	340	ePn	Pn	22 40 17.2	+1.8	ISP				eSg	Sg	22 42 45.7	+0.6
PTL	Penteli	0.93	93	ePn	Pb	22 39 44.7	+0.1	BIA	Bitola	3.09	340	ePn	Pn	22 40 17.1	+1.8	SHUT	Suhut-Afyon	6.20	83	eP	Pn	22 40 59.5	+1.7
PTL	Penteli	0.93	93	ePN	Pb	22 39 44.7	+0.1	VAY	Valandovo	3.21	358	P	Pn	22 40 17.3	+0.4	SVIS	Svilajnac	6.25	350	ePn	Pn	22 40 59.5	+0.8
PTL	Penteli	0.93	93	P	Pg	22 39 44.4	+0.3	VAY	Valandovo	3.21	358	ePn	Pn	22 40 17.3	+0.4	SVIS				eSn	Sn	22 42 11.2	+1.0
PTL	Penteli	0.93	93	ePn	Pb	22 39 44.7	+0.1	VAY				eSn	Sn	22 40 54.8	-0.4	BBLS	Lazići	6.27	338	⇑iPn	Pn	22 40 59.5	+0.6
PTL				S	Sb	22 39 58.0	+1.0	VAY	Valandovo	3.21	358	P	Pn	22 40 17.3	+0.4	BBLS				eSn	Sn	22 42 11.0	+0.3
AGG	Agios Georgios	0.95	343	eP	Pg	22 39 43.9	-0.8	VAY	Valandovo	3.21	358	ePn	Pn	22 40 17.8	+0.9	BBLS	Lazići	6.27	338	⇑iPn	Pn	22 40 59.5	+0.6
AGG				e		22 39 57.0		VAY				eSn	Sn	22 40 55.3	+0.1	BBLS				eSn	Sn	22 42 11.0	+0.3
AGG	Agios Georgios	0.95	343	P	Pg	22 39 43.4	-1.3	IDI	Anoyia	3.32	147	P	Pn	22 40 19.0	+0.5	MS1	Monte Sant'Ang	6.31	307	ePn	Pn	22 40 58.5	-1.1
AGG				S	Sb	22 39 58.1	+0.3	IDI	Anoyia	3.32	147	ePn	Pn	22 40 18.7	+0.2	DIVS	Divibare	6.32	342	⇑iPn	Pn	22 41 00.1	+0.4
AGG	Agios Georgios	0.95	343	ePn	Pg	22 39 43.9	-0.8	IDI	Anoyia	3.32	147	ePN	Pn	22 40 18.7	+0.2	DIVS	Divibare	6.32	342	⇑iPn	Pn	22 41 00.1	+0.4
AGG				eSn	Sg	22 39 57.0	-0.1	IDI	Anoyia	3.32	147	ePn	Pn	22 40 18.7	+0.2	SPNC	Sapanca-Adapaz	6.43	64	eP	Pn	22 41 03.2	+2.0
AGG	Agios Georgios	0.95	343	ePN	Pg	22 39 43.9	-0.8	IDI	Anoyia	3.32	147	P	Pn	22 40 19.0	+0.5	ANTB	Antalya	6.44	98	eP	Pn	22 41 04.0	+2.7
AGG				eSN	Sg	22 39 57.0	-0.1	NVR	Nevrokopi	3.36	15	P	Pn	22 40 19.0	0.0	GULT	Gulveren	6.50	67	eP	Pn	22 41 03.5	+1.4
AGG	Agios Georgios	0.95	343	P	Pg	22 39 43.4	-1.3	NVR	Nevrokopi	3.36	15	ePn	Pn	22 40 19.2	+0.2	HUMR	Humele	6.64	14	⇓iP	Pn	22 41 05.1	+1.1
AGG	Agios Georgios	0.95	343	ePn	Pg	22 39 43.9	-0.8	NVR	Nevrokopi	3.36	15	ePN	Pn	22 40 19.2	+0.2	TEKS	Tekeris	6.86	341	⇑iPn	Pn	22 41 09.2	+2.1
AGG				eSn	Sg	22 39 57.0	-0.1	NVR	Nevrokopi	3.36	15	ePn	Pn	22 40 19.2	+0.2	TEKS	Tekeris	6.86	341	⇑iPn	Pn	22 41 09.2	+2.1
AGG				S	Sb	22 39 58.1	+0.3	VLO	Vlora	3.42	315	i PN	Pn	22 40 21.3	+1.5	MDUB	Mudurnu	7.01	68	eP	Pn	22 41 10.4	+1.2
RLS	Riolos of Patr	0.97	267	P	Pg	22 39 43.7	-1.2	VLO	Vlora	3.42	315	i Pn	Pn	22 40 21.3	+1.5	SVRH	Sivrihisar-ESK	7.03	76	eP	Pn	22 41 10.4	+0.9
RLS	Riolos of Patr	0.97	267	ePn	Pg	22 39 43.8	-1.2	BLCB	Balcova	3.44	84	eP	Pn	22 40 21.0	+1.0	MTUR	Matau	7.33	13	⇑iP	Pn	22 41 15.8	+2.2
RLS				eSn	Sb	22 39 57.8	-0.3	GVD	Gavdhos	3.45	161	ePn	Pn	22 40 23.2	+3.0	FGSL	Fruska Gora	7.37	344	ePn	Pn	22 41 15.1	+1.1
RLS	Riolos of Patr	0.97	267	ePN	Pg	22 39 43.8	-1.2	GVD	Gavdhos	3.45	161	ePn	Pn	22 40 23.2	+3.0	FRGS	Fruska Gora	7.37	344	ePn	Pn	22 41 15.1	+1.1
RLS				eSN	Sb	22 39 57.8	-0.3	SIVA	Sivas	3.52	150	P	Pn	22 40 22.8	+1.6	LOT	Lotru	7.38	6	⇑iP	Pn	22 41 14.5	+0.3
RLS	Riolos of Patr	0.97	267	P	Pg	22 39 43.7	-1.2	SIVA	Sivas	3.52	150	P	Pn	22 40 22.8	+1.6	ARR	Arges	7.40	11	⇑iP	Pn	22 41 15.3	+0.8
RLS				eSn	Sb	22 39 57.8	-0.3	IZM	Izmir	3.61	84	eP	Pn	22 40 23.5	+1.1	BZS	Buzias	7.54	354	⇓iP	Pn	22 41 16.8	+0.4
MAKR	Makrakomi, Fth	1.00	334	P	Pg	22 39 44.4	-1.2	LAST	Lasithi	3.70	142	P	Pn	22 40 24.5	+0.8	ISR	Istrita	7.57	21	⇑iP	Pn	22 41 19.6	+2.7
MAKR	Makrakomi, Fth	1.00	334	P	Pg	22 39 44.4	-1.2	LAST	Lasithi	3.70	142	ePn	Pn	22 40 24.7	+1.0	LADK	Ladik-KONYA	7.62	86	eP	Pn	22 41 19.3	+1.7
EVR	Evrytania	1.06	320	P	Pg	22 39 46.2	-0.6	LAST	Lasithi	3.70	142	ePN	Pn	22 40 24.7	+1.0	TIRR	Tirgusor	7.67	32	eP	Pn	22 41 17.9	-0.2
EVR				S	Sb	22 40 01.3	+0.3	LAST	Lasithi	3.70	142	P	Pn	22 40 24.5	+0.8	TIRR				e		22 42 42.9	
EVR	Evrytania	1.06	320	ePn	Pg	22 39 46.1	-0.7	GELI	Tayfur-Gelibol	3.72	51	eP	Pn	22 40 24.1	+0.2	TIRR	Tirgusor	7.67	32	ePn	Pn	22 41 17.9	-0.2
EVR	Evrytania	1.06	320	ePN	Pg	22 39 46.1	-0.7	ENEZ	Enez	3.75	45	eP	Pn	22 40 25.0	+0.7	TIRR				eSn	Sn	22 42 42.9	-2.1
EVR	Evrytania	1.06	320	P	Pg	22 39 46.2	-0.6	BODT	Bodrum	3.81	104	eP	Pn	22 40 26.6	+1.4	TIRR	Tirgusor	7.67	32	⇓iP	Pn	22 41 18.7	+0.6
EVR				S	Sb	22 40 01.3	+0.3	LPK	Lapseki	3.88	53	eP	Pn	22 40 26.6	+0.4	TIRR	Tirgusor	7.67	32	eP	Pn	22 41 17.9	-0.2
ITM	Ithomi	1.11	213	P	Pg	22 39 46.8	-0.9	TIR	Tirane	3.90	327	i PN	Pn	22 40 27.3	+0.9	MLR	Muntele Rosu	7.76	17	Pn	Pn	22 41 20.7	+1.1
ITM	Ithomi	1.11	213	ePn	Pg	22 39 46.7	-0.9	TIR	Tirane	3.90	327	eP	Pn	22 40 27.8	+1.4	MLR				Sn	Sn	22 42 47.3	-0.4
ITM	Ithomi	1.11	213	ePN	Pg	22 39 46.7	-0.9	TIR						22 41 13.1		MLR	Muntele Rosu	7.76	17	⇑iP	Pn	22 41 20.7	+1.1
ITM	Ithomi	1.11	213	P	Pg	22 39 46.8	-0.9	TIR	Tirane	3.90	327	ePn	Pn	22 40 27.8	+1.4	MLR	Muntele Rosu	7.76	17	Pn	Pn	22 41 20.7	+1.1
SKIA	Skiathos	1.22	30	P	Pg	22 39 49.1	-0.6	TIR				Sn	Sn	22 41 13.1	+0.8	MLR				0.3nm,0.3s,baz=235,slow=5.7,SNR=42 Sn	Sn	22 42 47.3	-0.4
SKIA	Skiathos	1.22	30	P	Pg	22 39 49.1	-0.6	TIR	Tirane	3.90	327	eSn	Sn	22 41 17.4	+5.1	MLR				baz=288,slow=20,SNR=0.9 LR	LR	22 44 40.6	
NEO	Neokhori	1.27	19	ePn	Pg	22 39 49.7	-0.9	TIR	Tirane	3.90	327	eP	Pn	22 40 27.8	+1.4	MLR				comp=Z,118nm,20.2s,baz=186,slow=40 LR	LR	22 44 40.6	
NEO	Neokhori	1.27	19	ePN	Pg	22 39 49.7	-0.9	TIR				S	Sn	22 41 13.1	+0.8	MLR	Muntele Rosu	7.76	17	P	Pn	22 41 20.7	+1.1
NEO	Neokhori	1.27	19	ePn	Pg	22 39 49.7	-0.9	ERIK	Erikli-Kesan	3.91	48	eP	Pn	22 40 27.1	+0.5	MLR				S	Sg	22 44 07.1	+2.1
XOR	Xorichti	1.31	17	P	Pg	22 39 50.5	-1.1	PHP	Peshkopia	3.97	335	i PN	Pn	22 40 31.1	+3.7	DOPR	Dopca	8.11	13	⇓iP	Pn	22 41 26.1	+2.0
XOR	Xorichti	1.31	17	P	Pg	22 39 50.5	-1.1	PHP	Peshkopia	3.97	335	P	Pn	22 40 28.3	+0.9	CFR	Carcaliu	8.15	28	⇑iP	Pn	22 41 25.3	+0.6
MRMA	Marmari	1.33	92	P	Pg	22 39 51.3	-0.6	PHP	Peshkopia	3.97	335	P	Pn	22 40 28.3	+0.9	AFSR	Af`ar-Bala (A	8.22	77	eP	Pn	22 41 26.0	+0.3
MRMA	Marmari	1.33	92	P	Pg	22 39 51.3	-0.6	PHP	Peshkopia	3.97	335	i Pn	Pn	22 40 31.1	+3.7	AQU	L'Aquila	8.27	304	ePn	Pn	22 41 25.2	-1.3
DYR	Agios Nikonas	1.37	192	P	Pn	22 39 51.4	-0.3	SKO	Skopje	3.98	346	ePn	Pn	22 40 27.6	+0.1	AQU				eSn	Sn	22 42 58.9	-1.1
DYR	Agios Nikonas	1.37	192	ePN	Pn	22 39 51.4	-0.3	SKO				eSn	Sn	22 41 16.2	+2.0	AQU	L'Aquila	8.27	304	⇓iP	Pn	22 41 26.2	+0.3
DYR	Agios Nikonas	1.37	192	P	Pn	22 39 51.4	-0.3	SKO	Skopje	3.98	346	ePn	Pn	22 40 27.6	+0.1	AQU	L'Aquila	8.27	304	eP	Pn	22 41 25.2	-1.3
DYR				S	Sg	22 40 10.5	0.0	SKO				eSn	Sn	22 41 16.2	+2.0	AQU				eS	Sn	22 42 58.9	-1.1
VLI	Veliai	1.40	172	P	Pn	22 39 51.9	-0.1	AKS	Akhisar	4.09	78	eP	Pn	22 40 30.3	+1.3	PLOR	Plostina	8.28	20	⇓iP	Pn	22 41 28.2	+1.7
VLI	Veliai	1.40	172	ePn	Pn	22 39 52.1	+0.1	MLSB	Milas	4.11	100	eP	Pn	22 40 30.6	+1.3	VRI	Vrincioaia	8.31	20	⇑iP	Pn	22 41 29.5	+2.5
VLI	Veliai	1.40	172	ePN	Pn	22 39 52.1	+0.1	KRBG	Karabiga-Canak	4.24	56	eP	Pn	22 40 32.6	+1.6	PETR	Petresti	8.32	23	⇑iP	Pn	22 41 30.1	+3.0
VLI	Veliai	1.40	172	ePn	Pn	22 39 52.1	+0.1	PLD	Plovdiv	4.28	20	P	Pn	22 40 32.6	+1.0	PKSM	Moragy	8.64	341	⇑iP	Pn	22 41 31.4	0.0
AOS	Alonnisos	1.41	41	P	Pn	22 39 51.5	-0.7	PLD	Plovdiv	4.28	20	P	Pn	22 40 32.6	+1.0	PKSM	Moragy	8.64	341	⇓ePn	Pn	22 41 31.1	-0.3
AOS	Alonnisos	1.41	41	ePN	Pn	22 39 51.5	-0.7	BALB	Balikesir	4.33	68	eP	Pn	22 40 33.2	+1.0	DRGR		8.68	0	⇑iP	Pn	22 41 33.4	+1.4
AOS	Alonnisos	1.41	41	ePn	Pn	22 39 51.5	-0.7	GONE	Gonen-Balikesi	4.34	62	eP	Pn	22 40 33.0	+0.6	BR131	Keskin Array S	8.69	76	ePn	Pn	22 41 33.4	+1.2
PYL	PYLOS	1.43	212	P	Pn	22 39 52.5	+0.2	PUK	Puka	4.48	332	i PN	Pn	22 40 37.3	+2.9		2.2nm,0.5s						
PYL	PYLOS	1.43	212	ePn	Pn	22 39 52.6	+0.2	PUK	Puka	4.48	332	i Pn	Pn	22 40 37.3	+2.9	BR131				S	Sg	22 44 07.1	+2.1
PYL	PYLOS	1.43	212	ePN	Pn	22 39 52.6	+0.2	VTS	Vitosha	4.50	5	P	Pn	22 40 35.6	+0.9	BR131	Keskin Array S	8.69	76	ePn	Pn	22 41 33.4	+1.2
PYL	PYLOS	1.43	212	P	Pn	22 39 51.8	-0.6	VTS	Vitosha	4.50	5	ePn	Pn	22 40 35.9	+1.2		2.2nm,0.5s						
PYL	PYLOS	1.43	212	ePn	Pn	22 39 52.6	+0.2	VTS				eSn	Sn	22 41 27.2	0.0	BRTR	Keskin Array B	8.69	76	Pn	Pn	22 41 34.2	+2.0
PYL				S	Sn	22 40 12.8	+1.5	VTS	Vitosha	4.50	5	⇓iP	Pn	22 40 36.0	+1.2	BRTR	Keskin Array B	8.69	76	Pn	Pn	22 41 34.2	+2.0
KFL	Anninata	1.50	271	P	Pb	22 39 54.3	-0.1	VTS	Vitosha	4.50	5	P	Pn	22 40 35.6	+0.9		0.5nm,0.3s,baz=258,slow=12,SNR=22						
KFL	Anninata	1.50	271	P	Pn	22 39 54.0	+0.6	VTS	Vitosha	4.50	5	ePn	Pn	22 40 35.9	+1.2	BRTR	Keskin Array B	8.69	76	P	Pn	22 41 34.2	+2.0
THL	Klokotos Trika	1.55	340	P	Pn	22 39 54.3	+0.3	VTS				eSn	Sn	22 41 27.2	0.0	NVLJ	Novalja	8.73	320	ePn	Pn	22 41 31.2	-1.4
THL				S	Sg	22 40 15.6	-0.5	YER	Yerkesik	4.54	101	eP	Pn	22 40 37.3	+2.0	NVLJ				Sn	Sn	22 43 06.5	-4.5
THL	Klokotos Trika	1.55	340	ePn	Pn	22 39 54.1	+0.1	MRMT	Marmara Adasi	4.54	55	eP	Pn	22 40 36.2	+0.9	NVLJ	Novalja	8.73	320	ePn	Pn	22 41 31.2	-1.4
THL	Klokotos Trika	1.55	340	ePN	Pn	22 39 54.1	+0.1	ULC	Ulcinj	4.67	327	⇑iPn	Pn	22 40 38.9	+1.9	TESR	Tescani	8.89	18	⇑iP	Pn	22 41 37.2	+2.3
THL	Klokotos Trika	1.55	340	ePn	Pn	22 39 54.1	+0.1	ULC				eSn	Sn	22 41 33.6	+2.3	CSS	Prodhromos	9.12	107	Pn	Pn	22 41 39.2	+1.1
THL				S	Sg	22 40 15.6	-0.5	ULC	Ulcinj	4.67	327	⇑iPn	Pn	22 40 38.9	+1.9	CSS				eSn	Sn	22 43 22.3	+1.5
VLS	Valsamata	1.66	273	eP	Pn	22 39 56.1	+0.5	ULC				eSn	Sn	22 41 33.6	+2.3	CSS	Prodhromos	9.12	107	Pn	Pn	22 41 39.2	+1.1
VLS	Valsamata	1.66	273	P	Pn	22 39 56.1	+0.5	BARS	Barje	4.75	352	ePn	Pn	22 40 38.9	+0.8	CSS				eSn	Sn	22 43 22.3	+1.5
VLS	Valsamata	1.66	273	ePn	Pn	22 39 56.1	+0.5	BARS	Barje	4.75	352	ePn	Pn	22 40 38.9	+0.8	BEHE	Becsehely	9.43	334	⇓ePn	Pn	22 41 40.8	-1.5
VLS	Valsamata	1.66	273	ePN	Pn	22 39 56.1	+0.5	TIP	Timpagrande	4.77	285	ePn	Pn	22 40 39.5	+1.1	BURAR	Bucovina Array	9.68	10	⇑iP	Pn	22 41 47.9	+2.1
VLS	Valsamata	1.66	273	P	Pn	22 39 56.1	+0.5	TIP				eSn	Sn	22 41 35.5	+1.7	BUR08	Bucovina Ar. S	9.71	10	ePn	Pn	22 41 47.3	+1.2
KYTH	Kithira	1.84	171	P	Pn	22 39 58.9	+0.7	TIP	Timpagrande	4.77	285	ePn	Pn	22 40 39.5	+1.1	BUR08	Bucovina Ar. S	9.71	10	ePn	Pn	22 41 47.3	+1.2
KYTH	Kithira	1.84	171	ePn	Pn	22 39 59.3	+1.1	TIP				eSn	Sn	22 41 35.5	+1.7	BUD	Budapest	9.75	345	⇓ePn	Pn	22 41 48.3	+1.7
KYTH	Kithira	1.84	171	ePN	Pn	22 39 59.3	+1.1	EDRB	Edirne	4.86	39	eP	Pn	22 40 41.4	+1.9	PSZ	Piszkesteto	10.02	349	eP	Pn	22 41 51.7	+1.3
KYTH	Kithira	1.84	171	P	Pn	22 39 58.9	+0.7	DST	Dursunbey	4.86	70	eP	Pn	22 40 41.1	+1.5	PSZ	Piszkesteto	10.02	349	ePn	Pn	22 41 51.7	+1.3
KYTH	Kithira	1.84	171	ePn	Pn	22 39 59.3	+1.1	KCTX	Karacabey (Bur	4.90	62	eP	Pn	22 40 41.4	+1.3	PSZ	Piszkesteto	10.02	349	⇑iP	Pn	22 41 53.2	+2.8
LIT	Litokhoron	2.00	356	eP	Pn	22 40 00.2	0.0	DALY	Dalyan (Mu`la	4.91	103	eP	Pn	22 40 42.4	+2.1	PSZ	Piszkesteto	10.02	349	⇓ePn	Pn	22 41 53.5	+3.1
LIT	Litokhoron	2.00	356	P	Pn	22 40 00.2	0.0	CRLT	Corlu	4.93	51	eP	Pn	22 40 41.6	+1.1	PSZ	Piszkesteto	10.02	349	eP	Pn	22 41 51.7	+1.3
LIT	Litokhoron	2.00	356	ePn	Pn	22 40 00.2	0.0	PVY	Plav	4.94	336	⇑iPn	Pn	22 40 42.4	+1.6	TRPA	Tarpa	10.02	359	⇑epPn	Pn	22 41 54.5	+4.2
LIT	Litokhoron	2.00	356	ePN	Pn	22 40 00.2	0.0	PVY				eSn	Sn	22 41 40.1	+1.9	VOY	Vojsko	10.26	323	ePn	Pn	22 41 54.0	+0.2
LIT	Litokhoron	2.00	356	P	Pn	22 40 00.2	0.0	PVY	Plav	4.94	336	⇑iPn	Pn	22 40 42.4	+1.6	VOY				e		22 41 56.5	
ANKY	Antikythira Is	2.29	168	ePn	Pn	22 40 04.8	+0.6	PVY				eSn	Sn	22 41 40.1	+1.9	VOY				e		22 42 07.4	
ANKY	Antikythira Is	2.29	168	ePN	Pn	22 40 04.8	+0.6	DENT	Denizli	5.03	92	eP	Pn	22 40 43.9	+1.9	VOY				eSn	Sn	22 43 44.7	-4.3
ANKY	Antikythira Is	2.29	168	ePn	Pn	22 40 05.0	+0.6	PDG	Podgorica	5.05	330	⇓iPn	Pn	22 40 43.3	+1.1	VOY				e		22 43 48.8	
KZN	Kozani	2.31	342	eP	Pn	22 40 04.7	+0.1	PDG				eSn	Sn	22 41 43.4	+2.7	UZH	Uzhgorod	10.52	359	eP	Pn	22 41 58.4	+1.2
KZN	Kozani	2.31	342	P	Pn	22 40 04.7	+0.1	TTG	Podgorica	5.05	330	⇓iPn	Pn	22 40 43.3	+1.1	UZH	Uzhgorod	10.52	359	eP	Pn	22 41 58.4	+1.2
KZN	Kozani	2.31	342	ePb	Pn	22 40 05.0	+0.4	TTG				eSn	Sn	22 41 43.4	+2.7	VYHS	Vyhne	10.75	346	eP	Pn	22 42 05.5	+5.1
KZN	Kozani	2.31	342	ePB	Pn	22 40 05.0	+0.4	BUM	Brajici-Budva	5.10	326	⇑iPn	Pn	22 40 44.3	+1.4	VYHS	Vyhne	10.75	346	ePN	Pn	22 42 05.5	+5.1
KZN	Kozani	2.31	342	P	Pn	22 40 04.7	+0.1	BUM				eSn	Sn	22 41 43.5	+1.6	KOLS	Kolonicke sedl	10.82	359	eP	Pn	22 42 04.3	+2.9
KZN	Kozani	2.31	342	ePb	Pn	22 40 05.0	+0.4	BUM	Brajici-Budva	5.10	326	⇑iPn	Pn	22 40 44.3	+1.4	KOLS	Kolonicke sedl	10.82	359	ePN	Pn	22 42 04.3	+2.9
IGT	Igoumenitsa

MMAI Mount Meron Ar 11.53 112 Pn **Pn 22 42 11.1 0.0**
comp=Z,1.3nm,0.3s,baz=315,slow=11,SNR=13
MMAI Mount Meron Ar 11.53 112 Pn **Pn 22 42 11.1 0.0**
OKC Ostrava-Krasne 12.17 346 AMS AMS 22 48 00.0
comp=Z,500nm,14.0s
TREC Trest 12.33 337 *e*P **Pn 22 42 24.4 +2.4**
TREC MLR MLR
comp=Z,300nm,17.3s
TREC Trest 12.33 337 *e*P **Pn 22 42 24.4 +2.4**
TREC AMS AMS 22 47 50.0
comp=Z,300nm,17.3s
TREC Trest 12.33 337 *e*P **Pn 22 42 24.4 +2.4**
comp=Z,300nm,17.3s
FUORN Ofenpass-Fuorn 12.51 317 *e*Pn Pn 22 42 27.6 +2.9
GEC2 GERESS Array S 12.55 332 *e*P **Pn 22 42 26.2 +1.1**
GEC2 GERESS Array S 12.55 332 *e*Pn **Pn 22 42 26.2 +1.1**
GEC2 GERESS Array S 12.55 332 *e*P **Pn 22 42 26.2 +1.1**
GERES GERESS Array B 12.55 332 Pn **Pn 22 42 25.6 +0.5**
GERES GERESS Array B 12.55 332 Pn **Pn 22 42 25.6 +0.5**
comp=Z,0.2nm,0.3s,baz=150,slow=14,SNR=8.2
GERES LR LR 22 47 43.5
comp=Z,238nm,21.0s,baz=155,slow=39
GERES GERESS Array B 12.55 332 P **Pn 22 42 25.6 +0.5**
DAVOX Davos/Dischmat 12.82 317 Pn **Pn 22 42 29.9 +1.1**
DAVOX Sn Sn 22 44 44.2 -7.5
DAVOX Davos/Dischmat 12.82 317 Pn **Pn 22 42 29.9 +1.1**
comp=Z,0.3nm,0.3s,baz=135,slow=20,SNR=2.8
DAVOX Sn Sn 22 44 44.2 -7.5
comp=Z,0.2nm,0.3s,baz=339,slow=17,SNR=2.8
DAVOX Davos/Dischmat 12.82 317 P **Pn 22 42 29.9 +1.1**
KHC Kasperske Hory 12.83 332 *e*P **Pn 22 42 29.2 +0.3**
KHC MLR MLR
comp=Z,600nm,10.9s
KHC Kasperske Hory 12.83 332 *e*P **Pn 22 42 30.1 +1.3**
KHC Kasperske Hory 12.83 332 *e*Pn **Pn 22 42 30.1 +1.3**
KHC Kasperske Hory 12.83 332 *e*P **Pn 22 42 29.2 +0.3**
KHC *ex* x 22 42 32.5
KHC AMS AMS 22 47 50.0
comp=Z,600nm,10.9s
KHC Kasperske Hory 12.83 332 *e*P **Pn 22 42 29.2 +0.3**
comp=Z,600nm,10.9s
KHC Kasperske Hory 12.83 332 *e*Pn **Pn 22 42 30.1 +1.3**
SBF Sospel 12.88 301 *e*P Pn 22 42 34.2 +4.7
comp=Z,15nm,0.8s
SBF Sospel 12.88 301 *e*P Pn 22 42 34.2 +4.7
SBF pmax pmax
comp=Z,15nm,0.8s
SBF Sospel 12.88 301 *e*P Pn 22 42 34.2 +4.7
comp=Z,15nm,0.8s
ASF Jabal al Asfar 13.04 113 Pn **Pn 22 42 33.7 +1.8**
ASF Jabal al Asfar 13.04 113 Pn **Pn 22 42 33.7 +1.8**
comp=Z,0.1nm,0.3s,baz=338,slow=3.2,SNR=3.0
DPC Dobruska-Polom 13.06 342 *e*P **P 22 42 41.4 -0.9**
DPC MLR MLR
comp=Z,400nm,14.1s
DPC Dobruska-Polom 13.06 342 *e*P **P 22 42 41.4 -0.9**
DPC AMS AMS 22 48 20.0
comp=Z,400nm,14.1s
EIL Elat 13.20 126 Pn **Pn 22 42 32.7 -1.2**
EIL Sn Sn 22 44 51.9 -9.0
EIL Elat 13.20 126 Pn **Pn 22 42 32.7 -1.2**
comp=Z,0.4nm,0.3s,baz=332,slow=5.7,SNR=6.7
EIL Sn Sn 22 44 51.9 -9.0
comp=Z,0.3nm,0.3s,baz=27,slow=4.5,SNR=2.5
EIL Elat 13.20 126 Pn **Pn 22 42 32.7 -1.2**
UPC Upice 13.28 341 *e*P **P 22 42 44.7 -0.1**
UPC Upice 13.28 341 *e*P **P 22 42 44.7 -0.1**
FRF La Foret Royal 13.31 299 *e*P Pn 22 42 39.4 +4.1
FRF La Foret Royal 13.31 299 *e*P Pn 22 42 39.4 +4.1
FRF La Foret Royal 13.31 299 *e*P Pn 22 42 39.4 +4.1
LMR La Mourre 13.33 298 *e*P Pn 22 42 38.8 +3.1
comp=Z,12nm,0.9s
LMR La Mourre 13.33 298 *e*P Pn 22 42 38.8 +3.1
LMR pmax pmax
comp=Z,12nm,0.9s
LMR La Mourre 13.33 298 *e*P Pn 22 42 38.8 +3.1
comp=Z,12nm,0.9s
AK01 Malin Array Si 13.41 18 *e*Pn **Pn 22 42 36.8 +0.2**
AK01 Malin Array Si 13.41 18 *e*Pn **Pn 22 42 36.8 +0.2**
KIEV Kiev 13.41 18 *e*P **Pn 22 42 38.3 +1.7**
KIEV Kiev 13.41 18 *e*Pn **Pn 22 42 38.3 +1.7**
KIEV Kiev 13.41 18 *e*P **Pn 22 42 38.3 +1.7**
AKASG Malin Array Be 13.42 18 P **Pn 22 42 37.1 +0.3**
AKASG Malin Array Be 13.42 18 Pn **Pn 22 42 37.1 +0.3**
AKASG Malin Array Be 13.42 18 Pn **Pn 22 42 37.1 +0.3**
comp=Z,0.4nm,0.3s,baz=207,slow=12,SNR=4.5
AKASG Malin Array Be 13.42 18 P **Pn 22 42 37.1 +0.3**
MBDF Montbardon 13.64 304 *e*P Pn 22 42 43.7 +3.6
comp=Z,7.7nm,0.6s
MBDF Montbardon 13.64 304 *e*P Pn 22 42 43.7 +3.6
MBDF pmax pmax
comp=Z,8.0nm,0.6s
MBDF Montbardon 13.64 304 *e*P Pn 22 42 43.7 +3.6
comp=Z,7.7nm,0.6s
LPG La Plagne 13.98 307 *e*P Pn 22 42 48.1 +3.3
comp=Z,8.8nm,0.7s
LPG La Plagne 13.98 307 *e*P Pn 22 42 48.1 +3.3
LPG pmax pmax
comp=Z,9.0nm,0.7s
LPG La Plagne 13.98 307 *e*P Pn 22 42 48.1 +3.3
comp=Z,8.8nm,0.7s
LPL La Plagne 14.00 307 *e*P Pn 22 42 48.3 +3.3
comp=Z,6.5nm,0.6s
LPL La Plagne 14.00 307 *e*P Pn 22 42 48.3 +3.3
LPL pmax pmax
comp=Z,7.0nm,0.6s
LPL La Plagne 14.00 307 *e*P Pn 22 42 48.3 +3.3
comp=Z,6.5nm,0.6s
SENIN Lac Senin/Sane 14.06 311 *e*Pn **P 22 42 54.8 +1.1**
SENIN *e*Sn **Sn 22 45 19.1 -2.8**
NKC Novy Kostel 14.16 332 AMS AMS 22 49 10.0
comp=Z,500nm,16.6s
BRG Berggiesshubel 14.19 337 *e*P **P 22 42 56.5 +1.6**
comp=Z,3.0nm,1.0s
BRG
comp=N,164nm,11.3s
BRG
comp=E,222nm,11.4s
BRG
comp=Z,271nm,19.5s
BRG Berggiesshubel 14.19 337 *e*P **P 22 42 56.5 +1.6**
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG MLR MLR
comp=N,164nm,11.3s
BRG MLR MLR
comp=E,222nm,11.4s
BRG MLR MLR
comp=Z,271nm,19.5s
GRFO Grafenberg 14.21 328 *e*P **Pn 22 42 48.2 +0.6**
GRFO Grafenberg 14.21 328 *e*Pn **Pn 22 42 48.1 +0.6**
GRFO Grafenberg 14.21 328 *e*Pn **Pn 22 42 48.2 +0.6**
GRF Grafenberg Arr 14.21 328 *e*P **P 22 42 55.8 +0.7**
GRF MLR MLR
comp=Z,400nm,18.4s
GRF Grafenberg Arr 14.21 328 *e*P **P 22 42 55.8 +0.7**
GRF *e*L L 22 49 01.7
comp=Z,439nm,18.4s
ORIF Oris-en-Rattie 14.30 304 *e*P Pn 22 42 52.1 +3.1
ORIF *e*R
comp=Z,168nm,19.2s
ORIF Oris-en-Rattie 14.30 304 *e*P Pn 22 42 52.1 +3.1
ORIF Oris-en-Rattie 14.30 304 *e*P Pn 22 42 52.1 +3.1
BFO Black Forest 14.61 319 *e*P **Pn 22 42 52.5 -0.6**
BFO Black Forest 14.61 319 *e*Pn **Pn 22 42 52.5 -0.6**
BFO Black Forest 14.61 319 *e*Pn **Pn 22 42 52.5 -0.6**
CLL Collm 14.87 336 *e*P Pn 22 42 47.0 -10
CLL Collm 14.87 336 *e*(PP) 22 43 03.0
CLL Lm MLR 22 49 00.0
comp=Z,100nm,21.5s
CABF La Chapelle 14.91 310 *e*P **Pn 22 42 59.0 +1.8**
comp=Z,33nm,1.1s
CABF La Chapelle 14.91 310 *e*P **Pn 22 42 59.0 +1.8**
CABF pmax pmax
comp=Z,33nm,1.1s
CABF La Chapelle 14.91 310 *e*P **Pn 22 42 59.0 +1.8**
comp=Z,33nm,1.1s
HINF Hinteralfeld 15.09 315 *e*P **Pn 22 43 01.7 +2.0**
HINF Hinteralfeld 15.09 315 *e*P **Pn 22 43 01.7 +2.0**
HINF Hinteralfeld 15.09 315 *e*P **Pn 22 43 01.7 +2.0**
CDF Champ du Feu 15.21 318 *e*P **Pn 22 43 02.6 +1.4**
CDF Champ du Feu 15.21 318 *e*P **Pn 22 43 02.6 +1.4**
CDF Champ du Feu 15.21 318 *e*P **Pn 22 43 02.6 +1.4**
HAU Haudompre 15.48 315 *e*P **Pn 22 43 05.8 +1.0**
comp=Z,45nm,1.3s
HAU *e*R
comp=Z,68nm,22.5s
HAU Haudompre 15.48 315 *e*P **Pn 22 43 05.8 +1.0**
HAU pmax pmax
comp=Z,45nm,1.3s
HAU Haudompre 15.48 315 *e*P **Pn 22 43 05.8 +1.0**
comp=Z,45nm,1.3s
SUW Suwalki 15.91 1 *e*P **Pn 22 43 11.0 +0.8**
SUW pmax pmax
comp=Z,37nm,0.9s
SUW Suwalki 15.91 1 *e*Pn **Pn 22 43 11.0 +0.8**
comp=Z,37nm,0.9s
SUW Suwalki 15.91 1 *e*P **P 22 43 14.0 +0.1**
SUW Suwalki 15.91 1 *e*Pn **Pn 22 43 11.0 +0.8**
comp=Z,37nm,0.9s
SUW Suwalki 15.91 1 *e*P **P 22 43 14.1 +0.1**
KIV Kislovodsk 16.16 63 *e*P **Pn 22 43 13.3 -0.4**
KIV pmax pmax
comp=Z,8.0nm,1.0s
KIV MLR MLR
comp=Z,33nm,12.0s
KBZ Khabaz 16.26 63 P **P 22 43 17.4 -0.4**
KBZ Khabaz 16.26 63 Pn **P 22 43 17.4 -0.4**
KBZ Khabaz 16.26 63 Pn **P 22 43 17.4 -0.4**
comp=Z,0.1nm,0.3s,baz=279,slow=9.9,SNR=5.6
KBZ Khabaz 16.26 63 P **P 22 43 17.4 -0.4**
SMF Signal de Mont 16.30 308 *e*P **P 22 43 17.6 -0.8**
SMF Signal de Mont 16.30 308 *e*P **P 22 43 17.6 -0.8**
SMF Signal de Mont 16.30 308 *e*P **P 22 43 17.6 -0.8**
SMF Signal de Mont 16.30 308 *e*P **P 22 43 17.6 -0.8**
MTLF Montolieu 16.37 295 *e*P **P 22 43 19.2 +0.1**
comp=Z,11nm,0.8s
MTLF Montolieu 16.37 295 *e*P **P 22 43 19.2 +0.1**
MTLF pmax pmax
comp=Z,11nm,0.8s
MTLF Montolieu 16.37 295 *e*P **P 22 43 19.2 +0.1**
comp=Z,11nm,0.8s
MTLF Montolieu 16.37 295 *e*P **P 22 43 19.2 +0.1**
comp=Z,5.6nm,0.8s
MEZF Maizieres J'vi 16.48 315 *e*P **Pn 22 43 19.1 +1.6**
MEZF Maizieres J'vi 16.48 315 *e*P **Pn 22 43 19.1 +1.6**
MEZF Maizieres J'vi 16.48 315 *e*P **Pn 22 43 19.1 +1.6**
LOR Lormes 16.56 310 *e*P **Pn 22 43 19.7 +1.0**
comp=Z,14nm,0.8s
LOR *e*R
comp=Z,116nm,20.5s
LOR Lormes 16.56 310 *e*P **Pn 22 43 19.7 +1.0**
comp=Z,14nm,0.8s
LOR Lormes 16.56 310 *e*P **Pn 22 43 19.7 +1.0**
comp=Z,7.2nm,0.8s
AVF Avril sur Loir 16.67 308 *e*P **Pn 22 43 21.4 +1.4**
AVF Avril sur Loir 16.67 308 *e*P **Pn 22 43 21.4 +1.4**
AVF Avril sur Loir 16.67 308 *e*P **Pn 22 43 21.4 +1.4**
AVF Avril sur Loir 16.67 308 *e*P **Pn 22 43 21.4 +1.4**
SSF Saint Saulge 16.69 309 *e*P **Pn 22 43 21.9 +1.6**
comp=Z,22nm,0.9s
SSF Saint Saulge 16.69 309 *e*P **Pn 22 43 21.9 +1.6**
SSF pmax pmax
comp=Z,22nm,0.9s
SSF Saint Saulge 16.69 309 *e*P **Pn 22 43 21.9 +1.6**
comp=Z,22nm,0.9s
SSF Saint Saulge 16.69 309 *e*P **Pn 22 43 21.9 +1.6**
comp=Z,11nm,0.9s
ZEI Tsey 16.79 67 *e*P **P 22 43 25.7 +1.7**
ZEI pmax pmax
comp=Z,4.0nm,0.5s
ZEI Tsey 16.79 67 *e*P **P 22 43 25.7 +1.7**
comp=Z,4.0nm,0.5s
CAF Calviac 16.86 300 *e*P **Pn 22 43 22.5 0.0**
CAF Calviac 16.86 300 *e*P **Pn 22 43 22.5 0.0**
CAF Calviac 16.86 300 *e*P **Pn 22 43 22.5 0.0**
CAF Calviac 16.86 300 *e*P **Pn 22 43 22.5 0.0**
BGF Bois d'Agland 16.90 306 *e*P **P 22 43 24.5 -0.4**
comp=Z,30nm,0.9s
BGF Bois d'Agland 16.90 306 *e*P **P 22 43 24.5 -0.4**
BGF pmax pmax
comp=Z,30nm,0.9s
BGF Bois d'Agland 16.90 306 *e*P **P 22 43 24.5 -0.4**
comp=Z,30nm,0.9s
BGF Bois d'Agland 16.90 306 *e*P **P 22 43 24.5 -0.4**
comp=Z,15nm,0.9s
TCF Toulx Ste Croi 17.20 305 *e*P **P 22 43 28.3 -0.1**
TCF Toulx Ste Croi 17.20 305 *e*P **P 22 43 28.3 -0.1**
TCF Toulx Ste Croi 17.20 305 *e*P **P 22 43 28.3 -0.1**
TCF Toulx Ste Croi 17.20 305 *e*P **P 22 43 28.3 -0.1**
GNI Garni 17.23 76 *e*Pn **Pn 22 43 27.7 +0.5**
comp=Z,76nm,2.3s
GNI Garni 17.23 76 LR LR 22 50 27.4
comp=Z,80nm,19.2s,baz=283,slow=38
GNI Garni 17.23 76 *e*P **Pn 22 43 27.7 +0.5**
comp=Z,76nm,2.3s
RJF Les Rejaudoux 17.34 301 *e*P **P 22 43 30.3 +0.4**
comp=Z,20nm,1.0s
RJF *e*R
comp=Z,123nm,21.0s
RJF Les Rejaudoux 17.34 301 *e*P **P 22 43 30.3 +0.4**
RJF pmax pmax
comp=Z,20nm,1.0s
RJF Les Rejaudoux 17.34 301 *e*P **P 22 43 30.3 +0.4**
comp=Z,20nm,1.0s
RJF Les Rejaudoux 17.34 301 *e*P **P 22 43 30.3 +0.4**
comp=Z,9.8nm,1.0s
VORD Divnogorie 17.42 37 *e*P **P 22 43 34.6 +4.0**
VORD pmax pmax
comp=Z,20nm,1.8s
VORD pmax pmax
comp=N,7.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD MLR MLR
comp=Z,200nm,12.0s
VORD MLR MLR
comp=N,120nm,13.0s
VSR Storozhevoye 17.52 36 *e*P **P 22 43 34.2 +2.4**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=N,10.0nm,1.6s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR MLR MLR
comp=Z,340nm,21.0s
VSR Storozhevoye 17.52 36 *e*P **P 22 43 34.2 +2.4**
comp=Z,340nm,21.0s
LFF La Frestale 17.77 300 *e*P **P 22 43 35.2 +0.6**
LFF La Frestale 17.77 300 *e*P **P 22 43 35.2 +0.6**
LFF La Frestale 17.77 300 *e*P **P 22 43 35.2 +0.6**
LFF La Frestale 17.77 300 *e*P **P 22 43 35.2 +0.6**
BAIF Baives 17.80 318 *e*P **P 22 43 35.6 +0.7**
BAIF Baives 17.80 318 *e*P **P 22 43 35.6 +0.7**
BAIF Baives 17.80 318 *e*P **P 22 43 35.6 +0.7**
BAIF Baives 17.80 318 *e*P **P 22 43 35.6 +0.7**
VRHR Novokhopersk 18.64 40 *e*P **Pn 22 43 45.1 +0.7**
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR Novokhopersk 18.64 40 *e*P **Pn 22 43 45.1 +0.7**
SJPF Ste Jean 18.81 293 *e*P **Pn 22 43 47.6 +1.0**
SJPF Ste Jean 18.81 293 *e*P **Pn 22 43 47.6 +1.0**
SJPF Ste Jean 18.81 293 *e*P **Pn 22 43 47.6 +1.0**
SJPF Ste Jean 18.81 293 *e*P **Pn 22 43 47.6 +1.0**
MFF Saint Martin d 18.84 304 *e*P **Pn 22 43 47.4 +0.5**
comp=Z,29nm,0.9s
MFF Saint Martin d 18.84 304 *e*P **Pn 22 43 47.4 +0.5**
MFF pmax pmax
comp=Z,29nm,0.9s
MFF Saint Martin d 18.84 304 *e*P **Pn 22 43 47.4 +0.5**
comp=Z,29nm,0.9s
MFF Saint Martin d 18.84 304 *e*P **Pn 22 43 47.4 +0.5**
comp=Z,14nm,0.9s
OBN Obninsk 19.43 24 P **P 22 43 53.0 +0.2**
OBN pmax pmax
comp=Z,28nm,1.4s
OBN MLR MLR
comp=Z,100nm,15.0s
OBN Obninsk 19.43 24 P **P 22 43 53.0 +0.2**
comp=Z,100nm,15.0s
MAK Makhachkala 19.44 68 *e*P **P 22 43 53.3 +0.3**
MAK S **Sn 22 47 32.5 +0.2**
MAK pmax pmax
comp=Z,107nm,1.2s
MAK MLR MLR
comp=Z,118nm,20.0s
MAK Makhachkala 19.44 68 *e*P **P 22 43 53.3 +0.3**
comp=Z,107nm,1.2s
MAK S **Sn 22 47 32.5 +0.2**
comp=Z,118nm,20.0s
SLIT Slitere, Latvi 19.53 359 *e*P **P 22 43 53.2 -0.6**
SNR=135
FLN La Foliniere 19.84 310 *e*P **P 22 43 57.2 -0.1**
FLN *e*R
comp=Z,134nm,17.2s
FLN La Foliniere 19.84 310 *e*P **P 22 43 57.2 -0.1**
FLN La Foliniere 19.84 310 *e*P **P 22 43 57.2 -0.1**
FLN La Foliniere 19.84 310 *e*P **P 22 43 57.2 -0.1**
GRR Gorron 19.92 309 *e*P **P 22 43 58.2 0.0**
comp=Z,22nm,0.6s
GRR Gorron 19.92 309 *e*P **P 22 43 58.2 0.0**
GRR pmax pmax
comp=Z,22nm,0.6s
GRR Gorron 19.92 309 *e*P **P 22 43 58.2 0.0**
comp=Z,22nm,0.6s
GRR Gorron 19.92 309 *e*P **P 22 43 58.2 0.0**
comp=Z,11nm,0.6s
MOS Moscow 20.29 25 *e*P Pn 22 44 05.8 +1.7
MOS *e* 22 47 39.4
MOS pmax pmax
comp=Z,34nm,0.9s
VSU Vasula 20.54 6 *c i*P **P 22 44 04.6 -0.1**
VSU Vasula 20.54 6 *e*P **P 22 44 04.6 -0.1**
comp=Z,123nm,1.5s,SNR=151
ESDC Sonseca Array 20.78 283 P **P 22 44 07.3 -0.4**
ESDC Sonseca Array 20.78 283 P **P 22 44 07.3 -0.4**
comp=Z,3.0nm,0.6s,baz=77,slow=11,SNR=20
ESDC Sonseca Array 20.78 283 P **P 22 44 07.3 -0.4**
SGMF Saint Gilles 20.93 307 *e*P **P 22 44 09.3 +0.2**
comp=Z,28nm,0.7s
SGMF Saint Gilles 20.93 307 *e*P **P 22 44 09.3 +0.2**
SGMF pmax pmax
comp=Z,29nm,0.7s
SGMF Saint Gilles 20.93 307 *e*P **P 22 44 09.3 +0.2**
comp=Z,28nm,0.7s
SGMF Saint Gilles 20.93 307 *e*P **P 22 44 09.3 +0.2**
comp=Z,14nm,0.7s
QUIF Quistinic 21.21 306 *e*P **P 22 44 11.5 -0.6**
comp=Z,38nm,0.7s
QUIF Quistinic 21.21 306 *e*P **P 22 44 11.5 -0.6**
QUIF pmax pmax
comp=Z,38nm,0.7s
QUIF Quistinic 21.21 306 *e*P **P 22 44 11.5 -0.6**
comp=Z,38nm,0.7s
QUIF Quistinic 21.21 306 *e*P **P 22 44 11.5 -0.6**
comp=Z,19nm,0.7s
TAM Tamanrasset 21.21 229 *e*P **P 22 44 13.7 +1.2**
TAM Tamanrasset 21.21 229 *e*P **P 22 44 13.7 +1.2**
comp=Z,3.5nm,1.0s
TAM Tamanrasset 21.21 229 *e*P **P 22 44 13.6 +1.1**
comp=Z,3.5nm,1.0s
ROSF Rostrenen 21.41 307 *e*P **P 22 44 14.3 0.0**
comp=Z,44nm,0.9s
ROSF Rostrenen 21.41 307 *e*P **P 22 44 14.3 0.0**
ROSF pmax pmax
comp=Z,44nm,0.9s
ROSF Rostrenen 21.41 307 *e*P **P 22 44 14.3 0.0**
comp=Z,44nm,0.9s
ROSF Rostrenen 21.41 307 *e*P **P 22 44 14.3 0.0**
comp=Z,22nm,0.9s
MIB Mutribah 22.01 105 *e*P **P 22 44 20.3 -0.6**
MIB AMb AMB 22 44 26.1
comp=Z,30nm,0.7s
MIB Mutribah 22.01 105 *e*P **P 22 44 20.3 -0.6**
comp=Z,30nm,0.7s
MEF Metsahovi 22.16 2 *e*P **P 22 44 21.0 -1.1**
comp=Z,20nm,2.7s,SNR=151
NAY Al-Naaiem 22.21 106 *e*P **P 22 44 22.7 -0.3**
NAY AMb AMB 22 44 29.3
comp=Z,19nm,1.3s
NAY Al-Naaiem 22.21 106 *e*P **P 22 44 22.7 -0.3**
UMR Umm Al-Rimmam 22.42 105 *e*P **P 22 44 22.7 -2.6**
HFS Hagfors 22.77 348 P **P 22 44 27.1 -1.8**
HFS Hagfors 22.77 348 P **P 22 44 27.0 -1.8**
comp=Z,5.2nm,0.6s,baz=161,slow=10,SNR=17
HFS LR LR 22 54 28.0
comp=Z,118nm,18.4s,baz=169,slow=40
HFS Hagfors 22.77 348 P **P 22 44 27.0 -1.8**
comp=Z,118nm,18.5s
MDT Midelt 22.82 265 P **P 22 44 30.1 +0.5**
MDT Midelt 22.82 265 P **P 22 44 30.1 +0.5**
comp=Z,3.9nm,1.0s,baz=27,slow=6.8,SNR=3.2
MDT Midelt 22.82 265 P **P 22 44 30.1 +0.5**
RAF Rauma 22.95 359 *e*P **P 22 44 31.6 +1.1**
SNR=143
FINES FINESS Array B 23.45 4 P **P 22 44 33.8 -1.9**
FINES FINESS Array B 23.45 4 P **P 22 44 33.8 -1.9**
comp=Z,0.6nm,0.4s,baz=190,slow=6.9,SNR=9.1
FINES LR LR 22 54 19.6
comp=Z,146nm,20.2s,baz=90,slow=38
FINES FINESS Array B 23.45 4 P **P 22 44 33.8 -1.9**
NB2 NORSAR Subarra 24.06 346 P **P 22 44 39.7 -1.9**
comp=Z,3.9nm,0.9s,baz=146,slow=10
NB2 NORSAR Subarra 24.06 346 P **P 22 44 39.7 -1.9**
comp=Z,3.9nm,0.9s,SNR=1.5
NOA NORSAR Array B 24.06 346 P **P 22 44 40.1 -1.5**
NOA NORSAR Array B 24.06 346 P **P 22 44 40.1 -1.5**
comp=Z,1.7nm,0.6s,baz=147,slow=9.7,SNR=11
NOA LR LR 22 55 13.6
comp=Z,73nm,19.5s,baz=175,slow=39
NOA NORSAR Array B 24.06 346 P **P 22 44 40.1 -1.5**
KAF Kangasniemi 24.14 4 *e*P **P 22 44 45.9 +3.6**
KAF pmax pmax
comp=Z,4.0nm,0.8s
KAF Kangasniemi 24.14 4 *e*p **P 22 44 45.9 +3.6**
comp=Z,3.7nm,0.8s
RAYN Ar Rayn 24.31 120 *e*P **P 22 44 47.3 +3.1**
comp=Z,7.8nm,1.0s
EKA Eskdalemuir Ar 24.49 323 P **P 22 44 46.1 +0.5**
EKA Eskdalemuir Ar 24.49 323 P **P 22 44 46.1 +0.5**
comp=Z,3.2nm,0.5s,baz=124,slow=9.8,SNR=14
EKA Eskdalemuir Ar 24.49 323 P **P 22 44 46.1 +0.5**
JOF Joensuu 25.39 9 *e*P **P 22 44 52.1 -1.5**
JOF pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 25.39 9 *e*p **P 22 44 52.1 -1.5**
comp=Z,1.5nm,0.5s
JOF Joensuu 25.39 9 *e*P **P 22 44 52.1 -1.5**
comp=Z,2.0nm,0.5s
AKTO Aktyubinsk 27.86 52 LR LR 22 59 19.7
comp=Z,38nm,20.9s,baz=115,slow=43
ABKAR Akbulak array 28.87 55 *e*P **P 22 45 24.7 -0.4**
comp=Z,0.5nm,0.5s
ABKAR Akbulak array 28.87 55 *e*P **P 22 45 24.7 -0.4**
comp=Z,0.5nm,0.5s
ARU Arti 29.99 41 P **P 22 45 36.1 +1.2**
ARU Arti 29.99 41 P **P 22 45 36.1 +1.2**
TORD Torodi Ar. Bea 31.09 223 P **P 22 45 44.8 -0.2**
TORD Torodi Ar. Bea 31.09 223 P **P 22 45 44.8 -0.2**
comp=Z,1.3nm,0.6s,baz=34,slow=8.6,SNR=13
TORD LR LR 22 59 20.2
comp=Z,107nm,18.2s,baz=40,slow=38
TORD Torodi Ar. Bea 31.09 223 P **P 22 45 44.8 -0.2**
ARCES ARCESS Array B 31.52 2 P **P 22 45 47.3 -1.0**
ARCES PcP **PcP 22 48 39.4 -1.3**
ARCES ARCESS Array B 31.52 2 P **P 22 45 47.3 -1.0**
comp=Z,1.4nm,0.8s,baz=172,slow=13,SNR=5.3
ARCES PcP **PcP 22 48 39.4 -1.3**
comp=Z,2.8nm,1.0s,baz=199,slow=2.5,SNR=5.9
ARCES LR LR 22 58 59.2
comp=Z,73nm,22.0s,baz=186,slow=37
ARCES ARCESS Array B 31.52 2 P **P 22 45 47.3 -1.0**
BRVK Borovoye 35.79 50 ‖ *e*P **P 22 46 25.4 -0.2**
BRVK pmax pmax
comp=Z,5.0nm,1.3s
BRVK Borovoye 35.79 50 *e*P **P 22 46 25.8 +0.2**
comp=Z,5.8nm,0.9s
BRVK PP **PP 22 47 47.4 +0.6**
BRVK Borovoye 35.79 50 *e*P **P 22 46 25.8 +0.2**
comp=Z,5.8nm,0.9s
BVAR Borovoye Array 35.85 50 P **P 22 46 26.6 +0.4**
BVAR Borovoye Array 35.85 50 P **P 22 46 26.6 +0.4**
BVAR Borovoye Array 35.85 50 P **P 22 46 26.6 +0.4**
comp=Z,2.1nm,0.7s,baz=265,slow=6.8,SNR=9.6
BVAR LR LR 23 02 00.7
comp=Z,33nm,21.1s,baz=143,slow=38
BVAR Borovoye Array 35.85 50 P **P 22 46 26.6 +0.4**
KKAR Karatay Array 36.25 67 *e*P **P 22 46 29.0 -0.7**
KKAR pmax pmax
comp=Z,3.0nm,0.5s

KKAR Karatay Array 36.25 67 *e*P **P 22 46 29.0 -0.7**
comp=Z,2.8nm,0.5s
KKAR Karatay Array 36.25 67 *e*P **P 22 46 29.0 -0.7**
comp=Z,2.8nm,0.5s
AAK Ala-Archa 39.22 67 *i* P **P 22 46 55.4 +0.4**
AAK pmax pmax
comp=Z,9.0nm,1.1s
AAK Ala-Archa 39.22 67 *e*P **P 22 46 55.3 +0.3**
comp=Z,6.1nm,1.1s
AAK Ala-Archa 39.22 67 P **P 22 46 53.6 -1.3**
comp=Z,0.9nm,0.4s,baz=195,slow=8.8,SNR=5.8
AAK Ala-Archa 39.22 67 *i* P **P 22 46 55.4 +0.4**
comp=Z,9.0nm,1.1s
MBAR Mbarara 39.23 167 LR LR 23 04 24.6
comp=Z,102nm,18.8s,baz=3.6,slow=38
DBIC Dimbokro 40.03 226 P **P 22 47 01.8 0.0**
DBIC Dimbokro 40.03 226 P **P 22 47 01.8 0.0**
comp=Z,2.3nm,0.6s,baz=3.6,slow=9.4,SNR=10
DBIC LR LR 23 04 21.5
comp=Z,71nm,18.4s,baz=26,slow=37
DBIC Dimbokro 40.03 226 P **P 22 47 01.8 0.0**
SPITS Spitsbergen Ar 40.27 358 P **P 22 47 01.4 -1.7**
SPITS PcP **PcP 22 49 05.8 -0.8**
SPITS Spitsbergen Ar 40.27 358 P **P 22 47 01.4 -1.7**
comp=Z,9.1nm,1.1s,baz=146,slow=12,SNR=2.4
SPITS PcP **PcP 22 49 05.8 -0.8**
comp=Z,4.7nm,0.9s,baz=145,slow=5.9,SNR=1.7
SPITS Spitsbergen Ar 40.27 358 P **P 22 47 01.4 -1.7**
SPITS Spitsbergen Ar 40.27 358 PcP **PcP 22 49 05.8 -0.8**
KURBB Kurchatov Arra 40.89 54 P **P 22 47 07.5 -1.1**
comp=Z,4.9nm,0.5s,baz=280,slow=8.7,SNR=42
KURBB LR LR 23 09 01.4
comp=Z,32nm,19.4s,baz=285,slow=43
KURK Kurchatov 40.94 53 *e*P **P 22 47 08.4 -0.6**
KURK pmax pmax
comp=Z,10.0nm,0.9s
KURK Kurchatov 40.94 53 *e*P **P 22 47 08.4 -0.6**
comp=Z,10nm,0.9s
KURK Kurchatov 40.94 53 *e*P **P 22 47 08.4 -0.6**
comp=Z,10nm,0.9s
KSH Kashi 41.03 71 *e*P **P 22 47 10.1 +0.1**
KSH *e*pP **pP 22 47 14.4 +1.5**
KSH *e*sP sP 22 47 17.0 +3.0
KSH *e*PP **PnPn 22 48 48.6 -0.2**
KSH *e*PcP **PcP 22 49 09.6 -0.3**
KSH *e*ScP **ScP 22 52 57.8 -1.9**
KSH *e*PcS **PcS 22 52 59.4 -1.5**
KSH *e*S **S 22 53 22.8 +0.2**
KSH *e*sS sS 22 53 30.5 +3.2
KSH *e*SS **SS 22 56 21.1 -3.3**
KSH *e*ScS **ScS 22 57 11.9 -3.2**
KSH pmax pmax
comp=Z,2.0nm,0.4s
KSH pmax pmax
comp=Z,180nm,3.5s
KSH LR LR
comp=N,78nm,3.9s
KSH LR LR
comp=E,85nm,3.7s
KSH LR LR
comp=Z,91nm,6.3s
KMBO Kilima Mbogo 41.29 158 LR LR 23 05 29.7
comp=Z,60nm,18.5s,baz=71,slow=38
NVS Novosibirsk 43.47 47 *e*P **P 22 47 28.7 -0.8**
NVS pmax pmax
comp=N,2.0nm,0.8s
NVS pmax pmax
comp=Z,9.0nm,0.8s
NVS pmax pmax
comp=E,5.0nm,1.0s
NVS Novosibirsk 43.47 47 *e*P **P 22 47 28.7 -0.8**
MK31 Makanchi Array 43.88 59 *e*P **P 22 47 32.6 -0.3**
MK31 Makanchi Array 43.88 59 *e*P **P 22 47 32.6 -0.3**
MK31 Makanchi Array 43.88 59 *e*P **P 22 47 32.6 -0.3**
MKAR Makanchi Array 43.88 59 P **P 22 47 32.3 -0.6**
MKAR Makanchi Array 43.88 59 P **P 22 47 32.3 -0.6**
MKAR ScP **ScP 22 53 07.6 -3.3**
MKAR Makanchi Array 43.88 59 P **P 22 47 32.3 -0.6**
comp=E,4.1nm,0.5s,baz=274,slow=7.5,SNR=56
MKAR ScP **ScP 22 53 07.6 -3.3**
comp=E,1.5nm,0.9s,baz=291,slow=2.2,SNR=4.3
MKAR LR LR 23 11 05.0
comp=E,25nm,19.6s,baz=91,slow=43
MKAR Makanchi Array 43.88 59 P **P 22 47 32.3 -0.6**
ZAA0 Zalesovo Array 44.46 48 *e*P **P 22 47 36.2 -1.3**
ZAA0 Zalesovo Array 44.46 48 *e*P **P 22 47 36.2 -1.3**
ZALV Zalesovo Beam 44.46 48 P **P 22 47 36.9 -0.6**
ZALV Zalesovo Beam 44.46 48 P **P 22 47 36.9 -0.6**
ZALV Zalesovo Beam 44.46 48 P **P 22 47 36.9 -0.6**
comp=E,7.9nm,0.5s,baz=277,slow=8.6,SNR=49
ZALV Zalesovo Beam 44.46 48 P **P 22 47 36.9 -0.6**
PYUN Piuthan 50.71 83 *e*P **P 22 48 25.3 -1.3**
comp=E,18nm,0.7s
DANN Dangsing 51.19 82 *e*P **P 22 48 29.1 -1.3**
comp=E,26nm,0.8s
KOLN Koldanda 51.34 83 *e*P **P 22 48 29.6 -1.8**
comp=E,7.7nm,0.6s
DMN Daman 52.59 82 *e*P **P 22 48 39.1 -1.7**
comp=E,10nm,0.6s
GUN Gumba 53.05 81 *e*P **P 22 48 42.4 -1.9**
comp=E,19nm,0.9s
RAMN Ramite 54.07 82 *e*P **P 22 48 49.5 -2.2**
comp=E,15nm,0.8s
ODAN Odare 54.73 82 *e*P P 22 48 53.7 -2.8
TAPN Taplejung 54.75 81 *e*P P 22 48 53.9 -2.7
comp=E,3.5nm,0.4s
LSA Lhasa 56.29 77 *e*P **P 22 49 08.9 +1.0**
LSA pmax pmax
comp=Z,3.0nm,0.7s
LSA Lhasa 56.29 77 *e*P **P 22 49 08.9 +1.0**
comp=Z,2.9nm,0.7s
LSA Lhasa 56.29 77 *e*P **P 22 49 08.9 +1.0**
comp=Z,2.9nm,0.7s
ZAK Zakamensk 56.31 49 *e*P **P 22 49 08.7 +1.4**
ZAK pmax pmax
comp=Z,2.0nm,0.9s
ZAK Zakamensk 56.31 49 *e*P **P 22 49 08.7 +1.4**
comp=Z,2.0nm,0.9s
SONM Songino Array 59.17 51 P **P 22 49 26.9 -0.6**
SONM Songino Array 59.17 51 P **P 22 49 26.9 -0.6**
comp=Z,1.7nm,0.8s,baz=284,slow=7.6,SNR=11
SONM Songino Array 59.17 51 P **P 22 49 26.9 -0.6**
ULN Ulaanbaatar 59.56 51 *e*P **P 22 49 29.1 -1.2**
comp=Z,2.1nm,0.8s
ULN Ulaanbaatar 59.56 51 *e*P **P 22 49 29.1 -1.2**
comp=Z,2.1nm,0.8s
SCHQ Schefferville 59.66 318 *e*P **P 22 49 30.3 -0.3**
comp=Z,12nm,0.8s
SCHQ Schefferville 59.66 318 P **P 22 49 30.5 -0.2**
comp=Z,9.6nm,0.7s,baz=69,slow=2.7,SNR=20
SCHQ Schefferville 59.66 318 *e*P **P 22 49 30.3 -0.3**
comp=Z,12nm,0.8s
HHC Hu-ho-hao-te 65.66 56 *e*P **P 22 50 11.6 +0.6**
HHC pP pP 22 50 19.8 +5.8
HHC sP sP 22 50 22.9 +7.8
HHC PP **PP 22 52 37.1 +2.0**
HHC PcS 22 54 47.4
HHC S **S 22 58 52.8 -4.1**
HHC ScS **SKSac 23 00 02.3 -4.6**
HHC SS **SS 23 03 07.8 -2.6**
HHC pmax pmax
comp=Z,32nm,0.6s
HHC pmax pmax
comp=Z,140nm,7.3s
HHC LR LR
comp=N,170nm,17.8s
HHC LR LR
comp=E,190nm,17.8s
HHC LR LR
comp=Z,150nm,16.7s
BOSA Boshof 66.42 178 P **P 22 50 16.1 +0.3**
BOSA Boshof 66.42 178 P **P 22 50 16.1 +0.3**
comp=Z,2.3nm,0.8s,baz=360,slow=9.1,SNR=2.6
BOSA LR LR 23 18 19.8
comp=Z,83nm,20.4s,baz=174,slow=35
BOSA Boshof 66.42 178 P **P 22 50 16.1 +0.3**
CMAR Chiang Mai Arr 68.20 83 P **P 22 50 25.2 -2.2**
CMAR Chiang Mai Arr 68.20 83 P **P 22 50 25.2 -2.2**
comp=Z,1.1nm,0.4s,baz=304,slow=7.9,SNR=10.0
CMAR Chiang Mai Arr 68.20 83 P **P 22 50 25.2 -2.2**
YKA Yellowknife Ar 74.03 341 P **P 22 51 00.8 -1.2**
YKA Yellowknife Ar 74.03 341 P **P 22 51 00.8 -1.2**
comp=Z,1.0nm,0.6s,baz=30,slow=5.2,SNR=15
YKA Yellowknife Ar 74.03 341 P **P 22 51 00.8 -1.2**
COLD Coldfoot 74.85 357 *e*P **P 22 51 06.6 -0.1**
comp=Z,1.4nm,0.7s
COLD Coldfoot 74.85 357 *e*P **P 22 51 06.6 -0.1**
comp=Z,1.4nm,0.7s
COWI Conover 76.27 318 *e*P **P 22 51 15.2 0.0**
COWI Conover 76.27 318 *e*P **P 22 51 15.2 0.0**
ULM Lac du Bonnet 76.76 325 LR LR 23 25 35.3
comp=Z,82nm,20.4s,baz=319,slow=36
ILAR Eielson Array 77.13 355 P **P 22 51 19.5 -0.2**
ILAR Eielson Array 77.13 355 P **P 22 51 19.5 -0.2**
comp=Z,1.1nm,0.5s,baz=348,slow=3.3,SNR=36
ILAR Eielson Array 77.13 355 P **P 22 51 19.5 -0.2**
KSAR Wonju Array Be 78.02 52 P **P 22 51 23.7 -1.5**
KSAR Wonju Array Be 78.02 52 P **P 22 51 23.7 -1.5**
DOT Dot Lake 78.03 354 *e*P **P 22 51 25.9 +1.0**
comp=Z,3.3nm,0.7s
DOT Dot Lake 78.03 354 *e*P **P 22 51 25.9 +1.0**
comp=Z,3.2nm,0.7s
KSRS Korea Array 78.04 52 P **P 22 51 23.7 -1.6**
comp=Z,1.2nm,0.6s,baz=319,slow=4.8,SNR=3.1
KSRS Korea Array 78.04 52 P **P 22 51 23.7 -1.6**
comp=Z,1.0nm,0.6s
CPCT Cooper Cave 80.55 308 *e*P **P 22 51 40.2 +1.2**
CPCT Cooper Cave 80.55 308 *e*P **P 22 51 40.2 +1.2**
PETK Petropavlovsk- 81.14 26 LR LR 23 34 20.6
comp=Z,30nm,19.4s,baz=46,slow=41
ECSD EROS Data Cent 81.75 320 *e*P **P 22 51 45.4 +0.1**
comp=Z,3.2nm,0.7s
ECSD EROS Data Cent 81.75 320 *e*P **P 22 51 45.4 +0.1**
comp=Z,3.2nm,0.7s
LRAL Lakeview Retre 83.67 307 *e*P **P 22 51 55.1 -0.4**
LRAL Lakeview Retre 83.67 307 *e*P **P 22 51 55.1 -0.4**
MJAR Matsushiro Arr 84.80 47 P **P 22 52 03.3 +2.1**
MJAR Matsushiro Arr 84.80 47 P **P 22 52 03.3 +2.1**
comp=Z,1.9nm,0.9s,baz=314,slow=5.8,SNR=3.3
MJAR Matsushiro Arr 84.80 47 P **P 22 52 03.3 +2.1**
KSU1 Kansas State U 85.09 317 *e*P **P 22 52 02.8 +0.2**
KSU1 Kansas State U 85.09 317 *e*P **P 22 52 02.8 +0.2**
YBMT Yellow Bay 86.11 332 *e*P **P 22 52 07.8 +0.1**
comp=Z,1.8nm,0.7s
YBMT Yellow Bay 86.11 332 *e*P **P 22 52 07.8 +0.1**
comp=Z,1.8nm,0.7s
JTMT Jette 86.31 333 *e*P **P 22 52 09.2 +0.4**
comp=Z,8.2nm,1.1s
JTMT Jette 86.31 333 *e*P **P 22 52 09.1 +0.4**
comp=Z,8.2nm,1.1s
SWMT Swartz Lake 86.41 332 *e*P **P 22 52 10.5 +1.4**
comp=Z,9.6nm,1.3s
SWMT Swartz Lake 86.41 332 *e*P **P 22 52 10.5 +1.4**
comp=Z,9.6nm,1.3s
NEW Newport 86.87 334 *e*P **P 22 52 11.7 +0.4**
comp=Z,8.2nm,0.8s
NEW Neport 86.87 334 *e*P **P 22 52 11.7 +0.4**
comp=Z,8.2nm,0.8s
PDAR Pinedale Array 88.56 327 P **P 22 52 18.8 -0.9**
PDAR Pinedale Array 88.56 327 P **P 22 52 18.8 -0.9**
comp=Z,1.4nm,0.7s,baz=64,slow=6.8,SNR=6.2
PDAR LR LR 23 33 34.3
comp=Z,34nm,19.3s,baz=271,slow=37
PDAR Pinedale Array 88.56 327 P **P 22 52 18.8 -0.9**
WMOK Wichita Mounta 89.46 315 *e*P **P 22 52 24.4 +0.6**
WMOK pmax pmax
comp=Z,9.0nm,1.0s
WMOK Wichita Mounta 89.46 315 *e*P **P 22 52 24.4 +0.6**
comp=Z,9.2nm,1.0s
WMOK Wichita Mounta 89.46 315 *e*P **P 22 52 24.4 +0.6**
comp=Z,9.2nm,1.0s
PV01 Paradox Valley 91.85 324 *e*P **P 22 52 35.2 0.0**
comp=Z,433nm,1.0s
PV01 Paradox Valley 91.85 324 *e*P **P 22 52 35.2 0.0**
comp=Z,433nm,1.0s
DUG Dugway 92.06 328 *e*P **P 22 52 36.5 +0.5**
DUG pmax pmax
comp=Z,4.0nm,0.9s
DUG Dugway 92.06 328 *e*P **P 22 52 36.5 +0.5**
comp=Z,3.9nm,0.9s
DUG Dugway 92.06 328 *e*P **P 22 52 36.5 +0.5**
comp=Z,3.9nm,0.9s
NVAR Mina Array Bea 95.80 330 P **P 22 52 53.1 -0.2**
NVAR Mina Array Bea 95.80 330 P **P 22 52 53.1 -0.2**
comp=Z,0.3nm,0.7s,baz=57,slow=3.3,SNR=3.2
NVAR Mina Array Bea 95.80 330 P **P 22 52 53.1 -0.2**
TXAR Lajitas Array 96.25 315 P **P 22 52 56.0 +0.7**
TXAR Lajitas Array 96.25 315 P **P 22 52 56.0 +0.7**
comp=Z,1.2nm,0.8s,baz=59,slow=4.0,SNR=9.5
TXAR Lajitas Array 96.25 315 P **P 22 52 56.0 +0.7**
WRA Warramunga Arr 118.83 94 PKP **PKPdf 22 58 13.7 -1.8**
WRA Warramunga Arr 118.83 94 PKP **PKPdf 22 58 13.7 -1.8**
comp=Z,0.6nm,0.5s,baz=322,slow=2.0,SNR=12
WRA Warramunga Arr 118.83 94 PKIKP **PKPdf 22 58 13.6 -1.8**
ASAR Alice Springs 120.47 97 PKP **PKPdf 22 58 17.1 -1.4**
ASAR Alice Springs 120.47 97 PKP **PKPdf 22 58 17.1 -1.4**
comp=Z,1.0nm,0.5s,baz=307,slow=1.5,SNR=13
STKA Stephens Creek 130.34 102 PKP **PKPdf 22 58 36.7 -0.4**
STKA Stephens Creek 130.34 102 PKP **PKPdf 22 58 36.7 -0.4**
comp=Z,1.7nm,0.8s,baz=180,slow=3.0,SNR=2.8

IDC 17 22:48:39.7±4.0,3°**82N**×127°**74E**,**h0**km,**mb3.4**/3,
mb1 3.7/3,**mb1mx3.3**/23,**mbtmp3.4**/3,**Error ellipse:**
s-maj=240.5km s-min=32.2km az=90.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.49**	**165**	P	P	22 54 02.3	+1.4
	0.2nm,0.3s,baz=344,slow=10,SNR=8.6						
ASAR	**Alice Springs**	**27.98**	**168**	P	P	22 54 30.8	-1.6
	0.2nm,0.3s,baz=357,slow=7.3,SNR=4.2						
ILAR	**Eielson Array**	**84.59**	**25**	P	P	23 01 14.8	-0.1
	0.2nm,0.6s,baz=261,slow=5.2,SNR=6.0						

*ISCJB **17** 22:51:25.7*±*1.5, 8°7***S**±0°.1×107°.87**E**±0°.07*, h55km, Error ellipse: s-maj=16.7km s-min=7.8km az=25.5*
*DJA **17** 22:51:25.7*±*1.1, 9°S*±*5°×107°.8E*±*°, h17km*±*11km, M3.8/11, MLv3.8/11*

ISC 17 22:51:27.6±1.3,**8°55S**±0°.06×**107°.88E**±0°.05,**h55**km,**n16,**
σ1§**01**/18,**Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.99**	**356**	P	**Pn**	**22 51 43.0**	**-2.4**
CLJI	**Cilicap**	**1.40**	**54**	P	**Pn**	**22 51 50.9**	**+0.1**
CLJI				S	**Sn**	**22 52 07.9**	**-0.3**
LEM	**Lembang**	**1.73**	**351**	P	**Pn**	**22 51 55.4**	**-0.1**
LEM				S	**Sn**	**22 52 18.5**	**+1.9**
TGJI	**Tegal**	**2.08**	**37**	P	**Pn**	**22 51 58.2**	**-1.9**
BJII	**Banjamegara**	**2.18**	**56**	P	**Pn**	**22 52 01.6**	**+0.1**
DBJI	**Dramaga**	**2.27**	**330**	P	**Pn**	**22 52 03.3**	**+0.5**
UGM	**Wanagama**	**2.69**	**77**	P	**Pn**	**22 52 08.2**	**-0.3**
UGM	**Wanagama**	**2.69**	**77**	P	**Pn**	**22 52 07.5**	**-1.1**
	baz=15,SNR=9.2						
XMI	**Christmas Isla**	**2.87**	**229**	P	**Sn**	**22 52 44.4**	**+0.1**
	baz=18,SNR=3.7						
CGJI	**Cibinong**	**2.90**	**311**	P	**Pn**	**22 52 11.1**	**-0.2**
XMIS	**Christmas Isla**	**2.92**	**229**	P	**Sn**	**22 52 45.5**	**+0.1**
	baz=18,SNR=5.4						
SMRI	**Semarang**	**2.94**	**60**	P	**Pn**	**22 52 12.4**	**+0.4**
SMRI	**Semarang**	**2.94**	**60**	P	**Pn**	**22 52 12.6**	**+0.6**
	baz=16,SNR=4.1						
WOJI	**Wonogiri, Jawa**	**3.10**	**77**	P	**Pn**	**22 52 14.3**	**+0.3**
PCJI	**Pacitan**	**3.28**	**84**	P	**Pn**	**22 52 16.3**	**-0.3**
PWJI	**Pagerwojo**	**3.92**	**83**	P	**Pn**	**22 52 25.2**	**-0.1**

IDC 17 22:57:36.1±1.9,**43°06S**×**72°21W**,**h0**km,**mb3.5**/3,
mb1 3.8/4,**mb1mx3.6**/17,**mbtmp3.5**/4,**MS3.3**/2,**Ms1 3.3**/2,
ms1mx3.0/12,**Error ellipse: s-maj=56.8km**
s-min=22.0km az=121.0,Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.64**	**29**	Pn	Pn	22 58 21.9	+1.8
	9.4nm,0.3s,baz=222,slow=16,SNR=62						
PLCA				Pg	Pb	22 58 24.8	+0.5
	9.4nm,0.3s,baz=220,slow=16,SNR=81						
PLCA				LR	LR	22 58 56.3	
	comp=Z,385nm,18.9s,baz=325,slow=30						
PLCA				Lg	Lg	22 58 59.1	
	48nm,0.3s,baz=115,slow=20,SNR=24						
CPUP	**Villa Florida**	**20.64**	**41**	LR	LR	23 09 42.8	
	comp=Z,106nm,22.0s,baz=352,slow=35						
LPAZ	**La Paz**	**26.91**	**9**	P	P	23 03 18.8	-1.0
	0.2nm,0.4s,baz=169,slow=5.2,SNR=2.3						
TXAR	**Lajitas Array**	**77.63**	**332**	P	P	23 09 34.6	+0.4
	0.2nm,0.7s,baz=138,slow=5.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**87.47**	**70**	P	P	23 10 25.5	-0.3
	0.4nm,0.9s,baz=241,slow=4.8,SNR=2.3						

IDC 17 23:00:39.5±1.7,**3°85N**×**127°31E**,**h0**km,**mb3.6**/5,
mb1 3.8/5,**mb1mx3.5**/24,**mbtmp3.7**/5,**MS3.1**/1,**Ms1 3.1**/1,
ms1mx2.1/38,**Error ellipse: s-maj=100.5km**
s-min=22.9km az=68.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.88**	**184**	P	P	23 05 34.8	+0.6
	2.5nm,0.8s,baz=16,slow=12,SNR=4.2						
WRA	**Warramunga Arr**	**24.63**	**164**	P	P	23 06 01.6	-0.4
	1.5nm,0.7s,baz=343,slow=10,SNR=11						
ASAR	**Alice Springs**	**28.10**	**167**	P	P	23 06 33.5	+0.2
	0.2nm,0.5s,baz=347,slow=7.6,SNR=3.4						
MJAR	**Matsushiro Arr**	**34.04**	**16**	LR	LR	23 19 16.5	
	comp=Z,27nm,18.0s,baz=150,slow=33						
STKA	**Stephens Creek**	**38.04**	**160**	P	P	23 07 59.4	-0.4
	0.4nm,0.3s,baz=348,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**57.79**	**325**	P	P	23 10 32.6	-0.1
	0.3nm,0.4s,baz=120,slow=7.3,SNR=8.7						

*DJA **17** 23:08:13.6*±*0.3, 8°S*±*3°×11°0E*±*°, h10km, M3.5/14, MLv3.5/14*
*IDC **17** 23:08:28.5*±*8.6, 8°95S×112°.17E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, Error ellipse: s-maj=149.6km s-min=125.2km az=176.0*

ISC 17 23:08:12.1±1.2,**8°06S**±0°.06×**110°42E**±0°.03,**h9**km±9km,
n18,σ1§**04**/26,**mb3.3**/3,**Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UGM	**Wanagama**	**0.18**	**35**	P	**Pg**	**23 08 16.5**	**+0.6**
UGM				S	**Sg**	**23 08 18.7**	**+0.2**
YOGI	**Yogyakarta**	**0.27**	**334**	P	**Pg**	**23 08 17.4**	**-0.2**
YOGI				S	**Sg**	**23 08 21.4**	**+0.2**
WOJI	**Wonogiri, Jawa**	**0.55**	**66**	P	**Pg**	**23 08 22.5**	**-0.2**
WOJI				S	**Sg**	**23 08 30.1**	**+0.2**
PCJI	**Pacitan**	**0.76**	**100**	P	**Pg**	**23 08 26.7**	**-0.1**
PCJI				S	**Sg**	**23 08 38.4**	**+1.7**
SMRI	**Semarang**	**1.01**	**1**	P	**Pn**	**23 08 31.7**	**-0.8**
SMRI				S	**Sn**	**23 08 48.9**	**+2.1**
BJII	**Banjamegara**	**1.01**	**316**	P	**Pg**	**23 08 30.5**	**-1.0**
BJII				S	**Sb**	**23 08 44.3**	**-0.9**
PWJI	**Pagerwojo**	**1.37**	**88**	P	**Pn**	**23 08 36.5**	**-1.0**
PWJI				S	**Sb**	**23 08 54.9**	**-0.7**
SJI	**Sawahan**	**1.38**	**76**	P	**Pn**	**23 08 36.6**	**-1.0**
CLJI	**Cilicap**	**1.43**	**284**	P	**Pb**	**23 08 39.5**	**+0.6**
CLJI				S	**Sn**	**23 08 56.2**	**-1.0**
TGJI	**Tegal**	**1.75**	**313**	P	**Pn**	**23 08 42.0**	**-0.7**
KRKI	**Karangkates**	**2.02**	**93**	P	**Pb**	**23 08 48.8**	**-0.1**
GRJI	**Gresik**	**2.34**	**61**	S	**Sb**	**23 09 24.4**	**+0.9**
CISI	**Cisompet, Garu**	**2.63**	**281**	P	**Pn**	**23 08 54.9**	**+0.1**
GMJI	**Gumukmas**	**3.00**	**94**	P	**Pb**	**23 09 03.9**	**-1.9**
BLJI	**Banyuglugur**	**3.16**	**84**	P	**Pb**	**23 09 06.9**	**-1.6**
WRA	**Warramunga Arr**	**26.00**	**120**	P	**P**	**23 13 46.0**	**+0.4**
	0.4nm,0.6s,baz=293,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**27.33**	**127**	P	**P**	**23 13 59.1**	**+1.5**
	0.2nm,0.3s,baz=311,slow=8.5,SNR=3.2						
STKA	**Stephens Creek**	**37.44**	**134**	P	**P**	**23 15 26.6**	**+0.6**
	0.9nm,0.4s,baz=306,slow=11,SNR=6.7						

*NEIC **17** 23:22:58.9*±*0.2, 2°.51N×126°.77E, h10km, mb5.1/41, Error ellipse: s-maj=7.2km s-min=4.4km az=79.0*
*BJI **17** 23:22:58.9, 1°.88N×126°.88E, h55km, mB5.0/25, mb5.0/41, Ms4.5/30, Ms7 4.2/30*
*MOS **17** 23:23:01.0*±*0.9, 2°.47N×126°.70E, h33km, mb5.2/29, Error ellipse: s-maj=13.0km s-min=6.3km az=112.7*
*IDC **17** 23:23:02.8*±*2.6, 2°.40N×126°.74E, h33km*±*19km, mb4.7/31, mb1 4.7/31, mb1mx4.7/32, mbtmp4.7/31, MS3.6/10, Ms1 3.6/10, ms1mx3.4/27, Error ellipse: s-maj=16.0km s-min=8.0km az=74.0*
*ISCJB **17** 23:23:04.2*±*0.5, 2°.49N*±*0°.02×126°.87E*±*0°.03, h65km*±*4km, mb4.9/96, Error ellipse: s-maj=4.5km s-min=3.6km az=153.0*
*AUST **17** 23:23:04.6*±*0.2, 2°.40N×126°.85E, h54km, Error ellipse: s-maj=0.8km s-min=0.6km az=40.0*
*DJA **17** 23:23:06.1*±*0.3, 2°N*±*3°×12°7E*±*°, h10km, M4.9/23, mB5.4/13, mb5.0/23, MLv4.9/9, Mw(mB)4.8/13*

ISC 17 23:23:04.8±0.3,**2°48N**±0°.03×**126°80E**±0°.04,**h51**km±2km,
n424,σ1§**28**/484,**mb5.0**/106,**MS3.7**/22,**11C-6D,Northern**
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.18**	**123**	P	**Pn**	**23 23 23.9**	**-1.1**
GAMI				S	**Sn**	**23 23 44.2**	**+4.3**
TNTI	**Ternate**	**1.79**	**161**	P	**Pn**	**23 23 32.7**	**-0.6**
TNTI				S	**Sn**	**23 23 59.2**	**+4.4**
MNI	**Manado**	**2.21**	**242**	P	**Pn**	**23 23 40.3**	**+1.2**
MNI				S	**Sn**	**23 24 08.8**	**+3.6**
LBMI	**Labuha**	**3.17**	**167**	P	**Pn**	**23 23 53.7**	**+1.4**
KMSI	**Cibinong**	**3.39**	**236**	P	Pn	23 23 58.7	+3.5
DAV	**Davao City (W)**	**4.72**	**345**	P	Pn	23 24 08.3	-5.2
DAV				Sn	Sn	23 25 17.0	+10
DAV	**Davao City (W)**	**4.72**	**345**	P	**Pn**	**23 24 15.2**	**+1.6**
	102nm,0.3s,baz=213,slow=1.9,SNR=3.7						
DAV				Sn	Sn	23 25 17.0	+10
	48nm,0.3s,baz=72,slow=20,SNR=2.9						
MRSI	**Marisa**	**5.25**	**248**	P	**Pn**	**23 24 23.5**	**+2.8**
	605nm,0.8s,5μm						
LUWI	**Luwuk**	**5.33**	**229**	P	Pn	23 24 34.3	+12
LUWI	**Luwuk**	**5.33**	**229**	P	Pn	23 24 25.5	+3.6
	baz=5.3,SNR=18						
CTBH	**Cotabato--PC H**	**5.35**	**332**	ĵ	*i* P	**Pn**	**23 24 22.8**	**+0.6**
SWI	**Sorong**	**5.56**	**127**	P	**Pn**	**23 24 27.0**	**+2.0**
	165nm,0.8s,2μm0.7nm						
SWI	**Sorong**	**5.56**	**127**	P	**Pn**	**23 24 27.2**	**+2.1**
	baz=5.5,SNR=15						
NLAI	**Namlea**	**5.69**	**177**	P	**Pn**	**23 24 27.5**	**+0.7**
	94nm,0.7s,2μm0.5nm						
FAKI	**Fak Fak**	**7.64**	**134**	P	Pn	23 24 57.9	+4.2
	58nm,1.4s,666nm0.2nm						
FAKI	**Fak Fak**	**7.64**	**134**	P	**Pn**	**23 24 55.7**	**+2.1**
	baz=7.6,SNR=34						
RKPI	**Ransiki, Papua**	**8.38**	**118**	P	Pn	23 25 09.0	+5.3
	93nm,0.9s,4μm						
MYLDM	**Lahad Datu**	**8.70**	**288**	P	Pn	23 25 11.3	+3.1
MYLDM	**Lahad Datu**	**8.70**	**288**	P	Pn	23 25 11.2	+3.1
	300nm,1.2s,3μm						
TTSI	**Tana Toraja**	**8.87**	**232**	P	**Pn**	**23 25 10.7**	**+0.2**
	81nm,0.9s,2μm						
PALU	**Palau**	**9.05**	**57**	P	**Pn**	**23 25 13.7**	**+0.8**
	baz=9.1,SNR=7.4						
PALU				S	**Sn**	**23 26 53.3**	**-0.1**
	baz=9.1,SNR=3.7						
TSM	**Tawau**	**9.09**	**282**	P	**Pn**	**23 25 14.1**	**+0.6**
SPSI	**Sidrap Palu**	**9.50**	**228**	P	**Pn**	**23 25 20.6**	**+1.5**
	48nm,0.8s,619nm						
BAKI	**Biak**	**10.00**	**111**	P	Pn	23 25 30.6	+4.7
	99nm,0.8s,1μm						
SDKM	**Sandakan**	**10.08**	**288**	P	**Pn**	**23 25 28.3**	**+1.2**
BKSI	**Bulukumba**	**10.22**	**221**	P	**Pn**	**23 25 31.6**	**+2.7**
	26nm,0.8s,366nm						
KAPI	**Kappang**	**10.24**	**223**	*e*Pn	**Pn**	**23 25 26.9**	**-2.3**
KAPI	**Kappang**	**10.24**	**223**	Pn	**Pn**	**23 25 29.0**	**-0.2**
	174nm,0.5s,SNR=8.8						
KAPI	**Kappang**	**10.24**	**223**	P	**Pn**	**23 25 29.0**	**-0.2**
	31nm,0.7s						
KAPI	**Kappang**	**10.24**	**223**	Pn	**Pn**	**23 25 28.8**	**-0.4**
	3.3nm,0.3s,baz=74,slow=4.9,SNR=18						
KKM	**Kota Kinabalu**	**11.13**	**289**	*e*Pn	**Pn**	**23 25 44.1**	**+2.7**
KKM	**Kota Kinabalu**	**11.13**	**289**	P	Pn	23 25 44.6	+3.1
KKM	**Kota Kinabalu**	**11.13**	**289**	P	Pn	23 25 44.9	+3.4
	baz=11,SNR=12						
BBKI	**Banjar Baru**	**13.33**	**244**	P	Pn	23 26 15.3	+3.9
	42nm,0.8s,3μm						

112nm,0.9s
MTN Manton Dam 15.82 164 P **Pn** **23 26 42.2 -2.1**
baz=16,SNR=15
KMMI Kalianget 15.92 233 P **P** **23 26 49.7 +1.2**
104nm,0.8s
KDU Kakadu 16.09 160 P **Pn** **23 26 45.1 -2.6**
baz=16,SNR=16
IGBI Denpasar 16.15 226 P **P** **23 26 51.9 +0.9**
85nm,0.9s
KSM Kuching 16.51 267 *e*Pn **Pn** **23 26 50.9 -2.2**
39nm,0.9s
KSM Kuching 16.51 267 P **P** **23 26 56.5 +1.4**
KSM Kuching 16.51 267 P **P** **23 26 57.3 +2.3**
48nm,1.1s
KSM Kuching 16.51 267 P **Pn** **23 26 49.1 -4.0**
baz=17,SNR=4.3
BLJI Banyuglugur 16.63 232 P **P** **23 26 57.5 +1.2**
111nm,0.9s,4µm
GMJI Gumukmas 17.07 231 P **P** **23 27 04.0 +2.8**
80nm,1.0s
SJI Sawahan 18.10 236 P **Pn** **23 27 14.9 +2.0**
46nm,0.9s
KNRA Kununurra 18.14 174 P **P** **23 27 11.6 -1.4**
baz=18,SNR=22
PWJI Pagerwojo 18.23 235 P **Pn** **23 27 15.1 +0.8**
37nm,0.5s
PCJI Pacitan 18.84 236 P **Pn** **23 27 22.5 +0.8**
FITZ Fitzroy Crossi 20.48 183 P **P** **23 27 37.7 -0.9**
FITZ Fitzroy Crossi 20.48 183 P **P** **23 27 37.7 -0.9**
12nm,0.4s,baz=18,slow=8.4,SNR=52
FITZ Fitzroy Crossi 20.48 183 P **P** **23 27 37.7 -0.9**
baz=20,SNR=10.0
TWG Pinlang 20.97 345 *e*Pn **P** **23 27 40.7 -3.1**
177nm,0.6s
GUMO Guam 21.00 57 LR LR 23 35 32.5
comp=Z,123nm,19.8s,baz=256,slow=36
YULB Yu-li 21.46 346 *e*P **P** **23 27 45.6 -3.5**
37nm,1.0s
TPUB Ta-pu 21.55 344 *e*P **P** **23 27 47.6 -2.4**
57nm,0.9s
SSLB Suanglung 21.93 346 *e*P **P** **23 27 51.4 -2.7**
75nm,0.6s
NACB Ninganchiao 22.15 347 *e*P **P** **23 27 54.4 -2.0**
111nm,0.3s
YHNB Yeheng 22.68 347 *e*P **P** **23 28 00.5 -1.7**
159nm,0.5s
MYKOM Kota Tinggi 22.94 269 P **P** **23 28 04.1 -0.9**
COEN Coen 23.03 136 P **P** **23 28 04.9 -1.0**
baz=23,SNR=24
QIZ Qiongzhong 23.37 316 P **P** **23 28 08.3 -0.8**
QIZ S **S** **23 32 16.4 -2.0**
QIZ pmax pmax
comp=Z,17nm,0.9s
QIZ LR LR
comp=N,160nm,16.6s
QIZ LR LR
comp=Z,260nm,31.3s
KGM Kluang 23.46 269 P **P** **23 28 11.4 +1.3**
WRAB Tennant Creek 23.47 162 *e*P **P** **23 28 08.4 -1.7**
WRAB *e*S **S** **23 32 15.7 -4.5**
WRAB pmax pmax
comp=Z,48nm,0.7s
WRAB Tennant Creek 23.47 162 *e*P **P** **23 28 08.4 -1.7**
comp=Z,48nm,0.7s
WRAB *e*S **S** **23 32 15.7 -4.5**
WRAB Tennant Creek 23.47 162 P **P** **23 28 08.0 -2.1**
comp=Z,477nm,0.4s
WRA Warramunga Arr 23.48 162 P **P** **23 28 08.2 -1.9**
WRA PcP **PcP** **23 31 54.8 -0.3**
WRA S **S** **23 32 19.4 -0.8**
WRA Warramunga Arr 23.48 162 P **P** **23 28 08.2 -1.9**
comp=Z,49nm,0.6s,baz=342,slow=11,SNR=284
WRA PcP **PcP** **23 31 54.8 -0.3**
comp=Z,2.5nm,0.4s,baz=330,slow=2.3,SNR=5.5
WRA S **S** **23 32 19.4 -0.8**
comp=Z,6.0nm,1.0s,baz=342,slow=18,SNR=7.5
KTGM Kuala Trenggan 23.77 278 P **P** **23 28 13.0 0.0**
JOW Kunigami 24.26 3 *e*P **P** **23 28 17.4 +0.1**
comp=Z,148nm,1.5s
MBWA Marble Bar 24.49 196 *e*P **P** **23 28 18.9 -0.5**
comp=Z,16nm,0.7s
XMIS Christmas Isla 24.67 238 P **P** **23 28 21.8 +0.7**
baz=25,SNR=3.8
MNAI Manna 24.77 254 P **P** **23 28 24.5 +2.3**
baz=25,SNR=4.5
FRIM Kepong 25.15 272 P **P** **23 28 25.6 +0.1**
IPM Ipoh 25.80 275 P **P** **23 28 34.5 +3.1**
QIS Mount Isa 26.11 152 P **P** **23 28 33.2 -1.0**
baz=26,SNR=43
MTSU Mount Surprise 26.78 141 P **P** **23 28 39.9 -0.4**
baz=27,SNR=34
AS31 Alice Springs 26.89 165 *e*P **P** **23 28 39.6 -1.6**
AS31 *e*PcP **PcP** **23 32 02.6 -0.1**
ASAR Alice Springs 26.89 165 P **P** **23 28 39.7 -1.5**
ASAR PcP **PcP** **23 32 03.0 +0.3**
ASAR S S 23 33 23.4 +8.8
ASAR Alice Springs 26.89 165 P **P** **23 28 39.7 -1.5**
comp=Z,11nm,0.7s,baz=336,slow=6.3,SNR=119
ASAR PcP **PcP** **23 32 03.0 +0.3**
comp=Z,4.8nm,0.4s,baz=338,slow=1.9,SNR=9.5
ASAR S S 23 33 23.4 +8.8
comp=Z,7.0nm,1.1s,baz=331,slow=18,SNR=9.3
PSI Prapat 27.84 271 P **P** **23 28 49.2 -0.8**
PSI Prapat 27.84 271 P **P** **23 28 49.2 -0.8**
comp=Z,13nm,0.7s,baz=82,slow=5.1,SNR=11
PSI Prapat 27.84 271 P **P** **23 28 49.8 -0.2**
baz=28,SNR=5.2
GSI Gunungsitoli 29.23 268 P **P** **23 29 01.5 -0.7**
baz=29,SNR=4.9
CTA Charters Tower 29.45 140 P **P** **23 29 03.4 -0.7**
CTA Charters Tower 29.45 140 P **P** **23 29 03.4 -0.7**
comp=Z,4.8nm,0.5s,baz=317,slow=9.1,SNR=5.4
MEEK Meekatharra 30.00 195 P **P** **23 29 08.1 -0.8**
baz=30,SNR=17
WHN Wuhan 30.30 338 P **P** **23 29 13.8 +2.4**
WHN S S 23 34 17.8 +10
WHN pmax pmax
comp=Z,32nm,0.5s
WHN LR LR
comp=N,690nm,29.6s
WHN LR LR
comp=E,560nm,29.4s
WHN LR LR
comp=Z,740nm,23.4s
GYA Guiyang 30.69 323 P **P** **23 29 16.8 +1.7**
GYA pP **pP** **23 29 29.6 +1.4**
GYA sP **sP** **23 29 35.6 +1.4**
GYA PP **PnPn** **23 30 18.8 +2.4**
GYA S S **23 34 14.5 0.0**
GYA sS **sS** **23 34 37.0 +0.4**
GYA ScP **ScP** **23 35 49.5 -1.4**
GYA PcS **PcS** **23 35 57.0 +0.6**
GYA SS **SnSn** **23 36 01.4 +5.1**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,650nm,17.4s
GYA LR LR
comp=E,520nm,18.0s
GYA LR LR
comp=Z,790nm,17.8s
JNU Nakatsue 30.72 7 P **P** **23 29 15.5 +0.3**
JNU Nakatsue 30.72 7 P **P** **23 29 15.5 +0.3**
comp=Z,13nm,0.9s,baz=333,slow=2.7,SNR=6.7
CMAR Chiang Mai Arr 31.57 302 P **P** **23 29 22.8 -0.1**
CMAR PcP **PcP** **23 32 15.8 +1.1**
CMAR ScP **ScP** **23 35 55.3 +1.5**
CMAR Chiang Mai Arr 31.57 302 P **P** **23 29 22.8 -0.1**
comp=Z,15nm,0.8s,baz=120,slow=7.1,SNR=74
CMAR PcP **PcP** **23 32 15.8 +1.1**
comp=Z,0.7nm,0.3s,baz=183,slow=1.9,SNR=5.7
CMAR ScP **ScP** **23 35 55.3 +1.5**
comp=Z,0.7nm,0.3s,baz=178,slow=2.3,SNR=5.6
CMAR LR LR 23 42 41.0
comp=Z,99nm,19.8s,baz=122,slow=37
CHTO Chiang Mai 31.74 303 *e*P **P** **23 29 23.6 -0.7**
CHTO pmax pmax
comp=Z,25nm,0.7s
CHTO Chiang Mai 31.74 303 *e*P **P** **23 29 23.6 -0.7**
comp=Z,25nm,0.7s
ENH Enshi 32.15 331 *e*P **P** **23 29 26.8 -1.0**
comp=Z,14nm,0.7s
KMI Kunming 32.32 316 P **P** **23 29 29.9 +0.4**
KMI pP **pP** **23 29 44.1 +1.5**
KMI sP **sP** **23 29 50.1 +1.4**
KMI PP **PP** **23 30 42.9 -0.4**
KMI S **S** **23 34 41.3 +1.2**
KMI sS **sS** **23 35 03.8 +1.5**
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI pmax pmax
comp=Z,57nm,3.3s
KMI LR LR
comp=N,79nm,24.2s
KMI LR LR
comp=E,100nm,22.8s
KMI LR LR
comp=Z,200nm,27.9s
MORW Morawa 33.02 197 P **P** **23 29 34.6 -0.7**
baz=33,SNR=17
FORT Forrest 33.09 178 P **P** **23 29 35.1 -0.8**
baz=33,SNR=116
QLP Quilpie 33.44 151 P **P** **23 29 38.3 -0.7**
baz=34,SNR=12
KMBL Kambalda 33.98 188 P **P** **23 29 43.4 -0.3**
baz=34,SNR=11
BLDU Ballidu 34.29 196 P **P** **23 29 45.8 -0.5**
baz=34,SNR=14
KSAR Wonju Array Be 34.81 2 P **P** **23 29 52.1 +1.3**
KSAR PcP **PcP** **23 32 23.9 +0.7**
KSRS Korea Array 34.82 2 P **P** **23 29 52.1 +1.2**
comp=Z,11nm,0.5s,baz=177,slow=9.9,SNR=47
KSRS PcP **PcP** **23 32 23.9 +0.6**
comp=Z,2.9nm,0.8s,baz=200,slow=2.4,SNR=6.1
KLBR Kellerberrin 34.95 194 P **P** **23 29 51.9 -0.2**
baz=35,SNR=19
MJAR Matsushiro Arr 35.50 16 P **P** **23 29 55.8 -0.9**
MJAR PcP **PcP** **23 32 26.5 +1.1**
MJAR Matsushiro Arr 35.50 16 P **P** **23 29 55.8 -0.9**
comp=Z,10nm,0.6s,baz=190,slow=9.3,SNR=19
MJAR PcP **PcP** **23 32 26.5 +1.1**
comp=Z,1.2nm,0.3s,baz=206,slow=4.5,SNR=5.6
MJAR LR LR 23 42 07.1
comp=Z,85nm,19.5s,baz=175,slow=32
MAJO Matsushiro 35.50 16 *e*P **P** **23 29 55.9 -0.9**
MAJO Matsushiro 35.50 16 *e*P **P** **23 29 55.9 -0.9**
MAT Matsushiro 35.50 16 P **P** **23 29 57.3 +0.5**
XAN Xi'an 35.56 334 P **P** **23 29 56.8 -0.6**
XAN pmax pmax
comp=Z,4.0nm,0.7s
XAN LR LR
comp=Z,540nm,20.2s
CD2 Chengdu 35.69 325 P **P** **23 29 59.0 +0.4**
CD2 PP **PnPn** **23 31 19.8 +0.3**
CD2 PcP **PcP** **23 32 27.3 +1.2**
CD2 S **S** **23 35 35.3 +3.4**
CD2 PcS **PcS** **23 36 13.3 -0.2**
CD2 SS **SnSn** **23 37 55.4 -2.0**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,5.6s
RMQ Roma 35.77 145 P **P** **23 29 58.5 -0.6**
baz=36,SNR=6.2
BBOO Buckleboo 36.17 167 P **P** **23 30 01.4 -1.1**
baz=36,SNR=55
EIDS Eidsvold 36.34 141 P **P** **23 30 03.2 -0.8**
baz=36,SNR=8.0
NWAO Narrogin (SRO) 36.36 194 *e*P **P** **23 30 03.5 -0.6**
comp=Z,18nm,0.9s
NWAO Narrogin (SRO) 36.36 194 P **P** **23 30 02.9 -1.2**
comp=Z,12nm,0.6s,baz=18,slow=7.4,SNR=17
STKA Stephens Creek 36.94 159 *e*P **P** **23 30 08.5 -0.6**
comp=Z,7.7nm,0.8s
STKA PcP **PcP** **23 32 30.0 +0.3**
STKA *e*PcP **PcP** **23 32 30.1 +0.4**
STKA Stephens Creek 36.94 159 P **P** **23 30 08.5 -0.6**
comp=Z,22nm,0.4s,baz=337,slow=7.7,SNR=48
STKA PcP **PcP** **23 32 30.0 +0.3**
comp=Z,9.0nm,0.7s,baz=350,slow=5.1,SNR=4.1
STKA Stephens Creek 36.94 159 P **P** **23 30 08.3 -0.8**
baz=37,SNR=56
RKGY Rocky Gully 38.03 193 P **P** **23 30 19.5 +1.2**
baz=38,SNR=7.9
CMSA Cobar Meteorol 38.30 154 P **P** **23 30 20.2 -0.4**
baz=38,SNR=19
BJI Beijing 38.61 347 P **P** **23 30 22.8 -0.3**
BJI S S 23 36 23.0 +7.1
BJI pmax pmax
comp=Z,31nm,0.8s
BJI LR LR
comp=Z,120nm,25.7s
LZH Lanzhou 39.61 330 *e*P **P** **23 30 33.0 +1.2**
LZH pP **pP** **23 30 46.1 +1.0**
LZH sP **sP** **23 30 51.5 +0.4**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,97nm,6.2s
LZH LR LR
comp=N,120nm,10.3s
LZH LR LR
comp=E,100nm,10.0s
LZH LR LR
comp=Z,400nm,20.2s
ARMA Armidale 40.39 146 P **P** **23 30 38.5 +0.2**
baz=40,SNR=29
HHC Hu-ho-hao-te 40.60 342 *e*P **P** **23 30 39.9 +0.1**
HHC sP **sP** **23 30 57.3 -1.9**
HHC S **S** **23 36 49.5 +3.5**
HHC sS **sS** **23 37 08.0 -0.5**
HHC SS **SS** **23 39 45.6 -2.1**
HHC ScS **ScS** **23 40 37.9 -3.2**
HHC pmax pmax
comp=Z,37nm,0.5s
HHC pmax pmax
comp=Z,160nm,6.2s
HHC LR LR
comp=N,530nm,26.7s
HHC LR LR
comp=E,440nm,21.8s
HHC LR LR
comp=Z,750nm,27.0s
ARPS Mount Arapiles 41.48 162 P **P** **23 30 47.0 +0.1**
baz=42,SNR=20
USRK Ussuriysk Arra 41.80 6 P **P** **23 30 50.6 +1.2**
comp=Z,10nm,0.6s,baz=190,slow=6.3,SNR=24
YNG Young 41.84 153 P **P** **23 30 50.3 +0.3**
baz=42,SNR=8.2
MDJ Mudanjiang 42.04 3 P **P** **23 30 52.4 +1.0**
MDJ pP **pP** **23 31 03.9 -0.9**
MDJ sP **sP** **23 31 08.8 -1.9**
MDJ PP **PP** **23 32 30.8 +1.3**
MDJ S S 23 37 13.0 +6.1
MDJ sS sS 23 37 36.1 +6.6
MDJ pmax pmax
comp=Z,9.0nm,0.9s
MDJ pmax pmax
comp=Z,48nm,3.7s
MDJ LR LR
comp=N,93nm,29.7s
MDJ LR LR
comp=E,60nm,26.8s
MDJ LR LR
comp=Z,140nm,28.7s
CAN Canberra 42.97 153 *e*P **P** **23 30 59.1 -0.1**
CAN pmax pmax
comp=Z,20nm,0.8s
CAN Canberra 42.97 153 *e*P **P** **23 30 59.1 -0.1**
comp=Z,20nm,0.8s
CNB Canberra Magne 43.13 153 P **P** **23 31 01.8 +1.3**
baz=43,SNR=6.6
LSA Lhasa 43.32 312 *e*P **P** **23 31 01.7 -0.9**
LSA pmax pmax
comp=Z,16nm,0.7s
LSA Lhasa 43.32 312 *e*P **P** **23 31 01.7 -0.9**
comp=Z,16nm,0.7s
TOO Toolangi 43.46 158 P **P** **23 31 04.2 +1.1**
baz=44,SNR=4.1
ASAJ Asahikawa 43.76 16 P **P** **23 31 06.6 +1.3**
ASAJ Asahikawa 43.76 16 P **P** **23 31 06.6 +1.3**
comp=Z,15nm,0.6s,baz=180,slow=18
GTA Gaotai 44.20 330 *e*P **P** **23 31 09.3 +0.2**
GTA pP **pP** **23 31 21.8 -0.9**
GTA sP **sP** **23 31 27.0 -1.6**
GTA PcP **PP** **23 32 52.6 -0.4**
GTA PP **PcP** **23 32 54.6 +1.4**
GTA S **S** **23 37 40.1 +1.0**
GTA sS **sS** **23 38 01.3 -0.5**
GTA SS SS 23 40 51.3 -7.3
GTA pmax pmax
comp=Z,8.0nm,0.8s
GTA pmax pmax
comp=Z,92nm,5.7s
GTA LR LR
comp=N,140nm,21.4s
GTA LR LR
comp=E,220nm,22.3s
GTA LR LR
comp=Z,300nm,22.8s
TAPN Taplejung 44.81 307 *e*P **P** **23 31 12.9 -1.5**
comp=Z,21nm,0.5s
ODAN Odare 44.85 306 *e*P **P** **23 31 13.4 -1.3**
comp=Z,63nm,0.7s
RAMN Ramite 45.53 306 *e*P **P** **23 31 19.2 -0.8**
comp=Z,47nm,0.7s
DZM Mont Dzumac 45.77 124 P **P** **23 31 21.7 -0.1**
DZM Mont Dzumac 45.77 124 P **P** **23 31 21.7 -0.1**
comp=Z,4.6nm,0.7s,baz=146,slow=18,SNR=4.1
GUN Gumba 46.52 307 *e*P **P** **23 31 26.6 -1.3**
comp=Z,101nm,0.8s
PKI Pulchoki 46.75 306 *e*P **P** **23 31 28.0 -1.7**
comp=Z,15nm,0.5s
PKIN Phulchoki 46.77 306 *e*P **P** **23 31 29.2 -0.6**
KLR Kul'dur 46.77 4 *e*P **P** **23 31 25.8 -3.3**
KKN Kakani 46.95 307 *e*P **P** **23 31 29.7 -1.4**
comp=Z,22nm,0.5s
DMN Daman 47.01 306 *e*P **P** **23 31 30.4 -1.3**
comp=Z,32nm,0.8s
KOLN Koldanda 48.30 306 *e*P **P** **23 31 40.5 -1.1**
comp=Z,69nm,0.6s
ULN Ulaanbaatar 48.32 342 *e*P **P** **23 31 42.3 +0.9**
comp=Z,13nm,0.8s
DANN Dangsing 48.40 306 *e*P **P** **23 31 41.1 -1.4**
comp=Z,87nm,0.7s
SONM Songino Array 48.50 342 P **P** **23 31 43.4 +0.7**
SONM PcP **PcP** **23 33 08.4 +0.3**
SONM Songino Array 48.50 342 P **P** **23 31 43.4 +0.7**
comp=Z,8.9nm,0.6s,baz=158,slow=9.7,SNR=41
SONM PcP **PcP** **23 33 08.4 +0.3**
comp=Z,2.5nm,0.8s,baz=163,slow=2.3,SNR=4.0
SONM LR LR 23 55 54.2
comp=Z,51nm,19.0s,baz=160,slow=41
PYUN Piuthan 48.92 306 *e*P **P** **23 31 45.4 -1.0**
comp=Z,63nm,0.6s
HYB Hyderabad 49.61 291 *i* P **P** **23 31 50.0 -1.6**
ZAK Zakamensk 51.72 341 *e*P **P** **23 32 07.7 +0.6**
ZAK *e* 23 33 20.6
TLY Talaya 52.73 342 *e*P **P** **23 32 15.8 +1.4**
TLY pmax pmax
comp=Z,9.0nm,0.8s
TLY MLR MLR
comp=Z,35nm,20.0s
MOY Mondy 53.58 340 *e*P **P** **23 32 22.0 +1.3**
MOY pmax pmax
comp=Z,15nm,1.9s
DDI Dehra Dun 53.75 306 *ex* **P** **23 32 22.0 -0.4**
WMQ Urumqi 53.78 326 P **P** **23 32 23.8 +1.4**
WMQ pP **pP** **23 32 36.3 +0.1**
WMQ sP **sP** **23 32 41.6 -0.5**
WMQ PcP **PcP** **23 33 29.0 +1.2**
WMQ PP **PP** **23 34 26.5 +2.6**
WMQ PcS **PcS** **23 37 26.8 -0.2**
WMQ S **S** **23 39 53.4 0.0**
WMQ sS **sS** **23 40 14.8 -1.9**
WMQ ScS **ScS** **23 42 05.8 -1.8**
WMQ SS **SS** **23 43 34.1 -0.9**
WMQ pmax pmax
comp=Z,14nm,0.4s
WMQ pmax pmax
comp=Z,130nm,4.0s
WMQ LR LR
comp=N,120nm,5.6s
WMQ LR LR
comp=E,110nm,5.4s
HVS Khovu-Aksy 55.90 335 *c i*P **P** **23 32 38.4 +0.9**
HVS pmax pmax
comp=Z,65nm,0.8s
PETK Petropavlovsk- 56.56 22 P **P** **23 32 42.8 +0.7**
PETK Petropavlovsk- 56.56 22 P **P** **23 32 42.8 +0.7**
PETK Petropavlovsk- 56.56 22 P **P** **23 32 42.8 +0.7**
comp=Z,5.0nm,0.6s,baz=199,slow=3.9,SNR=6.6
PETK LR LR 23 54 07.5
comp=Z,36nm,21.1s,baz=231,slow=33
MK31 Makanchi Array 58.62 326 *e*P **P** **23 32 56.1 -0.6**
MK31 Makanchi Array 58.62 326 *e*P **P** **23 32 56.1 -0.6**
MKAR Makanchi Array 58.62 326 *e*P **P** **23 32 56.4 -0.4**
MKAR Makanchi Array 58.62 326 *e*P **P** **23 32 56.4 -0.4**
MKAR Makanchi Array 58.62 326 P **P** **23 32 56.1 -0.6**
comp=Z,8.6nm,0.5s,baz=122,slow=8.3,SNR=83
MKAR LR LR 23 59 50.6
comp=Z,96nm,20.6s,baz=315,slow=38
KSH Kashi 58.98 316 *e*P **P** **23 33 00.0 +0.5**
KSH *e*pP **pP** **23 33 12.6 -0.9**
KSH *e*sP **sP** **23 33 17.9 -1.4**
KSH *e*PcP **PcP** **23 33 49.4 +1.2**
KSH *e*PP **PP** **23 35 11.3 +1.0**
KSH *e*ScP **ScP** **23 37 44.5 -0.3**
KSH *e*PcS **PcS** **23 37 50.0 -0.1**
KSH *e*S **S** **23 40 59.1 -3.4**
KSH *e*ScS **ScS** **23 42 42.1 -3.4**
KSH pmax pmax
comp=Z,4.0nm,0.4s
KSH LR LR
comp=N,130nm,5.3s
KSH LR LR
comp=E,130nm,4.2s
KSH LR LR
comp=Z,140nm,6.4s
YAK Yakutsk 59.45 2 *e*P **P** **23 33 01.9 -0.2**
YAK pmax pmax
comp=Z,19nm,0.7s
ULHL Ulahol 59.99 319 P **P** **23 33 06.8 +0.2**
SNR=13
KZA Kyzart 60.58 318 P **P** **23 33 11.1 +0.2**
SNR=5.6
RPZ Rata Peaks 60.71 145 P **P** **23 33 09.1 -2.0**
RPZ Rata Peaks 60.71 145 P **P** **23 33 09.1 -2.0**
comp=Z,23nm,0.8s,baz=107,slow=3.6,SNR=3.8
TKM2 Tokmak 2 60.73 319 *i* P **P** **23 33 11.0 -0.5**
TKM2 Tokmak 2 60.73 319 *e*P **P** **23 33 10.6 -1.0**
comp=Z,9.8nm,0.8s
TKM2 Tokmak 2 60.73 319 P **P** **23 33 11.1 -0.5**
SNR=22
KBK Karagaybulak 61.04 318 P **P** **23 33 14.8 +1.2**
SNR=6.0
AAK Ala-Archa 61.33 318 *i* P **P** **23 33 16.9 +1.3**
AAK Ala-Archa 61.33 318 *e*P **P** **23 33 15.8 +0.3**
comp=Z,1.4nm,0.9s
AAK Ala-Archa 61.33 318 P **P** **23 33 21.0 +5.4**
SNR=7.1
AAK Ala-Archa 61.33 318 P **P** **23 33 17.4 +1.8**
comp=Z,5.0nm,0.7s,baz=159,slow=8.7,SNR=16
USP Ospenovka 61.60 319 P **P** **23 33 16.7 -0.6**
SNR=23
AML Almayashu 61.65 317 P **P** **23 33 18.1 0.0**
SNR=33
ZAA0 Zalesovo Array 61.73 333 *e*P **P** **23 33 16.3 -1.5**
ZALV Zalesovo Beam 61.73 333 P **P** **23 33 16.7 -1.1**
ZALV Zalesovo Beam 61.73 333 P **P** **23 33 16.7 -1.1**
ZALV ⇑*e* 00 02 35.1
ZALV Zalesovo Beam 61.73 333 P **P** **23 33 16.7 -1.1**
comp=Z,5.7nm,0.4s,baz=134,slow=7.3,SNR=27
ZALV PKP2bc 00 02 35.1
comp=Z,0.3nm,0.3s,baz=305,slow=3.1,SNR=5.3
ZALV LR LR 00 02 59.9
comp=Z,26nm,20.0s,baz=340,slow=39
EKS2 Erkin-Say 61.82 318 *e*P **P** **23 33 18.8 -0.1**
EKS2 pmax pmax
comp=Z,12nm,0.8s
EKS2 Erkin-Say 61.82 318 *e*P **P** **23 33 18.8 -0.1**
comp=Z,12nm,0.8s
EKS2 Erkin-Say 61.82 318 P **P** **23 33 18.7 -0.1**
SNR=22
KBL Kabul 62.34 308 *e*P **P** **23 33 21.5 -1.1**
KBL pmax pmax
comp=Z,13nm,0.8s
KBL Kabul 62.34 308 *e*P **P** **23 33 21.5 -1.1**
comp=Z,13nm,0.8s
KBL Kabul 62.34 308 P **P** **23 33 22.0 -0.6**
baz=62,SNR=9.3
KURBB Kurchatov Arra 62.83 328 P **P** **23 33 24.6 -0.6**
comp=Z,16nm,0.7s,baz=127,slow=6.0,SNR=110
KURK Kurchatov 62.83 328 *e*P **P** **23 33 24.6 -0.7**
KURK pmax pmax
comp=Z,31nm,0.6s

KURK	Kurchatov	62.83	328	*e*P		P		23 33 24.6	-0.7
	comp=Z,31nm,0.6s								
KURK	Kurchatov	62.83	328	P		P		23 33 24.5	-0.7
	comp=Z,291nm,0.6s,SNR=35								
NVS	Novosibirsk	63.01	333	*e*P		P		23 33 24.2	-2.2
NVS					pmax	pmax			
	comp=Z,12nm,0.9s								
NVS					pmax	pmax			
	comp=N,5.0nm,0.7s								
NVS					pmax	pmax			
	comp=E,5.0nm,0.7s								
FX1	Attu Island--F	63.13	29	*e*P		P		23 33 27.8	+0.6
SEY	Seymchan	63.23	13	*ce*P		P		23 33 28.5	+0.8
KKAR	Karatay Array	64.19	317	*e*P		P		23 33 33.6	-0.8
KKAR	Karatay Array	64.19	317	*e*P		P		23 33 33.6	-0.8
BRVK	Borovoye	68.47	327	*c i*P		P		23 34 00.9	-0.7
BRVK					pmax	pmax			
	comp=Z,6.0nm,0.7s								
BRVK	Borovoye	68.47	327	*e*P		P		23 34 01.0	-0.6
	comp=Z,14nm,1.0s								
BRVK	Borovoye	68.47	327	P		P		23 34 01.8	+0.2
	comp=Z,90nm,0.6s,SNR=9.4								
CASY	Casey	69.59	187	*e*P		P		23 34 08.2	0.0
	comp=Z,136nm,2.3s								
BILL	Bilibino	70.74	15⇑	*e*P		P		23 34 16.2	+0.9
BILL				*e*				23 34 26.4	
BILL				*e*				23 34 31.8	
BILL					pmax	pmax			
	comp=Z,5.0nm,1.0s								
MRIV	Mauritius Mete	71.54	248	*e*P		P		23 34 20.9	-0.1
ABKT	Ailbek	71.73	309	P		P		23 34 21.1	-0.9
	comp=Z,60nm,0.6s,SNR=6.3								
ABKAR	Akbulak array	73.16	321	*e*P		P		23 34 29.6	-0.6
UNV	Unalaska Valle	74.41	34	*e*P		P		23 34 37.4	+0.1
SVE	Sverdlovsk	75.06	329⇓	*e*P		P		23 34 41.0	-0.1
SVE					pmax	pmax			
	comp=Z,38nm,0.8s								
ARU	Arti	76.03	328	*c i*P		P		23 34 45.8	-0.8
ARU								23 37 35.4	
ARU				S		S		23 44 27.9	+1.9
ARU					pmax	pmax			
	comp=Z,22nm,0.7s								
ARU	Arti	76.03	328	P		P		23 34 45.6	-1.0
	comp=Z,197nm,0.9s,SNR=18								
SDPT	Sand Point	78.19	34	*e*P		P		23 34 58.3	-0.5
	comp=Z,32nm,0.6s								
RDF	Al-Radifah	79.39	299	*e*P		P		23 35 04.4	-1.6
RDF					AMb	AMB		23 35 08.4	
	comp=Z,17nm,0.5s								
CHGN	Chignik	79.53	33	*e*P		P		23 35 05.0	-1.1
MIB	Mutribah	79.62	300	*e*P		P		23 35 05.7	-1.5
MIB					AMb	AMB		23 35 06.5	
	comp=Z,26nm,0.6s								
NAY	Al-Naaiem	79.68	299	*e*P		P		23 35 05.6	-2.0
NAY					AMb	AMB		23 35 09.9	
	comp=Z,9.7nm,0.6s								
RAYN	Ar Rayn	81.03	293	P		P		23 35 14.5	-0.5
	comp=Z,66nm,0.7s,SNR=5.3								
RAYN	Ar Rayn	81.03	293	*e*P		P		23 35 13.7	-1.3
	comp=Z,7.7nm,0.8s								
VNDA	Vanda	82.18	173	*e*P		P		23 35 19.7	-0.2
	comp=Z,12nm,0.8s								
VNDA	Vanda	82.18	173	P		P		23 35 19.7	-0.2
	comp=Z,12nm,0.7s,baz=319,slow=6.3,SNR=60								
GNI	Garni	82.33	310	*e*P		P		23 35 20.9	-0.8
	comp=Z,9.3nm,0.8s								
OHAK	Old Harbor	82.46	33	*e*P		P		23 35 22.1	+0.4
	comp=Z,17nm,0.9s								
MAW	Mawson	82.61	200	P		P		23 35 23.0	+0.8
MAW	Mawson	82.61	200	P		P		23 35 23.0	+0.8
	comp=Z,15nm,0.7s,baz=69,slow=6.5,SNR=42								
MAW	Mawson	82.61	200	P		P		23 35 22.9	+0.6
	baz=83,SNR=13								
KDAK	Kodiak Island	82.91	32	*e*P		P		23 35 24.3	+0.3
	comp=Z,7.7nm,0.8s								
SBA	Scott Base	83.09	172	*e*P		P		23 35 25.3	+0.7
SBA					pmax	pmax			
	comp=Z,171nm,3.0s								
SBA	Scott Base	83.09	172	*e*P		P		23 35 25.2	+0.7
	comp=Z,172nm,3.0s								
ZEI	Tsey	83.11	313	*e*P		P		23 35 24.9	-0.8
ZEI					pmax	pmax			
	comp=Z,15nm,0.8s								
SPU	Mount Spurr	83.57	29	*e*P		P		23 35 26.1	-1.4
PPLA	Purkeypile	83.71	27	*e*P		P		23 35 29.2	+1.0
	comp=Z,12nm,1.0s								
KBZ	Khabaz	83.88	314	P		P		23 35 29.6	+0.2
KBZ	Khabaz	83.88	314	P		P		23 35 29.6	+0.2
KBZ	Khabaz	83.88	314	P		P		23 35 29.6	+0.2
	comp=Z,7.6nm,0.8s,baz=144,slow=7.2,SNR=25								
KIV	Kislovodsk	84.05	314	*e*P		P		23 35 30.9	+0.6
KIV					pmax	pmax			
	comp=Z,9.0nm,0.9s								
KIV					MLR	MLR			
	comp=Z,45nm,20.0s								
KIV	Kislovodsk	84.05	314	P		P		23 35 31.4	+1.1
	comp=Z,66nm,0.8s,SNR=5.4								
TRF	Thorofare Moun	84.62	27	*e*P		P		23 35 28.7	-4.2
	comp=Z,7.1nm,1.1s								
SEW	Seward	84.74	30	*e*P		P		23 35 32.3	-1.0
	comp=Z,14nm,0.8s								
PMR	Palmer	85.01	29	*e*P		P		23 35 34.8	+0.2
PMR					pmax	pmax			
	comp=Z,15nm,0.9s								
PMR	Palmer	85.01	29	*e*P		P		23 35 34.8	+0.2
	comp=Z,15nm,0.9s								
COLD	Coldfoot	85.01	23	*e*P		P		23 35 34.3	-0.3
	comp=Z,9.2nm,0.8s								
VRHR	Novokhopersk	85.05	321	*e*P		P		23 35 34.1	-1.0
VRHR					pmax	pmax			
	comp=Z,30nm,0.6s								
VRHR					pmax	pmax			
	comp=N,6.0nm,0.7s								
VRHR					pmax	pmax			
	comp=E,10.0nm,0.7s								
MCK	McKinley	85.25	26	*e*P		P		23 35 35.5	-0.4
MCK					pmax	pmax			
	comp=Z,8.0nm,1.0s								
MCK	McKinley	85.25	26	*e*P		P		23 35 35.5	-0.4
	comp=Z,8.3nm,1.0s								
ILAR	Eielson Array	86.20	25	P		P		23 35 39.5	-1.0
ILAR				PKKP		PKKPdf		23 53 37.4	+3.1
ILAR	Eielson Array	86.20	25	P		P		23 35 39.5	-1.0
	comp=Z,1.3nm,0.7s,baz=240,slow=5.0,SNR=24								
ILAR				PKKP		PKKPdf		23 53 37.4	+3.1
	comp=Z,0.3nm,0.6s,baz=51,slow=1.9,SNR=4.8								
VORD	Divnogorie	86.52	321	*e*P		P		23 35 41.1	-1.2
VORD					pmax	pmax			
	comp=N,8.0nm,0.6s								
VORD					pmax	pmax			
	comp=Z,10.0nm,0.6s								
VORD					pmax	pmax			
	comp=E,10.0nm,0.7s								
VSR	Storozhevoye	86.60	321	*e*P		P		23 35 41.6	-1.1
VSR					pmax	pmax			
	comp=E,10.0nm,1.0s								
VSR					pmax	pmax			
	comp=Z,10.0nm,1.0s								
VSR					pmax	pmax			
	comp=N,6.0nm,1.2s								
DOT	Dot Lake	87.42	27	*e*P		P		23 35 46.1	-0.5
	comp=N,8.8nm,0.8s								
ANN	Anapa	87.82	315	*c i*P		P		23 35 47.6	-1.2
ANN				*e*				23 46 23.5	
ANN					pmax	pmax			
	comp=Z,52nm,0.8s								
ANN					pmax	pmax			
	comp=N,21nm,0.9s								
ANN					pmax	pmax			
	comp=E,7.0nm,0.9s								
OBN	Obninsk	88.12	325	P		P		23 35 49.0	-1.0
OBN					pmax	pmax			
	comp=Z,12nm,0.7s								
KMBO	Kilima Mbogo	89.59	269	*e*P		P		23 35 58.2	+0.1
	comp=Z,48nm,2.8s								
KMBO	Kilima Mbogo	89.59	269	P		P		23 35 58.0	-0.1
	comp=Z,1.7nm,0.7s,baz=84,slow=9.2,SNR=5.2								
JOF	Joensuu	90.32	333	*e*P		P		23 35 58.2	-1.9
JOF					pmax	pmax			
	comp=Z,3.0nm,0.6s								
JOF	Joensuu	90.32	333	*ep*		P		23 35 58.2	-1.9
	comp=Z,2.5nm,0.6s								
BR131	Keskin Array S	90.87	310	*e*P		P		23 36 02.1	-1.3
	comp=Z,3.1nm,0.7s								
BRTR	Keskin Array B	90.87	310	P		P		23 36 02.0	-1.4
BRTR	Keskin Array B	90.87	310	P		P		23 36 02.0	-1.4
	comp=Z,4.4nm,0.8s,baz=128,slow=4.2,SNR=31								
SYO	Syowa Base	91.29	201⇓	*e*P		P		23 36 03.0	-1.5
CSS	Prodhromos	91.44	305	*e*P		P		23 36 04.9	-1.1
	comp=Z,8.3nm,0.8s								
ARCES	ARCESS Array B	91.64	340	P		P		23 36 05.2	-1.0
ARCES				PKKP		PKKPdf		23 53 25.6	+0.6
ARCES	ARCESS Array B	91.64	340	P		P		23 36 05.2	-1.0
	comp=Z,4.9nm,0.7s,baz=57,slow=4.5,SNR=11								
ARCES				PKKP		PKKPdf		23 53 25.6	+0.6
	comp=Z,2.5nm,1.0s,baz=299,slow=5.0,SNR=3.6								
KAF	Kangasniemi	92.73	332	*e*P		P		23 36 09.5	-1.8
KAF					pmax	pmax			
	comp=Z,2.0nm,0.6s								
KAF	Kangasniemi	92.73	332	*ep*		P		23 36 09.5	-1.8
	comp=Z,1.9nm,0.6s								
AKASG	Malin Array Be	92.90	321	P		P		23 36 10.7	-1.7
AKASG	Malin Array Be	92.90	321	P		P		23 36 10.7	-1.7
AKASG	Malin Array Be	92.90	321	P		P		23 36 10.7	-1.7
	comp=Z,2.3nm,0.6s,baz=70,slow=4.5,SNR=9.5								
AKASG				LR		LR		00 21 32.9	
	comp=Z,37nm,21.4s,baz=265,slow=38								
AK01	Malin Array Si	92.91	321	*e*P		P		23 36 11.9	-0.5
AK02	Malin Array Si	92.92	321	*e*P		P		23 36 10.8	-1.7
FINES	FINESS Array B	92.96	332	P		P		23 36 11.3	-1.1
FINES	FINESS Array B	92.96	332	P		P		23 36 11.3	-1.1
	comp=Z,1.4nm,0.6s,baz=48,slow=5.0,SNR=16								
FINES				LR		LR		00 23 03.6	
	comp=Z,38nm,21.7s,baz=90,slow=39								
TIRR	Tirgusor	94.26	315⇑	*i*P		P		23 36 17.8	-1.0
TESR	Tescani	95.19	317⇓	*i*P		P		23 36 22.5	-0.5
VRI	Vrincioaia	95.24	316⇓	*i*P		P		23 36 23.6	+0.3
PLOR	Ploshina	95.30	316⇑	*i*P		P		23 36 23.5	-0.1
MLR	Muntele Rosu	95.84	316⇓	*i*P		P		23 36 26.0	-0.2
BURAR	Bucovina Array	95.97	318⇓	*i*P		P		23 36 26.8	+0.1
BUR08	Bucovina Ar. S	95.98	318	*e*P		P		23 36 26.1	-0.7
DRGR		97.81	318⇑	*i*P		P		23 36 34.0	-1.0
NB2	NORSAR Subarra	99.93	334	P		Pdif		23 36 42.3	-1.9
	comp=Z,1.3nm,0.8s,baz=66,slow=4.6								
NOA	NORSAR Array B	99.93	334	P		Pdif		23 36 42.2	-1.9
NOA	NORSAR Array B	99.93	334	P		Pdif		23 36 42.2	-1.9
	comp=Z,1.0nm,0.8s,baz=66,slow=4.6,SNR=5.3								
NOA				LR		LR		00 27 40.1	
	comp=Z,30nm,18.8s,baz=295,slow=39								
YKA	Yellowknife Ar	100.60	25	P		Pdif		23 36 47.4	+0.4
YKA				PKiKP		PKiKP		23 41 13.6	+0.5
YKA	Yellowknife Ar	100.60	25	P		Pdif		23 36 47.3	+0.4
	comp=Z,0.9nm,0.7s,baz=297,slow=4.5,SNR=14								
YKA				PKiKP		PKiKP		23 41 13.5	+0.5
	comp=Z,0.9nm,0.6s,baz=295,slow=2.0,SNR=8.0								
J13A	Cove Ranch, Pi	108.90	42	P				23 41 30.2	
	baz=109								
M17A	Scullys Gap (B	112.05	43	P				23 41 35.4	
	baz=112								
PDAR	Pinedale Array	112.25	41	PKiKP		PKiKP		23 41 35.5	-0.1
PDAR				PKKPbc		PKKPbc		23 52 24.2	-3.4
PDAR				PKKPab		PKKPab		23 52 33.5	-2.3
PDAR	Pinedale Array	112.25	41	PKiKP		PKiKP		23 41 35.5	-0.1
	comp=Z,0.5nm,0.6s,baz=114,slow=2.9,SNR=5.5								
PDAR				PKKPbc		PKKPbc		23 52 24.2	-3.4
	comp=Z,0.1nm,0.4s,baz=99,slow=5.6,SNR=3.9								
PDAR				PKKPab		PKKPab		23 52 33.5	-2.3
	comp=Z,0.6nm,0.8s,baz=117,slow=7.2,SNR=4.8								
D22A	Cohagen	112.29	36	P				23 41 35.7	
	baz=112								
I20A	Wynd	112.64	40	P				23 41 36.5	
	baz=112								
J20A	Shoshoni	112.95	40	P				23 41 37.2	
	baz=113								
C24A	Savage	113.11	35	P				23 41 37.7	
	baz=113								
SRU	San Rafael	113.12	45	P				23 41 37.8	
	baz=113								
J22A	Midwest	113.95	40	P				23 41 38.3	
	baz=114								
N20A	Spence Gulch,	113.97	43	P				23 41 39.6	
	baz=114								
L21A	Rawlins	114.06	41	P		PKPdf		23 41 39.2	+0.2
	baz=114								
M21A	Separation Pea	114.22	42	P		PKPdf		23 41 39.4	0.0
	baz=114								
O20A	White River Ci	114.29	44	P		PKPdf		23 41 40.2	+0.6
	baz=114								
H24A	Dirks Ranch, A	114.49	38	P		PKPdf		23 41 39.4	-0.2
	baz=114								
N21A	Black Mountain	114.50	43	P		PKPdf		23 41 39.4	-0.6
	baz=114								
PV01	Paradox Valley	114.92	46	*e*PKPdf		PKPdf		23 41 41.6	+0.7
S20A	Disappointment	115.20	46	P		PKPdf		23 41 42.0	+0.6
	baz=115								
S21A	Coal Bank Pass	115.68	46	P		PKPdf		23 41 43.9	+1.4
	baz=116								
ULM	Lac du Bonnet	116.02	29	PKP		PKPdf		23 41 41.8	-0.5
ULM	Lac du Bonnet	116.02	29	PKP		PKPdf		23 41 41.8	-0.5
	comp=Z,3.1nm,0.5s,baz=328,slow=3.2,SNR=3.1								
U21A	Nageezi	116.30	47	P		PKPdf		23 41 45.0	+1.4
	baz=116								
T23A	Casias Ranch,	117.21	46	P		PKPdf		23 41 45.4	+0.1
	baz=117								
P25A	Willow Gulch B	117.36	43	P		PKPdf		23 41 46.0	+0.6
	baz=117								
Z21A	St. Cloud Mine	117.56	50	P		PKPdf		23 41 45.9	-0.1
	baz=118								
320A	Kipp Ranch, An	117.65	53	P		PKPdf		23 41 46.5	+0.3
	baz=118								
Y22A	Socorro	117.85	49	P		PKPdf		23 41 47.3	+0.8
	baz=118								
R25A	Fountain Ranch	117.93	44	P		PKPdf		23 41 46.9	+0.3
	baz=118								
S25A	Robets Cordova	118.06	45	P		PKPdf		23 41 47.4	+0.6
	baz=118								
T25A	Trinidad	118.32	45	P		PKPdf		23 41 48.0	+0.6
	baz=118								
V24A	Rampart Ranch,	118.34	47	P		PKPdf		23 41 48.8	+1.3
	baz=118								
W24A	Lazy 6 Ranch,	118.47	47	P		PKPdf		23 41 48.1	+0.3
	baz=118								
U25A	Circle Dot Ran	118.66	46	P		PKPdf		23 41 48.7	+0.6
	baz=119								
S26A	Kim	118.75	44	P		PKPdf		23 41 48.7	+0.6
	baz=119								
V25A	Rancho No Teng	118.77	46	P		PKPdf		23 41 48.8	+0.6
	baz=119								
T26A	Comanche Natio	118.88	45	P		PKPdf		23 41 48.8	+0.3
	baz=119								
Y24A	Capitan	119.01	49	P		PKPdf		23 41 49.6	+0.8
	baz=119								
S27A	Las Animas	119.12	44	P		PKPdf		23 41 49.2	+0.4
	baz=119								
U26A	Atchley Ranch,	119.14	45	P		PKPdf		23 41 49.6	+0.6
	baz=119								
W25A	X Bar L Ranch,	119.16	47	P		PKPdf		23 41 49.7	+0.8
	baz=119								
Z24A	Sheeppen Canyo	119.32	49	P		PKPdf		23 41 50.4	+1.0
	baz=119								
V26A	Tequesquite Ra	119.39	46	P		PKPdf		23 41 49.8	+0.4
	baz=119								
R28A	Tribune	119.53	43	P		PKPdf		23 41 49.6	+0.1
	baz=119								
Y25A	Mesa, Roswell	119.57	48	P		PKPdf		23 41 50.5	+0.7
	baz=120								
ECSD	EROS Data Cent	119.77	35	*e*PKPdf		PKPdf		23 41 49.4	-0.3
U27A	Thompson Grove	119.78	45	P		PKPdf		23 41 51.3	+1.2
	baz=120								
S28A	Manter	119.85	43	P		PKPdf		23 41 50.6	+0.4
	baz=120								
X26A	CR and CF Fran	119.94	47	P		PKPdf		23 41 50.9	+0.4
	baz=120								
MNTX	Cornudas Mount	119.98	51	*e*PKPdf		PKPdf		23 41 51.4	+0.9
125A	Gardner Draw,	120.14	50	P		PKPdf		23 41 51.4	+0.5
	baz=120								
W27A	Bowe Ranch, En	120.25	47	P		PKPdf		23 41 51.7	+0.6
	baz=120								
S29A	Ulysses	120.37	43	P		PKPdf		23 41 51.2	+0.1
	baz=120								
T29A	Hugoton	120.49	44	P		PKPdf		23 41 51.7	+0.4
	baz=120								
126A	Clayton Basin,	120.63	49	P		PKPdf		23 41 52.2	+0.4
	baz=120								
425A	Indio Mountain	120.67	52	P		PKPdf		23 41 52.5	+0.5
	baz=121								
Y27A	Causey	120.72	48	P		PKPdf		23 41 52.5	+0.5
	baz=121								
226B	Tecolote Peak,	120.76	50	P		PKPdf		23 41 52.5	+0.5
	baz=121								
SPMN	St. Paul	120.91	32	P		PKPdf		23 41 52.4	+0.5
	baz=121								
V29A	Stinnett	120.97	45	P		PKPdf		23 41 52.4	0.0
	baz=121								
MSTX	Muleshoe	120.97	48	P		PKPdf		23 41 52.5	0.0
	baz=121								
127A	Arkansas Junct	121.12	49	P		PKPdf		23 41 53.0	+0.3
	baz=121								
X29A	Tulia	121.53	47	P		PKPdf		23 41 54.5	+1.0
	baz=121								
T31A	Randall Ranch,	121.62	43	P		PKPdf		23 41 53.6	+0.1
	baz=122								
SCHQ	Schefferville	121.78	9	PKP		PKPdf		23 41 53.4	+0.1
SCHQ	Schefferville	121.78	9	PKP		PKPdf		23 41 53.4	+0.1
	comp=Z,4.5nm,0.6s,baz=39,slow=2.4,SNR=13								
Y29A	Porterfield Fa	121.83	47	P		PKPdf		23 41 55.0	+0.9
	baz=122								
626A	Big Bend Ranch	121.84	53	P		PKPdf		23 41 54.6	+0.4
	baz=122								
328A	Wristen Ranch,	122.11	50	P		PKPdf		23 41 55.1	+0.4
	baz=122								
X30A	Coker Ranch, T	122.13	46	P		PKPdf		23 41 54.9	+0.3
	baz=122								
COWI	Conover	122.14	29	*e*PKPdf		PKPdf		23 41 53.8	-0.4
129A	Stewart Farms,	122.26	49	P		PKPdf		23 41 55.1	+0.1
	baz=122								
TXAR	Lajitas Array	122.30	53	PKP		PKPdf		23 41 55.6	+0.5
TXAR	Lajitas Array	122.30	53	PKP		PKPdf		23 41 55.6	+0.5
	comp=Z,0.7nm,0.7s,baz=285,slow=1.5,SNR=7.5								
627A	Terlingua Ranc	122.47	53	P		PKPdf		23 41 55.7	+0.2
	baz=122								
428A	Kincaid Ranch,	122.49	51	P		PKPdf		23 41 56.3	+0.9
	baz=122								
Z30A	Sanderson Ranc	122.50	47	P		PKPdf		23 41 55.7	+0.3
	baz=122								
KSU1	Kansas State U	122.53	39	*e*PKPdf		PKPdf		23 41 54.9	-0.3
X31A	McDonald Ranch	122.68	46	P		PKPdf		23 41 56.3	+0.7
	baz=123								
329A	Wagon Wheel Ra	122.69	50	P		PKPdf		23 41 56.1	+0.4
	baz=123								
Y31A	Rekieta Farm,	122.81	46	P		PKPdf		23 41 56.5	+0.6
	baz=123								
628A	Black Gap, Mar	122.86	52	P		PKPdf		23 41 56.8	+0.7
	baz=123								
130A	Snyder	122.95	48	P		PKPdf		23 41 56.8	+0.6
	baz=123								
429A	Davenport Ranc	123.14	51	P		PKPdf		23 41 57.1	+0.5
	baz=123								
Z31A	Sharp Cattle R	123.21	47	P		PKPdf		23 41 56.9	+0.2
	baz=123								
131A	Roby	123.34	48	P		PKPdf		23 41 57.3	+0.4
	baz=123								
330A	Mertzon	123.34	49	P		PKPdf		23 41 56.8	-0.2
	baz=123								
TORD	Torodi Ar. Bea	123.36	287	PKP		PKPdf		23 41 57.2	-0.2
TORD				PKKPab		PKKPab		23 51 47.7	+0.7
TORD	Torodi Ar. Bea	123.36	287	PKP		PKPdf		23 41 57.2	-0.2
	comp=Z,1.1nm,0.5s,baz=83,slow=1.6,SNR=25								
TORD				PKKPab		PKKPab		23 51 47.7	+0.7
	comp=Z,0.6nm,0.5s,baz=283,slow=3.3,SNR=23								
WMOK	Wichita Mounta	123.47	45	*e*PKIKP		PKPdf		23 41 57.1	0.0
WMOK	Wichita Mounta	123.47	45	*e*PKPdf		PKPdf		23 41 57.1	0.0
430A	Baggett Ranch,	123.58	50	P		PKPdf		23 41 58.0	+0.5
	baz=124								
Z32A	Haskell	123.70	47	P		PKPdf		23 41 57.8	+0.2
	baz=124								
231A	Bronte	123.75	49	P		PKPdf		23 41 58.0	+0.3
	baz=124								
530A	J-C Ranch, Com	123.79	51	P		PKPdf		23 41 58.7	+0.9
	baz=124								
JFWS	Jewell Farm	123.83	32	*e*PKIKP		PKPdf		23 41 56.6	-0.9
JFWS	Jewell Farm	123.83	32	*e*PKPdf		PKPdf		23 41 56.6	-0.9
331A	San Angelo	123.96	49	P		PKPdf		23 41 58.5	+0.3
	baz=124								
431A	Sonora	124.11	50	P		PKPdf		23 41 58.7	+0.2
	baz=124								
531A	Rocksprings	124.39	51	P		PKPdf		23 41 59.4	+0.4
	baz=124								
332A	Millersview	124.44	49	P		PKPdf		23 41 59.6	+0.6
	baz=124								
432A	Menard	124.64	49	P		PKPdf		23 41 60.0	+0.5
	baz=124								
631A	Perdido Creek	124.71	51	P		PKPdf		23 42 00.3	+0.7
	baz=125								
JCT	Junction City	124.82	50	*e*PKIKP		PKPdf		23 42 00.4	+0.5
JCT	Junction City	124.82	50	*e*PKPdf		PKPdf		23 42 00.4	+0.5
JCT	Junction City	124.82	50	P		PKPdf		23 42 00.6	+0.8
	baz=125								
632A	Uvalde	125.28	51	P		PKPdf		23 42 01.4	+0.7
	baz=125								
732A	Laxson Ranch,	125.48	52	P		PKPdf		23 42 01.7	+0.6
	baz=125								
SFIN	Scholer Farm	127.29	32	P		PKPdf		23 42 04.7	+0.5
	baz=127								
OLIL	Olney	127.89	35	*e*PKPdf		PKPdf		23 42 05.6	+0.2
DBIC	Dimbokro	130.89	281	PKP		PKPdf		23 42 12.3	+0.5
DBIC	Dimbokro	130.89	281	PKP		PKPdf		23 42 12.3	+0.5
	comp=Z,4.4nm,1.1s,baz=168,slow=0.5,SNR=3.7								
TZTN	Tazewell	131.98	33	*e*PKPdf		PKPdf		23 42 13.6	+0.3
TKL	Tuckaleechee C	132.50	34	*e*PKPdf		PKPdf		23 42 13.5	-0.8
KMSC	Kings Mountain	134.22	33

	baz=317								
NNS	**Nan Shan**	**0.77**	**250**	P		**Pn**	23 28 08.3		**-0.2**
	baz=248								
NNS				*e*S		**Sn**	23 28 20.7		**+0.4**
	baz=248								
TWS1	**Kuangyinshan**	**0.78**	**300**	P		**Pn**	23 28 08.0		**-0.4**
	baz=299								
TWS1				*e*S		**Sn**	23 28 19.9		**-0.5**
	baz=299								
TWD	**Chiawan**	**0.81**	**220**	P		**Pn**	23 28 08.2		**-0.7**
	baz=218								
TWD				S		**Sn**	23 28 20.9		**-0.1**
	baz=218								
YOJ	**Yonaguni jima**	**0.81**	**107**	P		**Pn**	23 28 08.5		**-0.4**
YOJ				*e*S		**Sn**	23 28 21.5		**+0.5**
PCYT	**Pengchaiyu**	**0.92**	**355**	P		**Pn**	23 28 10.3		**+0.1**
	baz=355								
PCYT				*e*S		**Sn**	23 28 23.9		**+0.6**
	baz=355								
NCU	**National Centr**	**0.92**	**287**	*e*P		**Pn**	23 28 10.0		**-0.2**
	baz=285								
NCU				*e*S		**Sn**	23 28 23.8		**+0.5**
	baz=285								
WHF	**Hehuan Shan**	**0.99**	**236**	*e*P		**Pn**	23 28 10.9		**-0.5**
	baz=234								
WHF				*e*S		**Sn**	23 28 25.6		**+0.1**
	baz=234								
TWT	**Tachien**	**1.01**	**243**	*e*P		**Pn**	23 28 11.4		**0.0**
	baz=242								
TWT				*e*S		**Sn**	23 28 25.9		**+0.4**
	baz=242								
NSTT	**Nanjuang**	**1.06**	**266**	P		**Pn**	23 28 11.4		**-0.4**
	baz=264								
NSTT				*e*S		**Sn**	23 28 25.6		**-0.7**
	baz=264								
ESL	**Shilin**	**1.11**	**217**	*e*P		**Pn**	23 28 12.4		**-0.2**
	baz=215								
NSY	**Sanyi**	**1.31**	**257**	*e*P		**Pn**	23 28 14.6		**-0.4**
	baz=256								
NSY				*e*S		**Sn**	23 28 31.5		**-0.5**
	baz=256								
TWQ1	**Liyutan**	**1.31**	**254**	*e*P		**Pn**	23 28 14.2		**-0.9**
	baz=253								
TWQ1				*e*S		**Sn**	23 28 31.9		**-0.3**
	baz=253								
SMLT	**Sun Moon Lake**	**1.42**	**235**	*e*P		**Pn**	23 28 16.9		**+0.3**
	baz=233								
SMLT				*e*S		**Sn**	23 28 35.0		**+0.4**
	baz=233								
EHY	**Hungye**	**1.42**	**213**	*e*P		**Pn**	23 28 15.8		**-0.8**
	baz=211								
EHY				*e*S		**Sn**	23 28 33.5		**-1.1**
	baz=211								
TYC	**Yuchr**	**1.44**	**236**	*e*P		**Pn**	23 28 16.9		**+0.2**
	baz=235								
TYC				*e*S		**Sn**	23 28 35.6		**+0.7**
	baz=235								
IRIF	**Iriomote-Funau**	**1.48**	**104**	P		**Pn**	23 28 16.5		**-0.7**
IRIF				S		**Sn**	23 28 35.2		**-0.7**
TWF1	**Yuli**	**1.56**	**210**	*e*P		**Pn**	23 28 17.5		**-0.9**
	baz=209								
HATJ	**Hateruma jima**	**1.63**	**113**	P		**Pn**	23 28 19.3		**0.0**
HATJ				*e*S		**Sn**	23 28 40.6		**+1.0**
ALS	**Alishan**	**1.72**	**226**	*e*P		**Pn**	23 28 20.9		**+0.2**
	baz=225								
ALS				*e*S		**Sn**	23 28 42.2		**+0.1**
	baz=225								
JKRS	**Kuro-shima**	**1.75**	**105**	P		**Pn**	23 28 21.3		**+0.5**
JKRS				S		**Sn**	23 28 42.2		**-0.1**
CHN5	**Tsauling**	**1.75**	**231**	P		**Pn**	23 28 21.4		**+0.4**
	baz=230								
CHN5				*e*S		**Sn**	23 28 43.1		**+0.6**
	baz=230								
CHKT	**Chengkung**	**1.76**	**205**	*e*P		**Pn**	23 28 20.4		**-0.6**
	baz=203								
JIJ	**Ishigaki jima**	**1.84**	**100**	P		**Pn**	23 28 21.6		**-0.4**
JIJ				S		**Sn**	23 28 43.6		**-0.8**
CHN4	**Tsaushan**	**1.97**	**227**	*e*P		**Pn**	23 28 24.4		**+0.6**
	baz=226								
CHN4				*e*S		**Sn**	23 28 49.1		**+1.4**
	baz=226								
JTJ	**Tarama**	**2.31**	**91**	P		**Pn**	23 28 28.6		**+0.2**
JTJ				*e*S		**Sn**	23 28 56.6		**+0.7**

IDC 17 23:30:00.0±9.8, 25°.84S×179°.52W, h494km±106km, mb3.4/5, mb1 3.5/6, mb1mx3.2/20, mbtmp3.4/6, Error ellipse: s-maj=154.1km s-min=62.2km az=76.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**12.71**	**192**	P	P	23 32 46.9	**+0.9**
	1.6nm,0.3s,baz=25,slow=5.2,SNR=11						
URZ				S	S	23 34 59.3	**-3.5**
	0.1nm,0.3s,baz=247,slow=19,SNR=3.7						
CTA	**Charters Tower**	**31.97**	**273**	P	P	23 35 45.3	**+0.4**
	5.2nm,1.0s,baz=105,slow=13,SNR=6.9						
STKA	**Stephens Creek**	**34.45**	**251**	P	P	23 36 05.4	**-0.3**
	1.7nm,0.4s,baz=100,slow=13,SNR=6.0						
STKA	**Stephens Creek**	**34.45**	**251**	S	P	23 36 05.5	**-0.2**
	baz=37,SNR=5.7						
ASAR	**Alice Springs**	**42.19**	**263**	P	P	23 37 08.5	**-0.4**
	2.0nm,0.5s,baz=94,slow=8.1,SNR=23						
WRA	**Warramunga Arr**	**42.74**	**268**	P	P	23 37 12.8	**-0.6**
	2.4nm,0.4s,baz=102,slow=7.5,SNR=43						
FITZ	**Fitzroy Crossi**	**51.14**	**267**	P	P	23 38 17.5	**+0.6**
	0.9nm,0.5s,baz=104,slow=9.5,SNR=4.2						

JMA 17 23:42:08.6, 36°.00N×137°.29E, h11km, M3.4, 3C
Broadband fault plane solution: P waves. NP1: ϕ_s=334.00000°, δ89.00000°, λ=-6.00000°. **NP2:** ϕ_s=64.00000°, δ84.00000°, λ=-179.00000°. **Principal axes:** T Plg3.0000°, Azm19.0000°; N Plg84.0000°, Azm140.0000°; P Plg5.0000°, Azm289.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.22**	**5**	⇑P	Pg	23 42 13.4	0.0
JGN				S	Sg	23 42 16.8	**+0.1**
JGM	**Miyama**	**0.55**	**237**	⇑P	Pg	23 42 19.3	**-0.2**
JGM				S	Sg	23 42 26.5	**-0.3**
JTT	**Ttatey**	**0.60**	**3**	⇑P	Pg	23 42 20.5	**+0.1**
JTT				S	Sg	23 42 28.8	**+0.4**
MAT	**Matsushiro**	**0.92**	**54**	P	Pb	23 42 26.5	**-0.1**
MAT				S	Sb	23 42 38.7	**-0.1**

*ISCJB **17** 23:50:25.7±0.6, 37°.88N±0°.03×27°.53E±0°.05, h2km±8km*
Error ellipse: s-maj=6.7km s-min=4.5km az=148.4
*ISK **17** 23:50:25.7, 37°.89N×27°.54E, h8km, MD2.6*
*DDA **17** 23:50:25.7, 37°.86N×27°.54E, h9km, MD3.0*
*CSEM **17** 23:50:26.4±0.2, 37°.86N×27°.55E, h2km, MD3.0, Error ellipse: s-maj=5.0km s-min=3.8km az=83.0*

ISC 17 23:50:25.8±1.0, 37°.87N±0°.02×27°.53E±0°.03, h7km±10km, n24, σ0=42/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.29**	**235**	*i* P	**Pg**	23 50 31.4	**-0.1**
GCAM				*i* S	**Sg**	23 50 35.0	**-0.4**
GCAM	**G?zelcaml?**	**0.29**	**235**	*i* P	**Pg**	23 50 31.4	**-0.1**
GCAM				*i* S	**Sg**	23 50 35.0	**-0.4**
AYDN	**Tasoluk**	**0.34**	**127**	*i* P	**Pg**	23 50 32.7	**+0.2**
AYDN				*i* S	**Sg**	23 50 36.9	**-0.2**
AYDN	**Tasoluk**	**0.34**	**127**	*i* P	**Pg**	23 50 32.7	**+0.2**
AYDN				*i* S	**Sg**	23 50 36.9	**-0.2**
MLSB	**Milas**	**0.60**	**161**	*e*PG	**Pb**	23 50 38.0	**-0.7**
BLCB	**Balcova**	**0.65**	**323**	*e*PG	**Pg**	23 50 38.8	**+0.6**
BLCB				*e*SG	**Sg**	23 50 47.2	**+0.5**
BLCB	**Balcova**	**0.65**	**323**	*e*Pg	**Pg**	23 50 38.8	**+0.6**
BLCB				*e*Sg	**Sg**	23 50 47.2	**+0.5**
BODT	**Bodrum**	**0.82**	**193**	*e*PG	**Pb**	23 50 42.3	**-0.2**
BODT				*e*SG	**Sb**	23 50 54.5	**+0.7**
BODT	**Bodrum**	**0.82**	**193**	*e*Pg	**Pb**	23 50 42.3	**-0.2**
BODT				*e*Sg	**Sb**	23 50 54.5	**+0.7**
YER	**Yerkesik**	**0.94**	**141**	*e*PG	**Pb**	23 50 44.4	**-0.1**
YER	**Yerkesik**	**0.94**	**141**	*e*Pg	**Pb**	23 50 44.4	**-0.1**
MANT	**Manisa**	**1.02**	**52**	*i* P	**Pg**	23 50 45.3	**-0.1**
MANT				*i* S	**Sg**	23 50 58.4	**-0.2**
MANT	**Manisa**	**1.02**	**52**	*i* P	**Pg**	23 50 45.3	**-0.1**
MANT				*i* S	**Sg**	23 50 58.4	**-0.2**
AKHS	**Akhisar**	**1.03**	**12**	*i* P	**Pn**	23 50 46.6	**-0.1**
AKHS				*i* S	**Sb**	23 50 59.8	**0.0**
AKHS	**Akhisar**	**1.03**	**12**	*i* P	**Pn**	23 50 46.6	**-0.1**
AKHS				*i* S	**Sb**	23 50 59.8	**0.0**
AKS	**Akhisar**	**1.03**	**12**	*e*PG	**Pb**	23 50 45.9	**-0.1**
AKS	**Akhisar**	**1.03**	**12**	*e*Pg	**Pb**	23 50 45.9	**-0.1**
KULA	**Kula-Manisa**	**1.10**	**54**	*e*PN	**Pg**	23 50 46.6	**-0.3**
DNZL	**Cakiroluk**	**1.21**	**98**	*i* P	**Pg**	23 50 49.8	**+0.7**
DNZL				*i* S	**Sn**	23 51 06.5	**+0.4**
DNZL	**Cakiroluk**	**1.21**	**98**	*i* P	**Pg**	23 50 49.8	**+0.7**
DNZL				*i* S	**Sn**	23 51 06.5	**+0.4**
DALY	**Dalyan (Mu˘la**	**1.38**	**139**	*e*PN	**Pg**	23 50 52.2	**0.0**
DALY	**Dalyan (Mu˘la**	**1.38**	**139**	*e*Pn	**Pg**	23 50 52.2	**0.0**
BALY	**Balya**	**1.87**	**2**	*i* P	**Pg**	23 51 01.6	**0.0**
BALY				*i* S	**Sn**	23 51 21.1	**-1.1**
BALY	**Balya**	**1.87**	**2**	*i* P	**Pg**	23 51 01.6	**0.0**

IDC 17 23:58:54.6±1.0, 13°.38N×44°.84W, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/25, mbtmp3.5/5, MS3.5/7, Ms1 3.5/7, ms1mx3.2/27, Error ellipse: s-maj=37.7km s-min=26.8km az=139.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**27.48**	**84**	LR	LR	00 13 27.3	
	comp=Z,104nm,18.3s,baz=130,slow=32						
ROSC	**El Rosal**	**30.30**	**257**	LR	LR	00 16 18.4	
	comp=Z,58nm,19.0s,baz=160,slow=34						
LPAZ	**La Paz**	**37.41**	**219**	P	P	00 06 10.1	**-0.4**
	0.5nm,0.7s,baz=20,slow=4.9,SNR=3.4						
LPAZ				PcP	PcP	00 08 29.6	**+0.1**
	0.2nm,0.5s,baz=5.5,slow=3.8,SNR=2.7						
LPAZ				LR	LR	00 21 24.9	
	comp=Z,71nm,19.2s,baz=78,slow=36						
DBIC	**Dimbokro**	**39.89**	**96**	LR	LR	00 19 12.8	
	comp=Z,69nm,20.6s,baz=184,slow=30						
TORD	**Torodi Ar. Bea**	**45.23**	**85**	P	P	00 07 14.1	**-0.1**
	1.6nm,1.1s,baz=266,slow=6.4,SNR=4.1						
TORD				LR	LR	00 23 51.3	
	comp=Z,88nm,19.4s,baz=245,slow=33						
TXAR	**Lajitas Array**	**56.50**	**296**	LR	LR	00 32 20.2	
	comp=Z,33nm,18.8s,baz=0.0,slow=36						
PDAR	**Pinedale Array**	**62.51**	**311**	LR	LR	00 33 09.1	
	comp=Z,37nm,18.7s,baz=164,slow=33						
YKA	**Yellowknife Ar**	**68.90**	**332**	P	P	00 10 00.3	**-0.8**
	0.3nm,0.8s,baz=108,slow=6.4,SNR=4.3						
BRTR	**Keskin Array B**	**72.76**	**52**	P	P	00 10 25.1	**-0.2**
	0.4nm,0.9s,baz=224,slow=10.0,SNR=3.0						
ILAR	**Eielson Array**	**83.07**	**335**	P	P	00 11 22.8	**+0.9**
	0.3nm,0.8s,baz=66,slow=3.1,SNR=4.0						

IDC 18 00:04:07.1±6.9, 49°.01S×122°.81E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/14, mbtmp3.5/2, MS3.5/4, Ms1 3.5/4, ms1mx3.1/16, Error ellipse: s-maj=539.5km s-min=72.1km az=102.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**16.60**	**343**	LR	LR	00 12 12.0	
	comp=Z,123nm,20.1s,baz=356,slow=29						
STKA	**Stephens Creek**	**22.20**	**46**	LR	LR	00 16 21.4	
	comp=Z,99nm,20.3s,baz=203,slow=33						
ASAR	**Alice Springs**	**26.76**	**23**	P	P	00 09 48.2	**-0.3**
	0.9nm,1.0s,baz=194,slow=7.3,SNR=3.5						
WRA	**Warramunga Arr**	**30.44**	**22**	P	P	00 10 21.6	**+0.3**
	0.6nm,1.0s,baz=201,slow=8.8,SNR=3.0						
VNDA	**Vanda**	**32.24**	**165**	LR	LR	00 22 10.2	
	comp=Z,96nm,20.2s,baz=334,slow=34						
CTA	**Charters Tower**	**34.43**	**41**	LR	LR	00 24 14.8	
	comp=Z,88nm,18.7s,baz=233,slow=35						
YKA	**Yellowknife Ar**	**146.22**	**45**	PKPbc	PKPdf	00 23 47.3	**+0.3**
	0.4nm,0.6s,baz=271,slow=3.0,SNR=9.1						

*IDC **18** 00:07:00.8±1.4, 36°.51N×21°.55E, h0km, mb3.3/4, mb1 3.3/4, mb1mx3.1/28, mbtmp3.3/4, Error ellipse: s-maj=62.9km s-min=26.3km az=132.0*
*ISCJB **18** 00:07:01.5±0.7, 37°.29N±0°.02×20°.42E±0°.04, h20km±5km, mb3.1/4, Error ellipse: s-maj=5.5km s-min=3.2km az=151.1*
*ATH **18** 00:07:02.7, 37°.36N×20°.58E, h19km±1km, MD3.4/21*
*CSEM **18** 00:07:02.3±0.2, 37°.33N×20°.53E, h8km, ML3.1, Error ellipse: s-maj=5.3km s-min=2.5km az=58.0*
*THE **18** 00:07:03.1, 37°.34N×20°.57E, h9km±1km, ML3.1/12, Error ellipse: s-maj=1.7km s-min=0.8km az=245.0*

ISC 18 00:07:02.0±1.3, 37°.33N±0°.03×20°.53E±0°.03, h11km±9km, n179, σ0=91/237, mb3.2/4, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.80**	**15**	P	**Pg**	00 07 17.1	**-0.3**
KFL				S	**Sb**	00 07 29.1	**+0.3**
KFL	**Anninata**	**0.80**	**15**	P	**Pg**	00 07 17.1	**-0.3**
KFL				S	**Sb**	00 07 29.1	**+0.3**
VLS	**Valsamata**	**0.84**	**3**	P	**Pg**	00 07 18.1	**-0.1**
VLS				S	**Sb**	00 07 30.6	**+0.6**
VLS	**Valsamata**	**0.84**	**3**	*e*PN	**Pb**	00 07 18.7	**+0.1**
VLS				*e*SN	**Sb**	00 07 30.2	**+0.2**
VLS	**Valsamata**	**0.84**	**3**	P	**Pg**	00 07 18.1	**-0.1**
VLS	**Valsamata**	**0.84**	**3**	*e*Pn	**Pb**	00 07 18.7	**+0.1**
VLS				*e*Sn	**Sb**	00 07 30.2	**+0.2**
VLS				S	**Sb**	00 07 30.6	**+0.6**
RLS	**Riolos of Patr**	**1.03**	**45**	P	**Pg**	00 07 21.9	**0.0**
RLS				S	**Sn**	00 07 36.7	**-0.2**
RLS	**Riolos of Patr**	**1.03**	**45**	*e*PN	**Pg**	00 07 21.8	**-0.1**
RLS				*e*SN	**Sg**	00 07 35.3	**-0.1**
RLS	**Riolos of Patr**	**1.03**	**45**	P	**Pg**	00 07 21.9	**0.0**
RLS				*e*Sn	**Sg**	00 07 35.3	**-0.1**
RLS				S	**Sn**	00 07 36.7	**-0.2**
PYL	**PYLOS**	**1.06**	**114**	P	**Pb**	00 07 22.6	**+0.3**
PYL				S	**Sn**	00 07 37.6	**+0.1**
PYL	**PYLOS**	**1.06**	**114**	*e*PN	**Pb**	00 07 22.6	**+0.3**
PYL				*e*SN	**Sb**	00 07 36.6	**+0.4**
PYL	**PYLOS**	**1.06**	**114**	P	**Pb**	00 07 22.6	**+0.3**
PYL				*e*Sn	**Sb**	00 07 36.6	**+0.4**
PYL				S	**Sn**	00 07 37.6	**+0.1**
ITM	**Ithomi**	**1.12**	**97**	P	**Pn**	00 07 23.9	**+0.3**
ITM	**Ithomi**	**1.12**	**97**	*e*PN	**Pb**	00 07 23.7	**+0.3**
ITM				*e*SN	**Sb**	00 07 38.7	**+0.7**
ITM	**Ithomi**	**1.12**	**97**	P	**Pn**	00 07 23.9	**+0.3**
ITM				*e*Sn	**Sb**	00 07 38.7	**+0.7**
ITM				S	**Sn**	00 07 39.8	**+0.7**
UPR	**University Cam**	**1.37**	**46**	P	**Pg**	00 07 28.6	**+0.3**
LKD2	**Lefkada island**	**1.46**	**4**	P	**Pn**	00 07 29.1	**+0.8**
LKD2				S	**Sg**	00 07 49.5	**+0.7**
LKD2	**Lefkada island**	**1.46**	**4**	*e*PN	**Pg**	00 07 30.3	**+0.4**
LKD2				*e*SN	**Sg**	00 07 49.5	**+0.7**
LKD2	**Lefkada island**	**1.46**	**4**	P	**Pn**	00 07 29.0	**+0.8**
LKD2	**Lefkada island**	**1.46**	**4**	*e*Pn	**Pg**	00 07 30.3	**+0.4**
LKD2				S	**Sg**	00 07 49.5	**+0.7**
LAKA	**Lakka**	**1.46**	**51**	P	**Pb**	00 07 29.3	**+0.1**
LAKA	**Lakka**	**1.46**	**51**	*e*PN	**Pg**	00 07 29.9	**-0.1**
LAKA				*e*SN	**Sg**	00 07 48.8	**-0.2**
LAKA	**Lakka**	**1.46**	**51**	P	**Pb**	00 07 29.3	**+0.1**
LAKA	**Lakka**	**1.46**	**51**	*e*Pn	**Pg**	00 07 29.9	**-0.1**
LAKA				*e*Sn	**Sg**	00 07 48.8	**-0.2**
LAKA				S	**Sb**	00 07 49.6	**+1.8**
KLV	**Kalavryta, Ach**	**1.47**	**61**	*e*PN	**Pb**	00 07 29.4	**+0.1**
KLV				*e*SN	**Sg**	00 07 49.0	**-0.2**
KLV	**Kalavryta, Ach**	**1.47**	**61**	*e*Pn	**Pb**	00 07 29.4	**+0.1**
KLV				*e*Sn	**Sg**	00 07 49.0	**-0.2**
VLX	**Vlachokerasia**	**1.47**	**88**	P	**Pn**	00 07 28.4	**-0.1**
VLX	**Vlachokerasia**	**1.47**	**88**	*e*PN	**Pg**	00 07 30.1	**-0.1**
VLX	**Vlachokerasia**	**1.47**	**88**	P	**Pn**	00 07 28.4	**-0.1**
VLX	**Vlachokerasia**	**1.47**	**88**	*e*Pn	**Pg**	00 07 30.1	**-0.1**
EFP	**Efpalio**	**1.54**	**44**	P	**Pn**	00 07 29.9	**+0.5**
EFP				S	**Sb**	00 07 50.7	**+0.7**
EFP	**Efpalio**	**1.54**	**44**	*e*PN	**Pb**	00 07 31.0	**+0.5**
EFP				*e*SN	**Sg**	00 07 51.4	**-0.1**
EFP	**Efpalio**	**1.54**	**44**	P	**Pn**	00 07 29.9	**+0.5**
EFP	**Efpalio**	**1.54**	**44**	*e*Pn	**Pb**	00 07 31.0	**+0.5**
EFP				S	**Sb**	00 07 50.7	**+0.7**
EFP				*e*Sn	**Sg**	00 07 51.4	**-0.1**
DYR	**Agios Nikonas**	**1.55**	**111**	P	**Pb**	00 07 30.7	**0.0**
DYR				S	**Sn**	00 07 50.1	**+0.5**
DYR	**Agios Nikonas**	**1.55**	**111**	*e*PN	**Pb**	00 07 30.7	**0.0**
DYR	**Agios Nikonas**	**1.55**	**111**	P	**Pb**	00 07 30.7	**0.0**
DYR				S	**Sn**	00 07 50.1	**+0.5**
GUR	**Goura**	**1.56**	**67**	P	**Pn**	00 07 30.3	**+0.6**
GUR	**Goura**	**1.56**	**67**	*e*PN	**Pn**	00 07 30.4	**+0.7**
GUR	**Goura**	**1.56**	**67**	P	**Pn**	00 07 30.5	**+0.7**
TRIZ	**Trizonia**	**1.60**	**49**	P	**Pb**	00 07 31.6	**+0.2**
TRIZ	**Trizonia**	**1.60**	**49**	*e*PN	**Pb**	00 07 31.9	**+0.5**
TRIZ	**Trizonia**	**1.60**	**49**	P	**Pb**	00 07 31.6	**+0.2**
TRIZ	**Trizonia**	**1.60**	**49**	*e*Pn	**Pb**	00 07 31.9	**+0.5**
KALE	**Kalithea**	**1.65**	**50**	P	**Pb**	00 07 32.3	**-0.2**
KALE				S	**Sb**	00 07 53.9	**+0.6**
KALE	**Kalithea**	**1.65**	**50**	*e*PN	**Pb**	00 07 32.9	**+0.4**
KALE	**Kalithea**	**1.65**	**50**	P	**Pb**	00 07 32.3	**-0.2**
KALE	**Kalithea**	**1.65**	**50**	*e*Pn	**Pb**	00 07 32.9	**+0.4**
KALE				S	**Sb**	00 07 53.9	**+0.6**
THAL	**Thalero**	**1.83**	**67**	P	**Pn**	00 07 34.3	**+1.0**
THAL	**Thalero**	**1.83**	**67**	P	**Pn**	00 07 34.3	**+1.0**
EVR	**Evrytania**	**1.87**	**32**	P	**Pn**	00 07 34.4	**+0.3**
EVR				S	**Sn**	00 07 58.9	**+1.1**
EVR	**Evrytania**	**1.87**	**32**	*e*PN	**Pn**	00 07 35.4	**+1.3**
EVR				*e*SN	**Sb**	00 07 59.2	**-0.5**
EVR	**Evrytania**	**1.87**	**32**	P	**Pn**	00 07 34.4	**+0.3**
EVR	**Evrytania**	**1.87**	**32**	*e*Pn	**Pn**	00 07 35.4	**+1.3**
EVR				S	**Sn**	00 07 58.9	**+1.1**
EVR				*e*Sn	**Sb**	00 07 59.2	**-0.5**
DSF	**Desfina**	**1.91**	**55**	P	**Pn**	00 07 35.7	**+1.2**
DSF				S	**Sn**	00 07 59.7	**+1.1**
DSF	**Desfina**	**1.91**	**55**	P	**Pn**	00 07 35.7	**+1.2**
DSF				S	**Sn**	00 07 59.7	**+1.1**
VLI	**Veliai**	**2.02**	**107**	P	**Pb**	00 07 37.8	**-0.9**
VLI				S	**Sn**	00 08 02.1	**+0.9**
VLI	**Veliai**	**2.02**	**107**	*e*PN	**Pb**	00 07 37.9	**-0.8**
VLI	**Veliai**	**2.02**	**107**	P	**Pb**	00 07 37.8	**-0.9**
VLI				S	**Sn**	00 08 02.1	**+0.9**
LTK	**Loutraki**	**2.05**	**70**	P	**Pn**	00 07 36.2	**+0.3**
LTK	**Loutraki**	**2.05**	**70**	*e*PB	**Pn**	00 07 36.9	**+0.5**
LTK	**Loutraki**	**2.05**	**70**	*e*Pb	**Pn**	00 07 36.9	**+0.5**
MAKR	**Makrakomi, Fth**	**2.10**	**36**	P	**Pn**	00 07 38.5	**+1.4**
MAKR	**Makrakomi, Fth**	**2.10**	**36**	P	**Pn**	00 07 38.5	**+1.4**
DIDY	**Didyma**	**2.14**	**85**	P	**Pn**	00 07 38.6	**+0.9**
DIDY	**Didyma**	**2.14**	**85**	P	**Pn**	00 07 38.6	**+0.9**
DID	**Didima**	**2.16**	**85**	P	**Pn**	00 07 37.8	**-0.1**
DID	**Didima**	**2.16**	**85**	*e*PN	**Pb**	00 07 39.9	**-1.2**
DID	**Didima**	**2.16**	**85**	P	**Pn**	00 07 37.8	**-0.1**
DID	**Didima**	**2.16**	**85**	*e*Pn	**Pb**	00 07 39.9	**-1.2**
IGT	**Igoumenitsa**	**2.20**	**356**	P	**Pn**	00 07 39.7	**+1.2**
IGT				S	**Sn**	00 08 05.9	**+0.2**
IGT	**Igoumenitsa**	**2.20**	**356**	P	**Pn**	00 07 39.7	**+1.2**
IGT				S	**Sn**	00 08 05.9	**+0.2**
AGG	**Agios Georgios**	**2.20**	**40**	P	**Pn**	00 07 39.9	**+1.4**
AGG	**Agios Georgios**	**2.20**	**40**	*e*PN	**Pn**	00 07 40.1	**+1.6**
AGG	**Agios Georgios**	**2.20**	**40**	P	**Pn**	00 07 39.9	**+1.4**
AXAR	**Agios Charalam**	**2.21**	**49**	P	**Pn**	00 07 39.5	**+1.0**
AXAR	**Agios Charalam**	**2.21**	**49**	P	**Pn**	00 07 39.5	**+1.0**
JAN	**Janina**	**2.33**	**6**	P	**Pn**	00 07 42.2	**+1.9**
JAN	**Janina**	**2.33**	**6**	*e*PB	**Pb**	00 07 42.8	**-1.2**
JAN	**Janina**	**2.33**	**6**	P	**Pn**	00 07 42.2	**+1.9**
JAN	**Janina**	**2.33**	**6**	*e*Pb	**Pb**	00 07 42.8	**-1.2**
LKR	**Lokris**	**2.35**	**55**	P	**Pn**	00 07 40.9	**+0.4**
LKR				S	**Sn**	00 08 10.2	**+0.8**
LKR	**Lokris**	**2.35**	**55**	*e*PB	**Pn**	00 07 41.2	**+0.7**
LKR	**Lokris**	**2.35**	**55**	P	**Pn**	00 07 40.9	**+0.4**
LKR	**Lokris**	**2.35**	**55**	*e*Pb	**Pn**	00 07 41.2	**+0.7**
LKR				S	**Sn**	00 08 10.2	**+0.8**
ATAL	**Atalanti**	**2.39**	**55**	P	**Pn**	00 07 40.6	**-0.4**
ATAL				S	**Sn**	00 08 10.4	**+0.1**
ATAL	**Atalanti**	**2.39**	**55**	P	**Pn**	00 07 40.6	**-0.4**
ATAL				S	**Sn**	00 08 10.4	**+0.1**
NAIG	**Nisos Aigina**	**2.39**	**79**	*e*PB	**Pn**	00 07 43.0	**+2.0**
NAIG	**Nisos Aigina**	**2.39**	**79**	*e*Pb	**Pn**	00 07 43.0	**+2.0**
KEK	**Kerkira**	**2.44**	**347**	P	**Pn**	00 07 43.0	**+1.2**
KEK	**Kerkira**	**2.44**	**347**	*e*PN	**Pn**	00 07 43.3	**+1.5**
KEK	**Kerkira**	**2.44**	**347**	P	**Pn**	00 07 43.0	**+1.2**
KEK	**Kerkira**	**2.44**	**347**	*e*Pn	**Pn**	00 07 43.3	**+1.5**
THL	**Klokotos Trika**	**2.51

VTS	**Vitosha**	**5.64**	**21**	P	**Pn**	**00 08 26.6**	**+0.8**
STON	**Ston**	**5.94**	**339**	*i* Pn	**Pn**	**00 08 28.4**	**-1.5**
STON				Sn	Sn	00 09 32.2	-5.6
ARG	**Arkhangelos**	**6.20**	**98**	P	**Pn**	**00 08 34.8**	**+1.4**
ARG	**Arkhangelos**	**6.20**	**98**	P	**Pn**	**00 08 34.8**	**+1.4**
NVLJ	**Novalja**	**8.39**	**331**	*e*Pn	**Pn**	**00 09 03.4**	**-0.1**
NVLJ				Sn	Sn	00 10 31.6	-6.6
NVLJ	**Novalja**	**8.39**	**331**	*e*Pn	**Pn**	**00 09 03.3**	**-0.1**
FINES	**FINESS Array B**	**24.38**	**6**	P	P	00 12 27.1	+7.2
	0.5nm,0.6s,baz=157,slow=10,SNR=5.3						
TORD	**Torodi Ar. Bea**	**29.38**	**220**	P	**P**	**00 13 05.0**	**-0.2**
	0.4nm,1.0s,baz=35,slow=8.9,SNR=5.3						
KURBB	**Kurchatov Arra**	**42.73**	**53**	P	**P**	**00 14 57.9**	**-1.0**
	0.1nm,0.3s,baz=271,slow=8.9,SNR=4.1						
MKAR	**Makanchi Array**	**45.74**	**58**	P	**P**	**00 15 22.0**	**-1.2**
	0.2nm,0.6s,baz=289,slow=8.7,SNR=2.2						

ATH ***18*** *00:20:27.2, 37.35N×20.54E, h16km±1km, MD3.5/15*
ISCJB ***18*** *00:20:28.2±0.8, 37.37N±0.03×20.54E±0.05, h18km±5km, Error ellipse: s-maj=6.8km s-min=3.4km az=150.0*
CSEM ***18*** *00:20:28.7±0.4, 37.41N×20.63E, h10km, ML2.5/6, Error ellipse: s-maj=8.1km s-min=3.7km az=61.0*
THE ***18*** *00:20:29.5, 37.41N×20.66E, h12km±1km, ML2.5/6, Error ellipse: s-maj=2.1km s-min=0.9km az=245.0*

ISC 18 00:20:28.3±1.3, 37.37N±0.03×20.59E±0.04, h13km±9km, n98, σ0§83/152, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.75**	**12**	P	**Pg**	**00 20 42.1**	**-0.8**
KFL				S	**Sb**	**00 20 54.0**	**+0.6**
KFL	**Anninata**	**0.75**	**12**	P	**Pg**	**00 20 42.1**	**-0.8**
KFL				S	**Sb**	**00 20 54.0**	**+0.6**
VLS	**Valsamata**	**0.80**	**360**	P	**Pg**	**00 20 42.6**	**-1.3**
VLS				S	**Sb**	**00 20 54.9**	**0.0**
VLS	**Valsamata**	**0.80**	**360**	*e*PN	**Pg**	**00 20 43.2**	**-0.7**
VLS				*e*SN	**Sb**	**00 20 54.7**	**-0.2**
VLS	**Valsamata**	**0.80**	**360**	P	**Pg**	**00 20 42.6**	**-1.3**
VLS	**Valsamata**	**0.80**	**360**	*e*Pn	**Pg**	**00 20 43.2**	**-0.7**
VLS				S	**Sb**	**00 20 54.9**	**0.0**
RLS	**Riolos of Patr**	**0.97**	**45**	P	**Pb**	**00 20 46.3**	**-0.7**
RLS				S	**Sb**	**00 20 59.8**	**0.0**
RLS	**Riolos of Patr**	**0.97**	**45**	*e*PN	**Pb**	**00 20 47.0**	**0.0**
RLS				*e*SN	**Sg**	**00 21 00.8**	**+1.0**
RLS	**Riolos of Patr**	**0.97**	**45**	P	**Pb**	**00 20 46.3**	**-0.7**
RLS	**Riolos of Patr**	**0.97**	**45**	*e*Pn	**Pb**	**00 20 47.0**	**0.0**
RLS				S	**Sb**	**00 20 59.8**	**0.0**
RLS				*e*Sn	**Sg**	**00 21 00.8**	**+1.0**
PYL	**PYLOS**	**1.04**	**117**	P	**Pb**	**00 20 46.9**	**-1.2**
PYL				S	**Sg**	**00 21 02.5**	**+0.7**
PYL	**PYLOS**	**1.04**	**117**	*e*PN	**Pb**	**00 20 46.9**	**-1.2**
PYL				*e*SN	**Sb**	**00 21 02.0**	**+0.5**
PYL	**PYLOS**	**1.04**	**117**	P	**Pb**	**00 20 46.9**	**-1.2**
PYL				*e*Sn	**Sb**	**00 21 02.0**	**+0.5**
PYL				S	**Sg**	**00 21 02.5**	**+0.7**
ITM	**Ithomi**	**1.08**	**100**	P	**Pb**	**00 20 48.4**	**-0.4**
ITM				S	**Sb**	**00 21 03.4**	**+0.5**
ITM	**Ithomi**	**1.08**	**100**	*e*PN	**Pb**	**00 20 48.5**	**-0.4**
ITM				*e*SN	**Sg**	**00 21 04.0**	**+0.7**
ITM	**Ithomi**	**1.08**	**100**	P	**Pb**	**00 20 48.4**	**-0.4**
ITM				S	**Sb**	**00 21 03.4**	**+0.5**
ITM				*e*Sn	**Sg**	**00 21 04.0**	**+0.7**
LAKA	**Lakka**	**1.40**	**51**	P	**Pb**	**00 20 54.4**	**+0.2**
LAKA				S	**Sb**	**00 21 12.4**	**+0.3**
LAKA	**Lakka**	**1.40**	**51**	*e*PN	**Pb**	**00 20 54.5**	**+0.2**
LAKA				*e*SN	**Sg**	**00 21 14.5**	**+1.1**
LAKA	**Lakka**	**1.40**	**51**	P	**Pb**	**00 20 54.4**	**+0.2**
LAKA				S	**Sb**	**00 21 12.4**	**+0.3**
LAKA				*e*Sn	**Sg**	**00 21 14.5**	**+1.1**
LKD2	**Lefkada island**	**1.42**	**2**	P	**Pn**	**00 20 53.5**	**-0.3**
LKD2				S	**Sb**	**00 21 12.3**	**-0.2**
LKD2	**Lefkada island**	**1.42**	**2**	P	**Pn**	**00 20 53.5**	**-0.3**
LKD2				S	**Sb**	**00 21 12.3**	**-0.2**
VLX	**Vlachokerasia**	**1.42**	**90**	P	**Pn**	**00 20 53.6**	**-0.3**
VLX	**Vlachokerasia**	**1.42**	**90**	*e*PN	**Pb**	**00 20 55.0**	**+0.2**
VLX				*e*SN	**Sg**	**00 21 14.8**	**+0.6**
VLX	**Vlachokerasia**	**1.42**	**90**	P	**Pn**	**00 20 53.6**	**-0.3**
VLX	**Vlachokerasia**	**1.42**	**90**	*e*Pn	**Pb**	**00 20 55.0**	**+0.2**
VLX				*e*Sn	**Sg**	**00 21 14.8**	**+0.6**
EFP	**Efpalio**	**1.48**	**44**	P	**Pb**	**00 20 55.3**	**-0.3**
EFP				S	**Sb**	**00 21 14.9**	**+0.6**
EFP	**Efpalio**	**1.48**	**44**	*e*PN	**Pb**	**00 20 55.9**	**+0.3**
EFP				*e*SN	**Sg**	**00 21 16.6**	**+0.7**
EFP	**Efpalio**	**1.48**	**44**	P	**Pb**	**00 20 55.3**	**-0.3**
EFP	**Efpalio**	**1.48**	**44**	*e*Pn	**Pb**	**00 20 55.9**	**+0.3**
EFP				S	**Sb**	**00 21 14.9**	**+0.6**
EFP				*e*Sn	**Sg**	**00 21 16.6**	**+0.7**
GUR	**Goura**	**1.50**	**67**	P	**Pn**	**00 20 55.0**	**0.0**
GUR	**Goura**	**1.50**	**67**	*e*PN	**Pn**	**00 20 55.4**	**+0.4**
GUR				*e*SN	**Sg**	**00 21 17.3**	**+0.7**
GUR	**Goura**	**1.50**	**67**	P	**Pn**	**00 20 55.0**	**0.0**
GUR	**Goura**	**1.50**	**67**	*e*Pn	**Pn**	**00 20 55.4**	**+0.4**
GUR				*e*Sn	**Sg**	**00 21 17.3**	**+0.7**
DYR	**Agios Nikonas**	**1.52**	**113**	P	**Pn**	**00 20 54.7**	**-0.5**
DYR				S	**Sn**	**00 21 14.9**	**0.0**
DYR	**Agios Nikonas**	**1.52**	**113**	*e*PN	**Pb**	**00 20 56.4**	**0.0**
DYR	**Agios Nikonas**	**1.52**	**113**	P	**Pn**	**00 20 54.7**	**-0.5**
DYR	**Agios Nikonas**	**1.52**	**113**	*e*Pn	**Pb**	**00 20 56.4**	**0.0**
DYR				S	**Sn**	**00 21 14.9**	**0.0**
TRIZ	**Trizonia**	**1.54**	**49**	P	**Pb**	**00 20 56.4**	**-0.1**
TRIZ	**Trizonia**	**1.54**	**49**	*e*PN	**Pb**	**00 20 56.5**	**-0.1**
TRIZ	**Trizonia**	**1.54**	**49**	P	**Pb**	**00 20 56.4**	**-0.1**
KALE	**Kalithea**	**1.59**	**50**	P	**Pn**	**00 20 56.8**	**+0.6**
KALE				S	**Sn**	**00 21 15.8**	**-0.9**
KALE	**Kalithea**	**1.59**	**50**	*e*PN	**Pb**	**00 20 57.5**	**-0.1**
KALE	**Kalithea**	**1.59**	**50**	P	**Pn**	**00 20 56.8**	**+0.6**
KALE	**Kalithea**	**1.59**	**50**	*e*Pn	**Pb**	**00 20 57.5**	**-0.1**
KALE				S	**Sn**	**00 21 15.8**	**-0.9**
THAL	**Thalero**	**1.77**	**67**	P	**Pn**	**00 20 58.7**	**+0.1**
THAL	**Thalero**	**1.77**	**67**	P	**Pn**	**00 20 58.7**	**+0.1**
EVR	**Evrytania**	**1.82**	**32**	P	**Pn**	**00 20 59.7**	**+0.4**
EVR	**Evrytania**	**1.82**	**32**	*e*PN	**Pb**	**00 21 01.0**	**-0.4**
EVR	**Evrytania**	**1.82**	**32**	P	**Pn**	**00 20 59.7**	**+0.4**
EVR	**Evrytania**	**1.82**	**32**	*e*Pn	**Pb**	**00 21 01.0**	**-0.4**
DSF	**Desfina**	**1.85**	**55**	P	**Pn**	**00 21 00.3**	**+0.6**
DSF				S	**Sn**	**00 21 22.7**	**-0.3**
DSF	**Desfina**	**1.85**	**55**	P	**Pn**	**00 21 00.3**	**+0.6**
DSF				S	**Sn**	**00 21 22.7**	**-0.3**
VLI	**Veliai**	**1.99**	**108**	P	**Pn**	**00 21 02.5**	**+0.9**
VLI				S	**Sn**	**00 21 27.0**	**+0.7**
VLI	**Veliai**	**1.99**	**108**	*e*PN	**Pb**	**00 21 03.4**	**-0.9**
VLI	**Veliai**	**1.99**	**108**	P	**Pn**	**00 21 02.5**	**+0.9**
VLI	**Veliai**	**1.99**	**108**	*e*Pn	**Pb**	**00 21 03.4**	**-0.9**
VLI				S	**Sn**	**00 21 27.0**	**+0.7**
LTK	**Loutraki**	**1.99**	**70**	P	**Pn**	**00 21 01.4**	**-0.3**
LTK	**Loutraki**	**1.99**	**70**	*e*PN	**Pb**	**00 21 03.8**	**-0.6**
LTK	**Loutraki**	**1.99**	**70**	P	**Pn**	**00 21 01.4**	**-0.3**
LTK	**Loutraki**	**1.99**	**70**	*e*Pn	**Pb**	**00 21 03.8**	**-0.6**
DIDY	**Didyma**	**2.09**	**86**	P	**Pn**	**00 21 01.5**	**-1.6**
DIDY	**Didyma**	**2.09**	**86**	P	**Pn**	**00 21 01.5**	**-1.6**
DID	**Didima**	**2.11**	**86**	P	**Pn**	**00 21 02.6**	**-0.7**
DID	**Didima**	**2.11**	**86**	*e*PN	**Pn**	**00 21 04.6**	**+1.3**
DID	**Didima**	**2.11**	**86**	P	**Pn**	**00 21 02.6**	**-0.7**
DID	**Didima**	**2.11**	**86**	*e*Pn	**Pn**	**00 21 04.6**	**+1.3**
AGG	**Agios Georgios**	**2.14**	**39**	P	**Pn**	**00 21 04.8**	**+1.0**
AGG				S	**Sn**	**00 21 30.5**	**+0.3**
AGG	**Agios Georgios**	**2.14**	**39**	*e*PB	**Pn**	**00 21 04.6**	**+0.8**
AGG	**Agios Georgios**	**2.14**	**39**	*e*Pb	**Pn**	**00 21 04.6**	**+0.8**
AGG				S	**Sn**	**00 21 30.5**	**+0.3**
AXAR	**Agios Charalam**	**2.15**	**49**	P	**Pn**	**00 21 03.6**	**-0.2**
AXAR				S	**Sn**	**00 21 30.0**	**-0.3**
AXAR	**Agios Charalam**	**2.15**	**49**	P	**Pn**	**00 21 03.6**	**-0.2**
AXAR				S	**Sn**	**00 21 30.0**	**-0.3**
IGT	**Igoumenitsa**	**2.17**	**355**	P	**Pn**	**00 21 04.6**	**+0.5**
IGT	**Igoumenitsa**	**2.17**	**355**	P	**Pn**	**00 21 04.6**	**+0.5**
KYTH	**Kithira**	**2.24**	**118**	P	**Pn**	**00 21 06.1**	**+1.0**
KYTH	**Kithira**	**2.24**	**118**	P	**Pn**	**00 21 06.1**	**+1.0**
LKR	**Lokris**	**2.29**	**55**	P	**Pn**	**00 21 05.8**	**+0.1**
LKR				S	**Sn**	**00 21 33.2**	**-0.6**
LKR	**Lokris**	**2.29**	**55**	*e*PB	**Pn**	**00 21 07.0**	**+1.3**
LKR	**Lokris**	**2.29**	**55**	P	**Pn**	**00 21 05.8**	**+0.1**
LKR	**Lokris**	**2.29**	**55**	*e*Pb	**Pn**	**00 21 07.0**	**+1.3**
LKR				S	**Sn**	**00 21 33.2**	**-0.6**
ATAL	**Atalanti**	**2.33**	**55**	P	**Pn**	**00 21 05.6**	**-0.7**
ATAL	**Atalanti**	**2.33**	**55**	P	**Pn**	**00 21 05.6**	**-0.7**
KEK	**Kerkira**	**2.42**	**345**	P	**Pn**	**00 21 09.0**	**+1.5**
KEK				S	**Sn**	**00 21 37.4**	**+0.4**
KEK	**Kerkira**	**2.42**	**345**	P	**Pn**	**00 21 09.0**	**+1.5**
KEK				S	**Sn**	**00 21 37.4**	**+0.4**
THL	**Klokotos Trika**	**2.46**	**27**	P	**Pn**	**00 21 08.2**	**+0.2**
THL				S	**Sn**	**00 21 37.9**	**0.0**
THL	**Klokotos Trika**	**2.46**	**27**	P	**Pn**	**00 21 08.2**	**+0.2**
THL				S	**Sn**	**00 21 37.9**	**0.0**
SMIA	**Simia**	**2.55**	**53**	P	**Pn**	**00 21 09.2**	**-0.2**
SMIA	**Simia**	**2.55**	**53**	P	**Pn**	**00 21 09.2**	**-0.2**
NEST	**Nestorio**	**3.06**	**7**	P	**Pn**	**00 21 16.9**	**+0.5**
NEST				S	**Sn**	**00 21 53.7**	**+0.8**
NEST	**Nestorio**	**3.06**	**7**	P	**Pn**	**00 21 16.9**	**+0.5**
NEST				S	**Sn**	**00 21 53.7**	**+0.8**
LIT	**Litokhoron**	**3.10**	**28**	P	**Pn**	**00 21 17.6**	**+0.7**
LIT	**Litokhoron**	**3.10**	**28**	P	**Pn**	**00 21 17.6**	**+0.7**
KARN	**Karanos**	**3.33**	**125**	P	**Pn**	**00 21 22.1**	**+2.1**
KARN	**Karanos**	**3.33**	**125**	P	**Pn**	**00 21 22.1**	**+2.1**
FNA	**Florina**	**3.46**	**10**	P	**Pn**	**00 21 21.9**	**0.0**
FNA				S	**Sn**	**00 22 01.6**	**-1.2**
FNA	**Florina**	**3.46**	**10**	P	**Pn**	**00 21 21.9**	**0.0**
FNA				S	**Sn**	**00 22 01.6**	**-1.2**
IDI	**Anoyia**	**4.05**	**120**	P	**Pn**	**00 21 31.9**	**+1.9**
IDI				S	**Sn**	**00 22 13.4**	**-3.8**
IDI	**Anoyia**	**4.05**	**120**	P	**Pn**	**00 21 31.9**	**+1.9**
STON	**Ston**	**5.92**	**339**	*e*Pn	**Pn**	**00 21 52.7**	**-2.9**
STON				Sn	Sn	00 22 55.7	-7.6

DDA ***18*** *00:47:31.0, 36.37N×26.81E, h14km, MD2.9*
ISCJB ***18*** *00:47:33.6±1.1, 36.46N±0.03×27.03E±0.04, h1km±7km, Error ellipse: s-maj=5.9km s-min=4.1km az=137.1*
CSEM ***18*** *00:47:33.8±0.2, 36.43N×27.00E, h2km, MD3.3, Error ellipse: s-maj=7.0km s-min=4.3km az=135.0*
ATH ***18*** *00:47:34.2, 36.52N×27.04E, h22km±1km, MD3.3/9*
ISK ***18*** *00:47:35.6, 36.56N×27.06E, h8km, MD3.0*

ISC 18 00:47:35.3±1.0, 36.50N±0.03×27.01E±0.03, h10km±8km, n35, σ0§94/55, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.17**	**51**	*e*PB	**Pg**	**00 47 38.5**	**-0.5**
NIS1				*e*SB	**Sg**	**00 47 42.3**	**+0.7**
ARG	**Arkhangelos**	**0.94**	**107**	*e*PN	**Pb**	**00 47 52.6**	**-1.1**
ARG				*e*SN	**Sb**	**00 48 05.4**	**-0.8**
ARG	**Arkhangelos**	**0.94**	**107**	*e*Pn	**Pb**	**00 47 52.6**	**-1.1**
ARG				*e*Sn	**Sb**	**00 48 05.4**	**-0.8**
KARP	**Karpathos**	**0.95**	**173**	*e*PN	**Pb**	**00 47 53.3**	**-0.6**
KARP				*e*SN	**Sb**	**00 48 06.5**	**-0.1**
KARP	**Karpathos**	**0.95**	**173**	*e*Pn	**Pb**	**00 47 53.3**	**-0.6**
KARP				*e*Sn	**Sb**	**00 48 06.5**	**-0.1**
MLSB	**Milas**	**1.01**	**37**	*e*PG	**Pb**	**00 47 55.2**	**+0.4**
MLSB				*e*SG	**Sb**	**00 48 07.2**	**-0.9**
MLSB	**Milas**	**1.01**	**37**	*e*Pg	**Pb**	**00 47 55.2**	**+0.4**
MLSB				*e*Sg	**Sb**	**00 48 07.2**	**-0.9**
YER	**Yerkesik**	**1.20**	**58**	*e*PN	**Pn**	**00 47 57.7**	**-0.5**
YER	**Yerkesik**	**1.20**	**58**	*e*Pn	**Pn**	**00 47 57.7**	**-0.5**
GCAM	**G?zelcaml?**	**1.22**	**8**	*i* P	**Pn**	**00 47 57.6**	**-0.7**
GCAM				*e*S	**Sb**	**00 48 11.4**	**-2.7**
GCAM	**G?zelcaml?**	**1.22**	**8**	*i* P	**Pn**	**00 47 57.6**	**-0.7**
GCAM				*e*S	**Sb**	**00 48 11.4**	**-2.7**
SANT	**Santorini**	**1.26**	**265**	*e*PN	**Pn**	**00 47 58.0**	**-1.0**
SANT				*e*SN	**Sn**	**00 48 16.4**	**+0.4**
SANT	**Santorini**	**1.26**	**265**	*e*Pn	**Pn**	**00 47 58.0**	**-1.0**
SANT				*e*Sn	**Sn**	**00 48 16.4**	**+0.4**
APE	**Apeiranthos**	**1.32**	**296**	*e*PN	**Pn**	**00 48 00.6**	**+0.8**
APE				*e*SN	**Sg**	**00 48 19.6**	**+1.7**
APE	**Apeiranthos**	**1.32**	**296**	*e*PN	**Pn**	**00 47 59.5**	**-0.3**
APE				*e*SN	**Sb**	**00 48 18.2**	**+1.0**
APE	**Apeiranthos**	**1.32**	**296**	*e*Pn	**Pn**	**00 47 59.5**	**-0.3**
APE				*e*Sn	**Sb**	**00 48 18.2**	**+1.0**
TURN	**Turunc**	**1.33**	**73**	*i* P	Pn	00 47 53.6	-6.3
TURN				*i* S	Sn	00 48 07.1	-11
AYDN	**Tasoluk**	**1.35**	**30**	*e*P	**Pn**	**00 47 59.8**	**-0.5**
AYDN				*e*S	**Sg**	**00 48 19.6**	**+0.7**
AYDN	**Tasoluk**	**1.35**	**30**	*e*P	**Pn**	**00 47 59.8**	**-0.5**
AYDN				*e*S	**Sg**	**00 48 19.6**	**+0.7**
DALY	**Dalyan (Mu˘la**	**1.36**	**76**	*e*PN	**Pn**	**00 48 00.9**	**+0.6**
DALY				*e*SN	**Sb**	**00 48 19.0**	**+0.8**
DALY	**Dalyan (Mu˘la**	**1.36**	**76**	*e*Pn	**Pn**	**00 48 00.9**	**+0.6**
DALY				*e*Sn	**Sb**	**00 48 19.0**	**+0.8**
ZKR	**Zakros**	**1.52**	**205**	*e*PN	**Pn**	**00 48 02.5**	**0.0**
ZKR				*e*SB	**Sb**	**00 48 23.4**	**+0.5**
ZKR	**Zakros**	**1.52**	**205**	*e*Pn	**Pn**	**00 48 02.5**	**0.0**
ZKR				*e*Sn	**Sb**	**00 48 23.4**	**+0.5**
FETY	**Fethiye**	**1.67**	**85**	*e*PN	**Pn**	**00 48 05.2**	**+0.6**
FETY	**Fethiye**	**1.67**	**85**	*e*Pn	**Pn**	**00 48 05.3**	**+0.6**
NPS	**Neapolis**	**1.68**	**223**	*e*PB	**Pn**	**00 48 03.5**	**-1.2**
NPS	**Neapolis**	**1.68**	**223**	*e*Pb	**Pn**	**00 48 03.5**	**-1.2**
LAST	**Lasithi**	**1.82**	**224**	*e*PN	**Pn**	**00 48 07.1**	**+0.3**
LAST	**Lasithi**	**1.82**	**224**	*e*Pn	**Pn**	**00 48 07.1**	**+0.3**
BLCB	**Balcova**	**1.89**	**1**	*e*PN	**Pn**	**00 48 07.8**	**+0.2**
BLCB	**Balcova**	**1.89**	**1**	*e*Pn	**Pn**	**00 48 07.8**	**+0.2**
DNZL	**Cakiroluk**	**2.02**	**53**	*e*P	**Pn**	**00 48 10.6**	**+1.1**
DNZL				*e*S	**Sb**	**00 48 39.2**	**+1.8**
DNZL	**Cakiroluk**	**2.02**	**53**	*e*P	**Pn**	**00 48 10.6**	**+1.1**
IDI	**Anoyia**	**2.10**	**236**	*e*PB	**Pn**	**00 48 10.2**	**-0.4**
IDI	**Anoyia**	**2.10**	**236**	*e*Pb	**Pn**	**00 48 10.2**	**-0.4**

DDA ***18*** *00:55:40.7, 36.46N×27.04E, h11km, MD3.1*
THE ***18*** *00:55:41.6, 36.47N×27.08E, h0km±1km, ML2.5/2, Error ellipse: s-maj=1.3km s-min=0.9km az=129.0*
ISCJB ***18*** *00:55:41.0±0.7, 36.46N±0.02×27.06E±0.02, h3km±5km, Error ellipse: s-maj=4.0km s-min=2.8km az=142.1*
ATH ***18*** *00:55:41.1, 36.51N×27.04E, h20km±1km, MD3.3/9*
CSEM ***18*** *00:55:41.6±0.1, 36.49N×27.02E, h8km, MD3.3, Error ellipse: s-maj=3.7km s-min=2.3km az=145.0*
ISK ***18*** *00:55:43.1, 36.58N×27.10E, h14km, MD3.0*

ISC 18 00:55:42.0±0.8, 36.48N±0.02×27.06E±0.02, h13km±6km, n64, σ0§69/103, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.15**	**38**	P	**Pg**	**00 55 45.4**	**-0.3**
NIS1				S	**Sg**	**00 55 48.6**	**+0.3**
NIS1	**Nisyros Isl.**	**0.15**	**38**	*e*PB	**Pg**	**00 55 45.3**	**-0.4**
NIS1				*e*SB	**Sg**	**00 55 48.9**	**+0.6**
NIS1	**Nisyros Isl.**	**0.15**	**38**	P	**Pg**	**00 55 45.4**	**-0.3**
NIS1				S	**Sg**	**00 55 48.6**	**+0.3**
NIS1				*e*Sb	Sb	00 55 48.9	-1.0
BODT	**Bodrum**	**0.61**	**19**	*e*PG	**Pg**	**00 55 53.4**	**-0.5**
BODT				*e*SG	**Sg**	**00 56 01.0**	**-1.0**
BODT	**Bodrum**	**0.61**	**19**	*e*Pg	**Pg**	**00 55 53.4**	**-0.5**
BODT				*e*Sg	**Sg**	**00 56 01.0**	**-1.0**
ARG	**Arkhangelos**	**0.90**	**107**	P	**Pb**	**00 55 59.3**	**-0.1**
ARG				S	**Sn**	**00 56 12.5**	**-0.7**
ARG	**Arkhangelos**	**0.90**	**107**	*e*PN	**Pb**	**00 55 59.3**	**-0.1**
ARG				*e*SN	**Sb**	**00 56 12.0**	**+0.7**
ARG	**Arkhangelos**	**0.90**	**107**	P	**Pb**	**00 55 59.3**	**-0.1**
ARG				S	**Sn**	**00 56 12.5**	**-0.7**
KARP	**Karpathos**	**0.94**	**175**	*e*PN	**Pb**	**00 56 00.1**	**0.0**
KARP				*e*SN	**Sb**	**00 56 12.8**	**+0.4**
KARP	**Karpathos**	**0.94**	**175**	*e*Pn	**Pb**	**00 56 00.1**	**0.0**
MLSB	**Milas**	**0.99**	**35**	*e*PG	**Pn**	**00 56 01.8**	**+0.1**
MLSB				*e*SG	**Sg**	**00 56 13.8**	**-0.3**
MLSB	**Milas**	**0.99**	**35**	*e*Pg	**Pn**	**00 56 01.8**	**+0.1**
MLSB				*e*Sg	**Sg**	**00 56 13.8**	**-0.3**
YER	**Yerkesik**	**1.18**	**56**	*e*PN	**Pb**	**00 56 04.1**	**-0.1**
YER				*e*SN	**Sn**	**00 56 20.9**	**+0.7**
YER	**Yerkesik**	**1.18**	**56**	*e*Pn	**Pb**	**00 56 04.1**	**-0.1**
YER				*e*Sn	**Sn**	**00 56 20.9**	**+0.7**
GCAM	**G?zelcaml?**	**1.22**	**6**	*i* P	**Pn**	**00 56 03.6**	**-1.1**
GCAM				*i* S	**Sn**	**00 56 21.7**	**+0.5**
GCAM	**G?zelcaml?**	**1.22**	**6**	*i* P	**Pn**	**00 56 03.6**	**-1.1**
GCAM				*i* S	**Sn**	**00 56 21.7**	**+0.5**
SANT	**Santorini**	**1.30**	**266**	P	**Pb**	**00 56 05.9**	**-0.3**
SANT				S	**Sg**	**00 56 24.3**	**+0.5**
SANT	**Santorini**	**1.30**	**266**	*e*PN	**Pn**	**00 56 05.1**	**-0.7**
SANT				*e*SN	**Sn**	**00 56 23.1**	**0.0**
SANT	**Santorini**	**1.30**	**266**	*e*Pn	**Pn**	**00 56 05.1**	**-0.7**
SANT	**Santorini**	**1.30**	**266**	P	**Pb**	**00 56 05.9**	**-0.3**
SANT				*e*Sn	**Sn**	**00 56 23.1**	**0.0**
SANT				S	**Sg**	**00 56 24.3**	**+0.5**
THR1	**Thera Island**	**1.30**	**266**	P	**Pn**	**00 56 05.8**	**0.0**
THR1				S	**Sg**	**00 56 24.8**	**+1.0**
THR1	**Thera Island**	**1.30**	**266**	P	**Pn**	**00 56 05.8**	**0.0**
THR1				S	**Sg**	**00 56 24.8**	**+1.0**
TURN	**Turunc**	**1.30**	**72**	*i* P	Pn	00 56 00.5	-5.3
TURN				*i* S	Sb	00 56 13.9	-8.9
DALY	**Dalyan (Mu˘la**	**1.32**	**75**	*e*PN	**Pg**	**00 56 06.9**	**-0.5**
THR3	**Thira Island,**	**1.34**	**267**	P	**Pn**	**00 56 05.8**	**-0.6**
THR3				S	**Sg**	**00 56 25.3**	**+0.1**
THR3	**Thira Island,**	**1.34**	**267**	P	**Pn**	**00 56 05.8**	**-0.6**
THR3				S	**Sg**	**00 56 25.3**	**+0.1**
AYDN	**Tasoluk**	**1.35**	**29**	*i* P	**Pb**	**00 56 06.8**	**-0.3**
AYDN				*i* S	**Sg**	**00 56 26.6**	**+1.2**
AYDN	**Tasoluk**	**1.35**	**29**	*i* P	**Pb**	**00 56 06.8**	**-0.3**
AYDN				*i* S	**Sg**	**00 56 26.6**	**+1.2**
APE	**Apeiranthos**	**1.36**	**296**	*e*PN	**Pg**	**00 56 08.5**	**+0.3**
APE	**Apeiranthos**	**1.36**	**296**	P	**Pn**	**00 56 06.1**	**-0.6**
APE				S	**Sg**	**00 56 27.8**	**+1.9**
APE	**Apeiranthos**	**1.36**	**296**	*e*PN	**Pn**	**00 56 06.6**	**-0.1**
APE				*e*SN	**Sg**	**00 56 25.4**	**-0.5**
APE	**Apeiranthos**	**1.36**	**296**	P	**Pn**	**00 56 06.1**	**-0.6**
APE	**Apeiranthos**	**1.36**	**296**	*e*Pn	**Pn**	**00 56 06.6**	**-0.1**
APE				*e*Sn	**Sg**	**00 56 25.4**	**-0.5**
APE				S	**Sg**	**00 56 27.8**	**+1.9**
ZKR	**Zakros**	**1.53**	**207**	P	**Pn**	**00 56 09.3**	**+0.3**
ZKR				S	**Sg**	**00 56 30.1**	**-1.0**
ZKR	**Zakros**	**1.53**	**207**	*e*PN	**Pn**	**00 56 09.4**	**+0.4**
ZKR				*e*SN	**Sg**	**00 56 30.3**	**-0.8**
ZKR	**Zakros**	**1.53**	**207**	*e*Pn	**Pn**	**00 56 09.4**	**+0.4**
ZKR				*e*Sn	**Sg**	**00 56 30.3**	**-0.8**
FETY	**Fethiye**	**1.64**	**84**	*e*PN	**Pb**	**00 56 11.7**	**-0.3**
FETY	**Fethiye**	**1.64**	**84**	*e*Pn	**Pb**	**00 56 11.7**	**-0.3**
NPS	**Neapolis**	**1.69**	**224**	P	**Pn**	**00 56 10.5**	**-0.7**
NPS				S	**Sg**	**00 56 35.4**	**-1.0**
NPS	**Neapolis**	**1.69**	**224**	*e*PN	**Pn**	**00 56 11.1**	**-0.1**
NPS	**Neapolis**	**1.69**	**224**	P	**Pn**	**00 56 10.5**	**-0.7**
NPS	**Neapolis**	**1.69**	**224**	*e*Pn	**Pn**	**00 56 11.1**	**-0.1**
NPS				S	**Sg**	**00 56 35.4**	**-1.0**
LAST	**Lasithi**	**1.84**	**225**	P	**Pn**	**00 56 13.2**	**-0.2**
LAST				S	**Sn**	**00 56 37.0**	**+0.4**
LAST	**Lasithi**	**1.84**	**225**	*e*PN	**Pn**	**00 56 13.9**	**+0.5**
LAST	**Lasithi**	**1.84**	**225**	P	**Pn**	**00 56 13.2**	**-0.2**
LAST	**Lasithi**	**1.84**	**225**	*e*Pn	**Pn**	**00 56 13.9**	**+0.5**
LAST				S	**Sn**	**00 56 37.0**	**+0.4**
BLCB	**Balcova**	**1.90**	**360**	*e*PN	**Pn**	**00 56 14.3**	**+0.2**
**BLC

SNR=50
VIKU Vikbolandet 2.86 288 *e*P **Pn 01 07 15.4 +1.3**
VIKU Vikbolandet 2.86 288 P **Pn 01 07 15.4 +1.3**
ASPU Aespoe 2.87 266 *e*P **Pn 01 07 16.4 +2.1**
ASPU Aespoe 2.87 266 P **Pn 01 07 16.3 +2.1**
IZAR Zarasai 3.12 128 *e*S **Sb 01 08 01.5 -0.8**
IZAR AML AML 01 08 04.8
comp=Z,3.4nm,0.2s
FLYU Flymyra 3.17 321 *e*P **Pn 01 07 19.7 +1.2**
FLYU Flymyra 3.17 321 P **Pn 01 07 19.6 +1.2**
OSKU Oskarshamn 3.17 262 *e*P **Pn 01 07 20.0 +1.5**
OSKU Oskarshamn 3.17 262 P **Pn 01 07 20.0 +1.5**
ISAL Salakas 3.20 131 *e*S **Sb 01 08 02.1 -2.3**
ISAL AML AML 01 08 05.7
comp=Z,3.0nm,0.2s
ESKU Eskilstuna 3.25 300 *e*P **Pn 01 07 21.1 +1.5**
ESKU Eskilstuna 3.25 300 P **Pn 01 07 21.0 +1.5**
BACU Backbrunna 3.27 312 *e*P **Pn 01 07 21.0 +1.2**
BACU Backbrunna 3.27 312 P **Pn 01 07 20.9 +1.2**
RAF Rauma 3.29 359 *e*P **Pn 01 07 21.0 +0.9**
RAF MSG 01 08 15.7
comp=Z,6.1nm,0.1s
RAF Rauma 3.29 359 *e*P **Pn 01 07 21.0 +0.9**
RAF MSG 01 08 15.7
comp=Z,6.1nm,0.1s
RAF Rauma 3.29 359 P **Pn 01 07 20.9 +0.9**
RAF *e*S **Sn 01 08 03.6 +3.7**
comp=Z,16nm,0.4s,SNR=50
IIGN Ignalina 3.39 133 *e*S **Sn 01 08 04.8 +2.4**
IIGN AML AML 01 08 05.7
comp=Z,2.6nm,0.1s
IIGN Ignalina 3.39 133 *e*S **Sn 01 08 04.8 +2.4**
comp=Z,2.6nm,0.1s,SNR=33
LNKU Linkoeping 3.43 281 *e*P **Pn 01 07 23.6 +1.5**
LNKU Linkoeping 3.43 281 P **Pn 01 07 23.5 +1.5**
PVF Pernaja 3.48 34 *e*P **Pn 01 07 24.0 +1.4**
PVF *e*SG **Sb 01 08 13.4 +1.0**
PVF Pernaja 3.48 34 *e*P **Pn 01 07 24.0 +1.4**
PVF *e*SG **Sb 01 08 13.4 +1.0**
PVF Pernaja 3.48 34 P **Pn 01 07 24.0 +1.4**
OSTU Oestervaala 3.50 317 *e*P **Pn 01 07 23.9 +0.9**
OSTU Oestervaala 3.50 317 P **Pn 01 07 23.9 +0.9**
BLEU Blekinge 3.62 249 *e*P **Pn 01 07 25.6 +1.0**
BLEU Blekinge 3.62 249 P **Pn 01 07 25.6 +1.0**
VXJU Vaexsjoe 3.86 261 *e*P **Pn 01 07 29.3 +1.4**
VXJU Vaexsjoe 3.86 261 P **Pn 01 07 29.2 +1.4**
ASKU Askersund 3.90 290 *e*P **Pn 01 07 30.3 +1.8**
ASKU Askersund 3.90 290 P **Pn 01 07 30.3 +1.8**
IGGU Iggoen 3.92 325 *e*P **Pn 01 07 30.2 +1.4**
IGGU Iggoen 3.92 325 P **Pn 01 07 30.1 +1.4**
NRAU Nora 4.02 300 *e*P **Pn 01 07 31.3 +1.1**
NRAU Nora 4.02 300 P **Pn 01 07 31.2 +1.1**
VJF Virojoki 4.05 44 *e*P **Pn 01 07 30.7 +0.2**
VJF MSG 01 08 38.5
comp=Z,6.3nm,0.1s
VJF Virojoki 4.05 44 *e*P **Pn 01 07 30.7 +0.2**
VJF MSG 01 08 38.5
comp=Z,6.3nm,0.1s
VJF Virojoki 4.05 44 P **Pn 01 07 30.7 +0.2**
comp=Z,6.3nm,0.1s,SNR=33
FALU Falun 4.17 314 *e*P **Pn 01 07 32.9 +0.8**
FALU Falun 4.17 314 P **Pn 01 07 32.9 +0.8**
FIA0 FINESS Array S 4.28 28 Pn **Pn 01 07 33.1 -0.5**
baz=206,slow=12
FIA0 Pg **Pb 01 07 41.6 -1.8**
baz=210,slow=14
FIA0 Sn **Sn 01 08 24.4 +0.2**
baz=215,slow=18
FIA0 Lg Lg 01 08 40.0
baz=214,slow=28
FIA0 FINESS Array S 4.28 28 Pn **Pn 01 07 33.1 -0.5**
baz=206,slow=12
FIA0 Pg **Pb 01 07 41.6 -1.8**
baz=210,slow=14
FIA0 Sn **Sn 01 08 24.4 +0.2**
baz=215,slow=18
FIA0 Lg Lg 01 08 40.0
baz=214,slow=28
FIA0 FINESS Array S 4.28 28 *e*P **Pn 01 07 34.5 +0.8**
FIA0 FINESS Array S 4.28 28 *e*P **Pn 01 07 34.5 +0.8**
FIA0 FINESS Array S 4.28 28 Pn **Pn 01 07 33.2 -0.5**
baz=206,slow=12,SNR=7.9
FIA0 FINESS Array S 4.28 28 P **Pn 01 07 34.4 +0.8**
FIA0 Sn **Sn 01 08 24.4 +0.2**
baz=215,slow=17,SNR=50
FIA0 Lg Lg 01 08 40.0
baz=214,slow=27,SNR=6.5
FINES FINESS Array B 4.28 28 Pn **Pn 01 07 34.6 +0.9**
comp=Z,0.4nm,0.3s,baz=211,slow=12,SNR=41
FINES Pg **Pb 01 07 44.5 +1.1**
comp=Z,1.0nm,0.3s,baz=213,slow=15,SNR=22
FINES Sn **Sn 01 08 23.1 -1.2**
comp=Z,0.8nm,0.3s,baz=212,slow=20,SNR=6.0
FINES Lg Lg 01 08 40.0
comp=Z,1.7nm,0.3s,baz=217,slow=24,SNR=12
FKPU Falk 4.37 279 P **Pn 01 07 36.3 +1.3**
GNOU Gnosjoe 4.41 268 *e*P **Pn 01 07 37.1 +1.6**
GNOU Gnosjoe 4.41 268 P **Pn 01 07 37.0 +1.6**
DEL Delary 4.55 257 *e*P **Pn 01 07 38.8 +1.4**
DEL Delary 4.55 257 P **Pn 01 07 38.8 +1.4**
ARNU Arnoeviken 4.57 332 *e*P **Pn 01 07 38.0 +0.3**
ARNU Arnoeviken 4.57 332 P **Pn 01 07 38.0 +0.3**
HUDU Hudiksvall 4.67 331 *e*P **Pn 01 07 39.5 +0.4**
HUDU Hudiksvall 4.67 331 P **Pn 01 07 39.5 +0.4**
BSD Bornholm Skovb 4.68 239 *i*P **Pn 01 07 39.1 -0.1**
BSD *i* 01 07 55.2
BSD *e*S **Sn 01 08 32.9 -1.3**
KEF Keuruu 4.68 17 *e*P **Pn 01 07 40.8 +1.5**
KEF MSG 01 09 02.0
comp=Z,3.2nm,0.2s
KEF Keuruu 4.68 17 *e*P **Pn 01 07 40.8 +1.5**
KEF MSG 01 09 02.0
comp=Z,3.2nm,0.2s
KEF Keuruu 4.68 17 P **Pn 01 07 40.7 +1.5**
NASU Vaermlandsnaes 4.74 288 *e*P **Pn 01 07 40.9 +0.9**
NASU Vaermlandsnaes 4.74 288 P **Pn 01 07 40.9 +0.9**
ROTU Roteberg 4.81 323 *e*P **Pn 01 07 41.2 +0.2**
ROTU Roteberg 4.81 323 P **Pn 01 07 41.1 +0.2**
HFS Hagfors 4.87 303 Pn **Pn 01 07 42.9 +1.1**
baz=131,slow=14
HFS Sn **Sn 01 08 37.3 -1.6**
baz=113,slow=28
HFS Lg Lg 01 08 59.0
baz=106,slow=28
HFS Hagfors 4.87 303 Pn **Pn 01 07 42.9 +1.1**
baz=131,slow=14
HFS Sn **Sn 01 08 37.3 -1.6**
baz=113,slow=28
HFS Lg Lg 01 08 59.0
baz=106,slow=28
HFS Hagfors 4.87 303 Pn **Pn 01 07 42.7 +0.9**
comp=Z,0.5nm,0.3s,baz=117,slow=18,SNR=76
HFS Sn **Sn 01 08 40.8 +1.9**
comp=Z,0.4nm,0.3s,baz=110,slow=29,SNR=3.9
HFS Lg Lg 01 09 01.0
comp=Z,0.9nm,0.3s,baz=120,slow=30,SNR=7.5
HFS Hagfors 4.87 303 Pn **Pn 01 07 42.9 +1.1**
baz=131,slow=13,SNR=50
HFS Sn **Sn 01 08 37.3 -1.6**
baz=113,slow=25,SNR=50
HFS Lg Lg 01 08 59.0
baz=106,slow=28,SNR=5.1
UDD Uddeholm 4.89 302 *e*P **Pn 01 07 43.2 +1.1**
UDD Uddeholm 4.89 302 P **Pn 01 07 43.2 +1.1**
BORU Boraas 4.89 273 *e*P **Pn 01 07 43.7 +1.6**
BORU Boraas 4.89 273 P **Pn 01 07 43.7 +1.6**
KAF Kangasniemi 4.91 25 *e*P **Pn 01 07 42.6 +0.2**
KAF MSG 01 09 03.2
comp=Z,2.7nm,0.2s
KAF Kangasniemi 4.91 25 *e*P **Pn 01 07 42.6 +0.2**
KAF MSG 01 09 03.2
comp=Z,2.7nm,0.2s
KAF Kangasniemi 4.91 25 P **Pn 01 07 42.6 +0.2**
FABU Falkenberg 5.02 265 *e*P **Pn 01 07 44.7 +0.9**
FABU Falkenberg 5.02 265 P **Pn 01 07 44.7 +0.9**
LUNU Lund 5.11 249 P **Pn 01 07 45.0 -0.1**
HASU Hassela 5.16 331 *e*P **Pn 01 07 45.9 +0.2**
HASU Hassela 5.16 331 P **Pn 01 07 45.9 +0.2**
FINU Finntorp 5.20 293 *e*P **Pn 01 07 47.2 +0.9**
FINU Finntorp 5.20 293 P **Pn 01 07 47.2 +0.9**
VANU Vaenersborg 5.26 282 *e*P **Pn 01 07 47.4 +0.3**
VANU Vaenersborg 5.26 282 P **Pn 01 07 47.4 +0.3**
HEMU Hemsoen 5.31 340 *e*P **Pn 01 07 48.4 +0.6**
HEMU Hemsoen 5.31 340 P **Pn 01 07 48.4 +0.6**
TJOU Tjoern 5.48 277 *e*P **Pn 01 07 51.1 +0.9**
TJOU Tjoern 5.48 277 P **Pn 01 07 51.1 +0.9**
STRU Stroemstad 5.78 287 *e*P **Pn 01 07 54.9 +0.6**
STRU Stroemstad 5.78 287 P **Pn 01 07 54.9 +0.6**
UMAU Umeaa 6.19 355 *e*P **Pn 01 08 00.3 +0.4**
UMAU Umeaa 6.19 355 P **Pn 01 08 00.2 +0.4**
NB2 NORSAR Subarra 6.37 306 Pn **Pn 01 08 02.3 -0.2**
baz=127,slow=14
NB2 Lg Lg 01 09 47.2
baz=118,slow=37
NB2 NORSAR Subarra 6.37 306 Pn **Pn 01 08 02.3 -0.2**
baz=127,slow=14
NB2 Lg Lg 01 09 47.2
baz=118,slow=37
NB2 NORSAR Subarra 6.37 306 Pn **Pn 01 08 02.3 -0.2**
baz=127,slow=12,SNR=50
NB2 Lg Lg 01 09 47.2
baz=118,slow=30,SNR=3.2
NOA NORSAR Array B 6.37 306 Pn **Pn 01 08 02.6 +0.1**
comp=Z,0.3nm,0.3s,baz=119,slow=13,SNR=11
NOA Sn **Sn 01 09 12.7 -3.3**
comp=Z,0.2nm,0.3s,baz=326,slow=18,SNR=2.4
NOA Lg Lg 01 09 46.8
comp=Z,0.7nm,0.3s,baz=87,slow=16,SNR=5.4
BREU Bredtraesk 6.38 347 *e*P **Pn 01 08 02.5 0.0**
BREU Bredtraesk 6.38 347 P **Pn 01 08 02.4 0.0**
NOD Norderasen 6.68 332 *e*P **Pn 01 08 05.8 -0.9**
NOD Norderasen 6.68 332 P **Pn 01 08 05.8 -0.9**
BURU Burvik 6.87 358 *e*P **Pn 01 08 09.2 0.0**
BURU Burvik 6.87 358 P **Pn 01 08 09.2 0.0**
MUD Monsted U'grnd 7.05 265 *i*P **Pn 01 08 12.3 +0.6**
MUD *i* 01 08 16.2
MUD Monsted U'grnd 7.05 265 *i*P **Pn 01 08 12.4 +0.7**
SNR=90
LILU Lilltraesk 7.63 354 *e*P **Pn 01 08 18.9 -0.7**
LILU Lilltraesk 7.63 354 P **Pn 01 08 19.0 -0.7**
SJUU Sjulsmark 7.79 359 *e*P **Pn 01 08 21.3 -0.6**
SJUU Sjulsmark 7.79 359 P **Pn 01 08 21.3 -0.6**
AKASG Malin Array Be 8.26 146 Pn Pn 01 08 25.6 -2.7
comp=Z,0.3nm,0.3s,baz=328,slow=11,SNR=2.8
HARU Harads 8.46 357 *e*P **Pn 01 08 30.4 -0.7**
HARU Harads 8.46 357 P **Pn 01 08 30.4 -0.7**
ARA0 ARCESS Array S 11.94 6 Pn Pn 01 09 15.1 -3.6
baz=184,slow=16
ARA0 ARCESS Array S 11.94 6 P Pn 01 09 15.1 -3.6
baz=184,slow=18
ARCES ARCESS Array B 11.94 6 Pn Pn 01 09 15.2 -3.5
comp=Z,0.1nm,0.3s,baz=190,slow=13,SNR=7.8
ARCES Sn Sn 01 11 19.6 -13
comp=Z,0.1nm,0.3s,baz=189,slow=23,SNR=2.4

*AUST **18** 01:23:22.0, 15.47S×172.44W, h600km*
*VIE **18** 01:24:01.2, 17.53S×178.32W, h550km, mb3.4 352 km E of Suva*
*ISCJB **18** 01:24:02.5±0.7, 17.9S±0.2×178.2W±0.1, h590km, mb3.7/12, Error ellipse: s-maj=24.0km s-min=11.8km az=146.9*
*IDC **18** 01:24:07.4±3.9, 17.90S×178.30W, h637km±46km, mb3.3/12, mb1 3.6/12, mb1mx3.4/19, mbtmp3.3/12, Error ellipse: s-maj=27.6km s-min=18.3km az=141.0*

ISC 18 01:24:03.3±0.7,**17.9S**±0.2×**178.2W**±0.1,**h590**km,**n50, σ0.6s78/48,mb3.8/12,9C-6D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YNG	**Young**	**34.01**	**235**	P	P	01 30 24.7	+25
	baz=40,SNR=7.0						
COEN	**Coen**	**37.35**	**270**	P	**P**	**01 30 28.7**	**+1.5**
	baz=43,SNR=26						
STKA	**Stephens Creek**	**38.85**	**241**	P	**P**	**01 30 39.7**	**+0.4**
	3.5nm,0.7s,baz=54,slow=6.9,SNR=7.4						
STKA	**Stephens Creek**	**38.85**	**241**	P	**P**	**01 30 40.3**	**+1.0**
	baz=45,SNR=4.8						
QIS	**Mount Isa**	**39.90**	**259**	P	P	01 31 06.1	+18
	baz=46,SNR=7.1						
JAY	**Jayapura**	**43.13**	**286**	S	S	01 37 16.9	+19
	baz=48,SNR=3.6						
BBOO	**Buckleboo**	**43.63**	**241**	P	**P**	**01 31 17.1**	**+0.2**
	baz=50,SNR=7.3						
WRA	**Warramunga Arr**	**44.88**	**259**	P	**P**	**01 31 26.4**	**-0.3**
	2.9nm,0.4s,baz=95,slow=7.1,SNR=160						
WRA				PcP	**PcP**	**01 32 54.3**	**-1.1**
	0.6nm,0.3s,baz=90,slow=3.8,SNR=6.7						
ASAR	**Alice Springs**	**45.03**	**254**	P	**P**	**01 31 27.8**	**-0.1**
	5.4nm,0.4s,baz=88,slow=8.1,SNR=84						
ASAR				PcP	**PcP**	**01 32 55.0**	**-0.9**
	1.5nm,0.5s,baz=102,slow=3.8,SNR=10						
KDU	**Kakadu**	**47.80**	**269**	P	**P**	**01 31 48.7**	**-0.1**
	baz=53,SNR=7.4						
KDU				S	S	01 38 34.7	+31
	baz=53,SNR=4.5						
MTN	**Manton Dam**	**49.04**	**268**	P	**P**	**01 31 57.4**	**-0.5**
	baz=55,SNR=5.9						
FITZ	**Fitzroy Crossi**	**53.27**	**260**	P	**P**	**01 32 28.5**	**+0.1**
	baz=59,SNR=6.7						
MEEK	**Meekatharra**	**58.67**	**249**	P	**P**	**01 33 04.5**	**-1.1**
	baz=65,SNR=3.7						
VNDA	**Vanda**	**60.49**	**185**	P	**P**	**01 33 17.0**	**+0.4**
	0.9nm,1.0s,baz=21,slow=9.4,SNR=3.0						
MJAR	**Matsushiro Arr**	**68.03**	**323**	P	**P**	**01 34 05.2**	**+0.2**
	1.2nm,0.4s,baz=151,slow=5.6,SNR=5.4						
PETK	**Petropavlovsk-**	**73.72**	**345**	P	**P**	**01 34 38.2**	**+0.4**
	2.2nm,0.6s,baz=138,slow=9.4,SNR=3.7						
NVAR	**Mina Array Bea**	**79.24**	**44**	P	**P**	**01 35 09.7**	**+1.0**
	0.9nm,0.6s,baz=225,slow=8.2,SNR=7.7						
TXAR	**Lajitas Array**	**85.78**	**58**	P	**P**	**01 35 43.2**	**+1.7**
	1.3nm,0.7s,baz=213,slow=6.9,SNR=16						
ILAR	**Eielson Array**	**85.81**	**13**	P	**P**	**01 35 40.0**	**-0.8**
	0.9nm,0.4s,baz=220,slow=4.8,SNR=31						
PDAR	**Pinedale Array**	**87.17**	**43**	P	**P**	**01 35 48.3**	**+0.3**
	0.8nm,0.6s,baz=217,slow=3.5,SNR=8.8						
CMAR	**Chiang Mai Arr**	**89.11**	**290**	P	**P**	**01 35 58.6**	**+1.3**
	0.7nm,0.3s,baz=106,slow=3.3,SNR=5.5						
YKA	**Yellowknife Ar**	**94.21**	**25**	P	**P**	**01 36 19.2**	**-0.4**
	0.2nm,0.5s,baz=239,slow=4.6,SNR=8.2						
MKAR	**Makanchi Array**	**109.29**	**314**	PKiKP	**PKiKP**	**01 41 25.2**	**-2.0**
	0.4nm,0.5s,baz=212,slow=0.8,SNR=8.9						
ARCES	**ARCESS Array B**	**126.33**	**350**	PKP	**PKPdf**	**01 41 57.9**	**-1.3**
	1.8nm,0.8s,baz=333,slow=1.2,SNR=9.5						
FINES	**FINESS Array B**	**133.23**	**344**	PKP	**PKPdf**	**01 42 10.5**	**-1.9**
	0.3nm,0.3s,baz=48,slow=2.1,SNR=5.3						
KWP	**Kalwaria Pacla**	**144.15**	**337**	*j*P	PKPbc	01 42 31.9	-0.5
BURAR	**Bucovina Array**	**144.71**	**332**	*j*P	**PKPab**	**01 42 34.8**	**-0.3**
TESR	**Tescani**	**144.86**	**330**	*j*P	**PKPdf**	**01 42 34.1**	**+0.2**
BRTR	**Keskin Array B**	**144.94**	**315**	PKP	**PKPdf**	**01 42 34.1**	**-0.3**
	2.0nm,0.7s,baz=71,slow=2.7,SNR=19						
CFR	**Carcaliu**	**145.05**	**327**	*j*P	**PKPbc**	**01 42 34.8**	**-0.4**
VRI	**Vrincioaia**	**145.28**	**329**	*j*P	**PKPdf**	**01 42 34.1**	**-0.6**
TRPA	**Tarpa**	**145.43**	**335**	*j*P	**PKPbc**	**01 42 36.1**	**-0.1**
OKC	**Ostrava-Krasne**	**145.53**	**341**	*e*PKP	**PKPbc**	**01 42 36.3**	**-0.2**
OKC				*ex*	x	01 42 38.7	
UPC	**Upice**	**145.53**	**344**	*e*PKP	**PKPbc**	**01 42 36.6**	**+0.1**
UPC				*ex*	x	01 42 38.5	
DPC	**Dobruska-Polom**	**145.59**	**344**	*e*PKP	**PKPbc**	**01 42 36.8**	**+0.1**
DPC				*ex*	x	01 42 39.0	
BRG	**Berggiesshubel**	**145.70**	**346**	*e*P	**PKPbc**	**01 42 36.4**	**-0.5**
	3.9nm,0.7s						
KRLC	**Kraliky**	**145.72**	**343**	*e*PKP	**PKPbc**	**01 42 36.8**	**-0.3**
MORC	**Moravsky Berou**	**145.76**	**342**	*j*P	**PKPbc**	**01 42 37.1**	**-0.1**
PVCC	**Panska Ves**	**145.88**	**345**	*e*PKP	**PKPab**	**01 42 39.5**	**+0.1**
MLR	**Muntele Rosu**	**145.94**	**329**	*j*P	**PKPbc**	**01 42 37.8**	**-0.1**
PRU	**Pruhonice**	**146.38**	**345**	*e*PKP	**PKPbc**	**01 42 38.6**	**-0.2**
DRGR		**146.43**	**334**	*j*P	**PKPbc**	**01 42 38.8**	**-0.4**
PSZ	**Piszkesteto**	**146.61**	**338**	*j*P	**PKPbc**	**01 42 40.2**	**+0.6**
ARR	**Arges**	**146.66**	**330**	*j*P	**PKPbc**	**01 42 40.4**	**+0.6**
KHC	**Kasperske Hory**	**147.41**	**346**	*e*PKP	**PKPbc**	**01 42 41.5**	**-0.2**
KHC				*ex*	x	01 42 46.3	
GERES	**GERESS Array B**	**147.65**	**345**	PKPbc	**PKPbc**	**01 42 41.5**	**-0.9**
	1.9nm,0.6s,baz=21,slow=2.9,SNR=21						
CSNA	**Conrad Observa**	**147.92**	**342**	*j*PKPbc	**PKPbc**	**01 42 43.0**	**0.0**
	2.7nm,0.7s						
WTTA	**Wattenberg**	**149.61**	**347**	*j*PKPbc	**PKPbc**	**01 42 46.8**	**-0.5**
	4.5nm,0.6s						
MOTA	**Moosalm**	**149.65**	**347**	*j*PKPbc	**PKPbc**	**01 42 46.2**	**-1.2**
	1.8nm,0.6s						
DAVA	**Damuels**	**149.94**	**349**	*j*PKPbc	**PKPbc**	**01 42 48.1**	**0.0**
	3.8nm,0.7s						

*SKO **18** 01:25:09.0, 41.53N×19.44E, h0km*
*ISCJB **18** 01:25:09.6±0.6, 41.41N±0.02×19.48E±0.03, h1km±4km, Error ellipse: s-maj=4.7km s-min=2.8km az=141.3*
*THE **18** 01:25:10.9, 41.45N×19.54E, h6km±2km, ML2.5/3, Error ellipse: s-maj=3.6km s-min=1.8km az=313.0*
*CSEM **18** 01:25:10.2±0.2, 41.41N×19.49E, h2km, ML2.1, Error ellipse: s-maj=4.8km s-min=2.6km az=56.0*
*PDG **18** 01:25:12.4±0.3, 41.51N×19.45E, h4km±1km, ML2.3/8, Error ellipse: s-maj=1.4km s-min=1.6km az=0.0*
*BEO **18** 01:25:12.3±0.9, 41.40N×19.57E, h4km±4km, ML2.1/6*

ISC 18 01:25:10.6±1.1,**41.41N**±0.02×**19.49E**±0.02,**h6**km±9km, **n55,σ1s17/108,12C-7D,Albania**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.29**	**102**	P	**Pg**	**01 25 15.9**	**-0.3**
TIR				S	**Sg**	**01 25 20.3**	**+0.3**
TIR	**Tirane**	**0.29**	**102**	*j*P	**Pg**	**01 25 15.7**	**-0.5**
TIR				*e*Sg	**Sg**	**01 25 20.4**	**+0.4**
TIR	**Tirane**	**0.29**	**102**	P	**Pg**	**01 25 15.9**	**-0.3**
TIR				S	**Sg**	**01 25 20.3**	**+0.3**
ULC	**Ulcinj**	**0.59**	**342**	*i*Pg	**Pg**	**01 25 22.1**	**+0.2**
ULC				*e*Sg	**Sg**	**01 25 29.4**	**-0.2**
ULC	**Ulcinj**	**0.59**	**342**	*i*Pg	**Pg**	**01 25 22.1**	**+0.2**
ULC				*e*Sg	**Sg**	**01 25 29.4**	**-0.2**
PHP	**Peshkopia**	**0.76**	**68**	P	**Pg**	**01 25 23.4**	**-1.9**
PHP				S	**Sg**	**01 25 34.5**	**-0.7**
PHP	**Peshkopia**	**0.76**	**68**	P	**Pg**	**01 25 23.4**	**-1.9**
PHP				S	**Sg**	**01 25 34.5**	**-0.7**
BUM	**Brajici-Budva**	**1.00**	**334**	*j*Pg	**Pg**	**01 25 29.6**	**-0.2**
BUM				*e*Sg	**Sg**	**01 25 43.1**	**+0.3**
BUM	**Brajici-Budva**	**1.00**	**334**	*j*Pg	**Pg**	**01 25 29.6**	**-0.2**
BUM				*e*Sg	**Sg**	**01 25 43.1**	**+0.3**
PDG	**Podgorica**	**1.04**	**350**	*i*Pg	**Pg**	**01 25 29.4**	**-1.1**
PDG				*e*Sg	**Sg**	**01 25 44.6**	**+0.6**
TTG	**Podgorica**	**1.04**	**350**	*i*Pg	**Pg**	**01 25 29.4**	**-1.1**
TTG				*e*Sg	**Sg**	**01 25 44.6**	**+0.6**
PVY	**Plav**	**1.24**	**16**	*j*Pg	**Pg**	**01 25 34.2**	**-0.2**
PVY				*e*Sg	**Sb**	**01 25 51.9**	**+1.2**
PVY	**Plav**	**1.24**	**16**	*j*Pg	**Pg**	**01 25 34.2**	**-0.2**
PVY				*e*Sg	**Sb**	**01 25 51.9**	**+1.2**
KBN	**Korca**	**1.25**	**128**	P	**Pg**	**01 25 34.7**	**0.0**
KBN				S	**Sn**	**01 25 53.2**	**+1.2**
KBN	**Korca**	**1.25**	**128**	P	**Pg**	**01 25 34.7**	**0.0**
KBN				S	**Sn**	**01 25 53.2**	**+1.2**
HCY	**Herceg Novi**	**1.28**	**325**	*i*Pg	**Pg**	**01 25 33.9**	**-1.3**
HCY				*e*Sg	**Sb**	**01 25 52.4**	**+0.6**
HCY	**Herceg Novi**	**1.28**	**325**	*i*Pg	**Pg**	**01 25 33.9**	**-1.3**
HCY				*e*Sg	**Sb**	**01 25 52.4**	**+0.6**
BIA	**Bitola**	**1.43**	**105**	P	**Pn**	**01 25 36.9**	**-0.3**
BIA				S	**Sb**	**01 25 56.5**	**+0.2**
BIA	**Bitola**	**1.43**	**105**	*e*Pn	**Pn**	**01 25 36.8**	**-0.5**
BIA				*e*Sn	**Sn**	**01 25 57.8**	**+1.4**
BIA	**Bitola**	**1.43**	**105**	P	**Pn**	**01 25 36.9**	**-0.3**
BIA				S	**Sb**	**01 25 56.5**	**+0.2**
BIA				*e*Sn	**Sn**	**01 25 57.8**	**+1.4**
NKY	**Niksic**	**1.45**	**345**	*i*Pg	**Pn**	**01 25 36.8**	**-0.8**
NKY				*e*Sg	**Sn**	**01 25 58.3**	**+1.3**
NKY	**Niksic**	**1.45**	**345**	*i*Pg	**Pn**	**01 25 36.8**	**-0.8**
NKY				*e*Sg	**Sn**	**01 25 58.3**	**+1.3**
BEY	**Berane**	**1.49**	**11**	*i*Pg	**Pn**	**01 25 38.0**	**-0.1**
BEY				*e*Sg	**Sg**	**01 26 00.0**	**+1.4**
IVA	**Berane**	**1.49**	**11**	*i*Pg	**Pn**	**01 25 38.0**	**-0.1**
IVA				*e*Sg	**Sg**	**01 26 00.0**	**+1.4**
NEST	**Nestorio**	**1.54**	**130**	P	**Pn**	**01 25 39.1**	**+0.4**
NEST				S	**Sb**	**01 26 00.1**	**+0.7**
NEST	**Nestorio**	**1.54**	**130**	P	**Pn**	**01 25 39.1**	**+0.4**
NEST				S	**Sb**	**01 26 00.1**	**+0.7**
FNA	**Florina**	**1.55**	**113**	P	**Pn**	**01 25 38.3**	**-0.6**
FNA				S	**Sn**	**01 26 00.1**	**+0.7**
FNA	**Florina**	**1.55**	**113**	P	**Pn**	**01 25 38.3**	**-0.6**
FNA				S	**Sn**	**01 26 00.1**	**+0.7**
SKO	**Skopje**	**1.56**	**68**	*e*Sg	**Sg**	**01 26 00.9**	**0.0**
SKO	**Skopje**	**1.56**	**68**	*e*Sg	**Sg**	**01 26 00.9**	**0.0**
BRY	**Bratogost**	**1.65**	**335**	*i*Pg	**Pn**	**01 25 41.1**	**+0.8**
BRY				*e*Sg	**Sg**	**01 26 04.4**	**+0.6**
BRY	**Bratogost**	**1.65**	**335**	*i*Pg	**Pn**	**01 25 41.1**	**+0.8**
BRY				*e*Sg	**Sg**	**01 26 04.4**	**+0.6**
KEK	**Kerkira**	**1.71**	**172**	P	**Pn**	**01 25 41.9**	**+1.0**
KEK				S	**Sb**	**01 26 05.3**	**+1.1**
KEK	**Kerkira**	**1.71**	**172**	P	**Pn**	**01 25 41.9**	**+1.0**
KEK				S	**Sb**	**01 26 05.3**	**+1.1**
UPM	**Unac-Piva**	**1.85**	**347**	*j*Pn	**Pn**	**01 25 44.6**	**+1.6**
UPM				*e*Sn	**Sb**	**01 26 09.6**	**+1.2**
UPM	**Unac-Piva**	**1.85**	**347**	*j*Pn	**Pn**	**01 25 44.6**	**+1.6**
UPM				*e*Sn	**Sb**	**01 26 09.6**	**+1.2**
IGT	**Igoumenitsa**	**1.98**	**161**	P	**Pn**	**01 25 45.1**	**+0.4**
IGT				S	**Sn**	**01 26 10.0**	**+0.2**
IGT	**Igoumenitsa**	**1.98**	**161**	P	**Pn**	**01 25 45.1**	**+0.4**
IGT				S	**Sn**	**01 26 10.0**	**+0.2**
STON	**Ston**	**1.98**	**318**	*e*Pn	**Pn**	**01 25 45.4**	**+0.8**
STON				Sn	**Sn**	**01 26 07.9**	**-1.9**
STON	**Ston**	**1.98**	**318**	*e*Pn	**Pn**	**01 25 45.4**	**+0.8**
STON				Sn	**Sn**	**01 26 07.9**	**-1.9**
BARS	**Barje**	**2.23**	**50**	*e*Pn	**Pn**	**01 25 48.0**	**-0.1**
BARS	**Barje**	**2.23**	**50**	*e*Pn	**Pn**	**01 25 48.0**	**-0.1**
GRG	**Griva**	**2.24**	**101**	P	**Pn**	**01 25 48.1**	**-0.2**
GRG				S	**Sn**	**01 26 15.9**	**-0.4**
GRG	**Griva**	**2.24**	**101**	P	**Pn**	**01 25 48.1**	**-0.2**
GRG				S	**Sn**	**01 26 15.9**	**-0.4**
BBLS	**Lazići**	**2.46**	**359**	*e*Pn	**Pb**	**01 25 55.7**	**+0.4**
BBLS				*e*Sn	**Sn**	**01 26 22.4**	**+0.7**
GRUS	**Gruza**	**2.64**	**20**	*e*Pn	**Pn**	**01 25 56.0**	**+2.3**
GRUS				*e*Sn	**Sn**	**01 26 27.8**	**+1.7**
GRUS	**Gruza**	**2.64**	**20**	*e*Pn	**Pn**	**01 25 56.0**	**+2.3**
GRUS				*e*Sn	**Sn**	**01 26 27.8**	**+1.7**
LKD2	**Lefkada island**	**2.76**	**161**	P	**Pn**	**01 25 54.6**	**-0.9**
LKD2				S	**Sn**	**01 26 28.0**	**-1.2**
LKD2	**Lefkada island**	**2.76**	**161**	P	**Pn**	**01 25 54.6**	**-0.9**
LKD2				S	**Sn**	**01 26 28.0**	**-1.2**
ZAPS	**Zavoj**	**2.98**	**50**	*e*Pn	**Pn**	**01 25 59.2**	**+0.7**
ZAPS				*e*Sn	**Sn**	**01 26 34.6**	**0.0**
ZAPS	**Zavoj**	**2.98**	**50**	*e*Pn	**Pn**	**01 25 59.2**	**+0.7**
ZAPS				*e*Sn	**S

JMK	**Ichinoseki**	**5.55**	**75**	P		**Pn**	**01 42 44.6**	**+0.6**
USRK	**Ussuriysk Arra**	**6.72**	**345**	P		**Pn**	**01 42 57.4**	**+0.8**
	0.7nm,0.3s,baz=166,slow=11,SNR=13							
WRA	**Warramunga Arr**	**57.34**	**180**	P		**P**	**01 50 23.2**	**-1.2**
	0.1nm,0.5s,baz=358,slow=7.9,SNR=3.4							
FINES	**FINESS Array B**	**65.50**	**330**	P		**P**	**01 51 16.3**	**-1.5**
	0.2nm,0.4s,baz=63,slow=8.8,SNR=4.5							

ISK ***18*** *01:44:54.7,39.09N×27.26E,h6km,MD2.8*
ISCJB ***18*** *01:44:55.4±0.4,39.08N±0.02×27.30E±0.03,h8km±4km, Error ellipse: s-maj=4.2km s-min=3.2km az=10.6*
DDA ***18*** *01:44:55.1,39.07N×27.33E,h7km,MD2.8*
CSEM ***18*** *01:44:55.7±0.1,39.07N×27.32E,h10km,MD2.8, Error ellipse: s-maj=2.0km s-min=1.5km az=100.0*

ISC 18 01:44:55.9±0.9,39.07N±0.02×27.32E±0.02,h14km±9km, n46,σ0s57/67,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKS	**Akhisar**	**0.43**	**116**	*e*PG	**Pg**	**01 45 04.4**	**-0.1**
AKS				*e*SG	**Sg**	**01 45 12.4**	**+2.1**
AKS	**Akhisar**	**0.43**	**116**	*e*Pg	**Pg**	**01 45 04.4**	**-0.1**
AYVA	**Ayvalik**	**0.54**	**296**	*i* P	**Pg**	**01 45 06.2**	**-0.4**
AYVA				*i* S	**Sg**	**01 45 13.6**	**-0.2**
AYVA	**Ayvalik**	**0.54**	**296**	*i* P	**Pg**	**01 45 06.2**	**-0.4**
AYVA				*i* S	**Sg**	**01 45 13.6**	**-0.2**
IZM	**Izmir**	**0.67**	**184**	*e*PG	**Pg**	**01 45 08.5**	**-0.5**
IZM				*e*SG	**Sg**	**01 45 18.4**	**+0.6**
IZM	**Izmir**	**0.67**	**184**	*e*Pg	**Pg**	**01 45 08.5**	**-0.5**
IZM				*e*Sg	**Sg**	**01 45 18.5**	**+0.6**
BALY	**Balya**	**0.71**	**19**	*i* P	**Pg**	**01 45 09.4**	**-0.3**
BALY				*i* S	**Sg**	**01 45 19.1**	**+0.1**
BALY	**Balya**	**0.71**	**19**	*i* P	**Pg**	**01 45 09.4**	**-0.3**
BALY				*i* S	**Sg**	**01 45 19.1**	**+0.1**
BALB	**Balikesir**	**0.72**	**37**	*e*PG	**Pg**	**01 45 09.3**	**-0.5**
BALB				*e*SG	**Sg**	**01 45 19.3**	**0.0**
BALB	**Balikesir**	**0.72**	**37**	*e*Pg	**Pg**	**01 45 09.3**	**-0.5**
BALB				*e*Sg	**Sg**	**01 45 19.3**	**0.0**
BLCB	**Balcova**	**0.72**	**198**	*e*PG	**Pg**	**01 45 09.2**	**-0.6**
BLCB				*e*SG	**Sg**	**01 45 19.4**	**+0.2**
BLCB	**Balcova**	**0.72**	**198**	*e*Pg	**Pg**	**01 45 09.2**	**-0.6**
BLCB				*e*Sg	**Sg**	**01 45 19.5**	**+0.2**
URLA	**Izmir**	**0.91**	**219**	*i* P	**Pg**	**01 45 13.5**	**+0.1**
URLA				*i* S	**Sg**	**01 45 25.9**	**+0.6**
URLA	**Izmir**	**0.91**	**219**	*i* P	**Pg**	**01 45 13.5**	**+0.1**
URLA				*i* S	**Sg**	**01 45 25.9**	**+0.6**
GONE	**Gonen-Balikesi**	**1.01**	**16**	*e*PG	**Pg**	**01 45 15.4**	**-0.1**
GONE				*e*SG	**Sg**	**01 45 28.9**	**+0.1**
GONE	**Gonen-Balikesi**	**1.01**	**16**	*e*Pg	**Pg**	**01 45 15.4**	**-0.1**
GONE				*e*Sg	**Sg**	**01 45 28.9**	**+0.1**
DURS	**Dursunbey**	**1.04**	**59**	*i* P	**Pg**	**01 45 15.8**	**-0.2**
DURS				*i* S	**Sg**	**01 45 28.8**	**-0.8**
DURS	**Dursunbey**	**1.04**	**59**	*i* P	**Pg**	**01 45 15.8**	**-0.2**
DURS				*i* S	**Sg**	**01 45 28.8**	**-0.8**
EZN	**Ezine**	**1.08**	**315**	*e*PG	Pg	01 45 14.5	-2.2
EZN	**Ezine**	**1.08**	**315**	*e*Pg	Pg	01 45 14.5	-2.2
DEMI	**Demirci**	**1.09**	**91**	*i* P	**Pg**	**01 45 16.7**	**-0.2**
DEMI				*i* S	**Sg**	**01 45 30.8**	**-0.3**
DEMI	**Demirci**	**1.09**	**91**	*i* P	**Pg**	**01 45 16.7**	**-0.2**
DEMI				*i* S	**Sg**	**01 45 30.8**	**-0.3**
MANT	**Manisa**	**1.13**	**120**	*i* P	**Pb**	**01 45 17.5**	**+0.2**
MANT				*i* S	**Sg**	**01 45 31.2**	**-1.2**
MANT	**Manisa**	**1.13**	**120**	*i* P	**Pb**	**01 45 17.5**	**+0.2**
MANT				*i* S	**Sg**	**01 45 31.2**	**-1.2**
DST	**Dursunbey**	**1.14**	**62**	*e*PN	**Pb**	**01 45 17.5**	**+0.1**
DST	**Dursunbey**	**1.14**	**62**	*e*Pn	**Pb**	**01 45 17.5**	**+0.1**
KULA	**Kula-Manisa**	**1.19**	**117**	*e*PN	**Pb**	**01 45 17.8**	**-0.4**
KULA	**Kula-Manisa**	**1.19**	**117**	*e*Pn	**Pb**	**01 45 17.8**	**-0.4**
KRBG	**Karabiga-Canak**	**1.32**	**359**	*e*PN	**Pn**	**01 45 20.4**	**+0.5**
KRBG	**Karabiga-Canak**	**1.32**	**359**	*e*Pn	**Pn**	**01 45 20.4**	**+0.5**
LPK	**Lapseki**	**1.37**	**342**	*e*PN	**Pn**	**01 45 20.4**	**-0.2**
LPK	**Lapseki**	**1.37**	**342**	*e*Pn	**Pn**	**01 45 20.4**	**-0.2**
KCTX	**Karacabey (Bur**	**1.44**	**34**	*e*PN	**Pn**	**01 45 21.5**	**0.0**
KCTX	**Karacabey (Bur**	**1.44**	**34**	*e*Pn	**Pn**	**01 45 21.5**	**0.0**
AYDN	**Tasoluk**	**1.48**	**162**	*e*P	**Pn**	**01 45 21.7**	**-0.4**
AYDN				*i* S	**Sn**	**01 45 41.0**	**-0.2**
AYDN	**Tasoluk**	**1.48**	**162**	*e*P	**Pn**	**01 45 21.7**	**-0.4**
AYDN				*i* S	**Sn**	**01 45 41.0**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.48**	**334**	*e*PN	**Pn**	**01 45 22.3**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.48**	**334**	*e*Pn	**Pn**	**01 45 22.3**	**+0.3**
ORLT	**Orhaneli**	**1.56**	**51**	*e*PN	**Pn**	**01 45 24.4**	**+1.2**
ORLT	**Orhaneli**	**1.56**	**51**	*e*Pn	**Pn**	**01 45 24.4**	**+1.2**
RKY	**Sarkoy-Tekirda**	**1.62**	**356**	*e*PN	**Pn**	**01 45 24.4**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.62**	**356**	*e*Pn	**Pn**	**01 45 24.4**	**+0.4**
TVSB	**Tavsanli**	**1.71**	**76**	*e*PN	**Pn**	**01 45 26.3**	**+1.0**
TVSB	**Tavsanli**	**1.71**	**76**	*e*Pn	**Pn**	**01 45 26.3**	**+1.0**
ERIK	**Erikli-Kesan**	**1.71**	**339**	*e*PN	**Pn**	**01 45 26.0**	**+0.7**
ERIK	**Erikli-Kesan**	**1.71**	**339**	*e*Pn	**Pn**	**01 45 26.0**	**+0.7**

IDC ***18*** *01:49:00.0±2.4,9.41S×112.84E,h0km,mb3.8/6, mb1 3.9/7,mb1mx3.7/22,mbtmp3.8/7,ML3.5/1,MS3.0/4, Ms1 3.1/4,ms1mx2.7/37,Error ellipse: s-maj=141.2km s-min=19.4km az=53.0*
ISCJB ***18*** *01:49:04.7±0.7,9.63S±0.06×112.87E±0.05,h36km, mb3.8/6,MS3.6/3,Error ellipse: s-maj=9.6km s-min=5.6km az=29.4*
DJA ***18*** *01:49:09.2±1.8,9°S±6°×11°3E±°,h36km±19km,M4.1/13, MLv4.1/13*

ISC 18 01:49:05.5±0.9,9.58S±0.08×112.86E±0.05,h36km,n24, σ1s52/23,mb3.9/6,MS3.1/3,South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**1.42**	**24**	P	**Pn**	**01 49 29.0**	**+0.3**
GMJI				S	**Sn**	**01 49 45.2**	**-0.9**
KRKI	**Karangkates**	**1.47**	**344**	P	**Pn**	**01 49 30.4**	**+1.0**
PWJI	**Pagerwojo**	**1.86**	**326**	P	**Pn**	**01 49 35.4**	**+0.5**
PWJI				S	**Sn**	**01 49 57.4**	**+0.2**
BLJI	**Banyuglugur**	**1.96**	**22**	P	**Pn**	**01 49 38.8**	**+2.6**
SJI	**Sawahan**	**2.13**	**329**	P	**Pn**	**01 49 39.6**	**+1.0**
PCJI	**Pacitan**	**2.16**	**309**	P	**Pn**	**01 49 39.7**	**+0.8**
PCJI				S	**Sn**	**01 50 05.8**	**+1.4**
WOJI	**Wonogiri, Jawa**	**2.58**	**312**	P	**Pn**	**01 49 46.3**	**+1.6**
WOJI				S	**Sn**	**01 50 15.7**	**+0.8**
KMMI	**Kalianget**	**2.74**	**24**	P	**Pn**	**01 49 48.1**	**+1.2**
SRBI	**Singaraja**	**2.75**	**58**	P	**Pn**	**01 49 49.9**	**+2.7**
UGM	**Wanagama**	**2.84**	**305**	P	**Pn**	**01 49 49.8**	**+1.4**
KHKI	**Kahang-Kahang**	**2.97**	**66**	P	**Pn**	**01 49 51.8**	**+1.7**
SMRI	**Semarang**	**3.47**	**316**	P	**Pn**	**01 49 59.2**	**+2.2**
BJII	**Banjamegara**	**3.83**	**305**	P	Pn	01 50 06.1	+4.0
KAPI	**Kappang**	**8.20**	**57**	LR	LR	01 54 21.4	
	comp=Z,81nm,20.5s,baz=256,slow=40						
FITZ	**Fitzroy Crossi**	**15.02**	**126**	Pn	**Pn**	**01 52 33.3**	**-1.9**
	0.2nm,0.3s,baz=306,slow=12,SNR=4.8						
FITZ				Sn	Sn	01 55 06.9	-13
	0.1nm,0.3s,baz=135,slow=16,SNR=2.6						
FITZ				LR	LR	01 57 42.1	
	comp=Z,55nm,21.8s,baz=283,slow=34						
NWAO	**Narrogin (SRO)**	**23.59**	**171**	LR	LR	02 01 52.2	
	comp=Z,62nm,18.7s,baz=122,slow=32						
ASAR	**Alice Springs**	**24.50**	**127**	P	**P**	**01 54 22.6**	**+1.0**
	1.8nm,0.7s,baz=304,slow=9.0,SNR=24						
CMAR	**Chiang Mai Arr**	**31.06**	**334**	LR	LR	02 07 45.3	
	comp=Z,32nm,20.9s,baz=185,slow=36						
STKA	**Stephens Creek**	**34.65**	**134**	P	**P**	**01 55 52.7**	**+1.0**
	1.5nm,0.7s,baz=327,slow=9.9,SNR=3.5						
SONM	**Songino Arra**	**57.44**	**355**	P	**P**	**01 58 49.8**	**-0.9**
	1.1nm,0.7s,baz=178,slow=6.2,SNR=9.0						
MKAR	**Makanchi Array**	**62.40**	**337**	P	**P**	**01 59 23.5**	**-1.2**
	0.7nm,0.5s,baz=152,slow=7.3,SNR=9.1						
KURBB	**Kurchatov Arra**	**66.96**	**337**	P	**P**	**01 59 53.7**	**-0.6**
	0.1nm,0.5s,baz=153,slow=5.1,SNR=4.4						
RAO	**Raoul Island**	**67.29**	**118**	LR	LR	02 27 47.4	
	comp=Z,542nm,19.9s,baz=122,slow=34						
ZALV	**Zalesovo Beam**	**67.59**	**343**	P	**P**	**01 59 56.4**	**-1.9**
	0.3nm,0.3s,baz=140,slow=7.6,SNR=3.7						

IDC 18 01:52:03.5±0.5,13.91N×144.97E,h138km±3km,mb3.4/10, mb1 3.6/10,mb1mx3.4/27,mbtmp3.4/10,Error ellipse: s-maj=26.1km s-min=15.5km az=98.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.33**	**196**	P	Pn	01 52 24.4	+1.6
	1μm,0.3s,baz=28,slow=0.8,SNR=519						
GUMO				S	Sn	01 52 38.8	+1.4
	1μm,0.3s,baz=72,slow=22,SNR=131						
FITZ	**Fitzroy Crossi**	**37.08**	**211**	P	P	01 58 59.9	-0.7
	0.9nm,0.5s,baz=36,slow=12,SNR=6.8						
ASAR	**Alice Springs**	**38.88**	**196**	P	P	01 59 15.2	-0.5
	0.4nm,0.3s,baz=20,slow=7.4,SNR=6.3						
STKA	**Stephens Creek**	**45.64**	**184**	P	P	02 00 09.8	-0.4
	1.7nm,0.5s,baz=349,slow=11,SNR=6.5						
MKAR	**Makanchi Array**	**61.33**	**316**	P	P	02 02 05.3	+0.7
	0.4nm,0.5s,baz=85,slow=8.8,SNR=4.6						
KURBB	**Kurchatov Arra**	**64.44**	**320**	P	P	02 02 25.6	+0.5
	0.9nm,0.7s,baz=102,slow=6.5,SNR=7.6						
ILAR	**Eielson Array**	**68.24**	**25**	P	P	02 02 47.5	-1.4
	0.3nm,0.4s,baz=249,slow=5.5,SNR=14						
BVAR	**Borovoye Array**	**69.73**	**322**	P	P	02 02 58.5	0.0
	0.3nm,0.3s,baz=108,slow=4.7,SNR=3.2						
YKA	**Yellowknife Ar**	**82.53**	**27**	P	P	02 04 10.3	-0.3
	0.4nm,0.6s,baz=287,slow=5.2,SNR=7.4						
NVAR	**Mina Array Bea**	**86.65**	**51**	P	P	02 04 33.0	+0.9
	0.5nm,0.6s,baz=272,slow=4.5,SNR=6.0						
FINES	**FINESS Array B**	**90.91**	**335**	P	P	02 04 50.1	-1.2
	0.7nm,0.8s,baz=69,slow=4.6,SNR=3.8						
TORD	**Torodi Ar. Bea**	**134.76**	**305**	PKP	PKPdf	02 11 06.8	-0.1
	0.2nm,0.9s,baz=28,slow=2.9,SNR=5.6						
LPAZ	**La Paz**	**147.98**	**99**	PKPbc	PKPbc	02 11 35.5	+1.1
	1.4nm,0.7s,baz=281,slow=2.6,SNR=8.2						

ISK ***18*** *01:53:36.5,40.72N×35.28E,h5km,MD2.9*
DDA ***18*** *01:53:36.4,40.70N×35.27E,h19km,MD3.2*
CSEM ***18*** *01:53:36.9±0.1,40.71N×35.29E,h2km,MD3.2, Error ellipse: s-maj=3.6km s-min=2.8km az=147.0*

ISC 18 01:53:37.0±1.0,40.70N±0.02×35.28E±0.02,h9km±11km, n37,σ0s78/57,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTKT	**Corum**	**0.38**	**258**	*i* P	**Pg**	**01 53 44.7**	**+0.1**
CTKT				*i* S	**Sg**	**01 53 50.6**	**+1.0**
CTKT	**Corum**	**0.38**	**258**	*i* P	**Pg**	**01 53 44.7**	**+0.1**
CTKT				*i* S	**Sg**	**01 53 50.6**	**+1.0**
KVT	**Kavak**	**0.69**	**57**	PG	**Pg**	**01 53 50.5**	**+0.1**
KVT				SG	**Sg**	**01 54 00.0**	**+0.5**
KVT	**Kavak**	**0.69**	**57**	*i* Pg	**Pg**	**01 53 50.5**	**+0.1**
KVT				*i* Sg	**Sg**	**01 54 00.0**	**+0.5**
CORM	**Corum**	**0.72**	**224**	PG	**Pg**	**01 53 51.2**	**+0.2**
CORM				SG	**Sb**	**01 54 01.9**	**0.0**
CORM	**Corum**	**0.72**	**224**	*i* Pg	**Pg**	**01 53 51.2**	**+0.2**
CORM				*i* Sg	**Sb**	**01 54 01.9**	**0.0**
BYBT	**Boyabat**	**0.86**	**333**	*e*PG	**Pg**	**01 53 52.7**	**-0.8**
BYBT	**Boyabat**	**0.86**	**333**	*e*Pg	**Pg**	**01 53 52.7**	**-0.8**
DIKM	**Dikmen**	**0.95**	**359**	*e*PG	**Pb**	**01 53 55.5**	**-0.1**
DIKM				*e*SG	**Sb**	**01 54 08.4**	**+0.1**
DIKM	**Dikmen**	**0.95**	**359**	*e*Pg	**Pb**	**01 53 55.5**	**-0.1**
DIKM				*e*Sg	**Sb**	**01 54 08.4**	**+0.1**
TOS	**Tosya**	**1.01**	**290**	*e*PG	**Pg**	**01 53 56.1**	**-0.3**
TOS	**Tosya**	**1.01**	**290**	*e*Pg	**Pg**	**01 53 56.1**	**-0.3**
YOZ	**Yozgat**	**1.06**	**178**	*e*PG	**Pg**	**01 53 57.4**	**0.0**
YOZ	**Yozgat**	**1.06**	**178**	*e*Pg	**Pg**	**01 53 57.4**	**0.0**
ERBA	**Erbaa**	**1.12**	**91**	*i* P	**Pg**	**01 53 57.4**	**-1.2**
ERBA				*e*S	**Sg**	**01 54 13.3**	**+0.1**
ERBA	**Erbaa**	**1.12**	**91**	*i* P	**Pg**	**01 53 57.4**	**-1.2**
ERBA				*e*S	**Sg**	**01 54 13.3**	**+0.1**
CANT	**Cankiri**	**1.27**	**266**	*e*PN	**Pg**	**01 54 00.6**	**-0.7**
CDAG	**Cicekdag**	**1.28**	**213**	*i* P	**Pg**	**01 54 00.6**	**-1.1**
CDAG				*i* S	**Sg**	**01 54 18.0**	**-0.3**
CDAG	**Cicekdag**	**1.28**	**213**	*i* P	**Pg**	**01 54 00.6**	**-1.1**
CDAG				*i* S	**Sg**	**01 54 18.0**	**-0.3**
ELDT	**Eldivan**	**1.43**	**262**	*i* P	**Pn**	**01 54 03.1**	**-0.2**
ELDT				*i* S	**Sb**	**01 54 22.0**	**-0.2**
ELDT	**Eldivan**	**1.43**	**262**	*i* P	**Pn**	**01 54 03.1**	**-0.2**
ELDT				*i* S	**Sb**	**01 54 22.0**	**-0.2**
RSDY	**Resadiye-TOKAT**	**1.59**	**100**	*e*PN	**Pn**	**01 54 05.9**	**+0.5**
RSDY	**Resadiye-TOKAT**	**1.59**	**100**	*e*Pn	**Pn**	**01 54 05.9**	**+0.5**
BALT	**Daday**	**1.65**	**301**	*i* P	**Pb**	**01 54 07.4**	**-0.4**
BALT				*i* S	**Sg**	**01 54 29.5**	**-0.7**
BALT	**Daday**	**1.65**	**301**	*i* P	**Pb**	**01 54 07.4**	**-0.4**
BALT				*i* S	**Sg**	**01 54 29.5**	**-0.7**
AVNT	**Avonos**	**1.95**	**190**	*i* P	**Pb**	**01 54 12.0**	**-0.8**
AVNT				*i* S	**Sb**	**01 54 37.9**	**+0.6**
AVNT	**Avonos**	**1.95**	**190**	*i* P	**Pb**	**01 54 12.0**	**-0.8**
AVNT				*i* S	**Sb**	**01 54 37.9**	**+0.6**
BBAL	**Bala**	**2.02**	**236**	*i* P	**Pn**	**01 54 12.8**	**+1.4**
BBAL				*i* S	**Sg**	**01 54 40.8**	**-1.1**
BBAL	**Bala**	**2.02**	**236**	*i* P	**Pn**	**01 54 12.8**	**+1.4**
BBAL				*i* S	**Sg**	**01 54 40.8**	**-1.1**
SAFT	**Safranbolu**	**2.03**	**286**	*e*PN	**Pn**	**01 54 12.6**	**+1.1**
SAFT	**Safranbolu**	**2.03**	**286**	*e*Pn	**Pn**	**01 54 12.6**	**+1.1**
ANTO	**Ankara**	**2.08**	**247**	*e*PN	**Pn**	**01 54 13.2**	**+1.1**
ANTO	**Ankara**	**2.08**	**247**	*e*Pn	**Pn**	**01 54 13.2**	**+1.1**
LOD	**Lodumlu**	**2.09**	**248**	*e*PN	**Pn**	**01 54 13.6**	**+1.3**
LOD	**Lodumlu**	**2.09**	**248**	*e*Pn	**Pn**	**01 54 13.6**	**+1.3**
AFSR	**Af ar-Bala (A**	**2.11**	**234**	*e*PN	**Pn**	**01 54 13.9**	**+1.3**
AFSR	**Af ar-Bala (A**	**2.11**	**234**	*e*Pn	**Pn**	**01 54 13.9**	**+1.3**

ISCJB ***18*** *02:01:30.8±0.7,39.85N±0.04×26.18E±0.05,h4km±6km, Error ellipse: s-maj=7.3km s-min=5.6km az=143.1*
DDA ***18*** *02:01:30.2,39.85N×26.17E,h7km,MD2.8*
ISK ***18*** *02:01:32.1,39.93N×26.32E,h2km,MD2.5*
CSEM ***18*** *02:01:32.2±0.5,39.86N×26.29E,h5km,MD2.5, Error ellipse: s-maj=10.6km s-min=5.1km az=72.0*

ISC 18 02:01:30.6±1.1,39.84N±0.03×26.15E±0.04,h10km±7km, n23,σ0s65/32,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.08**	**275**	*i* P	**Pg**	**02 01 32.6**	**-0.4**
BOZC				*i* S	**Sg**	**02 01 34.5**	**-0.2**
EZN	**Ezine**	**0.14**	**94**	*e*PG	**Pg**	**02 01 33.7**	**-0.1**
EZN				*e*SG	**Sg**	**02 01 36.6**	**+0.6**
EZN	**Ezine**	**0.14**	**94**	*e*Pg	**Pg**	**02 01 33.7**	**-0.1**
EZN				*e*Sg	**Sg**	**02 01 36.6**	**+0.6**
GELI	**Tayfur-Gelibol**	**0.61**	**24**	*e*PG	**Pg**	**02 01 42.6**	**0.0**
GELI				*e*SG	**Sg**	**02 01 51.0**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.61**	**24**	*e*Pg	**Pg**	**02 01 42.6**	**0.0**
GELI				*e*Sg	**Sg**	**02 01 51.0**	**+0.4**
AYVA	**Ayvalik**	**0.67**	**141**	*i* P	**Pg**	**02 01 43.1**	**-0.5**
AYVA				*i* S	**Sg**	**02 01 53.4**	**+1.0**
AYVA	**Ayvalik**	**0.67**	**141**	*i* P	**Pg**	**02 01 43.1**	**-0.5**
AYVA				*i* S	**Sg**	**02 01 53.4**	**+1.0**
LPK	**Lapseki**	**0.71**	**41**	*e*PG	**Pg**	**02 01 44.1**	**-0.3**
LPK	**Lapseki**	**0.71**	**41**	*e*Pg	**Pg**	**02 01 44.1**	**-0.3**
ERIK	**Erikli-Kesan**	**0.88**	**18**	*e*PG	**Pg**	**02 01 47.2**	**-0.4**
ERIK	**Erikli-Kesan**	**0.88**	**18**	*e*Pg	**Pg**	**02 01 47.2**	**-0.4**
ENEZ	**Enez**	**0.90**	**0**	*e*PG	**Pb**	**02 01 49.1**	**+0.8**
ENEZ	**Enez**	**0.90**	**0**	*e*Pg	**Pb**	**02 01 49.1**	**+0.8**
KRBG	**Karabiga-Canak**	**1.04**	**57**	*e*PG	**Pg**	**02 01 49.6**	**-1.1**
KRBG	**Karabiga-Canak**	**1.04**	**57**	*e*Pg	**Pg**	**02 01 49.6**	**-1.1**
BALY	**Balya**	**1.14**	**94**	*i* P	**Pb**	**02 01 51.7**	**-0.6**
BALY				*i* S	**Sb**	**02 02 07.1**	**-0.1**
BALY	**Balya**	**1.14**	**94**	*i* P	**Pb**	**02 01 51.7**	**-0.6**
BALY				*i* S	**Sb**	**02 02 07.1**	**-0.1**
GONE	**Gonen-Balikesi**	**1.20**	**79**	*e*PG	**Pb**	**02 01 52.6**	**-0.8**
GONE	**Gonen-Balikesi**	**1.20**	**79**	*e*Pg	**Pb**	**02 01 52.6**	**-0.8**
BALB	**Balikesir**	**1.35**	**98**	*e*PN	**Pg**	**02 01 57.4**	**+0.9**
BALB	**Balikesir**	**1.35**	**98**	*e*Pn	**Pg**	**02 01 57.4**	**+0.9**
EDRB	**Edirne**	**2.06**	**12**	*e*PN	**Pb**	**02 02 07.8**	**-0.3**
EDRB	**Edirne**	**2.06**	**12**	*e*Pn	**Pb**	**02 02 07.8**	**-0.3**

UPP ***18*** *02:08:48.7,57.72N×22.23E,h0km,ML2.3,Suspected Mining explosion.*
ISCJB ***18*** *02:08:49.3±0.3,57.79N±0.03×21.90E±0.04,h0km,Error ellipse: s-maj=3.8km s-min=2.8km az=1.5*
HEL ***18*** *02:08:50.4±0.1,57.75N×21.93E,h0km,ML2.2, ML2.3(UPP),Explosion*
CSEM ***18*** *02:08:50.3±0.1,57.75N×21.97E,h2km,ML2.2,Error ellipse: s-maj=3.7km s-min=2.1km az=155.0,Mining explosion.*
NAO ***18*** *02:08:51.8±1.9,57.93N×21.94E,ML2.2*
IDC ***18*** *02:08:51.3±1.1,57.84N×22.04E,h0km,mb3.9/1, mb1 3.4/6,mb1mx3.2/29,mbtmp3.4/6,ML2.8/5,Error ellipse: s-maj=11.0km s-min=8.7km az=180.0*
BER ***18*** *02:08:53.3±5.0,57.88N×21.85E,h0km±24km, ML2.2(NAO)*

ISC 18 02:08:48.8±0.7,57.77N±0.03×21.90E±0.02,h0km,n118, σ1s68/147,2C,Baltic States - Belarus - Northwestern Russia

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

SLIT	**Slitere, Latvi**	**0.25**	**124**	*e*P	**Pg**	**02 08 54.6**	**+0.9**
SLIT				*e*S	**Sg**	**02 08 57.2**	**+0.4**
SLIT	**Slitere, Latvi**	**0.25**	**124**	P	**Pg**	**02 08 54.5**	**+0.9**
SLIT				S	**Sg**	**02 08 57.2**	**+0.4**
MTSE	**Matsula**	**1.39**	**46**	*e*P	**Pg**	**02 09 14.9**	**-0.5**
MTSE				*e*S	**Sg**	**02 09 33.5**	**+0.1**
MTSE	**Matsula**	**1.39**	**46**	P	**Pg**	**02 09 14.8**	**-0.5**
MTSE				S	**Sg**	**02 09 33.4**	**+0.1**
GOTU	**Gotland**	**1.79**	**269**	*e*P	**Pb**	**02 09 22.7**	**+0.3**
GOTU	**Gotland**	**1.79**	**269**	P	**Pb**	**02 09 22.7**	**+0.3**
NYNU	**Nynaeshamn**	**2.40**	**303**	*e*P	**Pn**	**02 09 31.4**	**+2.1**
NYNU	**Nynaeshamn**	**2.40**	**303**	P	**Pn**	**02 09 31.4**	**+2.1**
NRTU	**Norrtaelje**	**2.56**	**320**	*e*P	**Pn**	**02 09 33.7**	**+2.2**
NRTU	**Norrtaelje**	**2.56**	**320**	P	**Pn**	**02 09 33.7**	**+2.2**
AAL	**Aland**	**2.61**	**339**	*e*P	**Pn**	**02 09 33.5**	**+1.3**
AAL				*e*SG	**Sb**	**02 10 10.6**	**+1.6**
AAL	**Aland**	**2.61**	**339**	*e*P	**Pn**	**02 09 33.5**	**+1.3**
AAL				*e*SG	**Sb**	**02 10 10.6**	**+1.6**
AAL	**Aland**	**2.61**	**339**	P	**Pn**	**02 09 33.5**	**+1.3**
VSU	**Vasula**	**2.66**	**73**	Pn	**Pn**	**02 09 34.1**	**+1.3**
VSU				Sn	**Sb**	**02 10 09.4**	**-0.9**
VSU	**Vasula**	**2.66**	**73**	Pn	**Pn**	**02 09 34.1**	**+1.3**
VSU				Sn	**Sb**	**02 10 09.4**	**-0.9**
VSU	**Vasula**	**2.66**	**73**	*e*P	**Pn**	**02 09 34.1**	**+1.3**
VSU				*e*SB	**Sb**	**02 10 10.3**	**0.0**
VSU	**Vasula**	**2.66**	**73**	P	**Pn**	**02 09 34.1**	**+1.3**
VSU				Sn	**Sb**	**02 10 09.4**	**-0.9**
	SNR=50						
MEF	**Metsahovi**	**2.77**	**27**	*e*PB	**Pb**	**02 09 38.0**	**-1.2**
MEF				*e*SB	**Sb**	**02 10 14.4**	**+0.7**
MEF	**Metsahovi**	**2.77**	**27**	*e*PB	**Pb**	**02 09 38.0**	**-1.2**
MEF				*e*SB	**Sb**	**02 10 14.4**	**+0.7**
MEF	**Metsahovi**	**2.77**	**27**	*e*Pb	**Pb**	**02 09 38.0**	**-1.2**
	SNR=63						
MEF	**Metsahovi**	**2.77**	**27**	*e*P	**Pb**	**02 09 38.7**	**-0.5**
	SNR=50						
MEF				*e*S	**Sb**	**02 10 14.0**	**+0.3**
	19nm,0.2s,SNR=50						
MEF				*e*Sb	**Sb**	**02 10 14.4**	**+0.7**
	SNR=63						
VIKU	**Vikbolandet**	**2.86**	**287**	*e*P	**Pn**	**02 09 37.6**	**+2.0**
VIKU	**Vikbolandet**	**2.86**	**287**	P	**Pn**	**02 09 37.6**	**+2.0**
GRAU	**Graesoe**	**3.10**	**327**	*e*P	**Pn**	**02 09 40.5**	**+1.5**
GRAU	**Graesoe**	**3.10**	**327**	P	**Pn**	**02 09 40.5**	**+1.5**
IZAR	**Zarasai**	**3.13**	**128**	*e*S	**Sb**	**02 10 22.6**	**-1.5**
IZAR				AML	AML	02 10 33.9	
	comp=Z,4.2nm,0.3s						
IZAR	**Zarasai**	**3.13**	**128**	*e*S	**Sb**	**02 10 22.5**	**-1.5**

HFS	**Hagfors**	**4.87**	**303**	Pn		**Pn**	**02 10 05.0**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=124,slow=17,SNR=79							
HFS				Sn		**Sn**	**02 11 01.7**	**+1.5**
	comp=Z,0.4nm,0.3s,baz=115,slow=24,SNR=3.9							
HFS				Lg		Lg	02 11 24.1	
	comp=Z,1.1nm,0.3s,baz=116,slow=33,SNR=7.6							
HFS	**Hagfors**	**4.87**	**303**	Pn		**Pn**	**02 10 05.0**	**+1.8**
	baz=135,slow=14,SNR=50							
HFS				Sn		**Sn**	**02 10 59.5**	**-0.7**
	baz=111,slow=27,SNR=50							
HFS				Lg		Lg	02 11 20.5	
	baz=119,slow=24,SNR=90							
KAF	**Kangasniemi**	**4.89**	**25**	*e*P		**Pn**	**02 10 04.6**	**+1.1**
KAF				MSG			02 11 23.7	
	comp=Z,2.0nm,0.1s							
KAF	**Kangasniemi**	**4.89**	**25**	*e*P		**Pn**	**02 10 04.6**	**+1.1**
KAF				MSG			02 11 23.7	
	comp=Z,2.0nm,0.1s							
KAF	**Kangasniemi**	**4.89**	**25**	*e*P		**Pn**	**02 10 04.6**	**+1.1**
	comp=Z,2.0nm,0.1s,SNR=31							
UDD	**Uddeholm**	**4.89**	**302**	*e*P		**Pn**	**02 10 05.4**	**+1.9**
UDD	**Uddeholm**	**4.89**	**302**	P		**Pn**	**02 10 05.4**	**+1.9**
FABU	**Falkenberg**	**5.03**	**265**	*e*P		**Pn**	**02 10 07.1**	**+1.7**
FABU	**Falkenberg**	**5.03**	**265**	P		**Pn**	**02 10 07.1**	**+1.7**
BJUU	**Bjuv**	**5.15**	**255**	*e*P		**Pn**	**02 10 08.2**	**+1.1**
BJUU	**Bjuv**	**5.15**	**255**	P		**Pn**	**02 10 08.2**	**+1.1**
FINU	**Finntorp**	**5.20**	**292**	*e*P		**Pn**	**02 10 09.5**	**+1.8**
FINU	**Finntorp**	**5.20**	**292**	P		**Pn**	**02 10 09.5**	**+1.8**
VANU	**Vaenersborg**	**5.26**	**282**	*e*P		**Pn**	**02 10 10.0**	**+1.4**
VANU	**Vaenersborg**	**5.26**	**282**	P		**Pn**	**02 10 09.9**	**+1.4**
VAF	**Ylistaro**	**5.31**	**4**	*e*P		**Pn**	**02 10 11.1**	**+1.9**
VAF	**Ylistaro**	**5.31**	**4**	*e*P		**Pn**	**02 10 11.1**	**+1.9**
VAF	**Ylistaro**	**5.31**	**4**	P		**Pn**	**02 10 11.0**	**+1.9**
SUF	**Sumiainen**	**5.40**	**21**	*e*P		**Pn**	**02 10 12.2**	**+1.7**
SUF	**Sumiainen**	**5.40**	**21**	*e*P		**Pn**	**02 10 12.2**	**+1.7**
SUF	**Sumiainen**	**5.40**	**21**	P		**Pn**	**02 10 12.1**	**+1.7**
STRU	**Stroemstad**	**5.78**	**287**	*e*P		**Pn**	**02 10 17.2**	**+1.5**
STRU	**Stroemstad**	**5.78**	**287**	P		**Pn**	**02 10 17.1**	**+1.5**
NB2	**NORSAR Subarra**	**6.37**	**306**	Pn		**Pn**	**02 10 24.8**	**+1.0**
	baz=126,slow=14							
NB2				Lg		Lg	02 12 06.8	
NB2	**NORSAR Subarra**	**6.37**	**306**	Pn		**Pn**	**02 10 24.8**	**+1.0**
	baz=126,slow=14							
NB2				Lg		Lg	02 12 06.8	
NB2	**NORSAR Subarra**	**6.37**	**306**	Pn		**Pn**	**02 10 24.8**	**+1.0**
	baz=126,slow=13,SNR=50							
NB2				Lg		Lg	02 12 06.8	
	SNR=50							
NOA	**NORSAR Array B**	**6.37**	**306**	Pn		**Pn**	**02 10 25.2**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=119,slow=13,SNR=12							
NOA				Sn		**Sn**	**02 11 35.1**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=3.3,slow=5.8,SNR=2.4							
NOA				Lg		Lg	02 12 08.8	
	comp=Z,0.5nm,0.3s,baz=221,slow=16,SNR=4.2							
AKASG	**Malin Array Be**	**8.27**	**146**	Pn		**Pn**	**02 10 48.6**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=355,slow=9.1,SNR=4.6							
ARA0	**ARCESS Array S**	**11.92**	**6**	Pn		**Pn**	**02 11 37.2**	**-2.5**
	baz=184,slow=16							
ARA0	**ARCESS Array S**	**11.92**	**6**	P		**Pn**	**02 11 37.2**	**-2.5**
	baz=184,slow=16							
ARCES	**ARCESS Array B**	**11.92**	**6**	Pn		**Pn**	**02 11 37.2**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=191,slow=13,SNR=9.1							
ARCES				Sn		Sn	02 13 44.1	-9.1
	comp=Z,0.1nm,0.3s,baz=186,slow=25,SNR=2.3							
SPA0	**Spitsbergen Ar**	**20.59**	**357**	P		**P**	**02 13 29.3**	**+0.4**
	baz=152,slow=11							
SPA0	**Spitsbergen Ar**	**20.59**	**357**	P		**P**	**02 13 29.3**	**+0.4**
	baz=152,slow=11							
SPA0	**Spitsbergen Ar**	**20.59**	**357**	P		**P**	**02 13 29.3**	**+0.4**
	baz=152,slow=11,SNR=47							
SPITS	**Spitsbergen Ar**	**20.59**	**357**	P		**P**	**02 13 29.6**	**+0.7**
	comp=Z,5.5nm,0.9s,baz=170,slow=14,SNR=7.0							

*ISCJB **18** 02:12:14.0±0.9, 10.98S±0.05×73.32W±0.04, h46km±8km, mb4.4/43, MS3.9/8, Error ellipse: s-maj=9.8km s-min=5.8km az=28.3*

*IDC **18** 02:12:14.5±0.5, 10.92S×73.37W, h32km±3km, mb4.1/16, mb1 4.3/19, mb1mx4.2/25, mbtmp4.1/19, ML4.2/3, MS3.8/12, Ms1 3.8/12, ms1mx3.6/30, Error ellipse: s-maj=16.3km s-min=10.6km az=35.0*

*NEIC **18** 02:12:16.3±0.5, 11.02S×73.37W, h51km±5km, mb4.7/26, Error ellipse: s-maj=7.6km s-min=4.3km az=48.0*

NEIC Felt [III] at Atalaya.

ISC 18 02:12:14.5±0.4, 10.99S±0.06×73.31W±0.05, h32km±2km, h32km:pP-P,n348,σ0.78/375, mb4.5/43, MS3.9/8, 140C-96D, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NNA	**Nana**	**3.60**	**254**	*e*Pn		**Pn**	**02 13 08.2**	**0.0**
NNA				Pg		**Pb**	**02 13 19.7**	**+2.1**
NNA				*e*S		**Sn**	**02 13 49.3**	**-0.4**
NNA				Lg		Lg	02 14 01.9	
NNA	**Nana**	**3.60**	**254**	Pn		**Pn**	**02 13 08.2**	**0.0**
	43nm,0.3s,baz=77,slow=10,SNR=64							
NNA				Pg		**Pb**	**02 13 19.7**	**+2.1**
	78nm,0.3s,baz=82,slow=16,SNR=27							
NNA				Sn		**Sn**	**02 13 48.0**	**-1.7**
	216nm,0.3s,baz=156,slow=19,SNR=13							
NNA				Lg		Lg	02 14 01.9	
	165nm,0.3s,baz=148,slow=22,SNR=4.1							
NNA				LR		LR	02 14 44.5	
	comp=Z,1μm,21.1s,baz=143,slow=42							
ARE	**Arequipa**	**5.72**	**162**	*e*P		**Pn**	**02 13 38.0**	**+0.5**
ATAH	**Atahualpa**	**6.32**	**307**	Pn		**Pn**	**02 13 48.1**	**+2.3**
ATAH				Sn		**Sn**	**02 14 59.6**	**+2.5**
ATAH	**Atahualpa**	**6.32**	**307**	Pn		**Pn**	**02 13 48.1**	**+2.3**
	12nm,0.3s,baz=150,slow=11,SNR=47							
ATAH				Sn		**Sn**	**02 14 59.6**	**+2.5**
	14nm,0.3s,baz=72,slow=20,SNR=2.3							
LPAZ	**La Paz**	**7.28**	**137**	*e*Pn		**Pn**	**02 14 01.9**	**+2.6**
LPAZ				Lg		Lg	02 16 06.6	
LPAZ	**La Paz**	**7.28**	**137**	Pn		**Pn**	**02 14 02.0**	**+2.7**
	0.6nm,0.3s,baz=320,slow=12,SNR=13							
LPAZ				Lg		Lg	02 16 06.6	
	6.5nm,0.3s,baz=177,slow=21,SNR=1.9							
LPAZ				LR		LR	02 17 29.3	
	comp=Z,338nm,21.6s,baz=116,slow=43							
SAML	**Samuel**	**10.18**	**79**	*e*Pn		**Pn**	**02 14 39.7**	**+1.2**
	0.5nm,1.1s							
SAML				*e*Sn		**Sn**	**02 16 32.2**	**+0.6**
OTAV	**Otavalo**	**12.27**	**335**	*e*Pn		**Pn**	**02 15 09.3**	**+1.7**
SIV	**San Ignacio**	**12.89**	**114**	Pn		**Pn**	**02 15 17.0**	**+1.3**
SIV				Lg		Lg	02 19 07.0	
SIV	**San Ignacio**	**12.89**	**114**	Pn		**Pn**	**02 15 17.0**	**+1.3**
	1.3nm,0.3s,baz=294,slow=13,SNR=22							
SIV				Lg		Lg	02 19 07.0	
	7.2nm,0.3s,baz=225,slow=18,SNR=4.3							
SIV				LR		LR	02 20 34.3	
	comp=Z,519nm,18.8s,slow=38							
ROSC	**El Rosal**	**15.78**	**356**	*e*Pn		**P**	**02 15 57.2**	**-1.2**
ROSC				Sn		Sn	02 18 35.0	-14
ROSC				Lg		Lg	02 20 37.8	
ROSC	**El Rosal**	**15.78**	**356**	Pn		P	02 16 03.7	+5.3
	1.5nm,0.3s,baz=90,slow=11,SNR=9.9							
ROSC				Sn		Sn	02 18 35.0	-14
	0.9nm,0.3s,baz=216,slow=19,SNR=1.9							
ROSC				Lg		Lg	02 20 37.8	
	1.0nm,0.3s,baz=95,slow=20,SNR=4.1							
ROSC				LR		LR	02 22 36.2	
	comp=Z,233nm,19.4s,baz=183,slow=40							
BCIP	**Isla Barro Col**	**21.05**	**342**	*e*P		**P**	**02 16 57.7**	**+1.7**
CPUP	**Villa Florida**	**21.46**	**138**	P		**P**	**02 17 00.6**	**+0.3**
CPUP	**Villa Florida**	**21.46**	**138**	P		**P**	**02 17 00.6**	**+0.3**
	4.4nm,0.8s,baz=306,slow=10,SNR=14							
CPUP				LR		LR	02 26 23.9	
	comp=Z,219nm,21.3s,baz=298,slow=39							
BDFB	**Brasilia**	**25.04**	**103**	P		**P**	**02 17 38.1**	**+2.0**
BDFB				Lg		Lg	02 25 31.5	
BDFB	**Brasilia**	**25.04**	**103**	P		**P**	**02 17 38.1**	**+2.0**
	7.2nm,0.7s,baz=258,slow=11,SNR=12							
BDFB				Lg		Lg	02 25 31.5	
	17nm,1.0s,baz=172,slow=25,SNR=2.4							
BDFB				LR		LR	02 28 15.6	
	comp=Z,507nm,18.5s,baz=31,slow=38							
PLCA	**Paso Flores**	**29.72**	**176**	P		**P**	**02 18 17.4**	**-0.4**
PLCA	**Paso Flores**	**29.72**	**176**	P		**P**	**02 18 17.4**	**-0.4**
	3.0nm,0.7s,baz=349,slow=13,SNR=4.5							
TEIG	**Tepich**	**34.34**	**335**	*e*P		**P**	**02 18 57.9**	**-0.6**
	12nm,0.8s							
RCBR	**Riachuelo**	**37.34**	**85**	LR		LR	02 35 16.2	
	comp=Z,314nm,19.0s,baz=251,slow=37							
KMSC	**Kings Mountain**	**46.51**	**351**	⇑P		**P**	**02 20 38.8**	**-0.1**
	baz=47							
732A	**Laxson Ranch,**	**47.15**	**327**	⇑P		**P**	**02 20 43.5**	**-0.5**
	baz=47							
SWET	**Sewanee**	**47.48**	**346**	*e*P		**P**	**02 20 45.5**	**-1.0**
	6.6nm,0.8s							
632A	**Uvalde**	**47.68**	**328**	⇑P		**P**	**02 20 48.0**	**-0.1**
	baz=48							
631A	**Perdido Creek**	**48.01**	**327**	⇑P		**P**	**02 20 49.8**	**-0.9**
	baz=48,SNR=6.3							
532A	**Rocksprings**	**48.24**	**329**	⇓P		**P**	**02 20 52.3**	**-0.1**
	baz=48							
TZTN	**Tazewell**	**48.25**	**349**	*e*P		**P**	**02 20 51.9**	**-0.6**
	17nm,1.1s							
JCT	**Junction City**	**48.47**	**329**	⇑P		**P**	**02 20 54.0**	**-0.2**
	baz=49							
531A	**Rocksprings**	**48.60**	**328**	⇓P		**P**	**02 20 55.3**	**+0.1**
	baz=49							
432A	**Menard**	**48.78**	**329**	⇑P		**P**	**02 20 56.5**	**-0.2**
	baz=49							
530A	**J-C Ranch, Com**	**49.00**	**327**	⇓P		**P**	**02 20 58.5**	**+0.2**
	baz=49							
431A	**Sonora**	**49.04**	**328**	⇑P		**P**	**02 20 58.5**	**-0.1**
	baz=49							
332A	**Millersview**	**49.17**	**330**	⇑P		**P**	**02 20 59.3**	**-0.3**
	baz=49							
628A	**Black Gap, Mar**	**49.33**	**325**	⇓P		**P**	**02 21 01.0**	**+0.1**
	baz=50,SNR=5.2							
430A	**Baggett Ranch,**	**49.45**	**328**	⇓P		**P**	**02 21 01.5**	**-0.3**
	baz=50							
331A	**San Angelo**	**49.45**	**329**	⇑P		**P**	**02 21 01.3**	**-0.5**
	baz=50							
529A	**Stev Forest Ra**	**49.45**	**327**	⇑P		**P**	**02 21 01.6**	**-0.2**
	baz=50							
232A	**Coleman**	**49.53**	**330**	⇓P		**P**	**02 21 02.0**	**-0.4**
	baz=50,SNR=5.6							
627A	**Terlingua Ranc**	**49.58**	**325**	⇑P		**P**	**02 21 02.4**	**-0.5**
	baz=50							
TXAR	**Lajitas Array**	**49.65**	**325**	P		**P**	**02 21 03.0**	**-0.4**
TXAR				pP		**pP**	**02 21 12.2**	**-1.0**
TXAR	**Lajitas Array**	**49.65**	**325**	P		**P**	**02 21 03.0**	**-0.4**
	1.1nm,0.6s,baz=153,slow=8.9,SNR=18							
TXAR				pP		**pP**	**02 21 12.2**	**-1.0**
	0.9nm,0.5s,baz=152,slow=9.2,SNR=9.8							
429A	**Davenport Ranc**	**49.67**	**327**	⇑P		**P**	**02 21 03.0**	**-0.5**
	baz=50							
231A	**Bronte**	**49.90**	**330**	⇑P		**P**	**02 21 05.5**	**+0.3**
	baz=50							
330A	**Mertzon**	**49.91**	**329**	⇑P		**P**	**02 21 04.9**	**-0.4**
	baz=50							
626A	**Big Bend Ranch**	**50.08**	**324**	⇓P		**P**	**02 21 06.7**	**0.0**
	baz=50,SNR=7.8							
ABTX	**Abilene, Hawle**	**50.14**	**331**	⇓P		**P**	**02 21 06.8**	**-0.1**
	baz=50,SNR=8.1							
131A	**Roby**	**50.54**	**330**	⇓P		**P**	**02 21 10.1**	**+0.1**
	baz=51							
Z32A	**Haskell**	**50.62**	**331**	⇑P		**P**	**02 21 10.5**	**-0.1**
	baz=51							
427A	**Hayter Ranch,**	**50.66**	**326**	⇑P		**P**	**02 21 10.7**	**-0.3**
	baz=51							
229A	**Bryant Ranch,**	**50.68**	**328**	⇑P		**P**	**02 21 10.8**	**-0.4**
	baz=51							
328A	**Wristen Ranch,**	**50.75**	**327**	⇑P		**P**	**02 21 11.3**	**-0.3**
	baz=51							
130A	**Snyder**	**50.76**	**330**	⇑P		**P**	**02 21 11.1**	**-0.6**
	baz=51							
426A	**McDonald Obser**	**50.86**	**325**	⇓P		**P**	**02 21 12.3**	**-0.5**
	baz=51							
Z31A	**Sharp Cattle R**	**50.95**	**331**	⇓P		**P**	**02 21 12.9**	**-0.1**
	baz=51,SNR=8.1							
Y32A	**R-V Farms, Ver**	**51.18**	**332**	⇑P		**P**	**02 21 15.0**	**+0.2**
	baz=51							
TUL1	**Tulsa**	**51.25**	**337**	⇑P		**P**	**02 21 15.4**	**+0.1**
	baz=52							
326A	**Caldwell Ranch**	**51.33**	**326**	⇑P		**P**	**02 21 15.3**	**-0.8**
	baz=52							
Z30A	**Sanderson Ranc**	**51.40**	**330**	⇓P		**P**	**02 21 16.0**	**-0.5**
	baz=52,SNR=11							
BLO	**Bloomington**	**51.40**	**347**	*e*P		**P**	**02 21 15.0**	**-1.3**
	14nm,0.6s							
425A	**Indio Mountain**	**51.49**	**325**	⇑P		**P**	**02 21 16.8**	**-0.5**
	baz=52							
WMOK	**Wichita Mounta**	**51.49**	**333**	*e*P		**P**	**02 21 17.0**	**-0.2**
	1.1nm,0.4s							
Y31A	**Rekieta Farm,**	**51.53**	**331**	⇓P		**P**	**02 21 17.3**	**-0.1**
	baz=52,SNR=5.9							
128A	**Castleberry Fa**	**51.55**	**328**	⇓P		**P**	**02 21 16.6**	**-1.1**
	baz=52							
Z29A	**Hungry Hill Ra**	**51.66**	**329**	⇓P		**P**	**02 21 18.1**	**-0.4**
	baz=52							
X31A	**McDonald Ranch**	**51.95**	**332**	⇓P		**P**	**02 21 20.2**	**-0.3**
	baz=52,SNR=6.2							
226B	**Tecolote Peak,**	**52.02**	**326**	⇓P		**P**	**02 21 20.8**	**-0.4**
	baz=52							
Z28A	**Tucker Farm, M**	**52.03**	**329**	⇑P		**P**	**02 21 21.1**	**-0.2**
	baz=52							
127A	**Arkansas Junct**	**52.05**	**328**	⇑P		**P**	**02 21 20.8**	**-0.6**
	baz=52							
Y29A	**Porterfield Fa**	**52.13**	**330**	⇑P		**P**	**02 21 21.3**	**-0.6**
	baz=52							
X30A	**Coker Ranch, T**	**52.22**	**331**	⇓P		**P**	**02 21 22.0**	**-0.5**
	baz=52							
324A	**Moseley Ranch,**	**52.26**	**325**	⇓P		**P**	**02 21 22.0**	**-1.1**
	baz=52							
126A	**Clayton Basin,**	**52.37**	**327**	⇓P		**P**	**02 21 23.0**	**-0.9**
	baz=53							
225A	**Deer Hill, Car**	**52.40**	**326**	⇓P		**P**	**02 21 23.6**	**-0.5**
	baz=53							
Z27A	**Tatum**	**52.47**	**328**	⇑P		**P**	**02 21 24.1**	**-0.5**
	baz=53							
SFIN	**Scholer Farm**	**52.68**	**347**	⇓P		**P**	**02 21 25.8**	**0.0**
	baz=53							
224A	**Cornudas Mount**	**52.76**	**325**	⇓P		**P**	**02 21 26.3**	**-0.5**
	baz=53							
MSTX	**Muleshoe**	**52.76**	**329**	⇓P		**P**	**02 21 26.1**	**-0.6**
	baz=53							
V31A	**Spring Creek L**	**52.84**	**333**	⇑P		**P**	**02 21 26.8**	**-0.3**
	baz=53							
Z26A	**Caprock**	**52.84**	**328**	⇓P		**P**	**02 21 26.7**	**-0.6**
	baz=53							
Y27A	**Causey**	**52.89**	**329**	⇑P		**P**	**02 21 27.2**	**-0.5**
	baz=53							
BINY	**Binghamton**	**52.98**	**358**	*e*P		**P**	**02 21 28.4**	**+0.3**
	24nm,0.9s							
BINY				*e*pP		**pP**	**02 21 37.9**	**+0.1**
124A	**Stringfield Ra**	**53.19**	**326**	⇑P		**P**	**02 21 29.6**	**-0.5**
	baz=53							
Z25A	**Roswell**	**53.23**	**327**	⇑P		**P**	**02 21 29.6**	**-0.7**
	baz=53							
Z24A	**Sheeppen Canyo**	**53.62**	**327**	⇓P		**P**	**02 21 32.8**	**-0.4**
	baz=54,SNR=5.5							
222A	**Williams Famil**	**53.68**	**324**	⇑P		**P**	**02 21 33.3**	**-0.2**
	baz=54							
Y25A	**Mesa, Roswell**	**53.72**	**328**	⇑P		**P**	**02 21 33.1**	**-0.7**
	baz=54							
X26A	**CR and CF Fran**	**53.75**	**329**	⇑P		**P**	**02 21 33.7**	**-0.2**
	baz=54							
W27A	**Bowe Ranch, En**	**53.78**	**330**	⇑P		**P**	**02 21 34.4**	**+0.2**
	baz=54							
320A	**Kipp Ranch, An**	**53.96**	**322**	⇓P		**P**	**02 21 35.5**	**-0.1**
	baz=54							
Z23A	**Rita Site, Whi**	**54.05**	**326**	⇑P		**P**	**02 21 36.1**	**-0.1**
	baz=54							
220A	**Playas Peak, P**	**54.36**	**323**	⇑P		**P**	**02 21 38.3**	**-0.2**
	baz=54,SNR=5.7							
121A	**Cookes Peak, D**	**54.38**	**324**	⇑P		**P**	**02 21 38.7**	**0.0**
	baz=55							
Z22A	**Elephant Butte**	**54.45**	**325**	⇓P		**P**	**02 21 38.9**	**-0.3**
	baz=55							
W25A	**X Bar L Ranch,**	**54.60**	**329**	⇑P		**P**	**02 21 39.8**	**-0.4**
	baz=55							
T29A	**Hugoton**	**54.63**	**333**	⇓P		**P**	**02 21 39.7**	**-0.6**
	baz=55							
V26A	**Tequesquite Ra**	**54.72**	**330**	⇓P		**P**	**02 21 40.3**	**-0.7**
	baz=55							
Z21A	**St. Cloud Mine**	**54.88**	**325**	⇓P		**P**	**02 21 42.5**	**+0.1**
	baz=55							
120A	**U Bar Ranch, L**	**54.89**	**323**	⇑P		**P**	**02 21 42.4**	**0.0**
	baz=55							
W24A	**Lazy 6 Ranch,**	**55.08**	**328**	⇑P		**P**	**02 21 43.4**	**-0.3**
	baz=55							
V25A	**Rancho No Teng**	**55.16**	**329**	⇓P		**P**	**02 21 43.5**	**-0.8**
	baz=55							
T27A	**Campo**	**55.21**	**331**	⇓P		**P**	**02 21 44.0**	**-0.6**
	baz=55							
S28A	**Manter**	**55.26**	**332**	⇑P		**P**	**02 21 44.1**	**-0.8**
	baz=56,SNR=5.4							
Z20A	**Nine Sixteen R**	**55.27**	**324**	⇑P		**P**	**02 21 44.9**	**-0.2**
	baz=55,SNR=5.7							
LAZ	**Ladron**	**55.40**	**326**	*e*P		**P**	**02 21 45.8**	**-0.2**
	1.2nm,0.9s							
Y21A	**Point of Rocks**	**55.40**	**325**	⇑P		**P**	**02 21 46.1**	**0.0**
	baz=56,SNR=5.5							
V24A	**Rampart Ranch,**	**55.41**	**328**	⇑P		**P**	**02 21 45.4**	**-0.7**
	baz=56							
U25A	**Circle Dot Ran**	**55.50**	**330**	⇑P		**P**	**02 21 46.2**	**-0.5**
	baz=56							
T26A	**Comanche Natio**	**55.72**	**331**	⇑P		**P**	**02 21 48.1**	**-0.2**
	baz=56							
Y20A	**Horse Springs,**	**55.72**	**325**	⇑P		**P**	**02 21 47.8**	**-0.6**
	baz=56							
X21A	**Alamocita Cree**	**55.79**	**326**	⇑P		**P**	**02 21 48.5**	**-0.4**
	baz=56							
V23A	**Ortiz Mt. (NFS**	**55.90**	**328**	⇑P		**P**	**02 21 49.4**	**-0.2**
	baz=56							
S26A	**Kim**	**56.02**	**331**	⇓P		**P**	**02 21 50.2**	**-0.1**
	baz=56							
T25A	**Trinidad**	**56.08**	**330**	⇑P		**P**	**02 21 50.7**	**-0.3**
	baz=56							
X20A	**Quemado**	**56.26**	**325**	⇑P		**P**	**02 21 51.9**	**-0.4**
	baz=56							
T24A	**Torres, Weston**	**56.35**	**330**	⇓P		**P**	**02 21 52.9**	**0.0**
	baz=57							
V22A	**San Miguel Ran**	**56.41**	**327**	⇑P		**P**	**02 21 53.1**	**-0.2**
	baz=57							
S25A	**Robets Cordova**	**56.51**	**331**	⇑P		**P**	**02 21 53.1**	**-0.9**
	baz=57							
R26A	**Arlington**	**56.55**	**332**	⇓P		**P**	**02 21 53.5**	**-0.6**
	baz=57							
S24A	**Houchin Ranch,**	**56.87**	**330**	⇓P		**P**	**02 21 56.6**	**0.0**
	baz=57							
214A	**Organ Pipe Nat**	**57.03**	**320**	⇑P		**P**	**02 21 57.3**	**-0.2**
	baz=57,SNR=5.4							
X18A	**Snowflake**	**57.07**	**324**	⇑P		**P**	**02 21 58.1**	**+0.1**
	baz=57							
Q26A	**Hugo**	**57.09**	**332**	⇑P		**P**	**02 21 58.0**	**0.0**
	baz=57							
P26A	**Davis Ranch, A**	**57.52**	**333**	⇓P		**P**	**02 22 01.4**	**+0.4**
	baz=58							
T21A	**Navajo Lake**	**57.55**	**328**	⇓P		**P**	**02 22 01.7**	**+0.4**
	baz=58							
S22A	**4UR Ranch, Cre**	**57.76**	**329**	⇑P		**P**	**02 22 02.9**	**-0.1**
	baz=58							
X16A	**Lo Mia Camp, P**	**57.87**	**323**	⇑P		**P**	**02 22 03.5**	**0.0**
	baz=58,SNR=6.9							
R22A	**Saguache, Gunn**	**58.09**	**329**	⇓P		**P**	**02 22 05.3**	**+0.1**
	baz=58							
Y14A	**Wickenburg**	**58.48**	**321**	⇑P		**P**	**02 22 07.8**	**+0.1**
	baz=59							
P23A	**Jefferson**	**58.53**	**331**	⇑P		**P**	**02 22 08.9**	**+0.6**
	baz=59							
WUAZ	**Wupatki**	**58.59**	**324**	*e*P		**P**	**02 22 08.5**	**-0.1**
	7.4nm,0.9s							
WUAZ	**Wupatki**	**58.59**	**324**	⇑P		**P**	**02 22 08.8**	**+0.2**
	baz=59,SNR=5.3							
S20A	**Disappointment**	**58.62**	**328**	⇑P		**P**	**02 22 09.0**	**+0.2**
	baz=59							
R20A	**Redvale**	**58.89**	**328**	⇓P		**P**	**02 22 10.7**	**0.0**
	baz=59							
SMCO	**Snowmass**	**58.94**	**330**	*e*P		**P**	**02 22 11.3**	**+0.1**
	5.2nm,1.2s							
PV01	**Paradox Valley**	**58.95**	**328**	*e*P		**P**	**02 22 11.2**	**0.0**
P22A	**Eagle**	**59.15**	**330**	⇓P		**P**	**02 22 12.7**	**+0.2**
	baz=59							
O23A	**Lake Granby, G**	**59.23**	**331**	⇓P		**P**	**02 22 13.1**	**0.0**
	baz=59							
N24A	**Carr**	**59.24**	**332**	⇑P		**P**	**02 22 13.5**	**+0.5**
	baz=60							
Y12C	**Blythe**	**59.29**	**320**	⇓P		**P**	**02 22 13.5**	**+0.2**
	baz=60							
S18A	**Hurst Farm, Bl**	**59.38**	**327**	⇓P		**P**	**02 22 14.3**	**+0.1**
	baz=60							
P21A	**Newcastle**	**59.44**	**330**	⇑P		**P**	**02 22 14.8**	**+0.3**
	baz=60							
M24A	**Cheyenne**	**59.73**	**333**	⇓P		**P**	**02 22 16.6**	**+0.2**
	baz=60							
U15A	**North Rim**	**59.76**	**324**	⇓P		**P**	**02 22 16.9**	**0.0**
	baz=60							
N23A	**Red Feather La**	**59.78**	**332**	⇑P		**P**	**02 22 17.3**	**+0.5**
	baz=60							
W13A	**Hualapai Mount**	**59.80**	**322**	⇑P		**P**	**02 22 16.9**	**-0.1**
	baz=60							
BC3	**Big Chuckawall**	**59.82**	**320**

0.8nm,0.7s,baz=145,slow=8.1,SNR=7.5
PDAR pP **pP** 02 22 47.6 **-0.5**
1.8nm,1.1s,baz=123,slow=7.8,SNR=4.5
PDAR LR LR 02 50 56.9
comp=Z,38nm,18.4s,baz=237,slow=37
G23A Biddle 62.98 335 ⇓P **P** 02 22 38.6 **+0.4**
baz=63
R11A Troy Canyon, C 62.99 324 ⇑P **P** 02 22 38.4 **-0.1**
baz=63,SNR=5.8
ISA Isabella 63.01 320 ⇓P **P** 02 22 38.6 **0.0**
baz=63
MDND Maddock 63.07 340 ⇓P **P** 02 22 39.2 **+0.5**
baz=63
HWUT Hardware Ranch 63.07 329 *eP* **P** 02 22 38.0 **-1.0**
6.6nm,0.8s
J19A Crowheart 63.08 331 ⇓P **P** 02 22 38.7 **-0.3**
baz=63
F24A Ekalaka 63.13 336 ⇑P **P** 02 22 39.0 **-0.2**
baz=63
I20A Worland 63.18 332 ⇑P **P** 02 22 39.2 **-0.3**
baz=63
PKM Peak Mountain 63.41 318 ⇓P **P** 02 22 41.2 **-0.2**
baz=64
VES Vestal, Richgr 63.51 319 ⇓P **P** 02 22 41.4 **-0.4**
baz=64
H20A Greybull 63.54 333 ⇓P **P** 02 22 41.0 **-0.9**
baz=64,SNR=5.4
I19A Meeteetse 63.64 332 ⇑P **P** 02 22 42.5 **-0.2**
baz=64
E24A Baker 63.66 337 ⇓P **P** 02 22 42.6 **0.0**
baz=64
I18A Diamond G Ranc 63.77 331 ⇓P **P** 02 22 43.2 **-0.4**
baz=64
E23A Ismay 64.00 336 ⇑P **P** 02 22 45.2 **+0.4**
baz=64
LOHW Long Hollow 64.08 331 *eP* **P** 02 22 45.4 **-0.3**
39nm,2.8s
ULM Lac du Bonnet 64.10 344 P **P** 02 22 44.2 **-1.1**
ULM pP **pP** 02 22 54.2 **-1.1**
ULM *ep*P **pwP** 02 22 54.6 **-0.7**
ULM Lac du Bonnet 64.10 344 P **P** 02 22 44.2 **-1.1**
6.3nm,0.6s,baz=150,slow=8.7,SNR=5.1
ULM pP **pP** 02 22 54.2 **-1.1**
9.8nm,0.8s,baz=155,slow=5.2,SNR=5.2
G20A Bridger 64.21 333 ⇓P **P** 02 22 45.3 **-1.1**
baz=64
RRI2 Red Ridge 64.23 330 *eP* **P** 02 22 46.3 **-0.4**
RRI2 *ep*P **pP** 02 22 58.3 **+1.6**
IMW Indian Meadow 64.45 331 *eP* **P** 02 22 48.0 **-0.2**
2.8nm,0.8s
D23A Lindsay 64.52 336 ⇑P **P** 02 22 48.6 **+0.3**
baz=65
NVAR Mina Array Bea 64.65 322 P **P** 02 22 49.3 **-0.2**
NVAR Mina Array Bea 64.65 322 P **P** 02 22 49.3 **-0.2**
1.3nm,0.8s,baz=150,slow=6.9,SNR=9.8
D22A Cohagen 64.89 336 ⇑P **P** 02 22 51.0 **+0.3**
baz=65,SNR=8.9
G18A Lazy EL Ranch, 64.89 333 ⇑P **P** 02 22 50.0 **-0.8**
baz=65,SNR=7.8
F19A Roth Farm, Mol 65.02 333 ⇓P **P** 02 22 51.6 **-0.1**
baz=65,SNR=6.1
C23A Lambert 65.03 337 ⇓P **P** 02 22 51.8 **+0.3**
baz=65
D21A La Casta Ranch 65.15 335 ⇓P **P** 02 22 52.8 **+0.4**
baz=65
E20A Meyer Farm, Mu 65.18 334 ⇑P **P** 02 22 52.6 **0.0**
baz=65
H16A Russell Place, 65.20 331 ⇑P **P** 02 22 53.1 **+0.1**
baz=65,SNR=6.6
GCMT Greycliff 65.30 333 *eP* **P** 02 22 53.1 **-0.3**
J14A Carey 65.31 329 ⇑P **P** 02 22 53.3 **-0.3**
baz=66,SNR=5.2
F18A Big Timber 65.41 333 ⇑P **P** 02 22 53.9 **-0.2**
baz=66,SNR=8.1
E19A Rath Farm, Rou 65.43 334 ⇑P **P** 02 22 53.7 **-0.5**
baz=66,SNR=5.3
B23A Brockton 65.50 337 ⇑P **P** 02 22 55.0 **+0.4**
baz=66
A24A Westby 65.51 338 ⇑P **P** 02 22 55.1 **+0.4**
baz=66
D20A Manuel Ranch, 65.64 335 ⇑P **P** 02 22 55.7 **+0.2**
baz=66
J13A Cove Ranch, Pi 65.70 328 ⇑P **P** 02 22 56.2 **+0.1**
baz=66
I14A Mackay 65.71 329 ⇑P **P** 02 22 56.0 **-0.2**
baz=66
SCHQ Schefferville 65.80 4 P **P** 02 22 56.0 **-0.3**
SCHQ pP **pP** 02 23 05.3 **-1.1**
SCHQ Schefferville 65.80 4 P **P** 02 22 56.0 **-0.3**
6.5nm,1.0s,baz=209,slow=8.8,SNR=4.5
SCHQ pP **pP** 02 23 05.3 **-1.1**
6.1nm,0.6s,baz=207,slow=6.1,SNR=5.5
C21A Desert Coulee 65.80 336 ⇓P **P** 02 22 56.3 **-0.3**
baz=66,SNR=7.2
H15A Lima 65.81 330 ⇓P **P** 02 22 57.3 **+0.4**
baz=66
F17A Fitzpatrick Pl 65.83 332 ⇑P **P** 02 22 56.8 **-0.2**
baz=66
G16A Moss Hill, Enn 65.86 331 ⇑P **P** 02 22 57.1 **0.0**
baz=66
HLID Hailey 65.94 328 *eP* **P** 02 22 56.7 **-0.9**
3.9nm,1.3s
HLID Hailey 65.94 328 ⇑P **P** 02 22 57.7 **0.0**
baz=66
E18A Harlowton 66.00 333 ⇑P **P** 02 22 57.9 **-0.1**
baz=66,SNR=5.3
D19A Cripps Ranch, 66.02 334 ⇑P **P** 02 22 57.9 **-0.1**
baz=66
I13A Wildhorse Cree 66.03 329 ⇑P **P** 02 22 58.1 **-0.2**
baz=66
MCMT McKenzie Canyo 66.06 330 *eP* **P** 02 22 58.6 **0.0**
C20A Veseth Ranch, 66.08 335 ⇓P **P** 02 22 58.3 **-0.1**
baz=66
BOZ Bozeman (W) 66.08 332 *eP* **P** 02 22 57.9 **-0.7**
4.5nm,1.3s
BOZ *e* pP 02 23 08.3 **-0.3**
G15A Dillon 66.14 331 ⇓P **P** 02 22 59.1 **+0.1**
baz=66
H14A Leadore 66.16 330 ⇓P **P** 02 22 59.2 **+0.1**
baz=66,SNR=5.4
F16A Kennard Place, 66.19 332 ⇓P **P** 02 22 59.1 **0.0**
baz=66
A22A Carney Farms, 66.28 337 ⇓P **P** 02 22 59.9 **+0.2**
baz=66
E17A Martinsdale 66.34 333 ⇓P **P** 02 22 59.8 **-0.4**
baz=67,SNR=5.2
D18A Linhart Farms, 66.44 334 ⇓P **P** 02 23 00.8 **+0.1**
baz=67
I12A Atlanta 66.47 328 ⇑P **P** 02 23 01.3 **+0.1**
baz=67
C19A Slack Wire Ran 66.53 335 ⇑P **P** 02 23 01.5 **+0.3**
baz=67
H13A Challis 66.57 329 ⇓P **P** 02 23 01.6 **0.0**
baz=67
B20A Solberg Farm, 66.66 336 ⇑P **P** 02 23 01.6 **-0.4**
baz=67
E16A East Helena 66.77 332 ⇑P **P** 02 23 03.0 **+0.1**
baz=67
D17A Six Diamond Ra 66.79 333 ⇓P **P** 02 23 02.9 **-0.1**
baz=67
BEKR Beckworth 66.80 322 *eP* **P** 02 23 03.7 **+0.4**
1.6nm,0.8s
H12A Diamond D Ranc 66.86 329 ⇑P **P** 02 23 03.6 **0.0**
baz=67
G13A Cobalt 66.93 330 ⇑P **P** 02 23 04.2 **+0.2**
baz=67
B19A Brinkman Farms 67.05 335 ⇑P **P** 02 23 04.4 **-0.2**
baz=67
D16A Dana Ranch, Ca 67.08 333 ⇓P **P** 02 23 04.9 **0.0**
baz=67
C17A Wharram Farm, 67.19 334 ⇑P **P** 02 23 05.7 **+0.2**
baz=67
A19A Klindworth Far 67.34 336 ⇓P **P** 02 23 06.7 **+0.3**
baz=68
B18A Beardsley Farm 67.35 335 ⇓P **P** 02 23 06.6 **+0.1**
baz=68
F13A Darby 67.48 330 ⇑P **P** 02 23 07.2 **-0.2**
baz=68
G12A Big Creek, Yel 67.50 329 ⇓P **P** 02 23 07.7 **0.0**
baz=68
E14A Clinton 67.53 331 ⇑P **P** 02 23 07.8 **0.0**
baz=68
D15A Lincoln 67.53 332 ⇑P **P** 02 23 09.0 **+1.2**
baz=68
C16A Fuhringer Ranc 67.75 333 ⇑P **P** 02 23 09.1 **0.0**
baz=68
E13A Victor 67.88 331 ⇓P **P** 02 23 09.8 **-0.1**
baz=68

F12A Elk City 67.91 330 ⇑P **P** 02 23 10.4 **+0.2**
baz=68
D14A Greenough 68.02 332 ⇓P **P** 02 23 10.6 **-0.2**
baz=68
MSO Missoula 68.04 331 *eP* **P** 02 23 11.0 **+0.1**
5.5nm,1.1s
MSO Missoula 68.04 331 ⇑P **P** 02 23 11.0 **+0.1**
baz=68,SNR=7.6
MOD Modoc 68.04 324 *eP* **P** 02 23 11.1 **0.0**
8.7nm,1.1s
C15A Salmond Ranch, 68.12 333 ⇓P **P** 02 23 11.5 **+0.1**
baz=68,SNR=5.1
A17A Triple J Farms 68.17 334 ⇓P **P** 02 23 11.6 **0.0**
baz=68
B16A M & M Farms, S 68.20 334 ⇓P **P** 02 23 11.5 **-0.3**
baz=68
D13A Huson 68.48 331 ⇓P **P** 02 23 13.8 **+0.2**
baz=69
B15A Bradely Ranch, 68.50 333 ⇑P **P** 02 23 13.8 **0.0**
baz=69
A16A West Butte Ran 68.55 334 ⇑P **P** 02 23 14.4 **+0.3**
baz=69
C14A Swan Lake 68.64 332 ⇑P **P** 02 23 15.3 **+0.7**
baz=69
B14A Marquette Ranc 68.85 333 ⇓P **P** 02 23 16.1 **+0.1**
baz=69
D12A Red Ives Fores 68.88 331 ⇑P **P** 02 23 16.3 **+0.2**
baz=69
C13A Hot Springs 68.95 331 ⇓P **P** 02 23 16.4 **-0.1**
baz=69,SNR=5.2
A14A Double T Ranch 69.37 333 ⇓P **P** 02 23 18.8 **-0.4**
baz=70
C12B Naegeli Ranch, 69.40 331 ⇓P **P** 02 23 19.8 **+0.5**
baz=70
B13A Whitefish 69.41 332 ⇑P **P** 02 23 19.6 **+0.3**
baz=70
A13A Flathead Natio 69.79 332 ⇓P **P** 02 23 22.2 **+0.5**
baz=70
FFC Flin Flon 69.79 343 *eP* **P** 02 23 18.7 **-2.8**
C11A Tepee Creek (N 69.87 331 ⇑P **P** 02 23 22.0 **-0.2**
baz=70,SNR=6.6
DBIC Dimbokro 70.34 79 *eP* **P** 02 23 25.8 **0.0**
12nm,1.1s
DBIC pP **pP** 02 23 34.9 **-0.9**
DBIC Dimbokro 70.34 79 P **P** 02 23 25.9 **+0.2**
3.7nm,0.6s,baz=260,slow=4.2,SNR=8.8
DBIC pP **pP** 02 23 34.9 **-0.9**
5.0nm,0.7s,baz=227,slow=6.9,SNR=3.9
DBIC LR LR 02 52 12.6
comp=Z,80nm,18.7s,baz=57,slow=34
NEW Newport 70.58 331 ⇓P **P** 02 23 26.1 **-0.4**
baz=71
NLWA Neilton Lookou 73.45 327 *eP* **P** 02 23 44.0 **+0.3**
11nm,1.1s
SNAA Sanae 73.53 162 *eP* **P** 02 23 44.2 **+0.3**
4.3nm,0.8s
PPT2 Papeete2 73.79 255 *e*LR LR 02 46 31.1
71nm,25.5s
FRB Frobisher Bay 74.60 2 P **P** 02 23 49.2 **-0.7**
FRB Frobisher Bay 74.60 2 P **P** 02 23 49.2 **-0.7**
4.2nm,0.9s,baz=199,slow=5.3
EVOP Sao Brissos 78.13 47 *eP* P 02 24 19.0 +8.4
14nm,1.0s
TOA0 Torodi Ar. Sit 78.19 74 *eP* **P** 02 24 11.1 **-0.4**
TORD Torodi Ar. Bea 78.19 74 P **P** 02 24 11.6 **+0.1**
TORD pP **pP** 02 24 21.8 **+0.2**
TORD Torodi Ar. Bea 78.19 74 P **P** 02 24 11.6 **+0.1**
6.3nm,0.8s,baz=230,slow=4.4,SNR=65
TORD pP **pP** 02 24 21.8 **+0.2**
2.8nm,0.5s,baz=270,slow=4.8,SNR=6.4
EVO Evora 78.21 47 *eP* P 02 24 19.0 +7.9
14nm,1.0s
MDT Midelt 78.57 53 P **P** 02 24 13.7 **+0.4**
MDT pP **pP** 02 24 24.1 **+0.6**
MDT Midelt 78.57 53 P **P** 02 24 13.7 **+0.4**
1.5nm,0.8s,baz=270,slow=3.0,SNR=3.8
MDT pP **pP** 02 24 24.1 **+0.6**
1.7nm,0.7s,baz=217,slow=5.2,SNR=2.7
YKA Yellowknife Ar 79.94 342 P **P** 02 24 19.2 **-0.8**
YKA pP **pP** 02 24 29.7 **-0.5**
YKA Yellowknife Ar 79.94 342 P **P** 02 24 19.2 **-0.8**
3.6nm,0.7s,baz=137,slow=6.0,SNR=81
YKA pP **pP** 02 24 29.7 **-0.5**
3.4nm,0.7s,baz=137,slow=6.0,SNR=16
YKW3 Yellowknife Ar 79.99 342 *eP* **P** 02 24 19.4 **-0.9**
0.1nm,0.8s
ESDC Sonseca Array 81.56 47 P **P** 02 24 29.8 **+0.6**
ESDC pP **pP** 02 24 39.9 **+0.4**
ESDC Sonseca Array 81.56 47 P **P** 02 24 29.8 **+0.6**
0.5nm,0.6s,baz=260,slow=5.6,SNR=7.0
ESDC pP **pP** 02 24 39.9 **+0.4**
0.8nm,0.5s,baz=264,slow=5.2,SNR=7.0
TAM Tamanrasset 84.11 66 *eP* **P** 02 24 43.9 **+0.9**
4.2nm,0.8s
TAM *e* **pP** 02 24 53.4 **+0.1**
VNDA Vanda 86.39 190 P **P** 02 24 53.7 **+0.5**
VNDA Vanda 86.39 190 P **P** 02 24 53.7 **+0.5**
1.5nm,0.7s,baz=117,slow=3.9,SNR=9.3
SUMG Summit 86.44 10 *eP* **P** 02 24 53.7 **-0.1**
14nm,0.8s
SUMG Summit 86.44 10 *i* P **P** 02 24 53.9 **+0.1**
5.9nm,1.0s
SUMG *i* 02 25 03.4
ORIF Oris-en-Rattie 90.14 44 *eP* P 02 25 15.5 +3.8
5.7nm,0.8s
ORIF Oris-en-Rattie 90.14 44 *eP* P 02 25 15.5 +3.8
5.7nm,0.8s
BOSA Boshof 92.20 120 LR LR 03 01 48.6
comp=Z,70nm,20.5s,baz=164,slow=32
ILAR Eielson Array 92.99 336 P **P** 02 25 23.4 **-0.9**
ILAR pP **pP** 02 25 35.0 **+0.3**
ILAR Eielson Array 92.99 336 P **P** 02 25 23.4 **-0.9**
0.6nm,0.8s,baz=157,slow=3.8,SNR=6.5
ILAR pP **pP** 02 25 35.0 **+0.3**
0.4nm,0.7s,baz=147,slow=2.9,SNR=3.9
GERES GERESS Array B 96.22 42 LR LR 03 04 05.4
comp=Z,36nm,18.5s,baz=90,slow=32
NOA NORSAR Array B 96.89 29 LR LR 03 03 23.6
comp=Z,22nm,18.7s,baz=270,slow=32
KBZ Khabaz 116.41 47 PKP **PKPdf** 02 30 53.7 **-1.4**
KBZ Khabaz 116.41 47 PKP **PKPdf** 02 30 53.7 **-1.4**
0.4nm,0.4s,baz=225,slow=4.3,SNR=3.8
AKTO Aktyubinsk 124.07 35 PKP **PKPdf** 02 31 09.3 **-0.4**
AKTO Aktyubinsk 124.07 35 PKP **PKPdf** 02 31 09.3 **-0.4**
0.5nm,0.6s,baz=225,slow=1.4,SNR=4.0
ZALV Zalesovo Beam 133.74 18 PKP **PKPdf** 02 31 28.1 **+0.2**
ZALV pPKP **pPKPdf** 02 31 38.9 **+0.3**
ZALV Zalesovo Beam 133.74 18 PKP **PKPdf** 02 31 28.1 **+0.2**
1.1nm,0.5s,baz=318,slow=1.9,SNR=4.7
ZALV pPKP **pPKPdf** 02 31 38.9 **+0.3**
0.5nm,0.3s,baz=323,slow=2.2,SNR=2.5
ASAR Alice Springs 136.47 218 PKP **PKPdf** 02 31 33.2 **-0.9**
ASAR Alice Springs 136.47 218 PKP **PKPdf** 02 31 33.2 **-0.9**
0.9nm,0.7s,baz=109,slow=2.8,SNR=8.2
MKAR Makanchi Array 138.76 26 PKP **PKPdf** 02 31 36.1 **-1.5**
MKAR Makanchi Array 138.76 26 PKP **PKPdf** 02 31 36.1 **-1.5**
0.3nm,0.6s,baz=319,slow=3.1,SNR=3.4
KSH Kashi 140.62 39 *e*PKPbc **PKPdf** 02 31 44.0 **+2.7**
KSH *es*PKP 02 31 58.3
KSH *e*PP **PP** 02 34 38.6 **-1.8**
KSH *e*PKS **PKSdf** 02 35 18.9 **+1.5**
KSH *e*SKS **SKSdf** 02 38 49.1 **-0.4**
KSH *e*SKKS SKKSac 02 41 24.3 -8.1
MJAR Matsushiro Arr 141.85 317 PKPpre PKPpre 02 31 37.2
MJAR Matsushiro Arr 141.85 317 PKhKP PKPpre 02 31 37.2
1.0nm,0.3s,baz=72,slow=3.6,SNR=4.2
SONM Songino Array 143.28 0 PKP PKPbc 02 31 42.8 0.0
SONM pPKP PKPdf 02 31 54.5 -2.0
SONM Songino Array 143.28 0 PKP PKPbc 02 31 42.8 0.0
0.9nm,0.7s,baz=340,slow=4.0,SNR=5.9
SONM pPKP pPKPdf 02 31 54.5 -2.0
0.8nm,0.5s,baz=9.0,slow=2.1,SNR=3.9
WMQ Urumqi 143.39 23 *eP* **PKPdf** 02 31 46.3 **+0.3**
CN2 Changchun 143.50 337 *eP* PKPab 02 31 39.0 -3.4
KSRS Korea Array 147.47 328 PKPbc **PKPbc** 02 31 55.2 **-0.4**
5.8nm,0.8s,baz=59,slow=2.1,SNR=14
KSRS pPKPbc **pPKPbc** 02 32 07.0 **+0.8**
5.1nm,0.8s,baz=26,slow=3.1,SNR=6.8
KSAR Wonju Array Be 147.50 328 PKPbc **PKPbc** 02 31 55.2 **-0.5**
KSAR pPKPbc **pPKPbc** 02 32 07.0 **+0.7**
GTA Gaotai 151.04 11 *e*PKPbc **PKPbc** 02 32 05.4 **+0.6**
GTA pPKP **PKPab** 02 32 16.3 **+4.1**
GTA sPKP 02 32 19.9
GTA PKPab PKiKP 02 32 22.0 +17
CD2 Chengdu 159.99 7 PKPbc **PKPdf** 02 32 09.3 **-1.8**
GYA Guiyang 164.61 0 *e*PKP **PKPdf** 02 32 13.8 **-2.2**
GYA sPKP 02 32 33.6
GYA PKS **PKSdf** 02 35 44.3 **-4.8**
GYA PP **PP** 02 36 57.5 **+1.9**
GYA AMB AMB
comp=Z,70nm,7.9s
CMAR Chiang Mai Arr 169.46 44 PKP **PKPdf** 02 32 19.9 **+0.3**
CMAR Chiang Mai Arr 169.46 44 PKP **PKPdf** 02 32 19.9 **+0.3**
comp=Z,0.7nm,0.4s,baz=287,slow=2.2,SNR=5.4

*ISCJB **18** 02:22:34.4±0.7, 20.°9S±0.°1×178.°2W±0.°1, h495km, mb3.8/14, Error ellipse: s-maj=24.0km s-min=10.0km az=141.8*
*IDC **18** 02:22:40.0±2.3, 20.°92S×178.°22W, h552km±24km, mb3.4/14, mb1 3.7/15, mb1mx3.6/19, mbtmp3.4/15, Error ellipse: s-maj=19.9km s-min=15.7km az=138.0*
ISC 18 02:22:34.6±0.7, 20.°9S±0.°2×178.°2W±0.°1, h495km, n48, σ1s25/52, mb3.9/14, 8C-11D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.24**	**43**	S	**S**	**02 26 30.4**	**0.0**
	2.0nm,0.3s,baz=40,slow=16,SNR=3.6						
DZM	**Mont Dzumac**	**14.35**	**262**	P	P	02 25 42.7	+4.4
	1.1nm,0.3s,baz=82,slow=17,SNR=9.3						
CTA	**Charters Tower**	**33.27**	**265**	P	**P**	**02 28 32.3**	**+1.8**
	1.7nm,0.3s,baz=90,slow=7.1,SNR=5.7						
STKA	**Stephens Creek**	**37.47**	**245**	P	**P**	**02 29 07.1**	**+1.8**
	1.0nm,0.5s,baz=59,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**44.26**	**257**	P	**P**	**02 30 01.1**	**+1.3**
	2.8nm,0.7s,baz=96,slow=7.8,SNR=27						
ASAR				S	**S**	**02 35 53.0**	**-4.1**
	0.3nm,0.5s,baz=91,slow=14,SNR=5.8						
VNDA	**Vanda**	**57.53**	**185**	P	**P**	**02 31 35.6**	**0.0**
	0.6nm,0.5s,baz=264,slow=19,SNR=5.6						
MJAR	**Matsushiro Arr**	**70.39**	**324**	P	**P**	**02 32 58.1**	**-0.2**
	1.0nm,0.6s,baz=158,slow=6.1,SNR=6.8						
PETK	**Petropavlovsk-**	**76.57**	**345**	P	**P**	**02 33 33.2**	**0.0**
	4.9nm,0.7s,baz=125,slow=7.4,SNR=4.7						
KSRS	**Korea Array**	**77.03**	**319**	P	**P**	**02 33 37.0**	**+0.9**
	1.0nm,0.5s,baz=137,slow=5.7,SNR=4.3						
USRK	**Ussuriysk Arra**	**79.15**	**326**	P	**P**	**02 33 48.9**	**+1.5**
	4.0nm,0.7s,baz=124,slow=3.4,SNR=6.6						
NVAR	**Mina Array Bea**	**81.41**	**43**	P	**P**	**02 34 01.2**	**+1.6**
	2.7nm,0.8s,baz=224,slow=8.7,SNR=14						
TXAR	**Lajitas Array**	**87.41**	**57**	P	**P**	**02 34 30.7**	**+1.6**
	1.4nm,0.9s,baz=217,slow=6.2,SNR=10.0						
TXAR				pP	pP	02 36 34.0	+15
	0.5nm,1.0s,baz=206,slow=6.0,SNR=3.6						
ILAR	**Eielson Array**	**88.71**	**13**	P	**P**	**02 34 33.6**	**-0.6**
	1.7nm,0.5s,baz=216,slow=5.3,SNR=37						
PDAR	**Pinedale Array**	**89.35**	**43**	P	**P**	**02 34 39.0**	**+0.8**
	2.3nm,0.7s,baz=214,slow=3.0,SNR=19						
CMAR	**Chiang Mai Arr**	**90.06**	**290**	P	**P**	**02 34 42.6**	**+1.0**
	1.7nm,0.5s,baz=129,slow=3.4,SNR=11						
YKA	**Yellowknife Ar**	**96.92**	**25**	P	**P**	**02 35 11.3**	**-0.6**
	0.3nm,0.8s,baz=253,slow=5.2,SNR=4.4						
MKAR	**Makanchi Array**	**111.31**	**313**	PKiKP	**PKiKP**	**02 40 09.8**	**-2.0**
	0.3nm,0.4s,baz=129,slow=0.3,SNR=7.7						
BVAR	**Borovoye Array**	**119.23**	**320**	PKP	**PKPdf**	**02 40 25.6**	**-1.2**
	2.1nm,0.3s,baz=117,slow=2.2,SNR=9.0						
SPITS	**Spitsbergen Ar**	**122.21**	**356**	PKP	**PKPdf**	**02 40 30.3**	**-1.6**
	1.9nm,0.6s,baz=29,slow=4.4,SNR=5.7						
ARCES	**ARCESS Array B**	**129.24**	**349**	PKP	**PKPdf**	**02 40 44.5**	**-1.0**
	2.0nm,0.6s,baz=40,slow=1.5,SNR=15						
FINES	**FINESS Array B**	**136.06**	**343**	PKhKP	PKPpre	02 40 46.1	
	0.3nm,0.6s,baz=139,slow=30,SNR=3.4						
FINES				PKP	**PKPdf**	**02 40 56.5**	**-2.0**
	1.1nm,0.7s,baz=111,slow=2.6,SNR=6.5						
FINES				SKPbc	**SKPbc**	**02 43 39.2**	**-4.4**
	1.6nm,0.9s,baz=32,slow=4.7,SNR=4.2						
NB2	**NORSAR Subarra**	**139.31**	**353**	PKP	PKPpre	02 40 56.6	
	comp=Z,1.2nm,1.0s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**139.31**	**353**	PKhKP	PKPpre	02 40 57.2	
	comp=Z,0.6nm,0.8s,baz=2.5,slow=2.6,SNR=4.4						
NOA				PKP	**PKPdf**	**02 41 04.7**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=17,slow=4.2,SNR=3.6						
AKASG	**Malin Array Be**	**143.24**	**331**	PKP	PKPab	02 41 08.5	-1.1
	comp=Z,7.3nm,0.4s,baz=43,slow=4.2,SNR=52						
KWP	**Kalwaria Pacla**	**146.83**	**335**	⇑*i*P	**PKPbc**	**02 41 20.8**	**+0.1**
BRTR	**Keskin Array B**	**146.94**	**312**	PKPbc	**PKPbc**	**02 41 20.6**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=138,slow=4.5,SNR=24						
BURAR	**Bucovina Array**	**147.28**	**330**	⇑*i*P	**PKPbc**	**02 41 22.5**	**+0.4**
TESR	**Tescani**	**147.37**	**327**	⇓*i*P	**PKPbc**	**02 41 21.7**	**-0.6**
CFR	**Carcaliu**	**147.47**	**324**	⇑*i*P	**PKPbc**	**02 41 22.2**	**-0.3**
VRI	**Vrincioaia**	**147.76**	**326**	⇓*i*P	**PKPbc**	**02 41 22.9**	**-0.4**
TIRR	**Tirgusor**	**147.77**	**323**	⇑*i*P	**PKPbc**	**02 41 22.9**	**-0.4**
UPC	**Upice**	**148.36**	**343**	⇓*e*PKP	**PKPbc**	**02 41 24.6**	**-0.1**
UPC				*ex*	**PKPab**	**02 41 30.3**	**+0.6**
CLL	**Collm**	**148.37**	**347**	⇓*i*PKPbc	**PKPbc**	**02 41 24.4**	**-0.2**
	comp=Z,9.0nm,0.8s						
CLL				⇑*i*PKPab	**PKPab**	**02 41 29.3**	**-0.4**
	comp=Z,6.0nm,0.7s						
DPC	**Dobruska-Polom**	**148.41**	**342**	⇓*i*PKP	**PKPbc**	**02 41 25.0**	**+0.1**
DPC				*ex*	**PKPab**	**02 41 30.7**	**+0.7**
MLR	**Muntele Rosu**	**148.42**	**327**	⇓*i*P	**PKPbc**	**02 41 24.3**	**-0.8**
MLR	**Muntele Rosu**	**148.42**	**327**	PKPbc	**PKPbc**	**02 41 24.3**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=322,slow=7.8,SNR=16						
BRG	**Berggiesshubel**	**148.56**	**345**	*e*P	**PKPbc**	**02 41 24.9**	**-0.2**
	comp=Z,4.9nm,0.8s						
BRG				*e*		02 41 30.5	
	comp=Z,2.4nm,0.6s						
PVCC	**Panska Ves**	**148.72**	**344**	⇓*e*PKP	**PKPbc**	**02 41 25.8**	**+0.3**
PVCC				*ex*	**PKPab**	**02 41 31.8**	**+0.6**
ARR	**Arges**	**149.17**	**328**	⇑*i*P	**PKPbc**	**02 41 27.6**	**+0.7**
PRU	**Pruhonice**	**149.23**	**344**	⇓*e*PKP	**PKPbc**	**02 41 26.5**	**-0.3**
NKC	**Novy Kostel**	**149.50**	**346**	⇓*e*PKP	**PKPbc**	**02 41 27.4**	**-0.1**
KHC	**Kasperske Hory**	**150.26**	**344**	⇓*i*PKP	**PKPbc**	**02 41 29.2**	**-0.1**
KHC				*ex*	x	02 41 38.1	
GERES	**GERESS Array B**	**150.50**	**344**	PKPbc	**PKPbc**	**02 41 28.6**	**-1.4**
	comp=Z,1.9nm,0.6s,baz=27,slow=2.4,SNR=20						
GERES				PKPab	**PKPab**	**02 41 38.1**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=28,slow=6.0,SNR=4.9						
CONA	**Conrad Observa**	**150.71**	**340**	⇑*i*PKiKP	**PKPbc**	**02 41 30.5**	**0.0**
	comp=Z,4.5nm,0.6s						
VTS	**Vitosha**	**151.85**	**325**	⇓*i*P	**PKPbc**	**02 41 32.6**	**-0.7**
WTTA	**Wattenberg**	**152.48**	**345**	⇑*i*pPKPdf	**PKPbc**	**02 41 34.1**	**-0.5**
	comp=Z,2.5nm,0.4s						
ESDC	**Sonseca Array**	**160.61**	**14**	PKPab	**PKPab**	**02 42 22.8**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=355,slow=4.4,SNR=4.5						
TORD	**Torodi Ar. Bea**	**172.33**	**179**	PKPab	**PKPab**	**02 43 13.7**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=152,slow=3.8,SNR=2.2						

*ISK **18** 02:39:21.8, 37.°18N×28.°10E, h16km, MD2.8*
*ISCJB **18** 02:39:22.2±0.5, 37.°15N±0.°04×28.°09E±0.°03, h0km, Error ellipse: s-maj=5.5km s-min=3.2km az=28.0*
*DDA **18** 02:39:22.6, 37.°15N×28.°09E, h8km, MD2.8*
*CSEM **18** 02:39:22.4±0.4, 37.°19N×28.°12E, h1km, MD2.8, Error ellipse: s-maj=10.3km s-min=6.1km az=35.0*
ISC 18 02:39:22.1±0.8, 37.°20N±0.°03×28.°09E±0.°02, h0km, n26, σ1s36/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.17**	**111**	*e*PG	**Pg**	**02 39 26.4**	**+1.1**
YER				*e*SG	**Sg**	**02 39 29.1**	**+1.6**
YER	**Yerkesik**	**0.17**	**111**	*e*Pg	**Pg**	**02 39 26.4**	**+1.1**
YER				*e*Sg	**Sg**	**02 39 29.1**	**+1.6**
AYDN	**Tasoluk**	**0.49**	**341**	*i* P	**Pb**	**02 39 33.6**	**-0.1**
AYDN				*i* S	**Sb**	**02 39 41.3**	**-0.3**
AYDN	**Tasoluk**	**0.49**	**341**	*i* P	**Pb**	**02 39 33.6**	**-0.1**
AYDN				*i* S	**Sb**	**02 39 41.3**	**-0.3**
TURN	**Turunc**	**0.52**	**128**	*i* P	**Pg**	**02 39 30.0**	**-2.2**
TURN				*i* S	**Sg**	**02 39 37.0**	**-2.0**
TURN	**Turunc**	**0.52**	**128**	*i* P	**Pg**	**02 39 30.0**	**-2.2**
TURN				*i* S	**Sg**	**02 39 37.0**	**-2.0**
DALY	**Dalyan (Mu¨la**	**0.59**	**130**	*e*PG	**Pg**	**02 39 33.7**	**+0.3**
DALY				*e*SG	**Sg**	**02 39 42.1**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.59**	**130**	*e*Pg	**Pg**	**02 39 33.7**	**+0.3**
DALY				*e*Sg	**Sg**	**02 39 42.1**	**+1.0**
BODT	**Bodrum**	**0.63**	**258**	*e*PG	**Pg**	**02 39 35.0**	**+0.7**
BODT				*e*SG

DENT	**Denizli**	**0.94**	**53**	*e*Pg	**Pg**	**02 39 40.6**	**+0.5**
IZM	**Izmir**	**1.37**	**332**	*e*PN	**Pg**	**02 39 47.3**	**-1.0**
IZM	**Izmir**	**1.37**	**332**	*e*Pn	**Pg**	**02 39 47.3**	**-1.0**
KULA	**Kula-Manisa**	**1.39**	**19**	*e*PN	**Pn**	**02 39 47.3**	**-1.6**
KULA	**Kula-Manisa**	**1.39**	**19**	*e*Pn	**Pn**	**02 39 47.3**	**-1.6**
AKAS	**Kas**	**1.55**	**128**	*i* P	**Pb**	**02 39 51.8**	**0.0**
AKAS				*i* S	**Sg**	**02 40 15.5**	**+3.5**
AKAS	**Kas**	**1.55**	**128**	*i* P	**Pb**	**02 39 51.8**	**0.0**
KHL	**Karahalli**	**1.60**	**45**	*e*PN	**Pn**	**02 39 49.6**	**-2.1**
KHL	**Karahalli**	**1.60**	**45**	*e*Pn	**Pn**	**02 39 49.7**	**-2.1**
AKHS	**Akhisar**	**1.69**	**353**	*i* P	**Pn**	**02 39 52.4**	**-0.6**
AKHS	**Akhisar**	**1.69**	**353**	*i* P	**Pn**	**02 39 52.4**	**-0.6**

IDC 18 02:58:11.0±2.2, 20°04S×177°22E, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.8/17, mbtmp3.8/4, MS3.4/3, Ms1 3.4/3, ms1mx3.1/27, Error ellipse: s-maj=136.7km s-min=29.8km az=156.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**12.16**	**62**	LR	LR	03 04 11.5	
	comp=Z,93nm,19.6s,baz=33,slow=30						
URZ	**Urewera**	**18.16**	**180**	LR	LR	03 07 45.9	
	comp=Z,154nm,21.3s,baz=91,slow=32						
CTA	**Charters Tower**	**29.07**	**265**	LR	LR	03 12 54.2	
	comp=Z,131nm,21.1s,baz=234,slow=30						
ASAR	**Alice Springs**	**40.26**	**257**	P	P	03 05 49.5	-0.5
	1.4nm,0.8s,baz=86,slow=8.0,SNR=13						
NVAR	**Mina Array Bea**	**83.84**	**45**	P	P	03 10 41.8	-1.0
	0.7nm,0.8s,baz=230,slow=8.1,SNR=6.7						
ILAR	**Eielson Array**	**88.93**	**15**	P	P	03 11 06.7	-0.3
	0.3nm,0.9s,baz=232,slow=4.4,SNR=3.9						
TXAR	**Lajitas Array**	**90.63**	**59**	P	P	03 11 16.3	+0.4
	1.1nm,0.8s,baz=227,slow=4.8,SNR=10						
GERES	**GERESS Array B**	**148.35**	**339**	PKPbc	PKPbc	03 18 00.3	+0.9
	0.4nm,0.5s,baz=35,slow=3.6,SNR=5.0						

*ISCJB **18** 03:07:23.2±0.7, 12°92N±0°06×88°82W±0°05, h55km, mb3.6/6, Error ellipse: s-maj=10.4km s-min=4.7km az=39.3*
*CASC **18** 03:07:24.1±1.1, 12°98N×88°80W, h32km±4km, ML4.1*
*IDC **18** 03:07:34.2±10.0, 13°63N×88°43W, h140km±60km, mb3.2/6, mb1 3.5/7, mb1mx3.3/23, mbtmp3.2/7, Error ellipse: s-maj=102.1km s-min=38.1km az=173.0*

ISC 18 03:07:23.3±1.1, 12°98N±0°09×88°79W±0°06, h55km, n25, σ1§37/29, mb3.5/6, 2C-8D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNVI	**San Vicente**	**0.63**	**356**	⇓*i*P	**Pn**	**03 07 37.0**	**+0.4**
VSM	**San Miguel**	**0.67**	**49**	⇓*i*P	**Pn**	**03 07 37.5**	**+0.3**
BLLM	**Bellamira**	**0.71**	**50**	⇓*i*P	**Pn**	**03 07 37.7**	**+0.2**
LBRS	**Las Brisas**	**0.79**	**342**	⇓*i*P	**Pn**	**03 07 39.2**	**+0.6**
SNET	**Serv Nac Est T**	**0.82**	**329**	⇓*i*P	**Pn**	**03 07 39.2**	**+0.2**
SNET				*e*S	**Sn**	**03 07 51.3**	**+0.9**
SNET				AML	AML	03 07 54.5	
	comp=Z,6μm,0.5s						
LFU	**La Fuente**	**0.82**	**338**	⇓*i*P	**Pn**	**03 07 39.6**	**+0.6**
LFU				*e*S	**Sn**	**03 07 52.4**	**+2.0**
BOQS	**Boqueron**	**0.89**	**328**	⇑*i*P	**Pn**	**03 07 40.4**	**+0.5**
BOQS				*e*S	**Sn**	**03 07 53.5**	**+1.4**
CAHU	**Cacacuatique**	**0.96**	**36**	⇓*i*P	**Pn**	**03 07 41.4**	**+0.5**
CNCH	**Conchagua**	**0.98**	**73**	*i* P	**Pn**	**03 07 40.9**	**-0.1**
CNCH				*e*S	**Sn**	**03 07 56.2**	**+2.2**
SBLS	**San Blas**	**1.17**	**316**	*i* P	**Pn**	**03 07 44.7**	**+1.0**
SNJE	**San Jose**	**1.18**	**318**	*i* P	**Pn**	**03 07 44.7**	**+0.9**
RTR	**El Retiro**	**1.23**	**318**	*i* P	**Pn**	**03 07 45.5**	**+1.0**
RBDL	**Robledal**	**1.42**	**322**	⇑*i*P	**Pn**	**03 07 47.9**	**+0.9**
MTO2	**Montecristo 2**	**1.51**	**339**	⇓*i*P	**Pn**	**03 07 49.0**	**+0.7**
CGA2	**Cerro Gallo 2**	**5.16**	**124**	*e*P	**Pn**	**03 08 40.5**	**+2.2**
QCR	**Quepos**	**5.75**	**127**	*e*P	**Pn**	**03 08 47.8**	**+1.6**
QCR				*e*S	Sn	03 09 45.4	-5.5
BUS	**Buena Vista**	**6.00**	**124**	*e*P	**Pn**	**03 08 52.5**	**+2.5**
ACR	**Cerro Adams**	**7.00**	**127**	*e*P	**Pn**	**03 09 05.1**	**+1.7**
TEIG	**Tepich**	**7.22**	**4**	P	**Pn**	**03 09 08.3**	**+2.1**
	comp=Z,2.5nm,0.3s,baz=168,slow=9.3,SNR=29						
TXAR	**Lajitas Array**	**21.34**	**322**	P	**P**	**03 12 07.1**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=133,slow=8.6,SNR=10						
PDAR	**Pinedale Array**	**34.69**	**33**	P	**P**	**03 14 07.4**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=135,slow=14,SNR=3.9						
NVAR	**Mina Array Bea**	**36.45**	**319**	P	**P**	**03 14 24.2**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=124,slow=7.7,SNR=2.8						
NVAR				PcP	**PcP**	**03 16 46.0**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=128,slow=3.2,SNR=4.4						
SCHQ	**Schefferville**	**45.16**	**18**	P	P	03 15 31.2	-3.3
	comp=Z,1.8nm,0.7s,baz=217,slow=20,SNR=3.2						
YKA	**Yellowknife Ar**	**52.76**	**345**	P	**P**	**03 16 30.4**	**-2.1**
	comp=Z,0.9nm,0.5s,baz=140,slow=7.7,SNR=32						
ILAR	**Eielson Arry**	**65.01**	**336**	P	**P**	**03 17 55.5**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=126,slow=5.1,SNR=7.3						

*AUST **18** 03:14:45.7, 5°49S×129°02E, h0km*
*ISCJB **18** 03:14:57.5±0.8, 5°82S±0°05×129°7E±0°1, h146km, mb3.2/2, Error ellipse: s-maj=18.0km s-min=6.3km az=10.8*
*IDC **18** 03:15:05.6±5.8, 5°83S×130°09E, h219km±56km, mb3.0/2, mb1 3.4/3, mb1mx3.0/17, mbtmp3.2/3, Error ellipse: s-maj=85.0km s-min=14.8km az=76.0*

ISC 18 03:14:58.0±1.0, 5°89S±0°06×129°8E±0°1, h146km, n10, σ2§08/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.85**	**40**	P	**Pn**	**03 15 57.5**	**+1.3**
	baz=4.1,SNR=45						
FAKI				S	**Sn**	**03 16 39.5**	**-1.8**
	baz=4.1,SNR=21						
MTN	**Manton Dam**	**7.04**	**169**	P	**Pn**	**03 16 40.9**	**+2.3**
	baz=7.6,SNR=28						
MTN				S	**Sn**	**03 17 55.9**	**-1.6**
	baz=7.6,SNR=12						
KDU	**Kakadu**	**7.26**	**159**	P	**Pn**	**03 16 43.3**	**+1.8**
	baz=8.0,SNR=33						
KDU				S	**Sn**	**03 17 59.7**	**-3.1**
	baz=8.0,SNR=12						
KNRA	**Kununurra**	**9.78**	**186**	P	**Pn**	**03 17 16.4**	**+1.2**
	baz=10,SNR=21						
KNRA				S	**Sn**	**03 18 59.7**	**-3.7**
	baz=10,SNR=4.6						
FITZ	**Fitzroy Crossi**	**12.79**	**198**	P	**Pn**	**03 17 56.0**	**+1.3**
	baz=13,SNR=19						
PALU	**Palau**	**13.96**	**20**	S	**Sn**	**03 20 42.8**	**-1.5**
	baz=14,SNR=4.6						
COEN	**Coen**	**15.44**	**122**	P	**P**	**03 18 31.5**	**+2.0**
	baz=16,SNR=5.4						
ASAR	**Alice Springs**	**18.12**	**168**	P	**Pn**	**03 19 01.5**	**+1.0**
	0.7nm,0.3s,baz=346,slow=10.0,SNR=56						
ASAR				S	**S**	**03 22 18.2**	**-0.9**
	0.2nm,0.3s,baz=356,slow=24,SNR=5.4						
MKAR	**Makanchi Array**	**67.18**	**327**	P	**P**	**03 25 36.8**	**+0.5**
	0.4nm,0.6s,baz=131,slow=7.2,SNR=6.3						
ILAR	**Eielson Array**	**92.44**	**25**	P	**P**	**03 27 50.6**	**-1.4**
	0.1nm,0.6s,baz=281,slow=4.7,SNR=3.2						

*UPP **18** 03:33:57.1, 57°70N×22°25E, h0km, ML2.3, Suspected Mining explosion.*
*ISCJB **18** 03:33:58.0±0.4, 57°79N±0°03×21°93E±0°04, h0km, Error ellipse: s-maj=4.8km s-min=3.2km az=173.1*
*HEL **18** 03:33:59.1±0.1, 57°76N×21°96E, h0km, ML2.3, ML2.3(UPP), Explosion*
*IDC **18** 03:33:59.6±1.0, 57°81N×22°05E, h0km, mb1 3.2/5, mb1mx3.0/28, mbtmp3.2/5, ML2.8/5, Error ellipse: s-maj=10.2km s-min=8.6km az=12.0*
*CSEM **18** 03:33:59.0±0.2, 57°74N×21°95E, h2km, ML2.3, Error ellipse: s-maj=5.5km s-min=3.1km az=155.0, Mining explosion.*
*NAO **18** 03:34:00.1±2.0, 57°90N×21°95E, ML2.2*
*BER **18** 03:34:02.2±5.0, 57°86N×21°89E, h0km±24km, ML2.2(NAO)*

ISC 18 03:33:57.7±0.8, 57°78N±0°03×21°93E±0°03, h0km, n83, σ1§53/105, 2C, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.24**	**128**	*e*P	**Pg**	**03 34 03.1**	**+0.8**
SLIT				*e*S	**Sg**	**03 34 05.8**	**+0.3**
	SNR=90						
SLIT				S	**Sg**	**03 34 05.7**	**+0.3**
MTSE	**Matsula**	**1.37**	**46**	*e*P	**Pg**	**03 34 23.5**	**-0.4**
MTSE				*e*S	**Sg**	**03 34 41.2**	**-0.4**
MTSE	**Matsula**	**1.37**	**46**	P	**Pg**	**03 34 23.5**	**-0.4**
MTSE				S	**Sg**	**03 34 41.2**	**-0.4**
GOTU	**Gotland**	**1.81**	**269**	⇑*e*P	**Pn**	**03 34 31.4**	**+1.4**
GOTU	**Gotland**	**1.81**	**269**	⇑P	**Pn**	**03 34 31.4**	**+1.4**
NYNU	**Nynaeshamn**	**2.41**	**302**	*e*P	**Pn**	**03 34 40.1**	**+1.8**
NYNU	**Nynaeshamn**	**2.41**	**302**	P	**Pn**	**03 34 40.0**	**+1.8**
NRTU	**Norrtaelje**	**2.57**	**319**	*e*P	**Pn**	**03 34 42.4**	**+1.9**
NRTU	**Norrtaelje**	**2.57**	**319**	P	**Pn**	**03 34 42.4**	**+1.9**
AAL	**Aland**	**2.61**	**338**	*e*P	**Pn**	**03 34 42.2**	**+1.2**
AAL				*e*S	**Sn**	**03 35 14.9**	**+1.5**
AAL	**Aland**	**2.61**	**338**	P	**Pn**	**03 34 42.2**	**+1.2**
AAL				S	**Sn**	**03 35 14.9**	**+1.5**
VSU	**Vasula**	**2.64**	**73**	Pn	**Pn**	**03 34 42.8**	**+1.3**
VSU				Sn	**Sb**	**03 35 18.0**	**-0.7**
VSU	**Vasula**	**2.64**	**73**	Pn	**Pn**	**03 34 42.8**	**+1.3**
VSU				Sn	**Sb**	**03 35 18.0**	**-0.7**
VSU	**Vasula**	**2.64**	**73**	*e*P	**Pn**	**03 34 42.8**	**+1.3**
VSU				*e*SB	**Sb**	**03 35 19.0**	**+0.3**
VSU	**Vasula**	**2.64**	**73**	P	**Pn**	**03 34 42.8**	**+1.3**
VSU				Sn	**Sb**	**03 35 18.0**	**-0.7**
	SNR=50						
MEF	**Metsahovi**	**2.76**	**26**	*e*PB	**Pb**	**03 34 46.9**	**-0.9**
MEF				*e*S	**Sn**	**03 35 17.9**	**+0.7**
MEF				MSG		03 35 25.9	
	comp=Z,16nm,0.1s						
MEF	**Metsahovi**	**2.76**	**26**	*e*P	**Pb**	**03 34 46.9**	**-0.9**
	SNR=50						
MEF				S	**Sn**	**03 35 17.8**	**+0.7**
VIKU	**Vikbolandet**	**2.87**	**287**	*e*P	**Pn**	**03 34 46.3**	**+1.6**
VIKU	**Vikbolandet**	**2.87**	**287**	P	**Pn**	**03 34 46.2**	**+1.6**
ASPU	**Aespoe**	**2.89**	**265**	*e*P	**Pn**	**03 34 47.5**	**+2.5**
ASPU	**Aespoe**	**2.89**	**265**	P	**Pn**	**03 34 47.4**	**+2.5**
GRAU	**Graesoe**	**3.11**	**327**	*e*P	**Pn**	**03 34 49.3**	**+1.4**
GRAU	**Graesoe**	**3.11**	**327**	P	**Pn**	**03 34 49.3**	**+1.4**
FLYU	**Flymyra**	**3.16**	**320**	*e*P	**Pn**	**03 34 50.3**	**+1.7**
FLYU	**Flymyra**	**3.16**	**320**	P	**Pn**	**03 34 50.2**	**+1.7**
OSKU	**Oskarshamn**	**3.20**	**262**	*e*P	**Pn**	**03 34 50.8**	**+1.5**
OSKU	**Oskarshamn**	**3.20**	**262**	P	**Pn**	**03 34 50.7**	**+1.5**
ESKU	**Eskilstuna**	**3.25**	**299**	*e*P	**Pn**	**03 34 51.9**	**+1.9**
ESKU	**Eskilstuna**	**3.25**	**299**	P	**Pn**	**03 34 51.8**	**+1.9**
RAF	**Rauma**	**3.26**	**359**	*e*P	**Pn**	**03 34 52.3**	**+2.4**
RAF				MSG		03 35 42.7	
	comp=Z,6.2nm,0.1s						
RAF	**Rauma**	**3.26**	**359**	P	**Pn**	**03 34 52.3**	**+2.4**
BACU	**Backbrunna**	**3.26**	**312**	*e*P	**Pn**	**03 34 51.9**	**+1.9**
BACU	**Backbrunna**	**3.26**	**312**	P	**Pn**	**03 34 51.9**	**+1.9**
PVF	**Pernaja**	**3.44**	**34**	*e*P	**Pn**	**03 34 54.5**	**+2.1**
PVF				MSG		03 35 54.7	
	comp=Z,6.5nm,0.2s						
PVF	**Pernaja**	**3.44**	**34**	P	**Pn**	**03 34 54.5**	**+2.1**
LNKU	**Linkoeping**	**3.45**	**280**	*e*P	**Pn**	**03 34 54.4**	**+1.7**
LNKU	**Linkoeping**	**3.45**	**280**	P	**Pn**	**03 34 54.3**	**+1.7**
OSTU	**Oestervaala**	**3.49**	**317**	*e*P	**Pn**	**03 34 54.9**	**+1.7**
OSTU	**Oestervaala**	**3.49**	**317**	P	**Pn**	**03 34 54.9**	**+1.7**
BLEU	**Blekinge**	**3.65**	**249**	*e*P	**Pn**	**03 34 56.4**	**+1.0**
BLEU	**Blekinge**	**3.65**	**249**	P	**Pn**	**03 34 56.4**	**+1.0**
VXJU	**Vaexsjoe**	**3.88**	**260**	*e*P	**Pn**	**03 35 00.1**	**+1.5**
VXJU	**Vaexsjoe**	**3.88**	**260**	P	**Pn**	**03 35 00.1**	**+1.5**
IGGU	**Iggoen**	**3.90**	**325**	*e*P	**Pn**	**03 35 00.8**	**+2.0**
IGGU	**Iggoen**	**3.90**	**325**	P	**Pn**	**03 35 00.8**	**+2.0**
ASKU	**Askersund**	**3.91**	**290**	*e*P	**Pn**	**03 35 01.3**	**+2.3**
ASKU	**Askersund**	**3.91**	**290**	P	**Pn**	**03 35 01.2**	**+2.3**
VJF	**Virojoki**	**4.01**	**44**	*e*P	**Pn**	**03 35 02.1**	**+1.9**
VJF				MSG		03 36 11.7	
	comp=Z,6.7nm,0.2s						
VJF	**Virojoki**	**4.01**	**44**	P	**Pn**	**03 35 02.1**	**+1.9**
NRAU	**Nora**	**4.02**	**299**	*e*P	**Pn**	**03 35 02.2**	**+1.7**
NRAU	**Nora**	**4.02**	**299**	P	**Pn**	**03 35 02.2**	**+1.7**
FALU	**Falun**	**4.16**	**313**	*e*P	**Pn**	**03 35 03.8**	**+1.4**
FALU	**Falun**	**4.16**	**313**	P	**Pn**	**03 35 03.8**	**+1.4**
FIA0	**FINESS Array S**	**4.24**	**28**	Pn	**Pn**	**03 35 04.6**	**+1.2**
	baz=212,slow=11						
FIA0				Pg	**Pb**	**03 35 13.9**	**+0.9**
	baz=220,slow=14						
FIA0				Sn	**Sn**	**03 35 54.2**	**+0.7**
	baz=216,slow=22						
FIA0				Lg	Lg	03 36 09.6	
	baz=225,slow=37						
FIA0	**FINESS Array S**	**4.24**	**28**	Pn	**Pn**	**03 35 04.6**	**+1.2**
	baz=212,slow=11						
FIA0				Pg	**Pb**	**03 35 13.9**	**+0.9**
	baz=220,slow=14						
FIA0				Sn	**Sn**	**03 35 54.2**	**+0.7**
	baz=216,slow=22						
FIA0				Lg	Lg	03 36 09.6	
	baz=225,slow=37						
FIA0	**FINESS Array S**	**4.24**	**28**	*e*P	**Pn**	**03 35 04.8**	**+1.4**
FIA0	**FINESS Array S**	**4.24**	**28**	P	**Pn**	**03 35 04.8**	**+1.4**
FIA0				Sn	**Sn**	**03 35 54.2**	**+0.7**
	baz=216,slow=21,SNR=50						
FIA0				Lg	Lg	03 36 09.6	
	baz=225,slow=28,SNR=6.6						
FINES	**FINESS Array B**	**4.24**	**28**	Pn	**Pn**	**03 35 05.2**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=206,slow=12,SNR=31						
FINES				Pg	**Pb**	**03 35 15.0**	**+2.0**
	comp=Z,1.1nm,0.3s,baz=202,slow=12,SNR=19						
FINES				Sn	**Sn**	**03 35 55.7**	**+2.2**
	comp=Z,0.7nm,0.3s,baz=215,slow=20,SNR=3.3						
FINES				Lg	Lg	03 36 10.2	
	comp=Z,1.9nm,0.3s,baz=218,slow=25,SNR=12						
FKPU	**Falk**	**4.39**	**278**	P	**Pn**	**03 35 07.4**	**+1.9**
KEF	**Keuruu**	**4.64**	**17**	*e*P	**Pn**	**03 35 11.5**	**+2.5**
KEF				MSG		03 36 26.1	
	comp=Z,3.8nm,0.2s						
KEF	**Keuruu**	**4.64**	**17**	P	**Pn**	**03 35 11.5**	**+2.5**
BSD	**Bornholm Skovb**	**4.72**	**239**	*i* P	**Pn**	**03 35 10.1**	**0.0**
BSD				*i* S	**Sn**	**03 36 04.4**	**-1.0**
	comp=Z,2.7nm,0.3s,SNR=49						
KAF	**Kangasniemi**	**4.87**	**25**	*e*P	**Pn**	**03 35 13.7**	**+1.5**
KAF	**Kangasniemi**	**4.87**	**25**	P	**Pn**	**03 35 13.6**	**+1.5**
HFS	**Hagfors**	**4.88**	**302**	Pn	**Pn**	**03 35 13.7**	**+1.5**
	baz=135,slow=14						
HFS				Sn	**Sn**	**03 36 09.4**	**+0.2**
	baz=107,slow=28						
HFS				Lg	Lg	03 36 29.8	
	baz=120,slow=28						
HFS	**Hagfors**	**4.88**	**302**	Pn	**Pn**	**03 35 13.7**	**+1.5**
	baz=135,slow=14						
HFS				Sn	**Sn**	**03 36 09.4**	**+0.2**
	baz=107,slow=28						
HFS				Lg	Lg	03 36 29.8	
	baz=120,slow=28						
HFS	**Hagfors**	**4.88**	**302**	Pn	**Pn**	**03 35 13.7**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=121,slow=17,SNR=64						
HFS				Sn	**Sn**	**03 36 11.1**	**+1.8**
	comp=Z,0.5nm,0.3s,baz=118,slow=25,SNR=3.7						
HFS				Lg	Lg	03 36 32.5	
	comp=Z,0.7nm,0.3s,baz=119,slow=31,SNR=5.4						
HFS	**Hagfors**	**4.88**	**302**	Pn	**Pn**	**03 35 13.7**	**+1.5**
	baz=135,slow=14,SNR=50						
HFS				Sn	**Sn**	**03 36 09.4**	**+0.2**
	baz=107,slow=26,SNR=50						
HFS				Lg	Lg	03 36 29.8	
	baz=120,slow=26,SNR=50						
NB2	**NORSAR Subarra**	**6.37**	**305**	Pn	**Pn**	**03 35 33.3**	**+0.5**
	baz=126,slow=14						
NB2				Lg	Lg	03 37 18.6	
	baz=119,slow=37						
NB2	**NORSAR Subarra**	**6.37**	**305**	Pn	**Pn**	**03 35 33.3**	**+0.5**
	baz=126,slow=14						
NB2				Lg	Lg	03 37 18.6	
	baz=119,slow=37						
NB2	**NORSAR Subarra**	**6.37**	**305**	Pn	**Pn**	**03 35 33.3**	**+0.5**
	baz=126,slow=13,SNR=50						
NB2				Lg	Lg	03 37 18.5	
	baz=119,slow=35,SNR=3.1						
NOA	**NORSAR Array B**	**6.37**	**305**	Pn	**Pn**	**03 35 33.5**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=119,slow=13,SNR=11						
NOA				Sn	**Sn**	**03 36 44.4**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=111,slow=17,SNR=2.2						
NOA				Lg	Lg	03 37 18.4	
	comp=Z,0.8nm,0.3s,baz=118,slow=15,SNR=5.3						
AKASG	**Malin Array Be**	**8.27**	**146**	Pn	**Pn**	**03 35 56.8**	**-2.0**
	comp=Z,0.4nm,0.3s,baz=352,slow=12,SNR=2.9						
KMY	**Karmoy**	**8.86**	**286**	*e*P	**Pn**	**03 36 06.2**	**-0.6**
KMY	**Karmoy**	**8.86**	**286**	*e*P	**Pn**	**03 36 06.2**	**-0.6**
MOR8	**Moi Rana**	**9.12**	**340**	*e*P	**Pn**	**03 36 11.5**	**+1.0**
MOR8	**Moi Rana**	**9.12**	**340**	*e*P	**Pn**	**03 36 11.5**	**+1.0**
ARA0	**ARCESS Array S**	**11.91**	**6**	Pn	Pn	03 36 45.5	-3.0
	baz=185,slow=14						
ARA0	**ARCESS Array S**	**11.91**	**6**	P	Pn	03 36 45.5	-3.0
	baz=185,slow=14						
ARCES	**ARCESS Array B**	**11.91**	**6**	Pn	Pn	03 36 45.9	-2.6
	comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=12						
ARCES				Sn	Sn	03 38 53.6	-8.3
	comp=Z,0.1nm,0.3s,baz=192,slow=22,SNR=2.2						
SPA0	**Spitsbergen Ar**	**20.58**	**357**	P	**P**	**03 38 35.1**	**-2.6**
	baz=151,slow=18						
SPA0	**Spitsbergen Ar**	**20.58**	**357**	P	**P**	**03 38 35.1**	**-2.6**
	baz=151,slow=18						

*ISCJB **18** 03:34:00.8±0.4, 37°05N±0°04×71°85E±0°07, h142km, mb3.4/7, Error ellipse: s-maj=8.9km s-min=3.7km az=154.0*
*NNC **18** 03:34:00.3±11.0, 37°32N×70°79E, h0km, mb3.9, mpv3.8, Error ellipse: s-maj=93.8km s-min=67.8km az=166.0*
*IDC **18** 03:34:02.3±4.9, 37°12N×72°09E, h151km±42km, mb3.2/7, mb1 3.3/13, mb1mx3.1/32, mbtmp3.2/13, Error ellipse: s-maj=50.7km s-min=33.0km az=136.0*

ISC 18 03:34:01.5±0.6, 37°07N±0°06×71°97E±0°08, h142km, n47, σ1§94/47, mb3.6/7, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.24**	**181**	P	Pn	03 34 57.6	+5.9
CEP				S	Sn	03 35 37.0	+6.5
CHCP	**Chirah Chowk**	**3.56**	**162**	P	Pn	03 35 02.5	+6.7
THW	**Thamme Wali**	**4.27**	**183**	P	Pn	03 35 10.2	+5.1
SARP	**Sargodha**	**5.17**	**173**	P	Pn	03 35 20.8	+3.8
AML	**Almayashu**	**5.23**	**14**	P	**Pn**	**03 35 18.6**	**+0.5**
	SNR=146						
UCH	**Uchtor**	**5.51**	**20**	P	**Pn**	**03 35 22.9**	**+1.0**
	SNR=7.6						
DLH	**Dalhousie**	**5.58**	**143**	*e*PKP	**Pn**	**03 35 25.0**	**+2.3**
DLH				*e*S	**Sn**	**03 36 25.0**	**-1.1**
KZA	**Kyzart**	**5.61**	**26**	P	**Pn**	**03 35 23.6**	**+0.4**
	SNR=10						
EKS2	**Erkin-Say**	**5.76**	**13**	P	**Pn**	**03 35 26.2**	**+1.4**
	SNR=14						
AAK	**Ala-Archa**	**5.89**	**18**	P	**Pn**	**03 35 27.5**	**+0.9**
	SNR=24						
AAK	**Ala-Archa**	**5.89**	**18**	P	**Pn**	**03 35 27.4**	**+0.8**
	8.9nm,0.3s,baz=208,slow=1.0,SNR=66						
AAK				S	**Sn**	**03 36 31.1**	**-2.1**
	1.9nm,0.3s,baz=308,slow=23,SNR=17						
DHRM	**DHARAMSHALA**	**5.98**	**142**	*e*PKP	Pn	03 35 31.6	+3.5
DHRM				*e*S	**Sn**	**03 36 37.0**	**+1.3**
DHRM				AML	AML	03 36 40.6	
	comp=N,369nm,0.3s						
DHRM				AML	AML	03 36 42.9	
	comp=E,620nm,0.4s						
KBK	**Karagaybulak**	**6.03**	**21**	P	**Pn**	**03 35 30.7**	**+2.1**
	SNR=5.3						
ULHL	**Ulahol**	**6.13**	**31**	P	**Pn**	**03 35 31.5**	**+1.6**
	SNR=7.0						
KK31	**Karatay Array**	**6.13**	**350**	Pn	**Pn**	**03 35 29.9**	**+0.2**
	comp=E,7.7nm,0.5s,baz=172,slow=13,SNR=156						
KK31				⇑Sn	**Sn**	**03 36 33.4**	**-5.5**
	comp=E,35nm,0.4s,baz=180,slow=24,SNR=34						
CHMS	**Chumysh**	**6.30**	**19**	P	**Pn**	**03 35 33.1**	**+1.1**
	SNR=9.7						
TKM2	**Tokmak 2**	**6.47**	**24**	⇓Pn	**Pn**	**03 35 35.3**	**+0.8**
	comp=E,2.0nm,0.5s						
TKM2				⇑Sn	Sn	03 37 02.1	+15
	comp=E,5.2nm,0.6s						
USP	**Ospenovka**	**6.49**	**17**	P	**Pn**	**03 35 36.1**	**+1.5**
	SNR=6.6						
SMLA	**Simla**	**7.32**	**142**	*i* P	**Pn**	**03 35 48.9**	**+3.1**
SMLA				*e*S	**Sn**	**03 37 05.8**	**-1.8**
SMLA				AML	AML	03 37 08.7	
	comp=E,143nm,0.4s						
SMLA				AML	AML	03 37 10.7	
	comp=N,136nm,0.1s						
DDI	**Dehra Dun**	**8.42**	**141**	*e*S	**Sn**	**03 37 34.0**	**-0.1**
DDI				AML	AML	03 37 36.4	
	comp=N,505nm,0.1s						
DDI				AML	AML	03 37 36.7	
	comp=E,581nm,0.3s						
KHET	**Khetri**	**9.53**	**159**	*e*S	**Sn**	**03 37 55.6**	**-5.3**
KHET				AML	AML	03 38 01.6	
	comp=E,126nm,0.2s						
KHET				AML	AML	03 38 02.4	
	comp=N,118nm,0.1s						
KUDL	**Kundal**	**9.68**	**156**	*e*S	**Sn**	**03 37 59.3**	**-5.1**
AGRA	**Agra**	**11.03**

LBOS		**2.26**	**35**	*i* P	Pb	03 36 30.4	-1.0
LBOS				*i* S	Sb	03 37 01.1	+1.3
BDHA	**Al Bayda'**	**2.53**	**40**	*i* P	Pb	03 36 34.2	-1.6
BDHA				*i* S	Sb	03 37 07.6	+0.1
BDHA				AML	AML	03 37 19.0	
	comp=E,384nm,0.7s						
BDHA	**Al Bayda'**	**2.53**	**40**	*i* P	Pb	03 36 34.2	-1.7
BDHA				*i* S	Sb	03 37 07.6	+0.1
	comp=E,192nm,0.7s						
DHBB	**Dhamar BB**	**2.59**	**10**	*i* P	Pn	03 36 30.2	-2.2
DHBB	**Dhamar BB**	**2.59**	**10**	*i* P	Pn	03 36 30.2	-2.2

ISCJB ***18*** *03:39:33.6±0.3,33°.79N±0°.03×118°.42W±0°.03,h10km, mb4.6/40,MS4.0/23,Error ellipse: s-maj=4.8km s-min=3.2km az=40.1*

IDC ***18*** *03:39:34.8±0.6,33°.83N×118°.31W,h0km,mb4.3/16, mb1 4.4/23,mb1mx4.3/33,mbtmp4.2/23,ML3.8/7,MS3.9/29, Ms1 3.9/29,ms1mx3.8/38,Error ellipse: s-maj=10.8km s-min=7.6km az=56.0*

BJI ***18*** *03:39:35.0,33°.90N×118°.30W,h13km,mB5.2/11, mb4.9/12,Ms5.1/6,Ms7 4.6/6*

NEIC ***18*** *03:39:36.3,33°.94N×118°.34W,h14km,mb5.0/23, MW4.7(PAS),After PAS.*

NEIC Some windows broken at Lennox and Long Beach. Felt [V] at Bell, Bellflower, Carson, Compton, Downey, Gardena, Harbor City, Hawaiian Gardens, Huntington Park, Inglewood, Lakewood, Lawndale, Lomita, Long Beach, Los Angeles, Maywood, Paramount, Redondo Beach, Seal Beach, Signal Hill, South Gate, Sunset Beach, Torrance and Wilmington and [IV] in much of Los Angeles and Orange Counties. Felt as far as Bishop, the San Diego area, and in parts of the San Francisco Bay area. Also felt at North Las Vegas, Nevada and at Bullhead City and Phoenix, Arizona. Felt [III] at Rosarito and [II] at Tijuana, Baja California, Mexico.

ISC 18 03:39:35.9±0.5,33°.93N±0°.01×118°.35W±0°.02,h9km±3km, n599,σ1°53/450,mb4.7/39,MS4.0/23,181C-202D, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FMP	**Fort Macarthur**	**0.22**	**169**	⇓P	**Pg**	**03 39 40.8**	**+0.5**
FMP	baz=0.2,SNR=1000			⇑S	**Sg**	**03 39 44.4**	**+1.1**
PASC	**Pasadena Art C**	**0.28**	**29**	*e*Pg	**Pg**	**03 39 41.3**	**-0.2**
DECC	**Green Verdugo**	**0.32**	**2**	P	**Pg**	**03 39 42.3**	**+0.1**
DECC	baz=0.3,SNR=1000			⇑S	**Sg**	**03 39 47.3**	**+0.7**
MWC	**Mount Wilson**	**0.38**	**39**	*e*Pg	**Pg**	**03 39 43.2**	**-0.2**
MWC				*e*S	**Sg**	**03 39 48.8**	**+0.3**
CIS	**Catalina Islan**	**0.52**	**185**	⇑P	**Pg**	**03 39 46.4**	**+0.4**
CIS	baz=0.5,SNR=1000			⇑S	**Sg**	**03 39 53.8**	**+1.0**
BLG	**Laguna Peak**	**0.62**	**287**	P	**Pg**	**03 39 47.5**	**-0.4**
BLG	baz=0.6,SNR=699			⇓S	**Sg**	**03 39 57.1**	**+1.0**
BFSC	**Mount Baldy Ra**	**0.65**	**61**	P	**Pg**	**03 39 47.9**	**-0.5**
OSI	**Osito Adit**	**0.75**	**336**	*e*Pg	**Pg**	**03 39 50.4**	**0.0**
OSI	**Osito Adit**	**0.75**	**336**	⇑P	**Pg**	**03 39 50.3**	**-0.1**
OSI	baz=0.7,SNR=786			⇓S	**Sb**	**03 40 01.4**	**-0.3**
SCI	**San Clemente I**	**0.96**	**190**	P	**Pb**	**03 39 53.6**	**-1.0**
SCI	baz=1.0,SNR=1000			⇑S	**Sg**	**03 40 08.1**	**+1.3**
EDW2	**Edwards Air Fo**	**0.99**	**17**	⇓P	**Pb**	**03 39 54.0**	**-1.3**
EDW2	baz=1.0,SNR=1000			⇓S	**Sn**	**03 40 09.1**	**-1.2**
MURC	**Murrieta**	**1.01**	**109**	P	**Pb**	**03 39 53.6**	**-1.9**
MURC	baz=1.0,SNR=1000			⇓S	**Sg**	**03 40 09.0**	**+0.6**
BSC	**Santa Cruz Isl**	**1.07**	**274**	⇑P	**Pb**	**03 39 55.2**	**-1.5**
BSC	baz=1.1,SNR=586			⇓S	**Sn**	**03 40 11.6**	**-0.6**
BBRC	**Big Bear Solar**	**1.23**	**74**	P	**Pn**	**03 39 58.1**	**-1.3**
BBRC	baz=1.2,SNR=1000			⇑S	**Sn**	**03 40 15.3**	**-1.1**
SBC	**Santa Barbara**	**1.25**	**295**	⇑P	**Pn**	**03 39 58.6**	**-0.9**
SBC	baz=1.2,SNR=212			⇓S	**Sg**	**03 40 16.3**	**+0.4**
ARVC	**Arvin**	**1.26**	**342**	⇓P	**Pn**	**03 39 58.8**	**-0.9**
ARVC	baz=1.3,SNR=1000			⇑Sb	**Sg**	**03 40 18.1**	**+1.6**
RRX	**Edison Barstow**	**1.46**	**49**	⇓P	**Pn**	**03 40 01.9**	**-0.6**
RRX	baz=1.4,SNR=502			⇑Sb	**Sg**	**03 40 22.6**	**-0.3**
109C	**Camp Elliot, M**	**1.47**	**135**	P	**Pn**	**03 40 00.4**	**-2.1**
PKM	**Peak Mountain**	**1.55**	**309**	P	**Pn**	**03 40 03.5**	**-0.4**
PKM	baz=1.5,SNR=699			⇓Sb	**Sb**	**03 40 25.0**	**+0.2**
PFO	**Pinyon Flat Ob**	**1.61**	**101**	Pn	**Pn**	**03 40 03.3**	**-1.3**
PFO	55μm,0.6s **Pinyon Flat Ob**	**1.61**	**101**	*e*Pn	**Pn**	**03 40 03.1**	**-1.5**
PFO				*e*S	**Sn**	**03 40 23.8**	**-1.7**
PFO				Lg	Lg	03 40 25.0	
PFO				Rg	Rg	03 40 32.5	
PFO	**Pinyon Flat Ob**	**1.61**	**101**	Pn	**Pn**	**03 40 03.1**	**-1.5**
PFO	759nm,0.3s,baz=286,slow=12,SNR=2311			Lg	Lg	03 40 25.0	
PFO	2μm,0.3s,baz=297,slow=9.0,SNR=8.8			LR	LR	03 40 32.2	
PFO	comp=Z,1μm,20.9s,baz=314,slow=37			Rg	Rg	03 40 32.5	
PFO	5μm,0.3s,baz=17,slow=20,SNR=22 **Pinyon Flat Ob**	**1.61**	**101**	P	**Pn**	**03 40 03.2**	**-1.5**
PFO	baz=1.6,SNR=1000			⇑S	**Sb**	**03 40 25.3**	**-1.0**
LRMC	baz=1.6 **Laurel Mountai**	**1.64**	**19**	⇓P	**Pn**	**03 40 04.6**	**-0.4**
LRMC	baz=1.6,SNR=1000			⇓S	**Sn**	**03 40 25.6**	**-0.7**
ISA	**Isabella**	**1.73**	**357**	*e*Pn	**Pn**	**03 40 06.0**	**-0.3**
ISA				*e*S	**Sb**	**03 40 28.9**	**-1.0**
ISA	**Isabella**	**1.73**	**357**	⇓P	**Pn**	**03 40 06.1**	**-0.2**
ISA	baz=1.7,SNR=1000			⇓S	**Sn**	**03 40 28.2**	**-0.4**
GSC	**Goldstone**	**1.87**	**42**	*e*Pn	**Pn**	**03 40 07.7**	**-0.4**
GSC				*e*S	**Sg**	**03 40 35.4**	**-0.6**
GSC	**Goldstone**	**1.87**	**42**	⇓P	**Pn**	**03 40 07.8**	**-0.4**
GSC	baz=1.9,SNR=1000			⇑S	**Sn**	**03 40 31.5**	**-0.5**
BAR	**Barrett**	**1.88**	**131**	*e*Pn	**Pn**	**03 40 06.4**	**-1.8**
BAR				*e*S	**Sn**	**03 40 28.8**	**-3.2**
HEC	**Hector,Ludlow**	**1.90**	**61**	⇑P	**Pn**	**03 40 07.5**	**-1.0**
HEC	baz=1.9,SNR=1000			⇓Sb	**Sg**	**03 40 35.4**	**-1.4**
MONP	**Monument Peak**	**1.92**	**122**	P	**Pn**	**03 40 07.6**	**-1.3**
MONP	baz=1.9,SNR=1000			⇓S	**Sn**	**03 40 32.6**	**-0.6**
SMMC	**Simmler**	**1.94**	**316**	⇓P	**Pn**	**03 40 09.3**	**+0.2**
BELC	baz=1.9,SNR=53 **Belle Mtn. Jos**	**1.95**	**87**	P	**Pn**	**03 40 08.2**	**-1.2**
BELC	baz=1.9,SNR=1000			⇑Sb	**Sg**	**03 40 37.4**	**-1.3**
VES	baz=1.9 **Vestal, Richgr**	**2.00**	**343**	⇓P	**Pn**	**03 40 09.2**	**-0.7**
MPMC	baz=2.0,SNR=526 **Manual Prospec**	**2.24**	**18**	⇓P	**Pn**	**03 40 13.1**	**-0.3**
DVTC	baz=2.2,SNR=529 **Desert V Tower**	**2.27**	**123**	⇓P	**Pn**	**03 40 12.5**	**-1.1**
DVTC	baz=2.3,SNR=539			⇑S	**Sn**	**03 40 41.8**	**+0.1**
SWSC	baz=2.3 **Sam W. Stewart**	**2.35**	**114**	⇑P	**Pn**	**03 40 12.3**	**-2.3**
SWSC	baz=2.3,SNR=972			⇑Sb	**Sb**	**03 40 48.7**	**+1.3**
GMRC	baz=2.3 **Granite Mounta**	**2.38**	**68**	P	**Pn**	**03 40 13.9**	**-1.3**
GMRC	baz=2.4,SNR=822			⇑Sb	**Sb**	**03 40 49.9**	**+1.4**
DAC	baz=2.4 **Darwin (Calif)**	**2.42**	**15**	*e*Pn	**Pn**	**03 40 16.1**	**+0.2**
DAC				*e*S	**Sn**	**03 40 47.0**	**+1.2**
BC3	**Big Chuckawall**	**2.42**	**96**	P	**Pn**	**03 40 14.0**	**-1.8**
BC3	baz=2.4,SNR=559			⇑Sb	**Sg**	**03 40 51.9**	**-1.9**
RCTC	baz=2.4 **Rector, Farmer**	**2.49**	**343**	P	**Pn**	**03 40 16.3**	**-0.2**
RCTC	baz=2.5,SNR=76			⇓S	**Sn**	**03 40 46.3**	**-0.7**
TUQ	baz=2.5 **Turquoise Moun**	**2.50**	**52**	⇓P	**Pn**	**03 40 16.1**	**-0.7**
TUQ	baz=2.5,SNR=256			⇑Sb	**Sg**	**03 40 54.3**	**-1.9**
CWC	baz=2.5 **Cottonwood Cre**	**2.52**	**5**	⇑P	**Pn**	**03 40 17.3**	**+0.2**
SHOC	baz=2.5,SNR=137 **Shoshone**	**2.60**	**40**	⇑P	**Pn**	**03 40 17.8**	**-0.4**
IRM	baz=2.6,SNR=57 **Iron Mountain**	**2.66**	**84**	⇓P	**Pn**	**03 40 17.4**	**-1.7**
FURC	baz=2.7,SNR=110 **Furnace Creek,**	**2.81**	**25**	⇑P	**Pn**	**03 40 20.8**	**-0.2**
LDFC	baz=2.8,SNR=124 **Landfair**	**2.91**	**66**	*e*Pn	**Pn**	**03 40 21.3**	**-1.2**
LDFC				*e*S	**Sn**	**03 40 55.6**	**-2.0**
GLA	**Glamis**	**3.07**	**106**	*e*Pn	**Pn**	**03 40 23.0**	**-1.6**
GLA				*e*S	**Sg**	**03 41 12.2**	**-2.2**
GLA	**Glamis**	**3.07**	**106**	⇑P	**Pn**	**03 40 22.6**	**-2.0**
TIN	baz=3.1,SNR=48 **Tinemaha**	**3.12**	**2**	⇓P	**Pn**	**03 40 26.2**	**+0.8**
GRAC	baz=3.1,SNR=24 **Grapevine Rang**	**3.17**	**14**	⇑P	**Pn**	**03 40 26.9**	**+0.9**
Y12C	baz=3.2,SNR=39 **Blythe**	**3.19**	**92**	⇓P	**Pn**	**03 40 24.3**	**-1.9**
NEE2	baz=3.2,SNR=55 **Needles Airpor**	**3.19**	**74**	⇓P	**Pn**	**03 40 25.5**	**-0.8**
PDMCI	baz=3.2 **Parker Dam,Lak**	**3.51**	**83**	⇓P	**Pn**	**03 40 29.2**	**-1.4**
MLAC	baz=3.5,SNR=93 **Mammoth Lakes**	**3.72**	**354**	⇑P	**Pn**	**03 40 35.4**	**+1.7**
SAO	baz=3.7,SNR=57 **San Andreas Ge**	**3.80**	**319**	*e*Pn	**Pn**	**03 40 33.9**	**-0.7**
W13A	**Hualapai Mount**	**3.86**	**71**	⇑P	**Pn**	**03 40 34.8**	**-0.9**
CMB	baz=3.8,SNR=475 **Columbia Colle**	**4.42**	**339**	*e*Pn	**Pn**	**03 40 43.4**	**+0.2**
CMB				*e*S	**Sg**	**03 41 52.7**	**-5.1**
Y14A	**Wickenburg**	**4.44**	**88**	⇑P	**Pn**	**03 40 42.1**	**-1.4**
NVAR	baz=4.4,SNR=26 **Mina Array Bea**	**4.49**	**0**	Pn	**Pn**	**03 40 46.3**	**+2.0**
NVAR				Pg	**Pb**	**03 40 56.4**	**+1.3**
NVAR				Lg	Lg	03 42 01.3	
NVAR	**Mina Array Bea**	**4.49**	**0**	Pn	**Pn**	**03 40 46.3**	**+2.0**
NVAR	0.8nm,0.3s,baz=183,slow=15,SNR=43			Pg	**Pb**	**03 40 56.4**	**+1.3**
NVAR	5.2nm,0.3s,baz=179,slow=17,SNR=93			Lg	Lg	03 42 01.3	
NVAR	7.3nm,0.3s,baz=185,slow=19,SNR=3.4			LR	LR	03 42 49.1	
NV11	comp=Z,1μm,18.8s,baz=178,slow=42 **Mina Array Sit**	**4.50**	**2**	*e*Pn	**Pn**	**03 40 46.1**	**+1.8**
NV11				*e*S	**Sg**	**03 42 02.4**	**+2.1**
Z14A	**Wintersburg**	**4.54**	**96**	⇑P	**Pn**	**03 40 42.9**	**-1.9**
R11A	baz=4.5,SNR=21 **Troy Canyon, C**	**4.95**	**26**	⇑P	**Pn**	**03 40 51.2**	**+0.7**
214A	baz=4.9,SNR=21 **Organ Pipe Nat**	**5.05**	**111**	⇓P	**Pn**	**03 40 51.5**	**-0.3**
CCUT	baz=5.0,SNR=28 **Cedar City**	**5.43**	**47**	*e*Pn	**Pn**	**03 40 58.4**	**+1.2**
CCUT	18μm,0.2s			*e*S	**Sg**	**03 42 25.3**	**-4.9**
WCN	**Washoe City**	**5.48**	**348**	*e*Pn	**Pn**	**03 40 60.0**	**+2.1**
WCN	123nm,0.9s			*e*S	**Sg**	**03 42 34.8**	**+3.0**
ARUT	**Antelope Range**	**5.54**	**45**	*e*Pn	**Pn**	**03 40 60.0**	**+1.2**
ARUT				*e*S	Sg	03 42 28.4	-5.4
U15A	**North Rim**	**5.55**	**62**	⇓P	**Pn**	**03 40 59.3**	**+0.4**
MCCM	baz=5.5,SNR=141 **Marconi Confer**	**5.58**	**320**	*e*Pn	**Pn**	**03 40 58.2**	**-0.9**
X16A	**Lo Mia Camp, P**	**5.75**	**83**	P	**Pn**	**03 41 00.9**	**-0.6**
WUAZ	baz=5.7,SNR=117 **Wupatki**	**5.96**	**73**	*e*Pn	**Pn**	**03 41 04.3**	**0.0**
WUAZ	343nm,1.0s			*e*S	**Sg**	**03 42 46.8**	**-0.3**
WUAZ	**Wupatki**	**5.96**	**73**	⇓P	**Pn**	**03 41 04.4**	**0.0**
BEKR	baz=5.9,SNR=35 **Beckworth**	**6.14**	**345**	*e*Pn	**Pn**	**03 41 08.7**	**+1.7**
BEKR	25nm,0.8s			*e*S	**Sb**	**03 42 38.5**	**+1.7**
HOPS	**Hopland**	**6.33**	**324**	*e*Pn	**Pn**	**03 41 09.5**	**+0.1**
HOPS				*e*S	Sb	03 42 32.8	-9.2
TUC	**Tucson**	**6.55**	**102**	*e*Pn	**Pn**	**03 41 11.5**	**-1.0**
TUC	18nm,1.0s			*e*Pg	Pg	03 41 45.2	+3.9
TUC				*e*S	**Sg**	**03 43 09.8**	**+3.7**
BMN	**Battle Mountai**	**6.55**	**8**	*e*Pn	**Pn**	**03 41 14.9**	**+2.4**
BMN	55nm,1.0s			*e*S	**Sg**	**03 43 03.9**	**-2.4**
MVU	**Marysvale**	**6.74**	**46**	*e*Pn	**Pn**	**03 41 17.3**	**+2.1**
MVU	100nm,0.7s			*e*S	**Sg**	**03 43 11.7**	**-0.5**
MSU	**Marysvale**	**6.77**	**46**	*e*Pn	**Pn**	**03 41 17.6**	**+2.0**
MSU	101nm,0.7s			*e*S	**Sg**	**03 43 15.6**	**+2.5**
X18A	**Snowflake**	**6.98**	**83**	⇑P	**Pn**	**03 41 18.7**	**+0.3**
KIPM	baz=7.0,SNR=30 **Iron Peak**	**7.17**	**326**	*e*Pn	**Pn**	**03 41 21.2**	**+0.3**
W18A	**Petrified Fore**	**7.21**	**78**	⇑P	**Pn**	**03 41 22.2**	**+0.6**
ELK	baz=7.2 **Elko**	**7.24**	**19**	*e*Pn	**Pn**	**03 41 24.5**	**+2.4**
ELK	42nm,0.8s			Sn	**Sn**	**03 42 44.9**	**+0.4**
ELK				*e*S	Sg	03 43 21.9	-6.4
ELK				Lg	Lg	03 43 26.7	
ELK	**Elko**	**7.24**	**19**	Pn	**Pn**	**03 41 24.4**	**+2.3**
ELK	1.3nm,0.3s,baz=198,slow=11,SNR=33			Sn	**Sn**	**03 42 44.9**	**+0.4**
ELK	1.3nm,0.3s,baz=216,slow=18,SNR=2.0			Lg	Lg	03 43 26.7	
ELK	6.2nm,0.3s,baz=123,slow=18,SNR=9.9			LR	LR	03 44 09.4	
WDC	comp=Z,658nm,20.8s,baz=195,slow=38 **Whiskeytown Da**	**7.43**	**334**	*e*Pn	**Pn**	**03 41 24.9**	**+0.4**
WDC	14nm,1.0s			*e*S	**Sb**	**03 43 14.7**	**+0.9**
Q16A	**Castle Valley**	**7.63**	**47**	⇑P	**Pn**	**03 41 29.0**	**+1.6**
DUG	baz=7.6,SNR=48 **Dugway**	**7.66**	**34**	*e*Pn	Pn	03 41 31.3	+3.6
DUG	75nm,0.9s			*e*S	**Sg**	**03 43 38.1**	**-3.6**
DUG	**Dugway**	**7.66**	**34**	⇑P	**Pn**	**03 41 30.0**	**+2.2**
S18A	baz=7.6 **Hurst Farm, Bl**	**7.75**	**59**	⇑P	**Pn**	**03 41 30.4**	**+1.2**
319A	baz=7.7,SNR=11 **Douglas**	**8.06**	**106**	⇑P	**Pn**	**03 41 33.9**	**+0.7**
MPU	baz=8.0,SNR=15 **Maple Canyon**	**8.11**	**40**	*e*Pn	Pn	03 41 38.0	+4.0
MPU	24nm,0.8s			*e*S	**Sg**	**03 43 50.8**	**-5.3**
MOD	**Modoc**	**8.11**	**350**	*e*Pn	**Pn**	**03 41 36.5**	**+2.6**
MOD	36nm,1.0s			*e*S	Sg	03 43 49.3	-6.8
SRU	**San Rafael**	**8.15**	**48**	⇑P	**Pn**	**03 41 35.9**	**+1.5**
KHMM	baz=8.1 **Horse Mountain**	**8.15**	**330**	*e*Pn	**Pn**	**03 41 34.4**	**-0.1**
X20A	51nm,1.2s **Quemado**	**8.18**	**83**	⇑P	**Pn**	**03 41 35.6**	**+0.7**
Z20A	baz=8.2,SNR=26 **Nine Sixteen R**	**8.19**	**93**	⇓P	**Pn**	**03 41 34.6**	**-0.5**
W20A	baz=8.2,SNR=33 **Ramah**	**8.21**	**79**	⇑P	**Pn**	**03 41 36.1**	**+0.7**
P17A	baz=8.2,SNR=13 **Butcher Ranch,**	**8.24**	**46**	⇓P	Pn	03 41 38.4	+2.6
120A	baz=8.2 **U Bar Ranch, L**	**8.25**	**97**	⇓P	**Pn**	**03 41 35.7**	**-0.2**
Y20A	baz=8.2 **Horse Springs,**	**8.29**	**87**	P	**Pn**	**03 41 37.0**	**+0.5**
V20A	baz=8.3,SNR=34 **Brimhall**	**8.33**	**74**	⇓P	**Pn**	**03 41 38.6**	**+1.5**
U20A	baz=8.3,SNR=24 **Newcomb**	**8.41**	**70**	⇓P	Pn	03 41 40.8	+2.7
WVOR	baz=8.4 **Wild Horse Val**	**8.49**	**359**	*e*Pn	Pn	03 41 42.6	+3.4
220A	63nm,1.1s **Playas Peak, P**	**8.50**	**101**	⇑P	**Pn**	**03 41 40.2**	**+0.9**
YBH	baz=8.5,SNR=26 **Yreka Blue Hor**	**8.52**	**337**	*e*Pn	Pn	03 41 43.2	+3.7
YBH	5.2nm,0.8s **Yreka Blue Hor**	**8.52**	**337**	Pn	**Pn**	**03 41 42.7**	**+3.2**
YBH	0.1nm,0.3s,baz=151,slow=8.7,SNR=9.0			LR	LR	03 44 55.4	
CTU	comp=Z,546nm,20.0s,baz=165,slow=37 **Camp Tracy**	**8.55**	**36**	*e*Pn	**Pn**	**03 41 40.2**	**+0.1**
DAU	33nm,0.8s **Daniels Canyon**	**8.59**	**39**	*e*Pn	Pn	03 41 45.1	+4.4
JLU	49nm,0.9s **Jordanelle**	**8.63**	**38**	*e*Pn	Pn	03 41 45.6	+4.3
P18A	40nm,0.8s **Preston Nutter**	**8.63**	**46**	⇑P	**Pn**	**03 41 43.1**	**+1.8**
MVCO	baz=8.6,SNR=57 **Mesa Verde**	**8.66**	**65**	*e*Pn	**Pn**	**03 41 42.8**	**+1.1**
MVCO	145nm,0.8s			*e*S	**Sn**	**03 43 23.4**	**+3.7**
MVCO	**Mesa Verde**	**8.66**	**65**	⇓P	**Pn**	**03 41 42.6**	**+1.0**
320A	baz=8.6 **Kipp Ranch, An**	**8.67**	**105**	⇓P	**Pn**	**03 41 43.3**	**+1.6**
PV10	baz=8.7,SNR=36 **Paradox Valley**	**8.74**	**57**	*e*Pn	**Pn**	**03 41 44.1**	**+1.5**
X21A	2μm,0.7s **Alamocita Cree**	**8.77**	**84**	⇓P	**Pn**	**03 41 43.6**	**+0.5**
PV04	baz=8.7,SNR=20 **Paradox Valley**	**8.84**	**57**	*e*Pn	**Pn**	**03 41 45.8**	**+1.8**
Y21A	**Point of Rocks**	**8.87**	**87**	⇓P	**Pn**	**03 41 45.0**	**+0.6**
Z21A	baz=8.8,SNR=22 **St. Cloud Mine**	**8.93**	**91**	P	**Pn**	**03 41 45.4**	**+0.2**
121A	baz=8.9,SNR=43 **Cookes Peak, D**	**8.96**	**96**	⇑P	**Pn**	**03 41 45.3**	**-0.4**
PV01	baz=8.9,SNR=48 **Paradox Valley**	**8.96**	**59**	*e*Pn	**Pn**	**03 41 47.3**	**+1.6**
HVU	30μm,0.9s **Hansel Valley**	**8.99**	**28**	*e*Pn	**Pn**	**03 41 47.4**	**+1.4**
S20A	34nm,0.8s **Disappointment**	**8.99**	**61**	⇑P	**Pn**	**03 41 47.8**	**+1.7**
V21A	baz=9.0 **Milan**	**9.00**	**75**	⇓P	Pn	03 41 48.9	+2.7
221A	baz=9.0 **Mesquite Ranch**	**9.08**	**99**	⇑P	**Pn**	**03 41 48.6**	**+1.3**
U21A	baz=9.1,SNR=9.0 **Nageezi**	**9.10**	**71**	⇓P	**Pn**	**03 41 49.3**	**+1.8**
R20A	baz=9.1,SNR=51 **Redvale**	**9.12**	**59**	⇓P	**Pn**	**03 41 49.3**	**+1.5**
LAZ	baz=9.1 **Ladron**	**9.30**	**84**	*e*Pn	**Pn**	**03 41 50.9**	**+0.6**
T21A	11nm,0.7s **Navajo Lake**	**9.33**	**68**	⇑P	**Pn**	**03 41 52.6**	**+1.8**
S21A	baz=9.3 **Coal Bank Pass**	**9.35**	**64**	⇓P	**Pn**	**03 41 53.0**	**+2.0**
HWUT	baz=9.3 **Hardware Ranch**	**9.36**	**33**	*e*Pn	Pn	03 41 55.1	+4.1
HUMO	94nm,1.1s **Hull Mountain**	**9.39**	**339**	*e*Pn	**Pn**	**03 41 50.2**	**-1.2**
P19A	28nm,1.5s **Cripple Cowboy**	**9.42**	**50**	⇓P	**Pn**	**03 41 54.4**	**+2.3**
LENM	baz=9.4,SNR=14 **Lemitar**	**9.44**	**85**	*e*Pn	**Pn**	**03 41 52.4**	**+0.1**
Y22A	26nm,1.0s **Socorro**	**9.46**	**87**	⇓P	**Pn**	**03 41 52.9**	**+0.4**
Z22A	baz=9.4,SNR=10 **Elephant Butte**	**9.52**	**91**	⇑P	**Pn**	**03 41 53.2**	**-0.1**
Q20A	baz=9.5,SNR=23 **Ridgley Place,**	**9.52**	**55**	⇑P	**Pn**	**03 41 54.5**	**+1.1**
122A	baz=9.5,SNR=12 **Conniff Cattle**	**9.57**	**94**	⇑P	**Pn**	**03 41 54.7**	**+0.7**
V22A	baz=9.5 **San Miguel Ran**	**9.60**	**75**	⇓P	**Pn**	**03 41 56.1**	**+1.7**
222A	baz=9.6,SNR=35 **Williams Famil**	**9.62**	**98**	P	**Pn**	**03 41 55.1**	**+0.5**
MFID	baz=9.6,SNR=17 **Camas Ranch**	**9.68**	**11**	*e*Pn	Pn	03 42 00.4	+5.1
MFID	21nm,0.8s **Camas Ranch**	**9.68**	**11**	⇑P	Pn	03 41 59.9	+4.5
M17A	baz=9.7,SNR=18 **Scullys Gap (B**	**9.68**	**37**	⇓P	Pn	03 41 58.6	+3.1
LPM	baz=9.7,SNR=19 **Los Pinos Moun**	**9.72**	**84**	*e*Pn	**Pn**	**03 41 56.7**	**+0.6**
U22A	20nm,0.9s **Llaves**	**9.72**	**72**	⇓P	Pn	03 41 59.1	+3.0
O19A	baz=9.7,SNR=20 **Miners Draw (B**	**9.73**	**47**	⇓P	Pn	03 41 59.7	+3.6
BNM	baz=9.7,SNR=33 **Barren Site**	**9.73**	**85**	*e*Pn	**Pn**	**03 41 56.7**	**+0.5**
P20A	44nm,1.2s **De Beque**	**9.73**	**52**	⇓P	Pn	03 41 59.4	+3.2
R21A	baz=9.7 **Cimarron**	**9.79**	**60**	⇓P	**Pn**	**03 41 58.8**	**+1.7**
T22A	baz=9.8 **Edith**	**9.83**	**68**	⇑P	**Pn**	**03 41 58.9**	**+1.3**
ANMO	baz=9.8 **Albuquerque**	**9.87**	**81**	*e*Pn	**Pn**	**03 41 59.0**	**+0.8**
ANMO	38nm,1.0s			Lg	Lg	03 44 48.4	
ANMO	**Albuquerque**	**9.87**	**81**	Pn	**Pn**	**03 41 59.3**	**+1.1**
ANMO	0.1nm,0.3s,baz=279,slow=13,SNR=7.2			Lg	Lg	03 44 48.4	
ANMO	0.4nm,0.3s,baz=4.0,slow=19,SNR=4.6			LR	LR	03 45 58.7	
M18A	comp=Z,1μm,19.6s,baz=81,slow=39 **Lyman**	**9.95**	**39**	⇑P	Pn	03 42 02.5	+3.2
Q21A	baz=9.9 **Lamborn Mesa,**	**9.97**	**57**	⇑P	**Pn**	**03 42 01.0**	**+1.5**
J13A	baz=9.9,SNR=8.4 **Cove Ranch, Pi**	**10.00**	**18**	⇓P	**Pn**	**03 42 01.8**	**+2.0**
X23A	baz=10.0,SNR=21 **Hourglass Bar**	**10.09**	**83**	⇑P	**Pn**	**03 42 02.1**	**+1.0**
S22A	baz=10,SNR=10 **4UR Ranch, Cre**	**10.10**	**65**	⇑P	Pn	03 42 04.0	+2.7
HLID	baz=10 **Hailey**	**10.10**	**17**	*e*Pn	**Pn**	**03 42 01.7**	**+0.5**
HLID	34nm,1.1s **Hailey**	**10.10**	**17**	⇑P	**Pn**	**03 42 01.6**	**+0.5**
J14A	baz=10,SNR=60 **Carey**	**10.11**	**20**	⇑P	Pn	03 42 03.9	+2.6
Z23A	baz=10 **Rita Site, Whi**	**10.13**	**90**	⇑P	**Pn**	**03 42 01.7**	**+0.1**
W23A	baz=10,SNR=20 **Werner Place,**	**10.13**	**80**	⇓P	**Pn**	**03 42 02.6**	**+0.8**
V23A	baz=10,SNR=14 **Ortiz Mt. (NFS**	**10.16**	**76**	⇓P	**Pn**	**03 42 03.8**	**+1.6**
I12A	baz=10 **Atlanta**	**10.16**	**13**	⇑P	Pn	03 42 04.8	+2.7
O20A	baz=10 **White River Ci**	**10.18**	**50**	⇑P	**Pn**	**03 42 03.4**	**+1.1**
123A	baz=10,SNR=24 **Bell Site, Whi**	**10.20**	**94**	⇓P	Pn	03 42 05.8	+3.3
Y23A	baz=10 **Lovelace Mesa,**	**10.21**	**87**	⇑P	**Pn**	**03 42 02.7**	**-0.1**
U23A	baz=10,SNR=20 **El Rito**	**10.24**	**73**	⇑P	**Pn**	**03 42 05.0**	**+1.8**
R22A	baz=10,SNR=46 **Saguache, Gunn**	**10.31**	**62**	⇑P	Pn	03 42 07.2	+2.9
L18A	baz=10 **Fontenelle, Gr**	**10.33**	**37**	⇑P	Pn	03 42 07.7	+3.3
P21A	baz=10,SNR=10 **Newcastle**	**10.37**	**54**	⇓P	Pn	03 42 07.7	+2.6
Q22A	baz=10,SNR=34 **Crested Butte,**	**10.45**	**59**	⇓P	**Pn**	**03 42 08.5**	**+2.3**
M19A	baz=10,SNR=12 **Rock Springs**	**10.49**	**41**	⇓P	Pn	03 42 09.5	+2.8
I13A	baz=10 **Wildhorse Cree**	**10.50**	**17**	⇑P	Pn	03 42 10.9	+4.1
T23A	baz=10,SNR=30 **Casias Ranch,**	**10.50**	**69**	⇓P	**Pn**	**03 42 08.9**	**+2.0**
SMCO	baz=10,SNR=11 **Snowmass**	**10.54**	**57**	*e*Pn	**Pn**	**03 42 09.0**	**+1.5**

W24A **Lazy 6 Ranch,** 10.75 80 ⇓P Pn 03 42 11.5 +1.4
baz=11,SNR=18
L19A **Farson** 10.80 38 ⇑P Pn 03 42 15.1 +4.2
baz=11,SNR=29
Z24A **Sheeppen Canyo** 10.84 90 ⇓P Pn 03 42 11.0 -0.4
baz=11
124A **Stringfield Ra** 10.86 93 ⇑P Pn 03 42 11.6 -0.1
baz=11,SNR=18
P22A **Eagle** 10.88 55 ⇑P Pn 03 42 13.3 +1.4
baz=11,SNR=8.0
RRI2 **Red Ridge** 10.89 28 *e*Pn Pn 03 42 12.5 +0.3
20nm,0.9s
V24A **Rampart Ranch,** 10.90 77 ⇑P Pn 03 42 13.7 +1.5
baz=11,SNR=10.0
224A **Cornudas Mount** 10.93 96 P Pn 03 42 12.9 +0.3
baz=11,SNR=15
BMO **Blue Mountains** 10.94 4 *e*Pn Pn 03 42 15.7 +3.1
7.4nm,1.0s
H12A **Diamond D Ranc** 10.95 13 ⇑P Pn 03 42 18.7 +5.9
baz=11,SNR=20
U24A **Moreno Valley** 10.98 73 ⇓P Pn 03 42 18.1 +4.7
baz=11
N21A **Black Mountain** 10.98 48 ⇑P Pn 03 42 16.9 +3.5
baz=11,SNR=16
R23A **Moffat** 10.99 64 P Pn 03 42 17.1 +3.6
baz=11,SNR=6.2
M20A **Sweetwater, Wa** 11.03 44 ⇓P Pn 03 42 18.3 +4.3
baz=11,SNR=20
H13A **Challis** 11.08 15 ⇓P Pn 03 42 21.0 +6.4
baz=11,SNR=25
SDCO **Great Sand Dun** 11.10 66 *e*Pn Pn 03 42 18.3 +3.2
26nm,1.2s
SDCO *e*S Sn 03 45 20.0 +61
324A **Moseley Ranch,** 11.12 99 ⇑P Pn 03 42 14.9 -0.4
baz=11
MNTX **Cornudas Mount** 11.13 98 *e*Pn Pn 03 42 15.7 +0.4
4.3nm,0.7s
DCID1 **Drake Creek** 11.15 28 *e*Pn Pn 03 42 20.6 +5.0
TPAW **Teton Pass** 11.15 29 *e*Pn Pn 03 42 20.0 +4.2
39nm,1.1s
BW06 **Boulder Array** 11.19 35 *e*Pn Pn 03 42 19.8 +3.6
45nm,1.5s
PDAR **Pinedale Array** 11.20 35 Pn Pn 03 42 20.1 +3.8
PDAR Lg Lg 03 45 28.7
PDAR **Pinedale Array** 11.20 35 Pn Pn 03 42 20.1 +3.8
0.1nm,0.3s,baz=228,slow=12,SNR=37
PDAR Lg Lg 03 45 28.7
0.1nm,0.3s,baz=218,slow=16,SNR=3.6
PDAR LR LR 03 47 25.5
comp=Z,100nm,19.9s,baz=229,slow=42
SNOW **Snow King Moun** 11.21 30 *e*Pn Pn 03 42 17.2 +0.7
29nm,1.1s
Q23A **Hartsel** 11.23 60 ⇑P Pn 03 42 19.4 +2.4
baz=11
I16A **Newdale** 11.27 26 ⇓P Pn 03 42 20.6 +3.2
baz=11,SNR=8.8
L20A **Wamsutter** 11.28 41 ⇑P Pn 03 42 21.5 +4.1
baz=11,SNR=14
T24A **Torres, Weston** 11.28 70 ⇓P Pn 03 42 21.3 +3.7
baz=11,SNR=7.6
O22A **Kremmling** 11.29 53 ⇓P Pn 03 42 20.1 +2.4
baz=11
S24A **Houchin Ranch,** 11.29 67 ⇓P Pn 03 42 19.7 +2.0
baz=11
Y25A **Mesa, Roswell** 11.34 86 ⇑P Pn 03 42 19.9 +1.6
baz=11,SNR=15
X25A **Clemmons Ranch** 11.35 83 ⇓P Pn 03 42 23.0 +4.7
baz=11
H14A **Leadore** 11.35 18 ⇓P Pn 03 42 23.4 +5.1
baz=11,SNR=27
Z25A **Roswell** 11.38 89 ⇓P Pn 03 42 19.6 +0.8
baz=11
LOHW **Long Hollow** 11.40 30 *e*Pn Pn 03 42 23.8 +4.8
31nm,1.1s
P23A **Jefferson** 11.42 58 ⇓P Pn 03 42 21.0 +1.6
baz=11
G12A **Big Creek, Yel** 11.43 11 ⇓P Pn 03 42 23.0 +3.6
baz=11
V25A **Rancho No Teng** 11.44 77 ⇑P Pn 03 42 22.4 +2.8
baz=11,SNR=15
MOOW **Moose Ponds** 11.45 29 *e*Pn Pn 03 42 22.7 +2.9
16nm,1.3s
225A **Deer Hill, Car** 11.50 95 ⇑P Pn 03 42 21.5 +1.1
baz=12,SNR=14
IMW **Indian Meadow** 11.50 28 *e*Pn Pn 03 42 22.1 +1.6
29nm,1.3s
W25A **X Bar L Ranch,** 11.52 80 ⇓P Pn 03 42 23.3 +2.6
baz=12,SNR=14
125A **Gardner Draw,** 11.53 93 P Pn 03 42 21.9 +1.1
baz=12,SNR=32
R24A **Sanders Place,** 11.54 64 ⇑P Pn 03 42 22.4 +1.5
baz=12
H15A **Lima** 11.55 21 ⇓P Pn 03 42 23.7 +2.6
baz=12,SNR=6.8
M21A **Separation Pea** 11.58 45 ⇑P Pn 03 42 23.4 +1.8
baz=12,SNR=18
K19A **Absolon Red Bu** 11.59 37 ⇑P Pn 03 42 25.4 +3.7
baz=12,SNR=47
G13A **Cobalt** 11.59 15 ⇓P Pn 03 42 25.3 +3.7
baz=12,SNR=39
I17A **Pilgrim Ck.** 11.66 29 ⇑P Pn 03 42 28.5 +5.9
baz=12
U25A **Circle Dot Ran** 11.67 74 ⇑P Pn 03 42 24.3 +1.5
baz=12,SNR=32
N22A **Wattenberg Ran** 11.68 51 ⇑P Pn 03 42 26.5 +3.5
baz=12
MCMT **McKenzie Canyo** 11.68 20 *e*Pn Pn 03 42 29.1 +6.1
56nm,2.0s
425A **Indio Mountain** 11.72 102 ⇑P Pn 03 42 25.0 +1.5
baz=12,SNR=16
K20A **Yellowstone Ra** 11.73 39 ⇑P Pn 03 42 26.9 +3.4
baz=12
O23A **Lake Granby, G** 11.74 54 ⇓P Pn 03 42 26.7 +2.9
baz=12
Q24A **Divide** 11.75 61 ⇓P Pn 03 42 27.6 +3.5
baz=12
ISCO **Idaho Springs** 11.76 56 *e*Pn Pn 03 42 21.8 -2.2
12nm,1.0s
ISCO *e*S Sn 03 45 44.3 +69
ISCO **Idaho Springs** 11.76 56 ⇑P Pn 03 42 26.5 +2.4
baz=12
T25A **Trinidad** 11.80 70 ⇓P Pn 03 42 26.5 +2.0
baz=12,SNR=23
L21A **Rawlins** 11.80 44 ⇑P Pn 03 42 27.0 +2.4
baz=12,SNR=22
I18A **Diamond G Ranc** 11.80 32 ⇓P Pn 03 42 28.2 +3.6
baz=12
J19A **Crowheart** 11.81 35 ⇑P Pn 03 42 27.6 +2.9
baz=12,SNR=12
S25A **Robets Cordova** 11.89 68 ⇓P Pn 03 42 28.3 +2.5
baz=12,SNR=7.0
G14A **Jackson** 11.91 17 ⇓P Pn 03 42 31.9 +5.9
baz=12
M22A **Cedar Creek Ra** 11.92 48 ⇓P Pn 03 42 28.8 +2.5
baz=12,SNR=16
Z26A **Caprock** 12.00 89 ⇓P Pn 03 42 28.6 +1.4
baz=12,SNR=20
226B **Tecolote Peak,** 12.05 95 P Pn 03 42 29.7 +1.8
baz=12,SNR=40
X26A **CR and CF Fran** 12.05 83 ⇓P Pn 03 42 29.0 +1.1
baz=12,SNR=12
F12A **Elk City** 12.05 10 ⇓P Pn 03 42 31.1 +3.3
baz=12,SNR=19
LPIG **La Paz** 12.05 142 LR LR 03 46 35.4
comp=Z,79nm,20.8s,baz=140,slow=35
126A **Clayton Basin,** 12.06 92 ⇓P Pn 03 42 30.2 +2.2
baz=12
H17A **Grant Village** 12.06 28 ⇑P Pn 03 42 33.5 +5.4
baz=12
N23A **Red Feather La** 12.06 51 ⇓P Pn 03 42 31.8 +3.7
baz=12
Y26A **Elida** 12.06 86 ⇑P Pn 03 42 31.2 +3.0
baz=12
H16A **Russell Place,** 12.08 25 ⇑P Pn 03 42 32.2 +3.9
baz=12,SNR=12
W26A **Owens Ranch, T** 12.09 80 ⇓P Pn 03 42 32.7 +4.3
baz=12
G15A **Dillon** 12.09 20 ⇓P Pn 03 42 31.7 +3.2
baz=12
V26A **Tequesquite Ra** 12.11 77 ⇓P Pn 03 42 31.9 +3.2
baz=12,SNR=5.9
P24A **Kohler Place,** 12.13 59 ⇑P Pn 03 42 31.7 +2.6
baz=12
R25A **Fountain Ranch** 12.13 66 ⇓P Pn 03 42 31.9 +2.8
baz=12,SNR=11
YMR **Madison River** 12.15 26 *e*Pn Pn 03 42 25.9 -3.4
24nm,1.2s
U26A **Atchley Ranch,** 12.20 74 ⇑P Pn 03 42 33.3 +3.2
baz=12
F13A **Darby** 12.24 13 ⇓P Pn 03 42 33.7 +3.2
baz=12,SNR=13
DLMT **Dillon** 12.24 19 *e*Pn 03 42 36.8
35nm,0.9s
K21A **Alcova** 12.30 42 ⇓P Pn 03 42 34.3 +2.9
baz=12
G16A **Moss Hill, Enn** 12.36 22 ⇓P Pn 03 42 35.6 +3.5
baz=12,SNR=7.7
J20A **Shoshoni** 12.36 37 ⇑P Pn 03 42 34.8 +2.8
baz=12,SNR=34
326A **Caldwell Ranch** 12.39 98 ⇑P Pn 03 42 35.2 +2.7
baz=12,SNR=12
L22A **Ellis Ranch, M** 12.39 46 ⇓P Pn 03 42 35.8 +3.1
baz=12,SNR=16
Q25A **Bedland, Calha** 12.39 62 ⇓P Pn 03 42 35.2 +2.5
baz=12,SNR=5.8
I19A **Meeteetse** 12.43 33 ⇑P Pn 03 42 37.5 +4.4
baz=12,SNR=13
T26A **Comanche Natio** 12.44 71 ⇓P Pn 03 42 36.5 +3.2
baz=12,SNR=9.6
M23A **Laramie** 12.51 49 ⇑P Pn 03 42 36.5 +2.3
baz=12
426A **McDonald Obser** 12.54 101 ⇓P Pn 03 42 35.0 +0.2
baz=12,SNR=16
PHWY **Pilot Hill** 12.58 50 *e*Pn Pn 03 42 38.3 +3.0
8.1nm,1.1s
127A **Arkansas Junct** 12.60 92 ⇑P Pn 03 42 38.0 +2.5
baz=13,SNR=6.3
Y27A **Causey** 12.62 86 ⇑P Pn 03 42 37.9 +2.2
baz=13,SNR=14
S26A **Kim** 12.63 69 ⇑P Pn 03 42 38.0 +2.1
baz=13,SNR=8.1
Z27A **Tatum** 12.63 89 ⇑P Pn 03 42 38.7 +2.9
baz=13,SNR=45
X27A **F and S Farms,** 12.63 82 ⇓P Pn 03 42 37.8 +1.9
baz=13
H18A **Shoshone NF, C** 12.66 29 ⇓P Pn 03 42 39.5 +3.3
baz=13
W27A **Bowe Ranch, En** 12.66 81 ⇓P Pn 03 42 38.9 +2.6
baz=13,SNR=7.3
P25A **Willow Gulch B** 12.66 60 ⇓P Pn 03 42 39.6 +3.3
baz=13,SNR=5.9
J21A **Lysite** 12.68 39 ⇑P Pn 03 42 39.7 +3.2
baz=13,SNR=17
526A **Mary Lane Ranc** 12.70 104 ⇑P Pn 03 42 39.5 +2.7
baz=13,SNR=14
LRM **Limekiln Ridge** 12.71 19 *e*Pn 03 42 42.9
201nm,1.1s
F15A **Butte** 12.71 19 ⇓P Pn 03 42 40.8 +3.8
baz=13
K22A **Casper** 12.72 43 ⇑P Pn 03 42 39.6 +2.5
baz=13,SNR=29
I20A **Worland** 12.77 35 ⇓P Pn 03 42 40.5 +2.7
baz=13,SNR=9.0
227A **Bennet, Jal** 12.79 94 ⇑P Pn 03 42 40.7 +2.8
baz=13,SNR=14
BOZ **Bozeman (W)** 12.79 22 *e*Pn 03 42 43.3
7.4nm,1.0s
G17A **Pierce Place,** 12.79 25 ⇑P Pn 03 42 41.4 +3.4
baz=13
R26A **Arlington** 12.81 66 ⇓P Pn 03 42 40.7 +2.4
baz=13,SNR=7.7
626A **Big Bend Ranch** 12.86 106 ⇑P Pn 03 42 42.0 +3.0
baz=13,SNR=14
V27A **Dan Oppiter Fa** 12.87 77 ⇑P Pn 03 42 41.9 +2.7
baz=13,SNR=6.2
L23A **Garrett** 12.88 47 ⇑P Pn 03 42 41.6 +2.3
baz=13,SNR=18
E13A **Victor** 12.89 13 ⇓P Pn 03 42 43.1 +3.7
baz=13,SNR=11
F16A **Kennard Place,** 12.91 21 ⇑P 03 42 45.7
baz=13,SNR=8.7
O25A **Wiggins** 12.93 57 ⇑P Pn 03 42 42.7 +2.7
baz=13,SNR=5.9
MSTX **Muleshoe** 12.93 85 ⇑P Pn 03 42 43.5 +3.5
baz=13,SNR=13
H19A **Powell** 12.94 31 ⇑P Pn 03 42 44.1 +4.2
baz=13,SNR=20
Q26A **Hugo** 12.94 63 ⇓P Pn 03 42 43.9 +3.9
baz=13,SNR=9.0
U27A **Thompson Grove** 12.94 75 ⇓P Pn 03 42 43.3 +3.2
baz=13,SNR=16
427A **Hayter Ranch,** 13.00 100 ⇑P Pn 03 42 44.6 +3.7
baz=13,SNR=32
E14A **Clinton** 13.01 15 ⇑P Pn 03 42 45.0 +4.0
baz=13,SNR=14
M24A **Cheyenne** 13.08 51 ⇑P Pn 03 42 45.7 +3.7
baz=13
I21A **Big Trails, Te** 13.09 38 ⇑P Pn 03 42 45.5 +3.4
baz=13,SNR=26
S27A **Las Animas** 13.09 69 ⇓P Pn 03 42 46.2 +4.1
baz=13
T27A **Campo** 13.11 72 ⇓P Pn 03 42 45.7 +3.2
baz=13
E15A **Deer Lodge** 13.22 18 ⇓P Pn 03 42 47.1 +3.3
baz=13,SNR=6.9
G18A **Lazy EL Ranch,** 13.22 28 ⇓P Pn 03 42 47.5 +3.5
baz=13
H20A **Greybull** 13.24 34 ⇑P Pn 03 42 47.7 +3.6
baz=13,SNR=21
J22A **Midwest** 13.24 41 ⇑P Pn 03 42 47.5 +3.4
baz=13,SNR=32
P26A **Davis Ranch, A** 13.27 61 ⇑P Pn 03 42 46.9 +2.3
baz=13,SNR=8.2
R27A **Eads** 13.30 66 ⇓P Pn 03 42 48.1 +3.2
baz=13,SNR=15
K23A **Bowen Ranch, D** 13.30 45 ⇓P Pn 03 42 47.4 +2.4
baz=13,SNR=12
D12A **Red Ives Fores** 13.30 9 ⇑P Pn 03 42 48.9 +3.9
baz=13
MSO **Missoula** 13.31 13 *e*Pn Pn 03 42 46.5 +1.4
15nm,1.2s
MSO **Missoula** 13.31 13 ⇓P Pn 03 42 49.3 +4.2
baz=13,SNR=14
TXAR **Lajitas Array** 13.32 106 Pn Pn 03 42 48.1 +2.9
TXAR Lg Lg 03 46 43.3
TXAR **Lajitas Array** 13.32 106 Pn Pn 03 42 48.1 +2.9
0.4nm,0.3s,baz=283,slow=9.1,SNR=102
TXAR Lg Lg 03 46 43.3
0.1nm,0.3s,baz=285,slow=28,SNR=4.1
TXAR LR LR 03 48 29.5
comp=Z,1μm,19.7s,baz=0.0,slow=40
Z28A **Tucker Farm, M** 13.32 88 ⇑P Pn 03 42 48.4 +3.2
baz=13,SNR=30
F17A **Fitzpatrick Pl** 13.33 24 ⇓P P 03 42 49.8 -5.3
baz=13,SNR=5.2
328A **Wrisn Ranch,** 13.34 97 ⇑P Pn 03 42 48.2 +2.8
baz=13,SNR=6.8
128A **Castleberry Fa** 13.34 91 ⇑P Pn 03 42 47.9 +2.4
baz=13,SNR=9.3
228A **UT Block 9, Go** 13.35 93 ⇑P Pn 03 42 49.3 +3.7
baz=13,SNR=20
W28A **Vega** 13.37 80 ⇓P Pn 03 42 49.6 +3.8
baz=13
V28A **Channing** 13.37 78 ⇓P Pn 03 42 49.5 +3.5
baz=13,SNR=7.1
X28A **Dimmitt** 13.38 83 ⇓P Pn 03 42 48.6 +2.5
baz=13
U28A **Mallet** 13.42 75 ⇓P Pn 03 42 49.7 +3.1
baz=13,SNR=13
D13A **Huson** 13.48 11 ⇓P P 03 42 51.5 -5.2
baz=14,SNR=17
627A **Terlingua Ranc** 13.49 105 ⇓P Pn 03 42 50.7 +3.1
baz=14
CHMT **Chamberlain Mo** 13.54 15 *e*Pn P 03 42 52.7 -4.8
9.6nm,0.9s
O26A **Horse Wrangler** 13.55 58 ⇑P Pn 03 42 51.8 +3.5
baz=14,SNR=8.0
I22A **9 Mile Ranch,** 13.56 39 ⇓P Pn 03 42 52.0 +3.5
baz=14,SNR=23
E16A **East Helena** 13.57 20 ⇑P P 03 42 52.8 -5.0
baz=14,SNR=11
GCMT **Greycliff** 13.58 27 *e*Pn P 03 42 54.7 -3.3
37nm,1.3s
428A **Kincaid Ranch,** 13.62 99 ⇑P P 03 42 53.5 -4.9
baz=14,SNR=30
KSCO **Kaye Shedlock'** 13.62 64 ⇓P Pn 03 42 52.5 +3.1
baz=14,SNR=7.8
D14A **Greenough** 13.64 14 ⇑P P 03 42 53.8 -4.7
baz=14,SNR=12
F18A **Big Timber** 13.66 26 ⇑P P 03 42 54.8 -4.0
baz=14,SNR=29
HRY **Holter Researc** 13.69 19 *e*Pn Pn 03 42 51.6 +1.3
7.7nm,0.7s
G20A **Bridger** 13.71 32 ⇓P Pn 03 42 54.0 +3.6
baz=14,SNR=16
E17A **Martinsdale** 13.76 22 ⇑P Pn 03 42 54.7 +3.5
baz=14,SNR=9.9
X29A **Tulia** 13.79 83 ⇓P Pn 03 42 54.5 +2.8
baz=14,SNR=5.6
AMTX **Amarillo** 13.80 81 *e*Pn Pn 03 42 54.3 +2.5
56nm,1.2s
SLMT **Seeley Lake** 13.80 14 *e*Pn P 03 42 56.7 -3.6
15nm,0.9s
H21A **Big Horn, Sher** 13.80 36 ⇓P P 03 42 55.7 -4.6
baz=14
W29A **Amraillo** 13.82 80 ⇓P Pn 03 42 55.0 +2.9
baz=14,SNR=7.3
D15A **Lincoln** 13.82 17 ⇑P P 03 42 56.1 -4.5
baz=14,SNR=10
P27A **Ficken Ranch,** 13.83 62 ⇑P Pn 03 42 55.1 +2.9
baz=14
S28A **Manter** 13.85 70 ⇑P Pn 03 42 55.6 +3.2
baz=14,SNR=14
N26A **Koester Ranch,** 13.85 56 ⇓P Pn 03 42 55.4 +3.0
baz=14
129A **Stewart Farms,** 13.85 91 ⇓P Pn 03 42 55.3 +2.9
baz=14,SNR=5.2
Y29A **Porterfield Fa** 13.86 86 ⇓P Pn 03 42 55.6 +3.1
baz=14,SNR=12
628A **Black Gap, Mar** 13.88 104 P P 03 42 56.8 -4.5
baz=14,SNR=63
Z29A **Hungry Hill Ra** 13.89 88 P Pn 03 42 56.0 +3.0
baz=14,SNR=15
F19A **Roth Farm, Mol** 13.91 28 ⇓P P 03 42 57.9 -3.7
baz=14,SNR=10.0
V29A **Stinnett** 13.95 77 ⇑P Pn 03 42 57.0 +3.2
baz=14
SWMT **Swartz Lake** 13.96 12 *e*Pn P 03 42 59.3 -2.8
9.4nm,0.9s
L25A **Engebretsen Ra** 13.98 50 ⇓P Pn 03 42 56.9 +2.7
baz=14
C11A **Tepee Creek (N** 13.99 6 ⇑P P 03 42 58.8 -3.5
baz=14,SNR=40
329A **Wagon Wheel Ra** 13.99 96 ⇓P Pn 03 42 57.6 +3.2
baz=14,SNR=7.0
229A **Bryant Ranch,** 14.03 93 ⇓P Pn 03 42 57.9 +3.1
baz=14,SNR=17
C13A **Hot Springs** 14.03 11 ⇓P P 03 42 58.7 -4.1
baz=14
D16A **Dana Ranch, Ca** 14.06 19 ⇓P P 03 42 59.3 -4.0
baz=14,SNR=26
R28A **Tribune** 14.07 67 P Pn 03 42 58.5 +3.0
baz=14,SNR=12
H22A **Clearmont** 14.12 37 ⇓P Pn 03 42 59.2 +3.1
baz=14
O27A **Beecher Island** 14.12 59 ⇓P Pn 03 42 59.0 +2.8
baz=14
JTMT **Jette** 14.14 11 *e*Pn P 03 43 00.3 -3.8
22nm,1.3s
E18A **Harlowton** 14.16 24 ⇓P P 03 43 02.1 -2.2
baz=14,SNR=46
G21A **Lodge Grass** 14.16 34 ⇓P Pn 03 42 59.2 +2.5
baz=14
BSMT **Bassoo Peak** 14.16 10 *e*Pn P 03 43 01.5 -3.0
16nm,1.0s
F20A **Billings** 14.19 30 ⇓P Pn 03 42 59.8 +2.6
baz=14
529A **Stev Forest Ra** 14.20 101 ⇓P Pn 03 42 59.5 +2.3
baz=14,SNR=39
J24A **Dixon Ranch, L** 14.21 45 ⇓P Pn 03 42 59.8 +2.3
baz=14
Q28A **Sharon Springs** 14.23 64 ⇑P Pn 03 42 60.0 +2.3
baz=14
T29A **Hugoton** 14.25 72 ⇓P Pn 03 42 60.0 +2.0
baz=14,SNR=6.3
C14A **Swan Lake** 14.25 13 ⇓P P 03 43 02.9 -2.5
baz=14
K25A **Mack Ranch, Ha** 14.28 48 ⇑P Pn 03 43 00.5 +2.0
baz=14,SNR=5.4
YBMT **Yellow Bay** 14.30 12 Pn Pn 03 42 58.6 0.0
13nm,1.0s
429A **Davenport Ranc** 14.30 99 P P 03 43 02.0 -3.9
baz=14,SNR=50
N27A **Anderson Farm,** 14.31 57 ⇑P Pn 03 43 01.7 +2.8
baz=14
NEW **Newport** 14.35 3 *e*Pn Pn 03 42 58.2 -1.0
14nm,1.0s
NEW Lg Lg 03 47 14.0
NEW **Newport** 14.35 3 Pn P 03 43 03.5 -2.9
0.2nm,0.3s,baz=181,slow=14,SNR=14
NEW Lg Lg 03 47 14.0
0.1nm,0.3s,baz=112,slow=23,SNR=1.9
NEW **Newport** 14.35 3 ⇑P P 03 43 03.0 -3.4
baz=14,SNR=6.3
Z30A **Sanderson Ranc** 14.37 88 ⇑P Pn 03 43 01.5 +1.9
baz=14,SNR=15
D17A **Six Diamond Ra** 14.43 21 ⇑P P 03 43 04.3 -3.0
baz=14,SNR=24
P28A **Saint Francis** 14.44 62 ⇓P Pn 03 43 03.2 +2.7
baz=14,SNR=10
S29A **Ulysses** 14.46 70 ⇑P P 03 43 04.4 -3.3
baz=14,SNR=15
X30A **Coker Ranch, T** 14.47 83 ⇑P Pn 03 43 02.9 +1.9
baz=14,SNR=15
E19A **Rath Farm, Rou** 14.48 27 ⇓P P 03 43 05.1 -2.7
baz=14
C15A **Salmond Ranch,** 14.49 16 ⇓P P 03 43 04.8 -3.2
baz=14,SNR=27
L26A **Underwood Farm** 14.49 52 ⇑P P 03 43 04.3 -3.8
baz=14
Y30A **Stafford Cattl** 14.49 85 ⇓P Pn 03 43 04.0 +2.7
baz=14,SNR=6.7
I24A **Kuemmerle Ranc** 14.56 43 ⇑P P 03 43 05.4 -3.4
baz=14
G22A **Birney** 14.59 36 ⇓P P 03 43 05.5 -3.6
baz=15,SNR=8.8
R29A **Marienthal** 14.60 67 ⇓P P 03 43 05.7 -3.5
baz=15
130A **Snyder** 14.61 90 P Pn 03 43 05.3 +2.5
baz=15,SNR=8.6
V30A **Spur Ranch, Mi** 14.62 78 ⇓P P 03 43 06.1 -3.3
baz=15,SNR=5.8
230A **Sterling City** 14.62 93 P P 03 43 05.8 -3.6
baz=15,SNR=21
B12A **Libby** 14.67 7 ⇑P P 03 43 07.8 -2.2
baz=15
330A **Mertzon** 14.68 95 ⇓P P 03 43 06.8 -3.3
baz=15,SNR=34
U30A **WK&E Inc. Balk** 14.70 75 ⇑P Pn 03 43 06.3 +2.3
baz=15,SNR=11
W30A **Crocket Farms** 14.70 80 ⇑P P 03 43 06.9 -3.4
baz=15
OGNE **Ogallala** 14.72 57 *e*Pn P 03 43 07.2 -3.3
103nm,1.0s
OGNE **Ogallala** 14.72 57 ⇑P P 03 43 07.3 -3.2
baz=15
B13A **Whitefish** 14.72 10 ⇓P P 03 43 08.9 -1.6
baz=15,SNR=10
D18A **Linhart Farms,** 14.74 23 ⇑P P 03 43 07.1 -3.7
baz=15,SNR=11
K26A **Motz Farm, Whi** 14.76 49 ⇑P Pn 03 43 05.9 +1.0
baz=15
E20A **Meyer Farm, Mu** 14.77 29 ⇓P P 03 43 07.8 -3.2
baz=15,SNR=12
430A **Baggett Ranch,** 14.80 98 ⇑P P 03 43 08.2 -3.2
baz=15,SNR=48
C17A **Wharram Farm,** 14.84 20 ⇓P P 03 43 09.2 -2.6
baz=15
T30A **Plains** 14.85 73 ⇑P Pn 03 43 08.3 +2.2
baz=15
530A **J-C Ranch, Com** 14.91 100 P P 03 43 10.4 -2.3
baz=15,SNR=38
B14A **Marquette Ranc** 14.91 13 ⇓P P 03 43 11.8 -0.8
baz=15,SNR=64
S30A **Montezuma** 14.98 71 ⇑P P 03 43 11.2 -2.2
baz=15
B15A **Bradely Ranch,** 15.01 15 ⇓P P 03 43 12.5 -1.2
baz=15,SNR=56
Y31A **Rekieta Farm,** 15.01 85 ⇓P P 03 43 11.9 -1.8
baz=15,SNR=7.4
F22A **Rosebud** 15.02 34 ⇓P P 03 43 11.0 -2.8
baz=15
G23A **Biddle** 15.03 38 ⇑P Pn 03 43 10.3 +1.8
baz=15,SNR=10
D19A **Cripps Ranch,** 15.04 26 ⇑P P 03 43 12.5 -1.5
baz=15,SNR=49
131A **Roby** 15.07 90 ⇑P Pn 03 43 10.9 +1.9
baz=15,SNR=23
A12A **Yaak River Ran** 15.13 7 ⇑P P 03 43 13.2 -1.8
baz=15
H24A **Dirks Ranch, A** 15.16 41 ⇑P Pn 03 43 11.2 +0.9
baz=15
Z31A **Sharp Cattle R** 15.18 87 ⇓P P 03 43 12.7 -2.9
baz=15,SNR=16

X31A	McDonald Ranch	15.20	82	P		P	03 43 12.9	-3.0	
	baz=15,SNR=17								
W31A	Holland Ranch,	15.22	80	⇓P		P	03 43 13.5	-2.6	
	baz=15,SNR=16								
E21A	Keefer Ranch,	15.24	31	⇑P		P	03 43 13.6	-2.6	
	baz=15								
R30A	Dighton	15.24	68	P		P	03 43 13.6	-2.7	
	baz=15,SNR=15								
D20A	Manuel Ranch,	15.25	27	⇓P		P	03 43 14.6	-1.7	
	baz=15,SNR=27								
231A	Bronte	15.27	92	P		P	03 43 13.8	-2.9	
	baz=15,SNR=52								
A13A	Flathead Natio	15.28	10	⇓P		P	03 43 15.8	-0.8	
	baz=15,SNR=14								
V31A	Spring Creek L	15.31	78	⇓P		P	03 43 14.9	-2.1	
	baz=15,SNR=8.2								
331A	San Angelo	15.33	95	P		P	03 43 14.8	-2.5	
	baz=15,SNR=45								
U31A	Nine Bar Ranch	15.33	76	⇓P		P	03 43 15.9	-1.3	
	baz=15								
431A	Sonora	15.35	97	P		P	03 43 15.2	-2.3	
	baz=15,SNR=47								
K27A	Flueckinger Fa	15.36	51	⇑P		P	03 43 14.9	-2.8	
	baz=15								
F23A	Volborg	15.39	36	⇓P		P	03 43 16.5	-1.4	
	baz=15,SNR=22								
B17A	L&G Farms, Che	15.42	19	⇑P		P	03 43 17.0	-1.3	
	baz=15,SNR=45								
C19A	Slack Wire Ran	15.46	24	⇓P		P	03 43 17.8	-1.0	
	baz=16,SNR=17								
A14A	Double T Ranch	15.47	12	⇓P		P	03 43 18.1	-0.8	
	baz=16,SNR=26								
WALA	Waterton Lakes	15.47	11	*e*Pn		Pn	03 43 13.5	-0.8	
	1.0nm,0.8s								
EGMT	Eagleton	15.49	22	*e*Pn		Pn	03 43 14.1	-0.5	
	64nm,0.9s								
EGMT	Eagleton	15.49	22	⇑P		P	03 43 18.1	-0.9	
	baz=16,SNR=20								
T31A	Randall Ranch,	15.53	73	P		P	03 43 16.8	-2.7	
	baz=16,SNR=12								
531A	Rocksprings	15.55	99	⇑P		P	03 43 18.5	-1.3	
	baz=16								
A15A	Johnson Ranch,	15.61	14	⇑P		P	03 43 19.4	-1.0	
	baz=16,SNR=25								
G24A	Alzada	15.62	39	⇑P		P	03 43 18.9	-1.6	
	baz=16								
E22A	Miles City	15.66	33	⇑P		P	03 43 20.2	-0.6	
	baz=16								
D21A	La Casta Ranch	15.69	30	⇑P		P	03 43 20.2	-1.0	
	baz=16,SNR=12								
Y32A	R-V Farms, Ver	15.69	84	⇓P		P	03 43 20.0	-1.3	
	baz=16,SNR=6.8								
ABTX	Abilene, Hawle	15.70	90	P		P	03 43 19.2	-2.2	
	baz=16,SNR=21								
Z32A	Haskell	15.73	87	⇓P		P	03 43 20.5	-1.3	
	baz=16,SNR=75								
S31A	Mullinville	15.74	71	⇓P		P	03 43 24.2	+2.3	
	baz=16,SNR=5.4								
631A	Perdido Creek	15.78	102	P		P	03 43 21.0	-1.3	
	baz=16,SNR=28								
B18A	Beardsley Farm	15.81	21	⇓P		P	03 43 21.8	-0.7	
	baz=16,SNR=60								
C20A	Veseth Ranch,	15.82	26	⇓P		P	03 43 22.2	-0.4	
	baz=16,SNR=22								
A16A	West Butte Ran	15.83	17	⇓P		P	03 43 22.3	-0.5	
	baz=16,SNR=9.7								
232A	Coleman	15.84	92	P		P	03 43 20.4	-2.5	
	baz=16,SNR=63								
M29A	Burnside Ranch	15.85	57	⇑P		P	03 43 21.3	-1.8	
	baz=16								
332A	Millersview	15.88	94	P		P	03 43 21.7	-1.7	
	baz=16,SNR=43								
F24A	Ekalaka	15.96	38	⇑P		P	03 43 22.0	-2.2	
	baz=16								
432A	Menard	15.96	96	P		P	03 43 23.3	-1.1	
	baz=16,SNR=51								
E23A	Ismay	16.00	34	⇓P		Pn	03 43 22.2	+1.1	
	baz=16,SNR=8.5								
A17A	Triple J Farms	16.05	19	⇑P		P	03 43 24.7	-0.6	
	baz=16,SNR=39								
JCT	Junction City	16.07	97	*e*Pn		Pn	03 43 22.5	+0.4	
	22nm,1.0s								
JCT	Junction City	16.07	97	P		P	03 43 24.4	-1.1	
	baz=16,SNR=14								
532A	Rocksprings	16.09	99	P		P	03 43 25.2	-0.5	
	baz=16,SNR=75								
D22A	Cohagen	16.10	31	⇓P		P	03 43 24.7	-1.1	
	baz=16,SNR=38								
B19A	Brinkman Farms	16.13	23	⇓P		P	03 43 25.5	-0.6	
	baz=16,SNR=39								
WMOK	Wichita Mounta	16.19	82	*e*Pn		Pn	03 43 23.9	+0.3	
	30nm,1.1s								
C21A	Desert Coulee	16.26	28	⇓P		P	03 43 27.5	0.0	
	baz=16,SNR=11								
A18A	Metzger Ranch,	16.26	20	⇓P		P	03 43 27.2	-0.4	
	baz=16,SNR=13								
B20A	Solberg Farm,	16.43	25	⇓P		P	03 43 29.4	0.0	
	baz=16,SNR=8.9								
E24A	Baker	16.52	36	⇑P		P	03 43 29.9	-0.6	
	baz=16,SNR=8.3								
732A	Laxson Ranch,	16.53	103	⇓P		P	03 43 30.4	-0.2	
	baz=16,SNR=15								
D23A	Lindsay	16.54	33	⇓P		P	03 43 30.7	0.0	
	baz=16,SNR=9.0								
A19A	Klindworth Far	16.61	23	⇑P		Pn	03 43 28.8	-0.1	
	baz=17,SNR=9.4								
C22A	Vida	16.68	30	⇓P		P	03 43 31.6	-0.7	
	baz=17,SNR=13								
B21A	Ellsworth Farm	16.78	27	⇓P		P	03 43 33.0	-0.3	
	baz=17								
D24A	Glendive	16.91	35	⇓P		P	03 43 33.8	-1.0	
	baz=17,SNR=8.5								
C23A	Lambert	17.03	32	⇑P		P	03 43 35.4	-0.7	
	baz=17,SNR=18								
C24A	Savage	17.16	34	⇓P		P	03 43 37.5	-0.1	
	baz=17,SNR=9.3								
B23A	Brockton	17.62	31	⇓P		P	03 43 44.0	+1.4	
	baz=18,SNR=20								
BGNE	Belgrade	17.62	59	⇑P		P	03 43 43.0	+0.3	
	baz=18								
WHTX	Lake Whitney	17.64	91	⇑P		P	03 43 43.1	+0.2	
	baz=18,SNR=7.7								
DGMT	Dagmar	17.97	32	⇓P		P	03 43 48.3	+1.9	
	baz=18,SNR=6.4								
KSU1	Kansas State U	18.21	67	*e*Pn		P	03 43 49.4	+0.4	
	41nm,0.9s								
BRSD	Miller	18.29	49	⇓P		P	03 43 51.5	+1.4	
	baz=18								
A24A	Westby	18.39	31	⇑P		Pn	03 43 53.0	+1.9	
	baz=18,SNR=11								
TUL1	Tulsa	18.60	78	⇓P		Pn	03 43 54.2	+0.6	
	baz=18,SNR=18								
ECSD	EROS Data Cent	19.51	53	*e*P		Pn	03 44 04.0	-0.6	
	17nm,0.9s								
MDND	Maddock	19.78	40	⇓P		Pn	03 44 07.8	0.0	
	baz=20								
AGMN	Agassiz Nation	22.09	43	*e*P		P	03 44 31.4	+0.1	
	29nm,0.7s								
SPMN	St. Paul	22.59	52	⇑P		P	03 44 37.1	+0.4	
	baz=22,SNR=14								
ULM	Lac du Bonnet	23.19	39	P		P	03 44 41.6	-1.1	
ULM	Lac du Bonnet	23.19	39	P		P	03 44 41.6	-1.1	
	23nm,0.9s,baz=235,slow=9.3,SNR=10								
ULM					LR	LR	03 53 57.5		
	comp=Z,262nm,20.0s,baz=272,slow=37								
PARMO	Parma	23.46	75	*e*P		P	03 44 46.2	+0.5	
JFWS	Jewell Farm	23.68	59	*e*P		P	03 44 46.9	-0.9	
	31nm,1.0s								
OXF	Oxford	23.90	80	*e*P		P	03 44 49.2	-0.8	
	60nm,1.1s								
HDIL	Hopedale	23.99	66	*e*P		P	03 44 51.4	+0.7	
	37nm,1.2s								
EYMN	Ely	24.49	47	*e*P		P	03 44 54.5	-0.8	
	38nm,1.4s								
SFIN	Scholer Farm	25.64	66	⇓P		P	03 45 06.0	+0.2	
	baz=26								
DLBC	Dease Lake	25.74	346	*e*P		P	03 45 06.3	-0.2	
DLBC	Dease Lake	25.74	346	P		P	03 45 06.9	+0.3	
	3.9nm,0.9s,baz=180,slow=8.1,SNR=6.6								
DLBC					LR	LR	03 55 25.5		
	comp=Z,431nm,19.8s,baz=149,slow=37								
SWET	Sewanee	26.66	78	*e*P		P	03 45 15.1	0.0	
	15nm,1.0s								
CPCT	Cooper Cave	27.78	77	*e*P		P	03 45 25.3	+0.2	
TKL	Tuckaleechee C	28.36	77	P		P	03 45 30.6	+0.2	
TKL	Tuckaleechee C	28.36	77	P		P	03 45 30.6	+0.2	
	9.0nm,0.8s,baz=265,slow=4.0,SNR=8.5								
TKL					LR	LR	03 57 55.2		
	comp=Z,142nm,19.9s,baz=96,slow=39								
YKA	Yellowknife Ar	28.68	4	P		P	03 45 33.4	+0.5	
YKA				PcP		PcP	03 48 43.3	+0.2	
YKA	Yellowknife Ar	28.68	4	P		P	03 45 33.4	+0.5	
	1.9nm,0.8s,baz=182,slow=8.8,SNR=15								
YKA				PcP		PcP	03 48 43.3	+0.2	
	1.6nm,1.0s,baz=180,slow=2.9,SNR=6.0								
TEIG	Tepich	29.93	109	LR		LR	03 59 29.9		
	comp=Z,116nm,20.4s,baz=326,slow=40								
KMSC	Kings Mountain	30.41	77	⇓P		P	03 45 48.9	+0.4	
	baz=30,SNR=7.1								
EGAK	Eagle	33.86	343	*e*P		P	03 46 19.6	+1.2	
	8.6nm,1.0s								
EGAK				*e*PcP		PcP	03 48 57.2	+0.2	
ILAR	Eielson Array	35.41	339	P		P	03 46 33.0	+1.2	
ILAR				PcP		PcP	03 49 01.6	+0.1	
ILAR	Eielson Array	35.41	339	P		P	03 46 33.0	+1.2	
	3.3nm,0.9s,baz=157,slow=7.8,SNR=25								
ILAR				PcP		PcP	03 49 01.6	+0.1	
	0.9nm,0.8s,baz=157,slow=2.4,SNR=6.3								
ILAR				LR		LR	04 01 37.3		
	comp=Z,153nm,18.3s,baz=128,slow=37								
SCHQ	Schefferville	41.19	43	LR		LR	04 06 03.9		
	comp=Z,149nm,19.1s,baz=128,slow=38								
ROSC	El Rosal	50.02	115	LR		LR	04 11 07.6		
	comp=Z,70nm,19.0s,baz=27,slow=38								
SUMG	Summit	54.99	21	*e*P		P	03 49 07.5	+0.1	
	11nm,0.9s								
SUMG	Summit	54.99	21	*i* P		P	03 49 07.6	+0.1	
	8.3nm,0.8s								
PPT	Papeete	59.23	215	LR		LR	04 09 24.9		
	comp=Z,142nm,19.3s,baz=344,slow=30								
PPT2	Papeete2	59.25	215	*e*LR		LR	04 07 09.1		
	150nm,25.8s								
PETK	Petropavlovsk-	60.26	316	LR		LR	04 09 54.9		
	comp=Z,38nm,20.2s,baz=301,slow=30								
TBI	Tubuai	64.20	212	*e*LR		LR	04 09 20.3		
	101nm,28.5s								
LPAZ	La Paz	69.14	128	P		P	03 50 43.1	-0.4	
LPAZ	La Paz	69.14	128	P		P	03 50 43.1	-0.4	
	1.9nm,0.9s,baz=333,slow=6.5,SNR=7.5								
ARCES	ARCESS Array B	73.50	12	LR		LR	04 26 55.6		
	comp=Z,112nm,18.7s,baz=135,slow=39								
NB2	NORSAR Subarra	76.84	23	P		P	03 51 28.2	+0.3	
	comp=Z,4.1nm,0.9s,baz=317,slow=5.9								
NOA	NORSAR Array B	76.84	23	P		P	03 51 28.4	+0.5	
NOA	NORSAR Array B	76.84	23	P		P	03 51 28.4	+0.5	
	comp=Z,2.0nm,0.9s,baz=320,slow=5.7,SNR=4.7								
NOA				LR		LR	04 25 57.8		
	comp=Z,68nm,21.2s,baz=325,slow=36								
HFS	Hagfors	78.33	22	LR		LR	04 29 50.7		
	comp=Z,106nm,18.3s,baz=304,slow=38								
USRK	Ussuriysk Arra	79.36	316	P		P	03 51 45.0	+2.9	
	comp=Z,5.9nm,0.9s,baz=54,slow=8.8,SNR=5.9								
ROSF	Rostrenen	79.71	38	*e*P		P	03 51 42.9	-1.0	
	comp=Z,96nm,1.4s								
ROSF	Rostrenen	79.71	38	*e*P		P	03 51 42.9	-1.0	
	comp=Z,96nm,1.4s								
KAF	Kangasniemi	80.13	16	*e*p		P	03 51 41.6	-4.3	
	comp=Z,2.8nm,0.8s								
MDJ	Mudanjiang	80.45	318	P		P	03 51 46.6	-1.4	
MDJ				pmax		pmax			
	comp=Z,9.0nm,2.5s								
MDJ				pmax		pmax			
	comp=Z,61nm,4.0s								
JOF	Joensuu	80.47	14	*e*p		P	03 51 46.9	-0.9	
	comp=Z,3.5nm,0.8s								
FINES	FINESS Array B	80.66	16	P		P	03 51 49.1	+0.3	
FINES	FINESS Array B	80.66	16	P		P	03 51 49.1	+0.3	
	comp=Z,5.7nm,0.8s,baz=335,slow=6.2,SNR=14								
FINES				LR		LR	04 30 05.9		
	comp=Z,82nm,19.8s,baz=270,slow=38								
FLN	La Foliniere	80.83	36	*e*P		P	03 51 48.3	-1.7	
	comp=Z,109nm,1.5s								
FLN	La Foliniere	80.83	36	*e*P		P	03 51 48.3	-1.7	
	comp=Z,109nm,1.5s								
GRR	Gorron	80.89	37	*e*P		P	03 51 49.2	-1.1	
GRR	Gorron	80.89	37	*e*P		P	03 51 49.2	-1.1	
MFF	Saint Martin d	82.44	38	*e*P		P	03 51 57.0	-1.6	
	comp=Z,48nm,1.2s								
MFF	Saint Martin d	82.44	38	*e*P		P	03 51 57.0	-1.6	
	comp=Z,48nm,1.2s								
BDFB	Brasilia	83.06	114	LR		LR	04 33 43.5		
	comp=Z,103nm,19.4s,baz=137,slow=39								
CN2	Changchun	83.26	319	*e*P		P	03 52 02.0	-0.9	
CN2				pmax		pmax			
	comp=Z,10.0nm,0.8s								
CPUP	Villa Florida	83.31	128	P		P	03 52 03.6	+0.5	
CPUP	Villa Florida	83.31	128	P		P	03 52 03.6	+0.5	
	comp=Z,1.3nm,0.8s,baz=321,slow=12,SNR=4.0								
CPUP				LR		LR	04 27 40.9		
	comp=Z,82nm,19.0s,baz=83,slow=35								
SSF	Saint Saulge	83.95	36	*e*P		P	03 52 04.5	-1.8	
	comp=Z,13nm,1.0s								
SSF	Saint Saulge	83.95	36	*e*P		P	03 52 04.5	-1.8	
	comp=Z,13nm,1.0s								
LOR	Lormes	83.97	35	*e*P		P	03 52 04.9	-1.6	
	comp=Z,24nm,1.1s								
LOR	Lormes	83.97	35	*e*P		P	03 52 04.9	-1.6	
	comp=Z,24nm,1.1s								
AVF	Avril sur Loir	84.06	36	*e*P		P	03 52 05.0	-1.9	
AVF	Avril sur Loir	84.06	36	*e*P		P	03 52 05.0	-1.9	
RJF	Les Rejaudoux	84.18	38	*e*P		P	03 52 05.8	-1.7	
	comp=Z,26nm,1.2s								
RJF	Les Rejaudoux	84.18	38	*e*P		P	03 52 05.8	-1.7	
	comp=Z,26nm,1.2s								
SJPF	Ste Jean	84.22	41	*e*P		P	03 52 06.4	-1.4	
	comp=Z,48nm,1.4s								
SJPF	Ste Jean	84.22	41	*e*P		P	03 52 06.4	-1.4	
	comp=Z,48nm,1.4s								
SMF	Signal de Mont	84.40	36	*e*P		P	03 52 06.5	-2.2	
	comp=Z,23nm,1.1s								
SMF	Signal de Mont	84.40	36	*e*P		P	03 52 06.5	-2.2	
	comp=Z,23nm,1.1s								
CAF	Calviac	84.72	38	*e*P		P	03 52 08.5	-1.8	
	comp=Z,14nm,1.0s								
CAF	Calviac	84.72	38	*e*P		P	03 52 08.5	-1.8	
	comp=Z,14nm,1.0s								
ETSF	Etsaut	84.72	41	*e*P		P	03 52 08.5	-1.9	
	comp=Z,25nm,1.2s								
ETSF	Etsaut	84.72	41	*e*P		P	03 52 08.5	-1.9	
	comp=Z,25nm,1.2s								
ESDC	Sonseca Array	84.93	45	P		P	03 52 10.9	-0.6	
ESDC	Sonseca Array	84.93	45	P		P	03 52 10.9	-0.6	
	comp=Z,0.2nm,0.3s,baz=302,slow=2.4,SNR=4.8								
CLL	Collm	84.97	28	*e*P		P	03 52 12.0	+0.6	
CLL				LmV			04 30 00.0		
	comp=Z,100nm,18.9s								
EPF	Esparros	85.12	40	*e*P		P	03 52 10.5	-1.9	
EPF	Esparros	85.12	40	*e*P		P	03 52 10.5	-1.9	
BRG	Berggiesshubel	85.68	28	*e*(P)		P	03 52 15.6	+0.6	
	comp=Z,9.0nm,1.4s								
GERES	GERESS Array B	87.18	29	P		P	03 52 26.8	+4.3	
GERES	GERESS Array B	87.18	29	P		P	03 52 26.8	+4.3	
	comp=Z,0.7nm,0.9s,baz=311,slow=6.3,SNR=4.8								
GERES				LR		LR	04 31 22.5		
	comp=Z,116nm,18.2s,baz=315,slow=36								
VRAC	Vranov	87.96	28	LR		LR	04 34 38.8		
	comp=Z,95nm,18.3s,baz=314,slow=38								
SONM	Songino Array	89.28	332	P		P	03 52 33.8	+1.2	
SONM	Songino Array	89.28	332	P		P	03 52 33.8	+1.2	
	comp=Z,1.5nm,0.9s,baz=33,slow=3.5,SNR=6.5								
SONM				LR		LR	04 33 12.1		
	comp=Z,81nm,21.8s,baz=114,slow=36								
SOKA	Soboth	89.44	30	⇑PcP		PcP	03 52 33.3	-1.3	
	comp=Z,2.3nm,1.2s								
VYHS	Vyhne	89.48	27	*e*P		P	03 52 35.7	+2.4	
CRVS	Cervenica-Dubn	90.09	25	*e*P		P	03 52 35.2	-1.0	
ZALV	Zalesovo Beam	90.21	347	P		P	03 52 36.6	0.0	
ZALV	Zalesovo Beam	90.21	347	P		P	03 52 36.6	0.0	
	comp=Z,0.7nm,0.3s,baz=27,slow=3.5,SNR=3.1								
ZALV				LR		LR	04 38 49.6		
	comp=Z,35nm,19.0s,baz=55,slow=39								
AKASG	Malin Array Be	91.00	20	P		P	03 52 40.2	-0.2	
AKASG	Malin Array Be	91.00	20	P		P	03 52 40.2	-0.2	
	comp=Z,4.1nm,1.0s,baz=316,slow=3.2,SNR=3.5								
AKASG				LR		LR	04 37 37.3		
	comp=Z,80nm,18.3s,baz=295,slow=38								
BVAR	Borovoye Array	93.08	355	P		P	03 52 50.2	+0.3	
BVAR	Borovoye Array	93.08	355	P		P	03 52 50.2	+0.3	
	comp=Z,1.0nm,0.7s,baz=21,slow=2.0,SNR=3.9								
KEST	Kesra	95.20	40	LR		LR	04 34 47.6		
	comp=Z,29nm,19.0s,baz=242,slow=35								
MKAR	Makanchi Array	97.52	346	P		Pdif	03 53 10.8	+0.4	
MKAR	Makanchi Array	97.52	346	P		Pdif	03 53 10.9	+0.4	
	comp=Z,0.6nm,0.8s,baz=1.4,slow=5.8,SNR=5.6								
MKAR				LR		LR	04 43 38.8		
	comp=Z,45nm,18.7s,baz=354,slow=39								
WMQ	Urumqi	99.06	341	*e*P		Pdif	03 53 17.4	0.0	
WMQ				LR		LR			
	comp=N,140nm,5.0s								
WMQ				LR		LR			
	comp=E,190nm,5.8s								
WMQ				LR		LR			
	comp=Z,43nm,24.2s								
GYA	Guiyang	106.31	319	*e*Pdif		Pdif	03 53 47.8	-2.2	
GYA				PKP		PKiKP	03 57 58.8	-2.6	
GYA				PP		PP	03 58 14.3	+0.9	
GYA				AMB		AMB			
	comp=Z,90nm,7.5s								
ASAR	Alice Springs	117.01	259	PKP		PKPdf	03 58 21.2	-0.4	
ASAR	Alice Springs	117.01	259	PKP		PKPdf	03 58 21.2	-0.4	
	comp=Z,0.2nm,0.4s,baz=76,slow=1.7,SNR=2.9								
MAW	Mawson	146.28	181	*e*PKPbc		PKPab	03 59 16.5	-0.2	
MAW	Mawson	146.28	181	PKPbc		PKPab	03 59 16.2	-0.5	
	comp=Z,7.3nm,0.9s,baz=198,slow=3.2,SNR=6.2								
LBTB	Lobatse	147.51	84	*e*PKPbc		PKPbc	03 59 20.7	-0.2	
BOSA	Boshof	148.55	90	PKPbc		PKPbc	03 59 23.9	+0.3	
BOSA	Boshof	148.55	90	PKPbc		PKPbc	03 59 23.9	+0.3	
	comp=Z,21nm,1.2s,baz=299,slow=2.7,SNR=8.1								

IDC 18 03:52:58.2±3.3, 2°61N×125°24E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=427.8km s-min=26.5km az=63.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	27.45	163	P	P	03 58 45.3	-0.9
	0.2nm,0.5s,baz=351,slow=7.9,SNR=4.1						
STKA	Stephens Creek	37.65	157	P	P	04 00 15.8	+0.6
	0.6nm,0.4s,baz=342,slow=11,SNR=3.9						
MKAR	Makanchi Array	57.64	326	P	P	04 02 50.1	-0.2
	0.3nm,0.5s,baz=115,slow=7.2,SNR=6.6						
TORD	Torodi Ar. Bea	121.84	287	PKP	PKPdf	04 11 55.6	+0.1
	0.1nm,0.4s,baz=75,slow=1.1,SNR=4.4						

NIED ***18*** *04:21:00, 32°.50N×132°.10E, h32km, Mw3.9 Best double couple: M0 6.99000×10^14 NP1:φ=226.00000°, δ=83.00000°, λ=-78.00000°. NP2:φ=345.00000°, δ=13.00000°, λ=-151.00000°.*

ISCJB ***18*** *04:21:28.8±0.6, 32°.48N±0°.06×132°.06E±0°.06, h43km±6km, mb3.5/7, MS3.2/2, Error ellipse: s-maj=10.6km s-min=6.2km az=143.0*

JMA ***18*** *04:21:29.2, 32°.48N×132°.07E, h27km±1km, M3.9*

JMA Felt I J1.

IDC ***18*** *04:21:29.4±1.0, 32°.43N×131°.82E, h32km±6km, mb3.4/7, mb1 3.5/8, mb1mx3.4/27, mbtmp3.4/8, ML3.3/1, MS3.2/2, Ms1 3.2/2, ms1mx2.9/16, Error ellipse: s-maj=31.0km s-min=19.3km az=78.0*

ISC 18 04:21:29.5±0.9, 32°.48N±0°.06×132°.07E±0°.05, h33km±2km, n18, σ0°91/23, mb3.6/7, 2C-5D, Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTSN	Tsuno	0.54	244	⇓P	Pb	04 21 39.8	-0.8
JTSN				*e*S	Sb	04 21 47.5	-0.8
JKIT	Kitakata	0.54	285	⇓P	Pb	04 21 39.8	-0.9
JKIT				*e*S	Sb	04 21 47.6	-0.9
JUS	Usuki	0.64	335	⇓P	Pn	04 21 41.8	-0.4
JUS				*e*S	Sb	04 21 50.8	-0.4
JTO	Tosashimizu	0.72	58	⇓P	Pn	04 21 42.7	-0.6
JTO				*e*S	Sn	04 21 52.5	-0.7
UWA2	Uwa jima 2	0.86	32	⇑P	Pn	04 21 44.8	-0.5
JTZ	Takazaki	1.02	236	⇓P	Pn	04 21 47.4	+0.1
JTZ				*e*S	Sn	04 22 00.6	+0.1
JIU2	Izumi 2	1.06	274	⇑P	Pn	04 21 48.5	+0.5
KSRS	Korea Array	6.02	327	Pn	Pn	04 22 57.4	+1.3
	0.8nm,0.3s,baz=145,slow=14,SNR=6.0						
KSRS				Lg	Lg	04 24 43.0	
	0.2nm,0.3s,baz=149,slow=31,SNR=4.0						
MJAR	Matsushiro Arr	6.49	50	Pn	Pn	04 23 09.9	+7.4
	0.7nm,0.3s,baz=243,slow=14,SNR=3.4						
SONM	Songino Array	24.75	316	P	P	04 26 46.4	-1.6
	1.7nm,0.9s,baz=128,slow=11,SNR=6.9						
PETK	Petropavlovsk-	27.64	34	LR	LR	04 40 24.1	
	comp=Z,27nm,19.1s,baz=241,slow=41						
MKAR	Makanchi Array	40.24	306	P	P	04 29 01.9	-1.1
	0.2nm,0.5s,baz=93,slow=10.0,SNR=5.3						
ASAR	Alice Springs	55.86	178	P	P	04 31 03.6	-0.2
	0.5nm,0.5s,baz=13,slow=12,SNR=13						
ILAR	Eielson Array	57.36	30	P	P	04 31 15.2	+1.2
	0.1nm,0.7s,baz=288,slow=6.9,SNR=2.8						
ILAR				pP	pP	04 31 24.9

LVC	**Limon Verde**	**2.08 313**	⇑*i*P	Pn	04 48 34.2	+1.2
LVC			*i* S	S	04 49 06.2	+2.5
PB04	**Plate Boundary**	**2.70 310**	⇑*i*P	Pn	04 48 46.1	+6.7
PB04			*i* S	S	04 49 27.1	+12
PB04			AML	AML	04 49 29.4	
	comp=N,86nm,0.2s					
CEN1	**Los Morros**	**2.77 283**	⇑*i*P	Pn	04 48 43.6	+3.3
CEN1			*i* S	S	04 49 20.6	+3.8
CEN1			AML	AML	04 49 23.3	
	comp=E,70nm,0.5s					
PB09	**Plate Boundary**	**2.88 320**	*e*P	Pn	04 48 43.4	+1.7
PB09			*i* S	S	04 49 21.7	+2.3
PB09			AML	AML	04 49 25.2	
	comp=N,138nm,0.3s					
ANCH	**Antofagasta**	**2.91 276**	⇑*i*P	Pn	04 48 43.3	+1.6
ANCH			*i* S	S	04 49 21.4	+2.0
MECH	**Mejillones**	**3.07 287**	⇑*i*P	Pn	04 48 45.6	+2.0
MECH			*e*S	S	04 49 25.5	+2.8
MECH			AML	AML	04 49 37.0	
	comp=N,96nm,0.3s					
PB01	**Plate Boundary**	**3.62 325**	⇓*i*P	Pn	04 48 51.0	+0.6
PB01			*i* S	S	04 49 36.1	+1.1
PB01			AML	AML	04 49 40.3	
	comp=N,31nm,0.2s					

*ISCJB **18** 05:04:48.1±0.5, 21°.34S±0°.04×68°.43W±0°.07, h115^{km}±6^{km}, mb3.6/5, Error ellipse: s-maj=10.9km s-min=7.0km az=164.9*
*GUC **18** 05:04:49.7±0.7, 21°.43S×68°.71W, h118^{km}±5^{km}, ML4.0*
*IDC **18** 05:04:50.6±3.0, 21°.37S×68°.42W, h124^{km}±25^{km}, mb3.4/6, mb1 3.6/9, mb1mx3.4/20, mbtmp3.3/9, Error ellipse: s-maj=29.1km s-min=18.9km az=49.0*

ISC 18 05:04:49.4±0.8, 21°.38S±0°.05×68°.54W±0°.09, h115^{km}±8^{km}, n18, σ0^{s}94/23, mb3.5/5, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**Plate Boundary**	**0.77**	**237**	⇑*i*P	**Pn**	**05 05 09.7**	**+0.6**
PB09				*i* S	**Sn**	**05 05 23.9**	**+0.1**
PB09				AML	AML	05 05 26.6	
	comp=E,12μm,0.8s						
PB01	**Plate Boundary**	**0.94**	**290**	⇑*i*P	**Pn**	**05 05 10.6**	**+0.1**
PB01				*i* S	**Sn**	**05 05 26.0**	**-0.4**
PB01				AML	AML	05 05 27.4	
	comp=E,5μm,0.3s						
PB04	**Plate Boundary**	**1.25**	**225**	⇑*i*P	Pn	05 05 19.1	+5.5
PB04				*i* S	Sn	05 05 41.7	+10
PB04				AML	AML	05 05 45.6	
	comp=E,950nm,0.4s						
LVC	**Limon Verde**	**1.28**	**195**	⇓*i*P	**Pn**	**05 05 14.7**	**+0.5**
LVC				*e*S	**Sn**	**05 05 33.2**	**+0.2**
HMBC	**Humberstone**	**1.67**	**311**	⇑*i*P	**Pn**	**05 05 18.4**	**-0.2**
HMBC				*i* S	**Sn**	**05 05 40.9**	**0.0**
HMBC				AML	AML	05 05 43.6	
	comp=E,2μm,0.8s						
PSGC	**Pisagua**	**2.31**	**320**	⇑*i*P	**Pn**	**05 05 25.8**	**-0.8**
PSGC				*i* S	**Sn**	**05 05 54.5**	**-0.7**
PSGC				AML	AML	05 05 56.7	
	comp=N,497nm,0.2s						
MNMC	**Minimini**	**2.44**	**336**	⇑*i*P	**Pn**	**05 05 29.0**	**+0.5**
MNMC				*i* S	**Sn**	**05 05 59.7**	**+1.2**
MNMC				AML	AML	05 06 07.3	
	comp=N,1μm,0.1s						
ANCH	**Antofagasta**	**2.87**	**217**	*e*P	**Pn**	**05 05 33.6**	**-0.3**
LPAZ	**La Paz**	**5.08**	**4**	P	**Pn**	**05 06 06.8**	**+2.9**
	comp=N,1.6nm,0.3s,baz=201,slow=6.5,SNR=57						
SIV	**San Ignacio**	**8.88**	**54**	P	**Pn**	**05 06 53.4**	**-1.5**
	comp=N,0.7nm,0.3s,baz=247,slow=12,SNR=16						
SIV				S	Sn	05 08 28.2	-4.9
	comp=N,0.1nm,0.3s,baz=207,slow=16,SNR=2.4						
CPUP	**Villa Florida**	**11.38**	**118**	P	**Pn**	**05 07 27.4**	**-1.2**
	comp=N,0.4nm,0.3s,baz=271,slow=15,SNR=4.5						
BDFB	**Brasilia**	**20.28**	**77**	P	**P**	**05 09 16.1**	**-0.1**
	comp=N,2.3nm,0.4s,baz=246,slow=12,SNR=11						
TXAR	**Lajitas Array**	**60.72**	**325**	P	**P**	**05 14 48.8**	**-0.3**
	comp=N,0.4nm,0.9s,baz=150,slow=11,SNR=2.7						
QSPA	**South Pole Qui**	**68.81**	**180**	P	**P**	**05 15 41.7**	**+0.6**
	comp=N,0.8nm,0.7s,baz=146,slow=7.3,SNR=4.7						
PDAR	**Pinedale Array**	**74.17**	**330**	P	**P**	**05 16 14.1**	**+0.4**
	comp=N,0.2nm,0.5s,baz=134,slow=8.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**76.99**	**70**	P	**P**	**05 16 29.4**	**-0.6**
	comp=N,0.4nm,0.4s,baz=255,slow=5.4,SNR=15						
YKA	**Yellowknife Ar**	**91.18**	**340**	P	**P**	**05 17 41.5**	**+0.6**
	comp=N,0.8nm,0.5s,baz=135,slow=4.5,SNR=17						
MKAR	**Makanchi Array**	**145.33**	**36**	PKPbc	**PKPab**	**05 24 14.0**	**-0.1**
	comp=N,0.8nm,0.7s,baz=270,slow=0.9,SNR=7.1						

*IDC **18** 05:36:00.8±1.9, 40°.64N×51°.09E, h0^{km}, mb3.7/6, mb1 3.9/11, mb1mx3.6/31, mbtmp3.8/11, ML4.0/5, MS3.1/2, Ms1 3.1/2, ms1mx2.1/38, Error ellipse: s-maj=29.6km s-min=14.7km az=168.0*
*THR **18** 05:36:04.4±0.5, 40.66N×50.98E, h15^{km}, ML3.6*
*ISCJB **18** 05:36:05.4±0.6, 40.77N±0.05×51.19E±0.05, h53^{km}±12^{km}, mb3.6/8, MS3.4/1, Error ellipse: s-maj=8.3km s-min=5.8km az=12.7*
*NNC **18** 05:36:07.7±3.3, 41°.17N×51°.56E, h0^{km}, mb3.4, Error ellipse: s-maj=51.4km s-min=16.4km az=93.0*
*CSEM **18** 05:36:08.2±0.5, 40°.55N×50°.97E, h20^{km}, ML3.6, Error ellipse: s-maj=15.3km s-min=6.7km az=29.0*

ISC 18 05:36:06.1±1.0, 40°.76N±0°.05×51°.23E±0°.05, h43^{km}±15^{km}, n49, σ2^{s}10/59, mb3.7/8, 6C-2D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NDR	**Nardaran**	**0.96**	**260**	P	**Pn**	**05 36 23.5**	**+0.3**
	SNR=2.9						
NDR				S	Sn	05 36 42.4	+6.7
GOBA	**Gobu**	**1.20**	**253**	P	**Pn**	**05 36 25.3**	**-1.1**
	SNR=7.7						
GOBA				S	Sn	05 36 49.0	+7.6
SIZA	**Siyzn**	**1.79**	**281**	P	**Pn**	**05 36 37.7**	**+3.0**
	SNR=7.4						
SIZA				S	**Sn**	**05 37 00.8**	**+4.5**
ALIB	**Äli-Bayra**	**1.88**	**246**	P	**Pn**	**05 36 33.2**	**-2.5**
	SNR=7.1						
PQL	**Pirkuli**	**2.00**	**272**	P	**Pn**	**05 36 39.4**	**+1.8**
	SNR=7.8						
PQL				S	**Sn**	**05 37 02.8**	**+1.3**
QUBA	**Quba, Azerbaij**	**2.15**	**287**	P	Pn	05 36 44.1	+4.5
	SNR=2.8						
QUBA				S	Sn	05 37 15.1	+10
IML	**Ismayilli**	**2.31**	**272**	S	**Sn**	**05 37 09.8**	**+0.7**
GLBA	**Clilabad**	**2.65**	**236**	P	**Pn**	**05 36 45.6**	**-0.8**
	SNR=5.2						
GLBA				S	**Sn**	**05 37 16.1**	**-1.2**
LKRN	**Lenkeran, Azer**	**2.79**	**224**	P	**Pn**	**05 36 48.4**	**+0.2**
	SNR=2.9						
LKRN				S	**Sn**	**05 37 18.9**	**-1.6**
SEKA	**Sheki**	**3.09**	**280**	P	**Pn**	**05 36 53.7**	**+1.3**
	SNR=5.0						
SEKA				S	**Sn**	**05 37 28.3**	**+0.2**
GRMI	**Germi**	**3.23**	**234**	*e*Pn	**Pn**	**05 36 53.8**	**-0.6**
GRMI	**Germi**	**3.23**	**234**	*e*Pn	**Pn**	**05 36 53.8**	**-0.6**
GANJ	**Ganja**	**3.73**	**270**	P	**Pn**	**05 37 00.9**	**-0.3**
	SNR=7.7						
GANJ				S	**Sn**	**05 37 40.2**	**-3.8**
DGRG	**David-gareji**	**4.48**	**281**	P	**Pn**	**05 37 12.4**	**+0.9**
DGRG				S	**Sn**	**05 38 02.2**	**-0.2**
ZNJK	**Zanjan**	**4.54**	**207**	*e*Pn	**Pn**	**05 37 12.4**	**-0.2**
ZNJK	**Zanjan**	**4.54**	**207**	*e*Pn	**Pn**	**05 37 12.4**	**-0.2**
CHTH	**Charan**	**4.84**	**181**	*e*Pn	**Pn**	**05 37 17.5**	**+0.8**
CHTH	**Charan**	**4.84**	**181**	*e*Pn	**Pn**	**05 37 17.5**	**+0.8**
MRVT	**Maraveh tapeh**	**4.88**	**128**	*e*Pn	Pn	05 37 20.7	+3.7
MRVT				AML	AML	05 38 17.0	
	comp=E,43nm,0.2s						
MRVT	**Maraveh tapeh**	**4.88**	**128**	*e*Pn	Pn	05 37 20.7	+3.7
TBLG	**Delisi**	**4.99**	**283**	P	**Sn**	**05 38 12.2**	**-2.7**
DAMV	**Damavand**	**5.15**	**173**	*e*Pn	**Pn**	**05 37 23.0**	**+2.0**
DAMV				AML	AML	05 38 21.3	
	comp=N,28nm,0.3s						
DAMV	**Damavand**	**5.15**	**173**	*e*Pn	**Pn**	**05 37 23.0**	**+2.0**
GUDG	**Gudauri**	**5.34**	**291**	P	**Sn**	**05 38 24.3**	**+0.5**
KBZ	**Khabaz**	**6.86**	**298**	Pn	**Pn**	**05 37 45.2**	**+1.2**
	comp=N,0.5nm,0.3s,baz=112,slow=4.0,SNR=6.6						
KBZ				Sn	**Sn**	**05 38 57.6**	**-3.1**
	comp=N,0.4nm,0.3s,baz=226,slow=3.2,SNR=2.4						
TABS	**Tabas**	**8.51**	**145**	*e*Pn	**Pn**	**05 38 09.9**	**+3.1**
TABS	**Tabas**	**8.51**	**145**	*e*Pn	**Pn**	**05 38 09.9**	**+3.1**
AB31	**Akbulak array**	**10.49**	**33**	⇑Pn	**Pn**	**05 38 34.1**	**+0.3**
	comp=N,0.8nm,0.4s,baz=212,slow=14,SNR=13						
AB31				⇑Sn	**Sn**	**05 40 27.7**	**-2.2**
	comp=N,4.6nm,0.5s,baz=226,slow=21,SNR=7.8						
AB31	**Akbulak array**	**10.49**	**33**	Pn	**Pn**	**05 38 34.1**	**+0.3**
	comp=N,0.8nm,0.4s,SNR=13						
AB31				Sn	**Sn**	**05 40 27.7**	**-2.2**
	comp=N,4.6nm,0.5s,SNR=7.8						
AKTO	**Aktyubinsk**	**10.78**	**24**	⇓Pn	**Pn**	**05 38 36.5**	**-1.2**
	comp=N,0.2nm,0.3s						
AKTO				⇑Sn	**Sn**	**05 40 33.0**	**-3.9**
	comp=N,1.8nm,0.5s						
AKTO	**Aktyubinsk**	**10.78**	**24**	Pn	**Pn**	**05 38 38.1**	**+0.5**
	comp=N,1.0nm,0.3s,baz=204,slow=12,SNR=7.6						
AKTO				Sn	**Sn**	**05 40 33.0**	**-3.9**
	comp=N,2.3nm,0.3s,baz=88,slow=21,SNR=13						
AKTO	**Aktyubinsk**	**10.78**	**24**	Pn	**Pn**	**05 38 36.5**	**-1.2**
	comp=N,0.2nm,0.3s						
AKTO				Sn	**Sn**	**05 40 33.0**	**-3.9**
	comp=N,1.8nm,0.5s						
ZRNK	**Zerenda**	**17.16**	**39**	⇓P	**Pn**	**05 40 01.3**	**-1.3**
	comp=N,0.7nm,0.5s						
AAK	**Ala-Archa**	**17.47**	**76**	P	**Pn**	**05 40 06.1**	**-0.5**
	comp=N,0.3nm,0.3s,baz=256,slow=15,SNR=7.9						
BVA0	**Borovoye Array**	**17.87**	**40**	⇑P	**P**	**05 40 12.1**	**+0.5**
	comp=N,0.2nm,0.6s,baz=236,slow=14,SNR=6.9						
BVA0	**Borovoye Array**	**17.87**	**40**	P	**P**	**05 40 12.1**	**+0.5**
	comp=N,0.2nm,0.6s,SNR=6.9						
BVAR	**Borovoye Array**	**17.87**	**40**	P	**P**	**05 40 12.0**	**+0.4**
	comp=N,0.5nm,0.3s,baz=233,slow=16,SNR=6.4						
BVAR				S	**Sn**	**05 43 23.0**	**-6.5**
	comp=N,0.6nm,0.3s,baz=240,slow=25,SNR=8.2						
BVAR				LR	LR	05 48 10.3	
	comp=N,31nm,19.5s,baz=283,slow=40						
VOSK	**Vostochnaya**	**18.00**	**42**	⇑P	**P**	**05 40 14.4**	**+1.4**
	comp=N,1.2nm,0.7s						
AKASG	**Malin Array Be**	**18.23**	**310**	P	**P**	**05 40 13.8**	**-1.8**
	comp=N,1.6nm,0.3s,baz=103,slow=9.4,SNR=6.6						
KURBB	**Kurchatov Arra**	**21.36**	**53**	P	**P**	**05 40 52.0**	**+2.4**
	comp=N,0.7nm,0.6s,baz=254,slow=12,SNR=6.1						
MK31	**Makanchi Array**	**23.13**	**64**	⇑P	**P**	**05 41 11.0**	**+2.6**
	comp=N,0.6nm,0.5s,baz=268,slow=7.5,SNR=7.6						
MK31	**Makanchi Array**	**23.13**	**64**	P	**P**	**05 41 11.0**	**+2.6**
	comp=N,0.6nm,0.5s,SNR=7.6						
MKAR	**Makanchi Array**	**23.13**	**64**	P	**P**	**05 41 10.3**	**+1.9**
	comp=N,0.9nm,0.7s,baz=266,slow=8.1,SNR=8.4						
JOF	**Joensuu**	**25.16**	**338**	*ep*	**P**	**05 41 27.1**	**+0.1**
	comp=N,1.4nm,0.4s						
FINES	**FINESS Array B**	**25.74**	**332**	P	**P**	**05 41 32.3**	**0.0**
	comp=N,2.4nm,0.6s,baz=135,slow=10,SNR=13						
HFS	**Hagfors**	**30.17**	**323**	P	**P**	**05 42 11.6**	**-0.2**
	comp=N,1.4nm,0.7s,baz=118,slow=12,SNR=5.0						
ARCES	**ARCESS Array B**	**31.84**	**343**	P	**P**	**05 42 27.1**	**+0.6**
	comp=N,1.8nm,0.8s,baz=135,slow=10,SNR=3.1						
USRK	**Ussuriysk Arra**	**57.35**	**57**	LR	LR	06 12 14.9	
	comp=N,30nm,20.2s,baz=64,slow=38						
YKA	**Yellowknife Ar**	**76.47**	**353**	P	**P**	**05 47 51.5**	**+0.6**
	comp=N,0.3nm,0.5s,baz=15,slow=6.2,SNR=4.3						

*AUST **18** 05:38:25.9±1.8, 10°.14S×120°.28E, h0^{km}, Error ellipse: s-maj=1.6km s-min=1.2km az=264.0*
*ISCJB **18** 05:38:27.5±1.0, 10°.14S±0°.05×118°.8E±0°.2, h10^{km}, Error ellipse: s-maj=23.1km s-min=7.0km az=9.8*
*DJA **18** 05:38:34.1±1.4, 10°.S±8°.×119°.9E±1°.0, h5^{km}±7^{km}, M4.0/4, MLv4.0/4*

ISC 18 05:38:29.7±1.4, 10°.1S±0°.1×118°.9E±0°.3, h10^{km}, n9, σ0^{s}91/8, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.67**	**42**	P	**Pg**	**05 38 42.8**	**0.0**
WSI	**Waingapu**	**1.42**	**71**	P	Pn	05 38 57.2	+1.5
BSSI	**Bau Bau, Buton**	**4.26**	**21**	P	**Pn**	**05 39 35.3**	**+0.5**
BSSI				S	**Sn**	**05 40 24.8**	**+0.2**
BKSI	**Bulukumba**	**4.93**	**14**	P	**Pn**	**05 39 43.9**	**-0.1**
BKSI				S	**Sn**	**05 40 39.9**	**-1.2**
KAPI	**Kappang**	**5.16**	**9**	P	**Pn**	**05 39 47.7**	**+0.6**
LUWI	**Luwuk**	**9.81**	**23**	S	Sn	05 42 28.9	-12
	baz=9.4,SNR=3.5						
FITZ	**Fitzroy Crossi**	**10.24**	**141**	P	Pn	05 40 56.3	-0.6
	baz=9.5,SNR=5.4						
MEEK	**Meekatharra**	**16.41**	**181**	P	**Pn**	**05 42 19.2**	**-1.1**
	baz=17,SNR=5.7						
MORW	**Morawa**	**19.02**	**188**	P	**P**	**05 42 52.8**	**+0.9**
	baz=19,SNR=6.6						

MEX 18 05:45:39.0±0.7, 18°.34N×99°.80W, h57^{km}±6^{km}, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLIG	**Platanillo**	**0.29**	**80**	*e*P	Pn	05 45 47.1	-1.8
PLIG				*i* S	Sn	05 45 53.9	-2.1
MEIG	**Mezcala**	**0.45**	**157**	*i* P	Pn	05 45 49.0	-1.4
MEIG				*i* S	Sn	05 45 57.1	-1.4
ARIG	**Puente Sto Nin**	**0.52**	**264**	*e*P	Pn	05 45 49.6	-1.4
ARIG				*e*S	Sn	05 45 58.1	-1.7
YAIG	**Yautepec**	**0.87**	**53**	*e*P	Pn	05 45 54.5	-1.0
YAIG				*i* S	Sn	05 46 06.0	-1.6
CAIG	**El Cayaco**	**1.36**	**199**	*e*P	Pn	05 46 00.0	-1.8
CAIG				*i* S	Sn	05 46 17.1	-1.7
UTMO	**Huajuapan**	**1.97**	**105**	*i* P	Pn	05 46 07.9	-2.3
UTMO				*i* S	Sn	05 46 31.7	-2.4
PNIG	**Pinotepa**	**2.51**	**140**	*e*P	Pn	05 46 16.6	-0.9

*IDC **18** 05:50:40.9±6.3, 21°.67S×66°.69W, h212^{km}±45^{km}, mb3.7/3, mb1 3.5/6, mb1mx3.3/19, mbtmp3.5/6, Error ellipse: s-maj=67.6km s-min=21.6km az=16.0*
*ISCJB **18** 05:50:44.7±0.7, 21°.38S±0°.06×66°.9W±0°.1, h261^{km}±11^{km}, mb3.9/3, Error ellipse: s-maj=15.7km s-min=8.3km az=15.0*
*GUC **18** 05:50:45.9±0.8, 21°.47S×67°.16W, h262^{km}±13^{km}, ML4.3*

ISC 18 05:50:45.0±0.9, 21°.33S±0°.06×66°.77W±0°.09, h245^{km}±11^{km}, n15, σ1^{s}60/22, mb3.9/3, 3C-2D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**Plate Boundary**	**2.35**	**258**	⇑*i*P	**Pn**	**05 51 31.4**	**+0.9**
LVC	**Limon Verde**	**2.36**	**237**	⇑*i*P	**Pn**	**05 51 31.2**	**+0.4**
LVC				*e*S	**S**	**05 52 06.2**	**-0.7**
PB04	**Plate Boundary**	**2.69**	**249**	⇑*i*P	Pn	05 51 40.9	+7.1
PB04				*i* S	S	05 52 22.4	+10
PB04				AML	AML	05 52 24.8	
	comp=N,306nm,0.4s						
HMBC	**Humberstone**	**3.10**	**289**	⇓*i*P	**Pn**	**05 51 38.5**	**+0.1**
HMBC				*i* S	**Sn**	**05 52 19.2**	**-1.3**
HMBC				AML	AML	05 52 21.3	
	comp=N,288nm,0.3s						
MNMC	**Minimini**	**3.44**	**309**	⇓*i*P	**Pn**	**05 51 43.5**	**+1.1**
MNMC				*i* S	**S**	**05 52 28.6**	**+1.0**
MNMC				AML	AML	05 52 29.9	
	comp=N,295nm,0.4s						
PSGC	**Pisagua**	**3.58**	**298**	*e*P	**Pn**	**05 51 43.5**	**-0.4**
PSGC				*i* S	**S**	**05 52 28.5**	**-1.9**
PSGC				AML	AML	05 52 29.8	
	comp=N,179nm,0.3s						
CEN1	**Los Morros**	**3.78**	**236**	*e*P	**Pn**	**05 51 47.5**	**+1.4**
CEN1				*e*S	**S**	**05 52 36.0**	**+1.5**
ANCH	**Antofagasta**	**4.10**	**234**	*e*P	**Pn**	**05 51 50.1**	**+0.3**
ANCH				*i* S	**S**	**05 52 38.2**	**-2.9**
LPAZ	**La Paz**	**5.17**	**345**	P	**Pn**	**05 52 04.5**	**+1.0**
	comp=N,0.5nm,0.3s,baz=153,slow=9.6,SNR=21						
LPAZ				S	**S**	**05 53 06.2**	**+0.3**
	comp=N,0.2nm,0.3s,baz=131,slow=18,SNR=6.6						
SIV	**San Ignacio**	**7.57**	**46**	P	**Pn**	**05 52 30.7**	**-2.2**
	comp=N,4.2nm,0.3s,baz=243,slow=12,SNR=68						
SIV				S	**S**	**05 54 02.6**	**+2.9**
	comp=N,0.2nm,0.3s,baz=252,slow=11,SNR=2.8						
BDFB	**Brasilia**	**18.66**	**76**	P	**P**	**05 54 43.4**	**-2.0**
	comp=N,0.3nm,0.3s,baz=244,slow=16,SNR=5.1						
DBIC	**Dimbokro**	**66.78**	**72**	P	**P**	**06 01 09.9**	**-0.9**
	comp=N,1.7nm,0.6s,baz=230,slow=12,SNR=2.6						
TORD	**Torodi Ar. Bea**	**75.42**	**69**	P	**P**	**06 02 01.9**	**-0.6**
	comp=N,3.6nm,0.5s,baz=257,slow=5.5,SNR=71						
YKA	**Yellowknife Ar**	**91.70**	**340**	P	**P**	**06 03 26.2**	**+2.1**
	comp=N,0.4nm,0.6s,baz=124,slow=4.3,SNR=7.9						
MKAR	**Makanchi Array**	**144.31**	**37**	PKP	**PKPdf**	**06 09 52.0**	**+0.2**
	comp=N,0.8nm,0.7s,baz=317,slow=3.3,SNR=8.2						

*MDD **18** 06:18:56.6±4.0, 32°.95N×5°.35W, h0^{km}, mb4.3/1, Error ellipse: s-maj=99.4km s-min=32.8km az=68.0, PRXIMO*
*INMG **18** 06:18:57.6±0.9, 33°.06N×5°.35W, h0^{km}, MD2.0, ML2.2, Error ellipse: s-maj=8.1km s-min=5.3km az=148.0*
*CSEM **18** 06:18:58.3±0.3, 33°.14N×5°.11W, h12^{km}, ML2.6/6, Error ellipse: s-maj=11.3km s-min=6.0km az=66.0*
*CNRM **18** 06:19:00.3, 33°.09N×5°.10W, h3^{km}, MD2.8*

ISC 18 06:18:57.7±1.4, 33°.16N±0°.04×5°.18W±0°.07, h6^{km}±14^{km}, n23, σ1^{s}03/41, Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CZD	**Col de Zad**	**0.17**	**138**	*i* P	**Pg**	**06 19 00.5**	**-0.6**
CZD				*i* S	**Sg**	**06 19 04.0**	**+0.6**
MIF	**Mishlifen**	**0.25**	**350**	*i* P	**Pb**	**06 19 05.0**	**+0.2**
MIF				*i* S	**Sb**	**06 19 10.0**	**+0.4**
TGT	**Taghat**	**0.91**	**6**	*i* P	**Pn**	**06 19 19.0**	**+1.8**
TGT				*i* S	**Sn**	**06 19 33.0**	**+2.3**
KIB	**El Ksiba**	**0.93**	**232**	*i* P	**Pb**	**06 19 17.0**	**+0.7**
KIB				*i* S	**Sn**	**06 19 31.0**	**-0.1**
ZFT	**Errachidia**	**1.32**	**148**	*i* P	**Pb**	**06 19 22.0**	**-1.0**
ZFT				*i* S	**Sg**	**06 19 40.0**	**-0.1**
TZC	**Tazercounte**	**1.50**	**228**	*e*P	**Pn**	**06 19 26.0**	**+0.7**
TZC				*i* S	**Sn**	**06 19 46.0**	**+0.7**
PBDV	**Barranco-do-Ve**	**4.66**	**332**	*e*Pn	**Pn**	**06 20 08.7**	**+0.1**
PBDV				*e*Sn	**Sn**	**06 21 01.3**	**-1.7**
PBDV				A	A	06 21 08.9	
	3.0nm,1.4s						
PBDV	**Barranco-do-Ve**	**4.66**	**332**	Pn	**Pn**	**06 20 08.7**	**+0.1**
PBDV				Sn	**Sn**	**06 21 01.3**	**-1.7**
	3.0nm,1.4s						
PBDV	**Barranco-do-Ve**	**4.66**	**332**	*e*Pn	**Pn**	**06 20 08.7**	**+0.1**
PBDV				Sn	**Sn**	**06 21 01.3**	**-1.7**
	3.0nm,1.4s						
PVAQ	**Vaqueiros**	**4.72**	**335**	*e*Pn	**Pn**	**06 20 09.6**	**+0.2**
PVAQ				*e*Sn	**Sn**	**06 21 03.5**	**-0.9**
PVAQ				A	A	06 21 15.4	
	1.9nm,0.8s						
PVAQ	**Vaqueiros**	**4.72**	**335**	Pn	**Pn**	**06 20 09.6**	**+0.2**
PVAQ				Sn	**Sn**	**06 21 03.5**	**-0.9**
	1.9nm,0.8s						
PVAQ	**Vaqueiros**	**4.72**	**335**	*e*Pn	**Pn**	**06 20 09.6**	**+0.2**
PVAQ				Sn	**Sn**	**06 21 03.5**	**-0.9**
	1.9nm,0.8s						
EGRO	**El Granado**	**4.75**	**337**	Pn	**Pn**	**06 20 10.3**	**+0.4**
	1.7nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**06 21 03.5**	**-1.8**
	0.9nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.75**	**337**	Pn	**Pn**	**06 20 10.3**	**+0.4**
	1.7nm,0.1s,SNR=7.9						
EGRO				Sn	**Sn**	**06 21 03.5**	**-1.8**
	0.9nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.76**	**346**	Pn	**Pn**	**06 20 10.6**	**+0.7**
	0.1nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**06 21 05.7**	**+0.3**
	0.1nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.76**	**346**	Pn	**Pn**	**06 20 10.6**	**+0.7**
	0.1nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**06 21 05.7**	**+0.3**
	0.1nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**4.97**	**324**	A	A	06 21 21.2	
	5.6nm,0.9s						
PCVE	**Castro Verde**	**5.04**	**333**	*e*Sn	**Sn**	**06 21 11.3**	**-1.0**
PCVE				A	A	06 21 13.4	
	1.8nm,0.2s						
PCVE	**Castro Verde**	**5.04**	**333**	Sn	**Sn**	**06 21 11.3**	**-1.0**
	1.8nm,0.2s						
PCVE	**Castro Verde**	**5.04**	**333**	Sn	**Sn**	**06 21 11.3**	**-1.0**
	1.8nm,0.2s						
PBAR	**Barrancos**	**5.23**	**344**	*e*Pn	**Pn**	**06 20 17.0**	**+0.6**
PBAR				*e*Sn	**Sn**	**06 21 15.9**	**-1.1**
PBAR				A	A	06 21 30.3	
	1.5nm,0.9s						
PBAR	**Barrancos**	**5.23**	**344**	Pn	**Pn**	**06 20 17.0**	**+0.6**
PBAR				Sn	**Sn**	**06 21 15.9**	**-1.1**
	1.5nm,0.9s						
PBAR	**Barrancos**	**5.23**	**344**	*e*Pn	**Pn**	**06 20 17.0**	**+0.6**
PBAR				Sn	**Sn**	**06 21 15.9**	**-1.1**
	1.5nm,0.9s						

MEX 18 06:50:58.0±0.6, 17°.70N×101°.86W, h5^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.39**	**103**	*e*P	Pg	06 51 04.7	-0.8
ZIIG				*i* S

*MOS **18** 07:08:47.1±2.0,53.˚53N×108.˚80E,h16km,mb4.3/1,Error ellipse: s-maj=16.8km s-min=10.3km az=57.0*

BYKL 18 07:08:47.6±0.2,53.˚58N×108.˚61E,h15km±3km,2C-3D, Lake Baikal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXMB	**Maximikha**	**0.33**	**166**	*i*Pg	Pg	07 08 54.1	-0.3
MXMB				*e*Sg	Sg	07 08 58.9	-0.2
MXMB				Pmax			
	comp=Z,472nm,0.3s						
MXMB				Smax			
	comp=E,3μm,0.2s						
OGRR	**Ongureny**	**0.61**	**276**	*e*PG	Pg	07 08 59.6	0.0
OGRR				*e*		07 09 07.6	
OGRR				pmax	pmax		
	comp=Z,472nm,0.3s						
OGRR				smax	smax		
	comp=E,3μm,0.2s						
OGRR	**Ongureny**	**0.61**	**276**	*i*Pg	Pg	07 08 59.6	0.0
OGRR				*e*Sg	Sg	07 09 07.7	0.0
OGRR				Pmax			
	comp=E,489nm,0.1s						
OGRR				Smax			
	comp=E,3μm,0.1s						
SYVR	**Suvo**	**0.83**	**84**	*e*PG	Pb	07 09 02.6	-1.2
SYVR				*e*		07 09 13.8	
SYVR				pmax	pmax		
	comp=Z,106nm,0.3s						
SYVR				smax	smax		
	comp=N,676nm,0.4s						
SYVR	**Suvo**	**0.83**	**84**	*e*Pg	Pb	07 09 02.5	-1.3
SYVR				*e*Sg	Sg	07 09 13.8	-1.0
SYVR				*e*Sb	Sn	07 09 17.7	+0.9
SYVR				Pmax			
	comp=N,105nm,0.3s						
SYVR				max			
	comp=N,662nm,0.3s						
ZRHB	**Zarechye**	**1.35**	**221**	*e*Pg	Pb	07 09 12.4	-0.3
ZRHB				*e*Sg	Sg	07 09 30.6	-0.7
ZRHB				Pmax			
	comp=N,2.0nm,0.2s						
ZRHB				Smax			
	comp=N,18nm,0.3s						
TRG	**Tyrgan**	**1.59**	**240**	*e*PN	Pn	07 09 15.7	+0.4
TRG				*e*		07 09 37.0	
TRG				pmax	pmax		
	comp=Z,94nm,0.2s						
TRG				smax	smax		
	comp=N,778nm,0.2s						
TRG	**Tyrgan**	**1.59**	**240**	*e*Sg	Sb	07 09 37.3	+0.6
TRG				Smax			
	comp=N,768nm,0.2s						
UUDB	**Ulan-Yde**	**1.81**	**199**	*i*Pg	Pb	07 09 19.7	-0.8
UUDB				*e*Sg	Sb	07 09 43.6	+0.6
UUDB				Pmax			
	comp=N,170nm,0.2s						
UUDB				Smax			
	comp=N,744nm,0.3s						
FFNB	**Fofonovo**	**1.90**	**217**	*e*Pn	Pn	07 09 19.6	+0.1
FFNB				*e*Pg	Pb	07 09 21.4	-0.6
FFNB				*e*Sn	Sn	07 09 43.7	+0.5
FFNB				*e*Sg	Sb	07 09 46.6	+1.0
FFNB				Pmax			
	comp=N,26nm,0.1s						
FFNB				Smax			
	comp=N,442nm,0.2s						
KAB	**Kabansk**	**1.94**	**219**	*e*PN	Pb	07 09 22.9	+0.2
KAB				*e*		07 09 47.9	
KAB				pmax	pmax		
	comp=Z,223nm,0.3s						
KAB				smax	smax		
	comp=E,783nm,0.5s						
KAB	**Kabansk**	**1.94**	**219**	*e*Sg	Sb	07 09 48.1	+1.4
KAB				Smax			
	comp=E,776nm,0.2s						
YLYR	**Ulyunkhan**	**1.98**	**48**	*e*PN	Pn	07 09 21.1	+0.5
YLYR				*e*		07 09 22.6	
YLYR				*e*S	Sn	07 09 46.3	+1.1
YLYR				*e*		07 09 48.9	
YLYR				pmax	pmax		
	comp=Z,66nm,0.4s						
YLYR				smax	smax		
	comp=N,222nm,0.9s						
YLYR	**Ulyunkhan**	**1.98**	**48**	*i*Pn	Pn	07 09 21.1	+0.5
YLYR				*e*Pg	Pb	07 09 22.6	-0.8
YLYR				*e*		07 09 28.3	
YLYR				*e*Sg	Sb	07 09 49.2	+1.2
YLYR				Pmax			
	comp=N,65nm,0.4s						
YLYR				Smax			
	comp=N,168nm,0.4s						
HRMR	**Khuramsha**	**2.20**	**208**	*e*Pn	Pn	07 09 24.2	+0.6
HRMR				*e*Pg	Pb	07 09 26.7	-0.4
HRMR				*e*Sg	Sb	07 09 55.7	+1.5
HRMR				Pmax			
	comp=N,173nm,0.2s						
HRMR				Smax			
	comp=N,2μm,0.2s						
NIZ	**Nizh Angarsk**	**2.27**	**13**	*e*PN	Pn	07 09 25.5	+1.0
NIZ				*e*		07 09 29.4	
NIZ				*e*S	Sn	07 09 53.0	+0.8
NIZ				*e*		07 09 57.0	
NIZ				smax	smax		
	comp=N,212nm,0.5s						
KMO	**Kumora**	**2.76**	**32**	*e*PN	Pn	07 09 32.2	+0.9
KMO				*e*		07 09 36.5	
KMO				*e*S	Sn	07 10 04.1	-0.2
KMO	**Kumora**	**2.76**	**32**	*e*Pn	Pn	07 09 32.2	+0.9
KMO				*e*Pg	Pb	07 09 36.6	0.0
KMO				*e*PgPg	PbPb	07 09 40.0	+0.3
KMO				*e*Sg	Sb	07 10 12.6	+2.4
KMO				max			
	comp=N,90nm,0.5s						
KMO				Smax			
	comp=N,205nm,1.0s						
LSTR	**Listvyanka**	**2.87**	**235**	*e*Pn	Pn	07 09 33.0	+0.2
LSTR				*e*Pg	Pb	07 09 38.2	-0.3
LSTR				*e*Sn	Sn	07 10 07.2	+0.2
LSTR				*e*Sg	Sb	07 10 14.8	+1.4
LSTR				Pmax			
	comp=N,18nm,0.3s						
LSTR				Smax			
	comp=N,80nm,0.2s						
IRK	**Irkutsk**	**2.95**	**245**	*e*PN	Pb	07 09 40.6	+0.7
IRK				*e*		07 10 16.7	
IRK				pmax	pmax		
	comp=Z,126nm,0.2s						
IRK				smax	smax		
	comp=N,571nm,0.4s						
YOA	**Uoyan**	**3.13**	**34**	*e*Sg	Sg	07 10 25.9	-2.2
YOA				Smax			
	comp=N,562nm,0.4s						
CIT	**Chita**	**3.38**	**116**	*e*PN	Pn	07 09 39.2	-0.7
CIT				*e*		07 09 46.6	
CIT				*e*S	Sn	07 10 18.7	-1.1
CIT				*e*		07 10 29.2	
CIT				pmax	pmax		
	comp=Z,29nm,0.2s						
CIT				smax	smax		
	comp=E,287nm,0.3s						
CIT	**Chita**	**3.38**	**116**	*e*Sn	Sn	07 10 19.0	-0.8
CIT				*e*Sg	Sb	07 10 32.3	+4.0
CIT				Smax			
	comp=E,296nm,0.2s						
UKT	**Uakit**	**3.49**	**55**	*e*Pn	Pn	07 09 42.0	+0.5
UKT				*e*Pg	Pb	07 09 49.7	+0.5
UKT				*e*Sn	Sn	07 10 22.2	-0.4
UKT				*e*Sg	Sb	07 10 35.3	+3.7
UKT				Pmax			
	comp=E,13nm,0.6s						
UKT				Smax			
	comp=E,45nm,0.5s						
TLY	**Talaya**	**3.57**	**240**	*e*PN	Pn	07 09 42.4	-0.1
TLY				*e*		07 09 50.1	
TLY	**Talaya**	**3.57**	**240**	*e*Pn	Pn	07 09 42.5	0.0
TLY				*e*Pg	Pb	07 09 51.4	+0.9
TLY				*e*Sn	Sn	07 10 24.1	-0.4
TLY				*e*		07 10 34.7	
TLY				*e*Sg	Sg	07 10 38.3	-4.2
TLY				Pmax			
	comp=E,10.0nm,0.2s						
TLY				Smax			
	comp=E,92nm,0.4s						
ARS	**Arshan**	**4.11**	**249**	*e*PN	Pn	07 09 51.2	+1.3
ARS				*e*		07 10 01.1	
ARS	**Arshan**	**4.11**	**249**	*e*Pn	Pn	07 09 51.3	+1.4
ARS				*e*Pg	Pb	07 10 01.2	+1.5
ARS				*e*		07 10 51.3	
ARS				*e*Sg	Sb	07 10 53.8	+4.5
ARS				Pmax			
	comp=E,17nm,0.3s						
ARS				Smax			
	comp=E,434nm,0.4s						
KPC	**Khapcheranga**	**4.54**	**147**	*e*PN	Pn	07 09 54.2	-1.6
KPC				*e*		07 10 07.6	
KPC				*e*		07 11 06.9	
KPC				pmax	pmax		
	comp=Z,25nm,0.2s						
KPC				smax	smax		
	comp=E,112nm,1.5s						
ZAK	**Zakamensk**	**4.59**	**228**	*e*Pn	Pn	07 09 58.0	+1.4
ZAK				*e*Pg	Pb	07 10 10.8	+2.8
ZAK				*e*Sg	Sg	07 11 10.0	-5.3
ZAK				Pmax			
	comp=E,3.0nm,0.3s						
ZAK				Smax			
	comp=E,25nm,0.3s						
NLYR	**Nelyaty**	**5.01**	**52**	*e*Pn	Pn	07 10 03.0	+0.7
NLYR				*e*Pg	Pb	07 10 18.6	+3.5
NLYR				*e*Sg	Sg	07 11 24.0	-4.6
NLYR				Pmax			
	comp=E,8.0nm,0.7s						
NLYR				Smax			
	comp=E,96nm,1.3s						
MOY	**Mondy**	**5.02**	**251**	*e*	Pb	07 10 12.5	-2.8
MOY				*e*Sg	Sb	07 11 21.4	+5.9
MOY				Smax			
	comp=E,106nm,0.8s						
BOD	**Bodaibo**	**5.23**	**34**	*e*Pn	Pn	07 10 04.7	-0.5
BOD				*e*Sg	Sg	07 11 28.7	-6.6
BOD				Smax			
	comp=E,31nm,0.8s						
ORL	**Orlik**	**5.41**	**262**	*i*Pn	Pn	07 10 10.0	+2.2
ORL				*e*Sn	Sn	07 11 09.7	-0.2
ORL				*e*Sg	Sg	07 11 35.5	-6.0
ORL				Smax			
	comp=E,66nm,0.8s						
CRS	**Chara**	**6.45**	**55**	*e*Sg	Sg	07 12 08.1	-6.4
CRS				Smax			
	comp=E,45nm,1.6s						
TUP	**Tupik**	**6.74**	**78**	*e*PN	Pn	07 10 25.2	-0.8
TUP				*e*		07 10 46.4	
TUP				*e*S	Sn	07 11 40.5	-2.0
TUP				*e*		07 12 13.7	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TUP				smax	smax		
	comp=N,78nm,1.0s						
TUP	**Tupik**	**6.74**	**78**	*e*Pn	Pn	07 10 25.7	-0.3
TUP				*e*Sg	Sg	07 12 14.7	-9.2
TUP				Smax			
	comp=N,78nm,1.0s						

*NSSP **18** 07:27:10.4,41.˚28N×45.˚45E,h14km,Ms2.8*
*CSEM **18** 07:27:12.9±0.6,41.˚30N×45.˚56E,h14km,ML2.8,Error ellipse: s-maj=13.8km s-min=8.6km az=22.0*
*TIF **18** 07:27:13.2,41.˚27N×45.˚53E,h20km±1km*
*ISCJB **18** 07:27:14.2±0.7,41.˚26N±0.˚03×45.˚59E±0.˚05,h20km±6km, Error ellipse: s-maj=5.9km s-min=4.9km az=163.3*

ISC 18 07:27:14.0±1.0,41.˚26N±0.˚03×45.˚56E±0.˚03,h25km±9km, n28,σ1§25/51,15C-3D,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGRG	**David-gareji**	**0.23**	**324**	P	**Pb**	**07 27 19.8**	**-0.4**
DGRG				S	**Sb**	**07 27 25.0**	**+0.6**
SEAG	**Tbilisi Sea**	**0.76**	**312**	P	**Pb**	**07 27 27.1**	**-1.5**
SEAG				S	**Sb**	**07 27 37.7**	**-0.9**
TBLG	**Delisi**	**0.77**	**308**	P	**Pb**	**07 27 28.2**	**-0.7**
TBLG				S	**Sb**	**07 27 38.6**	**-0.4**
TBLG	**Delisi**	**0.77**	**308**	P	**Pb**	**07 27 28.2**	**-0.7**
TBLG				S	**Sb**	**07 27 38.6**	**-0.4**
KZR	**Kazreti**	**0.87**	**278**	P	**Pb**	**07 27 30.0**	**-0.5**
KZR				S	**Sb**	**07 27 41.4**	**-0.3**
STEZ	**Stepenevan**	**0.91**	**254**	*e*P	**Pb**	**07 27 31.0**	**-0.3**
STEZ				*e*S	**Sn**	**07 27 44.0**	**+0.2**
STE	**Stepanavan**	**0.94**	**254**	P	**Pn**	**07 27 31.0**	**-0.7**
STE				S	**Sb**	**07 27 44.0**	**+0.3**
DUS	**Dusheti**	**1.05**	**323**	P	**Pb**	**07 27 33.8**	**+0.3**
DUS				S	**Sn**	**07 27 48.7**	**+1.7**
VADZ	**Vardenis**	**1.10**	**173**	P	Pb	07 27 39.0	+4.5
VADZ				S	**Sb**	**07 27 53.0**	**+4.6**
HNAZ	**Hnaberd**	**1.24**	**240**	*i*P	**Pb**	**07 27 36.6**	**-0.3**
HNAZ				*i*S	**Sb**	**07 27 53.0**	**+0.4**
HNAZ	**Hnaberd**	**1.24**	**240**	P	**Pb**	**07 27 36.6**	**-0.3**
HNAZ				S	**Sb**	**07 27 53.0**	**+0.4**
KAMZ	**Kamo**	**1.29**	**251**	*i*P	**Pb**	**07 27 37.2**	**-0.5**
KAMZ				*i*S	**Sb**	**07 27 55.0**	**+1.1**
KAMZ	**Kamo**	**1.29**	**251**	P	**Pb**	**07 27 37.2**	**-0.5**
KAMZ				S	**Sb**	**07 27 55.0**	**+1.1**
GOR	**Gori**	**1.30**	**304**	P	**Sn**	**07 27 55.7**	**+2.3**
TSOZ	**Tsokhamarg**	**1.31**	**257**	*e*P	**Pn**	**07 27 37.6**	**+0.6**
TSOZ				S	**Sb**	**07 27 55.3**	**+0.6**
TSOZ	**Tsokhamarg**	**1.31**	**257**	P	**Pn**	**07 27 37.6**	**+0.6**
TSOZ				S	**Sb**	**07 27 55.3**	**+0.6**
GYMZ	**Gyumri**	**1.38**	**252**	*e*P	**Pn**	**07 27 36.1**	**-1.8**
GYMZ				S	**Sb**	**07 27 57.9**	**+1.3**
GYMZ	**Gyumri**	**1.38**	**252**	P	**Pn**	**07 27 36.1**	**-1.8**
GYMZ				S	**Sb**	**07 27 57.9**	**+1.3**
LERZ	**Lernakert**	**1.40**	**241**	*e*P	**Pn**	**07 27 36.8**	**-1.4**
LERZ				S	**Sb**	**07 27 58.8**	**+1.6**
LERZ	**Lernakert**	**1.40**	**241**	P	**Pn**	**07 27 36.8**	**-1.4**
LERZ				S	**Sb**	**07 27 58.8**	**+1.6**
MTKZ	**Martakert**	**1.43**	**137**	*i*P	**Pb**	**07 27 39.5**	**-0.5**
MTKZ				*i*S	**Sb**	**07 27 59.1**	**+1.3**
MTKZ	**Martakert**	**1.43**	**137**	P	**Pb**	**07 27 39.5**	**-0.5**
MTKZ				S	**Sb**	**07 27 59.1**	**+1.3**
GUDG	**Gudauri**	**1.45**	**326**	P	**Pn**	**07 27 39.5**	**+0.7**
GUDG				S	**Sb**	**07 27 58.9**	**+0.4**
AKH	**Akhalkalaki**	**1.56**	**276**	P	**Pb**	**07 27 42.4**	**0.0**
AKH				S	**Sb**	**07 28 02.4**	**+0.6**
STKZ		**1.71**	**147**	*i*P	Pn	07 27 37.0	-5.3
STKZ				*i*S	**Sn**	**07 28 01.3**	**-2.0**
STKZ		**1.71**	**147**	P	Pn	07 27 37.0	-5.3
STKZ				S	**Sn**	**07 28 01.3**	**-2.0**
ONI	**Oni**	**2.06**	**311**	P	**Pb**	**07 27 50.5**	**-0.2**
ONI				S	**Sb**	**07 28 17.4**	**+1.5**
CHVG	**Ch'k'valeri**	**2.97**	**300**	P	**Sb**	**07 28 42.2**	**+0.1**

*ISK **18** 07:40:25.3,39.˚23N×41.˚69E,h17km,MD2.8*
*CSEM **18** 07:40:25.5±0.7,39.˚15N×41.˚63E,h20km,MD2.8,Error ellipse: s-maj=22.8km s-min=13.5km az=162.0*
*DDA **18** 07:40:26.9,39.˚25N×41.˚74E,h22km,MD3.1*
*ISCJB **18** 07:40:27.0±0.7,39.˚21N±0.˚05×41.˚64E±0.˚05,h18km±8km, Error ellipse: s-maj=8.5km s-min=5.7km az=142.3*

ISC 18 07:40:25.6±1.1,39.˚22N±0.˚04×41.˚71E±0.˚03,h12km±9km, n13,σ1§63/23,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRTB	**Varto-Mus**	**0.21**	**253**	*e*PG	**Pb**	**07 40 31.2**	**-0.3**
VRTB				*e*SG	**Sg**	**07 40 34.5**	**+1.3**
VRTB	**Varto-Mus**	**0.21**	**253**	*e*Pg	**Pb**	**07 40 31.2**	**-0.3**
VRTB				*e*Sg	**Sg**	**07 40 34.5**	**+1.3**
EZM	**Erzurum**	**0.73**	**339**	*e*PG	**Pb**	**07 40 40.0**	**-0.5**
EZM				*e*SG	**Sb**	**07 40 50.4**	**-0.3**
BNGB	**Bingˆ¶l**	**0.83**	**254**	*e*PG	**Pg**	**07 40 40.9**	**-0.8**
BNGB				*e*SG	**Sb**	**07 40 53.3**	**-0.1**
HOMI	**Horasan**	**0.84**	**10**	*i*P	**Pb**	**07 40 42.1**	**-0.2**
HOMI				*i*S	**Sn**	**07 40 56.4**	**+0.4**
TUTA	**Tutak**	**0.88**	**78**	*i*P	**Pb**	**07 40 42.7**	**-0.2**
TUTA				*i*S	**Sn**	**07 40 57.0**	**+0.1**
TUTA	**Tutak**	**0.88**	**78**	*i*P	**Pb**	**07 40 42.7**	**-0.2**
TUTA				*i*S	**Sn**	**07 40 57.0**	**+0.1**
BINT	**Bingol**	**1.01**	**250**	*e*Pg	Pg	07 40 40.9	-4.2
BINT				*e*Sg	**Sg**	**07 40 53.3**	**-5.0**
KOPT	**Kop Dagi**	**1.23**	**311**	*i*P	**Pg**	**07 40 49.2**	**-0.1**
KOPT				*i*S	**Sn**	**07 41 08.5**	**+2.9**
KOPT	**Kop Dagi**	**1.23**	**311**	*i*P	**Pg**	**07 40 49.2**	**-0.1**
KOPT				*i*S	**Sn**	**07 41 08.5**	**+2.9**
BEST	**Besiri**	**1.37**	**195**	*i*P	**Pg**	**07 40 52.0**	**0.0**
BEST				*i*S	**Sg**	**07 41 11.9**	**+2.1**
PTK	**Pertek**	**1.83**	**260**	*e*PN	**Pn**	**07 40 56.8**	**-0.4**
PTK	**Pertek**	**1.83**	**260**	*e*Pn	**Pn**	**07 40 56.8**	**-0.4**

*ISCJB **18** 07:41:03.9±0.6,25.˚37N±0.˚05×37.˚68E±0.˚06,h10km, mb4.0/18,MS3.1/2,Error ellipse: s-maj=9.2km s-min=5.9km az=39.0*
*IDC **18** 07:41:04.9±1.2,25.˚47N×37.˚78E,h0km,mb3.9/12, mb1 4.0/17,mb1mx3.9/33,mbtmp3.9/17,ML3.7/5,MS3.2/2, Ms1 3.2/2,ms1mx2.4/44,Error ellipse: s-maj=20.7km s-min=17.1km az=34.0*
*CSEM **18** 07:41:04.5±0.3,25.˚35N×37.˚71E,h2km,mb4.3/6,Error ellipse: s-maj=10.7km s-min=6.7km az=123.0*
*NEIC **18** 07:41:06.4±0.6,25.˚45N×37.˚80E,h10km,mb4.1/7,Error ellipse: s-maj=10.5km s-min=8.6km az=96.0*

ISC 18 07:41:06.6±0.7,25.˚48N±0.˚05×37.˚57E±0.˚08,h10km,n90, σ1§51/93,mb4.0/18,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSFG		**3.45**	**289**	P	**Pn**	**07 42 00.0**	**-0.4**
HEDF	**Idfu**	**3.99**	**265**	P	**Pn**	**07 42 07.5**	**-0.4**
HBST	**Basata**	**4.50**	**327**	P	**Pn**	**07 42 16.1**	**+1.3**
NAHD	**NAHD**	**4.67**	**250**	P	**Pn**	**07 42 15.8**	**-1.4**
AAHD	**Abu Hadid**	**4.71**	**250**	P	**Pn**	**07 42 16.6**	**-1.2**
AAHD				S	Sn	07 43 03.0	-1.0
AKRL	**Khor El Raml**	**4.77**	**249**	P	**Pn**	**07 42 17.6**	**-1.0**
EIL	**Elat**	**4.78**	**331**	Pn	**Pn**	**07 42 21.1**	**+2.4**
EIL				Pg	Pb	07 42 33.7	+3.3
EIL				Lg	Lg	07 43 38.3	
EIL	**Elat**	**4.78**	**331**	Pn	**Pn**	**07 42 21.1**	**+2.4**
	1.0nm,0.3s,baz=175,slow=12,SNR=3.8						
EIL				Pg	Pb	07 42 33.7	+3.3
	2.6nm,0.3s,baz=143,slow=12,SNR=11						
EIL				Lg	Lg	07 43 38.3	
	9.9nm,0.3s,baz=359,slow=22,SNR=5.6						
EIL	**Elat**	**4.78**	**331**	Pn	**Pn**	**07 42 21.1**	**+2.4**
EIL	**Elat**	**4.78**	**331**	Pg	Pb	07 42 33.7	+3.3
EIL				Sn	**Sg**	**07 43 39.8**	**-0.2**
MBRI	**Mt Berech**	**4.90**	**332**	Pn	**Pn**	**07 42 22.4**	**+1.9**
MBRI				Sn	**Sg**	**07 43 43.2**	**-0.8**
NNAL	**NNAL**	**4.97**	**245**	P	**Pn**	**07 42 20.6**	**-0.8**
NSKD	**NSKD**	**5.05**	**250**	P	**Pn**	**07 42 22.1**	**-0.4**
HRFI	**Mount Harif**	**5.06**	**334**	Pn	**Pn**	**07 42 23.8**	**+1.2**
HRFI				Sn	**Sg**	**07 43 46.1**	**-3.1**
KRMI	**Paran Flat**	**5.26**	**332**	Pn	**Pn**	**07 42 27.6**	**+2.2**
KRMI				Sn	**Sg**	**07 43 51.8**	**-3.8**
PRNI	**Paran**	**5.36**	**336**	Pn	**Pn**	**07 42 27.7**	**+1.0**
PRNI				Sn	**Sg**	**07 43 55.0**	**-3.7**
HNKL	**Nakhl**	**5.45**	**325**	P	**Pn**	**07 42 29.3**	**+1.3**
ZFRI	**Zfri**	**5.48**	**338**	Sn	**Sg**	**07 43 56.9**	**-5.7**
KZIT	**Kziot**	**6.09**	**333**	Pn	**Pn**	**07 42 39.3**	**+2.6**
KZIT				Sn	Sb	07 44 13.1	+7.4
ASF	**Jabal al Asfar**	**6.69**	**355**	Pn	**Pn**	**07 42 45.0**	**-0.1**
ASF				Pg	Pg	07 43 09.9	-4.9
ASF				Lg	Lg	07 44 39.3	
ASF	**Jabal al Asfar**	**6.69**	**355**	Pn	**Pn**	**07 42 45.0**	**-0.1**
	1.1nm,0.3s,baz=40,slow=14,SNR=9.2						
ASF				Pg	Pg	07 43 09.9	-4.9
	3.7nm,0.3s,baz=41,slow=9.0,SNR=26						
ASF				Lg	Lg	07 44 39.3	
	2.9nm,0.3s,baz=40,slow=22,SNR=11						
MMLI	**Mount Malkishu**	**7.18**	**345**	Pn	**Pn**	**07 42 52.9**	**+1.1**
MMA0	**Mount Meron ar**	**7.74**	**346**	Pn	**Pn**	**07 43 00.2**	**+0.7**
MMAI	**Mount Meron Ar**	**7.74**	**346**	Pn	**Pn**	**07 43 00.4**	**+0.9**
MMAI				Lg	Lg	07 45 14.9	
MMAI	**Mount Meron Ar**	**7.74**	**346**	Pn	**Pn**	**07 43 00.4**	**+0.9**
	6.3nm,0.3s,baz=150,slow=16,SNR=20						
MMAI				Lg	Lg	07 45 14.9	
	5.1nm,0.3s,baz=136,slow=24,SNR=5.6						
MMAI	**Mount Meron Ar**	**7.74**	**346**	Pn	**Pn**	**07 43 00.4**	**+0.9**
MMAI				Lg	Lg	07 45 14.9	
BR131	**Keskin Array S**	**14.58**	**348**	Pn	**Pn**	**07 44 33.8**	**+0.6**
BR131	**Keskin Array S**	**14.58**	**348**	Pn	**Pn**	**07 44 33.8**	**+0.6**
BRTR	**Keskin Array B**	**14.58**	**348**	Pn	**Pn**	**07 44 35.1**	**+1.9**
BRTR	**Keskin Array B**	**14.58**	**348**	Pn	**Pn**	**07 44 35.1**	**+1.9**
	0.1nm,0.3s,baz=172,slow=14,SNR=3.1						
BRTR	**Keskin Array B**	**14.58**	**348**	Pn	**Pn**	**07 44 35.1**	**+1.9**
ANTO	**Ankara**	**14.90**	**346**	ePn	**Pn**	**07 44 38.2**	**+0.8**
ANTO	**Ankara**	**14.90**	**346**	ePn	**Pn**	**07 44 38.2**	**+0.8**
KBZ	**Khabaz**	**18.72**	**12**	P	**P**	**07 45 25.2**	**0.0**
KBZ	**Khabaz**	**18.72**	**12**	P	**P**	**07 45 25.2**	**0.0**
	0.1nm,0.3s,baz=190,slow=9.9,SNR=5.3						
KBZ	**Khabaz**	**18.72**	**12**	P	**P**	**07 45 25.2**	**0.0**
	7.3nm,1.0s						
TIRR	**Tirgusor**	**20.34**	**341**	*e*P	**P**	**07 45 42.9**	**-0.1**
	7.3nm,1.0s						
TIRR	**Tirgusor**	**20.34**	**341**	*e*P	**P**	**07 45 42.9**	**-0.1**
	7.3nm,1.0s						
MLR	**Muntele Rosu**	**22.05**	**338**	P	**P**	**07 46 02.8**	**+1.2**
MLR	**Muntele Rosu**	**22.05**	**338**	P	**P**	**07 46 02.8**	**+1.2**
	0.7nm,0.8s,baz=148,slow=13,SNR=2.6						
MLR	**Muntele Rosu**	**22.05**	**338**	P	**P**	**07 46 02.8**	**+1.2**
BUR08	**Bucovina Ar. S**	**24.19**	**339**	*e*P	**P**	**07 46 25.3**	**+2.0**
BUR08	**Bucovina Ar. S**	**24.19**	**339**	*e*P	**P**	**07 46 25.3**	**+2.0**
KIEV	**Kiev**	**25.98**	**348**	*e*P	**P**	**07 46 38.6**	**-0.8**
	6.1nm,0.9s						
KIEV	**Kiev**	**25.98**	**348**	*e*P	**P**	**07 46 38.6**	**-0.8**
	6.1nm,0.9s						
AKASG	**Malin Array Be**	**25.99**	**348**	P	**P**	**07 46 39.6**	**+0.1**
AKASG	**Malin Array Be**	**25.99**	**348**	P	**P**	**07 46 39.6**	**+0.1**
	2.1nm,0.6s,baz=163,slow=8.6,SNR=9.0						
AKASG	**Malin Array Be**	**25.99**	**348**	P	**P**	**07 46 39.6**	**+0.1**
KEST	**Kesra**	**26.27**	**300**	P	**P**	**07 46 44.9**	**+2.6**
KEST	**Kesra**	**26.27**	**300**	P	**P**	**07 46 43.8**	**+1.5**
	0.8nm,0.8s,baz=52,slow=12,SNR=1.8						
KEST	**Kesra**	**26.27**	**300**	P	**P**	**07 46 44.9**	**+2.6**
KMBO	**Kilima Mbogo**	**26.45**	**181**	LR	LR	07 57 25.2	
	comp=Z,46nm,18.7s,baz=95,slow=37						
KWP	**Kalwaria Pacla**	**26.73**	**338**	*e*P	**P**	**07 46 48.4**	**+2.1**
	1.6nm,0.4s						
KWP	**Kalwaria Pacla**	**26.73**	**338**	*e*P	**P**	**07 46 48.4**	**+2.1**
	1.6nm,0.4s						
GERES	**GERESS Array B**	**29.86**	**328**	P	**P**	**07 47 14.8**	**+0.5**
GERES	**GERESS Array B**	**29.86**	**328**	P	**P**	**07 47 14.8**	**+0.5**
	1.2nm,0.8s,baz=150,slow=5.7,SNR=5.5						
GERES	**GERESS Array B**	**29.86**	**328**	P	**P**	**07 47 14.8**	**+0.5**
SUW	**Suwalki**	**30.45**	**343**	P	**P**	**07 47 18.0**	**-1.2**
	23nm,0.9s						
SUW	**Suwalki**	**30.45**	**343**	P	**P**	**07 47 18.0**	**-1.2**
	23nm,0.9s						
TORD	**

ARCES	**ARCESS Array B**	**44.65**	**354**	P	**P**	07 49 18.0	**-1.1**
SONM	**Songino Array**	**57.58**	**48**	P	**P**	07 50 55.3	**-1.5**
SONM	**Songino Array**	**57.58**	**48**	P	**P**	07 50 55.3	**-1.5**
	comp=Z,1.1nm,0.8s,baz=254,slow=9.2,SNR=5.8						
SONM	**Songino Array**	**57.58**	**48**	P	**P**	07 50 55.3	**-1.5**

IDC ***18*** *07:43:07.3±4.2, 56°.32N×152°.64W, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.5/27, mbtmp3.4/4, ML3.2/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/22, Error ellipse: s-maj=80.4km s-min=26.2km az=70.0*

NEIC ***18*** *07:43:10.7, 56°.46N×152°.08W, h10km, ML3.2(AEIC), After AEIC.*

ISC 18 07:43:09.3±1.0, 56°.41N±0°.07×152°.40W±0°.07, h20km, n32, σ1s47/36, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.95**	**329**	P	**Pn**	**07 43 27.8**	**+0.3**
KDAK	**Kodiak Island**	**1.38**	**356**	P	**Pb**	**07 43 33.6**	**-0.9**
KDAK	**Kodiak Island**	**1.38**	**356**	Pn	**Pb**	**07 43 33.5**	**-0.9**
	4.4nm,0.3s,baz=185,slow=7.9,SNR=36						
KDAK				Sn	**Sn**	**07 43 48.7**	**-2.4**
	29nm,0.3s,baz=282,slow=19,SNR=21						
KABR	**Katmai Barrier**	**2.22**	**322**	P	**Pb**	**07 43 47.6**	**-1.2**
CAHL	**Cahill**	**2.28**	**317**	P	**Pb**	**07 43 48.7**	**-1.1**
FONW	**Fourpeaked Sta**	**2.57**	**342**	P	**Pn**	**07 43 51.2**	**+1.4**
AUE	**Augustine Isla**	**3.01**	**350**	P	**Pn**	**07 43 57.5**	**+1.8**
OPT	**Oil Point**	**3.29**	**353**	P	**Pn**	**07 44 02.0**	**+2.4**
CHGN	**Chignik**	**3.35**	**271**	*e*Pn	**Pb**	**07 44 05.4**	**-2.5**
BRLK	**Bradley Lake**	**3.46**	**13**	P	**Pn**	**07 44 01.5**	**-0.5**
BRLK				S	**Sn**	**07 44 40.7**	**-1.7**
SEW	**Seward**	**4.02**	**22**	P	**Pn**	**07 44 08.7**	**-1.0**
RSO	**Redoubt South**	**4.07**	**358**	*e*Pn	**Pn**	**07 44 11.7**	**+1.1**
RSO				*e*Sn	**Sn**	**07 44 58.6**	**+0.9**
EYAK	**Cordova Ski Ar**	**5.42**	**37**	P	**Pn**	**07 44 27.9**	**-0.9**
PMR	**Palmer**	**5.47**	**17**	*e*Pn	**Pn**	**07 44 31.6**	**+2.1**
	9.1nm,0.9s						
SML	**Sawmill**	**5.81**	**19**	*e*Pn	**Pn**	**07 44 34.8**	**+0.5**
	3.5nm,1.0s						
SML				*e*Sn	**Sn**	**07 45 39.6**	**-0.5**
PPLA	**Purkeypile**	**6.51**	**1**	*e*Pn	Pn	07 44 47.6	+3.6
	7.2nm,0.7s						
PPLA				*e*Sn	**Sn**	**07 45 57.5**	**-0.2**
VRDI	**Verde Repeater**	**6.70**	**40**	P	**Pn**	**07 44 45.6**	**-1.0**
KIAG	**Kiagna River**	**6.92**	**45**	P	**Pn**	**07 44 48.3**	**-1.3**
BALM	**Baldy**	**6.99**	**44**	P	**Pn**	**07 44 49.2**	**-1.4**
TRF	**Thorofare Moun**	**7.15**	**8**	*e*Pn	**Pn**	**07 44 53.2**	**+0.6**
	15nm,1.1s						
TRF				*e*Sn	**Sn**	**07 46 15.1**	**+1.8**
BARN	**Barnard Glacie**	**7.28**	**46**	P	**Pn**	**07 44 51.9**	**-2.5**
PNL	**Peninsula**	**7.63**	**59**	P	**Pn**	**07 44 58.6**	**-0.6**
IL1	**Eielson Array**	**8.81**	**16**	P	**Pn**	**07 45 13.8**	**-1.6**
ILAR	**Eielson Array**	**8.81**	**16**	Pn	**Pn**	**07 45 15.2**	**-0.2**
	0.4nm,0.3s,baz=206,slow=13,SNR=18						
ILAR				Sn	Sn	07 46 47.6	-6.4
	0.3nm,0.3s,baz=53,slow=20,SNR=6.6						
IM3	**Indian Mountai**	**9.63**	**357**	P	**Pn**	**07 45 25.6**	**-1.0**
WHY	**Whitehorse**	**10.09**	**58**	P	**Pn**	**07 45 31.9**	**-1.1**
BM3	**Burnt Mountain**	**11.63**	**15**	P	**Pn**	**07 45 51.8**	**-2.1**
INK	**Inuvik**	**14.71**	**28**	Pn	**P**	**07 46 41.5**	**-0.4**
	0.1nm,0.3s,baz=208,slow=10,SNR=6.1						
YKA	**Yellowknife Ar**	**19.92**	**57**	P	**Pn**	**07 47 41.0**	**0.0**
	0.6nm,0.8s,baz=270,slow=10,SNR=3.7						
NVAR	**Mina Array Bea**	**28.83**	**114**	P	**P**	**07 49 08.6**	**+2.4**
	0.5nm,0.7s,baz=312,slow=8.4,SNR=4.6						
ASAJ	**Asahikawa**	**41.77**	**281**	LR	LR	08 10 15.7	
	comp=Z,39nm,18.1s,baz=147,slow=39						
TXAR	**Lajitas Array**	**43.51**	**108**	P	**P**	**07 51 12.7**	**+1.4**
	0.4nm,0.9s,baz=324,slow=8.2,SNR=4.6						

ISCJB ***18*** *07:47:53.4±0.7, 25°.41N±0°.08×37°.73E±0°.06, h10km, mb4.0/17, MS3.3/5, Error ellipse: s-maj=11.0km s-min=8.2km az=6.3*

IDC ***18*** *07:47:54.6±1.1, 25°.40N×37°.59E, h0km, mb4.0/12, mb1 4.0/16, mb1mx3.9/31, mbtmp3.9/16, ML3.7/4, MS3.3/6, Ms1 3.3/6, ms1mx2.7/49, Error ellipse: s-maj=18.8km s-min=16.4km az=114.0*

CSEM ***18*** *07:47:54.0±0.4, 25°.40N×37°.70E, h2km, mb4.3/6, Error ellipse: s-maj=13.7km s-min=9.4km az=173.0*

NEIC ***18*** *07:47:55.5±0.8, 25°.39N×37°.59E, h10km, mb4.4/5, Error ellipse: s-maj=12.8km s-min=10.9km az=112.0*

ISC 18 07:47:56.3±0.8, 25°.54N±0°.08×37°.64E±0°.08, h10km, n79, σ1s34/79, mb4.0/17, MS3.3/5, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EIL	**Elat**	**4.75**	**330**	Pn	**Pn**	**07 49 08.0**	**0.0**
EIL				Pg	Pg	07 49 23.8	-3.6
EIL				Lg	Lg	07 50 27.4	
EIL	**Elat**	**4.75**	**330**	Pn	**Pn**	**07 49 08.0**	**0.0**
	1.3nm,0.3s,baz=126,slow=18,SNR=2.9						
EIL				Pg	Pg	07 49 23.8	-3.6
	14nm,0.3s,baz=145,slow=9.7,SNR=12						
EIL				Lg	Lg	07 50 27.4	
	18nm,0.3s,baz=61,slow=12,SNR=4.0						
EIL	**Elat**	**4.75**	**330**	Pn	**Pn**	**07 49 08.0**	**0.0**
KRMI	**Paran Flat**	**5.24**	**331**	Pn	**Pn**	**07 49 13.9**	**-0.8**
KRMI				S	**Sg**	**07 50 42.0**	**-2.5**
PRNI	**Paran**	**5.33**	**335**	Pn	**Pn**	**07 49 16.3**	**+0.4**
PRNI				S	**Sg**	**07 50 46.0**	**-1.4**
ZFRI	**Zfri**	**5.44**	**337**	Pn	**Pn**	**07 49 18.9**	**+1.4**
ZFRI				S	**Sg**	**07 50 50.1**	**-1.0**
RTMI	**Retamim**	**6.07**	**335**	Pn	**Pn**	**07 49 27.6**	**+1.4**
RTMI				S	Sg	07 51 04.3	-7.0
DSI	**Dead Sea**	**6.32**	**342**	Pn	Pn	07 49 32.9	+3.3
DSI				S	**Sg**	**07 51 15.7**	**-3.7**
ASF	**Jabal al Asfar**	**6.64**	**355**	Pn	**Pn**	**07 49 34.6**	**+0.6**
ASF				Pg	Pg	07 49 58.3	-5.1
ASF				Lg	Lg	07 51 29.1	
ASF	**Jabal al Asfar**	**6.64**	**355**	Pn	**Pn**	**07 49 34.6**	**+0.6**
	1.4nm,0.3s,baz=124,slow=10.0,SNR=2.8						
ASF				Pg	Pg	07 49 58.3	-5.1
	6.2nm,0.3s,baz=37,slow=13,SNR=7.7						
ASF				Lg	Lg	07 51 29.1	
	20nm,0.3s,baz=14,slow=23,SNR=11						
MMAI	**Mount Meron Ar**	**7.70**	**346**	Pn	**Pn**	**07 49 48.8**	**+0.2**
MMAI				Lg	Lg	07 52 04.8	
MMAI	**Mount Meron Ar**	**7.70**	**346**	Pn	**Pn**	**07 49 48.8**	**+0.2**
	6.0nm,0.3s,baz=152,slow=15,SNR=8.1						
MMAI				Lg	Lg	07 52 04.8	
	16nm,0.3s,baz=159,slow=25,SNR=5.5						
MMAI	**Mount Meron Ar**	**7.70**	**346**	Pn	**Pn**	**07 49 48.8**	**+0.2**
MMAI				Lg	Lg	07 52 04.8	
RDF	**Al-Radifah**	**9.44**	**67**	*e*P	**Pn**	**07 50 10.1**	**-2.3**
RDF				AML	AML	07 52 45.3	
	comp=Z,30nm,0.6s						
RDF	**Al-Radifah**	**9.44**	**67**	*e*P	**Pn**	**07 50 10.1**	**-2.3**
MIB	**Mutribah**	**9.59**	**62**	*e*P	**Pn**	**07 50 12.8**	**-1.6**
MIB				AML	AML	07 52 37.7	
	comp=Z,38nm,0.6s						
MIB	**Mutribah**	**9.59**	**62**	*e*P	**Pn**	**07 50 12.8**	**-1.6**
QRN	**Al-Qurain**	**9.70**	**69**	*e*P	**Pn**	**07 50 14.1**	**-1.8**
QRN				AML	AML	07 52 36.4	
	comp=Z,21nm,0.6s						
BRTR	**Keskin Array B**	**14.53**	**348**	Pn	**Pn**	**07 51 24.7**	**+2.5**
BRTR	**Keskin Array B**	**14.53**	**348**	Pn	**Pn**	**07 51 24.7**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=306,slow=9.9,SNR=2.3						
BRTR	**Keskin Array B**	**14.53**	**348**	Pn	**Pn**	**07 51 24.7**	**+2.5**
ANTO	**Ankara**	**14.85**	**345**	*e*Pn	**Pn**	**07 51 27.7**	**+1.3**
	comp=Z,9.7nm,0.9s						
ANTO	**Ankara**	**14.85**	**345**	*e*Pn	**Pn**	**07 51 27.7**	**+1.3**
	comp=Z,9.7nm,0.9s						
GNI	**Garni**	**15.73**	**20**	LR	LR	07 58 16.0	
	comp=Z,58nm,20.5s,baz=212,slow=39						
BUR08	**Bucovina Ar. S**	**24.15**	**339**	*e*P	**P**	**07 53 11.1**	**-1.6**
BUR08	**Bucovina Ar. S**	**24.15**	**339**	*e*P	**P**	**07 53 11.1**	**-1.6**
AK02	**Malin Array Si**	**25.90**	**348**	*e*P	**P**	**07 53 28.9**	**+0.6**
AK02	**Malin Array Si**	**25.90**	**348**	*e*P	**P**	**07 53 28.9**	**+0.6**
KIEV	**Kiev**	**25.94**	**348**	*e*P	**P**	**07 53 26.2**	**-2.5**
	comp=Z,6.3nm,1.1s						
KIEV	**Kiev**	**25.94**	**348**	*e*P	**P**	**07 53 26.2**	**-2.5**
	comp=Z,6.3nm,1.1s						
AKASG	**Malin Array Be**	**25.94**	**348**	P	**P**	**07 53 30.0**	**+1.3**
AKASG	**Malin Array Be**	**25.94**	**348**	P	**P**	**07 53 30.0**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=171,slow=8.7,SNR=9.1						
AKASG	**Malin Array Be**	**25.94**	**348**	P	**P**	**07 53 30.0**	**+1.3**
KEST	**Kesra**	**26.29**	**299**	*e*P	**P**	**07 53 34.3**	**+2.1**
KEST	**Kesra**	**26.29**	**299**	P	**P**	**07 53 34.1**	**+1.9**
	comp=Z,4.1nm,1.0s,baz=32,slow=1.7,SNR=5.6						
KEST	**Kesra**	**26.29**	**299**	*e*P	**P**	**07 53 34.3**	**+2.1**

KHC	**Kasperske Hory**	**30.10**	**328**	*e*P	**P**	**07 54 06.3**	**+0.4**
	comp=Z,5.7nm,0.9s						
KHC	**Kasperske Hory**	**30.10**	**328**	*e*P	**P**	**07 54 06.3**	**+0.4**
	comp=Z,5.7nm,0.9s						
SUW	**Suwalki**	**30.41**	**343**	*e*P	**P**	**07 54 08.5**	**0.0**
	comp=Z,21nm,1.1s						
SUW	**Suwalki**	**30.41**	**343**	*e*P	**P**	**07 54 08.5**	**0.0**
	comp=Z,21nm,1.1s						
BRG	**Berggiesshubel**	**31.14**	**331**	*e*P	**P**	**07 54 16.8**	**+1.7**
	comp=Z,3.8nm,0.8s						
AAK	**Ala-Archa**	**34.63**	**51**	LR	LR	08 11 49.3	
	comp=Z,71nm,18.8s,baz=235,slow=41						
TOA0	**Torodi Ar. Sit**	**35.97**	**257**	*e*P	**P**	**07 54 55.8**	**-1.7**
TOA0	**Torodi Ar. Sit**	**35.97**	**257**	*e*P	**P**	**07 54 55.8**	**-1.7**
TORD	**Torodi Ar. Bea**	**35.97**	**257**	P	**P**	**07 54 56.5**	**-1.0**
TORD	**Torodi Ar. Bea**	**35.97**	**257**	P	**P**	**07 54 56.5**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=60,slow=9.2,SNR=8.2						
TORD	**Torodi Ar. Bea**	**35.97**	**257**	P	**P**	**07 54 56.5**	**-1.0**
FINES	**FINESS Array B**	**36.74**	**351**	P	**P**	**07 55 04.2**	**+0.7**
FINES	**FINESS Array B**	**36.74**	**351**	P	**P**	**07 55 04.2**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=134,slow=11,SNR=4.0						
FINES	**FINESS Array B**	**36.74**	**351**	P	**P**	**07 55 04.2**	**+0.7**
BVAR	**Borovoye Array**	**36.80**	**33**	P	**P**	**07 55 04.9**	**+0.7**
BVAR	**Borovoye Array**	**36.80**	**33**	P	**P**	**07 55 04.9**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=216,slow=9.1,SNR=7.3						
BVAR				LR	LR	08 13 41.8	
	comp=Z,42nm,18.9s,baz=228,slow=42						
BVAR	**Borovoye Array**	**36.80**	**33**	P	**P**	**07 55 04.9**	**+0.7**
ESDC	**Sonseca Array**	**37.43**	**303**	P	**P**	**07 55 09.8**	**0.0**
ESDC	**Sonseca Array**	**37.43**	**303**	P	**P**	**07 55 09.8**	**0.0**
	comp=Z,0.7nm,0.4s,baz=86,slow=7.6,SNR=5.9						
ESDC	**Sonseca Array**	**37.43**	**303**	P	**P**	**07 55 09.8**	**0.0**
NB2	**NORSAR Subarra**	**39.79**	**340**	P	**P**	**07 55 29.4**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=140,slow=9.3						
NB2	**NORSAR Subarra**	**39.79**	**340**	P	**P**	**07 55 29.4**	**+0.1**
	comp=Z,2.6nm,0.8s,SNR=6.2						
NOA	**NORSAR Array B**	**39.79**	**340**	P	**P**	**07 55 29.8**	**+0.5**
NOA	**NORSAR Array B**	**39.79**	**340**	P	**P**	**07 55 29.8**	**+0.5**
	comp=Z,2.2nm,0.8s,baz=138,slow=8.5,SNR=5.8						
NOA	**NORSAR Array B**	**39.79**	**340**	P	**P**	**07 55 29.8**	**+0.5**
KURBB	**Kurchatov Arra**	**40.04**	**40**	P	**P**	**07 55 32.7**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=252,slow=8.5,SNR=15						
KURBB				LR	LR	08 14 24.2	
	comp=Z,27nm,18.4s,baz=205,slow=40						
KURK	**Kurchatov**	**40.13**	**40**	*e*P	**P**	**07 55 32.6**	**+0.4**
	comp=Z,1.5nm,0.7s						
KURK	**Kurchatov**	**40.13**	**40**	*e*P	**P**	**07 55 32.6**	**+0.4**
	comp=Z,1.5nm,0.7s						
MK31	**Makanchi Array**	**41.14**	**47**	*e*P	**P**	**07 55 41.0**	**+0.4**
MK31	**Makanchi Array**	**41.14**	**47**	*e*P	**P**	**07 55 41.0**	**+0.4**
MKAR	**Makanchi Array**	**41.14**	**47**	P	**P**	**07 55 41.5**	**+0.9**
MKAR	**Makanchi Array**	**41.14**	**47**	P	**P**	**07 55 41.5**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=249,slow=6.4,SNR=20						
MKAR	**Makanchi Array**	**41.14**	**47**	P	**P**	**07 55 41.5**	**+0.9**
ARCES	**ARCESS Array B**	**44.60**	**354**	P	**P**	**07 56 08.7**	**+0.4**
ARCES	**ARCESS Array B**	**44.60**	**354**	P	**P**	**07 56 08.7**	**+0.4**
	comp=Z,4.5nm,0.9s,baz=347,slow=3.7,SNR=4.7						
ARCES	**ARCESS Array B**	**44.60**	**354**	P	**P**	**07 56 08.7**	**+0.4**
DBIC	**Dimbokro**	**44.67**	**253**	*e*P	**P**	**07 56 07.5**	**-2.1**
	comp=Z,6.7nm,1.1s						
DBIC	**Dimbokro**	**44.67**	**253**	P	**P**	**07 56 08.0**	**-1.7**
	comp=Z,2.7nm,0.7s,baz=34,slow=12,SNR=4.4						
DBIC				LR	LR	08 14 28.5	
	comp=Z,62nm,19.9s,baz=63,slow=36						
DBIC	**Dimbokro**	**44.67**	**253**	*e*P	**P**	**07 56 07.5**	**-2.1**
	comp=Z,6.7nm,1.1s						
ZALV	**Zalesovo Beam**	**44.86**	**38**	LR	LR	08 17 56.7	
	comp=Z,31nm,18.0s,baz=77,slow=40						
YKA	**Yellowknife Ar**	**89.50**	**348**	P	**P**	**08 00 53.5**	**0.0**
YKA	**Yellowknife Ar**	**89.50**	**348**	P	**P**	**08 00 53.5**	**0.0**
	comp=Z,0.2nm,0.6s,baz=33,slow=4.3,SNR=3.6						
YKA	**Yellowknife Ar**	**89.50**	**348**	P	**P**	**08 00 53.5**	**0.0**

DDA ***18*** *07:51:47.7, 35°.13N×26°.57E, h8km, MD3.4*

ISK ***18*** *07:52:05.2, 35°.60N×26°.96E, h26km, MD3.7*

ISCJB ***18*** *07:52:05.9±0.6, 35°.60N±0°.04×26°.92E±0°.03, h66km±11km, Error ellipse: s-maj=6.7km s-min=3.2km az=149.6*

CSEM ***18*** *07:52:06.5±0.1, 35°.59N×26°.94E, h30km, MD3.2, Error ellipse: s-maj=3.6km s-min=1.7km az=150.0*

THE ***18*** *07:52:07.8, 35°.60N×26°.89E, h46km±5km, ML3.2/2, Error ellipse: s-maj=5.9km s-min=0.8km az=141.0*

ATH ***18*** *07:52:13.0, 35°.88N×26°.02E, h8km±2km, MD3.3/4*

ISC 18 07:52:06.6±1.3, 35°.58N±0°.04×26°.93E±0°.03, h55km±18km, n70, σ0s90/109, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.74**	**232**	P	**Pn**	**07 52 21.0**	**-0.1**
ZKR				S	**Sn**	**07 52 32.5**	**+0.7**
ZKR	**Zakros**	**0.74**	**232**	P	**Pn**	**07 52 21.0**	**-0.1**
ZKR				S	**Sn**	**07 52 32.5**	**+0.7**
NIS1	**Nisyros Isl.**	**1.04**	**11**	P	**Pn**	**07 52 25.5**	**+0.5**
NIS1				S	**Sn**	**07 52 39.0**	**+0.3**
NIS1	**Nisyros Isl.**	**1.04**	**11**	P	**Pn**	**07 52 25.5**	**+0.5**
NIS1				S	**Sn**	**07 52 39.0**	**+0.3**
NPS	**Neapolis**	**1.12**	**254**	P	**Pn**	**07 52 26.2**	**+0.1**
NPS				S	**Sn**	**07 52 41.2**	**+0.6**
NPS	**Neapolis**	**1.12**	**254**	*e*PB	**Pn**	**07 52 26.0**	**-0.1**
NPS				*e*SB	**Sn**	**07 52 35.5**	**-5.1**
NPS	**Neapolis**	**1.12**	**254**	P	**Pn**	**07 52 26.2**	**+0.1**
NPS				S	**Sn**	**07 52 41.2**	**+0.6**
ARG	**Arkhangelos**	**1.16**	**56**	P	**Pn**	**07 52 27.0**	**+0.4**
ARG				S	**Sn**	**07 52 41.6**	**+0.1**
ARG	**Arkhangelos**	**1.16**	**56**	P	**Pn**	**07 52 27.0**	**+0.4**
ARG				S	**Sn**	**07 52 41.6**	**+0.1**
LAST	**Lasithi**	**1.26**	**251**	P	**Pn**	**07 52 28.1**	**+0.1**
LAST				S	**Sn**	**07 52 43.5**	**-0.4**
LAST	**Lasithi**	**1.26**	**251**	P	**Pn**	**07 52 28.1**	**+0.1**
LAST				S	**Sn**	**07 52 43.5**	**-0.4**
SANT	**Santorini**	**1.43**	**304**	P	**Pn**	**07 52 30.3**	**0.0**
SANT				S	**Sn**	**07 52 47.6**	**-0.5**
SANT	**Santorini**	**1.43**	**304**	P	**Pn**	**07 52 30.3**	**0.0**
SANT				S	**Sn**	**07 52 47.6**	**-0.5**
THR6	**Thira Island,**	**1.47**	**302**	P	**Pn**	**07 52 31.3**	**+0.6**
THR6	**Thira Island,**	**1.47**	**302**	P	**Pn**	**07 52 31.3**	**+0.6**
THR2	**Thira Island,**	**1.49**	**306**	P	**Pn**	**07 52 31.3**	**+0.3**
THR2	**Thira Island,**	**1.49**	**306**	P	**Pn**	**07 52 31.3**	**+0.3**
BODT	**Bodrum**	**1.51**	**12**	*e*PN	**Pn**	**07 52 31.3**	**-0.1**
BODT				*e*SN	**Sn**	**07 52 49.3**	**-0.7**
BODT	**Bodrum**	**1.51**	**12**	*e*Pn	**Pn**	**07 52 31.3**	**-0.1**
BODT				*e*Sn	**Sn**	**07 52 49.3**	**-0.7**
THR5	**Thira Island,**	**1.53**	**304**	P	**Pn**	**07 52 31.3**	**-0.3**
THR5	**Thira Island,**	**1.53**	**304**	P	**Pn**	**07 52 31.3**	**-0.3**
IDI	**Anoyia**	**1.69**	**261**	P	**Pn**	**07 52 33.6**	**-0.2**
IDI				S	**Sn**	**07 52 53.6**	**-0.8**
IDI	**Anoyia**	**1.69**	**261**	P	**Pn**	**07 52 33.6**	**-0.2**
IDI				S	**Sn**	**07 52 53.6**	**-0.8**
SIVA	**Sivas**	**1.82**	**253**	P	**Pn**	**07 52 36.1**	**+0.6**
SIVA				S	**Sn**	**07 52 58.5**	**+1.0**
SIVA	**Sivas**	**1.82**	**253**	P	**Pn**	**07 52 36.1**	**+0.6**
SIVA				S	**Sn**	**07 52 58.5**	**+1.0**
MLSB	**Milas**	**1.84**	**21**	*e*PN	**Pn**	**07 52 35.9**	**0.0**
MLSB				*e*SN	**Sn**	**07 52 57.4**	**-0.7**
MLSB	**Milas**	**1.84**	**21**	*e*Pn	**Pn**	**07 52 35.9**	**0.0**
MLSB				*e*Sn	**Sn**	**07 52 57.4**	**-0.7**
DALY	**Dalyan (Mu˘la**	**1.86**	**48**	*e*PN	**Pn**	**07 52 36.0**	**-0.1**
DALY	**Dalyan (Mu˘la**	**1.86**	**48**	*e*Pn	**Pn**	**07 52 36.0**	**-0.1**
APE	**Apeiranthos**	**1.87**	**323**	*e*PN	**Pn**	**07 52 36.5**	**+0.3**
APE				*e*SN	**Sn**	**07 52 58.7**	**0.0**
APE	**Apeiranthos**	**1.87**	**323**	P	**Pn**	**07 52 36.6**	**+0.3**
APE				S	**Sn**	**07 52 59.5**	**+0.8**
APE	**Apeiranthos**	**1.87**	**323**	*e*PB	**Pn**	**07 52 36.5**	**+0.3**
APE				*e*SB	**Sn**	**07 52 53.9**	**-4.8**
APE	**Apeiranthos**	**1.87**	**323**	*e*Pb	**Pn**	**07 52 36.5**	**+0.3**
APE				*e*Sn	**Sn**	**07 52 58.7**	**0.0**
APE				S		07 52 59.5	
TURN	**Turunc**	**1.87**	**46**	*i* P	Pn	07 52 32.1	-4.1
TURN				*i* S	Sn	07 52 52.6	-6.0
TURN	**Turunc**	**1.87**	**46**	*i* P	Pn	07 52 32.1	-4.1
YER	**Yerkesik**	**1.90**	**35**	*e*PN	**Pn**	**07 52 36.6**	**-0.1**
YER				*e*SN	**Sn**	**07 52 59.2**	**-0.3**
YER	**Yerkesik**	**1.90**	**35**	*e*Pn	**Pn**	**07 52 36.6**	**-0.1**
YER				*e*Sn	**Sn**	**07 52 59.2**	**-0.3**
FETY	**Fethiye**	**2.04**	**58**	*e*PN	**Pn**	**07 52 38.3**	**-0.2**
FETY	**Fethiye**	**2.04**	**58**	*e*Pn	**Pn**	**07 52 38.3**	**-0.2**
AYDN	**Tasoluk**	**2.21**	**20**	*i* P	**Pn**	**07 52 42.0**	**+1.1**
AYDN				*i* S	**Sn**	**07 53 08.8**	**+1.6**
AYDN	**Tasoluk**	**2.21**	**20**	*i* P	**Pn**	**07 52 42.0**	**+1.1**
AYDN				*i* S	**Sn**	**07 53 08.8**	**+1.6**
VAM	**Vamos**	**2.23**	**266**	P	**Pn**	**07 52 42.1**	**+0.9**
VAM				S	**Sn**	**07 53 07.1**	**-0.5**
AKAS	**Kas**	**2.27**	**72**	*i* P	**Pn**	**07 52 40.9**	**-0.8**
AKAS				*i* S	**Sn**	**07 53 07.7**	**-0.9**
AKAS	**Kas**	**2.27**	**72**	*i* P	**Pn**	**07 52 40.9**	**-0.8**
AKAS				*i* S	**Sn**	**07 53 07.7**	**-0.9**
GVD	**Gavdhos**	**2.44**	**253**	P	**Pn**	**07 52 44.7**	**+0.7**
GVD	**Gavdhos**	**2.44**	**253**	P	**Pn**	**07 52 44.7**	**+0.7**
KARN	**Karanos**	**2.47**	**267**	P	**Pn**	**07 52 44.9**	**+0.5**
KARN				S	**Sn**	**07 53 12.8**	**-0.5**
KARN	**Karanos**	**2.47**	**267**	P	**Pn**	**07 52 44.9**	**+0.5**
KARN				S	**Sn**	**07 53 12.8**	**-0.5**
ELL	**Elmali**	**2.68**	**63**	*e*PN	**Pn**	**07 52 47.7**	**+0.4**
ELL	**Elmali**	**2.68**	**63**	*e*Pn	**Pn**	**07 52 47.7**	**+0.4**
URLA	**Izmir**	**2.79**	**355**	*i* P	**Pn**	**07 52 48.2**	**-0.6**
URLA				*i* S	**Sn**	**07 53 20.9**	**-0.4**
URLA	**Izmir**	**2.79**	**355**	*i* P	**Pn**	**07 52 48.2**	**-0.6**
URLA				*i* S	**Sn**	**07 53 20.9**	**-0.4**
BLCB	**Balcova**	**2.80**	**2**	*e*PN	**Pn**	**07 52 49.5**	**+0.6**
BLCB	**Balcova**	**2.80**	**2**	*e*Pn	**Pn**	**07 52 49.5**	**+0.6**
CHOS	**Chios island**	**2.89**	**346**	P	**Pn**	**07 52 50.0**	**-0.2**
CHOS				S	**Sn**	**07 53 23.2**	**-0.6**
CHOS	**Chios island**	**2.89**	**346**	P	**Pn**	**07 52 50.0**	**-0.2**
CHOS				S	**Sn**	**07 53 23.2**	**-0.6**
ANKY	**Antikythira Is**	**2.97**	**277**	*e*PN	**Pn**	**07 52 51.8**	**+0.6**
ANKY	**Antikythira Is**	**2.97**	**277**	*e*Pn	**Pn**	**07 52 51.8**	**+0.6**
KYTH	**Kithira**	**3.24**	**284**	P	**Pn**	**07 52 55.5**	**+0.6**
KYTH	**Kithira**	**3.24**	**284**	*e*PN	**Pn**	**07 52 55.6**	**+0.6**
KYTH	**Kithira**	**3.24**	**284**	P	**Pn**	**07 52 55.5**	**+0.6**
KULA	**Kula-Manisa**	**3.24**	**25**	*e*PN	**Pn**	**07 52 55.7**	**+0.7**
KULA	**Kula-Manisa**	**3.24**	**25**	*e*Pn	**Pn**	**07 52 55.7**	**+0.7**
VLI	**Veliai**	**3.43**	**291**	P	**Pn**	**07 52 57.9**	**+0.4**
VLI	**Veliai**	**3.43**	**291**	*e*PN	**Pn**	**07 52 58.3**	**+0.8**
VLI	**Veliai**	**3.43**	**291**	P	**Pn**	**07 52 57.9**	**+0.4**
VLI	**Veliai**	**3.43**	**291**	*e*Pn	**Pn**	**07 52 58.3**	**+0.8**
ITM	**Ithomi**	**4.34**	**293**	P	**Pn**	**07 53 11.0**	**+0.9**
ITM				S	**Sn**	**07 53 58.9**	**-0.5**
ITM	**Ithomi**	**4.34**	**293**	P	**Pn**	**07 53 11.0**	**+0.9**
ITM				S	**Sn**	**07 53 58.9**	**-0.5**

JMA 18 07:56:03.4±0.7, 31°.73N×142°.48E, h36km, M3.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.64**	**302**	*e*S	Sn	07 57 16.1	+1.9
**JH

comp=Z,0.7nm,0.3s,baz=185,slow=12,SNR=9.6

PET	**Petropavlovsk**	**10.52**	**38**	P	**Pn**	**08 12 23.2**	**-0.8**
KOK	**Koryaka**	**10.70**	**37**	P	**Pn**	**08 12 24.7**	**-1.8**
GNL	**Ganaly**	**10.72**	**34**	P	**Pn**	**08 12 25.6**	**-1.0**
UGLR	**Uglovaya**	**10.73**	**38**	P	**Pn**	**08 12 24.9**	**-1.9**
SMAR	**Somma**	**10.75**	**37**	P	**Pn**	**08 12 25.5**	**-1.8**
KRER	**Koryakskii**	**10.76**	**37**	*e*P	**Pn**	**08 12 26.4**	**-0.9**
SDLR	**Sedlovina**	**10.80**	**37**	P	**Pn**	**08 12 25.8**	**-2.0**
USRK	**Ussuriysk Arra**	**11.40**	**271**	P	**Pn**	**08 12 33.5**	**-2.1**

comp=Z,0.1nm,0.3s,baz=152,slow=41,SNR=2.7

TUMR	**Tumrok**	**12.76**	**33**	P	**Pn**	**08 12 52.0**	**-1.2**
MKZ	**Mys Kozlova**	**12.91**	**38**	*e*P	Pn	08 12 49.8	-5.2
KMNR	**Kamenistaya**	**13.15**	**32**	P	**Pn**	**08 12 58.4**	**+0.2**
SRDR	**Sredinnyy**	**13.39**	**29**	P	**Pn**	**08 13 01.5**	**+0.3**
KBTR	**Krutoberegovo**	**14.48**	**35**	*e*P	Pn	08 13 10.4	-4.5
BKI	**Bering**	**15.25**	**42**	P	**Pn**	**08 13 19.7**	**-4.7**
KSRS	**Korea Array**	**16.88**	**250**	P	**Pn**	**08 13 44.9**	**+0.3**

comp=Z,0.1nm,0.3s,baz=47,slow=13,SNR=5.1

ILAR	**Eielson Array**	**40.00**	**37**	P	**P**	**08 17 17.4**	**+0.8**

comp=Z,0.2nm,0.4s,baz=268,slow=7.5,SNR=6.3

MKAR	**Makanchi Array**	**44.45**	**297**	P	**P**	**08 17 51.3**	**-1.6**
MKAR	**Makanchi Array**	**44.45**	**297**	P	**P**	**08 17 51.3**	**-1.6**

comp=Z,0.1nm,0.3s,baz=62,slow=7.0,SNR=2.5

INK	**Inuvik**	**44.89**	**51**	P	**P**	**08 17 55.4**	**-0.6**

comp=Z,0.5nm,0.4s,baz=344,slow=2.4,SNR=13

CMAR	**Chiang Mai Arr**	**48.48**	**253**	P	**P**	**08 18 27.0**	**+2.4**

comp=Z,0.9nm,0.6s,baz=33,slow=5.5,SNR=4.2

TAPN	**Taplejung**	**50.56**	**271**	*e*P	**P**	**08 18 42.6**	**+2.0**
GUN	**Gumba**	**51.52**	**273**	*e*P	**P**	**08 18 49.3**	**+1.5**

comp=Z,12nm,0.5s

RAMN	**Ramite**	**51.59**	**271**	*e*P	**P**	**08 18 49.8**	**+1.6**

comp=Z,12nm,0.3s

PKI	**Pulchoki**	**52.05**	**273**	*e*P	**P**	**08 18 53.4**	**+1.6**

comp=Z,4.2nm,0.3s

PKIN	**Phulchoki**	**52.06**	**273**	*e*P	**P**	**08 18 53.0**	**+1.3**

comp=Z,4.9nm,0.5s

DANN	**Dangsing**	**52.75**	**275**	*e*P	**P**	**08 18 58.7**	**+1.9**

comp=Z,15nm,0.4s

KOLN	**Koldanda**	**53.21**	**274**	*e*P	**P**	**08 19 01.7**	**+1.6**

comp=Z,7.3nm,0.3s

PYUN	**Piuthan**	**53.44**	**275**	*e*P	**P**	**08 19 03.4**	**+1.6**

comp=Z,7.5nm,0.3s

YKA	**Yellowknife Ar**	**54.30**	**35**	P	**P**	**08 19 06.9**	**-0.4**

comp=Z,0.2nm,0.5s,baz=300,slow=7.1,SNR=3.3

FINES	**FINESS Array B**	**63.87**	**333**	P	**P**	**08 20 11.2**	**-1.8**

comp=Z,1.7nm,0.6s,baz=41,slow=7.3,SNR=8.4

NVAR	**Mina Array Bea**	**66.34**	**59**	P	**P**	**08 20 31.2**	**+1.5**

comp=Z,0.3nm,0.5s,baz=294,slow=6.8,SNR=3.3

NOA	**NORSAR Array B**	**68.48**	**339**	P	**P**	**08 20 40.9**	**-1.6**

comp=Z,0.3nm,0.4s,baz=29,slow=6.5,SNR=4.2

PDAR	**Pinedale Array**	**68.56**	**51**	P	**P**	**08 20 44.3**	**+0.7**

comp=Z,0.3nm,0.8s,baz=194,slow=3.3,SNR=3.7

TXAR	**Lajitas Array**	**81.39**	**57**	P	**P**	**08 21 59.2**	**+2.0**

comp=Z,0.5nm,0.8s,baz=301,slow=4.8,SNR=8.0

TXAR				pP	**pP**	**08 22 34.4**	**-0.7**

comp=Z,0.1nm,0.4s,baz=298,slow=4.6,SNR=5.9

*ISCJB **18** 08:14:23.4±0.9, 28.°59S±0.°03×71.°33W±0.°10, h29km, mb4.0/1, Error ellipse: s-maj=12.2km s-min=4.4km az=172.9*
*NEIC **18** 08:14:23.0, 28.°62S×71.°28W, h9km, ML4.1(GUC), After GUC.*
NEIC Felt [III] at Alto del Carmen, Freirina and Huasco; [II] at Vallenar.
*GUC **18** 08:14:23.0±0.9, 28.°62S×71.°28W, h9km±8km, ML4.1*
*IDC **18** 08:14:24.5±1.2, 28.°92S×71.°13W, h40km±6km, mb3.9/1, mb1 3.8/3, mb1mx3.4/18, mbtmp3.6/3, ML3.5/2, MS2.7/1, Ms1 2.8/1, ms1mx2.5/26, Error ellipse: s-maj=59.8km s-min=39.3km az=148.0*

ISC 18 08:14:24.2±0.8, 28.°60S±0.°03×71.°28W±0.°08, h29km, n25, σ1s26/41, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.66**	**129**	*e*Pn	**Pn**	**08 14 37.9**	**0.0**
LCO				*i* S	**Sb**	**08 14 46.1**	**-0.3**
LCO				*e*Sn	**Sn**	**08 14 46.3**	**-1.1**
LCO	**Las Campanas**	**0.66**	**129**	*e*P	**Pb**	**08 14 36.5**	**-0.9**
LCO				*i* S	**Sb**	**08 14 46.1**	**-0.3**
LCO				AML	AML	08 14 49.3	

comp=E,10μm,0.6s

CPCH	**Copiapo**	**1.48**	**34**	↑*i*P	**Pn**	**08 14 49.1**	**+0.1**
CPCH				*i* S	**Sb**	**08 15 09.5**	**-0.1**
CPCH	**Copiapo**	**1.48**	**34**	↑*i*P	**Pn**	**08 14 49.1**	**+0.1**
CPCH				*i* S	**Sb**	**08 15 09.5**	**-0.1**
CDCH	**Caldera**	**1.58**	**15**	*e*P	**Pn**	**08 14 49.6**	**-0.6**
CDCH				*i* S	**Sb**	**08 15 11.2**	**-1.1**
CDCH	**Caldera**	**1.58**	**15**	*e*P	**Pn**	**08 14 49.6**	**-0.6**
CDCH				*i* S	**Sb**	**08 15 11.2**	**-1.1**
TLL	**Tololo Astrono**	**1.62**	**165**	↑*i*P	**Pn**	**08 14 51.8**	**+0.7**
TLL				*i* S	**Sb**	**08 15 13.0**	**-0.8**
TLL	**Tololo Astrono**	**1.62**	**165**	↑*i*P	**Pn**	**08 14 51.8**	**+0.7**
TLL				*i* S	**Sb**	**08 15 13.0**	**-0.8**
TLL				AML	AML	08 15 20.7	

comp=N,2μm,0.7s

CMCH	**Combarbala**	**2.58**	**175**	P	**Pn**	**08 15 03.7**	**-0.4**
CMCH	**Combarbala**	**2.58**	**175**	*i* P	**Pn**	**08 15 03.7**	**-0.4**
CMCH				AML	AML	08 15 49.4	

comp=N,4μm,0.5s

LVC	**Limon Verde**	**6.33**	**20**	*e*Pn	**Pn**	**08 15 55.3**	**-0.6**

comp=N,12nm,0.3s

LVC				*e*Sn	**Sn**	**08 17 08.1**	**+0.7**
TRQA	**Tornquist**	**12.22**	**143**	*e*Pn	**Pn**	**08 17 17.7**	**+1.4**
LPAZ	**La Paz**	**12.59**	**14**	*e*Pn	**Pn**	**08 17 23.4**	**+1.4**

comp=N,2.4nm,0.7s

LPAZ	**La Paz**	**12.59**	**14**	Pn		08 17 25.9	+3.8

comp=N,0.1nm,0.3s,baz=157,slow=5.3,SNR=3.2

LPAZ				LR	LR	08 22 31.0	

comp=N,36nm,21.3s,baz=281,slow=38

CPUP	**Villa Florida**	**12.59**	**83**	Pn	**Pn**	**08 17 20.6**	**-0.9**
CPUP	**Villa Florida**	**12.59**	**83**	Pn	**Pn**	**08 17 20.6**	**-0.9**

comp=N,0.1nm,0.3s,baz=270,slow=20,SNR=3.4

SAML	**Samuel**	**20.98**	**23**	*e*P	Pn	08 19 07.9	-0.1
TORD	**Torodi Ar. Bea**	**81.77**	**70**	P	**P**	**08 26 39.5**	**+1.3**
TORD				pP	**pP**	**08 26 51.3**	**+1.3**
TORD				sP	**sP**	**08 26 56.3**	**+2.9**
TORD	**Torodi Ar. Bea**	**81.77**	**70**	P	**P**	**08 26 39.5**	**-1.3**

comp=N,1.1nm,0.6s,baz=268,slow=5.1,SNR=15

TORD				pP	**pP**	**08 26 51.3**	**+1.3**

comp=N,1.1nm,0.6s,baz=264,slow=4.2,SNR=6.0

TORD				sP	**sP**	**08 26 56.3**	**+2.9**

comp=N,1.2nm,0.7s,baz=274,slow=4.9,SNR=5.4

WRA	**Warramunga Arr**	**125.77**	**210**	PKP	**PKPdf**	**08 33 21.9**	**-1.9**
WRA				pPKP	**pPKPdf**	**08 33 35.0**	**+1.5**
WRA	**Warramunga Arr**	**125.77**	**210**	PKP	**PKPdf**	**08 33 21.9**	**-1.9**

comp=N,0.3nm,0.6s,baz=157,slow=1.6,SNR=6.0

WRA				pPKP	**pPKPdf**	**08 33 35.0**	**+1.5**

comp=N,0.2nm,0.6s,baz=156,slow=1.6,SNR=1.9

ZALV	**Zalesovo Beam**	**149.24**	**28**	PKPbc	**PKPbc**	**08 34 08.2**	**-1.5**
ZALV	**Zalesovo Beam**	**149.24**	**28**	PKPbc	**PKPbc**	**08 34 08.2**	**-1.5**

comp=N,0.5nm,0.4s,baz=279,slow=2.9,SNR=4.1

MKAR	**Makanchi Array**	**152.50**	**41**	PKPbc	**PKPbc**	**08 34 16.4**	**-1.2**
MKAR				pPKPbc	**PKPab**	**08 34 29.3**	**+1.3**
MKAR	**Makanchi Array**	**152.50**	**41**	PKPbc	**PKPbc**	**08 34 16.4**	**-1.2**

comp=N,0.6nm,0.6s,baz=325,slow=1.5,SNR=7.4

MKAR				pPKPbc	**PKPab**	**08 34 29.3**	**+1.3**

comp=N,0.5nm,0.7s,baz=308,slow=2.6,SNR=3.4

DJA 18 08:15:19.0±0.7, 8.°S±9.°×11.°0E±.°, h57km±18km, M3.8/9, MLv3.8/9, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOGI	**Yogyakarta**	**0.68**	**35**	P	Pn	08 15 34.0	+1.1
UGM	**Wanagama**	**0.77**	**53**	P	Pn	08 15 34.3	+0.3
BJII	**Banjamegara**	**1.06**	**350**	P	Pn	08 15 38.5	+0.7
BJII				S	Sn	08 15 52.5	+0.8
PCJI	**Pacitan**	**1.28**	**82**	P	Pn	08 15 40.7	+0.1
TGJI	**Tegal**	**1.69**	**333**	P	Pn	08 15 45.3	-0.9
PWJI	**Pagerwojo**	**1.92**	**79**	P	Pn	08 15 48.7	-0.6
SJI	**Sawahan**	**1.96**	**71**	P	Pn	08 15 49.6	-0.4
CISI	**Cisompet, Garu**	**2.22**	**291**	P	Pn	08 15 54.0	+0.5
CISI				S	Sn	08 16 20.9	+1.0
KRKI	**Karangkates**	**2.54**	**85**	P	Pn	08 15 58.4	+0.7

*ISCJB **18** 08:22:39.6±0.9, 51.°52N±0.°05×16.°11E±0.°04, h0km, Error ellipse: s-maj=6.7km s-min=3.4km az=14.1*
*CSEM **18** 08:22:41.1±0.6, 51.°52N×16.°10E, h2km, ML3.0/7, Error ellipse: s-maj=9.5km s-min=5.1km az=5.0*

*WAR **18** 08:22:42.1, 51.°53N×16.°10E*
*PRU **18** 08:22:42.4, 51.°50N×16.°11E, h0km*

ISC 18 08:22:41.8±1.2, 51.°51N±0.°06×16.°13E±0.°03, h0km, n20, σ0s47/36, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.68**	**171**	*e*Pg	**Pg**	**08 22 55.2**	**+0.4**
KSP				*e*Sg	**Sg**	**08 23 04.4**	**+0.8**
UPC	**Upice**	**1.01**	**184**	*e*PG	**Pg**	**08 23 01.1**	**0.0**
UPC				*e*SG	**Sg**	**08 23 14.2**	**0.0**

comp=Z,17nm,0.3s

UPC	**Upice**	**1.01**	**184**	Pg	**Pg**	**08 23 01.1**	**0.0**
UPC				Sg	**Sg**	**08 23 14.2**	**0.0**

17nm,0.3s

DPC	**Dobruska-Polom**	**1.17**	**174**	*e*PG	**Pg**	**08 23 03.9**	**-0.3**
DPC				*e*SG	**Sg**	**08 23 19.3**	**-0.1**

comp=Z,8.1nm,0.2s

DPC	**Dobruska-Polom**	**1.17**	**174**	Pg	**Pg**	**08 23 03.9**	**-0.3**
DPC				Sg	**Sg**	**08 23 19.3**	**-0.1**

8.1nm,0.2s

PVCC	**Panska Ves**	**1.40**	**226**	*e*PG	**Pn**	**08 23 08.0**	**-0.5**
PVCC				*e*SG	**Sg**	**08 23 26.6**	**0.0**

comp=Z,42nm,0.2s

PVCC	**Panska Ves**	**1.40**	**226**	Pg	**Pn**	**08 23 08.0**	**-0.5**
PVCC				Sg	**Sg**	**08 23 26.6**	**0.0**

42nm,0.2s

BRG	**Berggiesshubel**	**1.52**	**246**	PG	**Pn**	**08 23 10.1**	**-0.1**
BRG				Sg	**Sg**	**08 23 30.0**	**-0.5**

22nm,0.4s

PRU	**Pruhonice**	**1.83**	**214**	*e*SG	**Sb**	**08 23 40.0**	**+0.4**

comp=Z,4.4nm,0.2s

PRU	**Pruhonice**	**1.83**	**214**	Sg	**Sb**	**08 23 40.0**	**+0.4**

4.4nm,0.2s

MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn	**Pn**	**08 23 15.6**	**-0.7**
MORC				*e*Sg	**Sb**	**08 23 42.7**	**-0.6**
CLL	**Collm**	**1.97**	**265**	*e*Pg	**Pg**	**08 23 19.0**	**-0.5**
CLL				*i* Sg	**Sb**	**08 23 44.0**	**+0.4**

comp=Z,7.0nm,0.7s

OKC	**Ostrava-Krasne**	**2.11**	**142**	*e*SG	**Sg**	**08 23 49.2**	**-0.4**

comp=Z,6.6nm,0.3s

OKC	**Ostrava-Krasne**	**2.11**	**142**	Sg	**Sg**	**08 23 49.2**	**-0.4**

comp=Z,6.6nm,0.3s

NKC	**Novy Kostel**	**2.66**	**243**	*e*PN	**Pn**	**08 23 26.2**	**+0.3**
NKC				*e*PG	**Pb**	**08 23 30.6**	**+0.3**
NKC				*e*SG	**Sg**	**08 24 07.3**	**+0.1**

comp=Z,18nm,0.4s

NKC	**Novy Kostel**	**2.66**	**243**	Pn	**Pn**	**08 23 26.2**	**+0.3**
OJC	**Ojcow**	**2.66**	**118**	*e*Pg	**Pg**	**08 23 32.7**	**-0.1**
OJC				*e*Sg	**Sg**	**08 24 07.4**	**+0.2**
OJC	**Ojcow**	**2.66**	**118**	*e*Pg	**Pg**	**08 23 32.7**	**-0.1**
OJC				*e*Sg	**Sg**	**08 24 07.4**	**+0.2**
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PG	**Pb**	**08 23 34.9**	**+0.6**
KHC				*e*SG	**Sg**	**08 24 13.6**	**-1.1**

comp=Z,1.9nm,0.2s

KHC	**Kasperske Hory**	**2.89**	**215**	Pg	**Pb**	**08 23 34.9**	**+0.6**
KHC				Sg	**Sg**	**08 24 13.6**	**-1.1**

comp=Z,1.9nm,0.2s

GUC 18 08:31:30.0±1.0, 23.°71S×69.°03W, h90km±11km, ML3.5, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.10**	**6**	↓*i*P	Pn	08 31 51.5	+0.3
LVC				*i* S	Sn	08 32 08.5	+1.4
SPCH	**San Pedro de A**	**1.10**	**44**	*e*P	Pn	08 31 51.9	+0.6
SPCH				*i* S	Sn	08 32 08.4	+1.1
SPCH				AML	AML	08 32 10.2	

comp=E,3μm,0.2s

CEN1	**Los Morros**	**1.12**	**286**	↓*i*P	Pn	08 31 53.5	+2.2
CEN1				*i* S	Sn	08 32 10.4	+3.1
CEN1				AML	AML	08 32 11.3	

comp=N,651nm,0.4s

ANCH	**Antofagasta**	**1.27**	**271**	↑*i*P	Pn	08 31 53.2	+0.4
ANCH				*i* S	Sn	08 32 10.9	+0.8
ANCH				AML	AML	08 32 12.9	

comp=E,1μm,0.3s

MECH	**Mejillones**	**1.44**	**295**	*e*P	Pn	08 31 55.7	+0.7
MECH				AML	AML	08 32 22.6	

comp=E,1μm,0.7s

PB04	**Plate Boundary**	**1.50**	**343**	↑*i*P	Pn	08 31 59.0	+3.2
PB04				*e*S	Sn	08 32 18.6	+3.3
PB04				AML	AML	08 32 26.9	

comp=N,374nm,0.2s

PB09	**Plate Boundary**	**1.92**	**354**	↑*i*P	Pn	08 32 02.6	+1.2
PB09				AML	AML	08 32 36.0	

comp=E,1μm,0.4s

*IDC **18** 09:02:31.7±0.9, 43.°08N×46.°01E, h0km, mb4.0/11, mb1 4.1/14, mb1mx3.8/30, mbtmp4.0/14, ML3.6/4, MS2.8/2, Ms1 2.8/2, ms1mx2.3/44, Error ellipse: s-maj=20.7km s-min=10.5km az=173.0*
*MOS **18** 09:02:34.4±1.3, 43.°42N×46.°23E, h18km, mb4.6/8, Error ellipse: s-maj=6.2km s-min=5.4km az=41.3*
*ISCJB **18** 09:02:34.5±0.5, 43.°44N±0.°02×46.°28E±0.°02, h16km±4km, mb4.0/13, MS2.9/1, Error ellipse: s-maj=3.4km s-min=2.7km az=2.1*
*CSEM **18** 09:02:34.2±0.1, 43.°38N×46.°22E, h8km, mb4.6, mb4.2/8, Error ellipse: s-maj=4.8km s-min=3.2km az=16.0*
*TIF **18** 09:02:35.3, 43.°33N×46.°04E, h18km±3km*
*AZER **18** 09:02:50.0, 42.°22N×46.°44E, h40km*

ISC 18 09:02:35.2±0.9, 43.°29N±0.°03×46.°23E±0.°02, h20km±4km, n129, σ1s37/166, mb4.1/13, 13C-16D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRO	**Groznyy**	**0.35**	**275**	↓*i*PG	**Pg**	**09 02 42.0**	**-0.7**
GRO				*i* S	**Sb**	**09 02 47.7**	**-0.2**
GRO	**Groznyy**	**0.35**	**275**	*i* Pg	**Pg**	**09 02 42.0**	**-0.7**
GRO				*i* Sg	**Sb**	**09 02 47.7**	**-0.2**
DLMR	**Dylym**	**0.37**	**126**	PG	**Pg**	**09 02 42.5**	**-0.6**
DLMR	**Dylym**	**0.37**	**126**	Pg	**Pg**	**09 02 42.5**	**-0.6**
DBC	**Dubki**	**0.52**	**121**	PG	Pn	09 02 54.4	+6.8
KRNR	**Karanay**	**0.68**	**133**	*e*PG	**Pb**	**09 02 47.5**	**-1.0**
KRNR				*e*S	**Sg**	**09 02 56.5**	**-1.4**
KRNR				pmax	pmax		

comp=Z,495nm,0.3s

KRNR	**Karanay**	**0.68**	**133**	*e*Pg	**Pb**	**09 02 47.5**	**-1.0**

comp=Z,495nm,0.3s

UNCR	**Uncukul**	**0.71**	**144**	PG	Pn	09 02 53.5	+3.3
BUJR	**Buynaksk**	**0.80**	**125**	*e*PG	**Pn**	**09 02 52.8**	**+1.4**
BUJR				*e*S	**Sn**	**09 03 03.5**	**+0.8**
BUJR				pmax	pmax		

comp=Z,81nm,0.3s

BUJR	**Buynaksk**	**0.80**	**125**	*e*Pg	**Pn**	**09 02 52.8**	**+1.4**

comp=Z,81nm,0.3s

BUJR				*e*Sg	**Sn**	**09 03 03.5**	**+0.8**
XNZR	**Khunzakh**	**0.83**	**155**	PG	**Pb**	**09 02 50.0**	**-1.0**
XNZR	**Khunzakh**	**0.83**	**155**	Pg	**Pb**	**09 02 50.0**	**-1.0**
MAK	**Makhachkala**	**0.99**	**109**	*e*PG	**Pb**	**09 02 52.4**	**-1.3**
MAK				*e*		09 03 05.3	
MAK				pmax	pmax		

comp=Z,210nm,0.3s

MAK				smax	smax		

comp=N,3μm,0.6s

MAK				smax	smax		

comp=E,3μm,0.8s

MAK	**Makhachkala**	**0.99**	**109**	*e*Pg	**Pb**	**09 02 52.4**	**-1.3**

comp=E,210nm,0.3s

MAK				*e*Sg	**Sb**	**09 03 05.3**	**-1.1**

comp=E,3μm,0.6s

GNBR	**Gunib**	**1.05**	**149**	PG	**Pb**	**09 02 54.2**	**-0.6**
GNBR	**Gunib**	**1.05**	**149**	Pg	**Pb**	**09 02 54.2**	**-0.6**
SNJR	**Sundja**	**1.06**	**258**	↓*i*PG	**Pg**	**09 02 55.2**	**-0.6**
SNJR				*e*S	**Sn**	**09 03 10.5**	**+1.4**
SNJR	**Sundja**	**1.06**	**258**	*i* Pg	**Pg**	**09 02 55.2**	**-0.6**
SNJR				*e*Sg	**Sn**	**09 03 10.5**	**+1.4**
VLKR	**Vladikavkaz**	**1.16**	**258**	*e*PG	**Pb**	**09 02 56.7**	**+0.1**
VLKR				*e*S	**Sg**	**09 03 13.4**	**+0.5**
VLKR	**Vladikavkaz**	**1.16**	**258**	*e*Pg	**Pb**	**09 02 56.7**	**+0.1**
VLKR				*e*Sg	**Sg**	**09 03 13.4**	**+0.5**
TRKR	**Terskaya**	**1.17**	**292**	↓*i*PG	**Pg**	**09 02 58.0**	**+0.1**
TRKR				*i* S	**Sg**	**09 03 16.1**	**+2.9**
TRKR	**Terskaya**	**1.17**	**292**	*i* Pg	**Pg**	**09 02 58.0**	**+0.1**
BTKR	**Batakoyurt**	**1.23**	**274**	↑*i*PG	**Pg**	**09 02 58.7**	**-0.4**
BTKR				*e*S	**Sg**	**09 03 16.5**	**+1.3**
BTKR	**Batakoyurt**	**1.23**	**274**	*i* Pg	**Pg**	**09 02 58.7**	**-0.4**
ARNR	**Ardon**	**1.43**	**267**	↑*i*PG	**Pb**	**09 03 01.3**	**+0.2**
ARNR				*e*S	**Sg**	**09 03 21.4**	**0.0**
ARNR	**Ardon**	**1.43**	**267**	*i* Pg	**Pb**	**09 03 01.3**	**+0.2**
ARNR				*e*Sg	**Sg**	**09 03 21.4**	**0.0**
PRTR	**Priterechnaya**	**1.49**	**289**	↓*i*PG	**Pb**	**09 03 02.3**	**+0.1**
PRTR				*i* S	**Sg**	**09 03 23.8**	**+0.5**
PRTR	**Priterechnaya**	**1.49**	**289**	*i* Pg	**Pb**	**09 03 02.3**	**+0.1**
KORR	**Kora**	**1.59**	**263**	*i* PG	**Pb**	**09 03 02.9**	**-1.1**
KORR				*e*S	**Sg**	**09 03 25.2**	**-1.4**
KORR	**Kora**	**1.59**	**263**	*i* Pg	**Pb**	**09 03 02.9**	**-1.1**
KORR				*e*Sg	**Sg**	**09 03 25.2**	**-1.4**
DUS	**Dusheti**	**1.64**	**224**	P	**Pb**	**09 03 05.3**	**+0.4**
DUS				S	**Sb**	**09 03 26.6**	**+1.5**
LSNR	**Lesken**	**1.76**	**270**	↓*i*PN	**Pn**	**09 03 05.4**	**+0.8**
LSNR				*e*S	**Sb**	**09 03 29.5**	**+1.0**
LSNR	**Lesken**	**1.76**	**270**	*i* Pn	**Pn**	**09 03 05.4**	**+0.8**
LSNR				*e*Sg	**Sb**	**09 03 29.5**	**+1.0**
ZEI	**Tsey**	**1.78**	**254**	↓*i*PN	**Pn**	**09 03 04.4**	**-0.7**
ZEI	**Tsey**	**1.78**	**254**	*i* Pn	**Pn**	**09 03 04.4**	**-0.7**
SEAG	**Tbilisi Sea**	**1.85**	**215**	P	**Pb**	**09 03 07.6**	**-0.8**
SEAG				S	**Sb**	**09 03 32.6**	**+1.4**
TBLG	**Delisi**	**1.91**	**216**	P	**Pb**	**09 03 08.4**	**-0.9**
TBLG				S	**Sb**	**09 03 33.2**	**+0.5**
TBLG	**Delisi**	**1.91**	**216**	P	**Pb**	**09 03 08.4**	**-0.9**
TBLG				S	**Sb**	**09 03 33.2**	**+0.5**
DGRG	**David-gareji**	**1.94**	**199**	P	**Pb**	**09 03 09.6**	**-0.4**
DGRG				S	**Sg**	**09 03 37.3**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.98**	**260**	↑*i*PN	**Pn**	**09 03 07.8**	**0.0**
DIGR	**Digorskoe uzhe**	**1.98**	**260**	*i* Pn	**Pn**	**09 03 07.8**	**0.0**
DRN	**Derbent**	**2.00**	**128**	*e*PN	**Pb**	**09 03 11.8**	**+0.9**
DRN				*i* S	**Sg**	**09 03 38.0**	**-1.6**
GOR	**Gori**	**2.03**	**231**	P	**Pb**	**09 03 10.0**	**-1.5**
GOR				S	**Sb**	**09 03 36.1**	**-0.3**
ONI	**Oni**	**2.15**	**252**	P	**Pn**	**09 03 11.6**	**+1.5**
ONI				S	**Sb**	**09 03 38.5**	**-1.3**
KSMR	**Kasumkent**	**2.20**	**139**	*e*PN	**Pb**	**09 03 15.0**	**+0.7**
KSMR				*e*S	**Sg**	**09 03 45.0**	**-0.9**
KSMR				pmax	pmax		

comp=Z,375nm,0.2s

SEKA	**Sheki**	**2.20**	**161**	↑P	**Pn**	**09 03 12.7**	**+2.0**

SNR=102

SEKA				↓S	**Sb**	**09 03 41.1**	**-0.1**
SEKA	**Sheki**	**2.20**	**161**	P	**Pn**	**09 03 12.7**	**+2.0**

SNR=102

| | | | | | | | |
|---|---|---|---|---|---

BVAR	**Borovoye Array**	**18.75**	**50**	P		**Pn**	**09 06 55.2**	**+2.0**
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.3s								
BVAR	**Borovoye Array**	**18.75**	**50**	P		**Pn**	**09 06 55.2**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=243,slow=19,SNR=3.4								
AAK	**Ala-Archa**	**20.66**	**82**	*i* P		Pn	09 07 15.2	-1.1
AAK				MLR		MLR			
	comp=Z,91nm,16.0s								
AAK	**Ala-Archa**	**20.66**	**82**	LR		LR	09 16 45.2		
	comp=Z,21nm,19.3s,baz=190,slow=41								
AAK	**Ala-Archa**	**20.66**	**82**	*i* P		Pn	09 07 15.2	-1.1
	comp=Z,91nm,16.0s								
JOF	**Joensuu**	**21.50**	**341**	*e*P		**P**	**09 07 23.0**	**+0.5**
JOF				pmax		pmax			
	comp=Z,16nm,0.6s								
JOF	**Joensuu**	**21.50**	**341**	*e*p		**P**	**09 07 23.0**	**+0.5**
	comp=Z,16nm,0.6s								
JOF	**Joensuu**	**21.50**	**341**	*e*P		**P**	**09 07 23.0**	**+0.5**
	comp=Z,16nm,0.6s								
FINES	**FINESS Array B**	**21.78**	**334**	P		**P**	**09 07 25.0**	**-0.5**
	comp=Z,18nm,0.6s,baz=134,slow=11,SNR=48								
FINES	**FINESS Array B**	**21.78**	**334**	P		**P**	**09 07 25.0**	**-0.5**
	comp=Z,18nm,0.6s								
KAF	**Kangasniemi**	**22.21**	**335**	*e*P		**P**	**09 07 29.4**	**-0.7**
KAF				pmax		pmax			
	comp=Z,4.0nm,0.5s								
KAF	**Kangasniemi**	**22.21**	**335**	*e*p		**P**	**09 07 29.4**	**-0.7**
	comp=Z,4.0nm,0.5s								
KAF	**Kangasniemi**	**22.21**	**335**	*e*P		**P**	**09 07 29.4**	**-0.7**
	comp=Z,4.0nm,0.5s								
KURBB	**Kurchatov Arra**	**23.10**	**60**	P		**P**	**09 07 40.8**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=271,slow=12,SNR=3.7								
GERES	**GERESS Array B**	**23.12**	**295**	P		**P**	**09 07 39.7**	**-0.3**
	comp=Z,0.3nm,0.2s,baz=101,slow=6.9,SNR=3.8								
GERES	**GERESS Array B**	**23.12**	**295**	P		**P**	**09 07 39.7**	**-0.3**
KURK	**Kurchatov**	**23.17**	**60**	P		**P**	**09 07 40.8**	**+0.5**
KURK	**Kurchatov**	**23.17**	**60**	P		**P**	**09 07 40.8**	**+0.5**
HFS	**Hagfors**	**25.89**	**322**	P		**P**	**09 08 05.3**	**-0.2**
	comp=Z,4.3nm,0.5s,baz=106,slow=11,SNR=16								
HFS	**Hagfors**	**25.89**	**322**	P		**P**	**09 08 05.3**	**-0.2**
	comp=Z,4.0nm,0.5s								
NB2	**NORSAR Subarra**	**27.39**	**323**	P		**P**	**09 08 18.7**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=114,slow=9.3								
NB2	**NORSAR Subarra**	**27.39**	**323**	P		**P**	**09 08 18.7**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=114,slow=9.0,SNR=4.5								
NOA	**NORSAR Array B**	**27.39**	**323**	P		**P**	**09 08 20.4**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=118,slow=8.6,SNR=4.8								
NOA	**NORSAR Array B**	**27.39**	**323**	P		**P**	**09 08 20.4**	**+1.4**
ARCES	**ARCESS Array B**	**28.38**	**345**	P		**P**	**09 08 27.9**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=154,slow=11,SNR=9.3								
ARCES	**ARCESS Array B**	**28.38**	**345**	P		**P**	**09 08 27.9**	**+0.1**
SPITS	**Spitsbergen Ar**	**36.95**	**350**	P		**P**	**09 09 43.7**	**+1.2**
	comp=Z,1.4nm,0.4s,baz=140,slow=12,SNR=31								
SPITS	**Spitsbergen Ar**	**36.95**	**350**	P		**P**	**09 09 43.7**	**+1.2**
	comp=Z,1.0nm,0.4s								
TORD	**Torodi Ar. Bea**	**48.59**	**246**	P		**P**	**09 11 15.1**	**-2.4**
	comp=Z,0.8nm,0.6s,baz=28,slow=9.0,SNR=18								
CMAR	**Chiang Mai Arr**	**50.59**	**102**	P		**P**	**09 11 33.0**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=307,slow=8.8,SNR=4.2								
CMAR	**Chiang Mai Arr**	**50.59**	**102**	P		**P**	**09 11 33.0**	**+0.3**
	comp=Z,1.0nm,0.4s								
DBIC	**Dimbokro**	**57.69**	**246**	P		**P**	**09 12 22.4**	**-2.1**
	comp=Z,1.4nm,0.4s,baz=129,slow=1.1,SNR=3.7								
MJAR	**Matsushiro Arr**	**67.38**	**61**	P		**P**	**09 13 31.8**	**+2.7**
	comp=Z,3.3nm,1.1s,baz=327,slow=10,SNR=4.4								
MJAR	**Matsushiro Arr**	**67.38**	**61**	P		**P**	**09 13 31.8**	**+2.7**
	comp=Z,3.0nm,1.1s								

GUC 18 09:15:05.8±0.8, 34°.08S×70°.19W, h6^{km}±1^{km}, MD4.1, ML3.5, 8C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	**0.23**	**356**	⇑*i*P	Pg	09 15 10.8	+0.2
LMEL				*i* S	Sg	09 15 15.0	+1.1
LMEL				AML	AML	09 15 15.6	
	comp=E,6μm,0.3s						
CACH	**El Canelo**	**0.35**	**264**	⇓*i*P	Pg	09 15 12.7	0.0
CHCH	**Chadas Angostu**	**0.41**	**291**	⇑*i*P	Pg	09 15 14.5	+0.6
CHCH				*i* S	Sb	09 15 21.3	-1.0
SJCH	**San Jose de Ma**	**0.46**	**342**	*e*P	Pg	09 15 14.3	-0.6
SJCH				*i* S	Sg	09 15 21.8	+0.8
SJCH				AML	AML	09 15 22.8	
	comp=E,3μm,0.3s						
PCH	**Pirque**	**0.53**	**329**	⇑*i*P	Pg	09 15 16.6	+0.3
PCH				*i* S	Sb	09 15 24.9	-0.9
ANTU	**Antumapu**	**0.63**	**324**	⇑*i*P	Pg	09 15 18.5	+0.5
ANTU				*i* S	Sb	09 15 28.5	0.0
ANTU				AML	AML	09 15 28.9	
	comp=E,4μm,0.3s						
FSR	**Penalolen**	**0.66**	**335**	*e*P	Pg	09 15 15.5	-3.2
FSR				*i* S	Sb	09 15 29.4	-0.1
LACH	**Col Las Americ**	**0.69**	**335**	*e*P	Pg	09 15 19.2	+0.1
LACH				*i* S	Sb	09 15 30.0	-0.2
LACH				AML	AML	09 15 33.1	
	comp=E,1μm,0.5s						
SAN	**Santiago**	**0.74**	**328**	⇑*i*P	Pg	09 15 20.2	+0.1
SAN				*i* S	Sb	09 15 31.5	-0.1
SAN				AML	AML	09 15 31.9	
	comp=N,2μm,0.3s						
CLCH	**Cerro Calan**	**0.74**	**337**	⇓*i*P	Pg	09 15 20.4	+0.2
CLCH				*i* S	Sb	09 15 31.9	+0.2
CLCH				AML	AML	09 15 35.1	
	comp=E,4μm,0.3s						
STL	**Santa Lucia**	**0.75**	**329**	*e*P	Pg	09 15 20.2	0.0
STL				*i* S	Sb	09 15 31.4	-0.3
TACH	**Talagante**	**0.76**	**304**	⇑*i*P	Pg	09 15 20.6	+0.2
TACH				*i* S	Sb	09 15 31.8	-0.3
PEL	**Peldehue**	**1.02**	**336**	⇑*i*P	Pg	09 15 25.3	-0.3
PEL				*i* S	Sb	09 15 40.1	+0.4
PEL				AML	AML	09 15 41.2	
	comp=N,4μm,0.3s						
LNV	**Longovilo**	**1.02**	**277**	⇓*i*P	Pg	09 15 24.8	-0.7
LNV				*i* S	Sb	09 15 39.3	-0.4
ROCH	**El Roble**	**1.30**	**328**	*e*P	Pn	09 15 29.9	-0.9
ROCH				*e*S	Sb	09 15 48.2	0.0
ROCH				AML	AML	09 15 59.5	
	comp=E,886nm,0.5s						
JACH	**Jahuel**	**1.44**	**346**	⇓*i*P	Pn	09 15 31.5	-1.0
IHA	**Instituto Hidr**	**1.61**	**310**	⇓*i*P	Pn	09 15 34.8	+0.1
IHA				*i* S	Sn	09 15 56.0	+0.2
TALC	**Talca**	**1.77**	**222**	⇑*i*P	Pn	09 15 37.1	0.0
TALC				*i* S	Sn	09 16 00.2	+0.2
TALC				AML	AML	09 16 05.0	
	comp=E,6μm,0.6s						
CHNG	**Los Chungos**	**2.45**	**333**	*e*P	Pn	09 15 48.3	+1.9
CHNG				*i* S	Sb	09 16 19.3	-1.5
CHNG				AML	AML	09 16 26.0	
	comp=E,303nm,0.4s						
CMCH	**Combarbala**	**2.98**	**346**	*e*P	Pn	09 15 55.3	+1.5
CMCH				AML	AML	09 16 45.2	
	comp=E,1μm,0.4s						

GUC 18 09:15:51.7±0.6, 23°.39S×67°.21W, h226^{km}±9^{km}, ML3.7, 4C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.75**	**296**	⇑*i*P	Pn	09 16 31.6	+1.4
LVC				*i* S	S	09 17 02.0	+1.9
PB04	**Plate Boundary**	**2.38**	**298**	⇑*i*P	Pn	09 16 44.0	+7.9
PB04				*i* S	S	09 17 23.9	+13
PB04				AML	AML	09 17 29.8	
	comp=N,148nm,0.4s						
CEN1	**Los Morros**	**2.75**	**269**	⇓*i*P	Pn	09 16 42.9	+2.8
CEN1				*i* S	S	09 17 22.5	+4.6
CEN1				AML	AML	09 17 26.3	
	comp=N,59nm,0.3s						
ANCH	**Antofagasta**	**2.96**	**264**	⇑*i*P	Pn	09 16 44.3	+2.1
ANCH				*i* S	S	09 17 23.4	+1.7
PB01	**Plate Boundary**	**3.15**	**317**	⇑*i*P	Pn	09 16 46.4	+1.8
PB01				*i* S	S	09 17 28.2	+2.2
PB01				AML	AML	09 17 30.2	
	comp=E,112nm,0.2s						
HMBC	**Humberstone**	**3.97**	**321**	*e*P	Pn	09 16 55.5	+1.2
HMBC				*e*S	S	09 17 44.4	+0.8
PSGC	**Pisagua**	**4.65**	**324**	*e*P	Pn	09 17 02.9	+0.3
PSGC				*i* S	S	09 17 58.5	0.0

*ISK **18** 09:25:45.6, 37°.45N×38°.96E, h22^{km}, MD2.8*
*DDA **18** 09:25:46.8, 37°.43N×38°.61E, h7^{km}, MD2.9*

*ISCJB **18** 09:25:47.4±0.7, 37°.43N±0°.04×38°.61E±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=6.6km s-min=3.9km az=166.7*
*CSEM **18** 09:25:47.3±0.4, 37°.44N×38°.61E, h8^{km}, MD2.8, Error ellipse: s-maj=8.3km s-min=6.0km az=165.0*

ISC 18 09:25:47.2±0.9, 37.46N±0°.04×38.60E±0°.02, h8^{km}±8^{km}, n24, σ0^{s}71/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.17**	**97**	*e*Pg	**Pg**	**09 25 50.3**	**-0.6**
URFA				*e*Sg	**Sg**	**09 25 53.5**	**+0.1**
URFA	**Urfa**	**0.17**	**97**	*e*Pg	**Pg**	**09 25 50.3**	**-0.6**
URFA				*e*Sg	**Sg**	**09 25 53.5**	**+0.1**
ATAB	**Bozova**	**0.25**	**272**	*i* P	**Pg**	**09 25 51.9**	**-0.3**
ATAB				*i* S	**Sg**	**09 25 56.1**	**+0.6**
ATAB	**Bozova**	**0.25**	**272**	*i* P	**Pg**	**09 25 51.9**	**-0.3**
ATAB				*i* S	**Sg**	**09 25 56.1**	**+0.6**
GZT	**Gaziantep**	**0.83**	**263**	*i* P	**Pg**	**09 26 03.7**	**+0.4**
GZT				*i* S	**Sb**	**09 26 16.7**	**+1.2**
MYA	**Malataya**	**0.87**	**351**	*e*PG	**Pb**	**09 26 04.9**	**+0.2**
MYA				*e*SG	**Sn**	**09 26 18.2**	**-0.7**
MYA	**Malataya**	**0.87**	**351**	*e*Pg	**Pb**	**09 26 04.9**	**+0.2**
MYA				*e*Sg	**Sn**	**09 26 18.2**	**-0.7**
AKCD	**Akcadag**	**0.99**	**327**	*i* P	**Pn**	**09 26 07.7**	**+0.1**
AKCD				*i* S	**Sb**	**09 26 19.9**	**-0.1**
AKCD	**Akcadag**	**0.99**	**327**	*i* P	**Pn**	**09 26 07.7**	**+0.1**
AKCD				*i* S	**Sb**	**09 26 19.9**	**-0.1**
ELZG	**Elazig**	**1.08**	**16**	*i* P	**Pn**	**09 26 08.9**	**+0.1**
ELZG				*i* S	**Sn**	**09 26 23.6**	**-0.4**
ELZG	**Elazig**	**1.08**	**16**	*i* P	**Pn**	**09 26 08.9**	**+0.1**
ELZG				*i* S	**Sn**	**09 26 23.6**	**-0.4**
DIYA	**Diyarbakir**	**1.29**	**69**	*i* P	**Pg**	**09 26 12.5**	**+0.5**
DIYA				*i* S	**Sn**	**09 26 29.1**	**0.0**
DIYA	**Diyarbakir**	**1.29**	**69**	*i* P	**Pg**	**09 26 12.5**	**+0.5**
DIYA				*i* S	**Sn**	**09 26 29.1**	**0.0**
KMRS	**Kahramanmaras**	**1.36**	**272**	*e*PN	**Pb**	**09 26 13.1**	**+0.2**
KMRS	**Kahramanmaras**	**1.36**	**272**	*e*Pn	**Pb**	**09 26 13.1**	**+0.2**
KUZU	**Kuzuini**	**1.40**	**241**	*i* P	**Pb**	**09 26 13.9**	**+0.2**
KUZU				*i* S	**Sn**	**09 26 32.4**	**+0.5**
KUZU	**Kuzuini**	**1.40**	**241**	*i* P	**Pb**	**09 26 13.9**	**+0.2**
KUZU				*i* S	**Sn**	**09 26 32.4**	**+0.5**
DARE	**Darende-Malaty**	**1.42**	**322**	*e*PN	**Pb**	**09 26 13.9**	**-0.1**
DARE	**Darende-Malaty**	**1.42**	**322**	*e*Pn	**Pb**	**09 26 13.9**	**-0.1**
AYKD	**Aykdinkavak**	**1.43**	**269**	*i* P	**Pn**	**09 26 12.1**	**-1.5**
AYKD				*i* S	**Sn**	**09 26 29.6**	**-2.9**
PTK	**Pertek**	**1.56**	**23**	*e*PN	Pn	09 26 11.1	-4.3
PTK	**Pertek**	**1.56**	**23**	*e*Pn	Pn	09 26 11.1	-4.3
MARD	**Mardin**	**1.74**	**94**	*i* P	**Pn**	**09 26 17.6**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.97**	**299**	*e*PN	**Pn**	**09 26 21.5**	**+0.5**

MEX 18 09:37:30.5±0.3, 16°.88N×100°.22W, h8^{km}±2^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.18**	**344**	*i* P	Pg	09 37 33.8	-0.3
CAIG				*i* S	Sg	09 37 36.5	-0.2
ACX	**Acapulco**	**0.34**	**91**	*e*P	Pg	09 37 35.8	-1.5
ACX				*i* S	Sg	09 37 40.0	-1.8
ARIG	**Puente Sto Nin**	**1.40**	**355**	*i* P	Pn	09 37 52.6	-3.7
ARIG				*i* S	Sb	09 38 09.8	-5.3
PLIG	**Platanillo**	**1.65**	**24**	*i* P	Pn	09 37 56.6	-3.3
PLIG				*i* S	Sn	09 38 16.6	-4.8

IDC 18 09:39:41.9±4.5, 68°.55N×160°.57W, h0^{km}, mb4.3/1, mb1 3.5/4, mb1mx3.2/29, mbtmp3.3/4, ML3.1/3, Error ellipse: s-maj=63.8km s-min=36.4km az=47.0, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**6.62**	**118**	Pn	Pn	09 41 15.4	-4.9
	0.2nm,0.3s,baz=305,slow=14,SNR=18						
ILAR				Sn	Sn	09 42 31.1	-5.2
	baz=312,slow=18,SNR=2.1						
ILAR				Lg	Lg	09 43 12.8	
	baz=308,slow=32,SNR=4.1						
INK	**Inuvik**	**9.93**	**79**	Pn	Pn	09 42 01.7	-3.8
	0.1nm,0.3s,baz=290,slow=9.6,SNR=4.1						
INK				Sn	Sn	09 43 53.3	-4.1
	0.1nm,0.3s,baz=203,slow=13,SNR=3.3						
YKA	**Yellowknife Ar**	**19.56**	**86**	P	P	09 44 09.4	-1.3
	0.1nm,0.3s,baz=303,slow=10,SNR=3.1						
ULM	**Lac du Bonnet**	**35.52**	**87**	P	P	09 46 41.6	+1.7
	2.3nm,0.5s,baz=318,slow=3.3,SNR=3.0						

*NNC **18** 09:49:13.3±3.4, 36°.92N×70°.62E, h0^{km}, mb3.8, mpv3.9, Error ellipse: s-maj=32.6km s-min=28.0km az=75.0*

ISC 18 09:49:18.8±3.6, 36°.9N±0°.2×70°.9E±0°.2, h88^{km}, n12, σ0^{s}88/12, 5C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.69**	**21**	P	**Pn**	**09 50 40.9**	**-0.2**
	SNR=56						
KZA	**Kyzart**	**6.20**	**31**	P	**Pn**	**09 50 47.9**	**-0.1**
	SNR=6.9						
EKS2	**Erkin-Say**	**6.20**	**20**	P	**Pn**	**09 50 48.8**	**+0.9**
	SNR=11						
KK31	**Karatay Array**	**6.25**	**357**	⇓Pn	**Pn**	**09 50 46.4**	**-2.0**
	1.8nm,0.3s,baz=172,slow=12,SNR=4.8						
KK31				⇑Sn	**Sn**	**09 51 58.8**	**+0.3**
	5.0nm,0.4s						
KK31				⇓Lg	Lg	09 52 27.3	
	7.8nm,0.6s,baz=178,slow=32,SNR=5.5						
CHMS	**Chumysh**	**6.81**	**24**	P	**Pn**	**09 50 56.0**	**0.0**
	SNR=6.1						
USP	**Ospenovka**	**6.97**	**22**	P	**Pn**	**09 50 57.9**	**-0.3**
	SNR=13						
TKM2	**Tokmak 2**	**7.04**	**29**	⇑Pn	**Pn**	**09 50 59.6**	**+0.2**
	7.8nm,0.6s						
TKM2				⇓Lg	Lg	09 52 57.7	
	2.5nm,0.6s						
TKM2	**Tokmak 2**	**7.04**	**29**	P	**Pn**	**09 50 59.9**	**+0.6**
	SNR=9.0						
MK31	**Makanchi Array**	**13.04**	**37**	⇑P	**Pn**	**09 52 19.5**	**-1.0**
	2.4nm,0.8s,baz=222,slow=14,SNR=6.5						
AB31	**Akbulak array**	**14.75**	**331**	⇑P	Pn	09 52 36.6	-6.0
	1.0nm,0.4s,baz=157,slow=12,SNR=5.0						
BVA0	**Borovoye Array**	**16.18**	**359**	⇓P	**Pn**	**09 53 00.4**	**-0.3**
	0.1nm,0.6s,baz=175,slow=13,SNR=4.2						
AKTO	**Aktyubinsk**	**16.45**	**330**	⇑P	**P**	**09 53 05.7**	**+0.5**
	1.2nm,0.7s						

*IDC **18** 09:50:12.3±1.5, 13°.22S×111°.81W, h0^{km}, mb3.7/7, mb1 4.0/7, mb1mx4.0/16, mbtmp3.7/7, MS4.1/19, Ms1 4.1/19, ms1mx4.1/29, Error ellipse: s-maj=52.2km s-min=25.5km az=51.0*
*ISCJB **18** 09:50:13.3±0.8, 13°.2S±0°.1×111°.7W±0°.1, h10^{km}, mb4.3/28, MS4.2/19, Error ellipse: s-maj=22.3km s-min=10.8km az=144.7*
*GCMT **18** 09:50:16.0±0.4, 13°.46S×112°.02W, h24^{km}±1^{km}, MW5.0, Moment Tensor Solution. s23,c23; s75,c104; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.80±.24; $M_{θθ}$0.19±.20; $M_{φφ}$0.61±.20; $M_{rθ}$1.29±.27; $M_{θφ}$3.75±.14; $M_{φr}$-0.68±.23; Best double couple: $M_0$4.10000×10^{16} NP1:$φ_s$1.00000°, δ70.00000°, λ-166.00000°. NP2:$φ_s$266.00000°, δ77.00000°, λ-21.00000°. Principal axes: T 4.1900, Plg5.0000°, Azm314.0000°; N -0.2100, Plg66.0000°, Azm55.0000°; P -3.9800, Plg24.0000°, Azm222.0000°; Data Used: II IU G IC CN.*
*NEIC **18** 09:50:17.2±0.9, 12°.99S×111°.42W, h10^{km}, mb4.5/21 Error ellipse: s-maj=25.8km s-min=12.4km az=50.0*

ISC 18 09:50:14.3±0.7, 13°.2S±0°.1×111°.8W±0°.1, h10^{km}, n68, σ1^{s}59/49, mb4.4/29, MS4.2/19, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**33.44**	**83**	LR	LR	10 07 18.2	
	comp=Z,247nm,18.3s,baz=88,slow=31						
NNA	**Nana**	**34.15**	**92**	*e*P	**P**	**09 57 00.1**	**+0.2**
NNA	**Nana**	**34.15**	**92**	LR	LR	10 07 35.5	
	comp=Z,226nm,18.9s,baz=8.6,slow=31						
TGUH	**Tegucigalpa,Un**	**36.43**	**43**	*e*P	**P**	**09 57 20.4**	**+1.0**
	18nm,1.2s						
PPT	**Papeete**	**36.60**	**258**	LR	LR	10 07 10.2	
	comp=Z,126nm,21.2s,baz=112,slow=28						
PPT2	**Papeete2**	**36.60**	**258**	*e*LR	LR	10 07 03.1	
	266nm,29.8s						
TBI	**Tubuai**	**37.02**	**249**	*e*LR	LR	10 07 19.9	
	547nm,26.8s						
TEIG	**Tepich**	**40.53**	**35**	*e*P	**P**	**09 57 52.6**	**-1.2**
	10nm,0.9s						
TEIG	**Tepich**	**40.53**	**35**	LR	LR	10 12 16.8	
	comp=Z,610nm,18.6s,baz=239,slow=33						
ROSC	**El Rosal**	**41.35**	**67**	LR	LR	10 11 10.0	
	comp=Z,128nm,20.1s,baz=4.6,slow=30						
LPAZ	**La Paz**	**42.31**	**100**	P	**P**	**09 58 07.8**	**-1.5**
LPAZ	**La Paz**	**42.31**	**100**	P	**P**	**09 58 07.8**	**-1.5**
	1.2nm,0.8s,baz=321,slow=6.1,SNR=5.0						
LPAZ				LR	LR	10 11 42.8	
	comp=Z,316nm,20.6s,baz=237,slow=30						
TXAR	**Lajitas Array**	**43.05**	**10**	P	**P**	**09 58 12.9**	**-1.5**
TXAR	**Lajitas Array**	**43.05**	**10**	P	**P**	**09 58 12.9**	**-1.5**
	0.7nm,1.0s,baz=174,slow=14,SNR=5.8						
TXAR				LR	LR	10 12 56.1	
	comp=Z,122nm,19.1s,baz=270,slow=32						
MNTX	**Cornudas Mount**	**45.10**	**8**	*e*P	**P**	**09 58 31.5**	**+0.7**
	4.8nm,1.3s						
PLCA	**Paso Flores**	**45.25**	**135**	*e*P	**P**	**09 58 33.5**	**+1.3**
PLCA	**Paso Flores**	**45.25**	**135**	LR	LR	10 12 44.9	
	comp=Z,670nm,20.3s,baz=102,slow=30						
GDL2	**Guadalupe Moun**	**45.74**	**9**	*e*P	P	09 58 41.0	+5.0
BAR	**Barrett**	**45.89**	**354**	*e*P	**P**	**09 58 38.1**	**+1.1**
	4.9nm,1.0s						
BAR				*e*pP	pP	09 58 47.1	+6.9
RAR	**Rarotonga**	**46.33**	**253**	LR	LR	10 13 20.1	
	comp=Z,310nm,18.5s,baz=135,slow=30						
SDV	**Santo Domingo**	**46.44**	**64**	*e*P	**P**	**09 58 43.1**	**+1.2**
	6.9nm,0.9s						
LPM	**Los Pinos Moun**	**47.54**	**6**	*e*P	**P**	**09 58 52.0**	**+1.8**
MWC	**Mount Wilson**	**47.56**	**353**	*e*P	**P**	**09 58 51.1**	**+0.8**
	5.4nm,0.9s						
LAZ	**Ladron**	**47.58**	**5**	*e*P	**P**	**09 58 52.6**	**+2.1**
	7.9nm,1.6s						
SAML	**Samuel**	**47.87**	**90**	*e*P	**P**	**09 58 51.2**	**-1.7**
	8.6nm,1.0s						
SIV	**San Ignacio**	**49.10**	**100**	LR	LR	10 15 40.8	
	comp=Z,267nm,18.7s,slow=31						
CCUT	**Cedar City**	**50.53**	**358**	*e*P	P	09 59 18.1	+5.0
	5.4nm,1.3s						
SDCO	**Great Sand Dun**	**51.06**	**6**	*e*P	**P**	**09 59 17.7**	**+0.6**
	4.6nm,1.1s						
PV01	**Paradox Valley**	**51.19**	**3**	*e*P	**P**	**09 59 18.9**	**+0.9**
NVAR	**Mina Array Bea**	**51.75**	**354**	P	**P**	**09 59 23.5**	**+1.3**
NVAR	**Mina Array Bea**	**51.75**	**354**	P	**P**	**09 59 23.5**	**+1.3**
	1.4nm,0.7s,baz=180,slow=10,SNR=10						
NVAR				LR	LR	10 16 13.2	
	comp=Z,231nm,18.4s,baz=173,slow=30						
CPUP	**Villa Florida**	**52.57**	**113**	P	**P**	**09 59 29.5**	**+1.2**
CPUP	**Villa Florida**	**52.57**	**113**	P	**P**	**09 59 29.5**	**+1.2**
	0.5nm,0.4s,baz=90,slow=20,SNR=4.2						
CPUP				LR	LR	10 17 08.3	
	comp=Z,358nm,21.8s,baz=256,slow=31						
DUG	**Dugway**	**53.16**	**359**	*e*P	**P**	**09 59 33.8**	**+1.2**
	4.6nm,1.2s						
WVOR	**Wild Horse Val**	**55.74**	**354**	*e*P	P	09 59 55.2	+3.9
	7.5nm,1.1s						
PDAR	**Pinedale Array**	**55.76**	**2**	P	**P**	**09 59 49.5**	**-2.1**
PDAR	**Pinedale Array**	**55.76**	**2**	P	**P**	**09 59 49.5**	**-2.1**
	0.6nm,0.8s,baz=145,slow=5.4,SNR=4.9						
PDAR				LR	LR	10 20 01.8	
	comp=Z,133nm,18.5s,baz=193,slow=32						
MFID	**Camas Ranch**	**56.49**	**357**	*e*P	**P**	**09 59 57.0**	**+0.4**
	8.9nm,1.4s						
MOOW	**Moose Ponds**	**56.71**	**1**	*e*P	P	10 00 04.1	+5.8
	14nm,2.0s						
IMW	**Indian Meadow**	**56.86**	**1**	*e*P	**P**	**09 59 59.1**	**-0.3**
	4.2nm,1.0s						
MCMT	**McKenzie Canyo**	**57.79**	**359**	*e*P	**P**	**10 00 06.2**	**+0.2**
	1.6nm,1.0s						
BMO	**Blue Mountains**	**58.02**	**355**	*e*P	**P**	**10 00 09.0**	**+1.6**
	4.9nm,1.2s						
BDFB	**Brasilia**	**61.65**	**101**	LR	LR	10 23 16.0	
	comp=Z,101nm,18.4s,baz=50,slow=32						
AGMN	**Agassiz Nation**	**62.88**	**12**	*e*P	**P**	**10 00 38.1**	**-2.4**
	51nm,2.0s						
YKA	**Yellowknife Ar**	**75.52**	**359**	P	**P**	**10 01 58.0**	**-0.4**
YKA	**Yellowknife Ar**	**75.52**	**359**	P	**P**	**10 01 58.0**	**-0.4**
	0.2nm,0.6s,baz=173,slow=5.3,SNR=6.2						
QSPA	**South Pole Qui**	**76.87**	**180**	*e*P	**P**	**10 02 05.2**	**-1.2**
	167nm,3.0s						
SCHQ	**Schefferville**	**77.71**	**25**	LR	LR	10 36 18.8	
	comp=Z,118nm,18.0s,baz=248,slow=36						
DOT	**Dot Lake**	**80.56**	**346**	*e*P	**P**	**10 02 29.6**	**+3.1

HEL 18 09:51:19.3±0.5, 59°22N×27°83E, h0km, ML1.2, Explosion, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VJF	**Virojoki**	**1.33**	**354**	SG	Sg	09 52 00.1	-1.8
VJF				MSG		09 52 00.1	
	comp=Z,2.0nm,0.1s						
PVF	**Pernaja**	**1.66**	**324**	PG	Pn	09 51 48.8	-0.7
PVF				SG	Sn	09 52 10.8	-0.7
PVF				MSG		09 52 10.8	
	comp=Z,0.6nm,0.2s						
MEF	**Metsahovi**	**2.00**	**301**	PN	Pn	09 51 54.8	+0.5
MEF				SG	Sn	09 52 19.3	-0.7
MEF				MSG		09 52 19.3	
	comp=Z,1.4nm,0.1s						
MTSE	**Matsula**	**2.14**	**258**	PN	Pb	09 51 57.8	-1.0
MTSE				SG	Sb	09 52 25.0	-0.9
FIA0	**FINESS Array S**	**2.39**	**339**	PN	Pn	09 52 00.0	+0.3
FIA0				SG	Sb	09 52 32.6	-0.6
FIA0				MSG		09 52 32.6	
	comp=Z,1.1nm,0.2s						

*ISCJB **18** 09:52:43.7±0.4, 57°80N±0°03×21°92E±0°04, h0km, Error ellipse: s-maj=4.3km s-min=3.0km az=164.4*
*CSEM **18** 09:52:44.9±0.2, 57°75N×21°96E, h2km, ML2.8, Error ellipse: s-maj=4.8km s-min=2.7km az=153.0, Mining explosion.*
*HEL **18** 09:52:44.9±0.1, 57°76N×21°96E, h0km, ML2.3, ML2.2(UPP), Explosion*
*UPP **18** 09:52:45.0, 57°75N×22°00E, h0km, ML2.2, Suspected Mining explosion.*
*NAO **18** 09:52:46.5±2.0, 57°88N×21°93E, ML2.2*
*BER **18** 09:52:48.3±5.2, 57°85N×21°86E, h0km, ML2.2(NAO), Suspected explosion*
*IDC **18** 09:52:48.2±2.5, 58°00N×21°85E, h0km, mb1 3.3/4, mb1mx3.1/27, mbtmp3.2/4, ML2.7/4, Error ellipse: s-maj=28.5km s-min=10.0km az=165.0*

ISC 18 09:52:43.0±0.7, 57°75N±0°03×21°86E±0°02, h0km, n110, σ1§90/135, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	**Slitere, Latvi**	**0.26**	**119**	*e*P	**Pg**	**09 52 49.0**	**+1.0**
SLIT				*e*S	**Sg**	**09 52 51.6**	**+0.1**
SLIT	**Slitere, Latvi**	**0.26**	**119**	*e*P	**Pg**	**09 52 49.1**	**+1.1**
	SNR=90						
SLIT				S	**Sg**	**09 52 51.5**	**+0.1**
MTSE	**Matsula**	**1.41**	**46**	*e*P	**Pn**	**09 53 09.3**	**-0.7**
MTSE				*e*S	**Sg**	**09 53 27.4**	**-0.9**
MTSE	**Matsula**	**1.41**	**46**	P	**Pn**	**09 53 09.2**	**-0.7**
MTSE				S	**Sg**	**09 53 27.4**	**-0.9**
GOTU	**Gotland**	**1.77**	**269**	*e*P	**Pg**	**09 53 17.2**	**+0.3**
GOTU	**Gotland**	**1.77**	**269**	P	**Pg**	**09 53 17.2**	**+0.3**
NRTU	**Norrtaelje**	**2.56**	**320**	*e*P	**Pb**	**09 53 28.2**	**-1.6**
NRTU	**Norrtaelje**	**2.56**	**320**	P	**Pb**	**09 53 28.2**	**-1.6**
	baz=142						
AAL	**Aland**	**2.62**	**339**	*e*P	**Pn**	**09 53 27.9**	**+1.5**
AAL				*e*SG	**Sg**	**09 54 06.2**	**-0.8**
AAL	**Aland**	**2.62**	**339**	P	**Pn**	**09 53 28.0**	**+1.5**
AAL				Sg	**Sg**	**09 54 06.2**	**-0.8**
VSU	**Vasula**	**2.68**	**73**	Pn	**Pn**	**09 53 28.6**	**+1.2**
VSU				Sn	**Sn**	**09 54 04.2**	**-1.0**
VSU	**Vasula**	**2.68**	**73**	Pn	**Pn**	**09 53 28.6**	**+1.2**
VSU				Sn	**Sb**	**09 54 04.2**	**-1.0**
VSU	**Vasula**	**2.68**	**73**	*e*P	**Pn**	**09 53 28.6**	**+1.2**
VSU				*e*SB	**Sb**	**09 54 03.2**	**-2.0**
VSU	**Vasula**	**2.68**	**73**	P	**Pn**	**09 53 28.5**	**+1.1**
VSU				Sb	**Sb**	**09 54 03.2**	**-2.0**
VSU				Sn	**Sb**	**09 54 04.2**	**-1.0**
	SNR=50						
MEF	**Metsahovi**	**2.80**	**27**	*e*PB	**Pb**	**09 53 32.4**	**-1.4**
MEF				*e*SB	**Sb**	**09 54 07.5**	**-1.1**
MEF				MSG		09 54 11.8	
	comp=Z,18nm,0.1s						
MEF	**Metsahovi**	**2.80**	**27**	Pb	**Pb**	**09 53 32.4**	**-1.4**
MEF	**Metsahovi**	**2.80**	**27**	*e*P	**Pb**	**09 53 32.7**	**-1.1**
	SNR=50						
MEF				Sb	**Sb**	**09 54 07.4**	**-1.1**
VIKU	**Vikbolandet**	**2.84**	**287**	*e*P	**Pb**	**09 53 33.1**	**-1.5**
VIKU	**Vikbolandet**	**2.84**	**287**	P	**Pb**	**09 53 33.0**	**-1.5**
ASPU	**Aespoe**	**2.85**	**265**	*e*P	**Pb**	**09 53 33.4**	**-1.4**
ASPU	**Aespoe**	**2.85**	**265**	P	**Pb**	**09 53 33.4**	**-1.4**
GRAU	**Graesoe**	**3.11**	**328**	*e*P	**Pn**	**09 53 35.1**	**+1.9**
GRAU	**Graesoe**	**3.11**	**328**	P	**Pn**	**09 53 35.1**	**+1.9**
FLYU	**Flymyra**	**3.15**	**321**	*e*P	**Pn**	**09 53 36.6**	**+2.7**
FLYU	**Flymyra**	**3.15**	**321**	P	**Pn**	**09 53 36.5**	**+2.7**
OSKU	**Oskarshamn**	**3.16**	**262**	*e*P	**Pn**	**09 53 36.7**	**+2.7**
OSKU	**Oskarshamn**	**3.16**	**262**	P	**Pn**	**09 53 36.7**	**+2.7**
ESKU	**Eskilstuna**	**3.23**	**300**	*e*P	**Pn**	**09 53 37.8**	**+2.8**
ESKU	**Eskilstuna**	**3.23**	**300**	P	**Pn**	**09 53 37.7**	**+2.8**
BACU	**Backbrunna**	**3.25**	**312**	*e*P	**Pn**	**09 53 37.9**	**+2.7**
BACU	**Backbrunna**	**3.25**	**312**	P	**Pn**	**09 53 37.9**	**+2.7**
RAF	**Rauma**	**3.28**	**359**	*e*P	**Pn**	**09 53 37.8**	**+2.1**
RAF				*e*SB	**Sb**	**09 54 21.9**	**-0.5**
RAF				MSG		09 54 32.4	
	comp=Z,7.1nm,0.2s						
RAF	**Rauma**	**3.28**	**359**	P	**Pn**	**09 53 37.7**	**+2.1**
RAF				Sb	**Sb**	**09 54 21.9**	**-0.5**
LNKU	**Linkoeping**	**3.42**	**281**	*e*P	**Pn**	**09 53 40.4**	**+2.8**
LNKU	**Linkoeping**	**3.42**	**281**	P	**Pn**	**09 53 40.3**	**+2.8**
PVF	**Pernaja**	**3.48**	**35**	*e*P	**Pn**	**09 53 40.6**	**+2.3**
PVF				MSG		09 54 38.8	
	comp=Z,6.4nm,0.1s						
PVF	**Pernaja**	**3.48**	**35**	P	**Pn**	**09 53 40.5**	**+2.3**
OSTU	**Oestervaala**	**3.49**	**317**	*e*P	**Pn**	**09 53 41.3**	**+2.8**
OSTU	**Oestervaala**	**3.49**	**317**	P	**Pn**	**09 53 41.2**	**+2.8**
BLEU	**Blekinge**	**3.61**	**249**	*e*P	**Pn**	**09 53 42.3**	**+2.1**
BLEU	**Blekinge**	**3.61**	**249**	P	**Pn**	**09 53 42.3**	**+2.1**
VXJU	**Vaexsjoe**	**3.84**	**260**	*e*P	**Pn**	**09 53 46.0**	**+2.6**
VXJU	**Vaexsjoe**	**3.84**	**260**	P	**Pn**	**09 53 45.9**	**+2.6**
ASKU	**Askersund**	**3.88**	**290**	*e*P	**Pn**	**09 53 46.9**	**+3.0**
ASKU	**Askersund**	**3.88**	**290**	P	**Pn**	**09 53 46.9**	**+3.0**
IGGU	**Iggoen**	**3.90**	**325**	*e*P	**Pn**	**09 53 46.8**	**+2.7**
IGGU	**Iggoen**	**3.90**	**325**	P	**Pn**	**09 53 46.8**	**+2.7**
NRAU	**Nora**	**4.00**	**300**	*e*P	**Pn**	**09 53 47.7**	**+2.2**
NRAU	**Nora**	**4.00**	**300**	P	**Pn**	**09 53 47.7**	**+2.2**
VJF	**Virojoki**	**4.05**	**44**	*e*P	**Pn**	**09 53 48.3**	**+2.1**
VJF	**Virojoki**	**4.05**	**44**	P	**Pn**	**09 53 48.2**	**+2.1**
FALU	**Falun**	**4.15**	**314**	*e*P	**Pn**	**09 53 49.6**	**+2.1**
FALU	**Falun**	**4.15**	**314**	P	**Pn**	**09 53 49.6**	**+2.1**
FIA0	**FINESS Array S**	**4.28**	**28**	Pn	**Pn**	**09 53 51.2**	**+1.9**
	baz=212,slow=11						
FIA0				Pg	**Pb**	**09 54 00.5**	**+1.5**
	baz=207,slow=14						
FIA0				Sn	**Sn**	**09 54 41.9**	**+2.0**
	baz=222,slow=28						
FIA0				Lg	Lg	09 54 56.0	
	baz=231,slow=28						
FIA0	**FINESS Array S**	**4.28**	**28**	Pn	**Pn**	**09 53 51.2**	**+1.9**
	baz=212,slow=11						
FIA0				Pg	**Pb**	**09 54 00.5**	**+1.5**
	baz=207,slow=14						
FIA0				Sn	**Sn**	**09 54 41.9**	**+2.0**
	baz=222,slow=28						
FIA0				Lg	Lg	09 54 56.0	
	baz=231,slow=28						
FIA0	**FINESS Array S**	**4.28**	**28**	*e*P	**Pn**	**09 53 50.3**	**+1.0**
FIA0	**FINESS Array S**	**4.28**	**28**	P	**Pn**	**09 53 50.2**	**+1.0**
FIA0	**FINESS Array S**	**4.28**	**28**	Pn	**Pn**	**09 53 51.2**	**+1.9**
	baz=212,slow=11,SNR=50						
FIA0				Sn	**Sn**	**09 54 41.8**	**+2.0**
	baz=222,slow=23,SNR=50						
FIA0				Lg	Lg	09 54 56.0	
	baz=231,slow=25,SNR=9.6						
FINES	**FINESS Array B**	**4.28**	**28**	Pn	**Pn**	**09 53 51.4**	**+2.1**
	comp=Z,0.4nm,0.3s,baz=217,slow=11,SNR=8.7						
FINES				Pg	**Pb**	**09 54 00.4**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=211,slow=14,SNR=13						
FINES				Lg	Lg	09 54 55.1	
	comp=Z,2.0nm,0.3s,baz=209,slow=22,SNR=12						
FKPU	**Falk**	**4.36**	**279**	P	**Pn**	**09 53 53.3**	**+2.9**
GNOU	**Gnosjoe**	**4.40**	**267**	*e*P	Pn	09 53 54.4	+3.4
GNOU	**Gnosjoe**	**4.40**	**267**	P	Pn	09 53 54.3	+3.4
ARNU	**Arnoeviken**	**4.55**	**332**	*e*P	**Pn**	**09 53 54.6**	**+1.5**
ARNU	**Arnoeviken**	**4.55**	**332**	P	**Pn**	**09 53 54.6**	**+1.5**
HUDU	**Hudiksvall**	**4.66**	**331**	*e*P	**Pn**	**09 53 56.8**	**+2.2**
HUDU	**Hudiksvall**	**4.66**	**331**	P	**Pn**	**09 53 56.7**	**+2.2**
BSD	**Bornholm Skovb**	**4.68**	**238**	*i* P	**Pn**	**09 53 56.0**	**+1.2**
BSD				*i* S	**Sn**	**09 54 49.6**	**-0.1**
BSD				*i* S	**Sn**	**09 54 50.8**	**+1.1**
BSD	**Bornholm Skovb**	**4.68**	**238**	*i* P	**Pn**	**09 53 56.0**	**+1.2**
BSD				*i* S	**Sn**	**09 54 50.8**	**+1.1**
	comp=Z,8.0nm,0.7s						
KEF	**Keuruu**	**4.68**	**18**	*e*P	**Pn**	**09 53 57.1**	**+2.2**
KEF				MSG		09 55 14.9	
	comp=Z,2.7nm,0.1s						
KEF	**Keuruu**	**4.68**	**18**	P	**Pn**	**09 53 57.0**	**+2.2**
ROTU	**Roteberg**	**4.79**	**323**	*e*P	**Pn**	**09 53 58.4**	**+2.0**
ROTU	**Roteberg**	**4.79**	**323**	P	**Pn**	**09 53 58.4**	**+2.0**
HFS	**Hagfors**	**4.86**	**303**	Pn	**Pn**	**09 53 59.8**	**+2.5**
	baz=134,slow=14						
HFS				Sn	**Sn**	**09 54 55.1**	**+1.0**
	baz=111,slow=28						
HFS				Lg	Lg	09 55 17.1	
	baz=90,slow=28						
HFS	**Hagfors**	**4.86**	**303**	Pn	**Pn**	**09 53 59.8**	**+2.5**
	baz=134,slow=14						
HFS				Sn	**Sn**	**09 54 55.1**	**+1.0**
	baz=111,slow=28						
HFS				Lg	Lg	09 55 17.1	
	baz=90,slow=28						
HFS	**Hagfors**	**4.86**	**303**	Pn	**Pn**	**09 53 59.5**	**+2.2**
	comp=Z,0.5nm,0.3s,baz=109,slow=16,SNR=30						
HFS				Lg	Lg	09 55 16.6	
	comp=Z,1.0nm,0.3s,baz=135,slow=32,SNR=6.9						
HFS	**Hagfors**	**4.86**	**303**	Pn	**Pn**	**09 53 59.8**	**+2.5**
	baz=134,slow=14,SNR=50						
HFS				Sn	**Sn**	**09 54 55.2**	**+1.0**
	baz=111,slow=27,SNR=50						
HFS				Lg	Lg	09 55 17.1	
	baz=90,slow=27,SNR=50						
UDD	**Uddeholm**	**4.88**	**302**	*e*P	**Pn**	**09 53 59.5**	**+1.9**
UDD	**Uddeholm**	**4.88**	**302**	P	**Pn**	**09 53 59.5**	**+1.9**
BORU	**Boraas**	**4.88**	**272**	*e*P	**Pn**	**09 54 00.4**	**+2.7**
BORU	**Boraas**	**4.88**	**272**	P	**Pn**	**09 54 00.3**	**+2.7**
KAF	**Kangasniemi**	**4.91**	**25**	*e*P	**Pn**	**09 53 59.4**	**+1.4**
KAF	**Kangasniemi**	**4.91**	**25**	P	**Pn**	**09 53 59.3**	**+1.4**
HASU	**Hassela**	**5.14**	**331**	*e*P	**Pn**	**09 54 02.8**	**+1.7**
HASU	**Hassela**	**5.14**	**331**	P	**Pn**	**09 54 02.8**	**+1.7**
FINU	**Finntorp**	**5.18**	**293**	*e*P	**Pn**	**09 54 04.1**	**+2.4**
FINU	**Finntorp**	**5.18**	**293**	P	**Pn**	**09 54 04.1**	**+2.4**
VANU	**Vaenersborg**	**5.24**	**282**	*e*P	**Pn**	**09 54 04.2**	**+1.7**
VANU	**Vaenersborg**	**5.24**	**282**	P	**Pn**	**09 54 04.2**	**+1.7**
HEMU	**Hemsoen**	**5.29**	**340**	*e*P	**Pn**	**09 54 05.1**	**+1.9**
HEMU	**Hemsoen**	**5.29**	**340**	P	**Pn**	**09 54 05.1**	**+1.9**
TJOU	**Tjoern**	**5.47**	**277**	*e*P	**Pn**	**09 54 07.9**	**+2.2**
TJOU	**Tjoern**	**5.47**	**277**	P	**Pn**	**09 54 07.9**	**+2.2**
STRU	**Stroemstad**	**5.76**	**287**	*e*P	**Pn**	**09 54 11.6**	**+1.9**
STRU	**Stroemstad**	**5.76**	**287**	P	**Pn**	**09 54 11.6**	**+1.9**
UMAU	**Umeaa**	**6.18**	**355**	*e*P	**Pn**	**09 54 17.1**	**+1.7**
UMAU	**Umeaa**	**6.18**	**355**	P	**Pn**	**09 54 17.0**	**+1.7**
NB2	**NORSAR Subarra**	**6.36**	**306**	Pn	**Pn**	**09 54 19.2**	**+1.3**
	baz=124,slow=14						
NB2				Lg	Lg	09 56 02.9	
	baz=121,slow=37						
NB2	**NORSAR Subarra**	**6.36**	**306**	Pn	**Pn**	**09 54 19.2**	**+1.3**
	baz=124,slow=14						
NB2				Lg	Lg	09 56 02.9	
	baz=121,slow=37						
NB2	**NORSAR Subarra**	**6.36**	**306**	Pn	**Pn**	**09 54 19.2**	**+1.3**
	baz=124,slow=13,SNR=50						
NB2				Lg	Lg	09 56 02.9	
	baz=121,slow=32,SNR=47						
NOA	**NORSAR Array B**	**6.36**	**306**	Pn	**Pn**	**09 54 18.9**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=119,slow=13,SNR=7.9						
NOA				Lg	Lg	09 56 02.7	
	comp=Z,0.6nm,0.3s,baz=92,slow=13,SNR=3.8						
BREU	**Bredtraesk**	**6.36**	**347**	*e*P	**Pn**	**09 54 19.6**	**+1.7**
BREU	**Bredtraesk**	**6.36**	**347**	P	**Pn**	**09 54 19.6**	**+1.7**
SVAU	**Svanoeiden**	**6.85**	**352**	*e*P	**Pn**	**09 54 25.8**	**+1.2**
SVAU	**Svanoeiden**	**6.85**	**352**	P	**Pn**	**09 54 25.8**	**+1.2**
ARA0	**ARCESS Array S**	**11.93**	**6**	Pn	**Pn**	**09 55 31.6**	**-2.6**
	baz=192,slow=12						
ARA0	**ARCESS Array S**	**11.93**	**6**	P	**Pn**	**09 55 31.6**	**-2.6**
	baz=192,slow=12						
ARCES	**ARCESS Array B**	**11.93**	**6**	Pn	**Pn**	**09 55 31.7**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=4.7						
SPA0	**Spitsbergen Ar**	**20.60**	**357**	P	**P**	**09 57 23.9**	**+0.6**
	baz=165,slow=16						
SPA0	**Spitsbergen Ar**	**20.60**	**357**	P	**P**	**09 57 23.9**	**+0.6**
	baz=165,slow=16						
SPA0	**Spitsbergen Ar**	**20.60**	**357**	P	**P**	**09 57 23.9**	**+0.6**
	baz=165,slow=14,SNR=47						

*CSEM **18** 09:56:01.9±0.8, 51°24N×18°96E, h2km, ML2.8/8, Error ellipse: s-maj=12.1km s-min=5.4km az=15.0*
*IPEC **18** 09:56:02.8±0.3, 51°24N×19°14E, h0km, ML2.1/2, Error ellipse: s-maj=1.9km s-min=1.3km az=19.0*
*PRU **18** 09:56:05.1, 51°11N×18°91E, h0km, Belchatow*

ISC 18 09:56:04.0±1.7, 51°14N±0°08×18°99E±0°05, h0km, n23, σ1§38/36, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**1.05**	**150**	*e*Pg	**Pg**	**09 56 23.9**	**-0.2**
OJC				*e*Sg	**Sg**	**09 56 39.2**	**+1.5**
OJC	**Ojcow**	**1.05**	**150**	*e*Pg	**Pg**	**09 56 23.9**	**-0.2**
OJC				*e*Sg	**Sg**	**09 56 39.2**	**+1.5**
OKC	**Ostrava-Krasne**	**1.41**	**203**	*e*PG	**Pn**	**09 56 29.7**	**-1.1**
OKC				*e*SG	**Sg**	**09 56 48.8**	**-0.3**
	comp=Z,19nm,0.5s						
OKC	**Ostrava-Krasne**	**1.41**	**203**	Pg	**Pn**	**09 56 29.7**	**-1.1**
OKC				Sg	**Sg**	**09 56 48.8**	**-0.3**
	19nm,0.5s						
MORC	**Moravsky Berou**	**1.64**	**215**	*e*Pn	**Pn**	**09 56 34.6**	**+0.4**
MORC	**Moravsky Berou**	**1.64**	**215**	*e*Pg	**Pg**	**09 56 36.2**	**+0.7**
MORC				*e*Sg	**Sg**	**09 56 59.0**	**+2.3**
	10nm,0.4s,baz=34						
KSP	**Ksiaz**	**1.73**	**261**	*e*Pg	**Pg**	**09 56 39.3**	**+2.2**
KSP				*e*Sg	**Sg**	**09 57 03.7**	**+4.2**
KRLC	**Kraliky**	**1.76**	**234**	*e*PG	**Pn**	**09 56 36.0**	**+0.2**
KRLC				*e*SG	**Sb**	**09 56 59.4**	**-0.4**
KRLC	**Kraliky**	**1.76**	**234**	Pg	**Pn**	**09 56 36.0**	**+0.2**
KRLC				Sg	**Sb**	**09 56 59.4**	**-0.4**
DPC	**Dobruska-Polom**	**1.87**	**246**	*e*PG	**Pn**	**09 56 37.8**	**+0.6**
DPC				*e*SG	**Sg**	**09 57 03.0**	**-0.9**
	comp=Z,6.8nm,0.4s						
DPC	**Dobruska-Polom**	**1.87**	**246**	Pg	**Pn**	**09 56 37.8**	**+0.6**
DPC				Sg	**Sg**	**09 57 03.0**	**-0.9**
	6.8nm,0.4s						
UPC	**Upice**	**1.99**	**253**	*e*PG	**Pb**	**09 56 40.2**	**-0.8**
UPC				*e*SG	**Sg**	**09 57 07.2**	**-0.7**
	comp=Z,5.1nm,0.5s						
UPC	**Upice**	**1.99**	**253**	Pg	**Pb**	**09 56 40.2**	**-0.8**
UPC				Sg	**Sg**	**09 57 07.2**	**-0.7**
	5.1nm,0.5s						
VRAC	**Vranov**	**2.39**	**221**	*e*Pn	**Pb**	**09 56 47.1**	**-0.7**
VRAC	**Vranov**	**2.39**	**221**	*e*Pg	**Pg**	**09 56 52.0**	**+2.3**
VRAC				*e*Sg	**Sg**	**09 57 22.2**	**+1.5**
	8.2nm,0.5s,baz=39						
PVCC	**Panska Ves**	**2.87**	**259**	*e*SG	**Sg**	**09 57 35.0**	**-1.0**
	comp=Z,11nm,0.4s						
PVCC	**Panska Ves**	**2.87**	**259**	Sg	**Sg**	**09 57 35.0**	**-1.0**
	11nm,0.4s						
PRU	**Pruhonice**	**3.06**	**250**	*e*SG	**Sg**	**09 57 41.3**	**-0.9**
PRU	**Pruhonice**	**3.06**	**250**	Sg	**Sg**	**09 57 41.3**	**-0.9**
KHC	**Kasperske Hory**	**4.02**	**242**	*e*SG	**Sg**	**09 58 11.4**	**-1.6**
	comp=Z,3.3nm,0.5s						
KHC	**Kasperske Hory**	**4.02**	**242**	Sg	**Sg**	**09 58 11.4**	**-1.6**
	3.3nm,0.5s						
NKC	**Novy Kostel**	**4.26**	**260**	*e*SG	**Sg**	**09 58 19.0**	**-1.6**
	comp=Z,4.0nm,0.3s						
NKC	**Novy Kostel**	**4.26**	**260**	Sg	**Sg**	**09 58 19.0**	**-1.6**
	4.0nm,0.3s						

IDC 18 10:06:43.6±2.5, 13°04S×73°54W, h55km±40km, mb3.5/4, mb1 3.7/7, mb1mx3.5/23, mbtmp3.6/7, ML3.7/3, Error ellipse: s-maj=113.8km s-min=20.6km az=25.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.39**	**288**	P	Pn	10 07 34.6	+0.6
	6.0nm,0.3s,baz=136,slow=13,SNR=6.7						
LPAZ	**La Paz**	**6.15**	**122**	P	Pn	10 08 11.7	-1.1
	1.5nm,0.3s,baz=272,slow=8.5,SNR=39						
SIV	**San Ignacio**	**12.43**	**105**	P	Pn	10 09 37.9	+0.1
	0.1nm,0.3s,baz=256,slow=8.3,SNR=2.3						
TXAR	**Lajitas Array**	**51.19**	**326**	P	P	10 15 41.1	-0.6
	0.1nm,0.5s,baz=148,slow=9.1,SNR=5.3						
SCHQ	**Schefferville**	**67.84**	**4**	P	P	10 17 35.2	-0.7
	4.6nm,0.9s,baz=198,slow=18,SNR=3.7						
TORD	**Torodi Ar. Bea**	**78.97**	**74**	P	P	10 18 42.9	+0.7
	1.9nm,0.6s,baz=265,slow=5.9,SNR=20						
YKA	**Yellowknife Ar**	**81.80**	**342**	P	P	10 18 57.4	+1.2
	0.1nm,0.3s,baz=137,slow=6.4,SNR=3.5						
SONM	**Songino Array**	**145.31**	**0**	PKPbc	PKPbc	10 26 12.5	-2.8
	0.4nm,0.4s,baz=357,slow=2.7,SNR=3.6						

*BJI **18** 10:09:37.7, 4°85S×101°08E, h10km, mB5.1/36, mb5.0/49, Ms4.7/46, Ms7 4.6/41*
*IDC **18** 10:09:41.4±0.5, 4°32S×101°34E, h0km, mb4.7/22, mb1 4.8/24, mb1mx4.7/28, mbtmp4.7/24, ML4.5/2, MS4.3/17, Ms1 4.3/17, ms1mx3.9/49, Error ellipse: s-maj=17.9km s-min=9.1km az=50.0*
*AUST **18** 10:09:42.4, 4°34S×100°95E, h15km*
*ISCJB **18** 10:09:43.6±1.0, 4°37S±0°03×101°12E±0°03, h27km±6km, mb4.9/84, MS4.4/32, Error ellipse: s-maj=7.0km s-min=3.6km az=135.5*
*DJA **18** 10:09:44.0±1.5, 4°S±3°×10°1E±°, h14km±11km, M5.0/32, mB5.4/18, mb5.0/32, MLv5.5/15, Mw(mB)4.9/18*
*MOS **18** 10:09:45.3±1.0, 4°19S×101°28E, h33km, mb5.2/33, MS4.5/6, Error ellipse: s-maj=12.1km s-min=5.8km az=104.8*
*NEIC **18** 10:09:47.3±0.2, 4°26S×101°24E, h35km, mb5.0/23, Error ellipse: s-maj=7.6km s-min=5.1km az=61.0*
NEIC Felt [II] at Kapahiang.

ISC 18 10:09:41.1±0.3, 4°38S±0°04×101°11E±0°05, h0km, n423, σ1§51/435, mb5.1/93, MS4.4/33, 68C-60D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBSI	**MBSI**	**1.32**	**62**	P	**Pb**	**10 10 08.2**	**+1.5**
KSI	**Kapahiang**	**1.65**	**64**	P	**Pb**	**10 10 12.7**	**+0.3**
MASI	**Maura Aman, Be**	**1.67**	**43**	P	**Pb**	**10 10 13.1**	**+0.3**
MNAI	**Manna**	**1.84**	**89**	P	**Pb**	**10 10 15.4**	**-0.3**
MNAI	**Manna**	**1.84**	**89**	P	**Pn**	**10 10 15.2**	**+1.1**
	baz=2.0,SNR=54						
LWLI	**Liwa**	**3.01**	**102**	P	**Pn**	**10 10 31.8**	**+1.6**
KASI	**Kota Agung**	**3.56**	**109**	P	**Pn**	**10 10 38.6**	**+0.9**
PPI	**Padang Panjang**	**3.96**	**350**	P	**Pn**	**10 10 44.6**	**+1.4**
BKNI	**Bangkinang**	**4.68**	**359**	P	**Pn**	**10 10 54.8**	**+1.8**
CGJI	**Cibinong**	**5.08**	**116**	P	**Pn**	**10 10 58.7**	**+0.2**
	303nm,0.9s,5µm1.8nm						
SBJI	**Serang**	**5.29**	**109**	P	**Pn**	**10 11 04.1**	**+2.6**
	266nm,1.1s,19µm1.9nm						
PPBI	**Pangkal Pinang**	**5.49**	**66**	P	**Pn**	**10 11 06.1**	**+2.0**
	86nm,0.7s,1.7nm						
DBJI	**Dramaga**	**6.02**	**111**	P	**Pn**	**10 11 13.1**	**+1.6**
	379nm,1.3s,17µm2.6nm						
GSI	**Gunungsitoli**	**6.66**	**328**	P	**Pn**	**10 11 22.7**	**+2.4**
	100nm,1.0s,3µm0.9nm						
GSI	**Gunungsitoli**	**6.66**	**328**	P	**Pn**	**10 11 22.6**	**+2.3**
	baz=6.6,SNR=11						
GSI				S	**Sn**	**10 12 31.9**	**-5.1**
	baz=6.6,SNR=4.7						
MYKOM	**Kota Tinggi**	**6.72**	**24**	P	**Pn**	**10 11 23.3**	**+2.2**
KGM	**Kluang**	**6.73**	**19**	P	**Pn**	**10 11 22.8**	**+1.6**
LEM	**Lembang**	**6.92**	**111**	P	**Pn**	**10 11 26.5**	**+2.5**
	365nm,0.9s,4µm1.2nm						
LEM	**Lembang**	**6.92**	**111**	P	Pn	10 11 27.9	+4.0
	baz=7.1,SNR=5.3						
CISI	**Cisompet, Garu**	**7.38**	**116**	P	**Pn**	**10 11 30.1**	**-0.1**
	738nm,0.7s,8µm3.0nm						
CISI	**Cisompet, Garu**	**7.38**	**116**	P	**Pn**	**10 11 30.1**	**-0.1**
	baz=7.5,SNR=26						
CISI				S	**Sn**	**10 12 50.8**	**-4.0**
	baz=7.5,SNR=4.7						
PSI	**Prapat**	**7.46**	**343**	Pn	**Pn**	**10 11 30.3**	**-1.1**
PSI	**Prapat**	**7.46**	**343**	Pn	**Pn**	**10 11 30.3**	**-1.1**
	14nm,0.3s,baz=275,slow=0.3,SNR=28						
PSI				LR	LR	10 15 15.5	
	comp=Z,4µm,20.1s,baz=148,slow=45						
PSI	**Prapat**	**7.46**	**343**	P	**Pn**	**10 11 30.9**	**-0.5**
	baz=7.3,SNR=14						
XMI	**Christmas Isla**	**7.55**	**143**	S	Sn	10 12 50.7	-8.1
	baz=7.7,SNR=4.2						
XMIS	**Christmas Isla**	**7.55**	**144**	P	**Pn**	**10 11 29.3**	**-3.2**
	baz=7.7,SNR=3.5						
XMIS				S	Sn	10 12 46.3

BBSI Bau Bau 21.41 94 P **P** **10 14 35.1 +4.3**
LUWI Luwuk 21.89 82 P **P** **10 14 37.4 +1.4**
178nm,1.3s,2µm
LUWI Luwuk 21.89 82 P **P** **10 14 34.1 -1.9**
baz=22,SNR=3.7
CM31 Chiang Mai Arr 22.80 355 *e*P **P** **10 14 46.4 +0.8**
50nm,0.9s
CMAR Chiang Mai Arr 22.80 355 P **P** **10 14 44.6 -1.0**
CMAR PcP **PcP** **10 18 38.1 +0.6**
CMAR Chiang Mai Arr 22.80 355 P **P** **10 14 44.6 -1.0**
44nm,0.9s,baz=183,slow=8.6,SNR=73
CMAR PcP **PcP** **10 18 38.1 +0.6**
0.9nm,0.4s,baz=189,slow=3.1,SNR=4.2
CMAR LR LR 10 25 33.0
comp=Z,893nm,18.2s,baz=180,slow=42
CMMT Chiang Mai 23.15 355 P **P** **10 14 49.8 +0.6**
42nm,1.0s
CHTO Chiang Mai 23.15 355 *e*P **P** **10 14 49.7 +0.5**
CHTO pmax pmax
comp=Z,34nm,0.9s
CHTO Chiang Mai 23.15 355 *e*P **P** **10 14 49.7 +0.5**
comp=Z,34nm,0.9s
CHTO Chiang Mai 23.15 355 P **P** **10 14 49.3 +0.1**
comp=Z,48nm,1.0s
QIZ Qiongzhong 24.80 20 P **P** **10 15 05.6 +0.5**
QIZ sP 10 15 11.6
QIZ S **S** **10 19 30.9 +2.2**
QIZ sS 10 19 36.8
QIZ pmax pmax
comp=Z,38nm,1.4s
QIZ pmax pmax
comp=Z,130nm,5.9s
QIZ LR LR
comp=N,400nm,13.3s
QIZ LR LR
comp=Z,480nm,21.5s
QIZ Qiongzhong 24.80 20 *e*P **P** **10 15 05.5 +0.5**
comp=Z,38nm,1.0s
NLAI Namlea 25.96 88 P P 10 15 22.3 +6.7
LBMI Labuha 26.62 83 P **P** **10 15 23.3 +1.6**
RCP Roxas 26.73 53‖ *e*P **P** **10 15 23.1 +0.6**
TGY Tagaytay City 26.91 47 P **P** **10 15 24.4 +0.2**
TGY Tagaytay City 26.91 47 P **P** **10 15 24.4 +0.2**
comp=Z,74nm,0.3s,baz=194,slow=4.2,SNR=2.7
FITZ Fitzroy Crossi 27.60 122 P **P** **10 15 30.6 +0.2**
FITZ Fitzroy Crossi 27.60 122 P **P** **10 15 30.6 +0.2**
comp=Z,17nm,0.9s,baz=283,slow=5.6,SNR=31
FITZ Fitzroy Crossi 27.60 122 P **P** **10 15 30.6 +0.2**
baz=28,SNR=18
KMI Kunming 29.37 3 P **P** **10 15 48.0 +1.7**
KMI sP 10 15 55.0
KMI S **S** **10 20 42.4 +1.1**
KMI pmax pmax
comp=Z,35nm,1.0s
KMI LR LR
comp=N,820nm,18.5s
KMI LR LR
comp=E,850nm,15.1s
KMI LR LR
comp=Z,790nm,19.6s
KNRA Kununurra 29.41 114 P **P** **10 15 45.7 -0.8**
baz=30,SNR=6.0
GYA Guiyang 31.13 10 P P 10 16 06.0 +4.3
GYA PP **PP** **10 17 08.4 -3.6**
GYA S **S** **10 21 11.5 +2.9**
GYA ScP **ScP** **10 22 41.4 -0.2**
GYA SS **SnSn** **10 22 57.8 +8.1**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,5.1s
GYA LR LR
comp=N,680nm,17.8s
GYA LR LR
comp=E,540nm,18.2s
GYA LR LR
comp=Z,620nm,17.9s
NWAO Narrogin (SRO) 32.15 154 P **P** **10 16 11.3 +0.8**
NWAO Narrogin (SRO) 32.15 154 P **P** **10 16 11.3 +0.8**
comp=Z,12nm,1.0s,baz=336,slow=13,SNR=4.7
NWAO LR LR 10 28 45.7
comp=Z,499nm,19.2s,baz=330,slow=36
ODAN Odare 33.77 338⇑ *i*P **P** **10 16 26.6 +1.5**
comp=Z,108nm,0.9s
TAPN Taplejung 34.10 338⇑ *i*P **P** **10 16 29.6 +1.6**
comp=Z,169nm,1.0s
RAMN Ramite 34.16 337⇑ *i*P **P** **10 16 30.4 +1.9**
comp=Z,136nm,1.2s
CD2 Chengdu 35.19 4 P P 10 16 40.8 +3.8
CD2 pP 10 16 45.1
CD2 sP 10 16 47.8
CD2 PP **PP** **10 18 00.1 +3.2**
CD2 PcP **PcP** **10 19 11.0 +2.6**
CD2 S **S** **10 22 14.3 +2.9**
CD2 sS sS 10 22 21.1
CD2 PcS **PcS** **10 22 56.9 +1.5**
CD2 SS **SnSn** **10 24 31.5 +3.5**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,210nm,5.8s
CD2 LR LR
comp=N,810nm,12.7s
CD2 LR LR
comp=E,1µm,19.6s
CD2 LR LR
comp=Z,900nm,14.2s
PKI Pulchoki 35.20 335⇑ *i*P **P** **10 16 38.6 +1.1**
PKIN Phulchoki 35.21 335⇑ *i*P **P** **10 16 38.4 +0.9**
LSA Lhasa 35.21 345 *e*P **P** **10 16 37.7 0.0**
LSA pmax pmax
comp=Z,17nm,0.9s
LSA Lhasa 35.21 345 *e*P **P** **10 16 37.7 0.0**
comp=Z,17nm,0.9s
PALU Palau 35.28 71 P **P** **10 16 35.8 -2.2**
baz=35,SNR=7.4
GUN Gumba 35.30 336⇑ *i*P **P** **10 16 40.1 +1.6**
comp=Z,133nm,0.8s
DMN Daman 35.36 335⇑ *i*P **P** **10 16 40.1 +1.3**
comp=Z,68nm,1.1s
ENH Enshi 35.38 13 *e*P **P** **10 16 38.3 -0.4**
comp=Z,30nm,0.8s
KKN Kakani 35.44 335⇑ *i*P **P** **10 16 40.9 +1.4**
comp=Z,68nm,1.0s
WRA Warramunga Arr 35.87 118 P **P** **10 16 42.8 -0.3**
WRA S **S** **10 22 16.7 -5.5**
WRA Warramunga Arr 35.87 118 P **P** **10 16 42.8 -0.3**
comp=Z,12nm,0.9s,baz=291,slow=10,SNR=52
WRA S **S** **10 22 16.7 -5.5**
comp=Z,2.8nm,1.0s,baz=294,slow=16,SNR=6.0
WRAB Tennant Creek 35.87 118 *e*P **P** **10 16 42.8 -0.3**
WRAB pmax pmax
comp=Z,15nm,0.7s
WRAB Tennant Creek 35.87 118 *e*P **P** **10 16 42.8 -0.3**
comp=Z,15nm,0.7s
WRAB Tennant Creek 35.87 118 P **P** **10 16 43.9 +0.8**
comp=Z,132nm,0.7s,SNR=11
KOLN Koldanda 36.15 333⇑ *i*P **P** **10 16 47.2 +1.6**
comp=Z,49nm,0.9s
DANN Dangsing 36.58 334⇑ *i*P **P** **10 16 50.6 +1.3**
comp=Z,112nm,1.0s
PYUN Piuthan 36.71 333⇑ *i*P **P** **10 16 51.8 +1.4**
comp=Z,102nm,1.1s
WHN Wuhan 36.97 19 P **P** **10 16 52.8 +0.6**
WHN S **S** **10 22 40.3 +1.7**
WHN LR LR
comp=N,750nm,14.4s
WHN LR LR
comp=E,1µm,16.6s
WHN LR LR
comp=Z,1µm,16.3s
ASAR Alice Springs 36.98 124 P **P** **10 16 53.0 +0.4**
ASAR PcP **PcP** **10 19 14.4 +0.4**
ASAR S **S** **10 22 35.6 -3.7**
ASAR Alice Springs 36.98 124 P **P** **10 16 53.0 +0.4**
comp=Z,5.3nm,0.9s,baz=296,slow=8.1,SNR=52
ASAR PcP **PcP** **10 19 14.4 +0.4**
comp=Z,1.8nm,0.7s,baz=304,slow=2.8,SNR=4.4
ASAR S **S** **10 22 35.6 -3.7**
comp=Z,0.8nm,1.0s,baz=299,slow=16,SNR=4.7
AS31 Alice Springs 36.98 124 *e*P **P** **10 16 53.0 +0.4**
XAN Xi'an 38.92 10 P **P** **10 17 08.1 -0.7**
XAN S S 10 23 17.1 +8.8
XAN SS **SnSn** **10 25 56.5 -1.8**
XAN pmax pmax
comp=Z,10.0nm,1.1s
XAN LR LR
comp=N,550nm,14.2s
XAN LR LR
comp=E,170nm,15.7s
XAN LR LR
comp=Z,350nm,15.4s
NJ2 Nanjing 39.98 24 *e*P **P** **10 17 16.8 -0.7**
NJ2 pP 10 17 21.1
NJ2 sP 10 17 24.3
NJ2 PP **PnPn** **10 18 52.1 -0.6**
NJ2 S **S** **10 23 21.5 -2.5**
NJ2 pmax pmax
comp=Z,20nm,1.2s
NJ2 pmax pmax
comp=Z,160nm,5.0s
NJ2 LR LR
comp=N,430nm,18.0s
NJ2 LR LR
comp=E,390nm,15.2s
NJ2 LR LR
comp=Z,540nm,16.6s
QIS Mount Isa 40.73 117 P **P** **10 17 24.2 +0.1**
baz=41,SNR=12
DDI Dehra Dun 40.96 329 *ex* **P** **10 17 25.4 -0.4**
COEN Coen 42.54 106 P **P** **10 17 38.2 -0.7**
baz=43,SNR=4.0
GTA Gaotai 43.59 359⇑ P **P** **10 17 47.9 +0.7**
GTA pP 10 17 52.8
GTA sP 10 17 54.9
GTA PP **PP** **10 19 31.4 +2.8**
GTA PcP **PcP** **10 19 36.0 +1.1**
GTA S **S** **10 24 17.4 -0.3**
GTA sS sS 10 24 25.5
GTA SS SS 10 27 26.0 -6.5
GTA pmax pmax
comp=Z,17nm,1.7s
GTA pmax pmax
comp=Z,200nm,5.0s
GTA LR LR
comp=N,380nm,16.1s
GTA LR LR
comp=E,780nm,17.6s
GTA LR LR
comp=Z,550nm,15.2s
MTSU Mount Surprise 44.39 111 P **P** **10 17 54.4 +0.5**
baz=45,SNR=9.5
BJT Baijiatuan 46.30 16 *e*P **P** **10 18 09.2 +0.6**
comp=Z,320nm,0.9s
BJI Beijing 46.33 16 P **P** **10 18 09.5 +0.7**
BJI PP **PP** **10 19 59.5 +1.9**
BJI S **S** **10 25 00.9 +3.9**
BJI pmax pmax
comp=Z,37nm,1.1s
BJI pmax pmax
comp=Z,60nm,4.0s
BJI LR LR
comp=N,430nm,19.5s
BJI LR LR
comp=E,200nm,19.5s
BJI LR LR
comp=Z,280nm,19.8s
CTAO Charters Tower 46.61 114 *e*P **P** **10 18 12.1 +0.6**
CTAO pmax pmax
comp=Z,52nm,1.3s
CTAO Charters Tower 46.61 114 *e*P **P** **10 18 12.1 +0.6**
comp=Z,52nm,1.3s
QLP Quilpie 46.73 123 P **P** **10 18 13.7 +1.5**
baz=47,SNR=15
STKA Stephens Creek 46.76 131 *e*P **P** **10 18 13.3 +0.9**
STKA Stephens Creek 46.76 131 P **P** **10 18 12.9 +0.5**
comp=Z,6.9nm,0.8s,baz=300,slow=8.4,SNR=13
STKA Stephens Creek 46.76 131 P **P** **10 18 13.3 +0.9**
baz=47,SNR=8.4
JNU Nakatsue 46.76 35 *e*P **P** **10 18 12.1 -0.3**
comp=Z,19nm,1.1s
KSAR Wonju Array Be 48.50 29 P **P** **10 18 25.6 -0.2**
KSRS Korea Array 48.53 29 P **P** **10 18 25.6 -0.4**
comp=Z,24nm,0.9s,baz=216,slow=8.1,SNR=58
KSH Kashi 49.45 334⇑ P **P** **10 18 32.3 -0.9**
KSH *e*pP 10 18 36.6
KSH sP 10 18 39.3
KSH *e*PcP **PcP** **10 19 56.1 +0.6**
KSH *e*PP **PP** **10 20 26.1 -1.3**
KSH *e*ScP **ScP** **10 23 49.1 -3.3**
KSH *e*PcS **PcS** **10 23 51.3 -0.8**
KSH *e*S S 10 25 35.8 -5.9
KSH *e*ScS **ScS** **10 28 21.0 -5.8**
KSH pmax pmax
comp=Z,16nm,0.9s
KSH pmax pmax
comp=Z,150nm,4.9s
KSH LR LR
comp=N,540nm,15.8s
KSH LR LR
comp=E,680nm,16.8s
KSH LR LR
comp=Z,170nm,4.8s
WMQ Urumqi 49.48 347 P **P** **10 18 34.3 +1.0**
WMQ pP 10 18 38.8
WMQ sP 10 18 41.3
WMQ PcP **PcP** **10 19 56.5 +1.0**
WMQ PP **PP** **10 20 29.1 +1.5**
WMQ PcS **PcS** **10 23 50.9 -1.1**
WMQ S **S** **10 25 40.3 -1.6**
WMQ ScS **ScS** **10 28 22.8 -4.0**
WMQ SS **SS** **10 29 08.3 -5.7**
WMQ pmax pmax
comp=Z,62nm,0.9s
WMQ pmax pmax
comp=Z,300nm,4.6s
WMQ LR LR
comp=N,240nm,12.8s
WMQ LR LR
comp=E,300nm,17.0s
WMQ LR LR
comp=Z,240nm,20.6s
CMSA Cobar Meteorol 49.77 128 P **P** **10 18 37.1 +1.4**
baz=50,SNR=16
RMQ Roma 50.53 121 P **P** **10 18 43.2 +1.7**
baz=51,SNR=6.2
SONM Songino Array 52.20 5 P **P** **10 18 54.8 +0.9**
SONM PcP **PcP** **10 20 05.7 +0.2**
SONM Songino Array 52.20 5 P **P** **10 18 54.8 +0.9**
comp=Z,32nm,0.8s,baz=184,slow=8.5,SNR=149
SONM PcP **PcP** **10 20 05.7 +0.2**
comp=Z,2.3nm,0.4s,baz=188,slow=4.4,SNR=7.0
ULN Ulaanbaatar 52.29 5 *e*P **P** **10 18 55.4 +0.9**
comp=Z,24nm,0.9s
TKM2 Tokmak 2 52.44 336 *e*P **P** **10 18 56.6 +0.8**
TKM2 pmax pmax
comp=Z,23nm,0.8s
TKM2 Tokmak 2 52.44 336 *e*P **P** **10 18 56.6 +0.8**
comp=Z,23nm,0.8s
AAK Ala-Archa 52.65 335*c i*P **P** **10 18 58.3 +1.0**
AAK pmax pmax
comp=Z,40nm,2.5s
AAK MLR MLR
comp=Z,770nm,20.0s
AAK Ala-Archa 52.65 335 *e*P **P** **10 18 57.1 -0.2**
comp=Z,2.0nm,1.0s
AAK Ala-Archa 52.65 335 LR LR 10 43 22.6
comp=Z,294nm,20.9s,baz=141,slow=38
CN2 Changchun 52.74 22 *e*P **P** **10 18 56.8 -0.9**
CN2 *e*PP **PP** **10 20 57.6 +0.5**
CN2 *e*S **S** **10 26 23.3 -3.5**
CN2 *e*SS **SS** **10 30 00.8 -4.8**
CN2 pmax pmax
comp=Z,60nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,16.0s
CN2 LR LR
comp=E,400nm,16.0s
CN2 LR LR
comp=Z,300nm,18.0s
FRU Bishkek 52.77 336 *e*P **P** **10 18 58.0 0.0**
EKS2 Erkin-Say 52.98 335 *e*P **P** **10 19 00.8 +1.1**
EKS2 pmax pmax
comp=Z,20nm,0.8s
EKS2 Erkin-Say 52.98 335 *e*P **P** **10 19 00.8 +1.1**
comp=Z,20nm,0.8s
MAJO Matsushiro 53.45 37 *e*P **P** **10 19 01.9 -1.3**
MAJO pmax pmax
comp=Z,25nm,1.0s
MAJO Matsushiro 53.45 37 *e*P **P** **10 19 01.9 -1.3**
comp=Z,25nm,1.0s
MAT Matsushiro 53.45 37 P **P** **10 19 01.5 -1.7**
MJAR Matsushiro Arr 53.46 37 P **P** **10 19 01.5 -1.7**
MJAR Matsushiro Arr 53.46 37 P **P** **10 19 01.5 -1.7**
comp=Z,19nm,0.9s,baz=221,slow=8.5,SNR=50
MK31 Makanchi Array 53.61 344 *e*P **P** **10 19 04.4 +0.3**
MK31 Makanchi Array 53.61 344 *e*P **P** **10 19 04.4 +0.3**
MKAR Makanchi Array 53.61 344 *e*P **P** **10 19 04.5 +0.4**
MKAR Makanchi Array 53.61 344 *e*P **P** **10 19 04.5 +0.4**
MKAR Makanchi Array 53.61 344 P **P** **10 19 04.5 +0.4**
comp=Z,20nm,0.7s,baz=149,slow=8.3,SNR=178
MKAR LR LR 10 45 52.1
comp=Z,125nm,21.2s,baz=357,slow=40
ZAK Zakamensk 54.58 2 *e*P **P** **10 19 11.1 -0.1**
ZAK *e* 10 20 11.7
ZAK pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 54.76 333 *e*P **P** **10 19 12.6 0.0**
KKAR Karatay Array 54.76 333 *e*P **P** **10 19 12.6 0.0**
MDJ Mudanjiang 55.06 25 P **P** **10 19 14.5 -0.2**
MDJ sP 10 19 22.4
MDJ PcP **PcP** **10 20 17.8 +1.6**
MDJ S **S** **10 27 01.0 +2.8**
MDJ SS **SS** **10 30 41.9 -0.3**
MDJ pmax pmax
comp=Z,27nm,1.4s
MDJ LR LR
comp=N,90nm,23.3s
MDJ LR LR
comp=E,120nm,20.7s
MDJ LR LR
comp=Z,160nm,22.0s
HVS Khovu-Aksy 55.66 354 *i* P **P** **10 19 17.5 -1.6**
HVS pmax pmax
comp=Z,22nm,0.9s
USRK Ussuriysk Arra 55.75 27 P **P** **10 19 19.5 -0.2**
comp=Z,48nm,0.8s,baz=223,slow=6.1,SNR=55
MOY Mondy 55.83 360 *e*P **P** **10 19 20.4 +0.1**
TLY Talaya 55.89 2 *e*P **P** **10 19 21.5 +0.9**
TLY *e*S S 10 26 56.3 -13
TLY *e*PS **PnS** **10 27 10.6 -7.1**
TLY pmax pmax
comp=Z,20nm,0.9s
TLY MLR MLR
comp=Z,479nm,16.0s
TLY Talaya 55.89 2 P **P** **10 19 21.1 +0.5**
comp=Z,1115nm,0.9s,SNR=7.3
IRK Irkutsk 56.47 2 *e*P **P** **10 19 25.5 +0.8**
IRK pmax pmax
comp=Z,33nm,2.0s
KURK Kurchatov 58.19 343*c i*P **P** **10 19 37.0 +0.2**
KURK pmax pmax
comp=Z,33nm,0.9s
KURK Kurchatov 58.19 343 *e*P **P** **10 19 37.1 +0.2**
comp=Z,27nm,0.9s
KURK Kurchatov 58.19 343 P **P** **10 19 37.9 +1.0**
comp=Z,171nm,1.0s,SNR=7.4
KLR Kul'dur 59.67 23 *e*P P 10 19 42.8 -4.4
ZAA0 Zalesovo Array 59.70 349 *e*P **P** **10 19 47.1 -0.2**
ZALV Zalesovo Beam 59.70 349 *i* P **P** **10 19 47.2 -0.1**
ZALV pmax pmax
comp=Z,19nm,0.7s
ZALV Zalesovo Beam 59.70 349 P **P** **10 19 47.2 -0.1**
ZALV Zalesovo Beam 59.70 349 P **P** **10 19 47.2 -0.1**
comp=Z,19nm,0.7s,baz=170,slow=4.5,SNR=41
ZALV LR LR 10 49 30.5
comp=Z,207nm,18.6s,baz=204,slow=40
HABR Khabarovsk 60.41 25 *e*P P 10 19 48.1 -4.1
HABR *e**SP 10 19 54.7
HABR 10 20 34.8
HABR *e*S **S** **10 28 04.4 -3.9**
HABR *e**SS 10 28 11.4
HABR *e* 10 29 39.8
HABR *e*SS **SS** **10 32 05.5 -0.7**
HABR pmax pmax
comp=N,74nm,2.4s
HABR pmax pmax
comp=Z,85nm,2.4s
HABR pmax pmax
comp=E,88nm,2.4s
HABR MLR MLR
comp=Z,301nm,20.0s
ASAJ Asahikawa 60.97 33 LR LR 10 47 52.5
comp=Z,65nm,18.6s,baz=153,slow=38
VOSK Vostochnaya 62.34 340 P **P** **10 20 04.5 -0.8**
VOSK pmax pmax
comp=Z,14nm,1.1s
BVA0 Borovoye Array 62.79 340 P **P** **10 20 07.6 -0.7**
BVA0 pmax pmax
comp=Z,2.0nm,1.1s
BVAR Borovoye Array 62.79 340 P **P** **10 20 07.8 -0.5**
BVAR Borovoye Array 62.79 340 P **P** **10 20 07.8 -0.5**
BVAR Borovoye Array 62.79 340 P **P** **10 20 07.8 -0.5**
comp=Z,7.5nm,0.7s,baz=142,slow=7.5,SNR=42
BVAR LR LR 10 50 04.5
comp=Z,150nm,21.6s,baz=309,slow=39
BRVK Borovoye 62.85 340*c i*P **P** **10 20 08.2 -0.5**
BRVK pmax pmax
comp=Z,12nm,1.0s
BRVK Borovoye 62.85 340 *e*P **P** **10 20 08.4 -0.3**
comp=Z,11nm,1.0s
YSS Yuzh-Sakhalins 62.93 31 *e*P **P** **10 20 09.9 +0.6**
YSS pmax pmax
comp=Z,60nm,1.0s
ZRNK Zerenda 63.22 339 P **P** **10 20 10.5 -0.6**
ZRNK pmax pmax
comp=Z,12nm,1.0s
CLNS Chul'man 64.02 14 *e*P **P** **10 20 15.2 -1.2**
CLNS pmax pmax
comp=Z,12nm,0.8s
CLNS pmax pmax
comp=E,7.0nm,0.8s
CLNS pmax pmax
comp=N,6.0nm,0.7s
CLNS MLR MLR
comp=N,256nm,15.0s
CLNS MLR MLR
comp=Z,371nm,16.0s
CLNS MLR MLR
comp=E,368nm,18.0s
AB31 Akbulak array 64.25 331 *i* P **P** **10 20 17.6 -0.4**
AB31 pmax pmax
comp=Z,8.0nm,0.6s
ABKAR Akbulak array 64.25 331 *e*P **P** **10 20 17.9 -0.1**
DZM Mont Dzumac 65.53 112 *e*LR LR 10 40 07.6
comp=Z,455nm,24.2s
MAW Mawson 68.27 195 P **P** **10 20 45.0 +1.6**
MAW Mawson 68.27 195 P **P** **10 20 45.0 +1.6**
comp=Z,3.4nm,0.8s,baz=24,slow=18,SNR=4.8
MAW LR LR 10 44 19.5
comp=Z,378nm,18.9s,baz=67,slow=30
SVE Sverdlovsk 69.29 338‖ *e*P **P** **10 20 50.5 +0.5**
SVE pmax pmax
comp=Z,31nm,1.1s
YAK Yakutsk 69.76 14*c i*P **P** **10 20 51.5 -1.3**
YAK pmax pmax
comp=Z,53nm,1.1s
YAK pmax pmax
comp=N,24nm,1.9s
YAK pmax pmax
comp=E,13nm,1.6s
ARU Arti 69.82 336*c i*P **P** **10 20 53.1 -0.2**
ARU S **S** **10 30 04.6 +0.9**
ARU SS **SS** **10 34 30.1 -2.3**
ARU pmax pmax
comp=Z,31nm,1.7s
KBZ Khabaz 70.82 319 P **P** **10 21 00.6 +0.9**
KBZ Khabaz 70.82 319 P **P** **10 21 00.6 +0.9**
KBZ Khabaz 70.82 319 P **P** **10 21 00.6 +0.9**
comp=Z,5.5nm,0.8s,baz=109,slow=5.0,SNR=13
ASF Jabal al Asfar 70.87 306 P **P** **10 21 01.9 +1.5**
ASF Jabal al Asfar 70.87 306 P **P** **10 21 01.9 +1.5**
comp=Z,2.2nm,0.5s,baz=39,slow=5.2,SNR=5.1
GOF Gofitskoye 71.32 321 *e*P P 10 21 13.1 +10
GOF pmax pmax
comp=Z,50nm,1.4s
EIL Elat 71.73 303 P **P** **10 21 06.8 +1.2**
EIL Elat 71.73 303 P **P** **10 21 06.8 +1.2**
comp=Z,1.9nm,0.4s,baz=9.0,slow=19,SNR=3.1
LSZ Lusaka 72.39 255 *e*P P 10 21 12.9 +3.0
comp=Z,84nm,2.6s
RPZ Rata Peaks 72.53 134 LR LR 10 52 47.6
comp=Z,383nm,18.8s,baz=347,slow=36
SOKR Solikamsk 72.69 338 *e*P **P** **10 21 11.6 +1.0**
SOKR pmax pmax

comp=Z,20nm,0.8s
PETK Petropavlovsk- 74.31 32 P **P** 10 21 18.2 -2.1
PETK Petropavlovsk- 74.31 32 P **P** 10 21 18.2 -2.1
PETK Petropavlovsk- 74.31 32 P **P** 10 21 18.2 -2.1
comp=Z,7.8nm,0.8s,baz=202,slow=7.7,SNR=6.7
CSS Prodhromos 74.55 308 *e*P **P** 10 21 22.7 +0.6
comp=Z,8.5nm,0.8s
VRHR Novokhopersk 74.91 326 *e*P **P** 10 21 23.3 -0.5
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=N,10.0nm,1.4s
VRHR pmax pmax
comp=E,10.0nm,0.8s
BOSA Boshof 75.49 242 LR LR 10 48 49.3
comp=E,236nm,18.3s,baz=166,slow=31
BRTR Keskin Array B 75.74 313 P **P** 10 21 28.6 -0.5
BRTR Keskin Array B 75.74 313 P **P** 10 21 28.6 -0.5
comp=E,3.1nm,0.9s,baz=128,slow=8.0,SNR=15
BR131 Keskin Array S 75.74 313 *e*P **P** 10 21 28.4 -0.7
comp=E,1.8nm,0.7s
URZ Urewera 76.31 128 LR LR 10 51 21.6
comp=E,324nm,21.8s,baz=96,slow=33
VSR Storozhevoye 76.35 325 *e*P **P** 10 21 31.4 -0.7
VSR pmax pmax
comp=Z,6.0nm,0.6s
VSR pmax pmax
comp=N,8.0nm,0.7s
VSR pmax pmax
comp=E,3.0nm,0.4s
SEY Seymchan 77.42 21⇑ *e*P **P** 10 21 37.9 +0.1
TIXI Tiksi 78.03 9⇑ *e*P **P** 10 21 39.8 -1.3
TIXI pmax pmax
comp=Z,19nm,1.3s
TIXI MLR MLR
comp=Z,382nm,19.0s
OBN Obninsk 79.39 328⇓ *i*P **P** 10 21 49.2 +0.3
OBN *i* 10 21 56.7
OBN *i* S **S** 10 31 48.9 -1.9
OBN pmax pmax
comp=Z,12nm,1.1s
OBN MLR MLR
comp=Z,100nm,19.0s
VNDA Vanda 79.62 169 P **P** 10 21 50.0 +0.1
VNDA Vanda 79.62 169 P **P** 10 21 50.0 +0.1
comp=Z,2.3nm,1.1s,baz=2.3,slow=4.7,SNR=6.6
VNDA LR LR 10 53 00.1
comp=Z,129nm,21.6s,baz=301,slow=33
AKASG Malin Array Be 82.03 322 *i* P **P** 10 22 03.0 -0.2
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 82.03 322 P **P** 10 22 03.0 -0.2
AKASG Malin Array Be 82.03 322 P **P** 10 22 03.0 -0.2
comp=Z,2.4nm,0.8s,baz=78,slow=5.8,SNR=5.6
BUR08 Bucovina Ar. S 83.78 319 *e*P **P** 10 22 13.1 +0.6
JOF Joensuu 84.83 334 *e*P **P** 10 22 16.4 -0.9
JOF pmax pmax
comp=Z,3.0nm,0.8s
JOF Joensuu 84.83 334 *e*p **P** 10 22 16.4 -0.9
comp=Z,2.5nm,0.8s
BILL Bilibino 85.00 20*c i*P **P** 10 22 17.6 -0.5
BILL *i* 10 22 25.1
BILL *i* 10 25 39.7
BILL pmax pmax
comp=Z,22nm,1.6s
BILL Bilibino 85.00 20 *e*P **P** 10 22 17.6 -0.5
comp=Z,16nm,1.3s
KOLS Kolonicke sedl 85.97 320 *e*P **P** 10 22 24.8 +1.4
KOLS pmax pmax
comp=Z,8.0nm,1.0s
KOLS Kolonicke sedl 85.97 320 *e*P **P** 10 22 24.8 +1.4
CRVS Cervenica-Dubn 86.49 319 *e*P **P** 10 22 26.4 +0.5
CRVS pmax pmax
comp=Z,4.0nm,1.3s
CRVS Cervenica-Dubn 86.49 319 *e*P **P** 10 22 26.4 +0.5
FINES FINESS Array B 86.72 332 P **P** 10 22 27.2 +0.4
FINES FINESS Array B 86.72 332 P **P** 10 22 27.2 +0.4
comp=Z,2.9nm,0.7s,baz=87,slow=7.8,SNR=8.6
FINES LR LR 11 07 19.5
comp=Z,163nm,19.9s,baz=90,slow=40
KAF Kangasniemi 86.79 333 *e*P P 10 22 23.0 -4.1
KAF pmax pmax
comp=Z,3.0nm,0.7s
KAF Kangasniemi 86.79 333 *e*p P 10 22 23.0 -4.1
comp=Z,3.0nm,0.7s
VYHS Vyhne 88.14 319 *e*P **P** 10 22 35.0 +1.1
VYHS pmax pmax
comp=Z,2.0nm,1.4s
VYHS Vyhne 88.14 319 *e*P **P** 10 22 35.0 +1.1
ARCES ARCESS Array B 89.08 340 P **P** 10 22 38.0 +0.2
ARCES ARCESS Array B 89.08 340 P **P** 10 22 38.0 +0.2
comp=Z,8.2nm,0.9s,baz=82,slow=2.6,SNR=9.5
ARCES LR LR 11 06 55.3
comp=Z,212nm,21.0s,baz=309,slow=38
SNAA Sanae 90.23 198 *e*P **P** 10 22 45.1 +1.7
comp=Z,11nm,1.2s
GERES GERESS Array B 91.56 319 P **P** 10 22 50.1 +0.1
GERES GERESS Array B 91.56 319 P **P** 10 22 50.1 +0.1
comp=Z,0.8nm,0.6s,baz=60,slow=5.3,SNR=4.9
NOA NORSAR Array B 93.75 331 LR LR 11 09 58.5
comp=Z,61nm,21.9s,baz=315,slow=39
RSO Redoubt South 101.73 29 *e*Pdif **Pdif** 10 23 41.8 +5.8
ILAR Eielson Array 103.22 24 PP PP 10 27 58.7 +1.6
ILAR Eielson Array 103.22 24 PP PP 10 27 58.7 +1.6
comp=Z,1.1nm,1.1s,baz=291,slow=10.0,SNR=5.3
TBI Tubuai 105.96 116 *e*LR LR 10 58 49.8
comp=Z,172nm,23.2s
PPT2 Papeete2 106.97 110 *e*LR LR 10 59 19.9
comp=Z,101nm,23.2s
YKA Yellowknife Ar 116.30 18 PKP **PKPdf** 10 28 25.8 -0.5
YKA PP **PP** 10 29 30.3 -1.2
YKA Yellowknife Ar 116.30 18 PKP **PKPdf** 10 28 25.8 -0.5
comp=Z,0.3nm,0.5s,baz=300,slow=1.6,SNR=6.7
YKA PP **PP** 10 29 30.3 -1.2
comp=Z,0.3nm,0.6s,baz=319,slow=6.2,SNR=3.6
C11A Tepee Creek (N 126.16 30⇑PKPdf **PKPdf** 10 28 45.8 0.0
baz=126
A13A Flathead Natio 126.32 28⇑PKPdf **PKPdf** 10 28 46.0 -0.1
baz=126
FFC Flin Flon 126.44 16 *i* PKIKP **PKPdf** 10 28 46.4 +0.3
B13A Whitefish 126.68 29⇓PKPdf **PKPdf** 10 28 46.8 0.0
baz=126
A14A Double T Ranch 126.75 28⇓PKPdf **PKPdf** 10 28 46.4 -0.6
baz=126
BSMT Bassoo Peak 126.88 30 *e*PKPdf **PKPdf** 10 28 47.7 +0.3
A15A Johnson Ranch, 127.07 27⇑PKPdf **PKPdf** 10 28 46.7 -0.9
baz=127
D12A Red Ives Fores 127.14 31⇑PKPdf **PKPdf** 10 28 46.8 -1.0
baz=127
B14A Marquette Ranc 127.26 28⇓PKPdf **PKPdf** 10 28 47.1 -0.9
baz=127
C14A Swan Lake 127.45 29⇑PKPdf **PKPdf** 10 28 47.3 -1.1
baz=127
MOD Modoc 127.50 38 *e*PKPdf **PKPdf** 10 28 47.0 -1.7
D13A Huson 127.56 30⇓PKPdf **PKPdf** 10 28 47.7 -0.9
baz=127
B15A Bradely Ranch, 127.62 28⇓PKPdf **PKPdf** 10 28 47.9 -0.8
baz=127
SLMT Seeley Lake 127.94 29 *e*PKPdf **PKPdf** 10 28 49.5 +0.1
C15A Salmond Ranch, 127.99 28⇑PKPdf **PKPdf** 10 28 48.8 -0.7
baz=128
MSO Missoula 128.00 30 *e*PKPdf **PKPdf** 10 28 50.1 +0.6
MSO Missoula 128.00 30⇑PKPdf **PKPdf** 10 28 48.8 -0.7
baz=128
A17A Triple J Farms 128.01 26⇑PKPdf **PKPdf** 10 28 49.0 -0.4
baz=128
D14A Greenough 128.04 30⇑PKPdf **PKPdf** 10 28 48.5 -1.0
baz=128
F12A Elk City 128.05 32⇓PKPdf **PKPdf** 10 28 48.8 -0.8
baz=128
E13A Victor 128.14 31⇓PKPdf **PKPdf** 10 28 48.9 -0.9
baz=128
WVOR Wild Horse Val 128.22 37 *e*PKIKP **PKPdf** 10 28 49.7 -0.3
WVOR Wild Horse Val 128.22 37 *e*PKPdf **PKPdf** 10 28 49.7 -0.3
CHMT Chamberlain Mo 128.28 30 *e*PKPdf **PKPdf** 10 28 50.9 +0.8
C16A Fuhringer Ranc 128.37 28⇓PKPdf **PKPdf** 10 28 49.5 -0.7
baz=128
A18A Metzger Ranch, 128.40 26⇑PKPdf **PKPdf** 10 28 49.1 -1.0
baz=128
G12A Big Creek, Yel 128.43 32⇓PKPdf **PKPdf** 10 28 49.3 -1.1
baz=128
B17A L&G Farms, Che 128.45 27⇓PKPdf **PKPdf** 10 28 49.3 -0.8
baz=128
E14A Clinton 128.51 30⇑PKPdf **PKPdf** 10 28 49.6 -0.9
baz=128
F13A Darby 128.51 31⇓PKPdf **PKPdf** 10 28 49.5 -1.0
baz=128
D15A Lincoln 128.55 29⇑PKPdf **PKPdf** 10 28 49.8 -0.7
baz=128
B18A Beardsley Farm 128.82 26⇓PKPdf **PKPdf** 10 28 50.3 -0.6
baz=128
A19A Klindworth Far 128.86 25⇓PKPdf **PKPdf** 10 28 50.4 -0.6
baz=129
E15A Deer Lodge 128.93 30⇓PKPdf **PKPdf** 10 28 50.6 -0.7
baz=129
C17A Wharram Farm, 128.95 27⇓PKPdf **PKPdf** 10 28 50.2 -1.0
baz=129
D16A Dana Ranch, Ca 129.02 28⇓PKPdf **PKPdf** 10 28 51.3 -0.1
baz=129
H12A Diamond D Ranc 129.06 33⇑PKPdf **PKPdf** 10 28 51.2 -0.4
baz=129
EGMT Eagleton 129.11 26⇑PKPdf **PKPdf** 10 28 51.6 +0.1
baz=129
B19A Brinkman Farms 129.14 25⇓PKPdf **PKPdf** 10 28 51.5 0.0
baz=129
MFID Camas Ranch 129.25 34 *e*PKPdf **PKPdf** 10 28 53.0 +1.1
MFID Camas Ranch 129.25 34⇑PKPdf **PKPdf** 10 28 51.8 -0.2
baz=129
E16A East Helena 129.32 29⇓PKPdf **PKPdf** 10 28 51.9 -0.1
baz=129
D17A Six Diamond Ra 129.34 28⇓PKPdf **PKPdf** 10 28 51.8 -0.2
baz=129
H13A Challis 129.37 32⇑PKPdf **PKPdf** 10 28 52.0 -0.2
baz=129
I12A Atlanta 129.40 34⇓PKPdf **PKPdf** 10 28 52.0 -0.4
baz=129
F15A Butte 129.41 30⇑PKPdf **PKPdf** 10 28 52.4 +0.1
baz=129
C19A Slack Wire Ran 129.64 26⇓PKPdf **PKPdf** 10 28 52.8 +0.3
baz=129
DLMT Dillon 129.69 31 *e*PKPdf **PKPdf** 10 28 54.5 +1.8
D18A Linhart Farms, 129.71 27⇓PKPdf **PKPdf** 10 28 52.9 +0.2
baz=129
H14A Leadore 129.81 32⇓PKPdf **PKPdf** 10 28 53.1 0.0
baz=130
I13A Wildhorse Cree 129.88 33⇓PKPdf **PKPdf** 10 28 53.2 -0.1
baz=130
F16A Kennard Place, 129.88 30⇑PKPdf **PKPdf** 10 28 53.1 0.0
baz=130
G15A Dillon 129.88 31⇓PKPdf **PKPdf** 10 28 53.0 -0.2
baz=130
MCMT McKenzie Canyo 129.93 31 *e*PKPdf **PKPdf** 10 28 53.3 -0.1
HLID Hailey 129.95 33 *e*PKPdf **PKPdf** 10 28 55.3 +2.0
HLID Hailey 129.95 33⇑PKPdf **PKPdf** 10 28 53.3 -0.1
baz=130
C20A Veseth Ranch, 130.11 25⇑PKPdf **PKPdf** 10 28 53.8 +0.4
baz=130
D19A Cripps Ranch, 130.15 26⇓PKPdf **PKPdf** 10 28 53.4 -0.1
baz=130
H15A Lima 130.18 31⇓PKPdf **PKPdf** 10 28 54.0 +0.2
baz=130
G16A Moss Hill, Enn 130.19 30⇑PKPdf **PKPdf** 10 28 54.1 +0.4
baz=130
J13A Cove Ranch, Pi 130.19 33⇓PKPdf **PKPdf** 10 28 54.1 +0.3
baz=130
I14A Mackay 130.23 32⇓PKPdf **PKPdf** 10 28 54.1 +0.2
baz=130
F17A Fitzpatrick Pl 130.26 29⇓PKPdf **PKPdf** 10 28 54.1 +0.2
baz=130
C21A Desert Coulee 130.41 25⇑PKPdf **PKPdf** 10 28 54.3 +0.4
baz=130
B22A Reddig Ranch S 130.48 24⇓PKPdf **PKPdf** 10 28 54.4 +0.4
baz=130
D20A Manuel Ranch, 130.53 26⇓PKPdf **PKPdf** 10 28 54.6 +0.4
baz=130
I15A Monteview 130.69 32⇑PKPdf **PKPdf** 10 28 55.3 +0.6
baz=130
NVAR Mina Array Bea 130.70 41 PKP **PKPdf** 10 28 55.2 +0.3
NVAR SKPbc **SKPbc** 10 32 18.1 -2.2
NVAR Mina Array Bea 130.70 41 PKP **PKPdf** 10 28 55.2 +0.3
comp=Z,1.2nm,0.7s,baz=274,slow=2.1,SNR=10
NVAR SKPbc **SKPbc** 10 32 18.1 -2.2
comp=Z,1.1nm,0.8s,baz=268,slow=4.7,SNR=7.0
F18A Big Timber 130.71 28⇑PKPdf **PKPdf** 10 28 55.5 +0.8
baz=130
E19A Rath Farm, Rou 130.72 27⇓PKPdf **PKPdf** 10 28 55.2 +0.6
baz=130
SNOW Snow King Moun 131.96 31 *e*PKPdf **PKPdf** 10 28 58.5 +1.2
HWUT Hardware Ranch 132.82 33 *e*PKPdf **PKPdf** 10 28 58.8 -0.1
DUG Dugway 133.05 36 *e*PKIKP **PKPdf** 10 29 01.6 +2.3
DUG Dugway 133.05 36 *e*PKPdf **PKPdf** 10 29 01.6 +2.3
PDAR Pinedale Array 133.07 31 PKP **PKPdf** 10 28 59.1 -0.3
PDAR Pinedale Array 133.07 31 PKP **PKPdf** 10 28 59.1 -0.3
comp=Z,0.6nm,0.9s,baz=122,slow=1.9,SNR=4.8
GSC Goldstone 133.40 44 *e*PKIKP **PKPdf** 10 29 00.2 +0.2
GSC Goldstone 133.40 44 *e*PKPdf **PKPdf** 10 29 00.2 +0.2
MVU Marysvale 134.49 37 *e*PKPdf **PKPdf** 10 29 03.4 +1.2
MSU Marysvale 134.51 37 *e*PKIKP **PKPdf** 10 29 05.1 +2.9
MSU Marysvale 134.51 37 *e*PKPdf **PKPdf** 10 29 05.1 +2.9
RSSD Black Hills 134.65 25 *e*PKIKP **PKPdf** 10 29 02.4 +0.1
RSSD Black Hills 134.65 25 *e*PKPdf **PKPdf** 10 29 02.4 +0.1
WUAZ Wupatki 136.89 40 *e*PKPdf **PKPdf** 10 29 07.0 +0.4
SDCO Great Sand Dun 138.85 33 *e*PKPdf **PKPdf** 10 29 11.1 +0.7
ANMO Albuquerque 140.30 37 *e*PKPdf **PKPdf** 10 29 14.2 +1.3
124A Stringfield Ra 142.45 38⇓PKPdf **PKPdf** 10 29 15.9 -1.0
baz=142
CPUP Villa Florida 143.01 213 PKP **PKPdf** 10 29 19.4 +1.7
CPUP Villa Florida 143.01 213 PKP **PKPdf** 10 29 19.4 +1.7
comp=Z,0.5nm,0.4s,baz=11,slow=19,SNR=3.3
MNTX Cornudas Mount 143.17 39 *e*PKPdf PKPbc 10 29 15.7 +1.0
Z27A Tatum 143.35 35⇑PKPdf **PKPdf** 10 29 17.0 -1.3
baz=143
X29A Tulia 143.36 32⇑PKPdf **PKPdf** 10 29 17.3 -1.0
baz=143
GDL2 Guadalupe Moun 143.46 38 *e*PKPdf PKPbc 10 29 17.1 +1.4
Y28A McKinney Farm, 143.46 34⇑PKPdf PKPbc 10 29 16.9 +1.3
baz=143
226B Tecolote Peak, 143.67 38⇑PKPdf PKPbc 10 29 17.4 +1.1
baz=143
Y29A Porterfield Fa 143.81 33⇓PKPdf PKPbc 10 29 17.7 +1.1
baz=144
Z28A Tucker Farm, M 143.84 34⇓PKPdf PKPbc 10 29 17.9 +1.1
baz=144
425A Indio Mountain 144.03 40⇑PKPdf PKPbc 10 29 18.3 +0.8
baz=144
X31A McDonald Ranch 144.11 30⇑PKPdf PKPbc 10 29 18.4 +1.0
baz=144
ACSO Alum Creek Sta 144.12 5 *e*PKPdf PKPbc 10 29 17.2 0.0
Y30A Stafford Cattl 144.22 32⇓PKPdf PKPbc 10 29 18.5 +0.6
baz=144
227A Bennet, Jal 144.24 37⇓PKPdf PKPbc 10 29 18.6 +0.6
baz=144
Z29A Hungry Hill Ra 144.25 34⇓PKPdf PKPbc 10 29 18.7 +0.7
baz=144
128A Castleberry Fa 144.28 35⇓PKPdf PKPbc 10 29 18.7 +0.6
baz=144
326A Caldwell Ranch 144.31 38⇓PKPdf PKPbc 10 29 18.8 +0.6
baz=144
Y31A Rekieta Farm, 144.49 31⇑PKPdf PKPbc 10 29 19.2 +0.5
baz=144
Z30A Sanderson Ranc 144.54 33⇑PKPdf PKPbc 10 29 19.3 +0.4
baz=144
228A UT Block 9, Go 144.58 36⇑PKPdf PKPbc 10 29 19.6 +0.6
baz=144
129A Stewart Farms, 144.62 35⇓PKPdf PKPbc 10 29 19.8 +0.6
baz=144
426A McDonald Obser 144.72 39⇑PKPdf PKPbc 10 29 20.3 +0.6
baz=144
OLIL Olney 144.80 13 *e*PKPdf PKPbc 10 29 19.5 +0.1
Y32A R-V Farms, Ver 144.88 30⇑PKPdf PKPbc 10 29 19.9 +0.1
baz=145
TUL1 Tulsa 144.97 24⇓PKPdf **PKPab** 10 29 20.3 +0.3
baz=145
328A Wristen Ranch, 144.98 37⇑PKPdf **PKPab** 10 29 20.6 +0.3
baz=145
427A Hayter Ranch, 144.99 38⇑PKPdf **PKPab** 10 29 20.8 +0.3
baz=145
Z31A Sharp Cattle R 145.05 32⇓PKPdf **PKPab** 10 29 20.8 +0.3
baz=145
SDMD Soldier's Deli 145.08 357 *e*PKPab **PKPbc** 10 29 20.1 -0.2
526A Mary Lane Ranc 145.09 40⇓PKPdf **PKPab** 10 29 21.1 +0.2
baz=145
229A Bryant Ranch, 145.14 35⇓PKPdf **PKPab** 10 29 21.2 +0.3
baz=145
130A Snyder 145.16 34⇓PKPdf **PKPab** 10 29 21.1 +0.2
baz=145
527A Woodward Ranch 145.34 40⇑PKPdf **PKPdf** 10 29 22.2 +0.2
baz=145
329A Wagon Wheel Ra 145.39 36⇓PKPdf **PKPab** 10 29 22.2 +0.4
baz=145
626A Big Bend Ranch 145.40 41⇓PKPdf **PKPab** 10 29 22.4 +0.4
baz=145
Z32A Haskell 145.41 31⇓PKPdf **PKPab** 10 29 21.9 +0.1
baz=145
131A Roby 145.41 33⇓PKPdf **PKPab** 10 29 22.3 +0.4
baz=145
SIUC Southern Illin 145.51 15 *e*PKPdf **PKPdf** 10 29 21.6 -0.2
428A Kincaid Ranch, 145.51 38⇓PKPdf **PKPab** 10 29 23.2 +0.9
baz=145
230A Sterling City 145.60 35⇓PKPab **PKPab** 10 29 23.0 +0.4
baz=145
USIN University of 145.63 12 *e*PKPdf **PKPdf** 10 29 22.0 +0.1
WCI Wyandotte Cave 145.64 10 *e*PKIKP **PKPdf** 10 29 21.3 -0.7
WCI Wyandotte Cave 145.64 10 *e*PKPdf **PKPdf** 10 29 21.3 -0.7
528A Cox Ranch, San 145.84 39⇑PKPab **PKPab** 10 29 23.8 +0.1
baz=146
TXAR Lajitas Array 145.85 41 PKPbc **PKPab** 10 29 23.9 +0.3
TXAR Lajitas Array 145.85 41 PKPbc **PKPab** 10 29 23.9 +0.3
comp=Z,29nm,0.9s,baz=282,slow=1.8,SNR=212
ABTX Abilene, Hawle 145.85 32⇑PKPab **PKPab** 10 29 23.6 +0.2
baz=146
330A Mertzon 145.92 35⇑PKPab **PKPab** 10 29 23.7 -0.1
baz=146
627A Terlingua Ranc 145.95 40⇑PKPab **PKPab** 10 29 24.0 0.0
baz=146
231A Bronte 146.01 34⇑PKPab **PKPbc** 10 29 23.8 +0.2
baz=146
429A Davenport Ranc 146.07 37⇓PKPab **PKPbc** 10 29 24.0 +0.2
baz=146
529A Stev Forest Ra 146.22 38⇓PKPab **PKPbc** 10 29 24.6 +0.3
baz=146
628A Black Gap, Mar 146.24 40⇑PKPab **PKPbc** 10 29 24.7 +0.3
baz=146
430A Baggett Ranch, 146.34 36⇑PKPab **PKPbc** 10 29 24.8 +0.1
baz=146
PARMO Parma 146.36 16 *e*PKPdf **PKPbc** 10 29 23.9 -0.5
232A Coleman 146.42 33⇑PKPab **PKPbc** 10 29 25.1 +0.3
baz=146
331A San Angelo 146.42 35⇑PKPab **PKPbc** 10 29 25.1 +0.3
baz=146
530A J-C Ranch, Com 146.74 37⇓PKPab **PKPbc** 10 29 26.3 +0.4
baz=146
332A Millersview 146.75 34⇓PKPab **PKPbc** 10 29 26.3 +0.5
baz=146
JSRW J. Sargeant Re 146.83 359 *e*PKPdf **PKPbc** 10 29 24.9 -0.9
UALR University of 147.29 21 *e*PKPdf **PKPbc** 10 29 27.3 +0.1
WVT Waverly 147.35 13 *e*PKP2 **PKPdf** 10 29 26.0 +1.0
WVT Waverly 147.35 13 *e*PKPdf **PKPdf** 10 29 26.0 +1.0
PLAL Pickwick Lake 148.39 14 *e*PKPdf **PKPbc** 10 29 29.2 -0.9
TKL Tuckaleechee C 148.55 8 *e*PKPdf **PKPbc** 10 29 30.4 -0.1
HKT Hockley 149.95 30 *e*PKP2 **PKPbc** 10 29 34.6 +0.5
HKT Hockley 149.95 30 *e*PKPbc **PKPbc** 10 29 34.6 +0.5
LRAL Lakeview Retre 150.51 14 *e*PKPbc **PKPbc** 10 29 34.6 -0.9
JTS JuntasAbangare 171.60 45 *e*PKPab **PKPab** 10 31 13.8 -0.2

NAO ***18*** *10:11:07.6±2.0,59.69N×14.27E,ML2.0*
ISCJB ***18*** *10:11:08.8±1.0,59.76N±0.07×14.3E±0.1,h0km,Error ellipse: s-maj=11.5km s-min=7.7km az=28.7*
BER ***18*** *10:11:09.7±1.8,59.73N×14.21E,h0km±12km, ML2.0(NAO)*
CSEM ***18*** *10:11:09.2±0.3,59.74N×14.24E,h2km,ML1.1,Error ellipse: s-maj=8.3km s-min=4.3km az=31.0,Mining explosion.*
UPP ***18*** *10:11:10.5,59.74N×14.43E,h0km,ML1.1,Mining explosion.*

ISC 18 10:11:08.4±1.3,59.77N±0.07×14.33E±0.05,h0km,n18, σ1s01/18,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
NRAU	**Nora**	**0.41**	**119**	P	**Pg**	**Pg**	**10 11 17.3**	**+1.0**
HFS	**Hagfors**	**0.49**	**319**	Pg	**Pg**	**Pg**	**10 11 18.2**	**+0.4**
	baz=151,slow=18							
HFS				Lg	Lg	Lg	10 11 24.8	
	baz=150,slow=28							
HFS				Rg	Rg	Rg	10 11 26.6	
	baz=145,slow=56							
HFS	**Hagfors**	**0.49**	**319**	Pg	**Pg**	**Pg**	**10 11 18.2**	**+0.4**
	baz=151,slow=18							
HFS				Lg	Lg	Lg	10 11 24.8	
	baz=150,slow=28							
HFS				Rg	Rg	Rg	10 11 26.6	
	baz=145,slow=56							
HFS	**Hagfors**	**0.49**	**319**	Pg	**Pg**	**Pg**	**10 11 18.2**	**+0.4**
	baz=151,slow=17,SNR=90							
HFS				Lg	Lg	Lg	10 11 24.8	
	baz=150,slow=27,SNR=50							
FALU	**Falun**	**1.04**	**45**	P	**Pg**	**Pg**	**10 11 29.3**	**+0.9**
FALU				S	**Sb**	**Sb**	**10 11 44.2**	**+0.6**
ESKU	**Eskilstuna**	**1.18**	**116**	P	**Pg**	**Pg**	**10 11 31.4**	**+0.3**
BACU	**Backbrunna**	**1.41**	**85**	P	**Pg**	**Pg**	**10 11 36.0**	**+0.7**
OSTU	**Oestervaala**	**1.48**	**71**	P	**Pn**	**Pn**	**10 11 36.9**	**+0.6**
FLYU	**Flymyra**	**1.82**	**77**	P	**Pb**	**Pb**	**10 11 42.9**	**+0.3**
IGGU	**Iggoen**	**1.85**	**52**	P	**Pb**	**Pb**	**10 11 43.8**	**+0.7**
NB2	**NORSAR Subarra**	**2.00**	**311**	Pn	**Pn**	**Pn**	**10 11 43.8**	**+0.2**
	baz=136,slow=16							
NB2				Lg	Lg	Lg	10 12 10.9	
	baz=132,slow=37							
NB2	**NORSAR Subarra**	**2.00**	**311**	Pn	**Pn**	**Pn**	**10 11 43.8**	**+0.2**
	baz=136,slow=16							
NB2				Lg	Lg	Lg	10 12 10.9	
	baz=132,slow=37							
NB2	**NORSAR Subarra**	**2.00**	**311**	Pn	**Pn**	**Pn**	**10 11 43.8**	**+0.2**
	baz=136,slow=15,SNR=50							
NB2				Lg	Lg	Lg	10 12 10.9	
	baz=132,slow=29,SNR=47							
NRTU	**Norrtaelje**	**2.18**	**91**	P	**Pb**	**Pb**	**10 11 48.3**	**-0.4**
GRAU	**Graesoe**	**2.19**	**73**	P	**Pb**	**Pb**	**10 11 48.1**	**-0.7**
FIA0	**FINESS Array S**	**6.02**	**69**	Sn	**Sn**	**Sn**	**10 13 46.0**	**-2.3**
FIA0				Lg	Lg	Lg	10 14 16.8	
	baz=260,slow=28							
FIA0	**FINESS Array S**	**6.02**	**69**	Sn	**Sn**	**Sn**	**10 13 46.0**	**-2.3**
FIA0				Lg	Lg	Lg	10 14 16.8	
	baz=260,slow=28							
FIA0	**FINESS Array S**	**6.02**	**69**	Lg	Lg	Lg	10 14 16.8	
	baz=260,slow=26,SNR=4.1							

DDA ***18*** *10:20:05.6,39.83N×41.92E,h7km,MD2.9*
CSEM ***18*** *10:20:05.6,39.83N×41.92E,h7km,MD2.9,After DDA*
ISCJB ***18*** *10:20:06.5±0.9,39.83N±0.04×42.00E±0.05,h9km±6km, Error ellipse: s-maj=6.8km s-min=6.2km az=138.1*

ISC 18 10:20:06.0±1.1,39.83N±0.04×41.98E±0.03,h11km±9km, n13,σ0s70/22,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HOMI	**Horasan**	**0.22**	**346**	*i* Pg	**Pg**	**Pg**	**10 20 10.6**	**-0.2**
HOMI				*i* Sg	**Sg**	**Sg**	**10 20 14.7**	**+0.6**
ERZM	**Erzurum**	**0.48**	**279**	*e*P	**Pg**	**Pg**	**10 20 15.3**	**-0.1**
ERZM				*e*S	**Sb**	**Sb**	**10 20 24.4**	**+0.7**
ERZM	**Erzurum**	**0.48**	**279**	*e*P	**Pg**	**Pg**	**10 20 15.3**	**-0.1**
ERZM				*e*S	**Sb**	**Sb**	**10 20 24.4**	**+0.7**
EZM	**Erzurum**	**0.48**	**279**	*e*PG	**Pg**	**Pg**	**10 20 15.5**	**+0.1**
EZM				*e*SG	**Sb**	**Sb**	**10 20 24.9**	**+1.1**
TUTA	**Tutak**	**0.78**	**123**	*e*P	**Pg**	**Pg**	**10 20 20.6**	**-0.5**
TUTA				*e*S	**Sb**	**Sb**	**10 20 33.3**	**+1.0**
TUTA	**Tutak**	**0.78**	**123**	*e*P	**Pg**	**Pg**	**10 20 20.6**	**-0.5**
TUTA				*e*S	**Sb**	**Sb**	**10 20 33.3**	**+1.0**
DDEM	**Demirkent**	**1.07**	**351**	*e*P	**Pb**	**Pb**	**10 20 26.0**	**-0.7**
DDEM				*e*S	**Sb**	**Sb**	**10 20 41.5**	**+0.8**
DDEM	**Demirkent**	**1.07**	**351**	*e*P	**Pb**	**Pb**	**10 20 26.0**	**-0.7**
DDEM				*e*S	**Sb**	**Sb**	**10 20 41.5**	**+0.8**
KOPT	**Kop Dagi**	**1.15**	**280**	*e*P	Pb	**Pb**	10 20 24.5	-3.6
KOPT				*e*S	**Sb**	**Sb**	**10 20 42.3**	**-0.9**
KOPT	**Kop Dagi**	**1.15**	**280**	*e*P	Pb	**Pb**	10 20 24.5	-3.6
KOPT				*e*S	**Sb**	**Sb**	**10 20 42.3**	**-0.9**
DAGI	**Agillar**	**1.24**	**358**	*e*P	**Pn**	**Pn**	**10 20 29.1**	**-0.4**
DAGI				*e*S	**Sn**	**Sn**	**10 20 46.7**	**+0.4**
BNGB	**Bingˆ¶l**	**1.31**	**231**	*e*PN	**Pg**	**Pg**	**10 20 31.2**	**0.0**
BAYT	**Aydˆ–ntepe-Bay**	**1.52**	**292**	*e*PN	**Pb**	**Pb**	**10 20 34.3**	**+0.1**

ISCJB ***18*** *10:28:48.9±0.5,41.02N±0.02×25.77E±0.03,h8km±4km, Error ellipse: s-maj=4.6km s-min=2.7km az=141.4*
SOF ***18*** *10:28:48.6,41.02N×25.76E,h3km,MD2.8*
ATH ***18*** *10:28:48.4,40.99N×25.92E,h33km±5km,MD2.9/3*
CSEM ***18*** *10:28:49.6±0.1,41.04N×25.77E,h10km,MD2.9,Error ellipse: s-maj=2.8km s-min=2.0km az=42.0*
BEO ***18*** *10:28:50.4±1.1,41.03N×25.75E,h1km±7km,ML2.6/5*
ISK ***18*** *10:28:50.0,41.08N×25.90E,h5km,MD2.9*
THE ***18*** *10:28:50.1,41.00N×25.77E,h11km±1km,ML2.7/6,Error ellipse: s-maj=1.8km s-min=0.9km az=74.0*

ISC 18 10:28:49.7±0.9,**41°03'N**±0'.02×**25°77'E**±0'.02,**h13**km±7km, **n69**,σ0ᵗ**65**/113,**Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALN	**Alexandroupoli**	**0.25**	**121**	P	**Pg**	**10 28 54.9**	**-0.1**
ALN				S	**Sg**	**10 28 58.2**	**-0.3**
ALN	**Alexandroupoli**	**0.25**	**121**	*e*PB	**Pg**	**10 28 54.9**	**-0.1**
ALN				*e*SB	**Sg**	**10 28 58.8**	**+0.3**
ALN	**Alexandroupoli**	**0.25**	**121**	P	**Pg**	**10 28 54.9**	**-0.1**
ALN				S	**Sg**	**10 28 58.2**	**-0.3**
ALN				*e*Sb	**Sg**	**10 28 58.8**	**+0.3**
ENEZ	**Enez**	**0.41**	**134**	*e*PG	**Pg**	**10 28 58.4**	**+0.5**
ENEZ				*e*SG	**Sg**	**10 29 04.1**	**+0.7**
ENEZ	**Enez**	**0.41**	**134**	*e*Pg	**Pg**	**10 28 58.4**	**+0.5**
ENEZ				*e*Sg	**Sg**	**10 29 04.1**	**+0.7**
SMTH	**Samothraki Isl**	**0.58**	**198**	*e*PN	**Pg**	**10 29 01.2**	**+0.1**
SMTH				*e*SN	**Sb**	**10 29 10.0**	**0.0**
SMTH	**Samothraki Isl**	**0.58**	**198**	*e*Pn	**Pg**	**10 29 01.2**	**+0.1**
SMTH				*e*Sn	**Sb**	**10 29 10.0**	**0.0**
ERIK	**Erikli-Kesan**	**0.67**	**122**	*e*PG	**Pg**	**10 29 02.4**	**-0.3**
ERIK				*e*SG	**Sg**	**10 29 11.4**	**-0.1**
ERIK	**Erikli-Kesan**	**0.67**	**122**	*e*Pg	**Pg**	**10 29 02.4**	**-0.3**
ERIK				*e*Sg	**Sg**	**10 29 11.4**	**-0.1**
KDZ	**Kurdzhali**	**0.68**	**337**	*i* P	**Pg**	**10 29 02.0**	**-0.9**
KDZ	**Kurdzhali**	**0.68**	**337**	*i* P	**Pg**	**10 29 02.0**	**-0.9**
GELI	**Tayfur-Gelibol**	**0.83**	**139**	*e*PG	**Pb**	**10 29 05.9**	**0.0**
GELI	**Tayfur-Gelibol**	**0.83**	**139**	*e*Pg	**Pb**	**10 29 05.9**	**0.0**
KAVA	**Kavala**	**0.95**	**269**	P	**Pb**	**10 29 07.7**	**-0.3**
KAVA				S	**Sb**	**10 29 21.1**	**+0.6**
KAVA	**Kavala**	**0.95**	**269**	P	**Pb**	**10 29 07.7**	**-0.3**
KAVA				S	**Sb**	**10 29 21.1**	**+0.6**
LPK	**Lapseki**	**1.00**	**130**	*e*PG	**Pb**	**10 29 08.8**	**-0.1**
LPK	**Lapseki**	**1.00**	**130**	*e*Pg	**Pb**	**10 29 08.8**	**-0.1**
RZN	**Rozhen**	**1.03**	**310**	*i* P	**Pb**	**10 29 09.1**	**-0.5**
RZN	**Rozhen**	**1.03**	**310**	*i* P	**Pb**	**10 29 09.1**	**-0.5**
DIM	**Dimitrovgrad**	**1.04**	**350**	*i* P	**Pb**	**10 29 09.4**	**-0.2**
DIM	**Dimitrovgrad**	**1.04**	**350**	*i* P	**Pb**	**10 29 09.4**	**-0.2**
EDRB	**Edirne**	**1.10**	**42**	*e*PG	**Pb**	**10 29 09.2**	**-1.5**
EDRB	**Edirne**	**1.10**	**42**	*e*Pg	**Pb**	**10 29 09.2**	**-1.5**
MFT	**Murefte**	**1.17**	**101**	*e*PN	**Pb**	**10 29 12.1**	**+0.2**
MFT	**Murefte**	**1.17**	**101**	*e*Pn	**Pb**	**10 29 12.1**	**+0.2**
KRBG	**Karabiga-Canak**	**1.32**	**118**	*e*PN	**Pb**	**10 29 14.7**	**+0.2**
KRBG	**Karabiga-Canak**	**1.32**	**118**	*e*Pn	**Pb**	**10 29 14.7**	**+0.2**
PLD	**Plovdiv**	**1.34**	**324**	P	**Pn**	**10 29 14.3**	**+0.1**
PLD				S	**Sb**	**10 29 31.8**	**-0.1**
PLD	**Plovdiv**	**1.34**	**324**	*e*Pg	**Pb**	**10 29 14.7**	**-0.1**
PLD				*e*Sg	**Sn**	**10 29 32.3**	**+0.4**
PLD	**Plovdiv**	**1.34**	**324**	*i* P	**Pg**	**10 29 15.2**	**-0.3**
PLD	**Plovdiv**	**1.34**	**324**	P	**Pn**	**10 29 14.3**	**+0.1**
PLD	**Plovdiv**	**1.34**	**324**	*e*Pg	**Pb**	**10 29 14.7**	**-0.1**
PLD				S	**Sb**	**10 29 31.8**	**-0.1**
PLD				*e*Sg	**Sn**	**10 29 32.3**	**+0.4**
NVR	**Nevrokopi**	**1.47**	**283**	P	**Pn**	**10 29 16.3**	**+0.3**
NVR				S	**Sn**	**10 29 35.3**	**+0.1**
NVR	**Nevrokopi**	**1.47**	**283**	*e*PN	**Pn**	**10 29 16.3**	**+0.3**
NVR				*e*SN	**Sb**	**10 29 36.5**	**+0.8**
NVR	**Nevrokopi**	**1.47**	**283**	P	**Pn**	**10 29 16.3**	**+0.3**
NVR				S	**Sn**	**10 29 35.3**	**+0.1**
NVR				*e*Sn	**Sb**	**10 29 36.5**	**+0.8**
OUR	**Ouranopolis**	**1.52**	**244**	P	**Pn**	**10 29 16.4**	**-0.2**
OUR				S	**Sn**	**10 29 36.2**	**-0.1**
OUR	**Ouranopolis**	**1.52**	**244**	P	**Pn**	**10 29 16.4**	**-0.2**
OUR				S	**Sn**	**10 29 36.2**	**-0.1**
JMB	**Yambol**	**1.56**	**23**	P	**Pn**	**10 29 17.6**	**+0.3**
JMB				S	**Sb**	**10 29 38.4**	**+0.1**
JMB	**Yambol**	**1.56**	**23**	*e*Pg	**Pb**	**10 29 19.0**	**+0.4**
JMB				*e*Sg	**Sg**	**10 29 40.3**	**+0.2**
JMB	**Yambol**	**1.56**	**23**	*i* P	**Pb**	**10 29 18.4**	**-0.2**
JMB	**Yambol**	**1.56**	**23**	P	**Pn**	**10 29 17.6**	**+0.3**
JMB	**Yambol**	**1.56**	**23**	*e*Pg	**Pb**	**10 29 19.0**	**+0.4**
JMB				S	**Sb**	**10 29 38.4**	**+0.1**
JMB				*e*Sg	**Sg**	**10 29 40.3**	**+0.2**
MMB	**Musomiste**	**1.64**	**291**	*i* P	**Pn**	**10 29 17.5**	**-0.8**
MMB	**Musomiste**	**1.64**	**291**	*i* P	**Pn**	**10 29 17.5**	**-0.8**
SRS	**Serrai**	**1.65**	**274**	P	**Pn**	**10 29 18.6**	**+0.2**
SRS				S	**Sb**	**10 29 41.0**	**+0.4**
SRS	**Serrai**	**1.65**	**274**	P	**Pn**	**10 29 18.6**	**+0.2**
SRS				S	**Sb**	**10 29 41.0**	**+0.4**
GONE	**Gonen-Balikesi**	**1.76**	**123**	*e*PN	**Pb**	**10 29 21.2**	**-0.7**
GONE	**Gonen-Balikesi**	**1.76**	**123**	*e*Pn	**Pb**	**10 29 21.2**	**-0.7**
SIGR	**SIGRI**	**1.81**	**178**	P	**Pn**	**10 29 20.7**	**0.0**
SIGR				S	**Sn**	**10 29 43.0**	**-0.5**
SIGR	**SIGRI**	**1.81**	**178**	P	**Pn**	**10 29 20.7**	**0.0**
SIGR				S	**Sn**	**10 29 43.0**	**-0.5**
PRK	**Paraskevi**	**1.82**	**168**	P	**Pn**	**10 29 19.5**	**-1.2**
PRK				S	**Sn**	**10 29 43.8**	**+0.1**
PRK	**Paraskevi**	**1.82**	**168**	P	**Pn**	**10 29 19.5**	**-1.2**
PRK				S	**Sn**	**10 29 43.8**	**+0.1**
SOH	**Sokhos**	**1.84**	**264**	P	**Pb**	**10 29 22.3**	**-1.0**
SOH				S	**Sn**	**10 29 44.3**	**0.0**
SOH	**Sokhos**	**1.84**	**264**	P	**Pb**	**10 29 22.3**	**-1.0**
SOH				S	**Sn**	**10 29 44.3**	**0.0**
PLG	**Polygyros**	**1.88**	**251**	*e*PN	**Pn**	**10 29 20.9**	**-0.7**
PLG	**Polygyros**	**1.88**	**251**	*e*Pn	**Pn**	**10 29 20.9**	**-0.7**
HORT	**Hortiatis**	**2.07**	**259**	P	**Pn**	**10 29 24.9**	**+0.6**
HORT				S	**Sn**	**10 29 49.5**	**-0.5**
HORT	**Hortiatis**	**2.07**	**259**	P	**Pn**	**10 29 24.9**	**+0.6**
HORT				S	**Sn**	**10 29 49.5**	**-0.5**
VAY	**Valandovo**	**2.43**	**278**	*e*Pn	**Pb**	**10 29 33.9**	**+0.6**
VAY				*e*Sn	**Sg**	**10 30 06.6**	**-1.2**
VAY	**Valandovo**	**2.43**	**278**	*e*Pn	**Pb**	**10 29 34.3**	**+1.0**
VAY				*e*Sn	**Sn**	**10 30 01.0**	**+2.2**
VTS	**Vitosha**	**2.47**	**310**	P	**Pn**	**10 29 30.5**	**+0.6**
VTS				S	**Sn**	**10 30 01.1**	**+1.1**
VTS	**Vitosha**	**2.47**	**310**	*e*Pn	**Pn**	**10 29 31.4**	**+1.5**
VTS				*e*Sn	**Sn**	**10 30 03.8**	**-1.3**
VTS	**Vitosha**	**2.47**	**310**	P	**Pn**	**10 29 30.5**	**+0.6**
VTS	**Vitosha**	**2.47**	**310**	*e*Pn	**Pn**	**10 29 31.4**	**+1.5**
VTS				S	**Sn**	**10 30 01.1**	**+1.1**
VTS				*e*Sn	**Sb**	**10 30 03.2**	**-1.3**
CHOS	**Chios island**	**2.64**	**175**	P	**Pn**	**10 29 32.5**	**+0.3**
CHOS				S	**Sn**	**10 30 03.8**	**-0.4**
CHOS	**Chios island**	**2.64**	**175**	P	**Pn**	**10 29 32.5**	**+0.3**
CHOS				S	**Sn**	**10 30 03.8**	**-0.4**
ZAPS	**Zavoj**	**3.24**	**315**	*e*Pn	**Pn**	**10 29 40.1**	**-0.2**
BARS	**Barje**	**3.45**	**303**	*e*Pn	**Pn**	**10 29 44.6**	**+1.4**
BARS	**Barje**	**3.45**	**303**	*e*Pn	**Pn**	**10 29 44.6**	**+1.4**

*ISCJB **18** 10:34:50.8±0.3,57°.71N±0°.03×153°.01W±0°.05, h58km±4km, mb3.7/11, MS2.9/2, Error ellipse: s-maj=5.9km s-min=4.0km az=160.0*

*IDC **18** 10:34:51.8±0.8,57°.73N×153°.35W, h35km±5km, mb3.6/11, mb1 3.8/15, mb1mx3.7/33, mbtmp3.7/15, ML3.9/4, MS3.0/4, Ms1 3.0/4, ms1mx2.7/49, Error ellipse: s-maj=13.9km s-min=10.3km az=5.0*

*NEIC **18** 10:34:53.1,57°.71N×153°.12W, h36km, ML3.7(AEIC), After AEIC.*

NEIC Felt [II] at Kodiak.

ISC 18 10:34:52.2±0.5,**57°.73N**±0°.05×**153°.18W**±0°.04,**h42**km±5km, **n97**,σ1ᵗ**06**/107,**mb3.7**/11,**Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**0.32**	**80**	P	**Pn**	**10 35 00.2**	**-0.6**
KDAK				S	**Sn**	**10 35 06.8**	**-0.1**
KDAK	**Kodiak Island**	**0.32**	**80**	Pg	**Pn**	**10 35 00.9**	**+0.1**
	1µm,0.3s,baz=270,slow=7.0,SNR=8461						
KDAK				Lg	Lg	10 35 06.9	
	893nm,0.3s,baz=140,slow=19,SNR=95						
OHAK	**Old Harbor**	**0.51**	**187**	P	**Pn**	**10 35 02.9**	**-0.2**
OHAK				S	**Sn**	**10 35 11.4**	**+0.6**
KABR	**Katmai Barrier**	**1.04**	**294**	P	**Pn**	**10 35 10.4**	**+0.1**
KAWH	**Katmai**	**1.08**	**308**	P	**Pn**	**10 35 11.3**	**+0.3**
FOSS	**Fourpeaked Sta**	**1.11**	**346**	P	**Pn**	**10 35 11.5**	**+0.2**
FOSS				S	**Sn**	**10 35 25.8**	**+0.4**
KAKN	**Katmai Knife C**	**1.15**	**300**	P	**Pn**	**10 35 12.4**	**+0.4**
KAKN				S	**Sn**	**10 35 28.0**	**+1.4**
KCE	**Katmai Mt Cerb**	**1.19**	**297**	P	**Pn**	**10 35 13.3**	**+0.9**
KABU	**Katmai Buttres**	**1.25**	**297**	P	**Pn**	**10 35 14.0**	**+0.8**
KABU				S	**Sn**	**10 35 31.9**	**+3.0**
KELA	**Mount Kelaz**	**1.54**	**299**	P	**Pn**	**10 35 17.8**	**+0.6**
AUW	**Augustine West**	**1.66**	**355**	P	**Pn**	**10 35 20.0**	**+1.3**
AUNW	**Augustine NWes**	**1.66**	**355**	P	**Pn**	**10 35 20.3**	**+1.4**
OPT	**Oil Point**	**1.93**	**359**	P	**Pn**	**10 35 23.7**	**+1.1**
HOM	**Homer**	**2.10**	**22**	P	**Pn**	**10 35 26.0**	**+1.2**
IVE	**Iliamna Volcan**	**2.30**	**2**	P	**Pn**	**10 35 28.8**	**+1.1**
RSO	**Redoubt South**	**2.75**	**4**	*e*Pn	**Pn**	**10 35 34.9**	**+0.9**
ANPK	**Aniakchak Peak**	**2.83**	**254**	P	**Pn**	**10 35 35.6**	**+0.6**
ANNW	**Aniakchak Nort**	**2.83**	**257**	P	**Pn**	**10 35 36.5**	**+1.6**
DFR	**Drift River**	**2.88**	**5**	P	**Pn**	**10 35 36.4**	**+0.7**
ANPB	**Aniakchak Plen**	**2.92**	**254**	P	**Pn**	**10 35 36.8**	**+0.7**
SEW	**Seward**	**3.07**	**37**	P	**Pn**	**10 35 37.4**	**-0.7**
SLKM	**Skilak Lake**	**3.18**	**27**	P	**Pn**	**10 35 39.5**	**-0.2**
CHGN	**Chignik**	**3.20**	**246**	*e*Pn	**Pn**	**10 35 40.1**	**+0.2**
CKL	**Chakachamna La**	**3.51**	**7**	P	**Pn**	**10 35 44.8**	**+0.5**
SPU	**Mount Spurr**	**3.51**	**9**	P	**Pn**	**10 35 44.8**	**+0.5**
BGL	**Barrier Glacie**	**3.57**	**6**	P	**Pn**	**10 35 46.2**	**+1.0**
SVW2	**Sparrevohn**	**3.60**	**341**	P	**Pn**	**10 35 45.9**	**+0.5**
VNHG	**Veniaminof 1**	**3.61**	**248**	P	**Pn**	**10 35 47.4**	**+1.8**
STLK	**Strandline Lak**	**3.84**	**10**	P	**Pn**	**10 35 49.9**	**+1.0**
MID	**Middleton Isla**	**3.97**	**62**	P	**Pn**	**10 35 49.7**	**-0.8**
PMR	**Palmer**	**4.39**	**26**	P	**Pn**	**10 35 55.4**	**-0.7**
SDPT	**Sand Point**	**4.69**	**243**	P	**Pn**	**10 36 00.4**	**+0.1**
EYAK	**Cordova Ski Ar**	**4.76**	**50**	P	**Pn**	**10 36 00.5**	**-0.8**
SML	**Sawmill**	**4.77**	**29**	*e*Pn	**Pn**	**10 36 01.9**	**+0.4**
VLZ	**Valdez**	**4.88**	**43**	P	**Pn**	**10 36 02.6**	**-0.4**
DIV	**Divide**	**5.09**	**45**	P	**Pn**	**10 36 05.5**	**-0.4**
PPLA	**Purkeypile**	**5.21**	**5**	*e*Pn	**Pn**	**10 36 08.1**	**+0.4**
	23nm,0.6s						
TT01	**Tatalina**	**5.38**	**346**	P	**Pn**	**10 36 10.4**	**+0.5**
TRF	**Thorofare Moun**	**5.92**	**13**	P	**Pn**	**10 36 16.8**	**-0.6**
VRDI	**Verde Repeater**	**6.07**	**51**	P	**Pn**	**10 36 19.1**	**-0.5**
RND	**Reindeer**	**6.08**	**19**	P	**Pn**	**10 36 19.1**	**-0.4**
HARP	**HAARP**	**6.17**	**37**	P	**Pn**	**10 36 21.2**	**+0.5**
MCK	**McKinley**	**6.37**	**17**	P	**Pn**	**10 36 23.8**	**+0.3**
KIAG	**Kiagna River**	**6.40**	**55**	P	**Pn**	**10 36 23.6**	**-0.4**
BALM	**Baldy**	**6.45**	**55**	P	**Pn**	**10 36 24.2**	**-0.5**
PAX	**Paxson**	**6.50**	**33**	P	**Pn**	**10 36 25.2**	**-0.1**
BARN	**Barnard Glacie**	**6.76**	**56**	P	**Pn**	**10 36 28.9**	**-0.1**
SAMH	**Samovar Hills**	**6.86**	**64**	P	**Pn**	**10 36 30.5**	**+0.3**
MENT	**Mentasta**	**7.02**	**38**	*e*Pn	**Pn**	**10 36 32.8**	**+0.5**
WRH	**Wood River Hil**	**7.20**	**18**	P	**Pn**	**10 36 33.9**	**-0.9**
CCB	**Clear Creek Bu**	**7.41**	**18**	P	**Pn**	**10 36 36.4**	**-1.2**
DOT	**Dot Lake**	**7.43**	**33**	*e*Pn	**Pn**	**10 36 40.5**	**+2.5**
	15nm,0.8s						
PNL	**Peninsula**	**7.44**	**69**	P	**Pn**	**10 36 37.5**	**-0.6**
COLA	**College**	**7.61**	**17**	*e*Pn	**Pn**	**10 36 39.2**	**-1.1**
	12nm,0.6s						
ILAR	**Eielson Array**	**7.69**	**21**	Pn	Pn	10 36 37.9	-3.6
ILAR					Sn	10 37 59.5	-7.6
ILAR	**Eielson Array**	**7.69**	**21**	Pn	Pn	10 36 37.9	-3.6
	0.9nm,0.3s,baz=211,slow=14,SNR=37						
ILAR					Sn	10 37 59.5	-7.6
	1.2nm,0.3s,baz=202,slow=22,SNR=5.2						
ILAR					LR	10 39 22.7	
	comp=Z,58nm,18.1s,baz=245,slow=35						
IL1	**Eielson Array**	**7.69**	**21**	P	**Pn**	**10 36 40.6**	**-0.9**
BCA3	**Beaver Creek A**	**7.77**	**42**	P	**Pn**	**10 36 43.0**	**+0.4**
IM3	**Indian Mountai**	**8.29**	**358**	P	**Pn**	**10 36 49.9**	**+0.2**
HYT	**Haines Junctio**	**8.60**	**62**	P	**Pn**	**10 36 54.2**	**+0.1**
EGAK	**Eagle**	**9.12**	**34**	*e*Pn	**Pn**	**10 37 01.5**	**+0.4**
	6.2nm,0.6s						
DAWY	**Dawson**	**9.23**	**41**	P	**Pn**	**10 37 02.7**	**0.0**
SKAG	**Skagway**	**9.48**	**72**	*e*Pn	**Pn**	**10 37 05.8**	**-0.2**
	8.1nm,0.6s						
COLD	**Coldfoot**	**9.63**	**7**	*e*Pn	**Pn**	**10 37 07.0**	**-1.0**
	2.6nm,0.6s						
WHY	**Whitehorse**	**9.83**	**65**	P	**Pn**	**10 37 10.6**	**-0.3**
DLBC	**Dease Lake**	**12.26**	**77**	Pn	**Pn**	**10 37 44.2**	**+0.1**
DLBC	**Dease Lake**	**12.26**	**77**	Pn	**Pn**	**10 37 44.2**	**+0.1**
	0.7nm,0.3s,baz=280,slow=9.7,SNR=16						
DLBC					LR	10 42 13.1	
	comp=Z,82nm,19.1s,baz=273,slow=36						
INK	**Inuvik**	**13.78**	**32**	Pn	**Pn**	**10 38 03.4**	**-1.1**
INK	**Inuvik**	**13.78**	**32**	Pn	**Pn**	**10 38 03.4**	**-1.1**
	0.1nm,0.3s,baz=232,slow=16,SNR=4.7						
YKW3	**Yellowknife Ar**	**19.57**	**60**	*e*Pn	**P**	**10 39 16.5**	**+0.3**
	0.2nm,1.0s						
YKA	**Yellowknife Ar**	**19.58**	**60**	P	**P**	**10 39 16.9**	**+0.6**
YKA	**Yellowknife Ar**	**19.58**	**60**	P	**P**	**10 39 16.9**	**+0.6**
	0.2nm,0.3s,baz=270,slow=11,SNR=3.6						
FX1	**Attu Island--F**	**19.63**	**270**	P	**P**	**10 39 14.3**	**-2.5**
FX1	**Attu Island--F**	**19.63**	**270**	P	**P**	**10 39 14.3**	**-2.5**
	1.7nm,0.3s,baz=93,slow=19,SNR=14						
NEW	**Newport**	**23.41**	**98**	P	**P**	**10 39 57.4**	**+0.2**
NEW	**Newport**	**23.41**	**98**	P	**P**	**10 39 57.4**	**+0.2**
	2.2nm,0.8s,baz=328,slow=7.0,SNR=4.5						
NEW					LR	10 47 50.6	
	comp=Z,31nm,21.5s,baz=222,slow=33						
PETK	**Petropavlovsk-**	**27.75**	**282**	P	**P**	**10 40 35.3**	**-1.2**
PETK					sP	**10 40 51.6**	**-1.2**
PETK	**Petropavlovsk-**	**27.75**	**282**	P	**P**	**10 40 35.3**	**-1.2**
	1.5nm,0.7s,baz=84,slow=12,SNR=7.4						
PETK					sP	**sP**	**10 40 51.6**	**-1.2**
	1.8nm,0.6s,baz=91,slow=15,SNR=2.7						
NVAR	**Mina Array Bea**	**29.77**	**115**	P	**P**	**10 40 57.6**	**+2.7**
NVAR	**Mina Array Bea**	**29.77**	**115**	P	**P**	**10 40 57.6**	**+2.7**
	0.4nm,0.5s,baz=316,slow=10,SNR=4.2						
PDAR	**Pinedale Array**	**31.02**	**100**	P	**P**	**10 41 08.2**	**+2.3**
PDAR				pP	**pP**	**10 41 18.6**	**+1.3**
PDAR	**Pinedale Array**	**31.02**	**100**	P	**P**	**10 41 08.3**	**+2.3**
	0.2nm,0.4s,baz=48,slow=1.3,SNR=3.3						
PDAR				pP	**pP**	**10 41 18.6**	**+1.3**
	0.5nm,0.7s,baz=317,slow=5.0,SNR=3.8						
PFO	**Pinyon Flat Ob**	**34.53**	**118**	LR	LR	10 54 47.0	
	comp=Z,28nm,18.2s,baz=338,slow=34						
SPITS	**Spitsbergen Ar**	**44.20**	**3**	P	**P**	**10 42 55.5**	**-0.8**
SPITS	**Spitsbergen Ar**	**44.20**	**3**	P	**P**	**10 42 55.5**	**-0.8**
	0.6nm,0.4s,baz=50,slow=4.4,SNR=6.2						
TXAR	**Lajitas Array**	**44.32**	**108**	P	**P**	**10 42 59.5**	**+1.5**
TXAR				pP	**pP**	**10 43 10.9**	**+1.2**
TXAR	**Lajitas Array**	**44.32**	**108**	P	**P**	**10 42 59.5**	**+1.5**
	0.3nm,0.7s,baz=316,slow=8.8,SNR=4.5						
TXAR				pP	**pP**	**10 43 10.9**	**+1.2**
	0.7nm,0.8s,baz=324,slow=6.0,SNR=8.5						
ARCES	**ARCESS Array B**	**53.03**	**1**	P	**P**	**10 44 03.2**	**-1.0**
ARCES	**ARCESS Array B**	**53.03**	**1**	P	**P**	**10 44 03.2**	**-1.0**
	1.7nm,0.8s,baz=37,slow=8.2,SNR=3.6						
SONM	**Songino Array**	**56.07**	**307**	P	**P**	**10 44 26.4**	**-0.4**
SONM	**Songino Array**	**56.07**	**307**	P	**P**	**10 44 26.4**	**-0.4**
	2.0nm,0.7s,baz=48,slow=6.9,SNR=9.3						
HFS	**Hagfors**	**62.02**	**7**	P	**P**	**10 45 07.1**	**-0.5**
HFS				pP	**pP**	**10 45 19.0**	**-0.8**
HFS	**Hagfors**	**62.02**	**7**	P	**P**	**10 45 07.1**	**-0.5**
	0.5nm,0.4s,baz=35,slow=5.4,SNR=4.7						
HFS				pP	**pP**	**10 45 19.0**	**-0.8**
	1.6nm,0.7s,baz=15,slow=6.4,SNR=3.2						
BVAR	**Borovoye Array**	**64.04**	**332**	P	**P**	**10 45 20.7**	**-0.4**
BVAR	**Borovoye Array**	**64.04**	**332**	P	**P**	**10 45 20.7**	**-0.4**
	1.1nm,0.6s,baz=46,slow=9.2,SNR=5.3						
CMAR	**Chiang Mai Arr**	**83.73**	**295**	P	**P**	**10 47 16.1**	**-0.5**
CMAR	**Chiang Mai Arr**	**83.73**	**295**	P	**P**	**10 47 16.1**	**-0.5**
	0.3nm,0.3s,baz=6.8,slow=5.0,SNR=4.3						

*BUG **18** 10:35:48.7,51°.44N×6°.57E, h1km, ML2.1*

*ISCJB **18** 10:35:48.1±0.4,51°.50N±0°.02×6°.46E±0°.04, h0km, Error ellipse: s-maj=4.2km s-min=2.5km az=40.7*

*BNS **18** 10:35:49.9±0.9,51°.50N×6°.58E, h1km, ML2.1*

*CSEM **18** 10:35:49.2±0.2,51°.49N×6°.51E, h1km, ML2.8/11, Error ellipse: s-maj=4.9km s-min=3.8km az=118.0*

*BGR **18** 10:35:50.6±0.3,51°.48N×6°.58E, h1km, ML2.1/3, Error ellipse: s-maj=4.4km s-min=3.3km az=118.0*

*LDG **18** 10:35:50.4±0.5,51°.50N×6°.59E, h1km, Ml2.7/5, Error ellipse: s-maj=8.8km s-min=5.6km az=35.0, Suspected Mining induced.*

ISC 18 10:35:48.8±0.8,**51°.48N**±0°.02×**6°.58E**±0°.02,**h0**km,**n59**, σ0ᵗ**94**/85,**3D**,**Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRHE	**Rheinberg**	**0.03**	**355**	Pg	**Pg**	**10 35 49.7**	**+0.3**
BRHE				Sg	**Sg**	**10 35 50.5**	**+0.7**
BRHE	**Rheinberg**	**0.03**	**355**	Pg	**Pg**	**10 35 49.7**	**+0.3**
LAUG	**Laupendahl**	**0.27**	**120**	*i*Pg	**Pg**	**10 35 54.9**	**+1.1**
LAUG				*e*Sg	**Sg**	**10 35 58.9**	**+1.6**
	131nm,0.7s						
LAUG	**Laupendahl**	**0.27**	**120**	Pg	**Pg**	**10 35 54.9**	**+1.1**
LAUG				Sg	**Sg**	**10 35 58.9**	**+1.6**
	131nm,0.7s						
BUG	**Bochum--Univer**	**0.44**	**95**	*e*Pg	**Pg**	**10 35 58.0**	**+0.9**
BUG				*e*Sg	**Sg**	**10 36 04.7**	**+2.0**
OPLO	**Oploo**	**0.49**	**283**	*e*Sg	**Sg**	**10 36 06.1**	**+1.7**
OPLO	**Oploo**	**0.49**	**283**	Sg	**Sg**	**10 36 06.1**	**+1.7**
WTSB	**Winterswijk**	**0.50**	**16**	*e*Pg	**Pb**	**10 36 00.1**	**-0.4**
WTSB				*e*Sg	**Sg**	**10 36 06.0**	**+1.0**
WTSB	**Winterswijk**	**0.50**	**16**	*e*Pg	**Pb**	**10 35 59.9**	**-0.5**
	30nm,0.5s						
WTSB	**Winterswijk**	**0.50**	**16**	Pg	**Pb**	**10 36 00.1**	**-0.4**
WTSB				Sg	**Sg**	**10 36 06.0**	**+1.0**
HOBG	**Hohbusch**	**0.69**	**136**	*e*Pg	**Pb**	**10 36 03.5**	**-0.2**
HOBG				*e*Sg	**Sb**	**10 36 13.5**	**-0.2**
	92nm,1.7s						
HOBG	**Hohbusch**	**0.69**	**136**	Pg	**Pb**	**10 36 03.5**	**-0.2**
HOBG				Sg	**Sb**	**10 36 13.5**	**-0.2**
	92nm,1.7s						
HGN	**Heimansgroeve**	**0.83**	**210**	*e*Pg	**Pg**	**10 36 05.5**	**+1.0**
HGN				*e*Sg	**Sg**	**10 36 16.9**	**+1.7**
HGN	**Heimansgroeve**	**0.83**	**210**	*e*Pg	**Pb**	**10 36 06.9**	**+0.9**
	75nm,0.2s						
HGN				*e*Sg	**Sb**	**10 36 17.8**	**+0.2**
HGN	**Heimansgroeve**	**0.83**	**210**	Pg	**Pg**	**10 36 05.5**	**+1.0**
HGN				Sg	**Sg**	**10 36 16.9**	**+1.7**
DREG	**Dreilaegerbach**	**0.85**	**195**	*i*Pg	**Pg**	**10 36 05.9**	**+0.9**
DREG				*e*Sg	**Sb**	**10 36 18.2**	**-0.1**
	77nm,0.9s						
DREG	**Dreilaegerbach**	**0.85**	**195**	Pg	**Pg**	**10 36 05.9**	**+0.9**
DREG				Sg	**Sb**	**10 36 18.2**	**-0.1**
	77nm,0.9s						
KLL	**Kalltalsperre**	**0.85**	**191**	*e*Pg	**Pg**	**10 36 05.9**	**+0.8**
KLL				*e*Sg	**Sb**	**10 36 18.6**	**+0.2**
	76nm,0.5s						
KLL	**Kalltalsperre**	**0.85**	**191**	Pg	**Pg**	**10 36 05.9**	**+0.8**
KLL				Sg	**Sb**	**10 36 18.6**	**+0.2**
	76nm,0.5s						
STB	**Steinbach**	**0.91**	**169**	*e*Pg	**Pb**	**10 36 07.8**	**+0.5**
STB				*e*Sg	**Sb**	**10 36 20.2**	**+0.3**
	50nm,0.6s						
STB	**Steinbach**	**0.91**	**169**	Pg	**Pb**	**10 36 07.8**	**+0.5**
STB				Sg	**Sb**	**10 36 20.2**	**+0.3**
	50nm,0.6s						
MEM	**Membach**	**0.94**	**203**	P	**Pg**	**10 36 07.6**	**+0.7**
MEM	**Membach**	**0.94**	**203**	*e*Pg	**Pg**	**10 36 07.6**	**+0.7**
MEM				*e*Sg	**Sb**	**10 36 20.8**	**-0.2**
MEM	**Membach**	**0.94**	**203**	Pg	**Pg**	**10 36 07.6**	**+0.7**
MEM				Sg	**Sb**	**10 36 20.8**	**-0.2**
IBBN	**Ibbenburen**	**1.10**	**41**	*e*Sg	**Sb**	**10 36 26.2**	**+0.6**
IBBN	**Ibbenburen**	**1.10**	**41**	Sg	**Sb**	**10 36 26.2**	**+0.6**
HILG	**

EMOS S Sn 10 42 40.4 -2.2
0.9nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.28 338 P Pn 10 41 54.4 +1.3
2.5nm,0.1s,SNR=12
EMOS S Sn 10 42 40.4 -2.2
0.9nm,0.2s,SNR=7.9

IDC 18 10:49:12.5±16.0, 30.03S×179.22E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.8/17, mbtmp4.0/4, ML3.8/1, Error ellipse: s-maj=311.0km s-min=46.3km az=69.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**8.40**	**191**	Pn	Pn	10 51 15.9	+0.5
	1.1nm,0.3s,baz=331,slow=17,SNR=20						
URZ				Sn	Sn	10 52 33.5	-17
	2.9nm,0.3s,baz=264,slow=21,SNR=19						
STKA	**Stephens Creek**	**32.22**	**257**	P	P	10 55 42.1	-0.4
	0.8nm,0.4s,baz=91,slow=13,SNR=5.8						
ASAR	**Alice Springs**	**40.72**	**268**	P	P	10 56 54.5	-0.6
	0.4nm,0.3s,baz=106,slow=7.0,SNR=21						
WRA	**Warramunga Arr**	**41.67**	**273**	P	P	10 57 03.5	+0.5
	1.0nm,0.3s,baz=111,slow=8.1,SNR=67						

*ISCJB **18** 11:11:24.6±0.5, 47.40N±0.05×145.3E±0.1, h450km, mb3.2/11, Error ellipse: s-maj=13.4km s-min=6.2km az=9.7*
*MOS **18** 11:11:25.9±0.9, 47.61N×145.01E, h465km, mb3.9/3, Error ellipse: s-maj=35.8km s-min=19.2km az=87.9*
*IDC **18** 11:11:26.1±1.7, 47.58N×145.12E, h449km±20km, mb2.9/11, mb1 3.1/12, mb1mx3.0/26, mbtmp2.9/12, Error ellipse: s-maj=17.1km s-min=13.9km az=108.0*

ISC 18 11:11:25.4±0.6, 47.28N±0.07×145.4E±0.1, h450km, n25, σ1=80/32, mb3.2/11, 1D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**1.83**	**261**	⇓ *i* PN	**P**	**11 12 27.7**	**+2.8**
YSS				*e* S	**S**	**11 13 14.1**	**+0.8**
YSS	comp=Z,50nm,0.8s			pmax	pmax		
YSS	comp=N,60nm,1.0s			smax	smax		
JSE	**Soyaes**	**3.03**	**221**	P	**P**	**11 12 34.9**	**+2.3**
JWK2	**Keihoku**	**3.12**	**232**	P	**P**	**11 12 36.1**	**+2.8**
JRA	**Rausu**	**3.35**	**183**	P	**P**	**11 12 37.7**	**+2.6**
JTKR	**Abashiri--Toko**	**3.47**	**198**	P	**P**	**11 12 38.4**	**+2.3**
ASAJ	**Asahikawa**	**3.72**	**213**	P	**P**	**11 12 40.7**	**+2.5**
	comp=N,1.7nm,0.3s,baz=210,slow=7.1,SNR=11						
NEM2	**Nemuro 2**	**3.92**	**176**	P	**P**	**11 12 40.2**	**+0.3**
NEM2				*e* S	**S**	**11 13 39.2**	**-1.2**
JAR	**Ashorobuto**	**4.14**	**197**	P	**P**	**11 12 43.8**	**+2.0**
JAK	**Akkeshi**	**4.31**	**187**	P	**P**	**11 12 44.2**	**+0.9**
JAK				*e* S	**S**	**11 13 45.6**	**-1.1**
JCH	**Churui**	**4.88**	**198**	P	**P**	**11 12 49.3**	**+0.7**
JCH				*e* S	**S**	**11 13 54.4**	**-2.0**
JNBK	**Urakawa-nobuka**	**5.34**	**202**	P	**P**	**11 12 53.8**	**+0.7**
JNBK				*e* S	**S**	**11 14 02.8**	**-1.8**
JKB	**Kayabe**	**6.22**	**212**	P	**P**	**11 13 03.3**	**+1.3**
JKB				*e* S	**S**	**11 14 19.5**	**-1.4**
ILAR	**Eielson Array**	**39.44**	**39**	P	**P**	**11 18 13.6**	**-1.1**
	comp=N,0.8nm,0.8s,baz=280,slow=7.8,SNR=12						
ILAR				PcP	**PcP**	**11 20 12.1**	**+0.4**
	comp=N,0.3nm,0.7s,baz=315,slow=0.6,SNR=4.4						
MKAR	**Makanchi Array**	**41.94**	**294**	P	**P**	**11 18 33.4**	**-1.6**
MKAR	**Makanchi Array**	**41.94**	**294**	P	**P**	**11 18 33.4**	**-1.6**
	comp=N,0.3nm,0.4s,baz=63,slow=3.2,SNR=7.2						
KURK	**Kurchatov**	**42.60**	**300**	P	**P**	**11 18 38.4**	**-1.7**
KURBB	**Kurchatov Arra**	**42.69**	**300**	P	**P**	**11 18 38.4**	**-2.4**
	comp=N,0.6nm,0.5s,baz=73,slow=8.7,SNR=5.1						
YKA	**Yellowknife Ar**	**53.58**	**35**	P	**P**	**11 20 02.2**	**-0.1**
	comp=N,0.5nm,0.5s,baz=304,slow=6.7,SNR=5.6						
ARCES	**ARCESS Array B**	**55.51**	**338**	P	**P**	**11 20 14.7**	**-1.2**
	comp=N,2.8nm,0.9s,baz=50,slow=8.4,SNR=4.0						
FINES	**FINESS Array B**	**61.17**	**331**	P	**P**	**11 20 52.7**	**-1.8**
	comp=N,1.3nm,0.5s,baz=39,slow=7.3,SNR=4.7						
NOA	**NORSAR Array B**	**65.87**	**338**	P	**P**	**11 21 23.5**	**-1.2**
	comp=N,0.6nm,0.4s,baz=33,slow=6.6,SNR=6.5						
WRA	**Warramunga Arr**	**67.64**	**191**	P	**P**	**11 21 37.8**	**+1.6**
	comp=N,0.3nm,0.6s,baz=7.4,slow=6.7,SNR=9.9						
PDAR	**Pinedale Array**	**68.58**	**50**	P	**P**	**11 21 42.4**	**+0.3**
	comp=N,0.6nm,0.6s,baz=257,slow=1.3,SNR=5.3						
ASAR	**Alice Springs**	**71.37**	**191**	P	**P**	**11 22 01.7**	**+3.1**
	comp=N,0.2nm,0.5s,baz=2.8,slow=4.9,SNR=5.8						
TXAR	**Lajitas Array**	**81.69**	**56**	P	**P**	**11 22 56.9**	**+1.1**
	comp=N,0.2nm,0.4s,baz=295,slow=4.0,SNR=10						

IDC 18 11:16:45.6±1.5, 8.67S×71.46W, h523km±24km, mb3.2/8, mb1 3.4/12, mb1mx3.2/24, mbtmp3.2/12, Error ellipse: s-maj=37.2km s-min=13.1km az=32.0, Western Brazil

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**6.24**	**238**	P	P	11 18 26.0	+0.6
	3.9nm,0.3s,baz=40,slow=7.9,SNR=20						
NNA				S	S	11 19 46.0	-0.8
	1.5nm,0.3s,baz=248,slow=22,SNR=5.5						
ATAH	**Atahualpa**	**7.04**	**282**	P	P	11 18 35.4	+1.8
	0.8nm,0.3s,baz=86,slow=6.0,SNR=3.7						
ATAH				S	S	11 20 01.3	-0.5
	1.2nm,0.3s,baz=336,slow=21,SNR=4.3						
LPAZ	**La Paz**	**8.24**	**157**	P	P	11 18 46.4	+0.6
	1.1nm,0.3s,baz=332,slow=7.6,SNR=27						
LPAZ				S	S	11 20 22.6	-1.8
	0.1nm,0.3s,baz=186,slow=19,SNR=2.9						
SIV	**San Ignacio**	**12.48**	**127**	P	P	11 19 29.7	+0.4
	0.7nm,0.3s,baz=328,slow=12,SNR=10.0						
TXAR	**Lajitas Array**	**48.89**	**322**	P	P	11 24 43.6	-0.1
	0.7nm,0.6s,baz=147,slow=8.8,SNR=12						
PDAR	**Pinedale Array**	**61.86**	**329**	P	P	11 26 13.7	-0.4
	0.6nm,0.5s,baz=120,slow=8.7,SNR=7.9						
ULM	**Lac du Bonnet**	**62.41**	**343**	P	P	11 26 16.3	-0.8
	7.9nm,0.7s,baz=148,slow=4.6,SNR=5.5						
NVAR	**Mina Array Bea**	**63.99**	**320**	P	P	11 26 28.2	+0.4
	0.1nm,0.5s,baz=203,slow=11,SNR=4.2						
NVAR				PcP	PcP	11 26 56.0	-1.8
	0.4nm,0.6s,baz=158,slow=4.2,SNR=3.8						
DBIC	**Dimbokro**	**68.11**	**79**	P	P	11 26 54.6	+0.9
	1.1nm,0.3s,baz=235,slow=7.5,SNR=5.9						
TORD	**Torodi Ar. Bea**	**75.80**	**74**	P	P	11 27 37.5	-0.8
	1.7nm,0.8s,baz=263,slow=4.5,SNR=9.2						
TORD				pP	pP	11 29 34.3	+4.8
	1.1nm,1.0s,baz=232,slow=4.7,SNR=4.6						
YKA	**Yellowknife Ar**	**78.33**	**341**	P	P	11 27 50.9	-0.2
	2.4nm,0.6s,baz=136,slow=5.9,SNR=44						
ILAR	**Eielson Array**	**91.64**	**335**	P	P	11 28 57.4	+1.0
	0.4nm,0.7s,baz=85,slow=5.3,SNR=6.7						
KURBB	**Kurchatov Arra**	**131.36**	**25**	PKP	PKPdf	11 34 58.6	+0.4
	0.3nm,0.4s,baz=319,slow=2.8,SNR=4.3						
MKAR	**Makanchi Array**	**135.89**	**26**	PKP	PKPdf	11 35 06.2	-0.8
	0.4nm,0.7s,baz=270,slow=4.2,SNR=3.4						
ASAR	**Alice Springs**	**139.41**	**217**	PKhKP	PKPpre	11 35 04.5	
	0.3nm,0.6s,baz=136,slow=3.1,SNR=6.6						
ASAR				PKP	PKPdf	11 35 13.1	-1.1
	0.4nm,0.6s,baz=131,slow=2.0,SNR=8.3						
WRA	**Warramunga Arr**	**141.88**	**222**	PKhKP	PKPpre	11 35 13.6	
	0.4nm,0.6s,baz=137,slow=2.7,SNR=14						
WRA				PKP	PKPdf	11 35 19.6	+1.0
	0.7nm,0.6s,baz=123,slow=1.9,SNR=15						
KSRS	**Korea Array**	**146.40**	**331**	PKPbc	PKPbc	11 35 28.4	+0.2
	4.2nm,0.8s,baz=30,slow=2.9,SNR=9.1						

*KRSC **18** 11:16:50.8±2.0, 53.37N×155.61E, h440km±69km, ML4.1*
*ISCJB **18** 11:16:55.7±0.7, 53.4N±0.1×155.8E±0.2, h400km, mb3.0/3, Error ellipse: s-maj=18.4km s-min=10.5km az=137.9*
*MOS **18** 11:16:55.5±1.0, 53.40N×155.84E, h405km, mb3.9/1, Error ellipse: s-maj=53.3km s-min=26.2km az=60.8*
*IDC **18** 11:16:56.6±2.8, 53.26N×155.66E, h394km±14km, mb2.7/4, mb1 3.1/4, mb1mx2.6/26, mbtmp2.7/4, Error ellipse: s-maj=149.0km s-min=19.2km az=138.0*

ISC 18 11:16:56.3±1.1, 53.4N±0.1×155.9E±0.1, h400km, n24, σ0=97/30, mb3.2/3, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APC	**Apacha**	**0.91**	**123**	P	**Pn**	**11 17 47.0**	**0.0**
PETK	**Petropavlovsk-**	**1.13**	**106**	PN	**Pn**	**11 17 47.9**	**+0.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**1.13**	**106**	P	**Pn**	**11 17 47.9**	**+0.1**
	comp=Z,1.3nm,0.3s,baz=248,slow=4.6,SNR=24						
GNL	**Ganaly**	**1.25**	**77**	P	**Pn**	**11 17 48.6**	**+0.2**
MIPR	**Malaya Ipel'ka**	**1.27**	**155**	P	**Pn**	**11 17 48.5**	**+0.1**
ASAK	**Asacha**	**1.60**	**130**	P	**Pn**	**11 17 50.5**	**+0.4**
AVH	**Avacha**	**1.71**	**94**	P	**Pn**	**11 17 51.7**	**+1.1**
UGLR	**Uglovaya**	**1.77**	**96**	P	**Pn**	**11 17 50.5**	**-0.4**
SDLR	**Sedlovina**	**1.79**	**94**	P	**Pn**	**11 17 51.7**	**+0.6**
RUS	**Russkaya**	**1.87**	**121**	PN	**Pn**	**11 17 51.2**	**-0.2**
RUS				S	**S**	**11 18 35.6**	**-0.4**
RUS	**Russkaya**	**1.87**	**121**	P	**Pn**	**11 17 51.2**	**-0.2**
RUS				*i* S	**S**	**11 18 35.6**	**-0.4**
SPN	**Mys Shipunski**	**2.50**	**96**	PN	**Pn**	**11 17 56.0**	**+0.5**
SPN				S	**S**	**11 18 43.4**	**-0.1**
SPN	**Mys Shipunski**	**2.50**	**96**	P	**Pn**	**11 17 56.0**	**+0.5**
SPN				*i* S	**S**	**11 18 43.4**	**-0.1**
ESO	**Esso**	**2.98**	**32**	PN	**Pn**	**11 17 59.0**	**-0.2**
ESO	**Esso**	**2.98**	**32**	P	**Pn**	**11 17 59.0**	**-0.2**
TUMR	**Tumrok**	**3.10**	**51**	P	**Pn**	**11 18 01.3**	**+1.0**
KMNR	**Kamenistaya**	**3.44**	**45**	P	**Pn**	**11 18 04.2**	**+1.1**
MKZ	**Mys Kozlova**	**3.62**	**69**	PN	**Pn**	**11 18 04.6**	**-0.1**
MKZ				S	**S**	**11 18 57.6**	**-2.6**
MKZ	**Mys Kozlova**	**3.62**	**69**	P	**Pn**	**11 18 04.6**	**-0.1**
MKZ				*i* S	**S**	**11 18 57.6**	**-2.6**
SRDR	**Sredinnyy**	**3.64**	**36**	P	**Pn**	**11 18 05.0**	**+0.1**
MJAR	**Matsushiro Arr**	**20.92**	**223**	P	**P**	**11 21 07.7**	**-1.4**
	comp=Z,1.3nm,0.5s,baz=12,slow=9.0,SNR=7.0						
TXAR	**Lajitas Array**	**72.79**	**64**	P	**P**	**11 27 44.6**	**+2.1**
	comp=Z,0.3nm,0.4s,baz=298,slow=5.0,SNR=12						
WRA	**Warramunga Arr**	**75.41**	**201**	P	**P**	**11 27 56.7**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=17,slow=6.0,SNR=3.1						
ASAR	**Alice Springs**	**79.11**	**200**	P	**P**	**11 28 17.7**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=14,slow=5.0,SNR=7.7						

*ISCJB **18** 11:19:55.8±0.4, 57.82N±0.03×21.91E±0.04, h0km, Error ellipse: s-maj=4.4km s-min=3.2km az=163.8*
*HEL **18** 11:19:56.9±0.1, 57.75N×21.95E, h0km, ML2.3, ML2.2(UPP), Explosion*
*CSEM **18** 11:19:57.2±0.2, 57.78N±2.1°94E, h2km, ML3.0, Error ellipse: s-maj=4.8km s-min=2.9km az=154.0, Mining explosion.*
*UPP **18** 11:19:57.2, 57.75N±21.97E, h0km, ML2.2, Suspected Mining explosion.*
*NAO **18** 11:19:58.8±2.0, 57.93N±21.91E, ML2.1*
*IDC **18** 11:19:58.5±2.3, 57.86N±21.95E, h0km, mb1 3.2/4, mb1mx3.0/27, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=23.5km s-min=8.5km az=167.0*
*BER **18** 11:19:59.8±4.0, 57.84N±21.89E, h0km, ML2.1(NAO), Suspected explosion*

ISC 18 11:19:55.3±0.7, 57.77N±0.03×21.87E±0.02, h0km, n112, σ1=83/135, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.27**	**122**	*e* P	**Pg**	**11 20 00.9**	**+0.6**
SLIT				*e* S	**Sg**	**11 20 03.6**	**-0.2**
SLIT	**Slitere, Latvi**	**0.27**	**122**	*e* P	**Pg**	**11 20 01.0**	**+0.6**
	SNR=90						
SLIT				S	**Sg**	**11 20 03.6**	**-0.2**
MTSE	**Matsula**	**1.40**	**47**	*e* P	**Pg**	**11 20 21.4**	**-0.6**
MTSE				*e* S	**Sg**	**11 20 39.7**	**-0.4**
MTSE	**Matsula**	**1.40**	**47**	P	**Pg**	**11 20 21.4**	**-0.6**
MTSE				S	**Sg**	**11 20 39.7**	**-0.4**
GOTU	**Gotland**	**1.77**	**269**	*e* P	**Pb**	**11 20 29.3**	**+0.7**
GOTU	**Gotland**	**1.77**	**269**	P	**Pb**	**11 20 29.3**	**+0.7**
NRTU	**Norrtaelje**	**2.55**	**320**	*e* P	**Pb**	**11 20 40.4**	**-1.5**
NRTU	**Norrtaelje**	**2.55**	**320**	P	**Pb**	**11 20 40.3**	**-1.5**
AAL	**Aland**	**2.60**	**339**	*e* P	**Pn**	**11 20 40.1**	**+1.6**
AAL				*e* SG	**Sg**	**11 21 19.0**	**+0.2**
AAL	**Aland**	**2.60**	**339**	P	**Pn**	**11 20 40.1**	**+1.6**
AAL				Sg	**Sg**	**11 21 19.0**	**+0.2**
VSU	**Vasula**	**2.67**	**73**	Pn	**Pn**	**11 20 40.9**	**+1.4**
VSU				Sn	**Sb**	**11 21 15.6**	**-1.7**
VSU	**Vasula**	**2.67**	**73**	Pn	**Pn**	**11 20 40.9**	**+1.4**
VSU				Sn	**Sb**	**11 21 15.6**	**-1.7**
VSU	**Vasula**	**2.67**	**73**	*e* P	**Pn**	**11 20 40.8**	**+1.3**
VSU				*e* SG	**Sb**	**11 21 17.2**	**0.0**
VSU	**Vasula**	**2.67**	**73**	Pn	**Pn**	**11 20 40.9**	**+1.4**
	SNR=50						
VSU				Sn	**Sb**	**11 21 15.6**	**-1.7**
	SNR=50						
VSU				Sg	**Sb**	**11 21 17.2**	**0.0**
MEF	**Metsahovi**	**2.78**	**27**	*e* PB	**Pb**	**11 20 44.5**	**-1.2**
MEF				*e* SB	**Sb**	**11 21 19.6**	**-0.7**
MEF				MSG		11 21 22.1	
	comp=Z,18nm,0.1s						
MEF	**Metsahovi**	**2.78**	**27**	Pb	**Pb**	**11 20 44.5**	**-1.2**
MEF	**Metsahovi**	**2.78**	**27**	*e* P	**Pb**	**11 20 44.9**	**-0.9**
	SNR=50						
MEF				Sb	**Sb**	**11 21 19.6**	**-0.7**
VIKU	**Vikbolandet**	**2.84**	**287**	*e* P	**Pb**	**11 20 45.2**	**-1.5**
VIKU	**Vikbolandet**	**2.84**	**287**	P	**Pb**	**11 20 45.2**	**-1.5**
ASPU	**Aespoe**	**2.86**	**265**	*e* P	**Pb**	**11 20 45.5**	**-1.6**
ASPU	**Aespoe**	**2.86**	**265**	P	**Pb**	**11 20 45.4**	**-1.6**
GRAU	**Graesoe**	**3.09**	**328**	*e* P	**Pn**	**11 20 47.3**	**+2.0**
GRAU	**Graesoe**	**3.09**	**328**	P	**Pn**	**11 20 47.3**	**+2.0**
FLYU	**Flymyra**	**3.14**	**321**	*e* P	**Pn**	**11 20 48.2**	**+2.3**
FLYU	**Flymyra**	**3.14**	**321**	P	**Pn**	**11 20 48.2**	**+2.3**
OSKU	**Oskarshamn**	**3.17**	**262**	*e* P	**Pn**	**11 20 48.7**	**+2.4**
OSKU	**Oskarshamn**	**3.17**	**262**	P	**Pn**	**11 20 48.6**	**+2.4**
ESKU	**Eskilstuna**	**3.22**	**299**	*e* P	**Pn**	**11 20 49.8**	**+2.7**
ESKU	**Eskilstuna**	**3.22**	**299**	P	**Pn**	**11 20 49.8**	**+2.7**
BACU	**Backbrunna**	**3.24**	**312**	*e* P	**Pn**	**11 20 49.8**	**+2.6**
BACU	**Backbrunna**	**3.24**	**312**	P	**Pn**	**11 20 49.8**	**+2.6**
RAF	**Rauma**	**3.26**	**359**	*e* P	**Pn**	**11 20 50.1**	**+2.5**
RAF				MSG		11 21 38.5	
	comp=Z,5.1nm,0.2s						
RAF	**Rauma**	**3.26**	**359**	P	**Pn**	**11 20 50.1**	**+2.5**
LNKU	**Linkoeping**	**3.42**	**280**	*e* P	**Pn**	**11 20 52.3**	**+2.6**
LNKU	**Linkoeping**	**3.42**	**280**	P	**Pn**	**11 20 52.3**	**+2.6**
PVF	**Pernaja**	**3.46**	**35**	*e* P	**Pn**	**11 20 52.5**	**+2.2**
PVF				MSG		11 21 52.3	
	comp=Z,4.7nm,0.1s						
PVF	**Pernaja**	**3.46**	**35**	P	**Pn**	**11 20 52.5**	**+2.2**
OSTU	**Oestervaala**	**3.48**	**317**	*e* P	**Pn**	**11 20 52.8**	**+2.2**
OSTU	**Oestervaala**	**3.48**	**317**	P	**Pn**	**11 20 52.7**	**+2.2**
BLEU	**Blekinge**	**3.62**	**249**	*e* P	**Pn**	**11 20 54.4**	**+1.9**
BLEU	**Blekinge**	**3.62**	**249**	P	**Pn**	**11 20 54.4**	**+1.9**
VXJU	**Vaexsjoe**	**3.85**	**260**	*e* P	**Pn**	**11 20 57.9**	**+2.2**
VXJU	**Vaexsjoe**	**3.85**	**260**	P	**Pn**	**11 20 57.8**	**+2.2**
ASKU	**Askersund**	**3.88**	**290**	*e* P	**Pn**	**11 20 59.2**	**+3.1**
ASKU	**Askersund**	**3.88**	**290**	P	**Pn**	**11 20 59.1**	**+3.1**
IGGU	**Iggoen**	**3.89**	**325**	*e* P	**Pn**	**11 20 58.6**	**+2.4**
IGGU	**Iggoen**	**3.89**	**325**	P	**Pn**	**11 20 58.5**	**+2.4**
NRAU	**Nora**	**4.00**	**300**	*e* P	**Pn**	**11 21 00.1**	**+2.4**
NRAU	**Nora**	**4.00**	**300**	P	**Pn**	**11 21 00.0**	**+2.4**
VJF	**Virojoki**	**4.04**	**44**	*e* P	**Pn**	**11 20 59.6**	**+1.4**
VJF				MSG		11 22 09.5	
	comp=Z,6.3nm,0.1s						
VJF	**Virojoki**	**4.04**	**44**	P	**Pn**	**11 20 59.6**	**+1.4**
FALU	**Falun**	**4.14**	**314**	*e* P	**Pn**	**11 21 01.7**	**+2.1**
FALU	**Falun**	**4.14**	**314**	P	**Pn**	**11 21 01.7**	**+2.1**
FIA0	**FINESS Array S**	**4.26**	**28**	Pn	**Pn**	**11 21 03.0**	**+1.8**
	baz=214,slow=12						
FIA0				Pg	**Pb**	**11 21 11.7**	**+0.8**
	baz=209,slow=14						
FIA0				Sn	**Sn**	**11 21 52.4**	**+0.7**
	baz=215,slow=22						
FIA0				Lg	Lg	11 22 07.5	
	baz=216,slow=28						
FIA0	**FINESS Array S**	**4.26**	**28**	Pn	**Pn**	**11 21 03.0**	**+1.8**
	baz=214,slow=12						
FIA0				Pg	**Pb**	**11 21 11.7**	**+0.8**
	baz=209,slow=14						
FIA0				Sn	**Sn**	**11 21 52.4**	**+0.7**
	baz=215,slow=22						
FIA0				Lg	Lg	11 22 07.5	
	baz=216,slow=28						
FIA0	**FINESS Array S**	**4.26**	**28**	*e* P	**Pn**	**11 21 03.2**	**+1.9**
FIA0	**FINESS Array S**	**4.26**	**28**	Pn	**Pn**	**11 21 03.0**	**+1.8**
	baz=214,slow=11,SNR=50						
FIA0				Sn	**Sn**	**11 21 52.3**	**+0.7**
	baz=215,slow=22,SNR=50						
FIA0				Lg	Lg	11 22 07.5	
	baz=216,slow=26,SNR=7.2						
FINES	**FINESS Array B**	**4.26**	**28**	Pn	**Pn**	**11 21 03.2**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=209,slow=12,SNR=11						
FINES				Pg	**Pb**	**11 21 12.4**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=215,slow=15,SNR=12						
FINES				Sn	**Sn**	**11 21 53.0**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=202,slow=18,SNR=3.5						
FINES				Lg	Lg	11 22 09.1	
	comp=Z,2.0nm,0.3s,baz=232,slow=26,SNR=12						
FKPU	**Falk**	**4.36**	**279**	P	**Pn**	**11 21 05.1**	**+2.5**
ARNU	**Arnoeviken**	**4.54**	**332**	*e* P	**Pn**	**11 21 06.7**	**+1.5**
ARNU	**Arnoeviken**	**4.54**	**332**	P	**Pn**	**11 21 06.7**	**+1.5**
DEL	**Delary**	**4.55**	**257**	*e* P	**Pn**	**11 21 07.6**	**+2.3**
DEL	**Delary**	**4.55**	**257**	P	**Pn**	**11 21 07.6**	**+2.3**
HUDU	**Hudiksvall**	**4.65**	**331**	*e* P	**Pn**	**11 21 09.0**	**+2.4**
HUDU	**Hudiksvall**	**4.65**	**331**	P	**Pn**	**11 21 08.9**	**+2.4**
KEF	**Keuruu**	**4.66**	**18**	*e* P	**Pn**	**11 21 09.3**	**+2.5**
KEF				MSG		11 22 26.3	
	comp=Z,2.9nm,0.2s						
KEF	**Keuruu**	**4.66**	**18**	P	**Pn**	**11 21 09.3**	**+2.5**
NASU	**Vaermlandsnaes**	**4.72**	**288**	*e* P	**Pn**	**11 21 10.2**	**+2.6**
NASU	**Vaermlandsnaes**	**4.72**	**288**	P	**Pn**	**11 21 10.1**	**+2.6**
HFS	**Hagfors**	**4.85**	**303**	Pn	**Pn**	**11 21 11.7**	**+2.3**
	baz=134,slow=14						
HFS				Sn	**Sn**	**11 22 06.5**	**+0.3**
	baz=111,slow=28						
HFS				Lg	Lg	11 22 27.4	
	baz=114,slow=28						
HFS	**Hagfors**	**4.85**	**303**	Pn	**Pn**	**11 21 11.7**	**+2.3**
	baz=134,slow=14						
HFS				Sn	**Sn**	**11 22 06.5**	**+0.3**
	baz=111,slow=28						
HFS				Lg	Lg	11 22 27.4	
	baz=114,slow=28						
HFS	**Hagfors**	**4.85**	**303**	Pn	**Pn**	**11 21 11.7**	**+2.3**
	comp=Z,0.5nm,0.3s,baz=137,slow=14,SNR=30						
HFS				Sn	**Sn**	**11 22 08.0**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=118,slow=21,SNR=3.4						
HFS				Lg	Lg	11 22 28.3	
	comp=Z,0.7nm,0.3s,baz=120,slow=32,SNR=5.3						
HFS	**Hagfors**	**4.85**	**303**	Pn	**Pn**	**11 21 11.6**	**+2.3**
	baz=134,slow=13,SNR=6.7						
HFS				Sn	**Sn**	**11 22 06.5**	**+0.3**
	baz=111,slow=27,SNR=50						
HFS				Lg	Lg	11 22 27.4	
	baz=114,slow=26,SNR=4.5						
UDD	**Uddeholm**	**4.87**	**302**	*e* P	**Pn**	**11 21 11.9**	**+2.2**
UDD	**Uddeholm**	**4.87**	**302**	P	**Pn**	**11 21 11.9**	**+2.2**
BORU	**Boraas**	**4.88**	**272**	*e* P	**Pn**	**11 21 12.5**	**+2.7**
BORU	**Boraas**	**4.88**	**272**	P	**Pn**	**11 21 12.5**	**+2.7**
KAF	**Kangasniemi**	**4.89**	**25**	MSG		11 22 30.1	
	comp=Z,3.0nm,0.2s						
LUNU	**Lund**	**5.11**	**249**	P	**Pn**	**11 21 14.1**	**+1.1**
HASU	**Hassela**	**5.13**	**331**	*e* P	**Pn**	**11 21 14.8**	**+1.6**
HASU	**Hassela**	**5.13**	**331**	P	**Pn**	**11 21 14.8**	**+1.6**
FINU	**Finntorp**	**5.18**	**292**	*e* P	**Pn**	**11 21 16.4**	**+2.5**
FINU	**Finntorp**	**5.18**	**292**	P	**Pn**	**11 21 16.3**	**+2.5**
VANU	**Vaenersborg**	**5.24**	**282**	*e* P	**Pn**	**11 21 16.7**	**+1.9**
VANU	**Vaenersborg**	**5.24**	**282**	P	**Pn**	**11 21 16.7**	**+1.9**
HEMU	**Hemsoen**	**5.28**	**340**	*e* P	**Pn**	**11 21 17.2**	**+2.0**
HEMU	**Hemsoen**	**5.28**	**340**	P	**Pn**	**11 21 17.2**	**+2.0**
TJOU	**Tjoern**	**5.47**	**277**	*e* P	**Pn**	**11 21 19.9**	**+2.0**
TJOU	**Tjoern**	**5.47**	**277**	P	**Pn**	**11 21 19.9**	**+2.0**
STRU	**Stroemstad**	**5.76**	**287**	*e* P	**Pn**	**11 21 24.0**	**+2.1**
STRU	**Stroemstad**	**5.76**	**287**	P	**Pn**	**11 21 24.0**	**+2.1**
SOLU	**Sollefteaa**	**5.95**	**339**	*e* P	**Pn**	**11 21 25.4**	**+1.0**
SOLU	**Sollefteaa**	**5.95**	**339**	P	**Pn**	**11 21 25.4**	**+1.0**
UMAU	**Umeaa**	**6.16**	**355**	*e* P	**Pn**	**11 21 29.3**	**+1.9**
UMAU	**Umeaa**	**6.16**	**355**	P	**Pn**	**11 21 29.2**	**+1.9**
NB2	**NORSAR Subarra**	**6.35**	**306**	Pn	**Pn**	**11 21 30.6**	**+0.6**
	baz=125,slow=14						
NB2				Lg	Lg	11 23 17.4	
	baz=112,slow=28						
NB2	**NORSAR Subarra**	**6.35**	**306**	P	Pn	11 21 23.4	-6.6
	comp=Z,0.6nm,0.4s,baz=31,slow=6.5						
**NB

ROCH				*e*S	Sn	11 40 05.5	+0.7
ROCH				AML	AML	11 40 07.3	
	comp=N,98nm,0.4s						
CHCH	**Chadas Angostu**	**3.29**	**209**	*e*P	Pn	11 39 38.7	+0.9
CACH	**El Canelo**	**3.42**	**207** ⇓	*i*P	Pn	11 39 41.1	+1.3

*ISCJB **18** 11:45:50.9±0.5,22.°76S±0.°05×66.°14W±0.°06, h259km±6km, mb4.1/16, Error ellipse: s-maj=9.2km s-min=7.8km az=179.3*
*NEIC **18** 11:45:51.8±0.4,22.°73S×66.°06W, h249km±4km, mb4.4/7, Error ellipse: s-maj=6.5km s-min=6.1km az=156.0*
*IDC **18** 11:45:52.3±1.4,22.°65S×65.°97W, h252km±11km, mb4.0/11, mb1 4.0/17, mb1mx3.9/23, mbtmp3.9/17, Error ellipse: s-maj=15.0km s-min=11.3km az=55.0*
*GUC **18** 11:45:53.5±0.4,22.°65S×66.°69W, h278km±7km, ML5.5*

ISC 18 11:45:51.5±0.7, 22.°74S±0.°05×66.°11W±0.°06, h247km±6km, n77, σ1§06/97, mb4.1/16, 14C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.59**	**272**	*e*Pn	**Pn**	**11 46 41.2**	**+1.6**
LVC				*e*Sn	**S**	**11 47 17.9**	**+0.3**
LVC	**Limon Verde**	**2.59**	**272** ⇑	*i*P	**Pn**	**11 46 41.3**	**+1.6**
LVC				*i* S	**S**	**11 47 17.4**	**-0.3**
PB09	**Plate Boundary**	**3.05**	**287** ⇑	*i*P	**Pn**	**11 46 46.2**	**+1.7**
PB09				*e*S	**S**	**11 47 25.8**	**-0.5**
PB09	**Plate Boundary**	**3.05**	**287** ⇑	*i*P	**Pn**	**11 46 46.2**	**+1.7**
PB09				*e*S	**S**	**11 47 25.8**	**-0.5**
PB09				AML	AML	11 47 29.5	
	comp=N,5μm,0.1s						
PB04	**Plate Boundary**	**3.16**	**278** ⇑	*i*P	Pn	11 46 53.1	+7.6
PB04				*i* S	S	11 47 38.1	+10
PB04				AML	AML	11 47 43.2	
	comp=N,3μm,0.5s						
PB01	**Plate Boundary**	**3.56**	**298** ⇑	*i*P	**Pn**	**11 46 50.9**	**+0.8**
PB01				*i* S	**S**	**11 47 34.8**	**-1.8**
PB01	**Plate Boundary**	**3.56**	**298** ⇑	*i*P	**Pn**	**11 46 50.9**	**+0.8**
PB01				*i* S	**S**	**11 47 34.8**	**-1.8**
PB01				AML	AML	11 47 36.2	
	comp=E,4μm,0.3s						
PB07	**Plate Boundary**	**3.64**	**285** ⇑	*i*P	**Pn**	**11 46 51.9**	**+0.7**
PB07				*i* S	**S**	**11 47 35.9**	**-2.5**
PB07	**Plate Boundary**	**3.64**	**285** ⇑	*i*P	**Pn**	**11 46 51.9**	**+0.7**
PB07				*i* S	**S**	**11 47 35.9**	**-2.5**
CEN1	**Los Morros**	**3.82**	**259** ⇑	*i*P	**Pn**	**11 46 54.0**	**+0.8**
CEN1				*i* S	**S**	**11 47 41.8**	**-0.3**
CEN1	**Los Morros**	**3.82**	**259** ⇑	*i*P	**Pn**	**11 46 54.0**	**+0.8**
CEN1				*i* S	**S**	**11 47 41.8**	**-0.3**
CEN1				AML	AML	11 47 45.8	
	comp=N,2μm,0.5s						
MECH	**Mejillones**	**4.02**	**264**	*e*P	**Pn**	**11 46 56.2**	**+0.9**
MECH	**Mejillones**	**4.02**	**264**	*e*P	**Pn**	**11 46 56.2**	**+0.9**
ANCH	**Antofagasta**	**4.07**	**256** ⇑	*i*P	**Pn**	**11 46 56.6**	**+0.7**
ANCH				*i* S	**S**	**11 47 44.7**	**-2.4**
ANCH	**Antofagasta**	**4.07**	**256** ⇑	*i*P	**Pn**	**11 46 56.6**	**+0.7**
ANCH				*i* S	**S**	**11 47 44.7**	**-2.4**
MNMC	**Minimini**	**4.85**	**317** ⇑	*i*P	**Pn**	**11 47 06.0**	**+0.4**
MNMC				*i* S	**S**	**11 48 02.3**	**-2.3**
MNMC	**Minimini**	**4.85**	**317** ⇑	*i*P	**Pn**	**11 47 06.0**	**+0.4**
MNMC				*i* S	**S**	**11 48 02.3**	**-2.3**
LPAZ	**La Paz**	**6.69**	**343**	*e*Pn	**Pn**	**11 47 29.9**	**+1.0**
	comp=N,12nm,0.8s						
LPAZ				S	**S**	**11 48 47.1**	**+0.3**
LPAZ				*e*Sn		11 48 47.8	
LPAZ	**La Paz**	**6.69**	**343**	P	**Pn**	**11 47 29.9**	**+1.0**
	comp=N,1.6nm,0.3s,baz=152,slow=7.7,SNR=31						
LPAZ				S	**S**	**11 48 47.1**	**+0.3**
	comp=N,0.8nm,0.3s,baz=282,slow=22,SNR=8.2						
LCO	**Las Campanas**	**7.49**	**213**	*e*Pn	**Pn**	**11 47 37.5**	**-1.0**
	comp=N,26nm,0.6s						
LCO				*e*Sn	S	11 48 52.6	-12
SIV	**San Ignacio**	**8.22**	**36**	P	**Pn**	**11 47 47.5**	**-0.2**
SIV	**San Ignacio**	**8.22**	**36**	P	**Pn**	**11 47 47.5**	**-0.2**
	comp=N,5.8nm,0.3s,baz=228,slow=14,SNR=114						
CPUP	**Villa Florida**	**8.76**	**116**	P	**Pn**	**11 47 55.5**	**+1.1**
CPUP	**Villa Florida**	**8.76**	**116**	P	**Pn**	**11 47 55.5**	**+1.1**
	comp=N,0.5nm,0.3s,baz=285,slow=14,SNR=5.2						
SAML	**Samuel**	**13.99**	**12**	*e*Pn	**Pn**	**11 48 59.8**	**0.0**
	comp=N,12nm,0.8s						
NNA	**Nana**	**14.80**	**314**	P	**Pn**	**11 49 10.1**	**+0.5**
NNA				*e*Pn	**P**	**11 49 10.4**	**+0.9**
NNA	**Nana**	**14.80**	**314**	P	**Pn**	**11 49 10.1**	**+0.5**
	comp=N,1.3nm,0.3s,baz=158,slow=13,SNR=9.6						
SPB	**Sao Paulo**	**17.20**	**96**	*e*P	**P**	**11 49 35.8**	**+0.1**
	comp=N,23nm,0.7s						
PLCA	**Paso Flores**	**18.33**	**191**	P	**P**	**11 49 48.1**	**+0.3**
PLCA	**Paso Flores**	**18.33**	**191**	P	**P**	**11 49 48.1**	**+0.3**
	comp=N,1.0nm,0.3s,baz=358,slow=11,SNR=11						
BDFB	**Brasilia**	**18.48**	**71**	P	**P**	**11 49 50.0**	**+0.3**
BDFB	**Brasilia**	**18.48**	**71**	P	**P**	**11 49 50.0**	**+0.3**
	comp=N,2.0nm,0.3s,baz=244,slow=11,SNR=42						
RCBR	**Riachuelo**	**33.64**	**65**	P	**P**	**11 52 07.7**	**-1.6**
RCBR	**Riachuelo**	**33.64**	**65**	P	**P**	**11 52 07.7**	**-1.6**
	comp=N,12nm,0.6s,baz=224,slow=11,SNR=12						
GRGR	**Grenville**	**34.93**	**8**	*e*P	**P**	**11 52 20.0**	**-0.3**
	comp=N,34nm,0.5s						
SNAA	**Sanae**	**60.27**	**161**	P	**P**	**11 55 35.1**	**+1.4**
SNAA	**Sanae**	**60.27**	**161**	P	**P**	**11 55 35.1**	**+1.4**
	comp=N,3.3nm,1.2s,baz=308,slow=6.7,SNR=15						
TKL	**Tuckaleechee C**	**60.44**	**343**	P	**P**	**11 55 35.0**	**-0.2**
TKL	**Tuckaleechee C**	**60.44**	**343**	P	**P**	**11 55 35.0**	**-0.2**
	comp=N,5.8nm,0.8s,baz=128,slow=11,SNR=4.6						
WVT	**Waverly**	**62.05**	**340**	*e*P	**P**	**11 55 45.2**	**-0.7**
	comp=N,7.6nm,0.7s						
TXAR	**Lajitas Array**	**63.14**	**323**	P	**P**	**11 55 54.2**	**+0.8**
TXAR	**Lajitas Array**	**63.14**	**323**	P	**P**	**11 55 54.2**	**+0.8**
	comp=N,0.2nm,0.4s,baz=148,slow=7.6,SNR=6.0						
DBIC	**Dimbokro**	**66.63**	**72**	P	**P**	**11 56 15.2**	**-0.8**
DBIC	**Dimbokro**	**66.63**	**72**	P	**P**	**11 56 15.2**	**-0.8**
	comp=N,7.9nm,0.7s,baz=233,slow=6.3,SNR=12						
TOA0	**Torodi Ar. Sit**	**75.35**	**69**	*e*P	**P**	**11 57 07.3**	**-1.1**
TORD	**Torodi Ar. Bea**	**75.35**	**69**	P	**P**	**11 57 07.5**	**-0.8**
TORD	**Torodi Ar. Bea**	**75.35**	**69**	P	**P**	**11 57 07.5**	**-0.8**
	comp=N,8.7nm,0.4s,baz=257,slow=5.9,SNR=171						
SCHQ	**Schefferville**	**77.25**	**360**	P	**P**	**11 57 16.9**	**-1.2**
SCHQ	**Schefferville**	**77.25**	**360**	P	**P**	**11 57 16.9**	**-1.2**
	comp=N,2.4nm,0.6s,baz=151,slow=5.3,SNR=5.7						
NVAR	**Mina Array Bea**	**78.08**	**321**	P	**P**	**11 57 23.6**	**+0.2**
NVAR	**Mina Array Bea**	**78.08**	**321**	P	**P**	**11 57 23.6**	**+0.2**
	comp=N,0.2nm,0.6s,baz=140,slow=5.8,SNR=2.6						
BOSA	**Boshof**	**80.58**	**117**	P	**P**	**11 57 35.4**	**-1.7**
BOSA	**Boshof**	**80.58**	**117**	P	**P**	**11 57 35.4**	**-1.7**
	comp=N,4.9nm,0.8s,baz=12,slow=2.5,SNR=9.4						
MDT	**Midelt**	**80.58**	**49**	P	**P**	**11 57 35.3**	**-1.6**
MDT	**Midelt**	**80.58**	**49**	P	**P**	**11 57 35.3**	**-1.6**
	comp=N,2.8nm,0.9s,baz=338,slow=9.0,SNR=4.0						
TAM	**Tamanrasset**	**83.08**	**62**	*e*P	**P**	**11 57 50.1**	**-0.1**
	comp=N,3.1nm,0.8s						
ESDC	**Sonseca Array**	**84.92**	**43**	P	**P**	**11 57 59.6**	**+0.7**
ESDC	**Sonseca Array**	**84.92**	**43**	P	**P**	**11 57 59.6**	**+0.7**
	comp=N,0.6nm,0.3s,baz=249,slow=4.3,SNR=6.3						
KEST	**Kesra**	**91.99**	**52**	P	**P**	**11 58 33.2**	**+0.7**
KEST	**Kesra**	**91.99**	**52**	P	**P**	**11 58 33.2**	**+0.7**
	comp=N,1.6nm,0.8s,baz=274,slow=2.7,SNR=6.5						
YKA	**Yellowknife Ar**	**93.23**	**340**	P	**P**	**11 58 37.9**	**+0.5**
YKA	**Yellowknife Ar**	**93.23**	**340**	P	**P**	**11 58 37.8**	**+0.5**
	comp=N,1.2nm,0.6s,baz=129,slow=4.6,SNR=21						
ASAR	**Alice Springs**	**129.94**	**204**	PKP	**PKPdf**		**+0.4**
ASAR				SKPbc	SKPab	12 07 31.2	-0.3
ASAR	**Alice Springs**	**129.94**	**204**	PKP	**PKPdf**		**+0.4**
	comp=N,0.3nm,0.5s,baz=142,slow=2.0,SNR=8.2						
ASAR				SKPbc	SKPab	12 07 31.2	-0.3
	comp=N,1.0nm,0.8s,baz=150,slow=3.2,SNR=11						
WRA	**Warramunga Arr**	**133.12**	**207**	PKP	**PKPdf**		**0.0**
WRA				SKPbc	**SKPbc**		**-0.3**
WRA	**Warramunga Arr**	**133.12**	**207**	PKP	**PKPdf**		**0.0**
	comp=N,0.4nm,0.6s,baz=164,slow=1.7,SNR=11						
WRA				SKPbc	**SKPbc**		**-0.3**
	comp=N,2.9nm,0.9s,baz=158,slow=3.0,SNR=15						
FITZ	**Fitzroy Crossi**	**137.82**	**197**	SKPbc	**SKPbc**		**+0.6**
FITZ	**Fitzroy Crossi**	**137.82**	**197**	SKPbc	**SKPbc**		**+0.6**
	comp=N,2.6nm,1.0s,baz=250,slow=5.3,SNR=3.8						
AAK	**Ala-Archa**	**141.80**	**49**	PKP	**PKPdf**		**+0.8**
AAK	**Ala-Archa**	**141.80**	**49**	PKP	**PKPdf**		**+0.8**
	comp=N,0.9nm,0.4s,baz=161,slow=3.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**141.90**	**28**	PKP	**PKPdf**		**+0.8**
ZALV	**Zalesovo Beam**	**141.90**	**28**	PKP	**PKPdf**		**+0.8**
	comp=N,2.0nm,0.5s,baz=296,slow=3.1,SNR=7.1						
MK31	**Makanchi Array**	**145.03**	**39**	*e*PKPdf	**PKPab**		**+0.4**
MKAR	**Makanchi Array**	**145.03**	**39**	PKP	**PKPab**		**+0.1**
MKAR	**Makanchi Array**	**145.03**	**39**	PKP	**PKPab**		**+0.6**
	comp=N,16nm,0.8s,baz=312,slow=3.3,SNR=106						

SONM	**Songino Array**	**154.25**	**12**	PKPbc	**PKPbc**	**12 05 23.0**	**+0.7**
SONM				PKPab	**PKPab**	**12 05 36.8**	**-0.4**
SONM	**Songino Array**	**154.25**	**12**	PKPbc	**PKPbc**	**12 05 23.0**	**+0.7**
	comp=N,0.5nm,0.3s,baz=31,slow=0.3,SNR=5.9						
SONM				PKPab	**PKPab**	**12 05 36.8**	**-0.4**
	comp=N,0.8nm,0.6s,baz=325,slow=4.3,SNR=5.5						

*DJA **18** 11:50:09.9±1.3,2.°N±9.°9×9.°6E±1.°4, h10km, M4.3/4, mb4.1/3, mB4.8/1, MLv4.5/4, Mw(mB)4.0/1*
*IDC **18** 11:50:10.8±1.2,2.°59N×95.°81E, h0km, mb4.1/11, mb1 4.2/13, mb1mx4.0/29, mbtmp4.1/13, ML4.0/2, MS3.1/2, Ms1 3.2/2, ms1mx2.6/41, Error ellipse: s-maj=39.2km s-min=15.0km az=52.0*
*ISCJB **18** 11:50:12.8±0.6,2.°62N±0.°06×95.°79E±0.°07, h25km, mb4.1/12, Error ellipse: s-maj=12.4km s-min=5.0km az=141.1*
*NEIC **18** 11:50:16.1±0.5,2.°65N×95.°88E, h35km, mb4.0/2, Error ellipse: s-maj=10.8km s-min=6.5km az=222.0*
*AUST **18** 11:50:16.1±0.0,2.°58N×95.°76E, h43km±2km, Error ellipse: s-maj=3.6km s-min=1.2km az=254.0*

ISC 18 11:50:14.3±0.7, 2.°60N±0.°07×95.°80E±0.°09, h25km, n50, σ1§18/53, mb4.2/12, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**2.20**	**126**	P	**Pn**	**11 50 49.7**	**+0.5**
GSI	**Gunungsitoli**	**2.20**	**126**	P	**Pn**	**11 50 50.2**	**+1.0**
	baz=2.2,SNR=19						
GSI				S	**Sn**	**11 51 15.2**	**-0.4**
	baz=2.2,SNR=11						
LHMI	**Lhok Sumawe**	**2.85**	**24**	P	**Pn**	**11 50 59.9**	**+1.7**
LHMI	**Lhok Sumawe**	**2.85**	**24**	P	**Pn**	**11 50 59.9**	**+1.7**
	baz=2.9,SNR=6.6						
TSI	**Tuntungan**	**2.91**	**72**	P	**Pn**	**11 51 01.0**	**+2.0**
BSI	**Banda Aceh**	**2.92**	**350**	P	**Pn**	**11 50 57.8**	**-1.4**
PSI	**Prapat**	**3.13**	**86**	Pn	**Pn**	**11 51 02.7**	**+0.5**
PSI	**Prapat**	**3.13**	**86**	Pn	**Pn**	**11 51 02.7**	**+0.5**
	5.9nm,0.3s,baz=282,slow=7.4,SNR=26						
PSI				LR	LR	11 52 26.8	
	comp=Z,250nm,19.2s,baz=260,slow=44						
PSI	**Prapat**	**3.13**	**86**	P	**Pn**	**11 51 03.7**	**+1.5**
	baz=3.2,SNR=7.6						
MNSI	**Mandailing Nat**	**4.19**	**115**	P	**Pn**	**11 51 18.1**	**+1.5**
PPI	**Padang Panjang**	**5.51**	**123**	P	**Pn**	**11 51 37.8**	**+2.9**
	baz=5.5,SNR=4.0						
PPI				S	**Sn**	**11 52 37.1**	**-0.4**
	baz=5.5,SNR=3.7						
KULM	**Kulim**	**5.53**	**61**	*e*Pn	**Pn**	**11 51 35.7**	**+0.6**
	99nm,0.9s						
IPM	**Ipoh**	**5.54**	**70**	*e*Pn	**Pn**	**11 51 35.7**	**+0.4**
	30nm,0.5s						
MNAI	**Manna**	**9.95**	**134**	P	**Pn**	**11 52 37.1**	**+1.3**
	baz=10.0,SNR=5.1						
MNAI				S	**Sn**	**11 54 22.2**	**-4.6**
	baz=10.0,SNR=4.9						
PBKT	**Sadao Pong**	**14.78**	**20**	P	**P**	**11 53 47.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**16.06**	**11**	Pn	**Pn**	**11 53 57.5**	**-1.1**
CMAR	**Chiang Mai Arr**	**16.06**	**11**	Pn	**Pn**	**11 53 57.5**	**-1.1**
	0.5nm,0.3s,baz=196,slow=11,SNR=28						
CMAR				LR	LR	12 00 07.0	
	comp=Z,76nm,19.4s,baz=200,slow=37						
CHTO	**Chiang Mai**	**16.40**	**11**	*e*Pn	**Pn**	**11 54 02.0**	**-1.0**
	3.4nm,0.8s						
CHTO	**Chiang Mai**	**16.40**	**11**	P	**Pn**	**11 54 02.0**	**-1.0**
	8.2nm,1.1s						
CMMT	**Chiang Mai**	**16.40**	**11**	P	**Pn**	**11 54 02.3**	**-0.7**
	7.4nm,1.0s,387nm						
KKM	**Kota Kinabalu**	**20.64**	**80**	*e*P	**P**	**11 54 50.9**	**-1.5**
KAPI	**Kappang**	**25.10**	**108**	P	**P**	**11 55 37.2**	**-0.2**
KAPI	**Kappang**	**25.10**	**108**	P	**P**	**11 55 37.2**	**-0.2**
	5.8nm,0.5s,baz=255,slow=6.0,SNR=4.7						
BKSI	**Bulukumba**	**25.54**	**108**	P	**P**	**11 55 42.4**	**+1.0**
WRA	**Warramunga Arr**	**43.97**	**122**	P	**P**	**11 58 20.1**	**+0.3**
WRA	**Warramunga Arr**	**43.97**	**122**	P	**P**	**11 58 20.1**	**+0.3**
	0.7nm,0.4s,baz=300,slow=9.3,SNR=10						
WRAB	**Tennant Creek**	**43.97**	**122**	*e*P	**P**	**11 58 19.8**	**0.0**
AAK	**Ala-Archa**	**44.17**	**337**	P	**P**	**11 58 23.0**	**+1.7**
AAK	**Ala-Archa**	**44.17**	**337**	P	**P**	**11 58 23.0**	**+1.7**
	0.4nm,0.4s,baz=108,slow=19,SNR=2.2						
ASAR	**Alice Springs**	**45.35**	**127**	P	**P**	**11 58 31.5**	**+0.6**
ASAR	**Alice Springs**	**45.35**	**127**	P	**P**	**11 58 31.5**	**+0.6**
	0.4nm,0.5s,baz=300,slow=7.9,SNR=20						
KSAR	**Wonju Array Be**	**45.50**	**36**	P	**P**	**11 58 31.4**	**-0.4**
KSRS	**Korea Array**	**45.53**	**36**	P	**P**	**11 58 31.4**	**-0.6**
	1.9nm,0.7s,baz=229,slow=9.8,SNR=6.7						
MK31	**Makanchi Array**	**45.56**	**347**	*e*P	**P**	**11 58 32.5**	**+0.4**
MKAR	**Makanchi Array**	**45.56**	**347**	P	**P**	**11 58 32.7**	**+0.6**
MKAR	**Makanchi Array**	**45.56**	**347**	P	**P**	**11 58 32.7**	**+0.6**
	3.0nm,0.6s,baz=159,slow=8.8,SNR=44						
SONM	**Songino Array**	**45.98**	**10**	P	**P**	**11 58 35.8**	**+0.2**
SONM	**Songino Array**	**45.98**	**10**	P	**P**	**11 58 35.8**	**+0.2**
	4.1nm,0.7s,baz=189,slow=9.3,SNR=30						
KKAR	**Karatay Array**	**46.19**	**334**	*e*P	**P**	**11 58 38.0**	**+0.8**
ZALV	**Zalesovo Beam**	**51.97**	**352**	P	**P**	**11 59 21.9**	**+0.6**
ZALV	**Zalesovo Beam**	**51.97**	**352**	P	**P**	**11 59 21.9**	**+0.6**
	3.2nm,0.4s,baz=183,slow=6.3,SNR=7.4						
STKA	**Stephens Creek**	**55.33**	**132**	P	**P**	**11 59 45.9**	**-0.4**
STKA	**Stephens Creek**	**55.33**	**132**	P	**P**	**11 59 45.9**	**-0.4**
	1.0nm,0.6s,baz=291,slow=8.6,SNR=4.1						
ABKAR	**Akbulak array**	**55.63**	**332**	*e*P	**P**	**11 59 48.3**	**+0.2**
	3.3nm,0.9s						
FINES	**FINESS Array B**	**78.12**	**333**	P	**P**	**12 02 11.3**	**+0.3**
FINES	**FINESS Array B**	**78.12**	**333**	P	**P**	**12 02 11.3**	**+0.3**
	0.8nm,0.6s,baz=129,slow=4.4,SNR=3.4						
ARCES	**ARCESS Array B**	**80.75**	**340**	P	**P**	**12 02 25.6**	**+0.3**
ARCES	**ARCESS Array B**	**80.75**	**340**	P	**P**	**12 02 25.6**	**+0.3**
	4.2nm,1.1s,baz=90,slow=6.1,SNR=5.9						
TXAR	**Lajitas Array**	**143.18**	**29**	PKP	**PKPdf**	**12 09 46.4**	**-0.8**
TXAR	**Lajitas Array**	**143.18**	**29**	PKP	**PKPdf**	**12 09 46.4**	**-0.8**
	0.1nm,0.4s,baz=347,slow=3.9,SNR=3.8						

MEX 18 11:52:43.8±0.7, 16.°07N×97.°72W, h10km±10km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.51**	**309**	*e*P	Pg	11 52 52.9	-1.0
PNIG				*i* S	Sg	11 53 00.5	-0.1
VHO	**Vista Hermosa**	**1.37**	**43**	*i* P	Pn	11 53 05.2	-4.1
VHO				*i* S	Sb	11 53 22.7	-5.0
HUIG	**Huatulco**	**1.57**	**101**	*i* P	Pn	11 53 08.7	-3.2
HUIG				*i* S	Sn	11 53 26.7	-5.6
UTMO	**Huajuapan**	**1.75**	**357**	*i* P	Pn	11 53 11.8	-2.8
UTMO				*i* S	Sn	11 53 33.0	-4.2

*NEIC **18** 11:57:36.4,56.°36N×151.°91W, h10km, mb4.1/8, ML3.8(AEIC), After AEIC.*
*IDC **18** 11:57:37.0±0.9,56.°68N×152.°17W, h0km, mb4.1/16, mb1 4.2/19, mb1mx4.1/31, mbtmp4.0/19, ML3.4/2, MS3.4/7, Ms1 3.4/7, ms1mx3.0/43, Error ellipse: s-maj=27.4km s-min=13.0km az=33.0*
*ISCJB **18** 11:57:38.8±0.4,56.°75N±0.°03×151.°95W±0.°06, h18km, mb4.0/24, MS3.4/4, Error ellipse: s-maj=5.3km s-min=4.2km az=33.3*

ISC 18 11:57:39.2±0.6, 56.°59N±0.°07×152.°09W±0.°05, h18km, n113, σ1§25/115, mb4.1/24, MS3.4/4, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.91**	**314**	P	**Pb**	**11 57 55.4**	**-1.1**
KDAK	**Kodiak Island**	**1.23**	**348**	Pn	**Pn**	**11 58 00.7**	**-0.7**
KDAK	**Kodiak Island**	**1.23**	**348**	Pn	**Pn**	**11 58 00.7**	**-0.7**
	20nm,0.3s,baz=186,slow=8.5,SNR=125						
KABR	**Katmai Barrier**	**2.20**	**316**	P	**Pn**	**11 58 14.9**	**0.0**
KAKN	**Katmai Knife C**	**2.35**	**318**	P	**Pn**	**11 58 17.7**	**+0.8**
FOSS	**Fourpeaked Sta**	**2.38**	**339**	P	**Pn**	**11 58 18.2**	**+0.9**
FONW	**Fourpeaked Sta**	**2.46**	**337**	P	**Pn**	**11 58 18.9**	**+0.4**
KELA	**Mount Kelaz**	**2.71**	**315**	P	**Pn**	**11 58 22.1**	**+0.2**
MCNL	**McNeil River**	**2.87**	**336**	P	**Pn**	**11 58 24.7**	**+0.7**
AUW	**Augustine West**	**2.88**	**346**	P	**Pn**	**11 58 24.7**	**+0.5**
OPT	**Oil Point**	**3.13**	**349**	P	**Pn**	**11 58 28.3**	**+0.6**
BRLK	**Bradley Lake**	**3.25**	**11**	P	**Pn**	**11 58 28.3**	**-0.9**
ANNW	**Aniakchak Nort**	**3.39**	**279**	P	**Pn**	**11 58 29.8**	**-1.5**
CHGN	**Chignik**	**3.52**	**268**	*e*Pn	**Pn**	**11 58 30.2**	**-2.7**
SEW	**Seward**	**3.79**	**20**	P	**Pn**	**11 58 35.0**	**-1.7**
SEW				S	**Sn**	**11 59 23.8**	**+3.1**
RSO	**Redoubt South**	**3.90**	**355**	*e*Pn	**Pn**	**11 58 38.4**	**+0.1**

DFR	**Drift River**	**4.03**	**356**	P	**Pn**	**11 58 40.2**	**+0.2**
SPU	**Mount Spurr**	**4.61**	**0**	P	**Pn**	**11 58 47.5**	**-0.4**
SPU				S	**Sn**	**11 59 43.6**	**+2.7**
CKL	**Chakachamna La**	**4.62**	**359**	P	**Pn**	**11 58 48.9**	**+0.7**
SVW2	**Sparrevohn**	**4.87**	**340**	*e*Pn	**Pn**	**11 58 51.8**	**+0.2**
SDPT	**Sand Point**	**4.87**	**259**	P	**Pn**	**11 58 49.1**	**-2.5**
SUA	**Susitna One**	**4.94**	**8**	P	**Pn**	**11 58 52.1**	**-0.4**
EYAK	**Cordova Ski Ar**	**5.17**	**37**	P	**Pn**	**11 58 54.7**	**-1.0**
EYAK				S	**Sn**	**11 59 54.7**	**-0.1**
PMR	**Palmer**	**5.24**	**16**	P	**Pn**	**11 58 55.4**	**-1.2**
RAGM	**Ragged Mountai**	**5.44**	**43**	P	**Pn**	**11 58 57.6**	**-1.8**
VLZ	**Valdez**	**5.45**	**31**	P	**Pn**	**11 58 58.7**	**-0.7**
GOAT	**Goat Mountain**	**5.55**	**41**	P	**Pn**	**11 59 00.2**	**-0.7**
GOAT				S	**Sn**	**12 00 05.0**	**+0.8**
SML	**Sawmill**	**5.58**	**19**	*e*Pn	**Pn**	**11 59 00.1**	**-1.1**
DIV	**Divide**	**5.61**	**33**	P	**Pn**	**11 59 00.9**	**-0.8**
KLU	**Klutina**	**5.86**	**30**	P	**Pn**	**11 59 04.5**	**-0.6**
PPLA	**Purkeypile**	**6.33**	**360**	*e*Pn	**Pn**	**11 59 13.5**	**+1.9**
VRDI	**Verde Repeater**	**6.45**	**40**	P	**Pn**	**11 59 12.4**	**-1.0**
TT01	**Tatalina**	**6.64**	**344**	P	**Pn**	**11 59 15.2**	**-0.6**
KIAG	**Kiagna River**	**6.67**	**45**	P	**Pn**	**11 59 15.2**	**-1.2**
BALM	**Baldy**	**6.74**	**45**	P	**Pn**	**11 59 15.9**	**-1.4**
HARP	**HAARP**	**6.82**	**28**	P	**Pn**	**11 59 18.0**	**-0.2**
SAMH	**Samovar Hills**	**6.92**	**54**	P	**Pn**	**11 59 18.4**	**-1.4**
TRF	**Thorofare Moun**	**6.94**	**7**	*e*Pn	**Pn**	**11 59 19.3**	**-0.8**
BARN	**Barnard Glacie**	**7.02**	**46**	P	**Pn**	**11 59 19.9**	**-1.3**
RND	**Reindeer**	**7.03**	**12**	P	**Pn**	**11 59 21.1**	**-0.1**
PAX	**Paxson**	**7.22**	**25**	*e*Pn	**Pn**	**11 59 23.2**	**-0.6**
MCK	**McKinley**	**7.34**	**11**	P	**Pn**	**11 59 25.3**	**-0.1**
PNL	**Peninsula**	**7.39**	**60**	*e*Pn	**Pn**	**11 59 26.1**	**-0.1**
	61nm,0.4s						
MENT	**Mentasta**	**7.64**	**30**	*e*Pn	**Pn**	**11 59 29.2**	**-0.2**
DOT	**Dot Lake**	**8.13**	**26**	*e*Pn	**Pn**	**11 59 38.5**	**+2.2**
	19nm,1.1s						
WRH	**Wood River Hil**	**8.15**	**12**	P	**Pn**	**11 59 36.7**	**+0.3**
BCA3	**Beaver Creek A**	**8.30**	**34**	P	**Pn**	**11 59 37.0**	**-1.7**
CCB	**Clear Creek Bu**	**8.35**	**13**	P	**Pn**	**11 59 37.1**	**-2.1**
COLA	**College**	**8.56**	**12**	P	**Pn**	**11 59 41.6**	**-0.5**
IL1	**Eielson Array**	**8.59**	**15**	P	**Pn**	**11 59 42.1**	**-0.4**
ILAR	**Eielson Array**	**8.59**	**15**	Pn	**Pn**	**11 59 42.2**	**-0.4**
ILAR				Sn	**Sn**	**12 01 15.6**	**-3.3**
ILAR	**Eielson Array**	**8.59**	**15**	Pn	**Pn**	**11 59 42.2**	**-0.4**
	1.7nm,0.3s,baz=209,slow=14,SNR=88						
ILAR				Sn	**Sn**	**12 01 15.6**	**-3.3**
	0.2nm,0.3s,baz=192,slow=25,SNR=2.9						

BZGR			*i* S		**Sn**	**12 03 01.2**	**-0.8**
TUMR	**Tumrok**	**2.45 285**	P		**Pn**	**12 02 33.5**	**-0.1**
TUMR			*i* S		**Sn**	**12 03 02.2**	**-1.3**
SMKR	**Semkarok**	**2.46 321**	P		**Pn**	**12 02 32.9**	**-0.8**
SMKR			*i* S		**Sn**	**12 03 01.2**	**-2.5**
LGNR	**Loginova**	**2.47 305**	P		**Pn**	**12 02 34.8**	**+0.9**
LGNR			*i* S		**Sn**	**12 03 04.4**	**+0.2**
BZMR	**Bezymyannaya**	**2.49 301**	P		**Pn**	**12 02 33.8**	**-0.3**
BZMR			*i* S		**Sn**	**12 03 03.1**	**-1.4**
BZWR	**Bezymyannyi-We**	**2.50 302**	P		**Pn**	**12 02 34.2**	**-0.1**
BZWR			*i* S		**Sn**	**12 03 04.1**	**-0.7**
KMNR	**Kamenistaya**	**2.54 296**	P		**Pn**	**12 02 34.7**	**-0.1**
KMNR			*i* S		**Sn**	**12 03 05.0**	**-0.8**
BDR	**Baidarnaya**	**2.55 318**	P		**Pn**	**12 02 34.5**	**-0.4**
BDR			*i* S		**Sn**	**12 03 04.6**	**-1.3**
KIRR	**Kirishev**	**2.58 301**	P		**Pn**	**12 02 35.8**	**+0.6**
KIRR			*i* S		**Sn**	**12 03 06.2**	**-0.4**
KRSR	**Krestovskiy**	**2.60 307**	P		**Pn**	**12 02 34.8**	**-0.8**
KRSR			*i* S		**Sn**	**12 03 04.5**	**-2.7**
KLY	**Klyuchi**	**2.62 309**	P		**Pn**	**12 02 33.5**	**-2.2**
KLY			*i* S		**Sn**	**12 03 02.3**	**-5.1**
SRKR	**Sorokina**	**2.63 319**	P		**Pn**	**12 02 35.3**	**-0.6**
SRKR			*i* S		**Sn**	**12 03 05.7**	**-2.1**
KPT	**Kopyto**	**2.64 300**	P		**Pn**	**12 02 36.4**	**+0.3**
KPT			*i* S		**Sn**	**12 03 07.0**	**-1.1**
KOZ	**Kozyrevsk**	**2.86 300**	P		**Pn**	**12 02 39.3**	**+0.3**
KOZ			*i* S		**Sn**	**12 03 12.2**	**-1.1**
SPN	**Mys Shipunski**	**3.00 239**	P		**Pn**	**12 02 40.3**	**-0.6**
SPN			*i* S		**Sn**	**12 03 12.9**	**-3.8**
SRDR	**Sredinnyy**	**3.06 304**	P		**Pn**	**12 02 41.8**	**0.0**
SRDR			*i* S		**Sn**	**12 03 17.4**	**-0.9**
ESO	**Esso**	**3.42 293**	P		**Pn**	**12 02 46.0**	**-0.7**
ESO			*i* S		**Sn**	**12 03 23.9**	**-3.2**
SDLR	**Sedlovina**	**3.50 248**	P		**Pn**	**12 02 48.0**	**+0.1**
SDLR			*i* S		**Sn**	**12 03 26.4**	**-2.9**
SMAR	**Somma**	**3.55 248**	P		**Pn**	**12 02 48.8**	**+0.1**
SMAR			*i* S		**Sn**	**12 03 28.2**	**-2.5**
KRER	**Koryakskii**	**3.56 249**	P		**Pn**	**12 02 49.2**	**+0.4**
KRER			*i* S		**Sn**	**12 03 29.5**	**-1.4**
UGLR	**Uglovaya**	**3.56 247**	P		**Pn**	**12 02 49.2**	**+0.4**
UGLR			*i* S		**Sn**	**12 03 29.1**	**-1.7**
AVH	**Avacha**	**3.58 248**	P		**Pn**	**12 02 49.6**	**+0.6**
AVH			*i* S		**Sn**	**12 03 29.7**	**-1.6**
KOK	**Koryaka**	**3.62 249**	P		**Pn**	**12 02 50.0**	**+0.4**
KOK			*i* S		**Sn**	**12 03 31.1**	**-1.3**
PET	**Petropavlovsk**	**3.74 245**	P		**Pn**	**12 02 51.3**	**+0.2**
PET			*i* S		**Sn**	**12 03 32.6**	**-2.4**
GNL	**Ganaly**	**3.86 257**	P		**Pn**	**12 02 53.4**	**+0.5**
RUS	**Russkaya**	**4.13 239**	P		**Pn**	**12 02 56.0**	**-0.4**
RUS			*i* S		**Sn**	**12 03 40.5**	**-4.1**
PETK	**Petropavlovsk-**	**4.21 250**	Pn		**Pn**	**12 02 58.5**	**+0.9**
	1.3nm,0.3s,baz=82,slow=18,SNR=26						
MTVR	**Mutnovka**	**4.27 241**	P		**Pn**	**12 02 58.9**	**+0.4**
MTVR			*i* S		**Sn**	**12 03 45.2**	**-3.1**
ASAK	**Asacha**	**4.47 241**	P		**Pn**	**12 03 01.8**	**+0.6**
ASAK			*i* S		**Sn**	**12 03 50.8**	**-2.3**
FX1	**Attu Island--F**	**5.57 106**	Pn		**Pn**	**12 03 16.4**	**+0.1**
	3.3nm,0.3s,baz=186,slow=7.7,SNR=26						
FX1				Sn	**Sn**	**12 04 16.4**	**-3.8**
	4.1nm,0.3s,baz=57,slow=23,SNR=8.7						
MJAR	**Matsushiro Arr**	**25.50 235**	P		**P**	**12 07 22.9**	**+1.2**
	1.0nm,0.7s,baz=20,slow=5.9,SNR=3.8						
ILAR	**Eielson Array**	**25.90 48**	P		**P**	**12 07 24.6**	**-0.5**
	0.5nm,0.7s,baz=267,slow=9.3,SNR=8.3						
INK	**Inuvik**	**31.05 40**	P		**P**	**12 08 11.8**	**+0.9**
	0.3nm,0.4s,baz=132,slow=18,SNR=4.0						
YKA	**Yellowknife Ar**	**40.27 45**	P		**P**	**12 09 30.5**	**+0.5**
	0.2nm,0.5s,baz=295,slow=7.9,SNR=3.5						
TXAR	**Lajitas Array**	**67.74 71**	P		**P**	**12 12 52.7**	**+1.6**
	0.3nm,0.9s,baz=338,slow=9.3,SNR=3.1						
WRA	**Warramunga Arr**	**78.64 209**	P		**P**	**12 13 55.7**	**+0.5**
	0.6nm,1.0s,baz=24,slow=6.3,SNR=3.1						
ASAR	**Alice Springs**	**82.30 208**	P		**P**	**12 14 16.6**	**+1.7**
	0.5nm,0.8s,baz=9.0,slow=4.6,SNR=6.1						

NNC 18 12:26:25.7±7.3, 43.74N×81.70E, h0km, mb2.9, mpv2.5, 6C-4D, Error ellipse: s-maj=52.1km s-min=43.9km az=163.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**3.08**	**8**	⇓Pn	Pn	12 27 17.1	+1.4
	0.4nm,0.3s,baz=185,slow=16,SNR=12						
MK31				⇑Pg	Pg	12 27 23.7	-1.1
	0.3nm,0.2s,baz=195,slow=13,SNR=5.0						
MK31				⇑Sn	Sn	12 27 53.0	-0.3
	1.8nm,0.2s,baz=166,slow=28,SNR=7.7						
MK31				⇑Lg	Lg	12 28 06.9	
	15nm,0.6s,baz=183,slow=24,SNR=8.0						
KUR17	**Kurchatov Arra**	**7.24**	**343**	⇓Pn	Pn	12 28 10.6	-2.0
	baz=162,slow=12						
KUR17				⇑Lg	Lg	12 30 15.4	
	0.1nm,0.7s,baz=170,slow=22						
KURK	**Kurchatov**	**7.29**	**344**	⇓Pn	Pn	12 28 11.8	-1.5
	0.6nm,0.6s						
KURK				⇑Lg	Lg	12 30 15.0	
	2.4nm,0.8s						
KK31	**Karatay Array**	**8.17**	**269**	⇑Pn	Pn	12 28 16.3	-9.2
	3.2nm,0.5s,baz=145,slow=16,SNR=5.6						
KK31				⇓Lg	Lg	12 28 54.6	
	4.4nm,0.3s,baz=135,slow=27,SNR=9.3						

*DDA **18** 12:40:10.9, 40.38N×39.77E, h7km, MD2.8*
*ISCJB **18** 12:40:11.5±0.6, 40.38N±0.06×39.76E±0.04, h6km±8km, Error ellipse: s-maj=9.6km s-min=4.8km az=6.4*
*ISK **18** 12:40:11.1, 40.41N×39.76E, h8km, MD2.5*
*CSEM **18** 12:40:11.3±0.1, 40.40N×39.76E, h12km, MD2.5, Error ellipse: s-maj=2.2km s-min=1.2km az=14.0*
ISC 18 12:40:11.6±1.0, 40.40N±0.04×39.76E±0.03, h11km±10km, n13, σ0s30/21, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMT	**Gumushane**	**0.22**	**286**	*e*PG	**Pg**	**12 40 16.3**	**0.0**
GUMT				*e*SG	**Sg**	**12 40 19.8**	**+0.4**
GUMT	**Gumushane**	**0.22**	**286**	*e*Pg	**Pg**	**12 40 16.3**	**0.0**
GUMT				*e*Sg	**Sg**	**12 40 19.8**	**+0.4**
BAYT	**Ayd¯–ntepe-Bay**	**0.29**	**91**	*e*PG	**Pg**	**12 40 17.6**	**0.0**
BAYT				*e*SG	**Sg**	**12 40 21.4**	**-0.3**
BAYT	**Ayd¯–ntepe-Bay**	**0.29**	**91**	*e*Pg	**Pg**	**12 40 17.6**	**0.0**
BAYT				*e*Sg	**Sg**	**12 40 21.4**	**-0.3**
KELT	**Kelkit**	**0.46**	**237**	*i* P	**Pg**	**12 40 20.3**	**-0.3**
KELT				*i* S	**Sg**	**12 40 26.7**	**+0.1**
KOPT	**Kop Dagi**	**0.68**	**124**	*i* P	**Pg**	**12 40 25.2**	**+0.3**
KOPT				*i* S	**Sg**	**12 40 33.5**	**-0.4**
KOPT	**Kop Dagi**	**0.68**	**124**	*i* P	**Pg**	**12 40 25.2**	**+0.3**
KOPT				*i* S	**Sg**	**12 40 33.5**	**-0.4**
EZC	**Erzincan**	**0.72**	**206**	*e*PG	**Pg**	**12 40 25.4**	**0.0**
EZC	**Erzincan**	**0.72**	**206**	*e*Pg	**Pg**	**12 40 25.4**	**0.0**
ESPY	**Espiye-Giresun**	**0.94**	**304**	*e*PG	**Pg**	**12 40 29.4**	**-0.3**
ESPY	**Espiye-Giresun**	**0.94**	**304**	*e*Pg	**Pg**	**12 40 29.4**	**-0.3**
DDEM	**Demirkent**	**1.60**	**71**	*i* P	**Pb**	**12 40 41.0**	**-0.2**
DAGI	**Agillar**	**1.77**	**67**	*i* P	**Pb**	**12 40 44.1**	**-0.1**
DAGI				*i* S	**Sn**	**12 41 05.5**	**+0.6**

IDC 18 12:54:07.6±1.1, 58.73S×25.03W, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.8/19, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=71.2km s-min=24.7km az=93.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**15.81**	**154**	Pn	Pn	12 57 50.3	-1.0
	0.6nm,0.3s,baz=320,slow=14,SNR=49						
QSPA	**South Pole Qui**	**31.51**	**180**	P	P	13 00 30.7	-0.3
	1.2nm,0.7s,baz=251,slow=7.1,SNR=9.0						
VNDA	**Vanda**	**43.94**	**182**	P	P	13 02 16.3	+0.9
	2.0nm,1.1s,baz=187,slow=4.8,SNR=5.8						
TORD	**Torodi Ar. Bea**	**74.87**	**27**	P	P	13 05 50.0	+0.2
	0.3nm,0.4s,baz=196,slow=6.4,SNR=9.0						
ASAR	**Alice Springs**	**96.07**	**161**	P	P	13 07 35.7	-1.2
	0.3nm,0.7s,baz=198,slow=5.5,SNR=5.0						
YKA	**Yellowknife Ar**	**138.93**	**315**	PKP	PKPdf	13 13 34.3	+0.1
	0.6nm,0.5s,baz=128,slow=2.3,SNR=12						
SONM	**Songino Array**	**149.65**	**89**	PKPbc	PKPbc	13 13 58.2	+0.1
	0.4nm,0.8s,baz=270,slow=2.8,SNR=3.9						
ILAR	**Eielson Array**	**152.73**	**307**	PKPbc	PKPbc	13 14 04.1	-0.5
	0.6nm,0.6s,baz=141,slow=4.9,SNR=16						

*ISCJB **18** 13:01:16.9±0.9, 51.50N±0.04×16.10E±0.04, h0km, Error ellipse: s-maj=6.2km s-min=3.4km az=16.8*
*WAR **18** 13:01:18.9, 51.52N×16.11E*
*CSEM **18** 13:01:18.8±0.6, 51.47N×16.10E, h2km, ML2.9/7, Error ellipse: s-maj=9.3km s-min=4.7km az=5.0*
*PRU **18** 13:01:19.5, 51.48N×16.11E, h0km*
ISC 18 13:01:19.2±1.2, 51.48N±0.06×16.10E±0.03, h0km, n23, σ0s61/46, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**169**	*e*Pg	**Pg**	**13 01 31.6**	**+0.1**
KSP				*e*Sg	**Sg**	**13 01 40.4**	**+0.6**
UPC	**Upice**	**0.97**	**183**	*e*PG	**Pg**	**13 01 37.6**	**-0.1**
UPC				*e*SG	**Sg**	**13 01 50.9**	**+0.6**
	comp=Z,11nm,0.2s						
UPC	**Upice**	**0.97**	**183**	Pg	**Pg**	**13 01 37.6**	**-0.1**
UPC				Sg	**Sg**	**13 01 50.9**	**+0.6**
	11nm,0.2s						
DPC	**Dobruska-Polom**	**1.14**	**173**	*e*PG	**Pg**	**13 01 40.5**	**-0.4**
DPC				*e*SG	**Sg**	**13 01 55.6**	**0.0**
	comp=Z,9.8nm,0.3s						
DPC	**Dobruska-Polom**	**1.14**	**173**	Pg	**Pg**	**13 01 40.5**	**-0.4**
DPC				Sg	**Sg**	**13 01 55.6**	**0.0**
	9.8nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	**Pn**	**13 01 45.2**	**-0.1**
PVCC				*e*SG	**Sn**	**13 02 03.9**	**-0.1**
	comp=Z,36nm,0.2s						
PVCC	**Panska Ves**	**1.35**	**226**	Pg	**Pn**	**13 01 45.2**	**-0.1**
PVCC				Sg	**Sn**	**13 02 03.9**	**-0.1**
	36nm,0.2s						
KRLC	**Kraliky**	**1.47**	**163**	*e*PG	**Pn**	**13 01 46.5**	**-0.4**
KRLC				*e*SG	**Sg**	**13 02 06.1**	**-0.1**
KRLC	**Kraliky**	**1.47**	**163**	Pg	**Pn**	**13 01 46.5**	**-0.4**
KRLC				Sg	**Sg**	**13 02 06.1**	**-0.1**
BRG	**Berggiesshubel**	**1.49**	**247**	PN	**Pn**	**13 01 46.2**	**-0.9**
BRG				PG	**Pb**	**13 01 47.1**	**-0.5**
BRG				SG		13 03 07.3	
	18nm,0.4s						
PRU	**Pruhonice**	**1.79**	**214**	*e*PG	**Pb**	**13 01 52.6**	**-0.2**
PRU				*e*SG	**Sg**	**13 02 17.1**	**+0.5**
	comp=Z,6.1nm,0.3s						
PRU	**Pruhonice**	**1.79**	**214**	Pg	**Pb**	**13 01 52.6**	**-0.2**
PRU				Sg	**Sg**	**13 02 17.1**	**+0.5**
	6.1nm,0.3s						
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**13 01 52.5**	**-0.8**
MORC				*e*Sg	**Sn**	**13 02 18.9**	**+0.6**
CLL	**Collm**	**1.95**	**266**	*e*Pg	**Pb**	**13 01 55.0**	**-0.5**
CLL				*e*Sg	**Sg**	**13 02 21.0**	**-0.7**
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*SG	**Sg**	**13 02 25.7**	**-0.7**
	comp=Z,8.5nm,0.5s						
OKC	**Ostrava-Krasne**	**2.09**	**141**	Sg	**Sg**	**13 02 25.7**	**-0.7**
	8.5nm,0.5s						
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**13 02 03.2**	**+0.3**
NKC				*e*PG	**Pb**	**13 02 08.1**	**+1.0**
NKC				*e*SG	**Sg**	**13 02 44.5**	**+1.0**
	comp=Z,9.7nm,0.3s						
NKC	**Novy Kostel**	**2.63**	**243**	Pn	**Pn**	**13 02 03.2**	**+0.3**
NKC	**Novy Kostel**	**2.63**	**243**	Pg	**Pb**	**13 02 08.1**	**+1.0**
NKC				Sg	**Sg**	**13 02 44.5**	**+1.0**
	9.7nm,0.3s						
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**13 02 10.4**	**+0.3**
OJC				*e*Sg	**Sg**	**13 02 45.6**	**+1.0**
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**13 02 10.4**	**+0.3**
OJC				*e*Sg	**Sg**	**13 02 45.6**	**+1.0**
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PG	**Pb**	**13 02 11.6**	**+0.7**
KHC				*e*SN	**Sn**	**13 02 40.0**	**-1.0**
KHC				*e*SG	**Sg**	**13 02 51.3**	**+0.6**
	comp=Z,2.3nm,0.3s						
KHC	**Kasperske Hory**	**2.85**	**216**	Pg	**Pb**	**13 02 11.6**	**+0.7**
KHC				Sn	**Sn**	**13 02 40.0**	**-1.0**
KHC				Sg	**Sg**	**13 02 51.3**	**+0.6**
	2.3nm,0.3s						

*ISCJB **18** 13:03:17.6±0.6, 39.74N±0.04×40.55E±0.06, h11km, Error ellipse: s-maj=7.0km s-min=5.1km az=144.9*
*ISK **18** 13:03:17.8, 39.76N×40.53E, h10km, MD2.7*
*CSEM **18** 13:03:17.9±0.3, 39.70N×40.49E, h2km, MD2.7, Error ellipse: s-maj=6.4km s-min=5.5km az=18.0*
*DDA **18** 13:03:19.2, 40.01N×40.57E, h4km, MD2.9*
ISC 18 13:03:17.7±0.9, 39.82N±0.03×40.57E±0.04, h11km, n20, σ1s47/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOPT	**Kop Dagi**	**0.20**	**345**	*i* P	**Pg**	**13 03 20.6**	**-1.7**
KOPT				*i* S	**Sg**	**13 03 22.1**	**-3.2**
KOPT	**Kop Dagi**	**0.20**	**345**	*i* P	**Pg**	**13 03 20.6**	**-1.7**
EZM	**Erzurum**	**0.62**	**82**	*e*PG	**Pb**	**13 03 30.9**	**+0.2**
ERZM	**Erzurum**	**0.62**	**82**	*i* P	**Pb**	**13 03 31.5**	**+0.7**
ERZM	**Erzurum**	**0.62**	**82**	*i* P	**Pb**	**13 03 31.5**	**+0.7**
BAYT	**Ayd¯–ntepe-Bay**	**0.66**	**330**	*e*PG	**Pb**	**13 03 31.4**	**0.0**
BAYT				*e*SG	**Sb**	**13 03 42.5**	**+1.9**
BAYT	**Ayd¯–ntepe-Bay**	**0.66**	**330**	*e*Pg	**Pb**	**13 03 31.4**	**0.0**
BAYT				*e*Sg	**Sb**	**13 03 42.5**	**+1.9**
ERZN	**Erzincan**	**0.69**	**250**	*e*PG	**Pg**	**13 03 30.6**	**-0.5**
BNGB	**Bing¯||**	**0.83**	**174**	*e*PG	**Pg**	**13 03 33.3**	**-0.5**
EZC	**Erzincan**	**0.94**	**266**	*e*PG	**Pb**	**13 03 35.5**	**-0.6**
EZC	**Erzincan**	**0.94**	**266**	*e*Pg	**Pb**	**13 03 35.5**	**-0.6**
BINT	**Bingol**	**0.95**	**184**	*e*Pg	**Pg**	**13 03 33.3**	**-2.7**
GUMT	**Gumushane**	**1.05**	**308**	*e*PG	**Pn**	**13 03 38.4**	**-0.1**
GUMT				*e*SG	**Sn**	**13 03 54.5**	**+1.3**
GUMT	**Gumushane**	**1.05**	**308**	*e*Pg	**Pn**	**13 03 38.4**	**-0.1**
GUMT				*e*Sg	**Sn**	**13 03 54.5**	**+1.3**
KELT	**Kelkit**	**1.06**	**288**	*i* P	**Pn**	**13 03 38.9**	**+0.2**
KELT				*i* S	**Sn**	**13 03 56.2**	**+2.6**
KELT	**Kelkit**	**1.06**	**288**	*i* P	**Pn**	**13 03 38.9**	**+0.2**
KELT				*i* S	**Sn**	**13 03 56.2**	**+2.6**
PTK	**Pertek**	**1.30**	**225**	*e*PN	**Pg**	**13 03 41.9**	**-0.9**
PTK	**Pertek**	**1.30**	**225**	*e*Pn	**Pg**	**13 03 41.9**	**-0.9**
ILIC	**ilic-Erzincan**	**1.59**	**257**	*e*PN	**Pn**	**13 03 45.9**	**0.0**
ILIC	**ilic-Erzincan**	**1.59**	**257**	*e*Pn	**Pn**	**13 03 45.9**	**0.0**

*ISCJB **18** 13:06:14.7±0.4, 57.82N±0.03×21.96E±0.04, h0km, Error ellipse: s-maj=4.6km s-min=3.2km az=161.8*
*HEL **18** 13:06:15.9±0.1, 57.76N×21.96E, h0km, ML2.2, ML2.2(UPP), Explosion*
*CSEM **18** 13:06:16.0±0.2, 57.79N×22.00E, h2km, ML2.2, Error ellipse: s-maj=4.9km s-min=2.9km az=153.0, Mining explosion.*
*UPP **18** 13:06:16.7, 57.78N×21.89E, h0km, ML2.2, Suspected Mining explosion.*
*IDC **18** 13:06:17.3±2.9, 57.88N×21.85E, h0km, mb1 3.3/3, mb1mx3.0/26, mbtmp3.2/3, ML2.7/3, Error ellipse: s-maj=31.8km s-min=12.1km az=159.0*
ISC 18 13:06:15.4±0.8, 57.79N±0.03×21.96E±0.03, h0km, n99, σ0s85/108, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.24**	**133**	*e*P	**Pg**	**13 06 20.0**	**0.0**
SLIT				*e*S	**Sg**	**13 06 22.5**	**-0.5**
SLIT	**Slitere, Latvi**	**0.24**	**133**	P	**Pg**	**13 06 19.9**	**0.0**
SLIT				S	**Sg**	**13 06 22.5**	**-0.5**
MTSE	**Matsula**	**1.35**	**46**	*e*P	**Pg**	**13 06 40.2**	**-1.0**
MTSE				*e*S	**Sg**	**13 06 58.2**	**-0.4**
MTSE	**Matsula**	**1.35**	**46**	P	**Pg**	**13 06 40.2**	**-1.0**
MTSE				S	**Sg**	**13 06 58.2**	**-0.4**
GOTU	**Gotland**	**1.82**	**268**	*e*P	**Pn**	**13 06 48.2**	**+0.3**
GOTU				*e*S	**Sg**	**13 07 13.9**	**0.0**
GOTU	**Gotland**	**1.82**	**268**	P	**Pn**	**13 06 48.2**	**+0.3**
GOTU				S	**Sg**	**13 07 13.9**	**0.0**
NRTU	**Norrtaelje**	**2.57**	**319**	*e*P	**Pn**	**13 06 59.2**	**+1.0**
NRTU	**Norrtaelje**	**2.57**	**319**	P	**Pn**	**13 06 59.2**	**+1.0**
AAL	**Aland**	**2.60**	**338**	*e*P	**Pn**	**13 06 58.9**	**+0.3**
AAL				*e*SG	**Sb**	**13 07 36.4**	**+1.0**
AAL	**Aland**	**2.60**	**338**	P	**Pn**	**13 06 58.9**	**+0.3**
VSU	**Vasula**	**2.62**	**73**	*e*P	**Pn**	**13 06 59.7**	**+0.8**
VSU				*e*SB	**Sb**	**13 07 35.3**	**-0.5**
VSU	**Vasula**	**2.62**	**73**	P	**Pn**	**13 06 59.6**	**+0.8**
VSU				Sb	**Sb**	**13 07 35.3**	**-0.5**
MEF	**Metsahovi**	**2.74**	**26**	*e*PB	**Pb**	**13 07 03.4**	**-1.8**
MEF				*e*SB	**Sb**	**13 07 39.3**	**0.0**
MEF				MSG		13 07 42.7	
	comp=Z,16nm,0.1s						
VIKU	**Vikbolandet**	**2.88**	**287**	*e*P	**Pn**	**13 07 03.6**	**+1.1**
VIKU	**Vikbolandet**	**2.88**	**287**	P	**Pn**	**13 07 03.6**	**+1.1**

ASPU	**Aespoe**	**2.91**	**265**	*e*P	**Pn**	**13 07 04.4**	**+1.5**
ASPU	**Aespoe**	**2.91**	**265**	P	**Pn**	**13 07 04.4**	**+1.5**
GRAU	**Graesoe**	**3.10**	**327**	*e*P	**Pn**	**13 07 05.9**	**+0.4**
GRAU	**Graesoe**	**3.10**	**327**	P	**Pn**	**13 07 05.9**	**+0.4**
FLYU	**Flymyra**	**3.15**	**320**	*e*P	**Pn**	**13 07 07.5**	**+1.3**
FLYU	**Flymyra**	**3.15**	**320**	P	**Pn**	**13 07 07.5**	**+1.3**
OSKU	**Oskarshamn**	**3.22**	**262**	*e*P	**Pn**	**13 07 07.8**	**+0.6**
OSKU	**Oskarshamn**	**3.22**	**262**	P	**Pn**	**13 07 07.8**	**+0.6**
RAF	**Rauma**	**3.24**	**358**	*e*P	**Pn**	**13 07 08.6**	**+1.1**
RAF	**Rauma**	**3.24**	**358**	P	**Pn**	**13 07 08.6**	**+1.1**
ESKU	**Eskilstuna**	**3.26**	**299**	*e*P	**Pn**	**13 07 08.6**	**+0.9**
ESKU	**Eskilstuna**	**3.26**	**299**	P	**Pn**	**13 07 08.6**	**+0.9**
BACU	**Backbrunna**	**3.26**	**311**	*e*P	**Pn**	**13 07 09.0**	**+1.2**
BACU	**Backbrunna**	**3.26**	**311**	P	**Pn**	**13 07 08.9**	**+1.2**
PVF	**Pernaja**	**3.41**	**34**	*e*P	**Pn**	**13 07 11.5**	**+1.6**
PVF				MSG		13 08 09.8	
	comp=Z,5.6nm,0.2s						
PVF	**Pernaja**	**3.41**	**34**	P	**Pn**	**13 07 11.4**	**+1.6**
LNKU	**Linkoeping**	**3.46**	**280**	*e*P	**Pn**	**13 07 11.4**	**+0.9**
LNKU	**Linkoeping**	**3.46**	**280**	P	**Pn**	**13 07 11.4**	**+0.9**
OSTU	**Oestervaala**	**3.50**	**316**	*e*P	**Pn**	**13 07 12.1**	**+1.2**
OSTU	**Oestervaala**	**3.50**	**316**	P	**Pn**	**13 07 12.1**	**+1.2**
BLEU	**Blekinge**	**3.67**	**249**	*e*P	**Pn**	**13 07 13.3**	**-0.1**
BLEU	**Blekinge**	**3.67**	**249**	P	**Pn**	**13 07 13.3**	**-0.1**
IGGU	**Iggoen**	**3.90**	**324**	*e*P	**Pn**	**13 07 17.8**	**+1.2**
IGGU	**Iggoen**	**3.90**	**324**	P	**Pn**	**13 07 17.7**	**+1.2**
VXJU	**Vaexsjoe**	**3.90**	**260**	*e*P	**Pn**	**13 07 16.9**	**+0.4**
VXJU	**Vaexsjoe**	**3.90**	**260**	P	**Pn**	**13 07 16.9**	**+0.4**
ASKU	**Askersund**	**3.92**	**289**	*e*P	**Pn**	**13 07 18.1**	**+1.4**
ASKU	**Askersund**	**3.92**	**289**	P	**Pn**	**13 07 18.1**	**+1.4**
VJF	**Virojoki**	**3.98**	**44**	*e*PG	**Pb**	**13 07 27.4**	**+1.1**
VJF				MSG		13 08 26.3	
	comp=Z,6.9nm,0.2s						
NRAU	**Nora**	**4.03**	**299**	*e*P	**Pn**	**13 07 19.1**	**+0.8**
NRAU	**Nora**	**4.03**	**299**	P	**Pn**	**13 07 19.1**	**+0.8**
FALU	**Falun**	**4.16**	**313**	*e*P	**Pn**	**13 07 20.6**	**+0.5**
FALU	**Falun**	**4.16**	**313**	P	**Pn**	**13 07 20.6**	**+0.5**
FIA0	**FINESS Array S**	**4.22**	**28**	*e*P	**Pn**	**13 07 22.0**	**+1.2**
FIA0	**FINESS Array S**	**4.22**	**28**	P	**Pn**	**13 07 22.0**	**+1.2**
FINES	**FINESS Array B**	**4.22**	**28**	Pn	**Pn**	**13 07 22.1**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=213,slow=11,SNR=19						
FINES				Pg	**Pb**	**13 07 31.3**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=216,slow=13,SNR=16						
FINES				Sn	**Sn**	**13 08 11.4**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=219,slow=17,SNR=3.8						
FINES				Lg	Lg	13 08 28.1	
	comp=Z,1.8nm,0.3s,baz=234,slow=26,SNR=11						
GNOU	**Gnosjoe**	**4.45**	**267**	*e*P	**Pn**	**13 07 25.4**	**+1.3**
GNOU	**Gnosjoe**	**4.45**	**267**	P	**Pn**	**13 07 25.3**	**+1.3**
ARNU	**Arnoeviken**	**4.55**	**331**	*e*P	**Pn**	**13 07 25.5**	**+0.1**
ARNU	**Arnoeviken**	**4.55**	**331**	P	**Pn**	**13 07 25.5**	**+0.1**
DEL	**Delary**	**4.61**	**257**	*e*P	**Pn**	**13 07 26.7**	**+0.6**
DEL	**Delary**	**4.61**	**257**	P	**Pn**	**13 07 26.7**	**+0.6**
KEF	**Keuruu**	**4.63**	**17**	*e*P	**Pn**	**13 07 28.3**	**+1.9**
KEF	**Keuruu**	**4.63**	**17**	P	**Pn**	**13 07 28.3**	**+1.9**
NASU	**Vaermlandsnaes**	**4.76**	**288**	*e*P	**Pn**	**13 07 29.0**	**+0.7**
NASU	**Vaermlandsnaes**	**4.76**	**288**	P	**Pn**	**13 07 29.0**	**+0.7**
ROTU	**Roteberg**	**4.79**	**322**	*e*P	**Pn**	**13 07 29.3**	**+0.5**
ROTU	**Roteberg**	**4.79**	**322**	P	**Pn

MNAI	**Manna**	**3.34 315**	P	**Pn**	**13 18 14.1**	**+1.8**
MNAI	**Manna**	**3.34 315**	P	**Pn**	**13 18 14.3**	**+2.1**
	baz=7.0,SNR=12					
MNAI	**Manna**	**3.34 315**	P	**Pn**	**13 18 14.4**	**+2.2**
	baz=3.5,SNR=21					
XMI	**Christmas Isla**	**3.70 174**	P	**Pn**	**13 18 17.1**	**-0.1**
	baz=3.6,SNR=4.6					
XMI			S	**Sn**	**13 18 57.4**	**-2.3**
	baz=3.6,SNR=6.5					
XMIS	**Christmas Isla**	**3.73 175**	P	**Pn**	**13 19 01.3**	**+0.9**
	baz=10,SNR=7.3					
XMIS	**Christmas Isla**	**3.73 175**	P	**Pn**	**13 18 16.8**	**-0.8**
	baz=3.6,SNR=34					
XMIS			S	**Sn**	**13 18 58.5**	**-1.8**
	baz=3.6,SNR=14					
KSI	**Kapahiang**	**4.10 318**	P	**Pn**	**13 18 25.1**	**+2.4**
UGM	**Wanagama**	**5.29 103**	P	**Pn**	**13 18 41.2**	**+2.3**
	217nm,1.6s,1.0nm					
UGM	**Wanagagma**	**5.29 103**	P	**Pn**	**13 18 41.0**	**+2.0**
	baz=5.2,SNR=12					
PCJI	**Pacitan**	**5.98 104**	P	**Pn**	**13 18 50.8**	**+2.4**
	67nm,1.1s,0.4nm					
PWJI	**Pagerwojo**	**6.55 102**	P	**Pn**	**13 18 59.2**	**+3.0**
	43nm,0.4s,2µm0.3nm					
GMJI	**Gumukmas**	**8.20 101**	P	**Pn**	**13 19 21.2**	**+2.5**
	25nm,1.2s					
SRBI	**Singaraja**	**9.90 98**	P	**Pn**	**13 19 43.6**	**+1.7**
	30nm,0.6s,1µm					
KHKI	**Kahang-Kahang**	**10.32 100**	P	**Pn**	**13 19 47.8**	**0.0**
PSI	**Prapat**	**11.43 326**	LR	LR	13 26 00.4	
	comp=Z,89nm,18.9s,baz=323,slow=46					
GIRL	**Giralia**	**17.99 152**	P	**Pn**	**13 21 31.2**	**+3.4**
	baz=18,SNR=3.2					
FITZ	**Fitzroy Crossi**	**22.80 122**	P	**P**	**13 22 20.7**	**+1.2**
	0.7nm,0.6s,baz=347,slow=19,SNR=7.0					
FITZ	**Fitzroy Crossi**	**22.80 122**	P	**P**	**13 22 20.9**	**+1.4**
	baz=23,SNR=4.5					
MEEK	**Meekatharra**	**23.49 149**	P	P	13 22 45.6	+20
	baz=23,SNR=3.7					
MEEK			S	Sn	13 26 51.0	-8.9
	baz=23,SNR=3.0					
KNRA	**Kununurra**	**24.62 113**	P	**P**	**13 22 37.9**	**+1.4**
	baz=24,SNR=5.8					
MTN	**Manton Dam**	**26.13 105**	P	**P**	**13 22 51.3**	**+1.1**
	baz=26,SNR=5.0					
KDU	**Kakadu**	**27.39 105**	P	**P**	**13 23 04.1**	**+2.6**
	baz=27,SNR=6.4					
WRA	**Warramunga Arr**	**31.06 118**	P	**P**	**13 23 35.0**	**+0.9**
	0.3nm,0.5s,baz=303,slow=10,SNR=21					
WRA			PcP	**PcP**	**13 26 29.1**	**+0.7**
	0.3nm,0.4s,baz=308,slow=2.1,SNR=5.9					
ASAR	**Alice Springs**	**32.20 125**	P	**P**	**13 23 45.3**	**+1.3**
	0.2nm,0.3s,baz=298,slow=7.5,SNR=14					
ASAR			PcP	**PcP**	**13 26 32.6**	**+1.2**
	0.2nm,0.4s,baz=305,slow=2.2,SNR=4.8					
ASAR			S	**S**	**13 28 50.1**	**-2.1**
	0.7nm,0.8s,baz=296,slow=16,SNR=6.6					
STKA	**Stephens Creek**	**42.05 131**	P	**P**	**13 25 09.5**	**+2.1**
	0.8nm,0.3s,baz=308,slow=12,SNR=7.6					
MJAR	**Matsushiro Arr**	**52.95 33**	P	P	13 26 27.8	-4.0
	0.6nm,0.5s,baz=274,slow=7.1,SNR=4.1					
SONM	**Songino Array**	**54.35 1**	P	**P**	**13 26 40.1**	**-1.8**
	0.4nm,0.4s,baz=178,slow=9.4,SNR=4.9					
SONM			PcP	**PcP**	**13 27 44.4**	**-0.6**
	1.2nm,0.4s,baz=180,slow=3.8,SNR=12					
USRK	**Ussuriysk Arra**	**56.13 23**	P	**P**	**13 26 52.5**	**-2.1**
	2.6nm,0.5s,baz=200,slow=5.7,SNR=5.8					
MKAR	**Makanchi Array**	**57.09 341**	P	**P**	**13 26 59.0**	**-2.5**
	0.3nm,0.3s,baz=128,slow=6.3,SNR=3.5					
ZALV	**Zalesovo Beam**	**62.88 347**	P	**P**	**13 27 37.8**	**-3.1**
	0.5nm,0.3s,baz=135,slow=5.2,SNR=3.6					
BVAR	**Borovoye Array**	**66.49 338**	P	**P**	**13 28 02.5**	**-1.9**
	0.8nm,0.4s,baz=149,slow=9.4,SNR=7.8					
KBZ	**Khabaz**	**75.35 318**	P	**P**	**13 28 59.8**	**+1.5**
	2.2nm,0.9s,baz=120,slow=4.4,SNR=5.0					
FINES	**FINESS Array B**	**90.76 332**	P	**P**	**13 30 16.9**	**-0.5**
	1.1nm,0.5s,baz=94,slow=5.7,SNR=5.8					
ARCES	**ARCESS Array B**	**92.72 340**	P	**P**	**13 30 25.3**	**-1.1**
	1.9nm,0.8s,baz=101,slow=7.0,SNR=5.3					
YKA	**Yellowknife Ar**	**117.19 20**	PKP	**PKPdf**	**13 35 58.4**	**-0.8**
	0.1nm,0.5s,baz=0.6,slow=0.9,SNR=3.0					
PDAR	**Pinedale Array**	**132.76 35**	PKP	**PKPdf**	**13 36 30.6**	**+0.7**
	0.2nm,0.5s,baz=336,slow=2.0,SNR=2.3					
TXAR	**Lajitas Array**	**144.63 47**	PKP	PKPbc	13 36 51.0	+0.3
	2.5nm,0.6s,baz=292,slow=1.0,SNR=28					

*IDC **18** 13:20:27.9±1.1,54˚.75N×164˚.25E,h0km,mb3.3/4, mb1 3.5/6,mb1mx3.3/30,mbtmp3.3/6,ML3.1/2,Error ellipse: s-maj=30.8km s-min=12.4km az=5.0*
*ISCJB **18** 13:20:30.4±0.5,54˚.65N±0˚.03×164˚.24E±0˚.05, h33km±10km,mb3.2/4,Error ellipse: s-maj=4.9km s-min=4.4km az=143.9*
*KRSC **18** 13:20:30.4±0.3,54˚.70N×164˚.13E,h30km±30km,ML3.5*
ISC 18 13:20:30.5±2.4,54˚70N±0˚.04×164˚33E±0˚.05,h28km±20km, n38,σ1§31/61,mb3.2/4,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.08**	**61**	P	**Pn**	**13 20 50.1**	**+0.4**
BKI				S	**Sb**	**13 21 04.2**	**0.0**
MKZ	**Mys Kozlova**	**1.52**	**266**	P	**Pn**	**13 20 54.8**	**-1.0**
MKZ				S	**Sn**	**13 21 12.2**	**-2.4**
KBTR	**Krutoberegovo**	**1.74**	**331**	P	**Pn**	**13 20 56.9**	**-2.0**
KBG	**Krutoberegovo**	**1.82**	**330**	S	**Sn**	**13 21 18.5**	**-3.5**
ZLN	**Zelenaya**	**2.41**	**305**	P	**Pn**	**13 21 08.8**	**+0.6**
ZLN				S	**Sn**	**13 21 37.5**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**2.42**	**303**	P	**Pn**	**13 21 08.5**	**+0.2**
BZGR				S	**Sn**	**13 21 37.0**	**-0.1**
TUMR	**Tumrok**	**2.48**	**285**	P	**Pn**	**13 21 09.1**	**-0.1**
TUMR				S	**Sn**	**13 21 38.1**	**-0.4**
CIRR	**Tsirk**	**2.49**	**306**	S	**Sn**	**13 21 39.5**	**+0.7**
LGNR	**Loginova**	**2.50**	**305**	S	**Sn**	**13 21 39.5**	**+0.3**
BZMR	**Bezymyannaya**	**2.52**	**301**	P	**Pn**	**13 21 10.5**	**+0.8**
BZMR				S	**Sn**	**13 21 39.8**	**+0.2**
BZWR	**Bezymyannyi-We**	**2.53**	**302**	P	**Pn**	**13 21 10.3**	**+0.4**
BZWR				S	**Sn**	**13 21 38.4**	**-1.5**
KMNR	**Kamenistaya**	**2.57**	**296**	P	**Pn**	**13 21 10.5**	**+0.1**
KMNR				S	**Sn**	**13 21 40.6**	**-0.2**
KIRR	**Kirishev**	**2.60**	**301**	P	**Pn**	**13 21 11.7**	**+0.8**
KIRR				S	**Sn**	**13 21 42.3**	**+0.7**
KRSR	**Krestovskiy**	**2.63**	**307**	P	**Pn**	**13 21 10.6**	**-0.6**
KRSR				S	**Sn**	**13 21 40.1**	**-2.1**
KLY	**Klyuchi**	**2.65**	**309**	P	**Pn**	**13 21 09.7**	**-1.6**
KLY				S	**Sn**	**13 21 39.2**	**-3.2**
KPT	**Kopyto**	**2.67**	**300**	P	**Pn**	**13 21 12.2**	**+0.5**
KPT				S	**Sn**	**13 21 43.7**	**+0.6**
KOZ	**Kozyrevsk**	**2.88**	**300**	P	**Pn**	**13 21 14.4**	**-0.2**
KOZ				S	**Sn**	**13 21 47.3**	**-1.1**
SPN	**Mys Shipunski**	**3.01**	**240**	P	**Pn**	**13 21 15.5**	**-0.8**
SPN				S	**Sn**	**13 21 48.4**	**-2.9**
SRDR	**Sredinnyy**	**3.08**	**304**	P	**Pn**	**13 21 18.0**	**+0.6**
SRDR				S	**Sn**	**13 21 53.6**	**+0.2**
NLC	**Nalytchevo**	**3.32**	**245**	S	**Sn**	**13 21 55.9**	**-3.1**
ESO	**Esso**	**3.44**	**293**	P	**Pn**	**13 21 22.0**	**-0.3**
ESO				S	**Sn**	**13 21 59.3**	**-2.9**
SDLR	**Sedlovina**	**3.51**	**248**	P	**Pn**	**13 21 23.9**	**+0.6**
SDLR				S	**Sn**	**13 22 03.0**	**-1.0**
SMAR	**Somma**	**3.56**	**249**	P	**Pn**	**13 21 24.0**	**-0.1**
KRER	**Koryakskii**	**3.57**	**249**	P	**Pn**	**13 21 24.7**	**+0.4**
UGLR	**Uglovaya**	**3.58**	**248**	P	**Pn**	**13 21 25.2**	**+1.0**
AVH	**Avacha**	**3.60**	**249**	P	**Pn**	**13 21 25.5**	**+1.0**
AVH				S	**Sn**	**13 22 05.4**	**-0.6**
KOK	**Koryaka**	**3.64**	**250**	P	**Pn**	**13 21 25.2**	**+0.1**
PET	**Petropavlovsk**	**3.75**	**246**	P	**Pn**	**13 21 27.1**	**+0.6**
PET				S	**Sn**	**13 22 09.3**	**-0.4**
GNL	**Ganaly**	**3.88**	**258**	P	**Pn**	**13 21 28.8**	**+0.4**
RUS	**Russkaya**	**4.14**	**239**	P	**Pn**	**13 21 32.0**	**+0.2**
RUS				S	**Sn**	**13 22 17.0**	**-2.3**
PETK	**Petropavlovsk-**	**4.23**	**251**	Pn	**Pn**	**13 21 34.1**	**+1.0**
	0.8nm,0.3s,baz=75,slow=18,SNR=19						
PETK				Sn	**Sn**	**13 22 22.7**	**+1.2**
	0.7nm,0.3s,baz=288,slow=17,SNR=5.6						
MTVR	**Mutnovka**	**4.28**	**241**	P	**Pn**	**13 21 34.4**	**+0.5**
MTVR				S	**Sn**	**13 22 21.3**	**-1.6**
ASAK	**Asacha**	**4.48**	**241**	P	**Pn**	**13 21 37.7**	**+1.1**
ASAK				S	**Sn**	**13 22 27.7**	**0.0**
FX1	**Attu Island--F**	**5.54**	**106**	Pn	**Pn**	**13 21 52.0**	**+0.9**
	2.5nm,0.3s,baz=63,slow=22,SNR=36						
FX1				Sn	**Sn**	**13 22 52.3**	**-1.6**
	3.7nm,0.3s,baz=89,slow=21,SNR=10.0						
ILAR	**Eielson Array**	**25.89**	**48**	P	**P**	**13 26 01.1**	**+1.5**
	0.1nm,0.4s,baz=254,slow=9.8,SNR=5.0						
KURBB	**Kurchatov Arra**	**49.09**	**303**	P	**P**	**13 29 15.1**	**+0.1**
	0.4nm,0.4s,baz=53,slow=7.5,SNR=4.4						
WRA	**Warramunga Arr**	**78.64**	**209**	P	**P**	**13 32 30.5**	**+0.9**
	0.3nm,1.0s,baz=22,slow=5.6,SNR=3.3						
ASAR	**Alice Springs**	**82.30**	**208**	P	P	13 32 52.3	+3.1
	0.2nm,0.8s,baz=22,slow=4.8,SNR=2.8						

*IDC **18** 13:25:35.6±1.2,25˚.48N×37˚.72E,h0km,mb3.8/12, mb1 3.9/15,mb1mx3.8/30,mbtmp3.8/15,ML3.8/3,MS3.3/13, Ms1 3.3/13,ms1mx3.1/34,Error ellipse: s-maj=19.8km s-min=17.2km az=31.0*
*HLW **18** 13:25:46.5,25˚.58N×36˚.90E,h32km±33km,Md0.0,Ml3.4*
*CSEM **18** 13:25:48.2±1.0,25˚.64N×36˚.72E,h30km,ML3.4,Error ellipse: s-maj=27.1km s-min=7.4km az=109.0*
ISC 18 13:25:41.5±1.6,25˚62N±0˚.09×37˚0E±0˚.1,h10km,n48, σ2§15/33,mb3.7/13,MS3.2/10,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HHRG	**Al Ghardaqah**	**3.44**	**298**	P	**Pn**	**13 26 36.7**	**+1.4**
	baz=300						
HHRG	**Al Ghardaqah**	**3.44**	**298**	P	**Pn**	**13 26 36.7**	**+1.4**
HEDF	**Idfu**	**3.46**	**262**	P	**Pn**	**13 26 37.6**	**+2.0**
HEDF				S	**Sn**	**13 27 13.8**	**-2.9**
HDHB	**Dhahab**	**3.74**	**326**	P	**Pn**	**13 26 41.4**	**+2.0**
	baz=328						
HDHB	**Dhahab**	**3.74**	**326**	P	**Pn**	**13 26 41.3**	**+2.0**
HKAT	**Jabal Katrina**	**3.93**	**318**	P	**Pn**	**13 26 44.5**	**+2.4**
	baz=320						
HKAT	**Jabal Katrina**	**3.93**	**318**	P	**Pn**	**13 26 44.5**	**+2.4**
HBST	**Basata**	**4.10**	**332**	P	Pn	13 26 47.8	+3.5
	baz=333						
HBST	**Basata**	**4.10**	**332**	P	Pn	13 26 47.8	+3.5
NAHD	**NAHD**	**4.22**	**246**	P	**Pn**	**13 26 47.4**	**+1.5**
	baz=246						
NAHD	**NAHD**	**4.22**	**246**	P	**Pn**	**13 26 47.4**	**+1.5**
EIL	**Elat**	**4.42**	**337**	Pn	**Pn**	**13 26 51.2**	**+2.5**
	0.9nm,0.3s,baz=158,slow=5.4,SNR=4.3						
EIL				Pg	**Pg**	**13 27 04.2**	**-2.0**
	9.4nm,0.3s,baz=136,slow=6.7,SNR=20						
EIL				Lg	Lg	13 28 08.6	
	32nm,0.3s,baz=6.3,slow=18,SNR=18						
NNAL	**NNAL**	**4.55**	**240**	P	**Pn**	**13 26 52.4**	**+1.8**
	baz=241						
NNAL	**NNAL**	**4.55**	**240**	P	**Pn**	**13 26 52.4**	**+1.8**
NSKD	**NSKD**	**4.60**	**246**	P	**Pn**	**13 26 52.9**	**+1.7**
	baz=246						
NSKD	**NSKD**	**4.60**	**246**	P	**Pn**	**13 26 52.9**	**+1.7**
HNKL	**Nakhl**	**5.05**	**329**	P	**Pn**	**13 26 59.9**	**+2.5**
	baz=330						
HNKL	**Nakhl**	**5.05**	**329**	P	**Pn**	**13 26 59.9**	**+2.5**
HMSM	**Jabal Masmas**	**5.38**	**241**	AMP		13 28 00.0	
	comp=N,70µm,0.4s,logA/T=5.3,baz=241						
ASF	**Jabal al Asfar**	**6.53**	**359**	Pn	**Pn**	**13 27 17.0**	**-0.8**
	comp=N,1.7nm,0.3s,baz=38,slow=9.0,SNR=7.4						
ASF				Pg	**Pb**	**13 27 38.1**	**+2.7**
	comp=N,5.1nm,0.3s,baz=35,slow=8.9,SNR=13						
ASF				Lg	Lg	13 29 06.3	
	comp=N,7.6nm,0.3s,baz=227,slow=19,SNR=3.3						
ASF				LR	LR	13 29 52.7	
	comp=N,158nm,18.0s,baz=270,slow=38						
HDK1	**Dakhla**	**6.83**	**271**	P	**Pn**	**13 27 24.6**	**+2.7**
	baz=272						
HDK1	**Dakhla**	**6.83**	**271**	P	**Pn**	**13 27 24.6**	**+2.7**
MMAI	**Mount Meron Ar**	**7.50**	**350**	Pn	**Pn**	**13 27 30.6**	**-0.5**
	comp=N,7.5nm,0.3s,baz=157,slow=15,SNR=15						
MMAI				Lg	Lg	13 29 42.0	
	comp=N,5.2nm,0.3s,baz=160,slow=31,SNR=3.6						
NAY	**Al-Naaiem**	**9.82**	**66**	*e*P	Pn	13 27 49.9	-13
NAY				AML	AML	13 30 28.9	
	comp=Z,32nm,0.7s						
RDF	**Al-Radifah**	**9.97**	**68**	*e*P	Pn	13 27 51.1	-14
RDF				AML	AML	13 30 37.2	
	comp=Z,75nm,0.6s						
QRN	**Al-Qurain**	**10.23**	**70**	*e*P	Pn	13 27 54.5	-14
QRN				AML	AML	13 30 37.8	
	comp=Z,34nm,0.6s						
BRTR	**Keskin Array B**	**14.35**	**350**	Pn	**P**	**13 29 10.2**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=167,slow=14,SNR=5.5						
GNI	**Garni**	**15.88**	**22**	LR	LR	13 36 17.3	
	comp=Z,138nm,20.3s,baz=266,slow=41						
KBZ	**Khabaz**	**18.71**	**14**	LR	LR	13 38 01.5	
	comp=Z,73nm,20.0s,baz=192,slow=40						
KEST	**Kesra**	**25.73**	**300**	P	**P**	**13 31 15.7**	**+3.3**
	comp=Z,2.0nm,0.9s,baz=21,slow=8.6,SNR=4.9						
AKASG	**Malin Array Be**	**25.75**	**349**	P	**P**	**13 31 09.8**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=168,slow=8.1,SNR=8.2						
KMBO	**Kilima Mbogo**	**26.59**	**179**	LR	LR	13 41 09.5	
	comp=Z,46nm,19.6s,baz=90,slow=35						
MBAR	**Mbarara**	**26.75**	**194**	LR	LR	13 41 04.1	
	comp=Z,80nm,21.4s,baz=360,slow=35						
GERES	**GERESS Array B**	**29.46**	**328**	P	**P**	**13 31 46.2**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=97,slow=9.5,SNR=4.7						
BRG	**Berggiesshubel**	**30.78**	**331**	*e*(P)		**13 31 58.4**	**+1.2**
	comp=Z,3.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**35.39**	**256**	P	**P**	**13 32 37.4**	**-0.4**
	comp=Z,0.8nm,0.9s,baz=74,slow=9.6,SNR=4.5						
TORD				LR	LR	13 48 56.5	
	comp=Z,65nm,20.6s,baz=150,slow=39						
FINES	**FINESS Array B**	**36.58**	**351**	P	**P**	**13 32 44.9**	**-2.5**
	comp=Z,0.8nm,0.7s,baz=124,slow=12,SNR=3.1						
FINES				LR	LR	13 49 44.1	
	comp=Z,27nm,18.4s,baz=90,slow=39						
ESDC	**Sonseca Array**	**36.89**	**303**	P	**P**	**13 32 51.6**	**+1.2**
	comp=Z,0.3nm,0.3s,baz=109,slow=7.7,SNR=3.4						
BVAR	**Borovoye Array**	**37.08**	**33**	P	P	13 32 45.3	-6.5
	comp=Z,0.6nm,0.6s,baz=230,slow=12,SNR=5.2						
NB2	**NORSAR Subarra**	**39.52**	**341**	P	**P**	**13 33 09.8**	**-2.5**
	comp=Z,1.2nm,0.7s,baz=139,slow=9.3						
NOA	**NORSAR Array B**	**39.52**	**341**	P	**P**	**13 33 10.3**	**-2.1**
	comp=Z,1.0nm,0.7s,baz=138,slow=8.7,SNR=5.2						
NOA				LR	LR	13 52 01.3	
	comp=Z,18nm,18.1s,baz=165,slow=40						
KURBB	**Kurchatov Arra**	**40.38**	**41**	P	P	13 33 12.9	-6.7
	comp=Z,1.6nm,0.7s,baz=251,slow=8.5,SNR=11						
MKAR	**Makanchi Array**	**41.53**	**47**	P	P	13 33 21.6	-7.6
	comp=Z,2.1nm,0.7s,baz=249,slow=7.6,SNR=16						
MKAR				LR	LR	13 53 40.3	
	comp=Z,16nm,18.5s,baz=177,slow=41						
DBIC	**Dimbokro**	**44.12**	**252**	LR	LR	13 53 24.6	
	comp=Z,68nm,20.2s,baz=40,slow=37						
ARCES	**ARCESS Array B**	**44.46**	**354**	P	P	13 33 47.8	-4.7
	comp=Z,1.2nm,0.7s,baz=160,slow=9.3,SNR=4.1						
ARCES				LR	LR	13 54 42.0	
	comp=Z,31nm,18.4s,baz=160,slow=39						
ZALV	**Zalesovo Beam**	**45.17**	**38**	LR	LR	13 54 48.7	
	comp=Z,29nm,19.1s,baz=249,slow=39						
CMAR	**Chiang Mai Arr**	**57.45**	**84**	LR	LR	14 04 17.8	
	comp=Z,32nm,18.2s,baz=345,slow=41						
SONM	**Songino Array**	**57.89**	**48**	P	P	13 35 26.2	-7.7
	comp=Z,0.7nm,0.8s,baz=267,slow=7.3,SNR=7.1						

*ISK **18** 13:38:21.0,37˚.44N×28˚.29E,h3km,MD2.5*
*CSEM **18** 13:38:22.6±0.5,37˚.34N×28˚.32E,h19km±1km,MD2.5, Error ellipse: s-maj=11.9km s-min=7.1km az=39.0*
*DDA **18** 13:38:24.2,37˚.24N×28˚.18E,h7km,MD2.6*
ISC 18 13:38:21.7±1.4,37˚37N±0˚.05×28˚36E±0˚.05,h11km±11km, n16,σ0§70/25,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.24**	**194**	PG	**Pg**	**13 38 27.1**	**+0.4**
YER	**Yerkesik**	**0.24**	**194**	*i* Pg	**Pg**	**13 38 27.1**	**+0.4**
MLSB	**Milas**	**0.47**	**261**	*e*PG	**Pg**	**13 38 31.0**	**+0.1**
MLSB				*e*SG	**Sg**	**13 38 36.5**	**-0.6**
MLSB	**Milas**	**0.47**	**261**	*e*Pg	**Pg**	**13 38 31.0**	**+0.1**
MLSB				*e*Sg	**Sg**	**13 38 36.5**	**-0.6**
AYDN	**Tasoluk**	**0.48**	**308**	*i* P	**Pn**	**13 38 34.2**	**-0.4**
AYDN				*i* S	**Sb**	**13 38 41.0**	**+1.7**
AYDN	**Tasoluk**	**0.48**	**308**	*i* P	**Pn**	**13 38 34.2**	**-0.4**
AYDN				*i* S	**Sb**	**13 38 41.0**	**+1.7**
TURN	**Turunc**	**0.53**	**158**	*i* P	**Pb**	**13 38 33.2**	**+0.1**
TURN				*i* S	**Sb**	**13 38 40.7**	**-0.1**
TURN	**Turunc**	**0.53**	**158**	*i* P	**Pb**	**13 38 33.2**	**+0.1**
TURN				*i* S	**Sb**	**13 38 40.7**	**-0.1**
DALY	**Dalyan (Mu¨la**	**0.60**	**157**	*e*PG	**Pb**	**13 38 34.7**	**+0.5**
DALY				*e*SG	**Sn**	**13 38 46.1**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.60**	**157**	*e*Pg	**Pb**	**13 38 34.7**	**+0.5**
BODT	**Bodrum**	**0.89**	**250**	*e*PG	**Pg**	**13 38 39.0**	**+0.1**
BODT				*e*SG	**Sb**	**13 38 50.7**	**-0.4**
BODT	**Bodrum**	**0.89**	**250**	*e*Pg	**Pg**	**13 38 39.0**	**+0.1**
BODT				*e*Sg	**Sb**	**13 38 50.7**	**-0.4**
FETY	**Fethiye**	**0.94**	**141**	*e*PG	**Pn**	**13 38 40.9**	**0.0**
FETY	**Fethiye**	**0.94**	**141**	*e*Pg	**Pn**	**13 38 40.9**	**0.0**
KULA	**Kula-Manisa**	**1.17**	**12**	*e*PN	**Pn**	**13 38 43.0**	**-1.1**
KULA	**Kula-Manisa**	**1.17**	**12**	*e*Pn	**Pn**	**13 38 43.0**	**-1.1**

*IDC **18** 13:38:29.5±9.3,21˚.54S×172˚.47E,h81km±58km,mb3.5/4, mb1 3.8/5,mb1mx3.4/19,mbtmp3.6/5,ML4.3/1,MS3.2/1, Ms1 3.2/1,ms1mx2.7/19,Error ellipse: s-maj=109.9km s-min=66.0km az=177.0*
ISC 18 13:38:23.7±3.1,22˚3S±0˚.8×172˚9E±0˚.2,h35km,n7, σ1§89/10,mb3.8/4,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NORM	**Noumea**	**5.93**	**270**	*e*P	**Pn**	**13 39 49.6**	**+0.5**
NORM				*e*S	**Sn**	**13 40 54.9**	**-1.0**
DZM	**Mont Dzumac**	**5.98**	**271**	P	**Pn**	**13 39 50.7**	**+0.9**
	8.2nm,0.3s,baz=127,slow=19,SNR=207						
DZM				S	**Sn**	**13 40 54.5**	**-2.6**
	0.8nm,0.3s,baz=198,slow=20,SNR=4.3						
DZM				LR	LR	13 41 02.9	
	comp=Z,235nm,21.2s,baz=279,slow=27						
NOUC	**Port Laguerre**	**6.11**	**271**	*e*P	**Pn**	**13 39 54.1**	**+2.6**
NOUC				*e*S	**Sn**	**13 41 02.1**	**+1.9**
STKA	**Stephens Creek**	**29.36**	**244**	P	**P**	**13 44 24.1**	**+0.6**
	0.8nm,0.5s,baz=86,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**35.84**	**260**	P	**P**	**13 45 18.8**	**-1.6**
	1.0nm,0.7s,baz=80,slow=9.3,SNR=14						
WRA	**Warramunga Arr**	**35.97**	**266**	P	**P**	**13 45 19.7**	**-1.7**
	0.3nm,0.3s,baz=96,slow=8.5,SNR=15						
FITZ	**Fitzroy Crossi**	**44.40**	**267**	P	**P**	**13 46 31.2**	**-0.1**
	1.6nm,0.7s,baz=116,slow=9.5,SNR=4.4						

KRSC 18 13:56:48.5±0.8,55˚74N×162˚54E,h41km±41km,ML3.7, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.49**	**18**	P	Pn	13 56 59.5	+0.3
KBTR				S	Sn	13 57 07.4	+0.6
KBG	**Krutoberegovo**	**0.53**	**10**	P	Pn	13 57 00.0	+0.4
KBG				S	Sn	13 57 09.0	+1.6
ZLN	**Zelenaya**	**1.02**	**287**	P	Pn	13 57 07.2	+0.8
ZLN				S	Sn	13 57 20.8	+1.2
SMKR	**Semkarok**	**1.03**	**325**	P	Pn	13 57 07.4	+0.8
SMKR				S	Sn	13 57 21.2	+1.2
BZGR	**Bezymyannyi-Gr**	**1.06**	**282**	P	Pn	13 57 07.7	+0.7
BZGR				S	Sn	13 57 22.1	+1.4
CIRR	**Tsirk**	**1.08**	**291**	P	Pn	13 57 08.2	+0.9
CIRR				S	Sn	13 57 22.3	+1.1
LGNR	**Loginova**	**1.10**	**289**	P	Pn	13 57 08.6	+0.8
LGNR				S	Sn	13 57 23.2	+1.2
BDR	**Baidarnaya**	**1.12**	**319**	P	Pn	13 57 09.0	+1.2
BDR				S	Sn	13 57 24.4	+2.4
BZMR	**Bezymyannaya**	**1.17**	**280**	P	Pn	13 57 09.4	+0.8
BZMR				S	Sn	13 57 24.9	+1.4
BZWR	**Bezymyannyi-We**	**1.17**	**282**	P	Pn	13 57 09.5	+0.8
BZWR				S	Sn	13 57 25.1	+1.5
SRKR	**Sorokina**	**1.20**	**321**	P	Pn	13 57 10.0	+1.2
SRKR				S	Sn	13 57 25.5	+1.6
KLY	**Klyuchi**	**1.21**	**299**	P	Pn	13 57 08.1	-0.7
KLY				S	Sn	13 57 22.7	-1.3
KRSR	**Krestovskiy**	**1.21**	**294**	P	Pn	13 57 09.2	+0.1
KRSR				S	Sn	13 57 24.3	0.0
KIRR	**Kirishev**	**1.26**	**281**	P	Pn	13 57 10.9	+1.1
KIRR				S	Sn	13 57 27.3	+1.7
MKZ	**Mys Kozlova**	**1.27**	**202**	P	Pn	13 57 10.8	+1.0
MKZ		

NNA Sn **Sn** **14 02 54.5 +0.2**
NNA Nana 4.13 336 Pn **Pn** **14 02 06.8 +0.1**
4µm,0.4s,SNR=15
NNA Nana 4.13 336 Pn **Pn** **14 02 04.2 -2.5**
18nm,0.3s,baz=158,slow=13,SNR=23
NNA Sn **Sn** **14 02 54.5 +0.2**
396nm,0.3s,baz=117,slow=2.3,SNR=5.8
ARCH Arica 5.36 121 *eP* **Pn** **14 02 23.0 -0.5**
ARCH Arica 5.36 121 *eP* **Pn** **14 02 23.0 -0.5**
PSGC Pisagua 6.10 129 *eP* **Pn** **14 02 31.8 -2.0**
PSGC Pisagua 6.10 129 *eP* **Pn** **14 02 31.8 -2.0**
MNMC Minimini 6.25 123⇑*iP* **Pn** **14 02 34.8 -1.2**
MNMC Minimini 6.25 123⇑*iP* **Pn** **14 02 34.8 -1.2**
HMBC Humberstone 6.70 132⇑*iP* **Pn** **14 02 40.2 -1.8**
HMBC Humberstone 6.70 132⇑*iP* **Pn** **14 02 40.2 -1.8**
LPAZ La Paz 6.77 95 *ePn* **Pn** **14 02 45.9 +2.4**
LPAZ Sn **Sn** **14 04 02.5 +2.3**
LPAZ La Paz 6.77 95 Pn **Pn** **14 02 44.0 +0.5**
7.2nm,0.3s,baz=266,slow=7.7,SNR=131
LPAZ Sn **Sn** **14 04 02.5 +2.3**
baz=261,slow=6.8,SNR=2.2
LPAZ LR LR 14 05 31.5
comp=Z,50µm,19.7s,baz=274,slow=41
PB01 Plate Boundary 7.49 135 *eP* **Pn** **14 02 50.8 -2.0**
PB01 Plate Boundary 7.49 135 *eP* **Pn** **14 02 50.8 -2.0**
PB07 Plate Boundary 7.72 141⇑*iP* **Pn** **14 02 54.0 -2.0**
PB07 Plate Boundary 7.72 141⇑*iP* **Pn** **14 02 54.0 -2.0**
CEN1 Los Morros 8.87 149 *eP* **Pn** **14 03 09.8 -2.0**
CEN1 Los Morros 8.87 149 *eP* **Pn** **14 03 09.8 -2.0**
LVC Limon Verde 8.98 140 *eP* **Pn** **14 03 12.3 -1.1**
LVC Limon Verde 8.98 140 *eP* **Pn** **14 03 12.3 -1.1**
ATAH Atahualpa 9.18 339 Pn Pn 14 03 20.8 +4.4
ATAH Sn Sn 14 05 06.8 +7.6
ATAH Atahualpa 9.18 339 Pn Pn 14 03 20.8 +4.4
1.2nm,0.3s,baz=124,slow=7.3,SNR=10
ATAH Sn Sn 14 05 06.8 +7.6
6.9nm,0.3s,baz=166,slow=17,SNR=1.5
SAML Samuel 13.53 61 *ePn* **Pn** 14 04 10.6 -4.9
2.1nm,1.3s
SIV San Ignacio 13.55 93 Pn Pn 14 04 10.8 -5.0
SIV Sn **Sn** **14 06 44.6 -1.2**
SIV San Ignacio 13.55 93 Pn Pn 14 04 10.8 -5.0
1.0nm,0.3s,baz=302,slow=11,SNR=17
SIV Sn **Sn** **14 06 44.6 -1.2**
1.2nm,0.3s,baz=187,slow=18,SNR=2.3
SIV LR LR 14 09 54.0
comp=Z,30µm,19.2s,slow=40
LCO Las Campanas 13.77 163 *ePn* **Pn** **14 04 20.1 +1.1**
OTAV Otavalo 16.27 348 *eP* **P** **14 04 56.5 +1.1**
59nm,0.8s
CFAA Coronel Fontan 16.95 159 P **Pn** **14 05 00.7 +0.2**
CFAA S **S** **14 08 16.9 -1.1**
CFAA Coronel Fontan 16.95 159 P **Pn** **14 05 00.7 +0.2**
0.3nm,0.3s,baz=339,slow=10,SNR=20
CFAA S **S** **14 08 16.9 -1.1**
0.0nm,0.3s,baz=274,slow=19,SNR=2.0
CPUP Villa Florida 19.63 125 P **P** **14 05 31.9 0.0**
CPUP S **Sn** **14 09 17.2 +3.9**
CPUP Villa Florida 19.63 125 P **P** **14 05 31.9 0.0**
0.7nm,0.3s,baz=284,slow=11,SNR=20
CPUP S **Sn** **14 09 17.2 +3.9**
0.3nm,0.3s,baz=306,slow=19,SNR=2.0
CPUP LR LR 14 14 47.5
comp=Z,8µm,19.6s,baz=282,slow=42
ROSC El Rosal 20.55 2 *eP* **P** **14 05 41.1 -1.2**
ROSC S Sn 14 09 34.3 -1.9
ROSC El Rosal 20.55 2 P **P** **14 05 39.6 -2.7**
5.2nm,0.4s,baz=105,slow=20,SNR=1.9
ROSC S Sn 14 09 34.3 -1.9
6.1nm,0.4s,baz=96,slow=19,SNR=2.2
PAYG Puerto Ayora 21.19 314 P **P** **14 05 51.2 +2.3**
80nm,1.1s
PAYG LR LR
comp=Z,7µm,19.0s
LPA La Plata 24.51 144*ceP* **P** **14 06 22.0 -0.5**
LPA pP **pP** **14 06 26.0 -3.8**
LPA PP **PnPn** **14 06 53.0 -0.9**
LPA PPP PPP 14 07 00.0
LPA PPP(2) 14 08 56.0
LPA S S 14 10 52.0 +10
SDV Santo Domingo 24.94 11 P **P** **14 06 24.3 -2.4**
comp=Z,167nm,1.4s
SDV LR LR
comp=Z,1.0nm,22.0s
TRQA Tornquist 25.03 155 P **P** **14 06 27.2 0.0**
comp=Z,30nm,1.5s
TRQA LR LR
comp=Z,6µm,20.0s
PLCA Paso Flores 25.16 172 *eP* **P** **14 06 27.9 -0.5**
comp=Z,56nm,1.2s
PLCA Paso Flores 25.16 172 P **P** **14 06 28.3 -0.1**
comp=Z,14nm,1.0s,baz=351,slow=11,SNR=13
BCIP Isla Barro Col 25.24 349 *eP* **P** **14 06 29.7 +0.4**
comp=Z,235nm,1.8s
BCIP LR LR
comp=Z,7µm,20.0s
BDFB Brasilia 26.12 93 P **P** **14 06 35.1 -2.3**
BDFB Brasilia 26.12 93 P **P** **14 06 35.1 -2.3**
comp=Z,24nm,0.8s,baz=252,slow=12,SNR=11
BDFB LR LR 14 17 03.8
comp=Z,3µm,18.3s,baz=261,slow=37
SPB Sao Paulo 27.19 111 *eP* **P** **14 06 46.8 -0.1**
comp=Z,446nm,1.5s
SPB LR LR
comp=Z,24µm,20.0s
JTS JuntasAbangare 27.68 339 PFAKE 14 07 00.0 +8.6
JTS LR LR
comp=Z,21µm,21.0s
GRGR Grenville 30.81 26 PFAKE 14 07 30.0 +11
GRGR LR LR
comp=Z,13µm,19.0s
CAM4 Nova Friburgo 31.44 107⇑*iP* **P** **14 07 22.4 -2.5**
CAM4 *i* 14 07 26.0
CAM4 *i* 14 07 30.6
CAM4 *i* 14 07 35.6
CAM4 *i* 14 07 39.5
CAM4 *i* 14 07 47.1
CAM4 *i* 14 07 55.2
CAM4 *i* 14 08 08.5
TGUH Tegucigalpa,Un 32.00 337 PFAKE 14 07 40.0 +10
TGUH LR LR
comp=Z,5µm,21.0s
BBGH Gun Hill 32.64 29 PFAKE 14 07 50.0 +15
BBGH LR LR
comp=Z,24µm,21.0s
FDF Fort de France 33.35 25 PFAKE 14 07 50.0 +8.5
FDF LR LR
comp=Z,7µm,20.0s
MTDJ Mount Denham 33.90 356 PFAKE 14 08 00.0 +14
MTDJ LR LR
comp=Z,6µm,19.0s
CELP Cerrillos 34.71 14 *eP* **P** **14 07 51.5 -1.7**
SDDR Presa de Saban 34.78 6 PFAKE 14 08 00.0 +6.2
SDDR LR LR
comp=Z,9µm,20.0s
SJG San Juan 34.85 15 *eP* **P** **14 07 53.3 -1.1**
comp=Z,33nm,1.0s
SJG LR LR
comp=Z,7µm,19.0s
GTBY Guantanamo Bay 35.51 0 PFAKE 14 08 10.0 +10
GTBY LR LR
comp=Z,4µm,21.0s
ANWB Willy Bob 35.78 22 *eP* P 14 07 58.8 -3.6
comp=Z,137nm,0.8s
ANWB LR LR
comp=Z,6µm,20.0s
GRTK Grand Turk 37.30 6 PFAKE 14 08 30.0 +15
GRTK LR LR
comp=Z,9µm,22.0s
TEIG Tepich 38.06 340 *eP* **P** **14 08 20.8 -0.9**
comp=Z,72nm,1.3s
TEIG LR LR
comp=Z,9µm,21.0s
TEIG Tepich 38.06 340 P **P** **14 08 20.6 -1.1**
comp=Z,32nm,0.9s,baz=164,slow=6.6,SNR=14
USHA Ushuaia 39.29 174 P **P** **14 08 34.2 +2.4**
USHA Ushuaia 39.29 174 P **P** **14 08 34.2 +2.4**
comp=Z,6.3nm,0.8s,baz=342,slow=16,SNR=2.5
RCBR Riachuelo 39.74 80 *eP* P 14 08 32.7 -3.4
comp=Z,55nm,1.1s
RCBR Riachuelo 39.74 80 P **P** **14 08 34.9 -1.2**
comp=Z,29nm,1.0s,baz=249,slow=8.5,SNR=8.7
RCBR LR LR 14 26 07.5
comp=Z,23µm,19.2s,baz=53,slow=38
BRAL Brewton 47.93 346 PFAKE 14 09 50.0 +8.5
BRAL LR LR
comp=Z,3µm,20.0s
NHSC New Hope 48.87 354 PFAKE 14 10 00.0 +11
NHSC LR LR
comp=Z,6µm,20.0s
BBSR BB Station 48.94 12 PFAKE 14 10 00.0 +11
BBSR LR LR
comp=Z,4µm,20.0s
HKT Hockley 49.67 336 *eP* **P** **14 09 54.6 -0.2**
HKT pmax pmax
comp=Z,66nm,1.7s
HKT Hockley 49.67 336 *eP* **P** **14 09 54.5 -0.2**
comp=Z,66nm,1.7s
LRAL Lakeview Retre 49.87 347 *eP* **P** **14 09 55.6 -0.7**
comp=Z,59nm,1.4s
LRAL LR LR
comp=Z,2µm,19.0s
VBMS Vicksburg 49.97 343 PFAKE 14 10 10.0 +13
VBMS LR LR
comp=Z,3µm,20.0s
732A Laxson Ranch, 50.36 331⇑P **P** **14 09 59.3 -0.9**
baz=51
CNNC Cliffs of the 50.83 357 PFAKE 14 10 10.0 +6.4
CNNC LR LR
comp=Z,4µm,22.0s
KMSC Kings Mountain 51.01 353⇑P **P** **14 10 03.8 -1.1**
baz=51
631A Perdido Creek 51.22 331⇑P **P** **14 10 05.1 -1.5**
baz=52,SNR=12
532A Rocksprings 51.52 332⇓P **P** **14 10 08.2 -0.8**
baz=52,SNR=6.7
CPCT Cooper Cave 51.74 350 *eP* **P** **14 10 10.1 -0.3**
SWET Sewanee 51.76 349 *eP* **P** **14 10 09.3 -1.4**
comp=Z,23nm,1.0s
JCT Junction City 51.78 333 *eP* **P** **14 10 11.2 +0.3**
JCT pmax pmax
comp=Z,43nm,1.6s
JCT MLR MLR
comp=Z,2µm,20.0s
JCT Junction City 51.78 333 *eP* **P** **14 10 11.2 +0.3**
comp=Z,43nm,1.6s
JCT LR LR
comp=Z,2µm,20.0s
JCT Junction City 51.78 333⇑P **P** **14 10 09.6 -1.3**
baz=52
TKL Tuckaleechee C 51.83 351 *eP* **P** **14 10 10.0 -1.1**
531A Rocksprings 51.84 332⇑P **P** **14 10 10.3 -1.1**
baz=52,SNR=16
OXF Oxford 51.84 345 PFAKE 14 10 20.0 +8.8
OXF LR LR
comp=Z,2µm,19.0s
PLAL Pickwick Lake 51.98 347 *eP* **P** **14 10 10.7 -1.5**
432A Menard 52.11 333⇑P **P** **14 10 12.0 -1.4**
baz=52,SNR=7.8
WHTX Lake Whitney 52.11 336⇓P **P** **14 10 11.9 -1.3**
baz=52,SNR=5.4
530A J-C Ranch, Com 52.19 331⇓P **P** **14 10 13.1 -0.8**
baz=52,SNR=12
431A Sonora 52.31 332⇓P **P** **14 10 14.3 -0.6**
baz=53,SNR=12
628A Black Gap, Mar 52.38 329⇓P **P** **14 10 14.2 -1.2**
baz=53
332A Millersview 52.53 333⇓P **P** **14 10 15.9 -0.5**
baz=53,SNR=15
529A Stev Forest Ra 52.59 330⇓P **P** **14 10 15.4 -1.5**
baz=53
627A Terlingua Ranc 52.60 329⇑P **P** **14 10 17.0 -0.1**
baz=53,SNR=16
TXAR Lajitas Array 52.65 328 P **P** **14 10 16.1 -1.3**
TXAR Lajitas Array 52.65 328 P **P** **14 10 16.1 -1.3**
comp=Z,4.4nm,0.7s,baz=155,slow=8.5,SNR=35
TXAR LR LR 14 31 19.3
comp=Z,4µm,18.6s,baz=210,slow=35
TZTN Tazewell 52.67 351 *eP* **P** **14 10 17.3 0.0**
comp=Z,44nm,1.2s
430A Baggett Ranch, 52.68 332⇑P **P** **14 10 16.9 -0.7**
baz=53
331A San Angelo 52.76 333⇓P **P** **14 10 17.8 -0.4**
baz=53,SNR=7.2
429A Davenport Ranc 52.85 331⇑P **P** **14 10 18.5 -0.4**
baz=53,SNR=19
528A Cox Ranch, San 52.89 330⇓P **P** **14 10 18.8 -0.5**
baz=53,SNR=12
232A Coleman 52.92 334⇓P **P** **14 10 18.6 -0.7**
baz=53
VWCC Virginia Weste 52.96 355 *eP* **P** **14 10 19.5 0.0**
BLA Blacksburg 52.97 355 *eP* **P** **14 10 17.8 -1.7**
BLA pmax pmax
comp=Z,23nm,0.8s
BLA MLR MLR
comp=Z,3µm,21.0s
BLA Blacksburg 52.97 355 *eP* **P** **14 10 17.8 -1.7**
comp=Z,23nm,0.8s
BLA LR LR
comp=Z,3µm,21.0s
WVT Waverly 53.03 347 *eP* P 14 10 16.1 -3.9
WVT pmax pmax
comp=Z,45nm,1.5s
WVT Waverly 53.03 347 *eP* P 14 10 16.1 -3.9
comp=Z,44nm,1.5s
626A Big Bend Ranch 53.06 328⇑P **P** **14 10 19.5 -1.0**
baz=53
330A Mertzon 53.18 332⇓P **P** **14 10 20.2 -1.1**
baz=53
231A Bronte 53.25 333⇑P **P** **14 10 20.8 -1.0**
baz=54
JSRW J. Sargeant Re 53.27 357 P **P** **14 10 21.7 -0.1**
527A Woodward Ranch 53.28 329⇑P **P** **14 10 21.1 -1.1**
baz=54,SNR=12
428A Kincaid Ranch, 53.31 330⇓P **P** **14 10 21.5 -0.8**
baz=54
526A Mary Lane Ranc 53.45 329⇑P **P** **14 10 22.8 -0.6**
baz=54,SNR=17
ABTX Abilene, Hawle 53.55 334⇓P **P** **14 10 23.3 -0.7**
baz=54,SNR=5.7
230A Sterling City 53.56 332⇑P **P** **14 10 23.5 -0.6**
baz=54
329A Wagon Wheel Ra 53.61 331⇑P **P** **14 10 23.6 -0.9**
baz=54
427A Hayter Ranch, 53.76 330⇑P **P** **14 10 25.1 -0.5**
baz=54
328A Wristen Ranch, 53.91 331⇑P **P** **14 10 26.3 -0.4**
baz=54,SNR=12
131A Roby 53.91 334⇑P **P** **14 10 26.0 -0.6**
baz=54
426A McDonald Obser 53.92 329⇑P **P** **14 10 26.1 -0.8**
baz=54,SNR=16
229A Bryant Ranch, 53.94 332⇑P **P** **14 10 26.0 -0.8**
baz=54
Z32A Haskell 54.08 335⇑P **P** **14 10 27.1 -0.7**
baz=54
130A Snyder 54.10 333⇓P **P** **14 10 27.0 -1.0**
baz=54
327A Balmorrhea Ranc 54.23 330⇓P **P** **14 10 27.8 -1.2**
baz=54
Z31A Sharp Cattle R 54.37 334⇓P **P** **14 10 28.7 -1.2**
baz=55,SNR=10
326A Caldwell Ranch 54.42 330⇓P **P** **14 10 29.2 -1.2**
baz=55,SNR=5.7
228A UT Block 9, Go 54.42 331⇓P **P** **14 10 29.9 -0.5**
baz=55,SNR=7.2
425A Indio Mountain 54.49 328⇑P **P** **14 10 30.8 -0.2**
baz=55,SNR=18
129A Stewart Farms, 54.52 332⇓P **P** **14 10 30.9 -0.2**
baz=55
227A Bennet, Jal 54.66 331⇑P **P** **14 10 32.2 +0.1**
baz=55
Y32A R-V Farms, Ver 54.67 335⇓P **P** **14 10 31.7 -0.4**
baz=55,SNR=7.1
WCI Wyandotte Cave 54.76 349 *eP* **P** **14 10 30.4 -2.2**
WCI pmax pmax
comp=Z,79nm,1.0s
WCI Wyandotte Cave 54.76 349 *eP* **P** **14 10 30.4 -2.2**
comp=Z,79nm,1.0s
Z30A Sanderson Ranc 54.76 333⇓P **P** **14 10 32.3 -0.5**
baz=55,SNR=17
USIN University of 54.76 348 *eP* **P** **14 10 31.3 -1.3**
comp=Z,422nm,2.1s
128A Castleberry Fa 54.80 332⇑P **P** **14 10 32.5 -0.6**
baz=55,SNR=8.7
SIUC Southern Illin 54.85 346 *eP* **P** **14 10 32.4 -0.9**
comp=Z,72nm,1.3s
SDMD Soldier's Deli 54.95 358 *eP* **P** **14 10 34.0 0.0**
comp=Z,51nm,1.0s
Y31A Rekieta Farm, 54.97 334⇑P **P** **14 10 33.9 -0.4**
baz=55,SNR=7.2
Z29A Hungry Hill Ra 54.99 333⇑P **P** **14 10 33.7 -0.8**
baz=55
TUL1 Tulsa 55.02 340⇑P **P** **14 10 33.6 -0.9**
baz=55,SNR=6.1
WMOK Wichita Mounta 55.05 336 *eP* **P** **14 10 34.0 -0.8**
WMOK pmax pmax
comp=Z,21nm,1.3s
WMOK MLR MLR
comp=Z,1µm,20.0s
WMOK Wichita Mounta 55.05 336 *eP* **P** **14 10 34.0 -0.8**
comp=Z,20nm,1.3s
WMOK LR LR
comp=Z,1µm,20.0s
226B Tecolote Peak, 55.13 330⇓P **P** **14 10 35.5 -0.1**
baz=55,SNR=16
Y30A Stafford Cattl 55.16 334⇓P **P** **14 10 35.7 0.0**
baz=55
127A Arkansas Junct 55.24 331⇓P **P** **14 10 36.2 -0.2**
baz=56
324A Moseley Ranch, 55.27 328⇑P **P** **14 10 35.6 -1.1**
baz=56
Z28A Tucker Farm, M 55.31 332⇑P **P** **14 10 36.6 -0.2**
baz=56
GDL2 Guadalupe Moun 55.33 330 *eP* **P** **14 10 39.0 +2.0**
comp=Z,10nm,1.1s
MNTX Cornudas Mount 55.43 329 *eP* **P** **14 10 36.7 -0.9**
comp=Z,14nm,1.2s
MNTX LR LR
comp=Z,3µm,20.0s
X31A McDonald Ranch 55.43 335⇓P **P** **14 10 37.2 -0.4**
baz=56
225A Deer Hill, Car 55.48 329⇑P **P** **14 10 37.9 -0.3**
baz=56,SNR=18
MVL Millersville 55.53 359 *eP* **P** **14 10 37.5 -0.6**
comp=Z,90nm,1.3s
126A Clayton Basin, 55.53 330⇑P **P** **14 10 38.4 -0.1**
baz=56,SNR=7.2
OLIL Olney 55.59 348 P **P** **14 10 36.4 -2.2**
comp=Z,97nm,0.1s
X30A Coker Ranch, T 55.64 334⇑P **P** **14 10 38.4 -0.7**
baz=56
Z27A Tatum 55.71 332⇓P **P** **14 10 39.0 -0.8**
baz=56,SNR=13
Y28A McKinney Farm, 55.77 333⇑P **P** **14 10 40.3 +0.2**
baz=56
224A Cornudas Mount 55.80 329⇓P **P** **14 10 39.9 -0.6**
baz=56
125A Gardner Draw, 55.85 330⇑P **P** **14 10 40.0 -0.7**
baz=56,SNR=10
W31A Holland Ranch, 55.90 336⇓P **P** **14 10 40.5 -0.5**
baz=56
X29A Tulia 55.99 334⇑P **P** **14 10 40.9 -0.8**
baz=56
Z26A Caprock 56.03 331⇓P **P** **14 10 41.5 -0.5**
baz=56,SNR=5.2
MSTX Muleshoe 56.06 332⇓P **P** **14 10 41.5 -0.7**
baz=56,SNR=6.9
W30A Crocket Farms 56.16 335⇑P **P** **14 10 42.4 -0.5**
baz=56
Y27A Causey 56.16 332⇑P **P** **14 10 42.0 -1.0**
baz=56
SSPA Standing Stone 56.21 357 *eP* **P** **14 10 41.5 -1.5**
comp=Z,55nm,1.3s
ACSO Alum Creek Sta 56.22 353 *eP* **P** **14 10 40.9 -2.2**
comp=Z,37nm,0.8s
ACSO LR LR
comp=Z,3µm,19.0s
X28A Dimmitt 56.27 333⇓P **P** **14 10 42.4 -1.3**
baz=56
124A Stringfield Ra 56.27 329⇓P **P** **14 10 42.8 -1.1**
baz=56,SNR=17
AMTX Amarillo 56.36 334 *eP* **P** **14 10 44.9 +0.6**
comp=Z,16nm,1.1s
AMTX LR LR
comp=Z,1µm,19.0s
V31A Spring Creek L 56.38 336⇓P **P** **14 10 43.5 -0.9**
baz=57
Z25A Roswell 56.38 330⇓P **P** **14 10 43.7 -0.8**
baz=57,SNR=7.6
Y26A Elida 56.50 331⇓P **P** **14 10 44.4 -0.9**
baz=57
RKT Rikitea 56.55 253 *eS* **S** **14 18 35.3 -1.0**
comp=Z,6µm,26.2s
RKT *eLR* LR 14 27 29.5
comp=Z,7µm,27.5s,baz=88
W29A Amraillo 56.55 334⇑P **P** **14 10 44.4 -1.3**
baz=57
123A Bell Site, Whi 56.62 329⇑P **P** **14 10 46.1 -0.2**
baz=57
222A Williams Famil 56.63 327⇑P **P** **14 10 46.2 -0.1**
baz=57,SNR=9.8
V30A Spur Ranch, Mi 56.70 335⇓P **P** **14 10 47.1 +0.4**
baz=57
Z24A Sheeppen Canyo 56.74 330⇑P **P** **14 10 47.1 -0.1**
baz=57
X27A F and S Farms, 56.77 332⇑P **P** **14 10 47.1 -0.2**
baz=57
320A Kipp Ranch, An 56.78 326⇓P **P** **14 10 47.4 -0.1**
baz=57
U31A Nine Bar Ranch 56.90 336⇓P **P** **14 10 48.1 0.0**
baz=57
W28A Vega 56.90 334⇑P **P** **14 10 47.5 -0.7**
baz=57
Y25A Mesa, Roswell 56.90 331⇓P **P** **14 10 48.0 -0.2**
baz=57
221A Mesquite Ranch 56.91 327⇑P **P** **14 10 47.8 -0.5**
baz=57
X26A CR and CF Fran 57.01 332⇑P **P** **14 10 47.5 -1.5**
baz=57,SNR=6.1
122A Conniff Cattle 57.05 328⇑P **P** **14 10 49.5 +0.2**
baz=57
W27A Bowe Ranch, En 57.11 333⇓P **P** **14 10 49.8 +0.2**
baz=57
Z23A Rita Site, Whi 57.11 329⇑P **P** **14 10 49.9 +0.2**
baz=57
V29A Stinnett 57.14 335⇓P **P** **14 10 49.6 -0.2**
baz=57
220A Playas Peak, P 57.22 326⇑P **P** **14 10 50.4 -0.2**
baz=58,SNR=12
319A Douglas 57.22 325⇑P **P** **14 10 50.6 +0.1**
baz=58,SNR=11
Y24A Capitan 57.26 330⇑P **P** **14 10 51.0 +0.2**
baz=58,SNR=5.2
121A Cookes Peak, D 57.32 327⇓P **P** **14 10 51.1 -0.1**
baz=58,SNR=9.2
V28A Channing 57.33 334⇑P **P** **14 10 51.3 +0.1**
baz=58
U30A WK&E Inc. Balk 57.35 336⇑P **P** **14 10 51.5 +0.2**
baz=58
X25A Clemmons Ranch 57.38 331⇑P **P** **14 10 51.1 -0.6**
baz=58
W26A Owens Ranch, T 57.44 332⇓P **P** **14 10 51.9 -0.1**
baz=58
Z22A Elephant Butte 57.47 328⇓P **P** **14 10 51.7 -0.6**
baz=58
T31A Randall Ranch, 57.47 337⇓P **P** **14 10 51.9 -0.2**
baz=58
BRYW Bryant College 57.53 3 *eP* **P** **14 10 52.5 +0.1**
comp=Z,102nm,1.2s
U29A Oasis Ranch, S 57.53 335⇓P **P** **14 10 52.4 -0.2**
baz=58
Y23A Lovelace Mesa, 57.56 330⇑P **P** **14 10 52.8 -0.2**
baz=58
HDIL Hopedale 57.59 347 *eP* **P** **14 10 52.2 -0.6**
comp=Z,28nm,0.7s
HDIL LR LR
comp=Z,3µm,20.0s
V27A Dan Oppiter Fa 57.59 333⇑P **P** **14 10 52.3 -0.8**
baz=58
BINY Binghamton 57.72 359 *eP* **P** **14 10 53.0 -0.7**
comp=Z,120nm,1.5s
BINY LR LR
comp=Z,3µm,20.0s
T30A Plains 57.76 336⇓P **P** **14 10 54.0 -0.1**
baz=58
120A U Bar Ranch, L 57.77 327⇓P **P** **14 10 54.7 +0.2**
baz=58
X24A Lazy VL Ranch, 57.78 331⇑P **P** **14 10 53.8 -0.7**
baz=58
ERPA Erie 57.80 356 PFAKE 14 11 10.0 +16
ERPA LR LR
comp=Z,2µm,20.0s
S31A Mullinville 57.86 337⇓P **P** **14 10 55.1 +0.3**
baz=58
W25A X Bar L Ranch, 57.86 332⇓P **P** **14 10 54.6 -0.4**
baz=58
U28A Mallet 57.86 334⇓P **P** **14 10 54.7 -0.3**
baz=58
Z21A St. Cloud Mine 57.87 328⇑P **P** **14 10 55.3 +0.1**
baz=58,SNR=7.0

Y22A	Socorro	58.01	329	⇑P		P		14 10 55.8	-0.3	
	baz=58									
BNM	Barren Site	58.02	329	*eP*		P		14 10 57.2	+0.9	
	comp=Z,19nm,1.5s									
V26A	Tequesquite Ra	58.04	333	⇓P		P		14 10 55.8	-0.5	
	baz=58									
LPM	Los Pinos Moun	58.15	329	*eP*		P		14 10 57.4	+0.3	
X23A	Hourglass Bar	58.15	330	⇓P		P		14 10 57.2	0.0	
	baz=58									
T29A	Hugoton	58.15	336	⇑P		P		14 10 56.9	-0.1	
	baz=58									
U27A	Thompson Grove	58.15	334	⇓P		P		14 10 57.3	+0.3	
	baz=58									
KSU1	Kansas State U	58.19	340		PFAKE			14 11 10.0	+13	
KSU1					LR	LR				
	comp=Z,2µm,20.0s									
Z20A	Nine Sixteen R	58.19	327	⇓P		P		14 10 57.3	-0.1	
	baz=58,SNR=15									
S30A	Montezuma	58.25	336	⇑P		P		14 10 57.4	-0.1	
	baz=58									
W24A	Lazy 6 Ranch,	58.29	331	⇑P		P		14 10 57.0	-1.1	
	baz=58									
Y21A	Point of Rocks	58.43	328	⇓P		P		14 10 58.2	-0.9	
	baz=59									
V25A	Rancho No Teng	58.45	332	⇑P		P		14 10 58.1	-1.1	
	baz=59,SNR=14									
LAZ	Ladron	58.47	329	*eP*		P		14 10 59.6	+0.3	
	comp=Z,13nm,1.3s									
S29A	Ulysses	58.48	336	⇓P		P		14 10 58.2	-1.0	
	baz=59									
U26A	Atchley Ranch,	58.53	333	⇓P		P		14 10 58.9	-0.8	
	baz=59									
ANMO	Albuquerque	58.58	330	*eP*		P		14 10 59.6	-0.5	
	comp=Z,17nm,1.1s									
ANMO					LR	LR				
	comp=Z,2µm,21.0s									
W23A	Werner Place,	58.60	330	⇑P		P		14 10 59.3	-0.9	
	baz=59									
T27A	Campo	58.65	334	⇓P		P		14 10 58.6	-1.9	
	baz=59									
V24A	Rampart Ranch,	58.65	331	⇑P		P		14 10 59.4	-1.3	
	baz=59									
Y20A	Horse Springs,	58.70	328	⇓P		P		14 11 00.1	-1.0	
	baz=59,SNR=11									
R30A	Dighton	58.74	337	⇑P		P		14 11 00.1	-0.8	
	baz=59									
TUC	Tucson	58.76	325		PFAKE			14 11 10.0	+8.7	
TUC					LR	LR				
	comp=Z,4µm,19.0s									
S28A	Manter	58.77	335	⇓P		P		14 11 00.6	-0.6	
	baz=59									
U25A	Circle Dot Ran	58.82	333	⇑P		P		14 11 00.1	-1.7	
	baz=59,SNR=9.1									
X21A	Alamocita Cree	58.83	329	⇓P		P		14 11 01.5	-0.4	
	baz=59,SNR=14									
W22A	Albuquerque	58.88	330	⇓P		P		14 11 01.2	-0.9	
	baz=59									
V23A	Ortiz Mt. (NFS	59.09	331	⇑P		P		14 11 02.9	-0.8	
	baz=59									
T26A	Comanche Natio	59.12	334	⇑P		P		14 11 02.6	-1.1	
	baz=59,SNR=8.1									
R29A	Marienthal	59.19	336	⇑P		P		14 11 02.9	-1.3	
	baz=59									
S27A	Las Animas	59.26	335	⇑P		P		14 11 03.8	-0.9	
	baz=60									
X20A	Quemado	59.26	328	⇑P		P		14 11 03.9	-1.0	
	baz=60,SNR=5.3									
W21A	San Fidel	59.29	329	⇓P		P		14 11 04.1	-1.0	
	baz=60									
R28A	Tribune	59.38	336	⇓P		P		14 11 04.4	-1.1	
	baz=60									
SACV	Santiago Islan	59.40	62		PFAKE			14 11 20.0	+14	
SACV					LR	LR				
	comp=Z,5µm,20.0s									
T25A	Trinidad	59.44	333	⇑P		P		14 11 05.4	-0.7	
	baz=60,SNR=7.7									
S26A	Kim	59.44	334	⇑P		P		14 11 05.0	-0.9	
	baz=60,SNR=24									
NCB	Newcomb	59.49	1		PFAKE			14 11 20.0	+14	
NCB					LR	LR				
	comp=Z,2µm,20.0s									
U23A	El Rito	59.57	331	⇑P		P		14 11 06.3	-0.7	
	baz=60									
V22A	San Miguel Ran	59.58	330	⇑P		P		14 11 06.1	-0.9	
	baz=60,SNR=20									
214A	Organ Pipe Nat	59.65	323	⇓P		P		14 11 07.1	-0.3	
	baz=60,SNR=7.1									
T24A	Torres, Weston	59.67	332	⇓P		P		14 11 07.2	-0.6	
	baz=60									
W20A	Ramah	59.73	329	⇓P		P		14 11 07.5	-0.5	
	baz=60,SNR=7.2									
R27A	Eads	59.73	335	⇓P		P		14 11 07.4	-0.5	
	baz=60									
SCIA	State Center	59.80	344		PFAKE			14 11 20.0	+12	
SCIA					LR	LR				
	comp=Z,2µm,21.0s									
LBNH	Lisbon	59.83	3		PFAKE			14 11 20.0	+12	
LBNH					LR	LR				
	comp=Z,3µm,20.0s									
V21A	Milan	59.84	330	⇓P		P		14 11 07.6	-1.2	
	baz=60									
S25A	Robets Cordova	59.89	333	⇑P		P		14 11 08.2	-0.9	
	baz=60									
U22A	Llaves	59.92	331	⇑P		P		14 11 09.2	-0.2	
	baz=60,SNR=5.5									
X18A	Snowflake	60.00	327	⇑P		P		14 11 09.7	-0.3	
	baz=60									
R26A	Arlington	60.01	334	⇓P		P		14 11 08.6	-1.3	
	baz=60,SNR=6.1									
Q28A	Sharon Springs	60.01	336	⇓P		P		14 11 09.3	-0.6	
	baz=60									
JFWS	Jewell Farm	60.05	347	*eP*		P		14 11 09.0	-0.9	
JFWS					pmax	pmax				
	comp=Z,49nm,1.5s									
JFWS					MLR	MLR				
	comp=Z,2µm,19.0s									
JFWS	Jewell Farm	60.05	347	*eP*		P		14 11 09.0	-0.9	
	comp=Z,49nm,1.5s									
JFWS					LR	LR				
	comp=Z,2µm,19.0s									
T23A	Casias Ranch,	60.08	332	⇑P		P		14 11 10.1	-0.4	
	baz=60									
LONY	Lake Ozonia	60.13	0	*eP*		P		14 11 09.8	-0.6	
	comp=Z,67nm,1.7s									
LONY					LR	LR				
	comp=Z,2µm,21.0s									
S24A	Houchin Ranch,	60.21	333	⇓P		P		14 11 11.2	-0.2	
	baz=60									
R25A	Fountain Ranch	60.23	334	⇓P		P		14 11 11.4	0.0	
	baz=60									
V20A	Brimhall	60.24	329	⇓P		P		14 11 11.7	+0.1	
	baz=60									
KSCO	Kaye Shedlock'	60.28	336	⇑P		P		14 11 11.5	-0.2	
	baz=60									
U21A	Nageezi	60.35	330	⇑P		P		14 11 12.0	-0.3	
	baz=61									
W18A	Petrified Fore	60.35	328	⇑P		P		14 11 11.8	-0.5	
	baz=61									
FRNY	Flat Rock	60.37	1	*eP*		P		14 11 12.2	+0.2	
	comp=Z,135nm,1.9s									
SDCO	Great Sand Dun	60.42	333	*eP*		P		14 11 11.7	-1.2	
	comp=Z,34nm,1.2s									
SDCO					LR	LR				
	comp=Z,2µm,20.0s									
P28A	Saint Francis	60.43	337	⇑P		P		14 11 12.1	-0.5	
	baz=61									
T22A	Edith	60.46	331	⇓P		P		14 11 12.4	-0.7	
	baz=61,SNR=5.8									
MSNY	Massena	60.51	0	*eP*		P		14 11 14.3	+1.4	
	comp=Z,165nm,0.7s									
Q26A	Hugo	60.57	335	⇓P		P		14 11 13.1	-0.5	
	baz=61									
S23A	Nye Farm, Mont	60.62	332	⇓P		P		14 11 13.3	-0.9	
	baz=61									
R24A	Sanders Place,	60.66	333	⇑P		P		14 11 14.2	-0.2	
	baz=61									
X16A	Lo Mia Camp, P	60.71	326	⇑P		P		14 11 14.2	-0.6	
	baz=61,SNR=17									
U20A	Newcomb	60.72	329	⇑P		P		14 11 14.2	-0.7	
	baz=61									
P27A	Ficken Ranch,	60.73	336	⇑P		P		14 11 14.4	-0.3	
	baz=61									
T21A	Navajo Lake	60.74	331	⇓P		P		14 11 14.3	-0.7	
	baz=61									
Z14A	Wintersburg	60.76	324	⇓P		P		14 11 14.3	-0.6	
	baz=61									
BGNE	Belgrade	60.78	340	⇓P		P		14 11 14.7	-0.2	
	baz=61									
113A	Mohawk Valley,	60.79	323	⇑P		P		14 11 14.3	-0.8	
	baz=61									
Q25A	Bedland, Calha	60.86	334	⇑P		P		14 11 14.9	-0.9	
	baz=61									
R23A	Moffat	60.94	333	⇓P		P		14 11 15.9	-0.5	
	baz=61,SNR=11									
S22A	4UR Ranch, Cre	61.02	332	⇑P		P		14 11 16.4	-0.6	
	baz=61									
P26A	Davis Ranch, A	61.04	335	⇓P		P		14 11 16.8	0.0	
	baz=61									
Y14A	Wickenburg	61.21	324	⇑P		P		14 11 18.1	0.0	
	baz=62									
O27A	Beecher Island	61.24	336	⇑P		P		14 11 18.1	-0.1	
	baz=62									
Q24A	Divide	61.28	334	⇑P		P		14 11 18.2	-0.5	
	baz=62									
P25A	Willow Gulch B	61.33	335	⇓P		P		14 11 19.3	+0.4	
	baz=62,SNR=6.7									
MVCO	Mesa Verde	61.38	330	*eP*		P		14 11 18.8	-0.5	
	comp=Z,21nm,1.1s									
MVCO	Mesa Verde	61.38	330	⇑P		P		14 11 18.7	-0.6	
	baz=62									
R22A	Saguache, Gunn	61.38	332	⇓P		P		14 11 19.3	-0.1	
	baz=62									
S21A	Coal Bank Pass	61.40	331	⇓P		P		14 11 19.3	-0.3	
	baz=62									
WUAZ	Wupatki	61.51	327	*eP*		P		14 11 20.9	+0.7	
	comp=Z,37nm,1.3s									
WUAZ					LR	LR				
	comp=Z,6µm,20.0s									
WUAZ	Wupatki	61.51	327	⇓P		P		14 11 20.5	+0.3	
	baz=62,SNR=16									
Q23A	Hartsel	61.53	333	⇓P		P		14 11 20.2	-0.2	
	baz=62									
O26A	Horse Wrangler	61.61	336	⇓P		P		14 11 21.0	+0.3	
	baz=62									
GLA	Glamis	61.62	322	⇓P		P		14 11 20.2	-0.6	
	baz=62									
OGNE	Ogallala	61.72	337		PFAKE			14 11 30.0	+8.6	
OGNE					LR	LR				
	comp=Z,2µm,19.0s									
OGNE	Ogallala	61.72	337	⇑P		P		14 11 21.5	+0.1	
	baz=62									
N27A	Anderson Farm,	61.79	337	⇓P		P		14 11 22.1	+0.2	
	baz=62									
O25A	Wiggins	61.82	335	⇓P		P		14 11 22.5	+0.4	
	baz=62									
R21A	Cimarron	61.86	331	⇑P		P		14 11 23.0	+0.4	
	baz=62									
P23A	Jefferson	61.92	333	⇓P		P		14 11 23.5	+0.4	
	baz=62,SNR=9.8									
Y12C	Blythe	61.94	323	⇓P		P		14 11 22.7	-0.2	
	baz=62									
Q22A	Crested Butte,	61.97	332	⇑P		P		14 11 22.9	-0.5	
	baz=62									
N26A	Koester Ranch,	62.08	336	⇑P		P		14 11 23.6	-0.2	
	baz=62									
DVTC	Desert V Tower	62.10	321	⇑P		P		14 11 24.0	0.0	
	baz=62									
R20A	Redvale	62.10	331	⇑P		P		14 11 23.5	-0.7	
	baz=62,SNR=8.0									
SWSC	Sam W. Stewart	62.11	322	⇓P		P		14 11 24.4	+0.3	
	baz=62									
PDMCI	Deer Dam,Lak	62.12	324	⇓P		P		14 11 24.3	+0.2	
	baz=62									
PV01	Paradox Valley	62.15	331	*eP*		P		14 11 25.4	+0.9	
	comp=Z,2µm,1.2s									
ISCO	Idaho Springs	62.18	334	*eP*		P		14 11 23.9	-0.9	
ISCO					pmax	pmax				
	comp=Z,71nm,2.3s									
ISCO					MLR	MLR				
	comp=Z,1µm,21.0s									
ISCO	Idaho Springs	62.18	334	*eP*		P		14 11 23.9	-0.9	
	comp=Z,71nm,2.3s									
ISCO					LR	LR				
	comp=Z,1µm,21.0s									
ISCO	Idaho Springs	62.18	334	⇑P		P		14 11 25.0	+0.2	
	baz=62									
SMCO	Snowmass	62.26	332	*eP*		P		14 11 24.9	-0.5	
	comp=Z,30nm,1.3s									
BC3	Big Chuckawall	62.41	323	⇑P		P		14 11 25.3	-0.9	
	baz=63,SNR=12									
ECSD	EROS Data Cent	62.42	343		P	P		14 11 23.2	-2.7	
	comp=Z,99nm,1.5s									
ECSD					LR	LR				
	comp=Z,3µm,20.0s									
MONP	Monument Peak	62.45	321	⇑P		P		14 11 25.9	-0.7	
	baz=63									
BAR	Barrett	62.46	321	*eP*		P		14 11 27.9	+1.5	
	comp=Z,22nm,1.3s									
S18A	Hurst Farm, Bl	62.48	329	⇓P		P		14 11 26.7	0.0	
	baz=63									
P22A	Eagle	62.51	333	⇑P		P		14 11 27.0	+0.1	
	baz=63									
PV04	Paradox Valley	62.51	331	*eP*		P		14 11 27.7	+0.8	
W13A	Hualapai Mount	62.56	325	⇑P		P		14 11 27.0	-0.3	
	baz=63									
M26A	McRoberts Ranc	62.59	337	⇓P		P		14 11 27.2	-0.1	
	baz=63									
IRM	Iron Mountain	62.60	323	⇑P		P		14 11 27.6	+0.3	
	baz=63,SNR=5.9									
O23A	La Granby, G	62.65	334	⇓P		P		14 11 27.9	0.0	
	baz=63									
U15A	North Rim	62.68	327	⇓P		P		14 11 28.6	+0.4	
	baz=63,SNR=8.3									
N24A	Carr	62.74	335	⇓P		P		14 11 28.6	+0.3	
	baz=63									
P21A	Newcastle	62.75	332	⇓P		P		14 11 28.8	+0.3	
	baz=63									
L27A	T5 Ranch, Ells	62.82	338	⇑P		P		14 11 28.7	0.0	
	baz=63									
109C	Camp Elliot, M	62.86	321	⇓P		P		14 11 29.0	-0.1	
	baz=63									
O22A	Kremmling	62.88	333	⇑P		P		14 11 29.0	-0.4	
	baz=63									
COWI	Conover	62.90	349	*eP*		P		14 11 28.7	-0.4	
	comp=Z,38nm,1.3s									
COWI					LR	LR				
	comp=Z,4µm,20.0s									
PFO	Pinyon Flat Ob	62.97	322	P		P		14 11 31.6	+1.6	
	comp=Z,84nm,0.9s,SNR=6.0									
PFO	Pinyon Flat Ob	62.97	322	*eP*		P		14 11 31.4	+1.4	
	comp=Z,16nm,1.1s									
PFO					LR	LR				
	comp=Z,2µm,19.0s									
PFO	Pinyon Flat Ob	62.97	322	⇓P		P		14 11 29.3	-0.7	
	baz=63,SNR=9.8									
BELC	Belle Mtn. Jos	62.98	322	⇑P		P		14 11 30.2	+0.2	
	baz=63,SNR=6.5									
P20A	De Beque	63.16	332	⇑P		P		14 11 30.9	-0.2	
	baz=63									
N23A	Red Feather La	63.23	334	⇑P		P		14 11 30.6	-1.1	
	baz=64									
M24A	Cheyenne	63.25	335	⇑P		P		14 11 31.3	-0.4	
	baz=64									
O21A	Pagoda	63.33	333	⇓P		P		14 11 33.1	+0.7	
	baz=64									
GMRC	Granite Mounta	63.33	323	⇑P		P		14 11 31.3	-1.0	
	baz=64									
N22A	Wattenberg Ran	63.37	334	⇓P		P		14 11 32.3	-0.4	
	baz=64									
PHWY	Pilot Hill	63.37	335	*eP*		P		14 11 33.4	+0.8	
	comp=Z,32nm,1.6s									
MURC	Murrieta	63.41	321	⇑P		P		14 11 33.3	+0.5	
	baz=64									
L25A	Engebretsen Ra	63.50	336	⇑P		P		14 11 33.3	0.0	
	baz=64									
P19A	Cripple Cowboy	63.54	331	⇓P		P		14 11 33.9	+0.2	
	baz=64									
O20A	White River Ci	63.60	332	⇑P		P		14 11 34.0	-0.1	
	baz=64									
M23A	Laramie	63.62	335	⇑P		P		14 11 34.2	0.0	
	baz=64									
TAOE	Nuku Hiva Isla	63.67	268	*eS*		S		14 20 06.5	-1.8	
	comp=Z,3µm,27.3s									
TAOE				*eLQ*		LQ		14 27 52.1		
	comp=Z,3µm,32.5s									
TAOE				*eLR*		LR		14 30 42.4		
	comp=Z,10µm,24.5s,baz=106									
K26A	Motz Farm, Whi	63.67	337	⇓P		P		14 11 34.8	+0.5	
	baz=64									
HEC	Hector,Ludlow	63.76	323	⇓P		P		14 11 35.5	+0.4	
	baz=64									
N21A	Black Mountain	63.79	333	⇑P		P		14 11 35.0	-0.4	
	baz=64,SNR=12									
SCI	San Clemente I	63.81	320	⇓P		P		14 11 35.6	+0.2	
	baz=64									
SRU	San Rafael	63.85	330	⇓P		P		14 11 35.1	-0.7	
	baz=64,SNR=16									
M22A	Cedar Creek Ra	63.93	334	⇓P		P		14 11 36.8	+0.5	
	baz=64									
TUQ	Turquoise Moun	63.95	324	⇓P		P		14 11 36.9	+0.5	
	baz=64									
CIS	Catalina Islan	64.01	320	⇑P		P		14 11 36.2	-0.5	
	baz=64									
CCUT	Cedar City	64.09	327	*eP*		P		14 11 38.0	+0.6	
	comp=Z,23nm,1.2s									
BFSC	Mount Baldy Ra	64.13	322	⇓P		P		14 11 37.6	0.0	
	baz=64									
O19A	Miners Draw (B	64.14	332	⇑P		P		14 11 37.0	-0.6	
	baz=64									
L23A	Garrett	64.15	335	⇓P		P		14 11 37.4	-0.3	
	baz=64									
N20A	Spence Gulch,	64.18	333	⇑P		P		14 11 37.7	-0.2	
	baz=64,SNR=12									
MSU	Marysvale	64.21	328	*eP*		P		14 11 38.5	+0.3	
MSU	Marysvale	64.21	328	*eP*		P		14 11 38.5	+0.3	
MVU	Marysvale	64.22	328	*eP*		P		14 11 38.7	+0.5	
	comp=Z,21nm,1.2s									
MVU					LR	LR				
	comp=Z,6µm,20.0s									
P17A	Butcher Ranch,	64.24	330	⇓P		P		14 11 38.4	+0.1	
	baz=64									
ARUT	Antelope Range	64.31	327	*eP*		P		14 11 39.8	+1.0	
ARUT					pmax	pmax				
	comp=Z,27nm,1.1s									
ARUT	Antelope Range	64.31	327	*eP*		P		14 11 39.8	+1.0	
	comp=Z,27nm,1.1s									
K24A	Anderson Ranch	64.31	336	⇓P		P		14 11 39.0	+0.4	
	baz=65									
MWC	Mount Wilson	64.36	321	*eP*		P		14 11 39.7	+0.5	
MWC					pmax	pmax				
	comp=Z,30nm,1.3s									
MWC	Mount Wilson	64.36	321	*eP*		P		14 11 39.6	+0.5	
	comp=Z,30nm,1.3s									
GSC	Goldstone	64.36	323	*eP*		P		14 11 40.8	+1.7	
GSC					pmax	pmax				
	comp=Z,11nm,1.1s									
GSC	Goldstone	64.36	323	*eP*		P		14 11 40.8	+1.7	
	comp=Z,11nm,1.1s									
GSC	Goldstone	64.36	323	⇓P		P		14 11 39.0	-0.1	
	baz=65									
L22A	Ellis Ranch, M	64.38	335	⇑P		P		14 11 39.5	+0.4	
	baz=65									
PASC	Pasadena Art C	64.40	321	*eP*		P		14 11 40.8	+1.6	
M21A	Separation Pea	64.42	334	⇓P		P		14 11 40.0	+0.5	
	baz=65									
SHOC	Shoshone	64.48	324	⇓P		P		14 11 39.6	-0.1	
	baz=65									
K23A	Bowen Ranch, D	64.66	336	⇓P		P		14 11 40.1	-0.8	
	baz=65									
M20A	Sweetwater, Wa	64.68	333	⇑P		P		14 11 39.8	-1.3	
	baz=65									
L21A	Rawlins	64.72	334	⇑P		P		14 11 40.8	-0.5	
	baz=65,SNR=7.8									
EDW2	Edwards Air Fo	64.77	322	⇓P		P		14 11 41.2	-0.5	
	baz=65									
J24A	Dixon Ranch, L	64.77	337	⇑P		P		14 11 40.5	-1.1	
	baz=65									
BLG	Laguna Peak	64.89	321	⇑P		P		14 11 41.6	-0.9	
	baz=65									
K22A	Casper	64.93	335	⇓P		P		14 11 42.1	-0.7	
	baz=65,SNR=5.5									
LRMC	Laurel Mountai	65.00	322	⇓P		P		14 11 43.1	-0.2	
	baz=65									
OSI	Osito Adit	65.03	321	⇑P		P		14 11 43.1	-0.3	
	baz=65									
MPU	Maple Canyon	65.09	330	*eP*		P		14 11 43.9	+0.1	
	comp=Z,12nm,1.0s									
M19A	Rock Springs	65.12	332	⇓P		P		14 11 43.8	-0.2	
	baz=65									
EYMN	Ely	65.12	348	*eP*		P		14 11 42.8	-0.9	
	comp=Z,105nm,1.6s									
EYMN					LR	LR				
	comp=Z,4µm,20.0s									
BSC	Santa Cruz Isl	65.16	320	⇑P		P		14 11 43.7	-0.5	
	baz=65									
L20A	Wamsutter	65.17	333	⇑P		P		14 11 43.0	-1.3	
	baz=65									
J23A	Dilts Ranch, B	65.18	336	⇓P		P		14 11 43.5	-0.7	
	baz=65									
I24A	Kuemerle Ranc	65.21	337	⇑P		P		14 11 43.9	-0.6	
	baz=65									
RSSD	Black Hills	65.21	337	*eP*		P		14 11 44.2	-0.4	
RSSD					pmax	pmax				
	comp=Z,51nm,1.6s									
RSSD	Black Hills	65.21	337	*eP*		P		14 11 44.2	-0.4	
	comp=Z,51nm,1.6s									
K21A	Alcova	65.22	334	⇑P		P		14 11 43.9	-0.7	
	baz=66,SNR=12									
FURC	Furnace Creek,	65.22	324	⇑P		P		14 11 43.4	-1.0	
	baz=66									
DAU	Daniels Canyon	65.22	330	*eP*		P		14 11 44.9	+0.1	
DAU	Daniels Canyon	65.22	330	*eP*		P		14 11 44.9	+0.1	
MPMC	Manual Prospec	65.29	323	⇑P		P		14 11 44.9	-0.3	
	baz=66,SNR=13									
ARVC	Arvin	65.44	322	⇑P		P		14 11 45.6	-0.3	
	baz=66									
JLU	Jordanelle	65.46	330	*eP*		P		14 11 47.1	+0.8	
	comp=Z,27nm,1.2s									
M18A	Lyman	65.47	332	⇑P		P		14 11 45.3	-1.0	
	baz=66									
J22A	Midwest	65.55	335	⇑P		P		14 11 45.4	-1.3	
	baz=66									
ISA	Isabella	65.59	322	*eP*		P		14 11 47.8	+0.8	
ISA					pmax	pmax				
	comp=Z,10.0nm,1.0s									
ISA	Isabella	65.59	322	*eP*		P		14 11 47.8	+0.8	
	comp=Z,9.6nm,1.0s									
ISA	Isabella	65.59	322	⇑P		P		14 11 45.4	-1.6	
	baz=66									
L19A	Farson	65.69	333	⇑P		P		14 11 47.5	-0.2	
	baz=66									
K20A	Yellowstone Ra	65.70	334	⇑P		P		14 11 47.0	-0.7	
	baz=66,SNR=10									
M17A	Scullys Gap (B	65.78	331	⇑P		P		14 11 48.1	-0.2	
	baz=66									

comp=Z,2µm,18.2s,baz=144,slow=38
G24A Alzada 66.39 338 ⇓P P 14 11 50.8 -1.1
baz=67
TIN Tinemaha 66.41 323 ⇑P P 14 11 51.3 -1.0
baz=67
AGMN Agassiz Nation 66.44 345 PFAKE 14 12 00.0 +7.9
AGMN LR LR
comp=Z,2µm,21.0s
SHEL Horse Pasture 66.45 101 PFAKE 14 12 00.0 +7.1
SHEL LR LR
comp=Z,3µm,19.0s
H22A Clearmont 66.49 336 ⇓P P 14 11 51.2 -1.5
baz=67
J19A Crowheart 66.50 334 ⇓P P 14 11 51.9 -1.0
baz=67,SNR=11
TPH Tonopah 66.56 325 PFAKE 14 12 10.0 +17
TPH LR LR
comp=Z,2µm,19.0s
G23A Biddle 66.64 337 ⇑P P 14 11 52.3 -1.3
baz=67
I20A Worland 66.67 335 ⇓P P 14 11 52.8 -1.0
baz=67
H21A Big Horn, Sher 66.79 336 ⇑P P 14 11 52.8 -1.7
baz=67
MTUM Tungsten Hills 66.81 323 eP P 14 11 56.1 +1.2
F24A Ekalaka 66.84 338 ⇑P P 14 11 53.6 -1.2
baz=67
G22A Birney 66.99 337 ⇓P P 14 11 54.3 -1.6
baz=67
AHID Auburn Hatcher 67.00 332 PFAKE 14 12 10.0 +14
AHID LR LR
comp=Z,2µm,21.0s
HVU Hansel Valley 67.01 330 eP P 14 11 56.5 +0.4
HVU pmax pmax
comp=Z,17nm,1.0s
HVU Hansel Valley 67.01 330 eP P 14 11 56.5 +0.4
comp=Z,16nm,1.0s
MDND Maddock 67.03 342 ⇓P P 14 11 54.6 -1.3
baz=67,SNR=9.2
H20A Greybull 67.05 335 ⇑P P 14 11 54.9 -1.4
baz=67
F23A Volborg 67.08 337 ⇓P P 14 11 55.7 -0.7
baz=67,SNR=7.1
I19A Meeteetse 67.10 334 ⇓P P 14 11 55.1 -1.5
baz=67
MLAC Mammoth Lakes 67.16 323 ⇓P P 14 11 56.2 -1.0
baz=67
I18A Diamond G Ranc 67.17 333 ⇓P P 14 11 56.4 -0.8
baz=67,SNR=11
NV11 Mina Array Sit 67.33 325 eP P 14 11 59.5 +1.2
G21A Lodge Grass 67.35 336 ⇓P P 14 11 57.3 -0.8
baz=68
E24A Baker 67.41 339 ⇓P P 14 11 57.9 -0.4
baz=68
NVAR Mina Array Bea 67.41 324 P P 14 11 59.4 +0.6
NVAR Mina Array Bea 67.41 324 P P 14 11 59.4 +0.6
comp=Z,4.7nm,1.0s,baz=148,slow=6.9,SNR=20
NVAR LR LR 14 40 59.6
comp=Z,2µm,18.8s,baz=26,slow=36
ELK Elko 67.44 328 eP P 14 11 59.4 +0.4
comp=Z,135nm,1.0s
LOHW Long Hollow 67.45 333 eP P 14 11 59.3 +0.4
comp=Z,22nm,1.4s
F22A Rosebud 67.45 337 ⇓P P 14 11 57.9 -0.7
baz=68
TPAW Teton Pass 67.50 333 eP P 14 11 59.6 +0.3
comp=Z,19nm,1.1s
RRI2 Red Ridge 67.55 332 eP P 14 11 59.3 -0.4
comp=Z,28nm,0.9s
H19A Powell 67.61 335 ⇓P P 14 11 59.1 -0.7
baz=68
MOOW Moose Ponds 67.62 333 eP P 14 11 59.0 -1.0
comp=Z,35nm,1.7s
I17A Pilgrim Ck. 67.68 333 ⇓P P 14 11 59.8 -0.6
baz=68
DCID1 Drake Creek 67.69 332 eP P 14 12 01.6 +1.2
comp=Z,47nm,1.2s
E23A Ismay 67.71 338 ⇑P P 14 11 59.6 -0.6
baz=68,SNR=7.9
G20A Bridger 67.75 335 ⇓P P 14 11 59.9 -0.8
baz=68
IMW Indian Meadow 67.82 333 eP P 14 12 00.8 -0.5
comp=Z,30nm,1.4s
D24A Glendive 67.89 339 ⇓P P 14 12 01.4 0.0
baz=68
E22A Miles City 67.89 338 ⇑P P 14 12 01.1 -0.3
baz=68
H18A Shoshone NF, C 67.90 334 ⇓P P 14 12 01.2 -0.6
baz=68
I16A Newdale 68.05 332 ⇓P P 14 12 02.5 -0.1
baz=68
H17A Grant Village 68.06 333 ⇑P P 14 12 03.0 +0.2
baz=68
RLMT Red Lodge 68.09 335 eP P 14 12 01.6 -1.3
comp=Z,15nm,0.7s
RLMT LR LR
comp=Z,1µm,20.0s
F20A Billings 68.20 336 ⇑P P 14 12 03.2 -0.2
baz=68
BMN Battle Mountai 68.24 327 PFAKE 14 12 20.0 +16
BMN LR LR
comp=Z,2µm,20.0s
D23A Lindsay 68.25 338 ⇑P P 14 12 03.5 -0.2
baz=68
ULM Lac du Bonnet 68.25 346 eP P 14 12 03.0 -0.5
ULM Lac du Bonnet 68.25 346 P P 14 12 02.5 -1.0
comp=Z,24nm,0.6s,baz=159,slow=6.8,SNR=16
ULM LR LR 14 46 04.4
comp=Z,2µm,18.2s,baz=314,slow=40
C24A Savage 68.28 339 ⇑P P 14 12 03.8 0.0
baz=68
CMB Columbia Colle 68.33 323 eP P 14 12 08.0 +3.6
CMB pmax pmax
comp=Z,21nm,1.4s
CMB Columbia Colle 68.33 323 eP P 14 12 08.0 +3.6
comp=Z,21nm,1.4s
G18A Lazy EL Ranch, 68.37 335 ⇑P P 14 12 04.5 -0.1
baz=69
E21A Keefer Ranch, 68.40 337 ⇓P P 14 12 04.9 +0.2
baz=69
J14A Carey 68.54 331 ⇑P P 14 12 06.4 +0.7
baz=69,SNR=23
F19A Roth Farm, Mol 68.56 335 ⇓P P 14 12 05.7 0.0
baz=69
D22A Cohagen 68.58 338 ⇓P P 14 12 06.0 +0.3
baz=69
I15A Monteview 68.59 332 ⇑P P 14 12 06.5 +0.5
baz=69,SNR=7.4
E20A Meyer Farm, Mu 68.77 336 ⇓P P 14 12 06.9 -0.1
baz=69
QLMT Earthquake Lak 68.77 333 eP P 14 12 09.0 +1.8
C23A Lambert 68.78 339 ⇓P P 14 12 06.3 -0.7
baz=69
GCMT Greycliff 68.80 335 eP P 14 12 06.5 -0.7
comp=Z,9.4nm,0.8s
D21A La Casta Ranch 68.81 337 ⇑P P 14 12 07.3 +0.1
baz=69
WCN Washoe City 68.83 324 eP P 14 12 09.3 +1.7
WCN pmax pmax
comp=Z,13nm,1.2s
WCN Washoe City 68.83 324 eP P 14 12 09.3 +1.7
comp=Z,13nm,1.2s
G17A Pierce Place, 68.87 334 ⇓P P 14 12 07.7 0.0
baz=69
J13A Cove Ranch, Pi 68.91 331 ⇓P P 14 12 07.6 -0.4
baz=69,SNR=16
F18A Big Timber 68.91 335 ⇓P P 14 12 06.6 -1.3
baz=69,SNR=27
C22A Vida 68.98 338 ⇓P P 14 12 08.0 -0.2
baz=69,SNR=7.7
I14A Mackay 68.98 331 ⇑P P 14 12 08.9 +0.5
baz=69,SNR=22
E19A Rath Farm, Rou 68.99 336 ⇓P P 14 12 08.0 -0.3
baz=69,SNR=9.5
DGMT Dagmar 69.02 340 P P 14 12 08.6 +0.2
comp=Z,39nm,0.8s
DGMT LR LR
comp=Z,2µm,19.0s
DGMT Dagmar 69.02 340 ⇓P P 14 12 07.4 -1.0
baz=69
H15A Lima 69.14 332 ⇑P P 14 12 09.5 0.0
baz=69,SNR=8.7
HLID Hailey 69.15 331 P P 14 12 08.6 -0.9
comp=Z,72nm,2.0s
HLID LR LR
comp=Z,3µm,19.0s
HLID Hailey 69.15 331 ⇑P P 14 12 09.7 +0.2
baz=69,SNR=9.5

G16A Moss Hill, Enn 69.25 333 ⇑P P 14 12 10.1 -0.1
baz=70
D20A Manuel Ranch, 69.26 337 ⇑P P 14 12 10.1 +0.2
baz=70,SNR=8.8
I13A Wildhorse Cree 69.28 331 ⇓P P 14 12 11.0 +0.6
baz=70,SNR=36
B23A Brockton 69.28 339 ⇑P P 14 12 10.0 0.0
baz=70
F17A Fitzpatrick Pl 69.30 334 ⇑P P 14 12 10.4 0.0
baz=70
A24A Westby 69.35 340 ⇑P P 14 12 10.8 +0.3
baz=70,SNR=6.2
MCMT McKenzie Canyo 69.40 332 eP P 14 12 12.4 +1.3
comp=Z,5.0nm,0.9s
H14A Leadore 69.47 332 ⇓P P 14 12 11.7 +0.2
baz=70,SNR=13
C21A Desert Coulee 69.48 338 ⇑P P 14 12 11.3 0.0
baz=70,SNR=12
B22A Reddig Ranch S 69.49 339 ⇑P P 14 12 11.0 -0.3
baz=70
G15A Dillon 69.50 333 ⇑P P 14 12 11.3 -0.4
baz=70,SNR=9.3
BOZ Bozeman (W) 69.51 334 eP P 14 12 12.0 +0.3
BOZ pmax pmax
comp=Z,11nm,1.0s
BOZ MLR MLR
comp=Z,2µm,22.0s
BOZ Bozeman (W) 69.51 334 eP P 14 12 12.0 +0.3
comp=Z,11nm,1.0s
BOZ LR LR
comp=Z,2µm,22.0s
E18A Harlowton 69.53 335 ⇓P P 14 12 12.0 +0.2
baz=70,SNR=8.2
SNAA Sanae 69.56 161 eP P 14 12 10.1 -1.4
comp=Z,81nm,1.8s
BEKR Beckworth 69.56 324 eP P 14 12 12.7 +0.5
comp=Z,9.3nm,1.2s
D19A Cripps Ranch, 69.61 336 ⇓P P 14 12 12.1 -0.1
baz=70
F16A Kennard Place, 69.61 334 ⇓P P 14 12 12.4 +0.2
baz=70
I12A Atlanta 69.66 330 ⇑P P 14 12 12.9 +0.2
baz=70,SNR=12
DLMT Dillon 69.70 333 eP P 14 12 13.8 +1.0
comp=Z,18nm,1.1s
MFID Camas Ranch 69.72 330 eP P 14 12 12.1 -0.9
comp=Z,35nm,1.1s
MFID Camas Ranch 69.72 330 ⇓P P 14 12 12.6 -0.4
baz=70,SNR=19
C20A Veseth Ranch, 69.73 337 ⇑P P 14 12 12.3 -0.5
baz=70
TBI Tubuai 69.75 251 eS S 14 21 22.8 +1.3
comp=Z,6µm,26.0s
TBI eLQ LQ 14 30 34.6
comp=Z,591nm,31.8s
TBI eLR LR 14 33 36.0
comp=Z,5µm,26.0s,baz=86
E17A Martinsdale 69.83 335 ⇓P P 14 12 13.5 -0.1
baz=70
H13A Challis 69.83 331 ⇑P P 14 12 13.8 +0.1
baz=70,SNR=14
OHCM Honcut 69.84 323 eP P 14 12 10.8 -2.8
B21A Ellsworth Farm 69.96 338 ⇑P P 14 12 14.7 +0.5
baz=70,SNR=9.0
G14A Jackson 69.99 332 ⇑P P 14 12 14.4 -0.4
baz=70
D18A Linhart Farms, 70.00 336 ⇓P P 14 12 14.6 0.0
baz=70
LRM Limekiln Ridge 70.00 333 eP P 14 12 15.2 +0.4
F15A Butte 70.03 333 ⇓P P 14 12 15.0 +0.1
baz=70,SNR=6.8
A22A Carney Farms, 70.05 339 ⇓P P 14 12 14.6 -0.2
baz=70
H12A Diamond D Ranc 70.10 331 ⇑P P 14 12 15.8 +0.4
baz=70,SNR=12
C19A Slack Wire Ran 70.14 336 ⇓P P 14 12 16.0 +0.6
baz=70
G13A Cobalt 70.23 332 ⇓P P 14 12 16.6 +0.5
baz=70,SNR=14
E16A East Helena 70.23 334 ⇓P P 14 12 16.2 +0.2
baz=70
D17A Six Diamond Ra 70.31 335 ⇓P P 14 12 16.8 +0.2
baz=71
B20A Solberg Farm, 70.34 337 ⇑P P 14 12 16.9 +0.4
baz=71
WVOR Wild Horse Val 70.42 327 P P 14 12 17.5 +0.2
WVOR pmax pmax
comp=Z,6.0nm,0.9s
WVOR MLR MLR
comp=Z,3µm,20.0s
WVOR Wild Horse Val 70.42 327 P P 14 12 17.5 +0.2
comp=Z,6.1nm,0.9s
WVOR LR LR
comp=Z,3µm,20.0s
HRY Holter Researc 70.44 334 eP P 14 12 18.2 +0.9
E15A Deer Lodge 70.55 333 ⇓P P 14 12 18.4 +0.4
baz=71,SNR=8.7
D16A Dana Ranch, Ca 70.57 335 ⇓P P 14 12 18.8 +0.6
baz=71,SNR=15
EGMT Eagleton 70.65 336 eP P 14 12 17.1 -1.4
comp=Z,18nm,0.9s
EGMT LR LR
comp=Z,2µm,21.0s
EGMT Eagleton 70.65 336 ⇑P P 14 12 18.6 0.0
baz=71,SNR=12
A20A Cobblestone Ra 70.67 338 ⇑P P 14 12 18.8 +0.2
baz=71
B19A Brinkman Farms 70.69 337 ⇑P P 14 12 18.6 -0.1
baz=71
SCHQ Schefferville 70.71 5 P P 14 12 17.2 -1.5
SCHQ Schefferville 70.71 5 P P 14 12 17.2 -1.5
comp=Z,19nm,0.8s,baz=189,slow=5.1,SNR=19
SCHQ LR LR 14 45 33.8
comp=Z,2µm,18.9s,baz=1.4,slow=38
C17A Wharram Farm, 70.73 335 ⇑P P 14 12 19.6 +0.5
baz=71,SNR=12
CMLA Cha da Macela 70.79 40 PFAKE 14 12 30.0 +10
CMLA LR LR
comp=Z,2µm,19.0s
F13A Darby 70.81 332 ⇑P P 14 12 19.8 +0.2
baz=71
PPT2 Papeete2 70.86 257 eS S 14 21 35.4 +0.7
comp=Z,2µm,22.8s
PPT2 eLR LR 14 33 58.6
comp=Z,5µm,23.5s,baz=97
PPT Papeete 70.86 257 LR LR 14 35 01.7
comp=Z,2µm,20.0s,baz=162,slow=29
E14A Clinton 70.92 333 ⇑P P 14 12 21.3 +1.0
baz=71,SNR=20
MOD Modoc 70.93 326 eP P 14 12 19.6 -0.8
comp=Z,35nm,1.4s
B18A Beardsley Farm 70.96 336 ⇑P P 14 12 20.5 +0.1
baz=71
D15A Lincoln 70.99 334 ⇓P P 14 12 20.8 +0.1
baz=71,SNR=9.7
A19A Klindworth Far 71.01 337 ⇑P P 14 12 20.5 -0.2
baz=71
CHMT Chamberlain Mo 71.20 333 eP P 14 12 21.7 -0.4
F12A Elk City 71.20 332 ⇓P P 14 12 22.1 +0.1
baz=72,SNR=11
E13A Victor 71.24 333 ⇑P P 14 12 22.1 -0.1
baz=72,SNR=14
C16A Fuhringer Ranc 71.27 335 ⇑P P 14 12 22.3 -0.1
baz=72
B17A L&G Farms, Che 71.28 336 ⇓P P 14 12 21.9 -0.5
baz=72
A18A Metzger Ranch, 71.42 337 ⇓P P 14 12 22.8 -0.3
baz=72
MSO Missoula 71.43 333 eP P 14 12 23.2 -0.1
MSO LR LR
comp=Z,1µm,21.0s
MSO Missoula 71.43 333 ⇑P P 14 12 23.3 -0.1
baz=72
D14A Greenough 71.44 333 ⇓P P 14 12 23.0 -0.4
baz=72
BMO Blue Mountains 71.50 330 eP P 14 12 22.9 -0.8
comp=Z,15nm,1.3s
BMO LR LR
comp=Z,4µm,19.0s
SLMT Seeley Lake 71.56 334 eP P 14 12 24.0 -0.2
C15A Salmond Ranch, 71.60 334 ⇓P P 14 12 24.6 +0.3
baz=72
B16A M & M Farms, S 71.74 335 ⇑P P 14 12 25.2 +0.1
baz=72
A17A Triple J Farms 71.77 336 ⇑P P 14 12 25.4 +0.2
baz=72
D13A Huson 71.86 333 ⇑P P 14 12 25.9 0.0
baz=72

SWMT Swartz Lake 71.98 333 eP P 14 12 28.0 +1.3
B15A Bradely Ranch, 72.00 335 ⇑P P 14 12 27.4 +0.7
baz=72,SNR=12
A16A West Butte Ran 72.12 336 ⇑P P 14 12 27.3 -0.2
baz=72
YBH Yreka Blue Hor 72.14 325 eP P 14 12 28.8 +1.1
comp=Z,15nm,1.1s
YBMT Yellow Bay 72.26 334 eP P 14 12 29.6 +1.3
comp=Z,4.3nm,0.5s
JTMT Jette 72.29 333 eP P 14 12 29.9 +1.4
B14A Marquette Ranc 72.34 334 ⇑P P 14 12 28.7 -0.1
baz=73
C13A Hot Springs 72.36 333 ⇑P P 14 12 29.3 +0.4
baz=73,SNR=35
BLMT Blacktail Moun 72.53 334 eP P 14 12 31.3 +1.3
BSMT Bassoo Peak 72.58 333 eP P 14 12 30.5 +0.2
A15A Johnson Ranch, 72.60 335 ⇑P P 14 12 30.0 -0.3
baz=73
C12B Naegeli Ranch, 72.78 333 ⇑P P 14 12 31.7 +0.4
baz=73
B13A Whitefish 72.85 334 ⇓P P 14 12 32.0 +0.2
baz=73,SNR=6.0
A14A Double T Ranch 72.88 335 ⇑P P 14 12 31.5 -0.5
baz=73,SNR=12
VIPM Ingram Point 72.90 328 P P 14 12 34.0 +1.7
VIPM Ingram Point 72.90 328 P P 14 12 34.0 +1.7
DBIC Dimbokro 73.08 78 eP P 14 12 31.1 -2.7
comp=Z,40nm,1.0s
DBIC Dimbokro 73.08 78 P P 14 12 31.5 -2.2
comp=Z,25nm,0.8s,baz=222,slow=6.3,SNR=28
DBIC LR LR 14 43 44.3
comp=Z,11µm,18.8s,baz=223,slow=35
WALA Waterton Lakes 73.15 335 eP P 14 12 33.0 -0.6
comp=Z,0.3nm,0.6s
C11A Tepee Creek (N 73.22 332 ⇓P P 14 12 33.6 -0.4
baz=74
A13A Flathead Natio 73.26 334 ⇓P P 14 12 34.2 0.0
baz=74
B12A Libby 73.40 333 ⇑P P 14 12 35.9 +0.9
baz=74,SNR=9.6
IRO Indian Ridge 73.41 327 P P 14 12 37.0 +1.7
HAWA Hanford 73.69 330 PFAKE 14 12 50.0 +13
HAWA LR LR
comp=Z,3µm,20.0s
A12A Yaak River Ran 73.78 334 ⇓P P 14 12 37.4 +0.2
baz=74
FFC Flin Flon 73.87 344 eP P 14 12 37.3 -0.2
FFC pmax pmax
comp=Z,96nm,2.2s
FFC MLR MLR
comp=Z,3µm,19.0s
FFC Flin Flon 73.87 344 eP P 14 12 37.2 -0.2
comp=Z,96nm,2.2s
FFC LR LR
comp=Z,3µm,19.0s
NEW Newport 73.93 332 eP P 14 12 38.8 +0.7
comp=Z,17nm,1.3s
NEW LR LR
comp=Z,2µm,19.0s
NEW Newport 73.93 332 ⇓P P 14 12 37.9 -0.1
baz=74
MPOR Mary's Peak 74.44 326 P P 14 12 43.2 +2.0
ETW Entiat 74.93 330 P P 14 12 46.1 +2.0
LON Longmire 75.06 329 P P 14 12 45.0 +0.3
LON pmax pmax
comp=Z,9.0nm,1.2s
LON Longmire 75.06 329 P P 14 12 45.0 +0.3
comp=Z,9.3nm,1.2s
NLWA Neilton Lookou 76.53 328 eP P 14 12 53.9 +0.9
comp=Z,47nm,1.3s
NLWA LR LR
comp=Z,4µm,20.0s
VDB Vedder Mountai 76.77 330 P P 14 12 55.7 +1.3
RAR Rarotonga 79.53 251 PFAKE 14 13 20.0 +10
RAR LR LR
comp=Z,5µm,19.0s
SBA Scott Base 80.30 191 eP P 14 13 15.4 +2.0
SBA MLR MLR
comp=Z,3µm,20.0s
SBA Scott Base 80.30 191 eP P 14 13 15.4 +2.0
comp=Z,147nm,2.3s
SBA LR LR
comp=Z,3µm,20.0s
TOA0 Torodi Ar. Sit 81.25 74 eP P 14 13 17.8 -1.9
TORD Torodi Ar. Bea 81.25 74 P P 14 13 18.0 -1.6
TORD Torodi Ar. Bea 81.25 74 P P 14 13 18.0 -1.6
comp=Z,78nm,0.9s,baz=270,slow=5.4,SNR=119
TORD LR LR 14 48 22.1
comp=Z,9µm,19.1s,baz=245,slow=35
VNDA Vanda 81.36 191 eP P 14 13 21.6 +2.5
comp=Z,14nm,1.2s
VNDA Vanda 81.36 191 P P 14 13 20.4 +1.3
comp=Z,2.0nm,0.8s,baz=125,slow=3.0,SNR=10
VNDA LR LR 14 43 42.0
comp=Z,3µm,18.1s,baz=124,slow=31
PFVI Vila Bisbo 81.60 48 eP P 14 13 21.9 +0.9
RTC Rabat Centre 81.66 51 PFAKE 14 13 30.0 +8.6
RTC LR LR
comp=Z,3µm,20.0s
MORF Marmelete 81.80 48 eP P 14 13 22.5 +0.4
comp=Z,77nm,1.4s
MORF Marmelete 81.80 48 eP P 14 13 20.5 -1.6
MORF e 14 16 26.8
MORF eS S 14 23 32.2 -1.9
PTEO Sao Teotonio 81.86 47 eP P 14 13 24.8 +2.5
comp=Z,82nm,1.9s
LIS Lisbon 82.09 46 eP P 14 13 22.1 -1.4
LIS AMb AMB 14 13 28.1
comp=Z,112nm,1.3s
LIS eS S 14 23 34.8 -2.0
LIS Lisbon 82.09 46 eP P 14 13 22.1 -1.4
comp=Z,112nm,1.3s
LIS eS S 14 23 34.6 -2.2
PNCL Nicolau / Gran 82.25 47 eP P 14 13 26.0 +1.6
comp=Z,36nm,1.9s
PBDV Barranco-do-Ve 82.28 48 eP P 14 13 26.2 +1.5
comp=Z,53nm,1.4s
MESJ Messejana 82.34 47 eP P 14 13 23.3 -1.6
MESJ eS S 14 23 37.5 -2.0
MESJ AMS AMS 14 52 01.4
comp=E,3µm,18.0s
MESJ Messejana 82.34 47 eP P 14 13 23.3 -1.6
MESJ eS S 14 23 37.5 -2.0
PCVE Castro Verde 82.38 48 eP P 14 13 27.1 +2.0
comp=E,54nm,1.5s
PVAQ Vaqueiros 82.51 48 eP P 14 13 26.5 +0.7
PVAQ eS S 14 23 49.3 +8.1
PVAQ eLR LR 14 44 06.2
comp=E,4µm,18.0s
PBEJ Beja 82.68 47 eP P 14 13 28.3 +1.6
comp=E,48nm,1.5s
EVOP Sao Brissos 82.72 47 eP P 14 13 26.2 -0.6
EVOP pmax pmax
comp=Z,32nm,0.9s
EVOP Sao Brissos 82.72 47 eP P 14 13 26.2 -0.6
comp=Z,32nm,0.9s
EVO Evora 82.80 47 eP P 14 13 26.2 -1.1
comp=Z,32nm,0.9s
EVO Evora 82.80 47 eP P 14 13 29.2 +1.9
PMTG Montargil 82.89 46 eP P 14 13 29.2 +1.5
comp=Z,78nm,1.4s
PTOM Tomar 83.01 46 eP P 14 13 29.6 +1.3
comp=Z,109nm,1.3s
XMAS Kiritimati 83.14 274 PFAKE 14 13 40.0 +10
XMAS LR LR
comp=Z,4µm,19.0s
PESTR Estremoz 83.25 47 eP P 14 13 30.1 +0.5
PBAR Barrancos 83.33 47 eP P 14 13 31.6 +1.6
comp=Z,50nm,1.5s
PMRV Marv??o 83.63 46 eP P 14 13 33.6 +2.0
comp=Z,44nm,1.7s
PMRV eS S 14 24 03.0 +10
PMRV eLR LR 14 41 12.6
comp=Z,5µm,18.0s
PCBR Castelo Branco 83.76 46 eP P 14 13 34.3 +2.1
comp=Z,42nm,1.5s
PVIS Viseu 83.86 45 eP P 14 13 33.7 +0.9
comp=Z,66nm,1.6s
YKA Yellowknife Ar 83.95 343 P P 14 13 30.2 -2.4
YKA Yellowknife Ar 83.95 343 P P 14 13 30.2 -2.4
comp=Z,5.9nm,0.8s,baz=138,slow=5.1,SNR=42
MTE Manteigas 83.96 45 eP P 14 13 35.4 +2.1
comp=Z,65nm,1.4s
MTE eS S 14 24 00.0 +4.1
MTE eLR LR 14 40 04.2
comp=Z,4µm,20.0s

MTE	**Manteigas**	**83.96**	**45**	*e*P		**P**		**14 13 34.1**	**+0.8**
	comp=Z,28nm,1.1s								
MTE				LR		LR			
	comp=Z,4μm,20.0s								
YKW3	**Yellowknife Ar**	**84.01**	**343**	*e*P		**P**		**14 13 32.8**	**-0.1**
	comp=Z,1.2nm,1.5s								
PGAV	**Gavieira, Arco**	**84.17**	**44**	*e*S		**S**		**14 24 00.3**	**+2.2**
PGAV				*e*LR		LR		14 42 52.1	
	comp=Z,4μm,20.0s								
SFJD	**Kangerlussuaq**	**84.53**	**9**	PFAKE				14 13 50.0	+15
SFJD				LR		LR			
	comp=Z,1μm,20.0s								
MVO	**Moncorvo**	**84.65**	**45**	*e*P		**P**		**14 13 38.3**	**+1.5**
	comp=Z,41nm,1.5s								
MVO				*e*S		**S**		**14 24 05.0**	**+2.2**
MVO				*e*LQ		LQ		14 36 25.7	
MVO				*e*LR		LR		14 41 48.3	
	comp=Z,3μm,18.0s								
PAB	**San Pablo**	**85.81**	**47**	*e*P		**P**		**14 13 42.9**	**+0.3**
PAB				pmax		pmax			
	comp=Z,114nm,2.2s								
PAB				MLR		MLR			
	comp=Z,4μm,19.0s								
PAB	**San Pablo**	**85.81**	**47**	*e*P		**P**		**14 13 42.9**	**+0.3**
	comp=Z,114nm,2.2s								
PAB				LR		LR			
	comp=Z,4μm,19.0s								
ESDC	**Sonseca Array**	**86.14**	**47**	P		**P**		**14 13 43.0**	**-1.3**
ESDC	**Sonseca Array**	**86.14**	**47**	P		**P**		**14 13 43.0**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=256,slow=5.2,SNR=12								
ESDC				LR		LR		14 51 18.8	
	comp=Z,3μm,18.3s,baz=230,slow=35								
WRAK	**Wrangell Islan**	**86.28**	**332**	PFAKE				14 13 50.0	+5.6
WRAK				LR		LR			
	comp=Z,2μm,20.0s								
DLBC	**Dease Lake**	**86.50**	**334**	*e*P		**P**		**14 13 47.0**	**+1.4**
SUR	**Sutherland**	**86.58**	**123**	PFAKE				14 14 00.0	+13
SUR				LR		LR			
	comp=Z,4μm,20.0s								
TSUM	**Tsumeb**	**87.42**	**109**	*e*P		**P**		**14 13 50.8**	**-0.3**
	comp=Z,15nm,0.9s								
TSUM				LR		LR			
	comp=Z,2μm,19.0s								
TAM	**Tamanrasset**	**87.73**	**66**	*e*P		**P**		**14 13 53.1**	**+0.6**
TAM				pmax		pmax			
	comp=Z,88nm,1.9s								
TAM				MLR		MLR			
	comp=Z,5μm,19.0s								
TAM	**Tamanrasset**	**87.73**	**66**	*e*P		**P**		**14 13 53.1**	**+0.6**
	comp=Z,88nm,1.9s								
TAM				LR		LR			
	comp=Z,5μm,19.0s								
BORG	**Borgarnes**	**90.05**	**20**	PFAKE				14 14 10.0	+7.8
BORG				LR		LR			
	comp=Z,2μm,22.0s								
EPF	**Esparros**	**90.42**	**45**	*e*P		**P**		**14 14 02.7**	**-1.8**
	comp=Z,17nm,1.0s								
EPF	**Esparros**	**90.42**	**45**	*e*P		**P**		**14 14 02.7**	**-1.8**
EPF				pmax		pmax			
	comp=Z,17nm,1.0s								
EPF	**Esparros**	**90.42**	**45**	*e*P		**P**		**14 14 02.7**	**-1.8**
	comp=Z,17nm,1.0s								
BOSA	**Boshof**	**91.38**	**120**	LR		LR		14 51 27.4	
	comp=Z,3μm,20.1s,baz=258,slow=33								
MAW	**Mawson**	**91.39**	**165**	P		**P**		**14 14 09.5**	**+0.9**
MAW	**Mawson**	**91.39**	**165**	P		**P**		**14 14 09.5**	**+0.9**
	comp=Z,7.6nm,0.8s,baz=191,slow=3.2,SNR=14								
MAW				LR		LR		14 52 38.7	
	comp=Z,2μm,20.0s,baz=229,slow=34								
SUMG	**Summit**	**91.47**	**10**	*e*P		**P**		**14 14 09.0**	**-0.2**
SUMG	**Summit**	**91.47**	**10**	*e*P		**P**		**14 14 09.0**	**-0.2**
MTLF	**Montolieu**	**91.81**	**45**	*e*P		**P**		**14 14 09.3**	**-1.7**
MTLF	**Montolieu**	**91.81**	**45**	*e*P		**P**		**14 14 09.3**	**-1.7**
MTLF	**Montolieu**	**91.81**	**45**	*e*P		**P**		**14 14 09.3**	**-1.7**
AFI	**Afiamalu**	**92.47**	**255**	LR		LR		14 48 59.5	
	comp=Z,742nm,18.3s,baz=107,slow=31								
ESK	**Eskdalemuir**	**92.96**	**33**	PFAKE				14 14 30.0	+14
ESK				LR		LR			
	comp=Z,1μm,21.0s								
RAO	**Raoul Island**	**93.11**	**239**	LR		LR		14 46 28.0	
	comp=Z,2μm,21.2s,baz=114,slow=29								
URZ	**Urewera**	**93.66**	**229**	LR		LR		14 49 18.5	
	comp=Z,2μm,18.0s,baz=126,slow=31								
SSB	**Saint Sauveur**	**94.02**	**44**	PFAKE				14 14 30.0	+8.8
SSB				LR		LR			
	comp=Z,3μm,19.0s								
SNZO	**South Karori**	**94.11**	**225**	PFAKE				14 14 30.0	+8.3
SNZO				LR		LR			
	comp=Z,1μm,19.0s								
EGAK	**Eagle**	**94.41**	**337**	*e*P		**P**		**14 14 22.4**	**0.0**
	comp=Z,14nm,1.5s								
EGAK				LR		LR			
	comp=Z,2μm,19.0s								
MENT	**Mentasta**	**94.58**	**335**	P		**P**		**14 14 24.3**	**+1.0**
KEST	**Kesra**	**94.72**	**54**	LR		LR		14 58 29.5	
	comp=Z,2μm,19.2s,baz=318,slow=36								
LMR	**La Mourre**	**94.78**	**46**	*e*P		**P**		**14 14 22.9**	**-1.7**
	comp=Z,42nm,1.2s								
LMR	**La Mourre**	**94.78**	**46**	*e*P		**P**		**14 14 22.9**	**-1.7**
LMR				pmax		pmax			
	comp=Z,42nm,1.2s								
LMR	**La Mourre**	**94.78**	**46**	*e*P		**P**		**14 14 22.9**	**-1.7**
	comp=Z,42nm,1.2s								
FRF	**La Foret Royal**	**94.94**	**46**	*e*P		**P**		**14 14 23.8**	**-1.6**
FRF	**La Foret Royal**	**94.94**	**46**	*e*P		**P**		**14 14 23.8**	**-1.6**
FRF	**La Foret Royal**	**94.94**	**46**	*e*P		**P**		**14 14 23.8**	**-1.6**
PAX	**Paxson**	**95.31**	**334**	*e*P		**P**		**14 14 26.6**	**-0.1**
PAX				pmax		pmax			
	comp=Z,6.0nm,1.1s								
PAX	**Paxson**	**95.31**	**334**	*e*P		**P**		**14 14 26.6**	**-0.1**
	comp=Z,6.2nm,1.1s								
CABF	**La Chapelle**	**95.45**	**43**	*e*P		**P**		**14 14 25.4**	**-2.4**
CABF	**La Chapelle**	**95.45**	**43**	*e*P		**P**		**14 14 25.4**	**-2.4**
CABF	**La Chapelle**	**95.45**	**43**	*e*P		**P**		**14 14 25.4**	**-2.4**
RPZ	**Rata Peaks**	**95.46**	**222**	LR		LR		14 49 49.9	
	comp=Z,937nm,20.1s,baz=70,slow=31								
VSL	**Villasalto**	**95.77**	**51**	PFAKE				14 14 40.0	+11
VSL				LR		LR			
	comp=Z,2μm,20.0s								
SML	**Sawmill**	**96.08**	**333**	*e*P		**P**		**14 14 30.9**	**+0.7**
SML	**Sawmill**	**96.08**	**333**	*e*P		**P**		**14 14 30.9**	**+0.7**
WLF	**Walferdange**	**96.39**	**40**	PFAKE				14 14 40.0	+8.2
WLF				LR		LR			
	comp=Z,2μm,20.0s								
ECH	**Echery**	**96.61**	**42**	PFAKE				14 14 40.0	+7.1
ECH				LR		LR			
	comp=Z,2μm,19.0s								
ILAR	**Eielson Array**	**96.62**	**336**	P		**P**		**14 14 31.9**	**-0.6**
ILAR				PP		PP		14 18 21.6	-5.6
ILAR	**Eielson Array**	**96.62**	**336**	P		**P**		**14 14 31.9**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=168,slow=4.3,SNR=5.8								
ILAR				PP		PP		14 18 21.6	-5.6
	comp=Z,0.8nm,1.0s,baz=102,slow=6.6,SNR=4.1								
ILAR				LR		LR		14 59 34.0	
	comp=Z,2μm,19.5s,baz=114,slow=36								
KDAK	**Kodiak Island**	**96.68**	**328**	PFAKE				14 14 40.0	+7.1
KDAK				LR		LR			
	comp=Z,1μm,21.0s								
COLA	**College**	**97.04**	**336**	PFAKE				14 14 50.0	+16
COLA				LR		LR			
	comp=Z,2μm,20.0s								
BFO	**Black Forest**	**97.40**	**42**	PFAKE				14 14 50.0	+13
BFO				LR		LR			
	comp=Z,1μm,20.0s								
TUE	**Stuetta**	**97.58**	**44**	PFAKE				14 14 50.0	+12
TUE				LR		LR			
	comp=Z,4μm,19.0s								
VLC	**Villacollemand**	**97.71**	**46**	PFAKE				14 14 50.0	+12
VLC				LR		LR			
	comp=Z,2μm,20.0s								
CASY	**Casey**	**98.05**	**182**	PFAKE				14 14 50.0	+11
CASY				LR		LR			
	comp=Z,1μm,22.0s								
LSZ	**Lusaka**	**98.25**	**108**	PFAKE				14 14 50.0	+8.7
LSZ				LR		LR			
	comp=Z,3μm,22.0s								
COLD	**Coldfoot**	**98.78**	**338**	*e*P		Pdif		14 14 43.2	+1.0
WDD	**Wield Dalam**	**98.83**	**55**	PFAKE				14 14 50.0	+6.9
WDD				LR		LR			
	comp=Z,2μm,20.0s								
WTTA	**Wattenberg**	**99.30**	**44**	*i*Pdiff		**Pdif**		**14 14 45.2**	**0.0**
	comp=Z,5.3nm,0.8s								
AQU	**L'Aquila**	**99.42**	**49**	PFAKE				14 15 00.0	+14
AQU				LR		LR			
	comp=Z,2μm,21.0s								
CEL	**Celeste**	**100.42**	**53**	PFAKE				14 15 00.0	+10
CEL				LR		LR			
	comp=Z,2μm,20.0s								
NKC	**Novy Kostel**	**100.47**	**41**	*e*PP		PP		14 18 54.9	-2.2
NKC				*e*SKS		SKSac		14 25 34.9	+7.4
NKC				*ex*		x		14 26 31.2	
NKC				*e*PS		**PS**		**14 27 58.5**	**+0.6**
NKC				AMS		AMS		15 03 30.0	
	comp=Z,2μm,16.5s								
MSVF	**Nonsavu**	**100.55**	**248**	PFAKE				14 15 00.0	+8.6
MSVF				LR		LR			
	comp=Z,1μm,20.0s								
CUC	**Castrocucco**	**100.71**	**51**	PFAKE				14 15 00.0	+8.5
CUC				LR		LR			
	comp=Z,2μm,19.0s								
KONO	**Kongsberg**	**100.87**	**31**	PFAKE				14 15 00.0	+8.4
KONO				LR		LR			
	comp=Z,2μm,20.0s								
KHC	**Kasperske Hory**	**100.96**	**42**	*e*P		**Pdif**		**14 14 53.6**	**+1.2**
KHC				*e*				14 18 57.3	
KHC				*e*				14 25 32.9	
KHC				*e*S		**Sdif**		**14 26 28.5**	**-0.8**
KHC				*e*SP		**SP**		**14 28 00.7**	**+1.1**
KHC				MLR		MLR			
	comp=Z,2μm,17.2s								
KHC	**Kasperske Hory**	**100.96**	**42**	*e*PDIFF		**Pdif**		**14 14 53.6**	**+1.2**
KHC				*e*PP		**PP**		**14 18 57.3**	**-3.6**
KHC				*e*SKS				14 25 32.9	
KHC				*e*SDIF		**Sdif**		**14 26 28.5**	**-0.8**
KHC				*e*SP		**SP**		**14 28 00.7**	**+1.1**
KHC				AMS		AMS		15 02 00.0	
	comp=Z,2μm,17.2s								
GERES	**GERESS Array B**	**100.98**	**42**	P		**Pdif**		**14 14 52.8**	**+0.2**
GERES	**GERESS Array B**	**100.98**	**42**	P		**Pdif**		**14 14 52.8**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=251,slow=3.0,SNR=4.0								
CLL	**Collm**	**101.03**	**40**	*e*P		**Pdif**		**14 14 53.0**	**+0.5**
CLL				*e*				14 19 06.0	
CLL				*e*				14 25 34.0	
CLL				*e*S		**Sdif**		**14 26 31.0**	**+1.4**
CLL				MLR		MLR			
	comp=Z,3μm,21.3s								
CLL	**Collm**	**101.03**	**40**	*e*Pdif		**Pdif**		**14 14 53.0**	**+0.5**
CLL				*e*PP		**PP**		**14 19 06.0**	**+4.7**
CLL				*e*PPP		PPP		14 21 09.0	
CLL				*e*SKSac		**SKSac**		**14 25 34.0**	**+3.9**
CLL				*e*Sdif		**Sdif**		**14 26 31.0**	**+1.4**
CLL				*e*PS		**PS**		**14 27 59.0**	**-4.8**
CLL				*e*PPS		PPS		14 28 51.0	
CLL				*e*				14 31 42.0	
CLL				*e*SS		**SS**		**14 33 29.0**	**-0.1**
CLL				*e*SSS		SSS		14 37 10.0	
CLL				Lm		MLR		14 57 00.0	
	comp=Z,3μm,21.3s								
TIP	**Timpagrande**	**101.26**	**52**	PFAKE				14 15 00.0	+6.0
TIP				LR		LR			
	comp=Z,2μm,22.0s								
BRG	**Berggiesshubel**	**101.53**	**40**	P		**Pdif**		**14 14 56.0**	**+1.2**
BRG				PP		PP		14 18 53.0	-12
BRG				SKS		**SKSac**		**14 25 37.0**	**+4.5**
BRG				S		**Sdif**		**14 26 40.0**	**+6.2**
BRG				SS		SS		14 33 13.0	-23
BRG									
	comp=N,886nm,22.6s								
BRG									
	comp=E,2μm,19.8s								
BRG									
	comp=Z,2μm,21.7s								
BRG	**Berggiesshubel**	**101.53**	**40**	P		**Pdif**		**14 14 56.0**	**+1.2**
BRG								14 25 37.0	
BRG				MLR		MLR			
	comp=N,886nm,22.6s								
BRG				MLR		MLR			
	comp=E,2μm,19.8s								
BRG				MLR		MLR			
	comp=Z,2μm,21.7s								
PRU	**Pruhonice**	**101.74**	**41**	*e*PP		PP		14 19 04.7	-2.0
PRU				*e*SKS		**SKSac**		**14 25 36.2**	**+2.6**
PRU				*ex*		**Sdif**		**14 26 41.0**	**+5.3**
PRU				*e*PS		**PS**		**14 28 11.6**	**+0.2**
PRU				AMS		AMS		15 02 00.0	
	comp=Z,2μm,17.1s								
PVCC	**Panska Ves**	**101.86**	**41**	*e*PP		PP		14 19 07.2	-0.4
PVCC				*e*PS		**PS**		**14 28 13.1**	**+0.5**
PVCC				AMS		AMS		14 58 40.0	
	comp=Z,2μm,20.7s								
TREC	**Trest**	**102.22**	**42**	*e*PP		PP		14 19 10.9	+0.5
TREC				*e*PS		**PS**		**14 28 19.0**	**+2.4**
TREC				AMS		AMS		15 00 00.0	
	comp=Z,2μm,19.1s								
FUNA	**Funafuti**	**102.53**	**257**	PFAKE				14 15 10.0	+10
FUNA				LR		LR			
	comp=Z,7μm,19.0s								
DPC	**Dobruska-Polom**	**102.93**	**41**	*e*P		**Pdif**		**14 15 03.2**	**+2.1**
DPC				*e*				14 19 13.3	
DPC				*e*SP		SP		14 28 27.5	+7.0
DPC				MLR		MLR			
	comp=Z,2μm,17.9s								
DPC	**Dobruska-Polom**	**102.93**	**41**	*e*PDIFF		**Pdif**		**14 15 03.2**	**+2.1**
DPC				*e*PP		**PP**		**14 19 13.3**	**-2.4**
DPC				*e*SKS		**SKSac**		**14 25 44.8**	**+5.5**
DPC				*ex*		**Sdif**		**14 26 51.1**	**+5.4**
DPC				*e*SP		**SP**		**14 28 27.5**	**+7.1**
DPC				AMS		AMS		15 04 40.0	
	comp=Z,2μm,17.9s								
KSP	**Ksiaz**	**102.99**	**41**	*e*P		**Pdif**		**14 15 02.0**	**+0.7**
KSP				*e*				14 19 14.0	
KSP				*e*				14 25 43.5	
KSP				*e*S		**Sdif**		**14 26 45.5**	**-0.6**
KSP				*e*SP		**SP**		**14 28 21.0**	**0.0**
KSP				MLR		MLR			
	comp=Z,5μm,21.0s								
TIR	**Tirane**	**103.98**	**51**	PFAKE				14 15 20.0	+14
TIR				LR		LR			
	comp=Z,1μm,20.0s								
OKC	**Ostrava-Krasne**	**104.02**	**42**	*ex*		PKiKP		14 19 09.0	-14
OKC				*e*SKS		**SKSac**		**14 25 50.1**	**+5.8**
OKC				*e*SDIF		**Sdif**		**14 26 55.0**	**+0.3**
OKC				*e*PS		**PS**		**14 28 32.9**	**-2.6**
OKC				AMS		AMS		15 05 30.0	
	comp=Z,1μm,20.1s								
KBS	**Kingsbay**	**104.84**	**12**	PFAKE				14 15 20.0	+11
KBS				LR		LR			
	comp=Z,998nm,19.0s								
PSZ	**Piszkesteto**	**104.91**	**44**	PFAKE				14 15 20.0	+10
PSZ				LR		LR			
	comp=Z,3μm,19.0s								
MBAR	**Mbarara**	**105.12**	**95**	PFAKE				14 15 20.0	+8.1
MBAR				LR		LR			
	comp=Z,543nm,22.0s								
KWP	**Kalwaria Pacla**	**106.94**	**42**	PFAKE				14 19 40.0	
KWP				LR		LR			
	comp=Z,2μm,20.0s								
SANT	**Santorini**	**107.64**	**56**	PFAKE				14 19 40.0	
SANT				LR		LR			
	comp=Z,1μm,22.0s								
MIDW	**Midway**	**107.88**	**295**	PFAKE				14 19 40.0	
MIDW				LR		LR			
	comp=Z,2μm,21.0s								
DZM	**Mont Dzumac**	**108.88**	**240**	*e*SKSac		**SKSac**		**14 26 06.2**	**-1.1**
	comp=Z,616nm,29.1s								
DZM				*e*SP		**SP**		**14 29 27.8**	**+4.7**
	comp=Z,548nm,22.2s								
DZM				*e*SS		SS		14 35 30.5	+13
	comp=Z,3μm,26.4s								
DZM				*e*LQ		LQ		14 47 05.1	
	comp=Z,772nm,26.8s								
DZM				*e*LR		LR		14 51 33.8	
	comp=Z,5μm,23.6s								
KEV	**Kevo**	**108.93**	**21**	PFAKE				14 19 40.0	
KEV				LR		LR			
	comp=Z,1μm,21.0s								
TAU	**Tasmania Unive**	**109.76**	**212**	PFAKE				14 19 50.0	
TAU				LR		LR			
	comp=Z,1μm,19.0s								
KIS	**Kishinev**	**110.88**	**45**	*e*PKIKP		PKiKP		14 19 30.0	-6.0
KIS				*e*PPS		PPS		14 30 40.0	
KIS				MLR		MLR			
	comp=E,1μm,20.0s								
KIS				MLR		MLR			
	comp=Z,2μm,20.0s								
KIS	**Kishinev**	**110.88**	**45**	*e*PKP		PKiKP		14 19 30.0	-6.0
KIS	**Kishinev**	**110.88**	**45**	*e*PP		PP		14 20 50.0	+36
KIS	**Kishinev**	**110.88**	**45**	*e*PS		PS		14 29 24.0	-21
KIS	**Kishinev**	**110.88**	**45**	*e*PPS		PPS		14 30 40.0	
KIS				LRM		MLR		15 04 25.0	
	comp=Z,2μm,20.0s								
KIEV	**Kiev**	**111.15**	**41**	PFAKE				14 19 50.0	
KIEV				LR		LR			
	comp=Z,2μm,20.0s								
AKASG	**Malin Array Be**	**111.16**	**41**	PP		PP		14 20 10.5	-5.5
AKASG	**Malin Array Be**	**111.16**	**41**	PP		PP		14 20 10.5	-5.5
	comp=Z,0.3nm,0.4s,baz=263,slow=8.1,SNR=4.0								
KMBO	**Kilima Mbogo**	**111.20**	**98**	PFAKE				14 19 50.0	
KMBO				LR		LR			
	comp=Z,2μm,19.0s								
TARA	**Tarawa**	**111.45**	**265**	PFAKE				14 19 50.0	
TARA				LR		LR			
	comp=Z,2μm,21.0s								
ISP	**Isparta**	**111.80**	**55**	PFAKE				14 19 50.0	
ISP				LR		LR			
	comp=Z,1μm,19.0s								
ABPO	**Ambohimpanom**	**113.59**	**119**	PFAKE				14 19 50.0	
ABPO				LR		LR			
	comp=Z,2μm,19.0s								
ANTO	**Ankara**	**113.65**	**53**	PFAKE				14 19 50.0	
ANTO				LR		LR			
	comp=Z,1μm,20.0s								
CSS	**Prodhromos**	**113.90**	**58**	PFAKE				14 19 50.0	
CSS				LR		LR			
	comp=Z,1μm,21.0s								
CAN	**Canberra**	**114.14**	**219**	PFAKE				14 20 00.0	+17
CAN				LR		LR			
	comp=Z,1μm,22.0s								
BRTR	**Keskin Array B**	**114.30**	**53**	PKP		PKPdf		14 19 43.3	+0.3
BRTR	**Keskin Array B**	**114.30**	**53**	PKP		PKPdf		14 19 43.3	+0.3
	comp=Z,1.2nm,0.9s,baz=200,slow=3.3,SNR=4.5								
MOS	**Moscow**	**115.73**	**35**	*e*PKIKP		**PKPdf**		**14 19 40.3**	**-4.7**
ANN	**Anapa**	**116.96**	**48**	*i* PKIKP		**PKPdf**		**14 19 52.5**	**+4.8**
ANN				pmax		pmax			
	comp=Z,54nm,1.6s								
SOC	**Sochi**	**118.70**	**49**	*i* PKIKP		**PKPdf**		**14 19 53.1**	**+2.0**
SOC				*e*				14 21 07.4	
SOC				*e*				14 30 45.3	
SOC				*e*				14 32 06.6	
SOC				pmax		pmax			
	comp=Z,329nm,13.0s								
RER	**Riviere de l'E**	**119.42**	**126**	PFAKE				14 20 00.0	+6.6
RER				LR		LR			
	comp=Z,1μm,19.0s								
HNR	**Honiara**	**119.95**	**249**	PFAKE				14 20 10.0	+16
HNR				LR		LR			
	comp=Z,1μm,22.0s								
STKA	**Stephens Creek**	**120.93**	**216**	PKP		**PKPdf**		**14 19 56.8**	**+0.9**
STKA	**Stephens Creek**	**120.93**	**216**	PKP		**PKPdf**		**14 19 56.8**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=129,slow=6.2,SNR=3.7								
KBZ	**Khabaz**	**120.98**	**48**	PKIKP		**PKPdf**		**14 19 56.0**	**+0.5**
KBZ	**Khabaz**	**120.98**	**48**	PKP		**PKPdf**		**14 19 56.0**	**+0.5**
KBZ	**Khabaz**	**120.98**	**48**	PKP		**PKPdf**		**14 19 56.0**	**+0.5**
	comp=Z,8.6nm,0.9s,baz=216,slow=2.7,SNR=13								
WAKE	**Wake Island**	**121.23**	**283**	PFAKE				14 20 10.0	+13
WAKE				LR		LR			
	comp=Z,2μm,21.0s								
TIXI	**Tiksi**	**122.36**	**351**	*i* PKIKP		**PKPdf**		**14 19 57.6**	**+0.2**
TIXI				pmax		pmax			
	comp=Z,1.0nm,0.7s								
TIXI				MLR		MLR			
	comp=Z,1μm,25.0s								
SEY	**Seymchan**	**122.55**	**336**	*i* PKIKP		**PKPdf**		**14 20 00.4**	**+2.5**
GNI	**Garni**	**122.80**	**52**	PFAKE				14 20 10.0	+11
GNI				LR		LR			
	comp=Z,645nm,19.0s								
MAK	**Makhachkala**	**124.42**	**49**	*i* PKIKP		**PKPdf**		**14 20 05.9**	**+3.8**
MAK				*e*				14 21 57.1	
MAK				*e*PPP		PPP		14 24 25.8	
MAK				*e*				14 33 17.7	
PETK	**Petropavlovsk-**	**124.50**	**324**	PKIKP		**PKPdf**		**14 20 02.9**	**+0.9**
PETK	**Petropavlovsk-**	**124.50**	**324**	PKP		**PKPdf**		**14 20 02.9**	**+0.9**
PETK	**Petropavlovsk-**	**124.50**	**324**	PKP		**PKPdf**		**14 20 02.9**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=98,slow=3.1,SNR=4.2								
CTAO	**Charters Tower**	**125.89**	**230**	PFAKE				14 20 20.0	+14
CTAO				LR		LR			
	comp=Z,811nm,19.0s								
ARU	**Arti**	**126.49**	**30**	*i* PKIKP		**PKPdf**		**14 20 07.0**	**+1.3**
ARU								14 22 03.7	
ARU				MLR		MLR			
	comp=Z,2μm,19.0s								
MSEY	**Mahe Island**	**127.08**	**109**	PFAKE				14 20 20.0	+12
MSEY				LR		LR			
	comp=Z,2μm,21.0s								
NWAO	**Narrogin (SRO)**	**130.12**	**194**	PFAKE				14 20 30.0	+17
NWAO				LR		LR			
	comp=Z,763nm,20.0s								
YAK	**Yakutsk**	**130.59**	**345**	*e*PKHKP		PKPpre		14 20 02.9	
YAK				pmax		pmax			
	comp=Z,9.0nm,0.6s								
ABKAR	**Akbulak array**	**130.64**	**38**	*e*PKPdf		**PKPdf**		**14 20 13.4**	**-0.4**
PMG	**Port Moresby**	**131.18**	**242**	PFAKE				14 20 30.0	+14
PMG				LR		LR			
	comp=Z,1μm,20.0s								
AS31	**Alice Springs**	**131.57**	**217**	*e*PKPdf		**PKPdf**		**14 20 15.7**	**-0.9**
ASAR	**Alice Springs**	**131.57**	**217**	PKPpre		PKPpre		14 20 08.3	
ASAR				PKP		**PKPdf**		**14 20 15.7**	**-0.8**
ASAR	**Alice Springs**	**131.57**	**217**	PKhKP		PKPpre		14 20 08.3	
	comp=Z,0.3nm,0.8s,baz=116,slow=2.2,SNR=4.5								
ASAR				PKP		**PKPdf**		**14 20 15.7**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=123,slow=1.6,SNR=39								
BRVK	**Borovoye**	**133.97**	**28**	*i* PKIKP		**PKPdf**		**14 20 22.6**	**+2.6**
BRVK				MLR		MLR			
	comp=Z,2μm,21.0s								
BRVK	**Borovoye**	**133.97**	**28**	PFAKE				14 20 30.0	+10
BRVK				LR		LR			
	comp=Z,2μm,20.0s								
WRA	**Warramunga Arr**	**134.15**	**220**	PKPpre		PKPpre		14 20 10.4	
WRA	

GUMO	**Guam**	**141.26**	**272**		PFAKE			14 20 50.0	+15	
GUMO					LR	LR				
	comp=Z,1μm,20.0s									
EKS2	**Erkin-Say**	**142.28**	**38**	*e*	PKIKP	PKPpre		14 20 33.3		
EKS2					MLR	MLR				
	comp=Z,996nm,19.0s									
EKS2	**Erkin-Say**	**142.28**	**38**	*e*	PKPpre	PKPpre		14 20 33.3		
EKS2					LR	LR				
	comp=Z,996nm,19.0s									
FRU	**Bishkek**	**142.68**	**38**	*e*	PKIKP	**PKPdf**		**14 20 38.0**	**+1.6**	
AAK	**Ala-Archa**	**142.72**	**38**	*i*	PKIKP	PKPpre		14 20 34.6		
AAK	**Ala-Archa**	**142.72**	**38**	*e*	PKPpre	PKPpre		14 20 33.6		
AAK					LR	LR				
	comp=Z,1μm,22.0s									
TKM2	**Tokmak 2**	**143.19**	**37**	*e*	PKIKP	PKPbc		14 20 34.4	-0.1	
TKM2					MLR	MLR				
	comp=Z,2μm,21.0s									
TKM2	**Tokmak 2**	**143.19**	**37**	*e*	PKPpre	PKPbc		14 20 34.4	-0.1	
TKM2					LR	LR				
	comp=Z,2μm,21.0s									
USRK	**Ussuriysk Arra**	**143.53**	**326**		PKP	**PKPdf**		**14 20 37.1**	**-0.7**	
	comp=Z,8.6nm,0.9s,baz=70,slow=2.2,SNR=6.5									
HVS	**Khovu-Aksy**	**143.64**	**12**	*i*	PKIKP	**PKPdf**		**14 20 37.0**	**-0.9**	
IRK	**Irkutsk**	**143.65**	**1**	*e*	PKIKP	PKPbc		14 20 35.5	+0.3	
IRK					pmax	pmax				
	comp=Z,22nm,2.2s									
MK31	**Makanchi Array**	**143.85**	**27**	*e*	PKIKP	PKPbc		14 20 36.6	+0.6	
MK31	**Makanchi Array**	**143.85**	**27**	*e*	PKPpre	PKPbc		14 20 36.6	+0.6	
MKAR	**Makanchi Array**	**143.85**	**27**		PKIKP	PKPbc		14 20 36.6	+0.6	
MKAR	**Makanchi Array**	**143.85**	**27**		PKP	PKPbc		14 20 36.5	+0.6	
MKAR	**Makanchi Array**	**143.85**	**27**		PKP	PKPbc		14 20 36.5	+0.6	
	comp=Z,2.4nm,0.5s,baz=340,slow=3.1,SNR=22									
MJAR	**Matsushiro Arr**	**143.90**	**311**		PKP	PKPbc		14 20 36.2	-0.3	
MJAR	**Matsushiro Arr**	**143.90**	**311**		PKP	PKPbc		14 20 36.2	-0.3	
	comp=Z,8.3nm,0.8s,baz=115,slow=2.1,SNR=23									
MAJO	**Matsushiro**	**143.90**	**311**	*e*	PKIKP	**PKPdf**		**14 20 37.6**	**-1.1**	
MAJO	**Matsushiro**	**143.90**	**311**	*e*	PKPdf	**PKPdf**		**14 20 37.6**	**-1.1**	
MAJO					LR	LR				
	comp=Z,2μm,21.0s									
MAT	**Matsushiro**	**143.90**	**311**		PKP	**PKPdf**		**14 20 37.7**	**-1.0**	
MOY	**Mondy**	**144.09**	**4**	*e*	PKIKP	**PKPdf**		**14 20 41.1**	**+2.4**	
TLY	**Talaya**	**144.20**	**1**	*e*	PKIKP	**PKPdf**		**14 20 38.6**	**-0.1**	
TLY				*i*				14 20 48.1		
TLY				*e*				14 23 50.4		
TLY				*e*	SS	SS		14 42 33.5	-2.1	
TLY					pmax	pmax				
	comp=Z,5.0nm,0.9s									
MDJ	**Mudanjiang**	**144.47**	**329**		PKP	PKPbc		14 20 38.5	+0.6	
MDJ					PP	**PP**		**14 23 56.5**	**+1.7**	
MDJ					SKS	**SKSdf**		**14 27 43.8**	**-3.5**	
MDJ					LR	LR				
	comp=E,780nm,36.6s									
MDJ					LR	LR				
	comp=Z,560nm,26.8s									
MDJ	**Mudanjiang**	**144.47**	**329**		PFAKE			14 20 50.0	+11	
MDJ					LR	LR				
	comp=Z,997nm,19.0s									
HIA	**Hailar**	**144.48**	**343**		PFAKE			14 20 50.0	+11	
HIA					LR	LR				
	comp=Z,1μm,19.0s									
KSH	**Kashi**	**145.45**	**41**		PKPbc	**PKPab**		**14 20 42.3**	**+0.7**	
KSH				*e*	PKPab	**PKiKP**		**14 20 43.8**	**-1.6**	
KSH				*e*	pPKP	**pPKPdf**		**14 20 52.8**	**+3.1**	
KSH				*e*	SKP			14 20 56.8		
KSH				*e*	PP	**PP**		**14 24 04.0**	**+2.8**	
KSH				*e*	PKS	**PKSdf**		**14 24 16.3**	**-0.7**	
KSH				*e*	SKS	**SKSdf**		**14 27 46.0**	**-3.3**	
KSH				*e*	SKKS	**SKKSac**		**14 30 50.3**	**-2.2**	
KSH				*e*	SS	**SS**		**14 42 50.3**	**-1.7**	
KSH					AMB	AMB				
	comp=Z,600nm,8.7s									
KSH					LR	LR				
	comp=N,720nm,13.5s									
KSH					LR	LR				
	comp=E,930nm,15.3s									
KSH					LR	LR				
	comp=Z,2μm,16.6s									
ZAK	**Zakamensk**	**145.49**	**2**	*e*	PKP2	**PKPdf**		**14 20 40.0**	**-1.1**	
ZAK				*e*				14 24 09.0		
ZAK					pmax	pmax				
	comp=Z,28nm,1.3s									
CN2	**Changchun**	**147.05**	**332**	*e*	PKPbc	**PKPdf**		**14 20 41.3**	**-2.5**	
CN2				*es*	PKP			14 20 55.6		
CN2				*e*	PP	**PP**		**14 24 12.0**	**+2.0**	
CN2					AMB	AMB				
	comp=Z,200nm,8.0s									
CN2					LR	LR				
	comp=N,600nm,21.0s									
CN2					LR	LR				
	comp=E,500nm,21.0s									
CN2					LR	LR				
	comp=Z,600nm,25.0s									
ULN	**Ulaanbaatar**	**147.98**	**357**		PKPdf	**PKPdf**		**14 20 44.8**	**-0.6**	
ULN					LR	LR				
	comp=Z,1μm,20.0s									
SONM	**Songino Array**	**148.04**	**358**		PKPbc	**PKPbc**		**14 20 47.1**	**-1.5**	
SONM	**Songino Array**	**148.04**	**358**		PKPbc	**PKPbc**		**14 20 47.1**	**-1.5**	
	comp=Z,12nm,0.6s,baz=337,slow=1.6,SNR=41									
WMQ	**Urumqi**	**148.50**	**24**		PKPbc	**PKPbc**		**14 20 48.3**	**-1.6**	
WMQ					pPKP	**pPKPdf**		**14 20 58.9**	**+4.3**	
WMQ					sPKP			14 21 02.6		
WMQ					PP	PP		14 24 24.1	+5.7	
WMQ					SKS	**SKSdf**		**14 27 51.3**	**-2.0**	
WMQ					SKKS	**SKKSac**		**14 31 08.3**	**-0.9**	
WMQ					SS	**SS**		**14 43 25.3**	**+0.1**	
WMQ					LR	LR				
	comp=N,1μm,23.6s									
WMQ					LR	LR				
	comp=E,770nm,23.6s									
WMQ					LR	LR				
	comp=Z,1μm,22.2s									
SNY	**Shenyang**	**149.45**	**332**	⇓	PKPbc	**PKPab**		**14 20 54.5**	**-2.5**	
SNY					PP	**PP**		**14 24 26.4**	**+2.4**	
SNY					SKS	**SKSdf**		**14 27 57.6**	**+3.2**	
POO	**Poona**	**150.28**	**80**	*e*	PKP	**PKPdf**		**14 20 51.0**	**+1.1**	
KSRS	**Korea Array**	**150.31**	**321**		PKP	**PKPdf**		**14 20 50.0**	**+0.7**	
	comp=Z,3.8nm,0.9s,baz=51,slow=1.5,SNR=8.6									
KSRS					PKPbc	**PKPbc**		**14 20 54.6**	**+0.1**	
	comp=Z,9.2nm,1.1s,baz=60,slow=1.7,SNR=9.3									
KSAR	**Wonju Array Be**	**150.34**	**321**		PKP	**PKPdf**		**14 20 50.0**	**+0.6**	
KSAR					PKPbc	**PKPbc**		**14 20 54.6**	**0.0**	
JNU	**Nakatsue**	**150.82**	**311**	*e*	PKPbc	**PKPbc**		**14 20 55.6**	**-0.3**	
INCN	**Inchon**	**151.06**	**322**		PFAKE			14 21 00.0	+3.7	
INCN					LR	LR				
	comp=Z,992nm,20.0s									
DDI	**Dehra Dun**	**151.53**	**55**	*ex*		**PKPbc**		**14 20 56.2**	**-1.5**	
DL2	**Dalian**	**152.68**	**331**		PKPbc	**PKPdf**		**14 20 56.0**	**+3.2**	
DL2					PP	**PP**		**14 24 44.3**	**+1.8**	
DL2					LR	LR				
	comp=E,380nm,21.6s									
DL2					LR	LR				
	comp=Z,170nm,17.1s									
BJI	**Beijing**	**153.91**	**340**		PKPbc	**PKPdf**		**14 20 52.8**	**-1.8**	
BJI					AMB	AMB				
	comp=Z,290nm,7.3s									
BJI					LR	LR				
	comp=N,640nm,18.4s									
BJI					LR	LR				
	comp=E,920nm,19.1s									
BJI					LR	LR				
	comp=Z,850nm,27.5s									
BJT	**Baijiatuau**	**153.93**	**340**		PFAKE			14 21 10.0	-5.8	
BJT					LR	LR				
	comp=Z,1μm,19.0s									
KAPI	**Kappang**	**154.59**	**217**	*e*	PKPbc	**PKPbc**		**14 21 06.5**	**+1.7**	
KAPI					LR	LR				
	comp=Z,792nm,19.0s									
HYB	**Hyderabad**	**154.76**	**83**	*i*	PKP	**PKPbc**		**14 21 04.0**	**-1.1**	
BTO	**Baotou**	**154.88**	**351**	*e*	PKPbc	**PKPdf**		**14 20 59.3**	**+3.2**	
GTA	**Gaotai**	**156.07**	**10**	⇑	PKP	**PKPdf**		**14 20 59.8**	**+2.0**	
GTA					PKPab	**PKPab**		**14 21 29.3**	**+4.2**	
GTA					PKS	**PKSdf**		**14 24 32.6**	**+0.7**	
GTA					PP	PP		14 25 07.9	+6.6	
GTA					AMB	AMB				
	comp=Z,350nm,7.1s									
GTA					LR	LR				
	comp=N,760nm,20.4s									
GTA					LR	LR				
	comp=E,550nm,20.9s									
GTA					LR	LR				
	comp=Z,1μm,22.3s									
DAV	**Davao City (W)**	**157.92**	**249**		PFAKE			14 21 10.0	+9.3	
DAV					LR	LR				
	comp=Z,822nm,20.0s									

SSE	**Sheshan**	**158.68**	**318**		PKP	**PKPdf**		**14 20 59.8**	**-1.3**	
SSE					PP	**PP**		**14 25 19.6**	**+3.2**	
SSE					AMB	AMB				
	comp=Z,170nm,5.8s									
SSE					LR	LR				
	comp=N,640nm,21.8s									
SSE					LR	LR				
	comp=E,500nm,21.9s									
SSE					LR	LR				
	comp=Z,650nm,22.7s									
NJ2	**Nanjing**	**159.41**	**324**	*e*	PKP	**PKPdf**		**14 20 59.9**	**-2.0**	
NJ2					pPKP	**pPKPdf**		**14 21 11.3**	**+1.1**	
NJ2					sPKP			14 21 14.6		
NJ2					PKPab	**PKPab**		**14 21 40.6**	**+1.1**	
NJ2					PKS	**PKSdf**		**14 24 31.5**	**-4.0**	
NJ2					AMB	AMB				
	comp=Z,140nm,5.4s									
NJ2					LR	LR				
	comp=N,580nm,17.5s									
NJ2					LR	LR				
	comp=E,370nm,21.0s									
NJ2					LR	LR				
	comp=Z,250nm,23.7s									
LSA	**Lhasa**	**161.30**	**40**		PKP	**PKPdf**		**14 21 05.8**	**+1.1**	
LSA	**Lhasa**	**161.30**	**40**	*e*	PKIKP	**PKPdf**		**14 21 05.2**	**+0.5**	
LSA					MLR	MLR				
	comp=Z,2μm,22.0s									
LSA	**Lhasa**	**161.30**	**40**	*e*	PKPdf	**PKPdf**		**14 21 05.2**	**+0.5**	
LSA					LR	LR				
	comp=Z,2μm,22.0s									
XAN	**Xi'an**	**161.48**	**349**		PKP	**PKPdf**		**14 21 04.8**	**+0.6**	
XAN					LR	LR				
	comp=N,900nm,21.5s									
XAN					LR	LR				
	comp=E,190nm,21.5s									
XAN					LR	LR				
	comp=Z,340nm,22.6s									
TATO	**Taipei**	**161.94**	**303**		PFAKE			14 21 20.0	+15	
TATO					LR	LR				
	comp=Z,1μm,22.0s									
YHNB	**Yeheng**	**162.17**	**302**		PFAKE			14 21 20.0	+15	
YHNB					LR	LR				
	comp=Z,1μm,20.0s									
QZH	**Quanzhou**	**164.24**	**307**		PKP	**PKPdf**		**14 21 10.8**	**+3.7**	
QZH					LR	LR				
	comp=N,2μm,21.1s									
QZH					LR	LR				
	comp=E,3μm,22.9s									
QZH					LR	LR				
	comp=Z,2μm,19.4s									
KSM	**Kuching**	**164.77**	**201**		PFAKE			14 21 20.0	+12	
KSM					LR	LR				
	comp=Z,779nm,19.0s									
CD2	**Chengdu**	**164.93**	**4**		PKP	**PKPdf**		**14 21 06.6**	**-1.0**	
CD2					pPKP	**pPKPdf**		**14 21 17.4**	**+1.4**	
CD2					sPKP			14 21 21.0		
CD2					PKPab	**PKPab**		**14 22 04.0**	**+0.3**	
CD2					PKS	**PKSdf**		**14 24 38.3**	**-2.3**	
CD2					PP	**PP**		**14 25 49.9**	**+1.1**	
CD2					SKS	**SKSdf**		**14 28 08.3**	**-2.4**	
CD2					SKKS	**SKKSac**		**14 32 36.0**	**-0.5**	
CD2					SS	**SS**		**14 46 21.3**	**+0.5**	
CD2					AMB	AMB				
	comp=Z,550nm,6.2s									
CD2					LR	LR				
	comp=N,910nm,18.1s									
CD2					LR	LR				
	comp=E,750nm,17.1s									
CD2					LR	LR				
	comp=Z,1μm,18.6s									
ENH	**Enshi**	**164.98**	**344**		PFAKE			14 21 20.0	+12	
ENH					LR	LR				
	comp=Z,1μm,19.0s									
KKM	**Kota Kinabalu**	**165.22**	**230**		PFAKE			14 21 20.0	+12	
KKM					LR	LR				
	comp=Z,779nm,20.0s									
KULM	**Kulim**	**168.77**	**158**		PFAKE			14 21 20.0	+9.1	
KULM					LR	LR				
	comp=Z,2μm,20.0s									
GYA	**Guiyang**	**169.26**	**351**		PKP	**PKPdf**		**14 21 10.4**	**-0.7**	
GYA					sPKP			14 21 19.3		
GYA					PKPab	**PKPab**		**14 22 23.0**	**0.0**	
GYA					PKS	**PKSdf**		**14 24 41.6**	**-2.2**	
GYA					SKKS			14 32 58.5		
GYA					SS	**SS**		**14 47 05.0**	**+0.2**	
GYA					AMB	AMB				
	comp=Z,180nm,7.9s									
GYA					LR	LR				
	comp=N,280nm,24.8s									
GYA					LR	LR				
	comp=E,140nm,26.2s									
GYA					LR	LR				
	comp=Z,320nm,24.9s									
KMI	**Kunming**	**170.52**	**12**		PKP	**PKPdf**		**14 21 10.5**	**-1.5**	
CHTO	**Chiang Mai**	**173.62**	**61**		PFAKE			14 21 20.0	+6.8	
CHTO					LR	LR				
	comp=Z,1μm,20.0s									
CMAR	**Chiang Mai Arr**	**173.77**	**64**		PKP	**PKPdf**		**14 21 14.2**	**+0.8**	
CMAR	**Chiang Mai Arr**	**173.77**	**64**		PKP	**PKPdf**		**14 21 14.2**	**+0.8**	
	comp=Z,1.1nm,0.7s,baz=281,slow=2.8,SNR=5.4									
QIZ	**Qiongzhong**	**174.25**	**305**		PKP	**PKPdf**		**14 21 14.5**	**+1.1**	
QIZ					PP	**PP**		**14 26 39.0**	**+1.6**	
QIZ					AMB	AMB				
	comp=Z,420nm,7.1s									
QIZ					LR	LR				
	comp=N,630nm,18.8s									
QIZ					LR	LR				
	comp=Z,970nm,17.9s									
QIZ	**Qiongzhong**	**174.25**	**305**		PFAKE			14 21 20.0	+6.6	
QIZ					LR	LR				
	comp=Z,978nm,19.0s									

*IDC **18** 14:13:02.9±0.6, 15°.66S×75°.05W, h0km, mb4.4/13, mb1 4.5/17, mb1mx4.4/22, mbtmp4.3/17, ML4.3/4, MS4.9/5, Ms1 4.8/5, ms1mx4.6/25, Error ellipse: s-maj=22.3km s-min=14.0km az=53.0*

*BJI **18** 14:13:04.3, 15°.60S×75°.00W, h10km, mB5.4/10, Ms5.6/10, Ms7 5.3/10*

*ISCJB **18** 14:13:05.6±0.3, 15°.66S±0°.05×74°.96W±0°.07, h30km, mb4.7/65, MS5.3/5, Error ellipse: s-maj=11.4km s-min=4.1km az=141.4*

*NEIC **18** 14:13:06.2±1.6, 15°.71S×75°.04W, h20km±12km, mb4.9/52, ML4.6(ARE), Error ellipse: s-maj=9.7km s-min=4.5km az=58.0*

NEIC Felt [II] at Acari, Ica, Nazca and Yauca.

*GCMT **18** 14:13:09.3±0.3, 15°.90S×75°.27W, h18km±1km, MW5.3, Moment Tensor Solution. s20,c21; s62,c90; Moment tensor: Scale 10^17^Nm; Mrr1.07±.07; Mθθ-0.16±.04; Mφφ-0.91±.05; Mrθ0.07±.08; Mθφ0.47±.02; Mφr-0.27±.11; Best double couple: M0 1.10000×10^17^ NP1:♢s331.00000°, δ38.00000°, λ85.00000°. NP2:♢s157.00000°, δ52.00000°, λ94.00000°. Principal axes: T 1.1100, Plg82.0000°, Azm87.0000°; N 0.0600, Plg3.0000°, Azm335.0000°; P -1.1700, Plg7.0000°, Azm245.0000°; Data Used: II IU IC G CN.*

ISC 18 14:13:07.0±0.4, 15°.76S±0°.06×75°.10W±0°.08, h26km, n421, σ1♢05/438, mb4.8/65, MS5.4/5, 146C-129D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time h m s	Res ISC
				Op	ISC		
NNA	**Nana**	**4.11**	**335**	*e*Pn	**Pn**	**14 14 06.3**	**-2.0**
NNA				Sn	**Sn**	**14 14 53.6**	**-2.0**
NNA	**Nana**	**4.11**	**335**	Pn	**Pn**	**14 14 06.2**	**-2.1**
	15nm,0.3s,baz=156,slow=14,SNR=11						
NNA				Sn	**Sn**	**14 14 53.6**	**-2.0**
	122nm,0.3s,baz=240,slow=14,SNR=4.5						
PSGC	**Pisagua**	**6.09**	**130**	*e*P	**Pn**	**14 14 34.7**	**-0.8**
PSGC	**Pisagua**	**6.09**	**130**	*e*P	**Pn**	**14 14 34.7**	**-0.8**
MNMC	**Minimini**	**6.23**	**123**	*e*P	**Pn**	**14 14 37.7**	**+0.1**
MNMC	**Minimini**	**6.23**	**123**	*e*P	**Pn**	**14 14 37.7**	**+0.1**
HMBC	**Humberstone**	**6.69**	**133**	*e*P	**Pn**	**14 14 43.3**	**-0.5**
HMBC	**Humberstone**	**6.69**	**133**	*e*P	**Pn**	**14 14 43.3**	**-0.5**
LPAZ	**La Paz**	**6.72**	**95**	*e*Pn	Pn	14 14 48.6	+3.9
LPAZ				Sn	Sb	14 16 14.1	-10
LPAZ	**La Paz**	**6.72**	**95**	Pn	Pn	14 14 48.6	+3.9
	23nm,0.3s,baz=264,slow=9.1,SNR=202						
LPAZ				Sn	Sb	14 16 14.1	-10
	baz=174,slow=18,SNR=2.1						
LPAZ				LR	LR	14 17 33.4	
	comp=Z,9μm,20.1s,baz=275,slow=40						

PB01	**Plate Boundary**	**7.48**	**135**	*e*	P		**Pn**	**14 14 53.9**	**-0.7**	
PB01	**Plate Boundary**	**7.48**	**135**	*e*	P		**Pn**	**14 14 53.9**	**-0.7**	
PB07	**Plate Boundary**	**7.72**	**141**	⇑	*i*P		**Pn**	**14 14 56.6**	**-1.4**	
PB07	**Plate Boundary**	**7.72**	**141**	⇑	*i*P		**Pn**	**14 14 56.6**	**-1.4**	
PB04	**Plate Boundary**	**8.37**	**142**	*e*	P		Pn	14 14 59.7	-7.0	
PB04	**Plate Boundary**	**8.37**	**142**	*e*	P		Pn	14 14 59.7	-7.0	
CEN1	**Los Morros**	**8.88**	**149**	⇑	*i*P		**Pn**	**14 15 13.1**	**-0.8**	
CEN1	**Los Morros**	**8.88**	**149**	⇑	*i*P		**Pn**	**14 15 13.1**	**-0.8**	
LVC	**Limon Verde**	**8.98**	**140**	*e*	P		**Pn**	**14 15 15.0**	**-0.3**	
LVC	**Limon Verde**	**8.98**	**140**	*e*	P		**Pn**	**14 15 15.0**	**-0.3**	
ATAH	**Atahualpa**	**9.16**	**339**		Pn		Pn	14 15 22.0	+4.0	
ATAH					Sn		Sn	14 17 14.0	+14	
ATAH	**Atahualpa**	**9.16**	**339**		Pn		Pn	14 15 22.0	+4.0	
	0.6nm,0.3s,baz=99,slow=19,SNR=4.8									
ATAH					Sn		Sn	14 17 14.0	+14	
	4.2nm,0.3s,baz=185,slow=12,SNR=2.3									
SAML	**Samuel**	**13.46**	**61**	*e*	P		**Pn**	**14 16 15.8**	**-0.6**	
	23nm,0.6s									
SIV	**San Ignacio**	**13.50**	**93**		Pn		**Pn**	**14 16 15.2**	**-1.8**	
SIV	**San Ignacio**	**13.50**	**93**		Pn		**Pn**	**14 16 15.2**	**-1.8**	
	1.5nm,0.3s,baz=265,slow=13,SNR=12									
SIV					LR		LR	14 22 14.6		
	comp=Z,6μm,19.1s,slow=41									
CFAA	**Coronel Fontan**	**16.97**	**160**		P		**P**	**14 17 03.5**	**-1.0**	
CFAA	**Coronel Fontan**	**16.97**	**160**		P		**P**	**14 17 03.5**	**-1.0**	
	0.1nm,0.3s,baz=337,slow=11,SNR=13									
CPUP	**Villa Florida**	**19.61**	**125**		P		**Pn**	**14 17 34.8**	**-0.3**	
CPUP	**Villa Florida**	**19.61**	**125**		P		**Pn**	**14 17 34.8**	**-0.3**	
	0.6nm,0.3s,baz=288,slow=12,SNR=8.3									
CPUP					LR		LR	14 25 58.7		
	comp=Z,1μm,21.0s,baz=298,slow=40									
PLCA	**Paso Flores**	**25.20**	**172**		P		**P**	**14 18 31.1**	**+0.5**	
PLCA	**Paso Flores**	**25.20**	**172**		P		**P**	**14 18 31.1**	**+0.5**	
	5.0nm,0.8s,baz=345,slow=10,SNR=8.1									
BDFB	**Brasilia**	**26.07**	**93**		P		**P**	**14 18 37.5**	**-1.3**	
BDFB	**Brasilia**	**26.07**	**93**		P		**P**	**14 18 37.5**	**-1.3**	
	6.7nm,0.4s,baz=274,slow=11,SNR=10									
BDFB					LR		LR	14 30 27.7		
	comp=Z,2μm,18.9s,baz=291,slow=40									
SPB	**Sao Paulo**	**27.16**	**111**	*e*	P		**P**	**14 18 50.1**	**+1.6**	
	48nm,1.0s									
TEIG	**Tepich**	**38.03**	**340**	*e*	P		**P**	**14 20 23.4**	**0.0**	
	45nm,1.4s									
RCBR	**Riachuelo**	**39.68**	**80**	*e*	P		**P**	**14 20 36.5**	**-0.9**	
	38nm,1.3s									
RCBR	**Riachuelo**	**39.68**	**80**		LR		LR	14 39 03.8		
	comp=Z,3μm,19.5s,baz=72,slow=39									
LRAL	**Lakeview Retre**	**49.83**	**347**	*e*	P		**P**	**14 21 56.7**	**-1.2**	
	16nm,1.1s									
732A	**Laxson Ranch,**	**50.34**	**331**	⇑	P		**P**	**14 22 01.4**	**-0.5**	
	baz=51									
KMSC	**Kings Mountain**	**50.96**	**353**	⇑	P		**P**	**14 22 05.7**	**-0.8**	
	baz=51									
631A	**Perdido Creek**	**51.20**	**331**	⇓	P		**P**	**14 22 07.5**	**-0.9**	
	baz=51,SNR=8.1									
532A	**Rocksprings**	**51.51**	**332**	⇓	P		**P**	**14 22 09.4**	**-1.3**	
	baz=52									
SWET	**Sewanee**	**51.73**	**349**	*e*	P		**P**	**14 22 11.6**	**-0.6**	
	82nm,1.9s									
JCT	**Junction City**	**51.76**	**333**	⇑	P		**P**	**14 22 12.0**	**-0.6**	
	baz=52									
TKL	**Tuckaleechee C**	**51.79**	**351**	*e*	P		**P**	**14 22 12.2**	**-0.5**	
531A	**Rocksprings**	**51.83**	**332**	⇑	P		**P**	**14 22 12.7**	**-0.4**	
	baz=52,SNR=8.7									
WHTX	**Lake Whitney**	**52.09**	**336**	⇑	P		**P**	**14 22 14.3**	**-0.7**	
	baz=52									
432A	**Menard**	**52.09**	**333**	⇑	P		**P**	**14 22 14.1**	**-0.9**	
	baz=52									
530A	**J-C Ranch, Com**	**52.18**	**331**	⇓	P		**P**	**14 22 15.0**	**-0.7**	
	baz=52									
431A	**Sonora**	**52.29**	**332**	⇓	P		**P**	**14 22 15.9**	**-0.7**	
	baz=52,SNR=10									
628A	**Black Gap, Mar**	**52.37**	**329**	⇓	P		**P**	**14 22 16.1**	**-1.1**	
	baz=53,SNR=15									
332A	**Millersview**	**52.51**	**333**	⇑	P		**P**	**14 22 17.2**	**-0.9**	
	baz=53,SNR=8.6									
529A	**Stev Forest Ra**	**52.58**	**330**	⇑	P		**P**	**14 22 18.0**	**-0.7**	
	baz=53,SNR=16									
627A	**Terlingua Ranc**	**52.59**	**329**	⇓	P		**P**	**14 22 18.6**	**-0.2**	
	baz=53,SNR=8.1									
TXAR	**Lajitas Array**	**52.64**	**328**		P		**P**	**14 22 19.4**	**+0.2**	
TXAR	**Lajitas Array**	**52.64**	**328**		P		**P**	**14 22 19.4**	**+0.2**	
	2.2nm,0.6s,baz=150,slow=8.8,SNR=28									
430A	**Baggett Ranch,**	**52.67**	**332**	⇑	P		**P**	**14 22 18.8**	**-0.5**	
	baz=53,SNR=7.6									
331A	**San Angelo**	**52.74**	**333**	⇑	P		**P**	**14 22 19.2**	**-0.6**	
	baz=53									
429A	**Davenport Ranc**	**52.84**	**331**	⇓	P		**P**	**14 22 20.4**	**-0.2**	
	baz=53,SNR=8.4									
528A	**Cox Ranch, San**	**52.88**	**330**	⇑	P		**P**	**14 22 20.6**	**-0.4**	
	baz=53,SNR=6.1									
232A	**Coleman**	**52.90**	**334**	⇑	P		**P**	**14 22 20.7**	**-0.3**	
	baz=53,SNR=8.5									
626A	**Big Bend Ranch**	**53.05**	**328**	⇓

X29A	Tulia baz=56	55.98	333	⇓P	P	14 22 41.8	-1.6
Z26A	Caprock baz=56	56.02	331	⇓P	P	14 22 42.4	-1.3
MSTX	Muleshoe baz=56	56.04	332	⇑P	P	14 22 42.8	-1.1
Y27A	Causey baz=56	56.15	332	⇑P	P	14 22 43.3	-1.4
SSPA	Standing Stone 51nm,1.7s	56.16	357	P	P	14 22 41.8	-2.7
ACSO	Alum Creek Sta 57nm,1.4s	56.18	353	eP	P	14 22 42.8	-1.8
124A	Stringfield Ra baz=56,SNR=8.7	56.26	329	⇓P	P	14 22 44.1	-1.6
V31A	Spring Creek L baz=57	56.36	336	⇑P	P	14 22 45.2	-0.8
Z25A	Roswell baz=57	56.37	330	⇑P	P	14 22 44.9	-1.4
Y26A	Elida baz=57	56.48	331	⇑P	P	14 22 45.6	-1.5
Z24A	Sheeppen Canyo baz=57,SNR=9.4	56.73	330	⇑P	P	14 22 47.7	-1.2
Y25A	Mesa, Roswell baz=57	56.89	331	⇑P	P	14 22 48.0	-1.9
SFIN	Scholer Farm baz=57	56.95	349	⇑P	P	14 22 47.8	-2.2
X26A	CR and CF Fran baz=57	57.00	332	⇑P	P	14 22 49.3	-1.5
Z23A	Rita Site, Whi baz=57	57.10	329	⇑P	P	14 22 50.3	-1.1
220A	Playas Peak, P baz=57,SNR=6.4	57.21	326	⇑P	P	14 22 52.0	-0.3
319A	Douglas baz=57,SNR=5.4	57.22	325	⇑P	P	14 22 51.7	-0.6
121A	Cookes Peak, D baz=58	57.31	327	⇑P	P	14 22 52.2	-0.9
T31A	Randall Ranch, baz=58	57.45	337	⇑P	P	14 22 53.0	-0.7
Z22A	Elephant Butte baz=58,SNR=7.1	57.46	328	⇑P	P	14 22 52.9	-1.1
Y23A	Lovelace Mesa, baz=58	57.55	330	⇑P	P	14 22 53.3	-1.4
BINY	Binghamton 44nm,1.3s	57.67	359	eP	P	14 22 55.2	0.0
S31A	Mullinville baz=58	57.84	337	⇓P	P	14 22 55.0	-1.5
U28A	Mallet baz=58	57.85	334	⇑P	P	14 22 55.7	-1.0
W25A	X Bar L Ranch, baz=58	57.85	332	⇑P	P	14 22 55.3	-1.4
Z21A	St. Cloud Mine baz=58	57.86	328	⇑P	P	14 22 56.0	-0.9
V26A	Tequesquite Ra baz=58	58.03	333	⇓P	P	14 22 57.0	-1.0
T29A	Hugoton baz=58	58.13	335	⇓P	P	14 22 58.6	0.0
U27A	Thompson Grove baz=58	58.13	334	⇓P	P	14 22 58.7	0.0
X23A	Hourglass Bar baz=58	58.14	330	⇑P	P	14 22 59.1	+0.3
Z20A	Nine Sixteen R baz=58,SNR=8.3	58.19	327	⇓P	P	14 22 59.5	+0.3
V25A	Rancho No Teng baz=59,SNR=8.9	58.43	332	⇑P	P	14 23 00.0	-0.9
LAZ	Ladron 4.0nm,1.1s	58.46	329	eP	P	14 23 01.8	+0.7
U26A	Atchley Ranch, baz=59	58.51	333	⇑P	P	14 23 01.0	-0.4
ANMO	Albuquerque 47nm,2.2s	58.56	330	eP	P	14 23 01.3	-0.5
T27A	Campo baz=59	58.63	334	⇓P	P	14 23 01.8	-0.4
Y20A	Horse Springs, baz=59	58.69	328	⇑P	P	14 23 03.1	+0.3
TUC	Tucson 1.4nm,1.1s	58.76	325	P	P	14 23 02.9	-0.2
U25A	Circle Dot Ran baz=59	58.81	333	⇓P	P	14 23 03.5	0.0
X21A	Alamocita Cree baz=59	58.82	329	⇑P	P	14 23 03.8	+0.2
T26A	Comanche Natio baz=59	59.10	334	⇑P	P	14 23 05.0	-0.5
X20A	Quemado baz=60	59.25	328	⇑P	P	14 23 06.6	0.0
T25A	Trinidad baz=60	59.42	333	⇓P	P	14 23 07.2	-0.5
S26A	Kim baz=60,SNR=13	59.42	334	⇓P	P	14 23 07.3	-0.3
V22A	San Miguel Ran baz=60,SNR=7.2	59.56	330	⇓P	P	14 23 08.4	-0.3
214A	Organ Pipe Nat baz=60	59.65	323	⇑P	P	14 23 09.6	+0.4
R27A	Eads baz=60	59.71	335	⇓P	P	14 23 09.5	-0.1
W20A	Ramah baz=60	59.71	328	⇓P	P	14 23 09.9	+0.1
S25A	Robets Cordova baz=60	59.87	333	⇓P	P	14 23 10.8	0.0
U22A	Llaves baz=60	59.91	331	⇓P	P	14 23 11.8	+0.7
R26A	Arlington baz=60	59.99	334	⇓P	P	14 23 11.7	+0.2
Q28A	Sharon Springs baz=60	59.99	336	⇑P	P	14 23 12.2	+0.7
X18A	Snowflake baz=60	59.99	327	⇑P	P	14 23 12.2	+0.4
S24A	Houchin Ranch, baz=60	60.19	333	⇑P	P	14 23 13.2	0.0
V20A	Brimhall baz=60	60.23	329	⇓P	P	14 23 13.8	+0.5
FRNY	Flat Rock	60.32	1	eP	P	14 23 13.2	-0.3
U21A	Nageezi baz=61,SNR=6.5	60.33	330	⇓P	P	14 23 14.5	+0.4
W18A	Petrified Fore baz=61	60.34	328	⇑P	P	14 23 14.5	+0.4
SDCO	Great Sand Dun 10nm,0.9s	60.41	333	eP	P	14 23 14.6	0.0
Q26A	Hugo baz=61	60.55	335	⇑P	P	14 23 15.4	0.0
R24A	Sanders Place, baz=61	60.64	333	⇓P	P	14 23 16.1	0.0
X16A	Lo Mia Camp, P baz=61	60.70	326	⇓P	P	14 23 17.4	+0.9
T21A	Navajo Lake baz=61	60.73	331	⇓P	P	14 23 17.3	+0.6
Q25A	Bedland, Calha baz=61	60.84	334	⇓P	P	14 23 16.6	-0.8
R23A	Moffat baz=61,SNR=6.0	60.92	333	⇑P	P	14 23 18.3	+0.2
S22A	4UR Ranch, Cre baz=61	61.01	332	⇓P	P	14 23 18.8	+0.1
Y14A	Wickenburg baz=61	61.21	324	⇓P	P	14 23 20.8	+1.0
O27A	Beecher Island baz=62	61.22	336	⇓P	P	14 23 20.4	+0.6
Q24A	Divide baz=62	61.27	334	⇑P	P	14 23 21.0	+0.5
P25A	Willow Gulch B baz=62	61.31	335	⇑P	P	14 23 20.5	-0.1
MVCO	Mesa Verde 2.8nm,0.6s	61.36	330	eP	P	14 23 21.5	+0.5
MVCO	Mesa Verde baz=62	61.36	330	⇓P	P	14 23 21.3	+0.2
S21A	Coal Bank Pass baz=62	61.39	331	⇓P	P	14 23 21.8	+0.5
WUAZ	Wupatki 9.7nm,1.1s	61.50	327	eP	P	14 23 23.1	+1.2
WUAZ	Wupatki baz=62	61.50	327	⇓P	P	14 23 22.7	+0.8
R21A	Cimarron baz=62	61.84	331	⇓P	P	14 23 25.2	+0.9
P23A	Jefferson baz=62,SNR=6.7	61.90	333	⇓P	P	14 23 25.4	+0.6
Q22A	Crested Butte, baz=62	61.96	332	⇑P	P	14 23 25.7	+0.6
R20A	Redvale baz=62	62.09	331	⇑P	P	14 23 26.5	+0.6
ISCO	Idaho Springs 6.3nm,1.1s	62.16	334	eP	P	14 23 24.9	-1.6
ISCO	Idaho Springs baz=62	62.16	334	⇓P	P	14 23 26.6	+0.2
SMCO	Snowmass 10.0nm,1.3s	62.24	332	eP	P	14 23 27.8	+0.6
BC3	Big Chuckawall baz=63	62.41	322	⇑P	P	14 23 28.9	+0.9
MONP	Monument Peak baz=63	62.45	321	⇑P	P	14 23 29.1	+0.7
S18A	Hurst Farm, Bl baz=63,SNR=10	62.47	329	⇓P	P	14 23 29.3	+0.7
P22A	Eagle baz=63	62.49	333	⇑P	P	14 23 29.3	+0.7
IRM	Iron Mountain baz=63	62.59	323	⇑P	P	14 23 30.0	+0.9
O23A	Lake Granby, G baz=63	62.63	334	⇑P	P	14 23 29.6	0.0
U15A	North Rim baz=63	62.67	327	⇓P	P	14 23 30.6	+0.7
P21A	Newcastle baz=63	62.74	332	⇓P	P	14 23 30.7	+0.5
L27A	T5 Ranch, Ells baz=63	62.79	337	⇑P	P	14 23 29.5	-0.9
O22A	Kremmling baz=63	62.86	333	⇑P	P	14 23 31.2	+0.1
PFO	Pinyon Flat Ob 4.6nm,0.8s	62.97	322	eP	P	14 23 32.3	+0.5
PFO	Pinyon Flat Ob baz=63	62.97	322	⇑P	P	14 23 32.8	+1.0
BELC	Belle Mtn. Jos baz=63	62.97	322	⇑P	P	14 23 33.0	+1.2
N23A	Red Feather La baz=63	63.21	334	⇓P	P	14 23 33.5	+0.1
GMRC	Granite Mounta baz=64	63.33	323	⇑P	P	14 23 35.4	+1.2
N22A	Wattenberg Ran baz=64	63.35	334	⇓P	P	14 23 35.1	+0.8
P19A	Cripple Cowboy baz=64,SNR=7.5	63.52	331	⇓P	P	14 23 36.2	+0.8
N21A	Black Mountain baz=64	63.78	333	⇑P	P	14 23 37.4	+0.3
SRU	San Rafael baz=64,SNR=5.9	63.84	330	⇑P	P	14 23 37.9	+0.4
M22A	Cedar Creek Ra baz=64	63.91	334	⇑P	P	14 23 38.5	+0.5
TUQ	Turquoise Moun baz=64	63.95	324	⇑P	P	14 23 38.9	+0.7
CCUT	Cedar City 6.5nm,1.1s	64.08	327	eP	P	14 23 39.1	-0.1
P18A	Preston Nutter baz=64	64.11	330	⇑P	P	14 23 39.9	+0.5
O19A	Miners Draw (B baz=64	64.12	332	⇓P	P	14 23 39.8	+0.5
BFSC	Mount Baldy Ra baz=64	64.12	321	⇓P	P	14 23 40.4	+1.0
L23A	Garrett baz=64	64.13	335	⇓P	P	14 23 39.3	-0.1
N20A	Spence Gulch, baz=64,SNR=8.1	64.16	333	⇓P	P	14 23 40.3	+0.6
MSU	Marysvale	64.20	328	eP	P	14 23 40.4	+0.5
MVU	Marysvale 6.9nm,1.0s	64.21	328	P	P	14 23 40.1	+0.1
P17A	Butcher Ranch, baz=64	64.23	330	⇓P	P	14 23 40.5	+0.5
ARUT	Antelope Range 11nm,0.8s	64.30	327	P	P	14 23 41.0	+0.5
L22A	Ellis Ranch, M baz=65	64.36	335	⇑P	P	14 23 41.5	+0.6
M21A	Separation Pea baz=65	64.40	334	⇑P	P	14 23 41.8	+0.6
SHOC	Shoshone baz=65	64.48	324	⇑P	P	14 23 42.5	+1.0
L21A	Rawlins baz=65	64.70	334	⇑P	P	14 23 43.0	-0.1
K22A	Casper baz=65	64.91	335	⇓P	P	14 23 44.8	+0.4
LRMC	Laurel Mountai baz=65	65.00	322	⇑P	P	14 23 45.7	+0.6
EYMN	Ely 19nm,1.0s	65.09	348	eP	P	14 23 43.3	-1.9
L20A	Wamsutter baz=65	65.15	333	⇑P	P	14 23 46.8	+0.8
BSC	Santa Cruz Isl baz=65	65.16	320	⇓P	P	14 23 47.3	+1.2
I24A	Kuemmerle Ranc baz=65	65.19	337	⇑P	P	14 23 46.9	+0.8
RSSD	Black Hills 19nm,1.5s	65.19	337	eP	P	14 23 47.5	+1.3
K21A	Alcova baz=65,SNR=5.4	65.20	334	⇑P	P	14 23 47.0	+0.6
DAU	Daniels Canyon	65.21	330	eP	P	14 23 47.5	+1.0
MPMC	Manual Prospec baz=66	65.29	323	⇑P	P	14 23 48.1	+1.0
JLU	Jordanelle 11nm,1.2s	65.45	330	eP	P	14 23 47.3	-0.7
M18A	Lyman baz=66	65.45	332	⇑P	P	14 23 48.9	+0.9
J22A	Midwest baz=66	65.53	335	⇓P	P	14 23 48.7	+0.3
ISA	Isabella 2.9nm,0.9s	65.59	322	eP	P	14 23 50.1	+1.3
ISA	Isabella baz=66	65.59	322	⇓P	P	14 23 49.8	+1.0
L19A	Farson baz=66,SNR=5.8	65.67	333	⇑P	P	14 23 49.8	+0.4
K20A	Yellowstone Ra baz=66	65.68	334	⇑P	P	14 23 49.4	0.0
M17A	Scullys Gap (B baz=66	65.76	331	⇓P	P	14 23 50.0	0.0
DUG	Dugway 11nm,0.9s	65.80	329	eP	P	14 23 50.2	0.0
DUG	Dugway baz=66,SNR=15	65.80	329	⇑P	P	14 23 50.9	+0.7
L18A	Fontenelle, Gr baz=66	65.83	332	⇓P	P	14 23 50.5	+0.1
R11A	Troy Canyon, C baz=66,SNR=5.5	65.86	326	⇑P	P	14 23 51.3	+0.6
J21A	Lysite baz=66,SNR=5.9	65.87	335	⇑P	P	14 23 50.8	+0.2
PKM	Peak Mountain baz=66	65.88	321	⇓P	P	14 23 51.7	+0.8
CWC	Cottonwood Cre baz=66	65.89	323	⇓P	P	14 23 51.9	+1.0
H24A	Dirks Ranch, A baz=66	65.92	337	⇓P	P	14 23 51.2	+0.5
I22A	9 Mile Ranch, baz=66	65.93	336	⇓P	P	14 23 50.9	0.0
K19A	Absolon Red Bu baz=66	66.03	333	⇓P	P	14 23 52.0	+0.3
J20A	Shoshoni baz=66	66.14	334	⇓P	P	14 23 51.4	-0.9
I21A	Big Trails, Te baz=66,SNR=7.6	66.19	335	⇑P	P	14 23 52.7	+0.1
HWUT	Hardware Ranch 12nm,1.1s	66.29	331	eP	P	14 23 52.0	-1.3
PDAR	Pinedale Array	66.29	333	P	P	14 23 52.4	-1.1
PDAR	Pinedale Array 2.0nm,1.0s,baz=138,slow=6.9,SNR=12	66.29	333	P	P	14 23 52.4	-1.1
AGMN	Agassiz Nation 19nm,0.7s	66.40	345	eP	P	14 23 52.4	-1.3
H22A	Clearmont baz=67	66.47	336	⇑P	P	14 23 53.7	-0.6
J19A	Crowheart baz=67,SNR=6.7	66.48	334	⇓P	P	14 23 54.7	+0.2
G23A	Biddle baz=67	66.61	337	⇓P	P	14 23 55.0	-0.2
I20A	Worland baz=67	66.65	335	⇓P	P	14 23 55.2	-0.3
F24A	Ekalaka baz=67,SNR=7.8	66.82	338	⇑P	P	14 23 56.1	-0.4
G22A	Birney baz=67	66.97	337	⇓P	P	14 23 57.3	-0.2
HVU	Hansel Valley 9.7nm,1.1s	66.99	330	eP	P	14 23 57.9	0.0
MDND	Maddock baz=67	67.00	342	⇓P	P	14 23 57.8	+0.2
F23A	Volborg baz=67	67.06	337	⇑P	P	14 23 58.0	-0.1
I19A	Meeteetse baz=67	67.08	334	⇓P	P	14 23 58.3	-0.1
I18A	Diamond G Ranc baz=67,SNR=6.7	67.16	333	⇓P	P	14 23 59.0	0.0
G21A	Lodge Grass baz=68	67.33	336	⇓P	P	14 24 00.3	+0.5
E24A	Baker baz=68	67.38	339	⇓P	P	14 24 00.1	0.0
NVAR	Mina Array Bea	67.41	324	P	P	14 24 01.4	+0.9
NVAR	Mina Array Bea 0.9nm,0.7s,baz=143,slow=6.6,SNR=9.9	67.41	324	P	P	14 24 01.4	+0.9
F22A	Rosebud baz=68	67.43	337	⇓P	P	14 24 00.4	0.0
LOHW	Long Hollow 17nm,1.6s	67.43	333	eP	P	14 24 00.8	+0.2
TPAW	Teton Pass 21nm,1.8s	67.49	333	eP	P	14 24 00.3	-0.8
RRI2	Red Ridge 15nm,0.8s	67.54	332	eP	P	14 24 01.4	0.0
MOOW	Moose Ponds	67.60	333	eP	P	14 24 01.6	-0.1
E23A	Ismay baz=68	67.69	338	⇑P	P	14 24 02.0	+0.1
G20A	Bridger baz=68	67.72	335	⇑P	P	14 24 02.5	+0.1
IMW	Indian Meadow 9.2nm,1.0s	67.80	333	eP	P	14 24 03.0	0.0
D24A	Glendive baz=68,SNR=5.5	67.87	339	⇓P	P	14 24 03.4	+0.3
H18A	Shoshone NF, C baz=68,SNR=7.2	67.88	334	⇓P	P	14 24 03.6	+0.2
F20A	Billings baz=68	68.18	336	⇓P	P	14 24 05.1	-0.1
ULM	Lac du Bonnet	68.22	346	eP	P	14 24 04.5	-0.6
ULM	Lac du Bonnet 12nm,0.6s,baz=164,slow=6.5,SNR=7.2	68.22	346	P	P	14 24 04.2	-1.0
D23A	Lindsay baz=68,SNR=5.4	68.22	338	⇑P	P	14 24 05.8	+0.4
G18A	Lazy EL Ranch, baz=69,SNR=14	68.35	335	⇑P	P	14 24 06.8	+0.5
E21A	Keefer Ranch, baz=69	68.38	337	⇓P	P	14 24 06.9	+0.6
J14A	Carey baz=69,SNR=8.5	68.53	331	⇑P	P	14 24 08.1	+0.6
F19A	Roth Farm, Mol baz=69,SNR=10	68.54	335	⇓P	P	14 24 07.5	+0.1
D22A	Cohagen baz=69,SNR=16	68.56	338	⇑P	P	14 24 08.0	+0.6
E20A	Meyer Farm, Mu baz=69	68.75	336	⇓P	P	14 24 09.1	+0.5
C23A	Lambert baz=69	68.76	339	⇑P	P	14 24 08.5	-0.2
GCMT	Greycliff 4.6nm,0.9s	68.78	335	eP	P	14 24 08.7	-0.3
D21A	La Casta Ranch baz=69	68.78	337	⇓P	P	14 24 09.7	+0.8
F18A	Big Timber baz=69,SNR=16	68.89	335	⇑P	P	14 24 10.2	+0.6
J13A	Cove Ranch, Pi baz=69	68.89	330	⇓P	P	14 24 10.6	+0.9
C22A	Vida baz=69	68.95	338	⇑P	P	14 24 10.5	+0.6
I14A	Mackay baz=69,SNR=9.6	68.96	331	⇑P	P	14 24 11.3	+1.1
E19A	Rath Farm, Rou baz=69,SNR=9.1	68.97	336	⇓P	P	14 24 10.5	+0.5
DGMT	Dagmar baz=69	68.99	340	⇑P	P	14 24 11.6	+1.5
H15A	Lima baz=69	69.13	332	⇓P	P	14 24 11.4	+0.2
HLID	Hailey 17nm,1.7s	69.13	330	eP	P	14 24 11.8	+0.5
HLID	Hailey baz=69,SNR=5.7	69.13	330	⇓P	P	14 24 12.1	+0.9
G16A	Moss Hill, Enn baz=70	69.23	333	⇓P	P	14 24 12.4	+0.6
D20A	Manuel Ranch, baz=70,SNR=7.1	69.24	337	⇑P	P	14 24 11.9	+0.2
B23A	Brockton baz=70	69.26	339	⇑P	P	14 24 12.4	+0.7
I13A	Wildhorse Cree baz=70,SNR=13	69.26	331	⇑P	P	14 24 12.3	+0.2
F17A	Fitzpatrick Pl baz=70,SNR=6.4	69.28	334	⇓P	P	14 24 12.5	+0.4
MCMT	McKenzie Canyo 2.4nm,1.0s	69.38	332	eP	P	14 24 13.6	+0.8
H14A	Leadore baz=70	69.45	332	⇓P	P	14 24 13.7	+0.4
C21A	Desert Coulee baz=70,SNR=6.6	69.46	338	⇓P	P	14 24 13.4	+0.4
G15A	Dillon baz=70	69.48	333	⇑P	P	14 24 13.7	+0.3
BOZ	Bozeman (W) 4.9nm,0.9s	69.49	334	eP	P	14 24 13.3	-0.1
E18A	Harlowton baz=70	69.51	335	⇑P	P	14 24 13.9	+0.4
SNAA	Sanae 5.8nm,0.7s	69.58	161	P	P	14 24 13.6	0.0
D19A	Cripps Ranch, baz=70,SNR=6.7	69.59	336	⇓P	P	14 24 14.0	+0.1
F16A	Kennard Place, baz=70	69.60	334	⇑P	P	14 24 14.6	+0.6
I12A	Atlanta baz=70	69.65	330	⇑P	P	14 24 15.2	+0.7
DLMT	Dillon 11nm,1.1s	69.69	333	eP	P	14 24 14.8	+0.2
C20A	Veseth Ranch, baz=70	69.70	337	⇓P	P	14 24 15.0	+0.5
MFID	Camas Ranch baz=70,SNR=9.2	69.70	330	⇑P	P	14 24 15.4	+0.7
E17A	Martsdale baz=70	69.81	335	⇓P	P	14 24 15.7	+0.3
H13A	Challis baz=70,SNR=7.6	69.82	331	⇓P	P	14 24 16.2	+0.8
B21A	Ellsworth Farm baz=70	69.94	338	⇑P	P	14 24 16.6	+0.6
D18A	Linhart Farms, baz=70	69.98	336	⇑P	P	14 24 17.3	+1.0
G14A	Jackson baz=70	69.98	332	⇑P	P	14 24 17.0	+0.5
F15A	Butte baz=70	70.02	333	⇓P	P	14 24 16.8	+0.2
A22A	Carney Farms, baz=70,SNR=10	70.03	339	⇑P	P	14 24 17.2	+0.7
H12A	Diamond D Ranc baz=70,SNR=5.7	70.09	331	⇑P	P	14 24 17.6	+0.5
C19A	Slack Wire Ran baz=70,SNR=7.4	70.12	336	⇓P	P	14 24 17.4	+0.3
E16A	East Helena baz=70	70.21	334	⇑P	P	14 24 18.0	+0.2
G13A	Cobalt baz=70,SNR=7.9	70.21	332	⇑P	P	14 24 18.5	+0.6
D17A	Six Diamond Ra baz=70,SNR=9.1	70.30	335	⇓P	P	14 24 18.7	+0.4
B20A	Solberg Farm, baz=70	70.31	337	⇑P	P	14 24 18.4	+0.1
E15A	Deer Lodge baz=71	70.54	333	⇑P	P	14 24 19.8	0.0
D16A	Dana Ranch, Ca baz=71,SNR=6.7	70.55	334	⇓P	P	14 24 20.3	+0.5
EGMT	Eagleton 18nm,1.3s	70.63	336	eP	P	14 24 19.5	-0.7
EGMT	Eagleton baz=71,SNR=5.6	70.63	336	⇑P	P	14 24 20.5	+0.3
SCHQ	Schefferville	70.66	5	eP	P	14 24 20.0	-0.1
SCHQ	Schefferville 7.4nm,0.8s,baz=143,slow=4.0,SNR=6.8	70.66	5	P	P	14 24 19.6	-0.6
B19A	Brinkman Farms baz=71	70.67	337	⇑P	P	14 24 20.7	+0.3
C17A	Wharram Farm, baz=71	70.71	335	⇓P	P	14 24 21.0	+0.3
F13A	Darby baz=71,SNR=11	70.79	332	⇑P	P	14 24 21.9	+0.5
E14A	Clinton baz=71,SNR=6.5	70.90	333	⇑P	P	14 24 22.6	+0.6
MOD	Modoc 18nm,1.5s	70.92	326	eP	P	14 24 23.3	+1.1
B18A	Beardsley Farm baz=71,SNR=7.0	70.94	336	⇑P	P	14 24 22.5	+0.4
D15A	Lincoln baz=71	70.97	334	⇓P	P	14 24 22.5	+0.1
A19A	Klindworth Far baz=71,SNR=6.6	70.99	337	⇓P	P	14 24 22.5	+0.1
CHMT	Chamberlain Mo 3.1nm,1.2s	71.18	333	eP	P	14 24 24.0	+0.2
F12A	Elk City baz=71,SNR=5.8	71.19	332	⇓P	P	14 24 24.0	+0.3
E13A	Victor baz=71,SNR=9.6	71.23	333	⇓P	P	14 24 24.7	+0.8
C16A	Fuhringer Ranc baz=72	71.25	335	⇓P	P	14 24 24.1	+0.1
B17A	L&G Farms, Che baz=72	71.26	336	⇑P	P	14 24 24.1	+0.1
A18A	Metzger Ranch, baz=72,SNR=8.3	71.40	337	⇑P	P	14 24 25.1	+0.3
MSO	Missoula 9.0nm,1.2s	71.42	333	eP	P	14 24 26.4	+1.3
MSO	Missoula baz=72	71.42	333	⇓P	P	14 24 25.7	+0.7
D14A	Greenough baz=72	71.42	333	⇑P	P	14 24 25.6	+0.5
BMO	Blue Mountains 10nm,1.5s	71.48	330	eP	P	14 24 24.9	-0.6
SLMT	Seeley Lake	71.54	334	eP	P	14 24 26.4	+0.5
C15A	Salmond Ranch, baz=72	71.58	334	⇓P	P	14 24 26.8	+0.7
A17A	Triple J Farms baz=72,SNR=14	71.75	336	⇑P	P	14 24 27.3	+0.3

D13A	**Huson**	**71.84**	**333**	⇑P		**P**		**14 24 28.3**	**+0.7**
	baz=72,SNR=8.7									
SWMT	**Swartz Lake**	**71.97**	**333**	*e*P		**P**		**14 24 28.8**	**+0.4**
B15A	**Bradely Ranch,**	**71.99**	**335**	⇓P		**P**		**14 24 28.6**	**+0.2**
	baz=72,SNR=6.3									
A16A	**West Butte Ran**	**72.10**	**336**	⇓P		**P**		**14 24 28.9**	**-0.3**
	baz=72									
JTMT	**Jette**	**72.27**	**333**	P		**P**		**14 24 30.4**	**+0.2**
B14A	**Marquette Ranc**	**72.32**	**334**	⇑P		**P**		**14 24 31.1**	**+0.6**
	baz=72,SNR=11									
C13A	**Hot Springs**	**72.34**	**333**	⇑P		**P**		**14 24 31.3**	**+0.7**
	baz=73,SNR=14									
BSMT	**Bassoo Peak**	**72.57**	**333**	*e*P		**P**		**14 24 32.3**	**+0.3**
A15A	**Johnson Ranch,**	**72.58**	**335**	⇓P		**P**		**14 24 32.4**	**+0.4**
	baz=73									
C12B	**Naegeli Ranch,**	**72.76**	**333**	⇑P		**P**		**14 24 34.1**	**+1.0**
	baz=73									
B13A	**Whitefish**	**72.83**	**334**	⇓P		**P**		**14 24 34.2**	**+0.7**
	baz=73									
A14A	**Double T Ranch**	**72.86**	**335**	⇑P		**P**		**14 24 34.1**	**+0.4**
	baz=73,SNR=6.8									
DBIC	**Dimbokro**	**73.01**	**78**	*e*P		**P**		**14 24 34.6**	**-0.5**
	9.5nm,0.8s									
DBIC	**Dimbokro**	**73.01**	**78**	P		**P**		**14 24 34.4**	**-0.8**
	4.0nm,0.5s,baz=232,slow=6.0,SNR=11									
WALA	**Waterton Lakes**	**73.13**	**334**	*e*P		**P**		**14 24 35.3**	**0.0**
	0.2nm,1.0s									
C11A	**Tepee Creek (N**	**73.21**	**332**	⇑P		**P**		**14 24 36.7**	**+1.0**
	baz=73									
A13A	**Flathead Natio**	**73.24**	**334**	⇓P		**P**		**14 24 36.5**	**+0.6**
	baz=74									
B12A	**Libby**	**73.39**	**333**	⇑P		**P**		**14 24 37.8**	**+1.0**
	baz=74									
A12A	**Yaak River Ran**	**73.77**	**333**	⇑P		**P**		**14 24 40.0**	**+1.0**
	baz=74									
NEW	**Newport**	**73.91**	**332**	P		**P**		**14 24 38.2**	**-1.6**
	6.1nm,1.0s									
NEW	**Newport**	**73.91**	**332**	⇓P		**P**		**14 24 41.0**	**+1.2**
	baz=74									
TOA0	**Torodi Ar. Sit**	**81.18**	**74**	*e*P		**P**		**14 25 20.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**81.18**	**74**	P		**P**		**14 25 20.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**81.18**	**74**	P		**P**		**14 25 20.9**	**-0.2**
	33nm,0.9s,baz=264,slow=5.5,SNR=112									
VNDA	**Vanda**	**81.42**	**191**	P		**P**		**14 25 22.8**	**+1.5**
VNDA	**Vanda**	**81.42**	**191**	P		**P**		**14 25 22.8**	**+1.5**
	0.8nm,0.7s,baz=107,slow=3.5,SNR=4.3									
YKA	**Yellowknife Ar**	**83.92**	**343**	P		**P**		**14 25 34.0**	**-0.3**
YKA	**Yellowknife Ar**	**83.92**	**343**	P		**P**		**14 25 33.9**	**-0.3**
	3.1nm,0.9s,baz=137,slow=5.1,SNR=34									
ESDC	**Sonseca Array**	**86.06**	**47**	P		**P**		**14 25 45.9**	**+0.3**
ESDC	**Sonseca Array**	**86.06**	**47**	P		**P**		**14 25 45.9**	**+0.3**
	0.3nm,0.3s,baz=270,slow=6.2,SNR=4.1									
DLBC	**Dease Lake**	**86.48**	**334**	*e*P		**P**		**14 25 47.4**	**+0.1**
SUMG	**Summit**	**91.41**	**10**	*e*P		**P**		**14 26 11.2**	**+0.5**
	29nm,1.5s									
PAX	**Paxson**	**95.30**	**334**	*e*P		**P**		**14 26 28.8**	**+0.3**
	0.4nm,0.4s									
ILAR	**Eielson Array**	**96.60**	**336**	P		**P**		**14 26 33.4**	**-0.8**
ILAR				PP		**PP**		**14 30 26.6**	**-2.4**
ILAR	**Eielson Array**	**96.60**	**336**	P		**P**		**14 26 33.4**	**-0.8**
	0.6nm,1.1s,baz=128,slow=2.5,SNR=2.9									
ILAR				PP		**PP**		**14 30 26.6**	**-2.4**
	1.2nm,1.2s,baz=105,slow=5.9,SNR=4.4									
STKA	**Stephens Creek**	**121.00**	**216**	PKP		**PKPdf**		**14 31 57.4**	**-0.5**
STKA	**Stephens Creek**	**121.00**	**216**	PKP		**PKPdf**		**14 31 57.4**	**-0.5**
	1.1nm,0.7s,baz=186,slow=9.2,SNR=4.3									
ABKAR	**Akbulak array**	**130.57**	**38**	*e*P		**PKPdf**		**14 32 16.8**	**+1.3**
ASAR	**Alice Springs**	**131.64**	**216**	PKP		**PKPdf**		**14 32 18.1**	**-0.3**
ASAR	**Alice Springs**	**131.64**	**216**	PKP		**PKPdf**		**14 32 18.1**	**-0.3**
	1.0nm,0.6s,baz=126,slow=1.7,SNR=23									
WRA	**Warramunga Arr**	**134.22**	**220**	PKP		**PKPdf**		**14 32 22.6**	**-0.7**
WRA	**Warramunga Arr**	**134.22**	**220**	PKP		**PKPdf**		**14 32 22.6**	**-0.7**
	1.3nm,0.6s,baz=138,slow=1.8,SNR=29									
ZAA0	**Zalesovo Array**	**138.79**	**18**	*e*PKPdf		**PKPdf**		**14 32 31.4**	**+0.7**
ZALV	**Zalesovo Beam**	**138.79**	**18**	PKP		**PKPdf**		**14 32 31.5**	**+0.8**
ZALV	**Zalesovo Beam**	**138.79**	**18**	PKP		**PKPdf**		**14 32 31.5**	**+0.8**
	5.0nm,0.7s,baz=304,slow=2.1,SNR=24									
KURK	**Kurchatov**	**139.22**	**26**	*e*PKPdf		**PKPdf**		**14 32 32.7**	**+1.1**
FITZ	**Fitzroy Crossi**	**140.64**	**212**	PKP		**PKPdf**		**14 32 35.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**140.64**	**212**	PKP		**PKPdf**		**14 32 35.0**	**-0.2**
	1.7nm,0.8s,baz=164,slow=5.6,SNR=5.8									
MK31	**Makanchi Array**	**143.79**	**27**	*e*PKPpre		PKPbc		14 32 38.8	+1.2
MKAR	**Makanchi Array**	**143.79**	**27**	PKP		PKPbc		14 32 37.7	+0.1
MKAR	**Makanchi Array**	**143.79**	**27**	PKP		PKPbc		14 32 37.7	+0.1
	1.2nm,0.6s,baz=340,slow=3.6,SNR=12									
MJAR	**Matsushiro Arr**	**143.91**	**311**	PKPpre		PKPab		14 32 36.8	-0.9
MJAR	**Matsushiro Arr**	**143.91**	**311**	PKhKP		PKPab		14 32 36.8	-0.9
	1.9nm,0.8s,baz=114,slow=1.6,SNR=8.1									
KSH	**Kashi**	**145.38**	**41**	PKPbc		**PKPab**		**14 32 43.9**	**+0.7**
KSH				*e*PKPab		**PKiKP**		**14 32 45.8**	**-1.3**
KSH				*e*PP		**PP**		**14 36 07.1**	**+4.5**
KSH				*e*PKS		**PKSdf**		**14 36 18.4**	**-0.3**
KSH				*e*SKS		**SKSdf**		**14 39 48.3**	**-2.6**
KSH				*e*SKKS		**SKKSac**		**14 42 47.6**	**-6.2**
KSH				AMB		AMB				
	comp=Z,590nm,5.6s									
KSH				LR		LR				
	comp=N,200nm,9.8s									
KSH				LR		LR				
	comp=E,130nm,3.4s									
CN2	**Changchun**	**147.03**	**332**	*e*PKPbc		**PKPdf**		**14 32 46.3**	**+0.7**
CN2				PP		**PP**		**14 36 15.8**	**+4.1**
CN2				SS		SS		14 55 13.6	+3.2
CN2				AMB		AMB				
	comp=Z,200nm,5.0s									
CN2				LR		LR				
	comp=N,1μm,20.0s									
CN2				LR		LR				
	comp=E,700nm,20.0s									
CN2				LR		LR				
	comp=Z,1μm,18.0s									
ULN	**Ulaanbaatar**	**147.94**	**357**	*e*PKPbc		**PKPbc**		**14 32 50.9**	**+0.7**
SONM	**Songino Array**	**147.99**	**358**	PKPbc		**PKPdf**		**14 32 48.2**	**+1.0**
SONM	**Songino Array**	**147.99**	**358**	PKPbc		**PKPdf**		**14 32 48.2**	**+1.0**
	comp=Z,6.0nm,0.6s,baz=336,slow=1.8,SNR=33									
WMQ	**Urumqi**	**148.43**	**24**	PKPbc		**PKPbc**		**14 32 51.5**	**0.0**
WMQ				PP		PP		14 36 27.8	+7.9
WMQ				SKS		**SKSdf**		**14 39 54.5**	**-0.4**
WMQ				SKKS		**SKKSac**		**14 43 11.9**	**+1.4**
WMQ				SS		**SS**		**14 55 31.0**	**+4.9**
WMQ				LR		LR				
	comp=N,680nm,21.0s									
WMQ				LR		LR				
	comp=E,390nm,19.0s									
WMQ				LR		LR				
	comp=Z,460nm,19.0s									
KSRS	**Korea Array**	**150.31**	**321**	PKP		**PKPdf**		**14 32 52.7**	**+1.6**
	comp=Z,5.9nm,1.0s,baz=236,slow=0.5,SNR=5.2									
KSRS				PKPbc		**PKiKP**		**14 32 57.0**	**-0.1**
	comp=Z,10nm,1.1s,baz=12,slow=1.8,SNR=15									
KSAR	**Wonju Array Be**	**150.34**	**321**	PKP		**PKPdf**		**14 32 52.7**	**+1.5**
KSAR				PKPbc		**PKiKP**		**14 32 57.0**	**-0.2**
GTA	**Gaotai**	**156.02**	**10**	PKP		**PKPdf**		**14 33 01.1**	**+1.6**
GTA				PKPab		**PKPab**		**14 33 30.4**	**+3.8**
GTA				PKS		**PKSdf**		**14 36 34.0**	**+0.4**
GTA				PP		PP		14 37 09.6	+6.8
GTA				SKS		**SKSdf**		**14 40 06.1**	**+1.7**
GTA				SKKS		**SKKSac**		**14 43 56.5**	**+4.5**
GTA				AMB		AMB				
	comp=Z,230nm,7.1s									
GTA				LR		LR				
	comp=N,420nm,19.0s									
GTA				LR		LR				
	comp=E,610nm,18.5s									
GTA				LR		LR				
	comp=Z,630nm,20.4s									
DAV	**Davao City (W)**	**157.99**	**249**	PKPab		**PKPab**		**14 33 33.8**	**-2.1**
DAV	**Davao City (W)**	**157.99**	**249**	PKPab		**PKPab**		**14 33 33.7**	**-2.1**
	comp=Z,325nm,0.4s,baz=200,slow=3.5,SNR=4.5									
NJ2	**Nanjing**	**159.40**	**324**	*e*PKP		**PKPdf**		**14 33 03.5**	**-0.2**
CD2	**Chengdu**	**164.88**	**4**	PKP		**PKPdf**		**14 33 08.6**	**-0.8**
CD2				PKPab		**PKPab**		**14 34 06.1**	**+0.8**
CD2				PKS		**PKSdf**		**14 36 40.3**	**-2.1**
CD2				PP		**PP**		**14 37 53.5**	**+3.1**
CD2				SKS		**SKSdf**		**14 40 10.8**	**-1.5**
CD2				SKKS		**SKKSac**		**14 44 38.8**	**+0.9**
CD2				SS		**SS**		**14 58 24.3**	**+2.3**
CD2				AMB		AMB				
	comp=Z,150nm,6.4s									
CD2				LR		LR				
	comp=N,450nm,18.0s									
CD2				LR		LR				
	comp=Z,560nm,18.6s									
GYA	**Guiyang**	**169.23**	**352**	PKP		**PKPdf**		**14 33 11.0**	**-1.8**
GYA				PKPab		**PKPab**		**14 34 25.9**	**+1.2**
GYA				PKS		**PKSdf**		**14 36 43.8**	**-1.8**
GYA				PP		**PP**		**14 38 15.4**	**+2.6**
GYA				SKKS				14 45 01.6	
GYA				SS		**SS**		**14 59 09.5**	**+3.4**
GYA				AMB		AMB				
	comp=Z,120nm,8.6s									
GYA				LR		LR				
	comp=N,140nm,23.8s									
GYA				LR		LR				
	comp=E,120nm,21.2s									
GYA				LR		LR				
	comp=Z,130nm,22.9s									

IDC 18 14:26:06.4±2.5, 15.71S×75.08W, h0km, mb3.8/3, mb1 4.0/5, mb1mx3.8/20, mbtmp3.8/5, ML3.3/2, Error ellipse: s-maj=89.3km s-min=25.3km az=36.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.08**	**335**	Pn	Pn	14 27 10.7	+0.6
	2.9nm,0.3s,baz=234,slow=19,SNR=4.8						
NNA				Sn	Sn	14 27 58.5	-0.1
	21nm,0.3s,baz=236,slow=18,SNR=4.8						
LPAZ	**La Paz**	**6.70**	**96**	Pn	Pn	14 27 47.8	+0.8
	0.2nm,0.3s,baz=263,slow=15,SNR=4.1						
ATAH	**Atahualpa**	**9.12**	**339**	Pn	Pn	14 28 26.4	+6.6
	0.2nm,0.3s,baz=100,slow=19,SNR=1.9						
ATAH				Sn		14 30 13.6	+10
	0.8nm,0.3s,baz=6.0,slow=17,SNR=2.2						
TXAR	**Lajitas Array**	**52.60**	**328**	P	P	14 35 22.6	+0.2
	0.2nm,0.4s,baz=148,slow=8.6,SNR=3.3						
TORD	**Torodi Ar. Bea**	**81.15**	**74**	P	P	14 38 24.1	-0.4
	4.6nm,1.0s,baz=258,slow=4.9,SNR=14						
YKA	**Yellowknife Ar**	**83.88**	**343**	P	P	14 38 37.1	-0.5
	0.4nm,0.8s,baz=136,slow=5.0,SNR=5.7						
ZALV	**Zalesovo Beam**	**138.73**	**18**	PKP	PKPdf	14 45 34.4	0.0
	0.9nm,0.7s,baz=298,slow=3.2,SNR=5.5						
SONM	**Songino Array**	**147.94**	**358**	PKPbc	PKPbc	14 45 53.4	-0.5
	0.5nm,0.7s,baz=319,slow=1.3,SNR=4.5						

JMA 18 14:26:47.7±0.5, 32.25N×141.93E, h29km, M3.6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**1.98**	**295**	P	Pn	14 27 20.0	+0.8
JHJ2	**Mitsune**	**1.98**	**296**	P	Pn	14 27 20.4	+1.2
BSO3	**Boso 3**	**2.81**	**335**	P	Pn	14 27 32.1	+1.8
BSO3				*e*S	Sn	14 28 06.4	+3.5
BSO4	**Boso 4**	**3.04**	**335**	*e*S	Sn	14 28 11.0	+2.0
JYN	**Shimob**	**4.29**	**320**	P	Pn	14 27 55.7	+4.5
JYN				*e*S	Sn	14 28 43.8	+3.5
JAG	**Ashikaga**	**4.64**	**334**	P	Pn	14 27 58.9	+3.0
CBIJ	**Chichi jima**	**5.14**	**177**	P	Pn	14 28 04.2	+1.4
JMK	**Ichinoseki**	**6.71**	**355**	P	Pn	14 28 27.2	+2.9
JMK				*e*S	Sn	14 29 36.2	-3.5

IDC 18 15:03:31.5±5.8, 13.38S×74.24W, h0km, mb4.0/1, mb1 3.9/2, mb1mx3.4/21, mbtmp3.8/2, ML3.6/1, Error ellipse: s-maj=242.0km s-min=46.6km az=35.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**6.58**	**117**	Pn	Pn	15 05 10.1	-0.2
	0.7nm,0.3s,baz=271,slow=8.4,SNR=14						
TORD	**Torodi Ar. Bea**	**79.72**	**74**	P		15 15 41.9	0.0
	1.2nm,0.3s,baz=257,slow=5.5,SNR=5.3						
SONM	**Songino Array**	**145.65**	**359**	PKPbc	PKPdf	15 23 11.5	-0.7
	0.3nm,0.5s,baz=17,slow=1.5,SNR=3.1						

*IDC **18** 15:24:09.5±2.0, 20.45S×69.53W, h0km, mb4.0/2, mb1 4.3/4, mb1mx3.8/19, mbtmp4.1/4, ML4.1/2, Error ellipse: s-maj=57.0km s-min=42.9km az=175.0*
*ISCJB **18** 15:24:29.2±0.7, 19.18S±0.05×69.2W±0.1, h130km±7km, mb3.6/2, Error ellipse: s-maj=20.2km s-min=8.3km az=172.0*
*GUC **18** 15:24:29.4±0.4, 19.21S×69.18W, h122km±3km, ML3.7*
ISC 18 15:24:29.8±1.0, 19.18S±0.05×69.2W±0.1, h123km±9km, n14, σ0.51/19, 5C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNMC	**Minimini**	**0.37**	**277**	⇑*i*P	**Pn**	**15 24 47.6**	**-0.2**
MNMC				*i* S	**Sn**	**15 25 01.6**	**+0.2**
MNMC				AML	AML	15 25 04.8	
	comp=N,3μm,0.3s						
PB11	**Plate Boundary**	**0.72**	**216**	⇑*i*P	**Pn**	**15 24 49.8**	**-0.1**
PB11				*i* S	**Sn**	**15 25 05.1**	**+0.1**
PB11				AML	AML	15 25 06.0	
	comp=E,7μm,0.4s						
PSGC	**Pisagua**	**0.96**	**244**	⇑*i*P	**Pn**	**15 24 51.8**	**-0.1**
PSGC				*i* S	**Sn**	**15 25 08.8**	**+0.2**
PSGC				AML	AML	15 25 13.2	
	comp=E,477nm,0.5s						
ARCH	**Arica**	**1.24**	**303**	*i* P	**Pn**	**15 24 54.9**	**+0.4**
ARCH				*i* S	**Sn**	**15 25 14.1**	**+0.8**
ARCH				AML	AML	15 25 15.0	
	comp=N,2μm,0.5s						
HMBC	**Humberstone**	**1.27**	**210**	⇑*i*P	**Pn**	**15 24 54.7**	**-0.4**
HMBC				*i* S	**Sn**	**15 25 14.4**	**+0.2**
HMBC				AML	AML	15 25 19.4	
	comp=N,1μm,0.4s						
PB01	**Plate Boundary**	**1.88**	**188**	⇑*i*P	**Pn**	**15 25 01.9**	**-0.1**
PB01				*i* S	**Sn**	**15 25 26.6**	**0.0**
PB01				AML	AML	15 25 27.6	
	comp=E,884nm,0.5s						
PB09	**Plate Boundary**	**2.61**	**181**	*e*P	**Pn**	**15 25 11.8**	**+0.5**
PB09				AML	AML	15 25 55.5	
	comp=E,481nm,0.2s						
LPAZ	**La Paz**	**3.05**	**20**	Pn	**Pn**	**15 25 17.9**	**+0.4**
	comp=E,4.2nm,0.3s,baz=191,slow=6.8,SNR=137						
LVC	**Limon Verde**	**3.43**	**176**	*e*P	**Pn**	**15 25 23.1**	**+1.0**
PB06	**Plate Boundary**	**3.53**	**186**	*e*P	**Pn**	**15 25 24.0**	**+0.7**
PB06				AML	AML	15 26 12.5	
	comp=N,67nm,0.5s						
SIV	**San Ignacio**	**8.38**	**69**	Pn	Pn	15 26 23.3	-5.1
	comp=N,1.7nm,0.3s,baz=273,slow=9.8,SNR=32						
TORD	**Torodi Ar. Bea**	**76.85**	**71**	P	**P**	**15 36 07.8**	**-1.0**
	comp=N,0.6nm,0.5s,baz=249,slow=5.5,SNR=14						
YKA	**Yellowknife Ar**	**88.92**	**341**	P	**P**	**15 37 09.8**	**0.0**
	comp=N,0.5nm,0.5s,baz=133,slow=4.7,SNR=16						
SONM	**Songino Array**	**151.19**	**6**	PKPbc	**PKPbc**	**15 44 08.9**	**+0.2**
	comp=N,0.5nm,0.5s,baz=316,slow=1.5,SNR=3.8						

CRAAG 18 15:24:40.7, 36.52N×1.46E, MI3.6, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EBNR	**Beni Rached**	**0.24**	**166**	P	Pg	15 24 47.1	+1.7
ECHA	**Ech Chlef**	**0.38**	**191**	P	Pb	15 24 51.2	+0.9
EANR	**'Ain N'Sour**	**0.64**	**207**	P	Pg	15 24 53.7	+0.6

*IDC **18** 15:43:59.5±1.3, 17.58S×178.65W, h504km±15km, mb3.2/10, mb1 3.5/12, mb1mx3.3/22, mbtmp3.3/12, Error ellipse: s-maj=19.0km s-min=11.6km az=141.0*
*ISCJB **18** 15:44:01.5±0.4, 17.6S±0.1×178.65W±0.07, h547km, mb3.7/10, Error ellipse: s-maj=15.6km s-min=7.5km az=156.5*
*AUST **18** 15:44:02.9±0.0, 17.50S×178.52W, h555km, Error ellipse: s-maj=2.4km s-min=1.4km az=344.0*
ISC 18 15:44:02.7±0.5, 17.6S±0.1×178.62W±0.08, h547km, n40, σ1.938/44, mb3.6/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.54**	**62**	P	P	15 45 50.6	-5.5
	7.0nm,0.3s,baz=287,slow=3.3,SNR=12						
AFI				S	**S**	**15 47 24.4**	**-4.4**
	1.0nm,0.3s,baz=90,slow=20,SNR=2.1						
NIUE	**Niue**	**8.38**	**101**	P	**P**	**15 46 04.3**	**+0.1**
	baz=8.3,SNR=4.7						
DZM	**Mont Dzumac**	**14.74**	**250**	P	**P**	**15 47 06.9**	**-2.8**
	0.3nm,0.3s,baz=221,slow=20,SNR=2.6						
URZ	**Urewera**	**20.91**	**189**	P	**P**	**15 48 05.1**	**-1.9**
	10.0nm,1.1s,baz=199,slow=15,SNR=4.6						
EIDS	**Eidsvold**	**29.18**	**249**	P	**P**	**15 49 20.0**	**-0.4**
	baz=29,SNR=6.2						
ARMA	**Armidale**	**29.92**	**239**	P	**P**	**15 49 27.5**	**+0.7**
	baz=30,SNR=16						
MGCD	**Mangrove Creek**	**31.30**	**234**	P	**P**	**15 49 39.8**	**+1.2**
	baz=32,SNR=6.0						
RMQ	**Roma**	**31.43**	**248**	P	**P**	**15 49 40.1**	**+0.4**
	baz=32,SNR=15						
CNB	**Canberra Magne**	**33.45**	**232**	P	**P**	**15 49 57.5**	**+0.7**
	baz=34,SNR=22						
CMSA	**Cobar Meteorol**	**35.12**	**240**	P	**P**	**15 50 10.9**	**+0.1**
	baz=35,SNR=29						
MTSU	**Mount Surprise**	**35.24**	**263**	P	**P**	**15 50 11.7**	**-0.4**
	baz=35,SNR=4.9						
QLP	**Quilpie**	**35.45**	**249**	P	**P**	**15 50 13.3**	**-0.3**
	baz=36,SNR=43						
COEN	**Coen**	**36.91**	**270**	P	**P**	**15 50 26.0**	**+0.3**
	baz=37,SNR=12						
TOO	**Toolangi**	**37.20**	**230**	P	**P**	**15 50 28.7**	**+0.8**
	baz=37,SNR=8.6						
STKA	**Stephens Creek**	**38.60**	**241**	P	**P**	**15 50 39.9**	**+0.6**
	6.7nm,0.5s,baz=89,slow=9.4,SNR=48						
STKA	**Stephens Creek**	**38.60**	**241**	P	**P**	**15 50 39.9**	**+0.6**
	baz=39,SNR=27						
BBOO	**Buckleboo**	**43.38**	**241**	P	**P**	**15 51 17.3**	**+0.1**
	baz=44,SNR=34						
WRA	**Warramunga Arr**	**44.49**	**259**	P	**P**	**15 51 24.9**	**-1.2**
	3.4nm,0.6s,baz=94,slow=7.2,SNR=52						
WRA				PcP	**PcP**	**15 52 57.9**	**+0.3**
	0.9nm,0.7s,baz=91,slow=3.8,SNR=4.6						
WRA				ScP	**ScP**	**15 56 00.8**	**+2.9**
	0.6nm,0.7s,baz=92,slow=4.0,SNR=5.3						
ASAR	**Alice Springs**	**44.68**	**254**	P	**P**	**15 51 27.1**	**-0.4**
	40nm,0.6s,baz=89,slow=7.9,SNR=1122						
ASAR				PcP	**PcP**	**15 52 58.6**	**+0.3**
	1.5nm,0.6s,baz=104,slow=4.1,SNR=5.0						
ASAR				ScP	**ScP**	**15 56 01.8**	**+3.2**
	0.4nm,0.7s,baz=95,slow=5.0,SNR=4.8						
KDU	**Kakadu**	**47.37**	**269**	P	**P**	**15 51 47.6**	**-0.3**
	baz=47,SNR=44						
MTN	**Manton Dam**	**48.61**	**268**	P	**P**	**15 51 56.4**	**-0.8**
	baz=49,SNR=14						
FORT	**Forrest**	**49.95**	**244**	P	**P**	**15 52 06.3**	**-0.6**
	baz=50,SNR=21						
KNRA	**Kununurra**	**50.32**	**264**	P	**P**	**15 52 08.8**	**-1.0**
	baz=50,SNR=22						
FAKI	**Fak Fak**	**50.33**	**281**	P	**P**	**15 52 09.7**	**-0.2**
	baz=50,SNR=5.4						
FITZ	**Fitzroy Crossi**	**52.88**	**260**	P	**P**	**15 52 28.3**	**+0.1**
	baz=53,SNR=19						
AAI	**Ambon**	**53.88**	**278**	P	**P**	**15 52 37.2**	**+1.8**
	baz=54,SNR=3.1						
MEEK	**Meekatharra**	**58.35**	**249**	P	**P**	**15 53 05.5**	**-0.7**
	baz=58,SNR=4.6						
KLBR	**Kellerberrin**	**58.78**	**243**	P	**P**	**15 53 08.2**	**-0.7**
	baz=59,SNR=7.1						
MORW	**Morawa**	**60.42**	**246**	P	**P**	**15 53 19.2**	**-0.6**
	baz=60,SNR=7.1						
MJAR	**Matsushiro Arr**	**67.56**	**323**	P	**P**	**15 54 04.7**	**-0.3**
	1.9nm,0.6s,baz=156,slow=6.0,SNR=8.9						
UGM	**Wanagama**	**69.46**	**268**	P	**P**	**15 54 17.1**	**0.0**
	baz=70,SNR=6.3						
CISI	**Cisompet, Garu**	**72.14**	**268**	P	**P**	**15 54 32.1**	**-0.8**
	baz=72,SNR=3.7						
QSPA	**South Pole Qui**	**72.44**	**180**	P	**P**	**15 54 34.7**	**+1.1**
	0.8nm,0.5s,baz=2.7,slow=4.0,SNR=12						
NVAR	**Mina Array Bea**	**79.35**	**44**	P	**P**	**15 55 13.5**	**+1.1**
	0.5nm,0.7s,baz=247,slow=9.5,SNR=4.3						
ILAR	**Eielson Array**	**85.65**	**13**	P	**P**	**15 55 41.9**	**-1.4**
	0.1nm,0.5s,baz=209,slow=5.2,SNR=3.0						
TXAR	**Lajitas Array**	**86.01**	**58**	P	**P**	**15 55 48.6**	**+2.7**
	0.6nm,0.7s,baz=201,slow=6.4,SNR=5.3						
PDAR	**Pinedale Array**	**87.28**	**44**	P	**P**	**15 55 52.5**	**+0.7**
	0.2nm,0.5s,baz=204,slow=2.0,SNR=3.6						
CMAR	**Chiang Mai Arr**	**88.60**	**290**	P	**P**	**15 55 59.7**	**+1.5**
	1.4nm,0.9s,baz=97,slow=3.3,SNR=9.9						
BRTR	**Keskin Array B**	**144.44**	**315**	PKP	**PKPab**	**16 02 37.8**	**-0.1**
	1.6nm,0.6s,baz=122,slow=4.3,SNR=12						
GERES	**GERESS Array B**	**147.28**	**345**	PKPbc	**PKPbc**	**16 02 45.7**	**+0.6**
	1.0nm,0.5s,baz=114,slow=1.6,SNR=10						

*CSEM **18** 15:49:47.2, 34.72N×26.06E, h52km, MD3.1, After ATH*
ATH 18 15:49:47.2, 34.72N×26.06E, h52km±3km, MD3.1/8, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**13.84**	**191**	Pn	Pn	15 56 59.6	-0.3
	1.8nm,0.3s,baz=31,slow=14,SNR=93						
VNDA				LR	LR	16 01 08.5	
	comp=Z,425nm,20.7s,baz=98,slow=32						
RPZ	**Rata Peaks**	**20.72**	**353**	P	Pn	15 58 31.6	+4.6
	12nm,0.4s,baz=29,slow=16,SNR=7.9						
RPZ				LR	LR	16 05 08.0	
	comp=Z,375nm,20.2s,baz=303,slow=33						
QSPA	**South Pole Qui**	**25.78**	**180**	P	P	15 59 15.2	+0.1
	7.8nm,0.8s						
QSPA				LR	LR	16 08 14.8	
	comp=Z,255nm,18.6s,baz=218,slow=34						
MAW	**Mawson**	**39.66**	**214**	LR	LR	16 17 35.7	
	comp=Z,324nm,19.3s,baz=101,slow=36						
SNAA	**Sanae**	**44.27**	**181**	P	P	16 01 53.0	-0.5
	1.1nm,0.9s,baz=191,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**48.48**	**307**	P	P	16 02 27.5	+0.4
	1.0nm,0.8s,baz=154,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**51.77**	**310**	P	P	16 02 51.3	-0.8
	1.2nm,0.8s,baz=156,slow=6.6,SNR=8.5						
LPAZ	**La Paz**	**86.67**	**121**	P	P	16 06 29.4	+0.3
	0.4nm,0.5s,baz=174,slow=9.2,SNR=2.0						
BRTR	**Keskin Array B**	**146.46**	**242**	PKPbc	PKPdf	16 13 24.2	+0.6
	1.3nm,1.0s,baz=148,slow=7.3,SNR=3.8						

*IDC **18** 15:59:27.4±15.0, 19°.35N×65°.98W, h0km, mb3.3/4, mb1 3.8/4, mb1mx3.5/24, mbtmp3.3/4, MS3.4/1, Ms1 3.4/1, ms1mx3.0/18, Error ellipse: s-maj=315.5km s-min=76.1km az=155.0*

*ISCJB **18** 15:59:31.4±0.7, 19°.55N±0°.06×66°.39W±0°.06, h19km, mb3.4/4, MS3.3/1, Error ellipse: s-maj=9.8km s-min=7.0km az=44.1*

*RSPR **18** 15:59:34.4, 19°.51N×66°.39W, h12km±7km, MD3.5/11*

*NEIC **18** 15:59:34.4, 19°.51N×66°.39W, h12km, MD3.5(RSPR), After RSPR.*

ISC 18 15:59:32.8±0.8, 19°.43N±0°.07×66°.39W±0°.05, h19km, n42, σ0s51/43, mb3.5/4, 18C-14D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**1.13**	**198**	⇓*e*P	**Pn**	**15 59 53.5**	**-0.1**
AOPR	**Arecibo Observ**	**1.13**	**198**	⇓*e*P	**Pn**	**15 59 53.6**	**-0.1**
AOPR	**Arecibo Observ**	**1.13**	**198**	⇓*e*P	**Pn**	**15 59 53.5**	**-0.1**
AGPR	**Aguadilla, PR**	**1.17**	**216**	⇑*e*P	**Pn**	**15 59 53.9**	**-0.3**
AGPR	**Aguadilla, PR**	**1.17**	**216**	⇑*e*P	**Pn**	**15 59 53.9**	**-0.3**
LRS	**Lares**	**1.21**	**201**	⇑*e*P	**Pn**	**15 59 54.8**	**0.0**
LRS	**Lares**	**1.21**	**201**	⇑*e*P	**Pn**	**15 59 54.8**	**0.0**
CBYP	**Canovanas**	**1.25**	**156**	⇓*e*P	**Pn**	**15 59 55.6**	**+0.2**
CBYP	**Canovanas**	**1.25**	**156**	⇓*e*P	**Pn**	**15 59 55.9**	**+0.4**
CBYP	**Canovanas**	**1.25**	**156**	⇓*e*P	**Pn**	**15 59 55.9**	**+0.4**
SJG	**San Juan**	**1.33**	**170**	⇓*e*P	**Pb**	**15 59 57.1**	**0.0**
SJG	**San Juan**	**1.33**	**170**	⇓*e*P	**Pb**	**15 59 57.3**	**+0.2**
SJG	**San Juan**	**1.33**	**170**	⇓*e*P	**Pb**	**15 59 57.3**	**+0.2**
CELP	**Cerrillos**	**1.36**	**188**	⇑*e*P	**Pn**	**15 59 57.1**	**+0.4**
CELP	**Cerrillos**	**1.36**	**188**	⇑*e*P	**Pn**	**15 59 57.1**	**+0.4**
HUMP	**Col San Antoni**	**1.38**	**158**	⇑*e*P	**Pn**	**15 59 57.6**	**+0.6**
HUMP	**Col San Antoni**	**1.38**	**158**	⇑*e*P	**Pn**	**15 59 57.5**	**+0.5**
HUMP	**Col San Antoni**	**1.38**	**158**	⇑*e*P	**Pn**	**15 59 57.6**	**+0.6**
OBIP	**Obispado Ponce**	**1.39**	**188**	⇑*e*P	**Pn**	**15 59 58.0**	**+0.8**
OBIP	**Obispado Ponce**	**1.39**	**188**	⇑*e*P	**Pn**	**15 59 58.0**	**+0.8**
LSP	**Las Mesas**	**1.41**	**208**	⇓*e*P	**Pn**	**15 59 58.0**	**+0.5**
LSP	**Las Mesas**	**1.41**	**208**	⇓*e*P	**Pn**	**15 59 58.0**	**+0.5**
CPD	**Cerro la Pandu**	**1.45**	**162**	⇓*e*P	**Pn**	**15 59 58.0**	**-0.1**
CPD	**Cerro la Pandu**	**1.45**	**162**	⇓*e*P	**Pn**	**15 59 58.0**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.52**	**198**	⇓*e*P	**Pb**	**16 00 00.3**	**0.0**
GBPR	**Guanica, Bosqu**	**1.52**	**198**	⇓*e*P	**Pb**	**16 00 00.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.57**	**206**	⇓*e*P	**Pb**	**16 00 00.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.57**	**206**	⇓*e*P	**Pb**	**16 00 00.9**	**-0.3**
STVI	**Saint Thomas**	**1.73**	**128**	⇓*e*P	**Pn**	**16 00 02.1**	**+0.2**
STVI	**Saint Thomas**	**1.73**	**128**	⇓*e*P	**Pn**	**16 00 02.1**	**+0.2**
DR12	**Loma Pena Alta**	**2.90**	**258**	⇑*e*P	**Pn**	**16 00 18.3**	**+0.2**
DR12				*e*S	**Sn**	**16 00 52.3**	**-0.1**
DR12	**Loma Pena Alta**	**2.90**	**258**	⇑*e*P	**Pn**	**16 00 18.3**	**+0.2**
DR12				*e*S	**Sn**	**16 00 52.3**	**-0.1**
SDDR	**Presa de Saban**	**4.65**	**265**	*e*Pn	**Pn**	**16 00 43.5**	**+1.4**
SADO	**Sadowa**	**27.41**	**340**	LR	LR	16 16 02.1	
	comp=Z,78nm,18.2s,baz=286,slow=36						
TXAR	**Lajitas Array**	**35.23**	**294**	P	**P**	**16 06 27.4**	**+1.1**
TXAR	**Lajitas Array**	**35.23**	**294**	P	**P**	**16 06 27.4**	**+1.1**
	0.4nm,0.6s,baz=117,slow=11,SNR=5.6						
PDAR	**Pinedale Array**	**43.07**	**312**	P	**P**	**16 07 31.6**	**-0.2**
PDAR	**Pinedale Array**	**43.07**	**312**	P	**P**	**16 07 31.6**	**-0.2**
	0.3nm,0.6s,baz=134,slow=12,SNR=2.8						
YKA	**Yellowknife Ar**	**54.21**	**335**	P	**P**	**16 08 56.4**	**-0.6**
YKA	**Yellowknife Ar**	**54.21**	**335**	P	**P**	**16 08 56.3**	**-0.6**
	0.3nm,0.6s,baz=110,slow=7.4,SNR=4.0						
ILAR	**Eielson Array**	**68.56**	**333**	P	**P**	**16 10 33.3**	**-0.7**
ILAR	**Eielson Array**	**68.56**	**333**	P	**P**	**16 10 33.3**	**-0.7**
	0.3nm,0.6s,baz=104,slow=4.6,SNR=5.3						

IDC 18 16:10:30.6±4.8, 16°.69S×75°.77W, h0km, mb4.1/2, mb1 4.2/3, mb1mx3.8/19, mbtmp4.0/3, ML3.9/1, MS3.7/3, Ms1 3.7/3, ms1mx3.3/20, Error ellipse: s-maj=210.4km s-min=38.6km az=17.0, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.34**	**88**	Pn	Pn	16 12 20.9	+1.0
	0.9nm,0.3s,baz=275,slow=8.6,SNR=20						
LPAZ				LR	LR	16 15 06.1	
	comp=Z,233nm,19.5s,baz=271,slow=38						
ROSC	**El Rosal**	**21.46**	**4**	LR	LR	16 24 07.5	
	comp=Z,89nm,18.9s,baz=222,slow=38						
PPT	**Papeete**	**70.09**	**257**	LR	LR	16 45 08.1	
	comp=Z,209nm,18.6s,baz=173,slow=30						
TORD	**Torodi Ar. Bea**	**82.06**	**74**	P	P	16 22 52.9	-0.6
	5.4nm,0.9s,baz=254,slow=5.0,SNR=20						
YKA	**Yellowknife Ar**	**84.62**	**343**	P	P	16 23 05.5	0.0
	0.7nm,1.0s,baz=137,slow=5.1,SNR=9.0						
ZALV	**Zalesovo Beam**	**139.87**	**18**	PKP	PKPdf	16 30 00.9	+0.3
	1.0nm,0.7s,baz=299,slow=3.1,SNR=5.8						
SONM	**Songino Array**	**148.89**	**357**	PKPbc	PKPbc	16 30 20.4	-0.2
	1.9nm,1.1s,baz=341,slow=2.0,SNR=7.9						

*DDA **18** 16:11:20.5, 37°.47N×35°.40E, h5km, ML2.7*

*ISCJB **18** 16:11:21.8±0.5, 37°.48N±0°.05×35°.45E±0°.04, h12km, Error ellipse: s-maj=6.7km s-min=5.0km az=172.6*

*ISK **18** 16:11:21.1, 37°.49N×35°.44E, h18km, MD2.6*

*CSEM **18** 16:11:21.6±0.2, 37°.47N×35°.42E, h10km, MD2.6, Error ellipse: s-maj=4.8km s-min=4.2km az=48.0*

ISC 18 16:11:21.2±0.8, 37°.46N±0°.03×35°.44E±0°.04, h12km, n24, σ0s94/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.31**	**86**	*e*PG	**Pb**	**16 11 28.1**	**-0.6**
KOZT				*e*SG	**Sb**	**16 11 33.2**	**-0.5**
KOZT	**Kozan**	**0.31**	**86**	*e*Pg	**Pb**	**16 11 28.1**	**-0.6**
KOZT				*e*Sg	**Sb**	**16 11 33.2**	**-0.5**
CEYT	**Ceyhan**	**0.51**	**151**	*e*PG	**Pb**	**16 11 32.6**	**+0.5**
CEYT	**Ceyhan**	**0.51**	**151**	*e*Pg	**Pb**	**16 11 32.6**	**+0.5**
GULE	**Gulek**	**0.56**	**252**	*i* P	**Pg**	**16 11 32.1**	**-0.1**
GULE				*i* S	**Sn**	**16 11 42.9**	**-1.5**
GULE	**Gulek**	**0.56**	**252**	*i* P	**Pg**	**16 11 32.1**	**-0.1**
GULE				*i* S	**Sn**	**16 11 42.9**	**-1.5**
YURE	**YUREGIR**	**0.65**	**166**	*i* P	**Pb**	**16 11 35.1**	**+0.5**
YURE	**YUREGIR**	**0.65**	**166**	*i* P	**Pb**	**16 11 35.1**	**+0.5**
ANDN	**Andirin**	**0.73**	**80**	*e*P	**Pb**	**16 11 35.8**	**-0.1**
ANDN	**Andirin**	**0.73**	**80**	*e*P	**Pb**	**16 11 35.8**	**-0.1**
KRTS	**Karatas**	**0.89**	**183**	*e*PG	**Pn**	**16 11 38.8**	**-0.7**
KRTS	**Karatas**	**0.89**	**183**	*e*Pg	**Pn**	**16 11 38.8**	**-0.7**
NIG	**Nigde**	**0.92**	**315**	*e*PG	**Pg**	**16 11 39.1**	**0.0**
NIG	**Nigde**	**0.92**	**315**	*e*Pg	**Pg**	**16 11 39.1**	**0.0**
AYKD	**Aykdinkavak**	**1.09**	**92**	*i* P	**Pn**	**16 11 42.6**	**+0.3**
COBT	**Iskenderun**	**1.14**	**145**	*i* P	**Pg**	**16 11 43.6**	**+0.3**
COBT	**Iskenderun**	**1.14**	**145**	*i* P	**Pg**	**16 11 43.6**	**+0.3**
KMRS	**Kahramanmaras**	**1.16**	**87**	*e*PN	**Pn**	**16 11 43.2**	**-0.1**
KMRS	**Kahramanmaras**	**1.16**	**87**	*e*Pn	**Pn**	**16 11 43.2**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.22**	**39**	*e*PN	**Pn**	**16 11 43.1**	**-1.2**
AVNT	**Avonos**	**1.40**	**341**	*i* P	**Pg**	**16 11 48.0**	**-0.1**
AVNT				*i* S	**Sg**	**16 12 08.9**	**+2.7**
AVNT	**Avonos**	**1.40**	**341**	*i* P	**Pg**	**16 11 48.0**	**-0.1**
AVNT				*i* S	**Sg**	**16 12 08.9**	**+2.7**
PINB	**Pinarbasi**	**1.43**	**32**	*i* P	**Pb**	**16 11 48.1**	**+0.1**
PINB	**Pinarbasi**	**1.43**	**32**	*i* P	**Pb**	**16 11 48.1**	**+0.1**

*ISK **18** 16:16:08.0, 37°.56N×36°.10E, h12km, MD2.6*

*DDA **18** 16:16:08.7, 37°.45N×36°.11E, h7km, ML2.8*

*CSEM **18** 16:16:09.3±0.5, 37°.57N×36°.06E, h2km, MD2.6, Error ellipse: s-maj=14.4km s-min=8.4km az=148.0*

ISC 18 16:16:09.4±1.1, 37°.56N±0°.04×36°.08E±0°.02, h4km±13km, n21, σ0s91/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.21**	**84**	*i* P	**Pg**	**16 16 12.8**	**-0.7**
ANDN				*i* S	**Sg**	**16 16 17.1**	**+0.8**
ANDN	**Andirin**	**0.21**	**84**	*i* P	**Pg**	**16 16 12.8**	**-0.7**
ANDN				*i* S	**Sg**	**16 16 17.1**	**+0.8**
KOZT	**Kozan**	**0.22**	**250**	*e*PG	**Pg**	**16 16 13.4**	**-0.2**
KOZT				*e*SG	**Sg**	**16 16 17.2**	**+0.8**
KOZT	**Kozan**	**0.22**	**250**	*e*Pg	**Pg**	**16 16 13.4**	**-0.2**
KOZT				*e*Sg	**Sg**	**16 16 17.2**	**+0.8**
AYKD	**Aykdinkavak**	**0.59**	**104**	*i* P	**Pg**	**16 16 19.6**	**-1.2**
AYKD				*i* S	**Sg**	**16 16 27.9**	**-0.6**
CEYT	**Ceyhan**	**0.61**	**206**	*e*PG	**Pg**	**16 16 20.9**	**-0.1**
CEYT				*e*SG	**Sg**	**16 16 29.6**	**+0.7**
CEYT	**Ceyhan**	**0.61**	**206**	*e*Pg	**Pg**	**16 16 20.9**	**-0.1**
CEYT				*e*Sg	**Sg**	**16 16 29.6**	**+0.7**
KMRS	**Kahramanmaras**	**0.65**	**94**	*e*PG	**Pg**	**16 16 20.9**	**-1.0**
KMRS	**Kahramanmaras**	**0.65**	**94**	*e*Pg	**Pg**	**16 16 20.9**	**-1.0**
YURE	**YUREGIR**	**0.81**	**206**	*i* P	**Pn**	**16 16 27.1**	**-0.5**
YURE	**YUREGIR**	**0.81**	**206**	*i* P	**Pn**	**16 16 27.1**	**-0.5**
SARI	**SarD1z-Kayseri**	**0.89**	**17**	*e*PG	**Pg**	**16 16 25.4**	**-1.0**
GULE	**Gulek**	**1.07**	**256**	*e*P	**Pg**	**16 16 28.7**	**-1.3**
GULE				*i* S	**Sb**	**16 16 45.6**	**+0.5**
GULE	**Gulek**	**1.07**	**256**	*e*P	**Pg**	**16 16 28.7**	**-1.3**
GULE				*i* S	**Sb**	**16 16 45.6**	**+0.5**
PINB	**Pinarbasi**	**1.15**	**13**	*e*P	**Pn**	**16 16 33.2**	**+0.8**
PINB	**Pinarbasi**	**1.15**	**13**	*e*P	**Pn**	**16 16 33.2**	**+0.8**
GZT	**Gaziantep**	**1.20**	**99**	*i* P	**Pg**	**16 16 31.1**	**-1.2**
NIG	**Nigde**	**1.29**	**296**	*e*PN	**Pg**	**16 16 32.5**	**-1.6**
NIG	**Nigde**	**1.29**	**296**	*e*Pn	**Pg**	**16 16 32.5**	**-1.6**
AKCD	**Akcadag**	**1.63**	**63**	*i* P	**Pg**	**16 16 40.8**	**+0.2**
AKCD	**Akcadag**	**1.63**	**63**	*i* P	**Pg**	**16 16 40.8**	**+0.2**

PRE 18 16:16:19.9±3.0, 26°.44S×27°.38E, h2km, ML3.7, 8C-3D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLOF	**Kloof**	**0.22**	**66**	⇑*i*P	Pg	16 16 25.0	+0.5
KLOF				*e*S	Sg	16 16 27.3	-0.3
KLOF				AML	AML	16 16 27.5	
	comp=Z,21μm,0.2s						
PRYS	**Parys**	**0.48**	**182**	⇑*i*P	Pg	16 16 30.1	+0.7
PRYS				*e*S	Sg	16 16 36.0	+0.2
PRYS				AML	AML	16 16 43.1	
	comp=Z,587nm,0.4s						
BFSD	**Buffelsfontein**	**0.68**	**231**	*e*P	Pb	16 16 34.1	-0.6
BFSD				*e*S	Sg	16 16 42.7	+0.5
BFSD				AML	AML	16 16 44.2	
	comp=Z,839nm,0.3s						
KSR	**Koster**	**0.73**	**323**	⇑*i*P	Pg	16 16 34.9	+0.7
KSR				*e*S	Sg	16 16 43.9	0.0
KSR				AML	AML	16 16 51.8	
	comp=Z,1μm,0.2s						
MOAB	**Moab Khotsong**	**0.75**	**224**	*e*P	Pb	16 16 35.3	-0.7
MOAB				*e*S	Sg	16 16 45.2	+0.6
MOAB				AML	AML	16 16 46.3	
	comp=Z,712nm,0.5s						
ERPM	**east rand prop**	**0.78**	**83**	⇓*i*P	Pg	16 16 35.1	+0.1
ERPM				*e*S	Sg	16 16 43.5	-1.8
ERPM				AML	AML	16 16 45.6	
	comp=Z,474nm,0.5s						
TLEK	**Tau Lekoa**	**0.82**	**231**	*e*P	Pg	16 16 36.0	+0.1
TLEK				*e*S	Sg	16 16 47.4	+0.7
SLR	**Silverton**	**1.07**	**49**	⇓*i*P	Pg	16 16 40.5	-0.2
SLR				*e*S	Sg	16 16 53.5	-1.2
SLR				AML	AML	16 16 58.7	
	comp=Z,797nm,0.4s						
SEK	**Senekal**	**1.89**	**173**	⇑*i*P	Pb	16 16 55.2	-0.2
SEK				*e*S	Sn	16 17 18.6	+0.6
SEK				AML	AML	16 17 19.7	
	comp=Z,442nm,0.2s						
SWZ	**Schweizer**	**1.98**	**248**	⇑*i*P	Pn	16 16 55.4	+0.8
SWZ				*e*S	Sn	16 17 20.8	+0.7
SWZ				AML	AML	16 17 24.8	
	comp=Z,1μm,0.6s						
LBTB	**Lobatse**	**2.15**	**311**	⇑*i*P	Pb	16 16 58.6	-1.0
LBTB				*e*S	Sb	16 17 25.9	-0.9
LBTB				AML	AML	16 17 28.3	
	comp=Z,781nm,0.2s						
BOSA	**Boshof**	**2.87**	**221**	⇑*i*P	Pn	16 17 07.5	+0.6
BOSA				*e*S	Sn	16 17 40.4	-1.8
BOSA				AML	AML	16 17 49.5	
	comp=Z,123nm,0.3s						
POGA	**Pongola**	**3.89**	**105**	⇑*i*P	Pn	16 17 22.0	+1.3
POGA				*e*S	Sn	16 18 06.3	-0.7
POGA				AML	AML	16 18 22.3	
	comp=Z,155nm,0.5s						
CNG	**Changalane**	**4.31**	**89**	*e*P	Pn	16 17 27.6	+1.0
CNG				*e*S	Sn	16 18 14.9	-2.5
KSD	**Kokstad**	**4.46**	**157**	*e*P	Pn	16 17 30.0	+1.2
KSD				*e*S	Sn	16 18 21.0	-0.4
KSD				AML	AML	16 18 48.8	
	comp=Z,143nm,0.5s						
HVD	**Gariep Dam**	**4.47**	**201**	*e*P	Pn	16 17 29.6	+0.7
HVD				*e*S	Sn	16 18 17.8	-3.8
HVD				AML	AML	16 18 53.5	
	comp=Z,53nm,0.7s						
MSNA	**Messina**	**4.74**	**31**	*e*P	Pn	16 17 32.7	+0.3
MSNA				*e*S	Sn	16 18 24.6	-3.4
MSNA				AML	AML	16 18 52.5	
	comp=Z,56nm,0.5s						
UPI	**Upington**	**5.78**	**249**	*e*P	Pn	16 17 47.1	+0.3
UPI				*e*S	Sn	16 18 50.0	-3.7
UPI				AML	AML	16 19 25.1	
	comp=Z,66nm,0.5s						
SOE	**Somerset East**	**6.45**	**194**	⇓*e*P	Pn	16 17 57.1	+1.2
SOE				*e*S	Sn	16 19 06.7	-3.5
SOE				AML	AML	16 19 46.0	
	comp=Z,31nm,0.5s						
GRM	**Grahamstown**	**6.89**	**186**	*e*P	Pn	16 18 02.1	+0.1
GRM				*e*S	Sn	16 19 18.0	-3.1
GRM				AML	AML	16 20 02.8	
	comp=Z,20nm,1.0s						
SUR	**Sutherland**	**8.24**	**223**	*e*P	Pn	16 18 22.8	+2.1
SUR				*e*S	Sn	16 19 48.9	-5.7
SUR				AML	AML	16 20 38.8	
	comp=Z,17nm,0.8s						
CVNA	**Calvinia**	**8.35**	**231**	*e*P	Pn	16 18 23.1	+0.9
CVNA				*e*S	Sn	16 19 50.5	-6.7
CVNA				AML	AML	16 20 52.1	
	comp=Z,62nm,0.6s						
KOMG	**Komaggas**	**9.36**	**247**	*e*P	Pn	16 18 36.6	+0.8
KOMG				*e*S	Sn	16 20 17.4	-4.2
KOMG				AML	AML	16 21 22.5	
	comp=Z,27nm,0.6s						
LSZ	**Lusaka**	**11.13**	**4**	*e*P	Pn	16 18 59.2	-1.2
LSZ				*e*S	Sn	16 20 59.3	-6.3
TSUM	**Tsumeb**	**11.55**	**307**	*e*P	Pn	16 19 07.7	+1.6
TSUM				*e*S	Sn	16 21 09.2	-6.7

*JMA **18** 16:31:36.0±0.8, 46°.19N×152°.17E, h30km, M4.4*

*ISCJB **18** 16:31:37.1±0.7, 45°.56N±0°.10×152°.18E±0°.09, h55km, mb3.6/9, Error ellipse: s-maj=16.0km s-min=5.0km az=150.7*

*MOS **18** 16:31:41.7±1.7, 45°.89N×151°.88E, h96km, mb3.8/5, Error ellipse: s-maj=18.3km s-min=14.4km az=52.1*

*IDC **18** 16:31:42.4±3.0, 45°.99N×151°.91E, h85km±26km, mb3.4/9, mb1 3.6/11, mb1mx3.4/25, mbtmp3.4/11, Error ellipse: s-maj=28.6km s-min=18.2km az=135.0*

ISC 18 16:31:38.3±0.8, 45°.6N±0°.1×152°.26E±0°.09, h55km, n35, σ1s84/36, mb3.6/10, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.11**	**266**	*e*PN	**Pn**	**16 32 25.0**	**+0.2**
KUR				S	**Sn**	**16 33 00.5**	**-0.2**
KUR				pmax	pmax		
	comp=Z,120nm,0.4s						
KUR				pmax	pmax		
	comp=N,90nm,0.7s						
KUR				smax	smax		
	comp=N,330nm,0.5s						
KUR				smax	smax		
	comp=E,120nm,0.7s						
NEM2	**Nemuro 2**	**5.15**	**247**	P	**Pn**	**16 32 53.2**	**+0.5**
NEM2				*e*S	**Sn**	**16 33 50.0**	**-0.8**
JRA	**Rausu**	**5.33**	**255**	P	Pn	16 32 58.2	+3.0
JNK	**Nakash**	**5.73**	**253**	P	**Pn**	**16 33 02.0**	**+1.3**
JNK				*e*S	**Sn**	**16 34 05.3**	**+0.2**
SKR	**Severo-Kuril's**	**5.75**	**25**	*e*PN	Pn	16 32 53.9	-7.1
JAK	**Akkeshi**	**6.00**	**248**	P	**Pn**	**16 33 04.8**	**+0.4**
JAK				*e*S	**Sn**	**16 34 10.9**	**-0.7**
JTKR	**Abashiri--Toko**	**6.15**	**258**	P	**Pn**	**16 33 08.2**	**+1.8**
JAR	**Ashorobuto**	**6.48**	**253**	P	**Pn**	**16 33 12.8**	**+1.8**
JAR				*e*S	**Sn**	**16 34 24.3**	**+0.8**
YSS	**Yuzh-Sakhalins**	**6.74**	**285**	*e*PN	**Pn**	**16 33 14.0**	**-0.5**
JKK2	**Kamakawa 2**	**6.98**	**260**	P	Pn	16 33 19.9	+2.1
ASAJ	**Asahikawa**	**7.02**	**262**	P	**Pn**	**16 33 20.9**	**+2.5**
	comp=E,1.1nm,0.3s,baz=92,slow=26,SNR=9.9						
JCH	**Churui**	**7.04**	**249**	P	**Pn**	**16 33 19.4**	**+0.7**
JCH				*e*S	**Sn**	**16 34 35.7**	**-1.6**
JAB	**Ashibetsu**	**7.46**	**258**	P	Pn	16 33 27.3	+2.9
ERM	**Erimo**	**7.47**	**245**	*i* PN	Pn	16 33 30.7	+6.2
JNBK	**Urakawa-nobuka**	**7.60**	**248**	P	**Pn**	**16 33 26.5**	**+0.2**
JNBK				*e*S	**Sn**	**16 34 49.9**	**-1.1**
JBT2	**Biratori 2**	**7.63**	**252**	P	**Pn**	**16 33 29.2**	**+2.4**
PETK	**Petropavlovsk-**	**8.36**	**23**	*e*PN	Pn	16 33 39.6	+2.9
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**8.36**	**23**	P	**Pn**	**16 33 36.2**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=200,slow=14,SNR=11						
JNB	**Noboribetsu**	**8.65**	**253**	P	**Pn**	**16 33 42.4**	**+1.7**
JANG	**Nango**	**9.42**	**240**	P	**Pn**	**16 33 49.7**	**-1.5**
JANG				*e*S	Sn	16 35 29.1	-6.5
JTM	**Tenmabayashi**	**9.46**	**244**	P	**Pn**	**16 33 50.9**	**-0.8**
JTM				*e*S	**Sn**	**16 35 31.3**	**-5.2**
JRG	**Rokugo**	**10.55**	**238**	*e*S	Sn	16 35 56.1	-7.3
JIO	**Ouri**	**10.77**	**233**	*e*S	**Sn**	**16 36 03.9**	**-4.7**
YAK	**Yakutsk**	**21.04**	**330**	*e*P	**P**	**16 36 17.8**	**+0.6**
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
MKAR	**Makanchi Array**	**46.97**	**298**	PcP	**PcP**	**16 41 35.5**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=57,slow=5.3,SNR=3.7						
CMAR	**Chiang Mai Arr**	**51.51**	**257**	P	**P**	**16 40 38.5**	**0.0**
	comp=Z,0.2nm,0.5s,baz=44,slow=5.0,SNR=4.1						
YKA	**Yellowknife Ar**	**52.25**	**36**	P	**P**	**16 40 42.7**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=298,slow=7.0,SNR=5.1						
FINES	**FINESS Array B**	**64.87**	**335**	P	P	16 42 07.1	-4.0
	comp=Z,0.8nm,0.6s,baz=32,slow=5.7,SNR=4.0						
PDAR	**Pinedale Array**	**65.94**	**53**	P	**P**	**16 42 19.3**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=287,slow=4.6,SNR=4.1						
WRA	**Warramunga Arr**	**67.18**	**198**	P	**P**	**16 42 28.9**	**+2.5**
	comp=Z,0.1nm,0.4s,baz=16,slow=6.7,SNR=5.0						
NB2	**NORSAR Subarra**	**69.17**	**341**	P	**P**	**16 42 35.8**	**-2.7**
	comp=Z,0.5nm,0.5s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**69.17**	**341**	P	**P**	**16 42 35.9**	**-2.6**
	comp=Z,0.6nm,0.5s,baz=28,slow=6.4,SNR=4.2						
TXAR	**Lajitas Array**	**78.61**	**60**	P	**P**	**16 43 35.3**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=299,slow=4.3,SNR=4.1						
BRTR	**Keskin Array B**	**78.86**	**316**	P	**P**	**16 43 35.0**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=62,slow=3.2,SNR=4.9						
GERES	**GERESS Array B**	**79.27**	**334**	P	**P**	**16 43 35.9**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=38,slow=6.8,SNR=5.1						

IDC 18 16:32:02.5±5.9, 17°.73S×75°.94W, h0km, mb4.1/1, mb1 4.0/2, mb1mx3.6/19, mbtmp3.9/2, ML3.8/1, Error ellipse: s-maj=360.2km s-min=50.8km az=3.0, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.61**	**80**	Pn	Pn	16 33

BDFB	**Brasilia**	**40.11**	**54**	P	**P**	**17 34 08.6**	**+2.9**
	2.7nm,0.4s,baz=215,slow=4.6,SNR=4.9						
BDFB				LR	LR	17 51 27.5	
	comp=Z,280nm,18.8s,baz=357,slow=37						
SNAA	**Sanae**	**44.38**	**154**	P	**P**	**17 34 38.6**	**-1.2**
	6.9nm,1.2s						
SNAA	**Sanae**	**44.38**	**154**	P	P	17 34 43.7	+3.9
	1.8nm,1.1s,baz=270,slow=7.1,SNR=5.1						
QSPA	**South Pole Qui**	**45.34**	**180**	*e*P	**P**	**17 34 47.4**	**-0.3**
	8.7nm,0.9s						
QSPA	**South Pole Qui**	**45.34**	**180**	P	**P**	**17 34 48.2**	**+0.5**
	6.2nm,0.9s,baz=139,slow=4.6,SNR=12						
ROSC	**El Rosal**	**49.86**	**8**	LR	LR	17 53 56.4	
	comp=Z,409nm,20.7s,baz=202,slow=33						
SBA	**Scott Base**	**50.96**	**195**	*e*P	**P**	**17 35 31.4**	**+0.7**
	7.4nm,1.4s						
VNDA	**Vanda**	**52.02**	**194**	*e*P	**P**	**17 35 39.4**	**+0.8**
	5.1nm,1.3s						
VNDA	**Vanda**	**52.02**	**194**	P	**P**	**17 35 39.6**	**+1.1**
	1.3nm,0.9s,baz=134,slow=7.7,SNR=7.3						
VNDA				LR	LR	17 55 47.5	
	comp=Z,193nm,18.2s,baz=129,slow=34						
TBI	**Tubuai**	**59.08**	**267**	*e*LR	LR	17 53 42.8	
	158nm,27.8s						
PPT2	**Papeete2**	**62.90**	**272**	*e*S	S	17 45 15.9	-7.7
	94nm,29.2s						
PPT2				*e*LR	LR	17 55 27.5	
	208nm,24.2s						
MAW	**Mawson**	**64.48**	**165**	LR	LR	18 02 32.4	
	comp=Z,238nm,19.0s,baz=21,slow=34						
BOSA	**Boshof**	**80.59**	**121**	LR	LR	18 08 12.4	
	comp=Z,155nm,19.2s,baz=165,slow=31						
DBIC	**Dimbokro**	**84.75**	**75**	LR	LR	18 10 17.8	
	comp=Z,89nm,19.8s,baz=205,slow=31						
TORD	**Torodi Ar. Bea**	**93.86**	**75**	LR	LR	18 15 15.7	
	comp=Z,72nm,21.6s,baz=215,slow=31						
ULM	**Lac du Bonnet**	**95.69**	**350**	LR	LR	18 22 03.5	
	comp=Z,70nm,18.4s,baz=117,slow=35						
CMAR	**Chiang Mai Arr**	**153.63**	**179**	PKPbc	**PKPbc**	**17 46 28.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**153.63**	**179**	PKPbc	**PKPbc**	**17 46 28.1**	**-0.3**
	0.2nm,0.5s,baz=190,slow=4.6,SNR=3.8						

IDC 18 17:39:35.1±8.4, 3.°84S×152.°53E, h160km±52km, mb3.2/4, mb1 3.5/5, mb1mx3.2/20, mbtmp3.3/5, MS3.0/1, Ms1 3.0/1, ms1mx2.5/14, Error ellipse: s-maj=126.9km s-min=34.4km az=102.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.68**	**224**	P	Pn	17 41 24.4	+0.1
	1.7nm,0.3s,baz=22,slow=10,SNR=6.3						
WRA	**Warramunga Arr**	**23.89**	**226**	P	P	17 44 33.9	-0.4
	0.9nm,0.4s,baz=53,slow=9.7,SNR=27						
ASAR	**Alice Springs**	**26.69**	**221**	P	P	17 45 00.1	+0.5
	0.4nm,0.3s,baz=52,slow=9.0,SNR=27						
FITZ	**Fitzroy Crossi**	**29.90**	**240**	P	P	17 45 27.8	-0.3
	2.2nm,1.0s,baz=77,slow=11,SNR=3.8						
KSRS	**Korea Array**	**47.03**	**333**	LR	LR	18 06 19.1	
	comp=Z,19nm,21.2s,baz=330,slow=34						
MKAR	**Makanchi Array**	**79.43**	**319**	P	P	17 51 23.8	0.0
	0.1nm,0.6s,baz=99,slow=7.7,SNR=2.0						

MEX 18 17:45:03.8±0.4, 21.°75N×98.°45W, h5km, MD4.2, Veracruz

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEIG	**Demacu**	**1.54**	**201**	*e*P	Pn	17 45 28.3	-3.9
DEIG				*i* S	Sn	17 45 48.1	-4.7
VTVM	**Tizayuca**	**1.99**	**189**	*i* P	Pn	17 45 35.5	-3.0
VTVM				*i* S	Sn	17 45 58.7	-5.4
IIO	**Organos**	**2.16**	**187**	*i* P	Pn	17 45 38.2	-2.8
IIO				*i* S	Sn	17 46 03.1	-5.3
PTVM	**Pico Tres Padr**	**2.23**	**196**	*i* P	Pn	17 45 38.0	-3.8
PTVM				*i* S	Sn	17 46 04.8	-5.1
LNIG	**Linares**	**3.27**	**344**	*i* P	Pn	17 45 53.9	-1.9
LNIG				*i* S	Sn	17 46 31.7	-3.5
ARIG	**Puente Sto Nin**	**3.88**	**208**	*e*P	Pn	17 46 00.8	-3.4
ARIG				*i* S	Sn	17 46 47.4	-2.9
ZAIG	**Zacatecas**	**3.95**	**286**	*i* P	Pn	17 46 03.6	-1.9
ZAIG				*i* S	Sn	17 46 48.1	-4.5
SFJM	**Santa Fe**	**4.47**	**255**	*i* P	Pn	17 46 10.3	-2.1
SFJM				*i* S	Sn	17 47 02.0	-3.0
EZ5V		**5.33**	**246**	*i* P	Pn	17 46 21.3	-3.1
EZ5V				*i* S	Sn	17 47 22.3	-4.2
ANIG	**Ahuacatlan**	**5.70**	**264**	*i* P	Pn	17 46 26.2	-3.2
ANIG				*i* S	Sn	17 47 32.2	-3.1
MMIG	**Aquila**	**5.75**	**234**	*i* P	Pn	17 46 24.3	-5.5
MMIG				*i* S	Sn	17 47 30.1	-6.1
R15V		**5.79**	**245**	*i* P	Pn	17 46 27.4	-3.1
R15V				*i* S	Sn	17 47 33.2	-4.2

*IDC **18** 18:05:02.8±3.5, 31.°27S×177.°65W, h15km±20km, mb4.6/9, mb1 4.7/11, mb1mx4.4/21, mbtmp4.5/11, ML3.5/1, MS4.1/12, Ms1 4.1/12, ms1mx3.8/34, Error ellipse: s-maj=24.3km s-min=19.6km az=132.0*

*ISCJB **18** 18:05:03.3±0.8, 31.°65S±0.°05×177.°8W±0.°1, h26km, mb4.6/12, MS4.1/11, Error ellipse: s-maj=15.5km s-min=5.7km az=13.3*

*NEIC **18** 18:05:08.2±1.6, 31.°10S×177.°78W, h54km±11km, mb4.9/3, Error ellipse: s-maj=17.5km s-min=10.5km az=137.0*

*AUST **18** 18:05:21.7, 32.°05S×178.°79W, h100km*

ISC 18 18:05:04.4±0.6, 31.°47S±0.°06×177.°65W±0.°10, h26km, n106, σ1°67/104, mb4.7/12, MS4.1/11, 1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.23**	**354**	Pn	Pn	18 05 35.8	-3.8
RAO				Sn	**Sn**	**18 06 01.9**	**-4.4**
RAO	**Raoul Island**	**2.23**	**354**	Pn	Pn	18 05 35.8	-3.8
	338nm,0.3s,baz=105,slow=16,SNR=7.9						
RAO				Sn	**Sn**	**18 06 01.9**	**-4.4**
	620nm,0.3s,baz=64,slow=22,SNR=6.0						
PUZ	**Puketiti**	**7.39**	**206**	PN	**Pn**	**18 06 48.6**	**-2.0**
PUZ				SN	**Sn**	**18 08 12.7**	**-1.0**
MWZ	**Matawai**	**7.91**	**209**	PN	**Pn**	**18 06 54.8**	**-2.9**
MWZ				SN	**Sn**	**18 08 25.6**	**-0.8**
URZ	**Urewera**	**8.02**	**211**	Pn	**Pn**	**18 06 57.0**	**-2.2**
URZ				Sn	**Sn**	**18 08 25.7**	**-3.4**
URZ	**Urewera**	**8.02**	**211**	PN	**Pn**	**18 06 57.4**	**-1.8**
URZ				SN	**Sn**	**18 08 27.2**	**-1.9**
URZ	**Urewera**	**8.02**	**211**	Pn	**Pn**	**18 06 57.0**	**-2.2**
	0.6nm,0.3s,baz=269,slow=5.4,SNR=4.5						
URZ				Sn	**Sn**	**18 08 25.7**	**-3.4**
	7.0nm,0.3s,baz=320,slow=20,SNR=8.0						
OUZ	**Omahuta**	**8.22**	**241**	*e*P	Pn	18 07 07.4	+5.5
	49nm,0.5s						
KNZ	**Kokohu**	**8.45**	**206**	*e*PN	Pn	18 07 00.9	-4.2
KNZ				SN	**Sn**	**18 08 37.3**	**-2.2**
RPZ	**Rata Peaks**	**15.13**	**213**	Pn	**Pn**	**18 08 34.2**	**-2.1**
RPZ	**Rata Peaks**	**15.13**	**213**	Pn	**Pn**	**18 08 34.2**	**-2.1**
	0.8nm,0.3s,baz=77,slow=14,SNR=3.0						
DZM	**Mont Dzumac**	**17.00**	**300**	*e*P	**P**	**18 09 05.2**	**+3.0**
	107nm,1.2s						
DZM				*e*LR	LR	18 13 09.2	
	1μm,23.2s						
DZM	**Mont Dzumac**	**17.00**	**300**	Pn	**Pn**	**18 08 59.6**	**-0.9**
DZM	**Mont Dzumac**	**17.00**	**300**	Pn	**Pn**	**18 08 59.6**	**-0.9**
	0.2nm,0.3s,baz=69,slow=18,SNR=2.3						
DZM				LR	LR	18 14 07.6	
	comp=Z,1μm,18.0s,baz=34,slow=32						
TBI	**Tubuai**	**26.25**	**79**	*e*LR	LR	18 17 10.7	
	396nm,26.5s,baz=255						
MGCD	**Mangrove Creek**	**26.41**	**258**	P	**P**	**18 10 42.4**	**+3.5**
	baz=25,SNR=5.4						
CNB	**Canberra Magne**	**27.73**	**253**	P	**P**	**18 10 53.5**	**+2.6**
	baz=27,SNR=5.2						
YNG	**Young**	**28.58**	**255**	S	S	18 15 27.7	-17
	baz=27,SNR=5.6						
PPT2	**Papeete2**	**28.94**	**68**	*e*LR	LR	18 18 28.3	
	260nm,25.0s,baz=243						
PPT	**Papeete**	**28.95**	**68**	LR	LR	18 20 06.5	
	comp=Z,167nm,19.6s,baz=346,slow=31						
RMQ	**Roma**	**29.73**	**271**	P	**P**	**18 11 11.2**	**+2.5**
	baz=29,SNR=12						
HNR	**Honiara**	**30.23**	**312**	LR	LR	18 21 19.8	
	comp=Z,227nm,20.7s,baz=136,slow=32						
CMSA	**Cobar Meteorol**	**31.16**	**260**	P	**P**	**18 11 22.6**	**+1.3**
	baz=30,SNR=20						
QLP	**Quilpie**	**33.57**	**269**	P	**P**	**18 11 43.2**	**+0.8**
	baz=32,SNR=12						
CTA	**Charters Tower**	**34.28**	**281**	P	**P**	**18 11 49.7**	**+1.0**
	22nm,0.7s,baz=109,slow=10,SNR=19						
CTA				LR	LR	18 24 36.5	
	comp=Z,437nm,19.1s,baz=88,slow=34						
CTAO	**Charters Tower**	**34.28**	**281**	*e*P	**P**	**18 11 48.6**	**0.0**
	16nm,0.8s						
STKA	**Stephens Creek**	**34.54**	**258**	P	**P**	**18 11 51.8**	**+1.0**
STKA	**Stephens Creek**	**34.54**	**258**	P	**P**	**18 11 51.8**	**+1.0**
	6.1nm,0.9s,baz=115,slow=1.1,SNR=5.7						
STKA				LR	LR	18 25 06.8	
	comp=Z,279nm,18.3s,baz=25,slow=35						
STKA	**Stephens Creek**	**34.54**	**258**	P	**P**	**18 11 52.3**	**+1.5**
	baz=33,SNR=5.4						
MTSU	**Mount Surprise**	**36.80**	**282**	P	**P**	**18 12 11.3**	**+1.0**
	baz=36,SNR=10						
BBOO	**Buckleboo**	**38.98**	**255**	P	**P**	**18 12 28.0**	**-0.5**
	baz=38,SNR=20						
COEN	**Coen**	**39.86**	**287**	P	**P**	**18 12 36.6**	**+0.6**
	baz=39,SNR=4.8						
AS31	**Alice Springs**	**43.36**	**268**	*e*P	**P**	**18 13 04.2**	**-0.5**
ASAR	**Alice Springs**	**43.36**	**268**	P	**P**	**18 13 04.6**	**-0.2**
ASAR				ScP	**ScP**	**18 18 45.1**	**+2.3**
ASAR	**Alice Springs**	**43.36**	**268**	P	**P**	**18 13 04.6**	**-0.2**
	14nm,0.8s,baz=104,slow=7.3,SNR=186						
ASAR				ScP	**ScP**	**18 18 45.1**	**+2.3**
	1.5nm,0.8s,baz=112,slow=4.2,SNR=9.1						
ASAR				LR	LR	18 30 53.0	
	comp=Z,317nm,18.0s,baz=76,slow=36						
WRAB	**Tennant Creek**	**44.44**	**273**	*e*P	**P**	**18 13 11.9**	**-1.5**
	15nm,0.8s						
WRA	**Warramunga Arr**	**44.45**	**273**	P	**P**	**18 13 12.9**	**-0.6**
WRA				ScP	**ScP**	**18 18 47.7**	**+0.4**
WRA	**Warramunga Arr**	**44.45**	**273**	P	**P**	**18 13 12.9**	**-0.6**
	17nm,0.7s,baz=114,slow=7.7,SNR=155						
WRA				ScP	**ScP**	**18 18 47.7**	**+0.4**
	2.3nm,1.1s,baz=108,slow=4.3,SNR=6.5						
MTN	**Manton Dam**	**50.45**	**280**	P	**P**	**18 13 59.5**	**-0.7**
	baz=50,SNR=8.3						
MTN				S	**S**	**18 21 17.6**	**+5.1**
	baz=50,SNR=5.7						
KNRA	**Kununurra**	**51.09**	**275**	P	**P**	**18 14 05.7**	**+0.7**
	baz=50,SNR=5.7						
FITZ	**Fitzroy Crossi**	**52.66**	**271**	P	**P**	**18 14 16.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**52.66**	**271**	P	**P**	**18 14 16.4**	**-0.4**
	5.1nm,0.6s,baz=141,slow=6.1,SNR=25						
FITZ	**Fitzroy Crossi**	**52.66**	**271**	P	**P**	**18 14 16.5**	**-0.2**
	baz=52,SNR=13						
MEEK	**Meekatharra**	**55.24**	**258**	P	**P**	**18 14 37.9**	**+2.3**
	baz=54,SNR=3.6						
MBWA	**Marble Bar**	**56.41**	**264**	*e*P	**P**	**18 14 42.4**	**-1.6**
	14nm,1.0s						
WSI	**Waingapu**	**61.22**	**276**	S	S	18 23 09.2	-27
	baz=60,SNR=3.9						
MAW	**Mawson**	**71.41**	**201**	P	**P**	**18 16 23.6**	**+1.7**
MAW	**Mawson**	**71.41**	**201**	P	**P**	**18 16 23.6**	**+1.7**
	3.9nm,0.8s,baz=116,slow=8.4,SNR=4.6						
PLCA	**Paso Flores**	**81.56**	**133**	LR	LR	18 45 41.8	
	comp=Z,141nm,20.2s,baz=182,slow=30						
PETK	**Petropavlovsk-**	**86.92**	**345**	P	**P**	**18 17 46.4**	**-0.1**
PETK	**Petropavlovsk-**	**86.92**	**345**	P	**P**	**18 17 46.4**	**-0.1**
	8.5nm,0.8s,baz=111,slow=6.5,SNR=5.0						
PETK				LR	LR	18 54 24.5	
	comp=Z,57nm,18.9s,baz=314,slow=34						
YBH	**Yreka Blue Hor**	**88.69**	**38**	LR	LR	18 51 06.1	
	comp=Z,72nm,18.1s,baz=61,slow=31						
NVAR	**Mina Array Bea**	**88.82**	**43**	P	**P**	**18 17 57.3**	**+1.0**
NVAR	**Mina Array Bea**	**88.82**	**43**	P	**P**	**18 17 57.3**	**+1.0**
	1.5nm,1.0s,baz=220,slow=7.9,SNR=8.9						
TXAR	**Lajitas Array**	**92.72**	**57**	P	**P**	**18 18 16.8**	**+2.3**
TXAR	**Lajitas Array**	**92.72**	**57**	P	**P**	**18 18 16.8**	**+2.3**
	0.1nm,0.5s,baz=222,slow=6.6,SNR=3.0						
TXAR				LR	LR	18 55 36.7	
	comp=Z,95nm,18.0s,baz=230,slow=33						
CMAR	**Chiang Mai Arr**	**94.04**	**289**	P	**P**	**18 19 19.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**94.04**	**289**	P	**P**	**18 19 19.7**	**-1.0**
	0.7nm,0.9s,baz=156,slow=3.0,SNR=4.2						
LPAZ	**La Paz**	**97.43**	**114**	LR	LR	18 51 51.8	
	comp=Z,52nm,20.1s,baz=308,slow=29						
CPUP	**Villa Florida**	**99.08**	**128**	LR	LR	18 53 20.9	
	comp=Z,102nm,20.2s,baz=358,slow=29						
YKA	**Yellowknife Ar**	**106.28**	**26**	PKKPbc	PKKPbc	18 34 45.4	-3.1
	0.1nm,0.5s,baz=37,slow=3.0,SNR=4.3						
MKAR	**Makanchi Array**	**118.69**	**310**	PKP	**PKPdf**	**18 23 48.2**	**-1.6**
MKAR	**Makanchi Array**	**118.69**	**310**	PKP	**PKPdf**	**18 23 48.2**	**-1.6**
	0.5nm,0.6s,baz=206,slow=1.2,SNR=8.2						
KURK	**Kurchatov**	**122.00**	**313**	*e*PKPdf	**PKPdf**	**18 23 54.6**	**-1.4**
KURBB	**Kurchatov Arra**	**122.04**	**313**	PKP	**PKPdf**	**18 23 54.9**	**-1.2**
	1.5nm,0.6s,baz=112,slow=1.8,SNR=21						
BVAR	**Borovoye Array**	**127.38**	**315**	PKP	**PKPdf**	**18 24 05.9**	**-0.4**
BVAR	**Borovoye Array**	**127.38**	**315**	PKP	**PKPdf**	**18 24 05.9**	**-0.4**
	1.3nm,0.7s,baz=150,slow=1.7,SNR=8.4						
AKTO	**Aktyubinsk**	**135.04**	**312**	PKP	**PKPdf**	**18 24 20.4**	**-0.5**
AKTO	**Aktyubinsk**	**135.04**	**312**	PKP	**PKPdf**	**18 24 20.4**	**-0.5**
	0.9nm,0.5s,baz=44,slow=4.2,SNR=5.1						
ARCES	**ARCESS Array B**	**139.70**	**348**	PKP	**PKPdf**	**18 24 27.8**	**-1.2**
ARCES	**ARCESS Array B**	**139.70**	**348**	PKP	**PKPdf**	**18 24 27.8**	**-1.2**
	1.0nm,0.6s,baz=83,slow=3.8,SNR=5.2						
JOF	**Joensuu**	**143.52**	**338**	*e*pkp	PKPab	18 24 31.2	-1.1
	2.0nm,0.8s						
GNI	**Garni**	**144.82**	**296**	*e*PKPbc	**PKPab**	**18 24 38.1**	**-0.1**
KAF	**Kangasniemi**	**145.66**	**340**	*e*pkp	**PKPdf**	**18 24 37.2**	**-2.4**
	19nm,0.7s						
FIA1	**FINESS Array S**	**146.25**	**340**	*e*PKPbc	**PKPdf**	**18 24 40.5**	**-0.2**
FINES	**FINESS Array B**	**146.25**	**340**	PKPbc	**PKPdf**	**18 24 40.9**	**+0.2**
FINES	**FINESS Array B**	**146.25**	**340**	PKPbc	**PKPdf**	**18 24 40.9**	**+0.2**
	30nm,0.9s,baz=62,slow=4.5,SNR=71						
SFNV	**Sufian**	**148.43**	**289**	*e*P	**PKPbc**	**18 24 49.0**	**+0.2**
NB2	**NORSAR Subarra**	**149.85**	**351**	PKP	**PKPbc**	**18 24 50.6**	**-0.9**
	comp=Z,6.0nm,1.1s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.85**	**351**	PKPbc	**PKPbc**	**18 24 50.9**	**-0.6**
NOA	**NORSAR Array B**	**149.85**	**351**	PKPbc	**PKPbc**	**18 24 50.9**	**-0.6**
	comp=Z,2.0nm,0.8s,baz=16,slow=4.3,SNR=7.4						
ROOS	**tl_alroos**	**150.60**	**285**	*e*P	**PKPdf**	**18 24 51.3**	**+2.5**
MICGM	**Minsk**	**150.66**	**329**	*e*P	**PKPbc**	**18 24 52.0**	**-1.6**
NACGM	**Naroch**	**150.86**	**331**	*e*	**PKPdf**	**18 24 51.0**	**+2.6**
SALA	**Sala**	**150.92**	**282**	*e*P	**PKPbc**	**18 24 55.1**	**0.0**
DRWC	**Darouich**	**151.20**	**290**	*e*P	**PKPbc**	**18 24 55.3**	**-0.2**
HAWK	**Haweek**	**151.35**	**285**	*e*P	**PKPbc**	**18 24 55.6**	**-0.4**
BTCH	**Batrach**	**151.37**	**288**	*e*P	**PKPbc**	**18 24 55.4**	**-0.5**
TCHB	**Talchebab**	**151.55**	**281**	*e*P	**PKPbc**	**18 24 57.5**	**+1.1**
BRBR	**Barbar**	**151.65**	**283**	*e*P	**PKPbc**	**18 24 54.0**	**-2.8**
ARNB	**Al Arnab**	**151.76**	**288**	*e*P	**PKPbc**	**18 24 55.4**	**-1.5**
AKASG	**Malin Array Be**	**152.33**	**322**	PKPbc	**PKPbc**	**18 24 57.0**	**-0.6**
AKASG	**Malin Array Be**	**152.33**	**322**	PKPbc	**PKPbc**	**18 24 57.0**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=49,slow=2.5,SNR=14						
AK01	**Malin Array Si**	**152.34**	**322**	*e*PKPbc	**PKPbc**	**18 24 56.6**	**-0.9**
KIEV	**Kiev**	**152.34**	**322**	*e*PKPbc	**PKPbc**	**18 24 56.5**	**-1.0**
AK02	**Malin Array Si**	**152.36**	**322**	*e*PKPbc	**PKPbc**	**18 24 56.9**	**-0.7**
BR131	**Keskin Array S**	**153.36**	**297**	*e*PKPbc	**PKPbc**	**18 25 00.5**	**+0.1**
BRTR	**Keskin Array B**	**153.36**	**297**	PKPbc	**PKPbc**	**18 24 59.8**	**-0.7**
BRTR	**Keskin Array B**	**153.36**	**297**	PKPbc	**PKPbc**	**18 24 59.8**	**-0.7**
	comp=Z,2.5nm,0.9s,baz=134,slow=3.6,SNR=15						
CLL	**Collm**	**158.68**	**341**	*i*PKPab	**PKPab**	**18 25 33.7**	**-1.0**
	comp=Z,11nm,1.4s						
CLL				*e*pPKPab	**pPKPab**	**18 25 42.0**	**-1.2**
BRG	**Berggiesshubel**	**158.79**	**339**	*e*P	**PKPab**	**18 25 34.5**	**-0.7**
	comp=Z,7.4nm,1.1s						
GERES	**GERESS Array B**	**160.64**	**337**	PKPab	**PKPab**	**18 25 42.4**	**-1.1**
GERES	**GERESS Array B**	**160.64**	**337**	PKPab	**PKPab**	**18 25 42.4**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=35,slow=4.9,SNR=6.1						
TORD	**Torodi Ar. Bea**	**161.75**	**178**	PKPab	**PKPab**	**18 25 49.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**161.75**	**178**	PKPab	**PKPab**	**18 25 49.4**	**+0.5**
	comp=Z,1.8nm,0.9s,baz=176,slow=3.2,SNR=7.5						

*ISK **18** 18:13:44.8, 37.°88N×29.°11E, h7km, MD2.8*

*ISCJB **18** 18:13:45.1±0.5, 37.°87N±0.°03×29.°07E±0.°05, h8km±6km, Error ellipse: s-maj=6.7km s-min=4.4km az=17.1*

*DDA **18** 18:13:45.5, 37.°88N×29.°08E, h8km, MD2.5*

*CSEM **18** 18:13:45.2±0.1, 37.°87N×29.°11E, h8km, MD2.8, Error ellipse: s-maj=3.1km s-min=1.9km az=105.0*

ISC 18 18:13:45.1±1.0, 37.°88N±0.°02×29.°12E±0.°04, h9km±10km, n32, σ0°70/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.14**	**208**	*e*PG	**Pg**	**18 13 48.5**	**+0.3**
DENT	**Denizli**	**0.14**	**208**	*e*Pg	**Pg**	**18 13 48.5**	**+0.3**
DNZL	**Cakiroluk**	**0.20**	**196**	*i* P	**Pg**	**18 13 49.5**	**+0.3**
DNZL	**Cakiroluk**	**0.20**	**196**	*i* P	**Pg**	**18 13 49.5**	**+0.3**
KHL	**Karahalli**	**0.55**	**36**	*e*PG	**Pg**	**18 13 55.8**	**0.0**
KHL				*e*SG	**Sb**	**18 14 04.5**	**-0.5**
KHL	**Karahalli**	**0.55**	**36**	*e*Pg	**Pg**	**18 13 55.8**	**0.0**
KHL				*e*Sg	**Sb**	**18 14 04.5**	**-0.5**
KHAL	**Karahalli**	**0.57**	**31**	*i* P	**Pg**	**18 13 56.4**	**+0.1**
KHAL				*i* S	**Sb**	**18 14 05.2**	**-0.6**
KHAL	**Karahalli**	**0.57**	**31**	*i* P	**Pg**	**18 13 56.4**	**+0.1**
KHAL				*i* S	**Sb**	**18 14 05.2**	**-0.6**
KULA	**Kula-Manisa**	**0.73**	**331**	*e*PG	**Pg**	**18 13 59.5**	**+0.3**
KULA				*e*SG	**Sg**	**18 14 09.3**	**+0.6**
KULA	**Kula-Manisa**	**0.73**	**331**	*e*Pg	**Pg**	**18 13 59.5**	**+0.3**
KULA				*e*Sg	**Sg**	**18 14 09.3**	**+0.6**
GOLH	**Golhisar**	**0.73**	**151**	*i* P	**Pg**	**18 13 59.7**	**+0.4**
GOLH				*i* S	**Sb**	**18 14 11.8**	**+1.5**
GOLH	**Golhisar**	**0.73**	**151**	*i* P	**Pg**	**18 13 59.7**	**+0.4**
GOLH				*i* S	**Sb**	**18 14 11.8**	**+1.5**
MANT	**Manisa**	**0.75**	**324**	*e*P	**Pg**	**18 13 59.8**	**+0.1**
MANT	**Manisa**	**0.75**	**324**	*e*P	**Pg**	**18 13 59.8**	**+0.1**
YER	**Yerkesik**	**0.99**	**222**	*e*PG	**Pg**	**18 14 04.0**	**-0.2**
YER	**Yerkesik**	**0.99**	**222**	*e*Pg	**Pg**	**18 14 04.0**	**-0.2**
AYDN	**Tasoluk**	**1.00**	**258**	*e*P	**Pg**	**18 14 04.3**	**-0.1**
TURN	**Turunc**	**1.08**	**202**	*i* P	Pn	18 14 13.3	+6.9
TURN				*i* S	**Sg**	**18 14 17.0**	**-3.0**
DALY	**Dalyan (Mu˘la**	**1.12**	**199**	*e*PN	**Pb**	**18 14 06.8**	**+0.1**
DALY	**Dalyan (Mu˘la**	**1.12**	**199**	*e*Pn	**Pb**	**18 14 06.8**	**+0.1**
FETY	**Fethiye**	**1.24**	**181**	*e*PN	**Pn**	**18 14 08.4**	**-0.3**
FETY	**Fethiye**	**1.24**	**181**	*e*Pn	**Pn**	**18 14 08.4**	**-0.3**
SHUT	**Suhut-Afyon**	**1.32**	**59**	*e*PN	**Pn**	**18 14 09.9**	**0.0**
SHUT	**Suhut-Afyon**	**1.32**	**59**	*e*Pn	**Pn**	**18 14 09.9**	**0.0**
ALT	**Altintas**	**1.41**	**33**	*e*PN	**Pn**	**18 14 11.6**	**+0.5**
ALT	**Altintas**	**1.41**	**33**	*e*Pn	**Pn**	**18 14 11.6**	**+0.5**
ANTB	**Antalya**	**1.57**	**128**	*e*PN	**Pn**	**18 14 13.0**	**-0.1**
ANTB	**Antalya**	**1.57**	**128**	*e*Pn	**Pn**	**18 14 13.0**	**-0.1**
TVSB	**Tavsanli**	**1.59**	**10**	*e*PN	**Pb**	**18 14 14.6**	**-0.2**
TVSB	**Tavsanli**	**1.59**	**10**	*e*Pn	**Pb**	**18 14 14.6**	**-0.2**
BODT	**Bodrum**	**1.65**	**241**	*e*PN	**Pn**	**18 14 14.9**	**+0.6**
BODT	**Bodrum**	**1.65**	**241**	*e*Pn	**Pn**	**18 14 14.9**	**+0.6**

IDC 18 18:16:15.7±7.4, 6.°87S×155.°89E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, Error ellipse: s-maj=195.9km s-min=32.9km az=107.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.62**	**236**	P	P	18 21 38.5	+0.5
	0.3nm,0.6s,baz=60,slow=10,SNR=13						
ASAR	**Alice Springs**	**26.93**	**229**	P	P	18 21 58.6	-0.3
	0.5nm,0.7s,baz=63,slow=9.2,SNR=7.1						
CMAR	**Chiang Mai Arr**	**61.53**	**295**	P	P	18 26 34.8	-0.3
	0.2nm,0.6s,baz=128,slow=5.8,SNR=4.1						
SONM	**Songino Array**	**69.71**	**327**	P	P	18 27 27.7	+0.1
	0.2nm,0.5s,baz=136,slow=6.3,SNR=2.2						

IDC 18 18:50:53.7±3.4, 3.°25S×151.°44E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.5/19, mbtmp3.9/3, Error ellipse: s-maj=115.2km s-min=46.8km az=117.0, New Ireland region

| Code | Station Name

	baz=275									
TWD	**Chiawan**	**1.14**	**248**	*i*	P		**Pn**	19 24 42.4	**-0.2**
	baz=239									
TWD					S		**Sn**	19 24 58.2	**-0.7**
	baz=239									
HWA	**Hwalien**	**1.18**	**243**		P		**Pn**	19 24 43.0	**0.0**
	baz=240									
JKRS	**Kuro-shima**	**1.18**	**103**		P		**Pn**	19 24 43.9	**+0.9**
JKRS					*e*S		**Sn**	19 25 00.8	**+1.0**
NNS	**Nan Shan**	**1.26**	**267**		P		**Pn**	19 24 44.4	**+0.3**
	baz=259									
NNS					*e*S		**Sn**	19 25 01.2	**-0.5**
	baz=259									
JIJ	**Ishigaki jima**	**1.28**	**96**		P		**Pn**	19 24 44.7	**+0.6**
JIJ					*e*S		**Sn**	19 25 01.7	**-0.1**
NSK	**Sanguang**	**1.28**	**278**	*i*	P		**Pn**	19 24 44.9	**+0.6**
	baz=270									
NSK					S		**Sn**	19 25 01.6	**-0.4**
	baz=270									
TWY	**Chenhua**	**1.29**	**306**		P		**Pn**	19 24 45.0	**+0.6**
	baz=301									
TWS1	**Kuangyinshan**	**1.35**	**296**		P		**Pn**	19 24 45.5	**+0.6**
	baz=290									
TWS1					*e*S		**Sn**	19 25 03.0	**-0.3**
	baz=290									
ESL	**Shilin**	**1.39**	**240**		P		**Pn**	19 24 45.4	**-0.1**
	baz=237									
ESL					*e*S		**Sn**	19 25 03.4	**-1.0**
	baz=237									
WHF	**Hehuan Shan**	**1.41**	**255**	*i*	P		**Pn**	19 24 46.3	**+0.2**
	baz=258									
WHF					S		**Sn**	19 25 04.5	**-0.9**
	baz=258									
TWT	**Tachien**	**1.46**	**260**	*e*P			**Pn**	19 24 47.4	**+0.8**
	baz=258									
TWT					*e*S		**Sn**	19 25 06.0	**-0.1**
	baz=258									
NSTT	**Nanjuang**	**1.60**	**275**		P		**Pn**	19 24 48.8	**+0.7**
	baz=273									
NSTT					*e*S		**Sn**	19 25 08.4	**-0.5**
	baz=273									
EHY	**Hungye**	**1.65**	**233**	*i*	P		**Pn**	19 24 48.5	**-0.3**
	baz=237									
EHY					*e*S		**Sn**	19 25 08.5	**-1.5**
	baz=237									
TWF1	**Yuli**	**1.76**	**229**	*i*	P		**Pn**	19 24 50.2	**0.0**
	baz=234									
TWF1					*e*S		**Sn**	19 25 11.7	**-0.9**
	baz=234									
JTJ	**Tarama**	**1.78**	**86**		P		**Pn**	19 24 51.1	**+0.7**
JTJ					*e*S		**Sn**	19 25 13.7	**+0.8**
SMLT	**Sun Moon Lake**	**1.81**	**250**	*e*P			**Pn**	19 24 51.7	**+0.9**
	baz=243									
SMLT					*e*S		**Sn**	19 25 12.8	**-0.9**
	baz=243									
TWQ1	**Liyutan**	**1.81**	**265**	*e*P			**Pn**	19 24 51.6	**+0.8**
	baz=263									
TWQ1					*e*S		**Sn**	19 25 13.5	**-0.3**
	baz=263									
NSY	**Sanyi**	**1.82**	**267**	*e*S			**Sn**	19 25 14.8	**+0.9**
	baz=265									
TYC	**Yuchr**	**1.83**	**251**		P		**Pn**	19 24 52.1	**+1.0**
	baz=245									
TYC					*e*S		**Sn**	19 25 15.1	**+0.9**
	baz=245									
CHKT	**Chengkung**	**1.90**	**222**	*e*P			**Pn**	19 24 51.1	**-0.8**
	baz=214									
CHKT					*e*S		**Sn**	19 25 13.2	**-2.4**
	baz=214									
TCU	**Taichung**	**1.93**	**260**	*e*P			**Pn**	19 24 53.5	**+1.2**
	baz=267									
WNT	**Mingjian**	**1.99**	**252**	*e*P			**Pn**	19 24 54.7	**+1.6**
	baz=249									
ALS	**Alishan**	**2.04**	**241**		P		**Pn**	19 24 55.4	**+1.3**
	baz=233									
ALS					*e*S		**Sn**	19 25 18.9	**-0.6**
	baz=233									
ELDTW	**Lidau**	**2.06**	**231**		P		**Pn**	19 24 54.2	**0.0**
	baz=231									
CHN5	**Tsauling**	**2.10**	**245**		P		**Pn**	19 24 56.0	**+1.3**
	baz=242									
CHN5					*e*S		**Sn**	19 25 22.2	**+1.6**
	baz=242									
WGK	**Gukeng**	**2.17**	**248**	*e*P			**Pn**	19 24 57.2	**+1.8**
	baz=256									
WGK					*e*S		**Sn**	19 25 23.1	**+1.2**
	baz=256									
TWG	**Pinlang**	**2.28**	**223**	*e*P			**Pn**	19 24 56.9	**-0.1**
	baz=219									
TWG					*e*S		**Sn**	19 25 23.0	**-1.6**
	baz=219									
TTN	**Taitung**	**2.29**	**220**	*e*P			**Pn**	19 24 56.6	**-0.4**
	baz=213									
TTN					*e*S		**Sn**	19 25 23.4	**-1.3**
	baz=213									
CHN4	**Tsaushan**	**2.29**	**240**	*e*P			**Pn**	19 24 58.9	**+1.8**
	baz=237									
CHN4					*e*S		**Sn**	19 25 25.8	**+1.0**
	baz=237									
CHN2	**Minshiung**	**2.30**	**245**	*e*P			**Pn**	19 24 58.5	**+1.4**
	baz=243									
WTP	**Ta-pu**	**2.33**	**238**		P		**Pn**	19 24 59.1	**+1.5**
	baz=245									
WTP					*e*S		**Sn**	19 25 26.9	**+1.1**
	baz=245									
JMJ	**Miyako jima 2**	**2.33**	**82**	*e*S			**Sn**	19 25 25.6	**-0.1**
WTCT	**Ta-ch'eng**	**2.35**	**255**	*e*P			**Pn**	19 24 57.7	**-0.1**
	baz=252									
CHY	**Chiayi**	**2.36**	**245**	*e*P			**Pn**	19 24 59.4	**+1.5**
	baz=253									
TWK	**Hsinying**	**2.42**	**240**	*e*P			**Pn**	19 25 01.1	**+2.3**
	baz=257									
JOGS	**Gusukube**	**2.43**	**84**	*e*S			**Sn**	19 25 27.9	**-0.1**
CHN1	**Nanshi**	**2.43**	**237**	*e*P			**Pn**	19 25 00.7	**+1.8**
	baz=244									
CHN1					*e*S		**Sn**	19 25 29.2	**+1.1**
	baz=244									
WSF	**Szhu**	**2.47**	**250**	*e*P			**Pn**	19 24 58.9	**-0.5**
	baz=255									
WSF					*e*S		**Sn**	19 25 29.0	**-0.1**
	baz=255									
ECL	**Taimali**	**2.52**	**221**	*e*P			**Pn**	19 24 59.6	**-0.5**
	baz=218									
ECL					*e*S		**Sn**	19 25 28.3	**-2.0**
	baz=218									
SSD	**Sandimen**	**2.62**	**228**	*e*P			**Pn**	19 25 03.4	**+2.0**
	baz=225									
SSD					*e*S		**Sn**	19 25 34.1	**+1.4**
	baz=225									
LAY	**Lan-yu**	**2.70**	**204**	*e*P			**Pn**	19 25 01.8	**-0.7**
	baz=202									
EAST	**Anshuo**	**2.75**	**220**	*e*P			**Pn**	19 25 03.8	**+0.6**
	baz=217									
EAST					*e*S		**Sn**	19 25 34.1	**-1.7**
	baz=217									
SCZT	**Fangliau**	**2.90**	**223**	*e*P			**Pn**	19 25 07.7	**+2.6**
	baz=216									
PNG	**Penghu**	**3.07**	**253**	*e*P			**Pn**	19 25 06.8	**-0.6**
	baz=250									
TWK1	**Hengchun**	**3.12**	**215**	*e*S			**Sn**	19 25 43.7	**-1.0**
	baz=212									
JKE	**Kume jima 2**	**4.07**	**63**		P		**Pn**	19 25 21.0	**+0.2**
JKE					*e*S		**Sn**	19 26 07.8	**+0.4**
JIH	**Iheya**	**5.33**	**61**		P		**Pn**	19 25 37.3	**-0.6**
JIH					*e*S		**Sn**	19 26 35.4	**-2.6**
JOW	**Kunigami**	**5.49**	**64**		P		**Pn**	19 25 39.0	**-1.1**

IDC ***18*** *19:26:00.6±1.2,38˚.20N×22˚.09E, h0km, mb3.6/9, mb1 3.6/11, mb1mx3.5/29, mbtmp3.6/11, ML3.2/2, Error ellipse: s-maj=23.7km s-min=20.0km az=170.0*

ATH ***18*** *19:26:00.9, 38˚.13N×22˚.07E, h18km±1km, MD2.9/11, ML3.4*

ISCJB ***18*** *19:26:01.2±0.4, 38˚.14N±0˚.01×22˚.06E±0˚.02, h12km±2km, mb3.5/9, Error ellipse: s-maj=3.0km s-min=2.3km az=153.7*

CSEM ***18*** *19:26:01.4±0.1, 38˚.11N×22˚.08E, h8km, MD2.9, Error ellipse: s-maj=2.8km s-min=2.2km az=66.0*

ISC 18 19:26:01.8±0.7, 38˚.12N±0˚.02×22˚.06E±0˚.02, h12km±4km, n83, σ1§03/115, mb3.7/9, 1C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLV	**Kalavryta, Ach**	**0.11**	**137**	*e*PB	**Pg**	**19 26 04.6**	**-0.2**
KLV	**Kalavryta, Ach**	**0.11**	**137**	*e*Pb	**Pg**	**19 26 04.6**	**-0.2**
LAKA	**Lakka**	**0.13**	**332**	*e*PB	**Pg**	**19 26 04.8**	**-0.3**
LAKA				*e*SB	**Sg**	**19 26 06.9**	**-0.6**
LAKA	**Lakka**	**0.13**	**332**	*e*Pb	**Pg**	**19 26 04.8**	**-0.3**
LAKA				S	**Sg**	**19 26 06.5**	**-1.0**
LAKA				*e*Sb		19 26 06.9	
TRIZ	**Trizonia**	**0.24**	**3**	*e*PB	**Pg**	**19 26 06.5**	**-0.4**
TRIZ				*e*SB	**Sg**	**19 26 10.8**	**+0.5**
TRIZ	**Trizonia**	**0.24**	**3**	P	**Pg**	**19 26 06.5**	**-0.4**
TRIZ				S	**Sg**	**19 26 10.0**	**-0.3**
TRIZ				*e*Sb		19 26 10.8	
KALE	**Kalithea**	**0.28**	**13**	*e*PB	**Pg**	**19 26 07.2**	**-0.3**
KALE				*e*SB	**Sg**	**19 26 11.5**	**+0.1**
KALE	**Kalithea**	**0.28**	**13**	P	**Pg**	**19 26 07.2**	**-0.3**
KALE				S	**Sg**	**19 26 10.7**	**-0.7**
KALE				*e*Sb	**Sg**	**19 26 11.5**	**+0.1**
GUR	**Goura**	**0.29**	**130**	*e*PB	**Pg**	**19 26 07.5**	**-0.4**
GUR				*e*SB	**Sg**	**19 26 12.4**	**+0.6**
GUR	**Goura**	**0.29**	**130**	P	**Pg**	**19 26 07.4**	**-0.4**
GUR				S	**Sg**	**19 26 12.1**	**+0.3**
GUR				*e*Sb	**Sg**	**19 26 12.4**	**+0.6**
EFP	**Efpalio**	**0.33**	**339**	*e*PB	**Pg**	**19 26 08.1**	**-0.3**
EFP				*e*SB	**Sg**	**19 26 13.3**	**+0.5**
EFP	**Efpalio**	**0.33**	**339**	P	**Pg**	**19 26 08.1**	**-0.3**
EFP				S	**Sg**	**19 26 12.7**	**-0.1**
EFP				*e*Sb	**Sg**	**19 26 13.3**	**+0.5**
DSF	**Desfina**	**0.47**	**52**	P	**Pg**	**19 26 10.1**	**-0.9**
DSF				S	**Sg**	**19 26 16.4**	**-0.9**
RLS	**Riolos of Patr**	**0.47**	**262**	*e*PB	**Pg**	**19 26 10.6**	**-0.4**
RLS				*e*SB	**Sb**	**19 26 17.9**	**-1.0**
RLS	**Riolos of Patr**	**0.47**	**262**	*e*Pb	**Pg**	**19 26 10.6**	**-0.4**
RLS				S	**Sb**	**19 26 17.8**	**-1.1**
LTK	**Loutraki**	**0.72**	**98**	*e*PN	**Pg**	**19 26 15.1**	**-0.7**
LTK	**Loutraki**	**0.72**	**98**	P	**Pg**	**19 26 15.1**	**-0.7**
LTK				S	**Sg**	**19 26 25.5**	**+0.2**
VLX	**Vlachokerasia**	**0.79**	**161**	*e*PN	**Pg**	**19 26 16.2**	**-0.9**
VLX	**Vlachokerasia**	**0.79**	**161**	P	**Pg**	**19 26 16.2**	**-0.9**
VLX				S	**Sb**	**19 26 28.3**	**0.0**
EVR	**Evrytania**	**0.82**	**346**	*e*PN	**Pg**	**19 26 16.8**	**-0.9**
EVR				*e*SN	**Sg**	**19 26 27.9**	**-0.4**
EVR	**Evrytania**	**0.82**	**346**	P	**Pg**	**19 26 16.7**	**-0.9**
EVR				S	**Sb**	**19 26 29.1**	**+0.1**
LKR	**Lokris**	**0.91**	**54**	*e*PN	**Pg**	**19 26 17.9**	**-1.4**
LKR	**Lokris**	**0.91**	**54**	P	**Pg**	**19 26 17.9**	**-1.4**
LKR				S	**Sg**	**19 26 30.0**	**-1.2**
AGG	**Agios Georgios**	**0.92**	**13**	*e*PN	**Pg**	**19 26 18.2**	**-1.4**
AGG	**Agios Georgios**	**0.92**	**13**	P	**Pg**	**19 26 18.2**	**-1.4**
AGG				S	**Sb**	**19 26 32.0**	**0.0**
ATAL	**Atalanti**	**0.95**	**53**	P	**Pg**	**19 26 19.0**	**-1.1**
ATAL				S	**Sb**	**19 26 32.7**	**0.0**
ITM	**Ithomi**	**0.95**	**186**	*e*PN	**Pg**	**19 26 19.0**	**-1.1**
ITM				*e*SN	**Sb**	**19 26 32.6**	**0.0**
ITM	**Ithomi**	**0.95**	**186**	P	**Pg**	**19 26 18.9**	**-1.1**
ITM				*e*Sn	**Sb**	**19 26 32.6**	**0.0**
ITM				S	**Sn**	**19 26 33.7**	**-0.7**
DID	**Didima**	**1.12**	**123**	*e*PN	**Pb**	**19 26 21.9**	**-1.2**
DID				*e*SN	**Sg**	**19 26 37.7**	**-0.2**
DID	**Didima**	**1.12**	**123**	P	**Pb**	**19 26 22.1**	**-1.0**
DID				*e*Sn	**Sg**	**19 26 37.7**	**-0.2**
VLS	**Valsamata**	**1.16**	**273**	*e*PN	**Pb**	**19 26 22.5**	**-1.3**
VLS	**Valsamata**	**1.16**	**273**	P	**Pb**	**19 26 22.5**	**-1.3**
VLS				S	**Sn**	**19 26 39.7**	**+0.1**
NAIG	**Nisos Aigina**	**1.19**	**107**	*e*PN	**Pn**	**19 26 23.7**	**-0.5**
NAIG	**Nisos Aigina**	**1.19**	**107**	*e*Pn	**Pn**	**19 26 23.7**	**-0.5**
PYL	**PYLOS**	**1.25**	**192**	*e*PN	**Pn**	**19 26 24.4**	**-0.7**
PYL	**PYLOS**	**1.25**	**192**	*e*Pn	**Pn**	**19 26 24.4**	**-0.7**
PYL				S	**Sg**	**19 26 42.5**	**+0.4**
LKD2	**Lefkada island**	**1.28**	**302**	P	**Pn**	**19 26 24.7**	**-0.9**
ATH	**Athens Observa**	**1.32**	**96**	*e*PN	**Pn**	**19 26 25.7**	**-0.3**
ATH				*e*SN	**Sn**	**19 26 43.5**	**0.0**
ATH	**Athens Observa**	**1.32**	**96**	P	**Pn**	**19 26 25.4**	**-0.6**
ATH	**Athens Observa**	**1.32**	**96**	*e*Pn	**Pn**	**19 26 25.7**	**-0.3**
ATH				S	**Sb**	**19 26 42.7**	**-0.6**
ATH				*e*Sn	**Sn**	**19 26 43.5**	**0.0**
DYR	**Agios Nikonas**	**1.38**	**171**	*e*PN	**Pn**	**19 26 26.3**	**-0.5**
DYR	**Agios Nikonas**	**1.38**	**171**	*e*Pn	**Pn**	**19 26 26.3**	**-0.5**
PTL	**Penteli**	**1.43**	**92**	*e*PN	**Pn**	**19 26 27.1**	**-0.5**
PTL	**Penteli**	**1.43**	**92**	*e*Pn	**Pn**	**19 26 27.1**	**-0.5**
THL	**Klokotos Trika**	**1.44**	**359**	*e*PN	**Pb**	**19 26 27.9**	**-0.7**
THL	**Klokotos Trika**	**1.44**	**359**	*e*Pn	**Pb**	**19 26 27.9**	**-0.7**
NEO	**Neokhori**	**1.49**	**37**	*e*PN	**Pn**	**19 26 28.3**	**-0.2**
NEO	**Neokhori**	**1.49**	**37**	*e*Pn	**Pn**	**19 26 28.3**	**-0.2**
VLI	**Veliai**	**1.57**	**153**	*e*PN	**Pb**	**19 26 29.7**	**-1.0**
VLI	**Veliai**	**1.57**	**153**	*e*Pn	**Pb**	**19 26 29.7**	**-1.0**
JAN	**Janina**	**1.80**	**329**	*e*PN	**Pb**	**19 26 34.0**	**-0.7**
JAN	**Janina**	**1.80**	**329**	*e*Pn	**Pb**	**19 26 34.0**	**-0.7**
KYTH	**Kithira**	**2.00**	**157**	*e*PN	**Pb**	**19 26 36.8**	**-1.3**
KYTH	**Kithira**	**2.00**	**157**	*e*Pn	**Pb**	**19 26 36.8**	**-1.3**
LIT	**Litokhoron**	**2.00**	**10**	*e*PB	**Pn**	**19 26 35.5**	**0.0**
KEK	**Kerkira**	**2.37**	**313**	*e*PB	**Pb**	**19 26 42.3**	**-2.1**
ANKY	**Antikythira Is**	**2.46**	**156**	*e*PN	**Pn**	**19 26 42.2**	**+0.5**
ANKY	**Antikythira Is**	**2.46**	**156**	*e*Pn	**Pn**	**19 26 42.2**	**+0.5**
BIA	**Bitola**	**2.95**	**349**	*e*Pn	**Pn**	**19 26 49.6**	**+1.1**
BIA				*e*Sn	**Sb**	**19 27 30.6**	**+0.3**
BIA	**Bitola**	**2.95**	**349**	*e*Pn	**Pn**	**19 26 49.6**	**+1.1**
VAY	**Valandovo**	**3.22**	**7**	*e*Pn	**Pn**	**19 26 54.2**	**+2.1**
VAY	**Valandovo**	**3.22**	**7**	*e*Pn	**Pn**	**19 26 54.7**	**+2.6**
SKO	**Skopje**	**3.87**	**353**	*e*Pn	Pn	19 26 57.0	-4.1
SKO	**Skopje**	**3.87**	**353**	*e*Pn	Pn	19 26 57.5	-3.7
BARS	**Barje**	**4.69**	**358**	*e*Pn	**Pn**	**19 27 15.0**	**+2.6**
STON	**Ston**	**5.79**	**326**	*e*Pn	**Pn**	**19 27 27.8**	**+0.4**
STON				Sn	**Sn**	**19 28 31.6**	**-2.2**
STON	**Ston**	**5.79**	**326**	*e*Pn	**Pn**	**19 27 27.8**	**+0.4**
GRUS	**Gruza**	**5.85**	**350**	*e*Pn	**Pn**	**19 27 30.2**	**+1.9**
DIVS	**Divibare**	**6.17**	**346**	*i*Pn	**Pn**	**19 27 34.1**	**+1.3**
MLR	**Muntele Rosu**	**7.91**	**20**	Pn	Pn	19 28 01.5	+4.8
	0.1nm,0.3s,baz=6.2,slow=3.0,SNR=9.4						
NVLJ	**Novalja**	**8.40**	**322**	*i*Pn	**Pn**	**19 28 03.5**	**+0.2**
NVLJ				Sn	**Sn**	**19 29 33.5**	**-4.5**
BRTR	**Keskin Array B**	**9.17**	**76**	Pn	**Pn**	**19 28 15.3**	**+1.4**
	0.1nm,0.3s,baz=260,slow=12,SNR=3.9						
MMAI	**Mount Meron Ar**	**12.00**	**111**	Pn	**Pn**	**19 28 52.5**	**-0.2**
	0.4nm,0.3s,baz=294,slow=10,SNR=3.5						
ESDC	**Sonseca Array**	**20.29**	**283**	P	Pn	19 30 38.5	-0.9
	0.2nm,0.3s,baz=70,slow=11,SNR=3.3						
HFS	**Hagfors**	**22.66**	**349**	P	**P**	**19 31 03.0**	**+0.4**
	0.7nm,0.5s,baz=156,slow=11,SNR=7.3						
FINES	**FINESS Array B**	**23.48**	**5**	P	**P**	**19 31 09.5**	**-1.5**
	0.3nm,0.3s,baz=201,slow=8.0,SNR=3.5						
NOA	**NORSAR Array B**	**23.93**	**347**	P	**P**	**19 31 14.1**	**-1.3**
	0.4nm,0.6s,baz=163,slow=8.9,SNR=4.0						
EKA	**Eskdalemuir Ar**	**24.18**	**324**	P	**P**	**19 31 19.1**	**+1.2**
	1.3nm,0.6s,baz=119,slow=9.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**30.77**	**221**	P	**P**	**19 32 18.2**	**+1.1**
	0.7nm,0.7s,baz=33,slow=9.2,SNR=7.2						
ARCES	**ARCESS Array B**	**31.53**	**2**	P	**P**	**19 32 24.2**	**+0.8**
	3.2nm,1.0s,baz=184,slow=9.9,SNR=3.1						
MKAR	**Makanchi Array**	**44.30**	**59**	P	**P**	**19 34 11.7**	**+0.3**
	1.1nm,0.5s,baz=272,slow=7.6,SNR=34						
ZALV	**Zalesovo Beam**	**44.83**	**48**	P	**P**	**19 34 15.0**	**-0.4**
	1.3nm,0.4s,baz=275,slow=8.2,SNR=10						
SONM	**Songino Array**	**59.55**	**51**	P	**P**	**19 36 07.8**	**+2.7**
	0.1nm,0.4s,baz=284,slow=5.6,SNR=3.5						

BJI ***18*** *19:40:34.8, 3˚.71S×143˚.19E, h33km, mB5.1/32, mb4.9/49, Ms4.7/32, Ms7 4.4/31*

IDC ***18*** *19:40:35.9±0.4, 3˚.24S×142˚.69E, h0km, mb4.8/21, mb1 4.9/23, mb1mx4.8/26, mbtmp4.8/23, ML5.0/2, MS4.0/16, Ms1 4.0/16, ms1mx3.8/29, Error ellipse: s-maj=14.0km s-min=7.6km az=104.0*

ISCJB ***18*** *19:40:37.5±1.1, 3˚.29S±0˚.03×142˚.69E±0˚.03, h20km±7km, mb4.9/77, MS4.0/23, Error ellipse: s-maj=5.8km s-min=4.3km az=156.0*

MOS ***18*** *19:40:39.6±1.1, 3˚.28S×142˚.61E, h33km, mb5.1/26, Error ellipse: s-maj=11.1km s-min=6.2km az=104.4*

NEIC ***18*** *19:40:41.5±0.9, 3˚.31S×142˚.66E, h40km±8km, mb4.9/29, Error ellipse: s-maj=6.0km s-min=4.8km az=81.0*

DJA ***18*** *19:40:41.8±0.8, 3˚S±8˚×14˚2E±˚, h10km, M5.1/22, mB5.5/18, mb5.5/22, MLv5.3/5, Mw(mB)4.9/18*

AUST ***18*** *19:40:44.5±0.2, 3˚.36S×142˚.48E, h57km, Error ellipse: s-maj=0.8km s-min=0.5km az=226.0*

ISC 18 19:40:42.6±0.4, 3˚.27S±0˚.04×142˚.77E±0˚.05, h47km±3km, h48km:pP-P, n329, σ1§41/368, mb4.9/76, MS4.0/23, 18C-5D, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.19**	**290**	P	Pn	19 41 11.6	-5.0
JAY				S	**Sn**	**19 41 42.5**	**-0.1**
JAY	**Jayapura**	**2.19**	**290**	P	Pn	19 41 12.2	-4.4
	baz=2.0,SNR=37						
MMPI	**Merauke**	**5.68**	**205**	P	**Pn**	**19 42 05.7**	**+1.1**
	820nm,0.8s,12µm6.2nm						
MMPI				S	**Pn**	**19 42 06.0**	**+1.4**
	6.2nm12µm820nm,0.8s						
MMPI	**Merauke**	**5.68**	**205**	P	**Pn**	**19 42 06.1**	**+1.6**
	baz=5.5,SNR=5.3						
SRPI	**Serui, Papua**	**6.67**	**282**	P	**Pn**	**19 42 16.3**	**-1.8**
	834nm,0.5s,8µm3.1nm						
BAKI	**Biak**	**6.97**	**287**	P	**Pn**	**19 42 19.5**	**-2.7**
	252nm,0.9s,4µm1.1nm						
PMG	**Port Moresby**	**7.50**	**145**	*e*P	**Pn**	**19 42 29.6**	**+0.2**
	197nm,1.1s						
PMG				Sn	**Sn**	**19 43 51.9**	**-1.4**
PMG	**Port Moresby**	**7.50**	**145**	P	Pn	19 42 33.5	+4.0
	166nm,1.0s,1µm0.5nm						
PMG	**Port Moresby**	**7.50**	**145**	Pn	**Pn**	**19 42 30.1**	**+0.6**
	2.0nm,0.3s,baz=32,slow=8.2,SNR=7.3						
PMG				Sn	**Sn**	**19 43 51.9**	**-1.4**
	baz=325,slow=18,SNR=1.8						
RKPI	**Ransiki, Papua**	**8.76**	**281**	P	**Pn**	**19 42 44.8**	**-2.0**
	239nm,0.6s,3µm						
FAKI	**Fak Fak**	**10.51**	**272**	P	**Pn**	**19 43 08.5**	**-2.2**
	83nm,0.9s,622nm						
FAKI	**Fak Fak**	**10.51**	**272**	P	**Pn**	**19 43 09.2**	**-1.6**
	baz=10,SNR=25						
COEN	**Coen**	**10.63**	**178**	P	**Pn**	**19 43 15.3**	**+2.9**
	baz=11,SNR=6.8						
SWI	**Sorong**	**11.74**	**281**	P	**Pn**	**19 43 26.1**	**-1.5**
	86nm,0.8s,846nm						
SWI	**Sorong**	**11.74**	**281**	P	**Pn**	**19 43 27.0**	**-0.6**
	baz=12,SNR=8.8						
PALU	**Palau**	**13.40**	**322**	P	**Pn**	**19 43 49.0**	**-1.3**
	baz=13,SNR=9.1						
KDU	**Kakadu**	**13.83**	**227**	P	Pn	19 43 51.6	-4.5
	baz=14,SNR=269						
MTSU	**Mount Surprise**	**14.85**	**174**	P	**P**	**19 44 16.2**	**+1.5**
	baz=15,SNR=5.0						
MTN	**Manton Dam**	**14.93**	**230**	P	Pn	19 44 06.8	-4.0
	baz=15,SNR=34						
LBMI	**Labuha**	**15.48**	**279**	P	**Pn**	**19 44 17.9**	**0.0**
	382nm,1.0s,2µm						
GAMI	**Galela, Maluku**	**15.81**	**289**	P	**P**	**19 44 26.3**	**+1.0**
TNTI	**Ternate**	**15.91**	**284**	P	**P**	**19 44 25.2**	**-1.2**
	289nm,1.0s,2µm						
GUMO	**Guam**	**16.88**	**7**	Pn	**P**	**19 44 36.6**	**-0.5**
GUMO	**Guam**	**16.88**	**7**	Pn	**P**	**19 44 36.6**	**-0.5**
	2.9nm,0.3s,baz=108,slow=5.7,SNR=5.0						
GUMO				LR	LR	19 50 10.4	
	comp=Z,129nm,19.9s,baz=9.1,slow=34						
CTA	**Charters Tower**	**17.06**	**169**	P	**P**	**19 44 41.7**	**+2.5**
CTA				Lg	Lg	19 49 35.4	
CTA	**Charters Tower**	**17.06**	**169**	P	**P**	**19 44 41.7**	**+2.5**
	0.5nm,0.3s,baz=331,slow=12,SNR=4.0						
CTA				Lg	Lg	19 49 35.4	
	0.5nm,0.3s,baz=336,slow=10.0,SNR=2.1						
CTA				LR	LR	19 51 39.3	
	comp=Z,560nm,18.2s,baz=353,slow=39						
QIS	**Mount Isa**	**17.46**	**190**	P	**P**	**19 44 43.5**	**-0.1**
	baz=17,SNR=11						
HNR	**Honiara**	**18.13**	**111**	*e*P	**P**	**19 44 50.7**	**-0.4**
	106nm,0.8s						
HNR	**Honiara**	**18.13**	**111**	P	**Pn**	**19 44 51.5**	**+0.3**
	11nm,0.3s,baz=240,slow=8.7,SNR=6.9						
PATS	**Pohnpei**	**18.48**	**57**	P	**Pn**	**19 44 57.7**	**+2.3**
	baz=19,SNR=5.0						
WRAB	**Tennant Creek**	**18.49**	**206**	*e*P	**P**	**19 44 52.0**	**-2.9**
WRAB				pmax	pmax		
	comp=Z,93nm,0.9s						
WRAB	**Tennant Creek**	**18.49**	**206**	*e*P	**P**	**19 44 52.0**	**-2.9**
	comp=Z,94nm,0.9s						
KNRA	**Kununurra**	**18.50**	**227**	P	**P**	**19 44 51.6**	**-3.4**
	baz=18,SNR=143						
WRA	**Warramunga Arr**	**18.50**	**206**	P	**P**	**19 44 52.3**	**-2.8**
WRA				S	**S**	**19 48 23.2**	**-0.7**
WRA				Lg	Lg	19 50 14.5	
WRA	**Warramunga Arr**	**18.50**	**206**	P	**P**	**19 44 52.3**	**-2.8**
	comp=Z,3.5n

DZM Mont Dzumac 29.62 131 *e*LR LR 19 54 28.9
comp=Z,611nm,29.8s
BBOO Buckleboo 30.05 191 P **P** **19 46 47.0 -0.4**
baz=30,SNR=54
BBOO S **S** **19 51 42.2 -0.3**
baz=30,SNR=5.7
BTM Bintulu 30.36 282 P **P** **19 46 50.4 +0.1**
FORT Forrest 30.69 205 P **P** **19 46 52.9 -0.1**
baz=31,SNR=29
SBUM Sibu 31.06 280 P **P** **19 46 56.2 -0.3**
YNG Young 31.32 171 P **P** **19 46 59.7 +1.2**
baz=31,SNR=8.1
UGM Wanagama 32.41 260 P **P** **19 47 07.4 -1.0**
baz=32,SNR=4.4
CAN Canberra 32.41 170 *e*P **P** **19 47 08.7 +0.5**
CAN pmax pmax
comp=Z,13nm,0.9s
CAN Canberra 32.41 170 *e*P **P** **19 47 08.7 +0.5**
comp=Z,13nm,0.9s
CNB Canberra Magne 32.47 170 P **P** **19 47 09.6 +0.9**
baz=33,SNR=8.4
KSM Kuching 32.78 278 *e*P **P** **19 47 10.4 -1.3**
comp=Z,25nm,0.9s
KSM Kuching 32.78 278 P **P** **19 47 11.1 -0.6**
KSM Kuching 32.78 278 P **P** **19 47 10.8 -0.8**
baz=32,SNR=7.2
MEEK Meekatharra 32.79 223 P **P** **19 47 10.7 -0.9**
baz=33,SNR=15
ARPS Mount Arapiles 33.35 181 P **P** **19 47 17.1 +0.9**
baz=33,SNR=26
GIRL Giralia 33.70 233 P **P** **19 47 20.0 +0.5**
baz=34,SNR=17
MILA Mila 34.13 171 P **P** **19 47 24.0 +0.8**
baz=34,SNR=6.1
KMBL Kambalda 34.18 213 P **P** **19 47 23.2 -0.5**
baz=34,SNR=5.7
TOO Toolangi 34.23 176 P **P** **19 47 25.5 +1.5**
baz=34,SNR=7.1
TPI Tanjungpandan 35.07 270 P **P** **19 47 31.2 -0.3**
MORW Morawa 36.10 222 P **P** **19 47 39.1 -1.0**
baz=36,SNR=24
QZH Quanzhou 36.57 321⇓ *i*P **P** **19 47 45.3 +1.1**
QZH S **S** **19 53 27.3 +3.6**
QZH pmax pmax
comp=Z,60nm,0.7s
BLDU Ballidu 36.69 219 P **P** **19 47 44.3 -0.9**
baz=36,SNR=6.4
KLBR Kellerberrin 36.72 217 P **P** **19 47 44.4 -1.0**
baz=37,SNR=15
NWAO Narrogin (SRO) 37.97 216 P **P** **19 47 54.9 -1.1**
NWAO Narrogin (SRO) 37.97 216 P **P** **19 47 54.9 -1.1**
comp=Z,10.0nm,0.7s,baz=48,slow=10,SNR=8.4
NWAO LR LR 20 02 18.7
comp=Z,282nm,20.3s,baz=229,slow=34
MYKOM Kota Tinggi 39.22 277 P **P** **19 48 06.0 -0.7**
QIZ Qiongzhong 39.24 306 P **P** **19 48 06.3 -0.5**
QIZ S **S** **19 54 05.6 +1.2**
QIZ LR LR
comp=N,110nm,17.2s
QIZ LR LR
comp=E,66nm,15.9s
QIZ LR LR
comp=Z,230nm,21.9s
KGM Kluang 39.78 277 P **P** **19 48 10.7 -0.7**
MJAR Matsushiro Arr 39.83 354 P **P** **19 48 09.5 -2.0**
MJAR Matsushiro Arr 39.83 354 P **P** **19 48 09.5 -2.0**
comp=Z,2.1nm,1.0s,baz=187,slow=14,SNR=5.2
KTGM Kuala Trenggan 40.50 282 P **P** **19 48 16.5 -0.9**
FRIM Kepong 41.62 279 P **P** **19 48 25.8 -0.9**
NJ2 Nanjing 41.83 329 *e*P **P** **19 48 29.8 +1.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.9s
IPM Ipoh 42.41 280 *e*P **P** **19 48 30.7 -2.4**
comp=Z,7.3nm,0.5s
IPM Ipoh 42.41 280 P **P** **19 48 32.0 -1.0**
PPI Padang Panjang 42.43 273 P **P** **19 48 31.7 -1.5**
baz=42,SNR=9.2
KSAR Wonju Array Be 42.80 342 P **P** **19 48 35.9 +0.1**
KSAR PcP **PcP** **19 50 27.1 +0.6**
KSRS Korea Array 42.80 343 P **P** **19 48 35.9 +0.1**
comp=Z,5.9nm,0.8s,baz=164,slow=8.6,SNR=18
KSRS PcP **PcP** **19 50 27.1 +0.6**
comp=Z,3.6nm,0.9s,baz=173,slow=4.2,SNR=7.4
KSRS LR LR 20 04 39.5
comp=Z,150nm,20.3s,baz=145,slow=34
KULM Kulim 42.92 281 *e*P **P** **19 48 35.5 -1.7**
comp=Z,29nm,1.1s
KULM Kulim 42.92 281 P **P** **19 48 36.1 -1.1**
WHN Wuhan 43.20 323 P **P** **19 48 40.3 +1.1**
PSI Prapat 44.23 277 P **P** **19 48 46.1 -1.8**
PSI Prapat 44.23 277 P **P** **19 48 46.1 -1.8**
comp=Z,82nm,0.9s,baz=94,slow=5.1,SNR=61
PSI Prapat 44.23 277 P **P** **19 48 46.2 -1.8**
baz=44,SNR=38
GSI Gunungsitoli 45.40 275 P **P** **19 48 54.6 -2.4**
baz=45,SNR=13
GYA Guiyang 45.73 312 P **P** **19 49 01.4 +1.8**
GYA PP **PP** **19 50 48.8 +1.3**
GYA ScP **ScP** **19 54 24.3 -1.9**
GYA S **S** **19 55 40.0 +0.1**
GYA sS **sS** **19 56 04.3 +2.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,440nm,18.8s
GYA LR LR
comp=E,320nm,19.2s
GYA LR LR
comp=Z,430nm,18.9s
ENH Enshi 46.08 319 *e*P **P** **19 49 02.1 -0.1**
comp=Z,16nm,0.7s
URZ Urewera 46.85 143 P **P** **19 49 08.9 +0.8**
URZ Urewera 46.85 143 P **P** **19 49 08.9 +0.8**
baz=292,slow=6.2
RPZ Rata Peaks 47.43 152 P **P** **19 49 14.3 +1.7**
RPZ Rata Peaks 47.43 152 P **P** **19 49 14.3 +1.7**
comp=Z,24nm,0.9s,baz=288,slow=3.2
KMI Kunming 48.00 308 P **P** **19 49 18.6 +1.1**
KMI PP **PP** **19 51 07.8 -2.2**
KMI S **S** **19 56 14.0 +1.4**
KMI SS **SS** **19 59 44.9 +2.7**
KMI pmax pmax
comp=Z,26nm,1.3s
KMI LR LR
comp=N,68nm,17.2s
KMI LR LR
comp=E,130nm,22.2s
KMI LR LR
comp=Z,200nm,24.6s
USRK Ussuriysk Arra 48.23 350 P **P** **19 49 18.9 +0.3**
comp=Z,5.6nm,0.8s,baz=144,slow=7.1,SNR=6.6
CMAR Chiang Mai Arr 48.25 298 P **P** **19 49 19.1 -0.2**
CMAR PcP **PcP** **19 50 46.9 +1.0**
CMAR Chiang Mai Arr 48.25 298 P **P** **19 49 19.1 -0.2**
comp=Z,10nm,0.8s,baz=120,slow=6.3,SNR=81
CMAR PcP **PcP** **19 50 46.9 +1.0**
comp=Z,2.5nm,0.9s,baz=106,slow=2.5,SNR=4.7
CMAR LR LR 20 11 16.6
comp=Z,70nm,19.4s,baz=274,slow=38
CHTO Chiang Mai 48.38 299 *e*P **P** **19 49 18.8 -1.5**
CHTO pmax pmax
comp=Z,11nm,1.0s
CHTO Chiang Mai 48.38 299 *e*P **P** **19 49 18.8 -1.5**
comp=Z,11nm,1.0s
XAN Xi'an 48.93 322 P **P** **19 49 24.1 -0.2**
XAN pmax pmax
comp=Z,7.0nm,0.9s
XAN pmax pmax
comp=Z,40nm,7.8s
MDJ Mudanjiang 49.11 348 P **P** **19 49 26.3 +0.9**
MDJ pP **pP** **19 49 38.3 -0.1**
MDJ PP **PP** **19 51 21.8 +2.3**
MDJ S **S** **19 56 29.4 +2.3**
MDJ pmax pmax
comp=Z,12nm,1.7s
MDJ pmax pmax
comp=Z,70nm,3.5s
MDJ LR LR
comp=N,62nm,30.2s
MDJ LR LR
comp=E,180nm,26.6s
MDJ LR LR
comp=Z,120nm,26.6s
CN2 Changchun 49.38 344 *e*P **P** **19 49 26.6 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
BJT Baijiatuan 49.51 333 *e*P **P** **19 49 28.3 -0.3**
BJI Beijing 49.52 333 P **P** **19 49 28.3 -0.3**
BJI S **S** **19 56 36.0 +2.9**
BJI pmax pmax
comp=Z,19nm,1.3s
BJI pmax pmax
comp=Z,150nm,7.3s
BJI LR LR
comp=N,110nm,16.8s
BJI LR LR
comp=E,260nm,18.9s
BJI LR LR
comp=Z,130nm,22.0s
YSS Yuzh-Sakhalins 50.01 360 *e*P **P** **19 49 32.1 -0.1**
CD2 Chengdu 50.37 315 P **P** **19 49 36.5 +1.2**
CD2 pP **pP** **19 49 50.9 +2.5**
CD2 PcP **PcP** **19 50 54.3 +0.9**
CD2 PP **PP** **19 51 33.6 +2.3**
CD2 PcS **PcS** **19 54 50.0 -0.7**
CD2 S **S** **19 56 44.9 -0.4**
CD2 sS **sS** **19 57 09.5 +2.3**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,190nm,6.6s
CD2 LR LR
comp=N,220nm,14.2s
CD2 LR LR
comp=E,420nm,18.0s
CD2 LR LR
comp=Z,290nm,16.1s
HABR Khabarovsk 51.97 353 *e*P **P** **19 49 45.0 -1.9**
HABR *e**PP **pP** **19 49 55.2 -4.8**
HABR *e**SP sP 19 49 59.3 -6.2
HABR *e* 19 50 56.4
HABR *e*PPP PPP 19 52 46.5
HABR S **S** **19 57 08.3 +1.7**
HABR *e**SS **sS** **19 57 24.5 -4.1**
HABR *e* 19 59 32.3
HABR *e*SS **SS** **20 00 47.1 +2.8**
HABR *e*SSS SSS 20 02 30.3
HABR pmax pmax
comp=N,116nm,3.3s
HABR pmax pmax
comp=Z,74nm,3.2s
HABR pmax pmax
comp=E,55nm,2.7s
HABR MLR MLR
comp=Z,186nm,20.0s
HHC Hu-ho-hao-te 52.34 330 *e*P P 19 49 59.4 +9.4
HHC pP pP 19 50 13.9 +11
HHC PP PP 19 52 02.3 +13
HHC S S 19 57 27.1 +15
HHC sS sS 19 57 53.6 +19
HHC ScS ScS 19 59 45.5 +9.4
HHC Hu-ho-hao-te 52.34 330 SS **SKiKP** **20 01 08.6 -0.6**
HHC pmax pmax
comp=Z,37nm,0.6s
HHC pmax pmax
comp=Z,240nm,10.8s
HHC LR LR
comp=N,290nm,21.1s
HHC LR LR
comp=E,230nm,20.1s
HHC LR LR
comp=Z,480nm,19.5s
PETK Petropavlovsk- 57.56 11 P **P** **19 50 27.6 +0.3**
PETK Petropavlovsk- 57.56 11 P **P** **19 50 27.6 +0.3**
PETK Petropavlovsk- 57.56 11 P **P** **19 50 27.6 +0.3**
comp=Z,8.8nm,1.0s,baz=210,slow=11,SNR=3.3
PETK LR LR 20 10 55.2
comp=Z,82nm,21.2s,baz=309,slow=32
GTA Gaotai 57.97 321⇑⇑ *i*P **P** **19 50 31.5 +0.8**
GTA pP pP 19 50 37.6 -6.4
GTA sP sP 19 50 40.6 -8.8
GTA PP **PP** **19 52 42.0 +2.4**
GTA S **S** **19 58 29.3 +1.5**
GTA SS **SS** **20 02 21.6 +1.9**
GTA pmax pmax
comp=Z,22nm,1.3s
GTA pmax pmax
comp=Z,130nm,5.2s
GTA LR LR
comp=N,94nm,17.6s
GTA LR LR
comp=E,120nm,17.6s
GTA LR LR
comp=Z,120nm,17.1s
LSA Lhasa 59.24 307 P **P** **19 50 41.3 +1.2**
LSA Lhasa 59.24 307 *e*P **P** **19 50 41.1 +1.0**
LSA pmax pmax
comp=Z,27nm,1.2s
LSA Lhasa 59.24 307 *e*P **P** **19 50 41.1 +1.0**
comp=Z,27nm,1.2s
ULN Ulaanbaatar 59.74 333 *e*P **P** **19 50 43.1 +0.3**
comp=Z,14nm,1.0s
SONM Songino Array 60.01 333 P **P** **19 50 44.9 +0.2**
SONM PcP **PcP** **19 51 30.6 +0.3**
SONM Songino Array 60.01 333 P **P** **19 50 44.9 +0.2**
comp=Z,4.3nm,0.9s,baz=153,slow=7.2,SNR=38
SONM PcP **PcP** **19 51 30.6 +0.3**
comp=Z,1.2nm,0.6s,baz=148,slow=3.6,SNR=5.9
SONM LR LR 20 17 40.0
comp=Z,188nm,19.1s,baz=334,slow=37
TAPN Taplejung 61.13 304⇑ *i*P **P** **19 50 53.5 +0.6**
comp=Z,55nm,1.0s
ODAN Odare 61.23 303⇑ *i*P **P** **19 50 54.1 +0.6**
comp=Z,95nm,1.0s
CLNS Chul'man 61.65 349 *e*P **P** **19 50 55.3 -0.1**
CLNS pmax pmax
comp=Z,12nm,0.9s
CLNS pmax pmax
comp=N,6.0nm,0.9s
GUN Gumba 62.85 304⇑ *i*P **P** **19 51 05.1 +0.6**
comp=N,94nm,1.1s
PKI Pulchoki 63.13 303⇑ *i*P **P** **19 51 06.6 +0.3**
comp=N,54nm,1.1s
PKIN Phulchoki 63.14 303⇑ *i*P **P** **19 51 06.5 +0.2**
comp=N,44nm,1.2s
ZAK Zakamensk 63.27 333 *e*P **P** **19 51 06.7 +0.2**
ZAK pmax pmax
comp=Z,22nm,1.1s
KKN Kakani 63.31 303⇑ *i*P **P** **19 51 07.8 +0.4**
comp=Z,97nm,1.0s
DMN Daman 63.40 303⇑ *i*P **P** **19 51 08.6 +0.6**
comp=Z,128nm,1.1s
TLY Talaya 64.03 334 *e*P **P** **19 51 12.0 +0.6**
TLY *e*S S 19 59 56.4 +12
TLY pmax pmax
comp=Z,21nm,1.0s
TLY MLR MLR
comp=Z,96nm,19.0s
KOLN Koldanda 64.71 303⇑ *i*P **P** **19 51 17.1 +0.6**
comp=Z,57nm,0.9s
DANN Dangsing 64.76 303⇑ *i*P **P** **19 51 17.0 0.0**
comp=Z,98nm,1.0s
MOY Mondy 65.20 333 *e*P **P** **19 51 19.9 +0.8**
MOY pmax pmax
comp=Z,35nm,2.2s
PYUN Piuthan 65.33 303⇑ *i*P **P** **19 51 20.8 +0.3**
comp=Z,162nm,1.1s
YAK Yakutsk 65.89 353 *e*P **P** **19 51 22.5 -0.7**
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=N,13nm,1.2s
SEY Seymchan 66.42 5⇓ *e*P **P** **19 51 27.1 +0.5**
HYB Hyderabad 66.56 290⇓ *i*P **P** **19 51 27.0 -1.4**
PPT2 Papeete2 67.73 108 *e*LR LR 20 12 16.6
comp=N,103nm,22.8s
WMQ Urumqi 67.99 320 P **P** **19 51 37.6 +0.5**
WMQ PP **PP** **19 54 10.3 +2.7**
WMQ ScP 19 56 00.5
WMQ S **S** **20 00 30.8 -2.1**
WMQ sS **sS** **20 00 58.6 +2.9**
WMQ ScS **SKiKP** **20 01 27.5 -1.8**
WMQ pmax pmax
comp=Z,21nm,1.0s
WMQ pmax pmax
comp=Z,190nm,5.8s
WMQ LR LR
comp=N,180nm,6.2s
WMQ LR LR
comp=E,100nm,8.2s
WMQ LR LR
comp=Z,53nm,22.4s
TBI Tubuai 68.32 114 *e*LR LR 20 12 29.9
comp=Z,84nm,36.0s
HVS Khovu-Aksy 68.40 329 *c i*P **P** **19 51 40.3 +0.8**
DDI Dehra Dun 70.10 304 *ex* **P** **19 51 49.3 -1.1**
MIR Mirnyy 71.94 199⇓ *i*P **P** **19 52 02.0 +1.3**
MIR pmax pmax
comp=Z,66nm,1.2s
MK31 Makanchi Array 72.73 321 *e*P **P** **19 52 05.6 -0.3**
MK31 Makanchi Array 72.73 321 *e*P **P** **19 52 05.6 -0.3**
MKAR Makanchi Array 72.73 321 P **P** **19 52 06.2 +0.3**
MKAR Makanchi Array 72.73 321 P **P** **19 52 06.2 +0.3**
MKAR Makanchi Array 72.73 321 P **P** **19 52 06.2 +0.3**
comp=Z,7.8nm,0.7s,baz=99,slow=7.1,SNR=72
MKAR LR LR 20 22 25.3
comp=Z,51nm,20.9s,baz=238,slow=34
BILL Bilibino 73.03 9 *e*P **P** **19 52 07.7 +0.5**
BILL *e* 19 54 52.4
BILL pmax pmax
comp=Z,6.0nm,1.2s
KSH Kashi 74.43 312 *e*P **P** **19 52 17.5 +1.3**
KSH *e*pP **PcP** **19 52 30.6 0.0**
KSH *e*PcP **pP** **19 52 32.9 +3.0**
KSH *e*sP **sP** **19 52 36.1 +0.8**
KSH *e*S **S** **20 01 46.3 -1.4**
KSH *e*sS **sS** **20 02 08.0 -2.7**
KSH *e*SKS **SKSac** **20 02 17.0 -3.6**
KSH *e*ScS **SKKSac** **20 02 20.9 0.0**
KSH pmax pmax
comp=Z,18nm,0.9s
KSH LR LR
comp=N,210nm,4.9s
KSH LR LR
comp=E,110nm,4.8s
KSH LR LR
comp=Z,190nm,4.7s
ZAA0 Zalesovo Array 74.48 329 *e*P **P** **19 52 15.2 -0.8**
ZALV Zalesovo Beam 74.48 329 P **P** **19 52 15.3 -0.6**
ZALV Zalesovo Beam 74.48 329 P **P** **19 52 15.3 -0.6**
ZALV Zalesovo Beam 74.48 329 P **P** **19 52 15.3 -0.6**
comp=Z,6.5nm,0.7s,baz=110,slow=5.8,SNR=44
ZALV LR LR 20 24 34.2
comp=Z,114nm,19.7s,baz=247,slow=36
VNDA Vanda 74.90 176 *e*P **P** **19 52 17.1 -1.0**
comp=Z,4.4nm,0.8s
VNDA Vanda 74.90 176 P **P** **19 52 17.9 -0.1**
comp=Z,3.1nm,0.7s,baz=330,slow=7.3,SNR=18
TIXI Tiksi 75.33 355⇑ *e*P **P** **19 52 19.3 -1.2**
TIXI pmax pmax
comp=Z,2.0nm,0.7s
NVS Novosibirsk 75.72 329 *e*P **P** **19 52 21.2 -1.9**
NVS pmax pmax
comp=N,10.0nm,1.5s
NVS pmax pmax
comp=E,18nm,1.5s
NVS pmax pmax
comp=Z,33nm,1.5s
KZA Kyzart 75.73 315 P **P** **19 52 25.2 +1.3**
SNR=6.7
CHMS Chumysh 76.36 316 P **P** **19 52 27.4 +0.3**
SNR=8.0
AAK Ala-Archa 76.44 315 *c i*P **P** **19 52 28.3 +0.6**
AAK pmax pmax
comp=Z,24nm,1.2s
AAK Ala-Archa 76.44 315 *e*P **P** **19 52 25.8 -1.9**
comp=Z,8.2nm,1.1s
KURK Kurchatov 76.52 324 *c i*P **P** **19 52 27.6 -0.1**
KURK pmax pmax
comp=Z,14nm,1.0s
KURK Kurchatov 76.52 324 *e*P **P** **19 52 27.5 -0.2**
comp=Z,16nm,1.1s
USP Ospenovka 76.62 316 P **P** **19 52 29.1 +0.5**
SNR=10
AML Almayashu 76.85 314 P **P** **19 52 31.3 +1.0**
SNR=13
EKS2 Erkin-Say 76.95 315 *e*P **P** **19 52 31.0 +0.5**
EKS2 pmax pmax
comp=Z,12nm,1.0s
EKS2 Erkin-Say 76.95 315 *e*P **P** **19 52 31.0 +0.5**
comp=Z,12nm,1.0s
EKS2 Erkin-Say 76.95 315 P **P** **19 52 31.4 +0.9**
SNR=9.6
OHAK Old Harbor 78.99 30 *e*P **P** **19 52 41.6 +0.3**
comp=Z,15nm,0.8s
KKAR Karatay Array 79.38 315 *e*P **P** **19 52 43.8 0.0**
KKAR pmax pmax
comp=Z,14nm,1.3s
KKAR Karatay Array 79.38 315 *e*P **P** **19 52 43.8 0.0**
comp=Z,14nm,1.3s
KDAK Kodiak Island 79.56 29 *e*P **P** **19 52 44.6 +0.2**
comp=Z,19nm,1.0s
KDAK Kodiak Island 79.56 29 P **P** **19 52 45.2 +0.8**
comp=Z,8.4nm,1.0s,baz=352,slow=3.6,SNR=4.5
RSO Redoubt South 80.56 27 *e*P **P** **19 52 48.9 -1.1**
comp=Z,25nm,0.8s
BRVK Borovoye 82.17 324 *c i*P **P** **19 52 58.5 0.0**
BRVK pmax pmax
comp=Z,9.0nm,0.7s
BRVK Borovoye 82.17 324 *e*P **P** **19 52 58.6 +0.2**
comp=Z,10nm,0.7s
PMR Palmer 82.63 27 *e*P **P** **19 53 00.3 -0.3**
PMR pmax pmax
comp=Z,5.0nm,0.4s
PMR Palmer 82.63 27 *e*P **P** **19 53 00.3 -0.3**
comp=Z,4.9nm,0.4s
TRF Thorofare Moun 82.81 25 *e*P **P** **19 52 59.8 -2.0**
comp=Z,3.8nm,0.7s
SML Sawmill 83.06 27 *e*P **P** **19 53 03.4 +0.4**
SML pmax pmax
comp=Z,5.0nm,0.9s
SML Sawmill 83.06 27 *e*P **P** **19 53 03.4 +0.4**
comp=Z,5.2nm,0.9s
MAW Mawson 83.14 202 P **P** **19 53 03.0 -0.2**
MAW Mawson 83.14 202 P **P** **19 53 03.0 -0.2**
comp=Z,6.1nm,0.7s,baz=96,slow=6.3,SNR=13
MAW Mawson 83.14 202 P **P** **19 53 03.8 +0.5**
baz=83,SNR=8.1
MCK McKinley 83.48 25 *e*P **P** **19 53 04.3 -0.8**
MCK pmax pmax
comp=Z,17nm,1.1s
MCK McKinley 83.48 25 *e*P **P** **19 53 04.3 -0.8**
comp=Z,17nm,1.1s
COLD Coldfoot 84.29 21 *e*P **P** **19 53 09.6 +0.5**
comp=Z,4.0nm,0.9s
ILAR Eielson Array 84.68 24 P **P** **19 53 09.8 -1.4**
ILAR Eielson Array 84.68 24 P **P** **19 53 09.8 -1.4**
comp=Z,4.3nm,0.7s,baz=258,slow=4.7,SNR=44
ILAR LR LR 20 28 08.4
comp=Z,60nm,19.7s,baz=269,slow=34
PAX Paxson 84.70 26 *e*P **P** **19 53 11.0 -0.4**
PAX pmax pmax
comp=Z,6.0nm,1.1s
PAX Paxson 84.70 26 *e*P **P** **19 53 11.0 -0.4**
comp=Z,6.0nm,1.1s
DOT Dot Lake 85.51 25 *e*P **P** **19 53 15.0 -0.3**
comp=Z,8.5nm,1.0s
QSPA South Pole Qui 86.68 180 P **P** **19 53 20.8 -0.5**
QSPA South Pole Qui 86.68 180 P **P** **19 53 20.8 -0.5**
comp=Z,14nm,0.9s,baz=340,slow=0.9,SNR=36
ABKAR Akbulak array 87.77 319 *e*P **P** **19 53 25.3 -1.3**
comp=Z,4.0nm,0.8s
SVE Sverdlovsk 88.40 327 *e*P **P** **19 53 28.9 -0.6**
AKTO Aktyubinsk 89.15 320 P **P** **19 53 31.5 -1.6**
AKTO Aktyubinsk 89.15 320 P **P** **19 53 31.5 -1.6**
AKTO Aktyubinsk 89.15 320 P **P** **19 53 31.5 -1.6**
comp=Z,3.7nm,0.9s,baz=99,slow=5.1,SNR=7.6
ARU Arti 89.49 326 *c i*P **P** **19 53 33.1 -1.5**
ARU S **SKSac** **20 04 00.7 -0.2**
ARU SS **SS** **20 10 13.8 -3.9**
ARU pmax pmax
comp=Z,10.0nm,1.7s
YKA Yellowknife Ar 98.71 27 P Pdif 19 54 22.1 +5.4
YKA Yellowknife Ar 98.71 27 P Pdif 19 54 22.1 +5.4
comp=Z,0.4nm,0.7s,baz=273,slow=4.4,SNR=3.7
KBZ Khabaz 99.38 314 LR LR 20 40 44.9
comp=Z,44nm,20.1s,baz=297,slow=36
KEV Kevo 101.78 341 *e*P **Pdif** **19 54 24.9 -5.3**
KEV Kevo 101.78 341 *e*Pdif **Pdif** **19 54 24.9 -5.3**
ARCES ARCESS Array B 102.35 341 Pdif **Pdif** **19 54 31.9 -0.9**
ARCES ARCESS Array B 102.35 341 Pdiff **Pdif** **19 54 31.9 -0.9**
comp=Z,6.3nm,1.0s,baz=92,slow=8.4,SNR=6.0
FINES FINESS Array B 105.38 334 Pdif **Pdif** **19 54 44.3 -2.1**
FINES FINESS Array B 105.38 334 Pdiff **Pdif** **19 54 44.3 -2.1**
comp=Z,0.6nm,0.6s,baz=54,slow=7.1,SNR=4.2

UZH	Uzhgorod	112.23	322	*e*PKIKP	PKiKP	19 59 21.2 +8.0
UZH				*e*		19 59 26.6
UZH				*e*		19 59 37.0
GERES	GERESS Array B	117.27	325	PKP	PKPdf	19 59 23.2 +0.1
GERES	GERESS Array B	117.27	325	PKP	PKPdf	19 59 23.2 +0.1
	comp=Z,1.3nm,0.6s,baz=86,slow=1.3,SNR=13					
DAVOX	Davos/Dischmat	120.54	324	PKP	PKPdf	19 59 29.5 -0.1
DAVOX	Davos/Dischmat	120.54	324	PKP	PKPdf	19 59 29.5 -0.1
	comp=Z,3.7nm,0.5s,baz=349,slow=3.6,SNR=6.9					
EKA	Eskdalemuir Ar	121.27	339	PKP	PKPdf	19 59 30.5 +0.1
EKA	Eskdalemuir Ar	121.27	338	PKP	PKPdf	19 59 30.5 +0.1
	comp=Z,0.9nm,0.4s,baz=26,slow=2.8,SNR=8.7					
HINF	Hinteralfeld	121.68	327	*e*PKIKP	PKPdf	19 59 31.1 -0.4
	comp=Z,7.7nm,0.6s					
HINF	Hinteralfeld	121.68	327	*e*PKIKP	PKPdf	19 59 31.1 -0.4
HINF	Hinteralfeld	121.68	327	*e*PKIKP	PKPdf	19 59 31.1 -0.4
HAU	Haudompre	121.84	327	*e*PKIKP	PKPdf	19 59 31.6 -0.2
	comp=Z,6.9nm,0.6s					
HAU	Haudompre	121.84	327	*e*PKIKP	PKPdf	19 59 31.6 -0.2
HAU	Haudompre	121.84	327	*e*PKPdf	PKPdf	19 59 31.6 -0.2
SFTF	Sexfontaines	122.43	328	*e*PKIKP	PKPdf	19 59 32.7 -0.2
SFTF	Sexfontaines	122.43	328	*e*PKPdf	PKPdf	19 59 32.7 -0.2
CABF	La Chapelle	122.80	326	*e*PKIKP	PKPdf	19 59 34.1 +0.3
	comp=Z,23nm,1.0s					
CABF	La Chapelle	122.80	326	*e*PKIKP	PKPdf	19 59 34.1 +0.3
CABF	La Chapelle	122.80	326	*e*PKPdf	PKPdf	19 59 34.1 +0.3
LPG	La Plagne	123.06	324	*e*PKIKP	PKPdf	19 59 34.6 +0.1
	comp=Z,8.8nm,0.9s					
LPG	La Plagne	123.06	324	*e*PKIKP	PKPdf	19 59 34.6 +0.1
LPG	La Plagne	123.06	324	*e*PKPdf	PKPdf	19 59 34.6 +0.1
LPL	La Plagne	123.06	324	*e*PKIKP	PKPdf	19 59 34.6 +0.1
	comp=Z,8.7nm,0.8s					
LPL	La Plagne	123.06	324	*e*PKIKP	PKPdf	19 59 34.6 +0.1
LPL	La Plagne	123.06	324	*e*PKPdf	PKPdf	19 59 34.6 +0.1
SCHQ	Schefferville	123.26	20	PKP	PKPdf	19 59 33.5 -0.8
SCHQ	Schefferville	123.26	20	PKP	PKPdf	19 59 33.5 -0.8
	comp=Z,3.0nm,0.7s,baz=165,slow=2.1,SNR=4.6					
PGF	Pioggiola	123.26	320	*e*PKIKP	PKPdf	19 59 34.7 -0.1
	comp=Z,15nm,1.0s					
PGF	Pioggiola	123.26	320	*e*PKIKP	PKPdf	19 59 34.7 -0.1
PGF	Pioggiola	123.26	320	*e*PKPdf	PKPdf	19 59 34.7 -0.1
SBF	Sospel	123.55	322	*e*PKIKP	PKPdf	19 59 35.0 -0.2
	comp=Z,19nm,0.9s					
SBF	Sospel	123.55	322	*e*PKIKP	PKPdf	19 59 35.0 -0.2
SBF	Sospel	123.55	322	*e*PKPdf	PKPdf	19 59 35.0 -0.2
LOR	Lormes	123.63	327	*e*PKIKP	PKPdf	19 59 35.2 0.0
LOR	Lormes	123.63	327	*e*PKPdf	PKPdf	19 59 35.2 0.0
ORIF	Oris-en-Rattie	123.89	324	*e*PKIKP	PKPdf	19 59 35.9 0.0
	comp=Z,7.0nm,0.7s					
ORIF	Oris-en-Rattie	123.89	324	*e*PKIKP	PKPdf	19 59 35.9 0.0
ORIF	Oris-en-Rattie	123.89	324	*e*PKPdf	PKPdf	19 59 35.9 0.0
SSF	Saint Saulge	123.95	327	*e*PKIKP	PKPdf	19 59 36.1 +0.3
	comp=Z,8.4nm,0.9s					
SSF	Saint Saulge	123.95	327	*e*PKIKP	PKPdf	19 59 36.1 +0.3
SSF	Saint Saulge	123.95	327	*e*PKPdf	PKPdf	19 59 36.1 +0.3
SMF	Signal de Mont	124.03	327	*e*PKIKP	PKPdf	19 59 36.1 +0.1
	comp=Z,11nm,1.0s					
SMF	Signal de Mont	124.03	327	*e*PKIKP	PKPdf	19 59 36.1 +0.1
SMF	Signal de Mont	124.03	327	*e*PKPdf	PKPdf	19 59 36.1 +0.1
FRF	La Foret Royal	124.19	322	*e*PKIKP	PKPdf	19 59 36.3 -0.1
	comp=Z,22nm,1.1s					
FRF	La Foret Royal	124.19	322	*e*PKIKP	PKPdf	19 59 36.3 -0.1
FRF	La Foret Royal	124.19	322	*e*PKPdf	PKPdf	19 59 36.3 -0.1
AVF	Avril sur Loir	124.20	327	*e*PKIKP	PKPdf	19 59 36.2 -0.1
AVF	Avril sur Loir	124.20	327	*e*PKIKP	PKPdf	19 59 36.2 -0.1
AVF	Avril sur Loir	124.20	327	*e*PKPdf	PKPdf	19 59 36.2 -0.1
LMR	La Mourre	124.40	322	*e*PKIKP	PKPdf	19 59 36.9 +0.1
	comp=Z,9.2nm,0.9s					
LMR	La Mourre	124.40	322	*e*PKIKP	PKPdf	19 59 36.9 +0.1
LMR	La Mourre	124.40	322	*e*PKPdf	PKPdf	19 59 36.9 +0.1
SMRF	Simiane la Rot	124.61	323	*e*PKIKP	PKPdf	19 59 37.6 +0.4
	comp=Z,13nm,1.0s					
SMRF	Simiane la Rot	124.61	323	*e*PKPdf	PKPdf	19 59 37.6 +0.4
BGF	Bois d'Agland	124.62	327	*e*PKIKP	PKPdf	19 59 37.4 +0.3
	comp=Z,17nm,0.8s					
BGF	Bois d'Agland	124.62	327	*e*PKIKP	PKPdf	19 59 37.4 +0.3
BGF	Bois d'Agland	124.62	327	*e*PKPdf	PKPdf	19 59 37.4 +0.3
VIVF	Saint-Julien-l	124.63	325	*e*PKIKP	PKPdf	19 59 37.3 +0.1
	comp=Z,6.7nm,0.8s					
VIVF	Saint-Julien-l	124.63	325	*e*PKIKP	PKPdf	19 59 37.3 +0.1
VIVF	Saint-Julien-l	124.63	325	*e*PKPdf	PKPdf	19 59 37.3 +0.1
SADO	Sadowa	124.68	35	PKP	PKPdf	19 59 37.1 -0.2
SADO	Sadowa	124.68	35	PKP	PKPdf	19 59 37.1 -0.2
	comp=Z,3.2nm,0.8s,baz=355,slow=3.5,SNR=3.4					
FLN	La Foliniere	124.87	331	*e*PKIKP	PKPdf	19 59 37.5 0.0
FLN	La Foliniere	124.87	331	*e*PKIKP	PKPdf	19 59 37.5 0.0
FLN	La Foliniere	124.87	331	*e*PKPdf	PKPdf	19 59 37.5 0.0
TCF	Toulx Ste Croi	125.13	327	*e*PKIKP	PKPdf	19 59 38.4 +0.2
	comp=Z,20nm,0.9s					
TCF	Toulx Ste Croi	125.13	327	*e*PKIKP	PKPdf	19 59 38.4 +0.2
TCF	Toulx Ste Croi	125.13	327	*e*PKPdf	PKPdf	19 59 38.4 +0.2
LASF	Ste Croix	125.56	324	*e*PKIKP	PKPdf	19 59 39.3 +0.3
	comp=Z,12nm,1.1s					
LASF	Ste Croix	125.56	324	*e*PKPdf	PKPdf	19 59 39.3 +0.3
CAF	Calviac	126.07	326	*e*PKIKP	PKPdf	19 59 40.5 +0.5
CAF	Calviac	126.07	326	*e*PKIKP	PKPdf	19 59 40.5 +0.5
CAF	Calviac	126.07	326	*e*PKPdf	PKPdf	19 59 40.5 +0.5
PLCA	Paso Flores	126.67	149	PKP	PKPdf	19 59 41.9 +0.5
PLCA	Paso Flores	126.67	149	PKP	PKPdf	19 59 41.9 +0.5
	comp=Z,1.6nm,0.7s,baz=357,slow=4.3,SNR=4.8					
TORD	Torodi Ar. Bea	140.30	287	PKPpre	PKPpre	19 59 58.2
TORD	Torodi Ar. Bea	140.30	287	PKhKP	PKPpre	19 59 58.2
	comp=Z,1.1nm,0.6s,baz=74,slow=2.7,SNR=8.3					
LPAZ	La Paz	143.80	123	*e*PKPdf	PKPbc	20 00 12.5 +0.4
LPAZ				PKP	PKPdf	20 00 13.2 -1.3
LPAZ	La Paz	143.80	123	PKP	PKPbc	20 00 13.2 +1.0
	comp=Z,2.1nm,0.6s,baz=24,slow=3.9,SNR=5.6					
CPUP	Villa Florida	144.73	148	PKP	PKPab	20 00 13.7 -0.2
CPUP	Villa Florida	144.73	148	PKP	PKPab	20 00 13.7 -0.2
	comp=Z,1.7nm,0.5s,baz=188,slow=0.4,SNR=9.1					
DBIC	Dimbokro	147.57	277	*e*PKPbc	PKPbc	20 00 22.6 -0.2
DBIC	Dimbokro	147.57	277	PKPbc	PKPbc	20 00 22.9 0.0
	comp=Z,19nm,0.7s,baz=85,slow=2.7,SNR=45					
LIC	Lamto	147.78	276	*e*PKIKP	PKPbc	20 00 23.2 -0.2
	comp=Z,46nm,0.7s					
LIC	Lamto	147.78	276	*e*PKPdf	PKPbc	20 00 23.2 -0.2
SJG	San Juan	148.06	60	*e*PKPbc	PKPbc	20 00 23.6 -0.4
SAML	Samuel	151.43	115	*e*PKPbc	PKPbc	20 00 31.8 -0.6

*ISCJB **18** 19:48:11.9±0.7, 6°.9S±0°.1×128°.2E±0°.2, h350km, mb3.5/5, Error ellipse: s-maj=35.0km s-min=7.6km az=154.2*
*IDC **18** 19:48:14.2±6.8, 6°.89S×128°.25E, h353km±81km, mb3.2/5, mb1 3.4/8, mb1mx3.2/21, mbtmp3.3/8, Error ellipse: s-maj=64.2km s-min=26.4km az=54.0*

ISC 18 19:48:13.1±0.9, 6°.84S±0°.09×128°.4E±0°.2, h350km, n19, σ0°86/21, mb3.7/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.52	193	P		Pn	19 50 49.0 -0.2
	2.1nm,0.3s,baz=27,slow=14,SNR=16						
FITZ				S		S	19 52 58.7 +0.8
	0.3nm,0.3s,baz=13,slow=17,SNR=2.4						
WRA	Warramunga Arr	14.25	157	P		P	19 51 19.4 -0.2
	0.5nm,0.3s,baz=339,slow=11,SNR=7.9						
WRA				S		S	19 53 53.4 -0.8
	0.3nm,0.3s,baz=338,slow=20,SNR=4.2						
ASAR	Alice Springs	17.55	163	P		P	19 51 56.3 +0.9
	0.7nm,0.3s,baz=344,slow=12,SNR=8.2						
CMAR	Chiang Mai Arr	38.42	311	P		P	19 55 01.7 -0.8
	0.5nm,0.5s,baz=140,slow=6.5,SNR=7.6						
ODAN	Odare	51.96	312	*e*P		P	19 56 47.4 -0.7
TAPN	Taplejung	52.00	313	*e*P		P	19 56 47.7 -0.7
	4.5nm,0.4s						
RAMN	Ramite	52.59	311	*e*P		P	19 56 52.3 -0.4
	12nm,0.6s						
GUN	Gumba	53.66	312	*e*P		P	19 56 59.9 -0.6
	13nm,0.7s						
PKI	Pulchoki	53.82	311	*e*P		P	19 57 00.6 -1.1
	3.7nm,0.3s						
PKIN	Phulchoki	53.83	311	*e*P		P	19 57 00.4 -1.3
	3.5nm,0.5s						
KKN	Kakani	54.03	312	*e*P		P	19 57 02.0 -1.1
DMN	Daman	54.07	311	*e*P		P	19 57 02.6 -0.7
KOLN	Koldanda	55.28	311	*e*P		P	19 57 11.4 -0.5
DANN	Dangsing	55.47	311	*e*P		P	19 57 12.3 -1.0
	9.8nm,0.9s						
PYUN	Piuthan	55.91	311	*e*P		P	19 57 15.8 -0.6
SONM	Songino Array	57.80	343	P		P	19 57 30.4 +1.4
	0.3nm,0.7s,baz=174,slow=6.4,SNR=4.9						
MKAR	Makanchi Array	67.23	328	P		P	19 58 31.5 +0.8
	1.2nm,0.4s,baz=121,slow=8.2,SNR=36						
ZALV	Zalesovo Beam	70.74	334	P		P	19 58 51.9 -0.1
	1.0nm,0.6s,baz=146,slow=5.4,SNR=3.7						
KURBB	Kurchatov Arra	71.55	329	P		P	19 58 57.5 +0.6
	1.2nm,0.5s,baz=127,slow=5.0,SNR=20						

IDC 18 19:50:29.5±3.5, 27.77N×111.82W, h0km, mb3.5/2, mb1 3.9/7, mb1mx3.7/29, mbtmp3.6/7, ML3.6/5, MS3.4/6, Ms1 3.4/6, ms1mx3.1/29, Error ellipse: s-maj=49.5km s-min=15.6km az=20.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFO	Pinyon Flat Ob	7.06	327	LR	LR	19 55 07.7	
	comp=Z,180nm,19.4s,baz=289,slow=39						
TXAR	Lajitas Array	7.34	76	Pn	Pn	19 52 18.4	+0.3
	0.7nm,0.3s,baz=248,slow=13,SNR=36						
TXAR				Lg	Lg	19 54 22.5	
	1.3nm,0.3s,baz=253,slow=30,SNR=8.7						
TXAR				LR	LR	19 55 19.7	
	comp=Z,282nm,20.0s,baz=180,slow=40						
ANMO	Albuquerque	8.50	31	Pn	Pn	19 52 35.7	+1.5
	0.3nm,0.3s,baz=205,slow=13,SNR=3.2						
NVAR	Mina Array Bea	11.94	335	Pn	Pn	19 53 24.2	+2.9
	0.1nm,0.3s,baz=172,slow=14,SNR=3.7						
ELK	Elko	13.25	349	Pn	Pn	19 53 39.7	+0.4
	0.1nm,0.3s,baz=181,slow=12,SNR=14						
PDAR	Pinedale Array	15.08	6	Pn	P	19 54 08.6	-1.1
	0.1nm,0.3s,baz=180,slow=12,SNR=14						
YBH	Yreka Blue Hor	16.54	330	LR	LR	20 00 27.8	
	comp=Z,74nm,19.7s,baz=167,slow=36						
NEW	Newport	20.88	350	P	P	19 55 12.5	-0.7
	2.7nm,0.9s,baz=162,slow=9.2,SNR=3.6						
TKL	Tuckaleechee C	25.06	65	LR	LR	20 06 19.3	
	comp=Z,92nm,20.9s,baz=78,slow=38						
ILAR	Eielson Array	43.15	339	P	P	19 58 32.0	+0.5
	0.8nm,0.9s,baz=159,slow=6.5,SNR=6.2						
ARCES	ARCESS Array B	78.19	14	LR	LR	20 38 20.4	
	comp=Z,39nm,18.2s,baz=220,slow=37						
AKASG	Malin Array Be	94.62	24	LR	LR	20 45 20.6	
	comp=Z,42nm,19.9s,baz=75,slow=35						

*ISK **18** 19:52:40.3, 39°.07N×26°.93E, h5km, MD2.8*
*DDA **18** 19:52:40.9, 39°.08N×26°.98E, h7km, MD2.9*
*ISCJB **18** 19:52:41.0±0.5, 39°.07N±0°.03×26°.98E±0°.04, h5km±7km, Error ellipse: s-maj=5.9km s-min=4.1km az=161.0*
*CSEM **18** 19:52:41.3±0.2, 39°.06N×26°.97E, h8km, MD2.9, Error ellipse: s-maj=4.0km s-min=2.9km az=84.0*

ISC 18 19:52:41.0±1.1, 39°.07N±0°.02×26°.96E±0°.03, h10km±11km, n32, σ0°55/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	Ayvalik	0.32	319	*i* P		Pg	19 52 47.5 0.0
AYVA				*i* S		Sb	19 52 52.9 -1.2
AYVA	Ayvalik	0.32	319	*i* P		Pg	19 52 47.5 0.0
AYVA				*i* S		Sb	19 52 52.9 -1.2
BLCB	Balcova	0.68	175	*e*PG		Pg	19 52 53.9 -0.4
BLCB				*e*SG		Sb	19 53 04.2 -0.3
BLCB	Balcova	0.68	175	*e*Pg		Pg	19 52 53.9 -0.4
BLCB				*e*Sg		Sb	19 53 04.2 -0.3
AKHS	Akhisar	0.69	106	*i* P		Pg	19 52 54.2 -0.1
AKHS				*i* S		Sg	19 53 03.6 +0.2
AKHS	Akhisar	0.69	106	*i* P		Pg	19 52 54.2 -0.1
AKHS				*i* S		Sg	19 53 03.6 +0.2
IZM	Izmir	0.71	161	*e*PG		Pg	19 52 54.6 -0.1
IZM	Izmir	0.71	161	*e*Pg		Pg	19 52 54.6 -0.1
URLA	Izmir	0.76	202	*i* P		Pb	19 52 56.1 -0.3
URLA				*i* S		Sb	19 53 08.1 +1.3
URLA	Izmir	0.76	202	*i* P		Pb	19 52 56.1 -0.3
URLA				*i* S		Sb	19 53 08.1 +1.3
BALY	Balya	0.84	37	*i* P		Pg	19 52 57.2 -0.1
BALY				*i* S		Sb	19 53 10.1 +0.9
BALY	Balya	0.84	37	*i* P		Pg	19 52 57.2 -0.1
BALY				*i* S		Sb	19 53 10.1 +0.9
EZN	Ezine	0.91	327	*e*PG		Pg	19 52 58.4 -0.1
EZN				*e*SG		Sg	19 53 10.5 +0.2
EZN	Ezine	0.91	327	*e*Pg		Pg	19 52 58.4 -0.1
EZN				*e*Sg		Sg	19 53 10.5 +0.2
BALB	Balikesir	0.91	51	*e*PG		Pb	19 52 59.0 +0.1
BALB	Balikesir	0.91	51	*e*Pg		Pb	19 52 59.0 +0.1
GONE	Gonen-Balikesi	1.13	29	*e*PN		Pg	19 53 02.2 -0.5
GONE	Gonen-Balikesi	1.13	29	*e*Pn		Pg	19 53 02.2 -0.5
KRBG	Karabiga-Canak	1.35	11	*e*PN		Pb	19 53 06.5 +0.1
KRBG	Karabiga-Canak	1.35	11	*e*Pn		Pb	19 53 06.5 +0.1
GELI	Tayfur-Gelibol	1.38	344	*e*PN		Pg	19 53 07.3 -0.3
GELI	Tayfur-Gelibol	1.38	344	*e*Pn		Pg	19 53 07.3 -0.3
DST	Dursunbey	1.39	67	*e*PN		Pn	19 53 06.7 +0.2
DST	Dursunbey	1.39	67	*e*Pn		Pn	19 53 06.7 +0.2
KULA	Kula-Manisa	1.44	112	*e*PN		Pn	19 53 07.4 +0.2
KULA	Kula-Manisa	1.44	112	*e*Pn		Pn	19 53 07.4 +0.2
KCTX	Karacabey (Bur	1.61	41	*e*PN		Pb	19 53 10.7 -0.1
KCTX	Karacabey (Bur	1.61	41	*e*Pn		Pb	19 53 10.7 -0.1
MRMT	Marmara Adasi	1.61	17	*e*PN		Pb	19 53 10.8 -0.1
MRMT	Marmara Adasi	1.61	17	*e*Pn		Pb	19 53 10.8 -0.1
TVSB	Tavsanli	1.98	78	*e*PN		Pb	19 53 16.0 -1.1
TVSB	Tavsanli	1.98	78	*e*Pn		Pb	19 53 16.0 -1.1

IDC 18 20:09:05.2±1.3, 58.81S×147.57W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/15, mbtmp3.9/3, MS4.1/7, Ms1 4.1/7, ms1mx3.9/21, Error ellipse: s-maj=46.2km s-min=34.9km az=38.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	25.13	203	LR	LR	20 22 38.1	
	comp=Z,259nm,19.7s,baz=62,slow=32						
QSPA	South Pole Qui	31.33	180	P	P	20 15 26.6	-0.4
	1.2nm,0.6s,baz=82,slow=7.1,SNR=11						
TBI	Tubuai	35.46	357	*e*LR	LR	20 24 49.6	
	63nm,28.2s						
RKT	Rikitea	36.78	20	*e*LR	LR	20 25 38.4	
	396nm,26.0s						
PMSA	Palmer Station	37.18	135	LR	LR	20 30 21.8	
	comp=Z,318nm,19.8s,baz=118,slow=34						
PPT2	Papeete2	41.19	357	*e*S	S	20 22 56.5	-9.3
	86nm,25.8s						
PPT2				*e*LR	LR	20 27 39.9	
	666nm,25.5s						
PLCA	Paso Flores	49.92	105	LR	LR	20 35 07.9	
	comp=Z,152nm,18.7s,baz=196,slow=31						
MAW	Mawson	51.92	194	LR	LR	20 38 42.2	
	comp=Z,216nm,18.4s,baz=347,slow=34						
ASAR	Alice Springs	64.17	267	P	P	20 19 41.7	+0.2
	1.1nm,0.9s,baz=143,slow=6.0,SNR=7.6						
WRA	Warramunga Arr	67.01	269	P	P	20 19 59.7	-0.2
	1.7nm,1.0s,baz=143,slow=5.6,SNR=7.8						
CPUP	Villa Florida	67.99	105	LR	LR	20 45 30.7	
	comp=Z,90nm,19.8s,baz=6.6,slow=32						
BDFB	Brasilia	81.63	106	LR	LR	20 54 41.8	
	comp=Z,179nm,21.0s,baz=186,slow=34						
BOSA	Boshof	92.70	174	LR	LR	20 59 51.7	
	comp=Z,196nm,19.6s,baz=165,slow=33						
ILAR	Eielson Array	123.26	0	PKP	PKPdf	20 28 00.9	-1.3
	0.3nm,0.7s,baz=218,slow=1.0,SNR=2.8						
MKAR	Makanchi Array	148.32	270	PKPbc	PKPbc	20 28 52.2	-0.2
	1.1nm,0.9s,baz=117,slow=4.2,SNR=7.4						
ESDC	Sonseca Array	150.03	114	PKPbc	PKPbc	20 28 57.4	+0.5
	0.2nm,0.3s,baz=245,slow=2.5,SNR=3.8						

*ISCJB **18** 20:09:09.8±0.5, 39°.06N±0°.02×26°.96E±0°.04, h9km±5km, Error ellipse: s-maj=5.4km s-min=3.6km az=163.7*
*ISK **18** 20:09:09.4, 39°.06N×26°.96E, h10km, MD3.2*
*DDA **18** 20:09:09.7, 39°.07N×26°.99E, h7km, MD3.1*
*CSEM **18** 20:09:10.1±0.1, 39°.06N×26°.97E, h10km, MD3.1, Error ellipse: s-maj=2.8km s-min=1.9km az=84.0*

ISC 18 20:09:10.3±1.0, 39.06N±0°.02×26.97E±0°.03, h13km±10km, n86, σ0°54/96, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	Ayvalik	0.33	318	*i* P		Pg	20 09 16.8 -0.2
AYVA				*i* S		Sg	20 09 22.1 +0.6
AYVA	Ayvalik	0.33	318	*i* P		Pg	20 09 16.8 -0.2
AYVA				*i* S		Sg	20 09 22.1 +0.6
BLCB	Balcova	0.68	175	*e*PG		Pg	20 09 23.0 -0.6
BLCB				*e*SG		Sg	20 09 32.8 +0.3
BLCB	Balcova	0.68	175	*e*Pg		Pg	20 09 23.0 -0.6
BLCB				*e*Sg		Sg	20 09 32.8 +0.3
AKHS	Akhisar	0.68	106	*i* P		Pg	20 09 23.5 -0.1
AKHS				*i* S		Sg	20 09 32.9 +0.3
AKHS	Akhisar	0.68	106	*i* P		Pg	20 09 23.5 -0.1
AKHS				*i* S		Sg	20 09 32.9 +0.3
IZM	Izmir	0.70	161	*e*PG		Pg	20 09 23.7 -0.3
IZM	Izmir	0.70	161	*e*Pg		Pg	20 09 23.7 -0.3
URLA	Izmir	0.76	203	*i* P		Pg	20 09 24.8 -0.3
URLA	Izmir	0.76	203	*i* P		Pg	20 09 24.8 -0.3
BALY	Balya	0.84	36	*i* P		Pg	20 09 26.2 -0.4
BALY	Balya	0.84	36	*i* P		Pg	20 09 26.2 -0.4
BALB	Balikesir	0.91	50	*e*PG		Pg	20 09 27.6 -0.3
BALB	Balikesir	0.91	50	*e*Pg		Pg	20 09 27.6 -0.3
EZN	Ezine	0.91	327	*e*PG		Pg	20 09 27.1 -0.8
EZN	Ezine	0.91	327	*e*Pg		Pg	20 09 27.1 -0.8
GONE	Gonen-Balikesi	1.12	29	*e*PN		Pb	20 09 31.2 -0.5
GONE	Gonen-Balikesi	1.12	29	*e*Pn		Pb	20 09 31.2 -0.5
DURS	Dursunbey	1.28	65	*i* P		Pn	20 09 33.5 -0.6
DURS				*i* S		Sg	20 09 51.8 +0.1
DURS	Dursunbey	1.28	65	*i* P		Pn	20 09 33.5 -0.6
DURS				*i* S		Sg	20 09 51.8 +0.1
LPK	Lapseki	1.32	353	*e*PN		Pn	20 09 34.4 0.0
LPK	Lapseki	1.32	353	*e*Pn		Pn	20 09 34.4 0.0
KRBG	Karabiga-Canak	1.35	11	*e*PN		Pn	20 09 34.8 -0.1
KRBG	Karabiga-Canak	1.35	11	*e*Pn		Pn	20 09 34.8 -0.1
DEMI	Demirci	1.36	90	*e*P		Pn	20 09 35.1 0.0
DEMI	Demirci	1.36	90	*e*P		Pn	20 09 35.1 0.0
MANT	Manisa	1.36	114	*e*P		Pn	20 09 35.0 -0.3
MANT	Manisa	1.36	114	*e*P		Pn	20 09 35.0 -0.3
GCAM	G?zelcaml?	1.38	171	*i* P		Pn	20 09 35.7 +0.4
GCAM	G?zelcaml?	1.38	171	*i* P		Pn	20 09 35.7 +0.4
DST	Dursunbey	1.39	67	*e*PN		Pn	20 09 34.6 -0.8
DST	Dursunbey	1.39	67	*e*Pn		Pn	20 09 34.6 -0.8
GELI	Tayfur-Gelibol	1.39	344	*e*PN		Pn	20 09 35.4 0.0
GELI	Tayfur-Gelibol	1.39	344	*e*Pn		Pn	20 09 35.4 0.0
KULA	Kula-Manisa	1.43	112	*e*PN		Pn	20 09 35.6 -0.4
KULA	Kula-Manisa	1.43	112	*e*Pn		Pn	20 09 35.6 -0.4
BNT	Bandirma	1.48	29	*e*PN		Pn	20 09 35.9 -0.9
BNT	Bandirma	1.48	29	*e*Pn		Pn	20 09 35.9 -0.9
AYDN	Tasoluk	1.57	153	*e*P		Pn	20 09 37.2 -0.8
AYDN				*i* S		Sb	20 09 59.3 +0.2
AYDN	Tasoluk	1.57	153	*e*P		Pn	20 09 37.2 -0.8
AYDN				*i* S		Sb	20 09 59.3 +0.2
KCTX	Karacabey (Bur	1.61	41	*e*PN		Pn	20 09 38.0 -0.4
KCTX	Karacabey (Bur	1.61	41	*e*Pn		Pn	20 09 38.0 -0.4
MRMT	Marmara Adasi	1.61	17	*e*PN		Pn	20 09 38.5 0.0
MRMT	Marmara Adasi	1.61	17	*e*Pn		Pn	20 09 38.5 0.0
RKY	Sarkoy-Tekirda	1.63	5	*e*PN		Pn	20 09 39.1 +0.4
RKY	Sarkoy-Tekirda	1.63	5	*e*Pn		Pn	20 09 39.2 +0.4
ERIK	Erikli-Kesan	1.64	348	*e*PN		Pn	20 09 39.2 +0.4
ERIK	Erikli-Kesan	1.64	348	*e*Pn		Pn	20 09 39.3 +0.4
MFT	Murefte	1.74	8	*e*PN		Pn	20 09 41.0 +0.8
MFT	Murefte	1.74	8	*e*Pn		Pn	20 09 41.1 +0.8
ORLT	Orhaneli	1.78	56	*e*PN		Pn	20 09 41.6 +0.7
ORLT	Orhaneli	1.78	56	*e*Pn		Pn	20 09 41.6 +0.7
ENEZ	Enez	1.79

32nm,0.1s
LPEL Lama dei Pelig 0.53 109 Pg Pg 20 11 32.6 0.0
LPEL Sg Sb 20 11 40.8 -0.7
32nm,0.1s
SDI San Donato 0.56 156 Pg Pg 20 11 33.4 +0.3
SDI Sg Sb 20 11 41.8 -0.5
19nm,0.2s
SDI San Donato 0.56 156 Pg Pg 20 11 33.4 +0.3
SDI Sg Sb 20 11 41.8 -0.5
19nm,0.2s
NRCA Norcia 0.68 335 Pg Pg 20 11 35.1 -0.2
NRCA Sg Sg 20 11 45.0 +0.7
6.0nm,0.5s
NRCA Norcia 0.68 335 Pg Pg 20 11 35.1 -0.2
NRCA Sg Sg 20 11 45.0 +0.7
6.0nm,0.5s

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*IDC **18** 20:23:23.0±0.6, 19°.52S×177°.48E, h0km, mb4.4/13, mb1 4.6/15, mb1mx4.5/19, mbtmp4.4/15, ML3.6/2, MS4.3/16, Ms1 4.3/16, ms1mx4.2/23, Error ellipse: s-maj=23.6km s-min=16.7km az=130.0*
*NEIC **18** 20:23:25.4±0.2, 19°.56S×177°.42E, mb5.1/60, Error ellipse: s-maj=10.1km s-min=6.4km az=139.0*
NEIC Felt at Vunisea.
*ISCJB **18** 20:23:26.2±3.1, 19°.57S±0°.06×177°.42E±0°.06, h33km±22km, mb4.9/82, MS4.3/23, Error ellipse: s-maj=11.4km s-min=8.9km az=139.6*
*BJI **18** 20:23:27.2, 19°.50S×177°.30E, h18km, mB5.2/22, mb4.7/24, Ms5.0/17, Ms7 4.5/18*
*GCMT **18** 20:23:27.7±0.2, 19°.31S×177°.61E, h18km±1km, MW5.1, Moment Tensor Solution. s40,c53; s88,c145; Moment tensor: Scale 10^16^Nm; Mr0.04±.14; Mθθ-4.23±.13; Mφφ4.19±.12; Mrθ-0.55±.29; Mrφ1.79±.11; Mθφ1.66±.31; Best double couple: Mo4.90000×10^16^ NP1:φs57.00000°, δ70.00000°, λ5.00000°. NP2:φs326.00000°, δ86.00000°, λ160.00000°. Principal axes: T 5.0200, Plg17.0000°, Azm280.0000°; N -0.2700, Plg70.0000°, Azm134.0000°; P -4.7600, Plg11.0000°, Azm13.0000°; Data Used: II IU IC G CN.*
*MOS **18** 20:23:28.1±1.7, 19°.13S×177°.38E, h33km, mb5.3/25 Error ellipse: s-maj=14.9km s-min=11.1km az=149.3*
ISC 18 20:23:26.1±0.5, 19°.58S±0°.07×177°.56E±0°.06, h19km±1km, h19km:pP-P, n482, σ1§36/496, mb5.1/82, MS4.2/24, 137C-115D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
MSVF	**Nonsavu**	**1.90**	**14**	*e*P		Pn	20 23 48.8	-8.8
MSVF	**Nonsavu**	**1.90**	**14**	*e*P		Pn	20 23 48.8	-8.8
MSVF	**Nonsavu**	**1.90**	**14**	Pn		Pn	20 23 49.0	-8.6
	33μm,0.5s							
RAO	**Raoul Island**	**10.47**	**158**	LR		LR	20 29 21.6	
	comp=Z,1μm,20.1s,baz=19,slow=34							
DZM	**Mont Dzumac**	**10.69**	**255**	*e*P		**Pn**	**20 26 00.3**	**+1.9**
	306nm,1.8s							
DZM				*e*LR		LR	20 28 18.2	
	3μm,25.9s							
DZM	**Mont Dzumac**	**10.69**	**255**	Pn		**Pn**	**20 25 58.3**	**-0.1**
DZM	**Mont Dzumac**	**10.69**	**255**	Pn		**Pn**	**20 25 58.3**	**-0.1**
	0.1nm,0.3s,baz=66,slow=18,SNR=2.1							
FUNA	**Funafuti**	**11.10**	**8**	*e*P		**Pn**	**20 26 05.6**	**+1.6**
AFI	**Afiamalu**	**11.66**	**63**	P		**Pn**	**20 26 09.8**	**-1.9**
AFI	**Afiamalu**	**11.66**	**63**	LR		LR	20 29 49.6	
	comp=Z,698nm,20.4s,baz=235,slow=33							
URZ	**Urewera**	**18.62**	**181**	*e*P		**Pn**	**20 27 43.3**	**+0.5**
	76nm,1.3s							
URZ	**Urewera**	**18.62**	**181**	P		**Pn**	**20 27 44.6**	**+1.8**
	0.6nm,0.3s,baz=350,slow=6.8,SNR=6.5							
URZ				LR		LR	20 33 12.7	
	comp=Z,2μm,20.4s,baz=28,slow=32							
HNR	**Honiara**	**19.80**	**298**	*e*P		**P**	**20 27 53.5**	**-2.1**
	208nm,1.3s							
HNR	**Honiara**	**19.80**	**298**	P		**Pn**	**20 27 58.5**	**+1.3**
	2.5nm,0.3s,baz=180,slow=17,SNR=3.6							
HNR				LR		LR	20 34 07.4	
	comp=Z,853nm,20.9s,baz=288,slow=33							
RAR	**Rarotonga**	**21.30**	**98**	*e*P		P	20 28 16.5	+4.6
RAR	**Rarotonga**	**21.30**	**98**	LR		LR	20 33 60.0	
	comp=Z,1μm,20.4s,baz=248,slow=30							
SNZO	**South Karori**	**21.80**	**186**	*e*P		**P**	**20 28 15.6**	**-1.3**
	193nm,1.3s							
KHZ	**Kahutara**	**23.02**	**188**	*e*P		**P**	**20 28 29.3**	**-0.6**
	33nm,0.7s							
RPZ	**Rata Peaks**	**24.68**	**191**	*e*P		**P**	**20 28 45.5**	**-0.3**
RPZ	**Rata Peaks**	**24.68**	**191**	P		**P**	**20 28 45.1**	**-0.8**
	27nm,1.1s,baz=37,slow=15,SNR=3.4							
RPZ				LR		LR	20 36 53.6	
	comp=Z,942nm,22.0s,baz=280,slow=33							
TBI	**Tubuai**	**30.88**	**103**	*e*S		**S**	**20 34 40.3**	**-4.5**
	212nm,27.5s							
TBI				*e*LQ		LQ	20 36 19.4	
	878nm,26.5s							
TBI				*e*LR		LR	20 37 45.3	
	2μm,29.8s,baz=273							
PMG	**Port Moresby**	**31.07**	**285**	LR		LR	20 40 59.3	
	comp=Z,767nm,18.1s,baz=307,slow=34							
PPT2	**Papeete2**	**31.19**	**92**	*e*S		S	20 34 42.9	-7.0
	204nm,24.0s							
PPT2				*e*LR		LR	20 37 50.8	
	2μm,28.0s,baz=259							
PPT	**Papeete**	**31.19**	**92**	LR		LR	20 39 00.2	
	comp=Z,461nm,21.1s,baz=185,slow=30							
STKA	**Stephens Creek**	**34.48**	**242**	*e*P		P	20 30 08.9	-4.1
	7.3nm,1.1s							
STKA	**Stephens Creek**	**34.48**	**242**	P		**P**	**20 30 13.3**	**+0.3**
	5.5nm,0.8s,baz=88,slow=9.2,SNR=10							
STKA				LR		LR	20 42 09.9	
	comp=Z,364nm,20.7s,baz=238,slow=33							
WRAB	**Tennant Creek**	**40.59**	**262**	*e*P		P	20 31 00.6	-4.3
WRAB				pmax		pmax		
	comp=Z,14nm,1.0s							
WRAB	**Tennant Creek**	**40.59**	**262**	*e*P		P	20 31 00.6	-4.3
	comp=Z,14nm,1.0s							
WRA	**Warramunga Arr**	**40.59**	**262**	P		**P**	**20 31 03.6**	**-1.4**
WRA	**Warramunga Arr**	**40.59**	**262**	P		**P**	**20 31 03.6**	**-1.4**
	comp=Z,5.1nm,1.0s,baz=92,slow=8.5,SNR=21							
AS31	**Alice Springs**	**40.67**	**256**	*e*P		**P**	**20 31 04.9**	**-0.7**
ASAR	**Alice Springs**	**40.67**	**256**	P		**P**	**20 31 05.2**	**-0.4**
ASAR	**Alice Springs**	**40.67**	**256**	P		**P**	**20 31 05.2**	**-0.4**
	comp=Z,11nm,0.8s,baz=85,slow=8.4,SNR=92							
ASAR				LR		LR	20 46 54.4	
	comp=Z,512nm,19.9s,baz=96,slow=35							
RKT	**Rikitea**	**44.20**	**103**	*e*LR		LR	20 43 53.8	
	comp=Z,1μm,31.2s							
DRV	**Dumont d'Urvil**	**52.89**	**198**	S		S	20 40 02.0	-6.3
DRV				SS		SS	20 43 35.0	-12
DRV				R			20 48 00.0	
KAPI	**Kappang**	**58.04**	**276**	*e*P		**P**	**20 33 16.4**	**-2.1**
	comp=Z,21nm,0.9s							
VNDA	**Vanda**	**58.49**	**184**	P		**P**	**20 33 19.8**	**-0.8**
VNDA	**Vanda**	**58.49**	**184**	P		**P**	**20 33 19.8**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=19,slow=6.2,SNR=4.2							
VNDA				LR		LR	20 54 23.2	
	comp=Z,289nm,20.3s,baz=17,slow=32							
MJAR	**Matsushiro Arr**	**67.07**	**326**	P		**P**	**20 34 16.7**	**-1.6**
MJAR	**Matsushiro Arr**	**67.07**	**326**	P		**P**	**20 34 16.7**	**-1.6**
	comp=Z,1.1nm,0.7s,baz=162,slow=6.9,SNR=4.4							
PETK	**Petropavlovsk-**	**74.41**	**348**	LR		LR	21 02 29.9	
	comp=Z,84nm,20.1s,baz=168,slow=32							
NJ2	**Nanjing**	**76.12**	**312**	*e*P		P	20 35 17.8	+4.9
NJ2				pP		**PcP**	**20 35 27.3**	**+2.3**
NJ2				sP		sP	20 35 31.3	+10
NJ2				PP		PP	20 38 10.3	+6.1
NJ2				S		**S**	**20 44 58.5**	**+2.6**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
NJ2				pmax		pmax		
	comp=Z,110nm,7.8s							
NJ2				LR		LR		
	comp=N,100nm,27.0s							
NJ2				LR		LR		
	comp=E,180nm,24.9s							
NJ2				LR		LR		
	comp=Z,260nm,24.0s							
QIZ	**Qiongzhong**	**76.69**	**296**	P		**P**	**20 35 15.8**	**-0.6**
QIZ				S		**S**	**20 45 02.6**	**-0.1**
QIZ				LR		LR		
	comp=E,49nm,17.7s							
QIZ				LR		LR		
	comp=Z,160nm,27.9s							
COCO	**West Island**	**77.38**	**261**	*i* P		P	20 35 24.3	+3.9
MDJ	**Mudanjiang**	**77.43**	**327**	P		P	20 35 23.8	+3.8
MDJ				S		**S**	**20 45 12.3**	**+2.6**
MDJ				pmax		pmax		
	comp=Z,84nm,4.5s							
MDJ				LR		LR		
	comp=N,68nm,37.5s							
MDJ				LR		LR		
	comp=E,75nm,31.2s							
MDJ				LR		LR		
	comp=Z,57nm,32.5s							
HABR	**Khabarovsk**	**77.65**	**333**	P		P	20 35 24.6	+3.5
HABR				*e*			20 35 34.4	
HABR				*e**SP		sP	20 35 38.8	+9.2
HABR				*e*PPP		PPP	20 40 06.9	
HABR				*e*S		**S**	**20 45 14.3**	**+2.4**
HABR				*e*SS		**SKSac**	**20 45 26.9**	**-6.6**
HABR				*e**SS		**SKKSac**	**20 45 31.3**	**-3.0**
HABR				*e*			20 45 40.0	
HABR				pmax		pmax		
	comp=N,65nm,3.0s							
HABR				pmax		pmax		
	comp=E,61nm,3.0s							
HABR				pmax		pmax		
	comp=Z,137nm,3.0s							
HABR				MLR		MLR		
	comp=Z,116nm,19.0s							
CN2	**Changchun**	**79.08**	**324**	*e*P		P	20 35 38.3	+9.1
CN2				pmax		pmax		
	comp=Z,10.0nm,1.2s							
BSC	**Santa Cruz Isl**	**80.06**	**49**	⇓P		**P**	**20 35 34.3**	**-0.5**
	baz=80							
PKM	**Peak Mountain**	**80.40**	**48**	⇑P		**P**	**20 35 36.3**	**-0.5**
	baz=81,SNR=5.4							
SMMC	**Simmler**	**80.50**	**47**	⇓P		**P**	**20 35 37.2**	**+0.1**
	baz=81							
MAW	**Mawson**	**80.98**	**201**	P		**P**	**20 35 39.1**	**0.0**
MAW	**Mawson**	**80.98**	**201**	P		**P**	**20 35 39.1**	**0.0**
	comp=Z,8.0nm,1.0s,baz=103,slow=9.2,SNR=5.5							
MAW				LR		LR	21 07 41.0	
	comp=Z,301nm,18.2s,baz=88,slow=33							
MWC	**Mount Wilson**	**81.30**	**49**	*e*P		**P**	**20 35 42.0**	**+0.4**
MWC				pmax		pmax		
	comp=Z,17nm,1.0s							
MWC	**Mount Wilson**	**81.30**	**49**	*e*P		**P**	**20 35 42.0**	**+0.4**
	comp=Z,17nm,1.0s							
VES	**Vestal, Richgr**	**81.41**	**47**	⇑P		**P**	**20 35 42.8**	**+0.9**
	baz=82							
BFSC	**Mount Baldy Ra**	**81.59**	**49**	⇓P		**P**	**20 35 42.7**	**-0.4**
	baz=82							
EDW2	**Edwards Air Fo**	**81.68**	**49**	⇑P		**P**	**20 35 43.3**	**-0.2**
	baz=82,SNR=8.1							
CMB	**Columbia Colle**	**81.69**	**45**	*e*P		**P**	**20 35 43.1**	**-0.3**
CMB				pmax		pmax		
	comp=Z,21nm,1.1s							
CMB	**Columbia Colle**	**81.69**	**45**	*e*P		**P**	**20 35 43.1**	**-0.3**
	comp=Z,21nm,1.1s							
CMB				*e*			20 35 47.7	
WDC	**Whiskeytown Da**	**81.70**	**42**	*e*P		**P**	**20 35 44.1**	**+0.7**
WDC				pmax		pmax		
	comp=Z,13nm,1.1s							
WDC	**Whiskeytown Da**	**81.70**	**42**	*e*P		**P**	**20 35 44.0**	**+0.7**
	comp=Z,13nm,1.1s							
ISA	**Isabella**	**81.74**	**48**	*e*P		**P**	**20 35 42.7**	**-1.1**
ISA	**Isabella**	**81.74**	**48**	*e*P		**P**	**20 35 42.7**	**-1.1**
	comp=Z,3.0nm,0.9s							
ISA	**Isabella**	**81.74**	**48**	⇓P		**P**	**20 35 43.3**	**-0.5**
	baz=82,SNR=10							
MONP	**Monument Peak**	**81.81**	**51**	⇓P		**P**	**20 35 44.3**	**-0.1**
	baz=82							
DVTC	**Desert V Tower**	**81.94**	**51**	⇓P		**P**	**20 35 44.8**	**-0.1**
	baz=82							
ENH	**Enshi**	**82.10**	**306**	*e*P		**P**	**20 35 44.1**	**-1.7**
	comp=Z,33nm,1.4s							
PFO	**Pinyon Flat Ob**	**82.14**	**50**	⇑P		**P**	**20 35 46.2**	**+0.2**
	baz=82							
LRMC	**Laurel Mountai**	**82.20**	**48**	⇑P		**P**	**20 35 46.6**	**+0.3**
	baz=82							
YBH	**Yreka Blue Hor**	**82.25**	**41**	*e*P		**P**	**20 35 45.7**	**-0.6**
	comp=Z,14nm,1.2s							
SWSC	**Sam W. Stewart**	**82.30**	**51**	⇑P		**P**	**20 35 47.1**	**+0.4**
	baz=82							
BJI	**Beijing**	**82.35**	**317**	P		**P**	**20 35 47.3**	**+0.6**
BJI				pmax		pmax		
	comp=Z,11nm,0.7s							
BJI				LR		LR		
	comp=Z,61nm,38.3s							
GYA	**Guiyang**	**82.59**	**301**	P		**P**	**20 35 47.3**	**-1.2**
GYA				PP		**PP**	**20 38 57.6**	**-0.8**
GYA				S		**S**	**20 46 01.4**	**-3.8**
GYA				SS		**SS**	**20 51 25.8**	**-1.7**
GYA				pmax		pmax		
	comp=Z,20nm,1.0s							
GYA				pmax		pmax		
	comp=Z,130nm,5.0s							
GYA				LR		LR		
	comp=N,640nm,20.8s							
GYA				LR		LR		
	comp=E,520nm,21.2s							
GYA				LR		LR		
	comp=Z,730nm,20.9s							
HUMO	**Hull Mountain**	**82.60**	**40**	*e*P		**P**	**20 35 47.7**	**-0.4**
	comp=Z,12nm,1.1s							
MPMC	**Manual Prospec**	**82.63**	**48**	⇓P		**P**	**20 35 48.4**	**-0.2**
	baz=83,SNR=8.6							
BELC	**Belle Mtn. Jos**	**82.67**	**50**	⇑P		**P**	**20 35 47.9**	**-0.9**
	baz=83,SNR=5.4							
BEKR	**Beckworth**	**82.70**	**43**	P		**P**	**20 35 48.9**	**+0.1**
	comp=Z,13nm,1.3s							
BEKR				*e*			20 35 54.0	
GSC	**Goldstone**	**82.73**	**49**	P		**P**	**20 35 48.7**	**-0.3**
GSC				pmax		pmax		
	comp=Z,22nm,1.4s							
GSC	**Goldstone**	**82.73**	**49**	P		**P**	**20 35 48.7**	**-0.3**
	comp=Z,22nm,1.4s							
GSC	**Goldstone**	**82.73**	**49**	⇑P		**P**	**20 35 49.0**	**0.0**
	baz=83							
WCN	**Washoe City**	**82.79**	**44**	P		**P**	**20 35 49.6**	**+0.3**
WCN				pmax		pmax		
	comp=Z,17nm,1.0s							
WCN	**Washoe City**	**82.79**	**44**	P		**P**	**20 35 49.6**	**+0.3**
	comp=Z,17nm,1.0s							
HEC	**Hector,Ludlow**	**82.83**	**49**	⇑P		**P**	**20 35 49.7**	**+0.1**
	baz=83,SNR=5.3							
BC3	**Big Chuckawall**	**82.89**	**51**	⇓P		**P**	**20 35 50.0**	**+0.1**
	baz=83							
GLA	**Glamis**	**83.06**	**51**	*e*P		**P**	**20 35 51.3**	**+0.6**
GLA	**Glamis**	**83.06**	**51**	*e*P		**P**	**20 35 51.3**	**+0.6**
GLA	**Glamis**	**83.06**	**51**	⇑P		**P**	**20 35 50.5**	**-0.2**
	baz=83							
GRAC	**Grapevine Rang**	**83.19**	**47**	⇑P		**P**	**20 35 51.2**	**-0.2**
	baz=84							
GMRC	**Granite Mounta**	**83.29**	**50**	⇓P		**P**	**20 35 52.2**	**+0.2**
	baz=84,SNR=7.0							
NVAR	**Mina Array Bea**	**83.29**	**45**	P		**P**	**20 35 52.8**	**+0.8**
NVAR	**Mina Array Bea**	**83.29**	**45**	P		**P**	**20 35 52.8**	**+0.8**
	comp=Z,6.5nm,1.1s,baz=228,slow=9.3,SNR=12							
IRM	**Iron Mountain**	**83.36**	**50**	⇑P		**P**	**20 35 52.5**	**+0.3**
	baz=84,SNR=5.9							
NV11	**Mina Array Sit**	**83.39**	**45**	*e*P		**P**	**20 35 52.5**	**0.0**
Y12C	**Blythe**	**83.62**	**51**	⇓P		**P**	**20 35 53.6**	**+0.1**
	baz=84							
113A	**Mohawk Valley,**	**83.72**	**52**	⇑P		**P**	**20 35 53.2**	**-0.8**
	baz=84							
MOD	**Modoc**	**83.84**	**42**	*e*P		**P**	**20 35 52.4**	**-2.3**
	comp=Z,36nm,1.4s							
PDMCI	**Parker Dam,Lak**	**84.16**	**51**	⇓P		**P**	**20 35 56.3**	**+0.1**
	baz=84,SNR=6.7							
XAN	**Xi'an**	**84.29**	**309**	P		P	20 36 04.1	+7.1
XAN				pmax		pmax		
	comp=Z,2.0nm,1.1s							
XAN				pmax		pmax		
	comp=Z,20nm,6.1s							
SEY	**Seymchan**	**84.60**	**349**	⇑*e*P		P	20 36 02.6	+4.8
Z14A	**Wintersburg**	**84.60**	**52**	⇓P		**P**	**20 35 58.9**	**+0.4**
	baz=85							
W13A	**Hualapai Mount**	**84.72**	**50**	⇓P		**P**	**20 35 59.8**	**+0.4**
	baz=85							
Y14A	**Wickenburg**	**84.82**	**51**	⇓P		**P**	**20 35 59.8**	**+0.1**
	baz=85,SNR=5.5							
BMN	**Battle Mountai**	**85.04**	**44**	*e*P		**P**	**20 36 00.8**	**0.0**
BMN				pmax		pmax		
	comp=Z,44nm,1.3s							
BMN	**Battle Mountai**	**85.04**	**44**	*e*P		**P**	**20 36 00.8**	**0.0**
	comp=Z,44nm,1.3s							
R11A	**Troy Canyon, C**	**85.09**	**47**	⇓P		**P**	**20 36 01.1**	**0.0**
	baz=85							
PMR	**Palmer**	**85.17**	**15**	*e*P		**P**	**20 36 02.1**	**+1.5**
PMR				pmax		pmax		
	comp=Z,23nm,1.2s							
PMR	**Palmer**	**85.17**	**15**	*e*P		**P**	**20 36 02.1**	**+1.5**
	comp=Z,23nm,1.2s							
KMI	**Kunming**	**85.23**	**299**	P		**P**	**20 36 02.1**	**-0.1**
KMI				S		**S**	**20 46 28.9**	**-3.1**
KMI				SS		**SS**	**20 52 03.8**	**-3.0**
KMI				pmax		pmax		
	comp=Z,6.0nm,0.9s							
KMI				LR		LR		
	comp=Z,94nm,28.2s							
SML	**Sawmill**	**85.55**	**15**	P		**P**	**20 36 01.9**	**-0.8**
SML				pmax		pmax		
	comp=Z,7.0nm,1.6s							
SML	**Sawmill**	**85.55**	**15**	P		**P**	**20 36 01.9**	**-0.8**
	comp=Z,6.9nm,1.6s							
LON	**Longmire**	**85.64**	**37**	P		**P**	**20 36 04.5**	**+1.0**
LON				pmax		pmax		
	comp=Z,15nm,1.5s							
LON	**Longmire**	**85.64**	**37**	P		**P**	**20 36 04.5**	**+1.0**
	comp=Z,15nm,1.5s							
TUC	**Tucson**	**85.75**	**54**	*e*P		**P**	**20 36 02.1**	**-2.3**
TUC	**Tucson**	**85.75**	**54**	*e*P		**P**	**20 36 02.1**	**-2.3**
CMAR	**Chiang Mai Arr**	**85.89**	**291**	P		**P**	**20 36 05.2**	**-0.1**
CMAR	**Chiang Mai Arr**	**85.89**	**291**	P		**P**	**20 36 05.2**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=128,slow=3.8,SNR=17							
CHTO	**Chiang Mai**	**86.02**	**291**	*e*P		P	20 36 02.7	-3.2
CHTO				pmax		pmax		
	comp=Z,5.0nm,1.1s							
CHTO	**Chiang Mai**	**86.02**	**291**	*e*P		P	20 36 02.7	-3.2
	comp=Z,5.0nm,1.1s							
X16A	**Lo Mia Camp, P**	**86.19**	**52**	⇓P		**P**	**20 36 06.5**	**-0.3**
	baz=86,SNR=8.9							
CCUT	**Cedar City**	**86.25**	**48**	*e*P		**P**	**20 36 07.4**	**+0.4**
	comp=Z,22nm,1.3s							
CCUT				*e*pP		**pP**	**20 36 13.1**	**-0.2**
U15A	**North Rim**	**86.49**	**49**	⇑P		**P**	**20 36 07.9**	**-0.4**
	baz=87,SNR=11							
TRF	**Thorofare Moun**	**86.50**	**14**	*e*P		**P**	**20 36 06.2**	**-1.2**
	comp=Z,8.7nm,1.0s							
319A	**Douglas**	**86.50**	**55**	⇓P		**P**	**20 36 08.1**	**-0.1**
	baz=87							
ELK	**Elko**	**86.50**	**45**	*e*P		**P**	**20 36 07.8**	**-0.4**
	comp=Z,19nm,1.3s							
ELK				*e*pP		**pP**	**20 36 13.8**	**-0.7**
WUAZ	**Wupatki**	**86.74**	**51**	P		**P**	**20 36 10.2**	**+0.9**
	comp=Z,21nm,1.3s							
WUAZ				*e*pP		**pP**	**20 36 15.5**	**-0.2**
WUAZ	**Wupatki**	**86.74**	**51**	⇓P		**P**	**20 36 09.2**	**-0.1**
	baz=87							
HAWA	**Hanford**	**86.75**	**38**	*e*P		**P**	**20 36 09.1**	**+0.2**
	comp=Z,32nm,1.2s							
CD2	**Chengdu**	**86.80**	**304**	P		**P**	**20 36 08.8**	**-0.8**
CD2				PP		**PP**	**20 39 33.3**	**+0.7**
CD2				SKS		**SKSac**	**20 46 31.9**	**-4.0**
CD2				S		**S**	**20 46 43.5**	**-3.3**
CD2				SS		**SS**	**20 52 28.0**	**-1.4**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,5.4s							
320A	**Kipp Ranch, An**	**87.07**	**55**	⇓P		**P**	**20 36 10.7**	**-0.3**
	baz=87							
BMO	**Blue Mountains**	**87.26**	**40**	*e*P		**P**	**20 36 10.4**	**-1.1**
BMO				*e**PP		**pP**	**20 36 16.6**	**-1.3**
BMO				pmax		pmax		
	comp=Z,22nm,1.5s							
BMO	**Blue Mountains**	**87.26**	**40**	*e*P		**P**	**20 36 10.4**	**-1.1**
	comp=Z,22nm,1.5s							
BMO				*e*pP		**pP**	**20 36 16.6**	**-1.3**
PAX	**Paxson**	**87.26**	**16**	P		**P**	**20 36 10.7**	**-0.4**
PAX				pmax		pmax		
	comp=Z,3.0nm,0.4s							
PAX	**Paxson**	**87.26**	**16**	P		**P**	**20 36 10.7**	**-0.4**
	comp=Z,2.9nm,0.4s							
220A	**Playas Peak, P**	**87.31**	**55**	⇑P		**P**	**20 36 12.1**	**-0.1**
	baz=88							
X18A	**Snowflake**	**87.35**	**52**	⇑P		**P**	**20 36 11.9**	**-0.5**
	baz=88							
MFID	**Camas Ranch**	**87.44**	**42**	*e*P		P	20 36 08.2	-4.4
	comp=Z,27nm,1.3s							
MFID				*e*pP		pP	20 36 17.9	-0.9
MFID	**Camas Ranch**	**87.44**	**42**	⇓P		**P**	**20 36 12.5**	**0.0**
	baz=88,SNR=8.1							
MVU	**Marysvale**	**87.49**	**48**	*e*P		**P**	**20 36 11.1**	**-2.0**
	comp=Z,11nm,1.2s							
MVU				*e*pP		**pP**	**20 36 19.3**	**-0.1**
MSU	**Marysvale**	**87.52**	**48**	*e*P		**P**	**20 36 13.4**	**+0.3**
MSU				*e**PP		**pP**	**20 36 19.4**	**-0.1**
MSU				pmax		pmax		
	comp=Z,12nm,1.1s							
MSU	**Marysvale**	**87.52**	**48**	*e*P		**P**	**20 36 13.4**	**+0.3**
	comp=Z,12nm,1.1s							
MSU				*e*pP		**pP**	**20 36 19.4**	**-0.1**
BILL	**Bilibino**	**87.76**	**356**	⇑*i*P		P	20 36 18.3	+5.0
BILL				pmax		pmax		
	comp=Z,33nm,1.2s							
BILL				MLR		MLR		
	comp=Z,100nm,18.0s							
Z20A	**Nine Sixteen R**	**87.76**	**54**	⇑P		**P**	**20 36 14.3**	**-0.1**
	baz=88							
I12A	**Atlanta**	**88.07**	**42**	⇓P		**P**	**20 36 15.4**	**-0.2**
	baz=88,SNR=10							
121A	**Cookes Peak, D**	**88.14**	**55**	⇓P		**P**	**20 36 15.5**	**-0.6**
	baz=88							
Y20A	**Horse Springs,**	**88.26**	**53**	⇑P		**P**	**20 36 16.7**	**-0.1**
	baz=88,SNR=7.2							
Q16A	**Castle Valley**	**88.41**	**48**	⇓P		**P**	**20 36 16.3**	**-1.1**
	baz=89							
ILAR	**Eielson Array**	**88.41**	**14**	P		**P**	**20 36 15.7**	**-0.8**
ILAR	**Eielson Array**	**88.41**	**14**	P		**P**	**20 36 15.7**	**-0.8**
	comp=Z,1.4nm,0.9s,baz=238,slow=5.5,SNR=10							
ILAR				LR		LR	21 08 42.2	
	comp=Z,274nm,21.5s,baz=27,slow=31							
HLID	**Hailey**	**88.41**	**42**	*e*P		**P**	**20 36 16.1**	**-1.2**
	comp=Z,16nm,1.2s							
HLID				*e*pP		**pP**	**20 36 22.9**	**-0.6**
HLID	**Hailey**	**88.41**	**42**	⇑P		**P**	**20 36 17.4**	**+0.1**
	baz=89,SNR=9.0							
J13A	**Cove Ranch, Pi**	**88.48**	**43**	⇑P		**P**	**20 36 18.2**	**+0.7**
	baz=89,SNR=9.7							
222A	**Williams

W21A **San Fidel** 89.31 52 ⇓P P 20 36 20.5 -1.2
baz=90
Y22A **Socorro** 89.34 54 ⇑P P 20 36 21.8 0.0
baz=90
HWUT **Hardware Ranch** 89.35 45 P P 20 36 21.5 -0.2
comp=Z,14nm,1.4s
HWUT *e*P P 20 36 27.0 -1.0
324A **Moseley Ranch,** 89.49 56 ⇑P P 20 36 21.3 -1.2
baz=90
F13A **Darby** 89.54 40 ⇓P P 20 36 22.1 -0.3
baz=90,SNR=7.6
D12A **Red Ives Fores** 89.55 39 ⇑P P 20 36 22.1 -0.2
baz=90
H14A **Leadore** 89.58 42 ⇓P P 20 36 23.0 +0.3
baz=90,SNR=6.1
425A **Indio Mountain** 89.62 57 ⇑P P 20 36 23.8 +0.7
baz=90,SNR=9.5
MNTX **Cornudas Mount** 89.67 56 *e*P P 20 36 22.9 -0.2
comp=Z,27nm,1.5s
MNTX *e*P P 20 36 29.1 -0.4
224A **Cornudas Mount** 89.70 56 ⇑P P 20 36 23.6 +0.1
baz=90,SNR=5.6
LPM **Los Pinos Moun** 89.75 53 P P 20 36 22.4 -1.3
comp=Z,7.7nm,1.2s
LPM *e*P P 20 36 29.8 -0.2
626A **Big Bend Ranch** 89.83 59 ⇑P P 20 36 23.9 -0.1
baz=90,SNR=12
U21A **Nageezi** 89.85 51 ⇑P P 20 36 24.1 -0.1
baz=90,SNR=9.4
I15A **Monteview** 89.85 43 ⇑P P 20 36 23.2 -0.7
baz=90
EGAK **Eagle** 89.85 16 P P 20 36 20.7 -2.5
comp=Z,5.3nm,0.4s
M17A **Scullys Gap (B** 89.89 46 ⇑P P 20 36 23.3 -1.0
baz=90
S20A **Disappointment** 89.92 50 ⇓P P 20 36 24.1 -0.5
baz=90,SNR=6.0
MCMT **McKenzie Canyo** 90.00 42 *e*P P 20 36 23.3 -1.5
comp=Z,9.4nm,1.2s
MCMT *e*P P 20 36 30.5 -0.6
Y23A **Lovelace Mesa,** 90.03 54 ⇑P P 20 36 24.5 -0.6
baz=90
H15A **Lima** 90.03 42 ⇑P P 20 36 24.9 +0.1
baz=90,SNR=6.1
526A **Mary Lane Ranc** 90.06 58 ⇓P P 20 36 25.5 +0.3
baz=90,SNR=8.5
D13A **Huson** 90.10 39 ⇑P P 20 36 25.7 +0.8
baz=90,SNR=8.4
TXAR **Lajitas Array** 90.12 59 P P 20 36 25.8 +0.3
TXAR **Lajitas Array** 90.12 59 P P 20 36 25.8 +0.3
comp=Z,3.4nm,0.8s,baz=224,slow=5.0,SNR=25
TXAR LR LR 21 09 01.9
comp=Z,96nm,19.4s,baz=230,slow=30
ANMO **Albuquerque** 90.13 53 P P 20 36 23.7 -1.9
comp=Z,32nm,1.7s
ANMO *e*P P 20 36 31.2 -0.7
T21A **Navajo Lake** 90.17 51 ⇓P P 20 36 25.5 -0.2
baz=90
V22A **San Miguel Ran** 90.19 52 ⇓P P 20 36 24.5 -1.3
baz=90
P19A **Cripple Cowboy** 90.25 48 ⇑P P 20 36 26.0 0.0
baz=90,SNR=5.6
S21A **Coal Bank Pass** 90.26 50 ⇓P P 20 36 26.4 +0.2
baz=90,SNR=6.4
225A **Deer Hill, Car** 90.27 56 ⇓P P 20 36 25.8 -0.3
baz=90
BSMT **Bassoo Peak** 90.27 39 P P 20 36 25.5 -0.3
comp=Z,5.1nm,1.2s
BSMT *e*P P 20 36 30.8 -1.4
M18A **Lyman** 90.28 46 ⇓P P 20 36 26.7 +0.6
baz=90,SNR=7.9
MSO **Missoula** 90.28 40 ⇓P P 20 36 25.7 -0.1
baz=90
RRI2 **Red Ridge** 90.30 44 P P 20 36 26.9 +0.7
comp=Z,43nm,1.3s
RRI2 *e*P P 20 36 32.0 -0.5
C13A **Hot Springs** 90.31 39 ⇓P P 20 36 25.9 0.0
baz=91
426A **McDonald Obser** 90.33 58 ⇑P P 20 36 26.4 -0.2
baz=91,SNR=11
E14A **Clinton** 90.36 40 ⇓P P 20 36 26.6 +0.4
baz=91,SNR=5.6
627A **Terlingua Ranc** 90.39 59 ⇓P P 20 36 26.5 -0.2
baz=91,SNR=20
G15A **Dillon** 90.39 42 ⇑P P 20 36 27.0 +0.6
baz=91,SNR=6.6
DLMT **Dillon** 90.41 41 *e*P P 20 36 27.1 +0.6
comp=Z,13nm,1.2s
DLMT *e*P P 20 36 32.2 -0.6
I16A **Newdale** 90.43 43 ⇑P P 20 36 27.3 +0.6
baz=91,SNR=6.3
O19A **Miners Draw (B** 90.43 47 ⇑P P 20 36 27.4 +0.7
baz=91,SNR=11
Q20A **Ridgley Place,** 90.44 49 ⇑P P 20 36 26.7 -0.1
baz=91,SNR=9.1
527A **Woodward Ranch** 90.47 58 ⇑P P 20 36 27.3 +0.2
baz=91,SNR=11
Y24A **Capitan** 90.50 54 ⇓P P 20 36 27.4 +0.2
baz=91,SNR=6.7
P20A **De Beque** 90.61 48 ⇓P P 20 36 28.0 +0.4
baz=91,SNR=6.7
125A **Gardner Draw,** 90.61 56 ⇓P P 20 36 27.7 0.0
baz=91,SNR=5.9
TPAW **Teton Pass** 90.61 44 P P 20 36 27.3 -0.3
comp=Z,44nm,1.7s
TPAW *e*P P 20 36 33.4 -0.6
326A **Caldwell Ranch** 90.62 57 ⇑P P 20 36 28.0 +0.2
baz=91,SNR=5.9
GDL2 **Guadalupe Moun** 90.66 56 *e*P P 20 36 28.1 +0.2
comp=Z,27nm,1.6s
GDL2 *e* 20 36 34.0
D14A **Greenough** 90.66 40 ⇓P P 20 36 27.4 -0.2
baz=91,SNR=6.7
F15A **Butte** 90.70 41 ⇑P P 20 36 28.2 +0.3
baz=91,SNR=7.6
B13A **Whitefish** 90.72 38 ⇑P P 20 36 27.6 -0.1
baz=91
SNOW **Snow King Moun** 90.72 44 *e*P P 20 36 28.9 +0.8
comp=Z,13nm,0.8s
SNOW *e*P P 20 36 33.9 -0.6
R21A **Cimarron** 90.73 49 ⇑P P 20 36 28.4 +0.2
baz=91,SNR=11
CHMT **Chamberlain Mo** 90.74 40 *e*P P 20 36 27.8 -0.2
comp=Z,10nm,1.5s
CHMT *e*P P 20 36 33.9 -0.5
226B **Tecolote Peak,** 90.77 56 ⇑P P 20 36 28.0 -0.4
baz=91,SNR=8.2
IMW **Indian Meadow** 90.80 43 *e*P P 20 36 28.4 -0.1
comp=Z,27nm,1.2s
IMW *e*P P 20 36 34.2 -0.7
628A **Black Gap, Mar** 90.80 59 ⇓P P 20 36 28.7 +0.1
baz=91,SNR=16
C14A **Swan Lake** 90.85 39 ⇓P P 20 36 28.3 -0.1
baz=91
MOOW **Moose Ponds** 90.86 43 *e*P P 20 36 28.4 -0.3
comp=Z,14nm,1.3s
MOOW *e*P P 20 36 33.9 -1.1
E15A **Deer Lodge** 90.88 40 ⇑P P 20 36 28.7 0.0
baz=91
LOHW **Long Hollow** 90.89 44 *e*P P 20 36 27.6 -1.2
comp=Z,24nm,1.6s
LOHW *e*P P 20 36 34.5 -0.7
427A **Hayter Ranch,** 90.90 58 ⇑P P 20 36 29.4 +0.3
baz=91,SNR=12
Q21A **Lamborn Mesa,** 90.90 49 ⇑P P 20 36 29.5 +0.5
baz=91,SNR=5.7
M19A **Rock Springs** 90.93 46 ⇓P P 20 36 29.1 0.0
baz=91
O20A **White River Ci** 90.98 48 ⇓P P 20 36 29.9 +0.6
baz=91,SNR=7.9
S22A **4UR Ranch, Cre** 90.99 50 ⇑P P 20 36 30.0 +0.5
baz=91,SNR=13
W24A **Lazy 6 Ranch,** 91.03 53 ⇑P P 20 36 30.6 +0.9
baz=91,SNR=5.2
L19A **Farson** 91.05 45 ⇓P P 20 36 29.9 +0.3
baz=91,SNR=5.1
Y25A **Mesa, Roswell** 91.07 54 ⇑P P 20 36 29.8 0.0
baz=91,SNR=7.2
528A **Cox Ranch, San** 91.14 58 ⇓P P 20 36 30.3 +0.1
baz=91,SNR=8.9
BOZ **Bozeman (W)** 91.15 42 P P 20 36 27.6 -2.3
BOZ *e**PP pP 20 36 35.4 -0.8
BOZ pmax pmax
comp=Z,18nm,1.4s
BOZ **Bozeman (W)** 91.15 42 P P 20 36 27.6 -2.3
comp=Z,18nm,1.4s
BOZ *e*P pP 20 36 35.4 -0.8

BW06 **Boulder Array** 91.20 45 P P 20 36 30.1 -0.3
comp=Z,28nm,1.6s
BW06 *e*P pP 20 36 35.5 -1.2
PDAR **Pinedale Array** 91.20 45 P P 20 36 30.9 +0.5
PDAR **Pinedale Array** 91.20 45 P P 20 36 30.9 +0.5
comp=Z,1.2nm,1.0s,baz=236,slow=6.4,SNR=3.9
F16A **Kennard Place,** 91.21 41 ⇑P P 20 36 30.1 -0.1
baz=92
D15A **Lincoln** 91.24 40 ⇓P P 20 36 30.2 -0.1
baz=92,SNR=6.8
R22A **Saguache, Gunn** 91.24 50 ⇑P P 20 36 30.6 -0.2
baz=92,SNR=12
H17A **Grant Village** 91.25 43 ⇓P P 20 36 31.0 +0.5
baz=92,SNR=6.7
N20A **Spence Gulch,** 91.25 47 ⇓P P 20 36 30.4 -0.3
baz=92,SNR=7.2
Z26A **Caprock** 91.37 55 ⇑P P 20 36 30.7 -0.5
baz=92,SNR=8.1
Q22A **Crested Butte,** 91.39 49 ⇑P P 20 36 30.5 -0.9
baz=92
B14A **Marquette Ranc** 91.41 39 ⇑P P 20 36 30.7 -0.3
baz=92,SNR=6.9
428A **Kincaid Ranch,** 91.43 58 ⇓P P 20 36 31.2 -0.3
baz=92
SMCO **Snowmass** 91.47 49 *e*P P 20 36 29.9 -2.0
comp=Z,27nm,1.3s
SMCO *e*P pP 20 36 37.6 -0.6
E16A **East Helena** 91.52 41 ⇑P P 20 36 32.3 +0.7
baz=92,SNR=6.6
C15A **Salmond Ranch,** 91.53 39 ⇓P P 20 36 31.8 +0.2
baz=92,SNR=8.6
O21A **Pagoda** 91.55 48 ⇓P P 20 36 32.2 +0.2
baz=92,SNR=5.6
328A **Wristen Ranch,** 91.57 57 ⇑P P 20 36 31.6 -0.5
baz=92
M20A **Sweetwater, Wa** 91.58 46 ⇑P P 20 36 32.4 +0.2
baz=92,SNR=5.8
A14A **Double T Ranch** 91.61 38 ⇑P P 20 36 31.7 -0.3
baz=92,SNR=5.8
L20A **Wamsutter** 91.70 46 ⇓P P 20 36 33.0 +0.4
baz=92,SNR=6.0
K19A **Absolon Red Bu** 91.70 45 ⇓P P 20 36 32.9 +0.3
baz=92,SNR=6.4
N21A **Black Mountain** 91.74 47 ⇓P P 20 36 33.2 +0.3
baz=92,SNR=9.5
W25A **X Bar L Ranch,** 91.75 53 ⇓P P 20 36 32.5 -0.4
baz=92,SNR=12
J19A **Crowheart** 91.75 44 ⇓P P 20 36 32.5 -0.3
baz=92
D16A **Dana Ranch, Ca** 91.83 40 ⇑P P 20 36 33.0 0.0
baz=92,SNR=6.2
V25A **Rancho No Teng** 91.87 53 ⇓P P 20 36 33.5 -0.1
baz=92,SNR=6.0
R23A **Moffat** 91.90 50 ⇓P P 20 36 33.6 -0.2
baz=92,SNR=9.7
SDCO **Great Sand Dun** 91.96 51 *e*P P 20 36 33.8 -0.3
comp=Z,19nm,1.6s
SDCO *e*P pP 20 36 39.5 -0.8
ULN **Ulaanbaatar** 91.97 321 *e*P P 20 36 30.4 -3.3
comp=Z,4.1nm,1.1s
Z27A **Tatum** 91.98 55 ⇓P P 20 36 32.7 -1.3
baz=92
E17A **Martinsdale** 91.99 41 ⇓P P 20 36 33.6 -0.3
baz=92
228A **UT Block 9, Go** 92.02 57 ⇓P P 20 36 33.8 -0.4
baz=92
T24A **Torres, Weston** 92.02 51 ⇑P P 20 36 34.0 -0.3
baz=92
429A **Davenport Ranc** 92.03 58 ⇓P P 20 36 34.1 -0.1
baz=92,SNR=9.5
C16A **Fuhringer Ranc** 92.06 40 ⇓P P 20 36 33.7 -0.3
baz=92
I19A **Meeteetse** 92.12 44 ⇓P P 20 36 33.3 -1.2
baz=92
S24A **Houchin Ranch,** 92.13 51 ⇓P P 20 36 34.6 -0.2
baz=92,SNR=8.2
O22A **Kremmling** 92.17 48 ⇓P P 20 36 35.0 -0.1
baz=92,SNR=13
M21A **Separation Pea** 92.19 46 ⇓P P 20 36 35.0 0.0
baz=92,SNR=5.4
W26A **Owens Ranch, T** 92.22 54 ⇓P P 20 36 34.0 -1.1
baz=92
Y27A **Causey** 92.23 55 ⇑P P 20 36 35.0 -0.2
baz=92,SNR=6.5
U25A **Circle Dot Ran** 92.24 52 ⇓P P 20 36 34.8 -0.5
baz=92,SNR=5.2
329A **Wagon Wheel Ra** 92.27 57 ⇑P P 20 36 35.1 -0.3
baz=92,SNR=5.2
128A **Castleberry Fa** 92.29 56 ⇑P P 20 36 35.4 0.0
baz=92
530A **J-C Ranch, Com** 92.30 59 ⇓P P 20 36 35.1 -0.4
baz=92,SNR=6.1
G18A **La El Ranch,** 92.30 42 ⇓P P 20 36 35.4 +0.1
baz=93,SNR=7.3
L21A **Rawlins** 92.34 46 ⇑P P 20 36 35.2 -0.4
baz=93
B16A **M & M Farms, S** 92.36 39 ⇓P P 20 36 35.3 0.0
baz=93
P23A **Jefferson** 92.36 49 ⇑P P 20 36 35.7 -0.2
baz=93
SONM **Songino Array** 92.36 320 P P 20 36 34.7 -0.7
SONM **Songino Array** 92.36 320 P P 20 36 34.7 -0.7
comp=Z,0.6nm,0.9s,baz=128,slow=5.4,SNR=4.5
SONM LR LR 21 15 26.9
comp=Z,72nm,20.9s,baz=203,slow=34
H19A **Powell** 92.40 43 ⇑P P 20 36 36.2 +0.5
baz=93
D17A **Six Diamond Ra** 92.41 40 ⇓P P 20 36 36.0 +0.2
baz=93,SNR=7.6
J20A **Shoshoni** 92.43 45 ⇑P P 20 36 36.4 +0.4
baz=93,SNR=10
F18A **Big Timber** 92.46 42 ⇑P P 20 36 35.6 -0.4
baz=93
V26A **Tequesquite Ra** 92.47 53 ⇑P P 20 36 35.1 -1.1
baz=93
N22A **Wattenberg Ran** 92.49 47 ⇑P P 20 36 37.2 +0.7
baz=93,SNR=14
T25A **Trinidad** 92.52 51 ⇓P P 20 36 37.0 +0.4
baz=93
MSTX **Muleshoe** 92.56 55 ⇑P P 20 36 36.8 +0.1
baz=93,SNR=8.0
430A **Baggett Ranch,** 92.61 58 ⇑P P 20 36 36.4 -0.5
baz=93
E18A **Harlowton** 92.62 41 ⇓P P 20 36 37.5 +0.7
baz=93,SNR=8.3
I20A **Worland** 92.65 44 ⇑P P 20 36 36.9 0.0
baz=93,SNR=5.6
631A **Perdido Creek** 92.66 60 ⇑P P 20 36 37.0 -0.1
baz=93,SNR=7.4
ISCO **Idaho Springs** 92.69 49 *e*P P 20 36 36.0 -1.4
ISCO *e**PP pP 20 36 43.1 -0.6
ISCO pmax pmax
comp=Z,14nm,1.4s
ISCO **Idaho Springs** 92.69 49 *e*P P 20 36 36.0 -1.4
comp=Z,14nm,1.4s
ISCO *e*P pP 20 36 43.1 -0.6
ISCO **Idaho Springs** 92.69 49 ⇓P P 20 36 37.1 -0.3
baz=93
Q24A **Divide** 92.69 50 ⇓P P 20 36 37.0 -0.5
baz=93
S25A **Robets Cordova** 92.70 51 ⇑P P 20 36 37.2 -0.2
baz=93,SNR=8.8
U26A **Atchley Ranch,** 92.73 52 ⇑P P 20 36 37.7 +0.1
baz=93,SNR=6.3
W27A **Bowe Ranch, En** 92.75 54 ⇑P P 20 36 37.3 -0.3
baz=93
J21A **Lysite** 92.85 45 ⇓P P 20 36 37.9 0.0
baz=93,SNR=8.9
330A **Mertzon** 92.88 58 ⇓P P 20 36 37.9 -0.3
baz=93
N23A **Red Feather La** 92.89 48 ⇑P P 20 36 38.1 -0.1
baz=93,SNR=10
PLCA **Paso Flores** 92.90 135 P P 20 36 42.1 +3.9
PLCA **Paso Flores** 92.90 135 P P 20 36 42.1 +3.9
comp=Z,2.7nm,0.9s,baz=248,slow=7.3,SNR=3.1
732A **Laxson Ranch,** 92.91 61 ⇑P P 20 36 38.3 0.0
baz=93,SNR=5.5
F19A **Roth Farm, Mol** 92.93 42 ⇓P P 20 36 38.0 -0.1
baz=93
531A **Rockysprings** 92.95 59 ⇑P P 20 36 38.3 -0.2
baz=93,SNR=7.1
L22A **Ellis Ranch, M** 93.00 46 ⇓P P 20 36 38.7 +0.1
baz=93
431A **Sonora** 93.08 59 ⇓P P 20 36 38.2 -0.9
baz=93
I21A **Big Trails, Te** 93.14 44 ⇑P P 20 36 39.0 -0.2
baz=93,SNR=8.2
GTA **Gaotai** 93.19 311 *e*P P 20 36 39.8 +0.3

GTA SKS **SKSac** 20 47 12.4 -0.5
GTA S **S** 20 47 46.4 +0.6
GTA pmax pmax
comp=Z,3.0nm,1.4s
GTA pmax pmax
comp=Z,74nm,6.2s
GTA LR LR
comp=N,56nm,17.6s
GTA LR LR
comp=E,55nm,17.6s
GTA LR LR
comp=Z,100nm,19.5s
A17A **Triple J Farms** 93.19 39 ⇓P P 20 36 39.2 0.0
baz=93,SNR=5.2
E19A **Rath Farm, Rou** 93.28 42 ⇑P P 20 36 40.0 +0.3
baz=94,SNR=6.0
EGMT **Eagleton** 93.36 40 ⇓P P 20 36 40.9 +0.9
baz=94
S26A **Kim** 93.40 51 ⇓P P 20 36 40.6 +0.1
baz=94
532A **Rocksprings** 93.45 59 ⇓P P 20 36 40.4 -0.4
baz=94,SNR=5.1
B18A **Beardsley Farm** 93.50 40 ⇑P P 20 36 40.7 +0.1
baz=94
D19A **Cripps Ranch,** 93.52 41 ⇑P P 20 36 40.8 0.0
baz=94,SNR=7.8
J22A **Midwest** 93.52 45 ⇓P P 20 36 41.1 +0.1
baz=94
L23A **Garrett** 93.53 47 ⇑P P 20 36 40.8 -0.3
baz=94
P25A **Willow Gulch B** 93.60 49 ⇓P P 20 36 41.5 +0.1
baz=94,SNR=6.4
JCT **Junction City** 93.66 59 P P 20 36 42.3 +0.5
JCT pmax pmax
comp=Z,14nm,1.1s
JCT **Junction City** 93.66 59 P P 20 36 42.3 +0.5
comp=Z,14nm,1.1s
JCT *e*P pP 20 36 46.7 -1.4
C19A **Slack Wire Ran** 93.66 40 ⇑P P 20 36 41.6 +0.2
baz=94,SNR=5.2
R26A **Arlington** 93.67 51 ⇓P P 20 36 41.3 -0.4
baz=94
I22A **9 Mile Ranch,** 93.71 45 ⇓P P 20 36 41.7 -0.1
baz=94
231A **Bronte** 93.75 58 ⇑P P 20 36 41.2 -1.0
baz=94
432A **Menard** 93.80 59 ⇑P P 20 36 42.1 -0.3
baz=94,SNR=6.6
U28A **Mallet** 93.86 53 ⇓P P 20 36 42.6 0.0
baz=94
M24A **Cheyenne** 93.89 47 ⇑P P 20 36 42.8 +0.1
baz=94
332A **Millersview** 94.02 58 ⇓P P 20 36 43.0 -0.4
baz=94,SNR=7.9
C20A **Veseth Ranch,** 94.29 41 ⇓P P 20 36 44.4 +0.2
baz=94,SNR=5.5
Z31A **Sharp Cattle R** 94.38 56 ⇓P P 20 36 44.1 -0.9
baz=95
Z32A **Haskell** 94.89 57 ⇑P P 20 36 47.2 -0.1
baz=95,SNR=5.1
C21A **Desert Coulee** 94.90 41 ⇑P P 20 36 46.8 -0.2
baz=95
D22A **Cohagen** 95.20 42 ⇓P P 20 36 47.9 -0.5
baz=95
H24A **Dirks Ranch, A** 95.32 44 ⇓P P 20 36 48.9 -0.2
baz=96,SNR=5.5
P28A **Saint Francis** 95.36 50 ⇑P P 20 36 48.9 -0.5
baz=96
C22A **Vida** 95.62 41 ⇓P P 20 36 50.9 +0.6
baz=96
F24A **Ekalaka** 95.81 43 ⇑P P 20 36 51.1 -0.2
baz=96
T31A **Randall Ranch,** 96.03 53 ⇓P P 20 36 52.1 -0.4
baz=96,SNR=5.5
D24A **Glendive** 96.35 42 ⇓P P 20 36 53.5 -0.2
baz=97
TIXI **Tiksi** 96.83 346 ⇑*e*P P 20 36 59.4 +4.2
TIXI pmax pmax
comp=Z,4.0nm,1.5s
TIXI MLR MLR
comp=Z,174nm,24.0s
YKA **Yellowknife Ar** 97.46 26 P Pdif 20 37 02.2 +3.9
YKA **Yellowknife Ar** 97.46 26 P Pdif 20 37 02.2 +3.9
comp=Z,1.2nm,0.9s,baz=244,slow=4.2,SNR=13
WMQ **Urumqi** 103.20 312 *e*P **Pdif** 20 37 23.8 -0.6
WMQ LR LR
comp=N,76nm,29.6s
WMQ LR LR
comp=E,75nm,25.2s
WMQ LR LR
comp=Z,59nm,23.2s
ZALV **Zalesovo Beam** 107.18 322 PKiKP **PKiKP** 20 41 51.9 +1.1
comp=Z,1.0nm,0.8s,baz=80,slow=1.6,SNR=4.1
MKAR **Makanchi Array** 107.55 314 PKiKP **PKiKP** 20 41 53.0 +1.2
comp=Z,1.1nm,1.0s,baz=66,slow=3.5,SNR=5.4
KURK **Kurchatov** 110.51 318 ⇑*i*PKiKP PKiKP 20 42 02.3 +5.2
KURK pmax pmax
comp=Z,9.0nm,2.5s
KURBB **Kurchatov Arra** 110.56 318 PKiKP **PKiKP** 20 42 01.6 +4.4
comp=Z,0.9nm,0.7s,baz=95,slow=1.8,SNR=10
BVAR **Borovoye Array** 115.70 320 PKIKP **PKPdf** 20 42 06.7 -0.3
BVAR **Borovoye Array** 115.70 320 PKP **PKPdf** 20 42 06.7 -0.3
BVAR **Borovoye Array** 115.70 320 PKP **PKPdf** 20 42 06.7 -0.3
comp=Z,0.3nm,0.5s,baz=94,slow=5.8,SNR=2.7
BRVK **Borovoye** 115.76 320 ⇑*i*PKIKP PKPdf 20 42 12.4 +5.3
BRVK pmax pmax
comp=Z,6.0nm,1.7s
ARU **Arti** 122.07 325 *i* PKIKP **PKPdf** 20 42 24.2 +5.1
ARU 20 43 57.2
ARU SS SS 21 00 21.7 -10
AKTO **Aktyubinsk** 123.60 318 PKP PKPdf 20 42 27.7 +5.4
comp=Z,4.2nm,0.8s,baz=99,slow=2.9,SNR=9.4
AKASG **Malin Array Be** 140.13 329 PKIKP **PKPdf** 20 42 55.3 +1.9
AKASG **Malin Array Be** 140.13 329 PKP **PKPdf** 20 42 55.3 +1.9
AKASG **Malin Array Be** 140.13 329 PKP **PKPdf** 20 42 55.3 +1.9
comp=Z,0.2nm,0.3s,baz=43,slow=4.2,SNR=2.8
SUW **Suwalki** 140.42 336 *e*PKP PKPdf 20 43 01.6 +7.8
BEL **Belsk** 143.02 336 *e*PKP **PKPdf** 20 43 01.9 +3.4
GKP **Gorka Klasztor** 143.09 340 *e*PKP **PKPdf** 20 43 01.6 +3.0
BRTR **Keskin Array B** 143.11 311 PKP **PKPdf** 20 42 58.9 -0.4
BRTR **Keskin Array B** 143.11 311 PKP **PKPdf** 20 42 58.9 -0.4
comp=Z,0.7nm,0.8s,baz=132,slow=6.4,SNR=4.2
KWP **Kalwaria Pacla** 143.91 332 *e*PKIKP PKPab 20 42 56.2 -1.2
KWP *e* 20 43 03.2
KWP **Kalwaria Pacla** 143.91 332 *e*PKPpre PKPab 20 42 56.2 -1.2
KWP *e*pPKP **PKiKP** 20 43 03.2 -0.5
KWP **Kalwaria Pacla** 143.91 332 ⇑*i*P PKPbc 20 42 57.9 -0.1
KWP **Kalwaria Pacla** 143.91 332 *e*PKP **PKPdf** 20 43 03.7 +3.5
CFR **Carcaliu** 144.06 322 ⇓*i*P **PKPdf** 20 43 05.2 +4.6
TESR **Tescani** 144.09 325 ⇑*i*P **PKPdf** 20 43 04.8 +4.2
BUR08 **Bucovina Ar. S** 144.12 328 *e*PKPdf **PKPab** 20 42 58.2 -0.1
BUR08 *e*pPKPdf **pPKPdf** 20 43 06.4 -0.9
BURAR **Bucovina Array** 144.13 328 ⇑*i*P PKPdf 20 43 08.1 +7.3
TIRR **Tirgusor** 144.31 321 ⇑*i*P **PKPdf** 20 43 05.4 +4.4
VRI **Vrincioaia** 144.45 324 ⇑*i*P **PKPdf** 20 43 06.1 +4.8
PLOR **Plostina** 144.50 324 ⇓*i*P **PKPdf** 20 43 06.4 +5.0
MANR **Mangalia** 144.56 320 ⇑*i*P PKPdf 20 43 06.9 +5.4
KOLS **Kolonicke sedl** 144.62 332 *e*PKP **PKPdf** 20 43 04.9 +3.4
OJC **Ojcow** 144.68 335 *e*PKIKP **PKPdf** 20 43 06.1 +4.6
OJC **Ojcow** 144.68 335 *e*PKPdf **PKPdf** 20 43 06.1 +4.6
UZH **Uzhgorod** 144.83 331 *e*PKIKP **PKPdf** 20 43 05.8 +4.0
CSS **Prodhromos** 144.92 303 *e*PKPdf **PKPab** 20 43 00.1 -1.5
CSS *e*pPKPdf **PKiKP** 20 43 07.2 +1.0
CRVS **Cervenica-Dubn** 145.00 332 *e*PKIKP **PKPbc** 20 42 59.4 -2.0
CRVS pmax pmax
comp=Z,4.0nm,1.2s
CRVS **Cervenica-Dubn** 145.00 332 *e*PKP **PKPbc** 20 42 59.4 -2.0
CRVS *e* 20 43 06.1
ISR **Istrita** 145.01 323 ⇑*i*P PKPdf 20 43 08.1 +5.8
TRPA **Tarpa** 145.08 330 ⇑*i*P **PKPdf** 20 43 07.3 +5.1
TRPA **Tarpa** 145.08 330 ⇑*e*PKPbc PKPdf 20 43 07.9 +5.7
NIE **Niedzica** 145.10 334 *e*PKIKP PKPdf 20 43 08.2 +5.9
NIE **Niedzica** 145.10 334 *e*PKPdf PKPdf 20 43 08.2 +5.9
MLR **Muntele Rosu** 145.12 324 ⇓*i*P **PKPdf** 20 43 03.8 +1.2
KSP **Ksiaz** 145.46 339 *e*PKIKP **PKPbc** 20 43 02.3 -0.5
KSP *e* 20 43 08.0
KSP **Ksiaz** 145.46 339 *e*PKPdf **PKPbc** 20 43 02.4 -0.4
KSP *e*PKPab **PKiKP** 20 43 09.2 +2.4
OKC **Ostrava-Krasne** 145.63 336 *e*PKIKP **PKPdf** 20 43 02.8 -0.3
OKC *e* 20 43 08.7
OKC *e* 20 43 13.6
OKC **Ostrava-Krasne** 145.63 336 *e*PKP **PKPdf** 20 43 02.8 -0.3
OKC *e*pPKP **pPKPdf** 20 43 08.7 -0.9
OKC *e*sPKP 20 43 13.6
UPC **Upice** 145.84 339 *e*PKIKP **PKPdf** 20 43 03.6 +0.1

UPC				*e*			20 43 10.3	
UPC				*e*			20 43 18.8	
UPC	**Upice**	**145.84**	**339**	*e*PKP	**PKPdf**	**20 43 03.6**	**+0.1**	
UPC				*ep*PKP	**pPKPdf**	**20 43 10.3**	**+0.3**	
UPC				*ex*	x	20 43 18.8		
SIBR	**Sibiu**	**145.86**	**326**	⇑*i*P	PKPab	20 43 10.9	+6.2	
DPC	**Dobruska-Polom**	**145.87**	**338**	*e*PKIKP	**PKPab**	**20 43 05.7**	**+1.1**	
DPC				*e*		20 43 15.3		
DPC				*e*		20 43 19.0		
DPC	**Dobruska-Polom**	**145.87**	**338**	*e*PKP	**PKPab**	**20 43 05.7**	**+1.1**	
DPC				*ep*PKP	**pPKPdf**	**20 43 09.8**	**-0.3**	
DPC				*es*PKP		20 43 15.3		
DPC				*ex*	x	20 43 19.0		
MORC	**Moravsky Berou**	**145.91**	**337**	*e*PKIKP	**PKPdf**	**20 43 03.6**	**-0.1**	
MORC				*e*		20 43 08.6		
MORC	**Moravsky Berou**	**145.91**	**337**	*e*PKPdf	**PKPdf**	**20 43 03.6**	**-0.1**	
MORC				*ep*PKPdf	**PKiKP**	**20 43 08.6**	**+0.8**	
MORC	**Moravsky Berou**	**145.91**	**337**	⇑*i*P	PKPab	20 43 10.0	+5.2	
ARR	**Arges**	**145.91**	**325**	⇑*i*P	**PKPbc**	**20 43 04.5**	**0.0**	
DRGR		**145.94**	**329**	⇓*i*P	**PKPdf**	**20 43 03.3**	**-0.6**	
CLL	**Collm**	**146.08**	**343**	⇑*e*PKP2	**PKPbc**	**20 43 05.0**	**+0.3**	
CLL				pmax	pmax			
	comp=Z,6.0nm,0.6s							
CLL	**Collm**	**146.08**	**343**	*e*PKPbc	**PKPbc**	**20 43 05.0**	**+0.3**	
	comp=Z,6.0nm,0.6s							
CLL				⇑*i*pPKPbc	**PKiKP**	**20 43 09.2**	**+1.1**	
	comp=Z,35nm,1.1s							
CLL				*i* pPKiKP	**pPKiKP**	**20 43 14.4**	**-0.1**	
	comp=Z,31nm,1.2s							
CLL				*i*		20 43 18.1		
BRG	**Berggiesshubel**	**146.19**	**341**	*e*PKP	**PKPdf**	**20 43 04.4**	**+0.3**	
	comp=Z,3.3nm,0.9s							
BRG				*e*		20 43 10.8		
	comp=Z,21nm,1.0s							
BRG	**Berggiesshubel**	**146.19**	**341**	*e*PKP2	**PKPdf**	**20 43 04.4**	**+0.3**	
BRG						20 46 35.7		
BRG				pmax	pmax			
	comp=Z,3.0nm,0.9s							
PVCC	**Panska Ves**	**146.30**	**340**	*e*PKP2	PKPab	20 43 11.7	+5.5	
PVCC	**Panska Ves**	**146.30**	**340**	*ep*PKP	PKPab	20 43 11.7	+5.5	
PSZ	**Piszkesteto**	**146.43**	**332**	*e*PKP2	**PKPdf**	**20 43 04.2**	**-0.5**	
PSZ	**Piszkesteto**	**146.43**	**332**	*e*PKPdf	**PKPdf**	**20 43 04.2**	**-0.5**	
PSZ				*ep*PKPdf	**pPKPdf**	**20 43 11.3**	**+0.1**	
PSZ	**Piszkesteto**	**146.43**	**332**	⇑*i*P	PKPab	20 43 12.7	+5.8	
PSZ	**Piszkesteto**	**146.43**	**332**	⇑*e*	PKPab	20 43 12.3	+5.4	
VYHS	**Vyhne**	**146.43**	**334**	*e*PKP2	**PKPdf**	**20 43 05.2**	**+0.6**	
VYHS				pmax	pmax			
	comp=Z,2.0nm,1.0s							
VYHS	**Vyhne**	**146.43**	**334**	*e*PKP	**PKPdf**	**20 43 05.2**	**+0.6**	
VYHS				*e*		20 43 12.1		
PRU	**Pruhonice**	**146.78**	**340**	*e*PKP2	**PKPbc**	**20 43 06.2**	**-0.6**	
PRU	**Pruhonice**	**146.78**	**340**	*e*PKP	**PKPbc**	**20 43 06.2**	**-0.6**	
PRU				*ep*PKP	**pPKPdf**	**20 43 12.6**	**+1.2**	
SMOL	**Smolenice**	**146.98**	**336**	*e*	PKPab	20 43 14.3	+5.4	
TREC	**Trest**	**147.05**	**338**	*e*PKP2	**PKPab**	**20 43 13.5**	**+4.3**	
TREC	**Trest**	**147.05**	**338**	*ep*PKP	**PKPab**	**20 43 13.5**	**+4.3**	
BUD	**Budapest**	**147.14**	**333**	⇑*e*PKPdf	**PKPab**	**20 43 14.2**	**+4.7**	
NKC	**Novy Kostel**	**147.20**	**342**	*e*PKP2	**PKPbc**	**20 43 08.8**	**+0.7**	
NKC	**Novy Kostel**	**147.20**	**342**	*e*PKP	**PKPbc**	**20 43 08.8**	**+0.7**	
NKC				*ep*PKP	**pPKPdf**	**20 43 13.4**	**+1.1**	
ZST	**Bratislava**	**147.36**	**335**	*e*PKHKP	PKPpre	20 43 02.9		
ZST				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ZST	**Bratislava**	**147.36**	**335**	*e*PKP	PKPpre	20 43 02.9		
ZST				*e*		20 43 11.6		
PKSG		**147.48**	**333**	*e*PKPdf	**PKPab**	**20 43 14.6**	**+3.7**	
PKST	**T"s**	**147.74**	**333**	*e*PKPdf	**PKPab**	**20 43 15.3**	**+3.4**	
PKS2	**Kecel**	**147.81**	**331**	⇓*e*PKPdf	**PKPab**	**20 43 14.6**	**+4.4**	
KHC	**Kasperske Hory**	**147.83**	**340**	*e*PKIKP	**PKPdf**	**20 43 07.6**	**+0.6**	
KHC				*e*		20 43 13.1		
KHC	**Kasperske Hory**	**147.83**	**340**	*e*PKPbc	**PKPdf**	**20 43 07.5**	**+0.6**	
KHC				*ep*PKPbc	**PKPab**	**20 43 13.1**	**+0.8**	
KHC	**Kasperske Hory**	**147.83**	**340**	*e*PKP	**PKPab**	**20 43 11.7**	**-0.6**	
KHC				*ep*PKP	**pPKPdf**	**20 43 15.8**	**+2.4**	
GRF	**Grafenberg Arr**	**148.03**	**343**	*e*PKP2	**PKPab**	**20 43 16.3**	**+3.3**	
GRF				MLR	MLR			
	comp=Z,100nm,20.9s							
GRF	**Grafenberg Arr**	**148.03**	**343**	*e*PKP	**PKPab**	**20 43 16.3**	**+3.3**	
GRF				*e*L	L	21 45 11.8		
	comp=Z,70nm,20.9s							
GERES	**GERESS Array B**	**148.04**	**340**	PKPbc	**PKPdf**	**20 43 08.6**	**+1.2**	
GERES	**GERESS Array B**	**148.04**	**340**	PKPbc	**PKPdf**	**20 43 08.6**	**+1.2**	
	comp=Z,1.0nm,0.7s,baz=7.8,slow=3.0,SNR=9.9							
CONA	**Conrad Observa**	**148.06**	**336**	⇑*i*SPKPbc	sPKPbc	20 43 16.6	-2.6	
	comp=Z,35nm,1.4s,SNR=13							
PKS9	**Tamasi**	**148.16**	**332**	⇑*e*	**PKPab**	**20 43 13.2**	**-0.4**	
PKSM	**Moragy**	**148.28**	**332**	⇑*i*P	**PKPab**	**20 43 17.5**	**+3.4**	
PKSM	**Moragy**	**148.28**	**332**	⇑*e*	**PKPab**	**20 43 17.1**	**+3.0**	
MEM	**Membach**	**148.32**	**350**	APKPbc	**PKPab**	**20 43 16.7**	**+2.6**	
BCLA	**Clavier**	**148.62**	**350**	E	**PKPab**	**20 43 14.1**	**-1.2**	
WLF	**Walferdange**	**149.21**	**349**	APKPbc	**PKPab**	**20 43 19.3**	**+1.7**	
WLF	**Walferdange**	**149.21**	**349**	*e*PKIKP	**PKPbc**	**20 43 11.4**	**-2.0**	
WLF				*e*		20 43 19.4		
WLF	**Walferdange**	**149.21**	**349**	*e*PKPbc	**PKPbc**	**20 43 11.4**	**-2.0**	
WLF				*ep*PKPdf	**PKPab**	**20 43 19.4**	**+1.7**	
SOKA	**Soboth**	**149.41**	**336**	⇓*i*pPKPbc	**PKPab**	**20 43 19.3**	**+0.5**	
	comp=Z,19nm,1.3s							
LANF	**Langenberg**	**149.53**	**347**	PKP	**PKPab**	**20 43 18.6**	**-0.5**	
KBA	**Koelnbreinsper**	**149.69**	**338**	⇑*i*pPKPbc	**PKPab**	**20 43 19.8**	**-0.2**	
	comp=Z,11nm,0.9s,SNR=7.8							
MYKA	**Terra Mystica**	**149.97**	**338**	⇑*i*pPKPbc	**PKPab**	**20 43 20.2**	**-0.8**	
	comp=Z,13nm,0.8s							
BFO	**Black Forest**	**150.03**	**346**	*e*PKP2	**PKPbc**	**20 43 14.4**	**-1.1**	
BFO	**Black Forest**	**150.03**	**346**	*e*PKPbc	**PKPbc**	**20 43 14.4**	**-1.1**	
BFO				*ep*PKPbc	**PKPab**	**20 43 20.6**	**-0.6**	
WATA	**Walderalm**	**150.05**	**341**	⇑*i*pPKPbc	**PKPab**	**20 43 21.0**	**-0.4**	
	comp=Z,33nm,1.5s							
WTTA	**Wattenberg**	**150.09**	**341**	⇑*i*pPKiKP	**PKPab**	**20 43 21.4**	**-0.3**	
	comp=Z,24nm,1.0s,SNR=7.2							
MOTA	**Moosalm**	**150.18**	**341**	⇑*i*pPKPbc	**PKPab**	**20 43 21.3**	**-0.7**	
	comp=Z,19nm,0.9s							
ABTA	**Abfaltersbach**	**150.26**	**339**	⇑*i*pPKPbc	**PKPab**	**20 43 21.1**	**-1.2**	
	comp=Z,28nm,1.1s							
ECH	**Echery**	**150.40**	**347**	*e*PKP2	**PKPbc**	**20 43 15.8**	**-0.6**	
ECH	**Echery**	**150.40**	**347**	*e*PKPbc	**PKPbc**	**20 43 15.8**	**-0.6**	
FETA	**Feichten**	**150.59**	**341**	⇓*i*pPKiKP	**PKPab**	**20 43 22.7**	**-1.0**	
	comp=Z,22nm,1.0s,SNR=8.9							
DAVA	**Damuels**	**150.59**	**343**	⇑*i*pPKiKP	**PKPab**	**20 43 22.6**	**-1.1**	
	comp=Z,18nm,1.1s							
THEF	**They Montfort**	**150.62**	**348**	PKP	**PKPab**	**20 43 22.2**	**-1.4**	
TRI	**Trieste**	**150.71**	**336**	*e*PKIKP	**PKPbc**	**20 43 16.1**	**-1.0**	
TRI				*e*		20 43 22.3		
TRI	**Trieste**	**150.71**	**336**	*e*PKPbc	**PKPbc**	**20 43 16.1**	**-1.0**	
TRI				*ep*PKPbc	**pPKPbc**	**20 43 22.3**	**-1.3**	
MOF	**Molkenrain**	**150.75**	**347**	PKP	**PKPab**	**20 43 21.2**	**-3.0**	
LOMF	**Lomont**	**151.29**	**347**	PKP	**PKPab**	**20 43 23.8**	**-2.7**	
TUE	**Stuetta**	**151.49**	**343**	*e*PKPbc	**PKPbc**	**20 43 18.8**	**-0.4**	
TUE				*ep*PKPbc	**pPKPbc**	**20 43 24.6**	**-1.1**	
AQU	**L'Aquila**	**153.63**	**333**	⇑*i*P	PKPbc	20 43 29.3	+5.4	

MAN 18 20:28:54,10˚.21N×125˚.21E,h29km,mb4.3,ML3.1,MS3.0, 1D,Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.35**	**258**	*e*P	Pn	20 29 04.5	+1.4
MSLP				*e*S	Sn	20 29 11.6	+2.4
PLP	**Palo**	**0.98**	**347**	⇓*e*P	Pn	20 29 11.7	-0.2
PLP				*e*S	Sn	20 29 22.6	-2.2
OCLP	**Ormoc**	**1.02**	**325**	*e*P	Pb	20 29 12.9	-0.3
OCLP				*e*S	Sn	20 29 22.8	-3.1

IDC 18 20:51:35.8±3.2,20˚.11S×177˚.71E,h0km,mb3.4/3, mb1 3.7/3,ms1mx3.5/17,mbtmp3.4/3,Error ellipse: s-maj=369.1km s-min=32.3km az=162.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.67**	**263**	P	P	20 59 17.9	-0.4
	0.2nm,0.8s,baz=98,slow=6.2,SNR=2.9						
ASAR	**Alice Springs**	**40.69**	**257**	P	P	20 59 18.4	0.0
	0.5nm,0.6s,baz=83,slow=8.5,SNR=3.6						
NVAR	**Mina Array Bea**	**83.56**	**45**	P	P	21 04 10.2	+4.0
	0.2nm,0.4s,baz=232,slow=5.6,SNR=4.1						
TXAR	**Lajitas Array**	**90.27**	**59**	P	P	21 04 39.0	0.0
	0.4nm,0.8s,baz=224,slow=3.8,SNR=3.1						

GUC 18 20:52:42.6±0.8,22˚.50S×70˚.35W,h32km±3km,ML3.6,

2009 MAY

5C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MECH	**Mejillones**	**0.61**	**189**	⇑*i*P	Pb	20 52 54.5	-0.5
MECH				*i* S	Sb	20 53 02.8	-0.6
MECH				AML	AML	20 53 13.5	
	comp=N,5μm,0.7s						
MACH	**Maria Elena**	**0.62**	**61**	⇑*i*P	Pb	20 52 54.9	-0.6
MACH				*i* S	Sb	20 53 04.0	-0.2
PB04	**Plate Boundary**	**0.83**	**74**	⇓*i*P	Pn	20 52 49.7	-8.4
PB04				*i* S	Sn	20 52 54.8	-14
PB04				AML	AML	20 52 55.9	
	comp=N,9μm,0.4s						
PB07	**Plate Boundary**	**0.88**	**29**	⇓*i*P	Pn	20 52 58.6	-0.4
PB07				*i* S	Sn	20 53 10.5	-0.3
PB07				AML	AML	20 53 11.6	
	comp=N,4μm,0.3s						
CEN1	**Los Morros**	**0.90**	**171**	⇑*i*P	Pb	20 53 01.3	+1.4
CEN1				*e*S	Sb	20 53 14.8	+3.1
CEN1				AML	AML	20 53 17.0	
	comp=E,874nm,0.2s						
ANCH	**Antofagasta**	**1.18**	**183**	⇓*i*P	Pn	20 53 02.8	-0.1
ANCH				*i* S	Sn	20 53 18.4	+0.4
ANCH				AML	AML	20 53 21.8	
	comp=E,1μm,0.5s						
PB09	**Plate Boundary**	**1.24**	**56**	*e*P	Pn	20 53 04.5	+0.5
PB09				*i* S	Sb	20 53 21.3	-0.2
PB09				AML	AML	20 53 24.8	
	comp=E,8μm,0.4s						
PB01	**Plate Boundary**	**1.65**	**29**	⇑*i*P	Pn	20 53 11.0	+1.4
PB01				*i* S	Sb	20 53 32.2	-0.9
PB01				AML	AML	20 53 36.2	
	comp=E,2μm,0.2s						
HMBC	**Humberstone**	**2.25**	**11**	⇑*i*P	Pn	20 53 20.2	+2.4
HMBC				*i* S	Sb	20 53 48.3	-2.0
HMBC				AML	AML	20 53 59.7	
	comp=E,696nm,0.5s						

NNC 18 20:52:50.3±4.7,41˚.76N×80˚.90E,h0km,mb3.8,mpv3.4, 10C-5D,Error ellipse: s-maj=42.1km s-min=19.8km az=143.0,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**3.26**	**298**	⇑Pn	Pn	20 53 43.7	+0.9
KNDC				⇑Lg	Lg	20 54 31.4	
TKM2	**Tokmak 2**	**4.10**	**288**	⇑Pn	Pn	20 53 54.3	-0.3
	9.7nm,0.6s						
TKM2				⇑Lg	Lg	20 54 57.7	
	36nm,0.5s						
MK31	**Makanchi Array**	**5.13**	**11**	⇑Pn	Pn	20 54 05.5	-3.0
	1.2nm,0.5s,baz=201,slow=14,SNR=56						
MK31				⇑Pg	Pb	20 54 19.0	-2.1
	2.1nm,0.6s,baz=186,slow=15,SNR=4.9						
MK31				⇓Sn	Sn	20 55 08.2	-0.2
	6.9nm,0.7s,baz=182,slow=24,SNR=5.4						
MK31				⇓Lg	Lg	20 55 28.7	
	7.1nm,0.7s,baz=201,slow=27,SNR=4.4						
KK31	**Karatay Array**	**7.80**	**283**	⇑Pg	Pb	20 55 10.0	+3.4
	1.6nm,0.8s,baz=93,slow=16,SNR=5.5						
KK31				Lg	Lg	20 56 53.9	
	2.3nm,0.6s,baz=92,slow=28,SNR=7.5						
KUR17	**Kurchatov Arra**	**9.03**	**350**	⇓Pn	Pn	20 55 07.0	+5.1
KUR17				⇓Sn	Sn	20 56 50.1	+5.8
	0.3nm,0.8s						
KUR17				⇓Lg	Lg	20 57 35.7	
	0.6nm,0.8s						
KURK	**Kurchatov**	**9.10**	**351**	⇑Pn	Pn	20 55 06.5	+3.7
	3.5nm,1.1s						
KURK				⇑Sn	Sn	20 56 53.0	+7.1
	3.1nm,0.6s						
KURK				⇑Lg	Lg	20 57 34.7	
	8.6nm,1.0s						

*IDC **18** 21:15:36.5±3.3,6˚.96S×129˚.47E,h99km±30km,mb3.7/10, mb1 4.0/11,mb1mx3.9/19,mbtmp3.8/11,MS3.5/3, Ms1 3.5/3,ms1mx3.0/30,Error ellipse: s-maj=34.1km s-min=12.3km az=72.0*

*AUST **18** 21:15:37.6±0.3,7˚.04S×129˚.28E,h99km,Error ellipse: s-maj=1.0km s-min=0.7km az=296.0*

*ISCJB **18** 21:15:38.8±0.3,7˚.00S±0˚.03×129˚.52E±0˚.03,h139km, mb3.8/10,Error ellipse: s-maj=4.9km s-min=3.6km az=11.9*

*DJA **18** 21:15:41.0±0.4,7˚.S±4˚×13˚0E±˚,h168km±20km,M4.8/11, mB5.2/6,mb4.9/11,MLv4.9/7,Mw(mB)4.6/6*

ISC 18 21:15:40.2±0.4,7˚.07S±0˚.04×129˚.52E±0˚.05,h139km,n64, σ1s94/74,mb3.8/10,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.94**	**34**	P	**Pn**	**21 16 52.4**	**-0.3**
FAKI				S	**Sn**	**21 17 46.7**	**-2.4**
FAKI	**Fak Fak**	**4.94**	**34**	P	**Pn**	**21 16 52.3**	**-0.3**
	baz=5.1,SNR=122						
FAKI				S	**Sn**	**21 17 46.7**	**-2.4**
	baz=5.1,SNR=28						
MTN	**Manton Dam**	**5.96**	**165**	S	**Sn**	**21 18 12.0**	**-1.5**
	baz=6.1,SNR=5.8						
KDU	**Kakadu**	**6.30**	**153**	P	**Pn**	**21 17 11.8**	**+1.0**
	baz=6.5,SNR=1000						
KDU				S	**Sn**	**21 18 19.4**	**-2.2**
	baz=6.5,SNR=7.5						
SWI	**Sorong**	**6.41**	**16**	P	**Pn**	**21 17 11.7**	**-0.6**
	65nm,0.5s,5μm1.0nm						
SWI				S	**Sn**	**21 18 19.9**	**-4.4**
	65nm,0.5s,5μm1.0nm						
SWI	**Sorong**	**6.41**	**16**	P	**Pn**	**21 17 11.9**	**-0.4**
	baz=6.5,SNR=26						
SWI				S	**Sn**	**21 18 20.5**	**-3.8**
	baz=6.5,SNR=15						
LBMI	**Labuha**	**6.70**	**342**	P	**Pn**	**21 17 18.4**	**+2.1**
	217nm,0.9s,2μm0.6nm						
LBMI				S	**Sn**	**21 18 32.6**	**+1.2**
	217nm,0.9s,2μm0.6nm						
BBSI	**Bau Bau**	**7.08**	**282**	P	**Pn**	**21 17 24.4**	**+3.0**
	26nm,0.9s,0.1nm						
RKPI	**Ransiki, Papua**	**7.21**	**40**	P	**Pn**	**21 17 23.7**	**+0.5**
	236nm,0.5s,21μm2.5nm						
RKPI				S	**Sn**	**21 18 41.3**	**-2.6**
	236nm,0.5s,21μm2.5nm						
MMRI	**Maumere**	**7.38**	**257**	P	**Pn**	**21 17 26.5**	**+1.1**
	32nm,1.0s,760nm0.2nm						
TNTI	**Ternate**	**8.08**	**345**	P	**Pn**	**21 17 34.4**	**-0.4**
	53nm,0.7s						
SRPI	**Serui, Papua**	**8.46**	**53**	S	**Sn**	**21 19 10.5**	**-3.4**
KNRA	**Kununurra**	**8.59**	**185**	P	**Pn**	**21 17 40.9**	**-0.7**
	baz=8.7,SNR=962						
KNRA				S	**Sn**	**21 19 11.7**	**-5.2**
	baz=8.7,SNR=15						
BAKI	**Biak**	**8.79**	**49**	P	**Pn**	**21 17 42.9**	**-1.4**
	209nm,0.8s						
BAKI				S	**Sn**	**21 19 19.1**	**-2.8**
	209nm,0.8s						
BASI	**Baing, Sumba**	**9.38**	**250**	P	**Pn**	**21 17 52.2**	**0.0**
	78nm,0.7s,2μm						
WSI	**Waingapu**	**9.48**	**254**	P	**Pn**	**21 17 54.4**	**+0.8**
	158nm,0.5s,3μm						
WSI	**Waingapu**	**9.48**	**254**	P	**Pn**	**21 17 52.6**	**-1.0**
	baz=9.3,SNR=3.0						
WSI				S	**Sn**	**21 19 35.0**	**-3.5**
	baz=9.3,SNR=5.0						
BKSI	**Bulukumba**	**9.50**	**280**	P	Pn	21 18 09.5	+16
MNI	**Manado**	**9.66**	**331**	P	**Pn**	**21 17 57.8**	**+1.8**
	121nm,0.7s						
FITZ	**Fitzroy Crossi**	**11.60**	**199**	P	**Pn**	**21 18 19.1**	**-2.5**
	14nm,0.3s,baz=31,slow=11,SNR=343						
FITZ				S	Sn	21 20 21.2	-8.5
	14nm,0.3s,baz=91,slow=21,SNR=6.5						
FITZ	**Fitzroy Crossi**	**11.60**	**199**	P	**Pn**	**21 18 19.2**	**-2.5**
	baz=12,SNR=568						
JAY	**Jayapura**	**12.03**	**68**	S	**Sn**	**21 20 40.8**	**+0.6**
	baz=12,SNR=3.3						
WRA	**Warramunga Arr**	**13.63**	**160**	P	**Pn**	**21 18 45.8**	**-2.1**
	12nm,0.3s,baz=343,slow=12,SNR=94						
WRA				S	Sn	21 21 11.1	-7.5
	7.8nm,0.3s,baz=334,slow=22,SNR=60						
COEN	**Coen**	**15.07**	**118**	P	**P**	**21 19 09.1**	**+1.1**
	baz=15,SNR=35						
COEN				S	Sn	21 21 44.3	-9.0
	baz=15,SNR=4.1						
QIS	**Mount Isa**	**16.59**	**145**	P	**P**	**21 19 26.0**	**+1.1**
	baz=17,SNR=9.8						
ASAR	**Alice Springs**	**17.03**	**166**	P	**Pn**	**21 19 30.8**	**+0.5**
	3.5nm,0.3s,baz=330,slow=8.8,SNR=178						
ASAR				S	**S**	**21 22 34.3**	**-6.1**
	2.4nm,0.3s,baz=326,slow=20,SNR=7.3						
ASAR				ScP	**ScP**	**21 27 28.7**	**-1.1**
	baz=12,slow=2.6,SNR=4.3						
PMG	**Port Moresby**	**17.61**	**99**	P	**Pn**	**21 19 40.0**	**+2.8**
	1.5nm,0.3s,baz=344,slow=9.1,SNR=5.6						
MTSU	**Mount Surprise**	**18.14**	**129**	P	**Pn**	**21 19 45.4**	**+2.0**
	baz=18,SNR=6.3						
MTSU				S	**S**	**21 23 01.8**	**-0.9**
	baz=18,SNR=4.1						
MEEK	**Meekatharra**	**22.05**	**207**	P	**P**	**21 20 24.4**	**+0.4**
	baz=22,SNR=15						
FORT	**Forrest**	**23.63**	**183**	P	**P**	**21 20 40.7**	**+2.0**
	baz=24,SNR=24						
XMIS	**Christmas Isla**	**23.82**	**260**	S	S	21 24 27.6	-19
	baz=24,SNR=3.7						
QLP	**Quilpie**	**23.93**	**146**	P	**P**	**21 20 44.8**	**+3.3**
	baz=24,SNR=5.4						
MORW	**Morawa**	**25.31**	**209**	P	**P**	**21 20 56.0**	**+2.0**
	baz=25,SNR=13						
GUMO	**Guam**	**25.57**	**37**	LR	LR	21 30 48.7	
	comp=Z,33nm,19.2s,baz=79,slow=36						
BBOO	**Buckleboo**	**26.32**	**168**	P	**P**	**21 21 04.8**	**+1.6**
	baz=26,SNR=8.3						
STKA	**Stephens Creek**	**27.13**	**157**	P	**P**	**21 21 12.5**	**+2.1**
	4.0nm,0.6s,baz=334,slow=8.4,SNR=15						
STKA				LR	LR	21 31 42.7	
	comp=Z,77nm,19.9s,baz=25,slow=36						
STKA	**Stephens Creek**	**27.13**	**157**	P	**P**	**21 21 12.6**	**+2.1**
	baz=27,SNR=11						
ARPS	**Mount Arapiles**	**31.63**	**161**	P	P	21 21 53.0	+2.9
	baz=32,SNR=8.8						
DZM	**Mont Dzumac**	**38.59**	**117**	LR	LR	21 38 04.6	
	comp=Z,230nm,18.6s,baz=187,slow=35						
CMAR	**Chiang Mai Arr**	**39.41**	**310**	P	**P**	**21 22 56.6**	**-0.2**
	1.5nm,0.7s,baz=136,slow=6.9,SNR=17						
CMAR				PcP	**PcP**	**21 25 03.1**	**+0.7**
	0.7nm,0.6s,baz=166,slow=2.9,SNR=5.6						
MJAR	**Matsushiro Arr**	**44.14**	**10**	P	**P**	**21 23 33.4**	**-1.6**
	0.8nm,0.6s,baz=195,slow=9.9,SNR=4.7						
KSRS	**Korea Array**	**44.32**	**358**	P	**P**	**21 23 37.1**	**+0.8**
	0.9nm,0.7s,baz=177,slow=9.3,SNR=3.6						
ODAN	**Odare**	**52.94**	**311**	*e*P	**P**	**21 24 42.0**	**-0.8**
	4.4nm,0.4s						
TAPN	**Taplejung**	**52.98**	**312**	*e*P	**P**	**21 24 42.2**	**-0.9**
	4.6nm,0.4s						
RAMN	**Ramite**	**53.58**	**311**	*e*P	**P**	**21 24 47.0**	**-0.5**
	18nm,0.6s						
GUN	**Gumba**	**54.64**	**312**	*e*P	**P**	**21 24 54.4**	**-0.9**
	16nm,0.6s						
PKI	**Pulchoki**	**54.81**	**311**	*e*P	**P**	**21 24 55.6**	**-0.9**
PKIN	**Phulchoki**	**54.82**	**311**	*e*P	**P**	**21 24 55.5**	**-1.0**
	5.1nm,0.7s						
KKN	**Kakani**	**55.02**	**311**	*e*P	**P**	**21 24 57.3**	**-0.6**
	1.8nm,0.3s						
DMN	**Daman**	**55.05**	**311**	*e*P	**P**	**21 24 58.1**	**-0.1**
KOLN	**Koldanda**	**56.28**	**310**	*e*P	**P**	**21 25 06.3**	**-0.5**
	5.9nm,0.5s						
PYUN	**Piuthan**	**56.91**	**310**	*e*P	**P**	**21 25 10.8**	**-0.5**
SONM	**Songino Array**	**58.36**	**342**	P	**P**	**21 25 21.2**	**+0.2**
	0.6nm,0.5s,baz=159,slow=7.0,SNR=12						
SONM				PcP	**PcP**	**21 26 10.2**	**-0.2**
	0.4nm,0.5s,baz=160,slow=4.2,SNR=2.6						
MKAR	**Makanchi Array**	**68.02**	**327**	P	**P**	**21 26 24.4**	**-0.1**
	2.2nm,0.4s,baz=118,slow=7.8,SNR=59						
ZALV	**Zalesovo Beam**	**71.43**	**334**	P	**P**	**21 26 44.4**	**-0.9**
	0.7nm,0.4s,baz=140,slow=6.7,SNR=5.6						
VNDA	**Vanda**	**72.44**	**173**	P	**P**	**21 26 52.0**	**+1.1**
	0.7nm,0.6s,baz=316,slow=6.0,SNR=5.3						
QSPA	**South Pole Qui**	**82.91**	**180**	P	**P**	**21 27 50.1**	**+0.8**
	1.8nm,0.8s,baz=272,slow=4.1,SNR=11						
ILAR	**Eielson Array**	**93.61**	**25**	P	**P**	**21 28 39.0**	**-1.4**
	0.6nm,0.8s,baz=282,slow=3.8,SNR=6.8						
GERES	**GERESS Array B**	**112.17**	**320**	PKiKP	**PKiKP**	**21 33 59.8**	**+0.2**
	0.4nm,0.5s,baz=29,slow=3.0,SNR=4.1						
TXAR	**Lajitas Array**	**125.37**	**59**	PKP

CTKT	**Corum**	**0.88 30**	*i* P	**Pg**	**21 37 25.1**	**-0.1**
CTKT			*i* S	**Sb**	**21 37 37.9**	**+0.5**
YOZ	**Yozgat**	**0.88 104**	*e*PG	**Pg**	**21 37 24.2**	**-1.0**
YOZ			*e*SG	**Sg**	**21 37 36.3**	**-0.3**
YOZ	**Yozgat**	**0.88 104**	*e*Pg	**Pg**	**21 37 24.2**	**-1.0**
YOZ			*e*Sg	**Sg**	**21 37 36.3**	**-0.3**
BBAL	**Bala**	**0.91 250**	*i* P	**Pg**	**21 37 24.9**	**-0.9**
BBAL			*i* S	**Sg**	**21 37 37.7**	**+0.1**
BBAL	**Bala**	**0.91 250**	*i* P	**Pg**	**21 37 24.9**	**-0.9**
BBAL			*i* S	**Sg**	**21 37 37.7**	**+0.1**
AFSR	**Afʿar-Bala (A**	**0.98 245**	*e*PG	**Pg**	**21 37 26.6**	**-0.6**
AFSR			*e*SG	**Sb**	**21 37 40.4**	**+0.1**
AFSR	**Afʿar-Bala (A**	**0.98 245**	*e*Pg	**Pg**	**21 37 26.6**	**-0.6**
AFSR			*e*Sg	**Sb**	**21 37 40.4**	**+0.1**
ANTO	**Ankara**	**1.10 271**	*e*PN	**Pb**	**21 37 29.4**	**0.0**
ANTO	**Ankara**	**1.10 271**	*e*Pn	**Pb**	**21 37 29.4**	**0.0**
LOD	**Lodumlu**	**1.12 272**	*e*PN	**Pb**	**21 37 29.9**	**+0.2**
LOD	**Lodumlu**	**1.12 272**	*e*Pn	**Pb**	**21 37 29.9**	**+0.2**
TOS	**Tosya**	**1.18 353**	*e*PN	**Pb**	**21 37 30.6**	**-0.2**
TOS	**Tosya**	**1.18 353**	*e*Pn	**Pb**	**21 37 30.6**	**-0.2**
AVNT	**Avonos**	**1.19 155**	*e*P	**Pg**	**21 37 31.4**	**+0.3**
AVNT	**Avonos**	**1.19 155**	*e*P	**Pg**	**21 37 31.4**	**+0.3**
SULT	**Sultanhani-AKS**	**1.75 199**	*e*PN	**Pn**	**21 37 39.3**	**+0.6**
SULT	**Sultanhani-AKS**	**1.75 199**	*e*Pn	**Pn**	**21 37 39.3**	**+0.6**

BJI **18** *22:04:37.4, 44˚.52N×148˚.17E, h112km, mB4.9/8, mb4.4/16*
ISCJB **18** *22:04:37.8±0.5, 44˚.20N±0˚.04×147˚.83E±0˚.06, h98km±3km, mb4.2/40, Error ellipse: s-maj=8.5km s-min=4.5km az=136.1*
IDC **18** *22:04:38.7±2.0, 44˚.30N×147˚.74E, h91km±18km, mb4.0/19, mb1 4.1/24, mb1mx4.1/29, mbtmp4.0/24, MS2.8/1, Ms1 2.8/1, ms1mx2.4/37, Error ellipse: s-maj=14.5km s-min=11.7km az=128.0*
NEIC **18** *22:04:38.6±0.8, 44˚.29N×147˚.80E, h90km±7km, mb4.4/6, Error ellipse: s-maj=11.3km s-min=6.4km az=141.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
MOS **18** *22:04:38.0±1.4, 44˚.31N×147˚.77E, h105km, mb4.4/12, Error ellipse: s-maj=9.6km s-min=7.2km az=101.3*
JMA **18** *22:04:40.2±0.2, 43˚.95N×147˚.80E, h85km, M4.6*
JMA Felt I J1.
SKHL **18** *22:04:40.1±1.4, 44˚.17N×147˚.81E, h81km±30km, mb6.1/1, msh6.1/2*

ISC 18 22:04:38.1±0.7,**44˚.17N**±0˚.05×**147˚.90E**±0˚.05,**h89**km±5km**, n167,**σ1$52/196,**mb4.2**/41,**14C-8D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR	**Kuril'sk**	**1.07**	**359**	*e*PN		**Pn**	**22 04 59.5**	**+1.0**
KUR	**Kuril'sk**	**1.07**	**359**	⇑ *i*P		**Pn**	**22 04 59.5**	**+1.0**
KUR				*e*P		**Pn**	**22 04 59.5**	**+1.0**
KUR				AMB	AMB		22 04 59.9	
	10μm,1.0s							
KUR				AMB	AMB		22 05 03.5	
	800nm,0.4s							
KUR				AMB	AMB		22 05 03.5	
	2μm,0.5s							
KUR				AMB	AMB		22 05 03.5	
	1μm,0.8s							
KUR				*e*S		**Sn**	**22 05 15.0**	**+1.2**
KUR				A	A		22 05 15.2	
	35μm,1.0s							
KUR				A	A		22 05 15.2	
	28μm,1.0s							
KUR				A	A		22 05 19.2	
	4μm,0.5s							
KUR				A	A		22 05 19.2	
	4μm,0.5s							
YUK	**Yuzh-Kuril'sk**	**1.48**	**266**	*i* PN		**Pn**	**22 05 04.1**	**+0.7**
YUK				*i* S		**Sn**	**22 05 22.4**	**-0.2**
YUK				pmax	pmax			
	comp=N,116nm,0.2s							
YUK				pmax	pmax			
	comp=E,166nm,0.2s							
YUK				pmax	pmax			
	comp=Z,644nm,0.2s							
YUK				smax	smax			
	comp=E,3μm,0.6s							
YUK				smax	smax			
	comp=N,4μm,0.6s							
YUK	**Yuzh-Kuril'sk**	**1.48**	**266**	⇓ *i*P		**Pn**	**22 05 04.2**	**+0.8**
YUK				AMB	AMB		22 05 05.2	
	comp=N,116nm,0.2s							
YUK				AMB	AMB		22 05 05.2	
	comp=N,166nm,0.2s							
YUK				AMB	AMB		22 05 05.2	
	comp=N,644nm,0.2s							
YUK				*i* S		**Sn**	**22 05 22.4**	**-0.2**
YUK				A	A		22 05 24.4	
	comp=N,4μm,0.6s							
YUK				A	A		22 05 24.4	
	comp=N,3μm,0.6s							
NEM2	**Nemuro 2**	**1.76**	**244**	P		**Pn**	**22 05 07.3**	**+0.3**
NEM2				*e*S		**Sn**	**22 05 27.2**	**-1.8**
JRA	**Rausu**	**2.02**	**264**	P		**Pn**	**22 05 11.8**	**+1.4**
JRA				*e*S		**Sn**	**22 05 35.8**	**+0.7**
JNK	**Nakash**	**2.37**	**257**	P		**Pn**	**22 05 16.0**	**+0.8**
JNK				*e*S		**Sn**	**22 05 43.1**	**-0.5**
JAK	**Akkeshi**	**2.60**	**244**	P		**Pn**	**22 05 18.6**	**+0.4**
JAK				*e*S		**Sn**	**22 05 47.5**	**-1.6**
JTKR	**Abashiri--Toko**	**2.88**	**268**	P		**Pn**	**22 05 23.3**	**+1.3**
JAR	**Ashorobuto**	**3.12**	**255**	P		**Pn**	**22 05 26.7**	**+1.6**
JAR				*e*S		**Sn**	**22 06 01.5**	**+0.1**
JCH	**Churui**	**3.65**	**246**	P		**Pn**	**22 05 32.6**	**+0.2**
JCH				*e*S		**Sn**	**22 06 13.5**	**-0.9**
JKK2	**Kamakawa 2**	**3.73**	**267**	P		**Pn**	**22 05 35.4**	**+2.0**
ASAJ	**Asahikawa**	**3.82**	**271**	*e*Pn		**Pn**	**22 05 36.1**	**+1.5**
ASAJ				S		Sn	22 06 30.7	+12
ASAJ	**Asahikawa**	**3.82**	**271**	P		**Pn**	**22 05 35.6**	**+1.0**
	comp=N,4.9nm,0.3s,baz=74,slow=18,SNR=25							
ASAJ				S		Sn	22 06 30.7	+12
	comp=N,9.1nm,0.3s,baz=275,slow=27,SNR=4.9							
JSE	**Soyaes**	**3.88**	**284**	P		**Pn**	**22 05 36.6**	**+1.2**
JFR	**Furan**	**3.98**	**257**	P		**Pn**	**22 05 38.3**	**+1.5**
JFR				*e*S		**Sn**	**22 06 23.4**	**+1.1**
ERM	**Erimo**	**4.08**	**240**	*c i*PN		**Pn**	**22 05 40.8**	**+2.6**
ERM	**Erimo**	**4.08**	**240**	*e*Pn		**Pn**	**22 05 40.8**	**+2.6**
ERM				*e*Sn		**Sn**	**22 06 21.4**	**-3.5**
JNBK	**Urakawa-nobuka**	**4.21**	**245**	P		**Pn**	**22 05 39.8**	**-0.1**
JNBK				*e*S		**Sn**	**22 06 25.2**	**-2.6**
JWK2	**Keihoku**	**4.43**	**287**	P		**Pn**	**22 05 45.4**	**+2.5**
YSS	**Yuzh-Sakhalins**	**4.56**	**309**	⇓ *i*PN		**Pn**	**22 05 46.4**	**+1.7**
YSS				*e*S		**Sn**	**22 06 35.0**	**-1.4**
YSS				pmax	pmax			
	comp=Z,30nm,0.5s							
YSS				smax	smax			
	comp=N,110nm,0.9s							
YSS	**Yuzh-Sakhalins**	**4.56**	**309**	⇓ *i*P		**Pn**	**22 05 46.4**	**+1.7**
YSS				AMB	AMB		22 05 47.0	
	comp=N,30nm,0.5s							
YSS				*e*S		**Sn**	**22 06 35.0**	**-1.4**
YSS				A	A		22 06 43.5	
	comp=N,110nm,0.9s							
JEW	**Eniwo**	**4.88**	**256**	P		**Pn**	**22 05 50.8**	**+1.8**
JEW				*e*S		**Sn**	**22 06 44.1**	**0.0**
JKB	**Kayabe**	**5.53**	**248**	P		**Pn**	**22 05 58.0**	**+0.2**
JKB				*e*S		**Sn**	**22 06 56.2**	**-3.7**
JOT	**Ohata**	**5.76**	**243**	P		**Pn**	**22 06 00.5**	**-0.5**
JOT				*e*S		**Sn**	**22 07 00.0**	**-5.6**
TYV	**Tymovskoe**	**7.58**	**334**	*e*P		**Pn**	**22 06 26.8**	**+1.1**
TYV				AMB	AMB		22 06 28.0	
	comp=N,18nm,1.0s							
TYV				AMB	AMB		22 06 28.0	
	comp=N,22nm,1.0s							
SKR	**Severo-Kuril's**	**8.57**	**38**	*e*PN		Pn	22 06 34.4	-4.8
MJAR	**Matsushiro Arr**	**10.61**	**227**	P		**Pn**	**22 07 06.4**	**-0.7**
MJAR	**Matsushiro Arr**	**10.61**	**227**	P		**Pn**	**22 07 06.4**	**-0.7**
	comp=N,0.5nm,0.3s,baz=27,slow=13,SNR=24							
MJAR				LR		LR	22 11 00.8	
	comp=N,51nm,21.4s,baz=155,slow=36							
MAJO	**Matsushiro**	**10.61**	**227**	*e*PN		**Pn**	**22 07 06.2**	**-0.9**
MAJO	**Matsushiro**	**10.61**	**227**	*e*Pn		**Pn**	**22 07 06.2**	**-0.9**
MAT	**Matsushiro**	**10.61**	**227**	P		**Pn**	**22 07 06.2**	**-0.9**
MAT				*e*S		Sn	22 09 12.1	+8.1
PEA0B	**Petropavlovsk-**	**11.04**	**32**	*e*P		**Pn**	**22 07 11.7**	**-1.2**
PETK	**Petropavlovsk-**	**11.04**	**32**	PN		**Pn**	**22 07 11.5**	**-1.4**
PETK	**Petropavlovsk-**	**11.04**	**32**	P		**Pn**	**22 07 11.4**	**-1.4**
PETK	**Petropavlovsk-**	**11.04**	**32**	P		**Pn**	**22 07 11.4**	**-1.4**
	comp=N,1.2nm,0.3s,baz=187,slow=13,SNR=12							
USRK	**Ussuriysk Arra**	**11.42**	**276**	P		**Pn**	**22 07 17.1**	**-0.9**
	comp=N,0.3nm,0.3s,baz=84,slow=13,SNR=7.7							
KLR	**Kul'dur**	**12.18**	**300**	*e*PN		**Pn**	**22 07 25.4**	**-2.9**
MDJ	**Mudanjiang**	**13.11**	**278**	P		**Pn**	**22 07 40.0**	**-0.6**
MDJ				pmax	pmax			
	comp=Z,11nm,2.0s							
MDJ				pmax	pmax			
	comp=Z,130nm,4.8s							
FX1	**Attu Island--F**	**18.79**	**53**	P		**P**	**22 08 50.5**	**+0.4**
FX1	**Attu Island--F**	**18.79**	**53**	P		**P**	**22 08 50.5**	**+0.4**
	comp=Z,3.3nm,0.3s,baz=256,slow=6.9,SNR=9.8							
SEY	**Seymchan**	**18.98**	**6**	*i* P		**P**	**22 08 50.6**	**-1.5**
YAK	**Yakutsk**	**20.84**	**336**	*e*P		**P**	**22 09 07.6**	**-4.6**
YAK				pmax	pmax			
	comp=N,9.0nm,0.6s							
YAK				pmax	pmax			
	comp=E,10.0nm,0.7s							
YAK				pmax	pmax			
	comp=Z,75nm,0.9s							
NJ2	**Nanjing**	**25.72**	**252**	*e*P		**P**	**22 10 02.0**	**+2.0**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.9s							
BILL	**Bilibino**	**25.81**	**16**	*i* P		**P**	**22 09 58.7**	**-1.8**
BILL				*i*			22 10 50.1	
BILL				pmax	pmax			
	comp=Z,10.0nm,1.6s							
HHC	**Hu-ho-hao-te**	**26.85**	**276**	*e*P		**P**	**22 10 10.5**	**+0.2**
HHC				pP		**pP**	**22 10 31.8**	**+1.4**
HHC				PP		**PnPn**	**22 10 58.9**	**+1.8**
HHC				PcP		**PcP**	**22 13 31.3**	**+0.8**
HHC				S		**S**	**22 14 37.8**	**-2.4**
HHC				SS		**SnSn**	**22 15 57.4**	**+3.3**
HHC				ScS		**ScS**	**22 20 50.0**	**-3.4**
HHC				pmax	pmax			
	comp=Z,150nm,4.3s							
HHC				LR	LR			
	comp=N,300nm,15.5s							
HHC				LR	LR			
	comp=E,280nm,16.7s							
HHC				LR	LR			
	comp=Z,230nm,15.5s							
ULN	**Ulaanbaatar**	**28.37**	**292**	*e*P		**P**	**22 10 23.3**	**-0.5**
	comp=Z,3.6nm,0.7s							
SONM	**Songino Array**	**28.81**	**292**	P		**P**	**22 10 27.0**	**-0.7**
SONM	**Songino Array**	**28.81**	**292**	P		**P**	**22 10 27.0**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=77,slow=8.2,SNR=24							
TIXI	**Tiksi**	**29.07**	**348**	*ce*P		P	22 10 24.9	-4.6
TIXI				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ZAK	**Zakamensk**	**30.53**	**298**	*e*P		P	22 10 39.1	-3.8
GTA	**Gaotai**	**35.76**	**279**	*e*P		**P**	**22 11 30.3**	**+1.9**
GTA				pmax	pmax			
	comp=Z,3.0nm,1.1s							
HVS	**Khovu-Aksy**	**36.45**	**301**	*i* P		**P**	**22 11 32.8**	**-1.3**
CD2	**Chengdu**	**36.99**	**264**	P		**P**	**22 11 38.8**	**-0.1**
GYA	**Guiyang**	**37.55**	**256**	*e*P		**P**	**22 11 44.0**	**+0.3**
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
PPLA	**Purkeypile**	**38.51**	**40**	*e*P		**P**	**22 11 53.2**	**+1.7**
	comp=Z,12nm,1.3s							
COLD	**Coldfoot**	**39.51**	**33**	*e*P		**P**	**22 12 00.3**	**+0.8**
	comp=Z,2.3nm,0.6s							
ILAR	**Eielson Array**	**40.83**	**37**	P		**P**	**22 12 10.9**	**+0.4**
ILAR	**Eielson Array**	**40.83**	**37**	P		**P**	**22 12 10.9**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=252,slow=6.1,SNR=14							
ZALV	**Zalesovo Beam**	**41.18**	**307**	P		**P**	**22 12 11.3**	**-2.2**
ZALV							22 14 10.7	
ZALV	**Zalesovo Beam**	**41.18**	**307**	P		**P**	**22 12 11.3**	**-2.2**
ZALV				PcP		**PcP**	**22 14 10.7**	**-0.2**
ZALV	**Zalesovo Beam**	**41.18**	**307**	P		**P**	**22 12 11.3**	**-2.2**
	comp=Z,1.1nm,0.4s,baz=80,slow=12,SNR=7.1							
ZALV				PcP		**PcP**	**22 14 10.7**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=80,slow=2.9,SNR=8.5							
WMQ	**Urumqi**	**42.45**	**291**	*e*P		**P**	**22 12 24.4**	**+0.4**
MK31	**Makanchi Array**	**44.87**	**298**	*e*P		**P**	**22 12 42.5**	**-0.9**
MK31	**Makanchi Array**	**44.87**	**298**	*e*P		**P**	**22 12 42.5**	**-0.9**
MKAR	**Makanchi Array**	**44.87**	**298**	*e*P		**P**	**22 12 42.9**	**-0.5**
MKAR							22 14 22.6	
MKAR	**Makanchi Array**	**44.87**	**298**	*e*P		**P**	**22 12 42.9**	**-0.5**
MKAR				PcP		**PcP**	**22 14 22.6**	**-1.0**
MKAR	**Makanchi Array**	**44.87**	**298**	P		**P**	**22 12 42.5**	**-0.9**
	comp=Z,6.3nm,0.8s,baz=78,slow=8.8,SNR=40							
MKAR				PcP		**PcP**	**22 14 22.6**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=64,slow=5.6,SNR=3.7							
KURK	**Kurchatov**	**45.75**	**304**	*c i*P		**P**	**22 12 48.8**	**-1.4**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KURK	**Kurchatov**	**45.75**	**304**	*e*P		**P**	**22 12 48.5**	**-1.7**
	comp=Z,5.6nm,0.6s							
CMAR	**Chiang Mai Arr**	**48.16**	**254**	P		**P**	**22 13 10.2**	**+0.8**
CMAR	**Chiang Mai Arr**	**48.16**	**254**	P		**P**	**22 13 10.2**	**+0.8**
	comp=Z,0.9nm,0.4s,baz=46,slow=7.8,SNR=5.7							
BRVK	**Borovoye**	**49.70**	**309**	⇓ *e*P		**P**	**22 13 18.4**	**-2.3**
BRVK				pmax	pmax			
	comp=Z,6.0nm,1.7s							
TAPN	**Taplejung**	**50.54**	**272**	*e*P		**P**	**22 13 27.5**	**-0.3**
	comp=Z,2.6nm,0.4s							
GUN	**Gumba**	**51.53**	**273**	*e*P		**P**	**22 13 35.1**	**-0.1**
	comp=Z,4.3nm,0.5s							
RAMN	**Ramite**	**51.58**	**272**	*e*P		**P**	**22 13 35.1**	**-0.3**
	comp=Z,8.3nm,0.5s							
PKIN	**Phulchoki**	**52.07**	**273**	*e*P		**P**	**22 13 38.9**	**-0.3**
	comp=Z,3.3nm,0.7s							
EKS2	**Erkin-Say**	**52.12**	**296**	*e*P		**P**	**22 13 39.5**	**+0.4**
EKS2				pmax	pmax			
	comp=Z,1.0nm,0.5s							
EKS2	**Erkin-Say**	**52.12**	**296**	*e*P		**P**	**22 13 39.5**	**+0.4**
	comp=Z,1.3nm,0.5s							
KSH	**Kashi**	**52.21**	**291**	*e*P		P	22 13 44.9	+5.0
KSH				*ep*P		pP	22 14 11.4	+10
KSH				*es*P		sP	22 14 24.0	+12
KSH				*e*PcP		**PcP**	**22 14 53.1**	**+2.8**
KSH				*e*PP		PP	22 15 47.4	+8.6
KSH				*e*ScP		**ScP**	**22 18 38.5**	**-0.5**
KSH				*e*PcS		**PcS**	**22 18 50.3**	**+1.5**
KSH				*e*S		**S**	**22 21 02.8**	**+4.9**
KSH				*es*S		sS	22 21 49.3	+14
KSH				*e*ScS		**ScS**	**22 23 20.3**	**-0.9**
KSH				*e*SS		**SS**	**22 24 42.4**	**+6.5**
KSH				pmax	pmax			
	comp=Z,4.0nm,0.7s							
KSH				pmax	pmax			
	comp=Z,130nm,4.1s							
KSH				LR	LR			
	comp=N,77nm,4.8s							
KSH				LR	LR			
	comp=E,42nm,3.7s							
KSH				LR	LR			
	comp=Z,53nm,4.4s							
DMN	**Daman**	**52.26**	**274**	*e*P		**P**	**22 13 40.7**	**+0.2**
	comp=Z,7.0nm,0.7s							
DANN	**Dangsing**	**52.80**	**275**	*e*P		**P**	**22 13 44.8**	**+0.3**
	comp=Z,7.1nm,0.4s							
SVE	**Sverdlovsk**	**53.21**	**317**	*e*P		**P**	**22 13 45.1**	**-1.7**
SVE				pmax	pmax			
	comp=Z,10.0nm,0.8s							
KOLN	**Koldanda**	**53.25**	**275**	*e*P		**P**	**22 13 47.7**	**-0.1**
	comp=Z,3.1nm,0.4s							
PYUN	**Piuthan**	**53.49**	**276**	*e*P		**P**	**22 13 49.7**	**+0.2**
	comp=Z,8.8nm,0.7s							
KKAR	**Karatay Array**	**54.00**	**298**	P		**P**	**22 13 52.9**	**+0.1**
KKAR	**Karatay Array**	**54.00**	**298**	P		**P**	**22 13 52.9**	**+0.1**
ARU	**Arti**	**54.41**	**317**	*c i*P		**P**	**22 13 53.2**	**-2.3**
ARU					*PP	**pP**	**22 14 17.6**	**+0.1**
ARU							22 15 54.7	
ARU				S		**S**	**22 21 24.6**	**-2.3**
ARU				pmax	pmax			
	comp=Z,10.0nm,1.2s							
YKA	**Yellowknife Ar**	**55.15**	**34**	P		**P**	**22 14 01.4**	**+0.6**
YKA	**Yellowknife Ar**	**55.15**	**34**	P		**P**	**22 14 01.4**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=301,slow=6.8,SNR=16							
ABKAR	**Akbulak array**	**57.23**	**309**	*e*P		**P**	**22 14 15.0**	**-0.7**
KEV	**Kevo**	**58.51**	**339**	*e*P		**P**	**22 14 21.9**	**-2.5**
KEV				pmax	pmax			
	comp=Z,5.0nm,0.4s							
KEV	**Kevo**	**58.51**	**339**	*ep*		**P**	**22 14 21.9**	**-2.5**
	comp=Z,5.3nm,0.4s							
ARCES	**ARCESS Array B**	**59.05**	**340**	P		**P**	**22 14 26.2**	**-2.0**
ARCES	**ARCESS Array B**	**59.05**	**340**	P		**P**	**22 14 26.2**	**-2.0**
	comp=Z,2.6nm,0.4s,baz=42,slow=7.6,SNR=56							
JOF	**Joensuu**	**61.97**	**332**	*e*P		**P**	**22 14 45.4**	**-2.7**
JOF				pmax	pmax			
	comp=Z,3.0nm,0.5s							
JOF	**Joensuu**	**61.97**	**332**	*ep*		**P**	**22 14 45.4**	**-2.7**
	comp=Z,3.4nm,0.5s							
SUMG	**Summit**	**63.48**	**2**	*e*P		**P**	**22 14 57.8**	**-0.6**
SUMG	**Summit**	**63.48**	**2**	*e*P		**P**	**22 14 57.8**	**-0.6**
	comp=Z,156nm,3.0s							
KAF	**Kangasniemi**	**64.18**	**334**	*e*P		P	22 14 59.5	-3.2
KAF				pmax	pmax			
	comp=Z,4.0nm,0.6s							
KAF	**Kangasniemi**	**64.18**	**334**	*ep*		P	22 14 59.5	-3.2
	comp=Z,4.4nm,0.6s							
FINES	**FINESS Array B**	**64.75**	**333**	P		**P**	**22 15 04.6**	**-1.9**
FINES	**FINESS Array B**	**64.75**	**333**	P		**P**	**22 15 04.6**	**-1.9**
	comp=Z,10nm,0.6s,baz=41,slow=7.9,SNR=86							
WRA	**Warramunga Arr**	**64.99**	**194**	P		**P**	**22 15 09.1**	**+0.6**
WRA	**Warramunga Arr**	**64.99**	**194**	P		**P**	**22 15 09.1**	**+0.6**
	comp=Z,3.7nm,0.9s,baz=9.8,slow=6.9,SNR=25							
OBN	**Obninsk**	**65.30**	**324**	*i* P		**P**	**22 15 10.3**	**+0.2**
ASAR	**Alice Springs**	**68.71**	**194**	P		**P**	**22 15 32.9**	**+0.9**
ASAR	**Alice Springs**	**68.71**	**194**	P		**P**	**22 15 32.9**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=10.0,slow=5.8,SNR=13							
PDAR	**Pinedale Array**	**69.23**	**50**	P		**P**	**22 15 36.0**	**+0.5**
PDAR	**Pinedale Array**	**69.23**	**50**	P		**P**	**22 15 36.0**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=288,slow=0.9,SNR=4.2							
NB2	**NORSAR Subarra**	**69.41**	**339**	P		**P**	**22 15 34.5**	**-1.5**
	comp=Z,3.3nm,0.6s,baz=30,slow=6.5							
NOA	**NORSAR Array B**	**69.41**	**339**	P		**P**	**22 15 35.0**	**-1.0**
NOA	**NORSAR Array B**	**69.41**	**339**	P		**P**	**22 15 35.0**	**-1.0**
	comp=Z,3.1nm,0.6s,baz=32,slow=6.3,SNR=34							
KBZ	**Khabaz**	**69.93**	**312**	P		**P**	**22 15 40.7**	**+1.3**
KBZ	**Khabaz**	**69.93**	**312**	P		**P**	**22 15 40.7**	**+1.3**
KBZ	**Khabaz**	**69.93**	**312**	P		**P**	**22 15 40.7**	**+1.3**
	comp=Z,6.8nm,0.6s,baz=60,slow=5.7,SNR=16							
AKASG	**Malin Array Be**	**71.56**	**324**	P		**P**	**22 15 48.5**	**-0.7**
AKASG	**Malin Array Be**	**71.56**	**324**	P		**P**	**22 15 48.5**	**-0.7**
AKASG	**Malin Array Be**	**71.56**	**324**	P		**P**	**22 15 48.5**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=32,slow=5.6,SNR=8.5							
KIEV	**Kiev**	**71.58**	**324**	*i* P		**P**	**22 15 48.5**	**-0.8**
ANN	**Anapa**	**72.03**	**315**	*e*P		P	22 15 41.2	-11
KWP	**Kalwaria Pacla**	**75.06**	**327**	*e*P		**P**	**22 16 09.5**	**-0.3**
KWP				pmax	pmax			
	comp=Z,6.0nm,0.8s							
KWP	**Kalwaria Pacla**	**75.06**	**327**	*e*P		**P**	**22 16 09.5**	**-0.3**
	comp=Z,5.5nm,0.8s							
KWP	**Kalwaria Pacla**	**75.06**	**327**	⇑ *i*P		**P**	**22 16 10.4**	**+0.6**
BUR08	**Bucovina Ar. S**	**75.60**	**324**	*e*P		**P**	**22 16 12.9**	**-0.2**
BURAR	**Bucovina Array**	**75.62**	**324**	⇓ *i*P		**P**	**22 16 14.1**	**+0.9**
TESR	**Tescani**	**75.86**	**322**	⇑ *i*P		**P**	**22 16 14.9**	**+0.5**
STKA	**Stephens Creek**	**75.90**	**186**	P		**P**	**22 16 15.9**	**+1.4**
STKA	**Stephens Creek**	**75.90**	**186**	P		**P**	**22 16 15.9**	**+1.4**
	comp=Z,2.1nm,0.9s,baz=319,slow=8.4,SNR=5.9							
TLCR		**75.91**	**320**	⇑ *i*P		**P**	**22 16 14.8**	**+0.1**
CFR	**Carcaliu**	**76.22**	**321**	⇓ *i*P		**P**	**22 16 17.2**	**+0.7**
TRPA	**Tarpa**	**76.32**	**326**	⇑ *i*P		**P**	**22 16 17.9**	**+0.9**
VRI	**Vrincioaia**	**76.33**	**322**	⇓ *i*P		**P**	**22 16 18.3**	**+1.2**
DPC	**Dobruska-Polom**	**76.87**	**331**	*e*P		**P**	**22 16 21.1**	**+1.0**
DPC	**Dobruska-Polom**	**76.87**	**331**	*e*P		**P**	**22 16 21.1**	**+1.0**
MORC	**Moravsky Berou**	**76.91**	**330**	⇑ *i*P		**P**	**22 16 20.8**	**+0.4**
MLR	**Muntele Rosu**	**76.96**	**322**	⇑ *i*P		**P**	**22 16 22.1**	**+1.2**
ISR	**Istrita**	**76.99**	**322**	⇑ *i*P		**P**	**22 16 22.7**	**+1.8**
SCHQ	**Schefferville**	**77.05**	**20**	P		**P**	**22 16 22.3**	**+1.3**
SCHQ	**Schefferville**	**77.05**	**20**	P		**P**	**22 16 22.3**	**+1.3**
	comp=Z,1.1nm,0.4s,baz=349,slow=5.3,SNR=7.0							
CLL	**Collm**	**77.19**	**333**	*e*P		**P**	**22 16 21.0**	**-0.8**
CLL				pmax	pmax			
	comp=Z,5.0nm,0.8s							
CLL	**Collm**	**77.19**	**333**	*e*P		**P**	**22 16 21.0**	**-0.8**
	comp=Z,5.0nm,0.8s							
DRGR		**77.32**	**325**	⇓ *i*P		**P**	**22 16 23.7**	**+0.9**
ARR	**Arges**	**77.63**	**323**	⇑ *i*P		**P**	**22 16 26.1**	**+1.6**
VRAC	**Vranov**	**77.64**	**330**	⇓ *i*P		**P**	**22 16 25.0**	**+0.6**
BRTR	**Keskin Array B**	**77.65**	**314**	P		**P**	**22 16 25.0**	**+0.2**
BRTR	**Keskin Array B**	**77.65**	**314**	P		**P**	**22 16 25.0**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=64,slow=2.9,

CAIG	**El Cayaco**	**0.31**	**119**	*i*	P	Pg	22 29 33.3	-0.4
CAIG				*i*	S	Sg	22 29 37.8	0.0
ACX	**Acapulco**	**0.74**	**116**	*i*	P	Pg	22 29 40.6	-1.3
ACX				*i*	S	Sg	22 29 47.8	-3.7
ZIIG	**Zihuatanejo**	**0.96**	**295**	*i*	P	Pg	22 29 44.6	-1.4
ZIIG				*i*	S	Sg	22 29 56.4	-2.2
ARIG	**Puente Sto Nin**	**1.09**	**10**	*i*	P	Pg	22 29 45.4	-3.2
ARIG				*i*	S	Sg	22 29 59.9	-3.0
PLIG	**Platanillo**	**1.55**	**40**	*i*	P	Pn	22 29 52.6	-3.4
PLIG				*i*	S	Sn	22 30 11.5	-5.1
YAIG	**Yautepec**	**2.17**	**40**	*i*	P	Pn	22 30 04.3	-0.4
YAIG				*i*	S	Sn	22 30 28.3	-3.9
PNIG	**Pinotepa**	**2.46**	**109**	*i*	P	Pn	22 30 05.7	-2.7
PNIG				*i*	S	Sn	22 30 34.7	-4.2
UTMO	**Huajuapan**	**2.69**	**76**	*i*	P	Pn	22 30 09.5	-2.4
UTMO				*i*	S	Sn	22 30 41.8	-3.3

IDC ***18*** *22:31:13.0±1.2, 19°.78S×177°.60E, h0km, mb4.1/11, mb1 4.4/11, mb1mx4.3/18, mbtmp4.1/11, MS4.0/32, Ms1 4.0/32, ms1mx3.9/43, Error ellipse: s-maj=53.4km s-min=19.5km az=153.0*

ISCJB ***18*** *22:31:22.3±0.5, 19°.4S±0°.1×176°.79E±0°.07, h40km, mb4.7/45, MS4.1/33, Error ellipse: s-maj=21.7km s-min=8.0km az=164.5*

BJI ***18*** *22:31:22.3, 19°.67S×177°.09E, h59km, mB5.1/17, mb4.8/21, Ms5.0/13, Ms7 4.7/14*

NEIC ***18*** *22:31:23.8±1.5, 19°.39S×176°.80E, h44km±12km, mb5.0/27, Error ellipse: s-maj=17.8km s-min=6.8km az=160.0*

ISC 18 22:31:21.5±0.7, 19°.4S±0°.1×177°.36E±0°.09, h46km±4km, h47km:pP-P, n259, σ1§51/204, mb4.8/45, MS4.1/34, 70C-68D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.81**	**21**	*e*Pn			Pn	22 31 39.1	-11
MSVF					S		Sn	22 31 54.6	-18
MSVF	**Nonsavu**	**1.81**	**21**	Pn			Pn	22 31 38.6	-12
	10μm,0.8s								
DZM	**Mont Dzumac**	**10.55**	**254**	*e*LR		LR	LR	22 36 21.2	
	2μm,25.8s								
RAO	**Raoul Island**	**10.68**	**157**	LR		LR	LR	22 37 00.5	
	comp=Z,963nm,20.2s,baz=336,slow=34								
AFI	**Afiamalu**	**11.76**	**64**	*e*Pn			Pn	22 34 15.3	+8.4
AFI	**Afiamalu**	**11.76**	**64**	LR		LR	LR	22 37 28.6	
	comp=Z,483nm,19.4s,baz=233,slow=32								
URZ	**Urewera**	**18.76**	**181**	LR		LR	LR	22 41 03.3	
	comp=Z,1μm,21.2s,baz=29,slow=32								
HNR	**Honiara**	**19.56**	**298**	P		P	**P**	**22 35 42.1**	**-3.5**
HNR	**Honiara**	**19.56**	**298**	LR		LR	LR	22 42 08.4	
	comp=Z,269nm,21.4s,baz=306,slow=33								
RAR	**Rarotonga**	**21.51**	**99**	LR		LR	LR	22 42 15.5	
	comp=Z,511nm,18.5s,baz=281,slow=31								
RPZ	**Rata Peaks**	**24.78**	**191**	LR		LR	LR	22 44 30.3	
	comp=Z,719nm,22.0s,baz=145,slow=33								
CTA	**Charters Tower**	**29.27**	**263**	LR		LR	LR	22 47 32.7	
	comp=Z,456nm,20.3s,baz=87,slow=33								
PMG	**Port Moresby**	**30.86**	**285**	LR		LR	LR	22 48 20.5	
	comp=Z,386nm,19.6s,baz=83,slow=33								
TBI	**Tubuai**	**31.09**	**103**	*e*LQ		LQ	LQ	22 44 12.1	
	470nm,25.8s								
TBI				*e*LR		LR	LR	22 45 36.5	
	1μm,30.0s								
PPT2	**Papeete2**	**31.38**	**92**	*e*LR		LR	LR	22 45 41.7	
	1μm,27.8s								
PPT	**Papeete**	**31.38**	**92**	LR		LR	LR	22 46 57.7	
	comp=Z,383nm,18.4s,baz=178,slow=30								
STKA	**Stephens Creek**	**34.38**	**242**	*e*P		P	**P**	**22 38 04.3**	**-0.1**
STKA	**Stephens Creek**	**34.38**	**242**	P		P	**P**	**22 38 02.4**	**-1.9**
	3.1nm,0.7s,baz=90,slow=15,SNR=8.2								
STKA				LR		LR	LR	22 50 12.8	
	comp=Z,220nm,21.4s,baz=223,slow=33								
WRAB	**Tennant Creek**	**40.42**	**262**	*e*P		P	**P**	**22 38 55.0**	**-0.6**
	9.4nm,1.0s								
WRA	**Warramunga Arr**	**40.43**	**262**	P		P	**P**	**22 38 53.6**	**-2.1**
WRA	**Warramunga Arr**	**40.43**	**262**	P		P	**P**	**22 38 53.6**	**-2.1**
	2.1nm,1.0s,baz=94,slow=8.1,SNR=9.1								
WRA				LR		LR	LR	22 54 10.4	
	comp=Z,390nm,20.9s,baz=105,slow=34								
AS31	**Alice Springs**	**40.53**	**256**	*e*P		P	**P**	**22 38 55.3**	**-1.2**
ASAR	**Alice Springs**	**40.53**	**256**	P		P	**P**	**22 38 55.3**	**-1.2**
ASAR	**Alice Springs**	**40.53**	**256**	P		P	**P**	**22 38 55.3**	**-1.2**
	3.9nm,0.7s,baz=86,slow=8.6,SNR=31								
ASAR				LR		LR	LR	22 54 44.0	
	comp=Z,193nm,19.9s,baz=98,slow=35								
RKT	**Rikitea**	**44.42**	**104**	*e*LR		LR	LR	22 51 50.4	
	718nm,27.5s								
GUMO	**Guam**	**45.83**	**313**	LR		LR	LR	22 55 13.0	
	comp=Z,124nm,21.9s,baz=125,slow=31								
DAV	**Davao City (W)**	**57.39**	**292**	LR		LR	LR	23 03 29.2	
	comp=Z,59nm,21.2s,baz=235,slow=34								
KAPI	**Kappang**	**57.84**	**276**	*e*P		P	P	22 41 13.0	+4.1
	28nm,1.3s								
KAPI	**Kappang**	**57.84**	**276**	LR		LR	LR	23 06 00.9	
	comp=Z,70nm,19.9s,baz=108,slow=36								
VNDA	**Vanda**	**58.62**	**184**	LR		LR	LR	23 03 33.1	
	comp=Z,202nm,18.6s,baz=20,slow=33								
MJAR	**Matsushiro Arr**	**66.84**	**326**	P		P	**P**	**22 42 09.7**	**+1.0**
MJAR	**Matsushiro Arr**	**66.84**	**326**	P		P	**P**	**22 42 09.7**	**+1.0**
	0.9nm,0.7s,baz=151,slow=4.2,SNR=3.0								
JNU	**Nakatsue**	**68.57**	**319**	LR		LR	LR	23 07 40.8	
	comp=Z,45nm,20.7s,baz=238,slow=32								
QSPA	**South Pole Qui**	**70.62**	**180**	*e*P		P	**P**	**22 42 33.2**	**+1.2**
	14nm,1.2s								
PETK	**Petropavlovsk-**	**74.22**	**348**	LR		LR	LR	23 10 21.1	
	comp=Z,54nm,21.2s,baz=199,slow=32								
USRK	**Ussuriysk Arra**	**75.70**	**328**	LR		LR	LR	23 15 46.0	
	comp=Z,49nm,19.0s,baz=266,slow=35								
QIZ	**Qiongzhong**	**76.46**	**296**	P		P	**P**	**22 43 06.8**	**0.0**
QIZ				S		S	**S**	**22 52 46.1**	**-3.3**
QIZ				LR		LR	LR		
	comp=E,56nm,19.9s								
QIZ				LR		LR	LR		
	comp=Z,140nm,30.9s								
MDJ	**Mudanjiang**	**77.20**	**327**	P		P	**P**	**22 43 12.3**	**+1.8**
MDJ				pP		pP	**pP**	**22 43 23.8**	**-0.2**
MDJ				S		S	**S**	**22 52 57.9**	**+1.4**
MDJ				pmax		pmax			
	comp=Z,10.0nm,2.2s								
MDJ				pmax		pmax			
	comp=Z,93nm,4.8s								
WHN	**Wuhan**	**78.33**	**308**	P		P	P	22 43 26.3	+9.2
CN2	**Changchun**	**78.85**	**324**	*e*P		P	P	22 43 29.9	+10
PSI	**Prapat**	**80.05**	**277**	LR		LR	LR	23 21 04.7	
	comp=Z,194nm,18.2s,baz=22,slow=37								
MAW	**Mawson**	**81.05**	**201**	LR		LR	LR	23 15 49.8	
	comp=Z,215nm,18.8s,baz=303,slow=33								
CMB	**Columbia Colle**	**81.72**	**45**	*e*P		P	P	22 43 39.4	+4.2
	comp=Z,5.1nm,0.8s								
EDW2	**Edwards Air Fo**	**81.72**	**49**	⇑P		P	**P**	**22 43 34.1**	**-1.3**
	baz=82								
ISA	**Isabella**	**81.78**	**48**	*e*P		P	P	22 43 40.1	+4.4
	comp=Z,10nm,1.3s								
ISA	**Isabella**	**81.78**	**48**	⇑P		P	**P**	**22 43 34.4**	**-1.3**
	baz=82								
MONP	**Monument Peak**	**81.87**	**51**	⇑P		P	**P**	**22 43 35.5**	**-0.9**
	baz=82								
BJT	**Baijiatuau**	**82.11**	**317**	*e*P		P	**P**	**22 43 36.7**	**-0.5**
	comp=Z,19nm,1.4s								
BJI	**Beijing**	**82.11**	**317**	P		P	**P**	**22 43 38.3**	**+1.1**
BJI				pP		pP	**pP**	**22 43 50.6**	**-0.2**
BJI				S		S	**S**	**22 53 49.6**	**+1.1**
BJI				pmax		pmax			
	comp=Z,4.0nm,0.7s								
BJI				LR		LR	LR		
	comp=Z,38nm,22.5s								
PFO	**Pinyon Flat Ob**	**82.19**	**50**	⇓P		P	**P**	**22 43 36.3**	**-1.7**
	baz=83								
YBH	**Yreka Blue Hor**	**82.26**	**41**	LR		LR	LR	23 12 04.4	
	comp=Z,87nm,19.6s,baz=87,slow=30								
GYA	**Guiyang**	**82.36**	**301**	P		P	**P**	**22 43 40.3**	**+1.3**
GYA				pP		pP	**pP**	**22 43 52.8**	**+0.2**
GYA				sP		sP	**sP**	**22 43 56.9**	**-0.9**
GYA				PP		PP	**PP**	**22 46 49.0**	**+0.5**
GYA				S		S	**S**	**22 53 48.8**	**-3.1**
GYA				SKS		SKSac	**SKSac**	**22 53 51.3**	**-5.2**
GYA				pmax		pmax			
	comp=Z,20nm,1.0s								
GYA				pmax		pmax			
	comp=Z,130nm,5.2s								
GYA				LR		LR			
	comp=N,680nm,19.5s								
GYA				LR		LR			
	comp=E,560nm,20.2s								
GYA				LR		LR			
	comp=Z,730nm,19.9s								
MTUM	**Tungsten Hills**	**82.59**	**46**	*e*P		P		22 43 44.3	+4.3
HUMO	**Hull Mountain**	**82.61**	**40**	*e*P		P		22 43 44.6	+4.8
	comp=Z,14nm,1.4s								
MPMC	**Manual Prospec**	**82.67**	**48**	⇑P		**P**		**22 43 39.0**	**-1.5**
	baz=83								
BELC	**Belle Mtn. Jos**	**82.72**	**50**	⇓P		**P**		**22 43 39.8**	**-0.9**
	baz=83								
BEKR	**Beckworth**	**82.72**	**43**	*e*P		P		22 43 44.2	+3.5
	comp=Z,7.4nm,1.3s								
GSC	**Goldstone**	**82.77**	**49**	*e*P		P		22 43 45.2	+4.3
	comp=Z,9.8nm,1.3s								
GSC	**Goldstone**	**82.77**	**49**	⇓P		**P**		**22 43 39.8**	**-1.1**
	baz=83								
HEC	**Hector,Ludlow**	**82.88**	**49**	⇓P		**P**		**22 43 41.0**	**-0.5**
	baz=83								
BC3	**Big Chuckawall**	**82.94**	**51**	⇑P		**P**		**22 43 40.4**	**-1.4**
	baz=84								
GLA	**Glamis**	**83.12**	**52**	⇓P		**P**		**22 43 41.6**	**-1.1**
	baz=84								
NVAR	**Mina Array Bea**	**83.32**	**45**	P		**P**		**22 43 41.7**	**-2.1**
NVAR	**Mina Array Bea**	**83.32**	**45**	P		**P**		**22 43 41.7**	**-2.1**
	comp=Z,1.0nm,0.7s,baz=234,slow=8.3,SNR=5.4								
GMRC	**Granite Mounta**	**83.34**	**50**	⇑P		**P**		**22 43 43.3**	**-0.6**
	baz=84								
IRM	**Iron Mountain**	**83.41**	**50**	⇓P		**P**		**22 43 44.6**	**+0.4**
	baz=84								
NV11	**Mina Array Sit**	**83.42**	**46**	*e*P		P		22 43 48.0	+3.7
113A	**Mohawk Valley,**	**83.77**	**52**	⇑P		**P**		**22 43 44.4**	**-1.6**
	baz=84								
214A	**Organ Pipe Nat**	**84.12**	**53**	⇑P		**P**		**22 43 46.4**	**-1.4**
	baz=85								
PDMCI	**Parker Dam,Lak**	**84.21**	**51**	⇑P		**P**		**22 43 47.2**	**-1.0**
	baz=85								
Z14A	**Wintersburg**	**84.66**	**52**	⇓P		**P**		**22 43 49.4**	**-1.1**
	baz=85								
W13A	**Hualapai Mount**	**84.77**	**50**	⇓P		**P**		**22 43 49.6**	**-1.7**
	baz=85								
Y14A	**Wickenburg**	**84.88**	**51**	⇑P		**P**		**22 43 49.9**	**-1.8**
	baz=85								
KMI	**Kunming**	**85.00**	**299**	P		**P**		**22 43 53.6**	**+0.9**
KMI				pmax		pmax			
	comp=Z,10.0nm,0.9s								
BMN	**Battle Mountai**	**85.06**	**44**	*e*P		P		22 43 57.2	+4.7
	comp=Z,17nm,1.1s								
WVOR	**Wild Horse Val**	**85.19**	**42**	*e*P		P		22 43 57.4	+4.2
	comp=Z,27nm,1.5s								
HHC	**Hu-ho-hao-te**	**85.53**	**316**	S		S		22 54 14.3	-8.9
HHC	**Hu-ho-hao-te**	**85.53**	**316**	sS		S		22 54 35.5	+12
HHC	**Hu-ho-hao-te**	**85.53**	**316**	SS		SS		22 59 51.5	-8.6
HHC				pmax		pmax			
	comp=Z,27nm,0.6s								
HHC				pmax		pmax			
	comp=Z,160nm,6.1s								
HHC				LR		LR			
	comp=N,270nm,28.4s								
HHC				LR		LR			
	comp=E,160nm,28.4s								
HHC				LR		LR			
	comp=Z,120nm,22.2s								
BBB	**Bella Bella**	**85.61**	**30**	LR		LR		23 12 36.6	
	comp=Z,154nm,21.7s,baz=177,slow=29								
CMAR	**Chiang Mai Arr**	**85.66**	**291**	P		**P**		**22 43 55.8**	**0.0**
CMAR	**Chiang Mai Arr**	**85.66**	**291**	P		**P**		**22 43 55.8**	**0.0**
	comp=Z,2.4nm,0.9s,baz=125,slow=3.6,SNR=11								
CMAR				LR		LR		23 17 34.5	
	comp=Z,71nm,21.2s,baz=282,slow=32								
TUC	**Tucson**	**85.81**	**54**	P		P		22 44 01.0	+4.6
	comp=Z,3.1nm,1.4s								
X16A	**Lo Mia Camp, P**	**86.25**	**52**	⇓P		**P**		**22 43 57.0**	**-1.7**
	baz=87								
CCUT	**Cedar City**	**86.29**	**48**	*e*P		P		22 44 03.7	+4.9
	comp=Z,11nm,1.4s								
ELK	**Elko**	**86.53**	**45**	*e*P		P		22 44 04.2	+4.3
ELK	**Elko**	**86.53**	**45**	LR		LR		23 16 45.0	
	comp=Z,50nm,18.1s,baz=272,slow=32								
U15A	**North Rim**	**86.53**	**50**	⇑P		**P**		**22 43 59.2**	**-0.9**
	baz=87								
CD2	**Chengdu**	**86.57**	**304**	P		**P**		**22 44 01.8**	**+1.7**
CD2				pP		**pP**		**22 44 14.4**	**+0.5**
CD2				sP		**sP**		**22 44 19.3**	**+0.3**
CD2				PP		**PP**		**22 47 24.1**	**+1.4**
CD2				SKS		**SKSac**		**22 54 21.3**	**-2.0**
CD2				S		**SKKSac**		**22 54 31.4**	**-0.1**
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
CD2				pmax		pmax			
	comp=Z,120nm,5.4s								
319A	**Douglas**	**86.57**	**55**	⇓P		**P**		**22 43 59.1**	**-1.1**
	baz=87								
HAWA	**Hanford**	**86.75**	**38**	*e*P		P		22 44 04.8	+4.3
	comp=Z,22nm,1.2s								
320A	**Kipp Ranch, An**	**87.14**	**55**	⇑P		**P**		**22 44 01.8**	**-1.2**
	baz=88								
BMO	**Blue Mountains**	**87.27**	**40**	*e*P		P		22 44 07.0	+3.8
	comp=Z,14nm,1.7s								
220A	**Playas Peak, P**	**87.37**	**55**	⇓P		**P**		**22 44 03.9**	**-0.3**
	baz=88								
MFID	**Camas Ranch**	**87.46**	**42**	*e*P		P		22 44 08.8	+4.5
	comp=Z,6.0nm,0.9s								
MFID	**Camas Ranch**	**87.46**	**42**	⇓P		**P**		**22 44 05.0**	**+0.7**
	baz=88								
MSU	**Marysvale**	**87.56**	**48**	*e*P		P		22 44 10.1	+5.1
I12A	**Atlanta**	**88.09**	**42**	⇑P		**P**		**22 44 08.5**	**+1.2**
	baz=89								
121A	**Cookes Peak, D**	**88.21**	**55**	⇓P		**P**		**22 44 08.7**	**+0.5**
	baz=89								
ILAR	**Eielson Array**	**88.31**	**15**	P		**P**		**22 44 05.5**	**-2.2**
ILAR	**Eielson Array**	**88.31**	**15**	P		**P**		**22 44 05.5**	**-2.2**
	comp=Z,0.7nm,0.8s,baz=234,slow=6.2,SNR=6.7								
ILAR				LR		LR	LR	23 15 46.4	
	comp=Z,201nm,21.8s,baz=143,slow=30								
Y20A	**Horse Springs,**	**88.32**	**53**	⇑P		**P**		**22 44 09.4**	**+0.6**
	baz=89								
HLID	**Hailey**	**88.43**	**42**	*e*P		P		22 44 13.2	+4.3
	comp=Z,18nm,1.8s								
HLID	**Hailey**	**88.43**	**42**	⇓P		**P**		**22 44 09.5**	**+0.6**
	baz=89								
J13A	**Cove Ranch, Pi**	**88.50**	**43**	⇓P		**P**		**22 44 09.0**	**-0.3**
	baz=89								
G12A	**Big Creek, Yel**	**88.62**	**41**	⇑P		**P**		**22 44 08.9**	**-0.9**
	baz=89								
H12A	**Diamond D Ranc**	**88.63**	**41**	⇓P		**P**		**22 44 09.0**	**-0.9**
	baz=89								
W20A	**Ramah**	**88.74**	**52**	⇑P		**P**		**22 44 10.5**	**-0.1**
	baz=89								
I13A	**Wildhorse Cree**	**88.79**	**42**	⇑P		**P**		**22 44 10.3**	**-0.4**
	baz=89								
DLBC	**Dease Lake**	**88.85**	**25**	LR		LR		23 15 05.2	
	comp=Z,203nm,21.0s,baz=285,slow=30								
J14A	**Carey**	**88.89**	**43**	⇓P		**P**		**22 44 10.8**	**-0.3**
	baz=89								
Y21A	**Point of Rocks**	**88.90**	**53**	⇓P		**P**		**22 44 11.3**	**-0.1**
	baz=89								
F12A	**Elk City**	**88.97**	**40**	⇓P		**P**		**22 44 10.8**	**-0.6**
	baz=90								
X21A	**Alamocita Cree**	**88.99**	**53**	⇓P		**P**		**22 44 13.2**	**+1.3**
	baz=90								
H13A	**Challis**	**89.01**	**42**	⇑P		**P**		**22 44 10.7**	**-0.9**
	baz=90								
NEW	**Newport**	**89.12**	**37**	*e*P		P		22 44 16.1	+4.1
	comp=Z,5.6nm,1.1s								
NEW	**Newport**	**89.12**	**37**	LR		LR		23 13 57.5	
	comp=Z,86nm,20.4s,baz=13,slow=29								
NEW	**Newport**	**89.12**	**37**	⇑P		**P**		**22 44 12.1**	**+0.2**
	baz=90								
Z22A	**Elephant Butte**	**89.13**	**54**	⇓P		**P**		**22 44 11.5**	**-1.0**
	baz=90								
I14A	**Mackay**	**89.22**	**42**	⇑P		**P**		**22 44 11.1**	**-1.5**
	baz=90								
G13A	**Cobalt**	**89.28**	**41**	⇑P		**P**		**22 44 10.8**	**-2.1**
	baz=90								
C11A	**Tepee Creek (N**	**89.41**	**38**	⇓P		**P**		**22 44 11.3**	**-1.9**
	baz=90								
D12A	**Red Ives Fores**	**89.55**	**39**	⇑P		**P**		**22 44 13.5**	**-0.5**
	baz=90								
F13A	**Darby**	**89.55**	**41**	⇑P		**P**		**22 44 13.8**	**-0.3**
	baz=90								
324A	**Moseley Ranch,**	**89.56**	**56**	⇑P		**P**		**22 44 12.0**	**-2.5**
	baz=90								
425A	**Indio Mountain**	**89.70**	**57**	⇓P		P		22 44 12.3	-2.8
	baz=90,SNR=11								
224A	**Cornudas Mount**	**89.78**	**56**	⇑P		**P**		**22 44 13.8**	**-1.7**
	baz=90								
U21A	**Nageezi**	**89.90**	**51**	⇑P		**P**		**22 44 14.2**	**-1.9**
	baz=90								
626A	**Big Bend Ranch**	**89.91**	**59**	⇑P		**P**		**22 44 15.1**	**-1.0**
	baz=90								
M17A	**Scullys Gap (B**	**89.93**	**46**	⇑P		**P**		**22 44 14.5**	**-1.6**
	baz=90								
124A	**Stringfield Ra**	**90.07**	**55**	⇑P		**P**		**22 44 15.3**	**-1.7**
	baz=91								
Y23A	**Lovelace Mesa,**	**90.10**	**54**	⇓P		P		22 44 13.0	-4.0
	baz=91								
526A	**Mary Lane Ranc**	**90.14**	**58**	⇑P		**P**		**22 44 15.3**	**-2.0**
	baz=91,SNR=6.2								
ANMO	**Albuquerque**	**90.19**	**53**	*e*P		P		22 44 21.7	+4.3
	comp=Z,22nm,2.0s								
ANMO	**Albuquerque**	**90.19**	**53**	LR		LR		23 17 52.5	
	comp=Z,50nm,18.5s,baz=23,slow=31								
TXAR	**Lajitas Array**	**90.20**	**59**	P		**P**		**22 44 15.8**	**-1.7**
TXAR	**Lajitas Array**	**90.20**	**59**	P		**P**		**22 44 15.8**	**-1.7**
	comp=Z,3.5nm,0.9s,baz=226,slow=5.3,SNR=22								
TXAR				LR		LR	LR	23 20 38.2	
	comp=Z,36nm,18.4s,baz=220,slow=33								
M18A	**Lyman**	**90.31**	**46**	⇑P		**P**		**22 44 17.4**	**-0.4**
	baz=91								
S21A	**Coal Bank Pass**	**90.31**	**50**	⇑P		**P**		**22 44 16.9**	**-1.1**
	baz=91								
C13A	**Hot Springs**	**90.32**	**39**	⇓P		**P**		**22 44 15.3**	**-2.3**
	baz=91								
RRI2	**Red Ridge**	**90.33**	**44**	*e*P		P		22 44 22.9	+4.9
	comp=Z,14nm,1.0s								
225A	**Deer Hill, Car**	**90.34**	**56**	⇑P		**P**		**22 44 15.7**	**-2.5**
	baz=91								
E14A	**Clinton**	**90.36**	**40**	⇓P		**P**		**22 44 17.6**	**-0.3**
	baz=91								
426A	**McDonald Obser**	**90.42**	**58**	⇑P		**P**		**22 44 16.6**	**-2.0**
	baz=91,SNR=6.0								
627A	**Terlingua Ranc**	**90.47**	**59**	⇓P		**P**		**22 44 17.8**	**-1.0**
	baz=91								
Q20A	**Ridgley Place,**	**90.49**	**49**	⇓P		**P**		**22 44 17.4**	**-1.3**
	baz=91								
527A	**Woodward Ranch**	**90.55**	**58**	⇓P		**P**		**22 44 16.8**	**-2.4**
	baz=91								
Y24A	**Capitan**	**90.57**	**54**	⇓P		P		22 44 16.1	-3.1
	baz=91								
TPAW	**Teton Pass**	**90.63**	**44**	*e*P		P		22 44 24.2	+4.8
	comp=Z,10nm,1.1s								
P20A	**De Beque**	**90.65**	**48**	⇑P		**P**		**22 44 17.9**	**-1.6**
	baz=91								
CHMT	**Chamberlain Mo**	**90.75**	**40**	*e*P		P		22 44 24.2	+4.5
IMW	**Indian Meadow**	**90.82**	**43**	*e*P		P		22 44 25.0	+4.7
	comp=Z,10.0nm,1.0s								
226B	**Tecolote Peak,**	**90.84**	**56**	⇑P		P		22 44 17.7	-2.7
	baz=91								
Z25A	**Roswell**	**90.87**	**55**	⇑P		**P**		**22 44 18.5**	**-2.1**
	baz=91								
MOOW	**Moose Ponds**	**90.88**	**44**	*e*P		P		22 44 24.9	+4.5
	comp=Z,6.7nm,1.3s								
628A	**Black Gap, Mar**	**90.89**	**59**	⇓P		**P**		**22 44 19.5**	**-1.1**
	baz=91								
LOHW	**Long Hollow**	**90.91**	**44**	*e*P		P		22 44 25.1	+4.5
	comp=Z,7.9nm,1.3s								
Q21A	**Lamborn Mesa,**	**90.95**	**49**	⇑P		**P**		**22 44 20.5**	**-0.4**
	baz=92								
427A	**Hayter Ranch,**	**90.98**	**58**	⇓P		**P**		**22 44 19.5**	**-1.5**
	baz=92,SNR=5.3								
O20A	**White River Ci**	**91.02**	**48**	⇑P		**P**		**22 44 20.1**	**-1.0**
	baz=92								
S22A	**4UR Ranch, Cre**	**91.04**	**50**	⇓P		**P**		**22 44 19.7**	**-1.7**
	baz=92								
528A	**Cox Ranch, San**	**91.22**	**59**	⇓P		**P**		**22 44 20.9**	**-1.3**
	baz=92								
BW06	**Boulder Array**	**91.23**	**45**	*e*P		P		22 44 25.5	+3.4
	comp=Z,14nm,1.5s								
PDAR	**Pinedale Array**	**91.23**	**45**	P		**P**		**22 44 22.3**	**+0.2**
PDAR	**Pinedale Array**	**91.23**	**45**	P		**P**		**22 44 22.3**	**+0.2**
	comp=Z,2.8nm,1.1s,baz=214,slow=5.0,SNR=7.3								
PDAR				LR		LR	LR	23 18 29.5	
	comp=Z,30nm,19.4s,baz=254,slow=31								
H17A	**Grant Village**	**91.27**	**43**	⇑P		**P**		**22 44 21.0**	**-1.4**
	baz=92								
R22A	**Saguache, Gunn**	**91.29**	**50**	⇑P		**P**		**22 44 21.4**	**-1.2**
	baz=92								
N20A	**Spence Gulch,**	**91.29**	**47**	⇓P		**P**		**22 44 22.0**	**-0.5**
	baz=92								
B14A	**Marquette Ranc**	**91.41**	**39**	⇓P		**P**		**22 44 21.8**	**-0.9**
	baz=92								
Q22A	**Crested Butte,**	**91.43**	**49**	⇓P		**P**		**22 44 22.4**	**-0.9**

GTA					pmax	pmax			
	comp=Z,2.0nm,1.7s								
GTA					pmax	pmax			
	comp=Z,86nm,5.5s								
GTA					LR	LR			
	comp=N,46nm,14.5s								
GTA					LR	LR			
	comp=E,54nm,14.7s								
GTA					LR	LR			
	comp=Z,85nm,14.3s								
732A	**Laxson Ranch,**	**93.00**	**61**	⇓P	**P**		**22 44 29.7**	**-0.6**	
	baz=94								
531A	**Rocksprings**	**93.03**	**59**	⇓P	**P**		**22 44 30.2**	**-0.4**	
	baz=94								
L22A	**Ellis Ranch, M**	**93.03**	**46**	⇑P	**P**		**22 44 30.3**	**-0.2**	
	baz=94								
G20A	**Bridger**	**93.14**	**43**	⇑P	**P**		**22 44 30.7**	**-0.1**	
	baz=94								
A17A	**Triple J Farms**	**93.20**	**39**	⇑P	**P**		**22 44 31.2**	**+0.3**	
	baz=94								
E19A	**Rath Farm, Rou**	**93.30**	**42**	⇓P	**P**		**22 44 33.2**	**+1.8**	
	baz=94								
D19A	**Cripps Ranch,**	**93.53**	**41**	⇑P	**P**		**22 44 33.6**	**+1.2**	
	baz=94								
532A	**Rocksprings**	**93.54**	**59**	⇓P	**P**		**22 44 31.9**	**-0.9**	
	baz=94								
J22A	**Midwest**	**93.55**	**45**	⇑P	**P**		**22 44 34.4**	**+1.6**	
	baz=94								
R26A	**Arlington**	**93.72**	**51**	⇑P	P		22 44 30.8	-2.8	
	baz=94								
231A	**Bronte**	**93.83**	**58**	⇓P	**P**		**22 44 33.5**	**-0.7**	
	baz=94								
332A	**Millersview**	**94.10**	**58**	⇓P	**P**		**22 44 33.7**	**-1.7**	
	baz=95								
INK	**Inuvik**	**94.44**	**16**	LR	LR		23 18 24.9		
	comp=Z,117nm,21.8s,baz=217,slow=30								
YKA	**Yellowknife Ar**	**97.41**	**26**	P	**P**		**22 44 48.5**	**-1.1**	
YKA	**Yellowknife Ar**	**97.41**	**26**	P	**P**		**22 44 48.5**	**-1.1**	
	comp=Z,0.8nm,0.9s,baz=245,slow=4.3,SNR=3.7								
WMQ	**Urumqi**	**102.96**	**312**	*e*P	**Pdif**		**22 45 16.8**	**+1.8**	
WMQ				LR	LR				
	comp=N,63nm,21.0s								
WMQ				LR	LR				
	comp=E,270nm,28.6s								
WMQ				LR	LR				
	comp=Z,41nm,21.8s								
BRTR	**Keskin Array B**	**142.87**	**311**	PKP	**PKPdf**		**22 50 50.5**	**+0.2**	
BRTR	**Keskin Array B**	**142.87**	**311**	PKP	**PKPdf**		**22 50 50.5**	**+0.2**	
	comp=Z,0.6nm,0.9s,baz=3.3,slow=8.7,SNR=2.7								
CFR	**Carcaliu**	**143.84**	**322**	⇑*i*P	**PKPdf**		**22 50 55.5**	**+3.9**	
TESR	**Tescani**	**143.87**	**325**	⇓*i*P	PKPab		22 50 48.6	-0.3	
BUR08	**Bucovina Ar. S**	**143.90**	**328**	PKPdf	**PKPdf**		**22 50 52.0**	**+0.2**	
VRI	**Vrincioaia**	**144.22**	**324**	⇑*i*P	**PKPdf**		**22 50 53.2**	**+0.8**	
PLOR	**Plostina**	**144.28**	**324**	⇑*i*P	**PKPdf**		**22 50 53.3**	**+0.8**	
KOLS	**Kolonicke sedl**	**144.40**	**332**	*e*PKP	PKPbc		22 50 50.9	-0.2	
CSS	**Prodhromos**	**144.69**	**303**	*e*PKPdf	**PKPdf**		**22 50 56.5**	**+3.0**	
ISR	**Istrita**	**144.78**	**323**	⇑*i*P	**PKPab**		**22 50 51.7**	**-0.7**	
MLR	**Muntele Rosu**	**144.89**	**324**	⇑*i*P	**PKPab**		**22 50 51.6**	**-1.3**	
OKC	**Ostrava-Krasne**	**145.42**	**336**	*e*PKP	**PKPab**		**22 50 59.3**	**+4.8**	
OKC				*ep*PKP	**pPKPdf**		**22 51 04.2**	**-4.3**	
UPC	**Upice**	**145.64**	**339**	*e*PKP	PKPab		22 51 00.7	+5.4	
UPC				*ep*PKP	pPKPdf		22 51 05.1	-3.8	
UPC				*es*PKP			22 51 15.9		
DPC	**Dobruska-Polom**	**145.66**	**338**	*e*PKP	**PKPdf**		**22 50 54.3**	**-0.5**	
DPC				*ex*	x		22 51 01.0		
DPC				*es*PKP			22 51 16.3		
ARR	**Arges**	**145.68**	**325**	⇑*i*P	**PKPab**		**22 50 55.5**	**-0.2**	
MORC	**Moravsky Berou**	**145.70**	**337**	PKPdf	**PKPab**		**22 50 57.2**	**+1.6**	
DRGR		**145.72**	**329**	⇓*i*P	**PKPab**		**22 50 59.5**	**+3.7**	
CLL	**Collm**	**145.88**	**342**	*e*PKPbc	**PKPdf**		**22 50 55.0**	**0.0**	
CLL				*e*PKPbc(2)			22 50 56.0		
CLL				*e*PKiKP	**PKiKP**		**22 51 01.0**	**+1.9**	
	comp=Z,8.0nm,0.8s								
CLL				*e*			22 51 05.0		
	comp=Z,23nm,1.4s								
CLL				*i* pPKiKP	**pPKiKP**		**22 51 15.4**	**+2.0**	
	comp=Z,37nm,1.5s								
CLL				*e*			22 51 48.0		
BRG	**Berggiesshubel**	**145.99**	**341**	*e*PKP	**PKPab**		**22 51 01.2**	**+4.6**	
	comp=Z,2.9nm,0.7s								
BRG				*e*			22 51 06.6		
	comp=Z,8.3nm,0.9s								
PRU	**Pruhonice**	**146.57**	**340**	*ep*PKP	pPKPdf		22 51 08.1	-2.4	
NKC	**Novy Kostel**	**147.00**	**342**	*e*PKP	**PKPab**		**22 51 01.2**	**+0.6**	
NKC				*ex*	x		22 51 08.5		
KHC	**Kasperske Hory**	**147.63**	**340**	*e*PKPdf	**PKPbc**		**22 51 01.1**	**+0.3**	
KHC	**Kasperske Hory**	**147.63**	**340**	*e*PKP	**PKPbc**		**22 51 01.3**	**+0.5**	
KHC				*ex*	x		22 51 06.8		
KHC				*ep*PKP	**pPKPdf**		**22 51 11.8**	**-0.6**	
GERES	**GERESS Array B**	**147.84**	**340**	PKPbc	**PKPbc**		**22 51 00.8**	**-0.7**	
GERES	**GERESS Array B**	**147.84**	**340**	PKPbc	**PKPbc**		**22 51 00.8**	**-0.7**	
	comp=Z,1.0nm,0.8s,baz=352,slow=3.0,SNR=9.9								
CONA	**Conrad Observa**	**147.85**	**336**	⇓*i*PKPdf	**PKPbc**		**22 51 00.8**	**-0.8**	
	comp=Z,20nm,1.3s								
WLF	**Walferdange**	**149.03**	**349**	PKPab	**PKPab**		**22 51 10.5**	**+1.9**	
SOKA	**Soboth**	**149.20**	**336**	⇓*i*PKPbc	**PKPbc**		**22 51 04.8**	**-0.3**	
	comp=Z,10.0nm,1.3s								
MOTA	**Moosalm**	**149.99**	**341**	⇓*i*PKPdf	**PKPdf**		**22 51 03.7**	**+1.6**	
	comp=Z,9.1nm,1.0s								
TRI	**Trieste**	**150.50**	**336**	*e*PKPdf	**PKPbc**		**22 51 05.8**	**-2.3**	
TUE	**Stuetta**	**151.29**	**343**	*e*PKPdf	**PKPbc**		**22 51 07.6**	**-2.6**	
AQU	**L'Aquila**	**153.42**	**333**	⇓*i*P	**PKPbc**		**22 51 15.8**	**+0.8**	

IDC 18 22:36:01.1±2.1, 10°13'N×90°67'E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/27, mbtmp3.5/6, ML3.6/1, Error ellipse: s-maj=68.7km s-min=23.2km az=66.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**11.52**	**43**	Pn	Pn	22 38 48.9	+1.9
	0.1nm,0.3s,baz=233,slow=16,SNR=3.1						
MKAR	**Makanchi Array**	**37.22**	**350**	P	P	22 43 15.4	+1.1
	0.6nm,0.6s,baz=161,slow=8.9,SNR=6.1						
SONM	**Songino Array**	**39.85**	**17**	P	P	22 43 34.4	-2.1
	0.1nm,0.3s,baz=189,slow=8.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**43.95**	**355**	P	P	22 44 09.4	-0.3
	0.6nm,0.4s,baz=170,slow=9.0,SNR=4.7						
WRA	**Warramunga Arr**	**52.35**	**125**	P	P	22 45 15.5	+0.2
	0.1nm,0.4s,baz=302,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**53.99**	**129**	P	P	22 45 27.1	-0.3
	0.3nm,0.5s,baz=308,slow=6.1,SNR=4.5						

KRSC 18 22:57:42.6±1.5, 49°27'N×155°99'E, h10km±10km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.42**	**3**	P	Pn	22 58 08.2	-0.2
SKR				*i* S	Sn	22 58 27.0	-0.1
MIPR	**Malaya Ipel'ka**	**3.05**	**9**	P	Pn	22 58 31.4	+0.5
ASAK	**Asacha**	**3.34**	**21**	*e*P	Pn	22 58 36.3	+1.3
MTVR	**Mutnovka**	**3.50**	**23**	P	Pn	22 58 37.1	-0.2
RUS	**Russkaya**	**3.55**	**26**	P	Pn	22 58 37.8	+0.1
RUS				*i* S	Sn	22 59 17.8	-1.8
AVH	**Avacha**	**4.36**	**22**	P	Pn	22 58 49.9	+1.0
SDLR	**Sedlovina**	**4.41**	**23**	P	Pn	22 58 50.5	+0.9
GNL	**Ganaly**	**4.60**	**15**	P	Pn	22 58 53.6	+1.3
KBTR	**Krutoberegovo**	**8.09**	**28**	P	Pn	22 59 42.7	+2.7

IDC 18 22:59:47.1±6.3, 4°07S×150°95E, h103km±50km, mb3.5/3, mb1 3.7/4, mb1mx3.3/20, mbtmp3.6/4, Error ellipse: s-maj=102.7km s-min=41.1km az=127.0

ISC 18 22:59:43.9±2.7, 4°5S±0°5×151°8E±0°7, h100km, n10, σ1°52/9, mb3.6/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.73**	**223**	P	**Pn**	**23 01 22.2**	**+2.1**
PMG				S	**Sn**	**23 02 33.9**	**-1.4**
	1.8nm,0.3s,baz=264,slow=18,SNR=4.4						
KDU	**Kakadu**	**20.77**	**246**	P	Pn	23 04 17.4	-3.0
	baz=21,SNR=11						
MTN	**Manton Dam**	**22.05**	**247**	P	P	23 04 20.3	-10
	baz=22,SNR=3.2						
WRA	**Warramunga Arr**	**22.93**	**226**	P	**P**	**23 04 39.1**	**-0.6**
	3.3nm,0.5s,baz=50,slow=10.0,SNR=53						
KNRA	**Kununurra**	**25.24**	**242**	P	**P**	**23 05 03.0**	**+2.2**
	baz=25,SNR=4.0						
ASAR	**Alice Springs**	**25.73**	**220**	P	**P**	**23 05 05.0**	**-0.3**
	0.3nm,0.3s,baz=50,slow=8.9,SNR=5.6						
FITZ	**Fitzroy Crossi**	**28.96**	**240**	P	**P**	**23 05 33.1**	**-1.0**
	0.6nm,0.3s,baz=46,slow=8.0,SNR=5.9						
FITZ	**Fitzroy Crossi**	**28.96**	**240**	P	**P**	**23 05 33.3**	**-0.8**
	baz=28,SNR=4.8						
MEEK	**Meekatharra**	**38.62**	**232**	P	**P**	**23 06 57.1**	**-0.6**
	baz=39,SNR=7.0						
TORD	**Torodi Ar. Bea**	**149.28**	**288**	PKPbc	**PKPbc**	**23 19 21.8**	**-0.3**
	0.3nm,0.8s,baz=86,slow=2.6,SNR=7.3						

ISCJB 18 23:03:32.9±0.3, 7°67S±0°04×119°46E±0°03, h281km±3km, mb3.7/9, Error ellipse: s-maj=5.9km s-min=4.8km az=19.9
AUST 18 23:03:33.2, 7°49S×119°48E, h300km
DJA 18 23:03:34.8±0.4, 8°S±3°×11°9E±°, h260km±4km, M4.7/23, mb4.8/11, mB5.3/6, MLv4.5/23, Mw(mB)4.7/6
IDC 18 23:03:34.4±1.3, 7°54S×119°52E, h281km±9km, mb3.5/9, mb1 3.5/12, mb1mx3.4/25, mbtmp3.4/12, Error ellipse: s-maj=30.4km s-min=7.9km az=59.0

ISC 18 23:03:33.0±0.6, 7°67S±0°04×119°40E±0°05, h271km±6km, n56, σ1°83/66, mb3.7/9, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMNI	**Bima**	**1.11**	**219**	P	**Pn**	**23 04 13.4**	**+2.5**
BSSI	**Bau Bau, Buton**	**1.86**	**36**	P	**Pn**	**23 04 16.7**	**+0.6**
BSSI				S	**S**	**23 04 51.1**	**+0.8**
WBSI	**Waikabubak, Su**	**1.96**	**180**	P	**Pn**	**23 04 17.1**	**+0.1**
WBSI				S	**S**	**23 04 51.0**	**-0.8**
WSI	**Waingapu**	**2.18**	**156**	P	**Pn**	**23 04 20.0**	**+1.2**
WSI				S	**S**	**23 04 53.9**	**-1.3**
WSI	**Waingapu**	**2.18**	**156**	P	**S**	**23 04 53.9**	**-1.3**
	baz=24,SNR=15						
WSI	**Waingapu**	**2.18**	**156**	P	**Pn**	**23 04 20.1**	**+1.2**
	baz=2.3,SNR=4.3						
WSI				S	**S**	**23 04 53.5**	**-1.7**
	baz=2.3,SNR=16						
BKSI	**Bulukumba**	**2.44**	**17**	P	**Pn**	**23 04 22.5**	**+1.2**
KAPI	**Kappang**	**2.66**	**8**	P	**Pn**	**23 04 25.1**	**+1.7**
KAPI	**Kappang**	**2.66**	**8**	P	**Pn**	**23 04 23.9**	**+0.5**
	1.3nm,0.3s,baz=214,slow=22,SNR=3.6						
KAPI				S	**S**	**23 05 04.3**	**+0.9**
	1.5nm,0.3s,baz=222,slow=5.1,SNR=2.6						
BASI	**Baing, Sumba**	**2.79**	**155**	P	**Pn**	**23 04 24.9**	**+0.2**
BASI				S	**S**	**23 05 05.1**	**-0.6**
MMRI	**Maumere**	**2.97**	**109**	P	**Pn**	**23 04 27.2**	**+0.7**
SPSI	**Sidrap Palu**	**3.70**	**6**	P	**Pn**	**23 04 36.4**	**+2.0**
KHKI	**Kahang-Kahang**	**3.82**	**259**	P	**Pn**	**23 04 37.2**	**+1.5**
BBSI	**Bau Bau**	**3.83**	**56**	P	**Pn**	**23 04 37.6**	**+1.8**
SRBI	**Singaraja**	**4.17**	**264**	P	**Pn**	**23 04 41.4**	**+1.7**
DNP	**Denpasar**	**4.26**	**256**	P	**Pn**	**23 04 42.4**	**+1.6**
IGBI	**Denpasar**	**4.36**	**255**	P	**Pn**	**23 04 43.6**	**+1.7**
TTSI	**Tana Toraja**	**4.61**	**5**	P	**Pn**	**23 04 47.8**	**+2.9**
KMMI	**Kalianget**	**5.42**	**276**	P	**Pn**	**23 04 57.4**	**+2.8**
	60nm,1.0s,2μm0.2nm						
BLJI	**Banyuglugur**	**5.75**	**269**	P	**Pn**	**23 05 00.7**	**+2.1**
	125nm,0.7s,0.5nm						
GMJI	**Gumukmas**	**5.93**	**264**	P	**Pn**	**23 05 01.2**	**+0.5**
	35nm,0.3s,2μm0.3nm						
BBKI	**Banjar Baru**	**6.17**	**312**	P	**Pn**	**23 05 06.0**	**+2.3**
	112nm,0.9s,0.3nm						
KRKI	**Karangkates**	**6.90**	**265**	P	**Pn**	**23 05 14.3**	**+1.6**
	210nm,0.4s,22μm1.6nm						
PWJI	**Pagerwojo**	**7.53**	**267**	P	**Pn**	**23 05 22.3**	**+1.7**
	67nm,0.5s,0.4nm						
SJI	**Sawahan**	**7.56**	**269**	P	**Pn**	**23 05 23.3**	**+2.2**
	104nm,0.3s,4μm0.7nm						
PCJI	**Pacitan**	**8.16**	**266**	P	**Pn**	**23 05 29.2**	**+0.7**
	505nm,0.5s,7μm2.0nm						
WOJI	**Wonogiri, Jawa**	**8.40**	**268**	P	**Pn**	**23 05 32.8**	**+1.3**
	167nm,0.5s,4μm0.8nm						
UGM	**Wanagama**	**8.80**	**268**	P	**Pn**	**23 05 36.8**	**+0.3**
	baz=31,SNR=26						
UGM	**Wanagama**	**8.80**	**268**	P	**Pn**	**23 05 36.8**	**+0.3**
	baz=8.9,SNR=26						
UGM				S	**S**	**23 07 11.8**	**-4.7**
	baz=8.9,SNR=6.2						
BJII	**Banjamegara**	**9.61**	**271**	P	**Pn**	**23 05 49.1**	**+2.4**
	48nm,0.8s						
CISI	**Cisompet, Garu**	**11.48**	**270**	P	**Pn**	**23 06 08.8**	**-1.1**
	baz=33,SNR=13						
CISI	**Cisompet, Garu**	**11.48**	**270**	P	**Pn**	**23 06 08.8**	**-1.1**
	baz=12,SNR=13						
FITZ	**Fitzroy Crossi**	**12.02**	**150**	P	**Pn**	**23 06 17.6**	**+1.2**
	0.4nm,0.3s,baz=339,slow=6.8,SNR=16						
FITZ				S	**S**	**23 08 33.3**	**+2.9**
	4.7nm,0.3s,baz=188,slow=16,SNR=15						
FITZ	**Fitzroy Crossi**	**12.02**	**150**	P	**P**	**23 06 20.0**	**+1.3**
	baz=12,SNR=12						
FITZ				S	**S**	**23 08 34.0**	**+3.6**
	baz=12,SNR=5.3						
KNRA	**Kununurra**	**12.14**	**132**	P	**Pn**	**23 06 18.1**	**+0.2**
	baz=12,SNR=20						
KNRA				S	**S**	**23 08 27.9**	**-5.3**
	baz=12,SNR=5.9						
MTN	**Manton Dam**	**12.64**	**115**	P	**Pn**	**23 06 24.3**	**+0.2**
	baz=13,SNR=92						
FAKI	**Fak Fak**	**13.64**	**70**	P	**Pn**	**23 06 35.2**	**-1.0**
	baz=14,SNR=5.9						
FAKI				S	S	23 08 59.5	-7.8
	baz=14,SNR=5.8						
KDU	**Kakadu**	**13.80**	**112**	P	**Pn**	**23 06 37.9**	**-0.2**
	baz=14,SNR=23						
XMIS	**Christmas Isla**	**13.86**	**257**	P	**P**	**23 06 39.4**	**+0.2**
	baz=36,SNR=3.6						
XMIS	**Christmas Isla**	**13.86**	**257**	P	**P**	**23 06 39.4**	**+0.2**
	baz=14,SNR=3.6						
MNAI	**Manna**	**16.68**	**280**	P	**P**	**23 07 09.2**	**-1.0**
	baz=17,SNR=3.9						
MEEK	**Meekatharra**	**18.88**	**182**	P	**Pn**	**23 07 37.2**	**-0.9**
	baz=19,SNR=3.9						
MEEK				S	S	23 11 16.9	+23
	baz=19,SNR=6.5						
WRA	**Warramunga Arr**	**18.94**	**132**	P	**P**	**23 07 35.6**	**+1.0**
	1.7nm,0.3s,baz=305,slow=12,SNR=133						
WRA				S	**S**	**23 10 52.6**	**-2.6**
	0.1nm,0.3s,baz=304,slow=22,SNR=6.4						
ASAR	**Alice Springs**	**21.14**	**140**	P	**P**	**23 07 58.8**	**+1.2**
	2.9nm,0.4s,baz=314,slow=8.6,SNR=47						
ASAR				S	**S**	**23 11 38.8**	**+4.3**
	0.8nm,0.6s,baz=336,slow=27,SNR=4.0						
QIS	**Mount Isa**	**23.38**	**125**	S	S	23 12 31.1	+20
	baz=23,SNR=7.5						
STKA	**Stephens Creek**	**31.74**	**142**	P	**P**	**23 09 33.9**	**+1.6**
	1.3nm,0.6s,baz=324,slow=8.8,SNR=4.6						
STKA	**Stephens Creek**	**31.74**	**142**	P	**P**	**23 09 34.0**	**+1.8**
	baz=32,SNR=4.4						
KSRS	**Korea Array**	**45.59**	**10**	P	**P**	**23 11 26.9**	**+0.4**
	2.9nm,0.7s,baz=187,slow=8.4,SNR=11						
MJAR	**Matsushiro Arr**	**47.39**	**21**	P	**P**	**23 11 38.9**	**-1.6**
	2.7nm,0.9s,baz=192,slow=8.4,SNR=6.1						
USRK	**Ussuriysk Arra**	**52.87**	**11**	P	**P**	**23 12 19.8**	**-1.5**
	3.4nm,0.7s,baz=186,slow=11,SNR=6.0						
SONM	**Songino Array**	**56.45**	**350**	P	**P**	**23 12 47.3**	**+0.4**
	1.6nm,0.6s,baz=166,slow=9.2,SNR=11						
MKAR	**Makanchi Array**	**63.46**	**332**	P	**P**	**23 13 34.5**	**+0.1**
	0.9nm,0.4s,baz=153,slow=7.5,SNR=13						
ZALV	**Zalesovo Beam**	**67.95**	**339**	P	**P**	**23 14 01.9**	**-0.8**
	1.3nm,0.4s,baz=139,slow=5.6,SNR=7.2						
KURBB	**Kurchatov Arra**	**67.96**	**333**	P	**P**	**23 14 02.3**	**-0.6**
	0.5nm,0.4s,baz=140,slow=5.5,SNR=9.0						
TORD	**Torodi Ar. Bea**	**118.61**	**281**	PKP	**PKPdf**	**23 21 48.1**	**-1.7**
	0.2nm,0.5s,baz=39,slow=2.0,SNR=5.7						
TKL	**Tuckaleechee C**	**144.98**	**34**	PKP	PKPbc	23 22 37.9	-0.6
	1.5nm,0.3s,baz=315,slow=2.9,SNR=6.7						

IDC 18 23:03:51.4±4.2, 27°85N×87°86E, h48km±42km, mb3.7/9, mb1 3.8/12, mb1mx3.5/31, mbtmp3.6/12, ML3.5/2, Error ellipse: s-maj=42.1km s-min=14.7km az=55.0
DMN 18 23:03:52.6±0.3, 28°00N×87°98E, h50km, Ml4.6/7, Error ellipse: s-maj=7.5km s-min=3.6km az=52.0
NDI 18 23:03:53.3±2.5, 27°53N×87°97E, h10km, ML4.0

ISC 18 23:03:52.2±1.0, 27°98N±0°07×87°95E±0°05, h56km±13km, n31, σ1°64/41, mb3.9/9, 1D, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**0.66**	**199**	*e*Pg	**Pn**	**23 04 07.7**	**+1.7**
TAPN				*e*Sg	**Sn**	**23 04 18.4**	**+2.4**
	12μm,0.5s						
GTK	**Gangtok**	**0.87**	**137**	*e*PKP	Pn	23 04 06.5	-2.1
GTK				*e*S	Sn	23 04 12.0	-8.7
ODAN	**Odare**	**1.22**	**204**	*e*Pg	**Pn**	**23 04 14.7**	**+1.5**
ODAN				*e*Sg	**Sn**	**23 04 30.1**	**+1.3**
	3μm,0.3s						
SLGI	**Shiliguri**	**1.34**	**162**	*ex*	**Pn**	**23 04 15.0**	**+0.4**
SLGI				*e*S	Sn	23 04 23.0	-8.3
RAMN	**Ramite**	**1.57**	**230**	*e*Pg	**Pn**	**23 04 18.9**	**+0.9**
RAMN				*e*Sg	**Sn**	**23 04 38.2**	**+0.7**
	1μm,0.3s						
GUN	**Gumba**	**1.83**	**268**	*e*Pg	**Pn**	**23 04 22.7**	**+1.1**
GUN				*e*Sg	**Sn**	**23 04 44.2**	**+0.3**
	1μm,0.5s						
PKI	**Pulchoki**	**2.29**	**260**	*e*Pg	**Pn**	**23 04 28.9**	**+1.1**
PKI				*e*Sg	**Sn**	**23 04 55.9**	**+0.9**
	319nm,0.2s						
PKIN	**Phulchoki**	**2.29**	**261**	*e*Pg	**Pn**	**23 04 29.0**	**+1.1**
PKIN				*e*Sg	**Sn**	**23 04 55.9**	**+0.8**
	932nm,0.6s						
KKN	**Kakani**	**2.37**	**266**	*e*Pg	**Pn**	**23 04 29.8**	**+1.0**
DMN	**Daman**	**2.54**	**262**	*e*Pn	**Pn**	**23 04 32.3**	**+1.0**
DANN	**Dangsing**	**3.72**	**277**	*e*Pn	**Pn**	**23 04 47.0**	**-0.3**
DANN				*e*Sn	**Sn**	**23 05 28.3**	**-1.7**
	254nm,0.3s						
KOLN	**Koldanda**	**3.85**	**268**	*e*Pn	**Pn**	**23 04 49.5**	**+0.3**
SHL	**Shillong**	**4.26**	**123**	*e*PKP	**Pn**	**23 04 55.0**	**+0.4**
SHL				*e*S	**Sn**	**23 05 40.0**	**-3.2**
SHL				AML	AML	23 05 44.0	
	comp=N,337nm,0.4s						
SHL				AML	AML	23 05 45.5	
	comp=E,408nm,0.6s						
PYUN	**Piuthan**	**4.38**	**273**	*e*Pn	**Pn**	**23 04 55.7**	**-0.7**
PYUN				*e*Sn	**Sn**	**23 05 44.2**	**-2.1**
	comp=E,290nm,0.5s						
BOK	**Bokaro**	**4.56**	**205**	*e*PKP	**Pn**	**23 04 58.6**	**-0.1**
BOK				*e*S	**Sn**	**23 05 44.7**	**-5.6**
BOK				AML	AML	23 05 49.0	
	comp=E,327nm,0.1s						
BOK				AML	AML	23 05 49.8	
	comp=N,396nm,0.1s						
JBP	**Jabalpur**	**8.64**	**238**	⇓*e*PKP	**Pn**	**23 05 53.6**	**-0.9**
JBP				*i* x	x	23 05 55.4	
	comp=Z,13nm,0.4s						
JBP				*e*S	Sn	23 07 23.6	-6.9
DDI	**Dehra Dun**	**8.96**	**287**	*ex*	**Pn**	**23 05 58.2**	**-0.8**
DDI				*ex*	**Sn**	**23 07 35.2**	**-3.2**
BHPL	**Bhopal**	**10.60**	**246**	*e*S	Sn	23 08 09.5	-9.1
CMAR	**Chiang Mai Arr**	**13.84**	**131**	P	**Pn**	**23 07 03.6**	**-2.0**
	baz=308,slow=13,SNR=7.3						
CMAR				S	**Sn**	**23 09 36.7**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=298,slow=17,SNR=5.1						
POO	**Poona**	**15.99**	**237**	*e*S	Sn	23 10 15.6	-15
AAK	**Ala-Archa**	**18.25**	**327**	P	**Pn**	**23 08 03.2**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=131,slow=9.1,SNR=6.7						
MKAR	**Makanchi Array**	**19.31**	**348**	P	**Pn**	**23 08 14.3**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=171,slow=9.9,SNR=7.5						
KURBB	**Kurchatov Arra**	**23.72**	**345**	P	**P**	**23 08 59.6**	**+0.7**
	comp=Z,1.8nm,0.8s,baz=164,slow=9.0,SNR=15						
SONM	**Songino Array**	**24.48**	**31**	P	**P**	**23 09 07.3**	**+1.3**
	comp=Z,3.3nm,0.5s,baz=216,slow=9.8,SNR=39						
ZALV	**Zalesovo Beam**	**26.05**	**356**	P	**P**	**23 09 20.8**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=176,slow=9.7,SNR=4.8						
BVAR	**Borovoye Array**	**28.21**	**337**	P	**P**	**23 09 40.0**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=152,slow=12,SNR=4.6						
FINES	**FINESS Array B**	**52.44**	**328**	P	**P**	**23 12 58.3**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=106,slow=10,SNR=6.4						
ARCES	**ARCESS Array B**	**54.50**	**337**	P	**P**	**23 13 14.1**	**+0.3**
	comp=Z,3.7nm,1.0s,baz=103,slow=7.7,SNR=3.9						
GERES	**GERESS Array B**	**59.41**	**312**	P	**P**	**23 13 49.1**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=92,slow=6.8,SNR=4.2						
WRA	**Warramunga Arr**	**65.44**	**132**	P	**P**	**23 14 29.5**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=326,slow=6.6,SNR=6.0						
ASAR	**Alice Springs**	**67.82**	**135**	P	**P**	**23 14 44.8**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=316,slow=6.2,SNR=6.2						

IDC 18 23:17:17.9±2.2, 7°31N×152°85E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.8/24, mbtmp3.9/7, MS3.5/1, Ms1 3.5/1, ms1mx2.6/30, Error ellipse: s-maj=68.8km s-min=21.4km az=95.0, Eastern Caroline Islands region

| Code | Station Name | Δ° | A

FITZ					Sn	Sn	23 31 58.6	+2.7
	0.2nm,0.3s,baz=146,slow=18,SNR=4.8							
WRA	**Warramunga Arr**	**18.81**	**131**		P	Pn	23 31 16.2	+0.3
	0.1nm,0.3s,baz=302,slow=12,SNR=16							
ASAR	**Alice Springs**	**20.95**	**140**		P	P	23 31 39.2	+0.3
	1.2nm,0.6s,baz=315,slow=9.8,SNR=16							
STKA	**Stephens Creek**	**31.55**	**142**		P	P	23 33 17.5	-0.8
	0.6nm,0.5s,baz=315,slow=13,SNR=3.6							
ZALV	**Zalesovo Beam**	**68.23**	**339**		P	P	23 37 56.8	+0.3
	0.6nm,0.5s,baz=127,slow=5.6,SNR=2.4							

*ISCJB **18** 23:36:25.1±0.3,37.85N±0.02×1.82W±0.02, h3km±2km, Error ellipse: s-maj=3.4km s-min=2.0km az=163.4*
*CSEM **18** 23:36:25.9±0.1,37.76N×1.71W, h5km, ML3.6/29, Error ellipse: s-maj=2.8km s-min=1.7km az=150.0*
*INMG **18** 23:36:26.4±1.3,37.72N×1.64W, h5km±2km, ML3.2, Error ellipse: s-maj=2.3km s-min=1.6km az=137.0*
*MDD **18** 23:36:26.5±0.2,37.72N×1.64W, h0km, mbLg3.0/49, Error ellipse: s-maj=2.4km s-min=1.5km az=145.0, PRXIMO*
MDD EMS: IV INTENSIDAD MAXIMA.
*LDG **18** 23:36:26.7±0.1,37.68N×1.61W, h2km, Ml3.5/4, Error ellipse: s-maj=3.5km s-min=1.8km az=142.0*
*SFS **18** 23:36:26.0,37.75N×1.62W, h1km, ML3.1*
ISC 18 23:36:25.5±0.7,**37.78N**±0.02×**1.68W**±0.02,**h9**km±6km, **n185,σ1§13/291,3C-2D,Spain**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EXLO	**Lorca**	**0.11**	**191**	Pg	**Pg**	**23 36 27.5**	**-0.6**
	SNR=7.9						
EXLO				Lg	Lg	23 36 28.7	
	SNR=7.9						
EXLO	**Lorca**	**0.11**	**191**	Pg	**Pg**	**23 36 27.5**	**-0.6**
	SNR=7.9						
EXLO				Lg	Lg	23 36 28.7	
	SNR=7.9						
EMUR	**La Murta**	**0.35**	**80**	⇑Pg	**Pg**	**23 36 32.9**	**+0.5**
	170nm,0.3s,SNR=18						
EMUR				Lg	Lg	23 36 35.6	
	736nm,0.2s,SNR=5.0						
EMUR	**La Murta**	**0.35**	**80**	Pg	**Pg**	**23 36 32.9**	**+0.5**
	170nm,0.3s,SNR=18						
EMUR				Lg	Lg	23 36 35.6	
	736nm,0.2s,SNR=5.0						
CART	**Cartagena**	**0.57**	**110**	⇑Pg	**Pg**	**23 36 36.4**	**-0.1**
CART				Lg	Lg	23 36 42.0	
CART	**Cartagena**	**0.57**	**110**	Pg	**Pg**	**23 36 36.4**	**-0.1**
CART				Lg	Lg	23 36 42.0	
EHUE	**Huescar**	**0.73**	**273**	Pg	**Pb**	**23 36 39.4**	**-1.0**
	2.9nm,0.5s,SNR=7.9						
EHUE				Lg	Lg	23 36 51.6	
	131nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**0.73**	**273**	Pg	**Pb**	**23 36 39.4**	**-1.0**
	2.9nm,0.5s,SNR=7.9						
EHUE				Lg	Lg	23 36 51.6	
	131nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**0.87**	**7**	⇓Pg	**Pn**	**23 36 43.4**	**-0.6**
	327nm,0.2s,SNR=18						
ETOB				Lg	Lg	23 36 57.1	
	917nm,0.4s,SNR=5.0						
ETOB	**Tobarra**	**0.87**	**7**	Pg	**Pn**	**23 36 43.4**	**-0.6**
	327nm,0.2s,SNR=18						
ETOB				Lg	Lg	23 36 57.1	
	917nm,0.4s,SNR=5.0						
ENIJ	**Nijar**	**0.91**	**208**	⇓Pg	**Pg**	**23 36 42.3**	**-0.7**
	35nm,0.1s,SNR=18						
ENIJ				Lg	Lg	23 36 53.9	
	267nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**0.91**	**208**	Pg	**Pg**	**23 36 42.3**	**-0.7**
	35nm,0.1s,SNR=18						
ENIJ				Lg	Lg	23 36 53.9	
	267nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**1.08**	**323**	Pg	**Pn**	**23 36 46.9**	**+0.1**
	7.8nm,0.4s,SNR=364						
EVIA				Lg	Lg	23 37 03.5	
	984nm,0.6s,SNR=4.0						
EVIA	**Vianos**	**1.08**	**323**	Pg	**Pn**	**23 36 46.9**	**+0.1**
	7.8nm,0.4s,SNR=364						
EVIA				Lg	Lg	23 37 03.5	
	984nm,0.6s,SNR=4.0						
EQES	**Quesada**	**1.11**	**272**	Pg	**Pn**	**23 36 47.1**	**-0.2**
	2.7nm,0.1s,SNR=291						
EQES				Lg	Lg	23 37 04.2	
	262nm,0.2s,SNR=22						
EQES	**Quesada**	**1.11**	**272**	Pg	**Pn**	**23 36 47.1**	**-0.2**
	2.7nm,0.1s,SNR=291						
EQES				Lg	Lg	23 37 04.2	
	262nm,0.2s,SNR=22						
EBER	**Berja**	**1.31**	**228**	⇑Pg	**Pb**	**23 36 49.9**	**-0.4**
	80nm,0.3s,SNR=18						
EBER				Lg	Lg	23 37 09.6	
	207nm,0.4s,SNR=12						
EBER	**Berja**	**1.31**	**228**	Pg	**Pb**	**23 36 49.9**	**-0.4**
	80nm,0.3s,SNR=18						
EBER				Lg	Lg	23 37 09.6	
	207nm,0.4s,SNR=12						
EBEN	**Beniarda**	**1.47**	**51**	Pn	**Pn**	**23 36 51.7**	**-0.4**
	5.1nm,0.3s,SNR=7.9						
EBEN				Pg	**Pg**	**23 36 56.1**	**+2.4**
	12nm,0.3s,SNR=42						
EBEN				Lg	Lg	23 37 12.5	
	27nm,0.4s,SNR=6.6						
EBEN	**Beniarda**	**1.47**	**51**	Pn	**Pn**	**23 36 51.7**	**-0.4**
	5.1nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**1.52**	**248**	Pn	**Pb**	**23 36 53.0**	**-0.8**
	2.0nm,0.1s,SNR=7.9						
EQUE				Pg	**Pg**	**23 36 54.6**	**+0.1**
	31nm,0.2s,SNR=48						
EQUE				Lg	Lg	23 37 16.6	
	121nm,0.4s,SNR=15						
EQUE	**Quentar**	**1.52**	**248**	Pn	**Pb**	**23 36 53.0**	**-0.8**
	2.0nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**1.58**	**252**	Pg	**Pg**	**23 36 56.7**	**+0.8**
	31nm,0.2s,SNR=46						
ECOG				Lg	Lg	23 37 18.2	
	194nm,0.3s,SNR=14						
ECOG	**Cogollos-Vega**	**1.58**	**252**	Pg	**Pg**	**23 36 56.7**	**+0.8**
	31nm,0.2s,SNR=46						
ECOG				Lg	Lg	23 37 18.2	
	194nm,0.3s,SNR=14						
EGUA	**Guajares**	**1.78**	**239**	Pn	**Pb**	**23 36 56.9**	**-1.3**
	3.4nm,0.1s,SNR=7.9						
EGUA				Pg	**Pg**	**23 36 59.3**	**-0.3**
	81nm,0.2s,SNR=7.9						
EGUA				Lg	Lg	23 37 24.7	
	732nm,0.9s,SNR=7.9						
EGUA	**Guajares**	**1.78**	**239**	Pn	**Pb**	**23 36 56.9**	**-1.3**
	3.4nm,0.1s,SNR=7.9						
ERON	**Agron**	**1.86**	**247**	Pg	**Pg**	**23 37 00.5**	**-0.6**
	27nm,0.3s,SNR=7.9						
ERON				Lg	Lg	23 37 27.9	
	61nm,0.4s,SNR=7.9						
ERON	**Agron**	**1.86**	**247**	Pg	**Pg**	**23 37 00.5**	**-0.6**
	27nm,0.3s,SNR=7.9						
ERON				Lg	Lg	23 37 27.9	
	61nm,0.4s,SNR=7.9						
ECHE	**Chera**	**1.89**	**17**	Pn	**Pb**	**23 36 59.3**	**-0.9**
	4.0nm,0.3s,SNR=7.9						
ECHE				Pg	**Pg**	**23 37 03.3**	**+1.5**
	27nm,0.3s,SNR=7.9						
ECHE				Lg	Lg	23 37 29.1	
	49nm,0.6s,SNR=7.9						
ECHE	**Chera**	**1.89**	**17**	Pn	**Pb**	**23 36 59.3**	**-0.9**
	4.0nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**2.07**	**265**	Pn	**Pb**	**23 37 02.5**	**-0.7**
	20nm,0.2s,SNR=7.9						
ELUQ				Lg	Lg	23 37 33.8	
	94nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**2.07**	**265**	Pn	**Pb**	**23 37 02.5**	**-0.7**
	20nm,0.2s,SNR=7.9						
ELUQ				Lg	Lg	23 37 33.8	
	94nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.07**	**253**	Pn	**Pb**	**23 37 02.9**	**-0.4**
	4.6nm,0.2s,SNR=7.9						
ELOJ				Pg	**Pg**	**23 37 05.8**	**+0.6**
	20nm,0.2s,SNR=7.9						
ELOJ				Lg	Lg	23 37 33.1	
	40nm,0.3s,SNR=7.9						
ELOJ	**Sierra Loja**	**2.07**	**253**	Pn	**Pb**	**23 37 02.9**	**-0.4**
	4.6nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**2.33**	**280**	Pn	**Pb**	**23 37 04.6**	**-3.0**
	2.7nm,0.2s,SNR=50						
EADA				Pg	**Pg**	**23 37 09.7**	**-0.4**
	12nm,0.2s,SNR=7.9						
EADA				Sn	**Sb**	**23 37 34.5**	**-1.9**
	20nm,0.2s,SNR=6.1						
EADA				Lg	Lg	23 37 41.7	
	43nm,0.2s,SNR=7.1						
EADA	**Adamuz**	**2.33**	**280**	Pn	**Pb**	**23 37 04.6**	**-3.0**
	2.7nm,0.2s,SNR=50						
EMAL	**Malaga-Limoner**	**2.42**	**246**	Pn	**Pb**	**23 37 07.8**	**-1.4**
EMAL				Lg	Lg	23 37 39.6	
EMAL	**Malaga-Limoner**	**2.42**	**246**	*eP*	**Pb**	**23 37 07.8**	**-1.4**
EMAL				Lg	Lg	23 37 39.6	
EMAL				eS		23 37 39.6	
ESDC	**Sonseca Array**	**2.60**	**317**	Pn	**Pn**	**23 37 07.9**	**+0.1**
	2.3nm,0.2s,baz=129,slow=13,SNR=23						
ESDC				Pg	**Pg**	**23 37 14.5**	**-0.9**
	16nm,0.3s,baz=135,slow=17,SNR=43						
ESDC				Sn	**Sn**	**23 37 38.3**	**-1.2**
	6.0nm,0.2s,baz=134,slow=16,SNR=7.9						
ESDC				Lg	Lg	23 37 49.0	
	34nm,0.2s,baz=138,slow=29,SNR=7.9						
ESDC	**Sonseca Array**	**2.60**	**317**	Pn	**Pn**	**23 37 07.9**	**+0.1**
	2.3nm,0.2s,slow=13,SNR=23						
ESDC	**Sonseca Array**	**2.60**	**317**	Pg	**Pg**	**23 37 14.5**	**-0.9**
	16nm,0.3s,baz=135,slow=17,SNR=43						
ESDC				Sn	**Sn**	**23 37 38.3**	**-1.2**
	6.0nm,0.2s,SNR=7.9						
ESDC				Lg	Lg	23 37 49.0	
	34nm,0.2s,baz=138,SNR=7.9						
EIBI	**Ibiza**	**2.68**	**61**	Pn	**Pn**	**23 37 08.5**	**-0.3**
	13nm,0.2s,SNR=76						
EIBI				Sn	**Sn**	**23 37 39.0**	**-2.3**
	9.4nm,0.2s,SNR=5.0						
EIBI	**Ibiza**	**2.68**	**61**	Pn	**Pn**	**23 37 08.5**	**-0.3**
	13nm,0.2s,SNR=76						
EIBI				Sn	**Sn**	**23 37 39.0**	**-2.3**
	9.4nm,0.2s,SNR=5.0						
EMLI	**Melilla**	**2.68**	**203**	Pn	**Pn**	**23 37 08.6**	**-0.1**
	19nm,0.1s,SNR=7.9						
EMEL	**Melilla**	**2.68**	**203**	Pn	**Pn**	**23 37 08.6**	**-0.2**
	19nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**2.75**	**20**	Pn	**Pn**	**23 37 10.7**	**+0.9**
	0.6nm,0.1s,SNR=10						
EMOS				Pg	**Pg**	**23 37 18.1**	**0.0**
	2.1nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	23 37 54.5	
	11nm,0.3s,SNR=7.0						
EMOS	**Mosqueruela**	**2.75**	**20**	Pn	**Pn**	**23 37 10.7**	**+0.9**
	0.6nm,0.1s,SNR=10						
EMIJ	**Mijas**	**2.76**	**245**	Pn	**Pn**	**23 37 09.1**	**-0.8**
	0.6nm,0.2s,SNR=7.9						
EMIJ				Pg	**Pb**	**23 37 13.9**	**-1.0**
	2.0nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**2.76**	**245**	Pn	**Pn**	**23 37 09.1**	**-0.8**
	0.6nm,0.2s,SNR=7.9						
ETOR	**Torete**	**3.05**	**355**	Pn	Pb	23 37 15.7	-4.3
	4.2nm,0.1s,SNR=10.0						
ETOR				Pg	**Pg**	**23 37 24.0**	**+0.1**
	62nm,0.3s,SNR=7.9						
ETOR				Lg	Lg	23 38 06.5	
	150nm,0.5s,SNR=6.8						
ETOR	**Torete**	**3.05**	**355**	Pn	Pb	23 37 15.7	-4.3
	4.2nm,0.1s,SNR=10.0						
LIJA	**Lijar**	**3.10**	**255**	Pn	**Pb**	**23 37 19.0**	**-1.8**
LIJA				Lg	Lg	23 38 04.0	
LIJA	**Lijar**	**3.10**	**255**	*eP*	**Pb**	**23 37 19.0**	**-1.8**
LIJA				Lg	Lg	23 38 04.0	
GUD	**Guadarrama**	**3.45**	**327**	Pn	**Pn**	**23 37 20.9**	**+1.4**
	3.6nm,0.4s,SNR=9.9						
GUD				Pg	**Pg**	**23 37 30.9**	**-0.6**
	8.8nm,0.3s,SNR=7.9						
GUD				Lg	Lg	23 38 15.4	
	44nm,0.4s,SNR=9.2						
GUD	**Guadarrama**	**3.45**	**327**	Pn	**Pn**	**23 37 20.9**	**+1.4**
	3.6nm,0.4s,SNR=9.9						
ESPR	**Espera**	**3.46**	**256**	Pn	Pb	23 37 22.6	-4.2
	0.5nm,0.3s,SNR=4.0						
ESPR				Sn	**Sn**	**23 38 01.4**	**+0.9**
	8.8nm,0.2s,SNR=7.9						
ESPR				Lg	Lg	23 38 18.4	
	18nm,0.3s,SNR=7.9						
ESPR	**Espera**	**3.46**	**256**	Pn	Pb	23 37 22.6	-4.2
	0.5nm,0.3s,SNR=4.0						
ESPR				Sn	**Sn**	**23 38 01.4**	**+0.9**
	8.8nm,0.2s,SNR=7.9						
ESPR				Lg	Lg	23 38 18.4	
	18nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**3.53**	**26**	Pn	**Pn**	**23 37 22.1**	**+1.5**
	1.4nm,0.1s,SNR=11						
ERTA				Sn	**Sn**	**23 38 02.9**	**+0.4**
	3.3nm,0.2s,SNR=5.5						
ERTA				Lg	Lg	23 38 17.5	
	23nm,0.5s,SNR=5.0						
ERTA	**Horta de San J**	**3.53**	**26**	Pn	**Pn**	**23 37 22.1**	**+1.5**
	1.4nm,0.1s,SNR=11						
ERTA				Sn	**Sn**	**23 38 02.9**	**+0.4**
	3.3nm,0.2s,SNR=5.5						
ERTA				Lg	Lg	23 38 17.5	
	23nm,0.5s,SNR=5.0						
EMIN	**Mina Concepcio**	**3.96**	**271**	Pn	**Pn**	**23 37 26.7**	**+0.3**
	1.4nm,0.1s,SNR=25						
EMIN				Sn	**Sn**	**23 38 12.8**	**-0.1**
	1.9nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	23 38 32.8	
	116nm,1.1s,SNR=5.0						
EMIN	**Mina Concepcio**	**3.96**	**271**	Pn	**Pn**	**23 37 26.7**	**+0.3**
	1.4nm,0.1s,SNR=25						
EMIN				Sn	**Sn**	**23 38 12.8**	**-0.1**
	1.9nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	23 38 32.8	
	116nm,1.1s,SNR=5.0						
ESAC	**San Caprasio**	**4.04**	**13**	Pn	Pn	23 37 29.9	+2.3
	7.2nm,0.3s,SNR=5.2						
ESAC				Pg	**Pg**	**23 37 43.6**	**+0.6**
	13nm,0.2s,SNR=7.9						
ESAC				Lg	Lg	23 38 36.6	
	158nm,0.6s,SNR=5.0						
ESAC	**San Caprasio**	**4.04**	**13**	Pn	Pn	23 37 29.9	+2.3
	7.2nm,0.3s,SNR=5.2						
EPLA	**Plasencia**	**4.12**	**305**	Pn	**Pn**	**23 37 29.5**	**+0.8**
	0.5nm,0.1s,SNR=7.9						
EPLA				Pg	**Pg**	**23 37 43.3**	**-1.2**
	1.1nm,0.3s,SNR=7.9						
EPLA				Sn	**Sn**	**23 38 17.5**	**+0.5**
	8.8nm,0.3s,SNR=5.8						
EPLA				Lg	Lg	23 38 37.5	
	19nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	**4.12**	**305**	Pn	**Pn**	**23 37 29.5**	**+0.8**
	0.5nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.15**	**30**	Pn	**Pn**	**23 37 31.0**	**+1.9**
	1.2nm,0.2s,SNR=5.9						
EPOB				Sn	**Sn**	**23 38 18.2**	**+0.4**
	1.6nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**4.15**	**30**	Pn	**Pn**	**23 37 31.0**	**+1.9**
	1.2nm,0.2s,SNR=5.9						
EPOB				Sn	**Sn**	**23 38 18.2**	**+0.4**
	1.6nm,0.3s,SNR=7.9						
PBAR	**Barrancos**	**4.26**	**277**	*ePn*	**Pn**	**23 37 31.1**	**+0.7**
PBAR				*eSn*	**Sn**	**23 38 20.2**	**0.0**
PBAR				*eSg*	**Sg**	**23 38 42.1**	**-0.1**
PBAR				A	A	23 38 53.4	
	39nm,0.5s						
PBAR	**Barrancos**	**4.26**	**277**	Pn	**Pn**	**23 37 31.1**	**+0.7**
PBAR				Sn	**Sn**	**23 38 20.2**	**0.0**
PBAR				Lg	Lg	23 38 42.1	
	39nm,0.5s						
PBAR	**Barrancos**	**4.26**	**277**	*ePn*	**Pn**	**23 37 31.1**	**+0.7**
PBAR				*eSn*	**Sn**	**23 38 20.2**	**0.0**
PBAR				*eSg*	**Sg**	**23 38 42.1**	**-0.1**
	39nm,0.5s						
PBAR				Lg	Lg	23 38 42.1	
	39nm,0.5s						
EBAD	**Badajoz**	**4.31**	**285**	Pn	**Pn**	**23 37 31.5**	**+0.3**
	0.5nm,0.1s,SNR=17						
EBAD				Sn	**Sn**	**23 38 20.6**	**-1.0**
	7.8nm,0.2s,SNR=6.0						
EBAD				Lg	Lg	23 38 44.9	
	42nm,0.2s,SNR=5.0						
EBAD	**Badajoz**	**4.31**	**285**	Pn	**Pn**	**23 37 31.5**	**+0.3**
	0.5nm,0.1s,SNR=17						
EBAD				Sn	**Sn**	**23 38 20.6**	**-1.0**
	7.8nm,0.2s,SNR=6.0						
EBAD				Lg	Lg	23 38 44.9	
	42nm,0.2s,SNR=5.0						
EGRO	**El Granado**	**4.62**	**269**	Pn	**Pn**	**23 37 35.4**	**0.0**
	2.7nm,0.1s,SNR=10						
EGRO				Sn	**Sn**	**23 38 27.3**	**-1.8**
	3.0nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	23 38 53.2	
	11nm,0.3s,SNR=5.0						
EGRO	**El Granado**	**4.62**	**269**	Pn	**Pn**	**23 37 35.4**	**0.0**
	2.7nm,0.1s,SNR=10						
EGRO				Sn	**Sn**	**23 38 27.3**	**-1.8**
	3.0nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	23 38 53.2	
	11nm,0.3s,SNR=5.0						
PMRV	**Marv??o**	**4.77**	**292**	*ePn*	**Pn**	**23 37 38.3**	**+0.8**
PMRV				*eSn*	**Sn**	**23 38 33.2**	**+0.3**
PMRV				*eSg*	**Sg**	**23 39 01.2**	**+2.5**
PMRV				A	A	23 39 05.9	
	40nm,0.6s						
PMRV	**Marv??o**	**4.77**	**292**	Pn	**Pn**	**23 37 38.3**	**+0.8**
PMRV				Sn	**Sn**	**23 38 33.2**	**+0.3**
PMRV				Lg	Lg	23 39 01.2	
	40nm,0.6s						
PMRV	**Marv??o**	**4.77**	**292**	*ePn*	**Pn**	**23 37 38.3**	**+0.8**
PMRV				*eSn*	**Sn**	**23 38 33.2**	**+0.3**
PMRV				*eSg*	**Sg**	**23 39 01.2**	**+2.5**
	40nm,0.6s						
PMRV				Lg	Lg	23 39 01.2	
	40nm,0.6s						
PESTR	**Estremoz**	**4.78**	**285**	*ePn*	**Pn**	**23 37 38.6**	**+1.0**
PESTR				*eSn*	**Sn**	**23 38 32.7**	**-0.4**
PESTR				*eSg*	**Sg**	**23 38 59.1**	**+0.2**
PESTR				A	A	23 39 02.8	
	36nm,0.5s						
PESTR	**Estremoz**	**4.78**	**285**	Pn	**Pn**	**23 37 38.6**	**+1.0**
PESTR				Sn	**Sn**	**23 38 32.7**	**-0.4**
PESTR				Lg	Lg	23 38 59.1	
	36nm,0.5s						
PESTR	**Estremoz**	**4.78**	**285**	*ePn*	**Pn**	**23 37 38.6**	**+1.0**
PESTR				*eSn*	**Sn**	**23 38 32.7**	**-0.4**
PESTR				*eSg*	**Sg**	**23 38 59.1**	**+0.2**
	36nm,0.5s						
PESTR				Lg	Lg	23 38 59.1	
	36nm,0.5s						
EMIR	**Miracle**	**4.81**	**30**	Pn	**Pn**	**23 37 38.4**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**4.81**	**30**	Pn	**Pn**	**23 37 38.4**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
PVAQ	**Vaqueiros**	**4.81**	**267**	*ePn*	**Pn**	**23 37 38.4**	**+0.3**
PVAQ				*eSn*	**Sn**	**23 38 33.3**	**-0.7**
PVAQ				*eSg*	**Sg**	**23 39 00.5**	**+0.5**
PVAQ				A	A	23 39 03.7	
	16nm,0.7s						
PVAQ	**Vaqueiros**	**4.81**	**267**	Pn	**Pn**	**23 37 38.4**	**+0.3**
PVAQ				Sn	**Sn**	**23 38 33.3**	**-0.7**
PVAQ				Lg	Lg	23 39 00.5	
	16nm,0.7s						
PVAQ	**Vaqueiros**	**4.81**	**267**	*ePn*	**Pn**	**23 37 38.4**	**+0.3**
PVAQ				*eSn*	**Sn**	**23 38 33.3**	**-0.7**
PVAQ				*eSg*	**Sg**	**23 39 00.5**	**+0.5**
	16nm,0.7s						
PVAQ				Lg	Lg	23 39 00.5	
	16nm,0.7s						
PBEJ	**Beja**	**4.90**	**275**	*ePn*	**Pn**	**23 37 40.1**	**+0.8**
PBEJ				*eSn*	**Sn**	**23 38 35.7**	**-0.5**
PBEJ				*eSg*	**Sg**	**23 39 03.4**	**+0.5**
PBEJ				A	A	23 39 14.1	
	16nm,0.5s						
PBEJ	**Beja**	**4.90**	**275**	Pn	**Pn**	**23 37 40.1**	**+0.8**
PBEJ				Sn	**Sn**	**23 38 35.7**	**-0.5**
PBEJ				Lg	Lg	23 39 03.4	
	8.1nm,0.5s						
PBEJ	**Beja**	**4.90**	**275**	*ePn*	**Pn**	**23 37 40.1**	**+0.8**
PBEJ				*eSn*	**Sn**	**23 38 35.7**	**-0.5**
PBEJ				*eSg*	**Sg**	**23 39 03.4**	**+0.5**
	16nm,0.5s						
IUNC	**Unciti**	**4.97**	**1**	Pn	Pn	23 37 43.4	+3.1
	2.7nm,0.2s,SNR=7.9						
IUNC	**Unciti**	**4.97**	**1**	Pn	Pn	23 37 43.4	+3.1
	2.7nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**4.98**	**296**	*ePn*	**Pn**	**23 37 41.4**	**+1.1**
PCBR				*eSn*	**Sn**	**23 38 38.1**	**+0.1**
PCBR				A	A	23 39 17.1	
	31nm,0.7s						
PCBR	**Castelo Branco**	**4.98**	**296**	Pn	**Pn**	**23 37 41.4**	**+1.1**
PCBR				Sn	**Sn**	**23 38 38.1**	**+0.1**
	15nm,0.7s						
PCBR	**Castelo Branco**	**4.98**	**296**	*ePn*	**Pn**	**23 37 41.4**	**+1.1**
PCBR				*eSn*	**Sn**	**23 38 38.1**	**+0.1**
	31nm,0.7s						
EARA	**Aranguren**	**4.99**	**1**	Pn	Pn	23 37 43.2	+2.7
	13nm,0.3s,SNR=7.9						
EARA	**Aranguren**	**4.99**	**1**	Pn	Pn	23 37 43.2	+2.7
	13nm,0.3s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**5.00**	**266**	*ePn*	**Pn**	**23 37 41.5**	**+0.8**
PBDV				*eSn*	**Sn**	**23 38 38.2**	**-0.5**
PBDV				*eSg*	**Sg**	**23 39 07.0**	**+0.9**
PBDV				A	A	23 39 17.1	
	24nm,0.5s						
PBDV	**Barranco-do-Ve**	**5.00**	**266**	Pn	**Pn**	**23 37 41.5**	**+0.8**
PBDV				Sn	**Sn**	**23 38 38.2**	**-0.5**
PBDV				Lg	Lg	23 39 07.0	
	24nm,0.5s						
PBDV	**Barranco-do-Ve**	**5.00**	**266**	*ePn*	**Pn**	**23 37 41.5**	**+0.8**
PBDV				*eSn*	**Sn**	**23 38 38.2**	**-0.5**
PBDV				*eSg*	**Sg**	**23 39 07.0**	**+0.9**
	24nm,0.5s						
PBDV				Lg	Lg	23 39 07.0	
	24nm,0.5s						
IEPA	**Eparoz**	**5.00**	**3**	Pn	Pn	23 37 44.0	+3.2
	0.5nm,0.1s,SNR=7.9						
IEPA				Lg	Lg	23 39 07.2	
	28nm,0.6s,SNR=7.9						
IEPA	**Eparoz**	**5.00**	**3**	Pn	Pn	23 37 44.0	+3.2
	0.5nm,0.1s,SNR=7.9						
IEPA				Lg	Lg	23 39 07.2	
	28nm,0.6s,SNR=7.9						
PCVE	**Castro Verde**	**5.05**	**270**	*ePn*	**Pn**	**23 37 41.8**	**+0.5**
PCVE				*eSn*	**Sn**	**23 38 40.3**	**+0.5**
PCVE				*eSg*	**Sg**	**23 39 05.4**	**-2.2**
PCVE				A	A	23 39 18.4	
	18nm,0.7s						
**PC

IUSE	**Utxeti**	**5.16**	**1**	Pn	Pn	23 37 46.4	+3.4
	1.8nm,0.2s,SNR=7.9						
IUSE				Lg	Lg	23 39 14.2	
	2.2nm,0.3s,SNR=7.9						
ETSF	**Etsaut**	**5.18**	**9**	*e*Pn	**Pn**	**23 37 44.1**	**+0.8**
ETSF				*e*Sn	**Sn**	**23 38 42.3**	**-0.9**
ETSF				*e*Sg	**Sg**	**23 39 11.8**	**-0.1**
	8.7nm,0.6s						
ETSF	**Etsaut**	**5.18**	**9**	*e*Pn	**Pn**	**23 37 44.1**	**+0.8**
ETSF				*e*Sn	**Sn**	**23 38 42.3**	**-0.9**
ETSF				*e*Sg	**Sg**	**23 39 11.8**	**-0.1**
	4.3nm,0.6s						
MTE	**Manteigas**	**5.26**	**302**	*e*Pn	Pn	23 37 46.2	+1.9
MTE				*e*Sg	**Sg**	**23 39 13.2**	**-1.2**
MTE				A	A	23 39 32.7	
	44nm,0.6s						
MTE	**Manteigas**	**5.26**	**302**	Pn	Pn	23 37 46.2	+1.9
MTE				Lg	Lg	23 39 13.2	
	22nm,0.6s						
MTE	**Manteigas**	**5.26**	**302**	*e*Pn	Pn	23 37 46.2	+1.9
MTE				*e*Sg	**Sg**	**23 39 13.2**	**-1.2**
	44nm,0.6s						
PMTG	**Montargil**	**5.30**	**286**	*e*Pn	**Pn**	**23 37 46.0**	**+1.2**
PMTG				*e*Sn	**Sn**	**23 38 45.3**	**-0.7**
PMTG				*e*Sg	**Sg**	**23 39 16.8**	**+1.1**
PMTG				A	A	23 39 24.6	
	35nm,0.6s						
PMTG	**Montargil**	**5.30**	**286**	*e*Pn	**Pn**	**23 37 46.0**	**+1.2**
PMTG				*e*Sn	**Sn**	**23 38 45.3**	**-0.7**
PMTG				*e*Sg	**Sg**	**23 39 16.8**	**+1.1**
	35nm,0.6s						
MOE	**Montemor**	**5.31**	**280**	*e*Sn	**Sn**	**23 38 46.4**	**+0.1**
MOE				*e*Sg	**Sg**	**23 39 18.3**	**+2.2**
MOE	**Montemor**	**5.31**	**280**	Sn	**Sn**	**23 38 46.4**	**+0.1**
MOE				Lg	Lg	23 39 18.3	
MOE	**Montemor**	**5.31**	**280**	*e*Sn	**Sn**	**23 38 46.4**	**+0.1**
MOE				*e*Sg	**Sg**	**23 39 18.3**	**+2.2**
MOE				Lg	Lg	23 39 18.3	
SJPF	**Ste Jean**	**5.34**	**4**	*e*Pn	**Pn**	**23 37 47.0**	**+1.7**
SJPF				*e*Sg	**Sg**	**23 39 16.5**	**-0.3**
	10nm,0.6s						
SJPF	**Ste Jean**	**5.34**	**4**	*e*Pn	**Pn**	**23 37 47.0**	**+1.7**
SJPF				*e*Sg	**Sg**	**23 39 16.5**	**-0.3**
	5.1nm,0.6s						
MVO	**Moncorvo**	**5.35**	**311**	*e*Pn	**Pn**	**23 37 46.5**	**+1.0**
MVO				*e*Sn	**Sn**	**23 38 46.9**	**-0.3**
MVO				*e*Sg	**Sg**	**23 39 16.8**	**-0.3**
MVO				A	A	23 39 22.6	
	21nm,0.5s						
MVO	**Moncorvo**	**5.35**	**311**	Pn	**Pn**	**23 37 46.4**	**+0.9**
	2.2nm,0.1s,SNR=16						
MVO				Sn	**Sn**	**23 38 46.2**	**-1.0**
	5.7nm,0.3s,SNR=7.9						
MVO				Lg	Lg	23 39 16.8	
	60nm,0.6s,SNR=5.0						
MVO	**Moncorvo**	**5.35**	**311**	*e*Pn	**Pn**	**23 37 46.5**	**+1.0**
MVO				Sn	**Sn**	**23 38 46.2**	**-1.0**
	5.7nm,0.3s,SNR=7.9						
MVO				Lg	Lg	23 39 16.8	
	60nm,0.6s,SNR=5.0						
MVO				*e*Sg	**Sg**	**23 39 16.8**	**-0.3**
	21nm,0.5s						
ELIZ	**Elizondo**	**5.38**	**1**	Pn	Pn	23 37 48.6	+2.7
	0.3nm,0.1s,SNR=8.3						
ELIZ	**Elizondo**	**5.38**	**1**	Pn	Pn	23 37 48.6	+2.7
	0.3nm,0.1s,SNR=8.3						
PNCL	**Nicolau / Gran**	**5.43**	**276**	*e*Pn	**Pn**	**23 37 48.0**	**+1.5**
PNCL				*e*Sn	**Sn**	**23 38 48.5**	**-0.6**
PNCL				*e*Sg	**Sg**	**23 39 17.0**	**-2.7**
PNCL				A	A	23 39 23.5	
	7.2nm,0.5s						
CLLI	**Llivia**	**5.46**	**30**	Pn	Pn	23 37 49.8	+2.7
	0.4nm,0.3s,SNR=7.9						
CLLI	**Llivia**	**5.46**	**30**	Pn	Pn	23 37 49.8	+2.7
	0.4nm,0.3s,SNR=7.9						
EPF	**Esparros**	**5.47**	**16**	*e*Pn	Pn	23 37 49.2	+2.1
EPF				*e*Sg	**Sg**	**23 39 18.8**	**-2.1**
	11nm,0.5s						
EPF	**Esparros**	**5.47**	**16**	Pn	Pn	23 37 49.2	+2.1
EPF				Lg	Lg	23 39 18.8	
	2.7nm,0.5s						
MORF	**Marmelete**	**5.56**	**267**	*e*Sn	**Sn**	**23 38 53.0**	**+0.5**
MORF	**Marmelete**	**5.56**	**267**	Sn	**Sn**	**23 38 53.0**	**+0.5**
MORF	**Marmelete**	**5.56**	**267**	Sn	**Sn**	**23 38 53.0**	**+0.5**
PTOM	**Tomar**	**5.58**	**291**	*e*Pn	**Pn**	**23 37 50.1**	**+1.5**
PTOM				*e*Sn	**Sn**	**23 38 52.4**	**-0.4**
PTOM				*e*Sg	**Sg**	**23 39 26.5**	**+1.9**
PTOM				A	A	23 39 39.1	
	30nm,0.8s						
PTOM	**Tomar**	**5.58**	**291**	Pn	**Pn**	**23 37 50.1**	**+1.5**
PTOM				Sn	**Sn**	**23 38 52.4**	**-0.4**
PTOM				Lg	Lg	23 39 26.5	
	15nm,0.8s						
PTOM	**Tomar**	**5.58**	**291**	Pn	**Pn**	**23 37 50.1**	**+1.5**
PTOM				Sn	**Sn**	**23 38 52.4**	**-0.4**
PTOM				Lg	Lg	23 39 26.5	
	15nm,0.8s						
PTEO	**Sao Teotonio**	**5.60**	**270**	*e*Pn	**Pn**	**23 37 50.0**	**+1.1**
PTEO				*e*Sn	**Sn**	**23 38 52.9**	**-0.4**
PTEO				*e*Sg	**Sg**	**23 39 26.4**	**+1.2**
PTEO				A	A	23 39 34.5	
	15nm,0.7s						
PTEO	**Sao Teotonio**	**5.60**	**270**	Pn	**Pn**	**23 37 50.0**	**+1.1**
PTEO				Sn	**Sn**	**23 38 52.9**	**-0.4**
PTEO				Lg	Lg	23 39 26.4	
	7.3nm,0.7s						
PTEO	**Sao Teotonio**	**5.60**	**270**	Pn	**Pn**	**23 37 50.0**	**+1.1**
PTEO				Sn	**Sn**	**23 38 52.9**	**-0.4**
PTEO				Lg	Lg	23 39 26.4	
	7.3nm,0.7s						
PBRG	**Braganca**	**5.60**	**317**	*e*Pn	**Pn**	**23 37 50.1**	**+1.1**
PBRG				*e*Sn	**Sn**	**23 38 55.5**	**+2.1**
PBRG				*e*Sg	**Sg**	**23 39 23.1**	**-2.2**
PBRG				A	A	23 39 33.2	
	19nm,0.7s						
PBRG	**Braganca**	**5.60**	**317**	Pn	**Pn**	**23 37 50.1**	**+1.1**
PBRG				Sn	**Sn**	**23 38 55.5**	**+2.1**
PBRG				Lg	Lg	23 39 23.1	
	9.6nm,0.7s						
PBRG	**Braganca**	**5.60**	**317**	Pn	**Pn**	**23 37 50.1**	**+1.1**
PBRG				Sn	**Sn**	**23 38 55.5**	**+2.1**
PBRG				Lg	Lg	23 39 23.1	
	9.6nm,0.7s						
PVIS	**Viseu**	**5.65**	**303**	*e*Pn	**Pn**	**23 37 51.1**	**+1.5**
PVIS				*e*Sn	**Sn**	**23 38 54.1**	**-0.5**
PVIS				*e*Sg	**Sg**	**23 39 29.2**	**+2.4**
PVIS				A	A	23 39 35.6	
	18nm,0.5s						
PVIS	**Viseu**	**5.65**	**303**	Pn	**Pn**	**23 37 51.1**	**+1.5**
PVIS				Sn	**Sn**	**23 38 54.1**	**-0.5**
PVIS				Lg	Lg	23 39 29.2	
	9.1nm,0.5s						
PVIS	**Viseu**	**5.65**	**303**	Pn	**Pn**	**23 37 51.1**	**+1.5**
PVIS				Sn	**Sn**	**23 38 54.1**	**-0.5**
PVIS				Lg	Lg	23 39 29.2	
	9.1nm,0.5s						
ECAL	**Calabor**	**5.70**	**318**	Pn	**Pn**	**23 37 51.3**	**+1.0**
	2.6nm,0.4s,SNR=5.8						
ECAL				Sn	**Sn**	**23 38 55.6**	**-0.2**
	0.6nm,0.1s,SNR=7.9						
ECAL				Lg	Lg	23 39 26.9	
	41nm,0.5s,SNR=5.0						
ECAL	**Calabor**	**5.70**	**318**	Pn	**Pn**	**23 37 51.3**	**+1.0**
	2.6nm,0.4s,SNR=5.8						
ECAL				Sn	**Sn**	**23 38 55.6**	**-0.2**
	0.6nm,0.1s,SNR=7.9						
ECAL				Lg	Lg	23 39 26.9	
	41nm,0.5s,SNR=5.0						
PFVI	**Vila Bisbo**	**5.73**	**266**	*e*Pn	**Pn**	**23 37 51.4**	**+0.8**
PFVI				*e*Sn	**Sn**	**23 38 55.8**	**-0.7**
PFVI	**Vila Bisbo**	**5.73**	**266**	Pn	**Pn**	**23 37 51.9**	**+1.3**
	1.0nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**23 38 55.7**	**-0.7**
	1.5nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**5.73**	**266**	Pn	**Pn**	**23 37 51.9**	**+1.3**
	1.0nm,0.1s,SNR=7.9						
PFVI				Sn	**Sn**	**23 38 55.7**	**-0.7**
	1.5nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**5.83**	**35**	Sn	**Sn**	**23 39 02.8**	**+3.8**
	0.9nm,0.3s,SNR=7.9						
EJON	**La Jonquera**	**5.83**	**35**	Sn	**Sn**	**23 39 02.8**	**+3.8**
	0.9nm,0.3s,SNR=7.9						
PVRL	**Vila Real**	**5.83**	**309**	*e*Pn	**Pn**	**23 37 52.8**	**+0.7**
PVRL				*e*Sn	**Sn**	**23 38 59.7**	**+0.6**
PVRL				A	A	23 39 48.8	
	19nm,0.6s						
PVRL	**Vila Real**	**5.83**	**309**	Pn	**Pn**	**23 37 52.8**	**+0.7**
PVRL				Sn	**Sn**	**23 38 59.7**	**+0.6**
	9.6nm,0.6s						
PVRL	**Vila Real**	**5.83**	**309**	Pn	**Pn**	**23 37 52.8**	**+0.7**
PVRL				Sn	**Sn**	**23 38 59.7**	**+0.6**
	9.6nm,0.6s						
POLO	**Lamas de Olo**	**5.94**	**309**	*e*Pn	**Pn**	**23 37 55.3**	**+1.7**
POLO				*e*Sn	**Sn**	**23 39 02.1**	**+0.4**
POLO				*e*Sg	**Sg**	**23 39 37.9**	**+1.9**
POLO				A	A	23 39 53.2	
	7.3nm,0.6s						
PMAFR	**Mafra**	**6.09**	**283**	*e*Pn	**Pn**	**23 37 56.8**	**+1.1**
PMAFR				*e*Sn	**Sn**	**23 39 05.4**	**-0.1**
PMAFR				*e*Sg	**Sg**	**23 39 41.9**	**+0.9**
PMAFR				A	A	23 39 56.2	
	31nm,0.5s						
PMAFR	**Mafra**	**6.09**	**283**	Pn	**Pn**	**23 37 56.8**	**+1.1**
	5.3nm,0.2s,SNR=7.9						
PMAFR				Sn	**Sn**	**23 39 04.0**	**-1.5**
	7.4nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	23 39 41.6	
	16nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**6.09**	**283**	Pn	**Pn**	**23 37 56.8**	**+1.1**
	5.3nm,0.2s,SNR=7.9						
PMAFR				Sn	**Sn**	**23 39 04.0**	**-1.5**
	7.4nm,0.2s,SNR=7.9						
PMAFR				Lg	Lg	23 39 41.6	
	16nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**6.14**	**335**	Pn	Pn	23 37 58.1	+1.8
	0.4nm,0.1s,SNR=18						
EARI				Sn	**Sn**	**23 39 03.9**	**-2.7**
	0.3nm,0.2s,SNR=7.9						
EARI				Lg	Lg	23 39 43.2	
	4.7nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**6.14**	**335**	Pn	Pn	23 37 58.1	+1.8
	0.4nm,0.1s,SNR=18						
EARI				Sn	**Sn**	**23 39 03.9**	**-2.7**
	0.3nm,0.2s,SNR=7.9						
EARI				Lg	Lg	23 39 43.2	
	4.7nm,0.4s,SNR=7.9						
PCAB	**Cabril**	**6.27**	**311**	*e*Pn	**Pn**	**23 37 59.6**	**+1.4**
PCAB				*e*Sn	**Sn**	**23 39 09.0**	**-1.0**
PCAB				A	A	23 39 56.6	
	15nm,0.7s						
PCAB	**Cabril**	**6.27**	**311**	Pn	**Pn**	**23 37 59.6**	**+1.4**
PCAB				Sn	**Sn**	**23 39 09.0**	**-1.0**
	7.7nm,0.7s						
PCAB	**Cabril**	**6.27**	**311**	Pn	**Pn**	**23 37 59.6**	**+1.4**
PCAB				Sn	**Sn**	**23 39 09.0**	**-1.0**
	7.7nm,0.7s						
PGAV	**Gavieira, Arco**	**6.57**	**312**	*e*Pn	**Pn**	**23 38 03.7**	**+1.4**
PGAV				*e*Sn	**Sn**	**23 39 16.2**	**-1.2**
PGAV				A	A	23 40 02.6	
	19nm,0.6s						
LFF	**La Frestale**	**7.38**	**13**	*e*Pn	**Pn**	**23 38 14.2**	**+0.9**
LFF	**La Frestale**	**7.38**	**13**	Pn	**Pn**	**23 38 14.2**	**+0.9**
CAF	**Calviac**	**7.67**	**20**	*e*Pn	**Pn**	**23 38 17.7**	**+0.3**
CAF	**Calviac**	**7.67**	**20**	Pn	**Pn**	**23 38 17.7**	**+0.3**
RJF	**Les Rejaudoux**	**7.89**	**17**	*e*Pn	**Pn**	**23 38 21.3**	**+1.0**
RJF	**Les Rejaudoux**	**7.89**	**17**	Pn	**Pn**	**23 38 21.3**	**+1.0**
PGF	**Pioggiola**	**9.46**	**56**	*e*Pn	**Pn**	**23 38 43.2**	**+1.3**
PGF	**Pioggiola**	**9.46**	**56**	Pn	**Pn**	**23 38 43.2**	**+1.3**
QUIF	**Quistinic**	**10.19**	**354**	*e*Pn	**Pn**	**23 38 52.9**	**+1.1**
QUIF	**Quistinic**	**10.19**	**354**	Pn	**Pn**	**23 38 52.9**	**+1.1**

NIED ***18*** *23:43:00,30˚.90N×141˚.90E,h5km,Mw3.6 Best double couple: M0 3.11000×10^14 NP1:φs=220.00000°,δ76.00000°, λ=-72.00000°. NP2:φs=346.00000°,δ23.00000°, λ=-141.00000°.*

IDC 18 23:43:03.2±3.2,30˚.45N×141˚.33E,h0km,mb3.8/3, mb1 3.9/5,mb1mx3.5/25,mbtmpg3.7/5,ML3.3/2,Error ellipse: s-maj=177.3km s-min=18.2km az=77.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**2.97**	**334**	Pn	Pn	23 43 52.4	+0.8
	6.0nm,0.3s,baz=178,slow=18,SNR=3.2						
JHJ				Sn	Sn	23 44 26.9	-1.0
	11nm,0.3s,baz=90,slow=20,SNR=3.9						
MJAR	**Matsushiro Arr**	**6.61**	**338**	Pn	Pn	23 44 42.6	+1.0
	0.9nm,0.3s,baz=150,slow=9.9,SNR=4.6						
MJAR				Sn	Sn	23 45 58.6	+0.8
	0.3nm,0.3s,baz=256,slow=22,SNR=4.0						
WRA	**Warramunga Arr**	**50.55**	**189**	P	P	23 52 03.5	-0.1
	0.7nm,0.3s,baz=6.1,slow=7.5,SNR=27						
ASAR	**Alice Springs**	**54.28**	**188**	P	P	23 52 31.2	0.0
	0.4nm,0.4s,baz=4.3,slow=5.7,SNR=6.5						
FINES	**FINESS Array B**	**74.62**	**33**	P	P	23 54 43.3	-0.6
	0.6nm,0.5s,baz=56,slow=7.1,SNR=5.8						

IDC 18 23:51:44.9±0.8,40˚.07N×113˚.24E,h0km,mb3.7/8, mb1 4.0/9,mb1mx3.7/26,mbtmpg3.7/9,ML3.5/1,Error ellipse: s-maj=25.4km s-min=15.9km az=66.0, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**9.20**	**330**	Pn	Pn	23 53 57.6	-1.3
	0.5nm,0.3s,baz=150,slow=13,SNR=18						
SONM				Sn	Sn	23 55 45.0	+1.7
	0.2nm,0.3s,baz=153,slow=16,SNR=5.5						
SONM				Lg	Lg	23 56 35.7	
	0.4nm,0.3s,baz=141,slow=26,SNR=6.5						
MKAR	**Makanchi Array**	**23.36**	**297**	P	P	23 56 54.4	-0.5
	1.4nm,1.0s,baz=99,slow=6.5,SNR=6.6						
ZALV	**Zalesovo Beam**	**23.64**	**315**	P	P	23 56 58.6	+1.0
	1.7nm,0.9s,baz=111,slow=8.1,SNR=9.7						
CMAR	**Chiang Mai Arr**	**24.82**	**214**	P	P	23 57 08.2	-0.7
	1.1nm,0.4s,baz=17,slow=9.0,SNR=8.4						
KURBB	**Kurchatov Arra**	**26.35**	**305**	P	P	23 57 23.0	+0.5
	1.1nm,0.8s,baz=100,slow=10,SNR=10						
ILAR	**Eielson Array**	**58.47**	**30**	P	P	00 01 41.8	-0.5
	0.7nm,0.7s,baz=292,slow=5.8,SNR=8.9						
WRA	**Warramunga Arr**	**62.86**	**158**	P	P	00 02 12.5	-0.2
	1.4nm,1.1s,baz=344,slow=6.9,SNR=5.1						
ASAR	**Alice Springs**	**66.27**	**159**	P	P	00 02 35.3	+0.4
	0.4nm,0.6s,baz=347,slow=6.7,SNR=3.4						
YKA	**Yellowknife Ar**	**70.81**	**21**	P	P	00 03 02.9	+0.1
	1.8nm,0.7s,baz=323,slow=5.7,SNR=28						

MEX 18 23:52:17.3±0.8,16˚.34N×95˚.68W,h87km±10km,MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.70**	**216**	*e*P	Pn	23 52 32.1	-1.5
HUIG				*i* S	Sn	23 52 44.4	-1.4
VHO	**Vista Hermosa**	**1.24**	**306**	*i* P	Pn	23 52 38.8	-1.2
VHO				*i* S	Sn	23 52 55.3	-1.8
PNIG	**Pinotepa**	**2.35**	**272**	*i* P	Pn	23 52 53.5	-0.6
PNIG				*i* S	Sn	23 53 19.9	-2.5
PCIG		**2.45**	**105**	*i* P	Pn	23 52 54.5	-0.9
PCIG				*i* S	Sn	23 53 22.7	-1.9
UTMO	**Huajuapan**	**2.51**	**306**	*i* P	Pn	23 52 54.8	-1.7
UTMO				*i* S	Sn	23 53 25.6	-1.0

ISCJB ***19*** *00:15:03.0±0.5,29˚.04N±0˚.05×140˚.7E±0˚.1,h90km, mb3.7/14,Error ellipse: s-maj=17.8km s-min=4.2km az=161.8*

IDC ***19*** *00:15:03.6±2.6,29˚.00N×140˚.67E,h78km±23km,mb3.5/14, mb1 3.7/16,mb1mx3.6/27,mbtmpg3.5/16,Error ellipse: s-maj=26.7km s-min=14.2km az=93.0*

JMA ***19*** *00:15:04.0±0.1,29˚.34N×142˚.07E,h88km,M3.9*

ISC 19 00:15:04.7±0.6,29˚.03N±0˚.06×140˚.7E±0˚.2,h90km,n27, σ1ŝ19˚/32,mb3.7/14,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.31**	**146**	P	**Pn**	**00 15 39.7**	**-1.3**
CBIJ				*e*S	**Sn**	**00 16 07.5**	**-1.3**
JHHJ	**Haha-jima-NKT**	**2.71**	**151**	P	**Pn**	**00 15 46.2**	**-0.1**
JHHJ				*e*S	**Sn**	**00 16 18.1**	**-0.2**
JHJ2	**Mitsune**	**4.15**	**349**	P	**Pn**	**00 16 07.3**	**+1.6**
JHJ	**Hachijo jima 2**	**4.16**	**349**	P	**Pn**	**00 16 05.1**	**-0.8**
	4.3nm,0.3s,baz=280,slow=6.0,SNR=2.3						
JHJ				S	**Sn**	**00 16 52.9**	**-0.5**
	18nm,0.3s,baz=76,slow=22,SNR=4.7						
BSO4	**Boso 4**	**5.95**	**357**	*e*S	**Sn**	**00 17 35.7**	**-1.2**
JOD2	**Odawara 2**	**6.37**	**348**	P	**Pn**	**00 16 38.4**	**+2.4**
JRY	**Ryogami san**	**7.14**	**348**	*e*S	**Sn**	**00 18 04.9**	**-1.1**
JAG	**Ashikaga**	**7.46**	**352**	P	**Pn**	**00 16 50.8**	**+0.1**
JAG				*e*S	**Sn**	**00 18 09.8**	**-3.8**
JHO	**Hitachi**	**7.56**	**359**	P	**Pn**	**00 16 51.6**	**-0.6**
MJAR	**Matsushiro Arr**	**7.79**	**345**	P	**Pn**	**00 16 54.3**	**-0.9**
	0.3nm,0.3s,baz=165,slow=15,SNR=3.0						
WRA	**Warramunga Arr**	**49.07**	**188**	P	**P**	**00 23 42.3**	**-0.7**
	1.2nm,0.4s,baz=5.9,slow=7.8,SNR=49						
WRA				PcP	**PcP**	**00 25 05.6**	**+0.3**
	0.2nm,0.5s,baz=3.2,slow=4.2,SNR=4.5						
KURBB	**Kurchatov Arra**	**50.78**	**313**	P	**P**	**00 23 54.7**	**-0.9**
	0.3nm,0.3s,baz=91,slow=8.8,SNR=3.8						
ASAR	**Alice Springs**	**52.80**	**188**	P	**P**	**00 24 10.8**	**0.0**
	0.3nm,0.4s,baz=2.9,slow=5.6,SNR=7.6						
ILAR	**Eielson Array**	**56.65**	**29**	P	**P**	**00 24 38.2**	**0.0**
	0.3nm,0.6s,baz=260,slow=5.2,SNR=3.3						
STKA	**Stephens Creek**	**60.58**	**179**	P	**P**	**00 25 05.3**	**-0.4**
	0.3nm,0.3s,baz=336,slow=12,SNR=3.1						
INK	**Inuvik**	**61.82**	**25**	P	**P**	**00 25 13.7**	**0.0**
	1.2nm,0.9s,baz=202,slow=9.5,SNR=3.6						
YKA	**Yellowknife Ar**	**71.06**	**28**	P	**P**	**00 26 12.3**	**-0.4**
	0.2nm,0.6s,baz=295,slow=5.8,SNR=3.1						
ARCES	**ARCESS Array B**	**71.30**	**340**	P	**P**	**00 26 15.0**	**+0.9**
	4.8nm,1.0s,baz=32,slow=7.1,SNR=3.9						
FINES	**FINESS Array B**	**75.65**	**333**	P	**P**	**00 26 39.9**	**+0.2**
	1.0nm,0.4s,baz=61,slow=4.8,SNR=17						
NVAR	**Mina Array Bea**	**80.33**	**51**	P	**P**	**00 27 06.5**	**+0.2**
	0.6nm,0.6s,baz=289,slow=8.5,SNR=2.5						
NOA	**NORSAR Array B**	**81.34**	**338**	P	**P**	**00 27 11.1**	**0.0**
	0.4nm,0.5s,baz=49,slow=4.8,SNR=3.4						
PDAR	**Pinedale Array**	**83.73**	**44**	P	**P**	**00 27 26.1**	**+2.0**
	0.5nm,0.9s,baz=277,slow=2.5,SNR=3.7						
BRTR	**Keskin Array B**	**83.76**	**312**	P	**P**	**00 27 25.4**	**+1.2**
	0.3nm,0.6s,baz=76,slow=6.1,SNR=3.5						
TXAR	**Lajitas Array**	**95.46**	**52**	P	**P**	**00 28 20.3**	**+0.6**
	0.2nm,0.5s,baz=339,slow=4.3,SNR=3.0						
TORD	**Torodi Ar. Bea**	**122.35**	**311**	PKP	**PKPdf**	**00 33 49.4**	**-0.6**
	0.2nm,0.9s,baz=109,slow=0.6,SNR=4.4						
LPAZ	**La Paz**	**150.59**	**71**	PKPbc	**PKPbc**	**00 34 48.3**	**+0.7**
	0.9nm,0.9s,baz=329,slow=3.4,SNR=3.6						
PLCA	**Paso Flores**	**151.95**	**123**	PKPbc	**PKPbc**	**00 34 49.9**	**+0.5**
	1.8nm,0.9s,baz=268,slow=5.6,SNR=3.8						

IDC ***19*** *00:17:26.2±1.1,56˚.62N×152˚.35W,h0km,mb3.9/14, mb1 4.0/17,mb1mx3.9/29,mbtmpg3.8/17,ML3.1/3,MS2.9/2, Ms1 2.9/2,ms1mx2.5/46,Error ellipse: s-maj=25.4km s-min=17.9km az=24.0*

ISCJB ***19*** *00:17:31.1±0.8,56˚.91N±0˚.06×152˚.08W±0˚.06,h36km±7km, mb3.8/14,Error ellipse: s-maj=9.9km s-min=5.6km az=173.8*

NEIC ***19*** *00:17:34.4,57˚.14N×152˚.33W,h13km,ML3.2(AEIC),After AEIC.*

ISC 19 00:17:30.7±1.9,56˚.95N±0˚.07×152˚.17W±0˚.05, h16km±10km,n72,σ1ŝ36/66,mb4.0/14,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHAK	**Old Harbor**	**0.67**	**295**	P	**Pg**	**00 17 44.1**	**+0.3**
OHAK				S	**Sb**	**00 17 53.1**	**+0.1**
KDAK	**Kodiak Island**	**0.87**	**345**	P	**Pg**	**00 17 46.1**	**-1.5**
KDAK				S	**Sb**	**00 17 57.4**	**-1.4**
KDAK	**Kodiak Island**	**0.87**	**345**	Pn	**Pn**	**00 17 50.0**	**+1.8**
	23nm,0.3s,baz=187,slow=7.4,SNR=143						
KDAK				Sn	Sn	00 18 05.5	+4.9
	100nm,0.3s,baz=242,slow=20,SNR=9.1						
KABR	**Katmai Barrier**	**1.92**	**309**	P	**Pn**	**00 18 02.9**	**+0.1**
KABR				S	**Sn**	**00 18 23.8**	**-2.8**
CAHL	**Cahill**	**2.02**	**305**	P	**Pn**	**00 18 03.9**	**-0.3**
KAKN	**Katmai Knife C**	**2.06**	**312**	P	**Pn**	**00 18 05.7**	**+1.0**
KABU	**Katmai Buttres**	**2.14**	**310**	P	**Pn**	**00 18 06.2**	**+0.8**
KELA	**Mount Kelaz**	**2.43**	**310**	P	**Pn**	**00 18 10.5**	**+0.7**
OPT	**Oil Point**	**2.77**	**349**	P	**Pn**	**00 18 14.0**	**-0.4**
BRLK	**Bradley Lake**	**2.91**	**13**	P	**Pn**	**00 18 17.9**	**+1.6**
BRLK				S	**Sn**	**00 18 48.4**	**-2.5**
ANPK	**Aniakchak Peak**	**3.27**	**271**	P	**Pn**	**00 18 24.2**	**+3.0**
SEW	**Seward**	**3.48**	**23**	P	**Pn**	**00 18 24.8**	**+0.8**
SEW				S	**Sn**	**00 19 04.9**	**+0.1**
RSO	**Redoubt South**	**3.54**	**355**	*e*Pn	**Pn**	**00 18 27.4**	**+2.2**
RSO				*e*Sn	**Sn**	**00 19 08.7**	**+1.9**
DFR	**Drift River**	**3.67**	**356**	P	**Pn**	**00 18 28.8**	**+2.0**
SPU	**Mount Spurr**	**4.25**	**1**	P	**Pn**	**00 18 35.7**	**+1.0**
CKL	**Chakachamna La**	**4.27**	**359**	P	**Pn**	**00 18 35.0**	**-0.1**
PMR	**Palmer**	**4.92**	**17**	*e*Pn	**Pn**	**00 18 45.1**	**+1.3**
EYAK	**Cordova Ski Ar**	**4.92**	**40**	P	**Pn**	**00 18 44.0**

comp=Z,0.3nm,0.5s,baz=359,slow=5.3,SNR=4.3
ESDC Sonseca Array 80.07 24 P **P 00 29 39.9 +0.5**
ESDC Sonseca Array 80.07 24 P **P 00 29 39.9 +0.5**
comp=Z,0.6nm,0.7s,baz=349,slow=4.9,SNR=4.4
BRTR Keskin Array B 83.57 355 P P 00 29 56.5 -1.4
BRTR Keskin Array B 83.57 355 P P 00 29 56.5 -1.4
comp=Z,0.6nm,0.8s,baz=5.7,slow=1.2,SNR=4.0
CMAR Chiang Mai Arr 84.56 296 P P 00 30 01.1 -1.9
CMAR Chiang Mai Arr 84.56 296 P P 00 30 01.2 -1.9
comp=Z,0.5nm,0.3s,baz=8.9,slow=6.4,SNR=4.1

*KRSC **19** 00:37:11.1±2.0,53.°14N×154.°85E,h551km±51km,ML4.4*
*MOS **19** 00:37:13.9±1.4,53.°36N×154.°03E,h487km,mb4.2/5,Error ellipse: s-maj=15.6km s-min=9.1km az=63.1*
*ISCJB **19** 00:37:14.4±0.3,53.°36N±0.°06×154.°08E±0.°10, h489km±4km,mb3.3/13,Error ellipse: s-maj=11.6km s-min=6.1km az=135.3*
*IDC **19** 00:37:15.5±0.7,53.°37N×153.°87E,h492km±10km, mb2.9/13,mb1 3.2/17,mb1mx2.9/33,mbtmp2.9/17,Error ellipse: s-maj=20.7km s-min=8.7km az=149.0*
ISC 19 00:37:15.1±0.6,**53.°35N**±0.°08×**154.°22E**±0.°07,**h490**km±7km, **n68,**σ1**°72/83,mb3.4/13,1C-3D,Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APC	**Apacha**	**1.82**	**102**	*i* P	**P**	**00 38 19.1**	**+0.7**
APC				*i* S	**S**	**00 39 08.2**	**-1.7**
MIPR	**Malaya Ipel'ka**	**1.88**	**124**	P	**P**	**00 38 20.5**	**+1.8**
PETK	**Petropavlovsk-**	**2.11**	**95**	PN	**P**	**00 38 21.0**	**+1.2**
PETK				S	**S**	**00 39 16.0**	**+3.5**
PETK				pmax	pmax		
comp=Z,2.0nm,0.3s							
PETK	**Petropavlovsk-**	**2.11**	**95**	P	**P**	**00 38 21.0**	**+1.2**
comp=Z,2.2nm,0.3s,baz=227,slow=7.8,SNR=37							
PETK				S	**S**	**00 39 16.0**	**+3.5**
baz=316,slow=21,SNR=2.2							
GNL	**Ganaly**	**2.25**	**80**	*i* P	**P**	**00 38 22.2**	**+1.5**
GNL				*i* S	**S**	**00 39 13.4**	**-0.8**
ASAK	**Asacha**	**2.43**	**112**	*eP*	**P**	**00 38 23.3**	**+1.5**
MTVR	**Mutnovka**	**2.55**	**108**	P	**P**	**00 38 23.5**	**+1.0**
MTVR				*i* S	**S**	**00 39 16.4**	**-1.0**
KOK	**Koryaka**	**2.65**	**89**	*eP*	**P**	**00 38 24.4**	**+1.3**
PET	**Petropavlovsk**	**2.69**	**95**	PN	**P**	**00 38 23.7**	**+0.6**
PET	**Petropavlovsk**	**2.69**	**95**	P	**P**	**00 38 23.7**	**+0.6**
AVH	**Avacha**	**2.71**	**90**	*eP*	**P**	**00 38 24.7**	**+1.3**
KRER	**Koryakskii**	**2.72**	**89**	*eP*	**P**	**00 38 25.2**	**+1.6**
RUS	**Russkaya**	**2.76**	**108**	PN	**P**	**00 38 23.9**	**+0.3**
RUS				S	**S**	**00 39 16.2**	**-3.2**
RUS	**Russkaya**	**2.76**	**108**	*i* P	**P**	**00 38 23.9**	**+0.3**
RUS				*i* S	**S**	**00 39 16.2**	**-3.2**
UGLR	**Uglovaya**	**2.77**	**91**	*i* P	**P**	**00 38 25.4**	**+1.6**
SDLR	**Sedlovina**	**2.80**	**90**	*eP*	**P**	**00 38 25.2**	**+1.2**
NLC	**Nalytchevo**	**3.09**	**91**	PN	**P**	**00 38 26.3**	**+0.5**
NLC				S	**S**	**00 39 21.0**	**-2.4**
NLC	**Nalytchevo**	**3.09**	**91**	P	**P**	**00 38 26.3**	**+0.5**
NLC				*i* S	**S**	**00 39 21.0**	**-2.4**
SPN	**Mys Shipunski**	**3.50**	**92**	PN	**P**	**00 38 28.5**	**-0.3**
SPN				S	**S**	**00 39 24.3**	**-4.6**
SPN	**Mys Shipunski**	**3.50**	**92**	*eP*	**P**	**00 38 28.5**	**-0.3**
SPN				*i* S	**S**	**00 39 24.3**	**-4.6**
ESO	**Esso**	**3.67**	**43**	PN	**P**	**00 38 31.7**	**+1.6**
ESO	**Esso**	**3.67**	**43**	*eP*	**P**	**00 38 31.7**	**+1.6**
TUMR	**Tumrok**	**3.98**	**58**	*i* P	**P**	**00 38 34.4**	**+1.7**
KMNR	**Kamenistaya**	**4.25**	**53**	P	**P**	**00 38 33.5**	**-1.4**
SRDR	**Sredinnyy**	**4.36**	**45**	*i* P	**P**	**00 38 36.9**	**+1.2**
BZGR	**Bezymyannyi-Gr**	**4.57**	**53**	P	**P**	**00 38 36.7**	**-1.0**
MKZ	**Mys Kozlova**	**4.60**	**72**	PN	**P**	**00 38 36.6**	**-1.2**
MKZ				S	S	00 39 38.7	-6.7
MKZ	**Mys Kozlova**	**4.60**	**72**	*eP*	**P**	**00 38 36.6**	**-1.2**
MKZ				*i* S	S	00 39 38.7	-6.7
ZLN	**Zelenaya**	**4.67**	**52**	P	**P**	**00 38 38.4**	**-0.1**
BDR	**Baidarnaya**	**5.16**	**49**	*eP*	**P**	**00 38 44.0**	**+1.1**
SRKR	**Sorokina**	**5.19**	**48**	P	**P**	**00 38 43.3**	**+0.1**
SMKR	**Semkarok**	**5.29**	**49**	P	**P**	**00 38 43.5**	**-0.6**
KBG	**Krutoberegovo**	**5.71**	**56**	PN	**P**	**00 38 45.8**	**-2.2**
KBG	**Krutoberegovo**	**5.71**	**56**	P	**P**	**00 38 45.8**	**-2.2**
KBG				*i* S	S	00 39 56.4	-7.6
PALN	**Palana**	**6.59**	**27**	P	**P**	**00 38 58.0**	**+1.5**
BKI	**Bering**	**7.13**	**70**	PN	**P**	**00 39 00.5**	**-1.6**
BKI	**Bering**	**7.13**	**70**	P	**P**	**00 39 00.5**	**-1.6**
TILK	**Tilichiki**	**9.64**	**38**	P	**P**	**00 39 27.8**	**-0.4**
SEY	**Seymchan**	**9.66**	**355**⇓	*e*PN	**P**	**00 39 29.5**	**+1.1**
YSS	**Yuzh-Sakhalins**	**9.74**	**234**	*i* P	**P**	**00 39 28.7**	**-0.9**
FX1	**Attu Island--F**	**11.40**	**85**	P	**P**	**00 39 49.5**	**+2.3**
comp=Z,2.3nm,0.3s,baz=304,slow=12,SNR=7.0							
ASAJ	**Asahikawa**	**11.99**	**224**	P	**P**	**00 39 52.5**	**-1.1**
comp=Z,1.3nm,0.3s,baz=63,slow=16,SNR=2.6							
HABR	**Khabarovsk**	**13.03**	**256**	PN	**P**	**00 40 02.6**	**-1.9**
HABR				*e*S	**S**	**00 42 23.2**	**-1.0**
HABR				MLR	MLR		
comp=Z,102nm,14.0s							
ERM	**Erimo**	**13.55**	**218***c*	*i* PN	**P**	**00 40 08.3**	**-1.8**
YAK	**Yakutsk**	**15.64**	**313**⇓	*eP*	**P**	**00 40 29.6**	**-2.2**
BILL	**Bilibino**	**15.82**	**17**⇓	*eP*	**P**	**00 40 33.0**	**-0.7**
BILL				*i* S	**S**	**00 43 17.2**	**-0.4**
BILL				pmax	pmax		
comp=Z,6.0nm,0.7s							
USRK	**Ussuriysk Arra**	**17.21**	**247**	P	**P**	**00 40 46.5**	**-1.8**
comp=Z,0.5nm,0.3s,baz=56,slow=9.8,SNR=6.0							
MJA0	**Matsu Arr-Jizo**	**20.17**	**220**	*eP*	**P**	**00 41 16.4**	**+0.5**
MJA0				pmax	pmax		
comp=Z,19nm,0.7s							
MAJO	**Matsushiro**	**20.19**	**220**	*i* P	**P**	**00 41 16.6**	**+0.6**
MAT	**Matsushiro**	**20.19**	**220**	P	**P**	**00 41 16.1**	**+0.1**
MJAR	**Matsushiro Arr**	**20.19**	**220**	P	**P**	**00 41 14.9**	**-1.0**
comp=Z,19nm,0.7s,baz=12,slow=9.0,SNR=45							
TIXI	**Tiksi**	**21.45**	**338**	*i* P	**P**	**00 41 29.4**	**+2.5**
TIXI				pmax	pmax		
comp=Z,1.0nm,0.6s							
KSRS	**Korea Array**	**24.16**	**239**	P	**P**	**00 41 50.6**	**-1.0**
comp=Z,3.2nm,0.8s,baz=42,slow=9.4,SNR=12							
COLA	**College**	**30.73**	**45**	*i* P	**P**	**00 42 50.0**	**+1.2**
ILAR	**Eielson Array**	**31.15**	**45**	P	**P**	**00 42 53.3**	**+0.8**
comp=Z,1.6nm,0.7s,baz=279,slow=7.8,SNR=28							
INK	**Inuvik**	**35.82**	**37**	P	**P**	**00 43 32.9**	**+1.0**
comp=Z,1.7nm,0.4s,baz=304,slow=7.4,SNR=17							
KURK	**Kurchatov**	**44.55**	**299**	P	**P**	**00 44 42.1**	**-0.1**
KURK				*PP	**PcP**	**00 46 16.5**	**+1.7**
KURBB	**Kurchatov Arra**	**44.65**	**299**	P	**P**	**00 44 42.1**	**-0.8**
comp=Z,0.2nm,0.5s,baz=64,slow=7.6,SNR=3.1							
KURBB				pP	**PcP**	**00 46 16.5**	**+1.4**
comp=Z,0.9nm,0.8s,baz=57,slow=8.4,SNR=7.4							
MKAR	**Makanchi Array**	**44.82**	**292**	P	**P**	**00 44 43.1**	**-1.3**
MKAR	**Makanchi Array**	**44.82**	**292**	P	**P**	**00 44 43.1**	**-1.3**
comp=Z,0.2nm,0.4s,baz=60,slow=5.8,SNR=4.4							
YKA	**Yellowknife Ar**	**45.32**	**41**	P	**P**	**00 44 48.6**	**+0.7**
comp=Z,1.0nm,0.6s,baz=302,slow=7.3,SNR=22							
BVAR	**Borovoye Array**	**47.41**	**305**	P	**P**	**00 45 01.0**	**-3.0**
BVAR	**Borovoye Array**	**47.41**	**305**	P	**P**	**00 45 01.0**	**-3.0**
comp=Z,0.2nm,0.4s,baz=52,slow=7.8,SNR=2.5							
CMAR	**Chiang Mai Arr**	**54.83**	**253**	P	**P**	**00 45 58.1**	**-0.2**
comp=Z,1.1nm,0.6s,baz=26,slow=7.4,SNR=6.8							
NVAR	**Mina Array Bea**	**58.93**	**66**	P	**P**	**00 46 28.7**	**+2.0**
comp=Z,0.8nm,0.6s,baz=305,slow=6.5,SNR=3.8							
PDAR	**Pinedale Array**	**60.42**	**57**	P	**P**	**00 46 37.7**	**+1.1**
comp=Z,0.3nm,0.6s,baz=324,slow=6.6,SNR=2.9							
TXAR	**Lajitas Array**	**73.73**	**63**	P	**P**	**00 47 60.0**	**+1.3**
comp=Z,0.5nm,0.6s,baz=280,slow=4.7,SNR=6.0							
WRA	**Warramunga Arr**	**74.99**	**199**	P	**P**	**00 48 04.6**	**-1.0**
comp=Z,0.3nm,0.7s,baz=11,slow=6.1,SNR=3.3							

WEL 19 00:48:03.7±0.4,**38.°16S**×**176.°39E,h118**km±3km,**ML3.6/9, 4C-2D,Error ellipse: s-maj=2.2km s-min=2.1km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TARZ	**Mount Tarawera**	**0.12**	**131**	PN	Pn	00 48 20.1	0.0
RRRZ	**Republican Roa**	**0.20**	**152**	⇑PN	Pn	00 48 20.1	-0.1
RRRZ				SN	Sn	00 48 24.8	-7.7
PRRZ	**Plateau Road**	**0.34**	**180**	⇑PN	Pn	00 48 20.5	-0.1
ALRZ	**Allen Road**	**0.41**	**186**	PN	Pn	00 48 20.9	-0.1
URZ	**Urewera**	**0.57**	**100**	⇑PN	Pn	00 48 21.6	-0.3
URZ				SN	Sn	00 48 35.1	-0.5
TOZ	**Tahuroa Road**	**0.82**	**301**	⇓PN	Pn	00 48 24.4	+0.5
MWZ	**Matawai**	**0.91**	**102**	⇑PN	Pn	00 48 24.7	-0.1
RAHZ	**Arahi**	**0.93**	**145**	PN	Pn	00 48 25.2	+0.2
RAHZ				SN	Sn	00 48 41.5	+0.5
NMHZ	**Naumai**	**0.99**	**161**	PN	Pn	00 48 26.1	+0.5
BKZ	**Black Stump Fm**	**1.01**	**176**	PN	Pn	00 48 25.5	-0.3
FWVZ	**Far West T-bar**	**1.28**	**211**	PN	Pn	00 48 29.0	+0.2
FWVZ				SN	Sn	00 48 48.9	+1.1
MCHZ	**McNeill Hill**	**1.30**	**170**	PN	Pn	00 48 29.0	+0.2
TRVZ	**Turoa**	**1.32**	**210**	PN	Pn	00 48 29.6	+0.3
KNZ	**Kokohu**	**1.32**	**131**	PN	Pn	00 48 28.8	-0.1
MOVZ	**Moawhango**	**1.34**	**202**	PN	Pn	00 48 29.0	-0.3
BHHZ	**Black Hill Sta**	**1.35**	**191**	PN	Pn	00 48 28.9	-0.5
BHHZ				SN	Sn	00 48 47.4	-1.6
PRGZ	**Paritu Road**	**1.40**	**124**	⇓PN	Pn	00 48 29.8	-0.1
CNGZ	**Carnagh Statio**	**1.46**	**103**	PN	Pn	00 48 31.3	+0.7
PUZ	**Puketiti**	**1.47**	**87**	PN	Pn	00 48 30.6	-0.2
MHGZ	**Mahia Peninsul**	**1.55**	**130**	PN	Pn	00 48 31.5	0.0
CKHZ	**Cape Kidnapper**	**1.59**	**161**	PN	Pn	00 48 31.8	-0.2
MXZ	**Matakaoa Point**	**1.63**	**69**	PN	Pn	00 48 33.2	+0.7
KAHZ	**Kahuranaki**	**1.68**	**167**	PN	Pn	00 48 32.8	-0.4
PNHZ	**Pukenui**	**1.76**	**185**	PN	Pn	00 48 33.0	-1.2
WPHZ	**Waipukurau**	**1.91**	**179**	PN	Pn	00 48 35.5	-0.4
PXZ	**Pawanui**	**1.91**	**169**	PN	Pn	00 48 34.8	-1.1
TSZ	**Takapari Road**	**1.93**	**190**	PN	Pn	00 48 34.6	-1.6
WAZ	**Wanganui**	**1.94**	**214**	PN	Pn	00 48 35.9	-0.4
PRHZ	**Porangahau**	**2.11**	**175**	PN	Pn	00 48 37.4	-1.1
POWZ	**Post Office Ro**	**2.28**	**192**	PN	Pn	00 48 40.0	-0.6
BFZ	**Birch Farm**	**2.52**	**183**	PN	Pn	00 48 42.1	-1.6
MRZ	**Mangatainoka R**	**2.58**	**194**	PN	Pn	00 48 42.2	-2.3
HOWZ	**Holdsworth Sta**	**2.82**	**194**	PN	Pn	00 48 44.8	-2.8
KIW	**Kapiti Island**	**2.93**	**203**	PN	Pn	00 48 46.6	-2.5
TMWZ	**Te Maipa**	**2.97**	**187**	PN	Pn	00 48 47.1	-2.5
TRWZ	**Traveller**	**3.28**	**189**	PN	Pn	00 48 50.8	-2.8
MSWZ	**Moikau Station**	**3.37**	**195**	PN	Pn	00 48 51.2	-3.6
TCW	**Tory Channel**	**3.46**	**208**	PN	Pn	00 48 52.4	-3.6
TUWZ	**Tuamarina**	**3.77**	**209**	PN	Pn	00 48 56.4	-3.7
THZ	**Tophouse**	**4.49**	**216**	PN	Pn	00 49 07.2	-2.6
KHZ	**Kahutara**	**4.78**	**206**	PN	Pn	00 49 09.9	-3.7
LTZ	**Lake Taylor**	**5.59**	**213**	PN	Pn	00 49 20.2	-4.4
MQZ	**McQueen's Vall**	**6.22**	**206**	PN	Pn	00 49 26.8	-6.3

*IDC **19** 00:54:56.4±1.8,38.°69N×75.°06E,h0km,mb3.7/5, mb1 3.7/8,mb1mx3.4/30,mbtmp3.5/8,ML3.0/3,Error ellipse: s-maj=37.0km s-min=18.1km az=116.0*
ISC 19 00:55:00.3±1.6,**38.°9N**±0.°1×**75.°0E**±0.°1,**h10**km,**n9,** σ1**°77/11,mb3.4/5,1C-2D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**3.77**	**355**	Pn	**Pn**	**00 56 01.4**	**+2.8**
0.7nm,0.3s,baz=154,slow=11,SNR=9.0							
AAK				Pg	**Pb**	**00 56 08.7**	**+1.7**
2.0nm,0.3s,baz=143,slow=8.8,SNR=23							
AAK				Sn	**Sb**	**00 56 49.6**	**-3.1**
1.1nm,0.3s,baz=348,slow=13,SNR=4.1							
AAK				Lg	Lg	00 56 58.3	
1.4nm,0.3s,baz=234,slow=17,SNR=4.5							
KK31	**Karatay Array**	**5.40**	**323**	⇑Pn	**Pn**	**00 56 21.6**	**+0.7**
0.1nm,0.2s,baz=128,slow=13,SNR=17							
KK31				⇓Sn	**Sn**	**00 57 23.5**	**+0.3**
5.1nm,0.9s							
KK31				⇓Lg	Lg	00 57 43.8	
3.2nm,0.6s,baz=125,slow=27,SNR=4.1							
MKAR	**Makanchi Array**	**9.56**	**32**	Pn	**Pn**	**00 57 19.0**	**+1.0**
0.1nm,0.3s,baz=210,slow=17,SNR=3.3							
ZALV	**Zalesovo Beam**	**16.50**	**21**	Pn	**Pn**	**00 58 50.7**	**-1.1**
0.1nm,0.3s,baz=198,slow=14,SNR=2.7							
BRTR	**Keskin Array B**	**31.80**	**285**	P	**P**	**01 01 24.9**	**-0.1**
0.4nm,0.7s,baz=78,slow=9.3,SNR=3.3							
FINES	**FINESS Array B**	**37.36**	**323**	P	**P**	**01 02 12.7**	**0.0**
0.5nm,0.7s,baz=119,slow=11,SNR=3.5							
ARCES	**ARCESS Array B**	**40.22**	**336**	P	**P**	**01 02 36.1**	**-0.5**
5.3nm,1.1s,baz=107,slow=8.0,SNR=3.0							
TORD	**Torodi Ar. Bea**	**68.89**	**270**	P	P	01 06 02.9	-2.7
0.4nm,0.4s,baz=48,slow=5.5,SNR=17							
YKA	**Yellowknife Ar**	**78.68**	**5**	P	**P**	**01 07 00.9**	**-1.2**
0.2nm,0.5s,baz=346,slow=5.4,SNR=7.1							

GUC 19 01:37:11.1±0.6,**21.°94S**×**67.°78W,h225**km±23km,**ML3.6, 7C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**1.37**	**276**	⇑*i* P	Pn	01 37 47.2	+1.0
PB09				*i* S	S	01 38 16.9	+3.4
PB09				AML	AML	01 38 22.4	
comp=E,226nm,0.2s							
PB04	**Plate Boundary**	**1.62**	**258**	⇑*i* P	Pn	01 37 55.6	+7.6
PB04				*i* S	S	01 38 29.3	+13
PB04				AML	AML	01 38 32.8	
comp=N,135nm,0.2s							
PB01	**Plate Boundary**	**1.82**	**299**	⇑*i* P	Pn	01 37 51.1	+1.1
PB01				*i* S	S	01 38 22.0	+1.8
PB01				AML	AML	01 38 23.3	
comp=N,327nm,0.5s							
HMBC	**Humberstone**	**2.57**	**310**	⇑*i* P	Pn	01 37 58.7	+1.1
HMBC				*i* S	S	01 38 35.3	+1.6
HMBC				AML	AML	01 38 35.9	
comp=N,144nm,0.2s							
ANCH	**Antofagasta**	**2.98**	**234**	⇑*i* P	Pn	01 38 04.0	+2.1
PSGC	**Pisagua**	**3.20**	**316**	⇑*i* P	Pn	01 38 05.5	+0.9
PSGC				*i* S	S	01 38 47.5	+1.1
PSGC				AML	AML	01 38 51.5	
comp=E,32nm,0.8s							
MNMC	**Minimini**	**3.27**	**328**	⇑*i* P	Pn	01 38 07.1	+1.5
MNMC				*i* S	S	01 38 49.9	+1.6
MNMC				AML	AML	01 38 51.9	
comp=N,139nm,0.2s							

*IDC **19** 01:39:06.3±0.4,60.°67S×25.°50W,h0km,mb4.5/16, mb1 4.5/16,mb1mx4.5/19,mbtmp4.5/16,MS3.9/16, Ms1 3.9/16,ms1mx3.8/26,Error ellipse: s-maj=17.1km s-min=14.4km az=56.0*
*ISCJB **19** 01:39:07.3±0.4,60.°65S±0.°08×25.°6W±0.°2,h19km, mb4.4/20,MS3.9/15,Error ellipse: s-maj=12.3km s-min=9.9km az=32.5*
*NEIC **19** 01:39:08.2±5.0,60.°69S×25.°53W,h13km±30km,mb4.7/8, Error ellipse: s-maj=9.6km s-min=7.8km az=216.0*
ISC 19 01:39:09.3±0.4,**60.°63S**±0.°09×**25.°41W**±0.°09,**h19**km,**n81,** σ0**°93/78,mb4.5/20,MS3.9/15,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**14.22**	**150**	*e*Pn	Pn	01 42 24.1	-5.2
29nm,0.5s							
SNAA				Sn	Sn	01 44 48.3	-18
SNAA	**Sanae**	**14.22**	**150**	Pn	Pn	01 42 24.4	-4.9
2.7nm,0.3s,baz=312,slow=14,SNR=257							
SNAA				Sn	Sn	01 44 48.3	-18
0.9nm,0.3s,baz=7.0,slow=23,SNR=9.7							
SNAA				LR	LR	01 46 40.7	
comp=Z,161nm,21.0s,baz=321,slow=32							
PMSA	**Palmer Station**	**17.99**	**240**	P	**P**	**01 43 21.6**	**+3.3**
PMSA	**Palmer Station**	**17.99**	**240**	P	**P**	**01 43 21.6**	**+3.3**
0.7nm,0.3s,baz=97,slow=15,SNR=5.2							
EFI	**East Falkland**	**20.08**	**282**	*eP*	**P**	**01 43 40.3**	**-0.9**
329nm,1.9s							
USHA	**Ushuaia**	**23.34**	**265**	P	**P**	**01 44 16.8**	**+0.8**
USHA	**Ushuaia**	**23.34**	**265**	P	**P**	**01 44 16.8**	**+0.8**
9.8nm,0.9s,baz=115,slow=8.7,SNR=5.6							
USHA				LR	LR	01 51 34.4	
comp=Z,281nm,20.3s,baz=137,slow=32							
QSPA	**South Pole Qui**	**29.61**	**180**	P	**P**	**01 45 13.4**	**+0.5**
QSPA	**South Pole Qui**	**29.61**	**180**	P	**P**	**01 45 13.4**	**+0.5**
6.7nm,0.6s,baz=208,slow=5.8,SNR=47							
QSPA				LR	LR	01 56 37.3	
comp=Z,192nm,19.8s,baz=7.2,slow=36							
TRQA	**Tornquist**	**32.15**	**298**	*eP*	**P**	**01 45 34.5**	**-0.9**
2.6nm,0.6s							
PLCA	**Paso Flores**	**33.92**	**285**	*eP*	**P**	**01 45 49.9**	**-1.1**
3.9nm,0.9s							
PLCA	**Paso Flores**	**33.92**	**285**	P	**P**	**01 45 50.7**	**-0.2**
2.9nm,0.7s,baz=144,slow=10,SNR=7.0							
PLCA				LR	LR	01 57 06.7	
comp=Z,182nm,21.3s,baz=289,slow=32							
MAW	**Mawson**	**35.97**	**139**	P	**P**	**01 46 08.0**	**-0.1**
MAW	**Mawson**	**35.97**	**139**	P	**P**	**01 46 08.0**	**-0.1**
5.3nm,0.8s,baz=240,slow=9.7,SNR=5.5							
MAW				LR	LR	01 58 28.5	
comp=Z,243nm,19.6s,baz=53,slow=32							
CPUP	**Villa Florida**	**40.59**	**313**	P	**P**	**01 46 46.6**	**-0.8**
CPUP	**Villa Florida**	**40.59**	**313**	P	**P**	**01 46 46.6**	**-0.8**
2.0nm,0.4s,baz=127,slow=9.6,SNR=13							
CPUP				LR	LR	02 01 16.7	
comp=Z,159nm,21.7s,baz=157,slow=33							
SUR	**Sutherland**	**41.21**	**68**	P	**P**	**01 46 53.4**	**+0.7**
SUR	**Sutherland**	**41.21**	**68**	P	**P**	**01 46 53.4**	**+0.7**
15nm,1.2s,baz=41,slow=9.5,SNR=2.7							
VNDA	**Vanda**	**42.03**	**182**	*eP*	**P**	**01 46 55.6**	**-3.1**
5.5nm,1.0s							
VNDA	**Vanda**	**42.03**	**182**	P	**P**	**01 46 58.2**	**-0.4**
3.5nm,0.7s,baz=201,slow=8.4,SNR=21							
VNDA				LR	LR	02 01 35.0	
comp=Z,93nm,21.8s,baz=167,slow=32							
BOSA	**Boshof**	**46.43**	**70**	P	**P**	**01 47 35.0**	**+0.4**
BOSA	**Boshof**	**46.43**	**70**	P	**P**	**01 47 35.0**	**+0.4**
9.2nm,1.0s,baz=205,slow=8.0,SNR=12							
BOSA				LR	LR	02 01 57.2	
comp=Z,95nm,19.7s,baz=345,slow=30							
BDFB	**Brasilia**	**47.81**	**330**	P	**P**	**01 47 45.0**	**-0.4**
BDFB	**Brasilia**	**47.81**	**330**	P	**P**	**01 47 45.0**	**-0.4**
4.1nm,0.7s,baz=165,slow=4.2,SNR=4.8							
BDFB				LR	LR	02 03 37.7	
comp=Z,133nm,21.6s,baz=36,slow=31							
CASY	**Casey**	**49.28**	**158**	*eP*	**P**	**01 47 56.4**	**+0.3**
6.4nm,0.8s							
LBTB	**Lobatse**	**49.66**	**68**	*eP*	**P**	**01 47 59.6**	**0.0**
24nm,1.3s							
TSUM	**Tsumeb**	**51.30**	**56**	P	**P**	**01 48 12.7**	**+0.7**
TSUM	**Tsumeb**	**51.30**	**56**	P	**P**	**01 48 12.7**	**+0.7**
1.7nm,0.7s,baz=180,slow=10,SNR=3.6							
LPAZ	**La Paz**	**53.82**	**306**	P	**P**	**01 48 31.1**	**-0.2**
LPAZ	**La Paz**	**53.82**	**306**	P	**P**	**01 48 31.1**	**-0.2**
3.4nm,0.6s,baz=152,slow=5.5,SNR=15							
LPAZ				LR	LR	02 09 07.4	
comp=Z,108nm,22.0s,baz=61,slow=34							
SAML	**Samuel**	**58.71**	**315**	*eP*	**P**	**01 49 04.0**	**-1.5**
3.8nm,0.8s							
DBIC	**Dimbokro**	**69.01**	**22**	*eP*	**P**	**01 50 14.1**	**+0.9**
3.3nm,0.7s							
DBIC	**Dimbokro**	**69.01**	**22**	P	**P**	**01 50 14.3**	**+1.1**
5.5nm,0.8s,baz=176,slow=11,SNR=7.8							
ROSC	**El Rosal**	**75.55**	**309**	LR	LR	02 23 51.5	
comp=Z,65nm,21.4s,baz=29,slow=36							
KMBO	**Kilima Mbogo**	**75.91**	**66**	LR	LR	02 21 24.5	
comp=Z,44nm,18.1s,baz=102,slow=33							
TOA0	**Torodi Ar. Sit**	**76.65**	**27**	*eP*	**P**	**01 50 59.7**	**+1.2**
TORD	**Torodi Ar. Bea**	**76.65**	**27**	P	**P**	**01 50 59.8**	**+1.3**
TORD	**Torodi Ar. Bea**	**76.65**	**27**	P	**P**	**01 50 59.8**	**+1.3**
3.4nm,0.4s,baz=199,slow=5.9,SNR=50							
URZ	**Urewera**	**79.75**	**198**	LR	LR	02 23 56.1	
comp=Z,142nm,19.0s,baz=202,slow=34							
STKA	**Stephens Creek**	**87.22**	**169**	P	**P**	**01 51 53.8**	**-0.3**
STKA	**Stephens Creek**	**87.22**	**169**	P	**P**	**01 51 53.8**	**-0.3**
3.2nm,1.0s,baz=165,slow=6.8,SNR=6.5							
STKA				LR	LR	02 28 49.1	
comp=Z,107nm,18.3s,baz=26,slow=34							
ASAR	**Alice Springs**	**94.33**	**161**	P	**P**	**01 52 26.7**	**-0.7**
ASAR	**Alice Springs**	**94.33**	**161**	P	**P**	**01 52 26.7**	**-0.7**
1.9nm,0.8s,baz=188,slow=4.2,SNR=17							
WRA	**Warramunga Arr**	**98.06**	**161**	P	**P**	**01 52 43.0**	**-1.3**
WRA	**Warramunga Arr**	**98.06**	**161**	P	**P**	**01 52 43.0**	**-1.3**
0.7nm,1.0s,baz=191,slow=4.0,SNR=4.9							
FITZ	**Fitzroy Crossi**	**98.14**	**152**	LR	LR	02 33 06.0	
comp=Z,56nm,18.4s,baz=282,slow=33							
CTA	**Charters Tower**	**99.29**	**172**	LR	LR	02 37 10.3	
comp=Z,97nm,19.5s,baz=326,slow=35							
CMAR	**Chiang Mai Arr**	**122.53**	**112**	PKP	**PKPdf**	**01 58 03.1**	**0.0**

0.2nm,0.3s,baz=162,slow=8.7,SNR=3.0
AKTO Aktyubinsk 16.48 322 ⇑Pn **Pn 01 52 02.4 +0.1**
0.1nm,0.5s
AKTO ⇓Sn Sn 01 54 57.3 -8.2
0.1nm,0.8s
AKTO Aktyubinsk 16.48 322 P **Pn 01 52 03.6 +1.3**
0.2nm,0.3s,baz=123,slow=10,SNR=5.2
AKTO S Sn 01 54 57.8 -7.7
0.2nm,0.3s,baz=330,slow=14,SNR=3.2
ZALV Zalesovo Beam 17.30 22 P **P 01 52 10.3 -1.5**
0.6nm,0.3s,baz=209,slow=11,SNR=12
SONM Songino Array 25.43 58 P **P 01 53 34.4 -0.3**
0.8nm,0.7s,baz=250,slow=8.1,SNR=5.6
FINES FINESS Array B 37.24 324 P **P 01 55 18.2 +0.5**
0.4nm,0.3s,baz=115,slow=9.4,SNR=6.7
ARCES ARCESS Array B 40.31 336 P **P 01 55 43.5 +0.2**
4.0nm,0.9s,baz=113,slow=9.4,SNR=13
TORD Torodi Ar. Bea 68.00 270 P **P 01 59 04.1 -0.6**
0.5nm,0.9s,baz=51,slow=5.7,SNR=4.0
YKA Yellowknife Ar 79.25 4 P **P 02 00 08.8 -0.9**
0.2nm,0.3s,baz=348,slow=5.2,SNR=4.8

*ISCJB **19** 01:51:30.8±0.4,25°.29N±0'.05×37°.68E±0'.04,h10km, mb4.1/34,MS3.4/4,Error ellipse: s-maj=6.7km s-min=4.9km az=170.6*
*IDC **19** 01:51:31.4±0.7,25°.28N×37°.80E,h0km,mb4.0/22, mb1 4.0/28,mb1mx4.0/37,mbtmp3.9/28,ML3.2/4,MS3.1/9, Ms1 3.1/9,ms1mx2.8/40,Error ellipse: s-maj=15.2km s-min=13.9km az=141.0*
*CSEM **19** 01:51:31.1±0.2,25°.24N×37°.64E,h2km,mb4.2/14,Error ellipse: s-maj=7.9km s-min=5.9km az=165.0*
*NEIC **19** 01:51:33.0±0.4,25°.31N×37°.73E,h10km,mb4.3/9,Error ellipse: s-maj=7.4km s-min=7.1km az=54.0*
*MOS **19** 01:51:34.7±1.1,25°.35N×37°.67E,h33km,mb4.4/20,Error ellipse: s-maj=13.1km s-min=6.1km az=86.7*
*HLW **19** 01:51:38.7,25°.41N×37°.06E,h10km±31km,Md0.0,Ml3.5*
ISC 19 01:51:32.3±0.5,25°.13N±0'.05×37°.75E±0'.05,h10km,n198, σ1§40/213,**mb4.2**/34,**MS3.3**/4,**16C-3D,Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HAGS	**Hagol**	**2.62**	**254**	P		**Pn**	**01 52 13.0**	**-1.7**
	baz=242							
HAGS	**Hagol**	**2.62**	**254**	P		**Pn**	**01 52 13.0**	**-1.7**
EMRS	**Mersa Alam**	**2.65**	**268**	P		**Pn**	**01 52 12.5**	**-2.5**
HADB		**2.84**	**275**	P		**Pn**	**01 52 15.3**	**-2.4**
	baz=269							
HADB		**2.84**	**275**	P		**Pn**	**01 52 15.3**	**-2.4**
HQSR		**3.10**	**282**	P		**Pn**	**01 52 18.6**	**-2.7**
	baz=279							
HQSR		**3.10**	**282**	P		**Pn**	**01 52 18.6**	**-2.7**
HSFG		**3.73**	**293**	P		Pn	01 52 26.7	-3.2
	baz=293							
HSFG		**3.73**	**293**	P		Pn	01 52 26.7	-3.2
HEDF	**Idfu**	**4.14**	**270**	P		**Pn**	**01 52 33.7**	**-1.9**
	baz=266							
HEDF	**Idfu**	**4.14**	**270**	P		**Pn**	**01 52 33.7**	**-1.9**
HHRG	**Al Ghardaqah**	**4.29**	**300**	P		Pn	01 52 33.9	-3.8
	baz=301							
HHRG				S		Sn	01 53 14.0	-14
	baz=301							
HHRG	**Al Ghardaqah**	**4.29**	**300**	P		Pn	01 52 33.9	-3.8
HHRG				S		Sn	01 53 14.0	-14
HDHB	**Dhahab**	**4.54**	**323**	P		**Pn**	**01 52 38.9**	**-2.1**
	baz=328							
HDHB	**Dhahab**	**4.54**	**323**	P		**Pn**	**01 52 38.9**	**-2.1**
HKAT	**Jabal Katrina**	**4.76**	**316**	P		**Pn**	**01 52 41.6**	**-2.7**
	baz=320							
HKAT	**Jabal Katrina**	**4.76**	**316**	P		**Pn**	**01 52 41.6**	**-2.7**
NGMR	**NGMR**	**5.13**	**253**	AMP			01 54 00.0	
	comp=N,110μm,0.8s,logA/T=5.1,baz=247							
EIL	**Elat**	**5.16**	**332**	Pn		**Pn**	**01 52 47.1**	**-2.5**
EIL				Pg		**Pb**	**01 53 03.2**	**+0.6**
EIL	**Elat**	**5.16**	**332**	Pn		**Pn**	**01 52 47.1**	**-2.5**
	comp=N,0.5nm,0.3s,baz=177,slow=14,SNR=4.3							
EIL				Pg		**Pb**	**01 53 03.2**	**+0.6**
	comp=N,5.4nm,0.3s,baz=160,slow=7.3,SNR=23							
EIL				Lg		Lg	01 54 05.6	
	comp=N,18nm,0.3s,baz=167,slow=14,SNR=17							
EIL				LR		LR	01 54 59.3	
	comp=N,91nm,21.5s,baz=98,slow=41							
EIL	**Elat**	**5.16**	**332**	Pn		**Pn**	**01 52 47.1**	**-2.5**
EIL	**Elat**	**5.16**	**332**	Pg		**Pb**	**01 53 03.2**	**+0.6**
EIL				Sn		**Sb**	**01 54 05.1**	**+0.4**
MBRI	**Mt Berech**	**5.28**	**332**	Pn		Pn	01 52 47.5	-3.9
MBRI				Sn		**Sb**	**01 54 10.0**	**+1.7**
GRB	**Gharib**	**5.43**	**306**	P		**Pn**	**01 52 50.8**	**-2.6**
	baz=308							
GRB	**Gharib**	**5.43**	**306**	P		**Pn**	**01 52 50.8**	**-2.6**
HRFI	**Mount Harif**	**5.45**	**334**	Pn		**Pn**	**01 52 51.2**	**-2.3**
HRFI	**Mount Harif**	**5.45**	**334**	Pn		**Pn**	**01 52 51.2**	**-2.3**
KRMI	**Paran Flat**	**5.64**	**332**	Pn		Pn	01 52 52.9	-3.4
KRMI				S		**Sb**	**01 54 18.1**	**-0.6**
KRMI	**Paran Flat**	**5.64**	**332**	Pn		Pn	01 52 52.9	-3.4
KRMI				Sn		**Sb**	**01 54 18.1**	**-0.6**
PRNI	**Paran**	**5.74**	**336**	P		**Pn**	**01 52 55.2**	**-2.4**
PRNI	**Paran**	**5.74**	**336**	Pn		**Pn**	**01 52 55.2**	**-2.4**
PRNI				S		**Sb**	**01 54 23.3**	**+1.9**
PRNI	**Paran**	**5.74**	**336**	Pn		**Pn**	**01 52 55.2**	**-2.4**
PRNI				Sn		**Sb**	**01 54 23.3**	**+1.9**
HNKL	**Nakhl**	**5.83**	**326**	P		**Pn**	**01 52 57.5**	**-1.4**
	baz=330							
HNKL	**Nakhl**	**5.83**	**326**	P		**Pn**	**01 52 57.5**	**-1.4**
ZFRI	**Zfri**	**5.86**	**338**	Pn		**Pn**	**01 52 59.0**	**-0.2**
ZFRI				S		**Sb**	**01 54 28.0**	**+3.2**
ZFRI	**Zfri**	**5.86**	**338**	Pn		**Pn**	**01 52 59.0**	**-0.2**
ZFRI				Sn		**Sb**	**01 54 28.0**	**+3.2**
RMNI	**Mount Ramon**	**6.05**	**335**	Sn		**Sb**	**01 54 30.6**	**+0.2**
KZIT	**Kziot**	**6.47**	**333**	Pn		**Pn**	**01 53 04.7**	**-2.9**
KZIT				Sn		**Sb**	**01 54 39.0**	**-3.4**
RTMI	**Retamim**	**6.49**	**336**	Pn		**Pn**	**01 53 05.6**	**-2.2**
RTMI				S		**Sb**	**01 54 41.7**	**-1.2**
RTMI	**Retamim**	**6.49**	**336**	Pn		**Pn**	**01 53 05.6**	**-2.2**
RTMI				Sn		**Sb**	**01 54 41.7**	**-1.2**
DSI	**Dead Sea**	**6.75**	**342**	Pn		**Pn**	**01 53 11.4**	**0.0**
DSI				S		**Sb**	**01 54 52.3**	**+2.0**
DSI	**Dead Sea**	**6.75**	**342**	Pn		**Pn**	**01 53 11.4**	**0.0**
DSI				Sn		**Sb**	**01 54 52.3**	**+2.0**
AMAG	**Maghara**	**6.80**	**325**	P		**Pn**	**01 53 10.4**	**-1.8**
	baz=328							
AMAG	**Maghara**	**6.80**	**325**	P		**Pn**	**01 53 10.4**	**-1.8**
ASF	**Jabal al Asfar**	**7.05**	**354**	Pn		**Pn**	**01 53 13.3**	**-2.4**
ASF				Pg		**Pb**	**01 53 36.9**	**+2.0**
ASF	**Jabal al Asfar**	**7.05**	**354**	Pn		**Pn**	**01 53 13.3**	**-2.4**
	comp=N,0.6nm,0.3s,baz=40,slow=7.7,SNR=9.7							
ASF				Pg		**Pb**	**01 53 36.9**	**+2.0**
	comp=N,2.0nm,0.3s,baz=49,slow=2.8,SNR=9.6							
ASF				Lg		Lg	01 55 09.8	
	comp=N,5.0nm,0.3s,baz=164,slow=23,SNR=10							
ASF				LR		LR	01 56 18.3	
	comp=N,76nm,19.0s,baz=226,slow=42							
HMDT	**Nahal Hemdat**	**7.36**	**345**	Pn		**Pn**	**01 53 19.0**	**-0.8**
HMDT	**Nahal Hemdat**	**7.36**	**345**	Pn		**Pn**	**01 53 19.0**	**-0.8**
MMLI	**Mount Malkishu**	**7.56**	**345**	Sn		**Sb**	**01 55 13.1**	**-0.6**
MMAI	**Mount Meron Ar**	**8.12**	**346**	Pn		**Pn**	**01 53 27.9**	**-2.3**
MMAI	**Mount Meron Ar**	**8.12**	**346**	Pn		**Pn**	**01 53 27.9**	**-2.3**
	comp=N,4.4nm,0.3s,baz=151,slow=16,SNR=25							
MMAI				Lg		Lg	01 55 35.2	
	comp=N,3.8nm,0.3s,baz=157,slow=30,SNR=5.1							
MMAI				LR		LR	01 57 02.5	
	comp=N,54nm,18.2s,baz=145,slow=42							
MMAI	**Mount Meron Ar**	**8.12**	**346**	Pn		**Pn**	**01 53 28.0**	**-2.3**
BHL	**Bhannes**	**8.93**	**349**	eP		Pn	01 53 37.6	-3.8
HWQ	**Hawqa**	**9.25**	**351**	eP		Pn	01 53 37.7	-8.1
NAY	**Al-Naaiem**	**9.39**	**62**	*eP*		**Pn**	**01 53 46.0**	**-1.6**
NAY				AML		AML	01 56 28.5	
	comp=Z,38nm,0.8s							
RDF	**Al-Radifah**	**9.52**	**64**	*eP*		**Pn**	**01 53 48.1**	**-1.3**
RDF				AML		AML	01 56 20.8	
	comp=Z,32nm,0.6s							
QRN	**Al-Qurain**	**9.76**	**66**	*eP*		**Pn**	**01 53 52.0**	**-0.7**
QRN				AML		AML	01 56 21.8	
	comp=Z,30nm,0.7s							
BRTR	**Keskin Array B**	**14.96**	**348**	Pn		**Pn**	**01 55 02.6**	**-1.3**
BRTR	**Keskin Array B**	**14.96**	**348**	Pn		**Pn**	**01 55 02.6**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=164,slow=14,SNR=2.6							
BRTR	**Keskin Array B**	**14.96**	**348**	Pn		**Pn**	**01 55 02.6**	**-1.3**
GNI	**Garni**	**16.08**	**20**	P		**Pn**	**01 55 17.0**	**-1.6**
	comp=Z,9.5nm,1.0s							
GNI	**Garni**	**16.08**	**20**	Pn		**Pn**	**01 55 17.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=343,slow=16,SNR=1.9							
GNI				LR		LR	02 02 14.3	
	comp=Z,83nm,20.0s,baz=255,slow=40							
GNI	**Garni**	**16.08**	**20**	P		**Pn**	**01 55 17.0**	**-1.6**
	comp=Z,9.5nm,1.0s							
KBZ	**Khabaz**	**19.02**	**12**	P		**P**	**01 55 54.3**	**+0.1**
KBZ	**Khabaz**	**19.02**	**12**	P		**P**	**01 55 54.3**	**+0.1**
KBZ	**Khabaz**	**19.02**	**12**	P		**P**	**01 55 54.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=216,slow=9.7,SNR=3.5							
KBZ				LR		LR	02 03 24.5	
	comp=Z,44nm,20.4s,baz=17,slow=38							
KBZ	**Khabaz**	**19.02**	**12**	P		**P**	**01 55 54.3**	**+0.1**
ANN	**Anapa**	**19.62**	**359**	*eP*		**P**	**01 55 58.8**	**-2.0**
ANN				pmax		pmax		
	comp=Z,27nm,1.3s							
ANN	**Anapa**	**19.62**	**359**	*eP*		**P**	**01 55 58.8**	**-2.0**
	comp=Z,27nm,1.3s							
CFR	**Carcaliu**	**21.46**	**341**	⇑*iP*		**P**	**01 56 20.1**	**-0.6**
SULR		**21.62**	**337**	⇑*iP*		**P**	**01 56 25.0**	**+2.6**
MLR	**Muntele Rosu**	**22.43**	**338**	P		**P**	**01 56 32.1**	**+0.7**
MLR	**Muntele Rosu**	**22.43**	**338**	⇓*iP*		**P**	**01 56 32.5**	**+1.1**
MLR	**Muntele Rosu**	**22.43**	**338**	P		**P**	**01 56 32.1**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=218,slow=12,SNR=3.5							
MLR	**Muntele Rosu**	**22.43**	**338**	P		**P**	**01 56 32.1**	**+0.7**
PLOR	**Plostina**	**22.52**	**339**	⇑*iP*		**P**	**01 56 34.7**	**+2.5**
ARR	**Arges**	**22.80**	**336**	⇓*iP*		**P**	**01 56 35.2**	**0.0**
LOT	**Lotru**	**23.20**	**334**	⇑*iP*		**P**	**01 56 39.3**	**0.0**
BURAR	**Bucovina Array**	**24.54**	**339**	⇓*iP*		**P**	**01 56 53.3**	**+1.2**
BUR08	**Bucovina Ar. S**	**24.57**	**339**	*eP*		**P**	**01 56 52.6**	**+0.2**
BUR08	**Bucovina Ar. S**	**24.57**	**339**	*eP*		**P**	**01 56 52.7**	**+0.2**
DRGR		**24.72**	**335**	⇑*iP*		**P**	**01 56 54.6**	**+0.8**
VSR	**Storozhevoye**	**26.07**	**2**	*iP*		**P**	**01 57 05.9**	**+0.1**
VSR	**Storozhevoye**	**26.07**	**2**	*iP*		**P**	**01 57 05.9**	**+0.1**
VSR	**Storozhevoye**	**26.07**	**2**	*iP*		**P**	**01 57 05.9**	**+0.1**
AK02	**Malin Array Si**	**26.32**	**348**	P		**P**	**01 57 06.9**	**-1.2**
AK02	**Malin Array Si**	**26.32**	**348**	P		**P**	**01 57 06.9**	**-1.2**
AK01	**Malin Array Si**	**26.35**	**348**	*eP*		**P**	**01 57 06.7**	**-1.7**
AK01	**Malin Array Si**	**26.35**	**348**	*eP*		**P**	**01 57 06.7**	**-1.7**
KIEV	**Kiev**	**26.36**	**348**	*eP*		**P**	**01 57 07.0**	**-1.4**
KIEV				pmax		pmax		
	comp=Z,14nm,1.3s							
KIEV	**Kiev**	**26.36**	**348**	*eP*		**P**	**01 57 07.0**	**-1.4**
	comp=Z,14nm,1.3s							
KIEV	**Kiev**	**26.36**	**348**	*eP*		**P**	**01 57 07.0**	**-1.4**
	comp=Z,14nm,1.3s							
AKASG	**Malin Array Be**	**26.36**	**348**	*ceP*		**P**	**01 57 07.4**	**-1.1**
AKASG				pmax		pmax		
	comp=Z,3.0nm,0.8s							
AKASG	**Malin Array Be**	**26.36**	**348**	P		**P**	**01 57 06.7**	**-1.8**
AKASG	**Malin Array Be**	**26.36**	**348**	P		**P**	**01 57 06.7**	**-1.8**
	comp=Z,3.0nm,0.8s,baz=164,slow=8.5,SNR=11							
AKASG	**Malin Array Be**	**26.36**	**348**	*eP*		**P**	**01 57 07.4**	**-1.1**
	comp=Z,3.0nm,0.8s							
KEST	**Kesra**	**26.59**	**300**	*eP*		**P**	**01 57 12.8**	**+2.0**
KEST	**Kesra**	**26.59**	**300**	P		**P**	**01 57 12.8**	**+2.0**
	comp=Z,2.4nm,1.1s,baz=32,slow=2.1,SNR=5.8							
KEST	**Kesra**	**26.59**	**300**	*eP*		**P**	**01 57 12.8**	**+2.0**
TAM	**Tamanrasset**	**29.51**	**272**	*eP*		**P**	**01 57 37.1**	**0.0**
TAM				pmax		pmax		
	comp=Z,1.0nm,0.9s							
TAM	**Tamanrasset**	**29.51**	**272**	*eP*		**P**	**01 57 37.0**	**0.0**
	comp=Z,1.4nm,0.9s							
TAM	**Tamanrasset**	**29.51**	**272**	*eP*		**P**	**01 57 37.1**	**0.0**
	comp=Z,1.0nm,0.9s							
AKTK	**Aktyubinsk**	**29.71**	**27**	P		**P**	**01 57 38.5**	**0.0**
AKTO	**Aktyubinsk**	**29.71**	**27**	P		**P**	**01 57 38.5**	**0.0**
AKTO	**Aktyubinsk**	**29.71**	**27**	P		**P**	**01 57 38.5**	**0.0**
AKTO	**Aktyubinsk**	**29.71**	**27**	P		**P**	**01 57 38.5**	**0.0**
	comp=Z,0.2nm,0.4s,baz=222,slow=15,SNR=3.0							
AKTO	**Aktyubinsk**	**29.71**	**27**	P		**P**	**01 57 38.5**	**0.0**
OBN	**Obninsk**	**29.96**	**359**	⇑*eP*		**P**	**01 57 39.0**	**-1.5**
OBN				pmax		pmax		
	comp=Z,3.0nm,0.9s							
OBN	**Obninsk**	**29.96**	**359**	*eP*		**P**	**01 57 39.0**	**-1.5**
	comp=Z,3.0nm,0.9s							
GERES	**GERESS Array B**	**30.24**	**328**	P		**P**	**01 57 43.5**	**+0.2**
GERES				PcP		**PcP**	**02 00 43.9**	**0.0**
GERES	**GERESS Array B**	**30.24**	**328**	P		**P**	**01 57 43.5**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=119,slow=8.0,SNR=8.9							
GERES				PcP		**PcP**	**02 00 43.9**	**0.0**
	comp=Z,0.6nm,0.7s,baz=160,slow=4.3,SNR=4.9							
GERES	**GERESS Array B**	**30.24**	**328**	P		**P**	**01 57 43.5**	**+0.2**
SUW	**Suwalki**	**30.83**	**343**	*eP*		**P**	**01 57 47.0**	**-1.2**
SUW				pmax		pmax		
	comp=Z,13nm,0.8s							
SUW	**Suwalki**	**30.83**	**343**	*eP*		**P**	**01 57 47.0**	**-1.2**
	comp=Z,13nm,0.8s							
SUW	**Suwalki**	**30.83**	**343**	*eP*		**P**	**01 57 47.0**	**-1.2**
	comp=Z,13nm,0.8s							
BRG	**Berggiesshubel**	**31.55**	**331**	*e*(P)		**P**	**01 57 54.5**	**-0.1**
	comp=Z,4.5nm,1.3s							
BRG	**Berggiesshubel**	**31.55**	**331**	*eP*		**P**	**01 57 54.5**	**-0.1**
BRG				pmax		pmax		
	comp=Z,5.0nm,1.3s							
BRG	**Berggiesshubel**	**31.55**	**331**	*eP*		**P**	**01 57 54.5**	**-0.1**
	comp=Z,5.0nm,1.3s							
CLL	**Collm**	**32.27**	**331**	*eP*		**P**	**01 58 00.0**	**-1.0**
ARU	**Arti**	**34.72**	**20**	*c iP*		**P**	**01 58 21.9**	**-0.3**
ARU							01 59 33.2	
ARU				S		**S**	**02 03 50.6**	**-1.6**
ARU				SS		SnSn	02 05 54.3	-11
ARU				pmax		pmax		
	comp=Z,11nm,1.7s							
ARU	**Arti**	**34.72**	**20**	⇑*eP*		**P**	**01 58 22.0**	**-0.3**
ARU	**Arti**	**34.72**	**20**	*i* P		**P**	**01 58 21.9**	**-0.3**
	comp=Z,11nm,1.7s							
TOA0	**Torodi Ar. Sit**	**35.98**	**257**	*eP*		**P**	**01 58 34.8**	**+1.2**
TOA0	**Torodi Ar. Sit**	**35.98**	**257**	*eP*		**P**	**01 58 34.8**	**+1.2**
TORD	**Torodi Ar. Bea**	**35.98**	**257**	P		**P**	**01 58 34.6**	**+1.1**
TORD				PcP		**PcP**	**02 01 00.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**35.98**	**257**	P		**P**	**01 58 34.6**	**+1.1**
	comp=Z,2.5nm,1.1s,baz=61,slow=8.0,SNR=9.3							
TORD				PcP		**PcP**	**02 01 00.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=75,slow=2.5,SNR=2.8							
TORD				LR		LR	02 13 27.0	
	comp=Z,78nm,19.4s,baz=110,slow=36							
TORD	**Torodi Ar. Bea**	**35.98**	**257**	P		**P**	**01 58 34.6**	**+1.1**
BRVK	**Borovoye**	**37.06**	**33**	*c iP*		**P**	**01 58 42.5**	**+0.2**
BRVK				pmax		pmax		
	comp=Z,5.0nm,1.0s							
BRVK	**Borovoye**	**37.06**	**33**	*eP*		**P**	**01 58 42.5**	**+0.2**
	comp=Z,3.6nm,0.8s							
BRVK	**Borovoye**	**37.06**	**33**	*eP*		**P**	**01 58 42.5**	**+0.2**
	comp=Z,3.6nm,0.8s							
BVAR	**Borovoye Array**	**37.09**	**33**	P		**P**	**01 58 42.3**	**-0.3**
BVAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
BVAR	**Borovoye Array**	**37.09**	**33**	P		**P**	**01 58 42.3**	**-0.3**
BVAR	**Borovoye Array**	**37.09**	**33**	P		**P**	**01 58 42.3**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=212,slow=8.1,SNR=5.9							
BVAR	**Borovoye Array**	**37.09**	**33**	P		**P**	**01 58 42.3**	**-0.3**
FINES	**FINESS Array B**	**37.16**	**351**	P		**P**	**01 58 42.5**	**-0.6**
FINES				PcP		**PcP**	**02 01 03.2**	**+0.2**
FINES	**FINESS Array B**	**37.16**	**351**	P		**P**	**01 58 42.5**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=130,slow=10,SNR=6.2							
FINES				PcP		**PcP**	**02 01 03.2**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=211,slow=2.4,SNR=3.3							
FINES	**FINESS Array B**	**37.16**	**351**	P		**P**	**01 58 42.5**	**-0.6**
FINES	**FINESS Array B**	**37.16**	**351**	PcP		**PcP**	**02 01 03.2**	**+0.2**
ESDC	**Sonseca Array**	**37.74**	**303**	P		**P**	**01 58 48.9**	**+0.5**
ESDC	**Sonseca Array**	**37.74**	**303**	P		**P**	**01 58 48.9**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=91,slow=8.9,SNR=6.7							
ESDC	**Sonseca Array**	**37.74**	**303**	P		**P**	**01 58 48.9**	**+0.5**
KONO	**Kongsberg**	**39.67**	**338**	*eP*		**P**	**01 59 02.6**	**-1.6**
KONO				pmax		pmax		
	comp=Z,14nm,1.1s							
KONO	**Kongsberg**	**39.67**	**338**	*eP*		**P**	**01 59 02.6**	**-1.6**
	comp=Z,14nm,1.1s							
KONO	**Kongsberg**	**39.67**	**338**	*eP*		**P**	**01 59 02.6**	**-1.6**
	comp=Z,14nm,1.1s							
NB2	**NORSAR Subarra**	**40.21**	**340**	P		**P**	**01 59 07.2**	**-1.6**
	comp=Z,2.8nm,0.8s,baz=139,slow=8.6							
NB2	**NORSAR Subarra**	**40.21**	**340**	P		**P**	**01 59 07.2**	**-1.6**
	comp=Z,2.8nm,0.8s,SNR=9.0							
NOA	**NORSAR Array B**	**40.21**	**340**	P		**P**	**01 59 07.6**	**-1.2**
NOA	**NORSAR Array B**	**40.21**	**340**	P		**P**	**01 59 07.6**	**-1.2**
	comp=Z,2.2nm,0.7s,baz=138,slow=8.6,SNR=9.3							
NOA	**NORSAR Array B**	**40.21**	**340**	P		**P**	**01 59 07.6**	**-1.2**
KURBB	**Kurchatov Arra**	**40.29**	**40**	P		**P**	**01 59 10.2**	**+0.7**
	comp=Z,4.7nm,0.8s,baz=252,slow=8.5,SNR=32							
KURK	**Kurchatov**	**40.38**	**40**	*c iP*		**P**	**01 59 10.4**	**+0.3**
KURK				pmax		pmax		
	comp=Z,11nm,1.4s							
KURK	**Kurchatov**	**40.38**	**40**	*eP*		**P**	**01 59 10.5**	**+0.3**
	comp=Z,5.6nm,0.8s							
KURK	**Kurchatov**	**40.38**	**40**	*eP*		**P**	**01 59 10.5**	**+0.3**
	comp=Z,5.6nm,0.8s							
LSZ	**Lusaka**	**41.23**	**194**	*eP*		**P**	**01 59 20.3**	**+2.6**
LSZ	**Lusaka**	**41.23**	**194**	P		**P**	**01 59 20.2**	**+2.4**
	comp=Z,0.9nm,0.6s,baz=42,slow=15,SNR=2.7							
MK31	**Makanchi Array**	**41.34**	**47**	*eP*		**P**	**01 59 18.9**	**+0.6**
MK31	**Makanchi Array**	**41.34**	**47**	*eP*		**P**	**01 59 18.9**	**+0.6**
MK31	**Makanchi Array**	**41.34**	**47**	*eP*		**P**	**01 59 18.9**	**+0.6**
MKAR	**Makanchi Array**	**41.34**	**47**	P		**P**	**01 59 19.0**	**+0.7**
MKAR				pmax		pmax		
	comp=Z,5.0nm,0.8s							
MKAR				MLR		MLR		
	comp=Z,32nm,19.8s							
MKAR	**Makanchi Array**	**41.34**	**47**	P		**P**	**01 59 18.9**	**+0.7**
MKAR	**Makanchi Array**	**41.34**	**47**	P		**P**	**01 59 18.9**	**+0.7**
	comp=Z,5.1nm,0.8s,baz=250,slow=6.3,SNR=24							
MKAR				LR		LR	02 19 00.2	
	comp=Z,32nm,19.8s,baz=176,slow=40							
MKAR	**Makanchi Array**	**41.34**	**47**	P		**P**	**01 59 19.0**	**+0.7**
DBIC	**Dimbokro**	**44.65**	**253**	*eP*		**P**	**01 59 45.3**	**-0.1**
	comp=Z,2.6nm,0.7s							
DBIC	**Dimbokro**	**44.65**	**253**	P		**P**	**01 59 45.8**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=41,slow=11,SNR=5.1							
DBIC				LR		LR	02 19 31.4	
	comp=Z,98nm,18.1s,baz=95,slow=38							
DBIC	**Dimbokro**	**44.65**	**253**	*eP*		**P**	**01 59 45.3**	**-0.1**
	comp=Z,2.6nm,0.7s							
ZALV	**Zalesovo Beam**	**45.12**	**38**	P		**P**	**01 59 46.5**	**-2.2**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.7s							
ZALV				MLR		MLR		
	comp=Z,20nm,18.7s							
ZALV	**Zalesovo Beam**	**45.12**	**38**	P		**P**	**01 59 46.5**	**-2.2**
ZALV	**Zalesovo Beam**	**45.12**	**38**	P		**P**	**01 59 46.5**	**-2.2**
	comp=Z,0.9nm,0.7s,baz=232,slow=7.1,SNR=2.8							
ZALV				LR		LR	02 19 45.9	
	comp=Z,20nm,18.7s,baz=84,slow=38							
ZALV	**Zalesovo Beam**	**45.12**	**38**	P		**P**	**01 59 46.5**	**-2.2**
HVS	**Khovu-Aksy**	**49.63**	**43**	*c iP*		**P**	**02 00 24.8**	**+0.9**
HVS				pmax		pmax		
	comp=Z,47nm,1.2s							
HVS	**Khovu-Aksy**	**49.63**	**43**	P		**P**	**02 00 24.8**	**+0.9**
HVS	**Khovu-Aksy**	**49.63**	**43**	P		**P**	**02 00 24.8**	**+0.9**
SPITS	**Spitsbergen Ar**	**54.03**	**355**	P		**P**	**02 00 56.3**	**0.0**
SPITS	**Spitsbergen Ar**	**54.03**	**355**	P		**P**	**02 00 56.3**	**0.0**
	comp=Z,3.9nm,0.7s,baz=165,slow=8.1,SNR=4.1							
SPITS	**Spitsbergen Ar**	**54.03**	**355**	P		**P**	**02 00 56.3**	**0.0**
CMAR	**Chiang Mai Arr**	**56.80**	**84**	P		**P**	**02 01 16.9**	**-0.3**
CMAR	**Chiang Mai Arr**	**56.80**	**84**	P		**P**	**02 01 16.9**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=290,slow=8.1,SNR=5.1							
CMAR	**Chiang Mai Arr**	**56.80**	**84**	P		**P**	**02 01 16.9**	**-0.3**
SONM	**Songino Array**	**57.69**	**48**	P		**P**	**02 01 23.1**	**0.0**
SONM	**Songino Array**	**57.69**	**48**	P		**P**	**02 01 23.1**	**0.0**
	comp=Z,2.0nm,0.8s

	baz=5.9,SNR=75							
MTN				S		Sn	02 36 39.6	-3.2
	baz=5.9,SNR=6.3							
BBSI	Bau Bau	6.24	288	P		Pn	02 35 41.5	+1.4
KMPI	Kaimana, Papua	6.38	54	P		Pn	02 35 42.7	+0.8
KDU	Kakadu	6.48	144	P		Pn	02 35 43.0	-0.1
	baz=6.5,SNR=391							
KDU				S		Sn	02 36 52.7	-3.3
	baz=6.5,SNR=5.9							
BSSI	Bau Bau, Buton	8.10	279	P		Pn	02 36 06.1	+1.3
KNRA	Kununurra	8.16	178	P		Pn	02 36 04.2	-1.5
	baz=8.2,SNR=112							
KNRA				S		Sn	02 37 28.9	-7.7
	baz=8.2,SNR=13							
RKPI	Ransiki, Papua	8.16	44	P		Pn	02 36 05.6	-0.1
RKPI				S		Sn	02 37 35.8	-0.9
BASI	Baing, Sumba	8.32	250	P		Pn	02 36 08.2	+0.4
LUWI	Luwuk	8.59	318	P		Pn	02 36 18.4	+7.1
BKSI	Bulukumba	8.63	284	P		Pn	02 36 11.7	-0.2
KAPI	Kappang	9.06	285	P		Pn	02 36 18.2	+0.5
	15nm,1.1s							
KAPI	Kappang	9.06	285	P		Pn	02 36 16.3	-1.4
	1.5nm,0.3s,baz=129,slow=20,SNR=8.3							
WBSI	Waikabubak, Su	9.30	256	P		Pn	02 36 17.8	-3.0
SPSI	Sidrap Palu	9.39	291	P		Pn	02 36 21.4	-0.6
FITZ	Fitzroy Crossi	10.94	195	P		Pn	02 36 40.0	-2.5
	2.3nm,0.3s,baz=31,slow=11,SNR=105							
FITZ				S		Sn	02 38 32.6	-11
	8.5nm,0.3s,baz=77,slow=15,SNR=9.0							
FITZ	Fitzroy Crossi	10.94	195	S		Sn	02 38 33.5	-10
	baz=11,SNR=3.5							
WRA	Warramunga Arr	13.62	156	P		Pn	02 37 14.6	-2.6
	6.1nm,0.3s,baz=344,slow=12,SNR=138							
WRA				S		Sn	02 39 37.0	-11
	8.3nm,0.3s,baz=332,slow=22,SNR=13							
COEN	Coen	15.76	115	P		Pn	02 37 43.8	-0.1
	baz=16,SNR=24							
COEN				S		Sn	02 40 37.8	-1.8
	baz=16,SNR=4.0							
PALU	Palau	15.86	22	S		S	02 40 55.0	+13
	baz=16,SNR=4.1							
QIS	Mount Isa	16.86	142	P		Pn	02 37 58.5	+1.2
	baz=17,SNR=4.9							
ASAR	Alice Springs	16.91	163	P		Pn	02 37 58.8	+0.8
	4.9nm,0.3s,baz=338,slow=10,SNR=177							
ASAR				S		S	02 40 53.2	-13
	0.7nm,0.3s,baz=340,slow=22,SNR=4.7							
PMG	Port Moresby	18.52	97	P		Pn	02 38 16.3	-0.8
	0.7nm,0.3s,baz=281,slow=16,SNR=3.0							
MTSU	Mount Surprise	18.67	126	P		Pn	02 38 19.9	+1.0
	baz=19,SNR=6.4							
CTA	Charters Tower	21.27	128	P		P	02 38 47.4	+2.7
	6.5nm,1.1s,baz=296,slow=14,SNR=2.7							
MEEK	Meekatharra	21.27	205	P		P	02 38 46.0	+1.3
	baz=21,SNR=9.3							
QLP	Quilpie	24.17	144	P		P	02 39 16.5	+4.0
	baz=24,SNR=25							
MORW	Morawa	24.50	207	P		P	02 39 17.5	+2.1
	baz=25,SNR=3.5							
BBOO	Buckleboo	26.17	166	P		P	02 39 32.2	+1.8
	baz=26,SNR=11							
STKA	Stephens Creek	27.17	155	P		P	02 39 41.3	+1.9
	2.3nm,0.5s,baz=329,slow=10,SNR=11							
STKA	Stephens Creek	27.17	155	P		P	02 39 41.4	+1.9
	baz=27,SNR=7.4							
CMSA	Cobar Meteorol	28.81	148	P		P	02 39 56.7	+2.7
	baz=29,SNR=7.0							
PSI	Prapat	31.26	288	P		P	02 40 13.9	-2.1
	6.0nm,0.8s,baz=86,slow=9.7,SNR=7.1							
CMAR	Chiang Mai Arr	38.94	312	P		P	02 41 21.8	+0.3
	2.6nm,0.6s,baz=138,slow=7.0,SNR=11							
KSRS	Korea Array	44.69	359	P		P	02 42 08.2	+0.2
	1.8nm,0.5s,baz=179,slow=9.0,SNR=7.8							
MJAR	Matsushiro Arr	44.71	11	P		P	02 42 06.3	-1.8
	3.2nm,0.7s,baz=194,slow=10,SNR=6.8							
USRK	Ussuriysk Arra	51.52	3	P		P	02 42 59.4	-0.8
	2.2nm,0.4s,baz=189,slow=6.6,SNR=8.2							
ODAN	Odare	52.48	312	*e*P		P	02 43 07.0	-1.0
	18nm,0.6s							
ASAJ	Asahikawa	52.90	13	LR		LR	03 02 22.1	
	comp=Z,444nm,21.8s,baz=74,slow=32							
RAMN	Ramite	53.11	312	*e*P		P	02 43 12.0	-0.6
	38nm,0.6s							
GUN	Gumba	54.18	312	*e*P		P	02 43 20.1	-0.4
	25nm,0.6s							
KOLN	Koldanda	55.79	311	*e*P		P	02 43 31.5	-0.4
	24nm,0.7s							
DANN	Dangsing	55.98	312	*e*P		P	02 43 32.5	-0.9
PYUN	Piuthan	56.42	311	*e*P		P	02 43 35.7	-0.7
	36nm,0.8s							
SONM	Songino Array	58.44	343	P		P	02 43 50.8	+0.7
	6.4nm,0.8s,baz=168,slow=7.1,SNR=43							
PETK	Petropavlovsk-	65.23	19	P		P	02 44 35.7	+0.6
	2.7nm,0.6s,baz=180,slow=5.7,SNR=4.5							
MKAR	Makanchi Array	67.83	328	P		P	02 44 52.1	+0.3
	3.9nm,0.6s,baz=122,slow=8.1,SNR=44							
ZALV	Zalesovo Beam	71.36	334	P		P	02 45 12.8	-0.5
	4.3nm,0.4s,baz=122,slow=4.7,SNR=16							
ILAR	Eielson Array	94.39	25	P		P	02 47 11.1	-1.3
	0.5nm,0.8s,baz=287,slow=4.3,SNR=4.5							
LSZ	Lusaka	97.94	253	LR		LR	03 26 23.9	
	comp=Z,47nm,18.2s,baz=354,slow=32							
ARCES	ARCESS Array B	101.51	340	P		Pdif	02 47 44.4	+0.1
	4.6nm,0.9s,baz=74,slow=6.7,SNR=3.6							
YKA	Yellowknife Ar	108.81	26	PKiKP		PKiKP	02 52 21.3	+0.4
	0.4nm,0.6s,baz=296,slow=1.7,SNR=7.7							
GERES	GERESS Array B	111.84	320	PKiKP		PKiKP	02 52 27.7	+0.5
	0.3nm,0.5s,baz=69,slow=3.3,SNR=3.9							
PDAR	Pinedale Array	118.25	45	PKP		PKPdf	02 52 40.9	+0.9
	0.8nm,0.7s,baz=262,slow=1.0,SNR=6.2							
TXAR	Lajitas Array	126.41	59	PKP		PKPdf	02 52 57.6	+1.7
	0.4nm,0.6s,baz=255,slow=1.3,SNR=4.6							
TORD	Torodi Ar. Bea	127.47	281	PKP		PKPdf	02 52 57.9	-0.2
	1.3nm,0.6s,baz=62,slow=2.1,SNR=25							
DBIC	Dimbokro	133.75	272	PKP		PKPdf	02 53 11.1	+1.1
	1.2nm,0.4s,baz=76,slow=4.5,SNR=5.2							
CPUP	Villa Florida	145.93	171	PKPbc		PKPab	02 53 33.9	+0.6
	1.1nm,0.4s,baz=187,slow=4.0,SNR=7.5							
LPAZ	La Paz	151.21	145	PKPbc		PKPbc	02 53 49.4	+2.1
	3.1nm,0.4s,baz=42,slow=6.1,SNR=33							

*ISCJB **19** 03:17:00.3±0.6, 7.1S±0.1×67.99E±0.07, h12km, mb4.4/43, MS3.7/9, Error ellipse: s-maj=16.5km s-min=10.0km az=10.3*

*IDC **19** 03:17:00.1±0.7, 7.12S×67.89E, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.0/29, mbtmp4.1/16, MS3.7/9, Ms1 3.7/9, ms1mx3.3/29, Error ellipse: s-maj=23.1km s-min=17.2km az=9.0*

*NEIC **19** 03:17:01.6±0.3, 7.14S×67.96E, h10km, mb4.8/18, Error ellipse: s-maj=11.0km s-min=6.8km az=192.0*

*SZGRF **19** 03:17:10.0, 5.68S×68.06E, h33km, mb4.7, Chagos Archipelago region*

ISC 19 03:17:01.7±0.6, 7.2S±0.1×67.93E±0.09, h12km, n115, σ0.963/118, mb4.6/43, MS3.7/9, 2C-3D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DGAR	Diego Garcia	4.50	94	*e*Pn		Pn	03 18 08.8	-0.9
OPO	Ambohidratompo	23.16	239	LR		LR	03 29 11.6	
	comp=Z,330nm,18.6s,baz=345,slow=32							
KMBO	Kilima Mbogo	31.16	280	LR		LR	03 32 50.3	
	comp=Z,125nm,21.0s,baz=273,slow=30							
PSI	Prapat	32.47	73	LR		LR	03 35 18.4	
	comp=Z,285nm,18.1s,baz=230,slow=34							
LSZ	Lusaka	39.75	255	P		P	03 24 35.1	+0.2
LSZ	Lusaka	39.75	255	P		P	03 24 35.1	+0.2
	2.5nm,0.8s,baz=71,slow=11,SNR=5.8							
CMAR	Chiang Mai Arr	39.80	50	P		P	03 24 36.1	+1.1
CMAR	Chiang Mai Arr	39.80	50	P		P	03 24 36.1	+1.1
	1.4nm,0.3s,baz=242,slow=7.8,SNR=4.5							
CMAR				LR		LR	03 37 39.9	
	comp=Z,61nm,20.1s,baz=324,slow=31							
RDF	Al-Radifah	40.89	332	*e*P		P	03 24 43.6	-0.4
NAY	Al-Naaiem	41.31	332	*e*P		P	03 24 47.1	-0.3
NAY				AMb		AMB	03 24 48.1	
	comp=Z,14nm,0.8s							
MIB	Mutribah	41.73	333	*e*P		P	03 24 51.0	+0.2
MIB				AMb		AMB	03 24 51.8	
	comp=Z,48nm,0.7s							
ASF	Jabal al Asfar	49.04	325	P		P	03 25 49.6	+0.7
ASF	Jabal al Asfar	49.04	325	P		P	03 25 49.6	+0.7
	comp=Z,0.8nm,0.4s,baz=101,slow=5.2,SNR=3.2							
AAK	Ala-Archa	49.91	6	P		P	03 25 56.3	+0.9
AAK	Ala-Archa	49.91	6	P		P	03 25 56.3	+0.9
	comp=Z,0.7nm,0.3s,baz=198,slow=11,SNR=4.5							
MK31	Makanchi Array	55.20	12	P		P	03 26 33.9	-0.6
MKAR	Makanchi Array	55.20	12	P		P	03 26 33.6	-0.8
MKAR				PcP		PcP	03 27 35.7	+0.3
MKAR	Makanchi Array	55.20	12	P		P	03 26 33.6	-0.8
	comp=Z,1.6nm,0.7s,baz=197,slow=8.4,SNR=15							
MKAR				PcP		PcP	03 27 35.7	+0.3
	comp=Z,0.9nm,0.8s,baz=193,slow=5.0,SNR=4.0							
BR131	Keskin Array S	56.39	329	*e*P		P	03 26 43.3	+0.1
	comp=Z,1.7nm,0.9s							
BRTR	Keskin Array B	56.39	329	P		P	03 26 42.9	-0.3
BRTR				PcP		PcP	03 27 40.8	+0.4
BRTR	Keskin Array B	56.39	329	P		P	03 26 42.9	-0.3
	comp=Z,2.3nm,0.9s,baz=129,slow=9.7,SNR=14							
BRTR				PcP		PcP	03 27 40.8	+0.4
	comp=Z,0.6nm,1.0s,baz=129,slow=5.7,SNR=2.5							
ABKAR	Akbulak array	56.60	354	*e*P		P	03 26 44.2	-0.1
	comp=Z,6.3nm,1.3s							
KURK	Kurchatov	58.37	8	*e*P		P	03 26 56.4	-0.4
	comp=Z,5.1nm,0.9s							
ZALV	Zalesovo Beam	62.52	11	P		P	03 27 24.4	-0.7
ZALV	Zalesovo Beam	62.52	11	P		P	03 27 24.4	-0.7
	comp=Z,1.5nm,0.4s,baz=209,slow=5.7,SNR=4.6							
ZALV				LR		LR	03 51 26.7	
	comp=Z,28nm,19.3s,baz=73,slow=33							
SONM	Songino Array	64.40	28	P		P	03 27 38.6	+0.7
SONM	Songino Array	64.40	28	P		P	03 27 38.6	+0.7
	comp=Z,1.6nm,0.8s,baz=221,slow=6.8,SNR=12							
SONM				LR		LR	03 55 00.8	
	comp=Z,77nm,21.4s,baz=153,slow=35							
ASAR	Alice Springs	65.18	113	P		P	03 27 43.7	+0.3
ASAR	Alice Springs	65.18	113	P		P	03 27 43.7	+0.3
	comp=Z,0.4nm,0.5s,baz=284,slow=6.4,SNR=7.1							
WRA	Warramunga Arr	65.45	109	P		P	03 27 45.8	+0.6
WRA	Warramunga Arr	65.45	109	P		P	03 27 45.8	+0.6
	comp=Z,1.4nm,0.7s,baz=281,slow=6.4,SNR=10							
AKASG	Malin Array Be	66.61	334	P		P	03 27 50.9	-1.0
AKASG	Malin Array Be	66.61	334	P		P	03 27 50.9	-1.0
	comp=Z,1.2nm,0.6s,baz=140,slow=6.0,SNR=6.1							
TORD	Torodi Ar. Bea	68.80	287	P		P	03 28 06.1	-0.4
TORD	Torodi Ar. Bea	68.80	287	P		P	03 28 06.1	-0.4
	comp=Z,1.7nm,1.0s,baz=113,slow=3.7,SNR=7.1							
KEST	Kesra	69.58	312	P		P	03 28 12.2	+1.2
KEST	Kesra	69.58	312	P		P	03 28 12.2	+1.2
	comp=Z,0.7nm,0.7s,baz=92,slow=4.2,SNR=3.7							
KSRS	Korea Array	71.33	47	LR		LR	03 59 25.6	
	comp=Z,47nm,18.1s,baz=270,slow=36							
CONA	Conrad Observa	71.41	326	*i* P		P	03 28 21.4	-0.6
	comp=Z,9.6nm,1.6s							
PGF	Pioggiola	72.83	319	*e*P		P	03 28 30.9	+0.2
	comp=Z,12nm,1.0s							
PGF	Pioggiola	72.83	319	*e*P		P	03 28 30.9	+0.2
	comp=Z,12nm,1.0s							
WTTA	Wattenberg	73.47	324	*i* P		P	03 28 33.9	-0.5
	comp=Z,9.9nm,0.8s							
MOTA	Moosalm	73.82	324	*i* P		P	03 28 35.9	-0.6
	comp=Z,7.4nm,0.7s							
FETA	Feichten	73.88	323	*i* P		P	03 28 36.4	-0.4
	comp=Z,7.0nm,0.8s							
DBIC	Dimbokro	73.89	279	P		P	03 28 37.6	+0.3
DBIC	Dimbokro	73.89	279	P		P	03 28 37.6	+0.3
	comp=Z,2.9nm,0.6s,baz=85,slow=4.2,SNR=8.0							
LIC	Lamto	73.99	279	*e*P		P	03 28 37.3	-0.6
	comp=Z,6.4nm,0.7s							
LIC	Lamto	73.99	279	*e*P		P	03 28 37.3	-0.6
	comp=Z,6.4nm,0.7s							
SBF	Sospel	74.45	319	*e*P		P	03 28 41.0	+0.9
	comp=Z,14nm,0.8s							
SBF	Sospel	74.45	319	*e*P		P	03 28 41.0	+0.9
	comp=Z,14nm,0.8s							
DAVA	Daruels	74.52	323	*i* P		P	03 28 40.3	-0.2
	comp=Z,9.6nm,0.8s							
LMR	La Mourre	74.82	318	*e*P		P	03 28 42.8	+0.7
	comp=Z,13nm,1.1s							
LMR	La Mourre	74.82	318	*e*P		P	03 28 42.8	+0.7
	comp=Z,13nm,1.1s							
FRF	La Foret Royal	74.83	319	*e*P		P	03 28 42.9	+0.7
FRF	La Foret Royal	74.83	319	*e*P		P	03 28 42.9	+0.7
CLL	Colim	74.83	328	*i* P		P	03 28 42.4	+0.4
	comp=Z,6.0nm,1.2s							
GRF	Grafenberg Arr	74.95	326	*e*P		P	03 28 42.3	-0.5
	comp=Z,8.0nm,1.1s							
LPG	La Plagne	75.61	320	*e*P		P	03 28 47.1	+0.1
	comp=Z,4.0nm,0.7s							
LPG	La Plagne	75.61	320	*e*P		P	03 28 47.1	+0.1
	comp=Z,4.0nm,0.7s							
LPL	La Plagne	75.63	321	*e*P		P	03 28 47.1	+0.1
LPL	La Plagne	75.63	321	*e*P		P	03 28 47.1	+0.1
SMRF	Simiane la Rot	75.71	319	*e*P		P	03 28 47.8	+0.5
	comp=Z,6.5nm,0.8s							
SMRF	Simiane la Rot	75.71	319	*e*P		P	03 28 47.8	+0.5
	comp=Z,6.5nm,0.8s							
FINES	FINESS Array B	75.72	341	P		P	03 28 46.3	-0.6
FINES	FINESS Array B	75.72	341	P		P	03 28 46.3	-0.6
	comp=Z,0.9nm,0.6s,baz=132,slow=2.8,SNR=4.1							
ORIF	Oris-en-Rattie	75.91	320	*e*P		P	03 28 49.1	+0.6
ORIF	Oris-en-Rattie	75.91	320	*e*P		P	03 28 49.1	+0.6
CDF	Champ du Feu	76.60	323	*e*P		P	03 28 52.8	+0.5
CDF	Champ du Feu	76.60	323	*e*P		P	03 28 52.8	+0.5
LASF	Ste Croix	76.88	318	*e*P		P	03 28 54.2	+0.3
	comp=Z,9.8nm,1.1s							
LASF	Ste Croix	76.88	318	*e*P		P	03 28 54.2	+0.3
	comp=Z,9.8nm,1.1s							
SNAA	Sanae	77.25	198	LR		LR	03 53 44.5	
	comp=Z,34nm,20.4s,baz=303,slow=28							
MTLF	Montolieu	77.69	317	*e*P		P	03 28 59.0	+0.5
	comp=Z,5.1nm,1.0s							
MTLF	Montolieu	77.69	317	*e*P		P	03 28 59.0	+0.5
	comp=Z,5.1nm,1.0s							
SFTF	Sexfontaines	77.84	322	*e*P		P	03 29 00.0	+0.8
SFTF	Sexfontaines	77.84	322	*e*P		P	03 29 00.0	+0.8
SMF	Signal de Mont	77.93	321	*e*P		P	03 28 59.1	-0.6
	comp=Z,11nm,1.0s							
SMF	Signal de Mont	77.93	321	*e*P		P	03 28 59.1	-0.6
	comp=Z,11nm,1.0s							
LOR	Lormes	78.17	321	*e*P		P	03 29 01.8	+0.7
LOR	Lormes	78.17	321	*e*P		P	03 29 01.8	+0.7
SSF	Saint Saulge	78.31	321	*e*P		P	03 29 01.6	-0.2
	comp=Z,10nm,0.9s							
SSF	Saint Saulge	78.31	321	*e*P		P	03 29 01.6	-0.2
	comp=Z,10nm,0.9s							
CAF	Calviac	78.39	319	*e*P		P	03 29 02.6	+0.2
	comp=Z,12nm,1.1s							
CAF	Calviac	78.39	319	*e*P		P	03 29 02.6	+0.2
	comp=Z,12nm,1.1s							
BGF	Bois d'Agland	78.52	320	*e*P		P	03 29 04.2	+1.2
BGF	Bois d'Agland	78.52	320	*e*P		P	03 29 04.2	+1.2
RJF	Les Rejaudoux	78.89	319	*e*P		P	03 29 05.7	+0.6
	comp=Z,7.3nm,0.8s							
RJF	Les Rejaudoux	78.89	319	*e*P		P	03 29 05.7	+0.6
	comp=Z,7.3nm,0.8s							
LFF	La Frestale	79.27	318	*e*P		P	03 29 07.6	+0.5
	comp=Z,82nm,1.6s							
LFF	La Frestale	79.27	318	*e*P		P	03 29 07.6	+0.5
	comp=Z,82nm,1.6s							
SJPF	Ste Jean	79.96	316	*e*P		P	03 29 11.7	+0.7
	comp=Z,28nm,1.2s							
SJPF	Ste Jean	79.96	316	*e*P		P	03 29 11.7	+0.7
	comp=Z,28nm,1.2s							
ESDC	Sonseca Array	80.83	312	P		P	03 29 16.3	+0.5
ESDC	Sonseca Array	80.83	312	P		P	03 29 16.3	+0.5
	comp=Z,1.1nm,0.8s,baz=90,slow=4.8,SNR=8.9							
EVO	Evora	83.55	310	*e*P		P	03 29 30.6	+0.6
	comp=Z,13nm,1.0s							
EVOP	Sao Brissos	83.63	310	*e*P		P	03 29 30.6	+0.2
	comp=Z,13nm,1.0s							
PETK	Petropavlovsk-	95.52	37	LR		LR	04 11 45.3	
	comp=Z,29nm,21.3s,baz=311,slow=34							
ILAR	Eielson Array	117.44	16	PKP		PKPdf	03 35 46.1	-0.9
ILAR	Eielson Array	117.44	16	PKP		PKPdf	03 35 46.2	-0.9
	comp=Z,0.3nm,0.7s,baz=285,slow=3.5,SNR=3.5							
YKA	Yellowknife Ar	124.74	1	PKPpre		PKPpre	03 35 57.1	
YKA				PKP		PKPdf	03 36 00.5	-0.7
YKA				PP		PP	03 37 54.0	+6.3
YKA	Yellowknife Ar	124.74	1	PKhKP		PKPpre	03 35 57.1	
	comp=Z,0.6nm,0.8s,baz=341,slow=2.6,SNR=7.7							
YKA				PKP		PKPdf	03 36 00.4	-0.7
	comp=Z,0.6nm,0.8s,baz=345,slow=2.4,SNR=15							
YKA				PP		PP	03 37 54.0	+6.3
	comp=Z,0.3nm,1.0s,baz=354,slow=6.7,SNR=3.6							
PDAR	Pinedale Array	144.46	357	PKP		PKPab	03 36 36.5	-0.4
PDAR	Pinedale Array	144.46	357	PKP		PKPab	03 36 36.5	-0.4
	comp=Z,0.7nm,0.8s,baz=144,slow=0.2,SNR=6.2							
HWUT	Hardware Ranch	145.69	359	*e*PKPdf		PKPab	03 36 41.6	+0.3
OTAV	Otavalo	145.78	260	*e*PKPdf		PKPab	03 36 42.9	0.0
BEKR	Beckworth	146.59	12	*e*PKPdf		PKPdf	03 36 42.8	+0.4
BEKR				*e*PKPbc		PKPbc	03 36 43.4	-0.5
DAU	Daniels Canyon	146.87	359	*e*PKPbc		PKPbc	03 36 45.7	+0.8
DUG	Dugway	147.09	1	*e*PKPbc		PKPbc	03 36 45.1	-0.1
SMCO	Snowmass	147.78	353	*e*PKPbc		PKPbc	03 36 48.2	+0.7
NVAR	Mina Array Bea	148.35	9	PKP		PKPdf	03 36 46.7	+1.3
NVAR				PKPbc		PKiKP	03 36 50.1	-0.4
NVAR	Mina Array Bea	148.35	9	PKP		PKPdf	03 36 46.7	+1.3
	comp=Z,1.8nm,0.8s,baz=194,slow=1.9,SNR=12							
NVAR				PKPbc		PKiKP	03 36 50.1	-0.4
	comp=Z,2.0nm,0.7s,baz=299,slow=1.3,SNR=13							
NV11	Mina Array Sit	148.38	9	*e*PKPbc		PKPbc	03 36 48.1	-0.7
GSC	Goldstone	151.65	8	*e*PKPbc		PKPbc	03 36 58.0	+1.3
TXAR	Lajitas Array	156.56	341	PKP		PKPdf	03 36 57.2	-0.4
TXAR				PKPab		PKPab	03 37 25.9	-0.4
TXAR	Lajitas Array	156.56	341	PKP		PKPdf	03 36 57.2	-0.4
	comp=Z,0.3nm,0.7s,baz=126,slow=6.4,SNR=3.6							
TXAR				PKPab		PKPab	03 37 25.9	-0.4
	comp=Z,1.4nm,1.1s,baz=48,slow=3.7,SNR=6.2							

*AUST **19** 03:20:09.9, 20.75S×178.54E, h300km*

IDC 19 03:19:51.6±8.0, 19.53S×177.84W, h442km±86km, mb3.4/6, mb1 3.6/7, mb1mx3.2/22, mbtmp3.5/7, Error ellipse: s-maj=103.5km s-min=37.0km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	Mont Dzumac	14.91	258	P		P	03 23 03.4	+1.2
	0.9nm,0.3s,baz=89,slow=18,SNR=8.5							
CTA	Charters Tower	33.75	263	P		P	03 25 54.3	-0.6
	7.0nm,0.4s,baz=77,slow=12,SNR=5.2							
CMSA	Cobar Meteorol	34.86	243	P		P	03 26 02.7	-1.5
	baz=31,SNR=6.6							
QLP	Quilpie	35.50	251	P		P	03 26 09.0	-0.7
	baz=32,SNR=4.8							
MTSU	Mount Surprise	35.80	266	P		P	03 26 13.3	+1.0
	baz=32,SNR=13							
COEN	Coen	37.68	272	P		P	03 26 29.8	+1.9
	baz=34,SNR=7.9							
STKA	Stephens Creek	38.35	243	P		P	03 26 32.4	-0.9
	1.0nm,0.4s,baz=102,slow=9.3,SNR=5.2							
BBOO	Buckleboo	43.12	243	P		P	03 27 09.8	-1.7
	baz=40,SNR=5.8							
WRA	Warramunga Arr	44.89	261	P		P	03 27 25.1	-0.4
	2.4nm,0.3s,baz=94,slow=7.5,SNR=110							
ASAR	Alice Springs	44.90	256	P		P	03 27 25.4	-0.2
	6.5nm,0.7s,baz=88,slow=8.4,SNR=68							
KDU	Kakadu	48.09	270	P		P	03 27 50.7	+0.8
	baz=45,SNR=3.5							
KDU				S		S	03 34 10.2	-4.8
	baz=45,SNR=4.8							
MTN	Manton Dam	49.31	270	P		P	03 28 16.9	+18
	baz=46,SNR=3.7							
MTN				S		S	03 34 05.8	-26
	baz=46,SNR=4.4							
FAKI	Fak Fak	51.44	282	P		P	03 28 32.2	+17
	baz=48,SNR=5.1							
FITZ	Fitzroy Crossi	53.31	262	P		P	03 28 29.3	+1.1
	0.8nm,0.6s,baz=124,slow=11,SNR=5.7							
FITZ	Fitzroy Crossi	53.31	262	P		P	03 28 30.1	+1.9
	baz=50,SNR=3.3							
TXAR	Lajitas Array	86.41	57	P		P	03 31 46.3	-0.1
	0.6nm,1.0s,baz=217,slow=6.0,SNR=4.1							
KSH	Kashi	114.46	305	*e*SKKS			03 56 25.5	
HSP	Hornsund	122.09	356	*e*P			03 39 28.9	
HSP				*e*S			03 39 38.1	

*ISCJB **19** 03:26:21.8±0.4, 47.33S±0.08×13.4W±0.1, h10km, mb4.4/26, MS4.2/25, Error ellipse: s-maj=11.3km s-min=10.0km az=149.7*

*IDC **19** 03:26:21.6±0.5, 47.34S×13.39W, h0km, mb4.4/14, mb1 4.4/14, mb1mx4.4/16, mbtmp4.4/14, MS4.0/20, Ms1 4.1/20, ms1mx4.0/22, Error ellipse:

2.3nm,0.9s,baz=100,slow=8.3,SNR=6.6
LPAZ LR LR 03 57 27.6
comp=Z,346nm,22.0s,baz=311,slow=34
SBA Scott Base 55.05 180 *eP* **P 03 35 56.0 +1.5**
15nm,1.0s
VNDA Vanda 55.35 179 *eP* **P 03 35 57.7 +1.0**
VNDA Vanda 55.35 179 P **P 03 35 57.5 +0.8**
3.8nm,0.9s,baz=203,slow=7.2,SNR=15
VNDA LR LR 03 57 06.5
comp=Z,126nm,20.1s,baz=174,slow=33
SAML Samuel 56.80 296 *eP* **P 03 36 07.1 -0.7**
14nm,0.9s
TOA0 Torodi Ar. Sit 61.75 17 *eP* **P 03 36 41.0 -0.9**
TORD Torodi Ar. Bea 61.75 17 P **P 03 36 41.0 -0.9**
TORD Torodi Ar. Bea 61.75 17 P **P 03 36 41.0 -0.9**
2.4nm,0.9s,baz=195,slow=7.3,SNR=26
TORD LR LR 03 58 12.3
comp=Z,74nm,19.2s,baz=175,slow=31
KMBO Kilima Mbogo 63.60 60 P **P 03 36 56.9 +2.1**
KMBO Kilima Mbogo 63.60 60 P **P 03 36 56.9 +2.1**
0.8nm,0.7s,baz=222,slow=18,SNR=2.6
KMBO LR LR 04 00 36.6
comp=Z,230nm,22.0s,baz=274,slow=32
TAM Tamanrasset 71.90 18 *eP* **P 03 37 47.4 +0.7**
3.5nm,0.9s
ROSC El Rosal 74.45 295 P P 03 38 06.2 +3.9
ROSC El Rosal 74.45 295 P P 03 38 06.2 +3.9
2.9nm,0.6s,baz=104,slow=8.3,SNR=5.3
ROSC LR LR 04 09 31.1
comp=Z,232nm,18.1s,baz=222,slow=35
KEST Kesra 85.22 18 P **P 03 39 01.6 +1.9**
KEST Kesra 85.22 18 P **P 03 39 01.6 +1.9**
0.8nm,0.8s,baz=287,slow=12,SNR=3.8
KEST LR LR 04 14 16.8
comp=Z,31nm,19.9s,baz=292,slow=34
ESDC Sonseca Array 87.08 7 P **P 03 39 09.5 +0.7**
ESDC Sonseca Array 87.08 7 P **P 03 39 09.5 +0.7**
1.7nm,0.6s,baz=184,slow=4.4,SNR=9.6
DAVOX Davos/Dischmat 95.97 16 LR LR 04 16 02.2
comp=Z,53nm,21.2s,baz=264,slow=31
BRTR Keskin Array B 96.32 35 P **P 03 39 53.1 +1.3**
BRTR Keskin Array B 96.32 35 P **P 03 39 53.1 +1.3**
0.6nm,0.8s,baz=177,slow=6.2,SNR=5.0
BRTR LR LR 04 24 51.2
comp=Z,50nm,20.1s,baz=30,slow=36
GERES GERESS Array B 98.69 18 LR LR 04 22 05.6
comp=Z,55nm,18.2s,baz=237,slow=34
MLR Muntele Rosu 98.74 27 LR LR 04 24 16.3
comp=Z,15nm,20.1s,baz=187,slow=35
TBI Tubuai 99.22 220 *eLR* LR 04 12 26.5
148nm,37.2s
VRAC Vranov 99.76 19 LR LR 04 24 52.0
comp=Z,42nm,18.7s,baz=43,slow=35
PPT2 Papeete2 104.30 223 *eLR* LR 04 14 47.7
140nm,26.5s
N23A Red Feather La 120.04 299 P **PKPdf 03 45 14.2 +0.2**
baz=120
Y14A Wickenburg 120.08 289 P **PKPdf 03 45 13.8 -0.2**
baz=120
P19A Cripple Cowboy 121.09 296 P **PKPdf 03 45 16.2 +0.2**
baz=121
J23A Dilts Ranch, B 121.35 301 P **PKPdf 03 45 15.6 -0.6**
baz=122
H24A Dirks Ranch, A 121.59 303 P **PKPdf 03 45 16.1 -0.5**
baz=122
IRM Iron Mountain 121.61 288 P **PKPdf 03 45 16.6 -0.3**
baz=122
MONP Monument Peak 121.64 286 P **PKPdf 03 45 16.0 -1.3**
baz=122
P18A Preston Nutter 121.87 295 P **PKPdf 03 45 17.3 -0.3**
baz=122
J22A Midwest 121.89 301 P **PKPdf 03 45 16.4 -1.0**
baz=122
TMUT Trail Mountain 122.26 295 *e*PKPdf **PKPdf 03 45 19.1 +0.8**
MVU Marysvale 122.40 293 *e*PKPdf **PKPdf 03 45 19.7 +1.1**
PDAR Pinedale Array 123.32 299 PKP **PKPdf 03 45 19.2 -0.9**
PDAR Pinedale Array 123.32 299 PKP **PKPdf 03 45 19.2 -0.9**
1.1nm,0.8s,baz=135,slow=2.3,SNR=8.9
I19A Meeteetse 123.73 300 P **PKPdf 03 45 21.4 +0.5**
baz=124
DUG Dugway 123.79 295 P **PKPdf 03 45 21.4 +0.3**
baz=124
EDW2 Edwards Air Fo 123.90 286 P **PKPdf 03 45 21.3 0.0**
baz=124
LRMC Laurel Mountai 124.06 287 P **PKPdf 03 45 22.1 +0.4**
baz=124
SPUT South Promonto 124.22 296 *e*Pdif **Pdif 03 41 59.8 +3.7**
R11A Troy Canyon, C 124.43 291 P **PKPdf 03 45 22.9 +0.6**
baz=125
TPAW Teton Pass 124.57 299 *e*PKPdf **PKPdf 03 45 23.1 +0.5**
E20A Meyer Farm, Mu 124.65 303 P **PKPdf 03 45 22.0 -0.4**
baz=125
ISA Isabella 124.69 287 P **PKPdf 03 45 23.2 +0.4**
baz=125
E19A Rath Farm, Rou 125.00 303 P **PKPdf 03 45 23.4 +0.3**
baz=125
PKM Peak Mountain 125.10 285 P **PKPdf 03 45 23.7 -0.1**
baz=125
F18A Big Timber 125.22 302 P **PKPdf 03 45 24.0 +0.4**
baz=126
MKAR Makanchi Array 125.43 57 PKP **PKPdf 03 45 21.2 -2.6**
MKAR Makanchi Array 125.43 57 PKP **PKPdf 03 45 21.2 -2.6**
0.9nm,0.9s,baz=144,slow=2.3,SNR=4.5
D19A Cripps Ranch, 125.45 304 P **PKPdf 03 45 24.5 +0.6**
baz=126
ELK Elko 125.61 294 *e*PKPdf **PKPdf 03 45 25.6 +0.9**
E18A Harlowton 125.70 302 P **PKPdf 03 45 25.0 +0.5**
baz=126
F17A Fitzpatrick Pl 125.77 301 P **PKPdf 03 45 25.2 +0.6**
baz=126
C19A Slack Wire Ran 125.86 304 P **PKPdf 03 45 24.8 +0.1**
baz=126
G16A Moss Hill, Enn 126.06 300 P **PKPdf 03 45 25.6 +0.3**
baz=126
E17A Martinsdale 126.19 302 P **PKPdf 03 45 25.6 +0.2**
baz=126
B19A Brinkman Farms 126.20 305 P **PKPdf 03 45 25.8 +0.6**
baz=126
NVAR Mina Array Bea 126.21 290 PKP **PKPdf 03 45 27.2 +1.3**
NVAR Mina Array Bea 126.21 290 PKP **PKPdf 03 45 27.2 +1.3**
1.7nm,0.9s,baz=172,slow=3.5,SNR=7.6
H15A Lima 126.22 299 P **PKPdf 03 45 26.5 +0.9**
baz=126
F16A Kennard Place, 126.26 301 P **PKPdf 03 45 26.0 +0.4**
baz=126
I14A Mackay 126.32 298 P **PKPdf 03 45 26.8 +0.9**
baz=127
G15A Dillon 126.43 300 P **PKPdf 03 45 26.7 +0.7**
baz=127
D17A Six Diamond Ra 126.47 303 P **PKPdf 03 45 26.6 +0.6**
baz=127
DLMT Dillon 126.60 300 *e*PKPdf **PKPdf 03 45 25.6 -0.7**
HLID Hailey 126.69 297 P **PKPdf 03 45 27.3 +0.8**
baz=127
C17A Wharram Farm, 126.77 303 P **PKPdf 03 45 26.7 +0.2**
baz=127
F15A Butte 126.80 300 P **PKPdf 03 45 27.3 +0.6**
baz=127
D16A Dana Ranch, Ca 126.90 302 P **PKPdf 03 45 27.1 +0.3**
baz=127
WMQ Urumqi 126.96 63 *e*PKP **PKPdf 03 45 23.8 -3.1**
WMQ LR LR
comp=N,54nm,26.4s
WMQ LR LR
comp=E,160nm,22.6s
WMQ LR LR
comp=Z,53nm,23.2s
B17A L&G Farms, Che 127.15 304 P **PKPdf 03 45 27.8 +0.7**
baz=127
H13A Challis 127.15 298 P **PKPdf 03 45 28.0 +0.6**
baz=127
A17A Triple J Farms 127.44 305 P **PKPdf 03 45 28.2 +0.6**
baz=128
MFID Camas Ranch 127.47 296 P **PKPdf 03 45 28.2 +0.2**
baz=128
E14A Clinton 127.70 301 P **PKPdf 03 45 29.1 +0.7**
baz=128
CHMT Chamberlain Mo 127.82 301 *e*PKPdf **PKPdf 03 45 28.9 +0.3**
F13A Darby 127.86 300 P **PKPdf 03 45 29.0 +0.4**
baz=128
G12A Big Creek, Yel 128.09 298 P **PKPdf 03 45 29.2 +0.1**
baz=128
E13A Victor 128.12 300 P **PKPdf 03 45 29.7 +0.6**
baz=128
MSO Missoula 128.18 301 P **PKPdf 03 45 29.0 -0.2**
baz=128
C14A Swan Lake 128.56 302 P **PKPdf 03 45 29.8 0.0**
baz=129
D13A Huson 128.62 301 P **PKPdf 03 45 29.9 -0.1**
baz=129
A14A Double T Ranch 128.99 303 P **PKPdf 03 45 30.3 -0.4**
baz=129
GYA Guiyang 129.12 92 *e*Pdif **Pdif 03 42 17.6 -0.6**
GYA PKP **PKPdf 03 45 31.0 -0.6**
GYA PP **PP 03 47 42.8 +2.8**
GYA PKS **PKSdf 03 49 05.3 -3.1**
GYA SKKS 03 54 33.9
GYA SS **SS 04 05 01.8 +1.4**
GYA AMB AMB
comp=Z,140nm,7.8s
GYA LR LR
comp=N,180nm,23.5s
GYA LR LR
comp=E,160nm,23.2s
GYA LR LR
comp=Z,130nm,24.9s
D12A Red Ives Fores 129.12 300 P **PKPdf 03 45 30.6 -0.4**
baz=129
BMO Blue Mountains 129.14 297 *e*PKPdf **PKPdf 03 45 30.9 -0.2**
A13A Flathead Natio 129.53 303 P **PKPdf 03 45 31.9 +0.2**
baz=130
CD2 Chengdu 129.95 86 PKP **PKPdf 03 45 33.3 +0.3**
CD2 PP **PP 03 47 49.3 +3.9**
CD2 PKS **PKSdf 03 49 08.3 -1.3**
CD2 SKS **SKSdf 03 52 42.3 -2.2**
CD2 SKKS **SKKSac 03 54 40.1 -1.8**
CD2 SS **SS 04 05 11.3 +0.7**
CD2 AMB AMB
comp=Z,120nm,5.6s
ZALV Zalesovo Beam 130.50 50 PKP **PKPdf 03 45 32.7 -0.4**
ZALV Zalesovo Beam 130.50 50 PKP **PKPdf 03 45 32.7 -0.4**
comp=Z,0.4nm,0.2s,baz=251,slow=4.4,SNR=3.1
LZH Lanzhou 133.06 80 *e*PKP **PKPdf 03 45 35.5 -3.4**
LZH sPKP 03 45 41.0
LZH LR LR
comp=N,290nm,19.0s
LZH LR LR
comp=E,280nm,19.1s
LZH LR LR
comp=Z,67nm,15.3s
YKA Yellowknife Ar 135.28 320 PKP **PKPdf 03 45 41.6 -0.3**
YKA Yellowknife Ar 135.28 320 PKP **PKPdf 03 45 41.6 -0.3**
comp=Z,1.1nm,0.7s,baz=117,slow=2.1,SNR=20
SONM Songino Array 140.35 66 PKPpre PKPpre 03 45 46.2
SONM PKP **PKPdf 03 45 50.6 -1.3**
SONM Songino Array 140.35 66 PKhKP PKPpre 03 45 46.2
comp=Z,0.7nm,0.5s,baz=252,slow=1.4,SNR=2.7
SONM PKP **PKPdf 03 45 50.6 -1.3**
comp=Z,0.7nm,0.6s,baz=211,slow=3.5,SNR=5.5
HHC Hu-ho-hao-te 140.70 79 *e*PKP **PKPdf 03 45 54.8 +2.0**
HHC PP PP 03 48 58.3 +5.0
HHC PKS **PKSdf 03 49 29.3 +0.6**
HHC SKS **SKSdf 03 53 03.3 +0.4**
HHC SKKS **SKKSac 03 55 48.3 +2.0**
HHC SS **SS 04 07 22.0 +2.4**
HHC AMB AMB
comp=Z,110nm,5.1s
HHC LR LR
comp=N,150nm,17.8s
HHC LR LR
comp=E,290nm,17.8s
HHC LR LR
comp=Z,150nm,17.8s
SKAG Skagway 144.48 312 *e*PKPdf **PKPdf 03 45 58.2 -0.5**
DOT Dot Lake 148.62 319 *e*PKPbc **PKPbc 03 46 09.7 +0.3**
ILAR Eielson Array 149.65 322 PKP **PKPdf 03 46 07.2 0.0**
ILAR PKPbc **PKPbc 03 46 11.9 0.0**
ILAR Eielson Array 149.65 322 PKP **PKPdf 03 46 07.2 0.0**
comp=Z,7.9nm,1.0s,baz=360,slow=1.3,SNR=10
ILAR PKPbc **PKPbc 03 46 11.9 0.0**
comp=Z,5.6nm,0.8s,baz=5.9,slow=1.4,SNR=22
DIV Divide 149.69 315 *e*PKPbc **PKPbc 03 46 12.4 +0.3**
COLA College 150.03 322 *e*PKPdf **PKPbc 03 46 11.4 -1.3**
KSAR Wonju Array Be 150.06 95 PKPbc **PKPbc 03 46 11.9 -1.8**
KSRS Korea Array 150.09 95 PKPbc **PKPbc 03 46 11.9 -1.8**
comp=Z,2.3nm,0.8s,baz=259,slow=3.3,SNR=8.0
COLD Coldfoot 150.26 327 *e*PKPdf **PKPdf 03 46 06.8 -1.3**
COLD *e*PKPbc **PKPbc 03 46 13.5 +0.2**
MCK McKinley 150.75 320 *e*PKPdf **PKPdf 03 46 08.2 -0.8**
MCK *e*PKPbc **PKPbc 03 46 14.5 -0.1**
MCK *e*PKPab **PKPab 03 46 22.1 +0.4**
PMR Palmer 151.24 316 *e*PKPbc **PKPbc 03 46 15.9 +0.2**
CN2 Changchun 151.26 82 *e*PKPbc **PKPbc 03 46 15.0 -1.4**
CN2 PP PP 03 50 02.8 +7.0
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,400nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=Z,200nm,18.0s
TRF Thorofare Moun 151.40 320 *e*PKPbc **PKPbc 03 46 15.8 -0.5**
TRF *e*PKPab **PKPab 03 46 21.6 -3.0**
PPLA Purkeypile 152.37 319 *e*PKPbc **PKPbc 03 46 18.4 -0.1**
MDJ Mudanjiang 154.34 82 PKPbc **PKPdf 03 46 14.6 -0.3**
MJAR Matsushiro Arr 156.44 107 PKPab **PKPab 03 46 46.1 -0.6**
MJAR Matsushiro Arr 156.44 107 PKPab **PKPab 03 46 46.1 -0.6**
comp=Z,2.1nm,0.8s,baz=240,slow=7.6,SNR=4.6

HLW 19 03:28:41.1, 25°.16N×37°.49E, h20km±8km, Md3.2, Ml3.8, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMRS	**Mersa Alam**	**2.41**	**267**	P	Pn	03 29 18.9	-0.5
	baz=268						
EMRS				S	Sn	03 29 47.3	-1.0
	baz=268						
HADB		**2.60**	**275**	P	Pn	03 29 21.6	-0.5
	baz=275						
HQSR		**2.87**	**283**	P	Pn	03 29 25.1	-0.6
	baz=283						
HKAT	**Jabal Katrina**	**4.58**	**318**	P	Pn	03 29 48.7	-0.8
	baz=318						
HKAT				S	Sn	03 30 40.7	-1.6
	baz=318						
HBST	**Basata**	**4.72**	**329**	AMP		03 31 00.0	
	comp=E,230μm,0.4s,logA/T=5.7,baz=330						

FUNV 19 04:03:57.6, 10°.20N×67°.11W, h4km, MW4.0, 6C-6D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAUV	**EL PAUJM**	**0.13**	**263**	↓*e*P	Pg	04 03 59.7	-0.7
BOTV	**Botiquin**	**0.23**	**333**	↓*e*P	Pg	04 04 02.6	+0.2
IVIV	**IVIC**	**0.25**	**33**	↓*e*P	Pg	04 04 02.6	-0.2
OCUV	**OCUMARITO**	**0.32**	**105**	↓*e*P	Pg	04 04 02.8	-1.0
FDCV	**FORTIN DE LA C**	**0.38**	**24**	↑*i*P	Pg	04 04 05.3	+0.2
FUNV	**FUNVISIS**	**0.40**	**48**	↑*i*P	Pg	04 04 05.3	-0.2
FUNV				*e*S	Sg	04 04 11.5	+0.7
LLAV	**El Llanito**	**0.40**	**48**	↑*i*P	Pg	04 04 05.3	-0.2
TURV	**Turiamo**	**0.76**	**289**	↓*i*P	Pg	04 04 11.3	-0.9
TURV				*e*S	Sg	04 04 22.2	+0.1
BIRV	**Birongo**	**0.87**	**71**	↑*e*P	Pg	04 04 13.8	-0.6
BIRV				*e*S	Sg	04 04 25.7	-0.1
MERV	**Las Mercedes**	**1.24**	**139**	↓*e*P	Pg	04 04 20.2	-1.1
MERV				*e*S	Sg	04 04 37.6	+0.2
CUPV	**Cœpira**	**1.31**	**96**	↓*e*P	Pn	04 04 22.4	-0.5
CUPV				*e*S	Sg	04 04 39.5	-0.4
MAPV	**Macapo**	**1.38**	**255**	*e*P	Pn	04 04 23.5	-0.2
MAPV				*e*S	Sg	04 04 41.9	0.0
BAUV	**El Baul**	**1.55**	**216**	*e*P	Pn	04 04 24.5	-1.5
BAUV				*e*S	Sn	04 04 45.5	-1.1
ORCV	**Isla La Orchil**	**1.84**	**29**	*e*P	Pn	04 04 28.7	-1.4
ORCV				*e*S	Sn	04 04 53.5	-0.3
JACV	**Jacura**	**1.91**	**298**	*e*P	Pn	04 04 30.4	-0.6
JACV				*e*S	Sn	04 04 53.9	-1.6
TEPV	**Terepaima**	**2.06**	**264**	*e*P	Pn	04 04 33.6	+0.4
TEPV				*e*S	Sn	04 04 57.8	-1.6
PCRV	**Puerto La Cruz**	**2.44**	**90**	*e*P	Pn	04 04 39.8	+1.5
SANV	**Sanarito**	**2.49**	**254**	*e*P	Pn	04 04 39.3	+0.2
SANV				*e*S	Sn	04 05 08.6	-1.5
SIQV	**Siquisique**	**2.69**	**280**	*e*P	Pn	04 04 41.8	0.0
SIQV				*e*S	Sn	04 05 12.3	-2.6
CURV	**Curarigua**	**2.81**	**267**	*e*P	Pn	04 04 43.0	-0.6
PRGV	**PARIAGUAN**	**2.82**	**120**	*e*P	Pn	04 04 42.0	-1.6
MONV	**Montecano**	**3.31**	**302**	*e*P	Pn	04 04 49.4	-0.8
QARV	**Quebrada Arrib**	**3.36**	**270**	*e*P	Pn	04 04 50.5	-0.5
DABV	**Dabajuro**	**3.54**	**282**	*e*P	Pn	04 04 52.0	-1.4
ORIV	**Oritupano**	**3.82**	**107**	*e*P	Pn	04 04 55.8	-1.4
ELOV	**Elorza**	**3.95**	**217**	*e*P	Pn	04 04 58.4	-0.7
SOCV	**Socops**	**4.16**	**243**	↓*e*P	Pn	04 05 00.8	-1.2
VIGV	**El Vigia**	**4.41**	**253**	*e*P	Pn	04 05 04.6	-0.8
GURV	**El Guri**	**4.66**	**121**	*e*P	Pn	04 05 07.5	-1.3
CAPV	**Capacho**	**5.64**	**246**	*e*P	Pn	04 05 21.0	-1.6
RIOV	**Rio Grande**	**5.64**	**112**	*e*P	Pn	04 05 21.0	-1.4
LUEV	**Luepa**	**7.07**	**127**	*e*P	Pn	04 05 39.9	-2.3

*ISCJB **19** 04:29:30.1±0.9, 51°.46N±0°.04×16°.11E±0°.04, h0km, Error ellipse: s-maj=6.4km s-min=3.4km az=14.5*
*WAR **19** 04:29:31.6, 51°.51N×16°.12E*
*CSEM **19** 04:29:31.9±0.7, 51°.44N×16°.12E, h2km, ML2.8/7, Error ellipse: s-maj=11.4km s-min=5.9km az=9.0*
*PRU **19** 04:29:33.0, 51°.42N×16°.13E, h0km*

ISC 19 04:29:32.1±1.3, 51°.45N±0°.06×16°.12E±0°.03, h0km, n21, σ0s65/41, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.62**	**170**	*e*Pg	**Pg**	**04 29 44.3**	**+0.4**
KSP				*e*Sg	**Sg**	**04 29 52.7**	**+0.8**
UPC	**Upice**	**0.94**	**184**	*e*PG	**Pg**	**04 29 50.4**	**+0.2**
UPC				*e*SG	**Sg**	**04 30 02.1**	**-0.4**
	comp=Z,8.2nm,0.3s						
UPC	**Upice**	**0.94**	**184**	Pg	**Pg**	**04 29 50.4**	**+0.2**
UPC				Sg	**Sg**	**04 30 02.1**	**-0.4**
	8.2nm,0.3s						
DPC	**Dobruska-Polom**	**1.11**	**173**	*e*PG	**Pg**	**04 29 53.2**	**-0.1**
DPC				*e*SG	**Sg**	**04 30 07.6**	**-0.1**
	comp=Z,11nm,0.3s						
DPC	**Dobruska-Polom**	**1.11**	**173**	Pg	**Pg**	**04 29 53.2**	**-0.1**
DPC				Sg	**Sg**	**04 30 07.6**	**-0.1**
	11nm,0.3s						
PVCC	**Panska Ves**	**1.35**	**227**	*e*PG	**Pb**	**04 29 58.1**	**-0.1**
PVCC				*e*SG	**Sn**	**04 30 16.4**	**-0.4**
	comp=Z,35nm,0.2s						
PVCC	**Panska Ves**	**1.35**	**227**	Pg	**Pb**	**04 29 58.1**	**-0.1**
PVCC				Sg	**Sn**	**04 30 16.4**	**-0.4**
	35nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**248**	PG	**Pg**	**04 30 00.7**	**+0.1**
BRG				SG	**Sn**	**04 30 20.2**	**-0.1**
	22nm,0.7s						
PRU	**Pruhonice**	**1.77**	**215**	*e*PG	**Pb**	**04 30 05.4**	**-0.1**
PRU				*e*SG	**Sg**	**04 30 28.8**	**-0.3**
	comp=Z,8.1nm,0.4s						
PRU	**Pruhonice**	**1.77**	**215**	Pg	**Pb**	**04 30 05.4**	**-0.1**
PRU				Sg	**Sg**	**04 30 28.8**	**-0.3**
	8.1nm,0.4s						
MORC	**Moravsky Berou**	**1.90**	**151**	*e*Pn	**Pn**	**04 30 05.0**	**-0.9**
MORC				*e*Sg	**Sn**	**04 30 29.0**	**-1.6**
CLL	**Collm**	**1.96**	**267**	*e*Pg	**Pb**	**04 30 08.0**	**-0.7**
CLL				*i*		04 30 14.2	
CLL				*i* Sg	**Sb**	**04 30 34.2**	**+0.5**
	comp=Z,6.0nm,0.6s						
OKC	**Ostrava-Krasne**	**2.06**	**141**	*e*SG	**Sg**	**04 30 37.9**	**-0.5**
	comp=Z,4.7nm,0.3s						
OKC	**Ostrava-Krasne**	**2.06**	**141**	Sg	**Sg**	**04 30 37.9**	**-0.5**
	comp=Z,4.7nm,0.3s						
VRAC	**Vranov**	**2.16**	**172**	*e*Sg	**Sg**	**04 30 41.3**	**-0.3**
NKC	**Novy Kostel**	**2.63**	**244**	*e*PG	**Pg**	**04 30 21.5**	**-1.0**
NKC				*e*SG	**Sg**	**04 30 57.2**	**+0.7**
	comp=Z,11nm,0.4s						
NKC	**Novy Kostel**	**2.63**	**244**	Pg	**Pg**	**04 30 21.5**	**-1.0**
NKC				Sg	**Sg**	**04 30 57.2**	**+0.7**
	comp=Z,11nm,0.4s						
OJC	**Ojcow**	**2.64**	**116**	*e*Pg	**Pg**	**04 30 23.1**	**+0.5**
OJC				*e*Sg	**Sg**	**04 30 57.2**	**+0.4**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**04 30 20.0**	**+1.3**
KHC				*e*PG	**Pb**	**04 30 24.6**	**+0.9**
KHC				*e*SN	**Sn**	**04 30 53.2**	**-0.4**
KHC				*e*SG	**Sg**	**04 31 02.4**	**-0.8**
	comp=Z,1.8nm,0.3s						
KHC	**Kasperske Hory**	**2.84**	**216**	Pn	**Pn**	**04 30 20.0**	**+1.3**
KHC	**Kasperske Hory**	**2.84**	**216**	Pg	**Pb**	**04 30 24.6**	**+0.9**
KHC				Sn	**Sn**	**04 30 53.2**	**-0.4**
KHC				Sg	**Sg**	**04 31 02.4**	**-0.8**
	comp=Z,1.8nm,0.3s						

GUC 19 04:32:05.6±0.7, 34°.27S×70°.05W, h8km±3km, MD3.6, ML2.6, 3C-5D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMEL	**Las Melosas**	**0.44**	**343**	↑*i*P	Pg	04 32 14.0	-0.4
LMEL				*i* S	Sg	04 32 20.9	+0.6
LMEL				AML	AML	04 32 22.0	
	comp=N,906nm,0.2s						
CACH	**El Canelo**	**0.48**	**288**	↓*i*P	Pg	04 32 14.5	-0.6
CACH				*i* S	Sg	04 32 21.3	-0.3
CHCH	**Chadas Angostu**	**0.60**	**304**	↓*i*P	Pg	04 32 17.0	-0.3
CHCH				*i* S	Sg	04 32 25.1	-0.1
SJCH	**San Jose de Ma**	**0.67**	**338**	↓*i*P	Pg	04 32 17.9	-0.9
SJCH				*i* S	Sg	04 32 27.2	-0.5
SJCH				AML	AML	04 32 28.0	
	comp=E,379nm,0.3s						
PCH	**Pirque**	**0.75**	**329**	↓*i*P	Pg	04 32 19.7	-0.5
PCH				*i* S	Sg	04 32 30.6	+0.4
ANTU	**Antumapu**	**0.85**	**325**	*e*S	Sg	04 32 33.3	+0.1
ANTU				AML	AML	04 32 34.4	
	comp=N,355nm,0.6s						
CLCH	**Cerro Calan**	**0.96**	**335**	↑*i*P	Pg	04 32 23.5	-0.6
CLCH				*e*S	Sb	04 32 37.3	-0.2
CLCH				AML	AML	04 32 42.0	
	comp=E,382nm,0.6s						
TACH	**Talagante**	**0.96**	**310**	↑*i*P	Pg	04 32 23.2	-0.9
TACH				*i* S	Sg	04 32 36.5	-0.1
LNV	**Longovilo**	**1.17**	**285**	*e*P	Pb	04 32 26.7	-1.3
PEL	**Peldehue**	**1.24**	**335**	↓*i*P	Pn	04 32 28.4	-0.8
PEL				*i* S	Sg	04 32 45.6	-0.1
PEL				AML	AML	04 32 46.5	
	comp=N,514nm,0.4s						

GUC 19 04:50:21.0±0.5, 28°.30S×70°.38W, h68km±5km, ML3.9, 3C, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VACH	**Vallenar**	**0.44**	**230**	↑*i*P	Pn	04 50 21.1	-12
VACH				*e*S	Sn	04 50 30.2	-12
VACH				AML	AML	04 50 30.9	
	comp=E,13μm,0.1s						
LCO	**Las Campanas**	**0.77**	**202**	*e*P	Pn	04 50 37.1	+0.2
LCO				*e*S	Sn	04 50 50.1	+1.4
LCO				AML	AML	04 50 50.8	
	comp=E,2μm,0.3s						
CPCH	**Copiapo**	**0.93**	**1**	↑*i*P	Pn	04 50 38.8	+0.2
CPCH				*i* S	Sn	04 50 52.5	+0.8
CPCH				AML	AML	04 50 53.7	
	comp=E,15μm,0.1s						
CDCH	**Caldera**	**1.28**	**342**	*e*P	Pn	04 50 43.2	+0.2
CDCH				*e*S	Sn	04 51 00.3	+0.7
TLL	**Tololo Astrono**	**1.90**	**191**	↑*i*P	Pn	04 50 52.5	+0.8
TLL				*i* S	Sn	04 51 16.3	+1.4

*NIED **19** 05:08:00, 24°.70N×122°.00E, h86km, Mw4.2 Best double couple: M0 2.01000×10^15 NP1:φs327.00000°, δ71.00000°, λ-38.00000°. NP2:φs72.00000°, δ54.00000°, λ-156.00000°.*
*BJI **19** 05:08:10.8, 24°.80N×121°.95E, h7km, mB4.3/3, mb4.3/8, ML4.2/5*
*ISCJB **19** 05:08:14.6±0.2, 24°.80N±0°.02×122°.05E±0°.02, h84km±2km, mb3.7/8, Error ellipse: s-maj=3.5km s-min=2.2km az=149.7*
*TAP **19** 05:08:15.3, 24°.79N×122°.02E, h79km, ML4.7, B*
*JMA **19** 05:08:15.1±0.2, 24°.72N×122°.04E, h83km, M3.9*
*IDC **19** 05:08:19.1±5.5, 24°.84N×122°.08E, h122km±53km, mb3.5/8, mb1 3.8/9, mb1mx3.5/26, mbtmp3.6/9, MS2.7/3, Ms1 2.7/3, ms1mx2.4/37, Error ellipse: s-maj=27.1km s-min=16.0km az=76.0*

ISC 19 05:08:14.9±0.7, 24°.78N±0°.03×122°.03E±0°.02, h80km±4km, n97, σ1s25/161, mb3.8/8, 4C-31D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.23**	**350**	↓*i*P	**Pn**	**05 08 27.2**	**+0.4**

	baz=354								
TWB1				*i*	S		**Sn**	05 08 35.3	-0.2
	baz=354								
TWC	**Suao**	**0.24**	**224**	⇓	*i*P		**Pn**	05 08 27.3	+0.4
	baz=218								
TWC					S		**Sn**	05 08 35.2	-0.5
	baz=218								
ILA	**Ilan**	**0.26**	**266**	⇓	*e*P		**Pn**	05 08 27.7	+0.7
	baz=267								
ILA					S		**Sn**	05 08 36.6	+0.8
	baz=267								
TWE	**Neicheng**	**0.34**	**259**	⇓	*i*P		**Pn**	05 08 27.9	+0.6
	baz=260								
TWE					*e*S		**Sn**	05 08 37.3	+0.7
	baz=260								
NWF	**Wu-fen Shan**	**0.37**	**322**	⇓	*i*P		**Pn**	05 08 28.1	+0.4
	baz=314								
NWF					*i* S		**Sn**	05 08 37.0	-0.1
	baz=314								
ENA	**Nanau**	**0.44**	**217**	⇓	*i*P		**Pn**	05 08 29.2	+1.0
	baz=214								
ENA					*e*S		**Sn**	05 08 39.3	+1.3
	baz=214								
ENTT	**Nioudou**	**0.45**	**251**	⇓	*i*P		**Pn**	05 08 29.0	+0.8
	baz=248								
ENTT					*e*S		**Sn**	05 08 39.8	+1.7
	baz=248								
TAP1	**Taipei**	**0.53**	**299**	⇓	P		**Pn**	05 08 29.0	+0.2
	baz=304								
TAP1					S		**Sn**	05 08 38.6	-0.6
	baz=304								
EHP	**Heping Village**	**0.54**	**209**		*e*P		**Pn**	05 08 29.9	+0.9
	baz=200								
EHP					*e*S		**Sn**	05 08 41.4	+2.0
	baz=200								
TAP	**Taipei**	**0.54**	**298**		*e*P		**Pn**	05 08 29.1	+0.1
	baz=304								
TAP					S		**Sn**	05 08 38.9	-0.5
	baz=304								
NSK	**Sanguang**	**0.62**	**260**	⇓	*i*P		**Pn**	05 08 30.4	+0.6
	baz=264								
NSK					*i* S		**Sn**	05 08 41.4	+0.5
	baz=264								
TWY	**Chenhua**	**0.63**	**321**	⇓	*i*P		**Pn**	05 08 30.2	+0.4
	baz=321								
TWY					*i* S		**Sn**	05 08 40.7	-0.1
	baz=321								
TWS1	**Kuangyinshan**	**0.64**	**300**	⇓	P		**Pn**	05 08 30.5	+0.5
	baz=305								
TWS1					*i* S		**Sn**	05 08 41.3	+0.2
	baz=305								
NNS	**Nan Shan**	**0.69**	**240**	⇓	*i*P		**Pn**	05 08 31.8	+1.2
	baz=246								
NNS					S		**Sn**	05 08 43.5	+1.3
	baz=246								
NCU	**National Centr**	**0.79**	**284**	⇓	*e*P		**Pn**	05 08 32.1	+0.6
	baz=291								
NCU					S		**Sn**	05 08 44.9	+1.1
	baz=291								
TWD	**Chiawan**	**0.81**	**210**		P		**Pn**	05 08 32.0	+0.3
	baz=219								
TWD					*e*S		**Sn**	05 08 44.7	+0.5
	baz=219								
HWA	**Hwalien**	**0.89**	**206**		*e*P		**Pn**	05 08 33.4	+0.7
	baz=194								
HWA					*e*S		**Sn**	05 08 47.4	+1.5
	baz=194								
TWT	**Tachien**	**0.94**	**236**		*e*P		**Pn**	05 08 35.1	+1.6
	baz=227								
TWT					*e*S		**Sn**	05 08 49.0	+1.8
	baz=227								
WHF	**Hehuan Shan**	**0.94**	**228**	⇓	*i*P		**Pn**	05 08 34.5	+0.8
	baz=221								
WHF					S		**Sn**	05 08 48.6	+0.9
	baz=221								
YOJ	**Yonaguni jima**	**0.95**	**110**	⇓	*i*P		**Pn**	05 08 33.6	+0.3
	baz=108								
YOJ					S		**Sn**	05 08 47.5	+0.5
	baz=108								
YOJ	**Yonaguni jima**	**0.95**	**110**		P		**Pn**	05 08 33.6	+0.3
YOJ					S		**Sn**	05 08 47.3	+0.3
NSTT	**Nanjuang**	**0.95**	**261**	⇓	*i*P		**Pn**	05 08 34.2	+0.9
	baz=260								
NSTT					S		**Sn**	05 08 47.5	+0.4
	baz=260								
HSN	**Hsinchu**	**0.97**	**271**		*e*P		**Pn**	05 08 33.9	+0.4
	baz=272								
HSN					S		**Sn**	05 08 47.8	+0.4
	baz=272								
ESF	**Shoufeng Towns**	**1.03**	**208**		*e*P		**Pn**	05 08 34.1	-0.2
	baz=215								
ESL	**Shilin**	**1.11**	**210**	⇓	*i*P		**Pn**	05 08 34.9	-0.4
	baz=215								
ESL					*e*S		**Sn**	05 08 49.7	-0.9
	baz=215								
TEGC	**Jichi Village**	**1.16**	**203**		*e*P		**Pn**	05 08 36.6	+0.7
	baz=195								
TEGC					*e*S		**Sn**	05 08 53.1	+1.5
	baz=195								
NSY	**Sanyi**	**1.21**	**253**	⇓	*i*P		**Pn**	05 08 37.9	+1.3
	baz=251								
NSY					*i* S		**Sn**	05 08 54.2	+1.4
	baz=251								
TWQ1	**Liyutan**	**1.23**	**250**	⇓	*i*P		**Pn**	05 08 37.7	+1.0
	baz=248								
TWQ1					*e*S		**Sn**	05 08 54.0	+0.9
	baz=248								
SMLT	**Sun Moon Lake**	**1.37**	**229**	⇓	*i*P		**Pn**	05 08 40.1	+1.5
	baz=237								
SMLT					*e*S		**Sn**	05 08 58.7	+2.2
	baz=237								
TYC	**Yuchr**	**1.38**	**231**	⇓	*i*P		**Pn**	05 08 40.1	+1.3
	baz=229								
TYC					*e*S		**Sn**	05 08 58.2	+1.6
	baz=229								
TCU	**Taichung**	**1.39**	**243**	⇓	*e*P		**Pn**	05 08 39.9	+1.1
	baz=242								
TCU					*e*S		**Sn**	05 08 57.7	+1.0
	baz=242								
EHY	**Hungye**	**1.43**	**207**	⇓	*e*P		**Pn**	05 08 38.4	-0.9
	baz=198								
WNT	**Mingjian**	**1.52**	**234**		*e*P		**Pn**	05 08 41.8	+1.2
	baz=243								
WNT					*e*S		**Sn**	05 09 01.4	+1.4
	baz=243								
TWF1	**Yuli**	**1.57**	**205**	⇓	*e*P		**Pn**	05 08 40.5	-0.8
	baz=204								
TWF1					*e*S		**Sn**	05 08 59.9	-1.3
	baz=204								
IRIF	**Iriomote-Funau**	**1.61**	**106**		P		**Pn**	05 08 41.8	+0.2
IRIF					*e*S		**Sn**	05 09 01.9	0.0
ALS	**Alishan**	**1.69**	**222**	⇓	*e*P		**Pn**	05 08 44.5	+1.5
	baz=230								
ALS					*e*S		**Sn**	05 09 07.2	+3.0
	baz=230								
CHN5	**Tsauling**	**1.71**	**227**	⇓	*i*P		**Pn**	05 08 44.2	+1.2
	baz=235								
CHN5					*e*S		**Sn**	05 09 06.4	+2.0
	baz=235								
WGK	**Gukeng**	**1.73**	**231**		*e*P		**Pn**	05 08 44.6	+1.4
	baz=239								
WGK					*e*S		**Sn**	05 09 06.5	+1.7
	baz=239								
HATJ	**Hateruma jima**	**1.77**	**114**		P		**Pn**	05 08 44.1	+0.3
HATJ					S		**Sn**	05 09 06.1	+0.4
CHKT	**Chengkung**	**1.78**	**200**	⇓	P		**Pn**	05 08 43.6	-0.3
	baz=199								
CHKT					*e*S		**Sn**	05 09 04.2	-1.8
	baz=199								
ELDTW	**Lidau**	**1.84**	**211**		*e*P		**Pn**	05 08 44.8	0.0
	baz=201								
ELDTW					*e*S		**Sn**	05 09 07.4	0.0
	baz=201								
WTCT	**Ta-ch'eng**	**1.84**	**241**		*e*P		**Pn**	05 08 45.3	+0.6
	baz=239								
WTCT					S		**Sn**	05 09 07.7	+0.4
	baz=239								
JKRS	**Kuro-shima**	**1.88**	**106**		P		**Pn**	05 08 45.8	+0.6
JKRS					S		**Sn**	05 09 09.2	+0.9
CHN2	**Minshiung**	**1.89**	**229**		*e*P		**Pn**	05 08 46.8	+1.4
	baz=237								
CHN2					*e*S		**Sn**	05 09 10.7	+2.2
	baz=237								
CHN4	**Tsaushan**	**1.94**	**223**	⇑	*i*P		**Pn**	05 08 47.7	+1.7
	baz=222								
CHN4					*e*S		**Sn**	05 09 13.0	+3.3
	baz=222								
CHY	**Chiayi**	**1.95**	**229**		*e*P		**Pn**	05 08 47.1	+1.0
	baz=228								
CHY					*e*S		**Sn**	05 09 10.9	+1.1
	baz=228								
JIJ	**Ishigaki jima**	**1.97**	**102**		P		**Pn**	05 08 46.4	0.0
JIJ					S		**Sn**	05 09 10.4	+0.1
WTP	**Ta-pu**	**2.01**	**221**	⇓	P		**Pn**	05 08 48.0	+1.1
	baz=230								
WTP					*e*S		**Sn**	05 09 13.6	+2.3
	baz=230								
WSF	**Szhu**	**2.01**	**236**	⇓	*e*P		**Pn**	05 08 47.6	+0.7
	baz=234								
WSF					*e*S		**Sn**	05 09 12.2	+1.0
	baz=234								
TWK	**Hsinying**	**2.07**	**223**	⇑	P		**Pn**	05 08 49.2	+1.4
	baz=222								
TWK					*e*S		**Sn**	05 09 14.4	+1.6
	baz=222								
CHN1	**Nanshi**	**2.10**	**221**	⇑	P		**Pn**	05 08 49.5	+1.3
	baz=231								
CHN1					*e*S		**Sn**	05 09 15.7	+2.1
	baz=231								
TWG	**Pinlang**	**2.14**	**204**		*e*P		**Pn**	05 08 47.6	-1.1
	baz=196								
TWG					*e*S		**Sn**	05 09 12.9	-1.6
	baz=196								
SGST	**Jiashian**	**2.15**	**218**	⇓	*e*P		**Pn**	05 08 50.4	+1.5
	baz=227								
TTN	**Taitung**	**2.18**	**202**		*e*P		**Pn**	05 08 49.5	+0.3
	baz=200								
TTN					*e*S		**Sn**	05 09 15.4	+0.1
	baz=200								
CHN3	**Shinhua**	**2.28**	**222**		*e*P		Pn	05 08 53.9	+3.3
	baz=220								
SCLT	**Jiali**	**2.32**	**227**		*e*P		**Pn**	05 08 52.2	+1.1
	baz=225								
SCLT					*e*S		**Sn**	05 09 20.2	+1.4
	baz=225								
ECL	**Taimali**	**2.39**	**205**		*e*P		**Pn**	05 08 51.3	-0.8
	baz=198								
TAI1	**Yung-k'ang**	**2.40**	**224**		*e*P		**Pn**	05 08 53.7	+1.6
	baz=222								
SSD	**Sandimen**	**2.40**	**213**		*e*P		**Pn**	05 08 53.8	+1.6
	baz=211								
SSD					*e*S		**Sn**	05 09 23.3	+2.6
	baz=211								
JTJ	**Tarama**	**2.43**	**93**		P		**Pn**	05 08 54.0	+1.4
JTJ					S		**Sn**	05 09 22.7	+1.2
TWM1	**Shoushan**	**2.45**	**217**		*e*P		**Pn**	05 08 55.0	+2.2
	baz=225								
SGLT	**Jiouru**	**2.49**	**215**		*e*P		**Pn**	05 08 56.0	+2.6
	baz=225								
PNG	**Penghu**	**2.57**	**242**		*e*P		**Pn**	05 08 53.9	-0.5
	baz=241								
PNG					*e*S		**Sn**	05 09 23.0	-1.7
	baz=241								
EAST	**Anshuo**	**2.62**	**205**		*e*P		**Pn**	05 08 54.8	-0.4
	baz=197								
EAST					*e*S		**Sn**	05 09 26.0	-0.2
	baz=197								
TAW	**Tawu**	**2.63**	**204**		*e*P		**Pn**	05 08 55.2	-0.1
	baz=197								
TAW					*e*S		**Sn**	05 09 24.9	-1.3
	baz=197								
WDGT	**Dungji**	**2.65**	**236**	⇑	*e*P		**Pn**	05 08 55.4	-0.1
	baz=234								
WDGT					*e*S		**Sn**	05 09 26.0	-0.7
	baz=234								
SCZT	**Fangliau**	**2.73**	**209**		*e*P		**Pn**	05 08 58.2	+1.6
	baz=207								
SCZT					*e*S		**Sn**	05 09 29.9	+1.3
	baz=207								
LAY	**Lan-yu**	**2.77**	**189**		*e*P		**Pn**	05 08 56.4	-0.7
	baz=187								
LAY					*e*S		**Sn**	05 09 27.2	-2.4
	baz=187								
TWP	**Hsiaoliuchiu**	**2.87**	**213**		*e*P		**Pn**	05 09 00.5	+2.0
	baz=223								
JMJ	**Miyako jima 2**	**2.96**	**89**		*e*S		**Sn**	05 09 35.3	+1.0
HEN	**Hengchun**	**3.01**	**204**		*e*P		**Pn**	05 09 02.3	+1.9
	baz=201								
TWK1	**Hengchun**	**3.04**	**202**		*e*P		**Pn**	05 09 01.2	+0.4
	baz=200								
TWK1					*e*S		**Sn**	05 09 36.1	-0.1
	baz=200								
TSEB	**Hengchuen, Pin**	**3.05**	**200**		*e*P		**Pn**	05 09 01.9	+0.9
	baz=199								
TSEB					*e*S		**Sn**	05 09 36.9	+0.5
	baz=199								
JOGS	**Gusukube**	**3.07**	**90**		*e*S		**Sn**	05 09 39.0	+2.2
QZH	**Quanzhou**	**3.13**	**274**	⇓	*i*Pn		**Pn**	05 09 03.0	+1.0
QZH					Sn		**Sn**	05 09 36.8	-1.5
QZH					smax		smax		
	comp=N,1μm,0.9s								
QZH					smax		smax		
	comp=E,860nm,0.8s								
KNM	**Kinmen**	**3.30**	**264**		*e*P		**Pn**	05 09 05.9	+1.6
	baz=262								
JKE	**Kume jima 2**	**4.56**	**69**		P		**Pn**	05 09 23.4	+1.9
JKE					*e*S		**Sn**	05 10 15.6	+2.4
JAGN	**Aguni-jima**	**5.03**	**68**		P		**Pn**	05 09 29.7	+1.8
JAGN					*e*S		**Sn**	05 10 26.7	+2.0
JIH	**Iheya**	**5.79**	**66**		P		**Pn**	05 09 39.1	+0.8
JOW	**Kunigami**	**5.98**	**69**		*e*P		**Pn**	05 09 41.1	+0.2
	baz=73								
JOW	**Kunigami**	**5.98**	**69**		P		**Pn**	05 09 41.0	+0.1
JOW					*e*S		**Sn**	05 10 46.6	-1.5
JTK	**Tokunoshima**	**6.89**	**63**		P		**Pn**	05 09 52.9	-0.4
JAMN	**Amaminishikomi**	**7.27**	**60**		P		**Pn**	05 09 57.8	-0.6
JAM	**Amami Oshima**	**7.68**	**60**		P		**Pn**	05 10 03.4	-0.6
KSRS	**Korea Array**	**13.60**	**20**		P		**Pn**	05 11 26.4	+2.1
	comp=E,0.2nm,0.3s,baz=202,slow=14,SNR=6.3								
KSRS					LR		LR	05 16 53.0	
	comp=E,22nm,19.4s,baz=170,slow=38								
XAN	**Xi'an**	**14.67**	**312**		P		**P**	05 11 40.9	-1.6
XAN					pmax		pmax		
	comp=Z,2.0nm,1.3s								
XAN					pmax		pmax		
	comp=Z,19nm,4.6s								
MJAR	**Matsushiro Arr**	**18.16**	**46**		LR		LR	05 19 46.5	
	comp=Z,24nm,21.4s,baz=90,slow=38								
LZH	**Lanzhou**	**19.27**	**310**		*e*P		**Pn**	05 12 35.5	+0.3
LZH					pP		pP	05 12 43.5	-5.8
LZH					sP		**pP**	05 12 46.0	-3.3
LZH					pmax		pmax		
	comp=Z,21nm,1.5s								
CMAR	**Chiang Mai Arr**	**22.35**	**258**		P		**P**	05 13 07.8	+1.2
	comp=Z,1.6nm,0.7s,baz=62,slow=8.8,SNR=12								
SONM	**Songino Array**	**26.13**	**336**		P		**P**	05 13 41.3	-0.3
	comp=Z,2.0nm,0.8s,baz=148,slow=8.7,SNR=6.2								
MKAR	**Makanchi Array**	**38.45**	**315**		P		**P**	05 15 28.9	-0.1
	comp=Z,0.7nm,0.7s,baz=100,slow=11,SNR=6.6								
PETK	**Petropavlovsk-**	**38.94**	**34**		LR		LR	05 33 24.2	
	comp=Z,21nm,18.5s,baz=65,slow=39								
WRA	**Warramunga Arr**	**46.04**	**164**		P		**P**	05 16 30.5	-0.3
	comp=Z,1.7nm,0.4s,baz=347,slow=8.8,SNR=55								
ASAR	**Alice Springs**	**49.52**	**166**		P		**P**	05 16 58.2	+0.5
	comp=Z,0.5nm,0.5s,baz=345,slow=6.6,SNR=7.7								
FINES	**FINESS Arry B**	**71.32**	**330**		P		**P**	05 19 25.6	-0.1
	comp=Z,0.6nm,0.5s,baz=28,slow=4.5,SNR=4.0								
YKA	**Yellowknife Ar**	**82.12**	**23**		P		**P**	05 20 24.9	-1.6
	comp=Z,0.8nm,0.6s,baz=310,slow=5.0,SNR=19								
NVAR	**Mina Array Bea**	**95.47**	**43**		P		**P**	05 21 31.4	0.0
	comp=Z,0.3nm,0.7s,baz=297,slow=5.9,SNR=3.1								

ISK ***19*** *05:23:36.9, 39.37N×28.19E, h5km, MD2.7*
DDA ***19*** *05:23:37.3, 39.38N×28.18E, h7km, MD2.8*
CSEM ***19*** *05:23:38.0±0.1, 39.36N×28.20E, h2km, MD2.8, Error ellipse: s-maj=2.4km s-min=2.0km az=31.0*

ISC 19 05:23:37.6±1.0, 39.37N±0.03×28.20E±0.02, h12km±10km, n30, σ0.30/40, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
DURS	**Dursunbey**	**0.31**	**43**	*i* P		**Pg**	**05 23 43.7**	**-0.3**
DURS				*i* S		**Sg**	**05 23 48.3**	**0.0**
DURS	**Dursunbey**	**0.31**	**43**	*i* P		**Pg**	**05 23 43.7**	**-0.3**
DURS				*i* S		**Sg**	**05 23 48.3**	**0.0**
BALB	**Balikesir**	**0.36**	**317**	*e*PG		**Pg**	**05 23 45.1**	**+0.2**
BALB				*e*SG		**Sb**	**05 23 51.6**	**-0.1**
BALB	**Balikesir**	**0.36**	**317**	*e*Pg		**Pg**	**05 23 45.1**	**+0.2**
BALB				*e*Sg		**Sb**	**05 23 51.6**	**-0.1**
DST	**Dursunbey**	**0.40**	**54**	*e*PG		**Pg**	**05 23 45.4**	**-0.1**
DST	**Dursunbey**	**0.40**	**54**	*e*Pg		**Pg**	**05 23 45.4**	**-0.1**
AKHS	**Akhisar**	**0.58**	**211**	*i* P		**Pg**	**05 23 48.7**	**-0.2**
AKHS				*i* S		**Sg**	**05 23 56.6**	**+0.1**
AKHS	**Akhisar**	**0.58**	**211**	*i* P		**Pg**	**05 23 48.7**	**-0.2**
AKHS				*i* S		**Sg**	**05 23 56.6**	**+0.1**
BALY	**Balya**	**0.58**	**310**	*i* P		**Pb**	**05 23 49.5**	**-0.3**
BALY				*i* S		**Sg**	**05 23 56.9**	**+0.3**
BALY	**Balya**	**0.58**	**310**	*i* P		**Pb**	**05 23 49.5**	**-0.3**
BALY				*i* S		**Sg**	**05 23 56.9**	**+0.3**
GONE	**Gonen-Balikesi**	**0.78**	**330**	*e*PG		**Pg**	**05 23 52.7**	**0.0**
GONE	**Gonen-Balikesi**	**0.78**	**330**	*e*Pg		**Pg**	**05 23 52.7**	**0.0**
ORLT	**Orhaneli**	**0.86**	**38**	*e*PG		**Pb**	**05 23 54.9**	**+0.4**
ORLT	**Orhaneli**	**0.86**	**38**	*e*Pg		**Pb**	**05 23 54.9**	**+0.4**
KCTX	**Karacabey (Bur**	**0.90**	**8**	*e*PG		**Pb**	**05 23 55.5**	**+0.3**
KCTX	**Karacabey (Bur**	**0.90**	**8**	*e*Pg		**Pb**	**05 23 55.5**	**+0.3**
KULA	**Kula-Manisa**	**0.93**	**157**	*e*PG		**Pb**	**05 23 55.9**	**+0.2**
KULA	**Kula-Manisa**	**0.93**	**157**	*e*Pg		**Pb**	**05 23 55.9**	**+0.2**
TVSB	**Tavsanli**	**0.98**	**85**	*e*PG		**Pn**	**05 23 57.3**	**0.0**
TVSB	**Tavsanli**	**0.98**	**85**	*e*Pg		**Pn**	**05 23 57.3**	**0.0**
GDZ	**Gediz**	**1.03**	**105**	*e*P		**Pn**	**05 23 58.3**	**+0.2**
GDZ				*i* S		**Sb**	**05 24 11.2**	**0.0**
GDZ	**Gediz**	**1.03**	**105**	*e*P		**Pn**	**05 23 58.3**	**+0.2**
GDZ				*i* S		**Sb**	**05 24 11.2**	**0.0**
IZI	**Iznik**	**1.38**	**45**	*e*PN		**Pg**	**05 24 04.6**	**+0.6**
IZI	**Iznik**	**1.38**	**45**	*e*Pn		**Pg**	**05 24 04.6**	**+0.6**
CAVI	**Cavuskoy**	**1.51**	**56**	*e*PN		**Pg**	**05 24 06.3**	**-0.3**
CAVI	**Cavuskoy**	**1.51**	**56**	*e*Pn		**Pg**	**05 24 06.3**	**-0.3**
MFT	**Murefte**	**1.58**	**334**	*e*PN		**Pg**	**05 24 07.5**	**-0.4**
MFT	**Murefte**	**1.58**	**334**	*e*Pn		**Pg**	**05 24 07.5**	**-0.4**
GULT	**Gulveren**	**2.07**	**59**	*e*PN		**Pb**	**05 24 14.6**	**-0.6**
GULT	**Gulveren**	**2.07**	**59**	*e*Pn		**Pb**	**05 24 14.6**	**-0.6**

NNC 19 05:23:43.9±3.5, 54.28N×86.51E, h0km, mb3.8, mpv3.5, 9C-7D, Error ellipse: s-maj=27.8km s-min=17.7km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KURK	**Kurchatov**	**5.99**	**237**	⇓	Pn	Pn	05 25 16.5	+2.7
	9.2nm,0.9s							
KURK				⇑	Sn	Sn	05 26 27.0	+4.0
	5.8nm,1.0s							
KURK				⇑	Lg	Lg	05 26 55.4	
	30nm,1.1s							
KUR07	**Kurchatov Arra**	**6.13**	**236**	⇑	Pn	Pn	05 25 18.4	+2.7
	0.6nm,0.7s							
KUR07				⇓	Sn	Sn	05 26 27.7	+1.3
	0.5nm,1.3s							
KUR07				⇑	Lg	Lg	05 26 59.8	
	2.3nm,1.1s							
MK31	**Makanchi Array**	**7.96**	**201**	⇓	Pn	Pn	05 25 42.0	+1.2
	8.3nm,1.5s,baz=32,slow=13,SNR=17							
MK31					Sn	Sn	05 27 17.4	+5.9
	6.1nm,1.1s,baz=26,slow=26,SNR=3.1							
MK31				⇑	Lg	Lg	05 27 52.7	
	27nm,1.1s,baz=25,slow=31,SNR=5.3							
VOSK	**Vostochnaya**	**9.38**	**267**	⇓	Pn	Pn	05 26 03.4	+3.1
	1.9nm,0.6s							
VOSK				⇑	Sn	Sn	05 27 43.9	-2.6
	14nm,1.1s							
VOSK				⇓	Lg	Lg	05 28 43.8	
	8.6nm,1.1s							
BVA0	**Borovoye Array**	**9.65**	**269**		Pn	Pn	05 26 03.7	-0.4
	0.6nm,1.1s,baz=235,slow=37,SNR=5.3							
BVA0					Sn	Sn	05 27 50.8	-2.3
	0.9nm,0.9s,baz=76,slow=18,SNR=10							
BRVK	**Borovoye**	**9.71**	**269**	⇓	Pn	Pn	05 26 03.0	-1.7
	4.7nm,1.0s							
BRVK				⇑	Sn	Sn	05 27 52.1	-2.3
	11nm,1.2s							
ZRNK	**Zerenda**	**10.48**	**270**	⇑	Pn	Pn	05 26 19.2	+3.9
	2.6nm,1.0s							
ZRNK				⇓	Sn	Sn	05 28 11.6	-1.8
	0.1nm,0.2s							
ZRNK				⇑	Lg	Lg	05 29 21.3	
	6.8nm,1.2s							

ISCJB ***19*** *05:41:17.6±0.2, 60.82N±0.02×151.63W±0.05, h86km±3km, mb3.7/9, Error ellipse: s-maj=4.8km s-min=3.3km az=34.1*
IDC ***19*** *05:41:17.6±1.3, 60.81N×151.96W, h66km±13km, mb3.6/9, mb1 3.8/13, mb1mx3.5/31, mbtmp3.6/13, MS2.9/1, Ms1 2.9/1, ms1mx2.3/39, Error ellipse: s-maj=15.9km s-min=9.2km az=102.0*
NEIC ***19*** *05:41:19.9, 60.81N×151.65W, h72km, MG3.6(AEIC), After AEIC.*
NEIC Felt at Eagle River.

ISC 19 05:41:19.1±0.7, 60.79N±0.03×151.67W±0.03, h79km±5km, n95, σ1.04/109, mb3.7/9, Kenai Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BGRM	**Barrier Glacie**	**0.37**	**265**		P	**Pn**	**05 41 31.2**	**-0.6**
BKG	**Blockade Glaci**	**0.40**	**314**		P	**Pn**	**05 41 31.5**	**-0.7**
BKG					S	**Sn**	**05 41 40.5**	**-1.2**
RDT	**Redoubt**	**0.42**	**239**		P	**Pn**	**05 41 31.8**	**-0.4**
SPU	**Mount Spurr**	**0.43**	**334**		P	**Pn**	**05 41 31.6**	**-0.8**
CKT	**Bend**	**0.49**	**328**		P	**Pn**	**05 41 32.0**	**-0.8**
CKL	**Chakachamna La**	**0.52**	**321**		P	**Pn**	**05 41 32.4**	**-0.8**
CRP	**Crater Peak**	**0.53**	**334**		P	**Pn**	**05 41 32.8**	**-0.5**
CRP					S	**Sn**	**05 41 43.4**	**-0.4**
DFR	**Drift River**	**0.54**	**249**		P	**Pn**	**05 41 32.7**	**-0.6**
BGL	**Barrier Glacie**	**0.59**	**324**		P	**Pn**	**05 41 33.1**	**-0.7**
REF	**Redoubt East F**	**0.59**	**240**		P	**Pn**	**05 41 33.3**	**-0.4**
REF					S	**Sn**	**05

ILAR	**Eielson Array**	**4.56**	**27**	P		**Pn**	**05 42 25.5**	**0.0**
	10nm,0.3s,baz=213,slow=13,SNR=399							
ILAR				S		**Sn**	**05 43 16.4**	**-0.7**
	7.9nm,0.3s,baz=215,slow=23,SNR=8.1							
BALM	**Baldy**	**4.56**	**83**	P		**Pn**	**05 42 24.3**	**-1.4**
DOT	**Dot Lake**	**4.57**	**48**	P		**Pn**	**05 42 25.5**	**-0.3**
GRNC	**Granite Creek**	**4.86**	**86**	P		**Pn**	**05 42 28.2**	**-1.7**
BARN	**Barnard Glacie**	**4.89**	**82**	P		**Pn**	**05 42 29.6**	**-0.6**
ANNW	**Aniakchak Nort**	**5.12**	**224**	P		**Pn**	**05 42 33.2**	**-0.1**
BCA3	**Beaver Creek A**	**5.20**	**60**	P		**Pn**	**05 42 33.8**	**-0.5**
IM3	**Indian Mountai**	**5.29**	**351**	P		**Pn**	**05 42 35.0**	**-0.6**
PNL	**Peninsula**	**6.22**	**95**	P		**Pn**	**05 42 47.7**	**-0.5**
EGAK	**Eagle**	**6.26**	**46**	*e*Pn		**Pn**	**05 42 48.0**	**-0.8**
	20nm,0.6s							
COLD	**Coldfoot**	**6.49**	**5**	P		**Pn**	**05 42 52.1**	**+0.2**
DAWY	**Dawson**	**6.58**	**55**	P		**Pn**	**05 42 52.7**	**-0.3**
BM3	**Burnt Mountain**	**7.33**	**22**	P		**Pn**	**05 43 02.1**	**-1.3**
INK	**Inuvik**	**10.81**	**38**	P		**Pn**	**05 43 50.5**	**-0.1**
INK				S		**Sn**	**05 45 53.1**	**+3.6**
INK	**Inuvik**	**10.81**	**38**	P		**Pn**	**05 43 50.5**	**-0.1**
	0.1nm,0.3s,baz=223,slow=16,SNR=8.0							
INK				S		**Sn**	**05 45 53.1**	**+3.6**
	0.4nm,0.3s,baz=305,slow=32,SNR=4.1							
DLBC	**Dease Lake**	**11.20**	**93**	LR		LR	05 48 38.9	
	comp=Z,59nm,18.5s,baz=153,slow=39							
YKA	**Yellowknife Ar**	**17.53**	**68**	P		**P**	**05 45 18.1**	**+0.1**
YKA				ScP		**ScP**	**05 53 20.6**	**-0.2**
YKA	**Yellowknife Ar**	**17.53**	**68**	P		**P**	**05 45 18.0**	**+0.1**
	0.1nm,0.3s,baz=277,slow=9.8,SNR=25							
YKA				ScP		**ScP**	**05 53 20.6**	**-0.2**
	0.0nm,0.3s,baz=288,slow=2.2,SNR=6.3							
ELK	**Elko**	**29.95**	**115**	P		**P**	**05 47 20.2**	**+0.4**
ELK	**Elko**	**29.95**	**115**	P		**P**	**05 47 20.2**	**+0.4**
	0.4nm,0.3s,baz=314,slow=12,SNR=10							
NVAR	**Mina Array Bea**	**30.55**	**122**	P		**P**	**05 47 26.5**	**+1.4**
NVAR	**Mina Array Bea**	**30.55**	**122**	P		**P**	**05 47 26.5**	**+1.4**
	0.8nm,0.6s,baz=323,slow=10.0,SNR=9.6							
PDAR	**Pinedale Array**	**30.96**	**106**	P		**P**	**05 47 30.0**	**+1.3**
PDAR	**Pinedale Array**	**30.96**	**106**	P		**P**	**05 47 30.0**	**+1.3**
	0.4nm,0.4s,baz=334,slow=4.2,SNR=5.0							
SPITS	**Spitsbergen Ar**	**41.08**	**4**	P		**P**	**05 48 54.0**	**-0.3**
SPITS	**Spitsbergen Ar**	**41.08**	**4**	P		**P**	**05 48 54.0**	**-0.3**
	2.1nm,0.8s,baz=24,slow=6.4,SNR=6.8							
TXAR	**Lajitas Array**	**44.66**	**113**	P		**P**	**05 49 25.2**	**+1.5**
TXAR	**Lajitas Array**	**44.66**	**113**	P		**P**	**05 49 25.2**	**+1.5**
	0.8nm,0.7s,baz=318,slow=5.8,SNR=14							
KSRS	**Korea Array**	**53.65**	**283**	P		**P**	**05 50 31.9**	**-0.2**
	0.4nm,0.3s,baz=38,slow=6.3,SNR=4.1							
KSAR	**Wonju Array Be**	**53.68**	**283**	P		**P**	**05 50 31.9**	**-0.4**
SONM	**Songino Array**	**54.86**	**306**	P		**P**	**05 50 40.4**	**-0.6**
SONM	**Songino Array**	**54.86**	**306**	P		**P**	**05 50 40.4**	**-0.6**
	1.6nm,0.7s,baz=46,slow=6.4,SNR=4.3							
ZALV	**Zalesovo Beam**	**57.12**	**324**	P		**P**	**05 50 55.1**	**-1.7**
ZALV	**Zalesovo Beam**	**57.12**	**324**	P		**P**	**05 50 55.1**	**-1.7**
	0.5nm,0.5s,baz=28,slow=6.5,SNR=3.2							
AKASG	**Malin Array Be**	**68.86**	**359**	P		**P**	**05 52 13.9**	**-0.7**
AKASG	**Malin Array Be**	**68.86**	**359**	P		**P**	**05 52 13.9**	**-0.7**
	0.3nm,0.4s,baz=353,slow=5.3,SNR=3.6							

MEX 19 06:09:34.6±0.9, 15°.85N×98°.55W, h5km, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.67**	**37**	*i* P	Pg	06 09 45.9	-1.7
PNIG				*i* S	Sg	06 09 56.2	-0.2
UTMO	**Huajuapan**	**2.09**	**20**	*i* P	Pn	06 10 07.9	-2.7
UTMO				*i* S	Sn	06 10 33.4	-4.0
HUIG	**Huatulco**	**2.35**	**92**	*i* P	Pn	06 10 11.2	-2.7
HUIG				*i* P	Pb	06 10 11.6	-5.8
HUIG				*i* S	Sn	06 10 38.3	-4.8
YAIG	**Yautepec**	**3.04**	**351**	*i* P	Pn	06 10 20.9	-2.7
YAIG				*i* S	Sn	06 10 57.6	-2.9

AUST 19 06:16:03.7±7.2, 38°.37S×145°.85E, h20km, Error ellipse: s-maj=1.2km s-min=1.0km az=237.0, Near southeast coast of Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOO	**Toolangi**	**0.85**	**340**	P	Pb	06 16 18.4	-1.4
	baz=0.8,SNR=427						
TOO				S	Sb	06 16 30.6	-0.2
	baz=0.8,SNR=13						
MILA	**Mila**	**2.93**	**64**	P	Pn	06 16 48.9	-0.4
	baz=2.9,SNR=212						
ARPS	**Mount Arapiles**	**3.56**	**295**	P	Pn	06 16 58.0	+0.1
	baz=3.6,SNR=20						
CNB	**Canberra Magne**	**4.15**	**44**	P	Pn	06 17 06.3	+0.1
	baz=4.2,SNR=7.5						
MOO	**Moorlands**	**4.19**	**166**	P	Pn	06 17 05.8	-0.9
	baz=4.2,SNR=5.3						
YNG	**Young**	**4.55**	**28**	P	Pn	06 17 11.7	+0.1
	baz=4.6,SNR=17						
STKA	**Stephens Creek**	**7.36**	**330**	P	Pn	06 17 50.7	+0.7
	baz=7.4,SNR=3.6						

AUST 19 06:24:18.3, 6°.98S×129°.54E, h100km
NEIC 19 06:24:18.2±2.6, 6°.93S×129°.70E, h105km±25km, mb4.5/7, Error ellipse: s-maj=19.1km s-min=15.7km az=52.0
ISCJB 19 06:24:20.5±0.4, 7°.01S±0°.03×130°.03E±0°.05, h150km, mb4.1/11, Error ellipse: s-maj=6.8km s-min=4.1km az=167.2
IDC 19 06:24:22.8±3.8, 7°.12S×129°.46E, h147km±31km, mb4.0/8, mb1 4.0/10, mb1mx3.8/22, mbtmp4.0/10, Error ellipse: s-maj=77.1km s-min=16.1km az=69.0
ISC 19 06:24:22.0±0.6, 7°.07S±0°.05×130°.05E±0°.06, h150km, n50, σ2^{s}38/55, mb4.2/10, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.67**	**28**	P	**Pn**	**06 25 30.9**	**-0.3**
	baz=4.9,SNR=8.2						
FAKI				S	**Sn**	**06 26 22.0**	**-3.0**
	baz=4.9,SNR=20						
MTN	**Manton Dam**	**5.83**	**170**	S	**Sn**	**06 26 51.7**	**-0.9**
	baz=29,SNR=15						
MTN	**Manton Dam**	**5.83**	**170**	P	**Pn**	**06 25 48.3**	**+1.7**
	baz=6.1,SNR=191						
MTN				S	**Sn**	**06 26 51.7**	**-0.9**
	baz=6.1,SNR=15						
KDU	**Kakadu**	**6.07**	**157**	S	**Sn**	**06 26 59.2**	**+1.0**
	baz=28,SNR=8.4						
KDU	**Kakadu**	**6.07**	**157**	P	**Pn**	**06 25 51.9**	**+2.3**
	baz=6.4,SNR=240						
KDU				S	**Sn**	**06 26 59.2**	**+1.0**
	baz=6.4,SNR=8.4						
SWI	**Sorong**	**6.29**	**11**	P	**Pn**	**06 25 51.5**	**-1.1**
	baz=6.4,SNR=4.1						
KNRA	**Kununurra**	**8.64**	**188**	P	**Pn**	**06 26 23.2**	**-0.9**
	baz=8.7,SNR=68						
KNRA				S	Sn	06 27 53.2	-7.0
	baz=8.7,SNR=19						
WSI	**Waingapu**	**9.99**	**254**	S	**Sn**	**06 28 31.1**	**-1.5**
	baz=9.5,SNR=5.3						
FITZ	**Fitzroy Crossi**	**11.78**	**201**	*e*Pn	**Pn**	**06 27 02.3**	**-3.2**
	10nm,0.8s						
FITZ				*e*Sn	Sn	06 29 04.9	-11
FITZ	**Fitzroy Crossi**	**11.78**	**201**	P	**Pn**	**06 27 02.2**	**-3.2**
	1.8nm,0.3s,baz=32,slow=10,SNR=46						
FITZ				S	Sn	06 29 04.4	-11
	3.4nm,0.3s,baz=75,slow=20,SNR=7.5						
FITZ	**Fitzroy Crossi**	**11.78**	**201**	P	**Pn**	**06 27 03.0**	**-2.5**
	baz=12,SNR=22						
FITZ				S	Sn	06 29 03.5	-12
	baz=12,SNR=4.4						
WRAB	**Tennant Creek**	**13.45**	**162**	*e*Pn	**Pn**	**06 27 26.1**	**-0.9**
	8.6nm,0.6s						
WRAB				*e*Sn	**Sn**	**06 29 52.0**	**-3.9**
WRA	**Warramunga Arr**	**13.45**	**162**	P	**Pn**	**06 27 26.3**	**-0.8**
WRA				S	Sn	06 29 49.1	-7.0
WRA	**Warramunga Arr**	**13.45**	**162**	P	**Pn**	**06 27 26.3**	**-0.8**
	1.1nm,0.3s,baz=339,slow=13,SNR=39						
WRA				S	Sn	06 29 49.1	-7.0
	3.3nm,0.3s,baz=340,slow=21,SNR=5.8						
COEN	**Coen**	**14.60**	**119**	*e*P	**P**	**06 27 46.0**	**+2.0**
	43nm,0.4s						
COEN				*e*S	**Sn**	**06 30 20.1**	**-3.6**
COEN	**Coen**	**14.60**	**119**	P	P	06 27 46.8	+2.9
	baz=15,SNR=28						
COEN				S	**Sn**	**06 30 21.6**	**-2.1**
	baz=15,SNR=5.8						

PALU	**Palau**	**14.98**	**17**	P		Pn	06 27 36.8	-10
	baz=15,SNR=11							
QIS	**Mount Isa**	**16.29**	**146**	P		**P**	**06 28 06.6**	**+4.0**
	baz=17,SNR=10							
QIS				S		**S**	**06 30 56.5**	**-7.0**
	baz=17,SNR=5.8							
AS31	**Alice Springs**	**16.91**	**168**	*e*P		**Pn**	**06 28 12.3**	**+2.4**
AS31				*e*S		**S**	**06 31 13.4**	**-4.6**
ASAR	**Alice Springs**	**16.91**	**168**	P		**Pn**	**06 28 11.8**	**+1.9**
ASAR				S		**S**	**06 31 12.3**	**-5.7**
ASAR				ScP		**ScP**	**06 36 08.8**	**-0.1**
ASAR	**Alice Springs**	**16.91**	**168**	P		**Pn**	**06 28 11.8**	**+1.9**
	2.4nm,0.3s,baz=338,slow=9.0,SNR=118							
ASAR				S		**S**	**06 31 12.3**	**-5.7**
	0.8nm,0.3s,baz=341,slow=24,SNR=6.8							
ASAR				ScP		**ScP**	**06 36 08.8**	**-0.1**
	baz=332,slow=2.1,SNR=4.9							
MBWA	**Marble Bar**	**17.20**	**214**	*e*P		**Pn**	**06 28 13.0**	**-0.3**
	5.6nm,0.6s							
MBWA				*e*S		S	06 31 11.7	-13
MTSU	**Mount Surprise**	**17.72**	**130**	S		**S**	**06 31 35.5**	**+0.5**
	baz=18,SNR=4.5							
MEEK	**Meekatharra**	**22.29**	**208**	P		**P**	**06 29 07.6**	**+0.3**
	baz=22,SNR=4.5							
QLP	**Quilpie**	**23.64**	**147**	P		P	06 29 24.1	+4.4
	baz=24,SNR=8.2							
FORT	**Forrest**	**23.66**	**184**	*e*P		**P**	**06 29 21.4**	**+1.6**
	25nm,0.8s							
FORT	**Forrest**	**23.66**	**184**	P		**P**	**06 29 21.8**	**+1.9**
	baz=24,SNR=14							
MORW	**Morawa**	**25.56**	**209**	P		**P**	**06 29 40.0**	**+2.9**
	baz=26,SNR=3.3							
BBOO	**Buckleboo**	**26.21**	**168**	P		P	06 29 48.1	+5.1
	baz=26,SNR=14							
STKA	**Stephens Creek**	**26.93**	**158**	*e*P		**P**	**06 29 52.4**	**+3.0**
	0.6nm,0.4s							
STKA	**Stephens Creek**	**26.93**	**158**	P		**P**	**06 29 51.4**	**+2.0**
	2.9nm,0.4s,baz=327,slow=9.8,SNR=5.8							
STKA	**Stephens Creek**	**26.93**	**158**	P		P	06 29 56.2	+6.8
	baz=27,SNR=4.3							
MK31	**Makanchi Array**	**68.31**	**327**	*e*P		**P**	**06 35 06.2**	**-0.8**
MKAR	**Makanchi Array**	**68.31**	**327**	P		**P**	**06 35 06.6**	**-0.4**
MKAR	**Makanchi Array**	**68.31**	**327**	P		**P**	**06 35 06.6**	**-0.4**
	3.9nm,0.5s,baz=115,slow=8.6,SNR=45							
AAK	**Ala-Archa**	**70.63**	**320**	*e*P		**P**	**06 35 21.9**	**+0.4**
	1.5nm,0.4s							
ZALV	**Zalesovo Beam**	**71.67**	**334**	P		**P**	**06 35 26.5**	**-0.7**
ZALV	**Zalesovo Beam**	**71.67**	**334**	P		**P**	**06 35 26.5**	**-0.7**
	2.1nm,0.3s,baz=122,slow=5.4,SNR=2.5							
VNDA	**Vanda**	**72.37**	**173**	P		P	06 35 33.2	+2.1
VNDA	**Vanda**	**72.37**	**173**	P		P	06 35 33.2	+2.1
	0.8nm,0.8s,baz=337,slow=7.4,SNR=4.4							
KURBB	**Kurchatov Arra**	**72.60**	**328**	P		**P**	**06 35 32.2**	**-0.6**
	2.9nm,0.6s,baz=129,slow=4.9,SNR=38							
KURK	**Kurchatov**	**72.61**	**329**	*e*P		**P**	**06 35 32.1**	**-0.8**
	4.2nm,0.9s							
BVAR	**Borovoye Array**	**78.15**	**328**	P		**P**	**06 36 03.8**	**-0.7**
BVAR	**Borovoye Array**	**78.15**	**328**	P		**P**	**06 36 03.8**	**-0.7**
	0.8nm,0.4s,baz=126,slow=7.5,SNR=7.0							
AKTO	**Aktyubinsk**	**84.16**	**322**	P		**P**	**06 36 36.4**	**0.0**
AKTO	**Aktyubinsk**	**84.16**	**322**	P		**P**	**06 36 36.4**	**0.0**
	0.8nm,0.3s,baz=63,slow=4.5,SNR=4.1							
BRTR	**Keskin Array B**	**99.40**	**309**	P		**Pdif**	**06 37 46.0**	**-1.9**
BRTR	**Keskin Array B**	**99.40**	**309**	P		**Pdif**	**06 37 46.0**	**-1.9**
	0.3nm,0.4s,baz=74,slow=4.5,SNR=2.4							
TORD	**Torodi Ar. Bea**	**128.87**	**281**	PKP		**PKPdf**	**06 43 13.4**	**+0.5**
TORD	**Torodi Ar. Bea**	**128.87**	**281**	PKP		**PKPdf**	**06 43 13.4**	**+0.5**
	0.5nm,1.0s,baz=67,slow=2.0,SNR=4.2							

ISK 19 06:33:36.9, 37°.27N×28°.18E, h5km, MD2.6
DDA 19 06:33:37.8, 37°.22N×28°.14E, h7km, MD2.9
CSEM 19 06:33:38.4±0.3, 37°.24N×28°.19E, h2km, MD2.6, Error ellipse: s-maj=8.2km s-min=4.5km az=37.0
ISC 19 06:33:37.7±1.0, 37°.25N±0°.04×28°.19E±0°.03, h6km±9km, n20, σ1^{s}10/34, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.14**	**147**	*e*PG	**Pg**	**06 33 40.7**	**0.0**
YER				*e*SG	**Sg**	**06 33 43.3**	**+0.7**
YER	**Yerkesik**	**0.14**	**147**	*e*Pg	**Pg**	**06 33 40.7**	**0.0**
YER				*e*Sg	**Sg**	**06 33 43.3**	**+0.7**
MLSB	**Milas**	**0.33**	**277**	*e*PG	**Pg**	**06 33 44.8**	**+0.7**
MLSB				*e*SG	**Sb**	**06 33 50.2**	**-1.4**
MLSB	**Milas**	**0.33**	**277**	*e*Pg	**Pg**	**06 33 44.8**	**+0.7**
MLSB				*e*Sg	**Sb**	**06 33 50.2**	**-1.4**
AYDN	**Tasoluk**	**0.47**	**329**	*i* P	**Pb**	**06 33 48.1**	**-0.4**
AYDN				*i* S	**Sb**	**06 33 55.2**	**-0.6**
AYDN	**Tasoluk**	**0.47**	**329**	*i* P	**Pb**	**06 33 48.1**	**-0.4**
AYDN				*i* S	**Sb**	**06 33 55.2**	**-0.6**
TURN	**Turunc**	**0.51**	**139**	*i* P	**Pg**	**06 33 46.7**	**-0.7**
TURN				*i* S	**Sg**	**06 33 52.7**	**-1.4**
TURN	**Turunc**	**0.51**	**139**	*i* P	**Pg**	**06 33 46.7**	**-0.7**
TURN				*i* S	**Sg**	**06 33 52.7**	**-1.4**
DALY	**Dalyan (Mu¨la**	**0.57**	**139**	*e*PG	**Pb**	**06 33 49.7**	**-0.5**
DALY				*e*SG	**Sb**	**06 33 58.6**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.57**	**139**	*e*Pg	**Pb**	**06 33 49.7**	**-0.5**
DALY				*e*Sg	**Sb**	**06 33 58.6**	**0.0**
BODT	**Bodrum**	**0.72**	**255**	*e*PG	**Pg**	**06 33 52.2**	**+0.5**
BODT				*e*SG	**Sb**	**06 34 02.7**	**-0.2**
BODT	**Bodrum**	**0.72**	**255**	*e*Pg	**Pg**	**06 33 52.2**	**+0.5**
BODT				*e*Sg	**Sb**	**06 34 02.7**	**-0.2**
DNZL	**Cakiroluk**	**0.81**	**57**	*i* P	**Pb**	**06 33 53.9**	**-0.4**
DNZL				*i* S	**Sn**	**06 34 07.3**	**-1.1**
FETY	**Fethiye**	**0.95**	**130**	*e*PG	**Pn**	**06 33 57.1**	**-0.5**
FETY	**Fethiye**	**0.95**	**130**	*e*Pg	**Pn**	**06 33 57.1**	**-0.5**
GOLH	**Golhisar**	**1.10**	**90**	*i* P	**Pn**	**06 33 59.5**	**-0.3**
GOLH				*i* S	**Sn**	**06 34 19.1**	**+3.8**
KULA	**Kula-Manisa**	**1.31**	**16**	*e*PN	**Pn**	**06 34 02.6**	**-0.1**
KULA	**Kula-Manisa**	**1.31**	**16**	*e*Pn	**Pn**	**06 34 02.6**	**-0.1**
AKAS	**Kas**	**1.53**	**131**	*i* P	**Pg**	**06 34 08.0**	**+1.0**
AKAS				*i* S	**Sg**	**06 34 29.4**	**+2.5**
VYHS	**Vyhne**	**13.15**	**332**	*e*PG		06 50 10.3	
VYHS				*e*SG		06 50 11.3	

IDC 19 06:34:20.2±1.0, 56°.02N×164°.32E, h0km, mb3.3/8, mb1 3.7/9, mb1mx3.5/30, mbtmp3.4/9, ML3.3/1, Error ellipse: s-maj=26.0km s-min=17.0km az=10.0
MOS 19 06:34:21.8±0.5, 56°.03N×164°.80E, h11km, mb4.1/2, Error ellipse: s-maj=14.4km s-min=13.1km az=47.4
KRSC 19 06:34:24.3±0.6, 55°.91N×164°.52E, h10km±10km, ML4.2
ISC 19 06:34:22.8±3.0, 56°.01N±0°.05×164°.73E±0°.04, h14km±20km, n58, σ1^{s}66/89, mb3.5/8, 1C, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.07**	**138**	PN	**Pb**	**06 34 42.7**	**-0.3**
BKI				S	**Sb**	**06 34 56.3**	**-0.6**
BKI	**Bering**	**1.07**	**138**	P	**Pb**	**06 34 42.7**	**-0.3**
BKI				S	**Sb**	**06 34 56.3**	**-0.6**
KBTR	**Krutoberegovo**	**1.09**	**281**	PN	**Pb**	**06 34 42.3**	**-1.1**
KBTR				S	**Sb**	**06 34 56.6**	**-0.9**
KBTR	**Krutoberegovo**	**1.09**	**281**	P	**Pb**	**06 34 42.3**	**-1.1**
KBTR				S	**Sb**	**06 34 56.6**	**-0.9**
KBG	**Krutoberegovo**	**1.16**	**283**	PN	**Pn**	**06 34 43.8**	**-0.8**
KBG				S	**Sb**	**06 34 58.9**	**-0.6**
KBG	**Krutoberegovo**	**1.16**	**283**	P	**Pn**	**06 34 43.8**	**-0.8**
KBG				S	**Sb**	**06 34 58.9**	**-0.6**
SMKR	**Semkarok**	**1.91**	**289**	P	**Pn**	**06 34 55.7**	**+0.7**
SMKR				S	**Sn**	**06 35 19.1**	**+0.3**
BDR	**Baidarnaya**	**2.04**	**287**	P	**Pn**	**06 34 57.9**	**+1.1**
BDR				S	**Sn**	**06 35 22.7**	**+0.5**
SRKR	**Sorokina**	**2.09**	**290**	P	**Pn**	**06 34 58.5**	**+1.1**
SRKR				S	**Sn**	**06 35 22.8**	**-0.5**
ZLN	**Zelenaya**	**2.21**	**272**	P	**Pn**	**06 35 00.9**	**+1.8**
ZLN				S	**Sn**	**06 35 26.9**	**+0.7**
CIRR	**Tsirk**	**2.24**	**274**	P	**Pn**	**06 35 01.2**	**+1.7**
MKZ	**Mys Kozlova**	**2.25**	**231**	PN	**Pn**	**06 35 00.1**	**+0.6**
MKZ				S	**Sn**	**06 35 26.0**	**-1.1**
MKZ	**Mys Kozlova**	**2.25**	**231**	P	**Pn**	**06 35 00.1**	**+0.6**
MKZ				S	**Sn**	**06 35 26.0**	**-1.1**
LGNR	**Loginova**	**2.27**	**274**	P	**Pn**	**06 35 01.9**	**+1.8**
BZGR	**Bezymyannyi-Gr**	**2.27**	**270**	P	**Pn**	**06 35 01.7**	**+1.7**
KLY	**Klyuchi**	**2.30**	**279**	PN	**Pn**	**06 35 00.1**	**-0.2**
KLY				S	**Sn**	**06 35 26.1**	**-2.3**
KLY	**Klyuchi**	**2.30**	**279**	P	**Pn**	**06 35 00.1**	**-0.2**
KLY				S	**Sn**	**06 35 26.1**	**-2.3**
KRSR	**Krestovskiy**	**2.34**	**277**	P	**Pn**	**06 35 01.9**	**+0.9**
BZWR	**Bezymyannyi-We**	**2.38**	**271**	P	**Pn**	**06 35 03.3**	**+1.8**
BZWR				S	**Sn**	**06 35 31.8**	**+1.2**

BZMR	**Bezymyannaya**	**2.38**	**270**	P		**Pn**	**06 35 03.2**	**+1.6**
BZMR				S		**Sn**	**06 35 31.8**	**+1.1**
KIRR	**Kirishev**	**2.47**	**271**	P		**Pn**	**06 35 04.5**	**+1.8**
KIRR				S		**Sn**	**06 35 33.6**	**+0.9**
KPT	**Kopyto**	**2.53**	**271**	P		**Pn**	**06 35 05.6**	**+2.0**
KMNR	**Kamenistaya**	**2.54**	**266**	P		**Pn**	**06 35 05.5**	**+1.8**
TUMR	**Tumrok**	**2.70**	**256**	P		**Pn**	**06 35 08.1**	**+2.2**
TUMR				S		**Sn**	**06 35 39.3**	**+0.9**
KOZR	**Kozyr**	**2.71**	**273**	PN		**Pn**	**06 35 08.7**	**+2.7**
KOZR				S		**Sn**	**06 35 40.4**	**+1.8**
KOZ	**Kozyrevsk**	**2.73**	**273**	P		**Pn**	**06 35 08.7**	**+2.5**
KOZ				S		**Sn**	**06 35 40.4**	**+1.5**
SRDR	**Sredinnyy**	**2.82**	**278**	P		**Pn**	**06 35 09.5**	**+2.0**
SRDR				S		**Sn**	**06 35 42.3**	**+1.0**
ESO	**Esso**	**3.39**	**271**	PN		**Pn**	**06 35 16.8**	**+1.5**
ESO	**Esso**	**3.39**	**271**	P		**Pn**	**06 35 16.8**	**+1.5**
SPN	**Mys Shipunski**	**4.00**	**225**	S		**Sn**	**06 36 08.0**	**-2.3**
NLC	**Nalytchevo**	**4.23**	**230**	S		**Sn**	**06 36 14.9**	**-1.0**
SDLR	**Sedlovina**	**4.36**	**234**	P		**Pn**	**06 35 30.9**	**+2.2**
SDLR				S		**Sn**	**06 36 19.9**	**+0.6**
KRER	**Koryakskii**	**4.40**	**235**	P		**Pn**	**06 35 31.8**	**+2.4**
KRER				S		**Sn**	**06 36 21.2**	**+0.7**
SMAR	**Somma**	**4.41**	**234**	P		**Pn**	**06 35 31.7**	**+2.3**
SMAR				S		**Sn**	**06 36 20.1**	**-0.5**
UGLR	**Uglovaya**	**4.43**	**233**	P		**Pn**	**06 35 31.9**	**+2.2**
UGLR				S		**Sn**	**06 36 20.0**	**-1.1**
AVH	**Avacha**	**4.43**	**234**	P		**Pn**	**06 35 32.1**	**+2.4**
AVH				S		**Sn**	**06 36 20.4**	**-0.7**
KOK	**Koryaka**	**4.46**	**235**	P		**Pn**	**06 35 32.4**	**+2.3**
KOK				S		**Sn**	**06 36 22.0**	**+0.1**
GNL	**Ganaly**	**4.55**	**242**	P		**Pn**	**06 35 34.0**	**+2.6**
PET	**Petropavlovsk**	**4.63**	**232**	*e*PN		**Pn**	**06 35 34.3**	**+2.0**
PET	**Petropavlovsk**	**4.63**	**232**	P		**Pn**	**06 35 34.3**	**+2.0**
PET				S		**Sn**	**06 36 25.1**	**-0.8**
PETK	**Petropavlovsk-**	**5.02**	**238**	PN		**Pn**	**06 35 39.9**	**+2.3**
PETK							06 36 41.3	
PETK				pmax	pmax			
	comp=Z,2.0nm,0.3s							
PETK				smax	smax			
	comp=N,2.0nm,0.3s							
PETK	**Petropavlovsk-**	**5.02**	**238**	Pn		**Pn**	**06 35 39.9**	**+2.3**
	comp=N,1.9nm,0.3s,baz=79,slow=16,SNR=27							
PETK				Sn		Sn	06 36 41.3	+5.9
	comp=N,1.8nm,0.3s,baz=43,slow=26,SNR=6.9							
RUS	**Russkaya**	**5.11**	**228**	PN		**Pn**	**06 35 40.6**	**+1.7**
RUS	**Russkaya**	**5.11**	**228**	P		**Pn**	**06 35 40.6**	**+1.7**
RUS				S		**Sn**	**06 36 35.2**	**-2.4**
MTVR	**Mutnovka**	**5.21**	**230**	P		**Pn**	**06 35 42.8**	**+2.3**
MTVR				S		**Sn**	**06 36 39.4**	**-1.0**
ASAK	**Asacha**	**5.41**	**231**	P		**Pn**	**06 35 46.1**	**+3.1**
ASAK				S		**Sn**	**06 36 45.0**	**-0.1**
FX1	**Attu Island--F**	**5.83**	**119**	Pn		**Pn**	**06 35 49.2**	**+0.4**
	comp=N,2.6nm,0.3s,baz=320,slow=20,SNR=6.5							
FX1				Sn		**Sn**	**06 36 51.1**	**-4.3**
	comp=N,2.1nm,0.3s,baz=57,slow=21,SNR=7.7							
MIPR	**Malaya Ipel'ka**	**5.99**	**235**	P		**Pn**	**06 35 53.6**	**+2.6**
ILAR	**Eielson Array**	**24.85**	**50**	P		**P**	**06 39 45.3**	**+0.9**
	comp=N,0.3nm,0.8s,baz=260,slow=8.1,SNR=4.3							
MJAR	**Matsushiro Arr**	**26.46**	**234**	P		**P**	**06 39 57.3**	**-2.0**
	comp=N,0.6nm,0.2s,baz=17,slow=7.1,SNR=3.1							
YKA	**Yellowknife Ar**	**39.19**	**46**	P		**P**	**06 41 49.8**	**0.0

comp=N,121nm,0.3s,baz=84,slow=13,SNR=11
EIL Elat 5.07 331 Pn Pn 06 39 47.7 -0.8
EIL Elat 5.07 331 Pg Pb 06 40 02.2 +1.0
MBRI Mt Berech 5.19 332 Pn Pn 06 39 49.3 -1.0
HRFI Mount Harif 5.35 334 Pn Pn 06 39 51.4 -1.0
GRB Gharib 5.37 305 P Pn 06 39 51.3 -1.4
baz=307
GRB Gharib 5.37 305 P Pn 06 39 51.3 -1.4
HNKL Nakhl 5.75 325 P Pn 06 39 56.6 -1.3
baz=326
HNKL AMP 06 41 00.0
comp=N,2270µm,0.8s,logA/T=6.5,baz=326
HNKL Nakhl 5.75 325 P Pn 06 39 56.6 -1.3
ZFRI Zfri 5.76 337 Pn Pn 06 39 57.2 -0.9
RMNI Mount Ramon 5.96 334 Pn Pn 06 39 59.8 -1.0
DSI Dead Sea 6.64 342 Pn Pn 06 40 10.9 +0.7
HHAG Hagoal 6.87 314 P Pn 06 40 13.6 +0.3
baz=316
HHAG Hagoal 6.87 314 P Pn 06 40 13.6 +0.3
ASF Jabal al Asfar 6.95 354 Pn Pn 06 40 13.6 -0.9
ASF Pg Pg 06 40 37.9 -7.7
ASF Lg Lg 06 42 06.7
ASF Jabal al Asfar 6.95 354 Pn Pn 06 40 13.6 -0.9
comp=N,2.6nm,0.3s,baz=44,slow=12,SNR=19
ASF Pg Pg 06 40 37.9 -7.7
comp=N,4.6nm,0.3s,baz=34,slow=16,SNR=6.9
ASF Lg Lg 06 42 06.7
comp=N,53nm,0.3s,baz=209,slow=19,SNR=13
RAYN Ar Rayn 7.27 102 P Pn 06 40 19.6 +0.8
RAYN Ar Rayn 7.27 102 P Pn 06 40 19.6 +0.8
SALA Sala 7.50 353 *eP* **Pn 06 40 20.4 -1.7**
SALA *eS* Sn 06 41 31.3 -16
SALA AML AML 06 42 37.4
comp=N,2µm,0.6s
SALA AML AML 06 42 44.1
comp=E,223nm,0.8s
SALA AML AML 06 42 53.3
comp=Z,1µm,0.7s
TCHB Talchebab 7.57 348 *eP* **Pn 06 40 22.1 -0.8**
TCHB *eS* Sn 06 41 34.2 -15
TCHB AML AML 06 42 38.1
comp=N,2µm,0.7s
TCHB AML AML 06 42 43.9
comp=Z,2µm,0.5s
TCHB AML AML 06 42 46.2
comp=E,3µm,0.7s
TCHB Talchebab 7.57 348 *eP* **Pn 06 40 22.1 -0.8**
SNR=45
ZALF Zalf 7.66 357 *eP* **Pn 06 40 22.6 -1.6**
ZALF *eS* Sn 06 41 34.7 -16
ZALF AML AML 06 42 38.4
comp=E,2µm,0.7s
ZALF AML AML 06 42 50.1
comp=Z,873nm,0.7s
ZALF AML AML 06 42 50.5
comp=N,810nm,0.7s
MMAI Mount Meron Ar 8.02 346 Pn Pn 06 40 27.7 -1.4
MMAI Lg Lg 06 42 42.0
MMAI Mount Meron Ar 8.02 346 Pn Pn 06 40 27.7 -1.4
comp=N,12nm,0.3s,baz=153,slow=15,SNR=24
MMAI Lg Lg 06 42 42.0
comp=N,38nm,0.3s,baz=158,slow=27,SNR=4.2
MMAI LR LR 06 43 57.1
comp=N,810nm,20.1s,baz=110,slow=41
MMAI Mount Meron Ar 8.02 346 Pn Pn 06 40 27.7 -1.4
MMAI Lg Lg 06 42 42.0
TOTH TOTAH 8.18 352 *eP* **Pn 06 40 30.1 -1.2**
TOTH *eS* Sn 06 41 48.0 -16
TOTH TOTAH 8.18 352 *eP* **Pn 06 40 30.1 -1.2**
SNR=45
BRBR Barbar 8.29 349 *eP* **Pn 06 40 32.1 -0.9**
BRBR *eS* Sn 06 41 50.9 -16
BRBR AML AML 06 43 05.8
comp=Z,467nm,0.7s
BRBR AML AML 06 43 08.8
comp=E,566nm,0.7s
BRBR AML AML 06 43 09.6
comp=N,998nm,0.7s
BRBR Barbar 8.29 349 *eP* **Pn 06 40 32.1 -0.9**
SNR=45
QASN Qassioun 8.36 351 *eP* **Pn 06 40 33.0 -0.9**
QASN *eS* Sn 06 41 52.2 -16
QASN AML AML 06 43 04.1
comp=Z,1µm,0.8s
QASN AML AML 06 43 14.8
comp=N,2µm,0.8s
QASN AML AML 06 43 18.5
comp=E,972nm,0.7s
QASN Qassioun 8.36 351 *eP* **Pn 06 40 33.0 -0.9**
SNR=45
RCY Rachaya 8.40 349 *eP* Pb 06 41 07.0 +8.9
BHL Bhannes 8.83 349 *eP* Pb 06 41 11.5
HWQ Hawqa 9.14 351 *eP* Pb 06 41 15.4
RST Umm Al-Ruwaisa 9.25 61 *eP* **Pn 06 40 45.1 -0.8**
RST Umm Al-Ruwaisa 9.25 61 *eP* **Pn 06 40 45.1 -0.8**
NAY Al-Naaiem 9.34 63 *eP* **Pn 06 40 46.3 -0.9**
NAY AML AML 06 42 48.3
comp=Z,32nm,0.6s
NAY Al-Naaiem 9.34 63 *eP* **Pn 06 40 46.3 -0.9**
RDF Al-Radifah 9.47 65 *eP* **Pn 06 40 48.2 -0.7**
RDF AML AML 06 42 45.9
comp=Z,78nm,0.5s
RDF Al-Radifah 9.47 65 *eP* **Pn 06 40 48.2 -0.7**
MIB Mutribah 9.64 60 AML AML 06 42 43.2
comp=Z,96nm,0.6s
BHD Baghdad 9.87 34 *ex* **Pn 06 40 56.0 +1.6**
BHD *ex* x 06 42 49.0
IDHR Dehrash 12.03 36 *eP* Pn 06 41 19.4 -4.8
IDHR Dehrash 12.03 36 P Pn 06 41 19.3 -4.9
IDHR Dehrash 12.03 36 P Pn 06 41 19.3 -4.9
ILIN Lien 12.51 37 *eP* **Pn 06 41 27.8 -3.0**
ILIN Lien 12.51 37 *eP* **Pn 06 41 27.8 -3.0**
LKFR Kufra 13.26 268 *i* P **Pn 06 41 42.6 +1.7**
comp=Z,87nm,1.9s,SNR=45
ISRV Sarvestan 14.26 70 *eP* **Pn 06 41 53.6 -1.2**
IPAR Pars 14.32 68 *eP* **Pn 06 41 54.7 -0.9**
IKLH Kolahrood 14.49 53 *eP* **Pn 06 41 56.7 -1.2**
IRAZ Razeghan 14.59 43 *eP* **Pn 06 41 58.2 -1.0**
IRAZ Razeghan 14.59 43 P **Pn 06 41 58.2 -1.0**
ISHB Shabestar 14.61 25 *eP* Pn 06 41 55.7 -3.8
IZEF Zefreh 14.84 56 *eP* **Pn 06 42 03.4 +0.7**
BR131 Keskin Array S 14.85 348 *ePn* P 06 42 05.3 -3.2
comp=Z,12nm,1.1s
BR131 Keskin Array S 14.85 348 *ePn* P 06 42 05.3 -3.2
comp=Z,12nm,1.1s
BRTR Keskin Array B 14.85 348 Pn **Pn 06 42 02.9 +0.2**
BRTR Keskin Array B 14.85 348 Pn **Pn 06 42 02.9 +0.2**
comp=Z,0.1nm,0.3s,baz=152,slow=14,SNR=2.4
BRTR LR LR 06 47 59.0
comp=Z,506nm,20.4s,baz=145,slow=38
BRTR Keskin Array B 14.85 348 Pn **Pn 06 42 02.9 +0.2**
IR5 Iran Long-Peri 14.88 45 *eP* **Pn 06 42 03.0 0.0**
ANTO Ankara 15.17 345 *eP* **Pn**
ANTO pmax pmax
comp=Z,33nm,1.1s
ANTO Ankara 15.17 345 *ePn* **Pn 06 42 08.0 +1.1**
comp=Z,33nm,1.1s
ANTO Ankara 15.17 345 ⇓P **P 06 42 13.9 +1.9**
SNR=5.5
ANTO Ankara 15.17 345 *ePn* **Pn 06 42 08.0 +1.1**
comp=Z,33nm,1.1s
ANTO Ankara 15.17 345 P **P 06 42 13.9 +1.9**
SNR=5.5
IGZV Ghazvin 15.41 41 *eP* **Pn 06 42 05.9 -4.3**
ISAD Sadrabad 15.49 61 *eP* **P 06 42 13.2 -2.6**
ISAD Sadrabad 15.49 61 P **P 06 42 13.2 -2.6**
IVRN Varamin 15.50 48 *eP* **Pn 06 42 09.6 -1.4**
GNI Garni 15.98 20 LR LR 06 49 14.6
comp=Z,923nm,20.7s,baz=197,slow=40
GNI Garni 15.98 20 *eP* **P 06 42 19.9 -1.2**
comp=Z,19nm,1.0s
IDMV Damavand 16.04 47 *eP* Pn 06 42 13.6 -4.8
ASHO Ashiyiah 16.61 88 ⇑P **Pn 06 42 26.1 +0.5**
SNR=6.8
ASHO Ashiyiah 16.61 88 P **Pn 06 42 26.1 +0.5**
SNR=6.8
HATD Hatta, Dubai 16.66 88 ⇑P **P 06 42 27.2 -1.4**
SNR=9.0
HATD Hatta, Dubai 16.66 88 P **P 06 42 27.2 -1.4**
SNR=9.0
ARQ Araqi 17.22 92 ⇓P **P 06 42 35.4 +0.7**
SNR=7.2
ARQ Araqi 17.22 92 P **P 06 42 35.4 +0.7**
SNR=7.2
IANJ Anjilo 17.25 50 *eP* **Pn 06 42 33.7 -0.1**
IANJ Anjilo 17.25 50 *eP* **Pn 06 42 33.7 -0.1**
HOQ Hoqain 17.89 91 P **P 06 42 43.2 +1.1**
SNR=7.7
HOQ Hoqain 17.89 91 P **P 06 42 43.2 +1.1**
SNR=7.7
LZLA Zalla 18.31 285 *i* P **P 06 42 47.5 +0.7**
comp=Z,49nm,1.0s,SNR=35
SMDO Samad 18.65 92 ⇑P **Pn 06 42 52.0 +1.1**
SNR=6.0
SMDO Samad 18.65 92 P **Pn 06 42 52.0 +1.1**
SNR=6.0
JMDO Jabal Madar 18.84 94 ⇓P **Pn 06 42 54.1 +1.0**
SNR=7.4
JMDO Jabal Madar 18.84 94 P **Pn 06 42 54.1 +1.0**
SNR=7.4
KBZ Khabaz 18.92 12 P **Pn 06 42 54.0 +0.1**
KBZ MLR MLR
comp=Z,501nm,20.1s
KBZ Khabaz 18.92 12 P **Pn 06 42 54.0 +0.1**
KBZ Khabaz 18.92 12 P **Pn 06 42 54.0 +0.1**
comp=Z,0.1nm,0.3s,baz=160,slow=4.1,SNR=6.7
KBZ LR LR 06 50 58.7
comp=Z,501nm,20.1s,baz=193,slow=40
KBZ Khabaz 18.92 12 P **Pn 06 42 54.0 +0.1**
MAK Makhachkala 19.41 22 *eP* **Pn 06 43 01.1 +1.3**
MAK pmax pmax
comp=Z,34nm,0.3s
MAK MLR MLR
comp=Z,1µm,17.0s
ANN Anapa 19.52 359 *eP* **Pn 06 43 00.7 -0.4**
ANN *eS* **S 06 46 41.6 +1.4**
ANN pmax pmax
comp=Z,40nm,1.0s
ANN MLR MLR
comp=Z,321nm,17.0s
ANN Anapa 19.52 359 *eP* **Pn 06 43 00.7 -0.4**
comp=Z,40nm,1.0s
SIM Simferopol' 19.89 352 *i* P **Pn 06 43 06.6 +1.1**
SIM pmax pmax
comp=Z,41nm,0.4s
LJFR Jufra 19.89 286 *i* P **Pn 06 43 05.0 -0.8**
comp=Z,65nm,1.4s,SNR=35
TIRR Tirgusor 20.62 341 ⇓*i*P **P 06 43 12.2 +0.3**
TIRR Tirgusor 20.62 341 ⇓*i*P **P 06 43 12.2 +0.3**
LUMB Murzuk 20.75 277 *i* P Pn 06 43 15.6 -0.3
comp=Z,54nm,2.3s,SNR=34
ISHV Shirvan 20.93 49 *eP* **P 06 43 15.0 -0.6**
ISHV Shirvan 20.93 49 P **P 06 43 14.9 -0.6**
IAKL Akhelmad 21.23 53 *eP* **P 06 43 19.8 +0.9**
IPAY Payeh 21.34 53 *eP* **P 06 43 19.2 -0.8**
IPAY Payeh 21.34 53 *eP* **P 06 43 19.2 -0.8**
LSHF Shwairf 21.35 288 *i* P **P 06 43 21.1 +1.2**
comp=Z,65nm,1.4s,SNR=34
CFR Carcaliu 21.36 341 ⇑*i*P **P 06 43 20.6 +0.8**
CFR Carcaliu 21.36 341 ⇑*i*P **P 06 43 20.6 +0.8**
ISRO Mashad 21.63 54 *eP* **P 06 43 24.3 +1.3**
ISRO Mashad 21.63 54 *eP* **P 06 43 24.3 +1.3**
BARS Barje 21.89 327 ⇓*i*P **P 06 43 26.2 +0.6**
MLR Muntele Rosu 22.34 338 P **P 06 43 31.0 +0.5**
MLR Muntele Rosu 22.34 338 ⇑*i*P **P 06 43 32.2 +1.7**
MLR Muntele Rosu 22.34 338 P **P 06 43 31.0 +0.5**
comp=Z,0.7nm,0.7s,baz=205,slow=5.4,SNR=7.4
MLR Muntele Rosu 22.34 338 P **P 06 43 31.0 +0.5**
comp=Z,1.0nm,0.7s
VRI Vrincioaia 22.41 339 ⇓P **P 06 43 31.7 +0.5**
VRI Vrincioaia 22.41 339 ⇓*i*P **P 06 43 31.7 +0.5**
VRI Vrincioaia 22.41 339 P **P 06 43 31.7 +0.5**
PLOR Plostina 22.42 339 ⇓P **P 06 43 32.6 +1.3**
PLOR Plostina 22.42 339 ⇓*i*P **P 06 43 32.6 +1.3**
PLOR Plostina 22.42 339 P **P 06 43 32.6 +1.3**
TIP Timpagrande 22.48 313 *eP* **P 06 43 34.1 +2.0**
comp=Z,280nm,2.5s
TIP Timpagrande 22.48 313 *eP* **P 06 43 34.1 +2.0**
comp=Z,280nm,2.5s
CEL Celeste 22.61 310 *eP* **P 06 43 35.8 +2.4**
comp=Z,38nm,1.3s
CEL Celeste 22.61 310 *eP* **P 06 43 35.8 +2.4**
comp=Z,38nm,1.3s
ARR Arges 22.70 336 ⇑*i*P **P 06 43 36.4 +2.1**
ARR Arges 22.70 336 ⇑*i*P **P 06 43 36.4 +2.1**
TESR Tescani 23.01 340 ⇓*i*P **P 06 43 36.6 -0.9**
TESR Tescani 23.01 340 ⇓*i*P **P 06 43 36.6 -0.9**
LOT Lotru 23.10 334 ⇓*i*P **P 06 43 39.2 +0.7**
LOT Lotru 23.10 334 ⇓*i*P **P 06 43 39.2 +0.7**
CUC Castrocucco 23.53 314 *eP* **P 06 43 43.4 +0.5**
comp=Z,13nm,0.9s
CUC Castrocucco 23.53 314 *eP* **P 06 43 43.4 +0.5**
comp=Z,13nm,0.9s
DIVS Divibare 23.73 327 ⇓*i*P **P 06 43 44.7 -0.1**
BBLS Lazići 23.86 326 ⇓*i*P **P 06 43 45.4 -0.6**
TEKS Tekeris 24.29 327 *eP* **P 06 43 49.8 -0.1**
BURAR Bucovina Array 24.44 339 ⇓*i*P **P 06 43 52.3 +0.9**
BURAR Bucovina Array 24.44 339 ⇓*i*P **P 06 43 52.3 +0.9**
FGSL Fruska Gora 24.59 328 *eP* **P 06 43 53.6 +0.9**
DRGR 24.63 335 ⇓P **P 06 43 54.3 +1.2**
DRGR 24.63 335 ⇓*i*P **P 06 43 54.3 +1.2**
DRGR 24.63 335 P **P 06 43 54.3 +1.2**
VSR Storozhevoye 25.96 2 *eP* **P 06 44 05.0 0.0**
VSR pmax pmax
comp=Z,20nm,1.0s
VSR pmax pmax
comp=N,30nm,0.9s
VSR pmax pmax
comp=E,8.0nm,0.9s
VSR Storozhevoye 25.96 2 *eP* **P 06 44 05.0 0.0**
comp=E,20nm,1.0s
VRHR Novokhopersk 25.99 6 *eP* **P 06 44 06.3 +1.1**
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR pmax pmax
comp=Z,20nm,0.8s
VRHR pmax pmax
comp=N,70nm,1.0s
VRHR Novokhopersk 25.99 6 *eP* **P 06 44 06.3 +1.1**
comp=N,70nm,1.0s
KMBO Kilima Mbogo 26.21 181 LR LR 06 53 10.6
comp=N,220nm,19.2s,baz=96,slow=33
KIEV Kiev 26.25 348 *eP* **P 06 44 07.5 -0.2**
KIEV pmax pmax
comp=Z,52nm,1.5s
KIEV Kiev 26.25 348 *eP* **P 06 44 07.5 -0.2**
comp=Z,52nm,1.5s
KIEV Kiev 26.25 348 *eP* **P 06 44 07.5 -0.2**
comp=Z,52nm,1.5s
AKASG Malin Array Be 26.26 348 *ceP* **P 06 44 07.9 +0.2**
AKASG pmax pmax
comp=Z,17nm,1.1s
AKASG Malin Array Be 26.26 348 P **P 06 44 07.5 -0.1**
AKASG Malin Array Be 26.26 348 P **P 06 44 07.6 -0.1**
comp=Z,17nm,1.1s,baz=167,slow=8.8,SNR=25
AKASG Malin Array Be 26.26 348 *eP* **P 06 44 07.9 +0.2**
comp=Z,17nm,1.1s
UZH Uzhgorod 26.32 336 *eP* **P 06 44 08.5 +0.3**
UZH *e* 06 48 39.0
UZH Uzhgorod 26.32 336 *eP* **P 06 44 08.5 +0.3**
KEST Kesra 26.54 300 P **P 06 44 11.7 +1.2**
KEST Kesra 26.54 300 P **P 06 44 11.7 +1.2**
comp=Z,5.4nm,0.8s,baz=57,slow=7.4,SNR=12
KEST LR LR 06 55 44.9
comp=Z,86nm,19.3s,baz=4.3,slow=39
KEST Kesra 26.54 300 P **P 06 44 11.7 +1.2**
MBAR Mbarara 26.57 196 LR LR 06 54 01.9
comp=Z,489nm,19.4s,baz=14,slow=35
KOLS Kolonicke sedl 26.58 337 *eP* **P 06 44 12.0 +1.4**
KOLS pmax pmax
comp=Z,16nm,1.7s
KOLS Kolonicke sedl 26.58 337 *eP* **P 06 44 12.0 +1.4**
KOLS Kolonicke sedl 26.58 337 *eP* **P 06 44 12.0 +1.4**
comp=Z,16nm,1.7s
CRVS Cervenica-Dubn 26.85 336 *eP* **P 06 44 12.8 -0.3**
CRVS pmax pmax
comp=Z,10.0nm,1.7s
CRVS Cervenica-Dubn 26.85 336 *eP* **P 06 44 12.8 -0.3**
CRVS Cervenica-Dubn 26.85 336 *eP* **P 06 44 12.8 -0.3**
comp=Z,10.0nm,1.7s
VYHS Vyhne 27.56 332 *eP* **P 06 44 19.7 +0.2**
VYHS pmax pmax
comp=Z,23nm,2.1s
VYHS Vyhne 27.56 332 *eP* **P 06 44 19.7 +0.2**
VYHS Vyhne 27.56 332 *eP* **P 06 44 19.7 +0.2**
comp=Z,23nm,2.1s
SOKA Soboth 28.03 326 ⇑*i*P **P 06 44 25.6 +1.8**
comp=Z,12nm,1.6s
SOKA Soboth 28.03 326 P **P 06 44 25.6 +1.8**
comp=Z,12nm,1.6s
KBL Kabul 28.57 64 P **P 06 44 29.9 +0.9**
KBL Kabul 28.57 64 P **P 06 44 29.9 +0.9**
KBL Kabul 28.57 64 P **P 06 44 29.9 +0.9**
MYKA Terra Mystica 28.73 324 ⇑*i*pP pP 06 44 33.4 +0.2
comp=Z,11nm,1.2s
OKC Ostrava-Krasne 28.89 333 *eP* **P 06 44 32.8 +1.5**
OKC Ostrava-Krasne 28.89 333 *eP* **P 06 44 32.8 +1.5**
OKC Ostrava-Krasne 28.89 333 *eP* **P 06 44 32.8 +1.5**
MORC Moravsky Berou 29.09 333 *eP* **P 06 44 33.8 +0.6**
VRAC Vranov 29.15 331 P **P 06 44 34.5 +0.9**
VRAC Vranov 29.15 331 P **P 06 44 34.5 +0.9**
comp=Z,1.8nm,0.3s,baz=121,slow=5.9,SNR=6.8
VRAC Vranov 29.15 331 P **P 06 44 34.5 +0.9**
comp=Z,2.0nm,0.4s
TAM Tamanrasset 29.51 272 *eP* **P 06 44 38.4 +1.1**
TAM pmax pmax
comp=Z,3.0nm,0.8s
TAM Tamanrasset 29.51 272 *eP* **P 06 44 38.4 +1.1**
comp=Z,3.3nm,0.8s
TAM Tamanrasset 29.51 272 *eP* **P 06 44 38.4 +1.1**
comp=Z,3.0nm,0.8s
AKTK Aktyubinsk 29.62 27 P **P 06 44 38.5 +0.7**
comp=Z,1.0nm,0.2s
AKTO Aktyubinsk 29.62 27 P **P 06 44 38.5 +0.7**
AKTO pmax pmax
comp=Z,1.0nm,0.2s
AKTO Aktyubinsk 29.62 27 P **P 06 44 38.5 +0.7**
AKTO Aktyubinsk 29.62 27 P **P 06 44 38.5 +0.7**
comp=Z,0.6nm,0.2s,baz=216,slow=4.9,SNR=4.1
AKTO Aktyubinsk 29.62 27 P **P 06 44 38.5 +0.7**
OBN Obninsk 29.86 359 ⇑*eP* **P 06 44 39.7 0.0**
OBN *e* 06 45 36.4
OBN *i* S **S 06 49 35.9 -0.6**
OBN pmax pmax
comp=Z,9.0nm,0.4s
OBN MLR MLR
comp=Z,200nm,15.0s
OBN Obninsk 29.86 359 *eP* **P 06 44 39.7 0.0**
comp=Z,9.0nm,0.4s
DPC Dobruska-Polom 30.04 332 *eP* **P 06 44 42.0 +0.4**
DPC Dobruska-Polom 30.04 332 *eP* **P 06 44 42.0 +0.4**
DPC Dobruska-Polom 30.04 332 *eP* **P 06 44 42.0 +0.4**
GEC2 GERESS Array S 30.16 328 *eP* **P 06 44 44.0 +1.3**
GEC2 GERESS Array S 30.16 328 *eP* **P 06 44 44.0 +1.3**
GEC2 GERESS Array S 30.16 328 *eP* **P 06 44 44.0 +1.3**
GERES GERESS Array B 30.16 328 P **P 06 44 43.0 +0.3**
GERES GERESS Array B 30.16 328 P **P 06 44 43.0 +0.3**
comp=Z,2.7nm,0.9s,baz=132,slow=7.8,SNR=20
GERES GERESS Array B 30.16 328 P **P 06 44 43.0 +0.3**
comp=Z,3.0nm,0.9s
UPC Upice 30.29 332 *eP* **P 06 44 44.5 +0.8**
UPC Upice 30.29 332 *eP* **P 06 44 44.5 +0.8**
UPC Upice 30.29 332 *eP* **P 06 44 44.5 +0.8**
KHC Kasperske Hory 30.41 328 *eP* **P 06 44 45.4 +0.6**
KHC Kasperske Hory 30.41 328 *eP* **P 06 44 45.4 +0.6**
KHC Kasperske Hory 30.41 328 *eP* **P 06 44 45.4 +0.6**
KSP Ksiaz 30.42 333 *eP* **P 06 44 46.1 +1.2**
KSP Ksiaz 30.42 333 *eP* **P 06 44 46.1 +1.2**
FETA Feichten 30.55 322 ⇑*i*pP pP 06 44 47.9 -1.5
comp=Z,4.7nm,0.9s
FETA Feichten 30.55 322 P pP 06 44 47.9 -1.5
comp=Z,4.7nm,0.9s
PRU Pruhonice 30.56 330 *eP* **P 06 44 47.8 +1.7**
PRU Pruhonice 30.56 330 *eP* **P 06 44 47.8 +1.7**
PRU Pruhonice 30.56 330 *eP* **P 06 44 47.8 +1.7**
SBF Sospel 30.88 315 *eP* **P 06 44 49.9 +0.8**
SBF Sospel 30.88 315 *eP* **P 06 44 49.9 +0.8**
SBF Sospel 30.88 315 *eP* **P 06 44 49.9 +0.8**
SBF Sospel 30.88 315 *eP* **P 06 44 49.9 +0.8**
PVCC Panska Ves 30.93 331 *eP* **P 06 44 51.1 +1.7**
PVCC Panska Ves 30.93 331 *eP* **P 06 44 51.1 +1.7**
PVCC Panska Ves 30.93 331 *eP* **P 06 44 51.1 +1.7**
LMR La Mourre 31.25 313 *eP* **P 06 44 53.2 +0.9**
LMR La Mourre 31.25 313 *eP* **P 06 44 53.2 +0.9**
LMR La Mourre 31.25 313 *eP* **P 06 44 53.2 +0.9**
LMR La Mourre 31.25 313 *eP* **P 06 44 53.2 +0.9**
BRG Berggiesshubel 31.46 331 *i* P **P 06 44 54.9 +0.9**
comp=Z,15nm,1.1s
BRG Berggiesshubel 31.46 331 *i* P **P 06 44 54.9 +0.9**
BRG pmax pmax
comp=Z,15nm,1.1s
BRG Berggiesshubel 31.46 331 *i* P **P 06 44 54.9 +0.9**
comp=Z,15nm,1.1s
MBDF Montbardon 31.70 316 *eP* **P 06 44 57.8 +1.4**
comp=Z,2.5nm,0.3s
MBDF Montbardon 31.70 316 *eP* **P 06 44 57.8 +1.4**
MBDF pmax pmax
comp=Z,3.0nm,0.3s
MBDF Montbardon 31.70 316 *eP* **P 06 44 57.8 +1.4**
comp=Z,2.5nm,0.3s
MBDF Montbardon 31.70 316 *eP* **P 06 44 57.8 +1.4**
comp=Z,1.2nm,0.3s
NKC Novy Kostel 31.70 329 *eP* **P 06 44 57.1 +0.9**
NKC Novy Kostel 31.70 329 *eP* **P 06 44 57.1 +0.9**
NKC Novy Kostel 31.70 329 *eP* **P 06 44 57.1 +0.9**
SMRF Simiane la Rot 32.13 314 *eP* **P 06 45 01.6 +1.5**
SMRF Simiane la Rot 32.13 314 *eP* **P 06 45 01.6 +1.5**
SMRF Simiane la Rot 32.13 314 *eP* **P 06 45 01.6 +1.5**
SENIN Lac Senin/Sane 32.16 319 *eP* **P 06 45 01.6 +1.1**
comp=Z,71nm,2.1s
SENIN Lac Senin/Sane 32.16 319 *eP* **P 06 45 01.6 +1.1**
comp=Z,71nm,2.1s
CLL Collm 32.18 330 *i* P **P 06 45 00.5 +0.1**
CLL *e* 06 45 11.0
CLL *eS* **S 06 50 13.0 -0.1**
CLL pmax pmax
comp=Z,30nm,1.7s
CLL Collm 32.18 330 *i* P **P 06 45 00.5 +0.1**
comp=Z,30nm,1.7s
CLL *e* 06 45 11.0
CLL *e* 06 47 10.0
CLL *eS* **S 06 50 13.0 -0.1**
CLL Collm 32.18 330 *i* P **P 06 45 00.5 +0.1**
comp=Z,30nm,1.7s
ORIF Oris-en-Rattie 32.35 315 *eP* **P 06 45 03.5 +1.5**
ORIF *eR*
comp=Z,80nm,22.0s
ORIF Oris-en-Rattie 32.35 315 *eP* **P 06 45 03.5 +1.5**
ORIF Oris-en-Rattie 32.35 315 *eP* **P 06 45 03.5 +1.5**
ORIF Oris-en-Rattie 32.35 315 *eP* **P 06 45 03.5 +1.5**
CABF La Chapelle 33.01 318 *eP* **P 06 45 08.3 +0.5**
CABF La Chapelle 33.01 318 *eP* **P 06 45 08.3 +0.5**
CABF La Chapelle 33.01 318 *eP* **P 06 45 08.3 +0.5**
CABF La Chapelle 33.01 318 *eP* **P 06 45 08.3 +0.5**
HINF Hinteralfeld 33.17 321 *eP* **P 06 45 09.4 +0.2**
HINF Hinteralfeld 33.17 321 *eP* **P 06 45 09.4 +0.2**
HINF Hinteralfeld 33.17 321 *eP* **P 06 45 09.4 +0.2**
HINF Hinteralfeld 33.17 321 *eP* **P 06 45 09.4 +0.2**
CDF Champ du Feu 33.26 322 *eP* **P 06 45 10.2 +0.3**
CDF Champ du Feu 33.26 322 *eP* **P 06 45 10.2 +0.3**
CDF Champ du Feu 33.26 322 *eP* **P 06 45 10.2 +0.3**
CDF Champ du Feu 33.26 322 *eP* **P 06 45 10.2 +0.3**
LASF Ste Croix 33.31 313 *eP* **P 06 45 11.4 +1.0**
LASF Ste Croix 33.31 313 *eP* **P 06 45 11.4 +1.0**
BSD Bornholm Skovb 34.25 337 *i* P **P 06 45 16.4 -1.9**
BSD pmax pmax
comp=Z,7.0nm,0.9s
BSD Bornholm Skovb 34.25 337 *i* P **P 06 45 16.4 -1.9**
comp=Z,6.6nm,0.8s
SMF Signal de Mont 34.40 317 *eP* **P 06 45 19.8 0.0**
SMF Signal de Mont 34.40 317 *eP* **P 06 45 19.8 0.0**
SMF Signal de Mont 34.40 317 *eP* **P 06 45 19.8 0.0**
ARU Arti 34.62 20 *di*P **P 06 45 21.9 +0.3**
ARU 06 46 39.5
ARU 06 47 55.4
ARU S **S 06 50 53.2 +2.4**
ARU SS **SnSn 06 52 57.6 -5.2**
ARU pmax pmax
comp=Z,35nm,2.5s
ARU MLR MLR
comp=Z,575nm,17.0s
LOR Lormes 34.67 318 *eP* **P 06 45 22.5 +0.4**
comp=Z,7.3nm,0.7s
LOR *eR*
comp=Z,72nm,17.5s
LOR Lormes 34.67 318 *eP* **P 06 45 22.5 +0.4**
comp=Z,7.3nm,0.7s
SSF Saint Saulge 34.79 318 *eP* **P 06 45 23.7 +0.5**
SSF Saint Saulge 34.79 318 *eP* **P 06 45 23.7 +0.5**
SSF Saint Saulge 34.79 318 *eP* **P 06 45 23.7 +0.5**
BGF Bois d'Agland 34.98 316 *eP* **P 06 45 25.5 +0.7**
BGF Bois d'Agland 34.98 316 *eP* **P 06 45 25.5 +0.7**
BGF Bois d'Agland 34.98 316 *eP* **P 06 45 25.5 +0.7**

KSH	**Kashi**	**35.00**	**57**	*e*P		**P**	**06 45 24.1**	**-1.2**
KSH				*e*pP		**pP**	**06 45 28.5**	**0.0**
KSH				*e*sP		sP	06 45 31.6	+1.8
KSH				*e*PP		**PnPn**	**06 46 41.0**	**-1.2**
KSH				*e*PcP		**PcP**	**06 47 59.1**	**+1.7**
KSH				*e*S		**S**	**06 50 52.5**	**-4.8**
KSH				*e*ScP		**ScP**	**06 51 42.4**	**-0.7**
KSH				*e*PcS		**PcS**	**06 51 44.3**	**0.0**
KSH				*e*ScS		**ScS**	**06 55 44.4**	**-2.4**
KSH				pmax	pmax			
	comp=Z,2.0nm,0.5s							
KSH				pmax	pmax			
	comp=Z,230nm,3.5s							
KSH				LR	LR			
	comp=N,420nm,9.0s							
KSH				LR	LR			
	comp=E,820nm,11.8s							
KSH				LR	LR			
	comp=Z,470nm,9.0s							
BAIF	**Baives**	**35.84**	**323**	*e*P		**P**	**06 45 32.2**	**+0.1**
	comp=Z,3.6nm,0.4s							
BAIF	**Baives**	**35.84**	**323**	*e*P		**P**	**06 45 32.2**	**+0.1**
BAIF				pmax	pmax			
	comp=Z,4.0nm,0.4s							
BAIF	**Baives**	**35.84**	**323**	*e*P		**P**	**06 45 32.2**	**+0.1**
	comp=Z,3.6nm,0.4s							
ETSF	**Etsaut**	**35.93**	**309**	*e*P		**P**	**06 45 34.5**	**+1.4**
	comp=Z,21nm,0.9s							
ETSF	**Etsaut**	**35.93**	**309**	*e*P		**P**	**06 45 34.5**	**+1.4**
ETSF				pmax	pmax			
	comp=Z,21nm,0.9s							
ETSF	**Etsaut**	**35.93**	**309**	*e*P		**P**	**06 45 34.5**	**+1.4**
	comp=Z,21nm,0.9s							
TOA0	**Torodi Ar. Sit**	**36.00**	**257**	*e*P		**P**	**06 45 33.7**	**-0.2**
TOA0	**Torodi Ar. Sit**	**36.00**	**257**	*e*P		**P**	**06 45 33.7**	**-0.2**
TORD	**Torodi Ar. Bea**	**36.00**	**257**	P		**P**	**06 45 34.0**	**+0.1**
TORD	**Torodi Ar. Bea**	**36.00**	**257**	P		**P**	**06 45 34.0**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=58,slow=8.8,SNR=22							
TORD				LR	LR		07 00 57.5	
	comp=Z,499nm,18.6s,baz=60,slow=37							
TORD	**Torodi Ar. Bea**	**36.00**	**257**	P		**P**	**06 45 34.0**	**+0.1**
SJPF	**Ste Jean**	**36.45**	**309**	*e*P		**P**	**06 45 38.8**	**+1.3**
	comp=Z,19nm,0.9s							
SJPF	**Ste Jean**	**36.45**	**309**	*e*P		**P**	**06 45 38.8**	**+1.3**
SJPF				pmax	pmax			
	comp=Z,19nm,0.9s							
SJPF	**Ste Jean**	**36.45**	**309**	*e*P		**P**	**06 45 38.8**	**+1.3**
	comp=Z,19nm,0.9s							
MFF	**Saint Martin d**	**36.88**	**315**	*e*P		**P**	**06 45 41.7**	**+0.6**
	comp=Z,17nm,0.9s							
MFF	**Saint Martin d**	**36.88**	**315**	*e*P		**P**	**06 45 41.7**	**+0.6**
MFF				pmax	pmax			
	comp=Z,17nm,0.9s							
MFF	**Saint Martin d**	**36.88**	**315**	*e*P		**P**	**06 45 41.7**	**+0.6**
	comp=Z,17nm,0.9s							
BRVK	**Borovoye**	**36.97**	**33**	*c i*P		**P**	**06 45 42.8**	**+1.1**
BRVK				pmax	pmax			
	comp=Z,9.0nm,1.2s							
BRVK	**Borovoye**	**36.97**	**33**	*e*P		**P**	**06 45 42.0**	**+0.3**
	comp=Z,6.0nm,0.9s							
BRVK	**Borovoye**	**36.97**	**33**	P		**P**	**06 45 43.0**	**+1.2**
	SNR=5.0							
BRVK	**Borovoye**	**36.97**	**33**	*e*P		**P**	**06 45 42.0**	**+0.3**
	comp=Z,6.0nm,0.9s							
BVAR	**Borovoye Array**	**37.00**	**33**	P		**P**	**06 45 42.1**	**0.0**
BVAR				pmax	pmax			
	comp=Z,4.0nm,0.8s							
BVAR	**Borovoye Array**	**37.00**	**33**	P		**P**	**06 45 42.1**	**0.0**
BVAR	**Borovoye Array**	**37.00**	**33**	P		**P**	**06 45 42.1**	**0.0**
	comp=Z,3.6nm,0.8s,baz=220,slow=10,SNR=15							
BVAR	**Borovoye Array**	**37.00**	**33**	P		**P**	**06 45 42.1**	**0.0**
FINES	**FINESS Array B**	**37.06**	**351**	P		**P**	**06 45 41.6**	**-0.7**
FINES				PcP		**PcP**	**06 48 02.7**	**-0.1**
FINES	**FINESS Array B**	**37.06**	**351**	P		**P**	**06 45 41.6**	**-0.7**
	comp=Z,4.7nm,0.8s,baz=140,slow=9.2,SNR=15							
FINES				PcP		**PcP**	**06 48 02.7**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=196,slow=1.4,SNR=4.6							
FINES				LR	LR		07 02 48.8	
	comp=Z,92nm,19.2s,baz=90,slow=39							
FINES	**FINESS Array B**	**37.06**	**351**	P		**P**	**06 45 41.7**	**-0.7**
KAF	**Kangasniemi**	**37.66**	**351**	*e*P		P	06 45 44.3	-3.2
KAF				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KAF	**Kangasniemi**	**37.66**	**351**	*e*p		P	06 45 44.3	-3.2
	comp=Z,2.2nm,0.6s							
ESDC	**Sonseca Array**	**37.69**	**303**	P		**P**	**06 45 48.5**	**+0.4**
ESDC	**Sonseca Array**	**37.69**	**303**	P		**P**	**06 45 48.5**	**+0.4**
	comp=Z,4.1nm,0.9s,baz=85,slow=8.1,SNR=11							
ESDC				LR	LR		07 02 13.7	
	comp=Z,125nm,18.4s,baz=160,slow=38							
ESDC	**Sonseca Array**	**37.69**	**303**	P		**P**	**06 45 48.5**	**+0.4**
JOF	**Joensuu**	**37.91**	**355**	*e*P		**P**	**06 45 48.2**	**-1.4**
JOF				pmax	pmax			
	comp=Z,8.0nm,0.7s							
JOF	**Joensuu**	**37.91**	**355**	*e*p		P	**06 45 48.2**	**-1.4**
	comp=Z,7.9nm,0.7s							
FLN	**La Foliniere**	**37.94**	**318**	*e*P		**P**	**06 45 50.1**	**0.0**
	comp=Z,48nm,1.1s							
FLN				*e*R				
	comp=Z,82nm,17.0s							
FLN	**La Foliniere**	**37.94**	**318**	*e*P		**P**	**06 45 50.1**	**0.0**
FLN				pmax	pmax			
	comp=Z,48nm,1.1s							
FLN	**La Foliniere**	**37.94**	**318**	*e*P		**P**	**06 45 50.1**	**0.0**
	comp=Z,48nm,1.1s							
GRR	**Gorron**	**38.02**	**318**	*e*P		**P**	**06 45 50.7**	**0.0**
GRR	**Gorron**	**38.02**	**318**	*e*P		**P**	**06 45 50.7**	**0.0**
GRR	**Gorron**	**38.02**	**318**	*e*P		**P**	**06 45 50.7**	**0.0**
QUIF	**Quistinic**	**39.28**	**316**	*e*P		**P**	**06 46 02.4**	**+1.1**
	comp=Z,33nm,1.1s							
QUIF	**Quistinic**	**39.28**	**316**	*e*P		**P**	**06 46 02.4**	**+1.1**
QUIF				pmax	pmax			
	comp=Z,33nm,1.1s							
QUIF	**Quistinic**	**39.28**	**316**	*e*P		**P**	**06 46 02.4**	**+1.1**
	comp=Z,33nm,1.1s							
ROSF	**Rostrenen**	**39.49**	**316**	*e*P		**P**	**06 46 02.6**	**-0.5**
	comp=Z,30nm,1.0s							
ROSF	**Rostrenen**	**39.49**	**316**	*e*P		**P**	**06 46 02.6**	**-0.5**
ROSF				pmax	pmax			
	comp=Z,30nm,1.0s							
ROSF	**Rostrenen**	**39.49**	**316**	*e*P		**P**	**06 46 02.6**	**-0.5**
	comp=Z,30nm,1.0s							
NB2	**NORSAR Subarra**	**40.11**	**340**	P		**P**	**06 46 07.1**	**-1.0**
	comp=Z,0.6nm,0.8s,baz=134,slow=9.3							
NB2	**NORSAR Subarra**	**40.11**	**340**	P		**P**	**06 46 07.1**	**-1.0**
	comp=Z,0.6nm,0.8s,SNR=9.3							
NOA	**NORSAR Array B**	**40.11**	**340**	P		**P**	**06 46 07.2**	**-0.9**
NOA	**NORSAR Array B**	**40.11**	**340**	P		**P**	**06 46 07.2**	**-0.9**
	comp=Z,5.8nm,0.8s,baz=138,slow=8.5,SNR=19							
NOA				LR	LR		07 05 09.0	
	comp=Z,91nm,18.9s,baz=110,slow=40							
NOA	**NORSAR Array B**	**40.11**	**340**	P		**P**	**06 46 07.2**	**-0.9**
KURBB	**Kurchatov Arra**	**40.20**	**40**	P		**P**	**06 46 08.9**	**-0.1**
	comp=Z,6.9nm,0.8s,baz=251,slow=8.5,SNR=36							
KURBB				PcP		**PcP**	**06 48 13.7**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=250,slow=4.7,SNR=4.8							
KURK	**Kurchatov**	**40.29**	**40**	*i*P		**P**	**06 46 10.7**	**+1.0**
KURK				pmax	pmax			
	comp=Z,22nm,1.2s							
KURK	**Kurchatov**	**40.29**	**40**	*e*P		**P**	**06 46 09.9**	**+0.2**
KURK				PcP		**PcP**	**06 48 13.7**	**+0.5**
KURK	**Kurchatov**	**40.29**	**40**	P		**P**	**06 46 10.9**	**+1.2**
	SNR=7.7							
KURK	**Kurchatov**	**40.29**	**40**	*e*P		**P**	**06 46 09.9**	**+0.2**
EVO	**Evora**	**40.66**	**300**	*e*P		**P**	**06 46 14.4**	**+1.5**
	comp=Z,34nm,1.2s							
EVO				*e*R				
	comp=Z,175nm,20.0s							
EVOP	**Sao Brissos**	**40.75**	**300**	*e*P		**P**	**06 46 14.4**	**+0.8**
EVOP				pmax	pmax			
	comp=Z,34nm,1.2s							
EVOP	**Sao Brissos**	**40.75**	**300**	*e*P		**P**	**06 46 14.4**	**+0.8**
	comp=Z,34nm,1.2s							
MK31	**Makanchi Array**	**41.27**	**47**	*e*P		**P**	**06 46 18.4**	**+0.6**
MK31	**Makanchi Array**	**41.27**	**47**	*e*P		**P**	**06 46 18.4**	**+0.6**
MK31	**Makanchi Array**	**41.27**	**47**	*e*P		**P**	**06 46 18.4**	**+0.6**
MKAR	**Makanchi Array**	**41.27**	**47**	*ce*P		**P**	**06 46 18.8**	**+0.9**
MKAR				pmax	pmax			
	comp=Z,5.0nm,0.5s							
MKAR	**Makanchi Array**	**41.27**	**47**	P		**P**	**06 46 17.4**	**-0.5**
MKAR	**Makanchi Array**	**41.27**	**47**	P		**P**	**06 46 17.4**	**-0.5**
	comp=Z,4.5nm,0.5s,baz=250,slow=7.3,SNR=43							
MKAR				LR	LR		07 06 01.5	
	comp=Z,340nm,18.6s,baz=198,slow=40							
MKAR	**Makanchi Array**	**41.27**	**47**	P		**P**	**06 46 17.4**	**-0.5**
LSZ	**Lusaka**	**41.34**	**194**	P		**P**	**06 46 20.4**	**+1.7**
LSZ	**Lusaka**	**41.34**	**194**	P		**P**	**06 46 20.4**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=29,slow=12,SNR=3.2							
LSZ	**Lusaka**	**41.34**	**194**	P		**P**	**06 46 20.4**	**+1.7**
WMQ	**Urumqi**	**44.40**	**52**	P		**P**	**06 46 45.3**	**+1.9**
WMQ				pP	pP		06 46 49.8	+3.1
WMQ				sP	sP		06 46 52.3	+4.3
WMQ				PP		**PcP**	**06 48 30.3**	**+3.2**
WMQ				PcS		**PcS**	**06 52 21.0**	**+0.6**
WMQ				S		**S**	**06 53 19.5**	**+1.5**
WMQ				ScS		**ScS**	**06 56 40.3**	**-1.5**
WMQ				pmax	pmax			
	comp=Z,10.0nm,0.8s							
WMQ				pmax	pmax			
	comp=Z,220nm,5.0s							
WMQ				LR	LR			
	comp=N,290nm,10.6s							
WMQ				LR	LR			
	comp=E,310nm,9.6s							
WMQ				LR	LR			
	comp=Z,280nm,22.2s							
NVS	**Novosibirsk**	**44.50**	**36**	*e*P		**P**	**06 46 41.4**	**-2.5**
NVS				pmax	pmax			
	comp=N,11nm,1.5s							
NVS				pmax	pmax			
	comp=E,7.0nm,1.5s							
NVS				pmax	pmax			
	comp=Z,23nm,1.5s							
OPO	**Ambohidratompo**	**44.50**	**167**	P		**P**	**06 46 46.1**	**+1.7**
OPO	**Ambohidratompo**	**44.50**	**167**	P		**P**	**06 46 46.1**	**+1.7**
	comp=Z,5.1nm,0.9s,baz=305,slow=8.1,SNR=7.1							
OPO	**Ambohidratompo**	**44.50**	**167**	P		**P**	**06 46 46.1**	**+1.7**
DBIC	**Dimbokro**	**44.68**	**253**	P		**P**	**06 46 45.5**	**-0.3**
DBIC	**Dimbokro**	**44.68**	**253**	P		**P**	**06 46 45.5**	**-0.3**
	comp=Z,7.3nm,0.7s,baz=43,slow=10,SNR=12							
DBIC				LR	LR		07 06 30.8	
	comp=Z,767nm,18.3s,baz=46,slow=38							
DBIC	**Dimbokro**	**44.68**	**253**	P		**P**	**06 46 45.5**	**-0.3**
ARCES	**ARCESS Array B**	**44.91**	**354**	P		**P**	**06 46 46.6**	**-0.3**
ARCES	**ARCESS Array B**	**44.91**	**354**	P		**P**	**06 46 46.6**	**-0.3**
	comp=Z,4.2nm,0.8s,baz=166,slow=6.2,SNR=9.2							
ARCES				LR	LR		07 07 50.0	
	comp=Z,95nm,19.9s,baz=38,slow=39							
ARCES	**ARCESS Array B**	**44.91**	**354**	P		**P**	**06 46 46.7**	**-0.3**
ZALV	**Zalesovo Beam**	**45.03**	**38**	P		**P**	**06 46 48.4**	**+0.2**
ZALV				pmax	pmax			
	comp=Z,2.0nm,0.3s							
ZALV				MLR	MLR			
	comp=Z,167nm,19.3s							
ZALV	**Zalesovo Beam**	**45.03**	**38**	P		**P**	**06 46 48.4**	**+0.2**
ZALV	**Zalesovo Beam**	**45.03**	**38**	P		**P**	**06 46 48.4**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=247,slow=7.7,SNR=4.0							
ZALV				LR	LR		07 08 34.5	
	comp=Z,167nm,19.3s,baz=266,slow=40							
ZALV	**Zalesovo Beam**	**45.03**	**38**	P		**P**	**06 46 48.4**	**+0.2**
LIC	**Lamto**	**45.05**	**253**	*e*P		**P**	**06 46 48.7**	**-0.1**
	comp=Z,5.0nm,0.5s,baz=57							
LIC				*e*R				
	comp=Z,747nm,22.8s							
LIC	**Lamto**	**45.05**	**253**	*e*P		**P**	**06 46 48.7**	**-0.1**
	comp=Z,5.0nm,0.5s							
GTA	**Gaotai**	**53.35**	**59**	*e*P		**P**	**06 47 53.1**	**+0.8**
GTA				pP		**pP**	**06 47 57.3**	**+1.7**
GTA				sP		sP	06 48 00.3	+3.4
GTA				S		**S**	**06 55 23.0**	**-1.3**
GTA				SS		**SS**	**06 59 01.5**	**-2.5**
GTA				pmax	pmax			
	comp=Z,9.0nm,0.9s							
GTA				pmax	pmax			
	comp=Z,55nm,6.4s							
GTA				LR	LR			
	comp=N,260nm,19.5s							
GTA				LR	LR			
	comp=E,180nm,19.2s							
GTA				LR	LR			
	comp=Z,290nm,19.7s							
CMAR	**Chiang Mai Arr**	**56.79**	**84**	P		**P**	**06 48 18.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**56.79**	**84**	P		**P**	**06 48 18.2**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=297,slow=8.9,SNR=5.2							
CMAR	**Chiang Mai Arr**	**56.79**	**84**	P		**P**	**06 48 18.2**	**+1.0**
LZH	**Lanzhou**	**56.91**	**62**	*e*P		**P**	**06 48 19.0**	**+1.0**
LZH				pP	pP		06 48 23.5	+2.1
LZH				sP	sP		06 48 25.1	+2.4
LZH				pmax	pmax			
	comp=Z,20nm,1.3s							
LZH				LR	LR			
	comp=N,630nm,19.7s							
LZH				LR	LR			
	comp=E,500nm,19.7s							
LZH				LR	LR			
	comp=Z,670nm,18.9s							
SONM	**Songino Array**	**57.62**	**48**	P		**P**	**06 48 23.5**	**+0.7**
SONM	**Songino Array**	**57.62**	**48**	P		**P**	**06 48 23.5**	**+0.7**
	comp=Z,3.7nm,0.8s,baz=260,slow=7.4,SNR=5.4							
SONM	**Songino Array**	**57.62**	**48**	P		**P**	**06 48 23.5**	**+0.7**
CD2	**Chengdu**	**57.77**	**68**	P		**P**	**06 48 26.3**	**+2.2**
CD2				pP	pP		06 48 30.8	+3.4
CD2				sP	sP		06 48 33.3	+4.6
CD2				PcP		**PcP**	**06 49 18.9**	**+2.1**
CD2				PP		**PP**	**06 50 35.8**	**+3.8**
CD2				PcS		**PcS**	**06 53 18.8**	**+0.6**
CD2				S		**S**	**06 56 23.1**	**-0.3**
CD2				SS		**SS**	**07 00 14.8**	**+1.0**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=Z,120nm,5.2s							
CD2				LR	LR			
	comp=N,310nm,14.7s							
CD2				LR	LR			
	comp=E,540nm,20.6s							
CD2				LR	LR			
	comp=Z,310nm,18.1s							
SUR	**Sutherland**	**59.53**	**197**	LR		LR	07 14 06.1	
	comp=Z,336nm,21.0s,baz=153,slow=36							
GYA	**Guiyang**	**61.31**	**72**	*e*P		**P**	**06 48 50.3**	**+1.6**
GYA				PP		**PP**	**06 51 06.6**	**+3.0**
GYA				ScP		**ScP**	**06 53 32.3**	**-0.5**
GYA				S		**S**	**06 57 08.0**	**-1.4**
GYA				SS		**SS**	**07 01 10.0**	**+0.4**
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
GYA				pmax	pmax			
	comp=Z,90nm,4.9s							
GYA				LR	LR			
	comp=N,480nm,18.5s							
GYA				LR	LR			
	comp=E,360nm,19.2s							
GYA				LR	LR			
	comp=Z,430nm,18.9s							
HHC	**Hu-ho-hao-te**	**62.10**	**56**	*e*P		**P**	**06 48 55.0**	**+1.2**
HHC				pP	pP		06 48 59.6	+2.4
HHC				sP	sP		06 49 02.0	+3.5
HHC				PP		**PP**	**06 51 13.8**	**+3.6**
HHC				PcS		**PcS**	**06 53 36.9**	**-0.4**
HHC				S		**S**	**06 57 17.3**	**-1.7**
HHC				ScS		**SKKSac**	**06 58 42.6**	**-3.5**
HHC				SS		**SS**	**07 01 21.4**	**-0.1**
HHC				pmax	pmax			
	comp=Z,54nm,1.0s							
HHC				pmax	pmax			
	comp=Z,160nm,4.9s							
HHC				LR	LR			
	comp=N,570nm,17.8s							
HHC				LR	LR			
	comp=E,520nm,17.8s							
HHC				LR	LR			
	comp=Z,470nm,25.0s							
KULM	**Kulim**	**63.27**	**97**	*e*P		**P**	**06 49 01.8**	**0.0**
	comp=Z,55nm,1.5s							
KULM	**Kulim**	**63.27**	**97**	*e*P		**P**	**06 49 01.8**	**0.0**
	comp=Z,55nm,1.5s							
BJI	**Beijing**	**65.71**	**56**	P		**P**	**06 49 16.4**	**-1.0**
BJI				S		**S**	**06 58 01.3**	**-2.3**
BJI				pmax	pmax			
	comp=Z,5.0nm,0.6s							
BJI				LR	LR			
	comp=N,210nm,20.2s							
BJI				LR	LR			
	comp=E,280nm,18.4s							
BJI				LR	LR			
	comp=Z,230nm,18.6s							
QIZ	**Qiongzhong**	**66.36**	**79**	P		**P**	**06 49 21.9**	**0.0**
QIZ				S		**S**	**06 58 11.6**	**-0.5**
QIZ				pmax	pmax			
	comp=Z,8.0nm,1.3s							
QIZ				LR	LR			
	comp=N,86nm,6.8s							
QIZ				LR	LR			
	comp=E,38nm,16.3s							
TIXI	**Tiksi**	**66.63**	**20**	*d i*P		**P**	**06 49 21.7**	**-1.0**
TIXI				pmax	pmax			
	comp=Z,5.0nm,1.2s							
NJ2	**Nanjing**	**69.94**	**63**	*e*P		**P**	**06 49 43.8**	**-0.4**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CN2	**Changchun**	**71.41**	**50**	*e*P		**P**	**06 49 54.5**	**+1.6**
KSAR	**Wonju Array Be**	**75.22**	**55**	P		**P**	**06 50 15.6**	**0.0**
KSAR	**Wonju Array Be**	**75.22**	**55**	P		**P**	**06 50 15.6**	**0.0**
KSRS	**Korea Array**	**75.25**	**55**	P		**P**	**06 50 15.6**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=278,slow=6.1,SNR=6.9							
USRK	**Ussuriysk Arra**	**75.74**	**48**	P		**P**	**06 50 17.4**	**-0.9**
	comp=Z,2.8nm,0.7s,baz=297,slow=6.4,SNR=7.3							
USRK				LR	LR		07 28 21.2	
	comp=Z,218nm,18.2s,baz=62,slow=40							
RES	**Resolute Bay**	**75.78**	**348**	LR		LR	07 25 18.1	
	comp=Z,53nm,18.1s,baz=67,slow=37							
SEY	**Seymchan**	**78.20**	**25**	*e*P		**P**	**06 50 32.2**	**+0.3**
BILL	**Bilibino**	**79.58**	**17**	*e*P		**P**	**06 50 40.2**	**+0.8**
BILL				*e*S		**S**	**07 00 39.6**	**-1.4**
MJAR	**Matsushiro Arr**	**83.16**	**53**	P		**P**	**06 50 58.3**	**-0.7**
MJAR	**Matsushiro Arr**	**83.16**	**53**	P		**P**	**06 50 58.3**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=304,slow=5.3,SNR=4.5							
MJAR	**Matsushiro Arr**	**83.16**	**53**	P		**P**	**06 50 58.3**	**-0.7**
COLD	**Coldfoot**	**87.62**	**3**	*e*P		**P**	**06 51 20.4**	**-0.3**
	comp=Z,23nm,1.7s							
COLD	**Coldfoot**	**87.62**	**3**	*e*P		**P**	**06 51 20.4**	**-0.3**
	comp=Z,23nm,1.7s							
YKA	**Yellowknife Ar**	**89.82**	**348**	P		**P**	**06 51 29.9**	**-1.2**
YKA	**Yellowknife Ar**	**89.82**	**348**	P		**P**	**06 51 29.9**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=27,slow=5.3,SNR=11							
YKA	**Yellowknife Ar**	**89.82**	**348**	P		**P**	**06 51 29.9**	**-1.2**
ILAR	**Eielson Array**	**90.21**	**2**	P		**P**	**06 51 33.0**	**+0.1**
ILAR	**Eielson Array**	**90.21**	**2**	P		**P**	**06 51 33.0**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=336,slow=4.0,SNR=6.6							
ILAR				LR	LR		07 34 11.2	
	comp=Z,40nm,18.1s,baz=257,slow=37							
ILAR	**Eielson Array**	**90.21**	**2**	P		**P**	**06 51 33.0**	**+0.1**
EGAK	**Eagle**	**90.28**	**360**	*e*P		**P**	**06 51 34.2**	**+1.0**
	comp=Z,61nm,2.1s							
EGAK	**Eagle**	**90.28**	**360**	*e*P		**P**	**06 51 34.2**	**+1.0**
	comp=Z,61nm,2.1s							
MENT	**Mentasta**	**92.12**	**1**	*e*P		**P**	**06 51 42.4**	**+0.6**
MENT	**Mentasta**	**92.12**	**1**	*e*P		**P**	**06 51 42.4**	**+0.6**
ULM	**Lac du Bonnet**	**94.36**	**332**	LR		LR	07 34 29.6	
	comp=Z,48nm,20.6s,baz=350,slow=36							

MEX 19 06:50:39.7±0.3, 16°.24N×98°.25W, h5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**39**	*e*P		Pg	06 50 43.3	-0.3
PNIG				*i* S		Sg	06 50 46.2	0.0
UTMO	**Huajuapan**	**1.64**	**15**	*i* P		Pn	06 51 05.9	-3.6
UTMO				*i* S		Sn	06 51 26.4	-4.8
HUIG	**Huatulco**	**2.12**	**103**	*i* P		Pn	06 51 12.3	-3.4
HUIG				*i* S		Sn	06 51 38.8	-3.7
YAIG	**Yautepec**	**2.72**	**344**	*i* P		Pn	06 51 21.7	-2.6
YAIG				*i* S		Sn	06 51 54.1	-3.7

*DDA **19** 06:53:39.8, 37°.69N×38°.69E, h28km, MD3.4*
*ISCJB **19** 06:53:40.7±0.5, 37°.67N±0°.02×38°.74E±0°.02, h8km±3km, Error ellipse: s-maj=3.5km s-min=2.8km az=154.6*
*ISK **19** 06:53:40.3, 37.67N×38.71E, h7km, MD3.5*
*CSEM **19** 06:53:40.8±0.2, 37.67N×38.76E, h5km, MD3.5, Error ellipse: s-maj=4.7km s-min=3.7km az=130.0*
*NSSC **19** 06:53:43.9±2.1, 37.39N×38.87E, h0km±10km, MD1.7, ML3.6*

ISC 19 06:53:40.8±0.9, 37°.66N±0°.02×38°.74E±0°.02, h14km±7km, n68, σ1s 09/110, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.23**	**163**	*e*PG		**Pg**	**06 53 45.6**	**-0.2**
URFA				*e*SG		**Sg**	**06 53 49.6**	**+0.4**
URFA	**Urfa**	**0.23**	**163**	*e*Pg		**Pg**	**06 53 45.6**	**-0.2**
URFA				*e*Sg		**Sg**	**06 53 49.7**	**+0.4**
ATAB	**Bozova**	**0.40**	**242**	*i* P		**Pg**	**06 53 48.8**	**-0.1**
ATAB				*i* S		**Sg**	**06 53 54.0**	**-0.3**
ATAB	**Bozova**	**0.40**	**242**	*i* P		**Pg**	**06 53 48.8**	**-0.1**
ATAB				*i* S		**Sg**	**06 53 54.0**	**-0.3**
MYA	**Malataya**	**0.71**	**340**	*e*PG		**Pg**	**06 53 54.4**	**-0.3**
MYA	**Malataya**	**0.71**	**340**	*e*Pg		**Pg**	**06 53 54.4**	**-0.3**
SVRC	**Sivrice-ELAZID**	**0.85**	**32**	*e*PG		**Pg**	**06 53 56.9**	**-0.4**
SVRC				*e*SG		**Sb**	**06 54 09.2**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.85**	**32**	*e*Pg		**Pg**	**06 53 56.9**	**-0.4**
SVRC				*e*Sg		**Sb**	**06 54 09.2**	**+0.5**
ELZG	**Elazig**	**0.86**	**13**	*i* P		**Pg**	**06 53 57.1**	**-0.4**
ELZG				*i* S		**Sg**	**06 54 08.4**	**-0.5**
ELZG	**Elazig**	**0.86**	**13**	*i* P		**Pg**	**06 53 57.1**	**-0.4**
ELZG				*i* S		**Sg**	**06 54 08.4**	**-0.5**
AKCD	**Akcadag**	**0.91**	**315**	*i* P		**Pg**	**06 53 57.9**	**-0.5**
AKCD				*e*S		**Sg**	**06 54 08.7**	**-1.6**
AKCD	**Akcadag**	**0.91**	**315**	*i* P		**Pg**	**06 53

BEST				*i* S		**Sn**	06 54 38.9	-0.7
BNGB	**Bing˜ǁl**	**2.02**	**48**	*e*PN		**Pn**	06 54 16.2	-1.2
ERZN	**Erzincan**	**2.07**	**21**	*e*PN		**Pn**	06 54 16.5	+1.2
PINB	**Pinarbasi**	**2.10**	**300**	*i* P		**Pb**	06 54 18.8	-0.1
PINB				*i* S		**Sn**	06 54 43.6	+1.6
PINB	**Pinarbasi**	**2.10**	**300**	*i* P		**Pb**	06 54 18.8	-0.1
PINB				*i* S		**Sn**	06 54 43.6	+1.6
EZC	**Erzincan**	**2.15**	**13**	*e*PN		**Pn**	06 54 17.6	+1.3
EZC	**Erzincan**	**2.15**	**13**	*e*Pn		**Pn**	06 54 17.6	+1.3
COBT	**Iskenderun**	**2.29**	**241**	*i* P		**Pb**	06 54 23.3	+1.3
COBT				*i* S		**Sb**	06 54 52.4	+2.2
COBT	**Iskenderun**	**2.29**	**241**	*i* P		**Pb**	06 54 23.3	+1.3
COBT				*i* S		**Sb**	06 54 52.4	+2.2
KOZT	**Kozan**	**2.32**	**267**	*e*PN		**Pn**	06 54 20.4	+1.8
KOZT	**Kozan**	**2.32**	**267**	*e*Pn		**Pn**	06 54 20.4	+1.8
MZRK	**Al-Mazaregh**	**2.39**	**139**	*e*P		**Pn**	06 54 19.7	+0.2
MZRK				*e*S		**Sn**	06 54 47.3	-1.3
MZRK				AML		AML	06 54 56.4	
	comp=Z,404nm,0.5s							
MZRK	**Al-Mazaregh**	**2.39**	**139**	*e*P		**Pn**	06 54 19.7	+0.2
	SNR=45							
MZRK				*e*S		**Sn**	06 54 47.3	-1.3
	comp=Z,404nm,0.5s,SNR=40							
BTCH	**Batrach**	**2.44**	**229**	*e*P		**Pb**	06 54 23.7	-0.8
BTCH				*e*S		**Sb**	06 54 54.2	-0.3
BTCH				AML		AML	06 55 02.1	
	comp=N,2µm,0.4s							
BTCH				AML		AML	06 55 06.1	
	comp=E,2µm,0.6s							
BTCH	**Batrach**	**2.44**	**229**	*e*P		**Pb**	06 54 23.7	-0.8
	SNR=45							
BTCH				*e*S		**Sb**	06 54 54.2	-0.3
	comp=E,2µm,0.6s,SNR=40							
CEYT	**Ceyhan**	**2.47**	**256**	*e*PN		**Pn**	06 54 22.2	+1.6
CEYT	**Ceyhan**	**2.47**	**256**	*e*Pn		**Pn**	06 54 22.2	+1.6
KELT	**Kelkit**	**2.52**	**9**	*e*P		**Pb**	06 54 24.8	-1.1
KELT				*e*S		**Sb**	06 54 58.4	+1.5
KELT	**Kelkit**	**2.52**	**9**	*e*P		**Pb**	06 54 24.8	-1.1
HTY	**Hatay**	**2.59**	**234**	*e*PN		**Pn**	06 54 24.0	+1.7
HTY	**Hatay**	**2.59**	**234**	*e*Pn		**Pn**	06 54 24.0	+1.7
VRTB	**Varto-Mus**	**2.61**	**54**	*e*PN		**Pn**	06 54 24.2	+1.5
VRTB	**Varto-Mus**	**2.61**	**54**	*e*Pn		**Pn**	06 54 24.2	+1.5
ARNB	**Al Arnab**	**2.86**	**232**	*e*P		**Pb**	06 54 29.4	-2.2
ARNB	**Al Arnab**	**2.86**	**232**	*e*P		**Pb**	06 54 29.4	-2.2
	SNR=45							
KRTS	**Karatas**	**2.90**	**249**	*e*PN		**Pn**	06 54 28.4	+1.9
KRTS	**Karatas**	**2.90**	**249**	*e*Pn		**Pn**	06 54 28.4	+1.9
BAYT	**Ayd¨–ntepe-Bay**	**2.94**	**21**	*e*PN		**Pn**	06 54 28.8	+1.5
BAYT	**Ayd¨–ntepe-Bay**	**2.94**	**21**	*e*Pn		**Pn**	06 54 28.8	+1.5
RSDY	**Resadiye-TOKAT**	**2.95**	**339**	*e*PN		**Pn**	06 54 28.9	+1.6
RSDY	**Resadiye-TOKAT**	**2.95**	**339**	*e*Pn		**Pn**	06 54 28.9	+1.6
HWQ	**Hawqa**	**4.06**	**215**	*e*P		**Pn**	06 54 43.8	+1.2
HWQ	**Hawqa**	**4.06**	**215**	*e*P		**Pn**	06 54 43.8	+1.2

IDC 19 06:57:08.2±70.0, 17°24S×169°83E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/18, mbtmp4.0/3, Error ellipse: s-maj=1194.0km s-min=123.1km az=71.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**29.41**	**235**	P	P	07 03 13.8	+0.3
	1.6nm,0.7s,baz=76,slow=8.3,SNR=5.4						
WRA	**Warramunga Arr**	**33.70**	**260**	P	P	07 03 51.6	+0.2
	0.9nm,0.8s,baz=91,slow=8.7,SNR=7.3						
ASAR	**Alice Springs**	**34.19**	**253**	P	P	07 03 55.1	-0.6
	1.9nm,0.8s,baz=81,slow=9.0,SNR=11						

*DDA **19** 06:58:33.1, 37.67N×38.73E, h24km, MD3.0*
*ISK **19** 06:58:33.7, 37.67N×38.73E, h7km, MD3.0*
*ISCJB **19** 06:58:34.0±0.6, 37.67N±0.03×38.72E±0.03, h7km±4km, Error ellipse: s-maj=5.0km s-min=3.6km az=158.9*
*CSEM **19** 06:58:34.3±0.2, 37.68N×38.74E, h10km, MD3.0, Error ellipse: s-maj=4.9km s-min=3.9km az=138.0*
ISC 19 06:58:34.3±0.9, 37°66N±0.03×38°73E±0.02, h13km±8km, n34, σ0=54/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.23**	**162**	*e*PG	**Pg**	06 58 38.9	-0.3
URFA				*e*SG	**Sg**	06 58 42.9	+0.3
URFA	**Urfa**	**0.23**	**162**	*e*Pg	**Pg**	06 58 38.9	-0.3
URFA				*e*Sg	**Sg**	06 58 42.9	+0.3
ATAB	**Bozova**	**0.39**	**242**	*i* P	**Pg**	06 58 42.2	0.0
ATAB				*i* S	**Sg**	06 58 47.5	0.0
ATAB	**Bozova**	**0.39**	**242**	*i* P	**Pg**	06 58 42.2	0.0
ATAB				*i* S	**Sg**	06 58 47.5	0.0
MYA	**Malataya**	**0.71**	**340**	*e*PG	**Pg**	06 58 47.7	-0.4
MYA	**Malataya**	**0.71**	**340**	*e*Pg	**Pg**	06 58 47.7	-0.4
SVRC	**Sivrice-ELAZID**	**0.85**	**32**	*e*PG	**Pg**	06 58 50.3	-0.5
SVRC				*e*SG	**Sb**	06 59 02.5	+0.1
SVRC	**Sivrice-ELAZID**	**0.85**	**32**	*e*Pg	**Pg**	06 58 50.3	-0.5
SVRC				*e*Sg	**Sb**	06 59 02.5	+0.1
ELZG	**Elazig**	**0.86**	**13**	*i* P	**Pg**	06 58 50.6	-0.4
ELZG				*i* S	**Sg**	06 59 02.0	-0.3
ELZG	**Elazig**	**0.86**	**13**	*i* P	**Pg**	06 58 50.6	-0.4
ELZG				*i* S	**Sg**	06 59 02.0	-0.3
AKCD	**Akcadag**	**0.90**	**315**	*i* P	**Pg**	06 58 51.4	-0.3
AKCD				*i* S	**Sg**	06 59 02.8	-0.7
AKCD	**Akcadag**	**0.90**	**315**	*i* P	**Pg**	06 58 51.4	-0.3
AKCD				*i* S	**Sg**	06 59 02.8	-0.7
DIYA	**Diyarbakir**	**1.13**	**76**	*i* P	**Pb**	06 58 55.6	-0.1
DIYA				*i* S	**Sg**	06 59 10.9	0.0
DIYA	**Diyarbakir**	**1.13**	**76**	*i* P	**Pb**	06 58 55.6	-0.1
DIYA				*i* S	**Sg**	06 59 10.9	0.0
DIY	**Diyarbakir**	**1.21**	**78**	*e*PN	**Pn**	06 58 56.9	0.0
DIY	**Diyarbakir**	**1.21**	**78**	*e*Pn	**Pn**	06 58 56.9	0.0
PTK	**Pertek**	**1.34**	**23**	*e*PN	**Pn**	06 58 59.2	+0.4
PTK				*e*SN	**Sg**	06 59 18.2	+0.8
PTK	**Pertek**	**1.34**	**23**	*e*Pn	**Pn**	06 58 59.2	+0.4
PTK				*e*Sn	**Sg**	06 59 18.2	+0.8
DARE	**Darende-Malaty**	**1.34**	**313**	*e*PN	**Pn**	06 58 59.3	+0.5
DARE				*e*SN	**Sg**	06 59 18.1	+0.6
DARE	**Darende-Malaty**	**1.34**	**313**	*e*Pn	**Pn**	06 58 59.3	+0.5
DARE				*e*Sn	**Sg**	06 59 18.1	+0.6
KMRS	**Kahramanmaras**	**1.46**	**265**	*e*PN	**Pb**	06 59 01.1	-0.2
KMRS				*e*SN	**Sg**	06 59 21.1	-0.3
KMRS	**Kahramanmaras**	**1.46**	**265**	*e*Pn	**Pb**	06 59 01.2	-0.2
KMRS				*e*Sn	**Sg**	06 59 21.1	-0.3
AYKD	**Aykdinkavak**	**1.55**	**262**	*i* P	**Pn**	06 59 00.7	-0.9
AYKD				*e*S	**Sn**	06 59 19.9	-1.7
MARD	**Mardin**	**1.67**	**101**	*i* P	**Pn**	06 59 04.0	+0.8
MARD				*i* S	**Sb**	06 59 25.6	-0.2
ILIC	**ilic-Erzincan**	**1.79**	**356**	*e*PN	**Pn**	06 59 05.8	+0.7
ILIC	**ilic-Erzincan**	**1.79**	**356**	*e*Pn	**Pn**	06 59 05.8	+0.7
ANDN	**Andirin**	**1.90**	**268**	*i* P	**Pb**	06 59 09.4	+0.6
ANDN				*e*S	**Sn**	06 59 30.3	+0.1
ANDN	**Andirin**	**1.90**	**268**	*i* P	**Pb**	06 59 09.4	+0.6
ANDN				*e*S	**Sn**	06 59 30.3	+0.1
SARI	**SarD1z-Kayseri**	**1.97**	**293**	*e*PN	**Pn**	06 59 08.2	+0.7
BNGB	**Bing˜ǁl**	**2.03**	**48**	*e*PN	**Pn**	06 59 09.2	+0.9
ERZN	**Erzincan**	**2.08**	**22**	*e*PN	**Pn**	06 59 09.8	+0.9
EZC	**Erzincan**	**2.15**	**13**	*e*Pn	**Pn**	06 59 09.8	-0.1
KOZT	**Kozan**	**2.31**	**266**	*e*PN	**Pn**	06 59 12.9	+0.8
KOZT	**Kozan**	**2.31**	**266**	*e*Pn	**Pn**	06 59 12.9	+0.8

IDC 19 07:03:58.3±2.6, 7°05S×68°05E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/26, mbtmp3.6/3, Error ellipse: s-maj=106.6km s-min=34.6km az=55.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**55.09**	**12**	P	P	07 13 31.8	-0.4
	0.7nm,0.7s,baz=196,slow=8.6,SNR=6.2						
ASAR	**Alice Springs**	**65.11**	**113**	P	P	07 14 41.1	-0.4
	0.5nm,0.7s,baz=280,slow=7.1,SNR=5.9						
WRA	**Warramunga Arr**	**65.37**	**109**	P	P	07 14 43.5	+0.3
	0.7nm,0.7s,baz=281,slow=6.3,SNR=6.7						
YKA	**Yellowknife Ar**	**124.64**	**1**	PKP	PKPdf	07 22 57.8	-1.8
	0.3nm,0.8s,baz=347,slow=2.5,SNR=4.1						
NVAR	**Mina Array Bea**	**148.24**	**9**	PKPbc	PKPbc	07 23 48.1	+0.9
	0.6nm,0.7s,baz=312,slow=1.6,SNR=6.2						

*BJI **19** 07:04:10.6, 7.38S×67.40E, h10km, mB5.1/29, mb4.8/43, Ms4.8/35, Ms7 4.5/33*
*IDC **19** 07:04:14.9±0.4, 7.13S×67.92E, h0km, mb4.3/35, mb1 4.4/35, mb1mx4.4/37, mbtmp4.3/35, Error ellipse: s-maj=14.6km s-min=10.5km az=14.0*
*DJA **19** 07:04:15.2±0.4, 7°S×8°×6°E±°, h10km, M4.9/9, mB5.2/1, mb4.9/9, MLv4.9/1, Mw(mB)4.5/1*
*ISCJB **19** 07:04:15.8±0.2, 7.04S±0.04×67.88E±0.03, h16km, mb4.8/138, MS4.4/14, Error ellipse: s-maj=6.5km s-min=4.7km az=174.8*
*MOS **19** 07:04:15.1±1.1, 6.95S×67.86E, h10km, mb5.2/60, Error ellipse: s-maj=7.3km s-min=4.8km az=113.4*
*NEIC **19** 07:04:16.6±0.2, 7.11S×67.87E, h10km, mb5.1/55, Error ellipse: s-maj=5.9km s-min=4.5km az=190.0*
*GCMT **19** 07:04:16.5±0.2, 7.11S×67.84E, h13km±1km, MW5.0, Moment Tensor Solution. s22,c26; s77,c103; Moment tensor: Scale 10¹⁶Nm; Mrr=3.12±.19; Mθθ0.52±.11; Mϕϕ2.60±.13; Mrθ1.52±.37; Mθϕ-1.07±.08; Mϕr0.71±.31; Best double couple: Mo3.50000×10¹⁶ NP1:ϕs316.00000°, δ49.00000°, λ-122.00000°. NP2:ϕs179.00000°, δ50.00000°, λ-59.00000°. Principal axes: T 3.0500, Plg1.0000°, Azm247.0000°; N 0.7900, Plg23.0000°, Azm338.0000°; P -3.8400, Plg67.0000°, Azm156.0000°; Data Used: ll IU IC G CN.*
*TEH **19** 07:04:17.0, 7.07S×67.85E, h10km, ML5.1*
ISC 19 07:04:17.6±0.4, 7°10S±0.06×67°90E±0.05, h17km±1km, h17km; pP-P, n671, σ1=90/736, mb5.0/138, MS4.4/16, 136C-125D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.53**	**94**	*e*P	**Pn**	07 05 23.0	-2.5
DGAR	**Diego Garcia**	**4.53**	**94**	*e*Pn	**Pn**	07 05 23.0	-2.5
MSEY	**Mahe Island**	**12.59**	**280**	*e*Pn	**Pn**	07 07 15.2	-1.0
MRIV	**Mauritius Mete**	**16.55**	**217**	*e*P	**P**	07 08 12.2	+0.6
PALK	**Pallekele**	**19.15**	**42**	*e*P	**Pn**	07 08 42.4	+1.1
	299nm,2.3s						
PALK	**Pallekele**	**19.15**	**42**	P	**P**	07 08 40.2	-0.2
	39nm,1.5s,1µm						
OPO	**Ambohidratompo**	**23.16**	**239**	P	**P**	07 09 24.3	+0.6
OPO	**Ambohidratompo**	**23.16**	**239**	P	**P**	07 09 24.3	+0.6
	1.3nm,0.7s,baz=67,slow=13,SNR=4.0						
ABPO	**Ambohimpanom**	**23.33**	**237**	*e*P	**P**	07 09 26.1	+0.7
ABPO				pmax	pmax		
	comp=Z,119nm,1.4s						
ABPO	**Ambohimpanom**	**23.33**	**237**	*e*P	**P**	07 09 26.1	+0.7
	comp=Z,119nm,1.4s						
KMBO	**Kilima Mbogo**	**31.12**	**280**	*e*P	**P**	07 10 36.9	+0.9
	comp=Z,38nm,2.0s						
KMBO	**Kilima Mbogo**	**31.12**	**280**	P	**P**	07 10 36.6	+0.6
	comp=Z,2.2nm,0.8s,baz=81,slow=15,SNR=3.4						
PSI	**Prapat**	**32.49**	**73**	P	**P**	07 10 48.6	+0.8
PSI	**Prapat**	**32.49**	**73**	P	**P**	07 10 48.6	+0.8
	comp=Z,2.5nm,0.4s,baz=172,slow=16,SNR=5.0						
KULM	**Kulim**	**34.92**	**70**	*e*P	**P**	07 11 10.2	+1.3
	comp=Z,49nm,1.3s						
MBAR	**Mbarara**	**37.61**	**278**	P	**P**	07 11 33.3	+1.2
MBAR	**Mbarara**	**37.61**	**278**	P	**P**	07 11 33.3	+1.2
	comp=Z,1.4nm,0.2s,baz=67,slow=6.0,SNR=3.8						
LSZ	**Lusaka**	**39.74**	**255**	*e*P	**P**	07 11 50.1	+0.3
	comp=Z,43nm,1.0s						
LSZ	**Lusaka**	**39.74**	**255**	P	**P**	07 11 50.2	+0.3
	comp=Z,3.6nm,0.5s,baz=66,slow=12,SNR=9.1						
CMAR	**Chiang Mai Arr**	**39.78**	**50**	P	**P**	07 11 51.1	+1.1
CMAR				PcP	**PcP**	07 13 56.9	+0.6
CMAR	**Chiang Mai Arr**	**39.78**	**50**	P	**P**	07 11 51.1	+1.1
	comp=Z,5.2nm,0.8s,baz=244,slow=9.1,SNR=27						
CMAR				PcP	**PcP**	07 13 56.9	+0.6
	comp=Z,1.0nm,0.3s,baz=241,slow=4.1,SNR=5.6						
CHTO	**Chiang Mai**	**40.00**	**49**	*e*P	**P**	07 11 52.3	+0.5
CHTO				pmax	pmax		
	comp=Z,15nm,0.9s						
CHTO	**Chiang Mai**	**40.00**	**49**	*e*P	**P**	07 11 52.3	+0.5
	comp=Z,15nm,0.9s						
CHTO	**Chiang Mai**	**40.00**	**49**	P	**P**	07 11 53.3	+1.5
	SNR=9.1						
CHTO	**Chiang Mai**	**40.00**	**49**	P	**P**	07 11 51.6	-0.2
	comp=Z,23nm,1.4s						
CMMT	**Chiang Mai**	**40.00**	**49**	P	**P**	07 11 52.3	+0.4
PBKT	**Sadao Pong**	**40.29**	**54**	P	**P**	07 11 55.1	+0.9
RDF	**Al-Radifah**	**40.83**	**332**	*e*P	**P**	07 11 58.0	-0.5
RDF				AMb	AMB	07 11 59.5	
	comp=Z,54nm,0.9s						
ISAD	**Sadrabad**	**41.10**	**341**	*e*P	**P**	07 12 00.9	-0.2
NAY	**Al-Naaiem**	**41.25**	**332**	*e*P	**P**	07 12 01.8	-0.2
NAY				AMb	AMB	07 12 03.0	
	comp=Z,34nm,0.9s						
UMR	**Umm Al-Rimmam**	**41.29**	**333**	*e*P	**P**	07 12 02.0	-0.3
UMR				AMb	AMB	07 12 04.8	
	comp=Z,55nm,0.9s						
KBL	**Kabul**	**41.42**	**1**	*e*P	**P**	07 12 05.0	+1.4
KBL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KBL	**Kabul**	**41.42**	**1**	*e*P	**P**	07 12 05.0	+1.4
	comp=Z,7.6nm,0.7s						
RST	**Umm Al-Ruwaisa**	**41.57**	**332**	*e*P	**P**	07 12 04.4	-0.2
RST				AMb	AMB	07 12 06.1	
	comp=Z,1µm,0.9s						
IZEF	**Zefreh**	**42.44**	**340**	*e*P	**P**	07 12 11.8	-0.2
IPIR	**Pirpir**	**42.75**	**339**	*e*P	**P**	07 12 15.5	+0.9
LSA	**Lhasa**	**42.87**	**30**	P	**P**	07 12 18.3	+2.5
LSA	**Lhasa**	**42.87**	**30**	*e*P	**P**	07 12 18.4	+2.6
LSA				pmax	pmax		
	comp=Z,27nm,1.1s						
LSA	**Lhasa**	**42.87**	**30**	*e*P	**P**	07 12 18.4	+2.6
	comp=Z,27nm,1.1s						
UBPT	**Khong Chiam**	**43.36**	**59**	P	**P**	07 12 18.2	-1.2
ISRO	**Mashad**	**43.89**	**350**	*e*P	**P**	07 12 24.9	+1.4
IPAY	**Payeh**	**44.11**	**350**	*e*P	**P**	07 12 26.7	+1.2
LBTB	**Lobatse**	**44.15**	**241**	*e*P	**P**	07 12 25.1	-0.8
	comp=Z,9.2nm,1.1s						
IANJ	**Anjilo**	**44.34**	**344**	*e*P	**P**	07 12 28.4	+1.1
IVRN	**Varamin**	**44.56**	**341**	*e*P	**P**	07 12 28.5	-0.4
BOSA	**Boshof**	**45.55**	**237**	P	**P**	07 12 35.8	-1.2
BOSA	**Boshof**	**45.55**	**237**	P	**P**	07 12 35.8	-1.2
	comp=Z,8.7nm,1.2s,baz=104,slow=13,SNR=2.8						
KMI	**Kunming**	**46.64**	**45**	P	**P**	07 12 47.9	+2.2
KMI				pP	**pP**	07 12 51.0	-0.1
KMI				sP	**sP**	07 12 52.3	-0.9
KMI				S	**S**	07 19 37.8	+3.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KMI				LR	LR		
	comp=N,100nm,14.4s						
KMI				LR	LR		
	comp=E,150nm,18.3s						
KMI				LR	LR		
	comp=Z,160nm,17.6s						
KSH	**Kashi**	**46.98**	**9**	P	**P**	07 12 45.3	-2.6
KSH				*e*pP	**pP**	07 12 49.6	-3.7
KSH				sP	**sP**	07 12 52.4	-3.0
KSH				PcP	**PcP**	07 14 20.3	0.0
KSH				PP	**PP**	07 14 34.4	-4.3
KSH				*e*ScP	**ScP**	07 18 11.3	-2.2
KSH				*e*PcS	**PcS**	07 18 12.3	-3.0
KSH				*e*S	S	07 19 32.0	-6.8
KSH				*e*ScS	**ScS**	07 22 37.3	-4.7
KSH				*e*SS	SS	07 22 50.3	-16
KSH				pmax	pmax		
	comp=Z,21nm,1.0s						
KSH				LR	LR		
	comp=N,910nm,19.6s						
KSH				LR	LR		
	comp=E,460nm,11.4s						
KSH				LR	LR		
	comp=Z,450nm,10.7s						
EIL	**Elat**	**48.37**	**321**	P	**P**	07 12 59.9	+1.1
EIL	**Elat**	**48.37**	**321**	P	**P**	07 12 59.9	+1.1
	comp=Z,2.2nm,0.5s,baz=144,slow=10,SNR=4.4						
QIZ	**Qiongzhong**	**48.81**	**57**	P	**P**	07 13 02.6	+0.2
QIZ				S	**S**	07 20 07.8	+2.6
QIZ				pmax	pmax		
	comp=Z,12nm,1.7s						
QIZ				LR	LR		
	comp=N,110nm,20.3s						
QIZ				LR	LR		
	comp=E,99nm,16.6s						
QIZ				LR	LR		
	comp=Z,230nm,17.3s						
ASF	**Jabal al Asfar**	**48.98**	**325**	P	**P**	07 13 05.1	+1.5
ASF	**Jabal al Asfar**	**48.98**	**325**	P	**P**	07 13 05.1	+1.5
	comp=Z,3.4nm,0.9s,baz=82,slow=5.6,SNR=7.0						
EKS2	**Erkin-Say**	**49.81**	**6**	*e*P	**P**	07 13 11.3	+1.5
EKS2				pmax	pmax		
	comp=Z,21nm,1.2s						
EKS2	**Erkin-Say**	**49.81**	**6**	*e*P	**P**	07 13 11.2	+1.5
	comp=Z,21nm,1.2s						
AAK	**Ala-Archa**	**49.85**	**6**	*e*P	**P**	07 13 10.7	+0.5
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AAK	**Ala-Archa**	**49.85**	**6**	*e*P	**P**	07 13 10.7	+0.5
	comp=Z,3.2nm,1.1s						
AAK	**Ala-Archa**	**49.85**	**6**	P	**P**	07 13 11.9	+1.7
	SNR=5.7						
AAK	**Ala-Archa**	**49.85**	**6**	P	**P**	07 13 10.8	+0.7
	comp=Z,4.0nm,0.9s,baz=194,slow=8.6,SNR=8.5						
KKAR	**Karatay Array**	**50.02**	**2**	*e*P	**P**	07 13 11.3	+0.1
KKAR				pmax	pmax		
	comp=Z,17nm,1.3s						
KKAR	**Karatay Array**	**50.02**	**2**	*e*P	**P**	07 13 11.3	+0.1
	comp=Z,17nm,1.3s						
IMRD	**Marand**	**50.03**	**337**	*e*P	**P**	07 13 11.2	-0.3
FRU	**Bishkek**	**50.07**	**6**	*e*P	**P**	07 13 11.0	-0.6
FRU				pmax	pmax		
	comp=Z,40nm,1.9s						
GYA	**Guiyang**	**50.26**	**47**	⇑*i*P	**P**	07 13 15.8	+2.3
GYA				PP	**PP**	07 15 11.6	+2.6
GYA				ScP	**ScP**	07 18 28.8	+1.0
GYA				S	**S**	07 20 27.9	+2.4
GYA				SS	**SS**	07 23 58.4	-1.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				LR	LR		
	comp=N,680nm,19.5s						
GYA				LR	LR		
	comp=E,560nm,20.2s						
GYA				LR	LR		
	comp=Z,630nm,19.9s						
TKM2	**Tokmak 2**	**50.27**	**7**	*e*P	**P**	07 13 13.2	-0.1
TKM2				pmax	pmax		
	comp=Z,64nm,1.9s						
TKM2	**Tokmak 2**	**50.27**	**7**	*e*P	**P**	07 13 13.2	-0.1
	comp=Z,64nm,1.9s						
CD2	**Chengdu**	**51.05**	**40**	P	**P**	07 13 20.8	+1.5
CD2				pP	**pP**	07 13 25.3	+0.6
CD2				sP	**sP**	07 13 27.8	+1.0
CD2				PcP	**PcP**	07 14 36.1	+0.9
CD2				PP	**PP**	07 15 18.4	+2.3
CD2				PcS	**PcS**	07 18 32.4	-0.5
CD2				S	**S**	07 20 37.8	+1.5
CD2				sS	**sS**	07 20 44.9	-0.3
CD2				ScS	**ScS**	07 23 08.3	-1.4
CD2				SS	**SS**	07 24 11.0	-0.7
CD2				pmax	pmax		
	comp=Z,40nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.3s						
CD2				LR	LR		
	comp=N,280nm,17.6s						
CD2				LR	LR		
	comp=E,270nm,17.6s						
CD2				LR	LR		
	comp=Z,340nm,18.0s						
KAPI	**Kappang**	**51.58**	**91**	P	**P**	07 13 21.9	-1.6
KAPI	**Kappang**	**51.58**	**91**	P	**P**	07 13 21.9	-1.6
	comp=Z,2.9nm,0.3s,baz=252,slow=9.6,SNR=5.8						
GNI	**Garni**	**51.64**	**337**	*e*P	**P**	07 13 24.8	+1.1
	comp=Z,32nm,1.2s						
GNI	**Garni**	**51.64**	**337**	P	**P**	07 13 25.5	+1.8
	SNR=5.4						
WMQ	**Urumqi**	**53.76**	**18**	P	**P**	07 13 39.5	+0.4
WMQ				pP	**pP**	07 13 44.1	-0.5
WMQ				sP	**sP**	07 13 46.5	-0.2
WMQ				PcP	**PcP**	07 14 45.6	+0.6
WMQ				PP	**PP**	07 15 41.9	+1.6
WMQ				ScP	**ScP**	07 18 41.5	-0.9
WMQ				S	**S**	07 21 11.5	-1.4
WMQ				ScS	**ScS**	07 23 25.1	-2.9
WMQ				SS	**SKiKP**	07 24 51.5	-1.7
WMQ				pmax	pmax		
	comp=Z,18nm,1.6s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.6s						
WMQ				LR	LR		
	comp=N,470nm,14.2s						
WMQ				LR	LR		
	comp=E,250nm,14.0s						
WMQ				LR	LR		
	comp=Z,350nm,21.4s						
ONI	**Oni**	**54.24**	**338**	P	**PcP**	07 14 43.9	-3.0
ENH	**Enshi**	**54.51**	**45**	*e*P	**P**	07 13 45.5	+0.7
	comp=Z,24nm,1.1s						
LZH	**Lanzhou**	**54.63**	**36**	*e*P	**P**	07 13 47.0	+1.2
LZH				pP	**pP**	07 13 51.6	+0.4
LZH				sP	**sP**	07 13 53.5	+0.2
LZH				pmax	pmax		
	comp=Z,25nm,1.6s						
LZH				pmax	pmax		
	comp=Z,95nm,4.0s						
LZH				LR	LR		
	comp=N,990nm,19.4s						
LZH				LR	LR		
	comp=E,710nm,19.9s						
LZH				LR	LR		
	comp=Z,280nm,17.6s						
GTA	**Gaotai**	**54.90**	**30**	*e*P	**P**	07 13 48.0	+0.4
GTA				pP	**pP**	07 13 52.5	-0.6

KURK Kurchatov 58.32 8 *e*P **P 07 14 11.2 -0.4**
comp=Z,14nm,0.8s
KURK Kurchatov 58.32 8 P **P 07 14 12.0 +0.4**
SNR=7.9
KURK Kurchatov 58.32 8 P **P 07 14 11.0 -0.5**
comp=Z,107nm,0.8s,SNR=6.1
VOSK Vostochnaya 59.64 2 P **P 07 14 19.8 -0.9**
VOSK pmax pmax
comp=Z,18nm,1.3s
BVA0 Borovoye Array 59.93 2 *i* P **P 07 14 21.4 -1.3**
BVA0 pmax pmax
comp=Z,1.0nm,0.6s
BRVK Borovoye 59.96 2*d i*P **P 07 14 22.7 -0.2**
BRVK pmax pmax
comp=Z,13nm,1.2s
BRVK Borovoye 59.96 2 *e*P **P 07 14 22.5 -0.4**
comp=Z,28nm,1.7s
BRVK Borovoye 59.96 2 P **P 07 14 22.9 0.0**
SNR=7.5
NJ2 Nanjing 62.22 48 *e*P **P 07 14 38.8 +0.1**
NJ2 pP **pP 07 14 42.6 -1.6**
NJ2 sP **sP 07 14 43.8 -2.4**
NJ2 PP **PP 07 16 55.4 -0.4**
NJ2 S **S 07 23 07.0 +3.1**
NJ2 sS **sS 07 23 16.0 +3.0**
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 pmax pmax
comp=Z,110nm,8.1s
NJ2 LR LR
comp=N,400nm,26.7s
NJ2 LR LR
comp=E,220nm,21.9s
NJ2 LR LR
comp=Z,220nm,22.8s
VRHR Novokhopersk 62.23 342 *e*P **P 07 14 38.2 -0.1**
VRHR pmax pmax
comp=Z,20nm,1.6s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,20nm,0.9s
HHC Hu-ho-hao-te 62.31 36⇓*e*P **P 07 14 41.3 +2.0**
HHC pP **pP 07 14 45.9 +1.1**
HHC sP **sP 07 14 48.3 +1.5**
HHC PP **PP 07 17 00.8 +4.2**
HHC PcS **PcS 07 19 22.1 -0.1**
HHC S **S 07 23 06.6 +1.6**
HHC sS **sS 07 23 14.6 +0.5**
HHC ScS **SKSac 07 24 29.4 -1.6**
HHC SS **SS 07 27 11.9 +3.0**
HHC pmax pmax
comp=Z,54nm,1.1s
HHC pmax pmax
comp=Z,240nm,5.4s
HHC LR LR
comp=N,490nm,21.4s
HHC LR LR
comp=E,750nm,25.0s
HHC LR LR
comp=Z,420nm,21.4s
ZAA0 Zalesovo Array 62.47 11 *e*P **P 07 14 39.2 -0.6**
ZALV Zalesovo Beam 62.47 11 P **P 07 14 39.3 -0.6**
ZALV Zalesovo Beam 62.47 11 P **P 07 14 39.3 -0.6**
ZALV Zalesovo Beam 62.47 11 P **P 07 14 39.3 -0.6**
comp=Z,2.9nm,0.3s,baz=210,slow=6.8,SNR=11
VORD Divnogorie 62.88 340 *e*P **P 07 14 41.8 -0.8**
VORD pmax pmax
comp=Z,30nm,1.7s
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.6s
NVS Novosibirsk 63.03 10 *e*P **P 07 14 41.5 -2.1**
NVS pmax pmax
comp=N,25nm,2.0s
NVS pmax pmax
comp=Z,32nm,2.0s
NVS pmax pmax
comp=E,7.0nm,1.1s
VSR Storozhevoye 63.13 340 *e*P **P 07 14 43.6 -0.7**
VSR pmax pmax
comp=Z,20nm,1.2s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,1.6s
ARU Arti 63.77 354*d i*P **P 07 14 48.1 -0.3**
ARU 07 17 07.5
ARU S **S 07 23 22.7 +0.3**
ARU pmax pmax
comp=Z,37nm,1.7s
SVE Sverdlovsk 63.98 356⇓*e*P **P 07 14 49.9 +0.1**
SVE pmax pmax
comp=Z,38nm,1.8s
KIS Kishinev 64.03 331 *e*P **P 07 14 48.0 -2.4**
KIS Kishinev 64.03 331 *e*P **P 07 14 48.0 -2.4**
VRI Vrincioaia 64.27 329⇓*i*P **P 07 14 52.0 0.0**
PLOR Plostina 64.29 329⇑*i*P **P 07 14 52.7 +0.5**
SONM Songino Array 64.36 28 P **P 07 14 53.8 +1.1**
SONM Songino Array 64.36 28 P **P 07 14 53.8 +1.1**
comp=Z,9.1nm,1.0s,baz=213,slow=5.6,SNR=10
MLR Muntele Rosu 64.41 329⇑*i*P **P 07 14 53.5 +0.4**
BJI Beijing 64.63 39 P **P 07 14 55.1 +0.7**
BJI S **S 07 23 31.8 -1.9**
BJI pmax pmax
comp=Z,7.0nm,0.6s
BJI LR LR
comp=N,110nm,15.5s
BJI LR LR
comp=E,200nm,18.5s
BJI LR LR
comp=Z,120nm,22.7s
ULN Ulaanbaatar 64.69 28 *e*P **P 07 14 55.5 +0.6**
comp=Z,19nm,1.4s
ULN Ulaanbaatar 64.69 28 P **P 07 14 55.2 +0.3**
SNR=8.1
TESR Tescani 64.75 330⇑*i*P **P 07 14 55.4 +0.3**
ZAK Zakamensk 64.93 24 *e*P **P 07 14 55.8 -0.5**
MOY Mondy 65.05 22 *e*P **P 07 14 58.3 +1.2**
MOY pmax pmax
comp=Z,24nm,2.8s
ASAR Alice Springs 65.23 113 P **P 07 14 58.5 -0.3**
ASAR Alice Springs 65.23 113 P **P 07 14 58.5 -0.3**
comp=Z,1.7nm,0.8s,baz=280,slow=6.2,SNR=16
WRA Warramunga Arr 65.49 109 P **P 07 15 00.3 -0.2**
WRA Warramunga Arr 65.49 109 P **P 07 15 00.3 -0.2**
comp=Z,3.5nm,0.7s,baz=282,slow=6.4,SNR=20
WRAB Tennant Creek 65.50 109 *e*P **P 07 15 00.4 -0.2**
WRAB pmax pmax
comp=Z,92nm,2.1s
WRAB Tennant Creek 65.50 109 *e*P **P 07 15 00.3 -0.2**
comp=Z,92nm,2.1s
TLY Talaya 66.08 23 *e*P **P 07 15 05.3 +1.7**
TLY pmax pmax
comp=Z,20nm,1.3s
BUR08 Bucovina Ar. S 66.25 330 *e*P **P 07 15 05.0 +0.1**
AK01 Malin Array Si 66.54 334 *e*P **P 07 15 05.2 -1.4**
AKASG Malin Array Be 66.55 334*ce*P **P 07 15 05.6 -1.0**
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKASG Malin Array Be 66.55 334 P **P 07 15 05.7 -0.9**
AKASG Malin Array Be 66.55 334 P **P 07 15 05.7 -0.9**
comp=Z,4.9nm,0.8s,baz=142,slow=5.5,SNR=12
KIEV Kiev 66.55 334 *e*P **P 07 15 05.4 -1.2**
KIEV pmax pmax
comp=Z,13nm,0.7s
KIEV Kiev 66.55 334 *e*P **P 07 15 05.4 -1.2**
comp=Z,13nm,0.7s
DRGR 66.96 328⇓*i*P **P 07 15 10.0 +0.6**
SOKR Solikamsk 67.07 354 *e*P **P 07 15 08.5 -1.2**
SOKR pmax pmax
comp=Z,30nm,1.9s
OBN Obninsk 67.26 341⇓*i*P **P 07 15 11.0 0.0**
OBN *e*S S 07 24 12.7 +7.6
OBN pmax pmax
comp=Z,55nm,1.7s
OBN MLR MLR
comp=Z,100nm,19.0s
MOS Moscow 67.45 342 *e*P **P 07 15 10.4 -1.8**
MOS *e* 07 15 37.2
MOS pmax pmax
comp=Z,37nm,0.7s
TAM Tamanrasset 67.83 298 *e*P **P 07 15 16.4 +0.9**
TAM pmax pmax
comp=Z,5.0nm,0.9s
TAM Tamanrasset 67.83 298 *e*P **P 07 15 16.4 +0.9**
comp=Z,5.3nm,0.9s
LVV L'vov 68.29 331 *e*P **P 07 15 16.3 -1.4**
UZH Uzhgorod 68.36 329 *e*P **P 07 15 17.7 -0.4**
UZH *e* 07 15 23.5
KOLS Kolonicke sedl 68.57 330 *e*P **P 07 15 19.4 -0.1**
KOLS pmax pmax
comp=Z,20nm,1.5s
KOLS Kolonicke sedl 68.57 330 *e*P **P 07 15 19.4 -0.1**
TOA0 Torodi Ar. Sit 68.76 287 *e*P **P 07 15 20.8 -0.5**
TORD Torodi Ar. Bea 68.76 287 P **P 07 15 20.8 -0.5**
TORD PP **PP 07 17 54.6 +1.3**
TORD Torodi Ar. Bea 68.76 287 P **P 07 15 20.8 -0.5**
comp=Z,5.9nm,1.1s,baz=108,slow=6.9,SNR=21
TORD PP **PP 07 17 54.6 +1.3**
comp=Z,1.0nm,1.1s,baz=102,slow=6.1,SNR=3.1
KWP Kalwaria Pacla 68.81 330 *e*P **P 07 15 20.2 -0.7**
KWP pmax pmax
comp=Z,21nm,1.3s
KWP Kalwaria Pacla 68.81 330 *e*P **P 07 15 20.2 -0.7**
comp=Z,20nm,1.3s
PKSM Moragy 68.81 326⇓*i*P **P 07 15 20.4 -0.6**
CRVS Cervenica-Dubn 68.96 329 *e*P **P 07 15 20.1 -1.8**
CRVS pmax pmax
comp=Z,12nm,1.3s
CRVS Cervenica-Dubn 68.96 329 *e*P **P 07 15 20.1 -1.8**
KEST Kesra 69.52 312 *e*P **P 07 15 26.5 +0.7**
KEST Kesra 69.52 312 P **P 07 15 26.8 +1.0**
comp=Z,1.0nm,0.7s,baz=18,slow=1.7,SNR=9.5
VYHS Vyhne 70.07 328 *e*P **P 07 15 28.2 -0.6**
VYHS pmax pmax
comp=Z,32nm,2.0s
VYHS Vyhne 70.07 328 *e*P **P 07 15 28.2 -0.6**
SNY Shenyang 70.33 41⇓P **P 07 15 31.8 +1.4**
SNY pmax pmax
comp=Z,17nm,0.5s
SNY pmax pmax
comp=Z,180nm,4.7s
SNY LR LR
comp=N,150nm,32.2s
SNY LR LR
comp=E,190nm,22.4s
SNY LR LR
comp=Z,160nm,24.9s
ZST Bratislava 70.82 327 *e*P **P 07 15 31.7 -1.7**
ZST pmax pmax
comp=Z,35nm,2.1s
ZST Bratislava 70.82 327 *e*P **P 07 15 31.7 -1.7**
SOKA Soboth 71.12 325⇓*i*P **P 07 15 34.9 -0.5**
comp=Z,13nm,1.1s
OKC Ostrava-Krasne 71.24 329 *e*P **P 07 15 35.4 -0.4**
OKC *e* 07 15 43.2
OKC *e* 07 15 48.7
OKC Ostrava-Krasne 71.24 329⇑*e*P **P 07 15 35.4 -0.4**
OKC *ex* x 07 15 43.2
OKC *ex* x 07 15 48.7
KSAR Wonju Array Be 71.28 47 P **P 07 15 36.1 -0.3**
KSRS Korea Array 71.32 47 P **P 07 15 36.1 -0.5**
comp=Z,1.6nm,1.0s,baz=224,slow=5.2,SNR=4.9
TRI Trieste 71.34 323 *e*P **P 07 15 34.2 -2.4**
TRI pmax pmax
comp=Z,11nm,0.8s
TRI Trieste 71.34 323 *e*P **P 07 15 34.2 -2.4**
comp=Z,11nm,0.8s
CONA Conrad Observa 71.35 326⇑*i*P **P 07 15 36.2 -0.5**
comp=Z,24nm,1.2s
MORC Moravsky Berou 71.52 328 *e*P **P 07 15 36.5 -1.1**
MORC pmax pmax
comp=Z,23nm,1.5s
MORC Moravsky Berou 71.52 328 *e*P **P 07 15 36.5 -1.1**
comp=Z,23nm,1.5s
MYKA Terra Mystica 71.91 324⇓*i*P **P 07 15 39.7 -0.3**
comp=Z,16nm,1.3s
MOA Molln 72.20 325⇓*i*P **P 07 15 41.3 -0.5**
comp=Z,14nm,1.0s
KBA Koelnbreinsper 72.32 324⇑*i*P **P 07 15 41.9 -0.7**
comp=Z,17nm,1.6s
STKA Stephens Creek 72.45 121 P **P 07 15 42.6 -1.0**
STKA Stephens Creek 72.45 121 P **P 07 15 42.6 -1.0**
comp=Z,2.0nm,1.1s,baz=282,slow=14,SNR=2.8
CN2 Changchun 72.48 40 *e*P **P 07 15 45.8 +2.3**
CN2 *es*P **sP 07 15 52.8 +1.7**
CN2 *e*S **S 07 25 08.8 +1.8**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,21.0s
CN2 LR LR
comp=E,200nm,21.0s
CN2 LR LR
comp=Z,200nm,21.0s
DPC Dobruska-Polom 72.49 328 *e*P **P 07 15 42.6 -0.8**
DPC pmax pmax
comp=Z,19nm,1.3s
DPC Dobruska-Polom 72.49 328 *e*P **P 07 15 42.6 -0.8**
comp=Z,19nm,1.3s
DPC Dobruska-Polom 72.49 328 *e*P **P 07 15 42.7 -0.7**
DPC *ex* x 07 15 51.0
DPC *ex* x 07 15 55.9
ABTA Abfaltersbach 72.63 324⇓*i*P **P 07 15 44.1 -0.3**
comp=Z,32nm,1.2s
UPC Upice 72.74 328 *e*P **P 07 15 45.3 +0.4**
UPC Upice 72.74 328⇑*e*P **P 07 15 45.3 +0.4**
PGF Pioggiola 72.78 319 *e*P **P 07 15 44.4 -1.0**
comp=Z,26nm,1.1s
PGF Pioggiola 72.78 319 *e*P **P 07 15 44.4 -1.0**
PGF pmax pmax
comp=Z,26nm,1.1s
PGF Pioggiola 72.78 319 *e*P **P 07 15 44.4 -1.0**
comp=Z,26nm,1.1s
GERES GERESS Array B 73.06 326 P **P 07 15 46.0 -0.9**
GERES GERESS Array B 73.06 326 P **P 07 15 46.0 -0.9**
comp=Z,0.3nm,0.2s,baz=139,slow=4.4,SNR=7.0
PRU Pruhonice 73.23 327 *e*P **P 07 15 47.2 -0.5**
PRU *e* 07 15 55.5
PRU Pruhonice 73.23 327⇑*e*P **P 07 15 47.2 -0.5**
PRU *ex* x 07 15 55.5
VSU Vasula 73.24 339 *e*P **P 07 15 47.3 -0.3**
VSU pmax pmax
comp=Z,15nm,1.4s
KHC Kasperske Hory 73.28 326 *e*P **P 07 15 47.2 -1.0**
KHC *e* 07 15 55.2
KHC *e* 07 16 01.0
KHC Kasperske Hory 73.28 326 *e*P **P 07 15 46.8 -1.4**
comp=Z,14nm,1.2s
KHC Kasperske Hory 73.28 326 *e*P **P 07 15 47.2 -1.0**
KHC *ex* x 07 15 55.2
KHC *ex* x 07 16 01.0
WTTA Wattenberg 73.41 324⇓*i*P **P 07 15 48.5 -0.7**
comp=Z,29nm,1.0s
PVCC Panska Ves 73.51 328 *e*P **P 07 15 49.6 +0.2**
PVCC *e* 07 15 57.6
PVCC Panska Ves 73.51 328⇑*e*P **P 07 15 49.6 +0.2**
PVCC *ex* x 07 15 57.6
MOTA Moosalm 73.76 324⇓*i*P **P 07 15 51.2 0.0**
comp=Z,18nm,0.8s
FETA Feichten 73.82 323⇓*i*P **P 07 15 51.3 -0.2**
comp=Z,20nm,0.9s
DBIC Dimbokro 73.86 279 *e*P **P 07 15 51.6 -0.6**
comp=Z,14nm,1.0s
DBIC Dimbokro 73.86 279 P **P 07 15 51.9 -0.3**
comp=Z,5.6nm,0.8s,baz=79,slow=7.2,SNR=9.7
FUORN Ofenpass-Fuorn 73.90 323 *e*P **P 07 15 53.0 +0.8**
comp=Z,32nm,1.1s
LIC Lamto 73.95 279 *e*P **P 07 15 49.9 -2.9**
comp=Z,22nm,1.0s
LIC *eR*
comp=Z,357nm,21.8s
LIC Lamto 73.95 279 *e*P **P 07 15 49.9 -2.9**
comp=Z,22nm,1.0s
BRG Berggiesshubel 74.04 328 *i* P **P 07 15 53.0 +0.5**
comp=Z,46nm,1.9s
BRG *e* 07 16 00.5
comp=Z,17nm,1.4s
BRG Berggiesshubel 74.04 328 *i* P **P 07 15 53.0 +0.5**
BRG *e* 07 16 00.5
BRG pmax pmax
comp=Z,46nm,1.9s
BRG pmax pmax
comp=Z,17nm,1.4s
TUE Stuetta 74.39 322 *e*P **P 07 15 54.0 -0.9**
comp=Z,157nm,2.4s
SBF Sospel 74.39 319 *e*P **P 07 15 54.4 -0.4**
comp=Z,32nm,0.8s
SBF Sospel 74.39 319 *e*P **P 07 15 54.4 -0.4**
SBF pmax pmax
comp=Z,32nm,0.8s
SBF Sospel 74.39 319 *e*P **P 07 15 54.4 -0.4**
comp=Z,32nm,0.8s
DAVA Damuels 74.46 323⇓*i*P **P 07 15 54.8 -0.5**
comp=Z,32nm,0.8s
NKC Novy Kostel 74.49 327⇑*i*P **P 07 15 56.0 +0.8**
NKC *e* 07 16 01.3
NKC *e* 07 16 08.9
NKC Novy Kostel 74.49 327⇑*i*P **P 07 15 56.0 +0.8**
NKC *ep*P **pP 07 16 01.3 +0.5**
NKC *e*PCP **PcP 07 16 08.9 -0.8**
LMR La Mourre 74.76 318 *e*P **P 07 15 56.7 -0.2**
LMR La Mourre 74.76 318 *e*P **P 07 15 56.7 -0.2**
LMR La Mourre 74.76 318 *e*P **P 07 15 56.7 -0.2**
FRF La Foret Royal 74.77 319 *e*P **P 07 15 56.7 -0.2**
FRF La Foret Royal 74.77 319 *e*P **P 07 15 56.7 -0.2**
FRF La Foret Royal 74.77 319 *e*P **P 07 15 56.7 -0.2**
CLL Collm 74.77 328⇑*i*P **P 07 15 57.4 +0.7**
CLL *i* 07 16 05.3
CLL *e* 07 16 10.0
CLL pmax pmax
comp=Z,50nm,1.7s
CLL Collm 74.77 328⇑*i*P **P 07 15 57.4 +0.7**
comp=Z,50nm,1.7s
CLL *i* (sP) **sP 07 16 05.3 +0.9**
CLL *e*PcP **PcP 07 16 10.0 -0.8**
GRFO Grafenberg 74.89 326 *e*P **P 07 15 57.6 +0.1**
GRFO pmax pmax
comp=Z,25nm,0.8s
GRFO Grafenberg 74.89 326 *e*P **P 07 15 57.6 +0.1**
comp=Z,25nm,0.8s
JOF Joensuu 75.19 344 *e*P **P 07 15 57.5 -1.4**
JOF pmax pmax
comp=Z,3.0nm,0.7s
JOF Joensuu 75.19 344 *ep* **P 07 15 57.5 -1.4**
comp=Z,3.3nm,0.7s
MBDF Montbardon 75.20 320 *e*P **P 07 15 58.8 -0.8**
MBDF Montbardon 75.20 320 *e*P **P 07 15 58.8 -0.8**
MBDF Montbardon 75.20 320 *e*P **P 07 15 58.8 -0.8**
MDJ Mudanjiang 75.51 40 P **P 07 16 01.5 +0.3**
MDJ pmax pmax
comp=Z,14nm,1.7s
MDJ pmax pmax
comp=Z,54nm,3.7s
MDJ Mudanjiang 75.51 40 *e*P **P 07 16 03.3 +2.1**
comp=Z,18nm,0.9s
LPG La Plagne 75.55 320 *e*P **P 07 16 00.7 -1.0**
LPG La Plagne 75.55 320 *e*P **P 07 16 00.7 -1.0**
LPG La Plagne 75.55 320 *e*P **P 07 16 00.7 -1.0**
LPL La Plagne 75.57 321 *e*P **P 07 16 00.7 -1.1**
LPL La Plagne 75.57 321 *e*P **P 07 16 00.7 -1.1**
LPL La Plagne 75.57 321 *e*P **P 07 16 00.7 -1.1**
SMRF Simiane la Rot 75.65 319 *e*P **P 07 16 02.4 +0.4**
comp=Z,25nm,1.0s
SMRF Simiane la Rot 75.65 319 *e*P **P 07 16 02.4 +0.4**
comp=Z,25nm,1.0s
FIA1 FINESS Array S 75.66 341 *e*P **P 07 16 00.9 -0.6**
FINES FINESS Array B 75.66 341 P **P 07 16 01.2 -0.3**
FINES FINESS Array B 75.66 341 P **P 07 16 01.2 -0.3**
comp=Z,3.8nm,0.8s,baz=84,slow=5.9,SNR=12
ORIF Oris-en-Rattie 75.85 320 *e*P **P 07 16 03.0 -0.2**
ORIF Oris-en-Rattie 75.85 320 *e*P **P 07 16 03.0 -0.2**
ORIF Oris-en-Rattie 75.85 320 *e*P **P 07 16 03.0 -0.2**
BFO Black Forest 75.88 324 *e*P **P 07 16 03.4 +0.2**
BFO pmax pmax
comp=Z,6.0nm,0.9s
BFO Black Forest 75.88 324 *e*P **P 07 16 03.4 +0.2**
comp=Z,6.2nm,0.9s
KAF Kangasniemi 76.07 341 *e*P **P 07 16 02.7 -1.3**
KAF pmax pmax
comp=Z,6.0nm,0.7s
KAF Kangasniemi 76.07 341 *ep* **P 07 16 02.7 -1.3**
comp=Z,6.0nm,0.7s
CABF La Chapelle 76.45 321 *e*P **P 07 16 06.6 0.0**
CABF La Chapelle 76.45 321 *e*P **P 07 16 06.6 0.0**
CABF La Chapelle 76.45 321 *e*P **P 07 16 06.6 0.0**
ECH Echery 76.52 323 *e*P **P 07 16 05.4 -1.4**
ECH pmax pmax
comp=Z,8.0nm,1.3s
ECH Echery 76.52 323 *e*P **P 07 16 05.4 -1.4**
comp=Z,8.3nm,1.3s
HINF Hinteralfeld 76.52 323 *e*P **P 07 16 06.1 -0.8**
HINF Hinteralfeld 76.52 323 *e*P **P 07 16 06.1 -0.8**
HINF Hinteralfeld 76.52 323 *e*P **P 07 16 06.1 -0.8**
CDF Champ du Feu 76.53 323 *e*P **P 07 16 06.5 -0.6**
CDF Champ du Feu 76.53 323 *e*P **P 07 16 06.5 -0.6**
CDF Champ du Feu 76.53 323 *e*P **P 07 16 06.5 -0.6**
VIVF Saint-Julien-l 76.60 319 *e*P **P 07 16 07.5 +0.1**
VIVF Saint-Julien-l 76.60 319 *e*P **P 07 16 07.5 +0.1**
VIVF Saint-Julien-l 76.60 319 *e*P **P 07 16 07.5 +0.1**
CTA Charters Tower 76.69 109 P **P 07 16 08.6 +0.1**
CTA Charters Tower 76.69 109 P **P 07 16 08.6 +0.1**
comp=Z,1.4nm,0.5s,baz=286,slow=7.7,SNR=3.9
CTAO Charters Tower 76.69 109 *e*P **P 07 16 07.9 -0.6**
CTAO pmax pmax
comp=Z,7.0nm,1.1s
CTAO Charters Tower 76.69 109 *e*P **P 07 16 07.9 -0.6**
comp=Z,7.0nm,1.1s
LASF Ste Croix 76.82 318 *e*P **P 07 16 09.1 +0.4**
comp=Z,24nm,1.0s
LASF Ste Croix 76.82 318 *e*P **P 07 16 09.1 +0.4**
comp=Z,24nm,1.0s
SSB Saint Sauveur 76.86 320 *e*P **P 07 16 08.6 -0.3**
SSB pmax pmax
comp=Z,17nm,1.1s
SSB Saint Sauveur 76.86 320 *e*P **P 07 16 08.6 -0.3**
comp=Z,16nm,1.1s
USRK Ussuriysk Arra 76.90 42 P **P 07 16 08.9 -0.2**
comp=Z,2.6nm,1.0s,baz=251,slow=6.0,SNR=4.1
TAU Tasmania Unive 77.46 132 *e*P **P 07 16 15.2 +2.9**
TAU pmax pmax
comp=Z,43nm,1.5s
TAU Tasmania Unive 77.46 132 *e*P **P 07 16 15.2 +2.9**
comp=Z,43nm,1.5s
PAGF Fort de Pagny 77.52 323 *e*P **P 07 16 12.3 -0.2**
PAGF Fort de Pagny 77.52 323 *e*P **P 07 16 12.3 -0.2**
MTLF Montolieu 77.63 317 *e*P **P 07 16 13.6 +0.4**
comp=Z,91nm,1.6s
MTLF Montolieu 77.63 317 *e*P **P 07 16 13.6 +0.4**
MTLF pmax pmax
comp=Z,91nm,1.6s
MTLF Montolieu 77.63 317 *e*P **P 07 16 13.6 +0.4**
comp=Z,91nm,1.6s
SFTF Sexfontaines 77.78 322 *e*P **P 07 16 13.8 -0.2**
SFTF Sexfontaines 77.78 322 *e*P **P 07 16 13.8 -0.2**
MEZF Maizieres J'vi 77.90 323 *e*P **P 07 16 14.7 +0.1**
MEZF Maizieres J'vi 77.90 323 *e*P **P 07 16 14.7 +0.1**
LOR Lormes 78.11 321 *e*P **P 07 16 15.6 -0.2**
comp=Z,18nm,0.9s
LOR Lormes 78.11 321 *e*P **P 07 16 15.6 -0.2**
comp=Z,18nm,0.9s
AVF Avril sur Loir 78.23 321 *e*P **P 07 16 16.0 -0.5**
AVF Avril sur Loir 78.23 321 *e*P **P 07 16 16.0 -0.5**
AVF Avril sur Loir 78.23 321 *e*P **P 07 16 16.0 -0.5**
SSF Saint Saulge 78.25 321 *e*P **P 07 16 16.3 -0.3**
comp=Z,26nm,1.0s
SSF Saint Saulge 78.25 321 *e*P **P 07 16 16.3 -0.3**
SSF pmax pmax
comp=Z,27nm,1.0s
SSF Saint Saulge 78.25 321 *e*P **P 07 16 16.3 -0.3**
comp=Z,26nm,1.0s
PMG Port Moresby 78.32 98 P **P 07 16 17.6 -0.1**
PMG Port Moresby 78.32 98 P **P 07 16 17.6 -0.1**
comp=Z,5.9nm,0.6s,baz=276,slow=16,SNR=3.7
CAF Calviac 78.33 319 *e*P **P 07 16 17.6 +0.5**
CAF Calviac 78.33 319 *e*P **P 07 16 17.6 +0.5**
CAF Calviac 78.33 319 *e*P **P 07 16 17.6 +0.5**
BGF Bois d'Agland 78.46 320 *e*P **P 07 16 18.0 +0.2**
BGF Bois d'Agland 78.46 320 *e*P **P 07 16 18.0 +0.2**
BGF Bois d'Agland 78.46 320 *e*P **P 07 16 18.0 +0.2**
MAT Matsushiro 78.66 51 P **P 07 16 18.5 -0.6**
MAT S S 07 26 09.4 -6.4
MJAR Matsushiro Arr 78.66 51 P **P 07 16 19.8 +0.6**
MJAR Matsushiro Arr 78.66 51 P **P 07 16 19.8 +0.6**
comp=Z,1.3nm,0.6s,baz=195,slow=3.9,SNR=7.4
GIVF Givet 78.73 324 *e*P **P 07 16 19.2 +0.1**
GIVF Givet 78.73 324 *e*P **P 07 16 19.2 +0.1**
GIVF Givet 78.73 324 *e*P **P 07 16 19.2 +0.1**
TCF Toulx Ste Croi 78.76 320 *e*P **P 07 16 19.4 -0.1**
TCF Toulx Ste Croi 78.76 320 *e*P **P 07 16 19.4 -0.1**

TCF	Toulx Ste Croi	78.76	320	eP		P	07 16 19.4	-0.1	
KLR	Kul'dur	78.81	37	eP		P	07 16 13.8	-5.8	
RJF	Les Rejaudoux	78.83	319	eP		P	07 16 20.3	+0.4	
RJF	Les Rejaudoux	78.83	319	eP		P	07 16 20.3	+0.4	
RJF	Les Rejaudoux	78.83	319	eP		P	07 16 20.3	+0.4	
BAIF	Baives	79.07	324	eP		P	07 16 21.3	+0.3	
	comp=Z,90nm,1.4s								
BAIF	Baives	79.07	324	eP		P	07 16 21.3	+0.3	
BAIF				pmax	pmax				
	comp=Z,90nm,1.4s								
BAIF	Baives	79.07	324	eP		P	07 16 21.3	+0.3	
	comp=Z,90nm,1.4s								
LFF	La Frestale	79.21	318	eP		P	07 16 22.5	+0.6	
LFF	La Frestale	79.21	318	eP		P	07 16 22.5	+0.6	
LFF	La Frestale	79.21	318	eP		P	07 16 22.5	+0.6	
ETSF	Etsaut	79.37	316	eP		P	07 16 23.6	+0.7	
ETSF	Etsaut	79.37	316	eP		P	07 16 23.6	+0.7	
ETSF	Etsaut	79.37	316	eP		P	07 16 23.6	+0.7	
SJPF	Ste Jean	79.90	316	eP		P	07 16 26.5	+0.8	
	comp=Z,33nm,1.1s								
SJPF	Ste Jean	79.90	316	eP		P	07 16 26.5	+0.8	
SJPF				pmax	pmax				
	comp=Z,33nm,1.0s								
SJPF	Ste Jean	79.90	316	eP		P	07 16 26.5	+0.8	
	comp=Z,33nm,1.0s								
MFF	Saint Martin d	80.39	320	eP		P	07 16 28.5	+0.2	
MFF	Saint Martin d	80.39	320	eP		P	07 16 28.5	+0.2	
MFF	Saint Martin d	80.39	320	eP		P	07 16 28.5	+0.2	
HABR	Khabarovsk	80.51	38	eP		P	07 16 26.0	-2.8	
HABR				e			07 16 32.6		
HABR				e			07 19 28.9		
HABR				ePPP		PPP	07 21 18.6		
HABR				S		S	07 26 30.4	-4.4	
HABR				eSS		SS	07 31 42.9	-4.4	
HABR				pmax	pmax				
	comp=Z,52nm,1.5s								
HABR				pmax	pmax				
	comp=N,34nm,1.5s								
HABR				pmax	pmax				
	comp=E,10.0nm,0.3s								
HABR				MLR	MLR				
	comp=Z,143nm,19.0s								
ESDC	Sonseca Array	80.77	312	P		P	07 16 31.1	+0.5	
ESDC	Sonseca Array	80.77	312	P		P	07 16 31.1	+0.5	
	comp=Z,0.9nm,0.4s,baz=94,slow=4.7,SNR=15								
ESLA	Sonseca Array	80.77	312	eP		P	07 16 30.7	+0.1	
	comp=Z,4.8nm,1.2s								
NB2	NORSAR Subarra	80.90	336	P		P	07 16 30.2	-0.6	
	comp=Z,15nm,1.2s,baz=114,slow=5.3								
NOA	NORSAR Array B	80.90	336	P		P	07 16 30.9	+0.2	
NOA	NORSAR Array B	80.90	336	P		P	07 16 30.9	+0.2	
	comp=Z,1.2nm,0.7s,baz=115,slow=5.5,SNR=5.3								
PAB	San Pablo	81.02	312	eP		P	07 16 32.6	+0.7	
PAB				pmax	pmax				
	comp=Z,29nm,1.4s								
PAB	San Pablo	81.02	312	eP		P	07 16 32.6	+0.7	
	comp=Z,29nm,1.4s								
FLN	La Foliniere	81.38	322	eP		P	07 16 33.5	0.0	
FLN	La Foliniere	81.38	322	eP		P	07 16 33.5	0.0	
FLN	La Foliniere	81.38	322	eP		P	07 16 33.5	0.0	
GRR	Gorron	81.48	321	eP		P	07 16 34.2	+0.2	
GRR	Gorron	81.48	321	eP		P	07 16 34.2	+0.2	
GRR	Gorron	81.48	321	eP		P	07 16 34.2	+0.2	
ARCES	ARCESS Array B	81.78	346	P		P	07 16 34.9	-0.3	
ARCES	ARCESS Array B	81.78	346	P		P	07 16 34.9	-0.3	
	comp=Z,3.5nm,1.0s,baz=106,slow=13,SNR=4.4								
QSPA	South Pole Qui	82.94	180	eP		P	07 16 41.1	-0.4	
	comp=Z,73nm,1.9s								
EVO	Evora	83.49	310	eP		P	07 16 45.6	+0.8	
	comp=Z,39nm,1.2s								
EVO				eR					
	comp=Z,76nm,22.5s								
YAK	Yakutsk	83.51	25	eP		P	07 16 44.4	+0.1	
YAK				pmax	pmax				
	comp=Z,26nm,0.9s								
EVOP	Sao Brissos	83.58	310	eP		P	07 16 45.6	+0.4	
EVOP				pmax	pmax				
	comp=Z,39nm,1.2s								
EVOP	Sao Brissos	83.58	310	eP		P	07 16 45.6	+0.4	
	comp=Z,39nm,1.2s								
VNDA	Vanda	83.98	167	eP		P	07 16 46.8	+0.2	
	comp=Z,18nm,1.6s								
VNDA	Vanda	83.98	167	P		P	07 16 47.0	+0.4	
	comp=Z,3.3nm,1.0s,baz=280,slow=4.9,SNR=8.1								
SBA	Scott Base	84.98	168	eP		P	07 16 52.6	+1.0	
SBA				pmax	pmax				
	comp=Z,70nm,2.0s								
SBA	Scott Base	84.98	168	eP		P	07 16 52.6	+1.0	
	comp=Z,70nm,2.0s								
TIXI	Tiksi	87.93	16⇑	i/P		P	07 17 05.7	-0.3	
TIXI				pmax	pmax				
	comp=Z,34nm,2.5s								
SEY	Seymchan	93.75	27⇓	i/P		P	07 17 32.9	-0.5	
DZM	Mont Dzumac	95.22	113	eLR		LR	07 48 22.7		
	comp=Z,418nm,21.8s								
BILL	Bilibino	99.67	22⇑	eP		Pdif	07 17 59.6	-0.5	
BILL				eS		SKSac	07 28 41.5	+3.8	
BILL				pmax	pmax				
	comp=Z,2.0nm,1.4s								
ILAR	Eielson Array	117.40	16	PKP		PKPdf	07 23 00.9	-1.1	
ILAR	Eielson Array	117.40	16	PKP		PKPdf	07 23 00.9	-1.1	
	comp=Z,0.6nm,0.8s,baz=293,slow=2.7,SNR=7.7								
PMR	Palmer	119.12	19	ePKIKP		PKPdf	07 23 04.3	-1.1	
PMR	Palmer	119.12	19	ePKPdf		PKPdf	07 23 04.3	-1.1	
YKA	Yellowknife Ar	124.68	1	PKP		PKPdf	07 23 15.5	-0.6	
YKA				PP		PP	07 25 03.0	+0.5	
YKA	Yellowknife Ar	124.68	1	PKP		PKPdf	07 23 15.5	-0.6	
	comp=Z,1.5nm,0.8s,baz=352,slow=2.4,SNR=3.7								
YKA				PP		PP	07 25 03.0	+0.5	
	comp=Z,0.3nm,0.7s,baz=352,slow=6.7,SNR=5.5								
LPAZ	La Paz	130.68	242	PKP		PKPdf	07 23 29.7	+0.1	
LPAZ				ePKPdf		PKiKP	07 23 30.1	-0.4	
LPAZ	La Paz	130.68	242	PKP		PKPdf	07 23 29.7	+0.1	
	comp=Z,4.0nm,1.2s,baz=340,slow=5.0,SNR=5.2								
TBI	Tubuai	132.58	131	eLR		LR	08 05 37.5		
	comp=Z,96nm,33.8s								
PPT2	Papeete2	135.59	124	eLR		LR	08 06 59.5		
	comp=Z,147nm,24.5s								
CHMT	Chamberlain Mo	140.31	1	ePKPdf		PKPdf	07 23 48.1	+1.9	
BOZ	Bozeman (W)	141.59	359	ePKIKP		PKPdf	07 23 48.8	+0.3	
BOZ	Bozeman (W)	141.59	359	ePKPdf		PKPdf	07 23 48.8	+0.3	
DLMT	Dillon	141.88	1	ePKPdf		PKPdf	07 23 49.2	+0.2	
I12A	Atlanta	143.35	4	⇑PKPdf		PKPbc	07 23 50.3	+1.5	
	baz=143								
I18A	Diamond G Ranc	143.49	357	⇓PKPdf		PKPbc	07 23 50.3	+1.1	
	baz=143								
HLID	Hailey	143.62	3	ePKPdf		PKPbc	07 23 50.5	+0.9	
HLID	Hailey	143.62	3	⇓PKPdf		PKPbc	07 23 50.6	+1.1	
	baz=144								
MFID	Camas Ranch	143.68	5	ePKPdf		PKPdf	07 23 53.0	+0.7	
J20A	Shoshoni	143.72	355	⇑PKPdf		PKPbc	07 23 50.8	+1.0	
	baz=144								
TPAW	Teton Pass	143.74	359	ePKPdf		PKPdf	07 23 52.7	+0.2	
J19A	Crowheart	143.88	356	⇓PKPdf		PKPbc	07 23 51.2	+0.9	
	baz=144								
K25A	Mack Ranch, Ha	143.89	350	⇓PKPdf		PKPbc	07 23 51.2	+0.9	
	baz=144								
J14A	Carey	143.90	2	⇓PKPdf		PKPbc	07 23 51.5	+1.1	
	baz=144								
TIGA	Tifton	144.01	316	⇓PKPdf		PKPbc	07 23 51.5	+0.6	
	baz=144								
K22A	Casper	144.25	353	⇑PKPdf		PKPbc	07 23 51.5	+0.1	
	baz=144								
K19A	Absolon Red Bu	144.30	356	⇓PKPdf		PKPbc	07 23 51.8	+0.1	
	baz=144								
M29A	Burnside Ranch	144.32	345	⇓PKPdf		PKPbc	07 23 51.9	+0.3	
	baz=144								
WVOR	Wild Horse Val	144.33	8	ePKIKP		PKPbc	07 23 52.2	+0.5	
WVOR	Wild Horse Val	144.33	8	ePKPdf		PKPbc	07 23 52.2	+0.5	
K21A	Alcova	144.35	354	⇑PKPdf		PKPbc	07 23 51.9	+0.1	
	baz=144								
BW06	Boulder Array	144.40	357	ePKPdf		PKPbc	07 23 52.5	+0.4	
PDAR	Pinedale Array	144.40	357	PKP		PKPbc	07 23 52.5	+0.5	
PDAR	Pinedale Array	144.40	357	PKP		PKPbc	07 23 52.5	+0.5	
	comp=Z,1.9nm,0.8s,baz=87,slow=1.2,SNR=14								
K20A	Yellowstone Ra	144.43	355	⇓PKPdf		PKPbc	07 23 52.3	+0.3	
	baz=144								
MOD	Modoc	144.58	11	ePKPdf		PKPbc	07 23 52.9	+0.4	
M27A	Reverse DX Ran	144.64	347	⇑PKPdf		PKPab	07 23 52.4	-0.1	
	baz=144								
L23A	Garrett	144.67	352	⇑PKPdf		PKPab	07 23 52.4	-0.3	
	baz=144								
KHMM	Horse Mountain	144.80	15	ePKPdf		PKPdf	07 23 54.1	-0.2	
L22A	Ellis Ranch, M	144.85	353	⇓PKPdf		PKPab	07 23 53.2	-0.1	
	baz=145								
L21A	Rawlins	145.02	354	⇑PKPdf		PKPbc	07 23 53.8	-0.2	
	baz=145								
L19A	Farson	145.05	356	⇓PKPdf		PKPbc	07 23 54.1	0.0	
	baz=145								
L20A	Wamsutter	145.07	355	⇓PKPdf		PKPbc	07 23 54.1	-0.1	
	baz=145								
OGNE	Ogallala	145.12	347	⇓PKPdf		PKPbc	07 23 54.0	-0.2	
	baz=145								
M24A	Cheyenne	145.16	350	⇑PKPdf		PKPab	07 23 54.7	+0.2	
	baz=145								
KSU1	Kansas State U	145.21	339	ePKPdf		PKPbc	07 23 54.0	-0.5	
LRAL	Lakeview Retre	145.24	321	ePKPdf		PKPab	07 23 54.9	+0.1	
L18A	Fontenelle, Gr	145.27	357	⇑PKPdf		PKPdf	07 23 55.2	0.0	
	baz=145								
M23A	Laramie	145.30	352	⇓PKPdf		PKPbc	07 23 54.8	-0.1	
	baz=145								
N27A	Anderson Farm,	145.36	347	⇓PKPdf		PKPbc	07 23 54.8	-0.2	
	baz=145								
M21A	Separation Pea	145.38	354	⇓PKPdf		PKPbc	07 23 55.0	-0.2	
	baz=145								
WDC	Whiskeytown Da	145.38	14	ePKIKP		PKPbc	07 23 54.7	-0.2	
WDC	Whiskeytown Da	145.38	14	ePKPdf		PKPbc	07 23 54.7	-0.2	
PHWY	Pilot Hill	145.43	351	ePKPdf		PKPbc	07 23 55.2	-0.2	
HVU	Hansel Valley	145.46	1	ePKIKP		PKPab	07 23 55.9	+0.4	
HVU	Hansel Valley	145.46	1	ePKPdf		PKPab	07 23 55.9	+0.4	
M22A	Cedar Creek Ra	145.49	353	⇑PKPdf		PKPdf	07 23 55.3	-0.3	
	baz=145								
N26A	Koester Ranch,	145.49	348	⇓PKPdf		PKPdf	07 23 55.2	-0.2	
	baz=145								
HBAR	Harrisburg	145.51	328	ePKPdf		PKPab	07 23 56.2	+0.5	
M20A	Sweetwater, Wa	145.57	355	⇑PKPdf		PKPbc	07 23 55.9	+0.1	
	baz=145								
OXF	Oxford	145.62	326	ePKIKP		PKPdf	07 23 55.1	-0.6	
OXF	Oxford	145.62	326	ePKPdf		PKPdf	07 23 55.1	-0.6	
HWUT	Hardware Ranch	145.63	359	ePKPdf		PKPbc	07 23 56.1	+0.2	
M19A	Rock Springs	145.63	356	⇓PKPdf		PKPbc	07 23 56.0	0.0	
	baz=146								
M17A	Scullys Gap (B	145.74	358	⇓PKPdf		PKPdf	07 23 56.2	+0.2	
	baz=146								
OTAV	Otavalo	145.76	260	ePKPdf		PKPab	07 23 58.2	+0.3	
M18A	Lyman	145.76	357	⇓PKPdf		PKPbc	07 23 56.4	0.0	
	baz=146								
KIPM	Iron Peak	145.86	16	ePKPdf		PKPab	07 23 57.9	+0.8	
N23A	Red Feather La	145.90	352	⇑PKPdf		PKPbc	07 23 56.8	-0.1	
	baz=146								
O27A	Beecher Island	145.94	347	⇓PKPdf		PKPbc	07 23 56.8	-0.1	
	baz=146								
N22A	Wattenberg Ran	146.06	352	⇑PKPdf		PKPbc	07 23 57.3	-0.1	
	baz=146								
O26A	Horse Wrangler	146.07	348	⇓PKPdf		PKPbc	07 23 57.4	+0.1	
	baz=146								
N21A	Black Mountain	146.23	354	⇓PKPdf		PKPdf	07 23 57.4	+0.5	
	baz=146								
N20A	Spence Gulch,	146.23	355	⇑PKPdf		PKPdf	07 23 57.3	+0.5	
	baz=146								
P28A	Saint Francis	146.35	345	⇑PKiKP		PKPab	07 23 59.0	+0.1	
	baz=146								
O25A	Wiggins	146.35	349	⇓PKiKP		PKPab	07 23 59.0	0.0	
	baz=146								
ELK	Elko	146.38	4	ePKPbc		PKPab	07 23 59.0	-0.2	
BMN	Battle Mountai	146.49	7	ePKP2		PKPab	07 23 59.5	0.0	
BMN	Battle Mountai	146.49	7	ePKPbc		PKPab	07 23 59.5	0.0	
O24A	Longmont	146.52	350	⇓PKiKP		PKPab	07 23 59.3	-0.3	
	baz=146								
BEKR	Beckworth	146.54	12	ePKPdf		PKPbc	07 23 58.9	+0.2	
O23A	Lake Granby, G	146.56	351	⇓PKiKP		PKPbc	07 23 59.5	+0.6	
	baz=146								
P27A	Ficken Ranch,	146.57	347	⇑PKiKP		PKPab	07 23 59.4	-0.4	
	baz=146								
JLU	Jordanelle	146.63	359	ePKPbc		PKPbc	07 23 59.6	+0.5	
O22A	Kremmling	146.70	352	⇓PKiKP		PKPbc	07 23 59.5	+0.2	
	baz=147								
P26A	Davis Ranch, A	146.73	348	⇑PKiKP		PKPbc	07 23 59.7	+0.4	
	baz=147								
O21A	Pagoda	146.76	354	⇑PKiKP		PKPbc	07 23 59.6	+0.1	
	baz=147								
DAU	Daniels Canyon	146.82	359	ePKP2		PKPab	07 24 00.6	-0.3	
DAU	Daniels Canyon	146.82	359	ePKPbc		PKPab	07 24 00.6	-0.3	
Q28A	Sharon Springs	146.85	345	⇑PKiKP		PKPbc	07 24 00.2	+0.6	
	baz=147								
ISCO	Idaho Springs	146.92	351	ePKP2		PKPbc	07 23 59.9	-0.1	
ISCO	Idaho Springs	146.92	351	ePKPbc		PKPbc	07 23 59.9	-0.1	
ISCO	Idaho Springs	146.92	351	⇑PKiKP		PKPbc	07 24 00.4	+0.4	
	baz=147								
O20A	White River Ci	146.92	355	⇑PKiKP		PKPbc	07 24 00.5	+0.6	
	baz=147								
P25A	Willow Gulch B	146.94	349	⇑PKiKP		PKPbc	07 24 00.5	+0.5	
	baz=147								
UALR	University of	146.99	329	ePKPbc		PKPbc	07 24 00.1	+0.2	
DUG	Dugway	147.04	1	ePKP2		PKPbc	07 24 00.8	+0.7	
DUG	Dugway	147.04	1	ePKPbc		PKPbc	07 24 00.8	+0.7	
DUG	Dugway	147.04	1	⇓PKiKP		PKPbc	07 24 00.6	+0.5	
	baz=147								
P24A	Kohler Place,	147.08	350	⇑PKiKP		PKPbc	07 24 00.9	+0.6	
	baz=147								
KSCO	Kaye Shedlock'	147.10	346	⇓PKiKP		PKPbc	07 24 00.8	+0.5	
	baz=147								
R30A	Dighton	147.16	343	⇓PKiKP		PKPbc	07 24 00.8	+0.4	
	baz=147								
WCN	Washoe City	147.20	11	ePKP2		PKPbc	07 24 01.2	+0.5	
WCN	Washoe City	147.20	11	ePKPbc		PKPbc	07 24 01.2	+0.5	
P22A	Eagle	147.29	352	⇑PKiKP		PKPbc	07 24 01.6	+0.6	
	baz=147								
P23A	Jefferson	147.37	351	⇑PKiKP		PKPbc	07 24 01.8	+0.5	
	baz=147								
Q26A	Hugo	147.38	348	⇓PKiKP		PKPbc	07 24 01.8	+0.6	
	baz=147								
P21A	Newcastle	147.44	353	⇑PKiKP		PKPbc	07 24 02.0	+0.6	
	baz=147								
P19A	Cripple Cowboy	147.48	356	⇓PKiKP		PKPbc	07 24 01.9	+0.4	
	baz=147								
S31A	Mullinville	147.53	341	⇓PKiKP		PKPbc	07 24 02.1	+0.7	
	baz=147								
R28A	Tribune	147.53	345	⇑PKiKP		PKPbc	07 24 02.2	+0.7	
	baz=147								
P20A	De Beque	147.56	355	⇓PKiKP		PKPbc	07 24 01.7	0.0	
	baz=147								
P18A	Preston Nutter	147.57	357	⇓PKiKP		PKPbc	07 24 02.0	+0.2	
	baz=147								
Q24A	Divide	147.66	350	⇓PKiKP		PKPbc	07 24 02.2	0.0	
	baz=148								
TUL1	Tulsa	147.66	335	⇑PKiKP		PKPbc	07 24 02.1	+0.3	
	baz=148								
SMCO	Snowmass	147.73	353	ePKPbc		PKPbc	07 24 03.0	+0.6	
P17A	Butcher Ranch,	147.74	358	⇓PKiKP		PKPbc	07 24 02.8	+0.6	
	baz=148								
S30A	Montezuma	147.81	343	⇑PKiKP		PKPbc	07 24 02.8	+0.5	
	baz=148								
R27A	Eads	147.83	346	⇑PKiKP		PKPbc	07 24 03.1	+0.8	
	baz=148								
Q23A	Hartsel	147.83	351	⇑PKiKP		PKPbc	07 24 02.9	+0.3	
	baz=148								
R26A	Arlington	147.96	347	⇓PKiKP		PKPbc	07 24 03.5	+0.8	
	baz=148								
BCIP	Isla Barro Col	148.00	276	ePKPbc		PKPbc	07 24 03.9	+0.5	
S29A	Ulysses	148.02	343	⇑PKiKP		PKPbc	07 24 03.6	+0.8	
	baz=148								
Q22A	Crested Butte,	148.03	352	⇓PKiKP		PKPbc	07 24 03.6	+0.5	
	baz=148								
T31A	Randall Ranch,	148.06	341	⇑PKiKP		PKPbc	07 24 03.5	+0.7	
	baz=148								
SRU	San Rafael	148.09	358	⇑PKiKP		PKPbc	07 24 03.8	+0.7	
	baz=148								
Q20A	Ridgley Place,	148.10	354	⇑PKiKP		PKPbc	07 24 03.5	+0.4	
	baz=148								
Q21A	Lamborn Mesa,	148.14	353	⇑PKiKP		PKPbc	07 24 04.1	+0.8	
	baz=148								
S28A	Manter	148.26	344	⇓PKiKP		PKPbc	07 24 04.3	+0.8	
	baz=148								
CMB	Columbia Colle	148.30	13	ePKP2		PKPbc	07 24 03.9	+0.4	
CMB	Columbia Colle	148.30	13	ePKPbc		PKPbc	07 24 03.9	+0.4	
NVAR	Mina Array Bea	148.31	9	PKPbc		PKPbc	07 24 04.9	+1.2	
NVAR	Mina Array Bea	148.31	9	PKPbc		PKPbc	07 24 04.9	+1.2	
	comp=Z,5.0nm,0.8s,baz=322,slow=1.8,SNR=23								
NV11	Mina Array Sit	148.33	9	ePKPdf		PKPdf	07 24 00.8	+0.5	
NV11				ePKPbc		PKPbc	07 24 04.5	+0.8	
R24A	Sanders Place,	148.36	349	⇓PKiKP		PKPbc	07 24 04.4	+0.6	
	baz=148								
T30A	Plains	148.37	342	⇓PKiKP		PKPbc	07 24 04.5	+0.7	
	baz=148								
T29A	Hugoton	148.50	343	⇑PKiKP		PKPbc	07 24 04.8	+0.7	
	baz=148								
S26A	Kim	148.62	347	⇑PKiKP		PKPbc	07 24 05.1	+0.7	
	baz=148								
MSU	Marysvale	148.72	0	ePKP2		PKPbc	07 24 05.5	+0.6	
MSU	Marysvale	148.72	0	ePKPbc		PKPbc	07 24 05.5	+0.6	
R11A	Troy Canyon, C	148.73	5	⇑PKiKP		PKPbc	07 24 05.5	+0.7	
	baz=149								
MVU	Marysvale	148.73	0	ePKPbc		PKPbc	07 24 05.6	+0.8	
U31A	Nine Bar Ranch	148.78	341	⇑PKiKP		PKPbc	07 24 05.5	+0.7	
	baz=149								
S25A	Robets Cordova	148.79	348	⇓PKiKP		PKPbc	07 24 05.6	+0.6	
	baz=149								
R20A	Redvale	148.86	354	⇓PKiKP		PKPbc	07 24 05.6	+0.4	
	baz=149								
U30A	WK&E Inc. Balk	148.89	342	⇑PKiKP		PKPbc	07 24 05.7	+0.6	
	baz=149								
SDCO	Great Sand Dun	148.91	350	ePKPdf		PKPdf	07 24 01.8	+0.4	
SDCO				ePKPbc		PKPbc	07 24 05.5	+0.1	
PV01	Paradox Valley	148.94	355	ePKPbc		PKPbc	07 24 05.6	+0.2	
S24A	Houchin Ranch,	148.96	349	⇓PKiKP		PKPbc	07 24 06.0	+0.4	
	baz=149								
T27A	Campo	148.97	345	⇓PKiKP		PKPbc	07 24 06.0	+0.6	
	baz=149								
T26A	Comanche Natio	149.07	347	⇑PKiKP		PKPbc	07 24 06.2	+0.5	
	baz=149								
S22A	4UR Ranch, Cre	149.12	352	⇑PKiKP		PKPbc	07 24 06.3	+0.4	
	baz=149								
S20A	Disappointment	149.22	354	⇓PKiKP		PKPbc	07 24 06.3	+0.2	
	baz=149								
T25A	Trinidad	149.28	348	⇑PKiKP		PKPbc	07 24 06.2	-0.1	
	baz=149								
S21A	Coal Bank Pass	149.32	353	⇓PKiKP		PKPbc	07 24 06.6	+0.1	
	baz=149								
V31A	Spring Creek L	149.32	340	⇓PKiKP		PKPbc	07 24 06.7	+0.5	
	baz=149								
T24A	Torres, Weston	149.48	349	⇑PKiKP		PKPbc	07 24 06.9	0.0	
	baz=149								
S18A	Hurst Farm, Bl	149.48	357	⇓PKiKP		PKPbc	07 24 06.4	-0.4	
	baz=149								
U27A	Thompson Grove	149.60	345	⇓PKiKP		PKPbc	07 24 06.8	-0.2	
	baz=150								
CCUT	Cedar City	149.66	2	ePKPdf		PKPdf	07 24 03.7	+1.1	
CCUT				ePKPbc		PKPbc	07 24 07.6	+0.4	
T23A	Casias Ranch,	149.69	350	⇓PKiKP		PKPbc	07 24 07.2	-0.1	
	baz=150								
MVCO	Mesa Verde	149.84	354	ePKPbc		PKPbc	07 24 07.7	0.0	
MVCO	Mesa Verde	149.84	354	⇓PKiKP		PKPbc	07 24 07.6	-0.1	
	baz=150								
U26A	Atchley Ranch,	149.85	346	⇓PKiKP		PKPbc	07 24 07.4	-0.3	
	baz=150								
W31A	Holland Ranch,	149.89	340	⇓PKiKP		PKPbc	07 24 07.6	-0.1	
	baz=150								
T21A	Navajo Lake	149.95	353	⇓PKiKP		PKPbc	07 24 07.9	0.0	
	baz=150								
U25A	Circle Dot Ran	150.00	348	⇑PKiKP		PKPbc	07 24 08.2	+0.2	
	baz=150								
V28A	Channing	150.08	344	⇑PKiKP		PKPbc	07 24 08.0	-0.1	
	baz=150								
RCTC	Rector, Farmer	150.20	12	⇑PKiKP		PKPbc	07 24 08.1	-0.1	
	baz=150								
CWC	Cottonwood Cre	150.28	10	⇑PKiKP		PKPbc	07 24 08.4	-0.3	
	baz=150								
U23A	El Rito	150.41	350	⇑PKiKP		PKPbc	07 24 08.5	-0.5	
	baz=150								
X31A	McDonald Ranch	150.41	339	⇑PKiKP		PKPbc	07 24 08.6	-0.2	
	baz=150								
V26A	Tequesquite Ra	150.44	346	⇓PKiKP		PKPbc	07 24 08.5	-0.5	
	baz=150								
FURC	Furnace Creek,	150.44	8	⇑PKiKP		PKiKP	07 24 09.4	-0.1	
	baz=150								
U22A	Llaves	150.46	351	⇑PKiKP		PKPbc	07

	baz=152							
Z29A	**Hungry Hill Ra**	**152.24**	**341**	⇓PKiKP	**PKPbc**	**07 24 13.0**	**-0.2**
	baz=152							
GMRC	**Granite Mounta**	**152.25**	**6**	⇓PKiKP	**PKiKP**	**07 24 13.7**	**+0.1**
	baz=152							
131A	**Roby**	**152.32**	**338**	⇓PKiKP	**PKPbc**	**07 24 13.3**	**-0.1**
	baz=152							
X22A	**Bernardo**	**152.32**	**351**	⇓PKiKP	**PKiKP**	**07 24 13.7**	**0.0**
	baz=152							
Z28A	**Tucker Farm, M**	**152.42**	**342**	⇑PKiKP	**PKPbc**	**07 24 13.4**	**-0.2**
	baz=152							
Y25A	**Mesa, Roswell**	**152.44**	**347**	⇑PKiKP	**PKPbc**	**07 24 13.6**	**-0.1**
	baz=152							
LAZ	**Ladron**	**152.44**	**351**	*e*PKPdf	**PKPdf**	**07 24 08.0**	**+1.1**
LAZ				*e*PKPbc	**PKiKP**	**07 24 14.1**	**0.0**
LAZ				*e*PKPab	**PKPab**	**07 24 22.4**	**-1.4**
X20A	**Quemado**	**152.49**	**354**	⇑PKiKP	**PKiKP**	**07 24 14.2**	**+0.1**
	baz=152							
X21A	**Alamocita Cree**	**152.49**	**352**	⇓PKiKP	**PKPbc**	**07 24 13.9**	**-0.1**
	baz=152							
130A	**Snyder**	**152.59**	**339**	⇑PKiKP	**PKPbc**	**07 24 13.8**	**-0.2**
	baz=152							
Y24A	**Capitan**	**152.60**	**348**	⇓PKiKP	**PKPbc**	**07 24 13.5**	**-0.6**
	baz=152							
BBRC	**Big Bear Solar**	**152.60**	**9**	⇑PKiKP	**PKPbc**	**07 24 13.8**	**-0.4**
	baz=152							
HKT	**Hockley**	**152.60**	**328**	*e*PKiKP	**PKPbc**	**07 24 15.0**	**+1.1**
HKT	**Hockley**	**152.60**	**328**	*e*PKPbc	**PKPbc**	**07 24 15.0**	**+1.1**
BNM	**Barren Site**	**152.61**	**350**	*e*PKPbc	**PKPbc**	**07 24 13.9**	**-0.3**
X18A	**Snowflake**	**152.63**	**356**	⇓PKiKP	**PKPbc**	**07 24 14.3**	**+0.1**
	baz=152							
Z27A	**Tatum**	**152.64**	**344**	⇓PKiKP	**PKPbc**	**07 24 13.8**	**-0.3**
	baz=152							
Y23A	**Lovelace Mesa,**	**152.72**	**349**	⇓PKiKP	**PKPbc**	**07 24 14.4**	**0.0**
	baz=153							
232A	**Coleman**	**152.73**	**336**	⇑PKiKP	**PKiKP**	**07 24 14.5**	**0.0**
	baz=153							
X16A	**Lo Mia Camp, P**	**152.80**	**359**	⇑PKiKP	**PKiKP**	**07 24 15.2**	**+0.4**
	baz=153							
PDMCI	**Parker Dam,Lak**	**152.86**	**4**	⇓PKiKP	**PKiKP**	**07 24 14.6**	**0.0**
	baz=153							
129A	**Stewart Farms,**	**152.87**	**341**	⇑PKiKP	**PKPbc**	**07 24 14.5**	**-0.2**
	baz=153							
Y22A	**Socorro**	**152.87**	**351**	⇓PKiKP	**PKPbc**	**07 24 14.7**	**0.0**
	baz=153							
Z26A	**Caprock**	**152.89**	**345**	⇓PKiKP	**PKPbc**	**07 24 14.6**	**-0.1**
	baz=153							
IRM	**Iron Mountain**	**152.92**	**6**	⇑PKiKP	**PKPbc**	**07 24 23.4**	**-2.2**
	baz=153							
231A	**Bronte**	**152.95**	**338**	⇑PKPab	**PKPab**	**07 24 25.8**	**0.0**
	baz=153							
BELC	**Belle Mtn. Jos**	**152.99**	**7**	⇑PKPab	**PKPab**	**07 24 25.8**	**-0.2**
	baz=153							
Z25A	**Roswell**	**153.06**	**346**	⇑PKPab	**PKPab**	**07 24 26.1**	**-0.2**
	baz=153							
128A	**Castleberry Fa**	**153.07**	**342**	⇑PKPab	**PKPab**	**07 24 26.3**	**0.0**
	baz=153							
Y20A	**Horse Springs,**	**153.10**	**353**	⇑PKPab	**PKPab**	**07 24 25.3**	**-1.3**
	baz=153							
Z24A	**Sheeppen Canyo**	**153.16**	**347**	⇑PKPab	**PKPab**	**07 24 25.3**	**-1.5**
	baz=153							
332A	**Millersview**	**153.22**	**336**	⇑PKPab	**PKPab**	**07 24 25.8**	**-1.2**
	baz=153							
Y14A	**Wickenburg**	**153.28**	**2**	⇓PKPab	**PKPab**	**07 24 26.2**	**-0.9**
	baz=153							
BC3	**Big Chuckawall**	**153.39**	**6**	⇓PKPab	**PKPab**	**07 24 26.3**	**-1.3**
	baz=153							
126A	**Clayton Basin,**	**153.49**	**345**	⇑PKPab	**PKPab**	**07 24 27.6**	**-0.5**
	baz=153							
Z22A	**Elephant Butte**	**153.54**	**350**	⇓PKPab	**PKPab**	**07 24 27.9**	**-0.4**
	baz=153							
331A	**San Angelo**	**153.55**	**337**	⇑PKPab	**PKPab**	**07 24 27.4**	**-1.0**
	baz=153							
Z21A	**St. Cloud Mine**	**153.59**	**352**	⇑PKPab	**PKPab**	**07 24 27.5**	**-1.2**
	baz=154							
125A	**Gardner Draw,**	**153.64**	**346**	⇑PKPab	**PKPab**	**07 24 27.5**	**-1.3**
	baz=154							
432A	**Menard**	**153.68**	**336**	⇑PKPab	**PKPab**	**07 24 27.9**	**-1.1**
	baz=154							
330A	**Mertzon**	**153.75**	**339**	⇑PKPab	**PKPab**	**07 24 28.2**	**-1.0**
	baz=154							
Z20A	**Nine Sixteen R**	**153.91**	**353**	⇑PKPab	**PKPab**	**07 24 29.9**	**-0.1**
	baz=154							
329A	**Wagon Wheel Ra**	**153.96**	**340**	⇑PKPab	**PKPab**	**07 24 29.1**	**-1.0**
	baz=154							
MONP	**Monument Peak**	**154.02**	**8**	⇓PKPab	**PKPab**	**07 24 30.0**	**-0.5**
	baz=154							
JCT	**Junction City**	**154.03**	**335**	*e*PKIKP	**PKPdf**	**07 24 09.4**	**+0.3**
JCT	**Junction City**	**154.03**	**335**	*e*PKPdf	**PKPdf**	**07 24 09.4**	**+0.3**
JCT	**Junction City**	**154.03**	**335**	⇓PKPab	**PKPab**	**07 24 30.1**	**-0.4**
	baz=154							
GLA	**Glamis**	**154.05**	**5**	⇑PKPab	**PKPab**	**07 24 30.4**	**0.0**
	baz=154							
226B	**Tecolote Peak,**	**154.07**	**344**	⇓PKPab	**PKPab**	**07 24 30.0**	**-0.6**
	baz=154							
328A	**Wristen Ranch,**	**154.32**	**341**	⇓PKPab	**PKPab**	**07 24 30.5**	**-1.1**
	baz=154							
430A	**Baggett Ranch,**	**154.33**	**338**	⇓PKPab	**PKPab**	**07 24 31.3**	**-0.4**
	baz=154							
532A	**Rocksprings**	**154.38**	**335**	⇓PKPab	**PKPab**	**07 24 31.9**	**-0.1**
	baz=154							
224A	**Cornudas Mount**	**154.40**	**347**	⇑PKPab	**PKPab**	**07 24 31.9**	**-0.2**
	baz=154							
113A	**Mohawk Valley,**	**154.41**	**3**	⇑PKPab	**PKPab**	**07 24 31.7**	**-0.1**
	baz=154							
120A	**U Bar Ranch, L**	**154.47**	**353**	⇓PKPab	**PKPab**	**07 24 32.2**	**-0.1**
	baz=154							
531A	**Rocksprings**	**154.61**	**336**	⇓PKPab	**PKPab**	**07 24 32.4**	**-0.5**
	baz=154							
TGUH	**Tegucigalpa,Un**	**154.65**	**288**	*e*PKPdf	**PKPdf**	**07 24 11.0**	**+0.7**
TGUH				*e*PKPbc	**PKiKP**	**07 24 19.3**	**+0.5**
222A	**Williams Famil**	**154.68**	**350**	⇓PKPab	**PKPab**	**07 24 32.7**	**-0.5**
	baz=155							
MNTX	**Cornudas Mount**	**154.73**	**346**	*e*PKPdf	**PKPdf**	**07 24 10.6**	**+0.6**
MNTX				*e*PKPbc	**PKiKP**	**07 24 18.8**	**+0.2**
MNTX				*e*PKPab	**PKPab**	**07 24 34.4**	**+1.1**
326A	**Caldwell Ranch**	**154.73**	**344**	⇑PKPab	**PKPab**	**07 24 33.4**	**-0.1**
	baz=155							
632A	**Uvalde**	**154.87**	**334**	⇓PKPab	**PKPab**	**07 24 33.7**	**-0.3**
	baz=155							
TUC	**Tucson**	**154.88**	**357**	*e*PKIKP	**PKPdf**	**07 24 10.8**	**+0.5**
TUC	**Tucson**	**154.88**	**357**	*e*PKPdf	**PKPdf**	**07 24 10.8**	**+0.5**
TUC				*e*PKPbc	**PKiKP**	**07 24 19.5**	**+0.5**
428A	**Kincaid Ranch,**	**154.89**	**341**	⇓PKPab	**PKPab**	**07 24 34.1**	**0.0**
	baz=155							
530A	**J-C Ranch, Com**	**154.94**	**338**	⇑PKPab	**PKPab**	**07 24 34.4**	**+0.2**
	baz=155							
324A	**Moseley Ranch,**	**155.00**	**347**	⇑PKPab	**PKPab**	**07 24 34.4**	**-0.3**
	baz=155							
427A	**Hayter Ranch,**	**155.00**	**342**	⇓PKPab	**PKPab**	**07 24 34.0**	**-0.6**
	baz=155							
214A	**Organ Pipe Nat**	**155.26**	**1**	⇓PKPab	**PKPab**	**07 24 35.4**	**-0.2**
	baz=155							
529A	**Stev Forest Ra**	**155.28**	**339**	⇓PKPab	**PKPab**	**07 24 35.6**	**-0.2**
	baz=155							
631A	**Perdido Creek**	**155.29**	**335**	⇓PKPab	**PKPab**	**07 24 35.5**	**-0.3**
	baz=155							
426A	**McDonald Obser**	**155.36**	**343**	⇓PKPab	**PKPab**	**07 24 34.5**	**-1.8**
	baz=155							
528A	**Cox Ranch, San**	**155.44**	**340**	⇓PKPab	**PKPab**	**07 24 36.2**	**-0.3**
	baz=155							
425A	**Indio Mountain**	**155.51**	**345**	⇑PKPab	**PKPab**	**07 24 35.0**	**-1.7**
	baz=155							
320A	**Kipp Ranch, An**	**155.65**	**353**	⇑PKPab	**PKPab**	**07 24 38.1**	**+0.7**
	baz=156							
319A	**Douglas**	**155.70**	**354**	⇓PKPab	**PKPab**	**07 24 37.1**	**-0.4**
	baz=156							
527A	**Woodward Ranch**	**155.72**	**342**	⇓PKPab	**PKPab**	**07 24 37.8**	**0.0**
	baz=156							
526A	**Mary Lane Ranc**	**155.95**	**343**	⇓PKPab	**PKPab**	**07 24 38.4**	**-0.3**
	baz=156							
628A	**Black Gap, Mar**	**156.10**	**340**	⇑PKPab	**PKPab**	**07 24 39.5**	**+0.2**
	baz=156							
627A	**Terlingua Ranc**	**156.29**	**341**	⇑PKPab	**PKPab**	**07 24 37.9**	**-2.3**
	baz=156							
TXAR	**Lajitas Array**	**156.49**	**341**	PKP	**PKPdf**	**07 24 12.8**	**+0.3**
TXAR				PKPab	**PKPab**	**07 24 41.8**	**+0.8**
TXAR	**Lajitas Array**	**156.49**	**341**	PKP	**PKPdf**	**07 24 12.8**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=147,slow=2.5,SNR=5.7							
TXAR				PKPab	**PKPab**	**07 24 41.8**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=58,slow=3.1,SNR=9.8							

IDC 19 07:08:04.7±6.9, 15°.85S×75°.80W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.4/20, mbtmp3.6/3, ML3.8/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/15, Error ellipse: s-maj=252.4km

s-min=31.2km az=22.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**7.39**	**94**	Pn	Pn	07 09 54.5	-0.2
	0.7nm,0.3s,baz=272,slow=12,SNR=19						
LPAZ				Sn	Sn	07 11 20.8	+0.9
	baz=7.9,slow=19,SNR=1.6						
PLCA	**Paso Flores**	**25.21**	**171**	LR	LR	07 21 25.5	
	comp=Z,94nm,21.8s,baz=0.2,slow=32						
TXAR	**Lajitas Array**	**52.36**	**329**	P		07 17 18.8	-0.1
	0.2nm,0.9s,baz=144,slow=7.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**81.86**	**74**	P	P	07 20 26.6	0.0
	1.0nm,0.8s,baz=260,slow=5.2,SNR=10						

MEX 19 07:19:40.5±1.0, 16°.24N×100°.54W, h18km±29km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.84**	**18**	*e*P	Pb	07 19 53.1	-3.5
CAIG				*i* S	Sb	07 20 03.6	-4.0
ACX	**Acapulco**	**0.90**	**46**	*i* P	Pb	07 19 53.6	-4.0
ACX				*i* S	Sb	07 20 04.9	-4.5
ZIIG	**Zihuatanejo**	**1.62**	**327**	*i* P	Pn	07 20 04.9	-3.3
ZIIG				*i* S	Sn	07 20 23.7	-4.9
MEIG	**Mezcala**	**1.89**	**28**	*i* P	Pn	07 20 09.7	-2.3
MEIG				*i* S	Sn	07 20 31.0	-4.4
ARIG	**Puente Sto Nin**	**2.03**	**5**	*e*P	Pn	07 20 11.8	-2.2
ARIG				*i* S	Sn	07 20 35.2	-3.7
PNIG	**Pinotepa**	**2.32**	**86**	*i* P	Pn	07 20 15.1	-2.8
PNIG				*i* S	Sn	07 20 41.9	-4.0
PLIG	**Platanillo**	**2.35**	**25**	*i* P	Pn	07 20 15.7	-2.8
PLIG				*i* S	Sn	07 20 42.8	-4.2
YAIG	**Yautepec**	**2.96**	**28**	*i* P	Pn	07 20 23.8	-3.0
YAIG				*i* S	Sn	07 20 59.0	-3.0
UTMO	**Huajuapan**	**3.05**	**59**	*i* P	Pn	07 20 24.9	-3.3
UTMO				*i* S	Sn	07 21 01.2	-3.3
PPM	**Popocatepetl**	**3.35**	**33**	*i* P	Pn	07 20 29.8	-2.8
PPM				*i* S	Sn	07 21 09.1	-3.3
VHO	**Vista Hermosa**	**3.74**	**77**	*i* P	Pn	07 20 35.5	-2.1
VHO				*i* S	Sn	07 21 16.9	-4.4

*IDC **19** 07:22:42.3±0.6, 7°.02S×68°.01E, h0km, mb4.1/22, mb1 4.2/22, mb1mx4.1/33, mbtmp4.1/22, MS4.2/27, Ms1 4.2/27, ms1mx4.0/33, Error ellipse: s-maj=16.3km s-min=15.8km az=104.0*

*BJI **19** 07:22:42.7, 7°.00S×68°.00E, h10km, mB5.1/3, mb4.3/9, Ms4.8/4, Ms7 4.5/4*

*ISCJB **19** 07:22:42.3±0.3, 6°.96S±0°.06×68°.08E±0°.04, h12km, mb4.4/41, MS4.2/29, Error ellipse: s-maj=9.1km s-min=6.3km az=9.6*

*NEIC **19** 07:22:43.7±0.2, 7°.05S×68°.03E, h10km, mb4.6/12, Error ellipse: s-maj=8.1km s-min=7.0km az=169.0*

*GCMT **19** 07:22:44.8±0.2, 7°.34S×67°.97E, h13km, MW5.0, Moment Tensor Solution. s20,c24; s78,c122; Moment tensor: Scale 10^16 Nm; Mrr=3.71±.21; Mθθ 1.65±.14; Mϕϕ 2.06±.14; Mrθ=0.47±.40; Mθϕ=1.92±.09; Mϕr=0.31±.36; Best double couple: Mo 3.80000×10^16 NP1: ϕs 326.00000°, δ 45.00000°, λ=78.00000°. NP2: ϕs 130.00000°, δ 46.00000°, λ=102.00000°. Principal axes: T 3.7900, Plg 1.0000°, Azm 228.0000°; N 0.0100, Plg 8.0000°, Azm 138.0000°; P -3.7900, Plg 81.0000°, Azm 323.0000°; Data Used: II IC G IU CN.*

*SZGRF **19** 07:22:50.8, 6°.00S×67°.82E, h33km, mb4.8, Carlsberg Ridge*

ISC 19 07:22:43.9±0.4, 7°.01S±0°.08×68°.04E±0°.06, h12km, n111, σ 1s 50/108, mb4.4/41, MS4.2/29, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.39**	**95**	*e*Pn	**Pn**	**07 23 49.1**	**-1.3**
DGAR				*e*Sn	**Sn**	**07 24 39.9**	**-1.7**
MSEY	**Mahe Island**	**12.71**	**280**	*e*Pn	**Pn**	**07 25 44.4**	**-0.3**
OPO	**Ambohidratompo**	**23.33**	**239**	P	**P**	**07 27 54.0**	**+1.7**
OPO	**Ambohidratompo**	**23.33**	**239**	P	**P**	**07 27 54.0**	**+1.7**
	2.0nm,0.9s,baz=86,slow=14,SNR=3.6						
OPO				LR	LR	07 34 44.7	
	comp=Z,2μm,19.9s,baz=50,slow=31						
ABPO	**Ambohimpanom**	**23.50**	**237**	*e*P	**P**	**07 27 53.3**	**-0.8**
	234nm,2.5s						
KMBO	**Kilima Mbogo**	**31.25**	**279**	LR	LR	07 39 06.5	
	comp=Z,516nm,20.4s,baz=97,slow=32						
PSI	**Prapat**	**32.33**	**73**	LR	LR	07 40 31.4	
	comp=Z,2μm,19.8s,baz=265,slow=33						
CMAR	**Chiang Mai Arr**	**39.62**	**50**	P	**P**	**07 30 17.8**	**+2.1**
CMAR	**Chiang Mai Arr**	**39.62**	**50**	P	**P**	**07 30 17.8**	**+2.1**
	3.0nm,0.7s,baz=241,slow=9.2,SNR=17						
CMAR				LR	LR	07 44 21.0	
	comp=Z,262nm,20.6s,baz=214,slow=33						
CHTO	**Chiang Mai**	**39.83**	**49**	*e*P	**P**	**07 30 19.4**	**+1.9**
	4.5nm,0.9s						
LSZ	**Lusaka**	**39.90**	**255**	*e*P	**P**	**07 30 17.7**	**-0.6**
	4.2nm,0.8s						
LSZ	**Lusaka**	**39.90**	**255**	P	**P**	**07 30 18.0**	**-0.3**
	2.5nm,0.8s,baz=58,slow=9.3,SNR=5.4						
NAY	**Al-Naaiem**	**41.24**	**332**	*e*P	**P**	**07 30 28.4**	**-0.5**
NAY				AMb	AMB	07 30 38.4	
	comp=Z,20nm,1.1s						
RST	**Umm Al-Ruwaisa**	**41.56**	**332**	*e*P	**P**	**07 30 31.5**	**-0.1**
RST				AMb	AMB	07 30 42.1	
	comp=Z,890nm,0.9s						
MIB	**Mutribah**	**41.66**	**332**	*e*P	**P**	**07 30 32.4**	**0.0**
MIB				AMb	AMB	07 30 42.1	
	comp=Z,71nm,1.0s						
LSA	**Lhasa**	**42.73**	**30**	P	P	07 30 47.8	+6.1
BOSA	**Boshof**	**45.71**	**237**	LR	LR	07 49 26.5	
	comp=Z,409nm,18.1s,baz=58,slow=35						
KMI	**Kunming**	**46.48**	**45**	P	P	07 31 21.3	+10
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSH	**Kashi**	**46.87**	**8**	P	**P**	**07 31 12.3**	**-1.9**
KSH				*e*pP	**pP**	**07 31 19.3**	**+1.3**
KSH				sP	**sP**	**07 31 22.8**	**+3.4**
KSH				*e*PcP	**PcP**	**07 32 45.0**	**-2.0**
KSH				*e*PP	**PP**	**07 33 02.3**	**-2.3**
KSH				*e*ScP	**ScP**	**07 36 36.3**	**-4.5**
KSH				*e*PcS	**PcS**	**07 36 39.1**	**-2.9**
KSH				*e*S	**S**	**07 38 00.3**	**-4.5**
KSH				*e*sS	**sS**	**07 38 12.3**	**+1.2**
KSH				*e*ScS	**ScS**	**07 41 02.6**	**-6.4**
KSH				*e*SS	SS	07 41 19.3	-13
KSH				pmax	pmax		
	comp=Z,16nm,0.9s						
KSH				LR	LR		
	comp=N,280nm,11.3s						
KSH				LR	LR		
	comp=E,510nm,13.8s						
KSH				LR	LR		
	comp=Z,550nm,16.8s						
QIZ	**Qiongzhong**	**48.64**	**57**	P	**P**	**07 31 28.3**	**+0.2**
QIZ				S	**S**	**07 38 31.3**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,13nm,1.7s						
QIZ				LR	LR		
	comp=N,160nm,18.0s						
QIZ				LR	LR		
	comp=E,65nm,17.8s						
QIZ				LR	LR		
	comp=Z,280nm,27.6s						
ASF	**Jabal al Asfar**	**48.99**	**324**	LR	LR	07 50 10.5	
	comp=Z,82nm,19.1s,baz=269,slow=34						
EKS2	**Erkin-Say**	**49.71**	**6**	*e*P	**P**	**07 31 38.3**	**+2.2**
	comp=Z,7.3nm,1.0s						
AAK	**Ala-Archa**	**49.76**	**6**	*e*P	**P**	**07 31 37.9**	**+1.4**
	comp=Z,3.4nm,0.9s						
AAK	**Ala-Archa**	**49.76**	**6**	P	**P**	**07 31 38.5**	**+2.1**
	comp=Z,2.3nm,0.8s,baz=210,slow=11,SNR=6.1						
AAK				LR	LR	07 52 39.6	
	comp=Z,215nm,19.0s,baz=174,slow=36						
GNI	**Garni**	**51.62**	**337**	LR	LR	07 53 06.5	
	comp=Z,85nm,20.6s,baz=134,slow=35						
LZH	**Lanzhou**	**54.48**	**36**	*e*P	P	07 32 08.8	-2.9
LZH				pmax	pmax		
	comp=Z,18nm,1.5s						
GTA	**Gaotai**	**54.75**	**30**	*e*P	**P**	**07 32 14.8**	**+1.2**
GTA				pP	**pP**	**07 32 18.8**	**+1.3**
GTA				sP	**sP**	**07 32 22.1**	**+3.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	**Makanchi Array**	**55.05**	**12**	*e*P	**P**	**07 32 15.1**	**-0.4**
MKAR	**Makanchi Array**	**55.05**	**12**	P	**P**	**07 32 15.2**	**-0.3**
MKAR	**Makanchi Array**	**55.05**	**12**	P	**P**	**07 32 15.2**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=198,slow=7.9,SNR=18						
MKAR				LR	LR	07 55 11.9	
	comp=Z,180nm,20.1s,baz=181,slow=35						
KBZ	**Khabaz**	**55.40**	**338**	P	**P**	**07 32 19.4**	**+1.4**
KBZ	**Khabaz**	**55.40**	**338**	P	**P**	**07 32 19.4**	**+1.4**
	comp=Z,2.7nm,0.9s,baz=143,slow=10,SNR=3.3						
XAN	**Xi'an**	**56.24**	**41**	P	**P**	**07 32 25.3**	**+0.9**
XAN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**56.33**	**328**	P	**P**	**07 32 25.3**	**+0.3**
BRTR	**Keskin Array B**	**56.33**	**328**	P	**P**	**07 32 25.3**	**+0.3**
	comp=Z,2.3nm,0.9s,baz=144,slow=9.1,SNR=8.1						
BRTR				LR	LR	07 57 17.7	
	comp=Z,62nm,18.5s,baz=8.4,slow=37						
BR131	**Keskin Array S**	**56.33**	**328**	*e*P	**P**	**07 32 25.3**	**+0.3**
	comp=Z,0.4nm,0.3s						
ABKAR	**Akbulak array**	**56.48**	**354**	*e*P	**P**	**07 32 25.6**	**-0.1**
	comp=Z,5.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**57.09**	**107**	*e*P	**P**	**07 32 31.5**	**+0.9**
	comp=Z,6.9nm,1.2s						
AKTO	**Aktyubinsk**	**57.87**	**352**	P	**P**	**07 32 35.4**	**-0.1**
AKTO	**Aktyubinsk**	**57.87**	**352**	P	**P**	**07 32 35.4**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=194,slow=7.3,SNR=7.1						
KURBB	**Kurchatov Arra**	**58.11**	**8**	P	**P**	**07 32 37.2**	**0.0**
	comp=Z,4.1nm,0.8s,baz=204,slow=7.1,SNR=26						
KURBB				PP	**PP**	**07 34 46.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=201,slow=7.5,SNR=5.2						
KURBB				LR	LR	07 57 33.6	
	comp=Z,158nm,18.8s,baz=190,slow=36						
KURK	**Kurchatov**	**58.22**	**8**	*e*P	**P**	**07 32 37.9**	**0.0**
	comp=Z,10nm,0.9s						
KURK				PP	**PP**	**07 34 46.8**	**-0.2**
BVAR	**Borovoye Array**	**59.84**	**2**	P	**P**	**07 32 49.0**	**-0.1**
BVAR	**Borovoye Array**	**59.84**	**2**	P	**P**	**07 32 49.0**	**-0.1**
	comp=Z,2.5nm,1.0s,baz=163,slow=7.0,SNR=6.9						
MAW	**Mawson**	**60.61**	**182**	LR	LR	07 52 40.7	
	comp=Z,305nm,19.8s,baz=310,slow=30						
ZAA0	**Zalesovo Array**	**62.36**	**11**	*e*P	**P**	**07 33 05.9**	**-0.3**
ZALV	**Zalesovo Beam**	**62.36**	**11**	P	**P**	**07 33 06.0**	**-0.2**
ZALV	**Zalesovo Beam**	**62.36**	**11**	P	**P**	**07 33 06.0**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=203,slow=5.6,SNR=7.5						
ZALV				LR	LR	08 01 01.7	
	comp=Z,221nm,18.6s,baz=237,slow=37						
SONM	**Songino Array**	**64.22**	**28**	P	**P**	**07 33 19.6**	**+0.7**
SONM	**Songino Array**	**64.22**	**28**	P	**P**	**07 33 19.6**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=207,slow=6.3,SNR=5.0						
SONM				LR	LR	08 00 54.1	
	comp=Z,397nm,21.2s,baz=266,slow=36						
ASAR	**Alice Springs**	**65.13**	**113**	P	**P**	**07 33 25.2**	**0.0**
ASAR	**Alice Springs**	**65.13**	**113**	P	**P**	**07 33 25.2**	**0.0**
	comp=Z,1.4nm,0.7s,baz=275,slow=6.1,SNR=21						
ASAR				LR	LR	07 57 01.5	
	comp=Z,129nm,20.7s,baz=264,slow=32						
WRA	**Warramunga Arr**	**65.39**	**109**	P	**P**	**07 33 27.1**	**+0.2**
WRA	**Warramunga Arr**	**65.39**	**109**	P	**P**	**07 33 27.1**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=279,slow=6.4,SNR=36						
WRA				LR	LR	07 57 36.4	
	comp=Z,150nm,20.8s,baz=270,slow=32						
WRAB	**Tennant Creek**	**65.40**	**109**	*e*P	**P**	**07 33 27.1**	**+0.1**
	comp=Z,2.9nm,0.6s						
AKASG	**Malin Array Be**	**66.53**	**334**	P	**P**	**07 33 33.0**	**-0.6**
AKASG	**Malin Array Be**	**66.53**	**334**	P	**P**	**07 33 33.0**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=129,slow=5.9,SNR=4.1						
KOLS	**Kolonicke sedl**	**68.56**	**329**	*e*P	**P**	**07 33 48.6**	**+2.1**
KOLS				*e*		08 08 54.3	
TORD	**Torodi Ar. Bea**	**68.87**	**287**	P	**P**	**07 33 49.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**68.87**	**287**	P	**P**	**07 33 49.1**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=120,slow=5.0,SNR=4.5						
TORD				LR	LR	08 02 20.2	
	comp=Z,145nm,18.6s,baz=120,slow=34						
CRVS	**Cervenica-Dubn**	**68.96**	**329**	*e*P	**P**	**07 33 49.4**	**+0.4**
KEST	**Kesra**	**69.57**	**312**	LR	LR	08 01 59.3	
	comp=Z,32nm,18.5s,baz=221,slow=34						
VYHS	**Vyhne**	**70.07**	**328**	*e*P	**P**	**07 33 55.8**	**-0.1**
KSRS	**Korea Array**	**71.16**	**47**	LR	LR	08 07 19.1	
	comp=Z,217nm,18.2s,baz=247,slow=38						
STKA	**Stephens Creek**	**72.37**	**121**	LR	LR	08 03 54.4	
	comp=Z,145nm,18.4s,baz=23,slow=34						
DPC	**Dobruska-Polom**	**72.49**	**328**	*e*pP	pP	07 34 17.3	+2.8
GERES	**GERESS Array B**	**73.07**	**326**	P	**P**	**07 34

mb3.9/20,MS4.2/1, Error ellipse: s-maj=9.9km s-min=5.9km az=35.8
*NEIC **19** 07:34:59.1±1.1,25°.23N×96°.46E, h44km±12km, mb4.2/3, Error ellipse: s-maj=19.7km s-min=7.4km az=55.0*
*BJI **19** 07:35:00.2,25°.73N×96°.45E, h43km, mB4.9/6, mb4.4/10, ML3.7/3, Ms3.9/2, Ms7 3.9/2*

ISC 19 07:34:57.0±0.5, 25°.30N±0°.07×96°.54E±0°.07, h25km, n58, σ1§30/62, mb3.9/20, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.21**	**275**	*e*PN		**Pn**	**07 36 00.0**	**+0.2**
SHL				*i* SN		**Sn**	**07 36 52.0**	**+3.6**
AGT	**Agartala**	**5.01**	**255**	*e*PKP		Pb	07 36 39.0	+15
AGT				*e*S		**Sn**	**07 37 10.0**	**+2.2**
KMI	**Kunming**	**5.62**	**90**	Pn		Pb	07 36 41.3	+6.7
KMI				Sn		Sb	07 37 51.3	+10
KMI	comp=N,88nm,0.9s			smax		smax		
KMI	comp=E,61nm,1.2s			smax		smax		
KMI	comp=N,610nm,4.4s			LR		LR		
KMI	comp=E,690nm,8.9s			LR		LR		
KMI	comp=Z,770nm,8.7s			LR		LR		
LSA	**Lhasa**	**6.49**	**314**	*e*Pn		**Pn**	**07 36 33.9**	**+2.6**
LSA	comp=Z,15nm,0.5s			*e*Sn		**Sn**	**07 37 45.6**	**+0.9**
CHTO	**Chiang Mai**	**6.83**	**160**	*e*Pn		**Pn**	**07 36 35.5**	**-0.2**
CHTO	comp=Z,20nm,0.8s			*e*Pg		Pb	07 37 00.3	+5.3
CHTO				*e*Sg		Sb	07 38 31.0	+15
CMAR	**Chiang Mai Arr**	**7.17**	**161**	Pn		**Pn**	**07 36 40.1**	**-0.2**
CMAR				Pg		Pb	07 37 06.4	+5.6
CMAR				Lg		Lg	07 38 41.5	
CMAR	**Chiang Mai Arr**	**7.17**	**161**	Pn		**Pn**	**07 36 40.1**	**-0.2**
CMAR	comp=Z,2.3nm,0.3s,baz=330,slow=13,SNR=8.2			Pg		Pb	07 37 06.4	+5.6
CMAR	comp=Z,1.1nm,0.3s,baz=340,slow=18,SNR=16			Lg		Lg	07 38 41.5	
TAPN	comp=Z,1.8nm,0.3s,baz=331,slow=32,SNR=4.8 **Taplejung**	**8.18**	**286**	*e*P		**Pn**	**07 36 53.9**	**-0.5**
ODAN	comp=Z,56nm,0.4s **Odare**	**8.37**	**283**	*e*P		**Pn**	**07 36 57.3**	**+0.3**
RAMN	comp=Z,148nm,0.5s **Ramite**	**9.08**	**283**	*e*P		**Pn**	**07 37 06.5**	**-0.2**
GUN	comp=Z,122nm,0.5s **Gumba**	**9.88**	**288**	*e*P		**Pn**	**07 37 17.7**	**-0.1**
PKI	comp=Z,55nm,0.4s **Pulchoki**	**10.22**	**285**	*e*P		**Pn**	**07 37 21.6**	**-0.9**
PKIN	comp=Z,38nm,0.5s **Phulchoki**	**10.24**	**285**	*e*P		**Pn**	**07 37 20.9**	**-1.7**
KKN	comp=Z,25nm,0.3s **Kakani**	**10.38**	**286**	*e*P		**Pn**	**07 37 24.0**	**-0.5**
DMN	**Daman**	**10.50**	**285**	*e*P		**Pn**	**07 37 24.2**	**-2.0**
DANN	comp=Z,37nm,0.5s **Dangsing**	**11.81**	**288**	*e*P		**Pn**	**07 37 41.5**	**-2.6**
KOLN	comp=Z,16nm,0.3s **Koldanda**	**11.84**	**285**	*e*P		**Pn**	**07 37 42.0**	**-2.5**
PYUN	comp=Z,24nm,0.4s **Piuthan**	**12.43**	**286**	*e*P		Pn	07 37 49.2	-3.3
KSH	comp=Z,46nm,0.7s **Kashi**	**22.34**	**314**	P		**P**	**07 39 53.8**	**+0.7**
KSH				*ep*P		**pP**	**07 40 01.3**	**+1.3**
KSH				*es*P		**sP**	**07 40 04.6**	**+1.4**
KSH	comp=Z,6.0nm,0.5s			pmax		pmax		
KSH	comp=Z,200nm,4.6s			pmax		pmax		
KSH	comp=N,500nm,14.2s			LR		LR		
KSH	comp=E,250nm,13.5s			LR		LR		
KSH	comp=Z,220nm,5.8s			LR		LR		
SONM	**Songino Array**	**23.80**	**17**	P		**P**	**07 40 09.3**	**+1.4**
SONM	**Songino Array**	**23.80**	**17**	P		**P**	**07 40 09.3**	**+1.4**
MKAR	comp=Z,0.8nm,0.3s,baz=186,slow=12,SNR=2.8 **Makanchi Array**	**24.27**	**336**	P		**P**	**07 40 12.5**	**+0.4**
MKAR	**Makanchi Array**	**24.27**	**336**	P		**P**	**07 40 12.5**	**+0.4**
MK31	comp=Z,3.2nm,0.5s,baz=140,slow=9.1,SNR=29 **Makanchi Array**	**24.27**	**336**	*e*P		**P**	**07 40 12.6**	**+0.5**
AAK	**Ala-Archa**	**25.04**	**319**	*e*P		**P**	**07 40 20.9**	**+1.5**
AAK	comp=Z,3.1nm,0.7s **Ala-Archa**	**25.04**	**319**	P		**P**	**07 40 20.7**	**+1.3**
KURBB	comp=Z,2.4nm,0.6s,baz=128,slow=6.1,SNR=7.3 **Kurchatov Arra**	**28.84**	**336**	P		**P**	**07 40 53.4**	**+0.2**
KURK	comp=Z,0.5nm,0.4s,baz=146,slow=9.5,SNR=9.7 **Kurchatov**	**28.88**	**336**	*e*P		**P**	**07 40 53.5**	**0.0**
ZALV	comp=Z,3.5nm,1.0s **Zalesovo Beam**	**29.92**	**346**	P		**P**	**07 41 02.9**	**+0.1**
ZALV	**Zalesovo Beam**	**29.92**	**346**	P		**P**	**07 41 02.9**	**+0.1**
ABKAR	comp=Z,3.3nm,0.3s,baz=172,slow=8.5,SNR=2.8 **Akbulak array**	**37.13**	**320**	*e*P		**P**	**07 42 05.7**	**+0.2**
MJAR	comp=Z,1.9nm,0.6s **Matsushiro Arr**	**37.20**	**62**	P		**P**	**07 42 07.3**	**+1.0**
MJAR	**Matsushiro Arr**	**37.20**	**62**	P		**P**	**07 42 07.4**	**+1.0**
AKTO	comp=Z,0.5nm,0.3s,baz=272,slow=12,SNR=4.0 **Aktyubinsk**	**38.77**	**321**	P		**P**	**07 42 19.6**	**+0.3**
AKTO	**Aktyubinsk**	**38.77**	**321**	P		**P**	**07 42 19.6**	**+0.3**
BRTR	comp=Z,0.6nm,0.3s,baz=111,slow=8.6,SNR=3.3 **Keskin Array B**	**53.94**	**302**	P		**P**	**07 44 18.5**	**-0.4**
BRTR	**Keskin Array B**	**53.94**	**302**	P		**P**	**07 44 18.5**	**-0.4**
AKASG	comp=Z,0.4nm,0.5s,baz=109,slow=7.8,SNR=3.2 **Malin Array Be**	**56.63**	**315**	P		**P**	**07 44 36.2**	**-1.6**
AKASG				PP		**PP**	**07 46 41.1**	**-2.6**
AKASG	**Malin Array Be**	**56.63**	**315**	P		**P**	**07 44 36.2**	**-1.6**
AKASG	comp=Z,0.4nm,0.4s,baz=77,slow=7.2,SNR=2.9			PP		**PP**	**07 46 41.1**	**-2.6**
WRA	comp=Z,0.3nm,0.3s,baz=123,slow=7.0,SNR=5.6 **Warramunga Arr**	**58.08**	**137**	P		**P**	**07 44 48.1**	**-0.4**
WRA	**Warramunga Arr**	**58.08**	**137**	P		**P**	**07 44 48.1**	**-0.4**
FINES	comp=Z,0.8nm,0.8s,baz=325,slow=7.5,SNR=16 **FINESS Array B**	**58.78**	**328**	P		**P**	**07 44 52.3**	**-0.5**
FINES	**FINESS Array B**	**58.78**	**328**	P		**P**	**07 44 52.3**	**-0.5**
ARCES	comp=Z,1.2nm,0.6s,baz=98,slow=8.3,SNR=4.2 **ARCESS Array B**	**59.91**	**337**	P		**P**	**07 44 59.6**	**-0.9**
ARCES	**ARCESS Array B**	**59.91**	**337**	P		**P**	**07 44 59.6**	**-0.9**
ASAR	comp=Z,1.7nm,0.9s,baz=92,slow=8.5,SNR=4.3 **Alice Springs**	**60.66**	**140**	P		**P**	**07 45 07.2**	**+0.9**
ASAR	**Alice Springs**	**60.66**	**140**	P		**P**	**07 45 07.2**	**+0.9**
NB2	comp=Z,0.6nm,0.7s,baz=322,slow=6.7,SNR=13 **NORSAR Subarra**	**65.97**	**328**	P		**P**	**07 45 39.3**	**-1.7**
NOA	comp=Z,0.4nm,0.5s,baz=81,slow=6.5 **NORSAR Array B**	**65.97**	**328**	P		**P**	**07 45 40.0**	**-1.0**
NOA	**NORSAR Array B**	**65.97**	**328**	P		**P**	**07 45 40.0**	**-1.0**
GERES	comp=Z,0.7nm,0.7s,baz=82,slow=6.3,SNR=3.8 **GERESS Array B**	**66.81**	**315**	P		**P**	**07 45 46.2**	**-0.4**
GERES	**GERESS Array B**	**66.81**	**315**	P		**P**	**07 45 46.2**	**-0.4**
STKA	comp=Z,0.3nm,0.2s,baz=74,slow=6.3,SNR=4.5 **Stephens Creek**	**71.30**	**141**	P		**P**	**07 46 16.0**	**+1.5**
STKA	**Stephens Creek**	**71.30**	**141**	P		**P**	**07 46 16.0**	**+1.5**
ILAR	comp=Z,1.2nm,0.8s,baz=323,slow=10,SNR=2.5 **Eielson Array**	**77.85**	**23**	P		**P**	**07 46 50.7**	**-1.4**
ILAR	**Eielson Array**	**77.85**	**23**	P		**P**	**07 46 50.7**	**-1.4**
NVAR	comp=Z,0.2nm,0.7s,baz=304,slow=5.4,SNR=2.8 **Mina Array Bea**	**108.69**	**28**	PKiKP		**PKiKP**	**07 53 25.3**	**+0.9**
NVAR	**Mina Array Bea**	**108.69**	**28**	PKiKP		**PKiKP**	**07 53 25.3**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=335,slow=1.3,SNR=9.2							

*TIR **19** 07:42:54.4±0.3,41°.96N×19°.15E, h30km±6km, ML2.8*
*ISCJB **19** 07:42:56.3±0.8,41°.93N±0°.04×19°.23E±0°.04, h12km±5km, Error ellipse: s-maj=7.6km s-min=4.3km az=22.2*
*CSEM **19** 07:42:56.4±0.3,41°.92N×19°.23E, h10km, ML1.7/7, Error ellipse: s-maj=6.6km s-min=3.5km az=21.0*
*PDG **19** 07:42:57.4±0.1,41°.98N×19°.24E, h11km±1km, MD1.8/1, ML1.7/7, Error ellipse: s-maj=0.6km s-min=0.5km az=90.0*

ISC 19 07:42:56.6±1.0, 41°.95N±0°.05×19°.24E±0°.03, h15km±5km, n22, σ0§52/44, 6C-4D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.01**	**29**	⇑*i*	Pg	**Pg**	**07 42 59.2**	**-0.1**
ULC				*e*Sg		**Sg**	**07 43 01.2**	**+0.1**
ULC	**Ulcinj**	**0.01**	**29**	⇑*i*	Pg	**Pg**	**07 42 59.2**	**-0.1**
ULC				*e*Sg		**Sg**	**07 43 01.2**	**+0.1**
BUM	**Brajici-Budva**	**0.43**	**324**	⇑*i*	Pg	**Pg**	**07 43 05.0**	**-0.3**
BUM				*e*Sg		**Sb**	**07 43 12.0**	**-0.3**
BUM	**Brajici-Budva**	**0.43**	**324**	⇑*i*	Pg	**Pg**	**07 43 05.0**	**-0.3**
BUM				*e*Sg		**Sb**	**07 43 12.0**	**-0.3**
PDG	**Podgorica**	**0.48**	**2**	⇓*i*	Pg	**Pg**	**07 43 05.8**	**-0.3**
PDG				*e*Sg		**Sb**	**07 43 13.3**	**-0.2**
TTG	**Podgorica**	**0.48**	**2**	⇓*i*	Pg	**Pg**	**07 43 05.8**	**-0.3**
TTG				*e*Sg		**Sb**	**07 43 13.3**	**-0.2**
PUK	**Puka**	**0.50**	**79**	*i*	PG	**Pg**	**07 43 06.4**	**-0.1**
PUK				*i*	SG	**Sb**	**07 43 15.2**	**+1.0**
PUK	**Puka**	**0.50**	**79**	*i*	Pg	**Pg**	**07 43 06.4**	**-0.1**
PUK	SNR=10.0			*i*	Sg	**Sb**	**07 43 15.2**	**+1.0**
	SNR=10.0							
HCY	**Herceg Novi**	**0.74**	**312**	*e*Pg		**Pg**	**07 43 11.0**	**-0.1**
HCY				*e*Sg		**Sb**	**07 43 22.0**	**+0.8**
HCY	**Herceg Novi**	**0.74**	**312**	*e*Pg		**Pg**	**07 43 11.0**	**-0.1**
HCY				*e*Sg		**Sb**	**07 43 22.0**	**+0.8**
BCI	**Bajram Curri**	**0.74**	**56**	*i*	PG	**Pg**	**07 43 10.4**	**-0.7**
BCI				*i*	SG	**Sb**	**07 43 22.0**	**+0.8**
BCI	**Bajram Curri**	**0.74**	**56**	*i*	Pg	**Pg**	**07 43 10.4**	**-0.7**
BCI	SNR=9.0			*i*	Sg	**Sb**	**07 43 22.0**	**+0.8**
	SNR=9.0							
PVY	**Plav**	**0.83**	**40**	*e*Pg		**Pb**	**07 43 12.9**	**0.0**
PVY				*e*Sg		**Sn**	**07 43 25.9**	**-0.2**
PVY	**Plav**	**0.83**	**40**	*e*Pg		**Pb**	**07 43 12.9**	**0.0**
PVY				*e*Sg		**Sn**	**07 43 25.9**	**-0.2**
NKY	**Niksic**	**0.88**	**348**	⇑*i*	Pg	**Pb**	**07 43 13.6**	**0.0**
NKY				*e*Sg		**Sn**	**07 43 26.5**	**-0.6**
NKY	**Niksic**	**0.88**	**348**	⇑*i*	Pg	**Pb**	**07 43 13.6**	**0.0**
NKY				*e*Sg		**Sn**	**07 43 26.5**	**-0.6**
PHP	**Peshkopia**	**0.94**	**106**	*i*	PG	**Pb**	**07 43 13.9**	**-0.7**
PHP				*i*	SG	**Sn**	**07 43 28.6**	**+0.1**
PHP	**Peshkopia**	**0.94**	**106**	*i*	Pg	**Pb**	**07 43 13.9**	**-0.7**
PHP	SNR=9.0			*i*	Sg	**Sn**	**07 43 28.6**	**+0.1**
	SNR=9.0							
BEY	**Berane**	**1.04**	**28**	⇓*i*	Pg	**Pb**	**07 43 16.2**	**-0.2**
BEY				*e*Sg		**Sn**	**07 43 32.2**	**+1.2**
IVA	**Berane**	**1.04**	**28**	⇓*i*	Pg	**Pb**	**07 43 16.2**	**-0.2**
IVA				*e*Sg		**Sn**	**07 43 32.2**	**+1.2**
STON	**Ston**	**1.46**	**309**	*e*Pn		**Pb**	**07 43 23.6**	**+0.1**
STON				Sn		**Sg**	**07 43 43.6**	**-0.1**
STON	**Ston**	**1.46**	**309**	*e*Pn		**Pb**	**07 43 23.6**	**+0.1**
STON				Sn		**Sg**	**07 43 43.6**	**-0.1**

*ISCJB **19** 08:05:05.7±0.3,15°.29N±0°.03×61°.42W±0°.08, h159km±2km, mb3.5/12, Error ellipse: s-maj=13.1km s-min=3.8km az=162.8*
*IDC **19** 08:05:05.9±0.6,15°.31N×61°.58W, h151km±4km, mb3.3/12, mb1 3.6/12, mb1mx3.4/25, mbtmp3.3/12, Error ellipse: s-maj=16.0km s-min=8.6km az=79.0*
*TRN **19** 08:05:06.8,15°.26N×61°.48W, h145km, MD3.6*

ISC 19 08:05:06.2±0.7, 15°.26N±0°.04×61°.48W±0°.09, h154km±5km, n50, σ0§83/71, mb3.6/12, 10C-9D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DPMT	**Pointe Michel**	**0.10**	**92**	*e*P		**Pn**	**08 05 26.7**	**-0.2**
MDN	**Morne-Daniel**	**0.10**	**58**	⇑*e*P		**Pn**	**08 05 26.8**	**-0.1**
MDN				*e*S		**Sn**	**08 05 42.0**	**-0.6**
DSHT	**Scott's Head**	**0.12**	**115**	*e*P		**Pn**	**08 05 26.7**	**-0.2**
DSHT				*e*S		**Sn**	**08 05 41.6**	**-1.0**
DBLT	**Belle View Cho**	**0.13**	**87**	*e*P		**Pn**	**08 05 26.9**	**-0.1**
DSTT	**Stowe**	**0.17**	**96**	*e*P		**Pn**	**08 05 27.0**	**0.0**
DSTT				*e*S		**Sn**	**08 05 42.8**	**0.0**
DLPL	**La Plaine**	**0.24**	**73**	⇓*e*P		**Pn**	**08 05 27.9**	**+0.8**
DLPL				*e*S		**Sn**	**08 05 43.5**	**+0.4**
DWS	**Wesley**	**0.34**	**29**	*e*P		**Pn**	**08 05 28.9**	**+1.4**
DWS				*e*S		**Sn**	**08 05 43.2**	**-0.5**
DVCT	**Vielle Casse P**	**0.36**	**12**	*e*P		**Pn**	**08 05 28.9**	**+1.4**
DVCT				*e*S		**Sn**	**08 05 43.4**	**-0.4**
TBG	**Guadaloupe-3**	**0.60**	**345**	⇓*i*	P	**Pn**	**08 05 29.3**	**+0.7**
FDF	**Fort de France**	**0.62**	**149**	⇓*i*	P	**Pn**	**08 05 29.4**	**+0.6**
FDF				⇓	*e*S	**Sn**	**08 05 46.7**	**+0.7**
MGG	**Marie-Galante**	**0.67**	**14**	⇓*i*	P	**Pn**	**08 05 29.6**	**+0.6**
HMG	**Houelmont**	**0.74**	**344**	*e*P		**Pn**	**08 05 30.3**	**+0.8**
PHG	**Guadaloupe-2**	**0.76**	**348**	⇓*i*	P	**Pn**	**08 05 30.7**	**+0.9**
DOG	**Dongo Capester**	**0.77**	**350**	*e*P		**Pn**	**08 05 30.6**	**+0.8**
SCG	**Saint Claude**	**0.78**	**346**	*e*P		**Pn**	**08 05 30.8**	**+0.9**
BCG	**Bois Riant Cap**	**0.83**	**351**	*e*P		**Pn**	**08 05 30.9**	**+0.7**
BIM	**Bigot**	**0.84**	**152**	*e*P		**Pn**	**08 05 31.3**	**+1.1**
MVM	**Montagne Vaucl**	**0.91**	**141**	⇑*e*P		**Pn**	**08 05 31.3**	**+0.6**
LZG	**Guadaloupe-1**	**0.92**	**342**	*e*P		**Pn**	**08 05 31.6**	**+0.9**
SEG	**Port Louis**	**1.13**	**359**	⇑*i*	P	**Pn**	**08 05 33.1**	**+0.6**
SLW	**Petit Monier**	**1.34**	**157**	⇑*e*P		**Pn**	**08 05 34.9**	**+0.3**
SLW	**Petit Monier**	**1.34**	**157**	*e*P		**Pn**	**08 05 35.8**	**+1.2**
SLW				⇑	*e*S	**Sn**	**08 05 56.8**	**+0.4**
SLW				*e*S		**Sn**	**08 05 56.9**	**+0.5**
SLPE	**Piton Saint Es**	**1.49**	**161**	*e*P		**Pn**	**08 05 36.9**	**+0.7**
SLPE				*e*S		**Sn**	**08 05 59.3**	**+0.3**
SLB	**Belfond**	**1.49**	**163**	*e*P		**Pn**	**08 05 37.3**	**+1.2**
SLB				*e*S		**Sn**	**08 05 59.5**	**+0.4**
SLDE	**Delcer**	**1.51**	**164**	*e*P		**Pn**	**08 05 37.4**	**+1.1**
SLDE				*e*S		**Sn**	**08 05 59.6**	**+0.2**
MCLT	**Moule a Chique**	**1.63**	**161**	⇑*e*P		**Pn**	**08 05 38.1**	**+0.5**
MCLT				*e*S		**Sn**	**08 06 01.1**	**-0.5**
BPA	**Boggy Peak**	**1.81**	**349**	⇓*i*	P	**Pn**	**08 05 40.5**	**+1.0**
BPA				*e*S		**Sn**	**08 06 04.9**	**-0.2**
SVB	**Belmont**	**1.99**	**174**	⇑*e*P		**Pn**	**08 05 42.2**	**+0.6**
SVB				*e*S		**Sn**	**08 06 09.6**	**+0.8**
NEV	**Hard Times**	**2.13**	**331**	⇑*i*	P	**Pn**	**08 05 44.7**	**+1.5**
NEV				*e*S		**Sn**	**08 06 12.0**	**+0.2**
NVBH	**Bath Hotel, Ne**	**2.14**	**330**	⇑*e*P		**Pn**	**08 05 45.0**	**+1.8**
NVBH				*e*S		**Sn**	**08 06 12.5**	**+0.7**
BSK	**Brimstone Hill**	**2.45**	**328**	*e*P		**Pn**	**08 05 48.1**	**+1.2**
BSK				*e*S		**Sn**	**08 06 18.4**	**0.0**
GRHS	**Sauteurs**	**3.03**	**183**	*e*P		**Pn**	**08 05 55.3**	**+1.1**
GRW	**Mount Saint Ca**	**3.09**	**183**	*e*P		**Pn**	**08 05 56.2**	**+1.2**
TOSP	**Speyside**	**4.05**	**167**	⇑*e*P		**Pn**	**08 06 07.1**	**-0.2**
TOSP				*e*S		**Sn**	**08 06 53.6**	**-1.2**
TRN	**Trinidad (W)**	**4.59**	**179**	⇓*e*P		**Pn**	**08 06 16.4**	**+2.0**
TBH	**Brigand Hill**	**4.77**	**175**	⇓*e*P		**Pn**	**08 06 18.1**	**+1.3**
TXAR	**Lajitas Array**	**41.24**	**297**	P		**P**	**08 12 35.4**	**-0.9**
TXAR	0.1nm,0.6s,baz=117,slow=7.5,SNR=4.1			PcP		**PcP**	**08 14 32.4**	**+0.1**
PDAR	0.2nm,0.6s,baz=132,slow=5.0,SNR=3.2 **Pinedale Array**	**49.31**	**314**	P		**P**	**08 13 39.3**	**-0.7**
NVAR	0.9nm,0.6s,baz=123,slow=11,SNR=7.7 **Mina Array Bea**	**54.77**	**306**	P		**P**	**08 14 19.9**	**-0.5**
ESDC	0.4nm,0.7s,baz=91,slow=6.4,SNR=3.5 **Sonseca Array**	**55.50**	**52**	P		**P**	**08 14 26.3**	**+0.9**
YKA	0.3nm,0.3s,baz=266,slow=12,SNR=3.5 **Yellowknife Ar**	**59.96**	**335**	P		**P**	**08 14 55.0**	**-0.9**
TORD	1.0nm,0.6s,baz=109,slow=7.5,SNR=14 **Torodi Ar. Bea**	**61.09**	**83**	P		**P**	**08 15 04.7**	**+0.2**
KEST	0.8nm,0.5s,baz=286,slow=6.7,SNR=19 **Kesra**	**65.80**	**57**	P		**P**	**08 15 35.4**	**+0.3**
NB2	0.8nm,0.6s,baz=72,slow=13,SNR=4.2 **NORSAR Subarra**	**68.39**	**30**	P		**P**	**08 15 51.7**	**+0.7**
NOA	comp=Z,0.5nm,0.6s,baz=260,slow=6.5 **NORSAR Array B**	**68.39**	**30**	P		**P**	**08 15 51.2**	**+0.2**
ILAR	comp=Z,1.1nm,0.8s,baz=262,slow=6.2,SNR=4.3 **Eielson Array**		**74.36**	**334**	P	**P**	**08 16 25.7**	**-1.0**
ARCES	comp=Z,0.2nm,0.4s,baz=84,slow=4.9,SNR=3.4 **ARCESS Array B**	**74.77**	**21**	P		**P**	**08 16 29.1**	**+0.1**
FINES	comp=Z,1.5nm,0.7s,baz=61,slow=7.2,SNR=3.8 **FINESS Array B**	**75.57**	**30**	P		**P**	**08 16 34.1**	**+0.5**
BRTR	comp=Z,1.3nm,0.6s,baz=288,slow=3.8,SNR=3.9 **Keskin Array B**	**84.26**	**51**	P		**P**	**08 17 21.7**	**+0.7**
WRA	comp=Z,0.5nm,0.6s,baz=259,slow=6.3,SNR=2.9 **Warramunga Arr**	**164.22**	**251**	PKP		**PKPdf**	**08 24 51.6**	**-0.5**
WRA	comp=Z,0.1nm,0.7s,baz=106,slow=0.9,SNR=3.2			PKPab		**PKPab**	**08 25 45.9**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=105,slow=4.1,SNR=4.3							

*AUST **19** 08:30:09.4, 7°.50S×124°.01E, h300km*
*ISCJB **19** 08:30:10.5±0.9, 7°.57S±0°.09×124°.19E±0°.08, h300km, mb3.3/2, Error ellipse: s-maj=14.1km s-min=10.1km az=147.1*
*IDC **19** 08:30:15.3±4.7, 7°.53S×124°.66E, h311km±52km, mb3.0/2, mb1 3.1/4, mb1mx3.0/20, mbtmp3.0/4, Error ellipse: s-maj=129.9km s-min=16.1km az=61.0*

ISC 19 08:30:09.7±1.1, 7°.6S±0°.1×124°.02E±0°.08, h300km, n15, σ2§88/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**4.24**	**240**	S		**S**	**08 32 16.9**	**+3.2**
MTN	baz=4.3,SNR=3.3 **Manton Dam**	**8.75**	**127**	P		**Pn**	**08 32 11.3**	**-1.3**
KNRA	baz=8.8,SNR=6.5 **Kununurra**	**9.31**	**151**	P		**Pn**	**08 32 18.7**	**-0.8**
	baz=9.4,SNR=7.8							
FAKI	**Fak Fak**	**9.40**	**61**	P		**Pn**	**08 32 20.6**	**0.0**
FITZ	baz=9.4,SNR=16 **Fitzroy Crossi**	**10.60**	**172**	P		**Pn**	**08 32 35.0**	**-0.3**
WRA	baz=11,SNR=11 **Warramunga Arr**	**15.87**	**142**	P		**Pn**	**08 33 37.3**	**-1.1**
WRA	0.7nm,0.3s,baz=319,slow=12,SNR=78			S		**S**	**08 36 22.1**	**-5.9**
PALU	0.1nm,0.3s,baz=317,slow=22,SNR=5.6 **Palau**	**18.10**	**35**	P		**P**	**08 34 00.5**	**-0.1**
XMIS	baz=18,SNR=5.1 **Christmas Isla**	**18.37**	**260**	S		**S**	**08 37 11.7**	**-5.9**
ASAR	baz=18,SNR=4.2 **Alice Springs**	**18.62**	**150**	P		**P**	**08 34 08.7**	**+2.5**
ASAR	0.3nm,0.3s,baz=330,slow=11,SNR=24			S		**S**	**08 37 22.6**	**+0.2**
COEN	baz=326,slow=20,SNR=7.1 **Coen**	**19.86**	**110**	P		**P**	**08 34 19.6**	**+0.3**
QIS	baz=20,SNR=12 **Mount Isa**	**19.87**	**132**	P		**P**	**08 34 20.8**	**+1.5**
MTSU	baz=20,SNR=9.7 **Mount Surprise**	**22.38**	**120**	P		**P**	**08 34 46.0**	**+2.5**
STKA	baz=22,SNR=7.3 **Stephens Creek**	**29.22**	**148**	P		**P**	**08 35 45.3**	**+0.9**
CMSA	0.5nm,0.4s,baz=349,slow=10,SNR=4.3 **Cobar Meteorol**	**31.28**	**143**	P		P	08 36 05.9	+3.5
MKAR	baz=31,SNR=7.0 **Makanchi Array**	**65.58**	**330**	P		P	08 40 28.5	+6.7
	0.3nm,0.4s,baz=127,slow=9.0,SNR=3.5							

IDC 19 08:56:25.1±5.4, 6°.08S×147°.89E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.5/19, mbtmp3.5/5, ML3.1/2, MS2.9/2, Ms1 3.0/2, ms1mx2.6/24, Error ellipse: s-maj=83.3km s-min=48.4km az=66.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.38**	**192**	Pn		**Pn**	**08 57 19.8**	**+0.7**
PMG	3.9nm,0.3s,baz=17,slow=8.0,SNR=9.2			Sn		Sn	08 58 00.1	0.0
WRA	2.6nm,0.3s,baz=360,slow=19,SNR=3.8 **Warramunga Arr**	**19.06**	**222**	P		P	09 00 48.4	-0.8
ASAR	0.1nm,0.3s,baz=48,slow=11,SNR=8.0 **Alice Springs**	**22.06**	**216**	P		P	09 01 21.4	-0.4
FITZ	0.9nm,0.5s,baz=51,slow=9.6,SNR=26 **Fitzroy Crossi**	**24.78**	**239**	P		P	09 01 49.1	+0.2
STKA	0.7nm,0.3s,baz=69,slow=8.6,SNR=4.5 **Stephens Creek**	**26.33**	**192**	P		P	09 02 03.3	+0.5
TGY	0.2nm,0.3s,baz=11,slow=16,SNR=2.8 **Tagaytay City**	**33.43**	**307**	LR		LR	09 16 02.5	
CMAR	comp=Z,5.0nm,21.0s,baz=27,slow=35 **Chiang Mai Arr**	**54.07**	**298**	LR		LR	09 27 12.5	
	comp=Z,36nm,19.0s,baz=62,slow=34							

*ISCJB **19** 09:06:49.4±0.2, 62°.89N±0°.02×149°.68W±0°.05, h90km±4km, mb4.0/3, Error ellipse: s-maj=4.0km s-min=3.2km az=29.6*
*IDC **19** 09:06:49.3±1.8, 62°.84N×150°.03W, h70km±25km, mb3.9/3, mb1 3.8/8, mb1mx3.4/30, mbtmp3.7/8, Error ellipse: s-maj=28.2km s-min=14.4km az=115.0*
*NEIC **19** 09:06:50.5, 62°.91N×149°.75W, h78km, MG3.4(AEIC), After AEIC.*

ISC 19 09:06:50.6±0.8, 62°.89N±0°.03×149°.70W±0°.04, h83km±6km, n73, σ1§08/92, mb4.1/3, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HUR	**Hurricane**	**0.09**	**18**	P		**Pn**	**09 07 02.0**	**-0.5**
HUR				S		**Sn**	**09 07 10.3**	**-0.9**
TRF	**Thorofare Moun**	**0.62**	**335**	P		**Pn**	**09 07 05.2**	**-0.7**
TRF				S		**Sn**	**09 07 16.4**	**-0.9**
RND	**Reindeer**	**0.65**	**36**	P		**Pn**	**09 07 05.8**	**-0.2**
RND				S		**Sn**	**09 07 17.2**	**-0.3**
MCK	**McKinley**	**0.92**	**22**	P		**Pn**	**09 07 08.9**	**+0.1**
MCK				S		**Sn**	**09 07 22.6**	**+0.1**
DHY	**Denali Highway**	**1.08**	**79**	P		**Pn**	**09 07 10.4**	**-0.5**
DHY				S		**Sn**	**09 07 25.8**	**-0.3**
PPLA	**Purkeypile**	**1.14**	**272**	P		**Pn**	**09 07 11.6**	**0.0**
PPLA				S		**Sn**	**09 07 27.2**	**-0.1**
SML	**Sawmill**	**1.26**	**

ARCES ARCESS Array B 47.82 2 P **P** **09 15 18.5 -0.5**
2.6nm,0.9s,baz=19,slow=7.7,SNR=4.3
MKAR Makanchi Array 63.13 323 P **P** **09 17 09.3 +0.3**
MKAR Makanchi Array 63.13 323 P **P** **09 17 09.3 +0.3**
0.7nm,0.5s,baz=40,slow=7.1,SNR=12
AKTO Aktyubinsk 64.91 341 P **P** **09 17 20.3 -0.3**
AKTO Aktyubinsk 64.91 341 P **P** **09 17 20.3 -0.3**
1.3nm,0.4s,baz=11,slow=10,SNR=4.7

IDC ***19*** *09:10:15.9±2.5, 8.°66S×108.°48E, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/22, mbtmp4.1/4, Error ellipse: s-maj=130.1km s-min=24.5km az=51.0*
DJA ***19*** *09:10:18.2±1.0, 9.°5±4.°×10.°9E±°, h18km±11km, M3.9/8, MLv3.9/8*
ISC 19 09:10:17.8±2.8, 8.°77S±0.°09×108.°63E±0.°05, h7km±18km, n20, σ1°44/25, mb4.0/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**1.12**	**20**	P	**Pn**	**09 10 40.2**	**+0.3**
CISI	**Cisompet, Garu**	**1.45**	**326**	P	**Pb**	**09 10 45.0**	**-0.3**
CISI				S	**Sn**	**09 11 02.3**	**-1.6**
BJII	**Banjamegara**	**1.79**	**37**	P	**Pb**	**09 10 51.5**	**+0.5**
YOGI	**Yogyakarta**	**1.91**	**60**	P	**Pn**	**09 10 50.1**	**-0.7**
TGJI	**Tegal**	**1.96**	**15**	P	**Pn**	**09 10 52.7**	**+1.2**
UGM	**Wanagama**	**2.06**	**66**	P	**Pn**	**09 10 52.5**	**-0.5**
UGM				S	**Sn**	**09 11 16.6**	**-2.4**
LEM	**Lembang**	**2.18**	**333**	P	**Pb**	**09 10 57.8**	**+0.1**
LEM				S	**Sg**	**09 11 27.6**	**-0.3**
WOJI	**Wonogiri, Jawa**	**2.46**	**68**	P	**Sn**	**09 11 27.4**	**-1.2**
SMRI	**Semarang**	**2.48**	**46**	P	Sg	09 11 37.9	+0.1
PCJI	**Pacitan**	**2.59**	**77**	P	**Pn**	**09 11 01.2**	**+1.0**
PCJI				S	**Sn**	**09 11 32.8**	**+0.9**
DBJI	**Dramaga**	**2.88**	**320**	P	**Pn**	**09 11 06.0**	**+1.7**
DBJI				S	**Sn**	**09 11 40.6**	**+1.3**
PWJI	**Pagerwojo**	**3.23**	**77**	P	**Pn**	**09 11 10.2**	**+1.2**
PWJI				S	**Sn**	**09 11 47.4**	**-0.4**
SJI	**Sawahan**	**3.28**	**72**	P	Pn	09 11 13.1	+3.4
SJI				S	**Sn**	**09 11 52.6**	**+3.6**
CGJI	**Cibinong**	**3.61**	**306**	P	**Pn**	**09 11 13.6**	**-0.7**
KRKI	**Karangkates**	**3.83**	**81**	P	**Pn**	**09 11 16.1**	**-1.2**
GMJI	**Gumukmas**	**4.79**	**84**	P	**Pn**	**09 11 29.0**	**-1.5**
WRA	**Warramunga Arr**	**27.20**		P	**P**	**09 16 03.1**	**+0.4**
	2.1nm,0.8s,baz=288,slow=11,SNR=10						
ASAR	**Alice Springs**	**28.36**	**124**	P	**P**	**09 16 13.2**	**+0.4**
	0.7nm,0.7s,baz=299,slow=8.7,SNR=12						
STKA	**Stephens Creek**	**38.26**	**132**	P	**P**	**09 17 40.3**	**+1.3**
	7.7nm,0.7s,baz=302,slow=7.9,SNR=30						
MKAR	**Makanchi Array**	**60.10**	**339**	P	**P**	**09 20 23.9**	**-2.0**
	0.6nm,0.5s,baz=153,slow=8.7,SNR=7.5						

ISCJB ***19*** *09:27:35.2±1.1, 43.°51N±0.°06×127.°5W±0.°1, h15km, mb3.0/2, MS3.3/1, Error ellipse: s-maj=12.0km s-min=6.6km az=148.4*
IDC ***19*** *09:27:35.7±2.2, 43.°62N×127.°24W, h0km, mb2.9/3, mb1 3.5/8, mb1mx3.4/32, mbtmp3.2/8, ML3.6/4, MS2.9/4, Ms1 2.9/4, ms1mx2.5/15, Error ellipse: s-maj=35.0km s-min=16.6km az=56.0*
NEIC ***19*** *09:27:36.5±1.2, 43.°49N×127.°45W, h10km, mb3.5/1, Error ellipse: s-maj=14.8km s-min=8.1km az=65.0*
ISC 19 09:27:37.1±1.5, 43.°46N±0.°07×127.°5W±0.°1, h15km, n43, σ1°17/44, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**2.39**	**103**	*e*Pn	**Pn**	**09 28 13.2**	**-2.6**
KEBM				*e*Sn	**Sn**	**09 28 45.4**	**+0.7**
KBO	**Bosley Butte**	**2.71**	**116**	*e*Pn	**Pn**	**09 28 18.9**	**-1.3**
KBO				*e*Sn	**Sn**	**09 28 50.4**	**-2.3**
RNO	**Roman Nose**	**2.76**	**79**	P	**Pn**	**09 28 19.0**	**-1.9**
UMPQ	**Umpqua Communi**	**3.04**	**92**	P	**Pn**	**09 28 23.3**	**-1.4**
DBO	**Dodson Butte**	**3.12**	**95**	P	**Pn**	**09 28 24.0**	**-1.9**
COR	**Corvallis**	**3.23**	**68**	P	**Pn**	**09 28 25.7**	**-1.5**
HUMO	**Hull Mountain**	**3.44**	**103**	*e*Pn	**Pn**	**09 28 28.8**	**-1.3**
HUMO				*e*Sn	**Sn**	**09 29 10.3**	**-0.3**
BROR	**Big Rock Looko**	**3.74**	**76**	P	**Pn**	**09 28 33.5**	**-0.7**
IRO	**Indian Ridge**	**3.84**	**80**	P	**Pn**	**09 28 34.9**	**-0.9**
YBH	**Yreka Blue Hor**	**3.93**	**114**	Pn	**Pn**	**09 28 37.0**	**0.0**
YBH	**Yreka Blue Hor**	**3.93**	**114**	Pn	**Pn**	**09 28 37.0**	**0.0**
	0.8nm,0.3s,baz=294,slow=14,SNR=30						
G04A	**Mulino**	**4.00**	**62**	P	**Pn**	**09 28 37.4**	**-0.5**
H04A	**Detroit Lake**	**4.02**	**70**	P	**Pn**	**09 28 37.3**	**-0.9**
HUOR	**Husband**	**4.14**	**79**	P	**Pn**	**09 28 39.8**	**-0.2**
WIFE	**Three Sisters-**	**4.16**	**80**	P	**Pn**	**09 28 39.7**	**-0.5**
BKCOR	**Black Crater**	**4.28**	**77**	P	**Pn**	**09 28 41.5**	**-0.3**
F04A	**Amboy**	**4.38**	**54**	P	**Pn**	**09 28 42.6**	**-0.5**
BEND	**Bend**	**4.51**	**80**	P	**Pn**	**09 28 44.7**	**-0.2**
LON	**Longmire**	**5.20**	**49**	*e*Pn	**Pn**	**09 28 54.1**	**-0.3**
	34nm,0.6s						
LON				*e*Sn	**Sn**	**09 29 54.5**	**+0.4**
PGC	**Sidney**	**5.91**	**27**	*e*Pn	**Pn**	**09 29 02.9**	**-1.1**
HAWA	**Hanford**	**6.37**	**60**	*e*Pn	**Pn**	**09 29 10.1**	**-0.3**
	9.7nm,0.4s						
NVAR	**Mina Array Bea**	**8.58**	**123**	Pn	**Pn**	**09 29 41.6**	**+0.6**
NVAR	**Mina Array Bea**	**8.58**	**123**	Pn	**Pn**	**09 29 41.6**	**+0.6**
	0.0nm,0.3s,baz=296,slow=13,SNR=4.2						
NEW	**Newport**	**8.69**	**53**	Pn	**Pn**	**09 29 40.5**	**-1.7**
NEW	**Newport**	**8.69**	**53**	Pn	**Pn**	**09 29 40.5**	**-1.7**
	0.5nm,0.3s,baz=235,slow=9.5,SNR=4.0						
NEW				LR	LR	09 33 01.7	
	comp=Z,82nm,20.3s,baz=270,slow=39						
BBB	**Bella Bella**	**8.74**	**359**	LR	LR	09 32 14.1	
	comp=Z,53nm,20.7s,baz=216,slow=32						
ELK	**Elko**	**9.51**	**102**	Pn	**Pn**	**09 29 54.4**	**+0.7**
ELK	**Elko**	**9.51**	**102**	Pn	**Pn**	**09 29 54.4**	**+0.7**
	0.1nm,0.3s,baz=283,slow=8.6,SNR=4.4						
BSMT	**Bassoo Peak**	**9.92**	**59**	*e*Pn	**Pn**	**09 29 59.8**	**+0.5**
	6.4nm,1.4s						
MSO	**Missoula**	**10.15**	**66**	*e*Pn	**Pn**	**09 30 01.8**	**-0.6**
	1.7nm,0.9s						
SWMT	**Swartz Lake**	**10.31**	**62**	*e*Pn	**Pn**	**09 30 03.3**	**-1.2**
	1.7nm,0.9s						
DLMT	**Dillon**	**10.83**	**75**	*e*Pn	**Pn**	**09 30 12.2**	**+0.5**
PFO	**Pinyon Flat Ob**	**13.08**	**135**	LR	LR	09 36 15.5	
	comp=Z,36nm,18.7s,baz=299,slow=40						
PDAR	**Pinedale Array**	**13.13**	**87**	Pn	**Pn**	**09 30 45.5**	**+2.3**
PDAR	**Pinedale Array**	**13.13**	**87**	Pn	**Pn**	**09 30 45.5**	**+2.3**
	0.1nm,0.3s,baz=282,slow=12,SNR=5.8						
FFC	**Flin Flon**	**20.04**	**47**	*e*P	**P**	**09 32 10.1**	**+0.8**
	1.3nm,0.6s						
YKA	**Yellowknife Ar**	**20.51**	**17**	P	**P**	**09 32 13.7**	**-0.7**
YKA	**Yellowknife Ar**	**20.51**	**17**	P	**P**	**09 32 13.7**	**-0.7**
	0.3nm,0.6s,baz=210,slow=12,SNR=5.1						
TXAR	**Lajitas Array**	**23.70**	**119**	P	**P**	**09 32 49.4**	**+1.0**
TXAR	**Lajitas Array**	**23.70**	**119**	P	**P**	**09 32 49.4**	**+1.0**
	0.4nm,0.6s,baz=299,slow=8.3,SNR=7.4						
ILAR	**Eielson Array**	**23.99**	**340**	P	**P**	**09 32 50.5**	**-0.3**
ILAR	**Eielson Array**	**23.99**	**340**	P	**P**	**09 32 50.5**	**-0.3**
	0.4nm,0.8s,baz=147,slow=8.9,SNR=8.8						
INK	**Inuvik**	**25.11**	**355**	LR	LR	09 42 30.3	
	comp=Z,78nm,18.0s,baz=345,slow=36						

IDC 19 09:27:46.4±7.8, 17.°30S×178.°79W, h580km±99km, mb3.2/9, mb1 3.5/9, mb1mx3.3/20, mbtmp3.2/9, Error ellipse: s-maj=77.3km s-min=29.1km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.61**	**240**	P	P	09 34 20.6	-0.3
	0.8nm,0.4s,baz=111,slow=9.5,SNR=7.0						
WRA	**Warramunga Arr**	**44.39**	**259**	P	P	09 35 06.6	-0.1
	1.9nm,0.7s,baz=95,slow=7.5,SNR=64						
ASAR	**Alice Springs**	**44.61**	**254**	P	P	09 35 08.3	-0.1
	8.5nm,0.7s,baz=87,slow=8.7,SNR=158						
NVAR	**Mina Array Bea**	**79.24**	**44**	P	P	09 38 53.0	+0.3
	0.8nm,0.7s,baz=223,slow=8.8,SNR=8.3						
ILAR	**Eielson Array**	**85.38**	**13**	P	P	09 39 22.6	-0.2
	0.6nm,0.5s,baz=220,slow=4.9,SNR=17						
TXAR	**Lajitas Array**	**85.98**	**58**	P	P	09 39 26.6	+0.1
	0.8nm,0.7s,baz=216,slow=6.4,SNR=11						
PDAR	**Pinedale Array**	**87.17**	**44**	P	P	09 39 31.3	-0.7
	0.7nm,0.8s,baz=232,slow=3.6,SNR=5.5						
INK	**Inuvik**	**91.40**	**15**	P	P	09 39 50.5	-0.2
	0.6nm,0.9s,baz=229,slow=4.6,SNR=4.1						
YKA	**Yellowknife Ar**	**93.94**	**25**	P	P	09 40 02.4	0.0
	0.2nm,0.8s,baz=239,slow=4.4,SNR=5.1						
BRTR	**Keskin Array B**	**144.10**	**315**	PKP	PKPbc	09 46 16.9	+0.1
	0.6nm,0.5s,baz=33,slow=3.4,SNR=3.9						
GERES	**GERESS Array B**	**146.94**	**345**	PKPbc	PKPbc	09 46 23.8	-0.8
	0.7nm,0.5s,baz=35,slow=3.3,SNR=6.6						

MAN 19 09:49:14, 11.°35N×122.°21E, h16km, mb4.5, ML3.3, MS3.2, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCP	**Roxas**	**0.56**	**68**	*e*P	Pb	09 49 25.6	0.0
GUIM	**Jordan**	**0.81**	**153**	*e*P	Pb	09 49 28.6	-1.1
OTRP	**Odiongan**	**1.02**	**350**	*e*P	Pb	09 49 33.4	0.0
OTRP				*e*S	Sn	09 49 47.9	+0.2
CUYO	**Cuyo Island**	**1.27**	**247**	*e*P	Pn	09 49 37.2	0.0
CUYO				*e*S	Sb	09 49 53.1	-0.6

IDC 19 09:54:18.7±48.0, 15.°88S×173.°67W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/20, mbtmp3.6/3, Error ellipse: s-maj=921.1km s-min=188.4km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.57**	**240**	P	P	10 02 25.2	+0.5
	0.3nm,0.3s,baz=98,slow=14,SNR=3.4						
WRA	**Warramunga Arr**	**49.48**	**257**	P	P	10 03 11.0	-0.3
	0.2nm,0.5s,baz=96,slow=7.0,SNR=8.0						
ASAR	**Alice Springs**	**49.71**	**252**	P	P	10 03 12.8	-0.4
	1.5nm,0.6s,baz=88,slow=8.4,SNR=48						

WEL 19 10:13:20.2±0.6, 38.°10S×176.°26E, h166km±5km, ML3.6/5, 12C, Error ellipse: s-maj=3.3km s-min=2.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	**Matawai**	**1.02**	**104**	PN	Pn	10 13 46.6	-0.2
MWZ				SN	Sn	10 14 04.4	-2.8
RAHZ	**Arahi**	**1.04**	**142**	PN	Pn	10 13 47.3	+0.4
NMHZ	**Naumai**	**1.09**	**157**	PN	Pn	10 13 48.0	+0.7
NGZ	**Ngauruhoe**	**1.20**	**205**	PN	Pn	10 13 48.5	+0.2
TUVZ	**Tukino**	**1.27**	**202**	PN	Pn	10 13 48.9	-0.1
FWVZ	**Far West T-bar**	**1.28**	**205**	PN	Pn	10 13 48.8	-0.5
TRVZ	**Turoa**	**1.33**	**205**	PN	Pn	10 13 49.5	-0.1
WNVZ	**Wahianoa**	**1.34**	**203**	PN	Pn	10 13 49.4	-0.2
MOVZ	**Moawhango**	**1.37**	**197**	↑PN	Pn	10 13 49.2	-0.6
MCHZ	**McNeill Hill**	**1.39**	**166**	PN	Pn	10 13 50.3	+0.4
MCHZ				SN	Sn	10 14 12.5	-0.4
PKVZ	**Pokaka**	**1.39**	**211**	PN	Pn	10 13 49.9	-0.1
BHHZ	**Black Hill Sta**	**1.40**	**186**	↑PN	Pn	10 13 49.6	-0.5
KNZ	**Kokohu**	**1.44**	**130**	PN	Pn	10 13 50.2	-0.1
VRZ	**Vera Road**	**1.56**	**228**	↑PN	Pn	10 13 52.0	+0.4
PUZ	**Puketiti**	**1.57**	**90**	PN	Pn	10 13 51.4	-0.4
MHGZ	**Mahia Peninsul**	**1.67**	**130**	PN	Pn	10 13 52.9	+0.2
CKHZ	**Cape Kidnapper**	**1.69**	**158**	PN	Pn	10 13 53.0	+0.1
MXZ	**Matakaoa Point**	**1.70**	**72**	PN	Pn	10 13 53.4	+0.4
KAHZ	**Kahuranaki**	**1.76**	**164**	↑PN	Pn	10 13 53.8	0.0
PNHZ	**Pukenui**	**1.82**	**182**	PN	Pn	10 13 53.6	-0.7
WAZ	**Wanganui**	**1.93**	**211**	PN	Pn	10 13 55.3	-0.3
WPHZ	**Waipukurau**	**1.97**	**176**	PN	Pn	10 13 55.3	-0.6
TSZ	**Takapari Road**	**1.98**	**187**	↑PN	Pn	10 13 55.2	-0.8
PXZ	**Pawanui**	**1.99**	**167**	↑PN	Pn	10 13 55.7	-0.4
PXZ				SN	Sn	10 14 21.4	-2.6
PRHZ	**Porangahau**	**2.19**	**173**	↑PN	Pn	10 13 57.8	-0.7
DVHZ	**Dannevirke**	**2.20**	**182**	↑PN	Pn	10 13 57.5	-1.1
POWZ	**Post Office Ro**	**2.33**	**189**	PN	Pn	10 13 58.9	-1.2
BFZ	**Birch Farm**	**2.58**	**180**	PN	Pn	10 14 01.9	-1.2
MRZ	**Mangatainoka R**	**2.62**	**191**	↑PN	Pn	10 14 02.0	-1.5
MRZ				SN	Sn	10 14 33.9	-3.4
TIWZ	**Tintock**	**2.69**	**186**	↑PN	Pn	10 14 03.0	-1.5
OGWZ	**Otaki Gorge**	**2.85**	**197**	PN	Pn	10 14 04.6	-1.7
HOWZ	**Holdsworth Sta**	**2.86**	**191**	↑PN	Pn	10 14 04.5	-1.9
KIW	**Kapiti Island**	**2.96**	**200**	PN	Pn	10 14 05.5	-2.1
TMWZ	**Te Maipa**	**3.02**	**185**	PN	Pn	10 14 06.5	-2.0
MTW	**Mount Morrison**	**3.12**	**191**	↑PN	Pn	10 14 07.3	-2.3
CAW	**Cannon Point**	**3.15**	**197**	PN	Pn	10 14 07.8	-2.2
DUWZ	**D'Urville Isla**	**3.25**	**213**	PN	Pn	10 14 09.4	-2.0
TRWZ	**Traveller**	**3.33**	**187**	PN	Pn	10 14 10.1	-2.2
PAWZ	**Paruwai Farm**	**3.34**	**191**	PN	Pn	10 14 10.1	-2.4
WEL	**Wellington**	**3.39**	**199**	PN	Pn	10 14 10.8	-2.2
MSWZ	**Moikau Station**	**3.41**	**193**	PN	Pn	10 14 10.7	-2.6
SNZO	**South Karori**	**3.43**	**200**	PN	Pn	10 14 10.9	-2.6
TCW	**Tory Channel**	**3.47**	**206**	PN	Pn	10 14 11.7	-2.4
BHW	**Baring Head**	**3.48**	**198**	PN	Pn	10 14 11.5	-2.6
PLWZ	**Palliser**	**3.56**	**192**	PN	Pn	10 14 12.4	-2.8
TUWZ	**Tuamarina**	**3.78**	**208**	PN	Pn	10 14 15.4	-2.6
NNZ	**Nelson**	**3.83**	**215**	PN	Pn	10 14 16.1	-2.6
QRZ	**Quartz Range**	**3.97**	**225**	PN	Pn	10 14 17.4	-3.1
BSWZ	**Blackbirch Sta**	**4.05**	**206**	PN	Pn	10 14 19.0	-2.5
THZ	**Tophouse**	**4.48**	**214**	PN	Pn	10 14 24.2	-2.9
KHZ	**Kahutara**	**4.79**	**205**	PN	Pn	10 14 28.2	-2.9

WEL 19 10:19:55.6±0.4, 40.°16S×173.°63E, h178km±3km, ML3.5/11, 8C-1D, Error ellipse: s-maj=1.9km s-min=1.2km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.68**	**161**	↑PN	Pn	10 20 21.2	+0.2
DUWZ				SN	Sn	10 20 39.6	-1.1
QRZ	**Quartz Range**	**1.07**	**231**	PN	Pn	10 20 23.5	-0.1
QRZ				SN	Sn	10 20 42.8	-2.5
NNZ	**Nelson**	**1.07**	**190**	PN	Pn	10 20 23.5	0.0
WAZ	**Wanganui**	**1.12**	**69**	PN	Pn	10 20 24.8	+0.8
TCW	**Tory Channel**	**1.16**	**155**	PN	Pn	10 20 24.5	+0.3
KIW	**Kapiti Island**	**1.20**	**126**	↑PN	Pn	10 20 24.6	0.0
TUWZ	**Tuamarina**	**1.29**	**169**	PN	Pn	10 20 25.3	0.0
OGWZ	**Otaki Gorge**	**1.35**	**120**	PN	Pn	10 20 26.0	+0.1
VRZ	**Vera Road**	**1.36**	**41**	PN	Pn	10 20 25.8	-0.2
SNZO	**South Karori**	**1.41**	**145**	↑PN	Pn	10 20 26.5	0.0
WEL	**Wellington**	**1.42**	**143**	↑PN	Pn	10 20 26.6	+0.1
CAW	**Cannon Point**	**1.45**	**131**	↑PN	Pn	10 20 26.9	+0.1
BSWZ	**Blackbirch Sta**	**1.56**	**173**	PN	Pn	10 20 28.2	+0.3
BHW	**Baring Head**	**1.56**	**143**	↑PN	Pn	10 20 27.8	-0.1
MRZ	**Mangatainoka R**	**1.57**	**109**	PN	Pn	10 20 27.9	-0.2
PKVZ	**Pokaka**	**1.59**	**57**	PN	Pn	10 20 28.1	-0.2
HOWZ	**Holdsworth Sta**	**1.62**	**118**	↑PN	Pn	10 20 28.4	-0.1
THZ	**Tophouse**	**1.69**	**199**	↑PN	Pn	10 20 29.1	-0.2
THZ				SN	Sn	10 20 53.1	-2.4
TRVZ	**Turoa**	**1.72**	**60**	PN	Pn	10 20 29.6	-0.2
WNVZ	**Wahianoa**	**1.73**	**62**	PN	Pn	10 20 29.6	-0.3
MTW	**Mount Morrison**	**1.74**	**125**	PN	Pn	10 20 29.6	-0.1
FWVZ	**Far West T-bar**	**1.74**	**59**	PN	Pn	10 20 29.5	-0.5
MSWZ	**Moikau Station**	**1.76**	**136**	PN	Pn	10 20 29.6	-0.2
TSZ	**Takapari Road**	**1.79**	**87**	PN	Pn	10 20 30.1	-0.3
TUVZ	**Tukino**	**1.80**	**61**	PN	Pn	10 20 30.4	-0.1
MOVZ	**Moawhango**	**1.81**	**66**	PN	Pn	10 20 29.8	-0.7
TIWZ	**Tintock**	**1.83**	**110**	PN	Pn	10 20 30.5	-0.1
PAWZ	**Paruwai Farm**	**1.83**	**132**	PN	Pn	10 20 30.5	-0.2
WTVZ	**West Tongariro**	**1.84**	**56**	PN	Pn	10 20 30.6	-0.4
PLWZ	**Palliser**	**1.87**	**139**	PN	Pn	10 20 30.7	-0.4
KRVZ	**Karewarewa**	**1.89**	**56**	PN	Pn	10 20 31.0	-0.5
DVHZ	**Dannevirke**	**1.95**	**195**	PN	Pn	10 20 31.7	-0.2
TMWZ	**Te Maipa**	**1.96**	**119**	PN	Pn	10 20 31.9	-0.2
PNHZ	**Pukenui**	**1.99**	**84**	PN	Pn	10 20 32.1	-0.3
TRWZ	**Traveller**	**1.99**	**129**	PN	Pn	10 20 32.2	-0.2
BHHZ	**Black Hill Sta**	**2.00**	**71**	PN	Pn	10 20 31.6	-0.9
BFZ	**Birch Farm**	**2.07**	**105**	PN	Pn	10 20 33.1	-0.1
DSZ	**Dennistoun Nort**	**2.10**	**221**	↓PN	Pn	10 20 33.4	-0.1
DSZ				SN	Sn	10 21 00.1	-3.1
KHZ	**Kahutara**	**2.25**	**182**	PN	Pn	10 20 35.0	-0.2
PRHZ	**Porangahau**	**2.31**	**94**	PN	Pn	10 20 35.5	-0.4
BKZ	**Black Stump Fm**	**2.43**	**67**	PN	Pn	10 20 36.5	-0.9
MCHZ	**McNeill Hill**	**2.47**	**74**	PN	Pn	10 20 37.7	-0.1
PXZ	**Pawanui**	**2.49**	**88**	PN	Pn	10 20 37.6	-0.4
LTZ	**Lake Taylor**	**2.81**	**201**	PN	Pn	10 20 41.8	0.0
URZ	**Urewera**	**3.31**	**56**	PN	Pn	10 20 46.4	-1.5
KNZ	**Kokohu**	**3.33**	**71**	PN	Pn	10 20 47.2	-1.0
MHGZ	**Mahia Peninsul**	**3.46**	**74**	PN	Pn	10 20 49.3	-0.4
MWZ	**Matawai**	**3.54**	**60**	PN	Pn	10 20 49.2	-1.6
PUZ	**Puketiti**	**4.16**	**61**	PN	Pn	10 20 56.6	-2.1

IDC 19 10:22:09.5±2.2, 17.°57S×176.°73E, h0km, mb3.3/5, mb1 3.7/5, mb1mx3.5/18, mbtmp3.3/5, Error ellipse: s-maj=149.4km s-min=25.8km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.13**	**260**	P	P	10 29 47.5	0.0
	0.2nm,0.8s,baz=102,slow=8.0,SNR=2.3						
ASAR	**Alice Springs**	**40.43**	**254**	P	P	10 29 49.9	0.0
	0.3nm,0.7s,baz=85,slow=8.1,SNR=5.4						
NVAR	**Mina Array Bea**	**82.45**	**46**	P	P	10 34 35.2	+1.0
	0.1nm,0.3s,baz=223,slow=4.8,SNR=1.8						
ILAR	**Eielson Array**	**86.67**	**15**	P	P	10 34 52.8	-1.9
	0.3nm,1.0s,baz=200,slow=4.6,SNR=2.9						
TXAR	**Lajitas Array**	**89.77**	**59**	P	P	10 35 10.4	0.0
	0.1nm,0.7s,baz=216,slow=4.5,SNR=2.7						

IDC 19 10:38:32.5±13.0, 48.°50S×107.°48E, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.6/15, mbtmp3.8/2, MS4.7/1, Ms1 4.7/1, ms1mx3.0/25, Error ellipse: s-maj=720.7km s-min=47.4km az=120.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**32.42**	**50**	P	P	10 45 04.0	-0.1
	0.6nm,0.7s,baz=212,slow=8.3,SNR=12						
WRA	**Warramunga Arr**	**35.77**	**47**	P	P	10 45 33.1	-0.1
	1.5nm,0.8s,baz=210,slow=8.2,SNR=12						
PSI	**Prapat**	**51.63**	**349**	LR	LR	11 03 38.7	
	comp=Z,747nm,21.9s,baz=38,slow=29						
NVAR	**Mina Array Bea**	**145.75**	**90**	PKPbc	PKPdf	10 58 12.8	+0.1
	0.4nm,0.7s,baz=223,slow=3.6,SNR=4.6						
TXAR	**Lajitas Array**	**149.43**	**117**	PKPbc	PKPbc	10 58 22.5	-0.9
	0.4nm,0.9s,baz=191,slow=3.4,SNR=4.6						

IDC 19 12:00:45.2±1.7, 4.°14S×145.°16E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/18, mbtmp3.4/4, ML3.6/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/16, Error ellipse: s-maj=82.1km s-min=26.1km az=123.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.92**	**213**	P	Pn	12 05 08.5	+0.2
	0.2nm,0.3s,baz=34,slow=11,SNR=25						
ASAR	**Alice Springs**	**22.25**	**208**	P	P	12 05 43.0	-0.8
	0.1nm,0.4s,baz=38,slow=7.9,SNR=9.0						
DAV	**Davao City (W)**	**22.50**	**300**	LR	LR	12 14 44.2	
	comp=Z,52nm,19.1s,baz=53,slow=37						
FITZ	**Fitzroy Crossi**	**23.61**	**233**	P	P	12 05 58.4	+0.3
	1.3nm,0.3s,baz=57,slow=10.0,SNR=13						
ILAR	**Eielson Array**	**84.51**	**24**	P	P	12 13 19.7	-0.1
	0.4nm,0.7s,baz=251,slow=5.2,SNR=7.2						

IDC 19 12:06:01.4±2.2, 5.°95N×125.°36E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, Error ellipse: s-maj=144.7km s-min=25.2km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.90**	**179**	P	P	12 11 17.7	+0.7
	1.9nm,0.5s,baz=6.5,slow=10.0,SNR=23						
WRA	**Warramunga Arr**	**27.20**	**161**	P	P	12 11 46.5	-0.5
	0.3nm,0.7s,baz=336,slow=9.4,SNR=8.6						
ASAR	**Alice Springs**	**30.59**	**164**	P	P	12 12 17.1	-0.2
	0.2nm,0.4s,baz=343,slow=7.4,SNR=13						
MKAR	**Makanchi Array**	**54.97**	**325**	P	P	12 15 34.3	-0.1
	0.3nm,0.3s,baz=120,slow=7.2,SNR=5.2						

IDC ***19*** *12:25:41.1±5.8, 24.°47N×124.°50E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/24, mbtmp3.3/3, MS3.9/1, Ms1 3.9/1, ms1mx2.5/27, Error ellipse

MTN Manton Dam 12.29 192 P **Pn** **12 34 54.1 -1.2**
baz=12,SNR=33
SPSI Sidrap Palu 14.25 257 P Pn 12 35 25.2 +3.1
26nm,0.9s,494nm
BKSI Bulukumba 14.27 251 P **Pn** **12 35 23.1 +0.8**
42nm,1.4s,501nm
KAPI Kappang 14.53 253 *e*Pn **Pn** **12 35 26.3 +0.4**
KAPI Kappang 14.53 253 P **Pn** **12 35 27.7 +1.8**
60nm,1.1s,691nm
KAPI Kappang 14.53 253 Pn **Pn** **12 35 27.6 +1.7**
1.6nm,0.3s,baz=175,slow=15,SNR=12
KNRA Kununurra 15.62 198 P **Pn** **12 35 38.0 -2.3**
baz=16,SNR=44
KNRA S Sn 12 38 22.7 -10
baz=16,SNR=3.9
PMG Port Moresby 15.95 123 Pn **P** **12 35 51.8 +4.0**
PMG Port Moresby 15.95 123 Pn **P** **12 35 51.8 +4.0**
0.3nm,0.3s,baz=329,slow=17,SNR=2.3
COEN Coen 16.16 145 *e*Pn **Pn** **12 35 47.6 +0.3**
255nm,1.4s
COEN *e*Sn **Sn** **12 38 44.8 -0.8**
COEN Coen 16.16 145 P **P** **12 35 50.1 0.0**
baz=16,SNR=4.6
SMKI Samarinda 16.46 271 P P 12 35 59.0 +5.5
GUMO Guam 18.05 38 LR LR 12 42 23.0
comp=Z,313nm,18.7s,baz=202,slow=35
FITZ Fitzroy Crossi 18.98 204 *e*P **Pn** **12 36 22.3 +0.2**
22nm,0.9s
FITZ S Sn 12 39 38.9 -15
FITZ *e*S S 12 39 45.6 -9.3
FITZ Fitzroy Crossi 18.98 204 P **P** **12 36 19.8 -1.4**
0.7nm,0.3s,baz=49,slow=12,SNR=36
FITZ S Sn 12 39 38.9 -15
0.2nm,0.3s,baz=140,slow=3.5,SNR=3.6
FITZ Fitzroy Crossi 18.98 204 P **P** **12 36 19.7 -1.5**
baz=19,SNR=30
WRAB Tennant Creek 19.10 178 *e*P **P** **12 36 22.3 -0.2**
WRAB *e*S **Sn** **12 39 53.1 -3.5**
WRAB pmax pmax
comp=Z,42nm,1.2s
WRAB Tennant Creek 19.10 178 *e*P **P** **12 36 22.3 -0.2**
comp=Z,42nm,1.2s
WRAB *e*S **Sn** **12 39 53.1 -3.5**
WRA Warramunga Arr 19.11 178 P **P** **12 36 22.6 0.0**
WRA S Sn 12 39 46.3 -11
WRA Warramunga Arr 19.11 178 P **P** **12 36 22.6 0.0**
comp=Z,0.5nm,0.3s,baz=357,slow=11,SNR=60
WRA S Sn 12 39 46.3 -11
baz=357,slow=23,SNR=2.6
KHKI Kahang-Kahang 19.52 247 P **Pn** **12 36 28.2 -0.5**
comp=Z,62nm,2.0s,comp=Z,932nm
MTSU Mount Surprise 20.21 149 P Pn 12 36 38.0 +1.2
baz=20,SNR=9.9
QIS Mount Isa 20.54 164 P Pn 12 36 43.9 +3.3
baz=21,SNR=11
KMMI Kalianget 20.63 252 P Pn 12 36 41.1 -0.5
comp=Z,43nm,1.8s
GMJI Gumukmas 21.50 249 P **P** **12 36 50.4 +1.8**
comp=Z,26nm,1.4s
AS31 Alice Springs 22.80 179 *e*P **P** **12 37 02.3 -0.2**
ASAR Alice Springs 22.80 179 P **P** **12 37 02.7 +0.2**
ASAR S **S** **12 41 11.4 +2.0**
ASAR Alice Springs 22.80 179 P **P** **12 37 02.7 +0.2**
comp=Z,5.0nm,0.6s,baz=6.4,slow=12,SNR=130
ASAR S **S** **12 41 11.4 +2.0**
comp=Z,1.4nm,0.9s,baz=360,slow=22,SNR=3.4
ASAR LR LR 12 47 23.4
comp=Z,714nm,18.3s,baz=354,slow=40
CTA Charters Tower 22.84 148 P **P** **12 37 04.7 +1.8**
CTA Charters Tower 22.84 148 P **P** **12 37 04.7 +1.8**
comp=Z,2.2nm,0.7s,baz=320,slow=13,SNR=3.0
CTAO Charters Tower 22.84 148 *e*P **P** **12 37 05.0 +2.0**
CTAO pmax pmax
comp=Z,51nm,1.3s
CTAO Charters Tower 22.84 148 *e*P **P** **12 37 05.0 +2.0**
comp=Z,51nm,1.3s
SJI Sawahan 22.91 252 P P 12 37 12.1 +8.3
KSM Kuching 23.46 275 *e*P **P** **12 37 09.9 +0.7**
comp=Z,27nm,1.4s
KSM Kuching 23.46 275 P **P** **12 37 10.1 +0.8**
baz=23,SNR=6.3
MBWA Marble Bar 24.44 213 *e*P **P** **12 37 19.3 +1.0**
comp=Z,47nm,1.4s
BJII Banjamegara 24.77 254 P **P** **12 37 22.7 +1.2**
comp=Z,51nm,1.8s
CISI Cisompet, Garu 26.65 255 P **P** **12 37 40.2 +1.7**
comp=Z,47nm,1.2s
SSLB Suanglung 27.32 334 *e*P **P** **12 37 43.9 -0.5**
comp=Z,23nm,1.1s
XMIS Christmas Isla 29.48 250 S S 12 42 35.4 -21
baz=30,SNR=3.4
FORT Forrest 30.36 190 *e*P **P** **12 38 13.0 +1.8**
comp=Z,18nm,0.8s
QIZ Qiongzhong 30.55 311 P **P** **12 38 12.8 -0.3**
QIZ S **S** **12 43 15.1 +2.4**
QIZ LR LR
comp=N,140nm,16.2s
QIZ LR LR
comp=E,65nm,19.9s
QIZ LR LR
comp=Z,190nm,20.8s
STKA Stephens Creek 31.87 167 P **P** **12 38 23.9 -0.6**
STKA Stephens Creek 31.87 167 P **P** **12 38 23.9 -0.6**
comp=Z,1.8nm,0.7s,baz=339,slow=8.6,SNR=3.2
STKA LR LR 12 52 49.2
comp=Z,1μm,19.0s,baz=257,slow=39
KMBL Kambalda 32.45 199 P P 12 38 36.5 +6.8
baz=33,SNR=6.9
PPI Padang Panjang 33.27 270 S sS 12 44 10.7 -1.4
baz=33,SNR=6.0
JNU Nakatsue 33.77 356 P **P** **12 38 40.3 -1.0**
comp=Z,14nm,0.9s,baz=152,slow=9.8
JNU LR LR 12 52 06.9
comp=Z,198nm,18.5s,baz=336,slow=36
BLDU Ballidu 33.80 207 P P 12 38 47.9 +6.4
baz=34,SNR=4.4
JHJ Hachijo jima 2 34.16 9 LR LR 12 49 40.3
comp=Z,453nm,19.4s,baz=116,slow=31
NJ2 Nanjing 35.49 338 *e*P **P** **12 38 56.8 +0.7**
NJ2 pP **pP** **12 39 06.8 +0.7**
NJ2 sP **sP** **12 39 09.4 -0.9**
NJ2 PP **PP** **12 40 19.0 +1.9**
NJ2 S **S** **12 44 34.0 +4.8**
NJ2 sS **sS** **12 44 49.0 +3.2**
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 pmax pmax
comp=Z,90nm,11.2s
NJ2 LR LR
comp=N,170nm,22.3s
NJ2 LR LR
comp=E,320nm,26.5s
NJ2 LR LR
comp=Z,210nm,24.1s
NWAO Narrogin (SRO) 35.57 204 LR LR 12 54 04.8
comp=Z,144nm,19.2s,baz=25,slow=37
WHN Wuhan 36.13 331 P **P** **12 39 01.9 +0.4**
WHN S **sS** **12 44 51.3 -4.4**
WHN LR LR
comp=Z,450nm,10.0s
MJAR Matsushiro Arr 37.32 6 P **P** **12 39 09.8 -1.8**
MJAR Matsushiro Arr 37.32 6 P **P** **12 39 09.8 -1.8**
comp=Z,1.5nm,0.9s,baz=202,slow=9.3,SNR=6.2
MJAR LR LR 12 51 42.9
comp=Z,282nm,20.0s,baz=200,slow=32
GYA Guiyang 37.53 318 *e*P **P** **12 39 15.3 +1.6**
GYA pP **pP** **12 39 25.4 +1.6**
GYA sP sP 12 39 31.3 +3.3
GYA PP **PnPn** **12 40 44.8 +4.0**
GYA S **S** **12 45 02.1 +1.3**
GYA sS **ScP** **12 45 19.3 +2.9**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.8s
GYA LR LR
comp=N,480nm,17.8s
GYA LR LR
comp=E,360nm,18.0s
GYA LR LR
comp=Z,430nm,17.9s
KSAR Wonju Array Be 38.36 353 P **P** **12 39 19.7 -0.7**
KSRS Korea Array 38.37 353 P **P** **12 39 19.7 -0.7**
comp=Z,1.7nm,0.9s,baz=170,slow=9.9,SNR=7.7
KSRS LR LR 12 54 09.1
comp=Z,163nm,18.8s,baz=171,slow=35

CMAR Chiang Mai Arr 39.10 301 P **P** **12 39 26.5 -0.4**
CMAR Chiang Mai Arr 39.10 301 P **P** **12 39 26.5 -0.4**
comp=Z,0.8nm,0.7s,baz=125,slow=7.2,SNR=11
CHTO Chiang Mai 39.25 301 *e*P **P** **12 39 28.1 0.0**
CHTO Chiang Mai 39.25 301 *e*P **P** **12 39 28.1 0.0**
comp=Z,4.1nm,0.9s
KMI Kunming 39.45 313 P **P** **12 39 30.3 +0.3**
KMI pP **pP** **12 39 39.4 -0.8**
KMI S **S** **12 45 33.3 +3.3**
KMI pmax pmax
comp=Z,11nm,1.3s
KMI LR LR
comp=N,81nm,15.0s
KMI LR LR
comp=E,100nm,16.1s
KMI LR LR
comp=Z,170nm,25.7s
XAN Xi'an 41.67 328 P **P** **12 39 46.8 -1.2**
XAN pmax pmax
comp=Z,2.0nm,1.0s
XAN pmax pmax
comp=Z,14nm,4.7s
CD2 Chengdu 42.40 321 P **P** **12 39 55.5 +1.5**
CD2 pP **pP** **12 40 05.8 +1.6**
CD2 sP **sP** **12 40 10.0 +1.6**
CD2 PP **PP** **12 41 37.3 +4.6**
CD2 S **S** **12 46 14.9 +1.5**
CD2 sS **sS** **12 46 31.9 +1.6**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,5.4s
CD2 LR LR
comp=E,290nm,16.1s
CD2 LR LR
comp=Z,170nm,17.1s
BJT Baijiatuau 43.59 340 *e*P **P** **12 40 03.5 0.0**
comp=Z,82nm,1.2s
BJI Beijing 43.61 340 P **P** **12 40 02.9 -0.7**
BJI S **S** **12 46 36.1 +5.3**
BJI pmax pmax
comp=Z,62nm,0.9s
BJI pmax pmax
comp=Z,120nm,4.1s
BJI LR LR
comp=N,140nm,18.9s
BJI LR LR
comp=E,150nm,19.3s
BJI LR LR
comp=Z,130nm,23.7s
USRK Uesuriysk Arra 44.76 358 P **P** **12 40 11.7 -1.0**
comp=Z,5.2nm,0.8s,baz=190,slow=7.8,SNR=8.7
CN2 Changchun 44.94 352 *e*P **P** **12 40 17.0 +2.8**
CN2 *e*sP **sP** **12 40 30.8 +2.2**
CN2 *e*S **S** **12 46 52.8 +2.8**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=N,200nm,19.0s
CN2 LR LR
comp=E,100nm,19.0s
CN2 LR LR
comp=Z,200nm,21.0s
MDJ Mudanjiang 45.30 356 P **P** **12 40 17.0 0.0**
MDJ pP **pP** **12 40 26.0 -1.3**
MDJ sP **sP** **12 40 29.8 -1.6**
MDJ PcP **PcP** **12 41 52.8 -3.5**
MDJ PP **PP** **12 42 05.0 +1.6**
MDJ ScP **ScP** **12 45 43.5 -3.1**
MDJ PcS **PcS** **12 45 47.4 -2.7**
MDJ S **S** **12 46 57.8 +2.7**
MDJ ScS **ScS** **12 50 09.8 -1.3**
MDJ pmax pmax
comp=Z,12nm,1.3s
MDJ pmax pmax
comp=Z,70nm,4.5s
MDJ LR LR
comp=N,78nm,30.3s
MDJ LR LR
comp=E,17nm,26.9s
MDJ LR LR
comp=Z,95nm,26.9s
LZH Lanzhou 45.95 326 *e*P **P** **12 40 23.0 +0.5**
LZH pP **pP** **12 40 33.5 +0.6**
LZH sP **sP** **12 40 38.1 +1.1**
LZH pmax pmax
comp=Z,71nm,1.6s
LZH pmax pmax
comp=Z,100nm,4.0s
HHC Hu-ho-hao-te 46.01 337 *e*P **P** **12 40 25.8 +3.0**
HHC pP **pP** **12 40 35.8 +2.6**
HHC sP **sP** **12 40 39.6 +2.3**
HHC PP **PP** **12 42 14.0 +2.8**
HHC S **S** **12 47 08.5 +2.7**
HHC ScS **ScS** **12 50 16.1 0.0**
HHC SS **SS** **12 50 25.8 -5.4**
HHC pmax pmax
comp=Z,55nm,1.1s
HHC pmax pmax
comp=Z,160nm,5.1s
HHC LR LR
comp=N,260nm,21.4s
HHC LR LR
comp=E,260nm,19.6s
HHC LR LR
comp=Z,200nm,21.4s
HABR Khabarovsk 49.02 1 *e*P **P** **12 40 43.3 -2.6**
HABR *e**PP **pP** **12 40 53.0 -3.3**
HABR *e**SP **sP** **12 40 57.2 -3.2**
HABR 12 42 07.1
HABR 12 42 37.2
HABR *e*S **S** **12 47 45.9 -2.2**
HABR *e**SS **sS** **12 48 02.6 -2.6**
HABR *e* 12 50 32.5
HABR *e*SS **SS** **12 51 18.6 -0.9**
HABR *e*SSS SSS 12 52 35.3
HABR pmax pmax
comp=E,60nm,2.2s
HABR pmax pmax
comp=N,28nm,2.2s
HABR pmax pmax
comp=Z,37nm,1.6s
HABR MLR MLR
comp=Z,94nm,16.0s
KLR Kul'dur 49.79 358 *e*P P 12 40 48.0 -3.8
GTA Gaotai 50.56 326 *e*P **P** **12 40 58.0 0.0**
GTA pP **pP** **12 41 07.1 -1.3**
GTA sP **sP** **12 41 11.3 -1.2**
GTA S **S** **12 48 10.5 +0.3**
GTA pmax pmax
comp=Z,10.0nm,1.5s
GTA pmax pmax
comp=Z,67nm,4.3s
GTA LR LR
comp=N,170nm,9.5s
GTA LR LR
comp=E,220nm,13.8s
GTA LR LR
comp=Z,180nm,12.1s
LSA Lhasa 50.58 310 P **P** **12 40 59.0 +0.3**
LSA Lhasa 50.58 310 *e*P **P** **12 40 59.1 +0.3**
LSA pmax pmax
comp=Z,53nm,1.5s
LSA Lhasa 50.58 310 *e*P **P** **12 40 59.1 +0.3**
comp=Z,53nm,1.5s
TAPN Taplejung 52.23 306 *e*P **P** **12 41 10.2 -0.7**
comp=Z,81nm,1.1s
ODAN Odare 52.29 305 *e*P **P** **12 41 10.5 -0.8**
comp=Z,61nm,1.0s
RAMN Ramite 52.97 305 *e*P **P** **12 41 15.9 -0.5**
ULN Ulaanbaatar 53.66 338 *e*P **P** **12 41 21.5 +0.5**
comp=Z,23nm,1.2s
SONM Songino Array 53.88 338 P **P** **12 41 22.6 +0.1**
SONM Songino Array 53.88 338 P **P** **12 41 22.6 +0.1**
comp=Z,5.0nm,1.0s,baz=145,slow=7.7,SNR=27
SONM LR LR 13 04 33.5
comp=Z,129nm,18.8s,baz=251,slow=36
GUN Gumba 53.94 306 *e*P **P** **12 41 22.8 -0.8**
PKI Pulchoki 54.19 305 *e*P **P** **12 41 24.4 -1.0**
KKN Kakani 54.38 305 *e*P **P** **12 41 25.7 -0.9**
DMN Daman 54.45 305 *e*P **P** **12 41 26.7 -0.5**
comp=Z,63nm,1.1s
URZ Urewera 54.59 138 LR LR 13 01 16.0
comp=Z,224nm,18.4s,baz=88,slow=32
KOLN Koldanda 55.75 305 *e*P **P** **12 41 36.1 -0.4**
comp=Z,56nm,1.0s
DANN Dangsing 55.84 305 *e*P **P** **12 41 36.6 -0.6**
comp=Z,80nm,1.0s
PYUN Piuthan 56.37 305 *e*P **P** **12 41 40.4 -0.6**
comp=Z,159nm,1.0s
ZAK Zakamensk 57.15 337 *e*P **P** **12 41 45.0 -0.9**
ZAK pmax pmax
comp=Z,7.0nm,1.5s
PETK Petropavlovsk- 57.28 17 LR LR 13 01 37.0
comp=Z,85nm,21.5s,baz=202,slow=31
TLY Talaya 58.05 338 *e*P **P** **12 41 52.7 +0.5**
TLY pmax pmax
comp=Z,8.0nm,1.1s
MOY Mondy 59.05 337 *e*P **P** **12 42 00.2 +1.0**
MOY pmax pmax
comp=Z,33nm,1.6s
WMQ Urumqi 60.38 323 P **P** **12 42 09.1 +0.6**
WMQ pP **pP** **12 42 19.3 +0.2**
WMQ sP **sP** **12 42 23.1 -0.1**
WMQ PP **PP** **12 44 24.1 +2.2**
WMQ PcS **PcS** **12 46 54.8 -0.9**
WMQ S **S** **12 50 19.4 -1.7**
WMQ ScS SKKSac 12 51 53.4 -3.2
WMQ pmax pmax
comp=Z,17nm,0.7s
WMQ pmax pmax
comp=Z,140nm,4.2s
WMQ LR LR
comp=N,110nm,6.0s
WMQ LR LR
comp=E,75nm,8.2s
WMQ LR LR
comp=Z,47nm,20.4s
HVS Khovu-Aksy 61.77 333 *e*P **P** **12 42 17.8 0.0**
HVS pmax pmax
comp=Z,50nm,1.3s
YAK Yakutsk 62.67 358 *e*P **P** **12 42 20.8 -2.7**
YAK pmax pmax
comp=Z,15nm,1.0s
YAK pmax pmax
comp=N,11nm,1.3s
SEY Seymchan 65.04 9 *i*P **P** **12 42 38.8 -0.3**
MK31 Makanchi Array 65.19 324 *e*P **P** **12 42 40.8 +0.3**
MK31 Makanchi Array 65.19 324 *e*P **P** **12 42 40.8 +0.3**
MKAR Makanchi Array 65.19 324 P **P** **12 42 40.6 +0.1**
MKAR Makanchi Array 65.19 324 P **P** **12 42 40.6 +0.1**
MKAR Makanchi Array 65.19 324 P **P** **12 42 40.6 +0.1**
comp=N,5.4nm,0.9s,baz=106,slow=7.8,SNR=36
KSH Kashi 66.09 314 P **P** **12 42 48.0 +1.5**
KSH pP **pP** **12 42 58.4 +1.2**
KSH *e*sP **sP** **12 43 02.4 +1.1**
KSH *e*PP **PP** **12 45 13.0 +0.7**
KSH *e*PcS 12 47 22.0
KSH *e*S **S** **12 51 30.6 -2.1**
KSH *e*ScS **SKSac** **12 52 37.4 -2.9**
KSH pmax pmax
comp=Z,14nm,0.5s
KSH pmax pmax
comp=Z,270nm,4.3s
KSH LR LR
comp=N,130nm,11.4s
KSH LR LR
comp=E,180nm,6.6s
KSH LR LR
comp=Z,190nm,4.4s
KZA Kyzart 67.58 317 P **P** **12 42 57.0 +0.7**
SNR=14
TKM2 Tokmak 2 67.68 318 *i*P **P** **12 42 56.9 +0.3**
TKM2 Tokmak 2 67.68 318 *e*P **P** **12 42 57.1 +0.4**
comp=Z,11nm,1.3s
TKM2 Tokmak 2 67.68 318 P **P** **12 42 57.0 +0.3**
SNR=7.0
ZALV Zalesovo Beam 67.75 331 P **P** **12 42 56.3 -0.3**
ZALV Zalesovo Beam 67.75 331 P **P** **12 42 56.3 -0.3**
ZALV Zalesovo Beam 67.75 331 P **P** **12 42 56.3 -0.3**
comp=Z,3.2nm,0.3s,baz=122,slow=7.4,SNR=2.8
ZALV LR LR 13 13 17.2
comp=Z,37nm,20.5s,baz=84,slow=37
AAK Ala-Archa 68.31 317 *e*P **P** **12 43 00.8 +0.2**
AAK pmax pmax
comp=Z,2.0nm,1.4s
AAK Ala-Archa 68.31 317 *e*P **P** **12 43 00.8 +0.2**
comp=Z,2.3nm,1.4s
AAK Ala-Archa 68.31 317 P **P** **12 43 00.3 -0.3**
comp=Z,1.6nm,0.7s,baz=119,slow=7.1,SNR=3.7
AAK LR LR 13 12 33.1
comp=Z,63nm,20.8s,baz=88,slow=36
USP Ospenovka 68.55 318 P **P** **12 43 02.2 +0.2**
SNR=9.9
AML Almayashu 68.67 316 P **P** **12 43 03.6 +0.4**
SNR=9.7
EKS2 Erkin-Say 68.81 317 *e*P **P** **12 43 04.2 +0.5**
EKS2 Erkin-Say 68.81 317 *e*P **P** **12 43 04.2 +0.5**
EKS2 Erkin-Say 68.81 317 P **P** **12 43 04.2 +0.5**
SNR=5.2
NVS Novosibirsk 69.02 331 *e*P **P** **12 43 02.5 -2.0**
NVS pmax pmax
comp=Z,27nm,1.9s
NVS pmax pmax
comp=N,8.0nm,1.4s
NVS pmax pmax
comp=E,12nm,1.4s
KURK Kurchatov 69.25 326 *e*P **P** **12 43 05.9 -0.1**
KURK Kurchatov 69.25 326 *e*P **P** **12 43 05.9 -0.1**
KURBB Kurchatov Arra 69.25 326 P **P** **12 43 05.9 -0.1**
comp=E,9.3nm,0.8s,baz=119,slow=5.6,SNR=43
KKAR Karatay Array 71.21 316 *e*P **P** **12 43 18.4 +0.1**
KKAR pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 71.21 316 *e*P **P** **12 43 18.4 +0.1**
comp=Z,1.0nm,0.3s
BILL Bilibino 72.23 12 *i*P **P** **12 43 23.3 -0.6**
BILL *e* 12 46 01.4
BILL pmax pmax
comp=Z,2.0nm,1.0s
TIXI Tiksi 72.33 358 *i*P **P** **12 43 23.3 -1.0**
TIXI pmax pmax
comp=Z,6.0nm,1.7s
BVAR Borovoye Array 74.84 326 P **P** **12 43 39.3 -0.2**
BVAR Borovoye Array 74.84 326 P **P** **12 43 39.3 -0.2**
BVAR Borovoye Array 74.84 326 P **P** **12 43 39.3 -0.2**
comp=Z,3.7nm,0.8s,baz=120,slow=5.8,SNR=18
BRVK Borovoye 74.91 326 *c i*P **P** **12 43 39.7 -0.2**
BRVK pmax pmax
comp=Z,12nm,1.7s
BRVK Borovoye 74.91 326 *e*P **P** **12 43 39.8 -0.1**
comp=Z,2.7nm,0.6s
VNDA Vanda 78.22 174 LR LR 13 19 13.4
comp=Z,237nm,18.3s,baz=345,slow=36
ABKAR Akbulak array 79.98 320 *e*P **P** **12 44 07.8 -0.6**
comp=Z,3.7nm,0.8s
SVE Sverdlovsk 81.38 328 *e*P **P** **12 44 15.4 -0.3**
SVE pmax pmax
comp=Z,16nm,1.3s
AKTO Aktyubinsk 81.45 321 LR LR 13 21 47.1
comp=Z,38nm,18.5s,baz=301,slow=37
KDAK Kodiak Island 82.00 31 P **P** **12 44 18.6 -0.3**
KDAK Kodiak Island 82.00 31 P **P** **12 44 18.6 -0.3**
comp=Z,8.7nm,1.0s,baz=322,slow=3.2,SNR=3.3
ARU Arti 82.40 327 *c i*P **P** **12 44 20.1 -0.9**
ARU 12 47 26.6
ARU S **S** **12 54 35.6 +0.9**
ARU pmax pmax
comp=Z,11nm,1.7s
PMR Palmer 84.56 28 *e*P **P** **12 44 32.1 +0.1**
PMR pmax pmax
comp=Z,6.0nm,1.1s
PMR Palmer 84.56 28 *e*P **P** **12 44 32.1 +0.1**
comp=Z,5.6nm,1.1s
MCK McKinley 85.08 26 *e*P **P** **12 44 34.7 +0.1**
MCK pmax pmax
comp=Z,25nm,1.5s
MCK McKinley 85.08 26 *e*P **P** **12 44 34.7 +0.1**
comp=Z,25nm,1.5s
DIV Divide 86.07 29 *e*P **P** **12 44 40.3 +0.7**
comp=Z,24nm,1.4s
ILAR Eielson Array 86.16 25 P **P** **12 44 39.3 -0.6**
ILAR Eielson Array 86.16 25 P **P** **12 44 39.3 -0.6**
comp=Z,2.2nm,0.9s,baz=262,slow=5.0,SNR=21
PAX Paxson 86.49 27 *e*P **P** **12 44 42.6 +0.9**
PAX pmax pmax
comp=Z,24nm,1.6s
PAX Paxson 86.49 27 *e*P **P** **12 44 42.6 +0.9**
comp=Z,24nm,1.6s
MENT Mentasta 87.27 27 *e*P **P** **12 44 45.4 -0.1**
QSPA South Pole Qui 89.20 180 P **P** **12 44 55.6 +0.9**

QSPA	**South Pole Qui**	**89.20**	**180**	P		**P**		**12 44 55.6**	**+0.9**
	comp=Z,3.0nm,1.2s,baz=2.1,slow=2.5,SNR=4.0								
INK	**Inuvik**	**91.72**	**22**	P		**P**		**12 45 05.3**	**-0.8**
INK	**Inuvik**	**91.72**	**22**	P		**P**		**12 45 05.3**	**-0.8**
	comp=Z,2.7nm,1.2s,baz=310,slow=5.7,SNR=4.3								
OBN	**Obninsk**	**94.67**	**325**	*e*P		**P**		**12 45 17.5**	**-2.5**
OBN				*e*				12 49 09.1	
OBN				*e*S		SKSac		12 55 42.9	-10
OBN				pmax		pmax			
	comp=Z,6.0nm,0.4s								
OBN				MLR		MLR			
	comp=Z,100nm,22.0s								
ARCES	**ARCESS Array B**	**96.98**	**340**	LR		LR		13 36 17.3	
	comp=Z,58nm,18.0s,baz=214,slow=40								
FINES	**FINESS Array B**	**98.99**	**332**	P		**Pdif**		**12 45 38.9**	**-0.6**
FINES	**FINESS Array B**	**98.99**	**332**	P		**Pdif**		**12 45 38.9**	**-0.6**
	comp=Z,4.1nm,1.1s,baz=83,slow=4.3,SNR=4.2								
FINES				LR		LR		13 32 59.3	
	comp=Z,108nm,19.7s,baz=90,slow=37								
YKA	**Yellowknife Ar**	**100.55**	**26**	P		**Pdif**		**12 45 46.2**	**-0.2**
YKA	**Yellowknife Ar**	**100.55**	**26**	P		**Pdif**		**12 45 46.2**	**-0.2**
	comp=Z,0.4nm,1.0s,baz=282,slow=3.1,SNR=4.2								
CRVS	**Cervenica-Dubn**	**105.00**	**321**	*e*P		**Pdif**		**12 46 02.9**	**-3.7**
CRVS	**Cervenica-Dubn**	**105.00**	**321**	PDIF		**Pdif**		**12 46 02.9**	**-3.7**
VYHS	**Vyhne**	**106.79**	**321**	*e*P		**Pdif**		**12 46 10.4**	**-4.1**
VYHS	**Vyhne**	**106.79**	**321**	PDIF		**Pdif**		**12 46 10.4**	**-4.1**
LRM	**Limekiln Ridge**	**106.98**	**42**	*e*PKPdf				12 50 26.4	
CPUP	**Villa Florida**	**151.08**	**159**	PKPbc		**PKPbc**		**12 51 53.0**	**+0.1**
CPUP	**Villa Florida**	**151.08**	**159**	PKPbc		**PKPbc**		**12 51 53.0**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=193,slow=5.5,SNR=6.0								
LPAZ	**La Paz**	**152.63**	**129**	PKPbc		**PKPbc**		**12 51 58.0**	**+0.6**
LPAZ	**La Paz**	**152.63**	**129**	PKPbc		**PKPbc**		**12 51 58.0**	**+0.6**
	comp=Z,2.4nm,1.1s,baz=333,slow=2.1,SNR=4.5								

CSEM ***19*** *12:36:48.7, 36°.14N×6°.64E, h0km, ML3.5, After ALG*
CRAAG 19 12:36:48.7, 36°.14N×6°.64E, Ml3.5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CASM	**Ain Smara**	**0.17**	**317**	P		12 36 53.5	+1.4
CASM	**Ain Smara**	**0.17**	**317**	P		12 36 53.5	+1.4
CKFL	**Kef-Lekhel**	**0.27**	**14**	P		12 36 56.2	-0.5
CKFL	**Kef-Lekhel**	**0.27**	**14**	P		12 36 56.2	-0.5
CAEH	**'Ain El Ouahch**	**0.67**	**15**	P		12 37 04.5	-1.0
CAEH	**'Ain El Ouahch**	**0.67**	**15**	P		12 37 04.5	-1.0
ABSA	**Djebel Ababsia**	**0.69**	**78**	P		12 37 05.2	-0.8
ABSA	**Djebel Ababsia**	**0.69**	**78**	P		12 37 05.2	-0.8
DFRA	**Djebel Bou Aff**	**0.74**	**304**	P		12 37 04.8	+0.2
DFRA	**Djebel Bou Aff**	**0.74**	**304**	P		12 37 04.8	+0.2
CMAH	**Djebel Manchou**	**0.80**	**52**	P		12 37 07.2	-0.2
CMAH	**Djebel Manchou**	**0.80**	**52**	P		12 37 07.2	-0.2
SET	**Setif**	**1.00**	**274**	P		12 37 11.0	+0.8
SET	**Setif**	**1.00**	**274**	P		12 37 11.0	+0.8

IDC ***19*** *12:40:31.9±1.8, 43°.66N×148°.21E, h0km, mb3.1/2, mb1 3.5/4, mb1mx3.2/26, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=45.5km s-min=36.7km az=111.0*
ISCJB ***19*** *12:40:44.9±1.1, 44°.9N±0°.1×147°.0E±0°.2, h142km, mb3.0/2, Error ellipse: s-maj=24.2km s-min=9.2km az=38.4*
JMA ***19*** *12:40:46.5±0.6, 44°.82N×146°.85E, h159km, M2.9*
ISC 19 12:40:44.5±1.2, 44°.9N±0°.1×146°.9E±0°.1, h142km, n14, σ2$17/17, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JRA	**Rausu**	**1.62**	**233**	P		**Pn**	**12 41 17.1**	**+2.4**
NEM2	**Nemuro 2**	**1.78**	**208**	P		**Pn**	**12 41 18.1**	**+1.6**
NEM2				*e*S		**Sn**	**12 41 42.8**	**+1.7**
JNK	**Nakash**	**2.07**	**230**	P		**Pn**	**12 41 22.1**	**+2.1**
JTKR	**Abashiri--Toko**	**2.35**	**247**	P		**Pn**	**12 41 25.1**	**+1.8**
JAK	**Akkeshi**	**2.51**	**220**	P		**Pn**	**12 41 26.9**	**+1.6**
JAK				*e*S		**Sn**	**12 41 58.1**	**+1.4**
JAR	**Ashorobuto**	**2.79**	**235**	P		**Pn**	**12 41 31.7**	**+2.9**
JKK2	**Kamakawa 2**	**3.16**	**252**	P		**Pn**	**12 41 35.7**	**+2.1**
ASAJ	**Asahikawa**	**3.19**	**257**	Pn		**Pn**	**12 41 35.7**	**+1.8**
	3.0nm,0.3s,baz=75,slow=12,SNR=16								
JCH	**Churui**	**3.46**	**229**	P		**Pn**	**12 41 38.7**	**+1.3**
JCH				*e*S		**Sn**	**12 42 18.4**	**0.0**
JNBK	**Urakawa-nobuka**	**4.02**	**230**	P		**Pn**	**12 41 44.9**	**+0.2**
JKB	**Kayabe**	**5.25**	**237**	*e*S		**Sn**	**12 42 56.5**	**-4.2**
PETK	**Petropavlovsk-**	**10.81**	**37**	Pn		**Pn**	**12 43 15.3**	**+0.1**
	0.3nm,0.3s,baz=199,slow=13,SNR=7.4								
WRA	**Warramunga Arr**	**65.58**	**193**	P		**P**	**12 51 11.1**	**-1.8**
	0.2nm,0.5s,baz=8.6,slow=6.6,SNR=4.8								
ASAR	**Alice Springs**	**69.30**	**193**	P		**P**	**12 51 34.1**	**-2.1**
	0.1nm,0.6s,baz=8.9,slow=6.6,SNR=3.3								

ISCJB ***19*** *12:59:29.8±0.3, 31°.31N±0°.03×103°.41E±0°.04, h13km, mb4.1/18, Error ellipse: s-maj=4.6km s-min=4.2km az=155.1*
IDC ***19*** *12:59:29.8±0.8, 31°.29N×103°.71E, h0km, mb4.0/12, mb1 4.1/13, mb1mx3.9/30, mbtmp4.0/13, ML3.7/1, Error ellipse: s-maj=29.6km s-min=14.9km az=48.0*
BJI ***19*** *12:59:31.0, 31°.30N×103°.41E, h18km, mb4.5/4, ML3.9/20, Ms3.7/10, MS7 3.4/6*
MOS ***19*** *12:59:33.3±1.1, 31°.38N×103°.71E, h33km, mb4.4/14, Error ellipse: s-maj=19.8km s-min=9.7km az=106.9*
ISC 19 12:59:32.3±0.5, 31°.25N±0°.04×103°.41E±0°.05, h13km, n43, σ1$99/53, mb4.2/18, 3C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.45**	**138**	*i*Pg		**Pg**	**12 59 40.1**	**-1.2**
CD2				Sg		**Sb**	**12 59 47.8**	**-1.1**
CD2				smax		smax			
	comp=N,17μm,0.5s								
CD2				smax		smax			
	comp=E,22μm,0.6s								
LZH	**Lanzhou**	**4.84**	**4**	Pg		**Pg**	**13 01 03.3**	**-1.6**
LZH				Sg		**Sg**	**13 02 07.5**	**-0.1**
LZH				smax		smax			
	comp=N,56nm,0.8s								
LZH				smax		smax			
	comp=E,75nm,1.0s								
LZH				LR		LR			
	comp=N,90nm,6.1s								
LZH				LR		LR			
	comp=E,1μm,7.5s								
LZH				LR		LR			
	comp=Z,75nm,6.8s								
XAN	**Xi'an**	**5.42**	**58**	Pn		**Pn**	**13 00 51.9**	**-0.9**
XAN				Pg		**Pb**	**13 01 08.4**	**+1.6**
XAN				Sn		**Sn**	**13 01 51.1**	**-4.0**
XAN				Sg		**Sb**	**13 02 15.5**	**+3.7**
XAN				smax		smax			
	comp=N,90nm,0.8s								
XAN				smax		smax			
	comp=E,50nm,0.8s								
XAN				LR		LR			
	comp=N,110nm,7.8s								
XAN				LR		LR			
	comp=E,58nm,7.8s								
XAN				LR		LR			
	comp=Z,68nm,8.8s								
KMI	**Kunming**	**6.13**	**186**	Pn		**Pn**	**13 01 02.9**	**+0.1**
KMI				Sn		**Sn**	**13 02 16.3**	**+3.3**
KMI				smax		smax			
	comp=N,27nm,0.9s								
KMI				smax		smax			
	comp=E,27nm,0.9s								
GTA	**Gaotai**	**8.65**	**341**	*e*P		Pg	13 02 14.0	-3.9
GTA				pP		**Pg**	**13 02 19.8**	**+1.9**
GTA				pmax		pmax			
	comp=Z,7.0nm,0.9s								
WHN	**Wuhan**	**9.43**	**91**	P		**Pn**	**13 01 47.5**	**-0.3**
WHN				LR		LR			
	comp=N,210nm,8.3s								
WHN				LR		LR			
	comp=E,470nm,7.6s								
WHN				LR		LR			
	comp=Z,450nm,10.0s								
NJ2	**Nanjing**	**13.19**	**83**	*e*P		**Pn**	**13 02 40.0**	**+0.8**
NJ2				pP		P	13 02 43.5	-5.8
NJ2				sP			13 02 46.8		
NJ2				PP		**PnPn**	**13 02 50.6**	**+3.6**
NJ2				S		**Sn**	**13 05 07.0**	**+1.2**
NJ2				LR		LR			
	comp=N,200nm,15.2s								
NJ2				LR		LR			
	comp=E,180nm,11.2s								
NJ2				LR		LR			
	comp=Z,200nm,11.2s								
CMAR	**Chiang Mai Arr**	**13.37**	**199**	Pn		P	13 02 48.3	-3.0
	comp=Z,0.4nm,0.3s,baz=14,slow=12,SNR=15								
QIZ	**Qiongzhong**	**13.49**	**153**	P		**P**	**13 02 50.9**	**-1.8**
QIZ				S		Sn	13 05 23.6	+10
QIZ				LR		LR			
	comp=N,190nm,4.7s								
QIZ				LR		LR			
	comp=E,120nm,5.7s								
QIZ				LR		LR			
	comp=Z,120nm,7.9s								
TAPN	**Taplejung**	**14.24**	**258**	*e*P		Pn	13 02 51.6	-2.3
RAMN	**Ramite**	**15.30**	**258**	*e*P		**Pn**	**13 03 05.4**	**-2.9**
GUN	**Gumba**	**15.61**	**262**	*e*P		**Pn**	**13 03 11.0**	**-1.4**
PKI	**Pulchoki**	**16.11**	**261**	*e*P		**Pn**	**13 03 17.3**	**-1.5**
	comp=Z,46nm,0.5s								
PKIN	**Phulchoki**	**16.11**	**261**	*e*P		**Pn**	**13 03 17.4**	**-1.4**
	comp=Z,19nm,0.4s								
KKN	**Kakani**	**16.15**	**262**	*e*P		**Pn**	**13 03 18.1**	**-1.2**
	comp=Z,64nm,0.7s								
DMN	**Daman**	**16.35**	**262**	*e*P		**Pn**	**13 03 20.4**	**-1.5**
	comp=Z,47nm,0.7s								
SONM	**Songino Array**	**16.72**	**7**	Pn		**Pn**	**13 03 26.6**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=189,slow=12,SNR=9.2								
DANN	**Dangsing**	**17.30**	**265**	*e*P		**Pn**	**13 03 31.8**	**-2.0**
	comp=Z,41nm,0.6s								
KOLN	**Koldanda**	**17.59**	**264**	*e*P		**Pn**	**13 03 34.2**	**-3.1**
PYUN	**Piuthan**	**18.02**	**265**	*e*P		**Pn**	**13 03 39.3**	**-3.4**
	comp=Z,62nm,1.0s								
HVS	**Khovu-Aksy**	**21.13**	**343**	*e*P		**P**	**13 04 17.7**	**+0.9**
KSRS	**Korea Array**	**21.14**	**66**	P		**P**	**13 04 14.9**	**-2.0**
	comp=Z,3.2nm,0.6s,baz=259,slow=9.9,SNR=17								
MKAR	**Makanchi Array**	**22.48**	**320**	P		**P**	**13 04 32.6**	**+1.3**
MKAR				pmax		pmax			
	comp=Z,4.0nm,0.8s								
MKAR	**Makanchi Array**	**22.48**	**320**	P		**P**	**13 04 32.5**	**+1.3**
	comp=Z,3.8nm,0.8s,baz=125,slow=10,SNR=23								
KSH	**Kashi**	**23.77**	**298**	*e*P		**P**	**13 04 49.3**	**+4.6**
KSH				*e*pP		pP	13 04 58.0	+9.4
KSH				*e*PP		PnPn	13 05 23.3	+11
KSH				*e*PcP		**PcP**	**13 08 33.0**	**+4.8**
KSH				*e*S		**S**	**13 08 59.8**	**-0.1**
KSH				*e*sS		sS	13 09 14.3	+7.9
KSH				*e*SS		SnSn	13 09 49.1	+11
KSH				*e*ScP		**ScP**	**13 12 08.0**	**+1.8**
KSH				pmax		pmax			
	comp=Z,18nm,0.9s								
KSH				LR		LR			
	comp=N,150nm,6.3s								
KSH				LR		LR			
	comp=E,120nm,4.5s								
KSH				LR		LR			
	comp=Z,71nm,3.5s								
AAK	**Ala-Archa**	**25.63**	**304**	*i*P		**P**	**13 05 03.1**	**+1.4**
AAK				pmax		pmax			
	comp=Z,14nm,0.8s								
AAK	**Ala-Archa**	**25.63**	**304**	P		**P**	**13 05 04.7**	**+3.1**
	comp=Z,4.6nm,0.7s,baz=109,slow=5.8,SNR=15								
KURBB	**Kurchatov Arra**	**26.76**	**323**	P		**P**	**13 05 12.4**	**+0.8**
	comp=Z,5.6nm,0.8s,baz=128,slow=9.5,SNR=77								
KURK	**Kurchatov**	**26.77**	**324**	*c*P		**P**	**13 05 12.6**	**+0.9**
KURK				pmax		pmax			
	comp=Z,15nm,1.2s								
BVAR	**Borovoye Array**	**32.31**	**322**	P		**P**	**13 06 00.6**	**-0.2**
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
BVAR	**Borovoye Array**	**32.31**	**322**	P		**P**	**13 06 00.6**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=119,slow=9.3,SNR=7.8								
BRVK	**Borovoye**	**32.38**	**322**	*e*P		**P**	**13 06 01.7**	**+0.3**
BRVK				pmax		pmax			
	comp=Z,4.0nm,1.0s								
AKTO	**Aktyubinsk**	**38.60**	**313**	P		**P**	**13 06 55.1**	**+0.2**
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.4s								
AKTO	**Aktyubinsk**	**38.60**	**313**	P		**P**	**13 06 55.1**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=64,slow=8.3,SNR=3.1								
SVE	**Sverdlovsk**	**39.03**	**324**	*e*P		**P**	**13 06 59.4**	**+1.0**
SVE				pmax		pmax			
	comp=Z,10.0nm,1.0s								
ARU	**Arti**	**39.95**	**322**	*c i*P		**P**	**13 07 06.7**	**+0.6**
ARU				S		**S**	**13 13 09.5**	**-1.3**
ARU				SS		SS	13 15 55.2	-12
ARU				pmax		pmax			
	comp=Z,5.0nm,0.8s								
TIXI	**Tiksi**	**42.73**	**12**	*e*P		**P**	**13 07 27.1**	**-1.6**
TIXI				pmax		pmax			
	comp=Z,2.0nm,1.2s								
ARCES	**ARCESS Array B**	**56.88**	**336**	P		**P**	**13 09 15.8**	**-0.6**
	comp=Z,2.8nm,1.0s,baz=90,slow=8.1,SNR=3.6								
FINES	**FINESS Array B**	**57.11**	**326**	P		**P**	**13 09 18.4**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=108,slow=6.2,SNR=4.2								
WRA	**Warramunga Arr**	**58.93**	**146**	P		**P**	**13 09 30.1**	**-1.2**
	comp=Z,7.7nm,0.5s,baz=337,slow=7.6,SNR=61								
ASAR	**Alice Springs**	**61.93**	**148**	P		**P**	**13 09 50.8**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=337,slow=6.9,SNR=32								
ILAR	**Eielson Array**	**69.96**	**25**	P		**P**	**13 10 40.7**	**-2.3**
	comp=Z,0.2nm,0.9s,baz=264,slow=8.1,SNR=3.6								
YKA	**Yellowknife Ar**	**81.72**	**17**	P		**P**	**13 11 49.6**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=329,slow=5.4,SNR=4.3								

IDC 19 13:00:30.6±3.0, 19°.71S×177°.70E, h0km, mb3.7/4, mb1 4.1/4, mb1mx3.8/18, mbtmp3.7/4, MS3.5/2, Ms1 3.5/2, ms1mx3.1/22, Error ellipse: s-maj=263.4km s-min=28.3km az=158.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**11.60**	**62**	LR	LR	13 07 05.2	
	comp=Z,96nm,18.7s,baz=214,slow=34						
URZ	**Urewera**	**18.50**	**181**	LR	LR	13 10 19.9	
	comp=Z,283nm,20.5s,baz=11,slow=32						
WRA	**Warramunga Arr**	**40.71**	**262**	P	P	13 08 13.3	-0.1
	0.5nm,0.8s,baz=97,slow=8.2,SNR=3.4						
ASAR	**Alice Springs**	**40.77**	**256**	P	P	13 08 13.7	-0.2
	0.6nm,0.8s,baz=89,slow=8.4,SNR=10						
NVAR	**Mina Array Bea**	**83.28**	**45**	P	P	13 12 59.1	-0.5
	3.2nm,1.2s,baz=227,slow=7.3,SNR=4.2						
TXAR	**Lajitas Array**	**90.07**	**59**	P	P	13 13 33.4	+0.6
	1.3nm,0.8s,baz=224,slow=6.9,SNR=3.6						

NNC 19 13:23:47.6±9.3, 36°.89N×70°.27E, h0km, mb3.7, mpv3.7, 1C-4D, Error ellipse: s-maj=100.9km s-min=81.2km az=82.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.21**	**2**	P	Pn	13 25 23.9	+3.3
	1.9nm,0.5s,baz=183,slow=14,SNR=17						
KK31				S	Sn	13 26 33.0	+0.6
	7.0nm,0.5s,baz=188,slow=19,SNR=19						
TKM2	**Tokmak 2**	**7.29**	**33**	P	Pn	13 25 33.9	-1.8
	5.6nm,0.8s						
AB31	**Akbulak array**	**14.46**	**332**	P	Pn	13 27 11.7	-1.8
	1.1nm,0.8s,baz=144,slow=12,SNR=8.2						
AKTO	**Aktyubinsk**	**16.15**	**331**	P	Pn	13 27 33.6	-2.4
	0.4nm,1.1s						

NSSC ***19*** *13:56:31.8±2.0, 36°.97N×39°.35E, h125km±22km, MD1.3, ML2.7*
CSEM ***19*** *13:56:32.4±0.3, 37°.08N×39°.08E, h2km, MD3.2, Error ellipse: s-maj=7.4km s-min=5.0km az=41.0*
DDA ***19*** *13:56:32.7, 37°.09N×39°.04E, h40km, MD2.9*
ISCJB ***19*** *13:56:33.2±1.1, 37°.10N±0°.03×39°.09E±0°.03, h10km±8km, Error ellipse: s-maj=5.2km s-min=3.6km az=16.7*
ISK ***19*** *13:56:36.4, 37°.32N×38°.95E, h6km, MD3.2*
ISC 19 13:56:32.2±1.0, 37°.04N±0°.03×39°.09E±0°.02, h16km±9km, n36, σ1$00/57, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URFA	**Urfa**	**0.46**	**332**	*e*PG	**Pg**	**13 56 40.4**	**-1.0**
URFA	**Urfa**	**0.46**	**332**	*e*Pg	**Pg**	**13 56 40.4**	**-1.0**
ATAB	**Bozova**	**0.77**	**304**	*i*P	**Pg**	**13 56 46.8**	**-0.3**
ATAB				*i*S	**Sg**	**13 56 57.1**	**-0.2**
ATAB	**Bozova**	**0.77**	**304**	*i*P	**Pg**	**13 56 46.8**	**-0.3**
ATAB				*i*S	**Sg**	**13 56 57.1**	**-0.2**
SFNV	**Sufian**	**1.03**	**127**	*e*P	**Pb**	**13 56 52.2**	**+0.6**
SFNV				*i*S	**Sn**	**13 57 07.0**	**+0.9**
SFNV	**Sufian**	**1.03**	**127**	*e*P	**Pb**	**13 56 52.2**	**+0.6**
	SNR=142						
KBSD	**Kabsdagh**	**1.16**	**91**	*e*P	**Pg**	**13 56 55.0**	**+0.4**
KBSD				*i*S	**Sg**	**13 57 10.2**	**+0.3**
KBSD				AML	AML	13 57 13.4	
	comp=E,455nm,0.4s						
KBSD				AML	AML	13 57 13.7	
	comp=Z,310nm,0.4s						
KBSD				AML	AML	13 57 13.8	
	comp=N,274nm,0.3s						
KBSD	**Kabsdagh**	**1.16**	**91**	*e*P	**Pg**	**13 56 55.0**	**+0.4**
	SNR=137						
KBSD				*i*S	**Sg**	**13 57 10.2**	**+0.3**
	comp=N,274nm,0.3s,SNR=137						
GZT	**Gaziantep**	**1.26**	**285**	*i*P	**Pb**	**13 56 56.1**	**+0.5**
GZT				*i*S	**Sb**	**13 57 12.0**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.35**	**7**	*e*PN	**Pb**	**13 56 57.6**	**+0.4**
SVRC				*e*SN	**Sn**	**13 57 13.3**	**-1.0**
SVRC	**Sivrice-ELAZID**	**1.35**	**7**	*e*Pn	**Pb**	**13 56 57.6**	**+0.4**
SVRC				*e*Sn	**Sn**	**13 57 13.3**	**-1.0**
MARD	**Mardin**	**1.38**	**78**	*i*P	**Pn**	**13 56 57.2**	**+0.3**
MARD				*i*S	**Sn**	**13 57 15.1**	**+0.2**
MYA	**Malataya**	**1.39**	**338**	*e*PN	**Pb**	**13 56 57.8**	**0.0**
MYA	**Malataya**	**1.39**	**338**	*e*Pn	**Pb**	**13 56 57.8**	**0.0**
ELZG	**Elazig**	**1.46**	**357**	*i*P	**Pb**	**13 56 59.4**	**+0.3**
ELZG				*e*S	**Sn**	**13 57 15.7**	**-1.3**
ELZG	**Elazig**	**1.46**	**357**	*i*P	**Pb**	**13 56 59.4**	**+0.3**
ELZG				*e*S	**Sn**	**13 57 15.7**	**-1.3**
JHLN	**Al Jahlan**	**1.46**	**201**	*e*P	**Pb**	**13 56 59.3**	**+0.3**
JHLN				*i*S	**Sg**	**13 57 20.4**	**+1.2**
JHLN				AML	AML	13 57 22.7	
	comp=N,102nm,0.6s						
JHLN				AML	AML	13 57 24.5	
	comp=Z,44nm,0.3s						
JHLN				AML	AML	13 57 30.0	
	comp=E,79nm,0.3s						
JHLN	**Al Jahlan**	**1.46**	**201**	*e*P	**Pb**	**13 56 59.3**	**+0.3**
	SNR=123						
JHLN				*i*S	**Sg**	**13 57 20.4**	**+1.2**
	comp=E,79nm,0.3s,SNR=123						
AKCD	**Akcadag**	**1.56**	**324**	*i*P	**Pb**	**13 57 00.6**	**-0.2**
AKCD				*i*S	**Sn**	**13 57 19.1**	**-0.4**
MZRK	**Al-Mazaregh**	**1.75**	**133**	*e*P	**Pn**	**13 56 59.4**	**-2.4**
MZRK				*e*S	**Sn**	**13 57 21.9**	**-1.9**
MZRK				AML	AML	13 57 25.4	
	comp=N,174nm,0.3s						
MZRK				AML	AML	13 57 26.9	
	comp=Z,98nm,0.2s						
MZRK	**Al-Mazaregh**	**1.75**	**133**	*e*P	**Pn**	**13 56 59.4**	**-2.4**
	SNR=122						
MZRK				*e*S	**Sn**	**13 57 21.9**	**-1.9**
	comp=Z,98nm,0.2s,SNR=122						
KMRS	**Kahramanmaras**	**1.81**	**286**	*e*PN	**Pb**	**13 57 05.8**	**+0.8**
KMRS				*e*SN	**Sb**	**13 57 28.3**	**+0.9**
KMRS	**Kahramanmaras**	**1.81**	**286**	*e*Pn	**Pb**	**13 57 05.8**	**+0.8**
KMRS				*e*Sn	**Sb**	**13 57 28.3**	**+0.9**
AYKD	**Aykdinkavak**	**1.86**	**282**	*i*P	**Pn**	**13 57 04.0**	**+0.5**
AYKD				*i*S	**Sn**	**13 57 26.1**	**-0.5**
PTK	**Pertek**	**1.87**	**7**	*e*PN	**Pb**	**13 57 06.2**	**+0.2**
PTK	**Pertek**	**1.87**	**7**	*e*Pn	**Pb**	**13 57 06.2**	**+0.2**
BEST	**Besiri**	**1.93**	**63**	*i*P	**Pn**	**13 57 05.5**	**+1.0**
BEST				*i*S	**Sb**	**13 57 30.4**	**-0.6**
DARE	**Darende-Malaty**	**1.99**	**321**	*e*PN	**Pb**	**13 57 07.3**	**-0.8**
DARE	**Darende-Malaty**	**1.99**	**321**	*e*Pn	**Pb**	**13 57 07.3**	**-0.8**
BTMT	**Batman**	**2.23**	**58**	*e*PN	**Pb**	**13 57 11.8**	**-0.3**
BTMT	**Batman**	**2.23**	**58**	*e*Pn	**Pb**	**13 57 11.8**	**-0.3**
BNGB	**Bing¶ll**	**2.32**	**32**	*e*PN	**Pb**	**13 57 14.2**	**+0.5**
ILIC	**ilic-Erzincan**	**2.44**	**350**	*e*PN	**Pn**	**13 57 13.8**	**+2.2**
ILIC	**ilic-Erzincan**	**2.44**	**350**	*e*Pn	**Pn**	**13 57 13.8**	**+2.2**
SARI	**SarD1z-Kayseri**	**2.52**	**304**	*e*PN	**Pb**	**13 57 15.5**	**-1.7**
KOZT	**Kozan**	**2.64**	**281**	*e*PN	**Pb**	**13 57 18.9**	**-0.3**

IDC 19 14:32:07.8±3.2, 13°.32S×166°.95E, h181km±28km, mb3.3/5, mb1 3.5/6, mb1mx3.3/20, mbtmp3.3/6, MS3.6/1, Ms1 3.6/1, ms1mx2.6/18, Error ellipse: s-maj=42.6km s-min=24.4km az=137.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.72**	**183**	P	Pn	14 34 11.3	+0.6
	0.7nm,0.3s,baz=143,slow=20,SNR=5.3						
DZM				S	Sn	14 35 31.0	-17
	baz=107,slow=20,SNR=2.2						
STKA	**Stephens Creek**	**29.69**	**227**	P	P	14 37 56.6	-0.2
	0.8nm,0.5s,baz=46,slow=7.6,SNR=4.0						
WRA	**Warramunga Arr**	**31.89**	**254**	P	P	14 38 16.2	-0.2
	0.3nm,0.6s,baz=85,slow=9.0,SNR=9.5						
ASAR	**Alice Springs**	**32.91**	**247**	P	P	14 38 25.0	-0.2
	0.8nm,0.5s,baz=75,slow=9.2,SNR=36						
ASAR				PcP	PcP	14 41 04.8	-0.6
	0.1nm,0.2s,baz=89,slow=1.9,SNR=5.2						
ASAR				ScP	ScP	14 44 32.5	-0.1
	0.2nm,0.6s,baz=99,slow=2.2,SNR=4.9						
KAPI	**Kappang**	**47.25**	**276**	LR	LR	14 59 38.6	
	comp=Z,60nm,18.1s,baz=286,slow=

BACU	**Backbrunna**	**3.22**	**313**	*e*P		**Pn**	**14 38 10.5**	**+1.1**
BACU	**Backbrunna**	**3.22**	**313**	P		**Pn**	**14 38 10.5**	**+1.1**
RAF	**Rauma**	**3.27**	**360**	*e*P		**Pn**	**14 38 10.6**	**+0.5**
RAF	**Rauma**	**3.27**	**360**	P		**Pn**	**14 38 10.5**	**+0.5**
LNKU	**Linkoeping**	**3.39**	**281**	*e*P		**Pn**	**14 38 12.5**	**+0.8**
LNKU	**Linkoeping**	**3.39**	**281**	P		**Pn**	**14 38 12.4**	**+0.8**
OSTU	**Oestervaala**	**3.46**	**318**	*e*P		**Pn**	**14 38 14.1**	**+1.4**
OSTU	**Oestervaala**	**3.46**	**318**	P		**Pn**	**14 38 14.1**	**+1.4**
PVF	**Pernaja**	**3.49**	**35**	*e*P		**Pn**	**14 38 14.8**	**+1.7**
PVF				*e*SG		**Sb**	**14 39 06.1**	**+3.1**
PVF				MSG			14 39 08.3	
	comp=Z,2.3nm,0.1s							
PVF	**Pernaja**	**3.49**	**35**	P		**Pn**	**14 38 14.7**	**+1.7**
BLEU	**Blekinge**	**3.59**	**249**	*e*P		**Pn**	**14 38 14.2**	**-0.2**
BLEU	**Blekinge**	**3.59**	**249**	P		**Pn**	**14 38 14.2**	**-0.2**
VXJU	**Vaexsjoe**	**3.82**	**260**	*e*P		**Pn**	**14 38 17.9**	**+0.4**
VXJU	**Vaexsjoe**	**3.82**	**260**	P		**Pn**	**14 38 17.9**	**+0.4**
IGGU	**Iggoen**	**3.88**	**325**	*e*P		**Pn**	**14 38 19.7**	**+1.2**
IGGU	**Iggoen**	**3.88**	**325**	P		**Pn**	**14 38 19.6**	**+1.2**
NRAU	**Nora**	**3.97**	**300**	*e*P		**Pn**	**14 38 20.2**	**+0.5**
NRAU	**Nora**	**3.97**	**300**	P		**Pn**	**14 38 20.2**	**+0.5**
VJF	**Virojoki**	**4.06**	**44**	*e*SG		**Sg**	**14 39 26.4**	**-1.7**
VJF				MSG			14 39 28.1	
	comp=Z,2.7nm,0.3s							
VJF	**Virojoki**	**4.06**	**44**	Sg		**Sg**	**14 39 26.3**	**-1.7**
FALU	**Falun**	**4.12**	**314**	*e*P		**Pn**	**14 38 22.2**	**+0.4**
FALU	**Falun**	**4.12**	**314**	P		**Pn**	**14 38 22.2**	**+0.4**
FIA0	**FINESS Array S**	**4.28**	**29**	Pn		**Pn**	**14 38 25.0**	**+1.0**
	baz=214,slow=11							
FIA0				Sn		**Sn**	**14 39 13.8**	**-0.8**
	baz=207,slow=28							
FIA0				Lg		Lg	14 39 31.4	
	baz=211,slow=37							
FIA0	**FINESS Array S**	**4.28**	**29**	Pn		**Pn**	**14 38 25.0**	**+1.0**
	baz=214,slow=11							
FIA0				Sn		**Sn**	**14 39 13.8**	**-0.8**
	baz=207,slow=28							
FIA0				Lg		Lg	14 39 31.4	
	baz=211,slow=37							
FIA0	**FINESS Array S**	**4.28**	**29**	Pn		**Pn**	**14 38 25.0**	**+1.0**
	baz=214,slow=11,SNR=50							
FIA0				Sn		**Sn**	**14 39 13.8**	**-0.8**
	baz=207,slow=25,SNR=50							
FIA0				Lg		Lg	14 39 31.4	
	baz=211,slow=29,SNR=5.8							
DEL	**Delary**	**4.52**	**257**	*e*P		**Pn**	**14 38 27.5**	**+0.3**
DEL	**Delary**	**4.52**	**257**	P		**Pn**	**14 38 27.5**	**+0.3**
ARNU	**Arnoeviken**	**4.54**	**332**	*e*P		**Pn**	**14 38 27.8**	**+0.4**
ARNU	**Arnoeviken**	**4.54**	**332**	P		**Pn**	**14 38 27.8**	**+0.4**
ROTU	**Roteberg**	**4.77**	**323**	*e*P		**Pn**	**14 38 31.2**	**+0.6**
ROTU	**Roteberg**	**4.77**	**323**	P		**Pn**	**14 38 31.2**	**+0.6**
HFS	**Hagfors**	**4.83**	**303**	Pn		**Pn**	**14 38 31.8**	**+0.3**
	baz=117,slow=14							
HFS				Lg		Lg	14 39 47.4	
	baz=113,slow=37							
HFS	**Hagfors**	**4.83**	**303**	Pn		**Pn**	**14 38 31.8**	**+0.3**
	baz=117,slow=14							
HFS				Lg		Lg	14 39 47.4	
	baz=113,slow=37							
HFS	**Hagfors**	**4.83**	**303**	Pn		**Pn**	**14 38 31.8**	**+0.3**
	baz=117,slow=13,SNR=50							
HFS				Lg		Lg	14 39 47.3	
	baz=113,slow=28,SNR=6.1							
HASU	**Hassela**	**5.12**	**332**	*e*P		**Pn**	**14 38 35.7**	**+0.3**
HASU	**Hassela**	**5.12**	**332**	P		**Pn**	**14 38 35.7**	**+0.3**
FINU	**Finntorp**	**5.15**	**293**	*e*P		**Pn**	**14 38 35.8**	**-0.1**
FINU	**Finntorp**	**5.15**	**293**	P		**Pn**	**14 38 35.8**	**-0.1**
VANU	**Vaenersborg**	**5.21**	**282**	*e*P		**Pn**	**14 38 37.0**	**+0.3**
VANU	**Vaenersborg**	**5.21**	**282**	P		**Pn**	**14 38 37.0**	**+0.3**
HEMU	**Hemsoen**	**5.28**	**341**	*e*P		**Pn**	**14 38 38.5**	**+0.8**
HEMU	**Hemsoen**	**5.28**	**341**	P		**Pn**	**14 38 38.4**	**+0.8**
TJOU	**Tjoern**	**5.44**	**277**	*e*P		**Pn**	**14 38 40.2**	**+0.4**
TJOU	**Tjoern**	**5.44**	**277**	P		**Pn**	**14 38 40.2**	**+0.4**
STRU	**Stroemstad**	**5.73**	**287**	*e*P		**Pn**	**14 38 44.5**	**+0.6**
STRU	**Stroemstad**	**5.73**	**287**	P		**Pn**	**14 38 44.5**	**+0.6**
NB2	**NORSAR Subarra**	**6.33**	**306**	Pn		**Pn**	**14 38 51.9**	**-0.2**
	baz=123,slow=14							
NB2				Lg		Lg	14 40 38.2	
NB2	**NORSAR Subarra**	**6.33**	**306**	Pn		**Pn**	**14 38 51.9**	**-0.2**
	baz=123,slow=14							
NB2				Lg		Lg	14 40 38.2	
NB2	**NORSAR Subarra**	**6.33**	**306**	Pn		**Pn**	**14 38 51.9**	**-0.2**
	baz=123,slow=13,SNR=50							
NB2				Lg		Lg	14 40 38.2	
BREU	**Bredtraesk**	**6.35**	**347**	*e*P		**Pn**	**14 38 52.7**	**+0.4**
BREU	**Bredtraesk**	**6.35**	**347**	P		**Pn**	**14 38 52.7**	**+0.4**
NOD	**Norderasen**	**6.65**	**332**	*e*P		**Pn**	**14 38 55.5**	**-0.9**
NOD	**Norderasen**	**6.65**	**332**	P		**Pn**	**14 38 55.5**	**-0.9**
SVAU	**Svanoeiden**	**6.84**	**352**	*e*P		**Pn**	**14 38 59.1**	**0.0**
SVAU	**Svanoeiden**	**6.84**	**352**	P		**Pn**	**14 38 59.1**	**0.0**
BURU	**Burvik**	**6.85**	**358**	*e*P		**Pn**	**14 38 59.7**	**+0.5**
BURU	**Burvik**	**6.85**	**358**	P		**Pn**	**14 38 59.6**	**+0.5**
LILU	**Lilltraesk**	**7.61**	**354**	*e*P		**Pn**	**14 39 09.2**	**-0.4**
LILU	**Lilltraesk**	**7.61**	**354**	P		**Pn**	**14 39 09.2**	**-0.4**
SJUU	**Sjulsmark**	**7.78**	**359**	*e*P		**Pn**	**14 39 11.4**	**-0.5**
SJUU	**Sjulsmark**	**7.78**	**359**	P		**Pn**	**14 39 11.4**	**-0.5**
ARA0	**ARCESS Array S**	**11.93**	**6**	Pn		Pn	14 40 05.0	-3.7
	baz=191,slow=14							
ARA0	**ARCESS Array S**	**11.93**	**6**	P		Pn	14 40 05.0	-3.7
	baz=191,slow=14							
SPA0	**Spitsbergen Ar**	**20.59**	**357**	P		**P**	**14 41 57.5**	**-0.3**
	baz=154,slow=10							
SPA0	**Spitsbergen Ar**	**20.59**	**357**	P		**P**	**14 41 57.5**	**-0.3**
	baz=154,slow=10							
SPA0	**Spitsbergen Ar**	**20.59**	**357**	P		**P**	**14 41 57.5**	**-0.3**
	baz=154,slow=9.8,SNR=47							

GUC 19 14:47:57.5±0.5, 23°.89S×67°.65W, h230km, ML3.5, 1C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**2.40**	**281**	⇓*i*P	Pn	14 48 44.8	+2.4
CEN1				*i* S	S	14 49 20.7	+3.2
CEN1				AML	AML	14 49 22.6	
	comp=N,50nm,0.5s						
ANCH	**Antofagasta**	**2.54**	**274**	*i* S	S	14 49 21.9	+2.0
PB09	**Plate Boundary**	**2.55**	**324**	⇓*i*P	Pn	14 48 46.1	+1.9
PB09				*i* S	S	14 49 22.9	+2.3
PB09				AML	AML	14 49 26.2	
	comp=N,118nm,0.2s						
PB07	**Plate Boundary**	**2.98**	**316**	⇑*i*P	Pn	14 48 50.5	+1.6
PB07				*i* S	S	14 49 31.2	+2.0
PB07				AML	AML	14 49 34.5	
	comp=E,61nm,0.3s						
PB01	**Plate Boundary**	**3.30**	**329**	*e*P	Pn	14 48 53.5	+1.1
PB01				*i* S	S	14 49 36.9	+1.4
PB01				AML	AML	14 49 37.8	
	comp=E,35nm,0.2s						
HMBC	**Humberstone**	**4.15**	**329**	*e*P	Pn	14 49 03.0	+0.5
HMBC				*e*S	S	14 49 54.5	+0.7
HMBC				AML	AML	14 49 59.7	
	comp=E,20nm,0.8s						

ISCJB ***19*** *14:50:13.9±0.6, 38°.91N±0°.03×21°.81E±0°.05, h10km±3km, Error ellipse: s-maj=7.0km s-min=4.4km az=14.9*
THE ***19*** *14:50:13.2, 38°.94N×21°.73E, h9km±2km, ML2.6/3, Error ellipse: s-maj=2.6km s-min=0.9km az=117.0*
ATH ***19*** *14:50:14.7, 38°.91N×21°.85E, h5km±2km, MD2.8/6*
CSEM ***19*** *14:50:14.0±0.1, 38°.91N×21°.83E, h8km, ML2.0, Error ellipse: s-maj=2.9km s-min=1.9km az=97.0*

ISC 19 14:50:13.4±0.8, 38°.91N±0°.02×21°.83E±0°.04, h10km±5km, n26, σ0°.45/43, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.02**	**302**	P	**Pg**	**14 50 15.5**	**+0.2**
EVR				S	**Sg**	**14 50 16.6**	**-0.1**
EVR	**Evrytania**	**0.02**	**302**	*e*PG	**Pg**	**14 50 15.6**	**+0.2**
EVR				*e*SG	**Sg**	**14 50 16.8**	**+0.1**
EVR	**Evrytania**	**0.02**	**302**	*e*Pg	**Pg**	**14 50 15.6**	**+0.2**
EVR				*e*Sg	**Sg**	**14 50 16.8**	**+0.1**
MAKR	**Makrakomi, Fth**	**0.26**	**65**	P	**Pb**	**14 50 20.0**	**-0.2**
MAKR				S	**Sb**	**14 50 24.8**	**+0.1**
MAKR	**Makrakomi, Fth**	**0.26**	**65**	P	**Pb**	**14 50 20.0**	**-0.2**
MAKR				S	**Sb**	**14 50 24.0**	**-0.7**
AGG	**Agios Georgios**	**0.41**	**73**	P	**Pb**	**14 50 22.2**	**-0.5**
AGG				S	**Sb**	**14 50 29.6**	**+0.6**
AGG	**Agios Georgios**	**0.41**	**73**	*e*PB	**Pb**	**14 50 22.4**	**-0.3**
AGG				*e*SB	**Sg**	**14 50 27.7**	**+0.9**
AGG	**Agios Georgios**	**0.41**	**73**	P	**Pb**	**14 50 22.4**	**-0.3**
AGG				*e*Sb	**Sg**	**14 50 27.7**	**+0.9**
AGG				S	**Sb**	**14 50 28.2**	**-0.8**
EFP	**Efpalio**	**0.48**	**173**	P	**Pb**	**14 50 23.6**	**-0.4**
EFP				S	**Sb**	**14 50 31.6**	**+0.5**
EFP	**Efpalio**	**0.48**	**173**	P	**Pb**	**14 50 23.5**	**-0.4**
EFP				S	**Sb**	**14 50 30.8**	**-0.3**
TRIZ	**Trizonia**	**0.57**	**161**	P	**Pg**	**14 50 25.0**	**+0.5**
TRIZ				S	**Sb**	**14 50 34.4**	**+0.7**
TRIZ	**Trizonia**	**0.57**	**161**	P	**Pg**	**14 50 25.0**	**+0.5**
TRIZ				S	**Sb**	**14 50 33.6**	**-0.1**
LAKA	**Lakka**	**0.67**	**170**	P	**Pg**	**14 50 26.8**	**+0.4**
LAKA	**Lakka**	**0.67**	**170**	P	**Pg**	**14 50 26.8**	**+0.4**
THL	**Klokotos Trika**	**0.67**	**12**	*e*PG	**Pb**	**14 50 27.0**	**-0.3**
THL				*e*SB	**Sb**	**14 50 37.1**	**+0.4**
THL	**Klokotos Trika**	**0.67**	**12**	*e*Pg	**Pb**	**14 50 27.0**	**-0.3**
THL				*e*Sb	**Sb**	**14 50 37.1**	**+0.4**
DSF	**Desfina**	**0.73**	**132**	P	**Pg**	**14 50 27.6**	**0.0**
DSF	**Desfina**	**0.73**	**132**	P	**Pg**	**14 50 27.6**	**0.0**
KLV	**Kalavryta, Ach**	**0.90**	**164**	*e*PG	**Pb**	**14 50 31.1**	**0.0**
KLV				*e*SB	**Sn**	**14 50 44.5**	**-0.7**
KLV	**Kalavryta, Ach**	**0.90**	**164**	*e*Pg	**Pb**	**14 50 31.1**	**0.0**
KLV				*e*Sb	**Sn**	**14 50 44.5**	**-0.7**
LKD2	**Lefkada island**	**0.93**	**263**	*e*PB	**Pn**	**14 50 32.6**	**+0.1**
LKD2	**Lefkada island**	**0.93**	**263**	*e*Pb	**Pn**	**14 50 32.6**	**+0.1**
LKR	**Lokris**	**0.95**	**105**	*e*PB	**Pn**	**14 50 32.6**	**-0.2**
LKR	**Lokris**	**0.95**	**105**	*e*Pb	**Pn**	**14 50 32.6**	**-0.2**
LIT	**Litokhoron**	**1.30**	**23**	*e*PG	**Pg**	**14 50 38.7**	**+0.3**
LIT	**Litokhoron**	**1.30**	**23**	*e*Pg	**Pg**	**14 50 38.7**	**+0.3**

IDC ***19*** *14:50:44.0±1.9, 3°.99S×139°.71E, h0km, mb4.0/2, mb1 4.4/5, mb1mx3.9/18, mbtmp4.2/5, ML3.9/3, Error ellipse: s-maj=42.8km s-min=29.5km az=79.0*
AUST ***19*** *14:50:56.4, 4°.41S×139°.54E, h100km*

ISC 19 14:50:49.2±2.8, 4°.4S±0°.2×139°.7E±0°.1, h35km, n13, σ2°.71/11, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPI	**Merauke**	**4.13**	**170**	S	Sn	14 52 49.0	+12
	baz=4.1,SNR=8.9						
FAKI	**Fak Fak**	**7.53**	**281**	P	Pn	14 52 44.7	+8.0
	baz=7.4,SNR=7.1						
PMG	**Port Moresby**	**8.97**	**124**	Pn	Pn	14 52 57.3	+1.0
	1.0nm,0.3s,baz=297,slow=14,SNR=3.7						
COEN	**Coen**	**10.13**	**160**	P	Pn	14 53 17.0	+4.7
	baz=10,SNR=8.3						
KDU	**Kakadu**	**10.89**	**220**	P	Pn	14 53 28.7	+6.0
	baz=11,SNR=29						
KDU				S	**Sn**	**14 55 26.5**	**+3.2**
	baz=11,SNR=4.5						
MTSU	**Mount Surprise**	**14.41**	**162**	P	**P**	**14 54 15.3**	**-2.0**
	baz=14,SNR=7.0						
MTSU				S	**Sn**	**14 56 51.2**	**+1.7**
	baz=14,SNR=5.5						
KNRA	**Kununurra**	**15.52**	**223**	P	**P**	**14 54 31.0**	**+1.4**
	baz=16,SNR=18						
KNRA				S	**Sn**	**14 57 16.2**	**-0.2**
	baz=16,SNR=8.0						
QIS	**Mount Isa**	**16.08**	**180**	P	P	14 54 39.2	+3.3
	baz=16,SNR=9.8						
WRA	**Warramunga Arr**	**16.32**	**198**	Pn	**P**	**14 54 39.5**	**+1.0**
	0.8nm,0.3s,baz=17,slow=13,SNR=44						
WRA				Sn	**Sn**	**14 57 34.0**	**-1.9**
	0.6nm,0.3s,baz=16,slow=23,SNR=8.6						
FITZ	**Fitzroy Crossi**	**19.34**	**224**	P	**Pn**	**14 55 14.5**	**+1.4**
	0.5nm,0.3s,baz=46,slow=11,SNR=19						
FITZ				S	**S**	**14 58 44.7**	**-4.2**
	0.5nm,0.3s,baz=177,slow=12,SNR=7.2						
FITZ	**Fitzroy Crossi**	**19.34**	**224**	P	Pn	14 55 15.6	+2.5
	baz=19,SNR=18						
FITZ				S	**S**	**14 58 45.4**	**-3.5**
	baz=19,SNR=5.5						
ASAR	**Alice Springs**	**19.96**	**196**	P	Pn	14 55 22.2	+1.7
	17nm,0.6s,baz=27,slow=9.3,SNR=161						
ASAR				S	**S**	**14 59 03.2**	**+1.7**
	1.6nm,0.8s,baz=18,slow=24,SNR=10						
MKAR	**Makanchi Array**	**71.68**	**322**	P	P	15 02 06.1	-1.5
	0.3nm,0.4s,baz=113,slow=8.0,SNR=4.6						

IDC 19 14:52:56.6±1.2, 16°.26S×173°.09W, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.7/22, mbtmp3.6/5, ML1.4/1, MS3.3/3, Ms1 3.4/3, ms1mx2.9/29, Error ellipse: s-maj=55.7km s-min=27.6km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.66**	**29**	Pn	Pn	14 53 38.7	-2.1
	3.8nm,0.3s,baz=210,slow=20,SNR=11						
AFI				Sn	Sn	14 54 08.8	-5.0
	17nm,0.3s,baz=233,slow=20,SNR=8.2						
AFI				LR	LR	14 54 37.8	
	comp=Z,225nm,20.9s,baz=238,slow=38						
HNR	**Honiara**	**27.13**	**281**	LR	LR	15 07 31.4	
	comp=Z,86nm,20.8s,baz=9.2,slow=32						
ASAR	**Alice Springs**	**50.13**	**253**	P	P	15 01 53.9	-0.3
	1.0nm,0.5s,baz=88,slow=8.5,SNR=6.0						
NVAR	**Mina Array Bea**	**74.77**	**42**	P	P	15 04 39.1	+0.2
	0.5nm,0.7s,baz=233,slow=10,SNR=4.6						
NVAR				LR	LR	15 34 12.9	
	comp=Z,39nm,18.1s,baz=89,slow=33						
PDAR	**Pinedale Array**	**82.70**	**42**	P	P	15 05 24.1	+1.5
	0.5nm,0.8s,baz=222,slow=3.6,SNR=4.5						
ILAR	**Eielson Array**	**83.22**	**11**	P	P	15 05 25.1	+0.6
	0.2nm,0.6s,baz=241,slow=6.3,SNR=5.3						
BRTR	**Keskin Array B**	**147.00**	**320**	PKPbc	PKPdf	15 12 40.5	+0.6
	0.9nm,0.8s,baz=59,slow=3.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**174.09**	**121**	PKPab	PKPab	15 14 39.2	-1.3
	0.6nm,0.9s,baz=242,slow=4.9,SNR=4.7						

FUNV 19 14:53:13.3, 10°.19N×67°.06W, h5km, MW4.0, 7C-4D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVIV	**IVIC**	**0.23**	**23**	⇑*i*P	Pg	14 53 17.9	-0.3
IVIV				*e*S	Sg	14 53 21.7	+0.2
BOTV	**Botiquin**	**0.26**	**324**	⇓*e*P	Pg	14 53 18.6	-0.1
BOTV				*e*S	Sg	14 53 22.5	+0.1
OCUV	**OCUMARITO**	**0.27**	**107**	⇓*e*P	Pg	14 53 17.9	-0.7
OCUV				*e*S	Sg	14 53 21.9	-0.3
FDCV	**FORTIN DE LA C**	**0.36**	**17**	⇑*i*P	Pg	14 53 20.6	0.0
FDCV				*e*S	Sg	14 53 26.2	+0.8
FUNV	**FUNVISIS**	**0.37**	**42**	⇑*i*P	Pg	14 53 20.4	-0.3
FUNV				*e*S	Sg	14 53 25.9	+0.3
LLAV	**El Llanito**	**0.37**	**42**	⇑*i*P	Pg	14 53 20.4	-0.3
LLAV				*e*S	Sg	14 53 25.7	+0.1
TURV	**Turiamo**	**0.81**	**288**	⇓*i*P	Pg	14 53 27.9	-0.9
TURV				*e*S	Sg	14 53 39.3	0.0
BIRV	**Birongo**	**0.83**	**70**	⇑*e*P	Pg	14 53 28.4	-0.9
BIRV				*e*S	Sb	14 53 41.4	-0.4
MERV	**Las Mercedes**	**1.20**	**141**	⇑*e*P	Pg	14 53 36.3	-0.1
CUPV	**Cœpira**	**1.26**	**96**	⇓*e*P	Pg	14 53 37.4	-0.3
CUPV				*e*S	Sb	14 53 54.4	-0.1
MAPV	**Macapo**	**1.42**	**255**	*e*P	Pb	14 53 40.1	-0.2
MAPV				*e*S	Sb	14 53 58.6	-0.2
BAUV	**El Baul**	**1.57**	**218**	*e*P	Pn	14 53 41.1	-0.9
BAUV				*e*S	Sn	14 54 02.4	-0.3
ORCV	**Isla La Orchil**	**1.82**	**28**	⇑*e*P	Pn	14 53 44.0	-1.3
ORCV				*e*S	Sn	14 54 07.5	-1.4
JACV	**Jacura**	**1.95**	**297**	*e*P	Pn	14 53 46.1	-1.1
JACV				*e*S	Sn	14 54 11.3	-0.9
TEPV	**Terepaima**	**2.11**	**264**	*e*P	Pn	14 53 48.5	-0.9
TEPV				*e*S	Sn	14 54 15.1	-1.0
PCRV	**Puerto La Cruz**	**2.39**	**90**	*e*P	Pn	14 53 53.5	+0.2
PCRV				*e*S	Sn	14 54 22.8	-0.3
SANV	**Sanarito**	**2.53**	**254**	*e*P	Pn	14 53 55.0	-0.3
SANV				*e*S	Sn	14 54 25.2	-1.5
SIQV	**Siquisique**	**2.74**	**280**	*e*P	Pn	14 53 56.7	-1.4
SIQV				*e*S	Sn	14 54 29.4	-2.3
PRGV	**PARIAGUAN**	**2.78**	**121**	*e*P	Pn	14 53 57.5	-1.0
CURV	**Curarigua**	**2.86**	**267**	*e*P	Pn	14 53 59.3	-0.5
MONV	**Montecano**	**3.35**	**302**	*e*P	Pn	14 54 05.1	-1.3
DABV	**Dabajuro**	**3.59**	**282**	*e*P	Pn	14 54 08.7	-1.0
SOCV	**Socops**	**4.20**	**243**	*e*P	Pn	14 54 17.0	-1.1
VIGV	**El Vigia**	**4.45**	**253**	*e*P	Pn	14 54 20.1	-1.5
GURV	**El Guri**	**4.62**	**121**	*e*P	Pn	14 54 21.6	-2.2
GUIV	**Guiria**	**4.78**	**84**	*e*P	Pn	14 54 25.0	-1.2
CAPV	**Capacho**	**5.68**	**246**	*e*P	Pn	14 54 36.6	-2.1

IDC 19 15:11:53.8±0.8, 20°.63N×145°.29E, h0km, mb3.6/8, mb1 3.9/8, mb1mx3.7/26, mbtmp3.7/8, Error ellipse: s-maj=33.6km s-min=17.7km az=100.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**22.55**	**322**	P	P	15 16 56.9	+1.4
	0.8nm,0.9s,baz=147,slow=8.7,SNR=5.3						
WRA	**Warramunga Arr**	**41.73**	**196**	P	P	15 19 44.8	0.0
	0.5nm,0.5s,baz=10,slow=8.6,SNR=17						
FITZ	**Fitzroy Crossi**	**43.05**	**208**	P	P	15 19 55.3	-0.2
	baz=21,slow=9.6						
ASAR	**Alice Springs**	**45.41**	**195**	P	P	15 20 14.4	0.0
	0.1nm,0.4s,baz=8.8,slow=6.8,SNR=9.9						
MKAR	**Makanchi Array**	**56.86**	**313**	P	P	15 21 39.9	-0.4
	0.4nm,0.4s,baz=89,slow=7.4,SNR=9.3						
ILAR	**Eielson Array**	**62.09**	**27**	P	P	15 22 16.4	+0.2
	0.4nm,0.8s,baz=266,slow=6.1,SNR=6.1						
YKA	**Yellowknife Ar**	**76.47**	**28**	P	P	15 23 45.5	+0.3
	0.3nm,0.4s,baz=291,slow=5.7,SNR=5.5						
NVAR	**Mina Array Bea**	**82.25**	**52**	P	P	15 24 17.4	-0.2
	0.8nm,1.0s,baz=258,slow=3.5,SNR=4.0						
FINES	**FINESS Array B**	**84.98**	**335**	P	P	15 24 29.9	-0.8
	1.4nm,0.4s,baz=61,slow=4.6,SNR=21						

IDC ***19*** *15:34:02.6±1.3, 2°.12S×99°.54E, h0km, mb4.3/13, mb1 4.3/14, mb1mx4.1/26, mbtmp4.3/14, ML3.3/1, MS3.3/3, Ms1 3.4/3, ms1mx3.0/30, Error ellipse: s-maj=41.7km s-min=15.2km az=60.0*
ISCJB ***19*** *15:34:04.7±0.6, 2°.23S±0°.06×99°.37E±0°.06, h33km, mb4.5/28, MS4.0/11, Error ellipse: s-maj=9.7km s-min=7.0km az=136.5*
BJI ***19*** *15:34:06.2, 2°.20S×99°.50E, h35km, mB4.8/18, mb4.8/29, Ms4.5/22, Ms7 4.2/22*
NEIC ***19*** *15:34:07.3±0.4, 2°.15S×99°.52E, h35km, mb4.6/8, Error ellipse: s-maj=12.0km s-min=5.6km az=56.0*
DJA ***19*** *15:34:12.0±0.7, 2°.5S×9°.9E±1°.0, h10km, M4.6/6, mb4.7/2, mB5.2/2, MLv4.6/6, Mw(mB)4.5/2*

ISC 19 15:34:06.5±0.6, 2°.22S±0°.06×99°.23E±0°.07, h35km, n78, σ1°.78/121, mb4.6/28, MS4.0/11, 1C, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.90**	**351**	P	**Pn**	**15 34 20.2**	**-2.5**
PPI	**Padang Panjang**	**2.11**	**34**	P	**Pn**	**15 34 37.7**	**-1.6**
MNSI	**Mandailing Nat**	**3.02**	**7**	P	**Pn**	**15 34 50.7**	**-1.1**
BKNI	**Bangkinang**	**3.11**	**36**	P	**Pn**	**15 34 53.1**	**0.0**
MASI	**Maura Aman, Be**	**3.15**	**107**	P	Pn	15 35 03.3	+10
KSI	**Kapahiang**	**3.65**	**113**	P	Pn	15 35 16.7	+16
PSI	**Prapat**	**5.00**	**357**	Pn	**Pn**	**15 35 16.6**	**-2.6**
PSI	**Prapat**	**5.00**	**357**	Pn	**Pn**	**15 35 16.6**	**-2.6**
	1.3nm,0.3s,baz=169,slow=11,SNR=11						
PSI				LR	LR	15 37 07.7	
	comp=Z,204nm,20.2s,baz=72,slow=38						
LWLI	**Liwa**	**5.56**	**120**	P	Pn	15 35 37.9	+11
KGM	**Kluang**	**5.87**	**44**	P	**Pn**	**15 35 30.5**	**-0.6**
KCSI	**Kotacane, Aceh**	**5.89**	**346**	P	**Pn**	**15 35 32.7**	**+1.4**
	34nm,0.9s,807nm						
FRIM	**Kepong**	**5.93**	**24**	P	**Pn**	**15 35 31.1**	**-0.8**
MYKOM	**Kota Tinggi**	**6.10**	**49**	P	**Pn**	**15 35 33.3**	**-1.0**
MYKOM	**Kota Tinggi**	**6.10**	**49**	P	**Pn**	**15 35 33.6**	**-0.7**
IPM	**Ipoh**	**6.89**	**15**	*e*P	**Pn**	**15 35 44.7**	**-0.4**
	14nm,0.6s						
IPM	**Ipoh**	**6.89**	**15**	P	**Pn**	**15 35 45.7**	**+0.5**
KULM	**Kulim**	**7.59**	**11**	*e*P	**Pn**	**15 35 53.7**	**-1.0**
KULM	**Kulim**	**7.59**	**11**	P	**Pn**	**15 35 53.9**	**-0.9**
KTGM	**Kuala Trenggan**	**8.45**	**27**	P	**Pn**	**15 36 04.6**	**-2.0**
LEM	**Lembang**	**9.53**	**119**	P	Pn	15 36 36.0

	comp=Z,2.3nm,0.9s,baz=298,slow=7.9,SNR=13							
ASAR					PcP	**PcP**	**15 43 43.2**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=289,slow=2.8,SNR=3.0							
GTA	**Gaotai**	**41.43**	**1**	*e*P	**P**		**15 41 50.6**	**+0.7**
GTA				pP	**pP**		**15 42 00.4**	**+0.2**
GTA				sP	**sP**		**15 42 04.5**	**+0.1**
GTA				S	**S**		**15 48 04.8**	**+2.0**
GTA				sS	**sS**		**15 48 20.3**	**+0.5**
GTA				SS	**SS**		**15 51 02.3**	**-5.7**
GTA				pmax	pmax			
	comp=Z,8.0nm,1.3s							
GTA				pmax	pmax			
	comp=Z,78nm,6.2s							
GTA				LR	LR			
	comp=N,59nm,11.6s							
GTA				LR	LR			
	comp=E,100nm,12.8s							
GTA				LR	LR			
	comp=Z,100nm,8.3s							
HHC	**Hu-ho-hao-te**	**44.32**	**13**⇑	*e*P	**P**		**15 42 15.3**	**+2.0**
HHC				pP	**pP**		**15 42 25.1**	**+1.5**
HHC				sP	**sP**		**15 42 29.0**	**+1.2**
HHC				PP	**PcP**		**15 44 00.1**	**+3.0**
HHC				PcS	**PcS**		**15 47 51.1**	**+0.7**
HHC				S	**S**		**15 48 47.1**	**+1.9**
HHC				sS	**sS**		**15 49 03.4**	**+1.2**
HHC				SS	**SS**		**15 51 57.8**	**-6.9**
HHC				ScS	**ScS**		**15 52 08.3**	**-0.8**
HHC				pmax	pmax			
	comp=Z,20nm,1.1s							
HHC				pmax	pmax			
	comp=Z,170nm,5.0s							
HHC				LR	LR			
	comp=N,520nm,15.5s							
HHC				LR	LR			
	comp=E,250nm,19.3s							
HHC				LR	LR			
	comp=Z,450nm,15.3s							
KSH	**Kashi**	**46.70**	**335**	*e*P	**P**		**15 42 31.9**	**-0.3**
KSH				*ep*P	**pP**		**15 42 42.3**	**-0.3**
KSH				*es*P	**sP**		**15 42 44.5**	**-2.3**
KSH				*e*PcP	**PcP**		**15 44 04.0**	**-1.4**
KSH				*e*ScP	**ScP**		**15 47 54.1**	**-2.5**
KSH				*e*PcS	**PcS**		**15 47 58.3**	**-2.1**
KSH				*e*S	**S**		**15 49 16.3**	**-3.4**
KSH				*e*sS	**sS**		**15 49 37.3**	**+0.5**
KSH				*e*ScS	**ScS**		**15 52 21.0**	**-3.6**
KSH				*e*SS	**SS**		**15 52 40.1**	**-6.4**
KSH				pmax	pmax			
	comp=Z,3.0nm,0.9s							
KSH				pmax	pmax			
	comp=Z,80nm,4.3s							
KSH				LR	LR			
	comp=N,89nm,5.7s							
KSH				LR	LR			
	comp=E,68nm,4.2s							
KSH				LR	LR			
	comp=Z,90nm,6.1s							
WMQ	**Urumqi**	**46.99**	**349**	P	**P**		**15 42 35.8**	**+1.5**
WMQ				pP	**pP**		**15 42 45.8**	**+1.1**
WMQ				sP	**sP**		**15 42 49.6**	**+0.7**
WMQ				pmax	pmax			
	comp=Z,18nm,0.8s							
WMQ				pmax	pmax			
	comp=Z,130nm,4.2s							
WMQ				LR	LR			
	comp=N,100nm,6.8s							
WMQ				LR	LR			
	comp=E,200nm,6.6s							
WMQ				LR	LR			
	comp=Z,34nm,19.0s							
KSAR	**Wonju Array Be**	**47.58**	**31**	P	**P**		**15 42 38.1**	**-0.7**
KSRS	**Korea Array**	**47.60**	**31**	P	**P**		**15 42 38.2**	**-0.9**
	comp=Z,4.7nm,0.9s,baz=225,slow=8.2,SNR=16							
STKA	**Stephens Creek**	**49.58**	**131**	*e*P	**P**		**15 42 53.0**	**-1.5**
STKA	**Stephens Creek**	**49.58**	**131**	P	**P**		**15 42 54.3**	**-0.2**
	comp=Z,2.4nm,0.9s,baz=308,slow=7.4,SNR=6.5							
TKM2	**Tokmak 2**	**49.73**	**337**	*e*P	**P**		**15 42 56.8**	**+1.1**
	comp=Z,6.3nm,1.0s							
AAK	**Ala-Archa**	**49.92**	**336**	P	**P**		**15 42 58.7**	**+1.7**
AAK	**Ala-Archa**	**49.92**	**336**	P	**P**		**15 42 58.7**	**+1.7**
	comp=Z,1.0nm,0.5s,baz=150,slow=8.1,SNR=5.4							
EKS2	**Erkin-Say**	**50.24**	**336**	*e*P	**P**		**15 43 00.7**	**+1.3**
	comp=Z,3.2nm,0.8s							
SONM	**Songino Array**	**50.24**	**6**	P	**P**		**15 43 00.1**	**+0.8**
SONM	**Songino Array**	**50.24**	**6**	P	**P**		**15 43 00.1**	**+0.8**
	comp=Z,8.1nm,0.8s,baz=188,slow=9.1,SNR=9.7							
ULN	**Ulaanbaatar**	**50.35**	**7**	*e*P	**P**		**15 43 00.6**	**+0.4**
	comp=Z,11nm,1.0s							
MK31	**Makanchi Array**	**51.04**	**345**	*e*P	**P**		**15 43 05.9**	**+0.7**
MKAR	**Makanchi Array**	**51.04**	**345**	P	**P**		**15 43 06.4**	**+1.2**
MKAR	**Makanchi Array**	**51.04**	**345**	P	**P**		**15 43 06.4**	**+1.2**
	comp=Z,5.9nm,0.7s,baz=150,slow=8.2,SNR=62							
CN2	**Changchun**	**51.50**	**24**	*e*P	**P**		**15 43 07.8**	**-0.9**
CN2				*es*P	**sP**		**15 43 21.6**	**-1.7**
CN2				*e*S	**S**		**15 50 24.9**	**-1.7**
CN2				pmax	pmax			
	comp=Z,20nm,0.6s							
CN2				LR	LR			
	comp=N,200nm,15.0s							
CN2				LR	LR			
	comp=E,200nm,15.0s							
CN2				LR	LR			
	comp=Z,200nm,16.0s							
MJAR	**Matsushiro Arr**	**52.93**	**39**	P	**P**		**15 43 18.4**	**-1.1**
MJAR	**Matsushiro Arr**	**52.93**	**39**	P	**P**		**15 43 18.4**	**-1.1**
	comp=Z,3.6nm,1.0s,baz=220,slow=8.3,SNR=9.2							
USRK	**Ussuriysk Arra**	**54.72**	**28**	P	**P**		**15 43 32.1**	**-0.3**
	comp=Z,10nm,0.8s,baz=229,slow=5.4,SNR=14							
KURK	**Kurchatov**	**55.60**	**344**	*e*P	**P**		**15 43 39.0**	**+0.4**
	comp=Z,7.1nm,0.9s							
ZAA0	**Zalesovo Array**	**57.25**	**350**	*e*P	**P**		**15 43 51.1**	**+0.9**
ZALV	**Zalesovo Beam**	**57.25**	**350**	P	**P**		**15 43 51.1**	**+0.9**
ZALV	**Zalesovo Beam**	**57.25**	**350**	P	**P**		**15 43 51.1**	**+0.9**
	comp=Z,13nm,0.8s,baz=175,slow=5.5,SNR=43							
ABKAR	**Akbulak array**	**61.47**	**332**	*e*P	**P**		**15 44 19.8**	**+0.2**
	comp=Z,3.0nm,0.8s							
PETK	**Petropavlovsk-**	**73.48**	**32**	P	**P**		**15 45 34.9**	**-0.5**
PETK	**Petropavlovsk-**	**73.48**	**32**	P	**P**		**15 45 34.9**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=212,slow=5.1,SNR=2.4							
FINES	**FINESS Array B**	**83.95**	**332**	P	**P**		**15 46 33.9**	**+1.2**
FINES	**FINESS Array B**	**83.95**	**332**	P	**P**		**15 46 33.9**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=120,slow=5.5,SNR=2.6							
NOA	**NORSAR Array B**	**90.96**	**331**	LR	LR		16 30 44.6	
	comp=Z,20nm,20.2s,baz=115,slow=37							
TXAR	**Lajitas Array**	**145.34**	**37**	PKPbc	**PKPdf**		**15 53 42.1**	**+0.5**
TXAR	**Lajitas Array**	**145.34**	**37**	PKPbc	**PKPdf**		**15 53 42.1**	**+0.5**
	comp=Z,4.8nm,0.8s,baz=294,slow=1.1,SNR=35							
JCT	**Junction City**	**146.61**	**31**	*e*PKPbc	**PKPbc**		**15 53 45.8**	**+0.7**

NNC 19 15:44:40.9±4.1, 37°26N×71°21E, h197km±42km, mb2.3, mpv3.4, 2C-4D, Error ellipse: s-maj=37.1km s-min=25.2km az=26.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.87**	**355**	⇓P	Pn	15 46 06.4	+0.1
	1.5nm,0.2s,baz=175,slow=12,SNR=26						
KK31				⇓S	Sn	15 47 14.8	+0.8
	3.8nm,0.4s,baz=184,slow=17,SNR=11						
TKM2	**Tokmak 2**	**6.58**	**29**	⇑P	Pn	15 46 15.4	-0.5
	1.1nm,0.5s						
TKM2				⇑S	Sn	15 47 31.4	+0.3
	1.9nm,0.5s						
AB31	**Akbulak array**	**14.51**	**329**	P	P	15 47 58.5	+0.1
	0.2nm,0.2s,baz=3.8,slow=27,SNR=23						
AB31				S	S	15 50 35.1	-3.5
	0.5nm,0.5s,baz=149,slow=23,SNR=2.7						
AKTO	**Aktyubinsk**	**16.22**	**328**	⇓P	P	15 48 16.8	-0.5
	0.2nm,0.8s						
AKTO				⇓S	Sn	15 51 19.2	-0.6
	0.2nm,0.7s						

*ISCJB **19** 16:07:34.9±0.6, 33°32N±0°02×35°43E±0°04, h6km±4km, Error ellipse: s-maj=5.9km s-min=3.3km az=28.7*
*CSEM **19** 16:07:34.9±0.1, 33°33N×35°43E, h5km, ML2.8, Error ellipse: s-maj=3.2km s-min=1.7km az=113.0*
*GRAL **19** 16:07:35.1±0.3, 33°30N×35°40E, h0km±114km, MD2.8*
*NSSC **19** 16:07:35.0±0.6, 33°30N×35°44E, h2km±2km, MD1.5, ML1.7*
ISC 19 16:07:35.1±1.1, 33°32N±0°02×35°43E±0°04, h9km±9km, n23, σ0=48/42, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.23**	**124**	Pg	**Pg**	**16 07 39.5**	**-0.3**
KSDI				Sg	**Sg**	**16 07 42.9**	**-0.1**
MMA0	**Mount Meron ar**	**0.31**	**184**	Pg	**Pg**	**16 07 41.1**	**-0.1**
MMA0				Sg	**Sg**	**16 07 46.3**	**+1.0**
HNTI	**Hanita**	**0.32**	**221**	Sg	**Sb**	**16 07 47.4**	**-0.9**
RCY	**Rachaya**	**0.38**	**63**	*e*P	**Pg**	**16 07 42.7**	**0.0**
RCY				*e*S	**Sg**	**16 07 48.2**	**+0.4**
BRBR	**Barbar**	**0.45**	**79**	*e*P	**Pg**	**16 07 43.6**	**-0.2**
BRBR				*e*S	**Sg**	**16 07 50.4**	**+0.6**
BRBR				AML	AML	16 07 51.5	
	comp=E,130nm,0.2s						
BRBR				AML	AML	16 07 52.0	
	comp=N,45nm,0.2s						
BRBR				AML	AML	16 07 53.9	
	comp=Z,71nm,0.4s						
BRBR	**Barbar** SNR=94	**0.45**	**79**	*e*P	**Pg**	**16 07 43.6**	**-0.2**
BRBR				*e*S	**Sg**	**16 07 50.4**	**+0.6**
	comp=Z,71nm,0.4s,SNR=59						
BHL	**Bhannes**	**0.61**	**18**	*e*P	**Pg**	**16 07 46.5**	**-0.4**
BHL	**Bhannes**	**0.61**	**18**	*e*P	**Pg**	**16 07 46.5**	**-0.4**
OFRI	**'Ofer**	**0.79**	**208**	Pg	**Pg**	**16 07 50.5**	**+0.2**
TCHB	**Talchebab**	**0.80**	**145**	*e*P	**Pg**	**16 07 50.5**	**+0.1**
TCHB				*e*S	**Sg**	**16 08 00.8**	**0.0**
TCHB				AML	AML	16 08 01.6	
	comp=E,88nm,0.5s						
TCHB				AML	AML	16 08 05.7	
	comp=N,84nm,0.4s						
TCHB				AML	AML	16 08 10.2	
	comp=Z,35nm,0.4s						
TCHB	**Talchebab** SNR=75	**0.80**	**145**	*e*P	**Pg**	**16 07 50.5**	**+0.1**
TCHB				*e*S	**Sg**	**16 08 00.8**	**0.0**
	comp=Z,35nm,0.4s,SNR=59						
MMLI	**Mount Malkishu**	**0.88**	**180**	Pg	**Pg**	**16 07 51.8**	**-0.3**
MMLI				Sg	**Sg**	**16 08 04.1**	**+0.5**
HWQ	**Hawqa**	**1.05**	**24**	*e*P	**Pg**	**16 07 54.6**	**-0.6**
HWQ				*e*S	**Sg**	**16 08 08.8**	**0.0**
HWQ	**Hawqa**	**1.05**	**24**	*e*P	**Pg**	**16 07 54.6**	**-0.6**
HWQ				*e*S	**Sg**	**16 08 08.8**	**0.0**
HMDT	**Nahal Hemdat**	**1.07**	**175**	Pg	**Pg**	**16 07 54.9**	**-0.7**
HMDT				Sg	**Sb**	**16 08 10.5**	**+0.6**
SLTI	**Sal'it**	**1.13**	**197**	Pg	**Pb**	**16 07 56.3**	**-0.5**
SLTI				Sg	**Sb**	**16 08 12.1**	**+0.5**
SALA	**Sala**	**1.26**	**119**	*e*P	**Pn**	**16 07 58.4**	**-0.7**
SALA				*i* S	**Sb**	**16 08 15.1**	**-0.4**
SALA				AML	AML	16 08 16.2	
	comp=N,66nm,0.3s						
SALA				AML	AML	16 08 16.9	
	comp=E,2.8nm,0.3s						
SALA				AML	AML	16 08 17.8	
	comp=Z,36nm,0.4s						
SALA	**Sala** SNR=57	**1.26**	**119**	*e*P	**Pn**	**16 07 58.4**	**-0.7**
SALA				*i* S	**Sb**	**16 08 15.1**	**-0.4**
	comp=Z,36nm,0.4s,SNR=49						
HAWK	**Haweek**	**1.45**	**34**	*e*P	**Pn**	**16 08 02.0**	**+0.4**
HAWK				*e*S	**Sb**	**16 08 21.5**	**+0.6**
HAWK				AML	AML	16 08 24.7	
	comp=Z,20nm,0.5s						
HAWK				AML	AML	16 08 26.6	
	comp=E,19nm,0.4s						
HAWK				AML	AML	16 08 26.9	
	comp=N,13nm,0.3s						
HAWK	**Haweek** SNR=57	**1.45**	**34**	*e*P	**Pn**	**16 08 02.0**	**+0.4**
HAWK				*e*S	**Sb**	**16 08 21.5**	**+0.6**
	comp=N,13nm,0.3s,SNR=49						
ZALF	**Zalf**	**1.65**	**104**	*e*P	**Pn**	**16 08 04.7**	**+0.4**
ZALF				*i* S	**Sb**	**16 08 26.6**	**-0.1**
ZALF	**Zalf** SNR=57	**1.65**	**104**	*e*P	**Pn**	**16 08 04.7**	**+0.4**
ZALF				*i* S	**Sb**	**16 08 26.6**	**-0.1**
	SNR=49						
DSI	**Dead Sea**	**1.75**	**181**	Pn	**Pn**	**16 08 05.8**	**+0.2**
DSI				Sn	**Sn**	**16 08 28.5**	**+0.4**

IDC 19 16:07:59.3±2.9, 19°33N×145°82E, h155km±28km, mb3.2/7, mb1 3.4/9, mb1mx3.2/27, mbtmp3.2/9, Error ellipse: s-maj=37.5km s-min=17.2km az=90.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.78**	**189**	P	Pn	16 09 22.6	-0.5
	3.8nm,0.3s,baz=127,slow=17,SNR=14						
GUMO				S	Sn	16 10 29.0	+0.3
	1.7nm,0.3s,baz=143,slow=20,SNR=2.6						
MJAR	**Matsushiro Arr**	**18.41**	**340**	P	Pn	16 12 03.7	-0.9
	0.2nm,0.3s,baz=171,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	**40.62**	**197**	P	P	16 15 24.3	+0.2
	1.1nm,0.4s,baz=15,slow=8.6,SNR=21						
ASAR	**Alice Springs**	**44.28**	**196**	P	P	16 15 53.6	-0.1
	0.3nm,0.5s,baz=16,slow=12,SNR=7.1						
ZALV	**Zalesovo Beam**	**57.59**	**322**	P	P	16 17 32.4	-0.3
	0.4nm,0.3s,baz=114,slow=9.7,SNR=3.1						
MKAR	**Makanchi Array**	**58.12**	**314**	P	P	16 17 36.8	+0.2
	0.2nm,0.6s,baz=81,slow=8.9,SNR=3.4						
YKA	**Yellowknife Ar**	**77.38**	**28**	P	P	16 19 36.8	+0.1
	0.2nm,0.5s,baz=291,slow=5.2,SNR=3.6						
NVAR	**Mina Array Bea**	**82.66**	**52**	P	P	16 20 06.1	+0.2
	0.4nm,0.9s,baz=269,slow=6.3,SNR=3.8						
FINES	**FINESS Array B**	**86.37**	**335**	P	P	16 20 22.2	-1.5
	0.3nm,0.3s,baz=28,slow=6.3,SNR=3.6						

MAN 19 16:31:00, 18°89N×121°23E, h16km, mb4.7, ML3.7, MS3.6, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.80**	**226**	⇓*i*P	Pb	16 31 15.5	-0.1
PIP				*e*S	Sn	16 31 27.6	-0.8
APYP	**Conner**	**1.02**	**179**	*e*P	Pb	16 31 18.0	-1.4
APYP				*e*S	Sn	16 31 34.4	+0.7
ABRA	**Dolores**	**1.33**	**202**	*e*P	Pn	16 31 24.0	+0.1
ABRA				*e*S	Sb	16 31 41.8	+0.5
CAUP	**Cauayan**	**2.02**	**164**	*e*P	Pb	16 31 35.4	-0.9
PALP	**Palanan**	**2.15**	**148**	⇓*e*P	Pn	16 31 33.6	-1.6
BALP	**Baler**	**3.15**	**174**	*e*P	Pn	16 31 50.6	+1.6

IDC 19 16:44:08.3±2.7, 24°89N×37°89E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.4/27, mbtmp3.7/5, Error ellipse: s-maj=88.7km s-min=23.3km az=158.0, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEST	**Kesra**	**26.82**	**300**	P	P	16 49 50.7	+0.2
	1.4nm,0.9s,baz=74,slow=15,SNR=4.9						
TORD	**Torodi Ar. Bea**	**36.05**	**258**	P	P	16 51 11.6	-0.2
	1.0nm,1.0s,baz=62,slow=8.8,SNR=4.3						
BVAR	**Borovoye Array**	**37.23**	**32**	P	P	16 51 20.7	-0.7
	0.6nm,0.6s,baz=209,slow=12,SNR=3.5						
KURBB	**Kurchatov Arra**	**40.39**	**40**	P	P	16 51 48.0	0.0
	1.2nm,0.7s,baz=251,slow=8.4,SNR=7.9						
MKAR	**Makanchi Array**	**41.41**	**47**	P	P	16 51 56.6	+0.1
	0.8nm,0.6s,baz=253,slow=7.1,SNR=12						

*IDC **19** 16:44:11.8±1.5, 62°37N×150°92W, h58km±16km, mb3.3/9, mb1 3.6/12, mb1mx3.4/28, mbtmp3.3/12, MS2.8/3, Ms1 2.8/3, ms1mx2.6/25, Error ellipse: s-maj=17.4km s-min=9.2km az=109.0*
*ISCJB **19** 16:44:12.0±0.2, 62°32N±0°02×150°89W±0°05, h82km±3km, mb3.6/10, Error ellipse: s-maj=4.4km s-min=3.2km az=25.7*
*NEIC **19** 16:44:13.8, 62°32N×150°92W, h73km, mb4.2/1, After AEIC.*
ISC 19 16:44:13.2±0.7, 62°33N±0°03×150°91W±0°03, h74km±6km, n88, σ0=84/100, mb3.5/10, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRAP	**Trapper Creek**	**0.31**	**88**	P	**Pn**	**16 44 24.7**	**-0.1**
TRAP				S	**Sn**	**16 44 33.9**	**+0.4**
PPLA	**Purkeypile**	**0.82**	**315**	P	**Pn**	**16 44 29.9**	**-0.1**
PPLA				S	**Sn**	**16 44 42.1**	**-0.2**
HUR	**Hurricane**	**0.88**	**41**	P	**Pn**	**16 44 30.7**	**+0.3**
HUR				S	**Sn**	**16 44 43.5**	**+0.1**
STLK	**Strandline Lak**	**0.94**	**208**	P	**Pn**	**16 44 30.8**	**-0.5**
PMR	**Palmer**	**1.12**	**130**	P	**Pn**	**16 44 33.2**	**-0.1**
PMR				S	**Sn**	**16 44 48.9**	**+0.6**
TRF	**Thorofare Moun**	**1.17**	**14**	*e*P	**Pn**	**16 44 33.9**	**-0.2**
CRP	**Crater Peak**	**1.22**	**210**	P	**Pn**	**16 44 34.4**	**-0.3**
CRP				S	**Sn**	**16 44 50.6**	**-0.3**
SPU	**Mount Spurr**	**1.27**	**206**	P	**Pn**	**16 44 34.8**	**-0.5**
BGL	**Barrier Glacie**	**1.28**	**214**	P	**Pn**	**16 44 35.8**	**+0.4**
CKL	**Chakachamna La**	**1.32**	**212**	P	**Pn**	**16 44 35.8**	**-0.3**
SML	**Sawmill**	**1.32**	**112**	P	**Pn**	**16 44 36.9**	**+0.9**
RND	**Reindeer**	**1.44**	**40**	P	**Pn**	**16 44 37.7**	**+0.2**
RND				S	**Sn**	**16 44 56.3**	**+0.5**
MCK	**McKinley**	**1.68**	**32**	*e*Pn	**Pn**	**16 44 41.0**	**+0.4**
CHUM	**Lake Minchumin**	**1.69**	**338**	P	**Pn**	**16 44 41.1**	**+0.4**
CHUM				S	**Sn**	**16 45 01.4**	**-0.1**
DHY	**Denali Highway**	**1.80**	**64**	P	**Pn**	**16 44 42.5**	**+0.1**
DHY				S	**Sn**	**16 45 05.2**	**+0.8**
SLKM	**Skilak Lake**	**1.85**	**169**	P	**Pn**	**16 44 43.5**	**+0.5**
DFR	**Drift River**	**1.94**	**207**	P	**Pn**	**16 44 44.2**	**+0.1**
NCT	**North Crescent**	**2.02**	**210**	P	**Pn**	**16 44 45.5**	**+0.3**
RSO	**Redoubt South**	**2.07**	**206**	*e*P	**Pn**	**16 44 46.1**	**+0.1**
SEW	**Seward**	**2.34**	**162**	*e*P	**Pn**	**16 44 49.3**	**-0.1**
NEA	**Nenana**	**2.41**	**19**	P	**Pn**	**16 44 50.2**	**-0.1**
TT01	**Tatalina**	**2.43**	**286**	P	**Pn**	**16 44 50.4**	**-0.3**
ILIM	**Iliamna**	**2.46**	**205**	P	**Pn**	**16 44 51.1**	**-0.1**
VLZ	**Valdez**	**2.49**	**117**	P	**Pn**	**16 44 50.7**	**-0.7**
WRH	**Wood River Hil**	**2.50**	**29**	P	**Pn**	**16 44 51.7**	**+0.1**
SVW2	**Sparrevohn**	**2.54**	**243**	P	**Pn**	**16 44 51.7**	**-0.5**
BRLK	**Bradley Lake**	**2.57**	**180**	P	**Pn**	**16 44 53.0**	**+0.4**
PAX	**Paxson**	**2.59**	**73**	P	**Pn**	**16 44 53.8**	**+0.8**
HARP	**HAARP**	**2.68**	**86**	P	**Pn**	**16 44 55.0**	**+0.9**
CCB	**Clear Creek Bu**	**2.71**	**30**	P	**Pn**	**16 44 54.5**	**0.0**
MLY	**Manley**	**2.72**	**2**	P	**Pn**	**16 44 54.5**	**-0.1**
DIV	**Divide**	**2.73**	**114**	P	**Pn**	**16 44 53.7**	**-1.0**
HDA	**Harding Lake**	**2.75**	**39**	P	**Pn**	**16 44 55.5**	**+0.6**
COLA	**College**	**2.90**	**27**	P	**Pn**	**16 44 57.2**	**+0.2**
MDM	**Murphy Dome**	**2.90**	**23**	P	**Pn**	**16 44 57.2**	**+0.2**
OPT	**Oil Point**	**2.91**	**204**	P	**Pn**	**16 44 57.4**	**+0.2**
IL1	**Eielson Array**	**3.04**	**34**	P	**Pn**	**16 44 59.1**	**+0.2**
ILAR	**Eielson Array**	**3.04**	**34**	P	**Pn**	**16 44 58.9**	**-0.1**
ILAR				S	**Sn**	**16 45 32.1**	**-2.2**
ILAR	**Eielson Array**	**3.04**	**34**	P	**Pn**	**16 44 58.9**	**-0.1**
	17nm,0.3s,baz=220,slow=14,SNR=606						
ILAR				S	**Sn**	**16 45 32.1**	**-2.2**
	47nm,0.3s,baz=220,slow=22,SNR=37						
EYAK	**Cordova Ski Ar**	**3.05**	**123**	P	**Pn**	**16 44 58.2**	**-0.9**
GLM	**Gilmore Dome**	**3.10**	**29**	P	**Pn**	**16 44 59.3**	**-0.4**
MENT	**Mentasta**	**3.38**	**76**	*e*Pn	**Pn**	**16 45 03.8**	**+0.2**
DOT	**Dot Lake**	**3.40**	**64**	P	**Pn**	**16 45 04.4**	**+0.6**
MID	**Middleton Isla**	**3.67**	**140**	P	**Pn**	**16 45 07.6**	**+0.2**
VRDI	**Verde Repeater**	**3.71**	**104**	P	**Pn**	**16 45 07.2**	**-1.0**
MCARA	**McCarthy VSAT**	**3.86**	**101**	P	**Pn**	**16 45 09.7**	**-0.3**
IM3	**Indian Mountai**	**3.88**	**343**	P	**Pn**	**16 45 10.4**	**+0.1**
PRP	**Porcupine Dome**	**3.99**	**34**	P	**Pn**	**16 45 12.3**	**+0.4**
BCA3	**Beaver Creek A**	**4.27**	**76**	P	**Pn**	**16 45 15.8**	**+0.2**
BALM	**Baldy**	**4.28**	**104**	P	**Pn**	**16 45 14.9**	**-1.0**
KIAG	**Kiagna River**	**4.32**	**105**	P	**Pn**	**16 45 15.2**	**-1.3**
KAKN	**Katmai Knife C**	**4.54**	**209**	P	**Pn**	**16 45 19.2**	**-0.2**
BARN	**Barnard Glacie**	**4.58**	**102**	P	**Pn**	**16 45 19.7**	**-0.4**
KDAK	**Kodiak Island**	**4.63**	**191**	P	**Pn**	**16 45 19.8**	**-0.8**
KDAK				S	**Sn**	**16 46 12.2**	**-0.8**
KDAK	**Kodiak Island**	**4.63**	**191**	P	**Pn**	**16 45 19.8**	**-0.8**
	1.7nm,0.3s,baz=16,slow=7.0,SNR=18						
KDAK				S	**Sn**	**16 46 12.2**	**-0.8**
	9.7nm,0.3s,baz=300,slow=20,SNR=6.5						
GRNC	**Granite Creek**	**4.67**	**106**	P	**Pn**	**16 45 20.2**	**-1.0**
KABR	**Katmai Barrier**	**4.67**	**207**	P	**Pn**	**16 45 21.4**	**+0.2**
COLD	**Coldfoot**	**4.93**	**3**	*e*Pn	**Pn**	**16 45 25.1**	**+0.5**
EGAK	**Eagle**	**5.01**	**56**	*e*Pn	**Pn**	**16 45 26.1**	**+0.4**
	62nm,0.6s						
OHAK	**Old Harbor**	**5.26**	**194**	*e*Pn	**Pn**	**16 45 27.4**	**-1.8**
	23nm,0.6s						
DAWY	**Dawson**	**5.50**	**66**	P	**Pn**	**16 45 32.8**	**+0.3**
BM3	**Burnt Mountain**	**5.77**	**25**	P	**Pn**	**16 45 35.6**	**-0.5**
PNL	**Peninsula**	**6.20**	**110**	*e*Pn	**Pn**	**16 45 43.4**	**+1.4**
	36nm,0.7s						
INK	**Inuvik**	**9.40**	**43**	P	**Pn**	**16 46 25.2**	**-0.3**
INK				S	**Sn**	**16 48 06.8**	**-2.6**
INK	**Inuvik**	**9.40**	**43**	P	**Pn**	**16 46 25.2**	**-0.3**
	0.5nm,0.3s,baz=253,slow=18,SNR=18						
INK				S	**Sn**	**16 48 06.8**	**-2.6**
	0.9nm,0.3s,baz=327,slow=17,SNR=4.4						
INK				LR	LR	16 50 48.0	
	comp=Z,47nm,18.4s,baz=343,slow=42						
DLBC	**Lease Lake**	**11.02**	**101**	LR	LR	16 51 31.7	
	comp=Z,39nm,18.0s,baz=336,slow=40						
YKA	**Yellowknife Ar**	**16.68**	**73**	P	**Pn**	**16 48 00.3**	**-1.5**
YKA	**Yellowknife Ar**	**16.68**	**73**	P	**Pn**	**16 48 00.3**	**-1.5**
	0.0nm,0.3s,baz=284,slow=13,SNR=2.8						
NEW	**Newport**	**23.48**	**111**	LR	LR	16 59 39.2	
	comp=Z,22nm,19.5s,baz=137,slow=40						
PDAR	**Pinedale Array**	**31.09**	**110**	P	P	**16 50 24.1**	**-0.2**
PDAR	**Pinedale Array**	**31.09**	**110**	P	P	**16 50 24.1**	**-0.2**
	0.2nm,0.4s,baz=319,slow=9.5,SNR=2.0

ENEZ	**Enez**	**1.43 183**	*e*PN	**Pg**	**16 49 32.9**	**+0.1**
ENEZ			*e*SN	**Sb**	**16 49 51.0**	**-0.2**
ENEZ	**Enez**	**1.43 183**	*e*PN	**Pg**	**16 49 32.9**	**+0.1**
ENEZ			*e*Sn	**Sb**	**16 49 51.0**	**-0.2**
ERIK	**Erikli-Kesan**	**1.51 172**	*e*PN	**Pn**	**16 49 33.1**	**0.0**
ERIK			*e*SN	**Sn**	**16 49 51.7**	**-1.6**
ERIK	**Erikli-Kesan**	**1.51 172**	*e*PN	**Pn**	**16 49 33.1**	**0.0**
TKR	**Tekirdag**	**1.52 140**	*e*PN	**Pn**	**16 49 33.3**	**-0.1**
TKR	**Tekirdag**	**1.52 140**	*e*Pn	**Pn**	**16 49 33.3**	**-0.1**
MFT	**Murefte**	**1.59 150**	*e*PN	**Pb**	**16 49 35.3**	**0.0**
MFT	**Murefte**	**1.59 150**	*e*Pn	**Pb**	**16 49 35.3**	**0.0**
PGB	**Panagyurishte**	**1.59 285**	P	**Pb**	**16 49 35.6**	**+0.3**
PGB	**Panagyurishte**	**1.59 285**	P	**Pb**	**16 49 35.6**	**+0.3**
ZIMR		**1.62 337**	⇑*i*P	**Sg**	**16 49 35.6**	**-0.2**
ZIMR		**1.62 337**	S	**Sg**	**16 49 57.6**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.64 154**	*e*PN	**Pn**	**16 49 34.6**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.64 154**	*e*Pn	**Pn**	**16 49 34.6**	**-0.4**
SART	**Tekirdag**	**1.64 154**	*e*P	**Pg**	**16 49 36.7**	**-0.1**
SART			*e*S	**Sg**	**16 49 58.7**	**+0.7**
SART	**Tekirdag**	**1.64 154**	*e*P	**Pg**	**16 49 36.7**	**-0.1**
SART			*e*S	**Sg**	**16 49 58.7**	**+0.7**
CTYL	**Yal??k??y-??at**	**1.68 114**	*e*PN	**Pb**	**16 49 36.5**	**-0.3**
CTYL	**Yal??k??y-??at**	**1.68 114**	*e*Pn	**Pb**	**16 49 36.5**	**-0.3**
SLVT	**Silivri**	**1.75 122**	*e*PN	**Pb**	**16 49 37.3**	**-0.6**
SLVT	**Silivri**	**1.75 122**	*e*Pn	**Pb**	**16 49 37.3**	**-0.6**
KAVA	**Kavala**	**1.75 229**	P	**Pn**	**16 49 37.3**	**+0.9**
KAVA			S	**Sg**	**16 50 01.7**	**+0.2**
KAVA	**Kavala**	**1.75 229**	P	**Pn**	**16 49 37.3**	**+0.9**
KAVA			S	**Sg**	**16 50 01.7**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.78 174**	*e*PN	**Pn**	**16 49 37.1**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.78 174**	*e*Pn	**Pn**	**16 49 37.1**	**+0.3**
LPK	**Lapseki**	**1.84 168**	*e*PN	**Pn**	**16 49 38.6**	**+0.9**
LPK	**Lapseki**	**1.84 168**	*e*Pn	**Pn**	**16 49 38.6**	**+0.9**
MRMT	**Marmara Adasi**	**1.87 147**	*e*PN	**Pn**	**16 49 38.4**	**+0.2**
MRMT	**Marmara Adasi**	**1.87 147**	*e*Pn	**Pn**	**16 49 38.4**	**+0.2**
CTKS	**Kestanelik-??a**	**1.93 118**	*e*PN	**Pn**	**16 49 39.9**	**+0.9**
CTKS	**Kestanelik-??a**	**1.93 118**	*e*Pn	**Pn**	**16 49 39.9**	**+0.9**
KRBG	**Karabiga-Canak**	**1.94 156**	*e*PN	**Pn**	**16 49 39.8**	**+0.7**
KRBG	**Karabiga-Canak**	**1.94 156**	*e*Pn	**Pn**	**16 49 39.8**	**+0.7**
NVR	**Nevrokopi**	**1.96 246**	P	**Pn**	**16 49 39.9**	**+0.5**
NVR			S	**Sb**	**16 50 07.6**	**+1.1**
NVR	**Nevrokopi**	**1.96 246**	P	**Pn**	**16 49 39.9**	**+0.5**
NVR			S	**Sb**	**16 50 07.6**	**+1.1**
MMB	**Musomiste**	**1.97 254**	P	**Pb**	**16 49 42.0**	**+0.3**
MMB	**Musomiste**	**1.97 254**	P	**Pb**	**16 49 42.0**	**+0.3**
PSN	**Preselentsi**	**2.08 43**	*e*P	**Pn**	**16 49 41.2**	**+0.2**
PSN	**Preselentsi**	**2.08 43**	*e*P	**Pn**	**16 49 41.2**	**+0.2**
PSN	**Preselentsi**	**2.08 43**	Pg	**Pg**	**16 49 47.8**	**+2.6**
BGKT	**Bogazkoy**	**2.14 117**	*e*PN	**Pb**	**16 49 43.8**	**-0.8**
BGKT	**Bogazkoy**	**2.14 117**	*e*Pn	**Pb**	**16 49 43.8**	**-0.8**
MPEP	**Malo Peshtene**	**2.19 304**	P	**Pn**	**16 49 42.5**	**+0.1**
MPEP			Pg	**Pg**	**16 49 47.8**	**+0.4**
BNT	**Bandirma**	**2.21 145**	*e*PN	**Pn**	**16 49 43.3**	**+0.5**
BNT	**Bandirma**	**2.21 145**	*e*Pn	**Pn**	**16 49 43.3**	**+0.5**
SRS	**Serrai**	**2.25 243**	P	**Pn**	**16 49 43.6**	**+0.3**
SRS			S	**Sb**	**16 50 14.7**	**0.0**
SRS	**Serrai**	**2.25 243**	P	**Pn**	**16 49 43.6**	**+0.3**
SRS			S	**Sb**	**16 50 14.7**	**0.0**
KLYT	**Kilyos**	**2.29 113**	*e*PN	**Pb**	**16 49 46.2**	**-0.9**
KLYT	**Kilyos**	**2.29 113**	*e*Pn	**Pb**	**16 49 46.2**	**-0.9**
VTS	**Vitosha**	**2.29 282**	P	**Pn**	**16 49 44.0**	**0.0**
VTS	**Vitosha**	**2.29 282**	P	**Pn**	**16 49 44.0**	**0.0**
EZN	**Ezine**	**2.34 178**	*e*PN	**Pb**	**16 49 46.7**	**-1.4**
EZN	**Ezine**	**2.34 178**	*e*Pn	**Pb**	**16 49 46.7**	**-1.4**
KKB	**Krupnik**	**2.38 264**	*e*P	**Pg**	**16 49 50.7**	**-0.2**
MANR	**Mangalia**	**2.38 45**	S	**Sb**	**16 50 18.4**	**-0.1**
MANR	**Mangalia**	**2.38 45**	S	**Sb**	**16 50 18.4**	**-0.1**
ISK	**Istanbul-Kandi**	**2.38 117**	*e*PN	**Pn**	**16 49 45.8**	**+0.7**
ISK	**Istanbul-Kandi**	**2.38 117**	*e*Pn	**Pn**	**16 49 45.8**	**+0.7**
GONE	**Gonen-Balikesi**	**2.38 152**	*e*PN	**Pn**	**16 49 46.1**	**+0.9**
GONE	**Gonen-Balikesi**	**2.38 152**	*e*Pn	**Pn**	**16 49 46.1**	**+0.9**
LIA	**Limnos Island**	**2.41 200**	P	**Pn**	**16 49 46.3**	**+0.8**
LIA	**Limnos Island**	**2.41 200**	P	**Pn**	**16 49 46.3**	**+0.8**
KCTX	**Karacabey (Bur**	**2.48 139**	*e*PN	**Pn**	**16 49 47.7**	**+1.2**
KCTX	**Karacabey (Bur**	**2.48 139**	*e*Pn	**Pn**	**16 49 47.7**	**+1.2**
OUR	**Ouranopolis**	**2.50 224**	P	**Pn**	**16 49 46.7**	**-0.1**
OUR	**Ouranopolis**	**2.50 224**	P	**Pn**	**16 49 46.7**	**-0.1**
BUY	**Buyukada**	**2.53 120**	*e*PN	**Pn**	**16 49 49.2**	**+2.0**
BUY	**Buyukada**	**2.53 120**	*e*Pn	**Pn**	**16 49 49.2**	**+2.0**
ARMT	**Armutlu**	**2.54 128**	*e*PN	**Pn**	**16 49 49.1**	**+1.7**
ARMT	**Armutlu**	**2.54 128**	*e*Pn	**Pn**	**16 49 49.1**	**+1.7**
SOH	**Sokhos**	**2.56 239**	P	**Pn**	**16 49 47.5**	**-0.1**
SOH	**Sokhos**	**2.56 239**	P	**Pn**	**16 49 47.5**	**-0.1**
AMRR	**Amara**	**2.57 18**	S	**Sb**	**16 50 25.5**	**+1.7**
BALY	**Balya**	**2.64 156**	*i*P	**Pn**	**16 49 49.5**	**+0.8**
BALY			*i*S	**Sn**	**16 50 21.5**	**+0.2**
BALY	**Balya**	**2.64 156**	*i*P	**Pn**	**16 49 49.5**	**+0.8**
BALY			*i*S	**Sn**	**16 50 21.5**	**+0.2**
SILT	**Sile**	**2.74 111**	*e*PN	**Pb**	**16 49 52.6**	**-2.3**
SILT	**Sile**	**2.74 111**	*e*Pn	**Pb**	**16 49 52.6**	**-2.3**
PLG	**Polygyros**	**2.77 231**	P	**Pn**	**16 49 52.0**	**+1.5**
PLG	**Polygyros**	**2.77 231**	P	**Pn**	**16 49 52.0**	**+1.5**
TIRR	**Tirgusor**	**2.78 34**	⇓*i*P	**Pb**	**16 49 56.6**	**+1.0**
BALB	**Balikesir**	**2.81 153**	*e*PN	**Pn**	**16 49 52.3**	**+1.2**
BALB	**Balikesir**	**2.81 153**	*e*Pn	**Pn**	**16 49 52.3**	**+1.2**
HORT	**Hortiatis**	**2.84 237**	P	**Pn**	**16 49 52.0**	**+0.5**
HORT	**Hortiatis**	**2.84 237**	P	**Pn**	**16 49 52.0**	**+0.5**
ISR	**Istrita**	**2.96 4**	⇓*i*P	**Pg**	**16 50 02.2**	**+0.2**
ISR	**Istrita**	**2.96 4**	S	**Sg**	**16 50 38.8**	**-1.5**
IZI	**Iznik**	**3.04 126**	*e*PN	**Pn**	**16 49 56.3**	**+2.0**
IZI	**Iznik**	**3.04 126**	*e*Pn	**Pn**	**16 49 56.3**	**+2.0**
GRG	**Griva**	**3.13 248**	P	**Pn**	**16 49 56.8**	**+1.1**
GRG	**Griva**	**3.13 248**	P	**Pn**	**16 49 56.8**	**+1.1**
ADVT	**Abdulvahap**	**3.15 122**	*e*PN	**Pn**	**16 49 57.8**	**+2.1**
ADVT	**Abdulvahap**	**3.15 122**	*e*Pn	**Pn**	**16 49 57.8**	**+2.1**
CFR	**Carcaliu**	**3.31 24**	⇓*i*P	**Pb**	**16 50 05.4**	**+0.9**
CFR	**Carcaliu**	**3.31 24**	S	**Sb**	**16 50 44.3**	**-0.8**
MLR	**Muntele Rosu**	**3.33 356**	⇑*i*P	**Pb**	**16 50 07.2**	**+2.2**
MLR	**Muntele Rosu**	**3.33 356**	S	**Sb**	**16 50 47.6**	**+1.7**
ARR	**Arges**	**3.40 340**	⇑*i*P	**Pb**	**16 50 07.8**	**+1.5**
ARR	**Arges**	**3.40 340**	S	**Sb**	**16 50 51.3**	**+3.3**
TLCR		**3.54 31**	⇑*i*P	**Pb**	**16 50 08.2**	**-0.4**
BOLS	**Boljevac**	**3.56 299**	*e*Pn	**Pn**	**16 50 01.0**	**-0.3**
TVSB	**Tavsanli**	**3.65 137**	*e*PN	**Pn**	**16 50 04.3**	**+1.6**
TVSB	**Tavsanli**	**3.65 137**	*e*Pn	**Pn**	**16 50 04.3**	**+1.6**
GULT	**Gulveren**	**3.66 117**	*e*PN	**Pn**	**16 50 05.6**	**+2.9**
GULT	**Gulveren**	**3.66 117**	*e*Pn	**Pn**	**16 50 05.6**	**+2.9**
VRI	**Vrincioaia**	**3.71 5**	⇓*i*P	**Pb**	**16 50 11.2**	**-0.3**
ALT	**Altintas**	**4.28 135**	*e*PN	**Pn**	**16 50 13.2**	**+1.8**
ALT	**Altintas**	**4.28 135**	*e*Pn	**Pn**	**16 50 13.2**	**+1.8**
GRUS	**Gruza**	**4.40 295**	⇓*i*Pn	**Sn**	**16 50 12.7**	**-0.2**
GRUS			*e*Sn	**Sn**	**16 51 03.7**	**-0.9**
DIVS	**Divibare**	**4.96 295**	⇓*i*Pn	**Pn**	**16 50 20.0**	**-0.8**
DIVS			*e*Sn	**Sn**	**16 51 15.4**	**-3.2**
KOLS	**Kolonicke sedl**	**7.32 339**	*e*SN	**Sn**	**16 52 12.9**	**-3.5**
VYHS	**Vyhne**	**8.20 323**	*e*PN	Pn	16 51 10.3	+5.3

WEL 19 16:52:18.9±0.6, **38°.53S**×**175°.72E, h187**km±5km, **ML3.5**/11, **3C, Error ellipse: s-maj=3.8km s-min=3.8km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVZ	**Karewarewa**	**0.57**	**186**	PN	Pn	16 52 43.5	-1.4
NGZ	**Ngauruhoe**	**0.66**	**188**	PN	Pn	16 52 45.4	+0.1
WPVZ	**Whakapapa**	**0.69**	**191**	PN	Pn	16 52 45.6	0.0
FWVZ	**Far West T-bar**	**0.74**	**190**	PN	Pn	16 52 45.8	-0.1
TRVZ	**Turoa**	**0.79**	**190**	PN	Pn	16 52 46.2	0.0
WNVZ	**Wahianoa**	**0.81**	**187**	PN	Pn	16 52 46.2	0.0
PKVZ	**Pokaka**	**0.82**	**201**	PN	Pn	16 52 46.1	0.0
MTVZ	**Mangateitei**	**0.88**	**193**	PN	Pn	16 52 46.5	0.0
BKZ	**Black Stump Fm**	**0.88**	**137**	⇑PN	Pn	16 52 46.5	-0.1
BKZ				SN	Sn	16 53 05.5	-2.6
MOVZ	**Moawhango**	**0.88**	**178**	PN	Pn	16 52 46.2	-0.3
BHHZ	**Black Hill Sta**	**1.00**	**164**	⇑PN	Pn	16 52 47.1	-0.3
NMHZ	**Naumai**	**1.03**	**124**	PN	Pn	16 52 48.4	+0.8
NMHZ				SN	Sn	16 53 09.5	-0.4
URZ	**Urewera**	**1.13**	**77**	PN	Pn	16 52 47.8	-0.5
MCHZ	**McNeill Hill**	**1.19**	**141**	PN	Pn	16 52 49.6	+0.8
MCHZ				SN	Sn	16 53 11.7	-0.3
WAZ	**Wanganui**	**1.35**	**205**	PN	Pn	16 52 50.0	-0.1
MWZ	**Matawai**	**1.44**	**83**	PN	Pn	16 52 50.8	-0.1
MWZ				SN	Sn	16 53 13.0	-2.6
PNHZ	**Pukenui**	**1.44**	**165**	PN	Pn	16 52 50.6	-0.3
TSZ	**Takapari Road**	**1.54**	**173**	PN	Pn	16 52 51.5	-0.4
KAHZ	**Kahuranaki**	**1.56**	**145**	PN	Pn	16 52 52.3	+0.3
KNZ	**Kokohu**	**1.61**	**109**	PN	Pn	16 52 52.7	+0.3
WPHZ	**Waipukurau**	**1.64**	**160**	⇑PN	Pn	16 52 52.5	-0.2
PXZ	**Pawanui**	**1.75**	**150**	PN	Pn	16 52 53.6	-0.2
PXZ				SN	Sn	16 53 18.4	-2.7
DVHZ	**Dannevirke**	**1.81**	**169**	PN	Pn	16 52 53.8	-0.7
PRHZ	**Porangahau**	**1.88**	**158**	PN	Pn	16 52 54.8	-0.3
MRZ	**Mangatainoka R**	**2.14**	**183**	PN	Pn	16 52 56.8	-1.1
OGWZ	**Otaki Gorge**	**2.33**	**190**	PN	Pn	16 52 59.1	-0.9
HOWZ	**Holdsworth Sta**	**2.38**	**184**	PN	Pn	16 52 59.1	-1.4
KIW	**Kapiti Island**	**2.42**	**195**	PN	Pn	16 52 59.6	-1.4
TMWZ	**Te Maipa**	**2.58**	**177**	PN	Pn	16 53 01.5	-1.4
CAW	**Cannon Point**	**2.63**	**191**	PN	Pn	16 53 02.1	-1.4
DUWZ	**D'Urville Isla**	**2.66**	**211**	PN	Pn	16 53 02.3	-1.6
TCW	**Tory Channel**	**2.91**	**202**	PN	Pn	16 53 05.0	-1.7
TUWZ	**Tuamarina**	**3.21**	**205**	PN	Pn	16 53 08.5	-1.8
NNZ	**Nelson**	**3.24**	**213**	PN	Pn	16 53 08.8	-1.8
QRZ	**Quartz Range**	**3.37**	**226**	PN	Pn	16 53 09.4	-2.9
THZ	**Tophouse**	**3.89**	**213**	PN	Pn	16 53 17.0	-1.9
KHZ	**Kahutara**	**4.23**	**202**	PN	Pn	16 53 21.0	-2.0

BJI ***19*** *16:54:22.4,24°.91N×36°.83E, h10km, mB5.1/33, mb4.8/41, Ms5.0/35, Ms7 4.6/37*

CSEM ***19*** *16:54:29.9±0.1, 25°.29N×37°.75E, h2km, mb4.9/99, Ms4.7, Mw5.0*

ISCJB ***19*** *16:54:29.9±0.2, 25°.30N±0°.02×37°.74E±0°.02, h14km, mb4.8/167, MS4.3/46, Error ellipse: s-maj=3.5km s-min=2.1km az=7.4*

IDC ***19*** *16:54:29.3±0.5, 25°.24N×37°.78E, h0km, mb4.5/32, mb1 4.6/37, mb1mx4.6/41, mbtmp4.5/37, ML3.8/4, MS4.2/24, Ms1 4.2/24, ms1mx4.0/42, Error ellipse: s-maj=12.4km s-min=11.7km az=39.0*

DJA ***19*** *16:54:30.6±0.5, 25°.N±8°.×3°.8E±°, h10km, M5.9/8, mB5.9/3, mb4.9/8, MLv6.4/2, Mw(mB)5.5/3*

NEIC ***19*** *16:54:31.1±0.2, 25°.25N×37°.70E, h10km, mb5.1/57, Error ellipse: s-maj=4.9km s-min=3.9km az=6.0*

NEIC Felt at Yanbu' al Bahr.

GCMT ***19*** *16:54:31.7±0.2, 25°.20N×37°.76E, h12km, MW5.0, Moment Tensor Solution. s32,c37; s75,c127; Moment tensor: Scale 10^16Nm; Mrr=4.14±.09; Mθθ 1.21±.09; Mφφ 2.94±.09; Mrθ 0.08±.35; Mθφ -1.95±.07; Mφr -0.44±.29; Best double couple: Mo 4.20000×10^16 NP1:φs 145.00000°, δ42.00000°, λ -94.00000°. NP2:φs 329.00000°, δ48.00000°, λ -87.00000°. Principal axes: T 4.2300, Plg3.0000°, Azm57.0000°; N -0.0500, Plg2.0000°, Azm147.0000°; P -4.1700, Plg86.0000°, Azm278.0000°; Data Used: II IU IC G CN.*

HLW ***19*** *16:54:32.0, 25°.29N×37°.56E, h9km±10km, Md0.0, Ml3.4*

MOS ***19*** *16:54:33.0±0.8, 25°.35N×37°.74E, h33km, mb5.1/87, Error ellipse: s-maj=6.8km s-min=3.2km az=110.6*

TEH ***19*** *16:54:35.0, 25°.24N×37°.74E, h35km, ML4.9*

SZGRF ***19*** *16:54:35.2, 25°.62N×37°.94E, h33km, mb5.2, Western Arabian Peninsula*

NSSC ***19*** *16:54:43.5±1.9, 26°.41N×38°.07E, h0km±166km, ML4.8*

ISC 19 16:54:31.3±0.4, 25°.24N±0°.03×37°.71E±0°.03, h13km±1km, **n894, σ1§14/941, mb4.9/167, MS4.3/47, 35C-42D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMRS	**Mersa Alam**	**2.62**	**266**	P	**Pn**	**16 55 10.8**	**-2.5**
EMRS				S	**Sn**	**16 55 41.2**	**-3.8**
HAGS	**Hagol**	**2.62**	**252**	P	**Pn**	**16 55 11.2**	**-2.2**
HAGS				S	**Sn**	**16 55 42.3**	**-2.8**
HAGS	**Hagol** baz=250	**2.62**	**252**	P	**Pn**	**16 55 11.2**	**-2.2**
HAGS	baz=250			S	**Sn**	**16 55 41.1**	**-4.1**
HAGS	**Hagol**	**2.62**	**252**	P	**Pn**	**16 55 11.2**	**-2.2**
HAGS				S	**Sn**	**16 55 42.3**	**-2.8**
HADB		**2.80**	**273**	P	**Pn**	**16 55 13.6**	**-2.2**
HADB	baz=272	**2.80**	**273**	P	**Pn**	**16 55 13.5**	**-2.4**
HADB		**2.80**	**273**	P	**Pn**	**16 55 13.6**	**-2.2**
HQSR		**3.05**	**280**	P	**Pn**	**16 55 17.1**	**-2.2**
HQSR	baz=280	**3.05**	**280**	P	**Pn**	**16 55 17.1**	**-2.2**
HQSR		**3.05**	**280**	P	**Pn**	**16 55 17.1**	**-2.2**
HSFG		**3.66**	**292**	P	**Pn**	**16 55 25.9**	**-1.7**
HSFG				S	**Sn**	**16 56 06.4**	**-4.2**
HSFG	baz=293	**3.66**	**292**	P	**Pn**	**16 55 25.9**	**-1.7**
HSFG		**3.66**	**292**	P	**Pn**	**16 55 26.0**	**-1.7**
HSFG				S	**Sn**	**16 56 06.4**	**-4.2**
HEDF	**Idfu** baz=269	**4.11**	**269**	P	**Pn**	**16 55 33.4**	**-0.5**
HEDF	**Idfu**	**4.11**	**269**	P	**Pn**	**16 55 33.3**	**-0.5**
NMAN	**Kulet Umm Tihe** baz=253	**4.42**	**254**	P	**Pn**	**16 55 38.3**	**+0.1**
NMAN	**Kulet Umm Tihe**	**4.42**	**254**	P	**Pn**	**16 55 38.3**	**+0.1**
HDHB	**Dhahab**	**4.43**	**322**	P	**Pn**	**16 55 36.4**	**-1.9**
HDHB	**Dhahab** baz=324	**4.43**	**322**	P	**Pn**	**16 55 36.5**	**-1.9**
HDHB	**Dhahab**	**4.43**	**322**	P	**Pn**	**16 55 36.5**	**-1.8**
NAHD	**NAHD** baz=253	**4.72**	**253**	P	**Pn**	**16 55 41.7**	**-0.6**
NAHD	**NAHD**	**4.72**	**253**	P	**Pn**	**16 55 41.7**	**-0.6**
HBST	**Basata**	**4.77**	**327**	P	**Pn**	**16 55 42.5**	**-0.4**
HBST	**Basata** baz=328	**4.77**	**327**	P	**Pn**	**16 55 42.5**	**-0.4**
HBST	**Basata**	**4.77**	**327**	P	**Pn**	**16 55 42.5**	**-0.4**
NNAL	**NNAL** baz=248	**5.00**	**248**	P	**Pn**	**16 55 46.3**	**+0.2**
NNAL	**NNAL**	**5.00**	**248**	P	**Pn**	**16 55 46.3**	**+0.2**
EIL	**Elat**	**5.05**	**332**	Pn	**Pn**	**16 55 45.1**	**-1.7**
EIL				Pg	**Pb**	**16 56 00.8**	**+1.3**
EIL				Lg	Lg	16 57 03.5	
EIL	**Elat** 3.2nm,0.3s,baz=145,slow=5.6,SNR=6.8	**5.05**	**332**	Pn	**Pn**	**16 55 45.1**	**-1.7**
EIL	25nm,0.3s,baz=150,slow=10,SNR=11			Pg	**Pb**	**16 56 00.8**	**+1.3**
EIL	197nm,0.3s,baz=99,slow=11,SNR=17			Lg	Lg	16 57 03.5	
EIL	**Elat**	**5.05**	**332**	Pn	**Pn**	**16 55 46.3**	**-0.5**
NGMR	**NGMR** baz=251	**5.13**	**252**	P	**Pn**	**16 55 47.8**	**-0.1**
NGMR	**NGMR**	**5.13**	**252**	P	**Pn**	**16 55 47.8**	**-0.1**
MBRI	**Mt Berech**	**5.17**	**332**	Pn	**Pn**	**16 55 48.1**	**-0.5**
HRDS	**Abu Rudays** baz=313	**5.24**	**312**	P	**Pn**	**16 55 49.2**	**-0.2**
HRFI	**Mount Harif**	**5.33**	**334**	Pn	**Pn**	**16 55 49.8**	**-0.9**
GRB	**Gharib** baz=306	**5.34**	**305**	P	**Pn**	**16 55 50.0**	**-0.8**
GRB	**Gharib**	**5.34**	**305**	P	**Pn**	**16 55 50.0**	**-0.8**
KRMI	**Paran Flat**	**5.53**	**332**	Pn	**Pn**	**16 55 52.9**	**-0.6**
PRNI	**Paran**	**5.63**	**335**	Pn	**Pn**	**16 55 53.6**	**-1.2**
HNKL	**Nakhl** baz=327	**5.73**	**325**	P	**Pn**	**16 55 55.5**	**-0.5**
HNKL	**Nakhl**	**5.73**	**325**	P	**Pn**	**16 55 55.6**	**-0.5**
ZFRI	**Zfri**	**5.75**	**338**	Pn	**Pn**	**16 55 55.1**	**-1.3**
HMSM	**Jabal Masmas** baz=247	**5.82**	**247**	P	**Pn**	**16 55 57.3**	**0.0**
RMNI	**Mount Ramon**	**5.94**	**335**	Pn	**Pn**	**16 55 58.1**	**-1.0**
ZAF	baz=313	**6.11**	**312**	P	**Pn**	**16 56 01.2**	**-0.2**
ZAF		**6.11**	**312**	P	**Pn**	**16 56 01.2**	**-0.2**
KZIT	**Kziot**	**6.36**	**333**	Pn	**Pn**	**16 56 03.9**	**-0.9**
RTMI	**Retamim**	**6.38**	**336**	Pn	**Pn**	**16 56 03.8**	**-1.2**
GTR	**Jabal at Tayr** baz=274	**6.48**	**274**	P	**Pn**	**16 56 05.6**	**-0.8**
GTR	**Jabal at Tayr**	**6.48**	**274**	P	**Pn**	**16 56 05.6**	**-0.8**
AKRG	**Al Kharijah** baz=274	**6.53**	**274**	P	**Pn**	**16 56 06.8**	**-0.4**
DSI	**Dead Sea**	**6.63**	**342**	Pn	**Pn**	**16 56 08.5**	**0.0**
AMAG	**Maghara** baz=326	**6.70**	**325**	P	**Pn**	**16 56 08.9**	**-0.5**
AMAG	**Maghara**	**6.70**	**325**	P	**Pn**	**16 56 08.9**	**-0.5**
RSH	baz=331	**6.70**	**329**	P	**Pn**	**16 56 08.7**	**-0.8**
RSH		**6.70**	**329**	P	**Pn**	**16 56 08.7**	**-0.8**
HHAG	**Hagoal** baz=316	**6.84**	**315**	P	**Pn**	**16 56 11.3**	**-0.2**
HHAG	**Hagoal**	**6.84**	**315**	P	**Pn**	**16 56 11.3**	**-0.2**
GLL	**Jalalah** baz=311	**6.87**	**310**	P	**Pn**	**16 56 11.5**	**-0.3**
GLL	**Jalalah**	**6.87**	**310**	P	**Pn**	**16 56 11.5**	**-0.3**
ASF	**Jabal al Asfar**	**6.94**	**354**	Pn	**Pn**	**16 56 12.6**	**-0.3**
ASF				Pg	Pb	16 56 36.3	+4.4
ASF				Lg	Lg	16 58 05.0	
ASF	**Jabal al Asfar** 5.9nm,0.3s,baz=38,slow=5.7,SNR=9.6	**6.94**	**354**	Pn	**Pn**	**16 56 12.6**	**-0.3**
ASF				Pg	Pb	16 56 36.3	+4.4
ASF	14nm,0.3s,baz=24,slow=12,SNR=9.0			Lg	Lg	16 58 05.0	
ASF	18nm,0.3s,baz=82,slow=13,SNR=3.3			LR	LR	16 59 18.5	
KOT	**Kottamia** comp=Z,1μm,19.3s,baz=224,slow=42	**7.00**	**313**	P	**Pn**	**16 56 14.7**	**+1.0**
KOT	**Kottamia** baz=314	**7.00**	**313**	P	**Pn**	**16 56 13.6**	**-0.1**
KOT	**Kottamia**	**7.00**	**313**	P	**Pn**	**16 56 13.6**	**-0.1**
HMDT	**Nahal Hemdat**	**7.25**	**345**	Pn	**Pn**	**16 56 16.0**	**-1.0**
RAYN	**Ar Rayn** 828nm,0.5s,SNR=25	**7.30**	**102**	Pn	**Pn**	**16 56 18.5**	**+0.7**
SLTI	**Sal'it**	**7.36**	**342**	Pn	**Pn**	**16 56 17.5**	**-1.0**
MMLI	**Mount Malkishu**	**7.45**	**345**	Pn	**Pn**	**16 56 19.3**	**-0.5**
SALA	**Sala**	**7.49**	**354**	*e*P	**Pn**	**16 56 20.7**	**+0.1**
SALA				*e*S	Sn	16 57 29.7	-16
SALA	comp=E,217nm,0.6s			AML	AML	16 58 33.3	
SALA	comp=N,3μm,0.6s			AML	AML	16 58 33.8	
SALA	comp=Z,4μm,0.7s			AML	AML	16 58 34.8	
SALA	**Sala** SNR=90	**7.49**	**354**	*e*P	**Pn**	**16 56 20.7**	**+0.1**
SALA	comp=Z,4μm,0.7s,SNR=90			*e*S	Sn	16 57 29.7	-16
TCHB	**Talchebab**	**7.56**	**349**	*e*P	**Pn**	**16 56 20.8**	**-0.5**
TCHB				*e*S	Sn	16 57 32.1	-15
TCHB	comp=N,5μm,0.7s			AML	AML	16 58 36.6	
TCHB	comp=Z,2μm,0.6s			AML	AML	16 58 42.1	
TCHB	comp=E,4μm,0.6s			AML	AML	16 58 51.8	
TCHB	**Talchebab** SNR=90	**7.56**	**349**	*e*P	**Pn**	**16 56 20.8**	**-0.5**
TCHB	comp=E,4μm,0.6s,SNR=90			*e*S	Sn	16 57 32.1	-15
ZALF	**Zalf**	**7.66**	**358**	*e*P	**Pn**	**16 56 22.1**	**-0.6**
ZALF				*e*S	Sn	16 57 32.4	-17
ZALF	comp=N,3μm,0.7s			AML	AML	16 58 37.0	
ZALF	comp=Z,2μm,0.7s			AML	AML	16 58 48.3	
ZALF	comp=E,1μm,0.7s			AML	AML	16 58 56.2	
ZALF	**Zalf** SNR=90	**7.66**	**358**	*e*P	**Pn**	**16 56 22.1**	**-0.6**
ZALF	comp=E,1μm,0.7s,SNR=90			*e*S	Sn	16 57 32.4	-17
OFRI	**'Ofer**	**7.73**	**343**	Pn	**Pn**	**16 56 22.9**	**-0.8**
BLGI	**Bet Lehem HaGe**	**7.79**	**344**	Pn	**Pn**	**16 56 23.4**	**-1.0**
MMA0	**Mount Meron ar**	**8.01**	**346**	Pn	**Pn**	**16 56 26.0**	**-1.5**
MMAI	**Mount Meron Ar**	**8.01**	**346**	Pn	**Pn**	**16 56 26.3**	**-1.2**
MMAI				Lg	Lg	16 58 39.4	
MMAI	**Mount Meron Ar** comp=E,32nm,0.3s,baz=158,slow=14,SNR=43	**8.01**	**346**	Pn	**Pn**	**16 56 26.3**	**-1.2**
MMAI	comp=E,37nm,0.3s,baz=126,slow=14,SNR=5.2			Lg	Lg	16 58 39.4	
MMAI	comp=E,2μm,19.7s,baz=140,slow=41			LR	LR	16 59 56.3	
MMAI	**Mount Meron Ar**	**8.01**	**346**	Pn	**Pn**	**16 56 26.3**	**-1.2**
MMAI				Lg	Lg	16 58 39.3	
KSDI	**Kefar Szold**	**8.12**	**348**	Pn	**Pn**	**16

IVRN Varamin 15.53 48 eP Pn 16 58 05.8 -4.3
IVRN Varamin 15.53 48 eP Pn 16 58 05.8 -4.3
GNI Garni 15.99 20 P Pn 16 58 17.3 +1.1
comp=Z,38nm,0.9s
GNI Garni 15.99 20 ⇓P P 16 58 17.8 -1.9
SNR=9.8
GNI Garni 15.99 20 Pn P 16 58 20.1 +0.4
comp=Z,0.3nm,0.3s,baz=298,slow=2.6,SNR=12
GNI LR LR 17 05 13.4
comp=Z,1μm,20.9s,baz=2.0,slow=40
GNI Garni 15.99 20 P Pn 16 58 17.3 +1.1
comp=Z,38nm,0.9s
IDMV Damavand 16.07 47 eP Pn 16 58 12.0 -5.3
IDMV Damavand 16.07 47 eP Pn 16 58 12.0 -5.3
IMEH Mehriz 16.09 64 eP Pn 16 58 15.6 -1.9
IMEH Mehriz 16.09 64 eP Pn 16 58 15.6 -1.9
ICHK Chekchek 16.21 61 eP Pn 16 58 17.9 -1.2
ICHK Chekchek 16.21 61 eP Pn 16 58 17.9 -1.2
IFIR Firoozkooh 16.58 48 eP Pn 16 58 22.7 -1.2
IFIR Firoozkooh 16.58 48 eP Pn 16 58 22.7 -1.2
ASHO Ashiyiah 16.65 88 ⇓P Pn 16 58 23.6 -0.9
SNR=16
ASHO Ashiyiah 16.65 88 P Pn 16 58 23.7 -0.9
SNR=18
HATD Hatta, Dubai 16.70 87 ⇓P Pn 16 58 24.7 -0.5
SNR=14
UOSS Wadi Hilu 16.75 87 Pn Pn 16 58 25.0 -0.8
comp=Z,526nm,0.6s,SNR=9.5
AKH Akhalkalaki 16.83 15 P P 16 58 29.7 +0.8
IBND Bandar-abas 17.02 78 eP Pn 16 58 28.1 -1.0
ARQ Araqi 17.25 92 ⇑P Pn 16 58 32.7 +0.6
SNR=14
ARQ Araqi 17.25 92 P Pn 16 58 32.7 +0.6
SNR=14
DGRG David-gareji 17.37 20 P P 16 58 35.6 +0.7
TBLG Delisi 17.45 18 P P 16 58 35.6 0.0
HOQ Hoqain 17.93 91 ⇑P Pn 16 58 40.3 -0.2
SNR=17
HOQ Hoqain 17.93 91 P Pn 16 58 40.3 -0.2
SNR=17
ONI Oni 17.94 14 P Pn 16 58 40.5 -0.1
BSY Bisya 17.98 94 ⇓P P 16 58 43.3 +1.7
SNR=11
BSYO Bisya 18.02 94 P P 16 58 43.3 +1.2
SNR=11
GUDG Gudauri 18.06 16 P P 16 58 46.0 +3.3
LZLA Zalla 18.27 285 iP P 16 58 46.8 +2.0
comp=Z,120nm,1.2s,SNR=35
SOC Sochi 18.37 5c iP Pn 16 58 45.5 -0.3
SOC e 17 02 11.3
SOC pmax pmax
comp=Z,20nm,1.0s
SOC MLR MLR
comp=Z,420nm,10.0s
SOC Sochi 18.37 5 iP Pn 16 58 45.5 -0.3
comp=Z,20nm,1.0s
SMDO Samad 18.68 92 P Pn 16 58 49.7 -0.2
SNR=13
SMDO Samad 18.68 92 P Pn 16 58 49.7 -0.2
SNR=13
JMDO Jabal Madar 18.87 94 ⇑P P 16 58 51.4 -0.1
SNR=13
JMDO Jabal Madar 18.87 94 P P 16 58 51.4 -0.1
SNR=13
KBZ Khabaz 18.93 12 P Pn 16 58 53.5 +1.0
KBZ MLR MLR
comp=Z,645nm,19.0s
KBZ Khabaz 18.93 12 P Pn 16 58 53.5 +1.0
KBZ Khabaz 18.93 12 P Pn 16 58 53.5 +1.0
comp=Z,0.1nm,0.3s,baz=188,slow=8.7,SNR=11
KBZ LR LR 17 07 17.9
comp=Z,645nm,19.0s,baz=193,slow=41
KBZ Khabaz 18.93 12 P Pn 16 58 53.5 +1.0
comp=Z,645nm,19.0s
KIV Kislovodsk 19.11 11 Pn Pn 16 58 54.5 -0.3
comp=Z,104nm,1.1s,SNR=10
MAK Makhachkala 19.42 22 eP P 16 58 51.8 -5.5
MAK S Sn 17 02 33.1 -3.0
MAK pmax pmax
comp=Z,349nm,2.5s
MAK MLR MLR
comp=Z,2μm,17.0s
MAK Makhachkala 19.42 22 eP P 16 58 51.8 -5.5
comp=Z,2μm,17.0s
ANN Anapa 19.52 359 eP P 16 58 57.8 -0.5
ANN eS Sn 17 02 35.7 -2.7
ANN pmax pmax
comp=Z,72nm,1.8s
ANN MLR MLR
comp=Z,530nm,15.0s
ANN Anapa 19.52 359 eP P 16 58 57.8 -0.5
comp=Z,72nm,1.8s
WBK Wadi Bani Khal 19.61 93 ⇑P P 16 58 59.4 -0.1
SNR=7.1
WBK Wadi Bani Khal 19.61 93 P P 16 58 59.4 -0.1
SNR=7.1
RZN Rozhen 19.62 330 P Pn 16 59 01.1 0.0
PRD Provadia 19.81 337 P P 16 59 01.4 -0.1
SIM Simferopol' 19.88 352c iP Pn 16 59 03.3 -0.6
SIM pmax pmax
comp=Z,42nm,0.5s
SIM MLR MLR
comp=Z,200nm,17.5s
SIM Simferopol' 19.88 352 iP Pn 16 59 03.3 -0.6
comp=Z,200nm,17.5s
PLD Plovdiv 19.96 331 P Pn 16 59 05.4 +0.5
PSN Preselentsi 19.98 339 P P 16 59 03.8 +0.4
MMB Musomiste 20.01 328 P Pn 16 59 04.9 -0.7
GOF Gofitskoye 20.24 11 eP sP 16 59 20.9 +9.4
GOF pmax pmax
comp=Z,170nm,2.3s
GOF Gofitskoye 20.24 11 eP Pn 16 59 20.9 +13
comp=Z,170nm,2.3s
KKB Krupnik 20.53 327 P P 16 59 10.0 +0.5
PGB Panagyurishte 20.56 330 P Pn 16 59 11.0 -1.0
TIRR Tirgusor 20.61 341 eP P 16 59 07.0 -3.2
TIRR pmax pmax
comp=Z,196nm,1.8s
TIRR Tirgusor 20.61 341 eP P 16 59 07.0 -3.2
comp=Z,196nm,1.8s
TIRR Tirgusor 20.61 341 ⇓iP Pn 16 59 11.1 -1.4
TIRR Tirgusor 20.61 341 ⇓iP Pn 16 59 11.1 -1.4
IDAH Dahanechah 20.75 64 eP Pn 16 59 13.6 -1.0
IDAH Dahanechah 20.75 64 eP Pn 16 59 13.6 -1.0
ISFR Sfrayin 20.93 51 eP P 16 59 13.8 -0.3
ISFR Sfrayin 20.93 51 eP P 16 59 13.8 -0.3
VTS Vitosha 21.03 329 P P 16 59 16.0 +1.0
LMSR Misrath 21.09 295 iP P 16 59 16.6 +1.1
comp=Z,132nm,1.2s,SNR=34
IAKL Akhelmad 21.26 53 eP P 16 59 18.4 +0.7
LSHF Shwairf 21.31 288 iP P 16 59 19.3 +1.3
comp=Z,163nm,1.4s,SNR=34
CFR Carcaliu 21.35 341 ⇑iP P 16 59 18.3 +0.2
MPEP Malo Peshtene 21.39 331 P P 16 59 19.4 +0.7
ABKT Ailbek 21.44 49 P P 16 59 20.8 +1.4
comp=Z,163nm,1.0s,SNR=11
ISR Istrita 21.79 338 ⇓iP P 16 59 22.8 -0.2
MLR Muntele Rosu 22.32 338 P P 16 59 30.2 +1.4
MLR Muntele Rosu 22.32 338 ⇑iP P 16 59 30.0 +1.2
MLR Muntele Rosu 22.32 338 P P 16 59 30.2 +1.4
comp=Z,2.9nm,0.9s,baz=179,slow=3.8,SNR=15
MLR Muntele Rosu 22.32 338 P P 16 59 30.2 +1.4
VRI Vrincioaia 22.40 340 ⇓iP P 16 59 29.6 +0.1
PLOR Plostina 22.41 339 ⇑iP P 16 59 30.3 +0.7
TIP Timpagrande 22.46 313 eP P 16 59 27.2 -3.0
comp=Z,110nm,1.5s
TIP Timpagrande 22.46 313 eP P 16 59 27.2 -3.0
comp=Z,110nm,1.5s
CEL Celeste 22.58 310 eP P 16 59 32.3 +0.8
comp=Z,108nm,1.5s
CEL Celeste 22.58 310 eP P 16 59 32.3 +0.8
comp=Z,108nm,1.5s
GHAR Gharyan 22.64 293 iP P 16 59 33.7 +1.4
comp=Z,393nm,1.6s,SNR=33
ARR Arges 22.69 336 ⇑iP P 16 59 33.5 +0.9
KIS Kishinev 22.84 344 eP P 16 59 33.0 -1.1
KIS e 17 00 04.0
KIS MLR MLR
comp=Z,500nm,12.0s
KIS Kishinev 22.84 344 eP P 16 59 33.0 -1.1
KIS eS S 17 03 46.0 +2.8
KIS LRM MLR 17 11 05.0
comp=Z,500nm,12.0s
KIS Kishinev 22.84 344 eP P 16 59 33.0 -1.1
DOPR Dopca 22.93 338 ⇑iP P 16 59 36.3 +1.2

TESR Tescani 23.00 340 ⇑iP P 16 59 35.5 -0.3
LOT Lotru 23.09 334 ⇓iP P 16 59 37.4 +0.6
CUC Castrocucco 23.51 314 eP P 16 59 40.4 -0.7
comp=Z,28nm,1.0s
CUC Castrocucco 23.51 314 eP P 16 59 40.4 -0.7
comp=Z,28nm,1.0s
ALAS Alassa 24.00 294 iP P 16 59 47.7 +1.9
comp=Z,188nm,1.7s,SNR=28
BZS Buzias 24.11 332 ⇑iP P 16 59 47.0 +0.3
BURAR Bucovina Array 24.43 339 ⇓iP P 16 59 51.0 +1.3
BUR08 Bucovina Ar. S 24.46 339 eP P 16 59 50.9 +0.8
BUR08 Bucovina Ar. S 24.46 339 eP P 16 59 50.8 +0.8
DRGR 24.61 335 ⇓iP P 16 59 52.5 +1.1
BMR Baia Mare 25.06 337 ⇓iP P 16 59 57.0 +1.7
LGHD Ghdames 25.46 287 iP P 17 00 00.8 +1.5
comp=Z,85nm,1.3s,SNR=28
VORD Divnogorie 25.71 2 eP P 17 00 00.9 -0.3
VORD e*SP sP 17 00 15.2 +8.5
VORD pmax pmax
comp=N,60nm,1.0s
VORD pmax pmax
comp=Z,30nm,1.0s
VORD pmax pmax
comp=E,20nm,1.4s
VORD MLR MLR
comp=Z,280nm,12.0s
VORD MLR MLR
comp=N,180nm,11.0s
VORD MLR MLR
comp=E,200nm,14.0s
VORD Divnogorie 25.71 2 eP P 17 00 00.9 -0.3
PKS6 Bocsa 25.77 330 ⇓eP P 17 00 04.8 +3.0
TRPA Tarpa 25.79 336 ⇓iP P 17 00 02.2 +0.3
TRPA Tarpa 25.79 336 ⇓eP P 17 00 04.0 +2.1
PKS2 Kecel 25.85 330 ⇓eP P 17 00 06.6 +4.1
PKSM Moragy 25.91 329 ⇓iP P 17 00 03.8 +0.8
PKSM Moragy 25.91 329 ⇓eP P 17 00 03.1 +0.1
VSR Storozhevoye 25.96 2 eP P 17 00 03.0 -0.4
VSR e*SP sP 17 00 18.0 +9.1
VSR pmax pmax
comp=Z,50nm,1.1s
VSR pmax pmax
comp=N,90nm,1.2s
VSR pmax pmax
comp=E,7.0nm,0.8s
VSR MLR MLR
comp=Z,260nm,12.0s
VSR MLR MLR
comp=N,170nm,13.0s
VSR MLR MLR
comp=E,140nm,10.0s
VSR Storozhevoye 25.96 2 eP P 17 00 03.0 -0.4
comp=E,90nm,1.2s
VRHR Novokhopersk 25.99 6 eP P 17 00 04.5 +0.8
VRHR pmax pmax
comp=Z,40nm,1.0s
VRHR pmax pmax
comp=N,80nm,1.1s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR Novokhopersk 25.99 6 eP P 17 00 04.5 +0.8
comp=E,80nm,1.1s
AK02 Malin Array Si 26.21 348 eP P 17 00 04.6 -1.1
AK02 Malin Array Si 26.21 348 eP P 17 00 04.6 -1.1
KMBO Kilima Mbogo 26.21 181 P P 17 00 08.0 +1.7
KMBO Kilima Mbogo 26.21 181 P P 17 00 08.0 +1.7
comp=E,1.4nm,0.8s,baz=52,slow=21,SNR=4.2
KMBO LR LR 17 09 08.4
comp=E,396nm,18.4s,baz=266,slow=34
KMBO Kilima Mbogo 26.21 181 P P 17 00 08.0 +1.7
comp=E,396nm,18.4s
AK01 Malin Array Si 26.24 348 eP P 17 00 05.2 -0.8
AK01 Malin Array Si 26.24 348 eP P 17 00 05.2 -0.8
KIEV Kiev 26.25 348 eP P 17 00 04.9 -1.1
KIEV pmax pmax
comp=Z,30nm,0.8s
KIEV Kiev 26.25 348 eP P 17 00 04.9 -1.1
comp=Z,30nm,0.8s
KIEV Kiev 26.25 348 eP P 17 00 04.9 -1.1
comp=Z,30nm,0.8s
AKASG Malin Array Be 26.25 348 P P 17 00 05.8 -0.3
AKASG 17 03 31.6
AKASG pmax pmax
comp=Z,16nm,0.9s
AKASG Malin Array Be 26.25 348 P P 17 00 05.8 -0.3
AKASG PcP PcP 17 03 31.6 -0.8
AKASG Malin Array Be 26.25 348 P P 17 00 05.8 -0.3
comp=Z,16nm,0.8s,baz=167,slow=8.8,SNR=66
AKASG PcP PcP 17 03 31.6 -0.8
comp=Z,1.4nm,0.6s,baz=136,slow=1.2,SNR=5.5
AKASG Malin Array Be 26.25 348 P P 17 00 05.8 -0.3
comp=Z,16nm,0.9s
AKASG Malin Array Be 26.25 348 PcP PcP 17 03 31.6 -0.8
UZH Uzhgorod 26.30 337 ⇓iP P 17 00 07.3 +0.8
UZH e 17 00 11.7
UZH e 17 00 24.0
UZH Uzhgorod 26.30 337 iP P 17 00 07.3 +0.8
PKS9 Tamasi 26.35 329 ⇓eP P 17 00 07.8 +0.7
VOR Voronezh 26.48 2 P P 17 00 06.0 -2.1
VOR Voronezh 26.48 2 P P 17 00 06.0 -2.1
KEST Kesra 26.50 300 eP P 17 00 10.5 +1.8
KEST Kesra 26.50 300 P P 17 00 11.3 +2.7
comp=Z,24nm,1.1s,baz=66,slow=1.6,SNR=31
KEST LR LR 17 12 02.5
comp=Z,155nm,18.1s,baz=182,slow=40
KEST Kesra 26.50 300 eP P 17 00 10.5 +1.8
KOLS Kolonicke sedl 26.56 337 eP P 17 00 10.3 +1.3
KOLS pmax pmax
comp=Z,31nm,1.4s
KOLS Kolonicke sedl 26.56 337 eP P 17 00 10.3 +1.3
KOLS Kolonicke sedl 26.56 337 eP P 17 00 10.3 +1.3
comp=Z,31nm,1.4s
MBAR Mbarara 26.56 196 LR LR 17 09 38.0
comp=Z,750nm,19.5s,baz=17,slow=34
PSZ Piszkesteto 26.65 333 eP P 17 00 09.5 -0.4
PSZ pmax pmax
comp=Z,39nm,1.3s
PSZ Piszkesteto 26.65 333 eP P 17 00 09.5 -0.4
comp=Z,39nm,1.3s
PSZ Piszkesteto 26.65 333 ⇑iP P 17 00 09.9 0.0
PSZ Piszkesteto 26.65 333 ⇓eP P 17 00 10.7 +0.8
PSZ Piszkesteto 26.65 333 eP P 17 00 09.5 -0.4
comp=Z,39nm,1.3s
BUD Budapest 26.69 331 ⇓eP P 17 00 10.9 +0.8
LVV L'vov 26.74 340 eP P 17 00 09.5 -1.0
LVV L'vov 26.74 340 eP P 17 00 09.5 -1.0
CRVS Cervenica-Dubn 26.83 336 eP P 17 00 10.8 -0.6
CRVS pmax pmax
comp=Z,21nm,1.5s
CRVS Cervenica-Dubn 26.83 336 eP P 17 00 10.8 -0.6
CRVS Cervenica-Dubn 26.83 336 eP P 17 00 10.8 -0.6
comp=Z,21nm,1.5s
PKSG 26.90 330 ⇓eP P 17 00 13.4 +1.4
PKST T"s 26.96 330 ⇓eP P 17 00 13.5 +0.9
KWP Kalwaria Pacla 27.00 338 eP P 17 00 13.6 +0.7
KWP pmax pmax
comp=Z,38nm,1.1s
KWP Kalwaria Pacla 27.00 338 eP P 17 00 13.6 +0.7
comp=Z,38nm,1.1s
KWP Kalwaria Pacla 27.00 338 ⇓iP P 17 00 14.1 +1.1
KWP Kalwaria Pacla 27.00 338 eP P 17 00 14.0 +1.1
KWP Kalwaria Pacla 27.00 338 eP P 17 00 13.6 +0.7
comp=Z,38nm,1.1s
CRES Cresnjev 27.22 325 eP P 17 00 16.2 +1.2
VYHS Vyhne 27.54 332 eP P 17 00 18.6 +0.8
VYHS pmax pmax
comp=Z,32nm,2.0s
VYHS Vyhne 27.54 332 eP P 17 00 18.6 +0.8
VYHS Vyhne 27.54 332 eP P 17 00 18.6 +0.8
comp=Z,32nm,2.0s
NIE Niedzica 27.69 335 eP P 17 00 19.9 +0.8
NIE Niedzica 27.69 335 eP P 17 00 19.9 +0.8
SOKA Soboth 28.01 326 ⇑iP P 17 00 23.5 +1.4
comp=Z,24nm,1.8s
ZST Bratislava 28.08 330 eP P 17 00 22.6 +0.1
ZST pmax pmax
comp=Z,65nm,1.9s
ZST Bratislava 28.08 330 eP P 17 00 22.6 +0.1
ZST Bratislava 28.08 330 eP P 17 00 22.6 +0.1
comp=Z,65nm,1.9s
ARSA Arzberg 28.15 327 ⇓iP P 17 00 24.7 +1.4
comp=Z,24nm,1.7s
CONA Conrad Observa 28.46 328 ⇓iP P 17 00 26.3 +0.3
comp=Z,17nm,1.4s,SNR=12
OJC Ojcow 28.53 336 eP P 17 00 26.6 0.0

OJC Ojcow 28.53 336 eP P 17 00 26.6 0.0
OJC Ojcow 28.53 336 eP P 17 00 26.6 0.0
MYKA Terra Mystica 28.70 324 ⇑ipP pP 17 00 30.6 -1.6
comp=Z,23nm,1.5s
OKC Ostrava-Krasne 28.87 333 eP P 17 00 30.3 +0.7
OKC e 17 00 37.2
OKC MLR MLR
comp=Z,200nm,19.5s
OKC Ostrava-Krasne 28.87 333 eP P 17 00 30.3 +0.7
OKC ex x 17 00 37.2
OKC eS S 17 05 28.1 +8.7
OKC AMS AMS 17 15 00.0
comp=Z,200nm,19.5s
OKC Ostrava-Krasne 28.87 333 eP P 17 00 30.3 +0.7
MORC Moravsky Berou 29.07 333 eP P 17 00 31.1 -0.4
MORC pmax pmax
comp=Z,60nm,1.9s
MORC Moravsky Berou 29.07 333 eP P 17 00 31.1 -0.4
comp=Z,60nm,1.9s
MORC Moravsky Berou 29.07 333 ⇑iP P 17 00 32.1 +0.6
MORC Moravsky Berou 29.07 333 eP P 17 00 31.1 -0.4
comp=Z,60nm,1.9s
VRAC Vranov 29.13 331 P P 17 00 32.7 +0.8
VRAC Vranov 29.13 331 P P 17 00 32.7 +0.8
comp=Z,3.6nm,0.4s,baz=191,slow=4.8,SNR=14
VRAC Vranov 29.13 331 P P 17 00 32.7 +0.8
comp=Z,4.0nm,0.4s
KBA Koelnbreinsper 29.15 325 ⇓iP P 17 00 33.6 +1.3
comp=Z,14nm,1.5s,SNR=7.0
MOA Molln 29.18 327 ⇓iP P 17 00 33.5 +1.1
comp=Z,11nm,1.2s
PGF Pioggiola 29.23 313 eP P 17 00 33.3 +0.3
comp=Z,13nm,1.1s
PGF Pioggiola 29.23 313 eP P 17 00 33.3 +0.3
PGF pmax pmax
comp=Z,13nm,1.1s
PGF Pioggiola 29.23 313 eP P 17 00 33.3 +0.3
comp=Z,13nm,1.1s
PGF Pioggiola 29.23 313 eP P 17 00 33.3 +0.3
comp=Z,6.4nm,1.1s
TAM Tamanrasset 29.47 272 eP P 17 00 37.1 +1.7
TAM pmax pmax
comp=Z,8.0nm,1.0s
TAM Tamanrasset 29.47 272 eP P 17 00 37.0 +1.7
comp=Z,8.3nm,1.0s
TAM Tamanrasset 29.47 272 eP P 17 00 37.0 +1.7
comp=Z,8.3nm,1.0s
ABKAR Akbulak array 29.58 30 eP P 17 00 35.4 -0.5
comp=Z,0.9nm,0.5s
ABKAR Akbulak array 29.58 30 eP P 17 00 35.4 -0.5
comp=Z,0.9nm,0.5s
TREC Trest 29.61 330 ⇑iP P 17 00 37.1 +0.9
TREC Trest 29.61 330 ⇑iP P 17 00 37.1 +0.9
TREC Trest 29.61 330 iP P 17 00 37.1 +0.9
AKTK Aktyubinsk 29.64 27 P P 17 00 36.2 -0.2
comp=Z,1.0nm,0.7s
AKTO Aktyubinsk 29.64 27 P P 17 00 36.2 -0.2
AKTO pmax pmax
comp=Z,1.0nm,0.7s
AKTO Aktyubinsk 29.64 27 P P 17 00 36.2 -0.2
AKTO Aktyubinsk 29.64 27 P P 17 00 36.2 -0.2
comp=Z,1.1nm,0.7s,baz=220,slow=16,SNR=4.7
AKTO Aktyubinsk 29.64 27 P P 17 00 36.2 -0.2
OBN Obninsk 29.85 359 ⇑iP P 17 00 37.7 -0.5
OBN e 17 01 39.1
OBN iS S 17 05 40.8 +6.1
OBN pmax pmax
comp=Z,57nm,1.7s
OBN MLR MLR
comp=Z,300nm,17.0s
OBN Obninsk 29.85 359 iP P 17 00 37.7 -0.5
comp=Z,57nm,1.7s
RJOB Jochberg 29.86 325 eP P 17 00 38.6 +0.2
DPC Dobruska-Polom 30.02 332 eP P 17 00 40.3 +0.4
DPC eS S 17 05 42.1 +4.5
DPC MLR MLR
comp=Z,100nm,14.2s
DPC Dobruska-Polom 30.02 332 eP P 17 00 40.3 +0.4
DPC eS S 17 05 42.1 +4.5
DPC AMS AMS 17 15 50.0
comp=Z,100nm,14.2s
DPC Dobruska-Polom 30.02 332 eP P 17 00 40.3 +0.4
comp=Z,100nm,14.2s
DPC eS S 17 05 42.1 +4.5
GEC2 GERESS Array S 30.13 328 eP P 17 00 41.4 +0.5
GEC2 pmax pmax
comp=Z,43nm,1.3s
GEC2 GERESS Array S 30.13 328 eP P 17 00 41.4 +0.5
comp=Z,43nm,1.3s
GEC2 GERESS Array S 30.13 328 eP P 17 00 41.4 +0.5
comp=Z,43nm,1.3s
GERES GERESS Array B 30.13 328 P P 17 00 41.6 +0.7
GERES PcP PcP 17 03 41.2 -0.9
GERES GERESS Array B 30.13 328 P P 17 00 41.6 +0.7
comp=Z,7.0nm,0.9s,baz=127,slow=8.5,SNR=62
GERES PcP PcP 17 03 41.2 -0.9
comp=Z,1.9nm,0.7s,baz=125,slow=2.1,SNR=5.3
GERES GERESS Array B 30.13 328 P P 17 00 41.6 +0.7
comp=Z,7.0nm,1.0s
UPC Upice 30.27 332 eP P 17 00 42.7 +0.7
UPC e 17 00 51.6
UPC Upice 30.27 332 ⇑eP P 17 00 42.7 +0.7
UPC ex x 17 00 51.6
UPC Upice 30.27 332 eP P 17 00 42.7 +0.7
KHC Kasperske Hory 30.39 328 eP P 17 00 43.2 +0.1
KHC e 17 00 51.5
KHC eS S 17 05 43.8 +0.4
KHC MLR MLR
comp=Z,100nm,14.6s
KHC Kasperske Hory 30.39 328 eP P 17 00 41.8 -1.4
comp=Z,24nm,1.6s
KHC Kasperske Hory 30.39 328 eP P 17 00 43.2 +0.1
KHC ex x 17 00 51.5
KHC eS S 17 05 43.8 +0.4
KHC AMS AMS 17 13 50.0
comp=Z,100nm,14.6s
KHC Kasperske Hory 30.39 328 eP P 17 00 43.2 +0.1
KHC eS S 17 05 43.8 +0.4
comp=Z,100nm,14.6s
KSP Ksiaz 30.41 333 eP P 17 00 43.8 +0.6
KSP Ksiaz 30.41 333 eP P 17 00 43.9 +0.7
KSP Ksiaz 30.41 333 eP P 17 00 43.8 +0.6
MOS Moscow 30.47 360 eP P 17 00 42.3 -1.3
MOS pmax pmax
comp=Z,45nm,0.8s
MOS Moscow 30.47 360 eP P 17 00 42.3 -1.3
comp=Z,45nm,0.8s
MOTA Moosalm 30.51 323 ⇑iP P 17 00 45.3 +0.9
comp=Z,14nm,1.0s,SNR=5.9
FETA Feichten 30.52 322 ⇑ipP pP 17 00 46.2 -2.2
comp=Z,15nm,1.0s
PRU Pruhonice 30.54 330 ⇑iP P 17 00 45.0 +0.7
PRU eS S 17 05 49.8 +4.2
SUW Suwalki 30.71 343 eP P 17 00 45.7 -0.1
SUW Suwalki 30.71 343 eP P 17 00 45.7 -0.1
comp=Z,102nm,0.9s
SUW Suwalki 30.71 343 eP P 17 00 46.1 +0.3
SUW Suwalki 30.71 343 eP P 17 00 45.7 -0.1
WET Wettzell 30.74 327 eP P 17 00 45.8 -0.4
WET pmax pmax
comp=Z,22nm,1.3s
WET Wettzell 30.74 327 eP P 17 00 45.8 -0.4
comp=Z,22nm,1.3s
WET Wettzell 30.74 327 eP P 17 00 45.8 -0.4
comp=Z,22nm,1.3s
SBF Sospel 30.85 315 eP P 17 00 47.8 +0.5
comp=Z,24nm,1.0s
SBF Sospel 30.85 315 eP P 17 00 47.8 +0.5
SBF pmax pmax
comp=Z,24nm,1.0s
SBF Sospel 30.85 315 eP P 17 00 47.8 +0.5
comp=Z,24nm,1.0s
SBF Sospel 30.85 315 eP P 17 00 47.8 +0.5
comp=Z,12nm,1.0s
DAVOX Davos/Dischmat 30.86 321 P P 17 00 48.8 +1.3
DAVOX Davos/Dischmat 30.86 321 P P 17 00 48.8 +1.3
comp=Z,8.9nm,1.0s,baz=154,slow=13,SNR=5.9
DAVOX Davos/Dischmat 30.86 321 P P 17 00 48.8 +1.3
comp=Z,9.0nm,1.0s
FUR Furstenfeldbru 30.92 325 eP P 17 00 47.6 -0.2
FUR Furstenfeldbru 30.92 325 eP P 17 00 47.6 -0.2
FUR Furstenfeldbru 30.92 325 eP P 17 00 47.6 -0.2
IDID Didziasalis 31.11 348 eP P 17 00 49.6 +0.3
IDID AMB AMB 17 00 50.9
comp=Z,9.1nm,1.2s

IDID Didziasalis 31.11 348 *e*P **P** **17 00 49.6 +0.3**
comp=Z,9.1nm,1.2s,SNR=40

DAVA Damuels 31.15 322⇓ *i*P **P** **17 00 50.6 +0.7**
comp=Z,20nm,1.2s

LMR La Mourre 31.22 313 *e*P **P** **17 00 50.8 +0.3**
comp=Z,54nm,1.5s

LMR La Mourre 31.22 313 *e*P **P** **17 00 50.8 +0.3**
LMR pmax pmax
comp=Z,54nm,1.5s

LMR La Mourre 31.22 313 *e*P **P** **17 00 50.8 +0.3**
comp=Z,54nm,1.5s

LMR La Mourre 31.22 313 *e*P **P** **17 00 50.8 +0.3**
comp=Z,27nm,1.5s

FRF La Foret Royal 31.23 314 *e*P **P** **17 00 51.2 +0.7**
comp=Z,30nm,1.3s

FRF La Foret Royal 31.23 314 *e*P **P** **17 00 51.2 +0.7**
FRF pmax pmax
comp=Z,30nm,1.3s

FRF La Foret Royal 31.23 314 *e*P **P** **17 00 51.2 +0.7**
comp=Z,30nm,1.3s

FRF La Foret Royal 31.23 314 *e*P **P** **17 00 51.2 +0.7**
comp=Z,15nm,1.3s

IIGN Ignalina 31.24 347 *e*P **P** **17 00 50.8 +0.3**
IIGN AMB AMB 17 00 51.9
comp=Z,9.6nm,1.7s

IIGN Ignalina 31.24 347 *e*P **P** **17 00 50.8 +0.3**
comp=Z,9.6nm,1.7s,SNR=40

BRG Berggiesshubel 31.44 331⇓ *i*P **P** **17 00 52.7 +0.4**
comp=Z,38nm,1.2s

BRG S S 17 06 06.0 +6.3

BRG Berggiesshubel 31.44 331⇓ *i*P **P** **17 00 52.7 +0.4**
BRG S S 17 06 06.0 +6.3
BRG pmax pmax
comp=Z,38nm,1.2s

BRG Berggiesshubel 31.44 331 *e*P **P** **17 00 52.3 0.0**
comp=Z,42nm,1.1s

BRG Berggiesshubel 31.44 331 *i* P **P** **17 00 52.7 +0.4**
comp=Z,38nm,1.2s

BRG S S 17 06 06.0 +6.3

ISAL Salakas 31.47 347 *e*P **P** **17 00 52.8 +0.3**
ISAL AMB AMB 17 00 54.1
comp=Z,16nm,1.2s

ISAL Salakas 31.47 347 *e*P **P** **17 00 52.8 +0.3**
comp=Z,16nm,1.2s,SNR=40

ROTZ Rotzenmuhle 31.48 328 *e*P **P** **17 00 52.8 +0.1**
comp=Z,67nm,1.8s

IZAR Zarasai 31.61 348 *e*P **P** **17 00 54.0 +0.3**
IZAR AMB AMB 17 00 55.3
comp=Z,17nm,1.3s

IZAR Zarasai 31.61 348 *e*P **P** **17 00 54.0 +0.3**
comp=Z,17nm,1.3s,SNR=40

MBDF Montbardon 31.67 316 *e*P **P** **17 00 55.8 +1.2**
MBDF Montbardon 31.67 316 *e*P **P** **17 00 55.8 +1.2**
MBDF Montbardon 31.67 316 *e*P **P** **17 00 55.8 +1.2**
MBDF Montbardon 31.67 316 *e*P **P** **17 00 55.8 +1.2**
NKC Novy Kostel 31.68 329 *e*P **P** **17 00 55.1 +0.7**
NKC *e*S S 17 06 09.5 +6.0
NKC Novy Kostel 31.68 329 *e*P **P** **17 00 55.1 +0.7**
NKC *e*S S 17 06 09.5 +6.0
NKC Novy Kostel 31.68 329 *e*P **P** **17 00 55.1 +0.7**
NKC *e*S S 17 06 09.5 +6.0
TANN Tannenbergstha 31.79 329 *e*P **P** **17 00 55.8 +0.3**
comp=Z,79nm,1.8s

GRA1 Grafenberg Arr 31.91 327 *e*P **P** **17 00 56.2 -0.3**
comp=Z,30nm,1.3s

GRA1 Grafenberg Arr 31.91 327 *e*PcP **PcP** **17 03 46.9 +0.1**
GRF Grafenberg Arr 31.91 327 *e*P **P** **17 00 56.2 -0.3**
GRF *e* 17 03 46.9
GRF pmax pmax
comp=Z,30nm,1.3s

GRF Grafenberg Arr 31.91 327 *e*P **P** **17 00 56.2 -0.3**
comp=Z,30nm,1.3s

GRF *e*PcP **PcP** **17 03 46.9 +0.1**
LPG La Plagne 32.04 317 *e*P **P** **17 00 58.5 +0.5**
comp=Z,96nm,1.8s

LPG La Plagne 32.04 317 *e*P **P** **17 00 58.5 +0.5**
LPG pmax pmax
comp=Z,96nm,1.8s

LPG La Plagne 32.04 317 *e*P **P** **17 00 58.5 +0.5**
comp=Z,96nm,1.8s

LPG La Plagne 32.04 317 *e*P **P** **17 00 58.5 +0.5**
comp=Z,48nm,1.8s

LPL La Plagne 32.06 317 *e*P **P** **17 00 58.7 +0.6**
LPL La Plagne 32.06 317 *e*P **P** **17 00 58.7 +0.6**
LPL La Plagne 32.06 317 *e*P **P** **17 00 58.7 +0.6**
LPL La Plagne 32.06 317 *e*P **P** **17 00 58.7 +0.6**
SMRF Simiane la Rot 32.11 314 *e*P **P** **17 00 59.6 +1.3**
comp=Z,64nm,1.5s

SMRF Simiane la Rot 32.11 314 *e*P **P** **17 00 59.6 +1.3**
comp=Z,64nm,1.5s

SMRF Simiane la Rot 32.11 314 *e*P **P** **17 00 59.6 +1.3**
comp=Z,32nm,1.5s

CLL Collm 32.16 330⇓ *i*P **P** **17 00 58.6 -0.1**
CLL pmax pmax
comp=Z,55nm,1.5s

CLL Collm 32.16 330 *e*P **P** **17 00 58.5 -0.1**
comp=Z,80nm,1.9s

CLL Collm 32.16 330⇓ *i*P **P** **17 00 58.6 -0.1**
comp=Z,55nm,1.5s

CLL *e*S S 17 06 18.0 +7.0
CLL Lm MLR 17 18 00.0
comp=N,200nm,18.3s

CLL Lm MLR 17 18 00.0
comp=E,100nm,20.6s

CLL Collm 32.16 330 *i* P **P** **17 00 58.6 -0.1**
comp=E,55nm,1.5s

KKAR Karatay Array 32.19 48 *e*P **P** **17 01 00.7 +1.7**
KKAR pmax pmax
comp=Z,6.0nm,1.0s

KKAR Karatay Array 32.19 48 *e*P **P** **17 01 00.7 +1.7**
comp=Z,6.1nm,1.0s

KKAR Karatay Array 32.19 48 *e*P **P** **17 01 00.7 +1.7**
comp=Z,6.0nm,1.0s

RSL Roselend 32.21 317 *e*P **P** **17 01 00.1 +0.7**
RSL Roselend 32.21 317 *e*P **P** **17 01 00.1 +0.7**
RSL Roselend 32.21 317 *e*P **P** **17 01 00.1 +0.7**
RSL Roselend 32.21 317 *e*P **P** **17 01 00.1 +0.7**
SPAK Spaichingen-Ko 32.22 323 *e*P **P** **17 01 00.1 +0.8**
SPAK Spaichingen-Ko 32.22 323 *e*P **P** **17 01 00.1 +0.8**
ORIF Oris-en-Rattie 32.32 315 *e*P **P** **17 01 01.2 +1.0**
ORIF *e*R
comp=Z,236nm,22.0s

ORIF Oris-en-Rattie 32.32 315 *e*P **P** **17 01 01.2 +1.0**
ORIF Oris-en-Rattie 32.32 315 *e*P **P** **17 01 01.2 +1.0**
ORIF Oris-en-Rattie 32.32 315 *e*P **P** **17 01 01.2 +1.0**
MOX Moxa 32.35 328 *e*P **P** **17 01 00.5 +0.2**
MOX pmax pmax
comp=Z,69nm,1.3s

MOX Moxa 32.35 328 *e*P **P** **17 01 00.5 +0.2**
comp=Z,69nm,1.3s

MOX Moxa 32.35 328 *e*P **P** **17 01 00.5 +0.2**
comp=Z,69nm,1.3s

STU Stuttgart 32.39 324 *e*P **P** **17 01 00.8 +0.1**
FELD Feldberg im Sc 32.53 322 *e*P **P** **17 01 00.9 -1.2**
FELD Feldberg im Sc 32.53 322 *e*P **P** **17 01 00.9 -1.2**
FELD Feldberg im Sc 32.53 322 *e*P **P** **17 01 00.9 -1.2**
OCF Saint Nazaire 32.54 315 *e*P **P** **17 01 02.9 +0.8**
OCF Saint Nazaire 32.54 315 *e*P **P** **17 01 02.9 +0.8**
OG26 St.-Nazaire-De 32.54 315 *e*P **P** **17 01 02.9 +0.8**
OG26 St.-Nazaire-De 32.54 315 *e*P **P** **17 01 02.9 +0.8**
BBS Basel-Blauen 32.59 321 *e*P **P** **17 01 02.5 0.0**
BBS Basel-Blauen 32.59 321 *e*P **P** **17 01 02.5 0.0**
BBS Basel-Blauen 32.59 321 *e*P **P** **17 01 02.5 0.0**
BFO Black Forest 32.60 323 *e*P **P** **17 01 03.0 +0.4**
BFO pmax pmax
comp=Z,38nm,1.3s

BFO Black Forest 32.60 323 *e*P **P** **17 01 03.0 +0.4**
comp=Z,38nm,1.3s

BFO Black Forest 32.60 323 *e*P **P** **17 01 03.3 +0.7**
comp=Z,15nm,1.0s

BFO Black Forest 32.60 323 *e*P **P** **17 01 03.0 +0.4**
comp=Z,38nm,1.3s

LOMF Lomont 32.92 320 *e*P **P** **17 01 06.0 +0.5**
LOMF Lomont 32.92 320 *e*P **P** **17 01 06.0 +0.5**
LOMF Lomont 32.92 320 *e*P **P** **17 01 06.0 +0.5**
LOMF Lomont 32.92 320 *e*P **P** **17 01 06.0 +0.5**
CABF La Chapelle 32.99 318 *e*P **P** **17 01 06.2 +0.1**
comp=Z,35nm,1.3s

CABF La Chapelle 32.99 318 *e*P **P** **17 01 06.2 +0.1**
CABF pmax pmax
comp=Z,35nm,1.3s

CABF La Chapelle 32.99 318 *e*P **P** **17 01 06.2 +0.1**
comp=Z,35nm,1.3s

CABF La Chapelle 32.99 318 *e*P **P** **17 01 06.2 +0.1**
comp=Z,17nm,1.3s

MOF Molkenrain 33.01 321 *e*P **P** **17 01 06.1 -0.1**
MOF Molkenrain 33.01 321 *e*P **P** **17 01 06.1 -0.1**
MOF Molkenrain 33.01 321 *e*P **P** **17 01 06.1 -0.1**
MOF Molkenrain 33.01 321 *e*P **P** **17 01 06.1 -0.1**
VIVF Saint-Julien-l 33.06 315 *e*P **P** **17 01 07.2 +0.5**
VIVF Saint-Julien-l 33.06 315 *e*P **P** **17 01 07.2 +0.5**
VIVF Saint-Julien-l 33.06 315 *e*P **P** **17 01 07.2 +0.5**
VIVF Saint-Julien-l 33.06 315 *e*P **P** **17 01 07.2 +0.5**
TOD Tromm 33.09 325 *e*P **P** **17 01 06.9 +0.1**
TOD Tromm 33.09 325 *e*P **P** **17 01 06.9 +0.1**
TOD Tromm 33.09 325 *e*P **P** **17 01 06.9 +0.1**
HINF Hinteralfeld 33.15 321 *e*P **P** **17 01 07.3 -0.1**
comp=Z,31nm,1.1s

HINF Hinteralfeld 33.15 321 *e*P **P** **17 01 07.3 -0.1**
HINF pmax pmax
comp=Z,31nm,1.1s

HINF Hinteralfeld 33.15 321 *e*P **P** **17 01 07.3 -0.1**
comp=Z,31nm,1.1s

HINF Hinteralfeld 33.15 321 *e*P **P** **17 01 07.3 -0.1**
comp=Z,15nm,1.1s

ECH Echery 33.19 322 *e*P **P** **17 01 08.1 +0.4**
ECH Echery 33.19 322 *e*P **P** **17 01 08.1 +0.4**
ECH Echery 33.19 322 *e*P **P** **17 01 08.1 +0.4**
ECH Echery 33.19 322 *e*P **P** **17 01 08.1 +0.4**
CDF Champ du Feu 33.23 322 *e*P **P** **17 01 08.2 0.0**
comp=Z,20nm,1.0s

CDF Champ du Feu 33.23 322 *e*P **P** **17 01 08.2 0.0**
CDF pmax pmax
comp=Z,20nm,1.0s

CDF Champ du Feu 33.23 322 *e*P **P** **17 01 08.2 0.0**
comp=Z,20nm,1.0s

CDF Champ du Feu 33.23 322 *e*P **P** **17 01 08.2 0.0**
comp=Z,9.8nm,1.0s

UBBA Unterbreizbach 33.24 327 *e*P **P** **17 01 07.6 -0.3**
comp=Z,58nm,2.3s

LANF Langenberg 33.26 323 *e*P **P** **17 01 07.8 -0.5**
LANF Langenberg 33.26 323 *e*P **P** **17 01 07.8 -0.5**
LANF Langenberg 33.26 323 *e*P **P** **17 01 07.8 -0.5**
LANF Langenberg 33.26 323 *e*P **P** **17 01 07.8 -0.5**
LASF Ste Croix 33.28 313 *e*P **P** **17 01 09.2 +0.6**
comp=Z,121nm,1.4s

LASF Ste Croix 33.28 313 *e*P **P** **17 01 09.2 +0.6**
comp=Z,121nm,1.4s

LASF Ste Croix 33.28 313 *e*P **P** **17 01 09.2 +0.6**
comp=Z,60nm,1.4s

SSB Saint Sauveur 33.33 315 *e*P **P** **17 01 09.3 +0.3**
SSB pmax pmax
comp=Z,20nm,1.4s

SSB Saint Sauveur 33.33 315 *e*P **P** **17 01 09.3 +0.3**
comp=Z,20nm,1.4s

SSB Saint Sauveur 33.33 315 *e*P **P** **17 01 09.3 +0.3**
comp=Z,20nm,1.4s

TNS Taunus Mts 33.65 325 *e*P **P** **17 01 11.3 -0.4**
TNS pmax pmax
comp=Z,253nm,4.1s

TNS Taunus Mts 33.65 325 *e*P **P** **17 01 11.3 -0.4**
comp=Z,253nm,4.1s

ABH Alteburg 33.91 324 *e*P **P** **17 01 14.4 +0.4**
ABH Alteburg 33.91 324 *e*P **P** **17 01 14.4 +0.4**
VALF Valcebollere 33.94 309 *e*P **P** **17 01 15.8 +1.3**
VALF Valcebollere 33.94 309 *e*P **P** **17 01 15.8 +1.3**
VALF Valcebollere 33.94 309 *e*P **P** **17 01 15.8 +1.3**
RUP Ruppelstein 34.07 324 *e*P **P** **17 01 15.6 +0.2**
RUP Ruppelstein 34.07 324 *e*P **P** **17 01 15.6 +0.2**
RUP Ruppelstein 34.07 324 *e*P **P** **17 01 15.6 +0.2**
MTLF Montolieu 34.11 311 *e*P **P** **17 01 15.8 0.0**
MTLF Montolieu 34.11 311 *e*P **P** **17 01 15.8 0.0**
MTLF Montolieu 34.11 311 *e*P **P** **17 01 15.8 0.0**
MTLF Montolieu 34.11 311 *e*P **P** **17 01 15.8 0.0**
LBL Lubilhac 34.14 315 *e*P **P** **17 01 16.4 +0.3**
LBL Lubilhac 34.14 315 *e*P **P** **17 01 16.4 +0.3**
LBL Lubilhac 34.14 315 *e*P **P** **17 01 16.4 +0.3**
LBL Lubilhac 34.14 315 *e*P **P** **17 01 16.4 +0.3**
PAGF Fort de Pagny 34.18 321 *e*P **P** **17 01 16.0 -0.3**
PAGF Fort de Pagny 34.18 321 *e*P **P** **17 01 16.0 -0.3**
PAGF Fort de Pagny 34.18 321 *e*P **P** **17 01 16.0 -0.3**
BSD Bornholm Skovb 34.23 337⇓ *i*P **P** **17 01 15.5 -1.1**
BSD pmax pmax
comp=Z,17nm,0.9s

BSD Bornholm Skovb 34.23 337⇓ *i*P **P** **17 01 15.5 -1.1**
comp=Z,17nm,0.8s

BSD Bornholm Skovb 34.23 337 *i* P **P** **17 01 15.5 -1.1**
comp=Z,17nm,0.9s

NRDL Niedersach Rie 34.28 330 *e*P **P** **17 01 16.7 -0.4**
comp=Z,21nm,1.2s

SMF Signal de Mont 34.37 317 *e*P **P** **17 01 17.9 -0.1**
comp=Z,30nm,1.4s

SMF Signal de Mont 34.37 317 *e*P **P** **17 01 17.9 -0.1**
SMF pmax pmax
comp=Z,30nm,1.4s

SMF Signal de Mont 34.37 317 *e*P **P** **17 01 17.9 -0.1**
comp=Z,30nm,1.4s

SMF Signal de Mont 34.37 317 *e*P **P** **17 01 17.9 -0.1**
comp=Z,15nm,1.4s

SFTF Sexfontaines 34.40 320 *e*P **P** **17 01 18.3 +0.1**
SFTF Sexfontaines 34.40 320 *e*P **P** **17 01 18.3 +0.1**
SFTF Sexfontaines 34.40 320 *e*P **P** **17 01 18.3 +0.1**
MEZF Maizieres J'vi 34.54 321 *e*P **P** **17 01 19.5 +0.1**
MEZF Maizieres J'vi 34.54 321 *e*P **P** **17 01 19.5 +0.1**
MEZF Maizieres J'vi 34.54 321 *e*P **P** **17 01 19.5 +0.1**
WLF Walferdange 34.54 323 P **P** **17 01 18.6 -0.8**
comp=Z,13nm,1.3s

WLF Walferdange 34.54 323 *e*P **P** **17 01 19.5 +0.1**
comp=Z,48nm,1.5s

AGO Saint Agoulin 34.55 316 *e*P **P** **17 01 20.7 +1.1**
AGO Saint Agoulin 34.55 316 *e*P **P** **17 01 20.7 +1.1**
AGO Saint Agoulin 34.55 316 *e*P **P** **17 01 20.7 +1.1**
ARU Arti 34.64 20 *d i*P **P** **17 01 19.8 -0.3**
ARU 17 02 31.8
ARU 17 03 52.8
ARU S **S** **17 06 47.9 -1.3**
ARU SS **SnSn** **17 09 05.6 +4.2**
ARU pmax pmax
comp=Z,44nm,1.7s

ARU MLR MLR
comp=Z,919nm,17.0s

ARU Arti 34.64 20 *i* P **P** **17 01 19.8 -0.3**
comp=Z,44nm,1.7s

ARU Arti 34.64 20 PcP **PcP** **17 03 52.8 -1.4**
ARU S **S** **17 06 47.9 -1.3**
comp=Z,919nm,17.0s

LOR Lormes 34.64 318 *e*P **P** **17 01 20.5 +0.1**
comp=Z,61nm,1.4s,baz=132

LOR *e*R
comp=Z,133nm,21.8s

LOR Lormes 34.64 318 *e*P **P** **17 01 20.5 +0.1**
comp=Z,61nm,1.4s

LOR Lormes 34.64 318 *e*P **P** **17 01 20.5 +0.1**
comp=Z,30nm,1.4s

AVF Avril sur Loir 34.74 317 *e*P **P** **17 01 21.0 -0.1**
AVF Avril sur Loir 34.74 317 *e*P **P** **17 01 21.0 -0.1**
AVF Avril sur Loir 34.74 317 *e*P **P** **17 01 21.0 -0.1**
AVF Avril sur Loir 34.74 317 *e*P **P** **17 01 21.0 -0.1**
SSF Saint Saulge 34.76 318 *e*P **P** **17 01 21.4 0.0**
comp=Z,31nm,1.2s

SSF Saint Saulge 34.76 318 *e*P **P** **17 01 21.4 0.0**
SSF pmax pmax
comp=Z,31nm,1.2s

SSF Saint Saulge 34.76 318 *e*P **P** **17 01 21.4 0.0**
comp=Z,31nm,1.2s

SSF Saint Saulge 34.76 318 *e*P **P** **17 01 21.4 0.0**
comp=Z,15nm,1.2s

AAK Ala-Archa 34.77 51 *c i*P **P** **17 01 23.3 +1.6**
AAK pmax pmax
comp=Z,13nm,1.2s

AAK Ala-Archa 34.77 51 P **P** **17 01 22.7 +1.0**
AAK PcP **PcP** **17 03 54.6 -0.6**
AAK Ala-Archa 34.77 51 P **P** **17 01 22.2 +0.5**
comp=Z,0.7nm,0.4s,baz=236,slow=5.6,SNR=6.0

AAK PcP **PcP** **17 03 54.6 -0.6**
comp=Z,1.4nm,0.6s,baz=284,slow=0.8,SNR=4.0

AAK LR LR 17 17 50.2
comp=Z,1μm,19.4s,baz=300,slow=40

AAK Ala-Archa 34.77 51 P **P** **17 01 22.7 +1.0**
CAF Calviac 34.79 313 *e*P **P** **17 01 22.5 +0.8**
comp=Z,60nm,1.5s

CAF Calviac 34.79 313 *e*P **P** **17 01 22.5 +0.8**
CAF pmax pmax
comp=Z,61nm,1.5s

CAF Calviac 34.79 313 *e*P **P** **17 01 22.5 +0.8**
comp=Z,60nm,1.5s

CAF Calviac 34.79 313 *e*P **P** **17 01 22.5 +0.8**
comp=Z,30nm,1.5s

FRU Bishkek 34.92 51 *e*P **P** **17 01 23.0 +0.2**
FRU MLR MLR
comp=Z,1μm,17.0s

FRU Bishkek 34.92 51 *e*P **P** **17 01 23.0 +0.2**
comp=Z,1μm,17.0s

BGF Bois d'Agland 34.95 316 *e*P **P** **17 01 23.6 +0.6**
comp=Z,83nm,1.3s

BGF Bois d'Agland 34.95 316 *e*P **P** **17 01 23.6 +0.6**
BGF pmax pmax
comp=Z,83nm,1.3s

BGF Bois d'Agland 34.95 316 *e*P **P** **17 01 23.6 +0.6**
comp=Z,83nm,1.3s

BGF Bois d'Agland 34.95 316 *e*P **P** **17 01 23.6 +0.6**
comp=Z,41nm,1.3s

BUG Bochum--Univer 34.98 326 *e*P **P** **17 01 22.3 -0.8**
KSH Kashi 35.03 57 *e*P **P** **17 01 22.1 -1.9**
KSH *e*pP **pP** **17 01 26.5 -1.4**
KSH *e*sP **sP** **17 01 29.3 -0.2**
KSH *e*PP **PnPn** **17 02 38.5 -2.5**
KSH *e*S S 17 06 50.5 -5.5
KSH *e*ScP **ScP** **17 07 40.1 -1.2**
KSH *e*ScS **ScS** **17 11 41.0 -4.1**
KSH pmax pmax
comp=Z,5.0nm,0.9s

KSH LR LR
comp=N,540nm,11.2s

KSH LR LR
comp=E,810nm,9.8s

KSH LR LR
comp=Z,850nm,10.3s

BSEG Bad Segeberg 35.17 332 *e*P **P** **17 01 24.3 -0.5**
BSEG pmax pmax
comp=Z,84nm,1.7s

BSEG Bad Segeberg 35.17 332 *e*P **P** **17 01 24.3 -0.5**
comp=Z,84nm,1.7s

BSEG Bad Segeberg 35.17 332 *e*P **P** **17 01 24.3 -0.5**
comp=Z,84nm,1.7s

TCF Toulx Ste Croi 35.23 316 *e*P **P** **17 01 26.2 +0.7**
comp=Z,33nm,1.3s

TCF Toulx Ste Croi 35.23 316 *e*P **P** **17 01 26.2 +0.7**
TCF pmax pmax
comp=Z,33nm,1.3s

TCF Toulx Ste Croi 35.23 316 *e*P **P** **17 01 26.2 +0.7**
comp=Z,33nm,1.3s

TCF Toulx Ste Croi 35.23 316 *e*P **P** **17 01 26.2 +0.7**
comp=Z,16nm,1.3s

IBBN Ibbenburen 35.27 328 *e*P **P** **17 01 25.1 -0.5**
RJF Les Rejaudoux 35.29 314 *e*P **P** **17 01 27.1 +1.1**
comp=Z,227nm,1.8s

RJF *e*R
comp=Z,205nm,17.5s

RJF Les Rejaudoux 35.29 314 *e*P **P** **17 01 27.1 +1.1**
RJF pmax pmax
comp=Z,227nm,1.8s

RJF Les Rejaudoux 35.29 314 *e*P **P** **17 01 27.1 +1.1**
comp=Z,227nm,1.8s

RJF Les Rejaudoux 35.29 314 *e*P **P** **17 01 27.1 +1.1**
comp=Z,114nm,1.8s

EPF Esparros 35.31 310 *e*P **P** **17 01 25.9 -0.3**
EPF Esparros 35.31 310 *e*P **P** **17 01 25.9 -0.3**
EPF Esparros 35.31 310 *e*P **P** **17 01 25.9 -0.3**
EPF Esparros 35.31 310 *e*P **P** **17 01 25.9 -0.3**
BCLA Clavier 35.41 324 P **P** **17 01 27.9 +1.0**
comp=Z,29nm,2.2s

GIVF Givet 35.50 323 *e*P **P** **17 01 27.4 -0.3**
GIVF Givet 35.50 323 *e*P **P** **17 01 27.4 -0.3**
GIVF Givet 35.50 323 *e*P **P** **17 01 27.4 -0.3**
GIVF Givet 35.50 323 *e*P **P** **17 01 27.4 -0.3**
LABF Labassere 35.50 310 *e*P **P** **17 01 29.0 +1.2**
LABF Labassere 35.50 310 *e*P **P** **17 01 29.0 +1.2**
LABF Labassere 35.50 310 *e*P **P** **17 01 29.0 +1.2**
TKM2 Tokmak 2 35.63 51 *e*P **P** **17 01 29.9 +0.7**
TKM2 pmax pmax
comp=Z,6.0nm,0.7s

TKM2 Tokmak 2 35.63 51 *e*P **P** **17 01 29.9 +0.7**
comp=Z,6.1nm,0.7s

TKM2 Tokmak 2 35.63 51 *e*P **P** **17 01 29.9 +0.7**
comp=Z,6.0nm,0.7s

SVE Sverdlovsk 35.63 22⇓ *i*P **P** **17 01 28.8 +0.1**
SVE *e*S **S** **17 07 09.5 +5.0**
SVE pmax pmax
comp=Z,21nm,1.7s

SVE MLR MLR
comp=Z,943nm,17.0s

SVE Sverdlovsk 35.63 22 *i* P **P** **17 01 28.8 +0.1**
comp=Z,21nm,1.7s

SVE *e*S **S** **17 07 09.5 +5.0**
comp=Z,943nm,17.0s

LFF La Frestale 35.67 313 *e*P **P** **17 01 30.4 +1.2**
comp=Z,124nm,1.4s

LFF La Frestale 35.67 313 *e*P **P** **17 01 30.4 +1.2**
LFF pmax pmax
comp=Z,124nm,1.4s

LFF La Frestale 35.67 313 *e*P **P** **17 01 30.4 +1.2**
comp=Z,124nm,1.4s

LFF La Frestale 35.67 313 *e*P **P** **17 01 30.4 +1.2**
comp=Z,62nm,1.4s

BAIF Baives 35.81 323 *e*P **P** **17 01 30.2 -0.1**
comp=Z,21nm,1.0s

BAIF Baives 35.81 323 *e*P **P** **17 01 30.2 -0.1**
BAIF pmax pmax
comp=Z,21nm,1.0s

BAIF Baives 35.81 323 *e*P **P** **17 01 30.2 -0.1**
comp=Z,21nm,1.0s

BAIF Baives 35.81 323 *e*P **P** **17 01 30.2 -0.1**
comp=Z,10nm,1.0s

REYF Montagne du Re 35.83 309 *e*P **P** **17 01 32.0 +1.3**
REYF Montagne du Re 35.83 309 *e*P **P** **17 01 32.0 +1.3**
REYF Montagne du Re 35.83 309 *e*P **P** **17 01 32.0 +1.3**
ETSF Etsaut 35.90 309 *e*P **P** **17 01 32.5 +1.2**
comp=Z,78nm,1.1s

ETSF Etsaut 35.90 309 *e*P **P** **17 01 32.5 +1.2**
ETSF pmax pmax
comp=Z,78nm,1.1s

ETSF Etsaut 35.90 309 *e*P **P** **17 01 32.5 +1.2**
comp=Z,78nm,1.1s

ETSF Etsaut 35.90 309 *e*P **P** **17 01 32.5 +1.2**
comp=Z,39nm,1.1s

TOA0 Torodi Ar. Sit 35.96 257 *e*P **P** **17 01 32.4 +0.3**
TOA0 Torodi Ar. Sit 35.96 257 *e*P **P** **17 01 32.4 +0.3**
TORD Torodi Ar. Bea 35.96 257 P **P** **17 01 32.5 +0.5**
TORD PcP **PcP** **17 03 58.5 -0.3**
TORD Torodi Ar. Bea 35.96 257 P **P** **17 01 32.5 +0.5**
comp=Z,10nm,1.0s,baz=59,slow=6.5,SNR=39

TORD PcP **PcP** **17 03 58.5 -0.3**
comp=Z,3.6nm,1.0s,baz=47,slow=1.5,SNR=5.7

TORD LR LR 17 16 56.0
comp=Z,913nm,18.5s,baz=85,slow=37

TORD Torodi Ar. Bea 35.96 257 P **P** **17 01 32.5 +0.5**
TORD Torodi Ar. Bea 35.96 257 PcP **PcP** **17 03 58.5 -0.3**
SJPF Ste Jean 36.43 309 *e*P **P** **17 01 36.9 +1.2**
comp=Z,56nm,1.3s

SJPF Ste Jean 36.43 309 *e*P **P** **17 01 36.9 +1.2**
SJPF pmax pmax
comp=Z,56nm,1.3s

SJPF Ste Jean 36.43 309 *e*P **P** **17 01 36.9 +1.2**
comp=Z,56nm,1.3s

SJPF Ste Jean 36.43 309 *e*P **P** **17 01 36.9 +1.2**
comp=Z,28nm,1.3s

MFF Saint Martin d 36.86 315 *e*P **P** **17 01 39.5 +0.2**
comp=Z,36nm,1.2s

MFF Saint Martin d 36.86 315 *e*P **P** **17 01 39.5 +0.2**
MFF pmax pmax
comp=Z,36nm,1.2s

MFF Saint Martin d 36.86 315 *e*P **P** **17 01 39.5 +0.2**
comp=Z,36nm,1.2s

MFF Saint Martin d 36.86 315 *e*P **P** **17 01 39.5 +0.2**
comp=Z,18nm,1.2s

BRVK Borovoye 36.99 33 *d i*P **P** **17 01 41.0 +0.6**
BRVK pmax pmax
comp=Z,13nm,1.2s

BRVK Borovoye 36.99 33 *e*P **P** **17 01 39.9 -0.5**
comp=Z,16nm,1.3s

BRVK Borovoye 36.99 33 P **P** **17 01 41.1 +0.8**
SNR=8.0

BRVK Borovoye 36.99 33 *e*P **P** **17 01 39.9 -0.5**
comp=Z,16nm,1.3s

BVAR Borovoye Array 37.02 33 P **P** **17 01 40.6 0.0**
BVAR 17 04 01.5
BVAR pmax pmax
comp=Z,5.0nm,0.6s

BVAR pmax pmax
comp=Z,3.0nm,0.9s

BVAR MLR MLR
comp=Z,714nm,18.0s

BVAR Borovoye Array 37.02 33 P **P** **17 01 40.6 0.0**
BVAR PcP **PcP** **17 04 01.5 +0.2**

BVAR Borovoye Array 37.02 33 P **P 17 01 40.6 0.0**
comp=Z,4.8nm,0.6s,baz=222,slow=9.8,SNR=41
BVAR PcP **PcP 17 04 01.5 +0.2**
comp=Z,3.3nm,0.9s,baz=223,slow=3.5,SNR=4.2
BVAR LR LR 17 20 25.7
comp=Z,714nm,18.0s,baz=239,slow=42
BVAR Borovoye Array 37.02 33 P **P 17 01 40.6 0.0**
comp=Z,5.0nm,0.6s
BVAR Borovoye Array 37.02 33 PcP **PcP 17 04 01.5 +0.2**
comp=Z,714nm,18.0s
FINES FINESS Array B 37.05 351 P **P 17 01 40.1 -0.6**
FINES PcP **PcP 17 04 00.7 -0.5**
FINES FINESS Array B 37.05 351 P **P 17 01 40.1 -0.6**
comp=Z,11nm,0.8s,baz=144,slow=11,SNR=36
FINES PcP **PcP 17 04 00.7 -0.5**
comp=Z,4.4nm,0.8s,baz=129,slow=2.7,SNR=8.3
FINES FINESS Array B 37.05 351 P **P 17 01 40.1 -0.6**
comp=Z,11nm,0.8s
FINES FINESS Array B 37.05 351 PcP **PcP 17 04 00.7 -0.5**
comp=Z,4.0nm,0.8s
FIA1 FINESS Array S 37.05 351 *eP* **P 17 01 40.1 -0.7**
FIA1 FINESS Array S 37.05 351 *eP* **P 17 01 40.1 -0.7**
MUD Monsted U'grnd 37.40 334 *i* P **P 17 01 44.3 +0.5**
MUD pmax pmax
comp=Z,23nm,1.0s
MUD Monsted U'grnd 37.40 334 *i* P **P 17 01 44.3 +0.5**
comp=Z,23nm,0.9s
MUD Monsted U'grnd 37.40 334 *i* P **P 17 01 44.3 +0.5**
comp=Z,23nm,1.0s
MDT Midelt 37.58 292 LR LR 17 18 09.1
comp=Z,237nm,18.9s,baz=55,slow=38
LDF La Druitiere 37.63 318 *eP* **P 17 01 45.5 -0.4**
comp=Z,39nm,1.2s
LDF La Druitiere 37.63 318 *eP* **P 17 01 45.5 -0.4**
LDF pmax pmax
comp=Z,39nm,1.2s
LDF La Druitiere 37.63 318 *eP* **P 17 01 45.5 -0.4**
comp=Z,39nm,1.2s
LDF La Druitiere 37.63 318 *eP* **P 17 01 45.5 -0.4**
comp=Z,20nm,1.2s
ESDC Sonseca Array 37.65 303 P **P 17 01 47.3 +1.0**
ESDC PcP **PcP 17 04 02.9 -0.8**
ESDC Sonseca Array 37.65 303 P **P 17 01 47.3 +1.0**
comp=Z,3.0nm,0.6s,baz=88,slow=8.0,SNR=31
ESDC PcP **PcP 17 04 02.9 -0.8**
comp=Z,0.2nm,0.3s,baz=58,slow=3.2,SNR=4.7
ESDC LR LR 17 18 22.3
comp=Z,186nm,18.8s,baz=160,slow=38
ESDC Sonseca Array 37.65 303 P **P 17 01 47.3 +1.0**
ESDC Sonseca Array 37.65 303 PcP **PcP 17 04 02.8 -0.8**
ESLA Sonseca Array 37.65 303 *eP* **P 17 01 46.9 +0.6**
comp=Z,7.1nm,1.3s
ESLA Sonseca Array 37.65 303 *eP* **P 17 01 46.9 +0.6**
comp=Z,7.1nm,1.3s
KAF Kangasniemi 37.66 351 *eP* P 17 01 42.7 -3.2
KAF pmax pmax
comp=Z,5.0nm,0.7s
KAF Kangasniemi 37.66 351 *ep* P 17 01 42.7 -3.2
comp=Z,4.8nm,0.7s
JOF Joensuu 37.91 355 *eP* **P 17 01 45.9 -2.1**
JOF pmax pmax
comp=Z,13nm,0.7s
JOF Joensuu 37.91 355 *ep* **P 17 01 45.9 -2.1**
comp=Z,13nm,0.7s
JOF Joensuu 37.91 355 *eP* **P 17 01 45.9 -2.1**
comp=Z,13nm,0.7s
FLN La Foliniere 37.92 318 *eP* **P 17 01 48.0 -0.3**
comp=Z,157nm,1.3s
FLN *eR*
comp=Z,150nm,17.2s
FLN La Foliniere 37.92 318 *eP* **P 17 01 48.0 -0.3**
FLN La Foliniere 37.92 318 *eP* **P 17 01 48.0 -0.3**
comp=Z,157nm,1.3s
FLN La Foliniere 37.92 318 *eP* **P 17 01 48.0 -0.3**
comp=Z,78nm,1.3s
GRR Gorron 37.99 318 *eP* **P 17 01 48.6 -0.3**
comp=Z,58nm,1.2s
GRR Gorron 37.99 318 *eP* **P 17 01 48.6 -0.3**
GRR pmax pmax
comp=Z,59nm,1.2s
GRR Gorron 37.99 318 *eP* **P 17 01 48.6 -0.3**
comp=Z,58nm,1.2s
GRR Gorron 37.99 318 *eP* **P 17 01 48.6 -0.3**
comp=Z,29nm,1.2s
HFS Hagfors 38.63 341 P **P 17 01 53.9 -0.3**
HFS PcP **PcP 17 04 05.4 -0.7**
HFS Hagfors 38.63 341 P **P 17 01 53.9 -0.3**
comp=Z,16nm,0.9s,baz=147,slow=8.3,SNR=25
HFS PcP **PcP 17 04 05.4 -0.7**
comp=Z,1.9nm,0.6s,baz=129,slow=3.9,SNR=3.2
HFS Hagfors 38.63 341 P **P 17 01 53.9 -0.3**
comp=Z,16nm,0.9s
SGMF Saint Gilles 38.99 317 *eP* **P 17 01 56.7 -0.6**
SGMF Saint Gilles 38.99 317 *eP* **P 17 01 56.7 -0.6**
SGMF Saint Gilles 38.99 317 *eP* **P 17 01 56.7 -0.6**
SGMF Saint Gilles 38.99 317 *eP* **P 17 01 56.7 -0.6**
QUIF Quistinic 39.25 316 *eP* **P 17 01 59.0 -0.5**
QUIF Quistinic 39.25 316 *eP* **P 17 01 59.0 -0.5**
QUIF Quistinic 39.25 316 *eP* **P 17 01 59.0 -0.5**
QUIF Quistinic 39.25 316 *eP* **P 17 01 59.0 -0.5**
ROSF Rostrenen 39.47 316 *eP* **P 17 02 00.6 -0.7**
comp=Z,33nm,0.9s
ROSF Rostrenen 39.47 316 *eP* **P 17 02 00.6 -0.7**
ROSF pmax pmax
comp=Z,33nm,0.9s
ROSF Rostrenen 39.47 316 *eP* **P 17 02 00.6 -0.7**
comp=Z,33nm,0.9s
ROSF Rostrenen 39.47 316 *eP* **P 17 02 00.6 -0.7**
comp=Z,16nm,0.9s
PBAR Barrancos 39.84 300 *eP* **P 17 02 05.0 +0.5**
comp=Z,22nm,1.5s
PBAR Barrancos 39.84 300 *eP* **P 17 02 05.0 +0.5**
comp=Z,22nm,1.5s
NAO01 NORSAR Array S 40.05 340 *eP* **P 17 02 05.5 -0.5**
comp=Z,28nm,1.0s
NAO01 NORSAR Array S 40.05 340 *eP* **P 17 02 05.5 -0.5**
comp=Z,28nm,1.0s
PBRG Braganca 40.10 306 *eP* **P 17 02 07.1 +0.4**
comp=Z,18nm,2.1s
PBRG Braganca 40.10 306 *eP* **P 17 02 07.1 +0.4**
comp=Z,18nm,2.1s
NB2 NORSAR Subarra 40.10 340 P **P 17 02 05.4 -1.1**
comp=Z,21nm,0.9s,baz=139,slow=9.3
NB2 NORSAR Subarra 40.10 340 P **P 17 02 05.4 -1.1**
baz=139,slow=9.3
NB2 NORSAR Subarra 40.10 340 P **P 17 02 05.4 -1.1**
comp=Z,21nm,0.9s,SNR=5.3
NOA NORSAR Array B 40.10 340 P **P 17 02 05.6 -0.8**
NOA NORSAR Array B 40.10 340 P **P 17 02 05.6 -0.8**
comp=Z,14nm,0.9s,baz=138,slow=8.5,SNR=37
NOA LR LR 17 21 07.6
comp=Z,136nm,18.6s,baz=150,slow=40
NOA NORSAR Array B 40.10 340 P **P 17 02 05.6 -0.8**
comp=Z,137nm,18.7s
MVO Moncorvo 40.21 305 *eP* **P 17 02 08.5 +0.8**
comp=Z,28nm,1.2s
MVO Moncorvo 40.21 305 *eP* **P 17 02 08.5 +0.8**
comp=Z,28nm,1.2s
KURBB Kurchatov Arra 40.23 40 P **P 17 02 08.2 +0.6**
comp=Z,11nm,0.7s,baz=251,slow=8.4,SNR=112
KURBB PcP **PcP 17 04 11.7 +0.2**
comp=Z,1.9nm,0.8s,baz=260,slow=3.4,SNR=6.3
KURBB LR LR 17 21 26.7
comp=Z,275nm,19.7s,baz=240,slow=40
PMRV Marv??o 40.24 302 *eP* **P 17 02 08.6 +0.7**
comp=Z,31nm,1.1s
PMRV Marv??o 40.24 302 *eP* **P 17 02 08.6 +0.7**
comp=Z,31nm,1.1s
PVAQ Vaqueiros 40.31 299 *eP* **P 17 02 09.0 +0.6**
comp=Z,71nm,1.2s
PVAQ Vaqueiros 40.31 299 *eP* **P 17 02 09.0 +0.6**
comp=Z,71nm,1.2s
KURK Kurchatov 40.32 40*d* *i*P **P 17 02 08.9 +0.6**
KURK pmax pmax
comp=Z,36nm,1.2s
KURK Kurchatov 40.32 40 *eP* **P 17 02 08.9 +0.6**
comp=Z,20nm,0.9s
KURK PcP **PcP 17 04 11.7 0.0**
KURK *e*PcP **PcP 17 04 11.8 +0.1**
KURK Kurchatov 40.32 40 P **P 17 02 09.5 +1.2**
SNR=17
KURK Kurchatov 40.32 40 *i* P **P 17 02 08.9 +0.6**
comp=Z,36nm,1.2s
PESTR Estremoz 40.33 301 *eP* **P 17 02 08.8 +0.1**
comp=Z,27nm,2.3s
PESTR Estremoz 40.33 301 *eP* **P 17 02 08.8 +0.1**
comp=Z,27nm,2.3s

PCBR Castelo Branco 40.36 302 *eP* **P 17 02 09.1 +0.3**
comp=Z,17nm,2.2s
PCBR Castelo Branco 40.36 302 *eP* **P 17 02 09.1 +0.3**
comp=Z,17nm,2.2s
PYUN Piuthan 40.39 76 *eP* **P 17 02 09.6 +0.1**
comp=Z,117nm,1.7s
PBDV Barranco-do-Ve 40.47 298 *eP* **P 17 02 10.7 +0.9**
comp=Z,58nm,1.2s
PBDV Barranco-do-Ve 40.47 298 *eP* **P 17 02 10.7 +0.9**
comp=Z,58nm,1.2s
PBEJ Beja 40.47 300 *eP* **P 17 02 10.6 +0.8**
comp=Z,28nm,1.8s
PBEJ Beja 40.47 300 *eP* **P 17 02 10.6 +0.8**
comp=Z,28nm,1.8s
PCVE Castro Verde 40.58 299 *eP* **P 17 02 10.6 -0.1**
comp=Z,43nm,2.1s
PCVE Castro Verde 40.58 299 *eP* **P 17 02 10.6 -0.1**
comp=Z,43nm,2.1s
EVO Evora 40.63 300⇓ *i*P **P 17 02 12.5 +1.4**
comp=Z,53nm,1.1s
EVO *eR*
comp=Z,301nm,19.0s
EVO Evora 40.63 300 *eP* **P 17 02 12.0 +0.9**
comp=Z,38nm,1.0s
EVO Evora 40.63 300 *eP* **P 17 02 12.0 +0.9**
comp=Z,38nm,1.0s
EVOP Sao Brissos 40.72 300⇓ *i*P **P 17 02 12.5 +0.7**
EVOP pmax pmax
comp=Z,53nm,1.1s
EVOP Sao Brissos 40.72 300⇓ *i*P **P 17 02 12.5 +0.7**
comp=Z,53nm,1.1s
EVOP Sao Brissos 40.72 300⇓ *i*P **P 17 02 12.5 +0.7**
comp=Z,26nm,1.1s
POLO Lamas de Olo 40.81 305 *eP* **P 17 02 13.1 +0.4**
comp=Z,20nm,1.6s
POLO Lamas de Olo 40.81 305 *eP* **P 17 02 13.1 +0.4**
comp=Z,20nm,1.6s
KOLN Koldanda 40.96 76 *eP* **P 17 02 14.3 +0.1**
comp=Z,9.3nm,0.8s
DANN Dangsing 41.03 75 *eP* **P 17 02 15.4 +0.5**
comp=Z,68nm,1.1s
MK31 Makanchi Array 41.29 47 *eP* **P 17 02 17.1 +0.6**
MK31 Makanchi Array 41.29 47 *eP* **P 17 02 17.1 +0.6**
MK31 Makanchi Array 41.29 47 *eP* **P 17 02 17.1 +0.6**
MKAR Makanchi Array 41.29 47 P **P 17 02 17.2 +0.7**
MKAR pmax pmax
comp=Z,15nm,0.7s
MKAR MLR MLR
comp=Z,540nm,18.5s
MKAR Makanchi Array 41.29 47 P **P 17 02 17.2 +0.7**
MKAR Makanchi Array 41.29 47 P **P 17 02 17.2 +0.7**
comp=Z,15nm,0.7s,baz=250,slow=6.9,SNR=162
MKAR LR LR 17 22 00.1
comp=Z,540nm,18.5s,baz=252,slow=40
MKAR Makanchi Array 41.29 47 P **P 17 02 17.2 +0.7**
comp=Z,540nm,18.5s
LSZ Lusaka 41.33 194 *eP* **P 17 02 17.9 +0.8**
comp=Z,19nm,1.4s
LSZ Lusaka 41.33 194 LR LR 17 19 10.4
comp=Z,447nm,18.7s,baz=25,slow=36
LSZ Lusaka 41.33 194 *eP* **P 17 02 17.9 +0.8**
comp=Z,19nm,1.4s
DMN Daman 42.31 76 *eP* **P 17 02 25.0 -0.3**
comp=Z,87nm,1.7s
EKA Eskdalemuir Ar 42.33 326 P **P 17 02 25.2 +0.4**
EKA PcP **PcP 17 04 18.4 +0.3**
EKA Eskdalemuir Ar 42.33 326 P **P 17 02 25.2 +0.4**
comp=Z,4.6nm,0.8s,baz=114,slow=10,SNR=9.2
EKA PcP **PcP 17 04 18.4 +0.3**
comp=Z,0.8nm,0.5s,baz=118,slow=5.7,SNR=4.3
EKA Eskdalemuir Ar 42.33 326 P **P 17 02 25.2 +0.4**
comp=Z,5.0nm,0.8s
EKA Eskdalemuir Ar 42.33 326 PcP **PcP 17 04 18.5 +0.3**
comp=Z,1.0nm,0.5s
APA Apatity 42.42 358⇓ *i*P **P 17 02 26.0 +0.6**
APA pmax pmax
comp=Z,39nm,1.0s
APA MLR MLR
comp=Z,300nm,14.0s
APA Apatity 42.42 358 *i* P **P 17 02 26.0 +0.6**
comp=Z,300nm,14.0s
KKN Kakani 42.44 76 *eP* **P 17 02 26.0 -0.3**
comp=Z,31nm,1.1s
PKIN Phulchoki 42.57 76 *eP* **P 17 02 26.7 -0.8**
comp=Z,102nm,1.8s
PKI Pulchoki 42.58 76 *eP* **P 17 02 26.8 -0.8**
comp=Z,98nm,1.6s
GUN Gumba 42.94 75 *eP* **P 17 02 30.4 -0.2**
comp=Z,46nm,1.2s
RAMN Ramite 43.72 77 *eP* **P 17 02 35.7 -1.1**
comp=Z,71nm,1.6s
WMQ Urumqi 44.43 52 P **P 17 02 42.6 +0.6**
WMQ pP **pP 17 02 47.1 +1.1**
WMQ sP **sP 17 02 49.6 +2.0**
WMQ PP **PcP 17 04 27.5 +1.9**
WMQ PcS **PcS 17 08 18.0 -0.9**
WMQ S **S 17 09 16.3 -0.3**
WMQ ScS **SS 17 12 37.9 +2.3**
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ LR LR
comp=Z,500nm,22.0s
ODAN Odare 44.43 77 *eP* **P 17 02 41.5 -1.0**
comp=Z,48nm,1.6s
NVS Novosibirsk 44.52 36⇑ *i*P **P 17 02 41.2 -1.3**
NVS *e* 17 04 24.8
NVS pmax pmax
comp=Z,46nm,1.4s
NVS pmax pmax
comp=N,21nm,1.5s
NVS pmax pmax
comp=E,12nm,1.4s
NVS Novosibirsk 44.52 36 *i* P **P 17 02 41.2 -1.3**
comp=E,21nm,1.5s
NVS Novosibirsk 44.52 36 *e*PcP **PcP 17 04 24.8 -0.8**
TAPN Taplejung 44.63 76 *eP* **P 17 02 43.2 -1.0**
DBIC Dimbokro 44.65 253 *eP* **P 17 02 43.7 -0.3**
comp=E,18nm,0.8s
DBIC Dimboki 44.65 253 P **P 17 02 44.1 +0.1**
comp=E,15nm,0.7s,baz=45,slow=8.2,SNR=23
DBIC LR LR 17 22 28.7
comp=E,1μm,18.7s,baz=45,slow=38
DBIC Dimbokro 44.65 253 P **P 17 02 44.1 +0.1**
comp=E,1μm,18.7s
ARCES ARCESS Array B 44.90 354 P **P 17 02 45.2 -0.1**
ARCES PcP **PcP 17 04 26.0 -0.6**
ARCES ARCESS Array B 44.90 354 P **P 17 02 45.2 -0.1**
comp=E,6.7nm,0.8s,baz=179,slow=8.0,SNR=16
ARCES PcP **PcP 17 04 26.0 -0.6**
comp=E,4.6nm,1.0s,baz=160,slow=5.6,SNR=4.0
ARCES LR LR 17 23 38.1
comp=E,136nm,18.6s,baz=172,slow=39
ARCES ARCESS Array B 44.90 354 P **P 17 02 45.2 -0.1**
comp=E,7.0nm,0.8s
ARCES ARCESS Array B 44.90 354 PcP **PcP 17 04 26.0 -0.6**
comp=E,136nm,18.6s
LIC Lamto 45.02 253 *eP* **P 17 02 47.0 0.0**
comp=E,22nm,0.7s,baz=59
LIC *eR*
comp=E,1μm,21.8s
LIC Lamto 45.02 253 *eP* **P 17 02 47.0 0.0**
comp=E,22nm,0.7s
LIC Lamto 45.02 253 *eP* **P 17 02 47.0 0.0**
comp=E,11nm,0.7s
ZAA0 Zalesovo Array 45.06 38 *eP* **P 17 02 46.4 -0.3**
ZAA0 Zalesovo Array 45.06 38 *eP* **P 17 02 46.4 -0.3**
ZALV Zalesovo Beam 45.06 38 P **P 17 02 46.2 -0.6**
ZALV pmax pmax
comp=Z,3.0nm,0.5s
ZALV MLR MLR
comp=Z,293nm,19.3s
ZALV Zalesovo Beam 45.06 38 P **P 17 02 46.2 -0.6**
ZALV Zalesovo Beam 45.06 38 P **P 17 02 46.2 -0.6**
comp=Z,2.8nm,0.5s,baz=248,slow=8.8,SNR=16
ZALV LR LR 17 24 32.9
comp=Z,293nm,19.3s,baz=71,slow=40
ZALV Zalesovo Beam 45.06 38 P **P 17 02 46.2 -0.6**
comp=Z,293nm,19.3s
HVS Khovu-Aksy 49.57 43*c* *i*P **P 17 03 22.8 +0.7**
HVS Khovu-Aksy 49.57 43 *i* P **P 17 03 22.8 +0.7**
GTA Gaotai 53.38 59 *eP* **P 17 03 51.3 +0.4**
GTA pP **pP 17 03 55.4 +0.4**
GTA sP **sP 17 03 58.6 +2.0**
GTA S **S 17 11 21.3 -1.6**
GTA pmax pmax
comp=Z,21nm,1.0s
GTA pmax pmax
comp=Z,130nm,6.4s
GTA LR LR
comp=N,400nm,20.7s
GTA LR LR
comp=E,320nm,19.0s
GTA LR LR
comp=Z,470nm,21.9s
SPITS Spitsbergen Ar 53.92 355 P **P 17 03 54.8 +0.7**
SPITS Spitsbergen Ar 53.92 355 P **P 17 03 54.8 +0.7**
comp=Z,16nm,0.8s,baz=137,slow=9.1,SNR=19
SPITS Spitsbergen Ar 53.92 355 P **P 17 03 54.8 +0.7**
comp=Z,16nm,0.8s
MOY Mondy 54.17 43 *eP* **P 17 03 57.8 +1.4**
MOY pmax pmax
comp=Z,45nm,2.3s
MOY Mondy 54.17 43 *eP* **P 17 03 57.8 +1.4**
comp=Z,45nm,2.3s
BOSA Boshof 54.87 193 P **P 17 04 02.4 +0.7**
BOSA Boshof 54.87 193 P **P 17 04 02.4 +0.7**
comp=Z,2.8nm,0.8s,baz=30,slow=11,SNR=6.1
BOSA LR LR 17 26 35.4
comp=Z,265nm,19.2s,baz=18,slow=35
BOSA Boshof 54.87 193 P **P 17 04 02.4 +0.7**
comp=Z,265nm,19.2s
KBS Kingsbay 54.99 354 *eP* **P 17 04 01.4 -0.4**
KBS pmax pmax
comp=Z,12nm,1.2s
KBS Kingsbay 54.99 354 *eP* **P 17 04 01.4 -0.4**
comp=Z,12nm,1.2s
ZAK Zakamensk 55.56 45 *eP* **P 17 04 05.6 -0.9**
ZAK pmax pmax
comp=Z,8.0nm,1.5s
ZAK Zakamensk 55.56 45 *eP* **P 17 04 05.6 -0.9**
comp=Z,8.0nm,1.5s
TLY Talaya 55.82 43 *eP* **P 17 04 09.9 +1.6**
TLY pmax pmax
comp=Z,25nm,1.9s
TLY MLR MLR
comp=Z,233nm,20.0s
TLY Talaya 55.82 43 *eP* **P 17 04 09.9 +1.6**
comp=Z,233nm,20.0s
CHTO Chiang Mai 56.71 83 *eP* **P 17 04 14.4 -0.7**
CHTO pmax pmax
comp=Z,11nm,1.4s
CHTO Chiang Mai 56.71 83 *eP* **P 17 04 14.4 -0.7**
comp=Z,11nm,1.4s
CHTO Chiang Mai 56.71 83 P **P 17 04 14.7 -0.4**
comp=Z,9.6nm,1.6s
CHTO Chiang Mai 56.71 83 *eP* **P 17 04 14.4 -0.7**
comp=Z,11nm,1.4s
CMAR Chiang Mai Arr 56.83 84 P **P 17 04 15.4 -0.5**
CMAR Chiang Mai Arr 56.83 84 P **P 17 04 15.4 -0.5**
comp=Z,3.8nm,1.0s,baz=293,slow=8.1,SNR=25
CMAR LR LR 17 33 31.0
comp=Z,223nm,18.1s,baz=281,slow=41
CMAR Chiang Mai Arr 56.83 84 P **P 17 04 15.4 -0.5**
comp=Z,223nm,18.1s
LZH Lanzhou 56.94 62 *eP* **P 17 04 17.0 +0.3**
LZH pP **pP 17 04 21.5 +0.7**
LZH sP **sP 17 04 24.0 +1.7**
LZH *eS* **S 17 12 08.0 -2.7**
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,170nm,4.0s
LZH LR LR
comp=N,200nm,18.4s
LZH LR LR
comp=E,890nm,19.4s
LZH LR LR
comp=Z,1μm,20.2s
SONM Songino Array 57.64 48 P **P 17 04 21.7 +0.3**
SONM Songino Array 57.64 48 P **P 17 04 21.7 +0.3**
comp=Z,7.5nm,0.8s,baz=267,slow=8.3,SNR=6.4
SONM Songino Array 57.64 48 P **P 17 04 21.7 +0.3**
comp=Z,8.0nm,0.8s
CD2 Chengdu 57.80 68 P **P 17 04 24.0 +1.3**
CD2 pP **pP 17 04 28.6 +1.8**
CD2 sP sP 17 04 31.0 +2.6
CD2 PcP **PcP 17 05 16.8 +1.4**
CD2 PP **PP 17 06 33.6 +2.8**
CD2 PcS **PcS 17 09 16.4 -0.4**
CD2 S **S 17 12 21.0 -1.0**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,5.6s
CD2 LR LR
comp=N,400nm,17.6s
CD2 LR LR
comp=E,590nm,21.1s
CD2 LR LR
comp=Z,400nm,21.5s
ULN Ulaanbaatar 58.08 48 *eP* **P 17 04 24.1 -0.4**
comp=Z,18nm,1.6s
ULN Ulaanbaatar 58.08 48 P **P 17 04 25.3 +0.7**
SNR=5.6
ULN Ulaanbaatar 58.08 48 P **P 17 04 24.8 +0.2**
comp=Z,7.5nm,1.6s
ULN Ulaanbaatar 58.08 48 *eP* **P 17 04 24.1 -0.4**
comp=Z,18nm,1.6s
SRDT SRDT 58.37 88 P **P 17 04 27.0 +0.2**
comp=Z,18nm,1.4s,comp=Z,4μm
PBKT Sadao Pong 59.27 85 P **P 17 04 32.7 -0.3**
comp=Z,24nm,1.3s,comp=Z,1μm
GYA Guiyang 61.34 72 P **P 17 04 48.0 +0.7**
GYA PP **PP 17 07 04.3 +2.0**
GYA ScP **ScP 17 09 31.8 +0.7**
GYA S S 17 13 02.5 -5.5
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=N,630nm,20.8s
GYA LR LR
comp=E,550nm,21.0s
GYA LR LR
comp=Z,610nm,20.9s
XAN Xi'an 61.41 64 P **P 17 04 46.8 -0.8**
XAN pmax pmax
comp=Z,3.0nm,0.9s
XAN LR LR
comp=N,290nm,21.5s
XAN LR LR
comp=E,140nm,21.5s
XAN LR LR
comp=Z,160nm,20.7s
CIT Chita 61.94 43 *eP* **P 17 04 50.1 -0.8**
CIT *e* 17 05 02.1
CIT Chita 61.94 43 *eP* **P 17 04 50.1 -0.8**
SUMG Summit 61.99 341 *i* P **P 17 04 51.8 +0.5**
SUMG pmax pmax
comp=Z,4.0nm,0.8s
SUMG Summit 61.99 341 *i* P **P 17 04 51.8 +0.5**
comp=Z,3.8nm,0.8s
SUMG Summit 61.99 341 *i* P **P 17 04 51.8 +0.5**
comp=Z,4.0nm,0.8s
HHC Hu-ho-hao-te 62.13 56⇑ *eP* **P 17 04 53.0 +0.6**
HHC pP **pP 17 04 57.6 +1.1**
HHC sP **sP 17 05 00.0 +1.9**
HHC PP **PP 17 07 11.8 +2.8**
HHC PcS **PcS 17 09 34.9 -0.9**
HHC S **S 17 13 15.3 -2.3**
HHC ScS **SKKSac 17 14 40.6 -3.9**
HHC pmax pmax
comp=Z,48nm,1.2s
HHC pmax pmax
comp=Z,200nm,5.2s
HHC LR LR
comp=N,720nm,17.5s
HHC LR LR
comp=E,690nm,15.8s
HHC LR LR
comp=Z,710nm,23.9s
BJI Beijing 65.74 56 P **P 17 05 16.1 +0.1**
BJI S **S 17 13 59.4 -2.7**
BJI SS SS 17 18 23.8 +7.6
BJI pmax pmax
comp=Z,12nm,1.9s
BJI pmax pmax
comp=Z,120nm,4.4s
BJI LR LR
comp=N,330nm,17.1s
BJI LR LR
comp=E,410nm,18.8s

BJI					LR	LR			
	comp=Z,270nm,30.0s								
TIXI	**Tiksi**	**66.64**	**20**	*d*	*i*P	**P**	**17 05 20.7**	**-0.5**	
TIXI					pmax	pmax			
	comp=Z,7.0nm,1.3s								
TIXI	**Tiksi**	**66.64**	**20**	*i*	P	**P**	**17 05 20.7**	**-0.5**	
	comp=Z,7.0nm,1.3s								
WHN	**Wuhan**	**66.73**	**66**	*e*	P	**P**	**17 05 21.9**	**-0.6**	
WHN					eS	S	17 14 07.8	-6.6	
WHN					LR	LR			
	comp=N,290nm,11.4s								
WHN					LR	LR			
	comp=E,390nm,14.6s								
WHN					LR	LR			
	comp=Z,800nm,20.0s								
YAK	**Yakutsk**	**68.94**	**30**	*e*	P	P	17 05 31.1	-4.7	
YAK					pmax	pmax			
	comp=Z,11nm,1.2s								
YAK					pmax	pmax			
	comp=E,10.0nm,1.5s								
YAK					MLR	MLR			
	comp=Z,449nm,19.0s								
YAK					MLR	MLR			
	comp=N,135nm,16.0s								
YAK					MLR	MLR			
	comp=E,371nm,19.0s								
NJ2	**Nanjing**	**69.98**	**63**	*e*	P	**P**	**17 05 41.8**	**-1.0**	
NJ2					pP	**pP**	**17 05 44.8**	**-2.2**	
NJ2					sP	**sP**	**17 05 46.8**	**-1.7**	
NJ2					PP	**PP**	**17 08 17.0**	**-0.5**	
NJ2					S	**S**	**17 14 53.0**	**-0.1**	
NJ2					pmax	pmax			
	comp=Z,10.0nm,0.9s								
NJ2					pmax	pmax			
	comp=Z,90nm,6.5s								
NJ2					LR	LR			
	comp=N,270nm,20.6s								
NJ2					LR	LR			
	comp=E,490nm,23.8s								
NJ2					LR	LR			
	comp=Z,570nm,19.6s								
CN2	**Changchun**	**71.43**	**50**	*e*	P	**P**	**17 05 51.8**	**+0.3**	
CN2					eS	**S**	**17 15 05.1**	**-4.6**	
CN2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
CN2					LR	LR			
	comp=N,400nm,19.0s								
CN2					LR	LR			
	comp=E,200nm,19.0s								
CN2					LR	LR			
	comp=Z,300nm,16.0s								
QZH	**Quanzhou**	**72.05**	**70**	‖	P	**P**	**17 05 55.5**	**0.0**	
QZH					LR	LR			
	comp=Z,630nm,22.7s								
KLR	**Kul'dur**	**73.83**	**43**	*e*	P	P	17 06 00.0	-5.7	
MDJ	**Mudanjiang**	**74.00**	**48**	P		**P**	**17 06 05.0**	**-1.7**	
MDJ					pP	**pP**	**17 06 08.3**	**-2.6**	
MDJ					sP	**sP**	**17 06 09.5**	**-3.0**	
MDJ					PcP	**PcP**	**17 06 20.3**	**-1.7**	
MDJ					PP	**PP**	**17 08 50.4**	**-1.2**	
MDJ					S	**SKiKP**	**17 15 37.5**	**+2.4**	
MDJ					ScS	**SKSac**	**17 16 14.3**	**+0.4**	
MDJ					pmax	pmax			
	comp=Z,7.0nm,1.6s								
MDJ					pmax	pmax			
	comp=Z,38nm,6.5s								
MDJ					LR	LR			
	comp=N,160nm,22.9s								
MDJ					LR	LR			
	comp=E,170nm,24.4s								
MDJ					LR	LR			
	comp=Z,260nm,18.3s								
KSAR	**Wonju Array Be**	**75.25**	**55**		P	**P**	**17 06 13.4**	**-0.7**	
KSAR	**Wonju Array Be**	**75.25**	**55**		P	**P**	**17 06 13.4**	**-0.7**	
KSRS	**Korea Array**	**75.28**	**55**		P	**P**	**17 06 13.4**	**-0.9**	
	comp=Z,4.3nm,0.8s,baz=282,slow=6.0,SNR=24								
KSRS	**Korea Array**	**75.28**	**55**		P	**P**	**17 06 13.4**	**-0.9**	
	comp=Z,4.0nm,0.8s								
USRK	**Ussuriysk Arra**	**75.76**	**48**		P	**P**	**17 06 15.7**	**-1.2**	
	comp=Z,6.9nm,0.7s,baz=268,slow=6.7,SNR=12								
RES	**Resolute Bay**	**75.77**	**348**		LR	LR	17 41 07.7		
	comp=Z,54nm,20.3s,baz=337,slow=37								
HABR	**Khabarovsk**	**76.14**	**43**		P	P	17 06 22.2	+3.2	
HABR					*e*		17 06 33.3		
HABR					*e*		17 09 14.3		
HABR					eS	**S**	**17 16 07.2**	**+4.7**	
HABR					eSS	SKSac	17 16 20.1	-10	
HABR					*e**SS	**SKKSac**	**17 16 24.2**	**-6.0**	
HABR					*e*		17 16 35.6		
HABR	**Khabarovsk**	**76.14**	**43**	*e*	PcP	**PcP**	**17 06 33.3**	**+2.2**	
SCHQ	**Schefferville**	**77.63**	**325**		P	**P**	**17 06 26.9**	**-0.4**	
SCHQ	**Schefferville**	**77.63**	**325**		P	**P**	**17 06 26.9**	**-0.4**	
	comp=Z,6.0nm,1.1s,baz=57,slow=9.5,SNR=7.2								
SCHQ	**Schefferville**	**77.63**	**325**		P	**P**	**17 06 26.9**	**-0.4**	
SEY	**Seymchan**	**78.22**	**25**	*e*	P	**P**	**17 06 30.0**	**-0.4**	
SEY	**Seymchan**	**78.22**	**25**	*e*	P	**P**	**17 06 30.0**	**-0.4**	
BILL	**Bilibino**	**79.59**	**17**	*e*	P	**P**	**17 06 37.2**	**-0.7**	
BILL					eS	**S**	**17 16 40.2**	**+1.0**	
BILL					pmax	pmax			
	comp=Z,15nm,1.2s								
BILL	**Bilibino**	**79.59**	**17**	*e*	P	**P**	**17 06 37.2**	**-0.7**	
	comp=Z,15nm,1.2s								
MAT	**Matsushiro**	**83.19**	**53**		P	**P**	**17 06 56.9**	**-0.7**	
MJAR	**Matsushiro Arr**	**83.19**	**53**		P	**P**	**17 06 56.7**	**-0.9**	
MJAR	**Matsushiro Arr**	**83.19**	**53**		P	**P**	**17 06 56.7**	**-0.9**	
	comp=Z,1.5nm,0.6s,baz=279,slow=5.2,SNR=8.6								
MJAR	**Matsushiro Arr**	**83.19**	**53**		P	**P**	**17 06 56.7**	**-0.9**	
	comp=Z,2.0nm,0.6s								
KAPI	**Kappang**	**84.94**	**98**	*e*	P	**P**	**17 07 05.7**	**-1.1**	
	comp=Z,7.9nm,0.9s								
KAPI	**Kappang**	**84.94**	**98**		P	**P**	**17 07 06.9**	**+0.1**	
KAPI	**Kappang**	**84.94**	**98**		P	**P**	**17 07 05.7**	**-1.1**	
	comp=Z,9.8nm,0.9s,baz=247,slow=5.3,SNR=7.7								
KAPI	**Kappang**	**84.94**	**98**	*e*	P	**P**	**17 07 05.7**	**-1.1**	
	comp=Z,7.9nm,0.9s								
LBNH	**Lisbon**	**85.64**	**317**	*e*	P	**P**	**17 07 11.2**	**+1.4**	
LBNH	**Lisbon**	**85.64**	**317**	*e*	P	**P**	**17 07 11.2**	**+1.4**	
	comp=Z,76nm,1.9s								
LBNH	**Lisbon**	**85.64**	**317**	*e*	P	**P**	**17 07 11.2**	**+1.4**	
COLD	**Coldfoot**	**87.63**	**3**	*e*	P	**P**	**17 07 20.1**	**+1.0**	
	comp=Z,58nm,1.9s								
COLD	**Coldfoot**	**87.63**	**3**	*e*	P	**P**	**17 07 20.1**	**+1.0**	
	comp=Z,58nm,1.9s								
SADO	**Sadowa**	**89.64**	**321**		LR	LR	17 49 13.7		
	comp=Z,61nm,19.4s,baz=125,slow=37								
YKA	**Yellowknife Ar**	**89.81**	**348**		P	**P**	**17 07 29.4**	**-0.1**	
YKA	**Yellowknife Ar**	**89.81**	**348**		P	**P**	**17 07 29.4**	**-0.1**	
	comp=Z,2.3nm,0.8s,baz=30,slow=5.0,SNR=33								
YKA	**Yellowknife Ar**	**89.81**	**348**		P	**P**	**17 07 29.4**	**-0.1**	
	comp=Z,2.0nm,0.9s								
ILAR	**Eielson Array**	**90.21**	**2**		P	**P**	**17 07 31.4**	**0.0**	
ILAR					PP	**PP**	**17 11 03.1**	**-1.0**	
ILAR	**Eielson Array**	**90.21**	**2**		P	**P**	**17 07 31.4**	**0.0**	
	comp=Z,1.3nm,0.7s,baz=332,slow=3.1,SNR=16								
ILAR					PP	**PP**	**17 11 03.1**	**-1.0**	
	comp=Z,0.8nm,1.0s,baz=352,slow=5.7,SNR=3.6								
ILAR	**Eielson Array**	**90.21**	**2**		P	**P**	**17 07 31.4**	**0.0**	
	comp=Z,1.0nm,0.7s								
ILAR	**Eielson Array**	**90.21**	**2**		PP	PP	17 11 03.2	-1.0	
FFC	**Flin Flon**	**93.16**	**338**	*e*	P	**P**	**17 07 44.7**	**-0.5**	
FFC					pmax	pmax			
	comp=Z,13nm,1.3s								
FFC	**Flin Flon**	**93.16**	**338**	*e*	P	**P**	**17 07 44.7**	**-0.5**	
	comp=Z,13nm,1.3s								
FFC	**Flin Flon**	**93.16**	**338**	*e*	P	**P**	**17 07 44.7**	**-0.5**	
	comp=Z,13nm,1.3s								
FITZ	**Fitzroy Crossi**	**95.73**	**107**		P	**P**	**17 07 57.2**	**-0.3**	
FITZ	**Fitzroy Crossi**	**95.73**	**107**		P	**P**	**17 07 57.2**	**-0.3**	
	comp=Z,3.9nm,1.2s,baz=273,slow=5.0,SNR=3.5								
FITZ	**Fitzroy Crossi**	**95.73**	**107**		P	**P**	**17 07 57.2**	**-0.3**	
ASAR	**Alice Springs**	**105.00**	**109**		Pdif	**Pdif**	**17 08 38.2**	**-0.8**	
ASAR	**Alice Springs**	**105.00**	**109**		Pdiff	**Pdif**	**17 08 38.2**	**-0.8**	
	comp=Z,0.2nm,0.8s,baz=299,slow=4.5,SNR=4.3								
ASAR	**Alice Springs**	**105.00**	**109**		P	**Pdif**	**17 08 38.2**	**-0.8**	
NVAR	**Mina Array Bea**	**112.79**	**340**		PKiKP	**PKiKP**	**17 13 09.9**	**+1.4**	
NVAR	**Mina Array Bea**	**112.79**	**340**		PKiKP	**PKiKP**	**17 13 09.9**	**+1.4**	
	comp=Z,0.2nm,0.3s,baz=106,slow=2.0,SNR=4.4								
NVAR	**Mina Array Bea**	**112.79**	**340**		PKiKP	**PKiKP**	**17 13 09.9**	**+1.4**	
TXAR	**Lajitas Array**	**114.28**	**323**		PKP	PKPdf	17 13 10.0	-1.4	
TXAR	**Lajitas Array**	**114.28**	**323**		PKP	PKPdf	17 13 10.0	-1.4	
	comp=Z,0.4nm,0.8s,baz=48,slow=1.9,SNR=3.6								
SBA	**Scott Base**	**122.36**	**169**	*e*	PKiKP	**PKPdf**	**17 13 26.1**	**+0.9**	
SBA	**Scott Base**	**122.36**	**169**	*e*	PKPdf	**PKPdf**	**17 13 26.1**	**+0.9**	
SBA	**Scott Base**	**122.36**	**169**	*e*	PKiKP	**PKPdf**	**17 13 26.1**	**+0.9**	

CSEM ***19*** *17:11:48.6±0.8, 38°.90N×42°.12E, h26km±7km, MD3.3, Error ellipse: s-maj=20.4km s-min=11.0km az=154.0*
DDA ***19*** *17:11:51.3, 39°.07N×42°.11E, h3km, MD3.1*
ISK ***19*** *17:11:56.6, 39°.29N×41°.37E, h18km, MD3.3*
ISC 19 17:11:50.4±1.1, 39°.06N±0'.03×42°.09E±0'.03, h12km±11km, n22, σ2ˢ48/27, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VRTB	**Varto-Mus**	**0.51**	**282**	*e*PG		**Pg**	**17 12 00.4**	**0.0**
VRTB	**Varto-Mus**	**0.51**	**282**	*e*Pg		**Pg**	**17 12 00.4**	**0.0**
TUTA	**Tutak**	**0.66**	**58**	*i* P		**Pg**	**17 12 02.9**	**-0.3**
TUTA				*e*S		**Sg**	**17 12 14.2**	**+2.4**
TUTA	**Tutak**	**0.66**	**58**	*i* P		**Pg**	**17 12 02.9**	**-0.3**
TUTA				*e*S		**Sg**	**17 12 14.2**	**+2.4**
HOMI	**Horasan**	**0.99**	**352**	*e*P		**Pg**	**17 12 07.7**	**-1.9**
HOMI				*e*S		**Sn**	**17 12 25.4**	**+0.9**
ERZM	**Erzurum**	**1.01**	**326**	*i* P		**Pg**	**17 12 09.9**	**-0.1**
ERZM				*i* S		**Sb**	**17 12 25.1**	**+1.6**
ERZM	**Erzurum**	**1.01**	**326**	*i* P		**Pg**	**17 12 09.9**	**-0.1**
ERZM				*i* S		**Sb**	**17 12 25.1**	**+1.6**
EZM	**Erzurum**	**1.02**	**326**	*e*PG		**Pg**	**17 12 09.2**	**-0.8**
EZM				*e*SG		**Sg**	**17 12 18.2**	**-5.1**
BNGB	**Bingˆ¶l**	**1.10**	**267**	*e*PG		**Pb**	**17 12 09.9**	**-1.6**
BINT	**Bingol**	**1.27**	**262**	*e*Pg		Pn	17 12 09.9	-4.1
BEST	**Besiri**	**1.33**	**209**	*e*P		**Pg**	**17 12 17.0**	**+1.0**
BEST				*i* S		**Sg**	**17 12 37.3**	**+3.9**
CLDR	**Caldiran**	**1.42**	**86**	*e*PN		**Sg**	**17 12 31.2**	**-5.0**
DDEM	**Demirkent**	**1.85**	**352**	*e*P		**Pg**	**17 12 25.7**	**-0.2**
DDEM				*e*S		**Sg**	**17 12 53.6**	**+3.8**
DDEM	**Demirkent**	**1.85**	**352**	*e*P		**Pg**	**17 12 25.7**	**-0.2**
ERZN	**Erzincan**	**1.91**	**287**	*e*PN		Pn	17 12 20.2	-2.7
BAYT	**Ayd¨¬ntepe-Bay**	**2.01**	**312**	*e*PN		**Pn**	**17 12 22.9**	**-1.4**
BAYT	**Ayd¨¬ntepe-Bay**	**2.01**	**312**	*e*Pn		**Pn**	**17 12 22.9**	**-1.4**
DAGI	**Agillar**	**2.02**	**356**	*e*P		**Pn**	**17 12 26.0**	**+1.6**
DAGI				*e*S		**Sg**	**17 13 00.2**	**+4.9**
PTK	**Pertek**	**2.11**	**266**	*e*PN		**Pn**	**17 12 24.0**	**-1.8**
PTK	**Pertek**	**2.11**	**266**	*e*Pn		**Pn**	**17 12 24.0**	**-1.8**
ILIC	**ilic-Erzincan**	**2.77**	**279**	*e*PN		Pn	17 12 32.3	-2.3
ILIC	**ilic-Erzincan**	**2.77**	**279**	*e*Pn		Pn	17 12 32.3	-2.3

IDC ***19*** *17:13:27.7±0.7, 25°.26N×37°.79E, h0km, mb4.0/19, mb1 4.1/22, mb1mx4.1/30, mbtmp4.0/22, ML4.2/4, MS3.5/4, Ms1 3.4/4, ms1mx3.0/46, Error ellipse: s-maj=15.6km s-min=14.3km az=159.0*
CSEM ***19*** *17:13:27.6±0.1, 25°.23N×37°.73E, h2km, mb4.2/22, Error ellipse: s-maj=5.1km s-min=4.6km az=35.0*
HLW ***19*** *17:13:28.8, 25°.18N×37°.69E, h18km±13km, Md0.0, Ml3.2*
NEIC ***19*** *17:13:28.9±0.3, 25°.20N×37°.77E, h10km, mb4.2/14, Error ellipse: s-maj=6.2km s-min=5.3km az=64.0*
MOS ***19*** *17:13:31.2±0.9, 25°.30N×37°.76E, h33km, mb4.4/28, Error ellipse: s-maj=11.6km s-min=6.0km az=92.5*
TEH ***19*** *17:13:36.6, 25°.56N×37°.66E, h52km, ML4.3*
NSSC ***19*** *17:13:47.1±3.1, 26°.68N×35°.84E, h0km±999km, ML4.1*
ISC 19 17:13:28.8±1.1, 25°.21N±0'.03×37.72E±0'.03, h11km±7km, n248, σ1ˢ47/251, mb4.2/44, 6C-3D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
UMJS	**Umm Lajj**	**0.37**	**273**	P		**Pg**	**17 13 35.0**	**-1.3**
UMJS	**Umm Lajj**	**0.37**	**273**	P		**Pg**	**17 13 35.0**	**-1.3**
YNBS	**Yanbu' al Bahr**	**0.90**	**164**	P		**Pg**	**17 13 44.6**	**-1.6**
YNBS				S		**Sg**	**17 13 56.6**	**-1.3**
YNBS	**Yanbu' al Bahr**	**0.90**	**164**	P		**Pg**	**17 13 44.6**	**-1.6**
YNBS				S		**Sg**	**17 13 56.7**	**-1.3**
YOBS		**1.26**	**132**	P		**Pn**	**17 13 50.6**	**-1.8**
YOBS				S		**Sb**	**17 14 06.8**	**-2.0**
YOBS		**1.26**	**132**	P		**Pn**	**17 13 50.6**	**-1.8**
YOBS				S		**Sb**	**17 14 06.8**	**-2.0**
HAGS	**Hagol**	**2.62**	**252**	P		**Pn**	**17 14 09.3**	**-1.9**
HAGS				S		**Sn**	**17 14 38.1**	**-4.9**
EMRS	**Mersa Alam**	**2.62**	**266**	P		**Pn**	**17 14 08.9**	**-2.2**
	baz=267							
EMRS				S		**Sn**	**17 14 38.8**	**-4.2**
	baz=267							
EMRS	**Mersa Alam**	**2.62**	**266**	P		**Pn**	**17 14 08.9**	**-2.2**
EMRS				S		**Sn**	**17 14 38.8**	**-4.2**
HADB		**2.81**	**273**	P		**Pn**	**17 14 11.8**	**-1.9**
	baz=275							
HADB		**2.81**	**273**	P		**Pn**	**17 14 11.8**	**-1.9**
HQSR		**3.06**	**281**	P		**Pn**	**17 14 15.4**	**-1.8**
	baz=282							
HQSR		**3.06**	**281**	P		**Pn**	**17 14 15.4**	**-1.8**
HSFG		**3.67**	**292**	P		**Pn**	**17 14 24.0**	**-1.6**
	baz=294							
HSFG		**3.67**	**292**	P		**Pn**	**17 14 24.0**	**-1.6**
HEDF	**Idfu**	**4.12**	**269**	P		**Pn**	**17 14 31.1**	**-0.6**
	baz=270							
HEDF	**Idfu**	**4.12**	**269**	P		**Pn**	**17 14 31.1**	**-0.6**
HHRG	**Al Ghardaqah**	**4.23**	**299**	AMP			17 14 00.0	
	comp=E,70μm,0.7s,logA/T=5.0,baz=300							
HDHB	**Dhahab**	**4.46**	**322**	P		**Pn**	**17 14 35.1**	**-1.3**
	baz=323							
HDHB	**Dhahab**	**4.46**	**322**	P		**Pn**	**17 14 35.1**	**-1.3**
HKAT	**Jabal Katrina**	**4.69**	**316**	P		**Pn**	**17 14 38.6**	**-1.1**
	baz=317							
HKAT	**Jabal Katrina**	**4.69**	**316**	P		**Pn**	**17 14 38.6**	**-1.1**
EIL	**Elat**	**5.08**	**332**	Pn		**Pn**	**17 14 47.0**	**+2.1**
EIL				Pg		**Pb**	**17 14 59.1**	**+1.4**
EIL				Lg		Lg	17 16 00.8	
EIL	**Elat**	**5.08**	**332**	Pn		**Pn**	**17 14 47.0**	**+2.1**
	comp=E,1.5nm,0.3s,baz=180,slow=5.1,SNR=3.5							
EIL				Pg		**Pb**	**17 14 59.1**	**+1.4**
	comp=E,9.8nm,0.3s,baz=134,slow=8.2,SNR=14							
EIL				Lg		Lg	17 16 00.8	
	comp=E,48nm,0.3s,baz=17,slow=19,SNR=5.4							
EIL	**Elat**	**5.08**	**332**	Pn		Pn	17 14 40.1	-4.8
EIL				Sn		**Sb**	**17 15 54.7**	**-4.1**
MBRI	**Mt Berech**	**5.20**	**332**	Pn		Pn	17 14 40.3	-6.4
MBRI				Sn		**Sb**	**17 16 00.2**	**-2.2**
HRFI	**Mount Harif**	**5.36**	**334**	Pn		Pn	17 14 42.5	-6.4
HRFI				Sn		**Sb**	**17 16 03.6**	**-3.4**
KRMI	**Paran Flat**	**5.56**	**332**	Pn		**Pn**	**17 14 49.2**	**-2.4**
KRMI				Sn		**Sb**	**17 16 08.2**	**-4.6**
PRNI	**Paran**	**5.66**	**335**	Pn		**Pn**	**17 14 51.7**	**-1.2**
PRNI				Sn		**Sb**	**17 16 12.1**	**-3.4**
HNKL	**Nakhl**	**5.75**	**326**	P		**Pn**	**17 14 53.9**	**-0.3**
	baz=327							
HNKL	**Nakhl**	**5.75**	**326**	P		**Pn**	**17 14 53.9**	**-0.3**
ZFRI	**Zfri**	**5.78**	**338**	Pn		**Pn**	**17 14 53.5**	**-1.0**
RMNI	**Mount Ramon**	**5.97**	**335**	Pn		Pn	17 14 51.1	-6.1
KZIT	**Kziot**	**6.39**	**333**	Pn		**Pn**	**17 15 02.1**	**-0.8**
KZIT				Sn		Sb	17 16 29.2	-7.3
ASF	**Jabal al Asfar**	**6.97**	**354**	Pn		**Pn**	**17 15 10.4**	**-0.7**
ASF				Pg		Pb	17 15 34.7	+4.7
ASF				Lg		Lg	17 17 03.5	
ASF	**Jabal al Asfar**	**6.97**	**354**	Pn		**Pn**	**17 15 10.4**	**-0.7**
	comp=E,2.3nm,0.3s,baz=180,slow=1.0,SNR=7.7							
ASF				Pg		Pb	17 15 34.7	+4.7
	comp=E,6.7nm,0.3s,baz=23,slow=15,SNR=13							
ASF				Lg		Lg	17 17 03.5	
	comp=E,19nm,0.3s,baz=166,slow=18,SNR=12							
ASF				LR		LR	17 18 16.1	
	comp=E,145nm,19.4s,baz=178,slow=42							
SLTI	**Sal'it**	**7.39**	**342**	Pn		**Pn**	**17 15 13.9**	**-2.7**
SALA	**Sala**	**7.52**	**354**	*e*P		**Pn**	**17 15 18.0**	**-0.7**
SALA				*e*S		Sn	17 16 24.7	-20
SALA				AML		AML	17 17 40.5	
	comp=Z,675nm,0.7s							
SALA				AML		AML	17 17 43.0	
	comp=N,646nm,0.6s							
SALA				AML		AML	17 17 50.8	
	comp=E,34nm,0.8s							
SALA	**Sala**	**7.52**	**354**	*e*P		**Pn**	**17 15 18.0**	**-0.7**
	SNR=45							
SALA				*e*S		Sn	17 16 24.7	-20
	comp=E,34nm,0.8s,SNR=40							
TCHB	**Talchebab**	**7.59**	**349**	*e*P		**Pn**	**17 15 18.6**	**-0.8**
TCHB				*e*S		Sn	17 16 21.8	-24
TCHB				AML		AML	17 17 35.2	
	comp=N,765nm,0.6s							
TCHB				AML		AML	17 17 40.8	
	comp=Z,543nm,0.6s							
TCHB				AML		AML	17 17 41.2	
	comp=E,1μm,0.6s							
TCHB	**Talchebab**	**7.59**	**349**	*e*P		**Pn**	**17 15 18.6**	**-0.8**
	SNR=45							
TCHB				*e*S		Sn	17 16 21.8	-24
	comp=E,1μm,0.6s,SNR=40							
ZALF	**Zalf**	**7.69**	**358**	*e*P		**Pn**	**17 15 21.6**	**+0.8**
ZALF				*e*S		Sn	17 16 33.8	-14
ZALF				*i* S		Sn	17 16 33.8	-14
ZALF				AML		AML	17 17 34.7	
	comp=N,520nm,0.7s							
ZALF				AML		AML	17 17 46.4	
	comp=Z,391nm,0.7s							
ZALF				AML		AML	17 18 00.9	
	comp=E,322nm,0.7s							
ZALF	**Zalf**	**7.69**	**358**	*e*P		**Pn**	**17 15 21.6**	**+0.8**
	SNR=45							
ZALF				*i* S		Sn	17 16 33.8	-14
	comp=E,322nm,0.7s							
OFRI	**'Ofer**	**7.76**	**343**		Pn	**Pn**	**17 15 20.9**	**-0.9**
MMA0	**Mount Meron ar**	**8.04**	**346**		Pn	**Pn**	**17 15 24.7**	**-0.9**
MMAI	**Mount Meron Ar**	**8.04**	**346**		Pn	**Pn**	**17 15 24.9**	**-0.7**
MMAI					Lg	Lg	17 17 37.5	
MMAI	**Mount Meron Ar**	**8.04**	**346**		Pn	**Pn**	**17 15 24.9**	**-0.7**
	comp=E,15nm,0.3s,baz=155,slow=14,SNR=32							
MMAI					Lg	Lg	17 17 37.5	
	comp=E,8.7nm,0.3s,baz=156,slow=31,SNR=4.0							
MMAI	**Mount Meron Ar**	**8.04**	**346**		Pn	**Pn**	**17 15 24.9**	**-0.7**
KSDI	**Kefar Szold**	**8.15**	**348**		Pn	**Pn**	**17 15 26.8**	**-0.3**
BRBR	**Barbar**	**8.31**	**350**	*e*P		**Pn**	**17 15 29.1**	**-0.5**
BRBR					AML	AML	17 18 01.7	
	comp=N,222nm,0.7s							
BRBR					AML	AML	17 18 05.9	
	comp=Z,376nm,0.7s							
BRBR					AML	AML	17 18 06.2	
	comp=E,213nm,0.6s							
BRBR	**Barbar**	**8.31**	**350**	*e*P		**Pn**	**17 15 29.1**	**-0.5**
	SNR=45							
BHL	**Bhannes**	**8.85**	**349**	*e*P		Pg	17 16 03.4	-15
HWQ	**Hawqa**	**9.17**	**351**	*e*P		Pg	17 16 08.5	
NAY	**Al-Naaiem**	**9.38**	**63**	*e*P		**Pn**	**17 15 43.5**	**-0.4**
NAY					AML	AML	17 18 18.4	
	comp=Z,34nm,0.8s							
NAY	**Al-Naaiem**	**9.38**	**63**	*e*P		**Pn**	**17 15 43.5**	**-0.4**
RDF	**Al-Radifah**	**9.51**	**65**	*e*P		**Pn**	**17 15 45.5**	**-0.2**
RDF					AML	AML	17 18 28.8	
	comp=Z,81nm,0.5s							
RDF	**Al-Radifah**	**9.51**	**65**	*e*P		**Pn**	**17 15 45.5**	**-0.2**
QRN	**Al-Qurain**	**9.75**	**67**	*e*P		**Pn**	**17 15 48.3**	**-0.8**
IKOM	**Komasi**	**12.33**	**41**	*e*P		Pn	17 16 21.2	-3.3
IKOM	**Komasi**	**12.33**	**41**	*e*P		Pn	17 16 21.2	-3.3
ILIN	**Lien**	**12.55**	**37**	*e*P		Pn	17 16 22.8	-4.8
ILIN	**Lien**	**12.55**	**37**	*e*P		Pn	17 16 22.8	-4.8
IPIR	**Pirpir**	**13.72**	**54**	*e*P		**Pn**	**17 16 41.8**	**-1.8**
IPIR	**Pirpir**	**13.72**	**54**	*e*P		**Pn**	**17 16 41.8**	**-1.8**
ISRV	**Sarvestan**	**14.30**	**70**	*e*P		**Pn**	**17 16 49.9**	**-1.7**
ISRV	**Sarvestan**	**14.30**	**70**	*e*P		**Pn**	**17 16 49.9**	**-1.7**
IPAR	**Pars**	**14.36**	**68**	*e*P		**Pn**	**17 16 52.1**	**-0.3**
IPAR	**Pars**	**14.36**	**68**	*e*P		**Pn**	**17 16 52.1**	**-0.3**
IKLH	**Kolahrood**	**14.53**	**53**	*e*P		Pn	17 16 51.5	-3.2
IKLH	**Kolahrood**	**14.53**	**53**	*e*P		Pn	17 16 51.5	-3.2
IRAZ	**Razeghan**	**14.63**	**43**	*e*P		Pn	17 16 49.6	-6.4
IRAZ	**Razeghan**	**14.63**	**43**	*e*P		Pn	17 16 49.6	-6.4
BR131	**Keskin Array S**	**14.87**	**348**		P	**P**	**17 17 05.4**	**+0.4**
	comp=Z,1.7nm,0.8s							
BR131	**Keskin Array S**	**14.87**	**348**		P	**P**	**17 17 05.4**	**+0.4**
	comp=Z,1.6nm,0.8s							
BRTR	**Keskin Array B**	**14.87**	**348**		Pn	**Pn**	**17 17 00.7**	**+1.4**
BRTR	**Keskin Array B**	**14.87**	**348**		Pn	**Pn**	**17 17 00.7**	**+1.4**
	comp=Z,2.1nm,0.3s,baz=154,slow=10,SNR=130							
BRTR	**Keskin Array B**	**14.87**	**348**		Pn	**Pn**	**17 17 00.6**	**+1.4**
IZEF	**Zefreh**	**14.88**	**56**	*e*P		Pn	17 16 55.3	-4.2
IZEF	**Zefreh**	**14.88**	**56**	*e*P		Pn	17 16 55.3	-4.2
ANTO	**Ankara**	**15.19**	**345**		P	**P**	**17 17 10.4**

	comp=Z,6.0nm,1.4s								
PSZ	**Piszkesteto**	**26.68**	**333**		P		**P**	**17 19 06.9**	**-1.0**
PSZ					pmax		pmax		
	comp=Z,7.0nm,0.9s								
PSZ	**Piszkesteto**	**26.68**	**333**		P		**P**	**17 19 06.9**	**-1.0**
	comp=Z,7.0nm,0.9s								
PSZ	**Piszkesteto**	**26.68**	**333**		P		**P**	**17 19 06.9**	**-1.0**
	comp=Z,7.0nm,0.9s								
VYHS	**Vyhne**	**27.57**	**332**		*e*P		**P**	**17 19 16.9**	**+1.0**
VYHS					pmax		pmax		
	comp=Z,7.0nm,2.3s								
VYHS	**Vyhne**	**27.57**	**332**		*e*P		**P**	**17 19 16.9**	**+1.0**
VYHS	**Vyhne**	**27.57**	**332**		*e*P		**P**	**17 19 16.9**	**+1.0**
	comp=Z,7.0nm,2.3s								
TAM	**Tamanrasset**	**29.48**	**272**		*e*P		**P**	**17 19 35.4**	**+2.1**
TAM					pmax		pmax		
	comp=Z,1.0nm,0.4s								
TAM	**Tamanrasset**	**29.48**	**272**		*e*P		**P**	**17 19 35.4**	**+2.1**
	comp=Z,0.7nm,0.4s								
TAM	**Tamanrasset**	**29.48**	**272**		*e*P		**P**	**17 19 35.4**	**+2.1**
	comp=Z,1.0nm,0.4s								
DPC	**Dobruska-Polom**	**30.05**	**332**		*e*P		**P**	**17 19 38.7**	**+0.8**
DPC	**Dobruska-Polom**	**30.05**	**332**		*e*P		**P**	**17 19 38.7**	**+0.8**
DPC	**Dobruska-Polom**	**30.05**	**332**		*e*P		**P**	**17 19 38.7**	**+0.8**
GERES	**GERESS Array B**	**30.16**	**328**		P		**P**	**17 19 40.1**	**+1.1**
GERES					PcP		**PcP**	**17 22 39.8**	**-0.3**
GERES	**GERESS Array B**	**30.16**	**328**		P		**P**	**17 19 40.1**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=138,slow=6.2,SNR=11								
GERES					PcP		**PcP**	**17 22 39.8**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=141,slow=3.3,SNR=3.2								
GERES	**GERESS Array B**	**30.16**	**328**		P		**P**	**17 19 40.1**	**+1.1**
	comp=Z,1.0nm,0.9s								
GERES	**GERESS Array B**	**30.16**	**328**		PcP		**PcP**	**17 22 39.8**	**-0.3**
KHC	**Kasperske Hory**	**30.42**	**328**		*e*P		**P**	**17 19 41.9**	**+0.7**
KHC	**Kasperske Hory**	**30.42**	**328**		*e*P		**P**	**17 19 41.9**	**+0.7**
KHC	**Kasperske Hory**	**30.42**	**328**		*e*P		**P**	**17 19 41.9**	**+0.7**
PRU	**Pruhonice**	**30.57**	**330**		*e*P		**P**	**17 19 43.5**	**+1.1**
PRU	**Pruhonice**	**30.57**	**330**		*e*P		**P**	**17 19 43.5**	**+1.1**
PRU	**Pruhonice**	**30.57**	**330**		*e*P		**P**	**17 19 43.5**	**+1.1**
PVCC	**Panska Ves**	**30.94**	**331**		*e*P		**P**	**17 19 47.4**	**+1.7**
PVCC	**Panska Ves**	**30.94**	**331**		*e*P		**P**	**17 19 47.4**	**+1.7**
PVCC	**Panska Ves**	**30.94**	**331**		*e*P		**P**	**17 19 47.4**	**+1.7**
BRG	**Berggiesshubel**	**31.47**	**331**		*e*P		**P**	**17 19 51.3**	**+1.0**
	comp=Z,23nm,2.1s								
BRG	**Berggiesshubel**	**31.47**	**331**		*e*P		**P**	**17 19 51.3**	**+1.0**
BRG					pmax		pmax		
	comp=Z,23nm,2.1s								
BRG	**Berggiesshubel**	**31.47**	**331**		*e*P		**P**	**17 19 51.3**	**+1.0**
	comp=Z,23nm,2.1s								
CLL	**Collm**	**32.19**	**330**		*i* P		**P**	**17 19 57.4**	**+0.7**
CLL					*i*			17 20 07.0	
CLL					pmax		pmax		
	comp=Z,14nm,1.7s								
CLL	**Collm**	**32.19**	**330**		*i* P		**P**	**17 19 57.4**	**+0.7**
	comp=Z,14nm,1.7s								
CLL					*i*			17 20 07.0	
CLL					*e*PPP		PPP	17 21 13.0	
CLL	**Collm**	**32.19**	**330**		*i* P		**P**	**17 19 57.4**	**+0.7**
	comp=Z,14nm,1.7s								
EKS2	**Erkin-Say**	**34.29**	**50**		*e*P		**P**	**17 20 14.3**	**-1.0**
EKS2	**Erkin-Say**	**34.29**	**50**		*e*P		**P**	**17 20 14.2**	**-1.0**
EKS2	**Erkin-Say**	**34.29**	**50**		*e*P		**P**	**17 20 14.2**	**-1.0**
ARU	**Arti**	**34.66**	**20**	*c*	*i* P		**P**	**17 20 18.6**	**+0.5**
ARU								17 21 30.7	
ARU					S		**S**	**17 25 46.6**	**-1.0**
ARU					SS		**SnSn**	**17 27 50.3**	**-10**
ARU					pmax		pmax		
	comp=Z,19nm,2.5s								
AAK	**Ala-Archa**	**34.78**	**51**		*e*P		**P**	**17 20 20.8**	**+1.2**
AAK					pmax		pmax		
	comp=Z,18nm,2.7s								
AAK	**Ala-Archa**	**34.78**	**51**		P		P	17 20 15.6	-4.0
TKM2	**Tokmak 2**	**35.64**	**51**		*e*P		**P**	**17 20 28.4**	**+1.3**
TKM2					pmax		pmax		
	comp=Z,2.0nm,0.6s								
TKM2	**Tokmak 2**	**35.64**	**51**		*e*P		**P**	**17 20 28.4**	**+1.3**
	comp=Z,1.9nm,0.6s								
TKM2	**Tokmak 2**	**35.64**	**51**		*e*P		**P**	**17 20 28.4**	**+1.3**
	comp=Z,1.9nm,0.6s								
TOA0	**Torodi Ar. Sit**	**35.97**	**257**		*e*P		**P**	**17 20 30.8**	**+0.9**
TOA0	**Torodi Ar. Sit**	**35.97**	**257**		*e*P		**P**	**17 20 30.8**	**+0.9**
TORD	**Torodi Ar. Bea**	**35.97**	**257**		P		**P**	**17 20 31.1**	**+1.1**
TORD					PcP		**PcP**	**17 22 57.5**	**+0.8**
TORD	**Torodi Ar. Bea**	**35.97**	**257**		P		**P**	**17 20 31.1**	**+1.1**
	comp=Z,3.4nm,1.0s,baz=53,slow=6.6,SNR=13								
TORD					PcP		**PcP**	**17 22 57.5**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=82,slow=1.4,SNR=4.0								
TORD	**Torodi Ar. Bea**	**35.97**	**257**		P		**P**	**17 20 31.0**	**+1.1**
BRVK	**Borovoye**	**37.01**	**33**		*e*P		**P**	**17 20 39.0**	**+0.7**
BRVK					pmax		pmax		
	comp=Z,4.0nm,1.3s								
BRVK	**Borovoye**	**37.01**	**33**		P		**P**	**17 20 38.0**	**-0.3**
	comp=Z,4.2nm,1.0s								
BRVK	**Borovoye**	**37.01**	**33**		P		**P**	**17 20 38.0**	**-0.3**
	comp=Z,4.2nm,1.0s								
BVAR	**Borovoye Array**	**37.04**	**33**		P		**P**	**17 20 39.3**	**+0.7**
BVAR					pmax		pmax		
	comp=Z,1.0nm,0.5s								
BVAR	**Borovoye Array**	**37.04**	**33**		P		**P**	**17 20 39.3**	**+0.7**
BVAR	**Borovoye Array**	**37.04**	**33**		P		**P**	**17 20 39.3**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=226,slow=10,SNR=9.5								
BVAR	**Borovoye Array**	**37.04**	**33**		P		**P**	**17 20 39.3**	**+0.7**
FINES	**FINESS Array B**	**37.08**	**351**		P		**P**	**17 20 38.5**	**-0.3**
FINES					PcP		**PcP**	**17 22 59.5**	**+0.3**
FINES	**FINESS Array B**	**37.08**	**351**		P		**P**	**17 20 38.5**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=144,slow=12,SNR=7.3								
FINES					PcP		**PcP**	**17 22 59.5**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=169,slow=1.9,SNR=5.9								
FINES	**FINESS Array B**	**37.08**	**351**		P		**P**	**17 20 38.5**	**-0.3**
ESDC	**Sonseca Array**	**37.68**	**303**		P		**P**	**17 20 45.6**	**+1.3**
ESDC	**Sonseca Array**	**37.68**	**303**		P		**P**	**17 20 45.6**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=97,slow=8.2,SNR=8.8								
ESDC	**Sonseca Array**	**37.68**	**303**		P		**P**	**17 20 45.6**	**+1.3**
ESLA	**Sonseca Array**	**37.68**	**303**		P		**P**	**17 20 44.7**	**+0.4**
	comp=Z,0.5nm,0.7s								
ESLA	**Sonseca Array**	**37.68**	**303**		P		**P**	**17 20 44.7**	**+0.4**
	comp=Z,0.5nm,0.7s								
NAO01	**NORSAR Array S**	**40.08**	**340**		*e*P		**P**	**17 21 02.9**	**-1.1**
NAO01	**NORSAR Array S**	**40.08**	**340**		*e*P		**P**	**17 21 02.9**	**-1.1**
NB2	**NORSAR Subarra**	**40.13**	**340**		P		**P**	**17 21 03.8**	**-0.7**
	comp=Z,3.2nm,0.8s,baz=139,slow=9.3								
NB2	**NORSAR Subarra**	**40.13**	**340**		P		**P**	**17 21 03.8**	**-0.7**
	comp=Z,3.2nm,0.8s,SNR=1.4								
NOA	**NORSAR Array B**	**40.13**	**340**		P		**P**	**17 21 04.3**	**-0.2**
NOA	**NORSAR Array B**	**40.13**	**340**		P		**P**	**17 21 04.3**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=138,slow=8.5,SNR=12								
NOA	**NORSAR Array B**	**40.13**	**340**		P		**P**	**17 21 04.3**	**-0.2**
KURBB	**Kurchatov Arra**	**40.24**	**40**		P		**P**	**17 21 06.7**	**+1.2**
	comp=Z,3.6nm,0.7s,baz=252,slow=8.4,SNR=31								
KURBB					PcP		**PcP**	**17 23 09.7**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=241,slow=4.1,SNR=4.2								
KURK	**Kurchatov**	**40.33**	**40**	*d*	*i* P		**P**	**17 21 07.3**	**+1.0**
KURK					pmax		pmax		
	comp=Z,8.0nm,1.3s								
KURK	**Kurchatov**	**40.33**	**40**		P		P	**17 21 06.7**	**+0.4**
KURK					PcP		**PcP**	**17 23 09.7**	**+0.1**
KURK	**Kurchatov**	**40.33**	**40**		P		**P**	**17 21 06.7**	**+0.4**
LSZ	**Lusaka**	**41.30**	**194**		*e*P		**P**	**17 21 16.1**	**+1.4**
	comp=Z,6.4nm,1.3s								
LSZ	**Lusaka**	**41.30**	**194**		*e*P		**P**	**17 21 16.1**	**+1.4**
	comp=Z,6.4nm,1.3s								
MK31	**Makanchi Array**	**41.30**	**47**		*e*P		**P**	**17 21 14.7**	**+0.3**
MK31	**Makanchi Array**	**41.30**	**47**		*e*P		**P**	**17 21 14.7**	**+0.3**
MK31	**Makanchi Array**	**41.30**	**47**		*e*P		**P**	**17 21 14.7**	**+0.3**
MKAR	**Makanchi Array**	**41.30**	**47**		P		**P**	**17 21 15.6**	**+1.2**
MKAR					pmax		pmax		
	comp=Z,3.0nm,0.6s								
MKAR	**Makanchi Array**	**41.30**	**47**		P		**P**	**17 21 15.6**	**+1.2**
MKAR	**Makanchi Array**	**41.30**	**47**		P		**P**	**17 21 15.6**	**+1.2**
	comp=Z,2.8nm,0.6s,baz=250,slow=7.0,SNR=39								
MKAR	**Makanchi Array**	**41.30**	**47**		P		**P**	**17 21 15.6**	**+1.2**
NVS	**Novosibirsk**	**44.54**	**36**		*e*P		**P**	**17 21 40.2**	**-0.2**
NVS					pmax		pmax		
	comp=Z,13nm,1.4s								
NVS					pmax		pmax		
	comp=N,6.0nm,1.5s								
DBIC	**Dimbokro**	**44.65**	**253**		*e*P		**P**	**17 21 41.9**	**+0.1**
	comp=N,6.5nm,0.7s								
DBIC	**Dimbokro**	**44.65**	**253**		P		**P**	**17 21 42.5**	**+0.7**
	comp=N,6.9nm,0.8s,baz=53,slow=10,SNR=9.0								
DBIC	**Dimbokro**	**44.65**	**253**		*e*P		**P**	**17 21 41.9**	**+0.1**
	comp=N,6.5nm,0.7s								
ARCES	**ARCESS Array B**	**44.93**	**354**		P		**P**	**17 21 43.2**	**-0.2**
ARCES	**ARCESS Array B**	**44.93**	**354**		P		**P**	**17 21 43.2**	**-0.2**
	comp=N,1.8nm,0.6s,baz=163,slow=10,SNR=12								
ARCES	**ARCESS Array B**	**44.93**	**354**		P		**P**	**17 21 43.2**	**-0.2**
KEV	**Kevo**	**45.01**	**355**		P		**P**	**17 21 44.2**	**+0.2**
KEV	**Kevo**	**45.01**	**355**		P		**P**	**17 21 44.2**	**+0.2**
KEV	**Kevo**	**45.01**	**355**		P		**P**	**17 21 44.2**	**+0.2**
ZAA0	**Zalesovo Array**	**45.07**	**38**		*e*P		**P**	**17 21 45.2**	**+0.5**
ZAA0	**Zalesovo Array**	**45.07**	**38**		*e*P		**P**	**17 21 45.2**	**+0.5**
ZALV	**Zalesovo Beam**	**45.07**	**38**		*i* P		**P**	**17 21 45.7**	**+1.0**
ZALV					pmax		pmax		
	comp=Z,1.0nm,0.5s								
ZALV	**Zalesovo Beam**	**45.07**	**38**		P		**P**	**17 21 44.9**	**+0.1**
ZALV	**Zalesovo Beam**	**45.07**	**38**		P		**P**	**17 21 44.9**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=251,slow=8.1,SNR=8.0								
ZALV	**Zalesovo Beam**	**45.07**	**38**		P		**P**	**17 21 44.8**	**+0.1**
ZAK	**Zakamensk**	**55.57**	**45**		*e*P		**P**	**17 23 04.2**	**-0.2**
ZAK					pmax		pmax		
	comp=Z,3.0nm,1.4s								
CMAR	**Chiang Mai Arr**	**56.82**	**84**		P		**P**	**17 23 12.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**56.82**	**84**		P		**P**	**17 23 12.9**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=294,slow=9.6,SNR=5.6								
CMAR	**Chiang Mai Arr**	**56.82**	**84**		P		**P**	**17 23 12.9**	**-0.8**
TIXI	**Tiksi**	**66.67**	**20**		*e*P		**P**	**17 24 18.7**	**-0.5**
TIXI					pmax		pmax		
	comp=Z,2.0nm,1.3s								
KSAR	**Wonju Array Be**	**75.26**	**55**		P		**P**	**17 25 11.5**	**-0.5**
KSAR	**Wonju Array Be**	**75.26**	**55**		P		**P**	**17 25 11.5**	**-0.5**
KSRS	**Korea Array**	**75.28**	**55**		P		**P**	**17 25 11.5**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=277,slow=5.7,SNR=6.4								
USRK	**Ussuriysk Arra**	**75.78**	**48**		P		**P**	**17 25 13.6**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=280,slow=6.6,SNR=7.6								
BILL	**Bilibino**	**79.62**	**17**		*i* P		**P**	**17 25 37.2**	**+1.4**
BILL					*e*			17 28 35.3	
BILL					*e*S		**S**	**17 35 33.0**	**-4.5**
BILL	**Bilibino**	**79.62**	**17**		*e*P		**P**	**17 25 36.2**	**+0.4**
	comp=Z,8.8nm,1.4s								
BILL	**Bilibino**	**79.62**	**17**		*e*P		**P**	**17 25 36.2**	**+0.4**
	comp=Z,8.8nm,1.4s								
MAJO	**Matsushiro**	**83.20**	**53**		*e*P		**P**	**17 25 55.5**	**0.0**
MAJO					pmax		pmax		
	comp=Z,3.0nm,0.8s								
MAJO	**Matsushiro**	**83.20**	**53**		*e*P		**P**	**17 25 55.5**	**0.0**
	comp=Z,3.4nm,0.8s								
MAJO	**Matsushiro**	**83.20**	**53**		*e*P		**P**	**17 25 55.5**	**0.0**
	comp=Z,3.4nm,0.8s								
YKA	**Yellowknife Ar**	**89.84**	**348**		P		**P**	**17 26 26.8**	**-0.7**
YKA	**Yellowknife Ar**	**89.84**	**348**		P		**P**	**17 26 26.8**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=25,slow=5.9,SNR=6.2								
YKA	**Yellowknife Ar**	**89.84**	**348**		P		**P**	**17 26 26.8**	**-0.7**
ILAR	**Eielson Array**	**90.24**	**2**		P		**P**	**17 26 30.2**	**+0.9**
ILAR	**Eielson Array**	**90.24**	**2**		P		**P**	**17 26 30.2**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=348,slow=2.4,SNR=4.5								
ILAR	**Eielson Array**	**90.24**	**2**		P		**P**	**17 26 30.2**	**+0.9**
FFC	**Flin Flon**	**93.19**	**338**		*i* P		**P**	**17 26 45.2**	**+2.0**

DDA ***19*** *17:16:02.8, 38.58N×44.37E, h7km, MD2.9*
CSEM ***19*** *17:16:02.8, 38.58N×44.37E, h7km, MD2.9, After DDA*

ISC 19 17:16:04.5±1.5, 38.54N±0.04×44.26E±0.04, h4km±13km, n13, σ0.97/22, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CLDR	**Caldiran**	**0.66**	**336**	*e*PG		**Pg**	**17 16 16.1**	**-1.1**
CLDR				*e*SG		**Sg**	**17 16 25.7**	**0.0**
TVAN	**Van**	**0.67**	**269**	*i* P		**Pg**	**17 16 17.3**	**-0.1**
TVAN				*i* S		**Sb**	**17 16 30.0**	**+1.4**
TVAN	**Van**	**0.67**	**269**	*i* P		**Pg**	**17 16 17.3**	**-0.1**
TVAN				*i* S		**Sb**	**17 16 30.0**	**+1.4**
VANB	**Van**	**0.68**	**275**	*e*PG		**Pg**	**17 16 17.4**	**-0.3**
GEVA	**Gevas**	**0.97**	**257**	*i* P		**Pg**	**17 16 21.9**	**-1.2**
GEVA				*i* S		**Sb**	**17 16 37.7**	**+0.5**
GEVA	**Gevas**	**0.97**	**257**	*i* P		**Pg**	**17 16 21.9**	**-1.2**
GEVA				*i* S		**Sb**	**17 16 37.7**	**+0.5**
HAKT	**HAKKARI**	**1.07**	**204**	*i* P		**Pg**	**17 16 24.5**	**-0.7**
HAKT				*i* S		**Sn**	**17 16 41.2**	**-0.8**
HAKT	**HAKKARI**	**1.07**	**204**	*i* P		**Pg**	**17 16 24.5**	**-0.7**
HAKT				*i* S		**Sn**	**17 16 41.2**	**-0.8**
TUTA	**Tutak**	**1.42**	**308**	*i* P		**Pn**	**17 16 30.6**	**-0.7**
TUTA				*e*S		**Sg**	**17 16 51.4**	**+1.4**
TUTA	**Tutak**	**1.42**	**308**	*i* P		**Pn**	**17 16 30.6**	**-0.7**
TUTA				*e*S		**Sg**	**17 16 51.4**	**+1.4**
GNI	**Garni**	**1.65**	**13**	*e*PN		**Pg**	**17 16 35.5**	**-0.7**
ISRB	**Sarab**	**2.78**	**104**	*e*P		**Pn**	**17 16 50.6**	**+0.6**
ISRB	**Sarab**	**2.78**	**104**	*e*P		**Pn**	**17 16 50.6**	**+0.6**

BGS ***19*** *17:34:33.9±1.9, 22.33N×39.50E, h5km, mb5.6, MS5.0*
BJI ***19*** *17:34:54.0, 25.01N×36.95E, h10km, mB5.8/52, mb5.3/60, Ms5.9/65, Ms7 5.7/68*
HLW ***19*** *17:34:58.6, 25.21N×37.76E, h7km±7km, Md0.0, Ml3.8*
ISCJB ***19*** *17:34:59.5±0.1, 25.32N±0.02×37.74E±0.01, h5km, mb5.5/282, MS5.3/254, Error ellipse: s-maj=2.4km s-min=1.5km az=19.8*
IDC ***19*** *17:35:00.7±0.3, 25.35N×37.78E, h0km, mb5.0/35, mb1 5.1/40, mb1mx5.1/40, mbtmp5.0/40, ML3.8/3, MS5.3/45, Ms1 5.3/45, ms1mx5.2/53, Error ellipse: s-maj=11.1km s-min=8.2km az=93.0*
CSEM ***19*** *17:35:00.9±0.1, 25.36N×37.78E, h2km, mb5.6/99, Ms5.5, Mw5.7, Error ellipse: s-maj=3.0km s-min=1.9km az=20.0*
NEIC ***19*** *17:35:01.1±0.1, 25.29N×37.74E, h5km, mb5.7/113, ME5.3, MS5.3/148, MW5.7, MW5.6, Error ellipse: s-maj=3.6km s-min=2.6km az=35.0 Broadband fault plane solution: P waves. NP1:φs290.00000°, δ60.00000°, λ-90.00000°. NP2:φs110.00000°, δ30.00000°, λ-90.00000°. Principal axes: T Plg15.0000°, Azm20.0000°; N Plg0.0000°, Azm0.0000°; P Plg75.0000°, Azm200.0000°; Moment Tensor Solution. s43 Moment tensor: Scale 10^17 Nm; Mrr=3.16; Mθθ1.32; Mφφ 1.84; Mrθ2.45; Mθφ -1.34; Mrφ0.60; Best double couple: M=4.00000×10^17 NP1:φs158.00000°, δ38.00000°, λ-50.00000°. NP2:φs291.00000°, δ62.00000°, λ-117.00000°. Principal axes: T 3.2000, Plg13.0000°, Azm40.0000°; N 1.2300, Plg23.0000°, Azm304.0000°; P -4.4300, Plg62.0000°, Azm157.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC At least seven people injured in Al Madinah. Felt at Al 'Ula, Al Wajh, Medina, Umm Lajj, Yanbu' al Bahr and in other parts of Al Madinah. Several large ground cracks and landslides were observed in Al Madinah.
GCMT ***19*** *17:35:02.5±0.1, 25.20N×37.76E, h12km, MW5.7, Moment Tensor Solution. s82,c142; s63,c70; Moment tensor: Scale 10^17Nm; Mrr=3.99±.03; Mθθ1.59±.03; Mφφ2.40±.04; Mrθ0.35±.10; Mθφ-1.85±.03; Mrφ-0.29±.10; Best double couple: M=4.00000×10^17 NP1:φs143.00000°, δ42.00000°, λ-88.00000°. NP2:φs320.00000°, δ48.00000°, λ-92.00000°. Principal axes: T 3.9100, Plg3.0000°, Azm51.0000°; N 0.1000, Plg1.0000°, Azm321.0000°; P -4.0200, Plg87.0000°, Azm208.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=242, per= 50.*
SZGRF ***19*** *17:35:02.9, 25.04N×37.65E, h33km, mb5.7, MS4.6, Western Arabian Peninsula*
TEH ***19*** *17:35:03.0, 25.36N×37.68E, h10km, ML5.6*
MOS ***19*** *17:35:04.0±0.8, 25.40N×37.74E, h33km, mb5.8/120, MS5.1/67, Error ellipse: s-maj=5.5km s-min=2.7km az=111.2*
NSSC ***19*** *17:35:05.8±2.5, 25.51N×37.13E, h37km±999km, ML5.3*
DJA ***19*** *17:35:06.1±0.7, 25°N±4°×37°8E±°, h48km±8km, M6.0/14, mB6.1/14, mb5.1/14, MLv7.1/2, Mw(mB)5.7/14, Mwp5.3/1*
NEIC ***19*** *17:35:17.7±0.0, 25.62N×37.64E, h10km, Moment Tensor Solution. s159 Moment tensor: Scale 10^17Nm; Mrr=3.43; Mθθ1.31; Mφφ2.11; Mrθ-0.46; Mθφ-1.63; Mrφ0.10; Best double couple: M=3.40000×10^17 NP1:φs327.00000°, δ42.00000°, λ-82.00000°. NP2:φs137.00000°, δ48.00000°, λ-96.00000°. Principal axes: T 3.4100, Plg3.0000°, Azm231.0000°; N 0.0600, Plg4.0000°, Azm141.0000°; P -3.4800, Plg84.0000°, Azm353.0000°;*

ISC 19 17:35:02.6±0.3, 25.26N±0.03×37.76E±0.02, h16km±1km, h15km:pP-P, n1896, σ1.37/1951, mb5.5/296, MS5.3/256, 54C-273D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
UMJS	**Umm Lajj**	**0.41**	**266**	P		Pg	17 35 06.9	-4.0
UMJS				S		**Sg**	**17 35 12.8**	**-3.8**
UMJS	**Umm Lajj**	**0.41**	**266**	P		Pg	17 35 06.9	-4.0
UMJS				S		**Sg**	**17 35 12.8**	**-3.8**

YNBS	**Yanbu' al Bahr**	**0.94**	**167**		P		Pb	17 35 16.6	-4.0
YNBS					S		**Sb**	**17 35 28.7**	**-4.1**
YNBS	**Yanbu' al Bahr**	**0.94**	**167**		P		Pb	17 35 16.6	-4.0
YNBS					S		**Sb**	**17 35 28.7**	**-4.1**
YOBS		**1.26**	**135**		P		**Pn**	**17 35 24.3**	**-1.4**
YOBS					S		**Sb**	**17 35 38.6**	**-3.5**
YOBS		**1.26**	**135**		P		**Pn**	**17 35 24.3**	**-1.4**
YOBS					S		**Sb**	**17 35 38.6**	**-3.5**
EMRS	**Mersa Alam**	**2.66**	**265**		P		Pn	17 35 40.9	-4.0
	baz=267								
EMRS					AMP			17 36 00.0	
	comp=N,690μm,3.5s,logA/T=5.3,baz=267								
EMRS	**Mersa Alam**	**2.66**	**265**		P		Pn	17 35 40.9	-4.0
HAGS	**Hagol**	**2.67**	**251**		P		Pn	17 35 41.4	-3.7
HAGS					S		**Sn**	**17 36 11.6**	**-5.5**
HAGS	**Hagol**	**2.67**	**251**		P		Pn	17 35 41.4	-3.7
HADB		**2.84**	**273**		P		Pn	17 35 43.8	-3.6
HADB		**2.84**	**273**		P		Pn	17 35 43.7	-3.8
	baz=274								
HADB		**2.84**	**273**		P		Pn	17 35 43.8	-3.6
HQSR		**3.09**	**280**		P		Pn	17 35 47.4	-3.5
HQSR		**3.09**	**280**		P		Pn	17 35 47.4	-3.5
	baz=281								
HQSR		**3.09**	**280**		P		Pn	17 35 47.3	-3.5
HSFG		**3.69**	**292**		P		**Pn**	**17 35 56.3**	**-2.8**
	baz=293								
HSFG		**3.69**	**292**		P		**Pn**	**17 35 56.3**	**-2.8**
HEDF	**Idfu**	**4.16**	**269**		P		**Pn**	**17 36 03.1**	**-2.3**
	baz=270								
HEDF	**Idfu**	**4.16**	**269**		P		**Pn**	**17 36 03.2**	**-2.3**
HHRG	**Al Ghardaqah**	**4.24**	**298**		P		Pn	17 36 02.8	-3.9
HHRG					S		**Sn**	**17 36 51.0**	**-4.9**
HHRG	**Al Ghardaqah**	**4.24**	**298**		P		Pn	17 36 02.6	-4.0
	baz=299								
HHRG					S		**Sn**	**17 36 50.8**	**-5.2**
	baz=299								
HDHB	**Dhahab**	**4.45**	**322**		P		**Pn**	**17 36 07.0**	**-2.5**
HDHB	**Dhahab**	**4.45**	**322**		P		**Pn**	**17 36 07.0**	**-2.5**
	baz=323								
HDHB	**Dhahab**	**4.45**	**322**		P		**Pn**	**17 36 06.9**	**-2.5**
HKAT	**Jabal Katrina**	**4.68**	**315**		P		**Pn**	**17 36 10.1**	**-2.8**
	baz=316								
HKAT	**Jabal Katrina**	**4.68**	**315**		P		**Pn**	**17 36 10.1**	**-2.8**
HBST	**Basata**	**4.78**	**326**		P		**Pn**	**17 36 12.2**	**-1.9**
HBST	**Basata**	**4.78**	**326**		P		**Pn**	**17 36 11.5**	**-2.5**
	baz=327								
HBST	**Basata**	**4.78**	**326**		P		**Pn**	**17 36 12.1**	**-1.9**
EIL	**Elat**	**5.05**	**331**		Pn		**Pn**	**17 36 16.2**	**-1.6**
EIL					Pg		**Pb**	**17 36 31.1**	**+0.4**
EIL					Lg		Lg	17 37 33.4	
EIL	**Elat**	**5.05**	**331**		Pn		**Pn**	**17 36 16.2**	**-1.6**
	comp=N,10.0nm,0.3s,baz=72,slow=12,SNR=9.7								
EIL					Pg		**Pb**	**17 36 31.1**	**+0.4**
	comp=N,132nm,0.3s,baz=127,slow=7.9,SNR=26								
EIL					Lg		Lg	17 37 33.4	
	comp=N,844nm,0.3s,baz=55,slow=6.1,SNR=21								
EIL					LR		LR	17 38 28.3	
	comp=N,22μm,18.3s,baz=109,slow=42								
EIL	**Elat**	**5.05**	**331**		Pn		**Pn**	**17 36 16.2**	**-1.6**
MBRI	**Mt Berech**	**5.18**	**331**		Pn		**Pn**	**17 36 19.2**	**-0.4**
HRFI	**Mount Harif**	**5.34**	**334**		Pn

HAWK					*e*S		Sn	17 38 50.1	-11	
HAWK					AML		AML	17 40 05.3		
	comp=E,1µm,0.7s									
HAWK					AML		AML	17 40 11.6		
	comp=N,1µm,0.7s									
HAWK					AML		AML	17 40 20.6		
	comp=Z,1µm,0.9s									
HAWK	**Haweek**		**9.31**	**353**	*e*P		**Pn**	**17 37 14.9**	**-1.4**	
	SNR=90									
HAWK					*e*S		Sn	17 38 50.1	-11	
	comp=Z,1µm,0.9s,SNR=90									
NAY	**Al-Naaiem**		**9.32**	**63**	*e*P		**Pn**	**17 37 15.0**	**-1.4**	
NAY					AML		AML	17 39 03.5		
	comp=Z,66nm,0.6s									
NAY	**Al-Naaiem**		**9.32**	**63**	*e*P		**Pn**	**17 37 15.0**	**-1.4**	
RDF	**Al-Radifah**		**9.45**	**65**	*e*P		**Pn**	**17 37 16.9**	**-1.3**	
RDF	**Al-Radifah**		**9.45**	**65**	*e*P		**Pn**	**17 37 16.9**	**-1.3**	
MIB	**Mutribah**		**9.63**	**60**	*e*P		**Pn**	**17 37 19.6**	**-1.0**	
MIB					AML		AML	17 38 55.0		
	comp=Z,154nm,0.6s									
MIB	**Mutribah**		**9.63**	**60**	*e*P		**Pn**	**17 37 19.6**	**-1.0**	
KBD	**Kabd**		**9.66**	**64**	*e*P		**Pn**	**17 37 20.2**	**-0.8**	
KBD					AML		AML	17 39 11.8		
	comp=Z,77nm,0.5s									
KBD	**Kabd**		**9.66**	**64**	*e*P		**Pn**	**17 37 20.2**	**-0.8**	
QRN	**Al-Qurain**		**9.70**	**67**	*e*P		**Pn**	**17 37 20.6**	**-1.0**	
QRN					AML		AML	17 39 07.2		
	comp=Z,165nm,0.5s									
UMR	**Umm Al-Rimmam**		**9.82**	**62**	*e*P		**Pn**	**17 37 22.3**	**-1.0**	
UMR	**Umm Al-Rimmam**		**9.82**	**62**	*e*P		**Pn**	**17 37 22.3**	**-1.0**	
PHNC	**Paralimni**		**10.23**	**342**	P		Sb	17 40 07.7		
	comp=Z,19nm,1.2s									
SZAC	**Souni-Zanaja**		**10.37**	**337**	P		Sb	17 40 09.5		
CSS	**Prodhromos**		**10.40**	**339**	P		Sb	17 40 09.3		
	comp=Z,15nm,1.2s									
CSS	**Prodhromos**		**10.40**	**339**	*e*P		**Pn**	**17 37 28.6**	**-2.6**	
CSS	**Prodhromos**		**10.40**	**339**	*e*Pn		Pn	17 37 27.4	-3.8	
	comp=Z,15nm,0.9s									
CSS	**Prodhromos**		**10.40**	**339**	*e*Pn		Pn	17 37 27.5	-3.8	
	comp=Z,15nm,0.9s									
MAMC	**Mammari**		**10.63**	**339**	P		Sb	17 40 13.8		
LFK	**Lefkose**		**10.63**	**341**	*e*P		Pn	17 37 31.2	-3.2	
LEF	**Lefka**		**10.63**	**338**	*e*P		**Pn**	**17 37 32.8**	**-2.3**	
EREN	**Erenkoy**		**10.70**	**344**	*e*P			17 38 35.4		
ALFC	**Alevga**		**10.83**	**337**	P		Sb	17 40 15.3		
	comp=Z,14nm,0.8s									
HAJJ	**Hajjah**		**10.97**	**149**	*i*S		Sn	17 39 49.8	+8.1	
HAJJ	**Hajjah**		**10.97**	**149**	*i*S		Sn	17 39 49.8	+8.1	
KRTS	**Karatas**		**11.46**	**350**	*e*P		**Pn**	**17 37 47.1**	**+1.4**	
IGHG	**Ghaleghazi**		**11.83**	**38**	*e*P		**Pn**	**17 37 49.0**	**-2.0**	
IGHG	**Ghaleghazi**		**11.83**	**38**	*e*P		**Pn**	**17 37 49.0**	**-2.0**	
CEYT	**Ceyhan**		**11.84**	**352**	*e*P		**Pn**	**17 37 53.6**	**+2.7**	
IDHR	**Dehrash**		**12.01**	**36**	*e*P		Pn	17 37 48.7	-4.7	
IDHR	**Dehrash**		**12.01**	**36**	*e*P		Pn	17 37 48.7	-4.7	
URFA	**Urfa**		**12.18**	**4**	*e*P		**Pn**	**17 37 54.6**	**-1.0**	
KMRS	**Kahramanmaras**		**12.23**	**357**	*e*P		**Pn**	**17 37 55.4**	**-0.9**	
GULE	**Gulek**		**12.26**	**349**	*i*P		**Pn**	**17 37 57.0**	**+0.3**	
GULE	**Gulek**		**12.26**	**349**	*i*P		**Pn**	**17 37 57.0**	**+0.3**	
IKOM	**Komasi**		**12.27**	**41**	*e*P		Pn	17 37 53.5	-3.4	
IKOM	**Komasi**		**12.27**	**41**	*e*P		Pn	17 37 53.5	-3.4	
KOZT	**Kozan**		**12.30**	**353**	*e*P		**Pn**	**17 38 00.1**	**+3.0**	
DAMY	**Dhamar**		**12.32**	**148**	P		**Pn**	**17 38 00.7**	**+2.9**	
DAMY	**Dhamar**		**12.32**	**148**	P		**Pn**	**17 38 00.7**	**+2.9**	
DHBB	**Dhamar BB**		**12.32**	**148**	*i*S		Sn	17 40 23.2	+8.2	
ANDN	**Andirin**		**12.34**	**355**	*i*P		**Pn**	**17 37 58.3**	**+0.4**	
ANDN	**Andirin**		**12.34**	**355**	*i*P		**Pn**	**17 37 58.3**	**+0.4**	
ILIN	**Lien**		**12.49**	**37**	*e*P		Pn	17 37 56.6	-3.4	
ILIN	**Lien**		**12.49**	**37**	*e*P		Pn	17 37 56.6	-3.4	
AKAS	**Kas**		**12.99**	**329**	*i*P		**Pn**	**17 38 06.7**	**0.0**	
AKAS	**Kas**		**12.99**	**329**	*i*P		**Pn**	**17 38 06.7**	**0.0**	
AKCD	**Akcadag**		**13.00**	**1**	*i*P		**Pn**	**17 38 08.1**	**+1.2**	
NIG	**Nigde**		**13.09**	**349**	*e*P		Pn	17 38 03.4	-4.8	
SVRC	**Sivrice-ELAZID**		**13.15**	**5**	*e*P		**Pn**	**17 38 08.0**	**-0.9**	
SARI	**SarD1z-Kayseri**		**13.16**	**355**	*e*P		**Pn**	**17 38 11.3**	**+2.2**	
LKFR	**Kufra**		**13.27**	**268**	*i*P		**Pn**	**17 38 12.4**	**+1.9**	
	comp=Z,1µm,2.0s,SNR=45									
DARE	**Darende-Malaty**		**13.28**	**359**	*e*P		**Pn**	**17 38 10.7**	**+0.1**	
KORT	**Korkueli**		**13.31**	**333**	*i*P		**Pn**	**17 38 11.4**	**+0.3**	
KORT	**Korkueli**		**13.31**	**333**	*i*P		**Pn**	**17 38 11.4**	**+0.3**	
LBOS			**13.34**	**147⇑**	*e*P		P	17 38 16.9	-4.4	
LBOS					*i*S		Sn	17 40 48.0	+8.1	
TRBA	**At Turbah**		**13.38**	**152**	*e*P		P	17 38 18.1	-3.6	
TRBA					AMb		AMB	17 38 19.9		
	comp=Z,52nm,0.6s									
TRBA					*i*S		Sn	17 40 49.0	+8.2	
BDHA	**Al Bayda'**		**13.41**	**145**	*i*S		Sn	17 40 49.8	+8.2	
BDHA	**Al Bayda'**		**13.41**	**145**	*i*S		Sn	17 40 49.8	+8.2	
PINB	**Pinarbasi**		**13.43**	**355**	*i*P		**Pn**	**17 38 14.7**	**+1.8**	
FETY	**Fethiye**		**13.56**	**329**	*e*P		**Pn**	**17 38 14.2**	**-0.2**	
IPIR	**Pirpir**		**13.66**	**54**	*e*P		**Pn**	**17 38 14.9**	**-1.1**	
IPIR	**Pirpir**		**13.66**	**54**	*e*P		**Pn**	**17 38 14.9**	**-1.1**	
PTK	**Pertek**		**13.66**	**5**	*e*P		**Pn**	**17 38 15.5**	**-0.5**	
LADK	**Ladik-KONYA**		**13.69**	**342**	*e*P		Pn	17 38 11.2	-5.1	
ARG	**Arkhangelos**		**13.70**	**325**	P		**Pn**	**17 38 15.3**	**-1.0**	
AVNT	**Avonos**		**13.70**	**350**	*i*P		**Pn**	**17 38 15.1**	**-1.4**	
AVNT	**Avonos**		**13.70**	**350**	*i*P		**Pn**	**17 38 15.1**	**-1.4**	
SHI	**Shiraz**		**13.80**	**68**	*e*P		**Pn**	**17 38 20.4**	**+2.5**	
GOLH	**Golhisar**		**13.84**	**332**	*i*P		**Pn**	**17 38 18.2**	**-0.1**	
GOLH	**Golhisar**		**13.84**	**332**	*i*P		**Pn**	**17 38 18.2**	**-0.1**	
LTBQ	**Tobruq**		**13.91**	**302**	*i*P		**Pn**	**17 38 19.3**	**+0.2**	
	comp=Z,799nm,2.0s,SNR=45									
DALY	**Dalyan (Mu`la**		**13.91**	**328**	*e*P		Pn	17 38 15.5	-3.6	
ISP	**Isparta**		**13.96**	**336**	*e*P		**Pn**	**17 38 17.7**	**-2.2**	
ISP	**Isparta**		**13.96**	**336**	*e*P		**Pn**	**17 38 19.4**	**-0.5**	
ISP					pmax		pmax			
	comp=Z,98nm,1.4s									
ISP	**Isparta**		**13.96**	**336**	*e*Pn		**Pn**	**17 38 19.4**	**-0.5**	
	comp=Z,98nm,1.4s									
ISP	**Isparta**		**13.96**	**336**	*e*Pn		**Pn**	**17 38 19.4**	**-0.5**	
	comp=Z,98nm,1.4s									
TURN	**Turunc**		**13.98**	**328**	*i*P		**Pn**	**17 38 20.4**	**+0.4**	
TURN	**Turunc**		**13.98**	**328**	*i*P		**Pn**	**17 38 20.4**	**+0.4**	
KEMA	**Kemaliye**		**13.98**	**2**	*i*P		**Pn**	**17 38 21.0**	**+0.8**	
KEMA	**Kemaliye**		**13.98**	**2**	*i*P		**Pn**	**17 38 21.0**	**+0.8**	
KDHN	**Kadinhani**		**14.06**	**341**	*i*P		**Pn**	**17 38 20.5**	**-0.8**	
KDHN	**Kadinhani**		**14.06**	**341**	*i*P		**Pn**	**17 38 20.5**	**-0.8**	
ILIC	**ilic-Erzincan**		**14.17**	**3**	*e*P		**Pn**	**17 38 23.7**	**+0.9**	
IAZR	**Azarshahr**		**14.22**	**27**	*e*P		Pn	17 38 20.1	-3.5	
IAZR	**Azarshahr**		**14.22**	**27**	*e*P		Pn	17 38 20.1	-3.5	
ISRV	**Sarvestan**		**14.25**	**70**	*e*P		**Pn**	**17 38 24.4**	**+0.3**	
IPAR	**Pars**		**14.30**	**68**	*e*P		**Pn**	**17 38 23.9**	**-1.0**	
IPAR	**Pars**		**14.30**	**68**	*e*P		**Pn**	**17 38 23.9**	**-1.0**	
YER	**Yerkesik**		**14.34**	**328**	*e*P		**Pn**	**17 38 23.8**	**-1.3**	
ERZN	**Erzincan**		**14.38**	**6**	*e*P		**Pn**	**17 38 25.7**	**0.0**	
DNZL	**Cakiroluk**		**14.44**	**331**	*i*P		**Pn**	**17 38 25.3**	**-1.4**	
NPS	**Neapolis**		**14.47**	**316**	P		**Pn**	**17 38 25.8**	**-1.0**	
IKLH	**Kolahrood**		**14.47**	**53**	*e*P		Pn	17 38 23.6	-3.6	
IKLH	**Kolahrood**		**14.47**	**53**	*e*P		Pn	17 38 23.6	-3.6	
NIS1	**Nisyros Isl.**		**14.49**	**324**	P		**Pn**	**17 38 25.3**	**-1.8**	
EZC	**Erzincan**		**14.51**	**5**	*e*P		**P**	**17 38 31.4**	**-2.8**	
IRAZ	**Razeghan**		**14.57**	**43**	*e*P		**Pn**	**17 38 26.6**	**-1.8**	
IRAZ	**Razeghan**		**14.57**	**43**	*e*P		**Pn**	**17 38 26.6**	**-1.8**	
ISHB	**Shabestar**		**14.59**	**25**	*e*P		Pn	17 38 24.1	-4.6	
ISHB	**Shabestar**		**14.59**	**25**	*e*P		Pn	17 38 24.1	-4.6	
SHUT	**Suhut-Afyon**		**14.59**	**337**	*e*P		Pn	17 38 25.2	-3.5	
BOLV	**Bolvadin**		**14.60**	**338**	*i*P		**Pn**	**17 38 27.0**	**-1.8**	
CDAG	**Cicekdag**		**14.61**	**350**	*i*P		**Pn**	**17 38 28.8**	**0.0**	
MLSB	**Milas**		**14.71**	**327**	*e*P		**Pn**	**17 38 27.3**	**-2.9**	
ITBZ	**Tabriz**		**14.76**	**27**	*e*P		Pn	17 38 26.9	-4.1	
ITBZ	**Tabriz**		**14.76**	**27**	*e*P		Pn	17 38 26.9	-4.1	
BBAL	**Bala**		**14.77**	**346**	*i*P		**Pn**	**17 38 30.6**	**-0.4**	
BODT	**Bodrum**		**14.77**	**325**	*e*P		**Pn**	**17 38 28.4**	**-2.6**	
KHL	**Karahalli**		**14.78**	**334**	*e*P		**P**	**17 38 36.8**	**-0.3**	
IZEF	**Zefreh**		**14.83**	**56**	*e*P		**Pn**	**17 38 30.7**	**-1.3**	
IZEF	**Zefreh**		**14.83**	**56**	*e*P		**Pn**	**17 38 30.7**	**-1.3**	
KHAL	**Karahalli**		**14.83**	**334**	*i*P		Pn	17 38 28.2	-3.6	
BRTR	**Keskin Array B**		**14.84**	**347**	Pn		**Pn**	**17 38 32.0**	**+0.1**	
BRTR	**Keskin Array B**		**14.84**	**347**	Pn		**Pn**	**17 38 32.0**	**+0.1**	
	comp=Z,0.1nm,0.3s,baz=164,slow=14,SNR=22									
BRTR					LR		LR	17 45 00.5		
	comp=Z,13µm,18.8s,baz=149,slow=41									
BRTR	**Keskin Array B**		**14.84**	**347**	Pn		**Pn**	**17 38 32.0**	**+0.1**	
BR131	**Keskin Array S**		**14.84**	**347**	*e*Pn		**Pn**	**17 38 29.9**	**-2.0**	
	comp=Z,94nm,1.3s									
BR131	**Keskin Array S**		**14.84**	**347**	*e*Pn		**Pn**	**17 38 29.9**	**-2.0**	
	comp=Z,94nm,1.3s									
IR5	**Iran Long-Peri**		**14.86**	**45**	*e*P		**Pn**	**17 38 30.2**	**-2.0**	
IR5	**Iran Long-Peri**		**14.86**	**45**	*e*P		**Pn**	**17 38 30.2**	**-2.0**	
KOPT	**Kop Dagi**		**14.90**	**8**	*i*P		**Pn**	**17 38 32.1**	**-0.8**	
KELT	**Kelkit**		**14.90**	**4**	*i*P		**Pn**	**17 38 33.5**	**+0.7**	
ERZM	**Erzurum**		**14.91**	**11**	*i*P		**Pn**	**17 38 34.8**	**+1.7**	
IDI	**Anoyia**		**14.94**	**315**	P		**Pn**	**17 38 30.5**	**-2.8**	
IDI	**Anoyia**		**14.94**	**315⇑**	*i*Pn		**Pn**	**17 38 32.4**	**-0.9**	
	comp=Z,215nm,1.0s									
IDI	**Anoyia**		**14.94**	**315⇑**	*i*Pn		**Pn**	**17 38 32.4**	**-0.9**	
	comp=Z,215nm,1.0s									
AYDN	**Tasoluk**		**14.95**	**328**	*i*P		**Pn**	**17 38 32.0**	**-1.4**	
IMRD	**Marand**		**15.00**	**25**	*e*P		**Pn**	**17 38 31.5**	**-2.7**	
IMRD	**Marand**		**15.00**	**25**	*e*P		**Pn**	**17 38 31.5**	**-2.7**	
TOKA	**Tokat**		**15.06**	**356**	*i*P		**Pn**	**17 38 35.3**	**+0.5**	
MUKL	**Al Mukalla**		**15.07**	**133**	*i*S		Sn	17 41 29.6	+7.8	
DYDN	**Diyadin**		**15.09**	**18**	*i*P		**Pn**	**17 38 34.9**	**-0.6**	
ISRB	**Sarab**		**15.09**	**32**	*e*P		**Pn**	**17 38 31.7**	**-3.8**	
ISRB	**Sarab**		**15.09**	**32**	*e*P		**Pn**	**17 38 31.7**	**-3.8**	
RSDY	**Resadiye-TOKAT**		**15.10**	**359**	*e*P		**Pn**	**17 38 34.3**	**-1.1**	
CORM	**Corum**		**15.11**	**351**	*e*P		**Pn**	**17 38 33.2**	**-2.4**	
LUJL	**Ujela**		**15.14**	**288**	*i*P		**Pn**	**17 38 35.2**	**-0.8**	
	comp=Z,1µm,1.6s,SNR=45									
HOMI	**Horasan**		**15.15**	**12**	*i*P		**Pn**	**17 38 36.5**	**+0.3**	
ANTO	**Ankara**		**15.15**	**345**	*e*P		Pn	17 38 31.1	-5.0	
ANTO	**Ankara**		**15.15**	**345**	*e*P		**Pn**	**17 38 34.5**	**-1.6**	
ANTO					pmax		pmax			
	comp=Z,268nm,1.2s									
ANTO	**Ankara**		**15.15**	**345**	*e*Pn		**Pn**	**17 38 34.5**	**-1.6**	
	comp=Z,268nm,1.2s									
ANTO	**Ankara**		**15.15**	**345**	*e*Pn		**Pn**	**17 38 34.5**	**-1.6**	
	comp=Z,268nm,1.2s									
LOD	**Lodumlu**		**15.18**	**345**	*e*P		**Pn**	**17 38 34.1**	**-2.4**	
ALT	**Altintas**		**15.20**	**337**	*e*P		**Pn**	**17 38 33.0**	**-3.8**	
GVD	**Gavdhos**		**15.20**	**312**	P		**Pn**	**17 38 35.0**	**-1.7**	
GVD	**Gavdhos**		**15.20**	**312**	*e*Pn		Pn	17 38 31.7	-4.9	
	comp=Z,439nm,1.0s									
GVD	**Gavdhos**		**15.20**	**312**	*e*Pn		Pn	17 38 31.7	-4.9	
	comp=Z,439nm,1.0s									
IMHD	**Mahdasht**		**15.21**	**44**	*e*P		**Pn**	**17 38 32.7**	**-4.2**	
IMHD	**Mahdasht**		**15.21**	**44**	*e*P		**Pn**	**17 38 32.7**	**-4.2**	
IHRS	**Heris**		**15.21**	**29**	*e*P		**Pn**	**17 38 33.2**	**-3.8**	
IHRS	**Heris**		**15.21**	**29**	*e*P		**Pn**	**17 38 33.2**	**-3.8**	
SANT	**Santorini**		**15.29**	**319**	*e*Pn		**Pn**	**17 38 35.0**	**-3.0**	
	comp=Z,187nm,1.1s									
SANT	**Santorini**		**15.29**	**319**	*e*Pn		**Pn**	**17 38 35.0**	**-3.0**	
	comp=Z,187nm,1.1s									
GCAM	**G?zelcaml?**		**15.30**	**327**	*i*P		**Pn**	**17 38 35.7**	**-2.2**	
KULA	**Kula-Manisa**		**15.30**	**332**	*e*P		**Pn**	**17 38 36.4**	**-1.6**	
IR3	**Iran Long-Peri**		**15.30**	**45**	*e*P		**Pn**	**17 38 36.5**	**-1.6**	
IR3	**Iran Long-Peri**		**15.30**	**45**	*e*P		**Pn**	**17 38 36.5**	**-1.6**	
NAX	**Nakhchivan**		**15.33**	**23⇑**	P		**Pn**	**17 38 37.4**	**-1.1**	
	SNR=19									
NAX	**Nakhchivan**		**15.33**	**23⇑**	Pn		**Pn**	**17 38 37.4**	**-1.1**	
	SNR=19									
ESKT	**Eskisehir**		**15.36**	**339**	*e*P		**Pn**	**17 38 40.5**	**+1.6**	
IGZV	**Ghazvin**		**15.39**	**41**	*e*P		**Pn**	**17 38 38.8**	**-0.7**	
IGZV	**Ghazvin**		**15.39**	**41**	*e*P		**Pn**	**17 38 38.8**	**-0.7**	
ERBA	**Erbaa**		**15.40**	**357**	*i*P		**Pn**	**17 38 39.5**	**+0.1**	
VAM	**Vamos**		**15.46**	**314**	P		**Pn**	**17 38 38.5**	**-1.6**	
GDZ	**Gediz**		**15.46**	**335**	*i*P		**Pn**	**17 38 38.4**	**-1.8**	
ISAD	**Sadrabad**		**15.47**	**61**	*e*P		**Pn**	**17 38 40.1**	**-0.4**	
ISAD	**Sadrabad**		**15.47**	**61**	*e*P		**Pn**	**17 38 40.1**	**-0.4**	
IVRN	**Varamin**		**15.48**	**48**	*e*P		Pn	17 38 34.5	-5.9	
IVRN					*e*P		**Pn**	**17 38 37.2**	**-3.2**	
IVRN	**Varamin**		**15.48**	**48**	*e*P		**Pn**	**17 38 37.2**	**-3.2**	
CTKT	**Corum**		**15.52**	**352**	*i*P		**Pn**	**17 38 40.8**	**-0.3**	
CANT	**Cankiri**		**15.69**	**348**	*e*P		**Pn**	**17 38 42.5**	**-0.7**	
DEMI	**Demirci**		**15.72**	**333**	*i*P		**Pn**	**17 38 40.8**	**-2.8**	
MACK	**Trabzon**		**15.73**	**6**	*i*P		**Pn**	**17 38 45.0**	**+1.4**	
MACK	**Trabzon**		**15.73**	**6**	*i*P		**Pn**	**17 38 45.0**	**+1.4**	
APE	**Apeiranthos**		**15.74**	**321**	P		**P**	**17 38 48.0**	**+0.3**	
TVSB	**Tavsanli**		**15.78**	**336**	*e*P		**Pn**	**17 38 41.5**	**-2.8**	
IZM	**Izmir**		**15.83**	**328**	*e*P		**Pn**	**17 38 44.5**	**-0.5**	
KVT	**Kavak**		**15.85**	**355**	*e*P		**Pn**	**17 38 42.1**	**-3.0**	
DDEM	**Demirkent**		**15.94**	**11**	*i*P		**Pn**	**17 38 47.2**	**+0.8**	
DDEM	**Demirkent**		**15.94**	**11**	*i*P		**Pn**	**17 38 47.2**	**+0.8**	
ASUD	**Al Ashush, Dub**		**15.95**	**89⇑**	P		**Pn**	**17 38 46.7**	**+0.2**	
	SNR=18									
ASUD	**Al Ashush, Dub**		**15.95**	**89**	P		**Pn**	**17 38 47.2**	**+0.7**	
GNI	**Garni**		**15.96**	**20**	*e*Pn		**Pn**	**17 38 47.4**	**+0.7**	
	comp=Z,3µm,2.5s									
GNI	**Garni**		**15.96**	**20**	Pn		**Pn**	**17 38 47.5**	**+0.8**	
	comp=Z,0.3nm,0.3s,baz=34,slow=3.9,SNR=16									
GNI					LR		LR	17 45 44.4		
	comp=Z,24µm,20.5s,baz=197,slow=41									
GNI	**Garni**		**15.96**	**20**	P		**Pn**	**17 38 46.8**	**+0.1**	
	SNR=25									
GNI	**Garni**		**15.96**	**20**	*e*Pn		**Pn**	**17 38 47.4**	**+0.7**	
	comp=Z,3µm,2.5s									
AKHS	**Akhisar**		**15.97**	**331**	*i*P		**Pn**	**17 38 44.9**	**-1.8**	
IDMV	**Damavand**		**16.02**	**47**	*e*P		**Pn**	**17 38 43.3**	**-4.3**	
IDMV	**Damavand**		**16.02**	**47**	*e*P		**Pn**	**17 38 43.3**	**-4.3**	
IMEH	**Mehriz**		**16.04**	**64**	*e*P		**Pn**	**17 38 48.6**	**+0.8**	
IMEH	**Mehriz**		**16.04**	**64**	*e*P		**Pn**	**17 38 48.6**	**+0.8**	
TOS	**Tosya**		**16.04**	**350**	*e*P		Pn	17 38 41.8	-5.9	
DBAD	**Bademkaya**		**16.05**	**11**	*i*P		**Pn**	**17 38 48.3**	**+0.4**	
DBAD	**Bademkaya**		**16.05**	**11**	*i*P		**Pn**	**17 38 48.3**	**+0.4**	
MDUB	**Mudurnu**		**16.13**	**342**	*e*P		**Pn**	**17 38 47.6**	**-1.3**	
DAGI	**Agillar**		**16.15**	**11**	*i*P		**Pn**	**17 38 49.3**	**+0.2**	
ICHK	**Chekchek**		**16.16**	**61**	*e*P		**Pn**	**17 38 47.8**	**-1.6**	
ICHK	**Chekchek**		**16.16**	**61**	*e*P		**Pn**	**17 38 47.8**	**-1.6**	
FAQ	**Al Faqa, Dubai**		**16.17**	**88**	P		**Pn**	**17 38 49.8**	**+0.4**	
NAZ	**Nazwa, Dubai**		**16.21**	**87⇓**	P		**Pn**	**17 38 49.8**	**-0.1**	
	SNR=34									
NAZ	**Nazwa, Dubai**		**16.21**	**87**	Pn		**Pn**	**17 38 49.8**	**-0.1**	
	SNR=34									
NAZ	**Nazwa, Dubai**		**16.21**	**87**	P		**Pn**	**17 38 50.1**	**+0.2**	
ARTV	**Artvin**		**16.26**	**11**	*i*P		**Pn**	**17 38 50.1**	**-0.5**	
ARTV	**Artvin**		**16.26**	**11**	*i*P		**Pn**	**17 38 50.1**	**-0.5**	
DURS	**Dursunbey**		**16.30**	**334**	*i*P		**Pn**	**17 38 50.1**	**-0.8**	
GULT	**Gulveren**		**16.30**	**340**	*e*P		**Pn**	**17 38 46.9**	**-4.1**	
CAVI	**Cavuskoy**		**16.31**	**338**	*e*P		**Pn**	**17 38 47.2**	**-3.9**	
LKRN	**Lenkeran, Azer**		**16.33**	**32**	P		**P**	**17 38 54.2**	**+0.1**	
	SNR=15									
LKRN	**Lenkeran, Azer**		**16.33**	**32**	Pn		**P**	**17 38 54.2**	**+0.1**	
	SNR=15									
DBOC	**Borcka**		**16.37**	**10**	*i*P		**Pn**	**17 38 52.5**	**+0.7**	
DBOC	**Borcka**		**16.37**	**10**	*i*P		**Pn**	**17 38 52.5**	**+0.7**	
CHOS	**Chios island**		**16.42**	**326**	P		**P**	**17 38 56.4**	**+1.1**	
ABTO	**Aybut**		**16.46**	**116⇓**	P		**Pn**	**17 38 52.6**	**-0.6**	
	SNR=26									
ABTO	**Aybut**		**16.46**	**116**	Pn		**Pn**	**17 38 52.6**	**-0.6**	
	SNR=26									
DIKM	**Dikmen**		**16.48**	**353**	*e*P		**Pn**	**17 38 52.7**	**-0.4**	
LJBD	**Adjabya**		**16.49**	**294**	*i*P		**Pn**	**17 38 53.0**	**-0.3**	
	comp=Z,1µm,1.5s,SNR=42									
SAFT	**Safranbolu**		**16.49**	**346**	*e*P		**Pn**	**17 38 52.7**	**-0.6**	
ILAS	**Lasjerd**		**16.53**	**49**	*e*P		**Pn**	**17 38 49.8**	**-4.3**	
ILAS	**Lasjerd**		**16.53**	**49**	*e*P		**Pn**	**17 38 49.8**	**-4.3**	
IFIR	**Firoozkooh**		**16.54**	**48**	*e*P		**Pn**	**17 38 54.0**	**-0.2**	
IFIR	**Firoozkooh**		**16.54**	**48**	*e*P		**Pn**	**17 38 54.0**	**-0.2**	
ADVT	**Abdulvahap**		**16.55**	**338**	*e*P		**Pn**	**17 38 50.4**	**-3.7**	
GLBA	**Clilabad**		**16.57**	**30**	P		**P**	**17 38 56.0**	**-0.8**	
	SNR=24									
GLBA	**Clilabad**		**16.57**	**30**	Pn		**P**	**17 38 56.0**	**-0.8**	
	SNR=24									
ASHO	**Ashiyiah**		**16.60**	**88⇑**	P		**Pn**	**17 38 54.7**	**-0.2**	
	SNR=110									
ASHO	**Ashiyiah**		**16.60**	**88**	Pn		**Pn**	**17 38 54.7**	**-0.2**	
	SNR=110									
BALT	**Daday**		**16.64**	**348**	*i*P		**Pn**	**17 38 54.2**	**-1.1**	
BALT	**Daday**		**16.64**	**348**	*i*P		**Pn**	**17 38 54.2**	**-1.1**	
HATD	**Hatta, Dubai**		**16.65**	**88⇓**	P		**Pn**	**17 38 55.1**	**-0.4**	
	SNR=79									
HATD	**Hatta, Dubai**		**16.65**	**88**	Pn		**Pn**	**17 38 55.1**	**-0.4**	
	SNR=79									
HATD	**Hatta, Dubai**		**16.65**	**88**	P		**Pn**	**17 38 55.4**	**-0.1**	
UOSS	**Wadi Hilu**		**16.71**	**87**	Pn		**Pn**	**17 38 55.4**	**-0.8**	
	comp=Z,4µm,1.0s,SNR=98									
BANOM	**Banah**		**16.74**	**84⇓**	P		**Pn**	**17 38 55.4**	**-1.2**	
	SNR=38									
BANOM	**Banah**		**16.74**	**84**	Pn		**Pn**	**17 38 55.4**	**-1.2**	
	SNR=38									
BANOM	**Banah**		**16.74**	**84**	P		**Pn**	**17 38 57.5**	**+0.9**	
	SNR=60									
BALY	**Balya**		**16.77**	**332**	*i*P		**Pn**	**17 38 55.5**	**-1.3**	
AKH	**Akhalkalaki**		**16.80**	**15**	P		**Pn**	**17 38 58.4**	**+1.1**	
BRDA	**Brd**		**16.91**	**25**	P		**P**	**17 39 01.3**	**+0.7**	
	SNR=39									
BRDA	**Brd**		**16.91**	**25**	Pn		**P**	**17 39 01.3**	**+0.7**	
	SNR=39									
GANJ	**Ganja**		**16.93**	**23**	P		**P**	**17 39 00.6**	**-0.2**	
	SNR=32									
GANJ	**Ganja**		**16.93**	**23**	Pn		**P**	**17 39 00.6**	**-0.2**	
	SN

PLD Plovdiv 19.97 331 P Pn 17 39 35.9 0.0
PLD Plovdiv 19.97 331 P Pn 17 39 35.9 0.0
PSN Preselentsi 19.98 339 P P 17 39 34.6 +0.3
MMB Musomiste 20.02 328 P P 17 39 35.6 +0.8
KZN Kozani 20.10 322 P P 17 39 35.4 -0.3
JAN Janina 20.19 319 P P 17 39 36.9 +0.2
GOF Gofitskoye 20.21 11 eP Pn 17 39 51.7 +13
GOF eS PcP 17 43 54.1 +3.3
GOF pmax pmax
comp=Z,350nm,1.1s
GOF Gofitskoye 20.21 11 eP Pn 17 39 51.7 +13
comp=Z,350nm,1.1s
GOF Gofitskoye 20.21 11 ePcP PcP 17 43 54.1 +3.3
GRG Griva 20.22 325 P P 17 39 36.9 -0.1
VAY Valandovo 20.39 325 P P 17 39 38.6 -0.2
VAY Valandovo 20.39 325 iP P 17 39 38.6 -0.2
comp=Z,460nm,1.9s
SZH Strazhica 20.41 335 P P 17 39 39.6 +0.6
IGT Igoumenitsa 20.42 318 P P 17 39 38.6 -0.6
KKB Krupnik 20.54 327 P P 17 39 40.6 +0.1
PGB Panagyurishte 20.57 330 P P 17 39 41.7 +1.0
NEST Nestorio 20.58 321 P P 17 39 40.4 -0.6
TIRR Tirgusor 20.61 341 eP P 17 39 40.6 -0.5
TIRR pmax pmax
comp=Z,2µm,2.1s
TIRR Tirgusor 20.61 341 eP P 17 39 40.5 -0.5
comp=Z,2µm,2.1s
TIRR Tirgusor 20.61 341 iP P 17 39 41.1 0.0
TIRR Tirgusor 20.61 341 eP P 17 39 40.5 -0.5
comp=Z,2µm,2.1s
PVL Pavlikeni 20.61 333 P Pn 17 39 42.8 -0.6
FNA Florina 20.65 323 P P 17 39 41.1 -0.6
IDAH Dahanechah 20.70 64 eP Pn 17 39 44.0 -0.9
IDAH Dahanechah 20.70 64 eP Pn 17 39 44.0 -0.9
LUMB Murzuk 20.75 277 iP Pn 17 39 44.4 -0.9
comp=Z,682nm,2.4s,SNR=34
BIA Bitola 20.84 323 P P 17 39 43.4 -0.3
BIA Bitola 20.84 323 iP P 17 39 43.2 -0.5
comp=Z,48nm,1.6s
KEK Kerkira 20.86 318 P P 17 39 43.2 -0.7
KBN Korca 20.87 321 P P 17 39 43.5 -0.5
ISHV Shirvan 20.91 49 eP P 17 39 45.6 +0.9
ISHV Shirvan 20.91 49 eP P 17 39 45.6 +0.9
VTS Vitosha 21.04 329 P P 17 39 47.0 +1.0
AMRR Amara 21.08 339 iP P 17 39 47.3 +1.1
IKRD Kardeh 21.12 52 eP P 17 39 55.1 +8.1
IKRD Kardeh 21.12 52 eP P 17 39 55.1 +8.1
LMSR Misrath 21.12 295 iP P 17 39 48.2 +1.4
comp=Z,482nm,1.5s,SNR=34
TLCR 21.16 342 iP P 17 39 48.3 +1.3
IAKL Akhelmad 21.22 53 eP P 17 39 49.1 +1.0
IPAY Payeh 21.32 53 eP P 17 39 50.3 +1.1
IPAY Payeh 21.32 53 eP P 17 39 50.3 +1.1
CFR Carcaliu 21.34 341 iP P 17 39 49.0 0.0
ABKT Ailbek 21.40 49 P P 17 39 50.1 +0.3
comp=Z,1µm,1.2s
IMOG Moghan 21.43 55 eP P 17 39 51.2 +0.8
IMOG Moghan 21.43 55 eP P 17 39 51.2 +0.8
SKO Skopje 21.45 325 P P 17 39 50.6 +0.4
SKO Skopje 21.45 325 iP P 17 39 50.6 +0.4
comp=Z,1µm,2.3s
IEMG Emamgholi 21.51 51 eP P 17 39 52.1 +0.8
IEMG Emamgholi 21.51 51 eP P 17 39 52.1 +0.8
ISRO Mashad 21.61 54 eP P 17 39 53.7 +1.6
ISRO Mashad 21.61 54 eP P 17 39 53.7 +1.6
PHP Peshkopia 21.78 323 P P 17 39 53.1 -0.7
ISR Istrita 21.79 338 iP P 17 39 54.9 +1.0
HUMR Humele 21.85 335 iP P 17 39 55.1 +0.6
TIR Tirane 21.87 322 eP P 17 39 53.7 -1.0
TIR pmax pmax
comp=Z,924nm,1.8s
TIR MLR MLR
comp=Z,2µm,21.0s
TIR Tirane 21.87 322 P P 17 39 54.0 -0.7
TIR Tirane 21.87 322 eP P 17 39 53.7 -1.0
comp=Z,924nm,1.8s
TIR LR LR
comp=Z,2µm,21.0s
TIR Tirane 21.87 322 eP P 17 39 53.7 -1.0
comp=Z,924nm,1.8s
GRER 21.88 339 iP P 17 39 56.5 +1.7
SECR 21.88 337 iP P 17 39 56.6 +1.7
IMYA Miami 22.09 55 eP P 17 39 58.1 +0.7
IMYA Miami 22.09 55 eP P 17 39 58.1 +0.7
PETR Petresti 22.11 340 iP P 17 39 57.4 +0.2
GOLR 22.12 335 iP P 17 39 59.0 +1.6
MLR Muntele Rosu 22.32 338 P P 17 40 00.4 +0.7
MLR PcP PcP 17 43 55.0 0.0
MLR Muntele Rosu 22.32 338 iP P 17 40 00.4 +0.7
MLR Muntele Rosu 22.32 338 P P 17 40 00.4 +0.7
comp=Z,5.5nm,0.8s,baz=130,slow=5.6,SNR=49
MLR PcP PcP 17 43 55.0 0.0
comp=Z,1.7nm,0.8s,baz=173,slow=8.1,SNR=3.7
MLR Muntele Rosu 22.32 338 P P 17 40 00.4 +0.7
MLR Muntele Rosu 22.32 338 PcP PcP 17 43 55.0 0.0
VRI Vrincioaia 22.39 339 iP P 17 40 00.3 -0.1
PLOR Plostina 22.41 339 iP P 17 40 00.8 +0.3
TIP Timpagrande 22.48 313 eP P 17 39 59.5 -1.9
comp=Z,1µm,2.0s
TIP LR LR
comp=Z,1µm,22.0s
TIP Timpagrande 22.48 313 eP P 17 39 59.5 -1.9
comp=Z,1µm,2.0s
LEOM Leova 22.50 343 iP P 17 40 01.5 +0.1
WDD Wield Dalam 22.58 303 eP P 17 40 02.3 -0.1
comp=Z,405nm,1.3s
WDD LR LR
comp=Z,3µm,20.0s
WDD Wield Dalam 22.58 303 eP P 17 40 02.3 -0.1
comp=Z,405nm,1.3s
CEL Celeste 22.60 310 ePn P 17 40 02.5 -0.2
comp=Z,341nm,1.4s
CEL LR LR
comp=Z,2µm,19.0s
CEL Celeste 22.60 310 ePn P 17 40 02.5 -0.2
comp=Z,341nm,1.4s
ARR Arges 22.69 335 iP P 17 40 04.1 +0.5
KIS Kishinev 22.84 344 iP P 17 40 02.0 -3.0
KIS i 17 40 20.0
KIS i S S 17 44 15.0 +1.3
KIS eSS SnSn 17 45 00.0 +15
KIS pmax pmax
comp=N,900nm,2.0s
KIS pmax pmax
comp=E,600nm,2.0s
KIS pmax pmax
comp=Z,800nm,2.0s
KIS pmax pmax
comp=N,2µm,4.0s
KIS pmax pmax
comp=Z,2µm,4.0s
KIS pmax pmax
comp=E,1µm,3.0s
KIS smax smax
comp=N,5µm,10.0s
KIS smax smax
comp=E,4µm,10.0s
KIS MLR MLR
comp=E,4µm,15.0s
KIS MLR MLR
comp=Z,4µm,15.0s
KIS MLR MLR
comp=N,3µm,14.0s
KIS MLR MLR
comp=Z,7µm,16.0s
KIS Kishinev 22.84 344 iP P 17 40 02.0 -3.0
comp=Z,800nm,2.0s
KIS i S S 17 44 15.0 +1.3
comp=Z,5µm,10.0s
KIS eSS SnSn 17 45 00.0 +15
KIS eLi 17 48 00.0
KIS eLQ LQ 17 49 34.0
KIS LRM MLR 17 51 38.0
comp=Z,4µm,15.0s
KIS Kishinev 22.84 344 iP P 17 40 01.1 -3.9
KIS Kishinev 22.84 344 iP P 17 40 02.0 -3.0
comp=Z,800nm,2.0s
KIS i S S 17 44 15.0 +1.3
DOPR Dopca 22.93 337 iP P 17 40 07.4 +1.4
TESR Tescani 23.00 340 iP P 17 40 06.3 -0.4
LOT Lotru 23.09 334 iP P 17 40 08.1 +0.3
CUC Castrocucco 23.53 314 eP P 17 40 12.3 +0.1
comp=Z,211nm,1.4s
CUC LR LR
comp=Z,825nm,20.0s
CUC Castrocucco 23.53 314 eP P 17 40 12.3 +0.1
comp=Z,211nm,1.4s
DIVS Divibare 23.72 327 P P 17 40 13.4 -0.6
DIVS Divibare 23.72 327 iP P 17 40 13.6 -0.4
STON Ston 24.08 322 P P 17 40 16.9 -0.5
BZS Buzias 24.11 331 iP P 17 40 17.6 0.0
TIM Timisoara 24.38 331 iP P 17 40 22.5 +2.4
BURAR Bucovina Array 24.43 339 iP P 17 40 21.9 +1.3
BUR08 Bucovina Ar. S 24.46 339 iP P 17 40 21.5 +0.6
BUR08 Bucovina Ar. S 24.46 339 iP P 17 40 21.5 +0.6
DRGR 24.61 335 iP P 17 40 23.2 +0.9
BMR Baia Mare 25.06 337 iP P 17 40 27.1 +0.9
VORD Divnogorie 25.70 2 iP P 17 40 31.5 -0.4
VORD e*SP sP 17 40 42.3 +3.7
VORD pmax pmax
comp=N,260nm,1.1s
VORD pmax pmax
comp=Z,130nm,1.1s
VORD pmax pmax
comp=E,60nm,1.0s
VORD MLR MLR
comp=Z,3µm,11.0s
VORD MLR MLR
comp=N,2µm,10.0s
VORD MLR MLR
comp=E,860nm,9.0s
VORD Divnogorie 25.70 2 i P P 17 40 31.5 -0.4
PKS6 Bocsa 25.78 330 eP P 17 40 34.0 +1.3
TRPA Tarpa 25.79 336 iP P 17 40 33.2 +0.4
TRPA Tarpa 25.79 336 eP P 17 40 33.4 +0.6
PKS2 Kecel 25.86 330 eP P 17 40 33.8 +0.4
PKSM Moragy 25.91 329 iP P 17 40 33.5 -0.5
PKSM Moragy 25.91 329 eP P 17 40 33.5 -0.5
VSR Storozhevoye 25.94 2 iP P 17 40 33.5 -0.6
VSR e*SP sP 17 40 43.9 +3.1
VSR pmax pmax
comp=Z,210nm,1.2s
VSR pmax pmax
comp=N,320nm,1.3s
VSR pmax pmax
comp=E,30nm,1.1s
VSR MLR MLR
comp=N,2µm,11.0s
VSR MLR MLR
comp=E,1µm,11.0s
VSR MLR MLR
comp=Z,3µm,11.0s
VSR Storozhevoye 25.94 2 iP P 17 40 33.5 -0.6
comp=Z,320nm,1.3s
VRHR Novokhopersk 25.97 6 eP P 17 40 34.9 +0.5
VRHR pmax pmax
comp=N,550nm,1.1s
VRHR pmax pmax
comp=E,100nm,1.1s
VRHR pmax pmax
comp=Z,400nm,1.1s
VRHR MLR MLR
comp=N,4µm,12.0s
VRHR MLR MLR
comp=Z,4µm,12.0s
VRHR MLR MLR
comp=E,590nm,9.0s
VRHR Novokhopersk 25.97 6 eP P 17 40 34.9 +0.5
AK02 Malin Array Si 26.20 348 eP P 17 40 35.6 -0.9
AK02 ePcP PcP 17 44 03.0 -0.1
AK02 eS S 17 45 13.2 +5.2
AK02 Malin Array Si 26.20 348 eP P 17 40 35.7 -0.9
KMBO Kilima Mbogo 26.23 181 iP P 17 40 38.7 +1.3
comp=E,382nm,2.3s
KMBO ePcP PcP 17 44 03.5 -0.6
KMBO PcP PcP 17 44 05.8 +1.7
KMBO Kilima Mbogo 26.23 181 iP P 17 40 39.0 +1.6
SNR=33
KMBO Kilima Mbogo 26.23 181 P P 17 40 39.8 +2.4
comp=E,6.8nm,1.1s,baz=357,slow=9.4,SNR=24
KMBO PcP PcP 17 44 05.8 +1.6
comp=E,6.3nm,0.9s,baz=349,slow=3.3,SNR=6.7
KMBO LR LR 17 49 39.9
comp=E,5µm,20.2s,baz=200,slow=33
KMBO Kilima Mbogo 26.23 181 i P P 17 40 38.7 +1.3
comp=E,382nm,2.3s
AK01 Malin Array Si 26.23 348 eP P 17 40 35.8 -1.0
AK01 ePcP PcP 17 44 03.4 +0.2
AK01 eS S 17 45 12.0 +3.6
AK01 Malin Array Si 26.23 348 eP P 17 40 35.8 -1.0
KIEV Kiev 26.24 348 eP P 17 40 35.5 -1.3
KIEV e 17 44 03.7
KIEV eS S 17 45 12.7 +4.2
KIEV pmax pmax
comp=Z,282nm,1.4s
KIEV MLR MLR
comp=Z,4µm,20.0s
KIEV Kiev 26.24 348 eP P 17 40 35.5 -1.3
comp=Z,282nm,1.4s
KIEV ePcP PcP 17 44 03.6 +0.5
KIEV eS S 17 45 12.7 +4.2
KIEV LR LR
comp=Z,4µm,20.0s
KIEV Kiev 26.24 348 eP P 17 40 35.5 -1.3
comp=Z,282nm,1.4s
AKASG Malin Array Be 26.24 348 P P 17 40 36.2 -0.7
AKASG 17 44 04.1
AKASG pmax pmax
comp=Z,131nm,1.2s
AKASG MLR MLR
comp=Z,5µm,18.7s
AKASG Malin Array Be 26.24 348 P P 17 40 36.2 -0.7
AKASG PcP PcP 17 44 04.0 +0.9
AKASG Malin Array Be 26.24 348 P P 17 40 36.2 -0.7
comp=Z,130nm,1.2s,baz=167,slow=9.0,SNR=175
AKASG PcP PcP 17 44 04.0 +0.9
comp=Z,10.0nm,0.8s,baz=129,slow=1.3,SNR=9.0
AKASG LR LR 17 53 15.2
comp=Z,5µm,18.6s,baz=145,slow=42
AKASG Malin Array Be 26.24 348 P P 17 40 36.2 -0.7
AKASG Malin Array Be 26.24 348 PcP PcP 17 44 04.1 +0.9
UZH Uzhgorod 26.30 336 eP P 17 40 36.0 -1.4
UZH e 17 41 20.9
UZH ePPP PPP 17 41 35.0
UZH e 17 44 09.7
UZH eS S 17 45 03.0 -6.5
UZH eSS SnSn 17 46 10.5 +0.9
UZH MLR MLR
comp=N,2µm,14.0s
UZH MLR MLR
comp=E,2µm,14.0s
UZH MLR MLR
comp=Z,1µm,14.0s
UZH Uzhgorod 26.30 336 eP P 17 40 36.0 -1.4
UZH Uzhgorod 26.30 336 ePcP PcP 17 44 09.7 +6.3
UZH eS S 17 45 03.0 -6.5
AQU L'Aquila 26.33 316 eP P 17 40 38.5 +0.6
comp=Z,269nm,1.4s
AQU LR LR
comp=Z,2µm,21.0s
AQU L'Aquila 26.33 316 eP P 17 40 38.5 +0.6
comp=Z,269nm,1.4s
PKS9 Tamasi 26.36 329 iP P 17 40 38.6 +0.6
VOR Voronezh 26.46 2 eP P 17 40 36.0 -2.8
VOR pmax pmax
comp=Z,360nm,1.4s
VOR Voronezh 26.46 2 eP P 17 40 36.0 -2.8
comp=Z,360nm,1.4s
SISC Sisak 26.52 325 P P 17 40 39.9 +0.5
KEST Kesra 26.53 300 iP P 17 40 41.6 +1.8
KEST ePcP PcP 17 44 05.1 +0.8
KEST PcP PcP 17 44 05.8 +1.5
KEST Kesra 26.53 300 P P 17 40 41.6 +1.8
comp=Z,50nm,1.0s,baz=76,slow=2.2,SNR=101
KEST PcP PcP 17 44 05.8 +1.5
comp=Z,9.6nm,0.9s,baz=289,slow=4.9,SNR=4.6
KEST LR LR 17 52 33.9
comp=Z,2µm,18.3s,baz=200,slow=40
KEST Kesra 26.53 300 iP P 17 40 41.6 +1.8
KEST Kesra 26.53 300 ePcP PcP 17 44 05.1 +0.8
KOLS Kolonicke sedl 26.56 337 eP P 17 40 41.1 +1.3
KOLS pmax pmax
comp=Z,138nm,1.5s
KOLS Kolonicke sedl 26.56 337 eP P 17 40 41.1 +1.3
KOLS eS S 17 45 17.7 +4.0
KOLS Kolonicke sedl 26.56 337 eP P 17 40 41.1 +1.3
comp=Z,138nm,1.5s
MBAR Mbarara 26.59 196 P P 17 40 41.0 +0.5
MBAR Mbarara 26.59 196 P P 17 40 41.9 +1.4
comp=Z,190nm,2.9s,SNR=43
MBAR Mbarara 26.59 196 P P 17 40 41.0 +0.5
comp=Z,33nm,1.1s,baz=16,slow=9.7,SNR=22
MBAR LR LR 17 50 31.6
comp=Z,13µm,19.9s,baz=16,slow=35
MBAR Mbarara 26.59 196 P P 17 40 41.0 +0.5
PSZ Piszkesteto 26.66 333 eP P 17 40 40.2 -0.6
PSZ pmax pmax
comp=Z,148nm,1.4s
PSZ MLR MLR
comp=Z,2µm,20.0s
PSZ Piszkesteto 26.66 333 eP P 17 40 40.2 -0.6
comp=Z,148nm,1.4s
PSZ LR LR
comp=Z,2µm,20.0s
PSZ Piszkesteto 26.66 333 iP P 17 40 40.7 -0.1
PSZ Piszkesteto 26.66 333 eP P 17 40 41.0 +0.2
PSZ Piszkesteto 26.66 333 eP P 17 40 40.2 -0.6
comp=Z,148nm,1.4s
BUD Budapest 26.69 331 eP P 17 40 41.1 +0.1
LVV L'vov 26.74 340 iP P 17 40 40.2 -1.2
LVV e 17 41 21.7
LVV eS S 17 45 08.7 -7.8
LVV eSS SnSn 17 46 20.5 +0.2
LVV L'vov 26.74 340 iP P 17 40 40.2 -1.2
LVV eS S 17 45 08.7 -7.8
NVLJ Novalja 26.74 322 P P 17 40 41.5 +0.1
CRVS Cervenica-Dubn 26.83 336 eP P 17 40 41.3 -1.0
CRVS pmax pmax
comp=Z,124nm,1.8s
CRVS Cervenica-Dubn 26.83 336 eP P 17 40 41.3 -1.0
CRVS eS S 17 45 19.1 +1.1
CRVS Cervenica-Dubn 26.83 336 eP P 17 40 41.3 -1.0
comp=Z,124nm,1.8s
PKSG 26.91 330 eP P 17 40 43.9 +1.0
PKST T"s 26.97 330 eP P 17 40 44.2 +0.7
KWP Kalwaria Pacla 27.00 338 eP P 17 40 44.1 +0.3
KWP pmax pmax
comp=Z,208nm,1.4s
KWP MLR MLR
comp=Z,3µm,20.0s
KWP Kalwaria Pacla 27.00 338 eP P 17 40 44.1 +0.3
comp=Z,208nm,1.4s
KWP LR LR
comp=Z,3µm,20.0s
KWP Kalwaria Pacla 27.00 338 iP P 17 40 44.8 +1.0
KWP Kalwaria Pacla 27.00 338 eP P 17 40 44.6 +0.8
KWP eS sS 17 45 44.5 +16
KWP LMZ LR 17 50 56.2
KWP Kalwaria Pacla 27.00 338 eP P 17 40 44.1 +0.3
comp=Z,208nm,1.4s
BOJS Bojanci 27.13 324 i P P 17 40 45.7 +0.7
BOJS eS S 17 45 29.9 +7.2
CRES Cresnjev 27.23 325 iP P 17 40 46.8 +0.8
VYHS Vyhne 27.55 332 eP P 17 40 49.1 +0.4
VYHS pmax pmax
comp=Z,209nm,2.2s
VYHS Vyhne 27.55 332 eP P 17 40 49.1 +0.4
VYHS eS S 17 45 32.5 +3.2
VYHS Vyhne 27.55 332 eP P 17 40 49.1 +0.4
comp=Z,209nm,2.2s
NIE Niedzica 27.69 335 iP P 17 40 50.5 +0.5
NIE eS S 17 45 32.1 +0.6
NIE Niedzica 27.69 335 iP P 17 40 50.5 +0.5
NIE eS S 17 45 32.1 +0.6
VSL Villasalto 27.72 308 PFAKE 17 41 00.0 +10
VSL LR LR
comp=Z,935nm,21.0s
SKDS Skadanscina 27.83 323 iP P 17 40 51.7 +0.4
SKDS eS S 17 45 38.9 +5.1
LJU Ljubljana 27.87 324 eP P 17 40 52.0 +0.4
PERS Pernice 27.95 326 iP P 17 40 53.4 +1.0
PERS eS S 17 45 41.1 +5.4
JAVS Javornik 28.02 323 iP P 17 40 53.4 +0.3
JAVS eS sS 17 45 48.1 +3.4
SOKA Soboth 28.02 326 isP sP 17 40 53.9 -5.8
comp=Z,87nm,1.7s
TRI Trieste 28.07 323 iP P 17 40 53.6 +0.2
TRI pmax pmax
comp=Z,123nm,1.7s
TRI Trieste 28.07 323 iP P 17 40 53.6 +0.2
comp=Z,123nm,1.7s
TRI Trieste 28.07 323 iP P 17 40 53.6 +0.2
comp=Z,123nm,1.7s
ZST Bratislava 28.08 330 eP P 17 40 53.4 -0.1
ZST pmax pmax
comp=Z,358nm,2.0s
ZST Bratislava 28.08 330 eP P 17 40 53.4 -0.1
ZST eS S 17 45 38.9 +1.2
ZST Bratislava 28.08 330 eP P 17 40 53.4 -0.1
comp=Z,358nm,2.0s
ABSA Djebel Ababsia 28.14 300 P P 17 40 56.0 +1.8
ABSA Djebel Ababsia 28.14 300 P P 17 40 56.0 +1.8
OBKA Obir 28.16 325 isP sP 17 40 55.4 -5.5
comp=Z,69nm,1.6s,SNR=22
ARSA Arzberg 28.16 327 isP sP 17 40 55.1 -5.8
comp=Z,88nm,1.8s,SNR=45
SMOL Smolenice 28.17 331 eP P 17 40 54.1 -0.2
SMOL Smolenice 28.17 331 eP P 17 40 54.1 -0.2
SMOL Smolenice 28.17 331 eP P 17 40 54.1 -0.2
VOY Vojsko 28.20 323 eP P 17 40 54.8 +0.1
VOY e 17 40 55.7
VOY e 17 41 27.2
CMAH Djebel Manchou 28.27 301 P P 17 40 57.1 +1.7
CMAH Djebel Manchou 28.27 301 P P 17 40 57.1 +1.7
CONA Conrad Observa 28.47 328 i sP sP 17 40 57.6 -6.1
comp=Z,91nm,2.1s,SNR=40
OJC Ojcow 28.53 335 iP P 17 40 56.9 -0.6
OJC eS S 17 45 44.3 -0.4
OJC MLR MLR
comp=Z,3µm,20.8s
OJC Ojcow 28.53 335 i P P 17 40 56.9 -0.6
OJC eS S 17 45 44.3 -0.4
OJC L L 17 55 07.6
comp=Z,3µm,20.8s
OJC Ojcow 28.53 335 i P P 17 40 56.9 -0.6
comp=Z,3µm,20.8s
OJC eS S 17 45 44.3 -0.4
KBL Kabul 28.56 64 eP P 17 40 58.5 +0.4
KBL pmax pmax
comp=Z,196nm,1.9s
KBL Kabul 28.56 64 eP P 17 40 58.5 +0.4
comp=Z,196nm,1.9s
KBL Kabul 28.56 64 eP P 17 40 58.5 +0.4
comp=Z,196nm,1.9s
MYKA Terra Mystica 28.71 324 isP sP 17 41 00.2 -5.7
comp=Z,90nm,1.6s
CKFL Kef-Lekhel 28.76 300 P P 17 41 00.2 +0.4
CKFL Kef-Lekhel 28.76 300 P P 17 41 00.2 +0.4
OKC Ostrava-Krasne 28.88 333 eP P 17 41 00.5 0.0
OKC e 17 41 11.7
OKC eS S 17 45 53.8 +3.7
OKC MLR MLR
comp=Z,2µm,16.1s
OKC Ostrava-Krasne 28.88 333 eP P 17 41 00.5 0.0
OKC ex x 17 41 11.7
OKC eS S 17 45 53.8 +3.7
OKC AMS AMS 17 55 20.0
comp=Z,2µm,16.1s
OKC Ostrava-Krasne 28.88 333 eP P 17 41 00.5 0.0
OKC eS S 17 45 53.8 +3.7
comp=Z,2µm,16.1s
CASM Ain Smara 28.91 300 P P 17 41 03.0 +2.0
CASM Ain Smara 28.91 300 P P 17 41 03.0 +2.0
CTEI Djebel Teioual 28.93 299 P P 17 41 03.1 +1.8
RAC Raciborz 29.05 334 eP P 17 41 02.7 +0.7
RAC MLR MLR
comp=Z,2µm,14.0s
RAC Raciborz 29.05 334 eP P 17 41 02.7 +0.7
comp=Z,2µm,14.0s
MORC Moravsky Berou 29.08 333 iP P 17 41 01.4 -1.0
MORC e 17 44 10.2
MORC pmax pmax
comp=Z,261nm,2.1s
MORC Moravsky Berou 29.08 333 iP P 17 41 01.4 -1.0
comp=Z,262nm,2.1s
MORC ePcP PcP 17 44 10.2 0.0
MORC Moravsky Berou 29.08 333 iP P 17 41 02.5 +0.1
MORC Moravsky Berou 29.08 333 iP P 17 41 01.4 -1.0
comp=Z,262nm,2.1s
VRAC Vranov 29.13 331 P P 17 41 03.3 +0.4
VRAC Vranov 29.13 331 iP P 17 41 03.1 +0.3
VRAC Vranov 29.13 331 P P 17 41 03.3 +0.4
comp=Z,20nm,1.1s,baz=128,slow=7.9,SNR=59

VRAC	**Vranov**	**29.13**	**331**	P	**P**	**17 41 03.3**	**+0.4**	
VLC	**Villacollemand**	**29.15**	**317**	PFAKE		17 41 10.0	+6.9	
VLC				LR	LR			
	comp=Z,2µm,20.0s							
KBA	**Koelnbreinsper**	**29.16**	**325**	⇓*i*sP	sP	17 41 04.1	-5.9	
	comp=Z,50nm,1.1s,SNR=9.2							
MOA	**Molln**	**29.19**	**327**	⇓*i*sP	sP	17 41 04.1	-6.0	
	comp=Z,44nm,1.4s,SNR=8.3							
PGF	**Pioggiola**	**29.25**	**313**	⇓*i*P	**P**	**17 41 04.4**	**+0.3**	
	comp=Z,312nm,1.9s							
PGF	**Pioggiola**	**29.25**	**313**	⇓*i*P	**P**	**17 41 04.4**	**+0.3**	
PGF				pmax	pmax			
	comp=Z,312nm,1.9s							
PGF	**Pioggiola**	**29.25**	**313**	⇓*i*P	**P**	**17 41 04.4**	**+0.3**	
	comp=Z,312nm,1.9s							
PGF	**Pioggiola**	**29.25**	**313**	⇓*i*P	**P**	**17 41 04.4**	**+0.3**	
	comp=Z,156nm,1.9s							
ABTA	**Abfaltersbach**	**29.39**	**323**	⇑*i*sP	sP	17 41 06.4	-5.5	
	comp=Z,51nm,1.4s,SNR=21							
DFRA	**Djebel Bou Aff**	**29.45**	**300**	P	**P**	**17 41 08.0**	**+2.0**	
DFRA	**Djebel Bou Aff**	**29.45**	**300**	P	**P**	**17 41 08.0**	**+2.0**	
TAM	**Tamanrasset**	**29.51**	**272**	⇓*i*P	**P**	**17 41 07.4**	**+0.7**	
TAM				*e*		17 41 56.4		
TAM				pmax	pmax			
	comp=Z,39nm,1.0s							
TAM				MLR	MLR			
	comp=Z,10µm,19.0s							
TAM	**Tamanrasset**	**29.51**	**272**	⇓*i*P	**P**	**17 41 07.4**	**+0.7**	
	comp=Z,39nm,1.0s							
TAM				*e*PP	**PnPn**	**17 41 56.4**	**-4.6**	
TAM				LR	LR			
	comp=Z,10µm,19.0s							
TAM	**Tamanrasset**	**29.51**	**272**	⇓*i*P	**P**	**17 41 07.4**	**+0.7**	
	comp=Z,39nm,1.0s							
BEL	**Belsk**	**29.52**	**338**	*e*P	**P**	**17 41 04.1**	**-2.1**	
BEL				*e*		17 45 30.1		
BEL				*e*S	**S**	**17 46 04.9**	**+4.7**	
BEL				LMZ	LR	17 52 24.9		
ABKAR	**Akbulak array**	**29.55**	**30**	*e*P	**P**	**17 41 05.9**	**-0.5**	
	comp=Z,24nm,1.1s							
ABKAR	**Akbulak array**	**29.55**	**30**	*e*P	**P**	**17 41 05.9**	**-0.5**	
	comp=Z,24nm,1.1s							
AKTK	**Aktyubinsk**	**29.60**	**27**	P	**P**	**17 41 06.5**	**-0.4**	
AKTO	**Aktyubinsk**	**29.60**	**27**	P	**P**	**17 41 06.5**	**-0.5**	
AKTO	**Aktyubinsk**	**29.60**	**27**	P	**P**	**17 41 06.5**	**-0.5**	
AKTO	**Aktyubinsk**	**29.60**	**27**	P	**P**	**17 41 06.5**	**-0.5**	
	comp=Z,12nm,1.1s,baz=217,slow=9.9,SNR=32							
AKTO	**Aktyubinsk**	**29.60**	**27**	P	**P**	**17 41 06.4**	**-0.5**	
TREC	**Trest**	**29.62**	**330**	*e*P	**P**	**17 41 07.1**	**0.0**	
TREC				*e*		17 41 56.5		
TREC				*e*S	**S**	**17 46 02.3**	**+0.4**	
TREC				MLR	MLR			
	comp=Z,2µm,17.6s							
TREC	**Trest**	**29.62**	**330**	*e*P	**P**	**17 41 07.1**	**0.0**	
TREC				*ex*	x	17 41 56.5		
TREC				*e*S	**S**	**17 46 02.3**	**+0.4**	
TREC				AMS	AMS	17 56 50.0		
	comp=Z,2µm,17.6s							
TREC	**Trest**	**29.62**	**330**	*e*P	**P**	**17 41 07.1**	**0.0**	
TREC				*e*S	**S**	**17 46 02.3**	**+0.4**	
	comp=Z,2µm,17.6s							
CKHR	**Kef el Ahmar**	**29.63**	**299**	P	**P**	**17 41 09.1**	**+1.6**	
CKHR	**Kef el Ahmar**	**29.63**	**299**	P	**P**	**17 41 09.1**	**+1.6**	
SET	**Setif**	**29.75**	**299**	P	**P**	**17 41 10.0**	**+1.4**	
SET	**Setif**	**29.75**	**299**	P	**P**	**17 41 10.0**	**+1.4**	
OBN	**Obninsk**	**29.84**	**359**	⇑*e*P	**P**	**17 41 08.1**	**-0.8**	
OBN				*e*		17 42 00.3		
OBN				*e*S	**S**	**17 46 04.9**	**-0.1**	
OBN				pmax	pmax			
	comp=Z,377nm,2.5s							
OBN				MLR	MLR			
	comp=Z,5µm,14.0s							
OBN	**Obninsk**	**29.84**	**359**	P	**P**	**17 41 08.6**	**-0.3**	
	comp=Z,518nm,1.2s,SNR=18							
OBN	**Obninsk**	**29.84**	**359**	*e*P	**P**	**17 41 08.1**	**-0.8**	
	comp=Z,377nm,2.5s							
OBN				*e*S	**S**	**17 46 04.9**	**-0.1**	
	comp=Z,5µm,14.0s							
RJOB	**Jochberg**	**29.87**	**325**	*e*P	**P**	**17 41 09.5**	**+0.1**	
	comp=Z,388nm,2.5s							
RJOB				*e*PcP	**PcP**	**17 44 12.5**	**+0.2**	
DPC	**Dobruska-Polom**	**30.03**	**332**	*e*P	**P**	**17 41 10.9**	**+0.1**	
DPC				*e*		17 41 18.1		
DPC				*e*		17 42 04.8		
DPC				*e*S	**S**	**17 46 08.1**	**-0.2**	
DPC				MLR	MLR			
	comp=Z,2µm,14.2s							
DPC	**Dobruska-Polom**	**30.03**	**332**	*e*P	**P**	**17 41 10.9**	**+0.1**	
DPC				*ex*	x	17 41 18.1		
DPC				*ex*	x	17 42 04.8		
DPC				*e*S	**S**	**17 46 08.1**	**-0.2**	
DPC				AMS	AMS	17 55 50.0		
	comp=Z,2µm,14.2s							
DPC	**Dobruska-Polom**	**30.03**	**332**	*e*P	**P**	**17 41 10.9**	**+0.1**	
DPC				*e*S	**S**	**17 46 08.1**	**-0.2**	
MICGM	**Minsk**	**30.11**	**348**	⇑*i*P	**P**	**17 41 09.0**	**-2.4**	
MNK	**Minsk**	**30.12**	**348**	*c i*P	**P**	**17 41 09.0**	**-2.5**	
MNK				*e*		17 42 08.0		
MNK				*e*PPP	PPP	17 42 28.0		
MNK				*e*		17 44 10.0		
MNK				*e*S	**S**	**17 46 04.0**	**-5.6**	
MNK				pmax	pmax			
	comp=Z,190nm,1.5s							
MNK				pmax	pmax			
	comp=N,40nm,1.5s							
MNK				pmax	pmax			
	comp=E,110nm,1.5s							
MNK				MLR	MLR			
	comp=E,8µm,10.0s							
MNK				MLR	MLR			
	comp=N,16µm,16.0s							
MNK				MLR	MLR			
	comp=Z,8µm,16.0s							
MNK	**Minsk**	**30.12**	**348**	*i*P	**P**	**17 41 09.0**	**-2.5**	
	comp=Z,190nm,1.5s							
MNK	**Minsk**	**30.12**	**348**	*e*PcP	**PcP**	**17 44 10.0**	**-2.7**	
MNK				*e*S	**S**	**17 46 04.0**	**-5.6**	
	comp=Z,8µm,16.0s							
GEC2	**GERESS Array S**	**30.14**	**328**	*e*P	**P**	**17 41 12.1**	**+0.2**	
GEC2				pmax	pmax			
	comp=Z,217nm,1.6s							
GEC2	**GERESS Array S**	**30.14**	**328**	*e*P	**P**	**17 41 12.1**	**+0.2**	
	comp=Z,217nm,1.6s							
GEC2	**GERESS Array S**	**30.14**	**328**	*e*P	**P**	**17 41 12.1**	**+0.2**	
	comp=Z,217nm,1.6s							
GERES	**GERESS Array B**	**30.14**	**328**	P	**P**	**17 41 12.1**	**+0.2**	
GERES				PcP	**PcP**	**17 44 13.8**	**+0.8**	
GERES	**GERESS Array B**	**30.14**	**328**	P	**P**	**17 41 12.1**	**+0.2**	
	comp=Z,26nm,1.1s,baz=124,slow=7.2,SNR=111							
GERES				PcP	**PcP**	**17 44 13.8**	**+0.8**	
	comp=Z,8.6nm,0.8s,baz=143,slow=3.3,SNR=5.9							
GERES	**GERESS Array B**	**30.14**	**328**	P	**P**	**17 41 12.1**	**+0.2**	
GERES	**GERESS Array B**	**30.14**	**328**	PcP	**PcP**	**17 44 13.8**	**+0.8**	
WTTA	**Wattenberg**	**30.18**	**323**	⇓*i*sP	sP	17 41 13.1	-5.9	
	comp=Z,47nm,1.4s,SNR=16							
WATA	**Walderalm**	**30.26**	**323**	⇓*i*pP	**P**	**17 41 13.2**	**+0.2**	
	comp=Z,19nm,1.0s							
UPC	**Upice**	**30.28**	**332**	*e*P	**P**	**17 41 12.7**	**-0.2**	
UPC	**Upice**	**30.28**	**332**	*e*P	**P**	**17 41 12.7**	**-0.2**	
UPC	**Upice**	**30.28**	**332**	*e*P	**P**	**17 41 12.7**	**-0.2**	
KHC	**Kasperske Hory**	**30.40**	**328**	*e*P	**P**	**17 41 14.0**	**-0.1**	
KHC				*e*		17 41 19.9		
KHC				*e*		17 42 10.1		
KHC				*e*S	**S**	**17 46 13.6**	**-0.5**	
KHC				MLR	MLR			
	comp=Z,1µm,17.9s							
KHC	**Kasperske Hory**	**30.40**	**328**	⇓*i*P	**P**	**17 41 13.3**	**-0.7**	
	comp=Z,138nm,1.8s							
KHC	**Kasperske Hory**	**30.40**	**328**	*e*P	**P**	**17 41 14.0**	**-0.1**	
KHC				*ex*	x	17 41 19.9		
KHC				*ex*	x	17 42 10.1		
KHC				*e*S	**S**	**17 46 13.6**	**-0.5**	
KHC				*e*SS	**SS**	**17 48 24.5**	**+0.8**	
KHC				AMS	AMS	17 55 30.0		
	comp=Z,1µm,17.9s							
KHC	**Kasperske Hory**	**30.40**	**328**	*e*P	**P**	**17 41 14.0**	**-0.1**	
KHC				*e*S	**S**	**17 46 13.6**	**-0.5**	
	comp=Z,1µm,17.9s							
KSP	**Ksiaz**	**30.41**	**333**	*e*P	**P**	**17 41 13.1**	**-1.0**	
KSP				*e*S	**S**	**17 46 15.7**	**+1.5**	
KSP				MLR	MLR			
	comp=Z,6µm,17.1s							
KSP	**Ksiaz**	**30.41**	**333**	*e*P	**P**	**17 41 14.1**	**0.0**	
KSP				*e*PP	**PP**	**17 42 19.2**	**-3.6**	
KSP				*e*S	**S**	**17 46 18.3**	**+4.1**	
KSP				LMZ	LR	17 56 58.1		
KSP	**Ksiaz**	**30.41**	**333**	*e*P	**P**	**17 41 13.1**	**-1.0**	
	comp=Z,6µm,17.1s							
KSP				*e*S	**S**	**17 46 15.7**	**+1.5**	
MOS	**Moscow**	**30.45**	**360**	*e*P	P	17 41 11.0	-3.3	
MOS				*e*PPP	PPP	17 42 19.7		
MOS				*e*		17 44 14.1		
MOS				*e*S	S	17 46 06.0	-8.6	
MOS				pmax	pmax			
	comp=N,73nm,1.0s							
MOS				pmax	pmax			
	comp=Z,201nm,1.9s							
MOS				pmax	pmax			
	comp=Z,1µm,2.8s							
MOS				pmax	pmax			
	comp=N,800nm,3.5s							
MOS				MLR	MLR			
	comp=Z,5µm,14.0s							
MOS				MLR	MLR			
	comp=N,4µm,15.0s							
MOS	**Moscow**	**30.45**	**360**	*e*P	P	17 41 11.0	-3.3	
	comp=N,800nm,3.5s							
MOS	**Moscow**	**30.45**	**360**	*e*PcP	**PcP**	**17 44 14.1**	**+0.6**	
MOS				*e*S	S	17 46 06.0	-8.6	
	comp=N,4µm,15.0s							
MOTA	**Moosalm**	**30.52**	**323**	⇓*i*pP	**P**	**17 41 15.4**	**+0.1**	
	comp=N,38nm,1.1s,SNR=11							
FETA	**Feichten**	**30.54**	**322**	⇓*i*sP	sP	17 41 16.4	-5.7	
	comp=N,68nm,1.2s,SNR=20							
PRU	**Pruhonice**	**30.54**	**330**	*e*P	**P**	**17 41 15.2**	**-0.1**	
PRU				*e*		17 41 20.9		
PRU				*e*		17 42 15.7		
PRU				*e*S	**S**	**17 46 15.6**	**-0.7**	
PRU				MLR	MLR			
	comp=Z,2µm,18.3s							
PRU	**Pruhonice**	**30.54**	**330**	*e*P	**P**	**17 41 15.2**	**-0.1**	
PRU				*ex*	x	17 41 20.9		
PRU				*e*PP	**PnPn**	**17 42 15.7**	**+1.3**	
PRU				*e*S	**S**	**17 46 15.6**	**-0.7**	
PRU				*e*SS	**SS**	**17 48 24.2**	**-2.4**	
PRU				AMS	AMS	17 57 00.0		
	comp=Z,2µm,18.3s							
PRU	**Pruhonice**	**30.54**	**330**	*e*P	**P**	**17 41 15.2**	**-0.1**	
PRU				*e*S	**S**	**17 46 15.6**	**-0.7**	
	comp=Z,2µm,18.3s							
PRA	**Prague**	**30.65**	**330**	P	**P**	**17 41 16.0**	**-0.2**	
NACGM	**Naroch**	**30.70**	**348**	*e*P	**P**	**17 41 14.0**	**-2.6**	
NACGM	**Naroch**	**30.70**	**348**	*e*P	**P**	**17 41 14.0**	**-2.6**	
SUW	**Suwalki**	**30.71**	**343**	*e*P	**P**	**17 41 16.3**	**-0.4**	
SUW				pmax	pmax			
	comp=Z,374nm,1.1s							
SUW	**Suwalki**	**30.71**	**343**	*e*P	**P**	**17 41 16.3**	**-0.4**	
	comp=Z,374nm,1.1s							
SUW	**Suwalki**	**30.71**	**343**	*e*P	**P**	**17 41 16.5**	**-0.2**	
SUW				*e*PP	**PP**	**17 42 26.3**	**+0.3**	
SUW				*e*S	**S**	**17 46 23.6**	**+4.8**	
SUW				LMZ	LR	17 55 31.6		
SUW	**Suwalki**	**30.71**	**343**	*e*P	**P**	**17 41 16.3**	**-0.4**	
	comp=Z,374nm,1.1s							
WET	**Wettzell**	**30.75**	**327**	*e*P	**P**	**17 41 16.6**	**-0.5**	
WET				*e*		17 44 14.4		
WET				pmax	pmax			
	comp=Z,76nm,1.5s							
WET	**Wettzell**	**30.75**	**327**	*e*P	**P**	**17 41 16.6**	**-0.5**	
	comp=Z,76nm,1.5s							
WET				*e*PcP	**PcP**	**17 44 14.4**	**-0.1**	
WET	**Wettzell**	**30.75**	**327**	*e*P	**P**	**17 41 16.6**	**-0.5**	
	comp=Z,76nm,1.5s							
RETA	**Reutte**	**30.79**	**323**	⇓*i*P	**P**	**17 41 17.5**	**-0.1**	
	comp=Z,38nm,1.5s,SNR=12							
SAOF	**Saorge**	**30.85**	**315**	*e*P	**P**	**17 41 18.0**	**-0.1**	
SAOF	**Saorge**	**30.85**	**315**	*e*P	**P**	**17 41 18.0**	**-0.1**	
SAOF	**Saorge**	**30.85**	**315**	*e*P	**P**	**17 41 18.0**	**-0.1**	
SAOF	**Saorge**	**30.85**	**315**	*e*P	**P**	**17 41 18.0**	**-0.1**	
REVF	**Revere**	**30.86**	**314**	*e*P	**P**	**17 41 18.2**	**0.0**	
REVF	**Revere**	**30.86**	**314**	*e*P	**P**	**17 41 18.2**	**0.0**	
REVF	**Revere**	**30.86**	**314**	*e*P	**P**	**17 41 18.2**	**0.0**	
REVF	**Revere**	**30.86**	**314**	*e*P	**P**	**17 41 18.2**	**0.0**	
SBF	**Sospel**	**30.87**	**315**	*e*P	**P**	**17 41 18.7**	**+0.4**	
	comp=Z,60nm,1.1s							
SBF	**Sospel**	**30.87**	**315**	*e*P	**P**	**17 41 18.7**	**+0.4**	
SBF				pmax	pmax			
	comp=Z,60nm,1.1s							
SBF	**Sospel**	**30.87**	**315**	*e*P	**P**	**17 41 18.7**	**+0.4**	
	comp=Z,60nm,1.1s							
SBF	**Sospel**	**30.87**	**315**	*e*P	**P**	**17 41 18.7**	**+0.4**	
	comp=Z,30nm,1.1s							
DAVOX	**Davos/Dischmat**	**30.87**	**321**	P	**P**	**17 41 19.3**	**+0.8**	
DAVOX				PcP	**PcP**	**17 44 16.4**	**+1.3**	
DAVOX	**Davos/Dischmat**	**30.87**	**321**	P	**P**	**17 41 19.3**	**+0.8**	
	comp=Z,26nm,1.0s,baz=143,slow=7.5,SNR=34							
DAVOX				PcP	**PcP**	**17 44 16.4**	**+1.3**	
	comp=Z,12nm,0.8s,baz=176,slow=5.6,SNR=4.2							
DAVOX				LR	LR	17 56 50.2		
	comp=Z,2µm,20.0s,baz=112,slow=42							
DAVOX	**Davos/Dischmat**	**30.87**	**321**	P	**P**	**17 41 19.3**	**+0.8**	
DAVOX	**Davos/Dischmat**	**30.87**	**321**	PcP	**PcP**	**17 44 16.4**	**+1.3**	
PVCC	**Panska Ves**	**30.92**	**331**	*e*P	**P**	**17 41 18.6**	**0.0**	
PVCC				*e*		17 42 21.0		
PVCC				*e*S	**S**	**17 46 23.9**	**+1.7**	
PVCC				*e*SS	**SS**	**17 48 27.3**	**-7.0**	
PVCC				MLR	MLR			
	comp=Z,2µm,15.6s							
PVCC	**Panska Ves**	**30.92**	**331**	*e*P	**P**	**17 41 18.6**	**0.0**	
PVCC				*e*PP	**PnPn**	**17 42 21.0**	**+1.7**	
PVCC				*e*S	**S**	**17 46 23.9**	**+1.7**	
PVCC				*e*SS	**SS**	**17 48 27.3**	**-7.0**	
PVCC				AMS	AMS	17 56 30.0		
	comp=Z,2µm,15.6s							
PVCC	**Panska Ves**	**30.92**	**331**	*e*P	**P**	**17 41 18.6**	**0.0**	
PVCC				*e*S	**S**	**17 46 23.9**	**+1.7**	
	comp=Z,2µm,15.6s							
FUR	**Furstenfeldbru**	**30.93**	**324**	*e*P	**P**	**17 41 18.3**	**-0.5**	
FUR				pmax	pmax			
	comp=Z,113nm,1.2s							
FUR	**Furstenfeldbru**	**30.93**	**324**	*e*P	**P**	**17 41 18.3**	**-0.5**	
	comp=Z,113nm,1.2s							
FUR	**Furstenfeldbru**	**30.93**	**324**	*e*P	**P**	**17 41 18.3**	**-0.5**	
	comp=Z,113nm,1.2s							
AUTN	**L'Aution**	**30.93**	**315**	*e*P	**P**	**17 41 19.7**	**+0.6**	
AUTN	**L'Aution**	**30.93**	**315**	*e*P	**P**	**17 41 19.7**	**+0.6**	
AUTN	**L'Aution**	**30.93**	**315**	*e*P	**P**	**17 41 19.7**	**+0.6**	
AUTN	**L'Aution**	**30.93**	**315**	*e*P	**P**	**17 41 19.7**	**+0.6**	
TUE	**Stuetta**	**31.01**	**320**	⇓*e*P	**P**	**17 41 20.0**	**+0.3**	
	comp=Z,72nm,1.6s							
TUE				LR	LR			
	comp=Z,1µm,20.0s							
TUE	**Stuetta**	**31.01**	**320**	⇓*e*P	**P**	**17 41 20.0**	**+0.3**	
	comp=Z,72nm,1.6s							
TOUF	**Mont Tournerai**	**31.06**	**315**	*e*P	**P**	**17 41 19.7**	**-0.4**	
TOUF	**Mont Tournerai**	**31.06**	**315**	*e*P	**P**	**17 41 19.7**	**-0.4**	
TOUF	**Mont Tournerai**	**31.06**	**315**	*e*P	**P**	**17 41 19.7**	**-0.4**	
TOUF	**Mont Tournerai**	**31.06**	**315**	*e*P	**P**	**17 41 19.7**	**-0.4**	
MVIF	**Mont Vial**	**31.07**	**314**	*e*P	**P**	**17 41 20.5**	**+0.3**	
MVIF	**Mont Vial**	**31.07**	**314**	*e*P	**P**	**17 41 20.5**	**+0.3**	
MVIF	**Mont Vial**	**31.07**	**314**	*e*P	**P**	**17 41 20.5**	**+0.3**	
MVIF	**Mont Vial**	**31.07**	**314**	*e*P	**P**	**17 41 20.5**	**+0.3**	
IDID	**Didziasalis**	**31.10**	**348**	*e*P	**P**	**17 41 20.1**	**-0.1**	
IDID				AMB	AMB	17 41 21.8		
	comp=Z,38nm,1.5s							
IDID	**Didziasalis**	**31.10**	**348**	*e*P	**P**	**17 41 20.0**	**-0.1**	
	comp=Z,38nm,1.5s,SNR=28							
DAVA	**Damuels**	**31.16**	**322**	⇓*i*pP	**P**	**17 41 21.0**	**0.0**	
	comp=Z,61nm,1.2s,SNR=18							
CALN	**Calern**	**31.17**	**314**	*e*P	**P**	**17 41 22.0**	**+0.9**	
CALN	**Calern**	**31.17**	**314**	*e*P	**P**	**17 41 22.0**	**+0.9**	
CALN	**Calern**	**31.17**	**314**	*e*P	**P**	**17 41 22.0**	**+0.9**	
CALN	**Calern**	**31.17**	**314**	*e*P	**P**	**17 41 22.0**	**+0.9**	
IIGN	**Ignalina**	**31.23**	**347**	*e*P	**P**	**17 41 21.2**	**-0.1**	
IIGN				AMB	AMB	17 41 23.1		
	comp=Z,38nm,1.8s							
IIGN	**Ignalina**	**31.23**	**347**	*e*P	**P**	**17 41 21.2**	**-0.1**	
	comp=Z,38nm,1.8s,SNR=28							
LMR	**La Mourre**	**31.24**	**313**	*e*P	**P**	**17 41 21.9**	**+0.4**	
	comp=Z,202nm,1.6s							
LMR	**La Mourre**	**31.24**	**313**	*e*P	**P**	**17 41 21.9**	**+0.4**	
LMR				pmax	pmax			
	comp=Z,202nm,1.6s							
LMR	**La Mourre**	**31.24**	**313**	*e*P	**P**	**17 41 21.9**	**+0.4**	
	comp=Z,202nm,1.6s							
LMR	**La Mourre**	**31.24**	**313**	*e*P	**P**	**17 41 21.9**	**+0.4**	
	comp=Z,101nm,1.6s							
FRF	**La Foret Royal**	**31.25**	**314**	⇑*i*P	**P**	**17 41 22.1**	**+0.5**	
FRF				pmax	pmax			
	comp=Z,264nm,1.8s							
FRF	**La Foret Royal**	**31.25**	**314**	⇑*i*P	**P**	**17 41 22.1**	**+0.5**	
	comp=Z,264nm,1.8s							
FRF	**La Foret Royal**	**31.25**	**314**	⇑*i*P	**P**	**17 41 22.1**	**+0.5**	
	comp=Z,192nm,1.8s							
BRG	**Berggiesshubel**	**31.44**	**331**	⇓*i*P	**P**	**17 41 23.4**	**+0.2**	
	comp=Z,197nm,1.4s							
BRG				S	**S**	**17 46 32.0**	**+1.6**	
BRG								
	comp=Z,2µm,14.7s							
BRG								
	comp=N,2µm,14.5s							
BRG								
	comp=E,2µm,14.5s							
BRG	**Berggiesshubel**	**31.44**	**331**	⇓*i*P	**P**	**17 41 23.4**	**+0.2**	
BRG				S	**S**	**17 46 32.0**	**+1.6**	
BRG				pmax	pmax			
	comp=Z,197nm,1.4s							
BRG				MLR	MLR			
	comp=Z,2µm,14.7s							
BRG				MLR	MLR			
	comp=N,2µm,14.5s							
BRG				MLR	MLR			
	comp=E,2µm,14.5s							
BRG	**Berggiesshubel**	**31.44**	**331**	*e*P	**P**	**17 41 23.0**	**-0.2**	
	comp=Z,197nm,1.4s							
BRG	**Berggiesshubel**	**31.44**	**331**	*i* P	**P**	**17 41 23.4**	**+0.2**	
	comp=Z,197nm,1.4s							
BRG				S	**S**	**17 46 32.0**	**+1.6**	
	comp=Z,2µm,14.7s							
ISAL	**Salakas**	**31.46**	**347**	*e*P	**P**	**17 41 23.2**	**-0.1**	
ISAL				AMB	AMB	17 41 24.9		
	comp=Z,34nm,1.6s							
ISAL	**Salakas**	**31.46**	**347**	*e*P	**P**	**17 41 23.2**	**-0.1**	
	comp=Z,34nm,1.6s,SNR=28							
ROTZ	**Rotzenmuhle**	**31.49**	**328**	*e*P	**P**	**17 41 23.5**	**-0.1**	
	comp=Z,247nm,1.8s							
SURF	**Saint Ours**	**31.55**	**315**	*e*P	**P**	**17 41 25.2**	**+0.8**	
SURF	**Saint Ours**	**31.55**	**315**	*e*P	**P**	**17 41 25.2**	**+0.8**	
SURF	**Saint Ours**	**31.55**	**315**	*e*P	**P**	**17 41 25.2**	**+0.8**	
IZAR	**Zarasai**	**31.61**	**348**	*e*P	**P**	**17 41 24.5**	**0.0**	
IZAR				AMB	AMB	17 41 26.3		
	comp=Z,44nm,1.5s							
IZAR	**Zarasai**	**31.61**	**348**	*e*P	**P**	**17 41 24.5**	**0.0**	
	comp=Z,44nm,1.5s,SNR=28							
NKC	**Novy Kostel**	**31.68**	**328**	*e*P	**P**	**17 41 25.6**	**+0.2**	
NKC				*e*S	**S**	**17 46 33.9**	**-0.3**	
NKC				MLR	MLR			
	comp=Z,2µm,18.0s							
NKC	**Novy Kostel**	**31.68**	**328**	*e*P	**P**	**17 41 25.6**	**+0.2**	
NKC				*e*S	**S**	**17 46 33.9**	**-0.3**	
NKC				AMS	AMS	17 56 10.0		
	comp=Z,2µm,18.0s							
NKC	**Novy Kostel**	**31.68**	**328**	*e*P	**P**	**17 41 25.6**	**+0.2**	
	comp=Z,2µm,18.0s							
NKC				*e*S	**S**	**17 46 33.9**	**-0.3**	
MBDF	**Montbardon**	**31.69**	**316**	*e*P	**P**	**17 41 26.7**	**+1.1**	
	comp=Z,141nm,1.1s							
MBDF	**Montbardon**	**31.69**	**316**	*e*P	**P**	**17 41 26.7**	**+1.1**	
MBDF				pmax	pmax			
	comp=Z,141nm,1.1s							
MBDF	**Montbardon**	**31.69**	**316**	*e*P	**P**	**17 41 26.7**	**+1.1**	
	comp=Z,141nm,1.1s							
MBDF	**Montbardon**	**31.69**	**316**	*e*P	**P**	**17 41 26.7**	**+1.1**	
	comp=Z,70nm,1.1s							
EMHD	**Djebel Mahouad**	**31.69**	**298**	P	**P**	**17 41 27.5**	**+1.7**	
EMHD	**Djebel Mahouad**	**31.69**	**298**	P	**P**	**17 41 27.5**	**+1.7**	
TANN	**Tannenbergstha**	**31.80**	**329**	*e*P	**P**	**17 41 26.6**	**+0.2**	
	comp=Z,350nm,1.8s							
TANN				*e*S	**S**	**17 46 38.2**	**+2.1**	
GRA1	**Grafenberg Arr**	**31.92**	**327**	*e*P	**P**	**17 41 27.0**	**-0.5**	
	comp=Z,282nm,2.0s							
GRA1	**Grafenberg Arr**	**31.92**	**327**	*e*PcP	**PcP**	**17 44 16.6**	**-1.0**	
GRA1				*e*S	**S**	**17 46 38.7**	**+0.8**	
	comp=Z,1µm,20.8s							
GRF	**Grafenberg Arr**	**31.92**	**327**	*e*P	**P**	**17 41 27.0**	**-0.5**	
GRF				*e*		17 42 41.7		
GRF				*e*		17 44 16.6		
GRF				*e*S	**S**	**17 46 38.7**	**+0.8**	
GRF				pmax	pmax			
	comp=Z,282nm,2.0s							
GRF				MLR	MLR			
	comp=Z,1µm,20.8s							
GRF	**Grafenberg Arr**	**31.92**	**327**	*e*P	**P**	**17 41 27.0**	**-0.5**	
	comp=Z,282nm,2.0s							
GRF				*e*PP	**PP**	**17 42 41.7**	**+2.1**	
GRF				*e*PcP	**PcP**	**17 44 16.6**	**-1.0**	
GRF				*e*S	**S**	**17 46 38.7**	**+0.8**	
GRF				*e*L	L	17 55 57.1		
	comp=Z,1µm,20.8s							
GRFO	**Grafenberg**	**31.92**	**327**	⇓*i*P	**P**	**17 41 26.8**	**-0.6**	
GRFO				*e*		17 44 18.1		
GRFO				pmax	pmax			
	comp=Z,324nm,2.1s							
GRFO	**Grafenberg**	**31.92**

ORIF Oris-en-Rattie 32.34 315 *e*P P 17 41 31.6 +0.3
comp=E,232nm,1.9s
ORIF *e*R
comp=E,2μm,22.0s
ORIF Oris-en-Rattie 32.34 315 *e*P P 17 41 31.6 +0.3
ORIF pmax pmax
comp=Z,232nm,1.9s
ORIF Oris-en-Rattie 32.34 315 *e*P P 17 41 31.6 +0.3
comp=Z,232nm,1.9s
ORIF Oris-en-Rattie 32.34 315 *e*P P 17 41 31.6 +0.3
comp=Z,116nm,1.9s
MOX Moxa 32.36 328 *e*P P 17 41 31.3 0.0
MOX pmax pmax
comp=Z,318nm,1.5s
MOX Moxa 32.36 328 *e*P P 17 41 31.3 0.0
comp=Z,318nm,1.5s
MOX Moxa 32.36 328 *e*P P 17 41 31.3 0.0
comp=Z,318nm,1.5s
STU Stuttgart 32.40 324 *e*P P 17 41 31.6 -0.1
comp=Z,252nm,2.0s
OG01 Vacheresse 32.51 318 *e*P P 17 41 32.5 -0.2
OG01 Vacheresse 32.51 318 *e*P P 17 41 32.5 -0.2
OG01 Vacheresse 32.51 318 *e*P P 17 41 32.5 -0.2
FELD Feldberg im Sc 32.54 322 *e*P P 17 41 33.0 -0.1
FELD Feldberg im Sc 32.54 322 *e*P P 17 41 33.0 -0.1
FELD Feldberg im Sc 32.54 322 *e*P P 17 41 33.0 -0.1
OCF Saint Nazaire 32.56 315 *e*P P 17 41 34.1 +0.9
OCF Saint Nazaire 32.56 315 *e*P P 17 41 34.1 +0.9
OG26 St.-Nazaire-De 32.56 315 *e*P P 17 41 34.1 +0.9
OG26 St.-Nazaire-De 32.56 315 *e*P P 17 41 34.1 +0.9
GRN Grenoble 32.57 316 *e*P P 17 41 33.1 -0.2
GRN Grenoble 32.57 316 *e*P P 17 41 33.1 -0.2
GRN Grenoble 32.57 316 *e*P P 17 41 33.1 -0.2
GRN Grenoble 32.57 316 *e*P P 17 41 33.1 -0.2
BFO Black Forest 32.62 323⇓*e*P P 17 41 32.3 -1.3
BFO *e* 17 44 19.2
BFO pmax pmax
comp=Z,76nm,1.3s
BFO MLR MLR
comp=Z,1μm,20.0s
BFO Black Forest 32.62 323 *e*P P 17 41 33.8 +0.2
comp=Z,104nm,1.5s
BFO Black Forest 32.62 323⇓*e*P P 17 41 32.3 -1.3
comp=Z,76nm,1.3s
BFO *e*PcP **PcP 17 44 19.2 -0.4**
BFO LR LR
comp=Z,1μm,20.0s
BFO Black Forest 32.62 323 P P 17 41 34.5 +0.9
comp=Z,248nm,1.2s,SNR=18
BFO Black Forest 32.62 323⇓*e*P P 17 41 32.3 -1.3
comp=Z,76nm,1.3s
RUE Ruedersdorf 32.68 333 P P 17 41 33.4 -0.6
RUE Ruedersdorf 32.68 333 P P 17 41 33.4 -0.6
EBNR Beni Rached 32.84 298 P P 17 41 37.5 +1.8
EBNR Beni Rached 32.84 298 P P 17 41 37.5 +1.8
ETRT Tiaret 32.90 297 P P 17 41 38.0 +1.7
LIBD Limburg 32.92 322 *e*P P 17 41 36.6 +0.4
LIBD Limburg 32.92 322 *e*P P 17 41 36.6 +0.4
LIBD Limburg 32.92 322 *e*P P 17 41 36.6 +0.4
LOMF Lomont 32.94 320 *e*P P 17 41 36.9 +0.4
LOMF Lomont 32.94 320 *e*P P 17 41 36.9 +0.4
LOMF Lomont 32.94 320 *e*P P 17 41 36.9 +0.4
LOMF Lomont 32.94 320 *e*P P 17 41 36.9 +0.4
CABF La Chapelle 33.00 318⇓*i*P P 17 41 37.0 -0.1
comp=Z,392nm,1.8s
CABF La Chapelle 33.00 318⇓*i*P P 17 41 37.0 -0.1
CABF pmax pmax
comp=Z,392nm,1.8s
CABF La Chapelle 33.00 318⇓*i*P P 17 41 37.0 -0.1
comp=Z,392nm,1.8s
CABF La Chapelle 33.00 318⇓*i*P P 17 41 37.0 -0.1
comp=Z,196nm,1.8s
MOF Molkenrain 33.02 321 *e*P P 17 41 37.4 +0.2
MOF Molkenrain 33.02 321 *e*P P 17 41 37.4 +0.2
MOF Molkenrain 33.02 321 *e*P P 17 41 37.4 +0.2
MOF Molkenrain 33.02 321 *e*P P 17 41 37.4 +0.2
VIVF Saint-Julien-l 33.08 315 *e*P P 17 41 38.1 +0.4
comp=Z,379nm,1.9s
VIVF Saint-Julien-l 33.08 315 *e*P P 17 41 38.1 +0.4
VIVF pmax pmax
comp=Z,379nm,1.8s
VIVF Saint-Julien-l 33.08 315 *e*P P 17 41 38.1 +0.4
comp=Z,379nm,1.8s
VIVF Saint-Julien-l 33.08 315 *e*P P 17 41 38.1 +0.4
comp=Z,190nm,1.9s
TOD Tromm 33.10 325 *e*P P 17 41 37.9 +0.1
TOD Tromm 33.10 325 *e*P P 17 41 37.9 +0.1
TOD Tromm 33.10 325 *e*P P 17 41 37.9 +0.1
EANR 'Ain N'Sour 33.13 298 P P 17 41 39.5 +1.2
EANR 'Ain N'Sour 33.13 298 P P 17 41 39.5 +1.2
HINF Hinteralfeld 33.16 321⇓*i*P P 17 41 38.1 -0.3
comp=Z,126nm,1.3s
HINF Hinteralfeld 33.16 321⇓*i*P P 17 41 38.1 -0.3
HINF pmax pmax
comp=Z,126nm,1.3s
HINF Hinteralfeld 33.16 321⇓*i*P P 17 41 38.1 -0.3
comp=Z,126nm,1.3s
HINF Hinteralfeld 33.16 321⇓*i*P P 17 41 38.1 -0.3
comp=Z,63nm,1.3s
ECH Echery 33.20 322⇓*i*P P 17 41 38.5 -0.2
ECH *e* 17 44 20.8
ECH pmax pmax
comp=Z,242nm,2.0s
ECH MLR MLR
comp=Z,997nm,22.0s
ECH Echery 33.20 322⇓*i*P P 17 41 38.5 -0.2
comp=Z,242nm,2.0s
ECH *e*PcP **PcP 17 44 20.8 -0.4**
ECH LR LR
comp=Z,997nm,22.0s
ECH Echery 33.20 322 *e*P P 17 41 38.8 +0.1
ECH Echery 33.20 322 *i*P P 17 41 38.5 -0.2
comp=Z,242nm,2.0s
CDF Champ du Feu 33.24 322⇓*i*P P 17 41 39.0 -0.2
comp=Z,312nm,1.9s
CDF Champ du Feu 33.24 322⇓*i*P P 17 41 39.0 -0.2
CDF pmax pmax
comp=Z,312nm,1.8s
CDF Champ du Feu 33.24 322⇓*i*P P 17 41 39.0 -0.2
comp=Z,312nm,1.8s
CDF Champ du Feu 33.24 322⇓*i*P P 17 41 39.0 -0.2
comp=Z,156nm,1.9s
UBBA Unterbreizbach 33.25 327 *e*P P 17 41 38.4 -0.5
comp=Z,201nm,2.3s
UBBA *e*PcP **PcP 17 44 21.0 -0.1**
LANF Langenberg 33.27 323 *e*P P 17 41 39.5 +0.2
LANF Langenberg 33.27 323 *e*P P 17 41 39.5 +0.2
LANF Langenberg 33.27 323 *e*P P 17 41 39.5 +0.2
LANF Langenberg 33.27 323 *e*P P 17 41 39.5 +0.2
LASF Ste Croix 33.30 313⇓*i*P P 17 41 40.0 +0.4
comp=Z,539nm,1.5s
LASF Ste Croix 33.30 313⇓*i*P P 17 41 40.0 +0.4
comp=Z,539nm,1.5s
LASF Ste Croix 33.30 313⇓*i*P P 17 41 40.0 +0.4
comp=Z,269nm,1.5s
KTD Kalmit 33.31 324 *e*P P 17 41 39.5 -0.2
KTD Kalmit 33.31 324 *e*P P 17 41 39.5 -0.2
KTD Kalmit 33.31 324 *e*P P 17 41 39.5 -0.2
SSB Saint Sauveur 33.35 315⇓*e*P P 17 41 39.8 -0.3
SSB *e* 17 44 22.0
SSB pmax pmax
comp=Z,227nm,1.7s
SSB MLR MLR
comp=Z,956nm,22.0s
SSB Saint Sauveur 33.35 315⇓*e*P P 17 41 39.8 -0.3
comp=Z,227nm,1.7s
SSB *e*PcP **PcP 17 44 22.0 +0.3**
SSB LR LR
comp=Z,956nm,22.0s
SSB Saint Sauveur 33.35 315 *e*P P 17 41 40.1 0.0
SSB Saint Sauveur 33.35 315 *e*P P 17 41 40.1 0.0
SSB Saint Sauveur 33.35 315 *e*PcP PcP 17 44 22.0 +0.3
HAU Haudompre 33.55 321⇓*i*P P 17 41 41.6 -0.2
comp=Z,128nm,1.6s
HAU *e*R
comp=Z,2μm,21.5s
HAU Haudompre 33.55 321⇓*i*P P 17 41 41.6 -0.2
HAU pmax pmax
comp=Z,128nm,1.6s
HAU Haudompre 33.55 321⇓*i*P P 17 41 41.6 -0.2
comp=Z,128nm,1.6s
HAU Haudompre 33.55 321⇓*i*P P 17 41 41.6 -0.2
comp=Z,64nm,1.6s
FILF Fillols 33.63 310 *e*P P 17 41 42.8 +0.2
FILF Fillols 33.63 310 *e*P P 17 41 42.8 +0.2

FILF Fillols 33.63 310 *e*P P 17 41 42.8 +0.2
TNS Taunus Mts 33.66 325 *e*P P 17 41 42.0 -0.7
TNS *e* 17 44 21.6
TNS *e*S **S 17 47 06.8 +1.9**
TNS pmax pmax
comp=Z,64nm,1.6s
TNS Taunus Mts 33.66 325 *e*P P 17 41 42.0 -0.7
comp=Z,64nm,1.6s
TNS *e*PcP **PcP 17 44 21.6 -0.9**
TNS *e*S **S 17 47 06.8 +1.9**
TNS Taunus Mts 33.66 325 *e*P P 17 41 42.0 -0.7
comp=Z,64nm,1.6s
LRDF Laroque-de-Fa 33.77 310 *e*P P 17 41 42.9 -0.8
LRDF Laroque-de-Fa 33.77 310 *e*P P 17 41 42.9 -0.8
LRDF Laroque-de-Fa 33.77 310 *e*P P 17 41 42.9 -0.8
THEF They Montfort 33.88 321 *e*P P 17 41 44.0 -0.6
THEF They Montfort 33.88 321 *e*P P 17 41 44.0 -0.6
THEF They Montfort 33.88 321 *e*P P 17 41 44.0 -0.6
THEF They Montfort 33.88 321 *e*P P 17 41 44.0 -0.6
ABH Alteburg 33.92 324 *e*P P 17 41 45.1 +0.1
ABH Alteburg 33.92 324 *e*P P 17 41 45.1 +0.1
VALF Valcebollere 33.96 309 *e*P P 17 41 46.2 +0.7
VALF Valcebollere 33.96 309 *e*P P 17 41 46.2 +0.7
VALF Valcebollere 33.96 309 *e*P P 17 41 46.2 +0.7
CARF Carcanieres 34.00 310 *e*P P 17 41 45.2 -0.6
CARF Carcanieres 34.00 310 *e*P P 17 41 45.2 -0.6
CARF Carcanieres 34.00 310 *e*P P 17 41 45.2 -0.6
AML Almayashu 34.00 51 P P 17 41 47.5 +1.2
SNR=21
AML Almayashu 34.00 51 P P 17 41 46.0 -0.2
SNR=20
POO Poona 34.07 94 *e*PKP P 17 41 45.0 -1.6
RUP Ruppelstein 34.08 324 *e*P P 17 41 46.4 0.0
RUP Ruppelstein 34.08 324 *e*P P 17 41 46.4 0.0
RUP Ruppelstein 34.08 324 *e*P P 17 41 46.4 0.0
VSU Vasula 34.09 350*d*iP P 17 41 45.6 -0.6
VSU pmax pmax
comp=Z,42nm,1.2s
VSU Vasula 34.09 350 *i*P P 17 41 45.6 -0.6
comp=Z,42nm,1.2s
VSU *e*S **S 17 47 09.5 -1.8**
SNR=28
MTLF Montolieu 34.13 311⇓*i*P P 17 41 46.7 -0.2
comp=Z,122nm,1.7s
MTLF Montolieu 34.13 311⇓*i*P P 17 41 46.7 -0.2
MTLF pmax pmax
comp=Z,122nm,1.7s
MTLF Montolieu 34.13 311⇓*i*P P 17 41 46.7 -0.2
comp=Z,122nm,1.7s
MTLF Montolieu 34.13 311⇓*i*P P 17 41 46.7 -0.2
comp=Z,61nm,1.7s
LBL Lubilhac 34.16 315 *e*P P 17 41 47.9 +0.7
LBL Lubilhac 34.16 315 *e*P P 17 41 47.9 +0.7
LBL Lubilhac 34.16 315 *e*P P 17 41 47.9 +0.7
LBL Lubilhac 34.16 315 *e*P P 17 41 47.9 +0.7
SLIT Slitere, Latvi 34.19 345 *e*P P 17 41 46.5 -0.6
comp=Z,759nm,1.5s,SNR=27
SLIT *e*S **S 17 47 13.7 +0.9**
SNR=152
PAGF Fort de Pagny 34.20 321 *e*P P 17 41 47.0 -0.3
comp=Z,56nm,1.8s
PAGF Fort de Pagny 34.20 321 *e*P P 17 41 47.0 -0.3
comp=Z,56nm,1.8s
PAGF Fort de Pagny 34.20 321 *e*P P 17 41 47.0 -0.3
comp=Z,28nm,1.8s
EKS2 Erkin-Say 34.23 50 *e*P P 17 41 48.3 +0.5
EKS2 pmax pmax
comp=Z,23nm,1.4s
EKS2 MLR MLR
comp=Z,24μm,19.0s
EKS2 Erkin-Say 34.23 50 *e*P P 17 41 48.3 +0.5
comp=Z,23nm,1.4s
EKS2 LR LR
comp=Z,24μm,19.0s
EKS2 Erkin-Say 34.23 50 *e*P P 17 41 48.3 +0.5
comp=Z,23nm,1.4s
BSD Bornholm Skovb 34.23 337⇓*i*P P 17 41 46.1 -1.4
BSD *i*S **S 17 47 11.8 -1.8**
BSD pmax pmax
comp=Z,36nm,0.9s
BSD MLR MLR
comp=Z,2μm,19.0s
BSD Bornholm Skovb 34.23 337⇓*i*P P 17 41 46.1 -1.4
comp=Z,36nm,0.9s
BSD
comp=Z,2μm,19.0s
BSD Bornholm Skovb 34.23 337⇓*i*P P 17 41 46.2 -1.3
comp=Z,36nm,0.9s,SNR=27
BSD *i*S **S 17 47 11.9 -1.7**
SNR=28
NRDL Niedersach Rie 34.29 330 *e*P P 17 41 47.5 -0.5
comp=Z,93nm,1.4s
NRDL *e*S **S 17 47 14.6 +0.2**
MSEY Mahe Island 34.37 148⇓*e*P P 17 41 50.1 +0.9
comp=Z,363nm,2.2s
MSEY *e*PcP **PcP 17 44 28.1 +3.0**
MSEY LR LR
comp=Z,2μm,22.0s
MSEY Mahe Island 34.37 148 ⇓P P 17 41 50.1 +0.9
SNR=7.4
MSEY Mahe Island 34.37 148 P P 17 41 50.0 +0.9
comp=Z,196nm,2.1s,SNR=6.6
MSEY Mahe Island 34.37 148⇓*e*P P 17 41 50.1 +0.9
comp=Z,363nm,2.2s
SMF Signal de Mont 34.39 317⇓*i*P P 17 41 48.7 -0.3
comp=Z,60nm,1.2s
SMF Signal de Mont 34.39 317⇓*i*P P 17 41 48.7 -0.3
SMF pmax pmax
comp=Z,60nm,1.2s
SMF Signal de Mont 34.39 317⇓*i*P P 17 41 48.7 -0.3
comp=Z,60nm,1.2s
SMF Signal de Mont 34.39 317⇓*i*P P 17 41 48.7 -0.3
comp=Z,30nm,1.2s
RGN Rugen 34.40 335⇓*i*P P 17 41 48.2 -0.7
comp=Z,155nm,1.3s
RGN Rugen 34.40 335⇓*i*P P 17 41 48.2 -0.7
comp=Z,155nm,1.3s
SFTF Sexfontaines 34.41 320 *e*P P 17 41 49.1 -0.1
comp=Z,176nm,1.3s,baz=116
SFTF Sexfontaines 34.41 320 *e*P P 17 41 49.1 -0.1
comp=Z,176nm,1.3s
SFTF Sexfontaines 34.41 320 *e*P P 17 41 49.1 -0.1
comp=Z,88nm,1.3s
PYM Petit Puy Mans 34.53 315 *e*P P 17 41 50.7 +0.4
PYM Petit Puy Mans 34.53 315 *e*P P 17 41 50.7 +0.4
PYM Petit Puy Mans 34.53 315 *e*P P 17 41 50.7 +0.4
PYM Petit Puy Mans 34.53 315 *e*P P 17 41 50.7 +0.4
WLF Walferdange 34.55 323 P P 17 41 50.4 +0.1
comp=Z,76nm,2.4s
WLF Walferdange 34.55 323⇓*i*P P 17 41 50.0 -0.3
WLF pmax pmax
comp=Z,330nm,2.1s
WLF MLR MLR
comp=Z,2μm,19.0s
WLF Walferdange 34.55 323 *e*P P 17 41 50.2 -0.2
comp=Z,177nm,1.7s
WLF Walferdange 34.55 323⇓*i*P P 17 41 50.0 -0.3
comp=Z,330nm,2.1s
WLF LR LR
comp=Z,2μm,19.0s
WLF Walferdange 34.55 323⇓*i*P P 17 41 50.0 -0.3
comp=Z,330nm,2.1s
MEZF Maizieres J'vi 34.55 321 *e*P P 17 41 50.4 0.0
comp=Z,211nm,1.4s
MEZF Maizieres J'vi 34.55 321 *e*P P 17 41 50.4 0.0
comp=Z,211nm,1.4s
MEZF Maizieres J'vi 34.55 321 *e*P P 17 41 50.4 0.0
comp=Z,106nm,1.4s
AGO Saint Agoulin 34.57 316 *e*P P 17 41 51.1 +0.4
AGO Saint Agoulin 34.57 316 *e*P P 17 41 51.1 +0.4
AGO Saint Agoulin 34.57 316 *e*P P 17 41 51.1 +0.4
ARU Arti 34.60 20*d*iP P 17 41 50.5 -0.2
ARU 17 43 07.0
ARU 17 44 22.2
ARU S **S 17 47 19.2 -0.1**
ARU SS **SnSn 17 49 25.5 -5.9**
ARU SSS SSS 17 49 47.1
ARU pmax pmax
comp=Z,261nm,2.5s
ARU MLR MLR
comp=Z,15μm,17.0s
ARU Arti 34.60 20 P P 17 41 50.0 -0.7
comp=Z,365nm,1.6s,SNR=31
ARU Arti 34.60 20 *i*P P 17 41 50.5 -0.2
comp=Z,261nm,2.5s

ARU Arti 34.60 20 PcP PcP 17 44 22.2 -2.7
ARU S **S 17 47 19.2 -0.1**
LOR Lormes 34.66 318⇓*i*P P 17 41 51.3 -0.1
comp=Z,359nm,1.7s,baz=120
LOR *e*R
comp=Z,1μm,17.5s
LOR Lormes 34.66 318⇓*i*P P 17 41 51.3 -0.1
comp=Z,359nm,1.7s
LOR Lormes 34.66 318⇓*i*P P 17 41 51.3 -0.1
comp=Z,180nm,1.7s
AAK Ala-Archa 34.72 51*d*iP P 17 41 53.4 +1.3
AAK pmax pmax
comp=Z,134nm,2.5s
AAK Ala-Archa 34.72 51⇓*e*P P 17 41 53.2 +1.1
comp=Z,479nm,2.6s
AAK *e*PcP **PcP 17 44 26.9 +1.1**
AAK PcP PcP 17 44 27.3 +1.5
AAK LR LR
comp=Z,19μm,19.0s
AAK Ala-Archa 34.72 51 ⇑P P 17 41 53.5 +1.3
SNR=22
AAK Ala-Archa 34.72 51 P P 17 41 54.0 +1.9
SNR=11
AAK Ala-Archa 34.72 51 P P 17 41 53.5 +1.3
comp=Z,80nm,1.7s,SNR=13
AAK Ala-Archa 34.72 51 P P 17 41 53.3 +1.1
comp=Z,4.5nm,0.6s,baz=240,slow=5.7,SNR=26
AAK PcP **PcP 17 44 27.3 +1.5**
comp=Z,5.2nm,0.8s,baz=181,slow=2.0,SNR=5.6
AAK Ala-Archa 34.72 51 *i*P P 17 41 53.4 +1.3
comp=Z,134nm,2.5s
AVF Avril sur Loir 34.75 317⇓*i*P P 17 41 51.9 -0.3
comp=Z,120nm,1.6s
AVF Avril sur Loir 34.75 317⇓*i*P P 17 41 51.9 -0.3
AVF pmax pmax
comp=Z,120nm,1.6s
AVF Avril sur Loir 34.75 317⇓*i*P P 17 41 51.9 -0.3
comp=Z,120nm,1.6s
AVF Avril sur Loir 34.75 317⇓*i*P P 17 41 51.9 -0.3
comp=Z,60nm,1.6s
SSF Saint Saulge 34.78 318⇓*i*P P 17 41 52.3 -0.1
comp=Z,235nm,1.7s
SSF Saint Saulge 34.78 318⇓*i*P P 17 41 52.3 -0.1
SSF pmax pmax
comp=Z,235nm,1.7s
SSF Saint Saulge 34.78 318⇓*i*P P 17 41 52.3 -0.1
comp=Z,235nm,1.7s
SSF Saint Saulge 34.78 318⇓*i*P P 17 41 52.3 -0.1
comp=Z,117nm,1.7s
MLS Moulis 34.78 310 *e*P P 17 41 51.4 -1.1
MLS Moulis 34.78 310 *e*P P 17 41 51.4 -1.1
MLS Moulis 34.78 310 *e*P P 17 41 51.4 -1.1
CAF Calviac 34.81 313⇓*i*P P 17 41 53.4 +0.7
comp=Z,208nm,1.6s
CAF Calviac 34.81 313⇓*i*P P 17 41 53.4 +0.7
CAF pmax pmax
comp=Z,208nm,1.5s
CAF Calviac 34.81 313⇓*i*P P 17 41 53.4 +0.7
comp=Z,208nm,1.5s
CAF Calviac 34.81 313⇓*i*P P 17 41 53.4 +0.7
comp=Z,104nm,1.6s
VERF Verneugheol 34.86 315 *e*P P 17 41 53.2 0.0
VERF Verneugheol 34.86 315 *e*P P 17 41 53.2 0.0
VERF Verneugheol 34.86 315 *e*P P 17 41 53.2 0.0
FRU Bishkek 34.87 51⇓*i*P P 17 41 54.0 +0.7
FRU *e* 17 43 13.0
FRU *i* 17 44 27.0
FRU *e*S **S 17 47 26.0 +2.1**
FRU pmax pmax
comp=Z,620nm,2.6s
FRU smax smax
comp=E,800nm,4.0s
FRU MLR MLR
comp=Z,22μm,17.5s
FRU MLR MLR
comp=E,20μm,16.5s
FRU Bishkek 34.87 51 *i*P P 17 41 54.0 +0.7
comp=E,620nm,2.6s
FRU Bishkek 34.87 51 *i*PcP PcP 17 44 27.0 +0.9
FRU *e*S **S 17 47 26.0 +2.1**
comp=E,22μm,17.5s
USP Ospenovka 34.93 50 P P 17 41 54.8 +1.0
SNR=32
BGF Bois d'Agland 34.97 316 *e*P P 17 41 54.4 +0.4
comp=E,138nm,1.0s
BGF Bois d'Agland 34.97 316 *e*P P 17 41 54.4 +0.4
BGF pmax pmax
comp=Z,138nm,1.0s
BGF Bois d'Agland 34.97 316 *e*P P 17 41 54.4 +0.4
comp=Z,138nm,1.0s
BGF Bois d'Agland 34.97 316 *e*P P 17 41 54.4 +0.4
comp=Z,69nm,1.0s
KSH Kashi 34.98 57 P P 17 41 52.4 -2.0
KSH pP **pP 17 41 57.9 -1.3**
KSH sP **sP 17 41 59.0 -2.1**
KSH PP **PnPn 17 43 08.4 -3.0**
KSH PcP **PcP 17 44 26.6 0.0**
KSH *S* S 17 47 19.9 -6.0
KSH *e*ScP **ScP 17 48 10.1 -1.6**
KSH *e*PcS **PcS 17 48 12.1 -1.3**
KSH ScS **ScS 17 52 11.9 -3.5**
KSH pmax pmax
comp=Z,130nm,1.8s
KSH pmax pmax
comp=Z,3μm,3.7s
KSH LR LR
comp=N,3μm,9.4s
KSH LR LR
comp=E,4μm,8.8s
KSH LR LR
comp=Z,2μm,6.0s
BUG Bochum--Univer 34.98 326 *e*P P 17 41 53.1 -1.0
comp=Z,41nm,1.2s
BUG *e*PcP **PcP 17 44 26.0 -0.1**
MELF Melles 34.99 309 *e*P P 17 41 54.7 +0.3
MELF Melles 34.99 309 *e*P P 17 41 54.7 +0.3
MELF Melles 34.99 309 *e*P P 17 41 54.7 +0.3
CHMS Chumysh 35.02 50 P P 17 41 55.8 +1.2
SNR=20
KBK Karagaybulak 35.05 51 P P 17 41 56.9 +1.9
SNR=37
GOA Goa 35.08 99⇓*ex* PP 17 43 13.7 -1.2
KZA Kyzart 35.09 52 P P 17 41 57.2 +1.6
SNR=22
BSEG Bad Segeberg 35.18 332 *e*P P 17 41 55.0 -0.7
BSEG *e*S **S 17 47 31.2 +3.0**
BSEG pmax pmax
comp=Z,352nm,1.8s
BSEG Bad Segeberg 35.18 332 *e*P P 17 41 55.0 -0.7
comp=Z,352nm,1.8s
BSEG *e*S **S 17 47 31.2 +3.0**
BSEG Bad Segeberg 35.18 332 *e*P P 17 41 55.0 -0.7
comp=Z,352nm,1.8s
TCF Toulx Ste Croi 35.25 316⇓*i*P P 17 41 57.0 +0.5
comp=Z,297nm,1.9s
TCF Toulx Ste Croi 35.25 316⇓*i*P P 17 41 57.0 +0.5
TCF pmax pmax
comp=Z,297nm,1.9s
TCF Toulx Ste Croi 35.25 316⇓*i*P P 17 41 57.0 +0.5
comp=Z,297nm,1.9s
TCF Toulx Ste Croi 35.25 316⇓*i*P P 17 41 57.0 +0.5
comp=Z,148nm,1.9s
RESF Ens 35.26 309 *e*P P 17 41 57.3 +0.5
RESF Ens 35.26 309 *e*P P 17 41 57.3 +0.5
RESF Ens 35.26 309 *e*P P 17 41 57.3 +0.5
IBBN Ibbenburen 35.27 328 *e*P P 17 41 55.8 -0.8
comp=Z,68nm,1.3s
RJF Les Rejaudoux 35.31 314⇓*i*P P 17 41 57.9 +0.9
comp=Z,983nm,1.9s
RJF *e*R
comp=Z,2μm,22.0s
RJF Les Rejaudoux 35.31 314⇓*i*P P 17 41 57.9 +0.9
RJF pmax pmax
comp=Z,983nm,1.9s
RJF Les Rejaudoux 35.31 314⇓*i*P P 17 41 57.9 +0.9
comp=Z,983nm,1.9s
RJF Les Rejaudoux 35.31 314⇓*i*P P 17 41 57.9 +0.9
comp=Z,492nm,1.9s
EPF Esparros 35.33 310 *e*P P 17 41 56.9 -0.4
comp=Z,52nm,1.3s
EPF Esparros 35.33 310 *e*P P 17 41 56.9 -0.4
EPF pmax pmax
comp=Z,53nm,1.3s
EPF Esparros 35.33 310 *e*P P 17 41 56.9 -0.4
comp=Z,52nm,1.3s
EPF Esparros 35.33 310 *e*P P 17 41 56.9 -0.4

comp=Z,26nm,1.3s
HYF Humbligny 35.40 317 *e*P **P 17 41 58.0 +0.2**
HYF Humbligny 35.40 317 *e*P **P 17 41 58.0 +0.2**
HYF Humbligny 35.40 317 *e*P **P 17 41 58.0 +0.2**
LLD Lille Linde 35.41 335 *i* P **P 17 41 58.3 +0.7**
LLD pmax pmax
comp=Z,73nm,1.0s
LLD Lille Linde 35.41 335 *i* P **P 17 41 58.3 +0.7**
comp=Z,73nm,0.9s
LLD Lille Linde 35.41 335 *i* P **P 17 41 58.3 +0.7**
comp=Z,73nm,1.0s
BCLA Clavier 35.42 324 P **P 17 41 58.4 +0.5**
comp=Z,88nm,2.0s
BEBN Eben Emael 35.43 324 P **P 17 41 58.2 +0.3**
VIEF Viey 35.51 309 *e*P **P 17 41 59.4 +0.6**
VIEF Viey 35.51 309 *e*P **P 17 41 59.4 +0.6**
VIEF Viey 35.51 309 *e*P **P 17 41 59.4 +0.6**
GIVF Givet 35.51 323⇓*i*P **P 17 41 58.3 -0.3**
comp=Z,144nm,1.3s
GIVF Givet 35.51 323⇓*i*P **P 17 41 58.3 -0.3**
GIVF pmax pmax
comp=Z,144nm,1.3s
GIVF Givet 35.51 323⇓*i*P **P 17 41 58.3 -0.3**
comp=Z,144nm,1.3s
GIVF Givet 35.51 323⇓*i*P **P 17 41 58.3 -0.3**
comp=Z,72nm,1.3s
LABF Labassere 35.52 310 *e*P **P 17 41 58.6 -0.3**
LABF Labassere 35.52 310 *e*P **P 17 41 58.6 -0.3**
LABF Labassere 35.52 310 *e*P **P 17 41 58.6 -0.3**
TKM2 Tokmak 2 35.58 51⇓*e*P **P 17 42 00.6 +1.0**
TKM2 pmax pmax
comp=Z,97nm,1.2s
TKM2 MLR MLR
comp=Z,16µm,20.0s
TKM2 Tokmak 2 35.58 51⇓*e*P **P 17 42 00.6 +1.0**
comp=Z,97nm,1.2s
TKM2 LR LR
comp=Z,16µm,20.0s
TKM2 Tokmak 2 35.58 51 P **P 17 42 00.9 +1.2**
SNR=62
TKM2 Tokmak 2 35.58 51⇓*e*P **P 17 42 00.6 +1.0**
comp=Z,97nm,1.2s
COP Copenhagen 35.59 335⇓*i*P **P 17 41 59.3 +0.1**
COP *i* S **S 17 47 37.6 +3.2**
COP pmax pmax
comp=Z,13nm,1.0s
COP MLR MLR
comp=Z,780nm,17.0s
COP Copenhagen 35.59 335⇓*i*P **P 17 41 59.3 +0.1**
comp=Z,13nm,0.9s
COP
comp=Z,780nm,16.0s
COP Copenhagen 35.59 335⇓*i*P **P 17 41 59.3 +0.1**
comp=Z,13nm,1.0s
COP *i* S **S 17 47 37.6 +3.2**
comp=Z,780nm,17.0s
SVE Sverdlovsk 35.60 22⇓*i*P **P 17 41 59.8 +0.5**
SVE *e* 17 43 17.9
SVE *e*S **S 17 47 36.2 +1.6**
SVE pmax pmax
comp=Z,194nm,2.5s
SVE MLR MLR
comp=Z,15µm,16.0s
SVE MLR MLR
comp=E,11µm,16.0s
SVE MLR MLR
comp=N,6µm,14.0s
SVE Sverdlovsk 35.60 22 *i* P **P 17 41 59.8 +0.5**
comp=N,194nm,2.5s
LFF La Frestale 35.69 313 *e*P **P 17 42 01.3 +1.1**
comp=N,490nm,1.5s
LFF La Frestale 35.69 313 *e*P **P 17 42 01.3 +1.1**
LFF pmax pmax
comp=Z,490nm,1.5s
LFF La Frestale 35.69 313 *e*P **P 17 42 01.3 +1.1**
comp=Z,490nm,1.5s
LFF La Frestale 35.69 313 *e*P **P 17 42 01.3 +1.1**
comp=Z,245nm,1.5s
BAIF Baives 35.83 323⇓*i*P **P 17 42 01.0 -0.3**
comp=Z,114nm,1.3s
BAIF Baives 35.83 323⇓*i*P **P 17 42 01.0 -0.3**
BAIF pmax pmax
comp=Z,114nm,1.3s
BAIF Baives 35.83 323⇓*i*P **P 17 42 01.0 -0.3**
comp=Z,114nm,1.3s
BAIF Baives 35.83 323⇓*i*P **P 17 42 01.0 -0.3**
comp=Z,57nm,1.3s
ULHL Ulahol 35.85 52 P **P 17 42 04.2 +2.3**
SNR=17
REYF Montagne du Re 35.85 309 *e*P **P 17 42 02.2 +0.4**
REYF Montagne du Re 35.85 309 *e*P **P 17 42 02.2 +0.4**
REYF Montagne du Re 35.85 309 *e*P **P 17 42 02.2 +0.4**
DDI Dehra Dun 35.87 73 *e*PKP **P 17 42 01.0 -1.0**
ETSF Etsaut 35.92 309⇓*i*P **P 17 42 03.3 +0.9**
comp=Z,1µm,1.6s
ETSF Etsaut 35.92 309⇓*i*P **P 17 42 03.3 +0.9**
ETSF pmax pmax
comp=Z,1µm,1.6s
ETSF Etsaut 35.92 309⇓*i*P **P 17 42 03.3 +0.9**
comp=Z,1µm,1.6s
ETSF Etsaut 35.92 309⇓*i*P **P 17 42 03.3 +0.9**
comp=Z,563nm,1.6s
TOA0 Torodi Ar. Sit 36.01 257⇓*e*P **P 17 42 03.4 +0.1**
TOA0 *e*PcP **PcP 17 44 28.4 -1.4**
TOA0 Torodi Ar. Sit 36.01 257⇓*e*P **P 17 42 03.4 +0.1**
TORD Torodi Ar. Bea 36.01 257 P **P 17 42 03.2 -0.1**
TORD PcP **PcP 17 44 29.3 -0.5**
TORD Torodi Ar. Bea 36.01 257 P **P 17 42 03.2 -0.1**
comp=Z,35nm,1.1s,baz=60,slow=5.2,SNR=120
TORD PcP **PcP 17 44 29.3 -0.5**
comp=Z,9.9nm,1.0s,baz=51,slow=2.0,SNR=7.5
TORD LR LR 17 57 26.9
comp=Z,11µm,18.4s,baz=70,slow=37
TORD Torodi Ar. Bea 36.01 257 P **P 17 42 03.2 -0.1**
TORD Torodi Ar. Bea 36.01 257 PcP **PcP 17 44 29.3 -0.5**
MEF Metsahovi 36.15 349 *e*P **P 17 42 03.6 -0.3**
comp=Z,264nm,1.1s,SNR=27
LARF Larrau 36.26 309 *e*P **P 17 42 05.5 +0.3**
LARF Larrau 36.26 309 *e*P **P 17 42 05.5 +0.3**
LARF Larrau 36.26 309 *e*P **P 17 42 05.5 +0.3**
ORDF Ordiarp 36.28 309 *e*P **P 17 42 04.8 -0.5**
ORDF Ordiarp 36.28 309 *e*P **P 17 42 04.8 -0.5**
ORDF Ordiarp 36.28 309 *e*P **P 17 42 04.8 -0.5**
SJPF Ste Jean 36.45 309 *e*P **P 17 42 07.7 +0.9**
comp=Z,771nm,1.9s
SJPF Ste Jean 36.45 309 *e*P **P 17 42 07.7 +0.9**
SJPF pmax pmax
comp=Z,771nm,1.9s
SJPF Ste Jean 36.45 309 *e*P **P 17 42 07.7 +0.9**
comp=Z,771nm,1.9s
SJPF Ste Jean 36.45 309 *e*P **P 17 42 07.7 +0.9**
comp=Z,385nm,1.9s
OSSF Osses 36.52 309 *e*P **P 17 42 07.2 -0.1**
OSSF Osses 36.52 309 *e*P **P 17 42 07.2 -0.1**
OSSF Osses 36.52 309 *e*P **P 17 42 07.2 -0.1**
AAA Alma-Ata 36.63 51 *i* P **P 17 42 09.4 +1.0**
AAA *i* S S 17 47 44.3 -6.6
AAA pmax pmax
comp=Z,1µm,3.6s
AAA smax smax
comp=E,2µm,15.2s
AAA MLR MLR
comp=Z,33µm,16.0s
AAA Alma-Ata 36.63 51 *i* P **P 17 42 09.4 +1.0**
comp=Z,1µm,3.6s
AAA *i* S S 17 47 44.3 -6.6
comp=Z,33µm,16.0s
SOKR Solikamsk 36.80 16*d i*P **P 17 42 09.5 +0.1**
SOKR 17 43 38.5
SOKR S **S 17 47 52.5 -0.3**
SOKR 17 52 26.5
SOKR pmax pmax
comp=Z,180nm,3.0s
SOKR MLR MLR
comp=Z,4µm,14.0s
SOKR Solikamsk 36.80 16 *i* P **P 17 42 09.5 +0.1**
comp=Z,180nm,3.0s
SOKR S **S 17 47 52.5 -0.3**
SOKR ScS **ScS 17 52 26.5 +2.4**
comp=Z,4µm,14.0s
MFF Saint Martin d 36.88 315⇓*i*P **P 17 42 10.4 0.0**
comp=Z,293nm,1.7s
MFF Saint Martin d 36.88 315⇓*i*P **P 17 42 10.4 0.0**
MFF pmax pmax
comp=Z,293nm,1.7s
MFF Saint Martin d 36.88 315⇓*i*P **P 17 42 10.4 0.0**
comp=Z,293nm,1.7s
MFF Saint Martin d 36.88 315⇓*i*P **P 17 42 10.4 0.0**
comp=Z,147nm,1.7s
BRVK Borovoye 36.95 33*d i*P **P 17 42 10.7 -0.2**
BRVK pmax pmax
comp=Z,122nm,1.2s
BRVK Borovoye 36.95 33⇓*i*P **P 17 42 10.7 -0.2**
comp=Z,112nm,1.1s
BRVK *e*PP **PP 17 43 34.2 -0.8**
BRVK LR LR
comp=Z,4µm,21.0s
BRVK Borovoye 36.95 33 P **P 17 42 11.4 +0.5**
SNR=56
BRVK Borovoye 36.95 33 P **P 17 42 11.0 +0.1**
comp=Z,456nm,1.1s,SNR=33
BRVK Borovoye 36.95 33⇓*i*P **P 17 42 10.7 -0.2**
comp=Z,112nm,1.1s
FINES FINESS Array B 37.04 351 P **P 17 42 10.8 -0.6**
FINES PcP **PcP 17 44 32.1 +0.1**
FINES FINESS Array B 37.04 351 P **P 17 42 10.8 -0.6**
comp=Z,39nm,1.0s,baz=152,slow=8.4,SNR=66
FINES PcP **PcP 17 44 32.1 +0.1**
comp=Z,15nm,0.7s,baz=142,slow=3.2,SNR=9.2
FINES LR LR 17 59 18.8
comp=Z,3µm,19.0s,baz=90,slow=40
FINES FINESS Array B 37.04 351 P **P 17 42 10.9 -0.6**
FIA1 FINESS Array S 37.04 351⇓*i*P **P 17 42 10.4 -1.1**
FIA1 *e*PP **PnPn 17 43 36.3 +0.2**
FIA1 *e*PcP **PcP 17 44 31.6 -0.4**
FIA1 FINESS Array S 37.04 351⇓*i*P **P 17 42 10.4 -1.1**
RAF Rauma 37.39 347 *e*S **S 17 48 00.8 -1.0**
SNR=27
MUD Monsted U'grnd 37.41 334⇓*i*P **P 17 42 15.0 +0.3**
MUD pmax pmax
comp=Z,58nm,1.0s
MUD MLR MLR
comp=Z,2µm,17.0s
MUD Monsted U'grnd 37.41 334⇓*i*P **P 17 42 15.0 +0.3**
comp=Z,58nm,1.0s
MUD
comp=Z,2µm,16.0s
MUD Monsted U'grnd 37.41 334⇓*i*P **P 17 42 15.0 +0.3**
comp=Z,58nm,1.0s
LDF La Druitiere 37.65 318⇓*i*P **P 17 42 16.4 -0.5**
comp=Z,312nm,1.6s
LDF La Druitiere 37.65 318⇓*i*P **P 17 42 16.4 -0.5**
LDF pmax pmax
comp=Z,312nm,1.6s
LDF La Druitiere 37.65 318⇓*i*P **P 17 42 16.4 -0.5**
comp=Z,312nm,1.6s
LDF La Druitiere 37.65 318⇓*i*P **P 17 42 16.4 -0.5**
comp=Z,156nm,1.6s
KAF Kangasniemi 37.65 351 *e*P **P 17 42 15.2 -1.5**
KAF pmax pmax
comp=Z,10.0nm,0.7s
KAF Kangasniemi 37.65 351 *e*p **P 17 42 15.2 -1.5**
comp=Z,10nm,0.7s
KAF Kangasniemi 37.65 351 *e*P **P 17 42 15.2 -1.5**
comp=Z,10.0nm,0.7s
ESDC Sonseca Array 37.68 303 P **P 17 42 17.8 +0.4**
ESDC PcP **PcP 17 44 34.9 +0.4**
ESDC Sonseca Array 37.68 303 P **P 17 42 17.8 +0.4**
comp=Z,17nm,0.8s,baz=85,slow=7.9,SNR=100
ESDC PcP **PcP 17 44 34.9 +0.4**
comp=Z,4.1nm,0.7s,baz=75,slow=2.6,SNR=6.7
ESDC LR LR 17 58 43.5
comp=Z,2µm,19.5s,baz=130,slow=38
ESDC Sonseca Array 37.68 303 P **P 17 42 17.8 +0.4**
ESLA Sonseca Array 37.68 303⇓*i*P **P 17 42 17.8 +0.4**
comp=Z,246nm,2.2s
ESLA *e*PcP **PcP 17 44 33.5 -1.0**
ESLA Sonseca Array 37.68 303⇓*i*P **P 17 42 17.8 +0.4**
comp=Z,246nm,2.2s
JOF Joensuu 37.90 355 *e*P **P 17 42 17.3 -1.5**
JOF pmax pmax
comp=Z,32nm,0.8s
JOF Joensuu 37.90 355 *e*p **P 17 42 17.3 -1.5**
comp=Z,32nm,0.8s
JOF Joensuu 37.90 355 *e*P **P 17 42 17.3 -1.5**
comp=Z,32nm,0.8s
FLN La Foliniere 37.93 318⇓*i*P **P 17 42 19.0 -0.3**
comp=Z,453nm,1.4s,baz=114
FLN *e*R
comp=Z,2µm,18.0s
FLN La Foliniere 37.93 318⇓*i*P **P 17 42 19.0 -0.3**
FLN pmax pmax
comp=Z,453nm,1.4s
FLN La Foliniere 37.93 318⇓*i*P **P 17 42 19.0 -0.3**
comp=Z,453nm,1.4s
FLN La Foliniere 37.93 318⇓*i*P **P 17 42 19.0 -0.3**
comp=Z,226nm,1.4s
PAB San Pablo 37.95 303 PFAKE 17 42 30.0 +10
PAB LR LR
comp=Z,2µm,19.0s
GRR Gorron 38.01 317 *e*P **P 17 42 19.5 -0.5**
comp=Z,194nm,1.2s
GRR Gorron 38.01 317 *e*P **P 17 42 19.5 -0.5**
GRR pmax pmax
comp=Z,194nm,1.3s
GRR Gorron 38.01 317 *e*P **P 17 42 19.5 -0.5**
comp=Z,194nm,1.3s
GRR Gorron 38.01 317 *e*P **P 17 42 19.5 -0.5**
comp=Z,97nm,1.2s
NGP Nagpur 38.06 87 *e*PKP **P 17 42 21.1 +0.4**
NGP *ex* x 17 48 25.9
JBP Jabalpur 38.45 84 *e*PKP **P 17 42 24.3 +0.3**
JBP AMB AMB 17 42 26.5
comp=Z,655nm,2.5s
JBP *e*S **S 17 48 20.1 +1.3**
HYB Hyderabad 38.67 93 *i* P **P 17 42 25.5 -0.4**
comp=Z,188nm,1.4s
HYB *e*PP **PP 17 43 55.0 +0.5**
HYB *e*S **S 17 48 24.0 +1.7**
HYB LR LR 17 51 52.0
comp=Z,5.6nm,20.0s
HOMB Homborsund 38.95 336 *e* P **P 17 42 24.8 -2.9**
SGMF Saint Gilles 39.01 317⇓*i*P **P 17 42 27.7 -0.6**
comp=Z,231nm,1.5s
SGMF Saint Gilles 39.01 317⇓*i*P **P 17 42 27.7 -0.6**
SGMF pmax pmax
comp=Z,231nm,1.5s
SGMF Saint Gilles 39.01 317⇓*i*P **P 17 42 27.7 -0.6**
comp=Z,231nm,1.5s
SGMF Saint Gilles 39.01 317⇓*i*P **P 17 42 27.7 -0.6**
comp=Z,115nm,1.5s
JSA Saint Aubin 39.12 318 AMS AMS 18 04 05.1
comp=Z,1µm,14.8s
QUIF Quistinic 39.27 316 *e*P **P 17 42 29.8 -0.7**
comp=Z,201nm,1.5s
QUIF Quistinic 39.27 316 *e*P **P 17 42 29.8 -0.7**
QUIF pmax pmax
comp=Z,201nm,1.5s
QUIF Quistinic 39.27 316 *e*P **P 17 42 29.8 -0.7**
comp=Z,201nm,1.5s
QUIF Quistinic 39.27 316 *e*P **P 17 42 29.8 -0.7**
comp=Z,100nm,1.5s
ROSF Rostrenen 39.48 316⇓*i*P **P 17 42 31.4 -0.9**
comp=Z,80nm,0.9s
ROSF Rostrenen 39.48 316⇓*i*P **P 17 42 31.4 -0.9**
ROSF pmax pmax
comp=Z,80nm,0.9s
ROSF Rostrenen 39.48 316⇓*i*P **P 17 42 31.4 -0.9**
comp=Z,80nm,0.9s
ROSF Rostrenen 39.48 316⇓*i*P **P 17 42 31.4 -0.9**
comp=Z,40nm,0.9s
RTC Rabat Centre 39.50 293 PFAKE 17 42 40.0 +7.4
RTC LR LR
comp=Z,5µm,19.0s
KONO Kongsberg 39.56 338 *e*P **P 17 42 30.9 -1.9**
KONO *e*PP **PP 17 44 03.4 -0.2**
KONO *e*ScP **ScP 17 48 27.2 -0.9**
KONO AMS AMS 18 03 33.2
comp=Z,2µm,12.6s
KONO Kongsberg 39.56 338⇓*e*P **P 17 42 31.4 -1.4**
KONO *e* 17 44 38.9
KONO pmax pmax
comp=Z,33nm,1.1s
KONO MLR MLR
comp=Z,2µm,20.0s
KONO Kongsberg 39.56 338⇓*e*P **P 17 42 31.4 -1.4**
comp=Z,7.8nm,1.1s
KONO *e*PcP **PcP 17 44 38.9 -1.0**
KONO LR LR
comp=Z,2µm,20.0s
KONO Kongsberg 39.56 338⇓*e*P **P 17 42 31.4 -1.4**
comp=Z,7.8nm,1.1s
NC602 NORSAR Array S 39.76 340 *e* sS 17 48 35.7 -10
PBAR Barrancos 39.87 300 *e*P **P 17 42 36.1 +0.5**
comp=Z,90nm,1.8s
PBAR Barrancos 39.87 300 PP PP 17 44 09.0 +1.7
PBAR Barrancos 39.87 300 *e*P **P 17 42 36.1 +0.5**
comp=Z,90nm,1.8s
PBAR Barrancos 39.87 300 PP PP 17 44 09.0 +1.7
NAO01 NORSAR Array S 40.05 340⇓*i*P **P 17 42 35.8 -1.0**
comp=Z,61nm,0.9s
NAO01 *e*PcP **PcP 17 44 38.4 -3.0**
NAO01 NORSAR Array S 40.05 340⇓*i*P **P 17 42 35.8 -1.0**
comp=Z,61nm,0.9s
SSW Stow on the Wo 40.10 322 *e*P **P 17 42 37.0 -0.4**
SSW Stow on the Wo 40.10 322 P **P 17 42 37.0 -0.4**
SSW Stow on the Wo 40.10 322 *e*P **P 17 42 37.0 -0.4**
NB2 NORSAR Subarra 40.10 340 P **P 17 42 36.2 -1.1**
comp=Z,129nm,1.2s,baz=137,slow=9.3
NB2 NORSAR Subarra 40.10 340 P **P 17 42 36.2 -1.1**
baz=137,slow=9.3
NB2 NORSAR Subarra 40.10 340 P **P 17 42 36.2 -1.1**
comp=Z,129nm,1.2s,SNR=5.7
NOA NORSAR Array B 40.10 340 P **P 17 42 36.4 -0.9**
NOA PcP **PcP 17 44 42.4 +0.7**
NOA NORSAR Array B 40.10 340 P **P 17 42 36.4 -0.9**
comp=Z,36nm,0.9s,baz=138,slow=8.6,SNR=68
NOA PcP **PcP 17 44 42.4 +0.7**
comp=Z,4.0nm,0.8s,baz=122,slow=3.6,SNR=4.4
NOA LR LR 18 01 38.7
comp=Z,2µm,19.2s,baz=145,slow=40
NOA NORSAR Array B 40.10 340 P **P 17 42 36.4 -0.9**
PBRG Braganca 40.13 306 *e*P **P 17 42 38.5 +0.7**
comp=Z,89nm,2.0s
PBRG Braganca 40.13 306 *e*P **P 17 42 38.5 +0.7**
comp=Z,89nm,2.0s
MVO Moncorvo 40.23 305 *e*P **P 17 42 39.9 +1.1**
comp=Z,95nm,2.2s
MVO Moncorvo 40.23 305 *e*P **P 17 42 39.9 +1.1**
comp=Z,95nm,2.2s
PMRV Marv??o 40.27 302 *e*P **P 17 42 38.9 -0.1**
comp=Z,139nm,0.5s
KURK Kurchatov 40.27 40*d i*P **P 17 42 39.6 +0.8**
KURK pmax pmax
comp=Z,200nm,1.2s
KURK Kurchatov 40.27 40⇓*e*P **P 17 42 39.4 +0.6**
comp=Z,163nm,1.1s
KURK *e*PP **PP 17 44 12.2 +0.7**
KURK LR LR
comp=Z,7µm,19.0s
KURK Kurchatov 40.27 40 P **P 17 42 40.0 +1.2**
SNR=114
KURK Kurchatov 40.27 40 P **P 17 42 40.2 +1.4**
comp=Z,709nm,1.1s
KURK Kurchatov 40.27 40 *i* P **P 17 42 39.6 +0.8**
comp=Z,200nm,1.2s
PVAQ Vaqueiros 40.34 299 *e*P **P 17 42 39.4 -0.2**
comp=Z,207nm,1.4s
PVAQ Vaqueiros 40.34 299 *e*PP PP 17 44 15.2 +2.8
PVAQ Vaqueiros 40.34 299 *e*P **P 17 42 39.4 -0.2**
comp=Z,207nm,1.4s
PVAQ Vaqueiros 40.34 299 *e*PP PP 17 44 15.2 +2.8
PYUN Piuhan 40.34 76 *e*P **P 17 42 40.0 0.0**
comp=Z,260nm,1.4s
PESTR Estremoz 40.36 301 *e*P **P 17 42 40.3 +0.5**
comp=Z,116nm,1.1s
PESTR A A 17 42 43.2
comp=Z,112nm,2.4s
PESTR Estremoz 40.36 301 *e*P **P 17 42 40.3 +0.5**
comp=Z,112nm,2.4s
PCBR Castelo Branco 40.39 302 *e*P **P 17 42 40.4 +0.5**
comp=Z,80nm,2.7s
PCBR Castelo Branco 40.39 302 *e*P **P 17 42 40.4 +0.5**
comp=Z,80nm,2.7s
PBDV Barranco-do-Ve 40.50 298 *e*P **P 17 42 41.8 +0.9**
PBDV Barranco-do-Ve 40.50 298 *e*P **P 17 42 41.8 +0.9**
PBEJ Beja 40.50 300 *e*P **P 17 42 41.0 +0.1**
comp=Z,79nm,2.9s
PBEJ Beja 40.50 300 *e*PP PP 17 44 17.3 +3.1
PBEJ Beja 40.50 300 *e*P **P 17 42 41.0 +0.1**
comp=Z,79nm,2.9s
PBEJ Beja 40.50 300 *e*PP PP 17 44 17.3 +3.1
MTE Manteigas 40.51 303 *e*P **P 17 42 41.0 -0.1**
comp=Z,63nm,2.1s
MTE Manteigas 40.51 303⇓*i*P **P 17 42 40.5 -0.5**
comp=Z,22nm,1.3s
MTE *e*PcP **PcP 17 44 43.7 +0.3**
MTE LR LR
comp=Z,3µm,19.0s
MTE Manteigas 40.51 303 *e*P **P 17 42 41.0 -0.1**
comp=Z,63nm,2.1s
KBI1 Birley Grange 40.51 324 *e*P **P 17 42 40.3 -0.5**
KBI1 Birley Grange 40.51 324 P **P 17 42 40.3 -0.5**
KBI1 Birley Grange 40.51 324 *e*P **P 17 42 40.3 -0.5**
PCVE Castro Verde 40.61 299 *e*P **P 17 42 41.9 +0.1**
comp=Z,100nm,1.7s
PCVE Castro Verde 40.61 299 *e*PP PP 17 44 19.5 +4.1
PCVE Castro Verde 40.61 299 *e*P **P 17 42 41.9 +0.1**
comp=Z,100nm,1.7s
EVO Evora 40.66 300⇓*i*P **P 17 42 43.3 +1.1**
comp=Z,194nm,1.2s
EVO *e*R
comp=Z,3µm,19.0s
EVO Evora 40.66 300 *e*P **P 17 42 43.7 +1.5**
comp=Z,148nm,2.9s
EVO Evora 40.66 300 *e*P **P 17 42 43.7 +1.5**
comp=Z,148nm,2.9s
EVOP Sao Brissos 40.75 300⇓*i*P **P 17 42 43.3 +0.4**
EVOP pmax pmax
comp=Z,194nm,1.2s
EVOP Sao Brissos 40.75 300⇓*i*P **P 17 42 43.3 +0.4**
comp=Z,194nm,1.2s
EVOP Sao Brissos 40.75 300⇓*i*P **P 17 42 43.3 +0.4**
comp=Z,97nm,1.2s
MCH1 Michaelchurch 40.75 322⇑*e*P **P 17 42 42.0 -0.8**
MCH1 AMB AMB 17 42 44.3
comp=Z,198nm,2.6s
MCH1 AMS AMS 18 09 02.8
comp=Z,1µm,12.0s
MCH1 Michaelchurch 40.75 322 P **P 17 42 42.0 -0.8**
MCH1 AMB AMB 17 42 44.3
comp=Z,198nm,2.6s
MCH1 AMS AMS 18 09 02.8
comp=Z,1µm,12.0s
MCH1 Michaelchurch 40.75 322⇑*e*P **P 17 42 42.0 -0.8**
MESJ Messejana 40.77 299 *e*P **P 17 42 43.0 -0.1**
MESJ AMb AMB 17 42 45.5
comp=Z,89nm,1.2s
MESJ *e*PP **PP 17 44 17.0 -0.1**
MESJ *e*S **S 17 48 55.2 +1.9**
MESJ Messejana 40.77 299 *e*P **P 17 42 43.0 -0.1**
comp=Z,89nm,1.2s
MESJ Messejana 40.77 299 *e*PP PP 17 44 17.0 -0.1
MESJ *e*S **S 17 48 55.2 +1.9**
MESJ Messejana 40.77 299 *e*P **P 17 42 43.0 -0.1**
MESJ *e* 17 44 16.9
MESJ *e*S **S 17 48 55.2 +1.9**
MESJ Messejana 40.77 299 *e*P **P 17 42 43.0 -0.1**
comp=Z,89nm,1.2s
MESJ Messejana 40.77 299 *e*PP PP 17 44 17.0 -0.1
MESJ *e*S **S 17 48 55.2 +1.9**
STNC Stoke 40.80 324 *e*P **P 17 42 42.3 -0.8**
STNC AMB AMB 17 42 45.2
comp=Z,276nm,2.1s
STNC AMS AMS 18 06 40.1
comp=Z,1µm,15.6s
STNC Stoke 40.80 324 P **P 17 42 42.3 -0.8**
STNC AMB AMB 17 42 45.2
comp=Z,276nm,2.1s
STNC AMS AMS 18 06 40.1
comp=Z,1µm,15.6s
STNC Stoke 40.80 324 *e*P **P 17 42 42.3 -0.8**
HEX Exmoor 40.83 320 *e*P **P 17 42 42.3 -1.1**
HEX Exmoor 40.83 320 P **P 17 42 42.3 -1.1**
HEX Exmoor 40.83 320 *e*P **P 17 42 42.3 -1.1**
POLO Lamas de Olo 40.84 305 *e*P **P 17 42 43.9 +0.1**
comp=Z,40nm,2.1s
POLO Lamas de Olo 40.84 305 *e*P **P 17 42 43.9 +0.1**
comp=Z,40nm,2.1s
PMTG Montargil 40.88 301 *e*P **P 17 42 44.8 +0.8**
comp=Z,57nm,2.1s
PMTG Montargil 40.88 301 *e*P **P 17 42 44.8 +0.8**
comp=Z,57nm,2.1s
HLM1 Long Mynd 40.91 323 *e*P **P 17 42 44.1 0.0**
HLM1 AMB AMB 17 42 45.6
comp=Z,147nm,3.0s
HLM1 Long Mynd 40.91 323 P **P 17 42 44.1 0.0**
HLM1 AMB AMB 17 42 45.6

comp=Z,147nm,3.0s
HLM1 Long Mynd 40.91 323 *e*P **P** 17 42 44.1 0.0
KOLN Koldanda 40.91 76 *e*P **P** 17 42 44.8 +0.1
comp=Z,78nm,1.1s
DANN Dangsing 40.98 75 *e*P **P** 17 42 46.2 +0.8
comp=Z,504nm,1.2s
PNCL Nicolau / Gran 41.03 300 *e*P **P** 17 42 45.6 +0.3
comp=Z,54nm,2.1s
PNCL Nicolau / Gran 41.03 300 *e*P **P** 17 42 45.6 +0.3
comp=Z,54nm,2.1s
PCAB Cabril 41.06 305 *e*P **P** 17 42 45.0 -0.5
comp=Z,88nm,2.2s
PCAB Cabril 41.06 305 *e*P **P** 17 42 45.0 -0.5
comp=Z,88nm,2.2s
MORF Marmelete 41.07 298 *e*P **P** 17 42 46.3 +0.6
comp=Z,60nm,2.1s
MORF Marmelete 41.07 298 *e*PP PP 17 44 23.9 +3.4
MORF Marmelete 41.07 298 *e*P **P** 17 42 45.5 -0.2
MORF *e* 17 44 20.6
MORF Marmelete 41.07 298 *e*P **P** 17 42 45.5 -0.2
MORF Marmelete 41.07 298 *e*PP PP 17 44 23.9 +3.4
PTOM Tomar 41.08 302 *e*P **P** 17 42 46.2 +0.6
comp=Z,130nm,1.3s
PTOM Tomar 41.08 302 *e*P **P** 17 42 46.2 +0.6
comp=Z,130nm,1.3s
PTEO Sao Teotonio 41.15 299 *e*P **P** 17 42 46.8 +0.6
comp=Z,188nm,1.3s
PTEO Sao Teotonio 41.15 299 *e*P **P** 17 42 46.8 +0.6
comp=Z,188nm,1.3s
PFVI Vila Bisbo 41.20 298 *e*P **P** 17 42 47.2 +0.5
PFVI Vila Bisbo 41.20 298 *e*PP PP 17 44 25.5 +3.7
PFVI Vila Bisbo 41.20 298 *e*P **P** 17 42 47.2 +0.5
PFVI Vila Bisbo 41.20 298 *e*PP PP 17 44 25.5 +3.7
FOEL Foel Wylfa 41.25 323⇑ *e*P **P** 17 42 47.2 +0.3
FOEL AMB AMB 17 42 48.9
comp=Z,194nm,2.9s
FOEL AMS AMS 18 07 09.8
comp=Z,1μm,17.2s
FOEL Foel Wylfa 41.25 323 P **P** 17 42 47.2 +0.3
FOEL AMB AMB 17 42 48.9
comp=Z,194nm,2.9s
FOEL AMS AMS 18 07 09.8
comp=Z,1μm,17.2s
FOEL Foel Wylfa 41.25 323⇑ *e*P **P** 17 42 47.2 +0.3
MK31 Makanchi Array 41.25 47 *e*P **P** 17 42 47.5 +0.5
MK31 *e* 17 44 20.4
MK31 *e* 17 44 46.0
MK31 Makanchi Array 41.25 47 *e*P **P** 17 42 47.5 +0.5
MK31 *e*PP **PP** 17 44 20.4 -1.7
MK31 *e*PcP **PcP** 17 44 46.0 +0.3
MK31 Makanchi Array 41.25 47 *e*P **P** 17 42 47.5 +0.5
MKAR Makanchi Array 41.25 47 *e*PcP **PcP** 17 44 46.0 +0.3
MKAR comp=Z,35nm,0.6s **Makanchi Array 41.25 47** P **P** 17 42 47.6 +0.6
MKAR pmax pmax
comp=Z,9μm,18.6s
MKAR Makanchi Array 41.25 47 P **P** 17 42 47.6 +0.6
MKAR Makanchi Array 41.25 47 P **P** 17 42 47.6 +0.6
comp=Z,34nm,0.6s,baz=250,slow=6.9,SNR=212
MKAR LR LR 18 02 31.3
comp=Z,9μm,18.6s,baz=253,slow=40
MKAR Makanchi Array 41.25 47 P **P** 17 42 47.6 +0.6
PGAV Gavieira, Arco 41.28 306 *e*P **P** 17 42 47.9 +0.5
comp=Z,90nm,2.4s
PGAV Gavieira, Arco 41.28 306 *e*P **P** 17 42 47.9 +0.5
comp=Z,90nm,2.4s
LSZ Lusaka 41.36 194 P **P** 17 42 49.3 +1.1
LSZ *e*PcP **PcP** 17 44 48.1 +1.6
LSZ PcP **PcP** 17 44 48.7 +2.2
LSZ Lusaka 41.36 194 P **P** 17 42 49.5 +1.3
SNR=21
LSZ Lusaka 41.36 194 P **P** 17 42 49.3 +1.1
comp=Z,13nm,0.9s,baz=17,slow=11,SNR=28
LSZ PcP **PcP** 17 44 48.7 +2.2
comp=Z,3.2nm,0.8s,baz=28,slow=4.4,SNR=3.5
LSZ LR LR 17 59 20.2
comp=Z,6μm,20.0s,baz=122,slow=35
LSZ Lusaka 41.36 194 P **P** 17 42 49.5 +1.3
SNR=21
LSZ Lusaka 41.36 194 *e*PcP **PcP** 17 44 48.1 +1.6
LIS Lisbon 41.56 301 *e*P **P** 17 42 49.6 0.0
LIS AMb AMB 17 42 52.8
comp=Z,134nm,1.5s
LIS *e*PP **PP** 17 44 25.8 +0.1
LIS Lisbon 41.56 301 *e*P **P** 17 42 49.6 0.0
comp=Z,134nm,1.5s
LIS Lisbon 41.56 301 *e*PP PP 17 44 25.8 +0.1
LIS *e*S **SS** 17 52 12.1 +2.2
LIS Lisbon 41.56 301 *e*P **P** 17 42 49.6 0.0
LIS *e* 17 44 25.7
LIS Lisbon 41.56 301 *e*P **P** 17 42 49.6 0.0
comp=Z,134nm,1.5s
LIS Lisbon 41.56 301 *e*PP PP 17 44 25.8 +0.1
LIS *e*S **SS** 17 52 12.1 +2.2
BER Bergen 41.59 336 *e*P **P** 17 42 49.3 -0.2
BER *e*S **S** 17 49 07.5 +2.6
BER *e*SS **SS** 17 52 14.1 +4.4
PMAFR Mafra 41.69 301 *e*P **P** 17 42 52.2 +1.5
comp=Z,103nm,2.2s
PMAFR Mafra 41.69 301 *e*PP PP 17 44 31.1 +4.0
PMAFR Mafra 41.69 301 *e*P **P** 17 42 52.2 +1.5
comp=Z,103nm,2.2s
PMAFR Mafra 41.69 301 *e*PP PP 17 44 31.1 +4.0
MDRS Chennai 41.75 99 *e*S **S** 17 49 09.2 +0.9
MDRS *ex* x 17 52 05.2
WPM1 Penmaenmawr 41.79 323⇑ *e*P **P** 17 42 50.5 -0.8
WPM1 Penmaenmawr 41.79 323 P **P** 17 42 50.5 -0.8
WPM1 Penmaenmawr 41.79 323⇑ *e*P **P** 17 42 50.5 -0.8
KESW Keswick, Cumbr 41.96 325 AMS AMS 18 09 24.0
comp=Z,1μm,12.0s
WLF1 Llynfaes 42.07 323 AMS AMS 18 09 46.5
comp=Z,1μm,19.4s
TBLU Trondheim 42.11 342 AMS AMS 18 01 44.5
comp=Z,2μm,15.9s
ECK Cauldkaine Hil 42.25 326⇑ *i*P **P** 17 42 55.1 +0.1
ECK Cauldkaine Hil 42.25 326 P **P** 17 42 55.1 +0.1
ECK Cauldkaine Hil 42.25 326⇑ *i*P **P** 17 42 55.1 +0.1
DMN Daman 42.26 76 *e*P **P** 17 42 55.6 -0.2
comp=Z,580nm,1.9s
ESY Stoneypath 42.35 327 *e*P **P** 17 42 54.9 -1.0
ESY Stoneypath 42.35 327 P **P** 17 42 54.9 -1.0
ESY Stoneypath 42.35 327 *e*P **P** 17 42 54.9 -1.0
ESK Eskdalemuir 42.35 326 AMS AMS 18 08 38.3
comp=Z,1μm,15.2s
ESK Eskdalemuir 42.35 326 *e*P **P** 17 42 55.4 -0.5
ESK pmax pmax
comp=Z,118nm,1.5s
ESK MLR MLR
comp=Z,1μm,20.0s
ESK Eskdalemuir 42.35 326 *e*P **P** 17 42 55.4 -0.5
comp=Z,118nm,1.5s
ESK LR LR
comp=Z,1μm,20.0s
ESK Eskdalemuir 42.35 326 *e*P **P** 17 42 55.4 -0.5
comp=Z,118nm,1.5s
KKN Kakani 42.39 76 *e*P **P** 17 42 56.8 0.0
comp=Z,570nm,1.9s
MOL Molde 42.40 340 *e*P **P** 17 42 57.1 +1.0
APA Apatity 42.41 358⇓ *i*P **P** 17 42 56.6 +0.5
APA *i* 17 44 33.0
APA *i* 17 44 49.0
APA *i* SS SS 17 52 20.0 -5.8
APA pmax pmax
comp=Z,115nm,1.2s
APA MLR MLR
comp=Z,4μm,16.0s
APA Apatity 42.41 358 *i* P **P** 17 42 56.6 +0.5
comp=Z,115nm,1.2s
APA Apatity 42.41 358 *i* PcP **PcP** 17 44 49.0 0.0
comp=Z,4μm,16.0s
EBL Broad Law 42.49 327⇑ *e*P **P** 17 42 57.2 +0.2
EBL Broad Law 42.49 327 P **P** 17 42 57.2 +0.2
EBL Broad Law 42.49 327⇑ *e*P **P** 17 42 57.2 +0.2
GCD Castle Douglas 42.52 325 *e*P **P** 17 42 57.3 +0.1
GCD Castle Douglas 42.52 325 P **P** 17 42 57.3 +0.1
GCD Castle Douglas 42.52 325 *e*P **P** 17 42 57.3 +0.1
PKIN Phulchoki 42.52 76 *e*P **P** 17 42 57.5 -0.4
comp=Z,382nm,1.6s
PKI Pulchoki 42.53 76 *e*P **P** 17 42 57.8 -0.3
comp=Z,290nm,1.4s
EDI Edinburgh 42.63 327 AMB AMB 17 42 57.8
comp=Z,282nm,1.8s
EDI AMS AMS 18 07 23.4
comp=Z,1μm,15.9s
EDI Edinburgh 42.63 327 AMB AMB 17 42 57.8
comp=Z,282nm,1.8s
EDI AMS AMS 18 07 23.4
comp=Z,1μm,15.9s
NSS Namsos 42.68 344 *e*P **P** 17 42 59.4 +1.0
LVZ Lovozero 42.70 358 *d* iP **P** 17 42 58.3 -0.2
LVZ pmax pmax
comp=Z,110nm,1.7s
LVZ Lovozero 42.70 358 *i* P **P** 17 42 58.3 -0.2
comp=Z,110nm,1.7s
EAU Auchinoon 42.73 327⇑ *i*P **P** 17 42 59.2 +0.3
EAU Auchinoon 42.73 327 P **P** 17 42 59.2 +0.3
EAU Auchinoon 42.73 327⇑ *i*P **P** 17 42 59.2 +0.3
GUN Gumba 42.90 75 *e*P **P** 17 43 01.0 -0.1
comp=Z,311nm,1.4s
GAL1 Galloway 42.92 325 *e*P **P** 17 43 00.6 +0.2
GAL1 AMB AMB 17 43 02.2
comp=Z,142nm,2.4s
GAL1 AMS AMS 18 07 56.3
comp=Z,1μm,20.5s
GAL1 Galloway 42.92 325 P **P** 17 43 00.6 +0.2
GAL1 AMB AMB 17 43 02.2
comp=Z,142nm,2.4s
GAL1 AMS AMS 18 07 56.3
comp=Z,1μm,20.5s
GAL1 Galloway 42.92 325 *e*P **P** 17 43 00.6 +0.2
MME1 Meikle Cairn 43.22 329 *e*P **P** 17 43 02.0 -0.9
MME1 Meikle Cairn 43.22 329 P **P** 17 43 02.0 -0.9
MME1 Meikle Cairn 43.22 329 *e*P **P** 17 43 02.0 -0.9
PGBU Glenifferbraes 43.23 326 *e*P **P** 17 43 03.0 0.0
PGBU AMB AMB 17 43 04.7
comp=Z,217nm,2.4s
PGBU AMS AMS 18 08 27.1
comp=Z,1μm,12.1s
PGBU Glenifferbraes 43.23 326 P **P** 17 43 03.0 0.0
PGBU AMB AMB 17 43 04.7
comp=Z,217nm,2.4s
PGBU AMS AMS 18 08 27.1
comp=Z,1μm,12.1s
PGBU Glenifferbraes 43.23 326 *e*P **P** 17 43 03.0 0.0
GMM Mts of Mourne 43.30 324 *e*P **P** 17 43 03.4 -0.2
GMM Mts of Mourne 43.30 324 P **P** 17 43 03.4 -0.2
GMM Mts of Mourne 43.30 324 *e*P **P** 17 43 03.4 -0.2
EAB Aberfoyle 43.33 327 *e*P **P** 17 43 03.0 -0.7
EAB Aberfoyle 43.33 327 P **P** 17 43 03.0 -0.7
EAB Aberfoyle 43.33 327 *e*P **P** 17 43 03.0 -0.7
MCD Coleburn Disti 43.49 329 *e*P **P** 17 43 03.8 -1.2
MCD Coleburn Disti 43.49 329 P **P** 17 43 03.8 -1.2
MCD Coleburn Disti 43.49 329 *e*P **P** 17 43 03.8 -1.2
RAMN Ramite 43.67 77 *e*P **P** 17 43 06.6 -0.7
comp=Z,375nm,1.9s
DCN Croghan 43.68 322⇑ *i*P **P** 17 43 04.0 -2.6
FLOS Flostrand 43.85 346 *e*P **P** 17 43 07.6 -0.2
STOK Stokkvaagen 43.93 346 *e*P **P** 17 43 08.5 +0.1
MDO Dochfour 43.94 328 *e*P **P** 17 43 07.1 -1.6
MDO Dochfour 43.94 328 P **P** 17 43 07.1 -1.6
MDO Dochfour 43.94 328 *e*P **P** 17 43 07.1 -1.6
LRW Lerwick 43.96 333 *e*P **P** 17 43 08.3 -0.4
LRW AMB AMB 17 43 09.6
comp=Z,306nm,1.3s
LRW AMS AMS 18 06 16.4
comp=Z,1μm,16.2s
LRW Lerwick 43.96 333 P **P** 17 43 08.3 -0.4
LRW AMB AMB 17 43 09.6
comp=Z,306nm,1.3s
LRW AMS AMS 18 06 16.4
comp=Z,1μm,16.2s
LRW Lerwick 43.96 333 *e*P **P** 17 43 08.4 -0.4
MVH1 Achvaich 44.09 329 *e*P **P** 17 43 09.2 -0.6
MVH1 Achvaich 44.09 329 P **P** 17 43 09.2 -0.6
MVH1 Achvaich 44.09 329 *e*P **P** 17 43 09.2 -0.6
KSB Sheil Bridge 44.33 328 *e*P **P** 17 43 10.2 -1.7
KSB Sheil Bridge 44.33 328 P **P** 17 43 10.2 -1.7
KSB Sheil Bridge 44.33 328 *e*P **P** 17 43 10.1 -1.7
WMQ Urumqi 44.38 52 P **P** 17 43 13.3 +0.8
WMQ pP **pP** 17 43 17.8 +0.4
WMQ sP **sP** 17 43 20.3 +1.0
WMQ PP **PcP** 17 44 58.0 +1.7
WMQ PcS **PcS** 17 48 49.9 +0.3
WMQ S **S** 17 49 46.3 -0.2
WMQ ScS **ScS** 17 53 08.8 -1.6
WMQ pmax pmax
comp=Z,72nm,1.6s
WMQ LR LR
comp=N,6μm,13.8s
WMQ LR LR
comp=E,7μm,19.6s
WMQ LR LR
comp=Z,7μm,22.4s
ODAN Odare 44.38 77 *e*P **P** 17 43 12.0 -0.9
comp=Z,668nm,2.4s
NVS Novosibirsk 44.48 36⇓ *i*P **P** 17 43 12.4 -0.6
NVS *i* 17 44 56.3
NVS *e*S S 17 49 37.8 -10
NVS *e* 17 53 11.3
NVS pmax pmax
comp=N,272nm,2.3s
NVS pmax pmax
comp=Z,549nm,2.3s
NVS smax smax
comp=N,63nm,2.6s
NVS Novosibirsk 44.48 36 *i* P **P** 17 43 12.4 -0.6
NVS Novosibirsk 44.48 36 *i* PcP **PcP** 17 44 56.3 0.0
comp=N,63nm,2.6s
NVS *e*S S 17 49 37.8 -10
NVS *e*ScS **ScS** 17 53 11.3 +0.9
KPL Plockton 44.50 328 *e*P **P** 17 43 11.6 -1.5
KPL AMB AMB 17 43 14.1
comp=Z,148nm,2.8s
KPL AMS AMS 18 09 43.7
comp=Z,1μm,13.8s
KPL Plockton 44.50 328 P **P** 17 43 11.6 -1.5
KPL AMB AMB 17 43 14.1
comp=Z,148nm,2.8s
KPL AMS AMS 18 09 43.7
comp=Z,1μm,13.8s
KPL Plockton 44.50 328 *e*P **P** 17 43 11.6 -1.5
OPO Ambohidratompo 44.52 167 P **P** 17 43 15.8 +2.0
OPO PcP **PP** 17 44 58.7 +0.7
OPO Ambohidratompo 44.52 167 P **P** 17 43 15.8 +2.0
comp=Z,28nm,0.9s,baz=345,slow=7.0,SNR=45
OPO PcP **PP** 17 44 58.7 +0.7
comp=Z,6.1nm,1.0s,baz=344,slow=6.6,SNR=2.9
OPO LR LR 18 00 44.0
comp=Z,3μm,19.8s,baz=328,slow=35
OPO Ambohidratompo 44.52 167 P **P** 17 43 15.8 +2.0
TAPN Taplejung 44.58 76 *e*P **P** 17 43 13.6 -1.0
comp=Z,247nm,1.8s
KTK1 Kautokeino 44.63 353 *e*P **P** 17 43 13.6 -0.4
KTK1 *e*P **pP** 17 43 14.0 -4.9
KTK1 *e*S **S** 17 49 48.9 -0.4
KTK1 *e*SS **ScS** 17 53 11.7 +0.8
KTK1 AMS AMS 18 04 16.5
comp=Z,7μm,13.6s
PALK Pallekele 44.68 106 *e*P **P** 17 43 15.6 +0.4
comp=Z,76nm,1.3s
PALK Pallekele 44.68 106 *e*P **P** 17 43 15.6 +0.4
comp=Z,76nm,1.3s
DBIC Dimbokro 44.70 253 *e*P **P** 17 43 14.5 -0.8
comp=Z,90nm,0.9s
DBIC *e*PcP **PcP** 17 44 58.0 +0.3
DBIC Dimbokro 44.70 253 P **P** 17 43 14.8 -0.4
comp=Z,61nm,0.8s,baz=42,slow=9.0,SNR=80
DBIC LR LR 18 03 17.2
comp=Z,15μm,18.4s,baz=45,slow=38
DBIC Dimbokro 44.70 253 *e*P **P** 17 43 14.5 -0.8
comp=Z,90nm,0.9s
DBIC Dimbokro 44.70 253 *e*PcP **PcP** 17 44 58.0 +0.3
ARCES ARCESS Array B 44.89 354 P **P** 17 43 15.6 -0.5
ARCES PP **PcP** 17 44 55.3 -2.1
ARCES ARCESS Array B 44.89 354 P **P** 17 43 15.6 -0.5
comp=Z,16nm,0.8s,baz=158,slow=5.0,SNR=54
ARCES PP **PcP** 17 44 55.3 -2.1
comp=Z,15nm,1.0s,baz=154,slow=6.7,SNR=5.1
ARCES LR LR 18 04 45.7
comp=Z,2μm,18.3s,baz=160,slow=40
ARCES ARCESS Array B 44.89 354 P **P** 17 43 15.6 -0.5
ARE0 ARCESS Array S 44.89 354 *e*P **P** 17 43 14.7 -1.5
ARE0 *e*SS SS 17 53 12.3 -2.0
ARE0 ARCESS Array S 44.89 354 *e*P **P** 17 43 15.6 -0.5
ARE0 *e*PcP **PcP** 17 44 54.7 -2.7
ARE0 ARCESS Array S 44.89 354 *e*P **P** 17 43 15.6 -0.5
VAL Valentia 44.90 319 *e*P **P** 17 43 13.4 -3.0
ABPO Ambohimpanom 44.96 167 *e*P **P** 17 43 18.7 +1.3
ABPO pmax pmax
comp=Z,36nm,1.0s
ABPO MLR MLR
comp=Z,3μm,20.0s
ABPO Ambohimpanom 44.96 167 *e*P **P** 17 43 18.7 +1.3
comp=Z,36nm,1.0s
ABPO LR LR
comp=Z,3μm,20.0s
ABPO Ambohimpanom 44.96 167 *e*P **P** 17 43 18.7 +1.3
comp=Z,36nm,1.0s
KEV Kevo 44.97 355 *e*P **P** 17 43 15.6 -1.1
KEV pmax pmax
comp=Z,8.0nm,0.7s
KEV Kevo 44.97 355 *e*p **P** 17 43 15.6 -1.1
comp=Z,8.3nm,0.7s
KEV Kevo 44.97 355 *e*P **P** 17 43 16.4 -0.3
comp=Z,457nm,2.1s
KEV LR LR
comp=Z,3μm,19.0s
KEV Kevo 44.97 355 *e*P **P** 17 43 16.4 -0.3
comp=Z,457nm,2.1s
ZAA0 Zalesovo Array 45.01 38 *e*P **P** 17 43 16.9 -0.4
ZAA0 *e*PcP **PcP** 17 44 55.9 -2.2
ZAA0 Zalesovo Array 45.01 38 *e*P **P** 17 43 16.9 -0.4
ZALV Zalesovo Beam 45.01 38 P **P** 17 43 17.1 -0.2
ZALV 17 44 58.2
ZALV pmax pmax
comp=Z,13nm,0.8s
ZALV MLR MLR
comp=Z,4μm,19.4s
ZALV Zalesovo Beam 45.01 38 P **P** 17 43 17.1 -0.2
ZALV PcP **PcP** 17 44 58.2 +0.1
ZALV Zalesovo Beam 45.01 38 P **P** 17 43 17.1 -0.2
comp=Z,13nm,0.8s,baz=251,slow=7.7,SNR=54
ZALV PcP **PcP** 17 44 58.2 +0.1
comp=Z,2.3nm,0.6s,baz=253,slow=4.4,SNR=2.2
ZALV LR LR 18 05 04.4
comp=Z,4μm,19.4s,baz=237,slow=40
ZALV Zalesovo Beam 45.01 38 P **P** 17 43 17.1 -0.2
ZALV Zalesovo Beam 45.01 38 PcP **PcP** 17 44 58.2 +0.1
LIC Lamto 45.06 253 *e*P **P** 17 43 17.8 -0.4
comp=Z,178nm,1.1s,baz=62
LIC *e*R
comp=Z,26μm,17.6s
LIC Lamto 45.06 253 *e*P **P** 17 43 17.8 -0.4
comp=Z,178nm,1.1s
LIC Lamto 45.06 253 *e*P **P** 17 43 17.8 -0.4
comp=Z,89nm,1.1s
LOF Lofoten 45.35 348 *e*P P 17 44 07.0 +47
TRO Tromso 45.77 351 *e*P **P** 17 43 22.4 -0.7
TRO *e*P **pP** 17 43 23.6 -4.3
TRO *e* 17 45 05.7
TRO *e*S **S** 17 50 06.1 +0.4
TRO AMS AMS 18 05 02.3
comp=Z,3μm,11.0s
DGAR Diego Garcia 46.84 129 PFAKE 17 43 40.0 +7.8
DGAR LR LR
comp=Z,2μm,20.0s
LSA Lhasa 47.23 72 P **P** 17 43 34.6 -1.1
LSA Lhasa 47.23 72 *e*P **P** 17 43 36.4 +0.7
LSA pmax pmax
comp=Z,110nm,1.5s
LSA MLR MLR
comp=Z,8μm,21.0s
LSA Lhasa 47.23 72 *e*P **P** 17 43 36.4 +0.7
comp=Z,110nm,1.5s
LSA LR LR
comp=Z,8μm,21.0s
LSA Lhasa 47.23 72 *e*P **P** 17 43 36.4 +0.7
comp=Z,8μm,21.0s
PMAR Madeira 47.96 292 *e*P **P** 17 43 41.1 +0.1
PMAR Madeira 47.96 292 *e*P **P** 17 43 41.1 +0.1
TSUM Tsumeb 48.36 206 *e*P **P** 17 43 44.3 +0.4
comp=Z,633nm,2.7s
TSUM LR LR
comp=Z,2μm,19.0s
TSUM Tsumeb 48.36 206 P **P** 17 43 44.4 +0.4
comp=Z,13nm,1.1s,baz=22,slow=5.8,SNR=15
TSUM Tsumeb 48.36 206 *e*P **P** 17 43 44.3 +0.4
comp=Z,633nm,2.7s
SHL Shillong 48.59 77⇓ *i*P **P** 17 43 45.5 -0.4
SHL *i* S **S** 17 50 47.0 -0.5
HVS Khovu-Aksy 49.53 43 *d* iP **P** 17 43 53.6 +0.9
HVS Khovu-Aksy 49.53 43 *i* P **P** 17 43 53.6 +0.9
BJO Bjornoya 50.25 354 *e* **P** 17 43 54.6 -3.0
BJO *e*SS **SS** 17 54 47.8 +5.6
LBTB Lobatse 51.34 194 *e*P **P** 17 44 08.1 +1.5
comp=Z,435nm,2.3s
LBTB Lobatse 51.34 194 *e*P **P** 17 44 08.1 +1.5
comp=Z,435nm,2.3s
JMIC Jan Mayen 52.69 343 *e*P **P** 17 44 15.2 -0.8
JMIC *e*PP **PP** 17 46 14.6 -0.5
JMIC *e*S **S** 17 51 44.0 +1.2
GTA Gaotai 53.34 59 P **P** 17 44 22.0 +0.6
GTA pP **pP** 17 44 26.8 +0.4
GTA sP **sP** 17 44 29.4 +1.1
GTA S **S** 17 51 51.5 -1.3
GTA pmax pmax
comp=Z,62nm,1.4s
GTA pmax pmax
comp=Z,1μm,5.5s
GTA LR LR
comp=N,6μm,19.0s
GTA LR LR
comp=E,4μm,18.5s
GTA LR LR
comp=Z,7μm,19.2s
SPA0 Spitsbergen Ar 53.91 355 *e*P **P** 17 44 24.8 -0.1
MOY Mondy 54.12 43 *e*P **P** 17 44 28.4 +1.4
MOY pmax pmax
comp=Z,258nm,2.7s
MOY Mondy 54.12 43 *e*P **P** 17 44 28.4 +1.4
comp=Z,258nm,2.7s
BORG Borgarnes 54.35 333 *e*P **P** 17 44 29.9 +1.7
comp=Z,502nm,1.9s
BORG LR LR
comp=Z,1μm,22.0s
BORG Borgarnes 54.35 333 *e*P **P** 17 44 29.9 +1.7
comp=Z,502nm,1.9s
CMLA Cha da Macela 54.45 300 PFAKE 17 44 40.0 +11
CMLA LR LR
comp=Z,2μm,19.0s
BOSA Boshof 54.90 193 *e*P **P** 17 44 33.4 +0.7
comp=Z,238nm,1.9s
BOSA Boshof 54.90 193 P **P** 17 44 33.4 +0.7
comp=Z,15nm,0.9s,baz=17,slow=8.7,SNR=16
BOSA LR LR 18 07 28.8
comp=Z,5μm,19.3s,baz=19,slow=35
BOSA Boshof 54.90 193 *e*P **P** 17 44 33.4 +0.7
comp=Z,238nm,1.9s
KBS Kingsbay 54.98 354 *e*P P 17 44 29.1 -3.5
KBS *e*S **S** 17 52 14.6 +1.0
KBS *e*SS **SS** 17 56 02.6 +5.9
KBS AMS AMS 18 11 34.1
comp=Z,2μm,14.4s
KBS Kingsbay 54.98 354 *e*P **P** 17 44 32.4 -0.2
KBS pmax pmax
comp=Z,117nm,2.5s
KBS Kingsbay 54.98 354 PFAKE 17 44 40.0 +7.4
KBS LR LR
comp=Z,2μm,20.0s
KBS Kingsbay 54.98 354 *e*P **P** 17 44 32.4 -0.2
comp=Z,117nm,2.5s
KBS *e*S **S** 17 52 14.6 +1.0
SNR=24
ZAK Zakamensk 55.51 45 *e*P **P** 17 44 36.6 -0.4
ZAK pmax pmax
comp=Z,33nm,1.5s
ZAK Zakamensk 55.51 45 *e*P **P** 17 44 36.6 -0.4
comp=Z,33nm,1.5s
TLY Talaya 55.77 43 *d* iP **P** 17 44 39.6 +0.8
TLY *e* 17 45 39.0
TLY *e* 17 46 39.1
TLY *e*PPP PPP 17 47 53.0
TLY *e*S **S** 17 52 25.7 +0.6
TLY *e*PS **PnS** 17 52 33.1 -2.4
TLY *e*SS **SS** 17 56 11.0 +0.7
TLY pmax pmax
comp=Z,97nm,1.9s
TLY MLR MLR
comp=Z,4μm,19.0s
TLY Talaya 55.77 43 P **P** 17 44 39.9 +1.1
comp=Z,179nm,1.2s,SNR=32
TLY Talaya 55.77 43 *i* P **P** 17 44 39.6 +0.8
comp=Z,97nm,1.9s
TLY Talaya 55.77 43 *e*PcP **PcP** 17 45 39.0 +1.2

TLY eS **S** 17 52 25.7 +0.6
IRK Irkutsk 56.18 43 eP **P** 17 44 40.9 -0.8
IRK e 17 46 42.5
IRK pmax pmax
comp=Z,282nm,2.4s
IRK Irkutsk 56.18 43 eP **P** 17 44 40.9 -0.8
comp=Z,282nm,2.4s
SCO Scoresbysund 56.42 340⇓iP **P** 17 44 43.6 +0.6
SCO MLR MLR
comp=Z,860nm,21.0s
SCO Scoresbysund 56.42 340⇓iP **P** 17 44 43.6 +0.6
comp=Z,5.7nm,1.1s
SCO
comp=Z,860nm,21.0s
SCO Scoresbysund 56.42 340⇓iP **P** 17 44 43.6 +0.6
comp=Z,5.7nm,1.1s
CHTO Chiang Mai 56.67 83 eP **P** 17 44 45.1 -0.5
CHTO pmax pmax
comp=Z,19nm,1.0s
CHTO MLR MLR
comp=Z,3µm,20.0s
CHTO Chiang Mai 56.67 83 eP **P** 17 44 45.1 -0.5
comp=Z,4.6nm,1.0s
CHTO LR LR
comp=Z,3µm,20.0s
CHTO Chiang Mai 56.67 83 P **P** 17 44 46.1 +0.5
SNR=24
CHTO Chiang Mai 56.67 83 P P 17 44 41.7 -3.9
comp=Z,33nm,2.5s,comp=Z,1µm
CHTO Chiang Mai 56.67 83 eP **P** 17 44 45.1 -0.5
comp=Z,4.6nm,1.0s
CMMT Chiang Mai 56.67 83 P **P** 17 44 43.1 -2.6
comp=Z,30nm,2.5s,comp=Z,1µm
CM31 Chiang Mai Arr 56.78 84 eP **P** 17 44 45.7 -0.8
comp=Z,44nm,1.3s
CM31 Chiang Mai Arr 56.78 84 eP **P** 17 44 45.7 -0.8
comp=Z,44nm,1.3s
CMAR Chiang Mai Arr 56.78 84 P **P** 17 44 46.0 -0.4
CMAR Chiang Mai Arr 56.78 84 P **P** 17 44 46.0 -0.4
comp=Z,12nm,0.9s,baz=292,slow=8.3,SNR=66
CMAR LR LR 18 14 02.2
comp=Z,3µm,18.6s,baz=283,slow=41
CMAR Chiang Mai Arr 56.78 84 P **P** 17 44 46.1 -0.4
comp=Z,3µm,18.6s
LZH Lanzhou 56.89 62⇓P **P** 17 44 47.4 +0.2
LZH pP **pP** 17 44 50.0 -2.2
LZH sP **sP** 17 44 52.1 -2.0
LZH S **S** 17 52 39.0 -1.6
LZH pmax pmax
comp=Z,59nm,1.1s
LZH pmax pmax
comp=Z,990nm,4.0s
LZH LR LR
comp=N,5µm,16.7s
LZH LR LR
comp=E,9µm,18.5s
LZH LR LR
comp=Z,16µm,20.3s
SONM Songino Array 57.60 48 P **P** 17 44 52.4 +0.5
SONM Songino Array 57.60 48 P **P** 17 44 52.4 +0.5
comp=Z,23nm,0.9s,baz=265,slow=8.6,SNR=30
SONM LR LR 18 12 20.3
comp=Z,3µm,19.0s,baz=266,slow=39
SONM Songino Array 57.60 48 P **P** 17 44 52.4 +0.5
CD2 Chengdu 57.76 68 P **P** 17 44 54.0 +0.8
CD2 pP **pP** 17 44 58.9 +0.7
CD2 sP **sP** 17 45 01.0 +0.9
CD2 PcP **PcP** 17 45 47.0 +1.0
CD2 PP **PP** 17 47 03.5 +2.3
CD2 PcS **PcS** 17 49 46.8 -0.6
CD2 S **S** 17 52 51.4 -0.5
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,360nm,5.1s
CD2 LR LR
comp=N,3µm,18.6s
CD2 LR LR
comp=E,5µm,21.5s
CD2 LR LR
comp=Z,6µm,23.0s
ULN Ulaanbaatar 58.04 48 eP **P** 17 44 54.8 -0.3
comp=Z,276nm,2.3s
ULN LR LR
comp=Z,3µm,21.0s
ULN Ulaanbaatar 58.04 48 P **P** 17 44 55.5 +0.4
SNR=32
ULN Ulaanbaatar 58.04 48 P **P** 17 44 53.2 -1.9
comp=Z,36nm,2.2s,comp=Z,1µm
ULN Ulaanbaatar 58.04 48 eP **P** 17 44 54.8 -0.3
comp=Z,276nm,2.3s
DAG Danmarks Havn 58.11 347⇓iP **P** 17 44 54.0 -0.9
DAG MLR MLR
comp=Z,970nm,16.0s
DAG Danmarks Havn 58.11 347⇓iP **P** 17 44 54.0 -0.9
comp=Z,6.9nm,0.9s
DAG
comp=Z,960nm,16.0s
DAG Danmarks Havn 58.11 347 *i* P **PcP** 17 45 46.7 +0.3
comp=Z,9.6nm,0.9s
SACV Santiago Islan 58.11 272 PFAKE 17 45 10.0 +14
SACV LR LR
comp=Z,2µm,20.0s
KMI Kunming 58.24 75 P **P** 17 44 56.9 0.0
KMI pP pP 17 45 08.3 +6.4
KMI PP **PP** 17 47 04.8 -1.0
KMI S **S** 17 52 55.4 -3.4
KMI pmax pmax
comp=Z,65nm,2.0s
KMI pmax pmax
comp=Z,1µm,4.8s
KMI LR LR
comp=N,1µm,16.6s
KMI LR LR
comp=E,2µm,16.1s
KMI LR LR
comp=Z,3µm,17.2s
SRDT SRDT 58.32 88 P **P** 17 44 55.6 -1.7
SHEL Horse Pasture 58.95 231 PFAKE 17 45 10.0 +8.4
SHEL LR LR
comp=Z,5µm,20.0s
PBKT Sadao Pong 59.22 85 P **P** 17 45 01.2 -2.4
SUR Sutherland 59.55 197 P **P** 17 45 07.0 +1.3
SUR LR LR
comp=Z,8µm,20.0s
SUR Sutherland 59.55 197 P **P** 17 45 07.0 +1.3
comp=Z,17nm,0.9s,baz=354,slow=7.1,SNR=6.8
SUR Sutherland 59.55 197 P **P** 17 45 07.0 +1.3
BTO Baotou 60.97 56 eP **P** 17 45 15.3 -0.1
GYA Guiyang 61.30 72⇑iP **P** 17 45 19.0 +1.2
GYA PP **PP** 17 47 35.6 +2.8
GYA ScP **ScP** 17 50 02.1 +0.7
GYA S **S** 17 53 38.9 +1.0
GYA SS **SS** 17 57 39.8 +1.6
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,170nm,5.3s
GYA LR LR
comp=N,3µm,21.8s
GYA LR LR
comp=E,2µm,22.0s
GYA LR LR
comp=Z,3µm,20.5s
XAN Xi'an 61.36 64 P **P** 17 45 17.6 -0.5
XAN pP **pP** 17 45 20.8 -2.3
XAN PP **PP** 17 47 32.6 -0.5
XAN S **S** 17 53 36.3 -2.1
XAN pmax pmax
comp=Z,8.0nm,1.4s
XAN pmax pmax
comp=Z,110nm,4.4s
XAN LR LR
comp=N,3µm,19.9s
XAN LR LR
comp=E,2µm,20.9s
XAN LR LR
comp=Z,2µm,20.4s
CHBT CHBT 61.80 89 P **P** 17 45 19.8 -1.4
CIT Chita 61.90 43 eP **P** 17 45 21.6 +0.2
CIT *e* 17 45 33.5
CIT *e* 17 47 41.4
CIT pmax pmax
comp=Z,329nm,2.5s
CIT Chita 61.90 43 eP **P** 17 45 21.6 +0.2
comp=Z,329nm,2.5s

SUMG Summit 61.99 341⇓iP **P** 17 45 22.2 +0.1
SUMG pmax pmax
comp=Z,17nm,0.8s
SUMG MLR MLR
comp=Z,930nm,16.0s
SUMG Summit 61.99 341 eP **P** 17 45 22.0 -0.1
comp=Z,109nm,1.4s
SUMG ePcP **PcP** 17 46 02.7 +0.1
SUMG Summit 61.99 341⇓iP **P** 17 45 22.2 +0.1
comp=Z,17nm,0.8s
SUMG
comp=Z,920nm,16.0s
SUMG Summit 61.99 341 *i* P **PcP** 17 46 03.7 +1.1
comp=Z,13nm,0.8s
SUMG Summit 61.99 341 *i* P **P** 17 45 22.2 +0.1
comp=Z,930nm,16.0s
HHC Hu-ho-hao-te 62.09 56⇑eP **P** 17 45 24.0 +1.1
HHC pP **pP** 17 45 28.6 +0.6
HHC sP **sP** 17 45 31.0 +1.2
HHC PP **PP** 17 47 42.8 +3.4
HHC PcS **PcS** 17 50 05.9 -0.5
HHC S **S** 17 53 46.3 -1.2
HHC ScS **SKKSac** 17 55 11.6 -3.1
HHC pmax pmax
comp=Z,230nm,2.5s
HHC pmax pmax
comp=Z,300nm,4.0s
HHC LR LR
comp=N,5µm,21.6s
HHC LR LR
comp=E,3µm,25.0s
HHC LR LR
comp=Z,5µm,31.5s
ENH Enshi 62.71 68 eP **P** 17 45 25.1 -2.1
comp=Z,87nm,1.5s
ENH LR LR
comp=Z,5µm,20.0s
ENH Enshi 62.71 68 eP **P** 17 45 25.1 -2.1
comp=Z,87nm,1.5s
PSI Prapat 62.81 100 P **P** 17 45 29.3 +1.1
PSI Prapat 62.81 100 P **P** 17 45 29.3 +1.1
comp=Z,28nm,0.9s,baz=276,slow=6.8,SNR=21
KULM Kulim 63.27 97 eP **P** 17 45 31.3 +0.3
comp=Z,712nm,2.0s
KULM LR LR
comp=Z,2µm,21.0s
KULM Kulim 63.27 97 P **P** 17 45 31.8 +0.8
KULM Kulim 63.27 97 eP **P** 17 45 31.3 +0.3
comp=Z,712nm,2.0s
TIY Taiyuan 63.36 59 eP **P** 17 45 31.3 -0.2
TIY S **S** 17 54 03.3 -0.3
TIY LR LR
comp=N,3µm,15.6s
TIY LR LR
comp=E,3µm,14.8s
TIY LR LR
comp=Z,5µm,15.4s
UBPT Khong Chiam 63.73 85 P **P** 17 45 31.8 -2.2
IPM Ipoh 63.95 98 eP **P** 17 45 34.6 -1.0
comp=Z,33nm,0.9s
IPM Ipoh 63.95 98 P **P** 17 45 35.5 -0.1
IPM Ipoh 63.95 98 eP **P** 17 45 34.6 -1.0
comp=Z,33nm,0.9s
FRIM Kepong 65.03 99 P **P** 17 45 43.2 +0.6
KTGM Kuala Trenggan 65.49 96 P **P** 17 45 46.6 +1.1
BJI Beijing 65.70 56 P **P** 17 45 46.4 -0.1
BJI PP **PP** 17 48 09.8 -1.2
BJI S **S** 17 54 32.8 +0.7
BJI SS **SS** 17 58 47.6 +1.5
BJI pmax pmax
comp=Z,38nm,2.2s
BJI pmax pmax
comp=Z,690nm,5.6s
BJI LR LR
comp=E,6µm,18.6s
BJI LR LR
comp=N,5µm,15.5s
BJI LR LR
comp=Z,5µm,19.6s
BJT Baijiatuau 65.70 56 PFAKE 17 46 00.0 +13
BJT LR LR
comp=Z,7µm,20.0s
HIA Hailar 66.21 45 eP **P** 17 45 49.6 -0.1
comp=Z,165nm,1.9s
HIA LR LR
comp=Z,6µm,19.0s
HIA Hailar 66.21 45 eP **P** 17 45 49.7 -0.1
comp=Z,165nm,1.9s
QIZ Qiongzhong 66.35 79 P **P** 17 45 51.0 -0.1
QIZ S **S** 17 54 42.1 +1.4
QIZ pmax pmax
comp=Z,68nm,1.4s
QIZ pmax pmax
comp=Z,520nm,5.2s
QIZ LR LR
comp=N,2µm,15.4s
QIZ LR LR
comp=E,1µm,17.1s
QIZ LR LR
comp=Z,2µm,17.8s
QIZ Qiongzhong 66.35 79 eP **P** 17 45 51.0 -0.1
comp=Z,226nm,1.8s
QIZ LR LR
comp=Z,2µm,19.0s
QIZ Qiongzhong 66.35 79 eP **P** 17 45 51.0 -0.1
comp=Z,226nm,1.8s
SFJD Kangerlussuaq 66.41 335 eP **P** 17 45 49.0 -1.6
comp=Z,53nm,1.3s
SFJD LR LR
comp=Z,1µm,20.0s
SFJD Kangerlussuaq 66.41 335⇓iP **P** 17 45 50.3 -0.3
comp=Z,22nm,0.8s
SFJD Kangerlussuaq 66.41 335 eP **P** 17 45 49.0 -1.6
comp=Z,53nm,1.3s
ALE Alert 66.43 352 P **P** 17 45 50.0 -0.6
comp=Z,141nm,1.2s,SNR=9.5
TIXI Tiksi 66.61 20*d* iP **P** 17 45 51.2 -0.7
TIXI pmax pmax
comp=Z,96nm,2.5s
TIXI Tiksi 66.61 20 *i* P **P** 17 45 51.2 -0.7
comp=Z,96nm,2.5s
WHN Wuhan 66.68 66 P **P** 17 45 53.6 +0.6
WHN S **S** 17 54 46.6 +2.2
WHN pmax pmax
comp=Z,130nm,1.2s
WHN pmax pmax
comp=Z,2µm,4.8s
WHN LR LR
comp=N,4µm,12.2s
WHN LR LR
comp=E,5µm,13.8s
WHN LR LR
comp=Z,9µm,18.6s
KGM Kluang 67.09 99 P **P** 17 45 56.7 +0.9
TIA Tai'an 67.37 59 P **P** 17 45 57.6 +0.3
TIA S **S** 17 54 57.9 +5.3
TIA LR LR
comp=N,5µm,14.9s
TIA LR LR
comp=E,7µm,18.4s
TIA LR LR
comp=Z,8µm,17.2s
MYKOM Kota Tinggi 67.66 99 P **P** 17 46 00.0 +0.5
CLNS Chul'man 67.70 36 eP **P** 17 45 59.0 -0.1
CLNS *e* 17 46 17.6
CLNS *e* 17 48 27.8
CLNS ePPP PPP 17 50 05.0
CLNS eS **S** 17 55 01.4 +5.5
CLNS pmax pmax
comp=Z,8.0nm,1.4s
CLNS pmax pmax
comp=N,36nm,1.1s
CLNS pmax pmax
comp=E,18nm,1.2s
CLNS pmax pmax
comp=N,7.0nm,1.5s
CLNS pmax pmax
comp=E,10.0nm,1.5s
CLNS pmax pmax
comp=Z,9.0nm,1.3s
CLNS smax smax
comp=E,781nm,13.9s
CLNS smax smax
comp=N,741nm,15.1s
CLNS MLR MLR
comp=Z,2µm,17.0s

CLNS MLR MLR
comp=Z,3µm,17.0s
CLNS MLR MLR
comp=N,1µm,18.0s
CLNS Chul'man 67.70 36 eP **P** 17 45 59.0 -0.1
comp=N,36nm,1.1s
GZH Guangzhou 68.09 74 P **P** 17 46 03.3 +1.2
GZH S **S** 17 55 04.3 +2.7
GZH LR LR
comp=N,2µm,18.5s
GZH LR LR
comp=E,2µm,15.2s
GZH LR LR
comp=Z,4µm,16.8s
COCO West Island 68.53 116 PFAKE 17 46 20.0 +15
COCO LR LR
comp=Z,1µm,21.0s
YAK Yakutsk 68.90 30*c* iP **P** 17 46 05.3 -1.2
YAK *e* 17 46 29.1
YAK *e* 17 48 35.1
YAK ePPP PPP 17 50 17.9
YAK eS **S** 17 55 04.2 -5.7
YAK *e* 17 56 03.4
YAK eSS **SS** 17 59 29.9 -4.8
YAK pmax pmax
comp=Z,27nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK pmax pmax
comp=E,19nm,1.3s
YAK pmax pmax
comp=Z,156nm,3.2s
YAK pmax pmax
comp=E,174nm,3.3s
YAK smax smax
comp=N,165nm,5.0s
YAK smax smax
comp=E,596nm,6.2s
YAK MLR MLR
comp=Z,5µm,14.0s
YAK MLR MLR
comp=N,635nm,12.0s
YAK MLR MLR
comp=E,3µm,14.0s
YAK Yakutsk 68.90 30 *i* P **P** 17 46 05.3 -1.2
comp=E,9.0nm,1.4s
YAK Yakutsk 68.90 30 ePcP **PcP** 17 46 29.1 -1.7
comp=E,156nm,3.2s
NJ2 Nanjing 69.93 63 eP **P** 17 46 13.9 +0.5
NJ2 pP **pP** 17 46 18.6 +0.2
NJ2 sP **sP** 17 46 20.9 +0.6
NJ2 PP PP 17 48 54.9 +7.0
NJ2 S **S** 17 55 24.0 +1.0
NJ2 sS **sS** 17 55 32.0 +0.6
NJ2 pmax pmax
comp=Z,50nm,1.2s
NJ2 pmax pmax
comp=Z,820nm,4.0s
NJ2 LR LR
comp=N,3µm,17.5s
NJ2 LR LR
comp=E,6µm,19.5s
NJ2 LR LR
comp=Z,8µm,19.3s
DL2 Dalian 70.06 56⇓P **P** 17 46 14.3 +0.2
DL2 PP **PP** 17 48 51.4 +2.5
DL2 S **S** 17 55 22.4 -2.0
DL2 pmax pmax
comp=Z,110nm,1.3s
DL2 pmax pmax
comp=Z,560nm,3.6s
DL2 LR LR
comp=Z,3µm,17.9s
SNY Shenyang 70.65 52⇓P **P** 17 46 16.8 -0.8
SNY S **S** 17 55 28.9 -2.3
SNY pmax pmax
comp=Z,520nm,5.4s
SNY LR LR
comp=N,2µm,17.9s
SNY LR LR
comp=E,4µm,15.6s
SNY LR LR
comp=Z,4µm,14.7s
CN2 Changchun 71.39 50 eP **P** 17 46 22.0 -0.1
CN2 esP **sP** 17 46 29.0 0.0
CN2 eS **S** 17 55 37.3 -2.4
CN2 pmax pmax
comp=Z,40nm,1.2s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,8µm,16.0s
CN2 LR LR
comp=E,2µm,16.0s
CN2 LR LR
comp=Z,3µm,14.0s
QZH Quanzhou 72.00 70⇓iP **P** 17 46 27.3 +1.2
QZH S **S** 17 55 47.4 +0.1
QZH pmax pmax
comp=Z,1µm,3.4s
QZH LR LR
comp=N,2µm,12.9s
QZH LR LR
comp=E,3µm,14.4s
QZH LR LR
comp=Z,7µm,19.9s
SSE Sheshan 72.12 64⇓P **P** 17 46 26.5 -0.2
SSE S **S** 17 55 49.3 +0.8
SSE ScS **ScS** 17 56 33.3 +0.7
SSE pmax pmax
comp=Z,31nm,0.8s
SSE pmax pmax
comp=Z,350nm,3.8s
SSE LR LR
comp=N,910nm,18.9s
SSE LR LR
comp=E,3µm,19.0s
SSE LR LR
comp=Z,4µm,19.9s
KSM Kuching 73.60 96 eP **P** 17 46 36.1 +0.4
comp=Z,204nm,1.9s
KSM LR LR
comp=Z,1µm,20.0s
KSM Kuching 73.60 96 P **P** 17 46 36.5 +0.8
KSM Kuching 73.60 96 eP **P** 17 46 36.1 +0.4
comp=Z,204nm,1.9s
KLR Kul'dur 73.79 43 eP P 17 46 31.0 -5.3
KLR *e* 17 49 20.0
KLR eS **SKiKP** 17 56 00.0 -5.1
KLR eSS **SS** 18 00 45.5 -4.7
KLR pmax pmax
comp=E,120nm,2.2s
KLR pmax pmax
comp=Z,180nm,2.2s
MDJ Mudanjiang 73.95 48 P **P** 17 46 35.8 -1.5
MDJ S **S** 17 56 07.9 -1.1
MDJ ScS **SKKSac** 17 56 45.4 +1.1
MDJ pmax pmax
comp=Z,21nm,2.2s
MDJ pmax pmax
comp=Z,200nm,4.5s
MDJ LR LR
comp=N,430nm,21.0s
MDJ LR LR
comp=E,4µm,15.7s
MDJ LR LR
comp=Z,6µm,19.7s
MDJ Mudanjiang 73.95 48 eP **P** 17 46 36.0 -1.3
comp=Z,208nm,2.3s
MDJ LR LR
comp=Z,5µm,19.0s
MDJ Mudanjiang 73.95 48 eP **P** 17 46 36.0 -1.3
comp=Z,208nm,2.3s
INCN Inchon 74.25 56 eP **P** 17 46 38.7 -0.5
comp=Z,3.9nm,0.5s
INCN LR LR
comp=Z,5µm,19.0s
INCN Inchon 74.25 56 P **P** 17 46 39.8 +0.5
SNR=7.2
INCN Inchon 74.25 56 eP **P** 17 46 38.7 -0.5
comp=Z,3.9nm,0.5s
TPUB Ta-pu 74.32 71 eP **P** 17 46 41.3 +1.4
comp=Z,101nm,1.6s
TPUB Ta-pu 74.32 71 eP **P** 17 46 41.3 +1.4
comp=Z,101nm,1.6s
SSLB Suanglung 74.42 71 eP **P** 17 46 41.8 +1.3

comp=Z,118nm,2.0s
SSLB Suanglung 74.42 71 *e*P **P** 17 46 41.8 +1.3
comp=Z,118nm,2.0s
TATO Taipei 74.45 69 PFAKE 17 46 50.0 +9.4
TATO LR LR
comp=Z,3µm,20.0s
YHNB Yeheng 74.47 70 *e*P **P** **17 46 41.7 +1.0**
comp=Z,125nm,1.9s
YHNB LR LR
comp=Z,4µm,20.0s
YHNB Yeheng 74.47 70 *e*P **P** **17 46 41.7 +1.0**
comp=Z,125nm,1.9s
NACB Ninganchiao 74.83 70 P **P** **17 46 40.9 -1.9**
NACB Ninganchiao 74.83 70 P **P** **17 46 40.9 -1.9**
YULB Yu-li 74.86 71 *e*P **P** **17 46 44.5 +1.5**
comp=Z,14nm,0.8s
YULB Yu-li 74.86 71 *e*P **P** **17 46 44.5 +1.5**
comp=Z,14nm,0.8s
SBUM Sibu 74.90 94 P **P** **17 46 44.1 +0.8**
SBUM Sibu 74.90 94 P **P** **17 46 44.3 +1.0**
KSAR Wonju Array Be 75.20 55 P **P** **17 46 44.2 -0.5**
KSAR Wonju Array Be 75.20 55 P **P** **17 46 44.2 -0.5**
KSRS Korea Array 75.23 55 P **P** **17 46 44.2 -0.6**
comp=Z,13nm,0.8s,baz=284,slow=6.0,SNR=66
KSRS LR LR 18 24 30.4
comp=Z,3µm,20.0s,baz=281,slow=40
KSRS Korea Array 75.23 55 P **P** **17 46 44.2 -0.6**
comp=Z,3µm,20.0s
USRK Ussuriysk Arra 75.71 48 P **P** **17 46 46.1 -1.4**
comp=Z,22nm,0.8s,baz=280,slow=5.5,SNR=54
USRK LR LR 18 24 50.7
comp=Z,5µm,18.1s,baz=277,slow=40
RES Resolute Bay 75.76 348 *e*P **P** **17 46 46.5 -0.7**
RES Resolute Bay 75.76 348 *e*P **P** **17 46 46.5 -0.7**
HABR Khabarovsk 76.09 43 *e*P **P** **17 46 48.5 -1.1**
HABR *e**PP **PcP** **17 46 58.9 -2.9**
HABR *e* 17 47 00.5
HABR *e**SP **PcP** **17 47 03.0 +1.2**
HABR *e* 17 49 38.7
HABR *e*PPP PPP 17 51 25.0
HABR *e*S **S** **17 56 29.5 -3.1**
HABR *e**SS sS 17 56 46.8 +5.8
HABR 17 56 59.8
HABR *e*SS **SS** **18 01 22.9 -2.2**
HABR *e*SSS SSS 18 04 46.3
HABR pmax pmax
comp=N,42nm,1.8s
HABR pmax pmax
comp=Z,307nm,2.7s
HABR pmax pmax
comp=E,83nm,1.8s
HABR MLR MLR
comp=N,2µm,15.0s
HABR MLR MLR
comp=Z,3µm,13.0s
HABR MLR MLR
comp=E,3µm,14.0s
HABR Khabarovsk 76.09 43 *e*P **P** **17 46 48.5 -1.1**
comp=E,307nm,2.7s
HABR Khabarovsk 76.09 43 *e*PcP **PcP** **17 47 03.0 +1.2**
KKM Kota Kinabalu 77.02 89 *e*P **P** **17 46 56.2 +0.7**
comp=E,21nm,0.8s
KKM LR LR
comp=Z,1µm,21.0s
KKM Kota Kinabalu 77.02 89 *e*P **P** **17 46 56.2 +0.7**
comp=Z,21nm,0.8s
SCHQ Schefferville 77.64 325 *e*P **P** **17 46 57.8 -0.4**
comp=Z,199nm,1.9s
SCHQ Schefferville 77.64 325 P **P** **17 46 57.9 -0.4**
comp=Z,15nm,1.0s,baz=68,slow=6.2,SNR=28
SCHQ LR LR 18 22 52.4
comp=Z,427nm,18.6s,baz=264,slow=37
SCHQ Schefferville 77.64 325 *e*P **P** **17 46 57.8 -0.4**
comp=Z,199nm,1.9s
RCBR Riachuelo 77.84 258 *e*P **P** **17 47 01.9 +1.8**
comp=Z,6.1nm,0.8s
RCBR Riachuelo 77.84 258 LR LR 18 18 37.1
comp=Z,6µm,21.5s,baz=249,slow=34
SDKM Sandakan 78.07 89 P **P** **17 47 01.8 +0.4**
SEY Seymchan 78.18 25 *d i*P **P** **17 47 02.2 +1.2**
SEY Seymchan 78.18 25 *i*P **P** **17 47 02.2 +1.2**
JNU Nakatsue 79.08 59 *e*P **P** **17 47 05.3 -1.3**
comp=Z,16nm,1.1s
JNU Nakatsue 79.08 59 LR LR 18 28 02.1
comp=Z,2µm,18.4s,baz=294,slow=40
JNU Nakatsue 79.08 59 *e*P **P** **17 47 05.3 -1.3**
comp=Z,16nm,1.1s
MYLDM Lahad Datu 79.44 89 P **P** **17 47 09.2 +0.4**
BILL Bilibino 79.56 17⇑ *e*P **P** **17 47 08.9 +0.3**
BILL *i*S **S** **17 57 08.8 -0.7**
BILL *i*SS **SS** **18 02 16.8 +0.4**
BILL pmax pmax
comp=Z,54nm,1.3s
BILL Bilibino 79.56 17 *e*P **P** **17 47 08.9 +0.3**
comp=Z,54nm,1.3s
BILL *i*S **S** **17 57 08.8 -0.7**
YSS Yuzh-Sakhalins 81.45 42⇑ *e*P **P** **17 47 20.0 +1.0**
YSS *e* 17 47 28.0
YSS *e* 17 50 26.0
YSS *e*S **S** **17 57 28.0 -1.9**
YSS *e* 17 57 35.0
YSS *e*PS **PnS** **17 58 11.0 -6.6**
YSS *e*SS **SS** **18 02 47.0 +1.5**
YSS pmax pmax
comp=Z,40nm,1.1s
YSS Yuzh-Sakhalins 81.45 42 *e*P **P** **17 47 20.0 +1.0**
comp=Z,40nm,1.1s
PQI Presque Isle 82.06 318 *e*P **P** **17 47 22.3 0.0**
comp=Z,305nm,1.9s
PQI Presque Isle 82.06 318 *e*P **P** **17 47 22.3 0.0**
comp=Z,305nm,1.9s
ASAJ Asahikawa 82.68 45 LR LR 18 26 13.5
comp=Z,1µm,20.2s,baz=129,slow=37
MAJO Matsushiro 83.14 53 *e*P **P** **17 47 27.4 -0.8**
MAJO pmax pmax
comp=Z,223nm,2.2s
MAJO MLR MLR
comp=Z,1µm,20.0s
MAJO Matsushiro 83.14 53 *e*P **P** **17 47 27.4 -0.8**
comp=Z,37nm,2.2s
MAJO LR LR
comp=Z,827nm,20.0s
MAJO Matsushiro 83.14 53 *e*P **P** **17 47 27.4 -0.8**
comp=Z,37nm,2.2s
MAT Matsushiro 83.14 53 P **P** **17 47 27.0 -1.2**
MAT S **S** **17 57 44.0 -3.8**
MJAR Matsushiro Arr 83.14 53 P **P** **17 47 27.8 -0.4**
MJAR Matsushiro Arr 83.14 53 P **P** **17 47 27.8 -0.4**
comp=Z,9.0nm,1.1s,baz=287,slow=5.0,SNR=22
MJAR LR LR 18 29 13.1
comp=Z,1µm,20.8s,baz=275,slow=39
MJAR Matsushiro Arr 83.14 53 P **P** **17 47 27.8 -0.4**
comp=Z,448nm,1.8s
CTBH Cotabato--PC H 83.79 85⇑ *i*P **P** **17 47 32.6 +0.8**
ERM Erimo 84.04 46 PFAKE 17 47 40.0 +7.4
ERM LR LR
comp=Z,3µm,21.0s
YUK Yuzh-Kuril'sk 84.78 44 *d i*P **P** **17 47 36.5 +0.2**
YUK *i*PPP PPP 17 52 48.5
YUK *i*S **S** **17 57 57.9 -5.9**
YUK *i*SS **SS** **18 03 36.9 +2.0**
YUK pmax pmax
comp=Z,681nm,1.7s
YUK pmax pmax
comp=N,92nm,0.9s
YUK pmax pmax
comp=E,133nm,0.9s
YUK pmax pmax
comp=Z,448nm,1.8s
YUK Yuzh-Kuril'sk 84.78 44 *i*P **P** **17 47 36.5 +0.2**
comp=Z,448nm,1.8s
KAPI Kappang 84.90 98 *e*P **P** **17 47 36.6 -0.8**
comp=Z,98nm,1.4s
KAPI Kappang 84.90 98 P **P** **17 47 36.8 -0.6**
SNR=18
KAPI Kappang 84.90 98 P **P** **17 47 36.6 -0.8**
comp=Z,254nm,1.4s,SNR=27
KAPI Kappang 84.90 98 P **P** **17 47 35.1 -2.3**
KAPI Kappang 84.90 98 LR LR 18 25 02.2
comp=Z,3µm,21.4s,baz=104,slow=35
KAPI Kappang 84.90 98 P **P** **17 47 36.8 -0.6**
SNR=18
DAV Davao City (W) 85.06 85 LR LR 18 31 24.0
comp=Z,1µm,21.9s,baz=199,slow=40
LBNH Lisbon 85.66 317 *e*P **P** **17 47 41.4 +0.7**
LBNH pmax pmax
comp=Z,435nm,2.0s
LBNH MLR MLR
comp=Z,944nm,19.0s
LBNH Lisbon 85.66 317 *e*P **P** **17 47 41.4 +0.7**
comp=Z,435nm,2.0s
LBNH LR LR
comp=Z,944nm,19.0s
LBNH Lisbon 85.66 317 *e*P **P** **17 47 41.4 +0.7**
comp=Z,435nm,2.0s
HNH Hanover 86.16 317 *e*P **P** **17 47 44.3 +1.1**
comp=Z,50nm,1.0s
HNH Hanover 86.16 317 *e*P **P** **17 47 44.3 +1.1**
comp=Z,50nm,1.0s
PETK Petropavlovsk- 86.21 32 P **P** **17 47 42.4 -0.9**
PETK MLR MLR
comp=Z,3µm,19.6s
PETK Petropavlovsk- 86.21 32 P **P** **17 47 42.4 -0.9**
PETK Petropavlovsk- 86.21 32 P **P** **17 47 42.4 -0.9**
comp=Z,7.0nm,0.9s,baz=306,slow=3.4,SNR=3.9
PETK LR LR 18 31 22.9
comp=Z,3µm,19.6s,baz=306,slow=39
PETK Petropavlovsk- 86.21 32 P **P** **17 47 42.4 -0.9**
WES Weston 86.24 315 *e*P **P** **17 47 44.4 +0.8**
WES pmax pmax
comp=Z,126nm,1.3s
WES Weston 86.24 315 *e*P **P** **17 47 44.4 +0.8**
comp=Z,68nm,1.3s
WES Weston 86.24 315 *e*P **P** **17 47 44.4 +0.8**
comp=Z,68nm,1.3s
HRV Adam Dziewonsk 86.32 316 *e*P **P** **17 47 44.3 +0.2**
HRV pmax pmax
comp=Z,9.0nm,0.6s
HRV Adam Dziewonsk 86.32 316 *e*P **P** **17 47 44.3 +0.2**
comp=Z,8.7nm,0.6s
HRV Adam Dziewonsk 86.32 316 *e*P **P** **17 47 44.3 +0.2**
comp=Z,8.7nm,0.6s
FRNY Flat Rock 86.35 318 *e*P **P** **17 47 44.5 +0.3**
comp=Z,78nm,1.7s
FRNY Flat Rock 86.35 318 *e*P **P** **17 47 44.5 +0.3**
comp=Z,78nm,1.7s
INK Inuvik 86.49 357 LR LR 18 32 36.3
comp=Z,662nm,19.1s,baz=11,slow=40
BBSR BB Station 86.52 304 PFAKE 17 48 00.0 +15
BBSR LR LR
comp=Z,2µm,22.0s
BRYW Bryant College 86.61 315 *e*P **P** **17 47 46.4 +0.8**
comp=Z,58nm,1.2s
BRYW Bryant College 86.61 315 *e*P **P** **17 47 46.4 +0.8**
comp=Z,58nm,1.2s
PET Petropavlovsk 86.71 31 *e*P **P** **17 47 45.7 0.0**
PET *e*S S 17 58 16.0 -6.4
PET *e*PS **PnS** **17 59 18.9 -2.6**
PET *e*SS **SS** **18 04 05.3 +2.6**
PET Petropavlovsk 86.71 31 *e*P **P** **17 47 45.7 0.0**
QUA2 Belchertown 86.94 316 *e*P **P** **17 47 47.9 +0.7**
comp=Z,74nm,1.8s
QUA2 Belchertown 86.94 316 *e*P **P** **17 47 47.8 +0.7**
comp=Z,74nm,1.8s
LONY Lake Ozonia 87.07 319 *e*P **P** **17 47 47.9 +0.2**
comp=Z,164nm,2.4s
LONY LR LR
comp=Z,774nm,20.0s
LONY Lake Ozonia 87.07 319 *e*P **P** **17 47 47.9 +0.2**
comp=Z,164nm,2.4s
ACCN Adirondack Com 87.18 317 *e*P **P** **17 47 48.1 -0.1**
comp=Z,261nm,2.2s
ACCN Adirondack Com 87.18 317 *e*P **P** **17 47 48.1 -0.1**
comp=Z,261nm,2.2s
NCB Newcomb 87.20 318 *e*P **P** **17 47 48.4 0.0**
comp=Z,122nm,2.1s
NCB LR LR
comp=Z,704nm,20.0s
NCB Newcomb 87.20 318 *e*P **P** **17 47 48.4 0.0**
comp=Z,122nm,2.1s
TNA Tin City 87.34 10 *e*P **P** **17 47 48.2 -0.3**
comp=Z,477nm,2.7s
TNA Tin City 87.34 10 *e*P **P** **17 47 48.2 -0.3**
comp=Z,477nm,2.7s
TRY Troy 87.53 317 P **P** **17 47 49.5 -0.4**
TRY Troy 87.53 317 P **P** **17 47 49.5 -0.4**
COLD Coldfoot 87.61 3 *e*P **P** **17 47 50.3 +0.5**
comp=Z,290nm,2.1s
COLD Coldfoot 87.61 3 *e*P **P** **17 47 50.3 +0.5**
comp=Z,290nm,2.1s
GAMB Gambell 88.28 13 *e*P **P** **17 47 53.4 +0.3**
comp=Z,203nm,2.4s
GAMB Gambell 88.28 13 *e*P **P** **17 47 53.3 +0.3**
comp=Z,203nm,2.4s
BINY Binghamton 89.25 317 PFAKE 17 48 10.0 +12
BINY LR LR
comp=Z,795nm,22.0s
SADO Sadowa 89.66 321 LR LR 18 28 36.8
comp=Z,522nm,18.5s,baz=258,slow=36
YKW3 Yellowknife Ar 89.75 348 *e*P **P** **17 47 59.5 -0.5**
YKW3 Yellowknife Ar 89.75 348 *e*P **P** **17 47 59.5 -0.5**
YKA Yellowknife Ar 89.81 348 P **P** **17 48 00.1 -0.1**
YKA PKKPbc **PKKPbc** **18 05 32.0 -1.9**
YKA Yellowknife Ar 89.81 348 P **P** **17 48 00.1 -0.1**
comp=Z,11nm,1.0s,baz=28,slow=5.0,SNR=73
YKA PKKPbc **PKKPbc** **18 05 32.0 -1.9**
comp=Z,0.6nm,0.7s,baz=195,slow=2.8,SNR=9.5
YKA Yellowknife Ar 89.81 348 P **P** **17 48 00.2 -0.1**
COLA College 90.06 2 *e*P **P** **17 48 00.9 -0.5**
COLA pmax pmax
comp=Z,282nm,2.3s
COLA MLR MLR
comp=Z,884nm,21.0s
COLA College 90.06 2 *e*P **P** **17 48 00.9 -0.5**
comp=Z,75nm,2.3s
COLA LR LR
comp=Z,884nm,21.0s
COLA College 90.06 2 *e*P **P** **17 48 00.9 -0.5**
comp=Z,75nm,2.3s
ILAR Eielson Array 90.19 2 P **P** **17 48 02.4 +0.3**
ILAR PP **PP** **17 51 37.8 +2.9**
ILAR PKKPbc **PKKPbc** **18 05 30.5 -2.6**
ILAR Eielson Array 90.19 2 P **P** **17 48 02.4 +0.3**
comp=Z,3.8nm,0.8s,baz=333,slow=3.4,SNR=25
ILAR PP **PP** **17 51 37.8 +2.9**
comp=Z,2.0nm,1.0s,baz=352,slow=6.4,SNR=6.3
ILAR PKKPbc **PKKPbc** **18 05 30.5 -2.6**
comp=Z,1.5nm,0.9s,baz=191,slow=3.3,SNR=10
ILAR LR LR 18 29 40.6
comp=Z,675nm,21.5s,baz=343,slow=36
ILAR Eielson Array 90.19 2 P **P** **17 48 02.4 +0.3**
comp=Z,4.0nm,0.8s
EGAK Eagle 90.26 360 *e*P **P** **17 48 02.8 +0.4**
comp=Z,364nm,2.0s
EGAK LR LR
comp=Z,718nm,20.0s
EGAK Eagle 90.26 360 *e*P **P** **17 48 02.8 +0.4**
comp=Z,364nm,2.0s
ANWB Willy Bob 90.87 290 PFAKE 17 48 20.0 +14
ANWB LR LR
comp=Z,2µm,20.0s
BBGH Gun Hill 90.95 285 PFAKE 17 48 20.0 +13
BBGH LR LR
comp=Z,2µm,20.0s
MCK McKinley 91.15 3 *e*P **P** **17 48 06.4 -0.2**
MCK pmax pmax
comp=Z,234nm,2.2s
MCK McKinley 91.15 3 *e*P **P** **17 48 06.4 -0.2**
comp=Z,234nm,2.2s
MCK McKinley 91.15 3 *e*P **P** **17 48 06.4 -0.2**
comp=Z,234nm,2.2s
SSPA Standing Stone 91.32 317 *e*P **P** **17 48 07.3 -0.5**
comp=Z,124nm,2.1s
SSPA Standing Stone 91.32 317 *e*P **P** **17 48 07.3 -0.5**
comp=Z,124nm,2.1s
TRF Thorofare Moun 91.36 4 *e*P **P** **17 48 07.1 -0.6**
comp=Z,120nm,1.9s
TRF Thorofare Moun 91.36 4 *e*P **P** **17 48 07.1 -0.6**
comp=Z,120nm,1.9s
DOT Dot Lake 91.38 1 *e*P **P** **17 48 08.3 +0.6**
comp=Z,209nm,2.3s
DOT Dot Lake 91.38 1 *e*P **P** **17 48 08.3 +0.6**
comp=Z,209nm,2.3s
FDF Fort de France 91.63 287 PFAKE 17 48 20.0 +10
FDF LR LR
comp=Z,1µm,19.0s
ERPA Erie 91.73 319 PFAKE 17 48 20.0 +10
ERPA LR LR
comp=Z,753nm,20.0s
PPLA Purkeypile 91.79 5 *e*P **P** **17 48 10.6 +0.9**
comp=Z,20nm,1.4s
PPLA Purkeypile 91.79 5 *e*P **P** **17 48 10.6 +0.9**
comp=Z,20nm,1.4s
MBWA Marble Bar 91.96 112 PFAKE 17 48 20.0 +9.0
MBWA LR LR
comp=Z,1µm,21.0s
MENT Mentasta 92.10 1 *e*P **P** **17 48 11.5 +0.5**
MENT Mentasta 92.10 1 *e*P **P** **17 48 11.5 +0.5**
CBN Corbin 92.39 314 PFAKE 17 48 20.0 +7.2
CBN LR LR
comp=Z,948nm,20.0s
BDFB Brasilia 92.84 254 P **P** **17 48 16.0 +0.7**
BDFB Brasilia 92.84 254 P **P** **17 48 16.0 +0.7**
comp=Z,6.9nm,0.8s,baz=49,slow=8.6,SNR=7.4
BDFB LR LR 18 32 19.5
comp=Z,2µm,18.1s,baz=56,slow=37
BDFB Brasilia 92.84 254 P **P** **17 48 16.0 +0.7**
FX1 Attu Island--F 93.05 25 LR LR 18 37 22.4
comp=Z,2µm,18.1s,baz=330,slow=40
FFC Flin Flon 93.16 338 *ce*P **P** **17 48 15.8 -0.2**
FFC Flin Flon 93.16 338 *e*P **P** **17 48 15.6 -0.4**
comp=Z,18nm,1.3s
FFC *e*PP PP 17 51 52.2 -6.3
FFC LR LR
comp=Z,2µm,19.0s
FFC Flin Flon 93.16 338 P **P** **17 48 15.9 -0.1**
comp=Z,108nm,1.5s,SNR=13
FFC Flin Flon 93.16 338 *e*P **P** **17 48 15.8 -0.2**
GRGR Grenville 93.23 285 PFAKE 17 48 30.0 +13
GRGR LR LR
comp=Z,610nm,22.0s
PMR Palmer 93.28 3 *e*P **P** **17 48 16.0 -0.4**
PMR pmax pmax
comp=Z,17nm,1.0s
PMR Palmer 93.28 3 *e*P **P** **17 48 16.0 -0.4**
comp=Z,17nm,1.0s
PMR Palmer 93.28 3 *e*P **P** **17 48 16.0 -0.4**
comp=Z,17nm,1.0s
EYMN Ely 94.08 329 PFAKE 17 48 30.0 +10
EYMN LR LR
comp=Z,919nm,21.0s
COWI Conover 94.22 326 *e*P **P** **17 48 20.2 -0.9**
comp=Z,102nm,1.8s
COWI LR LR
comp=Z,928nm,19.0s
COWI Conover 94.22 326 *e*P **P** **17 48 20.2 -0.9**
comp=Z,102nm,1.8s
ULM Lac du Bonnet 94.35 332 P **P** **17 48 20.0 -1.5**
ULM Lac du Bonnet 94.35 332 P **P** **17 48 20.0 -1.5**
comp=Z,3.3nm,0.7s,baz=47,slow=6.5,SNR=4.5
ULM LR LR 18 34 27.7
comp=Z,582nm,19.6s,baz=298,slow=38
ULM Lac du Bonnet 94.35 332 P **P** **17 48 20.0 -1.5**
SJG San Juan 94.36 292 PFAKE 17 48 30.0 +7.8
SJG LR LR
comp=Z,2µm,22.0s
CNNC Cliffs of the 94.42 312 PFAKE 17 48 30.0 +7.8
CNNC LR LR
comp=Z,2µm,22.0s
MAW Mawson 94.46 171 P **P** **17 48 23.0 +1.7**
MAW Mawson 94.46 171 P **P** **17 48 23.0 +1.7**
comp=Z,4.3nm,0.9s,baz=18,slow=7.2,SNR=5.5
MAW LR LR 18 32 40.9
comp=Z,995nm,18.2s,baz=334,slow=37
MAW Mawson 94.46 171 P **P** **17 48 23.0 +1.7**
ACSO Alum Creek Sta 94.67 319 PFAKE 17 48 30.0 +6.7
ACSO LR LR
comp=Z,827nm,19.0s
SEW Seward 94.75 4 *e*P **P** **17 48 23.6 +0.5**
comp=Z,24nm,1.2s
SEW Seward 94.75 4 *e*P **P** **17 48 23.6 +0.5**
comp=Z,24nm,1.2s
BLA Blacksburg 94.93 315 PFAKE 17 48 30.0 +5.4
BLA LR LR
comp=Z,946nm,22.0s
NWAO Narrogin (SRO) 95.19 124 PFAKE 17 48 40.0 +14
NWAO LR LR
comp=Z,1µm,19.0s
FITZ Fitzroy Crossi 95.69 107 LR LR 18 29 54.5
comp=Z,660nm,19.8s,baz=325,slow=34
SPB Sao Paulo 95.70 247 PFAKE 17 48 40.0 +12
SPB LR LR
comp=Z,2µm,20.0s
AGMN Agassiz Nation 95.81 331 PFAKE 17 48 40.0 +12
AGMN LR LR
comp=Z,846nm,19.0s
DLBC Dease Lake 96.00 354 *e*P **P** **17 48 28.3 -0.8**
DLBC Dease Lake 96.00 354 LR LR 18 33 29.8
comp=Z,504nm,22.0s,baz=6.1,slow=37
DLBC Dease Lake 96.00 354 *e*P **P** **17 48 28.3 -0.8**
SPMN St. Paul 96.66 327 P **P** **17 48 31.8 -0.4**
baz=96
KDAK Kodiak Island 96.83 6 PFAKE 17 48 40.0 +7.4
KDAK LR LR
comp=Z,1µm,20.0s
JFWS Jewell Farm 96.99 324 PFAKE 17 48 40.0 +6.2
JFWS LR LR
comp=Z,707nm,21.0s
TKL Tuckaleechee C 98.02 315 LR LR 18 35 25.9
comp=Z,519nm,22.0s,baz=72,slow=37
HDIL Hopedale 98.10 322 PFAKE 17 48 50.0 +11
HDIL LR LR
comp=Z,1µm,21.0s
SDDR Presa de Saban 98.19 295 PFAKE 17 48 50.0 +10
SDDR LR LR
comp=Z,2µm,21.0s
WRAK Wrangell Islan 98.22 354 PFAKE 17 48 50.0 +11
WRAK LR LR
comp=Z,537nm,21.0s
DGMT Dagmar 99.08 335 PFAKE 17 48 50.0 +6.9
DGMT LR LR
comp=Z,643nm,20.0s
GUMO Guam 99.20 70 LR LR 18 40 51.6
comp=Z,726nm,18.9s,baz=110,slow=40
SCIA State Center 99.26 325 PFAKE 17 48 50.0 +6.0
SCIA LR LR
comp=Z,992nm,20.0s
ECSD EROS Data Cent 99.60 328 *e*P **Pdif** **17 48 44.2 -1.3**
comp=Z,12nm,1.3s
ECSD LR LR
comp=Z,822nm,21.0s
ECSD EROS Data Cent 99.60 328 *e*P **Pdif** **17 48 44.2 -1.3**
comp=Z,12nm,1.3s
SNAA Sanae 100.66 192 PP PP 17 52 59.2 +2.1
SNAA Sanae 100.66 192 PP PP 17 52 59.2 +2.1
baz=39,slow=14
GTBY Guantanamo Bay 100.80 298 PFAKE 17 49 00.0 +8.8
GTBY LR LR
comp=Z,2µm,21.0s
A16A West Butte Ran 101.22 340 P **Pdif** **17 48 52.0 -0.7**
baz=101
EGMT Eagleton 101.43 338 PFAKE 17 49 00.0 +6.3
EGMT LR LR
comp=Z,885nm,22.0s
C19A Slack Wire Ran 101.45 338 P **Pdif** **17 48 53.4 -0.3**
baz=101
LRAL Lakeview Retre 101.74 315 PFAKE 17 49 10.0 +15
LRAL LR LR
comp=Z,804nm,20.0s
A14A Double T Ranch 101.75 341 P **Pdif** **17 48 54.8 -0.3**
baz=101
B15A Bradely Ranch, 102.08 340 P **Pdif** **17 48 55.6 -0.9**
baz=102
OXF Oxford 102.27 318 PFAKE 17 49 10.0 +13
OXF LR LR
comp=Z,615nm,21.0s
B13A Whitefish 102.59 341 P **Pdif** **17 48 58.2 -0.6**
baz=102
C14A Swan Lake 102.92 341 P **Pdif** **17 48 59.8 -0.5**
baz=103
KSU1 Kansas State U 103.07 325 PFAKE 17 49 10.0 +9.0
KSU1 LR LR
comp=Z,1µm,22.0s
BRAL Brewton 103.08 314 PFAKE 17 49 10.0 +8.8
BRAL LR LR
comp=Z,1µm,19.0s
NEW Newport 103.42 343 PFAKE 17 49 10.0 +7.6
NEW LR LR
comp=Z,1µm,20.0s
SAML Samuel 103.62 266 PFAKE 17 49 10.0 +6.2
SAML LR LR
comp=Z,2µm,19.0s
MTDJ Mount Denham 103.64 298 PFAKE 17 49 10.0 +6.0
MTDJ LR LR
comp=Z,2µm,20.0s
D13A Huson 103.74 341 P **Pdif** **17 49 03.3 -0.7**
baz=103
RLMT Red Lodge 103.78 337 PFAKE 17 49 10.0 +5.7
RLMT LR LR
comp=Z,1µm,19.0s

MSO	**Missoula**	**103.82**	**340**	PFAKE		17 49 10.0		+5.7
MSO				LR	LR			
	comp=Z,586nm,21.0s							
WRA	**Warramunga Arr**	**103.97**	**106**	Pdif	**Pdif**	**17 49 05.0**		**-0.3**
WRA				PP	**PP**	**17 53 23.1**		**+0.1**
WRA				PKKPbc	**PKKPbc**	**18 04 55.4**		**+0.8**
WRA	**Warramunga Arr**	**103.97**	**106**	Pdiff	**Pdif**	**17 49 05.0**		**-0.3**
	comp=Z,0.9nm,0.8s,baz=308,slow=3.6,SNR=9.6							
WRA				PP	**PP**	**17 53 23.1**		**+0.1**
	comp=Z,2.2nm,1.0s,baz=291,slow=7.7,SNR=7.8							
WRA				PKKPbc	**PKKPbc**	**18 04 55.4**		**+0.8**
	comp=Z,0.8nm,0.9s,baz=118,slow=2.5,SNR=5.0							
WRA	**Warramunga Arr**	**103.97**	**106**	P	**Pdif**	**17 49 05.0**		**-0.3**
	comp=Z,1.0nm,0.8s							
WRA	**Warramunga Arr**	**103.97**	**106**	PP	PP	17 53 23.1		0.0
WRAB	**Tennant Creek**	**103.98**	**106**	PFAKE		17 49 20.0		+15
WRAB				LR	LR			
	comp=Z,737nm,20.0s							
D12A	**Red Ives Fores**	**104.04**	**341**	P	**Pdif**	**17 49 04.3**		**-1.0**
	baz=104							
BOZ	**Bozeman (W)**	**104.14**	**338**	PFAKE		17 49 20.0		+14
BOZ				LR	LR			
	comp=Z,1μm,20.0s							
OGNE	**Ogallala**	**104.29**	**330**	PFAKE		17 49 20.0		+13
OGNE				LR	LR			
	comp=Z,703nm,20.0s							
VBMS	**Vicksburg**	**104.50**	**317**	PFAKE		17 49 20.0		+13
VBMS				LR	LR			
	comp=Z,1μm,19.0s							
I19A	**Meeteetse**	**104.61**	**336**	P	**Pdif**	**17 49 06.7**		**-1.3**
	baz=104							
LKWY	**Lake**	**104.66**	**337**	PFAKE		17 49 20.0		+12
LKWY				LR	LR			
	comp=Z,2μm,19.0s							
ASAR	**Alice Springs**	**104.96**	**109**	Pdif	**Pdif**	**17 49 10.0**		**+0.4**
ASAR				PKiKP	**PKiKP**	**17 53 24.5**		**-0.1**
ASAR				PKKPbc	**PKKPbc**	**18 04 52.5**		**+0.8**
ASAR	**Alice Springs**	**104.96**	**109**	Pdiff	**Pdif**	**17 49 10.0**		**+0.4**
	comp=Z,0.7nm,0.8s,baz=305,slow=4.7,SNR=10							
ASAR				PKiKP	**PKiKP**	**17 53 24.5**		**-0.1**
	comp=Z,1.7nm,0.9s,baz=297,slow=1.7,SNR=11							
ASAR				PKKPbc	**PKKPbc**	**18 04 52.5**		**+0.8**
	comp=Z,0.7nm,0.9s,baz=122,slow=3.2,SNR=5.6							
ASAR	**Alice Springs**	**104.96**	**109**	P	**Pdif**	**17 49 10.0**		**+0.4**
	comp=Z,1.0nm,0.8s							
ASAR	**Alice Springs**	**104.96**	**109**	PKiKP	**PKiKP**	**17 53 24.5**		**-0.1**
HAWA	**Hanford**	**105.78**	**344**	PFAKE		17 53 40.0		
HAWA				LR	LR			
	comp=Z,707nm,21.0s							
NLWA	**Neilton Lookou**	**105.81**	**347**	PFAKE		17 53 40.0		
NLWA				LR	LR			
	comp=Z,622nm,20.0s							
BW06	**Boulder Array**	**105.91**	**336**	PFAKE		17 53 40.0		
BW06				LR	LR			
	comp=Z,944nm,19.0s							
PDAR	**Pinedale Array**	**105.91**	**336**	PKiKP	**PKiKP**	**17 53 25.6**		**-0.7**
PDAR				PKKPab	**PKKPab**	**18 05 05.8**		**-2.7**
PDAR	**Pinedale Array**	**105.91**	**336**	PKiKP	**PKiKP**	**17 53 25.6**		**-0.7**
	comp=Z,0.5nm,0.5s,baz=350,slow=4.6,SNR=4.1							
PDAR				PKKPab	**PKKPab**	**18 05 05.8**		**-2.7**
	comp=Z,2.1nm,0.9s,baz=182,slow=5.2,SNR=11							
PDAR	**Pinedale Array**	**105.91**	**336**	PKiKP	**PKiKP**	**17 53 25.5**		**-0.7**
CASY	**Casey**	**106.24**	**156**	PFAKE		17 53 40.0		
CASY				LR	LR			
	comp=Z,1μm,20.0s							
AHID	**Auburn Hatcher**	**106.48**	**337**	PFAKE		17 53 40.0		
AHID				LR	LR			
	comp=Z,710nm,20.0s							
BMO	**Blue Mountains**	**106.61**	**342**	PFAKE		17 53 40.0		
BMO				LR	LR			
	comp=Z,820nm,21.0s							
ISCO	**Idaho Springs**	**106.82**	**331**	PFAKE		17 53 40.0		
ISCO				LR	LR			
	comp=Z,924nm,22.0s							
HLID	**Hailey**	**106.90**	**339**	PFAKE		17 53 40.0		
HLID				LR	LR			
	comp=Z,956nm,20.0s							
WMOK	**Wichita Mounta**	**107.50**	**324**	PFAKE		17 53 40.0		
WMOK				LR	LR			
	comp=Z,698nm,20.0s							
HWUT	**Hardware Ranch**	**107.66**	**336**	PFAKE		17 53 40.0		
HWUT				LR	LR			
	comp=Z,636nm,20.0s							
SDCO	**Great Sand Dun**	**108.46**	**330**	PFAKE		17 53 40.0		
SDCO				LR	LR			
	comp=Z,852nm,19.0s							
AMTX	**Amarillo**	**108.91**	**326**	PFAKE		17 53 40.0		
AMTX				LR	LR			
	comp=Z,815nm,19.0s							
WVOR	**Wild Horse Val**	**109.21**	**342**	PFAKE		17 53 40.0		
WVOR				LR	LR			
	comp=Z,946nm,21.0s							
DUG	**Dugway**	**109.35**	**336**	PFAKE		17 53 40.0		
DUG				LR	LR			
	comp=Z,612nm,20.0s							
BCIP	**Isla Barro Col**	**110.31**	**291**	PFAKE		17 53 50.0		
BCIP				LR	LR			
	comp=Z,566nm,22.0s							
MVU	**Marysvale**	**110.61**	**335**	PFAKE		17 53 50.0		
MVU				LR	LR			
	comp=Z,907nm,19.0s							
BMN	**Battle Mountai**	**110.62**	**340**	PFAKE		17 53 50.0		
BMN				LR	LR			
	comp=Z,557nm,19.0s							
TEIG	**Tepich**	**110.76**	**306**	PFAKE		17 53 50.0		
TEIG				LR	LR			
	comp=Z,1μm,21.0s							
ANMO	**Albuquerque**	**111.19**	**329**	PFAKE		17 53 50.0		
ANMO				LR	LR			
	comp=Z,708nm,19.0s							
JCT	**Junction City**	**111.27**	**321**	PFAKE		17 53 50.0		
JCT				LR	LR			
	comp=Z,855nm,21.0s							
Z26A	**Caprock**	**111.34**	**326**	P		17 53 36.6		
	baz=111							
PMG	**Port Moresby**	**111.44**	**90**	PFAKE		17 53 50.0		
PMG				LR	LR			
	comp=Z,538nm,19.0s							
531A	**Rocksprings**	**111.93**	**322**	P		17 53 37.6		
	baz=112							
X21A	**Alamocita Cree**	**112.22**	**330**	P		17 53 38.9		
	baz=112							
530A	**J-C Ranch, Com**	**112.38**	**322**	P		17 53 38.4		
	baz=112							
U15A	**North Rim**	**112.45**	**334**	P		17 53 39.4		
	baz=112							
Y21A	**Point of Rocks**	**112.53**	**329**	P		17 53 39.4		
	baz=112							
124A	**Stringfield Ra**	**112.54**	**327**	P		17 53 38.8		
	baz=112							
428A	**Kincaid Ranch,**	**112.67**	**324**	P		17 53 39.4		
	baz=112							
TPH	**Tonopah**	**112.77**	**339**	PFAKE		17 53 50.0		
TPH				LR	LR			
	comp=Z,713nm,19.0s							
NVAR	**Mina Array Bea**	**112.79**	**340**	PKiKP	**PKiKP**	**17 53 40.7**		**+1.4**
NVAR				PKKPbc	**PKKPbc**	**18 04 27.9**		**+0.3**
NVAR	**Mina Array Bea**	**112.79**	**340**	PKiKP	**PKiKP**	**17 53 40.7**		**+1.4**
	comp=Z,1.9nm,0.8s,baz=264,slow=1.7,SNR=7.1							
NVAR				PKKPbc	**PKKPbc**	**18 04 27.9**		**+0.3**
	comp=Z,1.2nm,0.8s,baz=198,slow=5.9,SNR=4.8							
NVAR	**Mina Array Bea**	**112.79**	**340**	PKiKP	**PKiKP**	**17 53 40.7**		**+1.4**
WUAZ	**Wupatki**	**112.87**	**333**	PFAKE		17 53 50.0		
WUAZ				LR	LR			
	comp=Z,835nm,20.0s							
EFI	**East Falkland**	**112.91**	**222**	PFAKE		17 53 50.0		
EFI				LR	LR			
	comp=Z,4μm,19.0s							
Y20A	**Horse Springs,**	**112.94**	**330**	P		17 53 40.0		
	baz=113							
427A	**Hayter Ranch,**	**112.96**	**324**	P		17 53 40.1		
	baz=113							
224A	**Cornudas Mount**	**113.08**	**327**	P		17 53 41.0		
	baz=113							
528A	**Cox Ranch, San**	**113.17**	**323**	P		17 53 40.0		
	baz=113							
MNTX	**Cornudas Mount**	**113.31**	**326**	PFAKE		17 53 50.0		
MNTX				LR	LR			
	comp=Z,613nm,20.0s							
426A	**McDonald Obser**	**113.43**	**324**	P		17 53 40.9		
	baz=113							
WAKE	**Wake Island**	**113.43**	**53**	PFAKE		17 53 50.0		
WAKE				LR	LR			
	comp=Z,975nm,21.0s							
OTAV	**Otavalo**	**113.47**	**282**	PFAKE		17 53 50.0		
OTAV				LR	LR			
	comp=Z,747nm,19.0s							
527A	**Woodward Ranch**	**113.62**	**324**	P		17 53 41.5		
	baz=113							
Z20A	**Nine Sixteen R**	**113.70**	**329**	P		17 53 42.2		
	baz=113							
TGUH	**Tegucigalpa,Un**	**113.71**	**300**	PFAKE		17 53 50.0		
TGUH				LR	LR			
	comp=Z,679nm,20.0s							
628A	**Black Gap, Mar**	**113.75**	**323**	P		17 53 41.5		
	baz=114							
121A	**Cookes Peak, D**	**113.80**	**329**	P		17 53 42.3		
	baz=114							
222A	**Williams Famil**	**113.83**	**328**	P		17 53 42.7		
	baz=114							
X16A	**Lo Mia Camp, P**	**113.84**	**332**	P		17 53 42.6		
	baz=114							
526A	**Mary Lane Ranc**	**113.94**	**324**	P		17 53 42.5		
	baz=114							
JTS	**JuntasAbangare**	**113.97**	**295**	PFAKE		17 53 50.0		
JTS				LR	LR			
	comp=Z,691nm,19.0s							
STKA	**Stephens Creek**	**114.03**	**115**	*e*PKPdf	PKPdf	17 53 41.6		+0.2
STKA	**Stephens Creek**	**114.03**	**115**	PKP	PKPdf	17 53 42.1		+0.7
	comp=Z,7.6nm,0.8s,baz=347,slow=3.9,SNR=21							
627A	**Terlingua Ranc**	**114.05**	**323**	P	PKPdf	17 53 41.6		-0.2
	baz=114							
FURC	**Furnace Creek,**	**114.10**	**338**	P	PKPdf	17 53 41.8		+0.3
120A	**U Bar Ranch, L**	**114.19**	**329**	P	PKPdf	17 53 42.6		+0.6
	baz=114							
W13A	**Hualapai Mount**	**114.24**	**335**	P	PKPdf	17 53 43.1		+0.9
	baz=114							
TXAR	**Lajitas Array**	**114.29**	**323**	PKP	PKPdf	17 53 41.9		-0.3
TXAR				PKKPbc	**PKKPbc**	**18 04 22.0**		**-0.1**
TXAR				PKKPab	**PKKPab**	**18 04 29.9**		**-0.8**
TXAR	**Lajitas Array**	**114.29**	**323**	PKP	PKPdf	17 53 41.9		-0.3
	comp=Z,1.1nm,0.8s,baz=78,slow=2.0,SNR=9.5							
TXAR				PKKPbc	**PKKPbc**	**18 04 22.0**		**-0.1**
	comp=Z,0.6nm,0.8s,baz=184,slow=6.1,SNR=3.8							
TXAR				PKKPab	**PKKPab**	**18 04 29.9**		**-0.8**
	comp=Z,0.5nm,0.7s,baz=201,slow=5.3,SNR=4.6							
626A	**Big Bend Ranch**	**114.37**	**324**	P	PKPdf	17 53 42.5		+0.2
	baz=114							
CTAO	**Charters Tower**	**114.51**	**102**	*e*PKIKP	PKPdf	17 53 43.6		+1.0
CTAO				MLR	MLR			
	comp=Z,856nm,20.0s							
CTAO	**Charters Tower**	**114.51**	**102**	*e*PKPdf	PKPdf	17 53 43.6		+1.0
CTAO				LR	LR			
	comp=Z,856nm,20.0s							
220A	**Playas Peak, P**	**114.67**	**329**	P	PKPdf	17 53 44.1		+1.1
	baz=114							
PDMCI	**Parker Dam,Lak**	**115.04**	**335**	P	**PKPdf**	**17 53 45.0**		**+1.6**
	baz=115							
QSPA	**South Pole Qui**	**115.13**	**180**	PKP	**PKPdf**	**17 53 41.5**		**-1.0**
QSPA				PKKPbc	**PKKPbc**	**18 04 18.9**		**-1.6**
QSPA	**South Pole Qui**	**115.13**	**180**	PKP	**PKPdf**	**17 53 41.5**		**-1.0**
	comp=Z,8.3nm,1.0s,baz=271,slow=2.5,SNR=17							
QSPA				PKKPbc	**PKKPbc**	**18 04 18.9**		**-1.6**
	comp=Z,3.2nm,0.8s,baz=43,slow=2.1,SNR=11							
320A	**Kipp Ranch, An**	**115.15**	**328**	P	**PKPdf**	**17 53 45.2**		**+1.3**
	baz=115							
TUC	**Tucson**	**115.36**	**331**	PFAKE		17 53 50.0		+5.8
TUC				LR	LR			
	comp=Z,659nm,21.0s							
319A	**Douglas**	**115.47**	**329**	P	**PKPdf**	**17 53 45.8**		**+1.4**
	baz=115							
IRM	**Iron Mountain**	**115.55**	**335**	P	**PKPdf**	**17 53 46.2**		**+1.7**
	baz=115							
PFO	**Pinyon Flat Ob**	**116.53**	**336**	PFAKE		17 54 00.0		+14
PFO				LR	LR			
	comp=Z,726nm,21.0s							
MIDW	**Midway**	**117.00**	**35**	PFAKE		17 54 00.0		+13
MIDW				LR	LR			
	comp=Z,1μm,22.0s							
LCO	**Las Campanas**	**117.13**	**249**	PFAKE		17 54 00.0		+12
LCO				LR	LR			
	comp=Z,2μm,20.0s							
MONP	**Monument Peak**	**117.16**	**336**	P	**PKPdf**	**17 53 48.8**		**+1.0**
	baz=117							
NNA	**Nana**	**117.16**	**269**	PKP	**PKPdf**	**17 53 48.9**		**+1.0**
NNA				LR	LR			
	comp=Z,2μm,21.0s							
NNA	**Nana**	**117.16**	**269**	PKP	**PKPdf**	**17 53 48.9**		**+1.0**
	comp=Z,3.6nm,0.4s,baz=185,slow=1.9,SNR=3.8							
NNA	**Nana**	**117.16**	**269**	PKiKP	**PKPdf**	**17 53 48.9**		**+1.0**
PMSA	**Palmer Station**	**117.57**	**208**	PFAKE		17 54 00.0		+13
PMSA				LR	LR			
	comp=Z,3μm,21.0s							
PLCA	**Paso Flores**	**119.48**	**236**	PKP	**PKPdf**	**17 53 53.5**		**+1.8**
PLCA	**Paso Flores**	**119.48**	**236**	PKP	**PKPdf**	**17 53 53.5**		**+1.8**
	comp=Z,2.2nm,0.8s,baz=135,slow=2.9,SNR=2.8							
PLCA	**Paso Flores**	**119.48**	**236**	PKiKP	**PKPdf**	**17 53 53.5**		**+1.8**
TAU	**Tasmania Unive**	**120.70**	**126**	PFAKE		17 54 00.0		+6.1
TAU				LR	LR			
	comp=Z,812nm,19.0s							
CAN	**Canberra**	**120.83**	**117**	PFAKE		17 54 00.0		+5.6
CAN				LR	LR			
	comp=Z,830nm,20.0s							
VNDA	**Vanda**	**121.64**	**168**	PKP	**PKPdf**	**17 53 57.2**		**+2.5**
VNDA	**Vanda**	**121.64**	**168**	PKP	**PKPdf**	**17 53 57.2**		**+2.5**
	comp=Z,1.9nm,0.9s,baz=358,slow=3.5,SNR=8.2							
SBA	**Scott Base**	**122.37**	**169**	PFAKE		17 54 10.0		+14
SBA				LR	LR			
	comp=Z,2μm,19.0s							
HNR	**Honiara**	**123.02**	**85**	PFAKE		17 54 10.0		+11
HNR				LR	LR			
	comp=Z,541nm,21.0s							
PAYG	**Puerto Ayora**	**124.27**	**288**	PFAKE		17 54 10.0		+8.4
PAYG				LR	LR			
	comp=Z,715nm,20.0s							
TARA	**Tarawa**	**129.19**	**65**	PFAKE		17 54 20.0		+9.0
TARA				LR	LR			
	comp=Z,739nm,21.0s							
DZM	**Mont Dzumac**	**133.12**	**97**	*e*LR	LR	18 36 45.8		
	comp=Z,971nm,22.4s							
MSVF	**Nonsavu**	**142.40**	**87**	PFAKE		17 54 50.0		+15
MSVF				LR	LR			
	comp=Z,750nm,20.0s							
XMAS	**Kiritimati**	**149.11**	**31**	PFAKE		17 55 00.0		+4.7
XMAS				LR	LR			
	comp=Z,1μm,20.0s							
AFI	**Afiamalu**	**150.04**	**73**	PFAKE		17 55 00.0		+0.8
AFI				LR	LR			
	comp=Z,1μm,19.0s							
PPT2	**Papeete2**	**169.76**	**43**	*e*LR	LR	18 53 38.7		
	comp=Z,2μm,24.8s							
RKT	**Rikitea**	**173.03**	**286**	*e*LR	LR	18 55 13.6		
	comp=Z,2μm,27.5s							
TBI	**Tubuai**	**173.14**	**75**	*e*LR	LR	18 55 14.9		
	comp=Z,2μm,32.8s							

IDC 19 17:50:28.2±8.2, 21°35S×68°44W, h109km±54km, mb3.5/3, mb1 3.6/5, mb1mx3.4/18, mbtmp3.5/5, Error ellipse: s-maj=78.3km s-min=28.9km az=38.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.04**	**3**	P	Pn	17 51 43.2	+0.8
	0.9nm,0.3s,baz=205,slow=5.4,SNR=14						
LPAZ				S	Sn	17 52 40.2	+0.2
	0.2nm,0.3s,baz=263,slow=9.1,SNR=2.5						
SIV	**San Ignacio**	**8.78**	**54**	P	Pn	17 52 30.7	-1.7
	5.4nm,0.3s,baz=261,slow=12,SNR=69						
BDFB	**Brasilia**	**20.18**	**77**	P	P	17 54 55.1	+0.8
	2.0nm,0.4s,baz=262,slow=7.1,SNR=3.0						
TORD	**Torodi Ar. Bea**	**76.89**	**70**	P	P	18 02 08.6	-0.3
	0.5nm,0.4s,baz=251,slow=5.2,SNR=12						
YKA	**Yellowknife Ar**	**91.19**	**340**	P	P	18 03 19.4	-1.0
	0.2nm,0.4s,baz=122,slow=4.2,SNR=4.3						
MKAR	**Makanchi Array**	**145.25**	**36**	PKPbc	PKPab	18 09 53.2	+0.1
	0.5nm,0.7s,baz=319,slow=2.3,SNR=6.8						

IDC 19 17:52:19.4±4.5, 58°79S×147°57W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/14, mbtmp3.6/2, Error ellipse: s-maj=799.0km s-min=110.0km az=176.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**64.17**	**267**	P	P	18 02 55.5	-0.1
	0.5nm,0.8s,baz=143,slow=7.1,SNR=11						
WRA	**Warramunga Arr**	**67.01**	**269**	P	P	18 03 14.1	+0.1
	0.6nm,0.9s,baz=149,slow=5.6,SNR=4.5						
MKAR	**Makanchi Array**	**148.31**	**270**	PKPbc	PKPbc	18 12 05.9	-0.6
	0.6nm,0.8s,baz=116,slow=3.4,SNR=5.9						

IDC 19 18:09:52.4±3.5, 27°50N×111°53W, h0km, mb3.3/2, mb1 3.8/5, mb1mx3.5/27, mbtmp3.4/5, ML4.3/2, MS3.4/1, Ms1 3.4/1, ms1mx3.0/16, Error ellipse: s-maj=54.1km s-min=16.8km az=11.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**7.16**	**73**	Pn	Pn	18 11 40.0	+1.4
	1.3nm,0.3s,baz=248,slow=14,SNR=26						
TXAR				Sn	Sn	18 12 58.2	-2.6
	baz=260,slow=27,SNR=3.1						
TXAR				Lg	Lg	18 13 39.4	
	1.8nm,0.3s,baz=253,slow=33,SNR=5.0						
TXAR				LR	LR	18 14 36.4	
	comp=Z,274nm,19.3s,baz=275,slow=40						
NVAR	**Mina Array Bea**	**12.29**	**334**	Pn	Pn	18 12 51.7	+2.7
	0.0nm,0.3s,baz=156,slow=3.4,SNR=3.4						
PDAR	**Pinedale Array**	**15.32**	**6**	Pn	P	18 13 33.6	-1.6
	0.2nm,0.3s,baz=185,slow=9.0,SNR=4.8						
PDAR				Lg	Lg	18 17 45.1	
	baz=173,slow=22,SNR=3.8						
INK	**Inuvik**	**42.90**	**348**	P	P	18 17 52.3	0.0
	0.6nm,0.9s,baz=158,slow=5.4,SNR=2.5						
ILAR	**Eielson Array**	**43.49**	**339**	P	P	18 17 56.2	-1.0
	0.3nm,0.9s,baz=132,slow=5.4,SNR=3.7						

IDC 19 18:12:18.8±2.2, 4°21S×149°08E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/18, mbtmp3.4/4, MS3.2/1, Ms1 3.2/1, ms1mx2.7/22, Error ellipse: s-maj=145.3km s-min=28.8km az=127.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.50**	**200**	Sn	Sn	18 14 45.8	-0.4
	0.4nm,0.3s,baz=230,slow=15,SNR=3.2						
PMG				LR	LR	18 16 01.6	
	comp=Z,213nm,19.6s,baz=295,slow=40						
WRA	**Warramunga Arr**	**21.23**	**221**	P	P	18 17 05.5	-1.1
	0.4nm,0.5s,baz=41,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**24.26**	**216**	P	P	18 17 38.2	+0.3
	0.4nm,0.8s,baz=50,slow=7.4,SNR=5.3						
FITZ	**Fitzroy Crossi**	**26.77**	**237**	P	P	18 18 01.0	+0.4
	0.1nm,0.4s,baz=55,slow=12,SNR=11						
ILAR	**Eielson Array**	**83.04**	**23**	P	P	18 24 45.9	0.0
	0.1nm,0.6s,baz=246,slow=5.8,SNR=4.6						

*ISCJB **19** 18:16:11.5±0.4, 38°39N±0°04×140°35E±0°05, h127km±3km, mb3.7/8, Error ellipse: s-maj=8.1km s-min=5.4km az=42.1*
*IDC **19** 18:16:11.4±1.9, 38°46N×140°49E, h115km±16km, mb3.4/8, mb1 3.5/12, mb1mx3.3/30, mbtmp3.4/12, MS4.2/1, Ms1 4.2/1, ms1mx3.2/27, Error ellipse: s-maj=28.0km s-min=13.5km az=79.0*
*JMA **19** 18:16:12.8±0.1, 38°37N×140°36E, h118km±1km, M3.2*

ISC 19 18:16:12.4±0.7, 38°39N±0°04×140°34E±0°05, h118km±5km, n29, σ1°42/44, mb3.7/8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOU	**Okura**	**0.26**	**94**	P	**Pn**	**18 16 29.5**	**+0.6**
JOU				*e*S	**Sn**	**18 16 42.2**	**+0.9**
JYS	**Shirataka**	**0.27**	**233**	P	**Pn**	**18 16 29.5**	**+0.6**
JYS				S	**Sn**	**18 16 42.3**	**+0.9**
JYK	**Kaneyama**	**0.53**	**2**	P	**Pn**	**18 16 30.9**	**+0.7**
JYK				S	**Sn**	**18 16 44.5**	**+0.8**
JYA	**Atsumi**	**0.53**	**293**	P	**Pn**	**18 16 31.0**	**+0.8**
JYA				S	**Sn**	**18 16 44.8**	**+1.1**
JMM	**Marumori**	**0.63**	**145**	P	**Pn**	**18 16 31.3**	**+0.4**
JMM				S	**Sn**	**18 16 45.4**	**+0.5**
JIO	**Ouri**	**0.80**	**85**	P	**Pn**	**18 16 32.4**	**+0.2**
JIO				S	**Sn**	**18 16 47.4**	**+0.2**
JAW	**Awa shima**	**0.86**	**275**	P	**Pn**	**18 16 33.5**	**+0.7**
JAW				S	**Sn**	**18 16 49.0**	**+0.8**
JFT	**Otama**	**0.87**	**180**	P	**Pn**	**18 16 33.7**	**+0.8**
JFT				S	**Sn**	**18 16 49.3**	**+0.9**
JMK	**Ichinoseki**	**0.89**	**50**	P	**Pn**	**18 16 33.7**	**+0.6**
JNS	**Sasagawa**	**0.99**	**235**	P	**Pn**	**18 16 34.6**	**+0.6**
JNS				S	**Sn**	**18 16 50.6**	**+0.2**
JRG	**Rokugo**	**1.03**	**13**	P	**Pn**	**18 16 35.6**	**+1.1**
JEY	**Yanaizu**	**1.10**	**207**	P	**Pn**	**18 16 35.9**	**+0.7**
JFK	**Kawauchi**	**1.10**	**157**	P	**Pn**	**18 16 35.4**	**+0.1**
JOM	**Ohasama**	**1.32**	**34**	P	**Pn**	**18 16 38.6**	**+1.1**
JOM				S	**Sn**	**18 16 58.1**	**+1.5**
JSD	**Sado**	**1.67**	**259**	P	**Pn**	**18 16 42.0**	**+0.3**
JSD				S	**Sn**	**18 17 03.9**	**-0.1**
MJAR	**Matsushiro Arr**	**2.50**	**223**	P	**Pn**	**18 16 53.3**	**+1.2**
	9.5nm,0.3s,baz=29,slow=13,SNR=165						
MJAR				S	**Sn**	**18 17 22.4**	**-0.2**
	1.1nm,0.3s,baz=50,slow=26,SNR=3.6						
MAT	**Matsushiro**	**2.50**	**223**	P	**Pn**	**18 16 53.2**	**+1.1**
MAT				S	**Sn**	**18 17 24.6**	**+2.0**
JHJ	**Hachijo jima 2**	**5.28**	**185**	P	**Pn**	**18 17 27.9**	**-1.0**
	9.2nm,0.3s,baz=69,slow=21,SNR=17						
JHJ				S	**Sn**	**18 18 23.8**	**-4.9**
	13nm,0.3s,baz=248,slow=23,SNR=7.1						
ASAJ	**Asahikawa**	**5.97**	**16**	P	**Pn**	**18 17 36.9**	**-1.4**
	2.3nm,0.3s,baz=224,slow=8.4,SNR=28						
ASAJ				S	**Sn**	**18 18 40.4**	**-4.9**
	0.2nm,0.3s,baz=239,slow=19,SNR=1.8						
JNU	**Nakatsue**	**9.31**	**239**	P	**Pn**	**18 18 24.2**	**+0.7**
	0.2nm,0.3s,baz=63,slow=4.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**40.38**	**311**	P	**P**	**18 23 37.1**	**-1.3**
	0.2nm,0.3s,baz=88,slow=12,SNR=2.4						
CMAR	**Chiang Mai Arr**	**41.05**	**253**	P	**P**	**18 23 45.4**	**+1.1**
	0.2nm,0.5s,baz=56,slow=7.5,SNR=3.1						
MKAR	**Makanchi Array**	**42.69**	**301**	P	**P**	**18 23 57.1**	**-0.3**
	0.3nm,0.4s,baz=83

OTT 19 18:34:07.3±1.6, 81°25'N×92°26'W, h18km, ML3.8/3, 182km northwest from Eureka, Nu, Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUNU	**Eureka**	**1.53**	**139**	PN	Pb	18 34 34.9	-0.4
EUNU				SN	Sb	18 34 55.3	+0.9
EUNU				Trac		18 34 59.3	
	comp=Z,70nm,0.2s						
RES	**Resolute Bay**	**6.62**	**186**	PN	Pn	18 35 42.1	-1.4
RES				SN	Sn	18 36 54.0	-4.4
RES				Trac		18 37 00.4	
	comp=Z,6.5nm,0.2s						
GIFN	**Gifford Fjord,**	**11.58**	**162**	PN	Pn	18 36 48.6	-2.8
GIFN				SN	Sn	18 38 49.0	-11
GIFN				Trac		18 39 16.4	
	comp=Z,6.0nm,0.8s						
AP3N	**Apex site 3 Nu**	**12.00**	**167**	PN	Pn	18 36 52.0	-5.1
AP3N				SN	Sn	18 38 59.1	-11
LAIN	**Lailor River,**	**12.38**	**165**	PN	Pn	18 37 00.8	-1.6
LAIN				SN	Sn	18 39 09.8	-10
CB31	**Cambridge Bay**	**12.56**	**202**	PN	Pn	18 37 04.8	0.0
CB31				SN	Sn	18 39 14.1	-10
CB31				Trac		18 39 19.2	
	comp=Z,2.1nm,0.2s						
SRLN	**Sarcpa Lake, N**	**12.95**	**165**	PN	Pn	18 37 07.2	-2.9
SRLN				SN	Sn	18 39 24.9	-8.5
KUGN	**Kugaaruk Camp,**	**13.24**	**176**	PN	Pn	18 37 12.0	-2.1
KUGN				SN	Sn	18 39 30.6	-10
STLN	**Stellar Camp,**	**14.02**	**181**	PN	Pn	18 37 22.1	-2.5
STLN				SN	Sn	18 39 49.7	-10
QILN	**Qililugaq Expl**	**14.75**	**171**	PN	Pn	18 37 30.9	-3.7
QILN				SN	Sn	18 40 03.8	-13
JERN	**Jeri Cho Mine,**	**16.05**	**209**	PN	Pn	18 37 49.9	-1.8
JERN				SN	Sn	18 40 34.7	-14
NUNN	**Nunuq Camp, NU**	**16.12**	**178**	PN	Pn	18 37 52.5	-0.2
CTLN	**Castor Lake**	**17.99**	**214**	PN	P	18 38 18.7	+2.2
CTLN				SN	Sn	18 41 24.4	-11
SEDN	**First Sedna Si**	**18.10**	**178**	PN	P	18 38 18.8	+1.2

*IDC **19** 18:36:07.3±0.5, 35°.06N×91°.28E, h0km, mb4.0/17, mb1 4.1/22, mb1mx4.0/33, mbtmp3.9/22, ML3.6/5, MS2.6/2, Ms1 2.6/2, ms1mx2.6/46, Error ellipse: s-maj=23.3km s-min=11.3km az=52.0*

*BJI **19** 18:36:08.5, 35°.20N×91°.18E, h9km, mB4.7/3, mb4.0/7, ML3.7/6, Ms4.1/4, Ms7 3.9/3*

*ISCJB **19** 18:36:10.5±0.3, 35°.20N±0°.03×91°.41E±0°.06, h33km, mb4.2/25, MS3.4/3, Error ellipse: s-maj=6.6km s-min=4.8km az=13.6*

*MOS **19** 18:36:10.5±1.2, 35°.17N×91°.37E, h33km, mb4.3/14, Error ellipse: s-maj=15.6km s-min=8.5km az=109.2*

ISC 19 18:36:12.5±0.4, 35°.21N±0°.06×91°.47E±0°.06, h35km, n62, σ1§24/63, mb4.2/25, MS4.0/3, 1C-1D, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**5.50**	**183**	P	Pn	18 37 36.8	+4.4
GTA	**Gaotai**	**7.86**	**55**	*eP*	**Pn**	**18 38 07.4**	**+2.9**
GTA				pP		18 38 11.3	
GTA				sP		18 38 14.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TAPN	**Taplejung**	**8.47**	**203**	*eP*	**Pn**	**18 38 14.4**	**+1.4**
	comp=Z,15nm,0.8s						
GUN	**Gumba**	**8.70**	**215**	*eP*	**Pn**	**18 38 17.2**	**+1.0**
	comp=Z,25nm,0.8s						
ODAN	**Odare**	**9.03**	**204**	*eP*	**Pn**	**18 38 20.7**	**+0.1**
	comp=Z,26nm,0.8s						
KKN	**Kakani**	**9.09**	**217**	*eP*	**Pn**	**18 38 21.9**	**+0.5**
	comp=Z,16nm,0.7s						
PKI	**Pulchoki**	**9.21**	**216**	*eP*	**Pn**	**18 38 23.9**	**+0.7**
	comp=Z,32nm,0.8s						
PKIN	**Phulchoki**	**9.21**	**216**	*eP*	**Pn**	**18 38 23.5**	**+0.4**
	comp=Z,13nm,0.6s						
RAMN	**Ramite**	**9.23**	**208**	*eP*	**Pn**	**18 38 23.5**	**+0.1**
	comp=Z,114nm,0.9s						
DMN	**Daman**	**9.32**	**217**	*eP*	**Pn**	**18 38 25.1**	**+0.4**
	comp=Z,12nm,0.6s						
DANN	**Dangsing**	**9.47**	**226**	*eP*	**Pn**	**18 38 26.4**	**-0.4**
	comp=Z,9.9nm,0.6s						
KOLN	**Koldanda**	**10.00**	**224**	*eP*	**Pn**	**18 38 34.3**	**+0.3**
	comp=Z,5.6nm,0.4s						
LZH	**Lanzhou**	**10.11**	**81**	*eP*	Pn	18 38 44.8	+9.4
LZH				pP		18 38 49.8	
LZH				sP		18 38 51.3	
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
PYUN	**Piuthan**	**10.12**	**228**	*eP*	**Pn**	**18 38 35.5**	**0.0**
	comp=Z,19nm,0.9s						
KSH	**Kashi**	**13.05**	**294**	*eP*	Pn	18 39 20.0	+4.5
KSH				*ep*P	**P**	**18 39 27.1**	**+1.7**
KSH				*e*PP	PnPn	18 39 31.0	+7.7
KSH				*e*S	Sn	18 41 47.3	+7.8
KSH				*e*SS	**S**	**18 42 03.0**	**-0.9**
KSH				*e*PcP	**PcP**	**18 44 48.3**	**+1.6**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,110nm,4.8s						
KSH				LR	LR		
	comp=N,500nm,5.9s						
KSH				LR	LR		
	comp=E,480nm,9.2s						
KSH				LR	LR		
	comp=Z,320nm,6.7s						
MKAR	**Makanchi Array**	**13.47**	**332**	P	**Pn**	**18 39 19.1**	**-2.0**
MKAR	**Makanchi Array**	**13.47**	**332**	Pn	**Pn**	**18 39 19.1**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=147,slow=14,SNR=15						
MKAR				LR	LR	18 44 32.8	
	comp=Z,104nm,20.0s,baz=312,slow=37						
AAK	**Ala-Archa**	**15.13**	**304**	*eP*	**Pn**	**18 39 43.4**	**-0.4**
AAK				pmax	pmax		
	comp=Z,21nm,1.5s						
AAK	**Ala-Archa**	**15.13**	**304**	Pn	**Pn**	**18 39 45.0**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=122,slow=8.9,SNR=3.4						
SONM	**Songino Array**	**16.81**	**37**	P	**P**	**18 40 08.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=220,slow=18,SNR=3.0						
ZAK	**Zakamensk**	**17.43**	**26**	*eP*	**Pn**	**18 40 12.2**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
CMAR	**Chiang Mai Arr**	**17.96**	**156**	P	**Pn**	**18 40 18.6**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=334,slow=12,SNR=15						
KURBB	**Kurchatov Arra**	**18.04**	**333**	P	**Pn**	**18 40 18.7**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=6.6						
KURK	**Kurchatov**	**18.08**	**333**	P	**Pn**	**18 40 18.7**	**-2.1**
ZALV	**Zalesovo Beam**	**19.30**	**348**	P	**Pn**	**18 40 35.2**	**-0.3**
ZALV	**Zalesovo Beam**	**19.30**	**348**	P	**Pn**	**18 40 35.2**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=168,slow=10.0,SNR=20						
WHN	**Wuhan**	**19.76**	**97**	*eP*	**P**	**18 40 37.9**	**-1.6**
NVS	**Novosibirsk**	**20.44**	**346**	*eP*	P	18 40 38.0	-8.7
NVS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=N,4.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.4s						
QIZ	**Qiongzhong**	**22.90**	**130**	P	**P**	**18 41 10.8**	**-2.5**
QIZ				S	**S**	**18 45 19.0**	**-1.8**
QIZ				LR	LR		
	comp=N,440nm,13.0s						
QIZ				LR	LR		
	comp=E,170nm,13.0s						
QIZ				LR	LR		
	comp=Z,370nm,12.2s						
BVAR	**Borovoye Array**	**23.22**	**327**	P	**P**	**18 41 16.9**	**+0.6**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVAR	**Borovoye Array**	**23.22**	**327**	P	**P**	**18 41 16.9**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=133,slow=12,SNR=8.0						
BRVK	**Borovoye**	**23.29**	**327**	*eP*	**P**	**18 41 15.5**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
AKTO	**Aktyubinsk**	**28.57**	**313**	P	**P**	**18 42 06.0**	**+1.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTO	**Aktyubinsk**	**28.57**	**313**	P	**P**	**18 42 06.0**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=84,slow=10,SNR=2.5						
KSRS	**Korea Array**	**29.34**	**75**	P	**P**	**18 42 13.4**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=286,slow=9.2,SNR=2.4						
KLR	**Kul'dur**	**32.55**	**52**	*eP*	**P**	**18 42 38.6**	**-1.5**
TGY	**Tagaytay City**	**33.83**	**121**	LR	LR	18 56 55.2	
	comp=Z,2.9nm,19.6s,baz=52,slow=37						
MIB	**Mutribah**	**37.37**	**274**	*eP*	**P**	**18 43 22.1**	**+0.2**
MIB				AMb	AMB	18 43 28.1	
	comp=Z,27nm,1.2s						
NAY	**Al-Naaiem**	**37.64**	**274**	*eP*	**P**	**18 43 24.1**	**-0.2**
NAY				AMb	AMB	18 43 30.3	
	comp=Z,16nm,1.2s						
RST	**Umm Al-Ruwaisa**	**37.76**	**274**	*eP*	**P**	**18 43 24.8**	**-0.3**
RST				AMb	AMB	18 43 26.1	
	comp=Z,224nm,0.7s						
OBN	**Obninsk**	**42.24**	**316**	*e*P	**P**	**18 44 02.0**	**0.0**
OBN				*e*		18 45 37.9	
OBN				*e*S	**S**	**18 50 17.8**	**-2.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s						
BRTR	**Keskin Array B**	**45.44**	**294**	P	**P**	**18 44 26.2**	**-2.0**
	comp=Z,2.3nm,0.8s,baz=105,slow=7.8,SNR=6.5						
AKASG	**Malin Array Be**	**46.72**	**309**	P	**P**	**18 44 38.5**	**+0.6**
AKASG	**Malin Array Be**	**46.72**	**309**	P	**P**	**18 44 38.5**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=73,slow=6.3,SNR=3.6						
FINES	**FINESS Array B**	**48.14**	**324**	P	**P**	**18 44 49.4**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=90,slow=7.2,SNR=5.9						
ARCES	**ARCESS Array B**	**49.11**	**335**	P	**P**	**18 44 56.5**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=88,slow=7.5,SNR=5.1						
BILL	**Bilibino**	**52.22**	**27**	*e*P	**P**	**18 45 21.0**	**+1.4**
BILL				*e*		18 47 17.2	
BILL				*e*S	**S**	**18 52 37.6**	**-4.1**
BILL				pmax	pmax		
	comp=Z,30nm,1.4s						
NB2	**NORSAR Subarra**	**55.32**	**324**	P	**P**	**18 45 42.4**	**0.0**
	comp=Z,1.3nm,0.6s,baz=79,slow=7.4						
NOA	**NORSAR Array B**	**55.32**	**324**	P	**P**	**18 45 42.3**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=79,slow=7.2,SNR=3.2						
GERES	**GERESS Array B**	**56.94**	**310**	P	**P**	**18 45 54.9**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=24,slow=7.5,SNR=3.4						
FITZ	**Fitzroy Crossi**	**62.16**	**143**	P	**P**	**18 46 29.4**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=331,slow=10,SNR=3.1						
LPG	**La Plagne**	**62.54**	**308**	*eP*	**P**	**18 46 33.5**	**+0.4**
	comp=Z,9.2nm,0.9s						
LPL	**La Plagne**	**62.55**	**308**	*eP*	**P**	**18 46 33.5**	**+0.5**
	comp=Z,6.5nm,0.8s						
WRA	**Warramunga Arr**	**68.29**	**136**	P	**P**	**18 47 10.2**	**+0.1**
	comp=Z,3.3nm,0.9s,baz=325,slow=5.9,SNR=28						
ILAR	**Eielson Array**	**70.46**	**23**	P	**P**	**18 47 23.9**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=297,slow=5.2,SNR=20						
ASAR	**Alice Springs**	**71.04**	**139**	P	**P**	**18 47 27.9**	**+0.9**
	comp=Z,5.4nm,0.8s,baz=324,slow=6.4,SNR=92						
NWAO	**Narrogin (SRO)**	**71.96**	**157**	P	**P**	**18 47 32.4**	**0.0**
	comp=Z,3.5nm,0.7s,baz=8.9,slow=3.5,SNR=4.2						
YKA	**Yellowknife Ar**	**80.39**	**12**	P	**P**	**18 48 20.3**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=357,slow=4.7,SNR=5.3						
STKA	**Stephens Creek**	**81.67**	**139**	P	**P**	**18 48 27.4**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=320,slow=8.8,SNR=9.6						
TORD	**Torodi Ar. Bea**	**82.36**	**281**	P	**P**	**18 48 30.2**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=47,slow=4.4,SNR=10						
SIV	**San Ignacio**	**148.87**	**301**	PKPbc	**PKPbc**	**18 55 57.2**	**+0.1**
	comp=Z,8.9nm,0.4s,baz=199,slow=20,SNR=4.4						
CPUP	**Villa Florida**	**151.86**	**280**	PKPbc	**PKPbc**	**18 56 03.2**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=350,slow=6.1,SNR=5.3						

MAN 19 18:36:17, 9°.57N×122°.60E, h23km, mb4.5, ML3.3, MS3.2, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.04**	**359**	*eP*	Pn	18 36 35.8	-0.5
GUIM				*e*S	Sn	18 36 53.3	+3.1
TBP	**Tagbilaran**	**1.25**	**85**	*eP*	Pb	18 36 39.6	-0.3
LLP	**Lapu-Lapu**	**1.53**	**61**	*eP*	Pn	18 36 41.8	-1.2
LLP				*e*S	Sn	18 37 02.7	+0.4
IPIL	**Ipil**	**1.77**	**181**	*eP*	Pn	18 36 46.1	-0.2
PAGZ	**Pagadian**	**1.88**	**156**	*eP*	Pn	18 36 47.9	+0.1
CUYO	**Cuyo Island**	**2.01**	**309**	*eP*	Pn	18 36 50.5	+0.9
MSLP	**Maasin**	**2.29**	**76**	*eP*	Pn	18 36 55.0	+1.6

*NEIC **19** 18:42:30.4±2.0, 2°.94N×128°.45E, h36km±18km, mb4.4/15, Error ellipse: s-maj=17.1km s-min=6.9km az=71.0*

*ISCJB **19** 18:42:31.1±0.7, 3°.03N±0°.04×128°.48E±0°.04, h55km±7km, mb4.2/29, Error ellipse: s-maj=7.4km s-min=6.2km az=4.5*

*IDC **19** 18:42:31.9±0.6, 2°.99N×128°.45E, h45km±5km, mb3.8/16, mb1 4.0/17, mb1mx3.9/27, mbtmp3.9/17, ML4.2/1, Error ellipse: s-maj=24.2km s-min=10.6km az=82.0*

*DJA **19** 18:42:31.1±1.4, 3°.1N±13°×12°.8E±°, h10km, M4.8/6, mb5.2/3, mB5.3/3, MLv4.6/6, Mw(mB)4.8/3*

*AUST **19** 18:42:33.6, 3°.00N×128°.50E, h60km*

ISC 19 18:42:31.9±0.5, 3°.00N±0°.05×128°.51E±0°.06, h46km±4km, h45km:pP-P, n84, σ1§24/102, mb4.2/29, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.36**	**212**	P	**Pn**	**18 42 52.9**	**-1.6**
TNTI	**Ternate**	**2.49**	**207**	P	**Pn**	**18 43 10.7**	**+0.7**
LBMI	**Labuha**	**3.75**	**196**	P	**Pn**	**18 43 29.4**	**+2.1**
MNI	**Manado**	**3.98**	**247**	P	**Pn**	**18 43 31.3**	**+0.8**
SWI	**Sorong**	**4.72**	**144**	P	**Pn**	**18 43 42.8**	**+2.2**
SWI	**Sorong**	**4.72**	**144**	P	**Pn**	**18 43 42.1**	**+1.5**
	baz=4.7,SNR=12						
KMSI	**Cibinong**	**5.13**	**242**	P	**Pn**	**18 43 47.7**	**+1.4**
	332nm,0.9s,5μm2.3nm						
CTBH	**Cotabato--PC H**	**5.97**	**315**	*i*P	**Pn**	**18 44 00.9**	**+3.0**
AAI	**Ambon**	**6.65**	**183**	P	Pn	18 44 20.3	+13
FAKI	**Fak Fak**	**6.96**	**148**	P	**Pn**	**18 44 13.6**	**+2.1**
	baz=7.0,SNR=13						
LUWI	**Luwuk**	**7.00**	**235**	P	**Pn**	**18 44 14.7**	**+2.7**
	66nm,1.2s,1μm						
LUWI	**Luwuk**	**7.00**	**235**	P	**Pn**	**18 44 14.0**	**+2.0**
	baz=7.0,SNR=39						
MRSI	**Marisa**	**7.03**	**249**	P	**Pn**	**18 44 12.4**	**0.0**
PALU	**Palau**	**7.34**	**54**	P	**Pn**	**18 44 17.9**	**+1.3**
	baz=7.4,SNR=10						
PALU				S	**Sn**	**18 45 39.7**	**+1.0**
	baz=7.4,SNR=3.6						
KAPI	**Kappang**	**11.83**	**228**	Pn	Pn	18 45 14.4	-3.7
	22nm,1.0s						
KAPI				P	**Pn**	**18 45 17.8**	**-0.3**
KAPI	**Kappang**	**11.83**	**228**	P	Pn	18 45 23.9	+5.8
KAPI	**Kappang**	**11.83**	**228**	P	**Pn**	**18 45 17.8**	**-0.3**
	1.7nm,0.3s,baz=79,slow=5.2,SNR=4.4						
KKM	**Kota Kinabalu**	**12.63**	**284**	Pn	**Pn**	**18 45 27.3**	**-1.8**
	26nm,1.1s						
MTN	**Manon Dam**	**15.95**	**171**	P	P	18 46 26.6	+10
	baz=16,SNR=3.7						
KDU	**Kakadu**	**16.07**	**166**	P	P	18 46 22.8	+5.2
	baz=16,SNR=4.5						
KHKI	**Kahang-Kahang**	**17.12**	**229**	P	**P**	**18 46 33.1**	**+3.9**
KSM	**Kuching**	**18.25**	**266**	*eP*	**P**	**18 46 41.0**	**-0.8**
	8.0nm,0.8s						
KSM	**Kuching**	**18.25**	**266**	P	**Pn**	**18 46 43.0**	**+0.9**
	baz=18,SNR=7.7						
KNRA	**Kununurra**	**18.55**	**179**	P	**Pn**	**18 46 45.8**	**+0.2**
	baz=19,SNR=10.0						
SMRI	**Semarang**	**20.61**	**241**	P	Pn	18 47 22.6	+12
	baz=21,SNR=3.5						
FITZ	**Fitzroy Crossi**	**21.16**	**188**	P	**P**	**18 47 11.9**	**-1.5**
FITZ	**Fitzroy Crossi**	**21.16**	**188**	P	**P**	**18 47 11.9**	**-1.5**
	1.3nm,0.8s,baz=6.8,slow=8.8,SNR=4.6						
FITZ	**Fitzroy Crossi**	**21.16**	**188**	P	**P**	**18 47 14.6**	**+1.2**
	baz=21,SNR=6.1						
YHNB	**Yeheng**	**22.62**	**343**	P	**P**	**18 47 29.8**	**+0.7**
	9.6nm,0.7s						
WRAB	**Tennant Creek**	**23.50**	**166**	*eP*	**P**	**18 47 38.0**	**+0.1**
	6.9nm,0.4s						
WRA	**Warramunga Arr**	**23.50**	**166**	P	**P**	**18 47 38.0**	**0.0**
WRA				ScP	**ScP**	**18 54 56.9**	**-0.6**
WRA	**Warramunga Arr**	**23.50**	**166**	P	**P**	**18 47 38.0**	**0.0**
	7.7nm,0.5s,baz=344,slow=10,SNR=42						
WRA				ScP	**ScP**	**18 54 56.9**	**-0.6**
	0.6nm,0.8s,baz=341,slow=3.0,SNR=6.1						
AS31	**Alice Springs**	**27.02**	**169**	*eP*	**P**	**18 48 06.5**	**-3.4**
ASAR	**Alice Springs**	**27.02**	**169**	P	**P**	**18 48 10.0**	**+0.1**
ASAR				PcP	**PcP**	**18 51 30.8**	**+0.1**
ASAR				ScP	**ScP**	**18 55 06.7**	**-0.7**
ASAR	**Alice Springs**	**27.02**	**169**	P	**P**	**18 48 10.0**	**+0.1**
	1.2nm,0.7s,baz=351,slow=14,SNR=14						
ASAR				PcP	**PcP**	**18 51 30.8**	**+0.1**
	1.4nm,0.5s,baz=354,slow=2.4,SNR=15						
ASAR				ScP	**ScP**	**18 55 06.7**	**-0.7**
	0.9nm,0.8s,baz=355,slow=2.5,SNR=8.6						
MEEK	**Meekatharra**	**30.98**	**197**	P	**P**	**18 48 44.9**	**-0.2**
	baz=31,SNR=6.4						
ENH	**Enshi**	**32.56**	**328**	P	**P**	**18 48 58.7**	**-0.3**
	7.9nm,1.2s						
CMAR	**Chiang Mai Arr**	**32.78**	**300**	P	**P**	**18 49 01.2**	**+0.2**
CMAR				ScP	**ScP**	**18 55 27.2**	**+1.0**
CMAR	**Chiang Mai Arr**	**32.78**	**300**	P	**P**	**18 49 01.2**	**+0.2**
	0.9nm,0.6s,baz=122,slow=7.4,SNR=10.0						
CMAR				ScP	**ScP**	**18 55 27.2**	**+1.0**
	0.7nm,0.9s,baz=137,slow=1.7,SNR=5.7						
CHTO	**Chiang Mai**	**32.92**	**301**	*eP*	**P**	**18 49 01.2**	**-1.1**
	2.1nm,0.9s						
MORW	**Morawa**	**34.05**	**200**	P	**P**	**18 49 14.6**	**+2.6**
	baz=34,SNR=3.2						
KSAR	**Wonju Array Be**	**34.28**	**359**	P	**P**	**18 49 14.7**	**+0.9**
KSAR				pP	**pP**	**18 49 26.1**	**0.0**
KSRS	**Korea Array**	**34.30**	**359**	P	**P**	**18 49 14.7**	**+0.8**
	0.5nm,0.5s,baz=180,slow=9.8,SNR=2.7						
KSRS				pP	**pP**	**18 49 26.1**	**0.0**
	1.1nm,0.8s,baz=176,slow=9.5,SNR=2.4						
MJAR	**Matsushiro Arr**	**34.56**	**14**	P	**P**	**18 49 15.6**	**-0.7**
MJAR				pP	**pP**	**18 49 29.1**	**+0.6**
MJAR	**Matsushiro Arr**	**34.56**	**14**	P	**P**	**18 49 15.6**	**-0.7**
	2.0nm,0.7s,baz=186,slow=10.0,SNR=7.3						
MJAR				pP	**pP**	**18 49 29.1**	**+0.6**
	1.1nm,0.6s,baz=186,slow=9.3,SNR=2.9						
XAN	**Xi'an**	**35.88**	**332**	P	**P**	**18 49 30.8**	**+3.0**
XAN				pP	**pP**	**18 49 39.0**	**-1.0**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KLBR	**Kellerberrin**	**35.89**	**196**	P	**P**	**18 49 28.8**	**+1.0**
	baz=36,SNR=5.7						
BBOO	**Buckleboo**	**36.32**	**169**	P	**P**	**18 49 31.5**	**0.0**
	baz=36,SNR=20						
STKA	**Stephens Creek**	**36.84**	**161**	*eP*	**P**	**18 49 35.3**	**-0.6**
	comp=Z,0.7nm,0.4s						
STKA				PcP	**PcP**	**18 51 57.2**	**0.0**
STKA	**Stephens Creek**	**36.84**	**161**	P	**P**	**18 49 35.5**	**-0.4**
	comp=Z,3.5nm,0.4s,baz=338,slow=8.1,SNR=27						
STKA				PcP	**PcP**	**18 51 57.2**	**0.0**
	comp=Z,1.5nm,0.5s,baz=346,slow=5.7,SNR=4.1						
STKA	**Stephens Creek**	**36.84**	**161**	P	**P**	**18 49 36.0**	**+0.1**
	baz=37,SNR=16						
NWAO	**Narrogin (SRO)**	**37.29**	**196**	P	**P**	**18 49 38.8**	**-0.9**
NWAO	**Narrogin (SRO)**	**37.29**	**196**	P	**P**	**18 49 40.4**	**+0.7**
	comp=Z,2.3nm,0.4s,baz=14,slow=5.1,SNR=5.2						
USRK	**Ussuriysk Arra**	**41.15**	**4**	P	**P**	**18 50 12.4**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=198,slow=7.1,SNR=6.6						
ARPS	**Mount Arapiles**	**41.47**	**164**	P	**P**	**18 50 15.2**	**+0.8**
	baz=42,SNR=8.8						
LSA	**Lhasa**	**44.26**	**311**	P	**P**	**18 50 38.9**	**+1.1**
PALK	**Pallekele**	**47.79**	**277**	P	P	18 50 59.1	-6.2
ULN	**Ulaanbaatar**	**48.38**	**341**	*eP*	**P**	**18 51 08.2**	**-1.3**
MK31	**Makanchi Array**	**59.17**	**325**	*eP*	**P**	**18 52 26.9**	**-1.4**
MKAR	**Makanchi Array**	**59.17**	**325**	P	**P**	**18 52 27.9**	**-0.4**
MKAR	**Makanchi Array**	**59.17**	**325**	P	**P**	**18 52 27.9**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=123,slow=8.0,SNR=15						
TKM2	**Tokmak 2**	**61.47**	**318**	P	**P**	**18 52 41.6**	**-2.7**
	comp=Z,1.0nm,0.6s						
ZALV	**Zalesovo Beam**	**62.05**	**332**	P	**P**	**18 52 46.5**	**-1.2**
ZALV	**Zalesovo Beam**	**62.05**	**332**	P	**P**	**18 52 46.5**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=95,slow=7.4,SNR=4.1						
EKS2	**Erkin-Say**	**62.59**	**317**	*eP*	**P**	**18 52 53.7**	**+2.0**
	comp=Z,2.3nm,0.8s						
KURBB	**Kurchatov Arra**	**63.32**	**327**	P	**P**	**18 52 55.4**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=126,slow=6.1,SNR=8.3						
KURBB				pP	**pP**	**18 53 09.0**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=124,slow=6.2,SNR=10						
KURK	**Kurchatov**	**63.32**	**327**	P	**P**	**18 52 55.4**	**-0.8**
KURK				pP	**pP**	**18 53 09.0**	**-0.3**
KKAR	**Karatay Array**	**64.98**	**317**	*eP*	**P**	**18 53 06.2**	**-1.1**
	comp=Z,1.3nm,0.7s						
BVAR	**Borovoye Array**	**68.90**	**327**	P	**P**	**18 53 31.1**	**-0.9**
BVAR				pP	**pP**	**18 53 44.8**	**-0.5**
BVAR	**Borovoye Array**	**68.90**	**327**	P	**P**	**18 53 31.1**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=99,slow=9.6,SNR=4.2						
BVAR				pP	**pP**	**18 53 44.8**	**-0.5**
	comp=Z,2.6nm,0.8s,baz=114,slow=7.3,SNR=8.6						
BRVK	**Borovoye**	**68.98**	**327**	P	**P**	**18 53 31.3**	**-1.2**
	comp=Z,4.3nm,0.7s						
ABKAR	**Akbulak array**	**73.84**	**321**	P	**P**	**18 54 02.4**	**+0.5**
VNDA	**Vanda**	**82.48**	**173**	*eP*	**P**	**18 54 49.0**	**-0.2**
	comp=Z,2.3nm,0.8s						
VNDA	**Vanda**	**82.48**	**173**	P	**P**	**18 54 49.1**	**0.0**
	comp=Z,1.2nm,0.3s,baz=296,slow=7.8,SNR=19						
SBA	**Scott Base**	**83.37**	**172**	P	**P**	**18 54 52.0

IDC 19 19:04:38.0±2.5, 2°23S×99°46E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, Error ellipse: s-maj=90.0km s-min=20.6km az=58.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.56**	**359**	P		P		19 09 18.2	-0.3
	0.7nm,0.8s,baz=188,slow=13,SNR=5.5								
WRA	**Warramunga Arr**	**38.34**	**120**	P		P		19 12 01.1	0.0
	0.5nm,0.5s,baz=302,slow=9.0,SNR=3.7								
ASAR	**Alice Springs**	**39.55**	**125**	P		P		19 12 10.5	-0.7
	0.2nm,0.5s,baz=311,slow=8.5,SNR=2.3								
MKAR	**Makanchi Array**	**51.11**	**345**	P		P		19 13 42.3	-0.2
	0.9nm,0.6s,baz=152,slow=8.0,SNR=16								
USRK	**Ussuriysk Arra**	**54.62**	**28**	P		P		19 14 08.3	-0.1
	1.3nm,0.6s,baz=238,slow=8.2,SNR=3.0								
ZALV	**Zalesovo Beam**	**57.30**	**350**	P		P		19 14 27.1	-0.4
	0.8nm,0.4s,baz=186,slow=5.7,SNR=9.1								
TXAR	**Lajitas Array**	**145.21**	**37**	PKPbc		PKPdf		19 24 18.5	-0.1
	0.7nm,0.6s,baz=248,slow=1.0,SNR=7.9								

*IDC **19** 19:04:35.1±0.8, 3°32N×127°32E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.8/24, mbtmp3.9/8, MS3.9/1, Ms1 3.9/1, ms1mx2.7/47, Error ellipse: s-maj=57.1km s-min=15.9km az=79.0*

*AUST **19** 19:04:44.6±1.1, 3°37N×127°41E, h91km, Error ellipse: s-maj=2.1km s-min=1.5km az=29.0*

ISC 19 19:04:42.1±0.7, 3°34N±0°09×127°4E±0°1, h45km, n19, σ1§36/16, mb4.0/8, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**5.00**	**321**	⇑*i*P			**Pn**	**19 05 57.3**	**+2.7**
SWI	**Sorong**	**5.66**	**137**	P			Pn	19 06 07.6	+3.8
	baz=5.7,SNR=13								
LUWI	**Luwuk**	**6.38**	**227**	P			Pn	19 06 17.1	+3.5
	baz=6.4,SNR=4.0								
FAKI	**Fak Fak**	**7.86**	**142**	P			Pn	19 06 37.7	+3.7
	baz=7.9,SNR=10.0								
JAY	**Jayapura**	**14.48**	**114**	S			**S**	**19 11 03.1**	**+1.3**
	baz=14,SNR=3.3								
MTN	**Manton Dam**	**16.49**	**167**	P			**P**	**19 08 33.9**	**+1.4**
	baz=17,SNR=6.7								
MTN				S			**Sn**	**19 11 34.7**	**+2.1**
	baz=17,SNR=4.4								
KNRA	**Kununurra**	**18.94**	**176**	P			**P**	**19 08 58.9**	**-0.6**
	baz=19,SNR=8.0								
FITZ	**Fitzroy Crossi**	**21.38**	**185**	P			**P**	**19 09 24.9**	**-1.0**
	1.1nm,0.7s,baz=32,slow=9.5,SNR=4.8								
FITZ	**Fitzroy Crossi**	**21.38**	**185**	P			**P**	**19 09 24.9**	**-1.0**
	baz=22,SNR=6.4								
WRA	**Warramunga Arr**	**24.11**	**164**	P			**P**	**19 09 52.5**	**-1.3**
	3.0nm,0.7s,baz=343,slow=9.0,SNR=29								
ASAR	**Alice Springs**	**27.57**	**167**	P			**P**	**19 10 24.4**	**-0.7**
	0.4nm,0.5s,baz=337,slow=7.1,SNR=14								
KSRS	**Korea Array**	**33.96**	**1**	P			**P**	**19 11 21.4**	**+0.1**
	1.1nm,0.8s,baz=178,slow=9.6,SNR=5.6								
HNR	**Honiara**	**34.79**	**112**	LR			LR	19 25 09.6	
	comp=Z,213nm,20.1s,baz=136,slow=35								
BBOO	**Buckleboo**	**36.87**	**168**	P			**P**	**19 11 46.2**	**-0.2**
	baz=37,SNR=8.4								
STKA	**Stephens Creek**	**37.52**	**160**	P			**P**	**19 11 50.9**	**-1.0**
	1.1nm,0.5s,baz=349,slow=7.7,SNR=8.4								
STKA	**Stephens Creek**	**37.52**	**160**	P			**P**	**19 11 51.6**	**-0.3**
	baz=38,SNR=4.4								
PETK	**Petropavlovsk-**	**55.53**	**22**	P			**P**	**19 14 12.2**	**-0.5**
	4.0nm,0.9s,baz=190,slow=7.0,SNR=4.7								
MKAR	**Makanchi Array**	**58.28**	**325**	P			**P**	**19 14 31.2**	**-1.1**
	0.5nm,0.4s,baz=120,slow=7.9,SNR=14								
ARCES	**ARCESS Array B**	**91.06**	**340**	P			**P**	**19 17 40.2**	**-1.3**
	3.2nm,0.9s,baz=80,slow=6.5,SNR=8.0								

*TAP **19** 19:22:14.0, 24°19N×121°83E, h57km, ML3.0, C*
*JMA **19** 19:22:13.9±0.3, 24°43N×121°89E, h79km, M2.3*
*ISCJB **19** 19:22:14.5±0.4, 24°17N±0°02×121°90E±0°02, h51km±5km, Error ellipse: s-maj=4.5km s-min=2.7km az=143.0*

ISC 19 19:22:15.0±1.2, 24°17N±0°03×121°88E±0°03, h48km±8km, n38, σ0§81/72, 3D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.28**	**251**	⇓*i*P			**Pn**	**19 22 23.4**	**-0.3**
	baz=239								
TWD				S			**Sn**	**19 22 30.7**	**+0.8**
	baz=239								
ENA	**Nanau**	**0.29**	**333**	*e*P			**Pn**	**19 22 23.6**	**-0.2**
	baz=347								
ENA				*e*S			**Sn**	**19 22 30.5**	**+0.5**
	baz=347								
HWA	**Hwalien**	**0.32**	**233**	P			**Pn**	**19 22 24.1**	**0.0**
	baz=220								
HWA				S			**Sn**	**19 22 31.9**	**+1.4**
	baz=220								
TWC	**Suao**	**0.44**	**356**	⇓*i*P			**Pn**	**19 22 25.4**	**0.0**
	baz=7.0								
TWC				S			**Sn**	**19 22 33.7**	**+0.9**
	baz=7.0								
NNS	**Nan Shan**	**0.54**	**300**	P			**Pn**	**19 22 26.3**	**-0.4**
	baz=295								
NNS				S			**Sn**	**19 22 34.7**	**-0.4**
	baz=295								
ESL	**Shilin**	**0.54**	**229**	*e*P			**Pn**	**19 22 25.6**	**-1.1**
	baz=233								
ESL				*e*S			**Sn**	**19 22 33.9**	**-1.1**
	baz=233								
ENTT	**Nioudou**	**0.55**	**328**	⇓*i*P			**Pn**	**19 22 26.1**	**-0.6**
	baz=331								
ENTT				*e*S			**Sn**	**19 22 35.4**	**+0.2**
	baz=331								
WHF	**Hehuan Shan**	**0.56**	**268**	*i* P			**Pn**	**19 22 26.6**	**-0.8**
	baz=260								
WHF				S			**Sn**	**19 22 35.3**	**-0.9**
	baz=260								
TWE	**Neicheng**	**0.58**	**340**	P			**Pn**	**19 22 26.8**	**-0.4**
	baz=338								
TWE				S			**Sn**	**19 22 36.2**	**+0.3**
	baz=338								
ILA	**Ilan**	**0.60**	**348**	*e*P			**Pn**	**19 22 27.3**	**-0.1**
	baz=347								
TWT	**Tachien**	**0.65**	**277**	P			**Pn**	**19 22 28.2**	**0.0**
	baz=269								
TWT				S			**Sn**	**19 22 37.8**	**0.0**
	baz=269								
EGS		**0.67**	**4**	P			**Pn**	**19 22 28.4**	**+0.1**
	baz=8.0								
EGS				S			**Sn**	**19 22 38.7**	**+0.8**
	baz=8.0								
NSK	**Sanguang**	**0.69**	**317**	*e*P			**Pn**	**19 22 28.1**	**-0.6**
	baz=312								
NSK				*e*S			**Sn**	**19 22 37.5**	**-1.0**
	baz=312								
EHY	**Hungye**	**0.84**	**218**	*e*P			**Pn**	**19 22 30.6**	**+0.1**
	baz=223								
EHY				*e*S			**Sn**	**19 22 39.9**	**-2.0**
	baz=223								
TWB1	**Santiao Chiao**	**0.84**	**7**	*e*P			**Pn**	**19 22 30.6**	**+0.1**
	baz=19								
TWB1				*e*S			**Sn**	**19 22 41.5**	**-0.3**
	baz=19								
NWF	**Wu-fen Shan**	**0.90**	**354**	*e*P			**Pn**	**19 22 31.5**	**0.0**
	baz=355								
NWF				*e*S			**Sn**	**19 22 43.9**	**+0.4**
	baz=355								
NSTT	**Nanjuang**	**0.93**	**300**	P			**Pn**	**19 22 31.3**	**-0.3**
	baz=300								
NSTT				S			**Sn**	**19 22 43.6**	**-0.3**
	baz=300								
SMLT	**Sun Moon Lake**	**0.94**	**253**	*e*P			**Pn**	**19 22 31.8**	**-0.2**
	baz=246								
SMLT				S			**Sn**	**19 22 44.4**	**-0.1**
	baz=246								
TYC	**Yuchr**	**0.97**	**254**	*e*P			**Pn**	**19 22 32.0**	**-0.3**
	baz=249								
TYC				*e*S			**Sn**	**19 22 44.9**	**-0.2**
	baz=249								
TWF1	**Yuli**	**0.98**	**213**	*e*P			**Pn**	**19 22 32.3**	**-0.1**
	baz=220								
TWF1				*e*S			**Sn**	**19 22 43.8**	**-1.4**
	baz=220								
TWS1	**Kuangyinshan**	**1.02**	**336**	*e*P			**Pn**	**19 22 31.8**	**-1.1**
	baz=336								
TWS1				*e*S			**Sn**	**19 22 45.3**	**-0.8**
	baz=336								
TWQ1	**Liyutan**	**1.03**	**280**	*e*P			**Pn**	**19 22 32.2**	**-0.8**
	baz=280								
TWQ1				*e*S			**Sn**	**19 22 48.1**	**+1.7**
	baz=280								
YOJ	**Yonaguni jima**	**1.07**	**74**	P			**Pn**	**19 22 33.3**	**-0.3**
YOJ				S			**Sn**	**19 22 47.6**	**+0.2**
WNT	**Mingjian**	**1.13**	**255**	*e*P			**Pn**	**19 22 34.7**	**+0.2**
	baz=254								
WNT				*e*S			**Sn**	**19 22 49.9**	**+0.9**
	baz=254								
CHKT	**Chengkung**	**1.17**	**204**	*e*P			**Pn**	**19 22 33.5**	**-1.5**
	baz=195								
ALS	**Alishan**	**1.19**	**237**	*e*P			**Pn**	**19 22 35.7**	**+0.2**
	baz=228								
CHN5	**Tsauling**	**1.24**	**243**	*e*P			**Pn**	**19 22 36.0**	**0.0**
	baz=234								
CHN5				*e*S			**Sn**	**19 22 53.2**	**+1.5**
	baz=234								
ELDTW	**Lidau**	**1.26**	**219**	*e*P			**Pn**	**19 22 35.3**	**-1.0**
	baz=218								
ELDTW				*e*S			**Sn**	**19 22 51.3**	**-0.9**
	baz=218								
WGK	**Gukeng**	**1.30**	**248**	*e*P			**Pn**	**19 22 36.2**	**-0.6**
	baz=248								
WGK				*e*S			**Sn**	**19 22 54.6**	**+1.6**
	baz=248								
CHN4	**Tsaushan**	**1.44**	**236**	*e*P			**Pn**	**19 22 39.1**	**+0.5**
	baz=236								
CHN4				*e*S			**Sn**	**19 22 58.0**	**+1.6**
	baz=236								
WTP	**Ta-pu**	**1.48**	**232**	*e*P			**Pn**	**19 22 39.3**	**0.0**
	baz=232								
WTP				*e*S			**Sn**	**19 22 59.1**	**+1.6**
	baz=232								
TWK	**Hsinying**	**1.56**	**235**	*e*P			**Pn**	**19 22 40.4**	**0.0**
	baz=235								
TWK				*e*S			**Sn**	**19 23 01.1**	**+1.5**
	baz=235								
CHN1	**Nanshi**	**1.58**	**232**	*e*P			**Pn**	**19 22 41.1**	**+0.4**
	baz=232								
CHN1				*e*S			**Sn**	**19 23 01.3**	**+1.4**
	baz=232								
IRIF	**Iriomote-Funau**	**1.69**	**84**	P			**Pn**	**19 22 41.5**	**-0.6**
IRIF				*e*S			**Sn**	**19 23 03.0**	**+0.4**
HATJ	**Hateruma jima**	**1.76**	**93**	P			**Pn**	**19 22 43.4**	**+0.4**
JKRS	**Kuro-shima**	**1.94**	**88**	P			**Pn**	**19 22 45.6**	**+0.1**
JKRS				*e*S			**Sn**	**19 23 09.5**	**+0.8**
JIJ	**Ishigaki jima**	**2.07**	**84**	P			**Pn**	**19 22 46.7**	**-0.6**
JIJ				*e*S			**Sn**	**19 23 11.1**	**-0.8**
JTJ	**Tarama**	**2.61**	**79**	P			**Pn**	**19 22 54.6**	**-0.1**
JTJ				*e*S			**Sn**	**19 23 25.8**	**+0.6**

*LDG **19** 19:29:44.4±0.1, 33°16N×75°84E, h10km, Mb5.0/47, Ms3.7/1, Error ellipse: s-maj=7.8km s-min=3.8km az=42.0*
*IDC **19** 19:29:45.6±0.4, 33°14N×75°76E, h0km, mb4.8/31, mb1 4.9/33, mb1mx4.9/34, mbtmp4.8/33, ML4.4/2, MS3.6/11, Ms1 3.6/11, ms1mx3.3/52, Error ellipse: s-maj=13.6km s-min=10.3km az=19.0*
*ISCJB **19** 19:29:47.8±0.6, 33°20N±0°02×75°82E±0°02, h25km±4km, mb4.9/200, MS3.9/27, Error ellipse: s-maj=3.3km s-min=2.5km az=42.4*
*NDI **19** 19:29:47.3±3.0, 33°23N×75°57E, h10km, ML4.8, mb4.9(NEIC)*
*NEIC **19** 19:29:48.9±1.5, 33°20N×75°79E, h21km±10km, mb4.9/57, Error ellipse: s-maj=5.0km s-min=3.0km az=199.0*
NEIC At least 100 houses damaged slightly in the Kishtwar area. Felt at Doda, Jammu, Rajouri, Ramban and Udhampur.
*MOS **19** 19:29:49.0±0.8, 33°20N×75°74E, h33km, mb5.2/95, Error ellipse: s-maj=6.4km s-min=3.6km az=120.7*
*SZGRF **19** 19:29:51.0, 33°62N×74°31E, h13km, mb4.8, Southwestern Kashmir*
*DJA **19** 19:29:52.7±1.1, 33°N±9°×7°6E±°, h62km±13km, M5.1/11, mB5.4/5, mb5.1/11, MLv5.3/1, Mw(mB)4.9/5*
*BJI **19** 19:29:53.3, 33°44N×76°43E, h25km, mB4.8/26, mb4.8/46, ML4.4/1, Ms4.4/46, Ms7 4.2/43*
*KISR **19** 19:29:55.5±3.0, 34°15N×74°59E, h0km±999km, mb5.5*
*NNC **19** 19:29:58.2±4.3, 34°36N×75°87E, h0km, mb4.8, mpv4.9, Error ellipse: s-maj=41.0km s-min=24.8km az=156.0*

ISC 19 19:29:48.9±0.5, 33°23N±0°03×75°79E±0°03, h19km±2km, n599, σ1§25/614, mb5.0/200, MS3.9/28, 38C-30D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**0.70**	**168**	*e*PKP			**Pg**	**19 30 00.0**	**-2.7**
DLH				*ex*			x	19 30 30.0	
THN	**Thein Dam**	**0.79**	**184**	*ex*			Pg	19 29 53.8	-11
THN				*e*S			**Sg**	**19 30 13.7**	**-1.3**
BHK	**Bhakra**	**1.88**	**163**	*e*PKP			**Pn**	**19 30 20.8**	**+0.8**
BHK				*ex*			**Sn**	**19 30 48.8**	**+5.6**
SDNR	**Sundarnagar**	**1.99**	**150**	*e*PKP			**Pn**	**19 30 23.1**	**+1.6**
SDNR				*ex*			**Sn**	**19 30 51.0**	**+5.1**
CHCP	**Chirah Chowk**	**2.15**	**282**	⇓P			**Pg**	**19 30 27.5**	**-2.8**
CEP	**Cherat**	**3.30**	**281**	⇓P			Pb	19 30 41.7	-5.1
KKR	**Kurukshetra**	**3.37**	**165**	*e*PKP			**Pn**	**19 30 41.4**	**+0.9**
KKR				*ex*			**Sn**	**19 31 24.1**	**+4.1**
THW	**Thamme Wali**	**3.43**	**264**	⇓P			Pb	19 30 42.8	-6.2
DDI	**Dehra Dun**	**3.48**	**146**	*e*PKP			**Pn**	**19 30 44.0**	**+2.0**
DDI				*e*S			**Sn**	**19 31 24.0**	**+1.3**
AYAN	**Aya Nagar**	**4.87**	**166**	*e*PKP			**Pn**	**19 31 01.8**	**+0.8**
AYAN				*e*S			**Sn**	**19 31 54.8**	**-2.0**
KUDL	**Kundal**	**5.10**	**173**	*e*PKP			**Pn**	**19 31 05.2**	**+1.0**
KUDL				*e*S			**Sn**	**19 31 58.5**	**-4.1**
KHET	**Khetri**	**5.14**	**180**	*e*PKP			**Pn**	**19 31 04.9**	**+0.1**
KHET				*e*S			**Sn**	**19 32 01.6**	**-1.9**
KHET					AML		AML	19 32 26.6	
	comp=E,3μm,0.5s								
KHET					AML		AML	19 32 29.0	
	comp=N,2μm,0.5s								
KBL	**Kabul**	**5.76**	**285**	*e*P			Pn	19 31 14.9	+1.4
KBL					pmax		pmax		
	comp=Z,221nm,0.9s								
KBL	**Kabul**	**5.76**	**285**	*e*Pn			Pn	19 31 14.9	+1.4
	comp=Z,221nm,0.9s								
AGRA	**Agra**	**6.26**	**162**	*e*PKP			**Pn**	**19 31 20.6**	**+0.4**
AGRA				*e*S			**Sn**	**19 32 28.2**	**-3.0**
AGRA					AML		AML	19 33 15.0	
	comp=N,1μm,0.4s								
AGRA					AML		AML	19 33 18.6	
	comp=E,816nm,0.6s								
KSH	**Kashi**	**6.28**	**1**	Pn			**Pn**	**19 31 21.1**	**+0.6**
KSH					Sn		**Sn**	**19 32 29.0**	**-2.8**
KSH					LR		LR		
	comp=N,6μm,10.3s								
KSH					LR		LR		
	comp=E,5μm,5.3s								
KSH					LR		LR		
	comp=Z,6μm,8.7s								
PYUN	**Piuthan**	**8.03**	**128**	*e*P			**Pn**	**19 31 43.8**	**-0.9**
	comp=Z,433nm,0.5s								
PYUN				*e*S			Sn	19 33 11.4	-3.8
DANN	**Dangsing**	**8.40**	**123**	*e*P			**Pn**	**19 31 48.6**	**-1.3**
	comp=Z,200nm,0.4s								
DANN				*e*S			Sn	19 33 19.7	-4.7
KOLN	**Koldanda**	**8.66**	**127**	*e*P			**Pn**	**19 31 52.4**	**-0.9**
	comp=Z,149nm,0.3s								
KOLN				*e*S			Sn	19 33 27.3	-3.2
KZA	**Kyzart**	**8.85**	**357**	P			**Pn**	**19 31 58.2**	**+2.2**
	SNR=75								
ULHL	**Ulahol**	**9.01**	**2**	P			Pn	19 32 01.2	+3.1
	SNR=30								
UCH	**Uchtor**	**9.04**	**354**	P			Pn	19 32 02.2	+3.5
	SNR=27								
AML	**Almayashu**	**9.04**	**350**	P			**Pn**	**19 32 00.5**	**+1.8**
	SNR=64								
KBK	**Karagaybulak**	**9.44**	**356**	P			Pn	19 32 06.5	+2.5
	SNR=59								
AAK	**Ala-Archa**	**9.45**	**354**	*i* P			Pn	19 32 06.4	+2.4
AAK	**Ala-Archa**	**9.45**	**354**	*e*Pn			**Pn**	**19 32 06.0**	**+1.9**
	comp=Z,70nm,0.9s								
AAK					Sn		**Sn**	**19 33 48.6**	**-1.1**
AAK	**Ala-Archa**	**9.45**	**354**	P			Pn	19 32 07.0	+3.0
	SNR=52								
AAK	**Ala-Archa**	**9.45**	**354**	P			Pn	19 32 06.4	+2.4
	SNR=56								
AAK	**Ala-Archa**	**9.45**	**354**	Pn			Pn	19 32 06.2	+2.2
	comp=Z,5.9nm,0.3s,baz=145,slow=7.1,SNR=55								
AAK					Sn		**Sn**	**19 33 48.6**	**-1.1**
	comp=Z,1.2nm,0.3s,baz=144,slow=14,SNR=2.3								
AAK					LR		LR	19 36 14.9	
	comp=Z,310nm,19.8s,baz=169,slow=41								
EKS2	**Erkin-Say**	**9.55**	**351**	*e*P			Pn	19 32 07.9	+2.5
EKS2				*e*				19 33 54.2	
EKS2					pmax		pmax		
	comp=Z,31nm,0.8s								
EKS2	**Erkin-Say**	**9.55**	**351**	*e*Pn			Pn	19 32 07.9	+2.5
	comp=Z,31nm,0.8s								
EKS2				*e*Sn			**Sn**	**19 33 54.2**	**+1.9**
EKS2	**Erkin-Say**	**9.55**	**351**	P			Pn	19 32 08.8	+3.4
	SNR=9.4								
FRU	**Bishkek**	**9.63**	**355**	*i* P			Pn	19 32 10.0	+3.5
FRU				*i* S			Sn	19 34 00.0	+5.8
FRU					pmax		pmax		
	comp=Z,220nm,2.0s								
FRU					smax		smax		
	comp=N,190nm,1.8s								
TKM2	**Tokmak 2**	**9.68**	**359**	⇓Pn			Pn	19 32 09.8	+2.6
	comp=N,21nm,0.5s								
TKM2				⇑Sn			**Sn**	**19 33 51.6**	**-3.9**
	comp=N,45nm,1.2s								
TKM2	**Tokmak 2**	**9.68**	**359**	*i* P			**Pn**	**19 32 09.5**	**+2.3**
TKM2	**Tokmak 2**	**9.68**	**359**	*e*Pn			**Pn**	**19 32 09.3**	**+2.0**
	comp=N,32nm,0.5s								
TKM2	**Tokmak 2**	**9.68**	**359**	P			**Pn**	**19 32 09.5**	**+2.3**
	SNR=71								
CHMS	**Chumysh**	**9.79**	**356**	P			Pn	19 32 11.9	+3.3
	SNR=27								
DMN	**Daman**	**9.80**	**122**	*e*P			**Pn**	**19 32 07.7**	**-1.3**
	comp=N,270nm,0.5s								
KKN	**Kakani**	**9.81**	**121**	*e*P			**Pn**	**19 32 07.6**	**-1.6**
	comp=N,249nm,0.5s								
KNDC	**Almaty**	**10.02**	**5**	⇓Pn			**Pn**	**19 32 09.4**	**-2.4**
	comp=N,60nm,0.9s								
PKIN	**Phulchoki**	**10.02**	**122**	*e*P			Pn	19 32 10.3	-1.8
	comp=N,186nm,0.5s								
PKI	**Pulchoki**	**10.04**	**122**	*e*P			Pn	19 32 10.5	-1.8
	comp=N,312nm,0.7s								
USP	**Ospenovka**	**10.07**	**355**	P			**Pn**	**19 32 14.2**	**+1.7**
	SNR=11								
GUN	**Gumba**	**10.18**	**119**	*e*P			Pn	19 32 12.2	-2.1
	comp=N,222nm,0.4s								
JBP	**Jabalpur**	**10.68**	**159**	⇑*e*PKP			**Pn**	**19 32 18.9**	**-1.9**
JBP				*ex*			x	19 34 11.9	
KK31	**Karatay Array**	**10.70**	**339**	⇑Pn			**Pn**	**19 32 20.7**	**-0.3**
	comp=N,31nm,0.7s,baz=147,slow=12,SNR=366								
KK31				⇑Sn			Sn	19 34 11.5	-8.7
	comp=N,52nm,0.7s,baz=143,slow=23,SNR=6.1								
KK31	**Karatay Array**	**10.70**	**339**	*i* P			**Pn**	**19 32 21.1**	**+0.1**
KK31					pmax		pmax		
	comp=Z,7.0nm,0.2s								
KKAR	**Karatay Array**	**10.70**	**339**	*e*P			**Pn**	**19 32 20.4**	**-0.6**
KKAR					pmax		pmax		
	comp=Z,39nm,0.6s								
KKAR	**Karatay Array**	**10.70**	**339**	*e*Pn			**Pn**	**19 32 20.4**	**-0.6**
	comp=Z,40nm,0.6s								
KKAR				*e*Sn			Sn	19 34 09.5	-11
RAMN	**Ramite**	**11.26**	**121**	*e*P			Pn	19 32 26.1	-2.8
	comp=Z,223nm,0.4s								
RAMN				*e*S			Sn	19 34 28.4	-6.0
TAPN	**Taplejung**	**11.85**	**117**	*e*P			Pn	19 32 34.4	-2.7
	comp=Z,181nm,0.4s								
ODAN	**Odare**	**11.88**	**119**	*e*P			Pn	19 32 35.3	-2.2
	comp=Z,107nm,0.4s								
LSA	**Lhasa**	**13.57**	**101**	P			**Pn**	**19 32 59.5**	**-1.3**
LSA	**Lhasa**	**13.57**	**101**	*e*P			Pn	19 32 59.3	-1.5
LSA	**Lhasa**	**13.57**	**101**	*e*Pn			Pn	19 32 59.3	-1.5
WMQ	**Urumqi**	**14.08**	**38**	P			**Pn**	**19 33 05.8**	**-1.5**
WMQ				pP			**P**	**19 33 14.3**	**-0.6**
WMQ				PP			**PnPn**	**19 33 17.9**	**+2.7**
WMQ				sP				19 33 20.9	
WMQ				S			**Sn**	**19 35 42.6**	**-0.4**
WMQ					pmax		pmax		
	comp=Z,68nm,0.8s								
WMQ					LR		LR		
	comp=N,1μm,8.4s								
WMQ					LR		LR		
	comp=E,1μm,9.6s								
WMQ					LR		LR		
	comp=Z,690nm,18.4s								
MK31	**Makanchi Array**	**14.43**	**18**	⇓Pn			**Pn**	**19 33 11.0**	**-1.0**
	comp=Z,12nm,0.6s,baz=194,slow=12,SNR=132								
MK31				⇑Sn			Sn	19 35 44.3	-7.1
	comp=Z,57nm,1.2s,baz=195,slow=22,SNR=6.3								
MK31	**Makanchi Array**	**14.43**	**18**	*e*P			**Pn**	**19 33 12.3**	**+0.3**
MK31					pmax		pmax		
	comp=Z,5.0nm,0.3s								
MK31	**Makanchi Array**	**14.43**	**18**	*e*Pn			**Pn**	**19 33 10.9**	**-1.1**
MK31				*e*Sn			Sn	19 35 44.9	-6.5
MKAR	**Makanchi Array**	**14.43**	**18**	P			**Pn**	**19 33 11.1**	**-0.9**
MKAR								19 35 46.6	
MKAR					pmax		pmax		
	comp=Z,1.0nm,0.3s								
MKAR					smax		smax		
	comp=N,1.0nm,0.3s								
MKAR	**Makanchi Array**	**14.43**	**18**	Pn			**Pn**	**19 33 11.1**	**-0.9**
MKAR				Sn			**Sn**	**19 35 46.6**	**-4.8**
MKAR	**Makanchi Array**	**14.43**	**18**	Pn			**Pn**	**19 33 11.1**	**-0.9**
	comp=N,0.9nm,0.3s,baz=198,slow=11,SNR=51								
MKAR				Sn			**Sn**	**19 35 46.6**	**-4.8**
	comp=N,1.2nm,0.3s,baz=195,slow=23,SNR=5.4								
MKAR				LR			LR	19 38 14.4	
	comp=N,77nm,19.8s,baz=203,slow=35								
LATR	**Latur**	**14.77**	**177**	*ex*			Pn	19 33 10.1	-6.6
HYB	**Hyderabad**	**15.94**	**170**	*i* P			Pn	19 33 25.0	-7.2
	comp=N,50nm,1.0s								
HYB				*e*S			**Sn**	**19 36 25.0**	**-3.4**
SHL	**Shillong**	**15.96**	**114**	*ex*			Pn	19 33 27.0	-5.5
SHL				*i* x			x	19 36 17.0	
KURBB	**Kurchatov Arra**	**17.50**	**6**	P			**Pn**	**19 33 49.6**	**-2.0

comp=Z,19nm,0.7s
AKTO ⇑S **S** **19 38 35.8 -0.2**
comp=Z,3.0nm,1.2s
AKTO Aktyubinsk 21.61 328 *i* P **P** **19 34 37.9 +0.4**
AKTO pmax pmax
comp=Z,19nm,0.6s
AKTO Aktyubinsk 21.61 328 P **P** **19 34 38.0 +0.4**
AKTO S **S** **19 38 32.9 -3.1**
AKTO Aktyubinsk 21.61 328 P **P** **19 34 38.0 +0.4**
comp=Z,100nm,0.6s,baz=127,slow=9.8,SNR=319
AKTO S **S** **19 38 32.9 -3.1**
comp=Z,2.7nm,0.7s,baz=153,slow=18,SNR=2.7
ZAA0 Zalesovo Array 21.69 15 *eP* **P** **19 34 36.8 -1.6**
ZALV Zalesovo Beam 21.69 15 P **P** **19 34 37.5 -0.8**
ZALV S **S** **19 38 36.6 -0.8**
ZALV pmax pmax
comp=Z,34nm,0.9s
ZALV smax smax
comp=N,4.0nm,0.7s
ZALV MLR MLR
comp=Z,279nm,21.5s
ZALV Zalesovo Beam 21.69 15 P **P** **19 34 37.5 -0.8**
ZALV S **S** **19 38 36.6 -0.8**
ZALV Zalesovo Beam 21.69 15 P **P** **19 34 37.5 -0.8**
comp=Z,34nm,0.8s,baz=206,slow=10,SNR=101
ZALV S **S** **19 38 36.6 -0.8**
comp=Z,3.8nm,0.7s,baz=203,slow=22,SNR=4.1
ZALV LR LR 19 43 55.0
comp=Z,279nm,21.5s,baz=85,slow=39
HVS Khovu-Aksy 22.18 31*d i*P **P** **19 34 44.9 +1.1**
HVS pmax pmax
comp=Z,142nm,1.1s
NVS Novosibirsk 22.23 11 ⇓*i*P **P** **19 34 43.6 -0.6**
NVS *e* 19 35 06.8
NVS *e*S **S** **19 38 42.6 -5.3**
NVS pmax pmax
comp=Z,61nm,1.3s
NVS pmax pmax
comp=N,96nm,1.6s
NVS pmax pmax
comp=Z,46nm,1.1s
NVS pmax pmax
comp=N,29nm,0.8s
NVS smax smax
comp=E,69nm,1.9s
LZH Lanzhou 23.22 75 *e*P **P** **19 34 57.5 +2.5**
LZH sP sP 19 35 05.0 +2.0
LZH S **S** **19 39 04.3 -1.8**
LZH pmax pmax
comp=Z,33nm,1.0s
LZH pmax pmax
comp=Z,160nm,4.0s
LZH LR LR
comp=N,290nm,12.0s
LZH LR LR
comp=E,370nm,11.1s
LZH LR LR
comp=Z,430nm,13.7s
CD2 Chengdu 23.79 88 P **P** **19 35 00.0 -0.4**
CD2 pP **pP** **19 35 07.3 +1.1**
CD2 sP sP 19 35 10.8 +2.2
CD2 PP **PnPn** **19 35 33.3 +5.0**
CD2 PcP **PcP** **19 38 45.1 +1.4**
CD2 S S 19 39 10.5 -4.6
CD2 sS **sS** **19 39 22.3 -2.4**
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,320nm,5.4s
CD2 LR LR
comp=N,770nm,12.2s
CD2 LR LR
comp=E,270nm,22.0s
CD2 LR LR
comp=Z,430nm,11.4s
MAK Makhachkala 24.19 302 *eP* **P** **19 35 03.0 -1.0**
MAK *e* 19 35 33.7
MAK S **S** **19 39 24.8 +3.6**
MAK pmax pmax
comp=Z,84nm,1.3s
MAK MLR MLR
comp=Z,233nm,12.0s
UMR Umm Al-Rimmam 24.21 269 *eP* **P** **19 35 04.7 +0.3**
UMR AMb AMB 19 35 06.7
comp=Z,66nm,0.5s
KBD Kabd 24.34 268 *eP* **P** **19 35 05.9 +0.4**
KBD AMb AMB 19 35 07.9
comp=Z,50nm,0.5s
MIB Mutribah 24.46 270 *eP* **P** **19 35 07.2 +0.6**
MIB AMb AMB 19 35 08.8
comp=Z,159nm,0.7s
RDF Al-Radifah 24.53 268 *eP* **P** **19 35 08.5 +1.3**
RDF AMb AMB 19 35 18.1
comp=Z,111nm,1.6s
NAY Al-Naaiem 24.69 268 *eP* **P** **19 35 09.2 +0.4**
NAY AMb AMB 19 35 10.4
comp=Z,40nm,0.7s
KMI Kunming 24.83 102 P **P** **19 35 10.8 +0.6**
KMI pP pP 19 35 21.9 +5.8
KMI sP sP 19 35 27.3 +8.8
KMI S **S** **19 39 30.6 -1.7**
KMI pmax pmax
comp=Z,63nm,0.7s
KMI LR LR
comp=N,440nm,17.9s
KMI LR LR
comp=E,180nm,14.9s
KMI LR LR
comp=Z,170nm,10.3s
RST Umm Al-Ruwaisa 24.83 269 *eP* **P** **19 35 10.8 +0.8**
RST AMb AMB 19 35 19.8
comp=Z,904nm,0.8s
CHTO Chiang Mai 25.20 119 *eP* **P** **19 35 12.5 -0.9**
CHTO pmax pmax
comp=Z,34nm,0.6s
CHTO Chiang Mai 25.20 119 *eP* **P** **19 35 12.5 -0.9**
comp=Z,34nm,0.6s
CHTO Chiang Mai 25.20 119 P **P** **19 35 12.8 -0.6**
comp=Z,58nm,0.8s,comp=Z,744nm
CMMT Chiang Mai 25.20 119 P **P** **19 35 13.3 -0.1**
comp=Z,53nm,0.7s,comp=Z,644nm
CMAR Chiang Mai Arr 25.43 120 P **P** **19 35 15.2 -0.2**
CMAR PcP **PcP** **19 38 48.0 +0.6**
CMAR ScP **ScP** **19 42 27.1 +1.4**
CMAR Chiang Mai Arr 25.43 120 P **P** **19 35 15.2 -0.2**
comp=Z,53nm,0.8s,baz=308,slow=9.5,SNR=257
CMAR PcP **PcP** **19 38 48.0 +0.6**
comp=Z,3.7nm,0.8s,baz=292,slow=3.9,SNR=5.9
CMAR ScP **ScP** **19 42 27.1 +1.4**
comp=Z,2.7nm,0.8s,baz=298,slow=4.6,SNR=13
DGRG David-gareji 25.44 298 P P 19 35 18.3 +2.9
ABTO Aybut 25.67 238 ⇑P **P** **19 35 18.7 +1.0**
SNR=8.0
GNI Garni 25.75 295 *eP* **P** **19 35 20.9 +2.5**
comp=Z,99nm,1.0s
GNI Garni 25.75 295 P **P** **19 35 21.2 +2.7**
comp=Z,40nm,0.8s,baz=2.8,slow=4.2,SNR=25
SVE Sverdlovsk 25.80 341 ⇑*i*P **P** **19 35 19.8 +1.4**
SVE *e*S **S** **19 39 43.8 -2.8**
SVE pmax pmax
comp=Z,34nm,1.4s
SEAG Tbilisi Sea 25.91 298 P **P** **19 35 22.0 +2.3**
TBLG Delisi 25.95 298 P P 19 35 24.0 +3.9
MOY Mondy 25.97 37 *eP* **P** **19 35 23.8 +3.6**
MOY pmax pmax
comp=Z,23nm,2.4s
DUS Dusheti 26.04 299 P P 19 35 25.5 +4.6
ARU Arti 26.07 338*c i*P **P** **19 35 21.9 +1.0**
ARU 19 35 58.2
ARU PPP PPP 19 36 10.0
ARU S **S** **19 39 53.4 +2.4**
ARU SS **SnSn** **19 40 48.8 -0.5**
ARU pmax pmax
comp=Z,30nm,1.0s
ARU MLR MLR
comp=Z,275nm,16.0s
KZR Kazreti 26.14 297 P **P** **19 35 23.0 +1.2**
PALK Pallekele 26.23 169 *eP* **P** **19 35 23.1 +0.4**
comp=Z,39nm,0.8s
GUDG Gudauri 26.27 300 P **P** **19 35 25.2 +2.0**
GOR Gori 26.46 298 P **P** **19 35 27.3 +2.7**
ZAK Zakamensk 26.49 41 *eP* **P** **19 35 25.8 +0.8**
ZAK pmax pmax
comp=Z,8.0nm,1.2s
AKH Akhalkalaki 26.83 297 P P 19 35 31.7 +3.4

ONI Oni 27.04 300 P P 19 35 32.8 +2.9
SONM Songino Array 27.24 49 P **P** **19 35 32.9 +1.1**
SONM Songino Array 27.24 49 P **P** **19 35 32.9 +1.1**
comp=Z,9.0nm,0.8s,baz=243,slow=9.0,SNR=15
SONM LR LR 19 47 32.1
comp=Z,323nm,18.5s,baz=88,slow=39
TLY Talaya 27.35 39 *eP* **P** **19 35 36.0 +3.4**
TLY *eS* **S** **19 40 13.9 +2.5**
TLY pmax pmax
comp=Z,7.0nm,1.3s
TLY MLR MLR
comp=Z,421nm,16.0s
XAN Xi'an 27.53 79 P **P** **19 35 34.8 +0.4**
XAN pP pP 19 35 46.6 +6.3
XAN sP sP 19 35 52.1 +9.4
XAN pmax pmax
comp=Z,18nm,6.7s
XAN LR LR
comp=N,110nm,9.5s
XAN LR LR
comp=E,94nm,12.3s
XAN LR LR
comp=Z,91nm,14.3s
GYA Guiyang 27.55 96 P **P** **19 35 34.8 +0.1**
GYA pP **pP** **19 35 41.4 +0.8**
GYA PP **PnPn** **19 36 23.5 +3.7**
GYA S **S** **19 40 12.3 -2.9**
GYA ScP **ScP** **19 42 31.0 -1.0**
GYA ScS **ScS** **19 46 22.0 -2.1**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,430nm,15.8s
GYA LR LR
comp=E,350nm,16.0s
GYA LR LR
comp=Z,410nm,15.5s
KBZ Khabaz 27.64 302 P **P** **19 35 35.6 +0.4**
KBZ pmax pmax
comp=Z,7.0nm,1.0s
KBZ MLR MLR
comp=Z,129nm,18.3s
KBZ Khabaz 27.64 302 P **P** **19 35 35.5 +0.4**
KBZ Khabaz 27.64 302 P **P** **19 35 35.5 +0.4**
comp=Z,6.5nm,1.0s,baz=145,slow=5.6,SNR=7.2
KBZ LR LR 19 48 48.2
comp=Z,129nm,18.3s,baz=336,slow=41
ULN Ulaanbaatar 27.67 49 *eP* **P** **19 35 36.8 +1.2**
comp=Z,10nm,1.0s
ULN Ulaanbaatar 27.67 49 P **P** **19 35 38.8 +3.2**
SNR=8.5
ULN Ulaanbaatar 27.67 49 P **P** **19 35 36.6 +1.0**
comp=Z,11nm,1.2s
CHVG Ch'k'valeri 28.05 300 P **P** **19 35 41.5 +2.5**
PBKT Sadao Pong 28.11 120 P **P** **19 35 39.0 -0.6**
SRDT SRDT 28.33 126 P P 19 35 39.2 -2.3
ENH Enshi 28.74 87 *eP* **P** **19 35 44.2 -0.9**
SOKR Solikamsk 29.21 340*d i*P P 19 35 51.1 +2.2
SOKR pmax pmax
comp=Z,10.0nm,0.8s
HHC Hu-ho-hao-te 29.40 65 ⇑*i*P **P** **19 35 53.3 +2.3**
HHC pP pP 19 36 05.0 +8.1
HHC PP **PnPn** **19 36 49.6 +4.7**
HHC S **S** **19 40 42.6 -1.4**
HHC PcS **PcS** **19 42 40.4 +0.6**
HHC ScS **ScS** **19 46 28.4 -3.7**
HHC pmax pmax
comp=Z,33nm,1.1s
HHC pmax pmax
comp=Z,170nm,5.2s
HHC LR LR
comp=N,490nm,12.2s
HHC LR LR
comp=E,420nm,10.2s
HHC LR LR
comp=Z,320nm,12.5s
VSR Storozhevoye 32.10 315 *eP* **P** **19 36 16.0 +1.4**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,0.9s
UBPT Khong Chiam 32.26 116 P P 19 36 13.6 -2.7
comp=E,17nm,0.9s,comp=E,660nm
HAWK Haweek 32.59 283⇓*eP* P 19 36 21.2 +2.0
HAWK Haweek 32.59 283⇓*eP* P 19 36 21.2 +2.0
SNR=57
ASF Jabal al Asfar 32.62 279 LR LR 19 51 26.0
comp=E,216nm,21.5s,baz=295,slow=40
WHN Wuhan 32.73 84 P **P** **19 36 22.1 +1.8**
WHN S S 19 41 31.1 -4.9
WHN LR LR
comp=N,820nm,13.7s
WHN LR LR
comp=E,360nm,12.7s
WHN LR LR
comp=Z,520nm,15.6s
BJI Beijing 32.90 66 P **P** **19 36 23.3 +1.6**
BJI S **S** **19 41 39.3 +0.8**
BJI pmax pmax
comp=Z,8.0nm,0.9s
BJI LR LR
comp=N,240nm,16.4s
BJI LR LR
comp=E,280nm,21.9s
BJI LR LR
comp=Z,140nm,18.7s
MMAI Mount Meron Ar 33.68 281 LR LR 19 51 36.4
comp=Z,150nm,21.0s,baz=100,slow=39
BR131 Keskin Array S 34.27 293 *eP* **P** **19 36 34.6 +0.7**
comp=Z,12nn,0.6s
BRTR Keskin Array B 34.27 293 P **P** **19 36 35.0 +1.1**
BRTR Keskin Array B 34.27 293 P **P** **19 36 35.0 +1.1**
comp=Z,17nn,0.7s,baz=110,slow=9.5,SNR=97
OBN Obninsk 34.97 321 ⇑*i*P **P** **19 36 39.5 0.0**
OBN *i* 19 37 58.8
OBN *e*S **S** **19 42 07.3 -2.8**
OBN *e*SS **SnSn** **19 44 30.6 +5.0**
OBN pmax pmax
comp=Z,39nm,1.2s
OBN MLR MLR
comp=Z,100nm,15.0s
CSS Prodhromos 35.01 285 *eP* **P** **19 36 40.3 +0.1**
comp=Z,6.6nm,0.5s
NJ2 Nanjing 36.09 80 *eP* **P** **19 36 51.3 +1.8**
NJ2 pP pP 19 37 01.6 +6.2
NJ2 sP sP 19 37 06.8 +9.0
NJ2 PP **PnPn** **19 38 12.4 +1.7**
NJ2 S **S** **19 42 27.0 -1.0**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 pmax pmax
comp=Z,110nm,4.7s
NJ2 LR LR
comp=N,160nm,10.8s
NJ2 LR LR
comp=E,100nm,10.7s
NJ2 LR LR
comp=Z,280nm,20.2s
HIA Hailar 36.16 50 P **P** **19 36 50.2 +0.3**
comp=Z,17nm,1.1s
IPM Ipoh 37.04 135 *eP* **P** **19 36 56.5 -1.1**
comp=Z,18nm,0.6s
TLCR 37.81 303 ⇑*i*P **P** **19 37 04.6 +0.7**
AKASG Malin Array Be 38.06 311 P **P** **19 37 05.5 -0.5**
AKASG pmax pmax
comp=Z,9.0nm,0.8s
AKASG Malin Array Be 38.06 311 P **P** **19 37 05.5 -0.5**
AKASG Malin Array Be 38.06 311 P **P** **19 37 05.5 -0.5**
comp=Z,9.3nm,0.8s,baz=87,slow=6.9,SNR=11
AK02 Malin Array Si 38.06 311 *eP* **P** **19 37 03.5 -2.5**
AK02 *eP* **PnPn** **19 38 33.0 -1.4**
AK01 Malin Array Si 38.06 311 *eP* **P** **19 37 05.2 -0.7**
KIEV Kiev 38.07 311 *eP* **P** **19 37 05.2 -0.8**
KIEV pmax pmax
comp=Z,10.0nm,0.7s
KIEV Kiev 38.07 311 *eP* **P** **19 37 05.2 -0.8**
comp=Z,9.9nm,0.7s
QZH Quanzhou 38.09 91 *eP* **P** **19 37 06.5 0.0**
QZH S S 19 42 55.1 -3.4
QZH LR LR
comp=N,410nm,11.8s

QZH LR LR
comp=E,270nm,6.4s
QZH LR LR
comp=Z,570nm,17.0s
CFR Carcaliu 38.29 302 ⇑*i*P **P** **19 37 08.3 +0.4**
FRIM Kepong 38.39 136 P **P** **19 37 09.2 +0.1**
VRI Vrincioaia 39.29 304 ⇓*i*P P 19 37 18.2 +1.8
PLOR Plostina 39.35 304 ⇓*i*P **P** **19 37 18.2 +1.3**
TESR Tescani 39.36 305 ⇑*i*P **P** **19 37 17.5 +0.5**
CN2 Changchun 39.73 60 *eP* **P** **19 37 21.0 +0.9**
CN2 *eS* **S** **19 43 21.9 -0.9**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,16.0s
CN2 LR LR
comp=E,200nm,16.0s
CN2 LR LR
comp=Z,200nm,15.0s
MLR Muntele Rosu 39.84 303 ⇑*i*P P 19 37 22.8 +1.7
NACGM Naroch 40.29 318 *e* **P** **19 37 22.0 -2.5**
KGM Kluang 40.37 135 P **P** **19 37 25.7 +0.1**
BURAR Bucovina Array 40.38 306 ⇑*i*P **P** **19 37 26.0 +0.5**
BUR08 Bucovina Ar. S 40.39 306 *eP* **P** **19 37 25.7 0.0**
SSLB Suanglung 40.53 91 *eP* **P** **19 37 27.9 +1.0**
comp=Z,8.8nm,0.8s
YHNB Yeheng 40.53 90 P **P** **19 37 27.6 +0.6**
comp=Z,10nm,0.7s
JOF Joensuu 40.66 331 *eP* **P** **19 37 27.6 +0.2**
JOF pmax pmax
comp=Z,12nn,0.5s
JOF Joensuu 40.66 331 *ep* **P** **19 37 27.6 +0.2**
comp=Z,12nn,0.5s
ARR Arges 40.76 303 ⇓*i*P **P** **19 37 29.7 +1.0**
CLNS Chul'man 40.78 39 *eP* P 19 37 32.0 +3.4
CLNS pmax pmax
comp=Z,16nm,0.8s
CLNS pmax pmax
comp=E,9.0nm,0.9s
CLNS pmax pmax
comp=N,3.0nm,0.9s
MYKOM Kota Tinggi 40.87 134 P **P** **19 37 30.1 +0.4**
YULB Yu-li 40.97 92 *eP* **P** **19 37 31.8 +1.2**
comp=N,20nm,1.1s
SANT Santorini 41.08 289 *eP* **P** **19 37 28.6 -2.7**
comp=N,42nm,0.9s
VSU Vasula 41.18 323 ⇑*i*P **P** **19 37 31.8 0.0**
VSU pmax pmax
comp=Z,16nm,0.7s
LVV L'vov 41.27 310 *eP* **P** **19 37 32.3 -0.4**
BMR Baia Mare 41.54 306 ⇓*i*P **P** **19 37 36.5 +1.5**
DRGR 42.08 305 ⇑*i*P **P** **19 37 40.4 +0.9**
KWP Kalwaria Pacla 42.12 309 *eP* **P** **19 37 39.8 +0.1**
KWP pmax pmax
comp=Z,25nm,0.9s
KWP Kalwaria Pacla 42.12 309 *eP* **P** **19 37 39.8 +0.1**
comp=Z,25nm,0.9s
KWP Kalwaria Pacla 42.12 309 ⇑*i*P **P** **19 37 40.9 +1.2**
APA Apatity 42.16 337⇓*eP* **P** **19 37 40.6 +0.8**
APA MLR MLR
comp=Z,500nm,11.0s
TRPA Tarpa 42.19 307 ⇓*i*P **P** **19 37 41.5 +1.2**
TRPA Tarpa 42.19 307 ⇑*eP* **P** **19 37 41.2 +0.9**
KSAR Wonju Array Be 42.27 69 P **P** **19 37 41.6 +0.6**
KSRS Korea Array 42.29 69 P **P** **19 37 41.6 +0.4**
comp=Z,5.8nm,0.9s,baz=272,slow=7.8,SNR=22
KSRS LR LR 19 55 44.9
comp=Z,76nm,21.4s,baz=75,slow=37
UZH Uzhgorod 42.37 308 ⇓*i*P P 19 37 44.2 +2.5
UZH *e* 19 37 51.0
FIA1 FINESS Array S 42.38 327 *eP* **P** **19 37 41.6 +0.1**
FINES FINESS Array B 42.38 327 P **P** **19 37 42.0 +0.5**
FINES FINESS Array B 42.38 327 P **P** **19 37 42.0 +0.5**
comp=Z,8.8nm,0.6s,baz=114,slow=9.2,SNR=50
KOLS Kolonicke sedl 42.38 308 *eP* **P** **19 37 42.2 +0.3**
KOLS pmax pmax
comp=Z,12nn,1.5s
KOLS Kolonicke sedl 42.38 308 *eP* **P** **19 37 42.2 +0.3**
KOLS *e*PP **PP** **19 39 21.4 +1.4**
GVD Gavdhos 42.49 287 *eP* **P** **19 37 42.3 -0.6**
KAF Kangasniemi 42.49 328 *eP* **P** **19 37 42.1 -0.4**
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 42.49 328 *ep* **P** **19 37 42.1 -0.4**
comp=Z,5.1nm,0.6s
MDJ Mudanjiang 42.67 58 P **P** **19 37 44.5 +0.3**
MDJ pP **pP** **19 37 50.5 +0.3**
MDJ sP **sP** **19 37 53.3 +0.7**
MDJ PP **PP** **19 39 22.3 -0.8**
MDJ PcP **PcP** **19 39 36.4 +0.5**
MDJ ScP **ScP** **19 43 25.8 0.0**
MDJ PcS **PcS** **19 43 28.8 +0.9**
MDJ S **S** **19 44 04.6 -1.9**
MDJ ScS **ScS** **19 47 44.3 -0.2**
MDJ pmax pmax
comp=Z,13nm,1.6s
MDJ pmax pmax
comp=Z,71nm,9.5s
MDJ LR LR
comp=N,80nm,23.3s
MDJ LR LR
comp=E,92nm,29.6s
MDJ LR LR
comp=Z,100nm,27.5s
MDJ Mudanjiang 42.67 58 *eP* **P** **19 37 46.3 +2.1**
comp=Z,14nm,0.9s
CRVS Cervenica-Dubn 42.92 308 *eP* **P** **19 37 46.0 -0.2**
CRVS pmax pmax
comp=Z,19nm,2.0s
CRVS Cervenica-Dubn 42.92 308 *eP* **P** **19 37 46.0 -0.2**
NIE Niedzica 43.68 309 *eP* **P** **19 37 53.7 +1.4**
NIE Niedzica 43.68 309 *eP* **P** **19 37 53.7 +1.4**
PSZ Piszkesteto 43.97 307 *eP* **P** **19 37 55.2 +0.4**
PSZ pmax pmax
comp=Z,10.0nm,0.8s
PSZ Piszkesteto 43.97 307 *eP* **P** **19 37 55.1 +0.4**
comp=Z,10nm,0.8s
PSZ Piszkesteto 43.97 307 ⇓*i*P **P** **19 37 55.1 +0.3**
PSZ Piszkesteto 43.97 307 ⇑*eP* **P** **19 37 55.5 +0.7**
KLR Kul'dur 43.99 51 *eP* P 19 37 51.0 -3.8
OJC Ojcow 44.02 310 *eP* **P** **19 37 54.9 -0.1**
OJC Ojcow 44.02 310 *eP* **P** **19 37 54.9 -0.1**
USRK Ussuriysk Arra 44.42 59 P **P** **19 38 01.1 +2.7**
comp=Z,2.2nm,0.6s,baz=262,slow=8.1,SNR=4.8
YAK Yakutsk 44.45 33 *eP* **P** **19 37 58.7 +0.4**
YAK *e* 19 39 39.6
YAK *e* 19 39 44.9
YAK *e*PPP PPP 19 40 22.0
YAK *e*S S 19 44 26.5 -5.5
YAK *e* 19 47 47.4
YAK *e*SS **ScS** **19 47 55.3 +0.3**
YAK *e*SSS SSS 19 48 38.5
YAK pmax pmax
comp=Z,38nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.0s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK pmax pmax
comp=Z,31nm,2.7s
YAK pmax pmax
comp=N,72nm,4.3s
YAK pmax pmax
comp=E,34nm,2.6s
YAK smax smax
comp=N,20nm,2.3s
YAK smax smax
comp=E,31nm,2.8s
VYHS Vyhne 44.66 308 *eP* **P** **19 38 00.8 +0.6**
VYHS pmax pmax
comp=Z,3.0nm,1.1s
VYHS Vyhne 44.66 308 *eP* **P** **19 38 00.8 +0.6**
PKSM Moragy 44.91 304⇓*eP* **P** **19 38 03.0 +0.8**
OKC Ostrava-Krasne 45.08 309 *eP* **P** **19 38 04.4 +0.9**
OKC Ostrava-Krasne 45.08 309 *eP* **P** **19 38 04.4 +0.9**
KSM Kuching 45.23 127 *eP* **P** **19 38 04.2 -0.8**
comp=Z,9.7nm,0.6s
KSM Kuching 45.23 127 P **P** **19 38 05.1 0.0**
KEV Kevo 45.29 338 *eP* **P** **19 38 04.9 0.0**
KEV pmax pmax
comp=Z,12nm,0.7s
KEV Kevo 45.29 338 *ep* **P** **19 38 04.2 -0.7**

comp=Z,10nm,0.6s
KEV Kevo 45.29 338 *e*P **P** 19 38 04.9 0.0
comp=Z,12nm,0.7s
MORC Moravsky Berou 45.48 309 *e*P **P** 19 38 06.6 -0.1
MORC pmax pmax
comp=Z,13nm,0.7s
MORC Moravsky Berou 45.48 309 *e*P **P** 19 38 06.6 -0.1
comp=Z,13nm,0.7s
MORC Moravsky Berou 45.48 309⇓ *i*P **P** 19 38 07.2 +0.5
JNU Nakatsue 45.64 74 P **P** 19 38 08.8 +0.6
JNU Nakatsue 45.64 74 P **P** 19 38 08.8 +0.6
comp=Z,11nm,0.8s,baz=22,slow=3.4,SNR=6.2
ARCES ARCESS Array B 45.66 338 P **P** 19 38 08.8 +1.0
ARCES ARCESS Array B 45.66 338 P **P** 19 38 08.8 +1.0
comp=Z,9.2nm,0.5s,baz=115,slow=8.4,SNR=115
ARE0 ARCESS Array S 45.66 338 *e*P **P** 19 38 08.8 +1.0
SBUM Sibu 45.82 124 P **P** 19 38 10.7 +1.0
VRAC Vranov 46.11 309⇑ *i*P **P** 19 38 12.8 +1.1
HABR Khabarovsk 46.20 52 *e*P **P** 19 38 11.2 -1.1
HABR *e**PP pP 19 38 20.9 +2.5
HABR *e**SP sP 19 38 25.3 +4.6
HABR *e* 19 39 46.4
HABR *e* 19 39 59.8
HABR *e*PPP PPP 19 40 41.8
HABR *e*S **S** **19 44 55.7 -1.9**
HABR *e**SS sS 19 45 12.5 +5.0
HABR *e* 19 48 03.9
HABR *e*SSS SSS 19 49 16.8
HABR pmax pmax
comp=E,54nm,2.7s
HABR pmax pmax
comp=N,23nm,1.8s
HABR pmax pmax
comp=Z,59nm,2.7s
HABR MLR MLR
comp=Z,230nm,22.0s
DPC Dobruska-Polom 46.25 310 *e*P **P** 19 38 13.7 +0.9
DPC Dobruska-Polom 46.25 310 *e*P **P** 19 38 13.7 +0.9
UPC Upice 46.44 310 *e*P **P** 19 38 15.1 +0.9
UPC Upice 46.44 310 *e*P **P** 19 38 15.1 +0.9
CONA Conrad Observa 46.68 307 *i* P **P** 19 38 16.7 +0.4
comp=Z,14nm,0.9s,SNR=16
TREC Trest 46.83 309 *e*P **P** 19 38 18.0 +0.6
TREC Trest 46.83 309 *e*P **P** 19 38 18.0 +0.6
BSD Bornholm Skovb 47.10 317 *e*P **P** 19 38 18.1 -1.2
BSD pmax pmax
comp=Z,8.0nm,1.0s
BSD Bornholm Skovb 47.10 317 *i* P **P** 19 38 18.1 -1.2
comp=Z,8.3nm,1.0s
TIP Timpagrande 47.28 295 *e*P **P** 19 38 20.6 -0.5
comp=Z,44nm,1.1s
PERS Pernice 47.30 305 *i* P **P** 19 38 21.6 +0.4
BOJS Bojanci 47.34 304 *e*P **P** 19 38 21.8 +0.5
SOKA Soboth 47.35 305⇑ *i*P **P** 19 38 22.1 +0.6
comp=Z,13nm,0.6s
PVCC Panska Ves 47.36 310 *e*P P 19 38 24.9 +3.5
PVCC Panska Ves 47.36 310 *e*P P 19 38 24.9 +3.5
PRU Pruhonice 47.41 310 *e*P **P** 19 38 22.5 +0.7
PRU Pruhonice 47.41 310 *e*P **P** 19 38 22.5 +0.7
TIXI Tiksi 47.41 20⇑ *i*P **P** 19 38 23.1 +1.6
TIXI pmax pmax
comp=Z,15nm,1.7s
VISS Visnje 47.59 304 *i* P **P** 19 38 23.6 +0.3
OBKA Obir 47.71 305⇑ *i*P **P** 19 38 24.8 +0.5
comp=Z,13nm,1.2s
BRG Berggiesshubel 47.74 311 *i* P **P** 19 38 24.9 +0.6
comp=Z,15nm,0.9s
BRG Berggiesshubel 47.74 311 *i* P **P** 19 38 25.0 +0.6
BRG pmax pmax
comp=Z,15nm,0.9s
BRG Berggiesshubel 47.74 311 *e*P **P** 19 38 24.8 +0.4
comp=Z,15nm,0.9s
MOA Molln 47.76 307⇑ *i*P **P** 19 38 24.7 +0.1
comp=Z,10nm,0.7s,SNR=11
CUC Castrocucco 47.83 296 *e*P **P** 19 38 25.6 +0.4
comp=Z,40nm,0.8s
GEC2 GERESS Array S 48.04 308 *e*P **P** 19 38 26.5 -0.3
GEC2 pmax pmax
comp=Z,4.0nm,0.9s
GEC2 GERESS Array S 48.04 308 *e*P **P** 19 38 26.5 -0.3
comp=Z,4.0nm,0.9s
GERES GERESS Array B 48.04 308 P **P** 19 38 26.9 +0.1
GERES GERESS Array B 48.04 308 P **P** 19 38 26.9 +0.1
comp=Z,2.7nm,0.7s,baz=91,slow=6.9,SNR=19
KHC Kasperske Hory 48.09 309 *e*P **P** 19 38 27.5 +0.3
KHC Kasperske Hory 48.09 309 *e*P **P** 19 38 27.0 -0.2
comp=Z,1.8nm,0.6s
KHC Kasperske Hory 48.09 309 *e*P **P** 19 38 27.5 +0.3
JAVS Javornik 48.12 304 *i* P **P** 19 38 27.7 +0.2
CEL Celeste 48.14 294 *e*P **P** 19 38 27.9 +0.2
comp=Z,22nm,0.9s
CLL Collm 48.31 312 *i* P **P** 19 38 28.7 0.0
CLL pmax pmax
comp=Z,9.0nm,1.0s
CLL Collm 48.31 312 *e*P **P** 19 38 28.8 0.0
comp=Z,6.0nm,0.7s
CLL Collm 48.31 312 *i* P **P** 19 38 28.7 0.0
comp=Z,9.0nm,1.0s
KBA Koelnbreinsper 48.46 306⇑ *i*P **P** 19 38 30.2 0.0
comp=Z,7.4nm,0.5s,SNR=5.8
TANN Tannenbergstha 48.71 310 *e*P **P** 19 38 32.2 +0.2
comp=Z,6.0nm,1.1s
NKC Novy Kostel 48.73 310 *e*P **P** 19 38 32.3 +0.2
NKC Novy Kostel 48.73 310 *e*P **P** 19 38 32.3 +0.2
RJOB Jochberg 48.75 307 *e*P **P** 19 38 31.8 -0.5
comp=Z,10.0nm,0.8s
ROTZ Rotzenmuhle 48.93 310 *e*P **P** 19 38 34.4 +0.8
comp=Z,8.0nm,1.1s
AQU L'Aquila 49.15 300 *e*P **P** 19 38 35.7 +0.2
comp=Z,24nm,1.1s
NB2 NORSAR Subarra 49.34 325 P **P** 19 38 36.4 -0.2
comp=Z,48nm,1.7s,baz=94,slow=7.9
NB2 NORSAR Subarra 49.34 325 P **P** 19 38 36.4 -0.2
baz=94,slow=7.9
NOA NORSAR Array B 49.34 325 P **P** 19 38 36.5 -0.2
NOA NORSAR Array B 49.34 325 P **P** 19 38 36.5 -0.2
comp=Z,4.9nm,0.6s,baz=96,slow=7.5,SNR=28
NOA LR LR 20 03 44.6
comp=Z,39nm,19.0s,baz=75,slow=41
NAO01 NORSAR Array S 49.49 324 *e*P **P** 19 38 36.6 -1.0
comp=Z,14nm,1.1s
GRF Grafenberg Arr 49.57 310 *e*P **P** 19 38 39.5 +1.0
GRF pmax pmax
comp=Z,8.0nm,0.8s
GRF Grafenberg Arr 49.57 310 *e*P **P** 19 38 39.5 +1.0
comp=Z,8.0nm,0.8s
WTTA Wattenberg 49.59 306⇑ *i*P **P** 19 38 38.3 -0.6
comp=Z,8.0nm,0.7s
WATA Walderalm 49.62 306⇑ *i*P **P** 19 38 38.2 -0.9
comp=Z,9.1nm,0.6s
BSEG Bad Segeberg 49.79 315 *e*P **P** 19 38 40.5 +0.5
BSEG pmax pmax
comp=Z,25nm,1.1s
BSEG Bad Segeberg 49.79 315 *e*P **P** 19 38 40.5 +0.5
comp=Z,25nm,1.1s
KMBO Kilima Mbogo 49.85 235 *e*P **P** 19 38 42.8 +1.5
comp=Z,22nm,0.8s
KMBO Kilima Mbogo 49.85 235 P P 19 38 43.5 +2.2
SNR=6.3
KMBO Kilima Mbogo 49.85 235 P **P** 19 38 42.8 +1.5
comp=Z,22nm,0.7s,baz=38,slow=11,SNR=38
MOTA Moosalm 49.94 307⇓ *i*P **P** 19 38 40.6 -0.9
comp=Z,13nm,0.6s,SNR=16
NRDL Niedersach Rie 50.01 313 *e*P **P** 19 38 42.2 +0.5
comp=Z,9.0nm,0.9s
FETA Feichten 50.24 306 *i* P **P** 19 38 43.1 -0.7
comp=Z,13nm,0.8s,SNR=11
MAJO Matsushiro 50.52 68 *e*P **P** 19 38 45.4 -0.5
MAJO pmax pmax
comp=Z,11nm,0.8s
MAJO Matsushiro 50.52 68 *e*P **P** 19 38 45.4 -0.5
comp=Z,11nm,0.8s
MAT Matsushiro 50.52 68 P **P** 19 38 46.4 +0.5
MAT *e*S S 19 45 45.8 -13
MJAR Matsushiro Arr 50.52 68 P **P** 19 38 45.7 -0.1
MJAR Matsushiro Arr 50.52 68 P **P** 19 38 45.7 -0.1
comp=Z,7.6nm,0.8s,baz=281,slow=9.9,SNR=34
DAVA Damuels 50.77 307 *i* P **P** 19 38 47.4 -0.4
comp=Z,35nm,0.6s,SNR=27
TUE Stuetta 51.27 306 *e*P **P** 19 38 50.3 -1.3
comp=Z,5.7nm,0.6s
SPAK Spaichingen-Ko 51.38 308 *e*P **P** 19 38 50.9 -1.3
YSS Yuzh-Sakhalins 51.54 54 *e*P **P** 19 38 56.0 +2.7
BFO Black Forest 51.64 308 *e*P **P** 19 38 53.9 -0.3
BFO pmax pmax
comp=Z,8.0nm,1.1s
BFO Black Forest 51.64 308 *e*P **P** 19 38 53.9 -0.3
comp=Z,8.0nm,1.1s
LANF Langenberg 51.88 309 *e*P **P** 19 38 56.2 +0.3
LANF Langenberg 51.88 309 *e*P **P** 19 38 56.2 +0.3
LANF Langenberg 51.88 309 *e*P **P** 19 38 56.2 +0.3
FELD Feldberg im Sc 51.93 308 *e*P **P** 19 38 56.2 -0.3
FELD Feldberg im Sc 51.93 308 *e*P **P** 19 38 56.2 -0.3
ASAJ Asahikawa 51.97 57 P **P** 19 38 56.4 -0.3
ASAJ Asahikawa 51.97 57 P **P** 19 38 56.4 -0.3
comp=Z,6.9nm,0.9s,baz=277,slow=16,SNR=3.1
RUP Ruppelstein 52.25 310 *e*P **P** 19 39 00.1 +1.4
RUP Ruppelstein 52.25 310 *e*P **P** 19 39 00.1 +1.4
PGF Pioggiola 52.30 301 *e*P **P** 19 38 58.5 -0.7
comp=Z,12nm,0.8s
PGF Pioggiola 52.30 301 *e*P **P** 19 38 58.5 -0.7
PGF pmax pmax
comp=Z,12nm,0.8s
PGF Pioggiola 52.30 301 *e*P **P** 19 38 58.5 -0.7
comp=Z,12nm,0.8s
CDF Champ du Feu 52.32 308 *e*P **P** 19 38 59.4 +0.1
comp=Z,13nm,0.9s
CDF Champ du Feu 52.32 308 *e*P **P** 19 38 59.4 +0.1
CDF pmax pmax
comp=Z,13nm,0.9s
CDF Champ du Feu 52.32 308 *e*P **P** 19 38 59.4 +0.1
comp=Z,13nm,0.9s
BBS Basel-Blauen 52.33 307 *e*P **P** 19 38 56.3 -3.0
BBS Basel-Blauen 52.33 307 *e*P **P** 19 38 56.3 -3.0
MOF Molkenrain 52.51 308 *e*P **P** 19 38 59.8 -0.9
MOF Molkenrain 52.51 308 *e*P **P** 19 38 59.8 -0.9
MOF Molkenrain 52.51 308 *e*P **P** 19 38 59.8 -0.9
HINF Hinteralfeld 52.70 308 *e*P **P** 19 39 01.7 -0.4
comp=Z,14nm,0.7s
HINF Hinteralfeld 52.70 308 *e*P **P** 19 39 01.7 -0.4
HINF pmax pmax
comp=Z,14nm,0.7s
HINF Hinteralfeld 52.70 308 *e*P **P** 19 39 01.7 -0.4
comp=Z,14nm,0.7s
MEM Membach 52.78 311 P **P** 19 39 03.0 +0.5
WLF Walferdange 52.84 310 P **P** 19 39 04.0 +1.1
comp=Z,11nm,1.1s
WLF Walferdange 52.84 310 *e*P **P** 19 39 03.9 +0.9
comp=Z,16nm,1.0s
SAOF Saorge 53.00 303 *e*P **P** 19 39 04.5 +0.2
SAOF Saorge 53.00 303 *e*P **P** 19 39 04.5 +0.2
SAOF Saorge 53.00 303 *e*P **P** 19 39 04.5 +0.2
HAU Haudompre 53.00 308 *e*P **P** 19 39 04.1 -0.2
comp=Z,38nm,1.0s
HAU Haudompre 53.00 308 *e*P **P** 19 39 04.1 -0.2
HAU pmax pmax
comp=Z,38nm,1.0s
HAU Haudompre 53.00 308 *e*P **P** 19 39 04.1 -0.2
comp=Z,38nm,1.0s
AUTN L'Aution 53.09 303 *e*P **P** 19 39 05.6 +0.4
AUTN L'Aution 53.09 303 *e*P **P** 19 39 05.6 +0.4
AUTN L'Aution 53.09 303 *e*P **P** 19 39 05.6 +0.4
OG01 Vacheresse 53.10 306 *e*P **P** 19 39 05.3 +0.2
OG01 Vacheresse 53.10 306 *e*P **P** 19 39 05.3 +0.2
SBF Sospel 53.11 303 *e*P **P** 19 39 05.2 0.0
comp=Z,54nm,0.7s
SBF Sospel 53.11 303 *e*P **P** 19 39 05.2 0.0
SBF pmax pmax
comp=Z,54nm,0.7s
SBF Sospel 53.11 303 *e*P **P** 19 39 05.2 0.0
comp=Z,54nm,0.7s
REVF Revere 53.19 303 *e*P **P** 19 39 05.9 +0.2
REVF Revere 53.19 303 *e*P **P** 19 39 05.9 +0.2
REVF Revere 53.19 303 *e*P **P** 19 39 05.9 +0.2
THEF They Montfort 53.20 308 *e*P **P** 19 39 05.6 -0.1
THEF They Montfort 53.20 308 *e*P **P** 19 39 05.6 -0.1
THEF They Montfort 53.20 308 *e*P **P** 19 39 05.6 -0.1
TOUF Mont Tournerai 53.21 303 *e*P **P** 19 39 03.7 -2.4
TOUF Mont Tournerai 53.21 303 *e*P **P** 19 39 03.7 -2.4
TOUF Mont Tournerai 53.21 303 *e*P **P** 19 39 03.7 -2.4
LPG La Plagne 53.23 305 *e*P **P** 19 39 06.5 +0.2
comp=Z,50nm,0.6s
LPG La Plagne 53.23 305 *e*P **P** 19 39 06.5 +0.2
LPG pmax pmax
comp=Z,50nm,0.6s
LPG La Plagne 53.23 305 *e*P **P** 19 39 06.5 +0.2
comp=Z,50nm,0.6s
LPL La Plagne 53.24 305 *e*P **P** 19 39 06.5 +0.2
comp=Z,90nm,0.5s
LPL La Plagne 53.24 305 *e*P **P** 19 39 06.5 +0.2
LPL pmax pmax
comp=Z,91nm,0.5s
LPL La Plagne 53.24 305 *e*P **P** 19 39 06.5 +0.2
comp=Z,90nm,0.5s
BCLA Clavier 53.25 311 P **P** 19 39 07.2 +1.2
RSL Roselend 53.28 305 *e*P **P** 19 39 06.5 0.0
RSL Roselend 53.28 305 *e*P **P** 19 39 06.5 0.0
RSL Roselend 53.28 305 *e*P **P** 19 39 06.5 0.0
MVIF Mont Vial 53.30 303 *e*P **P** 19 39 06.7 0.0
MVIF Mont Vial 53.30 303 *e*P **P** 19 39 06.7 0.0
MVIF Mont Vial 53.30 303 *e*P **P** 19 39 06.7 0.0
PAGF Fort de Pagny 53.31 309 *e*P **P** 19 39 05.8 -0.7
comp=Z,8.2nm,0.9s
PAGF Fort de Pagny 53.31 309 *e*P **P** 19 39 05.8 -0.7
comp=Z,8.2nm,0.9s
MBDF Montbardon 53.38 304 *e*P **P** 19 39 07.7 +0.4
comp=Z,22nm,0.5s
MBDF Montbardon 53.38 304 *e*P **P** 19 39 07.7 +0.4
MBDF pmax pmax
comp=Z,22nm,0.5s
MBDF Montbardon 53.38 304 *e*P **P** 19 39 07.7 +0.4
comp=Z,22nm,0.5s
CABF La Chapelle 53.45 306 *e*P **P** 19 39 07.8 +0.1
comp=Z,25nm,0.9s
CABF La Chapelle 53.45 306 *e*P **P** 19 39 07.8 +0.1
CABF pmax pmax
comp=Z,25nm,0.9s
CABF La Chapelle 53.45 306 *e*P **P** 19 39 07.8 +0.1
comp=Z,25nm,0.9s
GIVF Givet 53.61 311 *e*P **P** 19 39 09.2 +0.5
comp=Z,27nm,1.0s
GIVF Givet 53.61 311 *e*P **P** 19 39 09.2 +0.5
GIVF pmax pmax
comp=Z,27nm,1.0s
GIVF Givet 53.61 311 *e*P **P** 19 39 09.2 +0.5
comp=Z,27nm,1.0s
FRF La Foret Royal 53.74 303 *e*P **P** 19 39 09.4 -0.3
comp=Z,23nm,0.6s
FRF La Foret Royal 53.74 303 *e*P **P** 19 39 09.4 -0.3
FRF pmax pmax
comp=Z,23nm,0.6s
FRF La Foret Royal 53.74 303 *e*P **P** 19 39 09.4 -0.3
comp=Z,23nm,0.6s
DOU Dourbes 53.76 311 P **P** 19 39 10.2 +0.5
comp=Z,7.3nm,1.3s
MEZF Maizieres J'vi 53.76 309 *e*P **P** 19 39 10.1 +0.3
comp=Z,48nm,1.1s
MEZF Maizieres J'vi 53.76 309 *e*P **P** 19 39 10.1 +0.3
comp=Z,48nm,1.1s
SFTF Sexfontaines 53.83 309 *e*P **P** 19 39 10.2 -0.1
comp=Z,26nm,0.9s
SFTF Sexfontaines 53.83 309 *e*P **P** 19 39 10.2 -0.1
comp=Z,26nm,0.9s
KEST Kesra 53.87 293 *e*P **P** 19 39 11.2 +0.3
KEST Kesra 53.87 293 P **P** 19 39 11.5 +0.6
comp=Z,5.4nm,0.6s,baz=216,slow=0.8,SNR=31
LMR La Mourre 53.89 302 *e*P **P** 19 39 11.0 +0.2
comp=Z,6.1nm,0.7s
LMR La Mourre 53.89 302 *e*P **P** 19 39 11.0 +0.2
LMR pmax pmax
comp=Z,6.0nm,0.7s
LMR La Mourre 53.89 302 *e*P **P** 19 39 11.0 +0.2
comp=Z,6.1nm,0.7s
ORIF Oris-en-Rattie 53.96 304 *e*P **P** 19 39 11.5 +0.1
comp=Z,6.6nm,0.5s
ORIF Oris-en-Rattie 53.96 304 *e*P **P** 19 39 11.5 +0.1
ORIF pmax pmax
comp=Z,7.0nm,0.5s
ORIF Oris-en-Rattie 53.96 304 *e*P **P** 19 39 11.5 +0.1
comp=Z,6.6nm,0.5s
BAIF Baives 54.01 311 *e*P **P** 19 39 12.0 +0.4
comp=Z,28nm,1.1s
BAIF Baives 54.01 311 *e*P **P** 19 39 12.0 +0.4
BAIF pmax pmax
comp=Z,28nm,1.1s
BAIF Baives 54.01 311 *e*P **P** 19 39 12.0 +0.4
comp=Z,28nm,1.1s
YUK Yuzh-Kuril'sk 54.28 57 P P 19 39 08.6 -5.0
YUK S S 19 46 45.4 -4.8
YUK *e*SS **SS** **19 50 34.5 +2.5**
YUK *e*SSS SSS 19 52 27.2
YUK MLR MLR
comp=Z,366nm,19.0s
SMRF Simiane la Rot 54.39 303 *e*P **P** 19 39 15.5 +0.9
comp=Z,14nm,0.8s
SMRF Simiane la Rot 54.39 303 *e*P **P** 19 39 15.5 +0.9
comp=Z,14nm,0.8s
OCF Saint Nazaire 54.44 304 *e*P **P** 19 39 15.1 +0.2
OG26 St.-Nazaire-De 54.44 304 *e*P **P** 19 39 15.1 +0.2
SSB Saint Sauveur 54.80 305 *e*P **P** 19 39 17.3 -0.2
SSB Saint Sauveur 54.80 305 *e*P **P** 19 39 17.3 -0.2
SSB Saint Sauveur 54.80 305 *e*P **P** 19 39 17.3 -0.2
LOR Lormes 54.80 308 *e*P **P** 19 39 16.8 -0.6
comp=Z,23nm,1.1s
LOR Lormes 54.80 308 *e*P **P** 19 39 16.8 -0.6
comp=Z,23nm,1.1s
VIVF Saint-Julien-l 54.81 305 *e*P **P** 19 39 17.6 +0.1
comp=Z,21nm,0.7s
VIVF Saint-Julien-l 54.81 305 *e*P **P** 19 39 17.6 +0.1
VIVF pmax pmax
comp=Z,21nm,0.7s
VIVF Saint-Julien-l 54.81 305 *e*P **P** 19 39 17.6 +0.1
comp=Z,21nm,0.7s
SMF Signal de Mont 54.95 307 *e*P **P** 19 39 18.2 -0.3
comp=Z,49nm,0.7s
SMF Signal de Mont 54.95 307 *e*P **P** 19 39 18.2 -0.3
SMF pmax pmax
comp=Z,49nm,0.7s
SMF Signal de Mont 54.95 307 *e*P **P** 19 39 18.2 -0.3
comp=Z,49nm,0.7s
SEY Seymchan 54.98 33⇓ *i*P **P** 19 39 20.1 +1.7
SSF Saint Saulge 55.08 307 *e*P **P** 19 39 19.1 -0.3
comp=Z,39nm,0.9s
SSF Saint Saulge 55.08 307 *e*P **P** 19 39 19.1 -0.3
SSF pmax pmax
comp=Z,39nm,0.9s
SSF Saint Saulge 55.08 307 *e*P **P** 19 39 19.1 -0.3
comp=Z,39nm,0.9s
AVF Avril sur Loir 55.25 307 *e*P **P** 19 39 20.3 -0.3
comp=Z,38nm,0.9s
AVF Avril sur Loir 55.25 307 *e*P **P** 19 39 20.3 -0.3
AVF pmax pmax
comp=Z,38nm,0.9s
AVF Avril sur Loir 55.25 307 *e*P **P** 19 39 20.3 -0.3
comp=Z,38nm,0.9s
LASF Ste Croix 55.57 304 *e*P **P** 19 39 23.4 +0.4
comp=Z,28nm,0.7s
LASF Ste Croix 55.57 304 *e*P **P** 19 39 23.4 +0.4
comp=Z,28nm,0.7s
AGO Saint Agoulin 55.57 306 *e*P **P** 19 39 23.1 +0.1
AGO Saint Agoulin 55.57 306 *e*P **P** 19 39 23.1 +0.1
HYF Humbligny 55.61 308 *e*P **P** 19 39 23.4 +0.2
HYF Humbligny 55.61 308 *e*P **P** 19 39 23.4 +0.2
BGF Bois d'Agland 55.64 307 *e*P **P** 19 39 23.1 -0.4
comp=Z,13nm,0.8s
BGF Bois d'Agland 55.64 307 *e*P **P** 19 39 23.1 -0.4
BGF pmax pmax
comp=Z,13nm,0.8s
BGF Bois d'Agland 55.64 307 *e*P **P** 19 39 23.1 -0.4
comp=Z,13nm,0.8s
LBL Lubilhac 55.70 305 *e*P **P** 19 39 24.7 +0.7
LBL Lubilhac 55.70 305 *e*P **P** 19 39 24.7 +0.7
LBL Lubilhac 55.70 305 *e*P **P** 19 39 24.7 +0.7
PYM Petit Puy Mans 55.73 306 *e*P **P** 19 39 24.9 +0.7
PYM Petit Puy Mans 55.73 306 *e*P **P** 19 39 24.9 +0.7
PYM Petit Puy Mans 55.73 306 *e*P **P** 19 39 24.9 +0.7
TCF Toulx Ste Croi 56.13 307 *e*P **P** 19 39 27.2 +0.2
comp=Z,46nm,0.9s
TCF Toulx Ste Croi 56.13 307 *e*P **P** 19 39 27.2 +0.2
TCF pmax pmax
comp=Z,46nm,0.9s
TCF Toulx Ste Croi 56.13 307 *e*P **P** 19 39 27.2 +0.2
comp=Z,46nm,0.9s
CAF Calviac 56.58 305 *e*P **P** 19 39 30.6 +0.3
comp=Z,29nm,0.6s
CAF Calviac 56.58 305 *e*P **P** 19 39 30.6 +0.3
CAF pmax pmax
comp=Z,29nm,0.6s
CAF Calviac 56.58 305 *e*P **P** 19 39 30.6 +0.3
comp=Z,29nm,0.6s
RJF Les Rejaudoux 56.86 306 *e*P **P** 19 39 32.7 +0.5
comp=Z,22nm,0.9s
RJF Les Rejaudoux 56.86 306 *e*P **P** 19 39 32.7 +0.5
RJF pmax pmax
comp=Z,22nm,0.9s
RJF Les Rejaudoux 56.86 306 *e*P **P** 19 39 32.7 +0.5
comp=Z,22nm,0.9s
MTLF Montolieu 56.91 303 *e*P **P** 19 39 32.7 +0.1
comp=Z,15nm,0.6s
MTLF Montolieu 56.91 303 *e*P **P** 19 39 32.7 +0.1
MTLF pmax pmax
comp=Z,15nm,0.6s
MTLF Montolieu 56.91 303 *e*P **P** 19 39 32.7 +0.1
comp=Z,15nm,0.6s
LDF La Druitiere 57.09 310 *e*P **P** 19 39 33.3 -0.5
comp=Z,12nm,0.6s
LDF La Druitiere 57.09 310 *e*P **P** 19 39 33.3 -0.5
LDF pmax pmax
comp=Z,12nm,0.6s
LDF La Druitiere 57.09 310 *e*P **P** 19 39 33.3 -0.5
comp=Z,12nm,0.6s
FLN La Foliniere 57.28 310 *e*P **P** 19 39 34.5 -0.6
comp=Z,42nm,1.1s
FLN La Foliniere 57.28 310 *e*P **P** 19 39 34.5 -0.6
FLN pmax pmax
comp=Z,42nm,1.1s
FLN La Foliniere 57.28 310 *e*P **P** 19 39 34.5 -0.6
comp=Z,42nm,1.1s
LFF La Frestale 57.48 306 *e*P **P** 19 39 36.9 +0.3
comp=Z,33nm,0.7s
LFF La Frestale 57.48 306 *e*P **P** 19 39 36.9 +0.3
LFF pmax pmax
comp=Z,33nm,0.7s
LFF La Frestale 57.48 306 *e*P **P** 19 39 36.9 +0.3
comp=Z,33nm,0.7s
GRR Gorron 57.62 310 *e*P **P** 19 39 37.1 -0.4
comp=Z,37nm,0.9s
GRR Gorron 57.62 310 *e*P **P** 19 39 37.1 -0.4
GRR pmax pmax
comp=Z,37nm,0.9s
GRR Gorron 57.62 310 *e*P **P** 19 39 37.1 -0.4
comp=Z,37nm,0.9s
MFF Saint Martin d 57.62 308 *e*P **P** 19 39 37.1 -0.5
comp=Z,26nm,1.0s
MFF Saint Martin d 57.62 308 *e*P **P** 19 39 37.1 -0.5
MFF pmax pmax
comp=Z,26nm,1.0s
MFF Saint Martin d 57.62 308 *e*P **P** 19 39 37.1 -0.5
comp=Z,26nm,1.0s
MLS Moulis 57.81 303 *e*P **P** 19 39 38.7 -0.3
MLS Moulis 57.81 303 *e*P **P** 19 39 38.7 -0.3
EPF Esparros 58.32 303 *e*P **P** 19 39 42.2 -0.4
comp=Z,9.8nm,0.6s
EPF Esparros 58.32 303 *e*P **P** 19 39 42.2 -0.4
EPF pmax pmax
comp=Z,10.0nm,0.6s
EPF Esparros 58.32 303 *e*P **P** 19 39 42.2 -0.4
comp=Z,9.8nm,0.6s
LABF Labassere 58.50 304 *e*P **P** 19 39 43.8 0.0
LABF Labassere 58.50 304 *e*P **P** 19 39 43.8 0.0
SGMF Saint Gilles 58.74 310 *e*P **P** 19 39 45.2 -0.2
comp=Z,43nm,0.9s
SGMF Saint Gilles 58.74 310 *e*P **P** 19 39 45.2 -0.2
SGMF pmax pmax
comp=Z,43nm,0.9s
SGMF Saint Gilles 58.74 310 *e*P **P** 19 39 45.2 -0.2
comp=Z,43nm,0.9s
ETSF Etsaut 58.98 304 *e*P **P** 19 39 47.6 +0.4
comp=Z,39nm,0.6s
ETSF Etsaut 58.98 304 *e*P **P** 19 39 47.6 +0.4
ETSF pmax pmax
comp=Z,39nm,0.6s
ETSF Etsaut 58.98 304 *e*P **P** 19 39 47.6 +0.4
comp=Z,39nm,0.6s
ROSF Rostrenen 59.18 310 *e*P **P** 19 39 48.1 -0.3
comp=Z,34nm,0.8s
ROSF Rostrenen 59.18 310 *e*P **P** 19 39 48.1 -0.3
ROSF pmax pmax
comp=Z,34nm,0.8s
ROSF Rostrenen 59.18 310 *e*P **P** 19 39 48.1 -0.3
comp=Z,34nm,0.8s
QUIF Quistinic 59.23 310 *e*P **P** 19 39 48.3 -0.4
comp=Z,17nm,0.6s
QUIF Quistinic 59.23 310 *e*P **P** 19 39 48.3 -0.4
QUIF pmax pmax
comp=Z,17nm,0.6s
QUIF Quistinic 59.23 310 *e*P **P** 19 39 48.3 -0.4

	comp=Z,17nm,0.6s									
SJPF	**Ste Jean**	**59.38**	**304**	*e*P		**P**	**19 39 50.2**	**+0.3**
	comp=Z,14nm,0.7s									
SJPF	**Ste Jean**	**59.38**	**304**	*e*P		**P**	**19 39 50.2**	**+0.3**
SJPF				pmax	pmax					
	comp=Z,14nm,0.7s									
SJPF	**Ste Jean**	**59.38**	**304**	*e*P		**P**	**19 39 50.2**	**+0.3**
	comp=Z,14nm,0.7s									
PETK	**Petropavlovsk-**	**59.59**	**44**	P		**P**	**19 39 51.7**	**+0.6**
PETK				pmax	pmax					
	comp=Z,7.0nm,0.8s									
PETK	**Petropavlovsk-**	**59.59**	**44**	P		**P**	**19 39 51.7**	**+0.6**
PETK	**Petropavlovsk-**	**59.59**	**44**	P		**P**	**19 39 51.7**	**+0.6**
	comp=Z,7.2nm,0.8s,baz=222,slow=2.0,SNR=5.3									
BILL	**Bilibino**	**59.82**	**26**	⇑*i*P		**P**	**19 39 55.6**	**+3.1**
BILL				*e*			19 42 09.3			
BILL				*e*S		**S**	**19 48 04.5**	**+1.8**
BILL				*e*SS		**SS**	**19 51 57.0**	**-1.2**
BILL				pmax	pmax					
	comp=Z,6.0nm,0.9s									
TAM	**Tamanrasset**	**61.88**	**280**	*e*P		**P**	**19 40 06.4**	**-1.1**
TAM				pmax	pmax					
	comp=Z,5.0nm,0.8s									
TAM	**Tamanrasset**	**61.88**	**280**	*e*P		**P**	**19 40 06.3**	**-1.1**
	comp=Z,4.8nm,0.8s									
ESDC	**Sonseca Array**	**62.49**	**301**	P		**P**	**19 40 11.4**	**+0.3**
ESDC	**Sonseca Array**	**62.49**	**301**	P		**P**	**19 40 11.4**	**+0.3**
	comp=Z,22nm,0.8s,baz=60,slow=7.3,SNR=101									
ESLA	**Sonseca Array**	**62.49**	**301**	*e*P		**P**	**19 40 11.2**	**+0.1**
	comp=Z,4.3nm,0.8s									
PAB	**San Pablo**	**62.81**	**301**	*e*P		**P**	**19 40 13.3**	**-0.1**
PAB				pmax	pmax					
	comp=Z,18nm,0.8s									
PAB	**San Pablo**	**62.81**	**301**	*e*P		**P**	**19 40 13.3**	**-0.1**
	comp=Z,18nm,0.8s									
MVO	**Moncorvo**	**64.11**	**304**	*e*P		**P**	**19 40 22.2**	**+0.4**
	comp=Z,35nm,1.0s									
PVRL	**Vila Real**	**64.54**	**304**	*e*P		**P**	**19 40 25.2**	**+0.5**
POLO	**Lamas de Olo**	**64.56**	**304**	*e*P		**P**	**19 40 26.0**	**+1.2**
PCAB	**Cabril**	**64.59**	**305**	*e*P		**P**	**19 40 25.9**	**+1.0**
	comp=Z,48nm,1.7s									
PGAV	**Gavieira, Arco**	**64.66**	**305**	*e*P		**P**	**19 40 26.0**	**+0.5**
	comp=Z,46nm,1.6s									
MTE	**Manteigas**	**64.76**	**303**	*e*P		**P**	**19 40 27.2**	**+1.1**
	comp=Z,40nm,0.8s									
MTE	**Manteigas**	**64.76**	**303**	*e*P		**P**	**19 40 26.8**	**+0.6**
	comp=Z,35nm,0.9s									
PVIS	**Viseu**	**64.88**	**303**	*e*P		**P**	**19 40 27.9**	**+1.0**
	comp=Z,40nm,1.2s									
PCBR	**Castelo Branco**	**64.93**	**302**	*e*P		**P**	**19 40 28.2**	**+1.0**
	comp=Z,28nm,1.6s									
PMRV	**Marv??o**	**65.03**	**302**	*e*P		**P**	**19 40 28.8**	**+0.9**
	comp=Z,25nm,1.3s									
PBAR	**Barrancos**	**65.28**	**301**	*e*P		**P**	**19 40 30.1**	**+0.6**
	comp=Z,41nm,1.0s									
SUMG	**Summit**	**65.39**	**342**	*e*P		**P**	**19 40 31.5**	**+1.4**
SUMG				pmax	pmax					
	comp=Z,26nm,1.1s									
SUMG	**Summit**	**65.39**	**342**	*e*P		**P**	**19 40 31.5**	**+1.4**
	comp=Z,26nm,1.1s									
SUMG	**Summit**	**65.39**	**342**	*i* P		**P**	**19 40 32.0**	**+1.9**
	comp=Z,16nm,1.0s									
PESTR	**Estremoz**	**65.40**	**301**	*e*P		**P**	**19 40 30.8**	**+0.5**
	comp=Z,27nm,1.1s									
PTOM	**Tomar**	**65.68**	**303**	*e*P		**P**	**19 40 33.0**	**+1.0**
	comp=Z,67nm,1.0s									
PMTG	**Montargil**	**65.77**	**302**	*e*P		**P**	**19 40 33.3**	**+0.7**
EVO	**Evora**	**65.84**	**301**	*e*P		**P**	**19 40 33.6**	**+0.5**
	comp=Z,42nm,0.9s									
EVO	**Evora**	**65.84**	**301**	*e*P		**P**	**19 40 34.0**	**+0.9**
	comp=Z,35nm,1.3s									
EVOP	**Sao Brissos**	**65.92**	**301**	*e*P		**P**	**19 40 33.6**	**0.0**
EVOP				pmax	pmax					
	comp=Z,42nm,0.9s									
EVOP	**Sao Brissos**	**65.92**	**301**	*e*P		**P**	**19 40 33.6**	**0.0**
	comp=Z,42nm,0.9s									
PBEJ	**Beja**	**65.94**	**301**	*e*P		**P**	**19 40 34.7**	**+1.0**
	comp=Z,32nm,1.3s									
PVAQ	**Vaqueiros**	**66.09**	**300**	*e*P		**P**	**19 40 35.5**	**+0.8**
	comp=Z,43nm,1.1s									
LSZ	**Lusaka**	**66.26**	**231**	*e*P		**P**	**19 40 36.0**	**0.0**
	comp=Z,8.8nm,0.8s									
PBDV	**Barranco-do-Ve**	**66.31**	**300**	*e*P		**P**	**19 40 37.3**	**+1.2**
	comp=Z,63nm,1.4s									
PNCL	**Nicolau / Gran**	**66.38**	**301**	*e*P		**P**	**19 40 37.6**	**+1.1**
	comp=Z,32nm,1.6s									
FX1	**Attu Island--F**	**68.37**	**40**	P		**P**	**19 40 49.4**	**+0.5**
FX1	**Attu Island--F**	**68.37**	**40**	P		**P**	**19 40 49.4**	**+0.5**
	comp=Z,10nm,0.7s,baz=37,slow=13,SNR=4.0									
TOA0	**Torodi Ar. Sit**	**69.69**	**273**	*e*P		**P**	**19 40 56.4**	**-1.3**
TORD	**Torodi Ar. Bea**	**69.69**	**273**	P		**P**	**19 40 56.5**	**-1.2**
TORD	**Torodi Ar. Bea**	**69.69**	**273**	P		**P**	**19 40 56.5**	**-1.2**
	comp=Z,28nm,0.7s,baz=47,slow=5.6,SNR=171									
SFJD	**Kangerlussuaq**	**72.18**	**341**	*i* P		**P**	**19 41 12.1**	**+0.2**
	comp=Z,8.0nm,0.9s									
COLD	**Coldfoot**	**74.00**	**17**	*e*P		**P**	**19 41 23.3**	**+0.6**
	comp=Z,6.4nm,0.9s									
LBTB	**Lobatse**	**75.08**	**226**	*e*P		**P**	**19 41 29.8**	**+0.2**
	comp=Z,25nm,1.0s									
TSUM	**Tsumeb**	**76.17**	**236**	*e*P		**P**	**19 41 36.5**	**+0.4**
	comp=Z,24nm,0.8s									
INK	**Inuvik**	**76.43**	**11**	P		**P**	**19 41 37.2**	**+0.6**
INK	**Inuvik**	**76.43**	**11**	P		**P**	**19 41 37.2**	**+0.6**
	comp=Z,5.1nm,0.6s,baz=358,slow=8.0,SNR=14									
COLA	**College**	**76.45**	**18**	*e*P		**P**	**19 41 36.9**	**+0.1**
COLA				pmax	pmax					
	comp=Z,10.0nm,1.0s									
COLA	**College**	**76.45**	**18**	*e*P		**P**	**19 41 36.9**	**+0.1**
	comp=Z,10nm,1.0s									
NWAO	**Narrogin (SRO)**	**76.50**	**145**	*e*P		**P**	**19 41 36.2**	**-1.3**
ILAR	**Eielson Array**	**76.78**	**17**	P		**P**	**19 41 38.5**	**-0.2**
ILAR	**Eielson Array**	**76.78**	**17**	P		**P**	**19 41 38.5**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=318,slow=4.7,SNR=28									
PPLA	**Purkeypile**	**76.83**	**20**	*e*P		**P**	**19 41 39.8**	**+0.5**
	comp=Z,3.0nm,0.5s									
WRA	**Warramunga Arr**	**76.91**	**125**	P		**P**	**19 41 39.7**	**-0.4**
WRA	**Warramunga Arr**	**76.91**	**125**	P		**P**	**19 41 39.7**	**-0.4**
	comp=Z,16nm,0.8s,baz=322,slow=5.6,SNR=228									
WRAB	**Tennant Creek**	**76.91**	**125**	*e*P		**P**	**19 41 40.0**	**-0.1**
WRAB				pmax	pmax					
	comp=Z,15nm,0.6s									
WRAB	**Tennant Creek**	**76.91**	**125**	*e*P		**P**	**19 41 40.0**	**-0.1**
	comp=Z,15nm,0.6s									
TRF	**Thorofare Moun**	**76.94**	**19**	*e*P		**P**	**19 41 39.7**	**-0.2**
	comp=Z,5.6nm,1.1s									
BOSA	**Boshof**	**77.96**	**224**	*e*P		**P**	**19 41 45.2**	**-0.7**
	comp=Z,22nm,0.6s									
BOSA	**Boshof**	**77.96**	**224**	P		**P**	**19 41 45.5**	**-0.4**
	comp=Z,28nm,0.6s,baz=37,slow=4.4,SNR=108									
EGAK	**Eagle**	**78.13**	**15**	*e*P		**P**	**19 41 47.0**	**+0.8**
	comp=Z,4.8nm,1.0s									
DOT	**Dot Lake**	**78.41**	**17**	*e*P		**P**	**19 41 47.8**	**-0.1**
	comp=Z,7.4nm,1.1s									
RSO	**Redoubt South**	**78.53**	**22**	*e*P		**P**	**19 41 49.5**	**+0.7**
DBIC	**Dimbokro**	**78.56**	**271**	*e*P		**P**	**19 41 48.7**	**-0.8**
	comp=Z,20nm,0.9s									
DBIC	**Dimbokro**	**78.56**	**271**	P		**P**	**19 41 48.7**	**-0.8**
	comp=Z,18nm,0.8s,baz=36,slow=5.7,SNR=19									
PAX	**Paxson**	**78.62**	**18**	*e*P		**P**	**19 41 49.0**	**-0.2**
PAX				pmax	pmax					
	comp=Z,13nm,1.1s									
PAX	**Paxson**	**78.62**	**18**	*e*P		**P**	**19 41 49.0**	**-0.2**
	comp=Z,12nm,1.1s									
SML	**Sawmill**	**78.80**	**20**	*e*P		**P**	**19 41 50.9**	**+0.8**
SML				pmax	pmax					
	comp=Z,4.0nm,0.9s									
SML	**Sawmill**	**78.80**	**20**	*e*P		**P**	**19 41 50.9**	**+0.8**
	comp=Z,4.3nm,0.9s									
LIC	**Lamto**	**78.95**	**270**	⇑*i*P		**P**	**19 41 50.7**	**-0.9**
	comp=Z,23nm,0.7s									
LIC	**Lamto**	**78.95**	**270**	⇑*i*P		**P**	**19 41 50.7**	**-0.9**
	comp=Z,23nm,0.7s									
AS31	**Alice Springs**	**79.15**	**128**	*e*P		**P**	**19 41 51.9**	**-0.6**
ASAR	**Alice Springs**	**79.15**	**128**	P		**P**	**19 41 52.2**	**-0.2**
ASAR	**Alice Springs**	**79.15**	**128**	P		**P**	**19 41 52.2**	**-0.2**
	comp=Z,13nm,0.7s,baz=314,slow=5.2,SNR=258									
FRB	**Frobisher Bay**	**79.30**	**345**	P		**P**	**19 41 52.7**	**0.0**
FRB	**Frobisher Bay**	**79.30**	**345**	P		**P**	**19 41 52.7**	**0.0**
	comp=Z,7.0nm,1.1s,baz=258,slow=4.1,SNR=3.0									
SEW	**Seward**	**79.84**	**21**	*e*P		**P**	**19 41 54.2**	**-1.5**
	comp=Z,9.8nm,0.9s									
FORT	**Forrest**	**80.58**	**136**	*e*P		**P**	**19 41 59.4**	**-0.6**
	comp=Z,45nm,0.6s									
SUR	**Sutherland**	**83.32**	**224**	*e*P		**P**	**19 42 14.7**	**0.0**
	comp=Z,11nm,0.8s									
YKW3	**Yellowknife Ar**	**84.18**	**5**	*e*P		**P**	**19 42 18.4**	**0.0**
	comp=Z,0.2nm,1.0s									
YKA	**Yellowknife Ar**	**84.25**	**5**	P		**P**	**19 42 18.8**	**0.0**
YKA	**Yellowknife Ar**	**84.25**	**5**	P		**P**	**19 42 18.8**	**0.0**
	comp=Z,5.2nm,0.5s,baz=345,slow=5.1,SNR=71									
CTAO	**Charters Tower**	**85.57**	**117**	*e*P		**P**	**19 42 25.5**	**-0.6**
CTAO				pmax	pmax					
	comp=Z,23nm,0.8s									
CTAO	**Charters Tower**	**85.57**	**117**	*e*P		**P**	**19 42 25.5**	**-0.6**
	comp=Z,22nm,0.8s									
DLBC	**Dease Lake**	**86.16**	**13**	P		**P**	**19 42 28.2**	**-0.4**
DLBC	**Dease Lake**	**86.16**	**13**	P		**P**	**19 42 28.2**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=178,slow=26,SNR=4.7									
SCHQ	**Schefferville**	**86.59**	**339**	P		**P**	**19 42 30.7**	**0.0**
SCHQ	**Schefferville**	**86.59**	**339**	P		**P**	**19 42 30.7**	**0.0**
	comp=Z,3.4nm,0.7s,baz=6.1,slow=6.4,SNR=9.3									
BBOO	**Buckleboo**	**86.79**	**133**	*e*P		**P**	**19 42 31.1**	**-0.8**
	comp=Z,188nm,0.8s									
STKA	**Stephens Creek**	**89.68**	**129**	*e*P		**P**	**19 42 45.0**	**-0.6**
	comp=Z,2.2nm,0.6s									
STKA	**Stephens Creek**	**89.68**	**129**	P		**P**	**19 42 45.3**	**-0.3**
	comp=Z,11nm,0.5s,baz=321,slow=5.1,SNR=80									
FFC	**Flin Flon**	**92.38**	**359**	*e*P		**P**	**19 42 57.5**	**-0.4**
FFC				pmax	pmax					
	comp=Z,5.0nm,0.9s									
FFC	**Flin Flon**	**92.38**	**359**	*e*P		**P**	**19 42 57.5**	**-0.4**
	comp=Z,5.0nm,0.9s									
TXAR	**Lajitas Array**	**117.78**	**359**	PKP		**PKPdf**	**19 48 34.4**	**0.0**
TXAR	**Lajitas Array**	**117.78**	**359**	PKP		**PKPdf**	**19 48 34.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=108,slow=2.9,SNR=3.6									
QSPA	**South Pole Qui**	**123.03**	**180**	*e*PKPdf		**PKPdf**	**19 48 42.0**	**-1.1**
LPAZ	**La Paz**	**143.38**	**289**	PKPpre		PKPpre	19 49 18.5			
LPAZ	**La Paz**	**143.38**	**289**	PKhKP		PKPpre	19 49 18.5			
	comp=Z,0.6nm,0.5s,baz=29,slow=1.9,SNR=3.4									
PLCA	**Paso Flores**	**152.21**	**245**	PKPbc		**PKPbc**	**19 49 43.6**	**+0.5**
PLCA				PKPab		**PKPab**	**19 49 50.6**	**-2.5**
PLCA	**Paso Flores**	**152.21**	**245**	PKPbc		**PKPbc**	**19 49 43.6**	**+0.5**
	comp=Z,7.5nm,1.0s,baz=79,slow=3.4,SNR=7.7									
PLCA				PKPab		**PKPab**	**19 49 50.6**	**-2.5**
	comp=Z,9.3nm,1.1s,baz=191,slow=3.6,SNR=5.0									

IDC 19 19:36:52.0±13.0, **19.59S**×**177.26W**, **h479**km±132km, **mb3.2**/5, **mb1 3.5**/5, **mb1mx3.2**/19, **mbtmp3.2**/5, **Error ellipse: s-maj=101.7km s-min=46.5km az=126.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**7.71**	**44**	S		S	19 40 23.8	+6.1
	6.9nm,0.3s,baz=343,slow=19,SNR=1.9							
ASAR	**Alice Springs**	**45.41**	**256**	P		P	19 44 27.3	+0.1
	2.5nm,0.7s,baz=85,slow=8.3,SNR=15							
ASAR				S		S	19 50 25.4	-7.4
	0.5nm,0.8s,baz=89,slow=17,SNR=5.0							
WRA	**Warramunga Arr**	**45.42**	**261**	P		P	19 44 26.9	-0.4
	1.5nm,0.3s,baz=98,slow=7.4,SNR=46							
MJAR	**Matsushiro Arr**	**69.90**	**323**	P		P	19 47 14.0	-0.1
	0.9nm,0.4s,baz=166,slow=6.2,SNR=4.4							
ILAR	**Eielson Array**	**87.28**	**13**	P		P	19 48 46.4	0.0
	0.4nm,0.9s,baz=225,slow=6.0,SNR=4.1							
CMAR	**Chiang Mai Arr**	**90.47**	**289**	P		P	19 49 02.7	+0.3
	0.5nm,0.9s,baz=76,slow=3.8,SNR=4.1							
BRTR	**Keskin Array B**	**146.73**	**314**	PKPbc		PKPbc	19 55 39.0	-1.0
	0.8nm,0.7s,baz=111,slow=2.4,SNR=4.0							
GERES	**GERESS Array B**	**149.50**	**346**	PKPbc		PKPbc	19 55 46.3	-0.4
	0.7nm,0.7s,baz=7.1,slow=2.4,SNR=7.5							

NIED ***19*** *19:42:00,* 42˚10N×139˚30E, *h5*km*, Mw3.5 Best double couple: M*o*2.33000×10*14* NP1:*ϕs*286.00000°,δ81.00000°, λ-57.00000°. NP2:*ϕs*31.00000°,δ34.00000°, λ-163.00000°.*

ISCJB ***19*** *19:42:33.9*±1.0, 42˚11N±0˚05×139˚17E±0˚05, *h14*km±6km, *mb3.3/2, Error ellipse: s-maj=9.0km s-min=6.4km az=0.7*

IDC ***19*** *19:42:33.8*±1.3, 42˚08N×139˚11E, *h0*km*, mb3.3/2, mb1 3.4/5, mb1mx3.2/28, mbtmp3.1/5, ML2.7/3, Error ellipse: s-maj=29.2km s-min=15.9km az=134.0*

JMA ***19*** *19:42:36.4*±0.1, *42˚10N×139˚32E, h11*km±1km*, M3.8*

JMA Felt II J1.

ISC 19 19:42:35.0±1.4, **42˚09N**±0˚05×**139˚25E**±0˚07, **h14**km±8km, **n12**, σ1**°06**/19, **2C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**0.17**	**94**	⇓P		**Pg**	**19 42 39.3**	**+0.3**
JOSM				*e*S		**Sg**	**19 42 41.5**	**-0.2**
JSH	**Shimam**	**0.81**	**47**	⇑P		**Pg**	**19 42 50.7**	**+0.1**
JSH				*e*S		**Sg**	**19 43 01.0**	**-0.2**
JYM2	**Yakumo 2**	**0.83**	**88**	⇓P		**Pg**	**19 42 51.1**	**-0.1**
JYM2				*e*S		**Sg**	**19 43 01.6**	**-0.5**
JSR	**Shiriuchi**	**1.04**	**122**	⇑P		**Pg**	**19 42 54.7**	**-0.4**
JSR				*e*S		**Sg**	**19 43 07.8**	**-0.8**
JKB	**Kayabe**	**1.34**	**98**	P		**Pn**	**19 42 59.0**	**-0.4**
JSI2	**Shiura 2**	**1.35**	**140**	P		**Pn**	**19 42 59.1**	**-0.4**
JNB	**Noboribetsu**	**1.38**	**74**	⇓P		**Pn**	**19 42 59.7**	**-0.2**
JNB				*e*S		**Sn**	**19 43 17.3**	**-0.6**
ASAJ	**Asahikawa**	**3.18**	**49**	Pn		**Pn**	**19 43 26.2**	**+1.6**
	1.1nm,0.3s,baz=256,slow=12,SNR=10							
ASAJ				Pg		**Pg**	**19 43 34.2**	**-1.7**
	1.3nm,0.3s,baz=244,slow=26,SNR=7.9							
ASAJ				Lg		Lg	19 44 18.7	
	1.2nm,0.3s,baz=112,slow=34,SNR=2.4							
MJAR	**Matsushiro Arr**	**5.60**	**189**	Pn		**Pn**	**19 44 00.3**	**+2.3**
	0.1nm,0.3s,baz=13,slow=14,SNR=3.6							
USRK	**Ussuriysk Arra**	**5.71**	**294**	Pn		**Pn**	**19 44 00.3**	**+1.0**
	0.6nm,0.3s,baz=112,slow=14,SNR=18							
USRK				Sn		**Sn**	**19 45 03.1**	**-1.5**
	1.0nm,0.3s,baz=105,slow=29,SNR=3.8							
ILAR	**Eielson Array**	**46.21**	**35**	P		**P**	**19 50 59.8**	**+0.6**
	0.2nm,0.7s,baz=263,slow=7.2,SNR=3.8							
WRA	**Warramunga Arr**	**61.89**	**185**	P		**P**	**19 52 54.4**	**+0.3**
	0.3nm,0.9s,baz=3.6,slow=7.3,SNR=3.4							

SKHL ***19*** *19:46:23.6*±0.9, *47˚93N×155˚36E, h73*km±7km*, mb5.0/5*

MOS ***19*** *19:46:25.2*±1.1, *48˚21N×154˚19E, h34*km*, mb4.7/26, Error ellipse: s-maj=10.4km s-min=5.8km az=82.7*

ISCJB ***19*** *19:46:27.2*±0.5, *48˚19N±0˚04×154˚35E±0˚06, h54*km±4km*, mb4.3/63, MS3.2/1, Error ellipse: s-maj=8.6km s-min=2.6km az=41.2*

KRSC ***19*** *19:46:28.5*±1.4, *48˚14N×155˚51E, h5*km±5km*, ML4.8*

NEIC ***19*** *19:46:29.5*±0.9, *48˚24N×154˚03E, h57*km±8km*, mb4.4/17, Error ellipse: s-maj=8.3km s-min=4.9km az=132.0*

IDC ***19*** *19:46:32.3*±2.4, *48˚36N×154˚08E, h80*km±21km*, mb3.9/28, mb1 4.1/31, mb1mx4.0/36, mbtmp3.9/31, MS3.2/2, Ms1 3.2/2, ms1mx2.7/57, Error ellipse: s-maj=14.3km s-min=9.9km az=143.0*

ISC 19 19:46:29.3±0.8, **48˚25N**±0˚05×**154˚29E**±0˚06, **h59**km±7km, **n271**, σ1°**31**/293, **mb4.4**/63, **3C-9D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.72**	**25**	*e*P		Pn	19 47 06.5	-4.0
SKR				AMB		AMB	19 47 08.4	
	80nm,0.5s							
SKR				AMB		AMB	19 47 08.4	
	90nm,0.5s							
SKR				*e*S		**Sn**	**19 47 39.4**	**-2.7**
SKR				A		A	19 47 43.0	
	850nm,0.3s							
SKR				A		A	19 47 43.0	
	550nm,0.3s							
SKR				A		A	19 47 43.0	
	240nm,0.6s							
SKR	**Severo-Kuril's**	**2.72**	**25**	*e*P		**Pn**	**19 47 11.1**	**+0.6**
SKR				*e*S		**Sn**	**19 47 41.9**	**-0.2**
MIPR	**Malaya Ipel'ka**	**4.33**	**21**	*e*P		**Pn**	**19 47 34.5**	**+1.9**
MIPR				S		**Sn**	**19 48 22.9**	**+1.1**
ASAK	**Asacha**	**4.74**	**28**	*e*P		**Pn**	**19 47 39.5**	**+1.2**
ASAK				*e*S		**Sn**	**19 48 31.6**	**-0.4**
MTVR	**Mutnovka**	**4.92**	**29**	*e*P		**Pn**	**19 47 41.5**	**+0.7**
MTVR				*e*S		**Sn**	**19 48 35.3**	**-1.1**
GRL	**Gorelyy**	**4.94**	**28**	*e*P		**Pn**	**19 47 42.7**	**+1.6**
GRL				*e*S		**Sn**	**19 48 37.5**	**+0.6**
RUS	**Russkaya**	**4.99**	**31**	PN		**Pn**	**19 47 41.1**	**-0.4**
RUS	**Russkaya**	**4.99**	**31**	*e*P		**Pn**	**19 47 41.1**	**-0.4**
RUS				*e*S		**Sn**	**19 48 34.4**	**-3.4**
APC	**Apacha**	**5.03**	**20**	*e*P		**Pn**	**19 47 43.9**	**+1.8**
APC				S		**Sn**	**19 48 39.0**	**+0.2**
PEA0B	**Petropavlovsk-**	**5.33**	**23**	*e*Pn		**Pn**	**19 47 48.3**	**+2.0**
PETK	**Petropavlovsk-**	**5.33**	**23**	PN		**Pn**	**19 47 48.4**	**+2.2**
PETK				S		**Sn**	**19 48 48.1**	**+1.9**
PETK	**Petropavlovsk-**	**5.33**	**23**	P		**Pn**	**19 47 48.4**	**+2.2**
PETK				S		**Sn**	**19 48 48.1**	**+1.9**
PETK	**Petropavlovsk-**	**5.33**	**23**	P		**Pn**	**19 47 48.4**	**+2.2**
	5.1nm,0.3s,baz=179,slow=13,SNR=27							
PETK				S		**Sn**	**19 48 48.1**	**+1.9**
	0.8nm,0.3s,baz=227,slow=19,SNR=3.6							
PETK				LR		LR	19 49 39.1	
	comp=Z,110nm,21.8s,baz=309,slow=35							
KUR	**Kuril'sk**	**5.34**	**238**	*e*PN		**Pn**	**19 47 49.5**	**+3.1**
KUR				*e*S		Sn	19 48 53.7	+7.1
KUR				pmax	pmax			
	comp=Z,160nm,0.8s							
KUR				smax	smax			
	comp=N,300nm,0.8s							
KUR				smax	smax			
	comp=E,240nm,0.8s							
KUR	**Kuril'sk**	**5.34**	**238**	*e*P		**Pn**	**19 47 49.5**	**+3.1**
KUR				AMB		AMB	19 47 50.0	
	comp=E,2μm,0.8s							
KUR				*e*S		Sn	19 48 53.7	+7.1
KUR				A		A	19 49 03.0	
	comp=E,300nm,0.8s							
KUR				A		A	19 49 03.0	
	comp=E,240nm,0.8s							
PET	**Petropavlovsk**	**5.53**	**28**	*e*PN		Pn	19 47 52.2	+3.2
PET	**Petropavlovsk**	**5.53**	**28**	P		**Pn**	**19 47 50.4**	**+1.4**
PET				*e*S		**Sn**	**19 48 50.5**	**-0.6**
UGLR	**Uglovaya**	**5.74**	**28**	*e*P		**Pn**	**19 47 53.5**	**+1.5**
UGLR				*e*S		**Sn**	**19 48 56.5**	**0.0**
SDLR	**Sedlovina**	**5.82**	**28**	*e*P		**Pn**	**19 47 54.1**	**+1.0**
SDLR				*e*S		**Sn**	**19 48 56.8**	**-1.6**
GNL	**Ganaly**	**5.92**	**22**	*e*P		**Pn**	**19 47 57.0**	**+2.5**
GNL				*e*S		**Sn**	**19 49 02.2**	**+1.2**
SPN	**Mys Shipunski**	**6.07**	**35**	PN		**Pn**	**19 47 55.8**	**-0.6**
SPN	**Mys Shipunski**	**6.07**	**35**	*e*P		**Pn**	**19 47 55.8**	**-0.6**
SPN				*e*S		**Sn**	**19 49 01.2**	**-3.2**
YUK	**Yuzh-Kuril'sk**	**7.21**	**237**	*i* PN		**Pn**	**19 48 13.9**	**+2.0**
YUK				*i* S		**Sn**	**19 49 36.2**	**+3.8**
YUK				pmax	pmax			
	comp=N,15nm,0.5s							
YUK				pmax	pmax			
	comp=E,44nm,0.2s							
YUK				pmax	pmax			
	comp=Z,80nm,0.5s							
YUK	**Yuzh-Kuril'sk**	**7.21**	**237**	⇑*i*P		**Pn**	**19 48 14.0**	**+2.0**
YUK				AMB		AMB	19 48 18.0	
	comp=Z,15nm,0.5s							
YUK				AMB		AMB	19 48 18.0	
	comp=Z,60nm,0.5s							
YUK				AMB		AMB	19 48 18.0	
	comp=Z,44nm,0.2s							
YUK				*i* S		**Sn**	**19 49 36.2**	**+3.8**
NEM2	**Nemuro 2**	**7.71**	**234**	P		**Pn**	**19 48 17.3**	**-1.5**
NEM2				*e*S		**Sn**	**19 49 40.7**	**-3.9**
MKZ	**Mys Kozlova**	**7.84**	**34**	PN		**Pn**	**19 48 19.6**	**-1.0**
MKZ	**Mys Kozlova**	**7.84**	**34**	*e*P		**Pn**	**19 48 19.6**	**-1.0**
MKZ				*e*S		Sn	19 49 40.9	-6.9
YSS	**Yuzh-Sakhalins**	**7.90**	**265**	⇓*e*PN		Pn	19 48 25.3	+3.8
YSS				pmax	pmax			
	comp=E,50nm,0.9s							
YSS				pmax	pmax			
	comp=Z,60nm,0.9s							
YSS	**Yuzh-Sakhalins**	**7.90**	**265**	⇓*e*P		Pn	19 48 25

	comp=Z,6.9nm,1.4s								
MCK	**McKinley**	**34.00**	**42**	*eP*		**P**	19 53 07.9	**+0.9**
MCK				pmax	pmax				
	comp=Z,7.0nm,1.1s								
MCK	**McKinley**	**34.00**	**42**	*eP*		**P**	19 53 07.8	**+0.9**
	comp=Z,7.1nm,1.1s								
SML	**Sawmill**	**34.34**	**45**	*eP*		**P**	19 53 11.5	**+1.5**
SML				pmax	pmax				
	comp=Z,4.0nm,0.9s								
SML	**Sawmill**	**34.34**	**45**	*eP*		**P**	19 53 11.5	**+1.5**
	comp=Z,4.4nm,0.9s								
COLA	**College**	**34.47**	**40**	*eP*		**P**	19 53 12.1	**+1.1**
ILAR	**Eielson Array**	**34.88**	**40**	P		**P**	19 53 14.8	**+0.2**
ILAR				PcP		**PcP**	19 55 44.9	**-1.2**
ILAR	**Eielson Array**	**34.88**	**40**	P		**P**	19 53 14.8	**+0.2**
	comp=Z,1.3nm,0.9s,baz=257,slow=9.3,SNR=16								
ILAR				PcP		**PcP**	19 55 44.9	**-1.2**
	comp=Z,0.4nm,0.6s,baz=278,slow=3.1,SNR=4.4								
TPUB	**Ta-pu**	**36.48 239**		*eP*		**P**	19 53 27.8	**-0.8**
	comp=Z,22nm,1.0s								
EGAK	**Eagle**	**37.34**	**40**	*eP*		**P**	19 53 35.5	**0.0**
	comp=Z,5.9nm,0.9s								
ENH	**Enshi**	**38.43 259**		P		**P**	19 53 43.8	**-1.3**
	comp=Z,3.6nm,0.4s								
INK	**Inuvik**	**39.96**	**33**	P		**P**	19 53 58.8	**+1.5**
INK	**Inuvik**	**39.96**	**33**	P		**P**	19 53 58.8	**+1.5**
	comp=Z,1.9nm,0.5s,baz=300,slow=6.7,SNR=18								
ZALV	**Zalesovo Beam**	**42.40 305**		*iP*		**P**	19 54 16.2	**-1.3**
ZALV				pmax	pmax				
	comp=Z,1.0nm,0.3s								
ZALV	**Zalesovo Beam**	**42.40 305**		P		**P**	19 54 16.4	**-1.1**
ZALV				PcP		**PcP**	19 56 10.1	**+0.4**
ZALV	**Zalesovo Beam**	**42.40 305**		P		**P**	19 54 16.4	**-1.1**
	comp=Z,0.6nm,0.3s,baz=60,slow=8.8,SNR=4.5								
ZALV				PcP		**PcP**	19 56 10.1	**+0.4**
	comp=Z,3.7nm,0.8s,baz=83,slow=3.2,SNR=16								
MK31	**Makanchi Array**	**46.97 297**		*eP*		**P**	19 54 52.8	**-1.3**
MK31				*e*			19 56 25.2		
MK31	**Makanchi Array**	**46.97 297**		*eP*		**P**	19 54 52.8	**-1.3**
MK31				*e*PcP		**PcP**	19 56 25.2	**-0.4**
MKAR	**Makanchi Array**	**46.97 297**		P		**P**	19 54 52.8	**-1.3**
MKAR							19 56 25.2		
MKAR	**Makanchi Array**	**46.97 297**		P		**P**	19 54 52.8	**-1.3**
MKAR				PcP		**PcP**	19 56 25.2	**-0.4**
MKAR	**Makanchi Array**	**46.97 297**		P		**P**	19 54 52.8	**-1.3**
	comp=Z,1.3nm,0.6s,baz=65,slow=5.7,SNR=17								
MKAR				PcP		**PcP**	19 56 25.2	**-0.4**
	comp=Z,1.1nm,0.8s,baz=54,slow=5.4,SNR=5.0								
KURK	**Kurchatov**	**47.21 303**		*eP*		**P**	19 54 53.5	**-2.3**
KURK				pmax	pmax				
	comp=Z,4.0nm,1.2s								
KURK	**Kurchatov**	**47.21 303**		*eP*		**P**	19 54 53.8	**-2.0**
	comp=Z,2.3nm,0.7s								
KURK				PcP		**PcP**	19 56 27.1	**+0.8**
KURBB	**Kurchatov Arra**	**47.30 303**		P		**P**	19 54 55.2	**-1.3**
	comp=Z,1.7nm,0.5s,baz=68,slow=8.3,SNR=18								
KURBB				PcP		**PcP**	19 56 27.1	**+0.4**
	comp=Z,2.1nm,0.9s,baz=63,slow=3.4,SNR=10								
YKW3	**Yellowknife Ar**	**49.21**	**38**	*eP*		**P**	19 55 11.8	**+0.7**
	comp=Z,0.1nm,0.9s								
YKA	**Yellowknife Ar**	**49.25**	**38**	P		**P**	19 55 12.8	**+1.4**
YKA	**Yellowknife Ar**	**49.25**	**38**	P		**P**	19 55 12.8	**+1.4**
	comp=Z,3.7nm,0.8s,baz=298,slow=7.5,SNR=35								
BVAR	**Borovoye Array**	**50.53 309**		P		**P**	19 55 19.5	**-1.7**
BVAR							19 56 38.5		
BVAR	**Borovoye Array**	**50.53 309**		P		**P**	19 55 19.5	**-1.7**
BVAR				PcP		**PcP**	19 56 38.5	**+0.2**
BVAR	**Borovoye Array**	**50.53 309**		P		**P**	19 55 19.5	**-1.7**
	comp=Z,2.8nm,0.3s,baz=56,slow=7.8,SNR=43								
BVAR				PcP		**PcP**	19 56 38.5	**+0.2**
	comp=Z,2.1nm,0.5s,baz=72,slow=4.8,SNR=9.7								
BRVK	**Borovoye**	**50.57 309**		‖ *iP*		**P**	19 55 21.4	**-0.1**
BRVK				pmax	pmax				
	comp=Z,5.0nm,2.5s								
BRVK	**Borovoye**	**50.57 309**		*eP*		**P**	19 55 20.6	**-1.0**
LSA	**Lhasa**	**50.99 273**		P		**P**	19 55 27.2	**+1.6**
LSA				pmax	pmax				
	comp=Z,3.0nm,0.6s								
LSA	**Lhasa**	**50.99 273**		P		**P**	19 55 27.2	**+1.6**
	comp=Z,3.1nm,0.6s								
TKM2	**Tokmak 2**	**53.06 296**		P		P	19 55 36.9	-3.6
TKM2	**Tokmak 2**	**53.06 296**		P		P	19 55 36.9	-3.6
CHTO	**Chiang Mai**	**53.24 257**		*eP*		**P**	19 55 42.3	**+0.5**
CHTO				pmax	pmax				
	comp=Z,7.0nm,0.8s								
CHTO	**Chiang Mai**	**53.24 257**		*eP*		**P**	19 55 42.3	**+0.5**
	comp=Z,6.6nm,0.8s								
CMAR	**Chiang Mai Arr**	**53.50 256**		P		**P**	19 55 44.6	**+0.9**
CMAR				PcP		**PcP**	19 56 51.0	**+1.1**
CMAR	**Chiang Mai Arr**	**53.50 256**		P		**P**	19 55 44.6	**+0.9**
	comp=Z,4.8nm,0.7s,baz=34,slow=7.3,SNR=46								
CMAR				PcP		**PcP**	19 56 51.0	**+1.1**
	comp=Z,1.2nm,0.7s,baz=13,slow=3.2,SNR=6.5								
AAK	**Ala-Archa**	**53.89 296**		P		**P**	19 55 46.6	**+0.1**
AAK				pmax	pmax				
	comp=Z,1.0nm,0.4s								
AAK	**Ala-Archa**	**53.89 296**		P		**P**	19 55 45.9	**-0.6**
AAK	**Ala-Archa**	**53.89 296**		P		**P**	19 55 46.6	**+0.1**
	comp=Z,0.7nm,0.4s,baz=81,slow=4.6,SNR=4.3								
TAPN	**Taplejung**	**54.81 273**		*eP*		**P**	19 55 51.3	**-2.3**
	comp=Z,4.0nm,0.5s								
GUN	**Gumba**	**55.67 275**		*eP*		**P**	19 55 59.4	**-0.4**
	comp=Z,6.9nm,0.5s								
KKN	**Kakani**	**56.15 275**		*eP*		**P**	19 56 03.3	**+0.3**
	comp=Z,5.0nm,0.4s								
PKIN	**Phulchoki**	**56.21 275**		*eP*		**P**	19 56 03.2	**-0.3**
	comp=Z,3.9nm,0.4s								
DMN	**Daman**	**56.38 275**		*eP*		**P**	19 56 05.2	**+0.4**
	comp=Z,9.5nm,0.5s								
ARCES	**ARCESS Array B**	**56.70 341**		P		**P**	19 56 05.2	**-1.0**
ARCES	**ARCESS Array B**	**56.70 341**		P		**P**	19 56 05.2	**-1.0**
	comp=Z,1.7nm,0.8s,baz=27,slow=8.3,SNR=3.6								
DANN	**Dangsing**	**56.79 277**		*eP*		**P**	19 56 08.9	**+1.2**
	comp=Z,18nm,0.6s								
KOLN	**Koldanda**	**57.28 276**		*eP*		**P**	19 56 12.0	**+1.0**
	comp=Z,9.4nm,0.6s								
ABKAR	**Akbulak array**	**58.08 310**		*eP*		**P**	19 56 14.5	**-1.6**
	comp=Z,1.2nm,0.4s								
FFC	**Flin Flon**	**59.08**	**41**	*eP*		**P**	19 56 24.5	**+1.5**
FFC				pmax	pmax				
	comp=Z,2.0nm,1.0s								
FFC	**Flin Flon**	**59.08**	**41**	*eP*		**P**	19 56 24.5	**+1.5**
	comp=Z,1.9nm,1.0s								
KSM	**Kuching**	**60.01 233**		*eP*		**P**	19 56 30.9	**+1.0**
	comp=Z,4.1nm,0.9s								
JOF	**Joensuu**	**60.34 334**		*eP*		**P**	19 56 31.5	**0.0**
JOF				pmax	pmax				
	comp=Z,1.0nm,0.4s								
JOF	**Joensuu**	**60.34 334**		*ep*		**P**	19 56 31.5	**0.0**
	comp=Z,0.8nm,0.4s								
NVAR	**Mina Array Bea**	**61.04**	**64**	P		**P**	19 56 38.6	**+1.7**
NVAR	**Mina Array Bea**	**61.04**	**64**	P		**P**	19 56 38.6	**+1.7**
	comp=Z,1.6nm,0.7s,baz=291,slow=7.7,SNR=7.5								
FINES	**FINESS Array B**	**63.02 335**		P		**P**	19 56 48.5	**-1.0**
FINES	**FINESS Array B**	**63.02 335**		P		**P**	19 56 48.5	**-1.0**
	comp=Z,9.3nm,0.5s,baz=31,slow=6.4,SNR=22								
PDAR	**Pinedale Array**	**63.23**	**55**	P		**P**	19 56 52.4	**+0.9**
PDAR	**Pinedale Array**	**63.23**	**55**	P		**P**	19 56 52.4	**+0.9**
	comp=Z,0.9nm,0.7s,baz=283,slow=2.6,SNR=6.1								
OBN	**Obninsk**	**64.52 326**		‖ *iP*		**P**	19 56 59.6	**+0.1**
OBN				*e*			19 59 20.5		
OBN				*e*S		**S**	20 05 31.1	**-2.7**
OBN				pmax	pmax				
	comp=Z,7.0nm,0.7s								
NB2	**NORSAR Subarra**	**67.07 341**		P		**P**	19 57 15.0	**-0.8**
	comp=Z,0.8nm,0.6s,baz=26,slow=6.5								
NOA	**NORSAR Array B**	**67.07 341**		P		**P**	19 57 15.8	**-0.1**
NOA	**NORSAR Array B**	**67.07 341**		P		**P**	19 57 15.8	**-0.1**
	comp=Z,0.8nm,0.5s,baz=25,slow=6.3,SNR=6.9								
WRAB	**Tennant Creek**	**70.18 200**		*eP*		**P**	19 57 35.4	**-0.2**
WRAB				pmax	pmax				
	comp=Z,7.0nm,0.8s								
WRAB	**Tennant Creek**	**70.18 200**		*eP*		**P**	19 57 35.4	**-0.2**
	comp=Z,6.9nm,0.8s								
WRA	**Warramunga Arr**	**70.19 200**		P		**P**	19 57 35.7	**+0.1**
WRA	**Warramunga Arr**	**70.19 200**		P		**P**	19 57 35.7	**+0.1**
	comp=Z,6.0nm,0.7s,baz=16,slow=6.3,SNR=53								
KBZ	**Khabaz**	**70.39 314**		P		**P**	19 57 36.6	**-0.1**
KBZ	**Khabaz**	**70.39 314**		P		**P**	19 57 36.5	**-0.1**
KBZ	**Khabaz**	**70.39 314**		P		**P**	19 57 36.5	**-0.1**
	comp=Z,1.3nm,0.6s,baz=60,slow=6.3,SNR=4.6								
AKASG	**Malin Array Be**	**70.74 327**		P		**P**	19 57 37.8	**-0.9**
AKASG	**Malin Array Be**	**70.74 327**		P		**P**	19 57 37.8	**-0.9**
AKASG	**Malin Array Be**	**70.74 327**		P		**P**	19 57 37.8	**-0.9**
	comp=Z,0.6nm,0.3s,baz=36,slow=6.6,SNR=3.9								
FITZ	**Fitzroy Crossi**	**70.84 209**		P		**P**	19 57 40.2	**+0.6**
FITZ	**Fitzroy Crossi**	**70.84 209**		P		**P**	19 57 40.2	**+0.6**
	comp=Z,3.1nm,0.8s,baz=34,slow=5.7,SNR=6.0								
SCHQ	**Schefferville**	**71.62**	**24**	P		**P**	19 57 44.6	**+0.6**
SCHQ	**Schefferville**	**71.62**	**24**	P		**P**	19 57 44.6	**+0.6**
	comp=Z,3.2nm,0.5s,baz=334,slow=4.6,SNR=14								
AS31	**Alice Springs**	**73.88 199**		*eP*		**P**	19 57 58.2	**+0.5**
ASAR	**Alice Springs**	**73.88 199**		P		**P**	19 57 58.5	**+0.8**
ASAR	**Alice Springs**	**73.88 199**		P		**P**	19 57 58.5	**+0.8**
	comp=Z,2.1nm,0.6s,baz=12,slow=5.4,SNR=56								
KOLS	**Kolonicke sedl**	**74.69 329**		*eP*		**P**	19 58 00.4	**-1.8**
KOLS	**Kolonicke sedl**	**74.69 329**		*eP*		**P**	19 58 00.4	**-1.8**
BUR08	**Bucovina Ar. S**	**74.75 327**		*eP*		**P**	19 58 01.1	**-1.6**
UPC	**Upice**	**75.29 334**		*eP*		**P**	19 58 06.6	**+0.9**
UPC	**Upice**	**75.29 334**		‖ *eP*		**P**	19 58 06.6	**+0.9**
DPC	**Dobruska-Polom**	**75.34 334**		*eP*		**P**	19 58 07.3	**+1.3**
DPC	**Dobruska-Polom**	**75.34 334**		*eP*		**P**	19 58 07.3	**+1.3**
CLL	**Collm**	**75.43 336**		‖ *iP*		**P**	19 58 06.6	**+0.2**
CLL				pmax	pmax				
	comp=Z,4.0nm,0.7s								
CLL	**Collm**	**75.43 336**		‖ *iP*		**P**	19 58 06.6	**+0.2**
	comp=Z,4.0nm,0.7s								
MORC	**Moravsky Berou**	**75.48 333**		*eP*		**P**	19 58 05.7	**-1.1**
MORC				pmax	pmax				
	comp=Z,5.0nm,1.3s								
MORC	**Moravsky Berou**	**75.48 333**		*eP*		**P**	19 58 05.7	**-1.1**
	comp=Z,5.2nm,1.3s								
MBWA	**Marble Bar**	**75.70 213**		*eP*		**P**	19 58 08.5	**+0.3**
TXAR	**Lajitas Array**	**76.07**	**62**	P		**P**	19 58 11.6	**+1.0**
TXAR	**Lajitas Array**	**76.07**	**62**	P		**P**	19 58 11.6	**+1.0**
	comp=Z,1.3nm,0.6s,baz=298,slow=4.1,SNR=11								
PRU	**Pruhonice**	**76.18 335**		*eP*		**P**	19 58 11.3	**+0.6**
PRU	**Pruhonice**	**76.18 335**		‖ *eP*		**P**	19 58 11.3	**+0.6**
VYHS	**Vyhne**	**76.20 331**		*eP*		**P**	19 58 10.7	**-0.2**
VYHS				pmax	pmax				
	comp=Z,3.0nm,1.6s								
VYHS	**Vyhne**	**76.20 331**		*eP*		**P**	19 58 10.7	**-0.2**
MLR	**Muntele Rosu**	**76.29 325**		P		**P**	19 58 11.6	**0.0**
MLR	**Muntele Rosu**	**76.29 325**		P		**P**	19 58 11.6	**0.0**
	comp=Z,0.6nm,0.6s,baz=230,slow=9.6,SNR=8.2								
KHC	**Kasperske Hory**	**77.23 335**		‖ *iP*		**P**	19 58 17.6	**+0.9**
KHC	**Kasperske Hory**	**77.23 335**		*eP*		**P**	19 58 17.2	**+0.5**
	comp=Z,3.0nm,1.0s								
KHC	**Kasperske Hory**	**77.23 335**		‖ *iP*		**P**	19 58 17.6	**+0.9**
GERES	**GERESS Array B**	**77.45 335**		P		**P**	19 58 17.9	**-0.2**
GERES	**GERESS Array B**	**77.45 335**		P		**P**	19 58 17.9	**-0.2**
	comp=Z,1.1nm,0.6s,baz=32,slow=5.2,SNR=12								
BRTR	**Keskin Array B**	**77.84 317**		P		**P**	19 58 20.9	**+0.5**
BRTR	**Keskin Array B**	**77.84 317**		P		**P**	19 58 20.9	**+0.5**
	comp=Z,1.2nm,0.5s,baz=64,slow=2.7,SNR=8.0								
CDF	**Champ du Feu**	**79.57 338**		*eP*		**P**	19 58 30.1	**+0.4**
	comp=Z,9.1nm,1.0s								
CDF	**Champ du Feu**	**79.57 338**		*eP*		**P**	19 58 30.1	**+0.4**
CDF				pmax	pmax				
	comp=Z,9.0nm,1.0s								
CDF	**Champ du Feu**	**79.57 338**		*eP*		**P**	19 58 30.1	**+0.4**
	comp=Z,9.1nm,1.0s								
PAGF	**Fort de Pagny**	**79.81 339**		*eP*		**P**	19 58 31.8	**+0.9**
PAGF	**Fort de Pagny**	**79.81 339**		*eP*		**P**	19 58 31.8	**+0.9**
MEZF	**Maizieres J'vi**	**80.01 340**		*eP*		**P**	19 58 32.9	**+0.9**
MEZF	**Maizieres J'vi**	**80.01 340**		*eP*		**P**	19 58 32.9	**+0.9**
SFTF	**Sexfontaines**	**80.30 340**		*eP*		**P**	19 58 34.1	**+0.6**
SFTF	**Sexfontaines**	**80.30 340**		*eP*		**P**	19 58 34.1	**+0.6**
STKA	**Stephens Creek**	**80.57 191**		*eP*		**P**	19 58 33.2	**-1.6**
	comp=Z,0.8nm,1.2s								
LOR	**Lormes**	**81.45 340**		*eP*		**P**	19 58 40.1	**+0.4**
	comp=Z,6.9nm,0.9s								
LOR	**Lormes**	**81.45 340**		*eP*		**P**	19 58 40.1	**+0.4**
	comp=Z,6.9nm,0.9s								
SSF	**Saint Saulge**	**81.72 340**		*eP*		**P**	19 58 41.7	**+0.6**
	comp=Z,7.1nm,0.9s								
SSF	**Saint Saulge**	**81.72 340**		*eP*		**P**	19 58 41.7	**+0.6**
SSF				pmax	pmax				
	comp=Z,7.0nm,0.9s								
SSF	**Saint Saulge**	**81.72 340**		*eP*		**P**	19 58 41.7	**+0.6**
	comp=Z,7.1nm,0.9s								
SGMF	**Saint Gilles**	**81.81 345**		*eP*		**P**	19 58 42.3	**+0.8**
SGMF	**Saint Gilles**	**81.81 345**		*eP*		**P**	19 58 42.3	**+0.8**
SGMF	**Saint Gilles**	**81.81 345**		*eP*		**P**	19 58 42.3	**+0.8**
ROSF	**Rostrenen**	**81.85 345**		*eP*		**P**	19 58 42.7	**+1.0**
	comp=Z,8.4nm,0.7s								
ROSF	**Rostrenen**	**81.85 345**		*eP*		**P**	19 58 42.7	**+1.0**
ROSF				pmax	pmax				
	comp=Z,8.0nm,0.7s								
ROSF	**Rostrenen**	**81.85 345**		*eP*		**P**	19 58 42.7	**+1.0**
	comp=Z,8.4nm,0.7s								
AVF	**Avril sur Loir**	**82.01 340**		*eP*		**P**	19 58 43.3	**+0.7**
AVF	**Avril sur Loir**	**82.01 340**		*eP*		**P**	19 58 43.3	**+0.7**
AVF	**Avril sur Loir**	**82.01 340**		*eP*		**P**	19 58 43.3	**+0.7**
SMF	**Signal de Mont**	**82.04 340**		*eP*		**P**	19 58 44.2	**+1.4**
	comp=Z,14nm,1.0s								
SMF	**Signal de Mont**	**82.04 340**		*eP*		**P**	19 58 44.2	**+1.4**
SMF				pmax	pmax				
	comp=Z,14nm,1.0s								
SMF	**Signal de Mont**	**82.04 340**		*eP*		**P**	19 58 44.2	**+1.4**
	comp=Z,14nm,1.0s								
BGF	**Bois d'Agland**	**82.35 341**		*eP*		**P**	19 58 45.1	**+0.7**
BGF	**Bois d'Agland**	**82.35 341**		*eP*		**P**	19 58 45.1	**+0.7**
BGF	**Bois d'Agland**	**82.35 341**		*eP*		**P**	19 58 45.1	**+0.7**
LPL	**La Plagne**	**82.40 338**		*eP*		**P**	19 58 46.2	**+1.2**
	comp=Z,3.9nm,0.5s								
LPL	**La Plagne**	**82.40 338**		*eP*		**P**	19 58 46.2	**+1.2**
LPL				pmax	pmax				
	comp=Z,4.0nm,0.5s								
LPL	**La Plagne**	**82.40 338**		*eP*		**P**	19 58 46.2	**+1.2**
	comp=Z,3.9nm,0.5s								
LPG	**La Plagne**	**82.41 338**		*eP*		**P**	19 58 46.4	**+1.3**
	comp=Z,4.2nm,0.5s								
LPG	**La Plagne**	**82.41 338**		*eP*		**P**	19 58 46.4	**+1.3**
LPG				pmax	pmax				
	comp=Z,4.0nm,0.5s								
LPG	**La Plagne**	**82.41 338**		*eP*		**P**	19 58 46.4	**+1.3**
	comp=Z,4.2nm,0.5s								
MMAI	**Mount Meron Ar**	**82.41 312**		P		**P**	19 58 45.3	**+0.2**
MMAI	**Mount Meron Ar**	**82.41 312**		P		**P**	19 58 45.3	**+0.2**
	comp=Z,3.1nm,0.5s,baz=39,slow=7.2,SNR=12								
TCF	**Toulx Ste Croi**	**82.74 341**		*eP*		**P**	19 58 47.3	**+0.8**
	comp=Z,13nm,1.0s								
TCF	**Toulx Ste Croi**	**82.74 341**		*eP*		**P**	19 58 47.3	**+0.8**
TCF				pmax	pmax				
	comp=Z,13nm,1.0s								
TCF	**Toulx Ste Croi**	**82.74 341**		*eP*		**P**	19 58 47.3	**+0.8**
	comp=Z,13nm,1.0s								
MFF	**Saint Martin d**	**82.94 343**		*eP*		**P**	19 58 48.4	**+1.0**
	comp=Z,5.1nm,0.6s								
MFF	**Saint Martin d**	**82.94 343**		*eP*		**P**	19 58 48.4	**+1.0**
MFF				pmax	pmax				
	comp=Z,5.0nm,0.6s								
MFF	**Saint Martin d**	**82.94 343**		*eP*		**P**	19 58 48.4	**+1.0**
	comp=Z,5.1nm,0.6s								
ORIF	**Oris-en-Rattie**	**83.17 338**		*eP*		**P**	19 58 50.2	**+1.4**
	comp=Z,7.8nm,0.8s								
ORIF	**Oris-en-Rattie**	**83.17 338**		*eP*		**P**	19 58 50.2	**+1.4**
ORIF				pmax	pmax				
	comp=Z,8.0nm,0.8s								
ORIF	**Oris-en-Rattie**	**83.17 338**		*eP*		**P**	19 58 50.2	**+1.4**
	comp=Z,7.8nm,0.8s								
VIVF	**Saint-Julien-l**	**83.53 339**		*eP*		**P**	19 58 51.6	**+1.0**
VIVF	**Saint-Julien-l**	**83.53 339**		*eP*		**P**	19 58 51.6	**+1.0**
VIVF	**Saint-Julien-l**	**83.53 339**		*eP*		**P**	19 58 51.6	**+1.0**
FRF	**La Foret Royal**	**84.25 337**		*eP*		**P**	19 58 54.9	**+0.7**
	comp=Z,7.7nm,0.8s								
FRF	**La Foret Royal**	**84.25 337**		*eP*		**P**	19 58 54.9	**+0.7**
FRF				pmax	pmax				
	comp=Z,8.0nm,0.8s								
FRF	**La Foret Royal**	**84.25 337**		*eP*		**P**	19 58 54.9	**+0.7**
	comp=Z,7.7nm,0.8s								
LFF	**La Frestale**	**84.34 341**		*eP*		**P**	19 58 55.7	**+1.0**
LFF	**La Frestale**	**84.34 341**		*eP*		**P**	19 58 55.7	**+1.0**
LFF	**La Frestale**	**84.34 341**		*eP*		**P**	19 58 55.7	**+1.0**
LMR	**La Mourre**	**84.49 337**		*eP*		**P**	19 58 56.1	**+0.7**
LMR	**La Mourre**	**84.49 337**		*eP*		**P**	19 58 56.1	**+0.7**
LMR	**La Mourre**	**84.49 337**		*eP*		**P**	19 58 56.1	**+0.7**
PGF	**Pioggiola**	**84.54 335**		*eP*		**P**	19 58 56.0	**+0.1**
	comp=Z,3.7nm,0.5s								
PGF	**Pioggiola**	**84.54 335**		*eP*		**P**	19 58 56.0	**+0.1**
PGF				pmax	pmax				
	comp=Z,4.0nm,0.5s								
PGF	**Pioggiola**	**84.54 335**		*eP*		**P**	19 58 56.0	**+0.1**
	comp=Z,3.7nm,0.5s								
MTLF	**Montolieu**	**85.54 340**		*eP*		**P**	19 59 01.0	**+0.3**
MTLF	**Montolieu**	**85.54 340**		*eP*		**P**	19 59 01.0	**+0.3**
MTLF	**Montolieu**	**85.54 340**		*eP*		**P**	19 59 01.0	**+0.3**
EPF	**Esparros**	**86.25 341**		*eP*		**P**	19 59 04.5	**+0.2**
EPF	**Esparros**	**86.25 341**		*eP*		**P**	19 59 04.5	**+0.2**
EPF	**Esparros**	**86.25 341**		*eP*		**P**	19 59 04.5	**+0.2**
KEST	**Kesra**	**90.73 332**		P		**P**	19 59 26.3	**+0.6**
KEST	**Kesra**	**90.73 332**		P		**P**	19 59 26.3	**+0.6**
	comp=Z,0.4nm,0.5s,baz=357,slow=8.9,SNR=3.4								
TAU	**Tasmania Unive**	**90.98 185**		P		**P**	19 59 25.5	**-0.7**
TAU	**Tasmania Unive**	**90.98 185**		P		**P**	19 59 25.5	**-0.7**
TORD	**Torodi Ar. Bea**	**114.20 331**		PKiKP		**PKiKP**	20 05 01.7	**-0.5**
TORD	**Torodi Ar. Bea**	**114.20 331**		PKiKP		**PKiKP**	20 05 01.7	**-0.5**
	comp=Z,0.7nm,0.5s,baz=3.0,slow=2.0,SNR=7.7								
CPUP	**Villa Florida**	**147.03**	**60**	PKPbc		**PKPbc**	20 06 05.2	**+0.1**
CPUP	**Villa Florida**	**147.03**	**60**	PKPbc		**PKPbc**	20 06 05.2	**+0.1**
	comp=Z,0.8nm,0.4s,baz=277,slow=6.4,SNR=6.7								
PLCA	**Paso Flores**	**147.53**	**94**	PKPbc		**PKPbc**	20 06 06.8	**+0.5**
PLCA	**Paso Flores**	**147.53**	**94**	PKPbc		**PKPbc**	20 06 06.8	**+0.5**
	comp=Z,2.5nm,0.9s,baz=241,slow=6.2,SNR=2.9								

*ISCJB **19** 19:51:59.9±0.5, 1°.28N±0°.06×121°.72E±0°.07, h500km, mb3.2/8, Error ellipse: s-maj=10.8km s-min=7.3km az=146.7*

*IDC **19** 19:52:00.1±2.0, 1°.37N×121°.92E, h481km±28km, mb2.8/8, mb1 2.9/10, mb1mx2.8/26, mbtmp2.8/10, Error ellipse: s-maj=26.5km s-min=11.2km az=68.0*

*AUST **19** 19:52:01.8±0.0, 1°.35N×121°.84E, h548km, Error ellipse: s-maj=3.5km s-min=1.0km az=22.0*

ISC 19 19:52:00.9±0.6, 1°.26N±0°.08×121°.77E±0°.09, h500km, n23, σ1§36/26, mb3.4/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**2.50**	**156**	P		P	**P**	19 53 06.5	**-2.3**
LUWI	baz=2.6,SNR=21			S		S	**S**	19 54 00.6	**-3.2**
KAPI	**Kappang**	**6.55**	**198**	P		P	**P**	19 53 42.3	**-0.3**
KAPI	3.4nm,0.3s,baz=17,slow=14,SNR=15 1.2nm,0.3s,baz=119,slow=19,SNR=2.3			S		S	**S**	19 55 02.7	**-3.2**
KKM	**Kota Kinabalu**	**7.30**	**311**	P		P	**P**	19 53 49.3	**-1.1**
AAI	**Ambon**	**8.09**	**127**	P		P	**P**	19 53 60.0	**+1.6**
**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMJS	**Umm Lajj**	**0.38**	**275**	P	**Pg**	**19 57 24.5**	**-2.0**
UMJS				S	**Sg**	**19 57 29.9**	**-1.8**
UMJS	**Umm Lajj**	**0.38**	**275**	P	**Pg**	**19 57 24.5**	**-2.0**
UMJS				S	**Sg**	**19 57 29.9**	**-1.8**
YNBS	**Yanbu' al Bahr**	**0.89**	**164**	P	**Pb**	**19 57 34.4**	**-1.5**
YNBS				S	**Sg**	**19 57 47.2**	**-0.4**
YNBS	**Yanbu' al Bahr**	**0.89**	**164**	P	**Pb**	**19 57 34.4**	**-1.5**
YNBS				S	**Sg**	**19 57 47.2**	**-0.4**
YOBS		**1.24**	**132**	P	**Pn**	**19 57 40.6**	**-1.0**
YOBS				S	**Sb**	**19 57 57.4**	**-0.5**
YOBS		**1.24**	**132**	P	**Pn**	**19 57 40.7**	**-1.0**
YOBS				S	**Sb**	**19 57 57.4**	**-0.5**
HAGS	**Hagol** baz=251	**2.63**	**252**	P	**Pn**	**19 57 58.9**	**-1.9**
HAGS				S	**Sn**	**19 58 28.4**	**-4.0**
HAGS	**Hagol** baz=251	**2.63**	**252**	P	**Pn**	**19 57 58.9**	**-1.9**
EMRS	**Mersa Alam** comp=N,250μm,0.3s,logA/T=5.9,baz=265	**2.63**	**267**	AMP		19 58 00.0	
EMRS	**Mersa Alam**	**2.63**	**267**	P	**Pn**	**19 57 58.4**	**-2.4**
HADB	baz=273	**2.82**	**274**	P	**Pn**	**19 58 01.3**	**-2.1**
HADB		**2.82**	**274**	P	**Pn**	**19 58 01.3**	**-2.1**
HQSR	baz=281	**3.08**	**281**	P	**Pn**	**19 58 04.8**	**-2.1**
HQSR		**3.08**	**281**	P	**Pn**	**19 58 04.8**	**-2.1**
HSFG	baz=293	**3.69**	**292**	P	**Pn**	**19 58 13.2**	**-2.1**
HSFG				S	**Sn**	**19 58 53.5**	**-5.1**
HSFG	baz=293	**3.69**	**292**	P	**Pn**	**19 58 13.2**	**-2.1**
HSFG				S	**Sn**	**19 58 53.5**	**-5.1**
HEDF	**Idfu** baz=269	**4.13**	**270**	P	**Pn**	**19 58 20.8**	**-0.6**
HEDF	**Idfu**	**4.13**	**270**	P	**Pn**	**19 58 20.8**	**-0.6**
HHRG	**Al Ghardaqah** baz=300	**4.25**	**299**	P	Pn	19 58 19.8	-3.3
HHRG				AMP		19 58 00.0	
HHRG	comp=E,170μm,0.5s,logA/T=5.6,baz=300			S	**Sn**	**19 59 06.6**	**-5.8**
HDHB	**Dhahab** baz=323	**4.48**	**322**	P	**Pn**	**19 58 24.2**	**-1.9**
HDHB	**Dhahab**	**4.48**	**322**	P	**Pn**	**19 58 24.2**	**-1.9**
HKAT	**Jabal Katrina** baz=316	**4.70**	**316**	P	**Pn**	**19 58 27.6**	**-1.9**
HKAT	**Jabal Katrina**	**4.70**	**316**	P	**Pn**	**19 58 27.6**	**-1.9**
NAHD	**NAHD** baz=253	**4.72**	**254**	P	**Pn**	**19 58 29.2**	**-0.4**
NAHD	**NAHD**	**4.72**	**254**	P	**Pn**	**19 58 29.2**	**-0.4**
HBST	**Basata** baz=328	**4.81**	**327**	P	**Pn**	**19 58 29.4**	**-1.4**
HBST	**Basata**	**4.81**	**327**	P	**Pn**	**19 58 29.4**	**-1.4**
EIL	**Elat**	**5.09**	**332**	Pn	**Pn**	**19 58 32.6**	**-2.1**
EIL				Pg	**Pb**	**19 58 49.0**	**+1.3**
EIL				Sn	**Sn**	**19 59 38.7**	**+5.4**
EIL				Lg	Lg	19 59 51.0	
EIL	**Elat** comp=E,2.8nm,0.3s,baz=167,slow=5.0,SNR=14	**5.09**	**332**	Pn	**Pn**	**19 58 32.6**	**-2.1**
EIL				Pg	**Pb**	**19 58 49.0**	**+1.3**
EIL	comp=E,37nm,0.3s,baz=147,slow=8.9,SNR=40			Sn	**Sn**	**19 59 38.7**	**+5.4**
EIL	comp=E,70nm,0.3s,baz=20,slow=5.0,SNR=6.5			Lg	Lg	19 59 51.0	
EIL	**Elat** comp=E,164nm,0.3s,baz=54,slow=14,SNR=11	**5.09**	**332**	Pn	**Pn**	**19 58 32.6**	**-2.1**
EIL	**Elat**	**5.09**	**332**	Pg	**Pb**	**19 58 49.0**	**+1.3**
MBRI	**Mt Berech**	**5.22**	**332**	Pn	**Pn**	**19 58 33.9**	**-2.5**
HRDS	**Abu Rudays** baz=313	**5.28**	**312**	P	**Pn**	**19 58 35.6**	**-1.7**
GRB	**Gharib** baz=306	**5.38**	**306**	P	**Pn**	**19 58 37.0**	**-1.6**
GRB	**Gharib**	**5.38**	**306**	P	**Pn**	**19 58 37.0**	**-1.6**
HRFI	**Mount Harif**	**5.38**	**334**	P	**Pn**	**19 58 36.5**	**-2.1**
HRFI	**Mount Harif**	**5.38**	**334**	P	**Pn**	**19 58 36.5**	**-2.1**
HNKL	**Nakhl** baz=327	**5.77**	**326**	P	**Pn**	**19 58 42.4**	**-1.6**
HNKL	**Nakhl**	**5.77**	**326**	P	**Pn**	**19 58 42.4**	**-1.6**
KZIT	**Kziot**	**6.40**	**333**	P	**Pn**	**19 58 51.3**	**-1.4**
KZIT	**Kziot**	**6.40**	**333**	P	**Pn**	**19 58 51.3**	**-1.4**
AKRG	**Al Kharijah** baz=274	**6.55**	**274**	P	**Pn**	**19 58 53.3**	**-1.4**
RSH	baz=330	**6.74**	**329**	P	**Pn**	**19 58 55.6**	**-1.7**
RSH		**6.74**	**329**	P	**Pn**	**19 58 55.6**	**-1.7**
HHAG	**Hagoal** baz=315	**6.88**	**315**	P	**Pn**	**19 58 58.1**	**-1.2**
HHAG	**Hagoal**	**6.88**	**315**	P	**Pn**	**19 58 58.1**	**-1.2**
ASF	**Jabal al Asfar**	**6.99**	**354**	Pn	**Pn**	**19 58 58.5**	**-2.3**
ASF				Pg	Pb	19 59 24.3	+4.4
ASF				Lg	Lg	20 00 51.7	
ASF	**Jabal al Asfar** comp=E,5.3nm,0.3s,baz=38,slow=9.0,SNR=22	**6.99**	**354**	Pn	**Pn**	**19 58 58.5**	**-2.3**
ASF	comp=E,10nm,0.3s,baz=36,slow=15,SNR=6.2			Pg	Pb	19 59 24.3	+4.4
ASF	comp=E,56nm,0.3s,baz=66,slow=19,SNR=13			Lg	Lg	20 00 51.7	
ASF	comp=E,872nm,19.3s,baz=48,slow=40			LR	LR	20 01 55.8	
KOT	**Kottamia** baz=314	**7.04**	**313**	P	**Pn**	**19 59 00.5**	**-1.0**
KOT	**Kottamia**	**7.04**	**313**	P	**Pn**	**19 59 00.5**	**-1.0**
RAYN	**Ar Rayn**	**7.28**	**102**	P	**Pn**	**19 59 06.2**	**+1.4**
RAYN	**Ar Rayn**	**7.28**	**102**	P	**Pn**	**19 59 06.2**	**+1.4**
SALA	**Sala**	**7.54**	**354**	⇑*e*P	**Pn**	**19 59 07.9**	**-0.5**
SALA				*e*S	Sn	20 00 27.3	-6.5
SALA	comp=E,140nm,0.6s			AML	AML	20 01 24.4	
SALA	comp=E,3μm,0.7s			AML	AML	20 01 28.2	
SALA	comp=N,2μm,0.8s			AML	AML	20 01 28.3	
SALA	**Sala** SNR=45	**7.54**	**354**	⇑*e*P	**Pn**	**19 59 07.9**	**-0.5**
TCHB	**Talchebab**	**7.60**	**349**	⇑*e*P	**Pn**	**19 59 07.2**	**-1.9**
TCHB				*e*S	**Sn**	**20 00 30.9**	**-4.2**
TCHB	comp=E,4μm,0.7s			AML	AML	20 01 24.8	
TCHB	comp=E,1μm,0.6s			AML	AML	20 01 31.5	
TCHB	comp=N,4μm,0.7s			AML	AML	20 01 44.9	
TCHB	**Talchebab** SNR=45	**7.60**	**349**	⇑*e*P	**Pn**	**19 59 07.2**	**-1.9**
TCHB	comp=N,4μm,0.7s,SNR=40			*e*S	**Sn**	**20 00 30.9**	**-4.2**
ZALF	**Zalf**	**7.70**	**357**	⇓*e*P	**Pn**	**19 59 11.8**	**+1.3**
ZALF	comp=Z,2μm,0.7s			AML	AML	20 01 21.6	
ZALF	comp=N,4μm,0.7s			AML	AML	20 01 23.6	
ZALF	comp=E,841nm,0.7s			AML	AML	20 01 28.4	
MMAI	**Mount Meron Ar**	**8.05**	**346**	Pn	**Pn**	**19 59 13.7**	**-1.6**
MMAI				Pg	Pb	19 59 42.3	+4.3
MMAI				Lg	Lg	20 01 28.4	
MMAI	**Mount Meron Ar** comp=E,22nm,0.3s,baz=157,slow=15,SNR=54	**8.05**	**346**	Pn	**Pn**	**19 59 13.7**	**-1.6**
MMAI	comp=E,13nm,0.3s,baz=147,slow=15,SNR=5.1			Pg	Pb	19 59 42.3	+4.3
MMAI	comp=E,39nm,0.3s,baz=160,slow=32,SNR=6.3			Lg	Lg	20 01 28.4	
MMAI	comp=E,623nm,18.1s,baz=105,slow=42			LR	LR	20 02 52.4	
MMAI	**Mount Meron Ar**	**8.05**	**346**	Pn	**Pn**	**19 59 13.7**	**-1.6**
MMAI	**Mount Meron Ar**	**8.05**	**346**	Pg	Pb	19 59 42.3	+4.3
TOTH	**TOTAH**	**8.21**	**352**	⇓*e*P	**Pn**	**19 59 17.6**	**0.0**
TOTH				*e*S	**Sn**	**20 00 44.6**	**-5.6**
TOTH	comp=N,1μm,0.6s			AML	AML	20 01 43.1	
TOTH	comp=E,1μm,0.7s			AML	AML	20 01 45.2	
TOTH	comp=Z,1μm,0.8s			AML	AML	20 01 48.1	
TOTH	**TOTAH** SNR=45	**8.21**	**352**	⇓*e*P	**Pn**	**19 59 17.5**	**0.0**
BRBR	**Barbar**	**8.33**	**350**	⇑*e*P	**Pn**	**19 59 18.1**	**-1.2**
BRBR				*e*S	**Sn**	**20 00 49.2**	**-4.1**
BRBR	comp=N,566nm,0.7s			AML	AML	20 01 44.7	
BRBR	comp=E,840nm,0.7s			AML	AML	20 01 54.2	
BRBR				AML	AML	20 01 54.9	
BRBR	comp=Z,1μm,0.6s						
BRBR	**Barbar** SNR=45	**8.33**	**350**	⇑*e*P	**Pn**	**19 59 18.1**	**-1.2**
BRBR	comp=Z,1μm,0.6s,SNR=40			*e*S	**Sn**	**20 00 49.2**	**-4.1**
RCY	**Rachaya**	**8.43**	**349**	*e*P	**Pn**	**19 59 18.9**	**-1.7**
BHL	**Bhannes**	**8.86**	**349**	*e*P	**Pn**	**19 59 25.2**	**-1.3**
HWQ	**Hawqa**	**9.18**	**351**	*e*P	**Pn**	**19 59 30.3**	**-0.6**
HAWK	**Haweek**	**9.36**	**353**	⇑*e*P	**Pn**	**19 59 32.5**	**-0.8**
HAWK	**Haweek** SNR=45	**9.36**	**353**	⇑*e*P	**Pn**	**19 59 32.5**	**-0.8**
NAY	**Al-Naaiem**	**9.37**	**62**	*e*P	**Pn**	**19 59 32.6**	**-0.9**
NAY	comp=Z,93nm,0.6s			AML	AML	20 01 29.6	
RDF	**Al-Radifah**	**9.50**	**65**	*e*P	**Pn**	**19 59 35.0**	**-0.2**
RDF	**Al-Radifah**	**9.50**	**65**	*e*P	**Pn**	**19 59 35.0**	**-0.2**
MIB	**Mutribah**	**9.68**	**60**	*e*P	**Pn**	**19 59 36.6**	**-1.0**
MIB	comp=Z,85nm,0.6s			AML	AML	20 01 15.9	
MIB	**Mutribah**	**9.68**	**60**	*e*P	**Pn**	**19 59 36.6**	**-1.0**
KBD	**Kabd**	**9.71**	**64**	*e*P	**Pn**	**19 59 37.6**	**-0.4**
KBD	**Kabd**	**9.71**	**64**	*e*P	**Pn**	**19 59 37.6**	**-0.4**
QRN	**Al-Qurain**	**9.75**	**67**	*e*P	**Pn**	**19 59 37.5**	**-1.0**
QRN	comp=Z,59nm,0.6s			AML	AML	20 01 27.6	
CSS	**Prodhromos**	**10.45**	**340**	*e*Pn	**Pn**	**19 59 46.9**	**-1.2**
CSS	**Prodhromos**	**10.45**	**340**	*e*Pn	**Pn**	**19 59 46.9**	**-1.2**
BR131	**Keskin Array S** comp=Z,9.2nm,0.9s	**14.89**	**348**	*e*Pn	**Pn**	**20 00 49.4**	**+0.4**
BR131	**Keskin Array S** comp=Z,9.2nm,0.9s	**14.89**	**348**	*e*Pn	**Pn**	**20 00 49.4**	**+0.4**
BRTR	**Keskin Array B**	**14.89**	**348**	Pn	**Pn**	**20 00 49.1**	**+0.2**
BRTR				PcP	**PcP**	**20 05 59.5**	**+0.7**
BRTR	**Keskin Array B** comp=Z,0.1nm,0.3s,baz=160,slow=11,SNR=6.8	**14.89**	**348**	Pn	**Pn**	**20 00 49.1**	**+0.2**
BRTR	comp=Z,0.1nm,0.3s,baz=294,slow=4.3,SNR=4.5			PcP	**PcP**	**20 05 59.5**	**+0.7**
BRTR	comp=Z,488nm,20.6s,baz=146,slow=38			LR	LR	20 06 44.6	
BRTR	**Keskin Array B**	**14.89**	**348**	Pn	**Pn**	**20 00 49.1**	**+0.2**
IDI	**Anoyia** comp=Z,26nm,0.7s	**14.96**	**315**	*e*Pn	**Pn**	**20 00 48.9**	**-1.0**
IDI	**Anoyia** comp=Z,26nm,0.7s	**14.96**	**315**	*e*Pn	**Pn**	**20 00 48.9**	**-1.0**
ANTO	**Ankara**	**15.20**	**345**	*e*P	**P**	**20 00 56.2**	**-1.9**
ANTO	comp=Z,41nm,1.0s			pmax	pmax		
ANTO	**Ankara** comp=Z,41nm,1.0s	**15.20**	**345**	*e*Pn	**P**	**20 00 56.2**	**-1.9**
ANTO	**Ankara** SNR=8.5	**15.20**	**345**	⇓P	**P**	**20 00 55.9**	**-2.2**
ANTO	**Ankara** comp=Z,41nm,1.0s	**15.20**	**345**	*e*P	**P**	**20 00 56.2**	**-1.9**
SANT	**Santorini** comp=Z,54nm,0.8s	**15.32**	**320**	*e*P	**P**	**20 00 58.3**	**-1.1**
SANT	**Santorini** comp=Z,54nm,0.8s	**15.32**	**320**	*e*P	**P**	**20 00 58.3**	**-1.1**
NAX	**Nakhchivan** SNR=5.7	**15.39**	**23**	P	**P**	**20 00 58.9**	**-1.3**
NAX	**Nakhchivan** SNR=5.7	**15.39**	**23**	Pn	**P**	**20 00 58.9**	**-1.3**
GNI	**Garni** comp=Z,26nm,1.0s	**16.02**	**20**	*e*Pn	**Pn**	**20 01 05.3**	**+1.5**
GNI	**Garni** SNR=11	**16.02**	**20**	⇑P	**Pn**	**20 01 04.3**	**+0.5**
GNI	**Garni** comp=Z,0.2nm,0.3s,baz=223,slow=1.7,SNR=5.3	**16.02**	**20**	Pn	**Pn**	**20 01 05.5**	**+1.7**
GNI	comp=Z,766nm,20.9s,baz=198,slow=40			LR	LR	20 07 60.0	
GNI	**Garni** SNR=11	**16.02**	**20**	Pn	**Pn**	**20 01 04.3**	**+0.5**
GNI	**Garni** comp=Z,767nm,20.9s	**16.02**	**20**	P	**Pn**	**20 01 05.5**	**+1.7**
FURI	**Furi**	**16.24**	**177**	P	**P**	**20 01 11.0**	**+1.0**
ASHO	**Ashiyiah** SNR=9.6	**16.63**	**88**	⇑P	**Pn**	**20 01 11.9**	**+0.3**
ASHO	**Ashiyiah** SNR=9.6	**16.63**	**88**	Pn	**Pn**	**20 01 11.9**	**+0.3**
GLBA	**Clilabad** SNR=5.7	**16.64**	**30**	P	**P**	**20 01 14.0**	**+0.1**
GLBA	**Clilabad** SNR=5.7	**16.64**	**30**	Pn	**P**	**20 01 14.0**	**+0.1**
AKH	**Akhalkalaki**	**16.86**	**15**	P	**Pn**	**20 01 15.0**	**+0.5**
BRDA	**Brd** SNR=8.5	**16.98**	**25**	P	**P**	**20 01 19.1**	**+1.5**
BRDA	**Brd** SNR=8.5	**16.98**	**25**	Pn	**P**	**20 01 19.1**	**+1.5**
GANJ	**Ganja** SNR=6.6	**16.99**	**23**	P	**P**	**20 01 18.0**	**+0.2**
GANJ	**Ganja** SNR=6.6	**16.99**	**23**	Pn	**P**	**20 01 18.0**	**+0.2**
ARQ	**Araqi** SNR=16	**17.23**	**92**	⇑P	**P**	**20 01 21.5**	**+0.9**
ARQ	**Araqi** SNR=16	**17.23**	**92**	P	**P**	**20 01 21.5**	**+0.9**
DGRG	**David-gareji**	**17.41**	**20**	P	**P**	**20 01 22.4**	**0.0**
TBLG	**Delisi**	**17.48**	**18**	P	**P**	**20 01 23.2**	**-0.1**
TBLG	**Delisi**	**17.48**	**18**	P	**P**	**20 01 23.2**	**-0.1**
SEAG	**Tbilisi Sea**	**17.53**	**18**	P	**Pn**	**20 01 21.6**	**-1.1**
GOR	**Gori**	**17.55**	**16**	P	**P**	**20 01 25.5**	**+1.5**
SEKA	**Sheki** SNR=10	**17.80**	**24**	P	**P**	**20 01 28.2**	**+1.3**
SEKA	**Sheki** SNR=10	**17.80**	**24**	Pn	**P**	**20 01 28.2**	**+1.3**
DUS	**Dusheti**	**17.80**	**17**	P	**P**	**20 01 28.9**	**+2.0**
CHVG	**Ch'k'valeri**	**17.84**	**11**	P	**P**	**20 01 28.9**	**+1.8**
HOQ	**Hoqain** SNR=15	**17.91**	**91**	⇓P	**P**	**20 01 28.5**	**+0.4**
HOQ	**Hoqain** SNR=15	**17.91**	**91**	P	**P**	**20 01 28.5**	**+0.4**
BSY	**Bisya** SNR=10	**17.96**	**94**	⇓P	**P**	**20 01 30.7**	**+2.1**
ONI	**Oni**	**17.98**	**14**	P	**P**	**20 01 29.7**	**+0.9**
PQL	**Pirkuli** SNR=4.8	**17.99**	**28**	P	**P**	**20 01 30.8**	**+1.7**
PQL	**Pirkuli** SNR=4.8	**17.99**	**28**	Pn	**P**	**20 01 30.8**	**+1.7**
BSYO	**Bisya** SNR=10	**18.00**	**94**	P	**P**	**20 01 30.7**	**+1.6**
GUDG	**Gudauri**	**18.10**	**16**	P	**P**	**20 01 31.8**	**+1.6**
LZLA	**Zalla** comp=Z,61nm,1.0s,SNR=35	**18.30**	**285**	*i* P	**P**	**20 01 33.9**	**+1.5**
SIZA	**Siyn** SNR=7.0	**18.36**	**28**	P	**P**	**20 01 35.5**	**+2.5**
SIZA	**Siyzn** SNR=7.0	**18.36**	**28**	Pn	**P**	**20 01 35.5**	**+2.5**
SOC	**Sochi**	**18.41**	**5**	*c i* P	**P**	**20 01 32.8**	**-0.6**
SOC				*e*		20 04 54.4	
SOC	comp=Z,7.0nm,0.6s			pmax	pmax		
SOC	comp=Z,248nm,10.0s			MLR	MLR		
SOC	**Sochi** comp=Z,7.0nm,0.6s	**18.41**	**5**	*i* P	**P**	**20 01 32.8**	**-0.6**
QUBA	**Quba, Azerbaij** SNR=3.4	**18.43**	**26**	P	**Pn**	**20 01 36.7**	**+2.9**
QUBA	**Quba, Azerbaij** SNR=3.4	**18.43**	**26**	P	**Pn**	**20 01 36.7**	**+2.9**
SMDO	**Samad** SNR=8.7	**18.67**	**92**	⇓P	**Pn**	**20 01 37.6**	**+0.7**
SMDO	**Samad** SNR=8.7	**18.67**	**92**	P	**Pn**	**20 01 37.6**	**+0.7**
JMDO	**Jabal Madar** SNR=11	**18.85**	**94**	⇑P	**Pn**	**20 01 39.8**	**+0.7**
JMDO	**Jabal Madar** SNR=11	**18.85**	**94**	P	**Pn**	**20 01 39.8**	**+0.7**
KBZ	**Khabaz**	**18.96**	**12**	P	**Pn**	**20 01 40.4**	**+0.3**
KBZ	**Khabaz**	**18.96**	**12**	P	**Pn**	**20 01 40.4**	**+0.3**
KBZ	**Khabaz** comp=Z,0.1nm,0.3s,baz=203,slow=6.8,SNR=14	**18.96**	**12**	P	**Pn**	**20 01 40.4**	**+0.3**
KBZ	comp=Z,417nm,19.7s,baz=89,slow=40			LR	LR	20 09 43.7	
KBZ	**Khabaz**	**18.96**	**12**	P	**Pn**	**20 01 40.4**	**+0.3**
MAK	**Makhachkala**	**19.45**	**22**	*e*P	**Pn**	**20 01 47.0**	**+0.9**
MAK	comp=Z,277nm,1.9s			pmax	pmax		
MAK	comp=Z,737nm,17.0s			MLR	MLR		
ANN	**Anapa**	**19.56**	**359**	*d i* P	**P**	**20 01 46.3**	**+0.3**
ANN				*e*S	**Sn**	**20 05 28.1**	**+1.5**
ANN	comp=Z,41nm,0.7s			pmax	pmax		
ANN	comp=Z,288nm,17.0s			MLR	MLR		
ANN	**Anapa** comp=Z,41nm,0.7s	**19.56**	**359**	*i* P	**P**	**20 01 46.3**	**+0.3**
WBK	**Wadi Bani Khal** SNR=6.8	**19.59**	**93**	⇓P	**Pn**	**20 01 47.5**	**-0.4**
WBK	**Wadi Bani Khal** SNR=6.8	**19.59**	**93**	P	**Pn**	**20 01 47.5**	**-0.4**
LJFR	**Jufra** comp=Z,47nm,1.5s,SNR=34	**19.88**	**286**	*i* P	**Pn**	**20 01 51.3**	**-0.1**
SIM	**Simferopol'**	**19.92**	**352**	*c i* P	**Pn**	**20 01 50.9**	**-0.8**
SIM	comp=Z,83nm,1.6s			pmax	pmax		
SIM	comp=Z,80nm,15.5s			MLR	MLR		
SIM	**Simferopol'** comp=Z,80nm,15.5s	**19.92**	**352**	*i* P	**Pn**	**20 01 50.9**	**-0.8**
GOF	**Gofitskoye**	**20.27**	**11**	*e*P	Pn	20 02 08.5	+13
GOF	comp=Z,60nm,1.1s			pmax	pmax		
TIRR	**Tirgusor**	**20.65**	**341**	⇓*i* P	Pn	20 01 59.0	-1.3
CFR	**Carcaliu**	**21.39**	**341**	⇓*i* P	**P**	**20 02 05.7**	**-0.2**
ISR	**Istrita**	**21.84**	**338**	⇑*i* P	**P**	**20 02 11.9**	**+1.1**
HUMR	**Humele**	**21.89**	**335**	⇓*i* P	**P**	**20 02 12.0**	**+0.7**
TIR	**Tirane**	**21.90**	**322**	*e*P	**P**	**20 02 12.4**	**+1.0**
TIR	comp=Z,17nm,0.6s			pmax	pmax		
TIR	**Tirane** comp=Z,17nm,0.6s	**21.90**	**322**	*e*P	**P**	**20 02 12.4**	**+1.0**
TIR	**Tirane** comp=Z,17nm,0.6s	**21.90**	**322**	*e*P	**P**	**20 02 12.4**	**+1.0**
MLR	**Muntele Rosu**	**22.37**	**338**	P	**P**	**20 02 17.7**	**+1.2**
MLR				PcP	**PcP**	**20 06 11.4**	**0.0**
MLR	**Muntele Rosu**	**22.37**	**338**	⇓*i* P	**P**	**20 02 17.2**	**+0.7**
MLR	**Muntele Rosu** comp=Z,2.6nm,0.9s,baz=267,slow=4.0,SNR=17	**22.37**	**338**	P	**P**	**20 02 17.7**	**+1.2**
MLR	baz=188,slow=4.3			PcP	**PcP**	**20 06 11.4**	**0.0**
MLR	**Muntele Rosu**	**22.37**	**338**	P	**P**	**20 02 17.7**	**+1.2**
VRI	**Vrincioaia**	**22.44**	**340**	⇑*i* P	**P**	**20 02 17.4**	**+0.2**
PLOR	**Plostina**	**22.45**	**339**	⇑*i* P	**P**	**20 02 17.9**	**+0.6**
TIP	**Timpagrande** comp=Z,39nm,1.4s	**22.50**	**313**	*e*P	**P**	**20 02 18.6**	**+0.7**
TIP	**Timpagrande** comp=Z,39nm,1.4s	**22.50**	**313**	*e*P	**P**	**20 02 18.6**	**+0.7**
CEL	**Celeste** comp=Z,33nm,1.1s	**22.62**	**310**	*e*P	**P**	**20 02 20.2**	**+1.0**
CEL	**Celeste** comp=Z,33nm,1.1s	**22.62**	**310**	*e*P	**P**	**20 02 20.2**	**+1.0**
GHAR	**Gharyan** comp=Z,119nm,1.7s,SNR=29	**22.67**	**293**	*i* P	**P**	**20 02 20.8**	**+1.0**
ARR	**Arges**	**22.73**	**336**	⇓*i* P	**P**	**20 02 20.7**	**+0.4**
TESR	**Tescani**	**23.04**	**340**	⇑*i* P	**P**	**20 02 23.2**	**-0.3**
LOT	**Lotru**	**23.13**	**334**	⇓*i* P	**P**	**20 02 25.0**	**+0.5**
CUC	**Castrocucco** comp=Z,22nm,1.1s	**23.55**	**314**	*e*P	**P**	**20 02 28.0**	**-0.7**
CUC	**Castrocucco** comp=Z,22nm,1.1s	**23.55**	**314**	*e*P	**P**	**20 02 28.0**	**-0.7**
STON	**Ston**	**24.11**	**322**	P	**P**	**20 02 33.6**	**-0.4**
BZS	**Buzias**	**24.15**	**332**	⇓*i* P	**P**	**20 02 34.3**	**0.0**
BURAR	**Bucovina Array**	**24.47**	**339**	⇓*i* P	**P**	**20 02 38.5**	**+1.1**
BUR08	**Bucovina Ar. S**	**24.50**	**339**	*e*P	**P**	**20 02 38.2**	**+0.5**
BUR08	**Bucovina Ar. S**	**24.50**	**339**	*e*P	**P**	**20 02 38.2**	**+0.5**
DRGR		**24.65**	**335**	⇓*i* P	**P**	**20 02 40.0**	**+1.0**
BMR	**Baia Mare**	**25.10**	**337**	⇓*i* P	**P**	**20 02 44.1**	**+1.1**
TRPA	**Tarpa**	**25.84**	**336**	⇑*i* P	**P**	**20 02 51.1**	**+1.5**
TRPA	**Tarpa**	**25.84**	**336**	⇓*e*P	**P**	**20 02 51.4**	**+1.8**
PKSM	**Moragy**	**25.95**	**329**	⇑*e*P	**P**	**20 02 50.7**	**+0.1**
VSR	**Storozhevoye**	**26.00**	**2**	*e*P	**P**	**20 02 50.7**	**-0.3**
VSR	comp=N,60nm,1.0s			pmax	pmax		
VSR	comp=Z,40nm,1.0s			pmax	pmax		
VSR	comp=E,6.0nm,0.8s			pmax	pmax		
VSR	**Storozhevoye**	**26.00**	**2**	*e*P	**P**	**20 02 50.7**	**-0.3**
VRHR	**Novokhopersk** comp=E,70nm,1.2s	**26.03**	**6**	*e*P	**P**	**20 02 51.9**	**+0.6**
VRHR	comp=Z,40nm,0.9s			pmax	pmax		
VRHR	comp=N,70nm,1.2s			pmax	pmax		
VRHR	comp=E,20nm,0.7s			pmax	pmax		
VRHR	**Novokhopersk** comp=E,70nm,1.2s	**26.03**	**6**	*e*P	**P**	**20 02 51.9**	**+0.6**
KMBO	**Kilima Mbogo**	**26.18**	**181**	PcP	**PcP**	**20 06 21.8**	**+1.4**
KMBO	**Kilima Mbogo** comp=E,0.6nm,0.2s,baz=233,slow=23,SNR=3.7	**26.18**	**181**	PcP	**PcP**	**20 06 21.8**	**+1.4**
KMBO	comp=E,239nm,18.4s,baz=98,slow=36			LR	LR	20 13 11.0	
KMBO	**Kilima Mbogo**	**26.18**	**181**	PcP	**PcP**	**20 06 21.8**	**+1.4**
AK02	**Malin Array Si**	**26.25**	**348**	*e*P	**P**	**20 02 52.3**	**-1.0**
AK02	**Malin Array Si**	**26.25**	**348**	*e*P	**P**	**20 02 52.3**	**-1.0**
AK01	**Malin Array Si**	**26.29**	**348**	*e*P	**P**	**20 02 53.3**	**-0.3**
AK01	**Malin Array Si**	**26.29**	**348**	*e*P	**P**	**20 02 53.3**	**-0.3**
KIEV	**Kiev**	**26.29**	**348**	*e*P	**P**	**20 02 52.9**	**-0.8**
KIEV	comp=Z,23nm,0.8s			pmax	pmax		
KIEV	**Kiev** comp=Z,23nm,0.8s	**26.29**	**348**	*e*P	**P**	**20 02 52.9**	**-0.8**
KIEV	**Kiev** comp=Z,23nm,0.8s	**26.29**	**348**	*e*P	**P**	**20 02 52.9**	**-0.8**
AKASG	**Malin Array Be**	**26.29**	**348**	P	**P**	**20 02 53.2**	**-0.5**
AKASG						20 06 19.7	
AKASG	**Malin Array Be**	**26.29**	**348**	P	**P**	**20 02 53.2**	**-0.5**
AKASG				PcP	**PcP**	**20 06 19.7**	**0.0**
AKASG	**Malin Array Be** comp=Z,8.0nm,0.6s,baz=167,slow=8.8,SNR=35	**26.29**	**348**	P	**P**	**20 02 53.2**	**-0.5**
AKASG	comp=Z,2.1nm,0.6s,baz=130,slow=0.9,SNR=5.0			PcP	**PcP**	**20 06 19.7**	**0.0**
AKASG	**Malin Array Be**	**26.29**	**348**	P	**P**	**20 02 53.2**	**-0.5**
UZH	**Uzhgorod**	**26.34**	**337**	⇓*i* P	**P**	**20 02 53.4**	**-0.8**
UZH				*e*		20 02 58.6	
UZH				*e*		20 03 05.9	
UZH	**Uzhgorod**	**26.34**	**337**	*i* P	**P**	**20 02 53.4**	**-0.8**
AQU	**L'Aquila** comp=Z,24nm,1.1s	**26.35**	**317**	*e*P	**P**	**20 02 55.7**	**+1.3**
AQU	**L'Aquila** comp=Z,30nm,1.1s	**26.35**	**317**	*e*P	**P**	**20 02 55.7**	**+1.3**
MBAR	**Mbarara** comp=Z,405nm,20.4s,baz=23,slow=35	**26.53**	**196**	LR	LR	20 12 48.9	
KEST	**Kesra**	**26.54**	**300**	P	**P**	**20 02 58.3**	**+2.1**
KEST				PcP	**PcP**	**20 06 21.8**	**+1.0**
KEST	**Kesra** comp=Z,10nm,0.9s,baz=67,slow=2.7,SNR=28	**26.54**	**300**	P	**P**	**20 02 58.3**	**+2.1**
KEST	comp=Z,2.0nm,0.9s,baz=327,slow=7.3,SNR=4.1			PcP	**PcP**

SOKA Soboth 28.05 326 P P 20 03 10.9 +1.2
comp=Z,4.5nm,1.0s
ZST Bratislava 28.12 330 eP P 20 03 10.1 -0.1
ZST pmax pmax
comp=Z,101nm,3.0s
ZST Bratislava 28.12 330 eP P 20 03 10.1 -0.1
CONA Conrad Observa 28.50 328⇑iP P 20 03 14.4 +0.7
comp=Z,3.7nm,0.9s
CONA Conrad Observa 28.50 328 P P 20 03 14.4 +0.7
comp=Z,3.7nm,0.9s
OJC Ojcow 28.57 336 eP P 20 03 13.7 -0.5
OJC Ojcow 28.57 336 eP P 20 03 13.7 -0.5
KBL Kabul 28.61 64 eP P 20 03 16.0 +1.1
KBL pmax pmax
comp=Z,7.0nm,1.2s
KBL Kabul 28.61 64 eP P 20 03 16.0 +1.1
comp=Z,7.2nm,1.2s
KBL Kabul 28.61 64 eP P 20 03 16.0 +1.1
comp=Z,7.2nm,1.2s
OKC Ostrava-Krasne 28.92 333 eP P 20 03 16.6 -0.6
OKC MLR MLR
comp=Z,100nm,15.8s
OKC Ostrava-Krasne 28.92 333 eP P 20 03 16.6 -0.6
OKC epP pP 20 03 20.1 -1.4
OKC AMS AMS 20 17 40.0
comp=Z,100nm,15.8s
OKC Ostrava-Krasne 28.92 333 P P 20 03 16.6 -0.6
MORC Moravsky Berou 29.12 333 eP P 20 03 18.2 -0.9
MORC pmax pmax
comp=Z,5.0nm,1.0s
MORC Moravsky Berou 29.12 333 eP P 20 03 18.2 -0.9
comp=Z,5.2nm,1.0s
MORC Moravsky Berou 29.12 333⇑iP P 20 03 19.1 0.0
MORC Moravsky Berou 29.12 333 eP P 20 03 18.2 -0.9
comp=Z,5.2nm,1.0s
VRAC Vranov 29.17 331 P P 20 03 19.3 -0.2
VRAC Vranov 29.17 331 P P 20 03 19.3 -0.2
comp=Z,2.7nm,0.7s,baz=167,slow=11,SNR=6.9
VRAC Vranov 29.17 331 P P 20 03 19.3 -0.2
KBA Koelnbreinsper 29.19 325⇓iP P 20 03 21.0 +1.1
comp=Z,5.3nm,0.8s
KBA Koelnbreinsper 29.19 325 P P 20 03 21.0 +1.1
comp=Z,5.3nm,0.8s
MOA Molln 29.23 327⇓iP P 20 03 21.0 +0.9
comp=Z,6.8nm,1.3s
MOA Molln 29.23 327 P P 20 03 21.0 +0.9
comp=Z,6.8nm,1.3s
PGF Pioggiola 29.27 313 eP P 20 03 21.0 +0.4
PGF Pioggiola 29.27 313 eP P 20 03 21.0 +0.4
PGF Pioggiola 29.27 313 eP P 20 03 21.0 +0.4
PGF Pioggiola 29.27 313 eP P 20 03 21.0 +0.4
TAM Tamanrasset 29.49 272 eP P 20 03 24.3 +1.5
TAM pmax pmax
comp=Z,5.0nm,0.9s
TAM Tamanrasset 29.49 272 eP P 20 03 24.3 +1.5
comp=Z,5.3nm,0.9s
TAM Tamanrasset 29.49 272 eP P 20 03 24.3 +1.5
comp=Z,5.3nm,0.9s
ABKAR Akbulak array 29.61 30 eP P 20 03 22.6 -0.8
comp=Z,1.8nm,0.7s
ABKAR Akbulak array 29.61 30 eP P 20 03 22.6 -0.8
comp=Z,1.8nm,0.7s
TREC Trest 29.66 330 eP P 20 03 24.2 +0.4
TREC Trest 29.66 330 eP P 20 03 24.2 +0.4
TREC Trest 29.66 330 P P 20 03 24.2 +0.4
AKTO Aktyubinsk 29.66 27 P P 20 03 23.4 -0.5
AKTO Aktyubinsk 29.66 27 P P 20 03 23.4 -0.5
AKTO Aktyubinsk 29.66 27 P P 20 03 23.4 -0.5
comp=Z,0.7nm,0.5s,baz=229,slow=14,SNR=4.8
AKTO Aktyubinsk 29.66 27 P P 20 03 23.4 -0.5
OBN Obninsk 29.89 359⇑iP P 20 03 25.1 -0.7
OBN e 20 04 23.7
OBN eS S 20 08 28.6 +6.2
OBN pmax pmax
comp=Z,16nm,0.6s
DPC Dobruska-Polom 30.07 332 eP P 20 03 27.4 -0.1
DPC Dobruska-Polom 30.07 332 eP P 20 03 27.4 -0.1
DPC epP pP 20 03 30.7 -1.1
DPC Dobruska-Polom 30.07 332 P P 20 03 27.4 -0.1
GERES GERESS Array B 30.18 328 P P 20 03 28.4 -0.1
GERES PcP PcP 20 06 29.4 -0.1
GERES GERESS Array B 30.18 328 P P 20 03 28.4 -0.1
comp=Z,4.1nm,0.8s,baz=126,slow=8.4,SNR=40
GERES PcP PcP 20 06 29.4 -0.1
comp=Z,2.2nm,0.8s,baz=144,slow=3.1,SNR=6.3
GERES GERESS Array B 30.18 328 P P 20 03 28.4 -0.1
GERES GERESS Array B 30.18 328 PcP PcP 20 06 29.4 -0.1
UPC Upice 30.32 332 eP P 20 03 29.8 +0.2
UPC Upice 30.32 332 eP P 20 03 29.8 +0.2
UPC epP pP 20 03 32.4 -1.5
UPC Upice 30.32 332 P P 20 03 29.8 +0.2
KHC Kasperske Hory 30.43 328 eP P 20 03 30.0 -0.7
KHC Kasperske Hory 30.43 328 eP P 20 03 29.2 -1.5
comp=Z,1.6nm,0.8s
KHC Kasperske Hory 30.43 328 eP P 20 03 30.0 -0.7
KHC Kasperske Hory 30.43 328 eP P 20 03 29.2 -1.5
comp=Z,1.6nm,0.8s
KSP Ksiaz 30.45 333 eP P 20 03 31.2 +0.4
KSP Ksiaz 30.45 333 eP P 20 03 31.2 +0.4
MOTA Moosalm 30.55 323⇓iP P 20 03 32.5 +0.6
comp=Z,5.5nm,0.8s
MOTA Moosalm 30.55 323 P P 20 03 32.5 +0.6
comp=Z,5.5nm,0.8s
FETA Feichten 30.57 322⇓iP P 20 03 33.4 +1.3
comp=Z,7.7nm,0.9s
FETA Feichten 30.57 322 P P 20 03 33.3 +1.3
comp=Z,7.7nm,0.9s
PRU Pruhonice 30.58 330 eP P 20 03 32.3 +0.3
PRU Pruhonice 30.58 330 eP P 20 03 32.3 +0.3
PRU Pruhonice 30.58 330 P P 20 03 32.3 +0.3
SUW Suwalki 30.76 343 eP P 20 03 33.1 -0.3
SUW pmax pmax
comp=Z,62nm,0.9s
SUW Suwalki 30.76 343 eP P 20 03 33.1 -0.3
comp=Z,62nm,0.9s
SUW Suwalki 30.76 343 eP P 20 03 33.4 0.0
SUW Suwalki 30.76 343 eP P 20 03 33.1 -0.3
comp=Z,62nm,0.9s
SBF Sospel 30.89 315 eP P 20 03 35.0 +0.1
comp=Z,13nm,0.9s
SBF Sospel 30.89 315 eP P 20 03 35.0 +0.1
SBF pmax pmax
comp=Z,13nm,0.9s
SBF Sospel 30.89 315 eP P 20 03 35.0 +0.1
comp=Z,13nm,0.9s
SBF Sospel 30.89 315 eP P 20 03 35.0 +0.1
comp=Z,6.6nm,0.9s
PVCC Panska Ves 30.96 331 eP P 20 03 36.0 +0.7
PVCC Panska Ves 30.96 331 eP P 20 03 36.0 +0.7
PVCC Panska Ves 30.96 331 P P 20 03 36.0 +0.7
IDID Didziasalis 31.15 348 eP P 20 03 35.5 -1.4
IDID AMB AMB 20 03 38.2
comp=Z,7.2nm,1.1s
IDID Didziasalis 31.15 348 eP P 20 03 35.5 -1.4
comp=Z,7.2nm,1.1s,SNR=28
DAVA Damuels 31.19 322⇑iP P 20 03 37.7 +0.1
comp=Z,9.0nm,0.9s
DAVA Damuels 31.19 322 P P 20 03 37.7 +0.1
comp=Z,9.0nm,0.9s
LMR La Mourre 31.26 313 eP P 20 03 38.4 +0.4
LMR La Mourre 31.26 313 eP P 20 03 38.4 +0.4
LMR La Mourre 31.26 313 eP P 20 03 38.4 +0.4
LMR La Mourre 31.26 313 eP P 20 03 38.4 +0.4
FRF La Foret Royal 31.27 314 eP P 20 03 38.7 +0.6
comp=Z,9.1nm,0.9s
FRF La Foret Royal 31.27 314 eP P 20 03 38.7 +0.6
FRF pmax pmax
comp=Z,9.0nm,0.9s
FRF La Foret Royal 31.27 314 eP P 20 03 38.7 +0.6
comp=Z,9.1nm,0.9s
FRF La Foret Royal 31.27 314 eP P 20 03 38.7 +0.6
comp=Z,4.6nm,0.9s
IIGN Ignalina 31.29 347 eP P 20 03 36.8 -1.3
IIGN AMB AMB 20 03 39.4
comp=Z,6.1nm,1.0s
IIGN Ignalina 31.29 347 eP P 20 03 36.8 -1.3
comp=Z,6.1nm,1.0s,SNR=28
BRG Berggiesshubel 31.48 331⇓iP P 20 03 40.3 +0.4
comp=Z,16nm,1.0s
BRG Berggiesshubel 31.48 331⇓iP P 20 03 40.3 +0.4
BRG pmax pmax
comp=Z,16nm,1.0s
IZAR Zarasai 31.66 348 eP P 20 03 40.1 -1.3
IZAR AMB AMB 20 03 42.7
comp=Z,8.0nm,1.0s
IZAR Zarasai 31.66 348 eP P 20 03 40.1 -1.3
comp=Z,8.0nm,1.0s,SNR=28
MBDF Montbardon 31.71 316 eP P 20 03 43.8 +1.6
comp=Z,23nm,0.8s
MBDF Montbardon 31.71 316 eP P 20 03 43.8 +1.6
MBDF pmax pmax
comp=Z,23nm,0.8s
MBDF Montbardon 31.71 316 eP P 20 03 43.8 +1.6
comp=Z,23nm,0.8s
MBDF Montbardon 31.71 316 eP P 20 03 43.8 +1.6
comp=Z,12nm,0.8s
NKC Novy Kostel 31.72 329 eP P 20 03 42.5 +0.5
NKC Novy Kostel 31.72 329 eP P 20 03 42.5 +0.5
NKC Novy Kostel 31.72 329 P P 20 03 42.5 +0.5
GRF Grafenberg Arr 31.96 327 eP P 20 03 43.7 -0.4
GRF pmax pmax
comp=Z,6.0nm,1.1s
GRF Grafenberg Arr 31.96 327 eP P 20 03 43.7 -0.4
comp=Z,6.0nm,1.1s
LPG La Plagne 32.08 317 eP P 20 03 46.0 +0.4
comp=Z,7.6nm,0.8s
LPG La Plagne 32.08 317 eP P 20 03 46.0 +0.4
LPG pmax pmax
comp=Z,8.0nm,0.8s
LPG La Plagne 32.08 317 eP P 20 03 46.0 +0.4
comp=Z,7.6nm,0.8s
LPG La Plagne 32.08 317 eP P 20 03 46.0 +0.4
comp=Z,3.8nm,0.8s
LPL La Plagne 32.10 317 eP P 20 03 46.1 +0.4
LPL La Plagne 32.10 317 eP P 20 03 46.1 +0.4
LPL La Plagne 32.10 317 eP P 20 03 46.1 +0.4
LPL La Plagne 32.10 317 eP P 20 03 46.1 +0.4
SMRF Simiane la Rot 32.15 314 eP P 20 03 47.1 +1.2
SMRF Simiane la Rot 32.15 314 eP P 20 03 47.1 +1.2
SMRF Simiane la Rot 32.15 314 eP P 20 03 47.1 +1.2
KKAR Karatay Array 32.20 48 eP P 20 03 46.9 +0.5
KKAR pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 32.20 48 eP P 20 03 46.9 +0.5
comp=Z,5.5nm,0.9s
KKAR Karatay Array 32.20 48 eP P 20 03 46.8 +0.4
comp=Z,5.4nm,0.9s
CLL Collm 32.21 330⇓iP P 20 03 46.3 0.0
CLL e 20 06 35.0
CLL eS S 20 09 01.0 +2.2
CLL pmax pmax
comp=Z,23nm,1.5s
CLL Collm 32.21 330⇓iP P 20 03 46.3 0.0
comp=Z,23nm,1.5s
CLL ePcP PcP 20 06 35.0 +0.3
CLL eS S 20 09 01.0 +2.2
CLL Lm MLR 20 19 00.0
comp=Z,100nm,18.1s
ORIF Oris-en-Rattie 32.36 316 eP P 20 03 48.7 +0.9
ORIF eR
comp=Z,112nm,22.5s
ORIF Oris-en-Rattie 32.36 316 eP P 20 03 48.7 +0.9
ORIF Oris-en-Rattie 32.36 316 eP P 20 03 48.7 +0.9
ORIF Oris-en-Rattie 32.36 316 eP P 20 03 48.7 +0.9
BFO Black Forest 32.65 323 eP P 20 03 50.7 +0.5
BFO pmax pmax
comp=Z,11nm,1.1s
BFO Black Forest 32.65 323 eP P 20 03 50.6 +0.5
comp=Z,11nm,1.1s
BFO Black Forest 32.65 323 eP P 20 03 50.7 +0.5
comp=Z,11nm,1.1s
CABF La Chapelle 33.03 318 eP P 20 03 53.5 -0.1
comp=Z,18nm,1.1s
CABF La Chapelle 33.03 318 eP P 20 03 53.5 -0.1
CABF pmax pmax
comp=Z,18nm,1.1s
CABF La Chapelle 33.03 318 eP P 20 03 53.5 -0.1
comp=Z,18nm,1.1s
CABF La Chapelle 33.03 318 eP P 20 03 53.5 -0.1
comp=Z,8.8nm,1.1s
VIVF Saint-Julien-l 33.10 315 eP P 20 03 54.6 +0.3
comp=Z,17nm,1.2s
VIVF Saint-Julien-l 33.10 315 eP P 20 03 54.6 +0.3
VIVF pmax pmax
comp=Z,17nm,1.2s
VIVF Saint-Julien-l 33.10 315 eP P 20 03 54.6 +0.3
comp=Z,17nm,1.2s
VIVF Saint-Julien-l 33.10 315 eP P 20 03 54.6 +0.3
comp=Z,8.6nm,1.2s
HINF Hinteralfeld 33.19 321 eP P 20 03 54.8 -0.2
comp=Z,11nm,0.8s
HINF Hinteralfeld 33.19 321 eP P 20 03 54.8 -0.2
HINF pmax pmax
comp=Z,11nm,0.8s
HINF Hinteralfeld 33.19 321 eP P 20 03 54.8 -0.2
comp=Z,11nm,0.8s
HINF Hinteralfeld 33.19 321 eP P 20 03 54.8 -0.2
comp=Z,5.7nm,0.8s
CDF Champ du Feu 33.27 322 eP P 20 03 55.5 -0.3
CDF Champ du Feu 33.27 322 eP P 20 03 55.5 -0.3
CDF Champ du Feu 33.27 322 eP P 20 03 55.5 -0.3
CDF Champ du Feu 33.27 322 eP P 20 03 55.5 -0.3
LASF Ste Croix 33.32 313 eP P 20 03 56.6 +0.5
comp=Z,31nm,1.1s
LASF Ste Croix 33.32 313 eP P 20 03 56.6 +0.5
comp=Z,31nm,1.1s
LASF Ste Croix 33.32 313 eP P 20 03 56.6 +0.5
comp=Z,16nm,1.1s
HAU Haudompre 33.58 321 eP P 20 03 58.8 +0.4
HAU eR
comp=Z,122nm,18.2s
HAU Haudompre 33.58 321 eP P 20 03 58.8 +0.4
HAU Haudompre 33.58 321 eP P 20 03 58.8 +0.4
HAU Haudompre 33.58 321 eP P 20 03 58.8 +0.4
VSU Vasula 34.14 350 eP P 20 04 02.0 -1.0
VSU pmax pmax
comp=Z,6.0nm,0.7s
MTLF Montolieu 34.15 311 eP P 20 04 03.2 -0.2
comp=Z,10nm,1.3s
MTLF Montolieu 34.15 311 eP P 20 04 03.2 -0.2
MTLF pmax pmax
comp=Z,10.0nm,1.3s
MTLF Montolieu 34.15 311 eP P 20 04 03.2 -0.2
comp=Z,10nm,1.3s
MTLF Montolieu 34.15 311 eP P 20 04 03.2 -0.2
comp=Z,5.2nm,1.3s
PAGF Fort de Pagny 34.22 321 eP P 20 04 03.7 -0.2
PAGF Fort de Pagny 34.22 321 eP P 20 04 03.7 -0.2
PAGF Fort de Pagny 34.22 321 eP P 20 04 03.7 -0.2
BSD Bornholm Skovb 34.28 337 iP P 20 04 03.2 -1.0
BSD pmax pmax
comp=Z,16nm,0.8s
BSD Bornholm Skovb 34.28 337 iP P 20 04 03.2 -1.0
comp=Z,16nm,0.8s
BSD Bornholm Skovb 34.28 337 iP P 20 04 03.3 -1.0
comp=Z,22nm,0.7s,SNR=52
EKS2 Erkin-Say 34.29 50 eP P 20 04 05.2 +0.5
EKS2 pmax pmax
comp=Z,1.0nm,0.7s
EKS2 Erkin-Say 34.29 50 eP P 20 04 05.2 +0.5
comp=Z,1.1nm,0.7s
EKS2 Erkin-Say 34.29 50 eP P 20 04 05.2 +0.5
comp=Z,1.1nm,0.7s
SMF Signal de Mont 34.41 317 eP P 20 04 05.3 -0.3
SMF Signal de Mont 34.41 317 eP P 20 04 05.3 -0.3
SMF Signal de Mont 34.41 317 eP P 20 04 05.3 -0.3
SMF Signal de Mont 34.41 317 eP P 20 04 05.3 -0.3
SFTF Sexfontaines 34.44 320 eP P 20 04 05.7 -0.1
comp=Z,23nm,1.0s
SFTF Sexfontaines 34.44 320 eP P 20 04 05.7 -0.1
comp=Z,23nm,1.0s
SFTF Sexfontaines 34.44 320 eP P 20 04 05.7 -0.1
comp=Z,12nm,1.0s
ARU Arti 34.67 20diP P 20 04 07.4 -0.2
ARU 20 05 22.7
ARU 20 06 39.5
ARU S S 20 09 36.3 -0.5
ARU SS SnSn 20 11 47.0 -2.4
ARU pmax pmax
comp=Z,17nm,1.2s
ARU MLR MLR
comp=Z,446nm,17.0s
LOR Lormes 34.68 318 eP P 20 04 07.9 -0.1
comp=Z,16nm,1.0s
LOR eR
comp=Z,112nm,20.8s
LOR Lormes 34.68 318 eP P 20 04 07.9 -0.1
comp=Z,16nm,1.0s
LOR Lormes 34.68 318 eP P 20 04 07.9 -0.1
comp=Z,8.0nm,1.0s
AVF Avril sur Loir 34.78 317 eP P 20 04 08.4 -0.3
AVF Avril sur Loir 34.78 317 eP P 20 04 08.4 -0.3
AVF Avril sur Loir 34.78 317 eP P 20 04 08.4 -0.3
AVF Avril sur Loir 34.78 317 eP P 20 04 08.4 -0.3
AAK Ala-Archa 34.78 51 eP P 20 04 10.4 +1.4
AAK pmax pmax
comp=Z,1.0nm,0.6s
AAK Ala-Archa 34.78 51 eP P 20 04 10.4 +1.4
comp=Z,1.4nm,0.6s
AAK Ala-Archa 34.78 51 eP P 20 04 10.4 +1.4
comp=Z,1.4nm,0.6s
SSF Saint Saulge 34.80 318 eP P 20 04 08.9 -0.1
SSF Saint Saulge 34.80 318 eP P 20 04 08.9 -0.1
SSF Saint Saulge 34.80 318 eP P 20 04 08.9 -0.1
SSF Saint Saulge 34.80 318 eP P 20 04 08.9 -0.1
CAF Calviac 34.83 314 eP P 20 04 09.9 +0.6
comp=Z,15nm,1.1s
CAF Calviac 34.83 314 eP P 20 04 09.9 +0.6
CAF pmax pmax
comp=Z,15nm,1.1s
CAF Calviac 34.83 314 eP P 20 04 09.9 +0.6
comp=Z,15nm,1.1s
CAF Calviac 34.83 314 eP P 20 04 09.9 +0.6
comp=Z,7.3nm,1.1s
BGF Bois d'Agland 34.99 317 eP P 20 04 10.9 +0.3
comp=Z,21nm,0.8s
BGF Bois d'Agland 34.99 317 eP P 20 04 10.9 +0.3
BGF pmax pmax
comp=Z,21nm,0.8s
BGF Bois d'Agland 34.99 317 eP P 20 04 10.9 +0.3
comp=Z,21nm,0.8s
BGF Bois d'Agland 34.99 317 eP P 20 04 10.9 +0.3
comp=Z,11nm,0.8s
KSH Kashi 35.04 57 eP P 20 04 09.9 -1.4
KSH epP pP 20 04 14.4 -1.2
KSH esP sP 20 04 17.3 0.0
KSH ePP PnPn 20 05 27.3 -1.1
KSH ePcP PcP 20 06 43.5 +0.4
KSH eS S 20 09 38.9 -4.3
KSH esS sS 20 09 46.6 -3.7
KSH eScP ScP 20 10 27.3 -1.1
KSH ePcS PcS 20 10 29.3 -0.7
KSH eScS ScS 20 14 29.3 -3.0
KSH pmax pmax
comp=Z,4.0nm,0.8s
KSH LR LR
comp=N,79nm,3.9s
KSH LR LR
comp=E,230nm,5.5s
KSH LR LR
comp=Z,170nm,4.2s
TCF Toulx Ste Croi 35.28 316 eP P 20 04 13.5 +0.4
TCF Toulx Ste Croi 35.28 316 eP P 20 04 13.5 +0.4
TCF Toulx Ste Croi 35.28 316 eP P 20 04 13.5 +0.4
TCF Toulx Ste Croi 35.28 316 eP P 20 04 13.5 +0.4
RJF Les Rejaudoux 35.33 314 eP P 20 04 14.5 +0.9
RJF eR
comp=Z,152nm,22.2s
RJF Les Rejaudoux 35.33 314 eP P 20 04 14.5 +0.9
RJF Les Rejaudoux 35.33 314 eP P 20 04 14.5 +0.9
RJF Les Rejaudoux 35.33 314 eP P 20 04 14.5 +0.9
EPF Esparros 35.35 310 eP P 20 04 13.4 -0.4
comp=Z,3.9nm,0.8s
EPF Esparros 35.35 310 eP P 20 04 13.4 -0.4
EPF pmax pmax
comp=Z,4.0nm,0.8s
EPF Esparros 35.35 310 eP P 20 04 13.4 -0.4
comp=Z,3.9nm,0.8s
EPF Esparros 35.35 310 eP P 20 04 13.4 -0.4
comp=Z,2.0nm,0.8s
LLD Lille Linde 35.45 335 eP P 20 04 15.6 +1.3
LLD pmax pmax
comp=Z,22nm,0.7s
LLD Lille Linde 35.45 335 iP P 20 04 15.6 +1.3
comp=Z,22nm,0.7s
GIVF Givet 35.54 323 eP P 20 04 14.9 -0.4
GIVF Givet 35.54 323 eP P 20 04 14.9 -0.4
GIVF Givet 35.54 323 eP P 20 04 14.9 -0.4
GIVF Givet 35.54 323 eP P 20 04 14.9 -0.4
TKM2 Tokmak 2 35.64 51 eP P 20 04 17.6 +1.1
TKM2 pmax pmax
comp=Z,5.0nm,0.6s
TKM2 Tokmak 2 35.64 51 eP P 20 04 17.6 +1.1
comp=Z,5.0nm,0.6s
TKM2 Tokmak 2 35.64 51 eP P 20 04 17.6 +1.1
comp=Z,5.0nm,0.6s
SVE Sverdlovsk 35.66 22 eP P 20 04 16.5 +0.3
SVE eS S 20 09 45.1 -7.0
SVE pmax pmax
comp=Z,16nm,1.9s
LFF La Frestale 35.71 313 eP P 20 04 17.8 +1.0
comp=Z,19nm,0.7s
LFF La Frestale 35.71 313 eP P 20 04 17.8 +1.0
LFF pmax pmax
comp=Z,19nm,0.7s
LFF La Frestale 35.71 313 eP P 20 04 17.8 +1.0
comp=Z,19nm,0.7s
LFF La Frestale 35.71 313 eP P 20 04 17.8 +1.0
comp=Z,9.4nm,0.7s
BAIF Baives 35.85 323 eP P 20 04 17.6 -0.3
comp=Z,15nm,1.0s
BAIF Baives 35.85 323 eP P 20 04 17.6 -0.3
BAIF pmax pmax
comp=Z,15nm,1.0s
BAIF Baives 35.85 323 eP P 20 04 17.6 -0.3
comp=Z,15nm,1.0s
BAIF Baives 35.85 323 eP P 20 04 17.6 -0.3
comp=Z,7.3nm,1.0s
ETSF Etsaut 35.94 309 eP P 20 04 20.0 +1.1
comp=Z,41nm,0.9s
ETSF Etsaut 35.94 309 eP P 20 04 20.0 +1.1
ETSF pmax pmax
comp=Z,41nm,0.9s
ETSF Etsaut 35.94 309 eP P 20 04 20.0 +1.1
comp=Z,41nm,0.9s
ETSF Etsaut 35.94 309 eP P 20 04 20.0 +1.1
comp=Z,21nm,0.9s
TOA0 Torodi Ar. Sit 35.97 257 eP P 20 04 19.9 +0.6
TOA0 Torodi Ar. Sit 35.97 257 eP P 20 04 19.9 +0.6
TORD Torodi Ar. Bea 35.97 257 P P 20 04 20.3 +0.9
TORD PcP PcP 20 06 46.8 +0.7
TORD Torodi Ar. Bea 35.97 257 P P 20 04 20.3 +0.9
comp=Z,13nm,1.1s,baz=53,slow=7.4,SNR=27
TORD PcP PcP 20 06 46.8 +0.7
comp=Z,0.8nm,0.6s,baz=38,slow=2.6,SNR=3.6
TORD LR LR 20 19 34.0
comp=Z,276nm,18.6s,baz=45,slow=37
TORD Torodi Ar. Bea 35.97 257 P P 20 04 20.3 +0.9
SJPF Ste Jean 36.47 309 eP P 20 04 24.4 +1.1
comp=Z,19nm,0.8s
SJPF Ste Jean 36.47 309 eP P 20 04 24.4 +1.1
SJPF pmax pmax
comp=Z,19nm,0.8s
SJPF Ste Jean 36.47 309 eP P 20 04 24.4 +1.1
comp=Z,19nm,0.8s
SJPF Ste Jean 36.47 309 eP P 20 04 24.4 +1.1
comp=Z,9.6nm,0.8s
MFF Saint Martin d 36.90 315 eP P 20 04 27.0 +0.1
comp=Z,22nm,1.0s
MFF Saint Martin d 36.90 315 eP P 20 04 27.0 +0.1
MFF pmax pmax
comp=Z,22nm,1.0s
MFF Saint Martin d 36.90 315 eP P 20 04 27.0 +0.1
comp=Z,22nm,1.0s
MFF Saint Martin d 36.90 315 eP P 20 04 27.0 +0.1
comp=Z,11nm,1.0s
BRVK Borovoye 37.01 33diP P 20 04 27.7 -0.1
BRVK pmax pmax
comp=Z,13nm,1.2s
BRVK Borovoye 37.01 33 eP P 20 04 27.1 -0.8
comp=Z,7.2nm,0.8s
BRVK Borovoye 37.01 33 ⇓P P 20 04 28.7 +0.9
SNR=6.8
BRVK Borovoye 37.01 33 eP P 20 04 27.0 -0.8
comp=Z,7.2nm,0.8s
FINES FINESS Array B 37.09 351 P P 20 04 27.8 -0.6
FINES PcP PcP 20 06 48.6 0.0
FINES FINESS Array B 37.09 351 P P 20 04 27.8 -0.6
comp=Z,9.5nm,0.8s,baz=142,slow=9.6,SNR=39
FINES PcP PcP 20 06 48.6 0.0
comp=Z,4.7nm,0.8s,baz=126,slow=3.3,SNR=7.0
FINES LR LR 20 21 41.4
comp=Z,71nm,18.0s,baz=90,slow=40
FINES FINESS Array B 37.09 351 P P 20 04 27.8 -0.6
FIA1 FINESS Array S 37.09 351 eP P 20 04 27.0 -1.3

FIA1 eP cP P 20 06 48.3 -0.3
FIA1 FINESS Array S 37.09 351 eP P 20 04 27.0 -1.3
MUD Monsted U'grnd 37.45 334 i P P 20 04 31.7 +0.4
MUD pmax pmax
comp=Z,16nm,1.0s
MUD Monsted U'grnd 37.45 334 i P P 20 04 31.7 +0.4
comp=Z,16nm,0.9s
MUD Monsted U'grnd 37.45 334 i P P 20 04 31.8 +0.4
comp=Z,16nm,1.0s,SNR=50
LDF La Druitiere 37.67 318 eP P 20 04 33.0 -0.5
comp=Z,14nm,0.8s
LDF La Druitiere 37.67 318 eP P 20 04 33.0 -0.5
LDF pmax pmax
comp=Z,14nm,0.8s
LDF La Druitiere 37.67 318 eP P 20 04 33.0 -0.5
comp=Z,14nm,0.8s
LDF La Druitiere 37.67 318 eP P 20 04 33.0 -0.5
comp=Z,7.1nm,0.8s
ESDC Sonseca Array 37.69 303 P P 20 04 34.5 +0.7
ESDC PcP PcP 20 06 51.8 +0.8
ESDC Sonseca Array 37.69 303 P P 20 04 34.5 +0.7
comp=Z,3.7nm,0.6s,baz=86,slow=7.8,SNR=36
ESDC PcP PcP 20 06 51.8 +0.8
comp=Z,0.2nm,0.3s,baz=66,slow=2.9,SNR=4.9
ESDC Sonseca Array 37.69 303 P P 20 04 34.5 +0.7
ESLA Sonseca Array 37.69 303 eP P 20 04 34.4 +0.6
comp=Z,1.3nm,0.9s
ESLA Sonseca Array 37.69 303 eP P 20 04 34.4 +0.6
comp=Z,1.3nm,0.9s
KAF Kangasniemi 37.70 351 eP P 20 04 31.9 -1.6
KAF pmax pmax
comp=Z,5.0nm,0.7s
KAF Kangasniemi 37.70 351 ep P 20 04 31.9 -1.6
comp=Z,5.1nm,0.7s
JOF Joensuu 37.95 355 eP P 20 04 33.7 -1.9
JOF pmax pmax
comp=Z,18nm,0.7s
JOF Joensuu 37.95 355 ep P 20 04 33.7 -1.9
comp=Z,18nm,0.7s
FLN La Foliniere 37.96 318 eP P 20 04 35.5 -0.4
comp=Z,39nm,1.0s
FLN eR
comp=Z,122nm,20.5s
FLN La Foliniere 37.96 318 eP P 20 04 35.5 -0.4
FLN pmax pmax
comp=Z,39nm,1.0s
FLN La Foliniere 37.96 318 eP P 20 04 35.5 -0.4
comp=Z,39nm,1.0s
FLN La Foliniere 37.96 318 eP P 20 04 35.5 -0.4
comp=Z,20nm,1.0s
GRR Gorron 38.03 318 eP P 20 04 36.0 -0.5
comp=Z,15nm,0.9s
GRR Gorron 38.03 318 eP P 20 04 36.0 -0.5
GRR pmax pmax
comp=Z,15nm,0.9s
GRR Gorron 38.03 318 eP P 20 04 36.0 -0.5
comp=Z,15nm,0.9s
GRR Gorron 38.03 318 eP P 20 04 36.0 -0.5
comp=Z,7.5nm,0.9s
SGMF Saint Gilles 39.03 317 eP P 20 04 44.1 -0.8
SGMF Saint Gilles 39.03 317 eP P 20 04 44.1 -0.8
SGMF Saint Gilles 39.03 317 eP P 20 04 44.1 -0.8
SGMF Saint Gilles 39.03 317 eP P 20 04 44.1 -0.8
QUIF Quistinic 39.29 316 eP P 20 04 46.3 -0.8
comp=Z,56nm,1.3s
QUIF Quistinic 39.29 316 eP P 20 04 46.3 -0.8
QUIF pmax pmax
comp=Z,56nm,1.3s
QUIF Quistinic 39.29 316 eP P 20 04 46.3 -0.8
comp=Z,56nm,1.3s
QUIF Quistinic 39.29 316 eP P 20 04 46.3 -0.8
comp=Z,28nm,1.3s
ROSF Rostrenen 39.51 317 eP P 20 04 48.0 -0.9
comp=Z,24nm,0.8s
ROSF Rostrenen 39.51 317 eP P 20 04 48.0 -0.9
ROSF pmax pmax
comp=Z,24nm,0.8s
ROSF Rostrenen 39.51 317 eP P 20 04 48.0 -0.9
comp=Z,24nm,0.8s
ROSF Rostrenen 39.51 317 eP P 20 04 48.0 -0.9
comp=Z,12nm,0.8s
PBAR Barrancos 39.87 300 eP P 20 04 52.6 +0.6
comp=Z,20nm,1.2s
PBAR Barrancos 39.87 300 eP P 20 04 52.6 +0.6
comp=Z,20nm,1.2s
NAO01 NORSAR Array S 40.09 340 eP P 20 04 53.2 -0.4
NAO01 NORSAR Array S 40.09 340 eP P 20 04 53.2 -0.4
PBRG Braganca 40.14 306 eP P 20 04 54.7 +0.4
comp=Z,24nm,1.8s
PBRG Braganca 40.14 306 eP P 20 04 54.7 +0.4
comp=Z,24nm,1.8s
NB2 NORSAR Subarra 40.14 340 P P 20 04 53.0 -1.0
comp=Z,17nm,0.8s,baz=138,slow=9.3
NB2 NORSAR Subarra 40.14 340 P P 20 04 53.0 -1.0
comp=Z,17nm,0.8s,SNR=8.4
NOA NORSAR Array B 40.14 340 P P 20 04 53.1 -1.0
NOA NORSAR Array B 40.14 340 P P 20 04 53.1 -1.0
comp=Z,12nm,0.8s,baz=138,slow=8.5,SNR=53
NOA LR LR 20 23 53.7
comp=Z,86nm,19.3s,baz=335,slow=40
NOA NORSAR Array B 40.14 340 P P 20 04 53.1 -1.0
MVO Moncorvo 40.24 305 eP P 20 04 56.0 +0.8
comp=Z,17nm,1.5s
MVO Moncorvo 40.24 305 eP P 20 04 56.0 +0.8
comp=Z,17nm,1.5s
PMRV Marv??o 40.28 302 eP P 20 04 56.0 +0.5
comp=Z,19nm,1.8s
PMRV Marv??o 40.28 302 eP P 20 04 56.0 +0.5
comp=Z,19nm,1.8s
KURK Kurchatov 40.34 40 ceP P 20 04 56.7 +1.0
KURK pmax pmax
comp=Z,31nm,1.2s
KURK Kurchatov 40.34 40 eP P 20 04 56.2 +0.5
comp=Z,20nm,0.9s
KURK Kurchatov 40.34 40 ⇑P P 20 04 56.8 +1.1
SNR=13
KURK Kurchatov 40.34 40 eP P 20 04 56.2 +0.5
comp=Z,20nm,0.9s
PVAQ Vaqueiros 40.34 299 eP P 20 04 56.6 +0.6
comp=Z,31nm,2.3s
PVAQ Vaqueiros 40.34 299 eP P 20 04 56.6 +0.6
comp=Z,31nm,2.3s
PESTR Estremoz 40.37 301 eP P 20 04 56.9 +0.7
comp=Z,18nm,1.7s
PESTR Estremoz 40.37 301 eP P 20 04 56.9 +0.7
comp=Z,18nm,1.7s
PBDV Barranco-do-Ve 40.50 298 eP P 20 04 58.5 +1.2
comp=Z,40nm,1.1s
PBDV Barranco-do-Ve 40.50 298 eP P 20 04 58.5 +1.2
comp=Z,40nm,1.1s
PBEJ Beja 40.51 300 eP P 20 04 58.0 +0.7
comp=Z,37nm,1.6s
PBEJ Beja 40.51 300 eP P 20 04 58.0 +0.7
comp=Z,37nm,1.6s
PCVE Castro Verde 40.61 299 eP P 20 04 59.0 +0.8
comp=Z,25nm,2.3s
PCVE Castro Verde 40.61 299 eP P 20 04 59.0 +0.8
comp=Z,25nm,2.3s
EVO Evora 40.67 300 ⇓iP P 20 04 59.8 +1.2
comp=Z,29nm,1.0s
EVO eR
comp=Z,102nm,18.2s
EVO Evora 40.67 300 eP P 20 04 59.8 +1.2
EVO Evora 40.67 300 eP P 20 04 59.8 +1.2
EVOP Sao Brissos 40.75 300 ⇓iP P 20 04 59.8 +0.5
EVOP pmax pmax
comp=Z,29nm,1.0s
EVOP Sao Brissos 40.75 300 ⇓iP P 20 04 59.8 +0.5
comp=Z,29nm,1.0s
EVOP Sao Brissos 40.75 300 ⇓iP P 20 04 59.8 +0.5
comp=Z,15nm,1.0s
POLO Lamas de Olo 40.85 305 eP P 20 05 01.0 +0.8
comp=Z,12nm,1.6s
POLO Lamas de Olo 40.85 305 eP P 20 05 01.0 +0.8
comp=Z,12nm,1.6s
KOLN Koldanda 40.95 76 eP P 20 05 01.7 +0.3
comp=Z,15nm,0.7s
DANN Dangsing 41.02 75 eP P 20 05 03.0 +0.9
comp=Z,48nm,0.9s
PCAB Cabril 41.07 305 eP P 20 05 02.8 +0.8
comp=Z,48nm,1.9s
PCAB Cabril 41.07 305 eP P 20 05 02.8 +0.8
comp=Z,48nm,1.9s
PTOM Tomar 41.08 302 eP P 20 05 02.9 +0.8
PTOM Tomar 41.08 302 eP P 20 05 02.9 +0.8
MK31 Makanchi Array 41.31 47 ⇓iP P 20 05 04.6 +0.7
MK31 Makanchi Array 41.31 47 ⇓iP P 20 05 04.6 +0.7
MK31 Makanchi Array 41.31 47 ⇓iP P 20 05 04.6 +0.7
MKAR Makanchi Array 41.31 47 ceP P 20 05 05.0 +1.1
MKAR pmax pmax
comp=Z,26nm,0.8s
MKAR Makanchi Array 41.31 47 P P 20 05 04.7 +0.8
MKAR Makanchi Array 41.31 47 P P 20 05 04.7 +0.8
comp=Z,26nm,0.8s,baz=250,slow=6.7,SNR=242
MKAR LR LR 20 24 46.9
comp=Z,185nm,19.7s,baz=328,slow=40
MKAR Makanchi Array 41.31 47 P P 20 05 04.7 +0.8
DMN Daman 42.30 76 eP P 20 05 12.7 +0.2
comp=Z,59nm,1.5s
KKN Kakani 42.43 76 eP P 20 05 14.0 +0.5
comp=Z,37nm,1.5s
APA Apatity 42.47 358 ⇓iP P 20 05 13.6 +0.6
APA pmax pmax
comp=Z,2.0nm,0.8s
APA MLR MLR
comp=Z,400nm,19.0s
PKIN Phulchoki 42.56 76 eP P 20 05 14.2 -0.4
PKI Pulchoki 42.57 76 eP P 20 05 15.0 +0.2
comp=Z,18nm,0.8s
GUN Gumba 42.94 75 eP P 20 05 18.2 +0.4
comp=Z,39nm,1.2s
ODAN Odare 44.42 77 eP P 20 05 29.1 -0.5
comp=Z,6.9nm,0.8s
WMQ Urumqi 44.44 52 P P 20 05 30.3 +1.0
WMQ pP pP 20 05 34.8 +1.1
WMQ sP sP 20 05 37.3 +1.9
WMQ PP PP 20 07 15.1 +2.1
WMQ PcS PcS 20 11 05.6 -0.6
WMQ S S 20 12 03.9 0.0
WMQ sS sS 20 12 11.3 +0.2
WMQ ScS ScS 20 15 25.5 -1.8
WMQ pmax pmax
comp=Z,16nm,0.9s
WMQ pmax pmax
comp=Z,110nm,5.0s
WMQ LR LR
comp=N,240nm,15.0s
WMQ LR LR
comp=E,220nm,16.6s
WMQ LR LR
comp=Z,220nm,22.8s
NVS Novosibirsk 44.55 36 eP P 20 05 28.4 -1.5
NVS e 20 07 12.8
NVS pmax pmax
comp=Z,28nm,1.2s
NVS pmax pmax
comp=N,10.0nm,1.1s
NVS pmax pmax
comp=E,7.0nm,0.9s
TAPN Taplejung 44.63 76 eP P 20 05 30.7 -0.6
comp=E,19nm,1.3s
DBIC Dimbokro 44.65 253 P P 20 05 31.4 +0.2
DBIC Dimbokro 44.65 253 P P 20 05 31.4 +0.2
comp=E,20nm,0.6s,baz=41,slow=9.1,SNR=34
DBIC LR LR 20 25 16.7
comp=E,415nm,20.2s,baz=46,slow=38
DBIC Dimbokro 44.65 253 P P 20 05 31.5 +0.2
ARCES ARCESS Array B 44.95 354 P P 20 05 32.7 -0.2
ARCES ARCESS Array B 44.95 354 P P 20 05 32.7 -0.2
comp=E,8.0nm,0.7s,baz=162,slow=8.4,SNR=32
ARCES LR LR 20 26 36.0
comp=E,144nm,19.1s,baz=202,slow=39
ARCES ARCESS Array B 44.95 354 P P 20 05 32.7 -0.2
ARE0 ARCESS Array S 44.95 354 eP P 20 05 32.1 -0.8
ARE0 ARCESS Array S 44.95 354 eP P 20 05 32.2 -0.8
LIC Lamto 45.02 253 ⇑iP P 20 05 35.1 +0.9
LIC eR
comp=E,32nm,0.7s,baz=56
comp=E,607nm,20.5s
LIC Lamto 45.02 253 ⇑iP P 20 05 35.1 +0.9
comp=E,32nm,0.7s
LIC Lamto 45.02 253 ⇑iP P 20 05 35.1 +0.9
comp=E,16nm,0.7s
KEV Kevo 45.03 355 eP P 20 05 32.9 -0.6
KEV pmax pmax
comp=Z,7.0nm,0.6s
KEV Kevo 45.03 355 ep P 20 05 32.9 -0.6
comp=Z,6.8nm,0.6s
ZAA0 Zalesovo Array 45.08 38 ⇓iP P 20 05 33.7 -0.5
ZAA0 Zalesovo Array 45.08 38 ⇓iP P 20 05 33.7 -0.5
ZALV Zalesovo Beam 45.08 38 P P 20 05 33.7 -0.4
ZALV Zalesovo Beam 45.08 38 P P 20 05 33.7 -0.4
ZALV Zalesovo Beam 45.08 38 P P 20 05 33.7 -0.4
comp=Z,2.7nm,0.5s,baz=248,slow=9.5,SNR=15
ZALV Zalesovo Beam 45.08 38 P P 20 05 33.7 -0.4
LSA Lhasa 47.27 72 eP P 20 05 52.9 +0.5
LSA pmax pmax
comp=Z,5.0nm,0.7s
LSA Lhasa 47.27 72 eP P 20 05 52.9 +0.5
comp=Z,5.1nm,0.7s
LSA Lhasa 47.27 72 eP P 20 05 52.9 +0.5
comp=Z,5.1nm,0.7s
HVS Khovu-Aksy 49.59 43 i P P 20 06 10.7 +1.2
LBTB Lobatse 51.28 194 eP P 20 06 23.7 +1.2
comp=Z,13nm,1.3s
LBTB Lobatse 51.28 194 eP P 20 06 23.7 +1.2
comp=Z,13nm,1.3s
GTA Gaotai 53.39 59 eP P 20 06 39.0 +0.8
GTA pP pP 20 06 43.4 +0.8
GTA sP sP 20 06 46.3 +1.9
GTA pmax pmax
comp=Z,20nm,1.0s
MOY Mondy 54.19 43 eP P 20 06 44.8 +1.0
MOY pmax pmax
comp=Z,23nm,2.6s
BORG Borgarnes 54.39 333 P P 20 06 47.5 +2.6
BORG Borgarnes 54.39 333 P P 20 06 47.5 +2.6
BOSA Boshof 54.83 193 eP P 20 06 50.3 +1.7
comp=Z,7.7nm,0.9s
BOSA Boshof 54.83 193 P P 20 06 50.4 +1.7
comp=Z,5.2nm,0.8s,baz=9.4,slow=5.9,SNR=7.7
BOSA LR LR 20 29 46.4
comp=Z,314nm,18.8s,baz=348,slow=36
BOSA Boshof 54.83 193 eP P 20 06 50.3 +1.7
comp=Z,7.7nm,0.9s
ZAK Zakamensk 55.57 45 eP P 20 06 54.3 +0.5
ZAK pmax pmax
comp=Z,6.0nm,1.2s
TLY Talaya 55.84 43 eP P 20 06 55.8 +0.2
TLY pmax pmax
comp=Z,8.0nm,1.1s
TLY MLR MLR
comp=Z,166nm,18.0s
CHTO Chiang Mai 56.70 83 eP P 20 07 01.6 -0.7
CHTO pmax pmax
comp=Z,4.0nm,0.9s
CHTO Chiang Mai 56.70 83 eP P 20 07 01.6 -0.7
comp=Z,1.0nm,0.9s
CHTO Chiang Mai 56.70 83 P P 20 07 00.6 -1.7
comp=Z,7.0nm,1.0s
CHTO Chiang Mai 56.70 83 eP P 20 07 01.6 -0.7
comp=Z,0.9nm,0.9s
CMMT Chiang Mai 56.71 83 P P 20 07 01.1 -1.2
comp=Z,6.2nm,0.9s
CM31 Chiang Mai Arr 56.81 84 eP P 20 07 03.5 +0.4
comp=Z,4.3nm,0.9s
CM31 Chiang Mai Arr 56.81 84 eP P 20 07 03.5 +0.4
comp=Z,4.3nm,0.9s
CMAR Chiang Mai Arr 56.81 84 P P 20 07 03.0 0.0
CMAR PcP PcP 20 07 59.9 +1.1
CMAR Chiang Mai Arr 56.81 84 P P 20 07 03.0 0.0
comp=Z,3.5nm,0.9s,baz=293,slow=8.7,SNR=27
CMAR PcP PcP 20 07 59.9 +1.1
comp=Z,0.9nm,0.8s,baz=303,slow=5.0,SNR=3.3
CMAR LR LR 20 36 29.4
comp=Z,80nm,19.1s,baz=298,slow=42
CMAR Chiang Mai Arr 56.81 84 P P 20 07 03.0 0.0
CMAR Chiang Mai Arr 56.81 84 PcP PcP 20 07 59.9 +1.1
SONM Songino Array 57.66 48 P P 20 07 09.4 +0.7
SONM Songino Array 57.66 48 P P 20 07 09.4 +0.7
comp=Z,7.2nm,0.8s,baz=271,slow=8.3,SNR=13
SONM LR LR 20 36 25.9
comp=Z,157nm,18.2s,baz=80,slow=41
SONM Songino Array 57.66 48 P P 20 07 09.4 +0.7
CD2 Chengdu 57.80 68 P P 20 07 11.3 +1.3
ULN Ulaanbaatar 58.10 48 P P 20 07 10.7 -1.2
KMI Kunming 58.28 75 P P 20 07 14.6 +1.0
KMI pmax pmax
comp=Z,9.0nm,0.8s
PBKT Sadao Pong 59.25 85 P P 20 07 19.1 -1.0
GYA Guiyang 61.34 72 eP P 20 07 36.0 +1.5
GYA pmax pmax
comp=Z,10.0nm,1.0s
XAN Xi'an 61.41 64 P P 20 07 34.6 -0.2
XAN pmax pmax
comp=Z,3.0nm,0.8s
SUMG Summit 62.03 341 i P P 20 07 38.4 -0.4
SUMG pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 62.03 341 i P P 20 07 38.4 -0.4
comp=Z,6.2nm,0.8s
HHC Hu-ho-hao-te 62.14 55 ⇓iP P 20 07 40.0 +0.3
HHC pP pP 20 07 44.6 +0.4
HHC sP sP 20 07 47.0 +1.1
HHC PP PP 20 09 58.8 +2.5
HHC PcS PcS 20 12 21.9 -1.2
HHC S S 20 16 02.3 -2.5
HHC sS sS 20 16 10.0 -2.2
HHC ScS SKKSac 20 17 27.6 -4.0
HHC SS SS 20 20 06.4 -1.0
HHC pmax pmax
comp=Z,39nm,1.1s
HHC pmax pmax
comp=Z,310nm,5.2s
HHC LR LR
comp=N,370nm,18.9s
HHC LR LR
comp=E,370nm,20.3s
HHC LR LR
comp=Z,490nm,21.6s
ENH Enshi 62.76 68 eP P 20 07 43.1 -0.8
comp=Z,8.7nm,1.0s
ENH Enshi 62.76 68 eP P 20 07 43.1 -0.8
comp=Z,8.7nm,1.0s
BJI Beijing 65.75 56 P P 20 08 01.9 -1.4
BJI pmax pmax
comp=Z,7.0nm,0.8s
BJI pmax pmax
comp=Z,74nm,5.0s
BJI LR LR
comp=N,140nm,16.1s
BJI LR LR
comp=E,200nm,21.6s
BJI LR LR
comp=Z,150nm,20.6s
QIZ Qiongzhong 66.39 79 P P 20 08 06.4 -1.3
QIZ S S 20 16 56.6 -1.1
QIZ pmax pmax
comp=Z,13nm,1.0s
QIZ LR LR
comp=Z,110nm,14.2s
TIXI Tiksi 66.67 20 ⇑iP P 20 08 08.0 -0.6
TIXI pmax pmax
comp=Z,4.0nm,0.7s
WHN Wuhan 66.73 66 P P 20 08 10.3 +0.6
NJ2 Nanjing 69.98 63 eP P 20 08 28.3 -1.7
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=N,450nm,16.6s
NJ2 LR LR
comp=E,280nm,22.1s
NJ2 LR LR
comp=Z,230nm,19.5s
CN2 Changchun 71.44 50 eP P 20 08 38.3 -0.5
KSM Kuching 73.62 96 eP P 20 08 53.2 +1.0
comp=Z,2.1nm,0.8s
KSM Kuching 73.62 96 eP P 20 08 53.2 +1.0
comp=Z,2.1nm,0.8s
MDJ Mudanjiang 74.01 48 P P 20 08 53.4 -0.6
MDJ pmax pmax
comp=Z,4.0nm,1.0s
MDJ pmax pmax
comp=Z,33nm,4.3s
KSAR Wonju Array Be 75.26 55 P P 20 09 01.1 -0.3
KSAR Wonju Array Be 75.26 55 P P 20 09 01.1 -0.3
KSRS Korea Array 75.28 55 P P 20 09 01.1 -0.4
comp=Z,4.7nm,0.8s,baz=281,slow=5.8,SNR=30
KSRS LR LR 20 47 53.2
comp=Z,97nm,18.4s,baz=129,slow=40
USRK Ussuriysk Arra 75.78 48 P P 20 09 03.3 -0.9
comp=Z,9.8nm,0.8s,baz=283,slow=4.6,SNR=20
USRK LR LR 20 47 06.4
comp=Z,154nm,18.7s,baz=246,slow=40
HABR Khabarovsk 76.16 43 eP P 20 09 05.1 -1.2
HABR e*PP PcP 20 09 15.4 -3.0
HABR e 20 09 16.6
HABR e*SP sP 20 09 19.5 +6.9
HABR e 20 11 56.2
HABR eS S 20 18 47.6 -2.2
HABR e*SS sS 20 19 05.2 +7.8
HABR e 20 19 17.3
HABR eSS SS 20 23 42.4 -0.2
HABR pmax pmax
comp=N,22nm,1.7s
HABR pmax pmax
comp=E,28nm,1.7s
HABR pmax pmax
comp=Z,28nm,1.7s
HABR MLR MLR
comp=Z,63nm,15.0s
SCHQ Schefferville 77.67 325 P P 20 09 14.3 -0.4
SCHQ Schefferville 77.67 325 P P 20 09 14.3 -0.4
comp=Z,1.8nm,0.8s,baz=59,slow=5.9,SNR=2.7
SCHQ Schefferville 77.67 325 P P 20 09 14.3 -0.4
SEY Seymchan 78.25 25 eP P 20 09 18.4 +0.6
JNU Nakatsue 79.13 59 P P 20 09 22.2 -1.1
JNU Nakatsue 79.13 59 P P 20 09 22.2 -1.1
comp=Z,6.3nm,0.9s,baz=207,slow=8.5,SNR=5.4
JNU LR LR 20 47 29.6
comp=Z,102nm,21.0s,baz=48,slow=38
JNU Nakatsue 79.13 59 P P 20 09 22.2 -1.1
BILL Bilibino 79.63 17 ⇑eP P 20 09 25.8 +0.5
BILL eS S 20 19 33.9 +7.2
BILL pmax pmax
comp=Z,8.0nm,0.9s
MAJO Matsushiro 83.20 53 eP P 20 09 43.2 -1.7
MAJO Matsushiro 83.20 53 eP P 20 09 43.2 -1.7
MAJO Matsushiro 83.20 53 eP P 20 09 43.2 -1.7
MJAR Matsushiro Arr 83.20 53 P P 20 09 44.3 -0.6
MJAR Matsushiro Arr 83.20 53 P P 20 09 44.3 -0.6
comp=Z,1.9nm,0.8s,baz=298,slow=5.5,SNR=8.0
MJAR Matsushiro Arr 83.20 53 P P 20 09 44.3 -0.6
KAPI Kappang 84.92 98 P P 20 09 53.0 -0.9
KAPI Kappang 84.92 98 P P 20 09 53.0 -0.9
comp=Z,4.7nm,0.6s,baz=300,slow=6.3,SNR=4.7
KAPI Kappang 84.92 98 P P 20 09 53.0 -0.9
PETK Petropavlovsk- 86.27 32 LR LR 20 53 38.2
comp=Z,120nm,18.2s,baz=50,slow=39
YKA Yellowknife Ar 89.86 348 P P 20 10 17.1 +0.2
YKA Yellowknife Ar 89.86 348 P P 20 10 17.1 +0.2
comp=Z,1.5nm,0.8s,baz=27,slow=5.2,SNR=19
YKA Yellowknife Ar 89.86 348 P P 20 10 17.1 +0.2
ILAR Eielson Array 90.25 2 P P 20 10 18.8 +0.1
ILAR PP PP 20 13 55.0 +3.3
ILAR Eielson Array 90.25 2 P P 20 10 18.8 +0.1
comp=Z,1.0nm,0.8s,baz=333,slow=3.4,SNR=11
ILAR PP PP 20 13 55.0 +3.3
comp=Z,0.5nm,0.8s,baz=353,slow=7.7,SNR=6.0
ILAR Eielson Array 90.25 2 P P 20 10 18.8 +0.1
ILAR Eielson Array 90.25 2 PP PP 20 13 55.0 +3.3
TRF Thorofare Moun 91.42 4 eP P 20 10 22.7 -1.7
comp=Z,7.3nm,1.3s
TRF Thorofare Moun 91.42 4 eP P 20 10 22.7 -1.7
comp=Z,7.3nm,1.3s
BDFB Brasilia 92.79 254 LR LR 20 54 12.0
comp=Z,72nm,18.4s,baz=257,slow=37
FFC Flin Flon 93.21 338 ceP P 20 10 33.1 +0.5
FFC Flin Flon 93.21 338 eP P 20 10 32.2 -0.4
comp=Z,16nm,2.1s
FFC Flin Flon 93.21 338 eP P 20 10 32.2 -0.4
comp=Z,16nm,2.1s
WRA Warramunga Arr 103.98 106 Pdif Pdif 20 11 21.0 -0.7
WRA PP PP 20 15 42.2 +2.7
WRA Warramunga Arr 103.98 106 Pdiff Pdif 20 11 21.0 -0.7
comp=Z,0.4nm,0.8s,baz=306,slow=4.1,SNR=4.3
WRA PP PP 20 15 42.2 +2.7
comp=Z,0.6nm,1.0s,baz=287,slow=7.6,SNR=4.7
ASAR Alice Springs 104.97 109 Pdif Pdif 20 11 26.4 +0.4
ASAR Alice Springs 104.97 109 Pdiff Pdif 20 11 26.4 +0.4
comp=Z,0.2nm,0.6s,baz=291,slow=4.8,SNR=4.3
STKA Stephens Creek 114.03 115 eP PKPdf 20 15 57.8 +0.1
STKA Stephens Creek 114.03 115 PKiKP PKiKP 20 15 57.9 +0.1
comp=Z,1.9nm,0.9s,baz=309,slow=6.5,SNR=5.7
TXAR Lajitas Array 114.32 323 PKP PKPdf 20 15 59.2 +0.5
TXAR Lajitas Array 114.32 323 PKP PKPdf 20 15 59.2 +0.5
comp=Z,0.3nm,0.7s,baz=90,slow=5.4,SNR=3.1

*ISCJB **19** 19:59:00.3±1.0,21˙10S±0˙06×68˙5W±0˙2,h138km±11km, mb3.7/2, Error ellipse: s-maj=27.0km s-min=9.4km az=1.1*
*GUC **19** 19:59:00.7±0.6,21˙08S×68˙63W,h137km±5km, ML3.4*
*IDC **19** 19:59:04.1±8.8,20˙86S×68˙05W,h149km±64km, mb3.7/2, mb1 3.7/3, mb1mx3.3/16, mbtmp3.5/3, Error ellipse: s-maj=103.5km s-min=47.7km az=10.0*

ISC 19 19:59:01.0±1.3,21˙09S±0˙06×68˙5W±0˚2,h130km±12km, n13,σ0967/17,3C-1D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.92**	**273**	⇓*iP*		**Pn**		**19 59 22.9**	**-0.4**
PB01				*i* S		**Sn**		**19 59 39.7**	**-0.5**
PB01				AML		AML		19 59 41.6	
	comp=N,288nm,0.2s								
PB09	**Plate Boundary**	**0.99**	**224**	⇑*iP*		**Pn**		**19 59 24.2**	**+0.2**
PB09				*e*S		**Sn**		**19 59 42.3**	**+0.9**
PB09				AML		AML		19 59 44.5	
	comp=N,2μm,0.3s								
PB07	**Plate Boundary**	**1.44**	**244**	⇑*iP*		**Pn**		**19 59 28.4**	**-0.2**
PB07				*i* S		**Sn**		**19 59 49.7**	**+0.1**
PB07				AML		AML		19 59 50.7	
	comp=E,315nm,0.4s								
PB04	**Plate Boundary**	**1.49**	**218**	*e*P		Pn		19 59 34.8	+5.9
PB04				*i* S		Sn		20 00 00.5	+10
PB04				AML		AML		20 00 05.6	
	comp=N,267nm,0.3s								
HMBC	**Humberstone**	**1.53**	**302**	*e*P		**Pn**		**19 59 29.3**	**-0.2**
HMBC				*i* S		**Sn**		**19 59 51.1**	**-0.2**
HMBC				AML		AML		19 59 53.1	
	comp=N,310nm,0.8s								
MACH	**Maria Elena**	**1.61**	**227**	*e*P		**Pn**		**19 59 30.7**	**+0.1**
MACH				*i* S		**Sn**		**19 59 53.2**	**+0.1**
MNMC	**Minimini**	**2.20**	**332**	⇑*iP*		**Pn**		**19 59 38.0**	**+0.2**
MNMC				*e*S		**Sn**		**20 00 06.4**	**+0.5**
MNMC				AML		AML		20 00 08.1	
	comp=N,1μm,0.2s								
LPAZ	**La Paz**	**4.79**	**4**	P		**Pn**		**20 00 12.2**	**+0.3**
	comp=N,2.7nm,0.3s,baz=182,slow=4.7,SNR=18								
TORD	**Torodi Ar. Bea**	**76.86**	**70**	P		**P**		**20 10 37.6**	**-1.6**
	comp=N,1.3nm,0.5s,baz=255,slow=5.2,SNR=18								
YKA	**Yellowknife Ar**	**90.93**	**340**	P		**P**		**20 11 50.0**	**+0.4**
	comp=N,0.4nm,0.6s,baz=131,slow=4.5,SNR=4.8								
WRA	**Warramunga Arr**	**133.50**	**210**	PKP		**PKPdf**		**20 18 03.8**	**+1.0**
	comp=N,0.1nm,0.4s,baz=156,slow=1.7,SNR=3.3								
ZALV	**Zalesovo Beam**	**141.42**	**25**	PKP		**PKPdf**		**20 18 16.7**	**+0.4**
	comp=N,0.2nm,0.3s,baz=90,slow=1.4,SNR=2.1								
MKAR	**Makanchi Array**	**145.08**	**36**	PKP		PKPbc		20 18 22.8	+0.1
	comp=N,0.3nm,0.4s,baz=310,slow=3.8,SNR=7.6								

*AUST **19** 20:30:32.5±0.0,20˙15S×178˙56W,h627km, Error ellipse: s-maj=1.5km s-min=1.3km az=264.0*
*BJI **19** 20:30:33.0,19˙98S×178˙77W,h624km, mB4.7/15, mb4.6/32*
*ISCJB **19** 20:30:34.2±0.5,20˙33S±0˙05×178˙94W±0˙04, h650km±6km, mb4.5/84, Error ellipse: s-maj=7.6km s-min=5.1km az=168.4*
*IDC **19** 20:30:34.6±0.5,20˙32S×178˙90W,h635km±5km, mb4.0/28, mb1 4.1/31, mb1mx4.0/32, mbtmp4.0/31, Error ellipse: s-maj=9.1km s-min=8.1km az=138.0*
*NEIC **19** 20:30:35.3±0.2,20˙28S×178˙94W, mb4.5/52, Error ellipse: s-maj=6.8km s-min=5.6km az=146.0*
NEIC Felt at Suva.

ISC 19 20:30:35.1±0.3,20˙30S±0˙05×178˙92W±0˙05, h641km±2km,h642km;pP-P,n398,σ1§22/500,mb4.5/84, 83C-74D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.84**	**311**	⇑*iP*			**P**	**20 32 03.3**	**+0.6**
MSVF				*e*S			**S**	**20 33 15.4**	**+1.4**
NIUE	**Niue**	**8.56**	**83**	S			S	20 34 33.9	+10
	baz=8.2,SNR=4.1								
AFI	**Afiamalu**	**9.33**	**48**	*e*P			P	20 32 43.5	-5.0
	33nm,0.5s								
AFI				S			S	20 34 30.2	-7.6
AFI	**Afiamalu**	**9.33**	**48**	P			P	20 32 45.2	-3.3
	14nm,0.3s,baz=36,slow=4.3,SNR=5.8								
AFI				S			S	20 34 30.2	-7.6
	6.9nm,0.3s,baz=168,slow=20,SNR=4.4								
FUNA	**Funafuti**	**11.85**	**351**	*e*P			**P**	**20 33 11.3**	**-1.2**
	230nm,0.8s								
DZM	**Mont Dzumac**	**13.77**	**260**	*e*P			**P**	**20 33 31.1**	**+0.7**
	133nm,1.1s								
DZM	**Mont Dzumac**	**13.77**	**260**	*e*P			**P**	**20 33 29.8**	**-0.6**
DZM	**Mont Dzumac**	**13.77**	**260**	*e*P			**P**	**20 33 30.6**	**+0.2**
	48nm,0.7s								
DZM	**Mont Dzumac**	**13.77**	**260**	P			**P**	**20 33 30.8**	**+0.4**
	3.7nm,0.3s,baz=73,slow=18,SNR=25								
RAR	**Rarotonga**	**17.93**	**96**	*e*P			**P**	**20 34 07.7**	**-0.7**
	38nm,0.8s								
RAR	**Rarotonga**	**17.93**	**96**	P			**P**	**20 34 07.9**	**-0.5**
	1.5nm,0.3s,baz=253,slow=3.5,SNR=5.0								
URZ	**Urewera**	**18.23**	**190**	*e*P			**P**	**20 34 08.2**	**-2.6**
	35nm,0.5s								
URZ				S			S	20 36 57.7	-7.7
URZ				*e*S			S	20 37 01.1	-4.4
URZ	**Urewera**	**18.23**	**190**	P			**P**	**20 34 08.7**	**-2.1**
	6.0nm,0.3s,baz=14,slow=5.7,SNR=19								
URZ				S			S	20 36 57.7	-7.7
	1.0nm,0.3s,baz=114,slow=19,SNR=6.7								
SNZO	**South Karori**	**21.64**	**193**	P			**P**	**20 34 41.5**	**+0.2**
TARA	**Tarawa**	**22.96**	**339**	*e*P			**P**	**20 34 51.9**	**-1.6**
	354nm,0.9s								
RPZ	**Rata Peaks**	**24.81**	**198**	P			**P**	**20 35 09.1**	**-0.3**
RPZ	**Rata Peaks**	**24.81**	**198**	P			**P**	**20 35 09.1**	**-0.3**
	22nm,1.0s,baz=147,slow=8.3,SNR=3.3								
TBI	**Tubuai**	**27.50**	**102**	*e*P			**P**	**20 35 33.6**	**+0.4**
	82nm,0.8s								
PAE	**Paea**	**27.85**	**90**	*e*P			**P**	**20 35 36.4**	**0.0**
	9.9nm,0.9s								
PPT2	**Papeete2**	**27.87**	**89**	*e*P			**P**	**20 35 36.7**	**+0.1**
	47nm,0.8s								
PPT	**Papeete**	**27.87**	**89**	P			**P**	**20 35 36.6**	**+0.1**
PPT	**Papeete**	**27.87**	**89**	P			**P**	**20 35 36.6**	**+0.1**
	63nm,0.7s,baz=93,slow=22,SNR=8.1								
TIAR	**Tiarei**	**28.09**	**89**	*e*P			**P**	**20 35 38.7**	**+0.2**
	78nm,0.7s								
TVO	**Taravao**	**28.14**	**90**	*e*P			**P**	**20 35 38.8**	**-0.1**
	100nm,0.7s								
MEH	**Mehetia**	**29.24**	**91**	*e*P			**P**	**20 35 49.3**	**+1.0**
	98nm,0.8s								
PMOR	**Pomariorio Ree**	**30.00**	**85**	*e*P			**P**	**20 35 54.8**	**-0.1**
	136nm,0.8s								
CNB	**Canberra Magne**	**31.63**	**235**	P			**P**	**20 36 10.1**	**+1.6**
	baz=32,SNR=5.6								
CTA	**Charters Tower**	**32.65**	**264**	P			**P**	**20 36 17.4**	**+0.1**
CTA					ScP		**ScP**	**20 41 29.5**	**+1.9**
CTA	**Charters Tower**	**32.65**	**264**	P			**P**	**20 36 17.4**	**+0.1**
	15nm,0.4s,baz=94,slow=11,SNR=40								
CTA					ScP		**ScP**	**20 41 29.5**	**+1.9**
	10.0nm,0.9s,baz=125,slow=4.1,SNR=7.3								
CTAO	**Charters Tower**	**32.65**	**264**	*e*P			**P**	**20 36 17.5**	**+0.3**
	9.4nm,0.4s								
CTAO					*e*pP		**pP**	**20 37 57.5**	**-0.9**
CTAO					*e*ScP		**ScP**	**20 41 29.0**	**+1.5**
CMSA	**Cobar Meteorol**	**33.60**	**243**	P			**P**	**20 36 25.8**	**+0.7**
	baz=34,SNR=8.9								
QLP	**Quilpie**	**34.29**	**252**	P			**P**	**20 36 31.4**	**+0.5**
	baz=35,SNR=12								
PMG	**Port Moresby**	**34.45**	**283**	*e*P			**P**	**20 36 32.1**	**-0.3**
	52nm,1.0s								
PMG	**Port Moresby**	**34.45**	**283**	P			**P**	**20 36 32.2**	**-0.1**
	32nm,0.7s,baz=97,slow=5.3,SNR=11								
MTSU	**Mount Surprise**	**34.74**	**267**	P			**P**	**20 36 34.6**	**0.0**
	baz=35,SNR=5.0								
TOO	**Toolangi**	**35.32**	**233**	P			**P**	**20 36 40.2**	**+1.0**
	baz=36,SNR=12								
COEN	**Coen**	**36.71**	**274**	*e*P			**P**	**20 36 50.6**	**-0.2**
	139nm,0.8s								
COEN	**Coen**	**36.71**	**274**	P			**P**	**20 36 51.5**	**+0.6**
	baz=37,SNR=18								
STKA	**Stephens Creek**	**37.10**	**244**	*e*P			**P**	**20 36 54.4**	**+0.6**
	2.0nm,1.0s								
STKA					ScP		**ScP**	**20 41 46.2**	**+2.6**
STKA	**Stephens Creek**	**37.10**	**244**	P			**P**	**20 36 54.7**	**+0.9**
	6.5nm,0.9s,baz=91,slow=9.3,SNR=28								
STKA					ScP		**ScP**	**20 41 46.2**	**+2.6**
	3.9nm,0.9s,baz=47,slow=3.2,SNR=5.0								
STKA	**Stephens Creek**	**37.10**	**244**	P			**P**	**20 36 54.8**	**+1.0**
	baz=37,SNR=18								
STKA				S			S	20 41 46.8	-10
	baz=37,SNR=4.0								
QIS	**Mount Isa**	**38.79**	**262**	P			**P**	**20 37 08.8**	**+1.2**
	baz=39,SNR=6.3								
BBOO	**Buckleboo**	**41.86**	**243**	*e*P			**P**	**20 37 31.9**	**+0.2**
	137nm,0.6s								
BBOO	**Buckleboo**	**41.86**	**243**	P			**P**	**20 37 32.0**	**+0.2**
	baz=42,SNR=37								
JAY	**Jayapura**	**43.16**	**289**	P			**P**	**20 37 42.5**	**+0.4**
	baz=44,SNR=22								
AS31	**Alice Springs**	**43.72**	**257**	*e*P			**P**	**20 37 45.9**	**-0.4**
AS31					*e*ScP		**ScP**	**20 42 11.3**	**+1.2**
AS31					*e*S		**S**	**20 43 30.6**	**-1.6**
ASAR	**Alice Springs**	**43.72**	**257**	P			**P**	**20 37 46.0**	**-0.3**
ASAR					pP		**pP**	**20 39 36.3**	**+0.2**
ASAR					ScP		**ScP**	**20 42 12.2**	**+2.1**
ASAR					S		**S**	**20 43 30.9**	**-1.4**
ASAR					ScS		**ScS**	**20 46 35.2**	**+0.4**
ASAR	**Alice Springs**	**43.72**	**257**	P			**P**	**20 37 46.0**	**-0.3**
	11nm,0.7s,baz=93,slow=7.6,SNR=134								
ASAR					pP		**pP**	**20 39 36.3**	**+0.2**
	5.3nm,1.1s,baz=85,slow=8.6,SNR=2.5								
ASAR					ScP		**ScP**	**20 42 12.2**	**+2.1**
	1.8nm,0.6s,baz=99,slow=4.2,SNR=8.2								
ASAR					S		**S**	**20 43 30.9**	**-1.4**
	4.0nm,0.8s,baz=92,slow=15,SNR=22								
ASAR					ScS		**ScS**	**20 46 35.2**	**+0.4**
	1.1nm,1.0s,baz=88,slow=7.0,SNR=4.5								
WRAB	**Tennant Creek**	**43.76**	**262**	*e*P			**P**	**20 37 45.7**	**-0.9**
	14nm,0.8s								
WRA	**Warramunga Arr**	**43.77**	**262**	P			**P**	**20 37 46.0**	**-0.6**
WRA					S		**S**	**20 43 30.1**	**-2.8**
WRA					ScS		**ScS**	**20 46 35.1**	**0.0**
WRA	**Warramunga Arr**	**43.77**	**262**	P			**P**	**20 37 46.0**	**-0.6**
	7.2nm,0.3s,baz=97,slow=7.4,SNR=224								
WRA					S		**S**	**20 43 30.1**	**-2.8**
	6.6nm,1.0s,baz=97,slow=14,SNR=6.7								
WRA					ScS		**ScS**	**20 46 35.1**	**0.0**
	0.8nm,0.9s,baz=122,slow=5.5,SNR=5.1								
KDU	**Kakadu**	**47.08**	**271**	P			**P**	**20 38 11.4**	**-0.4**
	baz=47,SNR=17								
MTN	**Manton Dam**	**48.30**	**271**	P			**P**	**20 38 20.2**	**-0.5**
	baz=49,SNR=20								
MTN					S		**S**	**20 44 33.4**	**-2.2**
	baz=49,SNR=10								
GUMO	**Guam**	**49.01**	**310**	*e*P			**P**	**20 38 25.9**	**0.0**
GUMO	**Guam**	**49.01**	**310**	P			**P**	**20 38 26.0**	**0.0**
	108nm,0.9s,baz=154,slow=10,SNR=5.2								
KNRA	**Kununurra**	**49.81**	**266**	P			**P**	**20 38 31.4**	**-0.4**
	baz=50,SNR=10								
KNRA					S		**S**	**20 44 54.3**	**-1.8**
	baz=50,SNR=7.6								
FAKI	**Fak Fak**	**50.61**	**283**	P			**P**	**20 38 37.4**	**-0.3**
	baz=51,SNR=3.9								
FITZ	**Fitzroy Crossi**	**52.20**	**262**	*e*P			**P**	**20 38 48.6**	**-0.3**
	2.3nm,0.4s								
FITZ					*e*pP		**pP**	**20 40 44.8**	**-0.6**
FITZ					pP		**pwP**	**20 40 45.4**	**0.0**
FITZ	**Fitzroy Crossi**	**52.20**	**262**	P			**P**	**20 38 48.6**	**-0.3**
	3.3nm,0.5s,baz=143,slow=3.1,SNR=38								
FITZ					pP		**pwP**	**20 40 45.4**	**0.0**
	11nm,1.1s,baz=96,slow=8.8,SNR=9.1								
FITZ	**Fitzroy Crossi**	**52.20**	**262**	P			**P**	**20 38 48.9**	**0.0**
	baz=52,SNR=7.3								
SWI	**Sorong**	**52.36**	**285**	P			**P**	**20 38 50.3**	**+0.1**
	baz=53,SNR=16								
PALU	**Palau**	**53.43**	**296**	P			**P**	**20 38 58.4**	**+0.7**
	baz=54,SNR=6.4								
MBWA	**Marble Bar**	**57.05**	**257**	*e*P			**P**	**20 39 21.8**	**-0.8**
	14nm,1.1s								
MEEK	**Meekatharra**	**57.17**	**251**	P			**P**	**20 39 22.8**	**-0.6**
	baz=58,SNR=6.5								
NWAO	**Narrogin (SRO)**	**57.69**	**243**	pP			pP	20 41 29.1	+2.0
NWAO	**Narrogin (SRO)**	**57.69**	**243**	pP			pP	20 41 29.1	+2.0
	13nm,1.1s,baz=152,slow=4.8,SNR=3.3								
SBA	**Scott Base**	**58.02**	**184**	*e*P			**P**	**20 39 30.0**	**+1.8**
	29nm,1.2s								
VNDA	**Vanda**	**58.03**	**185**	*e*P			**P**	**20 39 29.1**	**+0.9**
	8.0nm,0.8s								
VNDA						*e*PcP	**PcP**	**20 40 06.8**	**-4.3**
VNDA	**Vanda**	**58.03**	**185**	P			**P**	**20 39 29.2**	**+0.9**
	5.0nm,0.5s,baz=351,slow=7.5,SNR=41								
MORW	**Morawa**	**59.10**	**248**	P			**P**	**20 39 36.5**	**+0.2**
	baz=59,SNR=3.1								
LUWI	**Luwuk**	**60.05**	**281**	P			**P**	**20 39 43.3**	**+0.6**
	baz=60,SNR=6.2								
CASY	**Casey**	**63.77**	**205**	*e*P			**P**	**20 40 05.4**	**-0.4**
	20nm,0.9s								
KKM	**Kota Kinabalu**	**68.87**	**285**	*e*P			**P**	**20 40 38.3**	**+0.1**
	39nm,1.2s								
UGM	**Wanagama**	**69.10**	**269**	P			**P**	**20 40 39.6**	**0.0**
	baz=69,SNR=5.4								
MJAR	**Matsushiro Arr**	**69.54**	**324**	P			**P**	**20 40 41.0**	**-0.7**
MJAR					pP		**pP**	**20 42 49.9**	**+0.8**
MJAR	**Matsushiro Arr**	**69.54**	**324**	P			**P**	**20 40 41.0**	**-0.7**
	13nm,0.6s,baz=164,slow=6.3,SNR=49								
MJAR					pP		**pP**	**20 42 49.9**	**+0.8**
	2.2nm,0.8s,baz=169,slow=7.1,SNR=5.5								
MAJO	**Matsushiro**	**69.54**	**324**	*e*P			**P**	**20 40 41.0**	**-0.6**
	10nm,0.6s								
MAT	**Matsushiro**	**69.54**	**324**	P			**P**	**20 40 41.2**	**-0.4**
QSPA	**South Pole Qui**	**69.77**	**180**	*e*P			**P**	**20 40 42.8**	**+0.2**
	41nm,0.8s								
QSPA						*e*pP	**pP**	**20 42 52.8**	**+2.7**
QSPA						pP	**pwP**	**20 42 53.0**	**+2.9**
QSPA	**South Pole Qui**	**69.77**	**180**	P			**P**	**20 40 43.0**	**+0.4**
	33nm,0.6s,baz=17,slow=1.2,SNR=242								
QSPA						pP	**pwP**	**20 42 53.0**	**+2.9**
	9.2nm,1.0s,baz=23,slow=4.1,SNR=6.0								
JNU	**Nakatsue**	**71.54**	**317**	*e*P			**P**	**20 40 53.0**	**-0.5**
	14nm,0.9s								
KSM	**Kuching**	**72.53**	**278**	*e*P			**P**	**20 40 59.8**	**+0.3**
	21nm,0.9s								
KSM						*e*pP	**pP**	**20 43 07.8**	**-0.7**
KSM	**Kuching**	**72.53**	**278**	P			**P**	**20 40 59.9**	**+0.3**
	baz=73,SNR=16								
TWG	**Pinlang**	**72.55**	**303**	*e*P			**P**	**20 40 57.1**	**-2.2**
	56nm,0.5s								
YULB	**Yu-li**	**72.67**	**304**	*e*P			**P**	**20 40 58.8**	**-1.3**
	6.6nm,0.6s								
NACB	**Ninganchiao**	**72.85**	**305**	*e*P			**P**	**20 41 00.3**	**-0.8**
	47nm,0.9s								
ASAJ	**Asahikawa**	**73.14**	**332**	*e*P			**P**	**20 41 03.8**	**+1.4**
	16nm,0.8s								
ASAJ	**Asahikawa**	**73.14**	**332**	P			**P**	**20 41 03.7**	**+1.4**
	26nm,0.7s,baz=207,slow=6.6,SNR=21								
SSLB	**Suanglung**	**73.14**	**304**	*e*P			**P**	**20 41 01.2**	**-1.6**
	14nm,0.5s								
TPUB	**Ta-pu**	**73.14**	**303**	*e*P			**P**	**20 41 01.4**	**-1.4**
	62nm,0.9s								
FX1	**Attu Island--F**	**73.20**	**355**	*e*P			**P**	**20 41 01.3**	**-1.1**
TATO	**Taipei**	**73.36**	**305**	P			**P**	**20 41 03.3**	**-0.7**
	50nm,0.9s								
UNV	**Unalaska Valle**	**74.61**	**8**	*e*P			**P**	**20 41 08.2**	**-2.0**
	30nm,0.8s								
PETK	**Petropavlovsk-**	**75.86**	**346**	P			**P**	**20 41 17.1**	**-0.2**
PETK	**Petropavlovsk-**	**75.86**	**346**	P			**P**	**20 41 17.1**	**-0.2**
	25nm,0.8s,baz=141,slow=9.6,SNR=16								
KSRS	**Korea Array**	**76.17**	**319**	P			**P**	**20 41 20.0**	**+0.7**
	7.6nm,0.9s,baz=139,slow=5.9,SNR=32								
KSRS					PP		**PP**	**20 44 20.4**	**-2.6**
	2.0nm,0.9s,baz=137,slow=8.7,SNR=4.4								
KSAR	**Wonju Array Be**	**76.18**	**319**	P			**P**	**20 41 20.0**	**+0.6**
KSAR					PP		**PP**	**20 44 20.4**	**-2.8**
USRK	**Ussuriysk Arra**	**78.32**	**326**	P			**P**	**20 41 31.6**	**+0.9**
	17nm,0.8s,baz=127,slow=3.2,SNR=44								
NJ2	**Nanjing**	**79.09**	**310**	*e*P			**P**	**20 41 35.6**	**+0.5**
NJ2					pmax		pmax		
	comp=Z,10.0nm,0.6s								
BFSC	**Mount Baldy Ra**	**79.59**	**48**	⇑P			**P**	**20 41 38.8**	**+0.9**
	baz=80								
EDW2	**Edwards Air Fo**	**79.71**	**47**	⇓P			**P**	**20 41 39.3**	**+0.9**
	baz=80								
MONP	**Monument Peak**	**79.73**	**49**	⇓P			**P**	**20 41 39.5**	**+0.8**
	baz=80								
ISA	**Isabella**	**79.82**	**46**	*e*P			**P**	**20 41 39.7**	**+0.8**
	comp=Z,6.0nm,0.9s								
ISA	**Isabella**	**79.82**	**46**	⇓P			**P**	**20 41 40.0**	**+1.0**
	baz=80								
MDJ	**Mudanjiang**	**79.86**	**325**	P			**P**	**20 41 39.6**	**+0.8**
MDJ					pmax		pmax		
	comp=Z,21nm,0.9s								
MDJ					pmax		pmax		
	comp=Z,65nm,5.3s								
MDJ	**Mudanjiang**	**79.86**	**325**	*e*P			**P**	**20 41 39.7**	**+0.8**
	comp=Z,18nm,0.8s								
CMB	**Columbia Colle**	**79.91**	**43**	P			**P**	**20 41 39.8**	**+0.5**
	comp=Z,4.1nm,0.8s								
QIZ	**Qiongzhong**	**79.99**	**295**	P			**P**	**20 41 40.3**	**+0.2**
QIZ				sP			**sP**	**20 44 54.9**	**-2.4**
QIZ				S			**S**	**20 50 54.1**	**+0.7**
QIZ				ScS			**ScS**	**20 51 08.5**	**+0.3**
QIZ				pmax			pmax		
	comp=Z,13nm,1.1s								
PFO	**Pinyon Flat Ob**	**80.09**	**49**	P			**P**	**20 41 41.2**	**+0.8**
PFO	**Pinyon Flat Ob**	**80.09**	**49**	P			**P**	**20 41 41.2**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=281,slow=5.2,SNR=3.1								
CWC	**Cottonwood Cre**	**80.51**	**46**	⇑P			**P**	**20 41 43.8**	**+1.2**
	baz=81								
BELC	**Belle Mtn. Jos**	**80.62**	**49**	⇑P			**P**	**20 41 44.1**	**+0.9**
	baz=81								
YBH	**Yreka Blue Hor**	**80.68**	**39**	*e*P			**P**	**20 41 44.5**	**+1.3**
	comp=Z,5.9nm,0.9s								
YBH	**Yreka Blue Hor**	**80.68**	**39**	P			**P**	**20 41 44.5**	**+1.3**
	comp=Z,4.3nm,0.7s,baz=295,slow=1.8,SNR=12								
MPMC	**Manual Prospec**	**80.70**	**46**	⇑P			**P**	**20 41 44.4**	**+0.7**
	baz=81								
GSC	**Goldstone**	**80.75**	**47**	*e*P			**P**	**20 41 44.1**	**+0.3**
	comp=Z,2.1nm,0.4s								
BC3	**Big Chuckawall**	**80.82**	**49**	⇑P			**P**	**20 41 44.6**	**+0.4**
	baz=81								
KDAK	**Kodiak Island**	**80.83**	**14**	P			**P**	**20 41 43.5**	**+0.1**
KDAK	**Kodiak Island**	**80.83**	**14**	P			**P**	**20 41 43.5**	**+0.1**
	comp=Z,6.6nm,0.8s,baz=297,slow=4.5,SNR=3.9								
HEC	**Hector,Ludlow**	**80.83**	**48**	⇓P			**P**	**20 41 44.9**	**+0.7**
	baz=81,SNR=8.1								
GLA	**Glamis**	**80.96**	**50**	⇑P			**P**	**20 41 46.0**	**+1.2**
	baz=81,SNR=5.0								
GMRC	**Granite Mounta**	**81.27**	**48**	⇓P			**P**	**20 41 47.3**	**+0.8**
	baz=82								
GRAC	**Grapevine Rang**	**81.30**	**45**	⇓P			**P**	**20 41 47.8**	**+1.3**
	baz=82								
IRM	**Iron Mountain**	**81.30**	**49**	⇓P			**P**	**20 41 47.5**	**+1.0**
	baz=82,SNR=5.2								
TUQ	**Turquoise Moun**	**81.43**	**47**	⇓P			**P**	**20 41 48.1**	**+0.7**
	baz=82								
MAW	**Mawson**	**81.46**	**200**	P			**P**	**20 41 46.5**	**-0.2**
MAW					pP		**pP**	**20 44 01.8**	**+1.8**
MAW	**Mawson**	**81.46**	**200**	P			**P**	**20 41 46.5**	**-0.2**
	comp=Z,6.5nm,0.9s,baz=110,slow=8.9,SNR=8.7								
MAW					pP		**pP**	**20 44 01.8**	**+1.8**
	comp=Z,4.6nm,1.0s,baz=47,slow=7.6,SNR=4.5								
MAW	**Mawson**	**81.46**	**200**	P			**P**	**20 41 47.0**	**+0.3**
	baz=82,SNR=5.0								
NVAR	**Mina Array Bea**	**81.48**	**44**	P			**P**	**20 41 47.5**	**0.0**
NVAR	**Mina Array Bea**	**81.48**	**44**	P			**P**	**20 41 47.5**	**0.0**
	comp=Z,4.5nm,0.7s,baz=229,slow=10,SNR=19								
Y12C	**Blythe**	**81.53**	**49**	⇑P			**P**	**20 41 48.7**	**+1.0**
	baz=82								
113A	**Mohawk Valley,**	**81.58**	**51**	⇑P			**P**	**20 41 48.9**	**+1.0**
	baz=82								
CN2	**Changchun**	**81.62**	**323**	*e*P			**P**	**20 41 47.9**	**0.0**
CN2				pmax			pmax		
	comp=Z,20nm,0.9s								
WHN	**Wuhan**	**81.63**	**307**	*e*P			**P**	**20 41 49.3**	**+1.1**
PMSA	**Palmer Station**	**81.81**	**157**	*e*P			**P**	**20 41 48.5**	**0.0**
	comp=Z,30nm,0.9s								
214A	**Organ Pipe Nat**	**81.87**	**52**	⇑P			**P**	**20 41 50.6**	**+1.1**
	baz=82								
PDMCI	**Parker Dam,Lak**	**82.09**	**49**	⇓P			**P**	**20 41 51.2**	**+0.8**
	baz=82								
Z14A	**Wintersburg**	**82.47**	**50**	⇓P			**P**	**20 41 53.6**	**+1.2**
	baz=83,SNR=6.9								
W13A	**Hualapai Mount**	**82.68**	**49**	⇓P			**P**	**20 41 54.6**	**+0.9**
	baz=83								
Y14A	**Wickenburg**	**82.72**	**50**	⇑P			**P**	**20 41 54.6**	**+0.9**
	baz=83,SNR=5.6								
KULM	**Kulim**	**82.89**	**278**	*e*P		

H13A	Challis	87.37	40	⇓P		P		20 42 16.7	+0.7	
	baz=88									
Z23A	Rita Site, Whi	87.38	53	⇓P		P		20 42 17.2	+1.0	
	baz=88									
224A	Cornudas Mount	87.40	55	⇓P		P		20 42 17.1	+0.7	
	baz=88,SNR=9.1									
626A	Big Bend Ranch	87.40	57	⇓P		P		20 42 17.2	+0.8	
	baz=88,SNR=15									
F12A	Elk City	87.41	39	⇓P		P		20 42 16.6	+0.5	
	baz=88									
BNM	Barren Site	87.48	52	*e*P		P		20 42 17.2	+0.3	
	comp=Z,3.1nm,1.0s									
I14A	Mackay	87.53	41	⇓P		P		20 42 17.9	+1.1	
	baz=88									
526A	Mary Lane Ranc	87.65	57	⇓P		P		20 42 18.2	+0.5	
	baz=88,SNR=14									
G13A	Cobalt	87.66	40	⇓P		P		20 42 18.0	+0.7	
	baz=88									
TXAR	Lajitas Array	87.68	58	P		P		20 42 18.8	+1.1	
TXAR				pP		pP		20 44 36.0	+2.1	
TXAR	Lajitas Array	87.68	58	P		P		20 42 18.8	+1.1	
	comp=Z,11nm,0.9s,baz=220,slow=5.3,SNR=81									
TXAR				pP		pP		20 44 36.0	+2.1	
	comp=Z,1.0nm,1.0s,baz=207,slow=5.2,SNR=3.8									
124A	Stringfield Ra	87.72	54	⇓P		P		20 42 18.7	+0.7	
	baz=88,SNR=7.8									
U21A	Nageezi	87.75	50	⇑P		P		20 42 18.8	+0.8	
	baz=88									
Y23A	Lovelace Mesa,	87.81	53	⇑P		P		20 42 18.8	+0.5	
	baz=88,SNR=5.5									
S20A	Disappointment	87.90	48	⇑P		P		20 42 19.0	+0.3	
	baz=88									
225A	Deer Hill, Car	87.95	55	⇑P		P		20 42 19.7	+0.7	
	baz=88,SNR=7.6									
627A	Terlingua Ranc	87.95	58	⇓P		P		20 42 19.8	+0.8	
	baz=88,SNR=16									
426A	McDonald Obser	87.95	56	⇓P		P		20 42 19.7	+0.6	
	baz=88,SNR=13									
ANMO	Albuquerque	87.96	52	*e*P		P		20 42 18.6	-0.3	
	comp=Z,5.0nm,0.9s									
F13A	Darby	87.97	39	⇑P		P		20 42 18.9	+0.2	
	baz=88									
DOT	Dot Lake	87.99	15	*e*P		P		20 42 17.6	-0.7	
	comp=Z,5.5nm,0.8s									
HIA	Hailar	88.03	325	*e*P		P		20 42 18.4	-0.3	
D12A	Red Ives Fores	88.05	38	⇑P		P		20 42 20.3	+1.3	
	baz=88									
527A	Woodward Ranch	88.06	57	⇑P		P		20 42 20.0	+0.5	
	baz=88,SNR=11									
M17A	Scullys Gap (B	88.06	44	⇑P		P		20 42 19.8	+0.5	
	baz=88									
COLA	College	88.20	13	*e*P		P		20 42 18.2	-0.9	
	comp=Z,13nm,0.9s									
S21A	Coal Bank Pass	88.22	49	⇑P		P		20 42 21.3	+1.0	
	baz=88									
SNAA	Sanae	88.23	179	*e*P		P		20 42 18.5	-1.0	
SNAA	Sanae	88.23	179	*e*P		P		20 42 18.3	-1.2	
	comp=Z,3.4nm,0.6s									
326A	Caldwell Ranch	88.26	56	⇓P		P		20 42 21.2	+0.8	
	baz=88									
Y24A	Capitan	88.27	53	⇓P		P		20 42 20.9	+0.4	
	baz=88,SNR=20									
125A	Gardner Draw,	88.31	54	⇓P		P		20 42 21.4	+0.8	
	baz=88									
P19A	Cripple Cowboy	88.31	47	⇑P		P		20 42 21.5	+0.9	
	baz=88									
ILAR	Eielson Array	88.31	13	P		P		20 42 18.7	-1.0	
ILAR				pP		pP		20 44 36.0	-0.1	
ILAR				PP		PP		20 45 59.4	-0.7	
ILAR	Eielson Array	88.31	13	P		P		20 42 18.7	-1.0	
	comp=Z,3.7nm,0.8s,baz=228,slow=5.5,SNR=41									
ILAR				pP		pP		20 44 36.0	-0.1	
	comp=Z,1.7nm,0.9s,baz=225,slow=6.4,SNR=8.7									
ILAR				PP		PP		20 45 59.4	-0.7	
	comp=Z,0.7nm,0.8s,baz=222,slow=5.9,SNR=4.1									
GDL2	Guadalupe Moun	88.34	55	*e*P		P		20 42 21.1	+0.4	
	comp=Z,4.6nm,0.7s									
628A	Black Gap, Mar	88.36	58	⇓P		P		20 42 21.4	+0.6	
	baz=88,SNR=8.2									
H15A	Lima	88.38	41	⇑P		P		20 42 22.1	+1.3	
	baz=89									
M18A	Lyman	88.44	45	⇑P		P		20 42 21.7	+0.6	
	baz=89									
226B	Tecolote Peak,	88.44	55	⇓P		P		20 42 21.6	+0.5	
	baz=89,SNR=12									
Q20A	Ridgley Place,	88.46	47	⇑P		P		20 42 21.9	+0.7	
	baz=89									
427A	Hayter Ranch,	88.52	56	⇓P		P		20 42 22.4	+0.8	
	baz=89,SNR=22									
O19A	Miners Draw (B	88.53	46	⇑P		P		20 42 22.0	+0.5	
	baz=89									
Z25A	Roswell	88.53	54	⇓P		P		20 42 22.2	+0.6	
	baz=89									
HHC	Hu-ho-hao-te	88.60	315	⇓*e*P		P		20 42 23.8	+2.1	
HHC				pP		pP		20 44 39.3	+1.1	
HHC				sP		sP		20 45 40.8	-0.9	
HHC				PP		PP		20 46 07.4	+4.4	
HHC				SKS		SKSac		20 51 53.0	+2.1	
HHC				S		S		20 52 17.1	+1.4	
HHC				sS		sS		20 56 15.8	-3.2	
HHC				SS		SS		20 58 32.9	+4.9	
HHC				pmax		pmax				
	comp=Z,35nm,1.4s									
HHC				pmax		pmax				
	comp=Z,140nm,5.2s									
P20A	De Beque	88.65	47	⇑P		P		20 42 22.8	+0.7	
	baz=89									
R21A	Cimarron	88.71	48	⇑P		P		20 42 23.6	+1.1	
	baz=89									
528A	Cox Ranch, San	88.72	57	⇓P		P		20 42 23.3	+0.7	
	baz=89,SNR=5.0									
E14A	Clinton	88.80	39	⇑P		P		20 42 22.3	-0.3	
	baz=89									
Y25A	Mesa, Roswell	88.82	53	⇓P		P		20 42 23.2	+0.2	
	baz=89,SNR=6.5									
W24A	Lazy 6 Ranch,	88.84	52	⇑P		P		20 42 23.2	+0.1	
	baz=89									
S22A	4UR Ranch, Cre	88.94	49	⇓P		P		20 42 24.1	+0.5	
	baz=89									
428A	Kincaid Ranch,	89.03	57	⇓P		P		20 42 24.2	+0.3	
	baz=89									
O20A	White River Ci	89.05	46	⇓P		P		20 42 24.6	+0.7	
	baz=89									
VNA1	Neumayer--Stat	89.06	177	*e*P		P		20 42 23.0	-0.2	
M19A	Rock Springs	89.07	45	⇓P		P		20 42 24.8	+0.7	
	baz=89									
Z26A	Caprock	89.08	54	⇑P		P		20 42 24.7	+0.6	
	baz=89									
529A	Stev Forest Ra	89.15	57	⇑P		P		20 42 24.9	+0.4	
	baz=89,SNR=6.7									
328A	Wristen Ranch,	89.20	56	⇓P		P		20 42 24.5	-0.2	
	baz=89									
CMAR	Chiang Mai Arr	89.23	290	P		P		20 42 26.6	+1.5	
CMAR				pP		pP		20 44 41.2	-0.5	
CMAR				PP		PP		20 46 11.6	+3.3	
CMAR				PKKPbc		PKKPbc		20 59 57.8	+0.4	
CMAR	Chiang Mai Arr	89.23	290	P		P		20 42 26.6	+1.5	
	comp=Z,8.2nm,0.9s,baz=123,slow=3.0,SNR=54									
CMAR				pP		pP		20 44 41.2	-0.5	
	comp=Z,1.5nm,1.0s,baz=128,slow=2.9,SNR=6.3									
CMAR				PP		PP		20 46 11.6	+3.3	
	comp=Z,1.1nm,1.0s,baz=133,slow=6.4,SNR=4.9									
CMAR				PKKPbc		PKKPbc		20 59 57.8	+0.4	
	comp=Z,1.3nm,0.8s,baz=290,slow=4.9,SNR=6.8									
127A	Arkansas Junct	89.31	55	⇓P		P		20 42 25.8	+0.5	
	baz=90									
N20A	Spence Gulch,	89.36	46	⇑P		P		20 42 25.5	+0.1	
	baz=90									
CHTO	Chiang Mai	89.36	290	*e*P		P		20 42 26.3	+0.7	
	comp=Z,10nm,0.9s									
PDAR	Pinedale Array	89.41	44	P		P		20 42 25.1	-0.5	
PDAR	Pinedale Array	89.41	44	P		P		20 42 25.1	-0.5	
	comp=Z,4.6nm,0.9s,baz=225,slow=1.9,SNR=8.8									
W25A	X Bar L Ranch,	89.55	52	⇓P		P		20 42 26.9	+0.6	
	baz=90									
429A	Davenport Ranc	89.61	57	⇓P		P		20 42 26.8	+0.2	
	baz=90,SNR=19									
EGAK	Eagle	89.64	15	*e*P		P		20 42 24.8	-1.0	
	comp=Z,5.7nm,0.9s									
M20A	Sweetwater, Wa	89.71	45	⇓P		P		20 42 27.9	+0.9	
	baz=90									
X26A	CR and CF Fran	89.75	53	⇑P		P		20 42 27.8	+0.5	
	baz=90									
N21A	Black Mountain	89.82	46	⇓P		P		20 42 28.4	+0.9	
	baz=90									
L20A	Wamsutter	89.85	45	⇓P		P		20 42 28.8	+1.2	
	baz=90									
530A	J-C Ranch, Com	89.86	58	⇓P		P		20 42 28.8	+1.0	
	baz=90									
SDCO	Great Sand Dun	89.88	49	P		P		20 42 27.7	-0.3	
329A	Wagon Wheel Ra	89.89	56	⇑P		P		20 42 29.2	+1.3	
	baz=90									
B14A	Marquette Ranc	89.93	37	⇓P		P		20 42 28.2	+0.5	
	baz=90									
E16A	East Helena	89.94	40	⇓P		P		20 42 29.2	+1.4	
	baz=90									
CD2	Chengdu	89.95	303	P		P		20 42 28.9	+0.7	
128A	Castleberry Fa	89.96	55	⇓P		P		20 42 29.0	+0.8	
	baz=90									
Y27A	Causey	89.96	54	⇑P		P		20 42 28.8	+0.5	
	baz=90									
W26A	Owens Ranch, T	90.01	52	⇑P		P		20 42 29.5	+1.1	
	baz=90									
PLCA	Paso Flores	90.04	134	P		P		20 42 28.0	-0.5	
PLCA	Paso Flores	90.04	134	P		P		20 42 28.0	-0.5	
	comp=Z,7.7nm,0.8s,baz=203,slow=6.1,SNR=11									
S24A	Houchin Ranch,	90.04	50	⇑P		P		20 42 30.2	+1.4	
	baz=90									
631A	Perdido Creek	90.17	59	⇓P		P		20 42 29.5	+0.3	
	baz=90,SNR=14									
430A	Baggett Ranch,	90.19	57	⇓P		P		20 42 29.3	0.0	
	baz=90									
O22A	Kremmling	90.21	47	⇑P		P		20 42 30.2	+0.7	
	baz=90									
229A	Bryant Ranch,	90.22	56	⇑P		P		20 42 29.9	+0.5	
	baz=90									
D16A	Dana Ranch, Ca	90.26	39	⇓P		P		20 42 31.2	+1.9	
	baz=90									
732A	Laxson Ranch,	90.40	60	⇓P		P		20 42 31.2	+1.0	
	baz=90									
531A	Rocksprings	90.49	58	⇑P		P		20 42 31.1	+0.4	
	baz=91,SNR=7.0									
N22A	Wattenberg Ran	90.56	46	⇓P		P		20 42 31.7	+0.7	
	baz=91									
S25A	Robets Cordova	90.61	50	⇓P		P		20 42 31.8	+0.6	
	baz=91									
D17A	Six Diamond Ra	90.83	39	⇑P		P		20 42 34.1	+2.1	
	baz=91									
632A	Uvalde	90.85	59	⇑P		P		20 42 32.8	+0.5	
	baz=91,SNR=6.0									
532A	Rocksprings	90.99	58	⇑P		P		20 42 33.7	+0.7	
	baz=91									
JCT	Junction City	91.21	58	P		P		20 42 32.0	-2.0	
	comp=Z,5.8nm,0.7s									
M23A	Laramie	91.35	46	⇓P		P		20 42 34.8	+0.2	
	baz=92									
231A	Bronte	91.37	56	⇓P		P		20 42 34.3	-0.3	
	baz=92									
432A	Menard	91.37	58	⇓P		P		20 42 34.5	-0.2	
	baz=92									
P25A	Willow Gulch B	91.58	48	⇑P		P		20 42 35.7	+0.1	
	baz=92									
332A	Millersview	91.61	57	⇓P		P		20 42 35.6	-0.1	
	baz=92									
LZH	Lanzhou	91.96	308	*e*P		P		20 42 38.5	+1.0	
LZH				pmax		pmax				
	comp=Z,14nm,1.0s									
Z32A	Haskell	92.55	55	⇓P		P		20 42 40.8	+0.8	
	baz=93									
INK	Inuvik	94.31	15	P		P		20 42 46.4	-0.7	
INK	Inuvik	94.31	15	P		P		20 42 46.4	-0.7	
	comp=Z,1.4nm,0.9s,baz=183,slow=5.8,SNR=6.3									
SONM	Songino Array	95.04	319	P		P		20 42 51.8	+0.7	
SONM	Songino Array	95.04	319	P		P		20 42 51.8	+0.7	
	comp=Z,0.6nm,0.5s,baz=116,slow=6.6,SNR=2.6									
LPAZ	La Paz	102.94	113	P		Pdif		20 43 30.3	+2.6	
LPAZ	La Paz	102.94	113	P		Pdif		20 43 30.3	+2.6	
	comp=Z,1.2nm,0.8s,baz=230,slow=4.6,SNR=5.8									
WMQ	Urumqi	106.14	311	*e*P		Pdif		20 43 35.9	-4.7	
ZAA0	Zalesovo Array	109.80	321	*e*Pdif		Pdif		20 43 55.0	-1.4	
ZALV	Zalesovo Beam	109.80	321	PKiKP		PKiKP		20 47 53.6	-1.0	
ZALV				PP		PP		20 48 42.5	+2.1	
ZALV	Zalesovo Beam	109.80	321	PKiKP		PKiKP		20 47 53.6	-1.0	
	comp=Z,1.0nm,0.8s,baz=155,slow=0.7,SNR=3.2									
ZALV				PP		PP		20 48 42.5	+2.1	
	comp=Z,1.7nm,0.8s,baz=83,slow=4.6,SNR=4.6									
MK31	Makanchi Array	110.43	314	*e*PKPdf				20 47 55.5		
MKAR	Makanchi Array	110.43	314	PKiKP		PKiKP		20 47 55.5	-0.6	
MKAR				PP		PP		20 48 57.0	+12	
MKAR				S		SKSac		20 53 35.6	-1.3	
MKAR				PKKPbc		PKKPbc		20 58 57.6	-1.2	
MKAR				PKKPab		PKKPab		20 59 09.8	-0.6	
MKAR	Makanchi Array	110.43	314	PKiKP		PKiKP		20 47 55.5	-0.6	
	comp=Z,0.2nm,0.5s,baz=210,slow=0.7,SNR=4.0									
MKAR				PP		PP		20 48 57.0	+12	
	comp=Z,0.6nm,0.9s,baz=108,slow=4.7,SNR=4.3									
MKAR				S		SKSac		20 53 35.6	-1.3	
	comp=Z,0.5nm,0.9s,baz=101,slow=7.5,SNR=3.6									
MKAR				PKKPbc		PKKPbc		20 58 57.6	-1.2	
	comp=Z,1.5nm,0.8s,baz=281,slow=3.8,SNR=14									
MKAR				PKKPab		PKKPab		20 59 09.8	-0.6	
	comp=Z,0.8nm,0.9s,baz=271,slow=3.5,SNR=4.9									
KURK	Kurchatov	113.26	317	PP		PP		20 48 55.7	-9.1	
KURK				SKP				20 50 36.9		
KURK				PKKPbc		PKKPbc		20 58 48.6	-1.1	
KURK				PKKPab		PKKPab		20 58 57.4	-0.2	
KURBB	Kurchatov Arra	113.31	317	PP		PP		20 48 55.7	-9.5	
	comp=Z,0.7nm,0.8s,baz=90,slow=6.1,SNR=5.4									
KURBB				SKP		SKPdf		20 50 36.9	-0.3	
	comp=Z,0.7nm,0.6s,baz=93,slow=1.7,SNR=5.9									
KURBB				PKKPbc		PKKPbc		20 58 48.6	-0.9	
	comp=Z,1.4nm,0.8s,baz=274,slow=4.0,SNR=18									
KURBB				PKKPab		PKKPab		20 58 57.4	0.0	
	comp=Z,1.1nm,0.9s,baz=272,slow=5.1,SNR=9.0									
BVAR	Borovoye Array	118.37	320	PKKPab		PKKPab		20 58 35.6	+0.5	
BVAR	Borovoye Array	118.37	320	PKKPab		PKKPab		20 58 35.6	+0.5	
	comp=Z,0.6nm,0.7s,baz=224,slow=5.6,SNR=4.5									
BDFB	Brasilia	119.98	123	SKP		SKiKP		20 50 51.4	-0.3	
	comp=Z,2.5nm,0.8s,baz=139,slow=12,SNR=3.2									
BOSA	Boshof	126.06	206	PKP		PKPdf		20 48 26.9	+0.1	
BOSA	Boshof	126.06	206	PKP		PKPdf		20 48 26.9	+0.1	
	comp=Z,2.8nm,1.0s,baz=132,slow=4.7,SNR=5.2									
ARCES	ARCESS Array B	128.57	349	PKP		PKPdf		20 48 29.8	-0.3	
ARCES				pPKP		pPKPdf		20 50 54.1	-2.7	
ARCES				SKP				20 51 06.4		
ARCES	ARCESS Array B	128.57	349	PKP		PKPdf		20 48 29.8	-0.3	
	comp=Z,0.8nm,0.5s,baz=153,slow=1.1,SNR=7.4									
ARCES				pPKP		pPKPdf		20 50 54.1	-2.7	
	comp=Z,6.0nm,1.0s,baz=0.0,slow=2.4,SNR=2.2									
ARCES				SKP		SKPdf		20 51 06.4	+0.6	
	comp=Z,4.7nm,1.0s,baz=27,slow=1.4,SNR=3.9									
FINES	FINESS Array B	135.34	343	PKPpre		PKPpre		20 48 39.9		
FINES				SKPbc		SKPbc		20 51 15.9	+0.7	
FINES	FINESS Array B	135.34	343	PKhKP		PKPpre		20 48 39.9		
	comp=Z,1.1nm,0.6s,baz=113,slow=5.0,SNR=8.2									
FINES				SKPbc		SKPbc		20 51 15.9	+0.7	
	comp=Z,8.9nm,0.9s,baz=58,slow=3.4,SNR=15									
LSZ	Lusaka	135.73	219	PKP		PKPdf		20 48 45.5	+0.1	
LSZ	Lusaka	135.73	219	PKP		PKPdf		20 48 45.5	+0.1	
	comp=Z,1.7nm,0.5s,baz=349,slow=3.9,SNR=8.0									
KBZ	Khabaz	138.13	314	SKPbc		SKPbc		20 51 25.2	+1.3	
KBZ	Khabaz	138.13	314	SKPbc		SKPbc		20 51 25.2	+1.3	
	comp=Z,1.4nm,0.9s,baz=113,slow=7.7,SNR=3.4									
NB2	NORSAR Subarra	138.68	353	PKP		SKPbc		20 51 25.4	+0.4	
	comp=Z,10nm,0.8s,baz=13,slow=2.9									
NOA	NORSAR Array B	138.68	353	PKPpre		PKPpre		20 48 39.0		
NOA				PKP		PKPdf		20 48 50.3	+1.1	
NOA				SKPbc		SKPbc		20 51 25.5	+0.5	
NOA	NORSAR Array B	138.68	353	PKhKP		PKPpre		20 48 39.0		
	comp=Z,0.7nm,0.8s,baz=16,slow=4.7,SNR=3.7									
NOA				PKP		PKPdf		20 48 50.3	+1.1	
	comp=Z,0.5nm,0.6s,baz=13,slow=3.8,SNR=3.3									
NOA				SKPbc		SKPbc		20 51 25.5	+0.5	
	comp=Z,9.2nm,0.9s,baz=17,slow=4.4,SNR=25									
HFS	Hagfors	139.20	350	SKPbc		SKPbc		20 51 27.1	+0.7	
HFS	Hagfors	139.20	350	SKPbc		SKPbc		20 51 27.1	+0.7	
	comp=Z,17nm,0.8s,baz=70,slow=1.7,SNR=31									
IZAR	Zarasai	139.89	338	*e*P		SKPbc		20 51 28.9	+0.6	
IZAR				AMB		AMB		20 51 31.3		
	comp=Z,8.0nm,0.8s									
IDID	Didziasalis	140.05	337	*e*P		SKPbc		20 51 29.5	+0.7	
IDID				AMB		AMB		20 51 31.6		
	comp=Z,5.7nm,0.9s									
ISAL	Salakas	140.07	338	*e*P		SKPbc		20 51 29.4	+0.6	
ISAL				AMB		AMB		20 51 31.7		
	comp=Z,5.2nm,1.1s									
IIGN	Ignalina	140.21	338	*e*P		SKPbc		20 51 29.9	+0.8	
IIGN				AMB		AMB		20 51 32.1		
	comp=Z,6.7nm,1.1s									
AKASG	Malin Array Be	142.42	331	PKPpre		PKPpre		20 48 52.3		
AKASG				SKPbc		SKPbc		20 51 34.6	-0.2	
AKASG	Malin Array Be	142.42	331	PKhKP		PKPpre		20 48 52.3		
	comp=Z,6.4nm,0.4s,baz=43,slow=4.4,SNR=37									
AKASG				SKPbc		SKPbc		20 51 34.6	-0.2	
	comp=Z,2.3nm,0.7s,baz=34,slow=2.3,SNR=7.5									
AK01	Malin Array Si	142.43	331	*e*PKPdf		PKPdf		20 48 52.0	-4.2	
KIEV	Kiev	142.43	331	*e*PKPdf		PKPdf		20 48 52.0	-4.2	
AK02	Malin Array Si	142.46	330	*e*PKPdf		PKPdf		20 48 52.3	-4.0	
SHEL	Horse Pasture	143.35	169	*e*PKPdf		PKPab		20 48 57.9	+0.4	
MUD	Monsted U'grnd	143.40	352	*i* P		PKPab		20 48 56.2	-0.3	
	comp=Z,17nm,0.8s									
MUD	Monsted U'grnd	143.40	352	*i* P		SKiKP		20 51 38.0	+0.1	
	comp=Z,6.7nm,0.9s									
COP	Copenhagen	143.65	349	*i* P		PKPbc		20 48 55.9	-1.6	
	comp=Z,7.1nm,0.8s									
BSD	Bornholm Skovb	143.70	347	⇓*i*P		PKPbc		20 48 56.8	-0.8	
	comp=Z,26nm,0.8s									
BSD	Bornholm Skovb	143.70	347	*i* P		SKiKP		20 51 38.7	+0.2	
	comp=Z,7.8nm,1.0s									
LLD	Lille Linde	144.03	349	*i* P		PKPbc		20 48 42.7	-16	
	comp=Z,23nm,0.8s									
MBAR	Mbarara	144.29	238	PKP		PKPdf		20 49 00.3	-0.6	
MBAR	Mbarara	144.29	238	PKP		PKPdf		20 49 00.3	-0.6	
	comp=Z,6.3nm,0.6s,baz=100,slow=3.7,SNR=10									
KWP	Kalwaria Pacla	146.03	335	*e*PKPdf		PKPdf		20 49 03.5	+0.9	
KWP	Kalwaria Pacla	146.03	335	⇑*i*P		PKPbc		20 49 04.8	+0.1	
BR131	Keskin Array S	146.06	312	*e*PKPdf		PKPdf		20 49 03.4	+0.3	
BRTR	Keskin Array B	146.06	312	PKPbc		PKPbc		20 49 04.9	-0.4	
BRTR				pPKPbc		pPKPbc		20 51 27.8	-1.5	
BRTR				SKPbc		SKPbc		20 51 43.9	0.0	
BRTR	Keskin Array B	146.06	312	PKPbc		PKPbc		20 49 04.9	-0.4	
	comp=Z,4.4nm,1.0s,baz=142,slow=4.9,SNR=11									
BRTR				pPKPbc		pPKPbc		20 51 27.8	-1.5	
	comp=Z,1.2nm,1.1s,baz=50,slow=5.8,SNR=2.3									
BRTR				SKPbc		SKPbc		20 51 43.9	0.0	
	comp=Z,1.8nm,0.9s,baz=113,slow=4.9,SNR=4.8									
BUR08	Bucovina Ar. S	146.45	330	*e*PKPbc		PKPbc		20 49 06.3	+0.2	
BURAR	Bucovina Array	146.46	330	⇑*i*P		PKPbc		20 49 05.6	-0.5	
TESR	Tescani	146.53	327	⇑*i*P		PKPab		20 49 09.4	+0.2	
CFR	Carcaliu	146.62	324	⇑*i*P		PKPbc		20 49 07.1	+0.7	
OJC	Ojcow	146.66	338	*e*PKPdf		PKPdf		20 49 05.0	+1.4	
OJC				*e*PKPbc		PKPbc		20 49 06.2	-0.2	
OJC				*e*PKPab		PKPab		20 49 09.8	+0.2	
KOLS	Kolonicke sedl	146.76	334	*e*PKP		PKPbc		20 49 07.2	+0.5	
KOLS				*e*				20 49 09.9		
KOLS				*e*				20 51 34.1		
VRI	Vrincioaia	146.93	326	⇓*i*P		PKPbc		20 49 06.9	-0.4	
CRVS	Cervenica-Dubn	147.11	335	*e*PKP		PKPab		20 49 10.5	-1.0	
CRVS				*e*				20 51 32.0		
NIE	Niedzica	147.13	337	*e*PKPdf		PKPbc		20 49 07.2	-0.2	
NIE				*e*PKPbc		PKiKP		20 49 08.4	-1.0	
NIE				*e*PKPab		PKPab		20 49 12.2	+0.6	
TRPA	Tarpa	147.28	333	⇓*i*P		PKPbc		20 49 08.2	+0.2	
ISR	Istrita	147.52	325	⇑*i*P		PKPab		20 49 14.1	+0.7	
OKC	Ostrava-Krasne	147.55	339	⇑*e*PKP		PKPbc		20 49 09.1	+0.4	
OKC				*e*PKPAB		PKPab		20 49 13.2	0.0	
MLR	Muntele Rosu	147.58	327	PKPbc		PKPbc		20 49 08.9	-0

HLW ***19*** *20:35:38.5,25˚.21N×37˚.97E,h25km±65km,Md3.8,Ml3.2*
CSEM ***19*** *20:35:39.1±0.1,25˚.29N×37˚.67E,h2km,mb4.6/30,Mw5.1, Error ellipse: s-maj=5.2km s-min=3.7km az=8.0*
NEIC ***19*** *20:35:40.1±0.3,25˚.23N×37˚.70E,h10km,mb4.6/16, Error ellipse: s-maj=6.6km s-min=5.3km az=53.0*
NEIC Felt at Medina, Umm Lajj, Yanbu' al Bahr and in other parts of Al Madinah.
MOS ***19*** *20:35:42.2±0.9,25˚.34N×37˚.73E,h33km,mb4.8/29, Error ellipse: s-maj=9.7km s-min=4.6km az=93.2*

ISC 19 20:35:40.4±0.5,25˚.21N±0˚.03×37˚.69E±0˚.03,h15km±2km, n343,σ1§44/377,mb4.4/64,MS3.9/26,11C-10D,Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UMJS	**Umm Lajj**	**0.34**	**273**	P	**Pg**	**20 35 45.6**	**-2.0**
UMJS				S	**Sg**	**20 35 50.7**	**-1.7**
UMJS	**Umm Lajj**	**0.34**	**273**	P	**Pg**	**20 35 45.6**	**-2.0**
UMJS				S	**Sg**	**20 35 50.7**	**-1.7**
YNBS	**Yanbu' al Bahr**	**0.91**	**162**	P	**Pb**	**20 35 56.2**	**-1.7**
YNBS				S	**Sb**	**20 36 09.1**	**-0.7**
YOBS		**1.28**	**131**	P	**Pn**	**20 36 02.4**	**-1.4**
YOBS				S	**Sb**	**20 36 19.2**	**-1.3**
EMRS	**Mersa Alam**	**2.59**	**266**	P	**Pn**	**20 36 19.7**	**-2.1**
	baz=267						
EMRS				AMP		20 36 00.0	
	comp=E,70μm,0.3s,logA/T=5.4,baz=267						
EMRS				S	**Sn**	**20 36 49.7**	**-3.3**
	baz=267						
EMRS	**Mersa Alam**	**2.59**	**266**	P	**Pn**	**20 36 19.7**	**-2.1**
EMRS				S	**Sn**	**20 36 49.7**	**-3.3**
HAGS	**Hagol**	**2.59**	**252**	P	**Pn**	**20 36 20.2**	**-1.6**
HAGS				S	**Sn**	**20 36 50.1**	**-2.9**
HADB		**2.78**	**274**	P	**Pn**	**20 36 22.5**	**-1.9**
	baz=274						
HADB		**2.78**	**274**	P	**Pn**	**20 36 22.5**	**-1.9**
HQSR		**3.03**	**281**	P	**Pn**	**20 36 25.9**	**-1.9**
	baz=281						
HQSR		**3.03**	**281**	P	**Pn**	**20 36 25.9**	**-1.9**
HSFG		**3.65**	**293**	P	**Pn**	**20 36 34.5**	**-1.8**
	baz=292						
HSFG		**3.65**	**293**	P	**Pn**	**20 36 34.5**	**-1.8**
HEDF	**Idfu**	**4.09**	**269**	P	**Pn**	**20 36 42.6**	**+0.3**
	baz=270						
HEDF	**Idfu**	**4.09**	**269**	P	**Pn**	**20 36 42.6**	**+0.3**
HHRG	**Al Ghardaqah**	**4.21**	**299**	P	**Pn**	**20 36 41.2**	**-2.8**
	baz=298						
HHRG				AMP		20 36 00.0	
	comp=E,60μm,0.6s,logA/T=5.0,baz=298						
HHRG				S	**Sn**	**20 37 28.0**	**-4.9**
	baz=298						
HHRG	**Al Ghardaqah**	**4.21**	**299**	P	**Pn**	**20 36 41.2**	**-2.8**
HHRG				S	**Sn**	**20 37 28.0**	**-4.9**
HDHB	**Dhahab**	**4.44**	**323**	P	**Pn**	**20 36 44.5**	**-2.7**
	baz=321						
HDHB	**Dhahab**	**4.44**	**323**	P	**Pn**	**20 36 44.5**	**-2.7**
HKAT	**Jabal Katrina**	**4.67**	**316**	P	**Pn**	**20 36 48.8**	**-1.7**
	baz=314						
HKAT	**Jabal Katrina**	**4.67**	**316**	P	**Pn**	**20 36 48.8**	**-1.7**
NAHD	**NAHD**	**4.69**	**254**	P	**Pn**	**20 36 50.8**	**+0.2**
	baz=255						
NAHD	**NAHD**	**4.69**	**254**	P	**Pn**	**20 36 50.8**	**+0.2**
EIL	**Elat**	**5.06**	**332**	Pn	**Pn**	**20 36 54.4**	**-1.4**
EIL				Pg	**Pb**	**20 37 10.3**	**+1.6**
EIL				Sn	**Sn**	**20 37 57.0**	**+3.0**
EIL				Lg	Lg	20 38 12.8	
EIL	**Elat**	**5.06**	**332**	Pn	**Pn**	**20 36 54.4**	**-1.4**
	comp=E,1.4nm,0.3s,baz=146,slow=8.8,SNR=9.6						
EIL				Pg	**Pb**	**20 37 10.3**	**+1.6**
	comp=E,22nm,0.3s,baz=158,slow=11,SNR=29						
EIL				Sn	**Sn**	**20 37 57.0**	**+3.0**
	comp=E,17nm,0.3s,baz=40,slow=12,SNR=3.8						
EIL				Lg	Lg	20 38 12.8	
	comp=E,72nm,0.3s,baz=12,slow=16,SNR=20						
EIL	**Elat**	**5.06**	**332**	Pn	**Pn**	**20 36 54.3**	**-1.4**
EIL				Sn	**Sn**	**20 37 55.9**	**+1.9**
MBRI	**Mt Berech**	**5.19**	**332**	Sn	**Sn**	**20 37 57.1**	**0.0**
HRDS	**Abu Rudays**	**5.25**	**313**	P	**Pn**	**20 36 57.1**	**-1.1**
	baz=312						
GRB	**Gharib**	**5.34**	**306**	P	**Pn**	**20 36 58.0**	**-1.6**
	baz=305						
GRB	**Gharib**	**5.34**	**306**	P	**Pn**	**20 36 58.0**	**-1.6**
HRFI	**Mount Harif**	**5.35**	**335**	P	**Pn**	**20 36 58.6**	**-1.1**
HRFI	**Mount Harif**	**5.35**	**335**	Pn	**Pn**	**20 36 58.3**	**-1.4**
HRFI	**Mount Harif**	**5.35**	**335**	P	**Pn**	**20 36 58.6**	**-1.1**
KRMI	**Paran Flat**	**5.55**	**332**	Pn	**Pn**	**20 37 00.3**	**-2.2**
PRNI	**Paran**	**5.65**	**336**	Pn	**Pn**	**20 37 02.2**	**-1.6**
HNKL	**Nakhl**	**5.74**	**326**	P	**Pn**	**20 37 04.0**	**-1.0**
	baz=324						
HNKL				AMP		20 38 00.0	
	comp=E,750μm,0.8s,logA/T=6.0,baz=324						
HNKL	**Nakhl**	**5.74**	**326**	P	**Pn**	**20 37 04.0**	**-1.0**
ZFRI	**Zfri**	**5.77**	**338**	Pn	**Pn**	**20 37 03.9**	**-1.5**
RMNI	**Mount Ramon**	**5.96**	**335**	Pn	**Pn**	**20 37 06.4**	**-1.7**
KZIT	**Kziot**	**6.38**	**334**	P	**Pn**	**20 37 12.1**	**-1.7**
KZIT	**Kziot**	**6.38**	**334**	Pn	**Pn**	**20 37 12.3**	**-1.5**
RTMI	**Retamim**	**6.39**	**336**	Pn	**Pn**	**20 37 12.2**	**-1.8**
DSI	**Dead Sea**	**6.65**	**343**	Pn	**Pn**	**20 37 17.4**	**-0.2**
ASF	**Jabal al Asfar**	**6.97**	**354**	Pn	**Pn**	**20 37 20.6**	**-1.5**
ASF				Pg	Pb	20 37 44.9	+3.7
ASF				Lg	Lg	20 39 13.7	
ASF	**Jabal al Asfar**	**6.97**	**354**	Pn	**Pn**	**20 37 20.6**	**-1.5**
	comp=E,5.3nm,0.3s,baz=40,slow=10,SNR=26						
ASF				Pg	Pb	20 37 44.9	+3.7
	comp=E,8.1nm,0.3s,baz=29,slow=13,SNR=13						
ASF				Lg	Lg	20 39 13.7	
	comp=E,16nm,0.3s,baz=68,slow=21,SNR=10						
ASF				LR	LR	20 40 25.9	
	comp=E,642nm,19.1s,baz=278,slow=42						
HMDT	**Nahal Hemdat**	**7.27**	**345**	Pn	**Pn**	**20 37 25.2**	**-0.8**
RAYN	**Ar Rayn**	**7.32**	**102**	P	**Pn**	**20 37 27.8**	**+1.0**
RAYN	**Ar Rayn**	**7.32**	**102**	P	**Pn**	**20 37 27.8**	**+1.0**
SLTI	**Sal'it**	**7.38**	**342**	Pn	**Pn**	**20 37 26.1**	**-1.5**
MMLI	**Mount Malkishu**	**7.47**	**345**	Pn	**Pn**	**20 37 28.4**	**-0.4**
OFRI	**'Ofer**	**7.75**	**343**	Pn	**Pn**	**20 37 32.0**	**-0.7**
MMA0	**Mount Meron ar**	**8.03**	**346**	Pn	**Pn**	**20 37 35.0**	**-1.5**
MMAI	**Mount Meron Ar**	**8.03**	**346**	Pn	**Pn**	**20 37 34.9**	**-1.6**
MMAI				Pg	Pb	20 38 04.2	+4.9
MMAI				Lg	Lg	20 39 54.4	
MMAI	**Mount Meron Ar**	**8.03**	**346**	Pn	**Pn**	**20 37 34.9**	**-1.6**
	comp=E,16nm,0.3s,baz=153,slow=15,SNR=58						
MMAI				Pg	Pb	20 38 04.2	+4.9
	comp=E,6.8nm,0.3s,baz=150,slow=15,SNR=5.1						
MMAI				Lg	Lg	20 39 54.4	
	comp=E,18nm,0.3s,baz=161,slow=35,SNR=6.5						
MMAI	**Mount Meron Ar**	**8.03**	**346**	Pn	**Pn**	**20 37 34.9**	**-1.6**
BHI	**Bhannes**	**8.84**	**349**	*e*P	**Pn**	**20 37 47.2**	**-0.5**
HWQ	**Hawqa**	**9.16**	**351**	*e*P	**Pn**	**20 37 53.1**	**+0.9**
NAY	**Al-Naaiem**	**9.40**	**63**	*e*P	**Pn**	**20 37 55.4**	**0.0**
NAY				AML	AML	20 39 36.9	
	comp=Z,24nm,0.6s						
NAY	**Al-Naaiem**	**9.40**	**63**	*e*P	**Pn**	**20 37 55.4**	**0.0**
RDF	**Al-Radifah**	**9.53**	**65**	*e*P	**Pn**	**20 37 57.6**	**+0.5**
RDF				AML	AML	20 39 42.5	
	comp=Z,39nm,0.6s						
RDF	**Al-Radifah**	**9.53**	**65**	*e*P	**Pn**	**20 37 57.6**	**+0.5**
KBD	**Kabd**	**9.74**	**64**	*e*P	**Pn**	**20 37 59.9**	**-0.1**
KBD	**Kabd**	**9.74**	**64**	*e*P	**Pn**	**20 37 59.9**	**-0.1**
QRN	**Al-Qurain**	**9.78**	**67**	*e*P	**Pn**	**20 38 00.4**	**-0.1**
QRN				AML	AML	20 39 39.9	
	comp=Z,32nm,0.4s						
CSS	**Prodhromos**	**10.42**	**340**	Pn	**Pn**	**20 38 09.6**	**+0.3**
CSS	**Prodhromos**	**10.42**	**340**	Pn	**Pn**	**20 38 09.6**	**+0.3**
LKFR	**Kufra**	**13.21**	**269**	*i* P	**Pn**	**20 38 46.9**	**-0.5**
	comp=Z,83nm,1.8s,SNR=81						
BR131	**Keskin Array S**	**14.87**	**348**	*e*Pn	**P**	**20 39 13.7**	**-2.2**
	comp=Z,2.4nm,0.8s						
BRTR	**Keskin Array B**	**14.87**	**348**	Pn	**Pn**	**20 39 11.2**	**+1.1**
BRTR	**Keskin Array B**	**14.87**	**348**	Pn	**Pn**	**20 39 11.2**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=163,slow=15,SNR=4.6						
LUJL	**Ujela**	**15.10**	**289**	*i* P	**Pn**	**20 39 13.9**	**+0.8**
	comp=Z,109nm,1.5s,SNR=80						
ANTO	**Ankara**	**15.18**	**345**	P	**P**	**20 39 20.3**	**+1.0**
ANTO				pmax	pmax		
	comp=Z,52nm,1.8s						
ANTO	**Ankara**	**15.18**	**345**	Pn	**P**	**20 39 20.3**	**+1.0**
	comp=Z,52nm,1.8s						
ANTO	**Ankara**	**15.18**	**345**	P	**P**	**20 39 20.3**	**+1.0**
	comp=Z,52nm,1.8s						
GNI	**Garni**	**16.02**	**20**	*e*Pn	**P**	**20 39 27.1**	**-1.7**
	comp=Z,62nm,1.5s						
GNI	**Garni**	**16.02**	**20**	Pn	**P**	**20 39 27.3**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=267,slow=2.4,SNR=14						
GNI				LR	LR	20 46 21.9	
	comp=Z,513nm,20.2s,baz=47,slow=40						
ASHO	**Ashiyiah**	**16.67**	**88**	⇓P	**Pn**	**20 39 34.6**	**+1.0**
	SNR=7.1						
ASHO	**Ashiyiah**	**16.67**	**88**	P	**Pn**	**20 39 34.6**	**+1.0**
	SNR=7.1						
HATD	**Hatta, Dubai**	**16.72**	**87**	⇓P	**Pn**	**20 39 34.3**	**+0.1**
	SNR=7.6						
HATD	**Hatta, Dubai**	**16.72**	**87**	P	**Pn**	**20 39 34.3**	**+0.1**
	SNR=7.6						
AKH	**Akhalkalaki**	**16.86**	**15**	P	**P**	**20 39 38.0**	**0.0**
ARQ	**Araqi**	**17.27**	**92**	⇓P	**Pn**	**20 39 41.1**	**-0.1**
	SNR=8.3						
ARQ	**Araqi**	**17.27**	**92**	P	**Pn**	**20 39 41.1**	**-0.1**
	SNR=8.3						
DGRG	**David-gareji**	**17.41**	**20**	P	**P**	**20 39 45.5**	**+1.5**
TBLG	**Delisi**	**17.48**	**18**	P	**P**	**20 39 45.8**	**+1.0**
TBLG	**Delisi**	**17.48**	**18**	P	**P**	**20 39 45.8**	**+1.0**
GOR	**Gori**	**17.55**	**16**	P	**P**	**20 39 47.0**	**+1.4**
CHVG	**Ch'k'valeri**	**17.83**	**11**	P	**P**	**20 39 52.7**	**+4.1**
HOQ	**Hoqain**	**17.95**	**91**	⇑P	**P**	**20 39 50.6**	**+0.6**
	SNR=9.4						
HOQ	**Hoqain**	**17.95**	**91**	P	**P**	**20 39 50.6**	**+0.6**
	SNR=9.4						
ONI	**Oni**	**17.97**	**14**	P	**P**	**20 39 51.6**	**+1.4**
BSY	**Bisya**	**18.00**	**94**	⇑P	**P**	**20 39 52.9**	**+2.3**
	SNR=10						
BSYO	**Bisya**	**18.04**	**94**	P	**P**	**20 39 52.9**	**+1.9**
	SNR=10						
GUDG	**Gudauri**	**18.10**	**16**	P	**P**	**20 39 53.9**	**+2.2**
SOC	**Sochi**	**18.40**	**5**	*c i*P	**P**	**20 39 54.0**	**-0.8**
SOC				*e*		20 43 17.0	
SOC				pmax	pmax		
	comp=Z,16nm,1.2s						
SOC				MLR	MLR		
	comp=Z,224nm,11.0s						
SOC	**Sochi**	**18.40**	**5**	*i* P	**P**	**20 39 54.0**	**-0.8**
	comp=Z,16nm,1.2s						
SMDO	**Samad**	**18.70**	**92**	⇓P	**Pn**	**20 39 59.4**	**+0.5**
	SNR=7.8						
SMDO	**Samad**	**18.70**	**92**	P	**Pn**	**20 39 59.4**	**+0.5**
	SNR=7.8						
JMDO	**Jabal Madar**	**18.89**	**94**	⇓P	**Pn**	**20 40 01.9**	**+0.9**
	SNR=9.7						
JMDO	**Jabal Madar**	**18.89**	**94**	P	**Pn**	**20 40 01.9**	**+0.9**
	SNR=9.7						
KBZ	**Khabaz**	**18.96**	**12**	P	**Pn**	**20 40 02.0**	**+0.4**
KBZ	**Khabaz**	**18.96**	**12**	P	**Pn**	**20 40 02.0**	**+0.4**
KBZ	**Khabaz**	**18.96**	**12**	P	**Pn**	**20 40 02.0**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=202,slow=11,SNR=9.3						
KBZ				LR	LR	20 48 05.4	
	comp=Z,384nm,19.7s,baz=189,slow=40						
KBZ	**Khabaz**	**18.96**	**12**	P	**Pn**	**20 40 02.0**	**+0.4**
MAK	**Makhachkala**	**19.45**	**22**	*e*P	**P**	**20 40 05.7**	**-0.7**
MAK				*e*S	**S**	**20 43 46.5**	**+0.7**
MAK				pmax	pmax		
	comp=Z,45nm,0.9s						
MAK				MLR	MLR		
	comp=Z,391nm,14.0s						
MAK	**Makhachkala**	**19.45**	**22**	*e*P	**P**	**20 40 05.7**	**-0.7**
	comp=Z,45nm,0.9s						
MAK				*e*S	**S**	**20 43 46.5**	**+0.7**
	comp=Z,391nm,14.0s						
ANN	**Anapa**	**19.55**	**359**	*c i*P	**Pn**	**20 40 08.4**	**-0.2**
ANN				*e*S	**Sn**	**20 43 48.2**	**+0.5**
ANN				pmax	pmax		
	comp=Z,34nm,1.1s						
ANN				MLR	MLR		
	comp=Z,193nm,16.0s						
ANN	**Anapa**	**19.55**	**359**	*i* P	**Pn**	**20 40 08.4**	**-0.2**
	comp=Z,34nm,1.1s						
ANN				*e*S	**Sn**	**20 43 48.2**	**+0.5**
	comp=Z,193nm,16.0s						
LJFR	**Jufra**	**19.84**	**286**	*i* P	**Pn**	**20 40 13.4**	**+1.0**
	comp=Z,78nm,1.7s,SNR=53						
SIM	**Simferopol'**	**19.90**	**353**	*e*P	**P**	**20 40 11.7**	**+0.4**
SIM				*e*S	**S**	**20 43 52.2**	**-2.6**
SIM				pmax	pmax		
	comp=Z,45nm,2.7s						
SIM	**Simferopol'**	**19.90**	**353**	*e*P	**P**	**20 40 11.7**	**+0.4**
	comp=Z,45nm,2.7s						
SIM				*e*S	**S**	**20 43 52.2**	**-2.6**
GOF	**Gofitskoye**	**20.27**	**11**	*e*P	Pn	20 40 30.4	+13
GOF				pmax	pmax		
	comp=Z,70nm,1.5s						
LUMB	**Murzuk**	**20.69**	**278**	*i* P	Pn	20 40 24.4	+1.9
	comp=Z,59nm,1.9s,SNR=52						
MLR	**Muntele Rosu**	**22.34**	**338**	P	**P**	**20 40 39.5**	**+1.8**
MLR	**Muntele Rosu**	**22.34**	**338**	P	**P**	**20 40 39.5**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=178,slow=12						
MLR	**Muntele Rosu**	**22.34**	**338**	P	**P**	**20 40 39.5**	**+1.8**
TIP	**Timpagrande**	**22.46**	**313**	*e*Pn	**P**	**20 40 40.1**	**+1.1**
	comp=Z,71nm,1.8s						
TIP	**Timpagrande**	**22.46**	**313**	*e*Pn	**P**	**20 40 40.1**	**+1.1**
	comp=Z,71nm,1.8s						
CEL	**Celeste**	**22.58**	**310**	*e*Pn	**P**	**20 40 40.2**	**-0.1**
	comp=Z,42nm,1.5s						
CEL	**Celeste**	**22.58**	**310**	*e*Pn	**P**	**20 40 40.2**	**-0.1**
	comp=Z,42nm,1.5s						
GHAR	**Gharyan**	**22.63**	**293**	*i* P	**P**	**20 40 43.5**	**+2.6**
	comp=Z,180nm,1.7s,SNR=51						
GRUS	**Gruza**	**23.21**	**328**	⇑*i*P	**P**	**20 40 47.5**	**+0.8**
CUC	**Castrocucco**	**23.51**	**314**	*e*Pn	**P**	**20 40 50.1**	**+0.4**
	comp=Z,18nm,1.4s						
CUC	**Castrocucco**	**23.51**	**314**	*e*Pn	**P**	**20 40 50.2**	**+0.4**
	comp=Z,18nm,1.4s						
DIVS	**Divibare**	**23.72**	**327**	⇓*i*P	**P**	**20 40 51.7**	**-0.2**
BBLS	**Lazići**	**23.85**	**326**	*e*P	**P**	**20 40 50.8**	**-2.3**
BUR08	**Bucovina Ar. S**	**24.48**	**339**	*e*Pn	**P**	**20 40 59.9**	**+1.0**
BUR08	**Bucovina Ar. S**	**24.48**	**339**	*e*Pn	**P**	**20 40 59.9**	**+1.0**
FGSL	**Fruska Gora**	**24.59**	**329**	⇑*i*P	**P**	**20 40 58.7**	**-1.1**
VORD	**Divnogorie**	**25.74**	**2**	*e*P	**P**	**20 41 11.2**	**+1.0**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VORD				pmax	pmax		
	comp=N,30nm,1.4s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.7s						
VORD	**Divnogorie**	**25.74**	**2**	*e*P	**P**	**20 41 11.2**	**+1.0**
	comp=E,30nm,1.4s						
VSR	**Storozhevoye**	**25.99**	**2**	*e*P	**P**	**20 41 11.8**	**-0.6**
VSR				pmax	pmax		
	comp=N,30nm,1.1s						
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				pmax	pmax		
	comp=E,20nm,1.6s						
VSR	**Storozhevoye**	**25.99**	**2**	*e*P	**P**	**20 41 11.8**	**-0.6**
VRHR	**Novokhopersk**	**26.02**	**6**	*e*P	**P**	**20 41 13.7**	**+1.0**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=N,40nm,0.9s						
VRHR				pmax	pmax		
	comp=E,6.0nm,0.4s						
VRHR	**Novokhopersk**	**26.02**	**6**	*e*P	**P**	**20 41 13.7**	**+1.0**
	comp=E,40nm,0.9s						
AK02	**Malin Array Si**	**26.23**	**348**	*e*P	**P**	**20 41 13.7**	**-0.9**
AK02	**Malin Array Si**	**26.23**	**348**	*e*P	**P**	**20 41 13.7**	**-0.9**
AK01	**Malin Array Si**	**26.27**	**348**	*e*P	**P**	**20 41 14.6**	**-0.3**
AK01	**Malin Array Si**	**26.27**	**348**	*e*P	**P**	**20 41 14.6**	**-0.3**
KIEV	**Kiev**	**26.27**	**348**	*e*P	**P**	**20 41 14.9**	**0.0**
KIEV				pmax	pmax		
	comp=Z,40nm,1.4s						
KIEV	**Kiev**	**26.27**	**348**	*e*P	**P**	**20 41 14.9**	**0.0**
	comp=Z,40nm,1.4s						
KIEV	**Kiev**	**26.27**	**348**	*e*P	**P**	**20 41 14.9**	**0.0**
	comp=Z,40nm,1.4s						
AKASG	**Malin Array Be**	**26.27**	**348**	*ce*P	**P**	**20 41 13.8**	**-1.2**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKASG	**Malin Array Be**	**26.27**	**348**	P	**P**	**20 41 14.7**	**-0.3**
AKASG				PcP	**PcP**	**20 44 41.1**	**0.0**
AKASG	**Malin Array Be**	**26.27**	**348**	P	**P**	**20 41 14.7**	**-0.3**
	comp=Z,6.1nm,0.9s,baz=166,slow=8.8,SNR=4.7						
AKASG				PcP	**PcP**	**20 44 41.1**	**0.0**
	comp=Z,0.3nm,0.3s,baz=188,slow=2.8,SNR=4.3						
AKASG	**Malin Array Be**	**26.27**	**348**	P	**P**	**20 41 14.7**	**-0.3**
AQU	**L'Aquila**	**26.32**	**317**	*e*P	**P**	**20 41 16.9**	**+1.3**
	comp=Z,73nm,1.8s						
AQU	**L'Aquila**	**26.32**	**317**	*e*P	**P**	**20 41 16.9**	**+1.3**
	comp=Z,73nm,1.8s						
UZH	**Uzhgorod**	**26.32**	**337**	*e*P	**P**	**20 41 16.3**	**+0.9**
UZH	**Uzhgorod**	**26.32**	**337**	*e*P	**P**	**20 41 16.3**	**+0.9**
KEST	**Kesra**	**26.50**	**300**	*e*P	**P**	**20 41 19.5**	**+2.2**
KEST	**Kesra**	**26.50**	**300**	P	**P**	**20 41 19.8**	**+2.5**
	comp=Z,3.6nm,1.0s,baz=92,slow=0.9,SNR=12						
KEST	**Kesra**	**26.50**	**300**	*e*P	**P**	**20 41 19.5**	**+2.2**
MBAR	**Mbarara**	**26.53**	**196**	LR	LR	20 51 10.4	
	comp=Z,319nm,19.9s,baz=21,slow=35						
KOLS	**Kolonicke sedl**	**26.58**	**337**	*e*P	**P**	**20 41 19.3**	**+1.5**
KOLS				pmax	pmax		
	comp=Z,57nm,2.9s						
KOLS	**Kolonicke sedl**	**26.58**	**337**	*e*P	**P**	**20 41 19.3**	**+1.5**
KOLS	**Kolonicke sedl**	**26.58**	**337**	*e*P	**P**	**20 41 19.3**	**+1.5**
	comp=Z,57nm,2.9s						
PSZ	**Piszkesteto**	**26.67**	**333**	P	**P**	**20 41 19.0**	**+0.3**
PSZ				pmax	pmax		
	comp=Z,11nm,1.3s						
PSZ	**Piszkesteto**	**26.67**	**333**	P	**P**	**20 41 19.0**	**+0.3**
	comp=Z,11nm,1.3s						
PSZ	**Piszkesteto**	**26.67**	**333**	P	**P**	**20 41 19.0**	**+0.3**
	comp=Z,11nm,1.3s						
CRVS	**Cervenica-Dubn**	**26.85**	**336**	*e*P	**P**	**20 41 19.0**	**-1.2**
CRVS				pmax	pmax		
	comp=Z,4.0nm,1.3s						
CRVS	**Cervenica-Dubn**	**26.85**	**336**	*e*P	**P**	**20 41 19.0**	**-1.2**
CRVS	**Cervenica-Dubn**	**26.85**	**336**	*e*P	**P**	**20 41 19.0**	**-1.2**
	comp=Z,4.0nm,1.3s						
KWP	**Kalwaria Pacla**	**27.02**	**338**	*e*P	**P**	**20 41 22.8**	**+1.0**
KWP				pmax	pmax		
	comp=Z,35nm,1.7s						
KWP	**Kalwaria Pacla**	**27.02**	**338**	*e*P	**P**	**20 41 22.8**	**+1.0**
	comp=Z,35nm,1.7s						
KWP	**Kalwaria Pacla**	**27.02**	**338**	*e*P	**P**	**20 41 22.8**	**+1.0**
	comp=Z,35nm,1.7s						
VYHS	**Vyhne**	**27.56**	**332**	*e*P	**P**	**20 41 27.7**	**+1.1**
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.9s						
VYHS	**Vyhne**	**27.56**	**332**	*e*P	**P**	**20 41 27.7**	**+1.1**
VYHS	**Vyhne**	**27.56**	**332**	*e*P	**P**	**20 41 27.7**	**+1.1**
	comp=Z,10.0nm,1.9s						
CONA	**Conrad Observa**	**28.47**	**328**	⇓*i*P	**P**	**20 41 36.0**	**+1.1**
	comp=Z,7.2nm,1.9s						
CONA	**Conrad Observa**	**28.47**	**328**	P	**P**	**20 41 36.0**	**+1.1**
	comp=Z,7.2nm,1.9s						
KBL	**Kabul**	**28.64**	**64**	P	P	20 41 33.5	-3.2
KBL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KBL	**Kabul**	**28.64**	**64**	P	P	20 41 33.5	-3.2
	comp=Z,1.7nm,0.5s						
OKC	**Ostrava-Krasne**	**28.89**	**333**	*e*P	**P**	**20 41 39.1**	**+0.7**
OKC	**Ostrava-Krasne**	**28.89**	**333**	*e*P	**P**	**20 41 39.1**	**+0.7**
OKC	**Ostrava-Krasne**	**28.89**	**333**	*e*P	**P**	**20 41 39.1**	**+0.7**
MORC	**Moravsky Berou**	**29.09**	**333**	*e*P	**P**	**20 41 41.1**	**+0.8**
VRAC	**Vranov**	**29.14**	**331**	P	**P**	**20 41 41.7**	**+1.0**
VRAC	**Vranov**	**29.14**	**331**	P	**P**	**20 41 41.7**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=163,slow=9.6,SNR=5.2						
VRAC	**Vranov**	**29.14**	**331**	P	**P**	**20 41 41.7**	**+1.0**
TAM	**Tamanrasset**	**29.45**	**272**	*e*P	**P**	**20 41 45.8**	**+1.9**
TAM				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TAM	**Tamanrasset**	**29.45**	**272**	*e*P	**P**	**20 41 45.8**	**+1.9**
	comp=Z,9.2nm,1.4s						
TAM	**Tamanrasset**	**29.45**	**272**	*e*P	**P**	**20 41 45.8**	**+1.9**
	comp=Z,9.0nm,1.4s						
TREC	**Trest**	**29.62**	**330**	*e*P	**P**	**20 41 46.0**	**+1.0**
TREC	**Trest**	**29.62**	**330**	*e*P	**P**	**20 41 46.0**	**+1.0**
TREC	**Trest**	**29.62**	**330**	*e*P	**P**	**20 41 46.0**	**+1.0**
AKTK	**Aktyubinsk**	**29.67**	**27**	P	**P**	**20 41 46.4**	**+1.0**
AKTO	**Aktyubinsk**	**29.67**	**27**	P	**P**	**20 41 46.4**	**+1.0**
AKTO	**Aktyubinsk**	**29.67**	**27**	P	**P**	**20 41 46.4**	**+1.0**
AKTO	**Aktyubinsk**	**29.67**	**27**	P	**P**	**20 41 46.4**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=208,slow=23,SNR=4.0						
AKTO	**Aktyubinsk**	**29.67**	**27**	P	**P**	**20 41 46.4**	**+1.0**
OBN	**Obninsk**	**29.88**	**359**	⇑*e*P	**P**	**20 41 46.7**	**-0.4**
OBN				*e*		20 42 42.5	
OBN				*e*S	**S**	**20 46 46.1**	**+2.6**
OBN				pmax	pmax		
	comp=Z,39nm,2.5s						
OBN				MLR	ML

comp=Z,27nm,1.7s
TKM2 Tokmak 2 35.66 51 *e*P **P 20 42 39.6 +1.5**
comp=Z,27nm,1.7s
TOA0 Torodi Ar. Sit 35.94 257 *e*P **P 20 42 41.8 +1.3**
TOA0 Torodi Ar. Sit 35.94 257 *e*P **P 20 42 41.8 +1.3**
TORD Torodi Ar. Bea 35.94 257 P **P 20 42 41.4 +0.8**
TORD Torodi Ar. Bea 35.94 257 P **P 20 42 41.3 +0.8**
comp=Z,6.7nm,1.3s,baz=54,slow=7.7,SNR=13
TORD LR LR 20 58 36.3
comp=Z,184nm,18.4s,baz=135,slow=38
TORD Torodi Ar. Bea 35.94 257 P **P 20 42 41.3 +0.8**
BRVK Borovoye 37.02 33*c i*P **P 20 42 49.6 +0.3**
BRVK pmax pmax
comp=Z,8.0nm,1.2s
BRVK Borovoye 37.02 33 *e*P **P 20 42 48.6 -0.7**
comp=Z,17nm,1.7s
BRVK Borovoye 37.02 33 *i*P **P 20 42 49.6 +0.3**
comp=Z,8.0nm,1.2s
BVAR Borovoye Array 37.05 33 LR LR 21 01 25.1
comp=Z,222nm,18.5s,baz=120,slow=42
FINES FINESS Array B 37.07 351 P **P 20 42 49.2 -0.4**
FINES FINESS Array B 37.07 351 P **P 20 42 49.2 -0.4**
comp=Z,2.0nm,0.7s,baz=134,slow=8.2,SNR=8.0
FINES LR LR 21 01 21.0
comp=Z,80nm,18.1s,baz=90,slow=42
FINES FINESS Array B 37.07 351 P **P 20 42 49.2 -0.4**
ESDC Sonseca Array 37.65 303 P **P 20 42 55.7 +0.7**
ESDC Sonseca Array 37.65 303 P **P 20 42 55.7 +0.7**
comp=Z,1.0nm,0.7s,baz=84,slow=7.4,SNR=10
ESDC Sonseca Array 37.65 303 P **P 20 42 55.7 +0.7**
ESLA Sonseca Array 37.65 303 *e*P **P 20 42 55.3 +0.3**
comp=Z,6.4nm,1.6s
ESLA Sonseca Array 37.65 303 *e*P **P 20 42 55.3 +0.3**
comp=Z,6.4nm,1.6s
KAF Kangasniemi 37.68 351 *e*P **P 20 42 54.3 -0.5**
KAF pmax pmax
comp=Z,8.0nm,1.1s
KAF Kangasniemi 37.68 351 *e*p **P 20 42 54.3 -0.5**
comp=Z,8.2nm,1.1s
KAF Kangasniemi 37.68 351 *e*P **P 20 42 54.3 -0.5**
comp=Z,8.0nm,1.1s
JOF Joensuu 37.94 355 *e*P **P 20 42 55.9 -1.0**
JOF pmax pmax
comp=Z,5.0nm,0.7s
JOF Joensuu 37.94 355 *e*p **P 20 42 55.9 -1.0**
comp=Z,4.6nm,0.7s
JOF Joensuu 37.94 355 *e*P **P 20 42 55.9 -1.0**
comp=Z,5.0nm,0.7s
HFS Hagfors 38.65 341 LR LR 21 00 24.8
comp=Z,90nm,18.5s,baz=173,slow=38
NAO01 NORSAR Array S 40.07 340 *e*P **P 20 43 14.2 -0.7**
NAO01 NORSAR Array S 40.07 340 *e*P **P 20 43 14.2 -0.7**
NB2 NORSAR Subarra 40.12 340 P **P 20 43 14.5 -0.8**
comp=Z,8.7nm,1.1s,baz=141,slow=8.6
NB2 NORSAR Subarra 40.12 340 P **P 20 43 14.5 -0.8**
comp=Z,8.7nm,1.1s,baz=141,slow=8.3,SNR=8.0
NOA NORSAR Array B 40.12 340 P **P 20 43 14.7 -0.6**
NOA NORSAR Array B 40.12 340 P **P 20 43 14.7 -0.6**
comp=Z,2.8nm,0.9s,baz=138,slow=8.6,SNR=8.2
NOA LR LR 21 02 15.2
comp=Z,57nm,19.1s,baz=40,slow=40
NOA NORSAR Array B 40.12 340 P **P 20 43 14.7 -0.6**
KURBB Kurchatov Arra 40.26 40 P **P 20 43 17.4 +0.9**
comp=Z,5.3nm,0.9s,baz=251,slow=8.5,SNR=35
KURBB PcP **PcP 20 45 21.1 +0.9**
comp=Z,0.8nm,0.8s,baz=262,slow=3.8,SNR=5.0
KURBB LR LR 21 02 33.5
comp=Z,110nm,19.4s,baz=225,slow=40
KURK Kurchatov 40.35 40*c i*P **P 20 43 18.1 +0.8**
KURK pmax pmax
comp=Z,28nm,1.7s
KURK Kurchatov 40.35 40 P **P 20 43 17.4 +0.1**
KURK PcP **PcP 20 45 21.1 +0.6**
KURK Kurchatov SNR=11 **40.35 40** P **P 20 43 18.8 +1.5**
KURK Kurchatov SNR=11 **40.35 40** P **P 20 43 18.8 +1.5**
LSZ Lusaka 41.30 194 P **P 20 43 28.3 +2.8**
LSZ Lusaka 41.30 194 P **P 20 43 28.3 +2.8**
comp=Z,2.9nm,0.9s,baz=47,slow=7.0,SNR=4.7
LSZ Lusaka 41.30 194 P **P 20 43 28.3 +2.8**
MK31 Makanchi Array 41.33 47 *e*P **P 20 43 26.4 +0.9**
MK31 Makanchi Array 41.33 47 *e*P **P 20 43 26.4 +0.9**
MK31 Makanchi Array 41.33 47 *e*P **P 20 43 26.4 +0.9**
MKAR Makanchi Array 41.33 47 P **P 20 43 26.6 +1.1**
MKAR Makanchi Array 41.33 47 P **P 20 43 26.6 +1.1**
MKAR Makanchi Array 41.33 47 P **P 20 43 26.6 +1.1**
comp=Z,7.1nm,0.7s,baz=250,slow=6.7,SNR=92
MKAR LR LR 21 03 09.3
comp=Z,189nm,18.9s,baz=72,slow=40
MKAR Makanchi Array 41.33 47 P **P 20 43 26.5 +1.1**
OPO Ambohidratompo 44.49 167 P **P 20 43 53.5 +2.0**
OPO Ambohidratompo 44.49 167 P **P 20 43 53.5 +2.0**
comp=Z,3.1nm,0.8s,baz=36,slow=7.6,SNR=5.5
OPO Ambohidratompo 44.49 167 P **P 20 43 53.5 +2.0**
NVS Novosibirsk 44.56 36 *e*P **P 20 43 50.6 -0.9**
NVS pmax pmax
comp=Z,24nm,1.5s
NVS pmax pmax
comp=N,12nm,1.6s
NVS pmax pmax
comp=E,11nm,1.7s
NVS Novosibirsk 44.56 36 *e*P **P 20 43 50.6 -0.9**
comp=E,12nm,1.6s
DBIC Dimbokro 44.62 253 *e*P **P 20 43 52.9 +0.4**
comp=E,7.8nm,0.7s
DBIC Dimbokro 44.62 253 P **P 20 43 53.4 +0.9**
comp=E,7.9nm,0.6s,baz=43,slow=8.8,SNR=14
DBIC LR LR 21 03 37.7
comp=E,326nm,19.6s,baz=49,slow=38
DBIC Dimbokro 44.62 253 *e*P **P 20 43 52.9 +0.4**
comp=E,8.0nm,0.7s
ARCES ARCESS Array B 44.93 354 P **P 20 43 54.0 -0.3**
ARCES ARCESS Array B 44.93 354 P **P 20 43 54.0 -0.3**
comp=E,2.4nm,0.7s,baz=165,slow=9.9,SNR=9.9
ARCES LR LR 21 05 13.5
comp=E,106nm,18.2s,baz=183,slow=40
ARCES ARCESS Array B 44.93 354 P **P 20 43 54.0 -0.3**
ZALV Zalesovo Beam 45.09 38 P **P 20 43 55.8 +0.1**
ZALV Zalesovo Beam 45.09 38 P **P 20 43 55.8 +0.1**
ZALV Zalesovo Beam 45.09 38 P **P 20 43 55.8 +0.1**
comp=E,0.4nm,0.3s,baz=258,slow=5.9,SNR=7.9
ZALV LR LR 21 06 00.5
comp=E,89nm,18.5s,baz=244,slow=40
ZALV Zalesovo Beam 45.09 38 P **P 20 43 55.8 +0.1**
JMIC Jan Mayen 52.72 343 LR LR 21 08 22.2
comp=E,40nm,20.1s,baz=254,slow=37
GTA Gaotai 53.42 59 *e*P **P 20 45 00.9 +1.1**
GTA pP **pP 20 45 04.8 0.0**
GTA sP **sP 20 45 07.8 +1.1**
GTA pmax pmax
comp=E,8.0nm,1.1s
BOSA Boshof 54.84 193 P **P 20 45 12.0 +1.9**
BOSA Boshof 54.84 193 P **P 20 45 12.0 +1.9**
comp=Z,2.5nm,0.8s,baz=318,slow=6.4,SNR=3.9
BOSA LR LR 21 06 57.4
comp=Z,164nm,19.6s,baz=7.4,slow=34
BOSA Boshof 54.84 193 P **P 20 45 12.0 +1.9**
ZAK Zakamensk 55.59 45 *e*P **P 20 45 15.7 +0.3**
ZAK pmax pmax
comp=Z,4.0nm,1.6s
ZAK Zakamensk 55.59 45 *e*P **P 20 45 15.7 +0.3**
comp=Z,4.0nm,1.6s
TLY Talaya 55.85 43 *e*P **P 20 45 18.7 +1.5**
TLY pmax pmax
comp=Z,11nm,1.6s
TLY MLR MLR
comp=Z,79nm,18.0s
TLY Talaya 55.85 43 *e*P **P 20 45 18.7 +1.5**
comp=Z,79nm,18.0s
CHTO Chiang Mai 56.74 83 P **P 20 45 22.7 -1.3**
CHTO Chiang Mai 56.74 83 P **P 20 45 22.7 -1.3**
CHTO Chiang Mai 56.74 83 P **P 20 45 22.7 -1.3**
CMAR Chiang Mai Arr 56.85 84 P **P 20 45 24.9 +0.2**
CMAR Chiang Mai Arr 56.85 84 P **P 20 45 24.9 +0.2**
comp=Z,1.2nm,0.9s,baz=296,slow=9.3,SNR=8.2
CMAR LR LR 21 13 00.1
comp=Z,60nm,18.2s,baz=88,slow=40
CMAR Chiang Mai Arr 56.85 84 P **P 20 45 24.9 +0.2**
SONM Songino Array 57.68 48 P **P 20 45 30.9 +0.6**
SONM Songino Array 57.68 48 P **P 20 45 30.9 +0.6**
comp=Z,2.2nm,0.8s,baz=249,slow=6.2,SNR=6.8
SONM Songino Array 57.68 48 P **P 20 45 30.9 +0.6**
CD2 Chengdu 57.83 68 P **P 20 45 32.3 +0.7**
GYA Guiyang 61.37 72 *e*P **P 20 45 57.4 +1.2**
GYA pmax pmax
comp=Z,10.0nm,1.0s
HHC Hu-ho-hao-te 62.17 55‖ *e*P **P 20 46 01.0 -0.3**
HHC pP **pP 20 46 05.6 -0.7**
HHC sP **sP 20 46 08.0 -0.2**
HHC PP **PP 20 48 19.8 +1.9**
HHC PcS **PcS 20 50 42.9 -1.7**
HHC S **S 20 54 23.3 -3.1**
HHC ScS **SKKSac 20 55 48.6 -4.5**
HHC pmax pmax
comp=Z,45nm,1.0s
HHC pmax pmax
comp=Z,160nm,5.3s
HHC LR LR
comp=N,300nm,20.8s
HHC LR LR
comp=E,370nm,20.8s
HHC LR LR
comp=Z,240nm,20.8s
BJI Beijing 65.78 56 P **P 20 46 23.3 -1.6**
BJI S **S 20 55 08.3 -2.6**
BJI pmax pmax
comp=Z,10.0nm,1.3s
BJI LR LR
comp=N,130nm,20.1s
BJI LR LR
comp=E,170nm,17.6s
BJI LR LR
comp=Z,67nm,30.4s
TIXI Tiksi 66.68 20 *e*P **P 20 46 29.1 -1.0**
TIXI pmax pmax
comp=Z,10.0nm,2.5s
TIXI Tiksi 66.68 20 *e*P **P 20 46 29.1 -1.0**
comp=Z,10.0nm,2.5s
NJ2 Nanjing 70.01 63 *e*P **P 20 46 50.6 -1.1**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s
NJ2 LR LR
comp=Z,180nm,23.2s
CN2 Changchun 71.47 50 *e*P **P 20 47 01.3 +0.9**
KSAR Wonju Array Be 75.28 55 P **P 20 47 23.0 0.0**
KSAR Wonju Array Be 75.28 55 P **P 20 47 23.0 0.0**
KSRS Korea Array 75.31 55 P **P 20 47 23.0 -0.1**
comp=Z,1.1nm,0.6s,baz=274,slow=5.1,SNR=4.9
KSRS LR LR 21 26 24.9
comp=Z,62nm,19.3s,baz=29,slow=40
KSRS Korea Array 75.31 55 P **P 20 47 23.0 -0.1**
comp=Z,62nm,19.3s
USRK Ussuriysk Arra 75.80 48 P **P 20 47 24.8 -0.9**
comp=Z,2.1nm,0.7s,baz=299,slow=5.3,SNR=7.4
RCBR Riachuelo 77.77 258 LR LR 21 19 58.0
comp=Z,105nm,19.4s,baz=60,slow=34
SEY Seymchan 78.25 25 *e*P **P 20 47 40.5 +1.3**
SEY Seymchan 78.25 25 *e*P **P 20 47 40.5 +1.3**
BILL Bilibino 79.63 17‖ *e*P **P 20 47 47.1 +0.4**
BILL *e* 20 50 46.1
BILL *e*S **SKSac 20 58 00.0 -2.6**
BILL pmax pmax
comp=Z,7.0nm,1.6s
BILL Bilibino 79.63 17 *e*P **P 20 47 47.1 +0.4**
comp=Z,7.0nm,1.6s
ASAJ Asahikawa 82.76 45 LR LR 21 29 05.9
comp=Z,81nm,18.2s,baz=1.3,slow=39
MJAR Matsushiro Arr 83.22 53 P **P 20 48 06.2 -0.3**
MJAR Matsushiro Arr 83.22 53 P **P 20 48 06.2 -0.3**
comp=Z,0.5nm,0.5s,baz=330,slow=6.6,SNR=5.4
MJAR Matsushiro Arr 83.22 53 P **P 20 48 06.2 -0.3**
JHJ Hachijo jima 2 85.92 55 LR LR 21 32 13.3
comp=Z,56nm,19.9s,baz=131,slow=40
PETK Petropavlovsk- 86.28 32 LR LR 21 32 00.4
comp=Z,77nm,18.1s,baz=151,slow=39
YKA Yellowknife Ar 89.84 348 P **P 20 48 38.7 +0.5**
YKA Yellowknife Ar 89.84 348 P **P 20 48 38.7 +0.5**
comp=Z,0.3nm,0.5s,baz=33,slow=5.1,SNR=8.6
YKA Yellowknife Ar 89.84 348 P **P 20 48 38.7 +0.5**
FFC Flin Flon 93.18 338 *i*P **P 20 48 54.8 +0.9**
FFC Flin Flon 93.18 338 *i*P **P 20 48 54.8 +0.9**
MAW Mawson 94.43 171 LR LR 21 30 01.5
comp=Z,72nm,19.7s,baz=174,slow=34

JMA 19 20:44:32.2±0.1, 42.94N×146.77E, h60km±2km, M3.7, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.86**	**300**	P	Pn	20 44 48.6	+0.2
NEM2				*e*S	Sn	20 45 00.8	+0.4
JAK	**Akkeshi**	**1.52**	**273**	P	Pn	20 44 57.6	+0.5
JAK				*e*S	Sn	20 45 16.3	+0.3
JRA	**Rausu**	**1.56**	**310**	P	Pn	20 44 58.1	+0.4
JRA				*e*S	Sn	20 45 17.4	+0.5
JNK	**Nakash**	**1.63**	**294**	P	Pn	20 44 58.7	+0.1
JNK				*e*S	Sn	20 45 18.1	-0.5
JOB	**Onbets**	**2.16**	**270**	P	Pn	20 45 06.4	+0.7
JOB				*e*S	Sn	20 45 31.8	+0.4
JAR	**Ashorobuto**	**2.23**	**280**	P	Pn	20 45 07.6	+0.9
JAR				*e*S	Sn	20 45 33.6	+0.5
JTKR	**Abashiri--Toko**	**2.33**	**297**	P	Pn	20 45 09.4	+1.4
JTKR				*e*S	Sn	20 45 36.8	+1.4
JCH	**Churui**	**2.53**	**264**	P	Pn	20 45 11.5	+0.7
JCH				*e*S	Sn	20 45 40.5	0.0
JMP	**Maruseppu**	**2.70**	**294**	P	Pn	20 45 14.8	+1.6
JNBK	**Urakawa-nobuka**	**3.04**	**259**	P	Pn	20 45 18.6	+0.8
JFR	**Furan**	**3.07**	**276**	P	Pn	20 45 19.7	+1.5
JFR				*e*S	Sn	20 45 55.4	+1.6
JKK2	**Kamakawa 2**	**3.08**	**289**	P	Pn	20 45 20.2	+1.9
JBT2	**Biratori 2**	**3.24**	**269**	P	Pn	20 45 21.1	+0.5
JBT2				*e*S	Sn	20 45 58.4	+0.4

IDC 19 20:49:42.6±51.0, 18.59S×178.85W, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.5/3, Error ellipse: s-maj=928.4km s-min=154.9km az=80.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.94**	**242**	P	P	20 57 02.4	+0.4
	0.5nm,0.7s,baz=82,slow=13,SNR=2.7						
WRA	**Warramunga Arr**	**44.10**	**260**	P	P	20 57 52.2	-0.8
	0.3nm,0.8s,baz=101,slow=7.9,SNR=4.3						
ASAR	**Alice Springs**	**44.20**	**255**	P	P	20 57 53.9	0.0
	0.9nm,0.7s,baz=85,slow=8.6,SNR=12						

IDC 19 20:58:52.8±3.3, 17.43S×176.29W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/19, mbtmp4.0/3, Error ellipse: s-maj=181.1km s-min=34.0km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.62**	**241**	P	P	21 06 34.2	-0.5
	0.7nm,0.5s,baz=69,slow=9.7,SNR=4.6						
WRA	**Warramunga Arr**	**46.70**	**259**	P	P	21 07 23.3	-0.5
	0.5nm,0.5s,baz=98,slow=7.0,SNR=24						
ASAR	**Alice Springs**	**46.86**	**254**	P	P	21 07 25.6	+0.6
	6.1nm,0.6s,baz=89,slow=8.1,SNR=60						
ARCES	**ARCESS Array B**	**126.19**	**351**	PKP	PKPdf	21 17 56.4	-0.3
	1.2nm,0.7s,baz=90,slow=1.8,SNR=3.7						
BRTR	**Keskin Array B**	**145.85**	**317**	PKPbc	PKPdf	21 18 33.1	-0.9
	0.8nm,0.6s,baz=120,slow=5.1,SNR=5.2						
GERES	**GERESS Array B**	**147.63**	**348**	PKPbc	PKPbc	21 18 39.0	-0.4
	0.2nm,0.5s,baz=28,slow=4.4,SNR=3.0						

*GUC **19** 21:06:35.3±0.6, 18.53S×71.23W, h38km±6km, ML3.9*
*ISCJB **19** 21:06:37.8±0.7, 18.55S±0.06×71.06W±0.08, h73km±7km, mb4.0/6, Error ellipse: s-maj=13.6km s-min=7.2km az=147.6*
*IDC **19** 21:06:42.5±2.8, 18.34S×71.04W, h102km±23km, mb3.9/6, mb1 3.8/9, mb1mx3.6/22, mbtmp3.8/9, MS3.3/1, Ms1 3.3/1, ms1mx2.5/29, Error ellipse: s-maj=31.8km s-min=21.8km az=16.0*

ISC 19 21:06:35.8±3.3, 18.5S±0.1×71.3W±0.2, h47km±25km, n17, σ0s81/20, mb4.2/6, 3C, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARCH	**Arica**	**0.90**	**92**	*e*P	**Pn**	**21 06 51.2**	**-1.0**
ARCH				*i*S	**Sn**	**21 07 03.9**	**-0.3**
ARCH				AML	AML	21 07 10.4	
	comp=E,6μm,0.2s						
PSGC	**Pisagua**	**1.56**	**137**⇑	*i*P	**Pn**	**21 07 00.8**	**-0.4**
PSGC				*e*S	**Sn**	**21 07 20.2**	**0.0**
PSGC				AML	AML	21 07 28.0	
	comp=E,943nm,0.6s						
MNMC	**Minimini**	**1.70**	**113**⇑	*i*P	**Pn**	**21 07 03.6**	**+0.2**
MNMC				*e*S	**Sn**	**21 07 24.8**	**+0.6**
MNMC				AML	AML	21 07 39.7	
	comp=E,3μm,0.5s						
HMBC	**Humberstone**	**2.22**	**145**⇑	*i*P	**Pn**	**21 07 10.1**	**-0.2**
HMBC				*e*S	**Sn**	**21 07 36.3**	**-0.3**
HMBC				AML	AML	21 07 38.8	
	comp=N,1μm,0.4s						
PB01	**Plate Boundary**	**3.06**	**147**	*e*P	**Pn**	**21 07 21.5**	**-0.4**
PB01				*i*S	**Sn**	**21 07 56.3**	**-1.0**
PB01				AML	AML	21 07 58.7	
	comp=E,489nm,0.2s						
LPAZ	**La Paz**	**3.68**	**55**	P	Pn	21 07 35.8	+5.0
	comp=E,2.6nm,0.3s,baz=239,slow=6.5,SNR=61						
NNA	**Nana**	**8.40**	**319**	P	Pn	21 08 42.1	+7.0
	comp=E,1.1nm,0.3s,baz=146,slow=15,SNR=2.8						
NNA				S	Sn	21 10 18.8	+10
	comp=E,0.8nm,0.3s,baz=139,slow=20,SNR=2.6						
SIV	**San Ignacio**	**10.03**	**77**	P	**Pn**	**21 08 59.3**	**+1.9**
	comp=E,1.6nm,0.3s,baz=290,slow=9.1,SNR=20						
SIV				LR	LR	21 13 22.2	
	comp=E,195nm,20.3s,slow=41						
BDFB	**Brasilia**	**22.39**	**86**	P	**P**	**21 11 30.5**	**0.0**
	comp=E,3.9nm,0.5s,baz=240,slow=10,SNR=7.0						
RCBR	**Riachuelo**	**36.68**	**74**	P	**P**	**21 13 38.3**	**-0.2**
	comp=E,5.7nm,0.7s,baz=155,slow=4.1,SNR=5.2						
SNAA	**Sanae**	**65.86**	**161**	P	**P**	**21 17 17.0**	**+0.8**
	comp=E,0.7nm,1.1s,baz=316,slow=12,SNR=4.5						
DBIC	**Dimbokro**	**70.04**	**76**	P	**P**	**21 17 42.8**	**-0.6**
	comp=E,2.1nm,0.6s,baz=238,slow=8.1,SNR=6.1						
TORD	**Torodi Ar. Bea**	**78.46**	**72**	P	**P**	**21 18 31.2**	**-1.2**
	comp=E,1.9nm,0.8s,baz=254,slow=5.5,SNR=24						
YKA	**Yellowknife Ar**	**87.61**	**341**	P	**P**	**21 19 18.1**	**-0.4**
	comp=E,1.1nm,0.6s,baz=140,slow=4.9,SNR=9.9						
WRA	**Warramunga Arr**	**134.32**	**215**	PKP	**PKPdf**	**21 25 50.5**	**+1.0**
	comp=E,0.2nm,0.6s,baz=138,slow=1.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**140.05**	**22**	PKP	**PKPdf**	**21 25 59.4**	**+0.5**
	comp=E,0.6nm,0.7s,baz=347,slow=4.6,SNR=3.9						
MKAR	**Makanchi Array**	**144.34**	**32**	PKP	**PKPab**	**21 26 05.1**	**+0.2**
	comp=E,0.7nm,0.6s,baz=322,slow=4.7,SNR=9.6						

*ISCJB **19** 21:09:03.4±0.5, 57.01N±0.05×155.83W±0.08, h75km±4km, mb3.7/16, Error ellipse: s-maj=10.4km s-min=4.8km az=139.8*
*IDC **19** 21:09:03.0±2.9, 57.21N×155.97W, h47km±24km, mb3.6/16, mb1 3.8/18, mb1mx3.7/31, mbtmp3.6/18, ML3.9/2, Error ellipse: s-maj=26.2km s-min=16.1km az=25.0*
*NEIC **19** 21:09:05.1, 56.96N×155.66W, h42km, ML3.1(AEIC), After AEIC.*

ISC 19 21:09:03.5±1.0, 56.95N±0.06×155.81W±0.04, h61km±9km, n63, σ1s12/71, mb3.9/16, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAHL	**Cahill**	**1.14**	**14**	P	**Pn**	**21 09 23.7**	**+0.2**
KABR	**Katmai Barrier**	**1.27**	**21**	P	**Pn**	**21 09 25.4**	**+0.2**
KABR				S	**Sn**	**21 09 42.1**	**+0.6**
ANPK	**Aniakchak Peak**	**1.28**	**266**	P	**Pn**	**21 09 26.5**	**+1.2**
ACHA	**Angle Creek He**	**1.29**	**11**	P	**Pn**	**21 09 25.8**	**+0.3**
ACHA				S	**Sn**	**21 09 41.4**	**-0.6**
ANNW	**Aniakchak Nort**	**1.32**	**272**	P	**Pn**	**21 09 27.6**	**+1.8**
KCE	**Katmai Mt Cerb**	**1.34**	**14**	P	**Pn**	**21 09 26.7**	**+0.5**
KABU	**Katmai Buttres**	**1.36**	**12**	P	**Pn**	**21 09 27.0**	**+0.6**
OHAK	**Old Harbor**	**1.40**	**78**	P	**Pn**	**21 09 26.6**	**-0.3**
KAKN	**Katmai Knife C**	**1.41**	**16**	P	**Pn**	**21 09 27.5**	**+0.4**
KAWH	**Katmai**	**1.54**	**20**	P	**Pn**	**21 09 28.8**	**0.0**
CHGN	**Chignik**	**1.58**	**247**	*e*Pn	**Pn**	**21 09 29.8**	**+0.5**
CHGN				*e*Sn	**Sn**	**21 09 47.7**	**-0.9**
KDAK	**Kodiak Island**	**1.94**	**63**	P	**Pn**	**21 09 33.8**	**-0.4**
KDAK				S	**Sn**	**21 09 56.0**	**-1.3**
KDAK				S	**Sn**	**21 09 56.1**	**-1.2**
KDAK	**Kodiak Island**	**1.94**	**63**	P	**Pn**	**21 09 33.7**	**-0.4**
	47nm,0.3s,baz=227,slow=6.9,SNR=504						
KDAK				S	**Sn**	**21 09 56.0**	**-1.3**
	46nm,0.3s,baz=148,slow=23,SNR=4.2						
VNHG	**Veniaminof 1**	**1.99**	**250**	P	**Pn**	**21 09 37.4**	**+2.5**
FOSS	**Fourpeaked Sta**	**2.17**	**30**	P	**Pn**	**21 09 37.5**	**+0.2**
FOSS				S	**Sn**	**21 10 03.1**	**-0.1**
MCNL	**McNeil River**	**2.38**	**19**	P	**Pn**	**21 09 40.6**	**+0.5**
OPT	**Oil Point**	**3.04**	**26**	P	**Pn**	**21 09 50.0**	**+0.9**
BRLK	**Bradley Lake**	**3.83**	**41**	P	**Pn**	**21 09 59.5**	**-0.5**
DFR	**Drift River**	**4.00**	**23**	P	**Pn**	**21 10 03.2**	**+0.9**
DTNA	**Dutton South F**	**4.04**	**246**	P	**Pn**	**21 10 04.2**	**+1.4**
DT1	**Dutton Round H**	**4.07**	**246**	P	**Pn**	**21 10 04.3**	**+1.1**
CKL	**Chakachamna La**	**4.52**	**21**	P	**Pn**	**21 10 12.4**	**+1.6**
STLK	**Strandline Lak**	**5.00**	**22**	P	**Pn**	**21 10 16.9**	**+0.9**
TT01	**Tatalina**	**5.98**	**359**	P	**Pn**	**21 10 30.4**	**+1.1**
PPLA	**Purkeypile**	**6.24**	**15**	P	**Pn**	**21 10 34.3**	**+1.3**
TRF	**Thorofare Moun**	**7.08**	**21**	*e*Pn	**Pn**	**21 10 43.6**	**-0.8**
	5.3nm,0.7s						
TRF				*e*Sn	**Sn**	**21 12 04.1**	**+0.7**
ILAR	**Eielson Array**	**8.96**	**25**	P	**Pn**	**21 11 07.7**	**-2.4**
ILAR				S	Sn	21 12 41.0	-8.4
ILAR	**Eielson Array**	**8.96**	**25**	P	**Pn**	**21 11 07.7**	**-2.4**
	0.5nm,0.3s,baz=216,slow=14,SNR=24						
ILAR				S	Sn	21 12 40.9	-8.4
	0.2nm,0.3s,baz=216,slow=24,SNR=4.4						
INK	**Inuvik**	**15.20**	**33**	P	**Pn**	**21 12 33.6**	**-0.4**
INK	**Inuvik**	**15.20**	**33**	P	**Pn**	**21 12 33.6**	**-0.4**
	0.4nm,0.3s,baz=257,slow=15,SNR=10						
YKA	**Yellowknife Ar**	**21.21**	**58**	P	**P**	**21 13 43.8**	**+0.1**
YKA	**Yellowknife Ar**	**21.21**	**58**	P	**P**	**21 13 43.8**	**+0.1**
	0.2nm,0.4s,baz=273,slow=9.5,SNR=5.3						
PETK	**Petropavlovsk-**	**26.51**	**282**	P	**P**	**21 14 34.4**	**-0.5**
PETK	**Petropavlovsk-**	**26.51**	**282**	P	**P**	**21 14 34.4**	**-0.5**
	1.1nm,0.5s,baz=74,slow=13,SNR=6.7						
NVAR	**Mina Array Bea**	**30.77**	**111**	P	**P**	**21 15 16.2**	**+3.1**
NVAR	**Mina Array Bea**	**30.77**	**111**	P	**P**	**21 15 16.2**	**+3.1**
	0.5nm,0.5s,baz=322,slow=12,SNR=2.3						
PDAR	**Pinedale Array**	**32.33**	**96**	P	**P**	**21 15 28.2**	**+1.4**
PDAR	**Pinedale Array**	**32.33**	**96**	P	**P**	**21 15 28.2**	**+1.4**
	0.5nm,0.4s,baz=298,slow=5.2,SNR=4.2						
TXAR	**Lajitas Array**	**45.47**	**105**	P	**P**	**21 17 18.3**	**+1.9**
TXAR	**Lajitas Array**	**45.47**	**105**	P	**P**	**21 17 18.3**	**+1.9**
	0.2nm,0.6s,baz=308,slow=4.5,SNR=3.4						
ARCES	**ARCESS Array B**	**53.82**	**359**	P	**P**	**21 18 18.4**	**-0.9**
ARCES	**ARCESS Array B**	**53.82**	**359**	P	**P**	**21 18 18.4**	**-0.9**
	2.4nm,1.0s,baz=7.3,slow=9.3,SNR=3.2						
NB2	**NORSAR Subarra**	**61.91**	**7**	P	**P**	**21 19 15.7**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=354,slow=6.9						
NOA	**NORSAR Array B**	**61.91**	**7**	P	**P**	**21 19 15.7**	**-0.4**
NOA	**NORSAR Array B**	**61.91**	**7**	P	**P**	**21 19 15.7**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=353,slow=6.7,SNR=10						
FINES	**FINESS Array B**	**61.94**	**359**	P	**P**	**21 19 15.2**	**-1.0**
FINES	**FINESS Array B**	**61.94**	**359**	P	**P**	**21 19 15.2**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=28,slow=9.7,SNR=6.1						
BVAR	**Borovoye Array**	**64.05**	**331**	P	**P**	**21 19 29.5**	**-0.8**
BVAR	**Borovoye Array**	**64.05**	**331**	P	**P**	**21 19 29.5**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=30,slow=6.8,SNR=11						
MKAR	**Makanchi Array**	**65.87**	**320**	P	**P**	**21 19 41.5**	**-0.8**
MKAR	**Makanchi Array**	**65.87**	**320**	P	**P**	**21 19 41.5**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=46,slow=4.2,SNR=3.7						
AKTO	**Aktyubinsk**	**69.39**	**338**	P	**P**	**21 20 03.4**	**-0.9**
AKTO	**Aktyubinsk**	**69.39**	**338**	P	**P**	**21 20 03.4**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=17,slow=5.7,SNR=13						
AKASG	**Malin Array Be**	**72.64**	**357**	P	**P**	**21 20 22.9**	**-1.0**
AKASG	**Malin Array Be**	**72.64**	**357**	P	**P**	**21 20 22.9**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=8.4,slow

n47,σ0876/65,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CORM	Corum	0.14	44	PG	Pg	21 57 29.5	-0.2
CORM				eSG	Sg	21 57 32.3	+0.3
CORM	Corum	0.14	44	*i* Pg	Pg	21 57 29.5	-0.2
CORM				eSg	Sg	21 57 32.3	+0.3
CDAG	Cicekdag	0.47	193	*i* P	Pg	21 57 35.3	-0.2
CDAG				*i* S	Sg	21 57 41.8	+0.1
CDAG	Cicekdag	0.47	193	*i* P	Pg	21 57 35.3	-0.2
CDAG				*i* S	Sg	21 57 41.8	+0.1
CTKT	Corum	0.59	22	*i* P	Pg	21 57 38.3	+0.5
CTKT				*i* S	Sg	21 57 45.6	0.0
CTKT	Corum	0.59	22	*i* P	Pg	21 57 38.3	+0.5
CTKT				*i* S	Sg	21 57 45.6	0.0
YOZ	Yozgat	0.77	125	ePG	Pg	21 57 40.1	-1.1
YOZ	Yozgat	0.77	125	ePg	Pg	21 57 40.1	-1.1
ELDT	Eldivan	0.92	297	eP	Pb	21 57 44.5	0.0
ELDT				eS	Sb	21 57 57.6	+0.6
ELDT	Eldivan	0.92	297	eP	Pb	21 57 44.6	0.0
ELDT				eS	Sb	21 57 57.6	+0.6
TOS	Tosya	1.02	339	ePG	Pg	21 57 45.4	-0.8
TOS	Tosya	1.02	339	ePg	Pg	21 57 45.4	-0.8
BBAL	Bala	1.19	244	*i* P	Pg	21 57 48.6	-0.7
BBAL				*i* S	Sb	21 58 05.1	+0.4
BBAL	Bala	1.19	244	*i* P	Pg	21 57 48.6	-0.7
BBAL				*i* S	Sb	21 58 05.1	+0.4
AFSR	Af˙ar-Bala (A	1.27	241	ePN	Pn	21 57 50.0	-0.4
AFSR	Af˙ar-Bala (A	1.27	241	ePn	Pn	21 57 50.0	-0.4
AVNT	Avonos	1.32	168	*i* P	Pn	21 57 50.0	-1.1
AVNT				*i* S	Sb	21 58 08.2	-0.4
AVNT	Avonos	1.32	168	*i* P	Pn	21 57 50.0	-1.1
AVNT				*i* S	Sb	21 58 08.2	-0.4
ANTO	Ankara	1.33	262	ePN	Pg	21 57 52.1	+0.1
ANTO	Ankara	1.33	262	ePn	Pg	21 57 52.1	+0.1
LOD	Lodumlu	1.35	263	ePN	Pb	21 57 51.7	-0.2
LOD	Lodumlu	1.35	263	ePn	Pb	21 57 51.7	-0.2
BYBT	Boyabat	1.40	8	ePN	Pn	21 57 51.6	-0.4
BYBT	Boyabat	1.40	8	ePn	Pn	21 57 51.6	-0.4
TOKA	Tokat	1.53	80	eP	Pn	21 57 54.3	+0.4
TOKA				eS	Sg	21 58 16.1	+0.4
TOKA	Tokat	1.53	80	eP	Pn	21 57 54.3	+0.4
TOKA				eS	Sg	21 58 16.1	+0.4
KVT	Kavak	1.54	49	ePN	Pn	21 57 53.8	-0.2
KVT	Kavak	1.54	49	ePn	Pn	21 57 53.8	-0.2
DIKM	Dikmen	1.67	20	ePN	Pn	21 57 54.8	-1.0
DIKM	Dikmen	1.67	20	ePn	Pn	21 57 54.8	-1.0
BALT	Daday	1.68	330	eP	Pb	21 57 57.8	+0.1
BALT				eS	Sb	21 58 18.6	-0.4
BALT	Daday	1.68	330	eP	Pb	21 57 57.8	+0.1
BALT				eS	Sb	21 58 18.6	-0.4
NIG	Nigde	1.97	178	ePN	Pb	21 58 01.4	-1.1
NIG	Nigde	1.97	178	ePn	Pb	21 58 01.4	-1.1
SULT	Sultanhani-AKS	2.03	203	ePN	Pn	21 58 01.9	+1.1
SULT	Sultanhani-AKS	2.03	203	ePn	Pn	21 58 01.9	+1.1
PINB	Pinarbasi	2.03	133	eP	Pb	21 58 03.5	-0.1
PINB				eS	Sb	21 58 29.4	+0.4
PINB	Pinarbasi	2.03	133	eP	Pb	21 58 03.5	-0.1
PINB				eS	Sb	21 58 29.4	+0.4
SARI	SarD1z-Kayseri	2.20	129	ePN	Pb	21 58 05.5	-0.9
SVRH	Sivrihisar-ESK	2.38	256	ePN	Pn	21 58 05.6	0.0
SVRH	Sivrihisar-ESK	2.38	256	ePn	Pn	21 58 05.6	0.0
KONT	Konya--Tatoy	2.71	219	ePN	Pn	21 58 11.2	+1.1
KONT	Konya--Tatoy	2.71	219	ePn	Pn	21 58 11.2	+1.1
DARE	Darende-Malaty	2.79	113	ePN	Pn	21 58 12.7	+1.4
DARE	Darende-Malaty	2.79	113	ePn	Pn	21 58 12.7	+1.4
KOZT	Kozan	2.79	158	ePN	Pn	21 58 13.3	+2.1
KOZT	Kozan	2.79	158	ePn	Pn	21 58 13.3	+2.1

IDC ***19*** *22:02:15.6±0.6, 0˚.22S×132˚.77E, h0km, mb4.1/15, mb1 4.4/17, mb1mx4.3/27, mbtmp4.2/17, ML4.7/2, MS3.8/16, Ms1 3.8/16, ms1mx3.6/35, Error ellipse: s-maj=28.8km s-min=10.3km az=78.0*

DJA ***19*** *22:02:18.4±0.5, 0˚.5±7˚×13˚.3E±˚, h10km, M4.8/15, mB5.3/8, mb4.7/15, MLv5.0/7, Mw(mB)4.7/8, Mwp6.5/1*

BJI ***19*** *22:02:19.7, 0˚.27S×132˚.96E, h35km, mB5.0/21, mb4.6/30, Ms4.4/13, Ms7 4.2/13*

ISCJB ***19*** *22:02:19.4±0.2, 0˚.28S±0˚.03×132˚.63E±0˚.04, h33km, mb4.4/39, MS3.9/16, Error ellipse: s-maj=5.7km s-min=3.9km az=148.1*

NEIC ***19*** *22:02:20.1±2.8, 0˚.28S×132˚.63E, h29km±20km, mb4.6/13, Error ellipse: s-maj=11.0km s-min=5.3km az=65.0*

AUST ***19*** *22:02:24.5, 0˚.99S×132˚.50E, h15km*

ISC 19 22:02:21.2±0.4,**0˚.37S**±0˚.04×**132˚.59E**±0˚.05,**h33**km,**n119,** σ1**8**/135,**mb4.4**/39,**MS3.8**/16,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	Sorong	1.42	250	P	Pn	22 02 42.8	-1.9
SWI	Sorong	1.42	250	P	Pn	22 02 43.5	-1.3
	baz=1.2,SNR=132						
SWI				S	Sb	22 03 06.5	+1.6
	baz=1.2,SNR=8.7						
RKPI	Ransiki, Papua	1.95	126	P	Pn	22 02 52.6	+0.6
FAKI	Fak Fak	2.55	188	P	Pn	22 03 00.3	-0.1
FAKI	Fak Fak	2.55	188	P	Pn	22 03 01.5	+1.1
	baz=1.9,SNR=708						
BAKI	Biak	3.61	103	P	Pn	22 03 13.7	-1.2
SRPI	Serui, Papua	3.94	112	P	Pn	22 03 21.4	+2.0
LBMI	Labuha	5.10	267	P	Pn	22 03 34.2	-1.2
	120nm,1.0s,2µm0.5nm						
JAY	Jayapura	8.38	105	S	Sn	22 05 43.4	-11
	baz=8.3,SNR=3.3						
KMSI	Cibinong	8.66	276	P	Pn	22 04 40.5	+16
LUWI	Luwuk	9.84	266	P	Pn	22 04 38.0	-2.5
	65nm,1.1s,660nm						
LUWI	Luwuk	9.84	266	P	Pn	22 04 44.5	+3.9
	baz=9.7,SNR=5.1						
DAV	Davao City (W)	10.18	317	Pn	Pn	22 04 44.9	-0.3
DAV	Davao City (W)	10.18	317	LR	LR	22 08 04.3	
	comp=Z,259nm,19.8s,baz=129,slow=34						
KDU	Kakadu	12.24	181	P	Pn	22 05 12.6	-0.7
	baz=12,SNR=125						
MTN	Manton Dam	12.47	187	P	Pn	22 05 15.0	-1.6
	baz=12,SNR=144						
TTSI	Tana Toraja	13.04	258	P	Pn	22 05 25.5	+1.2
	22nm,1.3s,1µm253µm						
BKSI	Bulukumba	13.39	248	P	Pn	22 05 29.9	+0.8
	24nm,0.6s,395nm						
KAPI	Kappang	13.63	250	ePn	Pn	22 05 32.7	+0.4
KAPI	Kappang	13.63	250	P	Pn	22 05 35.9	+3.6
	35nm,1.0s,501nm						
KAPI	Kappang	13.63	250	Pn	Pn	22 05 35.1	+2.7
	2.2nm,0.3s,baz=143,slow=4.7,SNR=17						
KAPI				LR	LR	22 10 52.8	
	comp=Z,187nm,19.8s,baz=93,slow=37						
SMKI	Samarinda	15.38	270	P	P	22 06 03.8	+3.5
KNRA	Kununurra	15.67	194	P	Pn	22 05 56.4	-3.3
	baz=15,SNR=53						
KNRA				S	Sn	22 08 47.2	-5.3
	baz=15,SNR=6.5						
WBSI	Waikabubak, Su	16.04	235	P	P	22 06 05.9	-1.8
	45nm,1.0s						
COEN	Coen	17.09	143	ePn	P	22 06 18.0	-1.2
	78nm,0.8s						
COEN				eSn	Sn	22 09 24.9	-2.0
COEN	Coen	17.09	143	P	P	22 06 19.1	-0.1
	baz=17,SNR=17						
BBKI	Banjar Baru	18.00	260	P	P	22 06 31.1	+1.7
	37nm,1.3s,2µm						
GUMO	Guam	18.45	41	LR	LR	22 12 44.1	
	comp=Z,241nm,19.7s,baz=236,slow=34						
KHKI	Kahang-Kahang	18.69	244	P	Pn	22 06 38.1	+0.6
	48nm,1.3s						
FITZ	Fitzroy Crossi	18.90	201	eP	P	22 06 37.4	-1.8
FITZ				eSn	Sn	22 10 02.1	-8.6
FITZ				S	S	22 10 02.3	-10
FITZ	Fitzroy Crossi	18.90	201	P	P	22 06 37.3	-1.9
	0.5nm,0.3s,baz=20,slow=14,SNR=17						
FITZ				S	Sn	22 10 02.3	-8.3
	0.8nm,0.3s,baz=141,slow=12,SNR=3.8						
FITZ				LR	LR	22 14 34.0	
	comp=Z,144nm,18.6s,baz=27,slow=39						
FITZ	Fitzroy Crossi	18.90	201	P	P	22 06 37.4	-1.8
	baz=18,SNR=8.0						
FITZ				S	Sn	22 09 59.8	-11
	baz=18,SNR=3.7						
WRAB	Tennant Creek	19.52	175	ePn	Pn	22 06 46.5	-0.9
	33nm,0.7s						
WRAB				eSn	S	22 10 15.7	-9.1
WRA	Warramunga Arr	19.52	175	P	P	22 06 46.5	+0.4
WRA				S	S	22 10 17.6	-7.4
WRA	Warramunga Arr	19.52	175	P	P	22 06 46.5	+0.4
	2.6nm,0.3s,baz=354,slow=11,SNR=161						
WRA				S	S	22 10 17.6	-7.4
	0.8nm,0.3s,baz=3.3,slow=22,SNR=7.2						
GMJI	Gumukmas	20.63	247	P	P	22 06 57.7	-0.4
	70nm,1.3s						
PBKI	Pangkalan Bun	21.04	263	P	P	22 07 03.5	+0.9
	106nm,1.0s						
MTSU	Mount Surprise	21.08	148	P	P	22 07 04.8	+1.8
	baz=21,SNR=6.2						
STKI	Sintang	21.12	271	P	P	22 07 04.0	+0.6
	22nm,1.4s						
QIS	Mount Isa	21.20	162	P	P	22 07 05.8	+1.6
	baz=21,SNR=10						
QIS				S	S	22 11 00.5	+2.1
	baz=21,SNR=4.8						
KRKI	Karangkates	21.51	248	P	P	22 07 19.7	+12
SJI	Sawahan	22.01	250	P	P	22 07 19.6	+6.5
PWJI	Pagerwojo	22.07	249	P	P	22 07 24.6	+11
KSM	Kuching	22.36	275	eP	P	22 07 16.9	+0.2
	28nm,1.3s						
AS31	Alice Springs	23.19	177	eP	P	22 07 26.0	+0.7
AS31				eS	S	22 11 35.9	+0.9
ASAR	Alice Springs	23.19	177	P	P	22 07 25.9	+0.5
ASAR				S	S	22 11 39.6	+4.5
ASAR	Alice Springs	23.19	177	P	P	22 07 25.9	+0.5
	15nm,0.6s,baz=356,slow=12,SNR=153						
ASAR				S	S	22 11 39.6	+4.5
	4.2nm,0.9s,baz=354,slow=22,SNR=7.2						
ASAR				LR	LR	22 17 30.1	
	comp=Z,306nm,18.1s,baz=331,slow=39						
CTA	Charters Tower	23.72	147	P	P	22 07 30.8	+0.2
CTA	Charters Tower	23.72	147	P	P	22 07 30.8	+0.2
	13nm,0.9s,baz=326,slow=12,SNR=12						
CTA				LR	LR	22 18 04.7	
	comp=Z,551nm,18.7s,baz=322,slow=40						
CTAO	Charters Tower	23.72	147	eP	P	22 07 31.6	+1.0
	15nm,0.9s						
BJII	Banjarnegara	23.84	253	P	P	22 07 32.8	+1.0
	32nm,2.2s						
MBWA	Marble Bar	24.18	210	eP	P	22 07 35.3	+0.5
	17nm,0.8s						
TPI	Tanjungpandan	25.04	264	P	P	22 07 43.1	+0.4
CISI	Cisompet, Garu	25.71	253	P	P	22 07 52.0	+3.1
CISI	Cisompet, Garu	25.71	253	S	S	22 12 36.7	+21
	baz=26,SNR=3.1						
QLP	Quilpie	28.37	158	P	P	22 08 13.9	+1.4
	baz=28,SNR=5.8						
QIZ	Qiongzhong	29.50	312	P	P	22 08 22.8	+0.1
QIZ				S	S	22 13 15.3	-0.1
QIZ				LR	LR		
	comp=N,150nm,9.3s						
QIZ				LR	LR		
	comp=Z,120nm,15.6s						
FORT	Forrest	30.55	188	eP	P	22 08 32.7	+1.0
	comp=Z,34nm,0.8s						
FORT				ePP	PP	22 09 38.3	-2.8
PPI	Padang Panjang	32.20	270	S	S	22 13 36.9	-21
	baz=32,SNR=3.9						
BBOO	Buckleboo	32.43	175	P	P	22 08 50.6	+2.3
	baz=32,SNR=4.7						
STKA	Stephens Creek	32.47	166	P	P	22 08 48.9	+0.2
STKA	Stephens Creek	32.47	166	P	P	22 08 48.9	+0.2
	comp=Z,4.7nm,0.7s,baz=1.6,slow=8.8,SNR=12						
STKA				LR	LR	22 24 45.3	
	comp=Z,153nm,18.5s,baz=10,slow=41						
STKA	Stephens Creek	32.47	166	P	P	22 08 49.2	+0.5
	baz=32,SNR=14						
JNU	Nakatsue	33.35	357	eP	P	22 08 54.8	-1.6
JNU	Nakatsue	33.35	357	P	P	22 08 54.3	-2.2
	comp=Z,10.0nm,1.1s,baz=217,slow=4.0,SNR=3.5						
CMSA	Cobar Meteorol	33.39	159	P	P	22 08 57.1	+0.4
	baz=33,SNR=5.9						
NJ2	Nanjing	34.77	339	eP	P	22 09 09.0	+0.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ARMA	Armidale	34.93	151	eP	P	22 09 10.6	+0.2
GYA	Guiyang	36.55	319	eP	P	22 09 25.8	+1.5
GYA				pP	pP	22 09 38.5	+4.6
GYA				sP	sP	22 09 41.3	+3.4
GYA				PP	PP	22 10 51.8	+3.9
GYA				PcP	PcP	22 11 47.9	+0.4
GYA				S	S	22 15 04.8	-0.1
GYA				sS	sS	22 15 23.3	+2.5
GYA				ScP	ScP	22 15 31.0	-0.9
GYA				ScS	ScS	22 19 35.4	-3.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,5.0s						
MJAR	Matsushiro Arr	37.10	8	P	P	22 09 25.6	-3.1
MJAR	Matsushiro Arr	37.10	8	P	P	22 09 25.6	-3.1
	comp=Z,0.8nm,0.7s,baz=213,slow=13,SNR=3.6						
MJAR				LR	LR	22 21 51.5	
	comp=Z,243nm,19.8s,baz=170,slow=32						
MAJO	Matsushiro	37.10	8	P	P	22 09 28.2	-0.4
ARPS	Mount Arapiles	37.22	168	P	P	22 09 32.9	+3.3
	baz=37,SNR=8.2						
KSAR	Wonju Array Be	37.88	354	P	P	22 09 32.8	-2.4
KSRS	Korea Array	37.88	354	P	P	22 09 32.8	-2.5
	comp=Z,0.3nm,0.3s,baz=163,slow=8.9,SNR=4.2						
KSRS				LR	LR	22 25 42.0	
	comp=Z,127nm,18.1s,baz=183,slow=37						
CMAR	Chiang Mai Arr	37.99	301	P	P	22 09 36.2	-0.3
CMAR	Chiang Mai Arr	37.99	301	P	P	22 09 36.2	-0.3
	comp=Z,0.4nm,0.3s,baz=90,slow=6.3,SNR=4.4						
XAN	Xi'an	40.81	329	P	P	22 09 57.3	-2.5
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,14nm,6.4s						
CD2	Chengdu	41.44	321	P	P	22 10 06.0	+0.9
CD2				pP	pP	22 10 17.3	+2.5
CD2				sP	sP	22 10 22.1	+3.3
CD2				PP	PnPn	22 11 45.8	-0.3
CD2				PcP	PcP	22 12 03.6	+0.9
CD2				S	S	22 16 18.8	+0.5
CD2				sS	sS	22 16 37.5	+3.1
CD2				SS	SS	22 19 19.3	-4.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
BJI	Beijing	42.92	341	P	P	22 10 15.9	-1.0
BJI				S	S	22 16 41.3	+1.6
BJI				pmax	pmax		
	comp=Z,11nm,1.1s						
BJI				LR	LR		
	comp=N,91nm,19.7s						
BJI				LR	LR		
	comp=E,92nm,16.0s						
BJI				LR	LR		
	comp=Z,60nm,28.4s						
USRK	Ussuriysk Arra	44.38	359	P	P	22 10 26.6	-1.9
	comp=Z,2.3nm,0.9s,baz=162,slow=8.0,SNR=4.8						
MDJ	Mudanjiang	44.87	357	P	P	22 10 33.3	+0.8
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,61nm,3.7s						
LZH	Lanzhou	45.06	327	eP	P	22 10 39.0	+4.6
LZH				pP	pP	22 10 51.3	+7.1
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC	Hu-ho-hao-te	45.26	337	eP	P	22 10 37.8	+2.0
HHC				pP	pP	22 10 50.3	+4.7
HHC				sP	sP	22 10 55.5	+5.9
HHC				PcP	PP	22 12 17.4	-4.7
HHC				PP	PcP	22 12 25.8	+10
HHC				S	S	22 17 15.8	+1.7
HHC				sS	sS	22 17 36.3	+6.1
HHC				ScS	ScS	22 20 28.6	-1.8
HHC				pmax	pmax		
	comp=Z,30nm,0.7s						
HHC				pmax	pmax		
	comp=Z,170nm,7.6s						
HHC				LR	LR		
	comp=N,190nm,15.5s						
HHC				LR	LR		
	comp=E,180nm,14.3s						
HHC				LR	LR		
	comp=Z,270nm,15.5s						
GTA	Gaotai	49.66	327	eP	P	22 11 09.9	-0.2

IDC 19 21:47:27.5±1.4,**28˚.47N**×**101˚.39E, h0**km,**mb3.1**/3, **mb1 3.4**/3,**mb1mx3.1**/25,**mbtmp3.2**/3,**MS2.8**/1,**Ms1 2.8**/1, **ms1mx2.0**/22,**Error ellipse: s-maj=83.3km s-min=23.9km az=60.0,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.22	193	Pg	Pn	21 50 34.5	+39
	baz=6.6,slow=18,SNR=2.4						
CMAR				Lg	Lg	21 52 45.2	
	0.1nm,0.3s,baz=2.1,slow=30,SNR=3.8						
MKAR	Makanchi Array	23.62	326	P	P	21 52 40.0	-0.2
	0.2nm,0.5s,baz=128,slow=9.4,SNR=3.7						
KURBB	Kurchatov Arra	28.07	328	P	P	21 53 20.7	+0.1
	0.1nm,0.4s,baz=144,slow=9.4,SNR=3.1						
AKTO	Aktyubinsk	39.30	316	LR	LR	22 14 45.6	
	comp=Z,12nm,18.5s,baz=72,slow=42						
WRA	Warramunga Arr	57.71	143	P	P	21 57 20.0	-0.1
	0.3nm,0.5s,baz=332,slow=7.7,SNR=9.5						

DDA ***19*** *21:57:25.8, 40˚.06N×34˚.54E, h13km, MD3.1*

ISCJB ***19*** *21:57:26.1±0.6, 40˚.08N±0˚.02×34˚.48E±0˚.03, h2km±5km, Error ellipse: s-maj=4.1km s-min=3.9km az=21.3*

ISK ***19*** *21:57:26.2, 40˚.13N×34˚.49E, h11km, MD3.2*

CSEM ***19*** *21:57:26.2±0.2, 40˚.08N×34˚.50E, h2km, MD3.2, Error ellipse: s-maj=3.8km s-min=3.5km az=95.0*

ISC 19 21:57:26.4±0.9,**40˚.08N**±0˚.02×**34˚.51E**±0˚.02,**h10**km±7km,

GTA					pmax	pmax			
	comp=Z,2.0nm,0.8s								
PETK	**Petropavlovsk-**	**57.26**	**18**		LR	LR	22 32 34.0		
	comp=Z,79nm,20.1s,baz=243,slow=32								
WMQ	**Urumqi**	**59.45**	**324**		P	**P**	**22 12 21.4**	**+0.4**
WMQ					pP	**pP**	**22 12 34.1**	**+3.0**
WMQ					sP	sP	22 12 39.4	+4.4
WMQ					PP	**PP**	**22 14 34.6**	**+2.0**
WMQ					PcS	**PcS**	**22 17 09.3**	**-1.2**
WMQ					S	**S**	**22 20 25.3**	**-2.9**
WMQ					sS	**sS**	**22 20 46.8**	**+1.9**
WMQ					pmax	pmax			
	comp=Z,7.0nm,1.0s								
WMQ					pmax	pmax			
	comp=Z,100nm,5.6s								
WMQ					LR	LR			
	comp=N,45nm,21.8s								
WMQ					LR	LR			
	comp=E,41nm,20.4s								
WMQ					LR	LR			
	comp=Z,26nm,21.2s								
MK31	**Makanchi Array**	**64.27**	**324**	*e*P		**P**	**22 12 52.8**	**-0.5**	
MKAR	**Makanchi Array**	**64.27**	**324**	P		**P**	**22 12 52.9**	**-0.5**	
MKAR	**Makanchi Array**	**64.27**	**324**	P		**P**	**22 12 52.9**	**-0.5**	
	comp=Z,1.2nm,0.6s,baz=115,slow=8.1,SNR=20								
MKAR					LR	LR	22 40 25.4		
	comp=Z,31nm,18.7s,baz=350,slow=36								
KSH	**Kashi**	**65.07**	**315**	*e*P		P	22 13 01.3	+2.5	
KSH				*ep*P		pP	22 13 14.3	+5.3	
KSH				*es*P		sP	22 13 19.3	+6.4	
KSH				*e*PcP		**PcP**	**22 13 33.9**	**+2.4**	
KSH				*e*PP		PP	22 15 26.5	+4.2	
KSH				*e*ScP			22 17 31.4		
KSH				*e*PcS			22 17 36.5		
KSH				*e*S		**S**	**22 21 38.5**	**-0.8**	
KSH				*es*S		sS	22 22 00.4	+4.3	
KSH				*e*ScS		**SKSac**	**22 22 48.4**	**-3.3**	
KSH				*e*SS		**SS**	**22 25 52.6**	**+0.6**	
KSH					pmax	pmax			
	comp=Z,3.0nm,0.8s								
KSH					pmax	pmax			
	comp=Z,70nm,6.1s								
KSH					LR	LR			
	comp=N,46nm,3.2s								
KSH					LR	LR			
	comp=E,70nm,3.1s								
KSH					LR	LR			
	comp=Z,86nm,4.7s								
TKM2	**Tokmak 2**	**66.69**	**318**	*e*P		**P**	**22 13 09.1**	**-0.2**	
	comp=Z,5.4nm,1.1s								
ZAA0	**Zalesovo Array**	**66.92**	**332**	*e*P		**P**	**22 13 08.7**	**-1.5**	
ZALV	**Zalesovo Beam**	**66.92**	**332**	P		**P**	**22 13 08.9**	**-1.4**	
ZALV	**Zalesovo Beam**	**66.92**	**332**	P		**P**	**22 13 08.9**	**-1.4**	
	comp=Z,2.4nm,0.7s,baz=111,slow=5.5,SNR=9.1								
AAK	**Ala-Archa**	**67.32**	**317**	*e*P		**P**	**22 13 12.3**	**-0.9**	
	comp=Z,2.0nm,0.8s								
EKS2	**Erkin-Say**	**67.82**	**317**	*e*P		**P**	**22 13 16.4**	**0.0**	
	comp=Z,8.3nm,1.3s								
KURK	**Kurchatov**	**68.35**	**326**	*e*P		P	22 13 15.8	-3.5	
	comp=Z,5.2nm,0.9s								
KURBB	**Kurchatov Arra**	**68.36**	**326**	P		**P**	**22 13 18.9**	**-0.5**	
	comp=Z,3.2nm,1.0s,baz=121,slow=5.8,SNR=13								
KBL	**Kabul**	**68.65**	**307**	*e*P		**P**	**22 13 20.8**	**-1.0**	
KKAR	**Karatay Array**	**70.21**	**317**	*e*P		**P**	**22 13 30.5**	**-0.6**	
	comp=Z,1.8nm,0.7s								
BVAR	**Borovoye Array**	**73.95**	**326**	P		**P**	**22 13 52.8**	**-0.4**	
BVAR	**Borovoye Array**	**73.95**	**326**	P		**P**	**22 13 52.8**	**-0.4**	
	comp=Z,2.8nm,0.9s,baz=128,slow=5.9,SNR=4.6								
BRVK	**Borovoye**	**74.02**	**326**	*e*P		**P**	**22 13 53.1**	**-0.5**	
	comp=Z,3.8nm,0.8s								
VNDA	**Vanda**	**78.69**	**174**	P		**P**	**22 14 20.5**	**+0.8**	
VNDA	**Vanda**	**78.69**	**174**	P		**P**	**22 14 20.5**	**+0.8**	
	comp=Z,1.0nm,0.8s,baz=286,slow=9.3,SNR=5.8								
VNDA					LR	LR	22 46 57.3		
	comp=Z,120nm,19.3s,baz=26,slow=34								
ABKAR	**Akbulak array**	**79.02**	**320**	*e*P		**P**	**22 14 20.8**	**-1.2**	
	comp=Z,3.2nm,0.8s								
AKTO	**Aktyubinsk**	**80.50**	**321**	P		**P**	**22 14 29.4**	**-0.6**	
AKTO	**Aktyubinsk**	**80.50**	**321**	P		**P**	**22 14 29.4**	**-0.6**	
	comp=Z,0.7nm,0.6s,baz=110,slow=3.3,SNR=3.3								
MAW	**Mawson**	**82.02**	**201**		LR	LR	22 45 41.5		
	comp=Z,95nm,19.3s,baz=290,slow=32								
PPLA	**Purkeypile**	**83.62**	**26**	*e*P		**P**	**22 14 46.6**	**+0.2**	
ILAR	**Eielson Array**	**86.29**	**25**	P		**P**	**22 14 58.2**	**-1.3**	
ILAR	**Eielson Array**	**86.29**	**25**	P		**P**	**22 14 58.2**	**-1.3**	
	comp=Z,1.9nm,0.9s,baz=256,slow=5.1,SNR=12								
ILAR					LR	LR	22 55 56.6		
	comp=Z,42nm,18.3s,baz=219,slow=37								
BBB	**Bella Bella**	**96.00**	**38**		LR	LR	22 51 22.3		
	comp=Z,62nm,20.1s,baz=41,slow=31								
ARCES	**ARCESS Array B**	**96.28**	**340**		LR	LR	23 00 52.8		
	comp=Z,66nm,21.4s,baz=208,slow=37								
YKA	**Yellowknife Ar**	**100.70**	**26**	P		**Pdif**	**22 16 06.7**	**+0.8**	
YKA	**Yellowknife Ar**	**100.70**	**26**	P		**Pdif**	**22 16 06.7**	**+0.8**	
	comp=Z,0.2nm,0.5s,baz=293,slow=5.1,SNR=3.7								
CPUP	**Villa Florida**	**151.78**	**161**		PKPbc	**PKPbc**	**22 22 13.3**	**0.0**	
CPUP	**Villa Florida**	**151.78**	**161**		PKPbc	**PKPbc**	**22 22 13.3**	**0.0**	
	comp=Z,1.6nm,0.6s,baz=213,slow=3.8,SNR=7.0								

IDC ***19*** *22:23:30.2±2.8, 3.°48S×135.°76E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.5/18, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=100.4km s-min=27.8km az=85.0*
AUST ***19*** *22:23:36.4±0.2, 3.°65S×135.°49E, h0km±4km, Error ellipse: s-maj=6.4km s-min=1.2km az=236.0*

ISC 19 22:23:35.6±1.8, 3.7°S±0.1×135.6°E±0.1, h22km, n9, σ3°31/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FAKI	**Fak Fak**	**3.39**	**283**	P		**Pn**	**22 24 28.4**	**+1.2**
	baz=3.3,SNR=13							
FAKI				S		**Sb**	**22 25 11.6**	**-4.2**
	baz=3.3,SNR=6.2							
KDU	**Kakadu**	**9.45**	**199**	P		**Pn**	**22 25 53.2**	**+2.7**
	baz=9.5,SNR=23							
MTN	**Manton Dam**	**10.10**	**205**	P		Pn	22 26 03.4	+4.0
	baz=10,SNR=16							
MTN				S		Sn	22 28 01.5	+9.4
	baz=10,SNR=3.8							
LUWI	**Luwuk**	**13.04**	**281**	P		**Pn**	**22 26 41.7**	**+2.0**
	baz=13,SNR=4.2							
KNRA	**Kununurra**	**13.66**	**209**	P		**Pn**	**22 26 51.0**	**+2.8**
	baz=14,SNR=3.4							
WRA	**Warramunga Arr**	**16.20**	**184**	Pn		**Pn**	**22 27 20.4**	**-1.7**
	0.1nm,0.3s,baz=2.7,slow=13,SNR=9.5							
WRA				Sn		**Sn**	**22 30 15.8**	**-5.6**
	0.1nm,0.3s,baz=12,slow=24,SNR=4.7							
FITZ	**Fitzroy Crossi**	**17.31**	**213**	P		**P**	**22 27 38.2**	**+0.9**
	0.1nm,0.3s,baz=27,slow=9.0,SNR=7.0							
FITZ				S		Sn	22 30 40.6	-7.5
	0.1nm,0.3s,baz=69,slow=17,SNR=2.3							
ASAR	**Alice Springs**	**19.93**	**184**	P		**P**	**22 28 06.6**	**+0.5**
	3.7nm,0.8s,baz=10,slow=11,SNR=35							
MKAR	**Makanchi Array**	**68.67**	**324**	P		**P**	**22 34 35.3**	**-2.1**
	0.2nm,0.6s,baz=110,slow=6.0,SNR=2.8							

IDC 19 22:33:28.4±7.9, 14.°82S×167.°39E, h97km±67km, mb3.7/4, mb1 3.8/5, mb1mx3.5/21, mbtmp3.7/5, ML4.0/1, MS2.5/1, Ms1 2.5/1, ms1mx2.4/29, Error ellipse: s-maj=56.8km s-min=36.8km az=4.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DZM	**Mont Dzumac**	**7.27**	**187**	*e*P		Pn	22 35 12.7	+0.6
DZM	**Mont Dzumac**	**7.27**	**187**	P		Pn	22 35 13.0	+0.9
	2.5nm,0.3s,baz=19,slow=19,SNR=26							
DZM				S		Sn	22 36 32.3	-0.9
	3.7nm,0.3s,baz=319,slow=20,SNR=7.4							
STKA	**Stephens Creek**	**29.02**	**230**	P		P	22 39 19.7	+0.4
	1.7nm,0.5s,baz=41,slow=8.2,SNR=12							
WRA	**Warramunga Arr**	**31.91**	**256**	P		P	22 39 44.2	-0.8
	0.5nm,0.5s,baz=84,slow=8.7,SNR=10							
ASAR	**Alice Springs**	**32.75**	**249**	P		P	22 39 52.0	-0.3
	1.2nm,0.5s,baz=79,slow=9.3,SNR=14							
FITZ	**Fitzroy Crossi**	**40.11**	**259**	P		P	22 40 55.4	+0.5
	1.9nm,0.7s,baz=97,slow=4.7,SNR=9.4							
TGY	**Tagaytay City**	**54.20**	**300**	LR		LR	23 02 38.5	
	comp=Z,3.7nm,18.5s,baz=1.8,slow=32							
ARCES	**ARCESS Array B**	**120.36**	**345**	PKP		PKPdf	22 52 07.2	-0.5
	1.8nm,0.9s,baz=37,slow=2.3,SNR=7.3							
TORD	**Torodi Ar. Bea**	**166.01**	**265**	PKP		PKPdf	22 53 22.8	-0.2
	0.2nm,0.6s,baz=98,slow=1.0,SNR=3.6							

NIED ***19*** *22:37:00, 30.°50N×141.°70E, h14km, Mw4.0 Best double couple: Ms1.22000×10^15 NP1:φs165.00000°, δ52.00000°, λ-89.00000°. NP2:φs344.00000°, δ38.00000°, λ-91.00000°.*
JMA ***19*** *22:37:44.2±0.1, 30.°47N×141.°71E, h0km, M4.0*
IDC ***19*** *22:37:51.1±2.6, 30.°20N×139.°66E, h68km±24km, mb3.4/9, mb1 3.6/12, mb1mx3.5/27, mbtmp3.4/12, Error ellipse: s-maj=28.1km s-min=15.9km az=98.0*

ISC 19 22:37:49.2±0.8, 30.°08N±0.°07×139.°8E±0.°1, h50km, n22, σ2°16/19, mb3.7/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHJ2	**Mitsune**	**3.03**	**1**	*e*S		**Sn**	**22 39 13.7**	**+4.1**
JHJ	**Hachijo jima 2**	**3.03**	**0**	P		**Pn**	**22 38 35.0**	**+0.3**
	2.9nm,0.3s,baz=270,slow=20,SNR=3.0							
JHJ				S		**Sn**	**22 39 13.6**	**+3.8**
	18nm,0.3s,baz=88,slow=20,SNR=4.9							
CBIJ	**Chichi jima**	**3.65**	**144**	P		Pn	22 38 39.9	-3.3
CBIJ				*e*S		Sn	22 39 20.2	-4.8
BSO3	**Boso 3**	**4.75**	**7**	*e*S		**Sn**	**22 39 47.5**	**-4.2**
BSO4	**Boso 4**	**4.92**	**5**	P		**Pn**	**22 38 57.9**	**-2.6**
BSO4				*e*S		**Sn**	**22 39 53.8**	**-2.3**
JOD2	**Odawara 2**	**5.20**	**354**	P		**Pn**	**22 39 05.2**	**+0.7**
JAO	**Obara**	**5.59**	**338**	P		Pn	22 39 17.2	+7.3
JHU	**Hanno**	**5.77**	**356**	*e*S		**Sn**	**22 40 18.6**	**+1.4**
JHO	**Hitachi**	**6.55**	**6**	P		Pn	22 39 18.5	-4.4
MJAR	**Matsushiro Arr**	**6.58**	**349**	P		**Pn**	**22 39 24.8**	**+1.4**
	0.4nm,0.3s,baz=103,slow=9.6,SNR=9.7							
JNU	**Nakatsue**		**8.17**	**294**	P		**Pn**	**22 39 44.2**	**-1.0**
	0.6nm,0.3s,baz=135,slow=4.8,SNR=5.1							
MKAR	**Makanchi Array**	**46.97**	**308**	P		**P**	**22 46 13.2**	**-1.9**
	0.3nm,0.8s,baz=76,slow=9.1,SNR=2.0							
WRA	**Warramunga Arr**	**50.00**	**187**	P		**P**	**22 46 39.6**	**+1.0**
	2.7nm,0.8s,baz=7.0,slow=7.9,SNR=17							
ASAR	**Alice Springs**	**53.73**	**187**	P		**P**	**22 47 07.2**	**+0.8**
	0.6nm,0.6s,baz=7.5,slow=5.7,SNR=8.1							
ILAR	**Eielson Array**	**56.15**	**30**	P		**P**	**22 47 22.4**	**-0.9**
	0.6nm,0.7s,baz=272,slow=5.5,SNR=7.7							
STKA	**Stephens Creek**	**61.64**	**178**	P		**P**	**22 48 02.0**	**+0.3**
	1.1nm,0.5s,baz=357,slow=4.5,SNR=4.8							
YKA	**Yellowknife Ar**	**70.53**	**28**	P		P	22 48 56.1	-2.3
	0.1nm,0.4s,baz=298,slow=5.3,SNR=3.6							
FINES	**FINESS Array B**	**74.34**	**333**	P		**P**	**22 49 20.8**	**-0.4**
	1.9nm,1.1s,baz=57,slow=5.1,SNR=2.7							
NB2	**NORSAR Subarra**	**80.06**	**337**	P		P	22 49 58.9	+5.6
	comp=Z,0.5nm,0.7s,baz=41,slow=5.3							
NOA	**NORSAR Array B**	**80.06**	**337**	P		**P**	**22 49 53.3**	**0.0**
	comp=Z,0.4nm,0.8s,baz=41,slow=5.2,SNR=2.5							
NVAR	**Mina Array Bea**	**80.33**	**51**	P		**P**	**22 49 56.5**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=288,slow=6.5,SNR=4.3							
LPAZ	**La Paz**	**151.00**	**68**	PKPbc		**PKPbc**	**22 57 38.4**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=302,slow=2.4,SNR=7.8							

IDC 19 22:48:21.3±20.0, 20.°06S×178.°65W, h510km±178km, mb2.8/3, mb1 3.1/3, mb1mx2.8/18, mbtmp2.8/3, Error ellipse: s-maj=254.8km s-min=62.9km az=138.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ASAR	**Alice Springs**	**44.03**	**256**	P		P	22 55 43.6	0.0
	0.3nm,0.4s,baz=87,slow=8.2,SNR=4.6							
WRA	**Warramunga Arr**	**44.06**	**262**	P		P	22 55 43.5	-0.3
	0.3nm,0.3s,baz=96,slow=7.2,SNR=19							
ILAR	**Eielson Array**	**88.03**	**13**	P		P	23 00 16.5	+0.1
	0.2nm,0.3s,baz=217,slow=5.5,SNR=4.5							
AKASG	**Malin Array Be**	**142.34**	**331**	PKP		PKPdf	23 06 53.1	-2.2
	1.4nm,0.5s,baz=42,slow=4.2,SNR=8.4							
BRTR	**Keskin Array B**	**146.10**	**312**	PKPbc		PKPbc	23 07 04.7	+0.3
	0.7nm,0.8s,baz=106,slow=2.7,SNR=3.7							

IDC ***19*** *22:49:08.4±1.7, 33.°77N×118.°43W, h0km, mb3.3/2, mb1 3.6/7, mb1mx3.5/29, mbtmp3.3/7, ML3.2/4, MS3.1/1, Ms1 3.0/1, ms1mx2.3/19, Error ellipse: s-maj=24.4km s-min=9.7km az=40.0*
ISCJB ***19*** *22:49:10.3±0.7, 33.°96N±0.°03×118.°28W±0.°03, h15km±3km, mb3.0/2, MS2.9/1, Error ellipse: s-maj=6.2km s-min=3.5km az=40.3*
NEIC ***19*** *22:49:11.4, 33.°93N×118.°34W, h15km, MW3.8(PAS), After PAS.*
NEIC Felt [IV] at Gardena, Hawthorne, Inglewood, Los Angeles, Manhattan Beach, Maywood, Newport Coast and Redondo Beach and [III] throughout the western part of the Los Angeles Basin. Felt from Oxnard to San Bernardino and as far south as San Diego.

ISC 19 22:49:11.1±0.9, 33.°93N±0.°02×118.°31W±0.°02, h11km±7km, n77, σ1°35/117, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FMP	**Fort Macarthur**	**0.22**	**177**	P		**Pg**	**22 49 15.9**	**+0.2**
	baz=0.2							
FMP				S		**Sg**	**22 49 19.2**	**+0.5**
	baz=0.2							
PASC	**Pasadena Art C**	**0.26**	**23**	*e*P		**Pg**	**22 49 16.3**	**-0.2**
PASC				*e*S		**Sg**	**22 49 19.1**	**-1.0**
DECC	**Green Verdugo**	**0.32**	**357**	P		**Pg**	**22 49 17.5**	**-0.1**
	baz=0.3							
DECC				S		**Sg**	**22 49 21.7**	**-0.3**
	baz=0.3							
MWC	**Mount Wilson**	**0.36**	**35**	*e*Pg		**Pg**	**22 49 18.5**	**+0.1**
CIS	**Catalina Islan**	**0.53**	**189**	P		**Pg**	**22 49 21.6**	**+0.2**
	baz=0.5							
CIS				S		**Sg**	**22 49 29.0**	**+0.6**
	baz=0.5							
BFSC	**Mount Baldy Ra**	**0.62**	**60**	P		**Pg**	**22 49 23.0**	**-0.2**
	baz=0.6							
BLG	**Laguna Peak**	**0.65**	**286**	P		**Pg**	**22 49 22.8**	**-1.0**
	baz=0.6							
OSI	**Osito Adit**	**0.77**	**333**	*e*Pn		**Pg**	**22 49 25.6**	**-0.3**
OSI				*e*Sg		**Sn**	**22 49 38.4**	**-1.2**
OSI	**Osito Adit**	**0.77**	**333**	P		**Pg**	**22 49 25.6**	**-0.3**
	baz=0.8							
SCI	**San Clemente I**	**0.97**	**192**	P		**Pg**	**22 49 28.9**	**-0.9**
	baz=1.0							
SCI				S		**Sg**	**22 49 41.9**	**-0.4**
	baz=1.0							
MURC	**Murrieta**	**0.98**	**109**	P		**Pg**	**22 49 28.9**	**-1.2**
	baz=1.0							
MURC				S		**Sg**	**22 49 42.5**	**-0.2**
	baz=1.0							
EDW2	**Edwards Air Fo**	**0.98**	**15**	P		**Pg**	**22 49 29.2**	**-0.9**
	baz=1.0							
EDW2				S		**Sb**	**22 49 43.6**	**+0.3**
	baz=1.0							
BSC	**Santa Cruz Isl**	**1.10**	**274**	P		**Pg**	**22 49 30.8**	**-1.6**
	baz=1.1							
BSC				S		**Sg**	**22 49 46.1**	**-0.7**
	baz=1.1							
ABL	**Mount Abel**	**1.19**	**321**	*e*Pn		**Pg**	**22 49 34.1**	**+0.1**
BBRC	**Big Bear Solar**	**1.20**	**74**	Pg		**Pb**	**22 49 33.5**	**-0.5**
	baz=1.2							
ARVC	**Arvin**	**1.27**	**340**	Pb		**Pn**	**22 49 34.0**	**-0.9**
	baz=1.3							
SBC	**Santa Barbara**	**1.27**	**294**	Pb		**Pn**	**22 49 33.9**	**-1.0**
	baz=1.3							
109C	**Camp Elliot, M**	**1.45**	**136**	P		**Pn**	**22 49 35.5**	**-1.7**
	baz=1.5							
PFO	**Pinyon Flat Ob**	**1.58**	**101**	*e*Pn		**Pn**	**22 49 38.4**	**-0.9**
PFO				*e*Sn		**Sn**	**22 49 59.5**	**-0.2**
PFO				Lg		Lg	22 50 00.0	
PFO				Rg		Rg	22 50 07.2	
PFO	**Pinyon Flat Ob**	**1.58**	**101**	Pn		**Pn**	**22 49 38.3**	**-0.9**
	88nm,0.3s,baz=276,slow=13,SNR=350							
PFO				Lg		Lg	22 50 00.0	
	189nm,0.3s,baz=198,slow=20,SNR=12							
PFO				Rg		Rg	22 50 07.2	
	931nm,0.5s,baz=12,slow=23,SNR=22							
PFO	**Pinyon Flat Ob**	**1.58**	**101**	P		**Pn**	**22 49 38.2**	**-1.0**
	baz=1.6							
PFO				Sb		**Sb**	**22 50 00.0**	**-0.4**
	baz=1.6							
PKM	**Peak Mountain**	**1.58**	**308**	Pb		**Pn**	**22 49 38.8**	**-0.5**
	baz=1.6							
LRMC	**Laurel Mountai**	**1.63**	**18**	Pb		**Pn**	**22 49 40.0**	**+0.1**
	baz=1.6							
ISA	**Isabella**	**1.73**	**356**	*e*Pn		**Pn**	**22 49 41.2**	**-0.2**
ISA				*e*Sn		**Sn**	**22 50 03.3**	**-0.3**
ISA	**Isabella**	**1.73**	**356**	Pb		**Pn**	**22 49 41.4**	**+0.1**
	baz=1.7							
ISA				Sb		**Sn**	**22 50 03.2**	**-0.3**
	baz=1.7							
GSC	**Goldstone**	**1.85**	**42**	*e*Pn		**Pn**	**22 49 42.6**	**-0.3**
GSC				*e*Sn		**Sn**	**22 50 05.0**	**-1.3**
GSC	**Goldstone**	**1.85**	**42**	P		**Pn**	**22 49 43.0**	**+0.1**
	baz=1.9							
BAR	**Barrett**	**1.85**	**132**	*e*Pn		**Pn**	**22 49 41.4**	**-1.5**
BAR				*e*Sn		**Sn**	**22 50 04.0**	**-2.3**
HEC	**Hector,Ludlow**	**1.87**	**61**	P		**Pn**	**22 49 42.7**	**-0.4**
	baz=1.9							
MONP	**Monument Peak**	**1.89**	**123**	P		**Pn**	**22 49 42.7**	**-0.9**
	baz=1.9							
BELC	**Belle Mtn. Jos**	**1.92**	**87**	P		**Pn**	**22 49 43.4**	**-0.6**
	baz=1.9							
SMMC	**Simmler**	**1.96**	**315**	Pb		**Pn**	**22 49 44.7**	**+0.2**
	baz=1.9							
SMMC				Sb		**Sn**	**22 50 09.9**	**+0.9**
	baz=1.9							
CLC	**China Lake**	**1.97**	**17**	*e*Pn		**Pn**	**22 49 44.6**	**0.0**
MPMC	**Manual Prospec**	**2.23**	**17**	P		**Pn**	**22 49 48.3**	**0.0**
	baz=2.2							
DVTC	**Desert V Tower**	**2.24**	**124**	P		**Pn**	**22 49 47.6**	**-0.8**
	baz=2.3							
PTRM	**Twissleman Ran**	**2.33**	**318**	*e*Pn		**Pn**	**22 49 48.1**	**-1.4**
PTRM				*e*Sn		**Sn**	**22 50 15.2**	**-3.0**
GMRC	**Granite Mounta**	**2.35**	**68**	P		**Pn**	**22 49 48.9**	**-0.9**
	baz=2.4							
IRM	**Iron Mountain**	**2.63**	**84**	P		**Pn**	**22 49 52.5**	**-1.1**
	baz=2.6							
LDFC	**Landfair**	**2.88**	**66**	*e*Pn		**Pn**	**22 49 57.1**	**0.0**
LDFC				*e*Sg		**Sg**	**22 50 44.9**	**+1.2**
GLA	**Glamis**	**3.04**	**106**	*e*Pn		**Pn**	**22 50 00.3**	**+1.0**
GLA				*e*Pg		**Pg**	**22 50 10.1**	**+0.8**
GLA				*e*Sn		**Sn**	**22 50 37.3**	**+1.7**
GLA				*e*Sg		**Sg**	**22 50 48.7**	**0.0**
Y12C	**Blythe**	**3.15**	**92**	P		**Pn**	**22 49 59.5**	**-1.3**
	baz=3.2							
SHPR	**Sheep Range**	**3.64**	**44**	*e*Pn		**Pn**	**22 50 09.0**	**+1.3**
SAO	**San Andreas Ge**	**3.82**	**319**	*e*Pn		**Pn**	**22 50 08.4**	**-1.6**
SAO				*e*Sn		**Sn**	**22 50 55.2**	**+0.3**
W13A	**Hualapai Mount**	**3.83**	**71**	P		**Pn**	**22 50 10.1**	**-0.3**
	baz=3.8							
CMB	**Columbia Colle**	**4.43**	**338**	*e*Pn		**Pn**	**22 50 18.0**	**-0.4**
CMB				*e*Sn		**Sn**	**22 51 10.6**	**+0.6**
NVAR	**Mina Array Bea**	**4.49**	**0**	Pn		**Pn**	**22 50 21.5**	**+2.1**
NVAR				Pg		**Pb**	**22 50 32.0**	**+1.8**
NVAR				Lg		Lg	22 51 36.0	
NVAR	**Mina Array Bea**	**4.49**	**0**	Pn		**Pn**	**22 50 21.5**	**+2.1**
	0.4nm,0.3s,baz=191,slow=16,SNR=12							
NVAR				Pg		**Pb**	**22 50 32.0**	**+1.8**
	3.0nm,0.3s,baz=190,slow=15,SNR=31							
NVAR				Lg		Lg	22 51 36.1	
	2.1nm,0.3s,baz=188,slow=30,SNR=2.7							
NV11	**Mina Array Sit**	**4.50**	**2**	*e*Pn		**Pn**	**22 50 20.4**	**+1.1**
NV11				*e*Sg		**Sg**	**22 51 38.1**	**+2.6**
Z14A	**Wintersburg**	**4.51**	**96**	P		**Pn**	**22 50 18.7**	**-0.7**
	baz=4.5							
CCUT	**Cedar City**	**5.41**	**47**	*e*Pn		**Pn**	**22 50 31.7**	**-0.3**
CCUT				*e*Sn		**Sn**	**22 51 37.9**	**+3.6**
CCUT				*e*Sg		**Sg**	**22 52 00.2**	**-4.5**
WCN	**Washoe City**	**5.49**	**348**	*e*Pn		**Pn**	**22 50 32.9**	**-0.2**
WCN				*e*Sg		**Sg**	**22 52 05.6**	**-1.7**
ARUT	**Antelope Range**	**5.52**	**44**	*e*Pn		**Pn**	**22 50 33.9**	**+0.5**
ARUT				*e*Sn		**Sn**	**22 51 42.6**	**+5.6**
ARUT				*e*Sg		**Sg**	**22 52 07.0**	**-1.3**
X16A	**Lo Mia Camp, P**	**5.71**	**83**	P		**Pn**	**22 50 36.1**	**-0.1**
	baz=5.7							
WUAZ	**Wupatki**	**5.92**	**73**	*e*Pn		**Pn**	**22 50 38.9**	**-0.2**
WUAZ				Pg		**Pg**	**22 51 04.7**	**+0.1**
WUAZ				*e*Sg		**Sg**	**22 52 20.1**	**-1.3**
BEKR	**Beckworth**	**6.15**	**345**	*e*Pn		**Pn**	**22 50 40.5**	**-1.6**
BEKR				*e*Sn		**Sn**	**22 51 52.6**	**+0.1**
MVU	**Marysvale**	**6.71**	**45**	*e*Pn		**Pn**	**22 50 49.7**	**-0.3**
MVU				*e*Sg		**Sg**	**22 52 47.4**	**+0.7**
MSU	**Marysvale**	**6.74**	**46**	*e*Pn		**Pn**	**22 50 49.6**	**-0.7**
MSU				Sn		**Sn**	**22 52 05.7**	**-1.5**
ELK	**Elko**	**7.23**	**19**	*e*Pn		**Pn**	**22 50 56.5**	**-0.4**
ELK				*e*Pg		**Pg**	**22 51 28.1**	**-1.4**
ELK				Sn		**Sn**	**22 52 18.6**	**-0.6**
ELK				Lg		Lg	22 52 58.0	
ELK	**Elko**	**

az=172.5
*IDC **19** 23:05:16.2±1.5, 23°.86S×66°.57W, h198km±14km, mb3.7/10, mb1 3.9/15, mb1mx3.8/20, mbtmp3.7/15, Error ellipse: s-maj=16.4km s-min=12.7km az=66.0*
*NEIC **19** 23:05:17.4, 23°.82S×67°.04W, h230km, mb4.1/5, After GUC.*
*GUC **19** 23:05:17.4±0.6, 23°.82S×67°.04W, h230km±15km, ML5.0*

ISC 19 23:05:15.9±0.8, **23°.89S**±0°.06×**66°.60W**±0°.07, **h198**km±8km, **n41**, σ1§**20**/51, **mb3.9**/10, **12C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.47**	**300**	⇑*i*P		**Pn**		**23 06 01.1**	**+1.4**
LVC				*e*S		**Sn**		**23 06 34.5**	**+0.8**
LVC	**Limon Verde**	**2.47**	**300**	⇑*i*P		**Pn**		**23 06 01.1**	**+1.4**
LVC				*e*S		**Sn**		**23 06 34.5**	**+0.8**
PB04	**Plate Boundary**	**3.11**	**301**	⇑*i*P		Pn		23 06 13.2	+6.4
PB04				*i*S		Sn		23 06 55.1	+8.7
PB04	**Plate Boundary**	**3.11**	**301**	⇑*i*P		Pn		23 06 13.2	+6.4
PB04				*i*S		Sn		23 06 55.1	+8.7
PB04				AML		AML		23 06 57.8	
	comp=N,1μm,0.5s								
PB09	**Plate Boundary**	**3.20**	**310**	⇑*i*P		**Pn**		**23 06 09.4**	**+1.3**
PB09				*i*S		**Sn**		**23 06 48.9**	**+0.1**
PB09	**Plate Boundary**	**3.20**	**310**	⇑*i*P		**Pn**		**23 06 09.4**	**+1.3**
PB09				*i*S		**Sn**		**23 06 48.9**	**+0.1**
PB09				AML		AML		23 06 54.7	
	comp=E,3μm,0.5s								
CEN1	**Los Morros**	**3.34**	**278**	⇓*i*P		**Pn**		**23 06 11.1**	**+1.5**
CEN1				*i*S		**Sn**		**23 06 52.0**	**+0.5**
CEN1	**Los Morros**	**3.34**	**278**	⇓*i*P		**Pn**		**23 06 11.1**	**+1.5**
CEN1				*i*S		**Sn**		**23 06 52.0**	**+0.5**
CEN1				AML		AML		23 06 55.6	
	comp=N,707nm,0.6s								
ANCH	**Antofagasta**	**3.49**	**273**	⇑*i*P		**Pn**		**23 06 11.7**	**+0.4**
ANCH				*i*S		**Sn**		**23 06 52.5**	**-2.2**
ANCH	**Antofagasta**	**3.49**	**273**	⇑*i*P		**Pn**		**23 06 11.7**	**+0.4**
ANCH				*i*S		**Sn**		**23 06 52.5**	**-2.2**
ANCH				AML		AML		23 06 55.0	
	comp=E,2μm,0.3s								
MECH	**Mejillones**	**3.62**	**282**	⇑*i*P		**Pn**		**23 06 13.5**	**+0.6**
MECH				*e*S		**Sn**		**23 06 55.4**	**-2.0**
MECH	**Mejillones**	**3.62**	**282**	⇑*i*P		**Pn**		**23 06 13.5**	**+0.6**
MECH				*e*S		**Sn**		**23 06 55.4**	**-2.0**
MECH				AML		AML		23 07 00.5	
	comp=N,3μm,0.5s								
PB01	**Plate Boundary**	**3.89**	**316**	⇑*i*P		**Pn**		**23 06 16.5**	**+0.1**
PB01				*i*S		**Sn**		**23 07 01.9**	**-2.0**
PB01	**Plate Boundary**	**3.89**	**316**	⇑*i*P		**Pn**		**23 06 16.5**	**+0.1**
PB01				*i*S		**Sn**		**23 07 01.9**	**-2.0**
LCO	**Las Campanas**	**6.29**	**215**	*e*Pn		**Pn**		**23 06 44.9**	**-2.2**
	comp=N,18nm,0.4s								
LCO				*e*Sn		Sn		23 07 45.6	-14
LPAZ	**La Paz**	**7.70**	**349**	*e*Pn		**Pn**		**23 07 05.8**	**-0.1**
	comp=N,2.7nm,0.5s								
LPAZ				*e*Sn		**Sn**		**23 08 29.8**	**-3.4**
LPAZ	**La Paz**	**7.70**	**349**	P		**Pn**		**23 07 07.2**	**+1.3**
	comp=N,0.8nm,0.3s,baz=167,slow=7.5,SNR=22								
LPAZ				S		**Sn**		**23 08 32.0**	**-1.2**
	comp=N,0.1nm,0.3s,baz=248,slow=19,SNR=3.0								
CFAA	**Coronel Fontan**	**7.82**	**190**	P		**Pn**		**23 07 06.1**	**-0.8**
	comp=N,0.2nm,0.3s,baz=0.7,slow=16,SNR=27								
CFAA				S		Sn		23 08 27.9	-7.3
	comp=N,1.1nm,0.3s,baz=258,slow=18,SNR=18								
CPUP	**Villa Florida**	**8.75**	**108**	P		**Pn**		**23 07 19.6**	**+0.7**
	comp=N,1.6nm,0.3s,baz=270,slow=11,SNR=56								
SIV	**San Ignacio**	**9.42**	**34**	P		**Pn**		**23 07 27.7**	**-0.1**
	comp=N,1.8nm,0.3s,baz=224,slow=13,SNR=46								
SAML	**Samuel**	**15.21**	**13**	*e*P		**Pn**		**23 08 40.7**	**-0.2**
	comp=N,1.1nm,0.5s								
PLCA	**Paso Flores**	**17.12**	**190**	*e*P		**Pn**		**23 09 03.6**	**-0.1**
	comp=N,4.6nm,0.6s								
PLCA	**Paso Flores**	**17.12**	**190**	P		**Pn**		**23 09 03.9**	**+0.1**
	comp=N,0.2nm,0.3s,baz=358,slow=16,SNR=2.9								
SPB	**Sao Paulo**	**17.56**	**93**	*e*P		**P**		**23 09 06.6**	**-0.5**
	comp=N,8.2nm,0.5s								
BDFB	**Brasilia**	**19.31**	**68**	P		**P**		**23 09 26.9**	**+0.6**
	comp=N,1.8nm,0.3s,baz=240,slow=11,SNR=42								
ROSC	**El Rosal**	**29.55**	**344**	*e*P		P		23 10 59.2	-3.5
TXAR	**Lajitas Array**	**63.80**	**324**	P		**P**		**23 15 27.6**	**+0.3**
	comp=N,0.5nm,0.5s,baz=150,slow=8.0,SNR=11								
DBIC	**Dimbokro**	**67.42**	**71**	P		**P**		**23 15 49.5**	**-1.1**
	comp=N,2.8nm,0.6s,baz=214,slow=6.8,SNR=5.3								
TORD	**Torodi Ar. Bea**	**76.19**	**69**	P		**P**		**23 16 42.5**	**-0.3**
	comp=N,2.7nm,0.6s,baz=256,slow=5.6,SNR=60								
PDAR	**Pinedale Array**	**77.24**	**329**	P		**P**		**23 16 49.0**	**+0.6**
	comp=N,0.8nm,0.6s,baz=137,slow=7.5,SNR=6.0								
ULM	**Lac du Bonnet**	**78.24**	**341**	P		**P**		**23 16 53.4**	**-0.1**
	comp=N,2.9nm,0.5s,baz=162,slow=3.8,SNR=3.3								
SCHQ	**Schefferville**	**78.40**	**360**	P		**P**		**23 16 53.9**	**-0.3**
	comp=N,2.1nm,0.7s,baz=208,slow=12,SNR=7.0								
NVAR	**Mina Array Bea**	**78.68**	**321**	P		**P**		**23 16 56.6**	**+0.2**
	comp=N,0.4nm,0.5s,baz=158,slow=5.8,SNR=3.2								
MAW	**Mawson**	**81.43**	**163**	P		**P**		**23 17 11.8**	**+1.3**
	comp=N,1.1nm,0.6s,baz=180,slow=4.0,SNR=3.8								
ESDC	**Sonseca Array**	**86.07**	**43**	P		**P**		**23 17 35.7**	**+1.3**
	comp=N,0.2nm,0.3s,baz=261,slow=4.8,SNR=4.2								
YKA	**Yellowknife Ar**	**94.15**	**340**	P		**P**		**23 18 11.6**	**+0.1**
	comp=N,1.2nm,0.6s,baz=133,slow=4.5,SNR=24								
ASAR	**Alice Springs**	**128.71**	**204**	PKP		**PKPdf**		**23 24 00.3**	**-0.1**
	comp=N,1.5nm,0.7s,baz=134,slow=1.9,SNR=14								
WRA	**Warramunga Arr**	**131.89**	**207**	PKP		**PKPdf**		**23 24 06.3**	**-0.1**
	comp=N,0.9nm,0.5s,baz=162,slow=1.5,SNR=15								
PETK	**Petropavlovsk-**	**135.74**	**323**	PKP		**PKPdf**		**23 24 13.2**	**+0.7**
	comp=N,4.2nm,0.9s,baz=146,slow=2.4,SNR=4.5								
ZALV	**Zalesovo Beam**	**143.12**	**28**	PKP		PKPbc		23 24 23.7	+0.2
	comp=N,1.2nm,0.4s,baz=309,slow=5.2,SNR=5.8								
MKAR	**Makanchi Array**	**146.21**	**40**	PKPbc		**PKPbc**		**23 24 32.4**	**-0.6**
	comp=N,3.0nm,0.5s,baz=314,slow=2.4,SNR=42								

*HLW **19** 23:12:16.5, 34°.50N×24°.31E, h33km±44km, Md3.4, Ml3.5*
*CSEM **19** 23:12:21.7±0.2, 34°.06N×24°.24E, h40km, ML3.5, Error ellipse: s-maj=7.3km s-min=4.2km az=68.0*
*ATH **19** 23:12:22.8, 34°.30N×24°.23E, h66km±5km*

ISC 19 23:12:20.4±1.0, **34°.08N**±0°.04×**24°.21E**±0°.05, **h50**km±26km, **n54**, σ1§**61**/65, **Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.77**	**353**	*e*P		**Pn**		**23 12 35.6**	**+0.6**
GVD				*e*S		**Sn**		**23 12 46.2**	**+0.5**
GVD	**Gavdhos**	**0.77**	**353**	*e*P		**Pn**		**23 12 35.6**	**+0.6**
GVD				*e*S		**Sn**		**23 12 46.2**	**+0.5**
SIVA	**Sivas**	**1.06**	**28**	*e*P		**Pn**		**23 12 40.2**	**+1.2**
SIVA	**Sivas**	**1.06**	**28**	*e*P		**Pn**		**23 12 40.2**	**+1.2**
VAM	**Vamos**	**1.33**	**360**	*e*P		**Pn**		**23 12 43.7**	**+1.1**
VAM				*e*S		**Sn**		**23 12 58.7**	**-0.4**
VAM	**Vamos**	**1.33**	**360**	*e*P		**Pn**		**23 12 43.7**	**+1.1**
VAM				*e*S		**Sn**		**23 12 58.7**	**-0.4**
IDI	**Anoyia**	**1.33**	**25**	*e*P		**Pn**		**23 12 44.1**	**+1.4**
IDI	**Anoyia**	**1.33**	**25**	*e*P		**Pn**		**23 12 44.1**	**+1.4**
LAST	**Lasithi**	**1.51**	**44**	*e*P		**Pn**		**23 12 46.7**	**+1.6**
LAST	**Lasithi**	**1.51**	**44**	*e*P		**Pn**		**23 12 46.7**	**+1.6**
NPS	**Neapolis**	**1.66**	**44**	*e*P		**Pn**		**23 12 48.5**	**+1.4**
NPS	**Neapolis**	**1.66**	**44**	*e*P		**Pn**		**23 12 48.5**	**+1.4**
KYTH	**Kithira**	**2.40**	**337**	*e*P		**Pn**		**23 12 59.5**	**+2.3**
KYTH	**Kithira**	**2.40**	**337**	*e*P		**Pn**		**23 12 59.5**	**+2.3**
SANT	**Santorini**	**2.51**	**24**	*e*P		**Pn**		**23 12 58.8**	**+0.1**
SANT	**Santorini**	**2.51**	**24**	*e*P		**Pn**		**23 12 58.8**	**+0.1**
SLUM		**2.71**	**162**	S		**Sn**		**23 13 33.7**	**+0.6**
	baz=165								
SLUM				AMP				23 13 00.0	
	comp=N,120μm,0.6s,logA/T=5.3,baz=165								
SLUM		**2.71**	**162**	P		**Pn**		**23 13 02.6**	**+1.1**
SLUM				S		**Sn**		**23 13 33.7**	**+0.6**
VLI	**Veliai**	**2.83**	**339**	*e*P		**Pn**		**23 13 05.4**	**+2.3**
VLI	**Veliai**	**2.83**	**339**	*e*P		**Pn**		**23 13 05.4**	**+2.3**
KARP	**Karpathos**	**2.84**	**58**	*e*P		**Pn**		**23 13 05.7**	**+2.4**
KARP				*e*S		**Sn**		**23 13 37.8**	**+1.5**
KARP	**Karpathos**	**2.84**	**58**	*e*P		**Pn**		**23 13 05.7**	**+2.4**
KARP				*e*S		**Sn**		**23 13 37.8**	**+1.5**
DYR	**Agios Nikonas**	**3.09**	**331**	*e*P		**Pn**		**23 13 09.6**	**+3.0**
DYR	**Agios Nikonas**	**3.09**	**331**	*e*P		**Pn**		**23 13 09.6**	**+3.0**
APE	**Apeiranthos**	**3.18**	**20**	*e*P		**Pn**		**23 13 08.2**	**+0.3**
APE	**Apeiranthos**	**3.18**	**20**	*e*P		**Pn**		**23 13 08.2**	**+0.3**
PYL	**PYLOS**	**3.46**	**325**	*e*P		**Pn**		**23 13 13.3**	**+1.6**
PYL	**PYLOS**	**3.46**	**325**	*e*P		**Pn**		**23 13 13.3**	**+1.6**
DID	**Didima**	**3.51**	**347**	*e*P		**Pn**		**23 13 12.7**	**+0.2**
DID	**Didima**	**3.51**	**347**	*e*P		**Pn**		**23 13 12.7**	**+0.2**
ITM	**Ithomi**	**3.61**	**330**	*e*P		**Pn**		**23 13 16.6**	**+2.8**
ITM	**Ithomi**	**3.61**	**330**	*e*P		**Pn**		**23 13 16.6**	**+2.8**
HMAT	**Matruh**	**3.85**	**140**	P		**Pn**		**23 13 17.6**	**+0.6**
	baz=144								
HMAT	**Matruh**	**3.85**	**140**	P		**Pn**		**23 13 17.7**	**+0.6**
ARG	**Arkhangelos**	**3.86**	**55**	*e*P		**Pn**		**23 13 18.9**	**+1.7**
ARG				*e*S		**Sn**		**23 14 00.9**	**-0.3**
ARG	**Arkhangelos**	**3.86**	**55**	*e*P		**Pn**		**23 13 18.9**	**+1.7**
ARG				*e*S		**Sn**		**23 14 00.9**	**-0.3**
GUR	**Goura**	**4.14**	**339**	*e*P		**Pn**		**23 13 22.7**	**+1.6**
GUR				*e*S		**Sn**		**23 14 07.0**	**-1.3**
GUR	**Goura**	**4.14**	**339**	*e*P		**Pn**		**23 13 22.7**	**+1.6**
LAKA	**Lakka**	**4.53**	**337**	*e*P		**Pn**		**23 13 27.3**	**+0.9**
LAKA	**Lakka**	**4.53**	**337**	*e*P		**Pn**		**23 13 27.3**	**+0.9**
TRIZ	**Trizonia**	**4.62**	**339**	*e*P		**Pn**		**23 13 30.5**	**+3.0**
TRIZ	**Trizonia**	**4.62**	**339**	*e*P		**Pn**		**23 13 30.5**	**+3.0**
KALE	**Kalithea**	**4.62**	**339**	*e*P		**Pn**		**23 13 28.2**	**+0.5**
KALE	**Kalithea**	**4.62**	**339**	*e*P		**Pn**		**23 13 28.2**	**+0.5**
EFP	**Efpalio**	**4.72**	**337**	*e*P		**Pn**		**23 13 31.2**	**+2.2**
EFP	**Efpalio**	**4.72**	**337**	*e*P		**Pn**		**23 13 31.2**	**+2.2**
SWA2		**4.93**	**167**	P		**Pn**		**23 13 32.6**	**+0.7**
	baz=169								
SWA2				AMP				23 14 00.0	
	comp=E,50μm,0.4s,logA/T=5.1,baz=169								
SWA2				S		**Sn**		**23 14 27.2**	**-0.5**
	baz=169								
SWA2		**4.93**	**167**	P		**Pn**		**23 13 32.7**	**+0.7**
SWA2				S		**Sn**		**23 14 27.2**	**-0.5**
HFRF	**Wahat Farafira**	**7.76**	**152**	P		**Pn**		**23 14 11.3**	**+0.6**
	baz=153								
HFRF	**Wahat Farafira**	**7.76**	**152**	P		**Pn**		**23 14 11.3**	**+0.6**
AMAG	**Maghara**	**8.35**	**112**	P		**Pn**		**23 14 16.3**	**-2.6**
	baz=114								
RSH		**8.62**	**109**	P		**Pn**		**23 14 19.9**	**-2.5**
	baz=111								
STON	**Ston**	**10.15**	**332**	*e*Pn		Pn		23 14 39.7	-3.7
STON				Sn		Sn		23 16 25.1	-11
NVLJ	**Novalja**	**12.71**	**328**	*e*Pn		**Pn**		**23 15 16.4**	**-1.9**
NVLJ				Sn		Sn		23 17 30.4	-7.9

IDC 19 23:32:25.6±3.6, **15°.90S×174°.06W, h109**km±27km, **mb3.4**/5, **mb1 3.8**/6, **mb1mx3.5**/20, **mbtmp3.4**/6, **Error ellipse: s-maj=118.8km s-min=23.8km az=150.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.96**	**48**	P		Pn		23 33 11.2	0.0
	29nm,0.3s,baz=58,slow=1.3,SNR=35								
AFI				S		Sn		23 33 41.6	-4.8
	65nm,0.3s,baz=31,slow=22,SNR=17								
ASAR	**Alice Springs**	**49.36**	**252**	P		P		23 41 04.2	-0.1
	0.7nm,0.5s,baz=90,slow=7.8,SNR=10								
NVAR	**Mina Array Bea**	**75.12**	**42**	P		P		23 43 56.6	+0.4
	0.1nm,0.3s,baz=220,slow=5.5,SNR=3.8								
TXAR	**Lajitas Array**	**81.41**	**56**	P		P		23 44 31.3	+0.3
	0.6nm,1.0s,baz=211,slow=8.8,SNR=3.7								
ILAR	**Eielson Array**	**83.06**	**11**	P		P		23 44 38.6	+0.1
	0.2nm,0.7s,baz=226,slow=7.5,SNR=5.6								
PDAR	**Pinedale Array**	**83.06**	**42**	P		P		23 44 38.8	-0.6
	0.9nm,0.8s,baz=212,slow=1.4,SNR=5.7								

*ISCJB **19** 23:32:47.4±0.5, 30°.30N×67°.63E±0°.05, h14km, mb3.6/13, MS3.1/1, Error ellipse: s-maj=6.9km s-min=5.0km az=154.9*
*IDC **19** 23:32:47.2±1.0, 30°.37N×67°.49E, h0km, mb3.6/10, mb1 3.9/11, mb1mx3.6/32, mbtmp3.7/11, ML4.1/1, MS2.9/2, Ms1 2.9/2, ms1mx2.3/41, Error ellipse: s-maj=25.3km s-min=20.3km az=88.0*
*BJI **19** 23:32:48.1, 30°.40N×67°.42E, h11km, mB4.4/1, mb4.3/4, Ms4.1/2, Ms7 3.7/2*
*NNC **19** 23:32:54.7±2.9, 30°.85N×67°.93E, h0km, mb3.5, Error ellipse: s-maj=74.3km s-min=26.6km az=101.0*

ISC 19 23:32:49.4±0.7, **30°.32N**±0°.06×**67°.59E**±0°.07, **h14**km, **n36**, σ1§**90**/36, **mb3.7**/13, **3C-5D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**4.32**	**54**	P		**Pn**		**23 33 56.7**	**+1.9**
CEP	**Cherat**	**5.07**	**45**	P		Pn		23 34 07.6	+2.5
CEP				S		**Sn**		**23 35 06.0**	**+2.5**
BHJ	**Bhuj**	**7.28**	**165**	*e*PKP		**Pn**		**23 34 36.2**	**+0.9**
BHJ				*e*S		**Sn**		**23 35 58.2**	**+0.4**
BHJ				AML		AML		23 36 04.3	
	comp=N,77nm,0.2s								
BHJ				AML		AML		23 36 04.9	
	comp=E,88nm,0.4s								
DHRM	**DHARAMSHALA**	**7.70**	**73**	*e*PKP		Pn		23 34 43.9	+2.5
DHRM				*e*S		**Sn**		**23 36 07.9**	**-0.7**
DHRM				AML		AML		23 36 15.7	
	comp=N,42nm,0.4s								
DHRM				AML		AML		23 36 18.1	
	comp=E,64nm,0.5s								
SMLA	**Simla**	**8.29**	**82**	*e*PKP		**Pn**		**23 34 51.5**	**+2.3**
SMLA				*e*S		**Sn**		**23 36 23.8**	**+1.3**
SMLA				AML		AML		23 36 25.0	
	comp=E,49nm,0.6s								
SMLA				AML		AML		23 36 27.1	
	comp=N,73nm,0.9s								
DDI	**Dehra Dun**	**9.05**	**87**	*e*PKP		**Pn**		**23 34 59.6**	**-0.2**
BHPL	**Bhopal**	**11.26**	**126**	*e*PKP		**Pn**		**23 35 32.3**	**+2.2**
BHPL				*e*S		**Sn**		**23 37 34.1**	**-1.7**
KSH	**Kashi**	**11.46**	**35**	P		Pn		23 35 28.6	-4.2
KSH				pmax		pmax			
	comp=Z,2.0nm,0.3s								
KSH				LR		LR			
	comp=N,240nm,7.0s								
KSH				LR		LR			
	comp=E,210nm,5.5s								
KSH				LR		LR			
	comp=Z,250nm,5.3s								
KK31	**Karatay Array**	**12.97**	**10**	Pn		**Pn**		**23 35 53.7**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=205,slow=16,SNR=15								
KK31				⇑Sn		**Sn**		**23 38 17.8**	**+0.3**
	comp=Z,0.4nm,0.5s								
AAK	**Ala-Archa**	**13.48**	**22**	Pn		**Pn**		**23 35 60.0**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=226,slow=4.8,SNR=7.8								
AAK				Sn		**Sn**		**23 38 26.7**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=64,slow=1.5,SNR=3.1								
AAK				LR		LR		23 41 16.6	
	comp=Z,18nm,19.2s,baz=44,slow=38								
PYUN	**Piuthan**	**13.63**	**96**	*e*P		**Pn**		**23 36 01.6**	**-1.0**
	comp=Z,26nm,0.5s								
TKM2	**Tokmak 2**	**14.12**	**25**	⇓Pn		**Pn**		**23 36 09.4**	**+0.3**
	comp=Z,5.3nm,0.9s								
TKM2				⇓Sn		Sn		23 38 38.6	-7.1
	comp=Z,1.0nm,0.5s								
KOLN	**Koldanda**	**14.24**	**96**	*e*P		Pn		23 36 06.0	-4.9
	comp=Z,7.2nm,0.3s								
DANN	**Dangsing**	**14.24**	**94**	*e*P		**Pn**		**23 36 10.8**	**-0.3**
	comp=Z,22nm,0.6s								
KKN	**Kakani**	**15.68**	**95**	*e*P		**Pn**		**23 36 25.8**	**-4.4**
	comp=Z,15nm,0.7s								
GUN	**Gumba**	**16.17**	**94**	*e*P		**Pn**		**23 36 34.0**	**-2.6**
	comp=Z,85nm,0.7s								
RAMN	**Ramite**	**17.02**	**97**	*e*P		Pn		23 36 37.7	-10
	comp=Z,30nm,0.5s								
ODAN	**Odare**	**17.73**	**96**	*e*P		Pn		23 36 47.6	-8.6
	comp=Z,34nm,0.7s								
TAPN	**Taplejung**	**17.88**	**95**	*e*P		**Pn**		**23 36 53.5**	**-4.6**
	comp=Z,15nm,0.7s								
AB07	**Akbulak array**	**19.77**	**345**	⇑P		**Pn**		**23 37 19.9**	**-0.6**
	comp=Z,1.6nm,0.8s								
MK31	**Makanchi Array**	**20.01**	**31**	⇑P		**P**		**23 37 21.0**	**-0.7**
	comp=Z,2.9nm,0.8s								
MKAR	**Makanchi Array**	**20.01**	**31**	P		**P**		**23 37 21.1**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=209,slow=10,SNR=16								
AKTO	**Aktyubinsk**	**21.34**	**343**	P		**P**		**23 37 35.5**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=187,slow=8.1,SNR=3.4								
KUR17	**Kurchatov Arra**	**21.87**	**19**	⇓P		**P**		**23 37 43.4**	**+1.7**
	comp=Z,0.4nm,1.2s								
KURBB	**Kurchatov Arra**	**21.88**	**19**	P		**P**		**23 37 41.1**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=212,slow=9.1,SNR=7.9								
VOSK	**Vostochnaya**	**22.52**	**5**	⇓P		**P**		**23 37 50.0**	**+1.3**
	comp=Z,4.9nm,1.5s								
ZRNK	**Zerenda**	**22.64**	**2**	⇓P		**P**		**23 37 53.2**	**+3.3**
	comp=Z,0.9nm,0.7s								
BVAR	**Borovoye Array**	**22.78**	**4**	P		**P**		**23 37 51.1**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=177,slow=8.5,SNR=3.4								
ZALV	**Zalesovo Beam**	**26.70**	**23**	P		**P**		**23 38 31.5**	**+3.4**
	comp=Z,2.3nm,0.4s,baz=229,slow=11,SNR=4.8								
EIL	**Elat**	**28.22**	**277**	LR		LR		23 51 01.2	
	comp=Z,47nm,18.1s,baz=288,slow=39								
FINES	**FINESS Array B**	**41.27**	**331**	P		**P**		**23 40 33.2**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=123,slow=7.0,SNR=4.0								
ARCES	**ARCESS Array B**	**45.90**	**341**	P		**P**		**23 41 11.1**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=139,slow=11,SNR=9.2								
TORD	**Torodi Ar. Bea**	**62.77**	**270**	P		**P**		**23 43 13.6**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=61,slow=5.9,SNR=18								
WRA	**Warramunga Arr**	**81.33**	**119**	P		**P**		**23 45 06.3**	**+0.5**
	comp=Z,1.0nm,0.9s,baz=320,slow=5.1,SNR=5.6								
ASAR	**Alice Springs**	**83.22**	**122**	P		**P**		**23 45 16.6**	**+1.0**
	comp=Z,0.9nm,0.6s,baz=315,slow=5.7,SNR=12								
YKA	**Yellowknife Ar**	**87.50**	**1**	P		**P**		**23 45 36.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=352,slow=4.8,SNR=4.7								

IDC 19 23:50:36.7±6.0, **6°.12S×151°.70E, h42**km±49km, **mb3.9**/5, **mb1 4.1**/6, **mb1mx3.7**/19, **mbtmp3.9**/6, **ML3.1**/1, **MS2.7**/2, **Ms1 2.7**/2, **ms1mx2.5**/27, **Error ellipse: s-maj=85.1km s-min=24.3km az=125.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.56**	**234**	P		Pn		23 51 58.6	+1.7
	3.3nm,0.3s,baz=45,slow=8.4,SNR=7.1								
PMG				S		Sn		23 52 58.7	-0.9
	9.8nm,0.3s,baz=152,slow=15,SNR=6.4								
HNR	**Honiara**	**8.81**	**112**	LR		LR		23 55 34.7	
	comp=Z,87nm,21.5s,baz=322,slow=34								
CTA	**Charters Tower**	**14.86**	**200**	LR		LR		23 58 06.9	
	comp=Z,19nm,18.7s,baz=55,slow=30								
WRA	**Warramunga Arr**	**21.75**	**229**	P		P		23 55 24.2	-0.7
	3.7nm,1.1s,baz=54,slow=9.8,SNR=11								
ASAR	**Alice Springs**	**24.44**	**223**	P		P		23 55 51.8	0.0
	4.2nm,0.7s,baz=55,slow=9.2,SNR=42								
FITZ	**Fitzroy Crossi**	**28.07**	**243**	P		P		23 56 25.9	+1.3
	2.2nm,0.3s,baz=82,slow=6.6,SNR=19								
PETK	**Petropavlovsk-**	**59.22**	**4**	P		P		00 00 33.6	0.0
	1.1nm,0.5s,baz=151,slow=6.3,SNR=3.6								
ILAR	**Eielson Array**	**83.79**	**22**	P		P		00 03 00.7	-0.6
	0.9nm,0.6s,baz=245,slow=5.1,SNR=17								
TORD	**Torodi Ar. Bea**	**149.63**	**286**	PKPbc		PKPbc		00 10 22.1	-0.8
	1.0nm,0.6s,baz=77,slow=3.0,SNR=8.4								

*ISCJB **20** 00:06:58.6±0.6, 51°.49N±0°.03×16°.02E±0°.04, h0km, Error ellipse: s-maj=3.9km s-min=3.2km az=179.5*
*CSEM **20** 00:06:58.8±0.3, 51°.57N×16°.00E, h2km, ML3.3/13, Error ellipse: s-maj=4.4km s-min=4.2km az=24.0*
*IPEC **20** 00:06:59.1±0.3, 51°.62N×16°.12E, h0km±1km, ML2.2/3, Error ellipse: s-maj=2.1km s-min=1.6km az=31.0*
*WAR **20** 00:07:01.0, 51°.55N×16°.10E*
*VIE **20** 00:07:02.1±0.3, 51°.32N×16°.02E, h0km, mb2.1/4, ML2.8/4, Error ellipse: s-maj=2.3km s-min=2.0km az=9.0 73 km WNW of Wroclaw Suspected Mining induced.*

ISC 20 00:07:00.4±0.8, **51°.51N**±0°.03×**16°.06E**±0°.02, **h0**km

*PDG **20** 00:21:55.3±0.3,43.09N×18.94E,h5km,MD2.8/4,ML2.7/9, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
*CSEM **20** 00:21:55.1±0.1,43.09N×18.98E,h2km,Ms2.8, Error ellipse: s-maj=3.1km s-min=2.4km az=83.0*
*BEO **20** 00:21:56.1±0.3,43.09N×18.99E,h7km,2km,ML2.7/1*
*VIE **20** 00:21:59.2±0.6,43.39N×19.03E,h10km,mb2.4/3,ML2.1/2, Ms2.8/1, Error ellipse: s-maj=10.9km s-min=4.2km az=43.0*
69 km SE of Sarajevo

ISC 20 00:21:55.5±0.9, 43.10N±0.02×18.99E±0.02, h7km±7km, n71, σ1$26/115, 22C-17D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
UPM	**Unac-Piva**	**0.12**	**329**	⇑*iPg*		**Pg**	**00 21 58.0**	**-0.2**
UPM				*eSg*		**Sg**	**00 22 00.1**	**-0.1**
UPM	**Unac-Piva**	**0.12**	**329**	⇑*iPg*		**Pg**	**00 21 58.0**	**-0.2**
UPM				*eSg*		**Sg**	**00 22 00.1**	**-0.1**
NKY	**Niksic**	**0.28**	**180**	⇑*iPg*		**Pg**	**00 22 00.7**	**-0.4**
NKY				*eSg*		**Sg**	**00 22 05.1**	**+0.2**
NKY	**Niksic**	**0.28**	**180**	⇑*iPg*		**Pg**	**00 22 00.7**	**-0.4**
NKY				*eSg*		**Sg**	**00 22 05.1**	**+0.2**
PLE	**Pljevlja**	**0.37**	**51**	⇑*iPg*		**Pg**	**00 22 03.0**	**+0.2**
PLE				*eSg*		**Sb**	**00 22 09.5**	**-1.1**
PLE	**Pljevlja**	**0.37**	**51**	⇑*iPg*		**Pg**	**00 22 03.0**	**+0.2**
PLE				*eSg*		**Sb**	**00 22 09.5**	**-1.1**
PDG	**Podgorica**	**0.69**	**164**	⇑*iPg*		**Pg**	**00 22 07.3**	**-1.5**
PDG				*eSg*		**Sg**	**00 22 17.4**	**-0.4**
PDG	**Podgorica**	**0.69**	**164**	⇑*iPg*		**Pg**	**00 22 07.3**	**-1.5**
PDG				*eSg*		**Sg**	**00 22 17.4**	**-0.4**
TTG	**Podgorica**	**0.70**	**163**	⇑*iPg*		**Pg**	**00 22 07.3**	**-1.5**
TTG				*eSg*		**Sg**	**00 22 18.5**	**+0.6**
BEY	**Berane**	**0.70**	**108**	⇓*iPg*		**Pg**	**00 22 08.8**	**-0.1**
BEY				*eSg*		**Sb**	**00 22 19.9**	**0.0**
IVA	**Berane**	**0.70**	**108**	⇓*iPg*		**Pg**	**00 22 08.8**	**-0.2**
IVA				*eSg*		**Sb**	**00 22 19.9**	**-0.1**
SJES	**Sjenica**	**0.74**	**77**	⇓*iPg*		**Pg**	**00 22 09.0**	**-0.7**
HCY	**Herceg Novi**	**0.75**	**210**	⇓*iPg*		**Pg**	**00 22 08.4**	**-1.4**
HCY				*eSg*		**Sg**	**00 22 20.1**	**+0.6**
HCY	**Herceg Novi**	**0.75**	**210**	⇓*iPg*		**Pg**	**00 22 08.4**	**-1.4**
HCY				*eSg*		**Sg**	**00 22 20.1**	**+0.6**
BUM	**Brajici-Budva**	**0.80**	**185**	⇑*iPg*		**Pg**	**00 22 09.7**	**-1.1**
BUM				*eSg*		**Sb**	**00 22 22.1**	**-0.7**
BUM	**Brajici-Budva**	**0.80**	**185**	⇑*iPg*		**Pg**	**00 22 09.7**	**-1.1**
BUM				*eSg*		**Sb**	**00 22 22.1**	**-0.7**
BBLS	**Lazići**	**0.82**	**21**	⇑*iPg*		**Pg**	**00 22 10.9**	**-0.5**
BBLS				*eSg*		**Sg**	**00 22 21.8**	**-0.3**
BBLS	**Lazići**	**0.82**	**21**	⇑*iPg*		**Pg**	**00 22 10.9**	**-0.5**
BBLS				*eSg*		**Sg**	**00 22 21.8**	**-0.3**
PVY	**Plav**	**0.87**	**125**	⇓*iPg*		**Pg**	**00 22 12.2**	**0.0**
PVY				*eSg*		**Sb**	**00 22 25.9**	**+1.0**
STON	**Ston**	**0.97**	**257**	*iPg*		**Pg**	**00 22 12.4**	**-1.7**
STON				*eSg*		**Sg**	**00 22 25.8**	**-1.0**
ULC	**Ulcinj**	**1.15**	**171**	⇑*iPg*		**Pg**	**00 22 16.3**	**-1.2**
ULC				*eSg*		**Sn**	**00 22 34.6**	**+0.6**
ULC	**Ulcinj**	**1.15**	**171**	⇑*iPg*		**Pg**	**00 22 16.3**	**-1.2**
DIVS	**Divibare**	**1.24**	**36**	⇓*iPg*		**Pg**	**00 22 18.5**	**-0.7**
DIVS				*eSg*		**Sn**	**00 22 36.1**	**-0.2**
DIVS	**Divibare**	**1.24**	**36**	⇓*iPg*		**Pg**	**00 22 18.5**	**-0.7**
DIVS				*eSg*		**Sn**	**00 22 36.1**	**-0.2**
GRUS	**Gruza**	**1.48**	**57**	*ePg*		**Pn**	**00 22 22.9**	**+0.3**
GRUS				*eSg*		**Sg**	**00 22 45.1**	**+1.9**
GRUS	**Gruza**	**1.48**	**57**	*ePg*		**Pn**	**00 22 22.9**	**+0.3**
GRUS				*eSg*		**Sg**	**00 22 45.1**	**+1.9**
TEKS	**Tekeris**	**1.50**	**15**	*ePg*		**Pn**	**00 22 22.4**	**-0.5**
TEKS				*eSg*		**Sg**	**00 22 45.2**	**+1.4**
TEKS	**Tekeris**	**1.50**	**15**	*ePg*		**Pn**	**00 22 22.4**	**-0.5**
TEKS				*eSg*		**Sg**	**00 22 45.2**	**+1.4**
TIR	**Tirane**	**1.86**	**159**	*eSg*		**Sg**	**00 22 57.2**	**+1.8**
TIR	**Tirane**	**1.86**	**159**	*eSg*		**Sg**	**00 22 57.2**	**+1.8**
SVIS	**Svilajnac**	**1.99**	**53**	*ePn*		**Pn**	**00 22 30.5**	**+0.9**
BEO	**Beograd**	**2.02**	**31**	*eSg*		**Sg**	**00 23 00.9**	**+0.6**
BEO	**Beograd**	**2.02**	**31**	*eSg*		**Sg**	**00 23 00.9**	**+0.6**
BARS	**Barje**	**2.09**	**97**	⇑*iPn*		**Pn**	**00 22 31.4**	**+0.4**
BARS				*eSn*		**Sn**	**00 22 57.4**	**+0.1**
BARS	**Barje**	**2.09**	**97**	⇑*iPn*		**Pn**	**00 22 31.4**	**+0.4**
BARS				*eSn*		**Sn**	**00 22 57.4**	**+0.1**
BLY	**Banja Luka**	**2.10**	**322**	*ePn*		**Pn**	**00 22 31.8**	**+0.6**
BLY				*eSg*		**Sg**	**00 23 05.0**	**+1.9**
BLY	**Banja Luka**	**2.10**	**322**	*ePn*		**Pn**	**00 22 31.8**	**+0.6**
FGSL	**Fruska Gora**	**2.14**	**16**	*eSg*		**Sg**	**00 23 03.2**	**-1.1**
FRGS	**Fruska Gora**	**2.14**	**16**	*eSg*		**Sg**	**00 23 03.2**	**-1.1**
ZAPS	**Zavoj**	**2.67**	**85**	⇑*iPn*		**Pn**	**00 22 40.0**	**+1.0**
ZAPS				*eSn*		**Sn**	**00 23 12.5**	**+0.9**
PKSM	**Moragy**	**3.12**	**356**	⇓*ePn*		**Pn**	**00 22 44.4**	**-0.7**
PKSM				*eSn*		**Sn**	**00 23 20.8**	**-1.9**
PKSM	**Moragy**	**3.12**	**356**	⇓*ePn*		**Pn**	**00 22 44.4**	**-0.7**
PKSM				*eSn*		**Sn**	**00 23 20.8**	**-1.9**
BZS	**Buzias**	**3.15**	**36**	*ePn*		**Pn**	**00 22 45.4**	**0.0**
BZS				*eSn*		**Sn**	**00 23 22.3**	**-0.9**
BZS	**Buzias**	**3.15**	**36**	*ePn*		**Pn**	**00 22 45.4**	**0.0**
BZS				*eSn*		**Sn**	**00 23 22.3**	**-0.9**
NVLJ	**Novalja**	**3.32**	**298**	*ePn*		**Pn**	**00 22 49.9**	**+2.0**
NVLJ				*Sn*		**Sn**	**00 23 30.6**	**+3.1**
NVLJ	**Novalja**	**3.32**	**298**	*ePn*		**Pn**	**00 22 49.8**	**+2.0**
NVLJ				*Sn*		**Sn**	**00 23 30.6**	**+3.1**
PKS9	**Tamasi**	**3.53**	**352**	⇓*ePn*		**Pn**	**00 22 50.2**	**-0.5**
PKS9	**Tamasi**	**3.53**	**352**	⇓*ePn*		**Pn**	**00 22 50.2**	**-0.5**
GOLS	**Golise**	**3.78**	**322**	*ePn*		**Pn**	**00 22 54.8**	**+0.6**
GOLS	**Golise**	**3.78**	**322**	*ePn*		**Pn**	**00 22 54.8**	**+0.6**
KOGS	**Kog**	**3.88**	**331**	*i Pn*		**Pn**	**00 22 55.5**	**0.0**
KOGS	**Kog**	**3.88**	**331**	*i Pn*		**Pn**	**00 22 55.5**	**0.0**
DOBS	**Dobrina**	**3.95**	**322**	*i Pn*		**Pn**	**00 22 57.1**	**+0.5**
DOBS	**Dobrina**	**3.95**	**322**	*i Pn*		**Pn**	**00 22 57.1**	**+0.5**
PDKS	**Podkum**	**4.11**	**317**	*i Pn*		**Pn**	**00 22 59.5**	**+0.7**
PDKS	**Podkum**	**4.11**	**317**	*i Pn*		**Pn**	**00 22 59.5**	**+0.7**
PKST	**T"s**	**4.22**	**351**	⇓*ePn*		**Pn**	**00 22 59.9**	**-0.3**
PKST				*eSn*		**Sn**	**00 23 51.1**	**+1.4**
PKST	**T"s**	**4.22**	**351**	⇓*ePn*		**Pn**	**00 22 59.9**	**-0.3**
PKST				*eSn*		**Sn**	**00 23 51.1**	**+1.4**
PKSG		**4.32**	**355**	*eSn*		**Sn**	**00 23 53.7**	**+1.6**
PKSG		**4.32**	**355**	*eSn*		**Sn**	**00 23 53.7**	**+1.6**
SOKA	**Soboth**	**4.55**	**323**	⇓*iPn*		**Pn**	**00 23 05.1**	**+0.2**
SOKA				⇑*iSn*		**Sn**	**00 23 56.3**	**-1.8**
SOKA	**Soboth**	**4.55**	**323**	Pn		**Pn**	**00 23 05.1**	**+0.2**
SOKA				Sn		**Sn**	**00 23 56.3**	**-1.8**
VOY	**Vojsko**	**4.68**	**311**	*ePn*		Pn	00 23 10.8	+4.2
VOY				*eSn*		**Sg**	**00 24 30.3**	**+4.7**
VOY	**Vojsko**	**4.68**	**311**	*ePn*		Pn	00 23 10.8	+4.2
ARSA	**Arzberg**	**4.82**	**331**	⇑*iPn*		**Pn**	**00 23 09.0**	**+0.5**
ARSA	**Arzberg**	**4.82**	**331**	Pn		**Pn**	**00 23 09.0**	**+0.5**
PSZ	**Piszkesteto**	**4.86**	**7**	⇓*ePn*		**Pn**	**00 23 07.9**	**-1.2**
PSZ				*eSn*		**Sn**	**00 24 02.2**	**-3.5**
PSZ	**Piszkesteto**	**4.86**	**7**	⇓*ePn*		**Pn**	**00 23 07.9**	**-1.2**
PSZ				*eSn*		**Sn**	**00 24 02.2**	**-3.5**
VYHS	**Vyhne**	**5.40**	**359**	*ePN*		**Pn**	**00 23 19.4**	**+3.0**
VYHS				*eSN*		**Sn**	**00 24 17.8**	**-1.0**
MOA	**Molln**	**5.80**	**327**	⇑*iPn*		**Pn**	**00 23 22.3**	**+0.4**
MOA				⇑*iSn*		**Sn**	**00 24 27.5**	**-1.1**
MOA	**Molln**	**5.80**	**327**	Pn		**Pn**	**00 23 22.3**	**+0.4**
MOA				Sn		**Sn**	**00 24 27.5**	**-1.1**

IDC 20 00:34:01.1±4.4, 19.39S×177.71W, h520km±49km, mb3.2/6, mb1 3.6/7, mb1mx3.3/20, mbtmp3.3/7, 2C, Error ellipse: s-maj=29.1km s-min=20.7km az=166.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
URZ	**Urewera**	**19.34**	**192**	P		P	00 37 52.0	-0.4
	3.3nm,0.3s,baz=353,slow=18,SNR=14							
WRA	**Warramunga Arr**	**45.03**	**261**	P		P	00 41 30.1	-0.4
	1.4nm,0.3s,baz=96,slow=7.7,SNR=30							
WRA				PcP		PcP	00 43 00.6	+0.2
	0.2nm,0.4s,baz=95,slow=3.3,SNR=3.7							
ASAR	**Alice Springs**	**45.05**	**256**	P		P	00 41 30.9	+0.4
	4.2nm,0.7s,baz=87,slow=8.7,SNR=46							
ASAR				PcP		PcP	00 43 00.2	-0.2
	0.6nm,0.6s,baz=98,slow=4.6,SNR=5.0							
MJAR	**Matsushiro Arr**	**69.48**	**323**	P		P	00 44 16.5	-0.6
	1.2nm,0.4s,baz=157,slow=7.2,SNR=4.1							
NVAR	**Mina Array Bea**	**80.03**	**43**	P		P	00 45 17.6	+0.9
	0.3nm,0.6s,baz=226,slow=8.7,SNR=2.8							
TXAR	**Lajitas Array**	**86.23**	**57**	P		P	00 45 48.3	+0.5
	0.3nm,0.6s,baz=226,slow=7.4,SNR=6.1							
ILAR	**Eielson Array**	**87.17**	**13**	P		P	00 45 50.0	-1.2
	0.6nm,0.6s,baz=220,slow=5.1,SNR=12							
MKAR	**Makanchi Array**	**110.63**	**314**	PKiKP		PKiKP	00 51 33.2	-1.2
	0.2nm,0.5s,baz=134,slow=0.4,SNR=6.9							
BVAR	**Borovoye Array**	**118.40**	**320**	PKP		PKPdf	00 51 47.5	-1.6
	0.7nm,0.3s,baz=116,slow=2.8,SNR=7.0							
ARCES	**ARCESS Array B**	**127.88**	**350**	PKP		PKPdf	00 52 06.4	-0.4
	2.0nm,0.8s,baz=11,slow=1.2,SNR=11							
EKA	**Eskdalemuir Ar**	**143.88**	**5**	PKP		PKPbc	00 52 34.7	-1.0
	0.9nm,0.4s,baz=321,slow=2.9,SNR=7.8							
BRTR	**Keskin Array B**	**146.28**	**314**	PKPbc		PKPbc	00 52 43.0	-0.6
	1.1nm,0.6s,baz=131,slow=3.5,SNR=7.9							
MMAI	**Mount Meron Ar**	**147.49**	**301**	PKPbc		PKPbc	00 52 47.3	+0.3
	1.1nm,0.4s,baz=61,slow=6.9,SNR=9.4							
GERES	**GERESS Array B**	**149.20**	**345**	PKPbc		PKPbc	00 52 50.5	-0.3
	0.8nm,0.5s,baz=29,slow=2.2,SNR=12							
WTTA	**Wattenberg**	**151.16**	**347**	⇑*i*PKPbc		PKPbc	00 52 55.2	-0.4
	2.4nm,0.3s							
ABTA	**Abfaltersbach**	**151.45**	**345**	⇑*i*PKPbc		PKPbc	00 52 55.2	-0.9
	4.2nm,0.6s							

*ISCJB **20** 00:38:14.9±0.3,33.76N±0.04×82.48E±0.06,h33km, mb4.1/28,MS3.3/14, Error ellipse: s-maj=7.1km s-min=5.4km az=147.0*
*MOS **20** 00:38:14.7±1.0,33.75N×82.53E,h33km,mb4.5/10, Error ellipse: s-maj=13.1km s-min=6.5km az=110.7*
*NEIC **20** 00:38:16.8±0.8,33.73N×82.51E,h35km±8km,mb4.4/9, Error ellipse: s-maj=10.0km s-min=5.6km az=221.0*
*IDC **20** 00:38:18.0±3.3,33.75N×82.52E,h43km±30km,mb3.8/17, mb1 4.0/20,mb1mx3.8/34,mbtmp3.8/20,ML3.4/3,MS3.3/16, Ms1 3.3/16,ms1mx3.1/48, Error ellipse: s-maj=24.1km s-min=13.8km az=45.0*

ISC 20 00:38:16.8±0.5, 33.72N±0.06×82.50E±0.06, h35km, n100, σ1$01/95, mb4.1/28, MS3.3/14, 3C, Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CHCP	**Chirah Chowk**	**7.70**	**272**	P		**Pn**	**00 40 07.4**	**+0.9**
LSA	**Lhasa**	**8.38**	**116**	*eP*		**Pn**	**00 40 14.4**	**-1.9**
LSA	**Lhasa**	**8.38**	**116**	*ePn*		**Pn**	**00 40 14.4**	**-1.9**
CEP	**Cherat**	**8.82**	**274**	P		**Pn**	**00 40 22.0**	**0.0**
THW	**Thamme Wali**	**9.06**	**267**	P		**Pn**	**00 40 27.8**	**+2.7**
TKM2	**Tokmak 2**	**10.67**	**331**	*eP*		**Pn**	**00 40 48.1**	**+0.8**
TKM2				*e*			00 42 46.2	
TKM2				pmax	pmax			
	comp=Z,7.0nm,1.0s							
TKM2	**Tokmak 2**	**10.67**	**331**	*ePn*		**Pn**	**00 40 48.1**	**+0.8**
	comp=Z,7.5nm,1.0s							
TKM2				*eSn*		**Sn**	**00 42 46.2**	**+0.7**
JBP	**Jabalpur**	**10.74**	**193**	⇑*iP*		**Pn**	**00 40 49.2**	**+1.0**
JBP				*i* x		x	00 40 51.6	
	comp=Z,15nm,0.6s							
JBP				*eS*		**Sn**	**00 42 46.1**	**-1.1**
AAK	**Ala-Archa**	**10.90**	**327**	*eP*		Pn	00 40 55.3	+4.8
AAK				pmax	pmax			
	comp=Z,18nm,1.7s							
AAK	**Ala-Archa**	**10.90**	**327**	*ePn*		**Pn**	**00 40 51.4**	**+0.9**
	comp=Z,9.8nm,1.3s							
AAK				*eSn*		**Sn**	**00 42 51.2**	**0.0**
AAK	**Ala-Archa**	**10.90**	**327**	P		**Pn**	**00 40 51.5**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=135,slow=13,SNR=7.7							
AAK				LR		LR	00 45 27.1	
	comp=Z,259nm,18.6s,baz=128,slow=39							
FRU	**Bishkek**	**11.01**	**328**	*eP*		Pn	00 40 56.0	+4.2
FRU				pmax	pmax			
	comp=Z,40nm,2.0s							
FRU				pmax	pmax			
	comp=E,70nm,2.0s							
KBL	**Kabul**	**11.19**	**278**	*eP*		**Pn**	**00 40 54.6**	**+0.1**
KBL				*e*			00 42 55.4	
KBL				pmax	pmax			
	comp=Z,18nm,1.0s							
KBL	**Kabul**	**11.19**	**278**	*ePn*		**Pn**	**00 40 54.6**	**+0.1**
	comp=Z,18nm,1.0s							
KBL				*eSn*		**Sn**	**00 42 55.4**	**-3.0**
MK31	**Makanchi Array**	**13.06**	**359**	*eP*		**Pn**	**00 41 18.3**	**-1.5**
MK31	**Makanchi Array**	**13.06**	**359**	*ePn*		**Pn**	**00 41 18.3**	**-1.5**
MKAR	**Makanchi Array**	**13.06**	**359**	P		**Pn**	**00 41 19.2**	**-0.6**
MKAR	**Makanchi Array**	**13.06**	**359**	P		**Pn**	**00 41 19.2**	**-0.6**
MKAR	**Makanchi Array**	**13.06**	**359**	P		**Pn**	**00 41 19.2**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=178,slow=13,SNR=42							
MKAR				LR		LR	00 47 09.7	
	comp=Z,69nm,18.6s,baz=259,slow=41							
KKAR	**Karatay Array**	**13.26**	**318**	*eP*		**Pn**	**00 41 23.5**	**+0.9**
KKAR	**Karatay Array**	**13.26**	**318**	*ePn*		**Pn**	**00 41 23.5**	**+0.9**
KURBB	**Kurchatov Arra**	**17.14**	**351**	P		**Pn**	**00 42 12.1**	**-1.4**
	comp=Z,0.0nm,0.3s,baz=170,slow=11,SNR=17							
KURBB				LR		LR	00 49 49.3	
	comp=Z,36nm,21.3s,baz=130,slow=40							
KURK	**Kurchatov**	**17.22**	**352**	⇑*iP*		**Pn**	**00 42 13.7**	**-0.8**
KURK				pmax	pmax			
	comp=Z,13nm,1.7s							
KURK	**Kurchatov**	**17.22**	**352**	*ePn*		**Pn**	**00 42 14.0**	**-0.5**
	comp=Z,3.7nm,0.3s							
HVS	**Khovu-Aksy**	**19.23**	**22**	*eP*		**P**	**00 42 37.8**	**-0.2**
ZALV	**Zalesovo Beam**	**20.29**	**4**	*i P*		**P**	**00 42 50.2**	**+0.8**
ZALV				pmax	pmax			
	comp=Z,3.0nm,0.3s							
ZALV	**Zalesovo Beam**	**20.29**	**4**	P		**P**	**00 42 49.4**	**0.0**
ZALV	**Zalesovo Beam**	**20.29**	**4**	P		**P**	**00 42 49.4**	**0.0**
	comp=Z,2.8nm,0.3s,baz=207,slow=9.6,SNR=6.1							
ZALV				LR		LR	00 50 26.4	
	comp=Z,11nm,21.9s,baz=43,slow=36							
CHTO	**Chiang Mai**	**20.88**	**131**	*eP*		**P**	**00 42 56.4**	**+0.4**
CHTO				pmax	pmax			
	comp=Z,29nm,1.6s							
CHTO	**Chiang Mai**	**20.88**	**131**	*eP*		**P**	**00 42 56.4**	**+0.4**
	comp=Z,29nm,1.6s							
NVS	**Novosibirsk**	**21.12**	**1**	*eP*		**P**	**00 42 57.7**	**-0.7**
NVS				pmax	pmax			
	comp=Z,13nm,1.4s							
NVS				pmax	pmax			
	comp=N,5.0nm,0.9s							
NVS				pmax	pmax			
	comp=E,14nm,1.9s							
CMAR	**Chiang Mai Arr**	**21.14**	**132**	P		**P**	**00 42 59.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**21.14**	**132**	P		**P**	**00 42 59.8**	**+0.9**
	comp=E,7.8nm,0.9s,baz=311,slow=11,SNR=32							
BVAR	**Borovoye Array**	**21.16**	**339**	P		**P**	**00 42 59.4**	**+0.6**
BVAR	**Borovoye Array**	**21.16**	**339**	P		**P**	**00 42 59.4**	**+0.6**
BVAR	**Borovoye Array**	**21.16**	**339**	P		**P**	**00 42 59.4**	**+0.6**
	comp=E,3.4nm,0.8s,baz=139,slow=9.2,SNR=11							
BRVK	**Borovoye**	**21.22**	**339**	*eiP*		**P**	**00 43 00.5**	**+1.1**
BRVK				pmax	pmax			
	comp=Z,17nm,1.2s							
BRVK	**Borovoye**	**21.22**	**339**	*eP*		**P**	**00 42 59.3**	**-0.1**
	comp=Z,12nm,1.0s							
ZAK	**Zakamensk**	**22.58**	**36**	*eP*		**P**	**00 43 14.3**	**+0.2**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.3s							
ABKAR	**Akbulak array**	**22.82**	**320**	*eP*		**P**	**00 43 15.2**	**-1.3**
	comp=Z,3.8nm,0.8s							
ENH	**Enshi**	**23.12**	**91**	*eP*		**P**	**00 43 20.4**	**+0.6**
	comp=Z,22nm,1.1s							
TLY	**Talaya**	**23.60**	**34**	*eP*		**P**	**00 43 26.9**	**+2.6**
TLY				pmax	pmax			
	comp=Z,5.0nm,0.7s							
TLY				MLR	MLR			
	comp=Z,47nm,14.0s							
AKTO	**Aktyubinsk**	**24.52**	**320**	P		**P**	**00 43 32.2**	**-0.6**
AKTO	**Aktyubinsk**	**24.52**	**320**	P		**P**	**00 43 32.2**	**-0.6**
AKTO	**Aktyubinsk**	**24.52**	**320**	P		**P**	**00 43 32.2**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=109,slow=7.5,SNR=9.0							
AKTO				LR		LR	00 53 12.0	
	comp=Z,46nm,21.0s,baz=293,slow=36							
GNI	**Garni**	**30.69**	**293**	*eP*		**P**	**00 44 28.1**	**-0.3**
	comp=Z,3.6nm,0.7s							
GNI	**Garni**	**30.69**	**293**	LR		LR	01 00 47.5	
	comp=Z,30nm,18.7s,baz=264,slow=44							
KBZ	**Khabaz**	**32.21**	**300**	LR		LR	00 59 48.3	
	comp=Z,46nm,18.4s,baz=246,slow=40							
KSRS	**Korea Array**	**36.85**	**71**	LR		LR	01 02 05.7	
	comp=Z,73nm,18.0s,baz=289,slow=39							
ASF	**Jabal al Asfar**	**38.07**	**281**	LR		LR	01 00 33.3	
	comp=Z,31nm,20.6s,baz=143,slow=35							
BR131	**Keskin Array S**	**39.23**	**293**	*eP*		**P**	**00 45 40.4**	**-1.6**
BRTR	**Keskin Array B**	**39.23**	**293**	P		**P**	**00 45 43.4**	**+1.4**
BRTR	**Keskin Array B**	**39.23**	**293**	P		**P**	**00 45 43.4**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=52,slow=6.8,SNR=4.9							
EIL	**Elat**	**40.39**	**278**	LR		LR	01 05 00.9	
	comp=Z,66nm,18.6s,baz=277,slow=40							
JOF	**Joensuu**	**43.09**	**329**	*eP*		**P**	**00 46 14.4**	**+1.3**
JOF	**Joensuu**	**43.09**	**329**	*ep*		**P**	**00 46 14.4**	**+1.3**
VSU	**Vasula**	**44.23**	**321**	*eP*		**P**	**00 46 22.4**	**0.0**
VSU				pmax	pmax			
	comp=Z,11nm,1.2s							
MLR	**Muntele Rosu**	**44.29**	**303**	P		**P**	**00 46 25.0**	**+1.8**
	comp=Z,1.9nm,0.9s,baz=116,slow=8.1							
TIXI	**Tiksi**	**45.07**	**19**	*eP*		**P**	**00 46 28.9**	**0.0**
TIXI				pmax	pmax			
	comp=Z,6.0nm,1.2s							
FINES	**FINESS Array B**	**45.09**	**326**	P		**P**	**00 46 29.4**	**+0.2**
FINES	**FINESS Array B**	**45.09**	**326**	P		**P**	**00 46 29.4**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=108,slow=9.3,SNR=11							
FINES				LR		LR	01 07 57.9	
	comp=Z,52nm,19.4s,baz=270,slow=40							
ARCES	**ARCESS Array B**	**47.40**	**336**	P		**P**	**00 46 47.0**	**-0.3**
ARCES	**ARCESS Array B**	**47.40**	**336**	P		**P**	**00 46 47.0**	**-0.3**
	comp=Z,3.6nm,0.9s,baz=101,slow=9.5,SNR=4.9							
HFS	**Hagfors**	**51.01**	**323**	P		**P**	**00 47 14.8**	**-0.2**
HFS	**Hagfors**	**51.01**	**323**	P		**P**	**00 47 14.8**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=115,slow=6.7,SNR=5.0							
HFS				LR		LR	01 09 49.5	
	comp=Z,47nm,20.8s,baz=177,slow=37							
SEY	**Seymchan**	**51.50**	**33**	*eP*		**P**	**00 47 18.9**	**+0.3**
GERES	**GERESS Array B**	**52.13**	**309**	P		**P**	**00 47 24.6**	**+1.0**
GERES	**GERESS Array B**	**52.13**	**309**	P		**P**	**00 47 24.6**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=76,slow=5.6,SNR=6.3							
NB2	**NORSAR Subarra**	**52.21**	**324**	P		**P**	**00 47 23.4**	**-0.6**
	comp=Z,2.7nm,0.9s,baz=88,slow=7.4							
NOA	**NORSAR Array B**	**52.21**	**324**	P		**P**	**00 47 24.0**	**0.0**
NOA	**NORSAR Array B**	**52.21**	**324**	P		**P**	**00 47 24.0**	**0.0**
	comp=Z,1.9nm,0.8s,baz=87,slow=7.3,SNR=6.9							
NOA				LR		LR	01 10 23.2	
	comp=Z,40nm,19.8s,baz=95,slow=37							
PETK	**Petropavlovsk-**	**55.30**	**45**	LR		LR	01 12 06.1	
	comp=Z,28nm,18.6s,baz=80,slow=37							
PGF	**Pioggiola**	**56.83**	**302**	*eP*		**P**	**00 47 56.3**	**-1.6**
	comp=Z,17nm,1.0s							
PGF	**Pioggiola**	**56.83**	**302**	*eP*		**P**	**00 47 56.3**	**-1.6**
PGF				pmax	pmax			
	comp=Z,17nm,1.0s							
PGF	**Pioggiola**	**56.83**	**302**	*eP*		**P**	**00 47 56.3**	**-1.6**
	comp=Z,17nm,1.0s							
LPG	**La Plagne**	**57.52**	**306**	*eP*		**P**	**00 48 02.8**	**-0.1**
	comp=Z,5.6nm,0.8s							
LPG	**La Plagne**	**57.52**	**306**	*eP*		**P**	**00 48 02.8**	**-0.1**
LPG				pmax	pmax			
	comp=Z,6.0nm,0.8s							
LPG	**La Plagne**	**57.52**	**306**	*eP*		**P**	**00 48 02.8**	**-0.1**
	comp=Z,5.6nm,0.8s							
LPL	**La Plagne**	**57.52**	**306**	*eP*		**P**	**00 48 02.8**	**-0.1**
	comp=Z,8.3nm,0.9s		

LOR *e*Sg **Sg** **00 47 48.5 -1.8**
0.8nm,0.2s

ISCJB ***20*** *01:00:11.3±0.8, 6°.63N±0°.10×127°.81E±0°.08, h71km, mb3.8/8, Error ellipse: s-maj=16.4km s-min=6.0km az=35.8*
AUST ***20*** *01:00:15.3±0.1, 5°.93N×125°.95E, h60km±1km, Error ellipse: s-maj=2.9km s-min=1.1km az=245.0*
IDC ***20*** *01:00:21.8±1.6, 6°.09N×126°.72E, h144km±12km, mb3.5/8, mb1 3.7/9, mb1mx3.5/25, mbtmp3.5/9, Error ellipse: s-maj=39.1km s-min=11.4km az=74.0*
ISC 20 01:00:12.5±0.9, **6.6N**±0°.1×**127.8E**±0°.1, **h71**km, **n19, σ1§25/19, mb4.0/8, 2C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.25**	**281**	P		**Pn**	**01 00 49.8**	**+2.3**
	213nm,0.3s,baz=106,slow=4.0,SNR=18							
DAV				S		**Sn**	**01 01 13.2**	**-1.1**
	49nm,0.3s,baz=127,slow=20,SNR=5.0							
DMPH	**Davao City--Mi**	**2.32**	**281**	*e*P		**Pn**	**01 00 51.0**	**+2.5**
DMPH				*e*S		**Sn**	**01 01 14.4**	**-1.8**
CGP	**Cagayan de Oro**	**3.58**	**301**	*e*P		Pn	01 01 10.7	+5.1
CGP				*e*S		**Sn**	**01 01 47.6**	**+1.0**
CTBH	**Cotabato--PC H**	**3.58**	**280**	*i*P		**Pn**	**01 01 05.9**	**+0.3**
KAPI	**Kappang**	**14.08**	**215**	P		Pn	01 03 22.1	-6.6
	0.2nm,0.3s,baz=24,slow=12,SNR=2.4							
MTN	**Manton Dam**	**19.62**	**170**	P		**Pn**	**01 04 37.6**	**+0.3**
	baz=20,SNR=7.9							
KDU	**Kakadu**	**19.74**	**166**	P		**Pn**	**01 04 39.0**	**+0.2**
	baz=20,SNR=4.8							
KNRA	**Kununurra**	**22.18**	**178**	P		**P**	**01 05 03.2**	**+0.3**
	baz=22,SNR=5.1							
KNRA				S		Sn	01 09 23.3	+4.6
	baz=22,SNR=3.5							
FITZ	**Fitzroy Crossi**	**24.66**	**185**	P		**P**	**01 05 25.1**	**-1.7**
	1.5nm,0.7s,baz=13,slow=8.5,SNR=5.4							
WRA	**Warramunga Arr**	**27.17**	**166**	P		**P**	**01 05 50.1**	**+0.6**
	1.4nm,0.4s,baz=345,slow=11,SNR=14							
WRA				ScP		ScP	01 12 35.9	-6.9
	0.8nm,0.7s,baz=348,slow=2.9,SNR=7.1							
ASAR	**Alice Springs**	**30.69**	**169**	P		**P**	**01 06 21.1**	**+0.4**
	0.3nm,0.4s,baz=346,slow=6.8,SNR=5.0							
ASAR				S		S	01 11 09.0	-10
	0.1nm,0.3s,baz=341,slow=13,SNR=3.1							
ASAR				ScP		ScP	01 12 46.5	-7.4
	0.6nm,0.7s,baz=356,slow=2.6,SNR=4.6							
MEEK	**Meekatharra**	**34.24**	**195**	P		P	01 06 48.4	-3.4
	baz=33,SNR=3.1							
BBOO	**Buckleboo**	**40.00**	**169**	P		**P**	**01 07 41.1**	**+0.7**
	baz=40,SNR=9.8							
MKAR	**Makanchi Array**	**55.84**	**324**	P		**P**	**01 09 42.7**	**0.0**
	1.6nm,0.5s,baz=120,slow=8.0,SNR=30							
MKAR				PcP		**PcP**	**01 10 40.7**	**-0.1**
	0.7nm,0.5s,baz=128,slow=4.4,SNR=7.1							
ILAR	**Eielson Array**	**82.05**	**26**	P		P	01 12 30.7	+5.9
	0.7nm,0.7s,baz=243,slow=5.5,SNR=8.5							
ARCES	**ARCESS Array B**	**88.11**	**340**	P		**P**	**01 12 55.5**	**+0.4**
	0.6nm,0.4s,baz=81,slow=6.1,SNR=11							
BRTR	**Keskin Array B**	**89.01**	**310**	P		**P**	**01 12 58.3**	**-1.8**
	1.0nm,0.9s,baz=117,slow=4.1,SNR=5.6							
FINES	**FINESS Array B**	**89.80**	**332**	P		**P**	**01 13 03.0**	**-0.1**
	1.5nm,1.0s,baz=56,slow=5.2,SNR=5.0							
TORD	**Torodi Ar. Bea**	**122.98**	**290**	PKP		**PKPdf**	**01 19 00.7**	**-1.1**
	0.6nm,0.8s,baz=42,slow=2.9,SNR=4.6							

ISK ***20*** *01:01:43.7, 37°.64N×38°.45E, h5km, MD2.9*
DDA ***20*** *01:01:43.6, 37°.67N×38°.44E, h7km, MD3.1*
CSEM ***20*** *01:01:44.0±0.1, 37°.67N×38°.44E, h2km, MD3.1, Error ellipse: s-maj=2.7km s-min=2.4km az=164.0*
ISC 20 01:01:44.0±1.0, **37.67N**±0°.02×**38.44E**±0°.02, **h5**km±10km, **n28, σ0§73/41, Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.23**	**210**	*i*P		**Pg**	**01 01 48.5**	**-0.1**
ATAB				*i*S		**Sg**	**01 01 51.8**	**+0.2**
ATAB	**Bozova**	**0.23**	**210**	*i*P		**Pg**	**01 01 48.4**	**-0.1**
ATAB				*i*S		**Sg**	**01 01 51.8**	**+0.2**
URFA	**Urfa**	**0.38**	**127**	*e*PG		**Pg**	**01 01 51.3**	**-0.1**
URFA				*e*SG		**Sg**	**01 01 56.4**	**0.0**
URFA	**Urfa**	**0.38**	**127**	*e*Pg		**Pg**	**01 01 51.3**	**-0.1**
URFA				*e*Sg		**Sg**	**01 01 56.4**	**0.0**
MYA	**Malataya**	**0.66**	**359**	*e*PG		**Pg**	**01 01 56.8**	**+0.1**
MYA	**Malataya**	**0.66**	**359**	*e*Pg		**Pg**	**01 01 56.8**	**+0.1**
AKCD	**Akcadag**	**0.75**	**327**	*i*P		**Pg**	**01 01 58.4**	**0.0**
AKCD				*i*S		**Sg**	**01 02 08.4**	**+0.3**
AKCD	**Akcadag**	**0.75**	**327**	*i*P		**Pg**	**01 01 58.4**	**0.0**
AKCD				*i*S		**Sg**	**01 02 08.4**	**+0.3**
GZT	**Gaziantep**	**0.76**	**246**	*i*P		**Pb**	**01 01 59.6**	**-0.3**
GZT				*i*S		**Sg**	**01 02 09.0**	**+0.3**
ELZG	**Elazig**	**0.93**	**27**	*e*P		**Pg**	**01 02 02.2**	**+0.2**
ELZG				*i*S		**Sg**	**01 02 14.1**	**+0.1**
ELZG	**Elazig**	**0.93**	**27**	*e*P		**Pg**	**01 02 02.2**	**+0.2**
ELZG				*i*S		**Sg**	**01 02 14.1**	**+0.1**
SVRC	**Sivrice-ELAZID**	**0.98**	**44**	*e*PG		**Pb**	**01 02 03.8**	**+0.1**
SVRC	**Sivrice-ELAZID**	**0.98**	**44**	*e*Pg		**Pb**	**01 02 03.8**	**+0.1**
KMRS	**Kahramanmaras**	**1.23**	**263**	*e*PN		**Pb**	**01 02 07.8**	**-0.1**
KMRS	**Kahramanmaras**	**1.23**	**263**	*e*Pn		**Pb**	**01 02 07.8**	**-0.1**
DIYA	**Diyarbakir**	**1.36**	**79**	*i*P		**Pn**	**01 02 09.1**	**-0.6**
DIYA				*i*S		**Sn**	**01 02 28.4**	**+0.3**
DIYA	**Diyarbakir**	**1.36**	**79**	*i*P		**Pn**	**01 02 09.1**	**-0.6**
DIYA				*i*S		**Sn**	**01 02 28.4**	**+0.3**
DARE	**Darende-Malaty**	**1.37**	**339**	*e*PN		**Pn**	**01 02 07.2**	**-2.7**
DARE	**Darende-Malaty**	**1.37**	**339**	*e*Pn		**Pn**	**01 02 07.2**	**-2.7**
PTK	**Pertek**	**1.43**	**31**	*e*PN		**Pn**	**01 02 10.9**	**0.0**
PTK	**Pertek**	**1.43**	**31**	*e*Pn		**Pn**	**01 02 10.9**	**0.0**
ANDN	**Andirin**	**1.67**	**268**	*i*P		**Pb**	**01 02 14.9**	**-0.3**
ANDN				*e*S		**Sn**	**01 02 35.9**	**+0.1**
ANDN	**Andirin**	**1.67**	**268**	*i*P		**Pb**	**01 02 14.9**	**-0.3**
ANDN				*e*S		**Sn**	**01 02 35.9**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.70**	**307**	*e*PN		**Pb**	**01 02 16.2**	**+0.3**
ILIC	**ilic-Erzincan**	**1.78**	**3**	*e*PN		**Pb**	**01 02 16.2**	**+0.6**
ILIC	**ilic-Erzincan**	**1.78**	**3**	*e*Pn		**Pn**	**01 02 16.2**	**+0.6**
KOZT	**Kozan**	**2.08**	**266**	*e*PN		**Pn**	**01 02 20.6**	**+1.0**
KOZT	**Kozan**	**2.08**	**266**	*e*Pn		**Pn**	**01 02 20.6**	**+1.0**

IDC 20 01:02:41.9±5.0, **18°.37S×173°.68W, h0**km, **mb3.5**/4, **mb1 3.8**/4, **mb1mx3.6**/20, **mbtmp3.5**/4, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.8**/19, **Error ellipse: s-maj=216.0km s-min=36.9km az=138.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.80**	**23**	LR		LR	01 05 13.9	
	comp=Z,185nm,20.7s,baz=298,slow=32							
STKA	**Stephens Creek**	**42.38**	**243**	P		P	01 10 38.1	-0.1
	0.6nm,0.4s,baz=101,slow=10,SNR=2.4							
WRA	**Warramunga Arr**	**48.97**	**259**	P		P	01 11 30.0	-0.5
	0.1nm,0.4s,baz=98,slow=7.0,SNR=4.4							
ASAR	**Alice Springs**	**48.99**	**254**	P		P	01 11 30.9	+0.2
	0.5nm,0.5s,baz=91,slow=7.6,SNR=6.5							
ILAR	**Eielson Array**	**85.39**	**11**	P		P	01 15 20.7	0.0
	0.2nm,0.6s,baz=221,slow=6.7,SNR=4.2							

CSEM ***20*** *01:06:04.8, 38°.01N×22°.46E, h29km, MD2.4, After ATH*
ATH 20 01:06:04.8, 38°.01N×22°.46E, h29km±2km, **MD2.4**/5, **Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUR	**Goura**	**0.12**	**232**	*e*PB		Pb	01 06 09.9	-0.4
GUR				*e*SB		Sb	01 06 14.5	+0.5
GUR	**Goura**	**0.12**	**232**	*e*Pb		Pb	01 06 09.9	-0.4
GUR				*e*Sb		Sb	01 06 14.5	+0.5
KLV	**Kalavryta, Ach**	**0.25**	**278**	*e*PB		Pb	01 06 12.0	+0.4
KLV				*e*SB		Sb	01 06 16.7	+0.5
KLV	**Kalavryta, Ach**	**0.25**	**278**	*e*Pb		Pb	01 06 12.0	+0.4
KLV				*e*Sb		Sb	01 06 16.7	+0.5
LTK	**Loutraki**	**0.40**	**88**	*e*PB		Pb	01 06 13.9	+0.2
LTK	**Loutraki**	**0.40**	**88**	*e*Pb		Pb	01 06 13.9	+0.2
LAKA	**Lakka**	**0.44**	**301**	*e*PB		Pb	01 06 14.8	+0.4
LAKA	**Lakka**	**0.44**	**301**	*e*Pb		Pb	01 06 14.8	+0.4
KALE	**Kalithea**	**0.46**	**327**	*e*PB		Pn	01 06 15.2	-0.3
KALE				*e*SB		Sb	01 06 22.0	+0.7
KALE	**Kalithea**	**0.46**	**327**	*e*Pb		Pn	01 06 15.2	-0.3
KALE				*e*Sb		Sb	01 06 22.0	+0.7
TRIZ	**Trizonia**	**0.47**	**319**	*e*PB		Pb	01 06 14.8	+0.1
TRIZ				*e*SB		Sb	01 06 22.0	+0.6
TRIZ	**Trizonia**	**0.47**	**319**	*e*Pb		Pb	01 06 14.8	+0.1
TRIZ				*e*Sb		Sb	01 06 22.0	+0.6

ISK ***20*** *01:06:50.9, 36°.41N×27°.99E, h11km, MD2.9*
CSEM ***20*** *01:06:51.1±0.2, 36°.37N×27°.90E, h5km, MD3.0, Error ellipse: s-maj=5.3km s-min=4.5km az=137.0*
ATH ***20*** *01:06:51.2, 36°.29N×27°.93E, h19km, MD3.0/5*
DDA ***20*** *01:06:52.6, 36°.47N×28°.04E, h7km, MD2.9*
ISC 20 01:06:51.4±1.0, **36°.32N**±0°.03×**27°.93E**±0°.02, **h20**km±3km, **n32, σ1§15/55, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.19**	**122**	*e*PB		**Pg**	**01 06 56.0**	**-0.3**
ARG				*e*SB		**Sg**	**01 06 59.7**	**+0.1**
ARG	**Arkhangelos**	**0.19**	**122**	*e*Pb		**Pg**	**01 06 56.0**	**-0.3**
ARG				*e*Sb		**Sg**	**01 06 59.7**	**+0.1**
NIS1	**Nisyros Isl.**	**0.67**	**295**	*e*PN		**Pg**	**01 07 04.6**	**-0.1**
NIS1				*e*SN		**Sg**	**01 07 14.0**	**+0.3**
NIS1	**Nisyros Isl.**	**0.67**	**295**	*e*Pn		**Pg**	**01 07 04.6**	**-0.1**
NIS1				*e*Sn		**Sg**	**01 07 14.0**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.77**	**49**	*e*PG		**Pb**	**01 07 04.3**	**-1.7**
DALY				*e*SG		**Sb**	**01 07 14.2**	**-1.9**
TURN	**Turunc**	**0.78**	**44**	*i*P		Pb	01 06 59.6	-6.6
TURN				*i*S		Sb	01 07 05.5	-11
YER	**Yerkesik**	**0.86**	**19**	*e*PG		**Pb**	**01 07 06.4**	**-1.4**
YER				*e*SG		**Sb**	**01 07 17.1**	**-1.9**
YER	**Yerkesik**	**0.86**	**19**	*e*Pg		**Pb**	**01 07 06.4**	**-1.4**
YER				*e*Sg		**Sb**	**01 07 17.1**	**-1.9**
BODT	**Bodrum**	**0.90**	**326**	*e*PG		**Pb**	**01 07 08.1**	**-0.2**
BODT				*e*SG		**Sb**	**01 07 19.7**	**-0.2**
BODT	**Bodrum**	**0.90**	**326**	*e*Pg		**Pb**	**01 07 08.1**	**-0.2**
BODT				*e*Sg		**Sb**	**01 07 19.7**	**-0.2**
FETY	**Fethiye**	**0.98**	**71**	*e*PG		**Pb**	**01 07 08.5**	**-1.3**
MLSB	**Milas**	**0.98**	**353**	*e*PG		**Pb**	**01 07 08.0**	**-1.8**
MLSB	**Milas**	**0.98**	**353**	*e*Pg		**Pb**	**01 07 08.0**	**-1.8**
KARP	**Karpathos**	**0.99**	**219**	*e*PN		**Pg**	**01 07 10.0**	**-0.7**
KARP				*e*SN		**Sn**	**01 07 23.1**	**-0.6**
KARP	**Karpathos**	**0.99**	**219**	*e*Pn		**Pg**	**01 07 10.0**	**-0.7**
AYDN	**Tasoluk**	**1.34**	**358**	*i*P		**Pb**	**01 07 16.1**	**+0.1**
AYDN				*i*S		**Sn**	**01 07 31.9**	**-0.5**
AYDN	**Tasoluk**	**1.34**	**358**	*i*P		**Pb**	**01 07 16.1**	**+0.1**
AYDN				*i*S		**Sn**	**01 07 32.0**	**-0.5**
AKAS	**Kas**	**1.35**	**93**	*i*P		**Pg**	**01 07 17.0**	**-0.6**
AKAS				*i*S		**Sg**	**01 07 35.0**	**-0.3**
GOLH	**Golhisar**	**1.60**	**54**	*i*P		**Pb**	**01 07 19.9**	**-0.4**
GOLH				*i*S		**Sb**	**01 07 40.4**	**+0.2**
GOLH	**Golhisar**	**1.60**	**54**	*i*P		**Pb**	**01 07 19.9**	**-0.4**
GOLH				*i*S		**Sb**	**01 07 40.4**	**+0.2**
DNZL	**Cakiroluk**	**1.64**	**33**	*e*P		**Pb**	**01 07 21.0**	**0.0**
DNZL				*e*S		**Sb**	**01 07 42.7**	**+1.4**
DNZL	**Cakiroluk**	**1.64**	**33**	*e*P		**Pb**	**01 07 21.0**	**0.0**
DNZL				*e*S		**Sb**	**01 07 42.7**	**+1.4**
ELL	**Elmali**	**1.65**	**74**	*e*PN		**Pn**	**01 07 19.6**	**+0.2**
ZKR	**Zakros**	**1.84**	**230**	*e*PN		**Pb**	**01 07 23.8**	**-0.6**
ZKR				*e*SN		**Sb**	**01 07 47.2**	**+0.2**
ZKR	**Zakros**	**1.84**	**230**	*e*Pn		**Pb**	**01 07 23.8**	**-0.6**
ZKR				*e*Sn		**Sb**	**01 07 47.2**	**+0.2**
KORT	**Korkueli**	**2.06**	**70**	*e*P		**Pb**	**01 07 28.4**	**+0.2**
KORT				*e*S		**Sb**	**01 07 55.1**	**+1.6**
KORT	**Korkueli**	**2.06**	**70**	*e*P		**Pb**	**01 07 28.4**	**+0.2**
KORT				*e*S		**Sb**	**01 07 55.1**	**+1.6**
NPS	**Neapolis**	**2.16**	**242**	*e*PB		**Pb**	**01 07 27.9**	**-1.9**
NPS				*e*SN		**Sb**	**01 07 54.7**	**-1.5**
LAST	**Lasithi**	**2.31**	**241**	*e*PN		**Pb**	**01 07 30.3**	**-2.1**
LAST	**Lasithi**	**2.31**	**241**	*e*Pn		**Pb**	**01 07 30.3**	**-2.1**
IDI	**Anoyia**	**2.68**	**248**	*e*PN		**Pn**	**01 07 35.1**	**+1.6**
IDI				*e*SN		**Sn**	**01 08 07.5**	**+2.1**
IDI	**Anoyia**	**2.68**	**248**	*e*Pn		**Pn**	**01 07 35.1**	**+1.6**
IDI				*e*Sn		**Sn**	**01 08 07.5**	**+2.1**

ISK ***20*** *01:07:37.0, 39°.34N×27°.05E, h5km, MD3.0*
DDA ***20*** *01:07:37.6, 39°.34N×26°.98E, h20km, MD2.8*
CSEM ***20*** *01:07:37.7±0.1, 39°.32N×27°.01E, h10km, MD2.8, Error ellipse: s-maj=2.8km s-min=2.4km az=25.0*
ATH ***20*** *01:07:39.4, 39°.22N×26°.84E, h38km±1km, MD3.0/5*
ISC 20 01:07:37.4±1.0, **39°.30N**±0°.02×**27°.01E**±0°.02, **h20**km±4km, **n59, σ0§74/85, Turkey**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.25**	**271**	*i*P		**Pg**	**01 07 43.2**	**-0.1**
AYVA				*i*S		**Sg**	**01 07 47.0**	**-0.2**
AYVA	**Ayvalik**	**0.25**	**271**	*i*P		**Pg**	**01 07 43.2**	**-0.1**
AYVA				*i*S		**Sg**	**01 07 47.0**	**-0.2**
PRK	**Paraskevi**	**0.57**	**264**	*e*PB		**Pn**	**01 07 49.7**	**-0.8**
PRK				*e*SB		**Sg**	**01 07 57.2**	**+0.5**
PRK	**Paraskevi**	**0.57**	**264**	*e*Pb		**Pn**	**01 07 49.7**	**-0.8**
PRK				*e*Sb		**Sg**	**01 07 57.2**	**+0.5**
BALY	**Balya**	**0.64**	**47**	*i*P		**Pb**	**01 07 50.1**	**+0.1**
BALY				*i*S		**Sb**	**01 07 58.3**	**-0.3**
BALY	**Balya**	**0.64**	**47**	*i*P		**Pb**	**01 07 50.1**	**+0.1**
BALY				*i*S		**Sb**	**01 07 58.3**	**-0.3**
EZN	**Ezine**	**0.74**	**315**	*e*PG		**Pb**	**01 07 51.5**	**-0.1**
BALB	**Balikesir**	**0.75**	**63**	*e*PG		**Pb**	**01 07 51.6**	**-0.3**
BALB				*e*SG		**Sb**	**01 08 01.2**	**-0.5**
BALB	**Balikesir**	**0.75**	**63**	*e*Pg		**Pb**	**01 07 51.6**	**-0.3**
AKHS	**Akhisar**	**0.76**	**124**	*i*P		**Pn**	**01 07 52.8**	**-0.2**
AKHS				*i*S		**Sn**	**01 08 03.5**	**-0.4**
AKHS	**Akhisar**	**0.76**	**124**	*i*P		**Pn**	**01 07 52.8**	**-0.2**
AKHS				*i*S		**Sn**	**01 08 03.5**	**-0.4**
GONE	**Gonen-Balikesi**	**0.91**	**35**	*e*PG		**Pb**	**01 07 54.3**	**-0.2**
GONE				*e*SG		**Sb**	**01 08 06.2**	**0.0**
GONE	**Gonen-Balikesi**	**0.91**	**35**	*e*Pg		**Pb**	**01 07 54.3**	**-0.2**
BOZC	**Bozcaada**	**0.91**	**306**	*i*P		**Pg**	**01 07 55.4**	**+0.1**
BOZC				*i*S		**Sb**	**01 08 05.6**	**-0.8**
BLCB	**Balcova**	**0.92**	**178**	*e*PG		**Pg**	**01 07 55.6**	**+0.2**
BLCB				*e*SG		**Sn**	**01 08 08.9**	**+1.1**
IZM	**Izmir**	**0.93**	**168**	*e*PG		**Pg**	**01 07 55.7**	**+0.2**
IZM	**Izmir**	**0.93**	**168**	*e*Pg		**Pg**	**01 07 55.7**	**+0.2**
LPK	**Lapseki**	**1.08**	**350**	*e*PG		**Pg**	**01 07 58.3**	**-0.2**
LPK	**Lapseki**	**1.08**	**350**	*e*Pg		**Pg**	**01 07 58.3**	**-0.2**
KRBG	**Karabiga-Canak**	**1.11**	**11**	*e*PG		**Pg**	**01 07 58.5**	**-0.5**
KRBG				*e*SG		**Sn**	**01 08 12.4**	**-0.2**
KRBG	**Karabiga-Canak**	**1.11**	**11**	*e*Pg		**Pg**	**01 07 58.5**	**-0.5**
KRBG				*e*Sg		**Sn**	**01 08 12.4**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.17**	**340**	*e*PN		**Pb**	**01 07 59.1**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.17**	**340**	*e*Pn		**Pb**	**01 07 59.1**	**+0.2**
DURS	**Dursunbey**	**1.17**	**75**	*i*P		**Pb**	**01 07 59.2**	**+0.1**
DURS				*i*S		**Sn**	**01 08 14.7**	**+0.4**
DURS	**Dursunbey**	**1.17**	**75**	*i*P		**Pb**	**01 07 59.2**	**+0.1**
DURS				*i*S		**Sn**	**01 08 14.7**	**+0.4**
CHOS	**Chios island**	**1.18**	**219**	*e*PN		**Pb**	**01 07 59.4**	**+0.2**
CHOS				*e*SN		**Sb**	**01 08 12.9**	**-1.2**
CHOS	**Chios island**	**1.18**	**219**	*e*Pn		**Pb**	**01 07 59.4**	**+0.2**
CHOS				*e*Sn		**Sb**	**01 08 12.9**	**-1.2**
DST	**Dursunbey**	**1.28**	**76**	*e*PN		**Pb**	**01 08 01.1**	**+0.2**
DST	**Dursunbey**	**1.28**	**76**	*e*Pn		**Pb**	**01 08 01.1**	**+0.2**
DEMI	**Demirci**	**1.35**	**101**	*i*P		**Pg**	**01 08 03.0**	**-0.6**
DEMI				*i*S		**Sb**	**01 08 19.9**	**+0.8**
DEMI	**Demirci**	**1.35**	**101**	*i*P		**Pg**	**01 08 03.0**	**-0.6**
DEMI				*i*S		**Sb**	**01 08 19.9**	**+0.8**
MRMT	**Marmara Adasi**	**1.37**	**19**	*e*PN		**Pb**	**01 08 03.0**	**+0.5**
MRMT	**Marmara Adasi**	**1.37**	**19**	*e*Pn		**Pb**	**01 08 03.0**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.39**	**5**	*e*PN		**Pb**	**01 08 03.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.39**	**5**	*e*Pn		**Pb**	**01 08 03.2**	**+0.4**
KCTX	**Karacabey (Bur**	**1.41**	**47**	*e*PN		**Pb**	**01 08 03.2**	**0.0**
KCTX	**Karacabey (Bur**	**1.41**	**47**	*e*Pn		**Pb**	**01 08 03.2**	**0.0**
ERIK	**Erikli-Kesan**	**1.42**	**345**	*e*PN		**Pb**	**01 08 03.3**	**+0.1**
ERIK	**Erikli-Kesan**	**1.42**	**345**	*e*Pn		**Pb**	**01 08 03.3**	**+0.1**
KULA	**Kula-Manisa**	**1.51**	**121**	*e*PN		**Pg**	**01 08 06.0**	**-0.6**
KULA	**Kula-Manisa**	**1.51**	**121**	*e*Pn		**Pg**	**01 08 06.0**	**-0.6**
LIA	**Limnos Island**	**1.53**	**293**	*e*PN		**Pb**	**01 08 04.9**	**-0.2**
LIA				*e*SN		**Sb**	**01 08 23.5**	**-0.6**
LIA	**Limnos Island**	**1.53**	**293**	*e*Pn		**Pb**	**01 08 04.9**	**-0.2**
LIA				*e*Sn		**Sb**	**01 08 23.5**	**-0.6**
ENEZ	**Enez**	**1.57**	**336**	*e*PN		**Pb**	**01 08 06.1**	**+0.2**
ENEZ	**Enez**	**1.57**	**336**	*e*Pn		**Pb**	**01 08 06.1**	**+0.2**
SMTH	**Samothraki Isl**	**1.63**	**316**	*e*PN		**Pb**	**01 08 07.0**	**+0.2**
SMTH				*e*SN		**Sb**	**01 08 27.0**	**0.0**
SMTH	**Samothraki Isl**	**1.63**	**316**	*e*Pn		**Pb**	**01 08 07.0**	**+0.2**
SMTH				*e*Sn		**Sb**	**01 08 27.0**	**0.0**
ALN	**Alexandroupoli**	**1.75**	**335**	*e*PN		**Pb**	**01 08 09.0**	**0.0**
ALN				*e*SN		**Sb**	**01 08 31.3**	**+0.7**
ALN	**Alexandroupoli**	**1.75**	**335**	*e*Pn		**Pb**	**01 08 09.0**	**0.0**
ALN				*e*Sn		**Sb**	**01 08 31.3**	**+0.7**
ARMT	**Armutlu**	**1.90**	**48**	*e*PN		**Pb**	**01 08 10.4**	**-1.1**
ARMT	**Armutlu**	**1.90**	**48**	*e*Pn		**Pb**	**01 08 10.4**	**-1.1**
TVSB	**Tavsanli**	**1.91**	**85**	*e*PN		**Pn**	**01 08 10.3**	**+1.3**
TVSB	**Tavsanli**	**1.91**	**85**	*e*Pn		**Pn**	**01 08 10.3**	**+1.3**
CTKS	**Kestanelik-??a**	**2.24**	**30**	*e*PN		**Pb**	**01 08 15.6**	**-1.7**
CTKS	**Kestanelik-??a**	**2.24**	**30**	*e*Pn		**Pb**	**01 08 15.6**	**-1.7**
EDRB	**Edirne**	**2.55**	**356**	*e*PN		**Pb**	**01 08 20.1**	**-2.4**
EDRB	**Edirne**	**2.55**	**356**	*e*Pn		**Pb**	**01 08 20.1**	**-2.4**
NVR	**Nevrokopi**	**3.16**	**311**	*e*PN		**Pn**	**01 08 27.8**	**+1.7**
NVR	**Nevrokopi**	**3.16**	**311**	*e*Pn		**Pn**	**01 08 27.8**	**+1.7**

ISCJB ***20*** *01:30:18.7±0.4, 34°.31N±0°.03×25°.48E±0°.04, h96km±8km, Error ellipse: s-maj=6.2km s-min=5.4km az=154.3*
HLW ***20*** *01:30:20.1, 34°.35N×25°.73E, h33km±25km, Md0.0, Ml3.0*
ATH ***20*** *01:30:20.7, 34°.49N×25°.43E, h94km±2km*
CSEM ***20*** *01:30:20.3±0.2, 34°.30N×25°.49E, h80km, ML3.0, Error ellipse: s-maj=6.0km s-min=3.7km az=59.0*
ISC 20 01:30:19.4±1.1, **34°.32N**±0°.04×**25°.45E**±0°.04, **h93**km±11km, **n48, σ1§13/68, Crete**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.84**	**2**	*e*P		**Pn**	**01 30 37.3**	**-0.3**
LAST				*e*S		**Sn**	**01 30 50.8**	**-0.5**
LAST	**Lasithi**	**0.84**	**2**	*e*P		**Pn**	**01 30 37.3**	**-0.3**
LAST				*e*S		**Sn**	**01 30 50.8**	**-0.5**
SIVA	**Sivas**	**0.88**	**323**	*e*P		**Pn**	**01 30 37.9**	**0.0**
SIVA				*e*S		**Sn**	**01 30 51.7**	**0.0**
SIVA	**Sivas**	**0.88**	**323**	*e*P		**Pn**	**01 30 37.9**	**0.0**
SIVA				*e*S		**Sn**	**01 30 51.7**	**0.0**
NPS	**Neapolis**	**0.95**	**8**	*e*P		**Pn**	**01 30 38.9**	**+0.2**
NPS	**Neapolis**	**0.95**	**8**	*e*P		**Pn**	**01 30 38.9**	**+0.2**
ZKR	**Zakros**	**1.02**	**38**	*e*P		**Pn**	**01 30 40.2**	**+0.8**
ZKR				*e*S		**Sn**	**01 30 54.1**	**-0.4**
ZKR	**Zakros**	**1.02**	**38**	*e*P		**Pn**	**01 30 40.2**	**+0.8**
ZKR				*e*S		**Sn**	**01 30 54.1**	**-0.4**
IDI	**Anoyia**	**1.07**	**335**	*e*P		**Pn**	**01 30 41.1**	**+1.0**
IDI				*e*S		**Sn**	**01 30 55.2**	**-0.5**
IDI	**Anoyia**	**1.07**	**335**	*e*P		**Pn**	**01 30 41.1**	**+1.0**
IDI				*e*S		**Sn**	**01 30

FORT	**Forrest**	**34.41**	**224**	*e*P		**P**	**01 50 32.4**	**-1.8**
	7.1nm,0.6s							
KAPI	**Kappang**	**35.12**	**272**	*e*P		**P**	**01 50 39.5**	**-1.1**
	16nm,1.1s							
MBWA	**Marble Bar**	**36.78**	**244**	*e*P		**P**	**01 50 53.1**	**-1.6**
	3.1nm,0.6s							
JNU	**Nakatsue**	**46.25**	**332**	P		**P**	**01 52 11.7**	**-0.5**
JNU	**Nakatsue**	**46.25**	**332**	P		**P**	**01 52 11.6**	**-0.5**
	6.0nm,1.0s,baz=139,slow=11,SNR=2.3							
KSRS	**Korea Array**	**51.18**	**332**	P		**P**	**01 52 50.2**	**+0.4**
	1.4nm,0.8s,baz=147,slow=8.4,SNR=6.1							
KSAR	**Wonju Array Be**	**51.19**	**332**	P		**P**	**01 52 50.2**	**+0.3**
ENH	**Enshi**	**57.43**	**313**	*e*P		**P**	**01 53 35.6**	**+0.1**
	5.9nm,0.7s							
PETK	**Petropavlovsk-**	**60.18**	**2**	LR		LR	02 19 12.8	
	comp=Z,24nm,18.7s,baz=240,slow=35							
KMI	**Kunming**	**60.18**	**304**	P		**P**	**01 53 55.3**	**+0.3**
KMI				pmax		pmax		
	comp=Z,9.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**60.92**	**296**	P		**P**	**01 54 00.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**60.92**	**296**	P		**P**	**01 54 00.5**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=110,slow=4.5,SNR=8.6							
LZH	**Lanzhou**	**64.52**	**316**	*e*P		**P**	**01 54 25.3**	**+1.6**
LZH				pmax		pmax		
	comp=Z,15nm,1.0s							
GTA	**Gaotai**	**68.95**	**317**	*e*P		**P**	**01 54 52.8**	**+0.9**
GTA				pmax		pmax		
	comp=Z,5.0nm,0.6s							
VNDA	**Vanda**	**70.31**	**178**	*e*P		**P**	**01 55 02.2**	**+2.8**
	comp=Z,2.2nm,1.1s							
BILL	**Bilibino**	**75.54**	**4**	*e*P		**P**	**01 55 30.1**	**-0.4**
	comp=Z,9.7nm,1.0s							
PPLA	**Purkeypile**	**80.61**	**22**	*e*P		**P**	**01 55 58.8**	**-0.1**
	comp=Z,18nm,1.5s							
PMR	**Palmer**	**81.03**	**24**	*e*P		**P**	**01 56 00.8**	**0.0**
	comp=Z,12nm,0.8s							
SML	**Sawmill**	**81.46**	**24**	*e*P		**P**	**01 56 04.2**	**+0.8**
	comp=Z,4.2nm,0.7s							
TRF	**Thorofare Moun**	**81.64**	**22**	*e*P		**P**	**01 56 02.8**	**-1.6**
	comp=Z,10nm,0.8s							
DIV	**Divide**	**82.15**	**25**	*e*P		**P**	**01 56 09.5**	**+2.6**
	comp=Z,9.6nm,0.7s							
MCK	**McKinley**	**82.30**	**22**	*e*P		**P**	**01 56 07.1**	**-0.5**
	comp=Z,20nm,0.8s							
QSPA	**South Pole Qui**	**82.72**	**180**	*e*P		**P**	**01 56 10.3**	**+0.4**
	comp=Z,6.4nm,1.2s							
COLA	**College**	**83.32**	**21**	*e*P		**P**	**01 56 11.7**	**-1.1**
	comp=Z,14nm,1.0s							
ILAR	**Eielson Array**	**83.61**	**21**	P		**P**	**01 56 13.2**	**-1.2**
ILAR	**Eielson Array**	**83.61**	**21**	P		**P**	**01 56 13.2**	**-1.2**
	comp=Z,4.3nm,0.9s,baz=254,slow=5.3,SNR=29							
ILAR				LR		LR	02 30 18.3	
	comp=Z,44nm,18.1s,baz=254,slow=33							
MK31	**Makanchi Array**	**83.62**	**319**	*e*P		**P**	**01 56 14.0**	**-0.8**
MKAR	**Makanchi Array**	**83.62**	**319**	*e*P		**P**	**01 56 14.8**	**-0.1**
MKAR	**Makanchi Array**	**83.62**	**319**	P		**P**	**01 56 14.7**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=102,slow=5.6,SNR=14							
COLD	**Coldfoot**	**83.86**	**19**	*e*P		**P**	**01 56 14.8**	**-0.8**
	comp=Z,2.8nm,0.7s							
MENT	**Mentasta**	**83.89**	**24**	*e*P		**P**	**01 56 16.1**	**+0.2**
DOT	**Dot Lake**	**84.10**	**23**	*e*P		**P**	**01 56 17.3**	**+0.3**
	comp=Z,30nm,0.8s							
EGAK	**Eagle**	**85.75**	**23**	*e*P		**P**	**01 56 25.6**	**+0.4**
	comp=Z,11nm,0.8s							
KSH	**Kashi**	**86.20**	**310**	P		P	01 56 33.3	+5.2
KSH				pmax		pmax		
	comp=Z,4.0nm,0.6s							
KSH				pmax		pmax		
	comp=Z,150nm,4.5s							
KURK	**Kurchatov**	**87.05**	**322**	*e*P		**P**	**01 56 30.7**	**-1.1**
	comp=Z,1.3nm,0.8s							
TKM2	**Tokmak 2**	**87.21**	**314**	*e*P		**P**	**01 56 33.0**	**-0.1**
	comp=Z,1.3nm,0.6s							
EKS2	**Erkin-Say**	**88.47**	**313**	*e*P		**P**	**01 56 39.0**	**-0.1**
	comp=Z,2.0nm,0.9s							
NVAR	**Mina Array Bea**	**91.87**	**52**	P		**P**	**01 56 56.2**	**+1.1**
NVAR	**Mina Array Bea**	**91.87**	**52**	P		**P**	**01 56 56.2**	**+1.1**
	comp=Z,3.3nm,1.0s,baz=253,slow=5.5,SNR=12							
BRVK	**Borovoye**	**92.59**	**323**	*e*P		**P**	**01 56 57.9**	**+0.1**
	comp=Z,3.1nm,1.0s							
YKW3	**Yellowknife Ar**	**96.56**	**28**	*e*P		**P**	**01 57 15.7**	**0.0**
YKA	**Yellowknife Ar**	**96.56**	**28**	P		**P**	**01 57 15.8**	**0.0**
YKA	**Yellowknife Ar**	**96.56**	**28**	P		**P**	**01 57 15.8**	**0.0**
	comp=Z,3.5nm,1.0s,baz=263,slow=4.4,SNR=12							
PDAR	**Pinedale Array**	**98.86**	**48**	P		**P**	**01 57 26.5**	**-0.5**
PDAR	**Pinedale Array**	**98.86**	**48**	P		**P**	**01 57 26.5**	**-0.5**
	comp=Z,0.8nm,1.0s,baz=216,slow=4.5,SNR=3.8							
PDAR				LR		LR	02 43 25.0	
	comp=Z,33nm,18.1s,baz=82,slow=36							
LCO	**Las Campanas**	**123.10**	**132**	*e*PKPdf		**PKPdf**	**02 02 43.4**	**-0.4**
LPAZ	**La Paz**	**131.31**	**119**	*e*PKPdf		**PKPdf**	**02 03 01.3**	**+1.0**
TAM	**Tamanrasset**	**146.84**	**301**	*e*PKPbc		**PKPbc**	**02 03 30.0**	**+0.5**
BDFB	**Brasilia**	**147.78**	**135**	PKPbc		**PKPbc**	**02 03 31.8**	**-0.4**
BDFB	**Brasilia**	**147.78**	**135**	PKPbc		**PKPbc**	**02 03 31.8**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=177,slow=4.6,SNR=4.7							
TOA0	**Torodi Ar. Sit**	**153.11**	**285**	*e*PKPbc		**PKPbc**	**02 03 44.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**153.11**	**285**	PKPbc		**PKPbc**	**02 03 44.2**	**-0.7**
TORD				PKPab		**PKPab**	**02 03 56.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**153.11**	**285**	PKPbc		**PKPbc**	**02 03 44.3**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=74,slow=2.0,SNR=12							
TORD				PKPab		**PKPab**	**02 03 56.4**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=63,slow=2.3,SNR=7.7							

IDC 20 02:36:47.3±2.2, **6°21S**×130.15**E**, **h0**km, **mb4.0**/1, **mb1 3.6**/4, **mb1mx3.5**/20, **mbtmp3.5**/4, **ML3.2**/3, **Error ellipse: s-maj=99.8km s-min=27.4km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.61**	**200**	Pn	Pn	02 39 49.7	+1.6
	0.1nm,0.3s,baz=24,slow=12,SNR=7.3						
FITZ				Sn	Sn	02 41 52.7	-17
	0.1nm,0.3s,baz=53,slow=20,SNR=3.6						
WRA	**Warramunga Arr**	**14.25**	**164**	Pn	Pn	02 40 09.8	-0.7
	0.1nm,0.3s,baz=343,slow=13,SNR=3.5						
WRA				Sn	Sn	02 42 36.2	-13
	0.3nm,0.3s,baz=345,slow=23,SNR=6.3						
ASAR	**Alice Springs**	**17.73**	**169**	P	Pn	02 40 55.0	-0.8
	0.1nm,0.3s,baz=346,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**67.65**	**327**	P	P	02 47 46.2	0.0
	0.7nm,0.5s,baz=126,slow=7.1,SNR=11						

GUC 20 02:43:18.7±0.7, **29°02S**×69.92**W**, **h90**km, **ML4.2, 2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.86**	**301**	↓*i*P	Pn	02 43 26.1	-11
VACH				*i* S	Sn	02 43 40.3	-10
VACH				AML	AML	02 43 41.9	
	comp=N,4μm,0.1s						
CPCH	**Copiapo**	**1.70**	**347**	*i* S	Sn	02 44 09.0	+0.5
CPCH				AML	AML	02 44 10.6	
	comp=N,7μm,0.1s						
CDCH	**Caldera**	**2.10**	**338**	*e*P	Pn	02 43 53.0	+0.8
CDCH				*i* S	Sn	02 44 17.9	+0.1
CMCH	**Combarbala**	**2.34**	**203**	↓*i*P	Pn	02 43 56.1	+0.6
CMCH				*i* S	Sn	02 44 24.2	+0.5

IDC 20 02:46:12.2±13.0, **4°08N**×126.46**E**, **h75**km±123km, **mb3.1**/3, **mb1 3.3**/3, **mb1mx3.0**/24, **mbtmp3.1**/3, **Error ellipse: s-maj=214.8km s-min=29.3km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.09**	**162**	P	P	02 51 30.1	0.0
	0.7nm,0.7s,baz=341,slow=10,SNR=5.6						
MKAR	**Makanchi Array**	**57.12**	**325**	P	P	02 55 51.0	0.0
	0.2nm,0.4s,baz=118,slow=7.9,SNR=5.2						
KURBB	**Kurchatov Arra**	**61.30**	**327**	P	P	02 56 19.6	-0.2
	0.2nm,0.5s,baz=123,slow=5.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	**122.56**	**288**	PKP	PKPdf	03 05 00.1	-0.1
	0.6nm,1.1s,baz=78,slow=1.5,SNR=3.3						

IDC 20 02:56:08.3±18.0, **17°62S**×178.41**W**, **h626**km±165km, **mb2.7**/3, **mb1 3.0**/3, **mb1mx2.6**/19, **mbtmp2.7**/3, **Error ellipse: s-maj=258.1km s-min=41.3km az=132.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.68**	**259**	P	P	03 03 27.8	0.0
	0.4nm,0.4s,baz=94,slow=7.1,SNR=16						
WRA				PcP	PcP	03 04 55.8	-0.5
	0.4nm,0.7s,baz=89,slow=3.6,SNR=3.9						
ASAR	**Alice Springs**	**44.87**	**254**	P	P	03 03 29.3	+0.1
	0.9nm,0.4s,baz=90,slow=8.3,SNR=12						
ASAR				PcP	PcP	03 04 56.5	-0.4
	0.3nm,0.4s,baz=106,slow=4.2,SNR=4.2						
ILAR	**Eielson Array**	**85.61**	**13**	P	P	03 07 41.2	-0.3
	0.1nm,0.4s,baz=220,slow=5.0,SNR=6.1						
GERES	**GERESS Array B**	**147.34**	**345**	PKPbc	PKPbc	03 14 43.2	+0.2
	0.2nm,0.5s,baz=29,slow=3.0,SNR=4.1						

TIR **20** *03:14:07.7±0.8, 41.47N×19.49E, h26km±5km, ML3.2*
ISCJB **20** *03:14:08.7±1.0, 41.38N±0.05×19.49E±0.06, h22km±6km, Error ellipse: s-maj=10.4km s-min=5.9km az=35.1*
CSEM **20** *03:14:09.3±0.6, 41.43N×19.53E, h20km, ML2.1, Error ellipse: s-maj=12.4km s-min=6.1km az=33.0*
PDG **20** *03:14:10.6±0.2, 41.55N×19.67E, h11km, ML2.0/6, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
BEO **20** *03:14:11.4±0.6, 41.59N×19.74E, h5km±6km, ML2.1/4*
ISC 20 03:14:08.9±1.4, **41.45N**±0.04×**19.51E**±0.04, **h14**km±9km, **n35**, σ0°90/60, **4C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**111**	*i* Pg	**Pb**	**03 14 15.6**	**-0.2**
TIR				*i* Sg	**Sb**	**03 14 20.8**	**+0.3**
TIR	**Tirane**	**0.29**	**111**	↑*i*Pg	**Pb**	**03 14 15.6**	**-0.2**
TIR				*e*Sg	**Sb**	**03 14 20.9**	**+0.4**
TIR	**Tirane**	**0.29**	**111**	↑*i*Pg	**Pb**	**03 14 15.6**	**-0.2**
TIR				*e*Sg	**Sb**	**03 14 20.9**	**+0.4**
ULC	**Ulcinj**	**0.55**	**339**	↓*i*Pg	**Pg**	**03 14 19.7**	**-0.1**
ULC				*e*Sg	**Sb**	**03 14 28.4**	**+0.2**
ULC	**Ulcinj**	**0.55**	**339**	↓*i*Pg	**Pg**	**03 14 19.7**	**-0.1**
ULC				*e*Sg	**Sb**	**03 14 28.4**	**+0.2**
PUK	**Puka**	**0.66**	**26**	*i* PG	**Pg**	**03 14 21.0**	**-0.8**
PUK				*i* SG	**Sb**	**03 14 31.1**	**-0.2**
PUK	**Puka**	**0.66**	**26**	*i* Pg	**Pg**	**03 14 21.0**	**-0.8**
	SNR=10.0						
PUK				*i* Sg	**Sb**	**03 14 31.1**	**-0.2**
	SNR=10.0						
PHP	**Peshkopia**	**0.74**	**71**	*i* PG	**Pg**	**03 14 22.2**	**-1.1**
PHP				*i* SG	**Sb**	**03 14 33.9**	**+0.4**
PHP	**Peshkopia**	**0.74**	**71**	*i* Pg	**Pg**	**03 14 22.2**	**-1.1**
	SNR=9.0						
PHP				*i* Sg	**Sb**	**03 14 33.9**	**+0.4**
	SNR=9.0						
BUM	**Brajici-Budva**	**0.97**	**332**	↓*i*Pg	**Pn**	**03 14 28.4**	**+0.2**
BUM				*e*Sg	**Sn**	**03 14 43.1**	**+1.3**
BUM	**Brajici-Budva**	**0.97**	**332**	↓*i*Pg	**Pn**	**03 14 28.4**	**+0.2**
BUM				*e*Sg	**Sn**	**03 14 43.1**	**+1.3**
PDG	**Podgorica**	**1.00**	**349**	*e*Pg	**Pb**	**03 14 27.4**	**-0.5**
PDG	**Podgorica**	**1.00**	**349**	↓*i*Pg	**Pb**	**03 14 27.5**	**-0.5**
PDG				*e*Sg	**Sn**	**03 14 42.8**	**+0.4**
TTG	**Podgorica**	**1.00**	**349**	↓*i*Pg	**Pb**	**03 14 27.5**	**-0.5**
TTG				*e*Sg	**Sn**	**03 14 42.8**	**+0.4**
BCI	**Bajram Curri**	**1.01**	**24**	*i* PG	**Pb**	**03 14 26.7**	**-1.5**
BCI	**Bajram Curri**	**1.01**	**24**	*i* Pg	**Pb**	**03 14 26.7**	**-1.5**
	SNR=9.0						
PVY	**Plav**	**1.19**	**16**	↑*i*Pg	**Pn**	**03 14 30.7**	**-0.6**
PVY				*e*Sg	**Sg**	**03 14 47.7**	**+0.2**
PVY	**Plav**	**1.19**	**16**	↑*i*Pg	**Pn**	**03 14 30.7**	**-0.6**
PVY				*e*Sg	**Sg**	**03 14 47.7**	**+0.2**
NKY	**Niksic**	**1.42**	**344**	*e*Pg	**Pb**	**03 14 35.2**	**0.0**
NKY				*e*Sg	**Sg**	**03 14 56.5**	**+1.9**
NKY	**Niksic**	**1.42**	**344**	*e*Pg	**Pb**	**03 14 35.2**	**0.0**
NKY				*e*Sg	**Sg**	**03 14 56.5**	**+1.9**
BEY	**Berane**	**1.45**	**11**	↓*i*Pg	**Pn**	**03 14 35.2**	**+0.4**
BEY				*e*Sg	**Sg**	**03 14 56.5**	**+0.8**
IVA	**Berane**	**1.45**	**11**	↓*i*Pg	**Pn**	**03 14 35.2**	**+0.4**
IVA				*e*Sg	**Sg**	**03 14 56.5**	**+0.8**
STON	**Ston**	**1.96**	**317**	*e*Pn	**Pn**	**03 14 41.0**	**-0.7**
STON				Sn	**Sn**	**03 15 05.4**	**-0.6**
STON	**Ston**	**1.96**	**317**	*e*Pn	**Pn**	**03 14 41.0**	**-0.7**
STON				Sn	**Sn**	**03 15 05.4**	**-0.6**
BARS	**Barje**	**2.19**	**51**	*e*Pn	**Pn**	**03 14 45.3**	**+0.3**
BARS	**Barje**	**2.19**	**51**	*e*Pn	**Pn**	**03 14 45.3**	**+0.3**
BBLS	**Lazi?i**	**2.42**	**358**	*e*Pn	**Pb**	**03 14 51.2**	**-1.0**
BBLS				*e*Sn	**Sn**	**03 15 18.8**	**+1.3**
BBLS	**Lazi?i**	**2.42**	**358**	*e*Pn	**Pb**	**03 14 51.2**	**-1.0**
BBLS				*e*Sn	**Sn**	**03 15 18.8**	**+1.3**
GRUS	**Gruza**	**2.59**	**20**	*e*Pn	**Pn**	**03 14 51.0**	**+0.5**
GRUS	**Gruza**	**2.59**	**20**	*e*Pn	**Pn**	**03 14 51.0**	**+0.5**
DIVS	**Divibare**	**2.67**	**7**	*e*Pn	**Pn**	**03 14 52.8**	**+1.2**
DIVS				*e*Sn	**Sn**	**03 15 23.0**	**-0.8**
DIVS	**Divibare**	**2.67**	**7**	*e*Pn	**Pn**	**03 14 52.8**	**+1.2**
DIVS				*e*Sn	**Sn**	**03 15 23.0**	**-0.8**
ZAPS	**Zavoj**	**2.95**	**51**	*e*Pn	**Pn**	**03 14 56.6**	**+1.3**
ZAPS	**Zavoj**	**2.95**	**51**	*e*Pn	**Pn**	**03 14 56.6**	**+1.3**
NVLJ	**Novalja**	**4.61**	**314**	Sn	**Sn**	**03 16 08.9**	**-2.5**

IDC **20** *03:21:30.6±0.6, 37.66N×21.05E, h0km, mb4.3/20, mb1 4.3/28, mb1mx4.2/39, mbtmp4.2/28, ML3.7/7, MS3.3/10, Ms1 3.3/10, ms1mx2.9/46, Error ellipse: s-maj=14.5km s-min=12.0km az=153.0*
MOS **20** *03:21:31.8±1.1, 37.70N×20.97E, h18km, mb4.7/23, Error ellipse: s-maj=9.5km s-min=4.5km az=75.1*
ATH **20** *03:21:32.7, 37.65N×20.89E, h17km, MD3.7/43, ML4.3*
PDG **20** *03:21:33.5±0.3, 37.68N×20.86E, h18km, ML3.9/6, Error ellipse: s-maj=1.1km s-min=0.9km az=90.0*
THE **20** *03:21:34.1, 37.68N×20.96E, h14km, ML4.4/4, Error ellipse: s-maj=1.0km s-min=0.5km az=291.0*
CSEM **20** *03:21:35.0±0.1, 37.67N×20.88E, h20km, mb4.2/7, Ms2.9, Mw4.4, Error ellipse: s-maj=3.9km s-min=2.4km az=34.0*
ISC 20 03:21:34.2±0.7, **37.69N**±0.02×**20.92E**±0.02, **h24**km±5km, **n458**, σ1°58/488, **mb4.4**/46, **MS3.4**/10, **29C-18D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.43**	**346**	P	**Pb**	**03 21 43.0**	**-0.3**
KFL				S	**Sb**	**03 21 50.0**	**+0.6**
KFL	**Anninata**	**0.43**	**346**	P	**Pb**	**03 21 43.0**	**-0.3**
KFL				S	**Sb**	**03 21 50.4**	**+1.0**
VLS	**Valsamata**	**0.56**	**332**	P	**Pb**	**03 21 44.9**	**-0.4**
VLS				S	**Sb**	**03 21 53.9**	**+1.0**
VLS	**Valsamata**	**0.56**	**332**	*e*PN	**Pb**	**03 21 44.9**	**-0.4**
VLS				*e*SN	**Sb**	**03 21 52.6**	**-0.3**
VLS	**Valsamata**	**0.56**	**332**	P	**Pb**	**03 21 44.9**	**-0.4**
VLS				*e*Sn	**Sb**	**03 21 52.6**	**-0.3**
VLS				S	**Sn**	**03 21 53.6**	**-1.5**
RLS	**Riolos of Patr**	**0.57**	**49**	P	**Pb**	**03 21 44.9**	**-0.6**
RLS				S	**Sb**	**03 21 52.9**	**-0.2**
RLS	**Riolos of Patr**	**0.57**	**49**	*e*PN	**Pb**	**03 21 44.9**	**-0.6**
RLS				*e*SN	**Sb**	**03 21 53.6**	**+0.4**
RLS	**Riolos of Patr**	**0.57**	**49**	P	**Pb**	**03 21 44.9**	**-0.6**
RLS				S	**Sb**	**03 21 53.0**	**-0.2**
RLS				*e*Sn	**Sb**	**03 21 53.6**	**+0.4**
UPR	**University Cam**	**0.91**	**49**	P	**Pb**	**03 21 51.2**	**0.0**
UPR				S	**Sn**	**03 22 04.8**	**+1.1**
ITM	**Ithomi**	**0.95**	**122**	P	**Pb**	**03 21 51.4**	**-0.5**
ITM	**Ithomi**	**0.95**	**122**	*e*PN	**Pb**	**03 21 51.1**	**-0.8**
ITM				*e*SN	**Sb**	**03 22 03.8**	**-0.2**
ITM	**Ithomi**	**0.95**	**122**	*e*Pn	**Pb**	**03 21 51.1**	**-0.8**
ITM	**Ithomi**	**0.95**	**122**	P	**Pb**	**03 21 51.4**	**-0.5**
ITM				*e*Sn	**Sb**	**03 22 03.8**	**-0.2**
ITM				S	**Sn**	**03 22 04.1**	**-0.7**
LAKA	**Lakka**	**1.00**	**56**	P	**Pb**	**03 21 52.0**	**-0.8**
LAKA				S	**Sn**	**03 22 06.2**	**+0.1**
LAKA	**Lakka**	**1.00**	**56**	*e*PB	**Pb**	**03 21 52.0**	**-0.8**
LAKA				*e*SN	**Sn**	**03 22 07.2**	**+1.1**
LAKA	**Lakka**	**1.00**	**56**	P	**Pb**	**03 21 52.1**	**-0.8**
LAKA				S	**Sn**	**03 22 06.3**	**+0.1**
LAKA				*e*Sn	**Sn**	**03 22 07.2**	**+1.1**
PYL	**PYLOS**	**1.03**	**140**	P	**Pb**	**03 21 52.4**	**-0.8**
PYL				S	**Sn**	**03 22 07.1**	**+0.4**
PYL	**PYLOS**	**1.03**	**140**	*e*PN	**Pb**	**03 21 52.4**	**-0.8**
PYL				*e*SN	**Sb**	**03 22 05.8**	**-0.5**
PYL	**PYLOS**	**1.03**	**140**	P	**Pb**	**03 21 52.4**	**-0.8**
PYL				*e*Sn	**Sb**	**03 22 05.8**	**-0.5**
PYL				S	**Sn**	**03 22 07.1**	**+0.4**
KLV	**Kalavryta, Ach**	**1.03**	**70**	*e*PN	**Pb**	**03 21 52.6**	**-0.8**
KLV				*e*SN	**Sn**	**03 22 08.0**	**+1.0**
KLV	**Kalavryta, Ach**	**1.03**	**70**	*e*Pn	**Pb**	**03 21 52.6**	**-0.8**
KLV				*e*Sn	**Sn**	**03 22 08.0**	**+1.0**
EFP	**Efpalio**	**1.07**	**46**	P	**Pn**	**03 21 53.2**	**-0.5**
EFP				S	**Sn**	**03 22 09.4**	**+1.6**
EFP	**Efpalio**	**1.07**	**46**	*e*PN	**Pn**	**03 21 53.4**	**-0.3**
EFP				*e*SN	**Sn**	**03 22 09.6**	**+1.8**
EFP	**Efpalio**	**1.07**	**46**	*e*Pn	**Pn**	**03 21 53.4**	**-0.3**
EFP				S	**Sn**	**03 22 09.4**	**+1.6**
LKD2	**Lefkada island**	**1.12**	**349**	P	**Pb**	**03 21 54.8**	**-0.1**
LKD2				S	**Sn**	**03 22 10.7**	**+1.7**
LKD2	**Lefkada island**	**1.12**	**349**	*e*PN	**Pn**	**03 21 54.6**	**+0.2**
LKD2				*e*SN	**Sn**	**03 22 10.8**	**+1.7**
LKD2	**Lefkada island**	**1.12**	**349**	P	**Pb**	**03 21 54.8**	**-0.1**
LKD2				*e*Sn	**Sn**	**03 22 10.8**	**+1.7**
TRIZ	**Trizonia**	**1.13**	**53**	P	**Pn**	**03 21 54.2**	**-0.2**
TRIZ	**Trizonia**	**1.13**	**53**	*e*PN	**Pn**	**03 21 54.3**	**-0.2**
TRIZ				*e*SN	**Sn**	**03 22 11.6**	**+2.3**
TRIZ	**Trizonia**	**1.13**	**53**	*e*Pn	**Pn**	**03 21 54.3**	**-0.2**
TRIZ				S	**Sn**	**03 22 10.0**	**+0.7**
TRIZ				*e*Sn	**Sn**	**03 22 11.6**	**+2.3**
GUR	**Goura**	**1.15**	**77**	P	**Pn**	**03 21 54.4**	**-0.4**
GUR	**Goura**	**1.15**	**77**	*e*PN	**Pn**	**03 21 54.8**	**-0.1**
GUR				*e*SN	**Sn**	**03 22 12.0**	**+2.0**
GUR	**Goura**	**1.15**	**77**	P	**Pn**	**03 21 54.5**	**-0.4**
GUR	**Goura**	**1.15**	**77**	*e*Pn	**Pn**	**03 21 54.8**	**-0.1**
GUR				S	**Sn**	**03 22 11.6**	**+1.6**
GUR				*e*Sn	**Sn**	**03 22 12.0**	**+2.0**
KALE	**Kalithea**	**1.19**	**53**	P	**Pn**	**03 21 55.2**	**-0.1**
KALE	**Kalithea**	**1.19**	**53**	*e*PN	**Pn**	**03 21 55.3**	**-0.1**
KALE	**Kalithea**	**1.19**	**53**	*e*Pn	**Pn**	**03 21 55.3**	**-0.1**
KALE				S	**Sn**	**03 22 13.1**	**+2.2**
VLX	**Vlachokerasia**	**1.20**	**105**	P	**Pb**	**03 21 55.8**	**-0.5**
VLX	**Vlachokerasia**	**1.20**	**105**	*e*PN	**Pn**	**03 21 55.4**	**-0.2**
VLX				*e*SN	**Sn**	**03 22 12.5**	**+1.3**
VLX	**Vlachokerasia**	**1.20**	**105**	*e*Pn	**Pn**	**03 21 55.4**	**-0.2**
VLX	**Vlachokerasia**	**1.20**	**105**	P	**Pb**	**03 21 55.8**	**-0.5**
VLX				*e*Sn	**Sn**	**03 22 12.5**	**+1.3**
EVR	**Evrytania**	**1.41**	**29**	P	**Pn**	**03 21 58.7**	**+0.2**
EVR	**Evrytania**	**1.41**	**29**	*e*PN	**Pb**	**03 21 59.5**	**-0.4**
EVR	**Evrytania**	**1.41**	**29**	P	**Pb**	**03 21 59.5**	**-0.4**
THAL	**Thalero**	**1.42**	**75**	P	**Pb**	**03 21 59.9**	**-0.1**
THAL	**Thalero**	**1.42**	**75**	P	**Pb**	**03 21 59.9**	**-0.1**
DYR	**Agios Nikonas**	**1.46**	**129**	P	**Pb**	**03 21 59.8**	**-0.8**
DYR	**Agios Nikonas**	**1.46**	**129**	P	**Pb**	**03 21 59.8**	**-0.8**
DSF	**Desfina**	**1.46**	**60**	P	**Pb**	**03 21 59.8**	**-0.9**
DSF	**Desfina**	**1.46**	**60**	P	**Pb**	**03 21 59.8**	**-0.9**
MAKR	**Makrakomi, Fth**	**1.63**	**35**	P	**Pb**	**03 22 04.1**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.63**	**35**	P	**Pb**	**03 22 04.1**	**+0.5**
LTK	**Loutraki**	**1.65**	**78**	P	**Pb**	**03 22 04.5**	**+0.6**
LTK	**Loutraki**	**1.65**	**78**	*e*PN	**Pb**	**03 22 03.6**	**-0.3**
LTK	**Loutraki**	**1.65**	**78**	*e*Pn	**Pb**	**03 22 03.6**	**-0.3**
LTK	**Loutraki**	**1.65**	**78**	P	**Pb**	**03 22 04.5**	**+0.6**
AGG	**Agios Georgios**	**1.73**	**39**	P	**Pb**	**03 22 05.1**	**-0.3**
AGG	**Agios Georgios**	**1.73**	**39**	*e*PN	**Pb**	**03 22 05.0**	**-0.3**
AGG	**Agios Georgios**	**1.73**	**39**	*e*Pn	**Pb**	**03 22 05.0**	**-0.3**
AXAR	**Agios Charalam**	**1.74**	**51**	P	**Pb**	**03 22 04.7**	**-0.7**
AXAR	**Agios Charalam**	**1.74**	**51**	P	**Pb**	**03 22 04.7**	**-0.7**
DIDY	**Didyma**	**1.83**	**96**	P	**Pb**	**03 22 06.1**	**-0.9**
DIDY	**Didyma**	**1.83**	**96**	P	**Pb**	**03 22 06.1**	**-0.9**
DID	**Didima**	**

VAY eLg Lg 03 23 17.5
comp=E,184nm,0.8s
VAY Valandovo 3.85 19⇑ iPn Pn 03 22 33.9 +2.0
VAY eLg Lg 03 23 17.9
comp=E,184nm,0.8s
IDI Anoyia 3.99 126 ePN Pn 03 22 35.6 +1.7
IDI Anoyia 3.99 126 ePn Pn 03 22 35.6 +1.7
LIA Limnos Island 3.99 55 ePN Pn 03 22 36.2 +2.4
LIA Limnos Island 3.99 55 ePn Pn 03 22 36.2 +2.4
SRS Serrai 4.00 30 P Pn 03 22 36.1 +2.1
SRS Serrai 4.00 30 P Pn 03 22 36.1 +2.1
PHP Peshkopia 4.01 355 ePN Pn 03 22 36.5 +2.4
PHP Peshkopia 4.01 355 P Pn 03 22 35.1 +1.0
PHP Peshkopia 4.01 355 P Pn 03 22 35.1 +1.0
PHP Peshkopia 4.01 355 ePn Pn 03 22 36.5 +2.4
SIVA Sivas 4.12 129 ePN Pn 03 22 37.0 +1.5
SIVA Sivas 4.12 129 ePn Pn 03 22 37.0 +1.5
PE1 Pezze di Greco 4.13 320 ePn Pn 03 22 33.3 -2.4
SKO Skopje 4.30 5 i Pn Pn 03 22 40.2 +2.2
SKO eLg Lg 03 23 29.6
comp=N,294nm,0.9s
SKO eLg Lg 03 23 29.6
comp=Z,162nm,0.7s
SKO Skopje 4.30 5 i Pn Pn 03 22 40.7 +2.7
SKO eLg Lg 03 23 30.1
comp=Z,162nm,0.7s
NVR Nevrokopi 4.31 31 P Pn 03 22 39.9 +1.7
NVR Nevrokopi 4.31 31 ePN Pn 03 22 40.6 +2.4
NVR Nevrokopi 4.31 31 P Pn 03 22 39.9 +1.7
NVR Nevrokopi 4.31 31 ePn Pn 03 22 40.6 +2.4
PUK Puka 4.42 350 ePN Pn 03 22 41.2 +1.4
PUK i SN Sn 03 23 20.0 -11
PUK Puka 4.42 350 ePn Pn 03 22 41.2 +1.4
LAST Lasithi 4.46 123 ePN Pn 03 22 41.3 +1.0
LAST Lasithi 4.46 123 ePn Pn 03 22 41.3 +1.0
ULC Ulcinj 4.46 344⇑ iPn Pn 03 22 41.4 +1.1
ULC eSn Sn 03 23 33.0 +1.5
ULC Ulcinj 4.46 344⇑ iPn Pn 03 22 41.4 +1.1
ULC eSn Sn 03 23 33.0 +1.5
PRK Paraskevi 4.48 68 ePN Pn 03 22 43.0 +2.5
PRK Paraskevi 4.48 68 ePn Pn 03 22 43.0 +2.5
NPS Neapolis 4.49 121 ePN Pn 03 22 43.4 +2.7
NPS Neapolis 4.49 121 ePn Pn 03 22 43.4 +2.7
URLA Izmir 4.53 80 i P Pn 03 22 43.2 +1.9
URLA Izmir 4.53 80 i P Pn 03 22 43.2 +1.9
SMTH Samothraki Isl 4.54 51 ePN Pn 03 22 43.9 +2.6
SMTH Samothraki Isl 4.54 51 ePn Pn 03 22 43.9 +2.6
BAI Bari 4.63 319 ePn Pn 03 22 44.3 +1.7
BAI eSn Sn 03 23 34.8 -0.8
BCI Bajram Curri 4.72 352 i PN Pn 03 22 46.3 +2.4
BCI i SN Sn 03 23 36.3 -1.5
BCI Bajram Curri 4.72 352 i Pn Pn 03 22 46.3 +2.4
BCI i Sn Sn 03 23 36.3 -1.5
AYVA Ayvalik 4.81 69 i P Pn 03 22 47.6 +2.6
AYVA Ayvalik 4.81 69 i P Pn 03 22 47.6 +2.6
BUM Brajici-Budva 4.86 342⇓ iPn Pn 03 22 46.6 +0.7
BUM eSn Sn 03 23 42.4 +1.0
BUM Brajici-Budva 4.86 342⇓ iPn Pn 03 22 46.6 +0.7
BUM eSn Sn 03 23 42.4 +1.0
TTG Podgorica 4.91 345⇓ iPn Pn 03 22 47.5 +1.2
TTG eSn Sn 03 23 43.7 +1.4
PDG Podgorica 4.91 345⇓ iPn Pn 03 22 47.5 +1.1
PDG eSn Sn 03 23 43.7 +1.3
PVY Plav 4.96 352⇓ iPn Pn 03 22 49.5 +2.3
PVY eSn Sn 03 23 46.0 +2.2
PVY Plav 4.96 352⇓ iPn Pn 03 22 49.5 +2.3
PVY eSn Sn 03 23 46.0 +2.2
GCAM G?zelcaml? 5.01 88 i P Pn 03 22 49.3 +1.6
GCAM G?zelcaml? 5.01 88 i P Pn 03 22 49.3 +1.6
ALN Alexandroupoli 5.11 50 ePN Pn 03 22 51.6 +2.5
ALN Alexandroupoli 5.11 50 ePn Pn 03 22 51.6 +2.5
HCY Herceg Novi 5.11 339⇓ iPn Pn 03 22 50.3 +1.2
HCY eSn Sn 03 23 48.2 +0.9
HCY Herceg Novi 5.11 339⇓ iPn Pn 03 22 50.3 +1.2
HCY eSn Sn 03 23 48.2 +0.9
BARS Barje 5.17 7 eSn Sn 03 23 48.4 -0.5
IVA Berane 5.24 352 ePn Pn 03 22 52.9 +1.9
IVA eSn Sn 03 23 52.3 +1.6
BEY Berane 5.24 352 ePn Pn 03 22 52.9 +1.9
BEY eSn Sn 03 23 52.3 +1.6
NKY Niksic 5.33 345 ePn Pn 03 22 54.2 +1.9
NKY eSn Sn 03 23 53.3 +0.4
NKY Niksic 5.33 345 ePn Pn 03 22 54.2 +1.9
NKY eSn Sn 03 23 53.3 +0.4
KARP Karpathos 5.45 111 ePN Pn 03 22 56.4 +2.4
KARP Karpathos 5.45 111 ePn Pn 03 22 56.4 +2.4
AYDN Tasoluk 5.52 88 i P Pn 03 22 57.4 +2.5
AYDN Tasoluk 5.52 88 i P Pn 03 22 57.4 +2.5
BALY Balya 5.62 67 i P Pn 03 22 59.1 +2.8
BALY Balya 5.62 67 i P Pn 03 22 59.1 +2.8
STON Ston 5.73 336 i Pn Pn 03 22 57.7 -0.1
STON eSn Sn 03 23 59.8 -2.9
STON Ston 5.73 336 i Pn Pn 03 22 57.7 -0.1
ARG Arkhangelos 5.95 102 ePN Pn 03 23 03.5 +2.7
ARG Arkhangelos 5.95 102 ePn Pn 03 23 03.5 +2.7
MANT Manisa 6.08 80 i P Pn 03 23 05.2 +2.5
MANT Manisa 6.08 80 i P Pn 03 23 05.2 +2.5
LTBQ Tobruq 6.13 155 i P Pn 03 23 04.7 +1.4
SNR=23
TURN Turunc 6.18 95 i P Pn 03 23 03.8 -0.1
TURN Turunc 6.18 95 i P Pn 03 23 03.8 -0.1
GRUS Gruza 6.20 359⇑ iPn Pn 03 23 04.7 +0.6
BBLS Lazići 6.28 350 ePn Pn 03 23 08.4 +3.1
DIVS Divibare 6.44 354 P Pn 03 23 07.6 0.0
DIVS Divibare 6.44 354 P Pn 03 23 07.6 0.0
KHAL Karahalli 6.80 82 i P Pn 03 23 15.9 +3.4
KHAL Karahalli 6.80 82 i P Pn 03 23 15.9 +3.4
GOLH Golhisar 6.89 91 i P Pn 03 23 18.3 +4.6
GOLH Golhisar 6.89 91 i P Pn 03 23 18.3 +4.6
AKAS Kas 7.10 99 i P Pn 03 23 18.9 +2.2
AKAS Kas 7.10 99 i P Pn 03 23 18.9 +2.2
AQU L'Aquila 7.42 311⇓ iP Pn 03 23 23.1 +2.2
AQU L'Aquila 7.42 311 P Pn 03 23 23.1 +2.2
KORT Korkueli 7.54 92 i P Pn 03 23 28.0 +5.2
BZS Buzias 7.94 4⇑ iP Pb 03 23 49.1 -1.9
SEYT Eskypehyr 7.99 74 i P Pn 03 23 32.4 +3.6
SEYT Eskypehyr 7.99 74 i P Pn 03 23 32.4 +3.6
ARR Arges 8.16 19⇑ iP Pn 03 23 33.3 +2.2
ARR Arges 8.16 19⇑ iP Pn 03 23 33.3 +2.2
NVLJ Novalja 8.25 328 ePn Pn 03 23 32.1 -0.1
NVLJ Sn Sn 03 25 00.1 -4.5
NVLJ Novalja 8.25 328 ePn Pn 03 23 32.1 -0.1
GHAR Gharyan 8.50 232 i P Pn 03 23 35.2 -0.6
SNR=22
ISR Istrita 8.54 28 ⇑P Pn 03 23 39.3 +3.0
ISR Istrita 8.54 28⇑ iP Pn 03 23 39.3 +3.0
ISR Istrita 8.54 28 P Pn 03 23 39.3 +3.0
MLR Muntele Rosu 8.65 24⇑ iP Pn 03 23 40.6 +2.6
MLR Muntele Rosu 8.65 24 Pn Pn 03 23 40.1 +2.1
comp=Z,0.1nm,0.3s,baz=204,slow=13,SNR=8.9
MLR Muntele Rosu 8.65 24 P Pn 03 23 40.1 +2.1
PKSM Moragy 8.69 349 ⇑P Pn 03 23 39.8 +1.6
PKSM Moragy 8.69 349⇑ iP Pn 03 23 39.8 +1.6
PKSM Moragy 8.69 349 P Pn 03 23 39.8 +1.6
TIRR Tirgusor 8.81 38 ⇑P Pn 03 23 41.9 +1.9
TIRR Tirgusor 8.81 38⇑ iP Pn 03 23 41.9 +1.9
TIRR Tirgusor 8.81 38 P Pn 03 23 41.9 +1.9
BOJS Bojanci 8.89 333 i Pn Pn 03 23 42.5 +1.5
BOJS i Sn Sn 03 25 15.4 -4.9
BOJS Bojanci 8.89 333 Pn Pn 03 23 42.5 +1.5
GBRS Gornja Briga 9.07 332 ePn Pn 03 23 44.8 +1.2
DRGR 9.19 8 ⇓P Pn 03 23 46.7 +1.4
DRGR 9.19 8⇓ iP Pn 03 23 46.7 +1.4
DRGR 9.19 8 P Pn 03 23 46.7 +1.4
CFR Carcaliu 9.23 34 ⇓P Pn 03 23 49.1 +3.3
CFR Carcaliu 9.23 34⇓ iP Pn 03 23 49.1 +3.3
CFR Carcaliu 9.23 34 P Pn 03 23 49.1 +3.3
VRI Vrincioaia 9.25 26 ⇓P Pn 03 23 49.1 +3.1
VRI Vrincioaia 9.25 26⇓ iP Pn 03 23 49.1 +3.1
VRI Vrincioaia 9.25 26 P Pn 03 23 49.1 +3.1
SKDS Skadanscina 9.40 329 i Pn Pn 03 23 48.2 +0.2
SKDS i Sn Sn 03 25 30.4 -2.5
SKDS Skadanscina 9.40 329 i Pn Pn 03 23 48.2 +0.2
KEST Kesra 9.50 262 Pn Pn 03 23 50.4 +0.9
comp=Z,0.2nm,0.3s,baz=335,slow=5.8,SNR=14
KEST LR LR 03 28 00.0
comp=Z,72nm,19.2s,baz=298,slow=41
JAVS Javornik 9.66 330 i Pn Pn 03 23 52.2 +0.4
JAVS i Sn Sn 03 25 35.2 -4.3
JAVS Javornik 9.66 330 i Pn Pn 03 23 52.2 +0.4

VOY Vojsko 9.84 330 ePn Pn 03 23 54.9 +0.7
VOY eSn Sn 03 25 38.6 -5.4
VOY Vojsko 9.84 330 ePn Pn 03 23 54.9 +0.7
PERS Pernice 9.92 336 i Pn Pn 03 23 56.3 +1.0
PERS i Sn Sn 03 25 39.9 -6.0
PERS Pernice 9.92 336 i Pn Pn 03 23 56.3 +1.0
SOKA Soboth 9.99 336⇑ iPn Pn 03 23 56.0 -0.2
SOKA ⇑i Sn Sn 03 25 41.7 -5.8
SOKA Soboth 9.99 336 Pn Pn 03 23 56.0 -0.2
BRTR Keskin Array B 10.15 75 Pn Pn 03 24 02.8 +4.3
comp=Z,0.3nm,0.3s,baz=257,slow=13,SNR=12
BRTR Keskin Array B 10.15 75 P Pn 03 24 02.8 +4.3
PSZ Piszkesteto 10.25 356 ⇑P Pn 03 24 01.3 +1.5
PSZ Piszkesteto 10.25 356⇑ iP Pn 03 24 01.3 +1.5
PSZ Piszkesteto 10.25 356 P Pn 03 24 01.3 +1.5
PGF Pioggiola 10.34 302 eP Pn 03 24 05.7 +4.7
comp=Z,19nm,1.1s
BURAR Bucovina Array 10.41 16⇑ iP Pn 03 24 04.6 +2.6
BURAR Bucovina Array 10.41 16⇑ iP Pn 03 24 04.6 +2.6
CMAH Djebel Manchou 10.83 268 P Pn 03 24 10.9 +3.2
CMAH Djebel Manchou 10.83 268 P Pn 03 24 10.9 +3.2
ZST Bratislava 10.87 346 eP Pn 03 24 05.4 -2.7
ZST Bratislava 10.87 346 e Pn 03 24 05.4 -2.7
VYHS Vyhne 10.91 353 eP Pn 03 24 08.6 -0.1
VYHS e 03 26 03.0
VYHS Vyhne 10.91 353 ePN Pn 03 24 08.6 -0.1
VYHS e 03 24 23.5
VYHS Vyhne 10.91 353 eSN Sn 03 26 03.0 -6.9
VYHS Vyhne 10.91 353 eP Pn 03 24 08.6 -0.1
CRVS Cervenica-Dubn 11.22 2 eP Pn 03 24 12.5 -0.4
CRVS Cervenica-Dubn 11.22 2 ePN Pn 03 24 12.5 -0.4
CRVS Cervenica-Dubn 11.22 2 eP Pn 03 24 12.5 -0.4
KOLS Kolonicke sedl 11.28 5 eP Pn 03 24 15.2 +1.4
KOLS Kolonicke sedl 11.28 5 ePN Pn 03 24 15.2 +1.4
KOLS Kolonicke sedl 11.28 5 eP Pn 03 24 15.2 +1.4
SBF Sospel 11.94 305 eP Pn 03 24 26.9 +4.1
comp=Z,19nm,0.9s
DFRA Djebel Bou Aff 12.07 269 P Pn 03 24 28.5 +3.8
DAVOX Davos/Dischmat 12.22 322 Pn Pn 03 24 28.1 +1.3
comp=Z,0.2nm,0.3s,baz=137,slow=17,SNR=2.6
DAVOX Sn **Sn 03 26 38.8 -3.4**
comp=Z,0.5nm,0.3s,baz=323,slow=20,SNR=5.7
DAVOX Davos/Dischmat 12.22 322 P Pn 03 24 28.1 +1.3
comp=Z,1.0nm,0.3s
TREC Trest 12.25 343 eP P 03 24 41.0 +1.8
TREC MLR MLR
comp=Z,100nm,12.9s
TREC Trest 12.25 343 eP P 03 24 41.0 +1.8
TREC AMS AMS 03 30 10.0
comp=Z,100nm,12.9s
OKC Ostrava-Krasne 12.31 352 eP P 03 24 45.0 +5.2
OKC AMS AMS 03 30 00.0
comp=Z,100nm,9.9s
GERES GERESS Array B 12.32 337 Pn Pn 03 24 30.0 +1.9
comp=Z,0.2nm,0.3s,baz=160,slow=13,SNR=5.6
GERES GERESS Array B 12.32 337 P Pn 03 24 30.0 +1.9
FRF La Foret Royal 12.32 303 eP Pn 03 24 32.4 +4.3
comp=Z,8.1nm,1.0s
LMR La Mourre 12.33 302 eP Pn 03 24 32.5 +4.4
comp=Z,12nm,1.1s
KHC Kasperske Hory 12.61 337 eP P 03 24 43.3 0.0
KHC MLR MLR
comp=Z,200nm,16.2s
KHC Kasperske Hory 12.61 337 eP P 03 24 43.3 0.0
KHC ex x 03 25 01.5
KHC AMS AMS 03 30 20.0
comp=Z,200nm,16.2s
MMAI Mount Meron Ar 12.71 107 Pn Pn 03 24 31.4 -2.0
comp=Z,0.9nm,0.3s,baz=321,slow=11,SNR=2.4
MBDF Montbardon 12.76 308 eP Pn 03 24 39.0 +4.9
comp=Z,24nm,1.1s
DPC Dobruska-Polom 13.08 347 eP P 03 24 49.1 +0.6
DPC MLR MLR
comp=Z,100nm,10.5s
DPC Dobruska-Polom 13.08 347 eP P 03 24 49.1 +0.6
DPC AMS AMS 03 30 50.0
comp=Z,100nm,10.5s
PRU Pruhonice 13.12 342 eP P 03 24 50.8 +1.9
PRU MLR MLR
comp=Z,100nm,14.0s
PRU Pruhonice 13.12 342 eP P 03 24 50.8 +1.9
PRU AMS AMS 03 30 50.0
comp=Z,100nm,14.0s
LPG La Plagne 13.15 311 eP Pn 03 24 43.4 +3.7
comp=Z,5.3nm,0.7s
LPG La Plagne 13.15 311 eP Pn 03 24 43.4 +3.7
comp=Z,2.7nm,0.7s
UPC Upice 13.29 346 eP P 03 24 53.6 +2.9
UPC Upice 13.29 346 eP P 03 24 53.6 +2.9
ORIF Oris-en-Rattie 13.41 307 eP Pn 03 24 47.0 +4.1
ORIF eR
comp=Z,189nm,17.0s
PVCC Panska Ves 13.62 343 eP Pn 03 24 50.1 +4.4
PVCC Panska Ves 13.62 343 eP Pn 03 24 50.1 +4.4
NKC Novy Kostel 13.93 337 eP P 03 24 56.5 -1.4
NKC MLR MLR
comp=Z,200nm,13.1s
NKC Novy Kostel 13.93 337 eP P 03 24 56.5 -1.4
NKC AMS AMS 03 31 10.0
comp=Z,200nm,13.1s
NKC Novy Kostel 13.93 337 eP P 03 24 56.5 -1.4
comp=Z,200nm,13.1s
CABF La Chapelle 14.14 314 eP Pn 03 24 54.6 +1.6
comp=Z,22nm,1.2s
AKASG Malin Array Be 14.29 22 P Pn 03 24 54.3 -0.6
AKASG Malin Array Be 14.29 22 Pn Pn 03 24 54.3 -0.6
comp=Z,0.4nm,0.3s,baz=212,slow=12,SNR=3.9
ANN Anapa 14.30 55 eP Pn 03 24 51.5 -3.5
ANN pmax pmax
comp=Z,26nm,1.0s
HINF Hinteralfeld 14.44 319 eP Pn 03 24 59.3 +2.3
comp=Z,9.9nm,0.8s
CDF Champ du Feu 14.62 321 eP Pn 03 25 02.3 +2.8
comp=Z,22nm,1.0s
CLL Collm 14.73 340 eP P 03 25 08.0 +1.3
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 14.73 340 eP P 03 25 08.0 +1.3
comp=Z,4.0nm,1.0s
HAU Haudompre 14.83 319 eP Pn 03 25 03.5 +1.3
comp=Z,22nm,0.7s
HAU eR
comp=Z,109nm,22.0s
MTLF Montolieu 15.30 298 eP P 03 25 11.8 -1.3
SMF Signal de Mont 15.48 311 eP P 03 25 13.3 -1.8
PAGF Fort de Pagny 15.50 319 eP Pn 03 25 12.8 +1.8
comp=Z,8.8nm,0.8s
SFTF Sexfontaines 15.64 317 eP Pn 03 25 14.8 +1.8
comp=Z,11nm,0.8s
LOR Lormes 15.79 313 eP P 03 25 16.9 -1.6
LOR eR
comp=Z,66nm,22.2s
SSF Saint Saulge 15.89 312 eP Pn 03 25 18.0 +1.9
comp=Z,10nm,1.0s
TCF Toulx Ste Croi 16.32 308 eP P 03 25 25.0 +0.5
comp=Z,9.4nm,1.0s
TCF Toulx Ste Croi 16.32 308 eP P 03 25 25.0 +0.5
comp=Z,4.7nm,1.0s
CHVG Ch'k'valeri 16.92 66 P P 03 25 34.8 +3.7
GIVF Givet 16.94 322 eP P 03 25 33.0 +1.7
comp=Z,32nm,1.1s
GIVF Givet 16.94 322 eP P 03 25 33.0 +1.7
comp=Z,16nm,1.1s
ETSF Etsaut 17.18 294 eP P 03 25 35.4 +1.4
comp=Z,19nm,0.9s
ETSF Etsaut 17.18 294 eP P 03 25 35.4 +1.4
comp=Z,9.4nm,0.9s
NACGM Naroch 17.68 11 e Pn 03 25 36.0 -2.5
KBZ Khabaz 17.70 63 P P 03 25 40.3 +0.7
KBZ MLR MLR
comp=Z,41nm,19.5s
KBZ Khabaz 17.70 63 P P 03 25 40.3 +0.7
comp=Z,0.3nm,0.3s,baz=274,slow=11,SNR=13
KBZ LR LR 03 33 59.4
comp=Z,41nm,19.5s,baz=202,slow=42
KBZ Khabaz 17.70 63 P P 03 25 40.3 +0.7
comp=Z,41nm,19.5s
SJPF Ste Jean 17.70 295 eP P 03 25 41.2 +1.5
comp=Z,16nm,0.9s
SJPF Ste Jean 17.70 295 eP P 03 25 41.2 +1.5
comp=Z,7.8nm,0.9s
AKH Akhalkalaki 17.79 71 P P 03 25 42.5 +1.6
MFF Saint Martin d 17.94 306 eP P 03 25 44.8 +2.5
MFF Saint Martin d 17.94 306 eP P 03 25 44.8 +2.5
VORD Divnogorie 18.61 39 eP P 03 25 42.6 -7.0

VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VORD pmax pmax
comp=Z,10.0nm,0.6s
GUDG Gudauri 18.63 68 P Pn 03 25 52.6 +2.0
GNI Garni 18.69 75 P P 03 25 51.1 +0.3
comp=Z,3.4nm,0.3s,baz=4.6,slow=18,SNR=3.7
GNI Garni 18.69 75 P P 03 25 51.1 +0.3
comp=Z,3.0nm,0.3s
VSR Storozhevoye 18.71 38 eP P 03 25 49.6 -1.1
VSR pmax pmax
comp=N,8.0nm,0.9s
VSR pmax pmax
comp=Z,6.0nm,0.9s
VSR pmax pmax
comp=E,9.0nm,0.8s
TBLG Delisi 18.75 70 P Pn 03 26 00.5 +8.7
LDF La Druitiere 18.77 312 eP Pn 03 25 53.2 +1.2
LDF La Druitiere 18.77 312 eP Pn 03 25 53.2 +1.2
GRR Gorron 19.11 311 eP Pn 03 25 58.5 +2.4
GRR Gorron 19.11 311 eP Pn 03 25 58.5 +2.4
DGRG David-gareji 19.20 71 P Pn 03 26 02.0 +4.7
ESDC Sonseca Array 19.52 284 P P 03 26 00.4 +0.6
comp=E,0.4nm,0.3s,baz=79,slow=12,SNR=31
VRHR Novokhopersk 19.87 41 eP Pn 03 26 04.7 -0.4
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR Novokhopersk 19.87 41 eP Pn 03 26 04.7 -0.4
OBN Obninsk 20.42 26 P P 03 26 09.0 -0.3
OBN e*SP sP 03 26 17.4 -1.6
OBN e 03 26 24.3
OBN pmax pmax
comp=Z,47nm,1.7s
OBN MLR MLR
comp=Z,100nm,13.0s
OBN Obninsk 20.42 26 P P 03 26 09.0 -0.3
comp=Z,47nm,1.7s
MAK Makhachkala 20.90 67 eP P 03 26 06.7 -8.0
MAK eS S 03 30 00.6 -5.8
MAK pmax pmax
comp=Z,29nm,0.4s
MAK MLR MLR
comp=Z,134nm,19.0s
VSU Vasula 21.13 8 c iP P 03 26 17.3 +0.3
VSU pmax pmax
comp=Z,44nm,0.8s
VSU Vasula 21.13 8 i P P 03 26 17.3 +0.3
comp=Z,44nm,0.8s
MOS Moscow 21.28 27 eP P 03 26 16.6 -2.0
MOS pmax pmax
comp=Z,50nm,0.8s
MDT Midelt 21.39 265 P P 03 26 20.8 +0.7
comp=Z,8.6nm,0.8s,baz=78,slow=11,SNR=16
MDT LR LR 03 34 38.0
comp=Z,48nm,18.7s,baz=2.6,slow=37
PBRG Braganca 21.62 290 eP P 03 26 23.9 +1.4
comp=Z,25nm,1.9s
PBRG Braganca 21.62 290 eP P 03 26 23.9 +1.4
comp=Z,25nm,1.9s
MVO Moncorvo 21.83 288 eP P 03 26 25.2 +0.4
comp=Z,26nm,1.7s
MVO Moncorvo 21.83 288 eP P 03 26 25.2 +0.4
comp=Z,26nm,1.7s
PBAR Barrancos 22.03 280 eP P 03 26 28.5 +1.6
comp=Z,17nm,1.6s
PBAR Barrancos 22.03 280 eP P 03 26 28.5 +1.6
comp=Z,17nm,1.6s
PMRV Marv??o 22.18 283 eP P 03 26 28.4 -0.1
comp=Z,24nm,1.9s
PMRV Marv??o 22.18 283 eP P 03 26 28.4 -0.1
comp=Z,24nm,1.9s
PESTR Estremoz 22.38 282 eP P 03 26 29.8 -0.9
comp=Z,18nm,1.6s
PESTR Estremoz 22.38 282 eP P 03 26 29.8 -0.9
comp=Z,18nm,1.6s
HFS Hagfors 22.93 351 P P 03 26 35.7 -0.5
comp=Z,6.6nm,0.6s,baz=156,slow=11,SNR=30
HFS LR LR 03 36 56.3
comp=Z,38nm,21.0s,baz=349,slow=40
RST Umm Al-Ruwaisa 23.15 103 eP P 03 26 37.3 -1.5
RST AMb AMB 03 26 40.2
comp=Z,267nm,0.7s
NAY Al-Naaiem 23.46 103 eP P 03 26 40.4 -1.4
NAY AMb AMB 03 26 42.9
comp=Z,16nm,0.6s
UMR Umm Al-Rimmam 23.68 102 eP P 03 26 43.0 -1.0
UMR AMb AMB 03 26 45.2
comp=Z,38nm,0.5s
FINES FINESS Array B 24.00 6 P P 03 26 46.5 -0.1
comp=Z,4.1nm,0.7s,baz=168,slow=9.8,SNR=12
EKA Eskdalemuir Ar 24.01 325 P P 03 26 48.4 +1.5
comp=Z,4.1nm,0.7s,baz=124,slow=9.0,SNR=11
NB2 NORSAR Subarra 24.16 348 P P 03 26 48.0 -0.3
comp=Z,0.6nm,0.7s,baz=158,slow=11
NB2 NORSAR Subarra 24.16 348 P P 03 26 48.0 -0.3
comp=Z,0.6nm,0.7s,SNR=4.3
NOA NORSAR Array B 24.16 348 P P 03 26 48.0 -0.3
comp=Z,3.6nm,0.8s,baz=148,slow=9.8,SNR=25
NOA LR LR 03 37 50.5
comp=Z,37nm,18.6s,baz=160,slow=40
KAF Kangasniemi 24.68 6 eP P 03 26 51.4 -1.5
KAF Kangasniemi 24.68 6 ep P 03 26 51.4 -1.5
JOF Joensuu 26.05 11 eP P 03 27 06.0 +0.7
JOF pmax pmax
comp=Z,3.0nm,0.5s
JOF Joensuu 26.05 11 ep P 03 27 06.0 +0.7
comp=Z,3.3nm,0.5s
AKTO Aktyubinsk 29.23 52 P P 03 27 33.1 -0.8
AKTO pmax pmax
comp=Z,1.0nm,0.9s
AKTO Aktyubinsk 29.23 52 P P 03 27 33.5 -0.4
comp=Z,3.3nm,0.4s,baz=273,slow=9.6,SNR=19
AKTO LR LR 03 40 59.2
comp=Z,29nm,19.8s,baz=68,slow=40
TORD Torodi Ar. Bea 29.85 220 P P 03 27 40.9 +1.1
comp=Z,6.4nm,0.7s,baz=32,slow=9.2,SNR=58
AB31 Akbulak array 30.26 55 eP P 03 27 43.0 -0.1
AB31 pmax pmax
comp=Z,4.0nm,0.5s
ARU Arti 31.22 41 d iP P 03 27 50.2 -1.2
ARU S S 03 32 56.2 +0.1
ARU SS SnSn 03 34 37.3 -1.8
ARU pmax pmax
comp=Z,12nm,1.7s
ARCES ARCESS Array B 32.00 3 P P 03 27 58.0 -0.2
comp=Z,5.8nm,1.1s,baz=180,slow=9.5,SNR=14
ARCES LR LR 03 42 09.3
comp=Z,113nm,18.9s,baz=47,slow=39
SVE Sverdlovsk 32.43 41⇑ eP P 03 28 02.3 +0.2
SVE pmax pmax
comp=Z,23nm,0.9s
ZRNK Zerenda 36.35 49 P P 03 28 35.4 -0.7
ZRNK pmax pmax
comp=Z,6.0nm,0.7s
BRVK Borovoye 37.13 49 c iP P 03 28 42.6 -0.1
BRVK pmax pmax
comp=Z,10.0nm,0.7s
BVA0 Borovoye Array 37.19 49 i P P 03 28 43.0 -0.2
BVA0 pmax pmax
comp=Z,1.0nm,0.6s
VOSK Vostochnaya 37.53 50 P P 03 28 45.1 -1.0
VOSK pmax pmax
comp=Z,7.0nm,0.8s
DBIC Dimbokro 38.75 224 P P 03 28 57.2 +0.5
comp=Z,9.9nm,0.8s,baz=19,slow=10,SNR=9.7
LIC Lamto 39.22 223⇑ iP P 03 29 01.7 +1.1
comp=Z,35nm,0.8s
BBTS Babate 40.30 246 LR LR 03 48 18.3
comp=Z,125nm,20.7s,baz=319,slow=40
AAK Ala-Archa 40.67 66 eP P 03 29 13.0 +0.3
AAK pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 42.32 53 c iP P 03 29 25.2 -0.6
KURK pmax pmax
comp=Z,6.0nm,1.0s
NVS Novosibirsk 44.78 47⇑ iP P 03 29 44.8 -0.8
NVS pmax pmax
comp=Z,17nm,0.8s
NVS pmax pmax
comp=E,9.0nm,0.7s

MK31	**Makanchi Array**	**45.29**	**58**	*e*P		**P**	**03 29 48.8**	**-1.1**
MK31				pmax	pmax				
	comp=Z,4.0nm,0.5s								
MKAR	**Makanchi Array**	**45.29**	**58**	P		**P**	**03 29 49.0**	**-0.8**
MKAR							03 31 29.8		
MKAR				pmax	pmax				
	comp=Z,4.0nm,0.4s								
MKAR				pmax	pmax				
	comp=Z,2.0nm,0.6s								
MKAR	**Makanchi Array**	**45.29**	**58**	P		**P**	**03 29 49.0**	**-0.8**
	comp=Z,3.5nm,0.4s,baz=269,slow=7.3,SNR=57								
MKAR				PcP		**PcP**	**03 31 29.8**	**+0.4**	
	comp=Z,1.6nm,0.6s,baz=276,slow=4.4,SNR=4.1								
ZALV	**Zalesovo Beam**	**45.78**	**48**	*i* P		**P**	**03 29 53.0**	**-0.6**
ZALV				pmax	pmax				
	comp=Z,15nm,0.6s								
ZALV	**Zalesovo Beam**	**45.78**	**48**	P		**P**	**03 29 53.1**	**-0.5**
	comp=Z,15nm,0.7s,baz=275,slow=8.6,SNR=37								
PYUN	**Piuthan**	**52.15**	**81**	*e*P		**P**	**03 30 42.1**	**-1.0**
	comp=Z,67nm,0.6s								
DANN	**Dangsing**	**52.64**	**81**	*e*P		**P**	**03 30 45.9**	**-0.9**
	comp=Z,42nm,0.6s								
KOLN	**Koldanda**	**52.78**	**81**	*e*P		**P**	**03 30 46.6**	**-1.1**
	comp=Z,13nm,0.5s								
DMN	**Daman**	**54.04**	**81**	*e*P		**P**	**03 30 55.8**	**-1.2**
	comp=Z,20nm,0.6s								
KKN	**Kakani**	**54.09**	**80**	*e*P		**P**	**03 30 56.4**	**-1.0**
	comp=Z,17nm,0.6s								
GUN	**Gumba**	**54.50**	**80**	*e*P		**P**	**03 30 59.6**	**-0.9**
	comp=Z,16nm,0.5s								
RAMN	**Ramite**	**55.52**	**81**	*e*P		**P**	**03 31 06.5**	**-1.3**
	comp=Z,27nm,0.8s								
ODAN	**Odare**	**56.18**	**80**	*e*P		**P**	**03 31 11.0**	**-1.5**
	comp=Z,5.1nm,0.4s								
TAPN	**Taplejung**	**56.20**	**80**	*e*P		**P**	**03 31 11.8**	**-0.9**
	comp=Z,11nm,0.6s								
ZAK	**Zakamensk**	**57.64**	**49**	*e*P		**P**	**03 31 20.9**	**-1.4**
ZAK				pmax	pmax				
	comp=Z,2.0nm,1.1s								
SCHQ	**Schefferville**	**59.03**	**318**	P		**P**	**03 31 32.9**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=32,slow=9.5,SNR=4.4								
SCHQ				LR	LR		03 56 14.6		
	comp=Z,56nm,18.8s,baz=59,slow=35								
TIXI	**Tiksi**	**60.00**	**20**	*e*P		**P**	**03 31 38.0**	**-0.2**
TIXI				pmax	pmax				
	comp=Z,2.0nm,0.8s								
SONM	**Songino Array**	**60.52**	**50**	P		**P**	**03 31 41.5**	**-0.9**
	comp=Z,2.3nm,1.0s,baz=298,slow=6.6,SNR=3.8								
CMAR	**Chiang Mai Arr**	**69.64**	**82**	P		**P**	**03 32 41.6**	**-0.2**
	comp=Z,5.7nm,0.6s,baz=304,slow=7.8,SNR=18								
BILL	**Bilibino**	**71.42**	**13**	P		**P**	**03 32 50.0**	**-1.9**
BILL				*e*			03 32 52.7		
BILL				*e*			03 32 56.0		
BILL							03 33 10.0		
BILL				pmax	pmax				
	comp=Z,19nm,0.6s								
INK	**Inuvik**	**72.60**	**350**	P		**P**	**03 32 59.5**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=13,slow=9.1,SNR=5.9								
YKA	**Yellowknife Ar**	**73.96**	**340**	P		**P**	**03 33 07.9**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=36,slow=5.2,SNR=8.6								
USRK	**Ussuriysk Arra**	**77.42**	**43**	P		**P**	**03 33 26.3**	**-0.9**
	comp=Z,2.5nm,0.7s,baz=273,slow=4.5,SNR=6.1								
ILAR	**Eielson Array**	**77.43**	**355**	P		**P**	**03 33 27.5**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=8.9,slow=2.9,SNR=4.3								
KSRS	**Korea Array**	**79.39**	**51**	P		**P**	**03 33 38.4**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=315,slow=5.2,SNR=18								
KSRS				LR	LR		04 14 00.2		
	comp=Z,32nm,19.5s,baz=314,slow=40								
MJAR	**Matsushiro Arr**	**86.10**	**46**	P		**P**	**03 34 13.2**	**0.0**
	comp=Z,2.0nm,0.8s,baz=306,slow=4.9,SNR=8.2								
WRA	**Warramunga Arr**	**120.20**	**93**	PKP		**PKPdf**	**03 40 23.1**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=322,slow=1.9,SNR=5.7								
ASAR	**Alice Springs**	**121.80**	**97**	PKP		**PKPdf**	**03 40 26.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=314,slow=1.5,SNR=6.5								

MOS ***20*** *03:23:41.8±0.6,54.°60N×112.°67E,h8km,mb4.2/1,Error ellipse: s-maj=42.2km s-min=22.9km az=96.6*
BYKL ***20*** *03:23:45.0±0.3,54.°76N×112.°60E*
ISC 20 03:23:42.9±0.8,54.°72N±0.°03×112.°52E±0.°03,h10km,n32,
σ2≥39/59,6C-4D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.80**	**282**	⇑*i*PG		**Pn**	**03 23 59.8**	**-0.5**
YLYR				*e*			03 24 10.8	
YLYR				pmax	pmax			
	comp=Z,47nm,0.1s							
YLYR				smax	smax			
	comp=E,689nm,0.2s							
YLYR	**Ulyunkhan**	**0.80**	**282**	⇑*i*Pg		**Pn**	**03 23 59.7**	**-0.5**
YLYR				*i* Sg		**Sn**	**03 24 11.2**	**-1.0**
YLYR				Pmax				
	comp=E,45nm,0.2s							
YLYR				Smax				
	comp=E,685nm,0.2s							
UKT	**Uakit**	**1.00**	**39**	⇑*i*Pg		**Pg**	**03 24 01.3**	**-0.8**
	comp=E,38nm,0.4s							
UKT				⇑*i*Pg		**Pg**	**03 24 01.3**	**-0.8**
	comp=E,32nm,0.4s							
UKT				⇑*i*Pg		**Pg**	**03 24 01.3**	**-0.8**
	comp=E,25nm,0.4s							
UKT				*e*Pb		**Pn**	**03 24 02.7**	**-0.3**
UKT				*e*			03 24 04.8	
UKT				*e*Sg		**Sg**	**03 24 13.5**	**-1.5**
UKT				*e*Sb		**Sb**	**03 24 15.3**	**-0.2**
UKT				max				
	comp=E,27nm,0.3s							
UKT				max				
	comp=E,195nm,0.2s							
KMO	**Kumora**	**1.39**	**328**	*e*PG		**Pg**	**03 24 09.6**	**+0.1**
KMO				*e*			03 24 26.9	
KMO				pmax	pmax			
	comp=Z,35nm,0.3s							
KMO				smax	smax			
	comp=E,261nm,0.7s							
KMO	**Kumora**	**1.39**	**328**	*e*Pg		**Pg**	**03 24 09.9**	**+0.4**
KMO				*e*			03 24 13.3	
KMO				*i* Sg		**Sg**	**03 24 27.8**	**+0.3**
KMO				*e*			03 24 31.0	
KMO				Pmax				
	comp=E,36nm,0.4s							
KMO				max				
	comp=E,261nm,0.7s							
YOA	**Uoyan**	**1.48**	**343**	*e*PN		**Pg**	**03 24 11.6**	**+0.3**
YOA				*i*			03 24 31.9	
YOA				pmax	pmax			
	comp=Z,73nm,0.2s							
YOA				smax	smax			
	comp=N,466nm,0.4s							
YOA	**Uoyan**	**1.48**	**343**	*e*Pg		**Pg**	**03 24 11.6**	**+0.3**
YOA				*e*			03 24 14.8	
YOA				*i* Sg		**Sg**	**03 24 31.9**	**+1.4**
YOA				max				
	comp=N,145nm,0.3s							
YOA				Smax				
	comp=N,468nm,0.7s							
SYVR	**Suvo**	**1.82**	**235**	*e*Pn		**Pg**	**03 24 17.7**	**-0.1**
SYVR				*e*Pg		Pb	03 24 18.8	+2.5
SYVR				*i* Sg		**Sg**	**03 24 43.9**	**+2.4**
SYVR				Pmax				
	comp=N,25nm,0.3s							
SYVR				Smax				
	comp=N,153nm,0.3s							
NIZ	**Nizh Angarsk**	**2.00**	**303**	⇑*i*Pg		**Pg**	**03 24 21.2**	**-0.1**
NIZ				*e*			03 24 23.7	
NIZ				*e*Sg		**Sg**	**03 24 47.7**	**+0.5**
NIZ				max				
	comp=N,12nm,0.2s							
NIZ				Smax				
	comp=N,82nm,0.4s							
NLYR	**Nelyaty**	**2.53**	**44**	*e*PN		**Pn**	**03 24 24.6**	**+0.6**
NLYR				*e*			03 24 28.4	
NLYR				*e*			03 25 01.0	
NLYR				pmax	pmax			
	comp=Z,66nm,0.2s							
NLYR				smax	smax			
	comp=N,234nm,1.0s							
NLYR	**Nelyaty**	**2.53**	**44**	*e*Pn		**Pn**	**03 24 23.6**	**-0.4**
NLYR				*e*			03 24 25.6	
NLYR				⇓*i*Pg		**Pb**	**03 24 28.5**	**+0.1**
NLYR				*i* Sg		**Sg**	**03 25 01.2**	**-2.9**
NLYR				Pmax				
	comp=N,67nm,0.3s							
NLYR				Smax				
	comp=N,234nm,1.0s							

MXMB	**Maximikha**	**2.67**	**238**	*e*Pg		**Pg**	**03 24 34.5**	**+0.6**
MXMB				*e*PgPg		**PbPb**	**03 24 37.9**	**+4.1**
MXMB				*i* Sg		**Sg**	**03 25 10.5**	**+2.1**
MXMB				*e*SgSg		**SnSn**	**03 25 13.8**	**+5.0**
MXMB				Pmax				
	comp=N,38nm,0.1s							
MXMB				max				
	comp=N,334nm,0.7s							
CIT	**Chita**	**2.78**	**167**	*e*		Pg	03 24 52.0	+16
CIT				*e*Sg		**Sg**	**03 25 11.8**	**-0.3**
CIT				Smax				
	comp=N,251nm,0.2s							
OGRR	**Ongureny**	**3.09**	**251**	*e*		**Pn**	**03 24 32.0**	**+0.3**
OGRR				*e*Pg		**Pg**	**03 24 41.6**	**-0.4**
OGRR				*e*			03 25 04.8	
OGRR				*e*Sg		**Sg**	**03 25 22.3**	**+0.3**
OGRR				Pmax				
	comp=N,9.0nm,0.5s							
OGRR				Smax				
	comp=N,73nm,1.2s							
BOD	**Bodaibo**	**3.21**	**14**	*e*		**Pn**	**03 24 33.0**	**-0.3**
BOD				⇓*i*Pg		**Pb**	**03 24 40.7**	**+0.8**
BOD				*e*			03 25 20.0	
BOD				*e*Sg		**Sg**	**03 25 22.0**	**-3.9**
BOD				Pmax				
	comp=N,60nm,0.2s							
BOD				Smax				
	comp=N,64nm,0.4s							
ZRHB	**Zarechye**	**3.86**	**238**	*e*Sg		**Sg**	**03 25 47.7**	**+0.9**
CRS	**Chara**	**3.91**	**54**	*e*PN		**Pn**	**03 24 44.4**	**+1.4**
CRS				*e*			03 24 52.6	
CRS				*e*			03 25 43.9	
CRS				pmax	pmax			
	comp=Z,25nm,1.0s							
CRS				smax	smax			
	comp=E,129nm,1.1s							
CRS	**Chara**	**3.91**	**54**	*e*Pg		**Pb**	**03 24 53.8**	**+1.9**
CRS				*e*Sg		**Sg**	**03 25 44.8**	**-3.5**
CRS				Pmax				
	comp=E,15nm,1.0s							
CRS				Smax				
	comp=E,130nm,1.4s							
UUDB	**Ulan-Yde**	**4.08**	**227**	*e*Pg		**Pg**	**03 24 59.9**	**-1.1**
UUDB				*i* Sg		**Sg**	**03 25 54.0**	**+0.1**
UUDB				Pmax				
	comp=E,22nm,0.8s							
UUDB				Smax				
	comp=E,85nm,1.3s							
TRG	**Tyrgan**	**4.16**	**244**	*e*Pn		Pn	03 24 49.6	+3.2
TRG				*e*Pg		**Pg**	**03 24 59.5**	**-3.0**
TRG				*e*			03 25 39.8	
TRG				*i* Sg		**Sg**	**03 25 53.8**	**-2.5**
TRG				*e*			03 25 57.6	
TRG				Pmax				
	comp=E,5.0nm,0.5s							
TRG				max				
	comp=E,28nm,0.4s							
TUP	**Tupik**	**4.34**	**91**	⇓*i*Pn		**Pn**	**03 24 50.3**	**+1.4**
TUP				⇓*i*Pg		**Pb**	**03 25 01.2**	**+2.0**
TUP				*e*			03 25 44.4	
TUP				*e*Sg		**Sg**	**03 25 58.1**	**-4.0**
TUP				Pmax				
	comp=E,8.0nm,0.3s							
TUP				Smax				
	comp=E,60nm,0.8s							
FFNB	**Fofonovo**	**4.37**	**234**	*e*		**Pb**	**03 24 57.7**	**-1.9**
FFNB				*e*Pg		**Pg**	**03 25 04.5**	**-1.9**
FFNB				*i* Sg		**Sg**	**03 26 02.3**	**-0.6**
FFNB				Pmax				
	comp=E,2.0nm,0.1s							
FFNB				Smax				
	comp=E,47nm,0.7s							
KAB	**Kabansk**	**4.42**	**235**	*e*Sg		**Sg**	**03 26 02.1**	**-2.4**
KAB				Smax				
	comp=E,246nm,0.7s							
HRMR	**Khuramsha**	**4.56**	**229**	*i* Sn		Pn	03 24 55.1	+3.2
HRMR				*e*Pg		**Pg**	**03 25 07.6**	**-2.6**
HRMR				*e*			03 25 14.4	
HRMR				*e*Sg		**Sg**	**03 26 07.5**	**-1.7**
HRMR				*e*			03 26 10.9	
HRMR				max				
	comp=E,17nm,0.7s							
HRMR				max				
	comp=E,318nm,0.8s							
LSTR	**Listvyanka**	**5.42**	**241**	*e*Sg		**Sg**	**03 26 32.7**	**-4.2**
LSTR				Smax				
	comp=E,31nm,1.0s							
YKLR	**Yuktali**	**5.50**	**66**	*e*Sg		**Sg**	**03 26 34.0**	**-5.3**
TLY	**Talaya**	**6.14**	**244**	*e*Sg		**Sg**	**03 26 58.1**	**-1.8**
TLY				Smax				
	comp=E,103nm,0.4s							
ARS	**Arshan**	**6.67**	**249**	*e*Sn		**Sn**	**03 26 41.9**	**+5.0**
ARS				*e*Sg		**Sg**	**03 27 12.5**	**-4.2**
ARS				Smax				
	comp=E,30nm,0.4s							
ZAK	**Zakamensk**	**7.11**	**236**	*e*Sg		**Sg**	**03 27 28.7**	**-2.3**
ZAK				Smax				
	comp=E,9.0nm,1.2s							
IENR	**Iengra**	**7.17**	**73**	*e*Sg		**Sg**	**03 27 27.1**	**-5.8**
MOY	**Mondy**	**7.57**	**251**	*e*Sg		**Sg**	**03 27 40.9**	**-4.7**
MOY				Smax				
	comp=E,15nm,1.8s							
ORL	**Orlik**	**7.87**	**259**	*e*		Pn	03 25 41.4	+4.0
ORL				*e*			03 25 48.8	
ORL				*e*			03 27 10.7	
ORL				*e*Sg		Sg	03 27 48.6	-6.5
ORL				max				
	comp=E,2.0nm,1.0s							
ORL				Smax				
	comp=E,13nm,1.6s							

ISCJB ***20*** *03:36:07.0±0.2,19.°03N±0.°02×65.°47W±0.°02,h33km, mb4.6/65,MS3.7/12,Error ellipse: s-maj=2.9km s-min=2.3km az=21.3*
BJI ***20*** *03:36:07.4,19.°00N×65.°50W,h18km,Ms7 4.6/2*
NEIC ***20*** *03:36:09.5,19.°00N×65.°50W,h19km,mb5.0/40, MD4.3(RSPR),After RSPR.*
NEIC Felt [V] at Fajardo, [III] at Ceiba and [II] at San Juan. Also felt at Bayamon, Carolina, Dorado, Las Piedras, Naranjito, San Lorenzo, Trujillo Alto and Yabucoa. Felt on Saint John and Saint Thomas, U.S. Virgin Islands. Felt on Tortola, British Virgin Islands. Felt [IV] at Cole Bay and Cul de Sac and [III] at Marigot and Philipsburg, Saint Martin. Also felt on Saint-Barthelemy.
IDC ***20*** *03:36:09.6±0.7, 18.°74N×65.°52W,h63km±6km,mb3.7/26, mb1 3.9/27,mb1mx3.9/34,mbtmp3.8/27,MS3.5/11, Ms1 3.5/11,ms1mx3.3/28,Error ellipse: s-maj=13.0km s-min=8.5km az=43.0*
RSPR ***20*** *03:36:09.5,19.°00N×65.°50W,h19km±3km,MD4.3/14*
ISC 20 03:36:09.8±0.5,18.°85N±0.°04×65.°52W±0.°02,h55km±4km, n275,σ1≥20/286,mb4.5/65,MS3.5/12,23C-39D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**0.66**	**209**	⇓*e*P		**Pn**	**03 36 22.8**	**-0.6**
CBYP	**Canovanas**	**0.66**	**209**	*e*S		**Sn**	**03 36 32.6**	**-0.5**
CBYP	**Canovanas**	**0.66**	**209**	*e*Pg		**Pn**	**03 36 22.7**	**-0.6**
CBYP				*e*S		**Sn**	**03 36 32.9**	**-0.2**
CBYP	**Canovanas**	**0.66**	**209**	⇓*e*P		**Pn**	**03 36 22.8**	**-0.6**
CBYP				*e*S		**Sn**	**03 36 32.6**	**-0.5**
STVI	**Saint Thomas**	**0.73**	**133**	⇑*e*P		**Pn**	**03 36 23.4**	**-0.8**
STVI	**Saint Thomas**	**0.73**	**133**	*e*S		**Sn**	**03 36 34.4**	**-0.2**
STVI	**Saint Thomas**	**0.73**	**133**	⇑*e*P		**Pn**	**03 36 23.4**	**-0.8**
STVI				*e*S		**Sn**	**03 36 34.4**	**-0.2**
STVI	**Saint Thomas**	**0.73**	**133**	⇑*e*P		**Pn**	**03 36 23.4**	**-0.8**
STVI				*e*S		**Sn**	**03 36 34.4**	**-0.2**
MTP	**Monte Pirata**	**0.75**	**182**	⇓*e*P		**Pn**	**03 36 24.5**	**+0.1**
MTP	**Monte Pirata**	**0.75**	**182**	*e*Pg		**Pn**	**03 36 24.3**	**-0.1**
MTP				*e*S		**Sn**	**03 36 35.0**	**0.0**
MTP	**Monte Pirata**	**0.75**	**182**	⇓*e*P		**Pn**	**03 36 24.5**	**+0.1**
HUMP	**Col San Antoni**	**0.77**	**204**	⇓*e*P		**Pn**	**03 36 24.3**	**-0.3**
HUMP	**Col San Antoni**	**0.77**	**204**	*e*S		**Sn**	**03 36 36.1**	**+0.6**
HUMP	**Col San Antoni**	**0.77**	**204**	⇓*e*P		**Pn**	**03 36 24.3**	**-0.3**
HUMP				*e*S		**Sn**	**03 36 36.1**	**+0.6**
HUMP	**Col San Antoni**	**0.77**	**204**	⇓*e*P		**Pn**	**03 36 24.3**	**-0.3**
HUMP				*e*S		**Sn**	**03 36 36.8**	**+1.3**
CPD	**Cerro la Pandu**	**0.89**	**205**	⇓*e*P		**Pn**	**03 36 26.1**	**-0.1**
CPD	**Cerro la Pandu**	**0.89**	**205**	*e*S		**Sn**	**03 36 39.3**	**+1.0**
CPD	**Cerro la Pandu**	**0.89**	**205**	⇓*e*P		**Pn**	**03 36 26.1**	**-0.1**

CPD					*e*S	**Sn**	**03 36 39.3**	**+1.0**	
CPD	**Cerro la Pandu**	**0.89**	**205**	⇓*e*P		**Pn**	**03 36 26.1**	**-0.1**	
CPD					*e*S	**Sn**	**03 36 39.3**	**+1.0**	
SJG	**San Juan**	**0.95**	**219**	⇓*e*P		**Pn**	**03 36 26.7**	**-0.3**	
SJG	**San Juan**	**0.95**	**219**	⇓*i*P		**Pn**	**03 36 26.7**	**-0.3**	
SJG	**San Juan**	**0.95**	**219**	*e*Pg		**Pn**	**03 36 26.5**	**-0.4**	
SJG					*e*S	**Sn**	**03 36 38.2**	**-1.4**	
SJG	**San Juan**	**0.95**	**219**	⇓*e*P		**Pn**	**03 36 26.7**	**-0.3**	
SJG	**San Juan**	**0.95**	**219**	⇓*i*P		**Pn**	**03 36 26.7**	**-0.3**	
SJG					*e*S	**Sn**	**03 36 40.4**	**+0.9**	
TBVI	**Tortola**	**0.96**	**117**	⇓*i*P		**Pn**	**03 36 25.8**	**-1.3**	
TBVI	**Tortola**	**0.96**	**117**	⇓*i*P		**Pn**	**03 36 25.8**	**-1.3**	
TBVI	**Tortola**	**0.96**	**117**	⇓*i*P		**Pn**	**03 36 25.8**	**-1.3**	
CELP	**Cerrillos**	**1.27**	**233**	⇓*i*P		**Pn**	**03 36 31.2**	**0.0**	
CELP	**Cerrillos**	**1.27**	**233**	⇓*i*P		**Pn**	**03 36 31.2**	**0.0**	
CELP	**Cerrillos**	**1.27**	**233**	⇓*i*P		**Pn**	**03 36 31.2**	**0.0**	
AOPR	**Arecibo Observ**	**1.27**	**247**	⇓*e*P		**Pn**	**03 36 30.8**	**-0.5**	
AOPR	**Arecibo Observ**	**1.27**	**247**	*e*S		**Sn**	**03 36 47.7**	**+0.3**	
AOPR	**Arecibo Observ**	**1.27**	**247**	⇓*e*P		**Pn**	**03 36 30.8**	**-0.5**	
AOPR					*e*S	**Sn**	**03 36 47.7**	**+0.3**	
AOPR	**Arecibo Observ**	**1.27**	**247**	⇓*e*P		**Pn**	**03 36 30.8**	**-0.5**	
AOPR					*e*S	**Sn**	**03 36 47.7**	**+0.3**	
CDVI	**St. Croix**	**1.31**	**147**	*e*Pn		**Pn**	**03 36 32.1**	**+0.4**	
CDVI					*e*S	**Sn**	**03 36 50.1**	**+1.9**	
OBIP	**Obispado Ponce**	**1.31**	**232**	⇓*e*P		**Pn**	**03 36 31.8**	**+0.1**	
OBIP	**Obispado Ponce**	**1.31**	**232**	*e*S		**Sn**	**03 36 48.9**	**+0.7**	
OBIP	**Obispado Ponce**	**1.31**	**232**	⇓*e*P		**Pn**	**03 36 31.8**	**+0.1**	
OBIP					*e*S	**Sn**	**03 36 48.9**	**+0.7**	
OBIP	**Obispado Ponce**	**1.31**	**232**	⇓*e*P		**Pn**	**03 36 31.8**	**+0.1**	
OBIP					*e*S	**Sn**	**03 36 48.9**	**+0.7**	
LRS	**Lares**	**1.37**	**246**	⇓*e*P		**Pn**	**03 36 31.9**	**-0.8**	
LRS	**Lares**	**1.37**	**246**	⇓*e*P		**Pn**	**03 36 31.9**	**-0.8**	
LRS	**Lares**	**1.37**	**246**	⇓*e*P		**Pn**	**03 36 31.9**	**-0.8**	
AGPR	**Aguadilla, PR**	**1.56**	**256**	⇓*e*P		**Pn**	**03 36 34.4**	**-0.8**	
AGPR	**Aguadilla, PR**	**1.56**	**256**	*e*S		**Sn**	**03 36 54.0**	**-0.2**	
AGPR	**Aguadilla, PR**	**1.56**	**256**	*e*Pn		**Pn**	**03 36 34.1**	**-1.0**	
AGPR					*e*S	**Sn**	**03 36 53.6**	**-0.6**	
AGPR					*e*S	**Sn**	**03 36 54.0**	**-0.2**	
AGPR	**Aguadilla, PR**	**1.56**	**256**	⇓*e*P		**Pn**	**03 36 34.4**	**-0.8**	
AGPR					*e*S	**Sn**	**03 36 54.5**	**+0.3**	
GBPR	**Guanica, Bosqu**	**1.56**	**236**	⇑*i*P		**Pn**	**03 36 35.5**	**+0.4**	
GBPR	**Guanica, Bosqu**	**1.56**	**236**	*i* Pu			03 36 35.5		
GBPR	**Guanica, Bosqu**	**1.56**	**236**	⇑*i*P		**Pn**	**03 36 35.5**	**+0.4**	
AGP	**Aguadilla**	**1.60**	**254**	*e*Pn		**Pn**	**03 36 34.5**	**-1.2**	
LSP	**Las Mesas**	**1.63**	**246**	⇑*e*P		**Pn**	**03 36 35.8**	**-0.4**	
LSP	**Las Mesas**	**1.63**	**246**	⇑*e*P		**Pn**	**03 36 35.8**	**-0.4**	
LSP	**Las Mesas**	**1.63**	**246**	⇑*e*P		**Pn**	**03 36 35.8**	**-0.4**	
MPR	**Mayaguez**	**1.66**	**248**	⇓*e*P		**Pn**	**03 36 36.0**	**-0.5**	
MPR	**Mayaguez**	**1.66**	**248**	*e*S		**Sn**	**03 36 56.8**	**-0.1**	
MPR	**Mayaguez**	**1.66**	**248**	⇓*e*P		**Pn**	**03 36 36.0**	**-0.5**	
MPR					*e*S	**Sn**	**03 36 56.8**	**-0.1**	
MPR	**Mayaguez**	**1.66**	**248**	⇓*e*P		**Pn**	**03 36 36.3**	**-0.3**	
MPR					*e*S	**Sn**	**03 36 56.8**	**-0.1**	
CRPR	**Cabo Rojo, PR**	**1.73**	**241**	⇓*e*P		**Pn**	**03 36 37.6**	**+0.2**	
CRPR	**Cabo Rojo, PR**	**1.73**	**241**	*e*S		**Sn**	**03 36 58.9**	**+0.5**	
CRPR	**Cabo Rojo, PR**	**1.73**	**241**	⇓*e*P		**Pn**	**03 36 37.6**	**+0.2**	
CRPR					*e*S	**Sn**	**03 36 58.9**	**+0.5**	
CRPR	**Cabo Rojo, PR**	**1.73**	**241**	⇓*e*P		**Pn**	**03 36 37.6**	**+0.2**	
CRPR					*e*S	**Sn**	**03 36 58.9**	**+0.5**	
IMO	**Isla Mona**	**2.38**	**252**	⇑*e*P		**Pn**	**03 36 46.6**	**+0.2**	
IMO	**Isla Mona**	**2.38**	**252**	⇑*e*P		**Pn**	**03 36 46.6**	**+0.2**	
IMO	**Isla Mona**	**2.38**	**252**	⇑*e*P		**Pn**	**03 36 46.6**	**+0.2**	
SABA	**Saba**	**2.49**	**119**	⇑*e*P		**Pn**	**03 36 47.7**	**-0.1**	
SABA	**Saba**	**2.49**	**119**	*e*S		**Sn**	**03 37 17.2**	**+0.2**	
SABA	**Saba**	**2.49**	**119**	⇑*e*P		**Pn**	**03 36 47.7**	**-0.1**	
SABA					*e*S	**Sn**	**03 37 17.2**	**+0.2**	
SABA	**Saba**	**2.49**	**119**	⇑*e*P		**Pn**	**03 36 47.7**	**-0.1**	
SABA					*e*S	**Sn**	**03 37 17.2**	**+0.2**	
SEUS	**St. Eustatius**	**2.77**	**119**	⇑*i*P		**Pn**	**03 36 51.4**	**-0.3**	
SEUS	**St. Eustatius**	**2.77**	**119**	*i* Pu		**Pn**	**03 36 51.4**	**-0.3**	
SEUS	**St. Eustatius**	**2.77**	**119**	⇑*i*P		**Pn**	**03 36 51.4**	**-0.3**	
BSK	**Brimstone Hill**	**2.96**	**120**	*e*P		**Pn**	**03 36 54.9**	**+0.6**	
BSK	**Brimstone Hill**	**2.96**	**120**	*e*		**Sn**	**03 37 31.8**	**+3.3**	
NVBH	**Bath Hotel, Ne**	**3.26**	**121**	*e*P		**Pn**	**03 36 58.9**	**+0.5**	
NVBH	**Bath Hotel, Ne**	**3.26**	**121**	*e*		**Sn**	**03 37 36.6**	**+0.7**	
NEV	**Hard Times**	**3.28**	**121**	⇑*e*P		**Pn**	**03 36 59.5**	**+0.7**	
SMN1	**Samana, DR**	**3.57**	**276**	⇓*e*P		**Pn**	**03 37 02.4**	**-0.3**	
SMN1	**Samana, DR**	**3.57**	**276**	⇓*e*P		**Pn**	**03 37 02.4**	**-0.3**	
DR12	**Loma Pena Alta**	**3.66**	**270**	⇑*i*P		**Pn**	**03 37 03.1**	**-0.8**	
DR12	**Loma Pena Alta**	**3.66**

BRNJ	**Basking Ridge**	**23.11 342**	*e*P	P	03 41 16.0	+5.0
	comp=E,13µm,0.5s					
BRNJ			*e*		03 45 13.7	
TKL	**Tuckaleechee C**	**23.25 320**	P	**P**	**03 41 13.4**	**+1.0**
TKL			S	**S**	**03 45 22.3**	**+1.7**
TKL	**Tuckaleechee C**	**23.25 320**	P	**P**	**03 41 13.4**	**+1.0**
	comp=E,3.3nm,0.7s,baz=140,slow=12,SNR=4.6					
TKL			S	**S**	**03 45 22.3**	**+1.7**
	comp=E,19nm,0.7s,baz=219,slow=19,SNR=4.1					
TKL			LR	LR	03 50 04.5	
	comp=E,83nm,19.8s,baz=257,slow=36					
YLE	**Yale**	**23.27 346**	*e*P	P	03 41 22.5	+10
	comp=E,114nm,0.5s					
YLE			*e*		03 45 06.5	
BRYW	**Bryant College**	**23.56 349**	*e*P	P	03 41 30.0	+15
BRYW			*e*		03 45 17.2	
CPCT	**Cooper Cave**	**23.58 318**	*e*P	**P**	**03 41 15.3**	**-0.3**
CPCT			*e*		03 45 27.9	
TZTN	**Tazewell**	**23.71 322**	*e*P	P	03 41 27.2	+10
	comp=E,70nm,0.6s					
LRAL	**Lakeview Retre**	**23.86 311**	*e*P	**P**	**03 41 18.0**	**-0.2**
	comp=E,12nm,0.7s					
WES	**Weston**	**23.97 349**	P	P	03 41 31.0	+12
	comp=E,18nm,0.5s					
WES			*e*		03 45 28.7	
QUA2	**Belchertown**	**24.07 347**	*e*P	**P**	**03 41 20.3**	**+0.3**
	comp=E,55nm,0.5s					
QUA2			*e*		03 45 36.3	
HRV	**Adam Dziewonsk**	**24.13 349**	*e*P	P	03 41 31.4	+11
	comp=E,48nm,0.6s					
HRV			*e*S	S	03 45 43.0	+8.4
SSPA	**Standing Stone**	**24.17 337**	*e*P	**P**	**03 41 20.3**	**-0.6**
	comp=E,18nm,0.7s					
SSPA			*e*S	S	03 45 48.1	+13
SWET	**Sewanee**	**24.34 316**	*e*P	P	03 41 34.2	+12
	comp=E,18nm,0.5s					
BINY	**Binghamton**	**24.92 341**	*e*P	P	03 41 35.6	+7.8
	comp=E,17nm,0.4s					
BINY			*e*S	S	03 45 57.2	+10
FFD	**Franklin Falls**	**25.08 349**	P	P	03 41 39.6	+10
	comp=E,78nm,0.5s					
FFD			*e*		03 45 57.9	
ACCN	**Adirondack Com**	**25.41 346**	P	P	03 41 42.7	+11
	comp=E,64nm,0.4s					
ACCN			*e*		03 46 08.9	
HNH	**Hanover**	**25.43 349**	P	**P**	**03 41 35.5**	**+3.2**
	comp=E,17nm,0.5s					
HNH			*e*		03 45 58.9	
LBNH	**Lisbon**	**25.88 349**	*e*P	P	03 41 49.0	+13
LBNH			*e*S	**S**	**03 46 06.2**	**+3.7**
ACSO	**Alum Creek Sta**	**26.07 328**	*e*P	**P**	**03 41 39.5**	**+1.3**
	comp=E,15nm,1.0s					
ACSO			*e*		03 46 38.5	
NCB	**Newcomb**	**26.09 346**	*e*P	P	03 41 49.9	+12
	comp=E,52nm,0.5s					
NCB			*e*S	S	03 46 28.2	+22
WVT	**Waverly**	**26.13 316**	*e*P	**P**	**03 41 39.3**	**+0.5**
	comp=E,8.7nm,0.6s					
WVT			*e*		03 46 40.8	
OXF	**Oxford**	**26.34 311**	*e*P	**P**	**03 41 42.8**	**+2.1**
	comp=E,37nm,0.6s					
WCI	**Wyandotte Cave**	**26.46 321**	*e*P	**P**	**03 41 44.5**	**+2.7**
	comp=E,35nm,0.6s					
FRNY	**Flat Rock**	**26.77 347**	*e*P	P	03 42 01.6	+17
USIN	**University of**	**27.12 319**	*e*P	**P**	**03 41 47.8**	**+0.1**
	comp=E,105nm,0.6s					
BLO	**Bloomington**	**27.22 322**	*e*P	**P**	**03 41 50.5**	**+2.0**
	comp=E,44nm,0.6s					
SAML	**Samuel**	**27.72 175**	*e*P	**P**	**03 41 51.5**	**-1.7**
	comp=E,3.9nm,0.6s					
SAML			*e*		03 45 17.1	
OLIL	**Olney**	**27.87 320**	*e*P	**P**	**03 41 55.9**	**+1.6**
	comp=E,98nm,0.6s					
SIUC	**Southern Illin**	**27.95 317**	*e*P	**P**	**03 41 59.3**	**+4.2**
	comp=E,28nm,0.7s					
SADO	**Sadowa**	**28.24 339**	LR	LR	03 51 37.3	
	comp=E,136nm,19.0s,baz=138,slow=33					
ATAH	**Atahualpa**	**28.77 207**	LR	LR	03 53 46.1	
	comp=E,80nm,21.9s,baz=192,slow=37					
530A	**J-C Ranch, Com**	**34.34 296**	P	**P**	**03 42 52.5**	**+0.9**
	baz=34					
429A	**Davenport Ranc**	**34.91 297**	P	**P**	**03 42 55.9**	**-0.5**
	baz=35					
T31A	**Randall Ranch,**	**34.97 308**	P	**P**	**03 42 55.9**	**-1.0**
	baz=35					
529A	**Stev Forest Ra**	**35.09 296**	P	**P**	**03 42 57.2**	**-0.9**
	baz=35					
628A	**Black Gap, Mar**	**35.56 295**	P	**P**	**03 43 02.1**	**+0.1**
	baz=36					
528A	**Cox Ranch, San**	**35.58 296**	P	**P**	**03 43 02.0**	**-0.3**
	baz=36					
428A	**Kincaid Ranch,**	**35.59 297**	P	**P**	**03 43 02.5**	**+0.1**
	baz=36					
627A	**Terlingua Ranc**	**35.99 294**	P	**P**	**03 43 06.6**	**+0.9**
	baz=36					
TXAR	**Lajitas Array**	**36.21 294**	P	**P**	**03 43 08.5**	**+0.8**
TXAR	**Lajitas Array**	**36.21 294**	P	**P**	**03 43 08.5**	**+0.8**
	comp=E,0.8nm,0.6s,baz=126,slow=8.2,SNR=8.0					
TXAR			LR	LR	04 01 42.0	
	comp=E,41nm,20.3s,baz=5.0,slow=42					
427A	**Hayter Ranch,**	**36.22 297**	P	**P**	**03 43 07.7**	**-0.1**
	baz=36					
527A	**Woodward Ranch**	**36.28 295**	P	**P**	**03 43 08.2**	**-0.1**
	baz=36					
626A	**Big Bend Ranch**	**36.64 294**	P	**P**	**03 43 11.9**	**+0.5**
	baz=37					
526A	**Mary Lane Ranc**	**36.68 295**	P	**P**	**03 43 12.0**	**+0.3**
	baz=37					
426A	**McDonald Obser**	**36.73 296**	P	**P**	**03 43 12.9**	**+0.7**
	baz=37					
425A	**Indio Mountain**	**37.56 296**	P	**P**	**03 43 19.8**	**+0.7**
	baz=38					
324A	**Moseley Ranch,**	**38.08 297**	P	**P**	**03 43 25.7**	**+2.1**
	baz=38					
RCBR	**Riachuelo**	**38.12 127**	P	**P**	**03 43 23.7**	**-0.2**
RCBR	**Riachuelo**	**38.12 127**	P	**P**	**03 43 23.7**	**-0.2**
	comp=E,2.7nm,0.5s,baz=308,slow=9.7,SNR=7.0					
V25A	**Rancho No Teng**	**38.34 304**	P	**P**	**03 43 26.9**	**+1.2**
	baz=38					
BDFB	**Brasilia**	**38.36 152**	P	**P**	**03 43 23.2**	**-2.7**
BDFB	**Brasilia**	**38.36 152**	P	**P**	**03 43 23.2**	**-2.7**
	comp=E,3.2nm,0.6s,baz=292,slow=7.4,SNR=7.0					
BDFB			LR	LR	03 59 52.9	
	comp=E,116nm,20.6s,baz=13,slow=37					
R24A	**Sanders Place,**	**39.40 308**	P	**P**	**03 43 35.7**	**+1.1**
	baz=39					
SDCO	**Great Sand Dun**	**39.55 307**	*e*P	**P**	**03 43 35.2**	**-0.8**
	comp=E,2.9nm,0.7s					
ULM	**Lac du Bonnet**	**39.57 329**	LR	LR	03 58 07.1	
	comp=E,80nm,20.9s,baz=359,slow=33					
ISCO	**Idaho Springs**	**40.28 310**	*e*P	**P**	**03 43 43.0**	**+1.0**
	comp=E,5.4nm,1.1s					
P21A	**Newcastle**	**41.54 309**	P	**P**	**03 43 52.5**	**+0.2**
	baz=41					
J22A	**Midwest**	**42.17 315**	P	**P**	**03 43 59.5**	**+2.2**
	baz=42					
K21A	**Alcova**	**42.41 313**	P	**P**	**03 43 59.5**	**+0.2**
	baz=42					
C24A	**Savage**	**42.64 321**	P	**P**	**03 44 01.3**	**+0.4**
	baz=42					
G22A	**Birney**	**42.77 317**	P	**P**	**03 44 01.8**	**-0.3**
	baz=43					
J21A	**Lysite**	**42.80 314**	P	**P**	**03 44 01.4**	**-1.1**
	baz=43					
J20A	**Shoshoni**	**43.24 314**	P	**P**	**03 44 08.6**	**+2.7**
	baz=43					
H20A	**Greybull**	**43.60 315**	P	**P**	**03 44 09.9**	**+1.2**
	baz=44					
L19A	**Farson**	**43.71 312**	P	**P**	**03 44 10.5**	**+0.7**
	baz=44					
J19A	**Crowheart**	**43.87 313**	P	**P**	**03 44 10.5**	**-0.6**
	baz=44					
PDAR	**Pinedale Array**	**44.06 313**	P	**P**	**03 44 11.8**	**-0.9**
PDAR	**Pinedale Array**	**44.06 313**	P	**P**	**03 44 11.8**	**-0.9**
	comp=E,0.8nm,0.6s,baz=116,slow=7.2,SNR=7.2					
BW06	**Boulder Array**	**44.06 313**	*e*P	**P**	**03 44 14.9**	**+2.3**
	comp=E,2.6nm,0.8s					
C21A	**Desert Coulee**	**44.38 320**	P	P	03 44 18.4	+3.4
	baz=44					
E20A	**Meyer Farm, Mu**	**44.47 318**	P	**P**	**03 44 15.1**	**-0.5**
	baz=44					
FRB	**Frobisher Bay**	**44.91 358**	P	**P**	**03 44 16.7**	**-2.0**
FRB	**Frobisher Bay**	**44.91 358**	P	**P**	**03 44 16.7**	**-2.0**
	comp=E,2.4nm,0.7s,baz=236,slow=11,SNR=3.7					
LOHW	**Long Hollow**	**45.05 313**	*e*P	**P**	**03 44 20.5**	**-0.1**
	comp=E,9.5nm,1.1s					
MOOW	**Moose Ponds**	**45.20 314**	*e*P	**P**	**03 44 21.9**	**+0.2**
	comp=E,4.8nm,0.8s					
F18A	**Big Timber**	**45.25 317**	P	**P**	**03 44 21.7**	**-0.3**
	baz=45					
TPAW	**Teton Pass**	**45.26 313**	*e*P	**P**	**03 44 22.3**	**+0.1**
	comp=E,4.1nm,0.7s					
CPUP	**Villa Florida**	**45.61 170**	P	P	03 44 21.8	-3.0
CPUP	**Villa Florida**	**45.61 170**	P	P	03 44 21.8	-3.0
	comp=E,4.4nm,0.4s,baz=331,slow=7.1,SNR=22					
CPUP			LR	LR	04 04 09.3	
	comp=E,57nm,18.6s,baz=160,slow=37					
I16A	**Newdale**	**45.75 313**	P	**P**	**03 44 25.5**	**-0.5**
	baz=46					
H16A	**Russell Place,**	**45.85 315**	P	**P**	**03 44 28.1**	**+1.3**
	baz=46					
F17A	**Fitzpatrick Pl**	**45.87 316**	P	**P**	**03 44 28.0**	**+1.2**
	baz=46					
Y12C	**Blythe**	**45.95 299**	P	**P**	**03 44 28.8**	**+1.3**
	baz=46					
B18A	**Beardsley Farm**	**46.25 320**	P	**P**	**03 44 28.8**	**-1.0**
	baz=46					
D17A	**Six Diamond Ra**	**46.34 318**	P	**P**	**03 44 30.7**	**+0.1**
	baz=46					
G16A	**Moss Hill, Enn**	**46.39 315**	P	**P**	**03 44 31.0**	**0.0**
	baz=46					
F16A	**Kennard Place,**	**46.46 316**	P	**P**	**03 44 31.2**	**-0.3**
	baz=46					
C17A	**Wharram Farm,**	**46.56 319**	P	**P**	**03 44 32.1**	**-0.2**
	baz=46					
I14A	**Mackay**	**47.12 313**	P	**P**	**03 44 37.4**	**+0.6**
	baz=47					
H14A	**Leadore**	**47.26 314**	P	**P**	**03 44 37.9**	**+0.1**
	baz=47					
J13A	**Cove Ranch, Pi**	**47.48 312**	P	**P**	**03 44 39.7**	**+0.2**
	baz=47					
A16A	**West Butte Ran**	**47.58 320**	P	**P**	**03 44 39.9**	**-0.3**
	baz=48					
ELK	**Elko**	**47.62 308**	P	**P**	**03 44 39.9**	**-0.9**
ELK	**Elko**	**47.62 308**	P	**P**	**03 44 39.9**	**-0.9**
	comp=E,0.5nm,0.6s,baz=168,slow=9.3,SNR=2.7					
HLID	**Hailey**	**47.69 312**	*e*P	**P**	**03 44 41.8**	**+0.6**
	comp=E,1.8nm,0.6s					
HLID	**Hailey**	**47.69 312**	P	**P**	**03 44 41.3**	**+0.1**
	baz=48					
C15A	**Salmond Ranch,**	**47.77 318**	P	**P**	**03 44 41.3**	**-0.4**
	baz=48					
B15A	**Bradely Ranch,**	**47.94 319**	P	**P**	**03 44 42.3**	**-0.6**
	baz=48					
A15A	**Johnson Ranch,**	**48.28 320**	P	**P**	**03 44 45.0**	**-0.6**
	baz=48					
A14A	**Double T Ranch**	**48.71 319**	P	**P**	**03 44 47.9**	**-0.9**
	baz=49					
NVAR	**Mina Array Bea**	**49.56 305**	P	**P**	**03 44 55.8**	**+0.1**
NVAR	**Mina Array Bea**	**49.56 305**	P	**P**	**03 44 55.8**	**+0.1**
	comp=E,0.6nm,0.6s,baz=90,slow=8.1,SNR=4.8					
CFAA	**Coronel Fontan**	**50.23 183**	P	P	03 44 57.0	-3.4
CFAA	**Coronel Fontan**	**50.23 183**	P	P	03 44 57.0	-3.4
	comp=E,0.3nm,0.4s,baz=1.0,slow=7.1,SNR=5.5					
NEW	**Newport**	**50.80 317**	*e*P	**P**	**03 45 03.8**	**-0.9**
	comp=E,7.8nm,0.8s					
NEW	**Newport**	**50.80 317**	P	**P**	**03 45 03.8**	**-0.9**
	comp=E,3.3nm,0.7s,baz=122,slow=7.3,SNR=7.1					
NEW	**Newport**	**50.80 317**	P	**P**	**03 45 04.4**	**-0.4**
	baz=51					
YKA	**Yellowknife Ar**	**55.08 335**	P	**P**	**03 45 34.1**	**-1.8**
YKA	**Yellowknife Ar**	**55.08 335**	P	**P**	**03 45 34.1**	**-1.8**
	comp=E,0.8nm,0.6s,baz=111,slow=7.5,SNR=11					
MDT	**Midelt**	**55.88 63**	P	**P**	**03 45 42.8**	**+0.5**
MDT	**Midelt**	**55.88 63**	P	**P**	**03 45 42.8**	**+0.5**
	comp=E,2.8nm,0.8s,baz=296,slow=10,SNR=4.4					
ESDC	**Sonseca Array**	**56.47 54**	P	**P**	**03 45 45.6**	**-0.8**
ESDC			pP	**pP**	**03 46 03.8**	**+2.6**
ESDC	**Sonseca Array**	**56.47 54**	P	**P**	**03 45 45.6**	**-0.8**
	comp=E,0.2nm,0.3s,baz=308,slow=5.5,SNR=5.2					
ESDC			pP	**pP**	**03 46 03.8**	**+2.6**
	comp=E,1.6nm,0.7s,baz=270,slow=6.9,SNR=3.9					
PLCA	**Paso Flores**	**59.46 184**	P	**P**	**03 46 05.5**	**-1.6**
PLCA	**Paso Flores**	**59.46 184**	P	**P**	**03 46 05.5**	**-1.6**
	comp=E,1.2nm,0.6s,baz=0.0,slow=16,SNR=4.3					
EPF	**Esparros**	**59.84 51**	*e*P	**P**	**03 46 07.9**	**-2.0**
	comp=E,7.1nm,0.9s					
LIC	**Lamto**	**60.11 94**	*e*P	**P**	**03 46 10.9**	**-1.2**
	comp=E,9.2nm,0.7s					
DBIC	**Dimbokro**	**60.14 93**	P	**P**	**03 46 11.2**	**-1.0**
DBIC			pP	**pP**	**03 46 26.5**	**-0.6**
DBIC	**Dimbokro**	**60.14 93**	P	**P**	**03 46 11.2**	**-1.0**
	comp=E,9.8nm,0.9s,baz=145,slow=20,SNR=8.0					
DBIC			pP	**pP**	**03 46 26.5**	**-0.6**
	comp=E,7.6nm,0.8s,baz=270,slow=8.5,SNR=4.0					
JMIC	**Jan Mayen**	**61.81 18**	P	**P**	**03 46 23.2**	**+0.6**
JMIC	**Jan Mayen**	**61.81 18**	P	**P**	**03 46 23.2**	**+0.6**
	comp=E,23nm,0.4s,baz=154,slow=8.5,SNR=3.0					
TORD	**Torodi Ar. Bea**	**64.54 84**	P	**P**	**03 46 40.6**	**-1.0**
TORD			pP	**pP**	**03 46 57.3**	**+0.6**
TORD	**Torodi Ar. Bea**	**64.54 84**	P	**P**	**03 46 40.6**	**-1.0**
	comp=E,3.1nm,0.9s,baz=292,slow=6.6,SNR=16					
TORD			pP	**pP**	**03 46 57.3**	**+0.6**
	comp=E,3.2nm,0.8s,baz=288,slow=6.1,SNR=9.2					
TAM	**Tamanrasset**	**65.95 73**	*e*P	**P**	**03 46 50.8**	**-0.1**
	comp=E,1.8nm,1.0s					
KEST	**Kesra**	**67.18 58**	P	**P**	**03 46 58.1**	**-0.3**
KEST	**Kesra**	**67.18 58**	P	**P**	**03 46 58.1**	**-0.3**
	comp=E,1.2nm,0.8s,baz=209,slow=3.2,SNR=5.8					
NB2	**NORSAR Subarra**	**67.28 31**	P	**P**	**03 46 57.5**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=268,slow=6.5					
NOA	**NORSAR Array B**	**67.28 31**	P	**P**	**03 46 57.9**	**-0.7**
NOA	**NORSAR Array B**	**67.28 31**	P	**P**	**03 46 57.9**	**-0.7**
	comp=E,1.2nm,0.8s,baz=268,slow=6.5,SNR=5.2					
NOA			LR	LR	04 10 46.1	
	comp=E,19nm,20.2s,baz=275,slow=31					
GERES	**GERESS Array B**	**69.02 44**	P	**P**	**03 47 08.6**	**-1.2**
GERES	**GERESS Array B**	**69.02 44**	P	**P**	**03 47 08.6**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=263,slow=5.2,SNR=5.7					
GERES			LR	LR	04 15 43.3	
	comp=Z,46nm,18.4s,baz=272,slow=34					
ILAR	**Eielson Array**	**69.45 333**	P	**P**	**03 47 11.0**	**-1.0**
ILAR	**Eielson Array**	**69.45 333**	P	**P**	**03 47 11.0**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=107,slow=4.1,SNR=3.9					
ILAR			LR	LR	04 19 48.6	
	comp=Z,46nm,18.6s,baz=115,slow=38					
ARCES	**ARCESS Array B**	**72.86 22**	P	**P**	**03 47 31.4**	**-1.1**
ARCES	**ARCESS Array B**	**72.86 22**	P	**P**	**03 47 31.4**	**-1.1**
	comp=Z,2.3nm,0.9s,baz=262,slow=5.9,SNR=4.5					
FINES	**FINESS Array B**	**74.40 30**	P	**P**	**03 47 40.6**	**-1.1**
FINES			pP	**pP**	**03 47 58.1**	**+1.1**
FINES	**FINESS Array B**	**74.40 30**	P	**P**	**03 47 40.6**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=183,slow=3.8,SNR=5.9					
FINES			pP	**pP**	**03 47 58.1**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=282,slow=3.7,SNR=3.4					
AKASG	**Malin Array Be**	**78.58 40**	P	**P**	**03 48 04.8**	**-0.7**
AKASG	**Malin Array Be**	**78.58 40**	P	**P**	**03 48 04.8**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=299,slow=4.1,SNR=3.2					
BRTR	**Keskin Array B**	**84.94 50**	P	**P**	**03 48 39.8**	**+0.2**
BRTR	**Keskin Array B**	**84.94 50**	P	**P**	**03 48 39.8**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=232,slow=3.0,SNR=4.7					
WMQ	**Urumqi**	**112.98 21**	*e*PKP	**PKiKP**	**03 54 41.9**	**+0.8**
HHC	**Hu-ho-hao-te**	**120.55 3**	*e*PKP	**PKPdf**	**03 54 57.9**	**+2.1**
HHC			PP	**PP**	**03 56 26.8**	**+4.9**
HHC			PKS	**PKSdf**	**03 58 33.3**	**+0.7**
HHC			SKS	**SKSdf**	**04 02 08.8**	**+5.3**
HHC			SKKS	**SKKSac**	**04 03 19.6**	**+1.1**
HHC			SS	**SS**	**04 12 51.0**	**+4.6**
HHC			LR	LR		
	comp=Z,170nm,21.8s					
LZH	**Lanzhou**	**124.44 10**	*e*PKP	**PKPdf**	**03 55 04.3**	**+0.8**
LZH			sPKP		03 55 18.8	
LZH			LR	LR		
	comp=Z,130nm,20.3s					
CD2	**Chengdu**	**129.46 12**	PKP	**PKPdf**	**03 55 13.4**	**+0.3**
STKA	**Stephens Creek**	**152.37 237**	PKPbc	**PKPbc**	**03 55 58.6**	**-1.6**
STKA	**Stephens Creek**	**152.37 237**	PKPbc	**PKPbc**	**03 55 58.6**	**-1.6**
	comp=Z,3.0nm,0.9s,baz=306,slow=6.5,SNR=3.2					
ASAR	**Alice Springs**	**161.28 252**	PKPab	**PKPab**	**03 56 48.1**	**-1.0**
ASAR	**Alice Springs**	**161.28 252**	PKPab	**PKPab**	**03 56 48.1**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=100,slow=4.2,SNR=4.0					

IDC 20 03:40:35.8±3.6, 17.56S×66.56W, h35km±32km, mb3.4/1, mb1 3.6/3, mb1mx3.3/20, mbtmp3.5/3, ML4.2/2, Error ellipse: s-maj=44.2km s-min=20.0km az=19.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.96**	**310**	Pn	Pn			03 41 07.4	0.0
	246nm,0.3s,baz=128,slow=15,SNR=9269								
LPAZ				Sn	Sn			03 41 32.6	+1.2
	143nm,0.3s,baz=252,slow=18,SNR=11								
SIV	**San Ignacio**	**5.49**	**74**	Pn	Pn			03 41 57.0	+1.8
	5.1nm,0.3s,baz=270,slow=11,SNR=134								
SIV				Pg	Pb			03 42 17.0	+6.1
	10nm,0.3s,baz=279,slow=14,SNR=15								
SIV				Sn	Sn			03 42 56.7	-0.4
	17nm,0.3s,baz=264,slow=15,SNR=5.3								
SIV				Lg				03 43 24.9	
	17nm,0.3s,baz=180,slow=21,SNR=9.6								
CPUP	**Villa Florida**	**12.22**	**137**	Pn	Pn			03 43 28.4	+1.0
	0.3nm,0.3s,baz=324,slow=19,SNR=3.8								
TORD	**Torodi Ar. Bea**	**73.95**	**70**	P	P			03 52 07.4	-0.7
	0.6nm,0.8s,baz=259,slow=5.2,SNR=6.8								

IDC 20 03:44:21.2±5.7, 6.14S×150.32E, h53km±48km, mb3.5/5, mb1 3.8/6, mb1mx3.5/19, mbtmp3.6/6, ML3.3/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/18, Error ellipse: s-maj=59.5km s-min=32.1km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.51**	**224**	P		P	Pn	03 45 27.5	+0.5
	10nm,0.3s,baz=46,slow=4.6,SNR=16								
PMG				S			Sn	03 46 19.2	+0.9
	14nm,0.3s,baz=76,slow=15,SNR=9.8								
CTA	**Charters Tower**	**14.42**	**196**	P		P	P	03 47 47.4	-0.6
	0.4nm,0.3s,baz=14,slow=12,SNR=5.1								
GUMO	**Guam**	**20.33**	**345**	LR		LR	LR	03 55 12.7	
	comp=Z,46nm,19.1s,baz=277,slow=32								
WRA	**Warramunga Arr**	**20.73**	**227**	P		P	P	03 48 57.9	+0.4
	1.6nm,0.4s,baz=52,slow=11,SNR=36								
ASAR	**Alice Springs**	**23.52**	**220**	P		P	P	03 49 27.1	+0.4
	0.3nm,0.3s,baz=58,slow=9.2,SNR=7.0								
FITZ	**Fitzroy Crossi**	**26.86**	**242**	P		P	P	03 49 56.5	-0.6
	1.0nm,0.4s,baz=77,slow=12,SNR=11								
STKA	**Stephens Creek**	**26.88**	**197**	P		P	P	03 49 56.6	-0.6
	2.0nm,0.8s,baz=29,slow=9.8,SNR=3.7								
ILAR	**Eielson Array**	**84.32**	**23**	P		P	P	03 56 47.2	0.0
	0.3nm,0.7s,baz=241,slow=5.0,SNR=3.8								
TORD	**Torodi Ar. Bea**	**148.32**	**285**	PKPbc		PKPbc		04 04 02.2	-0.4
	0.6nm,0.4s,baz=91,slow=2.5,SNR=27								

IDC 20 03:46:14.7±1.8, 19.54S×177.63E, h0km, mb3.7/4, mb1 4.0/4, mb1mx3.7/18, mbtmp3.7/4, MS3.4/1, Ms1 3.4/1, ms1mx2.7/22, Error ellipse: s-maj=166.3km s-min=30.4km az=159.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**29.50**	**264**	LR		LR	LR	04 02 06.1	
	comp=Z,69nm,18.6s,baz=230,slow=32								
STKA	**Stephens Creek**	**34.55**	**242**	P		P	P	03 53 05.8	+0.6
	0.6nm,0.4s,baz=107,slow=11,SNR=3.2								
WRA	**Warramunga Arr**	**40.66**	**262**	P		P	P	03 53 56.8	-0.3
	0.5nm,1.0s,baz=100,slow=8.3,SNR=3.1								
ASAR	**Alice Springs**	**40.75**	**256**	P		P	P	03 53 57.4	-0.4
	0.8nm,0.8s,baz=91,slow=8.2,SNR=7.3								
TXAR	**Lajitas Array**	**90.04**	**59**	P		P	P	03 59 16.9	0.0
	1.2nm,1.0s,baz=226,slow=6.6,SNR=8.3								

MEX 20 04:02:17.4±2.0, 19.55N×102.74W, h90km±29km, MD3.9, Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EZ5V		**0.81**	**265**	*e*P			Pn	04 02 33.8	-1.6
EZ5V				*i* S			Sn	04 02 46.1	-2.7
SFJM	**Santa Fe**	**0.97**	**343**	*i* P			Pn	04 02 34.9	-2.1
SFJM				*i* S			Sn	04 02 50.8	-0.9
R15V		**1.23**	**252**	*i* P			Pn	04 02 40.0	+0.1
R15V				*i* S			Sn	04 02 56.0	-0.8
MMIG	**Aquila**	**1.38**	**205**	*i* P			Pn	04 02 39.6	-2.0
MMIG				*i* S			Sn	04 02 58.3	-1.5
ZIIG	**Zihuatanejo**	**2.28**	**148**	*i* P			Pn	04 02 51.4	-2.0
ZIIG				*i* S			Sn	04 03 19.9	-0.9
ARIG	**Puente Sto Nin**	**2.59**	**119**	*e*P			Pn	04 02 56.4	-1.2
ARIG				*i* S			Sn	04 03 27.5	-0.8
ZAIG	**Zacatecas**	**3.21**	**3**	*i* P			Pn	04 03 06.4	+0.2
PLIG	**Platanillo**	**3.27**	**110**	*i* P			Pn	04 03 06.5	-0.3
PLIG				*i* S			Sn	04 03 44.6	-0.2
CAIG	**El Cayaco**	**3.42**	**136**	*i* P			Pn	04 03 11.2	+2.6
CAIG				*i* S			Sn	04 03 47.6	-0.6
YAIG	**Yautepec**	**3.54**	**101**	*i* P			Pn	04 03 10.6	+0.2
PPM	**Popocatepetl**	**3.92**	**96**	*e*P			Pn	04 03 15.9	-0.1
UTMO	**Huajuapan**	**4.98**	**109**	*i* P			Pn	04 03 15.2	-15
PNIG	**Pinotepa**	**5.40**	**125**	*i* P			Pn	04 04 06.9	+31

IDC 20 04:03:59.4±1.3, 0.63S×133.65E, h0km, mb3.6/3, mb1 3.9/5, mb1mx3.7/22, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=62.3km s-min=21.9km az=88.0, Irian Jaya region

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

comp=Z,84nm,18.5s,baz=285,slow=41

BDFB	**Brasilia**	**27.26**	**96**	P	**P**	**04 38 15.9**	**+0.1**
BDFB	**Brasilia**	**27.26**	**96**	P	**P**	**04 38 15.9**	**+0.1**
	2.0nm,0.5s,baz=264,slow=7.6,SNR=6.4						
BDFB				LR	LR	04 51 38.2	
	comp=Z,69nm,19.8s,baz=22,slow=42						
TXAR	**Lajitas Array**	**50.87**	**329**	P	**P**	**04 41 33.1**	**+0.9**
TXAR	**Lajitas Array**	**50.87**	**329**	P	**P**	**04 41 33.1**	**+0.9**
	0.6nm,0.6s,baz=151,slow=8.8,SNR=11						
DUG	**Dugway**	**64.03**	**329**	*eP*	**P**	**04 43 06.0**	**+1.1**
	2.2nm,0.7s						
NVAR	**Mina Array Bea**	**65.63**	**325**	P	**P**	**04 43 16.4**	**+1.0**
NVAR	**Mina Array Bea**	**65.63**	**325**	P	**P**	**04 43 16.4**	**+1.0**
	0.4nm,0.7s,baz=162,slow=6.3,SNR=2.7						
ULM	**Lac du Bonnet**	**66.59**	**346**	P	**P**	**04 43 21.9**	**+0.9**
ULM	**Lac du Bonnet**	**66.59**	**346**	P	**P**	**04 43 21.9**	**+0.9**
	1.7nm,0.4s,baz=182,slow=5.0,SNR=2.5						
SNAA	**Sanae**	**71.27**	**161**	*eP*	**P**	**04 43 49.9**	**-0.1**
	2.9nm,0.8s						
DBIC	**Dimbokro**	**73.77**	**79**	*eP*	**P**	**04 44 06.9**	**+1.0**
	9.3nm,1.1s						
DBIC	**Dimbokro**	**73.77**	**79**	P	**P**	**04 44 06.6**	**+0.7**
	5.2nm,0.9s,baz=197,slow=8.3,SNR=5.4						
DBIC				LR	LR	05 14 24.0	
	comp=Z,135nm,20.0s,baz=51,slow=34						
QSPA	**South Pole Qui**	**75.81**	**180**	*eP*	**P**	**04 44 16.9**	**0.0**
	1.1nm,0.7s						
TOA0	**Torodi Ar. Sit**	**81.82**	**74**	*eP*	**P**	**04 44 51.8**	**+1.1**
TORD	**Torodi Ar. Bea**	**81.82**	**74**	P	**P**	**04 44 51.9**	**+1.2**
TORD	**Torodi Ar. Bea**	**81.82**	**74**	P	**P**	**04 44 51.9**	**+1.2**
	7.1nm,0.6s,baz=263,slow=5.2,SNR=121						
YKA	**Yellowknife Ar**	**82.25**	**343**	P	**P**	**04 44 51.7**	**-0.2**
YKA	**Yellowknife Ar**	**82.25**	**343**	P	**P**	**04 44 51.7**	**-0.2**
	1.0nm,0.9s,baz=135,slow=5.4,SNR=12						
WRA	**Warramunga Arr**	**134.58**	**222**	PKP	**PKPdf**	**04 51 49.9**	**-0.4**
WRA	**Warramunga Arr**	**134.58**	**222**	PKP	**PKPdf**	**04 51 49.9**	**-0.4**
	0.6nm,0.7s,baz=130,slow=1.8,SNR=4.7						
SONM	**Songino Array**	**146.53**	**357**	PKPbc	**PKPbc**	**04 52 12.2**	**-0.3**
SONM	**Songino Array**	**146.53**	**357**	PKPbc	**PKPbc**	**04 52 12.2**	**-0.3**
	1.7nm,0.5s,baz=333,slow=0.7,SNR=4.5						

MEX 20 04:38:52.8±1.1, 16°22N×99°37W, h15km±12km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.80**	**324**	*i* P	Pg	04 39 05.4	-3.1
ACX				*i* S	Sg	04 39 16.3	-2.7
CAIG	**El Cayaco**	**1.19**	**314**	*eP*	Pn	04 39 11.8	-3.2
CAIG				*i* S	Sb	04 39 26.0	-4.4
PNIG	**Pinotepa**	**1.21**	**82**	*i* P	Pn	04 39 11.2	-4.0
PNIG				*i* S	Sb	04 39 26.2	-4.6
MEIG	**Mezcala**	**1.72**	**352**	*eP*	Pn	04 39 18.2	-4.1
MEIG				*i* S	Sn	04 39 38.3	-5.9
PLIG	**Platanillo**	**2.17**	**357**	*i* P	Pn	04 39 26.2	-2.3
PLIG				*i* S	Sn	04 39 50.6	-4.6
UTMO	**Huajuapan**	**2.19**	**43**	*i* P	Pn	04 39 25.8	-3.3
UTMO				*i* S	Sn	04 39 51.5	-4.7
ARIG	**Puente Sto Nin**	**2.25**	**336**	*i* P	Pn	04 39 26.9	-2.8
ARIG				*i* S	Sn	04 39 53.3	-4.0
YAIG	**Yautepec**	**2.65**	**6**	*eP*	Pn	04 39 32.2	-3.1
YAIG				*i* S	Sn	04 40 04.0	-3.2
PPM	**Popocatepetl**	**2.92**	**14**	*i* P	Pn	04 39 35.5	-3.9
PPM				*i* S	Sn	04 40 10.2	-4.6

MEX 20 04:40:49.9±0.6, 18°22N×103°53W, h5km, MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.19**	**70**	*i* P	Pg	04 40 53.1	-0.6
MMIG				*i* S	Sg	04 40 56.1	0.0
R15V		**1.03**	**336**	*i* P	Pg	04 41 06.9	-2.9
R15V				*i* S	Sg	04 41 20.9	-2.4
EZ5V		**1.25**	**357**	*i* P	Pg	04 41 10.3	-4.0
EZ5V				*i* S	Sg	04 41 27.1	-3.7
ZIIG	**Zihuatanejo**	**2.06**	**107**	*i* P	Pn	04 41 22.9	-2.3
ZIIG				*i* S	Sn	04 41 47.0	-4.3
SFJM	**Santa Fe**	**2.30**	**12**	*i* P	Pn	04 41 25.9	-2.8
SFJM				*i* S	Sn	04 41 53.8	-3.8
ANIG	**Ahuacatlan**	**2.96**	**342**	*i* S	Sn	04 42 09.6	-4.3
ARIG	**Puente Sto Nin**	**3.03**	**88**	*eP*	Pn	04 41 36.4	-2.1
CAIG	**El Cayaco**	**3.33**	**110**	*i* P	Pn	04 41 38.8	-3.9
CAIG				*i* S	Sn	04 42 18.6	-4.0
PLIG	**Platanillo**	**3.83**	**87**	*i* P	Pn	04 41 46.2	-3.5
PLIG				*i* S	Sn	04 42 32.4	-2.9
YAIG	**Yautepec**	**4.28**	**81**	*i* P	Pn	04 41 53.7	-2.3
YAIG				*i* S	Sn	04 42 43.3	-3.2
PPM	**Popocatepetl**	**4.73**	**79**	*i* P	Pn	04 41 57.9	-4.7
UTMO	**Huajuapan**	**5.47**	**93**	*i* P	Pn	04 42 10.1	-2.2
UTMO				*i* S	Sn	04 43 12.2	-3.7

*IDC **20** 04:44:29.9±6.6, 44.6°61N×146.68°E, h144km±73km, mb3.1/5, mb1 3.5/6, mb1mx3.2/25, mbtmp3.1/6, Error ellipse: s-maj=98.6km s-min=21.7km az=120.0*
*MOS **20** 04:44:29.9±1.0, 44.65°N×146.50°E, h164km, mb3.9/1, Error ellipse: s-maj=72.0km s-min=33.6km az=51.0*
*ISCJB **20** 04:44:30.3±0.7, 44.5°N±0.1°×146.5°E±0.1°, h169km±8km, mb3.1/5, Error ellipse: s-maj=16.7km s-min=13.6km az=161.1*
*JMA **20** 04:44:31.7±0.5, 44.54N×146.49E, h156km±4km, M3.3*
ISC 20 04:44:31.0±1.0, 44°5N±0.1°×146°51E±0°09, h162km±10km, n18, σ1°§02/25, mb3.2/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**0.69**	**223**	*i* PN	**Pn**	**04 44 55.0**	**+0.3**
YUK				*i*		04 45 16.9	
YUK				pmax	pmax		
	comp=E,53nm,0.3s						
YUK				pmax	pmax		
	comp=Z,191nm,0.3s						
YUK				pmax	pmax		
	comp=N,55nm,0.1s						
YUK				smax	smax		
	comp=E,648nm,0.4s						
YUK				smax	smax		
	comp=N,701nm,0.4s						
JRA	**Rausu**	**1.17**	**240**	P	**Pn**	**04 44 58.4**	**+0.1**
NEM2	**Nemuro 2**	**1.30**	**206**	P	**Pn**	**04 44 59.5**	**0.0**
NEM2				*eS*	**Sn**	**04 45 21.4**	**+0.1**
JNK	**Nakash**	**1.60**	**234**	P	**Pn**	**04 45 03.0**	**+0.4**
JTKR	**Abashiri--Toko**	**1.96**	**254**	P	**Pn**	**04 45 06.3**	**0.0**
JTKR				*eS*	**Sn**	**04 45 33.6**	**+0.1**
JAK	**Akkeshi**	**2.02**	**221**	P	**Pn**	**04 45 07.5**	**+0.4**
JAK				*eS*	**Sn**	**04 45 34.6**	**-0.3**
JMP	**Maruseppu**	**2.33**	**258**	P	**Pn**	**04 45 10.7**	**+0.1**
JAR	**Ashorobuto**	**2.34**	**239**	P	**Pn**	**04 45 12.0**	**+1.2**
JOB	**Onbets**	**2.54**	**231**	P	**Pn**	**04 45 14.1**	**+1.0**
JOB				*eS*	**Sn**	**04 45 46.1**	**+0.4**
JKK2	**Kamakawa 2**	**2.79**	**258**	P	**Pn**	**04 45 17.1**	**+0.9**
ASAJ	**Asahikawa**	**2.84**	**263**	P	**Pn**	**04 45 16.6**	**-0.2**
	comp=N,2.8nm,0.3s,baz=83,slow=16,SNR=8.9						
ASAJ				S	**Sn**	**04 45 53.1**	**+0.8**
	baz=277,slow=22,SNR=5.4						
JCH	**Churui**	**2.99**	**231**	P	**Pn**	**04 45 19.2**	**+0.5**
JCH				*eS*	**Sn**	**04 45 54.2**	**-1.4**
JNBK	**Urakawa-nobuka**	**3.55**	**232**	P	**Pn**	**04 45 25.7**	**-0.1**
JNBK				*eS*	**Sn**	**04 46 04.9**	**-3.4**
ILAR	**Eielson Array**	**41.13**	**37**	P	**P**	**04 51 57.8**	**-1.0**
	comp=N,0.4nm,0.4s,baz=260,slow=5.5,SNR=12						
YKA	**Yellowknife Ar**	**55.40**	**34**	P	**P**	**04 53 47.2**	**-0.8**
	comp=N,0.3nm,0.7s,baz=306,slow=7.3,SNR=5.9						
WRA	**Warramunga Arr**	**65.12**	**193**	P	**P**	**04 54 55.5**	**+1.1**
	comp=N,0.2nm,0.9s,baz=8.9,slow=6.8,SNR=5.7						
PDAR	**Pinedale Array**	**69.75**	**50**	P	**P**	**04 55 23.8**	**+0.1**
	comp=N,0.2nm,0.4s,baz=248,slow=1.0,SNR=3.7						
TXAR	**Lajitas Array**	**82.59**	**56**	P	**P**	**04 56 37.0**	**+0.8**
	comp=N,0.2nm,0.7s,baz=297,slow=4.0,SNR=2.9						

IDC 20 04:56:21.7±8.9, 9°10N×82°94W, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.4/3, Error ellipse: s-maj=337.2km s-min=42.9km az=35.0, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YKA	**Yellowknife Ar**	**58.03**	**343**	P	P	05 06 16.3	+0.1
	0.4nm,0.8s,baz=139,slow=7.0,SNR=8.8						
ILAR	**Eielson Array**	**70.86**	**336**	P	P	05 07 40.0	-0.2
	0.4nm,0.6s,baz=107,slow=4.8,SNR=6.1						
TORD	**Torodi Ar. Bea**	**82.79**	**78**	P	P	05 08 48.6	0.0
	0.2nm,0.8s,baz=286,slow=5.4,SNR=2.4						

HLW 20 05:14:22.9, 25°56N×36°75E, h0km±7km, Md0.0, MI3.5, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HQSR		**2.14**	**276**	P	Pn	05 14 58.5	-1.3
	baz=276						
HSFG		**2.73**	**292**	P	Pn	05 15 06.9	-1.0
	baz=293						
HEDF	**Idfu**	**3.26**	**263**	P	Pn	05 15 15.1	-0.2
	baz=263						
HKAT	**Jabal Katrina**	**3.84**	**321**	P	Pn	05 15 22.5	-0.9
	baz=321						
HKAT				S	Sn	05 16 08.1	-1.4
	baz=321						
HBST	**Basata**	**4.06**	**334**	AMP		05 16 00.0	
	comp=E,340μm,0.4s,logA/T=5.9,baz=335						
HNKL	**Nakhl**	**4.99**	**331**	AMP		05 17 00.0	
	comp=N,50μm,0.6s,logA/T=4.9,baz=332						

*UPP **20** 05:15:43.4, 57°43N×23°53E, h0km, ML1.9, Suspected Mining explosion.*
*ISCJB **20** 05:15:51.2±0.7, 57°84N±0°05×22°38E±0°08, h0km, Error ellipse: s-maj=7.9km s-min=4.8km az=137.7*
*CSEM **20** 05:15:51.3±0.3, 57°79N×22°56E, h1km, ML2.1, Error ellipse: s-maj=9.1km s-min=5.7km az=152.0, Mining explosion.*
*HEL **20** 05:15:52.8±0.2, 57°83N×22°40E, h0km, ML2.1, ML1.9(UPP), Explosion*
*IDC **20** 05:15:54.7±2.6, 57°97N×22°22E, h0km, mb1 3.2/4, mb1mx3.0/27, mbtmp3.1/4, ML2.4/4, Error ellipse: s-maj=28.8km s-min=9.6km az=157.0*
ISC 20 05:15:51.5±0.9, 57°82N±0°04×22°47E±0°04, h0km, n35, σ1°§15/44, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.21**	**207**	*eP*	**Pg**	**05 15 56.9**	**+1.4**
SLIT	**Slitere, Latvi**	**0.21**	**207**	P	**Pg**	**05 15 56.9**	**+1.4**
MTSE	**Matsula**	**1.15**	**38**	*eP*	**Pg**	**05 16 13.2**	**-0.3**
MTSE				*eS*	**Sg**	**05 16 28.9**	**+0.5**
MTSE	**Matsula**	**1.15**	**38**	P	**Pg**	**05 16 13.2**	**-0.3**
MTSE				S	**Sg**	**05 16 28.9**	**+0.5**
GOTU	**Gotland**	**2.09**	**268**	*eP*	**Pn**	**05 16 27.9**	**+0.1**
GOTU	**Gotland**	**2.09**	**268**	P	**Pn**	**05 16 27.9**	**+0.1**
VSU	**Vasula**	**2.35**	**72**	*ePB*	**Pb**	**05 16 33.8**	**-1.0**
VSU				*eSG*	**Sg**	**05 17 05.5**	**-1.5**
VSU	**Vasula**	**2.35**	**72**	Pb	**Pb**	**05 16 33.7**	**-1.0**
VSU				Sg	**Sg**	**05 17 05.5**	**-1.5**
MEF	**Metsahovi**	**2.61**	**22**	*eP*	**Pb**	**05 16 37.4**	**-1.6**
MEF				*eSB*	**Sb**	**05 17 11.3**	**-0.3**
MEF				MSG		05 17 13.6	
	comp=Z,8.1nm,0.1s						
AAL	**Aland**	**2.69**	**333**	*eP*	**Pn**	**05 16 38.0**	**+1.9**
AAL				*eSG*	**Sb**	**05 17 14.9**	**+0.9**
AAL	**Aland**	**2.69**	**333**	P	**Pn**	**05 16 36.2**	**+0.2**
RAF	**Rauma**	**3.24**	**354**	*eP*	**Pn**	**05 16 44.6**	**+1.1**
RAF				*eSB*	**Sb**	**05 17 28.8**	**-0.9**
RAF	**Rauma**	**3.24**	**354**	P	**Pn**	**05 16 44.6**	**+1.1**
GRAU	**Graesoe**	**3.24**	**323**	*eP*	**Pn**	**05 16 43.2**	**-0.3**
GRAU	**Graesoe**	**3.24**	**323**	P	**Pn**	**05 16 43.2**	**-0.3**
FLYU	**Flymyra**	**3.32**	**316**	*eP*	**Pn**	**05 16 45.5**	**+0.9**
FLYU	**Flymyra**	**3.32**	**316**	P	**Pn**	**05 16 45.4**	**+0.9**
BACU	**Backbrunna**	**3.46**	**309**	*eP*	**Pn**	**05 16 47.6**	**+1.1**
BACU	**Backbrunna**	**3.46**	**309**	P	**Pn**	**05 16 47.5**	**+1.1**
ESKU	**Eskilstuna**	**3.49**	**297**	*eP*	**Pn**	**05 16 47.7**	**+0.8**
ESKU	**Eskilstuna**	**3.49**	**297**	P	**Pn**	**05 16 47.7**	**+0.8**
IGGU	**Iggoen**	**4.04**	**321**	*eP*	**Pn**	**05 16 54.8**	**+0.2**
IGGU	**Iggoen**	**4.04**	**321**	P	**Pn**	**05 16 54.8**	**+0.2**
FIA0	**FINESS Array S**	**4.07**	**25**	*eP*	**Pn**	**05 16 57.1**	**+2.1**
FINES	**FINESS Array B**	**4.07**	**25**	Pn	**Pn**	**05 16 56.9**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=216,slow=12,SNR=9.5						
FINES				Pg	**Pn**	**05 17 05.2**	**+1.1**
	comp=Z,0.7nm,0.3s,baz=198,slow=13,SNR=14						
FINES				Sn	**Sn**	**05 17 45.1**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=203,slow=24,SNR=2.6						
FINES				Lg	Lg	05 18 01.1	
	comp=Z,1.5nm,0.3s,baz=213,slow=26,SNR=9.3						
FALU	**Falun**	**4.34**	**311**	*eP*	**Pn**	**05 17 00.5**	**+1.8**
FALU	**Falun**	**4.34**	**311**	P	**Pn**	**05 17 00.5**	**+1.8**
ARNU	**Arnoeviken**	**4.66**	**329**	*eP*	**Pn**	**05 17 03.4**	**+0.4**
ARNU	**Arnoeviken**	**4.66**	**329**	P	**Pn**	**05 17 03.4**	**+0.4**
BSD	**Bornholm Skovb**	**4.99**	**240**	*i* P	**Pn**	**05 17 06.3**	**-1.2**
BSD				*i* S	Sn	05 17 34.7	-31
HFS	**Hagfors**	**5.10**	**301**	Pn	**Pn**	**05 17 09.1**	**0.0**
	comp=Z,0.5nm,0.3s,baz=127,slow=14,SNR=14						
HFS				Lg	Lg	05 18 27.3	
	comp=Z,0.7nm,0.3s,baz=112,slow=31,SNR=8.6						
HASU	**Hassela**	**5.25**	**328**	*eP*	**Pn**	**05 17 10.6**	**-0.5**
HASU	**Hassela**	**5.25**	**328**	P	**Pn**	**05 17 10.6**	**-0.5**
NOA	**NORSAR Array B**	**6.59**	**304**	Pn	**Pn**	**05 17 28.6**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=120,slow=7.0,SNR=7.3						
NOA				Sn	**Sn**	**05 18 43.1**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=135,slow=18,SNR=1.6						
NOA				Lg	Lg	05 19 12.4	
	comp=Z,0.3nm,0.3s,baz=21,slow=20,SNR=1.6						
ARCES	**ARCESS Array B**	**11.84**	**5**	Pn	Pn	05 18 37.6	-3.8
	comp=Z,0.0nm,0.3s,baz=193,slow=12,SNR=4.7						

IDC 20 05:43:41.6±2.2, 5°59S×152°60E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.6/4, MS4.1/1, Ms1 4.1/1, ms1mx2.9/21, Error ellipse: s-maj=134.6km s-min=27.3km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.78**	**230**	P	P	05 48 44.1	-1.9
	0.4nm,0.6s,baz=53,slow=9.8,SNR=8.0						
ASAR	**Alice Springs**	**25.44**	**223**	P	P	05 49 11.9	+0.5
	0.8nm,0.8s,baz=59,slow=8.9,SNR=5.5						
FITZ	**Fitzroy Crossi**	**29.11**	**242**	P	P	05 49 45.3	+0.9
	1.2nm,0.8s,baz=42,slow=15,SNR=2.5						
RAR	**Rarotonga**	**48.65**	**113**	LR	LR	06 07 43.3	
	comp=Z,192nm,18.9s,baz=210,slow=30						
ILAR	**Eielson Array**	**82.96**	**22**	P	P	05 56 08.3	0.0
	0.5nm,0.8s,baz=258,slow=5.2,SNR=7.4						

PRE 20 05:44:34.2±1.9, 26°41S×27°59E, h2km, ML2.6, 3C-1D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLOF	**Kloof**	**0.07**	**13**	*eP*	Pg	05 44 35.9	+0.2
KLOF				*eS*	Sg	05 44 36.7	-0.1
KLOF				AML	AML	05 44 37.1	
	comp=Z,7μm,0.2s						
KLOF	**Kloof**	**0.07**	**13**	*i* P	Pg	05 44 36.0	+0.2
KLOF				*eS*	Sg	05 44 37.0	+0.1
KLOF				AML	AML	05 44 37.2	
	comp=Z,7μm,0.6s						
PRYS	**Parys**	**0.55**	**202**	*eP*	Pg	05 44 44.3	-0.7
PRYS				*eS*	Sg	05 44 52.1	-0.3
PRYS				AML	AML	05 44 58.0	
	comp=Z,191nm,0.6s						
PRYS	**Parys**	**0.55**	**202**	*eP*	Pg	05 44 45.3	+0.3
PRYS				*eS*	Sg	05 44 52.2	-0.2
PRYS				AML	AML	05 44 58.0	
	comp=Z,178nm,0.6s						
ERPM	**east rand prop**	**0.58**	**83**	*eP*	Pg	05 44 45.3	-0.4
ERPM				*eS*	Sg	05 44 53.3	-0.2
ERPM				AML	AML	05 44 54.1	
	comp=Z,89nm,0.1s						
ERPM	**east rand prop**	**0.58**	**83**	*eP*	Pb	05 44 46.6	-0.9
ERPM				*eS*	Sg	05 44 53.1	-0.3
ERPM				AML	AML	05 44 53.6	
	comp=Z,74nm,0.4s						
KSR	**Koster**	**0.84**	**312**	*eP*	Pg	05 44 48.9	-1.6
KSR				*eS*	Sg	05 45 00.6	-1.1
KSR				AML	AML	05 45 09.1	
	comp=Z,113nm,0.2s						
KSR	**Koster**	**0.84**	**312**	*eP*	Pg	05 44 50.3	-0.3
KSR				*eS*	Sg	05 45 00.5	-1.2
KSR				AML	AML	05 45 08.8	
	comp=Z,100nm,0.8s						

BFSD	**Buffelsfontein**	**0.85**	**238**	*eP*	Pg	05 44 50.0	-0.8
BFSD				*eS*	Sg	05 45 01.0	-1.0
BFSD				AML	AML	05 45 07.6	
	comp=Z,184nm,0.1s						
SLR	**Silverton**	**0.92**	**43**	*eP*	Pg	05 44 50.8	-1.2
SLR				*eS*	Sg	05 45 03.6	-0.4
SLR				AML	AML	05 45 11.3	
	comp=Z,61nm,0.3s						
SLR	**Silverton**	**0.92**	**43**	*eP*	Pg	05 44 51.8	-0.2
SLR				*eS*	Sg	05 45 03.6	-0.4
SLR				AML	AML	05 45 11.1	
	comp=Z,60nm,0.7s						
TLEK	**Tau Lekoa**	**0.99**	**236**	*eP*	Pg	05 44 52.9	-0.5
TLEK				*eS*	Sg	05 45 06.9	+0.4
SEK	**Senekal**	**1.90**	**179**	*eP*	Pn	05 45 07.8	-0.1
SEK				*eS*	Sn	05 45 33.1	+0.4
SEK				AML	AML	05 45 34.5	
	comp=Z,80nm,0.2s						
SEK	**Senekal**	**1.90**	**179**	*i* P	Pb	05 45 09.7	-0.2
SEK				*eS*	Sn	05 45 33.2	+0.5
SEK				AML	AML	05 45 34.3	
	comp=Z,77nm,0.3s						
SWZ	**Schweizer**	**2.16**	**249**	*eP*	Pn	05 45 11.6	+0.1
SWZ				*eS*	Sn	05 45 39.4	+0.4
SWZ				AML	AML	05 45 41.5	
	comp=Z,85nm,0.7s						
LBTB	**Lobatse**	**2.28**	**307**	*eP*	Pn	05 45 12.4	-0.6
LBTB				*eS*	Sn	05 45 41.4	-0.3
LBTB				AML	AML	05 45 45.7	
	comp=Z,50nm,0.4s						
LBTB	**Lobatse**	**2.28**	**307**	*i* P	Pn	05 45 13.8	+0.8
LBTB				*eS*	Sb	05 45 43.6	-1.4
LBTB				AML	AML	05 45 45.7	
	comp=Z,50nm,0.4s						
BOSA	**Boshof**	**3.02**	**223**	*eP*	Pn	05 45 23.5	+0.3
BOSA				*eS*	Sn	05 45 59.6	-0.5
BOSA				AML	AML	05 46 12.4	
	comp=Z,8.7nm,0.5s						
BOSA	**Boshof**	**3.02**	**223**	*i* P	Pn	05 45 23.1	-0.2
BOSA				*eS*	Sn	05 45 58.7	-1.4
BOSA				AML	AML	05 46 12.3	
	comp=Z,8.7nm,0.5s						
POGA	**Pongola**	**3.71**	**106**	*eP*	Pn	05 45 33.9	+1.3
POGA				*eS*	Sn	05 46 17.8	+0.8
POGA				AML	AML	05 46 35.3	
	comp=Z,14nm,0.8s						
POGA	**Pongola**	**3.71**	**106**	*eP*	Pn	05 45 35.0	+2.4
POGA				*eS*	Sn	05 46 17.8	+0.8
POGA				AML	AML	05 46 34.9	
	comp=Z,13nm,0.7s						
UPI	**Upington**	**5.96**	**250**	*eP*	Pn	05 46 03.9	+0.2
UPI				*eS*	Sn	05 47 10.0	-2.7
UPI				AML	AML	05 47 29.1	
	comp=Z,83nm,0.5s						
CVNA	**Calvinia**	**8.52**	**232**	*eS*	Sn	05 48 11.3	-4.3
CVNA				AML	AML	05 49 02.1	
	comp=Z,4.2nm,0.8s						

IDC 20 05:52:18.5±2.4, 8°06S×74°37W, h136km±29km, mb3.6/4, mb1 3.6/8, mb1mx3.3/24, mbtmp3.5/8, Error ellipse: s-maj=28.7km s-min=12.6km az=56.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**4.09**	**283**	P	Pn	05 53 21.4	+1.2
	21nm,0.3s,baz=85,slow=7.5,SNR=120						
ATAH				S	Sn	05 54 07.4	-0.6
	19nm,0.3s,baz=221,slow=19,SNR=21						
NNA	**Nana**	**4.60**	**212**	P	Pn	05 53 27.9	+1.5
	2.5nm,0.3s,baz=28,slow=5.9,SNR=9.9						
NNA				S	Sn	05 54 18.3	-1.0
	24nm,0.3s,baz=252,slow=16,SNR=16						
LPAZ	**La Paz**	**10.20**	**144**	P	Pn	05 54 42.7	+0.5
	0.2nm,0.3s,baz=320,slow=8.9,SNR=10						
SIV	**San Ignacio**	**15.20**	**122**	P	P	05 55 47.3	-0.8
	0.2nm,0.3s,baz=297,slow=13,SNR=5.6						
CFAA	**Coronel Fontan**	**24.11**	**167**	P	P	05 57 23.0	+1.2
	0.1nm,0.5s,baz=351,slow=5.9,SNR=3.5						
CPUP	**Villa Florida**	**24.34**	**140**	P	P	05 57 23.7	-0.1
	1.5nm,0.6s,baz=302,slow=12,SNR=7.9						
TXAR	**Lajitas Array**	**46.67**	**324**	P	P	06 00 34.7	+1.0
	0.3nm,0.6s,baz=150,slow=9.9,SNR=5.5						
DBIC	**Dimbokro**	**70.84**	**80**	P	P	06 03 20.2	-0.9
	1.9nm,0.4s,baz=246,slow=7.9,SNR=5.1						
TORD	**Torodi Ar. Bea**	**78.42**	**75**	P	P	06 04 04.3	-0.6
	1.4nm,0.7s,baz=260,slow=3.8,SNR=12						

IDC 20 06:11:45.3±1.9, 2°43N×126°34E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.5/23, mbtmp3.5/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/23, Error ellipse: s-maj=116.7km s-min=24.8km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.41**	**182**	P	P	06 16 24.0	-0.2
	1.0nm,0.6s,baz=14,slow=14,SNR=4.7						
FITZ				LR	LR	06 23 57.6	
	comp=Z,54nm,19.5s,baz=72,slow=36						
WRA	**Warramunga Arr**	**23.58**	**161**	P	P	06 16 57.9	+0.1
	0.6nm,0.4s,baz=340,slow=11,SNR=13						
ASAR	**Alice Springs**	**26.96**	**165**	P	P	06 17 28.9	0.0
	0.2nm,0.

KBTR					S		Sn	06 24 48.5	+0.4
KBTR	**Krutoberegovo**	**1.13**	**29**	*i* P			**Pn**	06 24 32.4	+0.6
KBTR					eS		**Sn**	06 24 48.5	+0.4
KBG	**Krutoberegovo**	**1.14**	**25**	PN			**Pn**	06 24 32.3	+0.3
KBG					S		**Sn**	06 24 48.0	-0.3
KBG	**Krutoberegovo**	**1.14**	**25**	*e*P			**Pn**	06 24 32.3	+0.3
KBG					*e*S		**Sn**	06 24 48.0	-0.3
KPT	**Kopyto**	**1.18**	**309**	*e*P			**Pn**	06 24 32.4	-0.2
KPT					*e*S		**Sn**	06 24 48.1	-1.3
KRSR	**Krestovskiy**	**1.23**	**324**	*i* P			**Pn**	06 24 32.9	-0.2
KRSR					*e*S		**Sn**	06 24 49.2	-1.2
KLY	**Klyuchi**	**1.28**	**329**	PN			**Pn**	06 24 33.2	-0.4
KLY					S		**Sn**	06 24 49.8	-1.5
KLY	**Klyuchi**	**1.28**	**329**	*e*P			**Pn**	06 24 33.2	-0.4
KLY					*e*S		**Sn**	06 24 49.8	-1.5
SMKR	**Semkarok**	**1.37**	**351**	*i* P			**Pn**	06 24 35.5	+0.6
SMKR					*e*S		**Sn**	06 24 53.7	+0.2
KOZR	**Kozyr**	**1.39**	**308**	PN			**Pn**	06 24 35.2	+0.2
KOZR					S		**Sn**	06 24 53.3	-0.4
BDR	**Baidarnaya**	**1.39**	**345**	*i* P			**Pn**	06 24 35.6	+0.5
BDR					*i* S		**Sn**	06 24 54.2	+0.4
KOZ	**Kozyrevsk**	**1.39**	**307**	*i* P			**Pn**	06 24 35.2	+0.2
KOZ					*e*S		**Sn**	06 24 53.3	-0.5
SRKR	**Sorokina**	**1.48**	**345**	*i* P			**Pn**	06 24 36.6	+0.5
SRKR					*e*S		**Sn**	06 24 55.7	0.0
SRDR	**Sredinnyy**	**1.62**	**313**	*i* P			**Pn**	06 24 37.7	-0.2
SRDR					*e*S		**Sn**	06 24 57.2	-1.7
KII	**Karymskiy**	**1.83**	**230**	*e*P			**Pn**	06 24 41.6	+1.0
KII					*e*S		**Sn**	06 25 04.3	+0.6
BKI	**Bering**	**2.37**	**89**	PN			**Pn**	06 24 47.8	+0.4
BKI					S		**Sn**	06 25 14.8	-1.1
BKI	**Bering**	**2.37**	**89**	*e*P			**Pn**	06 24 47.8	+0.4
BKI					*e*S		**Sn**	06 25 14.8	-1.1
SPN	**Mys Shipunski**	**2.39**	**207**	PN			**Pn**	06 24 47.3	-0.4
SPN					S		**Sn**	06 25 14.0	-2.5
SPN	**Mys Shipunski**	**2.39**	**207**	*i* P			**Pn**	06 24 47.3	-0.4
SPN					*i* S		**Sn**	06 25 14.0	-2.5
NLC	**Nalytchevo**	**2.53**	**216**	PN			**Pn**	06 24 49.9	+0.3
NLC					S		**Sn**	06 25 18.0	-1.8
NLC	**Nalytchevo**	**2.53**	**216**	*e*P			**Pn**	06 24 49.9	+0.3
NLC					*e*S		**Sn**	06 25 18.0	-1.8
SDLR	**Sedlovina**	**2.61**	**223**	*e*P			**Pn**	06 24 51.7	+0.9
SDLR					*e*S		**Sn**	06 25 21.0	-1.0
KRER	**Koryakskii**	**2.65**	**225**	*e*P			**Pn**	06 24 52.8	+1.4
KRER					*e*S		**Sn**	06 25 22.1	-0.8
SMAR	**Somma**	**2.66**	**223**	*e*P			**Pn**	06 24 52.8	+1.3
SMAR					*e*S		**Sn**	06 25 22.4	-0.8
AVH	**Avacha**	**2.68**	**224**	*e*P			**Pn**	06 24 53.1	+1.4
AVH					*e*S		**Sn**	06 25 23.5	0.0
UGLR	**Uglovaya**	**2.69**	**222**	*e*P			**Pn**	06 24 53.0	+1.2
UGLR					*e*S		**Sn**	06 25 22.9	-0.9
KOK	**Koryaka**	**2.70**	**225**	*e*P			**Pn**	06 24 53.6	+1.6
KOK					*e*S		**Sn**	06 25 24.5	+0.4
GNL	**Ganaly**	**2.75**	**238**	*i* P			**Pn**	06 24 53.6	+1.0
PET	**Petropavlovsk**	**2.90**	**222**	*e*PN			**Pn**	06 24 54.6	+0.1
PET					*e*S		**Sn**	06 25 28.0	-0.6
PET					pmax		pmax		
	comp=Z,59nm,0.5s								
PET					smax		smax		
	comp=N,387nm,0.7s								
PET					smax		smax		
	comp=E,261nm,0.6s								
PET	**Petropavlovsk**	**2.90**	**222**	P			**Pn**	06 24 55.7	+1.2
PET					*e*S		**Sn**	06 25 27.5	-1.1
PETK	**Petropavlovsk-**	**3.23**	**231**	PN			**Pn**	06 25 00.4	+1.4
PETK					S		**Sn**	06 25 39.5	+2.9
PETK					pmax		pmax		
	comp=Z,2.0nm,0.3s								
PETK					smax		smax		
	comp=N,3.0nm,0.3s								
PETK	**Petropavlovsk-**	**3.23**	**231**	P			**Pn**	06 25 00.4	+1.4
	comp=N,2.0nm,0.3s,baz=71,slow=16,SNR=12								
PETK					S		**Sn**	06 25 39.5	+2.9
	comp=N,3.3nm,0.3s,baz=70,slow=22,SNR=5.2								
RUS	**Russkaya**	**3.42**	**217**	PN			**Pn**	06 25 01.7	+0.1
RUS					S		**Sn**	06 25 38.2	-3.0
RUS	**Russkaya**	**3.42**	**217**	*e*P			**Pn**	06 25 01.7	+0.1
RUS					*e*S		**Sn**	06 25 38.2	-3.0
GRL	**Gorelyy**	**3.49**	**221**	P			**Pn**	06 25 03.8	+1.3
GRL					S		**Sn**	06 25 41.7	-1.2
MTVR	**Mutnovka**	**3.50**	**220**	*e*P			**Pn**	06 25 03.9	+1.2
MTVR					*e*S		**Sn**	06 25 42.1	-1.2
APC	**Apacha**	**3.60**	**232**	P			**Pn**	06 25 05.5	+1.6
ASAK	**Asacha**	**3.69**	**221**	*e*P			**Pn**	06 25 06.4	+1.2
ASAK					*e*S		**Sn**	06 25 46.8	-0.9
TILK	**Tilichiki**	**5.71**	**22**	*e*S			**Sn**	06 26 35.8	-0.8
SKR	**Severo-Kuril's**	**5.72**	**220**	S			**Sn**	06 26 35.6	-1.2
FX1	**Attu Island--F**	**7.07**	**105**	P			**Pn**	06 25 51.5	+0.6
	comp=N,1.2nm,0.3s,baz=88,slow=17,SNR=7.2								
FX1					S		**Sn**	06 27 06.6	-3.0
	comp=N,12nm,0.3s,baz=187,slow=22,SNR=17								
MJAR	**Matsushiro Arr**	**24.69**	**231**	P			**P**	06 29 22.2	+0.2
	comp=N,2.8nm,0.6s,baz=26,slow=6.2,SNR=6.6								
ILAR	**Eielson Array**	**26.60**	**48**	P			**P**	06 29 37.9	-1.1
	comp=N,0.2nm,0.7s,baz=247,slow=6.5,SNR=5.0								
YKA	**Yellowknife Ar**	**40.91**	**45**	P			**P**	06 31 43.0	+0.7
	comp=N,0.5nm,0.9s,baz=300,slow=8.2,SNR=3.4								
TXAR	**Lajitas Array**	**68.88**	**69**	pP			pP	06 35 31.7	+2.7
	comp=N,1.3nm,0.6s,baz=305,slow=3.1,SNR=5.1								
WRA	**Warramunga Arr**	**78.45**	**206**	P			**P**	06 35 59.7	-0.5
	comp=N,0.2nm,0.5s,baz=20,slow=6.1,SNR=3.6								

*NIC **20** 06:27:10.4±0.2,35°.93N×30°.82E,h11km,mb4.2,ML3.9, MW3.8*
*ISK **20** 06:27:10.4,35°.77N×30°.92E,h6km,MD3.5*
*DDA **20** 06:27:12.7,36°.00N×31°.00E,h20km,MD3.7*
*CSEM **20** 06:27:12.5±0.1,35°.84N×30°.94E,h10km,Mw3.8,Error ellipse: s-maj=4.7km s-min=2.6km az=52.0*
*NSSC **20** 06:27:12.7±1.4,35°.97N×31°.11E,h0km±314km,ML3.3*
*THE **20** 06:27:14.8,35°.71N×30°.88E,h28km±19km,Error ellipse: s-maj=19.1km s-min=0.7km az=210.0*
*IDC **20** 06:27:15.4±1.9,35°.98N×31°.07E,h56km±22km,mb3.6/9, mb1 3.6/17,mb1mx3.6/34,mbtmp3.6/17,ML3.9/8,Error ellipse: s-maj=18.3km s-min=13.1km az=47.0*
*HLW **20** 06:27:27.8,34°.95N×31°.32E,h33km±24km,Md0.0,MI3.8*

ISC 20 06:27:11.8±1.1,35°.85N±0°.02×30°.97E±0°.02,h15km±8km, n126,σ1§47/165,mb3.6/9,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ANTB	**Antalya**	**1.08**	**346**	*e*PN		**Pg**	06 27 32.7	0.0
ANTB				*e*SN		**Sn**	06 27 48.6	+1.6
ANTB	**Antalya**	**1.08**	**346**	*e*Pn		**Pg**	06 27 32.7	0.0
ANTB				*e*Sn		**Sn**	06 27 48.6	+1.6
GAZI	**Gazipasa**	**1.16**	**70**	*i* P		**Pb**	06 27 33.5	0.0
GAZI				*i* S		**Sb**	06 27 48.6	+0.3
GAZI	**Gazipasa**	**1.16**	**70**	*i* P		**Pb**	06 27 33.5	0.0
GAZI				*i* S		**Sb**	06 27 48.6	+0.3
AKAS	**Kas**	**1.17**	**290**	*i* P		**Pb**	06 27 33.7	-0.1
AKAS				*i* S		**Sn**	06 27 55.1	+5.7
AKAS	**Kas**	**1.17**	**290**	*i* P		**Pb**	06 27 33.7	-0.1
ELL	**Elmali**	**1.24**	**317**	*e*PN		**Pg**	06 27 35.7	-0.1
ELL				*e*SN		**Sn**	06 27 53.5	+2.3
ELL	**Elmali**	**1.24**	**317**	*e*Pn		**Pg**	06 27 35.7	-0.1
ELL				*e*Sn		**Sn**	06 27 53.5	+2.3
KORT	**Korkueli**	**1.25**	**337**	*i* P		**Pb**	06 27 35.9	+0.7
KORT				*i* S		**Sb**	06 27 49.2	-2.0
KORT	**Korkueli**	**1.25**	**337**	*i* P		**Pb**	06 27 35.9	+0.7
AKMC	**Akamas**	**1.38**	**126**	P		**Pn**	06 27 37.5	+1.0
AKMC	**Akamas**	**1.38**	**126**	P		**Pn**	06 27 37.5	+1.0
PPCY	**Paphos**	**1.48**	**130**	P		**Pg**	06 27 41.1	+0.8
PPCY	**Paphos**	**1.48**	**130**	P		**Pg**	06 27 41.1	+0.8
ALFC	**Alevga**	**1.50**	**117**	P		**Pn**	06 27 38.8	+0.7
	55nm,0.2s							
ALFC					S	**Sg**	06 28 00.6	+0.5
ALFC	**Alevga**	**1.50**	**117**	P		**Pn**	06 27 38.8	+0.7
	55nm,0.2s							
ALFC					S	**Sg**	06 28 00.6	+0.5
LEF	**Lefka**	**1.73**	**114**	*e*PN		**Pn**	06 27 41.5	+0.2
LEF	**Lefka**	**1.73**	**114**	*e*Pn		**Pn**	06 27 41.5	+0.2
ERMK	**Ermenek**	**1.76**	**63**	*i* P		**Pn**	06 27 43.6	+1.7
ERMK				*i* S		**Sb**	06 28 07.1	+1.3
ERMK	**Ermenek**	**1.76**	**63**	*i* P		**Pn**	06 27 43.6	+1.7
ERMK				*i* S		**Sb**	06 28 07.1	+1.3
GOLH	**Golhisar**	**1.79**	**321**	*i* P		**Pb**	06 27 44.5	+0.2
GOLH				*i* S		**Sg**	06 28 08.6	-0.9
GOLH	**Golhisar**	**1.79**	**321**	*i* P		**Pb**	06 27 44.5	+0.2
GOLH				*i* S		**Sg**	06 28 08.6	-0.9
MAMC	**Mammari**	**1.96**	**110**	P		**Pn**	06 27 45.5	+1.1
MAMC	**Mammari**	**1.96**	**110**	P		**Pn**	06 27 45.5	+1.1
ISP	**Isparta**	**2.00**	**350**	*e*PN		**Pb**	06 27 47.6	-0.4
ISP				*e*SN		**Sb**	06 28 13.2	+0.5
ISP	**Isparta**	**2.00**	**350**	P		**Pb**	06 27 47.5	-0.4
ISP				S		**Sb**	06 28 12.9	+0.2
ISP	**Isparta**	**2.00**	**350**	P		**Pb**	06 27 47.5	-0.4
ISP				S		**Sb**	06 28 12.9	+0.2
ISP				*e*Sn		**Sb**	06 28 13.2	+0.5
CSS	**Prodhromos**	**2.12**	**114**	P		**Pn**	06 27 47.4	+0.7
	9.8nm,0.4s							
CSS				S		**Sb**	06 28 16.5	+0.4
CSS	**Prodhromos**	**2.12**	**114**	*e*PN		**Pn**	06 27 47.0	+0.3
CSS	**Prodhromos**	**2.12**	**114**	P		**Pn**	06 27 47.2	+0.5
CSS				S		**Sn**	06 28 12.4	-0.4
CSS	**Prodhromos**	**2.12**	**114**	Pn		**Pn**	06 27 47.0	+0.3
CSS	**Prodhromos**	**2.12**	**114**	P		**Pn**	06 27 47.4	+0.7
	9.8nm,0.4s							
CSS				S		**Sb**	06 28 16.5	+0.4
LFK	**Lefkose**	**2.17**	**104**	*e*PN		**Pn**	06 27 47.6	+0.3
LFK	**Lefkose**	**2.17**	**104**	*e*Pn		**Pn**	06 27 47.6	+0.3
ARG	**Arkhangelos**	**2.33**	**280**	P		**Pn**	06 27 49.4	-0.2
ARG				S		**Sn**	06 28 16.2	-1.8
ARG	**Arkhangelos**	**2.33**	**280**	P		**Pn**	06 27 49.4	-0.2
ARG				S		**Sn**	06 28 16.2	-1.8
DNZL	**Cakiroluk**	**2.40**	**321**	*i* P		**Pb**	06 27 54.3	-0.5
DNZL				*i* S		**Sb**	06 28 26.2	+1.9
DNZL	**Cakiroluk**	**2.40**	**321**	*i* P		**Pb**	06 27 54.3	-0.5
DNZL				*i* S		**Sb**	06 28 26.2	+1.9
LADK	**Ladik-KONYA**	**2.60**	**25**	*e*PN		**Pn**	06 27 55.8	+2.4
LADK	**Ladik-KONYA**	**2.60**	**25**	*e*Pn		**Pn**	06 27 55.8	+2.4
EREN	**Erenkoy**	**2.62**	**96**	*e*PN		**Pn**	06 27 55.7	+2.1
EREN	**Erenkoy**	**2.62**	**96**	*e*Pn		**Pn**	06 27 55.7	+2.1
PHNC	**Paralimni**	**2.64**	**108**	P		**Pb**	06 27 58.9	+0.2
	12nm,0.5s							
PHNC				S		**Sg**	06 28 35.9	-0.7
PHNC	**Paralimni**	**2.64**	**108**	P		**Pb**	06 27 58.9	+0.2
	12nm,0.5s							
SHUT	**Suhut-Afyon**	**2.72**	**353**	*e*PN		**Pn**	06 27 57.0	+2.0
SHUT	**Suhut-Afyon**	**2.72**	**353**	*e*Pn		**Pn**	06 27 57.0	+2.0
KHL	**Karahalli**	**2.73**	**335**	*e*PN		**Pn**	06 27 56.0	+0.9
KHL	**Karahalli**	**2.73**	**335**	*e*Pn		**Pn**	06 27 56.0	+0.9
KHAL	**Karahalli**	**2.78**	**335**	*i* P		**Pn**	06 27 56.1	+0.2
KHAL				*i* S		**Sn**	06 28 29.6	+0.5
KHAL	**Karahalli**	**2.78**	**335**	*i* P		**Pn**	06 27 56.1	+0.2
KHAL				*i* S		**Sn**	06 28 29.6	+0.5
BOLV	**Bolvadin**	**2.86**	**360**	*i* P		**Pn**	06 27 59.2	+2.2
BOLV				*i* S		**Sn**	06 28 33.3	+2.0
BOLV	**Bolvadin**	**2.86**	**360**	*i* P		**Pn**	06 27 59.2	+2.2
BOLV				*i* S		**Sn**	06 28 33.3	+2.0
GULE	**Gulek**	**3.38**	**64**	*i* P		Pn	06 28 07.4	+3.2
GULE				*i* S		**Sb**	06 28 51.4	-1.1
GULE	**Gulek**	**3.38**	**64**	*i* P		Pn	06 28 07.4	+3.2
GULE				*i* S		**Sb**	06 28 51.4	-1.1
DEMI	**Demirci**	**3.66**	**331**	*i* P		**Pn**	06 28 08.5	+0.6
DEMI				*i* S		**Sn**	06 28 50.7	0.0
DEMI	**Demirci**	**3.66**	**331**	*i* P		**Pn**	06 28 08.5	+0.6
DEMI				*i* S		**Sn**	06 28 50.7	0.0
ARNB	**Al Arnab**	**4.06**	**88**	*e*P		**Pn**	06 28 14.5	+1.0
ARNB				*e*S		**Sn**	06 29 01.2	+0.4
ARNB				AML		AML	06 29 12.8	
	comp=Z,73nm,0.5s							
ARNB	**Al Arnab**	**4.06**	**88**	*e*P		**Pn**	06 28 14.5	+1.0
	SNR=45							
ARNB				*e*S		**Sn**	06 29 01.2	+0.4
	comp=Z,73nm,0.5s,SNR=40							
HWQ	**Hawqa**	**4.37**	**110**	*e*P		**Pn**	06 28 20.1	+2.3
HWQ	**Hawqa**	**4.37**	**110**	*e*P		**Pn**	06 28 20.1	+2.3
BRTR	**Keskin Array B**	**4.41**	**28**	P		**Pn**	06 28 18.6	+0.4
	comp=Z,3.0nm,0.3s,baz=195,slow=16,SNR=39							
BRTR					S	**Sn**	06 29 10.8	+1.4
	comp=Z,2.7nm,0.3s,baz=317,slow=37,SNR=5.4							
BIDA	**Albida**	**4.45**	**99**	*e*P		**Pn**	06 28 20.3	+1.5
BIDA				*e*S		**Sn**	06 29 08.9	-1.4
BIDA				AML		AML	06 29 17.8	
	comp=Z,306nm,0.6s							
BIDA	**Albida**	**4.45**	**99**	*e*P		**Pn**	06 28 20.3	+1.5
	SNR=45							
BIDA				*e*S		**Sn**	06 29 08.9	-1.4
	comp=Z,306nm,0.6s,SNR=40							
BTCH	**Batrach**	**4.46**	**86**	*e*P		**Pn**	06 28 20.1	+1.2
BTCH				*e*S		**Sn**	06 29 09.3	-1.2
BTCH				AML		AML	06 29 22.6	
	comp=Z,182nm,0.4s							
BTCH	**Batrach**	**4.46**	**86**	*e*P		**Pn**	06 28 20.1	+1.2
	SNR=45							
BTCH				*e*S		**Sn**	06 29 09.3	-1.2
	comp=Z,182nm,0.4s,SNR=40							
THR3	**Thira Island,**	**4.54**	**279**	P		**Pn**	06 28 20.5	+0.6
THR3	**Thira Island,**	**4.54**	**279**	P		**Pn**	06 28 20.5	+0.6
MMC7	**Mount Meron ar**	**4.62**	**126**	Pn		**Pn**	06 28 23.6	+2.6
MMA0	**Mount Meron ar**	**4.62**	**126**	Pn		**Pn**	06 28 23.6	+2.4
MMAI	**Mount Meron Ar**	**4.63**	**126**	P		**Pn**	06 28 22.7	+1.5
	comp=Z,17nm,0.3s,baz=306,slow=11,SNR=14							
MMAI					S	**Sn**	06 29 14.2	-0.5
	comp=Z,20nm,0.3s,baz=110,slow=24,SNR=4.8							
HAWK	**Haweek**	**4.64**	**105**	*e*P		**Pn**	06 28 24.2	+2.7
HAWK				*e*S		**Sn**	06 29 14.7	-0.4
HAWK				AML		AML	06 29 21.8	
	comp=Z,53nm,0.6s							
HAWK	**Haweek**	**4.64**	**105**	*e*P		**Pn**	06 28 24.2	+2.7
	SNR=45							
HAWK				*e*S		**Sn**	06 29 14.7	-0.4
	comp=Z,53nm,0.6s,SNR=40							
RCY	**Rachaya**	**4.65**	**119**	*e*P		Pn	06 28 24.9	+3.4
RCY	**Rachaya**	**4.65**	**119**	*e*P		Pn	06 28 24.9	+3.4
KSDI	**Kefar Szold**	**4.69**	**123**	Pn		**Pn**	06 28 24.3	+2.3
SLTI	**Sal'it**	**4.94**	**136**	Pn		**Pn**	06 28 27.4	+2.0
SLTI						**Sn**	06 29 21.1	-1.1
AYKD	**Aykdinkavak**	**4.95**	**70**	*i* P		**Pn**	06 28 27.4	+1.8
AYKD				*i* S		**Sn**	06 29 23.2	+0.7
AYKD	**Aykdinkavak**	**4.95**	**70**	*i* P		**Pn**	06 28 27.4	+1.8
AYKD				*i* S		**Sn**	06 29 23.2	+0.7
MMLI	**Mount Malkishu**	**5.02**	**131**	Pn		**Pn**	06 28 26.4	+2.0
MMLI				Sn		**Sn**	06 29 24.4	+0.1
HMDT	**Nahal Hemdat**	**5.21**	**132**	Pn		**Pn**	06 28 31.0	+1.8
HMDT				Sn		**Sn**	06 29 29.9	+0.9
HBRG	**Burj al 'Arab**	**5.34**	**191**	P		**Pn**	06 28 33.9	+2.9
	baz=197							
HBRG	**Burj al 'Arab**	**5.34**	**191**	P		**Pn**	06 28 33.9	+2.9
RSH		**5.39**	**154**	P		**Pn**	06 28 33.2	+1.6
ROOS	**tl_alroos**	**5.45**	**106**	*e*P		Pn	06 28 35.7	+3.2
ROOS				*e*S		**Sn**	06 29 34.6	-0.4
AMAG	**Maghara**	**5.52**	**160**	P		**Pn**	06 28 34.8	+1.3
	baz=159							
AMAG	**Maghara**	**5.52**	**160**	P		**Pn**	06 28 34.8	+1.3
DSI	**Dead Sea**	**5.63**	**138**	Pn		**Pn**	06 28 37.4	+2.5
DSI				Sn		**Sn**	06 29 39.9	+0.6
RTMI	**Retamim**	**5.70**	**146**	Pn		**Pn**	06 28 36.7	+0.8
HMAT	**Matruh**	**5.74**	**215**	AMP			06 29 00.0	
	comp=E,80µm,0.6s,logA/T=5.1,baz=224							
KOT	**Kottamia**	**5.95**	**173**	P		**Pn**	06 28 41.0	+1.7
	baz=174							
KOT				AMP			06 29 00.0	
	comp=N,110µm,0.3s,logA/T=5.5,baz=174							
KOT					S	Sn	06 29 36.1	-11
	baz=174							
KOT	**Kottamia**	**5.95**	**173**	P		**Pn**	06 28 41.0	+1.7
HHAG	**Hagoal**	**5.96**	**171**	AMP			06 29 00.0	
	comp=E,100µm,0.3s,logA/T=5.5,baz=172							
RMNI	**Mount Ramon**	**6.13**	**148**	Pn		**Pn**	06 28 44.2	+2.4
ASF	**Jabal al Asfar**	**6.14**	**125**	P		**Pn**	06 28 44.8	+2.8
	comp=E,0.6nm,0.3s,baz=201,slow=8.8,SNR=3.7							
ASF					S	**Sn**	06 29 55.8	+3.9
	comp=E,0.9nm,0.3s,baz=342,slow=20,SNR=2.4							
FYM	**Al Fayyum**	**6.14**	**179**	S		Sn	06 29 41.9	-10
	baz=183							
HSAF	**As Saff**	**6.23**	**175**	P		**Pn**	06 28 44.8	+1.6
	baz=177							
HSAF	**As Saff**	**6.23**	**175**	P		**Pn**	06 28 44.8	+1.6
GLL	**Jalalah**	**6.29**	**174**	P		**Pn**	06 28 45.8	+1.8
	baz=176							
GLL	**Jalalah**	**6.29**	**174**	P		**Pn**	06 28 45.8	+1.8
KYTH	**Kithira**	**6.44**	**276**	P		**Pn**	06 28 46.1	0.0
KYTH	**Kithira**	**6.44**	**276**	P		**Pn**	06 28 46.1	0.0
PRNI	**Paran**	**6.44**	**147**	Pn		**Pn**	06 28 47.3	+1.2
KRMI	**Paran Flat**	**6.53**	**150**	Pn		**Pn**	06 28 48.3	+1.0
ZAF		**6.68**	**168**	P		**Pn**	06 28 50.4	+1.0
	baz=169							
ZAF		**6.68**	**168**	P		**Pn**	06 28 50.4	+1.0
HRFI	**Mount Harif**	**6.73**	**148**	Pn		**Pn**	06 28 51.7	+1.7
MBRI	**Mt Berech**	**6.89**	**150**	Pn		**Pn**	06 28 53.2	+0.9
EIL	**Elat**	**7.01**	**150**	P		**Pn**	06 28 55.4	+1.5
	comp=E,2.7nm,0.3s,baz=338,slow=12,SNR=8.9							
EIL					S	**Sn**	06 30 10.8	-2.6
	comp=E,4.0nm,0.3s,baz=175,slow=21,SNR=5.1							
EIL	**Elat**	**7.01**	**150**	Pn		**Pn**	06 28 54.3	+0.4
HKAT	**Jabal Katrina**	**7.74**	**160**	P		**Pn**	06 29 05.0	+0.9
	baz=159							
HKAT	**Jabal Katrina**	**7.74**	**160**	P		**Pn**	06 29 05.0	+0.9
SWA2		**8.06**	**217**	AMP			06 30 00.0	
	comp=N,80µm,0.4s,logA/T=5.3,baz=223							
AKASG	**Malin Array Be**	**14.90**	**356**	P		**Pn**	06 30 40.9	-0.8
	comp=N,1.1nm,0.3s,baz=181,slow=10,SNR=5.4							
KEST	**Kesra**	**17.55**	**276**	P		**P**	06 31 18.4	+1.6
	comp=N,0.1nm,0.3s,baz=68,slow=3.7,SNR=6.8							
GERES	**GERESS Array B**	**18.15**	**321**	P		**Pn**	06 31 22.3	-1.0
	comp=N,0.3nm,0.3s,baz=115,slow=9.1,SNR=4.7							
DAVOX	**Davos/Dischmat**	**19.18**	**311**	P		**P**	06 31 35.8	+0.8
	comp=N,0.6nm,0.3s,baz=165,slow=20,SNR=6.5							
AKTO	**Aktyubinsk**	**24.36**	**45**	P		**P**	06 32 27.2	-1.8
	comp=N,2.6nm,0.6s,baz=247,slow=10,SNR=13							
FINES	**FINESS Array B**	**25.80**	**355**	P		**P**	06 32 39.1	-2.8
	comp=N,1.4nm,0.4s,baz=163,slow=11,SNR=13							
HFS	**Hagfors**	**26.74**	**341**	P		**P**	06 32 48.2	-2.2
	comp=N,0.6nm,0.4s,baz=113,slow=9.8,SNR=5.3							
NB2	**NORSAR Subarra**	**28.18**	**340**	P		P	06 33 01.1	-2.3
	comp=Z,0.5nm,0.5s,baz=153,slow=10							
NOA	**NORSAR Array B**	**28.18**	**340**	P		P	06 33 01.0	-2.4
	comp=Z,0.4nm,0.6s,baz=143,slow=8.7,SNR=3.9							
ARCES	**ARCESS Array B**	**33.88**	**357**	P		P	06 33 50.6	-2.8
	comp=Z,1.2nm,0.6s,baz=181,slow=8.7,SNR=12							
TORD	**Torodi Ar. Bea**	**34.70**	**237**	P		**P**	06 34 01.3	+0.2
	comp=Z,0.5nm,0.7s,baz=31,slow=8.7,SNR=3.8							
MKAR	**Makanchi Array**	**39.42**	**58**	P		P	06 34 39.0	-2.0
	comp=Z,0.7nm,0.5s,baz=278,slow=6.8,SNR=8.9							
MKAR				PcP		**PcP**	06 36 46.9	-2.0
	comp=Z,0.4nm,0.7s,baz=308,slow=3.5,SNR=3.5							
SPITS	**Spitsbergen Ar**	**42.89**	**356**	P		P	06 35 06.8	-2.3
	comp=Z,0.4nm,0.3s,baz=148,slow=12,SNR=7.6							
YKA	**Yellowknife Ar**	**78.16**	**344**	P		P	06 39 07.1	-2.9
	comp=Z,0.4nm,0.6s,baz=25,slow=5.5,SNR=7.9							

*DJA **20** 06:31:06.4±10.0,6°.N×71°.12°.9E±5°.5,h110km±33km, M4.9/4,mB5.0/3,mb5.0/4,MLv4.8/3,Mw(mB)4.3/3*
*IDC **20** 06:31:17.8±1.6,4°.42N×128°.16E,h0km,mb

ALFC	**Alevga**	**1.49**	**116**	⇑P		**Pn**	**06 46 00.0**	**+0.7**
	11nm,0.2s							
ALFC				S		**Sn**	**06 46 19.5**	**+0.9**
FETY	**Fethiye**	**1.72**	**298**	*e*PN		**Pn**	**06 46 03.1**	**+0.7**
FETY				*e*SN		**Sn**	**06 46 24.8**	**+0.6**
FETY	**Fethiye**	**1.72**	**298**	*e*Pn		**Pn**	**06 46 03.1**	**+0.7**
FETY				*e*Sn		**Sn**	**06 46 24.8**	**+0.6**
LEF	**Lefka**	**1.72**	**114**	*e*PN		**Pn**	**06 46 02.1**	**-0.3**
LEF	**Lefka**	**1.72**	**114**	*e*Pn		**Pn**	**06 46 02.1**	**-0.3**
ERMK	**Ermenek**	**1.77**	**62**	*i* P		**Pb**	**06 46 06.1**	**+0.9**
ERMK				*i* S		**Sn**	**06 46 25.5**	**-0.2**
ERMK	**Ermenek**	**1.77**	**62**	*i* P		**Pb**	**06 46 06.1**	**+0.9**
ERMK				*i* S		**Sn**	**06 46 25.5**	**-0.2**
GOLH	**Golhisar**	**1.80**	**322**	*i* P		**Pb**	**06 46 05.9**	**+0.2**
GOLH				*i* S		**Sg**	**06 46 30.8**	**0.0**
GOLH	**Golhisar**	**1.80**	**322**	*i* P		**Pb**	**06 46 05.9**	**+0.2**
GOLH				*i* S		**Sg**	**06 46 30.8**	**0.0**
ISP	**Isparta**	**2.02**	**350**	*e*PN		**Pn**	**06 46 07.2**	**+0.6**
ISP	**Isparta**	**2.02**	**350**	*e*Pn		**Pn**	**06 46 07.2**	**+0.6**
DALY	**Dalyan (Mu¨la**	**2.11**	**298**	*e*PN		**Pn**	**06 46 08.2**	**+0.5**
DALY	**Dalyan (Mu¨la**	**2.11**	**298**	*e*Pn		**Pn**	**06 46 08.2**	**+0.5**
CSS	**Prodhromos**	**2.12**	**113**	P		**Pn**	**06 46 08.7**	**+0.8**
	1.9nm,0.4s							
CSS				S		**Sn**	**06 46 36.3**	**+2.3**
CSS	**Prodhromos**	**2.12**	**113**	*e*PN		**Pn**	**06 46 08.1**	**+0.3**
CSS	**Prodhromos**	**2.12**	**113**	*e*Pn		**Pn**	**06 46 08.1**	**+0.3**
CSS	**Prodhromos**	**2.12**	**113**	P		**Pn**	**06 46 08.7**	**+0.8**
	1.9nm,0.4s							
CSS				S		**Sn**	**06 46 36.3**	**+2.3**
TURN	**Turunc**	**2.17**	**299**	*i* P		**Pb**	**06 46 12.5**	**+0.6**
TURN				*i* S		**Sg**	**06 46 41.5**	**-1.1**
TURN	**Turunc**	**2.17**	**299**	*i* P		**Pb**	**06 46 12.5**	**+0.6**
KONT	**Konya--Tatoy**	**2.39**	**28**	*e*PN		**Pn**	**06 46 13.0**	**+1.4**
KONT	**Konya--Tatoy**	**2.39**	**28**	*e*Pn		**Pn**	**06 46 13.0**	**+1.4**
DNZL	**Cakiroluk**	**2.41**	**321**	*i* P		**Pn**	**06 46 14.4**	**+2.4**
DNZL				*i* S		**Sn**	**06 46 44.1**	**+2.6**
DNZL	**Cakiroluk**	**2.41**	**321**	*i* P		**Pn**	**06 46 14.4**	**+2.4**
DNZL				*i* S		**Sn**	**06 46 44.1**	**+2.6**
LADK	**Ladik-KONYA**	**2.62**	**25**	*e*PN		**Pn**	**06 46 16.1**	**+1.3**
LADK	**Ladik-KONYA**	**2.62**	**25**	*e*Pn		**Pn**	**06 46 16.1**	**+1.3**
EREN	**Erenkoy**	**2.63**	**96**	*e*PN		**Pn**	**06 46 16.2**	**+1.4**
EREN	**Erenkoy**	**2.63**	**96**	*e*Pn		**Pn**	**06 46 16.2**	**+1.4**
PHNC	**Paralimni**	**2.64**	**107**	P		**Pg**	**06 46 22.8**	**-0.6**
SHUT	**Suhut-Afyon**	**2.74**	**353**	*e*PN		**Pn**	**06 46 17.9**	**+1.5**
SHUT	**Suhut-Afyon**	**2.74**	**353**	*e*Pn		**Pn**	**06 46 18.0**	**+1.5**
KHAL	**Karahalli**	**2.79**	**336**	*i* P		**Pn**	**06 46 18.2**	**+0.9**
KHAL				*i* S		**Sn**	**06 46 51.9**	**+1.0**
KHAL	**Karahalli**	**2.79**	**336**	*i* P		**Pn**	**06 46 18.2**	**+0.9**
KHAL				*i* S		**Sn**	**06 46 51.9**	**+1.0**
BOLV	**Bolvadin**	**2.88**	**360**	*i* P		**Pn**	**06 46 20.4**	**+1.9**
BOLV				*i* S		**Sn**	**06 46 54.3**	**+1.3**
BOLV	**Bolvadin**	**2.88**	**360**	*i* P		**Pn**	**06 46 20.4**	**+1.9**
BOLV				*i* S		**Sn**	**06 46 54.3**	**+1.3**
AYDN	**Tasoluk**	**3.08**	**307**	*i* P		**Pn**	**06 46 22.7**	**+1.6**
AYDN	**Tasoluk**	**3.08**	**307**	*i* P		**Pn**	**06 46 22.7**	**+1.6**
BODT	**Bodrum**	**3.19**	**294**	*e*PN		**Pn**	**06 46 22.7**	**+0.1**
BODT	**Bodrum**	**3.19**	**294**	*e*Pn		**Pn**	**06 46 22.7**	**+0.1**
KULA	**Kula-Manisa**	**3.25**	**326**	*e*PN		**Pn**	**06 46 23.9**	**+0.4**
KULA	**Kula-Manisa**	**3.25**	**326**	*e*Pn		**Pn**	**06 46 23.9**	**+0.4**
MANT	**Manisa**	**3.28**	**325**	*i* P		**Pn**	**06 46 24.3**	**+0.3**
MANT				*i* S		**Sn**	**06 46 58.6**	**-4.3**
MANT	**Manisa**	**3.28**	**325**	*i* P		**Pn**	**06 46 24.3**	**+0.3**
MANT				*i* S		**Sn**	**06 46 58.6**	**-4.3**
GULE	**Gulek**	**3.39**	**64**	*i* P		Pn	06 46 29.6	+4.0
GULE				*i* S		**Sb**	**06 47 13.6**	**-0.5**
GULE	**Gulek**	**3.39**	**64**	*i* P		Pn	06 46 29.6	+4.0
IZM	**Izmir**	**3.91**	**312**	*e*PN		**Pn**	**06 46 33.2**	**+0.6**
IZM	**Izmir**	**3.91**	**312**	*e*Pn		**Pn**	**06 46 33.2**	**+0.6**
YAYL	**Yayladag**	**4.18**	**86**	*i* P		**Pn**	**06 46 36.3**	**0.0**
YAYL				*i* S		**Sn**	**06 47 26.8**	**+1.8**
YAYL	**Yayladag**	**4.18**	**86**	*i* P		**Pn**	**06 46 36.3**	**0.0**
YAYL				*i* S		**Sn**	**06 47 26.8**	**+1.8**
BRTR	**Keskin Array B**	**4.43**	**28**	P		**Pn**	**06 46 40.9**	**+1.1**
	0.6nm,0.3s,baz=217,slow=15,SNR=8.6							
BRTR				S		**Sn**	**06 47 31.8**	**+0.6**
	0.7nm,0.3s,baz=198,slow=26,SNR=5.4							
MMAI	**Mount Meron Ar**	**4.62**	**126**	P		**Pb**	**06 46 53.0**	**-0.7**
	4.5nm,0.3s,baz=317,slow=14,SNR=3.5							
MMAI				S		**Sn**	**06 47 37.1**	**+1.3**
	3.3nm,0.3s,baz=306,slow=25,SNR=2.8							
AYKD	**Aykdinkavak**	**4.96**	**70**	*i* P		**Pn**	**06 46 49.1**	**+2.2**
RSH		**5.38**	**154**	P		**Pn**	**06 46 53.5**	**+0.8**
AMAG	**Maghara**	**5.50**	**159**	P		**Pn**	**06 46 55.9**	**+1.4**
	baz=162							
AMAG	**Maghara**	**5.50**	**159**	P		**Pn**	**06 46 55.9**	**+1.4**
HMAT	**Matruh**	**5.72**	**215**	S		**Sn**	**06 48 01.4**	**-1.5**
	baz=215							
HMAT				AMP			06 48 00.0	
	comp=E,10μm,0.4s,logA/T=4.4,baz=215							
KOT	**Kottamia**	**5.93**	**173**	P		**Pn**	**06 47 02.7**	**+2.4**
	baz=174							
KOT				AMP			06 48 00.0	
	comp=E,30μm,0.3s,logA/T=5.0,baz=174							
KOT				S		**Sn**	**06 48 05.9**	**-2.2**
	baz=174							
KOT	**Kottamia**	**5.93**	**173**	P		**Pn**	**06 47 02.7**	**+2.4**
HHAG	**Hagoal**	**5.94**	**170**	S		**Sn**	**06 48 05.3**	**-3.0**
	baz=172							
HHAG				AMP			06 48 00.0	
	comp=N,40μm,0.5s,logA/T=4.9,baz=172							
HNAT	**Natroun**	**6.19**	**183**	P		**Pn**	**06 47 06.4**	**+2.6**
	baz=184							
HNAT	**Natroun**	**6.19**	**183**	P		**Pn**	**06 47 06.4**	**+2.6**
AKTO	**Aktyubinsk**	**24.37**	**45**	P		**P**	**06 50 49.1**	**-1.3**
	comp=N,0.7nm,0.5s,baz=249,slow=10,SNR=4.0							
FINES	**FINESS Array B**	**25.82**	**355**	P		**P**	**06 51 00.7**	**-2.7**
	comp=N,0.5nm,0.5s,baz=152,slow=12,SNR=4.8							
MKAR	**Makanchi Array**	**39.43**	**58**	P		**P**	**06 53 00.8**	**-1.6**
	comp=N,0.1nm,0.3s,baz=269,slow=7.2,SNR=3.2							

IDC 20 06:51:54.7±1.0, 56.75S×23.63W, h0km, mb4.1/4, mb1 4.1/5, mb1mx3.9/18, mbtmp4.0/5, ML3.9/1, MS3.6/2, Ms1 3.5/2, ms1mx3.0/25, Error ellipse: s-maj=34.6km s-min=21.9km az=62.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**17.32**	**158**	P	Pn	06 55 57.5	-0.2
	0.4nm,0.3s,baz=332,slow=16,SNR=24						
QSPA	**South Pole Qui**	**33.50**	**180**	P	P	06 58 35.6	+0.1
	1.2nm,0.5s,baz=232,slow=2.6,SNR=17						
QSPA				PcP	PcP	07 01 16.0	-0.1
	1.0nm,0.6s,baz=172,slow=3.2,SNR=4.6						
PLCA	**Paso Flores**	**34.06**	**278**	LR	LR	07 10 36.1	
	comp=Z,88nm,18.1s,baz=7.7,slow=33						
CPUP	**Villa Florida**	**38.79**	**307**	P	P	06 59 20.6	-0.2
	1.3nm,0.8s,baz=162,slow=14,SNR=4.8						
CFAA	**Coronel Fontan**	**39.66**	**290**	P	P	06 59 26.9	-1.3
	0.1nm,0.6s,baz=192,slow=9.3,SNR=2.9						
BOSA	**Boshof**	**44.27**	**72**	LR	LR	07 14 17.1	
	comp=Z,57nm,18.4s,baz=166,slow=30						
LPAZ	**La Paz**	**52.41**	**302**	P	P	07 01 10.8	+1.3
	1.7nm,0.6s,baz=158,slow=6.0,SNR=11						
TORD	**Torodi Ar. Bea**	**72.76**	**26**	P	P	07 03 24.6	0.0
	1.6nm,0.7s,baz=202,slow=6.5,SNR=13						
ILAR	**Eielson Array**	**152.07**	**310**	PKPbc	PKPbc	07 11 49.6	-0.7
	0.5nm,0.7s,baz=132,slow=1.3,SNR=7.1						

JMA 20 06:52:42.9±0.3, 43.53N×147.86E, h3km, M3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.55**	**265**	P	Pn	06 53 11.5	+0.1
NEM2				*e*S	Sb	06 53 32.2	0.0
JNK	**Nakash**	**2.28**	**272**	P	Pn	06 53 21.8	+0.3
JNK				*e*S	Sn	06 53 50.4	+0.3
JAK	**Akkeshi**	**2.37**	**258**	P	Pn	06 53 23.1	+0.4
JAK				*e*S	Sn	06 53 52.4	+0.2
JTKR	**Abashiri--Toko**	**2.90**	**280**	P	Pn	06 53 31.0	+1.1
JAR	**Ashorobuto**	**2.99**	**267**	P	Pn	06 53 32.4	+1.2
JAR				*e*S	Sn	06 54 08.9	+1.4
JOB	**Onbets**	**3.01**	**259**	P	Pn	06 53 32.3	+0.9
JOB				*e*S	Sn	06 54 08.7	+0.7
JCH	**Churui**	**3.42**	**256**	*e*S	Sn	06 54 18.6	+0.5
JNBK	**Urakawa-nobuka**	**3.95**	**253**	P	Pn	06 53 45.2	+0.8
JNBK				*e*S	Sn	06 54 32.2	+0.9
JKB	**Kayabe**	**5.29**	**254**	P	Pn	06 54 04.0	+1.2
JKB				*e*S	Sn	06 55 02.8	-1.4
JOT	**Ohata**	**5.48**	**249**	P	Pn	06 54 06.3	+1.0
JOT				*e*S	Sn	06 55 07.1	-1.7

IDC 20 07:20:03.0±1.0, 44.66S×15.74W, h0km, mb4.3/3, mb1 4.3/3, mb1mx3.9/15, mbtmp4.3/3, MS3.8/20, Ms1 3.8/20, ms1mx3.7/28, 1D, Error ellipse: s-maj=40.0km s-min=30.3km az=50.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**30.86**	**79**	LR	LR	07 35 53.3	
	comp=Z,283nm,18.4s,baz=247,slow=31						
PMSA	**Palmer Station**	**33.25**	**216**	LR	LR	07 36 54.8	
	comp=Z,172nm,21.4s,baz=17,slow=30						
BOSA	**Boshof**	**36.16**	**78**	LR	LR	07 39 02.0	
	comp=Z,103nm,19.7s,baz=167,slow=32						
SYO	**Syowa Base**	**36.90**	**150**	*e*P	P	07 27 10.0	-2.8
TSUM	**Tsumeb**	**37.57**	**58**	LR	LR	07 39 04.5	
	comp=Z,143nm,19.7s,baz=159,slow=30						
CPUP	**Villa Florida**	**38.00**	**285**	P	P	07 27 22.6	0.0
	1.8nm,0.7s,baz=101,slow=12,SNR=6.5						
CPUP				LR	LR	07 40 21.2	
	comp=Z,118nm,20.6s,baz=143,slow=32						
PLCA	**Paso Flores**	**39.84**	**256**	LR	LR	07 40 32.2	
	comp=Z,212nm,19.3s,baz=168,slow=31						
CFAA	**Coronel Fontan**	**42.61**	**269**	LR	LR	07 43 39.5	
	comp=Z,20nm,21.8s,baz=125,slow=33						
MAW	**Mawson**	**45.49**	**148**	P	P	07 28 23.5	0.0
	7.3nm,1.0s,baz=292,slow=6.1,SNR=6.2						
DBIC	**Dimbokro**	**52.02**	**14**	LR	LR	07 45 43.4	
	comp=Z,69nm,21.2s,baz=346,slow=30						
LPAZ	**La Paz**	**52.16**	**286**	LR	LR	07 51 21.3	
	comp=Z,153nm,20.4s,baz=237,slow=36						
VNDA	**Vanda**	**58.09**	**179**	LR	LR	07 52 54.5	
	comp=Z,81nm,19.3s,baz=168,slow=34						
TORD	**Torodi Ar. Bea**	**59.67**	**20**	P	P	07 30 09.0	0.0
	3.2nm,1.0s,baz=196,slow=5.2,SNR=11						
TORD				LR	LR	07 51 33.5	
	comp=Z,94nm,20.1s,baz=160,slow=32						
KMBO	**Kilima Mbogo**	**63.69**	**63**	LR	LR	07 55 14.2	
	comp=Z,147nm,19.6s,baz=97,slow=33						
ROSC	**El Rosal**	**71.84**	**296**	LR	LR	08 01 46.7	
	comp=Z,69nm,18.5s,baz=329,slow=35						
MDT	**Midelt**	**77.77**	**10**	LR	LR	08 01 06.1	
	comp=Z,47nm,19.2s,baz=67,slow=32						
KEST	**Kesra**	**83.19**	**20**	LR	LR	08 04 01.1	
	comp=Z,36nm,19.4s,baz=246,slow=32						
EIL	**Elat**	**87.22**	**42**	LR	LR	08 09 11.5	
	comp=Z,101nm,18.2s,baz=96,slow=34						
MMAI	**Mount Meron Ar**	**90.21**	**41**	LR	LR	08 11 14.5	
	comp=Z,60nm,18.2s,baz=180,slow=34						
ASF	**Jabal al Asfar**	**90.22**	**42**	LR	LR	08 11 33.8	
	comp=Z,63nm,18.4s,baz=30,slow=34						
BRTR	**Keskin Array B**	**95.02**	**36**	LR	LR	08 15 11.4	
	comp=Z,34nm,19.7s,baz=106,slow=35						
GERES	**GERESS Array B**	**96.62**	**19**	LR	LR	08 16 39.1	
	comp=Z,38nm,18.9s,baz=88,slow=35						
KURBB	**Kurchatov Arra**	**125.02**	**51**	PKP	PKPdf	07 39 04.0	-0.2
	0.4nm,0.6s,baz=237,slow=2.2,SNR=4.3						
YKA	**Yellowknife Ar**	**132.18**	**322**	PKP	PKPdf	07 39 15.5	-2.0
	0.3nm,0.7s,baz=110,slow=2.1,SNR=4.9						
ILAR	**Eielson Array**	**146.52**	**324**	PKPbc	PKPbc	07 39 44.8	-0.2
	4.2nm,1.0s,baz=80,slow=1.3,SNR=32						

IDC 20 07:23:30.9±1.6, 21.41S×71.89W, h0km, mb3.8/3, mb1 4.0/6, mb1mx3.8/19, mbtmp3.9/6, ML3.9/3, Error ellipse: s-maj=36.5km s-min=30.1km az=49.0
ISCJB 20 07:23:32.7±2.3, 21.34S±0.05×71.75W±0.06, h25km±20km, mb3.7/3, Error ellipse: s-maj=10.2km s-min=8.8km az=164.1
GUC 20 07:23:34.1±1.0, 21.36S×71.52W, h31km±22km, ML3.9
ISC 20 07:23:32.9±4.2, 21.31S±0.07×71.73W±0.09, h15km±29km, n15, σ0 91/19, mb3.8/3, 6C-1D, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberstone**	**2.01**	**60**	⇑*i* P	**Pn**	**07 24 06.4**	**-0.1**
HMBC				*i* S	**Sn**	**07 24 30.5**	**-0.9**
HMBC				AML	AML	07 24 31.7	
	comp=N,2μm,0.6s						
PB01	**Plate Boundary**	**2.11**	**83**	⇑*i* P	**Pn**	**07 24 08.1**	**+0.3**
PB01				*i* S	**Sn**	**07 24 33.0**	**-0.9**
PB01				AML	AML	07 24 34.5	
	comp=N,1μm,0.5s						
PSGC	**Pisagua**	**2.27**	**42**	⇑*i* P	**Pn**	**07 24 09.9**	**-0.2**
PSGC				*i* S	**Sn**	**07 24 36.9**	**-1.1**
PSGC				AML	AML	07 24 38.6	
	comp=E,330nm,0.4s						
PB04	**Plate Boundary**	**2.29**	**115**	⇑*i* P	Pn	07 24 02.1	-8.2
PB04				*i* S	Sn	07 24 22.8	-16
PB04				AML	AML	07 24 24.0	
	comp=E,3μm,0.5s						
PB09	**Plate Boundary**	**2.37**	**102**	⇑*i* P	**Pn**	**07 24 12.1**	**+0.7**
PB09				*i* S	**Sn**	**07 24 39.9**	**-0.6**
PB09				AML	AML	07 24 42.3	
	comp=E,3μm,0.4s						
LVC	**Limon Verde**	**2.92**	**117**	⇑*i* P	**Pn**	**07 24 19.6**	**+0.4**
LVC				*i* S	**Sn**	**07 24 52.9**	**-1.4**
MNMC	**Minimini**	**2.95**	**43**	⇓*i* P	**Pn**	**07 24 20.4**	**+0.8**
MNMC				*i* S	**Sn**	**07 24 55.0**	**+0.1**
MNMC				AML	AML	07 24 59.6	
	comp=N,762nm,0.4s						
LPAZ	**La Paz**	**6.05**	**35**	Pn	**Pn**	07 25 06.3	+3.9
	comp=N,0.7nm,0.3s,baz=212,slow=10,SNR=26						
NNA	**Nana**	**10.48**	**331**	Pn	**Pn**	**07 26 02.4**	**-0.4**
	comp=N,1.6nm,0.3s,baz=143,slow=13,SNR=3.1						
CFAA	**Coronel Fontan**	**10.72**	**164**	Pn	**Pn**	**07 26 05.5**	**-0.5**
	comp=N,0.0nm,0.3s,baz=356,slow=14,SNR=4.4						
SIV	**San Ignacio**	**11.40**	**64**	Pn	**Pn**	**07 26 15.5**	**+0.1**
	comp=N,0.8nm,0.3s,baz=259,slow=12,SNR=14						
SIV				Sn	Sn	07 28 39.3	+17
BDFB	**Brasilia**	**23.18**	**80**	P	**P**	**07 28 41.6**	**+2.2**
	comp=N,1.3nm,0.5s,baz=262,slow=13,SNR=3.5						
TORD	**Torodi Ar. Bea**	**79.78**	**72**	P	**P**	**07 35 41.9**	**+0.8**
	comp=N,1.7nm,0.8s,baz=249,slow=5.0,SNR=11						
YKA	**Yellowknife Ar**	**90.17**	**342**	P	**P**	**07 36 32.3**	**+0.2**
	comp=N,0.1nm,0.4s,baz=145,slow=4.1,SNR=3.8						
MKAR	**Makanchi Array**	**146.97**	**34**	PKPbc	**PKPab**	**07 43 16.0**	**-0.5**
	comp=N,1.2nm,0.8s,baz=319,slow=3.9,SNR=6.2						

IDC 20 07:35:20.1±3.1, 15.75S×173.95W, h124km±21km, mb3.2/4, mb1 3.6/5, mb1mx3.3/20, mbtmp3.3/5, Error ellipse: s-maj=144.7km s-min=20.4km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.79**	**49**	P	Pn	07 36 04.8	+0.9
	17nm,0.3s,baz=71,slow=3.2,SNR=20						
AFI				S	Sn	07 36 37.8	+0.2
	57nm,0.3s,baz=27,slow=23,SNR=16						
WRA	**Warramunga Arr**	**49.25**	**257**	P	P	07 43 56.4	-0.1
	0.1nm,0.3s,baz=95,slow=6.1,SNR=4.5						
ASAR	**Alice Springs**	**49.50**	**252**	P	P	07 43 58.1	-0.3
	1.0nm,0.5s,baz=87,slow=7.7,SNR=27						
PDAR	**Pinedale Array**	**82.88**	**42**	P	P	07 47 31.4	+0.2
	0.7nm,0.8s,baz=188,slow=4.0,SNR=5.0						
ILAR	**Eielson Array**	**82.89**	**11**	P	P	07 47 30.6	0.0
	0.2nm,0.5s,baz=235,slow=6.4,SNR=9.4						

CSEM 20 07:36:13.3, 42.99N×36.37E, h33km, MD3.6, After ISK
ISK 20 07:36:13.3, 42.99N×36.37E, h33km, MD3.6, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KVT	**Kavak**	**1.92**	**187**	*e*PN	Pn	07 36 44.6	+0.8
KVT				*e*SN	Sn	07 37 07.3	+0.4
KVT	**Kavak**	**1.92**	**187**	*e*Pn	Pn	07 36 44.6	+0.8
KVT				*e*Sn	Sn	07 37 07.3	+0.4
ESPY	**Espiye-Giresun**	**2.71**	**139**	*e*PN	Pn	07 36 55.9	+1.2
ESPY	**Espiye-Giresun**	**2.71**	**139**	*e*Pn	Pn	07 36 55.9	+1.3
GUMT	**Gumushane**	**3.43**	**136**	*e*PN	Pn	07 37 06.2	+1.5
GUMT	**Gumushane**	**3.43**	**136**	*e*Pn	Pn	07 37 06.2	+1.5
BAYT	**Ayd¨--ntepe-Bay**	**3.83**	**131**	*e*PN	Pn	07 37 12.0	+1.8
BAYT	**Ayd¨--ntepe-Bay**	**3.83**	**131**	*e*Pn	Pn	07 37 12.0	+1.8
BCA	**Borcka**	**4.19**	**110**	*e*PN	Pn	07 37 16.6	+1.6
BCA	**Borcka**	**4.19**	**110**	*e*Pn	Pn	07 37 16.6	+1.6

ISCJB 20 07:50:07.6±0.5, 31.31N±0.06×130.4E±0.1, h171km±3km, mb3.5/6, Error ellipse: s-maj=17.3km s-min=9.2km az=179.1
IDC 20 07:50:09.1±1.4, 31.35N×130.19E, h170km±14km, mb3.2/6, mb1 3.4/7, mb1mx3.1/26, mbtmp3.2/7, Error ellipse: s-maj=31.7km s-min=16.1km az=83.0
JMA 20 07:50:09.4±0.1, 31.34N×130.43E, h163km±1km, M3.3
ISC 20 07:50:08.7±0.8, 31.31N±0.06×130.34E±0.10, h166km±6km, n16, σ0 91/23, mb3.6/6, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSU	**Suzuyama**	**0.22**	**25**	P	**Pn**	**07 50 31.3**	**+0.3**
JSU				*e*S	**Sn**	**07 50 48.1**	**-0.1**
JTSR	**Tashiro 2**	**0.51**	**106**	P	**Pn**	**07 50 32.1**	**+0.1**
JTSR				*e*S	**Sn**	**07 50 49.4**	**-0.4**
JSJ	**Shimokoshiki**	**0.65**	**305**	P	**Pn**	**07 50 33.2**	**+0.6**
JSJ				S	**Sn**	**07 50 51.5**	**+0.4**
JTN	**Tanegashima 3**	**0.85**	**140**	P	**Pn**	**07 50 34.2**	**+0.3**
JTN				*e*S	**Sn**	**07 50 53.0**	**-0.2**
JTZ	**Takazaki**	**0.87**	**47**	P	**Pn**	**07 50 34.0**	**0.0**
JTZ				*e*S	**Sn**	**07 50 52.3**	**-1.2**
JIU2	**Izumi 2**	**1.30**	**18**	P	**Pn**	**07 50 37.6**	**+0.1**
JIU2				*e*S	**Sn**	**07 50 58.7**	**-1.2**
JNN	**Nakanoshima**	**1.52**	**196**	P	**Pn**	**07 50 40.5**	**+0.8**
JNU	**Nakatsue**	**1.87**	**14**	P	**Pn**	**07 50 43.3**	**-0.1**
	5.0nm,0.3s,baz=199,slow=3.6,SNR=74						
JNU				S	**Sn**	**07 51 11.3**	**+1.1**
	3.3nm,0.3s,baz=246,slow=23,SNR=5.6						
KSRS	**Korea Array**	**6.45**	**343**	P	**Pn**	**07 51 41.5**	**+0.1**
	0.2nm,0.3s,baz=172,slow=13,SNR=7.4						
MJAR	**Matsushiro Arr**	**8.36**	**49**	P	**Pn**	**07 52 09.2**	**+2.5**
	0.6nm,0.3s,baz=243,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**51.10**	**175**	P	**P**	**07 58 54.1**	**-0.3**
	0.5nm,0.4s,baz=354,slow=7.9,SNR=11						
ASAR	**Alice Springs**	**54.77**	**176**	P	**P**	**07 59 22.6**	**+1.4**
	0.7nm,0.6s,baz=8.7,slow=13,SNR=11						
ILAR	**Eielson Array**	**59.11**	**30**	P	**P**	**07 59 51.4**	**+0.2**
	0.1nm,0.5s,baz=269,slow=4.5,SNR=2.2						
STKA	**Stephens Creek**	**63.74**	**169**	P	**P**	**08 00 22.4**	**-0.1**
	0.7nm,0.6s,baz=343,slow=11,SNR=3.8						
FINES	**FINESS Array B**	**69.39**	**330**	P	**P**	**08 00 56.7**	**-1.3**
	0.8nm,0.6s,baz=56,slow=7.1,SNR=4.2						
BRTR	**Keskin Array B**	**75.40**	**308**	P	**P**	**08 01 34.2**	**0.0**
	1.2nm,0.9s,baz=55,slow=6.5,SNR=4.6						

DDA 20 08:30:28.9, 36.48N×30.96E, h40km, MD3.3
ISK 20 08:30:29.0, 36.48N×31.00E, h29km, MD3.4
CSEM 20 08:30:30.6±0.1, 36.50N×30.97E, h40km, Mw2.9, Error ellipse: s-maj=6.6km s-min=3.0km az=31.0
NIC 20 08:30:32.6±0.4, 36.00N×30.88E, h12km, ML3.5, MW2.9
ISC 20 08:30:30.2±1.1, 36.47N±0.04×30.98E±0.03, h29km±11km, n56, σ1 915/69, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTB	**Antalya**	**0.50**	**329**	*e*PG	**Pn**	**08 30 40.8**	**-0.6**
ANTB				*e*SG	**Sn**	**08 30 48.2**	**-1.0**
ANTB	**Antalya**	**0.50**	**329**	*e*Pg	**Pn**	**08 30 40.8**	**-0.6**
ANTB				*e*Sg	**Sn**	**08 30 48.2**	**-1.0**
KORT	**Korkueli**	**0.73**	**316**	*i* P	**Pb**	**08 30 43.5**	**-1.0**
KORT				*i* S	**Sn**	**08 30 56.5**	**+1.4**
KORT	**Korkueli**	**0.73**	**316**	*i* P	**Pb**	**08 30 43.5**	**-1.0**
KORT				*i* S	**Sn**	**08 30 56.5**	**+1.4**
ELL	**Elmali**	**0.91**	**288**	*e*PG	**Pb**	**08 30 46.8**	**-0.6**
ELL				*e*SG	**Sb**	**08 30 59.5**	**+0.3**
ELL	**Elmali**	**0.91**	**288**	*e*Pg	**Pb**	**08 30 46.8**	**-0.6**
ELL				*e*Sg	**Sb**	**08 30 59.5**	**+0.3**
GAZI	**Gazipasa**	**

TNTI **Ternate** 3.35 108 P Pn 08 42 25.5 -1.6
GAMI **Galela, Maluku** 3.60 90 P Pn 08 42 27.6 -2.1
LBMI **Labuha** 4.12 126 P Pn 08 42 33.5 -1.7
LBMI S S 08 43 25.3 -4.9
SKSI **Soroako, Sulaw** 5.17 213 P Pn 08 42 45.5 -1.5
821nm,0.8s,8µm2.6nm
CTBH **Cotabato--PC H** 5.37 1⇓ *i*P Pn 08 42 48.2 -0.9
DMPH **Davao City--Mi** 5.39 14⇓ *e*P Pn 08 42 49.5 0.0
DMPH *e*S S 08 43 52.7 -3.5
DAV **Davao City (W)** 5.40 15 *e*Pn Pn 08 42 48.8 -0.7
DAV S S 08 43 54.3 -2.1
DAV *e*S S 08 43 56.8 +0.4
DAV **Davao City (W)** 5.40 15 P Pn 08 42 48.9 -0.6
80nm,0.3s,baz=192,slow=7.2,SNR=8.3
DAV S S 08 43 54.3 -2.1
56nm,0.3s,baz=90,slow=20,SNR=5.2
NLAI **Namlea** 5.81 150 P Pn 08 42 54.0 -0.3
132nm,0.6s,11µm3.1nm
PAGZ **Pagadian** 6.04 352 *e*P Pn 08 42 56.7 -0.3
BUKP **Musuan** 6.08 8 *e*P Pn 08 42 57.1 -0.4
TTSI **Tana Toraja** 6.51 222 P Pn 08 43 01.5 -1.0
612nm,0.9s,6µm1.9nm
MYLDM **Lahad Datu** 6.58 301 P Pn 08 43 03.7 +0.3
CGP **Cagayan de Oro** 6.61 4⇓ *e*P Pn 08 43 04.0 +0.2
TSM **Tawau** 6.76 291 P Pn 08 43 04.6 -1.0
AAI **Ambon** 6.78 144 P Pn 08 43 07.6 +1.8
93nm,0.8s,4µm0.8nm
SPSI **Sidrap Palu** 7.24 218 P Pn 08 43 10.1 -1.2
239nm,0.8s,2µm0.7nm
SMKI **Samarinda** 7.33 252 P Pn 08 43 12.7 +0.4
1µm,1.0s,9µm3.2nm
BBSI **Bau Bau** 7.43 192 P Pn 08 43 13.1 -0.5
136nm,0.9s,3µm0.4nm
SDKM **Sandakan** 7.94 299 P Pn 08 43 20.0 +0.3
KAPI **Kappang** 8.10 213 *e*Pn Pn 08 43 19.6 -2.1
KAPI **Kappang** 8.10 213 P Pn 08 43 19.7 -2.0
143nm,1.2s,1µm
KAPI **Kappang** 8.10 213 P Pn 08 43 19.6 -2.1
9.0nm,0.3s,baz=33,slow=9.4,SNR=28
BKSI **Bulukumba** 8.17 210 P Pn 08 43 21.6 -0.9
133nm,1.1s,1µm
BSSI **Bau Bau, Buton** 8.72 205 P Pn 08 43 28.4 -0.8
121nm,0.7s,1µm
GUIM **Jordan** 8.89 350 *e*P Pn 08 43 31.0 -0.3
KKM **Kota Kinabalu** 8.99 298 *e*Pn Pn 08 43 31.5 -1.0
KKM **Kota Kinabalu** 8.99 298 P Pn 08 43 31.8 -0.7
KKM **Kota Kinabalu** 8.99 298 P Pn 08 43 32.1 -0.4
baz=8.9,SNR=5.4
FAKI **Fak Fak** 9.34 120 P Pn 08 43 36.0 -0.7
70nm,0.8s
FAKI **Fak Fak** 9.34 120 P Pn 08 43 36.0 -0.7
baz=9.4,SNR=7.5
RCP **Roxas** 9.78 352 *e*P Pn 08 43 42.0 -0.1
MMRI **Maumere** 10.56 191 P P 08 43 55.2 +1.4
158nm,1.0s,2µm
CNP **Catarman** 10.63 3 *e*P Pn 08 43 52.7 +0.4
BBKI **Banjar Baru** 10.71 241 P Pn 08 43 53.1 -0.2
104nm,1.2s,3µm
PALU **Palau** 11.63 62 P Pn 08 44 04.5 0.0
baz=12,SNR=6.9
PVCP **Virac** 11.70 360 *e*P P 08 44 06.5 +0.2
SBUM **Sibu** 11.97 273 P P 08 44 09.4 0.0
WBSI **Waikabubak, Su** 12.34 203 P P 08 44 14.6 +1.0
120nm,0.8s
STKI **Sintang** 12.82 262 P P 08 44 20.4 +1.5
81nm,1.0s,14µm
KHKI **Kahang-Kahang** 13.24 220 P Pn 08 44 24.3 +0.5
47nm,1.2s
SRBI **Singaraja** 13.29 222 P Pn 08 44 25.0 +0.6
KSM **Kuching** 13.87 269 *e*Pn P 08 44 29.9 -0.6
KSM **Kuching** 13.87 269 P Pn 08 44 32.2 +1.0
KSM **Kuching** 13.87 269 P Pn 08 44 32.3 +1.0
baz=14,SNR=6.6
KSM S S 08 47 06.2 +3.1
baz=14,SNR=4.1
SJI **Sawahan** 15.60 232 P P 08 44 49.6 +0.1
46nm,0.5s,18µm
MTN **Manton Dam** 16.12 155 P P 08 44 55.4 +0.3
baz=16,SNR=14
MTN S S 08 47 36.8 -11
baz=16,SNR=4.9
KDU **Kakadu** 16.60 150 P P 08 45 00.5 +0.3
baz=17,SNR=183
JAY **Jayapura** 17.07 105 P P 08 45 06.8 +1.3
baz=17,SNR=3.7
TPI **Tanjungpandan** 17.14 255 P P 08 45 06.7 +0.6
23nm,1.0s,254nm
KNRA **Kununurra** 17.96 166 P P 08 45 14.6 -0.4
baz=18,SNR=112
PPBI **Pangkal Pinang** 18.47 258 P P 08 45 20.5 +0.1
12nm,0.6s
LEM **Lembang** 18.63 242 P P 08 45 25.1 +2.8
109nm,0.8s
FITZ **Fitzroy Crossi** 19.85 176 *e*P P 08 45 33.4 -1.5
94nm,0.9s
FITZ S S 08 48 57.3 -2.4
FITZ ScP ScP 08 52 44.5 +1.4
FITZ **Fitzroy Crossi** 19.85 176 P P 08 45 33.4 -1.5
40nm,0.3s,baz=8.0,slow=11,SNR=123
FITZ S S 08 48 57.3 -2.4
baz=143,slow=18,SNR=4.9
FITZ ScP ScP 08 52 44.5 +1.4
0.5nm,0.3s,baz=167,slow=1.4,SNR=5.4
FITZ **Fitzroy Crossi** 19.85 176 P P 08 45 33.4 -1.5
baz=20,SNR=279
FITZ S S 08 48 57.8 -1.9
baz=20,SNR=6.6
CGJI **Cibinong** 20.27 245 P P 08 45 40.3 +1.0
142nm,0.9s,2µm
MYKOM **Kota Tinggi** 20.32 270 P P 08 45 39.7 -0.1
KGM **Kluang** 20.85 271 P P 08 45 45.9 +1.0
KASI **Kota Agung** 20.97 250 P P 08 45 47.2 +1.2
84nm,0.8s
TWG **Pinlang** 21.09 352 *e*P P 08 45 45.4 -1.7
282nm,0.5s
KTGM **Kuala Trenggan** 21.29 280 P P 08 45 49.9 +0.9
YULB **Yu-li** 21.63 353 *e*P P 08 45 48.5 -3.3
58nm,0.6s
TPUB **Ta-pu** 21.63 351 *e*P P 08 45 50.2 -1.7
233nm,0.8s
TPUB *e*S S 08 49 35.2 +6.4
SSLB **Suanglung** 22.06 352 *e*P P 08 45 55.4 -0.4
82nm,0.7s
SSLB *e*S S 08 49 41.0 +5.3
QIZ **Qiongzhong** 22.13 322 P P 08 45 56.3 -0.2
QIZ sP sP 08 47 26.6 -2.3
QIZ S S 08 49 38.0 +1.0
NACB **Ninganchiao** 22.36 354 *e*P P 08 45 58.6 +0.1
32nm,0.9s
FRIM **Kepong** 22.58 274 P P 08 46 01.4 +0.8
YHNB **Yeheng** 22.88 353 *e*P P 08 46 02.8 -0.5
68nm,0.8s
TATO **Taipei** 23.17 354 *e*P P 08 46 04.4 -1.4
111nm,1.1s
MBWA **Marble Bar** 23.25 191 *e*P P 08 46 06.1 -0.5
45nm,0.8s
IPM **Ipoh** 23.27 277 P P 08 46 07.5 +0.6
WRAB **Tennant Creek** 23.81 156 *e*P P 08 46 11.6 -0.2
131nm,0.8s
WRA **Warramunga Arr** 23.81 156 P P 08 46 11.3 -0.4
WRA PcP PcP 08 49 45.3 -0.2
WRA S S 08 50 01.9 -1.8
WRA ScP ScP 08 52 54.6 +1.4
WRA **Warramunga Arr** 23.81 156 P P 08 46 11.3 -0.4
46nm,0.3s,baz=330,slow=11,SNR=620
WRA PcP PcP 08 49 45.3 -0.2
2.1nm,0.7s,baz=331,slow=2.5,SNR=3.0
WRA S S 08 50 01.9 -1.8
2.8nm,0.7s,baz=337,slow=16,SNR=4.8
WRA ScP ScP 08 52 54.6 +1.4
2.5nm,0.7s,baz=320,slow=3.7,SNR=4.6
COEN **Coen** 24.50 130 P P 08 46 17.8 -0.2
baz=25,SNR=36
JOW **Kunigami** 25.18 9 *e*P P 08 46 23.9 -0.1
93nm,1.3s
PSI **Prapat** 25.25 273 P P 08 46 24.8 -0.2
baz=25,SNR=3.2
PMG **Port Moresby** 25.46 116 P P 08 46 26.9 +0.2
PMG **Port Moresby** 25.46 116 P P 08 46 26.9 +0.2
17nm,0.8s,baz=290,slow=6.6,SNR=9.9
QIS **Mount Isa** 26.89 147 P P 08 46 40.0 +0.7
baz=27,SNR=15
AS31 **Alice Springs** 27.04 160 *e*P P 08 46 40.6 0.0
ASAR **Alice Springs** 27.04 160 P P 08 46 40.9 +0.2
ASAR PcP PcP 08 49 52.6 -0.3
ASAR ScP ScP 08 53 03.4 +0.9
ASAR **Alice Springs** 27.04 160 P P 08 46 40.9 +0.2
24nm,0.5s,baz=339,slow=7.3,SNR=522
ASAR PcP PcP 08 49 52.6 -0.3
3.7nm,0.7s,baz=358,slow=3.9,SNR=4.3
ASAR ScP ScP 08 53 03.4 +0.9
0.6nm,0.5s,baz=349,slow=2.9,SNR=4.2
MTSU **Mount Surprise** 28.04 136 P P 08 46 50.3 +0.8
baz=28,SNR=23
MEEK **Meekatharra** 28.80 190 P P 08 46 55.9 -0.2
baz=29,SNR=62
GYA **Guiyang** 29.73 327 P P 08 47 05.8 +1.4
GYA pP pP 08 48 05.4 +0.3
GYA PP PP 08 48 19.0 -0.2
GYA sP sP 08 48 41.3 -0.9
GYA PcP PcP 08 50 01.9 +2.2
GYA S S 08 51 37.8 +1.0
GYA ScP ScP 08 53 11.0 0.0
GYA PcS PcS 08 53 42.8 -0.8
GYA ScS ScS 08 57 06.3 -0.6
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.9s
CMAR **Chiang Mai Arr** 29.76 305 P P 08 47 04.6 -0.1
CMAR ScP ScP 08 53 12.3 +1.2
CMAR **Chiang Mai Arr** 29.76 305 P P 08 47 04.6 -0.1
comp=Z,0.8nm,0.3s,baz=140,slow=6.6,SNR=4.2
CMAR ScP ScP 08 53 12.3 +1.2
comp=Z,2.3nm,0.7s,baz=149,slow=2.5,SNR=13
WHN **Wuhan** 30.05 343 P P 08 47 08.0 +1.0
NJ2 **Nanjing** 30.49 351 *e*P P 08 47 11.1 +0.3
NJ2 pP pP 08 48 16.5 +4.8
NJ2 S S 08 51 52.5 +4.3
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,70nm,7.2s
NJ2 LR LR
comp=N,110nm,11.0s
NJ2 LR LR
comp=E,100nm,11.2s
NJ2 LR LR
comp=Z,100nm,10.8s
CTA **Charters Tower** 30.70 136 P P 08 47 13.7 +0.8
CTA **Charters Tower** 30.70 136 P P 08 47 13.7 +0.8
comp=Z,7.6nm,0.8s,baz=321,slow=11,SNR=9.7
CTAO **Charters Tower** 30.70 136 *e*P P 08 47 13.6 +0.6
comp=Z,29nm,1.4s
KMI **Kunming** 31.06 320 P P 08 47 16.8 +0.6
KMI pmax pmax
comp=Z,9.0nm,1.2s
ENH **Enshi** 31.55 335 *e*P P 08 47 19.7 -0.5
comp=Z,27nm,0.6s
MORW **Morawa** 31.69 194 P P 08 47 21.0 -0.3
baz=32,SNR=40
JNU **Nakatsue** 31.77 11 *e*P P 08 47 20.8 -1.2
comp=Z,9.4nm,0.8s
JNU **Nakatsue** 31.77 11 P P 08 47 21.4 -0.7
comp=Z,26nm,0.8s,baz=179,slow=4.9,SNR=23
FORT **Forrest** 32.63 174 *e*P P 08 47 29.3 -0.1
comp=Z,174nm,0.7s
FORT **Forrest** 32.63 174 P P 08 47 29.6 +0.2
baz=33,SNR=33
BLDU **Ballidu** 33.03 192 P P 08 47 32.6 -0.4
baz=33,SNR=91
KMBL **Kambalda** 33.08 184 P P 08 47 33.3 -0.1
baz=33,SNR=33
KLBR **Kellerberrin** 33.78 190 P P 08 47 39.1 -0.2
baz=34,SNR=57
QLP **Quilpie** 34.23 147 P P 08 47 44.2 +0.9
baz=34,SNR=8.4
CD2 **Chengdu** 34.80 328 P P 08 47 48.8 +0.7
CD2 pP pP 08 48 50.5 +0.5
CD2 PP PnPn 08 49 19.4 +1.2
CD2 sP sP 08 49 25.8 -1.0
CD2 PcP PcP 08 50 14.6 +1.0
CD2 S S 08 52 56.5 +1.7
CD2 PcS PcS 08 54 00.6 -0.2
CD2 sS sS 08 54 45.1 -1.7
CD2 SS SS 08 55 36.5 -5.3
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,110nm,5.8s
XAN **Xi'an** 35.09 338 P P 08 47 49.3 -1.2
XAN pP pP 08 48 51.5 -1.0
XAN S S 08 52 57.1 -2.0
XAN sS sS 08 54 45.3 -6.0
XAN pmax pmax
comp=Z,7.0nm,0.7s
XAN pmax pmax
comp=Z,27nm,7.9s
NWAO **Narrogin (SRO)** 35.18 190 P P 08 47 51.1 -0.2
NWAO **Narrogin (SRO)** 35.18 190 P P 08 47 51.1 -0.2
comp=Z,15nm,0.4s,baz=28,slow=7.6,SNR=45
KSAR **Wonju Array Be** 35.61 5 P P 08 47 54.6 -0.3
KSAR ScP ScP 08 53 31.9 +0.9
KSRS **Korea Array** 35.63 5 P P 08 47 54.6 -0.4
comp=Z,7.3nm,0.6s,baz=179,slow=9.7,SNR=41
KSRS ScP ScP 08 53 31.9 +0.9
comp=Z,1.1nm,0.5s,baz=179,slow=3.4,SNR=7.3
BBOO **Buckleboo** 36.23 163 *e*P P 08 48 00.3 +0.2
comp=Z,264nm,0.8s
BBOO **Buckleboo** 36.23 163 P P 08 48 00.4 +0.2
baz=36,SNR=85
RMQ **Roma** 36.81 142 P P 08 48 05.3 +0.2
baz=37,SNR=7.1
RKGY **Rocky Gully** 36.86 190 P P 08 48 06.5 +1.0
baz=37,SNR=22
MAJO **Matsushiro** 36.91 19 *e*P P 08 48 04.7 -1.1
comp=Z,66nm,0.9s
MAT **Matsushiro** 36.91 19 P P 08 48 04.5 -1.3
MAT S S 08 53 26.2 -0.3
MJAR **Matsushiro Arr** 36.91 19 P P 08 48 04.8 -1.0
MJAR ScP ScP 08 53 36.6 +0.7
MJAR **Matsushiro Arr** 36.91 19 P P 08 48 04.8 -1.0
comp=Z,47nm,0.7s,baz=196,slow=9.7,SNR=152
MJAR ScP ScP 08 53 36.6 +0.7
comp=Z,1.5nm,0.4s,baz=206,slow=5.3,SNR=8.6
STKA **Stephens Creek** 37.36 155 *e*P P 08 48 10.6 +0.9
comp=Z,16nm,0.9s
STKA *e*PP PP 08 49 38.7 -4.1
STKA ScP ScP 08 53 38.8 +1.1
STKA **Stephens Creek** 37.36 155 P P 08 48 10.5 +0.9
comp=Z,36nm,0.4s,baz=327,slow=8.4,SNR=229
STKA ScP ScP 08 53 38.8 +1.1
comp=Z,7.9nm,1.1s,baz=101,slow=3.9,SNR=4.4
STKA **Stephens Creek** 37.36 155 P P 08 48 10.7 +1.0
baz=38,SNR=150
EIDS **Eidsvold** 37.54 138 *e*P P 08 48 11.6 +0.4
comp=Z,26nm,1.0s
EIDS **Eidsvold** 37.54 138 P P 08 48 11.2 0.0
baz=38,SNR=9.6
BJI **Beijing** 38.73 350 P P 08 48 21.3 +0.4
BJI S S 08 53 55.4 +1.7
BJI pmax pmax
comp=Z,42nm,0.9s
BJI pmax pmax
comp=Z,94nm,3.4s
LZH **Lanzhou** 38.96 333 P P 08 48 24.1 +1.1
LZH pP pP 08 49 30.3 +4.2
LZH sP sP 08 50 01.0 -1.6
LZH S S 08 53 57.0 -0.5
LZH SS SS 08 56 58.0 -6.5
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.0s
CMSA **Cobar Meteorol** 38.96 150 P P 08 48 24.6 +1.7
baz=39,SNR=179
HHC **Hu-ho-hao-te** 40.50 345 *e*P P 08 48 36.8 +1.4
HHC pP pP 08 49 38.3 -0.8
HHC sP sP 08 50 15.0 -0.4
HHC PP PP 08 50 19.8 +3.3
HHC S S 08 54 22.4 +2.4
HHC sS sS 08 56 15.4 +1.0
HHC SS SS 08 57 30.3 -4.0
HHC ScS ScS 08 58 03.6 -1.6
HHC pmax pmax
comp=Z,29nm,0.7s
HHC pmax pmax
comp=Z,150nm,5.1s
ARMA **Armidale** 41.38 143 *e*P P 08 48 44.1 +1.3
comp=Z,43nm,1.0s
ARMA **Armidale** 41.38 143 P P 08 48 45.2 +2.5
baz=42,SNR=16
ARPS **Mount Arapiles** 41.76 159 P P 08 48 46.9 +1.3
baz=42,SNR=90
CN2 **Changchun** 41.82 1 *e*P P 08 48 46.1 +0.2
LSA **Lhasa** 41.87 315 *e*P P 08 48 47.7 +0.5
comp=Z,12nm,0.6s
YNG **Young** 42.53 150 P P 08 48 53.8 +2.0
baz=43,SNR=61
USRK **Ussuriysk Arra** 42.77 8 P P 08 48 53.4 -0.1
comp=Z,24nm,0.4s,baz=194,slow=7.2,SNR=117
USRK ScP ScP 08 53 59.4 +0.9
comp=Z,0.8nm,0.4s,baz=240,slow=3.8,SNR=6.2
MDJ **Mudanjiang** 42.89 6 *e*P P 08 48 53.6 -0.9
comp=Z,27nm,0.6s
MGCD **Mangrove Creek** 43.12 146 P P 08 48 59.4 +2.8
baz=43,SNR=33
GTA **Gaotai** 43.51 332 *e*P P 08 48 59.6 -0.1
GTA pP pP 08 50 07.3 +3.1
GTA sP sP 08 50 41.4 +1.1
GTA S S 08 55 04.9 +0.9
GTA sS sS 08 57 00.6 +0.9
GTA SS ScS 08 58 21.6 -2.3
GTA ScS SS 08 58 22.6 -6.3
GTA pmax pmax
comp=Z,21nm,1.0s
GTA pmax pmax
comp=Z,42nm,6.4s
GTA LR LR
comp=N,230nm,20.9s
GTA LR LR
comp=E,290nm,19.2s
GTA LR LR
comp=Z,93nm,13.5s
CAN **Canberra** 43.64 150 *e*P P 08 49 02.6 +1.9
comp=Z,82nm,0.6s
CNB **Canberra Magne** 43.81 150 P P 08 49 04.1 +2.1
baz=44,SNR=42
TOO **Toolangi** 43.88 155 P P 08 49 04.9 +2.4
baz=44,SNR=44
MILA **Mila** 45.09 152 P P 08 49 14.0 +2.0
baz=45,SNR=5.9
ASAJ **Asahikawa** 45.18 19 *e*P P 08 49 13.1 +0.6
HIA **Hailar** 47.42 356 *e*P P 08 49 29.2 -0.7
comp=Z,32nm,0.6s
ULN **Ulaanbaatar** 48.20 345 P P 08 49 35.4 -0.6
SONM **Songino Array** 48.35 344 P P 08 49 36.1 -1.0
SONM ScP ScP 08 54 21.8 -0.1
SONM **Songino Array** 48.35 344 P P 08 49 36.1 -1.0
comp=Z,11nm,0.7s,baz=161,slow=8.1,SNR=36
SONM ScP ScP 08 54 21.8 -0.1
comp=Z,1.5nm,1.0s,baz=153,slow=4.3,SNR=4.4
MOO **Moorlands** 48.72 157 P P 08 49 41.9 +2.2
baz=49,SNR=3.3
WMQ **Urumqi** 52.88 327 P P 08 50 10.8 +0.1
WMQ pP pP 08 51 18.4 +0.4
WMQ sP sP 08 51 53.0 -0.4
WMQ pmax pmax
comp=Z,22nm,0.6s
WMQ pmax pmax
comp=Z,110nm,4.0s
WMQ LR LR
comp=N,130nm,6.0s
WMQ LR LR
comp=E,130nm,6.0s
WMQ LR LR
comp=Z,37nm,22.0s
KSH **Kashi** 57.64 317 *i* P P 08 50 46.3 +1.8
KSH *e*pP pP 08 51 57.3 +4.1
KSH *e*sP sP 08 52 31.0 +2.8
KSH *e*S S 08 58 15.0 -2.5
KSH pmax pmax
comp=Z,10.0nm,0.7s
KSH pmax pmax
comp=Z,190nm,4.2s
KSH LR LR
comp=N,170nm,5.3s
KSH LR LR
comp=E,170nm,4.6s
KSH LR LR
comp=Z,160nm,4.4s
MK31 **Makanchi Array** 57.72 327 *e*P P 08 50 43.8 -0.9
MKAR **Makanchi Array** 57.72 327 P P 08 50 43.8 -0.9
MKAR PcP PcP 08 51 33.0 -0.8
MKAR pP pP 08 51 47.7 -5.8
MKAR S S 08 58 18.8 +0.8
MKAR **Makanchi Array** 57.72 327 P P 08 50 43.8 -0.9
comp=Z,11nm,0.5s,baz=123,slow=7.9,SNR=103
MKAR PcP PcP 08 51 33.0 -0.8
comp=Z,2.5nm,0.5s,baz=118,slow=4.9,SNR=5.8
MKAR pP pP 08 51 47.7 -5.8
comp=Z,2.2nm,0.8s,baz=134,slow=5.2,SNR=1.6
MKAR S S 08 58 18.8 +0.8
comp=Z,0.2nm,0.5s,baz=154,slow=14,SNR=3.7
PETK **Petropavlovsk-** 58.16 23 P P 08 50 48.1 +0.4
PETK **Petropavlovsk-** 58.16 23 P P 08 50 48.1 +0.4
comp=Z,24nm,0.8s,baz=189,slow=7.8,SNR=19
TKM2 **Tokmak 2** 59.53 320 *e*P P 08 50 56.5 -1.1
comp=Z,3.0nm,0.5s
AAK **Ala-Archa** 60.10 320 *e*P P 08 51 00.1 -1.2
comp=Z,1.8nm,0.6s
EKS2 **Erkin-Say** 60.58 319 *e*P P 08 51 03.8 -0.7
comp=Z,3.4nm,0.7s
ZAA0 **Zalesovo Array** 61.17 335 *e*P P 08 51 06.0 -2.0
ZALV **Zalesovo Beam** 61.17 335 P P 08 51 06.4 -1.6
ZALV **Zalesovo Beam** 61.17 335 P P 08 51 06.4 -1.6
comp=Z,7.0nm,0.4s,baz=129,slow=6.7,SNR=14
KURK **Kurchatov** 62.02 329 *e*P P 08 51 12.4 -1.2
comp=Z,37nm,0.6s
KKAR **Karatay Array** 62.92 318 *e*P P 08 51 18.4 -1.4
comp=Z,1.0nm,0.5s
URZ **Urewera** 62.94 135 P P 08 51 20.4 +0.4
URZ **Urewera** 62.94 135 P P 08 51 20.4 +0.4
baz=245,slow=7.1
FX1 **Attu Island--F** 65.00 30 *e*P P 08 51 33.2 +0.1
BVAR **Borovoye Array** 67.56 328 P P 08 51 47.9 -1.3
BVAR pP pP 08 52 54.3 -6.0
BVAR **Borovoye Array** 67.56 328 P P 08 51 47.9 -1.3
comp=Z,4.0nm,0.6s,baz=116,slow=6.6,SNR=15
BVAR pP pP 08 52 54.3 -6.0
comp=Z,1.4nm,0.7s,baz=111,slow=8.1,SNR=2.0
BRVK **Borovoye** 67.63 328 *e*P P 08 51 48.1 -1.5
comp=Z,9.1nm,0.8s
ABKAR **Akbulak array** 72.03 322 *e*P P 08 52 14.9 -1.5
comp=Z,4.0nm,0.6s
BILL **Bilibino** 72.05 15 *e*P P 08 52 15.1 -1.0
comp=Z,2.7nm,0.4s
OPO **Ambohidratompo** 78.26 251 P P 08 52 51.9 -0.6
OPO **Ambohidratompo** 78.26 251 P P 08 52 51.9 -0.6
comp=Z,6.2nm,1.1s,baz=63,slow=5.5,SNR=3.8
SDPT **Sand Point** 80.19 34 *e*P P 08 53 01.9 0.0
comp=Z,22nm,0.4s
MAW **Mawson** 81.10 200 P P 08 53 06.2 -0.1
MAW **Mawson** 81.10 200 P P 08 53 06.2 -0.1
comp=Z,5.3nm,0.6s,baz=71,slow=7.8,SNR=8.3
VNDA **Vanda** 81.88 172 *e*P P 08 53 10.6 +0.3
VNDA **Vanda** 81.88 172 P P 08 53 10.4 +0.1
comp=Z,5.6nm,0.5s,baz=314,slow=6.1,SNR=49
SBA **Scott Base** 82.81 172 *e*P P 08 53 16.0 +0.9
comp=Z,10nm,1.2s
COLD **Coldfoot** 86.63 23 *e*P P 08 53 34.2 -0.1
comp=Z,3.4nm,0.6s
MCK **McKinley** 87.00 26 *e*P P 08 53 35.3 -0.8
comp=Z,3.7nm,0.8s
ILAR **Eielson Array** 87.91 25 P P 08 53 38.8 -1.6
ILAR **Eielson Array** 87.91 25 P P 08 53 38.8 -1.6
comp=Z,1.0nm,0.5s,baz=256,slow=4.3,SNR=36
BRTR **Keskin Array B** 89.27 310 P P 08 53 45.2 -2.3
BRTR **Keskin Array B** 89.27 310 P P 08 53 45.2 -2.3
comp=Z,0.5nm,0.5s,baz=66,slow=3.5,SNR=2.5
JOF **Joensuu** 89.71 333 *e*p P 08 53 46.7 -2.0
comp=Z,8.8nm,0.6s
SYO **Syowa Base** 89.74 201⇑ *e*X P 08 53 45.0 -3.7
ARCES **ARCESS Array B** 91.35 340 P P 08 53 54.4 -1.8
ARCES **ARCESS Array B** 91.35 340 P P 08 53 54.4 -1.8
comp=Z,2.0nm,0.5s,baz=89,slow=6.8,SNR=28
QSPA **South Pole Qui** 91.74 180 *e*P P 08 53 58.5 +0.3
comp=Z,8.2nm,1.0s
QSPA **South Pole Qui** 91.74 180 P P 08 53 58.8 +0.6
comp=Z,10.0nm,1.1s,baz=287,slow=3.3,SNR=26
FINES **FINESS Array B** 92.30 332 P P 08 53 58.9 -1.8
FINES **FINESS Array B** 92.30 332 P P 08 53 58.9 -1.8
comp=Z,2.2nm,0.7s,baz=75,slow=5.9,SNR=6.8
SKAG **Skagway** 93.78 30 *e*P P 08 54 08.0 +0.4
comp=Z,4.2nm,0.9s
NOA **NORSAR Array B** 99.34 333 P Pdif 08 54 30.6 -2.1
NOA **NORSAR Array B** 99.34 333 P Pdif 08 54 30.6 -2.1

comp=Z,0.2nm,0.6s,baz=61,slow=2.0,SNR=3.5

NVAR	**Mina Array Bea**	**110.07**	**48**	PP	PP	08 59 59.2	-0.7
NVAR	**Mina Array Bea**	**110.07**	**48**	PP	PP	08 59 59.2	-0.7

comp=Z,0.7nm,0.8s,baz=268,slow=7.0,SNR=4.1

TORD	**Torodi Ar. Bea**	**121.05 286**		PKP	**PKPdf**	**08 59 41.8**	**-0.8**
TORD				pPKP	**pPKPdf**	**09 01 02.6**	**+0.4**
TORD	**Torodi Ar. Bea**	**121.05 286**		PKP	**PKPdf**	**08 59 41.8**	**-0.8**

comp=Z,0.4nm,0.6s,baz=98,slow=1.5,SNR=5.2

TORD				pPKP	**pPKPdf**	**09 01 02.6**	**+0.4**

comp=Z,0.7nm,0.8s,baz=90,slow=2.0,SNR=3.9

TXAR	**Lajitas Array**	**124.77**	**52**	PKP	**PKPdf**	**08 59 49.9**	**+0.4**
TXAR				PP	PP	09 01 55.6	+14
TXAR				SKPbc	SKiKP	09 02 35.4	-20
TXAR	**Lajitas Array**	**124.77**	**52**	PKP	**PKPdf**	**08 59 49.9**	**+0.4**

comp=Z,0.2nm,0.6s,baz=270,slow=1.8,SNR=3.0

TXAR				PP	PP	09 01 55.6	+14

comp=Z,0.3nm,0.8s,baz=298,slow=2.7,SNR=3.4

TXAR				SKPbc	SKiKP	09 02 35.4	-20

comp=Z,0.5nm,0.8s,baz=252,slow=1.6,SNR=5.4

PLCA	**Paso Flores**	**139.03 163**		pPKP	**pPKPdf**	**09 01 34.1**	**-1.6**

comp=Z,2.0nm,0.9s,baz=299,slow=5.6,SNR=3.0

PLCA				SKPbc	**SKiKP**	**09 03 22.4**	**-1.4**

comp=Z,1.4nm,0.8s,baz=270,slow=6.1,SNR=3.4

CPUP	**Villa Florida**	**155.59 177**		PKPab	**PKPab**	**09 01 11.3**	**+0.6**
CPUP	**Villa Florida**	**155.59 177**		PKPab	**PKPab**	**09 01 11.3**	**+0.6**

comp=Z,2.4nm,0.6s,baz=156,slow=3.5,SNR=11

LPAZ	**La Paz**	**161.19 141**		PKPab	**PKPab**	**09 01 38.1**	**+2.0**
LPAZ	**La Paz**	**161.19 141**		PKPab	**PKPab**	**09 01 38.1**	**+2.0**

comp=Z,1.1nm,0.5s,baz=194,slow=4.6,SNR=9.0

SIV	**San Ignacio**	**165.00 160**		PKPab	**PKPab**	**09 01 52.0**	**0.0**
SIV	**San Ignacio**	**165.00 160**		PKPab	**PKPab**	**09 01 52.0**	**0.0**

comp=Z,1.6nm,0.6s,baz=235,slow=4.6,SNR=6.8

MAN 20 09:08:59, 12.65N×123.56E, h7km, mb4.0, ML2.7, MS2.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.29**	**168**	*eP*	Pb	09 09 06.4	-0.2
MMPH				*eS*	Sb	09 09 11.7	0.0
CNP	**Catarman**	**1.08**	**97**	*eP*	Pb	09 09 20.2	+0.1
CNP				*eS*	Sg	09 09 33.5	-0.4
RCP	**Roxas**	**1.34**	**217**	*eP*	Pn	09 09 23.5	-0.7
GUIM	**Jordan**	**2.22**	**205**	*eP*	Pb	09 09 38.2	-1.4
GUIM				*eS*	Sn	09 09 55.2	-8.9

IDC 20 09:17:04.0±1.3, 19.37S×177.47E, h0km, mb3.9/10, mb1 4.2/11, mb1mx4.1/19, mbtmp3.9/11, ML3.0/1, MS3.9/14, Ms1 3.9/14, ms1mx3.7/33, Error ellipse: s-maj=59.8km s-min=19.4km az=152.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.66**	**254**	*e*LR	LR	09 22 02.6	

858nm,26.1s

DZM	**Mont Dzumac**	**10.66**	**254**	Pn	Pn	09 19 37.7	-0.6

0.1nm,0.3s,baz=96,slow=19,SNR=1.7

DZM				LR	LR	09 22 35.0	

comp=Z,203nm,21.4s,baz=79,slow=31

RAO	**Raoul Island**	**10.69**	**158**	LR	LR	09 22 26.4	

comp=Z,603nm,21.3s,baz=292,slow=30

AFI	**Afiamalu**	**11.64**	**64**	LR	LR	09 22 41.2	

comp=Z,193nm,19.4s,baz=240,slow=29

URZ	**Urewera**	**18.82**	**181**	LR	LR	09 26 43.5	

comp=Z,563nm,21.2s,baz=13,slow=31

RAR	**Rarotonga**	**21.42**	**99**	LR	LR	09 27 55.7	

comp=Z,572nm,21.4s,baz=271,slow=30

RPZ	**Rata Peaks**	**24.86**	**191**	LR	LR	09 30 28.3	

comp=Z,306nm,18.5s,baz=20,slow=32

CTA	**Charters Tower**	**29.38**	**263**	LR	LR	09 33 33.7	

comp=Z,243nm,19.6s,baz=75,slow=34

PMG	**Port Moresby**	**30.94**	**284**	LR	LR	09 34 03.3	

comp=Z,225nm,20.0s,baz=75,slow=33

TBI	**Tubuai**	**31.01**	**103**	*e*LQ	LQ	09 30 01.8	

294nm,28.2s

TBI				*e*LR	LR	09 31 27.9	

598nm,29.8s

PPT2	**Papeete2**	**31.28**	**92**	*e*S	S	09 28 23.8	-10

66nm,22.0s

PPT2				*e*LR	LR	09 31 34.4	

744nm,27.0s

PPT	**Papeete**	**31.28**	**92**	LR	LR	09 32 25.2	

comp=Z,277nm,20.9s,baz=136,slow=30

STKA	**Stephens Creek**	**34.50**	**242**	P	P	09 23 54.8	+0.7

3.6nm,0.9s,baz=101,slow=16,SNR=7.1

STKA				LR	LR	09 35 52.0	

comp=Z,138nm,19.2s,baz=43,slow=33

WRA	**Warramunga Arr**	**40.54**	**262**	P	P	09 24 44.4	-1.1

1.0nm,0.7s,baz=101,slow=7.7,SNR=8.5

ASAR	**Alice Springs**	**40.64**	**256**	P	P	09 24 46.6	+0.3

2.6nm,0.8s,baz=86,slow=8.5,SNR=30

ASAR				LR	LR	09 39 49.1	

comp=Z,164nm,18.9s,baz=95,slow=34

FITZ	**Fitzroy Crossi**	**48.95**	**263**	LR	LR	09 45 11.1	

comp=Z,150nm,19.1s,baz=272,slow=34

KSRS	**Korea Array**	**73.28**	**321**	P	P	09 28 39.0	+1.7

0.2nm,0.8s,baz=136,slow=4.4,SNR=2.6

YBH	**Yreka Blue Hor**	**82.15**	**41**	LR	LR	09 56 38.9	

comp=Z,65nm,21.9s,baz=308,slow=29

NVAR	**Mina Array Bea**	**83.20**	**45**	P	P	09 29 31.1	-1.5

0.6nm,0.8s,baz=221,slow=9.5,SNR=1.9

CMAR	**Chiang Mai Arr**	**85.73**	**291**	P	P	09 29 44.6	-1.0

0.4nm,0.3s,baz=191,slow=23,SNR=2.4

ILAR	**Eielson Array**	**88.23**	**14**	P	P	09 29 56.6	-0.1

0.5nm,0.8s,baz=224,slow=4.9,SNR=4.4

ILAR				LR	LR	10 01 25.2	

comp=Z,102nm,20.9s,baz=195,slow=30

TXAR	**Lajitas Array**	**90.08**	**59**	P	P	09 30 07.2	+0.8

0.5nm,0.6s,baz=210,slow=5.8,SNR=7.2

SONM	**Songino Array**	**92.14**	**320**	P	P	09 30 13.6	-2.0

0.2nm,0.3s,baz=120,slow=8.5,SNR=3.5

YKA	**Yellowknife Ar**	**97.31**	**26**	P	Pdif	09 30 39.9	+1.2

0.3nm,0.6s,baz=255,slow=4.8,SNR=4.5

CRVS	**Cervenica-Dubn**	**144.78**	**332**	*e*	PKPdf	09 36 43.4	+0.5
CLL	**Collm**	**145.86**	**343**	*i* P	PKPab	09 36 50.6	+5.0

comp=Z,7.0nm,0.8s

BRG	**Berggiesshubel**	**145.97**	**341**	*e*(P)	PKPab	09 36 51.4	+5.3

comp=Z,6.3nm,1.0s

VYHS	**Vyhne**	**146.21**	**334**	*e*	PKPab	09 36 49.5	+2.4
GERES	**GERESS Array B**	**147.82**	**340**	PKPbc	PKPdf	09 36 49.5	+1.3

comp=Z,0.5nm,0.5s,baz=337,slow=2.0,SNR=5.0

DAVOX	**Davos/Dischmat**	**150.83**	**342**	PKPbc	PKPbc	09 36 59.3	+0.5

comp=Z,3.5nm,0.7s,baz=284,slow=4.2,SNR=2.6

IDC 20 09:27:20.6±2.0, 5.54S×147.11E, h174km±18km, mb3.6/4, mb1 3.9/8, mb1mx3.5/21, mbtmp3.8/8, Error ellipse: s-maj=31.3km s-min=13.0km az=121.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.84**	**179**	P	Pn	09 28 20.2	+0.7

7.5nm,0.3s,baz=51,slow=9.2,SNR=88

PMG				S	Sn	09 29 04.5	-1.1

10nm,0.3s,baz=188,slow=21,SNR=8.2

HNR	**Honiara**	**13.30**	**108**	P	Pn	09 30 23.4	+0.5

2.7nm,0.3s,baz=300,slow=8.1,SNR=3.7

CTA	**Charters Tower**	**14.48**	**183**	P	P	09 30 38.9	-0.7

0.3nm,0.3s,baz=1.8,slow=12,SNR=8.2

WRA	**Warramunga Arr**	**18.95**	**220**	P	P	09 31 29.9	+1.3

1.9nm,0.3s,baz=40,slow=11,SNR=110

WRA				S	S	09 34 53.6	-1.2

0.1nm,0.3s,baz=41,slow=21,SNR=4.9

ASAR	**Alice Springs**	**22.05**	**214**	P	P	09 32 02.8	+1.2

8.9nm,0.7s,baz=50,slow=8.2,SNR=138

ASAR				S	S	09 35 53.4	+1.0

2.3nm,1.0s,baz=29,slow=20,SNR=14

FITZ	**Fitzroy Crossi**	**24.40**	**237**	P	P	09 32 23.4	+0.3

7.9nm,0.5s,baz=57,slow=9.9,SNR=34

STKA	**Stephens Creek**	**26.70**	**190**	P	P	09 32 45.2	+1.5

0.8nm,0.6s,baz=1.0,slow=16,SNR=3.3

ILAR	**Eielson Array**	**85.02**	**23**	P	P	09 39 34.8	-1.4

0.4nm,0.7s,baz=249,slow=5.0,SNR=5.3

TORD	**Torodi Ar. Bea**	**145.08**	**285**	PKPbc	PKPbc	09 46 36.8	-1.3

0.3nm,0.5s,baz=62,slow=3.6,SNR=7.2

*CSEM **20** 09:27:56.7, 60.40N×25.75E, h0km, ML1.4, Mining explosion. After HEL*
HEL 20 09:27:56.7±0.1, 60.40N×25.75E, h0km, ML1.4, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PVF	**Pernaja**	**0.16**	**21**	*e*P	Pg	09 27 59.0	-0.8
PVF	**Pernaja**	**0.16**	**21**	P	Pg	09 27 58.9	-0.9
MEF	**Metsahovi**	**0.70**	**256**	*e*P	Pg	09 28 09.1	-0.9
MEF				*e*S	Sg	09 28 18.0	-1.0
MEF	**Metsahovi**	**0.70**	**256**	P	Pg	09 28 09.1	-0.9
MEF				S	Sg	09 28 17.9	-1.1
VJF	**Virojoki**	**0.91**	**80**	*e*P	Pg	09 28 13.1	-1.0
VJF				*e*SB	Sg	09 28 25.5	-0.4
VJF	**Virojoki**	**0.91**	**80**	P	Pg	09 28 13.0	-1.1
VJF				Sb	Sg	09 28 25.4	-0.4
FIA0	**FINESS Array S**	**1.06**	**9**	*e*P	Pg	09 28 15.6	-1.5
FIA0				*e*S	Sg	09 28 29.2	-1.7
FIA0				*e*RG	Pg	09 28 36.3	
FIA0	**FINESS Array S**	**1.06**	**9**	P	Pg	09 28 15.6	-1.5
FIA0				S	Sg	09 28 29.1	-1.8
KAF	**Kangasniemi**	**1.74**	**9**	*e*P	Pn	09 28 27.5	-0.7
KAF				*e*SG	Sn	09 28 50.4	-0.7
KAF	**Kangasniemi**	**1.74**	**9**	P	Pn	09 28 27.5	-0.7
KAF				Sg	Sn	09 28 50.3	-0.8
KEF	**Keuruu**	**1.83**	**347**	*e*PG	Pn	09 28 29.5	+0.2
KEF				MSG	Sn	09 28 52.9	-0.2

comp=Z,1.7nm,0.2s

KEF				*e*SN	Sn	09 28 52.9	-0.2
KEF	**Keuruu**	**1.83**	**347**	Pg	Pn	09 28 29.4	+0.1
KEF				Sn	Sn	09 28 52.9	-0.2
MTSE	**Matsula**	**1.95**	**211**	*e*SG	Sn	09 28 57.0	+0.8
MTSE	**Matsula**	**1.95**	**211**	Sg	Sn	09 28 57.0	+0.8
RAF	**Rauma**	**2.06**	**290**	*e*PB	Pn	09 28 32.8	+0.4
RAF				*e*SG	Sn	09 28 59.7	+1.0
RAF				MSG		09 28 59.7	

comp=Z,1.5nm,0.1s

RAF	**Rauma**	**2.06**	**290**	Pb	Pn	09 28 32.8	+0.4
RAF				Sg	Sn	09 28 59.7	+1.0
SUF	**Sumiainen**	**2.34**	**5**	*e*PB	Pn	09 28 37.7	+1.4
SUF				MSG	Sb	09 29 07.6	-1.5

comp=Z,1.2nm,0.2s

SUF				*e*SB	Sb	09 29 07.6	-1.5
SUF	**Sumiainen**	**2.34**	**5**	Pb	Pn	09 28 37.7	+1.3
SUF				Sb	Sb	09 29 07.5	-1.6

IDC 20 09:40:01.8±2.0, 6.53S×68.22E, h0km, mb3.8/8, mb1 3.8/8, mb1mx3.7/30, mbtmp3.8/8, MS3.6/2, Ms1 3.6/2, ms1mx2.9/47, Error ellipse: s-maj=58.4km s-min=33.1km az=145.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**23.73**	**238**	LR	LR	09 51 51.3	

comp=Z,241nm,21.0s,baz=225,slow=30

KMBO	**Kilima Mbogo**	**31.34**	**279**	LR	LR	09 57 14.6	

comp=Z,72nm,19.7s,baz=96,slow=33

AAK	**Ala-Archa**	**49.26**	**6**	P	P	09 48 53.9	+1.4

1.0nm,0.6s,baz=189,slow=13,SNR=3.7

MKAR	**Makanchi Array**	**54.54**	**12**	P	P	09 49 29.9	-1.8

0.5nm,0.9s,baz=215,slow=13,SNR=3.7

BRTR	**Keskin Array B**	**56.01**	**328**	P	P	09 49 41.7	-0.9

0.7nm,0.9s,baz=132,slow=6.4,SNR=3.5

AKTO	**Aktyubinsk**	**57.41**	**352**	P	P	09 49 52.6	+0.5

2.0nm,0.9s,baz=179,slow=5.7,SNR=5.0

KURBB	**Kurchatov Arra**	**57.61**	**8**	P	P	09 49 53.3	-0.2

0.4nm,0.3s,baz=194,slow=10,SNR=4.0

BVAR	**Borovoye Array**	**59.35**	**2**	P	P	09 50 06.1	+0.5

1.3nm,0.6s,baz=103,slow=26,SNR=4.8

SONM	**Songino Array**	**63.72**	**28**	P	P	09 50 35.7	+0.3

0.2nm,0.3s,baz=209,slow=4.9,SNR=4.0

TORD	**Torodi Ar. Bea**	**68.89**	**287**	P	P	09 51 09.5	+0.4

0.8nm,0.8s,baz=88,slow=3.7,SNR=22

YKA	**Yellowknife Ar**	**124.11**	**2**	PKP	PKPdf	09 59 03.6	+1.5

0.5nm,0.9s,baz=18,slow=1.0,SNR=4.2

NVAR	**Mina Array Bea**	**147.69**	**10**	PKPbc	PKPbc	09 59 48.4	-0.8

0.6nm,0.6s,baz=321,slow=1.9,SNR=5.1

ANMO	**Albuquerque**	**151.29**	**351**	PKPbc	PKPbc	09 59 55.8	-2.4

0.7nm,0.7s,baz=69,slow=3.8,SNR=4.0

TXAR	**Lajitas Array**	**156.06**	**342**	PKPab	PKPab	10 00 25.6	-0.6

0.5nm,1.0s,baz=56,slow=3.4,SNR=3.4

*IDC **20** 09:40:15.0±0.4, 23.34S×174.82W, h0km, mb5.1/25, mb1 5.2/27, mb1mx5.2/28, mbtmp5.1/27, ML3.8/2, MS4.3/14, Ms1 4.3/14, ms1mx4.0/33, Error ellipse: s-maj=15.9km s-min=10.3km az=158.0*

*ISCJB **20** 09:40:18.8±0.2, 23.31S±0.04×174.64W±0.03, h33km, mb5.3/159, MS4.7/28, Error ellipse: s-maj=6.7km s-min=3.5km az=157.4*

*GCMT **20** 09:40:18.9±0.3, 23.24S×174.16W, h13km±1km, MW5.1, Moment Tensor Solution. s33,c46; s67,c102; Moment tensor: Scale 10^16 Nm; Mrr=4.28±.26; Mθθ 0.14±.20; Mϕϕ 4.14±.17; Mrθ -1.07±.48; Mθϕ 2.84±.13; Mϕr -1.42±.39; Best couple: Mo 5.30000×10^16 NP1: ϕ=202.00000°, δ=35.00000°, λ=-99.00000°. NP2: ϕ=32.00000°, δ=55.00000°, λ=-84.00000°. Principal axes: T 5.9200, Plg 10.0000°, Azm 118.0000°; N -1.3100, Plg 5.0000°, Azm 209.0000°; P -4.6100, Plg 79.0000°, Azm 325.0000°; Data Used: IC G IU II CN.*

*MOS **20** 09:40:19.7±1.1, 23.15S×174.75W, h33km, mb5.6/43, MS4.6/4 Error ellipse: s-maj=9.3km s-min=7.9km az=64.2*

*NEIC **20** 09:40:19.4±2.0, 23.33S×174.67W, h30km±13km, mb5.3/108, Error ellipse: s-maj=5.6km s-min=3.6km az=139.0*

*AUST **20** 09:40:20.8, 22.64S×174.27W, h60km*

*BGS **20** 09:40:21.3±5.5, 23.33S×174.67W, h33km, mb5.3(NEIC)*

*BJI **20** 09:40:23.6, 23.20S×174.70W, h60km, mB5.5/31, mb5.3/38, Ms5.4/30, Ms7 5.0/30*

*DJA **20** 09:40:58.0±7.7, 23.5S±18°×17.6W±6.3, h344km±75km, MS1.9/9, mB5.5/2, mb5.1/9, Mw(mB)4.9/2*

ISC 20 09:40:24.0±0.5, 23.36S±0.05×174.66W±0.04, h68km±3km, h67km: pP-P, n994, σ1s 07/1097, mb5.3/157, 187C-215D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**6.13**	**47**	P	Pn	09 41 38.1	-14

baz=5.4,SNR=31

NIUE				S	Sn	09 42 37.7	-23

baz=5.4,SNR=8.9

RAO	**Raoul Island**	**6.55**	**206**	Sn	**Sn**	**09 43 06.8**	**-4.3**
RAO	**Raoul Island**	**6.55**	**206**	Sn	**Sn**	**09 43 06.8**	**-4.3**

118nm,0.3s,baz=73,slow=19,SNR=3.7

MSVF	**Nonsavu**	**8.83**	**308**	*e*P	**Pn**	**09 42 27.1**	**-2.0**
MSVF	**Nonsavu**	**8.83**	**308**	*e*Pn	**Pn**	**09 42 27.1**	**-2.0**
MSVF	**Nonsavu**	**8.83**	**308**	Pn	**Pn**	**09 42 27.0**	**-2.0**

812nm,1.0s,SNR=24

AFI	**Afiamalu**	**9.79**	**17**	*e*Pn	Pn	09 42 29.5	-13
AFI				*e*Sn	Sn	09 44 03.3	-27
AFI				Sn	Sn	09 44 09.5	-21
AFI	**Afiamalu**	**9.79**	**17**	Pn	Pn	09 42 29.5	-13

6.7nm,0.3s,baz=102,slow=7.1,SNR=15

AFI				Sn	Sn	09 44 09.5	-21

25nm,0.3s,baz=119,slow=23,SNR=6.0

RAR	**Rarotonga**	**13.94**	**84**	Pn	Pn	09 43 26.6	-12
RAR				*e*Sn	Sn	09 45 43.6	-28
RAR				Sn	Sn	09 45 47.1	-25
RAR	**Rarotonga**	**13.94**	**84**	Pn	Pn	09 43 26.5	-12

42nm,0.3s,baz=270,slow=7.0,SNR=62

RAR				Sn	Sn	09 45 47.1	-25

9.4nm,0.3s,baz=90,slow=7.0,SNR=5.4

RAR				LR	LR	09 47 55.3	

comp=Z,1μm,19.7s,baz=271,slow=33

URZ	**Urewera**	**16.44**	**203**	Pn	**Pn**	**09 44 07.5**	**-2.8**
URZ				Sn	Sn	09 46 58.0	-14
URZ	**Urewera**	**16.44**	**203**	Pn	**Pn**	**09 44 07.5**	**-2.8**

0.9nm,0.3s,baz=69,slow=7.4,SNR=8.6

URZ				Sn	Sn	09 46 58.0	-14

1.7nm,0.3s,baz=293,slow=23,SNR=8.3

DZM	**Mont Dzumac**	**17.48**	**271**	*e*P	**P**	**09 44 24.1**	**+0.3**

236nm,0.9s

DZM				*e*LR	LR	09 48 34.3	

2μm,28.3s

DZM	**Mont Dzumac**	**17.48**	**271**	*e*P	**P**	**09 44 23.8**	**+0.1**
DZM	**Mont Dzumac**	**17.48**	**271**	P	**Pn**	**09 44 19.6**	**-3.8**
DZM	**Mont Dzumac**	**17.48**	**271**	P	**Pn**	**09 44 19.6**	**-3.8**

0.1nm,0.3s,baz=286,slow=20,SNR=2.2

NOUC	**Port Laguerre**	**17.61**	**270**	*e*P	**P**	**09 44 26.3**	**+1.3**
TBI	**Tubuai**	**23.13**	**95**	*e*P	**P**	**09 45 20.7**	**-3.8**

485nm,1.4s

TBI				*e*S	**S**	**09 49 24.7**	**-6.0**

2μm,27.0s

TBI				*e*LR	LR	09 50 46.6	

2μm,28.8s

RPZ	**Rata Peaks**	**23.47**	**207**	P	**P**	**09 45 25.0**	**-2.6**
RPZ	**Rata Peaks**	**23.47**	**207**	P	**P**	**09 45 25.0**	**-2.6**

24nm,0.9s,baz=63,slow=7.1,SNR=4.4

PAE	**Paea**	**24.14**	**81**	*e*P	**P**	**09 45 31.9**	**-1.9**

12nm,1.1s

PPT2	**Papeete2**	**24.17**	**81**	*e*P	**P**	**09 45 32.5**	**-1.7**

56nm,1.0s

PPT2				*e*LQ	LQ	09 50 04.0	

3μm,25.5s

PPT2				*e*LR	LR	09 51 09.1	

2μm,27.8s

PPT	**Papeete**	**24.18**	**81**	P	**P**	**09 45 31.5**	**-2.7**
PPT	**Papeete**	**24.18**	**81**	P	**P**	**09 45 31.5**	**-2.7**

51nm,0.9s,baz=296,slow=7.0,SNR=6.0

PPT				LR	LR	09 52 36.9	

comp=Z,581nm,20.3s,baz=274,slow=30

TIAR	**Tiarei**	**24.39**	**81**	*e*P	**P**	**09 45 34.4**	**-1.7**

159nm,1.0s

TVO	**Taravao**	**24.41**	**82**	*e*P	**P**	**09 45 34.3**	**-2.0**

110nm,1.0s

PMOR	**Pomariorio Ree**	**26.57**	**77**	*e*P	**P**	**09 45 53.8**	**-2.1**

135nm,1.3s

HNR	**Honiara**	**27.96**	**295**	P	**P**	**09 46 05.8**	**-2.5**
HNR	**Honiara**	**27.96**	**295**	P	**P**	**09 46 05.8**	**-2.5**

78nm,0.9s,baz=218,slow=2.4,SNR=15

HNR				LR	LR	09 56 17.8	

comp=Z,346nm,18.1s,baz=129,slow=35

ARMA	**Armidale**	**30.80**	**249**	*e*P	**P**	**09 46 34.1**	**+0.6**

58nm,1.1s

ARMA	**Armidale**	**30.80**	**249**	P	**P**	**09 46 34.5**	**+1.0**

baz=31,SNR=7.3

EIDS	**Eidsvold**	**31.23**	**259**	*e*P	**P**	**09 46 36.5**	**-0.7**

31nm,1.1s

EIDS	**Eidsvold**	**31.23**	**259**	P	**P**	**09 46 37.1**	**-0.1**

baz=32,SNR=7.4

MGCD	**Mangrove Creek**	**31.58**	**244**	P	**P**	**09 46 42.5**	**+2.2**

baz=32,SNR=9.5

RMQ	**Roma**	**33.25**	**257**	P	**P**	**09 46 55.4**	**+0.4**

baz=34,SNR=7.4

CNB	**Canberra Magne**	**33.38**	**241**	P	**P**	**09 46 58.0**	**+2.0**

baz=34,SNR=6.7

MILA	**Mila**	**33.91**	**238**	P	**P**	**09 47 03.6**	**+3.0**

baz=35,SNR=8.8

YNG	**Young**	**33.98**	**243**	P	**P**	**09 47 02.6**	**+1.4**

baz=35,SNR=13

baz=57,SNR=9.8
PALU Palau 58.32 295 P **P** 09 50 12.4 0.0
baz=58,SNR=4.2
KLBR Kellerberrin 59.70 246 P **P** 09 50 22.9 +1.1
baz=60,SNR=11
MEEK Meekatharra 59.95 252 P **P** 09 50 23.1 -0.4
baz=60,SNR=7.0
MBWA Marble Bar 60.28 258 *e*P **P** 09 50 25.4 -0.5
comp=Z,148nm,1.4s
BLDU Ballidu 60.76 247 P **P** 09 50 30.0 +1.0
baz=61,SNR=6.6
MORW Morawa 61.65 249 P **P** 09 50 35.8 +0.7
baz=62,SNR=15
CASY Casey 62.74 206 *e*P **P** 09 50 43.3 +1.7
comp=Z,44nm,1.0s
WSI Waingapu 63.38 271 P P 09 51 00.0 +13
baz=64,SNR=3.6
GIRL Giralia 64.80 255 P **P** 09 50 58.6 +2.7
baz=65,SNR=4.2
QSPA South Pole Qui 66.72 180 *e*P **P** 09 51 09.5 +1.7
comp=Z,67nm,1.3s
MIR Mirnyy 69.73 205 ⇑*i*P P 09 51 30.0 +3.6
MIR *i* 09 51 38.0
MIR pmax pmax
comp=Z,163nm,1.7s
MYLDM Lahad Datu 71.06 285 P P 09 51 38.6 +3.2
TSM Tawau 71.23 283 P **P** 09 51 38.5 +2.1
KDM Kudat 73.32 285 P **P** 09 51 51.3 +2.5
KKM Kota Kinabalu 73.48 284 *e*P **P** 09 51 49.8 -0.2
comp=Z,24nm,0.9s
KKM Kota Kinabalu 73.48 284 P **P** 09 51 50.6 +0.6
KKM Kota Kinabalu 73.48 284 P **P** 09 51 51.3 +1.4
baz=74,SNR=11
MJAR Matsushiro Arr 74.35 322 P **P** 09 51 54.5 +0.1
MJAR Matsushiro Arr 74.35 322 P **P** 09 51 54.5 +0.1
comp=Z,23nm,0.8s,baz=164,slow=6.3,SNR=65
MAJO Matsushiro 74.35 322 *e*P **P** 09 51 53.9 -0.6
MAJO pmax pmax
comp=Z,25nm,0.7s
MAJO Matsushiro 74.35 322 *e*P **P** 09 51 53.9 -0.6
comp=Z,25nm,0.7s
MAT Matsushiro 74.35 322 P **P** 09 51 54.3 -0.1
MAT S **SKiKP** 10 01 19.0 +3.8
BTM Bintulu 75.06 280 P **P** 09 52 01.6 +2.5
SBUM Sibu 75.53 279 P **P** 09 52 03.6 +1.8
YUK Yuzh-Kuril'sk 76.20 332 *d*iP **P** 09 52 06.4 +1.6
JNU Nakatsue 76.48 315 *e*P **P** 09 52 06.5 -0.2
comp=Z,38nm,1.1s
XMIS Christmas Isla 76.53 264 P **P** 09 52 09.8 +2.3
baz=77,SNR=4.2
KSM Kuching 76.87 277 *e*P **P** 09 52 10.3 +1.0
comp=Z,127nm,1.0s
KSM Kuching 76.87 277 P **P** 09 52 11.0 +1.6
KSM Kuching 76.87 277 P **P** 09 52 10.7 +1.3
baz=77,SNR=43
SBC Santa Barbara 77.63 44 ⇑P **P** 09 52 13.1 +0.1
baz=78
YULB Yu-li 77.65 302 *e*P **P** 09 52 12.3 -1.2
comp=Z,25nm,1.1s
ASAJ Asahikawa 77.73 330 *e*P **P** 09 52 14.8 +1.4
comp=Z,14nm,0.9s
ASAJ Asahikawa 77.73 330 LR LR 10 18 56.9
comp=Z,246nm,21.6s,baz=168,slow=30
CIS Catalina Islan 77.82 45 ⇑P **P** 09 52 14.0 -0.2
baz=78
NACB Ninganchiao 77.84 303 *e*P **P** 09 52 13.3 -1.1
comp=Z,149nm,1.3s
PKM Peak Mountain 77.85 43 ⇑P **P** 09 52 14.7 +0.2
baz=78
SMMC Simmler 78.00 43 ⇓P **P** 09 52 15.4 +0.1
baz=78
FMP Fort Macarthur 78.08 45 ⇓P **P** 09 52 15.3 -0.3
baz=78
TPUB Ta-pu 78.12 302 *e*P **P** 09 52 15.3 -0.8
comp=Z,116nm,1.0s
SSLB Suanglung 78.13 302 *e*P **P** 09 52 15.2 -1.0
comp=Z,56nm,1.2s
YHNB Yeheng 78.27 303 *e*P **P** 09 52 16.6 -0.4
comp=Z,98nm,1.3s
109C Camp Elliot, M 78.36 46 ⇓P **P** 09 52 16.8 -0.4
baz=78
DECC Green Verdugo 78.39 45 ⇑P **P** 09 52 16.9 -0.5
baz=79
PASC Pasadena Art C 78.44 45 *e*P **P** 09 52 17.2 -0.5
comp=Z,8.4nm,0.7s
MWC Mount Wilson 78.55 45 *e*P **P** 09 52 18.2 -0.3
MWC pmax pmax
comp=Z,17nm,1.0s
MWC Mount Wilson 78.55 45 *e*P **P** 09 52 18.2 -0.3
comp=Z,18nm,1.0s
ARVC Arvin 78.62 44 ⇑P **P** 09 52 18.6 0.0
baz=79
MURC Murrieta 78.73 46 ⇓P **P** 09 52 19.0 -0.3
baz=79,SNR=7.4
MONP Monument Peak 78.82 47 ⇓P **P** 09 52 19.7 -0.3
baz=79
BFSC Mount Baldy Ra 78.82 45 ⇓P **P** 09 52 19.4 -0.5
baz=79
DVTC Desert V Tower 78.89 47 ⇑P **P** 09 52 20.0 -0.2
baz=79
VES Vestal, Richgr 78.91 43 ⇑P **P** 09 52 19.8 -0.3
baz=79,SNR=15
EDW2 Edwards Air Fo 79.01 44 ⇓P **P** 09 52 20.5 -0.3
baz=79,SNR=22
RCTC Rector, Farmer 79.11 43 ⇓P **P** 09 52 21.1 -0.1
baz=79
ISA Isabella 79.19 44 *e*P **P** 09 52 21.7 0.0
ISA *e* 09 52 29.5
ISA pmax pmax
comp=Z,33nm,1.2s
ISA Isabella 79.19 44 *e*P **P** 09 52 21.7 0.0
comp=Z,33nm,1.2s
ISA *e*PcP **PcP** 09 52 29.5 -0.4
ISA Isabella 79.19 44 ⇑P **P** 09 52 21.6 -0.2
baz=79,SNR=22
PFO Pinyon Flat Ob 79.23 46 P **P** 09 52 21.2 -0.9
PFO Pinyon Flat Ob 79.23 46 P **P** 09 52 21.2 -0.9
comp=Z,5.5nm,0.8s,baz=268,slow=3.6,SNR=7.7
PFO Pinyon Flat Ob 79.23 46 ⇓P **P** 09 52 21.8 -0.3
baz=79,SNR=6.0
SWSC Sam W. Stewart 79.27 47 ⇓P **P** 09 52 22.0 -0.1
baz=80
BBRC Big Bear Solar 79.32 45 ⇓P **P** 09 52 22.5 -0.2
baz=80
CMB Columbia Colle 79.52 41 *e*P **P** 09 52 23.5 0.0
CMB pmax pmax
comp=Z,25nm,1.0s
CMB Columbia Colle 79.52 41 *e*P **P** 09 52 23.5 0.0
comp=Z,25nm,1.0s
LRMC Laurel Mountai 79.57 44 ⇑P **P** 09 52 23.7 -0.2
baz=80,SNR=7.2
BELC Belle Mtn. Jos 79.77 46 ⇑P **P** 09 52 25.0 -0.1
baz=80,SNR=14
YSS Yuzh-Sakhalins 79.85 332 ⇑*i*P **P** 09 52 26.6 +1.7
YSS *e*S **S** 10 02 26.0 +3.3
YSS pmax pmax
comp=Z,90nm,1.0s
PEA0B Petropavlovsk- 79.85 343 *e*P **P** 09 52 24.6 -0.3
PETK Petropavlovsk- 79.85 343 P **P** 09 52 24.9 +0.1
PETK Petropavlovsk- 79.85 343 P **P** 09 52 24.9 +0.1
PETK Petropavlovsk- 79.85 343 P **P** 09 52 24.9 +0.1
comp=Z,31nm,0.8s,baz=138,slow=9.1,SNR=25
CWC Cottonwood Cre 79.92 43 ⇑P **P** 09 52 25.9 0.0
baz=80
BC3 Big Chuckawall 79.92 47 ⇓P **P** 09 52 25.9 0.0
baz=80,SNR=11
WDC Whiskeytown Da 79.96 38 *e*P **P** 09 52 25.9 +0.2
WDC pmax pmax
comp=Z,63nm,1.4s
WDC Whiskeytown Da 79.96 38 *e*P **P** 09 52 25.9 +0.2
comp=Z,63nm,1.4s
GLA Glamis 79.99 48 *e*P **P** 09 52 26.7 +0.6
GLA pmax pmax
comp=Z,41nm,1.4s
GLA Glamis 79.99 48 *e*P **P** 09 52 26.7 +0.6
comp=Z,41nm,1.4s
GLA Glamis 79.99 48 ⇑P **P** 09 52 26.1 0.0
baz=80
GSC Goldstone 80.03 45 *e*P **P** 09 52 26.3 -0.1
GSC pmax pmax
comp=Z,22nm,1.2s
GSC Goldstone 80.03 45 *e*P **P** 09 52 26.3 -0.1
comp=Z,22nm,1.2s
GSC Goldstone 80.03 45 ⇓P **P** 09 52 26.0 -0.4
baz=80,SNR=9.3
HEC Hector,Ludlow 80.05 45 ⇓P **P** 09 52 26.1 -0.4
baz=80,SNR=14
MPMC Manual Prospec 80.06 44 ⇑P **P** 09 52 26.6 -0.1
baz=80,SNR=22
MLAC Mammoth Lakes 80.20 42 ⇓P **P** 09 52 27.4 0.0
baz=80
TIN Tinemaha 80.21 43 ⇑P **P** 09 52 27.4 0.0
baz=80
IRM Iron Mountain 80.43 46 ⇑P **P** 09 52 28.5 +0.1
baz=81,SNR=6.3
GMRC Granite Mounta 80.46 46 ⇑P **P** 09 52 28.4 -0.3
baz=81,SNR=13
CHGN Chignik 80.53 9 *e*P **P** 09 52 27.9 -0.4
113A Mohawk Valley, 80.55 48 ⇑P **P** 09 52 29.0 0.0
baz=81
QZH Quanzhou 80.56 302 ⇑*i*P **P** 09 52 32.1 +2.8
QZH S **S** 10 02 36.3 +5.1
QZH pmax pmax
comp=Z,160nm,1.0s
QZH LR LR
comp=N,670nm,16.2s
QZH LR LR
comp=E,400nm,13.5s
QZH LR LR
comp=Z,720nm,25.0s
Y12C Blythe 80.60 47 ⇑P **P** 09 52 29.3 0.0
baz=81
YBH Yreka Blue Hor 80.65 37 *e*P **P** 09 52 29.6 +0.1
comp=Z,16nm,0.9s
YBH Yreka Blue Hor 80.65 37 P **P** 09 52 29.9 +0.3
comp=Z,14nm,0.8s,baz=148,slow=2.6,SNR=20
TUQ Turquoise Moun 80.68 45 ⇓P **P** 09 52 29.9 -0.1
baz=81,SNR=5.2
FURC Furnace Creek, 80.71 44 ⇓P **P** 09 52 29.7 -0.1
baz=81,SNR=9.7
GRAC Grapevine Rang 80.72 43 ⇓P **P** 09 52 30.3 +0.3
baz=81,SNR=9.6
WCN Washoe City 80.72 40 *e*P **P** 09 52 30.0 -0.1
WCN pmax pmax
comp=Z,33nm,1.2s
WCN Washoe City 80.72 40 *e*P **P** 09 52 30.0 -0.1
comp=Z,33nm,1.2s
SHOC Shoshone 80.73 44 ⇑P **P** 09 52 29.9 -0.1
baz=81,SNR=10.0
BEKR Beckworth 80.73 39 *e*P **P** 09 52 29.4 -0.7
comp=Z,12nm,1.2s
NVAR Mina Array Bea 81.03 41 P **P** 09 52 31.9 0.0
NVAR Mina Array Bea 81.03 41 P **P** 09 52 31.9 0.0
comp=Z,17nm,0.8s,baz=222,slow=9.0,SNR=80
KSRS Kora Array 81.08 317 P **P** 09 52 33.0 +1.3
comp=Z,15nm,1.0s,baz=140,slow=5.9,SNR=62
KSAR Wonju Array Be 81.10 317 P **P** 09 52 33.0 +1.2
HUMO Hull Mountain 81.11 36 *e*P **P** 09 52 32.2 +0.3
comp=Z,25nm,1.2s
NV11 Mina Array Sit 81.13 42 *e*P **P** 09 52 32.1 -0.2
NEE2 Needles Airpor 81.14 46 ⇑P **P** 09 52 32.5 +0.3
baz=81
PDMCI Parker Dam,Lak 81.18 47 ⇓P **P** 09 52 32.5 0.0
baz=81,SNR=10
Y14A Wickenburg 81.74 48 ⇑P **P** 09 52 35.3 -0.1
baz=82,SNR=17
W13A Hualapai Mount 81.82 46 ⇑P **P** 09 52 36.1 +0.1
baz=82,SNR=16
INCN Inchon 81.91 317 *e*P **P** 09 52 36.8 +0.6
comp=Z,31nm,0.9s
MOD Modoc 82.10 38 *e*P **P** 09 52 37.6 +0.3
comp=Z,32nm,1.3s
VLA Vladivostok 82.41 324 ⇓*i*P **P** 09 52 37.5 -1.1
VLA S **S** 10 02 47.4 -2.1
VLA pmax pmax
comp=Z,33nm,0.9s
R11A Troy Canyon, C 82.66 43 ⇓P **P** 09 52 40.3 -0.1
baz=83
MYKOM Kota Tinggi 82.90 275 P **P** 09 52 43.5 +1.6
KDAK Kodiak Island 82.92 12 P **P** 09 52 41.2 +0.3
KDAK Kodiak Island 82.92 12 P **P** 09 52 41.2 +0.3
comp=Z,14nm,0.9s,baz=214,slow=2.4,SNR=6.0
319A Douglas 82.92 52 ⇓P **P** 09 52 42.1 +0.3
baz=83,SNR=13
BMN Battle Mountai 82.94 40 *e*P **P** 09 52 41.9 +0.1
BMN pmax pmax
comp=Z,48nm,1.3s
BMN Battle Mountai 82.94 40 *e*P **P** 09 52 41.9 +0.1
comp=Z,48nm,1.3s
USRK Ussuriysk Arra 83.07 324 P **P** 09 52 43.8 +1.7
comp=Z,25nm,0.9s,baz=122,slow=3.4,SNR=60
X16A Lo Mia Camp, P 83.08 48 ⇑P **P** 09 52 43.1 +0.5
baz=83,SNR=35
WVOR Wild Horse Val 83.39 38 *e*P **P** 09 52 43.7 -0.2
WVOR pmax pmax
comp=Z,29nm,1.1s
WVOR Wild Horse Val 83.39 38 *e*P **P** 09 52 43.7 -0.2
comp=Z,30nm,1.1s
320A Kipp Ranch, An 83.44 52 ⇑P **P** 09 52 45.1 +0.6
baz=84,SNR=17
KGM Kluang 83.47 275 P **P** 09 52 46.8 +1.9
CCUT Cedar City 83.60 45 *e*P **P** 09 52 45.6 +0.4
comp=Z,30nm,1.0s
VIPM Ingram Point 83.65 36 P **P** 09 52 45.2 -0.1
VIPM Ingram Point 83.65 36 P **P** 09 52 45.2 -0.1
U15A North Rim 83.65 46 ⇓P **P** 09 52 46.2 +0.6
baz=84,SNR=54
ARUT Antelope Range 83.69 44 *e*P **P** 09 52 45.8 +0.2
ARUT pmax pmax
comp=Z,29nm,1.1s
ARUT Antelope Range 83.69 44 *e*P **P** 09 52 45.8 +0.2
comp=Z,29nm,1.1s
VFP Flag Point 83.74 35 P **P** 09 52 46.0 +0.3
WUAZ Wupatki 83.74 47 *e*P **P** 09 52 46.3 +0.3
comp=Z,28nm,1.2s
WUAZ *e*PP **PP** 09 55 58.4 -1.7
WUAZ Wupatki 83.74 47 ⇑P **P** 09 52 46.4 +0.5
baz=84,SNR=17
220A Playas Peak, P 83.75 51 ⇑P **P** 09 52 46.4 +0.4
baz=84,SNR=24
NLWA Neilton Lookou 83.95 32 *e*P **P** 09 52 47.0 +0.5
comp=Z,45nm,1.0s
120A U Bar Ranch, L 84.01 51 ⇓P **P** 09 52 48.0 +0.6
baz=84,SNR=16
NJ2 Nanjing 84.08 308 *e*P **P** 09 52 49.4 +1.9
NJ2 pP **pP** 09 53 07.0 +0.9
NJ2 SKS **S** 10 03 05.0 -1.9
NJ2 S **SKKSac** 10 03 11.0 +0.6
NJ2 pmax pmax
comp=Z,160nm,1.2s
NJ2 pmax pmax
comp=Z,200nm,6.8s
NJ2 LR LR
comp=N,780nm,21.0s
NJ2 LR LR
comp=E,760nm,21.4s
NJ2 LR LR
comp=Z,490nm,27.4s
X18A Snowflake 84.16 49 ⇓P **P** 09 52 48.6 +0.4
baz=84,SNR=14
ELK Elko 84.33 41 *e*P **P** 09 52 48.9 0.0
comp=Z,18nm,1.1s
221A Mesquite Ranch 84.34 52 ⇑P **P** 09 52 49.4 +0.3
baz=84
Z20A Nine Sixteen R 84.35 50 ⇑P **P** 09 52 49.7 +0.6
baz=84,SNR=28
HABR Khabarovsk 84.47 329 *ce*P **P** 09 52 48.0 -1.1
HABR *e**PP **pP** 09 53 07.0 -0.7
HABR 09 56 03.2
HABR *i* 09 58 01.8
HABR *e*S S 10 03 03.9 -6.1
HABR SS **SS** **10 08 39.8 -2.7**
HABR *e*SSS SSS 10 12 10.2
HABR pmax pmax
comp=Z,68nm,1.1s
HABR MLR MLR
comp=Z,153nm,18.0s
LON Longmire 84.53 33 *e*P **P** 09 52 49.1 -0.4
LON pmax pmax
comp=Z,18nm,0.9s
LON Longmire 84.53 33 *e*P **P** 09 52 49.1 -0.4
comp=Z,18nm,0.9s
SYO Syowa Base 84.60 192 ⇓*i*P **P** 09 52 50.0 +0.4
SYO Syowa Base 84.60 192 ⇑*i*pP pP 09 53 09.6 +1.4
121A Cookes Peak, D 84.61 51 ⇓P **P** 09 52 51.0 +0.5
baz=85,SNR=9.4
RCM Mount Rainier- 84.63 33 P **P** 09 52 50.7 +0.3
W18A Petrified Fore 84.63 48 ⇓P **P** 09 52 50.9 +0.4
baz=85,SNR=9.2
MDJ Mudanjiang 84.64 324 P **P** 09 52 51.3 +1.2
MDJ pP **pP** 09 53 08.0 -0.7
MDJ PP **PP** 09 56 05.9 -1.1
MDJ S **S** 10 03 14.6 +2.6
MDJ pmax pmax
comp=Z,29nm,0.9s
MDJ pmax pmax
comp=Z,230nm,6.8s
MDJ LR LR
comp=N,190nm,17.6s
MDJ LR LR
comp=E,280nm,18.8s
MDJ LR LR
comp=Z,280nm,16.4s
MDJ Mudanjiang 84.64 324 *e*P **P** 09 52 51.8 +1.7
comp=Z,27nm,0.9s
TRW Toppenish Ridg 84.87 34 P **P** 09 52 51.8 +0.6
222A Williams Famil 84.88 52 ⇑P **P** 09 52 52.1 +0.3
baz=85,SNR=7.2
MVU Marysvale 84.89 44 *e*P **P** 09 52 52.3 +0.5
comp=Z,33nm,1.3s
MVU *e*PP **PP** 09 56 06.5 -3.0
MSU Marysvale 84.92 44 *e*P **P** 09 52 52.5 +0.6
MSU pmax pmax
comp=Z,21nm,0.9s
MSU Marysvale 84.92 44 *e*P **P** 09 52 52.5 +0.6
comp=Z,21nm,0.9s
Y20A Horse Springs, 84.92 50 ⇑P **P** 09 52 53.0 +0.9
baz=85,SNR=48
KTGM Kuala Trenggan 84.97 278 P **P** 09 52 54.8 +2.4
SNAA Sanae 85.05 177 *e*P **P** 09 52 52.7 +0.8
comp=Z,47nm,1.4s
PLCA Paso Flores 85.06 132 P **P** 09 52 53.4 +0.8
PLCA Paso Flores 85.06 132 P **P** 09 52 53.4 +0.8
comp=Z,5.2nm,1.0s,baz=215,slow=7.6,SNR=5.1
Z21A St. Cloud Mine 85.10 51 ⇓P **P** 09 52 53.5 +0.5
baz=85
X20A Quemado 85.18 49 ⇓P **P** 09 52 54.1 +0.8
baz=85,SNR=32
122A Conniff Cattle 85.26 51 ⇓P **P** 09 52 54.3 +0.6
baz=85
223A Chaparral, Ant 85.32 52 ⇑P **P** 09 52 54.5 +0.5
baz=86
RSO Redoubt South 85.41 11 *e*P **P** 09 52 52.3 -1.5
comp=Z,33nm,1.1s
HAWA Hanford 85.46 35 *e*P **P** 09 52 54.0 -0.1
comp=Z,69nm,1.4s
Y21A Point of Rocks 85.47 50 ⇓P **P** 09 52 55.7 +0.9
baz=86,SNR=38
DUG Dugway 85.49 43 *e*P **P** 09 52 54.7 +0.1
DUG pmax pmax
comp=Z,11nm,1.5s
DUG Dugway 85.49 43 *e*P **P** 09 52 54.7 +0.1
comp=Z,11nm,1.5s
DUG Dugway 85.49 43 ⇓P **P** 09 52 54.4 -0.2
baz=86
W20A Ramah 85.49 49 ⇓P **P** 09 52 55.6 +0.7
baz=86,SNR=57
FRIM Kepong 85.51 275 P **P** 09 52 57.1 +1.9
GBB Gable Butte 85.55 35 P **P** 09 52 55.0 +0.5
Z22A Elephant Butte 85.58 51 ⇑P **P** 09 52 55.9 +0.6
baz=86,SNR=29
MFID Camas Ranch 85.61 39 *e*P **P** 09 52 54.9 -0.2
comp=Z,29nm,1.3s
MFID Camas Ranch 85.61 39 ⇑P **P** 09 52 54.9 -0.2
baz=86
X21A Alamocita Cree 85.62 50 ⇑P **P** 09 52 56.0 +0.5
baz=86,SNR=32
BMO Blue Mountains 85.67 37 *e*P **P** 09 52 54.5 -0.8
BMO pmax pmax
comp=Z,26nm,1.3s
BMO Blue Mountains 85.67 37 *e*P **P** 09 52 54.5 -0.8
comp=Z,26nm,1.3s
SEW Seward 85.68 12 *e*P **P** 09 52 54.4 -0.4
comp=Z,25nm,1.0s
324A Moseley Ranch, 85.72 53 ⇓P **P** 09 52 55.8 -0.2
baz=86,SNR=34
425A Indio Mountain 85.76 54 ⇑P **P** 09 52 56.3 +0.1
baz=86,SNR=40
123A Bell Site, Whi 85.76 52 ⇑P **P** 09 52 56.6 +0.4
baz=86
626A Big Bend Ranch 85.79 55 ⇓P **P** 09 52 56.5 +0.2
baz=86,SNR=42
Q16A Castle Valley 85.79 44 ⇑P **P** 09 52 56.7 +0.5
baz=86
V20A Brimhall 85.87 48 ⇓P **P** 09 52 56.8 +0.1
baz=86,SNR=9.3
S18A Hurst Farm, Bl 85.87 46 ⇓P **P** 09 52 56.7 -0.1
baz=86
MNTX Cornudas Mount 85.93 53 *e*P **P** 09 52 56.7 -0.1
comp=Z,45nm,1.4s
Y22A Socorro 85.93 50 ⇓P **P** 09 52 57.5 +0.4
baz=86,SNR=21
224A Cornudas Mount 86.02 53 ⇑P **P** 09 52 57.7 +0.3
baz=86,SNR=33
TXAR Lajitas Array 86.03 56 P **P** 09 52 57.5 0.0
TXAR Lajitas Array 86.03 56 P **P** 09 52 57.5 0.0
comp=Z,17nm,0.9s,baz=211,slow=6.7,SNR=137
TXAR LR LR 10 25 07.0
comp=Z,268nm,18.1s,baz=25,slow=31
Y22D IRIS PASSCAL I 86.04 50 ⇑P **P** 09 52 57.9 +0.4
baz=86
LENM Lemitar 86.05 50 *e*P **P** 09 52 58.3 +0.7
comp=Z,23nm,1.2s
LAZ Ladron 86.05 50 *e*P **P** 09 52 58.0 +0.4
comp=Z,20nm,1.4s
325A Bean Ranch, Si 86.06 54 ⇑P **P** 09 52 57.5 -0.2
baz=86,SNR=44
526A Mary Lane Ranc 86.07 55 ⇑P **P** 09 52 57.8 +0.1
baz=86,SNR=48
W21A San Fidel 86.08 49 ⇑P **P** 09 52 58.2 +0.4
baz=86
Z23A Rita Site, Whi 86.11 51 ⇑P **P** 09 52 58.3 +0.4
baz=86
MPU Maple Canyon 86.12 43 *e*P **P** 09 52 58.3 +0.4
comp=Z,14nm,1.0s
U20A Newcomb 86.15 48 ⇑P **P** 09 52 58.2 +0.2
baz=86
X22A Bernardo 86.20 50 ⇓P **P** 09 52 59.3 +1.0
baz=86,SNR=12
I12A Atlanta 86.24 39 ⇓P **P** 09 52 58.4 +0.1
baz=86
BNM Barren Site 86.28 50 *e*P **P** 09 52 59.2 +0.4
comp=Z,21nm,1.3s
627A Terlingua Ranc 86.30 56 ⇑P **P** 09 52 58.9 0.0
baz=86,SNR=44
SRU San Rafael 86.32 45 ⇑P **P** 09 52 58.7 -0.1
baz=86
LPM Los Pinos Moun 86.36 50 *e*P **P** 09 52 59.7 +0.5
comp=Z,36nm,1.4s
124A Stringfield Ra 86.38 52 ⇑P **P** 09 52 59.7 +0.3
baz=86,SNR=21
P17A Butcher Ranch, 86.38 44 ⇓P **P** 09 52 59.2 +0.1
baz=87
426A McDonald Obser 86.42 55 ⇓P **P** 09 52 59.6 0.0
baz=87,SNR=62
HVU Hansel Valley 86.43 41 *e*P **P** 09 52 59.2 -0.1
HVU pmax pmax
comp=Z,37nm,1.5s
HVU Hansel Valley 86.43 41 *e*P **P** 09 52 59.1 -0.1
comp=Z,37nm,1.5s
V21A Milan 86.45 49 ⇓P **P** 09 52 59.9 +0.3
baz=87
CN2 Changchun 86.46 321 ⇓P **P** 09 53 00.0 +0.9
CN2 *e*pP **pP** 09 53 20.6 +2.8
CN2 *e*S **S** 10 03 28.1 -1.7
CN2 SS **SS** 10 09 12.8 +0.8
CN2 pmax pmax
comp=Z,40nm,1.1s
CN2 pmax pmax
comp=Z,300nm,3.0s
CN2 LR LR
comp=N,300nm,19.0s
CN2 LR LR
comp=E,300nm,19.0s
CN2 LR LR
comp=Z,200nm,19.0s
527A Woodward Ranch 86.47 55 ⇑P **P** 09 52 59.5 -0.2
baz=87,SNR=48
HLID Hailey 86.51 39 *e*P **P** 09 52 59.1 -0.6
comp=Z,16nm,1.4s
HLID Hailey 86.51 39 ⇑P **P** 09 52 59.7 0.0
baz=87
OD2 Odessa Site #2 86.54 34 P **P** 09 52 59.7 +0.3
225A Deer Hill, Car 86.54 53 ⇓P **P** 09 53 00.1 0.0
baz=87,SNR=19
IPM Ipoh 86.55 276 *e*P **P** 09 53 01.7 +1.3
comp=Z,26nm,0.8s
IPM Ipoh 86.55 276 P **P** 09 53 02.3 +1.9
JLU Jordanelle 86.57 43 *e*P **P** 09 52 59.7 -0.4
comp=Z,48nm,1.8s

KLR	Kul'dur	86.57	328	eP	P	09 52 57.0	-2.5
KLR				pmax	pmax		
	comp=Z,38nm,1.4s						
Y23A	Lovelace Mesa,	86.58	51	⇓P	P	09 53 00.2	0.0
	baz=87,SNR=21						
W22A	Albuquerque	86.59	50	⇑P	P	09 53 00.7	+0.4
	baz=87						
MVCO	Mesa Verde	86.61	47	eP	P	09 53 00.3	0.0
	comp=Z,12nm,1.4s						
MVCO	Mesa Verde	86.61	47	P	P	09 53 00.5	+0.2
	baz=87						
WHN	Wuhan	86.63	305	P	P	09 53 02.1	+1.8
WHN				pmax	pmax		
	comp=Z,67nm,1.0s						
WHN				pmax	pmax		
	comp=Z,630nm,5.5s						
WHN				LR	LR		
	comp=N,1µm,18.2s						
WHN				LR	LR		
	comp=E,1µm,20.6s						
WHN				LR	LR		
	comp=Z,1µm,17.1s						
628A	Black Gap, Mar	86.70	56	⇑P	P	09 53 00.7	0.0
	baz=87,SNR=37						
U21A	Nageezi	86.76	48	⇓P	P	09 53 01.5	+0.4
	baz=87,SNR=25						
Z24A	Sheeppen Canyo	86.77	52	⇑P	P	09 53 01.4	+0.3
	baz=87						
326A	Caldwell Ranch	86.77	54	⇓P	P	09 53 00.7	-0.4
	baz=87,SNR=20						
ANMO	Albuquerque	86.82	50	eP	P	09 53 01.4	0.0
	comp=Z,46nm,1.5s						
ANMO	Albuquerque	86.82	50	P	P	09 53 02.0	+0.7
	comp=Z,11nm,1.0s,baz=216,slow=5.5,SNR=30						
X23A	Hourglass Bar	86.82	50	⇑P	P	09 53 01.7	+0.3
	baz=87						
H12A	Diamond D Ranc	86.86	38	⇑P	P	09 53 00.9	-0.4
	baz=87						
GAMB	Gambell	86.88	1	eP	P	09 53 01.3	+0.6
	comp=Z,49nm,1.0s						
I13A	Wildhorse Cree	86.90	39	⇓P	P	09 53 01.3	-0.3
	baz=87						
GDL2	Guadalupe Moun	86.93	53	eP	P	09 53 02.0	+0.1
	comp=Z,25nm,1.0s						
125A	Gardner Draw,	86.94	53	⇓P	P	09 53 02.0	+0.1
	baz=87,SNR=20						
G12A	Big Creek, Yel	86.94	38	⇑P	P	09 53 01.3	-0.4
	baz=87						
427A	Hayter Ranch,	86.97	55	⇓P	P	09 53 02.3	+0.2
	baz=87,SNR=91						
EFI	East Falkland	87.00	146	⇑eP	P	09 53 02.9	+1.1
EFI				pmax	pmax		
	comp=Z,138nm,1.7s						
V22A	San Miguel Ran	87.00	49	⇓P	P	09 53 02.4	+0.1
	baz=87						
226B	Tecolote Peak,	87.01	53	⇓P	P	09 53 02.1	-0.2
	baz=87,SNR=35						
Y24A	Capitan	87.02	51	⇓P	P	09 53 02.5	+0.1
	baz=87,SNR=44						
S20A	Disappointment	87.04	47	⇓P	P	09 53 02.5	0.0
	baz=87						
PV01	Paradox Valley	87.06	46	eP	P	09 53 02.3	-0.2
	comp=Z,488nm,0.9s						
HWUT	Hardware Ranch	87.07	42	eP	P	09 53 01.5	-0.9
	comp=Z,7.5nm,0.9s						
528A	Cox Ranch, San	87.10	56	⇑P	P	09 53 02.7	-0.1
	baz=87,SNR=52						
PMR	Palmer	87.12	12	eP	P	09 53 01.1	-0.8
PMR				pmax	pmax		
	comp=Z,41nm,1.3s						
PMR	Palmer	87.12	12	eP	P	09 53 01.1	-0.8
	comp=Z,41nm,1.3s						
W23A	Werner Place,	87.14	50	⇑P	P	09 53 03.0	0.0
	baz=87,SNR=11						
WRAK	Wrangell Islan	87.14	22	eP	P	09 53 00.2	-1.9
	comp=Z,39nm,1.4s						
T21A	Navajo Lake	87.14	48	⇓P	P	09 53 02.9	-0.1
	baz=87						
327A	Balmorhea Ranc	87.16	54	⇑P	P	09 53 02.8	-0.1
	baz=87						
H13A	Challis	87.21	38	⇓P	P	09 53 02.8	-0.2
	baz=87						
Z25A	Roswell	87.21	52	⇓P	P	09 53 03.4	+0.2
	baz=87						
R20A	Redvale	87.22	46	⇓P	P	09 53 02.9	-0.3
	baz=87						
KULM	Kulim	87.22	277	P	P	09 53 05.7	+2.1
U22A	Llaves	87.28	48	⇑P	P	09 53 03.4	-0.3
	baz=88						
I14A	Mackay	87.29	39	⇑P	P	09 53 03.4	0.0
	baz=88						
CLNB	Carlsbad	87.31	53	P	P	09 53 03.8	0.0
	comp=Z,2.7nm,0.8s						
S21A	Coal Bank Pass	87.33	47	⇓P	P	09 53 03.6	-0.4
	baz=88						
X24A	Lazy VL Ranch,	87.34	51	⇓P	P	09 53 03.7	-0.3
	baz=88						
F12A	Elk City	87.37	37	⇑P	P	09 53 03.3	-0.4
	baz=88						
DIV	Divide	87.38	14	eP	P	09 53 02.8	-0.5
	comp=Z,31nm,1.1s						
126A	Clayton Basin,	87.40	53	⇓P	P	09 53 03.9	-0.2
	baz=88,SNR=10						
V23A	Ortiz Mt. (NFS	87.42	49	⇓P	P	09 53 05.0	+0.7
	baz=88,SNR=9.3						
428A	Kincaid Ranch,	87.45	55	⇓P	P	09 53 04.6	+0.2
	baz=88,SNR=28						
SML	Sawmill	87.47	12	eP	P	09 53 03.6	-0.1
SML				pmax	pmax		
	comp=Z,15nm,1.9s						
SML	Sawmill	87.47	12	eP	P	09 53 03.6	-0.1
	comp=Z,15nm,1.9s						
529A	Stev Forest Ra	87.51	56	⇓P	P	09 53 04.2	-0.5
	baz=88,SNR=26						
G13A	Cobalt	87.54	38	⇓P	P	09 53 04.1	-0.4
	baz=88						
Y25A	Mesa, Roswell	87.55	51	⇑P	P	09 53 04.5	-0.4
	baz=88						
M17A	Scullys Gap (B	87.55	43	⇑P	P	09 53 04.3	-0.5
	baz=88						
T22A	Edith	87.58	48	⇑P	P	09 53 05.0	-0.1
	baz=88						
P19A	Cripple Cowboy	87.60	45	⇓P	P	09 53 04.5	-0.6
	baz=88,SNR=5.3						
227A	Bennet, Jal	87.62	54	⇑P	P	09 53 04.8	-0.4
	baz=88						
PNL	Peninsula	87.64	17	eP	P	09 53 05.0	+0.5
	comp=Z,26nm,1.0s						
328A	Wristen Ranch,	87.68	54	⇓P	P	09 53 04.8	-0.6
	baz=88,SNR=12						
Q20A	Ridgley Place,	87.68	46	⇓P	P	09 53 05.1	-0.3
	baz=88						
W24A	Lazy 6 Ranch,	87.69	50	⇓P	P	09 53 05.4	-0.2
	baz=88,SNR=16						
U23A	El Rito	87.72	49	⇑P	P	09 53 05.7	0.0
	baz=88,SNR=13						
Z26A	Caprock	87.74	52	⇓P	P	09 53 05.5	-0.2
	baz=88						
H14A	Leadore	87.75	39	⇓P	P	09 53 05.5	-0.1
	baz=88						
PSI	Prapat	87.81	274	P	P	09 53 07.1	+0.5
	baz=88,SNR=18						
R21A	Cimarron	87.86	46	⇑P	P	09 53 06.3	-0.1
	baz=88,SNR=6.5						
X25A	Clemmons Ranch	87.87	51	⇑P	P	09 53 06.1	-0.4
	baz=88						
O19A	Miners Draw (B	87.88	44	⇓P	P	09 53 06.0	-0.3
	baz=88						
I15A	Monteview	87.90	40	⇓P	P	09 53 06.2	-0.1
	baz=88						
127A	Arkansas Junct	87.90	53	⇑P	P	09 53 05.9	-0.6
	baz=88,SNR=8.5						
F13A	Darby	87.90	37	⇓P	P	09 53 05.7	-0.5
	baz=88						
M18A	Lyman	87.90	43	⇓P	P	09 53 06.0	-0.5
	baz=88,SNR=16						
P20A	De Beque	87.91	45	⇓P	P	09 53 06.2	-0.4
	baz=88,SNR=15						
NEW	Newport	87.92	34	eP	P	09 53 05.7	-0.5
	comp=Z,14nm,1.1s						
NEW	Newport	87.92	34	⇓P	P	09 53 05.7	-0.5
	baz=88						
429A	Davenport Ranc	88.00	55	⇓P	P	09 53 06.6	-0.4
	baz=88,SNR=95						
S22A	4UR Ranch, Cre	88.02	47	⇑P	P	09 53 07.4	+0.1
	baz=88,SNR=12						
V24A	Rampart Ranch,	88.05	50	⇓P	P	09 53 07.6	+0.3
	baz=88,SNR=14						
G14A	Jackson	88.06	38	⇓P	P	09 53 06.7	-0.5
	baz=88						
Q21A	Lamborn Mesa,	88.09	46	⇓P	P	09 53 07.1	-0.3
	baz=88						
D12A	Red Ives Fores	88.11	36	⇓P	P	09 53 06.4	-0.7
	baz=88						
H15A	Lima	88.17	39	⇑P	P	09 53 07.4	-0.2
	baz=88						
MCMT	McKenzie Canyo	88.17	39	eP	P	09 53 07.5	-0.2
	comp=Z,3.7nm,1.2s						
Y26A	Elida	88.17	52	⇑P	P	09 53 07.6	-0.3
	baz=88						
T23A	Casias Ranch,	88.19	48	⇓P	P	09 53 07.9	-0.1
	baz=88						
228A	UT Block 9, Go	88.19	54	⇓P	P	09 53 07.6	-0.3
	baz=88,SNR=6.3						
L18A	Fontenelle, Gr	88.20	42	⇑P	P	09 53 07.1	-0.7
	baz=88						
530A	J-C Ranch, Com	88.20	56	⇑P	P	09 53 07.6	-0.3
	baz=88,SNR=16						
Z27A	Tatum	88.32	53	⇑P	P	09 53 08.0	-0.5
	baz=88,SNR=9.9						
R22A	Saguache, Gunn	88.32	47	⇓P	P	09 53 08.7	0.0
	baz=88						
329A	Wagon Wheel Ra	88.35	55	⇓P	P	09 53 08.2	-0.4
	baz=88,SNR=11						
O20A	White River Ci	88.35	45	⇓P	P	09 53 08.1	-0.5
	baz=88						
W25A	X Bar L Ranch,	88.36	50	⇓P	P	09 53 08.3	-0.4
	baz=88						
E13A	Victor	88.37	37	⇓P	P	09 53 07.9	-0.5
	baz=89						
I16A	Newdale	88.42	40	⇓P	P	09 53 08.4	-0.4
	baz=89						
631A	Perdido Creek	88.44	57	⇓P	P	09 53 08.6	-0.5
	baz=89,SNR=32						
DCID1	Drake Creek	88.44	41	eP	P	09 53 09.4	+0.5
C12B	Naegeli Ranch,	88.44	35	⇑P	P	09 53 08.2	-0.5
	baz=89,SNR=11						
X26A	CR and CF Fran	88.49	51	⇓P	P	09 53 09.0	-0.3
	baz=89,SNR=13						
M19A	Rock Springs	88.51	43	⇓P	P	09 53 08.8	-0.6
	baz=89,SNR=6.7						
128A	Castleberry Fa	88.52	53	⇑P	P	09 53 09.2	-0.2
	baz=89,SNR=8.0						
TPAW	Teton Pass	88.52	41	eP	P	09 53 09.6	+0.2
	comp=Z,8.3nm,1.0s						
P21A	Newcastle	88.54	46	⇑P	P	09 53 08.9	-0.7
	baz=89						
Q22A	Crested Butte,	88.55	46	⇓P	P	09 53 09.7	0.0
	baz=89,SNR=9.0						
V25A	Rancho No Teng	88.56	50	⇑P	P	09 53 09.6	-0.1
	baz=89						
430A	Baggett Ranch,	88.58	56	⇓P	P	09 53 09.0	-0.7
	baz=89,SNR=8.0						
G15A	Dillon	88.58	39	⇑P	P	09 53 08.8	-0.7
	baz=89						
732A	Laxson Ranch,	88.59	58	⇓P	P	09 53 09.3	-0.5
	baz=89,SNR=19						
D13A	Huson	88.62	36	⇑P	P	09 53 08.9	-0.6
	baz=89						
SNOW	Snow King Moun	88.62	41	eP	P	09 53 10.0	+0.2
	comp=Z,14nm,0.9s						
SKAG	Skagway	88.62	19	eP	P	09 53 10.0	+0.9
	comp=Z,59nm,1.3s						
DLMT	Dillon	88.63	39	eP	P	09 53 09.5	-0.2
	comp=Z,15nm,1.4s						
TRF	Thorofare Moun	88.63	11	eP	P	09 53 07.7	-1.6
	comp=Z,96nm,1.4s						
Y27A	Causey	88.63	52	⇑P	P	09 53 09.4	-0.5
	baz=89						
SMCO	Snowmass	88.67	46	eP	P	09 53 10.0	-0.4
	comp=Z,7.5nm,0.9s						
229A	Bryant Ranch,	88.70	54	⇓P	P	09 53 09.8	-0.5
	baz=89						
L19A	Farson	88.72	43	⇓P	P	09 53 10.0	-0.3
	baz=89						
N20A	Spence Gulch,	88.72	44	⇓P	P	09 53 09.9	-0.5
	baz=89,SNR=14						
MSO	Missoula	88.74	37	⇓P	P	09 53 09.3	-0.8
	baz=89						
E14A	Clinton	88.74	37	⇑P	P	09 53 09.5	-0.7
	baz=89,SNR=9.5						
IMW	Indian Meadow	88.75	40	eP	P	09 53 09.9	-0.6
	comp=Z,7.2nm,1.0s						
TNA	Tin City	88.79	3	eP	P	09 53 09.9	+0.2
	comp=Z,38nm,1.2s						
W26A	Owens Ranch, T	88.79	51	⇓P	P	09 53 10.2	-0.5
	baz=89						
531A	Rocksprings	88.81	56	⇓P	P	09 53 10.7	-0.1
	baz=89,SNR=28						
B12A	Libby	88.85	35	⇓P	P	09 53 10.3	-0.2
	baz=89						
T24A	Torres, Weston	88.89	49	⇑P	P	09 53 11.3	0.0
	baz=89						
O21A	Pagoda	88.89	45	⇑P	P	09 53 10.9	-0.3
	baz=89						
BSMT	Bassoo Peak	88.90	36	eP	P	09 53 10.2	-0.7
	comp=Z,9.8nm,1.3s						
C13A	Hot Springs	88.91	36	⇓P	P	09 53 10.2	-0.7
	baz=89						
Z28A	Tucker Farm, M	88.91	53	⇓P	P	09 53 11.0	-0.3
	baz=89						
330A	Mertzon	88.91	55	⇑P	P	09 53 10.5	-0.8
	baz=89,SNR=5.8						
SDCO	Great Sand Dun	88.92	48	eP	P	09 53 11.2	-0.3
	comp=Z,4.6nm,1.0s						
R23A	Moffat	88.93	47	⇓P	P	09 53 11.2	-0.3
	baz=89						
BW06	Boulder Array	88.96	42	eP	P	09 53 10.7	-0.7
	comp=Z,6.8nm,1.0s						
MSTX	Muleshoe	88.96	52	⇓P	P	09 53 11.1	-0.4
	baz=89,SNR=13						
PDAR	Pinedale Array	88.96	42	P	P	09 53 10.8	-0.6
PDAR				PP	PP	09 56 38.1	-4.0
PDAR	Pinedale Array	88.96	42	P	P	09 53 10.8	-0.6
	comp=Z,4.9nm,0.9s,baz=217,slow=3.7,SNR=27						
PDAR				PP	PP	09 56 38.1	-4.0
	comp=Z,0.7nm,0.7s,baz=232,slow=7.3,SNR=5.0						
PDAR				LR	LR	10 28 05.9	
	comp=Z,109nm,18.1s,baz=128,slow=32						
U25A	Circle Dot Ran	88.99	49	⇓P	P	09 53 11.6	-0.1
	baz=89						
431A	Sonora	89.00	56	⇑P	P	09 53 11.9	+0.1
	baz=89						
G16A	Moss Hill, Enn	89.01	39	⇑P	P	09 53 11.3	-0.2
	baz=89,SNR=5.8						
H16A	Russell Place,	89.03	40	⇑P	P	09 53 11.8	+0.1
	baz=89						
P22A	Eagle	89.03	46	⇓P	P	09 53 11.8	0.0
	baz=89						
X27A	F and S Farms,	89.05	51	⇓P	P	09 53 12.4	+0.4
	baz=89						
S24A	Houchin Ranch,	89.06	48	⇓P	P	09 53 12.4	+0.3
	baz=89						
632A	Uvalde	89.09	57	⇑P	P	09 53 12.0	-0.1
	baz=89,SNR=20						
PAX	Paxson	89.09	13	eP	P	09 53 10.8	-0.6
PAX				pmax	pmax		
	comp=Z,19nm,1.2s						
PAX	Paxson	89.09	13	eP	P	09 53 10.8	-0.6
	comp=Z,19nm,1.2s						
A12A	Yaak River Ran	89.10	34	⇓P	P	09 53 11.8	+0.1
	baz=89						
SWMT	Swartz Lake	89.11	36	eP	P	09 53 10.8	-1.1
	comp=Z,6.1nm,1.4s						
M20A	Sweetwater, Wa	89.12	44	⇑P	P	09 53 11.8	-0.4
	baz=89						
MCK	McKinley	89.12	11	eP	P	09 53 10.6	-0.8
MCK				pmax	pmax		
	comp=Z,39nm,1.0s						
MCK	McKinley	89.12	11	eP	P	09 53 10.6	-0.8
	comp=Z,39nm,1.0s						
V26A	Tequesquite Ra	89.13	50	⇑P	P	09 53 10.9	-1.4
	baz=89						
D14A	Greenough	89.13	37	⇓P	P	09 53 10.9	-1.1
	baz=89,SNR=14						
N21A	Black Mountain	89.15	44	⇑P	P	09 53 12.0	-0.4
	baz=89,SNR=6.2						
CHMT	Chamberlain Mo	89.17	37	eP	P	09 53 11.7	-0.6
	comp=Z,14nm,1.5s						
230A	Sterling City	89.19	55	⇑P	P	09 53 11.8	-0.7
	baz=89						
E15A	Deer Lodge	89.22	38	⇓P	P	09 53 12.0	-0.5
	baz=89						
SLMT	Seeley Lake	89.23	37	eP	P	09 53 11.4	-1.1
	comp=Z,17nm,1.5s						
H17A	Grant Village	89.25	40	⇓P	P	09 53 12.9	+0.1
	baz=90						
W27A	Bowe Ranch, En	89.28	51	⇓P	P	09 53 12.8	-0.1
	baz=89						
532A	Rocksprings	89.28	57	⇓P	P	09 53 12.8	-0.3
	baz=89,SNR=51						
Q23A	Hartsel	89.29	47	⇑P	P	09 53 13.0	-0.2
	baz=90						
L20A	Wamsutter	89.30	43	⇓P	P	09 53 12.8	-0.2
	baz=90,SNR=13						
Y28A	McKinney Farm,	89.31	52	⇑P	P	09 53 12.7	-0.5
	baz=90						
I18A	Diamond G Ranc	89.32	41	⇓P	P	09 53 12.6	-0.6
	baz=90						
BOZ	Bozeman (W)	89.35	39	eP	P	09 53 13.0	-0.1
BOZ				pmax	pmax		
	comp=Z,15nm,1.3s						
BOZ	Bozeman (W)	89.35	39	eP	P	09 53 13.0	-0.1
	comp=Z,15nm,1.3s						
B13A	Whitefish	89.38	35	⇑P	P	09 53 11.6	-1.4
	baz=90						
Z29A	Hungry Hill Ra	89.40	53	⇓P	P	09 53 12.2	-1.4
	baz=90						
C14A	Swan Lake	89.41	36	⇓P	P	09 53 11.9	-1.3
	baz=90						
K19A	Absolon Red Bu	89.43	42	⇓P	P	09 53 13.1	-0.5
	baz=90						
F16A	Kennard Place,	89.43	39	⇓P	P	09 53 13.1	-0.3
	baz=90,SNR=7.4						
MENT	Mentasta	89.43	14	eP	P	09 53 13.0	+0.1
331A	San Angelo	89.43	55	⇑P	P	09 53 12.8	-0.8
	baz=90,SNR=7.7						
R24A	Sanders Place,	89.43	48	⇓P	P	09 53 13.7	0.0
	baz=90						
U26A	Atchley Ranch,	89.45	50	⇓P	P	09 53 13.8	-0.1
	baz=90						
O22A	Kremmling	89.47	45	⇑P	P	09 53 13.9	-0.1
	baz=90						
DLBC	Dease Lake	89.50	22	eP	P	09 53 13.9	+0.5
JCT	Junction City	89.53	56	eP	P	09 53 13.7	-0.5
JCT				pmax	pmax		
	comp=Z,63nm,1.5s						
JCT	Junction City	89.53	56	eP	P	09 53 13.7	-0.5
	comp=Z,63nm,1.5s						
JCT	Junction City	89.53	56	⇓P	P	09 53 13.5	-0.7
	baz=90,SNR=13						
J19A	Crowheart	89.54	42	⇑P	P	09 53 13.3	-0.7
	baz=90,SNR=6.3						
S25A	Robets Cordova	89.61	48	⇑P	P	09 53 14.7	+0.1
	baz=90						
130A	Snyder	89.63	54	⇓P	P	09 53 14.8	+0.2
	baz=90						
X28A	Dimmitt	89.64	52	⇓P	P	09 53 14.4	-0.3
	baz=90						
K20A	Yellowstone Ra	89.65	42	⇑P	P	09 53 14.1	-0.5
	baz=90						
D15A	Lincoln	89.65	37	⇑P	P	09 53 14.0	-0.5
	baz=90,SNR=9.1						
M21A	Separation Pea	89.70	44	⇑P	P	09 53 15.0	0.0
	baz=90						
Y29A	Porterfield Fa	89.71	53	⇓P	P	09 53 15.3	+0.3
	baz=90						
432A	Menard	89.71	56	⇓P	P	09 53 14.0	-1.0
	baz=90,SNR=22						
A13A	Flathead Natio	89.75	35	⇑P	P	09 53 15.3	+0.5
	baz=90						
Q24A	Divide	89.78	47	⇓P	P	09 53 16.1	+0.6
	baz=90						
231A	Bronte	89.81	55	⇓P	P	09 53 14.4	-1.0
	baz=90,SNR=10						
E16A	East Helena	89.83	38	⇓P	P	09 53 15.5	+0.3
	baz=90						
Z30A	Sanderson Ranc	89.83	53	⇓P	P	09 53 15.4	-0.1
	baz=90						
HRY	Holter Researc	89.84	38	eP	P	09 53 15.6	+0.2
	comp=Z,6.0nm,0.5s						
N22A	Wattenberg Ran	89.86	45	⇓P	P	09 53 15.6	-0.2
	baz=90						
SEY	Seymchan	89.88	346	⇑iP	P	09 53 15.4	+0.5
L21A	Rawlins	89.89	43	⇓P	P	09 53 15.7	-0.1
	baz=90						
ISCO	Idaho Springs	89.89	46	eP	P	09 53 16.4	+0.4
ISCO	Idaho Springs	89.89	46	eP	P	09 53 16.4	+0.4
	comp=Z,2.0nm,0.9s						
ISCO	Idaho Springs	89.89	46	⇑P	P	09 53 15.9	-0.1
	baz=90						
O23A	Lake Granby, G	89.91	46	⇑P	P	09 53 15.8	-0.3
	baz=90						
T26A	Comanche Natio	89.94	49	⇓P	P	09 53 16.1	-0.1
	baz=90						
H18A	Shoshone NF, C	89.95	40	⇑P	P	09 53 16.3	+0.2
	baz=90						
R25A	Fountain Ranch	89.95	48	⇓P	P	09 53 16.4	+0.3
	baz=90						
X29A	Tulia	89.97	52	⇓P	P	09 53 16.0	-0.1
	baz=90						
332A	Millersview	89.99	56	⇓P	P	09 53 15.4	-0.9
	baz=90,SNR=20						
DOT	Dot Lake	89.99	13	eP	P	09 53 15.4	-0.1
	comp=Z,39nm,1.2s						
I19A	Meeteetse	90.00	41	⇓P	P	09 53 16.5	+0.2
	baz=90						
B14A	Marquette Ranc	90.02	36	⇑P	P	09 53 15.2	-0.9
	baz=90,SNR=29						
C15A	Salmond Ranch,	90.03	37	⇓P	P	09 53 15.5	-0.7
	baz=90,SNR=13						
F17A	Fitzpatrick Pl	90.05	39	⇑P	P	09 53 16.3	-0.1
	baz=90,SNR=10						
M22A	Cedar Creek Ra	90.08	44	⇑P	P	09 53 16.4	-0.3
	baz=90						
WALA	Waterton Lakes	90.09	35	eP	P	09 53 16.0	-0.4
	comp=Z,1.4nm,1.3s						
131A	Roby	90.10	54	⇑P	P	09 53 16.6	-0.1
	baz=90						
BJI	Beijing	90.10	314	P	P	09 53 17.3	+0.8
BJI				S	S	10 04 06.4	+1.9
BJI				SS	SS	10 10 07.0	+1.8
BJI				pmax	pmax		
	comp=Z,16nm,1.6s						
BJI				pmax	pmax		
	comp=Z,240nm,4.8s						
BJI				LR	LR		
	comp=N,280nm,25.5s						
BJI				LR	LR		
	comp=E,280nm,23.7s						
U27A	Thompson Grove	90.11	50	⇓P	P	09 53 16.6	-0.3
	baz=90						
J20A	Shoshoni	90.18	42	⇓P	P	09 53 16.8	-0.3
	baz=90,SNR=11						
D16A	Dana Ranch, Ca	90.19	38	⇑P	P	09 53 16.7	-0.2
	baz=90,SNR=13						
ENH	Enshi	90.20	303	eP	P	09 53 18.7	+1.4
	comp=E,140nm,1.4s						
V28A	Channing	90.21	51	⇑P	P	09 53 17.3	0.0
	baz=90						
N23A	Red Feather La	90.24	45	⇑P	P	09 53 17.3	-0.2
	baz=90						
S26A	Kim	90.25	49	⇑P	P	09 53 17.5	0.0
	baz=90						
E17A	Martinsdale	90.25	38	⇓P	P	09 53 17.5	+0.2
	baz=90						
Y30A	Stafford Cattl	90.28	53	⇓P	P	09 53 17.8	+0.2
	baz=90						
232A	Coleman	90.29	55	⇓P	P	09 53 17.1	-0.6
	baz=90,SNR=17						
A14A	Double T Ranch	90.30	35	⇑P	P	09 53 17.0	-0.4
	baz=90,SNR=37						
K21A	Alcova	90.32	43	⇓P	P	09 53 17.0	-0.8
	baz=90,SNR=7.5						
W29A	Amraillo	90.33	52	⇓P	P	09 53 17.7	-0.1
	baz=90						
H19A	Powell	90.35	41	⇓P	P	09 53 18.3	+0.5
	baz=90						
Q25A	Bedland, Calha	90.36	47	⇓P	P	09 53 18.3	+0.3
	baz=90						
COLA	College	90.36	11	eP	P	09 53 16.4	-0.7
COLA				pmax	pmax		
	comp=Z,41nm,1.0s						
COLA	College	90.36	11	eP	P	09 53 16.4	-0.7
	comp=Z,41nm,1.0s						
G18A	Lazy EL Ranch,	90.36	40	⇓P	P	09 53 18.3	+0.5
	baz=91						
B15A	Bradely Ranch,	90.37	36	⇓P	P	09 53 16.4	-1.3
	baz=91,SNR=14						
ILAR	Eielson Array	90.44	12	P	P	09 53 16.9	-0.6
ILAR				PKKPbc	PKKPbc	10 10 47.0	-1.4
ILAR	Eielson Array	90.44	12	P	P	09 53 16.9	-0.6
	comp=Z,15nm,0.9s,baz=218,slow=5.2,SNR=116						
ILAR				PKKPbc	PKKPbc	10 10 47.0	-1.4

comp=Z,0.5nm,1.0s,baz=344,slow=3.9,SNR=4.4
I20A Worland 90.48 41 ⇑P P 09 53 18.2 -0.1
baz=91
T27A Campo 90.50 50 ⇓P P 09 53 18.5 -0.1
baz=91
L22A Ellis Ranch, M 90.52 44 ⇓P P 09 53 18.7 0.0
baz=91
C16A Fuhringer Ranc 90.52 37 ⇓P P 09 53 17.7 -0.8
baz=91,SNR=19
GCMT Greycliff 90.56 39 *e*P P 09 53 19.1 +0.3
comp=Z,18nm,1.5s
X30A Coker Ranch, T 90.57 53 ⇑P P 09 53 19.0 +0.1
baz=91
J21A Lysite 90.57 42 ⇑P P 09 53 18.7 -0.3
baz=91,SNR=14
Z31A Sharp Cattle R 90.58 54 ⇑P P 09 53 18.3 -0.7
baz=91,SNR=8.8
F18A Big Timber 90.60 39 ⇓P P 09 53 18.8 -0.1
baz=91,SNR=12
R26A Arlington 90.60 48 ⇑P P 09 53 19.0 -0.1
baz=91
ABTX Abilene, Hawle 90.63 55 ⇓P P 09 53 18.7 -0.5
baz=91,SNR=9.2
A15A Johnson Ranch, 90.67 36 ⇑P P 09 53 18.3 -0.8
baz=91,SNR=29
M23A Laramie 90.68 45 ⇓P P 09 53 19.3 -0.2
baz=91
P25A Willow Gulch B 90.71 47 ⇑P P 09 53 19.5 -0.1
baz=91
D17A Six Diamond Ra 90.74 38 ⇑P P 09 53 19.3 -0.2
baz=91,SNR=22
GYA Guiyang 90.75 298 P P 09 53 20.6 +0.6
GYA pP **pP** 09 53 40.3 +1.5
GYA PP **PP** 09 56 59.0 +2.4
GYA SKS **SKSac** 10 03 43.3 -2.9
GYA S **S** 10 04 07.3 -4.0
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.2s
GYA LR LR
comp=N,730nm,18.8s
GYA LR LR
comp=E,650nm,19.0s
GYA LR LR
comp=Z,710nm,18.5s
V29A Stinnett 90.77 51 ⇓P P 09 53 19.5 -0.4
baz=91
K22A Casper 90.78 43 ⇓P P 09 53 19.7 -0.2
baz=91
Y31A Rekieta Farm, 90.79 53 ⇑P P 09 53 19.4 -0.5
baz=91,SNR=6.0
H20A Greybull 90.84 41 ⇓P P 09 53 19.5 -0.5
baz=91
E18A Harlowton 90.85 39 ⇓P P 09 53 20.3 +0.2
baz=91,SNR=13
B16A M & M Farms, S 90.89 36 ⇑P P 09 53 20.3 +0.2
baz=91
I21A Big Trails, Te 90.92 42 ⇑P P 09 53 20.1 -0.3
baz=91
C17A Wharram Farm, 90.97 37 ⇓P P 09 53 20.7 +0.2
baz=91
F19A Roth Farm, Mol 91.02 40 ⇓P P 09 53 20.6 -0.2
baz=91,SNR=8.5
L23A Garrett 91.03 44 ⇑P P 09 53 20.9 -0.2
baz=91
R27A Eads 91.04 48 ⇓P P 09 53 21.0 -0.1
baz=91
Z32A Haskell 91.07 54 ⇑P P 09 53 21.0 -0.3
baz=91,SNR=25
J22A Midwest 91.21 43 ⇓P P 09 53 21.8 0.0
baz=91
M24A Cheyenne 91.26 45 ⇓P P 09 53 22.8 +0.6
baz=91
D18A Linhart Farms, 91.27 38 ⇑P P 09 53 22.2 +0.3
baz=92,SNR=11
P26A Davis Ranch, A 91.29 47 ⇓P P 09 53 22.3 0.0
baz=92
X31A McDonald Ranch 91.31 53 ⇓P P 09 53 21.9 -0.4
baz=92
V30A Spur Ranch, Mi 91.32 51 ⇓P P 09 53 22.3 -0.1
baz=92
B17A L&G Farms, Che 91.32 37 ⇑P P 09 53 21.6 -0.5
baz=92,SNR=10
S28A Manter 91.33 49 ⇑P P 09 53 22.6 +0.2
baz=92
Y32A R-V Farms, Ver 91.41 53 ⇑P P 09 53 22.4 -0.4
baz=92,SNR=8.0
E19A Rath Farm, Rou 91.44 39 ⇓P P 09 53 22.7 0.0
baz=92,SNR=9.0
I22A 9 Mile Ranch, 91.45 42 ⇓P P 09 53 22.5 -0.5
baz=92
F20A Billings 91.46 40 ⇑P P 09 53 22.8 -0.1
baz=92
H21A Big Horn, Sher 91.50 41 ⇓P P 09 53 23.6 +0.5
baz=92
T29A Hugoton 91.54 50 ⇓P P 09 53 23.5 +0.1
baz=92
W31A Holland Ranch, 91.59 52 ⇓P P 09 53 23.2 -0.4
baz=92,SNR=13
EGAK Eagle 91.60 14 *e*P P 09 53 23.0 +0.1
comp=Z,30nm,1.2s
U30A WK&E Inc. Balk 91.70 51 ⇓P P 09 53 24.2 0.0
baz=92
A17A Triple J Farms 91.75 36 ⇓P P 09 53 23.7 -0.4
baz=92,SNR=15
R28A Tribune 91.75 49 ⇓P P 09 53 24.4 +0.1
baz=92
EGMT Eagleton 91.75 37 *e*P P 09 53 24.1 0.0
comp=Z,27nm,1.1s
EGMT Eagleton 91.75 37 ⇑P P 09 53 25.0 +0.9
baz=92
D19A Cripps Ranch, 91.77 39 ⇑P P 09 53 24.3 0.0
baz=92,SNR=12
E20A Meyer Farm, Mu 91.85 39 ⇓P P 09 53 25.3 +0.7
baz=92
S29A Ulysses 91.89 50 ⇑P P 09 53 25.4 +0.4
baz=92
H22A Clearmont 91.90 42 ⇑P P 09 53 25.7 +0.8
baz=92
V31A Spring Creek L 91.93 52 ⇓P P 09 53 25.7 +0.5
baz=92
B18A Beardsley Farm 91.94 37 ⇑P P 09 53 24.6 -0.4
baz=92,SNR=8.4
C19A Slack Wire Ran 91.99 38 ⇓P P 09 53 25.6 +0.3
baz=92,SNR=22
WHTX Lake Whitney 92.00 56 ⇑P P 09 53 25.9 +0.3
baz=92
T30A Plains 92.03 50 ⇑P P 09 53 25.9 +0.2
baz=92
Q28A Sharon Springs 92.08 48 ⇓P P 09 53 26.2 +0.4
baz=92
COLD Coldfoot 92.15 9 *e*P P 09 53 25.3 -0.1
comp=Z,12nm,1.2s
D20A Manuel Ranch, 92.16 39 ⇓P P 09 53 26.0 0.0
baz=92,SNR=12
O27A Beecher Island 92.18 47 ⇓P P 09 53 26.7 +0.4
baz=92
A18A Metzger Ranch, 92.20 37 ⇑P P 09 53 25.8 -0.3
baz=92,SNR=19
U31A Nine Bar Ranch 92.20 51 ⇑P P 09 53 26.8 +0.4
baz=92
BILL Bilibino 92.22 353 ⇓*i*P P 09 53 25.4 -0.3
BILL *i* 09 53 37.1
BILL *e* 09 57 15.9
BILL pmax pmax
comp=Z,23nm,1.2s
BILL Bilibino 92.22 353 *e*P P 09 53 25.6 -0.1
comp=Z,21nm,1.1s
G22A Birney 92.26 41 ⇓P P 09 53 26.5 -0.1
baz=92
XAN Xi'an 92.32 306 S SKSac 10 03 44.0 -11
XAN Xi'an 92.32 306 sS S 10 04 19.3 -5.8
HKT Hockley 92.36 58 *e*P P 09 53 27.3 +0.1
HKT pmax pmax
comp=Z,48nm,1.5s
HKT Hockley 92.36 58 *e*P P 09 53 27.3 +0.1
comp=Z,48nm,1.5s
P28A Saint Francis 92.37 48 ⇓P P 09 53 27.4 +0.2
baz=92
K25A Mack Ranch, Ha 92.45 44 ⇑P P 09 53 28.6 +1.0
baz=93
E21A Keefer Ranch, 92.49 40 ⇓P P 09 53 28.0 +0.5
baz=93,SNR=8.3
C20A Veseth Ranch, 92.57 38 ⇑P P 09 53 28.1 +0.2
baz=93,SNR=13
F22A Rosebud 92.57 41 ⇑P P 09 53 28.4 +0.4
baz=93

T31A Randall Ranch, 92.66 51 ⇓P P 09 53 28.6 +0.1
baz=93
R30A Dighton 92.78 49 ⇑P P 09 53 29.3 +0.2
baz=93
G23A Biddle 92.80 41 ⇑P P 09 53 29.1 0.0
baz=93
D21A La Casta Ranch 92.81 39 ⇑P P 09 53 29.7 +0.7
baz=93
A19A Klindworth Far 92.81 37 ⇓P P 09 53 28.8 -0.2
baz=93,SNR=13
K26A Motz Farm, Whi 92.94 44 ⇓P P 09 53 30.0 +0.3
baz=93
B20A Solberg Farm, 92.95 38 ⇓P P 09 53 29.9 +0.3
baz=93
RFTA Plano 93.03 55 *e*P P 09 53 30.1 -0.2
S31A Mullinville 93.03 50 ⇓P P 09 53 30.5 +0.2
baz=93
F23A Volborg 93.06 41 ⇑P P 09 53 30.0 -0.2
baz=93,SNR=8.1
H24A Dirks Ranch, A 93.08 42 ⇓P P 09 53 29.5 -0.8
baz=93,SNR=5.8
RSSD Black Hills 93.09 43 *e*P P 09 53 30.0 -0.6
RSSD pmax pmax
comp=Z,22nm,1.4s
RSSD Black Hills 93.09 43 *e*P P 09 53 30.0 -0.6
comp=Z,22nm,1.4s
E22A Miles City 93.10 40 ⇓P P 09 53 30.3 -0.1
baz=93,SNR=5.7
A20A Cobblestone Ra 93.24 37 ⇓P P 09 53 31.0 0.0
baz=93,SNR=14
D22A Cohagen 93.33 39 ⇑P P 09 53 31.7 +0.3
baz=94,SNR=14
KMI Kunming 93.40 296 P P 09 53 34.3 +1.9
KMI pP **pP** 09 53 53.1 +1.9
KMI sP **sP** 09 54 00.6 +2.1
KMI PP **PP** 09 57 18.6 +1.0
KMI SKS **SKSac** 10 03 59.8 -1.6
KMI S **S** 10 04 32.6 -2.7
KMI pmax pmax
comp=Z,21nm,1.1s
KMI pmax pmax
comp=Z,190nm,4.9s
KMI LR LR
comp=N,410nm,14.5s
KMI LR LR
comp=E,440nm,20.1s
KMI LR LR
comp=Z,500nm,25.0s
B21A Ellsworth Farm 93.51 38 ⇑P P 09 53 32.6 +0.5
baz=94
K27A Flueckinger Fa 93.55 45 ⇑P P 09 53 33.3 +0.7
baz=94
HHC Hu-ho-hao-te 93.56 313 ⇓*i*P P 09 53 34.4 +1.7
HHC pP **pP** 09 53 51.5 0.0
HHC PP **PP** 09 57 22.3 +3.8
HHC SKS **SKSac** 10 04 01.9 +0.5
HHC S **S** 10 04 34.8 -1.1
HHC SS **SS** 10 10 57.0 +1.7
HHC pmax pmax
comp=Z,69nm,1.2s
HHC pmax pmax
comp=Z,75nm,5.0s
HHC LR LR
comp=N,750nm,18.6s
HHC LR LR
comp=E,890nm,18.1s
HHC LR LR
comp=Z,690nm,18.0s
F24A Ekalaka 93.70 41 ⇓P P 09 53 33.7 +0.5
baz=94
JTS JuntasAbangare 93.75 80 *e*P P 09 53 34.8 +0.8
comp=Z,106nm,1.0s
C22A Vida 93.81 39 ⇑P P 09 53 33.8 +0.3
baz=94
CM31 Chiang Mai Arr 93.97 288 *e*P P 09 53 37.5 +2.5
CMAR Chiang Mai Arr 93.97 288 P P 09 53 36.2 +1.2
CMAR PP **PP** 09 57 21.6 -0.4
CMAR Chiang Mai Arr 93.97 288 P P 09 53 36.2 +1.2
comp=Z,2.0nm,0.3s,baz=191,slow=15,SNR=4.7
CMAR PP **PP** 09 57 21.6 -0.4
comp=Z,0.8nm,0.3s,baz=128,slow=8.3,SNR=4.7
B22A Reddig Ranch S 94.03 39 ⇓P P 09 53 34.7 +0.1
baz=94,SNR=8.9
CHTO Chiang Mai 94.11 289 *e*P P 09 53 37.8 +2.2
CHTO pmax pmax
comp=Z,18nm,1.0s
CHTO Chiang Mai 94.11 289 *e*P P 09 53 37.8 +2.2
comp=Z,18nm,1.0s
E24A Baker 94.14 41 ⇓P P 09 53 35.7 +0.5
baz=94
C23A Lambert 94.24 39 ⇑P P 09 53 35.9 +0.3
baz=94,SNR=13
D24A Glendive 94.40 40 ⇓P P 09 53 36.6 +0.3
baz=95,SNR=15
A22A Carney Farms, 94.43 38 ⇓P P 09 53 36.7 +0.3
baz=95
C24A Savage 94.55 40 ⇑P P 09 53 37.2 +0.2
baz=95,SNR=8.0
B23A Brockton 94.69 39 ⇓P P 09 53 37.9 +0.3
baz=95,SNR=12
CD2 Chengdu 94.93 301 P P 09 53 39.4 +0.3
CD2 pP **pP** 09 53 58.9 +1.0
CD2 PP **PP** 09 57 31.0 +1.7
CD2 SKS **SKSac** 10 04 07.3 -1.8
CD2 S **S** 10 04 44.3 -3.9
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,5.2s
CD2 LR LR
comp=N,810nm,20.1s
CD2 LR LR
comp=E,930nm,17.6s
CD2 LR LR
comp=Z,990nm,18.6s
TUL1 Tulsa 94.94 53 ⇑P P 09 53 39.5 +0.5
baz=95
DGMT Dagmar 95.15 39 *e*P P 09 53 39.9 +0.2
comp=Z,51nm,1.1s
DGMT Dagmar 95.15 39 ⇓P P 09 53 39.8 +0.2
baz=95,SNR=9.3
A24A Westby 95.48 39 ⇑P P 09 53 41.1 -0.2
baz=96,SNR=5.3
LZH Lanzhou 96.96 306 *e*P P 09 53 49.8 +1.4
LZH pP pP 09 54 11.0 +3.8
LZH SKS **SKSac** 10 04 19.3 -0.5
LZH *e*S **S** 10 05 02.0 -3.7
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,93nm,5.4s
LZH LR LR
comp=N,530nm,14.8s
LZH LR LR
comp=E,440nm,13.2s
LZH LR LR
comp=Z,730nm,17.7s
MDND Maddock 97.57 41 ⇓P P 09 53 50.7 0.0
baz=98
YKA Yellowknife Ar 97.83 24 P P 09 53 51.1 -0.3
YKA PKKPbc **PKKPbc** 10 10 27.6 -0.9
YKA Yellowknife Ar 97.83 24 P P 09 53 51.1 -0.3
comp=Z,2.2nm,0.9s,baz=234,slow=4.1,SNR=21
YKA PKKPbc **PKKPbc** 10 10 27.6 -0.9
comp=Z,0.8nm,0.8s,baz=41,slow=2.5,SNR=8.7
LPAZ La Paz 98.11 112 *e*P Pdif 09 53 57.2 +2.5
LPAZ La Paz 98.11 112 P Pdif 09 53 56.5 +1.8
comp=Z,1.0nm,0.9s,baz=102,slow=2.9,SNR=4.7
SONM Songino Array 99.94 318 P **Pdif** 09 54 02.3 +0.9
SONM PP **PP** 09 58 03.6 -3.9
SONM Songino Array 99.94 318 P **Pdif** 09 54 02.3 +0.9
comp=Z,0.4nm,0.4s,baz=154,slow=7.4,SNR=4.9
SONM PP **PP** 09 58 03.6 -3.9
comp=Z,1.6nm,1.0s,baz=124,slow=7.9,SNR=5.1
GTA Gaotai 101.18 308 *e*P **Pdif** 09 54 08.5 +1.4
GTA pP pP 09 54 25.8 -0.3
GTA pmax pmax
comp=Z,3.0nm,0.9s
WMQ Urumqi 111.14 310 *e*Pdif **Pdif** 09 54 50.6 -0.6
WMQ PP **PP** 09 59 32.6 +2.4
WMQ SKS SKSdf 10 05 49.8 -6.4
WMQ LR LR
comp=N,2μm,17.6s
WMQ LR LR
comp=E,1μm,17.0s
WMQ LR LR

comp=Z,2μm,21.6s
MKAR Makanchi Array 115.41 312 PKIKP **PKPdf** 09 58 57.5 -0.5
MKAR Makanchi Array 115.41 312 PKP **PKPdf** 09 58 57.5 -0.5
MKAR Makanchi Array 115.41 312 PKP **PKPdf** 09 58 57.5 -0.5
comp=Z,1.5nm,0.9s,baz=64,slow=2.8,SNR=7.5
KURK Kurchatov 118.19 316 PKIKP **PKPdf** 09 59 02.3 -0.8
KURK 10 00 18.2
KURK Kurchatov 118.19 316 PKP **PKPdf** 09 59 02.2 -0.8
KURK PP **PP** 10 00 18.2 -1.5
KURBB Kurchatov Arra 118.25 316 PKP **PKPdf** 09 59 02.2 -1.0
comp=Z,2.0nm,0.9s,baz=93,slow=1.9,SNR=15
KURBB PP **PP** 10 00 18.2 -1.9
comp=Z,2.8nm,1.0s,baz=99,slow=6.3,SNR=5.4
KSH Kashi 119.06 303 *e*PKP **PKPdf** 09 59 05.0 -0.3
KSH *e*PKS **PKSdf** 10 02 40.9 -1.2
KSH AMB AMB
comp=Z,170nm,5.2s
KSH LR LR
comp=N,91nm,3.7s
KSH LR LR
comp=E,92nm,5.4s
KSH LR LR
comp=Z,99nm,4.7s
TKM2 Tokmak 2 119.71 307 *e*PKIKP **PKPdf** 09 59 06.6 0.0
TKM2 Tokmak 2 119.71 307 *e*PKPdf **PKPdf** 09 59 06.6 0.0
AAK Ala-Archa 120.49 307 PKIKP **PKPdf** 09 59 07.9 -0.2
AAK Ala-Archa 120.49 307 PKP **PKPdf** 09 59 07.9 -0.2
AAK Ala-Archa 120.49 307 PKP **PKPdf** 09 59 07.9 -0.2
comp=Z,0.6nm,0.4s,baz=173,slow=23,SNR=3.9
OPO Ambohidratompo 121.64 228 PKP **PKPdf** 09 59 11.6 +0.6
OPO Ambohidratompo 121.64 228 PKP **PKPdf** 09 59 11.6 +0.6
comp=Z,5.6nm,0.8s,baz=215,slow=6.0,SNR=7.8
BVAR Borovoye Array 123.26 319 PKIKP **PKPdf** 09 59 13.0 +0.2
BVAR Borovoye Array 123.26 319 PKP **PKPdf** 09 59 13.0 +0.2
BVAR Borovoye Array 123.26 319 PKP **PKPdf** 09 59 13.0 +0.2
comp=Z,4.6nm,1.0s,baz=104,slow=4.7,SNR=14
BRVK Borovoye 123.32 319 *c i*PKIKP **PKPdf** 09 59 13.7 +0.8
BRVK pmax pmax
comp=Z,10.0nm,1.2s
KBS Kingsbay 124.29 358 ⇓*i*PKIKP **PKPdf** 09 59 15.2 +1.1
KBS pmax pmax
comp=Z,23nm,1.7s
SPITS Spitsbergen Ar 124.88 357 PKP **PKPdf** 09 59 15.4 +0.1
SPITS Spitsbergen Ar 124.88 357 PKP **PKPdf** 09 59 15.4 +0.1
comp=Z,16nm,1.0s,baz=120,slow=12,SNR=7.5
BOSA Boshof 124.88 201 PKP **PKPdf** 09 59 17.2 +0.3
BOSA *e*PKPdf **PKiKP** 09 59 17.9 +0.6
BOSA Boshof 124.88 201 PKP **PKPdf** 09 59 17.2 +0.3
comp=Z,19nm,1.0s,baz=160,slow=3.1,SNR=13
SUMG Summit 125.16 15 *i* PKIKP **PKPdf** 09 59 16.2 -0.2
SUMG pmax pmax
comp=Z,7.0nm,1.1s
SUMG Summit 125.16 15 *e*PKPdf **PKPdf** 09 59 16.6 +0.1
SUMG Summit 125.16 15 *i* P **PKPdf** 09 59 16.2 -0.2
comp=Z,6.5nm,1.1s
ARU Arti 129.31 325 *i* PKIKP **PKPdf** 09 59 24.8 +0.5
ARU 10 01 33.2
ARU 10 06 25.5
SCO Scoresbysund 130.23 12 *e*PKIKP **PKPdf** 09 59 27.3 +1.7
SCO pmax pmax
comp=Z,6.0nm,1.0s
SCO Scoresbysund 130.23 12 *i* P **PKPdf** 09 59 27.3 +1.7
comp=Z,5.6nm,1.0s
AKTO Aktyubinsk 131.26 317 PKIKP **PKPdf** 09 59 28.4 +0.2
AKTO Aktyubinsk 131.26 317 PKP **PKPdf** 09 59 28.4 +0.2
AKTO Aktyubinsk 131.26 317 PKP **PKPdf** 09 59 28.4 +0.2
comp=Z,0.6nm,0.5s,baz=24,slow=3.7,SNR=8.3
ARCES ARCESS Array B 132.26 351 PKP **PKPdf** 09 59 29.9 +0.4
ARCES ARCESS Array B 132.26 351 PKP **PKPdf** 09 59 29.9 +0.4
comp=Z,2.9nm,0.7s,baz=38,slow=0.9,SNR=17
LSZ Lusaka 135.57 212 *e*PKPdf **PKPdf** 09 59 39.4 +1.9
FINES FINESS Array B 139.36 345 PKP **PKPdf** 09 59 41.9 -1.0
FINES FINESS Array B 139.36 345 PKP **PKPdf** 09 59 41.9 -1.0
comp=Z,3.2nm,0.7s,baz=75,slow=2.2,SNR=11
KMBO Kilima Mbogo 140.56 236 PKPpre PKPpre 09 59 41.5
KMBO *e*PKPdf **PKPdf** 09 59 42.5 -4.4
KMBO Kilima Mbogo 140.56 236 PKhKP PKPpre 09 59 41.5
comp=Z,5.7nm,1.0s,baz=94,slow=2.8,SNR=6.5
OBN Obninsk 140.73 332 *i* PKIKP **PKPdf** 09 59 44.0 -1.5
NB2 NORSAR Subarra 142.13 355 PKPdf PKPdf 09 59 42.1 -5.9
comp=Z,3.5nm,1.1s,baz=6.6,slow=1.8
NOA NORSAR Array B 142.13 355 PKPpre PKPpre 09 59 42.3
NOA NORSAR Array B 142.13 355 PKhKP PKPpre 09 59 42.3
comp=Z,1.5nm,0.8s,baz=1.9,slow=2.4,SNR=5.4
MICGM Minsk 144.62 337 ⇑*e*P **PKPab** 09 59 50.0 -1.2
MNK Minsk 144.64 337 ⇑*e*PKIKP **PKPab** 09 59 50.0 -1.3
MNK pmax pmax
comp=Z,110nm,1.0s
NACGM Naroch 144.68 339 *e* **PKPab** 09 59 48.0 -3.4
MVH1 Achvaich 144.79 9 *e*P **PKPab** 09 59 50.0 -1.7
MVH1 Achvaich 144.79 9 P **PKPab** 09 59 50.0 -1.7
KAC Achnashellach 145.03 10 *e*P **PKPbc** 09 59 51.4 -1.2
KAC Achnashellach 145.03 10 P **PKPbc** 09 59 51.4 -1.2
KPL Plockton 145.13 10 *e*P **PKPbc** 09 59 52.5 -0.4
KPL Plockton 145.13 10 P **PKPbc** 09 59 52.5 -0.4
MDO Dochfour 145.23 9 *e*P **PKPbc** 09 59 52.0 -1.3
MDO Dochfour 145.23 9 P **PKPbc** 09 59 52.0 -1.3
MCD Coleburn Disti 145.25 8 *e*P **PKPbc** 09 59 51.6 -1.7
MCD Coleburn Disti 145.25 8 P **PKPbc** 09 59 51.6 -1.7
KSB Sheil Bridge 145.29 10 *e*P **PKPbc** 09 59 51.5 -1.9
KSB Sheil Bridge 145.29 10 P **PKPbc** 09 59 51.5 -1.9
SOC Sochi 145.29 314 *e*PKIKP **PKPbc** 09 59 53.8 -0.1
SOC *e* 10 03 11.8
SOC pmax pmax
comp=Z,51nm,1.0s
MME1 Meikle Cairn 145.55 8 *e*P **PKPdf** 09 59 53.0 -1.1
MME1 Meikle Cairn 145.55 8 P **PKPdf** 09 59 53.0 -1.1
ANN Anapa 146.22 317 *i* PKP2 **PKPdf** 09 59 55.9 +0.4
ANN *e* 10 16 00.5
ANN pmax pmax
comp=Z,107nm,1.5s
ELO Logie Almond 146.27 9 *e*P **PKPdf** 09 59 55.7 +0.4
ELO Logie Almond 146.27 9 P **PKPdf** 09 59 55.7 +0.4
EAB Aberfoyle 146.44 10 *e*P **PKPbc** 09 59 56.4 -0.6
EAB Aberfoyle 146.44 10 P **PKPbc** 09 59 56.4 -0.6
SUW Suwalki 146.57 341 *e*PKP2 **PKPbc** 09 59 58.0 +0.6
SUW Suwalki 146.57 341 *e*PKPbc **PKPbc** 09 59 58.0 +0.6
SUW Suwalki 146.57 341 *e*PKP **PKPbc** 09 59 57.5 +0.1
MUD Monsted U'grnd 146.82 356 *i* PKP2 **PKPbc** 09 59 58.6 +0.6
MUD pmax pmax
comp=Z,52nm,1.0s
MUD Monsted U'grnd 146.82 356 *i* P **PKPbc** 09 59 58.6 +0.6
comp=Z,52nm,0.9s
EAU Auchinoon 146.91 9 *e*P **PKPbc** 09 59 57.9 -0.5
EAU Auchinoon 146.91 9 P **PKPbc** 09 59 57.9 -0.5
ESY Stoneypath 146.96 8 *e*P **PKPbc** 09 59 57.8 -0.7
ESY Stoneypath 146.96 8 P **PKPbc** 09 59 57.8 -0.7
AKASG Malin Array Be 147.00 332 PKP2 **PKPbc** 09 59 58.3 -0.4
AKASG Malin Array Be 147.00 332 PKPbc **PKPbc** 09 59 58.3 -0.4
AKASG Malin Array Be 147.00 332 PKPbc **PKPbc** 09 59 58.3 -0.4
comp=Z,15nm,0.8s,baz=40,slow=3.7,SNR=35
AK01 Malin Array Si 147.01 332 *e*PKPdf **PKPdf** 09 59 56.0 -0.7
AK01 *e*PKPbc **PKPbc** 09 59 58.5 -0.3
AK01 *e*PKPab **PKPab** 10 00 00.2 -0.1
KIEV Kiev 147.01 332 *e*PKIKP **PKPdf** 09 59 56.7 0.0
KIEV *e* 09 59 58.5
KIEV Kiev 147.01 332 *e*PKPdf **PKPdf** 09 59 56.7 0.0
KIEV *e*PKPbc **PKPbc** 09 59 58.5 -0.2
KIEV *e*PKPab **PKPab** 10 00 00.5 +0.1
EBL Broad Law 147.04 9 *e*P **PKPbc** 09 59 58.5 -0.2
EBL Broad Law 147.04 9 P **PKPbc** 09 59 58.5 -0.2
AK02 Malin Array Si 147.04 332 *e*PKPbc **PKPbc** 09 59 58.5 -0.4
AK02 *e*PKPab **PKPab** 10 00 00.3 -0.2
SFNV Sufian 147.35 302 *e*P **PKPbc** 10 00 00.9 +0.6
SFNV Sufian 147.35 302 *e*P **PKPbc** 10 00 00.9 +0.6
SNR=46
ESK Eskdalemuir 147.46 9 *i* PKP2 **PKPab** 10 00 02.7 +0.7
BSD Bornholm Skovb 147.50 350 *i* PKP2 **PKPbc** 09 59 59.7 -0.3
BSD pmax pmax
comp=Z,20nm,1.0s
BSD Bornholm Skovb 147.50 350 *i* P **PKPbc** 09 59 59.7 -0.3
comp=Z,20nm,0.9s
ECK Cauldkaine Hil 147.60 9 *e*P **PKPbc** 09 59 59.8 -0.5
ECK Cauldkaine Hil 147.60 9 P **PKPbc** 09 59 59.8 -0.5
GAL1 Galloway 147.65 11 *e*P **PKPbc** 10 00 00.6 +0.2
GAL1 Galloway 147.65 11 P **PKPbc** 10 00 00.6 +0.2
LLD Lille Linde 147.66 353 *e*PKP2 **PKPbc** 10 00 00.9 +0.5
LLD pmax pmax
comp=Z,36nm,1.1s
LLD Lille Linde 147.66 353 *i* P **PKPbc** 10 00 00.9 +0.5
comp=Z,36nm,1.1s
XAL Allendale 148.04 8 *e*P **PKPbc** 10 00 01.2 -0.3
XAL Allendale 148.04 8 P **PKPbc** 10 00 01.2 -0.3

SIM	**Simferopol'**	**148.17**	**320**	*i* PKP2	**PKPbc**	10 00 03.0	+0.8		
SIM				pmax	pmax				
	comp=Z,23nm,0.9s								
KESW	**Keswick, Cumbr**	**148.18**	**9**	*e*P	**PKPbc**	10 00 01.6	-0.2		
KESW	**Keswick, Cumbr**	**148.18**	**9**	P	**PKPbc**	10 00 01.6	-0.2		
GKP	**Gorka Klasztor**	**148.80**	**346**	*e*PKP	**PKPbc**	10 00 04.2	+0.7		
BEL	**Belsk**	**149.18**	**341**	*e*PKP	**PKPbc**	10 00 05.3	+0.8		
KBI1	**Birley Grange**	**149.70**	**8**	*e*P	**PKPbc**	10 00 06.0	+0.3		
KBI1	**Birley Grange**	**149.70**	**8**	P	**PKPbc**	10 00 06.0	+0.3		
LVV	**L'vov**	**149.80**	**336**	*e*PKP2	**PKPbc**	10 00 06.2	+0.1		
KIS	**Kishinev**	**149.82**	**327**	*e*	**PKPbc**	10 00 04.0	-2.2		
KIS				*e*L	L	10 30 28.0			
KIS				LRM	MLR	10 37 00.0			
	comp=Z,300nm,20.0s								
DRWC	**Darouich**	**149.97**	**303**	*e*P	**PKPab**	10 00 12.1	-0.9		
DRWC	**Darouich**	**149.97**	**303**	*e*P	**PKPab**	10 00 12.1	-0.9		
	SNR=46								
ROOS	**tl_alroos**	**150.11**	**298**	*e*P	**PKPab**	10 00 12.1	-1.5		
RUE	**Ruedersdorf**	**150.22**	**350**	*e*PKPbc	**PKPbc**	10 00 08.2	+1.2		
KWP	**Kalwaria Pacla**	**150.44**	**337**	*e*PKIKP	**PKPbc**	10 00 08.7	+1.0		
KWP	**Kalwaria Pacla**	**150.44**	**337**	*e*PKPbc	**PKPbc**	10 00 08.7	+1.0		
KWP	**Kalwaria Pacla**	**150.44**	**337**	⇑*i*P	**PKPbc**	10 00 09.0	+1.3		
KWP	**Kalwaria Pacla**	**150.44**	**337**	*e*PKP	**PKPbc**	10 00 08.2	+0.5		
WRDH	**Warideh**	**150.48**	**301**	*e*P	**PKPdf**	10 00 05.3	+2.4		
WRDH	**Warideh**	**150.48**	**301**	*e*P	**PKPdf**	10 00 05.3	+2.4		
	SNR=46								
SLNF	**Slenfeh**	**150.61**	**302**	*e*P	**PKPab**	10 00 14.0	-1.7		
SLNF	**Slenfeh**	**150.61**	**302**	*e*P	**PKPab**	10 00 14.0	-1.7		
	SNR=46								
MCH1	**Michaelchurch**	**150.70**	**11**	*e*P	**PKPbc**	10 00 07.7	-0.4		
MCH1	**Michaelchurch**	**150.70**	**11**	P	**PKPbc**	10 00 07.7	-0.4		
HAWK	**Haweek**	**150.74**	**299**	*e*P	**PKPbc**	10 00 11.0	+2.0		
HAWK	**Haweek**	**150.74**	**299**	*e*P	**PKPbc**	10 00 11.0	+2.0		
	SNR=46								
ASF	**Jabal al Asfar**	**150.82**	**294**	PKPbc	**PKPbc**	10 00 09.5	+0.3		
ASF				PKPab	**PKPab**	10 00 18.4	+1.8		
ASF	**Jabal al Asfar**	**150.82**	**294**	PKPbc	**PKPbc**	10 00 09.5	+0.3		
	comp=Z,9.4nm,0.9s,baz=348,slow=1.2,SNR=15								
ASF				PKPab	**PKPab**	10 00 18.4	+1.8		
	comp=Z,17nm,0.9s,baz=17,slow=1.3,SNR=14								
OJC	**Ojcow**	**150.91**	**341**	*e*PKIKP	**PKPbc**	10 00 09.1	+0.4		
OJC	**Ojcow**	**150.91**	**341**	*e*PKP	**PKPbc**	10 00 09.1	+0.4		
TOTH	**TOTAH**	**150.98**	**297**	*e*P	**PKPbc**	10 00 10.7	+1.2		
TOTH	**TOTAH**	**150.98**	**297**	*e*P	**PKPbc**	10 00 10.7	+1.2		
	SNR=46								
BUR08	**Bucovina Ar. S**	**151.04**	**332**	*e*PKPbc	**PKPbc**	10 00 10.0	+0.7		
BR131	**Keskin Array S**	**151.05**	**311**	*e*PKPbc	**PKPbc**	10 00 09.9	+0.3		
BR131				*e*PKPab	**PKPab**	10 00 18.1	+0.7		
BRTR	**Keskin Array B**	**151.05**	**311**	PKPbc	**PKPbc**	10 00 09.7	+0.1		
BRTR				PKPab	**PKPab**	10 00 17.9	+0.5		
BRTR				PP	**PP**	10 03 45.9	-2.0		
BRTR	**Keskin Array B**	**151.05**	**311**	PKPbc	**PKPbc**	10 00 09.7	+0.1		
	comp=Z,8.6nm,0.9s,baz=116,slow=2.9,SNR=36								
BRTR				PKPab	**PKPab**	10 00 17.9	+0.5		
	comp=Z,14nm,1.1s,baz=46,slow=3.7,SNR=14								
BRTR				PP	**PP**	10 03 45.9	-2.0		
	comp=Z,2.7nm,1.1s,baz=93,slow=4.9,SNR=5.5								
BURAR	**Bucovina Array**	**151.06**	**332**	⇓*i*P	**PKPbc**	10 00 11.4	+2.1		
KOLS	**Kolonicke sedl**	**151.18**	**337**	*e*PKIKP	**PKPdf**	10 00 04.7	+1.2		
KOLS				*e*		10 00 11.0			
KOLS	**Kolonicke sedl**	**151.18**	**337**	*e*PKP	**PKPdf**	10 00 04.7	+1.2		
KOLS				*e*		10 00 10.9			
TESR	**Tescani**	**151.22**	**329**	⇑*i*P	**PKPbc**	10 00 10.3	+0.7		
KSP	**Ksiaz**	**151.28**	**345**	*e*PKIKP	**PKPbc**	10 00 10.5	+1.0		
KSP	**Ksiaz**	**151.28**	**345**	*e*PKPdf	**PKPbc**	10 00 10.6	+1.0		
CFR	**Carcaliu**	**151.40**	**325**	⇑*i*P	**PKPbc**	10 00 09.9	-0.1		
UZH	**Uzhgorod**	**151.43**	**336**	⇑*i*PKIKP	**PKPbc**	10 00 10.5	+0.5		
UZH				*i*		10 00 14.8			
UZH				*i*		10 00 19.8			
NIE	**Niedzica**	**151.45**	**339**	*e*PKIKP	**PKPbc**	10 00 11.4	+1.3		
NIE	**Niedzica**	**151.45**	**339**	*e*PKP	**PKPbc**	10 00 11.4	+1.3		
CLL	**Collm**	**151.48**	**350**	⇓*e*PKIKP	**PKPdf**	10 00 05.0	+1.2		
CLL				*i*		10 00 10.4			
CLL				*i*		10 00 18.5			
CLL				pmax	pmax				
	comp=Z,20nm,1.0s								
CLL	**Collm**	**151.48**	**350**	*e*PKPdf	**PKPdf**	10 00 05.0	+1.2		
CLL				⇓*i*PKPbc	**PKiKP**	10 00 10.4	0.0		
	comp=Z,52nm,1.1s								
CLL				*i*		10 00 13.2			
	comp=Z,53nm,1.3s								
CLL				*i* PKPab	**PKPab**	10 00 18.5	0.0		
	comp=Z,20nm,1.0s								
CLL				*i*		10 00 22.1			
CLL				*e*		10 00 31.0			
TCHB	**Talchebab**	**151.50**	**296**	*e*P	**PKPbc**	10 00 12.4	+1.7		
TCHB	**Talchebab**	**151.50**	**296**	*e*P	**PKPbc**	10 00 12.4	+1.7		
	SNR=46								
CRVS	**Cervenica-Dubn**	**151.50**	**337**	*e*PKIKP	**PKPdf**	10 00 03.6	-0.4		
CRVS				*e*		10 00 09.9			
CRVS	**Cervenica-Dubn**	**151.50**	**337**	*e*PKP	**PKPdf**	10 00 03.6	-0.4		
CRVS				*e*		10 00 09.9			
ANTO	**Ankara**	**151.57**	**312**	*e*PKIKP	**PKPdf**	10 00 03.8	-0.6		
ANTO				*e*		10 00 12.0			
ANTO	**Ankara**	**151.57**	**312**	*e*PKPdf	**PKPdf**	10 00 03.8	-0.6		
ANTO				*e*PKPbc	**PKiKP**	10 00 12.0	+0.8		
ANTO				*e*PKPab	**PKPab**	10 00 20.8	+1.3		
WOL	**Wolverton**	**151.64**	**9**	*e*P	**PKPbc**	10 00 10.6	+0.3		
WOL	**Wolverton**	**151.64**	**9**	P	**PKPbc**	10 00 10.6	+0.3		
VRI	**Vrincioaia**	**151.64**	**328**	⇓*i*P	**PKPbc**	10 00 11.6	+1.0		
UPC	**Upice**	**151.65**	**346**	*e*PKIKP	**PKPdf**	10 00 04.9	+0.8		
UPC				*e*		10 00 11.7			
UPC				*e*		10 00 20.5			
UPC	**Upice**	**151.65**	**346**	*e*PKPDF	**PKPdf**	10 00 04.9	+0.8		
UPC				⇑*e*PKP	**PKiKP**	10 00 11.7	+0.8		
UPC				*e*PKPAB	**PKPab**	10 00 20.5	+1.2		
DPC	**Dobruska-Polom**	**151.73**	**345**	*e*PKIKP	**PKPdf**	10 00 05.4	+1.1		
DPC				*e*		10 00 11.4			
DPC				*e*		10 00 20.7			
DPC	**Dobruska-Polom**	**151.73**	**345**	*e*PKPDF	**PKPdf**	10 00 05.4	+1.1		
DPC				⇑*e*PKP	**PKiKP**	10 00 11.4	+0.3		
DPC				*e*PKPAB	**PKPab**	10 00 20.7	+1.0		
OKC	**Ostrava-Krasne**	**151.73**	**342**	*e*PKIKP	**PKPbc**	10 00 11.5	+0.9		
OKC				*e*		10 00 20.2			
OKC	**Ostrava-Krasne**	**151.73**	**342**	⇑*e*PKP	**PKPbc**	10 00 11.5	+0.9		
OKC				*e*PKPAB	**PKPab**	10 00 20.2	+0.6		
BRG	**Berggiesshubel**	**151.74**	**348**	*e*PKP	**PKPdf**	10 00 05.3	+1.1		
	comp=Z,13nm,1.4s								
BRG				*i*		10 00 11.3			
	comp=Z,31nm,1.0s								
BRG				*i*		10 00 23.3			
	comp=Z,12nm,0.8s								
BRG	**Berggiesshubel**	**151.74**	**348**	*e*PKIKP	**PKPdf**	10 00 05.3	+1.1		
BRG				*i*		10 00 11.3			
BRG				pmax	pmax				
	comp=Z,13nm,1.4s								
TRPA	**Tarpa**	**151.75**	**335**	⇑*i*P	**PKPbc**	10 00 11.5	+0.8		
MMAI	**Mount Meron Ar**	**151.90**	**297**	PKP	**PKPdf**	10 00 04.9	-0.2		
MMAI				PKPbc	**PKiKP**	10 00 13.1	+1.1		
MMAI				PKPab	**PKPab**	10 00 22.4	+1.3		
MMAI	**Mount Meron Ar**	**151.90**	**297**	PKP	**PKPdf**	10 00 04.9	-0.2		
	comp=Z,2.1nm,0.2s,baz=103,slow=6.2,SNR=6.1								
MMAI				PKPbc	**PKiKP**	10 00 13.1	+1.1		
	comp=Z,21nm,1.0s,baz=15,slow=3.5,SNR=9.2								
MMAI				PKPab	**PKPab**	10 00 22.4	+1.3		
	comp=Z,23nm,0.7s,baz=46,slow=3.6,SNR=14								
PVCC	**Panska Ves**	**151.94**	**347**	*e*PKIKP	**PKPbc**	10 00 12.4	+1.3		
PVCC	**Panska Ves**	**151.94**	**347**	⇑*e*PKP	**PKPbc**	10 00 12.4	+1.3		
MORC	**Moravsky Berou**	**151.95**	**343**	*e*PKIKP	**PKPdf**	10 00 05.2	+0.5		
MORC				*e*		10 00 11.8			
MORC				*e*		10 00 21.2			
MORC	**Moravsky Berou**	**151.95**	**343**	*e*PKPdf	**PKPdf**	10 00 05.2	+0.5		
MORC				*e*PKPbc	**PKiKP**	10 00 11.8	+0.2		
MORC				*e*PKPab	**PKPab**	10 00 21.2	+0.6		
MORC				*e*SKPdf	**SKPdf**	10 03 32.6	+0.4		
MORC	**Moravsky Berou**	**151.95**	**343**	⇑*i*P	**PKPbc**	10 00 11.0	-0.2		
ISR	**Istrita**	**152.26**	**327**	⇑*i*P	**PKPab**	10 00 24.0	+1.9		
MLR	**Muntele Rosu**	**152.29**	**328**	⇓*i*P	**PKPbc**	10 00 13.3	+1.1		
PRU	**Pruhonice**	**152.46**	**347**	*e*PKIKP	**PKPbc**	10 00 12.8	+0.5		
PRU				*e*		10 00 23.1			
PRU				MLR	MLR				
	comp=Z,100nm,18.8s								
PRU	**Pruhonice**	**152.46**	**347**	⇑*e*PKP	**PKPbc**	10 00 12.8	+0.5		
PRU				*e*PKPAB	**PKPab**	10 00 23.1	+0.4		
PRU				AMS	AMS	11 15 50.0			
	comp=Z,100nm,18.8s								
NKC	**Novy Kostel**	**152.61**	**350**	*e*PKIKP	**PKPbc**	10 00 13.7	+1.1		
NKC				*e*		10 00 23.6			
NKC	**Novy Kostel**	**152.61**	**350**	⇑*e*PKP	**PKPbc**	10 00 13.7	+1.1		
NKC				*e*PKPAB	**PKPab**	10 00 23.6	+0.3		
NKC				epPKP	pPKPdf	10 00 33.7	+8.6		
BEBN	**Eben Emael**	**152.61**	**360**	PKPbc	**PKPbc**	10 00 13.5	+0.9		
BEBN				PKPab	**PKPab**	10 00 23.1	-0.1		
DRGR		**152.76**	**333**	⇑*i*P	**PKPbc**	10 00 13.8	+0.6		
EIL	**Elat**	**152.82**	**290**	PKPbc	**PKPbc**	10 00 13.7	0.0		
EIL				PKPab	**PKPab**	10 00 25.6	+0.7		
EIL	**Elat**	**152.82**	**290**	PKPbc	**PKPbc**	10 00 13.7	0.0		
	comp=Z,20nm,1.2s,baz=22,slow=4.2,SNR=9.8								
EIL				PKPab	**PKPab**	10 00 25.6	+0.7		
	comp=Z,30nm,0.9s,baz=91,slow=1.2,SNR=16								
PSZ	**Piszkesteto**	**152.88**	**338**	*e*PKIKP	**PKPbc**	10 00 13.8	+0.4		
PSZ				*e*		10 00 26.0			
PSZ	**Piszkesteto**	**152.88**	**338**	*e*PKPbc	**PKPbc**	10 00 13.8	+0.4		
PSZ				*e*PKPab	**PKPab**	10 00 25.9	+1.3		
TREC	**Trest**	**152.91**	**345**	*e*PKIKP	**PKPbc**	10 00 14.3	+1.0		
TREC				MLR	MLR				
	comp=Z,200nm,20.8s								
TREC	**Trest**	**152.91**	**345**	*e*PKP	**PKPbc**	10 00 14.3	+1.0		
TREC				AMS	AMS	11 18 20.0			
	comp=Z,200nm,20.8s								
BCLA	**Clavier**	**152.99**	**0**	PKPbc	**PKPbc**	10 00 13.9	+0.5		
BCLA				PKPab	**PKPab**	10 00 24.8	0.0		
CSS	**Prodhromos**	**153.06**	**302**	*e*PKPdf	**PKPdf**	10 00 05.6	-1.2		
CSS				*e*PKPbc	**PKiKP**	10 00 15.3	+1.0		
GIVF	**Givet**	**153.31**	**1**	*e*PKIKP	**PKPdf**	10 00 06.9	+0.3		
GIVF	**Givet**	**153.31**	**1**	*e*PKIKP	**PKPdf**	10 00 06.9	+0.3		
GIVF	**Givet**	**153.31**	**1**	*e*PKPdf	**PKPdf**	10 00 06.9	+0.3		
BAIF	**Baives**	**153.34**	**2**	*e*PKIKP	**PKPdf**	10 00 06.9	+0.3		
BAIF	**Baives**	**153.34**	**2**	*e*PKIKP	**PKPdf**	10 00 06.9	+0.3		
BAIF	**Baives**	**153.34**	**2**	*e*PKPdf	**PKPdf**	10 00 06.9	+0.3		
KHC	**Kasperske Hory**	**153.47**	**348**	*e*PKIKP	**PKPdf**	10 00 07.6	+0.7		
KHC				*e*		10 00 15.6			
KHC				*e*		10 00 26.7			
KHC				MLR	MLR				
	comp=Z,200nm,20.7s								
KHC	**Kasperske Hory**	**153.47**	**348**	*e*PKPdf	**PKPdf**	10 00 07.5	+0.6		
KHC				*e*PKPbc	**PKiKP**	10 00 15.2	+0.5		
KHC				*e*PKPab	**PKPab**	10 00 27.0	0.0		
KHC	**Kasperske Hory**	**153.47**	**348**	*e*PKPDF	**PKPdf**	10 00 07.6	+0.7		
KHC				⇑*e*PKP	**PKiKP**	10 00 15.6	+0.9		
KHC				*e*PKPAB	**PKPab**	10 00 26.7	-0.3		
KHC				epPKP	pPKPdf	10 00 36.5	+10		
KHC				AMS	AMS	11 12 40.0			
	comp=Z,200nm,20.7s								
ZST	**Bratislava**	**153.51**	**342**	*e*PKP2	**PKPab**	10 00 27.2	+0.1		
ZST	**Bratislava**	**153.51**	**342**	*e*PKP	**PKPab**	10 00 27.2	+0.1		
RUP	**Ruppelstein**	**153.68**	**357**	PKIKP	**PKPdf**	10 00 07.1	-0.1		
RUP	**Ruppelstein**	**153.68**	**357**	PKP	**PKPdf**	10 00 07.1	-0.1		
GERES	**GERESS Array B**	**153.72**	**347**	PKP	**PKPdf**	10 00 07.8	+0.4		
GERES				PKPbc	**PKPbc**	10 00 15.2	0.0		
GERES				PKPab	**PKPab**	10 00 27.3	-0.9		
GERES	**GERESS Array B**	**153.72**	**347**	PKP	**PKPdf**	10 00 07.8	+0.4		
	comp=Z,1.0nm,0.8s,baz=60,slow=3.7,SNR=8.6								
GERES				PKPbc	**PKPbc**	10 00 15.2	0.0		
	comp=Z,2.9nm,0.9s,baz=48,slow=2.0,SNR=10								
GERES				PKPab	**PKPab**	10 00 27.3	-0.9		
	comp=Z,2.0nm,0.8s,baz=0.0,slow=1.3,SNR=7.6								
WLF	**Walferdange**	**153.74**	**359**	PKPbc	**PKPbc**	10 00 16.7	+1.6		
WLF				PKPab	**PKPab**	10 00 27.4	-0.7		
ROSF	**Rostrenen**	**154.15**	**13**	*e*PKIKP	**PKPdf**	10 00 08.0	+0.2		
	comp=Z,19nm,1.1s								
ROSF	**Rostrenen**	**154.15**	**13**	*e*PKIKP	**PKPdf**	10 00 08.0	+0.2		
ROSF	**Rostrenen**	**154.15**	**13**	*e*PKPdf	**PKPdf**	10 00 08.0	+0.2		
FLN	**La Foliniere**	**154.23**	**9**	*e*PKIKP	**PKPdf**	10 00 08.0	+0.1		
FLN				*e*PKPbc	**PKPbc**	10 00 16.1	+0.3		
	comp=Z,242nm,20.5s								
FLN	**La Foliniere**	**154.23**	**9**	*e*PKIKP	**PKPdf**	10 00 08.0	+0.1		
FLN	**La Foliniere**	**154.23**	**9**	*e*PKIKP	**PKPdf**	10 00 08.0	+0.1		
LANF	**Langenberg**	**154.36**	**356**	PKIKP	**PKPdf**	10 00 09.5	+1.4		
LANF	**Langenberg**	**154.36**	**356**	PKP	**PKPdf**	10 00 09.5	+1.4		
LANF	**Langenberg**	**154.36**	**356**	PKP	**PKPdf**	10 00 09.5	+1.4		
LDF	**La Druitiere**	**154.45**	**8**	*e*PKIKP	**PKPdf**	10 00 08.8	+0.6		
LDF	**La Druitiere**	**154.45**	**8**	*e*PKIKP	**PKPdf**	10 00 08.8	+0.6		
LDF	**La Druitiere**	**154.45**	**8**	*e*PKPdf	**PKPdf**	10 00 08.8	+0.6		
PKSM	**Moragy**	**154.79**	**338**	⇑*i*P	**PKPdf**	10 00 09.1	+0.3		
PAGF	**Fort de Pagny**	**154.86**	**359**	*e*PKIKP	**PKPdf**	10 00 09.6	+0.8		
	comp=Z,3.0nm,0.8s								
PAGF	**Fort de Pagny**	**154.86**	**359**	*e*PKPdf	**PKPdf**	10 00 09.6	+0.8		
MEZF	**Maizieres J'vi**	**154.91**	**0**	*e*PKIKP	**PKPdf**	10 00 09.5	+0.6		
MEZF	**Maizieres J'vi**	**154.91**	**0**	*e*PKPdf	**PKPdf**	10 00 09.5	+0.6		
BFO	**Black Forest**	**154.97**	**355**	*e*PKIKP	**PKPbc**	10 00 18.1	+0.3		
BFO				*e*		10 00 33.1			
BFO	**Black Forest**	**154.97**	**355**	*e*PKPbc	**PKPbc**	10 00 18.1	+0.3		
BFO				*e*PKPab	**PKPab**	10 00 33.1	-0.3		
ECH	**Echery**	**155.16**	**357**	PKIKP	**PKPdf**	10 00 06.9	-2.4		
ECH				*e*		10 00 34.1			
ECH	**Echery**	**155.16**	**357**	PKP	**PKPdf**	10 00 06.9	-2.4		
ECH				*e*PKPab	**PKPab**	10 00 34.1	0.0		
ECH	**Echery**	**155.16**	**357**	PKP	**PKPdf**	10 00 06.9	-2.4		
THEF	**They Montfort**	**155.18**	**359**	PKIKP	**PKPdf**	10 00 07.5	-1.8		
THEF	**They Montfort**	**155.18**	**359**	PKP	**PKPdf**	10 00 07.5	-1.8		
THEF	**They Montfort**	**155.18**	**359**	PKP	**PKPdf**	10 00 07.5	-1.8		
SFTF	**Sexfontaines**	**155.21**	**0**	*e*PKIKP	**PKPdf**	10 00 09.7	+0.4		
SFTF	**Sexfontaines**	**155.21**	**0**	*e*PKPdf	**PKPdf**	10 00 09.7	+0.4		
HAU	**Haudompre**	**155.40**	**358**	*e*PKIKP	**PKPdf**	10 00 09.7	+0.1		
HAU				*e*R					
	comp=Z,196nm,18.5s								
HAU	**Haudompre**	**155.40**	**358**	*e*PKIKP	**PKPdf**	10 00 09.7	+0.1		
HAU	**Haudompre**	**155.40**	**358**	*e*PKPdf	**PKPdf**	10 00 09.7	+0.1		
FELD	**Feldberg im Sc**	**155.44**	**356**	PKP	**PKPdf**	10 00 09.5	-0.3		
FELD	**Feldberg im Sc**	**155.44**	**356**	PKP	**PKPdf**	10 00 09.5	-0.3		
MOF	**Molkenrain**	**155.52**	**357**	PKIKP	**PKPdf**	10 00 07.7	-2.2		
MOF	**Molkenrain**	**155.52**	**357**	PKP	**PKPdf**	10 00 07.7	-2.2		
MOF	**Molkenrain**	**155.52**	**357**	PKP	**PKPdf**	10 00 07.7	-2.2		
HINF	**Hinteralfeld**	**155.57**	**358**	*e*PKIKP	**PKPdf**	10 00 09.8	-0.1		
HINF	**Hinteralfeld**	**155.57**	**358**	*e*PKIKP	**PKPdf**	10 00 09.8	-0.1		
HINF	**Hinteralfeld**	**155.57**	**358**	*e*PKPdf	**PKPdf**	10 00 09.8	-0.1		
BBS	**Basel-Blauen**	**155.89**	**356**	PKIKP	**PKPdf**	10 00 06.2	-4.1		
BBS	**Basel-Blauen**	**155.89**	**356**	PKP	**PKPdf**	10 00 06.2	-4.1		
LOMF	**Lomont**	**156.03**	**358**	PKIKP	**PKPdf**	10 00 06.6	-4.0		
LOMF	**Lomont**	**156.03**	**358**	PKP	**PKPdf**	10 00 06.6	-4.0		
LOMF	**Lomont**	**156.03**	**358**	PKP	**PKPdf**	10 00 06.6	-4.0		
LOR	**Lormes**	**156.12**	**2**	*e*PKIKP	**PKPdf**	10 00 10.9	+0.3		
	comp=Z,21nm,1.1s								
LOR				*e*R					
	comp=Z,216nm,19.5s								
LOR	**Lormes**	**156.12**	**2**	*e*PKPdf	**PKPdf**	10 00 10.9	+0.3		
SSF	**Saint Saulge**	**156.31**	**3**	*e*PKIKP	**PKPdf**	10 00 11.2	+0.4		
	comp=Z,14nm,1.1s								
SSF	**Saint Saulge**	**156.31**	**3**	*e*PKIKP	**PKPdf**	10 00 11.2	+0.4		
SSF	**Saint Saulge**	**156.31**	**3**	*e*PKPdf	**PKPdf**	10 00 11.2	+0.4		
TUE	**Stuetta**	**156.72**	**353**	*e*PKPdf	**PKPdf**	10 00 11.9	+0.3		
TUE				*e*PKPab	**PKPab**	10 00 41.3	+0.1		
CABF	**La Chapelle**	**156.79**	**359**	*e*PKIKP	**PKPdf**	10 00 12.2	+0.6		
	comp=Z,40nm,1.4s								
CABF	**La Chapelle**	**156.79**	**359**	*e*PKIKP	**PKPdf**	10 00 12.2	+0.6		
CABF	**La Chapelle**	**156.79**	**359**	*e*PKPdf	**PKPdf**	10 00 12.2	+0.6		
LPL	**La Plagne**	**157.87**	**357**	*e*PKIKP	**PKPdf**	10 00 13.6	+0.4		
LPL	**La Plagne**	**157.87**	**357**	*e*PKIKP	**PKPdf**	10 00 13.6	+0.4		
LPL	**La Plagne**	**157.87**	**357**	*e*PKPdf	**PKPdf**	10 00 13.6	+0.4		
LPG	**La Plagne**	**157.89**	**357**	*e*PKIKP	**PKPdf**	10 00 13.9	+0.6		
LPG	**La Plagne**	**157.89**	**357**	*e*PKIKP	**PKPdf**	10 00 13.9	+0.6		
LPG	**La Plagne**	**157.89**	**357**	*e*PKPdf	**PKPdf**	10 00 13.9	+0.6		
LBL	**Lubilhac**	**158.12**	**4**	PKP	**PKPab**	10 00 47.9	+0.8		
CAF	**Calviac**	**158.32**	**6**	*e*PKIKP	**PKPdf**	10 00 14.0	+0.5		
	comp=Z,20nm,1.1s								
CAF	**Calviac**	**158.32**	**6**	*e*PKIKP	**PKPdf**	10 00 14.0	+0.5		
CAF	**Calviac**	**158.32**	**6**	*e*PKPdf	**PKPdf**	10 00 14.0	+0.5		
ORIF	**Oris-en-Rattie**	**158.49**	**359**	*e*PKIKP	**PKPdf**	10 00 14.2	+0.4		
	comp=Z,9.6nm,1.0s								
ORIF				*e*R					
	comp=Z,179nm,19.8s								
ORIF	**Oris-en-Rattie**	**158.49**	**359**	*e*PKIKP	**PKPdf**	10 00 14.2	+0.4		
ORIF	**Oris-en-Rattie**	**158.49**	**359**	*e*PKPdf	**PKPdf**	10 00 14.2	+0.4		
VIVF	**Saint-Julien-l**	**158.55**	**1**	*e*PKIKP	**PKPdf**	10 00 14.5	+0.7		
VIVF	**Saint-Julien-l**	**158.55**	**1**	*e*PKIKP	**PKPdf**	10 00 14.5	+0.7		
VIVF	**Saint-Julien-l**	**158.55**	**1**	*e*PKPdf	**PKPdf**	10 00 14.5	+0.7		
MBDF	**Montbardon**	**158.66**	**357**	*e*PKIKP	**PKPdf**	10 00 14.5	+0.5		
MBDF	**Montbardon**	**158.66**	**357**	*e*PKIKP	**PKPdf**	10 00 14.5	+0.5		
MBDF	**Montbardon**	**158.66**	**357**	*e*PKPdf	**PKPdf**	10 00 14.5	+0.5		
POLO	**Lamas de Olo**	**158.93**	**28**	*e*PKP	**PKPab**	10 00 51.0	+0.2		
PBRG	**Braganca**	**159.02**	**26**	*e*PKP	**PKPab**	10 00 51.4	+0.3		
LASF	**Ste Croix**	**159.30**	**3**	*e*PKIKP	**PKPdf**	10 00 15.3	+0.7		
LASF	**Ste Croix**	**159.30**	**3**	*e*PKPdf	**PKPdf**	10 00 15.3	+0.7		
TOUF	**Mont Tournerai**	**159.34**	**356**	PKP	**PKPab**	10 00 52.5	0.0		
AUTN	**L'Aution**	**159.35**	**356**	PKP	**PKPab**	10 00 51.5	-1.1		
SAOF	**Saorge**	**159.35**	**355**	PKP	**PKPab**	10 00 52.2	-0.2		
PVIS	**Viseu**	**159.42**	**30**	*e*PKP	**PKPab**	10 00 52.5	-0.4		
MVO	**Moncorvo**	**159.44**	**27**	*e*PKP	**PKPab**	10 00 52.9	0.0		
SMRF	**Simiane la Rot**	**159.44**	**360**	*e*PKIKP	**PKPdf**	10 00 15.8	+1.0		
	comp=Z,19nm,1.2s								
SMRF	**Simiane la Rot**	**159.44**	**360**	*e*PKPdf	**PKPdf**	10 00 15.8	+1.0		
MVIF	**Mont Vial**	**159.46**	**356**	PKP	**PKPab**	10 00 53.0	0.0		
FRF	**La Foret Royal**	**159.82**	**357**	*e

ISC 20 09:57:43.3±0.3, 7°21S±0.05×67°97E±0.04, h15km±1km, h15km:pP-P,n834,σ0996/875, mb5.1/166, MS4.7/46, 161C-151D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.45**	**93**	*d*	*i* P	Pn	09 58 46.4	-3.9
DGAR	**Diego Garcia**	**4.45**	**93**		*e* Pn	**Pn**	**09 58 47.3**	**-3.0**
DGAR					*e* Sn	**Sn**	**09 59 38.1**	**-3.8**
DGAR	**Diego Garcia**	**4.45**	**93**		Pn	**Pn**	**09 58 47.8**	**-2.5**
	SNR=8.5							
MSEY	**Mahe Island**	**12.68**	**281**		*e* Pn	**Pn**	**10 00 43.8**	**+0.6**
MSEY	**Mahe Island**	**12.68**	**281**		Pn	**Pn**	**10 00 44.4**	**+1.2**
	244nm,0.6s,SNR=5.2							
PALK	**Pallekele**	**19.19**	**42**		P	**P**	**10 02 06.1**	**-0.6**
PALK	**Pallekele**	**19.19**	**42**		P	**P**	**10 02 06.1**	**-0.6**
	0.3nm,0.3s,baz=106,slow=19,SNR=2.7							
OPO	**Ambohidratompo**	**23.16**	**239**		P	**P**	**10 02 50.9**	**+1.3**
OPO	**Ambohidratompo**	**23.16**	**239**		P	**P**	**10 02 50.9**	**+1.3**
	8.4nm,1.2s,baz=73,slow=13,SNR=3.9							
GOA	**Goa**	**23.29**	**14**		*ex*	x	10 02 54.1	
ABPO	**Ambohimpanom**	**23.33**	**238**		*e*P	**P**	**10 02 52.1**	**+0.8**
ABPO					pmax	pmax		
	comp=Z,71nm,1.6s							
ABPO	**Ambohimpanom**	**23.33**	**238**		*e*P	**P**	**10 02 52.1**	**+0.8**
	comp=Z,71nm,1.6s							
HYB	**Hyderabad**	**26.61**	**23**		*i* P	**P**	**10 03 22.0**	**+0.6**
HYB					*e*S	**S**	**10 07 56.0**	**+0.1**
KCSI	**Kotacane, Aceh**	**31.60**	**71**		P	**P**	**10 04 07.8**	**+2.0**
	comp=Z,22nm,1.2s							
HOQ	**Hoqain**	**32.33**	**342**		P	P	10 04 20.5	+8.4
	SNR=5.3							
JBP	**Jabalpur**	**32.40**	**21**		∥*ex*	x	10 04 18.1	
JBP					*ex*	x	10 09 15.4	
JBP					*i* x	x	10 15 45.7	
	comp=Z,2μm,17.4s							
KULM	**Kulim**	**34.90**	**70**		*e*P	**P**	**10 04 35.4**	**+0.8**
	comp=Z,46nm,1.3s							
KULM					*e*S	**S**	**10 10 01.2**	**-4.5**
LSZ	**Lusaka**	**39.78**	**255**		*e*P	**P**	**10 05 17.4**	**+1.3**
	comp=Z,27nm,1.2s							
LSZ					PcP	**PcP**	**10 07 22.1**	**-0.4**
LSZ	**Lusaka**	**39.78**	**255**		P	**P**	**10 05 17.8**	**+1.6**
	comp=Z,10.0nm,0.8s,baz=64,slow=10,SNR=16							
LSZ					PcP	**PcP**	**10 07 22.1**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=44,slow=5.6,SNR=3.7							
LSZ					LR	LR	10 21 19.4	
	comp=Z,941nm,18.2s,baz=301,slow=36							
CMAR	**Chiang Mai Arr**	**39.80**	**50**		P	**P**	**10 05 17.4**	**+1.2**
CMAR					PcP	**PcP**	**10 07 21.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**39.80**	**50**		P	**P**	**10 05 17.4**	**+1.2**
	comp=Z,3.0nm,0.6s,baz=245,slow=9.3,SNR=15							
CMAR					PcP	**PcP**	**10 07 21.6**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=246,slow=4.5,SNR=7.1							
CMAR					LR	LR	10 19 20.2	
	comp=Z,646nm,21.1s,baz=219,slow=33							
CHTO	**Chiang Mai**	**40.02**	**49**		*e*P	**P**	**10 05 19.2**	**+1.2**
CHTO					pmax	pmax		
	comp=Z,15nm,1.2s							
CHTO	**Chiang Mai**	**40.02**	**49**		*e*P	**P**	**10 05 19.2**	**+1.2**
	comp=Z,15nm,1.2s							
CHTO	**Chiang Mai**	**40.02**	**49**		P	**P**	**10 05 19.1**	**+1.2**
	comp=Z,15nm,1.4s							
CMMT	**Chiang Mai**	**40.02**	**49**		P	**P**	**10 05 19.7**	**+1.7**
	comp=Z,14nm,1.4s,comp=Z,407nm							
PBKT	**Sadao Pong**	**40.30**	**54**		P	**P**	**10 05 22.5**	**+2.2**
	comp=Z,19nm,1.3s							
RDF	**Al-Radifah**	**40.96**	**332**		*e*P	**P**	**10 05 25.6**	**0.0**
RDF					AMb	AMB	10 05 34.8	
	comp=Z,75nm,1.4s							
NAY	**Al-Naaiem**	**41.38**	**332**		*e*P	**P**	**10 05 28.3**	**-0.7**
NAY					AMb	AMB	10 05 37.4	
	comp=Z,59nm,1.4s							
KBL	**Kabul**	**41.54**	**1**		*e*P	**P**	**10 05 31.3**	**+0.8**
KBL					pmax	pmax		
	comp=Z,32nm,1.3s							
KBL	**Kabul**	**41.54**	**1**		*e*P	**P**	**10 05 31.3**	**+0.8**
	comp=Z,32nm,1.3s							
RST	**Umm Al-Ruwaisa**	**41.70**	**332**		*e*P	**P**	**10 05 30.9**	**-0.8**
RST					AMb	AMB	10 05 40.1	
	comp=Z,1μm,1.1s							
MIB	**Mutribah**	**41.80**	**333**		*e*P	**P**	**10 05 32.1**	**-0.4**
MIB					AMb	AMB	10 05 41.0	
	comp=Z,163nm,1.5s							
KSM	**Kuching**	**43.12**	**80**		*e*P	**P**	**10 05 44.6**	**+1.1**
	comp=Z,34nm,1.3s							
BOSA	**Boshof**	**45.54**	**237**		P	**P**	**10 06 04.0**	**+1.1**
BOSA	**Boshof**	**45.54**	**237**		P	**P**	**10 06 04.0**	**+1.1**
	comp=Z,2.7nm,0.5s,baz=82,slow=11,SNR=4.5							
BOSA					LR	LR	10 22 45.4	
	comp=Z,918nm,18.5s,baz=61,slow=33							
KMI	**Kunming**	**46.67**	**45**		P	P	10 06 15.4	+3.5
KMI					pP	pP	10 06 17.3	+0.6
KMI					sP	sP	10 06 18.5	-0.1
KMI					PP	**PP**	**10 08 03.9**	**+2.1**
KMI					S	**S**	**10 13 03.8**	**+2.6**
KMI					pmax	pmax		
	comp=Z,15nm,1.0s							
KMI					pmax	pmax		
	comp=Z,200nm,3.8s							
KMI					LR	LR		
	comp=N,410nm,14.5s							
KMI					LR	LR		
	comp=E,440nm,20.1s							
KMI					LR	LR		
	comp=Z,500nm,25.0s							
KSH	**Kashi**	**47.08**	**8**		*i* P	**P**	**10 06 12.3**	**-2.4**
KSH					*e*pP	**pP**	**10 06 16.6**	**-2.9**
KSH					*e*sP	**sP**	**10 06 19.4**	**-2.0**
KSH					*e*PP	**PP**	**10 08 01.3**	**-4.3**
KSH					*e*ScP	**ScP**	**10 11 38.8**	**-1.3**
KSH					S	S	10 12 59.3	-7.1
KSH					pmax	pmax		
	comp=Z,47nm,0.9s							
KSH					pmax	pmax		
	comp=Z,320nm,3.5s							
KSH					LR	LR		
	comp=N,950nm,14.0s							
KSH					LR	LR		
	comp=E,460nm,9.9s							
KSH					LR	LR		
	comp=Z,920nm,13.9s							
EIL	**Elat**	**48.50**	**321**		P	**P**	**10 06 26.1**	**+0.4**
EIL	**Elat**	**48.50**	**321**		P	**P**	**10 06 26.1**	**+0.4**
	comp=Z,2.3nm,0.4s,baz=163,slow=20,SNR=2.8							
EIL					LR	LR	10 23 30.2	
	comp=Z,183nm,19.1s,baz=93,slow=32							
QIZ	**Qiongzhong**	**48.81**	**57**		P	**P**	**10 06 28.3**	**0.0**
QIZ					S	**S**	**10 13 32.6**	**+1.3**
QIZ					LR	LR		
	comp=N,540nm,15.5s							
QIZ					LR	LR		
	comp=E,200nm,19.1s							
QIZ					LR	LR		
	comp=Z,600nm,17.9s							
ASF	**Jabal al Asfar**	**49.11**	**325**		P	**P**	**10 06 31.1**	**+0.6**
ASF	**Jabal al Asfar**	**49.11**	**325**		P	**P**	**10 06 31.1**	**+0.6**
	comp=Z,1.4nm,0.3s,baz=91,slow=0.2,SNR=3.7							
AML	**Almayashu**	**49.38**	**6**		P	**P**	**10 06 33.4**	**+0.6**
	SNR=18							
KZA	**Kyzart**	**49.50**	**7**		P	**P**	**10 06 34.6**	**+1.0**
	SNR=8.6							
ULHL	**Ulahol**	**49.80**	**8**		P	**P**	**10 06 37.3**	**+1.6**
	SNR=5.9							
KKM	**Kota Kinabalu**	**49.91**	**76**		*e*P	P	10 06 45.2	+8.3
	comp=Z,24nm,1.1s							
EKS2	**Erkin-Say**	**49.91**	**6**		*e*P	**P**	**10 06 38.0**	**+1.5**
EKS2	**Erkin-Say**	**49.91**	**6**		*e*P	**P**	**10 06 38.0**	**+1.5**
EKS2	**Erkin-Say**	**49.91**	**6**		P	**P**	**10 06 37.5**	**+1.0**
	SNR=7.6							
AAK	**Ala-Archa**	**49.96**	**6**		*c* *i* P	**P**	**10 06 37.7**	**+0.8**
AAK					pmax	pmax		
	comp=Z,40nm,1.9s							
AAK	**Ala-Archa**	**49.96**	**6**		*e*P	**P**	**10 06 36.8**	**-0.1**
	comp=Z,5.5nm,1.2s							
AAK	**Ala-Archa**	**49.96**	**6**		P	**P**	**10 06 38.3**	**+1.4**
	SNR=15							
AAK	**Ala-Archa**	**49.96**	**6**		P	**P**	**10 06 38.6**	**+1.7**
	SNR=5.4							
AAK	**Ala-Archa**	**49.96**	**6**		P	**P**	**10 06 37.3**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=174,slow=7.8,SNR=12							
KBK	**Karagaybulak**	**50.03**	**7**		P	**P**	**10 06 38.5**	**+1.1**
	SNR=6.1							
KKAR	**Karatay Array**	**50.13**	**2**		*e*P	**P**	**10 06 37.6**	**-0.4**
KKAR	**Karatay Array**	**50.13**	**2**		*e*P	**P**	**10 06 37.6**	**-0.4**
FRU	**Bishkek**	**50.17**	**6**		*e*P	**P**	**10 06 39.0**	**+0.7**
FRU					*e*		10 06 44.0	
FRU					pmax	pmax		
	comp=Z,70nm,2.0s							
FRU					MLR	MLR		
	comp=Z,500nm,20.0s							
GYA	**Guiyang**	**50.29**	**47**		P	**P**	**10 06 41.3**	**+1.7**
GYA					PP	**PP**	**10 08 37.9**	**+2.7**
GYA					ScP	**ScP**	**10 11 54.3**	**+0.2**
GYA					S	**S**	**10 13 53.3**	**+1.3**
GYA					pmax	pmax		
	comp=Z,20nm,1.0s							
GYA					pmax	pmax		
	comp=Z,130nm,5.0s							
GYA					LR	LR		
	comp=N,530nm,19.8s							
GYA					LR	LR		
	comp=E,450nm,20.0s							
GYA					LR	LR		
	comp=Z,510nm,19.5s							
TKM2	**Tokmak 2**	**50.37**	**7**		*i* P	**P**	**10 06 40.0**	**0.0**
TKM2	**Tokmak 2**	**50.37**	**7**		*e*P	**P**	**10 06 40.4**	**+0.3**
	comp=Z,35nm,1.4s							
TKM2	**Tokmak 2**	**50.37**	**7**		P	**P**	**10 06 40.1**	**0.0**
	SNR=5.7							
SUR	**Sutherland**	**50.41**	**234**		LR	LR	10 23 41.2	
	comp=Z,563nm,21.6s,baz=85,slow=31							
MMAI	**Mount Meron Ar**	**50.58**	**324**		P	**P**	**10 06 42.4**	**+0.7**
MMAI	**Mount Meron Ar**	**50.58**	**324**		P	**P**	**10 06 42.4**	**+0.7**
	comp=Z,5.7nm,0.3s,baz=139,slow=5.3,SNR=11							
USP	**Ospenovka**	**50.59**	**6**		P	**P**	**10 06 42.2**	**+0.7**
	SNR=5.8							
CD2	**Chengdu**	**51.10**	**40**		P	**P**	**10 06 46.0**	**+0.4**
CD2					pP	**pP**	**10 06 50.5**	**+0.1**
CD2					sP	**sP**	**10 06 53.0**	**+0.7**
CD2					PcP	**PcP**	**10 08 01.8**	**+0.5**
CD2					PP	**PP**	**10 08 43.6**	**+1.2**
CD2					PcS	**PcS**	**10 11 57.9**	**-1.1**
CD2					S	**S**	**10 14 02.8**	**-0.2**
CD2					ScS	**ScS**	**10 16 33.8**	**-2.3**
CD2					pmax	pmax		
	comp=Z,40nm,0.5s							
CD2					pmax	pmax		
	comp=Z,260nm,5.6s							
CD2					LR	LR		
	comp=N,840nm,20.1s							
CD2					LR	LR		
	comp=E,830nm,17.6s							
CD2					LR	LR		
	comp=Z,990nm,18.6s							
GNI	**Garni**	**51.77**	**337**		P	**P**	**10 06 50.5**	**-0.1**
GNI	**Garni**	**51.77**	**337**		P	**P**	**10 06 52.0**	**+1.4**
	SNR=12							
GNI	**Garni**	**51.77**	**337**		P	**P**	**10 06 50.5**	**-0.1**
	comp=Z,6.3nm,0.5s,baz=153,slow=22,SNR=4.8							
NWAO	**Narrogin (SRO)**	**52.27**	**126**		LR	LR	10 24 40.9	
	comp=Z,423nm,19.2s,baz=230,slow=31							
MAK	**Makhachkala**	**53.29**	**341**		*e*P	P	10 06 57.9	-3.7
MAK					*e*		10 08 58.3	
MAK					*e*S	**S**	**10 14 27.9**	**-4.6**
MAK					pmax	pmax		
	comp=Z,31nm,0.4s							
WMQ	**Urumqi**	**53.84**	**18**		P	**P**	**10 07 06.3**	**+0.6**
WMQ					pP	**pP**	**10 07 10.9**	**+0.3**
WMQ					sP	**sP**	**10 07 13.3**	**+0.8**
WMQ					PcP	**PcP**	**10 08 12.0**	**+0.7**
WMQ					PP	**PP**	**10 09 08.9**	**+1.8**
WMQ					PcS	**PcS**	**10 12 09.8**	**-0.7**
WMQ					S	**S**	**10 14 38.9**	**-1.3**
WMQ					ScS	**ScS**	**10 16 51.9**	**-2.9**
WMQ					pmax	pmax		
	comp=Z,14nm,1.0s							
WMQ					pmax	pmax		
	comp=Z,290nm,4.0s							
WMQ					LR	LR		
	comp=N,2μm,17.2s							
WMQ					LR	LR		
	comp=E,1μm,18.0s							
WMQ					LR	LR		
	comp=Z,2μm,20.0s							
LZH	**Lanzhou**	**54.68**	**36**		*e*P	P	10 07 15.4	+3.3
LZH					pP	pP	10 07 20.3	+3.3
LZH					sP	sP	10 07 23.6	+4.7
LZH					*e*S	S	10 14 59.0	+7.0
LZH					sS	sS	10 15 06.0	+5.9
LZH					pmax	pmax		
	comp=Z,35nm,1.4s							
LZH					pmax	pmax		
	comp=Z,150nm,5.0s							
LZH					LR	LR		
	comp=N,600nm,16.5s							
LZH					LR	LR		
	comp=E,970nm,19.4s							
LZH					LR	LR		
	comp=Z,1μm,20.1s							
GTA	**Gaotai**	**54.96**	**30**		*e*P	**P**	**10 07 14.5**	**+0.5**
GTA					pP	**pP**	**10 07 18.6**	**-0.3**
GTA					sP	**sP**	**10 07 21.8**	**+1.0**
GTA					S	**S**	**10 14 55.0**	**-0.6**
GTA					pmax	pmax		
	comp=Z,9.0nm,1.4s							
GTA					pmax	pmax		
	comp=Z,160nm,5.5s							
GTA					LR	LR		
	comp=N,550nm,19.5s							
GTA					LR	LR		
	comp=E,900nm,19.2s							
GTA					LR	LR		
	comp=Z,1μm,19.0s							
MK31	**Makanchi Array**	**55.26**	**12**		*e*P	**P**	**10 07 14.6**	**-1.3**
MK31	**Makanchi Array**	**55.26**	**12**		*e*P	**P**	**10 07 14.6**	**-1.3**
MKAR	**Makanchi Array**	**55.26**	**12**		P	**P**	**10 07 15.5**	**-0.4**
MKAR							10 08 15.6	
MKAR	**Makanchi Array**	**55.26**	**12**		P	**P**	**10 07 15.4**	**-0.4**
MKAR					PcP	**PcP**	**10 08 15.6**	**-1.0**
MKAR	**Makanchi Array**	**55.26**	**12**		P	**P**	**10 07 15.4**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=202,slow=7.8,SNR=24							
MKAR					PcP	**PcP**	**10 08 15.6**	**-1.0**
	comp=Z,3.2nm,1.1s,baz=222,slow=3.9,SNR=2.3							
MKAR					LR	LR	10 30 11.0	
	comp=Z,596nm,19.9s,baz=193,slow=35							
KBZ	**Khabaz**	**55.55**	**338**		P	**P**	**10 07 18.4**	**+0.4**
KBZ	**Khabaz**	**55.55**	**338**		P	**P**	**10 07 18.4**	**+0.4**
KBZ	**Khabaz**	**55.55**	**338**		P	**P**	**10 07 18.4**	**+0.4**
	comp=Z,4.3nm,1.0s,baz=206,slow=5.8,SNR=8.2							
XAN	**Xi'an**	**56.44**	**41**		P	**P**	**10 07 24.3**	**-0.4**
XAN					pmax	pmax		
	comp=Z,2.0nm,1.0s							
XAN					pmax	pmax		
	comp=Z,36nm,6.3s							
BRTR	**Keskin Array B**	**56.46**	**329**		P	**P**	**10 07 24.5**	**-0.3**
BRTR	**Keskin Array B**	**56.46**	**329**		P	**P**	**10 07 24.5**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=145,slow=8.9,SNR=18							
BRTR					LR	LR	10 32 17.7	
	comp=Z,111nm,19.0s,baz=106,slow=37							
BR131	**Keskin Array S**	**56.46**	**329**		*e*P	**P**	**10 07 24.8**	**0.0**
	comp=Z,28nm,1.3s							
ABKAR	**Akbulak array**	**56.67**	**354**		*e*P	**P**	**10 07 25.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**57.10**	**107**		*e*P	**P**	**10 07 30.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**57.10**	**107**		P	**P**	**10 07 29.1**	**-0.5**
	comp=Z,7.7nm,1.1s,baz=285,slow=3.3,SNR=6.2							
AKTO	**Aktyubinsk**	**58.06**	**353**		P	**P**	**10 07 35.3**	**-0.4**
AKTO	**Aktyubinsk**	**58.06**	**353**		P	**P**	**10 07 35.3**	**-0.4**
AKTO	**Aktyubinsk**	**58.06**	**353**		P	**P**	**10 07 35.3**	**-0.4**
	comp=Z,6.7nm,0.9s,baz=175,slow=6.7,SNR=21							
WHN	**Wuhan**	**58.17**	**47**		P	P	10 07 40.8	+4.0
WHN					S	**S**	**10 15 42.6**	**+4.6**
WHN					LR	LR		
	comp=N,1μm,18.2s							
WHN					LR	LR		
	comp=E,1μm,20.6s							
WHN					LR	LR		
	comp=Z,1μm,17.1s							
KURBB	**Kurchatov Arra**	**58.32**	**8**		P	**P**	**10 07 36.9**	**-0.6**
	comp=Z,9.1nm,0.8s,baz=205,slow=7.2,SNR=32							
KURK	**Kurchatov**	**58.42**	**8**		*e*P	**P**	**10 07 37.8**	**-0.4**
KURK	**Kurchatov**	**58.42**	**8**		*e*P	**P**	**10 07 37.8**	**-0.4**
KURK	**Kurchatov**	**58.42**	**8**		P	**P**	**10 07 38.5**	**+0.3**
	SNR=16							
KURK	**Kurchatov**	**58.42**	**8**		P	**P**	**10 07 37.1**	**-1.1**
	comp=Z,135nm,1.2s,SNR=7.2							
ANN	**Anapa**	**58.61**	**335**		*e*P	P	10 07 32.3	-7.3
ANN					pmax	pmax		
	comp=Z,61nm,1.3s							
DAV	**Davao City (W)**	**59.19**	**77**		LR	LR	10 30 27.5	
	comp=Z,605nm,21.6s,baz=272,slow=33							
BVAR	**Borovoye Array**	**60.04**	**2**		P	**P**	**10 07 49.3**	**-0.1**
BVAR	**Borovoye Array**	**60.04**	**2**		P	**P**	**10 07 49.3**	**-0.1**
BVAR	**Borovoye Array**	**60.04**	**2**		P	**P**	**10 07 49.3**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=146,slow=8.2,SNR=13							
BRVK	**Borovoye**	**60.07**	**2**		*e*P	**P**	**10 07 49.7**	**+0.1**
BRVK	**Borovoye**	**60.07**	**2**		*e*P	**P**	**10 07 49.7**	**+0.1**
BRVK	**Borovoye**	**60.07**	**2**		P	**P**	**10 07 49.9**	**+0.4**
	SNR=13							
SIM	**Simferopol'**	**60.18**	**333**		*e*P	P	10 07 58.4	+7.9
SIM					pmax	pmax		
	comp=Z,25nm,1.0s							
MAW	**Mawson**	**60.40**	**182**		LR	LR	10 27 28.4	
	comp=Z,1μm,20.0s,baz=355,slow=30							
HVS	**Khovu-Aksy**	**62.21**	**18**		∥*e*P	**P**	**10 08 03.4**	**-0.9**
HVS					pmax	pmax		
	comp=Z,48nm,1.7s							
NJ2	**Nanjing**	**62.25**	**48**		*e*P	**P**	**10 08 04.3**	**-0.5**
NJ2					pP	**pP**	**10 08 11.0**	**+1.3**
NJ2					S	**S**	**10 16 32.5**	**+2.1**
NJ2					pmax	pmax		
	comp=Z,20nm,0.9s							
NJ2					pmax	pmax		
	comp=Z,100nm,9.2s							
NJ2					LR	LR		
	comp=N,560nm,20.2s							
NJ2					LR	LR		
	comp=E,760nm,23.4s							
NJ2					LR	LR		
	comp=Z,680nm,18.6s							
VRHR	**Novokhopersk**	**62.36**	**342**		*e*P	P	10 08 12.0	+6.9
VRHR					pmax	pmax		
	comp=N,40nm,0.7s							
VRHR					pmax	pmax		
	comp=Z,20nm,0.7s							
VRHR					pmax	pmax		
	comp=E,20nm,0.5s							
HHC	**Hu-ho-hao-te**	**62.36**	**36**		∥*e*P	**P**	**10 08 07.6**	**+2.1**
HHC					pP	**pP**	**10 08 12.3**	**+1.8**
HHC					sP	**sP**	**10 08 14.6**	**+2.2**
HHC					PP	**PP**	**10 10 26.9**	**+3.9**
HHC					PcS	**PcS**	**10 12 48.6**	**+0.2**
HHC					S	**S**	**10 16 32.3**	**+0.5**
HHC					ScS	**SKSac**	**10 17 55.6**	**-1.9**
HHC					pmax	pmax		
	comp=Z,22nm,1.1s							
HHC					pmax	pmax		
	comp=Z,200nm,5.0s							
HHC					LR	LR		
	comp=N,750nm,18.8s							
HHC					LR	LR		
	comp=E,890nm,18.6s							
HHC					LR	LR		
	comp=Z,690nm,18.0s							
ZAA0	**Zalesovo Array**	**62.57**	**11**		*e*P	**P**	**10 08 05.9**	**-0.6**
ZALV	**Zalesovo Beam**	**62.57**	**11**		*i* P	**P**	**10 08 05.6**	**-0.9**
ZALV					pmax	pmax		
	comp=Z,2.0nm,0.4s							
ZALV	**Zalesovo Beam**	**62.57**	**11**		P	**P**	**10 08 05.7**	**-0.7**
ZALV	**Zalesovo Beam**	**62.57**	**11**		P	**P**	**10 08 05.7**	**-0.7**
	comp=Z,2.3nm,0.4s,baz=204,slow=6.5,SNR=8.0							
ZALV					LR	LR	10 36 01.3	
	comp=Z,687nm,18.4s,baz=252,slow=37							
VORD	**Divnogorie**	**63.01**	**340**		*e*P	P	10 08 15.7	+6.2
VORD					pmax	pmax		
	comp=Z,40nm,1.5s							
VORD					pmax	pmax		
	comp=N,60nm,1.1s							
VORD					pmax	pmax		
	comp=E,9.0nm,0.4s							
NVS	**Novosibirsk**	**63.13**	**10**		*i* P	**P**	**10 08 08.6**	**-1.6**
NVS					pmax	pmax		
	comp=Z,39nm,1.7s							
NVS					pmax	pmax		
	comp=N,25nm,1.8s							
NVS					pmax	pmax		
	comp=E,10.0nm,1.5s							
VSR	**Storozhevoye**	**63.26**	**340**		*e*P	P	10 08 17.3	+6.1
VSR					pmax	pmax		
	comp=Z,30nm,1.1s							
VSR					pmax	pmax		
	comp=N,30nm,1.3s							
VSR					pmax	pmax		
	comp=E,10.0nm,0.9s							
ARU	**Arti**	**63.89**	**354**	*d*	*i* P	**P**	**10 08 14.5**	**-0.7**
ARU							10 10 36.3	
ARU					S	**S**	**10 16 51.5**	**+1.5**
ARU					pmax	pmax		
	comp=Z,36nm,1.7s							
SVE	**Sverdlovsk**	**64.10**	**356**		*e*P	**P**	**10 08 17.1**	**+0.5**
SVE					pmax	pmax		
	comp=Z,36nm,1.3s							
SONM	**Songino Array**	**64.43**	**28**		P	**P**	**10 08 19.0**	**-0.2**
SONM	**Songino Array**	**64.43**	**28**		P	**P**	**10 08 19.0**	**-0.2**
	comp=Z,4.5nm,0.8s,baz=220,slow=6.2,SNR=29							
SONM					LR	LR	10 35 53.3	
	comp=Z,1μm,20.8s,baz=224,slow=36							
SYO	**Syowa Base**	**64.48**	**191**		*e*P	**P**	**10 08 17.8**	**-1.1**
BJI	**Beijing**	**64.68**	**39**		P	**P**	**10 08 19.9**	**-0.8**
BJI					S	**S**	**10 17 00.6**	**+0.2**
BJI					pmax	pmax		
	comp=Z,11nm,0.6s							
BJI					pmax	pmax		
	comp=Z,110nm,4.3s							
BJI					LR	LR		
	comp=N,240nm,18.8s							
BJI					LR	LR		
	comp=E,400nm,18.8s							
BJI					LR	LR		
	comp=Z,290nm,20.6s							
ULN	**Ulaanbaatar**	**64.76**	**28**		P	**P**	**10 08 21.2**	**-0.1**
	comp=Z,10nm,1.7s,comp=Z,282nm							
ZAK	**Zakamensk**	**65.00**	**24**		*e*P	**P**	**10 08 22.7**	**-0.1**
ASAR	**Alice Springs**	**65.12**	**113**		P	**P**	**10 08 24.1**	**0.0**
ASAR	**Alice Springs**	**65.12**	**113**		P	**P**	**10 08 24.1**	**0.0**
	comp=Z,7.0nm,1.1s,baz=277,slow=5.9,SNR=26							
ASAR					LR	LR	10 31 09.5	
	comp=Z,299nm,22.0s,baz=281,slow=31							
AS31	**Alice Springs**	**65.12**	**113**		P	**P**	**10 08 24.5**	**+0.4**
TIR	**Tirane**	**65.37**	**322**		*e*P	**P**	**10 08 25.1**	**-0.1**
TIR					pmax	pmax		
	comp=Z,76nm,1.0s							
TIR	**Tirane**	**65.37**	**322**		*e*P	**P**	**10 08 25.1**	**-0.1**
	comp=Z,76nm,1.0s							
WRA	**Warramunga Arr**	**65.39**	**109**		P	**P**	**10 08 26.1**	**+0.2**
WRA	**Warramunga Arr**	**65.39**	**109**		P	**P**	**10 08 26.1**	**+0.2**
	comp=Z,9.9nm,1.0s,baz=282,slow=6.3,SNR=30							
WRA					LR	LR

BBOO Buckleboo 67.73 122 *e*P P 10 08 41.8 +1.2
comp=Z,281nm,1.3s
UZH **Uzhgorod** 68.49 329 *e*P P 10 08 43.4 -1.5
UZH *i* 10 08 49.8
UZH *i* 10 09 10.2
KOLS Kolonicke sedl 68.70 330 *e*P P 10 08 46.3 +0.1
KOLS *e* 10 08 54.0
KOLS pmax pmax
comp=Z,23nm,1.3s
KOLS Kolonicke sedl 68.70 330 *e*P P 10 08 46.3 +0.1
KOLS *e*pP pP 10 08 54.0 +2.8
TOA0 Torodi Ar. Sit 68.86 287 *e*P P 10 08 47.9 0.0
TORD Torodi Ar. Bea 68.86 287 P P 10 08 47.8 0.0
TORD Torodi Ar. Bea 68.86 287 P P 10 08 47.8 0.0
comp=Z,2.4nm,1.0s,baz=122,slow=6.8,SNR=8.3
TORD LR LR 10 37 31.0
comp=Z,396nm,18.7s,baz=120,slow=35
CRVS Cervenica-Dubn 69.09 329 *e*P P 10 08 46.6 -2.1
CRVS *e* 10 08 53.4
CRVS pmax pmax
comp=Z,17nm,1.4s
CRVS Cervenica-Dubn 69.09 329 *e*P P 10 08 46.6 -2.1
CRVS *e*pP pP 10 08 53.4 -0.3
PSZ Piszkesteto 69.29 328 *e*P P 10 08 49.3 -0.7
PSZ pmax pmax
comp=Z,11nm,1.0s
PSZ Piszkesteto 69.29 328 *e*P P 10 08 49.3 -0.7
comp=Z,11nm,1.0s
KEST Kesra 69.64 312 P P 10 08 52.3 -0.2
KEST Kesra 69.64 312 P P 10 08 52.3 -0.2
comp=Z,1.7nm,1.0s,baz=0.6,slow=22,SNR=6.0
KEST LR LR 10 37 11.8
comp=Z,79nm,20.9s,baz=201,slow=34
VYHS Vyhne 70.20 328 *e*P P 10 08 54.9 -0.6
VYHS *e* 10 09 01.4
VYHS pmax pmax
comp=Z,17nm,1.2s
VYHS Vyhne 70.20 328 *e*P P 10 08 54.9 -0.6
VYHS *e*pP pP 10 09 01.4 +0.9
OJC Ojcow 70.76 330 *e*P P 10 09 05.7 +6.8
OJC Ojcow 70.76 330 *e*P P 10 09 05.7 +6.8
NACGM Naroch 70.76 336 *e* P 10 08 56.0 -2.8
SOKA Soboth 71.26 325⇓ *i*P P 10 09 02.3 +0.2
comp=Z,21nm,1.3s
ARSA Arzberg 71.29 325⇓ *i*P P 10 09 01.9 -0.4
comp=Z,20nm,1.1s
KSAR Wonju Array Be 71.31 47 P P 10 09 01.7 -0.8
KSRS Korea Array 71.35 47 P P 10 09 01.7 -1.0
comp=Z,2.9nm,1.1s,baz=243,slow=7.3,SNR=11
KSRS LR LR 10 42 18.1
comp=Z,629nm,18.4s,baz=244,slow=38
OKC Ostrava-Krasne 71.37 329 *e*P P 10 09 02.1 -0.5
OKC *e* 10 09 09.8
OKC Ostrava-Krasne 71.37 329 *e*P P 10 09 02.1 -0.5
OKC *ex* x 10 09 09.8
CONA Conrad Observa 71.48 326⇓ *i*P P 10 09 02.7 -0.7
comp=Z,35nm,1.2s
CONA *i* P pP 10 09 03.0 -5.4
SNR=7.3
MORC Moravsky Berou 71.65 328 *e*P P 10 09 03.2 -1.2
MORC pmax pmax
comp=Z,14nm,1.1s
MORC Moravsky Berou 71.65 328 *e*P P 10 09 03.2 -1.2
comp=Z,14nm,1.1s
JNU Nakatsue 71.86 52 P P 10 09 05.4 -0.5
JNU Nakatsue 71.86 52 P P 10 09 05.4 -0.5
comp=Z,7.1nm,1.1s,baz=128,slow=17,SNR=2.4
MYKA Terra Mystica 72.04 324⇑ *i*P P 10 09 06.5 -0.3
comp=Z,31nm,1.6s
STKA Stephens Creek 72.33 121 P P 10 09 08.8 0.0
STKA Stephens Creek 72.33 121 P P 10 09 08.8 0.0
comp=Z,3.1nm,1.0s,baz=229,slow=7.6,SNR=4.4
STKA LR LR 10 36 54.5
comp=Z,342nm,18.4s,baz=120,slow=32
MOA Molln 72.33 325⇑ *i*P P 10 09 08.1 -0.4
comp=Z,29nm,1.1s
KBA Koelnbreinsper 72.45 324⇓ *i*P P 10 09 09.6 +0.2
comp=Z,23nm,1.6s
TREC Trest 72.46 327 *e*P P 10 09 08.6 -0.6
TREC *e* 10 09 16.2
TREC Trest 72.46 327 *e*P P 10 09 08.6 -0.6
TREC *ex* x 10 09 16.2
CN2 Changchun 72.53 40 *e*P P 10 09 10.3 +0.6
DPC Dobruska-Polom 72.62 328 *e*P P 10 09 09.7 -0.5
DPC *e* 10 09 17.1
DPC Dobruska-Polom 72.62 328 *e*P P 10 09 09.7 -0.5
DPC *ex* x 10 09 17.1
ABTA Abfaltersbach 72.76 324⇓ *i*P P 10 09 10.6 -0.5
comp=Z,38nm,1.1s
ABTA *i* P pP 10 09 11.2 -4.9
SNR=7.5
UPC Upice 72.88 328 *e*P P 10 09 11.2 -0.4
UPC *e* 10 09 18.7
UPC Upice 72.88 328 *e*P P 10 09 11.2 -0.4
UPC *e*pP pP 10 09 18.7 +2.1
PGF Pioggiola 72.91 319 *e*P P 10 09 10.7 -1.4
comp=Z,29nm,1.2s
PGF Pioggiola 72.91 319 *e*P P 10 09 10.7 -1.4
PGF pmax pmax
comp=Z,29nm,1.2s
PGF Pioggiola 72.91 319 *e*P P 10 09 10.7 -1.4
comp=Z,29nm,1.2s
KSP Ksiaz 72.92 329 *e*P P 10 09 11.9 0.0
RJOB Jochberg 73.11 325 *e*P P 10 09 11.4 -1.8
comp=Z,10.0nm,1.0s
GEC2 GERESS Array S 73.19 326 *e*P P 10 09 11.7 -1.9
GEC2 pmax pmax
comp=Z,6.0nm,1.2s
GEC2 GERESS Array S 73.19 326 *e*P P 10 09 11.7 -1.9
comp=Z,6.0nm,1.2s
PRU Pruhonice 73.36 327 *e*P P 10 09 14.0 -0.5
PRU *e* 10 09 22.0
PRU Pruhonice 73.36 327 *e*P P 10 09 14.0 -0.5
PRU *ex* x 10 09 22.0
VSU Vasula 73.37 339⇓ *e*P P 10 09 13.2 -1.1
VSU pmax pmax
comp=Z,28nm,1.7s
KHC Kasperske Hory 73.41 326 *e*P P 10 09 14.5 -0.4
KHC pmax pmax
comp=Z,16nm,1.3s
KHC Kasperske Hory 73.41 326 *e*P P 10 09 14.5 -0.4
comp=Z,16nm,1.3s
KHC Kasperske Hory 73.41 326 *e*P P 10 09 13.8 -1.1
KHC *e*pP pP 10 09 21.2 +1.3
WTTA Wattenberg 73.54 324⇓ *i*P P 10 09 15.1 -0.8
PVCC Panska Ves 73.65 328 *e*P P 10 09 22.8 +6.6
PVCC Panska Ves 73.65 328 *e*pP P 10 09 22.8 +6.6
WET Wettzell 73.81 326 *e*P P 10 09 15.0 -2.2
WET pmax pmax
comp=Z,8.0nm,1.2s
WET Wettzell 73.81 326 *e*P P 10 09 15.0 -2.2
comp=Z,8.0nm,1.2s
MOTA Moosalm 73.89 324⇓ *i*P P 10 09 17.0 -0.9
comp=Z,41nm,1.0s
DBIC Dimbokro 73.94 279 P P 10 09 17.5 -1.1
DBIC Dimbokro 73.94 279 P P 10 09 17.5 -1.1
comp=Z,11nm,1.1s,baz=83,slow=5.5,SNR=4.4
DBIC LR LR 10 39 58.4
comp=Z,148nm,20.1s,baz=92,slow=34
FETA Feichten 73.95 323⇓ *i*P P 10 09 17.5 -0.8
comp=Z,19nm,1.4s
FETA *i* P pP 10 09 18.2 -5.1
SNR=6.5
FUORN Ofenpass-Fuorn 74.03 323 *e*P P 10 09 18.6 -0.3
LIC Lamto 74.04 279 *e*P P 10 09 18.9 -0.3
LIC *e*R
comp=Z,579nm,22.2s
LIC Lamto 74.04 279 *e*P P 10 09 18.9 -0.3
RETA Reutte 74.17 324⇓ *i*P P 10 09 18.8 -0.6
comp=Z,32nm,1.2s
BRG Berggiesshubel 74.17 328 *e*P P 10 09 19.1 -0.1
comp=Z,29nm,1.7s
BRG *e* 10 09 26.9
comp=Z,22nm,1.2s
BRG Berggiesshubel 74.17 328 *e*P P 10 09 19.1 -0.1
BRG *e* 10 09 26.9
BRG pmax pmax
comp=Z,29nm,1.7s
BRG Berggiesshubel 74.17 328 *e*P P 10 09 18.4 -0.8
comp=Z,22nm,1.3s
FUR Furstenfeldbru 74.21 324 *e*P P 10 09 18.4 -1.1
FUR pmax pmax
comp=Z,128nm,1.4s
FUR Furstenfeldbru 74.21 324 *e*P P 10 09 18.4 -1.1
comp=Z,128nm,1.4s

SAOF Saorge 74.50 319 *e*P P 10 09 21.3 0.0
SAOF Saorge 74.50 319 *e*P P 10 09 21.3 0.0
SAOF Saorge 74.50 319 *e*P P 10 09 21.3 0.0
ROTZ Rotzenmuhle 74.51 326 *e*P P 10 09 20.1 -1.1
comp=Z,19nm,1.5s
TUE Stuetta 74.52 322 *e*P P 10 09 21.1 -0.5
SBF Sospel 74.52 319 *e*P P 10 09 20.7 -0.8
comp=Z,99nm,1.2s
SBF Sospel 74.52 319 *e*P P 10 09 20.7 -0.8
SBF pmax pmax
comp=Z,99nm,1.2s
SBF Sospel 74.52 319 *e*P P 10 09 20.7 -0.8
comp=Z,99nm,1.2s
DAVA Damuels 74.59 323 *i* P P 10 09 21.5 -0.4
SNR=7.6
DAVA ⇑ *i*P pP 10 09 21.9 -5.1
NKC Novy Kostel 74.62 327 *e*P P 10 09 22.5 +0.6
NKC *e* 10 09 29.9
NKC Novy Kostel 74.62 327 *e*P P 10 09 22.5 +0.6
NKC *ex* x 10 09 29.9
TOUF Mont Tournerai 74.71 319 *e*P P 10 09 22.9 +0.2
TOUF Mont Tournerai 74.71 319 *e*P P 10 09 22.9 +0.2
TOUF Mont Tournerai 74.71 319 *e*P P 10 09 22.9 +0.2
TANN Tannenbergstha 74.71 327 *e*P P 10 09 21.9 -0.6
comp=Z,48nm,2.1s
MVIF Mont Vial 74.72 319 *e*P P 10 09 22.0 -0.8
MVIF Mont Vial 74.72 319 *e*P P 10 09 22.0 -0.8
MVIF Mont Vial 74.72 319 *e*P P 10 09 22.0 -0.8
LMR La Mourre 74.89 318 *e*P P 10 09 23.1 -0.5
comp=Z,38nm,1.3s
LMR La Mourre 74.89 318 *e*P P 10 09 23.1 -0.5
LMR pmax pmax
comp=Z,38nm,1.3s
LMR La Mourre 74.89 318 *e*P P 10 09 23.1 -0.5
comp=Z,38nm,1.3s
FRF La Foret Royal 74.90 319 *e*P P 10 09 23.1 -0.5
comp=Z,59nm,1.3s
FRF La Foret Royal 74.90 319 *e*P P 10 09 23.1 -0.5
FRF pmax pmax
comp=Z,59nm,1.3s
FRF La Foret Royal 74.90 319 *e*P P 10 09 23.1 -0.5
comp=Z,59nm,1.3s
CLL Collm 74.90 328 *i* P P 10 09 23.5 +0.1
CLL *i* 10 09 31.2
CLL pmax pmax
comp=Z,22nm,1.4s
CLL Collm 74.90 328 *e*P P 10 09 22.8 -0.7
comp=Z,39nm,1.3s
CLL Collm 74.90 328 *i* P P 10 09 23.5 +0.1
comp=Z,22nm,1.4s
CLL *i* (sP) sP 10 09 31.2 +0.9
CLL *e*SS SS 10 23 48.0 -0.8
GRF Grafenberg Arr 75.02 326 *e*P P 10 09 23.1 -1.1
GRF pmax pmax
comp=Z,79nm,1.3s
GRF Grafenberg Arr 75.02 326 *e*P P 10 09 23.1 -1.1
comp=Z,79nm,1.3s
GRF *e*L L 11 15 56.2
comp=Z,128nm,19.3s
GRFO Grafenberg 75.02 326 *e*P P 10 09 23.9 -0.3
GRFO pmax pmax
comp=Z,80nm,1.3s
GRFO Grafenberg 75.02 326 *e*P P 10 09 23.9 -0.3
comp=Z,80nm,1.3s
RUE Ruedersdorf 75.14 329 *e*P P 10 09 25.5 +0.7
comp=Z,36nm,0.5s
MOX Moxa 75.29 327 *e*P P 10 09 25.1 -0.7
MOX *e*PP pP 10 09 32.9 +2.1
MOX pmax pmax
comp=Z,28nm,1.4s
MOX Moxa 75.29 327 *e*P P 10 09 25.1 -0.7
comp=Z,28nm,1.4s
MOX *e*pP pP 10 09 32.9 +2.1
MOX *e*L L 11 02 48.6
comp=Z,116nm,21.8s
JOF Joensuu 75.32 344 *e*P P 10 09 24.7 -0.9
JOF pmax pmax
comp=Z,32nm,1.1s
JOF Joensuu 75.32 344 *e*p P 10 09 24.7 -0.9
comp=Z,32nm,1.1s
MBDF Montbardon 75.33 320 *e*P P 10 09 26.3 0.0
comp=Z,44nm,1.2s
MBDF Montbardon 75.33 320 *e*P P 10 09 26.3 0.0
MBDF pmax pmax
comp=Z,44nm,1.2s
MBDF Montbardon 75.33 320 *e*P P 10 09 26.3 0.0
comp=Z,44nm,1.2s
MDJ Mudanjiang 75.55 40 P P 10 09 28.1 +0.7
MDJ pP pP 10 09 31.3 -1.1
MDJ PcP PcP 10 09 40.4 +0.1
MDJ S S 10 19 09.9 +2.2
MDJ pmax pmax
comp=Z,12nm,1.1s
MDJ pmax pmax
comp=Z,110nm,5.3s
MDJ LR LR
comp=N,180nm,14.6s
MDJ LR LR
comp=E,280nm,14.6s
MDJ LR LR
comp=Z,270nm,13.2s
MDJ Mudanjiang 75.55 40 *e*P P 10 09 27.1 -0.3
comp=Z,15nm,1.0s
SPAK Spaichingen-Ko 75.63 324 *e*P P 10 09 27.9 +0.1
LPG La Plagne 75.68 320 *e*P P 10 09 27.0 -1.4
comp=Z,60nm,1.3s
LPG La Plagne 75.68 320 *e*P P 10 09 27.0 -1.4
LPG pmax pmax
comp=Z,61nm,1.3s
LPG La Plagne 75.68 320 *e*P P 10 09 27.0 -1.4
comp=Z,60nm,1.3s
LPL La Plagne 75.70 321 *e*P P 10 09 27.1 -1.4
comp=Z,53nm,1.2s
LPL La Plagne 75.70 321 *e*P P 10 09 27.1 -1.4
LPL pmax pmax
comp=Z,53nm,1.2s
LPL La Plagne 75.70 321 *e*P P 10 09 27.1 -1.4
comp=Z,53nm,1.2s
STU Stuttgart 75.71 324 *e*P P 10 09 26.8 -1.4
comp=Z,48nm,1.4s
SMRF Simiane la Rot 75.78 319 *e*P P 10 09 28.7 0.0
comp=Z,44nm,1.3s
SMRF Simiane la Rot 75.78 319 *e*P P 10 09 28.7 0.0
comp=Z,44nm,1.3s
FIA1 FINESS Array S 75.79 341 *e*P P 10 09 27.9 -0.4
FINES FINESS Array B 75.79 341 P P 10 09 27.5 -0.8
FINES FINESS Array B 75.79 341 P P 10 09 27.5 -0.8
comp=Z,2.8nm,0.7s,baz=107,slow=6.4,SNR=7.3
FINES LR LR 10 45 01.8
comp=Z,94nm,21.4s,baz=90,slow=38
ORIF Oris-en-Rattie 75.98 320 *e*P P 10 09 29.3 -0.6
comp=Z,55nm,1.4s
ORIF *e*R
comp=Z,163nm,21.5s
ORIF Oris-en-Rattie 75.98 320 *e*P P 10 09 29.3 -0.6
ORIF pmax pmax
comp=Z,55nm,1.4s
ORIF Oris-en-Rattie 75.98 320 *e*P P 10 09 29.3 -0.6
comp=Z,55nm,1.4s
FELD Feldberg im Sc 75.99 323 *e*P P 10 09 29.1 -0.9
FELD Feldberg im Sc 75.99 323 *e*P P 10 09 29.1 -0.9
BFO Black Forest 76.01 324 *e*P P 10 09 29.6 -0.3
BFO pmax pmax
comp=Z,19nm,1.2s
BFO Black Forest 76.01 324 *e*P P 10 09 29.0 -0.9
comp=Z,25nm,1.3s
BFO Black Forest 76.01 324 *e*P P 10 09 29.6 -0.3
comp=Z,19nm,1.2s
BBS Basel-Blauen 76.09 323 *e*P P 10 09 30.5 0.0
BBS Basel-Blauen 76.09 323 *e*P P 10 09 30.5 0.0
KAF Kangasniemi 76.20 341 *e*P P 10 09 29.2 -1.5
KAF pmax pmax
comp=Z,18nm,0.9s
KAF Kangasniemi 76.20 341 *e*p P 10 09 29.2 -1.5
comp=Z,18nm,0.9s
UBBA Unterbreizbach 76.27 326 *e*P P 10 09 30.6 -0.6
comp=Z,36nm,1.5s
LOMF Lomont 76.45 322 *e*P P 10 09 32.4 -0.2
LOMF Lomont 76.45 322 *e*P P 10 09 32.4 -0.2
LOMF Lomont 76.45 322 *e*P P 10 09 32.4 -0.2
MOF Molkenrain 76.50 323 *e*P P 10 09 31.1 -1.7
MOF Molkenrain 76.50 323 *e*P P 10 09 31.1 -1.7
MOF Molkenrain 76.50 323 *e*P P 10 09 31.1 -1.7
CABF La Chapelle 76.58 321 *e*P P 10 09 32.8 -0.5
comp=Z,87nm,1.3s

CABF La Chapelle 76.58 321 *e*P P 10 09 32.8 -0.5
CABF pmax pmax
comp=Z,87nm,1.3s
CABF La Chapelle 76.58 321 *e*P P 10 09 32.8 -0.5
comp=Z,87nm,1.3s
CTAO Charters Tower 76.59 109 *e*P P 10 09 34.1 +0.3
CTAO Charters Tower 76.59 109 *e*P P 10 09 34.1 +0.3
ECH Echery 76.65 323 *e*P P 10 09 32.4 -1.2
ECH Echery 76.65 323 *e*P P 10 09 32.4 -1.2
ECH Echery 76.65 323 *e*P P 10 09 32.4 -1.2
HINF Hinteralfeld 76.65 323 *e*P P 10 09 32.5 -1.1
comp=Z,40nm,1.4s
HINF Hinteralfeld 76.65 323 *e*P P 10 09 32.5 -1.1
HINF pmax pmax
comp=Z,40nm,1.4s
HINF Hinteralfeld 76.65 323 *e*P P 10 09 32.5 -1.1
comp=Z,40nm,1.4s
CDF Champ du Feu 76.67 323 *e*P P 10 09 32.7 -1.1
comp=Z,61nm,1.4s
CDF Champ du Feu 76.67 323 *e*P P 10 09 32.7 -1.1
CDF pmax pmax
comp=Z,61nm,1.4s
CDF Champ du Feu 76.67 323 *e*P P 10 09 32.7 -1.1
comp=Z,61nm,1.4s
VIVF Saint-Julien-l 76.73 319 *e*P P 10 09 33.7 -0.4
comp=Z,53nm,1.3s
VIVF Saint-Julien-l 76.73 319 *e*P P 10 09 33.7 -0.4
VIVF pmax pmax
comp=Z,53nm,1.3s
VIVF Saint-Julien-l 76.73 319 *e*P P 10 09 33.7 -0.4
comp=Z,53nm,1.3s
TNS Taunus Mts 76.84 325 *e*P P 10 09 34.0 -0.6
TNS pmax pmax
comp=Z,32nm,1.3s
TNS Taunus Mts 76.84 325 *e*P P 10 09 34.0 -0.6
comp=Z,32nm,1.3s
USRK Ussuriysk Arra 76.94 42 P P 10 09 35.2 0.0
comp=Z,3.2nm,0.9s,baz=306,slow=4.5,SNR=8.0
USRK LR LR 10 46 21.4
comp=Z,391nm,19.3s,baz=223,slow=38
LASF Ste Croix 76.95 318 *e*P P 10 09 35.3 -0.1
comp=Z,62nm,1.4s
LASF Ste Croix 76.95 318 *e*P P 10 09 35.3 -0.1
comp=Z,62nm,1.4s
SSB Saint Sauveur 76.99 320 *e*P P 10 09 35.6 0.0
SSB pmax pmax
comp=Z,32nm,1.3s
SSB Saint Sauveur 76.99 320 *e*P P 10 09 35.6 0.0
comp=Z,32nm,1.3s
HAU Haudompre 77.04 323 *e*P P 10 09 34.8 -1.0
HAU *e*R
comp=Z,78nm,19.2s
HAU Haudompre 77.04 323 *e*P P 10 09 34.8 -1.0
HAU Haudompre 77.04 323 *e*P P 10 09 34.8 -1.0
NRDL Niedersach Rie 77.05 328 *e*P P 10 09 35.0 -0.6
comp=Z,20nm,1.4s
THEF They Montfort 77.35 323 *e*P P 10 09 36.5 -1.0
THEF They Montfort 77.35 323 *e*P P 10 09 36.5 -1.0
THEF They Montfort 77.35 323 *e*P P 10 09 36.5 -1.0
RUP Ruppelstein 77.39 324 *e*P P 10 09 37.8 +0.1
RUP Ruppelstein 77.39 324 *e*P P 10 09 37.8 +0.1
PAGF Fort de Pagny 77.65 323 *e*P P 10 09 38.5 -0.7
comp=Z,22nm,1.4s
PAGF Fort de Pagny 77.65 323 *e*P P 10 09 38.5 -0.7
comp=Z,22nm,1.4s
BSEG Bad Segeberg 77.68 329 *e*P P 10 09 38.4 -0.7
BSEG pmax pmax
comp=Z,77nm,1.9s
BSEG Bad Segeberg 77.68 329 *e*P P 10 09 38.4 -0.7
comp=Z,77nm,1.9s
MTLF Montolieu 77.76 317 *e*P P 10 09 39.8 -0.1
comp=Z,72nm,1.3s
MTLF Montolieu 77.76 317 *e*P P 10 09 39.8 -0.1
MTLF pmax pmax
comp=Z,72nm,1.3s
MTLF Montolieu 77.76 317 *e*P P 10 09 39.8 -0.1
comp=Z,72nm,1.3s
LBL Lubilhac 77.81 319 *e*P P 10 09 38.9 -1.3
LBL Lubilhac 77.81 319 *e*P P 10 09 38.9 -1.3
LBL Lubilhac 77.81 319 *e*P P 10 09 38.9 -1.3
WLF Walferdange 77.89 324 *e*P P 10 09 39.5 -1.0
comp=Z,23nm,1.1s
SFTF Sexfontaines 77.92 322 *e*P P 10 09 40.1 -0.5
comp=Z,103nm,1.3s
SFTF Sexfontaines 77.92 322 *e*P P 10 09 40.1 -0.5
comp=Z,103nm,1.3s
SMF Signal de Mont 78.00 321 *e*P P 10 09 40.4 -0.8
SMF Signal de Mont 78.00 321 *e*P P 10 09 40.4 -0.8
SMF Signal de Mont 78.00 321 *e*P P 10 09 40.4 -0.8
MEZF Maizieres J'vi 78.03 323 *e*P P 10 09 40.7 -0.6
comp=Z,95nm,1.4s
MEZF Maizieres J'vi 78.03 323 *e*P P 10 09 40.7 -0.6
comp=Z,95nm,1.4s
BUG Bochum–Univer 78.07 326 *e*P P 10 09 41.0 -0.4
comp=Z,27nm,1.1s
PYM Petit Puy Mans 78.17 320 *e*P P 10 09 39.8 -2.4
PYM Petit Puy Mans 78.17 320 *e*P P 10 09 39.8 -2.4
PYM Petit Puy Mans 78.17 320 *e*P P 10 09 39.8 -2.4
IBBN Ibbenburen 78.22 327 *e*P P 10 09 41.7 -0.5
comp=Z,17nm,1.0s
PMG Port Moresby 78.24 98 P P 10 09 43.3 +0.1
PMG Port Moresby 78.24 98 P P 10 09 43.3 +0.1
comp=Z,7.4nm,0.9s,baz=294,slow=10.0,SNR=3.5
LOR Lormes 78.24 321 *e*P P 10 09 41.9 -0.6
comp=Z,55nm,1.3s
LOR *e*R
comp=Z,75nm,22.0s
LOR Lormes 78.24 321 *e*P P 10 09 41.9 -0.6
comp=Z,55nm,1.3s
AVF Avril sur Loir 78.37 321 *e*P P 10 09 43.5 +0.3
comp=Z,51nm,1.4s
AVF Avril sur Loir 78.37 321 *e*P P 10 09 43.5 +0.3
AVF pmax pmax
comp=Z,51nm,1.4s
AVF Avril sur Loir 78.37 321 *e*P P 10 09 43.5 +0.3
comp=Z,51nm,1.4s
SSF Saint Saulge 78.38 321 *e*P P 10 09 42.6 -0.6
comp=Z,52nm,1.2s
SSF Saint Saulge 78.38 321 *e*P P 10 09 42.6 -0.6
SSF pmax pmax
comp=Z,52nm,1.2s
SSF Saint Saulge 78.38 321 *e*P P 10 09 42.6 -0.6
comp=Z,52nm,1.2s
CAF Calviac 78.46 319 *e*P P 10 09 43.8 0.0
comp=Z,36nm,1.3s
CAF Calviac 78.46 319 *e*P P 10 09 43.8 0.0
CAF pmax pmax
comp=Z,36nm,1.3s
CAF Calviac 78.46 319 *e*P P 10 09 43.8 0.0
comp=Z,36nm,1.3s
BGF Bois d'Agland 78.59 320 *e*P P 10 09 44.3 -0.1
comp=Z,112nm,1.2s
BGF Bois d'Agland 78.59 320 *e*P P 10 09 44.3 -0.1
BGF pmax pmax
comp=Z,112nm,1.2s
BGF Bois d'Agland 78.59 320 *e*P P 10 09 44.3 -0.1
comp=Z,112nm,1.2s
MAT Matsushiro 78.68 51 P P 10 09 44.8 -0.4
MAT S S 10 19 41.6 -0.6
MJAR Matsushiro Arr 78.69 51 P P 10 09 45.7 +0.5
MJAR Matsushiro Arr 78.69 51 P P 10 09 45.7 +0.5
comp=Z,7.6nm,1.2s,baz=249,slow=7.0,SNR=13
MJAR LR LR 10 47 09.7
comp=Z,260nm,19.7s,baz=245,slow=38
BCLA Clavier 78.72 325 P P 10 09 45.4 +0.4
comp=Z,16nm,1.5s
CLNS Chul'man 78.85 28 *e*P P 10 09 45.7 +0.1
CLNS pmax pmax
comp=Z,5.0nm,1.0s
CLNS pmax pmax
comp=N,7.0nm,1.3s
CLNS pmax pmax
comp=E,12nm,1.3s
GIVF Givet 78.86 324 *e*P P 10 09 45.6 -0.2
GIVF Givet 78.86 324 *e*P P 10 09 45.6 -0.2
GIVF Givet 78.86 324 *e*P P 10 09 45.6 -0.2
KLR Kul'dur 78.86 37 *e*P P 10 09 41.0 -4.8
TCF Toulx Ste Croi 78.89 320 *e*P P 10 09 45.8 -0.3
TCF Toulx Ste Croi 78.89 320 *e*P P 10 09 45.8 -0.3
TCF Toulx Ste Croi 78.89 320 *e*P P 10 09 45.8 -0.3
EPF Esparros 78.92 316 *e*P P 10 09 46.5 +0.1
comp=E,39nm,1.4s
EPF Esparros 78.92 316 *e*P P 10 09 46.5 +0.1
EPF pmax pmax
comp=Z,39nm,1.4s
EPF Esparros 78.92 316 *e*P P 10 09 46.5 +0.1

comp=Z,39nm,1.4s
RJF Les Rejaudoux 78.97 319 *e*P **P** 10 09 46.6 +0.1
comp=Z,88nm,1.3s
RJF *e*R
comp=Z,111nm,20.8s
RJF Les Rejaudoux 78.97 319 *e*P **P** 10 09 46.6 +0.1
RJF pmax pmax
comp=Z,89nm,1.3s
RJF Les Rejaudoux 78.97 319 *e*P **P** 10 09 46.6 +0.1
comp=Z,88nm,1.3s
DOU Dourbes 78.99 324 P **P** 10 09 43.4 -3.1
comp=Z,11nm,1.6s
BAIF Baives 79.20 324 *e*P **P** 10 09 47.6 -0.1
comp=Z,85nm,1.2s
BAIF Baives 79.20 324 *e*P **P** 10 09 47.6 -0.1
BAIF pmax pmax
comp=Z,85nm,1.2s
BAIF Baives 79.20 324 *e*P **P** 10 09 47.6 -0.1
comp=Z,85nm,1.2s
LFF La Frestale 79.34 318 *e*P **P** 10 09 48.8 +0.3
comp=Z,123nm,1.2s
LFF La Frestale 79.34 318 *e*P **P** 10 09 48.8 +0.3
LFF pmax pmax
comp=Z,123nm,1.2s
LFF La Frestale 79.34 318 *e*P **P** 10 09 48.8 +0.3
comp=Z,123nm,1.2s
ETSF Etsaut 79.50 316 *e*P **P** 10 09 49.8 +0.2
comp=Z,69nm,1.3s
ETSF Etsaut 79.50 316 *e*P **P** 10 09 49.8 +0.2
ETSF pmax pmax
comp=Z,69nm,1.3s
ETSF Etsaut 79.50 316 *e*P **P** 10 09 49.8 +0.2
comp=Z,69nm,1.3s
SJPF Ste Jean 80.03 316 *e*P **P** 10 09 52.7 +0.3
comp=Z,120nm,1.5s
SJPF Ste Jean 80.03 316 *e*P **P** 10 09 52.7 +0.3
SJPF pmax pmax
comp=Z,120nm,1.5s
SJPF Ste Jean 80.03 316 *e*P **P** 10 09 52.7 +0.3
comp=Z,120nm,1.5s
MFF Saint Martin d 80.52 320 *e*P **P** 10 09 54.8 -0.1
comp=Z,50nm,1.3s
MFF Saint Martin d 80.52 320 *e*P **P** 10 09 54.8 -0.1
MFF pmax pmax
comp=Z,50nm,1.3s
MFF Saint Martin d 80.52 320 *e*P **P** 10 09 54.8 -0.1
comp=Z,50nm,1.3s
HABR Khabarovsk 80.56 38 *e*P **P** 10 09 53.1 -1.9
HABR *e**PP **pP** **10 09 56.4 -3.7**
HABR *e* 10 09 59.8
HABR *e* 10 12 56.0
HABR PPP PPP 10 14 45.7
HABR *e*S **S** **10 20 00.1 -1.3**
HABR *e**SS **sS** **10 20 05.7 -4.1**
HABR *e*SS **SS** **10 25 12.9 -1.3**
HABR *e*SSS SSS 10 28 39.4
HABR pmax pmax
comp=Z,11nm,1.1s
HABR pmax pmax
comp=E,3.0nm,0.8s
HABR pmax pmax
comp=N,3.0nm,0.9s
HABR MLR MLR
comp=Z,388nm,18.0s
ESDC Sonseca Array 80.90 312 P **P** **10 09 56.7 -0.4**
ESDC Sonseca Array 80.90 312 P **P** **10 09 56.7 -0.4**
comp=Z,2.2nm,0.6s,baz=89,slow=4.3,SNR=13
ESLA Sonseca Array 80.90 312 *e*P **P** 10 09 57.4 +0.2
comp=Z,10nm,1.3s
NB2 NORSAR Subarra 81.04 336 P **P** 10 09 56.8 -0.6
comp=Z,13nm,1.4s,baz=123,slow=5.6
NOA NORSAR Array B 81.04 336 P **P** 10 09 56.8 -0.6
NOA NORSAR Array B 81.04 336 P **P** **10 09 56.8 -0.6**
comp=Z,0.8nm,0.7s,baz=112,slow=5.8,SNR=3.4
PAB San Pablo 81.14 312 *e*P **P** 10 09 58.6 +0.1
PAB pmax pmax
comp=Z,32nm,1.3s
PAB San Pablo 81.14 312 *e*P **P** 10 09 58.6 +0.1
comp=Z,32nm,1.3s
LDF La Druitiere 81.23 321 *e*P **P** 10 09 58.2 -0.4
comp=Z,68nm,1.6s
LDF La Druitiere 81.23 321 *e*P **P** 10 09 58.2 -0.4
LDF pmax pmax
comp=Z,68nm,1.6s
LDF La Druitiere 81.23 321 *e*P **P** 10 09 58.2 -0.4
comp=Z,68nm,1.6s
FLN La Foliniere 81.51 322 *e*P **P** 10 09 59.7 -0.4
FLN *e*R
comp=Z,103nm,20.8s
FLN La Foliniere 81.51 322 *e*P **P** 10 09 59.7 -0.4
FLN La Foliniere 81.51 322 *e*P **P** 10 09 59.7 -0.4
GRR Gorron 81.61 321 *e*P **P** 10 10 00.4 -0.3
comp=Z,40nm,1.1s
GRR Gorron 81.61 321 *e*P **P** 10 10 00.4 -0.3
GRR pmax pmax
comp=Z,40nm,1.1s
GRR Gorron 81.61 321 *e*P **P** 10 10 00.4 -0.3
comp=Z,40nm,1.1s
ARCES ARCESS Array B 81.91 346 P **P** 10 10 01.9 +0.1
ARCES ARCESS Array B 81.91 346 P **P** 10 10 01.9 +0.1
comp=Z,14nm,1.2s,baz=109,slow=7.1,SNR=11
ARCES LR LR 10 47 57.0
comp=Z,181nm,20.0s,baz=122,slow=37
SGMF Saint Gilles 82.63 321 *e*P **P** 10 10 05.4 -0.6
comp=Z,75nm,1.3s
SGMF Saint Gilles 82.63 321 *e*P **P** 10 10 05.4 -0.6
SGMF pmax pmax
comp=Z,75nm,1.3s
SGMF Saint Gilles 82.63 321 *e*P **P** 10 10 05.4 -0.6
comp=Z,75nm,1.3s
YAK Yakutsk 83.59 25 *e*P P 10 10 17.3 +6.7
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.3s
YAK MLR MLR
comp=N,401nm,21.0s
YAK MLR MLR
comp=E,404nm,24.0s
EVO Evora 83.62 310 *e*P **P** 10 10 12.6 +1.2
comp=E,79nm,1.6s
EVOP Sao Brissos 83.70 310 *e*P **P** 10 10 12.6 +0.8
EVOP pmax pmax
comp=Z,79nm,1.6s
EVOP Sao Brissos 83.70 310 *e*P **P** 10 10 12.6 +0.8
comp=Z,79nm,1.6s
VNDA Vanda 83.85 167 P **P** 10 10 12.7 +0.8
VNDA Vanda 83.85 167 P **P** 10 10 12.7 +0.8
comp=Z,4.0nm,1.1s,baz=267,slow=5.3,SNR=7.6
VNDA LR LR 10 42 41.6
comp=Z,383nm,21.2s,baz=266,slow=32
SBA Scott Base 84.85 168 *e*P **P** 10 10 18.8 +1.9
SBA pmax pmax
comp=Z,27nm,1.4s
SBA Scott Base 84.85 168 *e*P **P** 10 10 18.8 +1.9
comp=Z,27nm,1.4s
YSS Yuzh-Sakhalins 84.98 42 *e*P **P** 10 10 17.0 -1.1
YUK Yuzh-Kuril'sk 86.35 45*c i*P P 10 10 31.6 +6.7
YUK *e*S **SKSac** **10 20 49.4 -1.5**
YUK MLR MLR
comp=Z,351nm,22.0s
TIXI Tiksi 88.02 16⇑ *e*P **P** 10 10 32.0 -0.4
TIXI pmax pmax
comp=Z,13nm,1.1s
JMIC Jan Mayen 92.39 341 LR LR 10 52 29.7
comp=Z,127nm,21.8s,baz=78,slow=36
PETK Petropavlovsk- 95.55 37 LR LR 10 59 06.7
comp=Z,268nm,18.0s,baz=256,slow=39
BORG Borgarnes 96.17 334 LR LR 10 55 25.5
comp=Z,168nm,21.3s,baz=28,slow=36
ILAR Eielson Array 117.49 16 PKP **PKPdf** **10 16 26.6 -1.5**
ILAR Eielson Array 117.49 16 PKP **PKPdf** **10 16 26.6 -1.5**
comp=Z,1.0nm,1.1s,baz=325,slow=3.9,SNR=7.1
PMR Palmer 119.21 19 *e*PKIKP **PKPdf** **10 16 30.5 -1.0**
PMR Palmer 119.21 19 *e*PKPdf **PKPdf** **10 16 30.4 -1.0**
SML Sawmill 119.31 19 *e*PKIKP **PKPdf** **10 16 32.7 +0.9**
SML Sawmill 119.31 19 *e*PKPdf **PKPdf** **10 16 32.7 +0.9**
DIV Divide 120.63 18 *e*PKPdf **PKPdf** **10 16 33.9 -0.5**
YKW3 Yellowknife Ar 124.73 1 *e*PKPdf **PKPdf** **10 16 41.3 -0.8**
YKA Yellowknife Ar 124.80 1 PKP **PKPdf** **10 16 41.5 -0.8**
YKA PP **PP** **10 18 30.1 +0.9**
YKA PKKPbc **PKKPab** **10 26 23.1 +0.3**
YKA Yellowknife Ar 124.80 1 PKP **PKPdf** **10 16 41.4 -0.8**
comp=Z,0.8nm,0.6s,baz=357,slow=2.3,SNR=15

YKA PP **PP** **10 18 30.1 +0.9**
comp=Z,1.1nm,0.9s,baz=353,slow=7.5,SNR=5.8
YKA PKKPbc **PKKPab** **10 26 23.0 +0.3**
comp=Z,0.2nm,0.5s,baz=168,slow=3.2,SNR=3.8
SKAG Skagway 124.93 14 *e*PKPdf **PKPdf** **10 16 42.8 +0.2**
DLBC Dease Lake 127.04 12 *e*PKPdf **PKPdf** **10 16 45.2 -1.6**
SAML Samuel 128.74 253 *e*PKPdf **PKPdf** **10 16 51.2 0.0**
LPAZ La Paz 130.68 241 PKP **PKPdf** **10 16 55.6 +0.1**
LPAZ La Paz 130.68 241 PKP **PKPdf** **10 16 55.6 +0.1**
comp=Z,1.7nm,1.0s,baz=134,slow=10,SNR=4.3
FFC Flin Flon 131.94 352 *i* PKIKP **PKPdf** **10 16 56.9 +0.8**
A24A Westby 137.88 352 ⇑PKiKP **PKiKP** **10 17 09.7 +0.2**
baz=138
A22A Carney Farms, 138.04 354 ⇓PKiKP **PKiKP** 10 17 09.4 -0.3
baz=138
MDND Maddock 138.14 347 ⇑PKiKP **PKiKP** **10 17 10.1 +0.1**
baz=138
A12A Yaak River Ran 138.31 4 ⇑PKiKP **PKiKP** **10 17 10.1 -0.3**
baz=138
A20A Cobblestone Ra 138.33 356 ⇑PKiKP **PKiKP** **10 17 10.1 -0.2**
baz=138
A19A Klindworth Far 138.33 357 ⇑PKiKP **PKiKP** **10 17 10.1 -0.3**
baz=138
DGMT Dagmar 138.35 352 ⇓PKiKP **PKiKP** **10 17 10.4 0.0**
baz=138
A14A Double T Ranch 138.37 1 ⇑PKiKP **PKiKP** **10 17 10.2 -0.3**
baz=138
A13A Flathead Natio 138.37 2 ⇓PKiKP **PKiKP** **10 17 10.3 -0.2**
baz=138
A15A Johnson Ranch, 138.37 1 ⇑PKiKP **PKiKP** **10 17 10.4 -0.2**
baz=138
A18A Metzger Ranch, 138.39 358 ⇓PKiKP **PKiKP** **10 17 10.6 +0.1**
baz=138
A17A Triple J Farms 138.39 359 ⇓PKiKP **PKiKP** **10 17 10.4 -0.2**
baz=138
A16A West Butte Ran 138.40 360 ⇑PKiKP **PKiKP** **10 17 10.2 -0.4**
baz=138
B23A Brockton 138.46 353 ⇓PKiKP **PKiKP** **10 17 10.4 -0.2**
baz=138
SPMN St. Paul 138.62 339 ⇑PKiKP **PKiKP** **10 17 11.1 +0.1**
baz=138
B21A Ellsworth Farm 138.71 355 ⇑PKiKP **PKiKP** **10 17 11.0 -0.1**
baz=138
B22A Reddig Ranch S 138.73 354 ⇑PKiKP **PKiKP** **10 17 11.4 +0.2**
baz=138
B20A Solberg Farm, 138.77 356 ⇓PKiKP **PKiKP** **10 17 11.4 +0.1**
baz=139
NEW Newport 138.86 5 ⇑PKiKP **PKiKP** **10 17 11.5 0.0**
baz=139
B13A Whitefish 138.93 2 ⇓PKiKP **PKiKP** **10 17 11.5 -0.1**
baz=139
B14A Marquette Ranc 138.98 1 ⇓PKiKP **PKiKP** **10 17 11.6 -0.3**
baz=139
B15A Bradely Ranch, 139.04 1 ⇑PKiKP **PKiKP** **10 17 11.5 -0.4**
baz=139
B17A L&G Farms, Che 139.05 359 ⇓PKiKP **PKiKP** **10 17 11.9 +0.1**
baz=139
C23A Lambert 139.13 353 ⇑PKiKP **PKiKP** **10 17 12.0 0.0**
baz=139
C22A Vida 139.27 354 ⇑PKiKP **PKiKP** **10 17 12.2 -0.1**
baz=139
EGMT Eagleton 139.28 358 ⇑PKiKP **PKiKP** **10 17 12.2 -0.1**
baz=139
C24A Savage 139.30 352 ⇑PKiKP **PKiKP** **10 17 12.3 -0.1**
baz=139
C11A Tepee Creek (N 139.35 4 ⇓PKiKP **PKiKP** **10 17 12.3 -0.3**
baz=139
C20A Veseth Ranch, 139.50 356 ⇑PKiKP **PKiKP** **10 17 12.5 -0.3**
baz=139
C19A Slack Wire Ran 139.54 357 ⇑PKiKP **PKiKP** **10 17 12.9 0.0**
baz=139
C16A Fuhringer Ranc 139.55 360 ⇑PKiKP **PKiKP** **10 17 12.8 -0.2**
baz=139
C14A Swan Lake 139.56 2 ⇓PKiKP **PKiKP** **10 17 13.0 0.0**
baz=139
C15A Salmond Ranch, 139.58 1 ⇓PKiKP **PKiKP** **10 17 13.1 0.0**
baz=139
C13A Hot Springs 139.62 3 ⇑PKiKP **PKiKP** **10 17 13.1 +0.1**
baz=139
C17A Wharram Farm, 139.71 359 ⇓PKiKP **PKiKP** **10 17 13.4 +0.1**
baz=140
SWMT Swartz Lake 139.81 2 *e*PKPdf **PKPdf** **10 17 11.1 0.0**
D22A Cohagen 139.89 354 ⇓PKiKP **PKiKP** **10 17 13.8 +0.2**
baz=140
SLMT Seeley Lake 140.09 2 *e*PKPdf **PKPdf** **10 17 12.1 +0.4**
D14A Greenough 140.25 2 ⇑PKiKP **PKiKP** **10 17 14.6 +0.1**
baz=140
D16A Dana Ranch, Ca 140.32 359 ⇑PKiKP **PKiKP** **10 17 14.7 +0.1**
baz=140
MSO Missoula 140.49 2 *e*PKPdf **PKPdf** **10 17 12.3 -0.1**
MSO Missoula 140.49 2 ⇓PKiKP **PKiKP** **10 17 15.1 +0.1**
baz=140
E17A Martinsdale 140.88 359 ⇑PKiKP **PKiKP** **10 17 15.9 +0.1**
baz=141
E15A Deer Lodge 140.93 1 ⇓PKiKP **PKiKP** **10 17 16.1 +0.2**
baz=141
ECSD EROS Data Cent 141.19 342 *e*PKPdf **PKPdf** **10 17 14.5 +0.9**
F18A Big Timber 141.40 357 ⇑PKiKP **PKiKP** **10 17 16.6 -0.2**
baz=141
F17A Fitzpatrick Pl 141.43 358 ⇑PKiKP **PKiKP** **10 17 16.9 0.0**
baz=141
F13A Darby 141.51 3 ⇑PKiKP **PKiKP** **10 17 17.1 0.0**
baz=141
BOZ Bozeman (W) 141.71 360 *e*PKIKP **PKPdf** **10 17 14.6 -0.1**
BOZ Bozeman (W) 141.71 360 *e*PKPdf **PKPdf** **10 17 14.6 -0.1**
DLMT Dillon 141.99 1 *e*PKPdf **PKPdf** **10 17 15.5 +0.4**
G20A Bridger 141.99 356 ⇑PKiKP **PKiKP** **10 17 18.1 +0.1**
baz=142
G12A Big Creek, Yel 142.12 4 ⇑PKiKP **PKiKP** **10 17 18.4 0.0**
baz=142
MCMT McKenzie Canyo 142.52 1 PKPdf **PKPdf** **10 17 15.8 -0.5**
RSSD Black Hills 142.57 351 *e*PKIKP **PKPdf** **10 17 17.4 +1.0**
RSSD Black Hills 142.57 351 *e*PKPdf **PKPdf** **10 17 17.4 +1.0**
H18A Shoshone NF, C 142.62 357 ⇑PKiKP **PKiKP** **10 17 19.1 -0.4**
baz=142
H13A Challis 142.74 3 ⇓PKiKP **PKiKP** **10 17 19.6 0.0**
baz=142
I24A Kuemmerle Ranc 142.92 351 ⇑PKiKP **PKiKP** **10 17 20.0 -0.1**
baz=143
I22A 9 Mile Ranch, 143.14 353 ⇑PKiKP **PKiKP** **10 17 20.2 -0.3**
baz=143
I21A Big Trails, Te 143.31 354 ⇓PKiKP **PKiKP** **10 17 20.7 -0.1**
baz=143
I13A Wildhorse Cree 143.40 3 ⇓PKiKP **PKiKP** **10 17 20.8 -0.3**
baz=143
I14A Mackay 143.41 2 ⇑PKPdf **PKPdf** **10 17 16.3 -1.4**
baz=143
HUMO Hull Mountain 143.45 14 *e*PKPdf PKPbc 10 17 15.3 +0.5
I12A Atlanta 143.46 4 ⇓PKPdf **PKPdf** **10 17 16.7 -1.2**
baz=143
I16A Newdale 143.48 359 ⇑PKPdf **PKPdf** **10 17 17.0 -0.9**
baz=143
J23A Dilts Ranch, B 143.50 352 ⇑PKPdf **PKPdf** **10 17 17.1 -0.8**
baz=143
MOOW Moose Ponds 143.59 358 *e*PKPdf **PKPdf** **10 17 16.9 -1.2**
I18A Diamond G Ranc 143.60 357 ⇑PKPdf **PKPdf** **10 17 17.0 -1.2**
baz=143
J22A Midwest 143.61 353 ⇓PKPdf **PKPdf** **10 17 17.0 -1.1**
baz=143
LOHW Long Hollow 143.72 358 *e*PKPdf **PKPdf** **10 17 18.3 -0.1**
HLID Hailey 143.73 3 *e*PKPdf PKPbc 10 17 15.6 -0.2
HLID Hailey 143.73 3 ⇑PKPdf **PKPdf** **10 17 17.1 -1.3**
baz=144
MFID Camas Ranch 143.79 5 *e*PKPdf **PKPdf** **10 17 18.4 +0.1**
MFID Camas Ranch 143.79 5 ⇓PKPdf **PKPdf** **10 17 17.2 -1.2**
baz=144
K26A Motz Farm, Whi 143.80 349 ⇓PKPdf PKPbc 10 17 17.1 +1.2
baz=144
J20A Shoshoni 143.84 355 ⇑PKPdf **PKPdf** **10 17 17.5 -1.0**
baz=144
TPAW Teton Pass 143.85 359 *e*PKPdf **PKPdf** **10 17 19.8 +1.1**
SNOW Snow King Moun 143.88 358 *e*PKPdf **PKPdf** **10 17 17.6 -1.1**
J19A Crowheart 144.00 356 ⇑PKPdf **PKPdf** **10 17 17.9 -0.9**
baz=144
TIGA Tifton 144.14 316 ⇑PKPdf **PKPdf** **10 17 18.4 -0.7**
baz=144
K22A Casper 144.37 353 ⇑PKPdf **PKPdf** **10 17 18.6 -0.8**
baz=144
K19A Absolon Red Bu 144.42 356 ⇑PKPdf PKPbc 10 17 18.4 +0.5
baz=144
WVOR Wild Horse Val 144.44 8 *e*PKIKP PKPbc 10 17 17.9 -0.1
WVOR Wild Horse Val 144.44 8 *e*PKPdf PKPbc 10 17 17.9 -0.1
M29A Burnside Ranch 144.45 345 ⇓PKPdf PKPbc 10 17 18.6 +0.6
baz=144
K21A Alcova 144.47 354 ⇓PKPdf PKPbc 10 17 18.5 +0.4
baz=144
L25A Engebretsen Ra 144.47 350 ⇓PKPdf PKPbc 10 17 18.6 +0.5
baz=144
BW06 Boulder Array 144.52 357 *e*PKPdf PKPbc 10 17 18.4 0.0
PDAR Pinedale Array 144.52 357 PKP PKPbc 10 17 18.5 +0.1
PDAR Pinedale Array 144.52 357 PKP PKPbc 10 17 18.5 +0.1
comp=Z,1.7nm,0.5s,baz=105,slow=2.1,SNR=17
K20A Yellowstone Ra 144.55 355 ⇓PKPdf PKPbc 10 17 18.9 +0.6
baz=144
MOD Modoc 144.68 11 *e*PKPdf **PKPdf** **10 17 19.4 -0.6**
L24A Wheatland 144.75 351 ⇑PKPdf PKPbc 10 17 19.5 +0.5
baz=144
M27A Reverse DX Ran 144.77 347 ⇓PKPdf **PKPdf** **10 17 19.7 -0.4**
baz=145
L23A Garrett 144.79 352 ⇓PKPdf PKPbc 10 17 19.6 +0.4
baz=145
L22A Ellis Ranch, M 144.97 353 ⇓PKPdf **PKPab** **10 17 19.0 -0.8**
baz=145
M26A McRoberts Ranc 144.98 348 ⇑PKPdf **PKPab** **10 17 18.5 -1.2**
baz=145
L21A Rawlins 145.14 354 ⇓PKPdf **PKPbc** **10 17 19.8 -0.5**
baz=145
L19A Farson 145.17 357 ⇓PKPdf **PKPbc** **10 17 20.1 -0.3**
baz=145
M25A Palm-Egli Farm 145.19 349 ⇓PKPdf **PKPbc** **10 17 20.4 -0.1**
baz=145
L20A Wamsutter 145.19 355 ⇓PKPdf **PKPbc** **10 17 20.3 -0.3**
baz=145
OGNE Ogallala 145.24 347 *e*PKPbc **PKPbc** **10 17 19.3 -1.2**
OGNE Ogallala 145.24 347 ⇓PKPdf **PKPbc** **10 17 19.9 -0.6**
baz=145
M24A Cheyenne 145.29 350 ⇓PKPdf **PKPbc** **10 17 20.6 -0.2**
baz=145
KSU1 Kansas State U 145.34 339 *e*PKPbc **PKPbc** **10 17 20.1 -0.7**
LRAL Lakeview Retre 145.37 321 *e*PKPbc **PKPbc** **10 17 20.9 -0.2**
L18A Fontenelle, Gr 145.38 357 ⇓PKPdf **PKPbc** **10 17 21.1 0.0**
baz=145
M23A Laramie 145.43 352 ⇑PKPdf **PKPbc** **10 17 21.3 0.0**
baz=145
WDC Whiskeytown Da 145.47 14 *e*PKIKP **PKPbc** **10 17 21.0 -0.1**
WDC Whiskeytown Da 145.47 14 *e*PKPbc **PKPbc** **10 17 21.0 -0.1**
N27A Anderson Farm, 145.49 347 ⇑PKPdf **PKPbc** **10 17 21.2 -0.2**
baz=145
M21A Separation Pea 145.50 354 ⇑PKPdf **PKPbc** **10 17 21.1 -0.4**
baz=145
HVU Hansel Valley 145.57 1 *e*PKIKP **PKPab** **10 17 21.8 -0.1**
HVU Hansel Valley 145.57 1 *e*PKPbc **PKPab** **10 17 21.8 -0.1**
M22A Cedar Creek Ra 145.61 353 ⇑PKPdf **PKPdf** **10 17 21.7 -0.1**
baz=145
N26A Koester Ranch, 145.61 348 ⇑PKPdf **PKPbc** **10 17 21.8 0.0**
baz=145
HBAR Harrisburg 145.65 328 *e*PKPbc **PKPab** **10 17 22.7 +0.6**
M20A Sweetwater, Wa 145.69 355 ⇓PKPdf **PKPbc** **10 17 22.0 -0.1**
baz=146
HWUT Hardware Ranch 145.75 359 *e*PKPbc **PKPab** **10 17 22.4 -0.2**
OXF Oxford 145.75 326 *e*PKIKP **PKPdf** **10 17 21.5 -0.3**
OXF Oxford 145.75 326 *e*PKPbc **PKPdf** **10 17 21.5 -0.3**
M19A Rock Springs 145.75 356 ⇓PKPdf **PKPdf** **10 17 22.1 +0.1**
baz=146
N25A Grover 145.80 349 ⇓PKPdf **PKPdf** **10 17 22.1 +0.1**
baz=146
OTAV Otavalo 145.80 260 *e*PKPdf **PKPab** **10 17 23.9 -0.1**
OTAV *e*PKPbc **PKPbc** **10 17 25.0 +1.4**
M17A Scullys Gap (B 145.86 358 ⇑PKPdf **PKPbc** **10 17 22.4 -0.2**
baz=146
M18A Lyman 145.88 357 ⇓PKPdf **PKPbc** **10 17 22.7 -0.1**
baz=146
N24A Carr 145.92 350 ⇓PKPdf **PKPbc** **10 17 22.6 -0.2**
baz=146
KIPM Iron Peak 145.95 16 *e*PKPbc **PKPab** **10 17 24.4 +1.0**
N23A Red Feather La 146.02 352 ⇑PKPdf **PKPdf** **10 17 22.9 +0.3**
baz=146
O27A Beecher Island 146.06 347 ⇓PKPdf **PKPbc** **10 17 22.8 -0.4**
baz=146
N22A Wattenberg Ran 146.18 352 ⇓PKPdf **PKPbc** **10 17 23.3 -0.4**
baz=146
N20A Spence Gulch, 146.35 355 ⇓PKPdf **PKPdf** **10 17 23.2 +0.1**
baz=146
N21A Black Mountain 146.35 354 ⇑PKPdf **PKPdf** **10 17 23.1 0.0**
baz=146
ELK Elko 146.49 4 *e*PKPdf **PKPdf** **10 17 22.3 -1.0**
ELK *e*PKPbc **PKPab** **10 17 25.2 -0.2**
BMN Battle Mountai 146.60 7 *e*PKP2 **PKPab** **10 17 25.4 -0.4**
BMN Battle Mountai 146.60 7 *e*PKPbc **PKPab** **10 17 25.4 -0.4**
BEKR Beckworth 146.64 12 *e*PKPbc **PKPbc** **10 17 25.2 +0.2**
BEKR *e*PKPab **PKPab** **10 17 26.5 +0.4**
JLU Jordanelle 146.75 359 *e*PKPbc **PKPab** **10 17 25.9 -0.6**
DAU Daniels Canyon 146.93 359 *e*PKP2 **PKPab** **10 17 26.9 -0.4**
DAU Daniels Canyon 146.93 359 *e*PKPbc **PKPab** **10 17 26.9 -0.4**
ISCO Idaho Springs 147.04 351 *e*PKP2 **PKPbc** **10 17 26.5 +0.2**
ISCO Idaho Springs 147.04 351 *e*PKPbc **PKPbc** **10 17 26.5 +0.2**
UALR University of 147.12 329 *e*PKPbc **PKPbc** **10 17 25.5 -0.8**
DUG Dugway 147.15 1 *e*PKIKP **PKPdf** **10 17 23.9 -0.4**
DUG Dugway 147.15 1 *e*PKPdf **PKPdf** **10 17 23.9 -0.4**
WCN Washoe City 147.30 11 *e*PKP2 **PKPbc** **10 17 27.1 +0.2**
WCN Washoe City 147.30 11 *e*PKPbc **PKPbc** **10 17 27.1 +0.2**
S31A Mullinville 147.66 341 ⇑PKiKP **PKPbc** **10 17 27.6 -0.1**
baz=148
R28A Tribune 147.66 345 ⇑PKiKP **PKPbc** **10 17 28.0 +0.2**
baz=148
P20A De Beque 147.69 355 ⇓PKiKP **PKPbc** **10 17 28.2 +0.3**
baz=148
Q24A Divide 147.78 350 ⇑PKiKP **PKPbc** **10 17 28.6 +0.2**
baz=148
TUL1 Tulsa 147.79 335 ⇓PKiKP **PKPbc** **10 17 28.7 +0.5**
baz=148
SMCO Snowmass 147.85 353 *e*PKPbc **PKPbc** **10 17 29.0 +0.3**
P17A Butcher Ranch, 147.86 358 ⇓PKiKP **PKPbc** **10 17 28.7 +0.3**
baz=148
S30A Montezuma 147.94 343 ⇓PKiKP **PKPbc** **10 17 28.6 0.0**
baz=148
Q23A Hartsel 147.95 351 ⇑PKiKP **PKPbc** **10 17 29.2 +0.4**
baz=148
R27A Eads 147.95 346 ⇑PKiKP **PKPbc** **10 17 28.7 +0.1**
baz=148
BCIP Isla Barro Col 148.08 276 *e*PKPdf **PKPdf** **10 17 25.3 -1.0**
R26A Arlington 148.09 347 ⇑PKiKP **PKPbc** **10 17 29.4 +0.4**
baz=148
S29A Ulysses 148.15 343 ⇑PKiKP **PKPbc** **10 17 29.4 +0.3**
baz=148
Q22A Crested Butte, 148.15 352 ⇑PKiKP **PKPbc** **10 17 29.6 +0.2**
baz=148
T31A Randall Ranch, 148.19 341 ⇑PKiKP **PKPbc** **10 17 29.2 0.0**
baz=148
SRU San Rafael 148.21 358 ⇑PKiKP **PKPbc** **10 17 29.2 -0.2**
baz=148
Q20A Ridgley Place, 148.22 354 ⇑PKiKP **PKPbc** **10 17 29.5 +0.2**
baz=148
Q21A Lamborn Mesa, 148.26 353 ⇓PKiKP **PKPbc** **10 17 29.8 +0.2**
baz=148
S28A Manter 148.39 345 ⇑PKiKP **PKPbc** **10 17 30.1 +0.3**
baz=148
CMB Columbia Colle 148.39 13 *e*PKP2 **PKPbc** **10 17 29.9 +0.2**
CMB Columbia Colle 148.39 13 *e*PKPbc **PKPbc** **10 17 29.9 +0.2**
NVAR Mina Array Bea 148.41 9 PKPbc **PKPdf** **10 17 27.8 +1.2**
NVAR Mina Array Bea 148.41 9 PKPbc **PKPdf** **10 17 27.8 +1.2**
comp=Z,11nm,1.1s,baz=25,slow=0.6,SNR=18
R25A Fountain Ranch 148.41 348 ⇑PKiKP **PKPbc** **10 17 30.0 +0.2**
baz=148
Q16A Castle Valley 148.42 359 ⇓PKiKP **PKPbc** **10 17 30.5 +0.5**
baz=148
NV11 Mina Array Sit 148.43 9 *e*PKPdf **PKPdf** **10 17 27.6 +1.2**
R24A Sanders Place, 148.49 350 ⇓PKiKP **PKPbc** **10 17 30.4 +0.3**
baz=148
T30A Plains 148.50 342 ⇓PKiKP **PKPbc** **10 17 30.4 +0.4**
baz=148
T29A Hugoton 148.63 343 ⇓PKiKP **PKPbc** **10 17 30.6 +0.2**
baz=148
R23A Moffat 148.65 351 ⇓PKiKP **PKPbc** **10 17 31.0 +0.3**
baz=148
R21A Cimarron 148.72 353 ⇑PKiKP **PKPbc** **10 17 30.9 +0.1**
baz=148
S26A Kim 148.74 347 ⇓PKiKP **PKPbc** **10 17 30.9 +0.1**
baz=148
R22A Saguache, Gunn 148.75 352 ⇑PKiKP **PKPbc** **10 17 31.5 +0.5**
baz=148
PV04 Paradox Valley 148.83 355 *e*PKPbc **PKPbc** **10 17 31.5 +0.5**
R11A Troy Canyon, C 148.84 5 ⇓PKiKP **PKPbc** **10 17 31.3 +0.3**
baz=149
MSU Marysvale 148.84 0 *e*PKP2 **PKPbc** **10 17 32.2 +1.1**
MSU Marysvale 148.84 0 *e*PKPbc **PKPbc** **10 17 32.2 +1.1**
MVU Marysvale 148.85 0 *e*PKPbc **PKPbc** **10 17 32.2 +1.0**
S25A Robets Cordova 148.91 348 ⇓PKiKP **PKPbc** **10 17 31.5 +0.2**
baz=149
U31A Nine Bar Ranch 148.91 341 ⇓PKiKP **PKPbc** **10 17 31.5 +0.4**
baz=149
R20A Redvale 148.98 354 ⇑PKiKP **PKPbc** **10 17 31.6 +0.2**
baz=149

U30A	WK&E Inc. Balk	149.02	350	⇑PKiKP	PKPbc	10 17 31.9	+0.5		
	baz=149								
SDCO	Great Sand Dun	149.03	350	*e*PKPdf	PKPdf	10 17 27.5	-0.1		
SDCO				*e*PKPbc	PKPbc	10 17 31.8	+0.1		
PV01	Paradox Valley	149.06	355	*e*PKPbc	PKPbc	10 17 31.4	-0.2		
S24A	Houchin Ranch,	149.08	349	⇑PKiKP	PKPbc	10 17 32.2	+0.3		
	baz=149								
MLAC	Mammoth Lakes	149.09	11	⇑PKiKP	PKPbc	10 17 32.2	+0.4		
	baz=149								
T27A	Campo	149.10	345	⇑PKiKP	PKPbc	10 17 31.8	+0.2		
	baz=149								
S23A	Nye Farm, Mont	149.15	351	⇓PKiKP	PKPbc	10 17 32.3	+0.4		
	baz=149								
T26A	Comanche Natio	149.20	347	⇓PKiKP	PKPbc	10 17 32.1	+0.1		
	baz=149								
S22A	4UR Ranch, Cre	149.24	352	⇑PKiKP	PKPbc	10 17 32.4	+0.2		
	baz=149								
S20A	Disappointment	149.34	354	⇓PKiKP	PKPbc	10 17 32.5	+0.1		
	baz=149								
T25A	Trinidad	149.41	348	⇑PKiKP	PKPbc	10 17 33.0	+0.5		
	baz=149								
S21A	Coal Bank Pass	149.44	353	⇓PKiKP	PKPbc	10 17 33.0	+0.2		
	baz=149								
V31A	Spring Creek L	149.45	340	⇑PKiKP	PKPbc	10 17 32.9	+0.4		
	baz=149								
ARUT	Antelope Range	149.53	2	*e*PKP2	PKPbc	10 17 33.2	+0.4		
ARUT	Antelope Range	149.53	2	*e*PKPbc	PKPbc	10 17 33.2	+0.4		
S18A	Hurst Farm, Bl	149.60	357	⇑PKiKP	PKPbc	10 17 32.9	-0.1		
	baz=149								
T24A	Torres, Weston	149.60	349	⇑PKiKP	PKPbc	10 17 33.4	+0.3		
	baz=149								
U28A	Mallet	149.61	344	⇓PKiKP	PKPbc	10 17 33.3	+0.3		
	baz=149								
U27A	Thompson Grove	149.73	345	⇓PKiKP	PKPbc	10 17 33.3	0.0		
	baz=150								
V30A	Spur Ranch, Mi	149.74	341	⇑PKiKP	PKPbc	10 17 33.5	+0.2		
	baz=150								
CCUT	Cedar City	149.77	2	*e*PKPdf	PKPdf	10 17 28.0	-0.7		
CCUT				*e*PKPbc	PKiKP	10 17 34.0	-0.4		
T23A	Casias Ranch,	149.81	350	⇓PKiKP	PKPbc	10 17 33.8	+0.2		
	baz=150								
GRAC	Grapevine Rang	149.95	9	⇑PKiKP	PKPbc	10 17 33.7	0.0		
	baz=150								
MVCO	Mesa Verde	149.97	354	*e*PKPbc	PKPbc	10 17 33.9	-0.1		
MVCO	Mesa Verde	149.97	354	⇓PKiKP	PKPbc	10 17 33.7	-0.3		
	baz=150								
T22A	Edith	149.97	352	⇑PKiKP	PKPbc	10 17 33.9	-0.1		
	baz=150								
U26A	Atchley Ranch,	149.98	347	⇓PKiKP	PKPbc	10 17 33.6	-0.4		
	baz=150								
WMOK	Wichita Mounta	150.01	338	*e*PKP2	PKPbc	10 17 33.7	-0.1		
WMOK	Wichita Mounta	150.01	338	*e*PKPbc	PKPbc	10 17 33.7	-0.1		
WMOK				*e*PKPab	PKPab	10 17 41.1	+1.7		
W31A	Holland Ranch,	150.02	340	⇑PKiKP	PKPbc	10 17 33.8	-0.1		
	baz=150								
T21A	Navajo Lake	150.07	353	⇑PKiKP	PKPbc	10 17 34.5	+0.3		
	baz=150								
U25A	Circle Dot Ran	150.12	348	⇓PKiKP	PKPbc	10 17 34.4	+0.1		
	baz=150								
V28A	Channing	150.21	344	⇑PKiKP	PKPbc	10 17 34.4	0.0		
	baz=150								
W30A	Crocket Farms	150.24	341	⇑PKiKP	PKPbc	10 17 34.5	+0.1		
	baz=150								
RCTC	Rector, Farmer	150.30	12	⇓PKiKP	PKiKP	10 17 35.1	-0.1		
	baz=150								
V27A	Dan Oppiter Fa	150.36	345	⇓PKiKP	PKiKP	10 17 35.3	-0.3		
	baz=150								
U23A	El Rito	150.53	350	⇑PKiKP	PKPbc	10 17 35.4	+0.1		
	baz=150								
X31A	McDonald Ranch	150.54	340	⇑PKiKP	PKiKP	10 17 35.6	-0.2		
	baz=150								
FURC	Furnace Creek,	150.54	8	⇓PKiKP	PKiKP	10 17 35.7	0.0		
	baz=150								
V26A	Tequesquite Ra	150.56	346	⇓PKiKP	PKPbc	10 17 35.3	0.0		
	baz=150								
U22A	Llaves	150.59	351	⇑PKiKP	PKPbc	10 17 35.7	+0.3		
	baz=150								
W29A	Amraillo	150.63	342	⇑PKiKP	PKPbc	10 17 35.0	-0.4		
	baz=150								
RFTA	Plano	150.64	333	*e*PKPbc	PKPbc	10 17 35.7	+0.3		
RFTA				*e*PKPab	PKPab	10 17 43.3	+1.2		
U21A	Nageezi	150.65	353	⇓PKiKP	PKPbc	10 17 35.5	-0.1		
	baz=150								
V25A	Rancho No Teng	150.71	348	⇑PKiKP	PKPbc	10 17 35.7	-0.1		
	baz=150								
VES	Vestal, Richgr	150.78	12	⇑PKiKP	PKPbc	10 17 35.4	-0.2		
	baz=151								
U20A	Newcomb	150.79	354	⇓PKiKP	PKiKP	10 17 36.2	-0.3		
	baz=151								
MPMC	Manual Prospec	150.85	9	⇑PKiKP	PKiKP	10 17 36.5	-0.2		
	baz=151								
AMTX	Amarillo	150.86	342	*e*PKPdf	PKPdf	10 17 30.1	-0.2		
AMTX				*e*PKPbc	PKPbc	10 17 35.7	-0.2		
AMTX				*e*PKPab	PKPab	10 17 43.0	0.0		
Y32A	R-V Farms, Ver	150.91	338	⇑PKiKP	PKPbc	10 17 36.0	0.0		
	baz=151								
U15A	North Rim	150.92	0	⇑PKiKP	PKiKP	10 17 36.8	-0.1		
	baz=151								
V24A	Rampart Ranch,	150.95	349	⇑PKiKP	PKPbc	10 17 36.3	0.0		
	baz=151								
X30A	Coker Ranch, T	151.01	341	⇓PKiKP	PKiKP	10 17 36.6	-0.2		
	baz=151								
V22A	San Miguel Ran	151.05	351	⇓PKiKP	PKPbc	10 17 36.6	0.0		
	baz=151								
ISA	Isabella	151.07	11	*e*PKIKP	PKPbc	10 17 36.9	+0.5		
ISA				*e*		10 17 44.1			
ISA	Isabella	151.07	11	*e*PKPbc	PKPbc	10 17 36.9	+0.5		
ISA				*e*PKPab	PKPab	10 17 44.1	+0.3		
ISA	Isabella	151.07	11	⇑PKiKP	PKPbc	10 17 36.6	+0.2		
	baz=151								
W27A	Bowe Ranch, En	151.08	345	⇑PKiKP	PKPbc	10 17 36.2	-0.3		
	baz=151								
SMMC	Simmler	151.09	14	⇓PKiKP	PKiKP	10 17 36.8	-0.2		
	baz=151								
V23A	Ortiz Mt. (NFS	151.10	350	⇓PKiKP	PKPbc	10 17 36.9	+0.2		
	baz=151								
SHOC	Shoshone	151.18	7	⇓PKiKP	PKiKP	10 17 37.0	-0.2		
	baz=151								
W26A	Owens Ranch, T	151.23	346	⇓PKiKP	PKPbc	10 17 36.7	-0.1		
	baz=151								
Y31A	Rekieta Farm,	151.24	339	⇑PKiKP	PKPbc	10 17 37.0	+0.3		
	baz=151								
V21A	Milan	151.26	353	⇑PKiKP	PKPbc	10 17 36.9	-0.2		
	baz=151								
W25A	X Bar L Ranch,	151.27	347	⇑PKiKP	PKPbc	10 17 36.8	-0.1		
	baz=151								
X29A	Tulia	151.27	342	⇑PKiKP	PKPbc	10 17 36.6	-0.3		
	baz=151								
X28A	Dimmitt	151.35	343	⇑PKiKP	PKPbc	10 17 37.3	+0.2		
	baz=151								
V20A	Brimhall	151.36	354	⇑PKiKP	PKPbc	10 17 36.9	-0.4		
	baz=151								
LRMC	Laurel Mountai	151.39	10	⇑PKiKP	PKPbc	10 17 37.2	0.0		
	baz=151								
W24A	Lazy 6 Ranch,	151.48	349	⇓PKiKP	PKPbc	10 17 37.5	-0.1		
	baz=151								
X27A	F and S Farms,	151.48	344	⇓PKiKP	PKPbc	10 17 37.5	0.0		
	baz=151								
ARVC	Arvin	151.52	12	⇑PKiKP	PKPbc	10 17 37.5	+0.1		
	baz=151								
PKM	Peak Mountain	151.53	14	⇑PKiKP	PKPbc	10 17 37.6	-0.1		
	baz=151								
Z32A	Haskell	151.54	338	⇓PKiKP	PKPbc	10 17 37.4	-0.2		
	baz=151								
W23A	Werner Place,	151.66	350	⇓PKiKP	PKPbc	10 17 37.7	-0.3		
	baz=152								
TUQ	Turquoise Moun	151.68	7	⇑PKiKP	PKiKP	10 17 38.2	-0.1		
	baz=152								
GSC	Goldstone	151.70	8	*e*PKIKP	PKPbc	10 17 38.8	+0.9		
GSC				*e*		10 17 46.4			
GSC	Goldstone	151.70	8	*e*PKPbc	PKPbc	10 17 38.8	+0.9		
GSC				*e*PKPab	PKPab	10 17 46.4	-0.1		
GSC	Goldstone	151.70	8	⇓PKiKP	PKiKP	10 17 38.2	-0.1		
	baz=152								
X26A	CR and CF Fran	151.75	346	⇓PKiKP	PKPbc	10 17 37.9	-0.2		
	baz=152								
Z31A	Sharp Cattle R	151.78	339	⇓PKiKP	PKPbc	10 17 37.6	-0.4		
	baz=152								
Y29A	Porterfield Fa	151.80	342	⇓PKiKP	PKPbc	10 17 38.2	0.0		
	baz=152								
WUAZ	Wupatki	151.82	359	*e*PKPdf	PKPdf	10 17 32.6	+0.7		
WUAZ				*e*PKPbc	PKiKP	10 17 38.7	0.0		
WUAZ				*e*PKPab	PKPab	10 17 46.7	-0.3		
WUAZ	Wupatki	151.82	359	⇑PKiKP	PKiKP	10 17 38.7	0.0		
	baz=152								
EDW2	Edwards Air Fo	151.92	10	⇓PKiKP	PKPbc	10 17 38.2	-0.1		
	baz=152								
ANMO	Albuquerque	151.93	350	*e*PKPdf	PKPdf	10 17 32.9	+0.8		
ANMO				*e*PKPbc	PKPbc	10 17 38.6	0.0		
ANMO				*e*PKPab	PKPab	10 17 46.2	-1.4		
Y28A	McKinney Farm,	151.93	343	⇓PKiKP	PKPbc	10 17 38.1	-0.4		
	baz=152								
MSTX	Muleshoe	152.03	343	⇓PKiKP	PKPbc	10 17 38.3	-0.4		
	baz=152								
W20A	Ramah	152.03	354	⇓PKiKP	PKPbc	10 17 38.5	-0.3		
	baz=152								
LDFC	Landfair	152.12	5	*e*PKPbc	PKPbc	10 17 40.0	+1.1		
LDFC				*e*PKPab	PKPab	10 17 47.8	-0.5		
W18A	Petrified Fore	152.15	356	⇑PKiKP	PKPbc	10 17 38.6	-0.5		
	baz=152								
Z30A	Sanderson Ranc	152.15	340	⇑PKiKP	PKPbc	10 17 38.5	-0.4		
	baz=152								
W13A	Hualapai Mount	152.19	3	⇓PKiKP	PKPbc	10 17 39.3	+0.1		
	baz=152								
ABTX	Abilene, Hawle	152.21	337	⇓PKiKP	PKPbc	10 17 39.0	-0.1		
	baz=152								
Y27A	Causey	152.22	344	⇓PKiKP	PKPbc	10 17 38.6	-0.6		
	baz=152								
HEC	Hector,Ludlow	152.23	8	⇑PKiKP	PKiKP	10 17 39.3	-0.1		
	baz=152								
X23A	Hourglass Bar	152.23	350	⇑PKiKP	PKPbc	10 17 39.1	-0.2		
	baz=152								
Y26A	Elida	152.36	345	⇓PKiKP	PKPbc	10 17 39.3	-0.2		
	baz=152								
GMRC	Granite Mounta	152.36	6	⇓PKiKP	PKPbc	10 17 39.2	-0.3		
	baz=152								
Z29A	Hungry Hill Ra	152.37	341	⇑PKiKP	PKPbc	10 17 39.2	-0.3		
	baz=152								
BSC	Santa Cruz Isl	152.44	14	⇓PKiKP	PKPbc	10 17 39.5	0.0		
	baz=152								
X22A	Bernardo	152.44	351	⇑PKiKP	PKPbc	10 17 39.8	+0.1		
	baz=152								
BLG	Laguna Peak	152.46	13	⇓PKiKP	PKiKP	10 17 39.8	0.0		
	baz=152								
MWC	Mount Wilson	152.55	11	*e*PKIKP	PKPdf	10 17 32.3	-0.8		
MWC				*e*		10 17 40.3			
MWC				*e*		10 17 48.7			
MWC	Mount Wilson	152.55	11	*e*PKPdf	PKPdf	10 17 32.3	-0.8		
MWC				*e*PKPbc	PKiKP	10 17 40.3	+0.1		
MWC				*e*PKPab	PKPab	10 17 48.7	-1.5		
Z28A	Tucker Farm, M	152.55	342	⇑PKiKP	PKiKP	10 17 40.0	-0.1		
	baz=152								
Y25A	Mesa, Roswell	152.56	347	⇑PKiKP	PKPbc	10 17 40.0	+0.1		
	baz=152								
LAZ	Ladron	152.57	351	*e*PKPdf	PKPdf	10 17 34.0	+1.0		
LAZ				*e*PKPbc	PKiKP	10 17 40.3	+0.1		
LAZ				*e*PKPab	PKPab	10 17 48.3	-2.0		
LPM	Los Pinos Moun	152.57	350	*e*PKPbc	PKPbc	10 17 40.1	+0.1		
LPM				*e*PKPab	PKPab	10 17 47.4	-2.8		
BFSC	Mount Baldy Ra	152.61	10	⇓PKiKP	PKPbc	10 17 40.0	0.0		
	baz=152								
X20A	Quemado	152.61	354	⇓PKiKP	PKPbc	10 17 40.1	-0.1		
	baz=152								
X21A	Alamocita Cree	152.62	352	⇓PKiKP	PKiKP	10 17 40.3	-0.1		
	baz=152								
BBRC	Big Bear Solar	152.70	9	⇑PKiKP	PKPbc	10 17 40.2	-0.1		
	baz=152								
130A	Snyder	152.72	339	⇓PKiKP	PKPbc	10 17 40.3	+0.1		
	baz=152								
Y24A	Capitan	152.72	348	⇓PKiKP	PKPbc	10 17 40.3	-0.1		
	baz=152								
BNM	Barren Site	152.73	350	*e*PKPbc	PKPbc	10 17 40.2	-0.2		
BNM				*e*PKPab	PKPab	10 17 48.3	-2.7		
X18A	Snowflake	152.75	356	⇑PKiKP	PKiKP	10 17 40.5	-0.1		
	baz=152								
Z27A	Tatum	152.77	344	⇑PKiKP	PKPbc	10 17 39.8	-0.6		
	baz=153								
LENM	Lemitar	152.77	351	*e*PKPbc	PKPbc	10 17 40.3	-0.2		
Y23A	Lovelace Mesa,	152.84	349	⇓PKiKP	PKPbc	10 17 40.4	-0.2		
	baz=153								
232A	Coleman	152.87	336	⇓PKiKP	PKPbc	10 17 40.3	-0.3		
	baz=153								
X16A	Lo Mia Camp, P	152.92	359	⇓PKiKP	PKiKP	10 17 41.6	+0.6		
	baz=153								
PDMCI	Parker Dam,Lak	152.97	4	⇓PKiKP	PKiKP	10 17 40.9	+0.1		
	baz=153								
Y22A	Socorro	152.99	351	⇑PKiKP	PKPbc	10 17 40.8	-0.2		
	baz=153								
129A	Stewart Farms,	153.00	341	⇑PKiKP	PKPbc	10 17 40.9	0.0		
	baz=153								
Z26A	Caprock	153.01	345	⇓PKiKP	PKPbc	10 17 40.4	-0.5		
	baz=153								
IRM	Iron Mountain	153.03	6	⇓PKiKP	PKPbc	10 17 40.8	-0.1		
	baz=153								
Y21A	Point of Rocks	153.03	352	⇓PKiKP	PKPbc	10 17 40.6	-0.5		
	baz=153								
231A	Bronte	153.08	338	⇑PKiKP	PKPbc	10 17 41.0	0.0		
	baz=153								
BELC	Belle Mtn. Jos	153.09	7	⇑PKiKP	PKPbc	10 17 40.7	-0.4		
	baz=153								
Z25A	Roswell	153.19	346	⇑PKiKP	PKPbc	10 17 40.8	-0.5		
	baz=153								
128A	Castleberry Fa	153.20	342	⇑PKiKP	PKPbc	10 17 40.8	-0.5		
	baz=153								
Y20A	Horse Springs,	153.22	353	⇓PKiKP	PKPbc	10 17 41.1	-0.4		
	baz=153								
CIS	Catalina Islan	153.27	12	⇓PKiKP	PKPbc	10 17 41.1	-0.3		
	baz=153								
Z24A	Sheeppen Canyo	153.28	348	⇓PKiKP	PKPbc	10 17 41.6	0.0		
	baz=153								
MURC	Murrieta	153.31	10	⇓PKiKP	PKPbc	10 17 41.4	-0.1		
	baz=153								
332A	Millersview	153.35	336	⇑PKiKP	PKPbc	10 17 41.5	-0.1		
	baz=153								
Y14A	Wickenburg	153.39	2	⇓PKiKP	PKPbc	10 17 41.5	-0.1		
	baz=153								
127A	Arkansas Junct	153.41	343	⇑PKiKP	PKPbc	10 17 41.5	-0.3		
	baz=153								
PFO	Pinyon Flat Ob	153.41	8	*e*PKPbc	PKPbc	10 17 43.6	+1.8		
PFO	Pinyon Flat Ob	153.41	8	⇑PKiKP	PKPbc	10 17 41.5	-0.3		
	baz=153								
230A	Sterling City	153.42	339	⇓PKiKP	PKPbc	10 17 41.7	-0.1		
	baz=153								
Y12C	Blythe	153.49	5	⇓PKiKP	PKPbc	10 17 41.6	-0.2		
	baz=153								
BC3	Big Chuckawall	153.50	6	⇑PKiKP	PKPbc	10 17 41.7	-0.2		
	baz=153								
Z23A	Rita Site, Whi	153.53	349	⇓PKiKP	PKPbc	10 17 41.8	-0.3		
	baz=153								
229A	Bryant Ranch,	153.59	340	⇑PKiKP	PKPbc	10 17 42.0	-0.1		
	baz=153								
331A	San Angelo	153.68	337	⇓PKiKP	PKPbc	10 17 41.9	-0.5		
	baz=154								
228A	UT Block 9, Go	153.70	342	⇓PKiKP	PKPbc	10 17 42.0	-0.4		
	baz=154								
330A	Mertzon	153.88	339	⇑PKiKP	PKPbc	10 17 42.5	-0.3		
	baz=154								
124A	Stringfield Ra	153.91	347	⇑PKiKP	PKPbc	10 17 42.6	-0.5		
	baz=154								
Z20A	Nine Sixteen R	154.03	353	⇓PKiKP	PKPbc	10 17 42.6	-0.6		
	baz=154								
MONP	Monument Peak	154.12	8	⇑PKiKP	PKPbc	10 17 43.2	-0.3		
	baz=154								
GLA	Glamis	154.16	5	*e*PKIKP	PKPbc	10 17 44.4	+1.0		
GLA	Glamis	154.16	5	*e*PKPbc	PKPbc	10 17 44.4	+1.0		
GLA	Glamis	154.16	5	⇑PKiKP	PKPbc	10 17 43.2	-0.1		
	baz=154								
JCT	Junction City	154.16	335	*e*PKIKP	PKPdf	10 17 34.7	-0.6		
JCT	Junction City	154.16	335	*e*PKPdf	PKPdf	10 17 34.7	-0.6		
226B	Tecolote Peak,	154.19	345	⇓PKiKP	PKPbc	10 17 43.4	-0.1		
	baz=154								
431A	Sonora	154.31	337	⇓PKiKP	PKPbc	10 17 43.3	-0.5		
	baz=154								
225A	Deer Hill, Car	154.33	346	⇑PKiKP	PKPbc	10 17 43.2	-0.7		
	baz=154								
DVTC	Desert V Tower	154.40	8	⇑PKiKP	PKPbc	10 17 43.3	-0.6		
	baz=154								
328A	Wristen Ranch,	154.45	341	⇑PKiKP	PKPbc	10 17 43.8	-0.3		
	baz=154								
430A	Baggett Ranch,	154.46	338	⇑PKiKP	PKPbc	10 17 43.5	-0.6		
	baz=154								
121A	Cookes Peak, D	154.50	352	⇑PKiKP	PKPbc	10 17 44.0	-0.3		
	baz=154								
532A	Rocksprings	154.51	335	⇑PKiKP	PKPbc	10 17 43.6	-0.6		
	baz=154								
113A	Mohawk Valley,	154.52	3	⇑PKiKP	PKPbc	10 17 44.0	0.0		
	baz=154								
224A	Cornudas Mount	154.53	347	⇓PKiKP	PKPbc	10 17 43.8	-0.5		
	baz=154								
120A	U Bar Ranch, L	154.59	353	⇓PKiKP	PKPbc	10 17 44.0	-0.4		
	baz=154								
327A	Balmorhea Ranc	154.67	343	⇓PKiKP	PKPbc	10 17 44.0	-0.5		
	baz=154								
531A	Rocksprings	154.75	336	⇓PKiKP	PKPbc	10 17 43.9	-0.8		
	baz=155								
222A	Williams Famil	154.81	350	⇑PKiKP	PKPbc	10 17 44.4	-0.5		
	baz=155								
429A	Davenport Ranc	154.84	339	⇑PKiKP	PKPbc	10 17 44.2	-0.7		
	baz=155								
MNTX	Cornudas Mount	154.86	347	*e*PKPdf	PKPdf	10 17 36.2	0.0		
MNTX				*e*PKPbc	PKiKP	10 17 45.5	+0.7		
MNTX				*e*PKPab	PKPab	10 18 00.5	+0.7		
326A	Caldwell Ranch	154.86	344	⇑PKiKP	PKPbc	10 17 44.4	-0.5		
	baz=155								
632A	Uvalde	155.00	334	⇓PKiKP		10 17 44.6			
	baz=155								
221A	Mesquite Ranch	155.01	351	⇑PKiKP		10 17 44.7			
	baz=155								
428A	Kincaid Ranch,	155.02	341	⇓PKiKP		10 17 44.7			
	baz=155								
530A	J-C Ranch, Com	155.07	338	⇓PKiKP	PKPdf	10 17 44.8	+8.2		
	baz=155								
325A	Bean Ranch, Si	155.07	346	⇑PKiKP	PKPdf	10 17 44.6	+7.9		
	baz=155								
324A	Moseley Ranch,	155.13	347	⇑PKiKP	PKPdf	10 17 44.6	+7.9		
	baz=155								
427A	Hayter Ranch,	155.13	342	⇑PKiKP	PKPdf	10 17 44.7	+8.0		
	baz=155								
220A	Playas Peak, P	155.22	353	⇑PKiKP	PKPdf	10 17 45.1	+8.3		
	baz=155								
214A	Organ Pipe Nat	155.37	2	⇓PKiKP	PKPdf	10 17 45.3	+8.4		
	baz=155								
529A	Stev Forest Ra	155.41	339	⇑PKiKP	PKPdf	10 17 45.5	+8.5		
	baz=155								
631A	Perdido Creek	155.42	335	⇑PKiKP	PKPdf	10 17 45.3	+8.3		
	baz=155								
426A	McDonald Obser	155.49	343	⇓PKiKP	PKPdf	10 17 45.5	+8.2		
	baz=155								
528A	Cox Ranch, San	155.57	340	⇑PKiKP	PKPdf	10 17 46.1	+8.8		
	baz=155								
425A	Indio Mountain	155.63	345	⇑PKiKP	PKPdf	10 17 46.1	+8.6		
	baz=156								
TXAR	Lajitas Array	156.62	341	PKP	PKPdf	10 17 39.0	+0.3		
TXAR				PKPab	PKPab	10 18 08.1	+0.5		
TXAR	Lajitas Array	156.62	341	PKP	PKPdf	10 17 39.0	+0.3		
	comp=Z,0.7nm,0.9s,baz=110,slow=1.9,SNR=6.1								
TXAR				PKPab	PKPab	10 18 08.1	+0.5		
	comp=Z,7.6nm,1.1s,baz=51,slow=2.1,SNR=10								

GUC 20 09:58:38.1±0.4, 23°.84S×67°.42W, h228km±8km, ML3.5, 3C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.84	311	⇑*i*P	Pn		09 59 18.9	+1.3
LVC				*i* S	S		09 59 50.2	+1.9
PB04	Plate Boundary	2.47	309	⇑*i*P	Pn		09 59 30.9	+7.4
PB04				*i* S	S		10 00 10.5	+12
PB04				AML	AML		10 00 16.4	
	comp=N,45nm,0.3s							
CEN1	Los Morros	2.59	279	⇓*i*P	Pn		09 59 27.9	+3.0
CEN1				*i* S	S		10 00 05.0	+3.5
CEN1				AML	AML		10 00 06.7	
	comp=N,29nm,0.5s							
ANCH	Antofagasta	2.74	273	⇓*i*P	Pn		09 59 27.9	+1.5
ANCH				*i* S	S		10 00 06.1	+2.0
PB01	Plate Boundary	3.38	325	⇑*i*P	Pn		09 59 35.7	+1.9
PB01				*i* S	S		10 00 20.1	+2.6
PB01				AML	AML		10 00 21.0	
	comp=E,28nm,0.2s							
MNMC	Minimini	5.11	336	*e*P	Pn		09 59 58.4	+3.4
MNMC				*e*S	S		10 00 59.7	+3.9
MNMC				AML	AML		10 01 02.7	
	comp=N,20nm,0.5s							

ISCJB ***20*** *10:03:10.7±0.5, 7°.06S±0°.10×68°.06E±0°.09, h12km, mb4.2/29, MS4.4/1, Error ellipse: s-maj=16.2km s-min=10.2km az=41.1*

IDC ***20*** *10:03:10.5±0.6, 7°.15S×67°.99E, h0km, mb4.1/24, mb1 4.2/24, mb1mx4.1/33, mb

KOLS	Kolonicke sedl	68.65	330	*e*P	P	10 14 16.0	+0.3
TORD	Torodi Ar. Bea	68.86	287	P	P	10 14 15.7	-2.0
TORD	Torodi Ar. Bea	68.86	287	P	P	10 14 15.7	-2.0
	comp=Z,1.2nm,0.9s,baz=95,slow=5.2,SNR=6.4						
CRVS	Cervenica-Dubn	69.04	329	*e*P	P	10 14 16.4	-1.7
VYHS	Vyhne	70.15	328	*e*P	P	10 14 24.7	-0.3
KSAR	Wonju Array Be	71.24	47	P	P	10 14 30.3	-1.5
KSRS	Korea Array	71.27	47	P	P	10 14 30.3	-1.7
	comp=Z,0.2nm,0.3s,baz=223,slow=8.6,SNR=4.4						
STKA	Stephens Creek	72.35	121	P	P	10 14 38.8	+0.1
STKA	Stephens Creek	72.35	121	P	P	10 14 38.8	+0.1
	comp=Z,0.6nm,0.4s,baz=43,slow=17,SNR=3.3						
FIA1	FINESS Array S	75.72	341	*e*P	P	10 14 57.2	-0.5
FINES	FINESS Array B	75.72	341	P	P	10 14 57.2	-0.5
FINES	FINESS Array B	75.72	341	P	P	10 14 57.2	-0.5
	comp=Z,1.9nm,0.9s,baz=104,slow=6.1,SNR=4.4						
CTA	Charters Tower	76.59	109	P	P	10 15 03.0	-0.6
CTA	Charters Tower	76.59	109	P	P	10 15 03.0	-0.6
	comp=Z,1.1nm,0.2s,baz=291,slow=5.5,SNR=3.9						
MJAR	Matsushiro Arr	78.61	51	P	P	10 15 14.1	-0.5
MJAR	Matsushiro Arr	78.61	51	P	P	10 15 14.1	-0.5
	comp=Z,0.3nm,0.3s,baz=243,slow=23,SNR=4.6						
HFS	Hagfors	79.45	336	LR	LR	10 49 42.1	
	comp=Z,201nm,20.7s,baz=75,slow=35						
ESDC	Sonseca Array	80.87	312	P	P	10 15 26.7	-0.1
ESDC	Sonseca Array	80.87	312	P	P	10 15 26.7	-0.1
	comp=Z,0.2nm,0.3s,baz=86,slow=4.8,SNR=4.2						
ARCES	ARCESS Array B	81.84	346	P	P	10 15 31.2	0.0
ARCES	ARCESS Array B	81.84	346	P	P	10 15 31.2	0.0
	comp=Z,3.1nm,1.0s,baz=134,slow=6.9,SNR=5.9						
VNDA	Vanda	83.92	167	P	P	10 15 42.5	+0.5
VNDA	Vanda	83.92	167	P	P	10 15 42.5	+0.5
	comp=Z,1.3nm,1.0s,baz=276,slow=7.8,SNR=3.2						
YKA	Yellowknife Ar	124.72	1	PKP	PKPdf	10 22 11.4	-0.5
YKA	Yellowknife Ar	124.72	1	PKP	PKPdf	10 22 11.4	-0.5
	comp=Z,0.7nm,0.7s,baz=346,slow=2.2,SNR=8.4						
WVOR	Wild Horse Val	144.35	8	*e*PKPdf	PKPbc	10 22 48.0	+0.5
PDAR	Pinedale Array	144.44	357	PKP	PKPbc	10 22 48.5	+0.5
PDAR	Pinedale Array	144.44	357	PKP	PKPbc	10 22 48.5	+0.5
	comp=Z,0.9nm,0.6s,baz=105,slow=2.5,SNR=7.6						
OTAV	Otavalo	145.85	260	*e*PKPbc	PKPab	10 22 54.9	+0.9
ELK	Elko	146.41	4	*e*PKPbc	PKPab	10 22 56.0	+1.0
BEKR	Beckworth	146.55	12	*e*PKPbc	PKPab	10 22 55.2	-0.3
ISCO	Idaho Springs	146.97	351	*e*PKPbc	PKPab	10 22 57.8	+0.5
DUG	Dugway	147.07	1	*e*PKPbc	PKPab	10 22 57.2	-0.3
SMCO	Snowmass	147.78	353	*e*PKPbc	PKPbc	10 22 59.3	+1.0
NVAR	Mina Array Bea	148.32	9	PKPbc	PKPbc	10 22 59.2	-0.4
NVAR	Mina Array Bea	148.32	9	PKPbc	PKPbc	10 22 59.2	-0.4
	comp=Z,1.9nm,0.7s,baz=304,slow=1.4,SNR=13						
MSU	Marysvale	148.76	0	*e*PKPbc	PKPab	10 23 03.0	-1.3
PV01	Paradox Valley	148.98	355	*e*PKPbc	PKPbc	10 23 01.9	+0.6
GSC	Goldstone	151.62	8	*e*PKPbc	PKPbc	10 23 07.9	+0.3
GSC				*e*PKPab	PKPab	10 23 15.7	-0.2
TXAR	Lajitas Array	156.56	341	PKPab	PKPab	10 23 37.9	+0.8
TXAR	Lajitas Array	156.56	341	PKPab	PKPab	10 23 37.9	+0.8
	comp=Z,1.1nm,1.0s,baz=46,slow=3.6,SNR=5.5						

*ISCJB **20** 10:04:17.1±0.5, 35°.6N±0°.1×135°.79E±0°.07, h350km, mb2.7/2, Error ellipse: s-maj=14.4km s-min=7.6km az=164.4*
*JMA **20** 10:04:17.1±0.1, 35°.52N×135°.68E, h355km±1km, M2.8*
*IDC **20** 10:04:20.5±1.2, 35°.45N×135°.07E, h406km±16km, mb2.5/2, mb1 2.6/5, mb1mx2.5/29, mbtmp2.3/5, Error ellipse: s-maj=33.8km s-min=20.5km az=122.0*

ISC 20 10:04:17.7±1.5, 35°.5N±0°.2×135°.7E±0°.1, h350km, n20, σ0^{s}37/12, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFM	Mihama	0.27	86	P	Pn	10 05 01.7	+0.2
JFM				*e*S	S	10 05 36.8	+0.1
JWT	Wachi	0.31	222	P	Pn	10 05 01.7	0.0
JWT				*e*S	S	10 05 36.3	-0.6
JGM	Miyama	0.89	78	P	Pn	10 05 03.0	0.0
JWY	Kouya	1.29	182	P	Pn	10 05 04.8	-0.1
JAO	Obara	1.33	100	P	Pn	10 05 04.9	-0.1
JIE	Ise	1.41	142	P	Pn	10 05 05.5	+0.1
JWZ	Kozaga	1.98	179	P	Pn	10 05 08.5	-0.4
JAI	Aioi	1.98	210	P	Pn	10 05 08.9	0.0
TTO1	TONANKAI O.B.S	2.10	153	P	Pn	10 05 10.1	+0.6
JHS	Saijyo	2.14	257	P	Pn	10 05 10.1	+0.1
JMN	Momobe	2.31	220	P	Pn	10 05 11.4	0.0
MJAR	Matsushiro Arr	2.31	63	P	Pn	10 05 23.0	+12
	0.2nm,0.3s,baz=245,slow=2.6,SNR=3.0						
JSD	Sado	3.27	39	P	Pn	10 05 19.4	-0.1
JTO	Tosashimizu	3.55	223	P	Pn	10 05 22.4	+0.1
BSO3	Boso 3	4.04	99	P	Pn	10 05 26.7	-0.1
BSO3				*e*S	S	10 06 19.2	-3.3
JHO	Hitachi	4.13	73	P	Pn	10 05 26.6	-1.4
JHO				*e*S	S	10 06 19.0	-5.7
JNU	Nakatsue	4.62	240	P	Pn	10 05 33.6	+0.4
	0.8nm,0.3s,baz=93,slow=4.6,SNR=9.2						
KSRS	Korea Array	6.52	290	P	Pn	10 05 55.4	+0.9
	0.2nm,0.3s,baz=107,slow=12,SNR=5.9						
ILAR	Eielson Array	53.24	31	P	P	10 13 00.7	-0.3
	0.2nm,0.6s,baz=266,slow=6.2,SNR=3.1						
WRA	Warramunga Arr	55.16	182	P	P	10 13 12.6	-2.6
	0.2nm,0.4s,baz=359,slow=7.6,SNR=6.0						

WEL 20 10:04:59.2±0.5, 36°.46S×177°.70E, h205km±5km, ML3.6/6, Error ellipse: s-maj=12.4km s-min=8.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.21	156	PN	Pn	10 05 31.3	+0.4
MXZ				SN	S	10 05 54.8	-0.7
URZ	Urewera	1.86	194	PN	Pn	10 05 36.6	0.0
URZ				SN	S	10 06 06.3	+0.8
MWZ	Matawai	1.88	184	PN	Pn	10 05 37.1	+0.2
MWZ				SN	S	10 06 06.5	+0.5
RAHZ	Arahi	2.50	191	PN	Pn	10 05 43.7	+0.2
KNZ	Kokohu	2.56	180	PN	Pn	10 05 44.1	+0.1
NMHZ	Naumai	2.73	195	PN	Pn	10 05 46.7	+0.6
BKZ	Black Stump Fm	2.87	199	PN	Pn	10 05 46.9	-0.7
MCHZ	McNeill Hill	3.08	195	PN	Pn	10 05 50.1	0.0
BHHZ	Black Hill Sta	3.29	203	PN	Pn	10 05 51.5	-1.1
PXZ	Pawanui	3.63	190	PN	Pn	10 05 55.4	-1.1
MRZ	Mangatainoka R	4.51	201	PN	Pn	10 06 05.1	-2.5

IDC 20 10:17:04.9±1.4, 30°.36S×178°.36W, h54km±7km, mb4.0/4, mb1 4.1/4, mb1mx3.7/18, mbtmp4.0/4, Error ellipse: s-maj=37.7km s-min=24.6km az=39.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.18	257	P	P	10 23 43.9	-1.3
	1.7nm,0.6s,baz=105,slow=7.2,SNR=6.8						
ASAR	Alice Springs	42.80	267	P	P	10 24 58.0	+0.4
	2.1nm,0.6s,baz=105,slow=7.5,SNR=48						
ASAR				pP	pP	10 25 11.7	-0.1
	1.6nm,0.6s,baz=104,slow=7.6,SNR=7.0						
WRA	Warramunga Arr	43.78	272	P	P	10 25 06.2	+0.6
	5.3nm,0.7s,baz=113,slow=7.9,SNR=51						
WRA				pP	pP	10 25 20.3	+0.6
	2.6nm,0.5s,baz=113,slow=7.9,SNR=8.1						
QSPA	South Pole Qui	59.75	180	P	P	10 27 04.1	+0.1
	2.5nm,0.8s,baz=264,slow=2.0,SNR=12						
QSPA				pP	pP	10 27 19.3	+0.5
	1.9nm,0.8s,baz=274,slow=1.2,SNR=3.2						
FINES	FINESS Array B	145.00	340	PKPbc	PKPbc	10 36 33.5	-1.3
	1.9nm,0.6s,baz=44,slow=5.8,SNR=6.7						
FINES				pPKPbc	pPKPbc	10 36 48.3	-2.7
	1.1nm,0.6s,baz=48,slow=2.1,SNR=2.1						

IDC 20 10:23:42.2±5.8, 5°.70S×68°.72E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.3/26, mbtmp3.5/2, Error ellipse: s-maj=387.3km s-min=35.4km az=41.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	65.02	113	P	P	10 34 24.4	-0.4
	0.3nm,0.7s,baz=285,slow=5.1,SNR=6.3						
WRA	Warramunga Arr	65.17	109	P	P	10 34 26.1	+0.3
	0.4nm,0.7s,baz=278,slow=6.6,SNR=6.9						
YKA	Yellowknife Ar	123.28	2	PKP	PKPdf	10 42 40.8	0.0
	0.2nm,0.5s,baz=359,slow=2.1,SNR=2.9						
NVAR	Mina Array Bea	146.80	10	PKPbc	PKPbc	10 43 26.3	-0.8
	0.1nm,0.4s,baz=252,slow=2.6,SNR=2.4						
TXAR	Lajitas Array	155.42	344	PKPab	PKPab	10 44 03.2	-0.6
	0.2nm,0.9s,baz=101,slow=1.4,SNR=2.5						

IDC 20 10:42:15.3±2.8, 6°.57S×68°.56E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.5/28, mbtmp3.8/5, MS3.7/3, Ms1 3.8/3, ms1mx3.2/38, Error ellipse: s-maj=153.0km s-min=23.6km az=44.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	18.32	42	LR	LR	10 51 53.2	
	comp=Z,266nm,20.0s,baz=20,slow=32						
OPO	Ambohidratompo	23.99	238	LR	LR	10 54 15.4	
	comp=Z,269nm,19.5s,baz=240,slow=30						
CMAR	Chiang Mai Arr	38.94	50	LR	LR	11 03 15.9	
	comp=Z,70nm,18.1s,baz=39,slow=32						
BRTR	Keskin Array B	56.23	328	P	P	10 51 57.7	+0.1
	0.4nm,0.7s,baz=182,slow=3.9,SNR=3.7						
AKTO	Aktyubinsk	57.51	352	P	P	10 52 06.2	-0.1
	0.4nm,0.5s,baz=158,slow=11,SNR=5.3						
ASAR	Alice Springs	64.82	113	P	P	10 52 56.4	-0.2
	0.4nm,0.6s,baz=276,slow=6.0,SNR=8.3						
WRA	Warramunga Arr	65.04	109	P	P	10 52 58.0	0.0
	0.6nm,0.6s,baz=281,slow=6.2,SNR=8.6						
HFS	Hagfors	79.18	335	P	P	10 54 21.3	-0.5
	0.7nm,0.5s,baz=105,slow=9.3,SNR=4.3						
NVAR	Mina Array Bea	147.68	10	PKPbc	PKPbc	11 02 03.2	+0.5
	0.5nm,0.7s,baz=20,slow=1.9,SNR=4.6						
TXAR	Lajitas Array	156.20	343	PKPab	PKPab	11 02 39.5	-0.8
	0.4nm,0.8s,baz=45,slow=2.0,SNR=4.0						

*UPP **20** 10:44:58.0, 57°.66N×23°.19E, h0km, ML2.2, Suspected Mining explosion.*
*ISCJB **20** 10:45:02.5±0.4, 57°.91N±0°.03×22°.36E±0°.05, h0km, Error ellipse: s-maj=4.5km s-min=3.6km az=135.0*
*HEL **20** 10:45:03.7±0.1, 57°.87N×22°.43E, h0km, ML2.2, ML2.2(UPP), Explosion*
*NAO **20** 10:45:03.2±2.0, 57°.89N×22°.43E, ML2.1*
*CSEM **20** 10:45:03.5±0.2, 57°.87N×22°.39E, h2km, ML2.2, Error ellipse: s-maj=5.7km s-min=4.2km az=156.0, Mining explosion.*
*BER **20** 10:45:04.7±3.6, 57°.82N×22°.36E, h0km, ML2.1(NAO), Suspected explosion*
*IDC **20** 10:45:05.1±2.3, 57°.96N×22°.36E, h0km, mb1 3.1/4, mb1mx2.9/27, mbtmp3.0/4, ML2.7/4, Error ellipse: s-maj=23.1km s-min=8.3km az=164.0*

ISC 20 10:45:01.7±0.7, 57°.89N±0°.03×22°.34E±0°.03, h0km, n55, σ1^{s}90/81, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLIT	Slitere, Latvi	0.26	186	*e*P	Pg	10 45 08.0	+1.3
SLIT				*e*S	Sg	10 45 12.2	+2.1
SLIT	Slitere, Latvi	0.26	186	*e*P	Pg	10 45 07.8	+1.1
	SNR=22						
MTSE	Matsula	1.14	43	*e*P	Pg	10 45 23.0	-0.4
GOTU	Gotland	2.03	266	*e*P	Pn	10 45 39.1	+2.0
GOTU	Gotland	2.03	266	P	Pn	10 45 39.1	+2.0
VSU	Vasula	2.40	74	Pn	Pn	10 45 43.0	+0.8
VSU				Sn	Sn	10 46 13.8	+1.6
VSU	Vasula	2.40	74	Pn	Pn	10 45 43.0	+0.8
VSU				Sn	Sn	10 46 13.8	+1.6
VSU	Vasula	2.40	74	*e*P	Pn	10 45 43.4	+1.2
VSU				*e*SB	Sb	10 46 15.0	-0.8
VSU	Vasula	2.40	74	Pn	Pn	10 45 43.0	+0.8
	SNR=50						
VSU				Sn	Sn	10 46 13.8	+1.6
VSU				*e*S	Sb	10 46 14.4	-1.4
	76nm,0.4s,SNR=20						
VSU				Sb	Sb	10 46 14.9	-0.8
MEF	Metsahovi	2.56	24	*e*P	Pb	10 45 47.2	-1.4
MEF				*e*SB	Sb	10 46 21.5	+0.9
MEF				MSG		10 46 23.0	
	comp=Z,13nm,0.1s						
MEF	Metsahovi	2.56	24	*e*P	Pb	10 45 47.5	-1.0
	SNR=16						
MEF				Sb	Sb	10 46 21.5	+0.9
AAL	Aland	2.60	333	*e*PB	Pb	10 45 49.1	0.0
AAL				*e*SG	Sg	10 46 25.8	+0.7
AAL				MSG		10 46 27.5	
	comp=Z,1.0nm,1.0s						
AAL	Aland	2.60	333	P	Pn	10 45 46.8	+1.9
AAL	Aland	2.60	333	Pb	Pb	10 45 49.1	0.0
AAL				Sg	Sg	10 46 25.8	+0.7
ASPU	Aespoe	3.12	264	*e*P	Pn	10 45 55.1	+2.9
ASPU	Aespoe	3.12	264	P	Pn	10 45 55.0	+2.9
RAF	Rauma	3.16	355	*e*P	Pn	10 45 55.1	+2.4
RAF				*e*SB	Sb	10 46 38.1	+0.5
RAF				MSG		10 46 45.0	
	comp=Z,4.0nm,0.2s						
RAF	Rauma	3.16	355	P	Pn	10 45 55.0	+2.4
RAF				Sb	Sb	10 46 38.1	+0.5
RAF				*e*S	Sg	10 46 39.7	-3.4
	comp=Z,11nm,0.2s,SNR=16						
FLYU	Flymyra	3.22	316	*e*P	Pn	10 45 56.3	+2.9
FLYU	Flymyra	3.22	316	P	Pn	10 45 56.3	+2.9
PVF	Pernaja	3.22	33	*e*PG	Pb	10 46 00.9	+1.2
PVF				*e*SB	Sb	10 46 40.1	+0.7
BACU	Backbrunna	3.36	308	*e*P	Pn	10 45 58.5	+3.2
BACU	Backbrunna	3.36	308	P	Pn	10 45 58.5	+3.2
ESKU	Eskilstuna	3.39	296	*e*P	Pn	10 45 58.6	+2.8
ESKU	Eskilstuna	3.39	296	P	Pn	10 45 58.6	+2.8
OSKU	Oskarshamn	3.44	261	*e*P	Pn	10 45 58.3	+1.9
OSKU	Oskarshamn	3.44	261	P	Pn	10 45 58.3	+1.9
OSTU	Oestervaala	3.57	313	*e*P	Pn	10 46 00.8	+2.5
OSTU	Oestervaala	3.57	313	P	Pn	10 46 00.8	+2.5
FIA0	FINESS Array S	4.04	26	Pn	Pn	10 46 06.2	+1.5
	baz=220,slow=11						
FIA0				Pg	Pb	10 46 13.4	-0.2
	baz=209,slow=14						
FIA0				Sn	Sn	10 46 55.0	+2.4
	baz=202,slow=28						
FIA0				Lg	Lg	10 47 10.6	
	baz=211,slow=28						
FIA0	FINESS Array S	4.04	26	*e*P	Pn	10 46 06.3	+1.7
FIA0	FINESS Array S	4.04	26	Pn	Pn	10 46 06.2	+1.5
	baz=220,slow=11,SNR=50						
FIA0	FINESS Array S	4.04	26	Pg	Pb	10 46 13.4	-0.2
	SNR=90						
FIA0				Sn	Sn	10 46 55.0	+2.4
	baz=202,slow=23						
FIA0				Lg	Lg	10 47 10.6	
	baz=211,slow=24,SNR=7.8						
FINES	FINESS Array B	4.04	26	Pn	Pn	10 46 06.4	+1.7
	comp=Z,0.2nm,0.3s,baz=210,slow=12,SNR=7.0						
FINES				Pg	Pb	10 46 15.9	+2.2
	comp=Z,1.7nm,0.3s,baz=209,slow=14,SNR=33						
FINES				Sn	Sn	10 46 54.7	+2.1
	comp=Z,0.7nm,0.3s,baz=199,slow=22,SNR=4.6						
FINES				Lg	Lg	10 47 10.3	
	comp=Z,2.7nm,0.3s,baz=210,slow=27,SNR=10						
ASKU	Askersund	4.08	287	*e*P	Pn	10 46 08.1	+2.8
ASKU	Askersund	4.08	287	P	Pn	10 46 08.1	+2.8
NRAU	Nora	4.16	297	*e*P	Pn	10 46 08.7	+2.3
NRAU	Nora	4.16	297	P	Pn	10 46 08.7	+2.3
FALU	Falun	4.25	311	*e*P	Pn	10 46 10.2	+2.6
FALU	Falun	4.25	311	P	Pn	10 46 10.1	+2.6
BSD	Bornholm Skovb	4.97	239	*i*P	Pn	10 46 17.4	0.0
BSD				*i*S	Sn	10 47 14.0	-1.5
HFS	Hagfors	5.00	300	Pn	Pn	10 46 20.3	+2.3
	baz=113,slow=16						
HFS				Sn	Sn	10 47 17.3	+0.9
	baz=126,slow=28						
HFS				Lg	Lg	10 47 39.6	
	baz=118,slow=37						
HFS	Hagfors	5.00	300	Pn	Pn	10 46 20.3	+2.3
	baz=113,slow=16						
HFS				Sn	Sn	10 47 17.3	+0.9
	baz=126,slow=28						
HFS				Lg	Lg	10 47 39.6	
	baz=118,slow=37						
HFS	Hagfors	5.00	300	Pn	Pn	10 46 20.2	+2.3
	comp=Z,0.8nm,0.3s,baz=126,slow=14,SNR=32						
HFS				Sn	Sn	10 47 17.5	+1.1
	comp=Z,0.4nm,0.3s,baz=137,slow=30,SNR=3.7						
HFS				Lg	Lg	10 47 39.6	
	comp=Z,1.6nm,0.3s,baz=118,slow=29,SNR=11						
HFS	Hagfors	5.00	300	Pn	Pn	10 46 20.3	+2.3
	baz=113,slow=15,SNR=50						
HFS				Sn	Sn	10 47 17.3	+0.9
	baz=126,slow=26						
HFS				Lg	Lg	10 47 39.6	
	baz=118,slow=33,SNR=7.3						
NB2	NORSAR Subarra	6.49	304	Pn	Pn	10 46 39.9	+1.5
	baz=118,slow=14						
NB2				Lg	Lg	10 48 26.7	
	baz=116,slow=37						
NB2	NORSAR Subarra	6.49	304	Pn	Pn	10 46 39.9	+1.5
	baz=118,slow=14						
NB2				Lg	Lg	10 48 26.7	
	baz=116,slow=37						
NB2	NORSAR Subarra	6.49	304	Pn	Pn	10 46 39.9	+1.5
	baz=118,slow=13,SNR=50						
NB2				Lg	Lg	10 48 26.7	
	baz=116,slow=29,SNR=3.5						
NOA	NORSAR Array B	6.49	304	Pn	Pn	10 46 40.1	+1.7
	comp=Z,0.4nm,0.3s,baz=127,slow=12,SNR=10						
NOA				Sn	Sn	10 47 51.7	-1.4
	comp=Z,0.2nm,0.3s,baz=222,slow=16,SNR=1.9						
NOA				Lg	Lg	10 48 26.0	
	comp=Z,0.8nm,0.3s,baz=133,slow=9.9,SNR=5.4						
APA0	Apatity Array	10.88	22	Pn	Pn	10 47 36.9	-1.6
APA0	Apatity Array	10.88	22	P	Pn	10 47 36.9	-1.6
ARA0	ARCESS Array S	11.77	5	Pn	Pn	10 47 48.1	-2.5
	baz=186,slow=14						
ARA0	ARCESS Array S	11.77	5	P	Pn	10 47 48.1	-2.5
	baz=186,slow=14						
ARCES	ARCESS Array B	11.77	5	Pn	Pn	10 47 48.3	-2.4
	comp=Z,0.1nm,0.3s,baz=186,slow=13,SNR=6.4						

IDC 20 10:56:40.0±3.0, 5°.62S×151°.29E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/19, mbtmp3.5/4, ML2.8/1, 2D, Error ellipse: s-maj=103.0km s-min=38.8km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.56	227	Pn	Pn	10 58 05.7	+1.7
	2.0nm,0.3s,baz=50,slow=12,SNR=7.5						
PMG				Sn	Sn	10 59 09.4	+0.7
	4.0nm,0.3s,baz=320,slow=20,SNR=10						
WRA	Warramunga Arr	21.78	228	P	P	11 01 33.6	0.0
	0.7nm,0.5s,baz=54,slow=10,SNR=11						
ASAR	Alice Springs	24.54	221	P	P	11 02 01.9	+0.4
	0.6nm,0.6s,baz=55,slow=9.0,SNR=13						
FITZ	Fitzroy Crossi	27.95	241	P	P	11 02 31.3	-1.1
	0.8nm,0.7s,baz=51,slow=12,SNR=3.9						
BURAR	Bucovina Array	117.91	322	‖*i*P	PKPdf	11 15 24.6	-4.3
DRGR		119.81	322	‖*i*P	PKPdf	11 15 40.8	+8.2
TORD	Torodi Ar. Bea	149.11	286	PKPbc	PKPbc	11 16 31.1	-0.4
	1.0nm,0.9s,baz=63,slow=0.8,SNR=4.7						

*IDC **20** 11:11:29.5±1.1, 19°.37S×177°.58E, h0km, mb4.1/14, mb1 4.3/15, mb1mx4.2/20, mbtmp4.1/15, ML3.3/1, MS4.2/26, Ms1 4.2/26, ms1mx4.0/39, Error ellipse: s-maj=41.7km s-min=17.1km az=150.0*
*NEIC **20** 11:11:35.1±0.7, 19°.06S×177°.48E, h35km, mb4.8/5, Error ellipse: s-maj=25.1km s-min=9.8km az=142.0*
*GCMT **20** 11:11:35.1±0.3, 19°.36S×177°.57E, h16km±1km, MW5.0, Moment Tensor Solution. s26,c31; s80,c127; Moment tensor: Scale 10^{16}Nm; M_{rr}0.22±.16; $M_{\theta\theta}$-3.81±.15; $M_{\phi\phi}$3.59±.13; $M_{r\theta}$0.65±.37; $M_{r\phi}$1.71±.13; $M_{\theta\phi}$1.57±.41; Best double couple: M_o4.40000×10^{16} NP1:φs325.00000°, δ72.00000°, λ168.00000°. NP2:φs59.00000°, δ78.00000°, λ18.00000°. Principal axes: T 4.6100, Plg21.0000°, Azm283.0000°; N -0.4000, Plg69.0000°, Azm91.0000°; P -4.2100, Plg4.0000°, Azm192.0000°; Data Used: II IU CN G IC.*

ISC 20 11:11:33.9±0.7, 19°.4S±0°.2×177°.6E±0°.1, h27km, n69, σ0^{s}92/44, mb4.1/20, MS4.2/22, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	1.72	15	*e*Pn	Pn	11 11 55.5	-6.6
MSVF				Sn	Sn	11 12 11.1	-12
RAO	Raoul Island	10.63	158	LR	LR	11 17 28.2	
	comp=Z,1μm,20.1s,baz=320,slow=34						
DZM	Mont Dzumac	10.76	254	eLR	LR	11 16 30.7	
	3μm,25.5s						
DZM	Mont Dzumac	10.76	254	Pn	Pn	11 14 07.0	+0.6
DZM	Mont Dzumac	10.76	254	Pn	Pn	11 14 07.0	+0.6
	0.2nm,0.3s,baz=56,slow=22,SNR=3.4						
AFI	Afiamalu	11.56	63	LR	LR	11 16 56.1	
	comp=Z,216nm,21.1s,baz=238,slow=28						
URZ	Urewera	18.80	181	LR	LR	11 21 20.5	
	comp=Z,2μm,20.9s,baz=28,slow=31						
HNR	Honiara	19.73	298	LR	LR	11 22 24.7	
	comp=Z,464nm,19.7s,baz=134,slow=33						
RPZ	Rata Peaks	24.86	191	LR	LR	11 24 47.7	
	comp=Z,1μm,19.8s,baz=338,slow=32						
CTAO	Charters Tower	29.48	263	P	P	11 17 34.4	-1.5
	4.6nm,0.9s						
TBI	Tubuai	30.90	103	eLQ	LQ	11 24 28.1	
	646nm,27.5s						
TBI				eLR	LR	11 25 50.5	
	2μm,29.5s						
PPT2	Papeete2	31.17	92	eLR	LR	11 25 58.3	
	2μm,27.8s						
PPT	Papeete	31.17	92	LR	LR	11 26 55.6	
	comp=Z,767nm,21.8s,baz=323,slow=30						
STKA	Stephens Creek	34.59	242	*e*P	P	11 18 21.4	+0.8
STKA	Stephens Creek	34.59	242	P	P	11 18 18.9	-1.7
	7.2nm,0.9s,baz=84

KDAK	**Kodiak Island**	**80.80**	**16**	LR	LR	11 52 39.4	
	comp=Z,229nm,22.0s,baz=134,slow=31						
MAW	**Mawson**	**81.16**	**201**	LR	LR	11 56 18.4	
	comp=Z,277nm,18.0s,baz=308,slow=33						
NVAR	**Mina Array Bea**	**83.15**	**45**	P	**P**	**11 23 58.0**	**+0.1**
NVAR	**Mina Array Bea**	**83.15**	**45**	P	**P**	**11 23 58.0**	**+0.1**
	0.9nm,0.8s,baz=229,slow=8.2,SNR=7.1						
BBB	**Bella Bella**	**85.47**	**30**	LR	LR	11 54 41.5	
	comp=Z,196nm,19.3s,baz=49,slow=30						
CMAR	**Chiang Mai Arr**	**85.84**	**291**	P	**P**	**11 24 12.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**85.84**	**291**	P	**P**	**11 24 12.2**	**+0.5**
	0.5nm,0.3s,baz=106,slow=3.2,SNR=3.1						
ILAR	**Eielson Array**	**88.23**	**14**	P	**P**	**11 24 22.2**	**+0.1**
ILAR	**Eielson Array**	**88.23**	**14**	P	**P**	**11 24 22.2**	**+0.1**
	0.7nm,1.0s,baz=237,slow=6.4,SNR=5.4						
ILAR				LR	LR	11 56 03.2	
	comp=Z,256nm,21.8s,baz=36,slow=30						
DLBC	**Dease Lake**	**88.73**	**25**	LR	LR	11 57 18.7	
	comp=Z,277nm,20.1s,baz=166,slow=31						
NEW	**Newport**	**88.97**	**37**	LR	LR	11 59 43.8	
	comp=Z,97nm,18.9s,baz=228,slow=32						
TXAR	**Lajitas Array**	**90.00**	**59**	P	**P**	**11 24 32.2**	**+0.7**
TXAR	**Lajitas Array**	**90.00**	**59**	P	**P**	**11 24 32.2**	**+0.7**
	3.0nm,0.9s,baz=213,slow=3.8,SNR=20						
TXAR				LR	LR	11 56 59.4	
	comp=Z,77nm,19.6s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**91.06**	**45**	P	**P**	**11 24 35.4**	**-0.9**
PDAR	**Pinedale Array**	**91.06**	**45**	P	**P**	**11 24 35.4**	**-0.9**
	0.6nm,0.9s,baz=208,slow=2.9,SNR=3.8						
SONM	**Songino Array**	**92.23**	**320**	LR	LR	12 02 47.5	
	comp=Z,63nm,19.1s,baz=263,slow=33						
PLCA	**Paso Flores**	**93.01**	**135**	LR	LR	11 57 04.1	
	comp=Z,89nm,20.8s,baz=184,slow=29						
INK	**Inuvik**	**94.35**	**16**	LR	LR	11 59 42.6	
	comp=Z,182nm,22.0s,baz=322,slow=31						
YKA	**Yellowknife Ar**	**97.29**	**26**	P	**P**	**11 25 03.2**	**-0.8**
YKA	**Yellowknife Ar**	**97.29**	**26**	P	**P**	**11 25 03.2**	**-0.8**
	0.1nm,0.4s,baz=245,slow=4.1,SNR=3.0						
PALK	**Pallekele**	**98.85**	**275**	LR	LR	12 13 03.7	
	comp=Z,94nm,18.7s,baz=276,slow=37						
KOLS	**Kolonicke sedl**	**144.47**	**332**	*e*PKP	**PKPdf**	**11 31 08.5**	**+0.8**
CRVS	**Cervenica-Dubn**	**144.85**	**332**	*e*PKP	**PKPab**	**11 31 07.0**	**-0.4**
CLL	**Collm**	**145.92**	**343**	*e*PKPbc	**PKPbc**	**11 31 11.0**	**+0.2**
CLL				*i* pPKPdf	**pPKPdf**	**11 31 17.8**	**-1.3**
	comp=Z,26nm,1.7s						
CLL				*i* pPKPbc	pPKPbc	11 31 21.4	+1.7
	comp=Z,21nm,1.2s						
CLL				*i* sPKiKP	sPKiKP	11 31 29.6	+3.3
BRG	**Berggiesshubel**	**146.03**	**341**	*e*P	PKPab	11 31 18.4	+6.7
	comp=Z,24nm,1.9s						
BRG				*e*		11 31 22.9	
	comp=Z,18nm,1.2s						
BRG				*e*		11 31 28.7	
	comp=Z,21nm,1.6s						
VYHS	**Vyhne**	**146.28**	**334**	*e*PKP	**PKPab**	**11 31 13.7**	**+0.9**
KHC	**Kasperske Hory**	**147.67**	**340**	*e*PKP	**PKPbc**	**11 31 16.5**	**+0.5**
GERES	**GERESS Array B**	**147.88**	**340**	PKPbc	**PKPbc**	**11 31 16.5**	**-0.1**
GERES	**GERESS Array B**	**147.88**	**340**	PKPbc	**PKPbc**	**11 31 16.5**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=20,slow=1.6,SNR=7.1						

*CSEM **20** 11:19:48.8±0.2,39.˚10N×21.˚72E,h13km±1km, ML2.3/4, Error ellipse: s-maj=3.7km s-min=2.8km az=104.0*
*ISCJB **20** 11:19:49.1±0.7,39.˚11N±0.˚02×21.˚74E±0.˚04,h14km±3km, Error ellipse: s-maj=5.8km s-min=3.7km az=14.1*
*THE **20** 11:19:49.1,39.˚10N×21.˚73E,h15km, ML2.3/4, Error ellipse: s-maj=1.0km s-min=0.5km az=80.0*
*ATH **20** 11:19:49.0,39.˚10N×21.˚76E,h26km±1km, MD2.9/13*
ISC 20 11:19:49.3±0.9,39.˚10N±0.˚02×21.˚75E±0.˚03,h14km±6km, n41,σ0s73/75, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EVR	**Evrytania**	**0.19**	**165**	P	**Pg**	**11 19 53.4**	**-0.4**
EVR				S	**Sg**	**11 19 57.0**	**+0.1**
EVR	**Evrytania**	**0.19**	**165**	P	**Pg**	**11 19 53.4**	**-0.4**
EVR				S	**Sg**	**11 19 57.0**	**+0.1**
MAKR	**Makrakomi, Fth**	**0.31**	**106**	P	**Pg**	**11 19 56.1**	**+0.3**
MAKR				S	**Sg**	**11 20 01.3**	**+1.0**
MAKR	**Makrakomi, Fth**	**0.31**	**106**	P	**Pg**	**11 19 56.1**	**+0.3**
MAKR				S	**Sg**	**11 20 01.3**	**+1.0**
AGG	**Agios Georgios**	**0.46**	**100**	P	**Pg**	**11 19 58.5**	**0.0**
AGG				S	**Sg**	**11 20 05.9**	**+1.2**
AGG	**Agios Georgios**	**0.46**	**100**	*e*PB	**Pg**	**11 19 58.5**	**0.0**
AGG				*e*SB	**Sb**	**11 20 06.2**	**+0.3**
AGG	**Agios Georgios**	**0.46**	**100**	P	**Pg**	**11 19 58.5**	**0.0**
AGG				S	**Sg**	**11 20 05.9**	**+1.2**
AGG				*e*Sb	**Sb**	**11 20 06.2**	**+0.3**
THL	**Klokotos Trika**	**0.51**	**24**	P	**Pg**	**11 19 58.9**	**-0.4**
THL				S	**Sg**	**11 20 06.5**	**+0.4**
THL	**Klokotos Trika**	**0.51**	**24**	*e*PN	**Pg**	**11 19 58.9**	**-0.4**
THL				*e*SN	**Sb**	**11 20 07.4**	**+0.2**
THL	**Klokotos Trika**	**0.51**	**24**	P	**Pg**	**11 19 58.9**	**-0.4**
THL				S	**Sg**	**11 20 06.5**	**+0.4**
EFP	**Efpalio**	**0.69**	**169**	P	**Pg**	**11 20 02.2**	**-0.5**
EFP	**Efpalio**	**0.69**	**169**	*e*PB	**Pg**	**11 20 02.0**	**-0.7**
EFP				*e*SN	**Sb**	**11 20 12.3**	**0.0**
EFP	**Efpalio**	**0.69**	**169**	*e*Pb	**Pg**	**11 20 02.0**	**-0.7**
KALE	**Kalithea**	**0.77**	**156**	P	**Pb**	**11 20 03.5**	**-1.0**
KALE	**Kalithea**	**0.77**	**156**	*e*PB	**Pb**	**11 20 03.3**	**-1.2**
KALE				*e*SN	**Sg**	**11 20 14.9**	**+0.4**
KALE	**Kalithea**	**0.77**	**156**	P	**Pb**	**11 20 03.5**	**-1.0**
KALE				*e*Sn	**Sg**	**11 20 14.9**	**+0.4**
TRIZ	**Trizonia**	**0.78**	**161**	P	**Pb**	**11 20 03.6**	**-1.0**
TRIZ				S	**Sb**	**11 20 15.6**	**+0.7**
TRIZ	**Trizonia**	**0.78**	**161**	*e*PN	**Pb**	**11 20 03.5**	**-1.0**
TRIZ				*e*SN	**Sg**	**11 20 14.9**	**+0.2**
TRIZ	**Trizonia**	**0.78**	**161**	P	**Pb**	**11 20 03.6**	**-1.0**
TRIZ				*e*Sn	**Sg**	**11 20 14.9**	**+0.2**
TRIZ				S	**Sb**	**11 20 15.6**	**+0.7**
LAKA	**Lakka**	**0.88**	**168**	*e*PB	**Pb**	**11 20 05.6**	**-0.7**
LAKA				*e*SN	**Sn**	**11 20 19.2**	**-0.6**
LAKA	**Lakka**	**0.88**	**168**	*e*Pb	**Pb**	**11 20 05.6**	**-0.7**
LKD2	**Lefkada island**	**0.90**	**250**	P	**Pb**	**11 20 06.2**	**-0.5**
LKD2	**Lefkada island**	**0.90**	**250**	P	**Pb**	**11 20 06.2**	**-0.5**
DSF	**Desfina**	**0.92**	**138**	P	**Pb**	**11 20 06.2**	**-0.8**
DSF				S	**Sg**	**11 20 19.8**	**+0.6**
DSF	**Desfina**	**0.92**	**138**	P	**Pb**	**11 20 06.2**	**-0.8**
DSF				S	**Sg**	**11 20 19.8**	**+0.6**
RLS	**Riolos of Patr**	**1.06**	**192**	*e*PN	**Pn**	**11 20 09.5**	**-0.2**
RLS				*e*SN	**Sn**	**11 20 25.1**	**+0.8**
RLS	**Riolos of Patr**	**1.06**	**192**	*e*Pn	**Pn**	**11 20 09.5**	**-0.2**
RLS				*e*Sn	**Sn**	**11 20 25.1**	**+0.8**
LKR	**Lokris**	**1.08**	**114**	*e*PN	**Pg**	**11 20 10.4**	**+0.3**
LKR				*e*SN	**Sg**	**11 20 24.9**	**+0.7**
LKR	**Lokris**	**1.08**	**114**	*e*Pn	**Pg**	**11 20 10.4**	**+0.3**
LKR				*e*Sn	**Sg**	**11 20 24.9**	**+0.7**
KLV	**Kalavryta, Ach**	**1.10**	**163**	*e*PB	**Pb**	**11 20 09.4**	**-0.8**
KLV				*e*SN	**Sg**	**11 20 26.6**	**+1.6**
KLV	**Kalavryta, Ach**	**1.10**	**163**	*e*Pb	**Pb**	**11 20 09.4**	**-0.8**
KLV				*e*Sn	**Sg**	**11 20 26.6**	**+1.6**
LIT	**Litokhoron**	**1.15**	**30**	P	**Pn**	**11 20 10.2**	**-0.8**
LIT	**Litokhoron**	**1.15**	**30**	*e*PN	**Pb**	**11 20 11.1**	**+0.1**
LIT				*e*SN	**Sg**	**11 20 27.1**	**+0.6**
LIT	**Litokhoron**	**1.15**	**30**	P	**Pn**	**11 20 10.2**	**-0.8**
LIT	**Litokhoron**	**1.15**	**30**	*e*Pn	**Pb**	**11 20 11.1**	**+0.1**
GUR	**Goura**	**1.25**	**158**	*e*PN	**Pn**	**11 20 12.1**	**-0.3**
GUR				*e*SN	**Sg**	**11 20 30.7**	**+0.9**
GUR	**Goura**	**1.25**	**158**	*e*Pn	**Pn**	**11 20 12.1**	**-0.3**
GUR				*e*Sn	**Sg**	**11 20 30.7**	**+0.9**
VLS	**Valsamata**	**1.29**	**225**	*e*PN	**Pb**	**11 20 13.2**	**-0.2**
VLS				*e*SN	**Sg**	**11 20 32.7**	**+1.7**
VLS	**Valsamata**	**1.29**	**225**	*e*Pn	**Pb**	**11 20 13.2**	**-0.2**
VLS				*e*Sn	**Sg**	**11 20 32.7**	**+1.7**
AOS	**Alonnisos**	**1.66**	**87**	*e*PN	**Pn**	**11 20 18.0**	**+0.1**
AOS				*e*SN	**Sn**	**11 20 38.5**	**-0.5**
AOS	**Alonnisos**	**1.66**	**87**	*e*Pn	**Pn**	**11 20 18.0**	**+0.1**
AOS				*e*Sn	**Sn**	**11 20 38.5**	**-0.5**

*IDC **20** 11:34:44.8±6.4,30.˚55N×137.˚98E,h334km±153km, mb2.7/3,mb1 2.8/5,mb1mx2.6/27,mbtmp2.7/5, Error ellipse: s-maj=277.3km s-min=20.3km az=64.0*
*ISCJB **20** 11:34:45.9±0.8,31.˚00N±0.˚07×138.˚8E±0.˚2,h394km, mb2.7/3, Error ellipse: s-maj=22.8km s-min=7.8km az=12.6*
*JMA **20** 11:34:48.4±0.2,31.˚17N×139.˚07E,h397km, M3.3*
ISC 20 11:34:47.0±1.1,31.09N±0.09×138.9E±0.2,h394km,n16, σ1s82/24,mb2.8/3,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**2.13**	**22**	P	**Pn**	**11 35 44.4**	**+1.3**
JHJ	**Hachijo jima 2**	**2.17**	**21**	P	**Pn**	**11 35 44.4**	**+1.0**
	13nm,0.3s,baz=114,slow=9.6,SNR=34						
JHJ				S	**S**	**11 36 29.0**	**-0.1**
	11nm,0.3s,baz=84,slow=24,SNR=8.4						
JHJ2	**Mitsune**	**2.18**	**22**	P	**Pn**	**11 35 45.3**	**+1.9**
BSO3	**Boso 3**	**3.96**	**20**	*e*S	**S**	**11 36 56.0**	**+0.6**
BSO1	**Boso 1**	**3.98**	**26**	P	**Pn**	**11 35 58.9**	**+1.2**
BSO1				*e*S	**S**	**11 36 56.1**	**+0.8**
JOD2	**Odawara 2**	**4.17**	**3**	P	**Pn**	**11 36 01.1**	**+0.9**
JOD2				*e*S	**S**	**11 36 59.4**	**-0.3**
JHU	**Hanno**	**4.76**	**4**	*e*S	**S**	**11 37 07.8**	**-2.7**
JRY	**Ryogami san**	**4.92**	**0**	P	**Pn**	**11 36 09.9**	**+2.2**
JRY				*e*S	**S**	**11 37 13.6**	**+0.2**
JYT	**Yasato**	**5.25**	**12**	P	**Pn**	**11 36 11.4**	**+0.3**
JYT				*e*S	**S**	**11 37 16.3**	**-3.3**
JAG	**Ashikaga**	**5.35**	**5**	P	**Pn**	**11 36 12.4**	**+0.2**
JAG				*e*S	**S**	**11 37 17.6**	**-4.0**
MJAR	**Matsushiro Arr**	**5.46**	**355**	P	**Pn**	**11 36 15.9**	**+2.4**
	0.2nm,0.3s,baz=90,slow=14,SNR=2.7						
JHO	**Hitachi**	**5.69**	**14**	P	**Pn**	**11 36 17.3**	**+1.4**
JHO				S	**S**	**11 37 25.5**	**-2.8**
JMK	**Ichinoseki**	**8.08**	**13**	P	**P**	**11 36 44.2**	**+1.0**
JMK				*e*S	**S**	**11 38 16.8**	**-0.6**
MKAR	**Makanchi Array**	**45.72**	**307**	P	**P**	**11 42 30.9**	**+0.3**
	0.2nm,0.3s,baz=86,slow=8.7,SNR=4.3						
WRA	**Warramunga Arr**	**50.92**	**185**	P	**P**	**11 43 08.4**	**-1.6**
	0.2nm,0.4s,baz=1.6,slow=8.5,SNR=17						
ASAR	**Alice Springs**	**54.65**	**186**	P	**P**	**11 43 35.8**	**-1.1**
	0.1nm,0.3s,baz=356,slow=5.1,SNR=7.5						

*NOU **20** 11:39:41.8±0.7,21.˚08S×171.˚50E,h30km,MD3.4*
IDC 20 11:39:45.5±8.0,21.˚64S×171.˚20E,h140km±47km,mb3.2/3, mb1 3.5/4,mb1mx3.3/18,mbtmp3.3/4,Error ellipse: s-maj=101.4km s-min=53.3km az=148.0,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**4.04**	**262**	*e*P	Pn	11 40 45.8	-0.2
BAYA				*e*S	Sn	11 41 32.9	-0.2
DZM	**Mont Dzumac**	**4.44**	**264**	*e*P	Pn	11 40 50.7	-0.8
DZM				*e*S	Sn	11 41 42.2	-0.5
DZM				AMP		11 41 46.9	
	comp=Z,2µm,7.9s						
DZM	**Mont Dzumac**	**4.44**	**264**	P	Pn	11 40 51.0	-0.5
	comp=Z,6.2nm,0.3s,baz=80,slow=17,SNR=110						
DZM				S	Sn	11 41 43.4	+0.6
	comp=Z,27nm,0.3s,baz=296,slow=23,SNR=21						
MVNO	**Noumea**	**4.46**	**261**	*e*S	Sn	11 41 43.4	+0.4
NOUC	**Port Laguerre**	**4.58**	**263**	*e*P	Pn	11 40 54.6	+1.6
NOUC				*e*S	Sn	11 41 48.0	+2.4
NOUC				AMP		11 41 54.1	
	comp=Z,111nm,5.1s						
ASAR	**Alice Springs**	**34.42**	**259**	P	P	11 46 19.9	+0.2
	comp=Z,1.6nm,0.9s,baz=89,slow=8.8,SNR=13						
WRA	**Warramunga Arr**	**34.46**	**266**	P	P	11 46 19.3	-0.8
	comp=Z,2.2nm,0.4s,baz=99,slow=8.6,SNR=7.9						
SONM	**Songino Array**	**90.23**	**322**	P	P	11 52 30.7	+0.5
	comp=Z,0.2nm,0.4s,baz=123,slow=5.5,SNR=3.5						

*BJI **20** 11:59:13.7,9.˚32S×124.˚74E,h106km,mB4.9/20,mb4.9/28*
*IDC **20** 11:59:14.8±3.6,8.˚72S×124.˚09E,h52km±34km,mb4.3/15, mb1 4.4/17,mb1mx4.3/24,mbtmp4.4/17,ML5.1/2,MS3.4/6, Ms1 3.3/6,ms1mx3.0/31,Error ellipse: s-maj=19.9km s-min=12.4km az=80.0*
*ISCJB **20** 11:59:19.2±0.4,8.˚89S±0.˚03×124.˚29E±0.˚03,h115km±4km, mb4.7/39,Error ellipse: s-maj=5.8km s-min=3.7km az=35.5*
*NEIC **20** 11:59:19.2±1.0,8.˚80S×124.˚23E,h95km±10km,mb4.7/18, Error ellipse: s-maj=10.2km s-min=5.6km az=55.0*
*AUST **20** 11:59:20.2±0.2,8.˚87S×124.˚32E,h92km,Error ellipse: s-maj=0.7km s-min=0.4km az=33.0*
*DJA **20** 11:59:21.8±0.3,9.˚S±3.˚×12.˚4E±.˚,h106km±4km, M4.8/27, mB5.2/9,mb5.1/27,MLv4.9/11,Mw(mB)4.6/9*
ISC 20 11:59:20.7±0.3,8.96S±0.03×124.23E±0.04,h110km±2km, h110km:pP-P,n173,σ1s82/225,mb4.7/39,1C-1D,Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**2.00**	**279**	P	**Pn**	**11 59 54.4**	**+0.7**
MMRI				S	**Sn**	**12 00 20.1**	**+1.2**
BASI	**Baing, Sumba**	**3.81**	**251**	P	**Pn**	**12 00 18.2**	**+0.6**
BASI				S	**Sn**	**12 01 02.1**	**+0.4**
BBSI	**Bau Bau**	**3.82**	**334**	P	**Pn**	**12 00 17.8**	**+0.1**
BBSI				S	**Sn**	**12 01 05.0**	**+3.1**
WSI	**Waingapu**	**3.94**	**259**	P	**Pn**	**12 00 22.2**	**+2.8**
WSI				S	**Sn**	**12 01 05.8**	**+1.0**
WSI	**Waingapu**	**3.94**	**259**	P	**Pn**	**12 00 20.0**	**+0.6**
	baz=4.0,SNR=5.2						
WSI				S	**Sn**	**12 01 05.5**	**+0.6**
	baz=4.0,SNR=4.0						
BSSI	**Bau Bau, Buton**	**4.64**	**307**	P	**Pn**	**12 00 29.4**	**+0.6**
BSSI				S	**Sn**	**12 01 25.8**	**+4.1**
WBSI	**Waikabubak, Su**	**4.83**	**262**	P	**Pn**	**12 00 30.1**	**-1.2**
BKSI	**Bulukumba**	**5.45**	**311**	P	**Pn**	**12 00 40.0**	**+0.4**
	115nm,0.5s,1µm0.5nm						
KAPI	**Kappang**	**5.92**	**311**	P	**Pn**	**12 00 43.1**	**-3.0**
KAPI	**Kappang**	**5.92**	**311**	P	**Pn**	**12 00 46.3**	**+0.2**
	62nm,0.7s,0.2nm						
KAPI	**Kappang**	**5.92**	**311**	P	**Pn**	**12 00 43.2**	**-3.0**
	2.6nm,0.3s,baz=158,slow=11,SNR=9.7						
SPSI	**Sidrap Palu**	**6.65**	**318**	P	**Pn**	**12 00 57.6**	**+1.6**
	41nm,0.6s,709nm0.2nm						
SKSI	**Soroako, Sulaw**	**7.01**	**336**	P	**Pn**	**12 01 03.2**	**+2.3**
	33nm,0.8s,423nm0.1nm						
MTN	**Manton Dam**	**7.80**	**120**	P	**Pn**	**12 01 10.3**	**-1.2**
	baz=7.8,SNR=551						
MTN				S	**Sn**	**12 02 33.4**	**-4.9**
	baz=7.8,SNR=15						
MTNI	**Mataram**	**7.97**	**272**	P	Pn	12 01 10.7	-3.2
	651nm,0.4s,36µm12nm						
KNRA	**Kununurra**	**8.01**	**147**	P	**Pn**	**12 01 13.1**	**-1.3**
	baz=8.1,SNR=414						
KNRA				S	**Sn**	**12 02 39.5**	**-3.9**
	baz=8.1,SNR=21						
KDU	**Kakadu**	**8.90**	**115**	P	**Pn**	**12 01 24.6**	**-1.9**
	baz=8.9,SNR=159						
KDU				S	**Sn**	**12 03 03.0**	**-2.1**
	baz=8.9,SNR=7.2						
FITZ	**Fitzroy Crossi**	**9.19**	**172**	*e*Pn	**Pn**	**12 01 28.8**	**-1.5**
FITZ				*e*Sn	**Sn**	**12 03 07.2**	**-4.9**
FITZ				S	**Sn**	**12 03 08.3**	**-3.8**
FITZ	**Fitzroy Crossi**	**9.19**	**172**	P	**Pn**	**12 01 28.7**	**-1.7**
	15nm,0.3s,baz=4.0,slow=8.4,SNR=76						
FITZ				S	**Sn**	**12 03 08.3**	**-3.8**
	50nm,0.3s,baz=112,slow=3.6,SNR=24						
FITZ				LR	LR	12 05 38.3	
	comp=Z,111nm,21.5s,baz=146,slow=41						
FITZ	**Fitzroy Crossi**	**9.19**	**172**	P	Pn	**12 01 28.9**	**-1.5**
	baz=9.3,SNR=60						
FITZ				S	**Sn**	**12 03 07.3**	**-4.9**
	baz=9.3,SNR=11						
FAKI	**Fak Fak**	**9.98**	**54**	P	Pn	**12 01 39.8**	**-1.3**
	baz=9.9,SNR=11						
BBKI	**Banjar Baru**	**10.81**	**300**	P	**Pn**	**12 01 52.0**	**-0.4**
	29nm,1.3s						
PWJI	**Pagerwojo**	**12.33**	**273**	P	**Pn**	**12 02 11.5**	**-1.1**
	53nm,0.6s						
SJI	**Sawahan**	**12.39**	**275**	P	**Pn**	**12 02 14.3**	**+0.8**
	113nm,0.5s						
MBWA	**Marble Bar**	**12.88**	**199**	*e*Pn	**Pn**	**12 02 21.2**	**+1.4**
PCJI	**Pacitan**	**12.93**	**272**	P	**Pn**	**12 02 18.5**	**-2.0**
	127nm,0.5s						
WOJI	**Wonogiri, Jawa**	**13.21**	**274**	P	**Pn**	**12 02 24.5**	**+0.3**
	85nm,1.0s,4µm						
UGM	**Wanagama**	**13.60**	**273**	*e*Pn	**Pn**	**12 02 27.0**	**-2.3**
UGM	**Wanagama**	**13.60**	**273**	P	**P**	**12 02 34.2**	**-0.2**
	baz=14,SNR=6.6						
UGM				S	**Sn**	**12 04 56.7**	**-2.5**
	baz=14,SNR=4.1						
SMRI	**Semarang**	**13.79**	**277**	P	**Pn**	**12 02 30.4**	**-1.2**
	90nm,0.6s						
SMRI	**Semarang**	**13.79**	**277**	P	**P**	**12 02 37.8**	**+1.4**
	baz=14,SNR=4.4						
BJII	**Banjamegara**	**14.46**	**275**	P	**Pn**	**12 02 39.9**	**-0.5**
	30nm,0.5s						
TSM	**Tawau**	**14.61**	**334**	P	**P**	**12 02 47.9**	**+2.4**

WRA	**Warramunga Arr**	**14.66**	**139**	P	Pn	12 02 39.4	-3.4
WRA				S	Sn	12 05 12.4	-12
WRA	**Warramunga Arr**	**14.66**	**139**	P	Pn	12 02 39.4	-3.4
	8.1nm,0.3s,baz=316,slow=13,SNR=155						
WRA				S	Sn	12 05 12.4	-12
	9.5nm,0.3s,baz=312,slow=24,SNR=30						
WRAB	**Tennant Creek**	**14.66**	**139**	*e*Pn	**Pn**	**12 02 39.7**	**-3.0**
	95nm,0.6s						
WRAB				*e*Sn	Sn	12 05 05.5	-19
MYLDM	**Lahad Datu**	**15.16**	**338**	P	**P**	**12 02 56.3**	**+4.6**
STKI	**Sintang**	**15.55**	**305**	P	**Pn**	**12 02 54.4**	**+0.4**
	24nm,1.1s						
DAV	**Davao City (W)**	**15.98**	**5**	LR	LR	12 09 12.7	
	comp=Z,58nm,19.2s,baz=200,slow=38						
CISI	**Cisompet, Garu**	**16.30**	**274**	P	**Pn**	**12 03 01.6**	**-1.9**
	101nm,0.6s,2µm						
CISI	**Cisompet, Garu**	**16.30**	**274**	P	**Pn**	**12 03 03.4**	**0.0**
	baz=16,SNR=6.4						
SBUM	**Sibu**	**16.48**	**313**	P	**P**	**12 03 07.3**	**+1.0**
LEM	**Lembang**	**16.59**	**276**	P	**Pn**	**12 03 06.7**	**-0.4**
	114nm,0.7s						
LEM	**Lembang**	**16.59**	**276**	P	**P**	**12 03 07.8**	**+0.1**
	baz=17,SNR=4.4						
GIRL	**Giralia**	**16.65**	**214**	P	**P**	**12 03 11.6**	**+3.6**
	baz=17,SNR=4.0						
KKM	**Kota Kinabalu**	**16.91**	**332**	P	**Pn**	**12 03 10.4**	**-0.5**
	49nm,0.9s						
KKM	**Kota Kinabalu**	**16.91**	**332**	P	**P**	**12 03 13.0**	**+1.9**
KKM	**Kota Kinabalu**	**16.91**	**332**	P	**P**	**12 03 12.5**	**+1.4**
	baz=17,SNR=13						
AS31	**Alice Springs**	**17.31**	**149**	*e*P	**P**	**12 03 15.4**	**0.0**
AS31				*e*Sn	Sn	12 06 10.8	-18
ASAR	**Alice Springs**	**17.31**	**149**	P	**P**	**12 03 15.2**	**-0.2**
ASAR				S	Sn	12 06 17.2	-11
ASAR	**Alice Springs**	**17.31**	**149**	P	**P**	**12 03 15.2**	**-0.2**
	4.7nm,0.3s,baz=319,slow=11,SNR=299						
ASAR				S	Sn	12 06 17.2	-11
	2.5nm,0.3s,baz=319,slow=20,SNR=16						
ASAR				LR	LR	12 10 19.6	
	comp=Z,179nm,20.8s,baz=266,slow=38						
KSM	**Kuching**	**17.32**	**306**	*e*P	**Pn**	**12 03 16.3**	**+0.6**
	19nm,0.7s						
KSM	**Kuching**	**17.32**	**306**	P	**Pn**	**12 03 17.1**	**+1.4**
KSM	**Kuching**	**17.32**	**306**	P	**Pn**	**12 03 18.1**	**+2.4**
	baz=17,SNR=8.0						
DBJI	**Dramaga**	**17.48**	**277**	P	**P**	**12 03 16.2**	**-1.2**
	69nm,0.6s						
XMI	**Christmas Isla**	**18.34**	**264**	P	**Pn**	**12 03 27.7**	**-0.3**
	baz=18,SNR=4.3						
MEEK	**Meekatharra**	**18.37**	**196**	P	**Pn**	**12 03 29.6**	**+1.2**
	baz=19,SNR=17						
MEEK				S	**S**	**12 06 50.4**	**-1.0**
	baz=19,SNR=4.3						
XMIS	**Christmas Isla**	**18.38**	**264**	*e*P	**P**	**12 03 27.4**	**+0.2**
	289nm,0.8s						
XMIS	**Christmas Isla**	**18.38**	**264**	P	**Pn**	**12 03 28.0**	**-0.5**
	baz=18,SNR=6.0						
QIS	**Mount Isa**	**18.80**	**130**	P	**Pn**	**12 03 33.8**	**+0.3**
	baz=19,SNR=163						
QIS				S	S	12 06 50.2	-10
	baz=19,SNR=5.3						
PALU	**Palau**	**19.14**	**33**	P	**P**	**12 03 35.8**	**+0.3**
	baz=19,SNR=3.2						
COEN	**Coen**	**19.22**	**107**	*e*P	**P**	**12 03 37.0**	**+0.7**
	204nm,0.6s						
COEN	**Coen**	**19.22**	**107**	P	**Pn**	**12 03 37.5**	**-0.9**
	baz=19,SNR=18						
COEN				S	S	12 06 58.4	-10
	baz=19,SNR=12						
PPBI	**Pangkal Pinang**	**19.22**	**290**	P	**P**	**12 03 34.8**	**-1.6**
	34nm,0.8s,2µm						
MORW	**Morawa**	**21.43**	**200**	P	**P**	**12 04 01.4**	**+1.3**
	baz=22,SNR=5.2						
MORW				S	Sn	12 07 59.7	-7.5
	baz=22,SNR=5.6						
MTSU	**Mount Surprise**	**21.53**	**117**	P	**P**	**12 04 02.9**	**+1.6**
	baz=22,SNR=65						
MTSU				S	**S**	**12 07 59.0**	**+5.2**

	comp=Z,10.0nm,0.8s							
KMI	**Kunming**	**39.83**	**329**	P	**P**	**12 06 44.8**	**+1.1**	
KMI				pP	**pP**	**12 07 10.1**	**+1.3**	
KMI				sP	**sP**	**12 07 22.8**	**+1.4**	
KMI				PP	**PnPn**	**12 08 22.0**	**+0.2**	
KMI				S	**S**	**12 12 41.8**	**+1.5**	
KMI				sS	**sS**	**12 13 25.4**	**+1.6**	
KMI				SS	**SS**	**12 15 36.1**	**-4.9**	
KMI				pmax	pmax			
	comp=Z,7.0nm,0.5s							
KMI				LR	LR			
	comp=N,87nm,12.7s							
KMI				LR	LR			
	comp=E,69nm,10.8s							
KMI				LR	LR			
	comp=Z,89nm,24.1s							
WHN	**Wuhan**	**40.41**	**347**	P	**P**	**12 06 47.4**	**-0.7**	
CD2	**Chengdu**	**44.24**	**334**	P	**P**	**12 07 20.1**	**+0.8**	
CD2				pP	**pP**	**12 07 45.0**	**+0.2**	
CD2				sP	**sP**	**12 07 57.5**	**+0.2**	
CD2				PP	**PP**	**12 09 06.4**	**+1.7**	
CD2				PcS	**PcS**	**12 12 54.9**	**-0.6**	
CD2				S	**S**	**12 13 45.6**	**+0.8**	
CD2				sS	**sS**	**12 14 29.1**	**+0.3**	
CD2				SS	ScS	12 16 58.3	-8.5	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=Z,120nm,5.2s							
XAN	**Xi'an**	**45.16**	**342**	P	**P**	**12 07 24.1**	**-2.5**	
XAN				pmax	pmax			
	comp=Z,4.0nm,0.8s							
KSAR	**Wonju Array Be**	**46.28**	**4**	P	**P**	**12 07 34.2**	**-1.0**	
KSRS	**Korea Array**	**46.30**	**4**	P	**P**	**12 07 34.2**	**-1.1**	
	comp=Z,1.7nm,0.7s,baz=176,slow=9.1,SNR=11							
MAJO	**Matsushiro**	**47.13**	**15**	*e*P	**P**	**12 07 39.6**	**-2.3**	
	comp=Z,7.1nm,0.6s							
MAT	**Matsushiro**	**47.13**	**15**	P	**P**	**12 07 40.0**	**-1.9**	
MAT				S	S	12 14 17.8	-8.2	
MJAR	**Matsushiro Arr**	**47.13**	**15**	P	**P**	**12 07 40.0**	**-1.9**	
MJAR	**Matsushiro Arr**	**47.13**	**15**	P	**P**	**12 07 40.0**	**-1.9**	
	comp=Z,6.5nm,0.7s,baz=193,slow=9.3,SNR=34							
LZH	**Lanzhou**	**48.74**	**338**	*e*P	**P**	**12 07 54.8**	**+0.2**	
LZH				pP	**pP**	**12 08 19.5**	**-1.0**	
LZH				sP	**sP**	**12 08 31.1**	**-1.7**	
LZH				*e*S	**S**	**12 14 46.6**	**-2.6**	
LZH				sS	**sS**	**12 15 34.0**	**+0.1**	
LZH				SS	**SS**	**12 18 14.9**	**-6.4**	
LZH				pmax	pmax			
	comp=Z,17nm,1.0s							
LZH				pmax	pmax			
	comp=Z,68nm,5.2s							
LZH				LR	LR			
	comp=N,440nm,18.2s							
LZH				LR	LR			
	comp=E,320nm,17.4s							
LZH				LR	LR			
	comp=Z,730nm,19.6s							
BJI	**Beijing**	**49.32**	**352**	P	**P**	**12 07 56.1**	**-2.5**	
BJI				pmax	pmax			
	comp=Z,14nm,0.7s							
LSA	**Lhasa**	**49.91**	**322**	*e*P	**P**	**12 08 03.3**	**-0.6**	
	comp=Z,8.8nm,0.6s							
ODAN	**Odare**	**50.45**	**316**	*e*P	**P**	**12 08 06.2**	**-1.5**	
	comp=Z,33nm,0.6s							
TAPN	**Taplejung**	**50.54**	**317**	*e*P	**P**	**12 08 07.1**	**-1.4**	
	comp=Z,23nm,0.4s							
HHC	**Hu-ho-hao-te**	**50.92**	**348**	⇓*i*P	**P**	**12 08 12.6**	**+1.8**	
HHC				pP	**pP**	**12 08 38.8**	**+1.8**	
HHC				sP	**sP**	**12 08 51.5**	**+2.2**	
HHC				PP	**PP**	**12 10 11.6**	**+3.2**	
HHC				PcS	**PcS**	**12 13 23.5**	**0.0**	
HHC				S	**S**	**12 15 19.6**	**+0.4**	
HHC				sS	**sS**	**12 16 05.4**	**+1.3**	
HHC				ScS	**ScS**	**12 17 48.8**	**-1.9**	
HHC				SS	**SS**	**12 18 53.8**	**-1.9**	
HHC				pmax	pmax			
	comp=Z,40nm,1.0s							
HHC				pmax	pmax			
	comp=Z,100nm,5.1s							
HHC				LR	LR			
	comp=N,140nm,21.4s							
HHC				LR	LR			
	comp=E,250nm,21.4s							
HHC				LR	LR			
	comp=Z,200nm,21.4s							
RAMN	**Ramite**	**51.05**	**316**	*e*P	**P**	**12 08 11.3**	**-1.0**	
	comp=Z,71nm,0.5s							
GUN	**Gumba**	**52.15**	**316**	*e*P	**P**	**12 08 19.2**	**-1.4**	
	comp=Z,48nm,0.7s							
PKI	**Pulchoki**	**52.26**	**315**	*e*P	**P**	**12 08 19.9**	**-1.5**	
	comp=Z,38nm,0.6s							
PKIN	**Phulchoki**	**52.27**	**315**	*e*P	**P**	**12 08 19.8**	**-1.6**	
	comp=Z,33nm,0.6s							
KKN	**Kakani**	**52.49**	**315**	*e*P	**P**	**12 08 21.5**	**-1.4**	
	comp=Z,20nm,0.7s							
DMN	**Daman**	**52.49**	**315**	*e*P	**P**	**12 08 21.6**	**-1.4**	
	comp=Z,16nm,0.6s							
CN2	**Changchun**	**52.52**	**1**	*e*P	**P**	**12 08 22.1**	**-0.5**	
USRK	**Ussuriysk Arra**	**53.37**	**7**	P	**P**	**12 08 27.6**	**-1.2**	
	comp=Z,7.1nm,0.7s,baz=199,slow=7.3,SNR=17							
MDJ	**Mudanjiang**	**53.54**	**5**	*e*P	**P**	**12 08 29.0**	**-1.0**	
	comp=Z,41nm,1.0s							
KOLN	**Koldanda**	**53.65**	**314**	*e*P	**P**	**12 08 30.2**	**-1.2**	
	comp=Z,26nm,0.6s							
DANN	**Dangsing**	**53.89**	**315**	*e*P	**P**	**12 08 31.8**	**-1.5**	
	comp=Z,54nm,0.5s							
PYUN	**Piuhan**	**54.28**	**314**	*e*P	**P**	**12 08 34.8**	**-1.2**	
	comp=Z,34nm,0.4s							
SONM	**Songino Array**	**58.71**	**346**	P	**P**	**12 09 04.6**	**-2.4**	
SONM	**Songino Array**	**58.71**	**346**	P	**P**	**12 09 04.6**	**-2.4**	
	comp=Z,3.2nm,0.9s,baz=162,slow=8.4,SNR=14							
WMQ	**Urumqi**	**62.10**	**331**	*e*P	**P**	**12 09 30.8**	**+0.7**	
WMQ				pP	**pP**	**12 09 54.9**	**-2.2**	
WMQ				sP	**sP**	**12 10 06.0**	**-3.2**	
WMQ				PP	**PP**	**12 11 50.5**	**+2.3**	
WMQ				PcS	**PcS**	**12 14 11.8**	**-0.7**	
WMQ				S	**S**	**12 17 45.8**	**-0.8**	
WMQ				ScS	**SKKSac**	**12 19 09.4**	**-2.3**	
WMQ				SS	**SS**	**12 21 51.5**	**-0.1**	
WMQ				pmax	pmax			
	comp=Z,10.0nm,0.5s							
WMQ				pmax	pmax			
	comp=Z,110nm,4.6s							
WMQ				LR	LR			
	comp=N,39nm,22.0s							
WMQ				LR	LR			
	comp=E,66nm,23.6s							
WMQ				LR	LR			
	comp=Z,29nm,22.0s							
KSH	**Kashi**	**65.75**	**321**	*i* P	**P**	**12 09 53.3**	**-0.8**	
KSH				*e*pP	**pP**	**12 10 20.1**	**-1.3**	
KSH				*e*PcP	**PcP**	**12 10 24.5**	**0.0**	
KSH				*e*sP	**sP**	**12 10 32.9**	**-0.5**	
KSH				*e*PP	**PP**	**12 12 19.9**	**-0.4**	
KSH				*e*ScP		12 14 15.4		
KSH				*e*PcS		12 14 27.3		
KSH				*e*S	S	12 18 24.9	-7.0	
KSH				pmax	pmax			
	comp=Z,19nm,0.6s							
KSH				pmax	pmax			
	comp=Z,200nm,4.6s							
KSH				LR	LR			
	comp=N,35nm,3.6s							
KSH				LR	LR			
	comp=E,50nm,3.5s							
KSH				LR	LR			
	comp=Z,52nm,3.8s							
MK31	**Makanchi Array**	**66.89**	**330**	*e*P	**P**	**12 09 59.8**	**-1.3**	
MKAR	**Makanchi Array**	**66.89**	**330**	P	**P**	**12 09 59.7**	**-1.4**	
MKAR	**Makanchi Array**	**66.89**	**330**	P	**P**	**12 09 59.7**	**-1.4**	
	comp=Z,6.4nm,0.7s,baz=133,slow=7.7,SNR=45							
KZA	**Kyzart**	**67.70**	**323**	P	**P**	**12 10 06.2**	**-0.6**	
	SNR=6.8							
KBL	**Kabul**	**67.77**	**313**	*e*P	**P**	**12 10 06.3**	**-0.8**	
	comp=Z,8.4nm,0.6s							
TKM2	**Tokmak 2**	**68.00**	**324**	*e*P	**P**	**12 10 07.4**	**-1.0**	
	comp=Z,3.2nm,0.6s							
TKM2	**Tokmak 2**	**68.00**	**324**	P	**P**	**12 10 07.5**	**-1.0**	
	SNR=6.9							
PETK	**Petropavlovsk-**	**68.07**	**21**	P	**P**	**12 10 07.8**	**-0.6**	
PETK	**Petropavlovsk-**	**68.07**	**21**	P	**P**	**12 10 07.8**	**-0.6**	
	comp=Z,6.1nm,0.7s,baz=205,slow=5.7,SNR=10							
AAK	**Ala-Archa**	**68.48**	**323**	*e*P	**P**	**12 10 10.7**	**-0.6**	
	comp=Z,7.9nm,0.6s							
AAK	**Ala-Archa**	**68.48**	**323**	P	**P**	**12 10 10.8**	**-0.6**	
	SNR=11							
AAK	**Ala-Archa**	**68.48**	**323**	LR	LR	12 40 40.4		
	comp=Z,32nm,20.2s,baz=123,slow=36							
AML	**Almayashu**	**68.67**	**322**	P	**P**	**12 10 11.9**	**-0.9**	
	SNR=19							
USP	**Ospenovka**	**68.85**	**323**	P	**P**	**12 10 12.5**	**-1.0**	
	SNR=5.3							
EKS2	**Erkin-Say**	**68.93**	**322**	*e*P	**P**	**12 10 13.3**	**-0.8**	
	comp=Z,2.7nm,0.5s							
EKS2	**Erkin-Say**	**68.93**	**322**	P	**P**	**12 10 13.5**	**-0.6**	
	SNR=5.6							
ZAA0	**Zalesovo Array**	**70.95**	**337**	*e*P	**P**	**12 10 23.5**	**-2.5**	
ZALV	**Zalesovo Beam**	**70.95**	**337**	P	**P**	**12 10 23.7**	**-2.3**	
ZALV	**Zalesovo Beam**	**70.95**	**337**	P	**P**	**12 10 23.7**	**-2.3**	
	comp=Z,3.4nm,0.4s,baz=137,slow=4.8,SNR=16							
VNDA	**Vanda**	**71.26**	**172**	P	**P**	**12 10 29.3**	**+1.7**	
VNDA	**Vanda**	**71.26**	**172**	P	**P**	**12 10 29.3**	**+1.7**	
	comp=Z,0.5nm,0.4s,baz=311,slow=7.7,SNR=3.6							
KURK	**Kurchatov**	**71.34**	**331**	*e*P	**P**	**12 10 26.8**	**-1.6**	
	comp=Z,9.3nm,0.8s							
OPO	**Ambohidratompo**	**74.98**	**253**	P	**P**	**12 10 50.8**	**-0.1**	
OPO	**Ambohidratompo**	**74.98**	**253**	P	**P**	**12 10 50.8**	**-0.1**	
	comp=Z,2.3nm,0.6s,baz=83,slow=8.6,SNR=7.9							
SYO	**Syowa Base**	**79.77**	**201**	⇑*e*P	**P**	**12 11 17.2**	**+0.9**	
ABKAR	**Akbulak array**	**80.56**	**323**	*e*P	**P**	**12 11 19.6**	**-1.3**	
	comp=Z,1.7nm,0.5s							
RDF	**Al-Radifah**	**82.81**	**301**	*e*P	**P**	**12 11 32.6**	**-0.6**	
RDF				AMb	AMB	12 11 34.4		
	comp=Z,24nm,1.2s							
NAY	**Al-Naaiem**	**83.15**	**301**	*e*P	**P**	**12 11 33.2**	**-1.7**	
NAY				AMb	AMB	12 11 35.1		
	comp=Z,9.6nm,0.7s							
MIB	**Mutribah**	**83.21**	**302**	*e*P	**P**	**12 11 32.8**	**-2.4**	
KMBO	**Kilima Mbogo**	**86.84**	**269**	P	**P**	**12 11 54.3**	**+0.3**	
KMBO	**Kilima Mbogo**	**86.84**	**269**	P	**P**	**12 11 54.3**	**+0.3**	
	comp=Z,0.5nm,0.3s,baz=231,slow=23,SNR=4.9							
MWC	**Mount Wilson**	**117.86**	**56**	*e*PKPdf	PKPdf	12 17 49.2	-5.9	
TORD	**Torodi Ar. Bea**	**123.54**	**280**	PKP	**PKPdf**	**12 18 06.4**	**+0.1**	
TORD	**Torodi Ar. Bea**	**123.54**	**280**	PKP	**PKPdf**	**12 18 06.4**	**+0.1**	
	comp=Z,2.8nm,0.7s,baz=49,slow=1.9,SNR=22							
CPUP	**Villa Florida**	**144.89**	**178**	PKPbc	**PKPdf**	**12 18 47.1**	**+1.5**	
CPUP	**Villa Florida**	**144.89**	**178**	PKPbc	**PKPdf**	**12 18 47.1**	**+1.5**	
	comp=Z,0.9nm,0.3s,baz=82,slow=1.7,SNR=7.3							
LPAZ	**La Paz**	**152.09**	**154**	PKPab	**PKPab**	**12 19 16.9**	**+2.3**	
LPAZ	**La Paz**	**152.09**	**154**	PKPab	**PKPab**	**12 19 16.9**	**+2.3**	
	comp=Z,1.9nm,0.6s,baz=190,slow=3.1,SNR=7.3							

NNC **20** *12:08:27.9±0.8,* **48°.98N×69°.01E, h0km, mb2.9, mpv2.5, 9C-7D, Error ellipse: s-maj=21.5km s-min=4.2km az=87.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VOSK	**Vostochnaya**	**3.95**	**18**	⇑Pn		Pn	12 09 30.9	+1.1
	0.7nm,0.7s							
VOSK				⇑Pg		Pb	12 09 40.5	+2.0
	0.8nm,0.5s							
VOSK				⇓Lg		Lg	12 10 34.0	
	3.8nm,1.1s							
ZRNK	**Zerenda**	**3.98**	**360**	⇓Pn		Pn	12 09 30.8	+0.6
	0.8nm,0.6s							
ZRNK				⇑Pg		Pb	12 09 40.2	+1.2
	1.5nm,0.7s							
ZRNK				⇑Sn		Sn	12 10 18.6	+1.0
	1.5nm,0.7s							
ZRNK				⇓Lg		Lg	12 10 34.2	
	1.9nm,0.5s							
BVA0	**Borovoye Array**	**4.15**	**12**	⇓Pn		Pn	12 09 32.0	-0.4
	0.1nm,0.5s,baz=207,slow=11,SNR=6.5							
BVA0				⇓Pg		Pb	12 09 42.9	+1.2
	0.2nm,0.4s,baz=198,slow=18,SNR=7.5							
BVA0				⇑Sn		Sn	12 10 22.3	+0.6
	0.2nm,0.6s							
BVA0				⇑Lg		Lg	12 10 37.9	
	0.4nm,0.5s,baz=186,slow=30,SNR=4.9							
BRVK	**Borovoye**	**4.17**	**11**	⇑Pg		Pb	12 09 43.9	+1.8
	3.5nm,0.9s							
BRVK				⇑Lg		Lg	12 10 40.1	
	3.5nm,0.6s							
KK31	**Karatay Array**	**5.96**	**169**	⇓Sn		Sn	12 11 07.1	+0.6
	1.8nm,0.7s,baz=347,slow=22,SNR=6.2							
KK31				⇓Lg		Lg	12 11 37.9	
	2.1nm,0.8s							
TKM2	**Tokmak 2**	**7.60**	**140**	⇑Lg		Lg	12 12 29.8	
	3.0nm,0.8s							

DDA **20** *12:08:35.7, 36°.92N×38°.87E, h7km, MD2.8*
ISCJB **20** *12:08:36.9±2.1, 36°.85N±0°.05×38°.91E±0°.04, h12km±15km, Error ellipse: s-maj=8.5km s-min=4.9km az=9.4*
CSEM **20** *12:08:36.6±0.3, 36°.82N×38°.91E, h15km, ML1.9, Error ellipse: s-maj=10.9km s-min=6.9km az=20.0*
NSSC **20** *12:08:36.6±2.5, 36°.76N×38°.97E, h0km±12km, MD1.4, ML1.9*

ISC 20 12:08:36.2±1.5, 36°.82N±0°.06×38°.94E±0°.03, h10km±12km, n12, σ0°96/23, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SLMH	**Al Salmeh**	**1.01**	**234**	*e*P		**Pb**	**12 08 55.9**	**+0.1**
SLMH				*e*S		**Sb**	**12 09 11.0**	**+1.9**
SLMH				AML		AML	12 09 13.3	
	comp=E,51nm,0.6s							
SLMH				AML		AML	12 09 14.0	
	comp=N,39nm,0.5s							
SLMH	**Al Salmeh**	**1.01**	**234**	*e*P		**Pb**	**12 08 55.9**	**+0.1**
	SNR=67							
SFNV	**Sufian**	**1.03**	**112**	*e*P		**Pn**	**12 08 56.7**	**0.0**
SFNV				*e*S		**Sb**	**12 09 09.3**	**-0.3**
SFNV				AML		AML	12 09 17.5	
	comp=N,29nm,0.6s							
SFNV				AML		AML	12 09 18.8	
	comp=E,38nm,0.3s							
SFNV	**Sufian**	**1.03**	**112**	*e*P		**Pn**	**12 08 56.7**	**0.0**
	SNR=67							
SFNV				*e*S		**Sb**	**12 09 09.3**	**-0.3**
	comp=E,38nm,0.3s,SNR=59							
KBSD	**Kabsdagh**	**1.30**	**81**	*e*P		**Pg**	**12 09 00.6**	**-0.6**
KBSD				*e*S		**Sn**	**12 09 19.2**	**+1.3**
KBSD				AML		AML	12 09 22.6	
	comp=N,22nm,0.4s							
KBSD				AML		AML	12 09 23.0	
	comp=E,37nm,0.2s							
KBSD	**Kabsdagh**	**1.30**	**81**	*e*P		**Pg**	**12 09 00.6**	**-0.6**
	SNR=57							
KBSD				*e*S		**Sn**	**12 09 19.2**	**+1.3**
	comp=E,37nm,0.2s,SNR=49							
MARD	**Mardin**	**1.56**	**71**	*i* P		**Pn**	**12 09 05.1**	**+1.1**
MARD				*i* S		**Sg**	**12 09 27.5**	**+1.2**
AKCD	**Akcadag**	**1.68**	**332**	*i* P		**Pn**	**12 09 05.5**	**-0.3**
AKCD				*i* S		**Sn**	**12 09 26.2**	**-1.3**
AKCD	**Akcadag**	**1.68**	**332**	*i* P		**Pn**	**12 09 05.5**	**-0.3**
AKCD				*i* S		**Sn**	**12 09 26.2**	**-1.3**
MZRK	**Al-Mazaregh**	**1.70**	**125**	*e*P		**Pn**	**12 09 04.7**	**-1.2**
MZRK				*e*S		**Sb**	**12 09 28.6**	**-0.5**
MZRK				AML		AML	12 09 31.1	
	comp=N,24nm,0.4s							
MZRK	**Al-Mazaregh**	**1.70**	**125**	*e*P		**Pn**	**12 09 04.7**	**-1.2**
	SNR=57							
MZRK				*e*S		**Sb**	**12 09 28.6**	**-0.5**
	comp=N,24nm,0.4s,SNR=49							
AYKD	**Aykdinkavak**	**1.80**	**290**	*i* P		**Pn**	**12 09 07.6**	**+0.3**
AYKD				*i* S		**Sn**	**12 09 30.3**	**0.0**

ISCJB **20** *12:23:20.6±0.8, 36°.85N±0°.05×22°.91E±0°.08, h2km±11km, Error ellipse: s-maj=10.4km s-min=7.9km az=177.0*
CSEM **20** *12:23:20.5±0.3, 36°.85N×22°.96E, h5km, MD2.7, Error ellipse: s-maj=7.0km s-min=5.7km az=85.0*
THE **20** *12:23:21.1, 36°.83N×22°.96E, h2km±22km, Error ellipse: s-maj=22.1km s-min=1.0km az=206.0*
ATH **20** *12:23:21.3, 36°.82N×22°.93E, h5km, MD2.7/6*

ISC 20 12:23:20.8±1.1, 36°.84N±0°.04×22°.95E±0°.05, h6km±12km, n18, σ0°51/23, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VLI	**Veliai**	**0.12**	**184**	P		**Pg**	**12 23 22.9**	**-0.3**
VLI				S		**Sg**	**12 23 25.1**	**+0.2**
VLI	**Veliai**	**0.12**	**184**	*e*PG		**Pg**	**12 23 22.9**	**-0.3**
VLI				*e*SG		**Sg**	**12 23 25.2**	**+0.3**
VLI	**Veliai**	**0.12**	**184**	P		**Pg**	**12 23 22.9**	**-0.3**
VLI				S		**Sg**	**12 23 25.1**	**+0.2**
DYR	**Agios Nikonas**	**0.50**	**262**	P		**Pg**	**12 23 30.8**	**+0.4**
DYR	**Agios Nikonas**	**0.50**	**262**	*e*PB		**Pg**	**12 23 30.6**	**+0.2**
DYR				*e*SB		**Sb**	**12 23 38.3**	**-1.2**
DYR	**Agios Nikonas**	**0.50**	**262**	P		**Pg**	**12 23 30.8**	**+0.4**
DYR				*e*Sb		**Sb**	**12 23 38.3**	**-1.2**
KYTH	**Kithira**	**0.56**	**173**	P		**Pg**	**12 23 31.9**	**+0.4**
KYTH	**Kithira**	**0.56**	**173**	P		**Pg**	**12 23 31.9**	**+0.4**
DID	**Didima**	**0.71**	**19**	*e*PB		**Pb**	**12 23 36.0**	**+0.4**
DID	**Didima**	**0.71**	**19**	*e*Pb		**Pb**	**12 23 36.0**	**+0.4**
ITM	**Ithomi**	**0.89**	**293**	P		**Pg**	**12 23 37.9**	**+0.1**
ITM	**Ithomi**	**0.89**	**293**	P		**Pg**	**12 23 37.9**	**+0.1**
PYL	**PYLOS**	**0.97**	**274**	*e*PB		**Pg**	**12 23 39.7**	**+0.4**
PYL	**PYLOS**	**0.97**	**274**	*e*Pb		**Pg**	**12 23 39.7**	**+0.4**
GUR	**Goura**	**1.20**	**336**	*e*PN		**Pg**	**12 23 43.5**	**-0.3**
GUR	**Goura**	**1.20**	**336**	*e*Pn		**Pg**	**12 23 43.5**	**-0.3**
KLV	**Kalavryta, Ach**	**1.36**	**332**	*e*PG		**Pn**	**12 23 46.5**	**+0.1**
KLV	**Kalavryta, Ach**	**1.36**	**332**	*e*Pg		**Pn**	**12 23 46.5**	**+0.1**

IDC **20** *12:43:46.4±0.5, 31°.24S×177°.63W, h0km, mb4.5/16, mb1 4.7/17, mb1mx4.7/19, mbtmp4.5/17, ML2.8/1, MS4.8/22, Ms1 4.8/22, ms1mx4.7/28, Error ellipse: s-maj=19.2km s-min=15.6km az=95.0*
ISCJB **20** *12:43:50.7±0.3, 31°.25S±0°.05×177°.77W±0°.06, h33km, mb5.0/50, MS4.9/43, Error ellipse: s-maj=8.2km s-min=6.0km az=28.4*
MOS **20** *12:43:50.8±1.1, 31°.23S×177°.80W, h33km, mb5.3/13, MS4.9/11, Error ellipse: s-maj=14.5km s-min=9.5km az=91.1*
BJI **20** *12:43:52.7, 30°.90S×177°.51W, h37km, mB5.4/23, mb5.2/23, Ms5.1/23, Ms7 4.8/26*
NEIC **20** *12:43:52.9±0.8, 31°.22S×177°.75W, h41km±7km, mb5.1/22, Error ellipse: s-maj=7.7km s-min=5.6km az=123.0*
GCMT **20** *12:43:53.5±0.2, 31°.27S×177°.41W, h16km, MW5.3, Moment Tensor Solution. s48,c71; s75,c125; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{t\theta}$0.00; $M_{r\phi}$0.00; $M_{\theta\phi}$0.00; M_{tt}0.00; M_{pp}0.00; Best double couple: $M_0$1.10000×10^{17} NP1φ_s214.00000°, δ19.00000°, λ114.00000°. NP2φ_s9.00000°, δ73.00000°, λ82.00000°. Principal axes: T 1.0700, Plg62.0000°, Azm267.0000°; N 0.0400, Plg8.0000°, Azm11.0000°; P -1.1100, Plg27.0000°, Azm105.0000°; Data Used: ll lU lC G CN.*

ISC 20 12:43:52.2±0.4, 31°.25S±0°.05×177°.55W±0°.07, h34km±1km, h34km:pP-P, n314, σ1°$41/346, mb5.1/50, MS4.9/44, 9C-2D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.01**	**351**	Pn		**Pn**	**12 44 22.5**	**-1.2**
RAO				Sn		Sn	**12 44 45.3**	**-2.4**
RAO	**Raoul Island**	**2.01**	**351**	Pn		**Pn**	**12 44 22.5**	**-1.2**
	371nm,0.3s,baz=142,slow=14,SNR=11							
RAO				Sn		**Sn**	**12 44 45.3**	**-2.4**
	700nm,0.3s,baz=289,slow=23,SNR=7.5							
RAO				LR		LR	12 44 48.7	
	comp=Z,6μm,18.1s,baz=170,slow=31							
CNGZ	**Carnagh Statio**	**8.02**	**205**	PN		Pn	12 45 37.8	-8.5
MWZ	**Matawai**	**8.15**	**208**	PN		Pn	12 45 40.9	-7.2
MWZ				SN		Sn	12 47 09.8	-9.2
URZ	**Urewera**	**8.26**	**211**	*e*Pn		**Pn**	**12 45 49.7**	**+0.2**
URZ				Sn		Sn	12 47 13.3	-8.3
URZ	**Urewera**	**8.26**	**211**	Pn		Pn	12 45 42.0	-7.6
URZ				SN		Sn	12 47 13.8	-7.8
URZ	**Urewera**	**8.26**	**211**	Pn		Pn	12 45 43.0	-6.6
	2.2nm,0.3s,baz=326,slow=17,SNR=17							
URZ				Sn		Sn	12 47 13.3	-8.3
	16nm,0.3s,baz=176,slow=18,SNR=13							
OUZ	**Omahuta**	**8.41**	**240**	*e*Pn		Pn	12 45 54.0	+2.4
OUZ	**Omahuta**	**8.41**	**240**	PN		Pn	12 45 53.9	+2.3
BKZ	**Black Stump Fm**	**9.28**	**210**	PN		Pn	12 45 55.2	-8.5
MRZ	**Mangatainoka R**	**10.92**	**209**	SN		Sn	12 48 13.2	-14
SNZO	**South Karori**	**11.82**	**210**	*e*Pn		**Pn**	**12 46 38.5**	**+0.2**
MSVF	**Nonsavu**	**14.04**	**342**	*e*P		**Pn**	**12 47 08.0**	**-0.8**
MSVF	**Nonsavu**	**14.04**	**342**	*e*Pn		**Pn**	**12 47 08.0**	**-0.8**
OXZ	**Oxford**	**14.61**	**212**	PN		Pn	12 47 08.5	-8.0
RPZ	**Rata Peaks**	**15.37**	**213**	Pn		Pn	12 47 19.4	-7.1
RPZ				*e*Sn		Sn	12 49 55.0	-21
RPZ				Sn		Sn	12 49 58.5	-17
RPZ	**Rata Peaks**	**15.37**	**213**	Pn		Pn	12 47 19.4	-7.1
	1.9nm,0.3s,baz=280,slow=1.5,SNR=7.0							
RPZ				Sn		Sn	12 49 58.5	-17
	2.5nm,0.3s,baz=112,slow=19,SNR=5.9							
DZM	**Mont Dzumac**	**16.96**	**299**	*e*P		**P**	**12 47 50.1**	**+1.4**
	233nm,1.3s							
DZM				*e*LR		LR	12 51 54.6	
	7μm,22.8s							
DZM	**Mont Dzumac**	**16.96**	**299**	Pn		**P**	**12 47 50.1**	**+1.4**
DZM	**Mont Dzumac**	**16.96**	**299**	Pn		**P**	**12 47 50.1**	**+1.4**
	0.4nm,0.3s,baz=89,slow=16,SNR=5.7							
DZM				LR		LR	12 52 48.2	
	comp=Z,5μm,22.0s,baz=132,slow=32							
AFI	**Afiamalu**	**18.05**	**18**	*e*P		**Pn**	**12 48 00.3**	**-0.2**
AFI				S		Sn	12 51 17.4	-3.6
AFI	**Afiamalu**	**18.05**	**18**	P		**Pn**	**12 48 00.1**	**-0.4**
	2.0nm,0.3s,baz=35,slow=21,SNR=6.2							
AFI				S		Sn	12 51 17.4	-3.6
	1.6nm,0.3s,baz=153,slow=21,SNR=3.7							
TBI	**Tubuai**	**26.12

VNDA	**Vanda**	**47.30**	**186**	P	**P**	12 52 21.8	**0.0**		
VNDA	**Vanda**	**47.30**	**186**	P	**P**	**12 52 21.8**	**0.0**		
	comp=Z,1.8nm,0.7s,baz=19,slow=6.9,SNR=5.6								
VNDA				LR	LR	13 09 07.9			
	comp=Z,872nm,18.1s,baz=19,slow=32								
FITZ	**Fitzroy Crossi**	**52.75**	**270**	*e*P	**P**	**12 53 02.4**	**-1.6**		
	comp=Z,12nm,0.9s								
FITZ	**Fitzroy Crossi**	**52.75**	**270**	LR	LR	13 15 24.2			
	comp=Z,2µm,18.5s,baz=167,slow=36								
CASY	**Casey**	**54.58**	**208**	*e*P	**P**	**12 53 15.2**	**-1.5**		
	comp=Z,169nm,2.2s								
MBWA	**Marble Bar**	**56.52**	**264**	*e*P	**P**	**12 53 28.9**	**-2.5**		
	comp=Z,4.6nm,0.9s								
GUMO	**Guam**	**57.35**	**315**	LR	LR	13 16 50.2			
	comp=Z,525nm,18.0s,baz=116,slow=35								
QSPA	**South Pole Qui**	**58.87**	**180**	*e*P	**P**	**12 53 47.1**	**-0.3**		
	comp=Z,22nm,0.8s								
QSPA	**South Pole Qui**	**58.87**	**180**	P	**P**	**12 53 47.5**	**+0.1**		
	comp=Z,6.5nm,0.7s,baz=38,slow=1.7,SNR=43								
KAPI	**Kappang**	**64.14**	**280**	LR	LR	13 22 11.1			
	comp=Z,764nm,19.0s,baz=44,slow=36								
MAW	**Mawson**	**71.65**	**201**	P	**P**	**12 55 09.0**	**-0.9**		
MAW	**Mawson**	**71.65**	**201**	P	**P**	**12 55 09.0**	**-0.9**		
	comp=Z,5.3nm,1.0s,baz=135,slow=8.6,SNR=3.5								
MAW				LR	LR	13 27 03.5			
	comp=Z,1µm,18.8s,baz=123,slow=36								
KKM	**Kota Kinabalu**	**73.19**	**288**	*e*P	**P**	**12 55 19.0**	**-1.1**		
	comp=Z,13nm,0.9s								
KSM	**Kuching**	**75.56**	**281**	*e*P	**P**	**12 55 32.3**	**-1.5**		
	comp=Z,2.4nm,0.4s								
JHJ	**Hachijo jima 2**	**75.65**	**324**	LR	LR	13 25 43.3			
	comp=Z,300nm,18.3s,baz=111,slow=33								
SYO	**Syowa Base**	**76.38**	**193**	*l e*X	P	12 55 30.6	-6.9		
SNAA	**Sanae**	**77.30**	**178**	*e*P	**P**	**12 55 41.6**	**-1.2**		
	comp=Z,24nm,1.3s								
MJAR	**Matsushiro Arr**	**79.16**	**325**	P	**P**	**12 55 51.4**	**-2.0**		
MJAR	**Matsushiro Arr**	**79.16**	**325**	P	**P**	**12 55 51.4**	**-2.0**		
	comp=Z,1.0nm,0.7s,baz=178,slow=4.2,SNR=4.4								
MJAR				LR	LR	13 29 20.7			
	comp=Z,229nm,19.1s,baz=125,slow=35								
MAJO	**Matsushiro**	**79.16**	**325**	*e*P	**P**	**12 55 52.9**	**-0.5**		
MAJO				pmax	pmax				
	comp=Z,2.0nm,0.4s								
MAJO	**Matsushiro**	**79.16**	**325**	*e*P	**P**	**12 55 52.9**	**-0.5**		
	comp=Z,1.9nm,0.4s								
MAT	**Matsushiro**	**79.16**	**325**	P	**P**	**12 55 54.6**	**+1.2**		
MAT				S	**S**	**13 05 51.8**	**+1.2**		
PLCA	**Paso Flores**	**81.65**	**133**	*e*P	**P**	**12 56 07.0**	**0.0**		
PLCA	**Paso Flores**	**81.65**	**133**	P	**P**	**12 56 05.8**	**-1.2**		
	comp=Z,3.4nm,0.8s,baz=240,slow=4.9,SNR=5.4								
PLCA				LR	LR	13 28 02.5			
	comp=Z,519nm,18.1s,baz=188,slow=32								
YUK	**Yuzh-Kuril'sk**	**82.04**	**334**	*d iP*	**P**	**12 56 08.8**	**+0.2**		
YUK				*i* PPP	PPP	13 01 04.7			
YUK				*i* S	**S**	**13 06 20.0**	**-0.3**		
YUK				*i* SSS	SSS	13 14 59.5			
YUK				MLR	MLR				
	comp=N,219nm,19.0s								
YUK				MLR	MLR				
	comp=Z,407nm,19.0s								
QZH	**Quanzhou**	**82.76**	**305**	P	P	12 56 18.0	+5.2		
QZH				S	**S**	**13 06 34.0**	**+5.5**		
QZH				LR	LR				
	comp=Z,500nm,20.9s								
KSRS	**Korea Array**	**85.24**	**319**	P	**P**	**12 56 24.5**	**-0.7**		
	comp=Z,0.7nm,0.6s,baz=127,slow=5.2,SNR=4.9								
KSRS				LR	LR	13 30 21.0			
	comp=Z,190nm,19.0s,baz=334,slow=33								
KSAR	**Wonju Array Be**	**85.25**	**319**	P	**P**	**12 56 24.5**	**-0.8**		
YSS	**Yuzh-Sakhalins**	**85.67**	**334**	*l eP*	**P**	**12 56 28.0**	**+0.9**		
YSS				*e*		13 06 50.0			
YSS				*e*S	**S**	**13 06 56.0**	**-0.8**		
YSS				pmax	pmax				
	comp=Z,20nm,1.0s								
YSS				MLR	MLR				
	comp=Z,500nm,19.0s								
QIZ	**Qiongzhong**	**85.70**	**295**	P	**P**	**12 56 28.8**	**+0.9**		
QIZ				sP	**sP**	**12 56 41.3**	**-1.5**		
QIZ				S	**SKKSac**	**13 06 58.1**	**-0.1**		
QIZ				sS	**sS**	**13 07 16.5**	**+0.2**		
QIZ				LR	LR				
	comp=Z,240nm,24.4s								
KULM	**Kulim**	**85.73**	**279**	*e*P	**P**	**12 56 27.5**	**-0.7**		
	comp=Z,5.4nm,1.0s								
MWC	**Mount Wilson**	**85.91**	**46**	*e*P	**P**	**12 56 30.7**	**+1.8**		
MWC	**Mount Wilson**	**85.91**	**46**	*e*P	**P**	**12 56 30.7**	**+1.8**		
MURC	**Murrieta**	**86.03**	**47**	P	**P**	**12 56 31.1**	**+1.9**		
	baz=86								
MONP	**Monument Peak**	**86.05**	**48**	P	**P**	**12 56 31.3**	**+1.7**		
	baz=86								
DVTC	**Desert V Tower**	**86.10**	**48**	P	**P**	**12 56 31.2**	**+1.5**		
	baz=86								
BFSC	**Mount Baldy Ra**	**86.17**	**46**	P	**P**	**12 56 30.7**	**+0.7**		
	baz=86								
VES	**Vestal, Richgr**	**86.39**	**44**	P	**P**	**12 56 31.4**	**+0.5**		
	baz=87								
EDW2	**Edwards Air Fo**	**86.39**	**45**	P	**P**	**12 56 31.9**	**+0.8**		
	baz=87								
PET	**Petropavlovsk**	**86.44**	**346**	*e*P	P	12 56 35.1	+4.4		
PET				*e*S	**S**	**13 07 02.6**	**-1.4**		
PET				MLR	MLR				
	comp=Z,600nm,19.0s								
SWSC	**Sam W. Stewart**	**86.47**	**48**	P	**P**	**12 56 33.2**	**+1.8**		
	baz=87								
PFO	**Pinyon Flat Ob**	**86.50**	**47**	P	**P**	**12 56 32.8**	**+1.1**		
	baz=87								
ISA	**Isabella**	**86.63**	**44**	*e*P	**P**	**12 56 33.4**	**+1.2**		
ISA				pmax	pmax				
	comp=Z,19nm,1.1s								
ISA	**Isabella**	**86.63**	**44**	*e*P	**P**	**12 56 33.4**	**+1.2**		
	comp=Z,19nm,1.1s								
ISA	**Isabella**	**86.63**	**44**	P	**P**	**12 56 33.7**	**+1.5**		
	baz=87								
BBRC	**Big Bear Solar**	**86.64**	**46**	P	**P**	**12 56 33.3**	**+0.8**		
	baz=87								
PETK	**Petropavlovsk-**	**86.73**	**345**	P	**P**	**12 56 31.2**	**-1.0**		
PETK	**Petropavlovsk-**	**86.73**	**345**	P	**P**	**12 56 31.2**	**-1.0**		
PETK	**Petropavlovsk-**	**86.73**	**345**	P	**P**	**12 56 31.2**	**-1.0**		
	comp=Z,8.4nm,0.8s,baz=142,slow=7.5,SNR=6.8								
PETK				LR	LR	13 27 59.2			
	comp=Z,230nm,21.4s,baz=168,slow=31								
BELC	**Belle Mtn. Jos**	**87.04**	**47**	P	**P**	**12 56 35.2**	**+0.9**		
	baz=87								
NJ2	**Nanjing**	**87.09**	**310**	*e*P	**P**	**12 56 36.3**	**+1.9**		
NJ2				pP	**pP**	**12 56 46.3**	**+1.0**		
NJ2				sP	**sP**	**12 56 49.4**	**+0.1**		
NJ2				S	**S**	**13 07 12.0**	**+0.8**		
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
NJ2				pmax	pmax				
	comp=Z,130nm,10.0s								
NJ2				LR	LR				
	comp=N,250nm,26.6s								
NJ2				LR	LR				
	comp=E,160nm,19.4s								
NJ2				LR	LR				
	comp=Z,260nm,19.2s								
CMB	**Columbia Colle**	**87.13**	**42**	*e*P	**P**	**12 56 35.7**	**+1.1**		
CMB				pmax	pmax				
	comp=Z,11nm,0.9s								
CMB	**Columbia Colle**	**87.13**	**42**	*e*P	**P**	**12 56 35.7**	**+1.1**		
	comp=Z,11nm,0.9s								
BC3	**Big Chuckawall**	**87.16**	**48**	P	**P**	**12 56 36.2**	**+1.3**		
	baz=88								
GLA	**Glamis**	**87.17**	**48**	*e*P	**P**	**12 56 36.6**	**+1.7**		
GLA				pmax	pmax				
	comp=Z,28nm,1.5s								
GLA	**Glamis**	**87.17**	**48**	*e*P	**P**	**12 56 36.6**	**+1.7**		
	comp=Z,28nm,1.5s								
GLA	**Glamis**	**87.17**	**48**	P	**P**	**12 56 36.4**	**+1.5**		
	baz=88								
HEC	**Hector,Ludlow**	**87.38**	**46**	P	**P**	**12 56 37.1**	**+1.2**		
	baz=88								
GSC	**Goldstone**	**87.40**	**46**	*e*P	**P**	**12 56 37.1**	**+1.1**		
GSC				pmax	pmax				
	comp=Z,11nm,1.0s								
GSC	**Goldstone**	**87.40**	**46**	*e*P	**P**	**12 56 37.1**	**+1.1**		
	comp=Z,11nm,1.0s								
GSC	**Goldstone**	**87.40**	**46**	P	**P**	**12 56 37.1**	**+1.1**		
	baz=88								
MPMC	**Manual Prospec**	**87.49**	**45**	P	**P**	**12 56 37.5**	**+0.9**		
	baz=88								
IRM	**Iron Mountain**	**87.68**	**47**	P	**P**	**12 56 39.1**	**+1.8**		
	baz=88								
MTUM	**Tungsten Hills**	**87.72**	**43**	*e*P	**P**	**12 56 38.8**	**+1.1**		
GMRC	**Granite Mounta**	**87.76**	**47**	P	**P**	**12 56 39.1**	**+1.3**		
	baz=88								
214A	**Organ Pipe Nat**	**87.78**	**50**	P	**P**	**12 56 38.7**	**+0.9**		
	baz=88								
Y12C	**Blythe**	**87.81**	**48**	P	**P**	**12 56 39.4**	**+1.5**		
	baz=88								
TUQ	**Turquoise Moun**	**88.03**	**46**	P	**P**	**12 56 39.9**	**+0.9**		
	baz=88								
USRK	**Usuriysk Arra**	**88.08**	**326**	P	**P**	**12 56 38.7**	**-0.2**		
	comp=Z,1.4nm,0.7s,baz=84,slow=5.9,SNR=7.4								
USRK				LR	LR	13 33 01.1			
	comp=Z,275nm,20.2s,baz=144,slow=34								
FURC	**Furnace Creek,**	**88.14**	**45**	P	**P**	**12 56 40.2**	**+0.9**		
	baz=88								
GRAC	**Grapevine Rang**	**88.19**	**44**	P	**P**	**12 56 41.1**	**+1.5**		
	baz=88								
LDFC	**Landfair**	**88.30**	**47**	*e*P	**P**	**12 56 42.1**	**+1.8**		
	comp=Z,29nm,0.8s								
PDMC	**Parker Dam,Lak**	**88.41**	**48**	P	**P**	**12 56 41.8**	**+1.1**		
	baz=89								
YBH	**Yreka Blue Hor**	**88.46**	**38**	*e*P	**P**	**12 56 42.0**	**+1.1**		
	comp=Z,3.7nm,0.8s								
Z14A	**Wintersburg**	**88.58**	**49**	P	**P**	**12 56 42.8**	**+1.3**		
	baz=89								
NVAR	**Mina Array Bea**	**88.60**	**42**	P	**P**	**12 56 42.5**	**+0.7**		
NVAR	**Mina Array Bea**	**88.60**	**42**	P	**P**	**12 56 42.5**	**+0.7**		
	comp=Z,5.2nm,0.8s,baz=220,slow=8.8,SNR=22								
NV11	**Mina Array Sit**	**88.69**	**43**	*e*P	**P**	**12 56 42.6**	**+0.5**		
Y14A	**Wickenburg**	**88.90**	**49**	P	**P**	**12 56 44.6**	**+1.5**		
	baz=89								
W13A	**Hualapai Mount**	**89.08**	**47**	P	**P**	**12 56 45.1**	**+1.0**		
	baz=89								
MDJ	**Mudanjiang**	**89.54**	**325**	P	**P**	**12 56 47.3**	**+1.5**		
MDJ				pP	**pP**	**12 56 56.6**	**-0.1**		
MDJ				sP	**sP**	**12 57 00.3**	**-0.3**		
MDJ				pmax	pmax				
	comp=Z,4.0nm,0.6s								
MDJ				pmax	pmax				
	comp=Z,100nm,4.5s								
MDJ				LR	LR				
	comp=N,170nm,17.9s								
MDJ				LR	LR				
	comp=E,69nm,19.3s								
MDJ				LR	LR				
	comp=Z,260nm,12.4s								
319A	**Douglas**	**89.78**	**53**	P	**P**	**12 56 48.8**	**+1.4**		
	baz=90								
MOD	**Moc**	**89.86**	**39**	*e*P	**P**	**12 56 48.5**	**+0.9**		
HABR	**Khabarovsk**	**89.97**	**331**	*de*P	**P**	**12 56 46.3**	**-1.3**		
HABR				*e**PP	**pP**	**12 56 56.7**	**-1.9**		
HABR				*e**SP	**sP**	**12 57 00.8**	**-1.7**		
HABR				*e*		13 00 18.9			
HABR				*e*S	**SKSac**	**13 07 13.6**	**-1.9**		
HABR				*e**SS	**SKKSac**	**13 07 32.0**	**+3.2**		
HABR				*e*SS	**SS**	**13 13 35.3**	**-1.8**		
HABR				*e*SSS	SSS	13 17 11.7			
HABR				MLR	MLR				
	comp=Z,275nm,18.0s								
R11A	**Troy Canyon, C**	**90.14**	**44**	P	**P**	**12 56 49.5**	**+0.6**		
	baz=90								
X16A	**Lo Mia Camp, P**	**90.21**	**49**	P	**P**	**12 56 51.2**	**+1.8**		
	baz=90								
320A	**Kipp Ranch, An**	**90.27**	**53**	P	**P**	**12 56 51.3**	**+1.6**		
	baz=91								
BMN	**Battle Mountai**	**90.56**	**42**	*e*P	**P**	**12 56 51.9**	**+1.0**		
BMN				pmax	pmax				
	comp=Z,15nm,1.3s								
BMN	**Battle Mountai**	**90.56**	**42**	*e*P	**P**	**12 56 51.9**	**+1.0**		
	comp=Z,15nm,1.3s								
220A	**Playas Peak, P**	**90.61**	**53**	P	**P**	**12 56 53.3**	**+2.0**		
	baz=91								
U15A	**North Rim**	**90.92**	**47**	P	**P**	**12 56 54.4**	**+1.6**		
	baz=91								
120A	**U Bar Ranch, L**	**90.93**	**52**	P	**P**	**12 56 53.8**	**+1.1**		
	baz=91								
WUAZ	**Wupatki**	**90.94**	**48**	*e*P	**P**	**12 56 53.8**	**+1.1**		
	comp=Z,16nm,1.3s								
WUAZ	**Wupatki**	**90.94**	**48**	P	**P**	**12 56 53.8**	**+1.1**		
	baz=91								
CCUT	**Cedar City**	**90.97**	**46**	*e*P	**P**	**12 56 54.8**	**+1.8**		
CN2	**Changchun**	**91.05**	**323**	*e*P	**P**	**12 56 52.8**	**0.0**		
CN2				*e*pP	**pP**	**12 57 03.5**	**-0.3**		
CN2				*e*S	**S**	**13 07 49.3**	**+1.4**		
CN2				SS	**SS**	**13 13 54.8**	**+1.9**		
CN2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
CN2				pmax	pmax				
	comp=Z,300nm,3.0s								
CN2				LR	LR				
	comp=N,300nm,18.0s								
CN2				LR	LR				
	comp=E,200nm,18.0s								
CN2				LR	LR				
	comp=Z,200nm,19.0s								
X18A	**Snowflake**	**91.25**	**50**	P	**P**	**12 56 56.0**	**+1.7**		
	baz=92								
Z20A	**Nine Sixteen R**	**91.29**	**52**	P	**P**	**12 56 55.8**	**+1.4**		
	baz=92								
121A	**Cookes Peak, D**	**91.49**	**52**	P	**P**	**12 56 56.9**	**+1.5**		
	baz=92								
222A	**Williams Famil**	**91.71**	**53**	P	**P**	**12 56 57.6**	**+1.2**		
	baz=92								
Y20A	**Horse Springs,**	**91.91**	**51**	P	**P**	**12 56 58.9**	**+1.5**		
	baz=92								
KLR	**Kul'dur**	**91.96**	**329**	*e*P	P	12 56 53.8	-3.1		
X20A	**Quemado**	**92.21**	**50**	P	**P**	**12 56 60.0**	**+1.2**		
	baz=92								
MSU	**Marysvale**	**92.30**	**46**	*e*P	**P**	**12 56 58.4**	**-0.7**		
MSU	**Marysvale**	**92.30**	**46**	*e*P	**P**	**12 56 58.4**	**-0.7**		
GYA	**Guiyang**	**92.31**	**300**	P	**P**	**12 57 00.5**	**+1.2**		
GYA				pP	**pP**	**12 57 11.9**	**+1.7**		
GYA				sP	**sP**	**12 57 16.0**	**+1.9**		
GYA				PP	**PP**	**13 00 43.3**	**+2.8**		
GYA				SKS	**SKSac**	**13 07 29.4**	**-0.8**		
GYA				S	**S**	**13 07 58.9**	**-1.4**		
GYA				sS	**sS**	**13 08 16.3**	**-2.2**		
GYA				SS	**SS**	**13 14 12.0**	**+0.1**		
GYA				pmax	pmax				
	comp=Z,20nm,1.0s								
GYA				pmax	pmax				
	comp=Z,140nm,5.6s								
GYA				LR	LR				
	comp=N,930nm,20.8s								
GYA				LR	LR				
	comp=E,750nm,21.0s								
GYA				LR	LR				
	comp=Z,810nm,20.5s								
626A	**Big Bend Ranch**	**92.31**	**57**	P	**P**	**12 56 59.9**	**+0.8**		
	baz=93								
ENH	**Enshi**	**92.40**	**304**	*e*P	**P**	**12 56 58.6**	**-0.8**		
425A	**Indio Mountain**	**92.41**	**55**	P	**P**	**12 57 00.7**	**+1.1**		
	baz=93								
Z22A	**Elephant Butte**	**92.48**	**52**	P	**P**	**12 57 01.1**	**+1.2**		
	baz=93								
TXAR	**Lajitas Array**	**92.52**	**57**	P	**P**	**12 57 00.6**	**+0.5**		
TXAR	**Lajitas Array**	**92.52**	**57**	P	**P**	**12 57 00.6**	**+0.5**		
	comp=Z,1.7nm,1.0s,baz=206,slow=5.4,SNR=8.6								
TXAR				LR	LR	13 34 01.9			
	comp=Z,519nm,18.2s,baz=185,slow=33								
W20A	**Ramah**	**92.56**	**50**	P	**P**	**12 57 01.7**	**+1.3**		
	baz=93								
X21A	**Alamocita Cree**	**92.63**	**51**	P	**P**	**12 57 01.6**	**+0.9**		
	baz=93								
526A	**Mar Lane Ranc**	**92.63**	**56**	P	**P**	**12 57 00.8**	**+0.1**		
	baz=93								
325A	**Bean Ranch, Si**	**92.75**	**55**	P	**P**	**12 57 01.4**	**+0.1**		
	baz=93								
224A	**Cornudas Mount**	**92.78**	**54**	P	**P**	**12 57 01.9**	**+0.6**		
	baz=93								
627A	**Terlingua Ranc**	**92.79**	**57**	P	**P**	**12 57 01.8**	**+0.4**		
	baz=93								
426A	**McDonald Obser**	**93.02**	**56**	P	**P**	**12 57 02.8**	**+0.3**		
	baz=93								
527A	**Woodward Ranch**	**93.02**	**56**	P	**P**	**12 57 02.7**	**+0.2**		
	baz=93								
628A	**Black Gap, Mar**	**93.17**	**57**	P	**P**	**12 57 03.5**	**+0.4**		
	baz=94								
MFID	**Camas Ranch**	**93.32**	**40**	P	**P**	**12 57 04.1**	**+0.6**		
	baz=94								
427A	**Hayter Ranch,**	**93.56**	**56**	P	**P**	**12 57 05.1**	**+0.1**		
	baz=94								
Z24A	**Sheeppen Canyo**	**93.61**	**53**	P	**P**	**12 57 06.2**	**+0.9**		
	baz=94								
528A	**Cox Ranch, San**	**93.62**	**57**	P	**P**	**12 57 06.1**	**+0.9**		
	baz=94								
RSO	**Redoubt South**	**93.62**	**12**	*e*P	**P**	**12 57 02.8**	**-1.8**		
SRU	**San Rafael**	**93.68**	**46**	P	**P**	**12 57 06.1**	**+0.7**		
	baz=94								
226B	**Tecolote Peak,**	**93.72**	**55**	P	**P**	**12 57 05.2**	**-0.4**		
	baz=94								
BJI	**Beijing**	**93.80**	**315**	P	**P**	**12 57 08.4**	**+2.8**		
BJI				PP	**PP**	**13 00 54.9**	**+3.1**		
BJI				SKS	**SKSac**	**13 07 40.3**	**+2.8**		
BJI				S	**ScS**	**13 08 16.3**	**+2.3**		
BJI				pmax	pmax				
	comp=Z,11nm,0.8s								
BJI				LR	LR				
	comp=N,160nm,22.4s								
BJI				LR	LR				
	comp=E,200nm,20.8s								
BJI				LR	LR				
	comp=Z,240nm,35.5s								
U21A	**Nageezi**	**93.88**	**49**	P	**P**	**12 57 07.2**	**+0.8**		
	baz=94								
Y24A	**Capitan**	**93.90**	**52**	P	**P**	**12 57 06.9**	**+0.3**		
	baz=94								
I12A	**Atlanta**	**93.95**	**40**	P	**P**	**12 57 07.2**	**+0.7**		
	baz=94								
CMAR	**Chiang Mai Arr**	**94.04**	**289**	PP	PP	13 00 54.5	+0.4		
CMAR	**Chiang Mai Arr**	**94.04**	**289**	PP	PP	13 00 54.5	+0.4		
	comp=Z,0.4nm,0.3s,baz=154,slow=6.1,SNR=4.1								
HLID	**Hailey**	**94.19**	**41**	*e*P	**P**	**12 57 08.4**	**+0.8**		
HLID	**Hailey**	**94.19**	**41**	P	**P**	**12 57 08.1**	**+0.5**		
	baz=94								
J13A	**Cove Ranch, Pi**	**94.22**	**41**	P	**P**	**12 57 08.7**	**+1.0**		
	baz=95								
S20A	**Disappointment**	**94.26**	**48**	P	**P**	**12 57 08.5**	**+0.3**		
	baz=95								
429A	**Davenport Ranc**	**94.52**	**57**	P	**P**	**12 57 08.6**	**-0.7**		
	baz=95								
Z26A	**Caprock**	**94.53**	**54**	P	**P**	**12 57 10.4**	**+1.1**		
	baz=95								
J14A	**Carey**	**94.54**	**41**	P	**P**	**12 57 10.2**	**+1.0**		
	baz=95								
KMI	**Kunming**	**94.55**	**297**	P	**P**	**12 57 11.3**	**+1.6**		
KMI				pP	**pP**	**12 57 22.5**	**+1.8**		
KMI				sP	**sP**	**12 57 26.5**	**+1.9**		
KMI				PP	**PP**	**13 01 01.9**	**+3.7**		
KMI				SKS	**SKSac**	**13 07 45.4**	**+2.6**		
KMI				S	**S**	**13 08 17.5**	**-2.8**		
KMI				sS	**sS**	**13 08 36.4**	**-2.1**		
KMI				SS	**SS**	**13 14 45.6**	**+1.4**		
KMI				pmax	pmax				
	comp=Z,7.0nm,0.9s								
KMI				pmax	pmax				
	comp=Z,45nm,6.1s								
KMI				LR	LR				
	comp=N,180nm,18.5s								
KMI				LR	LR				
	comp=E,180nm,18.5s								
KMI				LR	LR				
	comp=Z,180nm,20.5s								
I13A	**Wildhorse Cree**	**94.58**	**40**	P	**P**	**12 57 10.1**	**+0.7**		
	baz=95								
H12A	**Diamond D Ranc**	**94.59**	**40**	P	**P**	**12 57 09.8**	**+0.4**		
	baz=95								
G12A	**Big Creek, Yel**	**94.71**	**39**	P	**P**	**12 57 10.6**	**+0.7**		
	baz=95								
H13A	**Challis**	**94.92**	**40**	P	**P**	**12 57 11.8**	**+0.9**		
	baz=95								
F12A	**Elk City**	**95.15**	**38**	P	**P**	**12 57 12.2**	**+0.3**		
	baz=96								
S22A	**4UR Ranch, Cre**	**95.19**	**49**	P	**P**	**12 57 12.8**	**+0.3**		
	baz=96								
128A	**Castleberry Fa**	**95.20**	**55**	P	**P**	**12 57 13.2**	**+0.8**		
	baz=96								
531A	**Rocksprings**	**95.24**	**58**	P	**P**	**12 57 12.5**	**-0.1**		
	baz=96								
G13A	**Cobalt**	**95.28**	**39**	P	**P**	**12 57 13.0**	**+0.5**		
	baz=96								
W25A	**X Bar L Ranch,**	**95.30**	**52**	P	**P**	**12 57 13.2**	**+0.4**		
	baz=96								
H14A	**Leadore**	**95.45**	**40**	P	**P**	**12 57 14.0**	**+0.6**		
	baz=96								
F13A	**Darby**	**95.67**	**39**	P	**P**	**12 57 14.9**	**+0.6**		
	baz=96								
MCMT	**McKenzie Canyo**	**95.87**	**40**	*e*P	**P**	**12 57 16.1**	**+0.8**		
	comp=Z,1.8nm,1.1s								
D12A	**Red Ives Fores**	**95.94**	**37**	P	**P**	**12 57 17.9**	**+2.4**		
	baz=96								
G15A	**Dillon**	**96.28**	**40**	P	**P**	**12 57 18.4**	**+1.3**		
	baz=97								
PDAR	**Pinedale Array**	**96.48**	**43**	P	**P**	**12 57 17.9**	**-0.2**		
PDAR	**Pinedale Array**	**96.48**	**43**	P	**P**	**12 57 17.9**	**-0.2**		
	comp=Z,0.7nm,0.8s,baz=199,slow=3.1,SNR=5.1								
PDAR				LR	LR	13 36 38.2			
	comp=Z,554nm,18.2s,baz=249,slow=33								
QLMT	**Earthquake Lak**	**96.66**	**41**	P	**P**	**12 57 18.6**	**-0.3**		
CD2	**Chengdu**	**96.86**	**302**	P	**P**	**12 57 20.9**	**+1.0**		
CD2				pP	**pP**	**12 57 32.0**	**+1.1**		
CD2				sP	**sP**	**12 57 36.1**	**+1.3**		
CD2				PP	**PP**	**13 01 19.1**	**+3.2**		
CD2				SKS	**SKSac**	**13 07 53.8**	**-0.6**		
CD2				S	**S**	**13 08 37.3**	**-2.5**		
CD2				sS	**sS**	**13 08 55.9**	**-2.1**		
CD2				SS	**SS**	**13 15 17.5**	**+0.9**		
CD2				pmax	pmax				
	comp=Z,20nm,0.5s								
CD2				pmax	pmax				
	comp=Z,120nm,5.2s								
CD2				LR	LR				
	comp=N,160nm,18.1s								
CD2				LR	LR				
	comp=Z,210nm,15.7s								
J19A	**Crowheart**	**97.08**	**43**	P	**P**	**12 57 21.6**	**+0.8**		
	baz=97								
**HHC

MK31	**Makanchi Array**	**118.61**	**310**	*e*PKPdf	**PKPdf**	**13 02 34.7**	**-1.6**
MKAR	**Makanchi Array**	**118.61**	**310**	PKIKP	**PKPdf**	**13 02 34.9**	**-1.4**
MKAR	**Makanchi Array**	**118.61**	**310**	PKP	**PKPdf**	**13 02 34.9**	**-1.4**
MKAR	**Makanchi Array**	**118.61**	**310**	PKP	**PKPdf**	**13 02 34.9**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=128,slow=0.9,SNR=7.1						
KSH	**Kashi**	**121.00**	**300**	*e*PKP	**PKPdf**	**13 02 44.3**	**+3.1**
KSH				*es*PKP		13 02 54.8	
KSH				*e*PP	**PP**	**13 04 10.0**	**-1.4**
KSH				*e*PKS	**PKSdf**	**13 06 19.4**	**+1.4**
KSH				*e*SKS	**SKSdf**	**13 09 51.3**	**+0.6**
KSH				*e*SKKS	SKKSac	13 10 59.1	-8.8
KSH				AMB	AMB		
	comp=Z,120nm,5.5s						
KSH				LR	LR		
	comp=N,130nm,4.3s						
KSH				LR	LR		
	comp=E,100nm,5.5s						
KSH				LR	LR		
	comp=Z,110nm,3.7s						
KURK	**Kurchatov**	**121.91**	**313**	⇑*i*PKIKP	**PKPdf**	**13 02 41.3**	**-1.1**
KURK	**Kurchatov**	**121.91**	**313**	*e*PKPdf	**PKPdf**	**13 02 40.6**	**-1.8**
TKM2	**Tokmak 2**	**122.19**	**304**	*e*PKIKP	**PKPdf**	**13 02 41.8**	**-1.7**
TKM2	**Tokmak 2**	**122.19**	**304**	*e*PKPdf	**PKPdf**	**13 02 41.8**	**-1.7**
AAK	**Ala-Archa**	**122.90**	**303**	⇑*i*PKIKP	**PKPdf**	**13 02 43.7**	**-1.1**
EKS2	**Erkin-Say**	**123.42**	**303**	*e*PKIKP	**PKPdf**	**13 02 45.0**	**-0.8**
EKS2	**Erkin-Say**	**123.42**	**303**	*e*PKPdf	**PKPdf**	**13 02 45.0**	**-0.8**
KKAR	**Karatay Array**	**125.86**	**303**	*e*PKIKP	**PKPdf**	**13 02 49.5**	**-0.8**
KKAR	**Karatay Array**	**125.86**	**303**	*e*PKPdf	**PKPdf**	**13 02 49.5**	**-0.8**
BRVK	**Borovoye**	**127.34**	**315**	⇑*i*PKIKP	**PKPdf**	**13 02 53.4**	**+0.6**
ABKAR	**Akbulak array**	**133.75**	**310**	*e*PKPdf	**PKPdf**	**13 03 04.2**	**-0.8**
ARCES	**ARCESS Array B**	**139.50**	**348**	PKPpre	PKPpre	13 03 07.0	
ARCES				PKP	**PKPdf**	**13 03 16.1**	**+1.0**
ARCES	**ARCESS Array B**	**139.50**	**348**	PKhKP	PKPpre	13 03 07.0	
	comp=Z,0.7nm,0.5s,baz=49,slow=2.5,SNR=8.9						
ARCES				PKP	**PKPdf**	**13 03 16.1**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=52,slow=2.0,SNR=6.3						
MAK	**Makhachkala**	**142.62**	**301**	*e*PKIKP	PKiKP	13 03 34.1	+9.5
JOF	**Joensuu**	**143.35**	**338**	*e*PKIKP	PKPab	13 03 18.6	+0.4
JOF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
JOF	**Joensuu**	**143.35**	**338**	*ep*	PKPab	13 03 18.6	+0.4
	comp=Z,5.5nm,0.6s						
DGRG	**David-gareji**	**144.28**	**299**	P	PKPbc	13 03 24.0	+1.1
TBLG	**Delisi**	**144.74**	**299**	P	PKPbc	13 03 25.4	+1.1
DUS	**Dusheti**	**144.75**	**300**	P	**PKPdf**	**13 03 26.4**	**+1.0**
GUDG	**Gudauri**	**144.88**	**301**	P	**PKPab**	**13 03 25.0**	**0.0**
KZR	**Kazreti**	**145.00**	**299**	P	PKPbc	13 03 25.5	+0.2
VRHR	**Novokhopersk**	**145.01**	**316**	*e*PKIKP	**PKPbc**	**13 03 22.9**	**-1.9**
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MOS	**Moscow**	**145.25**	**325**	*e*PKIKP	**PKPbc**	**13 03 25.6**	**+0.2**
MOS				pmax	pmax		
	comp=Z,166nm,1.5s						
KAF	**Kangasniemi**	**145.47**	**340**	*e*PKIKP	**PKPdf**	**13 03 24.7**	**-1.2**
KAF				pmax	pmax		
	comp=Z,28nm,0.7s						
KAF	**Kangasniemi**	**145.47**	**340**	*ep*	**PKPdf**	**13 03 24.7**	**-1.2**
	comp=Z,28nm,0.7s						
ONI	**Oni**	**145.63**	**301**	P	**PKPdf**	**13 03 26.8**	**-0.1**
AKH	**Akhalkalaki**	**145.69**	**299**	P	**PKPdf**	**13 03 28.0**	**+0.8**
KBZ	**Khabaz**	**145.90**	**303**	PKP2	**PKPdf**	**13 03 27.4**	**+0.2**
KBZ	**Khabaz**	**145.90**	**303**	PKPbc	**PKPdf**	**13 03 27.4**	**+0.2**
KBZ	**Khabaz**	**145.90**	**303**	PKPbc	**PKPdf**	**13 03 27.4**	**+0.2**
	comp=Z,5.8nm,1.0s,baz=73,slow=5.4,SNR=20						
FIA1	**FINESS Array S**	**146.07**	**340**	*e*PKPdf	**PKPdf**	**13 03 26.5**	**-0.4**
FINES	**FINESS Array B**	**146.07**	**340**	PKPbc	**PKPdf**	**13 03 26.8**	**-0.1**
FINES	**FINESS Array B**	**146.07**	**340**	PKPbc	**PKPdf**	**13 03 26.8**	**-0.1**
	comp=Z,12nm,0.6s,baz=48,slow=3.5,SNR=50						
OBN	**Obninsk**	**146.09**	**325**	*α i*PKP2	**PKPdf**	**13 03 26.9**	**-0.2**
OBN				pmax	pmax		
	comp=Z,39nm,0.7s						
VSR	**Storozhevoye**	**146.42**	**317**	*e*PKP2	**PKPdf**	**13 03 27.7**	**-0.1**
VSR				pmax	pmax		
	comp=Z,30nm,0.9s						
VSR				pmax	pmax		
	comp=N,9.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VORD	**Divnogorie**	**146.44**	**317**	*e*PKP2	**PKPdf**	**13 03 27.9**	**+0.1**
VORD				pmax	pmax		
	comp=E,50nm,0.6s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=N,50nm,0.8s						
VSU	**Vasula**	**148.15**	**336**	⇑*e*PKIKP	**PKPdf**	**13 03 31.6**	**+1.1**
SOC	**Sochi**	**148.20**	**303**	*e*PKHKP	**PKPdf**	**13 03 27.6**	**-3.5**
SOC				*e*		13 07 02.3	
SOC				*es*S	SS	13 26 39.7	+31
SOC				MLR	MLR		
	comp=Z,229nm,17.0s						
ANN	**Anapa**	**149.55**	**306**	*i* PKP2	**PKPbc**	**13 03 38.0**	**+0.3**
ANN				pmax	pmax		
	comp=Z,65nm,1.3s						
NB2	**NORSAR Subarra1**	**149.64**	**352**	PKP	**PKPbc**	**13 03 36.9**	**-0.7**
	comp=Z,4.5nm,0.6s,baz=22,slow=3.1						
NOA	**NORSAR Array B**	**149.64**	**352**	PKPbc	**PKPbc**	**13 03 36.6**	**-1.0**
NOA	**NORSAR Array B**	**149.64**	**352**	PKPbc	**PKPbc**	**13 03 36.6**	**-1.0**
	comp=Z,3.6nm,0.9s,baz=14,slow=4.2,SNR=11						
NAO01	**NORSAR Array S**	**149.87**	**352**	*e*PKPdf	**PKPdf**	**13 03 34.5**	**+1.3**
NAO01				*e*PKPbc	**PKiKP**	**13 03 40.4**	**+1.4**
MICGM	**Minsk**	**150.51**	**329**	*e*	**PKPdf**	**13 03 37.0**	**+2.6**
MNK	**Minsk**	**150.53**	**329**	*e*PKIKP	**PKPdf**	**13 03 37.0**	**+2.6**
NACGM	**Naroch**	**150.71**	**331**	*e*	**PKPdf**	**13 03 37.0**	**+2.3**
SIM	**Simferopol'**	**151.77**	**308**	*i* PKIKP	**PKPbc**	**13 03 44.1**	**+1.1**
SIM				pmax	pmax		
	comp=Z,20nm,0.8s						
AKASG	**Malin Array Be**	**152.21**	**322**	PKIKP	**PKPbc**	**13 03 43.0**	**-0.8**
AKASG	**Malin Array Be**	**152.21**	**322**	PKPbc	**PKPbc**	**13 03 43.0**	**-0.8**
AKASG	**Malin Array Be**	**152.21**	**322**	PKPbc	**PKPbc**	**13 03 43.0**	**-0.8**
	comp=Z,3.3nm,0.6s,baz=47,slow=2.6,SNR=11						
AK01	**Malin Array Si**	**152.22**	**322**	*e*PKPbc	**PKPbc**	**13 03 43.0**	**-0.8**
KIEV	**Kiev**	**152.22**	**322**	*e*PKIKP	**PKPbc**	**13 03 44.8**	**+1.0**
KIEV	**Kiev**	**152.22**	**322**	*e*PKPbc	**PKPbc**	**13 03 44.8**	**+1.0**
AK02	**Malin Array Si**	**152.24**	**322**	*e*PKPdf	**PKPdf**	**13 03 35.7**	**-1.4**
BR131	**Keskin Array S**	**153.34**	**297**	*e*PKPbc	**PKPbc**	**13 03 47.1**	**+0.2**
BRTR	**Keskin Array B**	**153.34**	**297**	PKPbc	**PKPbc**	**13 03 46.4**	**-0.5**
BRTR	**Keskin Array B**	**153.34**	**297**	PKPbc	**PKPbc**	**13 03 46.4**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=114,slow=2.7,SNR=5.1						
BUR08	**Bucovina Ar. S**	**156.12**	**320**	*e*PKPab	**PKPab**	**13 04 11.3**	**+0.8**
KWP	**Kalwaria Pacla**	**156.15**	**326**	*e*PKP	**PKPab**	**13 04 10.2**	**-0.3**
KOLS	**Kolonicke sedl**	**156.84**	**325**	*e*PKP2	**PKPab**	**13 04 13.4**	**-0.1**
KOLS	**Kolonicke sedl**	**156.84**	**325**	*e*PKP	**PKPab**	**13 04 13.4**	**-0.1**
UZH	**Uzhgorod**	**157.03**	**325**	*e*PKP2	**PKPab**	**13 04 15.5**	**+1.3**
CRVS	**Cervenica-Dubn**	**157.25**	**326**	*e*PKP2	**PKPab**	**13 04 14.8**	**-0.4**
CRVS	**Cervenica-Dubn**	**157.25**	**326**	*e*PKP	**PKPab**	**13 04 14.8**	**-0.4**
KSP	**Ksiaz**	**157.88**	**336**	*e*PKP	**PKPab**	**13 04 19.4**	**+1.5**
OKC	**Ostrava-Krasne**	**158.01**	**332**	AMS	AMS	14 23 50.0	
	comp=Z,200nm,17.6s						
UPC	**Upice**	**158.26**	**336**	*e*PKP2	**PKPab**	**13 04 19.3**	**-0.2**
UPC	**Upice**	**158.26**	**336**	*e*PKPAB	**PKPab**	**13 04 19.3**	**-0.2**
DPC	**Dobruska-Polom**	**158.28**	**335**	*e*PKP2	**PKPab**	**13 04 19.2**	**-0.5**
DPC				MLR	MLR		
	comp=Z,300nm,22.0s						
DPC	**Dobruska-Polom**	**158.28**	**335**	*e*PKPAB	**PKPab**	**13 04 19.2**	**-0.5**
DPC				*ep*PKP	PKPab	13 04 28.3	+8.6
DPC				AMS	AMS	14 20 10.0	
	comp=Z,300nm,22.0s						
CLL	**Collm**	**158.49**	**342**	*i* PKP2	**PKPab**	**13 04 21.4**	**+1.0**
CLL				pmax	pmax		
	comp=Z,13nm,1.2s						
CLL				MLR	MLR		
	comp=Z,300nm,19.0s						
CLL	**Collm**	**158.49**	**342**	*i* PKPab	**PKPab**	**13 04 21.4**	**+1.0**
	comp=Z,13nm,1.2s						
CLL				*es*PKPab	**sPKPab**	**13 04 39.0**	**+3.7**
CLL				*es*S	SS	13 28 12.0	+13
CLL				*e*SSS	SSS	13 34 12.0	
CLL				LmV		14 29 00.0	
	comp=Z,300nm,19.0s						
BRG	**Berggiesshubel**	**158.61**	**340**	*e*PKP	**PKPab**	**13 04 21.9**	**+0.9**
	comp=Z,29nm,1.7s						
BRG				MLR	MLR		
	comp=Z,316nm,15.6s						
BRG				MLR	MLR		
	comp=N,306nm,22.0s						
BRG				MLR	MLR		
	comp=E,124nm,22.0s						
BRG	**Berggiesshubel**	**158.61**	**340**	*e*PKP2	**PKPab**	**13 04 21.9**	**+0.9**
BRG				pmax	pmax		
PVCC	**Panska Ves**	**158.72**	**338**	*e*PKP2	**PKPab**	**13 04 20.0**	**-1.5**
PVCC	**Panska Ves**	**158.72**	**338**	*e*PKPAB	**PKPab**	**13 04 20.0**	**-1.5**
VYHS	**Vyhne**	**158.75**	**329**	*e*PKP2	**PKPab**	**13 04 21.3**	**-0.5**
VYHS	**Vyhne**	**158.75**	**329**	*e*PKP	**PKPab**	**13 04 21.2**	**-0.5**
PRU	**Pruhonice**	**159.20**	**338**	*e*PKP2	**PKPab**	**13 04 24.7**	**+1.1**
PRU				MLR	MLR		
	comp=Z,300nm,18.7s						
PRU	**Pruhonice**	**159.20**	**338**	*e*PKPAB	**PKPab**	**13 04 24.7**	**+1.1**
PRU				*ep*PKP	PKPab	13 04 32.7	+9.1
PRU				AMS	AMS	14 25 50.0	
	comp=Z,300nm,18.7s						
TREC	**Trest**	**159.46**	**335**	*e*PKP2	**PKPab**	**13 04 24.7**	**-0.1**
TREC				MLR	MLR		
	comp=Z,300nm,17.2s						
TREC	**Trest**	**159.46**	**335**	*e*PKPAB	**PKPab**	**13 04 24.7**	**-0.1**
TREC				AMS	AMS	14 27 00.0	
	comp=Z,300nm,17.2s						
NKC	**Novy Kostel**	**159.61**	**341**	*e*PKP2	**PKPab**	**13 04 26.6**	**+1.2**
NKC	**Novy Kostel**	**159.61**	**341**	*e*PKPAB	**PKPab**	**13 04 26.6**	**+1.2**
NKC				*ep*PKP	PKPab	13 04 36.4	+11
KHC	**Kasperske Hory**	**160.26**	**338**	*e*PKP2	**PKPab**	**13 04 27.8**	**-0.5**
KHC				MLR	MLR		
	comp=Z,400nm,17.6s						
KHC	**Kasperske Hory**	**160.26**	**338**	*e*PKPAB	**PKPab**	**13 04 27.8**	**-0.5**
KHC				*ep*PKP	PKPab	13 04 36.9	+8.6
KHC				AMS	AMS	14 25 10.0	
	comp=Z,400nm,17.6s						
GERES	**GERESS Array B**	**160.46**	**337**	PKPab	**PKPab**	**13 04 27.8**	**-1.4**
GERES	**GERESS Array B**	**160.46**	**337**	PKPab	**PKPab**	**13 04 27.8**	**-1.4**
	comp=Z,0.7nm,0.5s,baz=35,slow=4.9,SNR=5.9						
TOA0	**Torodi Ar. Sit**	**161.97**	**178**	*e*PKPab	**PKPab**	**13 04 35.4**	**-1.0**
TORD	**Torodi Ar. Bea**	**161.97**	**178**	PKP	**PKPdf**	**13 03 49.2**	**-1.4**
TORD				PKPab	**PKPab**	**13 04 35.5**	**-1.0**
TORD	**Torodi Ar. Bea**	**161.97**	**178**	PKP	**PKPdf**	**13 03 49.2**	**-1.4**
	comp=Z,1.1nm,1.0s,baz=220,slow=1.2,SNR=4.7						
TORD				PKPab	**PKPab**	**13 04 35.5**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=170,slow=3.5,SNR=13						

*CSEM **20** 12:46:49.6,56˚.89N×12˚.63E,h5km,ML1.1,Mining explosion. After UPP*

UPP 20 12:46:49.6,56˚.89N×12˚.63E,h5km,ML1.1,2C,Mining explosion.,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FABU	**Falkenberg**	**0.12**	**23**	⇑P	Pg	12 46 52.0	0.0
BORU	**Boraas**	**0.75**	**6**	⇑P	Pg	12 47 03.3	-0.7
DEL	**Delary**	**0.80**	**121**	P	Pg	12 47 04.5	-0.5
BJUU	**Bjuv**	**0.85**	**165**	P	Pg	12 47 05.3	-0.5
TJOU	**Tjoern**	**1.27**	**335**	P	Pg	12 47 13.4	-0.5

IDC 20 12:50:15.1±2.2,30˚.35S×178˚.22W,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.7/18,mbtmp3.8/4,Error ellipse: s-maj=58.6km s-min=36.2km az=36.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**34.30**	**257**	P	P	12 57 03.1	-0.2
	0.4nm,0.4s,baz=95,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**42.92**	**267**	P	P	12 58 15.6	-0.2
	0.8nm,0.5s,baz=101,slow=7.3,SNR=7.4						
WRA	**Warramunga Arr**	**43.91**	**272**	P	P	12 58 23.8	0.0
	1.1nm,0.5s,baz=111,slow=8.0,SNR=18						
QSPA	**South Pole Qui**	**59.76**	**180**	P	P	13 00 21.5	-0.1
	0.6nm,0.5s,baz=275,slow=4.0,SNR=6.1						
FINES	**FINESS Array B**	**145.04**	**340**	PKPbc	PKPbc	13 09 52.3	-0.7
	1.0nm,0.8s,baz=39,slow=1.2,SNR=3.5						

IDC 20 13:06:42.2±11.0,2˚.09S×126˚.70E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.2/22,mbtmp3.3/3,MS4.0/1,Ms1 4.0/1, ms1mx2.8/19,Error ellipse: s-maj=178.9km s-min=149.5km az=129.0,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.25**	**158**	P	P	13 11 08.4	0.0
	0.1nm,0.3s,baz=337,slow=11,SNR=61						
ASAR	**Alice Springs**	**22.56**	**163**	P	P	13 11 43.2	-1.1
	0.2nm,0.3s,baz=344,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**32.79**	**156**	P	P	13 13 18.1	+0.7
	1.0nm,0.8s,baz=332,slow=9.8,SNR=2.5						
SONM	**Songino Array**	**52.79**	**343**	LR	LR	13 40 08.6	
	comp=Z,172nm,21.7s,baz=107,slow=38						

*DJA **20** 13:15:19.8±1.2,5˚N±5˚×9˚4E±˚,h10km,M4.6/4,mb4.5/1, MLv4.7/4*

*IDC **20** 13:15:25.3±0.7,4˚.92N×95˚.00E,h0km,mb4.2/19, mb1 4.3/19,mb1mx4.2/31,mbtmp4.2/19,MS3.9/2, Ms1 3.9/2,ms1mx3.1/35,Error ellipse: s-maj=29.7km s-min=14.8km az=46.0*

*AUST **20** 13:15:28.9±1.9,4˚.75N×94˚.55E,h40km,Error ellipse: s-maj=2.7km s-min=1.4km az=242.0*

*ISCJB **20** 13:15:30.9±0.3,4˚.81N±0˚.05×94˚.88E±0˚.05,h50km, mb4.2/23,MS4.0/2,Error ellipse: s-maj=8.6km s-min=5.6km az=138.0*

ISC 20 13:15:32.6±0.5,4˚.89N±0˚.06×94˚.92E±0˚.08,h50km,n58, σ1s12/59,mb4.2/23,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**0.71**	**32**	P	**Pn**	**13 15 46.9**	**+0.4**
BSI				S	**Sn**	**13 15 57.1**	**+0.5**
LHMI	**Lhok Sumawe**	**2.05**	**80**	P	**Pn**	**13 16 05.8**	**+1.2**
LHMI	**Lhok Sumawe**	**2.05**	**80**	P	**Pn**	**13 16 05.1**	**+0.5**
	baz=2.4,SNR=30						
SNSI	**Sinabang, Aceh**	**2.83**	**150**	P	**Pn**	**13 16 14.8**	**-0.5**
SNSI				S	Sn	13 17 01.3	+13
KCSI	**Kotacane, Aceh**	**3.15**	**115**	P	**Pn**	**13 16 20.8**	**+1.1**
KCSI				S	Sn	13 17 15.1	+19
GSI	**Gunungsitoli**	**4.44**	**143**	P	**Pn**	**13 16 38.6**	**+1.2**
GSI	**Gunungsitoli**	**4.44**	**143**	P	**Pn**	**13 16 37.1**	**-0.3**
	baz=4.6,SNR=9.1						
PSI	**Prapat**	**4.50**	**117**	P	**Pn**	**13 16 40.9**	**+2.5**
	baz=4.8,SNR=12						
PBKT	**Sadao Pong**	**13.04**	**27**	P	Pn	13 18 38.9	+3.7
CMAR	**Chiang Mai Arr**	**14.05**	**16**	Pn	**P**	**13 18 53.9**	**-1.6**
	1.0nm,0.3s,baz=207,slow=12,SNR=37						
CHTO	**Chiang Mai**	**14.39**	**16**	P	**P**	**13 18 59.3**	**0.0**
CMMT	**Chiang Mai**	**14.39**	**16**	P	**P**	**13 18 59.8**	**+0.5**
KSM	**Kuching**	**15.73**	**102**	P	**P**	**13 19 15.7**	**+1.5**
	baz=16,SNR=4.5						
UGM	**Wanagama**	**20.10**	**129**	S	S	13 23 37.1	-8.5
	baz=20,SNR=6.3						
TAPN	**Taplejung**	**23.37**	**344**	*e*P	**P**	**13 20 36.6**	**-0.6**
	14nm,0.7s						
GUN	**Gumba**	**24.46**	**340**	*e*P	**P**	**13 20 46.4**	**-0.9**
	11nm,0.5s						
KOLN	**Koldanda**	**25.18**	**336**	*e*P	**P**	**13 20 54.2**	**+0.5**
	17nm,0.5s						
DANN	**Dangsing**	**25.63**	**337**	*e*P	**P**	**13 20 57.6**	**-0.3**
	20nm,0.4s						
PYUN	**Piuthan**	**25.72**	**335**	*e*P	**P**	**13 20 58.8**	**+0.1**
	24nm,0.3s						
FITZ	**Fitzroy Crossi**	**37.95**	**128**	P	**P**	**13 22 43.9**	**-1.7**
	2.1nm,1.0s,baz=309,slow=6.5,SNR=5.4						
FITZ	**Fitzroy Crossi**	**37.95**	**128**	P	**P**	**13 22 44.1**	**-1.5**
	baz=38,SNR=3.8						
FAKI	**Fak Fak**	**38.09**	**101**	P	**P**	**13 22 45.4**	**-1.5**
	baz=38,SNR=6.1						
KNRA	**Kununurra**	**39.24**	**122**	P	**P**	**13 22 54.6**	**-2.0**
	baz=40,SNR=5.8						
MTN	**Manton Dam**	**40.06**	**116**	P	**P**	**13 23 01.2**	**-2.1**
	baz=40,SNR=4.0						
MTN				S	**S**	**13 29 08.4**	**+2.3**
	baz=40,SNR=4.4						
ULHL	**Ulahol**	**40.75**	**339**	P	**P**	**13 23 09.9**	**+0.9**
	SNR=5.2						
TKM2	**Tokmak 2**	**41.57**	**339**	P	**P**	**13 23 16.4**	**+0.7**
	SNR=5.7						
KBK	**Karagaybulak**	**41.59**	**338**	P	**P**	**13 23 17.3**	**+1.5**
	SNR=8.8						
AML	**Almayashu**	**41.63**	**336**	P	**P**	**13 23 17.5**	**+1.1**
	SNR=8.8						
EKS2	**Erkin-Say**	**42.04**	**337**	P	**P**	**13 23 20.6**	**+1.2**
	SNR=5.5						
USP	**Ospenovka**	**42.28**	**338**	P	**P**	**13 23 22.2**	**+0.9**
	SNR=8.5						
MKAR	**Makanchi Array**	**43.16**	**347**	P	**P**	**13 23 28.0**	**-0.3**
	4.4nm,0.4s,baz=158,slow=7.7,SNR=35						
SONM	**Songino Array**	**43.91**	**11**	P	**P**	**13 23 33.0**	**-1.5**
	0.7nm,0.5s,baz=194,slow=8.5,SNR=8.2						
SONM				PcP	**PcP**	**13 25 19.5**	**-0.3**
	0.6nm,0.5s,baz=198,slow=3.3,SNR=5.3						
KSRS	**Korea Array**	**44.26**	**38**	P	**P**	**13 23 35.9**	**-1.4**
	0.8nm,0.4s,baz=220,slow=8.7,SNR=7.6						
WRA	**Warramunga Arr**	**45.94**	**124**	P	**P**	**13 23 50.1**	**-0.7**
	6.1nm,0.6s,baz=302,slow=9.5,SNR=66						
ASAR	**Alice Springs**	**47.44**	**128**	P	**P**	**13 24 01.8**	**-0.8**
	1.0nm,0.4s,baz=300,slow=7.6,SNR=26						
ZALV	**Zalesovo Beam**	**49.60**	**352**	P	**P**	**13 24 18.0**	**-0.7**
	4.2nm,0.5s,baz=162,slow=7.1,SNR=23						
ZALV				LR	LR	13 46 52.0	
	comp=Z,62nm,19.7s,baz=76,slow=38						
RDF	**Al-Radifah**	**50.78**	**304**	*e*P	**P**	**13 24 30.2**	**+2.1**
USRK	**Ussuriysk Arra**	**50.91**	**34**	P	**P**	**13 24 27.8**	**-0.9**
	1.8nm,0.6s,baz=237,slow=6.1,SNR=4.6						
NAY	**Al-Naaiem**	**51.14**	**304**	*e*P	**P**	**13 24 31.7**	**+0.9**
NAY				AMb	AMB	13 24 32.9	
	comp=Z,4.3nm,0.5s						
MIB	**Mutribah**	**51.24**	**305**	*e*P	**P**	**13 24 32.6**	**+1.0**
MIB				AMb	AMB	13 24 33.4	
	comp=Z,9.1nm,0.6s						
BRTR	**Keskin Array B**	**64.97**	**312**	P	**P**	**13 26 07.4**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=129,slow=7.7,SNR=11						
MLR	**Muntele Rosu**	**71.84**	**316**	P	**P**	**13 26 50.7**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=107,slow=11,SNR=4.6						
JOF	**Joensuu**	**73.86**	**335**	*ep*	**P**	**13 27 01.8**	**-0.1**
FINES	**FINESS Array B**	**75.70**	**332**	P	**P**	**13 27 12.1**	**-0.4**
	comp=Z,3.0nm,0.4s,baz=104,slow=6.0,SNR=21						
FINES				LR	LR	14 06 51.1	
	comp=Z,191nm,20.8s,baz=90,slow=41						
KAF	**Kangasniemi**	**75.79**	**333**	*ep*	**P**	**13 27 12.7**	**-0.3**
	comp=Z,2.1nm,0.4s						
KEV	**Kevo**	**77.89**	**341**	*ep*	**P**	**13 27 24.5**	**-0.2**
ARCES	**ARCESS Array B**	**78.32**	**340**	P	**P**	**13 27 26.9**	**-0.2**
	comp=Z,2.3nm,0.5s,baz=95,slow=6.3,SNR=37						
GERES	**GERESS Array B**	**80.56**	**319**	P	**P**	**13 27 40.5**	**+0.7**
	comp=Z,1.9nm,0.7s,baz=90,slow=5.9,SNR=14						
CLL	**Collm**	**81.15**	**321**	*e*P	**P**	**13 27 45.0**	**+2.2**
	comp=Z,3.0nm,0.6s						
HFS	**Hagfors**	**81.41**	**330**	P	**P**	**13 27 43.7**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=94,slow=6.2,SNR=6.9						
NOA	**NORSAR Array B**	**82.70**	**331**	P	**P**	**13 27 50.5**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=96,slow=4.8,SNR=3.5						
SPITS	**Spitsbergen Ar**	**82.90**	**348**	P	**P**	**13 27 50.8**	**-0.7**
	comp=Z,0.4nm,0.2s,baz=110,slow=12,SNR=34						
KEST	**Kesra**	**93.58**	**305**	P	**P**	**13 27 56.3**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=74,slow=7.4,SNR=3.2						
EKA	**Eskdalemuir Ar**	**90.61**	**326**	P	**P**	**13 28 30.2**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=92,slow=5.7,SNR=6.0						
ILAR	**Eielson Array**	**97.20**	**22**	P	**P**	**13 28 59.2**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=301,slow=5.1,SNR=4.2						
NVAR	**Mina Array Bea**	**127.03**	**33**	PKP	**PKPdf**	**13 34 32.0**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=314,slow=3.1,SNR=4.4						
PDAR	**Pinedale Array**	**127.63**	**23**	PKP	**PKPdf**	**13 34 32.4**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=64,slow=3.4,SNR=4.1						
TXAR	**Lajitas Array**	**141.58**	**27**	PKP	**PKPdf**	**13 35 01.1**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=198,slow=2.6,SNR=5.1						

*ISCJB **20** 13:19:06.7±0.2,47˚.33N±0˚.01×6˚.97E±0˚.02,h5km±2km, Error ellipse: s-maj=2.1km s-min=1.7km az=146.8*

*LDG **20** 13:19:08.9±0.1,47˚.37N×7˚.06E,h5km,Md3.3/4,Ml3.3/29, Error ellipse: s-maj=1.3km s-min=1.2km az=139.0*

*BGR **20** 13:19

126nm,0.2s,SNR=1.0
CABF eSn Sg 13 19 41.9 +2.7
SNR=1.0
CABF La Chapelle 0.97 221 ePg Pn 13 19 28.3 +1.3
CABF eSg Sn 13 19 40.4 -0.2
63nm,0.2s,SNR=1.0
CABF eSn Sg 13 19 41.9 +2.7
SNR=1.0
OG01 Vacheresse 1.04 193 Pg Pn 13 19 29.7 +1.8
OG01 Vacheresse 1.04 193 Pg Pn 13 19 29.7 +1.8
BNALP Bannalp 1.08 116 ⇓iP Pg 13 19 28.6 +0.1
232nm,0.5s
BNALP Bannalp 1.08 116 ⇓iP Pg 13 19 29.1 +0.6
232nm,0.5s
FLACH Flaach 1.08 77 ⇑iP Pn 13 19 28.2 -0.1
485nm,0.2s
FLACH Flaach 1.08 77 ⇑iP Pn 13 19 28.2 -0.1
485nm,0.2s
CDF Champ du Feu 1.08 9 ePg Pb 13 19 28.4 +0.2
SNR=1.0
CDF Champ du Feu 1.08 9 ePn Pn 13 19 28.7 +0.2
SNR=1.0
CDF eSg Sb 13 19 42.0 -0.2
224nm,0.4s,SNR=1.0
CDF Champ du Feu 1.08 9 ePg Pb 13 19 28.4 +0.2
SNR=1.0
CDF Champ du Feu 1.08 9 ePn Pn 13 19 28.7 +0.2
SNR=1.0
CDF eSg Sb 13 19 42.0 -0.2
112nm,0.4s,SNR=1.0
SLE Schleitheim 1.08 67 ePg Pb 13 19 28.3 +0.1
SLE eSg Sg 13 19 42.6 -0.2
SLE Schleitheim 1.08 67 ⇑iP Pg 13 19 29.1 +0.5
1µm,0.3s
SLE Schleitheim 1.08 67 Pg Pb 13 19 28.3 +0.1
SLE Schleitheim 1.08 67 ⇑iP Pg 13 19 28.6 0.0
1µm,0.3s
SLE Sg Sg 13 19 42.6 -0.2
THEF They Montfort 1.12 322 Pg Pg 13 19 30.5 +1.2
THEF Sg Sn 13 19 45.7 +1.6
THEF They Montfort 1.12 322 Pg Pg 13 19 30.5 +1.2
THEF Sg Sn 13 19 45.7 +1.6
TRULL Truellikon 1.17 74 ⇑iP Pb 13 19 29.7 0.0
485nm,0.2s
TRULL Truellikon 1.17 74 ⇑iP Pb 13 19 29.7 0.0
485nm,0.2s
WILA Wila 1.29 86 ePg Pg 13 19 33.1 +0.6
WILA eSg Sg 13 19 49.6 +0.3
WILA Wila 1.29 86 Pg Pg 13 19 33.1 +0.6
WILA Sg Sg 13 19 49.6 +0.3
DIX Grande Dixence 1.30 168 ⇓iP Pg 13 19 33.7 +1.0
308nm,0.3s
DIX Grande Dixence 1.30 168 ⇓iP Pg 13 19 33.7 +1.0
308nm,0.3s
BFO Black Forest 1.32 42 ePn Pn 13 19 31.1 -0.6
BFO eSg Sg 13 19 50.1 -0.3
BFO Black Forest 1.32 42 Pn Pn 13 19 31.1 -0.6
BFO Sg Sg 13 19 50.1 -0.3
SPAK Spaichingen-Ko 1.41 57 Pn Pn 13 19 32.6 -0.4
SPAK Spaichingen-Ko 1.41 57 Pg Pb 13 19 34.5 +0.6
FUSIO Fusio 1.44 128 ⇓iP Pg 13 19 35.5 +0.1
134nm,0.2s
FUSIO Fusio 1.44 128 ⇓iP Pg 13 19 35.5 +0.1
134nm,0.2s
PAGF Fort de Pagny 1.49 325 ePn Pb 13 19 35.8 +0.7
baz=142
PAGF Fort de Pagny 1.49 325 ePg Pg 13 19 37.3 +1.0
baz=136
PAGF eSn Sn 13 19 52.6 -0.6
PAGF eSg Sg 13 19 56.3 +0.7
18nm,0.2s
PAGF Fort de Pagny 1.49 325 ePn Pb 13 19 35.8 +0.7
baz=142
PAGF Fort de Pagny 1.49 325 ePg Pg 13 19 37.3 +1.0
baz=136
PAGF eSn Sn 13 19 52.6 -0.6
PAGF eSg Sg 13 19 56.3 +0.7
8.8nm,0.2s
SFTF Sexfontaines 1.58 303 ePn Pb 13 19 36.8 +0.1
baz=128
SFTF Sexfontaines 1.58 303 ePg Pg 13 19 39.1 +1.0
baz=127
SFTF eSg Sg 13 19 59.2 +0.5
63nm,0.2s
SFTF Sexfontaines 1.58 303 ePn Pb 13 19 36.8 +0.1
baz=128
SFTF Sexfontaines 1.58 303 ePg Pg 13 19 39.1 +1.0
baz=127
SFTF eSg Sg 13 19 59.2 +0.5
31nm,0.2s
RSL Roselend 1.68 189 Pg Pg 13 19 40.5 +0.5
RSL Sg Sg 13 20 03.3 +1.5
RSL Roselend 1.68 189 Pg Pg 13 19 40.5 +0.5
RSL Sg Sg 13 20 03.3 +1.5
LANF Langenberg 1.72 18 Pg Pg 13 19 41.0 +0.3
LANF Langenberg 1.72 18 Pg Pg 13 19 41.0 +0.3
MEZF Maizieres J'vi 1.75 312 eP Pb 13 19 40.2 +0.6
baz=129,SNR=1.0
MEZF Maizieres J'vi 1.75 312 ePg Pg 13 19 42.5 +1.1
baz=133
MEZF eSg Sg 13 20 03.8 -0.3
149nm,0.4s
MEZF Maizieres J'vi 1.75 312 eP Pb 13 19 40.2 +0.6
baz=129,SNR=1.0
MEZF Maizieres J'vi 1.75 312 ePg Pg 13 19 42.5 +1.1
baz=133
MEZF eSg Sg 13 20 03.8 -0.3
74nm,0.4s
LPL La Plagne 1.84 186 ePn Pn 13 19 39.9 +0.9
SNR=1.0
LPL La Plagne 1.84 186 ePg Pg 13 19 43.9 +0.8
SNR=1.0
LPL eSg Sg 13 20 07.8 +0.8
27nm,0.3s,SNR=1.0
LPL La Plagne 1.84 186 ePn Pn 13 19 39.9 +0.9
SNR=1.0
LPL La Plagne 1.84 186 ePg Pg 13 19 43.9 +0.8
SNR=1.0
LPL eSg Sg 13 20 07.8 +0.8
14nm,0.3s,SNR=1.0
LPG La Plagne 1.86 186 ePn Pn 13 19 39.9 +0.6
SNR=1.0
LPG La Plagne 1.86 186 ePg Pg 13 19 44.2 +0.8
SNR=1.0
LPG eSn Sn 13 20 03.0 +0.3
SNR=1.0
LPG eSg Sg 13 20 08.6 +1.0
25nm,0.2s,SNR=1.0
LPG La Plagne 1.86 186 ePn Pn 13 19 39.9 +0.6
SNR=1.0
LPG La Plagne 1.86 186 ePg Pg 13 19 44.2 +0.8
SNR=1.0
LPG eSn Sn 13 20 03.0 +0.3
SNR=1.0
LPG eSg Sg 13 20 08.6 +1.0
12nm,0.2s,SNR=1.0
LSD Lago del Serru 1.89 177 P Pg 13 19 43.8 -0.2
DAVA Damuels 1.95 91 ⇑iPn Pb 13 19 42.2 -0.9
DAVA ⇓iPg Pg 13 19 45.4 +0.2
DAVA ⇑iSn Sn 13 20 05.8 +1.0
DAVA ⇑iSg Sg 13 20 10.1 -0.4
66nm,0.2s
DAVA Damuels 1.95 91 Pn Pb 13 19 42.2 -0.9
LOR Lormes 2.15 269 eP Pb 13 19 46.3 0.0
baz=94,SNR=1.0
LOR Lormes 2.15 269 ePg Pg 13 19 49.5 +0.6
baz=93
LOR eSg Sg 13 20 16.7 0.0
76nm,0.2s,SNR=1.0
LOR Lormes 2.15 269 eP Pb 13 19 46.3 0.0
baz=94,SNR=1.0
LOR Lormes 2.15 269 ePg Pg 13 19 49.5 +0.6
baz=93
LOR eSg Sg 13 20 16.7 0.0
38nm,0.2s,SNR=1.0
RSP Reno Superiore 2.21 175 P Pb 13 19 46.8 -0.6
OBER Oberstdorf 2.23 87 eSg Sg 13 20 19.1 -0.3
OBER Oberstdorf 2.23 87 Sg Sg 13 20 19.1 -0.3
SMF Signal de Mont 2.28 253 ePn Pn 13 19 46.0 +1.1
SNR=1.0
SMF Signal de Mont 2.28 253 ePg Pg 13 19 51.4 -0.1
SMF eSg Sg 13 20 21.1 +0.1
77nm,0.2s,SNR=1.0
SMF Signal de Mont 2.28 253 ePn Pn 13 19 46.0 +1.1
SNR=1.0
SMF Signal de Mont 2.28 253 ePg Pg 13 19 51.4 -0.1
SMF eSg Sg 13 20 21.1 +0.1
39nm,0.2s,SNR=1.0
RUP Ruppelstein 2.36 1 Pn Pn 13 19 46.7 +0.8
RUP Ruppelstein 2.36 1 Pg Pg 13 19 52.6 -0.3
SSF Saint Saulge 2.41 264 ePn Pn 13 19 47.7 +1.1
SNR=1.0
SSF Saint Saulge 2.41 264 eP Pb 13 19 49.9 -0.9
SSF Saint Saulge 2.41 264 ePg Pg 13 19 54.3 +0.4
SSF eSg Sg 13 20 25.1 0.0
62nm,0.4s,SNR=1.0
SSF Saint Saulge 2.41 264 ePn Pn 13 19 47.7 +1.1
SNR=1.0
SSF Saint Saulge 2.41 264 eP Pb 13 19 49.9 -0.9
SSF Saint Saulge 2.41 264 ePg Pg 13 19 54.3 +0.4
SSF eSg Sg 13 20 25.1 0.0
31nm,0.4s,SNR=1.0
ORIF Oris-en-Rattie 2.56 198 ePn Pn 13 19 50.3 +1.6
SNR=1.0
ORIF Oris-en-Rattie 2.56 198 ePg Pg 13 19 56.6 -0.1
SNR=1.0
ORIF eSg Sg 13 20 30.1 +0.3
30nm,0.2s,SNR=1.0
ORIF Oris-en-Rattie 2.56 198 ePn Pn 13 19 50.3 +1.6
SNR=1.0
ORIF Oris-en-Rattie 2.56 198 ePg Pg 13 19 56.6 -0.1
SNR=1.0
ORIF eSg Sg 13 20 30.1 +0.3
15nm,0.2s,SNR=1.0
AVF Avril sur Loir 2.56 259 ePn Pn 13 19 49.9 +1.2
SNR=1.0
AVF Avril sur Loir 2.56 259 eP Pb 13 19 52.2 -1.2
AVF Avril sur Loir 2.56 259 ePg Pg 13 19 57.4 +0.6
AVF eSn Sn 13 20 18.9 -0.8
SNR=1.0
AVF eSg Sg 13 20 30.0 0.0
18nm,0.2s,SNR=1.0
AVF Avril sur Loir 2.56 259 ePn Pn 13 19 49.9 +1.2
SNR=1.0
AVF Avril sur Loir 2.56 259 eP Pb 13 19 52.2 -1.2
AVF Avril sur Loir 2.56 259 ePg Pg 13 19 57.4 +0.6
AVF eSn Sn 13 20 18.9 -0.8
SNR=1.0
AVF eSg Sg 13 20 30.0 0.0
8.9nm,0.2s,SNR=1.0
MBDF Montbardon 2.63 184 ePg Pg 13 19 58.5 +0.5
SNR=1.0
MBDF eSg Sg 13 20 32.3 +0.2
18nm,0.5s
MBDF Montbardon 2.63 184 ePg Pg 13 19 58.5 +0.5
SNR=1.0
MBDF eSg Sg 13 20 32.3 +0.2
9.1nm,0.5s
MOTA Moosalm 2.78 89 ⇑iPg Pg 13 20 01.8 +0.8
MOTA ⇓iSn Sn 13 20 26.4 +1.1
MOTA Moosalm 2.78 89 Pg Pg 13 20 01.8 +0.8
MOTA Sn Sn 13 20 26.4 +1.1
BGF Bois d'Agland 2.96 256 ePn Pn 13 19 54.9 +0.7
BGF Bois d'Agland 2.96 256 eP Pb 13 19 57.8 -2.4
BGF Bois d'Agland 2.96 256 ePg Pg 13 20 04.5 +0.1
BGF eSn Sn 13 20 29.6 +0.1
SNR=1.0
BGF eSg Sg 13 20 42.8 0.0
80nm,0.3s,SNR=1.0
BGF Bois d'Agland 2.96 256 ePn Pn 13 19 54.9 +0.7
BGF Bois d'Agland 2.96 256 eP Pb 13 19 57.8 -2.4
BGF Bois d'Agland 2.96 256 ePg Pg 13 20 04.5 +0.1
BGF eSn Sn 13 20 29.6 +0.1
SNR=1.0
BGF eSg Sg 13 20 42.8 0.0
40nm,0.3s,SNR=1.0
AGO Saint Agoulin 2.97 246 Pn Pn 13 19 55.2 +0.8
AGO Saint Agoulin 2.97 246 Pg Pg 13 20 05.0 +0.4
AGO Saint Agoulin 2.97 246 Pn Pn 13 19 55.2 +0.8
AGO Saint Agoulin 2.97 246 Pg Pg 13 20 05.0 +0.4
VIVF Saint-Julien-l 2.98 214 ePn Pn 13 19 54.8 +0.3
SNR=1.0
VIVF Saint-Julien-l 2.98 214 ePg Pg 13 20 04.6 -0.1
VIVF eSg Sg 13 20 42.7 -0.6
37nm,0.3s,SNR=1.0
VIVF Saint-Julien-l 2.98 214 ePn Pn 13 19 54.8 +0.3
SNR=1.0
VIVF Saint-Julien-l 2.98 214 ePg Pg 13 20 04.6 -0.1
VIVF eSg Sg 13 20 42.7 -0.6
18nm,0.3s,SNR=1.0
HYF Humbligny 2.98 270 ePg Pg 13 20 04.2 -0.5
HYF eSg Sg 13 20 43.5 +0.2
HYF Humbligny 2.98 270 ePg Pg 13 20 04.2 -0.5
HYF eSg Sg 13 20 43.5 +0.2
FUR Furstenfeldbru 2.99 73 eSg Sg 13 20 43.4 -0.3
FUR Furstenfeldbru 2.99 73 Sg Sg 13 20 43.4 -0.3
TNS Taunus Mts 3.03 18 eSg Sg 13 20 44.7 -0.3
TNS Taunus Mts 3.03 18 Sg Sg 13 20 44.7 -0.3
GIVF Givet 3.12 333 eP Pn 13 19 59.0 +2.7
GIVF Givet 3.12 333 ePg Pg 13 20 06.3 -1.1
GIVF eSg Sg 13 20 45.4 -2.3
27nm,0.4s,SNR=1.0
GIVF Givet 3.12 333 eP Pn 13 19 59.0 +2.7
GIVF Givet 3.12 333 ePg Pg 13 20 06.3 -1.1
GIVF eSg Sg 13 20 45.4 -2.3
13nm,0.4s,SNR=1.0
PYM Petit Puy Mans 3.19 241 Pn Pn 13 19 57.3 -0.2
PYM Petit Puy Mans 3.19 241 Pg Pg 13 20 09.4 +0.5
PYM Petit Puy Mans 3.19 241 Pn Pn 13 19 57.3 -0.2
PYM Petit Puy Mans 3.19 241 Pg Pg 13 20 09.4 +0.5
BAIF Baives 3.29 327 ePg Pg 13 20 09.2 -1.5
BAIF eSg Sg 13 20 51.4 -1.9
7.3nm,0.3s
BAIF Baives 3.29 327 ePg Pg 13 20 09.2 -1.5
BAIF eSg Sg 13 20 51.4 -1.9
3.7nm,0.3s
LBL Lubilhac 3.36 232 Pn Pn 13 19 59.9 +0.1
LBL Lubilhac 3.36 232 Pg Pg 13 20 12.4 +0.3
LBL Lubilhac 3.36 232 Pn Pn 13 19 59.9 +0.1
LBL Lubilhac 3.36 232 Pg Pg 13 20 12.4 +0.3
TCF Toulx Ste Croi 3.46 254 ePn Pn 13 20 01.6 +0.4
SNR=1.0
TCF Toulx Ste Croi 3.46 254 ePg Pg 13 20 13.9 -0.1
TCF eSn Sn 13 20 40.8 -1.2
SNR=1.0
TCF eSg Sg 13 20 58.0 -0.9
9.7nm,0.2s,SNR=1.0
TCF Toulx Ste Croi 3.46 254 ePn Pn 13 20 01.6 +0.4
SNR=1.0
TCF Toulx Ste Croi 3.46 254 ePg Pg 13 20 13.9 -0.1
TCF eSn Sn 13 20 40.8 -1.2
SNR=1.0
TCF eSg Sg 13 20 58.0 -0.9
4.8nm,0.2s,SNR=1.0
FRF La Foret Royal 3.80 184 eP Pn 13 20 09.6 +3.9
FRF eSn Sn 13 20 49.1 -1.0
6.5nm,0.4s,SNR=1.0
FRF La Foret Royal 3.80 184 eP Pn 13 20 09.6 +3.9
FRF eSn Sn 13 20 49.1 -1.0
3.2nm,0.4s,SNR=1.0
LASF Ste Croix 3.95 215 ePn Pn 13 20 08.5 +0.7
SNR=1.0
LASF Ste Croix 3.95 215 ePg Pg 13 20 23.2 -0.1
LASF eSg Sg 13 21 12.7 -1.8
16nm,0.5s,SNR=1.0
LASF Ste Croix 3.95 215 ePn Pn 13 20 08.5 +0.7
SNR=1.0
LASF Ste Croix 3.95 215 ePg Pg 13 20 23.2 -0.1
LASF eSg Sg 13 21 12.7 -1.8
8.1nm,0.5s,SNR=1.0
LMR La Mourre 4.03 185 eSn Sn 13 20 54.6 -1.2
4.1nm,0.3s,SNR=1.0
LMR La Mourre 4.03 185 eSn Sn 13 20 54.6 -1.2
2.0nm,0.3s,SNR=1.0
CAF Calviac 4.21 237 eSg Sn 13 20 59.0 -1.3
CAF eSn Sb 13 21 01.7 -10
14nm,0.2s,SNR=1.0
LDF La Druitiere 4.95 287 eSg Sg 13 21 44.8 -1.8
22nm,0.6s,SNR=1.0
LDF La Druitiere 4.95 287 eSg Sg 13 21 44.8 -1.8
11nm,0.6s,SNR=1.0
MFF Saint Martin d 4.96 264 eSg Sg 13 21 44.4 -2.4
5.2nm,0.2s
MFF Saint Martin d 4.96 264 eSg Sg 13 21 44.4 -2.4
2.6nm,0.2s
FLN La Foliniere 5.22 288 ePn Pn 13 20 26.4 +1.1
FLN eSg Sg 13 21 52.4 -2.8
6.8nm,0.3s
FLN La Foliniere 5.22 288 ePn Pn 13 20 26.4 +1.1
FLN eSg Sg 13 21 52.4 -2.8
3.4nm,0.3s
MTLF Montolieu 5.24 222 ePn Pn 13 20 26.0 +0.4
MTLF Montolieu 5.24 222 ePg Pg 13 20 46.5 -1.5
MTLF eSg Sg 13 21 54.1 -1.8
4.4nm,0.4s,SNR=1.0
MTLF Montolieu 5.24 222 ePn Pn 13 20 26.0 +0.4
MTLF Montolieu 5.24 222 ePg Pg 13 20 46.5 -1.5
MTLF eSg Sg 13 21 54.1 -1.8
2.2nm,0.4s,SNR=1.0
BRG Berggiesshubel 5.76 50 SG Sg 13 22 12.7 +0.4
2.8nm,0.6s

IDC 20 13:42:23.9±1.5,30°35S×177°17W,h0km,Error ellipse: s-maj=183.3km s-min=38.4km az=60.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.27**	**329**	Pn	Pn	13 42 48.7	
	324nm,0.3s,baz=90,slow=19,SNR=12						
RAO				Sn	Sn	13 43 01.3	
	2µm,0.3s,baz=147,slow=22,SNR=16						
MKAR	**Makanchi Array**	**118.28**	**310**	PKP	PKP	14 01 11.7	
	0.6nm,0.9s,baz=223,slow=2.3,SNR=5.5						
FINES	**FINESS Array B**	**145.34**	**341**	PKPbc	PKPbc	14 02 02.4	
	4.4nm,0.6s,baz=50,slow=4.3,SNR=21						
KBZ	**Khabaz**	**145.67**	**304**	PKPbc	PKPbc	14 02 04.7	
	6.0nm,1.1s,baz=180,slow=5.1,SNR=11						
NOA	**NORSAR Array B**	**148.80**	**352**	PKPbc	PKPbc	14 02 12.2	
	0.6nm,0.6s,baz=14,slow=4.3,SNR=3.7						
AKASG	**Malin Array Be**	**151.69**	**323**	PKPbc	PKPbc	14 02 19.4	
	1.0nm,0.4s,baz=48,slow=2.8,SNR=4.6						

*NEIC **20** 13:42:25.7±1.0,30°.63S×177°.48W,h10km,mb4.9/6,Error ellipse: s-maj=23.5km s-min=14.3km az=64.0*
*IDC **20** 13:42:26.9±0.9,31°.20S×177°.82W,h0km,mb4.3/9, mb1 4.5/9,mb1mx4.3/20,mbtmp4.3/9,MS3.9/6,Ms1 3.9/6, ms1mx3.5/30,Error ellipse: s-maj=28.8km s-min=26.0km az=177.0*
*ISCJB **20** 13:42:30.4±0.8,31°.50S±0°.08×177°.9W±0°.1,h35km, mb4.5/13,MS3.9/5,Error ellipse: s-maj=16.7km s-min=10.4km az=19.4*

ISC 20 13:42:32.2±0.7,31°.44S±0°.09×177°.8W±0°.1,h35km,n50, σ1§92/46,mb4.6/13,MS3.9/5,1C,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.18**	**358**	ePn	Pn	13 42 50.8	-15
URZ	**Urewera**	**7.97**	**210**	Pn	Pn	13 44 21.8	-3.7
URZ				Sn	**Sn**	**13 45 53.1**	**-1.3**
URZ	**Urewera**	**7.97**	**210**	Pn	Pn	13 44 21.8	-3.7
	0.5nm,0.3s,baz=137,slow=22,SNR=12						
URZ				Sn	**Sn**	**13 45 53.1**	**-1.3**
	11nm,0.3s,baz=173,slow=16,SNR=20						
OUZ	**Omahuta**	**8.10**	**240**	eP	**Pn**	**13 44 28.8**	**+1.6**
RPZ	**Rata Peaks**	**15.07**	**212**	Pn	**Pn**	**13 45 59.7**	**-2.7**
RPZ				Sn	Sn	13 48 31.0	-17
RPZ	**Rata Peaks**	**15.07**	**212**	Pn	**Pn**	**13 45 59.7**	**-2.7**
	0.7nm,0.3s,baz=18,slow=3.2,SNR=2.9						
RPZ				Sn	Sn	13 48 31.0	-17
	0.4nm,0.3s,baz=270,slow=5.1,SNR=2.8						
DZM	**Mont Dzumac**	**16.84**	**300**	eLR	LR	13 50 23.2	
	658nm,24.9s						
DZM	**Mont Dzumac**	**16.84**	**300**	Pn	**P**	**13 46 26.8**	**-0.4**
DZM	**Mont Dzumac**	**16.84**	**300**	Pn	**P**	**13 46 26.8**	**-0.4**
	0.1nm,0.3s,baz=114,slow=19,SNR=1.8						
DZM				LR	LR	13 51 28.0	
	comp=Z,418nm,21.6s,baz=172,slow=32						
TBI	**Tubuai**	**26.40**	**79**	eLR	LR	13 54 29.5	
	168nm,23.0s						
TBI				eT	T	14 14 46.0	
	12nm,0.4s						
PAE	**Paea**	**29.03**	**68**	eT	T	14 17 54.3	
	3.6nm,0.3s						
PPT2	**Papeete2**	**29.07**	**68**	eLR	LR	13 55 40.8	
	132nm,21.2s,baz=229						
PPT	**Papeete**	**29.09**	**68**	LR	LR	13 57 51.3	
	comp=Z,168nm,20.2s,baz=152,slow=32						
HNR	**Honiara**	**30.09**	**312**	LR	LR	13 58 36.5	
	comp=Z,127nm,20.0s,baz=185,slow=32						
CTA	**Charters Tower**	**34.11**	**281**	P	**P**	**13 49 13.2**	**-0.5**
CTA	**Charters Tower**	**34.11**	**281**	P	**P**	**13 49 13.2**	**-0.5**
	14nm,0.9s,baz=99,slow=11,SNR=13						
CTA				LR	LR	14 02 14.4	
	comp=Z,338nm,18.1s,baz=79,slow=35						
CTAO	**Charters Tower**	**34.11**	**281**	eP	**P**	**13 49 12.8**	**-1.0**
	13nm,0.8s						
STKA	**Stephens Creek**	**34.39**	**258**	eP	**P**	**13 49 17.1**	**+1.0**
	0.7nm,0.6s						
STKA	**Stephens Creek**	**34.39**	**258**	P	**P**	**13 49 16.8**	**+0.7**
	5.3nm,0.7s,baz=82,slow=8.9,SNR=12						
STKA				LR	LR	14 02 15.3	
	comp=Z,207nm,18.2s,baz=26,slow=34						
BBOO	**Buckleboo**	**38.83**	**255**	eP	**P**	**13 49 53.3**	**-0.6**
	110nm,0.7s						
AS31	**Alice Springs**	**43.20**	**268**	eP	**P**	**13 50 30.7**	**+0.7**
ASAR	**Alice Springs**	**43.20**	**268**	P	**P**	**13 50 29.9**	**-0.1**
ASAR				ScP	**ScP**	**13 56 12.6**	**+5.0**
ASAR	**Alice Springs**	**43.20**	**268**	P	**P**	**13 50 29.9**	**-0.1**
	4.6nm,0.6s,baz=105,slow=7.2,SNR=49						
ASAR				ScP	**ScP**	**13 56 12.6**	**+5.0**
	1.7nm,0.8s,baz=116,slow=4.2,SNR=11						
WRAB	**Tennant Creek**	**44.28**	**273**	eP	**P**	**13 50 37.6**	**-1.0**
	13nm,0.9s						
WRA	**Warramunga Arr**	**44.28**	**273**	P	**P**	**13 50 37.7**	**-1.0**
WRA				ScP	**ScP**	**13 56 17.1**	**+5.0**
WRA	**Warramunga Arr**	**44.28**	**273**	P	**P**	**13 50 37.7**	**-1.0**
	5.9nm,0.6s,baz=110,slow=8.1,SNR=136						
WRA				ScP	**ScP**	**13 56 17.1**	**+5.0**
	1.5nm,0.9s,baz=128,slow=4.8,SNR=6.3						
SBA	**Scott Base**	**47.02**	**184**	eP	P	13 51 04.6	+5.1
FITZ	**Fitzroy Crossi**	**52.50**	**271**	eP	**P**	**13 51 41.6**	**-0.4**
	6.6nm,0.9s						
QSPA	**South Pole Qui**	**58.68**	**180**	eP	**P**	**13 52 27.7**	**+1.8**
	22nm,1.1s						
QSPA	**South Pole Qui**	**58.68**	**180**	P	**P**	**13 52 27.4**	**+1.6**
	3.2nm,0.9s,baz=19,slow=5.0,SNR=6.2						
SYO	**Syowa Base**	**76.14**	**193**	⇑eP	P	13 54 21.2	+5.2
SNAA	**Sanae**	**77.12**	**178**	eP	**P**	**13 54 22.9**	**+1.2**
	9.3nm,1.2s						
MJAR	**Matsushiro Arr**	**79.17**	**325**	P	**P**	**13 54 32.2**	**-1.1**
MJAR	**Matsushiro Arr**	**79.17**	**325**	P	**P**	**13 54 32.2**	**-1.1**
	0.9nm,0.8s,baz=161,slow=5.2,SNR=4.7						
KSRS	**Korea Array**	**85.22**	**320**	P	**P**	**13 55 04.3**	**-0.6**
	0.9nm,0.9s,baz=146,slow=4.4,SNR=4.8						
KSAR	**Wonju Array Be**	**85.24**	**320**	P	**P**	**13 55 04.3**	**-0.7**
USRK	**Ussuriysk Arra**	**88.10**	**326**	P	**P**	**13 55 18.1**	**-0.7**
	0.5nm,0.3s,baz=101,slow=6.0,SNR=4.8						
NVAR	**Mina Array Bea**	**88.91**	**43**	P	**P**	**13 55 21.9**	**-1.2**
NVAR	**Mina Array Bea**	**88.91**	**43**	P	**P**	**13 55 21.9**	**-1.2**
	0.7nm,0.7s,baz=215,slow=7.6,SNR=4.8						
CPUP	**Villa Florida**	**99.23**	**128**	LR	LR	14 37 11.1	
	comp=Z,103nm,18.5s,baz=1.0,slow=33						
KBZ	**Khabaz**	**145.79**	**303**	PKPbc	**PKPdf**	**14 02 06.8**	**-0.1**
KBZ	**Khabaz**	**145.79**	**303**	PKPbc	**PKPdf**	**14 02 06.8**	**-0.1**
	6.0nm,1.1s,baz=178,slow=1.0,SNR=13						
FINES	**FINESS Array B**	**146.16**	**340**	PKPbc	**PKPdf**	**14 02 07.3**	**+0.4**
FINES	**FINESS Array B**	**146.16**	**340**	PKPbc	**PKPdf**	**14 02 07.3**	**+0.4**
	7.6nm,0.8s,baz=54,slow=3.6,SNR=16						
NB2	**NORSAR Subarra**	**149.79**	**351**	PKP	**PKPdf**	**14 02 11.8**	**-1.2**
	comp=Z,2.9nm,1.0s,baz=11,slow=4.1						
NACGM	**Naroch**	**150.75**	**330**	*e*	**PKPbc**	**14 02 18.0**	**-2.1**
BRTR	**Keskin Array B**	**153.20**	**297**	PKPbc	**PKPbc**	**14 02 28.1**	**+1.7**
BRTR				PKPab	**PKPab**	**14 02 36.9**	**-1.4**
BRTR	**Keskin Array B**	**153.20**	**297**	PKPbc	**PKPbc**	**14 02 28.1**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=78,slow=1.8,SNR=6.3						
BRTR				PKPab	**PKPab**	**14 02 36.9**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=72,slow=2.3,SNR=7.1						
TORD	**Torodi Ar. Bea**	**161.79**	**179**	PKPab	**PKPab**	**14 03 15.7**	**+0.2**
TORD	**Torodi Ar. Bea**	**161.79**	**179**	PKPab	**PKPab**	**14 03 15.7**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=168,slow=3.5,SNR=3.4						

IDC 20 13:49:03.1±3.0,31°.68S×177°.37W,h0km,mb4.0/3, mb1 4.1/4,mb1mx3.9/19,mbtmp4.0/4,ML3.0/1,Error ellipse: s-maj=70.2km s-min=35.6km az=120.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.98**	**213**	Pn	Pn	13 50 59.8	-0.5
	0.2nm,0.3s,baz=263,slow=2.7,SNR=5.8						
URZ				Sn	Sn	13 52 30.8	-0.5

2.3nm,0.3s,baz=178,slow=15,SNR=11
STKA Stephens Creek 34.73 259 P P 13 55 56.2 +1.1
1.4nm,0.7s,baz=111,slow=11,SNR=3.6
ASAR Alice Springs 43.59 268 P P 13 57 09.2 -0.1
1.5nm,0.7s,baz=106,slow=7.6,SNR=14
WRA Warramunga Arr 44.69 273 P P 13 57 17.4 -0.7
1.5nm,0.5s,baz=111,slow=8.1,SNR=35
FINES FINESS Array B 146.52 340 PKPbc PKPdf 14 08 44.8 +0.6
1.7nm,0.6s,baz=36,slow=3.0,SNR=8.0

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*ISCJB **20** 14:04:05.4±1.0, 18°.33S±0'.05×69°.00W±0'.06, h118km±10km, mb4.5/44, Error ellipse: s-maj=9.4km s-min=8.2km az=36.5*
*BJI **20** 14:04:07.7, 18°.50S×68°.90W, h129km, mB4.6/1*
*IDC **20** 14:04:08.5±0.4, 18°.36S×68°.98W, h132km±3km, mb4.3/16, mb1 4.5/18, mb1mx4.3/24, mbtmp4.3/18, Error ellipse: s-maj=13.3km s-min=10.5km az=38.0*
*NEIC **20** 14:04:08.1±0.2, 18°.42S×68°.94W, mb4.5/32, Error ellipse: s-maj=7.3km s-min=5.0km az=54.0*
ISC 20 14:04:08.0±0.4, 18°.43S±0'.06×68°.97W±0'.06, h132km±3km, h132km:pP-P, n366, σ0s86/409, mb4.5/44, 125C-136D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LPAZ	**La Paz**	**2.28**	**21**	*e*Pn		**Pn**	**14 04 48.6**	**+2.4**
LPAZ				S		Sn	14 05 05.1	-10
LPAZ	**La Paz**	**2.28**	**21**	P		**Pn**	**14 04 48.5**	**+2.3**
	47nm,0.3s,baz=210,slow=6.1,SNR=1082							
LPAZ				S		Sn	14 05 05.1	-10
	64nm,0.3s,baz=204,slow=7.5,SNR=14							
LVC	**Limon Verde**	**4.16**	**179**	*e*Pn		**Pn**	**14 05 09.9**	**-0.2**
SIV	**San Ignacio**	**7.93**	**73**	P		**Pn**	**14 06 00.5**	**-0.1**
SIV				S		**Sn**	**14 07 29.1**	**+0.2**
SIV	**San Ignacio**	**7.93**	**73**	P		**Pn**	**14 06 00.5**	**-0.1**
	20nm,0.3s,baz=268,slow=10,SNR=124							
SIV				S		**Sn**	**14 07 29.1**	**+0.2**
	baz=356,slow=24,SNR=6.5							
NNA	**Nana**	**9.94**	**309**	*e*P		Pn	14 06 22.8	-4.8
	23nm,0.4s							
NNA				S		Sn	14 08 03.7	-14
NNA	**Nana**	**9.94**	**309**	P		Pn	14 06 23.3	-4.3
	11nm,0.3s,baz=136,slow=12,SNR=15							
NNA				S		Sn	14 08 03.7	-14
	3.7nm,0.3s,baz=147,slow=15,SNR=2.9							
SAML	**Samuel**	**10.97**	**32**	*e*P		**Pn**	**14 06 39.5**	**-1.9**
	8.2nm,0.6s							
CFAA	**Coronel Fontan**	**13.13**	**177**	P		**Pn**	**14 07 09.9**	**+0.4**
CFAA	**Coronel Fontan**	**13.13**	**177**	P		**Pn**	**14 07 09.9**	**+0.4**
	0.1nm,0.3s,baz=360,slow=12,SNR=6.4							
CPUP	**Villa Florida**	**13.32**	**128**	P		**Pn**	**14 07 11.4**	**-0.7**
CPUP	**Villa Florida**	**13.32**	**128**	P		**Pn**	**14 07 11.4**	**-0.7**
	2.4nm,0.3s,baz=291,slow=12,SNR=13							
BDFB	**Brasilia**	**20.23**	**85**	P		**P**	**14 08 33.3**	**+0.3**
BDFB	**Brasilia**	**20.23**	**85**	P		**P**	**14 08 33.3**	**+0.3**
	113nm,0.4s,baz=258,slow=9.7,SNR=49							
SPB	**Sao Paulo**	**20.74**	**108**	*e*P		**P**	**14 08 37.5**	**-0.9**
	30nm,0.4s							
OTAV	**Otavalo**	**20.76**	**332**	*e*P		**P**	**14 08 40.9**	**+1.8**
	6.7nm,0.6s							
PLCA	**Paso Flores**	**22.27**	**183**	P		**P**	**14 08 54.2**	**-0.1**
PLCA	**Paso Flores**	**22.27**	**183**	P		**P**	**14 08 54.2**	**-0.1**
	10.0nm,1.2s,baz=5.3,slow=13,SNR=4.8							
CAM4	**Nova Friburgo**	**25.04**	**103**	↑*i*P		**P**	**14 09 19.0**	**-1.4**
CAM4				*i*			14 09 20.7	
CAM4				*i*			14 09 26.7	
CAM4				*i*			14 09 33.8	
CAM4				*i*			14 09 40.1	
CAM4				*i*			14 10 06.9	
CAM4				*i*			14 10 30.9	
RCBR	**Riachuelo**	**34.59**	**73**	P		**P**	**14 10 45.2**	**+0.5**
RCBR	**Riachuelo**	**34.59**	**73**	P		**P**	**14 10 45.2**	**+0.5**
	13nm,0.9s,baz=246,slow=11,SNR=9.2							
TEIG	**Tepich**	**42.83**	**333**	P		**P**	**14 11 52.3**	**-0.8**
TEIG	**Tepich**	**42.83**	**333**	P		**P**	**14 11 52.3**	**-0.8**
	7.6nm,0.5s,baz=152,slow=5.9,SNR=7.4							
KMSC	**Kings Mountain**	**54.56**	**348**	↓P		**P**	**14 13 22.4**	**-0.1**
	baz=55							
TKL	**Tuckaleechee C**	**55.59**	**345**	P		**P**	**14 13 28.3**	**-1.6**
TKL	**Tuckaleechee C**	**55.59**	**345**	P		**P**	**14 13 28.3**	**-1.6**
	6.2nm,0.8s,baz=156,slow=12,SNR=3.6							
732A	**Laxson Ranch,**	**55.64**	**327**	↑P		**P**	**14 13 30.0**	**-0.4**
	baz=56							
632A	**Uvalde**	**56.17**	**327**	↓P		**P**	**14 13 34.1**	**-0.1**
	baz=56,SNR=5.2							
631A	**Perdido Creek**	**56.50**	**327**	↓P		**P**	**14 13 35.9**	**-0.7**
	baz=57,SNR=7.4							
532A	**Rocksprings**	**56.73**	**328**	↑P		**P**	**14 13 37.9**	**-0.4**
	baz=57							
JCT	**Junction City**	**56.97**	**328**	*e*P		**P**	**14 13 39.1**	**-0.8**
	4.8nm,0.7s							
JCT	**Junction City**	**56.97**	**328**	↑P		**P**	**14 13 39.4**	**-0.4**
	baz=57							
531A	**Rocksprings**	**57.09**	**327**	↑P		**P**	**14 13 40.6**	**-0.1**
	baz=57,SNR=8.0							
WHTX	**Lake Whitney**	**57.09**	**331**	↑P		**P**	**14 13 40.5**	**-0.1**
	baz=57							
432A	**Menard**	**57.28**	**328**	↑P		**P**	**14 13 41.5**	**-0.6**
	baz=58,SNR=5.9							
530A	**J-C Ranch, Com**	**57.49**	**327**	↑P		**P**	**14 13 43.2**	**-0.4**
	baz=58,SNR=6.5							
431A	**Sonora**	**57.54**	**328**	↑P		**P**	**14 13 43.3**	**-0.6**
	baz=58,SNR=5.2							
332A	**Millersview**	**57.67**	**329**	↑P		**P**	**14 13 44.4**	**-0.4**
	baz=58,SNR=9.7							
628A	**Black Gap, Mar**	**57.80**	**325**	↓P		**P**	**14 13 45.7**	**0.0**
	baz=58,SNR=13							
529A	**Stev Forest Ra**	**57.93**	**326**	↓P		**P**	**14 13 46.4**	**-0.2**
	baz=58,SNR=14							
430A	**Baggett Ranch,**	**57.94**	**327**	↑P		**P**	**14 13 46.0**	**-0.7**
	baz=58,SNR=8.6							
331A	**San Angelo**	**57.95**	**328**	↓P		**P**	**14 13 46.1**	**-0.6**
	baz=58							
232A	**Coleman**	**58.04**	**329**	↓P		**P**	**14 13 46.9**	**-0.4**
	baz=58,SNR=7.4							
627A	**Terlingua Ranc**	**58.04**	**324**	↓P		**P**	**14 13 46.9**	**-0.6**
	baz=58,SNR=7.1							
TXAR	**Lajitas Array**	**58.11**	**324**	P		**P**	**14 13 47.4**	**-0.5**
TXAR				pP		**pP**	**14 14 18.6**	**-0.7**
TXAR	**Lajitas Array**	**58.11**	**324**	P		**P**	**14 13 47.4**	**-0.5**
	1.6nm,0.7s,baz=158,slow=8.4,SNR=15							
TXAR				pP		**pP**	**14 14 18.5**	**-0.7**
	1.1nm,0.9s,baz=145,slow=7.2,SNR=3.3							
429A	**Davenport Ranc**	**58.16**	**327**	↑P		**P**	**14 13 47.8**	**-0.4**
	baz=58,SNR=12							
528A	**Cox Ranch, San**	**58.27**	**325**	↑P		**P**	**14 13 48.4**	**-0.7**
	baz=58,SNR=5.0							
330A	**Mertzon**	**58.41**	**328**	↑P		**P**	**14 13 49.2**	**-0.8**
	baz=59							
626A	**Big Bend Ranch**	**58.53**	**324**	↓P		**P**	**14 13 50.8**	**-0.1**
	baz=59,SNR=11							
ABTX	**Abilene, Hawle**	**58.64**	**330**	↓P		**P**	**14 13 51.1**	**-0.4**
	baz=59							
428A	**Kincaid Ranch,**	**58.65**	**326**	↓P		**P**	**14 13 51.6**	**-0.1**
	baz=59							
WCI	**Wyandotte Cave**	**58.66**	**344**	P		**P**	**14 13 50.7**	**-0.8**
	74nm,0.6s							
527A	**Woodward Ranch**	**58.70**	**325**	↑P		**P**	**14 13 51.5**	**-0.6**
	baz=59,SNR=6.9							
230A	**Sterling City**	**58.76**	**328**	↓P		**P**	**14 13 52.3**	**-0.1**
	baz=59							
329A	**Wagon Wheel Ra**	**58.88**	**327**	↑P		**P**	**14 13 52.6**	**-0.6**
	baz=59,SNR=6.7							
526A	**Mary Lane Ranc**	**58.90**	**324**	↑P		**P**	**14 13 53.3**	**-0.2**
	baz=59,SNR=13							
SIUC	**Southern Illin**	**59.01**	**341**	*e*P		**P**	**14 13 53.3**	**-0.5**
	39nm,0.9s							
131A	**Roby**	**59.04**	**329**	↑P		**P**	**14 13 53.8**	**-0.4**
	baz=59							
Z32A	**Haskell**	**59.12**	**330**	↑P		**P**	**14 13 54.3**	**-0.5**
	baz=59							
427A	**Hayter Ranch,**	**59.13**	**325**	↑P		**P**	**14 13 54.5**	**-0.5**
	baz=59,SNR=5.4							
229A	**Bryant Ranch,**	**59.18**	**328**	↑P		**P**	**14 13 54.6**	**-0.7**
	baz=59							
328A	**Wristen Ranch,**	**59.23**	**326**	↓P		**P**	**14 13 55.2**	**-0.4**
	baz=60,SNR=6.6							
130A	**Snyder**	**59.26**	**329**	↓P		**P**	**14 13 55.2**	**-0.5**
	baz=60							
426A	**McDonald Obser**	**59.33**	**325**	↑P		**P**	**14 13 56.0**	**-0.5**
	baz=60,SNR=10							
Z31A	**Sharp Cattle R**	**59.45**	**330**	↓P		**P**	**14 13 56.6**	**-0.5**
	baz=60,SNR=6.5							
Y32A	**R-V Farms, Ver**	**59.68**	**331**	↓P		**P**	**14 13 58.8**	**+0.1**
	baz=60							
228A	**UT Block 9, Go**	**59.70**	**327**	↑P		**P**	**14 13 58.8**	**-0.1**
	baz=60							
TUL1	**Tulsa**	**59.72**	**335**	↓P		**P**	**14 13 59.2**	**+0.4**
	baz=60							
129A	**Stewart Farms,**	**59.74**	**328**	↑P		**P**	**14 13 59.1**	**0.0**
	baz=60							
326A	**Caldwell Ranch**	**59.81**	**325**	↑P		**P**	**14 13 59.2**	**-0.4**
	baz=60,SNR=11							
Z30A	**Sanderson Ranc**	**59.90**	**329**	↑P		**P**	**14 13 59.4**	**-0.7**
	baz=60,SNR=5.0							
425A	**Indio Mountain**	**59.95**	**324**	↑P		**P**	**14 14 00.2**	**-0.4**
	baz=60,SNR=14							
227A	**Bennet, Jal**	**59.98**	**326**	↓P		**P**	**14 14 00.4**	**-0.4**
	baz=60							
Y31A	**Rekieta Farm,**	**60.03**	**330**	↑P		**P**	**14 14 00.6**	**-0.4**
	baz=60							
128A	**Castleberry Fa**	**60.05**	**327**	↓P		**P**	**14 14 00.4**	**-0.8**
	baz=60							
Z29A	**Hungry Hill Ra**	**60.16**	**329**	↓P		**P**	**14 14 01.5**	**-0.5**
	baz=60							
325A	**Bean Ranch, Si**	**60.39**	**325**	↓P		**P**	**14 14 03.1**	**-0.6**
	baz=61,SNR=22							
X31A	**McDonald Ranch**	**60.45**	**331**	↓P		**P**	**14 14 03.3**	**-0.5**
	baz=61,SNR=7.1							
226B	**Tecolote Peak,**	**60.50**	**326**	↑P		**P**	**14 14 04.4**	**+0.1**
	baz=61,SNR=11							
GDL2	**Guadalupe Moun**	**60.70**	**326**	*e*P		**P**	**14 14 05.9**	**+0.2**
	2.9nm,0.6s							
X30A	**Coker Ranch, T**	**60.72**	**330**	↓P		**P**	**14 14 04.9**	**-0.8**
	baz=61							
324A	**Moseley Ranch,**	**60.72**	**324**	↑P		**P**	**14 14 04.8**	**-1.1**
	baz=61,SNR=11							
126A	**Clayton Basin,**	**60.86**	**326**	↑P		**P**	**14 14 06.6**	**-0.2**
	baz=61							
MNTX	**Cornudas Mount**	**60.86**	**325**	*e*P		**P**	**14 14 04.8**	**-1.9**
	4.9nm,1.0s							
225A	**Deer Hill, Car**	**60.87**	**325**	↓P		**P**	**14 14 06.6**	**-0.3**
	baz=61,SNR=6.3							
Z27A	**Tatum**	**60.97**	**327**	↑P		**P**	**14 14 06.5**	**-1.0**
	baz=61,SNR=7.7							
125A	**Gardner Draw,**	**61.21**	**326**	↑P		**P**	**14 14 08.3**	**-0.9**
	baz=61							
224A	**Cornudas Mount**	**61.23**	**325**	↓P		**P**	**14 14 08.3**	**-1.0**
	baz=62,SNR=17							
MSTX	**Muleshoe**	**61.26**	**328**	↑P		**P**	**14 14 08.7**	**-0.8**
	baz=62,SNR=5.9							
Z26A	**Caprock**	**61.33**	**327**	↑P		**P**	**14 14 09.3**	**-0.6**
	baz=62							
V31A	**Spring Creek L**	**61.34**	**332**	↑P		**P**	**14 14 09.6**	**-0.3**
	baz=62							
Y27A	**Causey**	**61.39**	**328**	↓P		**P**	**14 14 09.3**	**-1.0**
	baz=62,SNR=5.5							
124A	**Stringfield Ra**	**61.67**	**325**	↑P		**P**	**14 14 11.8**	**-0.5**
	baz=62,SNR=5.6							
Z25A	**Roswell**	**61.72**	**326**	↑P		**P**	**14 14 12.2**	**-0.4**
	baz=62							
Z24A	**Sheeppen Canyo**	**62.10**	**326**	↑P		**P**	**14 14 14.6**	**-0.6**
	baz=62,SNR=8.2							
Y25A	**Mesa, Roswell**	**62.21**	**327**	↑P		**P**	**14 14 14.9**	**-1.0**
	baz=62							
X26A	**CR and CF Fran**	**62.24**	**328**	↓P		**P**	**14 14 15.4**	**-0.6**
	baz=62,SNR=5.2							
W27A	**Bowe Ranch, En**	**62.28**	**329**	↓P		**P**	**14 14 15.7**	**-0.5**
	baz=62							
320A	**Kipp Ranch, An**	**62.38**	**322**	↑P		**P**	**14 14 17.2**	**+0.2**
	baz=63							
220A	**Playas Peak, P**	**62.79**	**322**	↑P		**P**	**14 14 20.0**	**+0.3**
	baz=63,SNR=8.4							
121A	**Cookes Peak, D**	**62.83**	**323**	↓P		**P**	**14 14 20.6**	**+0.6**
	baz=63,SNR=6.8							
319A	**Douglas**	**62.85**	**322**	↑P		**P**	**14 14 20.5**	**+0.4**
	baz=63,SNR=6.6							
Z22A	**Elephant Butte**	**62.91**	**325**	↓P		**P**	**14 14 20.9**	**+0.3**
	baz=63,SNR=14							
Y23A	**Lovelace Mesa,**	**62.93**	**326**	↑P		**P**	**14 14 20.3**	**-0.4**
	baz=63							
X24A	**Lazy VL Ranch,**	**63.09**	**327**	↓P		**P**	**14 14 21.1**	**-0.7**
	baz=63							
W25A	**X Bar L Ranch,**	**63.10**	**328**	↓P		**P**	**14 14 21.2**	**-0.6**
	baz=63,SNR=5.6							
V26A	**Tequesquite Ra**	**63.22**	**329**	↓P		**P**	**14 14 22.1**	**-0.4**
	baz=64,SNR=5.4							
120A	**U Bar Ranch, L**	**63.32**	**323**	↓P		**P**	**14 14 23.6**	**+0.3**
	baz=64,SNR=6.1							
Z21A	**St. Cloud Mine**	**63.34**	**324**	↓P		**P**	**14 14 24.4**	**+0.9**
	baz=64							
BNM	**Barren Site**	**63.41**	**325**	*e*P		**P**	**14 14 23.9**	**+0.1**
	3.2nm,0.9s							
Y22A	**Socorro**	**63.43**	**325**	↑P		**P**	**14 14 24.7**	**+0.7**
	baz=64							
LPM	**Los Pinos Moun**	**63.53**	**326**	*e*P		**P**	**14 14 24.9**	**+0.3**
	5.4nm,0.7s							
W24A	**Lazy 6 Ranch,**	**63.58**	**327**	↓P		**P**	**14 14 25.2**	**+0.3**
	baz=64							
V25A	**Rancho No Teng**	**63.66**	**328**	↑P		**P**	**14 14 25.3**	**-0.2**
	baz=64,SNR=8.8							
U26A	**Atchley Ranch,**	**63.67**	**329**	↑P		**P**	**14 14 25.4**	**-0.2**
	baz=64							
Z20A	**Nine Sixteen R**	**63.72**	**323**	↑P		**P**	**14 14 26.5**	**+0.6**
	baz=64,SNR=11							
T27A	**Campo**	**63.72**	**330**	↓P		**P**	**14 14 25.7**	**-0.1**
	baz=64							
S28A	**Manter**	**63.76**	**331**	↑P		**P**	**14 14 26.1**	**+0.1**
	baz=64							
Y21A	**Point of Rocks**	**63.87**	**325**	↓P		**P**	**14 14 27.9**	**+1.0**
	baz=64							
X22A	**Bernardo**	**63.88**	**325**	↑P		**P**	**14 14 27.9**	**+1.0**
	baz=64							
V24A	**Rampart Ranch,**	**63.91**	**328**	↓P		**P**	**14 14 27.0**	**-0.2**
	baz=64							
ANMO	**Albuquerque**	**63.92**	**326**	*e*P		**P**	**14 14 27.2**	**0.0**
	1.9nm,0.8s							
W23A	**Werner Place,**	**63.92**	**327**	↓P		**P**	**14 14 27.2**	**-0.1**
	baz=64							
U25A	**Circle Dot Ran**	**64.00**	**329**	↓P		**P**	**14 14 27.6**	**-0.1**
	baz=64,SNR=7.5							
Y20A	**Horse Springs,**	**64.18**	**324**	↑P		**P**	**14 14 29.4**	**+0.4**
	baz=64,SNR=5.5							
T26A	**Comanche Natio**	**64.22**	**330**	↓P		**P**	**14 14 29.1**	**-0.1**
	baz=64,SNR=6.0							
X21A	**Alamocita Cree**	**64.26**	**325**	↑P		**P**	**14 14 29.9**	**+0.5**
	baz=64,SNR=5.4							
V23A	**Ortiz Mt. (NFS**	**64.39**	**327**	↑P		**P**	**14 14 30.6**	**+0.3**
	baz=65							
S26A	**Kim**	**64.52**	**330**	↓P		**P**	**14 14 31.2**	**+0.2**
	baz=65,SNR=7.0							
T25A	**Trinidad**	**64.59**	**329**	↑P		**P**	**14 14 32.0**	**+0.4**
	baz=65							
X20A	**Quemado**	**64.72**	**324**	↓P		**P**	**14 14 33.1**	**+0.6**
	baz=65,SNR=6.3							
R27A	**Eads**	**64.74**	**331**	↓P		**P**	**14 14 32.6**	**+0.2**
	baz=65							
T24A	**Torres, Weston**	**64.85**	**329**	↑P		**P**	**14 14 34.0**	**+0.7**
	baz=65							
V22A	**San Miguel Ran**	**64.90**	**327**	↓P		**P**	**14 14 34.3**	**+0.7**
	baz=65,SNR=15							
S25A	**Robets Cordova**	**65.01**	**329**	↓P		**P**	**14 14 34.6**	**+0.3**
	baz=65							
W20A	**Ramah**	**65.15**	**325**	↓P		**P**	**14 14 35.8**	**+0.5**
	baz=65							
U22A	**Llaves**	**65.22**	**327**	↑P		**P**	**14 14 36.7**	**+1.0**
	baz=66							
S24A	**Houchin Ranch,**	**65.38**	**329**	↑P		**P**	**14 14 37.6**	**+0.9**
	baz=66							
214A	**Organ Pipe Nat**	**65.39**	**320**	↓P		**P**	**14 14 37.5**	**+0.9**
	baz=66							
X18A	**Snowflake**	**65.52**	**323**	↑P		**P**	**14 14 38.1**	**+0.5**
	baz=66							
SDCO	**Great Sand Dun**	**65.60**	**329**	*e*P		**P**	**14 14 38.3**	**+0.2**
	12nm,1.1s							
V20A	**Brimhall**	**65.64**	**325**	↓P		**P**	**14 14 38.7**	**+0.4**
	baz=66							
U21A	**Nageezi**	**65.68**	**326**	↓P		**P**	**14 14 38.9**	**+0.3**
	baz=66,SNR=7.3							
T22A	**Edith**	**65.74**	**327**	↑P		**P**	**14 14 39.6**	**+0.6**
	baz=66,SNR=5.9							
R24A	**Sanders Place,**	**65.79**	**329**	↑P		**P**	**14 14 39.7**	**+0.4**
	baz=66							
T21A	**Navajo Lake**	**66.04**	**327**	↓P		**P**	**14 14 41.9**	**+1.0**
	baz=66							
U20A	**Newcomb**	**66.10**	**326**	↑P		**P**	**14 14 41.5**	**+0.2**
	baz=66							
R23A	**Moffat**	**66.11**	**329**	↑P		**P**	**14 14 41.8**	**+0.4**
	baz=66							
S22A	**4UR Ranch, Cre**	**66.26**	**328**	↑P		**P**	**14 14 43.2**	**+0.8**
	baz=66							
X16A	**Lo Mia Camp, P**	**66.29**	**322**	↓P		**P**	**14 14 43.3**	**+0.7**
	baz=66,SNR=8.3							
P25A	**Willow Gulch B**	**66.36**	**331**	↑P		**P**	**14 14 43.6**	**+0.8**
	baz=67							
Q24A	**Divide**	**66.39**	**330**	↓P		**P**	**14 14 43.3**	**+0.1**
	baz=67							
113A	**Mohawk Valley,**	**66.53**	**320**	↓P		**P**	**14 14 44.3**	**+0.5**
	baz=67							
R22A	**Saguache, Gunn**	**66.60**	**328**	↓P		**P**	**14 14 45.6**	**+1.0**
	baz=67							
Q23A	**Hartsel**	**66.67**	**329**	↑P		**P**	**14 14 46.0**	**+1.0**
	baz=67							
S21A	**Coal Bank Pass**	**66.69**	**327**	↑P		**P**	**14 14 46.2**	**+1.1**
	baz=67							
Y14A	**Wickenburg**	**66.87**	**321**	↓P		**P**	**14 14 46.7**	**+0.6**
	baz=67,SNR=5.6							
WUAZ	**Wupatki**	**67.04**	**323**	*e*P		**P**	**14 14 47.6**	**+0.4**
	8.5nm,0.9s							
WUAZ	**Wupatki**	**67.04**	**323**	↑P		**P**	**14 14 48.1**	**+0.9**
	baz=67,SNR=7.3							
R21A	**Cimarron**	**67.10**	**328**	↑P		**P**	**14 14 48.3**	**+0.6**
	baz=67							
S20A	**Disappointment**	**67.11**	**327**	↓P		**P**	**14 14 48.5**	**+0.8**
	baz=67,SNR=9.5							
Q22A	**Crested Butte,**	**67.16**	**329**	↓P		**P**	**14 14 49.0**	**+0.9**
	baz=67							
ISCO	**Idaho Springs**	**67.27**	**330**	*e*P		**P**	**14 14 48.7**	**-0.1**
	10nm,1.3s							
ISCO	**Idaho Springs**	**67.27**	**330**	↓P		**P**	**14 14 49.0**	**+0.2**
	baz=68,SNR=5.5							
R20A	**Redvale**	**67.39**	**327**	↑P		**P**	**14 14 50.1**	**+0.7**
	baz=68							
SMCO	**Snowmass**	**67.44**	**329**	*e*P		**P**	**14 14 50.4**	**+0.4**
	8.4nm,1.0s							
SMCO				*e*pP		**pP**	**14 15 22.1**	**-0.1**
PV01	**Paradox Valley**	**67.45**	**327**	*e*P		**P**	**14 14 50.4**	**+0.5**
	281nm,0.7s							
P22A	**Eagle**	**67.66**	**329**	↑P		**P**	**14 14 51.9**	**+0.8**
	baz=68							
Y12C	**Blythe**	**67.66**	**320**	↓P		**P**	**14 14 51.8**	**+0.8**
	baz=68							
O23A	**Lake Granby, G**	**67.73**	**330**	↑P		**P**	**14 14 52.2**	**+0.6**
	baz=68							
PDMCI	**Parker Dam,Lak**	**67.80**	**321**	↓P		**P**	**14 14 52.8**	**+0.9**
	baz=68							
S18A	**Hurst Farm, Bl**	**67.86**	**326**	↓P		**P**	**14 14 53.2**	**+0.7**
	baz=68,SNR=8.5							
P21A	**Newcastle**	**67.94**	**329**	↑P		**P**	**14 14 54.2**	**+1.3**
	baz=68							
DBIC	**Dimbokro**	**67.95**	**75**	*e*P		**P**	**14 14 53.2**	**+0.1**
	37nm,0.7s							
DBIC	**Dimbokro**	**67.95**	**75**	P		**P**	**14 14 53.5**	**+0.3**
	41nm,0.7s,baz=225,slow=6.0,SNR=39							
O22A	**Kremmling**	**68.00**	**330**	↓P		**P**	**14 14 54.3**	**+1.0**
	baz=68							
BC3	**Big Chuckawall**	**68.17**	**319**	↓P		**P**	**14 14 55.0**	**+0.7**
	baz=68,SNR=5.5							
W13A	**Hualapai Mount**	**68.20**	**321**	↓P		**P**	**14 14 55.6**	**+1.0**
	baz=68,SNR=9.3							
U15A	**North Rim**	**68.21**	**323**	↑P		**P**	**14 14 55.8**	**+1.1**
	baz=68,SNR=16							
M24A	**Cheyenne**	**68.23**	**332**	↓P		**P**	**14 14 55.8**	**+1.2**
	baz=68							
MONP	**Monument Peak**	**68.27**	**318**	↑P		**P**	**14 14 55.9**	**+0.9**
	baz=68							
N23A	**Red Feather La**	**68.28**	**331**	↓P		**P**	**14 14 55.9**	**+0.9**
	baz=68							
IRM	**Iron Mountain**	**68.32**	**320**	↑P		**P**	**14 14 55.8**	**+0.7**
	baz=68,SNR=9.3							
P20A	**De Beque**	**68.39**	**328**	↑P		**P**	**14 14 56.9**	**+1.2**
	baz=69							
N22A	**Wattenberg Ran**	**68.45**	**330**	↑P		**P**	**14 14 56.7**	**+0.6**
	baz=69							
BELC	**Belle Mtn. Jos**	**68.74**	**319**	↓P		**P**	**14 14 58.8**	**+1.0**
	baz=69							
PFO	**Pinyon Flat Ob**	**68.76**	**319**	↓P		**P**	**14 14 59.1**	**+1.1**
	baz=69							
P19A	**Cripple Cowboy**	**68.79**	**328**	↓P		**P**	**14 14 58.9**	**+0.8**
	baz=69							
O20A	**White River Ci**	**68.80**	**329**	↑P		**P**	**14 14 58.7**	**+0.5**
	baz=69							
N21A	**Black Mountain**	**68.93**	**330**	↓P		**P**	**14 15 00.1**	**+1.1**
	baz=69							
GMRC	**Granite Mounta**	**69.05**	**320**	↓P		**P**	**14 15 00.8**	**+1.0**
	baz=69,SNR=8.8							
SRU	**San Rafael**	**69.19**	**326**	↑P		**P**	**14 15 01.0**	**+0.4**
	baz=69,SNR=6.6							
N20A	**Spence Gulch,**	**69.34**	**329**	↑P		**P**	**14 15 02.0**	**+0.4**
	baz=70							
O19A	**Miners Draw (B**	**69.36**	**328**	↓P		**P**	**14 15 02.0**	**+0.4**
	baz=70							
Q16A	**Castle Valley**	**69.39**	**326**	↑P		**P**	**14 15 02.4

ISA				*e*pP	**pP**	14 15 46.4	+0.1
ISA	**Isabella**	**71.36**	**319**	⇑P	**P**	14 15 14.6	+0.9
	baz=72,SNR=6.5						
H22A	**Clearmont**	**71.39**	**333**	⇓P	**P**	14 15 14.5	+0.7
	baz=72						
R11A	**Troy Canyon, C**	**71.43**	**323**	⇓P	**P**	14 15 15.2	+1.0
	baz=72,SNR=12						
PDAR	**Pinedale Array**	**71.44**	**330**	P	**P**	14 15 13.9	-0.4
PDAR				pP	**pP**	14 15 46.4	-0.5
PDAR	**Pinedale Array**	**71.44**	**330**	P	**P**	14 15 13.9	-0.4
	1.8nm,0.8s,baz=158,slow=6.1,SNR=12						
PDAR				pP	**pP**	14 15 46.4	-0.5
	1.1nm,0.8s,baz=145,slow=8.4,SNR=3.5						
MDND	**Maddock**	**71.46**	**339**	⇑P	**P**	14 15 14.6	+0.6
	baz=72						
G23A	**Biddle**	**71.47**	**334**	⇓P	**P**	14 15 14.8	+0.6
	baz=72						
HWUT	**Hardware Ranch**	**71.57**	**328**	*e*P	**P**	14 15 14.9	-0.1
	4.4nm,0.8s						
J19A	**Crowheart**	**71.58**	**330**	⇓P	**P**	14 15 15.2	+0.1
	baz=72,SNR=6.4						
F24A	**Ekalaka**	**71.60**	**335**	⇑P	**P**	14 15 15.5	+0.5
	baz=72						
CWC	**Cottonwood Cre**	**71.62**	**320**	⇑P	**P**	14 15 16.6	+1.1
	baz=72						
I20A	**Worland**	**71.68**	**331**	⇑P	**P**	14 15 16.0	+0.4
	baz=72						
H21A	**Big Horn, Sher**	**71.72**	**332**	⇑P	**P**	14 15 16.3	+0.5
	baz=72						
QSPA	**South Pole Qui**	**71.74**	**180**	P	**P**	14 15 16.6	+0.9
QSPA				pP	**pP**	14 15 49.6	+1.4
QSPA	**South Pole Qui**	**71.74**	**180**	P	**P**	14 15 16.6	+0.9
	1.0nm,0.6s,baz=173,slow=4.1,SNR=6.0						
QSPA				pP	**pP**	14 15 49.6	+1.4
	4.7nm,0.9s,baz=164,slow=4.7,SNR=5.3						
F23A	**Volborg**	**71.89**	**334**	⇑P	**P**	14 15 16.8	0.0
	baz=72,SNR=5.0						
H20A	**Greybull**	**72.04**	**332**	⇓P	**P**	14 15 17.5	-0.2
	baz=72						
E24A	**Baker**	**72.13**	**335**	⇓P	**P**	14 15 18.7	+0.6
	baz=72						
I19A	**Meeteetse**	**72.14**	**331**	⇓P	**P**	14 15 18.7	+0.3
	baz=72						
G21A	**Lodge Grass**	**72.27**	**333**	⇓P	**P**	14 15 19.4	+0.4
	baz=72						
I18A	**Diamond G Ranc**	**72.27**	**330**	⇑P	**P**	14 15 19.6	+0.4
	baz=72						
F22A	**Rosebud**	**72.30**	**334**	⇑P	**P**	14 15 19.2	+0.1
	baz=73						
ULM	**Lac du Bonnet**	**72.39**	**342**	P	**P**	14 15 18.5	-1.0
ULM				pP	**pP**	14 15 52.2	+0.2
ULM	**Lac du Bonnet**	**72.39**	**342**	P	**P**	14 15 18.5	-1.0
	7.3nm,0.6s,baz=164,slow=6.3,SNR=7.3						
ULM				pP	**pP**	14 15 52.2	+0.2
	12nm,0.6s,baz=152,slow=5.5,SNR=7.0						
H19A	**Powell**	**72.63**	**331**	⇑P	**P**	14 15 21.7	+0.5
	baz=73						
G20A	**Bridger**	**72.70**	**332**	⇓P	**P**	14 15 21.7	+0.1
	baz=73						
I17A	**Pilgrim Ck.**	**72.80**	**330**	⇓P	**P**	14 15 23.6	+1.3
	baz=73						
ELK	**Elko**	**72.89**	**325**	*e*P	**P**	14 15 23.6	+0.6
H18A	**Shoshone NF, C**	**72.94**	**331**	⇑P	**P**	14 15 23.7	+0.5
	baz=73						
NV11	**Mina Array Sit**	**72.98**	**322**	*e*P	**P**	14 15 23.6	+0.2
NVAR	**Mina Array Bea**	**73.06**	**321**	P	**P**	14 15 24.9	+0.9
NVAR				pP	**pP**	14 15 57.0	+0.4
NVAR	**Mina Array Bea**	**73.06**	**321**	P	**P**	14 15 24.9	+0.9
	3.4nm,0.8s,baz=149,slow=6.5,SNR=22						
NVAR				pP	**pP**	14 15 57.0	+0.4
	1.3nm,0.8s,baz=151,slow=7.0,SNR=3.1						
RLMT	**Red Lodge**	**73.10**	**331**	*e*P	**P**	14 15 24.5	+0.4
	2.4nm,0.5s						
F20A	**Billings**	**73.13**	**332**	⇑P	**P**	14 15 24.4	+0.3
	baz=73						
E21A	**Keefer Ranch,**	**73.25**	**334**	⇑P	**P**	14 15 25.2	+0.5
	baz=74						
D22A	**Cohagen**	**73.36**	**334**	⇑P	**P**	14 15 26.0	+0.7
	baz=74						
G18A	**Lazy EL Ranch,**	**73.39**	**331**	⇑P	**P**	14 15 26.1	+0.4
	baz=74,SNR=8.7						
C23A	**Lambert**	**73.49**	**335**	⇓P	**P**	14 15 26.6	+0.5
	baz=74						
F19A	**Roth Farm, Mol**	**73.52**	**332**	⇑P	**P**	14 15 26.8	+0.4
	baz=74,SNR=5.9						
D21A	**La Casta Ranch**	**73.63**	**334**	⇓P	**P**	14 15 27.6	+0.7
	baz=74						
DGMT	**Dagmar**	**73.65**	**336**	⇑P	**P**	14 15 27.6	+0.7
	baz=74						
E20A	**Meyer Farm, Mu**	**73.67**	**333**	⇓P	**P**	14 15 27.8	+0.6
	baz=74						
H16A	**Russell Place,**	**73.71**	**330**	⇓P	**P**	14 15 29.1	+1.5
	baz=74						
C22A	**Vida**	**73.72**	**335**	⇑P	**P**	14 15 27.8	+0.4
	baz=74						
I15A	**Monteview**	**73.78**	**329**	⇑P	**P**	14 15 29.4	+1.4
	baz=74						
F18A	**Big Timber**	**73.91**	**332**	⇓P	**P**	14 15 29.2	+0.5
	baz=74,SNR=13						
E19A	**Rath Farm, Rou**	**73.92**	**333**	⇑P	**P**	14 15 29.1	+0.4
	baz=74,SNR=13						
B23A	**Brockton**	**73.95**	**336**	⇓P	**P**	14 15 29.4	+0.7
	baz=74						
A24A	**Westby**	**73.95**	**337**	⇑P	**P**	14 15 29.8	+1.0
	baz=74						
D20A	**Manuel Ranch,**	**74.13**	**333**	⇓P	**P**	14 15 30.2	+0.4
	baz=74,SNR=5.1						
I14A	**Mackay**	**74.21**	**328**	⇓P	**P**	14 15 31.6	+1.1
	baz=74,SNR=8.2						
B22A	**Reddig Ranch S**	**74.21**	**335**	⇑P	**P**	14 15 31.3	+1.1
	baz=74						
C21A	**Desert Coulee**	**74.28**	**334**	⇓P	**P**	14 15 31.1	+0.5
	baz=74						
F17A	**Fitzpatrick Pl**	**74.33**	**331**	⇓P	**P**	14 15 32.0	+0.9
	baz=75,SNR=5.8						
G16A	**Moss Hill, Enn**	**74.36**	**330**	⇓P	**P**	14 15 32.3	+0.9
	baz=75						
HLID	**Hailey**	**74.43**	**327**	*e*P	**P**	14 15 33.1	+1.2
	11nm,1.0s						
HLID	**Hailey**	**74.43**	**327**	⇓P	**P**	14 15 33.0	+1.2
	baz=75,SNR=12						
D19A	**Cripps Ranch,**	**74.51**	**333**	⇓P	**P**	14 15 32.9	+0.9
	baz=75						
I13A	**Wildhorse Cree**	**74.53**	**328**	⇑P	**P**	14 15 33.6	+1.1
	baz=75,SNR=8.4						
C20A	**Veseth Ranch,**	**74.56**	**334**	⇓P	**P**	14 15 32.7	+0.4
	baz=75						
MCMT	**McKenzie Canyo**	**74.57**	**329**	*e*P	**P**	14 15 33.4	+0.7
	2.9nm,0.9s						
BOZ	**Bozeman (W)**	**74.59**	**330**	*e*P	**P**	14 15 32.5	-0.2
	4.7nm,1.5s						
BOZ				*e*pP	**pP**	14 16 05.3	-0.1
G15A	**Dillon**	**74.64**	**330**	⇑P	**P**	14 15 33.9	+0.9
	baz=75						
H14A	**Leadore**	**74.67**	**329**	⇓P	**P**	14 15 34.1	+0.9
	baz=75						
E17A	**Martinsdale**	**74.84**	**331**	⇓P	**P**	14 15 34.7	+0.6
	baz=75						
D18A	**Linhart Farms,**	**74.93**	**332**	⇓P	**P**	14 15 35.3	+0.7
	baz=75						
I12A	**Atlanta**	**74.97**	**327**	⇓P	**P**	14 15 35.9	+1.0
	baz=75,SNR=6.2						
C19A	**Slack Wire Ran**	**75.02**	**333**	⇓P	**P**	14 15 35.5	+0.5
	baz=75						
MFID	**Camas Ranch**	**75.06**	**327**	*e*P	**P**	14 15 36.5	+1.1
	13nm,1.0s						
MFID	**Camas Ranch**	**75.06**	**327**	⇓P	**P**	14 15 36.3	+1.0
	baz=75,SNR=8.1						
H13A	**Challis**	**75.07**	**328**	⇑P	**P**	14 15 36.6	+1.1
	baz=75,SNR=7.6						
F15A	**Butte**	**75.14**	**330**	⇓P	**P**	14 15 36.8	+1.0
	baz=75						
BEKR	**Beckworth**	**75.21**	**322**	*e*P	**P**	14 15 37.2	+0.8
	3.0nm,1.2s						
E16A	**East Helena**	**75.27**	**331**	⇓P	**P**	14 15 37.7	+1.2
	baz=76						
D17A	**Six Diamond Ra**	**75.29**	**332**	⇓P	**P**	14 15 37.2	+0.6
	baz=76						
H12A	**Diamond D Ranc**	**75.36**	**328**	⇑P	**P**	14 15 38.0	+0.9
	baz=76,SNR=5.3						
G13A	**Cobalt**	**75.44**	**329**	⇑P	**P**	14 15 38.6	+1.1
	baz=76						
D16A	**Dana Ranch, Ca**	**75.59**	**331**	⇓P	**P**	14 15 39.1	+0.8
	baz=76						
E15A	**Deer Lodge**	**75.64**	**330**	⇓P	**P**	14 15 39.5	+0.8
	baz=76						
B18A	**Beardsley Farm**	**75.84**	**333**	⇓P	**P**	14 15 40.3	+0.6
	baz=76						
F13A	**Darby**	**75.98**	**329**	⇑P	**P**	14 15 41.4	+0.8
	baz=76,SNR=9.0						
E14A	**Clinton**	**76.03**	**330**	⇑P	**P**	14 15 41.8	+0.9
	baz=76,SNR=5.5						
D15A	**Lincoln**	**76.04**	**331**	⇓P	**P**	14 15 42.0	+1.1
	baz=76						
E13A	**Victor**	**76.39**	**330**	⇓P	**P**	14 15 43.8	+0.9
	baz=77,SNR=5.4						
TOA0	**Torodi Ar. Sit**	**76.40**	**71**	*e*P	**P**	14 15 43.1	-0.3
TORD	**Torodi Ar. Bea**	**76.40**	**71**	P	**P**	14 15 43.3	-0.2
TORD	**Torodi Ar. Bea**	**76.40**	**71**	P	**P**	14 15 43.3	-0.2
	13nm,0.4s,baz=253,slow=5.5,SNR=220						
F12A	**Elk City**	**76.41**	**329**	⇓P	**P**	14 15 43.8	+0.7
	baz=77,SNR=6.2						
D14A	**Greenough**	**76.53**	**330**	⇓P	**P**	14 15 44.6	+1.0
	baz=77						
C15A	**Salmond Ranch,**	**76.62**	**331**	⇓P	**P**	14 15 45.0	+0.9
	baz=77						
A17A	**Triple J Farms**	**76.66**	**333**	⇓P	**P**	14 15 45.0	+0.7
	baz=77						
BMO	**Blue Mountains**	**76.82**	**327**	*e*P	**P**	14 15 45.8	+0.5
	11nm,0.9s						
D13A	**Huson**	**76.98**	**330**	⇑P	**P**	14 15 47.1	+0.9
	baz=77						
C13A	**Hot Springs**	**77.46**	**330**	⇑P	**P**	14 15 49.5	+0.7
	baz=78						
B13A	**Whitefish**	**77.91**	**331**	⇑P	**P**	14 15 52.2	+0.9
	baz=78						
A12A	**Yaak River Ran**	**78.86**	**331**	⇓P	**P**	14 15 57.4	+0.9
	baz=79						
SYO	**Syowa Base**	**79.38**	**160**	⇑*e*X	PcP	14 16 13.4	+6.8
VNDA	**Vanda**	**79.84**	**190**	P	**P**	14 16 03.0	+1.6
VNDA	**Vanda**	**79.84**	**190**	P	**P**	14 16 03.0	+1.6
	0.4nm,0.5s,baz=116,slow=2.4,SNR=4.3						
ESDC	**Sonseca Array**	**83.70**	**45**	P	**P**	14 16 23.6	+1.4
ESDC	**Sonseca Array**	**83.70**	**45**	P	**P**	14 16 23.6	+1.4
	1.9nm,0.5s,baz=253,slow=4.7,SNR=13						
BOSA	**Boshof**	**84.94**	**118**	P	**P**	14 16 29.5	+0.6
BOSA				pP	**pP**	14 17 02.0	-0.5
BOSA	**Boshof**	**84.94**	**118**	P	**P**	14 16 29.5	+0.6
	3.4nm,0.8s,baz=247,slow=1.8,SNR=4.1						
BOSA				pP	**pP**	14 17 02.0	-0.5
	1.5nm,0.6s,baz=175,slow=11,SNR=2.0						
YKA	**Yellowknife Ar**	**88.29**	**341**	P	**P**	14 16 44.2	+0.2
YKA				pP	**pP**	14 17 17.5	-0.4
YKA	**Yellowknife Ar**	**88.29**	**341**	P	**P**	14 16 44.2	+0.2
	4.2nm,0.5s,baz=135,slow=4.8,SNR=87						
YKA				pP	**pP**	14 17 17.5	-0.4
	4.8nm,0.7s,baz=135,slow=4.9,SNR=9.1						
ILAR	**Eielson Array**	**101.47**	**335**	PP	PP	14 21 55.6	-0.2
ILAR	**Eielson Array**	**101.47**	**335**	PP	PP	14 21 55.6	-0.2
	0.7nm,1.1s,baz=110,slow=5.7,SNR=5.8						
ASAR	**Alice Springs**	**132.57**	**209**	PKPpre	PKPpre	14 22 50.3	
ASAR				PKP	**PKPdf**	14 23 07.5	-0.3
ASAR				pPKP	pPKPdf	14 23 43.3	+0.1
ASAR				SKPbc	**SKPbc**	14 26 22.5	-0.4
ASAR	**Alice Springs**	**132.57**	**209**	PKhKP	PKPpre	14 22 50.3	
	0.2nm,0.6s,baz=150,slow=3.1,SNR=4.2						
ASAR				PKP	**PKPdf**	14 23 07.5	-0.3
	0.6nm,0.6s,baz=132,slow=1.8,SNR=14						
ASAR				pPKP	pPKPdf	14 23 43.3	+0.1
	1.9nm,1.1s,baz=135,slow=2.8,SNR=4.8						
ASAR				SKPbc	**SKPbc**	14 26 22.5	-0.4
	0.3nm,0.6s,baz=149,slow=4.0,SNR=8.1						
WRA	**Warramunga Arr**	**135.53**	**212**	PKPpre	PKPpre	14 23 02.9	
WRA				PKP	**PKPdf**	14 23 13.6	+0.2
WRA				pPKP	pPKPdf	14 23 48.8	0.0
WRA				SKPbc	**SKPbc**	14 26 32.4	-0.2
WRA	**Warramunga Arr**	**135.53**	**212**	PKhKP	PKPpre	14 23 02.9	
	0.2nm,0.5s,baz=140,slow=1.7,SNR=9.1						
WRA				PKP	**PKPdf**	14 23 13.6	+0.2
	1.0nm,0.6s,baz=135,slow=1.6,SNR=11						
WRA				pPKP	pPKPdf	14 23 48.8	0.0
	1.3nm,0.9s,baz=156,slow=1.5,SNR=4.3						
WRA				SKPbc	**SKPbc**	14 26 32.4	-0.2
	0.7nm,0.7s,baz=144,slow=2.5,SNR=5.9						
ZALV	**Zalesovo Beam**	**139.20**	**24**	PKPpre	PKPpre	14 23 15.4	
ZALV				PKP	**PKPdf**	14 23 20.2	+1.2
ZALV				pPKP	pPKPdf	14 23 56.1	+1.7
ZALV				SKPbc	**SKPbc**	14 26 42.6	+0.4
ZALV	**Zalesovo Beam**	**139.20**	**24**	PKhKP	PKPpre	14 23 15.4	
	0.4nm,0.4s,baz=170,slow=41,SNR=2.7						
ZALV				PKP	**PKPdf**	14 23 20.2	+1.2
	1.0nm,0.6s,baz=343,slow=4.6,SNR=6.3						
ZALV				pPKP	pPKPdf	14 23 56.1	+1.7
	1.7nm,0.7s,baz=263,slow=2.5,SNR=3.4						
ZALV				SKPbc	**SKPbc**	14 26 42.6	+0.4
	0.9nm,0.7s,baz=297,slow=1.0,SNR=4.1						
MKAR	**Makanchi Array**	**143.16**	**33**	PKPpre	PKPpre	14 23 23.2	
MKAR				PKP	**PKPdf**	14 23 26.0	-0.5
MKAR				pPKP	pPKPdf	14 24 01.5	-0.4
MKAR				SKPbc	**SKPbc**	14 26 52.3	-0.4
MKAR	**Makanchi Array**	**143.16**	**33**	PKhKP	PKPpre	14 23 23.2	
	0.1nm,0.4s,baz=337,slow=4.3,SNR=4.1						
MKAR				PKP	**PKPdf**	14 23 26.0	-0.5
	0.3nm,0.5s,baz=277,slow=3.8,SNR=5.1						
MKAR				pPKP	pPKPdf	14 24 01.5	-0.4
	0.6nm,0.6s,baz=336,slow=2.7,SNR=3.1						
MKAR				SKPbc	**SKPbc**	14 26 52.3	-0.4
	0.6nm,0.7s,baz=146,slow=0.5,SNR=5.7						
KSH	**Kashi**	**143.16**	**48**	*e*PKPbc	PKPab	14 23 17.1	-5.6
KSH				*es*PKP		14 23 54.8	
KSH				*e*PKS	**SKPbc**	14 26 52.3	-0.7
KSH				*e*SKS	SKSdf	14 30 17.0	-7.5
KSH				*e*SKKS		14 32 09.5	
WMQ	**Urumqi**	**147.97**	**33**	*e*PKPbc	**PKPdf**	14 23 33.8	-1.0
USRK	**Ussuriysk Arra**	**148.87**	**330**	PKPbc	**PKPbc**	14 23 41.1	+0.8
	2.9nm,0.6s,baz=213,slow=2.7,SNR=8.0						
USRK				pPKPbc	**pPKPbc**	14 24 15.1	-0.3
	9.6nm,1.0s,baz=242,slow=3.0,SNR=4.2						
MJAR	**Matsushiro Arr**	**150.04**	**313**	PKPbc	**PKPbc**	14 23 43.7	+0.3
MJAR				PKPab	**PKPab**	14 23 48.7	-0.9
MJAR				pPKPbc	**pPKPbc**	14 24 19.1	+0.5
MJAR	**Matsushiro Arr**	**150.04**	**313**	PKPbc	**PKPbc**	14 23 43.7	+0.3
	3.2nm,0.7s,baz=132,slow=0.7,SNR=13						
MJAR				PKPab	**PKPab**	14 23 48.7	-0.9
	1.2nm,0.5s,baz=41,slow=1.6,SNR=5.2						
MJAR				pPKPbc	**pPKPbc**	14 24 19.1	+0.5
	2.4nm,0.8s,baz=113,slow=1.2,SNR=4.0						
MAJO	**Matsushiro**	**150.05**	**313**	*e*PKPbc	**PKPbc**	14 23 43.8	+0.4
MAT	**Matsushiro**	**150.05**	**313**	PKP	**PKPbc**	14 23 43.6	+0.2
SONM	**Songino Array**	**150.43**	**6**	PKPbc	**PKPbc**	14 23 45.0	+0.9
SONM				pPKPbc	**pPKPbc**	14 24 20.2	+0.8
SONM	**Songino Array**	**150.43**	**6**	PKPbc	**PKPbc**	14 23 45.0	+0.9
	1.7nm,0.5s,baz=308,slow=0.9,SNR=15						
SONM				pPKPbc	**pPKPbc**	14 24 20.2	+0.8
	1.7nm,0.6s,baz=343,slow=2.4,SNR=3.8						
KSRS	**Korea Array**	**155.95**	**325**	PKPab	**PKPab**	14 24 14.9	+0.4
	0.3nm,0.4s,baz=53,slow=2.0,SNR=4.2						
KSAR	**Wonju Array Be**	**155.98**	**325**	PKPab	**PKPab**	14 24 14.8	+0.3
HHC	**Hu-ho-hao-te**	**157.65**	**359**	⇓*e*PKP	**PKPdf**	14 23 47.6	-1.5
HHC				pPKP	**PKPab**	14 24 22.3	+0.5
HHC				sPKP		14 24 36.0	
HHC				PKS	**PKSdf**	14 27 20.1	-2.8
HHC				PP	**PP**	14 28 03.1	+2.7
HHC				SKS	**SKSdf**	14 30 38.8	-4.1
HHC				SKKS	**SKKSac**	14 34 37.0	-1.0
HHC				SS	**SS**	14 47 46.4	+0.5
HHC				LR	LR		
	comp=N,440nm,18.6s						
HHC				LR	LR		
	comp=E,200nm,21.0s						
HHC				LR	LR		
	comp=Z,140nm,21.0s						
LZH	**Lanzhou**	**161.30**	**18**	*e*PKP	**PKPdf**	14 23 51.3	-2.2
LZH				pPKP	**pPKPdf**	14 24 23.8	-5.3
LZH				sPKP		14 24 39.0	
CD2	**Chengdu**	**165.94**	**27**	PKP	**PKPdf**	14 23 56.0	-1.8
CMAR	**Chiang Mai Arr**	**168.53**	**88**	PKPab	**PKPab**	14 25 10.7	+0.4
CMAR	**Chiang Mai Arr**	**168.53**	**88**	PKPab	**PKPab**	14 25 10.7	+0.4
	comp=Z,0.8nm,0.8s,baz=288,slow=6.2,SNR=3.7						
KMI	**Kunming**	**169.82**	**48**	PKP	**PKPdf**	14 23 57.9	-3.0
GYA	**Guiyang**	**171.05**	**26**	*e*PKP	**PKPdf**	14 24 01.3	-0.1
GYA				pPKP	**pPKPdf**	14 24 34.8	-2.2
GYA				PKPab	**PKPab**	14 25 21.9	+0.9
GYA				PKS	**PKSdf**	14 27 31.4	-2.6
GYA				PP	**PP**	14 29 12.3	+1.5
GYA				AMB	AMB		
	comp=Z,60nm,8.3s						

MAN 20 14:07:03,11°.23N×124°.32E,h1km,mb4.2,ML3.1,MS2.8, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.33**	**123**	*e*P	Pg	14 07 10.2	+0.8
OCLP				*e*S	Sb	14 07 16.7	-0.9
LLP	**Lapu-Lapu**	**0.97**	**201**	*e*P	Pg	14 07 21.4	-0.4
LLP				*e*S	Sb	14 07 35.8	-0.3
MSLP	**Maasin**	**1.21**	**154**	*e*P	Pg	14 07 26.2	0.0
MSLP				*e*S	Sn	14 07 45.6	+1.4
CNP	**Catarman**	**1.31**	**15**	*e*P	Pg	14 07 27.2	-1.0
RCP	**Roxas**	**1.58**	**282**	*e*P	Pn	14 07 32.5	+0.3
TBP	**Tagbilaran**	**1.60**	**197**	*e*P	Pn	14 07 32.1	-0.3
GUIM	**Jordan**	**1.81**	**251**	*e*P	Pn	14 07 35.9	+0.6

*ISCJB **20** 14:28:46.8±0.4,50°.39N±0°.03×18°.75E±0°.03,h0km,Error ellipse: s-maj=4.4km s-min=2.3km az=14.1*
*IPEC **20** 14:28:47.9±0.2,50°.42N×18°.83E,h3km±1km,ML2.6/3, Error ellipse: s-maj=2.4km s-min=0.9km az=173.0*
*IDC **20** 14:28:47.2±2.7,50°.04N×19°.14E,h0km,mb1 3.5/3, mb1mx3.2/24,mbtmp3.4/3,ML2.9/3,Error ellipse: s-maj=49.4km s-min=10.5km az=139.0*
*PRU **20** 14:28:48.9,50°.36N×18°.77E,h0km*
*CSEM **20** 14:28:48.4±0.3,50°.36N×18°.76E,h2km,ML3.4/12,Error ellipse: s-maj=6.4km s-min=3.1km az=7.0*
*WAR **20** 14:28:48.1,50°.36N×18°.87E*
*VIE **20** 14:28:50.1±0.8,49°.71N×19°.02E,h0km,mb2.2/4,ML2.8/4, Error ellipse: s-maj=5.4km s-min=5.0km az=145.0 57 km ESE of Ostrava Suspected Mining induced.*

ISC 20 14:28:47.7±0.7,50°.35N±0°.03×18°.88E±0°.02,h0km,n61, σ1s26/99,7C-7D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.51**	**239**	*e*Pg	**Pb**	14 28 59.2	-0.3
RAC				*e*Sg	**Sb**	14 29 06.8	-0.7
OJC	**Ojcow**	**0.61**	**102**	*e*Pg	**Pg**	14 29 00.4	+1.1
OJC				*e*Sg	**Sb**	14 29 09.3	-1.0
OJC	**Ojcow**	**0.61**	**102**	*e*Pg	**Pg**	14 29 00.4	+1.1
OJC				*e*Sg	**Sb**	14 29 09.3	-1.0
OKC	**Ostrava-Krasne**	**0.70**	**223**	*e*PG	**Pg**	14 29 00.9	-0.1
OKC				*e*SG	**Sg**	14 29 10.2	+0.2
	comp=Z,88nm,0.2s						
OKC	**Ostrava-Krasne**	**0.70**	**223**	Pg	**Pg**	14 29 00.9	-0.1
OKC				Sg	**Sg**	14 29 10.2	+0.2
	88nm,0.2s						
MORC	**Moravsky Berou**	**1.03**	**237**	⇓*i*P	**Pg**	14 29 07.7	+0.2
MORC	**Moravsky Berou**	**1.03**	**237**	*e*Pg	**Pg**	14 29 07.6	+0.1
MORC				*e*Sg	**Sg**	14 29 21.0	+0.2
	118nm,0.4s,baz=51						
MORC				S	**Sb**	14 29 21.8	-0.8
NIE	**Niedzica**	**1.32**	**135**	*e*Pg	**Pg**	14 29 13.5	+0.6
NIE				*e*Sg	**Sn**	14 29 32.0	+0.4
NIE	**Niedzica**	**1.32**	**135**	*e*Pg	**Pg**	14 29 13.5	+0.6
NIE				*e*Sg	**Sn**	14 29 32.0	+0.4
DPC	**Dobruska-Polom**	**1.64**	**271**	*e*PG	**Pn**	14 29 17.5	-0.2
DPC				*e*SG	**Sn**	14 29 39.1	-0.4
	comp=Z,34nm,0.4s						
DPC	**Dobruska-Polom**	**1.64**	**271**	Pg	**Pn**	14 29 17.5	-0.2
DPC				Sg	**Sn**	14 29 39.1	-0.4
	34nm,0.4s						
KSP	**Ksiaz**	**1.72**	**288**	*e*Pg	**Pn**	14 29 19.5	+0.7
KSP				*e*Sn	**Sn**	14 29 40.8	-0.7
KSP				*e*Sg	**Sg**	14 29 43.1	+0.2
KSP	**Ksiaz**	**1.72**	**288**	*e*Pg	**Pb**	14 29 20.1	0.0
KSP				*e*Sn	**Sn**	14 29 40.6	-0.9
KSP				*e*Sg	**Sg**	14 29 43.0	+0.2
VRAC	**Vranov**	**1.81**	**236**	⇑*i*P	**Pn**	14 29 21.3	+1.2
VRAC	**Vranov**	**1.81**	**236**	S	**Sb**	14 29 45.5	+0.6
VRAC	**Vranov**	**1.81**	**236**	Pg	**Pn**	14 29 21.1	+1.0
	7.6nm,0.3s,baz=48,slow=15,SNR=21						
VRAC				Lg	Lg	14 29 44.5	
	18nm,0.3s,baz=144,slow=19,SNR=16						
VRAC	**Vranov**	**1.81**	**236**	*e*Pn	**Pn**	14 29 20.1	0.0
	baz=51						
VRAC	**Vranov**	**1.81**	**236**	⇑*i*P	**Pn**	14 29 21.3	+1.2
VRAC				*e*Sg	**Sb**	14 29 45.3	+0.4
	38nm,0.3s,baz=51						
UPC	**Upice**	**1.84**	**276**	*e*PG	**Pn**	14 29 21.1	+0.6
UPC				*e*SG	**Sb**	14 29 45.8	+0.1
	comp=Z,13nm,0.4s						
UPC	**Upice**	**1.84**	**276**	Pg	**Pn**

BURAR	**Bucovina Array**	**4.99**	**121**	⇑*i*P		**Pn**	**14 30 05.9**	**+2.0**
BURAR	**Bucovina Array**	**4.99**	**121**	⇑*i*P		**Pn**	**14 30 05.9**	**+2.0**
LEGS	**Legarje**	**5.01**	**210**	*i* Pg		**Sg**	**14 31 24.2**	**-4.2**
LEGS				*i* Sg		**Sg**	**14 31 27.1**	**-1.4**
AKASG	**Malin Array Be**	**6.61**	**83**	Lg	Lg		14 32 15.7	
	comp=Z,0.8nm,0.3s,baz=277,slow=28,SNR=3.1							
DAVOX	**Davos/Dischmat**	**6.96**	**243**	Lg	Lg		14 32 30.2	
	comp=Z,0.5nm,0.3s,baz=311,slow=22,SNR=4.6							
HFS	**Hagfors**	**10.24**	**345**	Pn		**Pn**	**14 31 18.4**	**+2.8**
	comp=Z,0.1nm,0.3s,baz=182,slow=12,SNR=2.7							
FINES	**FINESS Array B**	**11.82**	**17**	Pn		**Pn**	**14 31 34.5**	**-2.8**
	comp=Z,0.3nm,0.3s,baz=200,slow=16,SNR=6.7							
ARCES	**ARCESS Array B**	**19.51**	**7**	Pn		**P**	**14 33 15.0**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=187,slow=13,SNR=4.8							

IDC 20 14:38:43.9±2.1,21°.20S×67°.72W,h147km±18km,mb3.5/4, mb1 3.7/8,mb1mx3.6/19,mbtmp3.5/8,Error ellipse: s-maj=27.4km s-min=16.1km az=67.0,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LPAZ	**La Paz**	**4.90**	**355**	P		Pn	14 40 00.1	+3.3
	13nm,0.3s,baz=174,slow=7.2,SNR=140							
LPAZ				S		Sn	14 40 53.6	0.0
	baz=346,slow=18,SNR=1.0							
SIV	**San Ignacio**	**8.15**	**52**	P		Pn	14 40 39.2	-0.3
	6.4nm,0.3s,baz=255,slow=10,SNR=35							
SIV				S		Sn	14 42 04.6	-5.7
	0.2nm,0.3s,baz=180,slow=20,SNR=3.3							
CFAA	**Coronel Fontan**	**10.37**	**182**	P		Pn	14 41 07.8	-1.1
	0.2nm,0.3s,baz=21,slow=12,SNR=11							
CFAA				S		Sn	14 42 55.2	-8.5
	0.1nm,0.3s,baz=244,slow=21,SNR=3.2							
CPUP	**Villa Florida**	**10.79**	**120**	P		Pn	14 41 16.2	+1.8
	2.4nm,0.3s,baz=265,slow=10,SNR=14							
ATAH	**Atahualpa**	**17.38**	**322**	P		P	14 42 37.1	-0.1
	0.7nm,0.3s,baz=356,slow=14,SNR=3.0							
PLCA	**Paso Flores**	**19.62**	**186**	P		Pn	14 43 03.3	-0.6
	0.2nm,0.3s,baz=2.7,slow=13,SNR=3.0							
TXAR	**Lajitas Array**	**61.03**	**324**	P		P	14 48 42.4	+0.3
	0.2nm,0.6s,baz=145,slow=8.6,SNR=2.6							
PDAR	**Pinedale Array**	**74.41**	**329**	P		P	14 50 06.0	+0.1
	0.5nm,0.8s,baz=117,slow=7.2,SNR=3.7							
TORD	**Torodi Ar. Bea**	**76.21**	**70**	P		P	14 50 15.9	-0.5
	1.7nm,0.7s,baz=256,slow=5.8,SNR=8.7							
YKA	**Yellowknife Ar**	**91.28**	**340**	P		P	14 51 32.2	+0.1
	1.0nm,0.5s,baz=132,slow=4.4,SNR=17							
ASAR	**Alice Springs**	**130.68**	**206**	PKP		PKPdf	14 57 37.5	-0.8
	0.3nm,0.6s,baz=131,slow=1.9,SNR=5.6							
WRA	**Warramunga Arr**	**133.77**	**209**	PKP		PKPdf	14 57 44.3	+0.2
	0.4nm,0.7s,baz=158,slow=1.8,SNR=5.0							
MKAR	**Makanchi Array**	**144.74**	**37**	PKP		PKPdf	14 58 02.9	-0.3
	2.5nm,0.7s,baz=310,slow=3.4,SNR=27							
SONM	**Songino Array**	**153.00**	**9**	PKPbc		PKPbc	14 58 24.1	+0.1
	0.4nm,0.5s,baz=343,slow=3.4,SNR=3.0							

*ISCJB **20** 14:43:53.6±0.6,39°.1N±0°.07×91°.93E±0°.06, h10km, mb3.5/7,Error ellipse: s-maj=11.1km s-min=5.3km az=26.1*
*IDC **20** 14:43:54.2±0.8,39°.02N×92°.09E, h0km, mb3.5/8, mb1 3.7/13,mb1mx3.6/33,mbtmp3.6/13,ML3.5/5,Error ellipse: s-maj=28.2km s-min=15.5km az=49.0*
*BJI **20** 14:43:56.8,39°.04N×92°.11E, h6km, mb3.9/2, ML3.9/9*
ISC 20 14:43:55.6±0.8,39°.17N±0°.10×92°.09E±0°.06,h10km,n17, σ1s78/21,mb3.7/7,2C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WMQ	**Urumqi**	**5.70**	**326**	*e*Pn		**Pn**	**14 45 23.3**	**+3.0**
WMQ				Sg		Sg	14 46 54.1	-4.4
WMQ				smax		smax		
	comp=N,180nm,0.8s							
WMQ				smax		smax		
	comp=E,130nm,0.6s							
GTA	**Gaotai**	**6.00**	**85**	Pn		Pn	14 45 27.1	+2.6
GTA				Pg		Pg	14 45 45.5	-4.9
GTA				Sn		**Sn**	**14 46 35.1**	**+1.8**
GTA				Sg		**Sg**	**14 47 05.0**	**-3.1**
GTA				smax		smax		
	comp=N,31nm,0.9s							
GTA				smax		smax		
	comp=E,39nm,0.7s							
MK31	**Makanchi Array**	**10.46**	**320**	Pn		**Pn**	**14 46 25.0**	**-0.6**
	comp=E,1.8nm,0.5s,baz=136,slow=14,SNR=35							
MK31				⇓Sn		**Sn**	**14 48 21.5**	**-1.3**
	comp=E,4.5nm,0.7s							
MK31				⇑Lg		Lg	14 49 21.4	
	comp=E,8.9nm,0.8s,baz=138,slow=27,SNR=5.2							
MKAR	**Makanchi Array**	**10.46**	**320**	Pn		**Pn**	**14 46 25.9**	**+0.3**
	comp=E,1.5nm,0.3s,baz=133,slow=14,SNR=23							
MKAR				Sn		**Sn**	**14 48 19.9**	**-2.9**
	comp=E,0.3nm,0.3s,baz=132,slow=20,SNR=3.8							
MKAR				Lg		Lg	14 49 25.7	
	comp=E,0.2nm,0.3s,baz=119,slow=22,SNR=3.8							
TKM2	**Tokmak 2**	**13.00**	**292**	⇑Pn		**Pn**	**14 46 59.4**	**-1.1**
	comp=E,3.6nm,0.5s							
TKM2				⇓Sn		**Sn**	**14 49 23.5**	**-1.8**
	comp=E,2.2nm,0.8s							
TKM2				⇓Lg		Lg	14 50 42.3	
	comp=E,3.9nm,0.8s							
SONM	**Songino Array**	**13.51**	**45**	Pn		Pn	14 47 10.5	+3.2
	comp=E,0.3nm,0.3s,baz=232,slow=14,SNR=3.7							
SONM				Lg		Lg	14 51 02.0	
	comp=E,0.2nm,0.3s,baz=236,slow=31,SNR=9.2							
AAK	**Ala-Archa**	**13.75**	**290**	Pn		**Pn**	**14 47 10.0**	**-0.7**
	comp=E,0.2nm,0.3s,baz=208,slow=17,SNR=2.8							
AAK				Lg		Lg	14 51 14.6	
	comp=E,0.2nm,0.3s,baz=214,slow=16,SNR=2.0							
KURBB	**Kurchatov Arra**	**14.92**	**325**	Pn		**Pn**	**14 47 22.7**	**-3.7**
	comp=E,0.0nm,0.3s,baz=135,slow=12,SNR=3.8							
KURBB				Sn		**Sn**	**14 50 11.6**	**0.0**
	comp=E,0.0nm,0.3s,baz=116,slow=28,SNR=2.9							
KURBB				Lg		Lg	14 51 55.2	
	comp=E,0.0nm,0.3s,baz=137,slow=27,SNR=4.0							
ZALV	**Zalesovo Beam**	**15.60**	**344**	Pn		**Pn**	**14 47 36.1**	**+0.9**
	comp=E,0.1nm,0.3s,baz=160,slow=10,SNR=3.7							
ZALV				Lg		Lg	14 52 07.0	
	comp=E,0.2nm,0.3s,baz=161,slow=23,SNR=3.1							
BVAR	**Borovoye Array**	**20.35**	**320**	P		**P**	**14 48 32.4**	**+0.5**
	comp=E,0.4nm,0.6s,baz=95,slow=12,SNR=2.8							
CMAR	**Chiang Mai Arr**	**21.48**	**162**	P		**P**	**14 48 43.7**	**-0.6**
	comp=E,1.2nm,0.8s,baz=339,slow=10,SNR=6.4							
BRTR	**Keskin Array B**	**44.43**	**290**	P		**P**	**14 52 07.5**	**+0.8**
	comp=E,0.7nm,0.7s,baz=92,slow=10,SNR=3.4							
ILAR	**Eielson Array**	**66.64**	**24**	P		**P**	**14 54 46.4**	**+0.6**
	comp=E,0.5nm,0.8s,baz=305,slow=4.8,SNR=5.8							
WRA	**Warramunga Arr**	**70.85**	**138**	P		**P**	**14 55 12.0**	**-0.6**
	comp=E,0.8nm,0.8s,baz=331,slow=5.6,SNR=5.3							
ASAR	**Alice Springs**	**73.73**	**140**	P		**P**	**14 55 29.4**	**-0.5**
	comp=E,0.6nm,0.7s,baz=335,slow=6.4,SNR=12							
YKA	**Yellowknife Ar**	**76.43**	**12**	P		**P**	**14 55 46.6**	**+1.8**
	comp=E,0.2nm,0.7s,baz=341,slow=5.2,SNR=4.2							
TORD	**Torodi Ar. Bea**	**82.13**	**280**	P		**P**	**14 56 17.1**	**+0.3**
	comp=E,0.8nm,1.1s,baz=45,slow=4.3,SNR=4.0							

*CSEM **20** 14:56:33.5±1.4,34°.12N×35°.51E, h2km, ML1.8,Error ellipse: s-maj=31.3km s-min=8.7km az=112.0*
*GRAL **20** 14:56:35.5±0.3,34°.04N×35°.72E, h2km±9km, MD2.6*
*NSSC **20** 14:56:37.4±2.0,34°.05N×35°.74E, h0km±9km, MD0.9, ML1.7*
ISC 20 14:56:34.4±1.3,34°.05N±0°.03×35°.65E±0°.09,h10km±7km, n13,σ1s09/24,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BHL	**Bhannes**	**0.15**	**179**	*e*P		**Pg**	**14 56 38.1**	**+0.3**
BHL				*e*S		**Sg**	**14 56 40.0**	**-0.3**
BHL	**Bhannes**	**0.15**	**179**	*e*P		**Pg**	**14 56 38.1**	**+0.3**
BHL				*e*S		**Sg**	**14 56 40.0**	**-0.3**
HWQ	**Hawqa**	**0.33**	**48**	*e*P		**Pg**	**14 56 41.0**	**-0.1**
HWQ				*e*S		**Sg**	**14 56 45.1**	**-0.4**
HWQ	**Hawqa**	**0.33**	**48**	*e*P		**Pg**	**14 56 41.0**	**-0.1**
HWQ				*e*S		**Sg**	**14 56 45.1**	**-0.4**
RCY	**Rachaya**	**0.58**	**164**	*e*P		**Pg**	**14 56 45.3**	**-0.3**
RCY	**Rachaya**	**0.58**	**164**	*e*P		**Pg**	**14 56 45.3**	**-0.3**
BRBR	**Barbar**	**0.69**	**159**	*e*P		**Pn**	**14 56 49.9**	**-0.5**
BRBR				*e*S		**Sn**	**14 57 00.5**	**-0.7**
BRBR				AML		AML	14 57 01.0	
	comp=E,50nm,0.6s							
BRBR				AML		AML	14 57 02.6	
	comp=N,31nm,0.5s							
BRBR	**Barbar**	**0.69**	**159**	*e*P		**Pn**	**14 56 49.9**	**-0.5**
	SNR=91							
BRBR				*e*S		**Sn**	**14 57 00.5**	**-0.7**
	comp=N,31nm,0.5s,SNR=59							
HAWK	**Haweek**	**0.78**	**53**	*e*P		**Pb**	**14 56 50.2**	**+0.1**
HAWK				*e*S		**Sn**	**14 57 02.0**	**-1.3**
HAWK				AML		AML	14 57 06.5	
	comp=N,22nm,0.6s							
HAWK				AML		AML	14 57 08.0	
	comp=E,29nm,0.4s							
HAWK	**Haweek**	**0.78**	**53**	*e*P		**Pb**	**14 56 50.2**	**+0.1**
	SNR=75							
HAWK				*e*S		**Sn**	**14 57 02.0**	**-1.3**
	comp=E,29nm,0.4s,SNR=59							
SLNF	**Slenfeh**	**1.61**	**17**	*e*P		**Pg**	**14 57 05.7**	**+0.4**
SLNF				*e*S		**Sg**	**14 57 29.4**	**+3.2**
SLNF				AML		AML	14 57 35.0	
	comp=N,72nm,0.4s							
SLNF				AML		AML	14 57 40.5	
	comp=E,100nm,0.4s							
SALA	**Sala**	**1.62**	**146**	*e*P		**Pg**	**14 57 06.6**	**+1.1**
SALA				*e*S		**Sg**	**14 57 27.9**	**+1.5**
SALA				AML		AML	14 57 30.3	
	comp=N,23nm,0.4s							
SALA				AML		AML	14 57 31.0	
	comp=E,2.1nm,0.5s							
SALA	**Sala**	**1.62**	**146**	*e*P		**Pg**	**14 57 06.6**	**+1.1**
	SNR=57							
SALA				*e*S		**Sg**	**14 57 27.9**	**+1.5**
	comp=E,2.1nm,0.5s,SNR=49							

*ISCJB **20** 15:04:50.8±0.7,24°.81N±0°.04×122°.17E±0°.03, h114km±5km,Error ellipse: s-maj=7.3km s-min=3.8km az=166.9*
*TAP **20** 15:04:50.1,24°.89N×122°.12E, h120km, ML3.4,C*
*JMA **20** 15:04:51.1±0.2,24°.85N×122°.21E, h116km, M2.4*
ISC 20 15:04:50.5±1.8,24°.86N±0°.07×122°.16E±0°.04, h118km±11km,n33,σ0s62/60,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EGS		**0.20**	**267**	*e*P		**Pn**	**15 05 07.4**	**+0.5**
	baz=241							
EGS				*e*S		**Sn**	**15 05 19.4**	**+0.2**
	baz=241							
TWB1	**Santiao Chiao**	**0.21**	**315**	P		**Pn**	**15 05 07.0**	**+0.1**
	baz=308							
TWB1				S		**Sn**	**15 05 18.8**	**-0.5**
	baz=308							
TWC	**Suao**	**0.37**	**229**	P		**Pn**	**15 05 07.5**	**0.0**
	baz=225							
TWC				S		**Sn**	**15 05 19.6**	**-0.8**
	baz=225							
NWF	**Wu-fen Shan**	**0.40**	**302**	P		**Pn**	**15 05 07.7**	**0.0**
	baz=294							
NWF				*e*S		**Sn**	**15 05 20.3**	**-0.5**
	baz=294							
TWE	**Neicheng**	**0.46**	**253**	P		**Pn**	**15 05 08.1**	**+0.1**
	baz=248							
TWE				*e*S		**Sn**	**15 05 21.3**	**+0.1**
	baz=248							
ENA	**Nanau**	**0.57**	**222**	P		**Pn**	**15 05 09.2**	**+0.5**
	baz=215							
ENA				S		**Sn**	**15 05 23.0**	**+0.6**
	baz=215							
ENTT	**Nioudou**	**0.58**	**248**	*i* P		**Pn**	**15 05 09.2**	**+0.4**
	baz=246							
ENTT				S		**Sn**	**15 05 23.2**	**+0.7**
	baz=246							
TWY	**Chenhua**	**0.66**	**310**	*e*P		**Pn**	**15 05 09.1**	**-0.2**
	baz=303							
TWS1	**Kuangyinshan**	**0.71**	**290**	*e*P		**Pn**	**15 05 09.6**	**-0.1**
	baz=291							
NSK	**Sanguang**	**0.75**	**256**	*i* P		**Pn**	**15 05 10.1**	**-0.1**
	baz=254							
NSK				S		**Sn**	**15 05 24.1**	**-0.8**
	baz=254							
PCYT	**Pengchaiyu**	**0.77**	**354**	P		**Pn**	**15 05 10.6**	**+0.3**
	baz=354							
NNS	**Nan Shan**	**0.82**	**240**	P		**Pn**	**15 05 11.2**	**+0.4**
	baz=239							
NNS				*e*S		**Sn**	**15 05 26.1**	**-0.1**
	baz=239							
YOJ	**Yonaguni jima**	**0.87**	**117**	P		**Pn**	**15 05 11.3**	**+0.2**
YOJ				*e*S		**Sn**	**15 05 26.5**	**-0.2**
TWD	**Chiawan**	**0.93**	**214**	*e*P		**Pn**	**15 05 12.5**	**+0.9**
	baz=224							
TWD				*e*S		**Sn**	**15 05 26.8**	**-0.8**
	baz=224							
NSTT	**Nanjuang**	**1.07**	**258**	P		**Pn**	**15 05 13.0**	**-0.1**
	baz=251							
NSTT				S		**Sn**	**15 05 29.5**	**-0.7**
	baz=251							
TWT	**Tachien**	**1.08**	**236**	*e*P		**Pn**	**15 05 14.5**	**+1.2**
	baz=235							
TWT				*e*S		**Sn**	**15 05 31.0**	**+0.4**
	baz=235							
WHF	**Hehuan Shan**	**1.08**	**229**	*e*P		**Pn**	**15 05 14.2**	**+0.6**
	baz=229							
WHF				*e*S		**Sn**	**15 05 31.0**	**0.0**
	baz=229							
ESL	**Shilin**	**1.23**	**213**	*e*P		**Pn**	**15 05 16.0**	**+1.2**
	baz=219							
ESL				*e*S		**Sn**	**15 05 31.6**	**-1.5**
	baz=219							
TWQ1	**Liyutan**	**1.36**	**248**	*e*P		**Pn**	**15 05 16.8**	**+0.7**
	baz=247							
TWQ1				*e*S		**Sn**	**15 05 35.1**	**-0.5**
	baz=247							
SMLT	**Sun Moon Lake**	**1.50**	**230**	*e*P		**Pn**	**15 05 18.5**	**+0.6**
	baz=236							
SMLT				*e*S		**Sn**	**15 05 39.4**	**+0.6**
	baz=236							
TYC	**Yuchr**	**1.52**	**232**	*e*P		**Pn**	**15 05 18.6**	**+0.7**
	baz=240							
TYC				*e*S		**Sn**	**15 05 39.6**	**+0.7**
	baz=240							
IRIF	**Iriomote-Funau**	**1.52**	**110**	P		**Pn**	**15 05 18.0**	**0.0**
IRIF				*e*S		**Sn**	**15 05 39.3**	**+0.3**
EHY	**Hungye**	**1.54**	**210**	*e*P		**Pn**	**15 05 18.6**	**+0.3**
	baz=212							
EHY				*e*S		**Sn**	**15 05 38.0**	**-1.6**
	baz=212							
TWF1	**Yuli**	**1.69**	**208**	*e*P		**Pn**	**15 05 19.6**	**-0.4**
	baz=214							
TWF1				*e*S		**Sn**	**15 05 41.0**	**-1.7**
	baz=214							
HATJ	**Hateruma jima**	**1.70**	**118**	*e*S		**Sn**	**15 05 42.5**	**-0.3**
JKRS	**Kuro-shima**	**1.80**	**110**	P		**Pn**	**15 05 21.8**	**+0.5**
JKRS				*e*S		**Sn**	**15 05 44.6**	**-0.2**
CHN5	**Tsauling**	**1.84**	**227**	P		**Pn**	**15 05 22.4**	**+0.4**
	baz=229							
CHN5				*e*S		**Sn**	**15 05 46.2**	**+0.2**
	baz=229							
JIJ	**Ishigaki jima**	**1.87**	**105**	P		**Pn**	**15 05 22.3**	**0.0**
JIJ				*e*S		**Sn**	**15 05 45.7**	**-0.8**
ELDTW	**Lidau**	**1.96**	**212**	*e*P		**Pn**	**15 05 23.7**	**+0.2**
	baz=206							
CHN4	**Tsaushan**	**2.07**	**224**	*e*P		**Pn**	**15 05 24.4**	**-0.3**
	baz=225							
WTP	**Ta-pu**	**2.13**	**222**	*e*P		**Pn**	**15 05 25.7**	**+0.1**
	baz=225							
WTP				*e*S		**Sn**	**15 05 52.5**	**+0.1**
	baz=225							
CHN1	**Nanshi**	**2.23**	**222**	*e*P		**Pn**	**15 05 26.6**	**-0.2**
	baz=225							
CHN1				*e*S		**Sn**	**15 05 54.5**	**-0.1**
	baz=225							
JTJ	**Tarama**	**2.33**	**95**	P		**Pn**	**15 05 28.6**	**+0.7**
JTJ				*e*S		**Sn**	**15 05 56.7**	**0.0**

IDC 20 15:14:09.8±1.1,4°.17N×126°.56E,h0km,mb3.6/7, mb1 3.7/7,mb1mx3.5/25,mbtmp3.6/7,1D,Error ellipse: s-maj=122.2km s-min=16.7km az=67.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**3.80**	**323**	⇓*i*P		Pb	15 15 18.9	+1.0
WRA	**Warramunga Arr**	**25.16**	**163**	P		P	15 19 36.7	-0.3
	3.0nm,1.1s,baz=344,slow=11,SNR=11							
ASAR	**Alice Springs**	**28.58**	**166**	P		P	15 20 07.9	0.0
	0.1nm,0.5s,baz=344,slow=7.4,SNR=3.4							
STKA	**Stephens Creek**	**38.60**	**159**	P		P	15 21 35.1	+0.3
	2.2nm,0.9s,baz=355,slow=11,SNR=5.7							
SONM	**Songino Array**	**46.82**	**341**	P		P	15 22 42.5	+0.9
	0.3nm,0.6s,baz=149,slow=7.3,SNR=2.8							
MKAR	**Makanchi Array**	**57.09**	**325**	P		P	15 23 58.8	+0.7
	0.3nm,0.6s,baz=128,slow=8.2,SNR=5.0							
KURBB	**Kurchatov Arra**	**61.27**	**327**	P		P	15 24 26.2	-0.7
	0.3nm,0.3s,baz=121,slow=7.2,SNR=4.8							
BVAR	**Borovoye Array**	**66.86**	**327**	P		P	15 25 02.7	-1.0
	0.4nm,0.6s,baz=119,slow=8.9,SNR=3.4							

*BJI **20** 15:18:35.5,7°.20S×68°.10E, h10km, mB4.9/22, mb4.7/35, Ms4.7/20,Ms7 4.4/21*
*IDC **20** 15:18:35.1±0.4,7°.14S×67°.99E, h0km, mb4.2/33, mb1 4.4/33,mb1mx4.3/40,mbtmp4.2/33,MS3.9/20, Ms1 4.0/20,ms1mx3.7/35,Error ellipse: s-maj=14.1km s-min=12.2km az=55.0*
*MOS **20** 15:18:35.1±0.7,7°.06S×68°.04E, h10km, mb5.1/44,Error ellipse: s-maj=9.3km s-min=5.0km az=119.8*
*NEIC **20** 15:18:36.6±0.2,7°.13S×68°.03E, h10km, mb5.0/31,Error ellipse: s-maj=6.1km s-min=5.0km az=197.0*
*ISCJB **20** 15:18:36.1±0.3,7°.13S±0°.05×68°.00E±0°.04, h17km, mb4.7/116,MS4.1/28,Error ellipse: s-maj=7.9km s-min=5.6km az=174.8*
*SZGRF **20** 15:18:42.1,7°.51S×66°.51E, h33km, mb5.0,Mid-Indian Ridge*
*DJA **20** 15:19:23.1±5.6,4°.S±15°×7°.0E±°, h182km±61km, M4.8/6, mB6.2/2, mb4.8/6,Mw(mB)5.9/2*
ISC 20 15:18:38.0±0.4,7°.13S±0°.06×68°.03E±0°.06,h17km±1km, h16km:pP-P,n429,σ0s99/481,mb4.8/116,MS4.1/28, 20C-5D,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DGAR	**Diego Garcia**	**4.40**	**94**	*e*P		**Pn**	**15 19 42.1**	**-2.0**
DGAR	**Diego Garcia**	**4.40**	**94**	*e*Pn		**Pn**	**15 19 42.1**	**-2.0**
MSEY	**Mahe Island**	**12.71**	**280**	*e*P		**Pn**	**15 21 39.9**	**+1.6**
PALK	**Pallekele**	**19.09**	**42**	LR		LR	15 28 37.7	
	comp=Z,899nm,20.2s,baz=173,slow=32							
OPO	**Ambohidratompo**	**23.25**	**239**	P		**P**	**15 23 45.4**	**+0.4**
OPO	**Ambohidratompo**	**23.25**	**239**	P		**P**	**15 23 45.4**	**+0.4**
	2.1nm,0.3s,baz=273,slow=7.0,SNR=10							
OPO				LR		LR	15 30 47.5	
	comp=Z,838nm,18.6s,baz=41,slow=32							
ABPO	**Ambohimpanom**	**23.42**	**238**	*e*P		**P**	**15 23 47.2**	**+0.5**
ABPO				pmax		pmax		
	comp=E,66nm,1.7s							
ABPO	**Ambohimpanom**	**23.42**	**238**	*e*P		**P**	**15 23 47.2**	**+0.5**
	comp=E,66nm,1.7s							
MDRS	**Chennai**	**23.45**	**31**	*ex*		x	15 23 52.2	
MDRS				*ex*		x	15 29 12.2	
MDRS				*ex*		x	15 32 45.2	
MDRS				*ex*		x	15 35 17.2	
KMBO	**Kilima Mbogo**	**31.25**	**280**	LR		LR	15 34 59.4	
	comp=Z,236nm,20.0s,baz=91,slow=32							
SISI	**Saibi**	**31.50**	**81**	P		P	15 25 08.1	+8.7
	comp=Z,547nm,0.8s,comp=Z,9μm							
CMAR	**Chiang Mai Arr**	**39.71**	**50**	P		**P**	**15 26 11.1**	**+1.2**
CMAR				PcP		**PcP**	**15 28 16.4**	**-0.1**
CMAR	**Chiang Mai Arr**	**39.71**	**50**	P		**P**	**15 26 11.1**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=238,slow=10,SNR=7.8							
CMAR				PcP		**PcP**	**15 28 16.4**	**-0.1**
	comp=Z,1.5nm,1.0s,baz=244,slow=4.8,SNR=4.1							
CMAR				LR		LR	15 40 02.3	
	comp=Z,132nm,21.7s,baz=208,slow=32							
LSZ	**Lusaka**	**39.85**	**255**	*e*P		**P**	**15 26 10.2**	**-1.0**
	comp=Z,9.7nm,1.0s							
LSZ				PcP		**PcP**	**15 28 16.8**	**-0.4**
LSZ	**Lusaka**	**39.85**	**255**	P		**P**	**15 26 11.0**	**-0.3**
	comp=Z,4.9nm,0.8s,baz=65,slow=12,SNR=9.5							
LSZ				PcP		**PcP**	**15 28 16.8**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=50,slow=9.0,SNR=3.8							
CHTO	**Chiang Mai**	**39.92**	**49**	P		**P**	**15 26 08.7**	**-2.9**
	comp=Z,8.1nm,1.4s							
CMMT	**Chiang Mai**	**39.92**	**49**	P		**P**	**15 26 09.2**	**-2.4**
PBKT	**Sadao Pong**	**40.21**	**54**	P		**P**	**15 26 11.5**	**-2.5**
QRN	**Al-Qurain**	**40.59**	**332**	*e*P		**P**	**15 26 16.8**	**-0.2**
RDF	**Al-Radifah**	**40.92**	**332**	*e*P		**P**	**15 26 19.7**	**0.0**
RDF				AMb		AMB	15 26 21.3	
	comp=Z,29nm,1.1s							
NAY	**Al-Naaiem**	**41.33**	**332**	*e*P		**P**	**15 26 22.9**	**-0.2**
NAY				AMb		AMB	15 26 23.9	
	comp=Z,21nm,1.0s							
KBL	**Kabul**	**41.45**	**1**	*e*P		**P**	**15 26 26.0**	**+1.8**
KBL				pmax		pmax		
	comp=Z,15nm,1.1s							
KBL	**Kabul**	**41.45**	**1**	*e*P		**P**	**15 26 26.0**	**+1.8**
	comp=Z,15nm,1.1s							
MIB	**Mutribah**	**41.76**	**333**	*e*P		**P**	**15 26 26.5**	**-0.1**
MIB				AMb		AMB	15 26 27.6	
	comp=Z,73nm,0.9s							
BOSA	**Boshof**	**45.63**	**237**	LR		LR	15 45 20.5	
	comp=Z,265nm,18.4s,baz=165,slow=35							
KMI	**Kunming**	**46.58**	**45**	P		**P**	**15 27 07.9**	**+2.3**
KMI				pP		**pP**	**15 27 11.0**	**+0.2**
KMI				sP		**sP**	**15 27 12.1**	**-0.8**
KMI				PcP		**PcP**	**15 28 41.8**	**+2.1**
KMI				PP		**PP**	**15 28 57.3**	**+2.0**
KMI				S		**S**	**15 33 56.8**	**+2.7**
KMI				sS		**sS**	**15 34 01.8**	**-1.0**
KMI				SS		**SS**	**15 37 16.1**	**-4.4**
KMI				pmax		pmax		
	comp=Z,8.0nm,0.5s							
KMI				pmax		pmax		
	comp=Z,43nm,3.8s							
KMI				LR		LR		
	comp=N,110nm,12.4s							
KMI				LR		LR		
	comp=E,140nm,14.2s							
KMI				LR		LR		
	comp=Z,140nm,28.4s							
KSH	**Kashi**	**46.99**	**8**	*i* P		**P**	**15 27 06.

GYA S **S** **15 34 45.5 +0.5**
GYA SS **SS** **15 38 16.4 -2.3**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,430nm,18.8s
GYA LR LR
comp=E,350nm,19.0s
GYA LR LR
comp=Z,410nm,18.5s
TKM2 Tokmak 2 50.28 7 *e*P **P** **15 27 34.3 +0.5**
TKM2 pmax pmax
comp=Z,13nm,1.3s
TKM2 Tokmak 2 50.28 7 *e*P **P** **15 27 34.3 +0.5**
comp=Z,13nm,1.3s
TKM2 Tokmak 2 50.28 7 P **P** **15 27 34.4 +0.5**
SNR=9.5
CD2 Chengdu 51.00 40 P **P** **15 27 40.8 +1.5**
CD2 pP **pP** **15 27 45.3 +0.7**
CD2 sP **sP** **15 27 47.8 +1.2**
CD2 PcP **PcP** **15 28 56.5 +1.2**
CD2 PP **PP** **15 29 38.4 +2.4**
CD2 PcS **PcS** **15 32 52.8 -0.2**
CD2 S **S** **15 34 57.4 +1.5**
CD2 sS **sS** **15 35 04.5 -0.1**
CD2 ScS **ScS** **15 37 28.5 -1.2**
CD2 SS **SS** **15 38 30.4 -0.9**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
CD2 LR LR
comp=N,250nm,23.5s
CD2 LR LR
comp=E,270nm,19.1s
CD2 LR LR
comp=Z,190nm,15.7s
GNI Garni 51.72 337 P **P** **15 27 45.3 +0.6**
GNI Garni 51.72 337 P **P** **15 27 45.3 +0.6**
comp=Z,2.9nm,0.3s,baz=164,slow=16,SNR=4.3
WMQ Urumqi 53.75 18 P **P** **15 28 00.9 +1.4**
WMQ pP **pP** **15 28 05.5 +0.7**
WMQ sP **sP** **15 28 07.9 +1.1**
WMQ PcP **PcP** **15 29 06.6 +1.2**
WMQ PP **PP** **15 30 03.5 +2.8**
WMQ PcS **PcS** **15 33 04.3 -0.2**
WMQ S **S** **15 35 33.5 +0.3**
WMQ sS **sS** **15 35 41.1 -0.9**
WMQ ScS **ScS** **15 37 46.5 -1.9**
WMQ SS **SKiKP** **15 39 13.8 +0.2**
WMQ pmax pmax
comp=Z,12nm,1.3s
WMQ pmax pmax
comp=Z,100nm,3.8s
WMQ LR LR
comp=N,370nm,18.8s
WMQ LR LR
comp=E,210nm,16.2s
WMQ LR LR
comp=Z,270nm,21.4s
LZH Lanzhou 54.58 36 *e*P **P** **15 28 08.0 +2.2**
LZH pP **pP** **15 28 12.3 +1.1**
LZH sP **sP** **15 28 15.4 +2.2**
LZH *e*S **S** **15 35 44.4 -0.6**
LZH SS **SS** **15 39 26.1 -2.0**
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,52nm,4.2s
LZH LR LR
comp=N,210nm,17.3s
LZH LR LR
comp=E,160nm,14.4s
LZH LR LR
comp=Z,310nm,18.0s
GTA Gaotai 54.86 30 *e*P **P** **15 28 08.8 +1.0**
GTA pP **pP** **15 28 13.3 +0.2**
GTA sP **sP** **15 28 16.5 +1.4**
GTA pmax pmax
comp=Z,8.0nm,1.2s
MK31 Makanchi Array 55.16 12 *e*P **P** **15 28 09.2 -0.5**
MK31 Makanchi Array 55.16 12 *e*P **P** **15 28 09.2 -0.5**
MKAR Makanchi Array 55.16 12 *ce*P **P** **15 28 09.3 -0.4**
MKAR pmax pmax
comp=Z,2.0nm,1.0s
MKAR Makanchi Array 55.16 12 P **P** **15 28 09.1 -0.5**
MKAR PcP **PcP** **15 29 11.0 +0.3**
MKAR Makanchi Array 55.16 12 P **P** **15 28 09.1 -0.5**
comp=Z,2.0nm,1.0s,baz=216,slow=12,SNR=16
MKAR PcP **PcP** **15 29 11.0 +0.3**
comp=Z,2.1nm,1.0s,baz=196,slow=4.2,SNR=5.4
MKAR LR LR 15 51 04.1
comp=Z,100nm,19.2s,baz=186,slow=35
KBZ Khabaz 55.50 338 P **P** **15 28 12.4 +0.3**
KBZ Khabaz 55.50 338 P **P** **15 28 12.3 +0.3**
KBZ Khabaz 55.50 338 P **P** **15 28 12.3 +0.3**
comp=Z,4.0nm,0.9s,baz=197,slow=3.7,SNR=10
BR131 Keskin Array S 56.42 328 *e*P **P** **15 28 18.6 -0.4**
comp=Z,1.6nm,0.9s
BRTR Keskin Array B 56.42 328 P **P** **15 28 18.6 -0.4**
BRTR Keskin Array B 56.42 328 P **P** **15 28 18.6 -0.4**
comp=Z,4.0nm,0.9s,baz=140,slow=9.7,SNR=20
BRTR LR LR 15 53 21.7
comp=Z,30nm,18.4s,baz=282,slow=37
ABKAR Akbulak array 56.59 354 *e*P **P** **15 28 19.7 -0.1**
comp=Z,9.6nm,1.1s
FITZ Fitzroy Crossi 57.07 107 P **P** **15 28 23.9 +0.1**
FITZ Fitzroy Crossi 57.07 107 P **P** **15 28 23.9 +0.1**
comp=Z,2.1nm,0.9s,baz=234,slow=8.4,SNR=3.1
AKTO Aktyubinsk 57.98 352 P **P** **15 28 29.3 -0.3**
AKTO Aktyubinsk 57.98 352 P **P** **15 28 29.2 -0.3**
AKTO Aktyubinsk 57.98 352 P **P** **15 28 29.2 -0.3**
comp=Z,7.4nm,1.0s,baz=170,slow=7.0,SNR=18
KURBB Kurchatov Arra 58.23 8 P **P** **15 28 31.0 -0.3**
comp=Z,7.0nm,1.0s,baz=204,slow=7.0,SNR=34
KURBB PcP **PcP** **15 29 22.3 -0.2**
comp=Z,1.2nm,0.8s,baz=209,slow=4.5,SNR=4.2
KURK Kurchatov 58.33 8 *d*P **P** **15 28 31.5 -0.5**
KURK pmax pmax
comp=Z,16nm,1.0s
KURK Kurchatov 58.33 8 *e*P **P** **15 28 31.6 -0.4**
comp=Z,14nm,1.0s
KURK PcP **PcP** **15 29 22.3 -0.6**
BVAR Borovoye Array 59.95 2 P **P** **15 28 43.3 0.0**
BVAR Borovoye Array 59.95 2 P **P** **15 28 43.2 0.0**
BVAR Borovoye Array 59.95 2 P **P** **15 28 43.2 0.0**
comp=Z,3.5nm,1.0s,baz=166,slow=6.9,SNR=19
BRVK Borovoye 59.98 2 *e*P **P** **15 28 43.2 -0.3**
BRVK pmax pmax
comp=Z,7.0nm,1.1s
BRVK Borovoye 59.98 2 *e*P **P** **15 28 43.2 -0.3**
comp=Z,6.9nm,1.1s
MAW Mawson 60.49 182 LR LR 15 48 10.7
comp=Z,164nm,20.8s,baz=129,slow=29
HVS Khovu-Aksy 62.11 18 *ce*P **P** **15 28 57.5 -0.6**
HVS pmax pmax
comp=Z,57nm,1.7s
NJ2 Nanjing 62.15 48 *e*P **P** **15 28 58.6 0.0**
NJ2 pP **pP** **15 29 02.3 -1.7**
NJ2 S **S** **15 37 28.0 +4.5**
NJ2 sS **sS** **15 37 32.0 -0.3**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s
NJ2 pmax pmax
comp=Z,70nm,4.8s
NJ2 LR LR
comp=N,190nm,22.6s
NJ2 LR LR
comp=E,170nm,20.7s
NJ2 LR LR
comp=Z,160nm,16.2s
HHC Hu-ho-hao-te 62.26 36⇑ *i*P **P** **15 29 00.4 +1.1**
HHC pP **pP** **15 29 05.0 +0.3**
HHC sP **sP** **15 29 07.4 +0.6**
HHC PP **PP** **15 31 19.8 +3.2**
HHC PcS **PcS** **15 33 41.4 -1.0**
HHC S **S** **15 37 25.1 +0.2**
HHC sS **sS** **15 37 32.8 -1.0**
HHC ScS **SKSac** **15 38 48.4 -2.7**
HHC SS **SS** **15 41 30.5 +2.0**
HHC pmax pmax
comp=Z,42nm,1.1s
HHC pmax pmax
comp=Z,170nm,5.1s
HHC LR LR
comp=N,230nm,20.4s
HHC LR LR
comp=E,1µm,20.6s
HHC LR LR
comp=Z,140nm,21.4s
VRHR Novokhopersk 62.30 342 *e*P **P** **15 28 57.7 -1.5**
VRHR pmax pmax
comp=Z,6.0nm,0.5s
VRHR pmax pmax
comp=N,4.0nm,0.4s
VRHR pmax pmax
comp=E,5.0nm,0.6s
ZAA0 Zalesovo Array 62.47 11 *e*P **P** **15 28 59.5 -0.8**
ZALV Zalesovo Beam 62.47 11 P **P** **15 28 59.8 -0.5**
ZALV 15 29 39.3
ZALV Zalesovo Beam 62.47 11 P **P** **15 28 59.8 -0.5**
ZALV PcP **PcP** **15 29 39.3 -0.2**
ZALV Zalesovo Beam 62.47 11 P **P** **15 28 59.8 -0.5**
comp=E,2.2nm,0.8s,baz=212,slow=5.3,SNR=13
ZALV PcP **PcP** **15 29 39.3 -0.2**
comp=E,4.5nm,1.2s,baz=226,slow=5.4,SNR=3.6
ZALV LR LR 15 56 54.8
comp=E,118nm,18.4s,baz=248,slow=37
VORD Divnogorie 62.95 340 *e*P **P** **15 29 04.8 +1.3**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,30nm,0.5s
VORD pmax pmax
comp=E,100nm,0.7s
VSR Storozhevoye 63.20 340 *e*P **P** **15 29 04.3 -0.9**
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.9s
ARU Arti 63.81 354 *d i*P **P** **15 29 09.0 -0.1**
ARU 15 31 29.1
ARU S **S** **15 37 43.1 -0.3**
ARU pmax pmax
comp=Z,27nm,1.7s
SVE Sverdlovsk 64.02 355 *e*P **P** **15 29 10.8 +0.3**
SVE pmax pmax
comp=Z,24nm,1.5s
VTS Vitosha 64.11 325⇑ P **P** **15 29 09.1 -2.5**
VTS Vitosha 64.11 325⇑ *i*P **P** **15 29 09.1 -2.5**
SONM Songino Array 64.33 28 P **P** **15 29 13.2 +0.3**
SONM Songino Array 64.33 28 P **P** **15 29 13.2 +0.3**
comp=Z,4.4nm,1.1s,baz=222,slow=6.2,SNR=29
SONM LR LR 15 56 46.7
comp=Z,187nm,21.5s,baz=233,slow=36
VRI Vrincioaia 64.36 329⇑ P **P** **15 29 13.4 +0.4**
VRI Vrincioaia 64.36 329⇑ *i*P **P** **15 29 13.4 +0.4**
MLR Muntele Rosu 64.50 329 P **P** **15 29 13.9 -0.1**
MLR Muntele Rosu 64.50 329⇓ *i*P **P** **15 29 14.6 +0.5**
MLR Muntele Rosu 64.50 329 P **P** **15 29 13.9 -0.1**
comp=Z,1.4nm,1.1s,baz=231,slow=1.7,SNR=6.4
BJI Beijing 64.58 39 P **P** **15 29 15.4 +0.9**
BJI S **S** **15 37 57.8 +4.3**
BJI pmax pmax
comp=Z,10.0nm,0.8s
BJI LR LR
comp=N,84nm,19.6s
BJI LR LR
comp=E,120nm,21.1s
BJI LR LR
comp=Z,36nm,21.1s
ULN Ulaanbaatar 64.66 28 *e*P **P** **15 29 15.6 +0.4**
comp=Z,7.4nm,1.5s
ULN Ulaanbaatar 64.66 28 P **P** **15 29 13.9 -1.2**
TESR Tescani 64.84 330⇑ *i*P **P** **15 29 15.9 -0.2**
ZAK Zakamensk 64.91 24 *e*P **P** **15 29 16.8 +0.2**
ZAK pmax pmax
comp=Z,2.0nm,1.2s
VOIR 64.93 328⇓ P **P** **15 29 16.9 +0.1**
VOIR 64.93 328⇓ *i*P **P** **15 29 16.9 +0.1**
ASAR Alice Springs 65.10 113 P **P** **15 29 18.1 -0.3**
ASAR Alice Springs 65.10 113 P **P** **15 29 18.1 -0.3**
comp=Z,2.0nm,0.9s,baz=278,slow=6.2,SNR=13
WRA Warramunga Arr 65.36 109 P **P** **15 29 20.2 +0.1**
WRA Warramunga Arr 65.36 109 P **P** **15 29 20.2 +0.1**
comp=Z,4.6nm,1.0s,baz=282,slow=6.2,SNR=20
WRAB Tennant Creek 65.38 109 *e*P **P** **15 29 20.7 +0.5**
WRAB Tennant Creek 65.38 109 *e*P **P** **15 29 20.7 +0.5**
BURAR Bucovina Array 66.31 330⇑ *i*P P 15 29 17.4 -8.3
AKASG Malin Array Be 66.63 334 P **P** **15 29 26.6 -0.9**
AKASG Malin Array Be 66.63 334 P **P** **15 29 26.6 -0.9**
AKASG Malin Array Be 66.63 334 P **P** **15 29 26.6 -0.9**
comp=Z,2.5nm,0.8s,baz=138,slow=5.2,SNR=7.9
KIEV Kiev 66.63 334 *e*P **P** **15 29 26.2 -1.3**
KIEV pmax pmax
comp=Z,2.0nm,0.6s
KIEV Kiev 66.63 334 *e*P **P** **15 29 26.2 -1.3**
comp=Z,2.1nm,0.6s
BZS Buzias 66.89 326⇑ P **P** **15 29 29.0 -0.3**
BZS Buzias 66.89 326⇑ *i*P **P** **15 29 29.0 -0.3**
DRGR 67.05 328⇑ P **P** **15 29 30.6 +0.2**
DRGR 67.05 328⇑ *i*P **P** **15 29 30.6 +0.2**
OBN Obninsk 67.33 341 P **P** **15 29 32.0 +0.2**
OBN pmax pmax
comp=Z,20nm,1.7s
MOS Moscow 67.52 342 *e*P **P** **15 29 33.0 -0.1**
UZH Uzhgorod 68.45 329 *e*P P 15 29 35.2 -3.9
UZH *i* 15 30 03.8
KOLS Kolonicke sedl 68.66 330 *e*P **P** **15 29 40.7 +0.3**
KOLS pmax pmax
comp=Z,11nm,1.5s
KOLS Kolonicke sedl 68.66 330 *e*P **P** **15 29 40.7 +0.3**
TORD Torodi Ar. Bea 68.89 287 P **P** **15 29 42.2 -0.3**
TORD Torodi Ar. Bea 68.89 287 P **P** **15 29 42.2 -0.3**
comp=Z,2.4nm,1.1s,baz=102,slow=3.8,SNR=8.0
TORD LR LR 15 58 14.4
comp=Z,94nm,19.3s,baz=120,slow=35
CRVS Cervenica-Dubn 69.05 329 *e*P **P** **15 29 41.1 -1.8**
CRVS pmax pmax
comp=Z,16nm,1.7s
CRVS Cervenica-Dubn 69.05 329 *e*P **P** **15 29 41.1 -1.8**
KEST Kesra 69.63 312 P **P** **15 29 46.5 -0.3**
KEST Kesra 69.63 312 P **P** **15 29 46.5 -0.3**
comp=Z,1.1nm,0.9s,baz=44,slow=7.9,SNR=4.2
KEST LR LR 16 02 23.1
comp=Z,17nm,18.4s,baz=346,slow=38
VYHS Vyhne 70.16 328 *e*P **P** **15 29 49.3 -0.4**
VYHS pmax pmax
comp=Z,11nm,1.5s
VYHS Vyhne 70.16 328 *e*P **P** **15 29 49.3 -0.4**
KSAR Wonju Array Be 71.22 47 P **P** **15 29 56.9 +0.5**
KSRS Korea Array 71.25 47 P **P** **15 29 56.9 +0.3**
comp=Z,0.5nm,0.5s,baz=256,slow=5.0,SNR=5.9
KSRS LR LR 16 01 01.4
comp=Z,94nm,18.7s,baz=60,slow=36
MORC Moravsky Berou 71.61 328 *e*P **P** **15 29 57.5 -1.0**
MORC pmax pmax
comp=Z,22nm,1.9s
MORC Moravsky Berou 71.61 328 *e*P **P** **15 29 57.5 -1.0**
comp=Z,22nm,1.9s
VRAC Vranov 71.84 327 P **P** **15 29 58.8 -1.1**
VRAC Vranov 71.84 327 P **P** **15 29 58.8 -1.1**
comp=Z,1.8nm,0.5s,baz=42,slow=22,SNR=5.8
STKA Stephens Creek 72.33 121 P **P** **15 30 02.6 -0.6**
STKA Stephens Creek 72.33 121 P **P** **15 30 02.6 -0.6**
comp=Z,2.2nm,1.0s,baz=274,slow=12,SNR=3.4
TREC Trest 72.42 327 *e*P **P** **15 30 02.8 -0.6**
TREC *e* 15 30 09.2
TREC Trest 72.42 327⇑ *e*P **P** **15 30 02.8 -0.6**
TREC *ep*P **pP** **15 30 09.2 +0.3**
DPC Dobruska-Polom 72.58 328 *e*P **P** **15 30 04.2 -0.2**
DPC *e* 15 30 10.1
DPC Dobruska-Polom 72.58 328 *e*P **P** **15 30 04.2 -0.2**
DPC *ep*P **pP** **15 30 10.1 +0.2**
UPC Upice 72.83 328 *e*P **P** **15 30 05.6 -0.2**
UPC *e* 15 30 12.5
UPC Upice 72.83 328⇑ *e*P **P** **15 30 05.6 -0.2**
UPC *ex* x 15 30 12.5
PGF Pioggiola 72.88 318 *e*P **P** **15 30 05.1 -1.3**
comp=Z,15nm,1.2s
PGF Pioggiola 72.88 318 *e*P **P** **15 30 05.1 -1.3**
PGF pmax pmax
comp=Z,15nm,1.2s
PGF Pioggiola 72.88 318 *e*P **P** **15 30 05.1 -1.3**
comp=Z,15nm,1.2s
RJOB Jochberg 73.08 325 *e*P **P** **15 30 06.4 -1.0**
comp=Z,7.0nm,1.3s
PRU Pruhonice 73.32 327 *e*P **P** **15 30 08.5 -0.2**
PRU Pruhonice 73.32 327⇑ *e*P **P** **15 30 08.5 -0.2**
KHC Kasperske Hory 73.38 326 *e*P **P** **15 30 08.1 -1.0**
KHC pmax pmax
comp=Z,21nm,1.9s
KHC Kasperske Hory 73.38 326 *e*P **P** **15 30 08.1 -1.0**
comp=Z,21nm,1.9s
KHC Kasperske Hory 73.38 326 *e*P **P** **15 30 07.9 -1.2**
KHC *ep*P **pP** **15 30 15.2 +0.6**
PVCC Panska Ves 73.61 328 *e*P **P** **15 30 10.6 +0.2**
PVCC Panska Ves 73.61 328⇑ *e*P **P** **15 30 10.6 +0.2**
WET Wettzell 73.77 326 *e*P **P** **15 30 10.2 -1.2**
WET pmax pmax
comp=Z,13nm,1.9s
WET Wettzell 73.77 326 *e*P **P** **15 30 10.2 -1.2**
comp=Z,13nm,1.9s
DBIC Dimbokro 73.98 279 LR LR 15 59 06.8
comp=Z,105nm,18.7s,baz=262,slow=33
BRG Berggiesshubel 74.13 328 *e*P **P** **15 30 13.8 +0.4**
comp=Z,13nm,1.5s
BRG Berggiesshubel 74.13 328 *e*P **P** **15 30 13.8 +0.4**
BRG pmax pmax
comp=Z,13nm,1.5s
BRG Berggiesshubel 74.13 328 *e*P **P** **15 30 13.5 +0.1**
comp=Z,13nm,1.5s
FUR Furstenfeldbru 74.17 324 *e*P **P** **15 30 13.5 -0.3**
FUR pmax pmax
comp=Z,56nm,1.4s
FUR Furstenfeldbru 74.17 324 *e*P **P** **15 30 13.5 -0.3**
comp=Z,56nm,1.4s
DAVOX Davos/Dischmat 74.31 323 P **P** **15 30 13.7 -1.2**
DAVOX Davos/Dischmat 74.31 323 P **P** **15 30 13.7 -1.2**
comp=Z,4.4nm,0.9s,baz=148,slow=9.5,SNR=6.2
FBE Freiberg 74.47 328 *e*P **P** **15 30 15.8 +0.4**
comp=Z,16nm,1.1s
ROTZ Rotzenmuhle 74.47 326 *e*P **P** **15 30 15.3 -0.2**
comp=Z,30nm,1.9s
TUE Stuetta 74.49 322 *e*P **P** **15 30 15.2 -0.7**
comp=Z,23nm,1.6s
SBF Sospel 74.49 319 *e*P **P** **15 30 15.2 -0.6**
SBF Sospel 74.49 319 *e*P **P** **15 30 15.2 -0.6**
SBF Sospel 74.49 319 *e*P **P** **15 30 15.2 -0.6**
NKC Novy Kostel 74.59 327⇑ *i*P **P** **15 30 16.9 +0.8**
NKC *e* 15 30 23.8
NKC Novy Kostel 74.59 327⇑ *i*P **P** **15 30 16.9 +0.8**
NKC *ex* x 15 30 23.8
MANZ Manzenberg 74.64 326 *e*P **P** **15 30 16.4 -0.1**
comp=Z,13nm,1.4s
WERN Wernitzgruen 74.66 327 *e*P **P** **15 30 17.2 +0.6**
comp=Z,34nm,1.4s
TANN Tannenbergstha 74.68 327 *e*P **P** **15 30 16.9 +0.2**
comp=Z,16nm,1.7s
GUNZ Gunzen 74.72 327 *e*P **P** **15 30 17.5 +0.6**
comp=Z,33nm,1.6s
WERD Werda 74.78 327 *e*P **P** **15 30 17.8 +0.5**
comp=Z,26nm,1.8s
CLL Collm 74.86 328 *i* P **P** **15 30 17.6 -0.1**
CLL *i* 15 30 23.8
CLL pmax pmax
comp=Z,17nm,1.4s
CLL Collm 74.86 328 *e*P **P** **15 30 17.8 +0.1**
comp=Z,17nm,1.4s
CLL Collm 74.86 328 *i* P **P** **15 30 17.6 -0.1**
comp=Z,17nm,1.4s
CLL *i* 15 30 23.8
LMR La Mourre 74.87 318 *e*P **P** **15 30 17.4 -0.5**
LMR La Mourre 74.87 318 *e*P **P** **15 30 17.4 -0.5**
LMR La Mourre 74.87 318 *e*P **P** **15 30 17.4 -0.5**
FRF La Foret Royal 74.88 319 *e*P **P** **15 30 17.4 -0.5**
comp=Z,32nm,1.3s
FRF La Foret Royal 74.88 319 *e*P **P** **15 30 17.4 -0.5**
FRF pmax pmax
comp=Z,32nm,1.3s
FRF La Foret Royal 74.88 319 *e*P **P** **15 30 17.4 -0.5**
comp=Z,32nm,1.3s
PLN Plauen 74.88 327 *e*P **P** **15 30 18.3 +0.5**
comp=Z,259nm,2.3s
GRF Grafenberg Arr 74.98 326 *e*P **P** **15 30 18.3 -0.1**
GRF pmax pmax
comp=Z,50nm,1.7s
GRF Grafenberg Arr 74.98 326 *e*P **P** **15 30 18.3 -0.1**
comp=Z,50nm,1.7s
MOX Moxa 75.26 327 *e*P **P** **15 30 20.2 +0.2**
MOX pmax pmax
comp=Z,17nm,1.5s
MOX Moxa 75.26 327 *e*P **P** **15 30 20.2 +0.2**
comp=Z,17nm,1.5s
MBDF Montbardon 75.30 320 *e*P **P** **15 30 19.6 -1.0**
MBDF Montbardon 75.30 320 *e*P **P** **15 30 19.6 -1.0**
MBDF Montbardon 75.30 320 *e*P **P** **15 30 19.6 -1.0**
MDJ Mudanjiang 75.45 40 P **P** **15 30 21.5 +0.3**
MDJ pmax pmax
comp=Z,7.0nm,0.9s
MDJ pmax pmax
comp=Z,41nm,4.8s
NEUB Neuenburg 75.46 327 *e*P **P** **15 30 21.3 +0.2**
comp=Z,44nm,2.0s
LPG La Plagne 75.65 320 *e*P **P** **15 30 21.4 -1.3**
comp=Z,24nm,1.4s
LPG La Plagne 75.65 320 *e*P **P** **15 30 21.4 -1.3**
LPG pmax pmax
comp=Z,25nm,1.4s
LPG La Plagne 75.65 320 *e*P **P** **15 30 21.4 -1.3**
comp=Z,24nm,1.4s
LPL La Plagne 75.67 320 *e*P **P** **15 30 21.5 -1.3**
comp=Z,39nm,1.4s
LPL La Plagne 75.67 320 *e*P **P** **15 30 21.5 -1.3**
LPL pmax pmax
comp=Z,39nm,1.4s
LPL La Plagne 75.67 320 *e*P **P** **15 30 21.5 -1.3**
comp=Z,39nm,1.4s
STU Stuttgart 75.68 324 *e*P **P** **15 30 22.0 -0.4**
comp=Z,26nm,1.3s
FINES FINESS Array B 75.73 341 P **P** **15 30 21.4 -1.0**
FINES FINESS Array B 75.73 341 P **P** **15 30 21.4 -1.0**
comp=Z,6.2nm,1.0s,baz=140,slow=9.9,SNR=8.4
FINES LR LR 16 06 17.0
comp=Z,41nm,19.3s,baz=90,slow=38
SMRF Simiane la Rot 75.75 319 *e*P **P** **15 30 23.2 +0.2**
comp=Z,49nm,1.7s
SMRF Simiane la Rot 75.75 319 *e*P **P** **15 30 23.2 +0.2**
comp=Z,49nm,1.7s
ORIF Oris-en-Rattie 75.95 320 *e*P **P** **15 30 23.7 -0.5**
ORIF Oris-en-Rattie 75.95 320 *e*P **P** **15 30 23.7 -0.5**
ORIF Oris-en-Rattie 75.95 320 *e*P **P** **15 30 23.7 -0.5**
BFO Black Forest 75.97 324 *e*P **P** **15 30 24.0 -0.2**
BFO pmax pmax
comp=Z,10.0nm,1.2s
BFO Black Forest 75.97 324 *e*P **P** **15 30 24.0 -0.2**
comp=Z,10.0nm,1.2s
UBBA Unterbreizbach 76.23 326 *e*P **P** **15 30 25.6 +0.2**
comp=Z,27nm,1.8s
CABF La Chapelle 76.55 321 *e*P **P** **15 30 27.2 -0.4**
comp=Z,89nm,1.9s
CABF La Chapelle 76.55 321 *e*P **P** **15 30 27.2 -0.4**
CABF pmax pmax
comp=Z,89nm,1.9s
CABF La Chapelle 76.55 321 *e*P **P** **15 30 27.2 -0.4**
comp=Z,89nm,1.9s
HINF Hinteralfeld 76.62 323 *e*P **P** **15 30 26.8 -1.1**
HINF Hinteralfeld 76.62 323 *e*P **P** **15 30 26.8 -1.1**
HINF Hinteralfeld 76.62 323 *e*P **P** **15 30 26.8 -1.1**
CDF Champ du Feu 76.64 323 *e*P **P** **15 30 27.3 -0.7**
CDF Champ du Feu 76.64 323 *e*P **P** **15 30 27.3 -0.7**
CDF Champ du Feu 76.64 323 *e*P **P** **15 30 27.3 -0.7**
VIVF Saint-Julien-l 76.71 319 *e*P **P** **15 30 28.2 -0.2**
comp=Z,39nm,1.6s
VIVF Saint-Julien-l 76.71 319 *e*P **P** **15 30 28.2 -0.2**
VIVF pmax pmax
comp=Z,39nm,1.6s
VIVF Saint-Julien-l 76.71 319 *e*P **P** **15 30 28.2 -0.2**
comp=Z,39nm,1.6s
TNS Taunus Mts 76.80 325 *e*P **P** **15 30 29.1 +0.2**
TNS pmax pmax
comp=Z,16nm,1.4s
TNS Taunus Mts 76.80 325 *e*P **P** **15 30 29.1 +0.2**
comp=Z,16nm,1.4s
USRK Ussurirysk Arra 76.84 42 LR LR 16 07 06.1
comp=Z,73nm,20.4s,baz=175,slow=38
LASF Ste Croix 76.93 318 *e*P **P** **15 30 29.7 0.0**
comp=Z,29nm,1.4s
LASF Ste Croix 76.93 318 *e*P **P** **15 30 29.7 0.0**
comp=Z,29nm,1.4s
SSB Saint Sauveur 76.97 320 *e*P **P** **15 30 29.4 -0.5**
SSB pmax pmax

comp=Z,23nm,1.8s
SSB **Saint Sauveur** **76.97 320** *e*P **P** **15 30 29.4 -0.5**
comp=Z,23nm,1.8s
HAU **Haudompre** **77.01 323** *e*P **P** **15 30 29.4 -0.6**
HAU **Haudompre** **77.01 323** *e*P **P** **15 30 29.4 -0.6**
HAU **Haudompre** **77.01 323** *e*P **P** **15 30 29.4 -0.6**
NRDL **Niedersach Rie** **77.01 328** *e*P **P** **15 30 30.4 +0.6**
comp=Z,10.0nm,1.4s
SNAA **Sanae** **77.30 198** P **P** **15 30 30.6 -0.8**
SNAA **Sanae** **77.30 198** P **P** **15 30 30.6 -0.8**
comp=Z,1.6nm,1.2s,baz=67,slow=13,SNR=17
BSEG **Bad Segeberg** **77.64 329** *e*P **P** **15 30 33.8 +0.4**
BSEG pmax pmax
comp=Z,15nm,1.3s
BSEG **Bad Segeberg** **77.64 329** *e*P **P** **15 30 33.8 +0.4**
comp=Z,15nm,1.3s
MTLF **Montolieu** **77.74 317** *e*P **P** **15 30 34.3 +0.1**
comp=Z,46nm,1.5s
MTLF **Montolieu** **77.74 317** *e*P **P** **15 30 34.3 +0.1**
MTLF pmax pmax
comp=Z,46nm,1.5s
MTLF **Montolieu** **77.74 317** *e*P **P** **15 30 34.3 +0.1**
comp=Z,46nm,1.5s
WLF **Walferdange** **77.86 324** *e*P **P** **15 30 34.5 -0.2**
comp=Z,5.0nm,0.7s
SFTF **Sexfontaines** **77.88 322** *e*P **P** **15 30 34.6 -0.3**
SFTF **Sexfontaines** **77.88 322** *e*P **P** **15 30 34.6 -0.3**
SMF **Signal de Mont** **77.97 321** *e*P **P** **15 30 34.8 -0.7**
SMF **Signal de Mont** **77.97 321** *e*P **P** **15 30 34.8 -0.7**
SMF **Signal de Mont** **77.97 321** *e*P **P** **15 30 34.8 -0.7**
MEZF **Maizieres J'vi** **78.00 323** *e*P **P** **15 30 35.4 -0.1**
MEZF **Maizieres J'vi** **78.00 323** *e*P **P** **15 30 35.4 -0.1**
BUG **Bochum--Univer** **78.04 326** *e*P **P** **15 30 35.9 +0.3**
comp=Z,6.0nm,0.6s
IBBN **Ibbenburen** **78.18 327** *e*P **P** **15 30 37.0 +0.6**
comp=Z,9.0nm,0.4s
LOR **Lormes** **78.22 321** *e*P **P** **15 30 36.3 -0.5**
comp=Z,35nm,1.5s
LOR **Lormes** **78.22 321** *e*P **P** **15 30 36.3 -0.5**
comp=Z,35nm,1.5s
AVF **Avril sur Loir** **78.34 321** *e*P **P** **15 30 36.9 -0.5**
AVF **Avril sur Loir** **78.34 321** *e*P **P** **15 30 36.9 -0.5**
AVF **Avril sur Loir** **78.34 321** *e*P **P** **15 30 36.9 -0.5**
SSF **Saint Saulge** **78.35 321** *e*P **P** **15 30 37.0 -0.5**
comp=Z,22nm,1.3s
SSF **Saint Saulge** **78.35 321** *e*P **P** **15 30 37.0 -0.5**
SSF pmax pmax
comp=Z,22nm,1.3s
SSF **Saint Saulge** **78.35 321** *e*P **P** **15 30 37.0 -0.5**
comp=Z,22nm,1.3s
CAF **Calviac** **78.44 319** *e*P **P** **15 30 38.1 0.0**
comp=Z,22nm,1.3s
CAF **Calviac** **78.44 319** *e*P **P** **15 30 38.1 0.0**
CAF pmax pmax
comp=Z,22nm,1.3s
CAF **Calviac** **78.44 319** *e*P **P** **15 30 38.1 0.0**
comp=Z,22nm,1.3s
BGF **Bois d'Agland** **78.56 320** *e*P **P** **15 30 38.6 -0.1**
comp=Z,54nm,1.3s
BGF **Bois d'Agland** **78.56 320** *e*P **P** **15 30 38.6 -0.1**
BGF pmax pmax
comp=Z,54nm,1.3s
BGF **Bois d'Agland** **78.56 320** *e*P **P** **15 30 38.6 -0.1**
comp=Z,54nm,1.3s
MJAR **Matsushiro Arr** **78.59 51** P **P** **15 30 39.6 +0.5**
MJAR **Matsushiro Arr** **78.59 51** P **P** **15 30 39.6 +0.5**
comp=Z,3.0nm,1.0s,baz=249,slow=7.6,SNR=10.0
MJAR LR LR 16 02 19.7
comp=Z,59nm,21.1s,baz=275,slow=33
KLR **Kul'dur** **78.76 37** *e*P P 15 30 35.2 -4.5
GIVF **Givet** **78.83 324** *e*P **P** **15 30 40.0 -0.1**
GIVF **Givet** **78.83 324** *e*P **P** **15 30 40.0 -0.1**
GIVF **Givet** **78.83 324** *e*P **P** **15 30 40.0 -0.1**
TCF **Toulx Ste Croi** **78.86 320** *e*P **P** **15 30 40.6 +0.2**
TCF **Toulx Ste Croi** **78.86 320** *e*P **P** **15 30 40.6 +0.2**
TCF **Toulx Ste Croi** **78.86 320** *e*P **P** **15 30 40.6 +0.2**
EPF **Esparros** **78.90 316** *e*P **P** **15 30 40.2 -0.5**
EPF **Esparros** **78.90 316** *e*P **P** **15 30 40.2 -0.5**
EPF **Esparros** **78.90 316** *e*P **P** **15 30 40.2 -0.5**
RJF **Les Rejaudoux** **78.94 319** *e*P **P** **15 30 41.1 +0.3**
RJF **Les Rejaudoux** **78.94 319** *e*P **P** **15 30 41.1 +0.3**
RJF **Les Rejaudoux** **78.94 319** *e*P **P** **15 30 41.1 +0.3**
BAIF **Baives** **79.17 324** *e*P **P** **15 30 42.0 +0.1**
BAIF **Baives** **79.17 324** *e*P **P** **15 30 42.0 +0.1**
BAIF **Baives** **79.17 324** *e*P **P** **15 30 42.0 +0.1**
ETSF **Etsaut** **79.47 316** *e*P **P** **15 30 44.1 +0.2**
ETSF **Etsaut** **79.47 316** *e*P **P** **15 30 44.1 +0.2**
ETSF **Etsaut** **79.47 316** *e*P **P** **15 30 44.1 +0.2**
SJPF **Ste Jean** **80.01 316** *e*P **P** **15 30 47.0 +0.3**
comp=Z,42nm,1.4s
SJPF **Ste Jean** **80.01 316** *e*P **P** **15 30 47.0 +0.3**
SJPF pmax pmax
comp=Z,42nm,1.4s
SJPF **Ste Jean** **80.01 316** *e*P **P** **15 30 47.0 +0.3**
comp=Z,42nm,1.4s
MFF **Saint Martin d** **80.49 320** *e*P **P** **15 30 49.0 -0.2**
comp=Z,42nm,1.5s
MFF **Saint Martin d** **80.49 320** *e*P **P** **15 30 49.0 -0.2**
MFF pmax pmax
comp=Z,42nm,1.5s
MFF **Saint Martin d** **80.49 320** *e*P **P** **15 30 49.0 -0.2**
comp=Z,42nm,1.5s
ESDC **Sonseca Array** **80.88 312** P **P** **15 30 51.5 0.0**
ESDC **Sonseca Array** **80.88 312** P **P** **15 30 51.5 0.0**
comp=Z,0.2nm,0.2s,baz=94,slow=5.3,SNR=10
NOA **NORSAR Array B** **80.98 336** P **P** **15 30 51.4 -0.2**
NOA **NORSAR Array B** **80.98 336** P **P** **15 30 51.4 -0.2**
comp=Z,1.2nm,0.8s,baz=112,slow=5.5,SNR=3.9
LDF **La Druitiere** **81.20 321** *e*P **P** **15 30 52.5 -0.4**
LDF **La Druitiere** **81.20 321** *e*P **P** **15 30 52.5 -0.4**
LDF **La Druitiere** **81.20 321** *e*P **P** **15 30 52.5 -0.4**
FLN **La Foliniere** **81.48 321** *e*P **P** **15 30 54.0 -0.4**
FLN **La Foliniere** **81.48 321** *e*P **P** **15 30 54.0 -0.4**
FLN **La Foliniere** **81.48 321** *e*P **P** **15 30 54.0 -0.4**
GRR **Gorron** **81.58 321** *e*P **P** **15 30 54.8 -0.2**
GRR **Gorron** **81.58 321** *e*P **P** **15 30 54.8 -0.2**
GRR **Gorron** **81.58 321** *e*P **P** **15 30 54.8 -0.2**
ARCES **ARCESS Array B** **81.84 346** P **P** **15 30 55.9 0.0**
ARCES **ARCESS Array B** **81.84 346** P **P** **15 30 55.9 0.0**
comp=Z,5.4nm,1.0s,baz=111,slow=5.0,SNR=8.1
ARCES LR LR 16 07 02.4
comp=Z,57nm,21.9s,baz=189,slow=36
SGMF **Saint Gilles** **82.60 321** *e*P **P** **15 31 00.1 -0.2**
SGMF **Saint Gilles** **82.60 321** *e*P **P** **15 31 00.1 -0.2**
SGMF **Saint Gilles** **82.60 321** *e*P **P** **15 31 00.1 -0.2**
QUIF **Quistinic** **82.88 320** *e*P **P** **15 31 01.3 -0.4**
QUIF **Quistinic** **82.88 320** *e*P **P** **15 31 01.3 -0.4**
QUIF **Quistinic** **82.88 320** *e*P **P** **15 31 01.3 -0.4**
QSPA **South Pole Qui** **82.90 180** P **P** **15 31 02.0 +0.2**
QSPA **South Pole Qui** **82.90 180** P **P** **15 31 02.0 +0.2**
comp=Z,7.3nm,1.2s,baz=256,slow=1.8,SNR=5.5
ROSF **Rostrenen** **83.08 320** *e*P **P** **15 31 02.1 -0.7**
ROSF **Rostrenen** **83.08 320** *e*P **P** **15 31 02.1 -0.7**
ROSF **Rostrenen** **83.08 320** *e*P **P** **15 31 02.1 -0.7**
VNDA **Vanda** **83.92 167** P **P** **15 31 06.9 +0.2**
VNDA **Vanda** **83.92 167** P **P** **15 31 06.9 +0.2**
comp=Z,1.7nm,1.1s,baz=278,slow=6.7,SNR=4.3
VNDA LR LR 16 03 44.2
comp=Z,187nm,18.4s,baz=334,slow=32
EKA **Eskdalemuir Ar** **85.31 327** P **P** **15 31 14.2 +0.2**
EKA **Eskdalemuir Ar** **85.31 327** P **P** **15 31 14.2 +0.2**
comp=Z,0.5nm,0.6s,baz=122,slow=6.1,SNR=4.4
TIXI **Tiksi** **87.92 16***c* *i*P **P** **15 31 26.4 0.0**
TIXI pmax pmax
comp=Z,19nm,2.5s
PETK **Petropavlovsk-** **95.45 37** LR LR 16 17 24.5
comp=Z,52nm,18.3s,baz=132,slow=37
ILAR **Eielson Array** **117.40 16** PKP **PKPdf** **15 37 21.4 -1.1**
ILAR **Eielson Array** **117.40 16** PKP **PKPdf** **15 37 21.4 -1.1**
comp=Z,0.7nm,1.0s,baz=303,slow=3.3,SNR=5.6
YKA **Yellowknife Ar** **124.71 1** PKP **PKPdf** **15 37 35.8 -0.8**
YKA PP **PP** **15 39 23.3 +0.2**
YKA **Yellowknife Ar** **124.71 1** PKP **PKPdf** **15 37 35.7 -0.8**
comp=Z,0.8nm,0.7s,baz=348,slow=2.1,SNR=12
YKA PP **PP** **15 39 23.3 +0.2**
comp=Z,0.7nm,0.9s,baz=355,slow=6.9,SNR=8.4
EGMT **Eagleton** **139.20 358** *e*PKPdf **PKPdf** **15 38 03.3 -1.1**
J19A **Crowheart** **143.92 356** P PKPbc 15 38 11.5 +0.7
baz=144
K19A **Absolon Red Bu** **144.34 356** P PKPbc 15 38 12.4 +0.2
baz=144
WVOR **Wild Horse Val** **144.35 8** *e*PKIKP PKPbc 15 38 12.5 +0.4
WVOR **Wild Horse Val** **144.35 8** *e*PKPdf PKPbc 15 38 12.5 +0.4
PDAR **Pinedale Array** **144.44 357** PKP PKPbc 15 38 12.7 +0.1
comp=Z,0.9nm,0.6s,baz=105,slow=2.0,SNR=8.7
K20A **Yellowstone Ra** **144.47 355** P PKPbc 15 38 12.7 +0.1
baz=144
L23A **Garrett** **144.72 352** P PKPbc 15 38 13.5 +0.1
baz=145
L21A **Rawlins** **145.07 354** P **PKPab** **15 38 14.8 +0.2**
baz=145
L19A **Farson** **145.09 357** P **PKPab** **15 38 14.9 +0.2**
baz=145
L20A **Wamsutter** **145.12 355** P **PKPdf** **15 38 15.1 -0.2**
baz=145
M24A **Cheyenne** **145.22 351** P **PKPdf** **15 38 15.8 +0.3**
baz=145
L18A **Fontenelle, Gr** **145.31 357** P **PKPdf** **15 38 15.6 0.0**
baz=145
M23A **Laramie** **145.35 352** P **PKPdf** **15 38 15.8 +0.1**
baz=145
WDC **Whiskeytown Da** **145.38 14** *e*PKIKP **PKPdf** **15 38 15.5 0.0**
WDC **Whiskeytown Da** **145.38 14** *e*PKPdf **PKPdf** **15 38 15.5 0.0**
M21A **Separation Pea** **145.42 354** P **PKPdf** **15 38 16.1 +0.3**
baz=145
N27A **Anderson Farm,** **145.42 347** P **PKPdf** **15 38 16.1 +0.3**
baz=145
M22A **Cedar Creek Ra** **145.53 353** P **PKPab** **15 38 16.9 +0.5**
baz=145
M20A **Sweetwater, Wa** **145.62 355** P **PKPab** **15 38 17.4 +0.8**
baz=145
HWUT **Hardware Ranch** **145.66 359** *e*PKP **PKPab** **15 38 16.6 -0.2**
M19A **Rock Springs** **145.68 356** P **PKPab** **15 38 17.6 +0.8**
baz=146
M17A **Scullys Gap (B** **145.78 358** P **PKPab** **15 38 17.5 +0.3**
baz=146
M18A **Lyman** **145.80 357** P **PKPab** **15 38 17.9 +0.6**
baz=146
N24A **Carr** **145.85 350** P **PKPab** **15 38 17.9 +0.5**
baz=146
OTAV **Otavalo** **145.87 260** *e*PKP **PKPab** **15 38 19.1 +0.4**
N23A **Red Feather La** **145.95 352** P **PKPab** **15 38 17.9 0.0**
baz=146
N20A **Spence Gulch,** **146.27 355** P **PKPbc** **15 38 18.4 0.0**
baz=146
N21A **Black Mountain** **146.28 354** P **PKPbc** **15 38 18.6 +0.2**
baz=146
ELK **Elko** **146.40 4** *e*PKPbc **PKPbc** **15 38 18.3 -0.5**
O23A **Lake Granby, G** **146.62 352** P **PKPab** **15 38 20.5 0.0**
baz=146
O22A **Kremmling** **146.75 352** P **PKPbc** **15 38 19.9 0.0**
baz=147
DAU **Daniels Canyon** **146.85 359** *e*PKP2 **PKPbc** **15 38 19.7 -0.5**
DAU **Daniels Canyon** **146.85 359** *e*PKPbc **PKPbc** **15 38 19.7 -0.5**
Q28A **Sharon Springs** **146.92 345** P **PKPbc** **15 38 20.6 +0.4**
baz=147
ISCO **Idaho Springs** **146.97 351** P **PKPbc** **15 38 20.4 -0.2**
baz=147
DUG **Dugway** **147.07 1** P **PKPbc** **15 38 21.3 +0.7**
baz=147
P23A **Jefferson** **147.42 351** P **PKPbc** **15 38 22.2 +0.3**
baz=147
P18A **Preston Nutter** **147.60 358** P **PKPbc** **15 38 22.1 -0.3**
baz=148
Q24A **Divide** **147.71 350** P **PKPbc** **15 38 23.1 +0.4**
baz=148
SMCO **Snowmass** **147.77 353** *e*PKPbc **PKPbc** **15 38 23.0 +0.1**
R27A **Eads** **147.89 346** P **PKPbc** **15 38 22.8 -0.1**
baz=148
R26A **Arlington** **148.02 347** P **PKPbc** **15 38 23.3 0.0**
baz=148
SRU **San Rafael** **148.13 358** P **PKPbc** **15 38 23.9 +0.3**
baz=148
Q20A **Ridgley Place,** **148.14 355** P **PKPbc** **15 38 23.6 0.0**
baz=148
NVAR **Mina Array Bea** **148.32 9** PKPbc **PKPdf** **15 38 22.3 +1.5**
NVAR **Mina Array Bea** **148.32 9** PKPbc **PKPdf** **15 38 22.3 +1.5**
comp=Z,4.3nm,1.0s,baz=169,slow=1.5,SNR=14
NV11 **Mina Array Sit** **148.34 9** PKPbc **PKPdf** **15 38 22.1 +1.3**
Q16A **Castle Valley** **148.34 359** P **PKPbc** **15 38 24.7 +0.5**
baz=148
R23A **Moffat** **148.58 351** P **PKPbc** **15 38 25.3 +0.4**
baz=148
R21A **Cimarron** **148.64 353** P **PKPbc** **15 38 25.6 +0.6**
baz=148
S26A **Kim** **148.68 347** P **PKPbc** **15 38 25.5 +0.5**
baz=149
R22A **Saguache, Gunn** **148.68 352** P **PKPbc** **15 38 25.7 +0.5**
baz=148
R11A **Troy Canyon, C** **148.75 5** P **PKPdf** **15 38 22.8 +1.4**
baz=149
S25A **Robets Cordova** **148.84 348** P **PKPbc** **15 38 25.6 0.0**
baz=149
S24A **Houchin Ranch,** **149.01 350** P **PKPbc** **15 38 26.2 +0.1**
baz=149
T27A **Campo** **149.03 346** P **PKPdf** **15 38 23.2 +1.3**
baz=149
T26A **Comanche Natio** **149.13 347** P **PKPbc** **15 38 26.7 +0.4**
baz=149
S20A **Disappointment** **149.26 354** P **PKPbc** **15 38 27.2 +0.6**
baz=149
V31A **Spring Creek L** **149.40 340** P **PKPbc** **15 38 27.0 +0.3**
baz=149
S18A **Hurst Farm, Bl** **149.52 357** P **PKPbc** **15 38 27.4 +0.1**
baz=149
GRAC **Grapevine Rang** **149.86 9** P **PKPbc** **15 38 28.3 +0.4**
baz=150
U25A **Circle Dot Ran** **150.05 348** P **PKPbc** **15 38 29.3 +0.8**
baz=150
V26A **Tequesquite Ra** **150.50 346** P **PKPbc** **15 38 29.4 -0.1**
baz=150
U21A **Nageezi** **150.57 353** P **PKPbc** **15 38 29.9 0.0**
baz=150
V25A **Rancho No Teng** **150.64 348** P **PKPbc** **15 38 29.8 -0.2**
baz=150
MPMC **Manual Prospec** **150.76 9** P **PKPbc** **15 38 31.1 +0.8**
baz=151
Y32A **R-V Farms, Ver** **150.85 338** P **PKPbc** **15 38 30.6 +0.2**
baz=151
V24A **Rampart Ranch,** **150.88 349** P **PKPbc** **15 38 30.9 +0.3**
baz=151
ISA **Isabella** **150.98 11** P **PKPbc** **15 38 31.1 +0.4**
baz=151
W27A **Bowe Ranch, En** **151.01 345** P **PKPbc** **15 38 30.9 +0.1**
baz=151
GSC **Goldstone** **151.61 8** *e*PKIKP **PKPbc** **15 38 33.3 +1.1**
GSC **Goldstone** **151.61 8** *e*PKPbc **PKPbc** **15 38 33.3 +1.1**
GSC **Goldstone** **151.61 8** P **PKPbc** **15 38 33.0 +0.8**
baz=152
Z31A **Sharp Cattle R** **151.72 339** P **PKPbc** **15 38 32.3 -0.1**
baz=152
WUAZ **Wupatki** **151.74 359** *e*PKPbc **PKPbc** **15 38 32.7 +0.2**
WUAZ **Wupatki** **151.74 359** P **PKPbc** **15 38 32.2 -0.3**
baz=152
Z30A **Sanderson Ranc** **152.09 340** P **PKPbc** **15 38 32.6 -0.7**
baz=152
Y27A **Causey** **152.16 344** P **PKPbc** **15 38 33.2 -0.3**
baz=152
X23A **Hourglass Bar** **152.16 350** P **PKPbc** **15 38 33.7 +0.1**
baz=152
X16A **Lo Mia Camp, P** **152.84 359** P **PKPbc** **15 38 35.3 +0.2**
baz=153
Z26A **Caprock** **152.95 345** P **PKPbc** **15 38 34.6 -0.6**
baz=153
Y21A **Point of Rocks** **152.96 352** P **PKPdf** **15 38 25.1 -3.0**
baz=153
332A **Millersview** **153.30 336** P **PKPbc** **15 38 35.4 -0.6**
baz=153
325A **Bean Ranch, Si** **155.01 346** P **PKPab** **15 38 55.0 -0.1**
baz=155
530A **J-C Ranch, Com** **155.01 338** P **PKPab** **15 38 55.0 0.0**
baz=155
324A **Moseley Ranch,** **155.06 347** P **PKPab** **15 38 55.4 +0.1**
baz=155
529A **Stev Forest Ra** **155.35 339** P **PKPab** **15 38 56.3 -0.2**
baz=155
528A **Cox Ranch, San** **155.51 341** P **PKPab** **15 38 56.7 -0.5**
baz=155
527A **Woodward Ranch** **155.79 342** P **PKPab** **15 38 58.3 -0.2**
baz=156
628A **Black Gap, Mar** **156.17 340** P **PKPab** **15 39 00.3 +0.3**
baz=156
626A **Big Bend Ranch** **156.50 343** P **PKPab** **15 39 00.8 -0.6**
baz=156
TXAR **Lajitas Array** **156.56 342** PKPab **PKPab** **15 39 02.3 +0.6**
TXAR **Lajitas Array** **156.56 342** PKPab **PKPab** **15 39 02.3 +0.6**
comp=Z,2.7nm,1.0s,baz=45,slow=3.7,SNR=13

IDC 20 15:20:12.8±4.1, 15.86N×145.46E, h216km±14km, mb3.2/6, mb1 3.2/7, mb1mx2.9/29, mbtmp3.2/7, Error ellipse: s-maj=113.5km s-min=16.8km az=84.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.33**	**194**	P		Pn	15 20 57.3	+1.4
	2.3nm,0.3s,baz=27,slow=18,SNR=6.3						
GUMO				S		S	15 21 29.9	+0.4
	5.1nm,0.3s,baz=9.5,slow=12,SNR=6.2						
WRA	**Warramunga Arr**	**37.23**	**197**	P		P	15 27 03.0	-0.7
	0.2nm,0.6s,baz=20,slow=9.5,SNR=5.4						
FITZ	**Fitzroy Crossi**	**38.99**	**211**	P		P	15 27 18.6	+0.2
	0.6nm,0.5s,baz=31,slow=7.8,SNR=4.2						
ASAR	**Alice Springs**	**40.88**	**196**	P		P	15 27 34.1	+0.2
	0.3nm,0.8s,baz=15,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**60.28**	**315**	P		P	15 29 58.9	+0.4
	0.4nm,0.5s,baz=92,slow=8.4,SNR=7.4						
KURBB	**Kurchatov Arra**	**63.28**	**319**	P		P	15 30 18.2	-0.2
	1.6nm,0.5s,baz=98,slow=7.4,SNR=17						
BVAR	**Borovoye Array**	**68.52**	**321**	P		P	15 30 51.4	-0.4
	1.1nm,0.3s,baz=101,slow=7.5,SNR=7.2						

*DDA **20** 15:20:45.8, 37.57N×35.96E, h7km, MD3.1*
*ISK **20** 15:20:48.2, 37.40N×36.24E, h3km, MD2.6*
*CSEM **20** 15:20:49.9±0.5, 37.45N×36.22E, h2km, MD3.1, Error ellipse: s-maj=24.0km s-min=8.4km az=171.0*

ISC 20 15:20:49.3±1.1, 37.45N±0.06×36.21E±0.03, h8km±9km, n15, σ1§19/25, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.17**	**41**	*i* P		**Pg**	**15 20 52.8**	**-0.1**
ANDN				*i* S		**Sg**	**15 20 56.0**	**+0.7**
ANDN	**Andirin**	**0.17**	**41**	*i* P		**Pg**	**15 20 52.8**	**-0.1**
ANDN				*i* S		**Sg**	**15 20 56.0**	**+0.7**
KOZT	**Kozan**	**0.30**	**275**	*e*PG		**Pb**	**15 20 55.8**	**-1.2**
KOZT				*e*SG		**Sg**	**15 21 00.7**	**+1.4**
KOZT	**Kozan**	**0.30**	**275**	*e*Pg		**Pb**	**15 20 55.8**	**-1.2**
KOZT				*e*Sg		**Sg**	**15 21 00.7**	**+1.4**
AYKD	**Aykdinkavak**	**0.48**	**94**	*e*P		**Pb**	**15 20 59.5**	**-0.5**
AYKD				*e*S		**Sb**	**15 21 06.8**	**-0.5**
KMRS	**Kahramanmaras**	**0.56**	**84**	*e*PG		**Pg**	**15 20 58.4**	**-1.6**
KMRS				*e*SG		**Sb**	**15 21 08.0**	**-1.5**
KMRS	**Kahramanmaras**	**0.56**	**84**	*e*Pg		**Pg**	**15 20 58.4**	**-1.6**
KMRS				*e*Sg		**Sb**	**15 21 08.0**	**-1.5**
CEYT	**Ceyhan**	**0.57**	**220**	*e*PG		**Pb**	**15 21 00.5**	**-1.1**
CEYT	**Ceyhan**	**0.57**	**220**	*e*Pg		**Pb**	**15 21 00.5**	**-1.1**
SARI	**SarD1z-Kayseri**	**0.97**	**10**	*e*PG		**Pn**	**15 21 09.3**	**-0.2**
GZT	**Gaziantep**	**1.09**	**95**	*e*P		**Pn**	**15 21 11.7**	**+0.7**
GZT				*e*S		**Sn**	**15 21 28.0**	**+1.6**
GULE	**Gulek**	**1.15**	**262**	*e*P		Pg	15 21 03.6	-7.7
GULE				*e*S		**Sn**	**15 21 29.1**	**+1.1**
GULE	**Gulek**	**1.15**	**262**	*e*P		Pg	15 21 03.7	-7.7
GULE				*e*S		**Sn**	**15 21 29.1**	**+1.1**
ATAB	**Bozova**	**1.66**	**89**	*e*P		**Pg**	**15 21 21.8**	**+0.6**
ATAB				*e*S		**Sg**	**15 21 43.9**	**+1.2**
ATAB	**Bozova**	**1.66**	**89**	*e*P		**Pg**	**15 21 21.8**	**+0.6**
ATAB				*e*S		**Sg**	**15 21 43.9**	**+1.2**

IDC 20 15:25:35.7±30.0, 19.01S×177.35W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.7/20, mbtmp3.9/4, Error ellipse: s-maj=568.2km s-min=147.1km az=87.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.00**	**243**	P		P	15 33 03.8	-0.3
	0.8nm,0.6s,baz=83,slow=13,SNR=3.8						
WRA	**Warramunga Arr**	**45.44**	**260**	P		P	15 33 57.4	+0.6
	0.7nm,0.4s,baz=98,slow=7.9,SNR=25						
ASAR	**Alice Springs**	**45.48**	**255**	P		P	15 33 57.1	+0.1
	1.4nm,0.6s,baz=87,slow=7.6,SNR=47						
FITZ	**Fitzroy Crossi**	**53.85**	**261**	P		P	15 35 00.0	-0.9
	0.9nm,0.5s,baz=106,slow=7.4,SNR=5.5						

*IDC **20** 15:28:06.7±0.9, 14.90N×120.46E, h0km, mb3.3/7, mb1 3.5/7, mb1mx3.3/27, mbtmp3.3/7, MS2.9/1, Ms1 2.9/1, ms1mx2.4/20, Error ellipse: s-maj=57.7km s-min=9.1km az=59.0*
*MAN **20** 15:28:09, 18.90N×121.18E, h1km, mb4.6, ML3.4, MS3.3*

ISC 20 15:28:07.6±1.0, 14.8N±0.4×120.4E±0.6, h10km, n16, σ1§25/8, mb3.5/6, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.87**	**146**	‖*e*P		**Pn**	**15 28 25.0**	**-1.0**
TGY				*e*S		**Sg**	**15 28 35.8**	**0.0**
TGY	**Tagaytay City**	**0.87**	**146**	Pg		**Pn**	**15 28 24.9**	**-1.0**
	145nm,0.3s,baz=160,slow=1.0,SNR=8.8						
TGY				Lg		Lg	15 28 35.8	
	2µm,0.3s,baz=319,slow=19,SNR=76						
PGP	**Puerto Galera**	**1.41**	**159**	‖*i*P		Pn	15 28 24.1	-9.3
BALP	**Baler**	**1.43**	**50**	*e*P		Pg	15 28 45.0	+10
SJMP	**San Jose**	**2.44**	**164**	*e*P		Pn	15 28 34.6	-13
OTRP	**Odiongan**	**2.90**	**148**	*e*P		Pn	15 28 42.0	-12
ENPP	**El Nido**	**3.73**	**195**	*e*P		Pn	15 28 51.7	-14
CUYO	**Cuyo Island**	**3.99**	**172**	*e*P		Pn	15 28 54.0	-15
GUIM	**Jordan**	**4.68**	**153**	*e*P		Pn	15 29 06.4	-12
CMAR	**Chiang Mai Arr**	**20.90**	**283**	P		Pn	15 32 52.1	-0.7
	0.6nm,0.7s,baz=110,slow=10,SNR=4.5						
SONM	**Songino Array**	**34.91**	**343**	P		**P**	**15 35 00.6**	**+1.1**
	0.6nm,1.0s,baz=165,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**37.16**	**158**	P		**P**	**15 35 20.6**	**+1.7**
	0.8nm,0.8s,baz=333,slow=10,SNR=5.2						
ASAR	**Alice Springs**	**40.46**	**161**	P		P	15 35 49.2	+2.6
	0.1nm,0.5s,baz=331,slow=7.5,SNR=3.8						
MKAR	**Makanchi Array**	**44.98**	**323**	P		**P**	**15 36 22.5**	**-0.6**
	0.1nm,0.4s,baz=108,slow=9.5,SNR=3.5						
KURBB	**Kurchatov Arra**	**49.11**	**326**	P		**P**	**15 36 54.7**	**-0.6**
	1.0nm,0.9s,baz=123,slow=7.9,SNR=9.0						
BVAR	**Borovoye Array**	**54.70**	**325**	P		**P**	**15 37 35.9**	**-1.0**
	0.3nm,0.5s,baz=134,slow=4.2,SNR=3.5						
BVAR				LR	LR		15 59 28.2	
	comp=Z,12nm,20.2s,slow=34						

IDC 20 15:38:45.0±6.6, 30.70S×178.09W, h0km, mb3.7/2, mb1 3.9/2, mb1mx3.6/18, mbtmp3.7/2, Error ellipse: s-maj=275.3km s-min=54.3km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.02**	**267**	P		P	15 46 46.0	-0.5
	0.5nm,0.5s,baz=107,slow=7.8,SNR=15						
WRA	**Warramunga Arr**	**44.03**	**273**	P		P	15 46 55.0	+0.2
	0.5nm,0.3s,baz=111,slow=8.1,SNR=21						
FINES	**FINESS Array B**	**145.40**	**340**	PKPbc	PKPbc	15 58 23.2	-0.9
	1.1nm,0.4s,baz=48,slow=4.8,SNR=9.1						

KRSC 20 16:03:58.2±0.1, 55.05N×165.49E, h30km±20km, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.32**	**61**	*i* P		Pb	16 04 04.8	-1.1
BKI				*e*S		Sb	16 04 09.1	-2.0
KBTR	**Krutoberegovo**	**1.91**	**309**	*e*P		Pn	16 04 28.7	+0.1
KBTR				*e*S		Sn	16 04 50.3	-1.3
MKZ	**Mys Kozlova**	**2.23**	**259**	*e*P		Pn	16 04 34.1	+1.0
MKZ				*e*S		Sn	16 04 59.5	-0.1
SMKR	**Semkarok**	**2.74**	**306**	P		Pn	16 04 42.3	+2.1
SMKR				S		Sn	16 05 13.9	+1.6
BZGR	**Bezymyannyi-Gr**	**2.87**	**290**	P		Pn	16 04 44.8	+2.8
KLY	**Klyuchi**	**3.02**	**297**	S		Sn	16 05 18.6	-0.4
TUMR	**Tumrok**	**3.07**	**277**	P		Pn	16 04 46.2	+1.4
KMNR	**Kamenistaya**	**3.08**	**285**	P		Pn	16 04 47.3	+2.4
KMNR				S		Sn	16 05 22.3	+1.6
SRDR	**Sredinnyy**	**3.51**	**294**	P		Pn	16 04 53.8	+3.1
SRDR				S		Sn	16 05 32.8	+1.6
SPN	**Mys Shipunski**	**3.77**	**241**	S		Sn	16 05 34.8	-2.7
NLC	**Nalytchevo**	**4.08**	**245**	S		Sn	16 05 43.3	-1.7
SDLR	**Sedlovina**	**4.27**	**248**	P		Pn	16 05 03.4	+2.1
SDLR				S		Sn	16 05 49.7	-0.4
SMAR	**Somma**	**4.32**	**248**	P		Pn	16 05 03.4	+1.3
KRER	**Koryakskii**	**4.33**	**249**	P		Pn	16 05 04.0	+1.8
UGLR	**Uglovaya**	**4.33**	**248**	P		Pn	16 05 03.6	+1.5
AVH	**Avacha**	**4.35**	**249**	*e*P		P

PET			S	Sn	16 05 54.7	-1.1
GNL	**Ganaly**	**4.62 256**	*e*P	Pn	16 05 08.8	+2.8
RUS	**Russkaya**	**4.90 241**	P	Pn	16 05 11.0	+1.3
MTVR	**Mutnovka**	**5.04 242**	P	Pn	16 05 13.5	+1.6
MTVR			S	Sn	16 06 07.8	-1.4
ASAK	**Asacha**	**5.24 242**	P	Pn	16 05 17.0	+2.5

IDC 20 16:16:21.2±3.1, 12°.55N×142°.21E, h110km±36km, mb3.3/6, mb1 3.5/7, mb1mx3.3/27, mbtmp3.3/7, Error ellipse: s-maj=33.3km s-min=16.2km az=90.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.79**	**68**	P	Pn	16 17 06.1	+1.7
	11nm,0.3s,baz=328,slow=6.5,SNR=21						
GUMO				S	Sn	16 17 37.9	+0.2
	32nm,0.3s,baz=306,slow=16,SNR=9.6						
WRA	**Warramunga Arr**	**33.20**	**194**	P	P	16 22 47.6	-0.1
	1.3nm,0.6s,baz=18,slow=9.3,SNR=21						
FITZ	**Fitzroy Crossi**	**34.57**	**209**	P	P	16 22 59.3	-0.2
	1.0nm,0.6s,baz=45,slow=8.3,SNR=8.9						
ASAR	**Alice Springs**	**36.90**	**193**	P	P	16 23 19.8	+0.3
	0.8nm,0.5s,baz=23,slow=11,SNR=31						
STKA	**Stephens Creek**	**44.17**	**181**	P	P	16 24 18.1	-1.0
	0.7nm,0.4s,baz=355,slow=8.8,SNR=6.2						
SONM	**Songino Array**	**46.14**	**327**	P	P	16 24 33.6	-1.2
	0.1nm,0.4s,baz=143,slow=9.1,SNR=2.4						
MKAR	**Makanchi Array**	**60.46**	**317**	P	P	16 26 20.1	+0.7
	0.2nm,0.5s,baz=99,slow=7.6,SNR=2.9						
LPAZ	**La Paz**	**150.39**	**101**	PKPbc	PKPbc	16 36 01.8	+0.2
	1.2nm,0.8s,baz=272,slow=3.2,SNR=4.1						

*NEIC **20** 16:27:32.8, 18°.76N×67°.98W, h120km, MD3.6(RSPR), After RSPR.*

RSPR 20 16:27:32.8, 18°.76N×67°.98W, h120km±4km, MD3.6/19, 27C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMO	**Isla Mona**	**0.65**	**174**	*i*P	Pn	16 27 50.3	-1.4
IMO	**Isla Mona**	**0.65**	**174**	*i* Pu	Pn	16 27 50.3	-1.4
AGPR	**Aguadilla, PR**	**0.88**	**109**	*e*P	Pn	16 27 50.2	-3.4
AGPR	**Aguadilla, PR**	**0.88**	**109**	*e*P	Pn	16 27 50.2	-3.4
MPR	**Mayaguez**	**0.97**	**124**	*e*P	Pn	16 27 55.0	+0.5
MPR	**Mayaguez**	**0.97**	**124**	*e*S	Sn	16 28 10.1	-0.7
MPR	**Mayaguez**	**0.97**	**124**	*e*P	Pn	16 27 55.0	+0.5
MPR				*e*S	Sn	16 28 10.1	-0.7
LSP	**Las Mesas**	**1.03**	**124**	*e*P	Pn	16 27 54.2	-0.9
LSP	**Las Mesas**	**1.03**	**124**	*e*P	Pn	16 27 54.2	-0.9
CRPR	**Cabo Rojo, PR**	**1.12**	**132**	*e*P	Pn	16 27 56.0	+0.1
CRPR	**Cabo Rojo, PR**	**1.12**	**132**	*e*S	Sn	16 28 14.4	+0.9
CRPR	**Cabo Rojo, PR**	**1.12**	**132**	*e*P	Pn	16 27 56.0	+0.1
CRPR				*e*S	Sn	16 28 14.4	+0.9
LRS	**Lares**	**1.18**	**113**	*e*P	Pn	16 27 54.8	-1.8
LRS	**Lares**	**1.18**	**113**	*e*P	Pn	16 27 54.8	-1.8
AOPR	**Arecibo Observ**	**1.23**	**109**	*e*P	Pn	16 27 56.2	-1.1
AOPR	**Arecibo Observ**	**1.23**	**109**	*e*S	Sn	16 28 15.9	+0.1
AOPR	**Arecibo Observ**	**1.23**	**109**	*e*P	Pn	16 27 56.2	-1.1
AOPR				*e*S	Sn	16 28 15.9	+0.1
SMN1	**Samana, DR**	**1.29**	**289**	*i* Pu	Pn	16 27 57.1	-0.8
SMN1				*e*S	Sn	16 28 17.1	+0.1
GBPR	**Guanica, Bosqu**	**1.30**	**127**	*e*P	Pn	16 27 59.1	+1.1
GBPR	**Guanica, Bosqu**	**1.30**	**127**	*e*P	Pn	16 27 59.1	+1.1
DR12	**Loma Pena Alta**	**1.33**	**271**	*i*P	Pn	16 27 58.7	+0.4
DR12	**Loma Pena Alta**	**1.33**	**271**	*i* Pu	Pn	16 27 58.7	+0.4
OBIP	**Obispado Ponce**	**1.49**	**118**	*e*P	Pn	16 28 00.8	+0.7
OBIP	**Obispado Ponce**	**1.49**	**118**	*e*S	Sn	16 28 21.4	+0.6
OBIP	**Obispado Ponce**	**1.49**	**118**	*e*P	Pn	16 28 00.8	+0.7
OBIP				*e*S	Sn	16 28 21.4	+0.6
CELP	**Cerrillos**	**1.50**	**117**	*e*P	Pn	16 27 59.7	-0.5
CELP				*e*S	Sn	16 28 21.0	0.0
CELP	**Cerrillos**	**1.50**	**117**	*e*P	Pn	16 27 59.7	-0.5
CELP				*e*S	Sn	16 28 21.0	0.0
SJG	**San Juan**	**1.85**	**110**	*e*P	Pn	16 28 03.8	-0.6
SJG	**San Juan**	**1.85**	**110**	*e*P	Pn	16 28 04.0	-0.5
SJG	**San Juan**	**1.85**	**110**	*e*P	Pn	16 28 04.0	-0.5
CBYP	**Canovanas**	**2.07**	**103**	*e*P	Pn	16 28 06.7	-0.6
CBYP	**Canovanas**	**2.07**	**103**	*e*P	Pn	16 28 06.7	-0.6
CPD	**Cerro la Pandu**	**2.09**	**110**	*e*P	Pn	16 28 08.0	+0.6
CPD	**Cerro la Pandu**	**2.09**	**110**	*e*P	Pn	16 28 08.0	+0.6
HUMP	**Col San Antoni**	**2.11**	**107**	*e*P	Pn	16 28 08.2	+0.5
HUMP	**Col San Antoni**	**2.11**	**107**	*e*P	Pn	16 28 08.2	+0.5
MTP	**Monte Pirata**	**2.40**	**106**	*e*P	Pn	16 28 11.1	-0.1
MTP	**Monte Pirata**	**2.40**	**106**	*e*P	Pn	16 28 11.1	-0.1
STVI	**Saint Thomas**	**2.90**	**98**	*e*P	Pn	16 28 16.9	-0.8
STVI	**Saint Thomas**	**2.90**	**98**	*e*P	Pn	16 28 16.9	-0.8
SDDR	**Presa de Saban**	**3.14**	**275**	*e*Pn	Pn	16 28 25.4	+4.5
SDDR				*e*Sn	Sn	16 29 13.0	+15
GRTK	**Grand Turk**	**4.03**	**313**	*e*Pn	Pn	16 28 31.1	-1.6

*IDC **20** 16:42:09.9±0.9, 0°.49S×132°.97E, h0km, mb3.9/8, mb1 4.1/10, mb1mx3.9/24, mbtmp3.9/10, ML4.1/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/29, Error ellipse: s-maj=38.8km s-min=12.3km az=76.0*

*AUST **20** 16:42:22.6, 0°.99S×132°.50E, h100km*

ISC 20 16:42:15.7±1.0, 0°.73S±0°.07×132°.8E±0°.1, h33km, n22, σ2s18/22, mb3.9/8, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.50**	**265**	P	**Pb**	**16 42 42.6**	**-0.3**
	baz=1.2,SNR=161						
SWI				S	Sb	16 43 05.4	+3.8
	baz=1.2,SNR=4.6						
FAKI	**Fak Fak**	**2.24**	**193**	P	**Pb**	**16 42 53.6**	**-1.8**
	baz=1.9,SNR=413						
FAKI				S	**Sb**	**16 43 23.7**	**+1.0**
	baz=1.9,SNR=4.7						
AAI	**Ambon**	**5.42**	**237**	P	Pn	16 43 39.6	+5.3
	baz=5.1,SNR=4.5						
KDU	**Kakadu**	**11.89**	**181**	P	**Pn**	**16 45 03.3**	**+0.4**
	baz=12,SNR=60						
MTN	**Manton Dam**	**12.15**	**188**	P	**Pn**	**16 45 07.0**	**+0.5**
	baz=12,SNR=62						
MTN				S	**Sn**	**16 47 20.5**	**-0.4**
	baz=12,SNR=11						
KNRA	**Kununurra**	**15.37**	**195**	P	**Pn**	**16 45 50.1**	**-0.2**
	baz=15,SNR=28						
KNRA				S	**Sn**	**16 48 36.7**	**-2.9**
	baz=15,SNR=4.7						
FITZ	**Fitzroy Crossi**	**18.63**	**202**	P	**Pn**	**16 46 31.5**	**+0.4**
	0.4nm,0.3s,baz=37,slow=13,SNR=14						
FITZ				S	Sn	16 49 50.3	-8.3
	0.2nm,0.3s,baz=318,slow=15,SNR=3.0						
FITZ				LR	LR	16 54 33.0	
	comp=Z,64nm,21.1s,baz=107,slow=39						
FITZ	**Fitzroy Crossi**	**18.63**	**202**	P	**Pn**	**16 46 31.9**	**+0.8**
	baz=18,SNR=4.4						
WRA	**Warramunga Arr**	**19.16**	**175**	P	**Pn**	**16 46 37.4**	**-0.2**
	0.6nm,0.3s,baz=354,slow=12,SNR=39						
WRA				S	**Sn**	**16 50 06.3**	**-5.2**
	0.3nm,0.3s,baz=7.5,slow=23,SNR=6.3						
QIS	**Mount Isa**	**20.82**	**162**	P	**P**	**16 46 55.3**	**+0.7**
	baz=21,SNR=7.2						
KSM	**Kuching**	**22.55**	**276**	S	Sn	16 51 34.5	+1.5
	baz=22,SNR=4.2						
ASAR	**Alice Springs**	**22.83**	**177**	P	**P**	**16 47 18.2**	**+2.1**
	15nm,0.8s,baz=357,slow=10,SNR=147						
ASAR				S	**S**	**16 51 29.9**	**+6.4**
	0.5nm,0.8s,baz=4.6,slow=24,SNR=4.4						
SMRI	**Semarang**	**23.12**	**254**	S	Sn	16 51 48.5	+1.8
	baz=23,SNR=3.6						
CTA	**Charters Tower**	**23.34**	**146**	P	**P**	**16 47 21.8**	**+0.4**
	5.9nm,0.8s,baz=349,slow=15,SNR=5.8						
STKA	**Stephens Creek**	**32.09**	**166**	P	**P**	**16 48 40.1**	**+0.2**
	3.3nm,0.3s,baz=339,slow=8.7,SNR=26						
STKA	**Stephens Creek**	**32.09**	**166**	P	**P**	**16 48 40.0**	**+0.2**
	baz=32,SNR=20						
GSI	**Gunungsitoli**	**35.23**	**273**	S	S	16 54 29.7	-9.5
	baz=35,SNR=4.7						
CMAR	**Chiang Mai Arr**	**38.31**	**302**	P	**P**	**16 49 33.3**	**-0.3**
	1.3nm,1.0s,baz=128,slow=5.2,SNR=6.1						
MKAR	**Makanchi Array**	**64.64**	**324**	P	**P**	**16 52 49.0**	**-1.2**
	0.3nm,0.4s,baz=142,slow=5.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**67.30**	**332**	P	**P**	**16 53 06.2**	**-0.9**
	0.3nm,0.3s,baz=90,slow=4.4,SNR=4.3						
KURBB	**Kurchatov Arra**	**68.73**	**326**	P	**P**	**16 53 15.3**	**-0.9**
	1.1nm,0.8s,baz=120,slow=6.1,SNR=12						
ILAR	**Eielson Array**	**86.54**	**25**	P	P	16 54 52.2	-3.0
	0.2nm,0.6s,baz=237,slow=4.2,SNR=3.0						

*ISCJB **20** 16:43:40.6±0.7, 36°.9N±0°.1×134°.2E±0°.1, h450km, Error ellipse: s-maj=16.4km s-min=12.3km az=135.5*

*JMA **20** 16:43:41.8±0.2, 37°.06N×134°.10E, h428km, M2.5*

*IDC **20** 16:43:46.9±10.0, 37°.19N×134°.10E, h357km±200km, mb1 2.4/4, mb1mx2.2/30, mbtmp2.4/4, Error ellipse: s-maj=63.2km s-min=30.6km az=143.0*

ISC 20 16:43:40.9±1.4, 36°.9N±0°.1×134°.26E±0°.10, h450km, n13, σ1s23/15, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAI	**Saigo**	**1.02**	**227**	P	**P**	**16 44 36.5**	**-0.7**
JKG	**Kaga**	**1.78**	**110**	P	**P**	**16 44 40.1**	**-0.1**
JWT	**Wachi**	**1.86**	**150**	P	**P**	**16 44 41.2**	**+0.4**
JWT				S	**S**	**16 45 27.4**	**-1.8**
JHS	**Saijyo**	**2.12**	**206**	P	**P**	**16 44 41.6**	**-0.6**
JGM	**Miyama**	**2.32**	**121**	P	**P**	**16 44 44.2**	**+0.8**
JGT	**Gotsu**	**2.44**	**220**	P	**P**	**16 44 43.6**	**-0.5**
JHT	**Toyohira**	**2.69**	**214**	P	**P**	**16 44 45.1**	**-0.8**
JWY	**Kouya**	**2.89**	**158**	P	**P**	**16 44 48.2**	**+0.9**
JWY				*e*S	**S**	**16 45 40.4**	**-0.7**
MJAR	**Matsushiro Arr**	**3.19**	**95**	P	**P**	**16 44 50.5**	**+1.1**
	0.3nm,0.3s,baz=283,slow=11,SNR=7.1						
JIE	**Ise**	**3.20**	**141**	P	**P**	**16 44 50.9**	**+1.4**
JNU	**Nakatsue**	**4.69**	**217**	P	**P**	**16 45 05.1**	**+2.7**
	0.1nm,0.3s,baz=40,slow=11,SNR=1.6						
KSRS	**Korea Array**	**5.09**	**278**	P	**P**	**16 45 06.6**	**+0.6**
	0.2nm,0.3s,baz=96,slow=10.0,SNR=4.6						
USRK	**Ussuriysk Arra**	**7.49**	**347**	P	**P**	**16 45 31.3**	**+0.8**
	0.5nm,0.3s,baz=165,slow=11,SNR=6.1						

*IDC **20** 16:52:17.8±3.9, 9°.72S×120°.84E, h0km, mb3.9/1, mb1 3.7/5, mb1mx3.4/22, mbtmp3.5/5, ML3.3/4, Error ellipse: s-maj=173.8km s-min=28.5km az=66.0*

*ISCJB **20** 16:52:18.3±0.6, 9°.79S±0°.05×120°.53E±0°.06, h33km, mb3.7/1, Error ellipse: s-maj=9.7km s-min=6.6km az=143.1*

*DJA **20** 16:52:19.1±0.4, 10°.5±5°×12°.1E±°, h23km±5km, M3.7/9, mb4.1/1, MLv3.6/9*

ISC 20 16:52:19.6±1.0, 9°.81S±0°.06×120°.49E±0°.06, h35km, n14, σ1s50/16, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**0.24**	**307**	P	**Pn**	**16 52 26.1**	**-0.7**
WSI				S	**Sn**	**16 52 30.5**	**-1.2**
BASI	**Baing, Sumba**	**0.41**	**168**	P	**Pn**	**16 52 29.7**	**+0.7**
WBSI	**Waikabubak, Su**	**1.10**	**279**	P	**Pn**	**16 52 37.7**	**-0.8**
MMRI	**Maumere**	**2.08**	**56**	P	**Pn**	**16 52 51.3**	**-0.7**
BSSI	**Bau Bau, Buton**	**3.65**	**360**	P	**Pn**	**16 53 13.6**	**+0.1**
BKSI	**Bulukumba**	**4.48**	**355**	P	**Pn**	**16 53 25.3**	**+0.4**
BBSI	**Bau Bau**	**4.76**	**26**	P	**Pn**	**16 53 28.9**	**0.0**
KAPI	**Kappang**	**4.82**	**351**	P	**Pn**	**16 53 29.4**	**-0.3**
KAPI	**Kappang**	**4.82**	**351**	Pn	**Pn**	**16 53 31.4**	**+1.7**
	1.0nm,0.3s,baz=167,slow=14,SNR=7.5						
KHKI	**Kahang-Kahang**	**5.03**	**286**	P	**Pn**	**16 53 33.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**9.64**	**149**	Pn	**Pn**	**16 54 35.9**	**+0.1**
	0.2nm,0.3s,baz=328,slow=13,SNR=18						
FITZ				S	**Sn**	**16 56 18.8**	**-4.1**
	0.2nm,0.3s,baz=63,slow=11,SNR=4.1						
WRA	**Warramunga Arr**	**16.74**	**129**	Pn	**Pn**	**16 56 10.8**	**-0.7**
	0.1nm,0.3s,baz=309,slow=15,SNR=6.6						
WRA				S	Sn	16 59 07.9	-8.5
	0.1nm,0.3s,baz=306,slow=26,SNR=3.4						
ASAR	**Alice Springs**	**18.81**	**139**	P	**Pn**	**16 56 38.2**	**+1.2**
	0.2nm,0.3s,baz=311,slow=10,SNR=18						
STKA	**Stephens Creek**	**29.40**	**141**	P	**P**	**16 58 21.7**	**+2.0**
	0.9nm,0.6s,baz=344,slow=10,SNR=4.1						

*ISK **20** 17:06:33.8, 37°.87N×27°.57E, h6km, MD3.1*

*ISCJB **20** 17:06:34.2±0.5, 37°.87N±0°.03×27°.56E±0°.05, h5km±7km, Error ellipse: s-maj=6.7km s-min=3.8km az=153.3*

*DDA **20** 17:06:34.4, 37°.86N×27°.53E, h7km, MD3.1*

*CSEM **20** 17:06:34.5±0.1, 37°.86N×27°.58E, h5km, MD3.1, Error ellipse: s-maj=3.6km s-min=2.6km az=71.0*

ISC 20 17:06:34.7±1.1, 37°.86N±0°.02×27°.56E±0°.03, h6km±11km, n36, σ0s59/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.30**	**238**	*i* P	**Pg**	**17 06 40.7**	**+0.1**
GCAM				*i* S	**Sg**	**17 06 44.5**	**-0.1**
GCAM	**G?zelcaml?**	**0.30**	**238**	*i* P	**Pg**	**17 06 40.7**	**+0.1**
GCAM				*i* S	**Sg**	**17 06 44.5**	**-0.1**
AYDN	**Tasoluk**	**0.32**	**128**	*i* P	**Pg**	**17 06 41.4**	**+0.4**
AYDN				*i* S	**Sg**	**17 06 45.9**	**+0.6**
AYDN	**Tasoluk**	**0.32**	**128**	*i* P	**Pg**	**17 06 41.4**	**+0.4**
AYDN				*i* S	**Sg**	**17 06 45.9**	**+0.6**
IZM	**Izmir**	**0.58**	**337**	*e*PG	**Pg**	**17 06 46.1**	**+0.1**
IZM				*e*SG	**Sg**	**17 06 54.0**	**+0.3**
IZM	**Izmir**	**0.58**	**337**	*e*Pg	**Pg**	**17 06 46.1**	**+0.1**
IZM				*e*Sg	**Sg**	**17 06 54.0**	**+0.3**
MLSB	**Milas**	**0.59**	**163**	*e*PG	**Pg**	**17 06 46.0**	**-0.1**
MLSB				*e*SG	**Sg**	**17 06 53.9**	**+0.1**
MLSB	**Milas**	**0.59**	**163**	*e*Pg	**Pg**	**17 06 46.0**	**-0.1**
MLSB				*e*Sg	**Sg**	**17 06 53.9**	**+0.1**
BLCB	**Balcova**	**0.66**	**322**	*e*PG	**Pg**	**17 06 47.7**	**+0.2**
BLCB				*e*SG	**Sg**	**17 06 56.1**	**0.0**
BLCB	**Balcova**	**0.66**	**322**	*e*Pg	**Pg**	**17 06 47.7**	**+0.2**
BLCB				*e*Sg	**Sg**	**17 06 56.1**	**0.0**
BODT	**Bodrum**	**0.82**	**194**	*e*PG	**Pg**	**17 06 49.7**	**-0.8**
BODT				*e*SG	**Sb**	**17 07 02.2**	**-0.6**
BODT	**Bodrum**	**0.82**	**194**	*e*Pg	**Pg**	**17 06 49.7**	**-0.8**
BODT				*e*Sg	**Sb**	**17 07 02.2**	**-0.6**
YER	**Yerkesik**	**0.93**	**141**	*e*PG	**Pg**	**17 06 52.3**	**-0.2**
YER	**Yerkesik**	**0.93**	**141**	*e*Pg	**Pg**	**17 06 52.3**	**-0.2**
KULA	**Kula-Manisa**	**1.09**	**53**	*e*PG	**Pg**	**17 06 54.4**	**-1.2**
KULA	**Kula-Manisa**	**1.09**	**53**	*e*Pg	**Pg**	**17 06 54.4**	**-1.2**
DENT	**Denizli**	**1.17**	**95**	*e*PN	**Pg**	**17 06 56.2**	**-1.1**
DENT	**Denizli**	**1.17**	**95**	*e*Pn	**Pg**	**17 06 56.2**	**-1.1**
DNZL	**Cakiroluk**	**1.19**	**98**	*i* P	**Pg**	**17 06 57.6**	**0.0**
DNZL				*i* S	**Sn**	**17 07 16.6**	**+1.8**
DNZL	**Cakiroluk**	**1.19**	**98**	*i* P	**Pg**	**17 06 57.6**	**0.0**
GLHS	**Glhisar (BURDU**	**1.70**	**114**	*e*PN	**Pn**	**17 07 05.0**	**-0.1**
GLHS	**Glhisar (BURDU**	**1.70**	**114**	*e*Pn	**Pn**	**17 07 05.0**	**-0.1**
FETY	**Fethiye**	**1.73**	**135**	*e*PN	**Pn**	**17 07 05.2**	**-0.2**
FETY	**Fethiye**	**1.73**	**135**	*e*Pn	**Pn**	**17 07 05.2**	**-0.2**
DST	**Dursunbey**	**1.93**	**25**	*e*PN	**Pn**	**17 07 08.6**	**+0.4**
DST	**Dursunbey**	**1.93**	**25**	*e*Pn	**Pn**	**17 07 08.6**	**+0.4**
GONE	**Gonen-Balikesi**	**2.19**	**3**	*e*PN	**Pn**	**17 07 10.6**	**-1.1**
GONE	**Gonen-Balikesi**	**2.19**	**3**	*e*Pn	**Pn**	**17 07 10.6**	**-1.1**
ALT	**Altintas**	**2.33**	**58**	*e*PN	**Pn**	**17 07 13.8**	**0.0**
ALT	**Altintas**	**2.33**	**58**	*e*Pn	**Pn**	**17 07 13.8**	**0.0**
SHUT	**Suhut-Afyon**	**2.46**	**73**	*e*PN	**Pn**	**17 07 15.5**	**0.0**
SHUT	**Suhut-Afyon**	**2.46**	**73**	*e*Pn	**Pn**	**17 07 15.5**	**0.0**
KCTX	**Karacabey (Bur**	**2.48**	**14**	*e*PN	**Pn**	**17 07 15.5**	**-0.3**
KCTX	**Karacabey (Bur**	**2.48**	**14**	*e*Pn	**Pn**	**17 07 15.5**	**-0.3**
BNT	**Bandirma**	**2.51**	**6**	*e*PN	**Pn**	**17 07 16.8**	**+0.7**
BNT	**Bandirma**	**2.51**	**6**	*e*Pn	**Pn**	**17 07 16.8**	**+0.7**

*ISCJB **20** 17:09:30.4±0.8, 28°.57N±0°.04×130°.20E±0°.08, h37km±7km, mb3.6/9, Error ellipse: s-maj=13.4km s-min=5.5km az=23.4*

*JMA **20** 17:09:30.6±0.2, 28°.59N×130°.16E, h35km±4km, M3.3*

*IDC **20** 17:09:33.7±3.2, 28°.64N×130°.26E, h51km±30km, mb3.4/9, mb1 3.5/11, mb1mx3.4/27, mbtmp3.4/11, ML3.3/2, Error ellipse: s-maj=32.6km s-min=18.2km az=83.0*

ISC 20 17:09:31.3±1.4, 28°.58N±0°.05×130°.14E±0°.09, h28km±9km, n20, σ0s77/27, mb3.8/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.30**	**209**	P	**Pb**	**17 09 38.4**	**-0.2**
JZK				*e*S	**Sn**	**17 09 44.8**	**-0.5**
JAM	**Amami Oshima**	**0.50**	**251**	P	**Pb**	**17 09 41.0**	**-0.6**
JAM				*e*S	**Sb**	**17 09 48.5**	**-0.1**
JAMN	**Amaminishikomi**	**0.91**	**249**	P	**Pn**	**17 09 48.0**	**-0.2**
JAMN				*e*S	**Sb**	**17 10 00.5**	**+0.2**
JNN	**Nakanoshima**	**1.28**	**350**	P	**Pn**	**17 09 53.3**	**-0.1**
JNN				*e*S	**Sn**	**17 10 08.8**	**-0.8**
JTK	**Tokunoshima**	**1.31**	**233**	P	**Pn**	**17 09 54.2**	**+0.5**
JTK				*e*S	**Sb**	**17 10 12.1**	**+0.4**
JOW	**Kunigami**	**2.40**	**224**	P	**Pn**	**17 10 08.2**	**-0.5**
JIH	**Iheya**	**2.46**	**232**	P	**Pn**	**17 10 09.3**	**-0.2**
JJT2	**Tamagusuku 2**	**3.23**	**222**	P	**Pn**	**17 10 19.9**	**-0.2**
JKE	**Kume jima 2**	**3.73**	**234**	P	**Pn**	**17 10 26.9**	**-0.1**
JKE				*e*S	**Sn**	**17 11 10.5**	**+0.5**
JNU	**Nakatsue**	**4.58**	**8**	P	**Pn**	**17 10 39.2**	**+0.5**
	2.4nm,0.3s,baz=186,slow=12,SNR=10						
JNU				S	**Sn**	**17 11 30.7**	**-0.2**
	baz=192,slow=19,SNR=1.7						
KSRS	**Korea Array**	**9.05**	**349**	P	**Pn**	**17 11 41.5**	**+1.5**
	0.1nm,0.3s,baz=167,slow=13,SNR=4.1						
SONM	**Songino Array**	**26.61**	**323**	P	**P**	**17 15 08.5**	**+1.1**
	0.3nm,0.5s,baz=138,slow=8.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**30.25**	**257**	P	**P**	**17 15 42.0**	**+2.1**
	0.3nm,0.7s,baz=59,slow=7.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**41.46**	**321**	P	**P**	**17 17 14.4**	**-1.0**
	0.8nm,0.3s,baz=110,slow=8.3,SNR=5.0						
WRA	**Warramunga Arr**	**48.40**	**175**	P	**P**	**17 18 10.7**	**-0.3**
	0.8nm,0.8s,baz=353,slow=8.5,SNR=4.5						
ASAR	**Alice Springs**	**52.07**	**176**	P	**P**	**17 18 38.8**	**+0.1**
	0.3nm,0.6s,baz=9.6,slow=13,SNR=6.2						
FINES	**FINESS Array B**	**71.66**	**331**	P	**P**	**17 20 49.4**	**-0.8**
	0.4nm,0.5s,baz=69,slow=6.5,SNR=4.6						
AKASG	**Malin Array Be**	**74.85**	**320**	P	**P**	**17 21 08.0**	**-1.1**
	0.9nm,0.4s,baz=57,slow=6.7,SNR=2.9						
YKA	**Yellowknife Ar**	**75.69**	**26**	P	**P**	**17 21 13.9**	**+0.2**
	0.3nm,0.6s,baz=302,slow=6.0,SNR=4.3						
BRTR	**Keskin Array B**	**76.93**	**308**	P	**P**	**17 21 21.4**	**0.0**
	1.1nm,0.7s,baz=117,slow=4.6,SNR=6.5						

DJA 20 17:19:10.6±0.6, 9°.5±9°×11°.5E±°, h92km±6km, M3.4/11, mb3.7/2, MLv3.2/11, Bali region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**0.38**	**71**	P	Pn	17 19 26.1	+1.4
DNP	**Denpasar**	**0.50**	**58**	P	Pn	17 19 27.2	+1.7
DNP				S	Sn	17 19 40.0	+3.3
BYJI	**Banyuwangi**	**0.83**	**330**	P	Pn	17 19 29.4	+0.8
SRBI	**Singaraja**	**0.95**	**27**	P	Pn	17 19 29.5	-0.4
KHKI	**Kahang-Kahang**	**1.00**	**55**	P	Pn	17 19 29.6	-0.8
GMJI	**Gumukmas**	**1.48**	**297**	P	Pn	17 19 36.7	+0.5
GMJI				S	Sn	17 19 56.0	+0.5
BLJI	**Banyuglugur**	**1.67**	**315**	P	Pn	17 19 38.5	-0.1
KMMI	**Kalianget**	**2.04**	**337**	P	Pn	17 19 44.2	+0.7
PCJI	**Pacitan**	**3.64**	**281**	P	Pn	17 20 04.7	-0.1
UGM	**Wanagama**	**4.33**	**283**	P	Pn	17 20 13.9	-0.4
WBSI	**Waikabubak, Su**	**4.60**	**99**	P	Pn	17 20 17.4	-0.6
BSSI	**Bau Bau, Buton**	**6.31**	**64**	P	Pn	17 20 40.8	-0.3
	14nm,1.0s						
BKSI	**Bulukumba**	**6.41**	**56**	P	Pn	17 20 41.9	-0.5

IDC 20 17:25:51.4±1.9, 12°.57N×142°.69E, h166km±19km, mb3.2/7, mb1 3.5/8, mb1mx3.2/26, mbtmp3.2/8, Error ellipse: s-maj=30.0km s-min=14.5km az=101.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.36**	**64**	P	Pn	17 26 32.3	+0.7
	13nm,0.3s,baz=38,slow=23,SNR=13						
GUMO				S	Sn	17 27 03.0	+0.3
	26nm,0.3s,baz=58,slow=22,SNR=12						
USRK	**Ussuriysk Arra**	**32.83**	**346**	P	P	17 32 08.7	-0.4
	0.9nm,0.6s,baz=177,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**33.34**	**194**	P	P	17 32 13.2	-0.5
	1.2nm,0.5s,baz=17,slow=9.6,SNR=24						
ASAR	**Alice Springs**	**37.02**	**193**	P	P	17 32 45

*DDA **20** 18:15:15.5, 37°.53N × 35°.72E, h7km, MD2.8*
*ISCJB **20** 18:15:16.1 ± 0.7, 37°.55N ± 0°.04 × 35°.69E ± 0°.04, h9km ± 4km, Error ellipse: s-maj=7.1km s-min=4.9km az=159.9*
*CSEM **20** 18:15:16.4 ± 0.3, 37°.52N × 35°.67E, h10km, MD2.8, Error ellipse: s-maj=8.1km s-min=5.4km az=168.0*
*ISK **20** 18:15:16.0, 37°.55N × 35°.68E, h11km, MD2.8*

ISC 20 18:15:16.1 ± 0.9, 37°.52N ± 0°.04 × 35°.70E ± 0°.03, h13km ± 7km, n21, σ 0s2 52/35, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.11**	**112**	PG	**Pb**	**18 15 20.0**	**-0.1**
KOZT				eSG	**Sg**	**18 15 21.8**	**+0.5**
KOZT	**Kozan**	**0.11**	**112**	*i* Pg	**Pb**	**18 15 20.0**	**-0.1**
KOZT				eSg	**Sg**	**18 15 21.8**	**+0.5**
CEYT	**Ceyhan**	**0.51**	**176**	*e*PG	**Pb**	**18 15 26.8**	**-0.1**
CEYT				eSG	**Sb**	**18 15 35.3**	**+1.0**
CEYT	**Ceyhan**	**0.51**	**176**	*e*Pg	**Pb**	**18 15 26.8**	**-0.1**
CEYT				eSg	**Sb**	**18 15 35.3**	**+1.0**
ANDN	**Andirin**	**0.52**	**83**	*i* P	**Pg**	**18 15 25.9**	**-0.3**
ANDN				*i* S	**Sg**	**18 15 33.8**	**+0.7**
ANDN	**Andirin**	**0.52**	**83**	*i* P	**Pg**	**18 15 25.9**	**-0.3**
ANDN				*i* S	**Sg**	**18 15 33.8**	**+0.7**
GULE	**Gulek**	**0.77**	**252**	*i* P	**Pg**	**18 15 30.3**	**-0.8**
GULE				*i* S	**Sb**	**18 15 42.5**	**+0.5**
GULE	**Gulek**	**0.77**	**252**	*i* P	**Pg**	**18 15 30.3**	**-0.8**
GULE				*i* S	**Sb**	**18 15 42.5**	**+0.5**
AYKD	**Aykdinkavak**	**0.89**	**97**	*i* P	**Pg**	**18 15 32.0**	**-1.2**
AYKD				*i* S	**Sg**	**18 15 44.1**	**-0.7**
KMRS	**Kahramanmaras**	**0.96**	**91**	*e*PG	**Pn**	**18 15 35.1**	**-0.2**
KMRS	**Kahramanmaras**	**0.96**	**91**	*e*Pg	**Pn**	**18 15 35.1**	**-0.2**
SARI	**SarD1z-Kayseri**	**1.05**	**33**	*e*PG	**Pb**	**18 15 36.3**	**+0.1**
COBT	**Iskenderun**	**1.10**	**156**	*i* P	**Pb**	**18 15 36.5**	**-0.5**
COBT				*i* S	**Sb**	**18 15 51.6**	**+0.3**
COBT	**Iskenderun**	**1.10**	**156**	*i* P	**Pb**	**18 15 36.5**	**-0.5**
COBT				*i* S	**Sb**	**18 15 51.6**	**+0.3**
GAZ	**Gaziantep**	**1.26**	**106**	*e*PN	**Pg**	**18 15 40.4**	**+0.2**
GAZ	**Gaziantep**	**1.26**	**106**	*e*Pn	**Pg**	**18 15 40.4**	**+0.2**
GZT	**Gaziantep**	**1.50**	**96**	*i* P	**Pn**	**18 15 42.8**	**0.0**
GZT				*i* S	**Sg**	**18 16 04.2**	**0.0**
SULT	**Sultanhani-AKS**	**1.85**	**292**	*e*PN	**Pn**	**18 15 48.0**	**+0.3**
SULT	**Sultanhani-AKS**	**1.85**	**292**	*e*Pn	**Pn**	**18 15 48.0**	**+0.3**
AKCD	**Akcadag**	**1.92**	**66**	*i* P	**Pb**	**18 15 51.1**	**0.0**
AKCD				*i* S	**Sb**	**18 16 14.9**	**-0.1**
AKCD	**Akcadag**	**1.92**	**66**	*i* P	**Pb**	**18 15 51.1**	**0.0**
AKCD				*i* S	**Sb**	**18 16 14.9**	**-0.1**

*ISCJB **20** 19:06:37.1 ± 1.2, 47°.54N ± 0°.05 × 122°.02W ± 0°.10, h20km ± 11km, Error ellipse: s-maj=12.7km s-min=5.5km az=147.4*
*NEIC **20** 19:06:38.0, 47°.60N × 121°.87W, h21km, MD2.5(SEA), After SEA.*
NEIC Felt at Gold Bar, North Bend and Sultan.
*PNSN **20** 19:06:38.3, 47°.60N × 121°.87W, h21km, MD2.5, Fault plane solution: NP1: φs 25.00000°, δ 70.00000°, NP2: φs 295.00000°, δ 90.00000°, Principal axes: T Plg14.0000°, Azm248.0000°; P Plg14.0000°, Azm342.0000°;*
*PGC **20** 19:06:38.0, 47°.60N × 121°.87W, h21km, ML2.2/4, 34km east of Seattle, Wa Washington*

ISC 20 19:06:36.8 ± 1.4, 47°.58N ± 0°.04 × 121°.87W ± 0°.06, h22km ± 7km, n9, σ 0s2 52/17, 3D, Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LON	**Longmire**	**0.83**	**177**	*e*Pn	**Pb**	**19 06 52.6**	**0.0**
LON				*e*Sn	**Sb**	**19 07 03.6**	**+0.3**
VGZ	**Gonzales**	**1.28**	**311**	⇑P	**Pn**	**19 06 59.5**	**+0.2**
VGZ				⇓S	**Sn**	**19 07 14.7**	**-1.2**
NLWA	**Neilton Lookou**	**1.37**	**263**	*e*Pn	**Pb**	**19 07 01.4**	**-0.3**
VDB	**Vedder Mountai**	**1.46**	**354**	P	**Pb**	**19 07 03.0**	**-0.1**
VDB				⇑S	**Sb**	**19 07 21.8**	**+0.6**
SNB	**Saturna Island**	**1.48**	**324**	P	**Pb**	**19 07 03.2**	**-0.4**
SNB				⇑S	**Sb**	**19 07 21.9**	**0.0**
PGC	**Sidney**	**1.50**	**316**	*e*Pn	**Pn**	**19 07 02.3**	**-0.1**
PGC				*e*Sn	**Sn**	**19 07 21.0**	**-0.3**
PGC	**Sidney**	**1.50**	**316**	⇑P	**Pn**	**19 07 02.9**	**+0.5**
PGC				⇓S	**Sn**	**19 07 21.9**	**+0.5**
LZB	**Mount Lazard**	**1.67**	**309**	⇑P	**Pn**	**19 07 05.2**	**+0.5**
LZB				⇑S	**Sn**	**19 07 25.9**	**+0.4**
HAWA	**Hanford**	**1.99**	**126**	*e*Pn	**Pb**	**19 07 11.9**	**-0.5**
HAWA				*e*Sn	**Sb**	**19 07 36.9**	**+0.2**

*AUST **20** 19:20:06.9 ± 0.0, 9°.33S × 114°.93E, h56km, Error ellipse: s-maj=1.7km s-min=1.2km az=304.0*
*ISCJB **20** 19:20:19.0 ± 0.6, 10°.83S ± 0°.04 × 113°.31E ± 0°.05, h25km, Error ellipse: s-maj=7.9km s-min=5.8km az=159.2*
*DJA **20** 19:20:24.3 ± 0.8, 10°.5S ± 7°.× 11°.3E ± °, h10km, MJ3.8/11, MLv3.8/11*

ISC 20 19:20:20.7 ± 1.0, 10°.79S ± 0°.06 × 113°.35E ± 0°.06, h25km, n16, σ 1s 36/22, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**2.50**	**2**	P	**Pn**	**19 20 59.2**	**-0.7**
IGBI	**Denpasar**	**2.64**	**42**	P	**Pn**	**19 21 01.7**	**-0.1**
BYJI	**Banyuwangi**	**2.75**	**21**	P	**Pn**	**19 21 04.4**	**+1.2**
BYJI				S	**Sn**	**19 21 35.0**	**-0.6**
KRKI	**Karangkates**	**2.76**	**341**	P	**Pn**	**19 21 03.5**	**+0.1**
DNP	**Denpasar**	**2.79**	**41**	P	**Pn**	**19 21 04.1**	**+0.3**
DNP				S	**Sn**	**19 21 35.0**	**-1.7**
BLJI	**Banyuglugur**	**3.04**	**5**	P	**Pn**	**19 21 08.7**	**+1.5**
PWJI	**Pagerwojo**	**3.15**	**331**	P	**Pn**	**19 21 09.3**	**+0.6**
PWJI				S	**Sn**	**19 21 44.9**	**-0.5**
KHKI	**Kahang-Kahang**	**3.29**	**43**	P	**Pn**	**19 21 13.8**	**+3.2**
PCJI	**Pacitan**	**3.35**	**320**	P	**Pn**	**19 21 11.9**	**+0.4**
PCJI				S	**Sn**	**19 21 48.9**	**-1.7**
SJI	**Sawahan**	**3.41**	**333**	P	**Pn**	**19 21 14.1**	**+1.6**
KMMI	**Kalianget**	**3.77**	**9**	P	**Pn**	**19 21 18.3**	**+1.0**
GRJI	**Gresik**	**3.95**	**347**	P	**Pn**	**19 21 19.8**	**+0.1**
UGM	**Wanagama**	**3.99**	**316**	P	**Pn**	**19 21 21.5**	**+1.1**
UGM	**Wanagama** baz=4.6,SNR=9.7	**3.99**	**316**	P	**Pn**	**19 21 22.6**	**+2.2**
UGM				S	**Sn**	**19 22 06.0**	**-0.4**
GIRL	**Giralia** baz=4.6,SNR=3.9	**11.82**	**176**	P	**Pn**	**19 23 08.4**	**+0.7**
GIRL				S	**Sn**	**19 25 17.1**	**-1.8**
MEEK	**Meekatharra** baz=13,SNR=8.6	**16.53**	**163**	P	**Pn**	**19 24 10.8**	**-0.2**
MEEK				S	Sn	19 27 00.6	-13

*IDC **20** 19:24:50.6 ± 0.6, 28°.69N × 130°.05E, h0km, mb3.9/18, mb1 4.1/18, mb1mx4.0/27, mbtmp3.9/18, MS3.6/13, Ms1 3.6/13, ms1mx3.2/54, Error ellipse: s-maj=24.9km s-min=14.5km az=72.0*
*ISCJB **20** 19:24:55.0 ± 0.5, 28°.59N ± 0°.04 × 130°.13E ± 0°.06, h45km ± 4km, mb4.0/21, MS3.6/11, Error ellipse: s-maj=10.1km s-min=4.0km az=28.8*
*JMA **20** 19:24:55.0 ± 0.2, 28°.60N × 130°.12E, h35km ± 3km, M4.1*
JMA Felt I J1.
*NIED **20** 19:25:00, 28°.70N × 130°.20E, h23km, Mw4.2 Best double couple: M0 2.43000 × 10^15 NP1: φs 26.00000°, δ 57.00000°, λ 95.00000°. NP2: φs 197.00000°, δ 34.00000°, λ 83.00000°.*

ISC 20 19:24:55.4 ± 1.0, 28°.61N ± 0°.05 × 130°.08E ± 0°.07, h32km ± 6km, n48, σ 0s89/55, mb3.9/21, MS3.7/11, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.31**	**198**	P	**Pb**	**19 25 02.7**	**-0.6**
JZK				*e*S	**Sb**	**19 25 09.0**	**+0.4**
JAM	**Amami Oshima**	**0.46**	**245**	P	**Pb**	**19 25 05.1**	**-0.3**
JAM				*e*S	**Sb**	**19 25 12.1**	**-0.2**
JAMN	**Amaminishikomi**	**0.88**	**245**	P	**Pn**	**19 25 11.7**	**+0.1**
JAMN				*e*S	**Sb**	**19 25 24.8**	**+1.1**
JNN	**Nakanoshima**	**1.24**	**352**	P	**Pn**	**19 25 17.3**	**+0.8**
JNN				*e*S	**Sn**	**19 25 33.4**	**+1.3**
JTK	**Tokunoshima**	**1.29**	**231**	P	**Pn**	**19 25 18.1**	**+0.8**
JTK				*e*S	**Sb**	**19 25 36.1**	**+0.6**
JTN	**Tanegashima 3**	**2.18**	**21**	P	**Pn**	**19 25 30.1**	**+0.6**
JTN				*e*S	**Sn**	**19 25 56.8**	**+1.4**
JOW	**Kunigami**	**2.39**	**223**	P	**Pn**	**19 25 32.6**	**+0.2**
JOW				*e*S	**Sn**	**19 26 02.0**	**+1.4**
JIH	**Iheya**	**2.44**	**230**	P	**Pn**	**19 25 33.5**	**+0.4**
JIH				*e*S	**Sn**	**19 26 04.3**	**+2.4**
JJT2	**Tamagusuku 2**	**3.22**	**221**	P	**Pn**	**19 25 44.1**	**+0.3**
JJT2				*e*S	**Sn**	**19 26 22.1**	**+1.0**
JAGN	**Aguni-jima**	**3.23**	**232**	P	**Pn**	**19 25 44.7**	**+0.8**
JKE	**Kume jima 2**	**3.71**	**233**	P	**Pn**	**19 25 50.8**	**+0.3**
JKE				*e*S	**Sn**	**19 26 34.2**	**+1.1**
JNU	**Nakatsue** 5.2nm,0.3s,baz=206,slow=5.9,SNR=79	**4.55**	**8**	Pn	**Pn**	**19 26 03.6**	**+1.5**
JNU				Sn	**Sn**	**19 26 55.1**	**+1.3**
KSRS	**Korea Array** 0.3nm,0.3s,baz=166,slow=16,SNR=8.3	**9.00**	**349**	Pn	Pn	19 27 06.1	+3.0
KSRS				LR	LR	19 30 52.7	
JHJ	**Hachijo jima 2** comp=Z,224nm,18.3s,baz=168,slow=41	**9.47**	**59**	LR	LR	19 30 19.3	
MJAR	**Matsushiro Arr** comp=Z,190nm,20.0s,baz=336,slow=35	**10.46**	**39**	Pn	Pn	19 27 25.9	+2.8
SONM	**Songino Array** 0.2nm,0.3s,baz=203,slow=13,SNR=3.2	**26.55**	**323**	P	**P**	**19 30 28.6**	**-1.8**
SONM				LR	LR	19 42 31.2	
CMAR	**Chiang Mai Arr** 1.3nm,0.9s,baz=137,slow=11,SNR=5.3	**30.20**	**257**	P	**P**	**19 31 02.8**	**-0.4**
CMAR				PcP	**PcP**	**19 34 05.4**	**+1.7**
GUN	**Gumba** 0.5nm,0.7s,baz=10,slow=1.6,SNR=4.7	**38.77**	**280**	*e*P	**P**	**19 32 17.8**	**+0.3**
CMAR				LR	LR	19 44 26.4	
ODAN	**Odare** comp=Z,68nm,20.0s,baz=85,slow=39	**37.68**	**278**	*e*P	**P**	**19 32 08.3**	**+0.1**
DANN	**Dangsing** 16nm,0.7s	**40.52**	**281**	*e*P	**P**	**19 32 32.4**	**+0.4**
PKI	**Pulchoki** 14nm,0.6s	**39.25**	**279**	*e*P	**P**	**19 32 21.2**	**-0.3**
PKIN	**Phulchoki** 12nm,0.8s	**39.26**	**279**	*e*P	**P**	**19 32 21.3**	**-0.2**
KKN	**Kakani** 9.3nm,0.9s	**39.32**	**280**	*e*P	**P**	**19 32 22.0**	**0.0**
PYUN	**Piuthan** 13nm,0.9s	**41.23**	**281**	*e*P	**P**	**19 32 38.0**	**+0.2**
MKAR	**Makanchi Array** 15nm,0.9s	**41.24**	**309**	P	**P**	**19 32 36.8**	**-0.6**
MKAR				PcP	**PcP**	**19 34 36.3**	**+0.5**
ZALV	**Zalesovo Beam** 2.7nm,0.5s,baz=107,slow=8.6,SNR=15	**41.40**	**321**	P	**P**	**19 32 37.8**	**-0.7**
ZALV				PcP	**PcP**	**19 34 36.0**	**-0.2**
ZALV				LR	LR	19 51 26.8	
KURBB	**Kurchatov Arra** comp=Z,50nm,18.9s,baz=62,slow=39	**44.32**	**314**	P	**P**	**19 33 00.7**	**-1.5**
KURBB				LR	LR	19 53 16.8	
AAK	**Ala-Archa** 0.8nm,0.6s,baz=102,slow=9.0,SNR=10	**46.51**	**303**	LR	LR	19 55 22.9	
FITZ	**Fitzroy Crossi** comp=Z,66nm,19.8s,baz=56,slow=39	**46.64**	**186**	P	**P**	**19 33 21.2**	**+0.3**
WRA	**Warramunga Arr** 0.6nm,0.6s,baz=39,slow=13,SNR=3.6	**48.45**	**175**	P	**P**	**19 33 35.0**	**0.0**
BVAR	**Borovoye Array** 1.0nm,0.8s,baz=355,slow=8.2,SNR=10	**49.63**	**317**	LR	LR	19 56 36.4	
ASAR	**Alice Springs** comp=Z,87nm,18.3s,baz=88,slow=38	**52.11**	**176**	P	**P**	**19 34 03.0**	**+0.4**
AKTO	**Aktyubinsk** 0.7nm,0.6s,baz=9.1,slow=13,SNR=14	**57.36**	**314**	LR	LR	20 01 02.1	
STKA	**Stephens Creek** comp=Z,64nm,21.4s,baz=81,slow=38	**61.15**	**169**	P	**P**	**19 35 06.8**	**+0.1**
ILAR	**Eielson Array** 0.7nm,0.7s,baz=350,slow=13,SNR=3.1	**61.57**	**29**	P	**P**	**19 35 08.4**	**-0.9**
KBZ	**Khabaz** 0.5nm,0.8s,baz=279,slow=4.3,SNR=6.4	**68.93**	**309**	P	**P**	**19 35 58.1**	**+0.8**
KBZ				LR	LR	20 11 19.0	
MIB	**Mutribah** 3.1nm,0.8s,baz=91,slow=0.3,SNR=9.1	**70.60**	**294**	*e*P	**P**	**19 36 07.6**	**-0.2**
MIB				AMb	AMB	19 36 08.2	
NAY	**Al-Naaiem** comp=Z,5.7nm,0.7s	**70.89**	**293**	*e*P	**P**	**19 36 09.4**	**-0.3**
NAY				AMb	AMB	19 36 10.3	
RST	**Umm Al-Ruwaisa** comp=Z,3.7nm,0.6s	**70.99**	**294**	*e*P	**P**	**19 36 09.7**	**-0.5**
RST				AMb	AMB	19 36 10.9	
FINES	**FINESS Array B** comp=Z,46nm,1.2s	**71.61**	**331**	P	**P**	**19 36 13.4**	**0.0**
FINES				LR	LR	20 10 58.1	
AKASG	**Malin Array Be** comp=Z,1.3nm,0.5s,baz=64,slow=6.0,SNR=12	**74.79**	**320**	P	**P**	**19 36 30.8**	**-1.5**
YKA	**Yellowknife Ar** comp=Z,52nm,19.1s,baz=90,slow=39	**75.68**	**26**	P	**P**	**19 36 37.8**	**+0.5**
BRTR	**Keskin Array B** comp=Z,1.8nm,0.5s,baz=58,slow=6.1,SNR=5.7	**76.87**	**308**	P	**P**	**19 36 45.2**	**+0.5**
NB2	**NORSAR Subarra** comp=Z,0.7nm,0.6s,baz=96,slow=4.9,SNR=20	**77.90**	**334**	P	**P**	**19 36 48.9**	**-1.0**
NOA	**NORSAR Array B** comp=Z,0.6nm,0.7s,baz=50,slow=5.3	**77.90**	**334**	P	**P**	**19 36 48.6**	**-1.2**
NOA				LR	LR	20 17 15.9	
GERES	**GERESS Array B** comp=Z,0.7nm,0.7s,baz=51,slow=5.5,SNR=4.3	**84.28**	**324**	P	**P**	**19 37 24.3**	**+0.1**
PDAR	**Pinedale Array** comp=Z,0.5nm,0.6s,baz=35,slow=3.3,SNR=7.3	**90.28**	**39**	P	**P**	**19 37 53.9**	**+0.4**
PFO	**Pinyon Flat Ob** comp=Z,0.3nm,0.6s,baz=12,slow=2.1,SNR=3.3	**91.70**	**50**	LR	LR	20 12 59.3	

CASC 20 19:26:19.6 ± 2.4, 12°.76N × 90°.19W, h0km ± 10km, MD3.6, 2C-2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**1.21**	**27**	⇑*i*P	Pg	19 26 42.9	-0.4
SNJE	**San Jose**	**1.25**	**27**	*e*P	Pg	19 26 43.4	-0.4
RTR	**El Retiro**	**1.25**	**25**	*i* P	Pg	19 26 43.6	-0.3
BOQS	**Boqueron**	**1.32**	**42**	⇓*e*P	Pb	19 26 45.5	0.0
BOQS				*e*S	Sg	19 27 02.9	+0.3
LFRS	**El Faro**	**1.40**	**52**	*i* P	Pn	19 26 46.2	-0.4
LFRS				*e*S	Sn	19 27 06.5	+0.6
IXG	**Ixpaco**	**1.43**	**350**	*e*P	Pn	19 26 45.1	-2.0
IXG				*e*S	Sn	19 27 07.7	+0.8
RBDL	**Robledal**	**1.44**	**20**	⇓*i*P	Pn	19 26 46.3	-0.9
RBDL				*e*S	Sb	19 27 06.5	0.0
LBRS	**Las Brisas**	**1.49**	**49**	*e*P	Pn	19 26 47.4	-0.3
SNVI	**San Vicente**	**1.57**	**57**	⇑*i*P	Pn	19 26 48.6	-0.3
SNVI				*e*S	Sg	19 27 10.5	0.0
FUG	**Fuego 3**	**1.80**	**340**	*e*P	Pn	19 26 51.0	-1.1
FUG				*e*S	Sb	19 27 17.3	+0.4
NBG	**Las Nubes**	**1.83**	**355**	*e*P	Pn	19 26 52.6	0.0
NBG				*e*S	Sb	19 27 18.2	+0.2
MRL	**Marmol**	**2.35**	**12**	*e*P	Pn	19 27 00.3	+0.6
MRL				*e*S	Sb	19 27 33.0	+0.2

IDC 20 19:29:31.8 ± 1.4, 0°.77N × 123°.45E, h0km, mb3.5/4, mb1 3.7/6, mb1mx3.5/25, mbtmp3.6/6, ML3.7/2, Error ellipse: s-maj=54.9km s-min=22.2km az=66.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang** 0.7nm,0.3s,baz=29,slow=10,SNR=4.3	**6.83**	**213**	Pn	Pn	19 31 13.9	+0.5
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=358,slow=8.5,SNR=14	**18.88**	**174**	P	P	19 33 53.8	0.0
WRA	**Warramunga Arr** 1.1nm,0.5s,baz=330,slow=12,SNR=26	**23.19**	**153**	P	P	19 34 41.2	+0.8
ASAR	**Alice Springs** 0.2nm,0.5s,baz=330,slow=9.0,SNR=6.5	**26.33**	**158**	P	P	19 35 08.9	-0.7
STKA	**Stephens Creek** 0.6nm,0.4s,baz=321,slow=13,SNR=3.2	**36.74**	**154**	P	P	19 36 40.9	-0.1
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=127,slow=8.2,SNR=3.5	**58.20**	**328**	P	P	19 39 27.6	-0.3

*DDA **20** 19:41:51.0, 39°.28N × 27°.98E, h7km, MD3.0*
*ISCJB **20** 19:41:51.5 ± 0.5, 39°.27N ± 0°.02 × 27°.95E ± 0°.03, h7km ± 4km, Error ellipse: s-maj=4.0km s-min=3.5km az=146.8*
*ISK **20** 19:41:51.0, 39°.26N × 27°.92E, h9km, MD2.9*
*CSEM **20** 19:41:51.8 ± 0.1, 39°.26N ± 27°.95E, h10km, MD3.0, Error ellipse: s-maj=2.6km s-min=2.3km az=71.0*

ISC 20 19:41:51.2 ± 1.1, 39°.25N ± 0°.02 × 27°.95E ± 0°.02, h10km ± 9km, n51, σ 0s66/72, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.39**	**196**	*i* P	**Pb**	**19 41 60.0**	**-0.2**
AKHS				*i* S	**Sb**	**19 42 07.1**	**+0.9**
AKHS	**Akhisar**	**0.39**	**196**	*i* P	**Pb**	**19 42 00.0**	**-0.2**
AKHS				*i* S	**Sb**	**19 42 07.1**	**+0.9**
DURS	**Dursunbey**	**0.54**	**49**	*i* P	**Pg**	**19 42 01.3**	**-0.4**
DURS				*i* S	**Sb**	**19 42 09.7**	**-0.9**
DURS	**Dursunbey**	**0.54**	**49**	*i* P	**Pg**	**19 42 01.3**	**-0.4**
DURS				*i* S	**Sb**	**19 42 09.7**	**-0.9**
BALY	**Balya**	**0.56**	**332**	*i* P	**Pg**	**19 42 01.7**	**-0.3**
BALY				*i* S	**Sg**	**19 42 09.1**	**-0.3**
BALY	**Balya**	**0.56**	**332**	*i* P	**Pg**	**19 42 01.7**	**-0.3**
BALY				*i* S	**Sg**	**19 42 09.1**	**-0.3**
DST	**Dursunbey**	**0.63**	**55**	*e*PG	**Pb**	**19 42 04.4**	**+0.1**
DST				*e*SG	**Sb**	**19 42 13.5**	**+0.4**
DST	**Dursunbey**	**0.63**	**55**	*e*Pg	**Pb**	**19 42 04.4**	**+0.1**
DST				*e*Sg	**Sb**	**19 42 13.5**	**+0.4**
DEMI	**Demirci**	**0.63**	**109**	*i* P	**Pb**	**19 42 04.1**	**-0.2**
DEMI				*i* S	**Sb**	**19 42 13.3**	**+0.1**
DEMI	**Demirci**	**0.63**	**109**	*i* P	**Pb**	**19 42 04.1**	**-0.2**
DEMI				*i* S	**Sb**	**19 42 13.3**	**+0.1**
GONE	**Gonen-Balikesi**	**0.82**	**346**	*e*PG	**Pg**	**19 42 06.7**	**-0.4**
GONE				*e*SG	**Sg**	**19 42 18.1**	**+0.3**
GONE	**Gonen-Balikesi**	**0.82**	**346**	*e*Pg	**Pg**	**19 42 06.7**	**-0.4**
GONE				*e*Sg	**Sg**	**19 42 18.1**	**+0.3**
MANT	**Manisa**	**0.89**	**148**	*i* P	**Pb**	**19 42 09.6**	**+0.7**
MANT				*i* S	**Sg**	**19 42 20.7**	**+0.6**
MANT	**Manisa**	**0.89**	**148**	*i* P	**Pb**	**19 42 09.6**	**+0.7**
MANT				*i* S	**Sg**	**19 42 20.7**	**+0.6**
KULA	**Kula-Manisa**	**0.92**	**143**	*e*PG	**Pb**	**19 42 09.5**	**+0.2**
KULA	**Kula-Manisa**	**0.92**	**143**	*e*Pg	**Pb**	**19 42 09.5**	**+0.2**
AYVA	**Ayvalik**	**0.98**	**274**	*i* P	**Pn**	**19 42 11.3**	**+0.3**
AYVA				*i* S	**Sn**	**19 42 24.7**	**-0.3**
AYVA	**Ayvalik**	**0.98**	**274**	*i* P	**Pn**	**19 42 11.3**	**+0.3**
AYVA				*i* S	**Sn**	**19 42 24.7**	**-0.3**
IZM	**Izmir**	**1.01**	**213**	*e*PG	**Pn**	**19 42 11.2**	**-0.2**
IZM	**Izmir**	**1.01**	**213**	*e*Pg	**Pn**	**19 42 11.2**	**-0.2**
KCTX	**Karacabey (Bur**	**1.06**	**17**	*e*PG	**Pg**	**19 42 11.7**	**0.0**
KCTX	**Karacabey (Bur**	**1.06**	**17**	*e*Pg	**Pg**	**19 42 11.7**	**0.0**
BLCB	**Balcova**	**1.12**	**220**	*e*PN	**Pb**	**19 42 12.2**	**-0.4**
BLCB	**Balcova**	**1.12**	**220**	*e*Pn	**Pb**	**19 42 12.2**	**-0.4**
GDZ	**Gediz**	**1.20**	**97**	*i* P	**Pn**	**19 42 11.1**	**-3.0**
GDZ				*i* S	**Sn**	**19 42 31.5**	**+0.9**
KRBG	**Karabiga-Canak**	**1.25**	**336**	*e*PN	**Pg**	**19 42 15.3**	**+0.1**
KRBG	**Karabiga-Canak**	**1.25**	**336**	*e*Pn	**Pg**	**19 42 15.3**	**+0.1**
ULDT	**Uludag**	**1.28**	**45**	*i* P	**Pb**	**19 42 15.6**	**+0.1**
ULDT				*i* S	**Sb**	**19 42 32.2**	**+0.2**
ULDT	**Uludag**	**1.28**	**45**	*i* P	**Pb**	**19 42 15.6**	**+0.1**
ULDT				*i* S	**Sb**	**19 42 32.2**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.33**	**32**	*e*PN	**Pb**	**19 42 16.2**	**0.0**
MDNY	**Mudanya-Bursa**	**1.33**	**32**	*e*Pn	**Pb**	**19 42 16.2**	**0.0**
MRMT	**Marmara Adasi**	**1.38**	**349**	*e*PN	**Pb**	**19 42 17.2**	**0.0**
MRMT	**Marmara Adasi**	**1.38**	**349**	*e*Pn	**Pb**	**19 42 17.2**	**0.0**
KHAL	**Karahalli**	**1.49**	**126**	*i* P	**Pb**	**19 42 19.0**	**0.0**
KHAL				*i* S	**Sn**	**19 42 36.2**	**-1.5**
KHAL	**Karahalli**	**1.49**	**126**	*i* P	**Pb**	**19 42 19.0**	**0.0**
KHAL				*i* S	**Sn**	**19 42 36.2**	**-1.5**
ARMT	**Armutlu**	**1.49**	**28**	*e*PN	**Pb**	**19 42 18.7**	**-0.3**
ARMT	**Armutlu**	**1.49**	**28**	*e*Pn	**Pb**	**19 42 18.7**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.62**	**316**	*e*PN	**Pb**	**19 42 20.6**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.62**	**316**	*e*Pn	**Pb**	**19 42 20.6**	**-0.6**
ALT	**Altintas**	**1.69**	**96**	*e*PN	**Pn**	**19 42 21.5**	**+0.6**
ALT	**Altintas**	**1.69**	**96**	*e*Pn	**Pn**	**19 42 21.5**	**+0.6**
ERIK	**Erikli-Kesan**	**1.80**	**323**	*e*PN	**Pn**	**19 42 23.1**	**+0.8**
ERIK	**Erikli-Kesan**	**1.80**	**323**	*e*Pn	**Pn**	**19 42 23.1**	**+0.8**
ADVT	**Abdulvahap**	**1.81**	**49**	*e*PN	**Pn**	**19 42 23.0**	**+0.5**
ADVT	**Abdulvahap**	**1.81**	**49**	*e*Pn	**Pn**	**19 42 23.0**	**+0.5**
CRLT	**Corlu**	**1.89**	**355**	*e*PN	**Pn**	**19 42 24.4**	**+0.9**
CRLT	**Corlu**	**1.89**	**355**	*e*Pn	**Pn**	**19 42 24.4**	**+0.9**
HRT	**Hereke**	**2.05**	**39**	*e*PN	**Pn**	**19 42 26.6**	**+0.8**
HRT	**Hereke**	**2.05**	**39**	*e*Pn	**Pn**	**19 42 26.6**	**+0.8**
SHUT	**Suhut-Afyon**	**2.14**	**108**	*e*PN	**Pn**	**19 42 27.9**	**+0.8**
SHUT	**Suhut-Afyon**	**2.14**	**108**	*e*Pn	**Pn**	**19 42 28.0**	**+0.8**

*IDC **20** 19:43:47.6 ± 1.9, 30°.34N × 79°.44E, h0km, mb3.3/7, mb1 3.5/8, mb1mx3.3/31, mbtmp3.4/8, ML3.1/1, Error ellipse: s-maj=52.9km s-min=22.7km az=59.0*
*ISCJB **20** 19:43:49.9 ± 2.9, 30°.45N ± 0°.07 × 79°.77E ± 0°.05, h21km ± 24km, mb3.2/6, Error ellipse: s-maj=12.3km s-min=7.0km az=17.2*
*NDI **20** 19:43:51.7 ± 2.0, 30°.38N × 79°.60E, h10km, ML3.5*

**ISC 20 19:43:50.1 ± 1.9, 30°.40N ± 0°.07 × 79°.59E

DPC				*e*SG		**Sg**	**19 53 17.5**	**+0.1**
	comp=Z,8.6nm,0.3s							
DPC	**Dobruska-Polom**	**1.09 173**		Pg		**Pg**	**19 53 02.7**	**-0.5**
DPC				Sg		**Sg**	**19 53 17.5**	**+0.1**
	8.6nm,0.3s							
PVCC	**Panska Ves**	**1.33 228**		*e*PG		**Pb**	**19 53 07.8**	**-0.3**
PVCC				*e*SG		**Sn**	**19 53 26.2**	**-0.3**
	comp=Z,27nm,0.2s							
PVCC	**Panska Ves**	**1.33 228**		Pg		**Pb**	**19 53 07.8**	**-0.3**
PVCC				Sg		**Sn**	**19 53 26.2**	**-0.3**
	27nm,0.2s							
BRG	**Berggiesshubel**	**1.47 249**		PG		**Pg**	**19 53 11.0**	**+0.4**
BRG				SG		**Sn**	**19 53 30.6**	**+0.5**
	13nm,0.5s							
BRG				PG			21 21 01.7	
BRG				SG			21 21 22.1	
	9.4nm,0.4s							
PRU	**Pruhonice**	**1.75 215**		*e*PG		**Pg**	**19 53 15.2**	**-0.7**
PRU				*e*SG		**Sg**	**19 53 39.3**	**+0.6**
	comp=Z,10.0nm,0.5s							
PRU	**Pruhonice**	**1.75 215**		Pg		**Pg**	**19 53 15.2**	**-0.7**
PRU				Sg		**Sg**	**19 53 39.3**	**+0.6**
	10.0nm,0.5s							
MORC	**Moravsky Berou**	**1.89 151**		*e*Pn		**Pn**	**19 53 15.0**	**-0.9**
MORC				*e*Sg		**Sn**	**19 53 40.5**	**0.0**
	3.3nm,0.2s,baz=334							
CLL	**Collm**	**1.95 268**		*e*Pg		**Pg**	**19 53 19.0**	**-0.7**
CLL				*i* Sg		**Sg**	**19 53 45.4**	**+0.5**
	comp=Z,6.0nm,0.4s							
OKC	**Ostrava-Krasne**	**2.06 140**		*e*PG		**Pb**	**19 53 19.6**	**-1.0**
OKC				*e*SG		**Sb**	**19 53 46.5**	**-0.2**
	comp=Z,7.1nm,0.5s							
OKC	**Ostrava-Krasne**	**2.06 140**		Pg		**Pb**	**19 53 19.6**	**-1.0**
OKC				Sg		**Sb**	**19 53 46.5**	**-0.2**
	comp=Z,7.1nm,0.5s							
VRAC	**Vranov**	**2.15 171**		*e*Pn		**Pn**	**19 53 19.5**	**+0.1**
	baz=354							
VRAC				*e*Sg		**Sb**	**19 53 49.8**	**+0.5**
	comp=Z,5.1nm,0.4s,baz=354							
TREC	**Trest**	**2.18 191**		*e*PG		**Pb**	**19 53 22.4**	**-0.2**
TREC				*e*SG		**Sg**	**19 53 51.9**	**-0.3**
	comp=Z,5.3nm,0.3s							
TREC	**Trest**	**2.18 191**		Pg		**Pb**	**19 53 22.4**	**-0.2**
TREC				Sg		**Sg**	**19 53 51.9**	**-0.3**
	comp=Z,5.3nm,0.3s							
KRUC	**Moravsky**	**2.38 175**		*e*Pg		**Pb**	**19 53 25.4**	**-0.6**
	baz=358							
KRUC				*e*Sg		**Sb**	**19 53 56.8**	**+0.9**
	comp=Z,2.5nm,0.3s,baz=358							
NKC	**Novy Kostel**	**2.61 244**		*e*PG		**Pg**	**19 53 30.8**	**-1.6**
NKC				*e*SG		**Sg**	**19 54 07.6**	**+1.4**
	comp=Z,8.8nm,0.3s							
NKC	**Novy Kostel**	**2.61 244**		Pg		**Pg**	**19 53 30.8**	**-1.6**
NKC				Sg		**Sg**	**19 54 07.6**	**+1.4**
	comp=Z,8.8nm,0.3s							
OJC	**Ojcow**	**2.64 116**		*e*Pg		**Pg**	**19 53 33.3**	**+0.5**
OJC				*e*Sg		**Sg**	**19 54 07.8**	**+0.8**
KHC	**Kasperske Hory**	**2.82 216**		*e*PN		**Pn**	**19 53 29.1**	**+0.5**
KHC				*e*PG		**Pb**	**19 53 34.1**	**+0.6**
KHC				*e*SN		**Sn**	**19 54 02.9**	**-0.4**
KHC				*e*SG		**Sg**	**19 54 12.4**	**-0.4**
	comp=Z,2.3nm,0.4s							
KHC	**Kasperske Hory**	**2.82 216**		Pn		**Pn**	**19 53 29.1**	**+0.5**
KHC	**Kasperske Hory**	**2.82 216**		Pg		**Pb**	**19 53 34.1**	**+0.6**
KHC				Sn		**Sn**	**19 54 02.9**	**-0.4**
KHC				Sg		**Sg**	**19 54 12.4**	**-0.4**
	comp=Z,2.3nm,0.4s							
VYHS	**Vyhne**	**3.43 148**		*e*SG		**Sb**	**19 54 27.3**	**+1.2**
VYHS	**Vyhne**	**3.43 148**		*e*Sg		**Sb**	**19 54 27.3**	**+1.2**

*TRN **20** 19:55:24.3, 18°.59N×63°.92W, h160km*
*NEIC **20** 19:55:26.2, 18°.74N×64°.06W, h160km, MD3.6(RSPR), After RSPR.*

RSPR 20 19:55:26.2, 18°.73N×64°.06W, h160km±1km, MD3.6/5, 12C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.62**	**239**	*e*P	Pn	19 55 49.1	-0.1
TBVI				*e*S	Sn	19 56 06.8	0.0
TBVI	**Tortola**	**0.62**	**239**	*e*P	Pn	19 55 49.1	-0.1
TBVI				*e*S	Sn	19 56 06.8	0.0
TBVI	**Tortola**	**0.62**	**239**	*e*P	Pn	19 55 49.1	-0.1
TBVI				*e*S	Sn	19 56 06.8	0.0
STVI	**Saint Thomas**	**0.93**	**246**	*e*P	Pn	19 55 51.3	0.0
STVI	**Saint Thomas**	**0.93**	**246**	*e*S	Sn	19 56 10.5	-0.1
STVI	**Saint Thomas**	**0.93**	**246**	*e*P	Pn	19 55 51.3	0.0
STVI				*e*S	Sn	19 56 10.5	-0.1
STVI	**Saint Thomas**	**0.93**	**246**	*e*P	Pn	19 55 51.3	0.0
STVI				*e*S	Sn	19 56 10.5	-0.1
MTP	**Monte Pirata**	**1.56**	**246**	*e*P	Pn	19 55 57.0	-0.1
MTP	**Monte Pirata**	**1.56**	**246**	*e*S	Sn	19 56 21.3	+0.5
MTP	**Monte Pirata**	**1.56**	**246**	*e*P	Pn	19 55 57.0	-0.1
MTP				*e*S	Sn	19 56 21.3	+0.5
MTP	**Monte Pirata**	**1.56**	**246**	*e*P	Pn	19 55 57.2	+0.1
MTP				*e*S	Sn	19 56 21.3	+0.5
CBYP	**Canovanas**	**1.77**	**255**	*e*P	Pn	19 55 59.6	+0.2
CBYP	**Canovanas**	**1.77**	**255**	*e*S	Sn	19 56 25.4	+0.4
CBYP	**Canovanas**	**1.77**	**255**	*e*P	Pn	19 55 59.6	+0.2
CBYP				*e*S	Sn	19 56 25.4	+0.4
CBYP	**Canovanas**	**1.77**	**255**	*e*P	Pn	19 55 59.6	+0.2
CBYP				*e*S	Sn	19 56 25.4	+0.4
HUMP	**Col San Antoni**	**1.80**	**251**	*e*P	Pn	19 55 59.6	-0.1
HUMP	**Col San Antoni**	**1.80**	**251**	*e*S	Sn	19 56 25.9	+0.5
HUMP	**Col San Antoni**	**1.80**	**251**	*e*P	Pn	19 55 59.6	-0.1
HUMP				*e*S	Sn	19 56 25.9	+0.5
HUMP	**Col San Antoni**	**1.80**	**251**	*e*P	Pn	19 55 59.6	-0.1
HUMP				*e*S	Sn	19 56 25.9	+0.5
CPD	**Cerro la Pandu**	**1.90**	**249**	*e*P	Pn	19 56 00.6	-0.3
CPD	**Cerro la Pandu**	**1.90**	**249**	*e*S	Sn	19 56 27.7	+0.2
CPD	**Cerro la Pandu**	**1.90**	**249**	*e*P	Pn	19 56 00.6	-0.3
CPD				*e*S	Sn	19 56 27.7	+0.2
CPD	**Cerro la Pandu**	**1.90**	**249**	*e*P	Pn	19 56 00.6	-0.3
CPD				*e*S	Sn	19 56 27.7	+0.2
AGPR	**Aguadilla, PR**	**2.91**	**265**	*e*S	Sn	19 56 49.7	+0.8
AGPR	**Aguadilla, PR**	**2.91**	**265**	*e*S	Sn	19 56 49.7	+0.8

*NIED **20** 20:11:00, 28°.60N×130°.20E, h23km, Mw4.2 Best double couple: M0 2.42000×10^15 NP1:φ=21.00000°, δ=69.00000°, λ=81.00000°. NP2:φ=224.00000°, δ=23.00000°, λ=111.00000°.*
*IDC **20** 20:11:18.0±0.7, 28°.70N×130°.22E, h0km, mb3.9/18, mb1 4.0/19, mb1mx4.0/30, mbtmp3.9/19, ML3.0/1, MS3.4/12, Ms1 3.4/12, ms1mx3.1/38, Error ellipse: s-maj=26.5km s-min=15.2km az=73.0*
*ISCJB **20** 20:11:22.3±0.6, 28°.58N±0°.04×130°.16E±0°.06, h43km±4km, mb4.0/21, MS3.4/11, Error ellipse: s-maj=10.5km s-min=4.0km az=30.5*
*JMA **20** 20:11:22.8±0.1, 28°.60N×130°.12E, h33km±2km, M4.1*
JMA Felt I J1.

ISC 20 20:11:22.9±1.4, 28°.62N±0°.05×130°.09E±0°.07, h31km±9km, n49, σ0°78/58, mb4.0/21, MS3.4/11, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	**0.32**	**199**	P	**Pn**	**20 11 30.4**	**-1.0**
JZK				*e*S	**Sn**	**20 11 36.2**	**-0.8**
JAM	**Amami Oshima**	**0.47**	**245**	P	**Pn**	**20 11 32.9**	**-0.6**
JAM				*e*S	**Sn**	**20 11 39.9**	**-0.9**
JAMN	**Amaminishikomi**	**0.89**	**245**	P	**Pb**	**20 11 39.4**	**-0.3**
JAMN				*e*S	**Sb**	**20 11 52.1**	**+0.9**
JNN	**Nakanoshima**	**1.24**	**351**	P	**Pb**	**20 11 45.1**	**-0.5**
JNN				*e*S	**Sb**	**20 12 00.6**	**-0.6**
JTK	**Tokunoshima**	**1.30**	**231**	P	**Pb**	**20 11 45.7**	**-1.0**
JTK				*e*S	**Sb**	**20 12 04.0**	**+1.0**
JTN	**Tanegashima 3**	**2.17**	**21**	P	**Pn**	**20 11 57.8**	**+0.8**
JTN				*e*S	**Sn**	**20 12 23.6**	**+0.7**
JOW	**Kunigami**	**2.40**	**223**	P	**Pn**	**20 12 00.3**	**+0.3**
JOW				*e*S	**Sn**	**20 12 29.3**	**+0.9**
JIH	**Iheya**	**2.45**	**231**	P	**Pn**	**20 12 01.2**	**+0.4**
JIH				*e*S	**Sn**	**20 12 30.7**	**+1.0**
JJT2	**Tamagusuku 2**	**3.23**	**221**	P	**Pn**	**20 12 12.1**	**+0.7**
JJT2				*e*S	**Sn**	**20 12 48.6**	**-0.3**
JAGN	**Aguni-jima**	**3.23**	**232**	P	**Pn**	**20 12 12.0**	**+0.5**
JAGN				*e*S	**Sn**	**20 12 50.1**	**+1.1**
JKE	**Kume jima 2**	**3.72**	**233**	P	**Pn**	**20 12 18.5**	**+0.3**
JKE				*e*S	**Sn**	**20 13 01.8**	**+0.9**
JNU	**Nakatsue**	**4.54**	**8**	Pn	**Pn**	**20 12 31.4**	**+1.9**
	3.2nm,0.3s,baz=315,slow=6.9,SNR=38						
JNU				Sn	**Sn**	**20 13 23.0**	**+1.6**
	0.6nm,0.3s,baz=249,slow=23,SNR=1.3						
KSRS	**Korea Array**	**9.00**	**349**	Pn	**Pn**	**20 13 29.7**	**-0.9**
	0.2nm,0.3s,baz=155,slow=13,SNR=2.6						
JHJ	**Hachijo jima 2**	**9.46**	**59**	LR	LR	20 16 56.8	
	comp=Z,153nm,20.7s,baz=309,slow=36						
MJAR	**Matsushiro Arr**	**10.45**	**39**	Pn	**Pn**	**20 13 51.7**	**+1.0**
	0.1nm,0.3s,baz=208,slow=12,SNR=3.0						
GUMO	**Guam**	**20.31**	**134**	LR	LR	20 22 12.1	
	comp=Z,44nm,20.1s,baz=246,slow=32						
DAV	**Davao City (W)**	**21.85**	**192**	LR	LR	20 24 25.4	
	comp=Z,48nm,19.9s,baz=8.3,slow=36						
SONM	**Songino Array**	**26.55**	**323**	P	**P**	**20 16 57.9**	**-0.2**
	0.5nm,0.6s,baz=146,slow=10,SNR=5.7						
SONM				LR	LR	20 28 59.5	
	comp=Z,99nm,18.6s,baz=133,slow=40						
CMAR	**Chiang Mai Arr**	**30.21**	**257**	P	**P**	**20 17 30.7**	**-0.2**
	0.4nm,0.3s,baz=53,slow=8.3,SNR=6.3						
CMAR				PcP	**PcP**	**20 20 32.2**	**+0.8**
	0.2nm,0.3s,baz=46,slow=2.6,SNR=4.2						
CMAR				LR	LR	20 30 46.2	
	comp=Z,53nm,19.6s,baz=65,slow=38						
PETK	**Petropavlovsk-**	**31.81**	**32**	LR	LR	20 31 07.5	
	comp=Z,33nm,20.1s,baz=352,slow=38						
TAPN	**Taplejung**	**37.30**	**278**	*e*P	**P**	**20 18 33.2**	**+0.4**
	10nm,1.0s						
ODAN	**Odare**	**37.69**	**278**	*e*P	**P**	**20 18 35.7**	**-0.2**
	22nm,0.7s						
GUN	**Gumba**	**38.78**	**280**	*e*P	**P**	**20 18 45.9**	**+0.7**
	17nm,0.8s						
PKI	**Pulchoki**	**39.26**	**279**	*e*P	**P**	**20 18 48.9**	**-0.3**
	16nm,0.8s						
PKIN	**Phulchoki**	**39.27**	**279**	*e*P	**P**	**20 18 49.0**	**-0.2**
	11nm,0.9s						
KKN	**Kakani**	**39.32**	**280**	*e*P	**P**	**20 18 49.9**	**+0.3**
	16nm,0.9s						
DANN	**Dangsing**	**40.52**	**281**	*e*P	**P**	**20 18 59.9**	**+0.2**
	12nm,0.7s						
PYUN	**Piuthan**	**41.24**	**281**	*e*P	**P**	**20 19 05.3**	**-0.2**
	21nm,0.9s						
MKAR	**Makanchi Array**	**41.24**	**309**	P	**P**	**20 19 05.0**	**0.0**
	0.8nm,0.7s,baz=101,slow=10,SNR=11						
MKAR				PcP	**PcP**	**20 21 03.7**	**+0.1**
	0.8nm,0.8s,baz=99,slow=3.8,SNR=6.5						
ZALV	**Zalesovo Beam**	**41.41**	**321**	P	**P**	**20 19 05.7**	**-0.6**
	1.8nm,0.6s,baz=109,slow=9.9,SNR=9.8						
KURBB	**Kurchatov Arra**	**44.32**	**314**	P	**P**	**20 19 29.5**	**-0.4**
	1.2nm,0.8s,baz=101,slow=8.6,SNR=13						
KURBB				LR	LR	20 39 45.2	
	comp=Z,87nm,18.4s,baz=110,slow=38						
AAK	**Ala-Archa**	**46.52**	**303**	P	**P**	**20 19 48.2**	**+0.6**
	0.4nm,0.3s,baz=48,slow=5.8,SNR=3.5						
AAK				LR	LR	20 41 41.5	
	comp=Z,68nm,19.2s,baz=209,slow=39						
FITZ	**Fitzroy Crossi**	**46.64**	**186**	P	**P**	**20 19 49.0**	**+0.5**
	1.9nm,0.9s,baz=350,slow=6.1,SNR=3.7						
WRA	**Warramunga Arr**	**48.45**	**175**	P	**P**	**20 20 02.5**	**-0.1**
	1.1nm,0.8s,baz=356,slow=8.3,SNR=9.1						
BVAR	**Borovoye Array**	**49.63**	**317**	P	**P**	**20 20 11.8**	**+0.4**
	2.6nm,0.7s,baz=94,slow=11,SNR=12						
BVAR				LR	LR	20 44 08.2	
	comp=Z,38nm,19.1s,baz=279,slow=40						
ASAR	**Alice Springs**	**52.11**	**176**	P	**P**	**20 20 31.1**	**+0.8**
	0.4nm,0.5s,baz=6.5,slow=14,SNR=10						
ILAR	**Eielson Array**	**61.56**	**29**	P	**P**	**20 21 37.5**	**+0.6**
	0.2nm,0.8s,baz=256,slow=3.6,SNR=3.6						
ARCES	**ARCESS Array B**	**68.40**	**339**	LR	LR	20 57 24.4	
	comp=Z,33nm,19.7s,baz=210,slow=40						
KBZ	**Khabaz**	**68.94**	**309**	P	**P**	**20 22 25.8**	**+0.8**
	4.3nm,0.8s,baz=117,slow=3.8,SNR=12						
MIB	**Mutribah**	**70.61**	**294**	*e*P	**P**	**20 22 35.5**	**0.0**
MIB				AMb	AMB	20 22 36.8	
	comp=Z,6.0nm,0.8s						
NAY	**Al-Naaiem**	**70.90**	**293**	*e*P	**P**	**20 22 37.3**	**-0.1**
NAY				AMb	AMB	20 22 38.4	
	comp=Z,7.1nm,0.8s						
RST	**Umm Al-Ruwaisa**	**71.00**	**294**	*e*P	**P**	**20 22 37.3**	**-0.6**
RST				AMb	AMB	20 22 39.1	
	comp=Z,57nm,1.0s						
FINES	**FINESS Array B**	**71.61**	**331**	P	**P**	**20 22 40.2**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=72,slow=6.2,SNR=7.0						
FINES				LR	LR	20 55 34.1	
	comp=Z,38nm,19.9s,baz=90,slow=37						
AKASG	**Malin Array Be**	**74.79**	**320**	P	**P**	**20 22 59.6**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=54,slow=6.2,SNR=7.7						
YKA	**Yellowknife Ar**	**75.67**	**26**	P	**P**	**20 23 02.7**	**-2.2**
	comp=Z,0.7nm,0.8s,baz=300,slow=5.3,SNR=9.0						
BRTR	**Keskin Array B**	**76.87**	**308**	P	**P**	**20 23 12.6**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=102,slow=5.9,SNR=25						
NB2	**NORSAR Subarra**	**77.90**	**334**	P	**P**	**20 23 16.5**	**-1.0**
	comp=Z,1.8nm,1.0s,baz=48,slow=5.6						
NOA	**NORSAR Array B**	**77.90**	**334**	P	**P**	**20 23 16.8**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=49,slow=5.5,SNR=4.0						
NOA				LR	LR	21 03 36.0	
	comp=Z,25nm,18.2s,baz=5.0,slow=40						
GERES	**GERESS Array B**	**84.29**	**324**	P	**P**	**20 23 52.3**	**+0.5**
	comp=Z,0.1nm,0.2s,baz=46,slow=5.8,SNR=6.0						

IDC 20 20:25:20.3±1.2, 30°.86N×102°.98E, h0km, mb3.5/4, mb1 3.5/5, mb1mx3.3/27, mbtmp3.4/5, ML3.0/1, Error ellipse: s-maj=85.1km s-min=21.2km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**17.16**	**8**	P	Pn	20 29 22.0	+0.4
	0.1nm,0.3s,baz=179,slow=13,SNR=3.4						
MKAR	**Makanchi Array**	**22.54**	**321**	P	P	20 30 21.3	-0.6
	1.9nm,1.2s,baz=136,slow=9.5,SNR=5.7						
KURBB	**Kurchatov Arra**	**26.86**	**324**	P	P	20 31 02.8	+0.3
	0.8nm,0.8s,baz=130,slow=8.9,SNR=11						
WRA	**Warramunga Arr**	**58.82**	**145**	P	P	20 35 20.8	+0.1
	0.4nm,0.6s,baz=338,slow=7.6,SNR=7.5						
ASAR	**Alice Springs**	**61.79**	**148**	P	P	20 35 40.8	-0.3
	0.2nm,0.7s,baz=339,slow=7.6,SNR=3.0						

IDC 20 20:26:10.5±13.0, 0°.72S×133°.24E, h0km, mb3.7/2, mb1 3.7/4, mb1mx3.3/22, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=197.3km s-min=80.9km az=169.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.82**	**203**	P	P	20 30 31.8	-0.1
	0.1nm,0.3s,baz=12,slow=12,SNR=3.3						
WRA	**Warramunga Arr**	**19.13**	**177**	P	P	20 30 35.5	+0.1
	0.1nm,0.3s,baz=355,slow=11,SNR=9.2						
ASAR	**Alice Springs**	**22.82**	**178**	P	P	20 31 15.9	+0.6
	0.7nm,0.3s,baz=358,slow=11,SNR=22						
STKA	**Stephens Creek**	**31.98**	**166**	P	P	20 32 37.8	-0.7
	0.8nm,0.6s,baz=336,slow=10.0,SNR=3.7						

*IDC **20** 20:54:52.9±1.3, 6°.59S×130°.57E, h0km, mb3.7/3, mb1 4.2/6, mb1mx3.8/19, mbtmp4.0/6, ML4.3/3, Error ellipse: s-maj=71.5km s-min=21.0km az=74.0*
*ISCJB **20** 20:55:02.5±0.6, 6°.92S±0°.04×130°.07E±0°.09, h104km, mb3.6/3, Error ellipse: s-maj=12.1km s-min=6.0km az=174.7*
*AUST **20** 20:55:03.8, 6°.98S×130°.04E, h100km*

ISC 20 20:55:03.9±0.8, 6°.95S±0°.06×130°.08E±0°.09, h104km, n17, σ1°70/20, mb3.5/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.55**	**28**	P	**Pn**	**20 56 09.0**	**-1.7**
	baz=4.6,SNR=7.2						
FAKI				S	Sn	20 56 46.7	-16
	baz=4.6,SNR=7.9						
MTN	**Manton Dam**	**5.95**	**170**	P	Pn	20 56 32.9	+3.4
	baz=6.0,SNR=115						
MTN				S	**Sn**	**20 57 39.0**	**+2.7**
	baz=6.0,SNR=7.9						
SWI	**Sorong**	**6.16**	**11**	P	**Pn**	**20 56 31.2**	**-1.3**
	baz=6.2,SNR=12						
SWI				S	Sn	20 57 33.0	-8.7
	baz=6.2,SNR=16						
KDU	**Kakadu**	**6.17**	**158**	P	**Pn**	**20 56 34.1**	**+1.6**
	baz=6.2,SNR=898						
KDU				S	**Sn**	**20 57 40.5**	**-1.2**
	baz=6.2,SNR=7.2						
KNRA	**Kununurra**	**8.77**	**188**	P	Pn	20 57 11.1	+3.2
	baz=8.8,SNR=175						
KNRA				S	**Sn**	**20 58 43.6**	**-1.4**
	baz=8.8,SNR=16						
FITZ	**Fitzroy Crossi**	**11.90**	**201**	Pn	**Pn**	**20 57 51.3**	**+1.2**
	1.9nm,0.3s,baz=31,slow=13,SNR=55						
FITZ				Sn	**Sn**	**20 59 57.5**	**-3.5**
	1.9nm,0.3s,baz=114,slow=22,SNR=11						
FITZ	**Fitzroy Crossi**	**11.90**	**201**	P	**Pn**	**20 57 51.4**	**+1.2**
	baz=12,SNR=86						
FITZ				S	**Sn**	**20 59 58.8**	**-2.2**
	baz=12,SNR=5.1						
WRA	**Warramunga Arr**	**13.56**	**163**	Pn	**Pn**	**20 58 10.2**	**-1.9**
	1.6nm,0.3s,baz=348,slow=13,SNR=51						
WRA				Sn	Sn	21 00 32.7	-8.7
	2.3nm,0.3s,baz=333,slow=23,SNR=7.5						
COEN	**Coen**	**14.63**	**119**	P	**Pn**	**20 58 25.3**	**-0.7**
	baz=15,SNR=4.2						
QIS	**Mount Isa**	**16.38**	**147**	P	**P**	**20 58 47.8**	**-0.9**
	baz=16,SNR=6.7						
ASAR	**Alice Springs**	**17.02**	**168**	P	**P**	**20 58 56.4**	**+0.6**
	0.9nm,0.3s,baz=347,slow=13,SNR=38						
ASAR				S	Sn	21 01 54.1	-11
	0.4nm,0.3s,baz=348,slow=26,SNR=6.4						
MTSU	**Mount Surprise**	**17.78**	**130**	P	**Pn**	**20 59 05.8**	**+0.9**
	baz=18,SNR=14						
RMQ	**Roma**	**26.34**	**140**	S	**S**	**21 04 56.4**	**+0.5**
	baz=26,SNR=5.9						
STKA	**Stephens Creek**	**27.03**	**158**	P	**P**	**21 00 37.6**	**+1.2**
	1.0nm,0.3s,baz=325,slow=12,SNR=5.3						
GSI	**Gunungsitoli**	**33.45**	**283**	P	**P**	**21 01 33.0**	**-0.4**
	baz=33,SNR=4.8						
SONM	**Songino Array**	**58.42**	**341**	P	**P**	**21 04 49.9**	**+1.1**
	0.2nm,0.5s,baz=168,slow=8.2,SNR=4.4						
MKAR	**Makanchi Array**	**68.23**	**327**	P	**P**	**21 05 54.8**	**+1.3**
	0.3nm,0.4s,baz=116,slow=7.9,SNR=9.8						

IDC 20 21:01:20.0±2.6, 2°.84S×134°.38E, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.6/19, mbtmp3.9/4, ML3.5/2, Error ellipse: s-maj=100.7km s-min=27.2km az=82.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.00**	**180**	P	Pn	21 05 18.8	-0.7
	0.2nm,0.3s,baz=0.1,slow=12,SNR=9.7						
FITZ	**Fitzroy Crossi**	**17.42**	**209**	P	Pn	21 05 23.3	-1.4
	0.1nm,0.3s,baz=32,slow=14,SNR=3.0						
ASAR	**Alice Springs**	**20.71**	**181**	P	P	21 06 02.8	+0.6
	9.4nm,0.8s,baz=6.5,slow=12,SNR=24						
MKAR	**Makanchi Array**	**67.30**	**324**	P	P	21 12 16.9	+0.1
	0.3nm,0.5s,baz=106,slow=8.4,SNR=6.9						

*IDC **20** 21:30:06.9±0.5, 54°.77N×164°.28E, h0km, mb3.8/16, mb1 4.1/19, mb1mx3.9/31, mbtmp3.9/19, ML3.9/3, MS3.0/2, Ms1 3.1/2, ms1mx2.6/42, Error ellipse: s-maj=16.7km s-min=9.4km az=7.0*
*MOS **20** 21:30:11.1±2.5, 54°.69N×164°.08E, h57km, mb4.1/13, Error ellipse: s-maj=11.5km s-min=9.5km az=60.5*
*KRSC **20** 21:30:11.9±0.6, 54°.75N×163°.91E, h42km±32km, ML4.1*

ISC 20 21:30:08.7±3.4, 54°.76N±0°.05×164°.19E±0°.05, h13km±22km, n82, σ1°64/97, mb3.9/16, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.12**	**66**	PN	**Pb**	**21 30 29.1**	**-0.7**
BKI				S	**Sb**	**21 30 42.0**	**-2.3**
BKI	**Bering**	**1.12**	**66**	*i* P	**Pb**	**21 30 29.1**	**-0.7**
BKI				*i* S	**Sb**	**21 30 42.0**	**-2.3**
MKZ	**Mys Kozlova**	**1.45**	**263**	PN	Pn	21 30 33.5	-1.0
MKZ				S	**Sn**	**21 30 49.5**	**-3.8**
MKZ	**Mys Kozlova**	**1.45**	**263**	*e*P	Pn	21 30 33.5	-1.0
MKZ				*i* S	**Sn**	**21 30 49.5**	**-3.8**
KBTR	**Krutoberegovo**	**1.65**	**332**	PN	Pn	21 30 35.9	-1.4
KBTR				S	Sn	21 30 53.5	-4.8
KBTR	**Krutoberegovo**	**1.65**	**332**	*e*P	Pn	21 30 35.9	-1.4
KBTR				*i* S	Sn	21 30 53.5	-4.8
ZLN	**Zelenaya**	**2.30**	**304**	*i* P	**Pn**	**21 30 47.4**	**+1.0**
ZLN				*i* S	**Sn**	**21 31 12.6**	**-2.1**
BZGR	**Bezymyannyi-Gr**	**2.32**	**302**	*i* P	**Pn**	**21 30 47.3**	**+0.7**
BZGR				*i* S	**Sn**	**21 31 12.9**	**-2.1**
CIRR	**Tsirk**	**2.38**	**306**	P	**Pn**	**21 30 48.0**	**+0.4**
CIRR				*i* S	**Sn**	**21 31 13.9**	**-2.8**
TUMR	**Tumrok**	**2.39**	**284**	*i* P	**Pn**	**21 30 48.0**	**+0.4**
TUMR				*i* S	**Sn**	**21 31 14.3**	**-2.4**
SMKR	**Semkarok**	**2.39**	**321**	*i* P	**Pn**	**21 30 47.6**	**0.0**
SMKR				*i* S	**Sn**	**21 31 13.6**	**-3.1**
LGNR	**Loginova**	**2.39**	**305**	P	**Pn**	**21 30 48.7**	**+0.9**
LGNR				*i* S	**Sn**	**21 31 15

ASAK	**Asacha**	**4.44 240**	P	**Pn**	**21 31 16.1 +0.3**	
ASAK			*i* S	Sn	21 32 02.5	-4.9
APC	**Apacha**	**4.55 249**	P	**Pn**	**21 31 18.9 +1.7**	
MIPR	**Malaya Ipel'ka**	**5.09 244**	P	**Pn**	**21 31 25.8 +1.2**	
FX1	**Attu Island--F**	**5.64 106**	Pn	Pn	21 31 30.8	-1.4
	comp=N,16nm,0.3s,baz=350,slow=6.4,SNR=71					
FX1			Sn	Sn	21 32 30.4	-6.3
	comp=N,26nm,0.3s,baz=22,slow=22,SNR=13					
ASAJ	**Asahikawa**	**17.55 242**	P	**Pn**	**21 34 13.0 +0.1**	
	comp=N,0.8nm,0.3s,baz=58,slow=16,SNR=4.7					
ASAJ			LR	LR	21 40 09.7	
	comp=N,35nm,20.1s,baz=179,slow=34					
KDAK	**Kodiak Island**	**23.88 65**	P	**P**	**21 35 20.8 -0.9**	
	comp=N,1.4nm,0.4s,baz=81,slow=21,SNR=5.0					
MAT	**Matsushiro**	**25.49 235**	P	**P**	**21 35 37.8 +1.3**	
MJAR	**Matsushiro Arr**	**25.49 235**	P	**P**	**21 35 37.5 +1.1**	
	comp=N,2.8nm,0.7s,baz=30,slow=7.3,SNR=13					
ILAR	**Eielson Array**	**25.91 48**	P	**P**	**21 35 39.8 -0.2**	
	comp=N,1.1nm,0.7s,baz=259,slow=8.5,SNR=14					
SONM	**Songino Array**	**35.87 283**	P	**P**	**21 37 07.6 -0.6**	
	comp=N,0.6nm,0.5s,baz=53,slow=8.1,SNR=9.2					
SONM			PcP	**PcP**	**21 39 35.5 +0.4**	
	comp=N,0.4nm,0.7s,baz=120,slow=1.0,SNR=4.6					
YKA	**Yellowknife Ar**	**40.28 45**	P	**P**	**21 37 44.6 -0.3**	
	comp=N,0.6nm,0.6s,baz=298,slow=8.1,SNR=4.2					
ZALV	**Zalesovo Beam**	**43.90 303**	PcP	**PcP**	**21 40 01.1 +0.7**	
	comp=N,0.4nm,0.4s,baz=57,slow=5.3,SNR=3.1					
MKAR	**Makanchi Array**	**49.59 297**	P	**P**	**21 38 58.2 -1.0**	
MKAR			pmax	pmax		
	comp=Z,1.0nm,0.5s					
MKAR	**Makanchi Array**	**49.59 297**	P	**P**	**21 38 58.2 -1.0**	
	comp=Z,0.5nm,0.5s,baz=51,slow=7.1,SNR=11					
BVAR	**Borovoye Array**	**51.23 309**	P	**P**	**21 39 11.8 +0.3**	
BVAR			pmax	pmax		
	comp=Z,1.0nm,0.4s					
BVAR	**Borovoye Array**	**51.23 309**	P	**P**	**21 39 11.8 +0.3**	
	comp=Z,0.6nm,0.4s,baz=46,slow=6.4,SNR=7.3					
JOF	**Joensuu**	**57.04 336**	*e*P	**P**	**21 39 54.0 +0.3**	
JOF	**Joensuu**	**57.04 336**	ep	**P**	**21 39 54.0 +0.3**	
FINES	**FINESS Array B**	**59.51 338**	P	**P**	**21 40 11.2 +0.3**	
	comp=Z,1.3nm,0.6s,baz=34,slow=9.2,SNR=6.1					
TAPN	**Taplejung**	**60.47 276**	*e*P	**P**	**21 40 19.0 +0.6**	
CMAR	**Chiang Mai Arr**	**60.87 261**	P	**P**	**21 40 22.5 +1.6**	
	comp=Z,1.7nm,0.6s,baz=23,slow=7.2,SNR=14					
CMAR			LR	LR	22 08 54.0	
	comp=Z,17nm,19.9s,baz=195,slow=38					
ODAN	**Odare**	**61.02 276**	*e*P	**P**	**21 40 22.7 +0.6**	
RAMN	**Ramite**	**61.41 277**	*e*P	**P**	**21 40 25.1 +0.3**	
	comp=Z,8.3nm,0.5s					
KKN	**Kakani**	**61.53 278**	*e*P	**P**	**21 40 26.2 +0.7**	
DANN	**Dangsing**	**61.97 280**	*e*P	**P**	**21 40 29.2 +0.6**	
	comp=Z,11nm,0.8s					
KOLN	**Koldanda**	**62.51 280**	*e*P	**P**	**21 40 32.7 +0.6**	
	comp=Z,5.2nm,0.6s					
NB2	**NORSAR Subarra**	**62.57 346**	P	**P**	**21 40 31.9 +0.1**	
	comp=Z,0.6nm,0.6s,baz=17,slow=6.9					
NOA	**NORSAR Array B**	**62.57 346**	P	**P**	**21 40 31.9 +0.1**	
	comp=Z,0.9nm,0.6s,baz=18,slow=6.8,SNR=4.5					
PYUN	**Piuthan**	**62.60 280**	*e*P	**P**	**21 40 33.2 +0.5**	
	comp=Z,22nm,1.0s					
TXAR	**Lajitas Array**	**67.77 70**	P	**P**	**21 41 07.6 +1.4**	
	comp=Z,0.2nm,0.4s,baz=308,slow=3.0,SNR=3.4					
KBZ	**Khabaz**	**69.93 319**	P	**P**	**21 41 20.4 +1.2**	
KBZ			pmax	pmax		
	comp=Z,3.0nm,0.8s					
KBZ	**Khabaz**	**69.93 319**	P	**P**	**21 41 20.4 +1.2**	
	comp=Z,2.9nm,0.8s,baz=17,slow=1.1,SNR=8.2					
GERES	**GERESS Array B**	**73.82 340**	P	**P**	**21 41 43.6 +1.0**	
	comp=Z,0.1nm,0.2s,baz=54,slow=5.1,SNR=3.6					
WRA	**Warramunga Arr**	**78.67 209**	P	**P**	**21 42 10.1 -0.2**	
	comp=Z,1.2nm,0.7s,baz=24,slow=6.2,SNR=9.5					
ASAR	**Alice Springs**	**82.33 208**	P	**P**	**21 42 30.5 +0.6**	
	comp=Z,1.3nm,0.8s,baz=12,slow=4.3,SNR=9.5					
ESDC	**Sonseca Array**	**85.39 351**	P	**P**	**21 42 45.2 -0.3**	
	comp=Z,0.1nm,0.3s,baz=12,slow=5.6,SNR=4.5					

*IDC **20** 21:35:07.1±6.3,27.94N×129.97E,h0km,mb3.6/5, mb1 3.6/5,mb1mx3.3/25,mbtmp3.6/5, Error ellipse: s-maj=206.1km s-min=122.9km az=63.0*
*ISCJB **20** 21:35:14.2±1.1,28.59N±0.08×130.2E±0.1,h41km±8km, mb3.5/5, Error ellipse: s-maj=19.5km s-min=9.4km az=34.8*
*JMA **20** 21:35:14.5±0.2,28.58N×130.15E,h38km±3km,M3.3*
ISC 20 21:35:14.8±1.7,**28.61N**±0.07×**130.1E**±0.1,**h30**km±9km, **n15**,σ1§**67**/21,**mb3.7**/5,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.32**	**207**	P	**Pb**	**21 35 22.4**	**-0.2**
JZK				*e*S	**Sn**	21 35 28.8	-0.4
JAM	**Amami Oshima**	**0.51**	**248**	P	**Pb**	21 35 25.0	-0.3
JAM				*e*S	**Sb**	21 35 32.5	0.0
JAMN	**Amaminishikomi**	**0.92**	**247**	P	**Pn**	21 35 31.6	-0.1
JAMN				*e*S	**Sb**	21 35 44.0	-0.1
JNN	**Nakanoshima**	**1.25**	**349**	P	**Pn**	21 35 37.1	+0.8
JTK	**Tokunoshima**	**1.33**	**232**	P	**Pn**	21 35 38.0	+0.7
JTK				*e*S	**Sb**	21 35 56.0	+0.3
JOW	**Kunigami**	**2.42**	**224**	P	**Pn**	21 35 52.3	0.0
JOW				*e*S	**Sn**	21 36 21.6	+0.7
JIH	**Iheya**	**2.48**	**231**	P	**Pn**	21 35 53.4	+0.3
JIH				*e*S	**Sn**	21 36 23.2	+0.8
JJT2	**Tamagusuku 2**	**3.25**	**221**	P	**Pn**	21 36 04.9	+1.2
JAGN	**Aguni-jima**	**3.26**	**233**	P	**Pn**	21 36 04.3	+0.4
JKE	**Kume jima 2**	**3.75**	**233**	P	**Pn**	21 36 11.0	+0.5
SONM	**Songino Array**	**26.59**	**323**	P	**P**	21 40 50.7	+0.3
	0.1nm,0.4s,baz=128,slow=9.3,SNR=2.2						
ZALV	**Zalesovo Beam**	**41.44**	**321**	P	**P**	21 42 58.2	-0.3
	0.5nm,0.3s,baz=116,slow=6.1,SNR=3.0						
BVAR	**Borovoye Array**	**49.67**	**317**	P	**P**	21 44 04.2	+0.6
	0.4nm,0.4s,baz=94,slow=9.9,SNR=5.4						
FINES	**FINESS Array B**	**71.64**	**331**	P	**P**	21 46 33.4	+0.2
	0.3nm,0.4s,baz=64,slow=6.6,SNR=4.5						
BRTR	**Keskin Array B**	**76.91**	**308**	P	**P**	21 47 03.0	-1.6
	0.6nm,0.7s,baz=65,slow=4.6,SNR=3.9						

*ISCJB **20** 21:37:03.7±0.5,50.01N±0.03×18.45E±0.03,h0km, Error ellipse: s-maj=4.6km s-min=2.5km az=7.9*
*WAR **20** 21:37:04.4,49.96N×18.57E*
*IPEC **20** 21:37:04.4±0.2,49.96N×18.58E,h0km,ML1.6/2, Error ellipse: s-maj=2.2km s-min=1.1km az=160.0*
*PRU **20** 21:37:06.8,49.94N×18.42E,h0km*
*CSEM **20** 21:37:06.1±0.3,49.91N×18.41E,h2km,ML2.5/7, Error ellipse: s-maj=6.8km s-min=4.4km az=17.0*
ISC 20 21:37:05.2±0.8,**49.93N**±0.03×**18.55E**±0.02,**h0**km,**n29**, σ1§**04**/48,**Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.27**	**251**	*e*PG	**Pg**	**21 37 10.3**	**-0.1**
OKC				*e*SG	**Sg**	**21 37 14.5**	**+0.5**
	comp=Z,43nm,0.6s						
OKC	**Ostrava-Krasne**	**0.27**	**251**	Pg	**Pg**	**21 37 10.3**	**-0.1**
OKC				Sg	**Sg**	**21 37 14.5**	**+0.5**
	43nm,0.6s						
RAC	**Raciborz**	**0.28**	**305**	*e*Pg	**Pg**	21 37 11.2	+0.7
RAC				*e*Sg	**Sg**	21 37 16.2	+2.1
MORC	**Moravsky Berou**	**0.67**	**257**	*e*Pg	**Pg**	21 37 17.7	-0.3
	baz=75						
MORC				*e*Sg	**Sg**	21 37 26.3	-0.3
OJC	**Ojcow**	**0.86**	**70**	*e*Pg	**Pg**	21 37 20.4	-1.3
OJC				*e*Sg	**Sg**	21 37 33.1	+0.3
NIE	**Niedzica**	**1.26**	**113**	*e*Pg	**Pg**	21 37 29.3	0.0
NIE				*e*Sg	**Sn**	21 37 47.8	+0.1
VRAC	**Vranov**	**1.41**	**245**	*e*Pg	**Pn**	21 37 31.0	-1.2
	baz=63						
VRAC				*e*Sg	**Sg**	21 37 49.9	-0.7
	5.7nm,0.3s,baz=63						
VYHS	**Vyhne**	**1.45**	**172**	*e*PN	**Pn**	21 37 32.1	-0.6
VYHS				*e*SN	**Sn**	21 37 52.8	+0.4
VYHS	**Vyhne**	**1.45**	**172**	*e*Pn	**Pn**	21 37 32.1	-0.6
VYHS				*e*Sn	**Sn**	21 37 52.8	+0.4
DPC	**Dobruska-Polom**	**1.49**	**287**	*e*PG	**Pn**	21 37 31.9	-1.4
DPC				*e*SG	**Sg**	21 37 52.4	-0.7
	comp=Z,7.9nm,0.5s						
DPC	**Dobruska-Polom**	**1.49**	**287**	Pg	**Pn**	21 37 31.9	-1.4
DPC				Sg	**Sg**	21 37 52.4	-0.7
	7.9nm,0.5s						
SMOL	**Smolenice**	**1.59**	**208**	*e*SN	**Sg**	21 37 57.5	+1.2
SMOL	**Smolenice**	**1.59**	**208**	*e*Sn	**Sg**	21 37 57.5	+1.2
KRUC	**Moravsky**	**1.65**	**239**	*e*Pg	**Pn**	21 37 34.8	-0.6
	baz=57						
KRUC				*e*Sg	**Sn**	21 37 57.1	-0.2
	3.4nm,0.2s,baz=57						
KSP	**Ksiaz**	**1.71**	**303**	*e*Pg	**Pn**	21 37 35.9	-0.4
KSP				*e*Sg	**Sn**	21 37 58.9	+0.1
UPC	**Upice**	**1.73**	**291**	*e*PG	**Pn**	21 37 36.3	-0.2
UPC				*e*SG	**Sb**	21 38 00.0	-0.1
	comp=Z,3.6nm,0.7s						
UPC	**Upice**	**1.73**	**291**	Pg	**Pn**	21 37 36.3	-0.2
UPC				Sg	**Sb**	21 38 00.0	-0.1
	3.6nm,0.7s						
TREC	**Trest**	**2.09**	**254**	*e*SG	**Sb**	21 38 10.9	+0.5
TREC	**Trest**	**2.09**	**254**	Sg	**Sb**	21 38 10.9	+0.5
CRVS	**Cervenica-Dubn**	**2.16**	**117**	*e*PN	**Pn**	21 37 43.8	+1.3
CRVS				*e*SN	**Sb**	21 38 13.1	+0.5
CRVS	**Cervenica-Dubn**	**2.16**	**117**	*e*Pn	**Pn**	21 37 43.8	+1.3
CRVS				*e*Sn	**Sb**	21 38 13.1	+0.5
PRU	**Pruhonice**	**2.59**	**273**	*e*PG	**Pb**	21 37 51.4	-1.0
PRU				*e*SG	**Sb**	21 38 26.4	+1.6
	comp=Z,3.0nm,0.5s						
PRU	**Pruhonice**	**2.59**	**273**	Sg	**Sb**	21 38 26.4	+1.6
	3.0nm,0.5s						
PVCC	**Panska Ves**	**2.62**	**285**	*e*SG	**Sb**	21 38 27.9	+2.1
	comp=Z,7.3nm,0.4s						
PVCC	**Panska Ves**	**2.62**	**285**	Sg	**Sb**	21 38 27.9	+2.1
	7.3nm,0.4s						
KOLS	**Kolonicke sedl**	**2.63**	**111**	*e*PN	**Pb**	21 37 52.2	-1.0
KOLS				*e*		22 03 03.1	
KOLS	**Kolonicke sedl**	**2.63**	**111**	*e*Pn	**Pb**	21 37 52.2	-1.0
BRG	**Berggiesshubel**	**3.09**	**290**	SG	**Sb**	21 38 42.0	+2.7
	3.8nm,0.6s						
KHC	**Kasperske Hory**	**3.33**	**258**	*e*PG	**Pb**	21 38 05.0	-0.2
KHC				*e*SG	**Sg**	21 38 51.0	-1.2
	comp=Z,2.6nm,0.4s						

*CASC **20** 21:40:07.6±2.1,14.18N×90.94W,h133km±7km,MD3.7*
*NEIC **20** 21:40:09.0±0.8,14.13N×90.95W,h137km±10km, MD4.2(MEX),Error ellipse: s-maj=17.3km s-min=8.0km az=203.0*
*MEX **20** 21:40:11.3±0.5,14.12N×91.10W,h144km±10km,MD4.2*
ISC 20 21:40:09.4±1.0,**14.14N**±0.07×**90.97W**±0.04,**h126**km±7km, **n39**,σ1§**25**/58,**1C-3D**,**Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.33**	**22**	*e*P	**Pn**	**21 40 25.8**	**-1.7**
PCG	**Pacaya**	**0.43**	**54**	*e*P	**Pn**	**21 40 26.0**	**-2.0**
PCG				*e*S	**Sn**	21 40 43.0	+1.0
IXG	**Ixpaco**	**0.50**	**86**	*e*P	**Pn**	**21 40 26.7**	**-1.5**
IXG				*e*S	**Sn**	21 40 43.5	+1.1
JAT	**Jato**	**0.67**	**285**	*e*P	**Pn**	**21 40 29.4**	**+0.2**
NBG	**Las Nubes**	**0.75**	**53**	*e*P	**Pn**	**21 40 28.6**	**-1.5**
NBG				*e*S	**Sn**	21 40 45.8	+0.1
RTR	**El Retiro**	**1.31**	**100**	*i*P	**Pn**	21 40 33.6	-1.7
RTR				*e*S	**Sn**	21 40 57.5	+2.6
SBLS	**San Blas**	**1.34**	**103**	*i* P	**Pn**	21 40 33.9	-1.8
SBLS				*e*S	**Sn**	21 40 54.8	-0.9
SNJE	**San Jose**	**1.35**	**101**	*i* P	**Pn**	21 40 34.0	-1.8
SNJE				*e*S	**Sn**	21 40 56.3	+0.5
THIG		**1.47**	**301**	*i* P	**Pn**	21 40 37.6	+0.7
THIG				*i* S	**Sn**	21 40 58.7	+0.9
THIG		**1.47**	**301**	*i* P	**Pn**	21 40 37.6	+0.7
THIG				*i* S	**Sn**	21 40 58.7	+0.9
MRL	**Marmol**	**1.54**	**53**	*e*P	**Pn**	21 40 37.8	-0.2
MRL				*e*S	**Sn**	21 40 58.5	-1.1
BOQS	**Boqueron**	**1.69**	**104**	*i* P	**Pn**	21 40 38.2	-1.4
LBRS	**Las Brisas**	**1.91**	**102**	*i* P	**Pn**	21 40 40.9	-1.3
LFRS	**El Faro**	**1.92**	**105**	*i* P	**Pn**	21 40 40.9	-1.5
SNVI	**San Vicente**	**2.13**	**104**	*i* P	**Pn**	21 40 43.8	-1.2
CCIG	**Comitan**	**2.41**	**332**	*i* P	**Pn**	21 40 49.9	+1.3
CCIG				*i* S	**Sn**	21 41 18.7	+0.2
CCIG	**Comitan**	**2.41**	**332**	*i* P	**Pn**	21 40 49.9	+1.3
CCIG				*i* S	**Sn**	21 41 18.7	+0.2
PCIG		**2.67**	**306**	*i* P	**Pn**	21 40 52.3	+0.6
PCIG				*i* S	**Sn**	21 41 23.6	-0.6
PCIG		**2.67**	**306**	*i* P	**Pn**	21 40 52.3	+0.6
PCIG				*i* S	**Sn**	21 41 23.6	-0.6
CAHU	**Cacacuatique**	**2.70**	**97**	*e*P	**Pn**	21 40 51.1	-1.2
VSM	**San Miguel**	**2.71**	**105**	*i* P	**Pn**	21 40 51.8	-0.7
BLLM	**Bellamira**	**2.74**	**104**	*e*P	**Pn**	21 40 52.1	-0.6
CNCH	**Conchagua**	**3.17**	**105**	*i* P	**Pn**	21 40 57.6	-0.6
TGIG		**3.35**	**322**	*i* P	**Pn**	21 41 01.5	+1.0
TGIG				*i* S	**Sn**	21 41 39.5	-0.5
TGIG		**3.35**	**322**	*i* P	**Pn**	21 41 01.5	+1.0
TGIG				*i* S	**Sn**	21 41 39.5	-0.5
TGUH	**Tegucigalpa,Un**	**3.59**	**91**	*e*Pn	**Pn**	21 41 02.4	-1.2
HUIG	**Huatulco**	**5.22**	**289**	*i* P	**Pn**	21 41 24.8	-0.7
HUIG				*i* S	**Sn**	21 42 22.1	-2.7
HUIG	**Huatulco**	**5.22**	**289**	*i* P	**Pn**	21 41 24.8	-0.7
HUIG				*i* S	**Sn**	21 42 22.1	-2.7
VHO	**Vista Hermosa**	**6.27**	**298**	*i* P	**Pn**	21 41 38.9	-0.9
VHO				*i* S	**Sn**	21 42 48.5	-1.8
VHO	**Vista Hermosa**	**6.27**	**298**	*i* P	**Pn**	21 41 38.9	-0.9
VHO				*i* S	**Sn**	21 42 48.5	-1.8
VCR	**Vista de Mar**	**6.57**	**127**	*i*eP	**Pn**	21 41 44.7	+1.0
TEIG	**Tepich**	**6.58**	**23**	*e*Pn	**Pn**	21 41 42.6	-1.1
JTS	**JuntasAbangare**	**7.01**	**122**	*e*Pn	**Pn**	21 41 49.9	+0.2
FORC	**Fortuna**	**7.16**	**120**	*e*P	**Pn**	21 41 52.1	+0.5
CGA2	**Cerro Gallo 2**	**7.56**	**122**	*e*P	**Pn**	21 41 58.0	+0.8
QCR	**Quepos**	**8.14**	**124**	*e*P	**Pn**	21 42 04.2	-0.7
BUS	**Buena Vista**	**8.40**	**122**	*e*P	**Pn**	21 42 10.2	+1.5
ANMO	**Albuquerque**	**24.99**	**329**	P	**P**	21 45 20.5	-1.3
ACSO	**Alum Creek Sta**	**26.92**	**14**	*e*P	**P**	21 45 37.9	-1.0
	13nm,0.3s						

*ISK **20** 21:40:06.7,35.76N×31.11E,h8km,MD3.6*
*CSEM **20** 21:40:06.8±0.3,35.72N×31.08E,h2km,MD3.4, Error ellipse: s-maj=10.0km s-min=4.9km az=19.0*
*DDA **20** 21:40:10.9,36.09N×31.23E,h7km,MD3.4*
ISC 20 21:40:09.5±1.3,**35.72N**±0.05×**31.16E**±0.03,**h30**km±15km, **n41**,σ1§**12**/50,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**1.07**	**61**	*i* P	**Pn**	**21 40 28.7**	**+0.2**
GAZI				*i* S	**Sn**	21 40 39.0	-2.5
GAZI	**Gazipasa**	**1.07**	**61**	*i* P	**Pn**	**21 40 28.7**	**+0.2**
ANTB	**Antalya**	**1.24**	**341**	*e*PN	**Pn**	**21 40 30.2**	**-0.6**
ANTB	**Antalya**	**1.24**	**341**	*e*Pn	**Pn**	**21 40 30.2**	**-0.6**
AKAS	**Kas**	**1.36**	**293**	*i* P	**Pn**	**21 40 30.3**	**-2.2**
AKAS				*i* S	**Sb**	21 40 54.0	+2.5
AKAS	**Kas**	**1.36**	**293**	*i* P	**Pn**	21 40 30.3	-2.2
KORT	**Korkueli**	**1.43**	**333**	*i* P	**Pn**	21 40 33.7	+0.2
KORT				*i* S	**Sb**	21 40 55.0	+1.4
KORT	**Korkueli**	**1.43**	**333**	*i* P	**Pn**	21 40 33.7	+0.2
LEF	**Lefka**	**1.54**	**113**	*e*PN	**Pn**	21 40 35.4	+0.5
LEF				*e*SN	**Sb**	21 40 56.5	+0.1
LEF	**Lefka**	**1.54**	**113**	*e*Pn	**Pn**	21 40 35.4	+0.5
LEF				*e*Sn	**Sb**	21 40 56.6	+0.1
ERMK	**Ermenek**	**1.69**	**57**	*i* P	**Pb**	21 40 39.1	-1.0
ERMK	**Ermenek**	**1.69**	**57**	*i* P	**Pb**	21 40 39.1	-1.0
FETY	**Fethiye**	**1.91**	**299**	*e*PN	**Pn**	21 40 38.6	-1.4
FETY	**Fethiye**	**1.91**	**299**	*e*Pn	**Pn**	21 40 38.6	-1.4
CSS	**Prodhromos**	**1.93**	**112**	*e*PN	**Pn**	21 40 41.2	+0.9
CSS	**Prodhromos**	**1.93**	**112**	*e*Pn	**Pn**	21 40 41.2	+0.9
GLHS	**Glhisar (BURDU**	**1.96**	**317**	*e*PN	**Pn**	21 40 41.0	+0.3
GOLH	**Golhisar**	**1.98**	**320**	*e*P	**Pn**	21 40 40.8	-0.3
GOLH	**Golhisar**	**1.98**	**320**	*e*P	**Pn**	21 40 40.8	-0.3
ISP	**Isparta**	**2.16**	**347**	*e*PN	**Pn**	21 40 43.6	+0.1
ISP	**Isparta**	**2.16**	**347**	*e*Pn	**Pn**	21 40 43.6	+0.1
TURN	**Turunc**	**2.36**	**300**	*i* P	**Pn**	21 40 47.7	+1.6
TURN				*i* S	**Sn**	21 41 13.8	-0.3
TURN	**Turunc**	**2.36**	**300**	*i* P	**Pn**	21 40 47.7	+1.6
TURN				*i* S	**Sn**	21 41 13.8	-0.3
KONT	**Konya--Tatoy**	**2.42**	**23**	*e*PN	**Pn**	21 40 46.6	-0.4
EREN	**Erenkoy**	**2.46**	**94**	*e*PN	**Pn**	21 40 49.2	+1.7
EREN	**Erenkoy**	**2.46**	**94**	*e*Pn	**Pn**	21 40 49.2	+1.7
LADK	**Ladik-KONYA**	**2.66**	**21**	*e*PN	**Pn**	21 40 50.5	+0.2
LADK	**Ladik-KONYA**	**2.66**	**21**	*e*Pn	**Pn**	21 40 50.5	+0.2
YER	**Yerkesik**	**2.71**	**302**	*e*PN	**Pn**	21 40 50.9	-0.2
YER	**Yerkesik**	**2.71**	**302**	*e*Pn	**Pn**	21 40 50.9	-0.2
SHUT	**Suhut-Afyon**	**2.87**	**350**	*e*PN	**Pn**	21 40 53.2	0.0
SHUT	**Suhut-Afyon**	**2.87**	**350**	*e*Pn	**Pn**	21 40 53.2	0.0
KDHN	**Kadinhani**	**2.90**	**15**	*i* P	**Pn**	21 40 54.9	+1.2
KDHN				*i* S	**Sn**	21 41 28.7	+1.2
KDHN	**Kadinhani**	**2.90**	**15**	*i* P	**Pn**	21 40 54.9	+1.2
KDHN				*i* S	**Sn**	21 41 28.7	+1.2
MLSB	**Milas**	**3.14**	**301**	*e*PN	**Pn**	21 40 57.9	+0.9
MLSB	**Milas**	**3.14**	**301**	*e*Pn	**Pn**	21 40 57.9	+0.9
GULE	**Gulek**	**3.31**	**61**	*i* P	**Pn**	21 41 03.3	+3.9
GULE				*i* S	**Sb**	**21 41 45.9**	**-1.5**
KULA	**Kula-Manisa**	**3.43**	**325**	*e*PN	**Pn**	**21 41 02.0**	**+1.2**
KULA	**Kula-Manisa**	**3.43**	**325**	*e*Pn	**Pn**	**21 41 02.1**	**+1.2**
ALT	**Altintas**	**3.43**	**346**	*e*PN	**Pn**	**21 41 01.4**	**+0.4**
ALT	**Altintas**	**3.43**	**346**	*e*Pn	**Pn**	**21 41 01.4**	**+0.4**

*ISCJB **20** 21:42:55.9±0.5,0.59S±0.04×122.66E±0.07,h10km, mb3.6/5,Error ellipse: s-maj=9.6km s-min=5.9km az=174.7*
*IDC **20** 21:42:55.4±1.1,0.56S×122.85E,h0km,mb3.5/5, mb1 3.7/6,mb1mx3.5/23,mbtmp3.6/6,ML3.9/1, Error ellipse: s-maj=43.9km s-min=19.6km az=77.0*
*DJA **20** 21:42:59.8±0.3,1°S×3°×12°3E±°,h30km,M4.1/7,mb4.3/3, mB4.9/1,MLv4.0/7,Mw(mB)4.2/1*
ISC 20 21:42:55.6±0.7,**0.55S**±0.04×**122.80E**±0.07,**h10**km,**n18**, σ1§**93**/19,**mb3.7**/5,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.49**	**183**	P	**Pb**	**21 43 06.2**	**-0.2**
MRSI	**Marisa**	**1.33**	**320**	P	**Pn**	**21 43 18.6**	**-1.7**
MRSI				S	**Sb**	21 43 36.7	-1.2
KMSI	**Cibinong**	**1.62**	**47**	P	**Pg**	**21 43 26.7**	**-0.1**
MNI	**Manado**	**2.84**	**46**	P	**Pb**	**21 43 45.8**	**-0.7**
KKSI	**Kolaka, Sulawe**	**3.78**	**198**	P	**Pn**	**21 43 55.1**	**+1.1**
TTSI	**Tana Toraja**	**3.88**	**230**	P	**Pn**	**21 43 56.8**	**+1.5**
LBMI	**Labuha**	**4.70**	**91**	P	**Pb**	**21 44 15.1**	**-3.1**
BBSI	**Bau Bau**	**4.91**	**183**	P	**Pb**	**21 44 18.7**	**-3.1**
KAPI	**Kappang**	**5.38**	**214**	P	**Pn**	**21 44 14.8**	**-1.2**
	32nm,0.8s,0.1nm						
KAPI	**Kappang**	**5.38**	**214**	Pn	**Pn**	**21 44 15.0**	**-1.0**
	3.6nm,0.3s,baz=75,slow=6.7,SNR=12						
KAPI				Sn	**Sn**	**21 45 14.5**	**-3.6**
	0.5nm,0.3s,baz=26,slow=23,SNR=1.4						
BKSI	**Bulukumba**	**5.45**	**209**	P	**Pn**	**21 44 16.8**	**-0.1**
	14nm,0.7s,0.1nm						
BSSI	**Bau Bau, Buton**	**6.02**	**202**	P	**Pn**	**21 44 26.7**	**+1.9**
IGBI	**Denpasar**	**11.21**	**223**	P	**Pn**	21 45 41.1	+5.1
WRA	**Warramunga Arr**	**22.34**	**150**	P	**P**	**21 47 55.2**	**+1.3**
	1.4nm,0.5s,baz=337,slow=9.8,SNR=20						
ASAR	**Alice Springs**	**25.38**	**156**	P	**P**	**21 48 24.2**	**+0.9**
	0.9nm,0.5s,baz=344,slow=14,SNR=17						
MJAR	**Matsushiro Arr**	**39.58**	**20**	P	**P**	**21 50 27.1**	**-0.1**
	0.6nm,0.7s,baz=194,slow=9.4,SNR=3.5						
SONM	**Songino Array**	**50.26**	**346**	P	**P**	**21 51 54.5**	**+2.3**
	0.4nm,0.8s,baz=142,slow=4.9,SNR=3.8						
MKAR	**Makanchi Array**	**58.97**	**329**	P	**P**	**21 52 57.6**	**+2.2**
	0.3nm,0.5s,baz=126,slow=8.7,SNR=4.0						

*CSEM **20** 21:46:01.4,37.67N×20.94E,h11km±5km, After THE*
THE 20 21:46:01.4,37.67N×20.94E,h11km±5km**, Error ellipse: s-maj=5.9km s-min=0.7km az=15.0,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.46**	**345**	P	Pg	21

THR1	Thera Island	2.35	53	P		Pn	22 00 22.0	-0.7
ITM	Ithomi	2.40	337	P		Pn	22 00 23.7	+0.3
ITM	Ithomi	2.40	337	ePB		Pn	22 00 24.7	+1.3
ITM	Ithomi	2.40	337	P		Pn	22 00 23.7	+0.3
ITM	Ithomi	2.40	337	ePb		Pn	22 00 24.7	+1.3
DIDY	Didyma	2.50	2	P		Pn	22 00 25.2	+0.5
DIDY	Didyma	2.50	2	P		Pn	22 00 25.2	+0.5
DID	Didima	2.53	2	P		Pn	22 00 25.7	+0.7
DID	Didima	2.53	2	ePN		Pn	22 00 25.8	+0.7
DID	Didima	2.53	2	P		Pn	22 00 25.7	+0.7
ZKR	Zakros	2.54	86	ePN		Pn	22 00 26.4	+1.2
ZKR	Zakros	2.54	86	ePn		Pn	22 00 26.4	+1.2
NAIG	Nisos Aigina	2.79	6	ePN		Pn	22 00 29.2	+0.5
NAIG	Nisos Aigina	2.79	6	ePn		Pn	22 00 29.2	+0.5
APE	Apeiranthos	2.86	42	ePN		Pn	22 00 30.7	+1.1
APE	Apeiranthos	2.86	42	ePn		Pn	22 00 30.7	+1.1
LTBQ	Tobruq	2.99	167	*i* P		Pn	22 00 33.9	+2.6
	SNR=24							
LTBQ				eS		Sn	22 01 07.4	+1.5
	SNR=24							
GUR	Goura	3.02	348	P		Pn	22 00 33.0	+1.1
GUR	Goura	3.02	348	ePN		Pn	22 00 33.4	+1.5
GUR	Goura	3.02	348	P		Pn	22 00 33.0	+1.1
GUR	Goura	3.02	348	ePn		Pn	22 00 33.4	+1.5
ATH	Athens Observa	3.03	9	ePN		Pn	22 00 32.2	+0.3
ATH	Athens Observa	3.03	9	ePn		Pn	22 00 32.2	+0.3
LTK	Loutraki	3.04	358	P		Pn	22 00 32.6	+0.5
LTK	Loutraki	3.04	358	ePN		Pn	22 00 33.0	+0.9
LTK	Loutraki	3.04	358	P		Pn	22 00 32.6	+0.5
LTK	Loutraki	3.04	358	ePn		Pn	22 00 33.0	+0.9
PTL	Penteli	3.12	11	P		Pn	22 00 33.3	+0.1
PTL	Penteli	3.12	11	ePN		Pn	22 00 33.5	+0.3
PTL	Penteli	3.12	11	P		Pn	22 00 33.3	+0.1
KLV	Kalavryta, Ach	3.16	346	ePN		Pn	22 00 35.0	+1.2
KLV	Kalavryta, Ach	3.16	346	ePn		Pn	22 00 35.0	+1.2
KARP	Karpathos	3.35	79	ePN		Pn	22 00 37.3	+0.9
KARP	Karpathos	3.35	79	ePn		Pn	22 00 37.3	+0.9
RLS	Riolos of Patr	3.35	337	P		Pn	22 00 37.5	+1.2
RLS	Riolos of Patr	3.35	337	ePN		Pn	22 00 37.7	+1.4
RLS	Riolos of Patr	3.35	337	P		Pn	22 00 37.5	+1.2
LAKA	Lakka	3.39	345	ePN		Pn	22 00 37.7	+0.9
LAKA	Lakka	3.39	345	ePn		Pn	22 00 37.7	+0.9
DSF	Desfina	3.46	352	P		Pn	22 00 38.2	+0.3
DSF				S		Sn	22 01 18.3	+0.6
DSF	Desfina	3.46	352	P		Pn	22 00 38.2	+0.3
DSF				S		Sn	22 01 18.3	+0.6
TRIZ	Trizonia	3.49	346	P		Pn	22 00 39.0	+0.8
TRIZ	Trizonia	3.49	346	ePN		Pn	22 00 39.0	+0.8
TRIZ	Trizonia	3.49	346	P		Pn	22 00 39.0	+0.8
KALE	Kalithea	3.50	347	P		Pn	22 00 38.7	+0.3
KALE	Kalithea	3.50	347	ePN		Pn	22 00 39.2	+0.8
KALE	Kalithea	3.50	347	P		Pn	22 00 38.7	+0.3
KALE	Kalithea	3.50	347	ePn		Pn	22 00 39.2	+0.8
EFP	Efpalio	3.58	344	P		Pn	22 00 40.9	+1.4
EFP	Efpalio	3.58	344	ePN		Pn	22 00 40.9	+1.4
EFP	Efpalio	3.58	344	P		Pn	22 00 40.9	+1.4
LKR	Lokris	3.67	358	P		Pn	22 00 40.9	+0.2
LKR	Lokris	3.67	358	ePN		Pn	22 00 41.1	+0.4
LKR	Lokris	3.67	358	ePn		Pn	22 00 41.1	+0.4
ATAL	Atalanti	3.71	359	P		Pn	22 00 41.8	+0.5
ATAL	Atalanti	3.71	359	P		Pn	22 00 41.8	+0.5
VLS	Valsamata	3.79	328	ePN		Pn	22 00 41.9	-0.5
VLS	Valsamata	3.79	328	ePn		Pn	22 00 41.9	-0.5
AXAR	Agios Charalam	3.80	354	P		Pn	22 00 43.0	+0.5
AXAR	Agios Charalam	3.80	354	P		Pn	22 00 43.0	+0.5
SLUM		3.89	153	P		Pn	22 00 44.1	+0.4
SLUM				S		Sn	22 01 27.4	-0.7
SMIA	Simia	3.90	1	P		Pn	22 00 44.4	+0.6
SMIA	Simia	3.90	1	P		Pn	22 00 44.4	+0.6
EVR	Evrytania	4.07	345	P		Pn	22 00 48.4	+2.1
EVR	Evrytania	4.07	345	ePN		Pn	22 00 48.4	+2.1
EVR	Evrytania	4.07	345	P		Pn	22 00 48.4	+2.1
AGG	Agios Georgios	4.09	351	P		Pn	22 00 47.0	+0.5
AGG				S		Sn	22 01 34.2	+1.2
AGG	Agios Georgios	4.09	351	ePN		Pn	22 00 47.2	+0.7
AGG	Agios Georgios	4.09	351	P		Pn	22 00 47.0	+0.5
AGG				S		Sn	22 01 34.2	+1.2
MAKR	Makrakomi, Fth	4.11	349	P		Pn	22 00 48.1	+1.4
MAKR				S		Sn	22 01 34.7	+1.2
MAKR	Makrakomi, Fth	4.11	349	P		Pn	22 00 48.1	+1.4
MAKR				S		Sn	22 01 34.7	+1.2
CHOS	Chios island	4.14	34	ePN		Pn	22 00 47.1	-0.1
CHOS	Chios island	4.14	34	ePn		Pn	22 00 47.1	-0.1
SKIA	Skiathos	4.19	4	P		Pn	22 00 48.1	+0.2
SKIA	Skiathos	4.19	4	P		Pn	22 00 48.1	+0.2
AOS	Alonnisos	4.23	8	ePN		Pn	22 00 48.0	-0.4
AOS	Alonnisos	4.23	8	ePn		Pn	22 00 48.0	-0.4
ARG	Arkhangelos	4.26	72	ePN		Pn	22 00 49.2	+0.4
ARG	Arkhangelos	4.26	72	ePn		Pn	22 00 49.2	+0.4
LKD2	Lefkada island	4.29	333	ePN		Pn	22 00 49.9	+0.7
LKD2	Lefkada island	4.29	333	ePn		Pn	22 00 49.9	+0.7
NEO	Neokhori	4.32	1	ePN		Pn	22 00 49.8	+0.1
NEO	Neokhori	4.32	1	ePn		Pn	22 00 49.8	+0.1
XOR	Xorichti	4.38	1	P		Pn	22 00 50.0	-0.5
XOR	Xorichti	4.38	1	P		Pn	22 00 50.0	-0.5
THL	Klokotos Trika	4.67	349	P		Pn	22 00 54.3	0.0
THL	Klokotos Trika	4.67	349	ePN		Pn	22 00 54.4	+0.1
THL	Klokotos Trika	4.67	349	ePn		Pn	22 00 54.4	+0.1
LJBD	Adjabya	4.74	212	*i* P		Pn	22 00 55.3	-0.1
	SNR=23							
TURN	Turunc	4.83	65	*i* P		Pn	22 00 51.7	-4.9
JAN	Janina	5.01	339	P		Pn	22 00 59.5	+0.4
JAN	Janina	5.01	339	ePN		Pn	22 00 59.8	+0.7
JAN	Janina	5.01	339	P		Pn	22 00 59.5	+0.4
JAN	Janina	5.01	339	ePn		Pn	22 00 59.8	+0.7
HMAT	Matruh	5.11	138	P		Pn	22 00 59.2	-1.3
	baz=143							
HMAT				S		Sn	22 01 54.0	-4.1
	baz=143							
HMAT	Matruh	5.11	138	P		Pn	22 00 59.2	-1.3
HMAT				S		Sn	22 01 54.0	-4.1
OUR	Ouranopolis	5.39	7	P		Pn	22 01 03.8	-0.5
OUR	Ouranopolis	5.39	7	P		Pn	22 01 03.8	-0.5
AKAS	Kas	5.43	75	*i* P		Pn	22 01 04.2	-0.7
AKAS				*i* S		Sn	22 02 04.3	-1.8
AKAS	Kas	5.43	75	*i* P		Pn	22 01 04.2	-0.7
AKAS				*i* S		Sn	22 02 04.3	-1.8
DNZL	Cakiroluk	5.49	59	*i* P		Pn	22 01 07.5	+1.6
DNZL	Cakiroluk	5.49	59	*i* P		Pn	22 01 07.5	+1.6
NEST	Nestorio	5.67	344	P		Pn	22 01 09.0	+0.7
NEST	Nestorio	5.67	344	P		Pn	22 01 09.0	+0.7
FNA	Florina	5.96	347	P		Pn	22 01 11.4	-0.8
FNA	Florina	5.96	347	P		Pn	22 01 11.4	-0.8
SWA2		6.05	160	P		Pn	22 01 14.0	+0.7
	baz=163							
SWA2					AMP		22 02 00.0	
	comp=E,20μm,0.2s,logA/T=4.9,baz=163							
SWA2		6.05	160	P		Pn	22 01 14.0	+0.7
KHAL	Karahalli	6.14	55	*i* P		Pn	22 01 15.5	+0.9
KHAL	Karahalli	6.14	55	*i* P		Pn	22 01 15.5	+0.9
KORT	Korkueli	6.20	69	*i* P		Pn	22 01 16.0	+0.5
KORT	Korkueli	6.20	69	*i* P		Pn	22 01 16.0	+0.5
VTS	Vitosha	7.61	0	⇓*i* P		Pn	22 01 35.8	+1.0
VTS	Vitosha	7.61	0	⇓*i* P		Pn	22 01 35.8	+1.0
ERMK	Ermenek	8.12	75	*i* P		Pn	22 01 42.9	+1.0
ERMK	Ermenek	8.12	75	*i* P		Pn	22 01 42.9	+1.0
STON	Ston	8.94	333	*e*Pn		Pn	22 01 49.5	-3.5
STON				Sn		Sn	22 03 19.6	-13
AMAG	Maghara	9.52	114	P		Pn	22 01 57.8	-3.1
	baz=117							
BRTR	Keskin Array B	9.62	57	Pn		Pn	22 02 01.6	-0.7
	comp=E,0.1nm,0.3s,baz=234,slow=14,SNR=16							
RSH		9.76	111	P		Pn	22 02 00.6	-3.6
	baz=114							
MMAI	Mount Meron Ar	10.38	97	Pn		Pn	22 02 10.8	-1.9
	comp=E,0.4nm,0.3s,baz=344,slow=21,SNR=3.4							
MMAI				Sn		Sn	22 03 57.3	-10
	comp=E,0.2nm,0.3s,baz=356,slow=40,SNR=1.6							
ISR	Istrita	10.46	13	⇓*i* P		Pn	22 02 14.7	+0.9
ISR	Istrita	10.46	13	⇓*i* P		Pn	22 02 14.7	+0.9
MLR	Muntele Rosu	10.72	11	⇑*i* P		Pn	22 02 16.2	-1.2
MLR	Muntele Rosu	10.72	11	Pn		Pn	22 02 16.2	-1.2
	baz=161,slow=18							
MLR	Muntele Rosu	10.72	11	⇑*i* P		Pn	22 02 16.2	-1.2
VRI	Vrincioaia	11.22	13	⇓*i* P		Pn	22 02 26.0	+1.9
VRI	Vrincioaia	11.22	13	⇓*i* P		Pn	22 02 26.0	+1.9
KEST	Kesra	11.28	278	Sn		Sn	22 04 25.2	-4.5
	comp=E,0.0nm,0.3s,baz=118,slow=23,SNR=1.6							
EIL	Elat	11.31	115	Sn		Sn	22 04 20.3	-10
	comp=E,0.4nm,0.3s,baz=338,slow=9.2,SNR=2.2							
NVLJ	Novalja	11.48	329	*e*Pn		Pn	22 02 25.0	-2.6
NVLJ				Sn		Sn	22 04 22.6	-12
TESR	Tescani	11.83	12	⇑*i* P		Pn	22 02 34.5	+2.1
TESR	Tescani	11.83	12	⇑*i* P		Pn	22 02 34.5	+2.1
VYHS	Vyhne	13.88	348	*e*		P	22 03 07.8	+0.6
CRVS	Cervenica-Dubn	13.97	355	*e*		Pn	22 02 58.0	-3.6
VRAC	Vranov	15.11	343	Pn		Pn	22 03 16.8	+0.1
	comp=E,0.3nm,0.3s,baz=166,slow=8.3,SNR=2.5							
VRAC	Vranov	15.11	343	*e*P		P	22 03 21.1	+0.2
OKC	Ostrava-Krasne	15.29	348	*e*P		P	22 03 23.6	+0.7
OKC				*e*pP		Pn	22 03 26.8	+7.8
MORC	Moravsky Berou	15.35	346	*e*P		P	22 03 23.9	+0.3
TREC	Trest	15.38	341	*e*P		P	22 03 24.8	+0.9
GERES	GERESS Array B	15.51	336	Pn		Pn	22 03 20.1	-1.8
	comp=E,0.1nm,0.3s,baz=149,slow=12,SNR=5.2							
KHC	Kasperske Hory	15.80	336	*e*P		P	22 03 29.9	+1.3
KHC				*e*pP		Pn	22 03 32.3	+6.7
KHC	Kasperske Hory	15.80	336	P		P	22 03 29.5	+0.9
DPC	Dobruska-Polom	16.15	344	*e*P		P	22 03 32.8	+0.3
DPC				*e*pP		Pn	22 03 35.5	+5.6
PRU	Pruhonice	16.27	340	*e*P		P	22 03 34.2	+0.5
PRU				*e*pP		Pn	22 03 37.2	+5.8
AKASG	Malin Array Be	16.33	14	Pn		Pn	22 03 28.1	-4.1
	comp=E,1.2nm,0.3s,baz=210,slow=9.8,SNR=5.1							
UPC	Upice	16.36	344	*e*P		P	22 03 35.6	+0.8
KBZ	Khabaz	17.58	54	Pn		Pn	22 03 46.9	-0.9
	comp=E,0.1nm,0.3s,baz=226,slow=9.7,SNR=4.8							
MIB	Mutribah	21.07	97	*e*P		P	22 04 25.7	-0.8
MIB				AMb		AMB	22 04 26.9	
	comp=Z,20nm,0.7s							
MIB	Mutribah	21.07	97	*e*P		P	22 04 25.7	-0.8
	comp=Z,20nm,0.7s							
NAY	Al-Naaiem	21.19	99	*e*P		P	22 04 27.0	-0.7
NAY				AMb		AMB	22 04 27.9	
	comp=Z,4.7nm,0.7s							
NAY	Al-Naaiem	21.19	99	*e*P		P	22 04 27.0	-0.7
	comp=Z,4.7nm,0.7s							
UMR	Umm Al-Rimmam	21.46	98	*e*P		P	22 04 30.3	-0.4
UMR	Umm Al-Rimmam	21.46	98	*e*P		P	22 04 30.3	-0.4
ESDC	Sonseca Array	22.01	290	P		P	22 04 43.6	+7.1
	comp=Z,0.1nm,0.3s,baz=75,slow=12,SNR=3.7							
HFS	Hagfors	25.91	349	P		P	22 05 12.7	-0.9
	comp=Z,4.5nm,0.5s,baz=148,slow=12,SNR=38							
FINES	FINESS Array B	26.55	3	P		P	22 05 17.7	-1.7
	comp=Z,1.1nm,0.5s,baz=164,slow=10,SNR=14							
FINES				LR		LR	22 17 05.7	
	comp=Z,48nm,18.2s,baz=90,slow=40							
NB2	NORSAR Subarra	27.18	347	P		P	22 05 23.4	-1.7
	comp=Z,0.7nm,0.5s,baz=156,slow=9.3							
NB2	NORSAR Subarra	27.18	347	P		P	22 05 23.4	-1.7
	comp=Z,0.7nm,0.5s,baz=156,slow=9.0,SNR=8.5							
NOA	NORSAR Array B	27.18	347	P		P	22 05 24.1	-0.9
	comp=Z,0.8nm,0.5s,baz=151,slow=11,SNR=11							
EKA	Eskdalemuir Ar	27.25	326	P		P	22 05 27.8	+2.1
	comp=Z,0.9nm,0.6s,baz=121,slow=9.8,SNR=4.0							
TORD	Toroeli Ar. Bea	29.12	227	P		P	22 05 45.2	+2.5
	comp=Z,0.5nm,0.7s,baz=44,slow=9.6,SNR=4.0							
ARCES	ARCESS Array B	34.64	1	P		P	22 06 29.1	-1.5
	comp=Z,1.2nm,0.7s,baz=181,slow=11,SNR=5.5							
DBIC	Dimbokro	38.17	229	P		P	22 07 03.8	+2.6
	comp=Z,2.9nm,0.8s,baz=41,slow=11,SNR=3.3							
MKAR	Makanchi Array	45.27	56	P		P	22 07 58.5	-0.5
	comp=Z,0.5nm,0.4s,baz=284,slow=4.9,SNR=3.8							
ZALV	Zalesovo Beam	46.33	46	P		P	22 08 05.8	-1.4
	comp=Z,2.1nm,0.5s,baz=268,slow=8.9,SNR=10							
SONM	Songino Array	60.89	50	P		P	22 09 54.0	0.0
	comp=Z,1.1nm,0.7s,baz=281,slow=6.8,SNR=10.0							
CMAR	Chiang Mai Arr	68.25	82	P		P	22 10 42.8	+0.4
	comp=Z,0.5nm,0.8s,baz=294,slow=8.2,SNR=4.7							
YKA	Yellowknife Ar	77.10	341	P		P	22 11 35.2	+1.1
	comp=Z,0.3nm,0.5s,baz=30,slow=5.7,SNR=4.8							
KSRS	Korea Array	79.71	51	P		P	22 11 49.3	+0.3
	comp=Z,0.7nm,0.5s,baz=317,slow=3.9,SNR=3.5							

ISCJB ***20*** *22:05:03.6±0.5, 37°.86N±0°.03×27°.54E±0°.05, h3km±10km, Error ellipse: s-maj=8.0km s-min=4.3km az=146.7*
ISK ***20*** *22:05:03.0, 37°.86N×27°.50E, h14km, MD2.4*
DDA ***20*** *22:05:03.7, 37°.84N×27°.52E, h7km, MD2.9*
CSEM ***20*** *22:05:03.8±0.2, 37°.86N×27°.52E, h10km, MD2.9, Error ellipse: s-maj=4.9km s-min=3.3km az=77.0*

ISC 20 22:05:03.5±0.9, 37°.86N±0°.02×27°.53E±0°.03, h11km±9km, n22, σ0s35/37, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GCAM	G?zelcaml?	0.29	236	*i* P		Pg	22 05 09.3	0.0
GCAM				*i* S		Sg	22 05 13.0	-0.2
GCAM	G?zelcaml?	0.29	236	*i* P		Pg	22 05 09.3	0.0
GCAM				*i* S		Sg	22 05 13.0	-0.2
AYDN	Tasoluk	0.34	126	*i* P		Pb	22 05 11.5	-0.1
AYDN				*i* S		Sg	22 05 14.9	+0.1
AYDN	Tasoluk	0.34	126	*i* P		Pb	22 05 11.5	-0.1
AYDN				*i* S		Sg	22 05 14.9	+0.1
IZM	Izmir	0.58	338	*e*PG		Pg	22 05 14.8	0.0
IZM				*e*SG		Sb	22 05 23.3	-0.7
IZM	Izmir	0.58	338	*e*Pg		Pg	22 05 14.8	0.0
IZM				*e*Sg		Sb	22 05 23.3	-0.7
MLSB	Milas	0.60	161	*e*PG		Pg	22 05 15.0	-0.1
MLSB				*e*SG		Sb	22 05 24.1	-0.3
MLSB	Milas	0.60	161	*e*Pg		Pg	22 05 15.0	-0.1
MLSB				*e*Sg		Sb	22 05 24.1	-0.3
BLCB	Balcova	0.65	324	*e*PG		Pg	22 05 16.2	0.0
BLCB				*e*SG		Sg	22 05 24.7	0.0
BLCB	Balcova	0.65	324	*e*Pg		Pg	22 05 16.2	0.0
BLCB				*e*Sg		Sg	22 05 24.7	0.0
BODT	Bodrum	0.82	193	*e*PG		Pb	22 05 19.9	+0.2
BODT	Bodrum	0.82	193	*e*Pg		Pb	22 05 19.9	+0.2
YER	Yerkesik	0.94	140	*e*PG		Pb	22 05 22.0	+0.2
YER	Yerkesik	0.94	140	*e*Pg		Pb	22 05 22.0	+0.2
MANT	Manisa	1.02	52	*i* P		Pb	22 05 23.4	0.0
MANT				*i* S		Sg	22 05 36.4	-0.2
MANT	Manisa	1.02	52	*i* P		Pb	22 05 23.4	0.0
MANT				*i* S		Sg	22 05 36.4	-0.2
AKHS	Akhisar	1.04	12	*i* P		Pn	22 05 24.5	+0.4
AKHS				*i* S		Sn	22 05 39.7	+1.1
AKHS	Akhisar	1.04	12	*i* P		Pn	22 05 24.5	+0.4
KULA	Kula-Manisa	1.10	53	*e*PN		Pg	22 05 24.8	+0.1
KULA	Kula-Manisa	1.10	53	*e*Pn		Pg	22 05 24.8	+0.1
DEMI	Demirci	1.50	38	*i* P		Pg	22 05 32.6	+0.2
DEMI				*i* S		Sn	22 05 49.4	-0.7
DEMI	Demirci	1.50	38	*i* P		Pg	22 05 32.6	+0.2
DEMI				*i* S		Sn	22 05 49.4	-0.7

PRE 20 22:44:06.4±3.5, 29°.65S×27°.69E, h5km, ML3.6, 4C-3D, Lesotho

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SEK	Senekal	1.32	358	⇑*i* P		Pg	22 44 32.9	+0.9
SEK				*e*S		Sg	22 44 49.3	-0.1
SEK				AML		AML	22 44 50.1	
	comp=Z,448nm,0.3s							
BOSA	Boshof	2.36	295	⇑*i* P		Pn	22 44 46.3	+0.2
BOSA				*e*S		Sb	22 45 19.8	+0.5
BOSA				AML		AML	22 45 27.2	
	comp=Z,92nm,0.5s							
PRYS	Parys	2.73	354	*e*P		Pb	22 44 54.8	-1.1
PRYS				*e*S		Sn	22 45 23.3	-1.4
PRYS				AML		AML	22 45 35.2	
	comp=Z,284nm,0.5s							
SWZ	Schweizer	3.22	319	⇑*i* P		Pn	22 44 58.7	+0.9
SWZ				*e*S		Sn	22 45 36.0	-0.7
SWZ				AML		AML	22 45 52.0	
	comp=Z,124nm,0.4s							
SOE	Somerset East	3.55	210	⇓*i* P		Pn	22 45 03.9	+1.6
SOE				*e*S		Sn	22 45 44.2	-0.6
SOE				AML		AML	22 46 08.8	
	comp=Z,96nm,0.5s							
GRM	Grahamstown	3.79	195	*e*P		Pn	22 45 06.3	+0.8
GRM				*e*S		Sn	22 45 50.3	-0.2
GRM				AML		AML	22 46 16.8	
	comp=Z,77nm,0.5s							
KSR	Koster	3.85	349	⇑*i* P		Pn	22 45 07.0	+0.5
KSR				*e*S		Sn	22 45 51.8	-0.6
KSR				AML		AML	22 46 10.3	
	comp=Z,60nm,0.2s							
SLR	Silverton	3.94	8	⇓*i* P		Pn	22 45 08.4	+0.6
SLR				*e*S		Sn	22 45 51.5	-3.0
SLR				AML		AML	22 46 18.6	
	comp=Z,82nm,0.4s							
POGA	Pongola	4.14	58	*e*P		Pn	22 45 11.9	+1.6
POGA				*e*S		Sn	22 45 59.1	0.0
POGA				AML		AML	22 46 22.4	
	comp=Z,97nm,0.5s							
LBTB	Lobatse	4.98	338	⇓*i* P		Pn	22 45 22.6	+0.6
LBTB				*e*S		Sn	22 46 15.8	-4.3
LBTB				AML		AML	22 46 45.1	
	comp=Z,75nm,0.6s							
BUFB	Buffelsbos	5.14	208	*e*P		Pn	22 45 23.7	-0.3
BUFB				*e*S		Sn	22 46 19.4	-4.3
BUFB				AML		AML	22 46 57.4	
	comp=Z,40nm,0.4s							
UPI	Upington	5.78	281	*e*P		Pn	22 45 33.5	+0.6
UPI				*e*S		Sn	22 46 34.8	-5.0
UPI				AML		AML	22 47 17.6	
	comp=Z,20nm,0.4s							
SUR	Sutherland	6.50	244	*e*P		Pn	22 45 44.3	+1.3
SUR				*e*S		Sn	22 46 55.0	-2.6
SUR				AML		AML	22 47 29.0	
	comp=Z,37nm,0.6s							
CVNA	Calvinia	7.07	253	*e*P		Pn	22 45 51.5	+0.8
CVNA				*e*S		Sn	22 47 07.1	-4.5
CVNA				AML		AML	22 47 52.7	
	comp=Z,46nm,0.6s							
MSNA	Messina	7.57	17	*e*P		Pn	22 45 58.6	+1.1
MSNA				*e*S		Sn	22 47 17.6	-6.3
MSNA				AML		AML	22 48 07.0	
	comp=Z,12nm,0.7s							

IDC 20 23:10:03.0±9.0, 16°.25S×174°.99W, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.5/19, mbtmpg3.4/3, Error ellipse: s-maj=398.4km s-min=38.1km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	Warramunga Arr	48.17	258	P		P	23 18 44.4	-1.0
	0.2nm,0.6s,baz=95,slow=7.7,SNR=5.0							
ASAR	Alice Springs	48.40	253	P		P	23 18 48.1	+0.8
	0.4nm,0.5s,baz=94,slow=7.7,SNR=4.6							
ILAR	Eielson Array	83.58	12	P		P	23 22 32.6	0.0
	0.2nm,0.6s,baz=216,slow=5.4,SNR=6.2							

IDC 20 23:20:53.6±2.5, 15°.96S×173°.15W, h0km, mb3.7/5, mb1 4.1/6, mb1mx3.8/22, mbtmpg3.7/6, ML1.6/1, Error ellipse: s-maj=143.3km s-min=22.4km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AFI	Afiamalu	2.43	33	Pn		Pn	23 21 33.5	-1.3
	8.1nm,0.3s,baz=37,slow=5.6,SNR=5.7							
AFI				Sn		Sn	23 22 02.8	-2.6
	17nm,0.3s,baz=12,slow=22,SNR=7.8							
WRA	Warramunga Arr	49.96	257	P		P	23 29 49.4	-0.4
	0.3nm,0.7s,baz=94,slow=8.1,SNR=3.7							
ASAR	Alice Springs	50.17	252	P		P	23 29 50.8	-0.7
	1.9nm,0.6s,baz=87,slow=8.5,SNR=22							
NVAR	Mina Array Bea	74.58	42	P		P	23 32 34.7	-0.2
	0.7nm,0.7s,baz=225,slow=10,SNR=5.0							
PDAR	Pinedale Array	82.52	42	P		P	23 33 18.3	-0.3
	0.4nm,0.5s,baz=264,slow=7.2,SNR=3.9							
YKA	Yellowknife Ar	90.52	23	P		P	23 33 58.0	+0.9
	0.2nm,0.7s,baz=239,slow=4.5,SNR=4.0							
BRTR	Keskin Array B	146.75	321	PKPbc		PKPab	23 40 38.9	-0.4
	0.4nm,0.7s,baz=28,slow=7.5,SNR=2.5							

**IDC 20 23:22:16.6±14.0, 17°.74N×145°.58E, h380km±162km, mb2.7/5, mb1 3.0/5, mb1mx2.8/24, mbtmp2.7/5, Error

OGWZ	**Otaki Gorge**	**1.86**	**179**	⇑PN	Pn	23 26 09.5	-0.2
OGWZ				SN	S	23 26 39.0	-0.6
TIWZ	**Tintock**	**1.91**	**163**	PN	Pn	23 26 09.8	-0.4
KIW	**Kapiti Island**	**1.91**	**185**	PN	Pn	23 26 09.6	-0.6
HOWZ	**Holdsworth Sta**	**1.96**	**172**	PN	Pn	23 26 10.1	-0.6
MWZ	**Matawai**	**1.97**	**72**	PN	Pn	23 26 08.8	-2.0
KNZ	**Kokohu**	**1.98**	**93**	PN	Pn	23 26 09.8	-0.9
DUWZ	**D'Urville Isla**	**2.07**	**206**	⇓PN	Pn	23 26 10.8	-0.9
CAW	**Cannon Point**	**2.15**	**181**	PN	Pn	23 26 11.9	-0.7
CAW				SN	S	23 26 43.7	-0.9
MTW	**Mount Morrison**	**2.22**	**173**	PN	Pn	23 26 12.4	-0.8
TCW	**Tory Channel**	**2.35**	**196**	PN	Pn	23 26 13.8	-0.7
PAWZ	**Paruwai Farm**	**2.44**	**175**	PN	Pn	23 26 14.6	-0.9
MSWZ	**Moikau Station**	**2.46**	**178**	PN	Pn	23 26 14.7	-1.0
PLWZ	**Palliser**	**2.62**	**178**	PN	Pn	23 26 16.3	-1.2
NNZ	**Nelson**	**2.63**	**210**	⇑PN	Pn	23 26 16.0	-1.6
TUWZ	**Tuamarina**	**2.64**	**200**	PN	Pn	23 26 16.6	-1.0
QRZ	**Quartz Range**	**2.74**	**226**	⇑PN	Pn	23 26 16.3	-2.5
BSWZ	**Blackbirch Sta**	**2.92**	**199**	PN	Pn	23 26 19.9	-0.9
THZ	**Tophouse**	**3.28**	**211**	⇓PN	Pn	23 26 23.0	-2.1
KHZ	**Kahutara**	**3.67**	**199**	PN	Pn	23 26 28.1	-1.5
DSZ	**Denniston Nort**	**3.78**	**221**	PN	Pn	23 26 27.8	-3.2
LTZ	**Lake Taylor**	**4.40**	**209**	PN	Pn	23 26 35.9	-2.6

*IDC **20** 23:24:29.9±5.1,24°.94N×140°.92E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.4/24, mbtmp3.9/3, Error ellipse: s-maj=167.5km s-min=97.7km az=69.0*
*ISCJB **20** 23:25:35.0±0.8,28°.41N±0°.05×139°.7E±0°.1, h400km, mb3.4/2, Error ellipse: s-maj=17.0km s-min=5.9km az=164.6*
*JMA **20** 23:25:35.2±0.2,28°.48N×140°.32E, h427km, M3.5*

ISC 20 23:25:35.8±1.1,28°.46N±0°.08×139°.9E±0°.2, h400km, n15, σ1§57/22, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.42**	**124**	P	**Pn**	**23 26 35.0**	**+0.4**
CBIJ				*eS*	**S**	**23 27 22.2**	**+0.1**
JHHJ	**Haha-jima-NKT**	**2.71**	**132**	P	**Pn**	**23 26 36.6**	**-0.1**
JHHJ				*eS*	**S**	**23 27 26.2**	**+0.3**
JHJ2	**Mitsune**	**4.63**	**359**	P	**Pn**	**23 26 55.9**	**+2.0**
JHJ2				*eS*	**S**	**23 27 57.8**	**+0.3**
JMY	**Miyakejima3**	**5.60**	**356**	*eS*	**S**	**23 28 13.8**	**-2.1**
BSO1	**Boso 1**	**6.24**	**8**	P	**Pn**	**23 27 11.8**	**+1.6**
BSO1				*eS*	**S**	**23 28 27.6**	**+0.1**
BSO3	**Boso 3**	**6.34**	**4**	P	**Pn**	**23 27 13.5**	**+1.8**
BSO3				*eS*	**S**	**23 28 30.2**	**+0.2**
BSO4	**Boso 4**	**6.52**	**3**	*eS*	**S**	**23 28 34.2**	**+0.3**
JIE	**Ise**	**6.52**	**336**	P	**P**	**23 27 16.4**	**+1.9**
JYT	**Yasato**	**7.75**	**2**	P	**P**	**23 27 28.4**	**+0.3**
JAG	**Ashikaga**	**7.95**	**357**	P	**P**	**23 27 30.7**	**+0.3**
JAG				*eS*	**S**	**23 29 32.7**	**-4.0**
JHO	**Hitachi**	**8.14**	**4**	P	**P**	**23 29 05.5**	**-2.2**
JHO				*eS*	**S**	**23 29 22.3**	**-1.8**
JFK	**Kawauchi**	**8.91**	**5**	*eS*	**S**	**23 29 22.3**	**-1.8**
USRK	**Ussuriysk Arra**	**16.94**	**340**	P	**P**	**23 29 09.9**	**+1.1**
	1.9nm,0.5s,baz=166,slow=11,SNR=6.2						
SONM	**Songino Array**	**32.34**	**316**	P	**P**	**23 31 28.7**	**-1.1**
	0.3nm,0.5s,baz=119,slow=8.4,SNR=3.0						
FINES	**FINESS Array B**	**75.83**	**333**	P	**P**	**23 36 37.5**	**-1.4**
	1.0nm,0.3s,baz=69,slow=5.5,SNR=25						

IDC 20 23:33:14.5±26.0, 19°.08S×177°.86W, h317km±268km, mb2.9/4, mb1 3.2/4, mb1mx3.0/19, mbtmp2.9/4, Error ellipse: s-maj=160.6km s-min=57.6km az=173.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.54**	**243**	P	P	23 40 06.9	-0.6
	0.6nm,0.5s,baz=72,slow=9.6,SNR=3.9						
WRA	**Warramunga Arr**	**44.95**	**261**	P	P	23 40 59.0	-0.2
	0.2nm,0.3s,baz=96,slow=7.5,SNR=8.5						
ASAR	**Alice Springs**	**44.99**	**255**	P	P	23 40 59.6	+0.1
	1.1nm,0.7s,baz=90,slow=7.7,SNR=14						
TXAR	**Lajitas Array**	**86.18**	**57**	P	P	23 45 21.0	+0.1
	0.2nm,0.8s,baz=205,slow=2.6,SNR=3.5						
GERES	**GERESS Array B**	**148.87**	**345**	PKPbc	PKPbc	23 52 24.4	-0.7
	0.1nm,0.3s,baz=350,slow=4.1,SNR=4.0						

KRSC 20 23:34:47.6±0.7, 54°.77N×164°.05E, h39km±29km, ML3.5, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.19**	**68**	*eP*	Pn	23 35 05.8	-1.9
BKI				*eS*	Sn	23 35 19.0	-3.6
MKZ	**Mys Kozlova**	**1.36**	**262**	*eP*	Pn	23 35 10.3	+0.2
MKZ				*eS*	Sn	23 35 26.8	-0.1
KBTR	**Krutoberegovo**	**1.60**	**335**	*eP*	Pn	23 35 12.5	-0.9
KBTR				*eS*	Sn	23 35 30.9	-1.9
ZLN	**Zelenaya**	**2.23**	**305**	P	Pn	23 35 23.1	+0.9
ZLN				S	Sn	23 35 48.5	-0.1
BZGR	**Bezymyannyi-Gr**	**2.25**	**303**	*eP*	Pn	23 35 23.9	+1.5
BZGR				*eS*	Sn	23 35 50.5	+1.6
TUMR	**Tumrok**	**2.31**	**284**	P	Pn	23 35 24.7	+1.5
TUMR				S	Sn	23 35 52.5	+2.1
CIRR	**Tsirk**	**2.31**	**307**	P	Pn	23 35 24.6	+1.3
CIRR				S	Sn	23 35 51.4	+0.7
LGNR	**Loginova**	**2.32**	**306**	S	Sn	23 35 54.6	+3.4
BZMR	**Bezymyannaya**	**2.34**	**301**	P	Pn	23 35 25.1	+1.3
BZMR				S	Sn	23 35 52.0	+0.6
BZWR	**Bezymyannyi-We**	**2.35**	**302**	P	Pn	23 35 25.2	+1.3
BZWR				S	Sn	23 35 52.3	+0.6
KMNR	**Kamenistaya**	**2.40**	**296**	*eP*	Pn	23 35 26.0	+1.6
KMNR				*eS*	Sn	23 35 53.6	+1.0
BDR	**Baidarnaya**	**2.42**	**319**	P	Pn	23 35 26.4	+1.7
KRSR	**Krestovskiy**	**2.46**	**308**	P	Pn	23 35 25.8	+0.6
KRSR				S	Sn	23 35 53.2	-0.9
KLY	**Klyuchi**	**2.47**	**310**	P	Pn	23 35 24.8	+0.5
KLY				*eS*	Sn	23 35 51.8	-2.4
KPT	**Kopyto**	**2.49**	**300**	P	Pn	23 35 27.5	+1.8
KPT				S	Sn	23 35 56.6	+1.7
KOZ	**Kozyrevsk**	**2.71**	**300**	P	Pn	23 35 30.9	+2.3
KOZ				S	Sn	23 36 02.6	+2.5
SRDR	**Sredinnyy**	**2.91**	**304**	P	Pn	23 35 33.2	+1.8
SRDR				S	Sn	23 36 06.6	+1.4
SPN	**Mys Shipunski**	**2.91**	**237**	*eS*	Sn	23 36 02.9	-2.1
NLC	**Nalytchevo**	**3.21**	**242**	S	Sn	23 36 12.8	+0.5
ESO	**Esso**	**3.27**	**293**	P	Pn	23 35 37.6	+1.3
SDLR	**Sedlovina**	**3.39**	**246**	P	Pn	23 35 39.1	+1.0
SDLR				S	Sn	23 36 16.5	-0.7
SMAR	**Somma**	**3.44**	**246**	P	Pn	23 35 40.1	+1.1
KRER	**Koryakskii**	**3.45**	**247**	P	Pn	23 35 40.5	+1.4
UGLR	**Uglovaya**	**3.46**	**245**	P	Pn	23 35 41.1	+2.1
AVH	**Avacha**	**3.48**	**246**	*eP*	Pn	23 35 40.7	+1.5
AVH				S	Sn	23 36 19.0	-0.2
KOK	**Koryaka**	**3.52**	**247**	P	Pn	23 35 41.1	+1.3
GNL	**Ganaly**	**3.74**	**256**	P	Pn	23 35 45.3	+2.4
RUS	**Russkaya**	**4.04**	**237**	P	Pn	23 35 47.1	+0.2
MTVR	**Mutnovka**	**4.18**	**239**	P	Pn	23 35 49.4	+0.5
MTVR				S	Sn	23 36 35.4	-1.2
ASAK	**Asacha**	**4.38**	**239**	P	Pn	23 35 53.7	+2.1

*NNC **20** 23:41:10.2±2.0,42°.72N×85°.14E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=19.7km s-min=13.4km az=71.0*

IDC 20 23:41:01.0±1.9, 42°.54N×85°.77E, h0km, mb3.4/1, mb1 3.4/3, mb1mx3.1/29, mbtmp3.2/3, ML2.9/2, MS2.8/2, Ms1 2.8/2, ms1mx2.3/24, 6C-1D, Error ellipse: s-maj=91.2km s-min=18.3km az=59.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**4.92**	**331**	⇑Pn	Pn	23 42 20.5	+4.2
	0.4nm,0.4s,baz=154,slow=14,SNR=9.1						
MK31				⇑Pg	Pg	23 42 32.9	-2.5
	0.8nm,0.5s,baz=155,slow=14,SNR=4.4						
MK31				⇓Sn	Sn	23 43 15.2	+1.2
	1.2nm,0.4s						
MK31				⇑Lg	Lg	23 43 35.0	
	7.8nm,0.7s,baz=145,slow=31,SNR=7.4						
MKAR	**Makanchi Array**	**4.92**	**331**	Pn	Pn	23 42 18.0	+1.8
	0.3nm,0.3s,baz=150,slow=14,SNR=8.9						
MKAR				Pg	Pg	23 42 33.3	-2.1
	0.6nm,0.3s,baz=148,slow=16,SNR=5.5						
MKAR				Sn	Sn	23 43 13.6	-0.4
	0.9nm,0.3s,baz=134,slow=16,SNR=4.8						
MKAR				Lg	Lg	23 43 35.0	
	2.4nm,0.3s,baz=147,slow=29,SNR=10						
TKM2	**Tokmak 2**	**7.50**	**276**	⇑Lg	Lg	23 44 53.0	
	2.4nm,0.9s						
KURBB	**Kurchatov Arra**	**9.49**	**331**	⇑Lg	Lg	23 45 59.0	
	1.0nm,0.7s						
KURK	**Kurchatov**	**9.54**	**331**	⇑Lg	Lg	23 46 00.9	
	2.0nm,0.7s						
ZALV	**Zalesovo Beam**	**11.44**	**357**	Pn	Pn	23 43 46.3	+0.8
	0.1nm,0.3s,baz=179,slow=14,SNR=2.3						
SONM	**Songino Array**	**15.46**	**63**	LR	LR	23 51 19.5	
	comp=Z,21nm,18.4s,baz=308,slow=40						
JNU	**Nakatsue**	**36.48**	**90**	LR	LR	00 04 20.7	
	comp=Z,20nm,18.9s,baz=234,slow=38						
WRA	**Warramunga Arr**	**76.60**	**134**	P	P	23 52 53.2	-0.2
	0.4nm,1.1s,baz=336,slow=5.4,SNR=3.6						

IDC 20 23:42:27.5±2.7, 5°.39N×94°.36E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/26, mbtmp3.6/5, Error ellipse: s-maj=146.7km s-min=22.6km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**42.55**	**348**	P	P	23 50 26.2	+1.2
	0.5nm,0.5s,baz=172,slow=9.9,SNR=5.2						
WRA	**Warramunga Arr**	**46.68**	**124**	P	P	23 50 56.6	-1.8
	0.7nm,1.1s,baz=302,slow=9.6,SNR=4.6						
ASAR	**Alice Springs**	**48.19**	**128**	P	P	23 51 11.5	+1.4
	0.1nm,0.3s,baz=301,slow=7.4,SNR=2.7						
ZALV	**Zalesovo Beam**	**49.03**	**353**	P	P	23 51 15.2	-0.9
	0.5nm,0.4s,baz=156,slow=3.9,SNR=3.3						
FINES	**FINESS Array B**	**75.00**	**332**	P	P	23 54 10.1	-0.5
	0.6nm,0.7s,baz=98,slow=8.6,SNR=4.5						

*TIF **20** 23:54:10.8, 43°.38N×46°.27E, h17km±5km*
*ISCJB **20** 23:54:13.2±0.7, 43°.37N±0°.04×46°.39E±0°.04, h20km±6km, Error ellipse: s-maj=6.8km s-min=4.5km az=1.3*
*CSEM **20** 23:54:13.7±0.3, 43°.26N×46°.30E, h20km, mb3.9, Error ellipse: s-maj=11.3km s-min=5.5km az=177.0*
*MOS **20** 23:54:13.7±1.2, 43°.15N×46°.23E, h16km, mb3.9/1, Error ellipse: s-maj=23.2km s-min=8.4km az=9.6*

ISC 20 23:54:12.0±1.3, 43°.25N±0°.04×46°.33E±0°.03, h5km±10km, n41, σ0§70/71, 4C-7D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRO	**Groznyy**	**0.43**	**279**	⇑*i*Pg	**Pg**	**23 54 20.1**	**-0.2**
GRO				*i* S	**Sg**	**23 54 26.8**	**+0.8**
GRO	**Groznyy**	**0.43**	**279**	*i* Pg	**Pg**	**23 54 20.1**	**-0.2**
GRO				*i* Sg	**Sg**	**23 54 26.8**	**+0.8**
MAK	**Makhachkala**	**0.91**	**108**	*e*Pg	**Pn**	**23 54 31.8**	**+0.4**
MAK				*e*		23 54 44.0	
MAK				pmax	pmax		
	comp=Z,57nm,0.3s						
MAK	**Makhachkala**	**0.91**	**108**	*e*Pg	**Pn**	**23 54 31.8**	**+0.4**
	comp=Z,57nm,0.3s						
MAK				*e*Sg	**Sn**	**23 54 44.0**	**-0.9**
SNJR	**Sundja**	**1.13**	**261**	⇓*i*PG	**Pg**	**23 54 33.9**	**+0.2**
SNJR				*e*S	**Sn**	**23 54 50.2**	**-0.3**
SNJR	**Sundja**	**1.13**	**261**	*i* Pg	**Pg**	**23 54 33.9**	**+0.2**
SNJR				*e*Sg	**Sn**	**23 54 50.2**	**-0.3**
VLKR	**Vladikavkaz**	**1.23**	**261**	*e*PG	**Pg**	**23 54 35.3**	**-0.3**
VLKR				*e*S	**Sn**	**23 54 52.9**	**-0.1**
VLKR	**Vladikavkaz**	**1.23**	**261**	*e*Pg	**Pg**	**23 54 35.3**	**-0.3**
VLKR				*e*Sg	**Sn**	**23 54 52.9**	**-0.1**
TRKR	**Terskaya**	**1.26**	**292**	⇑*i*PG	**Pn**	**23 54 36.1**	**-0.2**
TRKR				*i* S	**Sn**	**23 54 54.5**	**+0.9**
TRKR	**Terskaya**	**1.26**	**292**	*i* Pg	**Pn**	**23 54 36.1**	**-0.2**
TRKR				*i* Sg	**Sn**	**23 54 54.5**	**+0.9**
BTKR	**Batakoyurt**	**1.31**	**276**	⇓*i*PG	**Pn**	**23 54 37.0**	**-0.1**
BTKR				*i* S	**Sn**	**23 54 56.1**	**+1.1**
BTKR	**Batakoyurt**	**1.31**	**276**	*i* Pg	**Pn**	**23 54 37.0**	**-0.1**
BTKR				*i* Sg	**Sn**	**23 54 56.1**	**+1.1**
ARNR	**Ardon**	**1.50**	**268**	⇓*i*PG	**Pn**	**23 54 39.5**	**-0.2**
ARNR				*e*S	**Sg**	**23 55 00.8**	**+0.5**
ARNR	**Ardon**	**1.50**	**268**	*i* Pg	**Pn**	**23 54 39.5**	**-0.2**
ARNR				*e*Sg	**Sg**	**23 55 00.8**	**+0.5**
LACR	**Lac**	**1.55**	**255**	⇓*i*PG	**Pn**	**23 54 39.1**	**-1.4**
LACR				*i* S	**Sn**	**23 55 00.4**	**-0.7**
LACR	**Lac**	**1.55**	**255**	*i* Pg	**Pn**	**23 54 39.1**	**-1.4**
LACR				*i* Sg	**Sn**	**23 55 00.4**	**-0.7**
PRTR	**Priterechnaya**	**1.57**	**289**	*e*PG	**Pb**	**23 54 41.3**	**-0.3**
PRTR				*e*S	**Sg**	**23 55 03.3**	**+0.7**
PRTR	**Priterechnaya**	**1.57**	**289**	*e*Pg	**Pb**	**23 54 41.3**	**-0.3**
PRTR				*e*Sg	**Sg**	**23 55 03.3**	**+0.7**
KORR	**Kora**	**1.67**	**265**	⇓*i*PG	**Pn**	**23 54 41.5**	**-0.5**
KORR				*e*S	**Sb**	**23 55 04.6**	**+0.1**
KORR	**Kora**	**1.67**	**265**	*i* Pg	**Pn**	**23 54 41.5**	**-0.5**
KORR				*e*Sg	**Sb**	**23 55 04.6**	**+0.1**
DUS	**Dusheti**	**1.67**	**227**	P	**Pb**	**23 54 42.9**	**-0.5**
DUS				S	**Sb**	**23 55 05.3**	**+0.5**
LSNR	**Lesken**	**1.84**	**271**	*e*PN	**Pn**	**23 54 45.0**	**+0.7**
LSNR				*e*S	**Sb**	**23 55 09.8**	**+0.3**
LSNR	**Lesken**	**1.84**	**271**	*e*Pn	**Pn**	**23 54 45.0**	**+0.7**
LSNR				*e*Sg	**Sb**	**23 55 09.8**	**+0.3**
ZEI	**Tsey**	**1.85**	**256**	⇑*i*PN	**Pn**	**23 54 44.1**	**-0.6**
ZEI				*i* S	**Sn**	**23 55 08.9**	**+0.3**
ZEI	**Tsey**	**1.85**	**256**	*i* Pn	**Pn**	**23 54 44.1**	**-0.6**
ZEI				*i* Sg	**Sn**	**23 55 08.9**	**+0.3**
SEAG	**Tbilisi Sea**	**1.87**	**218**	P	**Pb**	**23 54 46.4**	**-0.2**
SEAG				S	**Sg**	**23 55 12.3**	**+0.2**
TBLG	**Delisi**	**1.93**	**218**	P	**Pn**	**23 54 46.4**	**+0.9**
TBLG				S	**Sb**	**23 55 12.7**	**+0.7**
TBLG	**Delisi**	**1.93**	**218**	P	**Pn**	**23 54 46.4**	**+0.9**
TBLG				S	**Sb**	**23 55 12.7**	**+0.7**
DGRG	**David-gareji**	**1.94**	**202**	P	**Pb**	**23 54 47.4**	**-0.4**
DGRG				S	**Sb**	**23 55 11.6**	**-0.8**
DIGR	**Digorskoe uzhe**	**2.05**	**261**	*e*PN	**Pn**	**23 54 47.3**	**-0.1**
DIGR	**Digorskoe uzhe**	**2.05**	**261**	*e*Pn	**Pn**	**23 54 47.3**	**-0.1**
GOR	**Gori**	**2.07**	**233**	P	**Pb**	**23 54 48.9**	**-1.2**
GOR				S	**Sn**	**23 55 15.0**	**+1.2**
ONI	**Oni**	**2.22**	**254**	P	**Pn**	**23 54 49.7**	**+0.2**
ONI				S	**Sb**	**23 55 20.3**	**-0.2**
KZR	**Kazreti**	**2.35**	**218**	P	**Pb**	**23 54 54.0**	**-0.9**
AKH	**Akhalkalaki**	**2.80**	**230**	P	**Pb**	**23 55 00.5**	**-2.1**
AKH				S	**Sb**	**23 55 36.9**	**-0.3**
GOF	**Gofitskoye**	**2.98**	**308**	*e*PN	**Pb**	**23 55 03.6**	**-2.0**
CHVG	**Ch'k'valeri**	**3.16**	**262**	P	Sn	23 55 32.1	-8.6
AKTO	**Aktyubinsk**	**10.74**	**44**	⇑Pn	**Pn**	**23 56 46.9**	**+0.4**
	comp=Z,0.2nm,0.8s						
AKTO				⇓Sn	Sn	23 58 35.4	-12
	comp=Z,0.1nm,0.5s						
AKTO	**Aktyubinsk**	**10.74**	**44**	Pn	**Pn**	**23 56 46.9**	**+0.4**
	comp=Z,0.2nm,0.8s						
AB31	**Akbulak array**	**11.16**	**53**	Pn	**Pn**	**23 56 52.4**	**+0.2**
	comp=Z,0.1nm,0.2s,baz=248,slow=12,SNR=11						
AB31				⇓Sn	Sn	23 58 47.0	-10
	comp=Z,0.7nm,0.5s,baz=254,slow=25,SNR=6.1						
AB31	**Akbulak array**	**11.16**	**53**	Pn	**Pn**	**23 56 52.4**	**+0.2**
	comp=Z,0.1nm,0.2s,baz=248,SNR=11						

*ISCJB **21** 00:11:10.8±0.5, 28°.00N±0°.06×99°.69E±0°.06, h10km, mb3.7/9, MS2.8/2, Error ellipse: s-maj=10.6km s-min=5.5km az=34.9*
*IDC **21** 00:11:12.1±1.0, 28°.18N×99°.80E, h0km, mb3.6/9, mb1 3.8/10, mb1mx3.6/29, mbtmp3.6/10, ML3.9/1, MS2.9/2, Ms1 2.9/2, ms1mx2.3/34, Error ellipse: s-maj=34.0km s-min=17.0km az=75.0*
*BJI **21** 00:11:13.3, 28°.15N×99°.64E, h5km, ML3.6/7*

ISC 21 00:11:13.1±0.7, 28°.1N±0°.1×99°.8E±0°.1, h10km, n22, σ1§25/20, mb3.8/9, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**4.01**	**138**	Pg	**Pg**	**00 12 28.1**	**-1.8**
KMI				Sg	**Sg**	**00 13 22.4**	**+0.5**
KMI				smax	smax		
	comp=N,32nm,1.2s						
KMI				smax	smax		
	comp=E,37nm,1.2s						
CMAR	**Chiang Mai Arr**	**9.67**	**185**	Pn	**Pn**	**00 13 33.6**	**+1.3**
	comp=E,0.3nm,0.3s,baz=355,slow=14,SNR=8.8						
CMAR				Pg		00 14 10.3	
	comp=E,0.2nm,0.3s,baz=355,slow=17,SNR=9.9						
CMAR				Lg	Lg	00 16 22.1	
	comp=E,0.4nm,0.3s,baz=2.1,slow=26,SNR=15						
TAPN	**Taplejung**	**10.72**	**269**	*e*P	**Pn**	**00 13 47.1**	**+0.1**
ODAN	**Odare**	**11.07**	**266**	*e*P	**Pn**	**00 13 52.4**	**+0.7**
RAMN	**Ramite**	**11.75**	**267**	*e*P	**Pn**	**00 14 00.9**	**-0.2**
GUN	**Gumba**	**12.28**	**272**	*e*P	**Pn**	**00 14 07.7**	**-0.7**
PKI	**Pulchoki**	**12.72**	**271**	*e*P	**Pn**	**00 14 12.6**	**-1.9**
PKIN	**Phulchoki**	**12.73**	**271**	*e*P	**Pn**	**00 14 13.4**	**-1.1**
PKIN				*e*S	Sn	00 16 29.5	-7.1
KKN	**Kakani**	**12.82**	**272**	*e*P	**Pn**	**00 14 13.8**	**-1.8**
DANN	**Dangsing**	**14.12**	**275**	*e*P	**Pn**	**00 14 30.4**	**-3.1**
	comp=E,11nm,0.5s						
PYUN	**Piuthan**	**14.81**	**274**	*e*P	Pn	00 14 39.3	-3.6
	comp=E,22nm,0.6s						
SONM	**Songino Array**	**20.33**	**13**	P	Pn	00 15 50.4	-1.2
	comp=E,0.6nm,0.8s,baz=198,slow=8.8,SNR=2.6						
MKAR	**Makanchi Array**	**23.13**	**328**	P	**P**	**00 16 20.0**	**+0.7**
	comp=E,2.6nm,1.0s,baz=135,slow=11,SNR=11						
AAK	**Ala-Archa**	**25.06**	**312**	P	**P**	**00 16 38.8**	**+1.0**
	comp=E,1.6nm,0.5s,baz=126,slow=11,SNR=6.5						
KSRS	**Korea Array**	**25.34**	**61**	LR	LR	00 27 23.7	
	comp=E,26nm,18.3s,baz=255,slow=38						
KURBB	**Kurchatov Arra**	**27.63**	**330**	P	**P**	**00 17 01.5**	**+0.8**
	comp=E,0.8nm,0.2s,baz=142,slow=9.2,SNR=3.7						
KURBB				LR	LR	00 28 58.7	
	comp=E,22nm,19.8s,baz=220,slow=39						
ZALV	**Zalesovo Beam**	**28.02**	**341**	P	**P**	**00 17 04.3**	**+0.1**
	comp=E,0.6nm,0.4s,baz=134,slow=8.3,SNR=4.2						
FINES	**FINESS Array B**	**57.96**	**327**	P	**P**	**00 21 05.8**	**+0.4**
	comp=E,0.6nm,0.7s,baz=114,slow=9.2,SNR=4.5						
WRA	**Warramunga Arr**	**58.33**	**141**	P	**P**	**00 21 08.9**	**+0.4**
	comp=E,1.4nm,0.9s,baz=329,slow=7.4,SNR=5.4						
GERES	**GERESS Array B**	**66.91**	**314**	P	**P**	**00 22 05.7**	**0.0**
	comp=E,0.5nm,0.8s,baz=54,slow=5.0,SNR=4.7						
ILAR	**Eielson Array**	**74.10**	**24**	P	**P**	**00 22 49.4**	**+0.3**
	comp=E,0.3nm,0.9s,baz=297,slow=6.0,SNR=5.2						
TORD	**Torodi Ar. Bea**	**90.85**	**285**	P	**P**	**00 24 17.2**	**-0.2**
	comp=E,0.4nm,0.8s,baz=76,slow=6.1,SNR=2.4						

IDC 21 00:24:28.3±1.9, 31°.12S×177°.71W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/19, mbtmp4.1/4, MS3.7/1, Ms1 3.7/1, ms1mx2.8/20, Error ellipse: s-maj=51.2km s-min=36.0km az=36.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.86**	**354**	LR	LR	00 25 28.0	
	comp=Z,2μm,19.5s,baz=240,slow=32						
STKA	**Stephens Creek**	**34.56**	**258**	P	P	00 31 19.2	+0.4
	1.5nm,0.6s,baz=90,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**43.32**	**268**	P	P	00 32 32.0	-0.3
	1.6nm,0.6s,baz=103,slow=7.6,SNR=22						
WRA	**Warramunga Arr**	**44.38**	**273**	P	P	00 32 40.5	-0.3
	1.9nm,0.4s,baz=114,slow=7.6,SNR=31						
QSPA	**South Pole Qui**	**59.00**	**180**	P	P	00 34 29.5	-0.1
	1.6nm,1.0s,baz=261,slow=3.0,SNR=5.9						
CFAA	**Coronel Fontan**	**88.61**	**126**	LR	LR	01 05 51.4	
	comp=Z,37nm,21.8s,baz=221,slow=28						
FINES	**FINESS Array B**	**145.90**	**340**	PKPbc	PKPdf	00 44 08.2	-0.1
	1.2nm,0.5s,baz=44,slow=4.6,SNR=12						

*IDC **21** 00:29:39.0±0.4, 15°.35S×173°.18W, h0km, mb4.7/24, mb1 4.9/25, mb1mx4.8/31, mbtmp4.7/25, ML4.8/1, MS4.1/17, Ms1 4.1/17, ms1mx4.0/20, Error ellipse: s-maj=16.3km s-min=10.5km az=122.0*
*NEIC **21** 00:29:41.5±3.6, 15°.29S×173°.24W, h16km±21km, mb5.1/85, Error ellipse: s-maj=7.4km s-min=3.9km az=144.0*
*MOS **21** 00:29:43.8±0.9, 15°.24S×172°.94W, h33km, mb5.2/33, MS4.5/4, Error ellipse: s-maj=13.9km s-min=7.9km az=62.2*
*ISCJB **21** 00:29:43.1±0.2, 15°.37S±0°.04×173°.22W±0°.04, h40km, mb5.0/124, MS4.3/26, Error ellipse: s-maj=7.4km s-min=4.4km az=140.8*
*BJI **21** 00:29:45.7, 15°.20S×173°.30W, h47km, mB5.1/17, mb5.0/23, Ms4.9/16, Ms7 4.8/14*
*GCMT **21** 00:29:51.5±0.2, 15°.32S×172°.83W, h62km±2km, MW5.1, Moment Tensor Solution. s36,c44; s72,c99; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.62±.22; M_{tt}3.64±.23; M_{pp}

13nm,0.8s,baz=36,slow=10,SNR=3.3
RPZ LR LR 00 46 04.8
comp=Z,365nm,21.2s,baz=8.3,slow=32
RKT Rikitea 36.80 108 *e*T T 01 15 28.0
8.5nm,0.3s
CTA Charters Tower 38.87 257 P **P** **00 37 04.7 -1.9**
CTA PcP **PcP** **00 39 17.7 +0.5**
CTA Charters Tower 38.87 257 P **P** **00 37 04.7 -1.9**
2.4nm,0.6s,baz=86,slow=9.6,SNR=3.5
CTA PcP **PcP** **00 39 17.7 +0.5**
2.6nm,0.6s,baz=96,slow=2.7,SNR=3.6
PMG Port Moresby 39.15 274 P **P** **00 37 08.4 -0.6**
PMG Port Moresby 39.15 274 P **P** **00 37 08.4 -0.6**
5.9nm,0.6s,baz=120,slow=6.6,SNR=4.8
KIP Kipapa 39.45 23⇓ *e*P **P** **00 37 12.3 +1.0**
KIP pmax pmax
comp=Z,97nm,1.2s
MTSU Mount Surprise 40.74 260 P **P** **00 37 21.6 -0.6**
baz=41,SNR=17
CMSA Cobar Meteorol 40.77 239 P **P** **00 37 21.2 -1.1**
baz=41,SNR=15
QLP Quilpie 41.14 247 P **P** **00 37 23.9 -1.5**
baz=41,SNR=6.1
COEN Coen 42.20 266 *e*P **P** **00 37 34.7 +0.5**
comp=Z,140nm,0.8s
COEN Coen 42.20 266 P **P** **00 37 35.3 +1.1**
baz=42,SNR=13
TOO Toolangi 42.67 231 P **P** **00 37 37.3 -0.4**
baz=42,SNR=8.0
STKA Stephens Creek 44.25 240 *e*P **P** **00 37 49.8 -0.8**
comp=Z,2.7nm,0.9s
STKA Stephens Creek 44.25 240 P **P** **00 37 49.8 -0.8**
comp=Z,11nm,0.8s,baz=77,slow=9.2,SNR=21
STKA LR LR 00 53 35.3
comp=Z,343nm,20.9s,baz=31,slow=32
STKA Stephens Creek 44.25 240 P **P** **00 37 49.9 -0.7**
baz=44,SNR=17
ARPS Mount Arapiles 45.20 233 P **P** **00 37 57.2 -0.8**
baz=45,SNR=5.2
BBOO Buckleboo 49.03 240 *e*P **P** **00 38 27.2 -0.8**
comp=Z,974nm,1.8s
BBOO Buckleboo 49.03 240 P **P** **00 38 27.0 -0.9**
baz=49,SNR=13
WRAB Tennant Creek 50.06 257 *e*P **P** **00 38 34.8 -1.2**
WRAB pmax pmax
comp=Z,13nm,0.9s
WRAB Tennant Creek 50.06 257 *e*P **P** **00 38 34.8 -1.2**
comp=Z,12nm,0.9s
WRAB Tennant Creek 50.06 257 P **P** **00 38 34.4 -1.6**
comp=Z,75nm,0.9s,SNR=7.7
WRA Warramunga Arr 50.07 257 P **P** **00 38 34.6 -1.5**
WRA PcP **PcP** **00 39 55.9 +0.4**
WRA Warramunga Arr 50.07 257 P **P** **00 38 34.6 -1.5**
comp=Z,8.6nm,0.8s,baz=91,slow=7.0,SNR=67
WRA PcP **PcP** **00 39 55.9 +0.4**
comp=Z,2.7nm,0.6s,baz=91,slow=3.9,SNR=5.4
AS31 Alice Springs 50.33 252 *e*P **P** **00 38 36.6 -1.5**
ASAR Alice Springs 50.33 252 P **P** **00 38 37.1 -1.0**
ASAR Alice Springs 50.33 252 P **P** **00 38 37.1 -1.0**
comp=Z,22nm,0.7s,baz=85,slow=8.7,SNR=118
ASAR LR LR 00 58 24.3
comp=Z,473nm,21.7s,baz=89,slow=34
SBA Scott Base 63.32 185 *e*P **P** **00 40 12.0 +2.8**
SBA pmax pmax
comp=Z,35nm,0.8s
SBA Scott Base 63.32 185 *e*P **P** **00 40 12.0 +2.8**
comp=Z,35nm,0.8s
VNDA Vanda 63.45 186 *e*P **P** **00 40 12.2 +2.2**
VNDA Vanda 63.45 186 P **P** **00 40 11.9 +1.8**
comp=Z,19nm,0.8s,baz=6.6,slow=6.5,SNR=92
VNDA LR LR 01 02 54.1
comp=Z,124nm,21.6s,baz=324,slow=31
MEEK Meekatharra 64.04 248 P **P** **00 40 13.8 -1.0**
baz=64,SNR=4.0
KLBR Kellerberrin 64.46 242 P **P** **00 40 16.9 -0.6**
baz=64,SNR=6.5
FX1 Attu Island--F 68.97 351 LR LR 01 04 09.4
comp=Z,352nm,21.5s,baz=206,slow=30
MJAR Matsushiro Arr 69.04 320 P **P** **00 40 48.5 +2.0**
MJAR Matsushiro Arr 69.04 320 P **P** **00 40 48.5 +2.0**
comp=Z,1.3nm,0.6s,baz=155,slow=6.5,SNR=4.7
CASY Casey 70.55 205 *e*P **P** **00 40 55.8 +0.5**
comp=Z,18nm,1.0s
BSC Santa Cruz Isl 70.73 45 ⇓P **P** **00 40 57.8 +0.8**
baz=71
PKM Peak Mountain 71.12 44 ⇑P **P** **00 41 00.0 +0.5**
baz=71
CIS Catalina Islan 71.25 46 ⇓P **P** **00 41 00.1 0.0**
baz=71
109C Camp Elliot, M 71.88 47 ⇑P **P** **00 41 03.9 0.0**
baz=72
ARVC Arvin 71.92 44 ⇓P **P** **00 41 04.3 +0.2**
baz=72
JNU Nakatsue 71.92 313 P **P** **00 41 04.4 +0.2**
JNU Nakatsue 71.92 313 P **P** **00 41 04.4 +0.2**
comp=Z,7.9nm,0.7s,baz=186,slow=1.1,SNR=4.0
VES Vestal, Richgr 72.16 44 ⇑P **P** **00 41 05.7 +0.3**
baz=72
MURC Murrieta 72.20 47 ⇑P **P** **00 41 05.4 -0.5**
baz=72
BFSC Mount Baldy Ra 72.23 46 ⇓P **P** **00 41 06.2 0.0**
baz=72
PET Petropavlovsk 72.30 343 *e*P P 00 41 11.6 +5.7
PET *e*S **S** **00 50 31.4 +5.6**
EDW2 Edwards Air Fo 72.35 45 ⇓P **P** **00 41 06.9 +0.1**
baz=72
MONP Monument Peak 72.37 48 ⇓P **P** **00 41 07.2 +0.1**
baz=72
CHGN Chignik 72.44 9 *e*P **P** **00 41 06.1 -0.6**
ISA Isabella 72.46 44 *e*P **P** **00 41 08.0 +0.6**
ISA pmax pmax
comp=Z,20nm,1.3s
ISA Isabella 72.46 44 *e*P **P** **00 41 08.0 +0.6**
comp=Z,20nm,1.3s
ISA Isabella 72.46 44 ⇑P **P** **00 41 07.7 +0.3**
baz=73
DVTC Desert V Tower 72.48 48 ⇓P **P** **00 41 07.8 +0.2**
baz=73
CMB Columbia Colle 72.58 41 *e*P **P** **00 41 08.5 +0.4**
CMB pmax pmax
comp=Z,44nm,2.1s
CMB Columbia Colle 72.58 41 *e*P **P** **00 41 08.5 +0.4**
comp=Z,44nm,2.1s
PETK Petropavlovsk- 72.65 342 P **P** **00 41 08.8 +0.8**
PETK Petropavlovsk- 72.65 342 P **P** **00 41 08.8 +0.8**
PETK Petropavlovsk- 72.65 342 P **P** **00 41 08.8 +0.8**
comp=Z,6.4nm,0.7s,baz=141,slow=9.3,SNR=7.1
OHCM Honcut 72.68 40 *e*P **P** **00 41 08.2 -0.3**
PFO Pinyon Flat Ob 72.73 47 P **P** **00 41 09.2 +0.1**
PFO Pinyon Flat Ob 72.73 47 P **P** **00 41 09.2 +0.1**
comp=Z,3.5nm,0.8s,baz=237,slow=4.4,SNR=5.6
PFO Pinyon Flat Ob 72.73 47 ⇑P **P** **00 41 09.3 +0.1**
baz=73
BBRC Big Bear Solar 72.75 46 ⇓P **P** **00 41 08.9 -0.5**
baz=73
WDC Whiskeytown Da 72.80 38 *e*P **P** **00 41 09.2 -0.1**
WDC pmax pmax
comp=Z,16nm,1.3s
WDC Whiskeytown Da 72.80 38 *e*P **P** **00 41 09.2 -0.1**
comp=Z,16nm,1.3s
SWSC Sam W. Stewart 72.84 48 ⇑P **P** **00 41 09.5 -0.2**
baz=73
LRMC Laurel Mountai 72.89 45 ⇑P **P** **00 41 10.4 +0.3**
baz=73
RRX Edison Barstow 73.03 46 ⇓P **P** **00 41 10.8 +0.1**
baz=73
CWC Cottonwood Cre 73.16 44 ⇓P **P** **00 41 11.7 0.0**
baz=73
BELC Belle Mtn. Jos 73.26 47 ⇓P **P** **00 41 12.3 0.0**
baz=73
MLAC Mammoth Lakes 73.34 42 ⇓P **P** **00 41 13.5 +0.7**
baz=74
MPMC Manual Prospec 73.35 44 ⇓P **P** **00 41 13.1 +0.2**
baz=74
MTUM Tungsten Hills 73.36 43 *e*P **P** **00 41 13.7 +0.8**
GSC Goldstone 73.40 45 *e*P **P** **00 41 13.0 0.0**
GSC pmax pmax
comp=Z,20nm,1.3s
GSC Goldstone 73.40 45 *e*P **P** **00 41 13.0 0.0**
comp=Z,20nm,1.3s
GSC Goldstone 73.40 45 ⇓P **P** **00 41 12.9 0.0**
baz=74
TIN Tinemaha 73.41 43 ⇓P **P** **00 41 13.7 +0.6**
baz=74
YBH Yreka Blue Hor 73.43 37 *e*P **P** **00 41 13.3 +0.3**
comp=Z,14nm,1.0s
BC3 Big Chuckawall 73.46 47 ⇑P **P** **00 41 13.7 +0.3**
baz=74
HEC Hector,Ludlow 73.47 46 ⇑P **P** **00 41 13.2 -0.2**
baz=74
GLA Glamis 73.59 48 *e*P **P** **00 41 14.1 0.0**
GLA pmax pmax
comp=Z,8.0nm,1.0s
GLA Glamis 73.59 48 *e*P **P** **00 41 14.1 0.0**
comp=Z,8.4nm,1.0s
GLA Glamis 73.59 48 ⇑P **P** **00 41 14.5 +0.3**
baz=74
BEKR Beckworth 73.69 40 *e*P **P** **00 41 14.3 -0.5**
comp=Z,15nm,1.6s
WCN Washoe City 73.73 40 *e*P **P** **00 41 15.3 +0.3**
WCN pmax pmax
comp=Z,7.0nm,1.1s
WCN Washoe City 73.73 40 *e*P **P** **00 41 15.2 +0.3**
comp=Z,6.7nm,1.1s
HUMO Hull Mountain 73.84 36 *e*P **P** **00 41 16.6 +1.2**
comp=Z,25nm,1.3s
GMRC Granite Mounta 73.91 46 ⇑P **P** **00 41 16.1 0.0**
baz=74
IRM Iron Mountain 73.94 47 ⇑P **P** **00 41 16.3 +0.2**
baz=74
GRAC Grapevine Rang 73.95 44 ⇓P **P** **00 41 16.7 +0.5**
baz=74
FURC Furnace Creek, 74.00 44 ⇑P **P** **00 41 16.7 +0.4**
baz=74
TUQ Turquoise Moun 74.08 46 ⇑P **P** **00 41 17.2 +0.1**
baz=74
SHOC Shoshone 74.08 45 ⇓P **P** **00 41 16.9 0.0**
baz=74
NVAR Mina Arroy Bea 74.14 42 P **P** **00 41 17.9 +0.4**
NVAR Mina Arroy Bea 74.14 42 P **P** **00 41 17.9 +0.4**
comp=Z,4.6nm,0.7s,baz=229,slow=9.4,SNR=18
OHAK Old Harbor 74.17 11 *e*P **P** **00 41 17.1 +0.3**
comp=Z,30nm,1.0s
Y12C Blythe 74.17 48 ⇑P **P** **00 41 17.4 -0.1**
baz=74
113A Mohawk Valley, 74.22 49 ⇓P **P** **00 41 17.7 0.0**
baz=74
NV11 Mina Array Sit 74.24 42 *e*P **P** **00 41 17.1 -0.8**
LDFC Landfair 74.45 46 *e*P **P** **00 41 19.9 +0.7**
comp=Z,41nm,1.3s
214A Organ Pipe Nat 74.51 50 ⇓P **P** **00 41 19.7 +0.1**
baz=75
NEE2 Needles Airpor 74.63 47 ⇓P **P** **00 41 20.2 +0.1**
baz=75
QSPA South Pole Qui 74.70 180 *e*P **P** **00 41 21.4 +1.2**
comp=Z,55nm,1.0s
QSPA South Pole Qui 74.70 180 P **P** **00 41 21.4 +1.2**
comp=Z,48nm,0.9s,baz=46,slow=1.9,SNR=93
PDMCI Parker Dam,Lak 74.73 47 ⇓P **P** **00 41 20.7 +0.1**
baz=75
KDAK Kodiak Island 74.83 11 *e*P **P** **00 41 20.2 -0.5**
comp=Z,9.8nm,0.6s
KDAK Kodiak Island 74.83 11 P **P** **00 41 20.6 -0.1**
comp=Z,205nm,0.8s,SNR=5.9
MOD Modoc 74.95 38 *e*P **P** **00 41 22.7 +0.7**
comp=Z,36nm,1.0s
Z14A Wintersburg 75.11 49 ⇑P **P** **00 41 23.3 +0.4**
baz=75
IRO Indian Ridge 75.12 35 P **P** **00 41 23.1 +0.2**
BROR Big Rock Looko 75.18 35 P **P** **00 41 23.4 +0.4**
W13A Hualapai Mount 75.32 47 ⇓P **P** **00 41 24.4 0.0**
baz=76
Y14A Wickenburg 75.36 48 ⇓P **P** **00 41 24.5 +0.1**
baz=76
R11A Troy Canyon, C 75.87 43 ⇓P **P** **00 41 27.5 0.0**
baz=76
BMN Battle Mountai 75.97 41 *e*P **P** **00 41 28.6 +0.7**
BMN pmax pmax
comp=Z,9.0nm,0.8s
BMN Battle Mountai 75.97 41 *e*P **P** **00 41 28.6 +0.7**
comp=Z,8.9nm,0.8s
TUC Tucson 76.19 51 *e*P **P** **00 41 29.5 +0.3**
TUC pmax pmax
comp=Z,3.0nm,1.0s
TUC Tucson 76.19 51 *e*P **P** **00 41 29.5 +0.3**
comp=Z,3.5nm,1.0s
WVOR Wild Horse Val 76.26 38 *e*P **P** **00 41 29.4 0.0**
WVOR pmax pmax
comp=Z,54nm,1.6s
WVOR Wild Horse Val 76.26 38 *e*P **P** **00 41 29.4 0.0**
comp=Z,54nm,1.6s
KSRS Korea Array 76.28 315 P **P** **00 41 30.3 +0.8**
comp=Z,2.9nm,0.9s,baz=129,slow=5.8,SNR=7.4
KSAR Wonju Array Be 76.30 315 P **P** **00 41 30.3 +0.7**
FL2 Flat Top 2 76.46 34 P **P** **00 41 31.3 +0.8**
TDL Tradedollar La 76.63 34 P **P** **00 41 32.1 +0.7**
X16A Lo Mia Camp, P 76.72 48 ⇓P **P** **00 41 32.9 +0.6**
baz=77
319A Douglas 76.89 52 ⇓P **P** **00 41 33.7 +0.5**
baz=77
CCUT Cedar City 76.94 45 *e*P **P** **00 41 34.6 +1.0**
comp=Z,27nm,1.5s
ARUT Antelope Range 77.01 45 *e*P **P** **00 41 33.9 0.0**
ARUT pmax pmax
comp=Z,12nm,1.1s
ARUT Antelope Range 77.01 45 *e*P **P** **00 41 33.9 0.0**
comp=Z,12nm,1.1s
LON Longmire 77.10 33 *e*P **P** **00 41 33.8 -0.2**
LON pmax pmax
comp=Z,34nm,1.8s
LON Longmire 77.10 33 *e*P **P** **00 41 33.8 -0.2**
comp=Z,34nm,1.8s
U15A North Rim 77.11 46 ⇓P **P** **00 41 35.3 +0.7**
baz=77
WPW White Pass 77.21 34 P **P** **00 41 35.3 +0.6**
WUAZ Wupatki 77.30 47 *e*P **P** **00 41 35.2 -0.3**
comp=Z,30nm,1.4s
WUAZ Wupatki 77.30 47 ⇑P **P** **00 41 36.1 +0.5**
baz=78
RSO Redoubt South 77.32 10 *e*P **P** **00 41 34.5 -0.5**
JBO Jordan Butte 77.38 35 P **P** **00 41 35.9 +0.4**
ELK Elko 77.40 41 *e*P **P** **00 41 36.2 +0.1**
320A Kipp Ranch, An 77.44 52 ⇑P **P** **00 41 37.2 +0.8**
baz=78
220A Playas Peak, P 77.70 52 ⇓P **P** **00 41 38.5 +0.7**
baz=78
X18A Snowflake 77.85 49 ⇓P **P** **00 41 39.1 +0.4**
baz=78
120A U Bar Ranch, L 77.91 51 ⇓P **P** **00 41 39.8 +0.8**
baz=78
HAWA Hanford 78.11 35 *e*P **P** **00 41 40.3 +0.7**
comp=Z,47nm,1.3s
SPU Mount Spurr 78.11 10 *e*P **P** **00 41 38.7 -0.6**
Z20A Nine Sixteen R 78.20 51 ⇑P **P** **00 41 41.5 +0.9**
baz=78
MVU Marysvale 78.21 44 *e*P **P** **00 41 41.5 +0.9**
comp=Z,18nm,1.0s
MSU Marysvale 78.24 44 *e*P **P** **00 41 41.6 +0.8**
MSU Marysvale 78.24 44 *e*P **P** **00 41 41.6 +0.8**
W18A Petrified Fore 78.28 48 ⇓P **P** **00 41 41.4 +0.4**
baz=78
221A Mesquite Ranch 78.32 52 ⇓P **P** **00 41 42.0 +0.7**
baz=78
HABR Khabarovsk 78.41 328 *e*P **P** **00 41 38.5 -2.6**
HABR *e* 00 41 48.0
HABR *e**SP sP 00 41 53.1 -5.5
HABR *e*S **S** **00 51 29.9 -3.9**
HABR 00 51 55.1
HABR *e*SSS SSS 00 59 56.9
HABR pmax pmax
comp=Z,28nm,0.9s
HABR pmax pmax
comp=N,33nm,1.0s
HABR pmax pmax
comp=E,22nm,0.9s
ETW Entiat 78.42 33 P **P** **00 41 41.6 +0.2**
BMO Blue Mountains 78.45 37 *e*P **P** **00 41 41.1 -0.5**
comp=E,32nm,1.4s
MFID Camas Ranch 78.51 39 *e*P **P** **00 41 42.5 +0.5**
comp=E,19nm,1.0s
MFID Camas Ranch 78.51 39 ⇓P **P** **00 41 42.0 0.0**
baz=79
121A Cookes Peak, D 78.54 52 ⇑P **P** **00 41 43.2 +0.7**
baz=79,SNR=13
DUG Dugway 78.67 43 *e*P **P** **00 41 43.2 +0.1**
DUG pmax pmax
comp=Z,27nm,1.4s
DUG Dugway 78.67 43 *e*P **P** **00 41 43.2 +0.1**
comp=Z,27nm,1.4s
DUG Dugway 78.67 43 ⇑P **P** **00 41 43.1 +0.1**
baz=79
Y20A Horse Springs, 78.72 50 ⇑P **P** **00 41 44.4 +0.9**
baz=79
222A Williams Famil 78.87 52 ⇑P **P** **00 41 44.7 +0.4**
baz=79
X20A Quemado 78.92 49 ⇑P **P** **00 41 45.5 +0.8**
baz=79
Z21A St. Cloud Mine 78.97 51 ⇓P **P** **00 41 45.9 +1.0**
baz=79,SNR=18
PMR Palmer 79.03 11 *e*P **P** **00 41 44.0 -0.2**
PMR pmax pmax
comp=Z,45nm,1.4s
PMR Palmer 79.03 11 *e*P **P** **00 41 44.0 -0.2**
comp=Z,45nm,1.4s
MDJ Mudanjiang 79.12 322 P **P** **00 41 46.3 +1.1**
MDJ pP **pP** **00 41 58.3 +0.5**
MDJ sP **sP** **00 42 03.1 +0.5**
MDJ PP **PP** **00 44 47.3 +2.2**
MDJ S **S** **00 51 43.3 +1.8**
MDJ sS **ScS** **00 52 03.8 -0.5**
MDJ SS **SS** **00 56 47.9 -0.8**
MDJ pmax pmax
comp=Z,4.0nm,0.6s
MDJ pmax pmax
comp=Z,53nm,4.8s
MDJ LR LR
comp=N,86nm,24.7s
MDJ LR LR
comp=E,96nm,24.3s
MDJ LR LR
comp=Z,160nm,25.7s
Q16A Castle Valley 79.12 45 ⇓P **P** **00 41 46.4 +0.8**
baz=79
I12A Atlanta 79.14 39 ⇓P **P** **00 41 46.0 +0.5**
baz=79
OD2 Odessa Site #2 79.16 34 P **P** **00 41 45.5 +0.1**
W20A Ramah 79.19 49 ⇓P **P** **00 41 47.0 +0.9**
baz=79
122A Conniff Cattle 79.21 52 ⇓P **P** **00 41 47.1 +1.0**
baz=79
Y21A Point of Rocks 79.28 50 ⇑P **P** **00 41 47.5 +0.9**
baz=79,SNR=11
DIV Divide 79.30 13 *e*P **P** **00 41 46.0 +0.2**
comp=Z,32nm,0.9s
S18A Hurst Farm, Bl 79.33 46 ⇓P **P** **00 41 46.9 +0.1**
baz=80
223A Chaparral, Ant 79.35 53 ⇓P **P** **00 41 47.3 +0.4**
baz=80
MPU Maple Canyon 79.36 43 *e*P **P** **00 41 47.7 +0.9**
comp=Z,26nm,1.4s
SML Sawmill 79.38 12 *e*P **P** **00 41 46.8 +0.5**
SML pmax pmax
comp=Z,8.0nm,1.5s
SML Sawmill 79.38 12 *e*P **P** **00 41 46.8 +0.5**
comp=Z,8.5nm,1.5s
X21A Alamocita Cree 79.40 50 ⇓P **P** **00 41 47.9 +0.7**
baz=80,SNR=13
HLID Hailey 79.45 39 *e*P **P** **00 41 47.7 +0.5**
comp=Z,24nm,0.9s
HLID Hailey 79.45 39 ⇑P **P** **00 41 47.8 +0.5**
baz=80
Z22A Elephant Butte 79.48 51 ⇓P **P** **00 41 48.3 +0.7**
baz=80,SNR=5.0
J13A Cove Ranch, Pi 79.51 39 ⇑P **P** **00 41 48.0 +0.5**
baz=80
V20A Brimhall 79.52 48 ⇑P **P** **00 41 48.2 +0.3**
baz=80
HVU Hansel Valley 79.52 41 *e*P **P** **00 41 48.2 +0.6**
HVU pmax pmax
comp=Z,30nm,1.3s
HVU Hansel Valley 79.52 41 *e*P **P** **00 41 48.2 +0.6**
comp=Z,30nm,1.3s
SRU San Rafael 79.65 45 ⇓P **P** **00 41 48.9 +0.4**
baz=80
P17A Butcher Ranch, 79.69 44 ⇑P **P** **00 41 49.2 +0.6**
baz=80
PPLA Purkeypile 79.70 10 *e*P **P** **00 41 47.1 -1.0**
comp=Z,8.8nm,1.0s
H12A Diamond D Ranc 79.72 38 ⇓P **P** **00 41 48.5 -0.2**
baz=80,SNR=12
123A Bell Site, Whi 79.74 52 ⇑P **P** **00 41 49.3 +0.3**
baz=80
U20A Newcomb 79.75 48 ⇓P **P** **00 41 49.5 +0.5**
baz=80
G12A Big Creek, Yel 79.77 38 ⇑P **P** **00 41 49.0 +0.1**
baz=80,SNR=56
JLU Jordanelle 79.78 43 *e*P **P** **00 41 49.7 +0.5**
comp=Z,28nm,1.4s
Y22A Socorro 79.78 51 ⇓P **P** **00 41 49.9 +0.7**
baz=80,SNR=9.1
W21A San Fidel 79.80 49 ⇓P **P** **00 41 50.0 +0.6**
baz=80
DAU Daniels Canyon 79.81 43 *e*P **P** **00 41 50.1 +0.7**
DAU Daniels Canyon 79.81 43 *e*P **P** **00 41 50.1 +0.7**
I13A Wildhorse Cree 79.82 39 ⇑P **P** **00 41 49.5 +0.2**
baz=80,SNR=14
324A Moseley Ranch, 79.83 53 ⇓P **P** **00 41 49.6 0.0**
baz=80,SNR=13
LAZ Ladron 79.86 50 *e*P **P** **00 41 50.1 +0.4**
comp=Z,14nm,1.6s
J14A Carey 79.87 40 ⇓P **P** **00 41 50.3 +0.8**
baz=80
Y22D IRIS PASSCAL I 79.87 51 ⇑P **P** **00 41 50.3 +0.6**
baz=80
LENM Lemitar 79.88 50 *e*P **P** **00 41 50.7 +1.0**
425A Indio Mountain 79.95 54 ⇑P **P** **00 41 50.5 +0.3**
baz=80,SNR=17
X22A Bernardo 80.00 50 ⇓P **P** **00 41 51.5 +1.0**
baz=80
MNTX Cornudas Mount 80.02 53 *e*P **P** **00 41 50.2 -0.2**
comp=Z,22nm,1.4s
Z23A Rita Site, Whi 80.04 52 ⇓P **P** **00 41 51.1 +0.5**
baz=80
224A Cornudas Mount 80.07 53 ⇑P **P** **00 41 51.4 +0.5**
baz=80,SNR=13
H13A Challis 80.09 38 ⇓P **P** **00 41 50.9 +0.2**
baz=80,SNR=26
P18A Preston Nutter 80.09 44 ⇓P **P** **00 41 51.3 +0.3**
baz=80
626A Big Bend Ranch 80.12 56 ⇓P **P** **00 41 51.4 +0.4**
baz=80,SNR=12
BNM Barren Site 80.13 51 *e*P **P** **00 41 51.0 -0.2**
comp=Z,11nm,1.1s
F12A Elk City 80.16 37 ⇑P **P** **00 41 51.0 0.0**
baz=80,SNR=54
LPM Los Pinos Moun 80.19 50 *e*P **P** **00 41 52.3 +0.8**
325A Bean Ranch, Si 80.20 54 ⇓P **P** **00 41 51.6 +0.1**
baz=80,SNR=19
HWUT Hardware Ranch 80.21 42 *e*P **P** **00 41 50.9 -0.5**
comp=Z,14nm,1.3s
I14A Mackay 80.23 39 ⇑P **P** **00 41 51.9 +0.4**
baz=80,SNR=7.4
NJ2 Nanjing 80.31 307 *e*P **P** **00 41 52.3 +0.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
W22A Albuquerque 80.36 50 ⇓P **P** **00 41 53.3 +0.9**
baz=80
526A Mary Lane Ranc 80.36 55 ⇑P **P** **00 41 52.7 +0.3**
baz=80,SNR=19
124A Stringfield Ra 80.39 52 ⇑P **P** **00 41 53.1 +0.4**
baz=80,SNR=8.4
U21A Nageezi 80.39 48 ⇑P **P** **00 41 53.3 +0.7**
baz=80,SNR=69
G13A Cobalt 80.39 38 ⇓P **P** **00 41 52.3 0.0**
baz=81,SNR=15
TXAR Lajitas Array 80.40 56 P **P** **00 41 53.2 +0.6**
TXAR Lajitas Array 80.40 56 P **P** **00 41 53.2 +0.6**
comp=Z,10nm,1.1s,baz=219,slow=5.8,SNR=49
PV04 Paradox Valley 80.42 46 *e*P **P** **00 41 53.5 +0.9**
Y23A Lovelace Mesa, 80.46 51 ⇑P **P** **00 41 53.1 +0.2**
baz=81,SNR=8.1
PV01 Paradox Valley 80.53 46 *e*P **P** **00 41 52.8 -0.5**
comp=Z,2μm,0.9s
S20A Disappointment 80.53 47 ⇓P **P** **00 41 53.8 +0.4**
baz=81,SNR=19
TRF Thorofare Moun 80.54 10 *e*P **P** **00 41 51.2 -1.4**
comp=Z,19nm,1.0s
NEW Newport 80.54 34 *e*P **P** **00 41 52.7 -0.1**
comp=Z,8.2nm,0.8s
NEW Newport 80.54 34 ⇓P **P** **00 41 52.3 -0.5**
baz=81,SNR=8.5
ANMO Albuquerque 80.60 50 *e*P **P** **00 41 54.2 +0.5**
comp=Z,24nm,1.3s
225A Deer Hill, Car 80.62 53 ⇓P **P** **00 41 54.3 +0.5**
baz=81,SNR=8.2
X23A Hourglass Bar 80.64 50 ⇑P **P** **00 41 54.2 +0.3**
baz=81
426A McDonald Obser 80.65 55 ⇑P **P** **00 41 54.3 +0.3**
baz=81,SNR=28
H14A Leadore 80.65 39 ⇓P **P** **00 41 54.2 +0.4**
baz=81,SNR=25

627A Terlingua Ranc 80.67 56 ⇓P P 00 41 54.5 +0.5
baz=81,SNR=29
R20A Redvale 80.69 46 ⇓P P 00 41 54.4 +0.3
baz=81,SNR=8.1
V22A San Miguel Ran 80.70 49 ⇓P P 00 41 54.8 +0.5
baz=81
F13A Darby 80.71 37 ⇓P P 00 41 53.7 -0.3
baz=81,SNR=16
Z24A Sheeppen Canyo 80.72 52 ⇓P P 00 41 54.7 +0.3
baz=81,SNR=7.8
M17A Scullys Gap (B 80.73 42 ⇑P P 00 41 53.8 -0.4
baz=81
T21A Navajo Lake 80.73 48 ⇑P P 00 41 55.0 +0.7
baz=81,SNR=7.9
TNA Tin City 80.76 2 eP P 00 41 52.8 -0.7
comp=Z,14nm,1.1s
TNA ePP PP 00 44 57.7 -0.6
527A Woodward Ranch 80.77 55 ⇑P P 00 41 54.6 0.0
baz=81,SNR=18
C11A Tepee Creek (N 80.77 35 ⇓P P 00 41 54.3 +0.1
baz=81
D12A Red Ives Fores 80.83 36 ⇓P P 00 41 54.0 -0.5
baz=81,SNR=17
S21A Coal Bank Pass 80.86 47 ⇑P P 00 41 55.8 +0.6
baz=81,SNR=14
I15A Monteview 80.86 40 ⇓P P 00 41 55.5 +0.7
baz=81
W23A Werner Place, 80.92 50 ⇓P P 00 41 55.8 +0.4
baz=81,SNR=6.6
Y24A Capitan 80.92 51 ⇑P P 00 41 55.8 +0.4
baz=81,SNR=17
G14A Jackson 80.93 38 ⇑P P 00 41 55.7 +0.5
baz=81
U22A Llaves 80.94 48 ⇓P P 00 41 56.0 +0.5
baz=81
326A Caldwell Ranch 80.95 54 ⇓P P 00 41 55.5 0.0
baz=81
P19A Cripple Cowboy 80.95 45 ⇑P P 00 41 55.9 +0.4
baz=81
125A Gardner Draw, 80.98 53 ⇓P P 00 41 56.0 +0.3
baz=81,SNR=9.0
PAX Paxson 81.01 12 eP P 00 41 48.7 -6.4
PAX pmax pmax
comp=Z,26nm,1.5s
PAX Paxson 81.01 12 eP P 00 41 48.7 -6.4
comp=Z,26nm,1.5s
GDL2 Guadalupe Moun 81.02 53 eP P 00 41 56.5 +0.6
MCK McKinley 81.03 11 eP P 00 41 54.8 -0.3
MCK pmax pmax
comp=Z,36nm,1.1s
MCK McKinley 81.03 11 eP P 00 41 54.8 -0.3
comp=Z,36nm,1.1s
MCMT McKenzie Canyo 81.08 39 eP P 00 41 56.3 +0.2
comp=Z,16nm,1.1s
628A Black Gap, Mar 81.09 56 ⇓P P 00 41 56.6 +0.4
baz=81,SNR=13
H15A Lima 81.09 39 ⇑P P 00 41 56.6 +0.5
baz=81,SNR=25
M18A Lyman 81.09 43 ⇑P P 00 41 56.0 -0.2
baz=81,SNR=6.3
Q20A Ridgley Place, 81.10 46 ⇓P P 00 41 56.6 +0.3
baz=81,SNR=11
226B Tecolote Peak, 81.12 53 ⇑P P 00 41 56.7 +0.4
baz=81,SNR=25
C12B Naegeli Ranch, 81.13 35 ⇑P P 00 41 55.9 -0.1
baz=81
V23A Ortiz Mt. (NFS 81.15 49 ⇓P P 00 41 57.7 +1.1
baz=81,SNR=9.7
E13A Victor 81.16 37 ⇑P P 00 41 55.8 -0.5
baz=81,SNR=11
O19A Miners Draw (B 81.17 44 ⇑P P 00 41 56.5 -0.1
baz=81,SNR=5.5
CN2 Changchun 81.19 320 eP P 00 41 58.8 +2.5
CN2 ePP pP 00 42 09.3 +0.3
CN2 ePP PP 00 45 05.9 +3.6
CN2 pmax pmax
comp=Z,10.0nm,0.9s
Z25A Roswell 81.19 52 ⇑P P 00 41 57.3 +0.5
baz=81,SNR=9.1
T22A Edith 81.19 48 ⇓P P 00 41 57.2 +0.3
baz=81,SNR=10.0
X24A Lazy VL Ranch, 81.19 51 ⇓P P 00 41 57.0 +0.2
baz=81
427A Hayter Ranch, 81.22 55 ⇑P P 00 41 57.4 +0.4
baz=81,SNR=14
RRI2 Red Ridge 81.25 41 eP P 00 41 57.8 +0.8
comp=Z,31nm,1.1s
F14A Wisdom 81.29 38 ⇓P P 00 41 57.3 +0.2
baz=82
P20A De Beque 81.29 45 ⇑P P 00 41 57.5 +0.2
baz=82,SNR=14
R21A Cimarron 81.35 46 ⇑P P 00 41 58.4 +0.7
baz=82,SNR=9.7
D13A Huson 81.36 36 ⇓P P 00 41 56.6 -0.7
baz=82,SNR=50
U23A El Rito 81.40 49 ⇑P P 00 41 58.6 +0.6
baz=82,SNR=11
I16A Newdale 81.42 40 ⇓P P 00 41 58.6 +0.8
baz=82
528A Cox Ranch, San 81.43 56 ⇑P P 00 41 58.5 +0.4
baz=82,SNR=17
DCID1 Drake Creek 81.46 40 eP P 00 41 57.9 -0.2
comp=Z,39nm,1.2s
126A Clayton Basin, 81.46 53 ⇑P P 00 41 58.2 0.0
baz=82,SNR=8.1
G15A Dillon 81.47 39 ⇑P P 00 41 58.4 +0.3
baz=82,SNR=24
Y25A Mesa, Roswell 81.48 51 ⇑P P 00 41 58.5 +0.2
baz=82,SNR=15
W24A Lazy 6 Ranch, 81.49 50 ⇓P P 00 41 58.4 0.0
baz=82,SNR=18
B12A Libby 81.50 35 ⇓P P 00 41 58.1 +0.2
baz=82
MSO Missoula 81.51 37 eP P 00 41 57.6 -0.6
comp=Z,19nm,1.1s
MSO Missoula 81.51 37 ⇓P P 00 41 57.5 -0.6
baz=82,SNR=19
DLMT Dillon 81.51 38 eP P 00 41 58.4 +0.2
comp=Z,16nm,0.9s
E14A Clinton 81.55 37 ⇓P P 00 41 58.3 -0.1
baz=82,SNR=39
Q21A Lamborn Mesa, 81.55 46 ⇑P P 00 41 59.2 +0.5
baz=82,SNR=15
TPAW Teton Pass 81.56 41 eP P 00 41 59.0 +0.3
comp=Z,42nm,1.3s
DLBC Dease Lake 81.57 21 eP P 00 41 57.8 -0.4
S22A 4UR Ranch, Cre 81.57 47 ⇓P P 00 41 59.6 +0.7
baz=82,SNR=33
BSMT Bassoo Peak 81.59 35 eP P 00 41 58.4 -0.3
C13A Hot Springs 81.62 36 ⇑P P 00 41 58.2 -0.5
baz=82,SNR=20
SNOW Snow King Moun 81.67 41 eP P 00 41 59.6 +0.4
comp=Z,42nm,1.3s
O20A White River Ci 81.69 45 ⇑P P 00 41 59.3 -0.1
baz=82,SNR=6.3
A12A Yaak River Ran 81.73 34 ⇑P P 00 41 59.4 +0.2
baz=82
M19A Rock Springs 81.73 43 ⇓P P 00 41 59.3 -0.3
baz=82,SNR=7.0
428A Kincaid Ranch, 81.73 55 ⇑P P 00 42 00.3 +0.6
baz=82,SNR=12
Z26A Caprock 81.75 52 ⇑P P 00 41 59.7 0.0
baz=82,SNR=28
X25A Clemmons Ranch 81.76 51 ⇓P P 00 41 59.7 -0.1
baz=82,SNR=14
227A Bennet, Jal 81.77 54 ⇓P P 00 41 59.8 0.0
baz=82
IMW Indian Meadow 81.77 40 eP P 00 42 00.3 +0.5
comp=Z,47nm,1.4s
V24A Rampart Ranch, 81.81 50 ⇑P P 00 42 00.6 +0.4
baz=82,SNR=10
MOOW Moose Ponds 81.81 40 eP P 00 42 00.1 +0.2
comp=Z,19nm,1.3s
JTMT Jette 81.82 36 eP P 00 41 59.3 -0.5
T23A Casias Ranch, 81.82 48 ⇓P P 00 42 00.8 +0.6
baz=82,SNR=6.4
F15A Butte 81.83 38 ⇑P P 00 41 59.8 -0.1
baz=82,SNR=21
LOHW Long Hollow 81.83 41 eP P 00 42 00.3 +0.3
comp=Z,24nm,1.3s
LRM Limekiln Ridge 81.84 38 eP P 00 42 00.1 0.0
R22A Saguache, Gunn 81.84 47 ⇓P P 00 42 01.3 +1.0
baz=82,SNR=14
SWMT Swartz Lake 81.85 36 eP P 00 41 59.3 -0.6
529A Stev Forest Ra 81.87 56 ⇓P P 00 42 00.5 +0.2
baz=82
L19A Farson 81.89 42 ⇓P P 00 42 00.4 +0.1
baz=82,SNR=6.1

328A Wristen Ranch, 81.89 54 ⇓P P 00 42 00.3 -0.2
baz=82,SNR=7.5
D14A Greenough 81.90 37 ⇓P P 00 41 59.4 -0.8
baz=82,SNR=17
DOT Dot Lake 81.91 13 eP P 00 41 59.7 -0.1
comp=Z,40nm,1.0s
BLMT Blacktail Moun 81.92 35 eP P 00 41 60.0 -0.4
G16A Moss Hill, Enn 81.92 39 ⇑P P 00 42 00.7 +0.3
baz=82,SNR=7.3
QLMT Earthquake Lak 81.94 39 eP P 00 42 01.9 +1.4
P21A Newcastle 81.95 45 ⇑P P 00 42 01.1 +0.3
baz=82
CHMT Chamberlain Mo 81.95 37 eP P 00 42 00.1 -0.5
127A Arkansas Junct 81.99 53 ⇑P P 00 42 01.2 +0.2
baz=82
H16A Russell Place, 81.99 39 ⇓P P 00 42 01.7 +0.9
baz=82,SNR=29
SLMT Seeley Lake 81.99 36 eP P 00 42 00.1 -0.6
N20A Spence Gulch, 82.00 44 ⇑P P 00 42 01.3 +0.2
baz=82,SNR=14
I17A Pilgrim Ck. 82.01 40 ⇓P P 00 42 01.3 +0.3
baz=82
Q22A Crested Butte, 82.02 46 ⇓P P 00 42 01.9 +0.6
baz=82,SNR=17
E15A Deer Lodge 82.05 37 ⇓P P 00 42 00.8 -0.3
baz=82,SNR=18
B13A Whitefish 82.06 35 ⇑P P 00 42 00.2 -0.7
baz=82,SNR=14
BW06 Boulder Array 82.08 42 eP P 00 42 00.3 -1.1
comp=Z,35nm,1.5s
PDAR Pinedale Array 82.08 42 P P 00 42 01.0 -0.4
PDAR Pinedale Array 82.08 42 P P 00 42 01.0 -0.4
comp=Z,6.2nm,0.9s,baz=223,slow=3.7,SNR=46
U24A Moreno Valley 82.10 49 ⇓P P 00 42 02.4 +0.7
baz=82
SMCO Snowmass 82.12 46 eP P 00 41 55.3 -6.6
comp=Z,42nm,1.4s
C14A Swan Lake 82.13 36 ⇑P P 00 42 00.4 -1.0
baz=82
Y26A Elida 82.14 52 ⇑P P 00 42 01.9 +0.1
baz=82
S23A Nye Farm, Mont 82.14 48 ⇓P P 00 42 02.4 +0.5
baz=82
YMR Madison River 82.14 40 eP P 00 42 01.7 +0.1
comp=Z,92nm,1.5s
W25A X Bar L Ranch, 82.20 50 ⇓P P 00 42 01.8 -0.3
baz=82,SNR=11
BOZ Bozeman (W) 82.24 38 eP P 00 42 01.6 -0.5
BOZ pmax pmax
comp=Z,32nm,1.4s
BOZ Bozeman (W) 82.24 38 eP P 00 42 01.6 -0.5
comp=Z,32nm,1.4s
H17A Grant Village 82.25 40 ⇑P P 00 42 03.9 +1.7
baz=82
O21A Pagoda 82.25 45 ⇓P P 00 42 02.4 0.0
baz=82
COLA College 82.27 11 eP P 00 42 01.7 +0.2
COLA pmax pmax
comp=Z,30nm,0.9s
COLA College 82.27 11 eP P 00 42 01.7 +0.2
comp=Z,30nm,0.9s
F16A Kennard Place, 82.31 38 ⇓P P 00 42 02.7 +0.3
baz=82,SNR=7.3
429A Davenport Ranc 82.32 55 ⇓P P 00 42 02.7 -0.1
baz=82,SNR=26
V25A Rancho No Teng 82.34 50 ⇑P P 00 42 03.1 +0.2
baz=82
ILAR Eielson Array 82.35 11 P P 00 42 01.5 -0.5
ILAR Eielson Array 82.35 11 P P 00 42 01.5 -0.5
comp=Z,3.3nm,0.8s,baz=218,slow=5.8,SNR=34
ILAR LR LR 01 11 48.1
comp=Z,127nm,21.3s,baz=307,slow=31
Z27A Tatum 82.35 53 ⇑P P 00 42 02.6 -0.3
baz=82,SNR=6.5
228A UT Block 9, Go 82.36 54 ⇓P P 00 42 02.7 -0.2
baz=82,SNR=5.2
M20A Sweetwater, Wa 82.36 43 ⇓P P 00 42 02.9 0.0
baz=82,SNR=9.3
I18A Diamond G Ranc 82.38 41 ⇓P P 00 42 02.9 0.0
baz=82,SNR=5.7
A13A Flathead Natio 82.40 35 ⇑P P 00 42 02.6 -0.2
baz=83,SNR=7.2
X26A CR and CF Fran 82.41 51 ⇑P P 00 42 02.8 -0.4
baz=83,SNR=7.9
D15A Lincoln 82.44 37 ⇓P P 00 42 03.0 -0.1
baz=83,SNR=35
P22A Eagle 82.46 46 ⇓P P 00 42 03.6 +0.1
baz=83,SNR=7.6
N21A Black Mountain 82.47 44 ⇑P P 00 42 03.8 +0.3
baz=83,SNR=17
R23A Moffat 82.48 47 ⇑P P 00 42 04.2 +0.5
baz=83,SNR=18
L20A Wamsutter 82.51 43 ⇑P P 00 42 04.0 +0.4
baz=83,SNR=19
SDCO Great Sand Dun 82.52 48 eP P 00 42 03.3 -0.6
comp=Z,15nm,1.1s
SEY Seymchan 82.53 345 ⇑/P P 00 42 03.1 +0.2
T24A Torres, Weston 82.55 48 ⇑P P 00 42 04.8 +0.7
baz=83
K19A Absolon Red Bu 82.57 42 ⇑P P 00 42 03.2 -0.6
baz=83,SNR=11
530A J-C Ranch, Com 82.58 56 ⇓P P 00 42 03.9 -0.1
baz=83,SNR=9.0
329A Wagon Wheel Ra 82.59 55 ⇑P P 00 42 03.8 -0.3
baz=83,SNR=13
G17A Pierce Place, 82.61 39 ⇓P P 00 42 05.0 +1.0
baz=83
Y27A Causey 82.62 52 ⇓P P 00 42 04.0 -0.3
baz=83,SNR=12
128A Castleberry Fa 82.64 53 ⇓P P 00 42 04.3 -0.1
baz=83,SNR=11
J19A Crowheart 82.65 42 ⇓P P 00 42 04.1 -0.2
baz=83,SNR=7.5
W26A Owens Ranch, T 82.66 51 ⇓P P 00 42 04.3 -0.1
baz=83
E16A East Helena 82.67 38 ⇑P P 00 42 04.2 -0.1
baz=83,SNR=19
HRY Holter Researc 82.67 38 eP P 00 42 04.6 +0.3
S24A Houchin Ranch, 82.68 48 ⇓P P 00 42 05.3 +0.6
baz=83,SNR=20
B14A Marquette Ranc 82.72 36 ⇑P P 00 42 03.8 -0.7
baz=83,SNR=11
U25A Circle Dot Ran 82.73 49 ⇓P P 00 42 05.0 +0.1
baz=83,SNR=34
WALA Waterton Lakes 82.75 35 eP P 00 42 03.8 -0.8
comp=Z,1.1nm,1.4s
C15A Salmond Ranch, 82.78 36 ⇑P P 00 42 04.3 -0.5
baz=83,SNR=35
Q23A Hartsel 82.79 47 ⇑P P 00 42 05.7 +0.4
baz=83,SNR=9.3
K20A Yellowstone Ra 82.81 42 ⇓P P 00 42 04.7 -0.4
baz=83,SNR=5.3
O22A Kremmling 82.86 45 ⇓P P 00 42 05.7 +0.1
baz=83,SNR=16
229A Bryant Ranch, 82.91 54 ⇑P P 00 42 05.7 0.0
baz=83
430A Baggett Ranch, 82.91 56 ⇓P P 00 42 05.4 -0.3
baz=83
631A Perdido Creek 82.92 57 ⇑P P 00 42 05.7 -0.1
baz=83
V26A Tequesquite Ra 82.94 50 ⇑P P 00 42 05.5 -0.5
baz=83,SNR=9.1
H18A Shoshone NF, C 82.95 40 ⇑P P 00 42 06.0 +0.1
baz=83,SNR=5.4
MSTX Muleshoe 82.95 52 ⇓P P 00 42 05.8 -0.2
baz=83,SNR=11
F17A Fitzpatrick Pl 82.96 39 ⇑P P 00 42 06.4 +0.6
baz=83,SNR=17
M21A Separation Pea 82.97 44 ⇓P P 00 42 06.0 -0.1
baz=83,SNR=20
A14A Double T Ranch 82.97 35 ⇓P P 00 42 05.4 -0.4
baz=83,SNR=23
Z28A Tucker Farm, M 82.98 53 ⇓P P 00 42 05.9 -0.2
baz=83
X27A F and S Farms, 82.98 51 ⇓P P 00 42 06.4 +0.3
baz=83
D16A Dana Ranch, Ca 83.00 37 ⇓P P 00 42 06.1 +0.1
baz=83,SNR=36
R24A Sanders Place, 83.01 47 ⇓P P 00 42 06.8 +0.5
baz=83,SNR=18
T25A Trinidad 83.04 49 ⇓P P 00 42 06.6 +0.1
baz=83,SNR=11
I19A Meeteetse 83.06 41 ⇑P P 00 42 06.5 +0.1
baz=83,SNR=18
QIZ Qiongzhong 83.09 292 P P 00 42 06.5 -0.4
QIZ S S 00 52 24.0 +0.1
QIZ pmax pmax
comp=Z,69nm,3.1s

B15A Bradely Ranch, 83.10 36 ⇓P P 00 42 05.4 -1.0
baz=83,SNR=16
E17A Martinsdale 83.12 38 ⇑P P 00 42 06.9 +0.2
baz=83,SNR=11
129A Stewart Farms, 83.12 54 ⇓P P 00 42 06.9 0.0
baz=83
L21A Rawlins 83.13 43 ⇓P P 00 42 06.6 -0.2
baz=83,SNR=9.4
732A Laxson Ranch, 83.16 58 ⇑P P 00 42 07.2 +0.2
baz=83
W27A Bowe Ranch, En 83.18 51 ⇓P P 00 42 06.9 -0.2
baz=83,SNR=17
330A Mertzon 83.19 55 ⇓P P 00 42 06.9 -0.3
baz=83
N22A Wattenberg Ran 83.21 45 ⇓P P 00 42 07.8 +0.4
baz=83,SNR=12
U26A Atchley Ranch, 83.22 50 ⇓P P 00 42 07.4 -0.1
baz=83,SNR=22
531A Rocksprings 83.22 56 ⇓P P 00 42 07.3 -0.1
baz=83
S25A Robets Cordova 83.25 48 ⇑P P 00 42 07.7 +0.1
baz=83,SNR=24
C16A Fuhringer Ranc 83.29 37 ⇓P P 00 42 06.9 -0.5
baz=84,SNR=20
Q24A Divide 83.30 47 ⇓P P 00 42 08.2 +0.3
baz=84,SNR=7.1
J20A Shoshoni 83.31 42 ⇓P P 00 42 07.9 +0.2
baz=84,SNR=18
O23A Lake Granby, G 83.31 45 ⇑P P 00 42 08.3 +0.4
baz=84,SNR=7.6
G18A Lazy EL Ranch, 83.33 40 ⇑P P 00 42 08.1 +0.4
baz=84,SNR=18
Y28A McKinney Farm, 83.33 52 ⇑P P 00 42 07.9 0.0
baz=84
ISCO Idaho Springs 83.34 46 eP P 00 42 08.5 +0.4
ISCO pmax pmax
comp=Z,9.0nm,0.9s
ISCO Idaho Springs 83.34 46 eP P 00 42 08.5 +0.4
comp=Z,9.1nm,0.9s
ISCO Idaho Springs 83.34 46 ⇓P P 00 42 08.4 +0.4
baz=84,SNR=11
A15A Johnson Ranch, 83.36 35 ⇑P P 00 42 07.1 -0.6
baz=84,SNR=24
431A Sonora 83.37 56 ⇑P P 00 42 07.8 -0.4
baz=84
H19A Powell 83.37 40 ⇓P P 00 42 08.5 +0.6
baz=84,SNR=23
M22A Cedar Creek Ra 83.39 44 ⇓P P 00 42 07.9 -0.3
baz=84,SNR=7.1
RLMT Red Lodge 83.42 40 eP P 00 42 08.2 0.0
comp=Z,40nm,1.2s
230A Sterling City 83.42 55 ⇓P P 00 42 08.2 -0.2
baz=84
Z29A Hungry Hill Ra 83.49 53 ⇓P P 00 42 08.4 -0.3
baz=84
GCMT Greycliff 83.50 39 eP P 00 42 08.7 +0.1
comp=Z,31nm,1.3s
K21A Alcova 83.51 43 ⇓P P 00 42 08.7 -0.1
baz=84
EGAK Eagle 83.52 13 eP P 00 42 08.6 +0.5
comp=Z,17nm,1.3s
F18A Big Timber 83.53 39 ⇓P P 00 42 09.3 +0.6
baz=84,SNR=27
R25A Fountain Ranch 83.56 48 ⇑P P 00 42 08.9 -0.2
baz=84,SNR=20
I20A Worland 83.56 41 ⇑P P 00 42 09.0 0.0
baz=84,SNR=8.1
D17A Six Diamond Ra 83.57 38 ⇓P P 00 42 09.3 +0.3
baz=84,SNR=37
632A Uvalde 83.59 57 ⇓P P 00 42 09.4 +0.1
baz=84
N23A Red Feather La 83.60 45 ⇑P P 00 42 09.7 +0.4
baz=84,SNR=7.8
X28A Dimmitt 83.61 52 ⇑P P 00 42 09.3 -0.1
baz=84
V27A Dan Oppiter Fa 83.63 50 ⇑P P 00 42 09.3 -0.1
baz=84,SNR=6.7
B16A M & M Farms, S 83.63 36 ⇑P P 00 42 08.3 -0.8
baz=84,SNR=8.4
T26A Comanche Natio 83.65 49 ⇑P P 00 42 09.0 -0.6
baz=84,SNR=7.2
P24A Kohler Place, 83.70 46 ⇑P P 00 42 10.1 +0.3
baz=84
J21A Lysite 83.72 42 ⇑P P 00 42 10.1 +0.2
baz=84,SNR=58
532A Rocksprings 83.73 57 ⇓P P 00 42 09.8 -0.2
baz=84
E18A Harlowton 83.74 38 ⇑P P 00 42 10.4 +0.7
baz=84,SNR=23
331A San Angelo 83.75 55 ⇑P P 00 42 09.5 -0.6
baz=84
Y29A Porterfield Fa 83.75 53 ⇑P P 00 42 10.0 0.0
baz=84
C17A Wharram Farm, 83.77 37 ⇑P P 00 42 09.9 +0.1
baz=84,SNR=43
L22A Ellis Ranch, M 83.78 44 ⇓P P 00 42 10.5 +0.4
baz=84,SNR=10
130A Snyder 83.81 54 ⇑P P 00 42 10.2 -0.1
baz=84
O24A Longmont 83.85 46 ⇑P P 00 42 11.1 +0.5
baz=84,SNR=5.1
W28A Vega 83.90 51 ⇓P P 00 42 10.5 -0.3
baz=84
H20A Greybull 83.90 41 ⇓P P 00 42 10.1 -0.5
baz=84,SNR=14
U27A Thompson Grove 83.90 50 ⇑P P 00 42 10.2 -0.7
baz=84,SNR=5.3
Q25A Bedland, Calha 83.91 47 ⇑P P 00 42 10.8 -0.2
baz=84
S26A Kim 83.92 48 ⇑P P 00 42 10.4 -0.6
baz=84,SNR=12
JCT Junction City 83.94 56 eP P 00 42 11.0 0.0
JCT pmax pmax
comp=Z,7.0nm,0.9s
JCT Junction City 83.94 56 eP P 00 42 11.0 0.0
comp=Z,7.3nm,0.9s
JCT Junction City 83.94 56 ⇑P P 00 42 10.4 -0.6
baz=84
Z30A Sanderson Ranc 83.95 53 ⇑P P 00 42 10.6 -0.5
baz=84,SNR=10
X29A Tulia 83.96 52 ⇑P P 00 42 11.0 -0.1
baz=84,SNR=7.7
F19A Roth Farm, Mol 83.97 39 ⇑P P 00 42 11.1 +0.1
baz=84,SNR=33
A16A West Butte Ran 83.97 36 ⇑P P 00 42 10.7 -0.2
baz=84
K22A Casper 84.00 43 ⇓P P 00 42 11.1 -0.1
baz=84,SNR=5.8
M23A Laramie 84.00 44 ⇑P P 00 42 11.5 +0.1
baz=84,SNR=8.4
I21A Big Trails, Te 84.03 42 ⇑P P 00 42 10.9 -0.4
baz=84,SNR=40
COLD Coldfoot 84.06 9 eP P 00 42 12.1 +1.3
comp=Z,14nm,1.1s
231A Bronte 84.07 55 ⇑P P 00 42 10.9 -0.7
baz=84
V28A Channing 84.08 51 ⇑P P 00 42 11.7 0.0
baz=84
B17A L&G Farms, Che 84.09 37 ⇑P P 00 42 11.1 -0.3
baz=84,SNR=5.9
432A Menard 84.09 56 ⇓P P 00 42 11.1 -0.7
baz=84
PHWY Pilot Hill 84.11 44 eP P 00 42 11.9 -0.1
comp=Z,14nm,0.8s
G20A Bridger 84.11 40 ⇓P P 00 42 11.5 -0.2
baz=84,SNR=7.0
D18A Linhart Farms, 84.12 38 ⇑P P 00 42 12.2 +0.6
baz=84
AMTX Amarillo 84.14 52 eP P 00 42 11.9 -0.2
comp=Z,39nm,0.9s
P25A Willow Gulch B 84.22 47 ⇑P P 00 42 12.7 +0.2
baz=84,SNR=16
R26A Arlington 84.22 48 ⇑P P 00 42 12.2 -0.2
baz=84,SNR=14
T27A Campo 84.24 49 ⇑P P 00 42 12.2 -0.4
baz=84,SNR=11
W29A Amraillo 84.26 51 ⇓P P 00 42 12.4 -0.3
baz=84,SNR=11
131A Roby 84.29 54 ⇓P P 00 42 12.4 -0.4
baz=84
N24A Carr 84.29 45 ⇓P P 00 42 13.2 +0.5
baz=84,SNR=12
L23A Garrett 84.30 44 ⇓P P 00 42 12.6 -0.2
baz=84,SNR=20
332A Millersview 84.32 55 ⇓P P 00 42 12.4 -0.6
baz=84
U28A Mallet 84.33 50 ⇓P P 00 42 12.3 -0.7
baz=84,SNR=6.0

Y30A	**Stafford Cattl**	**84.35**	**53**	⇑P		**P**	**00 42 13.1**	**0.0**
	baz=84							
E19A	**Rath Farm, Rou**	**84.36**	**39**	⇓P		**P**	**00 42 13.1**	**+0.2**
	baz=84,SNR=30							
Q26A	**Hugo**	**84.43**	**47**	⇑P		**P**	**00 42 13.5**	**0.0**
	baz=85							
F20A	**Billings**	**84.43**	**40**	⇑P		**P**	**00 42 13.5**	**+0.2**
	baz=85							
A17A	**Triple J Farms**	**84.48**	**36**	⇑P		**P**	**00 42 13.4**	**0.0**
	baz=85,SNR=50							
BILL	**Bilibino**	**84.49**	**352**	⇑*i*P		**P**	**00 42 13.2**	**+0.3**
BILL				*i*			00 45 27.9	
BILL					pmax	pmax		
	comp=Z,14nm,2.5s							
O25A	**Wiggins**	**84.51**	**46**	⇑P		**P**	**00 42 13.8**	**0.0**
	baz=85							
EGMT	**Eagleton**	**84.56**	**37**	*e*P		**P**	**00 42 14.2**	**+0.4**
	comp=Z,28nm,0.9s							
EGMT	**Eagleton**	**84.56**	**37**	⇑P		**P**	**00 42 13.7**	**-0.1**
	baz=85,SNR=16							
H21A	**Big Horn, Sher**	**84.57**	**41**	⇑P		**P**	**00 42 14.0**	**0.0**
	baz=85,SNR=7.3							
232A	**Coleman**	**84.58**	**55**	⇑P		**P**	**00 42 14.1**	**-0.2**
	baz=85							
X30A	**Coker Ranch, T**	**84.59**	**52**	⇑P		**P**	**00 42 14.2**	**-0.1**
	baz=85							
I22A	**9 Mile Ranch,**	**84.59**	**42**	⇑P		**P**	**00 42 14.1**	**0.0**
	baz=85,SNR=9.9							
M24A	**Cheyenne**	**84.61**	**45**	⇓P		**P**	**00 42 14.5**	**+0.1**
	baz=85,SNR=8.4							
K23A	**Bowen Ranch, D**	**84.64**	**43**	⇑P		**P**	**00 42 14.2**	**-0.3**
	baz=85,SNR=8.1							
D19A	**Cripps Ranch,**	**84.65**	**38**	⇑P		**P**	**00 42 14.6**	**+0.3**
	baz=85,SNR=21							
V29A	**Stinnett**	**84.65**	**51**	⇓P		**P**	**00 42 14.6**	**0.0**
	baz=85							
R27A	**Eads**	**84.68**	**48**	⇑P		**P**	**00 42 14.4**	**-0.4**
	baz=85							
Z31A	**Sharp Cattle R**	**84.72**	**54**	⇓P		**P**	**00 42 14.6**	**-0.4**
	baz=85							
B18A	**Beardsley Farm**	**84.73**	**37**	⇑P		**P**	**00 42 14.5**	**-0.1**
	baz=85,SNR=29							
G21A	**Lodge Grass**	**84.75**	**40**	⇓P		**P**	**00 42 15.1**	**+0.2**
	baz=85							
E20A	**Meyer Farm, Mu**	**84.78**	**39**	⇑P		**P**	**00 42 15.3**	**+0.3**
	baz=85,SNR=14							
L24A	**Wheatland**	**84.78**	**44**	⇑P		**P**	**00 42 15.8**	**+0.6**
	baz=85							
P26A	**Davis Ranch, A**	**84.82**	**47**	⇓P		**P**	**00 42 15.6**	**+0.2**
	baz=85							
C19A	**Slack Wire Ran**	**84.83**	**38**	⇓P		**P**	**00 42 15.6**	**+0.4**
	baz=85,SNR=32							
N25A	**Grover**	**84.83**	**45**	⇑P		**P**	**00 42 15.7**	**+0.2**
	baz=85							
ABTX	**Abilene, Hawle**	**84.85**	**54**	⇑P		**P**	**00 42 15.6**	**0.0**
	baz=85							
Y31A	**Rekieta Farm,**	**84.87**	**53**	⇓P		**P**	**00 42 15.5**	**-0.2**
	baz=85							
A18A	**Metzger Ranch,**	**84.95**	**36**	⇓P		**P**	**00 42 15.7**	**0.0**
	baz=85							
J23A	**Dilts Ranch, B**	**84.97**	**43**	⇓P		**P**	**00 42 16.2**	**+0.1**
	baz=85							
H22A	**Clearmont**	**84.99**	**41**	⇓P		**P**	**00 42 16.1**	**-0.1**
	baz=85,SNR=6.1							
S28A	**Manter**	**85.05**	**49**	⇑P		**P**	**00 42 16.4**	**-0.2**
	baz=85,SNR=6.1							
D20A	**Manuel Ranch,**	**85.06**	**38**	⇑P		**P**	**00 42 16.7**	**+0.3**
	baz=85,SNR=23							
U29A	**Oasis Ranch, S**	**85.06**	**50**	⇑P		**P**	**00 42 16.7**	**0.0**
	baz=85							
F21A	**Absaloka Mine,**	**85.08**	**40**	⇑P		**P**	**00 42 16.8**	**+0.3**
	baz=85							
W30A	**Crocket Farms**	**85.09**	**52**	⇑P		**P**	**00 42 16.8**	**0.0**
	baz=85							
O26A	**Horse Wrangler**	**85.12**	**46**	⇑P		**P**	**00 42 17.9**	**+0.9**
	baz=85							
V30A	**Spur Ranch, Mi**	**85.23**	**51**	⇑P		**P**	**00 42 17.8**	**+0.3**
	baz=85							
Z32A	**Haskell**	**85.23**	**54**	⇑P		**P**	**00 42 17.7**	**+0.2**
	baz=85							
B19A	**Brinkman Farms**	**85.24**	**37**	⇑P		**P**	**00 42 17.4**	**+0.2**
	baz=85							
G22A	**Birney**	**85.32**	**41**	⇑P		**P**	**00 42 17.8**	**0.0**
	baz=86							
T29A	**Hugoton**	**85.32**	**50**	⇑P		**P**	**00 42 18.2**	**+0.2**
	baz=86							
X31A	**McDonald Ranch**	**85.34**	**52**	⇑P		**P**	**00 42 18.0**	**0.0**
	baz=86							
R28A	**Tribune**	**85.42**	**48**	⇓P		**P**	**00 42 18.1**	**-0.2**
	baz=86,SNR=10							
C20A	**Veseth Ranch,**	**85.43**	**38**	⇓P		**P**	**00 42 18.5**	**+0.3**
	baz=86							
E21A	**Keefer Ranch,**	**85.44**	**39**	⇓P		**P**	**00 42 18.9**	**+0.6**
	baz=86,SNR=8.7							
Y32A	**R-V Farms, Ver**	**85.52**	**53**	⇓P		**P**	**00 42 18.8**	**-0.1**
	baz=86							
J24A	**Dixon Ranch, L**	**85.53**	**43**	⇑P		**P**	**00 42 19.0**	**+0.1**
	baz=86							
W31A	**Holland Ranch,**	**85.58**	**52**	⇑P		**P**	**00 42 18.9**	**-0.3**
	baz=86							
A19A	**Kildworth Far**	**85.59**	**37**	⇑P		**P**	**00 42 19.2**	**+0.2**
	baz=86							
BJI	**Beijing**	**85.59**	**313**	P		**P**	**00 42 19.8**	**+0.7**
BJI				S		**S**	**00 52 48.0**	**0.0**
BJI				SS		**SS**	**00 58 25.9**	**+0.8**
BJI				pmax		pmax		
	comp=Z,10.0nm,0.6s							
BJI				pmax		pmax		
	comp=Z,70nm,3.7s							
BJI				LR		LR		
	comp=N,74nm,23.7s							
BJI				LR		LR		
	comp=E,85nm,25.1s							
F22A	**Rosebud**	**85.59**	**40**	⇑P		**P**	**00 42 19.3**	**+0.2**
	baz=86							
S29A	**Ulysses**	**85.63**	**49**	⇑P		**P**	**00 42 19.5**	**0.0**
	baz=86							
O27A	**Beecher Island**	**85.68**	**46**	⇑P		**P**	**00 42 19.8**	**+0.1**
	baz=86							
D21A	**La Casta Ranch**	**85.73**	**39**	⇓P		**P**	**00 42 20.0**	**+0.2**
	baz=86							
B20A	**Solberg Farm,**	**85.77**	**37**	⇑P		**P**	**00 42 20.2**	**+0.4**
	baz=86							
I24A	**Kuemmerle Ranc**	**85.78**	**42**	⇓P		**P**	**00 42 20.0**	**-0.1**
	baz=86							
V31A	**Spring Creek L**	**85.87**	**51**	⇓P		**P**	**00 42 21.3**	**+0.6**
	baz=86,SNR=7.0							
G23A	**Biddle**	**85.88**	**41**	⇓P		**P**	**00 42 20.3**	**-0.2**
	baz=86,SNR=5.6							
N27A	**Anderson Farm,**	**85.89**	**46**	⇑P		**P**	**00 42 20.4**	**-0.4**
	baz=86							
R29A	**Marienthal**	**85.93**	**49**	⇓P		**P**	**00 42 21.0**	**0.0**
	baz=86							
A20A	**Cobblestone Ra**	**86.04**	**37**	⇓P		**P**	**00 42 21.2**	**0.0**
	baz=86							
E22A	**Miles City**	**86.08**	**40**	⇓P		**P**	**00 42 21.9**	**+0.5**
	baz=86							
F23A	**Volborg**	**86.10**	**41**	⇑P		**P**	**00 42 21.3**	**-0.3**
	baz=86,SNR=8.3							
H24A	**Dirks Ranch, A**	**86.21**	**42**	⇓P		**P**	**00 42 21.4**	**-0.8**
	baz=86,SNR=17							
K26A	**Motz Farm, Whi**	**86.24**	**44**	⇓P		**P**	**00 42 22.6**	**+0.3**
	baz=86							
D22A	**Cohagen**	**86.27**	**39**	⇓P		**P**	**00 42 23.2**	**+0.9**
	baz=86							
RSSD	**Black Hills**	**86.28**	**42**	*e*P		**P**	**00 42 21.2**	**-1.5**
RSSD					pmax	pmax		
	comp=Z,8.0nm,0.7s							
RSSD	**Black Hills**	**86.28**	**42**	*e*P		**P**	**00 42 21.2**	**-1.5**
	comp=Z,8.2nm,0.7s							
WHTX	**Lake Whitney**	**86.36**	**56**	⇑P		**P**	**00 42 23.0**	**0.0**
	baz=86							
B21A	**Ellsworth Farm**	**86.36**	**38**	⇓P		**P**	**00 42 23.6**	**+0.8**
	baz=86							
T31A	**Randall Ranch,**	**86.49**	**50**	⇓P		**P**	**00 42 23.9**	**+0.3**
	baz=87							
R30A	**Dighton**	**86.50**	**49**	⇑P		**P**	**00 42 24.0**	**+0.2**
	baz=87							
C22A	**Vida**	**86.72**	**39**	⇑P		**P**	**00 42 24.9**	**+0.4**
	baz=87							
F24A	**Ekalaka**	**86.76**	**41**	⇓P		**P**	**00 42 25.4**	**+0.6**
	baz=87							
D23A	**Lindsay**	**86.87**	**39**	⇑P		**P**	**00 42 26.1**	**+0.8**
	baz=87							
B22A	**Reddig Ranch S**	**86.90**	**38**	⇓P		**P**	**00 42 26.1**	**+0.7**
	baz=87							
HKT	**Hockley**	**86.97**	**58**	*e*P		**P**	**00 42 26.7**	**+0.7**
HKT					pmax	pmax		
	comp=Z,22nm,1.6s							
HKT	**Hockley**	**86.97**	**58**	*e*P		**P**	**00 42 26.7**	**+0.7**
	comp=Z,22nm,1.6s							
C23A	**Lambert**	**87.16**	**39**	⇓P		**P**	**00 42 27.6**	**+0.9**
	baz=87							
D24A	**Glendive**	**87.38**	**40**	⇑P		**P**	**00 42 28.9**	**+1.2**
	baz=88							
B23A	**Brockton**	**87.57**	**38**	⇑P		**P**	**00 42 29.5**	**+0.9**
	baz=88							
MAW	**Mawson**	**87.91**	**199**	P		**P**	**00 42 30.8**	**+0.8**
MAW	**Mawson**	**87.91**	**199**	P		**P**	**00 42 30.8**	**+0.8**
	comp=Z,17nm,0.7s,baz=133,slow=6.3,SNR=18							
MAW					LR	LR	01 19 29.3	
	comp=Z,224nm,18.1s,baz=306,slow=34							
MAW	**Mawson**	**87.91**	**199**	P		**P**	**00 42 31.2**	**+1.3**
	baz=87,SNR=9.5							
DGMT	**Dagmar**	**88.05**	**38**	*e*P		**P**	**00 42 31.6**	**+0.8**
	comp=Z,35nm,1.0s							
DGMT	**Dagmar**	**88.05**	**38**	⇓P		**P**	**00 42 31.7**	**+0.8**
	baz=88							
GYA	**Guiyang**	**88.21**	**298**	P		**P**	**00 42 31.0**	**-1.3**
GYA				pP		**pP**	**00 42 45.8**	**+0.6**
GYA				sP		**sP**	**00 42 52.0**	**+2.1**
GYA				PP		**PP**	**00 46 01.8**	**+1.7**
GYA				SKS		**SKSac**	**00 52 53.1**	**-5.0**
GYA				S		**SKKSac**	**00 53 10.8**	**+2.1**
GYA				SS		**SS**	**00 59 02.9**	**-1.4**
GYA				pmax		pmax		
	comp=Z,20nm,1.0s							
GYA				pmax		pmax		
	comp=Z,130nm,5.0s							
GYA				LR		LR		
	comp=N,650nm,20.6s							
GYA				LR		LR		
	comp=E,520nm,19.0s							
GYA				LR		LR		
	comp=Z,570nm,21.8s							
A24A	**Westby**	**88.36**	**38**	⇓P		**P**	**00 42 32.9**	**+0.6**
	baz=88							
XAN	**Xi'an**	**88.78**	**306**	P		**P**	**00 42 35.9**	**+1.2**
XAN				pP		**pP**	**00 42 49.9**	**+2.3**
XAN				sP		**sP**	**00 42 56.6**	**+4.3**
XAN				S		**ScS**	**00 53 23.8**	**-0.6**
XAN				pmax		pmax		
	comp=Z,3.0nm,1.6s							
XAN				pmax		pmax		
	comp=Z,9.0nm,3.6s							
HHC	**Hu-ho-hao-te**	**89.15**	**313**	*e*P		**P**	**00 42 36.4**	**0.0**
HHC				sP		**sP**	**00 42 50.8**	**-3.2**
HHC				PP		**PP**	**00 46 09.3**	**+2.0**
HHC				SKS		**SKSac**	**00 53 01.5**	**-1.6**
HHC				S		**S**	**00 53 20.3**	**-2.2**
HHC				SS		**SS**	**00 59 16.5**	**-0.9**
HHC				pmax		pmax		
	comp=Z,40nm,0.7s							
HHC				pmax		pmax		
	comp=Z,140nm,6.5s							
HHC				LR		LR		
	comp=N,230nm,19.2s							
HHC				LR		LR		
	comp=E,210nm,19.1s							
HHC				LR		LR		
	comp=Z,210nm,19.0s							
PLCA	**Paso Flores**	**89.38**	**132**	LR		LR	01 12 48.8	
	comp=Z,122nm,19.7s,baz=180,slow=29							
YKA	**Yellowknife Ar**	**89.96**	**23**	P		**P**	**00 42 39.5**	**0.0**
YKA	**Yellowknife Ar**	**89.96**	**23**	P		**P**	**00 42 39.5**	**0.0**
	comp=Z,2.1nm,0.8s,baz=236,slow=4.5,SNR=38							
YKW3	**Yellowknife Ar**	**90.00**	**23**	*e*P		**P**	**00 42 39.5**	**-0.1**
	comp=Z,0.4nm,1.7s							
KMI	**Kunming**	**91.20**	**296**	P		**P**	**00 42 46.6**	**+0.1**
KMI				S		**S**	**00 53 39.5**	**-2.8**
KMI				pmax		pmax		
	comp=Z,8.0nm,0.5s							
KMI				LR		LR		
	comp=N,88nm,15.7s							
KMI				LR		LR		
	comp=E,57nm,15.7s							
KMI				LR		LR		
	comp=Z,70nm,13.9s							
FFC	**Flin Flon**	**91.94**	**33**	*i* P		**P**	**00 42 49.6**	**+0.7**
FFC	**Flin Flon**	**91.94**	**33**	*e*P		**P**	**00 42 48.3**	**-0.6**
	comp=Z,12nm,1.5s							
CD2	**Chengdu**	**91.97**	**301**	P		**P**	**00 42 49.3**	**-0.4**
CD2				pP		**pP**	**00 43 03.4**	**+0.8**
CD2				sP		**sP**	**00 43 08.9**	**+1.6**
CD2				PP		**PP**	**00 46 31.3**	**+1.5**
CD2				SKS		**SKSac**	**00 53 16.3**	**-3.4**
CD2				S		**S**	**00 53 44.0**	**-4.6**
CD2				sS		**sS**	**00 54 08.0**	**-2.2**
CD2				SS		**SS**	**00 59 56.3**	**-2.1**
CD2				pmax		pmax		
	comp=Z,30nm,0.5s							
CD2				pmax		pmax		
	comp=Z,100nm,5.4s							
SYO	**Syowa Base**	**92.69**	**191**	⇑*e*P		**P**	**00 42 50.2**	**-2.0**
CMAR	**Chiang Mai Arr**	**92.81**	**288**	P		**P**	**00 42 55.5**	**+1.7**
CMAR	**Chiang Mai Arr**	**92.81**	**288**	P		**P**	**00 42 55.5**	**+1.7**
	comp=Z,1.1nm,0.4s,baz=107,slow=3.1,SNR=3.3							
SNAA	**Sanae**	**92.95**	**177**	*e*P		**P**	**00 42 54.4**	**+0.9**
SNAA	**Sanae**	**92.95**	**177**	*e*P		**P**	**00 42 53.7**	**+0.3**
	comp=Z,18nm,1.4s							
SNAA	**Sanae**	**92.95**	**177**	P		**P**	**00 42 53.8**	**+0.3**
	comp=Z,2.1nm,1.0s,baz=218,slow=3.4,SNR=8.8							
VNA1	**Neumayer--Stat**	**93.58**	**175**	*e*P		**P**	**00 42 57.9**	**+1.6**
ULM	**Lac du Bonnet**	**93.75**	**39**	LR		LR	01 18 10.8	
	comp=Z,273nm,20.3s,baz=263,slow=31							
CFAA	**Coronel Fontan**	**94.30**	**124**	LR		LR	01 16 27.3	
	comp=Z,12nm,20.6s,baz=221,slow=30							
SONM	**Songino Array**	**94.95**	**318**	P		**P**	**00 43 04.2**	**+1.0**
SONM	**Songino Array**	**94.95**	**318**	P		**P**	**00 43 04.2**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=136,slow=5.0,SNR=2.6							
SONM				LR		LR	01 25 28.6	
	comp=Z,38nm,18.5s,baz=265,slow=35							
TIXI	**Tiksi**	**95.01**	**344**	⇑*e*P		**P**	**00 43 01.2**	**-1.4**
TIXI					pmax	pmax		
	comp=Z,6.0nm,2.5s							
GTA	**Gaotai**	**97.32**	**309**	*e*P		**P**	**00 43 13.3**	**-0.8**
GTA				pP		**pP**	**00 43 23.5**	**-3.5**
GTA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
TKL	**Tuckaleechee C**	**98.30**	**55**	LR		LR	01 20 48.5	
	comp=Z,142nm,18.1s,baz=275,slow=31							
LPAZ	**La Paz**	**99.62**	**110**	LR		LR	01 17 29.3	
	comp=Z,54nm,21.3s,baz=85,slow=29							
ROSC	**El Rosal**	**99.78**	**88**	LR		LR	01 18 52.5	
	comp=Z,66nm,19.8s,baz=252,slow=30							
MKAR	**Makanchi Array**	**110.95**	**315**	PKIKP		**PKiKP**	**00 48 13.5**	**-0.3**
MKAR	**Makanchi Array**	**110.95**	**315**	PKiKP		**PKiKP**	**00 48 13.5**	**-0.3**
MKAR	**Makanchi Array**	**110.95**	**315**	PKiKP		**PKiKP**	**00 48 13.5**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=219,slow=0.8,SNR=7.1							
KURK	**Kurchatov**	**113.25**	**319**	⇑*i*PKIKP		**PKiKP**	**00 48 17.5**	**-0.5**
BRVK	**Borovoye**	**118.03**	**322**	⇓*i*PKIKP		**PKPdf**	**00 48 28.3**	**+1.2**
ARU	**Arti**	**123.41**	**328**	*i* PKIKP		**PKPdf**	**00 48 37.5**	**+0.2**
ARU							00 50 20.9	
ARU							00 55 36.3	
ARCES	**ARCESS Array B**	**124.59**	**352**	PKP		**PKPdf**	**00 48 39.4**	**+0.1**
ARCES	**ARCESS Array B**	**124.59**	**352**	PKP		**PKPdf**	**00 48 39.4**	**+0.1**
	comp=Z,2.4nm,0.9s,baz=90,slow=1.3,SNR=6.1							
KLMR	**Klimovskoe**	**128.82**	**340**	PKIKP		PKPdf	00 49 00.9	+13
KLMR				pmax		pmax		
	comp=Z,10.0nm,1.4s							
KLMR				pmax		pmax		
	comp=Z,15nm,1.1s							
FINES	**FINESS Array B**	**131.94**	**348**	PKP		**PKPdf**	**00 48 54.4**	**+0.9**
FINES	**FINESS Array B**	**131.94**	**348**	PKP		**PKPdf**	**00 48 54.3**	**+0.9**
	comp=Z,1.3nm,1.0s,baz=29,slow=3.2,SNR=3.7							
KIV	**Kislovodsk**	**138.30**	**321**	*i* PKIKP		**PKPdf**	**00 49 02.8**	**-3.2**
KIV				pmax		pmax		
	comp=Z,3.0nm,1.1s							
KIV				MLR		MLR		
	comp=Z,70nm,20.0s							
AKASG	**Malin Array Be**	**140.38**	**338**	*i* PKIKP		**PKPdf**	**00 49 10.3**	**+0.9**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**140.38**	**338**	PKP		**PKPdf**	**00 49 10.1**	**+0.6**
AKASG	**Malin Array Be**	**140.38**	**338**	PKP		**PKPdf**	**00 49 10.1**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=45,slow=2.6,SNR=4.3							
ANN	**Anapa**	**140.89**	**325**	*i* PKIKP		**PKPdf**	**00 49 08.3**	**-2.2**
ANN				pmax		pmax		
	comp=Z,64nm,1.4s							
RAYN	**Ar Rayn**	**142.72**	**289**	*e*PKPdf		**PKPdf**	**00 49 12.8**	**-1.8**
LSZ	**Lusaka**	**142.97**	**216**	*e*PKPdf		**PKPdf**	**00 49 12.2**	**-3.1**
KWP	**Kalwaria Pacla**	**143.44**	**343**	⇑PKIKP		PKPbc	00 49 12.2	0.0
KWP	**Kalwaria Pacla**	**143.44**	**343**	⇑*i*P		PKPbc	00 49 12.2	0.0
OJC	**Ojcow**	**143.66**	**346**	*e*PKIKP		PKPbc	00 49 14.1	+1.3
OJC	**Ojcow**	**143.66**	**346**	*e*PKP		PKPbc	00 49 14.1	+1.3
CLL	**Collm**	**143.79**	**353**	*e*PKIKP		**PKPdf**	**00 49 16.0**	**+0.5**
CLL	**Collm**	**143.79**	**353**	*e*PKPdf		**PKPdf**	**00 49 16.0**	**+0.5**
CLL				*e*			00 49 38.0	
TSUM	**Tsumeb**	**144.07**	**197**	*e*PKPdf		**PKPdf**	**00 49 16.3**	**-0.9**
BRG	**Berggiesshubel**	**144.10**	**352**	*e*PKP		PKPdf	00 49 35.6	+20
	comp=Z,2.3nm,0.7s							
UPC	**Upice**	**144.15**	**350**	*e*PKIKP		PKPdf	00 49 21.5	+5.3
UPC	**Upice**	**144.15**	**350**	*e*PKP		PKPdf	00 49 21.5	+5.3
KOLS	**Kolonicke sedl**	**144.19**	**343**	*e*PKIKP		PKPbc	00 49 14.9	+0.4
KOLS				*e*			00 49 30.5	
KOLS	**Kolonicke sedl**	**144.19**	**343**	*e*PKP		PKPbc	00 49 14.9	+0.4
KOLS				*e*			00 49 30.5	
KOLS				*e*			00 53 43.3	
DPC	**Dobruska-Polom**	**144.25**	**350**	*e*PKIKP		**PKPdf**	**00 49 15.7**	**-0.7**
DPC				*e*			00 49 21.4	
DPC	**Dobruska-Polom**	**144.25**	**350**	*e*PKPdf		**PKPdf**	**00 49 15.9**	**-0.6**
DPC	**Dobruska-Polom**	**144.25**	**350**	*e*PKP		**PKPdf**	**00 49 15.7**	**-0.7**
DPC				*ep*PKP		**PKiKP**	**00 49 21.4**	**+1.4**
NIE	**Niedzica**	**144.28**	**345**	*e*PKIKP		**PKPdf**	**00 49 16.2**	**-0.3**
NIE	**Niedzica**	**144.28**	**345**	*e*PKP		**PKPdf**	**00 49 16.2**	**-0.3**
PVCC	**Panska Ves**	**144.36**	**352**	*e*PKIKP		**PKPdf**	**00 49 18.5**	**+2.0**
PVCC	**Panska Ves**	**144.36**	**352**	*e*PKP		**PKPdf**	**00 49 18.5**	**+2.0**
BUR08	**Bucovina Ar. S**	**144.38**	**339**	*e*PKPdf		PKPbc	00 49 15.9	+0.6
BUR08				*e*SKPbc		**SKPbc**	**00 52 52.5**	**-0.1**
OKC	**Ostrava-Krasne**	**144.39**	**347**	*e*PKIKP		**PKPdf**	**00 49 16.8**	**+0.2**
OKC				*e*			00 49 25.3	
OKC				MLR		MLR		
	comp=Z,100nm,15.6s							
OKC	**Ostrava-Krasne**	**144.39**	**347**	*e*PKP		**PKPdf**	**00 49 16.8**	**+0.2**
OKC				*ep*PKP		**PKiKP**	**00 49 25.3**	**+5.1**
OKC				AMS		AMS	01 48 00.0	
	comp=Z,100nm,15.6s							
BURAR	**Bucovina Array**	**144.40**	**338**	⇓*i*P		PKPbc	00 49 15.6	+0.3
CRVS	**Cervenica-Dubn**	**144.45**	**343**	*e*PKIKP		PKPbc	00 49 15.4	+0.1
CRVS	**Cervenica-Dubn**	**144.45**	**343**	*e*PKP		PKPbc	00 49 15.4	+0.1
CRVS				*e*			00 49 35.2	
MORC	**Moravsky Berou**	**144.57**	**348**	*e*PKIKP		**PKPdf**	**00 49 17.5**	**+0.5**
MORC	**Moravsky Berou**	**144.57**	**348**	*e*PKPdf		**PKPdf**	**00 49 17.5**	**+0.5**
TESR	**Tescani**	**144.79**	**336**	⇓*i*P		PKPbc	00 49 17.0	+0.5
MEM	**Membach**	**144.82**	**1**	APKP		pPKPdf	00 49 30.3	-0.4
TRPA	**Tarpa**	**144.83**	**342**	⇑*i*P		**PKPdf**	**00 49 17.2**	**-0.2**
TRPA	**Tarpa**	**144.83**	**342**	*e*PKPbc		PKPbc	00 49 16.9	+0.4
PRU	**Pruhonice**	**144.89**	**351**	*e*PKIKP		PKPbc	00 49 17.1	+0.5
PRU				*e*			00 49 27.5	
PRU				MLR		MLR		
	comp=Z,100nm,19.1s							
PRU	**Pruhonice**	**144.89**	**351**	*e*PKP		PKPbc	00 49 17.1	+0.5
PRU				*ex*		x	00 49 27.5	
PRU				AMS		AMS	01 47 20.0	
	comp=Z,100nm,19.1s							
GZT	**Gaziantep**	**145.06**	**315**	*i* P		**PKPdf**	**00 49 19.7**	**+1.3**
CFR	**Carcaliu**	**145.25**	**333**	⇓PKIKP		**PKPdf**	**00 49 19.8**	**+1.6**
CFR	**Carcaliu**	**145.25**	**333**	⇓*i*P		**PKPdf**	**00 49 19.8**	**+1.6**
VRI	**Vrincioaia**	**145.29**	**335**	⇓PKIKP		**PKPdf**	**00 49 18.9**	**+0.6**
VRI	**Vrincioaia**	**145.29**	**335**	⇓*i*P		**PKPdf**	**00 49 18.9**	**+0.6**
DOU	**Dourbes**	**145.30**	**3**	PKP		**PKPdf**	**00 49 19.5**	**+1.4**
DOU				E			00 49 28.5	
DOU				APKP		**pPKPdf**	**00 49 32.5**	**+1.0**
TREC	**Trest**	**145.41**	**350**	*e*PKIKP		**PKPab**	**00 49 18.7**	**+0.1**
TREC				*e*			00 49 27.9	
TREC				MLR		MLR		
	comp=Z,200nm,21.1s							
TREC	**Trest**	**145.41**	**350**	*e*PKP		**PKPab**	**00 49 18.7**	**+0.1**
TREC				*ex*		x	00 49 27.9	
TREC				AMS		AMS	01 51 30.0	
	comp=Z,200nm,21.1s							
VYHS	**Vyhne**	**145.50**	**346**	*e*PKIKP		**PKPab**	**00 49 19.6**	**+0.7**
VYHS				*e*			00 49 33.9	
VYHS	**Vyhne**	**145.50**	**346**	*e*PKP		**PKPab**	**00 49 19.6**	**+0.7**
VYHS				*e*			00 49 33.9	
AYKD	**Aykdinkavak**	**145.54**	**315**	*i* P		**PKPab**	**00 49 20.8**	**+1.3**
GRF	**Grafenberg Arr**	**145.56**	**355**	*e*PKP		**PKPab**	**00 49 19.3**	**+0.2**
GRF				*eL*		L	01 47 53.3	
	comp=Z,85nm,20.8s							
GRF	**Grafenberg Arr**	**145.56**	**355**	*e*PKIKP		**PKPab**	**00 49 19.3**	**+0.2**
GRFO	**Grafenberg**	**145.56**	**355**	*e*PKIKP		**PKPdf**	**00 49

JAVS	**Javornik**	**148.95**	**350**	*i* PKPdf	**PKPbc**	**00 49 30.6**	**+2.0**
JAVS				*i*		00 49 44.0	
SENIN	**Lac Senin/Sane**	**149.08**	**359**	*e*PKPab	**PKPbc**	**00 49 30.9**	**+1.9**
BOJS	**Bojanci**	**149.11**	**348**	*i* PKPdf	**PKPbc**	**00 49 29.8**	**+0.9**
BOJS				*i*		00 49 43.5	
CSS	**Prodhromos**	**149.22**	**314**	*e*PKPab	**PKPbc**	**00 49 31.0**	**+1.5**
SSB	**Saint Sauveur**	**150.10**	**3**	*e*PKHKP	PKPpre	00 49 26.8	
SSB	**Saint Sauveur**	**150.10**	**3**	*e*PKPdf	**PKPdf**	**00 49 26.8**	**+0.4**
PGAV	**Gavieira, Arco**	**150.45**	**23**	*i* P	PKPab	00 49 56.7	+18
PGAV				*e*LR	LR	01 47 11.8	
	comp=Z,83nm,20.0s						
PCAB	**Cabril**	**150.76**	**23**	*i* P	PKPab	00 49 57.5	+17
POLO	**Lamas de Olo**	**151.14**	**23**	*i* P	PKPab	00 49 57.5	+16
PBRG	**Braganca**	**151.15**	**21**	*i* P	PKPab	00 49 58.0	+16
PVRL	**Vila Real**	**151.25**	**23**	*i* P	PKPab	00 49 58.6	+16
TOUF	**Mont Tournerai**	**151.43**	**359**	PKP	**PKPbc**	**00 49 35.4**	**+0.7**
AUTN	**L'Aution**	**151.44**	**359**	PKP	**PKPbc**	**00 49 34.9**	**+0.1**
SAOF	**Saorge**	**151.45**	**359**	PKP	**PKPbc**	**00 49 34.1**	**-0.5**
MVO	**Moncorvo**	**151.61**	**22**	*e*PKP	**PKPbc**	**00 49 36.0**	**+0.9**
MVO				*i* P	PKPab	00 49 58.9	+15
MVO				*e*LR	LR	01 45 54.9	
	comp=Z,109nm,20.0s						
REVF	**Revere**	**151.70**	**359**	PKP	**PKPbc**	**00 49 33.4**	**-1.8**
MTE	**Manteigas**	**152.07**	**24**	*e*LR	LR	01 47 19.5	
	comp=Z,77nm,22.0s						
PTOM	**Tomar**	**152.38**	**26**	*i* P	PKPab	00 50 00.9	+14
PMRV	**Marv??o**	**152.97**	**25**	*i* P	PKPab	00 50 02.4	+13
PMRV				A	A	01 51 53.9	
	comp=Z,99nm,20.0s						
ESDC	**Sonseca Array**	**153.99**	**19**	PKPab	**PKPab**	**00 49 53.4**	**-0.3**
ESDC	**Sonseca Array**	**153.99**	**19**	PKPab	**PKPab**	**00 49 53.4**	**-0.3**
	comp=Z,2.2nm,1.0s,baz=316,slow=3.7,SNR=7.6						
TORD	**Torodi Ar. Bea**	**174.56**	**113**	PKP	**PKPdf**	**00 49 49.6**	**-1.5**
TORD				PKPab	**PKPab**	**00 51 23.2**	**-1.4**
TORD	**Torodi Ar. Bea**	**174.56**	**113**	PKP	**PKPdf**	**00 49 49.6**	**-1.5**
	comp=Z,0.7nm,0.9s,baz=34,slow=0.3,SNR=3.7						
TORD				PKPab	**PKPab**	**00 51 23.2**	**-1.4**
	comp=Z,1.0nm,0.9s,baz=255,slow=4.1,SNR=3.5						

IDC 21 00:38:02.4±3.7,**3°25'N**×**83°30'W**,**h0**km,**mb3.5**/3,
mb1 3.8/3,**mb1mx3.5**/21,**mbtmp3.5**/3,**MS3.3**/5,**Ms1 3.3**/5,
ms1mx3.0/23,**Error ellipse: s-maj=417.5km**
s-min=30.9km az=61.0,**Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**11.42**	**155**	LR	LR	00 43 39.6	
	comp=Z,49nm,21.9s,baz=131,slow=30						
TEIG	**Tepich**	**17.56**	**344**	LR	LR	00 48 49.3	
	comp=Z,70nm,20.4s,baz=117,slow=37						
LPAZ	**La Paz**	**24.53**	**143**	P	P	00 43 24.6	+0.1
	1.2nm,0.7s,baz=348,slow=12,SNR=3.9						
SIV	**San Ignacio**	**29.13**	**132**	LR	LR	00 56 16.0	
	comp=Z,63nm,21.7s,slow=38						
CPUP	**Villa Florida**	**38.67**	**141**	LR	LR	01 02 49.6	
	comp=Z,49nm,19.2s,baz=354,slow=38						
YKA	**Yellowknife Ar**	**63.52**	**344**	P	P	00 48 34.5	+0.3
	0.7nm,0.9s,baz=138,slow=6.3,SNR=9.3						
SFJD	**Kangerlussuaq**	**67.54**	**13**	LR	LR	01 20 52.9	
	comp=Z,57nm,18.5s,baz=181,slow=38						
ILAR	**Eielson Array**	**76.04**	**337**	P	P	00 49 51.0	-0.4
	0.2nm,0.8s,baz=136,slow=4.9,SNR=4.2						

ATH ***21*** *00:44:09.4,36°.10N×29°.16E,h66km±5km*
ISCJB ***21*** *00:44:11.0±0.8,35°.89N±0°.04×29°.09E±0°.04,h26km±6km, Error ellipse: s-maj=8.2km s-min=4.6km az=147.2*
ISK ***21*** *00:44:10.1,35°.97N×29°.09E,h14km, MD3.1*
DDA ***21*** *00:44:11.2,36°.02N×28°.98E,h8km, MD3.0*
CSEM ***21*** *00:44:11.0±0.3,35°.91N×29°.10E,h20km, MD3.0, Error ellipse: s-maj=7.0km s-min=3.7km az=148.0*

ISC 21 00:44:10.4±1.4,**35°.97N**±0°.04×**29°.02E**±0°.03,**h9**km±10km,
n41,σ0**964**/59,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.49**	**68**	*e*P	**Pb**	**00 44 21.0**	**-0.2**
AKAS	**Kas**	**0.54**	**60**	*i* P	**Pb**	**00 44 21.6**	**-0.5**
AKAS				*i* S	**Sb**	**00 44 31.5**	**+1.4**
AKAS	**Kas**	**0.54**	**60**	*i* P	**Pb**	**00 44 21.6**	**-0.5**
AKAS				*i* S	**Sb**	**00 44 31.5**	**+1.4**
FETY	**Fethiye**	**0.67**	**4**	*e*PG	**Pg**	**00 44 23.5**	**+0.2**
FETY				*e*SG	**Sb**	**00 44 33.3**	**-0.4**
FETY	**Fethiye**	**0.67**	**4**	*e*Pg	**Pg**	**00 44 23.5**	**+0.2**
FETY				*e*Sg	**Sb**	**00 44 33.3**	**-0.4**
ARG	**Arkhangelos**	**0.77**	**289**	*e*P	**Pn**	**00 44 26.7**	**-0.6**
ARG				*e*S	**Sn**	**00 44 39.0**	**0.0**
ARG	**Arkhangelos**	**0.77**	**289**	*e*P	**Pn**	**00 44 26.7**	**-0.6**
ARG				*e*S	**Sn**	**00 44 39.0**	**0.0**
TURN	**Turunc**	**0.97**	**340**	*i* P	**Pn**	**00 44 30.1**	**0.0**
TURN				*i* S	**Sn**	**00 44 44.7**	**+0.8**
TURN	**Turunc**	**0.97**	**340**	*i* P	**Pn**	**00 44 30.1**	**0.0**
TURN				*i* S	**Sn**	**00 44 44.7**	**+0.8**
GLHS	**Glhisar (BURDU**	**1.25**	**18**	*e*PN	**Pn**	**00 44 33.3**	**-0.8**
GLHS				*e*SN	**Sn**	**00 44 50.7**	**-0.4**
GLHS	**Glhisar (BURDU**	**1.25**	**18**	*e*Pn	**Pn**	**00 44 33.3**	**-0.8**
GLHS				*e*Sn	**Sn**	**00 44 50.7**	**-0.4**
YER	**Yerkesik**	**1.31**	**333**	*e*PN	**Pg**	**00 44 35.8**	**+0.3**
YER				*e*SN	**Sg**	**00 44 52.5**	**0.0**
YER	**Yerkesik**	**1.31**	**333**	*e*Pn	**Pg**	**00 44 35.8**	**+0.3**
YER				*e*Sn	**Sg**	**00 44 52.5**	**0.0**
GOLH	**Golhisar**	**1.34**	**19**	*i* P	**Pn**	**00 44 35.1**	**-0.2**
GOLH				*i* S	**Sg**	**00 44 53.8**	**+0.2**
GOLH	**Golhisar**	**1.34**	**19**	*i* P	**Pn**	**00 44 35.1**	**-0.2**
GOLH				*i* S	**Sg**	**00 44 53.8**	**+0.2**
KORT	**Korkueli**	**1.49**	**46**	*i* P	**Pn**	**00 44 36.4**	**-1.0**
KORT	**Korkueli**	**1.49**	**46**	*i* P	**Pn**	**00 44 36.4**	**-1.0**
KARP	**Karpathos**	**1.57**	**255**	*e*P	**Pn**	**00 44 37.4**	**-1.0**
KARP				*e*S	**Sb**	**00 44 59.4**	**-0.1**
KARP	**Karpathos**	**1.57**	**255**	*e*P	**Pn**	**00 44 37.4**	**-1.0**
KARP				*e*S	**Sb**	**00 44 59.4**	**-0.1**
ANTB	**Antalya**	**1.61**	**54**	*e*PN	**Pn**	**00 44 37.6**	**-1.4**
ANTB	**Antalya**	**1.61**	**54**	*e*Pn	**Pn**	**00 44 37.6**	**-1.4**
MLSB	**Milas**	**1.66**	**323**	*e*PN	**Pb**	**00 44 40.4**	**-0.8**
MLSB	**Milas**	**1.66**	**323**	*e*Pn	**Pb**	**00 44 40.4**	**-0.8**
DNZL	**Cakiroluk**	**1.72**	**1**	*i* P	**Pb**	**00 44 42.4**	**+0.2**
DNZL	**Cakiroluk**	**1.72**	**1**	*i* P	**Pb**	**00 44 42.4**	**+0.2**
BODT	**Bodrum**	**1.76**	**309**	*e*PN	**Pn**	**00 44 40.7**	**-0.3**
BODT	**Bodrum**	**1.76**	**309**	*e*Pn	**Pn**	**00 44 40.7**	**-0.3**
DENT	**Denizli**	**1.79**	**0**	*e*PN	**Pn**	**00 44 41.6**	**+0.2**
DENT	**Denizli**	**1.79**	**0**	*e*Pn	**Pn**	**00 44 41.6**	**+0.2**
AYDN	**Tasoluk**	**1.92**	**332**	*i* P	**Pb**	**00 44 44.9**	**-0.7**
AYDN	**Tasoluk**	**1.92**	**332**	*i* P	**Pb**	**00 44 44.9**	**-0.7**
ISP	**Isparta**	**2.21**	**33**	*e*PN	**Pn**	**00 44 47.3**	**0.0**
ISP	**Isparta**	**2.21**	**33**	*e*Pn	**Pn**	**00 44 47.3**	**0.0**
ZKR	**Zakros**	**2.44**	**250**	*e*P	**Pn**	**00 44 51.1**	**+0.8**
ZKR				*e*S	**Sn**	**00 45 20.8**	**+0.6**
ZKR	**Zakros**	**2.44**	**250**	*e*P	**Pn**	**00 44 51.1**	**+0.8**
ZKR				*e*S	**Sn**	**00 45 20.8**	**+0.6**
NPS	**Neapolis**	**2.86**	**257**	*e*P	**Pn**	**00 44 55.6**	**-0.6**
NPS	**Neapolis**	**2.86**	**257**	*e*P	**Pn**	**00 44 55.6**	**-0.6**
LAST	**Lasithi**	**3.00**	**255**	*e*P	**Pn**	**00 44 58.8**	**+0.7**
LAST	**Lasithi**	**3.00**	**255**	*e*P	**Pn**	**00 44 58.8**	**+0.7**
IDI	**Anoyia**	**3.43**	**260**	*e*P	**Pn**	**00 45 03.8**	**-0.2**
IDI	**Anoyia**	**3.43**	**260**	*e*P	**Pn**	**00 45 03.8**	**-0.2**

ISCJB ***21*** *00:51:07.8±0.7,51°.40N±0°.03×16°.09E±0°.03,h0km, Error ellipse: s-maj=4.8km s-min=2.8km az=18.5*
WAR ***21*** *00:51:08.4,51°.53N×16°.15E*
IPEC ***21*** *00:51:08.1±0.3,51°.51N×16°.26E,h0km,ML2.3/3, Error ellipse: s-maj=3.3km s-min=1.7km az=67.0*
CSEM ***21*** *00:51:09.3±0.3,51°.40N×16°.09E,h1km,ML3.1/10, Error ellipse: s-maj=5.8km s-min=3.1km az=2.0*
VIE ***21*** *00:51:10.9±0.4,51°.24N×16°.15E,h0km,mb2.1/3,ML2.6/4, Error ellipse: s-maj=3.2km s-min=2.7km az=71.0 62 km WNW of Wroclaw Suspected Mining induced.*

ISC 21 00:51:08.3±0.9,**51°.50N**±0°.03×**16°.10E**±0°.02,**h0**km,**n40**,
σ1**°09**/72,**2C-2D**,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	**Pg**	**00 51 21.3**	**+0.2**
KSP				*e*Sg	**Sg**	**00 51 30.5**	**+0.8**
KSP	**Ksiaz**	**0.67**	**170**	*e*Pg	**Pg**	**00 51 21.4**	**+0.3**
UPC	**Upice**	**1.00**	**183**	*e*PG	**Pg**	**00 51 27.3**	**0.0**
UPC	**Upice**	**1.00**	**183**	Pg	**Pg**	**00 51 27.3**	**0.0**
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*PG	**Pg**	**00 51 30.2**	**-0.3**
DPC				*e*SG	**Sg**	**00 51 44.3**	**-1.2**
	comp=Z,30nm,0.6s						
DPC	**Dobruska-Polom**	**1.16**	**173**	Pg	**Pg**	**00 51 30.2**	**-0.3**
DPC				Sg	**Sg**	**00 51 44.3**	**-1.2**
	30nm,0.6s						
PVCC	**Panska Ves**	**1.37**	**225**	*e*PG	**Pb**	**00 51 34.9**	**+0.1**
PVCC				*e*SG	**Sg**	**00 51 52.7**	**+0.3**
	comp=Z,104nm,0.5s						
PVCC	**Panska Ves**	**1.37**	**225**	Pg	**Pb**	**00 51 34.9**	**+0.1**
PVCC				Sg	**Sg**	**00 51 52.7**	**+0.3**
	104nm,0.5s						
BRG	**Berggiesshubel**	**1.50**	**246**	PG	**Pg**	**00 51 37.4**	**+0.4**
BRG				SG	**Sn**	**00 51 57.1**	**+0.5**
	66nm,0.6s						
BRG				PG		01 25 35.0	
BRG				SG		01 25 55.1	
	3.0nm,0.4s						
PRU	**Pruhonice**	**1.81**	**214**	*e*PG	**Pb**	**00 51 42.0**	**-0.3**
PRU				*e*SG	**Sn**	**00 52 05.1**	**+0.8**
	comp=Z,32nm,0.4s						
PRU	**Pruhonice**	**1.81**	**214**	Pg	**Pb**	**00 51 42.0**	**-0.3**
PRU				Sg	**Sn**	**00 52 05.1**	**+0.8**
	32nm,0.4s						
CLL	**Collm**	**1.95**	**266**	*e*Pg	**Pg**	**00 51 46.0**	**+0.3**
CLL				*e*Sg	**Sg**	**00 52 12.0**	**+1.1**
	comp=Z,19nm,0.8s						
MORC	**Moravsky Berou**	**1.95**	**151**	*e*Pn	**Pn**	**00 51 42.0**	**-0.7**
	baz=335						
MORC				*e*Sg	**Sn**	**00 52 08.0**	**0.0**
	comp=Z,23nm,0.6s,baz=335						
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*PG	**Pb**	**00 51 48.0**	**+0.6**
OKC				*e*SG	**Sb**	**00 52 14.7**	**+0.5**
OKC	**Ostrava-Krasne**	**2.11**	**141**	Pg	**Pb**	**00 51 48.0**	**+0.6**
OKC				Sg	**Sb**	**00 52 14.7**	**+0.5**
VRAC	**Vranov**	**2.22**	**172**	*e*Pn	**Pn**	**00 51 46.2**	**-0.1**
VRAC				*e*Sg	**Sb**	**00 52 17.2**	**0.0**
	comp=Z,12nm,0.5s,baz=354						
TREC	**Trest**	**2.24**	**190**	*e*PG	**Pb**	**00 51 50.1**	**+0.4**
TREC	**Trest**	**2.24**	**190**	Pg	**Pb**	**00 51 50.1**	**+0.4**
KRUC	**Moravsky**	**2.45**	**175**	*e*Pn	**Pn**	**00 51 49.3**	**-0.2**
	baz=358						
KRUC				*e*Sg	**Sb**	**00 52 24.9**	**+1.1**
	comp=Z,17nm,0.7s,baz=358						
NKC	**Novy Kostel**	**2.64**	**243**	*e*PN	**Pn**	**00 51 53.2**	**+1.1**
NKC				*e*PG	**Pg**	**00 51 58.0**	**-0.9**
NKC				*e*SG	**Sg**	**00 52 33.3**	**+0.2**
	comp=Z,23nm,0.4s						
NKC	**Novy Kostel**	**2.64**	**243**	Pn	**Pn**	**00 51 53.2**	**+1.1**
NKC	**Novy Kostel**	**2.64**	**243**	Pg	**Pg**	**00 51 58.0**	**-0.9**
NKC				Sg	**Sg**	**00 52 33.3**	**+0.2**
	comp=Z,23nm,0.4s						
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**00 52 00.5**	**+1.1**
OJC				*e*Sg	**Sg**	**00 52 35.5**	**+1.5**
OJC	**Ojcow**	**2.67**	**117**	*e*Pg	**Pg**	**00 52 00.5**	**+1.1**
OJC				*e*Sg	**Sg**	**00 52 35.5**	**+1.5**
KHC	**Kasperske Hory**	**2.87**	**215**	*e*PN	**Pn**	**00 51 55.7**	**+0.4**
KHC				*e*PG	**Pg**	**00 52 00.4**	**0.0**
KHC				*e*SN	**Sn**	**00 52 29.0**	**-1.6**
KHC				*e*SG	**Sb**	**00 52 38.4**	**+2.3**
	comp=Z,7.0nm,0.4s						
KHC	**Kasperske Hory**	**2.87**	**215**	Pn	**Pn**	**00 51 55.7**	**+0.4**
KHC				Sn	**Sn**	**00 52 29.0**	**-1.6**
KHC				Sg	**Sb**	**00 52 38.4**	**+2.3**
	comp=Z,7.0nm,0.4s						
SMOL	**Smolenice**	**3.11**	**164**	*e*SG	**Sg**	**00 52 48.7**	**+0.6**
SMOL	**Smolenice**	**3.11**	**164**	*e*Sg	**Sg**	**00 52 48.7**	**+0.6**
ZST	**Bratislava**	**3.37**	**169**	*e*PN	**Pn**	**00 52 01.9**	**-0.2**
ZST				*e*		00 52 12.4	
ZST	**Bratislava**	**3.37**	**169**	*e*Pn	**Pn**	**00 52 01.9**	**-0.2**
ZST				*e*Sg	**Sg**	**00 52 57.4**	**+0.9**
NIE	**Niedzica**	**3.40**	**126**	*e*P	**Pg**	**00 52 12.6**	**-0.9**
NIE				*e*S	**Sg**	**00 52 57.5**	**0.0**
VYHS	**Vyhne**	**3.49**	**149**	*e*PN	**Pn**	**00 52 02.7**	**-1.1**
VYHS				*e*		00 52 14.4	
VYHS	**Vyhne**	**3.49**	**149**	*e*Pn	**Pn**	**00 52 02.7**	**-1.1**
VYHS				*e*Sg	**Sg**	**00 53 01.9**	**+1.6**
CONA	**Conrad Observa**	**3.58**	**183**	⇓*i*Pn	**Pn**	**00 52 03.4**	**-1.7**
CONA				⇓*i*Sg	**Sg**	**00 53 00.7**	**-2.5**
	comp=Z,13nm,0.5s						
CONA	**Conrad Observa**	**3.58**	**183**	Pn	**Pn**	**00 52 03.4**	**-1.7**
CONA				Sg	**Sg**	**00 53 00.7**	**-2.5**
	comp=Z,13nm,0.5s						
BSD	**Bornholm Skovb**	**3.69**	**349**	*i* P	**Pn**	**00 52 06.0**	**-0.5**
BSD				*i* S	**Sn**	**00 52 47.1**	**-3.6**
MOA	**Molln**	**3.84**	**199**	⇑*i*Pn	**Pn**	**00 52 08.0**	**-0.7**
MOA				⇑*i*Sg	**Sg**	**00 53 10.1**	**-1.6**
	comp=Z,12nm,0.6s						
MOA	**Molln**	**3.84**	**199**	Pn	**Pn**	**00 52 08.0**	**-0.7**
MOA				Sg	**Sg**	**00 53 10.1**	**-1.6**
	comp=Z,12nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*SG	**Sg**	**00 53 26.5**	**-0.3**
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*Sg	**Sg**	**00 53 26.5**	**-0.3**

IDC ***21*** *01:02:25.1±0.9,17°.97N×62°.85W,h25km±5km,mb3.7/6, mb1 4.0/6,mb1mx3.6/22,mbtmp3.7/6, Error ellipse: s-maj=27.9km s-min=16.8km az=55.0*
NEIC ***21*** *01:02:27.1±1.0,18°.17N×62°.78W,h35km,MD3.8(TRN), Error ellipse: s-maj=20.2km s-min=5.0km az=209.0*
NEIC Felt on Saint Kitts and Saint Martin.
TRN ***21*** *01:02:27.6,17°.91N×62°.66W,h17km,MD3.8*

ISC 21 01:02:25.7±0.7,**18°.15N**±0°.05×**62°.79W**±0°.04,**h28**km±5km,
n41,σ1**°23**/59,**mb3.9**/8,**1C-2D**,**Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSK	**Brimstone Hill**	**0.80**	**184**	*e*P	**Pn**	**01 02 42.0**	**+0.9**
BSK				*e*S	**Sb**	**01 02 50.7**	**-0.8**
BSK	**Brimstone Hill**	**0.80**	**184**	*e*P	**Pn**	**01 02 42.0**	**+0.9**
BSK				*e*S	**Sb**	**01 02 50.7**	**-0.8**
NEV	**Hard Times**	**1.03**	**168**	*e*P	**Pb**	**01 02 45.1**	**+0.2**
NEV				*e*S	**Sn**	**01 02 58.1**	**+0.3**
NEV	**Hard Times**	**1.03**	**168**	*e*P	**Pb**	**01 02 45.1**	**+0.2**
NEV				*e*S	**Sn**	**01 02 58.1**	**+0.3**
NVBH	**Bath Hotel, Ne**	**1.04**	**171**	*e*P	**Pn**	**01 02 44.9**	**+0.5**
ANWB	**Willy Bob**	**1.07**	**116**	*e*Pn	**Pn**	**01 02 45.1**	**+0.4**
ANWB				*e*S	**Sb**	**01 02 59.5**	**+0.5**
BPA	**Boggy Peak**	**1.41**	**141**	*e*P	**Pn**	**01 02 50.6**	**+1.1**
BPA				*e*S	**Sn**	**01 03 07.4**	**+0.2**
BPA	**Boggy Peak**	**1.41**	**141**	*e*P	**Pn**	**01 02 50.6**	**+1.1**
BPA				*e*S	**Sn**	**01 03 07.4**	**+0.2**
CDVI	**St. Croix**	**1.93**	**258**	*e*Pn	**Pn**	**01 02 57.0**	**+0.4**
STVI	**Saint Thomas**	**2.07**	**276**	*e*Pn	**Pn**	**01 02 58.3**	**-0.2**
STVI				*e*S	**Sn**	**01 03 22.1**	**-1.4**
SEG	**Port Louis**	**2.12**	**145**	*e*P	**Pn**	**01 02 59.8**	**+0.5**
LZG	**Guadaloupe-1**	**2.22**	**154**	*e*P	**Pn**	**01 03 01.0**	**+0.4**
BCG	**Bois Riant Cap**	**2.34**	**151**	*e*P	**Pn**	**01 03 03.0**	**+0.7**
SCG	**Saint Claude**	**2.36**	**153**	*e*P	**Pn**	**01 03 03.6**	**+0.9**
DOG	**Dongo Capester**	**2.38**	**152**	*e*P	**Pn**	**01 03 03.4**	**+0.5**
PHG	**Guadaloupe-2**	**2.39**	**153**	*e*P	**Pn**	**01 03 04.2**	**+1.1**
HMG	**Houelmont**	**2.39**	**154**	*e*P	**Pn**	**01 03 04.9**	**+1.8**
MGG	**Marie-Galante**	**2.63**	**147**	⇓*e*P	**Pn**	**01 03 07.2**	**+1.0**
MTP	**Monte Pirata**	**2.63**	**269**	*e*Pn	**Pn**	**01 03 07.0**	**+0.7**
MTP				*e*S	**Sn**	**01 03 36.9**	**-0.5**
DVCT	**Vielle Casse P**	**2.85**	**152**	*e*P	**Pn**	**01 03 11.3**	**+2.1**
DVCT				*e*S	**Sn**	**01 03 42.3**	**-0.3**
CBYP	**Canovanas**	**2.92**	**273**	*e*Pn	**Pn**	**01 03 10.7**	**+0.4**
CBYP				*e*S	**Sn**	**01 03 43.4**	**-1.2**
SJG	**San Juan**	**3.20**	**270**	*e*Pn	**Pn**	**01 03 15.1**	**+1.0**
SJG				*e*S	**Sn**	**01 03 52.1**	**+0.7**
CELP	**Cerrillos**	**3.61**	**269**	*e*Pn	**Pn**	**01 03 21.5**	**+1.8**
CELP				*e*S	**Sn**	**01 04 01.8**	**+0.3**
OBIP	**Obispado Ponce**	**3.63**	**269**	*e*Pn	**Pn**	**01 03 21.4**	**+1.3**
FDF	**Fort de France**	**3.74**	**155**	*e*Pn	**Pn**	**01 03 23.9**	**+2.3**
FDF	**Fort de France**	**3.74**	**155**	⇓*e*P	**Pn**	**01 03 24.4**	**+2.8**
FDF				⇓*e*S	**Sn**	**01 04 06.4**	**+1.6**
LRS	**Lares**	**3.86**	**273**	*e*Pn	**Pn**	**01 03 24.1**	**+0.9**
LRS				*e*S	**Sn**	**01 04 11.4**	**+3.7**
LSP	**Las Mesas**	**4.09**	**271**	*e*Pn	**Pn**	**01 03 27.7**	**+1.4**
CRPR	**Cabo Rojo, PR**	**4.12**	**269**	*e*Pn	**Pn**	**01 03 27.7**	**+1.0**
AGPR	**Aguadilla, PR**	**4.12**	**275**	*e*Pn	**Pn**	**01 03 27.5**	**+0.7**
SDDR	**Presa de Saban**	**8.11**	**277**	Pn	**Pn**	**01 04 24.1**	**+2.5**
	25nm,0.7s						
LPAZ	**La Paz**	**34.62**	**189**	P	**P**	**01 09 11.4**	**-1.9**
	0.4nm,0.5s,baz=12,slow=7.3,SNR=3.7						
TXAR	**Lajitas Array**	**38.86**	**294**	P	**P**	**01 09 47.9**	**-0.9**
	0.4nm,0.6s,baz=102,slow=9.1,SNR=8.7						
TXAR				PcP	**PcP**	**01 12 01.2**	**+1.6**
	0.1nm,0.4s,baz=100,slow=3.7,SNR=4.1						
ULM	**Lac du Bonnet**	**41.51**	**328**	P	**P**	**01 10 10.7**	**+0.3**
	2.6nm,0.4s,baz=138,slow=5.7,SNR=3.7						
CPUP	**Villa Florida**	**44.53**	**173**	P	**P**	**01 10 32.5**	**-2.5**
	0.7nm,0.4s,baz=322,slow=12,SNR=6.4						
PDAR	**Pinedale Array**	**46.45**	**312**	P	**P**	**01 10 51.4**	**+1.0**
	4.9nm,0.6s,baz=123,slow=9.8,SNR=6.9						
YKA	**Yellowknife Ar**	**56.83**	**334**	P	**P**	**01 12 07.7**	**+0.3**
	1.0nm,0.5s,baz=105,slow=7.5,SNR=16						
YKA				pP	**pP**	**01 12 15.7**	**-0.3**
	0.7nm,0.6s,baz=107,slow=7.5,SNR=10						
TORD	**Torodi Ar. Bea**	**62.03**	**84**	P	**P**	**01 12 44.2**	**+0.2**
	0.3nm,0.9s,baz=287,slow=7.5,SNR=2.1						
TORD				pP	**pP**	**01 12 52.7**	**-0.1**
	0.4nm,0.7s,baz=291,slow=5.8,SNR=3.2						
GERES	**GERESS Array B**	**67.72**	**44**	pP	pP	01 13 30.0	+0.5
	0.3nm,0.6s,baz=297,slow=5.8,SNR=2.9						
ILAR	**Eielson Array**	**71.24**	**333**	P	**P**	**01 13 42.3**	**+0.3**
	0.5nm,0.5s,baz=102,slow=4.3,SNR=14						
ILAR				pP	**pP**	**01 13 50.9**	**0.0**
	0.2nm,0.4s,baz=110,slow=4.3,SNR=3.0						
WRA	**Warramunga Arr**	**163.71**	**261**	PKPab	**PKPab**	**01 23 18.6**	**-0.5**
	0.4nm,0.8s,baz=91,slow=4.2,SNR=3.4						

IDC 21 01:09:55.4±1.9,**2°.20N**×**127°.98E**,**h0**km,**mb3.5**/4,
mb1 3.8/4,**mb1mx3.5**/22,**mbtmp3.6**/4,**Error ellipse:**
s-maj=103.9km s-min=23.5km az=70.0,**Northern**
Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.30**	**186**	P	P	01 14 32.7	-0.4
	1.5nm,1.0s,baz=8.1,slow=14,SNR=3.0						
WRA	**Warramunga Arr**	**22.87**	**164**	P	P	01 15 01.1	+0.4
	1.6nm,0.6s,baz=344,slow=11,SNR=18						
ASAR	**Alice Springs**	**26.35**	**168**	P	P	01 15 32.9	-0.5
	0.4nm,0.3s,baz=347,slow=7.3,SNR=6.6						
MKAR	**Makanchi Array**	**59.52**	**325**	P	P	01 20 00.8	+0.2
	0.2nm,0.5s,baz=110,slow=7.4,SNR=3.2						

ATH ***21*** *01:11:45.4,37°.98N×26°.74E,h26km±3km,MD3.6/7*
ISCJB ***21*** *01:11:45.3±0.5,37°.95N±0°.02×26°.65E±0°.03,h4km±3km, Error ellipse: s-maj=3.8km s-min=2.8km az=143.4*
DDA ***21*** *01:11:45.8,37°.96N×26°.74E,h16km,MD3.4*
CSEM ***21*** *01:11:45.7±0.2,37°.94N×26°.66E,h2km,MD3.4, Error ellipse: s-maj=3.8km s-min=2.8km az=57.0*
ISK ***21*** *01:11:46.3,37°.95N×26°.81E,h7km,MD3.3*
THE ***21*** *01:11:48.5,38°.04N×26°.60E,h13km±1km,ML3.0/4, Error ellipse: s-maj=4.0km s-min=0.6km az=248.0*

ISC 21 01:11:44.7±0.7,**37°.99N**±0°.02×**26°.73E**±0°.02,**h14**km±7km,
n103,σ1**°35**/128,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.39**	**344**	*i* P	**Pb**	**01 11 53.8**	**+0.4**
URLA				*i* S	**Sb**	**01 12 00.1**	**+0.8**
URLA	**Izmir**	**0.39**	**344**	*i* P	**Pb**	**01 11 53.8**	**+0.4**
URLA				*i* S	**Sb**	**01 12 00.1**	**+0.8**
BLCB	**Balcova

KRBG	Karabiga-Canak	2.44	10	*e*Pn		Pb	01 12 28.1	-0.3	
NAIG	Nisos Aigina	2.58	266	*e*PN		Pn	01 12 27.3	+1.2	
NAIG	Nisos Aigina	2.58	266	*e*PN		Pn	01 12 27.3	+1.2	
KCTX	Karacabey (Bur	2.60	28	*e*PN		Pb	01 12 30.0	-1.2	
KCTX	Karacabey (Bur	2.60	28	*e*PN		Pb	01 12 30.0	-1.2	
ERIK	Erikli-Kesan	2.69	356	*e*PN		Pb	01 12 31.8	-0.8	
ERIK	Erikli-Kesan	2.69	356	*e*PN		Pb	01 12 31.8	-0.8	
MRMT	Marmara Adasi	2.70	14	*e*PN		Pb	01 12 31.6	-1.2	
MRMT	Marmara Adasi	2.70	14	*e*PN		Pb	01 12 31.6	-1.2	
ENEZ	Enez	2.78	351	*e*PN		Pb	01 12 33.1	-1.1	
ENEZ	Enez	2.78	351	*e*PN		Pb	01 12 33.1	-1.1	
ALT	Altintas	2.85	67	*e*PN		Pb	01 12 33.2	-2.3	
ALT	Altintas	2.85	67	*e*PN		Pb	01 12 33.2	-2.3	
ALN	Alexandroupoli	2.96	350	*e*PN		Pn	01 12 33.4	+2.2	
ALN	Alexandroupoli	2.96	350	*e*Pn		Pn	01 12 33.4	+2.2	
SHUT	Suhut-Afyon	3.06	78	*e*PN		Pb	01 12 35.7	-3.3	
SHUT	Suhut-Afyon	3.06	78	*e*Pn		Pb	01 12 35.7	-3.3	
ARMT	Armutlu	3.06	32	*e*PN		Pb	01 12 36.7	-2.2	
ARMT	Armutlu	3.06	32	*e*Pn		Pb	01 12 36.7	-2.2	
ADVT	Abdulvahap	3.38	43	*e*PN		Pb	01 12 41.2	-3.2	
ADVT	Abdulvahap	3.38	43	*e*Pn		Pb	01 12 41.2	-3.2	
ESKT	Eskisehir	3.56	63	*e*PN		Pb	01 12 43.2	-4.4	
ESKT	Eskisehir	3.56	63	*e*Pn		Pb	01 12 43.2	-4.4	
GPA	Golpazari	3.61	49	*e*PN		Pb	01 12 44.2	-4.1	
GPA	Golpazari	3.61	49	*e*Pn		Pb	01 12 44.2	-4.1	
HRT	Hereke	3.63	38	*e*PN		Pb	01 12 44.5	-4.2	
HRT	Hereke	3.63	38	*e*Pn		Pb	01 12 44.5	-4.2	
GULT	Gulveren	3.82	49	*e*PN		Pn	01 12 46.9	+3.7	
GULT	Gulveren	3.82	49	*e*Pn		Pn	01 12 46.9	+3.7	
EDRB	Edirne	3.86	0	*e*PN		Pb	01 12 48.3	-4.2	
EDRB	Edirne	3.86	0	*e*Pn		Pb	01 12 48.3	-4.2	
ITM	Ithomi	3.90	260	*e*PN		Pn	01 12 46.7	+2.4	
ITM	Ithomi	3.90	260	*e*Pn		Pn	01 12 46.7	+2.4	

MEX 21 01:24:38.7±0.4, 16°.79N×99°.11W, h11km±4km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.72**	**276**	*i* P	Pg	01 24 51.7	-1.1
ACX				*e*S	Sg	01 25 01.4	-0.9
PNIG	**Pinotepa**	**1.02**	**113**	*i* P	Pb	01 24 55.0	-3.4
PNIG				*i* S	Sg	01 25 07.9	-3.8
CAIG	**El Cayaco**	**1.14**	**283**	*i* P	Pb	01 24 56.8	-3.6
CAIG				*i* S	Sb	01 25 11.3	-3.9
PLIG	**Platanillo**	**1.64**	**347**	*i* P	Pn	01 25 03.9	-3.6
PLIG				*e*S	Sn	01 25 23.8	-4.9
ARIG	**Puente Sto Nin**	**1.90**	**322**	*i* P	Pn	01 25 07.0	-4.0
ARIG				*i* S	Sn	01 25 29.8	-5.2
YAIG	**Yautepec**	**2.06**	**1**	*i* P	Pn	01 25 10.9	-2.5
YAIG				*e*S	Sn	01 25 35.1	-4.1
ZIIG	**Zihuatanejo**	**2.40**	**290**	*i* P	Pn	01 25 14.6	-3.3
ZIIG				*e*S	Sn	01 25 43.5	-3.7

TIR 21 01:38:34.5±0.6, 42°.00N×20°.28E, h7km±182km, ML2.5, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.29**	**279**	*i* PG	Pb	01 38 41.9	-0.3
PUK				*i* SG	Sb	01 38 46.8	-0.6
PHP	**Peshkopia**	**0.34**	**159**	*i* PG	Pb	01 38 42.8	-0.1
PHP				*i* SG	Sb	01 38 48.7	+0.1
BCI	**Bajram Curri**	**0.40**	**337**	*i* PG	Pb	01 38 44.6	+0.6
BCI				*i* SG	Sb	01 38 51.2	+0.8

*ISCJB **21** 01:41:58.5±0.8, 33°.55N±0°.03×35°.59E±0°.06, h2km±7km, Error ellipse: s-maj=7.8km s-min=4.4km az=170.6*
*NSSC **21** 01:41:58.8±0.6, 33°.54N×35°.62E, h0km±3km, MD0.9, ML1.4*
*CSEM **21** 01:41:58.8±0.1, 33°.56N×35°.59E, h5km, ML3.0, Error ellipse: s-maj=3.0km s-min=1.9km az=94.0*
*GRAL **21** 01:41:59.6±0.3, 33°.55N×35°.61E, h0km±37km, MD3.0*
ISC 21 01:41:58.9±1.2, 33°.55N±0°.03×35°.61E±0°.05, h9km±9km, n13, σ0°28/25, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCY	**Rachaya**	**0.20**	**106**	*e*P	**Pg**	**01 42 03.1**	**+0.2**
RCY				*e*S	**Sg**	**01 42 05.7**	**-0.1**
BHL	**Bhannes**	**0.35**	**6**	*e*P	**Pg**	**01 42 06.0**	**+0.1**
BHL				*e*S	**Sg**	**01 42 10.7**	**+0.1**
BHL	**Bhannes**	**0.35**	**6**	*e*P	**Pg**	**01 42 06.0**	**+0.1**
BHL				*e*S	**Sg**	**01 42 10.7**	**+0.1**
NAQL	**Naqoura**	**0.58**	**222**	*e*P	**Pg**	**01 42 10.1**	**0.0**
TOTH	**TOTAH**	**0.71**	**105**	*e*P	**Pb**	**01 42 13.2**	**-0.3**
TOTH				*e*S	**Sb**	**01 42 22.9**	**-0.4**
TOTH	comp=E,38nm,0.5s			AML	AML	01 42 27.8	
TOTH	comp=N,18nm,0.7s			AML	AML	01 42 31.6	
HWQ	**Hawqa**	**0.78**	**21**	*e*P	**Pg**	**01 42 13.7**	**-0.2**
HWQ				*e*S	**Sg**	**01 42 23.9**	**-0.2**
HWQ	**Hawqa**	**0.78**	**21**	*e*P	**Pg**	**01 42 13.7**	**-0.2**
HWQ				*e*S	**Sg**	**01 42 23.9**	**-0.2**
TCHB	**Talchebab**	**0.93**	**161**	*e*P	**Pg**	**01 42 16.6**	**-0.1**
TCHB				*e*S	**Sb**	**01 42 29.9**	**+0.2**
TCHB	comp=N,37nm,0.3s			AML	AML	01 42 30.2	
TCHB	comp=E,23nm,0.3s			AML	AML	01 42 32.9	
HAWK	**Haweek**	**1.17**	**34**	*e*P	**Pg**	**01 42 21.5**	**+0.1**
HAWK				*e*S	**Sn**	**01 42 37.7**	**-0.1**
HAWK				AML	AML	01 42 41.3	
HAWK	comp=E,9.3nm,0.6s			AML	AML	01 42 41.5	
HAWK	comp=N,7.4nm,0.2s **Haweek**	**1.17**	**34**	*e*P	**Pg**	**01 42 21.5**	**+0.1**
	SNR=57						
HAWK	comp=N,7.4nm,0.2s,SNR=49			*e*S	**Sn**	**01 42 37.7**	**-0.1**
SALA	**Sala**	**1.26**	**131**	*e*P	**Pn**	**01 42 22.7**	**-0.2**
SALA				*e*S	**Sn**	**01 42 40.1**	**+0.1**
SALA	comp=E,1.7nm,0.4s			AML	AML	01 42 41.0	
SALA	comp=N,24nm,0.3s			AML	AML	01 42 41.6	
ZALF	**Zalf**	**1.57**	**113**	*e*P	**Pn**	**01 42 27.8**	**+0.7**
ZALF				*e*S	**Sb**	**01 42 48.1**	**-0.1**
ZALF	comp=N,11nm,0.4s			AML	AML	01 42 49.5	
ZALF	comp=E,5.8nm,0.4s			AML	AML	01 42 51.1	
ZALF	**Zalf** SNR=57	**1.57**	**113**	*e*P	**Pn**	**01 42 27.8**	**+0.7**
ZALF	comp=E,5.8nm,0.4s,SNR=49			*e*S	**Sb**	**01 42 48.2**	**-0.1**

*SZGRF **21** 01:41:42.2, 22°.54S×178°.23W, h33km, South of Fiji Islands*
*ISCJB **21** 01:42:52.1±0.2, 20°.75S±0°.05×179°.26W±0°.04, h619km, mb4.6/91, Error ellipse: s-maj=7.2km s-min=3.7km az=145.1*
*BGS **21** 01:42:53.7±4.2, 20°.74S×179°.28W, h627km, mb4.6(NEIC)*
*IDC **21** 01:42:53.5±1.1, 20°.79S×179°.18W, h627km±12km, mb4.0/23, mb1 4.2/24, mb1mx4.1/28, mbtmp4.1/24, Error ellipse: s-maj=14.4km s-min=9.6km az=133.0*
*NEIC **21** 01:42:53.6±0.5, 20°.74S×179°.28W, h626km±6km, mb4.6/70, Error ellipse: s-maj=8.2km s-min=4.3km az=148.0*
*BJI **21** 01:42:54.5, 20°.12S×179°.28W, h622km, mB4.7/12, mb4.6/18*
*AUST **21** 01:42:54.4±0.0, 20°.77S×178°.98W, h649km, Error ellipse: s-maj=1.8km s-min=1.4km az=225.0*
ISC 21 01:42:52.2±0.3, 20°.84S±0°.05×179°.06W±0°.06, h619km, n620, σ1°.26/662, mb4.6/90, 152C-143D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.12**	**318**	*e*P	**P**	01 44 24.0	+3.9
MSVF				*e*S	**S**	**01 45 36.9**	**+5.2**
RAO	**Raoul Island**	**8.44**	**173**	P	**P**	**01 44 57.8**	**+1.6**
RAO				S	**S**	**01 46 37.3**	**-0.6**
RAO	**Raoul Island** 20nm,0.3s,baz=30,slow=20,SNR=2.1	**8.44**	**173**	P	**P**	**01 44 57.8**	**+1.6**
RAO	8.0nm,0.3s,baz=90,slow=20,SNR=3.4			S	**S**	**01 46 37.3**	**-0.6**
NIUE	**Niue**	**8.77**	**80**	P	**P**	**01 45 01.6**	**+2.1**
	baz=8.7,SNR=5.9						
AFI	**Afiamalu**	**9.79**	**46**	*e*P	**P**	**01 45 09.7**	**+0.1**
AFI				S	**S**	**01 47 00.4**	**-1.7**
AFI	**Afiamalu** 9.6nm,0.3s,baz=350,slow=3.5,SNR=7.2	**9.79**	**46**	P	**P**	**01 45 09.2**	**-0.4**
AFI	1.5nm,0.3s,baz=198,slow=20,SNR=3.3			S	**S**	**01 47 00.4**	**-1.7**
DZM	**Mont Dzumac**	**13.55**	**262**	*e*P	**P**	01 45 46.2	-0.1
DZM	**Mont Dzumac** 24nm,0.6s	**13.55**	**262**	*e*P	**P**	01 45 47.2	+1.0
NOUC	**Port Laguerre**	**13.68**	**262**	*e*P	P	01 45 51.6	+4.1
OUZ	**Omahuta** 78nm,0.8s	**15.71**	**203**	*e*P	**P**	**01 46 09.8**	**+3.8**
URZ	**Urewera** 46nm,0.8s	**17.67**	**190**	*e*P	**P**	**01 46 21.7**	**-2.1**
URZ				S	**S**	**01 49 09.6**	**-6.0**
URZ	**Urewera** 2.9nm,0.3s,baz=346,slow=4.8,SNR=12	**17.67**	**190**	P	**P**	**01 46 22.0**	**-1.8**
URZ	0.7nm,0.3s,baz=345,slow=16,SNR=5.2			S	**S**	**01 49 09.6**	**-6.0**
EIDS	**Eidsvold** baz=28,SNR=13	**27.80**	**255**	P	**P**	**01 47 54.5**	**+0.5**
ARMA	**Armidale** baz=28,SNR=10	**28.02**	**244**	P	**P**	**01 47 57.5**	**+1.5**
MGCD	**Mangrove Creek** baz=29,SNR=4.8	**29.18**	**239**	P	**P**	**01 48 07.5**	**+1.6**
RMQ	**Roma** baz=30,SNR=25	**29.95**	**253**	P	**P**	**01 48 14.1**	**+1.4**
CNB	**Canberra Magne** baz=31,SNR=11	**31.21**	**236**	P	**P**	**01 48 24.6**	**+1.3**
CTA	**Charters Tower**	**32.47**	**265**	ScP	**ScP**	**01 53 47.0**	**-1.0**
CTA	**Charters Tower** 3.7nm,1.0s,baz=27,slow=6.8,SNR=3.2	**32.47**	**265**	ScP	**ScP**	**01 53 47.0**	**-1.0**
CTAO	**Charters Tower** 73nm,0.8s	**32.47**	**265**	*e*P	**P**	**01 48 34.6**	**+0.5**
CMSA	**Cobar Meteorol** baz=33,SNR=36	**33.24**	**244**	P	**P**	**01 48 41.1**	**+0.7**
QLP	**Quilpie** baz=34,SNR=63	**34.01**	**253**	P	**P**	**01 48 47.4**	**+0.5**
QLP	baz=34,SNR=4.6			S	S	01 53 54.9	+25
PMG	**Port Moresby** 87nm,0.8s	**34.45**	**284**	*e*P	**P**	**01 48 51.1**	**+0.4**
MTSU	**Mount Surprise** baz=35,SNR=52	**34.58**	**268**	P	**P**	**01 48 52.3**	**+0.5**
TOO	**Toolangi** baz=35,SNR=15	**34.89**	**234**	P	**P**	**01 48 55.0**	**+0.9**
COEN	**Coen** baz=37,SNR=18	**36.61**	**275**	P	**P**	**01 49 09.3**	**+0.8**
STKA	**Stephens Creek** 13nm,1.0s	**36.74**	**244**	*e*P	**P**	**01 49 09.9**	**+0.6**
STKA				ScP	**ScP**	**01 54 03.6**	**+0.2**
STKA	**Stephens Creek** 33nm,0.6s,baz=91,slow=9.5,SNR=78	**36.74**	**244**	P	**P**	**01 49 10.0**	**+0.6**
STKA	3.7nm,0.9s,baz=0.0,slow=2.0,SNR=3.0			ScP	**ScP**	**01 54 03.6**	**+0.2**
STKA	**Stephens Creek** baz=37,SNR=54	**36.74**	**244**	P	**P**	**01 49 10.2**	**+0.9**
ARPS	**Mount Arapiles** baz=38,SNR=6.2	**37.47**	**236**	P	**P**	**01 49 15.5**	**+0.4**
BBOO	**Buckleboo** baz=42,SNR=83	**41.51**	**244**	P	**P**	**01 49 47.7**	**+0.3**
JAY	**Jayapura** baz=43,SNR=22	**43.21**	**290**	P	**P**	**01 50 01.4**	**+0.4**
AS31	**Alice Springs**	**43.47**	**257**	*e*P	**P**	**01 50 03.0**	**+0.1**
ASAR	**Alice Springs**	**43.47**	**257**	P	**P**	**01 50 03.0**	**+0.1**
ASAR				ScP	**ScP**	**01 54 29.1**	**-1.0**
ASAR	**Alice Springs** 105nm,0.8s,baz=98,slow=7.6,SNR=756	**43.47**	**257**	P	**P**	**01 50 03.0**	**+0.1**
ASAR	5.1nm,0.9s,baz=100,slow=3.9,SNR=12			ScP	**ScP**	**01 54 29.1**	**-1.0**
WRAB	**Tennant Creek** 100nm,1.0s	**43.56**	**263**	*e*P	**P**	**01 50 03.1**	**-0.5**
WRA	**Warramunga Arr**	**43.57**	**263**	P	**P**	**01 50 02.9**	**-0.8**
WRA	**Warramunga Arr** 28nm,0.3s,baz=97,slow=7.5,SNR=540	**43.57**	**263**	P	**P**	**01 50 02.9**	**-0.8**
KIP	**Kipapa** 50nm,1.0s	**46.77**	**27**	*e*P	**P**	**01 50 28.7**	**+0.9**
KDU	**Kakadu** baz=47,SNR=19	**46.97**	**272**	P	**P**	**01 50 29.1**	**-0.4**
MTN	**Manton Dam** baz=48,SNR=14	**48.17**	**271**	P	**P**	**01 50 38.0**	**-0.4**
FORT	**Forrest** baz=48,SNR=23	**48.25**	**247**	P	**P**	**01 50 38.5**	**-0.3**
KNRA	**Kununurra** baz=50,SNR=16	**49.65**	**267**	P	**P**	**01 50 49.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**52.00**	**263**	P	**P**	**01 51 06.1**	**-0.2**
FITZ	**Fitzroy Crossi** 14nm,0.5s,baz=127,slow=4.0,SNR=83	**52.00**	**263**	P	**P**	**01 51 06.1**	**-0.2**
FITZ	**Fitzroy Crossi** baz=52,SNR=25	**52.00**	**263**	P	**P**	**01 51 06.0**	**-0.2**
SWI	**Sorong** baz=52,SNR=10	**52.38**	**286**	P	**P**	**01 51 09.1**	**+0.2**
MBWA	**Marble Bar** 54nm,0.9s	**56.81**	**258**	*e*P	**P**	**01 51 39.3**	**-0.5**
MEEK	**Meekatharra** baz=57,SNR=11	**56.87**	**251**	P	**P**	**01 51 39.3**	**-0.8**
KLBR	**Kellerberrin** baz=57,SNR=16	**57.01**	**245**	P	**P**	**01 51 40.6**	**-0.3**
NWAO	**Narrogin (SRO)**	**57.33**	**244**	P	**P**	**01 51 43.0**	**0.0**
NWAO	**Narrogin (SRO)** 29nm,0.9s,baz=105,slow=8.3,SNR=5.3	**57.33**	**244**	P	**P**	**01 51 43.0**	**0.0**
SBA	**Scott Base** 8.9nm,0.8s	**57.47**	**184**	*e*P	**P**	**01 51 45.9**	**+2.7**
VNDA	**Vanda** 3.1nm,0.9s	**57.49**	**185**	*e*P	**P**	**01 51 45.2**	**+1.8**
VNDA	**Vanda** 2.4nm,0.6s,baz=5.1,slow=7.6,SNR=22	**57.49**	**185**	P	**P**	**01 51 45.1**	**+1.8**
BLDU	**Ballidu** baz=58,SNR=13	**58.01**	**246**	P	**P**	**01 51 47.3**	**-0.4**
WSI	**Waingapu** baz=59,SNR=4.5	**59.26**	**271**	P	P	01 52 12.2	+16
GIRL	**Giralia** baz=62,SNR=3.5	**61.50**	**255**	P	**P**	**01 52 11.8**	**+0.9**
CASY	**Casey** 19nm,1.0s	**63.23**	**205**	*e*P	**P**	**01 52 21.7**	**+0.5**
QSPA	**South Pole Qui** 22nm,1.1s	**69.23**	**180**	*e*P	**P**	**01 52 59.1**	**+0.8**
MJAR	**Matsushiro Arr**	**69.90**	**324**	P	**P**	**01 53 02.2**	**-0.5**
MJAR	**Matsushiro Arr** 4.0nm,0.6s,baz=164,slow=6.3,SNR=14	**69.90**	**324**	P	**P**	**01 53 02.2**	**-0.5**
MAT	**Matsushiro**	**69.90**	**324**	P	**P**	**01 53 02.2**	**-0.5**
ATKA	**Atka Island**	**72.85**	**3**	*e*P	**P**	**01 53 19.4**	**0.0**
ASAJ	**Asahikawa** 12nm,0.9s	**73.56**	**332**	P	**P**	**01 53 24.9**	**+1.3**
ASAJ	**Asahikawa** 4.6nm,0.4s,baz=127,slow=20,SNR=7.8	**73.56**	**332**	P	**P**	**01 53 24.9**	**+1.3**
FX1	**Attu Island--F**	**73.72**	**355**	P	**P**	**01 53 23.6**	**-0.7**
FX1	**Attu Island--F** 12nm,0.7s,baz=236,slow=2.5,SNR=7.9	**73.72**	**355**	P	**P**	**01 53 23.6**	**-0.7**
UNV	**Unalaska Valle**	**75.16**	**8**	*e*P	**P**	**01 53 31.8**	**-0.5**
PEA0B	**Petropavlovsk-**	**76.35**	**346**	*e*P	**P**	**01 53 39.2**	**+0.3**
PETK	**Petropavlovsk-**	**76.35**	**346**	P	**P**	**01 53 39.1**	**+0.2**
PETK	**Petropavlovsk-** 12nm,0.7s,baz=150,slow=9.5,SNR=14	**76.35**	**346**	P	**P**	**01 53 39.1**	**+0.2**
USRK	**Ussuriysk Arra** 8.6nm,0.9s,baz=125,slow=3.2,SNR=17	**78.69**	**326**	P	**P**	**01 53 53.3**	**+1.6**
SCI	**San Clemente I** baz=79	**78.74**	**48**	⇓P	**P**	**01 53 54.5**	**+2.3**
CHGN	**Chignik**	**78.80**	**12**	*e*P	**P**	**01 53 51.9**	**0.0**
PKM	**Peak Mountain** baz=79	**78.94**	**46**	⇓P	**P**	**01 53 55.6**	**+2.1**
SAO	**San Andreas Ge** 19nm,0.9s	**78.96**	**44**	*e*P	**P**	**01 53 55.8**	**+2.5**
BLG	**Laguna Peak** baz=79	**79.01**	**47**	⇑P	**P**	**01 53 55.9**	**+2.2**
HOPS	**Hopland** 54nm,1.0s	**79.28**	**41**	*e*P	**P**	**01 53 57.0**	**+2.0**
NJ2	**Nanjing**	**79.33**	**310**	*e*P	**P**	**01 53 56.1**	**+0.7**
NJ2	comp=Z,10.0nm,0.7s			pmax	pmax		
VES	**Vestal, Richgr** baz=80,SNR=7.4	**79.98**	**46**	⇑P	**P**	**01 53 59.6**	**+1.0**
MURC	**Murrieta** baz=80	**80.02**	**48**	⇓P	**P**	**01 54 00.5**	**+1.5**
BFSC	**Mount Baldy Ra** baz=80	**80.05**	**48**	⇑P	**P**	**01 54 00.6**	**+1.3**
QIZ	**Qiongzhong**	**80.09**	**295**	P	**P**	**01 54 00.4**	**+0.8**
QIZ				pP	**pP**	**01 56 09.9**	**+1.2**
QIZ				S	**S**	**02 03 13.8**	**-1.1**
QIZ				ScS	**ScS**	**02 03 28.0**	**-1.7**
QIZ	comp=Z,43nm,5.0s			pmax	pmax		
EDW2	**Edwards Air Fo** baz=80,SNR=8.5	**80.18**	**47**	⇑P	**P**	**01 54 01.3**	**+1.5**
MONP	**Monument Peak** baz=80,SNR=11	**80.18**	**49**	⇓P	**P**	**01 54 01.8**	**+1.7**
MDJ	**Mudanjiang**	**80.23**	**326**	P	**P**	**01 54 01.0**	**+1.2**
MDJ	comp=Z,8.0nm,1.1s			pmax	pmax		
MDJ	comp=Z,38nm,3.8s			pmax	pmax		
ISA	**Isabella** comp=Z,18nm,0.9s	**80.28**	**46**	*e*P	**P**	**01 54 02.2**	**+1.8**
ISA	**Isabella** baz=80,SNR=13	**80.28**	**46**	⇓P	**P**	**01 54 02.0**	**+1.6**
DVTC	**Desert V Tower** baz=80,SNR=5.5	**80.29**	**50**	⇑P	**P**	**01 54 02.2**	**+1.7**
CMB	**Columbia Colle** comp=Z,24nm,1.2s	**80.39**	**43**	*e*P	**P**	**01 54 02.2**	**+1.4**
PFO	**Pinyon Flat Ob** baz=81	**80.55**	**49**	⇓P	**P**	**01 54 03.4**	**+1.6**
WDC	**Whiskeytown Da** comp=Z,25nm,0.9s	**80.57**	**40**	*e*P	**P**	**01 54 03.4**	**+1.7**
SWSC	**Sam W. Stewart** baz=81	**80.65**	**50**	⇓P	**P**	**01 54 03.8**	**+1.6**
LRMC	**Laurel Mountai** baz=81	**80.71**	**47**	⇓P	**P**	**01 54 04.4**	**+1.8**
OHAK	**Old Harbor** comp=Z,75nm,1.8s	**80.71**	**14**	*e*P	**P**	**01 54 02.5**	**+0.6**
RRX	**Edison Barstow** baz=81	**80.86**	**47**	⇓P	**P**	**01 54 04.7**	**+1.5**
MAW	**Mawson**	**80.91**	**200**	P	**P**	**01 54 03.1**	**+0.2**
MAW	**Mawson** comp=Z,3.5nm,0.7s,baz=164,slow=8.2,SNR=3.6	**80.91**	**200**	P	**P**	**01 54 03.1**	**+0.2**
CWC	**Cottonwood Cre** baz=81	**80.98**	**46**	⇑P	**P**	**01 54 06.0**	**+1.9**
BELC	**Belle Mtn. Jos** baz=81	**81.08**	**49**	⇓P	**P**	**01 54 06.5**	**+1.9**
MPMC	**Manual Prospec** baz=81,SNR=15	**81.17**	**46**	⇑P	**P**	**01 54 06.5**	**+1.5**
YBH	**Yreka Blue Hor** comp=Z,52nm,1.3s	**81.18**	**39**	*e*P	**P**	**01 54 06.9**	**+2.1**
YBH	**Yreka Blue Hor** comp=Z,25nm,0.8s,baz=188,slow=1.9,SNR=33	**81.18**	**39**	P	**P**	**01 54 06.8**	**+1.9**
GSC	**Goldstone** comp=Z,17nm,1.0s	**81.22**	**47**	*e*P	**P**	**01 54 06.8**	**+1.6**
GSC	**Goldstone** baz=82,SNR=11	**81.22**	**47**	⇓P	**P**	**01 54 06.5**	**+1.3**
TIN	**Tinemaha** baz=82	**81.23**	**45**	⇑P	**P**	**01 54 07.3**	**+2.0**
BC3	**Big Chuckawall** baz=82	**81.28**	**49**	⇓P	**P**	**01 54 07.4**	**+1.8**
HEC	**Hector,Ludlow** baz=82,SNR=6.5	**81.29**	**48**	⇓P	**P**	**01 54 06.8**	**+1.2**
KDAK	**Kodiak Island** comp=Z,21nm,1.1s	**81.38**	**14**	*e*P	**P**	**01 54 06.2**	**+0.9**
KDAK	**Kodiak Island** comp=Z,6.8nm,0.6s,baz=245,slow=2.3,SNR=11	**81.38**	**14**	P	**P**	**01 54 05.5**	**+0.1**
GLA	**Glamis** comp=Z,23nm,0.8s	**81.40**	**50**	*e*P	**P**	**01 54 08.5**	**+2.3**
GLA	**Glamis** baz=82,SNR=8.1	**81.40**	**50**	⇑P	**P**	**01 54 08.3**	**+2.1**
LBCM	**Butte Creek Ri**	**81.45**	**40**	P	**P**	**01 54 08.0**	**+1.7**
BEKR	**Beckworth** comp=Z,14nm,1.3s	**81.48**	**42**	*e*P	**P**	**01 54 08.2**	**+1.6**
WCN	**Washoe City** comp=Z,20nm,0.9s	**81.53**	**42**	*e*P	**P**	**01 54 08.1**	**+1.3**
HUMO	**Hull Mountain** comp=Z,41nm,1.1s	**81.57**	**38**	*e*P	**P**	**01 54 07.6**	**+0.8**
GMRC	**Granite Mounta** baz=82,SNR=10	**81.73**	**48**	⇑P	**P**	**01 54 09.4**	**+1.5**
IRM	**Iron Mountain** baz=82,SNR=11	**81.76**	**49**	⇑P	**P**	**01 54 09.8**	**+1.9**
GRAC	**Grapevine Rang** baz=82,SNR=13	**81.77**	**45**	⇑P	**P**	**01 54 09.7**	**+1.8**
FURC	**Furnace Creek,** baz=82,SNR=6.0	**81.82**	**46**	⇑P	**P**	**01 54 09.4**	**+1.3**
TUQ	**Turquoise Moun** baz=82,SNR=5.4	**81.90**	**47**	⇑P	**P**	**01 54 10.1**	**+1.3**
NVAR	**Mina Array Bea**	**81.96**	**44**	P	**P**	**01 54 10.6**	**+1.5**
NVAR	**Mina Array Bea** comp=Z,14nm,0.8s,baz=224,slow=8.6,SNR=56	**81.96**	**44**	P	**P**	**01 54 10.6**	**+1.5**
Y12C	**Blythe** baz=82,SNR=5.9	**81.98**	**49**	⇑P	**P**	**01 54 10.9**	**+1.9**
113A	**Mohawk Valley,** baz=82,SNR=8.8	**82.02**	**51**	⇑P	**P**	**01 54 10.9**	**+1.8**
NV11	**Mina Array Sit**	**82.05**	**44**	*e*P	**P**	**01 54 10.6**	**+1.2**
HOG	**Hogback Mounta**	**82.08**	**39**	P	**P**	**01 54 11.5**	**+2.0**
IPM	**Ipoh** comp=Z,26nm,0.9s	**82.19**	**278**	*e*P	**P**	**01 54 11.1**	**+0.6**
LDFC	**Landfair** comp=Z,42nm,0.8s	**82.27**	**48**	*e*P	**P**	**01 54 12.7**	**+2.1**
214A	**Organ Pipe Nat** baz=83	**82.30**	**52**	⇓P	**P**	**01 54 12.8**	**+2.1**
NEE2	**Needles Airpor** baz=83	**82.45**	**49**	⇓P	**P**	**01 54 13.3**	**+2.0**
PDMCI	**Parker Dam,Lak** baz=83,SNR=7.6	**82.54**	**49**	⇓P	**P**	**01 54 13.6**	**+1.8**
MOD	**Modoc** comp=Z,21nm,0.8s	**82.72**	**40**	*e*P	**P**	**01 54 14.0**	**+1.3**
K05A	**Summer Lake**	**82.85**	**39**	P	**P**	**01 54 15.3**	**+1.9**
BROR	**Big Rock Looko**	**82.89**	**37**	P	**P**	**01 54 14.7**	**+1.5**
Z14A	**Wintersburg** baz=83,SNR=9.8	**82.92**	**50**	⇓P	**P**	**01 54 15.7**	**+2.0**
W13A	**Hualapai Mount** baz=83,SNR=13	**83.14**	**49**	⇑P	**P**	**01 54 16.5**	**+1.5**
Y14A	**Wickenburg** baz=83,SNR=11	**83.16**	**50**	⇑P	**P**	**01 54 16.5**	**+1.5**
PSI	**Prapat** baz=84,SNR=5.3	**83.53**	**275**	P	**P**	**01 54 17.2**	**-0.2**
R11A	**Troy Canyon, C** baz=84	**83.69**	**45**	⇓P	**P**	**01 54 19.0**	**+1.4**
BMN	**Battle Mountai** comp=Z,28nm,1.4s	**83.77**	**43**	*e*P	**P**	**01 54 19.8**	**+1.8**
RSO	**Redoubt South**	**83.78**	**13**	*e*P	**P**	**01 54 16.2**	**-1.4**
TUC	**Tucson** comp=Z,2.8nm,0.9s	**83.97**	**52**	*e*P	**P**	**01 54 21.2**	**+2.2**
WVOR	**Wild Horse Val** comp=Z,21nm,1.2s	**84.03**	**40**	*e*P	**P**	**01 54 20.4**	**+1.3**

ETW Entiat 86.09 35 P P 01 54 30.2 +1.3
SYO Syowa Base 86.17 193⇑eX P 01 54 26.9 -1.9
BMO Blue Mountains 86.20 39 eP P 01 54 30.3 +0.8
comp=Z,4.8nm,0.7s
MFID Camas Ranch 86.29 41 eP P 01 54 31.4 +1.4
comp=Z,18nm,1.0s
MFID Camas Ranch 86.29 41 ⇓P P 01 54 31.3 +1.4
baz=86,SNR=17
121A Cookes Peak, D 86.31 53 ⇑P P 01 54 32.4 +2.0
baz=87
DUG Dugway 86.49 45 ⇑P P 01 54 33.6 +2.6
baz=87
Y20A Horse Springs, 86.51 52 ⇓P P 01 54 33.3 +1.9
baz=87,SNR=6.7
PNL Peninsula 86.52 19 eP P 01 54 31.4 +0.9
comp=Z,36nm,0.9s
TNA Tin City 86.55 5 eP P 01 54 30.9 +0.5
comp=Z,4.0nm,0.7s
222A Williams Famil 86.63 54 ⇓P P 01 54 34.0 +2.1
baz=87
X20A Quemado 86.72 51 ⇓P P 01 54 34.0 +1.7
baz=87,SNR=5.8
Z21A St. Cloud Mine 86.75 53 ⇓P P 01 54 34.5 +2.0
baz=87
I12A Atlanta 86.92 41 ⇑P P 01 54 34.6 +1.6
baz=87,SNR=18
Q16A Castle Valley 86.94 46 ⇓P P 01 54 35.2 +1.9
baz=87
W20A Ramah 86.99 51 ⇑P P 01 54 35.2 +1.6
baz=87,SNR=7.2
TRF Thorofare Moun 86.99 13 eP P 01 54 31.5 -1.3
comp=Z,37nm,0.7s
Y21A Point of Rocks 87.07 52 ⇓P P 01 54 35.9 +1.9
baz=87,SNR=5.9
S18A Hurst Farm, Bl 87.15 48 ⇑P P 01 54 35.7 +1.4
baz=87
X21A Alamocita Cree 87.19 52 ⇑P P 01 54 35.8 +1.2
baz=87,SNR=7.4
HLID Hailey 87.23 41 eP P 01 54 36.1 +1.6
comp=Z,15nm,1.0s
HLID Hailey 87.23 41 ⇓P P 01 54 36.0 +1.6
baz=88,SNR=27
Z22A Elephant Butte 87.26 53 ⇓P P 01 54 36.5 +1.7
baz=88
J13A Cove Ranch, Pi 87.30 41 ⇓P P 01 54 36.5 +1.7
baz=88,SNR=31
V20A Brimhall 87.33 50 ⇑P P 01 54 36.8 +1.7
baz=88
HVU Hansel Valley 87.33 43 eP P 01 54 36.2 +1.3
comp=Z,36nm,1.4s
SRU San Rafael 87.48 46 ⇑P P 01 54 37.2 +1.5
baz=88
H12A Diamond D Ranc 87.49 40 ⇑P P 01 54 36.9 +1.2
baz=88,SNR=26
P17A Butcher Ranch, 87.51 46 ⇑P P 01 54 37.9 +2.0
baz=88
MCK McKinley 87.52 13 eP P 01 54 34.6 -0.5
comp=Z,18nm,0.8s
G12A Big Creek, Yel 87.53 39 ⇓P P 01 54 37.1 +1.3
baz=88
U20A Newcomb 87.56 50 ⇑P P 01 54 37.2 +1.0
baz=88
Y22A Socorro 87.56 52 ⇑P P 01 54 37.8 +1.6
baz=88
324A Moseley Ranch, 87.57 55 ⇑P P 01 54 37.8 +1.5
baz=88,SNR=19
I13A Wildhorse Cree 87.60 41 ⇓P P 01 54 37.8 +1.6
baz=88,SNR=8.0
DAU Daniels Canyon 87.63 45 eP P 01 54 37.3 +0.7
LAZ Ladron 87.65 52 eP P 01 54 38.6 +1.9
SKAG Skagway 87.65 21 eP P 01 54 40.0 +4.3
comp=Z,7.9nm,0.6s
J14A Carey 87.66 42 ⇑P P 01 54 38.3 +1.9
baz=88
425A Indio Mountain 87.67 56 ⇑P P 01 54 38.5 +1.8
baz=88,SNR=14
SNAA Sanae 87.69 179 eP P 01 54 35.8 -0.3
MNTX Cornudas Mount 87.76 55 eP P 01 54 38.6 +1.6
comp=Z,7.0nm,0.9s
X22A Bernardo 87.79 52 ⇓P P 01 54 39.0 +1.7
baz=88
626A Big Bend Ranch 87.80 57 ⇓P P 01 54 39.2 +1.8
baz=88,SNR=19
Z23A Rita Site, Whi 87.81 53 ⇓P P 01 54 39.1 +1.8
baz=88
224A Cornudas Mount 87.82 55 ⇓P P 01 54 39.0 +1.6
baz=88,SNR=9.6
H13A Challis 87.86 40 ⇓P P 01 54 38.9 +1.5
baz=88
F12A Elk City 87.91 39 ⇑P P 01 54 38.4 +0.8
baz=88,SNR=40
BNM Barren Site 87.91 52 eP P 01 54 39.8 +1.8
P18A Preston Nutter 87.92 46 ⇓P P 01 54 39.2 +1.3
baz=88,SNR=8.4
325A Bean Ranch, Si 87.93 55 ⇓P P 01 54 39.3 +1.2
baz=88,SNR=14
LPM Los Pinos Moun 87.98 52 eP P 01 54 40.2 +2.0
I14A Mackay 88.02 41 ⇑P P 01 54 39.7 +1.6
baz=88,SNR=9.5
HWUT Hardware Ranch 88.02 44 eP P 01 54 39.0 +0.7
comp=Z,4.6nm,0.8s
526A Mary Lane Ranc 88.05 57 ⇓P P 01 54 40.1 +1.5
baz=88,SNR=11
TXAR Lajitas Array 88.08 58 P P 01 54 40.5 +1.9
TXAR Lajitas Array 88.08 58 P P 01 54 40.5 +1.9
comp=Z,9.1nm,0.8s,baz=220,slow=6.1,SNR=127
PV10 Paradox Valley 88.14 48 eP P 01 54 39.9 +1.0
124A Stringfield Ra 88.14 54 ⇓P P 01 54 40.4 +1.3
baz=88,SNR=6.3
G13A Cobalt 88.16 40 ⇑P P 01 54 39.9 +1.2
baz=88,SNR=7.0
U21A Nageezi 88.20 50 ⇓P P 01 54 40.4 +1.1
baz=88,SNR=19
NEW Newport 88.23 36 eP P 01 54 39.6 +0.7
comp=Z,3.7nm,0.7s
NEW Newport 88.23 36 P P 01 54 39.5 +0.7
comp=Z,3.6nm,0.7s,baz=256,slow=7.4,SNR=7.9
NEW Newport 88.23 36 ⇓P P 01 54 39.5 +0.7
baz=88
Y23A Lovelace Mesa, 88.24 53 ⇑P P 01 54 40.5 +1.1
baz=88,SNR=6.5
627A Terlingua Ranc 88.35 58 ⇓P P 01 54 41.6 +1.7
baz=89,SNR=16
PV01 Paradox Valley 88.35 48 eP P 01 54 41.0 +1.2
S20A Disappointment 88.35 48 ⇑P P 01 54 40.9 +0.9
baz=89,SNR=5.9
426A McDonald Obser 88.36 56 ⇓P P 01 54 41.6 +1.5
baz=89,SNR=18
225A Deer Hill, Car 88.37 55 ⇓P P 01 54 41.4 +1.4
baz=89,SNR=7.6
ANMO Albuquerque 88.39 52 eP P 01 54 41.1 +1.0
comp=Z,11nm,1.1s
X23A Hourglass Bar 88.43 52 ⇑P P 01 54 41.5 +1.2
baz=89
H14A Leadore 88.43 41 ⇓P P 01 54 41.5 +1.4
baz=89,SNR=5.7
527A Woodward Ranch 88.46 57 ⇓P P 01 54 41.7 +1.2
baz=89,SNR=14
F13A Darby 88.47 39 ⇑P P 01 54 40.9 +0.8
baz=89,SNR=10.0
C11A Tepee Creek (N 88.48 37 ⇓P P 01 54 41.2 +1.2
baz=89
Z24A Sheeppen Canyo 88.49 53 ⇓P P 01 54 42.0 +1.4
baz=89
V22A San Miguel Ran 88.50 51 ⇑P P 01 54 42.0 +1.3
baz=89
R20A Redvale 88.51 48 ⇑P P 01 54 41.6 +1.0
baz=89
VNA1 Neumayer--Stat 88.53 177 eP P 01 54 40.4 +0.6
VNA1 Neumayer--Stat 88.53 177 esP sP 01 58 03.3 +9.2
M17A Scullys Gap (B 88.54 44 ⇓P P 01 54 41.6 +1.0
baz=89
DOT Dot Lake 88.54 15 eP P 01 54 40.2 +0.3
comp=Z,34nm,0.8s
T21A Navajo Lake 88.55 49 ⇓P P 01 54 42.0 +1.2
baz=89
D12A Red Ives Fores 88.56 38 ⇓P P 01 54 41.3 +0.9
baz=89
KMI Kunming 88.62 297 P P 01 54 44.6 +3.2
KMI pmax pmax
comp=Z,7.0nm,0.6s
I15A Monteview 88.65 41 ⇑P P 01 54 42.7 +1.7
baz=89
S21A Coal Bank Pass 88.67 49 ⇓P P 01 54 42.7 +1.2
baz=89
326A Caldwell Ranch 88.67 56 ⇓P P 01 54 42.5 +1.1
baz=89
Y24A Capitan 88.70 53 ⇓P P 01 54 42.9 +1.3
baz=89,SNR=23
W23A Werner Place, 88.72 52 ⇑P P 01 54 43.4 +1.8
baz=89
125A Gardner Draw, 88.73 54 ⇑P P 01 54 42.8 +1.2
baz=89,SNR=6.3
U22A Llaves 88.75 50 ⇓P P 01 54 43.1 +1.3
baz=89
COLA College 88.75 13 eP P 01 54 40.1 -0.7
comp=Z,22nm,0.9s
DLBC Dease Lake 88.75 23 eP P 01 54 42.1 +1.0
DLBC Dease Lake 88.75 23 P P 01 54 42.0 +0.9
comp=Z,4.8nm,0.8s,baz=233,slow=5.1,SNR=14
GDL2 Guadalupe Moun 88.76 55 eP P 01 54 43.6 +1.9
comp=Z,6.3nm,0.9s
628A Black Gap, Mar 88.76 58 ⇑P P 01 54 43.4 +1.7
baz=89,SNR=8.2
P19A Cripple Cowboy 88.78 47 ⇓P P 01 54 42.8 +1.0
baz=89,SNR=9.6
C12B Naegeli Ranch, 88.84 37 ⇓P P 01 54 42.8 +1.1
baz=89
226B Tecolote Peak, 88.86 55 ⇑P P 01 54 43.6 +1.4
baz=89
MCMT McKenzie Canyo 88.86 41 eP P 01 54 43.6 +1.5
ILAR Eielson Array 88.87 13 P P 01 54 40.8 -0.5
ILAR PP PP 01 58 19.4 -3.6
ILAR Eielson Array 88.87 13 P P 01 54 40.8 -0.5
comp=Z,7.0nm,0.8s,baz=221,slow=5.3,SNR=75
ILAR PP PP 01 58 19.4 -3.6
comp=Z,1.0nm,1.0s,baz=216,slow=6.5,SNR=4.3
H15A Lima 88.87 41 ⇑P P 01 54 43.7 +1.6
baz=89,SNR=8.0
HHC Hu-ho-hao-te 88.88 315 eP P 01 54 40.5 -1.6
HHC pP pP 01 56 53.6 -1.3
HHC sP sP 01 57 52.0 -4.4
HHC PP PP 01 58 22.8 -1.0
HHC SKS SKSac 02 04 12.0 -1.5
HHC S S 02 04 36.1 -2.8
HHC sS sS 02 08 27.1 -8.5
HHC SS SS 02 10 51.4 -0.3
HHC pmax pmax
comp=Z,32nm,0.7s
HHC pmax pmax
comp=Z,110nm,6.4s
E13A Victor 88.90 39 ⇓P P 01 54 42.5 +0.4
baz=89
M18A Lyman 88.91 45 ⇓P P 01 54 43.7 +1.3
baz=89,SNR=18
Q20A Ridgley Place, 88.92 47 ⇑P P 01 54 43.5 +1.1
baz=89,SNR=7.1
427A Hayter Ranch, 88.92 56 ⇑P P 01 54 44.2 +1.7
baz=89,SNR=25
V23A Ortiz Mt. (NFS 88.95 51 ⇓P P 01 54 44.3 +1.6
baz=89,SNR=5.4
Z25A Roswell 88.95 54 ⇑P P 01 54 44.1 +1.4
baz=89,SNR=5.1
O19A Miners Draw (B 89.00 46 ⇓P P 01 54 43.7 +1.0
baz=89,SNR=10
T22A Edith 89.00 50 ⇓P P 01 54 44.1 +1.1
baz=89
RRI2 Red Ridge 89.05 42 eP P 01 54 44.4 +1.3
comp=Z,19nm,0.9s
D13A Huson 89.09 38 ⇑P P 01 54 44.4 +1.5
baz=89
P20A De Beque 89.11 47 ⇓P P 01 54 44.4 +1.1
baz=89,SNR=12
528A Cox Ranch, San 89.12 57 ⇑P P 01 54 45.0 +1.5
baz=89
R21A Cimarron 89.17 48 ⇓P P 01 54 44.9 +1.2
baz=89,SNR=6.7
L18A Fontenelle, Gr 89.17 44 ⇑P P 01 54 45.0 +1.4
baz=89
B12A Libby 89.20 37 ⇑P P 01 54 44.7 +1.4
baz=89
U23A El Rito 89.21 51 ⇓P P 01 54 45.5 +1.6
baz=90
126A Clayton Basin, 89.21 55 ⇑P P 01 54 44.9 +1.1
baz=90
I16A Newdale 89.21 42 ⇓P P 01 54 45.3 +1.7
baz=90,SNR=5.9
G15A Dillon 89.25 40 ⇓P P 01 54 44.9 +1.1
baz=90,SNR=10
Y25A Mesa, Roswell 89.25 53 ⇓P P 01 54 44.7 +0.7
baz=90,SNR=7.7
MSO Missoula 89.25 39 eP P 01 54 43.6 -0.1
comp=Z,1.4nm,0.7s
MSO Missoula 89.25 39 ⇓P P 01 54 44.3 +0.7
baz=90
W24A Lazy 6 Ranch, 89.28 52 ⇓P P 01 54 45.2 +0.9
baz=90,SNR=6.8
DLMT Dillon 89.28 40 eP P 01 54 45.2 +1.2
comp=Z,4.8nm,0.8s
CMAR Chiang Mai Arr 89.29 290 P P 01 54 45.8 +1.4
CMAR Chiang Mai Arr 89.29 290 P P 01 54 45.8 +1.4
comp=Z,4.0nm,0.8s,baz=120,slow=2.9,SNR=19
E14A Clinton 89.30 39 ⇓P P 01 54 44.7 +0.7
baz=90,SNR=5.4
BSMT Basco Peak 89.31 37 eP P 01 54 44.9 +0.8
C13A Hot Springs 89.34 38 ⇑P P 01 54 44.9 +0.9
baz=90
TPAW Teton Pass 89.36 42 eP P 01 54 46.0 +1.5
comp=Z,9.4nm,0.9s
Q21A Lamborn Mesa, 89.37 48 ⇓P P 01 54 45.8 +1.3
baz=90
S22A 4UR Ranch, Cre 89.39 49 ⇑P P 01 54 46.2 +1.4
baz=90
A12A Yaak River Ran 89.42 36 ⇑P P 01 54 45.7 +1.4
baz=90
428A Kincaid Ranch, 89.43 57 ⇓P P 01 54 46.3 +1.4
baz=90
SNOW Snow King Moun 89.47 43 eP P 01 54 46.9 +1.9
comp=Z,17nm,1.0s
Z26A Caprock 89.51 54 ⇓P P 01 54 46.0 +0.7
baz=90,SNR=8.0
O20A White River Ci 89.51 46 ⇓P P 01 54 46.2 +1.0
baz=90,SNR=9.7
X25A Clemons Ranch 89.53 53 ⇑P P 01 54 46.3 +1.0
baz=90
M19A Rock Springs 89.55 45 ⇑P P 01 54 46.2 +0.9
baz=90
529A Stev Forest Ra 89.55 58 ⇓P P 01 54 46.4 +1.0
baz=90,SNR=8.0
IMW Indian Meadow 89.57 42 eP P 01 54 46.9 +1.4
comp=Z,12nm,1.0s
F15A Butte 89.59 40 ⇓P P 01 54 46.4 +0.9
baz=90
V24A Rampart Ranch, 89.61 51 ⇓P P 01 54 47.0 +1.2
baz=90,SNR=8.6
328A Wristen Ranch, 89.61 56 ⇑P P 01 54 46.8 +1.1
baz=90
LRM Limekiln Ridge 89.61 40 eP P 01 54 46.9 +1.4
MOOW Moose Ponds 89.61 42 eP P 01 54 46.3 +0.7
comp=Z,13nm,1.7s
LOHW Long Hollow 89.64 43 eP P 01 54 46.8 +1.1
comp=Z,4.9nm,0.8s
D14A Greenough 89.64 38 ⇓P P 01 54 46.3 +0.8
baz=90
R22A Saguache, Gunn 89.66 49 ⇓P P 01 54 47.5 +1.4
baz=90
G16A Moss Hill, Enn 89.70 41 ⇑P P 01 54 47.1 +1.2
baz=90,SNR=5.3
CHMT Chamberlain Mo 89.70 39 eP P 01 54 46.5 +0.6
L19A Farson 89.70 44 ⇓P P 01 54 47.2 +1.2
baz=90,SNR=16
127A Arkansas Junct 89.73 55 ⇑P P 01 54 47.4 +1.1
baz=90
P21A Newcastle 89.77 47 ⇑P P 01 54 47.5 +1.1
baz=90
B13A Whitefish 89.77 37 ⇓P P 01 54 46.7 +0.7
baz=90
H16A Russell Place, 89.78 41 ⇓P P 01 54 48.2 +1.9
baz=90,SNR=6.4
E15A Deer Lodge 89.81 39 ⇑P P 01 54 47.2 +0.8
baz=90
N20A Spence Gulch, 89.83 46 ⇑P P 01 54 47.7 +1.1
baz=90,SNR=22
Q22A Crested Butte, 89.84 48 ⇓P P 01 54 48.2 +1.3
baz=90
C14A Swan Lake 89.86 38 ⇓P P 01 54 46.9 +0.4
baz=90
BW06 Boulder Array 89.89 44 eP P 01 54 47.8 +0.9
comp=Z,13nm,1.2s
PDAR Pinedale Array 89.89 44 P P 01 54 47.5 +0.6
PDAR PP PP 01 58 30.4 -1.3
PDAR Pinedale Array 89.89 44 P P 01 54 47.5 +0.6
comp=Z,4.9nm,0.7s,baz=204,slow=3.3,SNR=36
PDAR PP PP 01 58 30.4 -1.3
comp=Z,0.6nm,0.9s,baz=240,slow=6.0,SNR=4.7
Y26A Elida 89.90 54 ⇑P P 01 54 48.1 +1.1
baz=90
SMCO Snowmass 89.94 48 eP P 01 54 48.1 +0.7
comp=Z,4.9nm,0.8s
W25A X Bar L Ranch, 89.98 52 ⇑P P 01 54 48.1 +0.7
baz=90,SNR=8.9
429A Davenport Ranc 90.01 57 ⇑P P 01 54 48.6 +1.0
baz=90,SNR=27
H17A Grant Village 90.04 42 ⇓P P 01 54 49.8 +2.2
baz=90
F16A Kennard Place, 90.09 40 ⇓P P 01 54 49.1 +1.5
baz=90
Z27A Tatum 90.11 54 ⇓P P 01 54 49.2 +1.2
baz=90
V25A Rancho No Teng 90.14 52 ⇓P P 01 54 49.1 +0.9
baz=90
CD2 Chengdu 90.14 303 P P 01 54 49.0 +0.9
M20A Sweetwater, Wa 90.18 45 ⇑P P 01 54 49.3 +1.0
baz=90,SNR=8.5
D15A Lincoln 90.19 39 ⇑P P 01 54 49.1 +1.0
baz=90
530A J-C Ranch, Com 90.26 58 ⇑P P 01 54 49.4 +0.8
baz=90
P22A Eagle 90.28 47 ⇓P P 01 54 49.9 +1.1
baz=90
N21A Black Mountain 90.29 46 ⇓P P 01 54 50.1 +1.3
baz=90,SNR=11
329A Wagon Wheel Ra 90.30 56 ⇓P P 01 54 49.8 +0.9
baz=90,SNR=5.7
R23A Moffat 90.30 49 ⇓P P 01 54 49.9 +0.9
baz=90
L20A Wamsutter 90.33 45 ⇓P P 01 54 50.2 +1.3
baz=91,SNR=9.6
SDCO Great Sand Dun 90.33 49 eP P 01 54 50.2 +1.1
comp=Z,6.2nm,1.4s
T24A Torres, Weston 90.36 50 ⇓P P 01 54 50.4 +1.1
baz=91
128A Castleberry Fa 90.37 55 ⇓P P 01 54 50.2 +1.0
baz=91,SNR=5.6
K19A Absolon Red Bu 90.38 44 ⇑P P 01 54 49.7 +0.6
baz=91
Y27A Causey 90.38 54 ⇓P P 01 54 49.9 +0.7
baz=91
COLD Coldfoot 90.39 11 eP P 01 54 49.0 +0.6
comp=Z,8.2nm,0.9s
E16A East Helena 90.43 40 ⇑P P 01 54 50.1 +0.9
baz=91
B14A Marquette Ranc 90.44 37 ⇓P P 01 54 49.5 +0.3
baz=91,SNR=23
W26A Owens Ranch, T 90.44 52 ⇓P P 01 54 50.3 +0.8
baz=91
WALA Waterton Lakes 90.45 37 eP P 01 54 50.0 +0.8
J19A Crowheart 90.46 43 ⇑P P 01 54 50.3 +0.8
baz=91
S24A Houdin Ranch, 90.49 50 ⇑P P 01 54 51.1 +1.2
baz=91
C15A Salmond Ranch, 90.52 38 ⇑P P 01 54 50.1 +0.5
baz=91
U25A Circle Dot Ran 90.53 51 ⇓P P 01 54 50.6 +0.6
baz=91,SNR=6.6
631A Perdido Creek 90.57 59 ⇑P P 01 54 51.1 +1.0
baz=91,SNR=13
430A Baggett Ranch, 90.59 57 ⇑P P 01 54 51.1 +0.8
baz=91
Q23A Hartsel 90.61 48 ⇑P P 01 54 51.4 +1.0
baz=91
K20A Yellowstone Ra 90.63 44 ⇓P P 01 54 50.7 +0.5
baz=91
A14A Double T Ranch 90.68 37 ⇓P P 01 54 50.9 +0.6
baz=91,SNR=11
O22A Kremmling 90.68 47 ⇑P P 01 54 51.7 +1.0
baz=91,SNR=6.4
MSTX Muleshoe 90.72 54 ⇑P P 01 54 51.8 +1.0
baz=91
Z28A Tucker Farm, M 90.72 55 ⇑P P 01 54 51.8 +1.0
baz=91
V26A Tequesquite Ra 90.73 52 ⇓P P 01 54 51.8 +1.0
baz=91
F17A Fitzpatrick Pl 90.73 40 ⇑P P 01 54 52.3 +1.7
baz=91
D16A Dana Ranch, Ca 90.76 39 ⇑P P 01 54 52.1 +1.4
baz=91
732A Laxson Ranch, 90.78 60 ⇓P P 01 54 52.1 +1.1
baz=91,SNR=5.4
M21A Separation Pea 90.78 45 ⇑P P 01 54 51.9 +0.8
baz=91,SNR=9.7
B15A Bradely Ranch, 90.82 38 ⇑P P 01 54 51.4 +0.5
baz=91
R24A Sanders Place, 90.82 49 ⇓P P 01 54 52.4 +1.1
baz=91
T25A Trinidad 90.85 50 ⇑P P 01 54 52.2 +0.8
baz=91
I19A Meeteetse 90.86 43 ⇑P P 01 54 52.6 +1.2
baz=91
531A Rocksprings 90.89 58 ⇑P P 01 54 52.7 +1.1
baz=91,SNR=7.2
330A Mertzon 90.89 57 ⇓P P 01 54 52.0 +0.4
baz=91
N22A Wattenberg Ran 91.03 46 ⇑P P 01 54 53.6 +1.3
baz=91
C16A Fuhringer Ranc 91.03 38 ⇓P P 01 54 52.3 +0.4
baz=91,SNR=5.2
S25A Robets Cordova 91.05 50 ⇓P P 01 54 53.4 +1.0
baz=91,SNR=6.4
A15A Johnson Ranch, 91.07 37 ⇑P P 01 54 52.2 +0.2
baz=91,SNR=5.6
G18A Lazy EL Ranch, 91.12 41 ⇓P P 01 54 53.2 +0.8
baz=91
J20A Shoshoni 91.12 44 ⇑P P 01 54 53.5 +1.0
baz=91,SNR=5.7
O23A Lake Granby, G 91.13 47 ⇑P P 01 54 54.2 +1.4
baz=91
230A Sterling City 91.14 56 ⇑P P 01 54 54.0 +1.3
baz=91
ISCO Idaho Springs 91.16 48 eP P 01 54 54.4 +1.5
comp=Z,2.5nm,0.8s
ISCO Idaho Springs 91.16 48 ⇓P P 01 54 54.1 +1.1
baz=91
H19A Powell 91.17 42 ⇓P P 01 54 54.1 +1.5
baz=91
M22A Cedar Creek Ra 91.21 46 ⇑P P 01 54 54.5 +1.4
baz=92
632A Uvalde 91.24 59 ⇑P P 01 54 54.4 +1.2
baz=92,SNR=8.2
F18A Big Timber 91.31 41 ⇑P P 01 54 54.4 +1.2
baz=92
K21A Alcova 91.33 45 ⇑P P 01 54 54.3 +0.8
baz=92
D17A Six Diamond Ra 91.33 39 ⇑P P 01 54 54.5 +1.1
baz=92,SNR=11
B16A M & M Farms, S 91.36 38 ⇑P P 01 54 53.4 0.0
baz=92,SNR=5.3
I20A Worland 91.37 43 ⇓P P 01 54 54.3 +0.7
baz=92
R25A Fountain Ranch 91.37 50 ⇑P P 01 54 54.5 +0.8
baz=92
532A Rocksprings 91.39 58 ⇓P P 01 54 54.7 +0.8
baz=92,SNR=6.5
N23A Red Feather La 91.42 47 ⇓P P 01 54 54.9 +0.9
baz=92,SNR=7.4
331A San Angelo 91.44 57 ⇓P P 01 54 54.8 +0.7
baz=92
T26A Comanche Natio 91.45 51 ⇓P P 01 54 54.8 +0.5
baz=92
Y29A Porterfield Fa 91.50 54 ⇑P P 01 54 55.1 +0.7
baz=92
E18A Harlowton 91.51 40 ⇑P P 01 54 55.6 +1.4
baz=92
C17A Wharram Farm, 91.53 39 ⇑P P 01 54 55.0 +0.9
baz=92,SNR=6.5
L22A Ellis Ranch, M 91.60 45 ⇑P P 01 54 55.9 +1.1
baz=92
JCT Junction City 91.61 58 ⇓P P 01 54 55.6 +0.7
baz=92
A16A West Butte Ran 91.70 38 ⇑P P 01 54 55.9 +0.9
baz=92
S26A Kim 91.73 50 ⇓P P 01 54 55.8 +0.4
baz=92,SNR=6.5
432A Menard 91.77 58 ⇑P P 01 54 56.0 +0.4
baz=92,SNR=5.5
231A Bronte 91.78 57 ⇓P P 01 54 56.0 +0.3
baz=92,SNR=5.5
I21A Big Trails, Te 91.84 43 ⇓P P 01 54 56.3 +0.5
baz=92,SNR=6.4
332A Millersview 92.01 57 ⇓P P 01 54 57.2 +0.5
baz=92,SNR=11
R26A Arlington 92.03 50 ⇓P P 01 54 57.2 +0.5
baz=92,SNR=7.6

P25A	Willow Gulch B baz=92	92.04	48	⇓P		P	01 54 57.6	+0.8	
L23A	Garrett baz=92,SNR=6.4	92.12	46	⇑P		P	01 54 57.9	+0.7	
LZH	Lanzhou	92.19	308	*e*P		P	01 54 56.8	-0.8	
LZH				pP		pP	01 57 09.3	-1.6	
LZH				pmax		pmax			
	comp=Z,19nm,1.1s								
A17A	Triple J Farms baz=92	92.21	38	⇓P		P	01 54 58.4	+1.2	
232A	Coleman baz=92	92.28	57	⇑P		P	01 54 58.6	+0.6	
EGMT	Eagleton baz=92	92.31	39	⇓P		P	01 54 58.5	+0.8	
I22A	9 Mile Ranch, baz=93	92.40	44	⇓P		P	01 54 59.2	+0.9	
D19A	Cripps Ranch, baz=93	92.42	40	⇑P		P	01 54 59.4	+1.2	
Z31A	Sharp Cattle R baz=93	92.45	55	⇑P		P	01 54 59.4	+0.7	
B18A	Beardsley Farm baz=93,SNR=7.2	92.47	39	⇑P		P	01 54 59.1	+0.6	
ABTX	Abilene, Hawle baz=93	92.57	56	⇑P		P	01 54 59.9	+0.7	
C19A	Slack Wire Ran baz=93,SNR=6.2	92.59	39	⇑P		P	01 55 00.1	+1.1	
P26A	Davis Ranch, A baz=93	92.63	49	⇓P		P	01 55 00.4	+0.8	
H22A	Clearmont baz=93	92.80	43	⇓P		P	01 55 01.3	+1.2	
S28A	Manter baz=93	92.85	51	⇑P		P	01 55 01.5	+1.0	
Z32A	Haskell baz=93	92.96	56	⇓P		P	01 55 02.1	+1.1	
B19A	Brinkman Farms baz=93	92.99	39	⇓P		P	01 55 01.8	+1.0	
R28A	Tribune baz=94	93.22	50	⇑P		P	01 55 03.3	+1.1	
H24A	Dirks Ranch, A baz=94	94.02	44	⇓P		P	01 55 06.6	+0.9	
RSSD	Black Hills comp=Z,4.6nm,1.0s	94.09	44	*e*P		P	01 55 06.8	+0.7	
INK	Inuvik	94.86	15	P		P	01 55 07.9	-0.8	
INK				PP		PP	01 59 10.8	+1.7	
INK	Inuvik comp=Z,3.5nm,1.0s,baz=236,slow=13,SNR=15	94.86	15	P		P	01 55 07.9	-0.8	
INK				PP		PP	01 59 10.8	+1.7	
	comp=Z,1.5nm,1.0s,baz=205,slow=9.5,SNR=5.2								
YKA	Yellowknife Ar	97.24	25	P		Pdif	01 55 19.6	0.0	
YKA				PP		PP	01 59 24.6	-2.6	
YKA	Yellowknife Ar comp=Z,1.2nm,0.7s,baz=246,slow=4.4,SNR=19	97.24	25	P		Pdif	01 55 19.5	0.0	
YKA				PP		PP	01 59 24.6	-2.6	
	comp=Z,0.9nm,1.0s,baz=240,slow=7.8,SNR=7.4								
URVA	University of	111.30	57	*e*Pdif		Pdif	01 56 22.8	+0.1	
KURK	Kurchatov	113.57	317	PKiKP		PKiKP	02 00 19.9	-1.3	
KURBB	Kurchatov Arra comp=Z,0.4nm,0.5s,baz=110,slow=1.3,SNR=5.0	113.62	317	PKiKP		PKiKP	02 00 19.9	-1.4	
BVAR	Borovoye Array	118.70	320	PKP		PKPdf	02 00 29.1	-1.8	
BVAR	Borovoye Array comp=Z,0.9nm,0.3s,baz=133,slow=3.1,SNR=7.8	118.70	320	PKP		PKPdf	02 00 29.1	-1.8	
SPITS	Spitsbergen Ar	122.14	356	PKP		PKPdf	02 00 36.2	-0.8	
SPITS	Spitsbergen Ar comp=Z,7.1nm,0.7s,baz=69,slow=4.6,SNR=14	122.14	356	PKP		PKPdf	02 00 36.2	-0.8	
SUMG	Summit comp=Z,3.9nm,1.0s	123.71	13	*i* P		PKPdf	02 00 40.3	-0.3	
ARCES	ARCESS Array B	129.07	349	PKP		PKPdf	02 00 49.8	-0.6	
ARCES				SKPab		SKPab	02 03 13.8	-0.7	
ARCES	ARCESS Array B comp=Z,3.5nm,0.6s,baz=78,slow=1.5,SNR=26	129.07	349	PKP		PKPdf	02 00 49.8	-0.6	
ARCES				SKPbc		SKPab	02 03 13.8	-0.7	
	comp=Z,8.2nm,0.8s,baz=19,slow=4.1,SNR=16								
JOF	Joensuu	133.14	342	*e*pkp		PKPdf	02 00 57.2	-1.0	
JOF	Joensuu comp=Z,11nm,0.8s	133.14	342	*e*p		SKPbc	02 03 28.1	-1.2	
KAF	Kangasniemi	135.20	343	*e*pkp		PKPdf	02 01 00.6	-1.5	
KAF	Kangasniemi	135.20	343	*e*p		SKPbc	02 03 34.6	-1.3	
FINES	FINESS Array B	135.81	343	PKPpre		PKPpre	02 00 51.6		
FINES				PKP		PKPdf	02 01 02.7	-0.5	
FINES				SKPbc		SKPbc	02 03 36.6	-1.1	
FINES	FINESS Array B comp=Z,0.7nm,0.7s,baz=35,slow=4.7,SNR=3.4	135.81	343	PKHKP		PKPpre	02 00 51.6		
FINES				PKP		PKPdf	02 01 02.7	-0.5	
	comp=Z,2.0nm,0.6s,baz=24,slow=3.3,SNR=13								
FINES				SKPbc		SKPbc	02 03 36.6	-1.1	
	comp=Z,2.3nm,0.6s,baz=47,slow=3.1,SNR=18								
NB2	NORSAR Subarra comp=Z,1.0nm,0.7s,baz=17,slow=2.6	139.19	352	PKP		PKPdf	02 01 00.8	-8.7	
NOA	NORSAR Array B	139.19	352	PKPpre		PKPpre	02 01 00.8		
NOA				PKP		PKPdf	02 01 10.1	+0.6	
NOA				SKPbc		SKPbc	02 03 46.7	-0.8	
NOA				SKPab		SKPab	02 03 58.1	-0.9	
NOA	NORSAR Array B comp=Z,1.2nm,0.6s,baz=16,slow=4.6,SNR=9.3	139.19	352	PKHKP		PKPpre	02 01 00.8		
NOA				PKP		PKPdf	02 01 10.1	+0.6	
	comp=Z,1.6nm,0.6s,baz=14,slow=4.1,SNR=9.7								
NOA				SKPbc		SKPbc	02 03 46.7	-0.8	
	comp=Z,2.4nm,0.9s,baz=14,slow=4.3,SNR=6.4								
NOA				SKPab		SKPab	02 03 58.1	-0.9	
	comp=Z,1.9nm,0.9s,baz=15,slow=3.1,SNR=4.5								
HFS	Hagfors	139.71	350	PKPpre		PKPpre	02 01 02.1		
HFS				PKP		PKPdf	02 01 10.0	-0.4	
HFS				SKPbc		SKPbc	02 03 47.1	-1.7	
HFS	Hagfors comp=Z,3.1nm,0.6s,baz=66,slow=3.2,SNR=18	139.71	350	PKHKP		PKPpre	02 01 02.1		
HFS				PKP		PKPdf	02 01 10.0	-0.4	
	comp=Z,1.9nm,0.8s,baz=54,slow=2.6,SNR=4.7								
HFS				SKPbc		SKPbc	02 03 47.1	-1.7	
	comp=Z,2.3nm,0.8s,baz=26,slow=3.8,SNR=4.1								
MVH1	Achvaich	142.77	5	*e*P		PKPdf	02 01 13.1	-2.8	
MVH1	Achvaich	142.77	5	P		PKPdf	02 01 13.1	-2.8	
SUW	Suwalki	142.80	338	*e*PKPdf		PKPdf	02 01 13.1	-3.0	
SUW	Suwalki	142.80	338	*e*PKP		PKPdf	02 01 13.5	-2.6	
AKASG	Malin Array Be	142.82	330	PKPpre		PKPpre	02 01 13.0		
AKASG	Malin Array Be comp=Z,15nm,0.6s,baz=43,slow=4.3,SNR=52	142.82	330	PKHKP		PKPpre	02 01 13.0		
KAC	Achnashellach	143.10	6	*e*P		PKPab	02 01 14.3	-0.3	
KAC	Achnashellach	143.10	6	P		PKPab	02 01 14.3	-0.3	
MCD	Coleburn Disti	143.18	4	*e*P		PKPab	02 01 14.1	-0.8	
MCD	Coleburn Disti	143.18	4	P		PKPab	02 01 14.1	-0.8	
KPL	Plockton	143.23	6	*e*P		PKPab	02 01 14.9	-0.2	
KPL	Plockton	143.23	6	P		PKPab	02 01 14.9	-0.2	
MDO	Dochfour	143.24	5	*e*P		PKPab	02 01 14.5	-0.7	
MDO	Dochfour	143.24	5	P		PKPab	02 01 14.5	-0.7	
KSB	Sheil Bridge	143.38	6	*e*P		PKPab	02 01 15.1	-0.5	
KSB	Sheil Bridge	143.38	6	P		PKPab	02 01 15.1	-0.5	
MME1	Meikle Cairn	143.46	4	*e*P		PKPab	02 01 14.2	-1.8	
MME1	Meikle Cairn	143.46	4	P		PKPab	02 01 14.2	-1.8	
MUD	Monsted U'grnd comp=Z,23nm,0.9s	143.91	352	*i* P		PKPbc	02 01 16.9	-0.5	
COP	Copenhagen comp=Z,6.0nm,0.8s	144.16	349	*i* P		PKPbc	02 01 17.9	-0.3	
BSD	Bornholm Skovb comp=Z,13nm,0.9s	144.19	346	*i* P		PKPbc	02 01 17.9	-0.5	
EAB	Aberfoyle	144.48	5	*e*P		PKPdf	02 01 18.4	-0.6	
EAB	Aberfoyle	144.48	5	P		PKPdf	02 01 18.4	-0.6	
LLD	Lille Linde comp=Z,11nm,0.8s	144.53	349	*i* P		PKPdf	02 01 18.8	-0.2	
EDI	Edinburgh	144.83	4	*e*P		PKPdf	02 01 17.5	-2.0	
EDI	Edinburgh	144.83	4	P		PKPdf	02 01 17.5	-2.0	
ESY	Stoneypath	144.87	3	*e*P		PKPdf	02 01 19.7	+0.1	
ESY	Stoneypath	144.87	3	P		PKPdf	02 01 19.7	+0.1	
EAU	Auchinoon	144.89	4	*e*P		PKPdf	02 01 19.6	-0.1	
EAU	Auchinoon	144.89	4	P		PKPdf	02 01 19.6	-0.1	
EBL	Broad Law	144.99	4	*e*P		PKPdf	02 01 20.4	+0.6	
EBL	Broad Law	144.99	4	P		PKPdf	02 01 20.4	+0.6	
GKP	Gorka Klasztor	145.29	343	*e*PKP		PKPbc	02 01 21.4	-0.3	
BEL	Belsk	145.41	338	*e*PKP		PKPbc	02 01 22.4	+0.3	
EKA	Eskdalemuir Ar	145.42	4	PKPbc		PKPdf	02 01 21.4	+0.9	
EKA	Eskdalemuir Ar comp=Z,12nm,0.7s,baz=353,slow=2.7,SNR=44	145.42	4	PKPbc		PKPdf	02 01 21.4	+0.9	
ESK	Eskdalemuir	145.44	4	*e*P		PKPdf	02 01 21.4	+0.8	
ESK	Eskdalemuir	145.44	4	P		PKPdf	02 01 21.4	+0.8	
ESK	Eskdalemuir	145.44	4	*e*PKPdf		PKPdf	02 01 21.4	+0.8	
ECK	Cauldkaine Hil	145.58	4	*e*P		PKPdf	02 01 20.2	-0.6	
ECK	Cauldkaine Hil	145.58	4	P		PKPdf	02 01 20.2	-0.6	
GAL1	Galloway	145.76	6	*e*P		PKPbc	02 01 22.7	-0.3	
GAL1	Galloway	145.76	6	P		PKPbc	02 01 22.7	-0.3	
ASF	Jabal al Asfar	146.05	297	PKPbc		PKPbc	02 01 24.7	0.0	
ASF	Jabal al Asfar comp=Z,2.6nm,0.8s,baz=145,slow=2.1,SNR=4.9	146.05	297	PKPbc		PKPbc	02 01 24.7	0.0	
LEOM	Leova	146.10	325	⇑*i* P		PKPbc	02 01 23.4	-0.8	
BSEG	Bad Segeberg	146.19	350	*e*PKPbc		PKPbc	02 01 24.3	+0.1	
BR131	Keskin Array S	146.32	311	*e*PKPbc		PKPbc	02 01 24.9	-0.3	
BRTR	Keskin Array B	146.32	311	PKPbc		PKPbc	02 01 24.9	-0.4	
BRTR				pPKPbc		pPKPbc	02 03 52.6	+7.6	
BRTR	Keskin Array B comp=Z,2.4nm,0.6s,baz=118,slow=4.4,SNR=16	146.32	311	PKPbc		PKPbc	02 01 24.9	-0.4	
BRTR				pPKPbc		pPKPbc	02 03 52.6	+7.6	
	comp=Z,2.4nm,1.2s,baz=48,slow=2.1,SNR=3.5								
KWP	Kalwaria Pacla	146.46	334	*e*PKPbc		PKPbc	02 01 25.1	0.0	
KWP	Kalwaria Pacla	146.46	334	⇓*i* P		PKPbc	02 01 25.5	+0.3	
KWP	Kalwaria Pacla	146.46	334	*e*PKP		PKPbc	02 01 25.0	-0.2	
BUR08	Bucovina Ar. S	146.85	329	*e*PKPbc		PKPbc	02 01 26.8	+0.4	
BURAR	Bucovina Array	146.86	329	⇓*i* P		PKPbc	02 01 26.7	+0.3	
TESR	Tescani	146.91	327	⇑*i* P		PKPbc	02 01 26.4	-0.1	
CFR	Carcaliu	146.98	324	⇑*i* P		PKPbc	02 01 26.9	+0.3	
OJC	Ojcow	147.10	338	*e*PKP		PKPbc	02 01 26.7	-0.1	
MMAI	Mount Meron Ar	147.11	299	PKPbc		PKPbc	02 01 27.5	0.0	
MMAI	Mount Meron Ar comp=Z,6.0nm,0.8s,baz=54,slow=4.3,SNR=8.2	147.11	299	PKPbc		PKPbc	02 01 27.5	0.0	
KOLS	Kolonicke sedl	147.19	334	*e*PKP		PKPbc	02 01 27.3	+0.2	
TIRR	Tirgusor	147.26	322	⇑*i* P		PKPdf	02 01 25.0	+1.0	
VRI	Vrincioaia	147.30	326	⇓*i* P		PKPbc	02 01 26.1	-1.4	
CRVS	Cervenica-Dubn	147.54	334	*e*PKP		PKPbc	02 01 26.9	-1.1	
CRVS				*e*			02 01 31.9		
NIE	Niedzica	147.57	336	*i* PKP		PKPbc	02 01 28.0	-0.1	
NRDL	Niedersach Rie	147.62	350	*e*PKPbc		PKPbc	02 01 27.6	-0.3	
TRPA	Tarpa	147.69	333	⇑*i* P		PKPbc	02 01 28.5	+0.1	
KSP	Ksiaz	147.71	342	*e*PKP		PKPbc	02 01 28.9	+0.5	
FOEL	Foel Wylfa	147.85	5	*e*P		PKPbc	02 01 28.4	-0.3	
FOEL	Foel Wylfa	147.85	5	P		PKPbc	02 01 28.4	-0.3	
DOPR	Dopca	147.92	327	⇓*i* P		PKPbc	02 01 29.8	+0.7	
MLR	Muntele Rosu	147.96	326	PKPbc		PKPbc	02 01 29.6	+0.3	
MLR	Muntele Rosu	147.96	326	⇑*i* P		PKPbc	02 01 30.1	+0.8	
MLR	Muntele Rosu baz=329,slow=5.9	147.96	326	PKPbc		PKPbc	02 01 29.6	+0.3	
OKC	Ostrava-Krasne	148.00	339	⇑*e*PKP		PKPbc	02 01 28.9	-0.2	
OKC				*e*PKPAB		PKPab	02 01 34.8	+0.6	
UPC	Upice	148.09	342	⇑*e*PKP		PKPbc	02 01 29.7	+0.4	
UPC				*e*PKPAB		PKPab	02 01 35.3	+0.7	
EIL	Elat	148.10	293	PKPbc		PKPbc	02 01 30.2	+0.2	
EIL	Elat comp=Z,2.2nm,0.8s,baz=90,slow=22,SNR=4.4	148.10	293	PKPbc		PKPbc	02 01 30.2	+0.2	
DPC	Dobruska-Polom	148.14	341	⇑*e*PKP		PKPbc	02 01 29.9	+0.4	
DPC				*e*PKPAB		PKPab	02 01 35.6	+0.8	
IBBN	Ibbenburen	148.15	352	*e*PKPbc		PKPab	02 01 34.0	-0.7	
CLL	Collm	148.16	346	*e*PKPbc		PKPbc	02 01 29.5	+0.1	
CLL	Collm comp=Z,19nm,0.8s	148.16	346	⇑*i*PKPbc		PKPbc	02 01 29.5	+0.1	
CLL				*i* PKPab		PKPab	02 01 34.8	0.0	
	comp=Z,8.0nm,0.8s								
SECR		148.19	325	⇓*i* P		PKPbc	02 01 29.9	+0.1	
MORC	Moravsky Berou	148.25	339	*e*PKPbc		PKPbc	02 01 29.9	+0.1	
MORC				*e*PKPab		PKPab	02 01 35.6	+0.2	
MORC	Moravsky Berou	148.25	339	⇑*i* P		PKPbc	02 01 30.1	+0.3	
BRG	Berggiesshubel comp=Z,9.1nm,0.8s	148.33	344	⇑*i*PKP		PKPbc	02 01 30.0	+0.1	
BRG				*e*			02 01 35.9		
	comp=Z,10nm,1.2s								
BRG	Berggiesshubel	148.33	344	*e*PKPbc		PKPbc	02 01 29.9	0.0	
BRG				*e*PKPab		PKPab	02 01 35.5	0.0	
VOIR		148.46	327	⇑*i* P		PKPbc	02 01 30.9	+0.4	
PVCC	Panska Ves	148.48	343	⇑*e*PKP		PKPbc	02 01 30.9	+0.6	
WTSB	Winterswijk comp=Z,22nm,0.7s	148.60	353	*e*PKP		PKPbc	02 01 30.3	-0.1	
MCH1	Michaelchurch	148.75	5	*e*P		PKPbc	02 01 30.0	-0.9	
MCH1	Michaelchurch	148.75	5	P		PKPbc	02 01 30.0	-0.9	
VYHS	Vyhne	148.89	337	*e*PKP		PKPbc	02 01 31.4	0.0	
VYHS				*e*			02 01 38.4		
PSZ	Piszkesteto	148.96	335	⇑*i* P		PKPdf	02 01 29.0	+2.2	
VRAC	Vranov	148.97	340	PKPbc		PKPbc	02 01 31.3	-0.3	
VRAC	Vranov	148.97	340	⇓*i* P		PKPbc	02 01 32.0	+0.5	
VRAC	Vranov comp=Z,4.6nm,0.8s,baz=80,slow=1.7,SNR=8.7	148.97	340	PKPbc		PKPbc	02 01 31.3	-0.3	
PRU	Pruhonice	148.98	343	⇑*e*PKP		PKPbc	02 01 31.6	+0.1	
PRU				*e*PKPAB		PKPab	02 01 38.2	0.0	
BUG	Bochum--Univer	149.06	352	*e*PKPbc		PKPbc	02 01 31.4	-0.2	
MOX	Moxa	149.09	347	*e*PKPbc		PKPbc	02 01 31.7	-0.1	
MOX				*e*PKPab		PKPab	02 01 38.4	-0.3	
LOT	Lotru	149.10	328	⇑*i* P		PKPbc	02 01 31.4	-0.7	
TANN	Tannenbergstha	149.11	346	*e*PKPbc		PKPbc	02 01 31.9	0.0	
NKC	Novy Kostel	149.29	345	⇑*e*PKP		PKPbc	02 01 32.3	0.0	
NKC				*e*PKPAB		PKPab	02 01 40.0	+0.4	
TREC	Trest	149.33	341	⇑*e*PKP		PKPbc	02 01 32.4	0.0	
SMOL	Smolenice	149.38	338	*e*PKP		PKPab	02 01 40.9	+0.9	
ZST	Bratislava	149.76	338	*e*PKP		PKPbc	02 01 32.8	-0.6	
ZST				*e*			02 01 41.5		
ROTZ	Rotzenmuhle	149.78	345	*e*PKPbc		PKPbc	02 01 33.3	-0.1	
HGN	Heimansgroeve comp=Z,4.7nm,0.6s	149.88	354	*e*PKP		PKPbc	02 01 33.5	-0.1	
HGN				*e*X			02 01 40.7		
BZS	Buzias	150.01	330	⇓*i* P		PKPbc	02 01 34.2	+0.1	
KHC	Kasperske Hory	150.02	343	*e*PKPdf		PKPdf	02 01 28.5	+0.1	
KHC				*e*PKPbc		PKPbc	02 01 34.1	+0.1	
KHC				*e*PKPab		PKPab	02 01 43.4	+0.7	
KHC	Kasperske Hory	150.02	343	⇑*e*PKP		PKPbc	02 01 34.2	+0.1	
KHC				*e*PKPAB		PKPab	02 01 43.3	+0.6	
MEM	Membach	150.03	354	PKPbc		PKPbc	02 01 33.8	-0.2	
MEM				E			02 01 39.7		
GRF	Grafenberg Arr	150.07	347	*e*PKPab		PKPab	02 01 43.1	+0.3	
TNS	Taunus Mts	150.08	350	*e*PKPab		PKPab	02 01 42.9	0.0	
WET	Wettzell	150.19	344	*e*PKPbc		PKPbc	02 01 34.3	-0.1	
WET				*e*PKPab		PKPab	02 01 43.8	+0.4	
GEC2	GERESS Array S	150.25	343	*e*PKPbc		PKPbc	02 01 33.9	-0.8	
GERES	GERESS Array B	150.25	343	PKPbc		PKPbc	02 01 34.2	-0.4	
GERES				PKPab		PKPab	02 01 43.9	+0.2	
GERES	GERESS Array B comp=Z,5.7nm,0.8s,baz=26,slow=2.3,SNR=46	150.25	343	PKPbc		PKPbc	02 01 34.2	-0.4	
GERES				PKPab		PKPab	02 01 43.9	+0.2	
	comp=Z,1.1nm,0.8s,baz=0.0,slow=3.9,SNR=5.1								
BCLA	Clavier	150.28	354	PKPbc		PKPbc	02 01 34.5	-0.1	
BCLA				PKPab		PKPab	02 01 43.1	-0.6	
CONA	Conrad Observa comp=Z,9.6nm,0.7s	150.41	339	⇑*i*PKPbc		PKPbc	02 01 35.1	0.0	
DOU	Dourbes	150.66	355	PKPbc		PKPbc	02 01 35.4	0.0	
DOU				PKPab		PKPab	02 01 45.0	-0.3	
PKSM	Moragy	150.84	334	⇓*i* P		PKPbc	02 01 35.9	-0.1	
WLF	Walferdange	150.94	353	PKPbc		PKPbc	02 01 36.8	+0.7	
WLF				PKPab		PKPab	02 01 46.1	-0.3	
WLF	Walferdange	150.94	353	*e*PKPbc		PKPbc	02 01 36.4	+0.4	
WLF	Walferdange	150.94	353	*e*PKPbc		PKPbc	02 01 36.5	+0.4	
WLF				*ep*PKPab		PKPab	02 01 46.5	0.0	
MOA	Molln	150.98	341	⇑*i*PKPbc		PKPbc	02 01 35.8	-0.5	
	comp=Z,2.6nm,0.6s								
STU	Stuttgart	151.36	349	*e*PKPbc		PKPbc	02 01 36.7	-0.4	
VTS	Vitosha	151.37	324	⇑*i* P		PKPbc	02 01 37.3	-0.2	
FUR	Furstenfeldbru	151.49	345	*e*PKPbc		PKPbc	02 01 37.0	-0.4	
FUR				*e*PKPab		PKPab	02 01 49.1	+0.2	
RJOB	Jochberg	151.50	343	*e*PKPbc		PKPbc	02 01 37.0	-0.5	
RJOB				*e*PKPab		PKPab	02 01 49.4	+0.4	
PERS	Pernice	151.79	339	*i* PKPbc		PKPbc	02 01 37.2	-1.0	
PERS				*i*			02 01 50.2		
BFO	Black Forest	151.94	349	*e*PKPbc		PKPbc	02 01 37.8	-0.6	
BFO				*e*PKPab		PKPab	02 01 50.3	-0.5	
WTTA	Wattenberg comp=Z,8.8nm,0.7s	152.25	344	⇑*i*PKPbc		PKPbc	02 01 38.8	-0.5	
ABTA	Abfaltersbach comp=Z,7.0nm,0.6s	152.49	343	⇑*i*PKPbc		PKPbc	02 01 38.8	-1.0	
VISS	Visnje	152.61	339	*i* PKPbc		PKPbc	02 01 39.4	-0.6	
VISS				*i*			02 01 53.5		
FETA	Feichten comp=Z,4.5nm,0.8s	152.70	345	⇑*e*PKPbc		PKPbc	02 01 39.9	-0.4	
BOJS	Bojanci	152.73	338	*i* PKPbc		PKPbc	02 01 40.1	-0.1	
BOJS				*i*			02 01 54.1		
JAVS	Javornik	152.79	340	*i* PKPbc		PKPbc	02 01 39.6	-0.9	
JAVS				*i*			02 01 53.8		
DAVOX	Davos/Dischmat	153.12	346	PKPbc		PKPbc	02 01 40.8	-0.4	
DAVOX				PKPab		PKPab	02 01 56.4	+0.4	
DAVOX	Davos/Dischmat comp=Z,5.9nm,0.6s,baz=314,slow=2.3,SNR=12	153.12	346	PKPbc		PKPbc	02 01 40.8	-0.4	
DAVOX				PKPab		PKPab	02 01 56.4	+0.4	
	comp=Z,5.0nm,0.7s,baz=355,slow=3.5,SNR=5.9								
ESDC	Sonseca Array	160.76	12	PKPab		PKPab	02 02 28.7	-0.5	
ESDC	Sonseca Array comp=Z,3.2nm,0.9s,baz=347,slow=5.1,SNR=14	160.76	12	PKPab		PKPab	02 02 28.7	-0.5	
KEST	Kesra	163.43	335	PKPab		PKPab	02 02 41.2	+0.1	
KEST	Kesra comp=Z,1.9nm,0.8s,baz=276,slow=2.1,SNR=9.5	163.43	335	PKPab		PKPab	02 02 41.2	+0.1	
MDT	Midelt	167.09	21	PKPab		PKPab	02 02 58.1	+0.8	
MDT	Midelt comp=Z,3.0nm,1.0s,baz=28,slow=4.4,SNR=3.9	167.09	21	PKPab		PKPab	02 02 58.1	+0.8	
TORD	Torodi Ar. Bea	172.31	186	PKP		PKPdf	02 01 50.6	-1.5	
TORD				PKPab		PKPab	02 03 19.8	-0.8	
TORD	Torodi Ar. Bea comp=Z,0.8nm,0.8s,baz=217,slow=1.6,SNR=5.1	172.31	186	PKP		PKPdf	02 01 50.6	-1.5	
TORD				PKPab		PKPab	02 03 19.8	-0.8	

comp=Z,0.9nm,1.0s,baz=174,slow=3.3,SNR=4.3

BJI ***21*** *01:51:12.9,5.87S×128.60E,h360km,mB4.4/16,mb4.4/31*
AUST ***21*** *01:51:15.7±0.3,5.48S×128.04E, h325km, Error ellipse: s-maj=0.8km s-min=0.6km az=251.0*
ISCJB ***21*** *01:51:18.8±0.3,5.48S±0.02×128.24E±0.03, h382km±3km, mb4.4/69, Error ellipse: s-maj=4.3km s-min=3.4km az=166.2*
IDC ***21*** *01:51:19.5±0.9,5.45S×128.21E, h371km±8km, mb4.2/32, mb1 4.2/38, mb1mx4.2/41, mbtmp4.2/38, Error ellipse: s-maj=10.6km s-min=6.7km az=74.0*
NEIC ***21*** *01:51:19.5±0.5,5.47S×128.19E, h375km±5km, mb4.5/25, Error ellipse: s-maj=5.4km s-min=3.3km az=71.0*
DJA ***21*** *01:51:20.6±0.2,5°S±4″×12″8E±°, h383km±5km, M4.8/41, mB5.3/24, mb5.0/41, MLv5.5/18, Mw(mB)4.7/24*
ISC 21 01:51:18.3±0.3,5°51S±0.03×128°18E±0.04, h361km±2km, h362km:pP-P,n308,σ1°40/397, mb4.4/66, 2C-2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	Namlea	2.50	334	P	Pn	01 52 17.4	+2.9
FAKI	Fak Fak	4.80	58	P	Pn	01 52 37.2	+0.7
FAKI	Fak Fak baz=4.9,SNR=468	4.80	58	P	Pn	01 52 37.1	+0.7
FAKI				S	S	01 53 36.1	-3.5
	baz=4.9,SNR=35						
LBMI	Labuha	4.89	352	P	Pn	01 52 39.0	+1.6
SWI	Sorong 853nm,0.5s,18μm5.2nm	5.55	34	P	Pn	01 52 45.1	+0.5
SWI	Sorong baz=5.6,SNR=92	5.55	34	P	Pn	01 52 45.4	+0.8
SWI				S	S	01 53 52.6	-1.8
	baz=5.6,SNR=7.5						
BBSI	Bau Bau 185nm,1.0s,2μm0.7nm	5.59	270	P	Pn	01 52 49.8	+4.8
KMPI	Kaimana, Papua 2μm,0.6s	5.80	72	P	Pn	01 52 48.3	+0.9
TNTI	Ternate 241nm,1.2s,3μm1.1nm	6.30	353	P	Pn	01 52 54.9	+1.9
MMRI	Maumere 304

13nm,0.3s,baz=345,slow=10,SNR=181
ASAR S **S** **01 58 27.6 -1.5**
5.5nm,0.3s,baz=346,slow=22,SNR=20
ASAR PcP **PcP** **01 59 22.5 -0.2**
2.0nm,0.3s,baz=19,slow=1.9,SNR=4.9
TGJI Tegal 19.00 265 P **P** **01 55 15.0 -0.5**
117nm,1.1s
KSM Kuching 19.15 291 *e*pP **P** **01 55 17.4 +0.2**
KSM Kuching 19.15 291 *e*P **P** **01 55 17.4 +0.2**
34nm,1.1s
KSM Kuching 19.15 291 P **P** **01 55 17.5 +0.4**
baz=19,SNR=4.3
CLJI Cilicap 19.16 262 P **P** **01 55 14.5 -2.7**
86nm,1.1s
PMG Port Moresby 19.21 103 *e*P **P** **01 55 18.2 +0.5**
38nm,1.1s
PMG Port Moresby 19.21 103 P **P** **01 55 19.1 +1.5**
31nm,0.8s
PMG Port Moresby 19.21 103 P **P** **01 55 18.2 +0.5**
1.2nm,0.3s,baz=274,slow=4.2,SNR=16
MTSU Mount Surprise 20.14 130 P **P** **01 55 28.4 +1.3**
baz=20,SNR=9.6
CISI Cisompet, Garu 20.34 263 P **P** **01 55 26.9 -2.0**
144nm,0.8s
CISI Cisompet, Garu 20.34 263 P **P** **01 55 28.1 -0.8**
baz=20,SNR=4.9
LEM Lembang 20.49 265 P **P** **01 55 30.3 -0.1**
106nm,1.3s,2µm
TPI Tanjungpandan 20.66 277 P **P** **01 55 32.2 +0.5**
41nm,0.9s,295nm
DBJI Dramaga 21.34 266 P **P** **01 55 38.2 +0.3**
128nm,1.3s,8µm
GIRL Giralia 21.71 217 P **P** **01 55 43.6 +2.5**
baz=22,SNR=5.0
PPBI Pangkal Pinang 22.25 278 P **P** **01 55 48.0 +1.8**
53nm,1.3s
CTA Charters Tower 22.77 131 P **P** **01 55 51.9 +1.0**
CTA Charters Tower 22.77 131 P **P** **01 55 51.9 +1.0**
1.2nm,0.4s,baz=352,slow=7.1,SNR=2.3
MEEK Meekatharra 22.91 202 P **P** **01 55 51.8 -0.2**
baz=23,SNR=42
KASI Kota Agung 23.58 269 P **P** **01 55 58.2 0.0**
FORT Forrest 25.13 180 P **P** **01 56 12.8 +0.9**
baz=25,SNR=36
FORT S **S** **02 00 08.7 -1.0**
baz=25,SNR=4.8
GUMO Guam 25.19 41 *e*P **P** **01 56 13.1 +0.4**
141nm,1.2s
GUMO Guam 25.19 41 P **P** **01 56 11.5 -1.1**
21nm,0.4s,baz=166,slow=19,SNR=3.7
KMBL Kambalda 26.39 192 P **P** **01 56 23.7 +0.5**
baz=26,SNR=16
BLDU Ballidu 27.20 202 P **P** **01 56 30.9 +0.5**
baz=27,SNR=19
KLBR Kellerberrin 27.72 199 P **P** **01 56 35.6 +0.6**
baz=28,SNR=4.8
BBOO Buckleboo 28.14 166 P **P** **01 56 39.2 +0.7**
baz=28,SNR=38
BBOO S **S** **02 00 55.3 -1.5**
baz=28,SNR=6.2
STKA Stephens Creek 29.08 156 *e*P **P** **01 56 47.6 +0.8**
STKA pP **pP** **01 57 56.2 +2.3**
STKA ScP **ScP** **02 02 49.7 -1.7**
STKA Stephens Creek 29.08 156 P **P** **01 56 47.5 +0.6**
6.6nm,0.3s,baz=336,slow=7.9,SNR=43
STKA pP **pP** **01 57 56.2 +2.3**
10nm,0.6s,baz=318,slow=10,SNR=4.6
STKA ScP **ScP** **02 02 49.7 -1.7**
1.7nm,0.4s,baz=342,slow=6.4,SNR=3.0
STKA Stephens Creek 29.08 156 P **P** **01 56 47.7 +0.8**
baz=29,SNR=44
NWAO Narrogin (SRO) 29.12 199 *e*P **P** **01 56 48.0 +0.7**
14nm,0.3s
NWAO Narrogin (SRO) 29.12 199 P **P** **01 56 47.7 +0.4**
18nm,0.3s,baz=38,slow=7.7,SNR=42
KULM Kulim 29.51 291 *e*P **P** **01 56 50.6 -0.4**
8.7nm,0.4s
QIZ Qiongzhong 30.35 324 P **P** **01 56 59.5 +1.3**
QIZ pP **pP** **01 58 06.3 +0.7**
QIZ S **S** **02 01 34.0 +2.3**
QIZ pmax pmax
comp=Z,9.0nm,1.8s
UBPT Khong Chiam 30.55 313 P **P** **01 57 00.0 0.0**
CMSA Cobar Meteorol 30.65 150 P **P** **01 57 02.0 +1.3**
baz=31,SNR=6.2
YHNB Yeheng 30.73 348 *e*P **P** **01 56 59.8 -1.7**
comp=Z,10nm,0.7s
GSI Gunungsitoli 31.31 282 P **P** **01 57 05.5 -1.2**
GSI Gunungsitoli 31.31 282 P **P** **01 57 07.3 +0.6**
baz=31,SNR=5.4
GSI S S 02 01 32.2 -15
baz=31,SNR=10
JOW Kunigami 32.16 0 *e*P **P** **01 57 14.0 +0.2**
comp=Z,42nm,0.6s
ARPS Mount Arapiles 33.53 160 P **P** **01 57 27.1 +1.6**
baz=34,SNR=7.6
YNG Young 34.22 149 P **P** **01 57 33.5 +2.0**
baz=34,SNR=12
TOO Toolangi 35.60 156 P **P** **01 57 45.6 +2.5**
baz=36,SNR=4.4
CMAR Chiang Mai Arr 37.40 310 P **P** **01 57 58.6 +0.3**
CMAR PcP **PcP** **02 00 09.7 +1.0**
CMAR ScP **ScP** **02 03 19.9 -1.0**
CMAR Chiang Mai Arr 37.40 310 P **P** **01 57 58.6 +0.3**
comp=Z,4.6nm,0.5s,baz=136,slow=6.2,SNR=7.2
CMAR PcP **PcP** **02 00 09.7 +1.0**
comp=Z,1.0nm,0.3s,baz=157,slow=2.9,SNR=5.1
CMAR ScP **ScP** **02 03 19.9 -1.0**
comp=Z,0.5nm,0.3s,baz=173,slow=2.8,SNR=5.9
CHTO Chiang Mai 37.61 311 *e*P **P** **01 58 00.3 +0.2**
comp=Z,40nm,1.2s
GYA Guiyang 38.02 328 *e*P **P** **01 58 04.3 +0.8**
GYA pP **pP** **01 59 15.6 +2.4**
GYA sP **sP** **01 59 56.4 +1.7**
GYA PcP **PcP** **02 00 12.8 +2.3**
GYA ScP **ScP** **02 03 24.9 +1.7**
GYA S **S** **02 03 32.0 +3.4**
GYA PcS **PcS** **02 04 01.4 +1.1**
GYA ScS **ScS** **02 07 32.1 -1.9**
GYA pmax pmax
comp=Z,10.0nm,0.8s
WHN Wuhan 38.22 341 *e*P **P** **01 58 05.5 +0.6**
NJ2 Nanjing 38.40 347 *e*P **P** **01 58 08.0 +1.6**
NJ2 pmax pmax
comp=Z,20nm,0.7s
JNU Nakatsue 38.51 4 P **P** **01 58 06.7 -0.6**
JNU Nakatsue 38.51 4 P **P** **01 58 06.7 -0.6**
comp=Z,7.3nm,0.5s,baz=254,slow=22,SNR=5.3
KMI Kunming 39.24 322 P **P** **01 58 14.8 +1.1**
KMI pmax pmax
comp=Z,16nm,1.3s
KSAR Wonju Array Be 42.73 360 P **P** **01 58 41.7 +0.3**
KSRS Korea Array 42.75 360 P **P** **01 58 41.7 +0.2**
comp=Z,12nm,0.5s,baz=178,slow=9.3,SNR=59
MAJO Matsushiro 42.88 12 *e*P **P** **01 58 41.1 -1.5**
comp=Z,14nm,0.5s
MJAR Matsushiro Arr 42.88 12 P **P** **01 58 40.9 -1.7**
MJAR Matsushiro Arr 42.88 12 P **P** **01 58 40.9 -1.7**
comp=Z,8.5nm,0.6s,baz=192,slow=10,SNR=23
CD2 Chengdu 43.10 329 P **P** **01 58 46.3 +1.8**
CD2 pP **pP** **01 59 58.1 +2.0**
CD2 PP **PP** **02 00 35.1 +1.6**
CD2 sP **sP** **02 00 38.1 +1.1**
CD2 PcS **PcS** **02 04 20.6 +0.5**
CD2 S **S** **02 04 45.8 +2.8**
CD2 sS **sS** **02 06 53.3 +1.3**
CD2 SS **ScS** **02 08 03.9 -0.6**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,100nm,5.2s
XAN Xi'an 43.35 336 P **P** **01 58 45.1 -1.3**
XAN pmax pmax
comp=Z,2.0nm,0.7s
LZH Lanzhou 47.26 333 *e*P **P** **01 59 16.3 -0.6**
LZH pP **pP** **02 00 27.6 -2.5**
LZH sP **sP** **02 01 06.0 -4.6**
LZH pmax pmax
comp=Z,16nm,1.0s
HHC Hu-ho-hao-te 48.59 343 *e*P **P** **01 59 26.8 0.0**
HHC pP **pP** **02 00 40.8 +0.3**
HHC PcP **PcP** **02 00 46.6 +0.4**
HHC sP **sP** **02 01 17.5 -3.4**
HHC PP **PP** **02 01 24.0 0.0**
HHC ScP **ScP** **02 04 06.0 +0.1**
HHC PcS **PcS** **02 04 41.5 -1.4**
HHC S **S** **02 06 00.8 +0.2**
HHC ScS **ScS** **02 08 39.6 -0.6**
HHC SS **SS** **02 09 35.0 -1.3**
HHC pmax pmax
comp=Z,37nm,0.7s
HHC pmax pmax
comp=Z,110nm,6.0s
PALK Pallekele 49.05 285 P **P** **01 59 30.6 -0.1**
PALK Pallekele 49.05 285 P **P** **01 59 30.6 -0.1**
comp=Z,18nm,1.0s,baz=135,slow=10.0,SNR=3.2
CN2 Changchun 49.15 357 *e*P **P** **01 59 30.0 -0.8**
CN2 *e*pP **pP** **02 00 42.3 -2.3**
CN2 *e*sP **sP** **02 01 20.4 -4.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Arra 49.60 4 P **P** **01 59 34.2 0.0**
comp=Z,14nm,0.5s,baz=186,slow=6.7,SNR=45
LSA Lhasa 49.88 317 P P 01 59 30.3 -6.9
LSA pmax pmax
comp=Z,30nm,0.9s
MDJ Mudanjiang 49.92 1 P **P** **01 59 36.3 -0.2**
MDJ pP **PcP** **02 00 48.9 -1.9**
MDJ sP **sP** **02 01 31.6 +0.7**
MDJ S **S** **02 06 15.1 -3.4**
MDJ sS **sS** **02 08 29.3 -1.7**
MDJ pmax pmax
comp=Z,11nm,0.9s
MDJ pmax pmax
comp=Z,73nm,3.9s
ASAJ Asahikawa 51.08 13 P **P** **01 59 44.7 -0.5**
ASAJ Asahikawa 51.08 13 P **P** **01 59 44.7 -0.5**
comp=Z,8.6nm,0.4s,baz=110,slow=15,SNR=6.5
RAMN Ramite 51.57 311 *e*P **P** **01 59 49.6 +0.2**
comp=Z,110nm,0.4s
GTA Gaotai 51.81 332 *e*P **P** **01 59 51.1 +0.3**
GTA pP **pP** **02 01 04.4 -1.2**
GTA sP **sP** **02 01 42.9 -2.7**
GTA pmax pmax
comp=Z,12nm,1.0s
GUN Gumba 52.62 311 *e*P **P** **01 59 57.0 -0.2**
comp=Z,87nm,0.4s
PKI Pulchoki 52.79 311 *e*P **P** **01 59 58.0 -0.4**
comp=Z,39nm,0.6s
KKN Kakani 53.01 311 *e*P **P** **01 59 59.5 -0.3**
comp=Z,34nm,0.4s
DMN Daman 53.04 311 *e*P **P** **02 00 00.1 0.0**
comp=Z,24nm,0.3s
RPZ Rata Peaks 53.51 142 P **P** **02 00 04.2 +1.2**
RPZ Rata Peaks 53.51 142 P **P** **02 00 04.2 +1.2**
comp=Z,14nm,0.5s,baz=318,slow=5.7,SNR=8.0
HYB Hyderabad 54.04 296 ⥣P **P** **02 00 05.5 -1.7**
KOLN Koldanda 54.27 310 *e*P **P** **02 00 08.9 0.0**
comp=Z,34nm,0.4s
DANN Dangsing 54.44 311 *e*P **P** **02 00 10.0 -0.2**
comp=Z,31nm,0.4s
PYUN Piuthan 54.90 310 *e*P **P** **02 00 13.3 -0.1**
ULN Ulaanbaatar 56.31 343 *e*P **P** **02 00 22.9 0.0**
comp=Z,11nm,1.1s
SONM Songino Array 56.48 343 P **P** **02 00 24.4 +0.5**
SONM PcP **PcP** **02 01 16.4 +0.4**
SONM pP **pP** **02 01 44.5 +4.3**
SONM Songino Array 56.48 343 P **P** **02 00 24.4 +0.5**
comp=Z,5.0nm,0.7s,baz=161,slow=7.7,SNR=24
SONM PcP **PcP** **02 01 16.4 +0.4**
comp=Z,0.4nm,0.3s,baz=111,slow=3.3,SNR=3.6
SONM pP **pP** **02 01 44.5 +4.3**
comp=Z,0.7nm,0.5s,baz=157,slow=8.0,SNR=2.3
WMQ Urumqi 61.17 328 P **P** **02 00 56.4 +0.4**
WMQ PcP **PcP** **02 01 35.8 +1.0**
WMQ pP **pP** **02 02 12.6 -1.1**
WMQ sP **sP** **02 02 49.8 -3.1**
WMQ PP **PP** **02 03 18.3 +2.3**
WMQ ScP **ScP** **02 05 02.0 +1.0**
WMQ S **S** **02 08 46.8 +0.4**
WMQ ScS **SKSac** **02 10 09.0 -1.5**
WMQ pmax pmax
comp=Z,13nm,0.9s
WMQ pmax pmax
comp=Z,72nm,5.0s
WMQ LR LR
comp=N,92nm,5.6s
WMQ LR LR
comp=E,120nm,4.4s
WMQ LR LR
comp=Z,29nm,19.4s
CASY Casey 61.90 188 *e*P **P** **02 01 00.7 +0.4**
comp=Z,6.2nm,0.5s
PETK Petropavlovsk- 63.51 19 P **P** **02 01 11.3 +0.4**
PETK Petropavlovsk- 63.51 19 P **P** **02 01 11.3 +0.4**
comp=Z,9.6nm,0.5s,baz=179,slow=7.0,SNR=42
KSH Kashi 65.71 318 P **P** **02 01 26.3 +0.7**
KSH *e*PcP **PcP** **02 01 57.5 +3.8**
KSH *e*pP **pP** **02 02 43.1 -1.4**
KSH *e*sP **sP** **02 03 20.1 -3.4**
KSH *e*PP **PP** **02 03 55.1 -0.6**
KSH *e*PcS 02 06 00.5
KSH *e*S S 02 09 35.9 -6.4
KSH *e*ScS **SKSac** **02 10 42.0 -3.3**
KSH pmax pmax
comp=Z,27nm,1.0s
KSH pmax pmax
comp=Z,77nm,3.8s
KSH LR LR
comp=N,73nm,5.4s
KSH LR LR
comp=E,89nm,4.4s
KSH LR LR
comp=Z,84nm,3.6s
MK31 Makanchi Array 66.00 327 *e*P **P** **02 01 27.4 +0.2**
MKAR Makanchi Array 66.00 327 *e*P **P** **02 01 27.5 +0.3**
MKAR S **S** **02 09 43.2 -2.1**
MKAR Makanchi Array 66.00 327 P **P** **02 01 27.4 +0.2**
comp=Z,11nm,0.4s,baz=114,slow=8.7,SNR=262
MKAR S **S** **02 09 43.2 -2.1**
comp=Z,0.3nm,0.8s,baz=106,slow=9.2,SNR=3.8
TKM2 Tokmak 2 67.70 321 *e*P **P** **02 01 38.2 +0.1**
comp=Z,3.8nm,0.5s
AAK Ala-Archa 68.25 320 *e*P **P** **02 01 42.0 +0.6**
AAK Ala-Archa 68.25 320 P **P** **02 01 41.7 +0.3**
comp=Z,2.6nm,0.4s,baz=118,slow=2.8,SNR=3.8
EKS2 Erkin-Say 68.72 320 *e*P **P** **02 01 44.2 0.0**
comp=Z,12nm,1.1s
FX1 Attu Island--F 69.46 27 P **P** **02 01 48.2 -0.1**
FX1 Attu Island--F 69.46 27 P **P** **02 01 48.2 -0.1**
comp=Z,15nm,0.8s,baz=117,slow=2.3,SNR=7.1
ZAA0 Zalesovo Array 69.47 334 *e*P **P** **02 01 47.7 -0.7**
ZALV Zalesovo Beam 69.47 334 P **P** **02 01 47.8 -0.6**
ZALV Zalesovo Beam 69.47 334 P **P** **02 01 47.8 -0.6**
comp=Z,6.2nm,0.4s,baz=116,slow=5.1,SNR=9.3
KURBB Kurchatov Arra 70.31 329 P **P** **02 01 53.5 0.0**
comp=Z,8.1nm,0.5s,baz=130,slow=4.9,SNR=78
KURBB pP **pP** **02 03 17.2 +3.6**
comp=Z,1.8nm,0.9s,baz=124,slow=5.9,SNR=2.8
KURBB S **S** **02 10 32.1 -3.5**
comp=Z,0.2nm,0.4s,baz=264,slow=16,SNR=4.9
KURK Kurchatov 70.32 329 *e*P **P** **02 01 53.4 -0.1**
comp=Z,24nm,1.0s
KURK pP **pP** **02 03 17.2 +3.5**
KURK S **S** **02 10 32.1 -3.6**
KURK *e*S **S** **02 10 32.9 -2.8**
VNDA Vanda 74.14 173 *e*P **P** **02 02 15.4 -0.1**
comp=Z,3.4nm,0.7s
VNDA Vanda 74.14 173 P **P** **02 02 15.4 -0.1**
comp=Z,2.0nm,0.4s,baz=320,slow=6.5,SNR=30
SBA Scott Base 75.04 172 *e*P **P** **02 02 21.5 +0.8**
comp=Z,4.1nm,0.7s
MAW Mawson 75.67 201 *e*P **P** **02 02 25.4 +1.0**
MAW Mawson 75.67 201 P **P** **02 02 25.0 +0.7**
comp=Z,2.8nm,0.4s,baz=56,slow=5.8,SNR=5.0
BVAR Borovoye Array 75.85 328 P **P** **02 02 25.4 -0.3**
BVAR Borovoye Array 75.85 328 P **P** **02 02 25.4 -0.3**
comp=Z,2.3nm,0.4s,baz=132,slow=6.2,SNR=19
BRVK Borovoye 75.93 328 *e*P **P** **02 02 24.6 -1.4**
comp=Z,7.6nm,0.9s
ABKAR Akbulak array 80.23 322 *e*P **P** **02 02 49.0 -0.6**
comp=Z,3.1nm,0.5s
AKTO Aktyubinsk 81.80 323 P **P** **02 02 57.4 -0.3**
AKTO Aktyubinsk 81.80 323 P **P** **02 02 57.4 -0.3**
comp=Z,3.1nm,0.4s,baz=90,slow=5.0,SNR=12
GAMB Gambell 82.25 23 *e*P **P** **02 03 00.4 +0.7**
comp=Z,7.4nm,1.0s
SYO Syowa Base 84.38 201 ⥣*e*P **P** **02 03 10.2 -0.3**
SYO Syowa Base 84.38 201 ⥣*e*PcP **PcP** **02 03 16.0 +2.6**
QSPA South Pole Qui 84.45 180 *e*P **P** **02 03 10.5 -0.5**
comp=Z,6.8nm,0.6s
RDF Al-Radifah 84.49 300 *e*P **P** **02 03 12.1 +0.2**
RDF AMb AMB 02 03 13.3
comp=Z,28nm,0.5s
NAY Al-Naaiem 84.80 300 *e*P **P** **02 03 12.9 -0.5**
NAY AMb AMB 02 03 14.1
comp=Z,29nm,1.1s
MIB Mutribah 84.81 300 *e*P **P** **02 03 12.8 -0.6**
MIB AMb AMB 02 03 14.3
comp=Z,52nm,1.0s
RST Umm Al-Ruwaisa 85.05 300 *e*P **P** **02 03 13.8 -0.8**
RAYN Ar Rayn 85.50 294 *e*P **P** **02 03 17.0 0.0**
comp=Z,34nm,1.4s
KDAK Kodiak Island 88.91 32 P **P** **02 03 32.4 +0.1**
KDAK Kodiak Island 88.91 32 P **P** **02 03 32.4 +0.1**
comp=Z,1.9nm,0.5s,baz=270,slow=9.1,SNR=3.8
KBZ Khabaz 90.37 314 P **P** **02 03 39.8 +0.4**
KBZ Khabaz 90.37 314 P **P** **02 03 39.8 +0.4**
comp=Z,2.5nm,0.9s,baz=213,slow=4.0,SNR=5.1
KMBO Kilima Mbogo 90.82 269 P **P** **02 03 42.4 -0.2**
KMBO Kilima Mbogo 90.82 269 P **P** **02 03 42.4 -0.2**
comp=Z,1.1nm,0.4s,baz=223,slow=23,SNR=4.6
SML Sawmill 91.74 28 *e*P **P** **02 03 45.0 -0.4**
comp=Z,3.3nm,0.7s
SML *e*pP pP 02 05 16.2 +6.2
ILAR Eielson Array 92.78 25 P **P** **02 03 47.6 -2.5**
ILAR PP **PP** **02 07 39.0 +1.1**
ILAR PKKPbc **PKKPdf** **02 20 59.6 -0.2**
ILAR Eielson Array 92.78 25 P **P** **02 03 47.6 -2.5**
comp=Z,0.9nm,0.6s,baz=239,slow=5.1,SNR=15
ILAR PP **PP** **02 07 39.0 +1.1**
comp=Z,0.4nm,0.7s,baz=266,slow=5.9,SNR=5.1
ILAR PKKPbc **PKKPdf** **02 20 59.6 -0.2**
comp=Z,0.4nm,0.7s,baz=43,slow=1.2,SNR=5.9
ASF Jabal al Asfar 93.99 302 P **P** **02 03 56.6 +0.1**
ASF Jabal al Asfar 93.99 302 P **P** **02 03 56.6 +0.1**
comp=Z,0.8nm,0.4s,baz=90,slow=2.0,SNR=3.9
MENT Mentasta 94.00 27 *e*PKiKP **PKiKP** **02 08 37.8 -0.1**
MMAI Mount Meron Ar 95.30 303 P **P** **02 04 02.0 -0.5**
MMAI Mount Meron Ar 95.30 303 P **P** **02 04 02.0 -0.5**
comp=Z,3.6nm,0.9s,baz=64,slow=6.6,SNR=4.1
INK Inuvik 98.16 22 P **P** **02 04 13.1 -1.3**
INK Inuvik 98.16 22 P **P** **02 04 13.1 -1.3**
comp=Z,1.1nm,0.7s,baz=276,slow=5.6,SNR=7.1
BOSA Boshof 98.64 240 P Pdif 02 04 17.1 -0.6
BOSA Boshof 98.64 240 P Pdif 02 04 17.1 -0.6
comp=Z,1.6nm,0.4s,baz=100,slow=6.1,SNR=14
ARCES ARCESS Array B 99.57 340 P **Pdif** **02 04 19.0 -1.7**
ARCES PKKPbc **PKKPbc** **02 20 40.6 -4.1**
ARCES ARCESS Array B 99.57 340 P **Pdif** **02 04 19.0 -1.7**
comp=Z,0.7nm,0.4s,baz=67,slow=5.0,SNR=11
ARCES PKKPbc **PKKPbc** **02 20 40.6 -4.1**
comp=Z,0.5nm,0.5s,baz=251,slow=2.8,SNR=7.9
SPITS Spitsbergen Ar 99.77 349 P **Pdif** **02 04 20.5 -0.9**
SPITS Spitsbergen Ar 99.77 349 P **Pdif** **02 04 20.5 -0.9**
comp=Z,5.8nm,0.9s,baz=111,slow=6.3,SNR=4.9
FINES FINESS Array B 100.60 331 pP pP 02 05 49.9 -0.6
FINES PKiKP **PKiKP** **02 08 48.3 -1.3**
FINES FINESS Array B 100.60 331 pP pP 02 05 49.9 -0.6
comp=Z,1.2nm,1.0s,baz=93,slow=3.8,SNR=2.2
FINES PKiKP **PKiKP** **02 08 48.3 -1.3**
comp=Z,0.4nm,0.4s,baz=125,slow=3.0,SNR=6.0
YKA Yellowknife Ar 107.21 26 PKKPbc PKKPbc 02 20 18.2 -3.5
YKA Yellowknife Ar 107.21 26 PKKPbc PKKPbc 02 20 18.2 -3.5
comp=Z,0.4nm,0.3s,baz=114,slow=3.5,SNR=7.7
JMIC Jan Mayen 109.12 346 PKKPbc PKKPbc 02 20 16.1 +0.1
JMIC Jan Mayen 109.12 346 PKKPbc PKKPbc 02 20 16.1 +0.1
comp=Z,13nm,0.6s,baz=153,slow=2.3,SNR=3.8
GERES GERESS Array B 110.13 320 PKiKP **PKiKP** **02 09 07.3 -0.5**
GERES SKP 02 12 06.4
GERES GERESS Array B 110.13 320 PKiKP **PKiKP** **02 09 07.3 -0.5**
comp=Z,0.8nm,0.5s,baz=70,slow=1.5,SNR=14
GERES SKP 02 12 06.4
comp=Z,0.3nm,0.5s,baz=75,slow=2.1,SNR=3.9
NVAR Mina Array Bea 111.78 51 PKKPab PKKPab 02 20 16.0 +0.2
NVAR Mina Array Bea 111.78 51 PKKPab PKKPab 02 20 16.0 +0.2
comp=Z,3.9nm,0.6s,baz=123,slow=6.6,SNR=3.5
DAVOX Davos/Dischmat 113.19 319 PKiKP **PKiKP** **02 09 13.1 -0.6**
DAVOX Davos/Dischmat 113.19 319 PKiKP **PKiKP** **02 09 13.1 -0.6**
comp=Z,1.1nm,0.4s,baz=117,slow=14,SNR=3.2
CDF Champ du Feu 114.32 321 *e*PKiKP PKPdf 02 09 15.1 -0.6
CDF Champ du Feu 114.32 321 *e*PKPdf PKPdf 02 09 15.1 -0.6
HINF Hinteralfeld 114.79 321 *e*PKiKP PKPdf 02 09 15.7 -0.9
comp=Z,2.8nm,0.5s
HINF Hinteralfeld 114.79 321 *e*PKPdf PKPdf 02 09 15.7 -0.9
PGF Pioggiola 115.02 315 *e*PKiKP **PKPdf** **02 09 16.7 -0.6**
comp=Z,1.5nm,0.4s
PGF Pioggiola 115.02 315 *e*PKPdf **PKPdf** **02 09 16.7 -0.6**
PAGF Fort de Pagny 115.23 322 *e*PKiKP **PKPdf** **02 09 16.7 -0.7**
PAGF Fort de Pagny 115.23 322 *e*PKPdf **PKPdf** **02 09 16.7 -0.7**
BAIF Baives 115.56 324 *e*PKiKP **PKPdf** **02 09 17.3 -0.6**
BAIF Baives 115.56 324 *e*PKPdf **PKPdf** **02 09 17.3 -0.6**
LPG La Plagne 115.66 318 *e*PKiKP **PKPdf** **02 09 18.2 -0.5**
comp=Z,1.3nm,0.5s
LPG La Plagne 115.66 318 *e*PKPdf **PKPdf** **02 09 18.2 -0.5**
LPL La Plagne 115.66 318 *e*PKiKP **PKPdf** **02 09 18.2 -0.4**
comp=Z,1.7nm,0.3s
LPL La Plagne 115.66 318 *e*PKPdf **PKPdf** **02 09 18.2 -0.4**
MEZF Maizieres J'vi 115.67 322 *e*PKiKP **PKPdf** **02 09 17.3 -0.9**
MEZF Maizieres J'vi 115.67 322 *e*PKPdf **PKPdf** **02 09 17.3 -0.9**
CABF La Chapelle 115.71 320 *e*PKiKP **PKPdf** **02 09 18.2 -0.3**
comp=Z,7.1nm,0.5s
CABF La Chapelle 115.71 320 *e*PKPdf **PKPdf** **02 09 18.2 -0.3**
SFTF Sexfontaines 115.79 322 *e*PKiKP **PKPdf** **02 09 18.2 -0.2**
SFTF Sexfontaines 115.79 322 *e*PKPdf **PKPdf** **02 09 18.2 -0.2**
FRF La Foret Royal 116.36 316 *e*PKiKP **PKPdf** **02 09 19.1 -0.6**
comp=Z,2.1nm,0.5s
FRF La Foret Royal 116.36 316 *e*PKPdf **PKPdf** **02 09 19.1 -0.6**
ORIF Oris-en-Rattie 116.43 318 *e*PKiKP **PKPdf** **02 09 19.3 -0.6**
comp=Z,2.0nm,0.5s
ORIF Oris-en-Rattie 116.43 318 *e*PKPdf **PKPdf** **02 09 19.3 -0.6**
LMR La Mourre 116.53 316 *e*PKiKP **PKPdf** **02 09 19.6 -0.4**
LMR La Mourre 116.53 316 *e*PKPdf **PKPdf** **02 09 19.6 -0.4**
LOR Lormes 116.88 321 *e*PKiKP **PKPdf** **02 09 20.0 -0.6**
comp=Z,2.1nm,0.5s
LOR Lormes 116.88 321 *e*PKPdf **PKPdf** **02 09 20.0 -0.6**
EKA Eskdalemuir Ar 117.00 331 PKP **PKPdf** **02 09 19.9 -0.6**
EKA Eskdalemuir Ar 117.00 331 PKP **PKPdf** **02 09 19.9 -0.6**
comp=Z,0.5nm,0.4s,baz=45,slow=3.2,SNR=9.6
PDAR Pinedale Array 117.12 44 PKP **PKPdf** **02 09 21.3 -0.2**
PDAR PKKPbc **PKKPbc** **02 19 47.0 -1.8**
PDAR Pinedale Array 117.12 44 PKP **PKPdf** **02 09 21.3 -0.2**
comp=Z,0.3nm,0.4s,baz=188,slow=4.0,SNR=3.9
PDAR PKKPbc **PKKPbc** **02 19 47.0 -1.8**
comp=Z,0.7nm,0.8s,baz=100,slow=4.7,SNR=5.0
SMF Signal de Mont 117.13 320 *e*PKiKP **PKPdf** **02 09 20.3 -0.8**
comp=Z,1.5nm,0.3s
SMF Signal de Mont 117.13 320 *e*PKPdf **PKPdf** **02 09 20.3 -0.8**
SSF Saint Saulge 117.18 321 *e*PKiKP **PKPdf** **02 09 20.8 -0.4**
comp=Z,3.5nm,0.5s
SSF Saint Saulge 117.18 321 *e*PKPdf **PKPdf** **02 09 20.8 -0.4**
VIVF Saint-Julien-l 117.26 318 *e*PKiKP **PKPdf** **02 09 20.9 -0.5**
VIVF Saint-Julien-l 117.26 318 *e*PKPdf **PKPdf** **02 09 20.9 -0.5**
AVF Avril sur Loir 117.39 321 *e*PKiKP **PKPdf** **02 09 20.7 -0.8**
comp=Z,3.1nm,0.4s
AVF Avril sur Loir 117.39 321 *e*PKPdf **PKPdf** **02 09 20.7 -0.8**
BGF Bois d'Agland 117.80 320 *e*PKiKP **PKPdf** **02 09 22.2 -0.2**
comp=Z,4.9nm,0.4s
BGF Bois d'Agland 117.80 320 *e*PKPdf **PKPdf** **02 09 22.2 -0.2**
TCF Toulx Ste Croi 118.31 320 *e*PKiKP **PKPdf** **02 09 23.0 -0.4**
TCF Toulx Ste Croi 118.31 320 *e*PKPdf **PKPdf** **02 09 23.0 -0.4**
LDF La Druitiere 118.75 324 *e*PKiKP **PKPdf** **02 09 23.8 -0.3**
LDF La Druitiere 118.75 324 *e*PKPdf **PKPdf** **02 09 23.8 -0.3**
FLN La Foliniere 118.89 324 *e*PKiKP **PKPdf** **02 09 23.7 -0.7**
FLN La Foliniere 118.89 324 *e*PKPdf **PKPdf** **02 09 23.7 -0.7**
CAF Calviac 118.95 319 *e*PKiKP **PKPdf** **02 09 24.7 0.0**
CAF Calviac 118.95 319 *e*PKPdf **PKPdf** **02 09 24.7 0.0**
MTLF Montolieu 119.46 317 *e*PKiKP **PKPdf** **02 09 25.1 -0.6**
comp=Z,1.5nm,0.4s
MTLF Montolieu 119.46 317 *e*PKPdf **PKPdf** **02 09 25.1 -0.6**
MFF Saint Martin d 119.66 322 *e*PKiKP **PKPdf** **02 09 25.5 -0.4**
comp=Z,5.3nm,0.4s
MFF Saint Martin d 119.66 322 *e*PKPdf **PKPdf** **02 09 25.5 -0.4**
SGMF Saint Gilles 120.34 324 *e*PKiKP **PKPdf** **02 09 26.6 -0.6**
comp=Z,1.6nm,0.4s
SGMF Saint Gilles 120.34 324 *e*PKPdf **PKPdf** **02 09 26.6 -0.6**
ROSF Rostrenen 120.72 324 *e*PKiKP **PKPdf** **02 09 27.2 -0.7**
ROSF Rostrenen 120.72 324 *e*PKPdf **PKPdf** **02 09 27.2 -0.7**
EPF Esparros 120.84 318 *e*PKiKP **PKPdf** **02 09 28.2 -0.2**
comp=Z,2.9nm,0.5s
EPF Esparros 120.84 318 *e*PKPdf **PKPdf** **02 09 28.2 -0.2**
QUIF Quistinic 120.86 324 *e*PKiKP **PKPdf** **02 09 28.0 -0.2**
QUIF Quistinic 120.86 324 *e*PKPdf **PKPdf** **02 09 28.0 -0.2**
ESDC Sonseca Array 125.19 316 PP PP 02 11 32.0 +0.5
ESDC Sonseca Array 125.19 316 PP PP 02 11 32.0 +0.5

comp=Z,0.9nm,0.8s,baz=72,slow=6.7,SNR=5.9

TXAR	**Lajitas Array**	**125.69**	**58**	PKP	**PKPdf**	**02 09 38.2**	**+0.1**
TXAR				SKP		02 12 36.4	
TXAR				PKKPbc	**PKKPab**	**02 19 15.1**	**0.0**
TXAR	**Lajitas Array**	**125.69**	**58**	PKP	**PKPdf**	**02 09 38.2**	**+0.1**

comp=Z,0.3nm,0.5s,baz=206,slow=2.6,SNR=8.1

TXAR				SKP		02 12 36.4	

comp=Z,0.7nm,1.0s,baz=186,slow=5.3,SNR=3.7

TXAR				PKKPbc	**PKKPab**	**02 19 15.1**	**0.0**

comp=Z,0.1nm,0.4s,baz=72,slow=3.9,SNR=5.5

TORD	**Torodi Ar. Bea**	**126.74**	**282**	PKPpre	PKPpre	02 09 29.5	
TORD				PKP	**PKPdf**	**02 09 40.1**	**-0.3**
TORD				SKPab	SKiKP	02 12 21.9	-20
TORD				SKP		02 12 39.0	
TORD	**Torodi Ar. Bea**	**126.74**	**282**	PKhKP	PKPpre	02 09 29.5	

comp=Z,0.2nm,0.5s,baz=341,slow=0.1,SNR=5.8

TORD				PKP	**PKPdf**	**02 09 40.1**	**-0.3**

comp=Z,1.5nm,0.5s,baz=239,slow=1.2,SNR=4.1

TORD				SKPab	SKiKP	02 12 21.9	-20

comp=Z,0.4nm,0.6s,baz=85,slow=4.0,SNR=7.3

TORD				SKP		02 12 39.0	

comp=Z,0.5nm,0.6s,baz=83,slow=2.8,SNR=2.3

MDT	**Midelt**	**128.39**	**308**	PKP	**PKPdf**	**02 09 43.8**	**+0.6**
MDT	**Midelt**	**128.39**	**308**	PKP	**PKPdf**	**02 09 43.8**	**+0.6**

comp=Z,0.7nm,0.8s,baz=8.7,slow=2.4,SNR=4.8

SCHQ	**Schefferville**	**129.35**	**11**	PKP	**PKPdf**	**02 09 44.6**	**+0.4**
SCHQ				SKPbc	SKPab	02 12 29.1	-2.0
SCHQ	**Schefferville**	**129.35**	**11**	PKP	**PKPdf**	**02 09 44.6**	**+0.4**

comp=Z,1.4nm,0.5s,baz=140,slow=2.8,SNR=5.5

SCHQ				SKPbc	SKPab	02 12 29.1	-2.0

comp=Z,2.3nm,0.6s,baz=15,slow=5.0,SNR=6.3

DBIC	**Dimbokro**	**133.30**	**274**	PKP	**PKPdf**	**02 09 53.4**	**+0.5**
DBIC				SKPbc	**SKPbc**	**02 12 45.1**	**-1.5**
DBIC	**Dimbokro**	**133.30**	**274**	PKP	**PKPdf**	**02 09 53.4**	**+0.5**

comp=Z,2.2nm,0.5s,baz=214,slow=8.1,SNR=3.6

DBIC				SKPbc	**SKPbc**	**02 12 45.1**	**-1.5**

comp=Z,6.2nm,0.9s,baz=206,slow=3.8,SNR=3.5

CFAA	**Coronel Fontan**	**139.90**	**158**	PKP	**PKPdf**	**02 10 02.3**	**-2.4**
CFAA				SKPbc	**SKPbc**	**02 13 04.7**	**-1.3**
CFAA	**Coronel Fontan**	**139.90**	**158**	PKP	**PKPdf**	**02 10 02.3**	**-2.4**

comp=Z,0.3nm,0.5s,baz=266,slow=1.9,SNR=5.2

CFAA				SKPbc	**SKPbc**	**02 13 04.7**	**-1.3**

comp=Z,0.3nm,0.5s,baz=206,slow=2.9,SNR=7.7

JTS	**JuntasAbangare**	**146.85**	**80**	*e*PKPbc	**PKPbc**	**02 10 20.1**	**+0.3**
LVC	**Limon Verde**	**147.43**	**150**	*e*PKPbc	**PKPbc**	**02 10 22.4**	**+1.1**
CPUP	**Villa Florida**	**147.90**	**171**	*e*PKPbc	**PKPbc**	**02 10 22.4**	**+0.2**
CPUP	**Villa Florida**	**147.90**	**171**	PKPbc	**PKPbc**	**02 10 22.3**	**+0.2**

comp=Z,6.7nm,0.4s,baz=196,slow=1.7,SNR=47

LPAZ	**La Paz**	**152.99**	**144**	*e*PKPdf	**PKPdf**	**02 10 28.7**	**+1.2**
LPAZ				PKPbc	**PKiKP**	**02 10 35.2**	**0.0**
LPAZ				*e*PKPbc	**PKPbc**	**02 10 35.7**	**+0.6**
LPAZ				*e*PKPab	**PKPab**	**02 10 47.6**	**-0.3**
LPAZ				PKPab	PKPab	02 10 47.8	-0.1
LPAZ	**La Paz**	**152.99**	**144**	PKP	**PKPdf**	**02 10 28.8**	**+1.2**

comp=Z,1.0nm,0.8s,baz=92,slow=4.0,SNR=5.0

LPAZ				PKPbc	**PKiKP**	**02 10 35.2**	**0.0**

comp=Z,2.9nm,0.4s,baz=24,slow=1.2,SNR=32

LPAZ				PKPab	**PKPab**	**02 10 47.8**	**-0.1**

comp=Z,2.0nm,0.6s,baz=136,slow=2.2,SNR=6.1

BDFB	**Brasilia**	**158.65**	**190**	PKPab	**PKPab**	**02 11 11.4**	**0.0**
BDFB	**Brasilia**	**158.65**	**190**	PKPab	**PKPab**	**02 11 11.4**	**0.0**

comp=Z,2.0nm,0.4s,baz=208,slow=10.0,SNR=3.6

RCBR	**Riachuelo**	**160.52**	**235**	PKPab	**PKPab**	**02 11 20.9**	**+1.0**
RCBR	**Riachuelo**	**160.52**	**235**	PKPab	**PKPab**	**02 11 20.9**	**+1.0**

comp=Z,10.0nm,1.0s,baz=91,slow=14,SNR=5.2

*IDC **21** 01:55:24.7±2.0,35°.86N×69°.34E, h0km, mb3.9/11, mb1 3.9/16, mb1mx3.8/35, mbtmp3.8/16, ML3.6/5, Error ellipse: s-maj=41.8km s-min=16.9km az=146.0*
*ISCJB **21** 01:55:31.5±0.5,36°.27N±0°.04×69°.11E±0°.06, h43km, mb3.8/10, Error ellipse: s-maj=7.0km s-min=5.4km az=156.0*
*NNC **21** 01:55:34.4±6.1,36°.34N×68°.99E, h72km±77km, mb3.4, mpv3.9, Error ellipse: s-maj=44.1km s-min=33.3km az=6.0*
ISC 21 01:55:33.4±0.6, 36°.29N±0°.06×69°.09E±0°.07, h43km, n40, σ1s78/44, mb3.9/10, 10C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.37**	**136**	P	**Pn**	**01 56 22.5**	**-1.2**
CEP				S	Sn	01 57 10.0	+7.5
THW	**Thamme Wali**	**4.12**	**147**	P	**Pn**	**01 56 31.1**	**-2.7**
CHCP	**Chirah Chowk**	**4.32**	**126**	P	**Pn**	**01 56 35.0**	**-1.5**
THN	**Thein Dam**	**6.69**	**123**	*e*PKP	Pn	01 57 22.7	+14
THN				*e*S	**Sn**	**01 58 24.7**	**+0.7**
AML	**Almayashu** SNR=16	**6.84**	**30**	P	**Pn**	**01 57 12.7**	**+1.2**
KK31	**Karatay Array** 3.2nm,0.5s,baz=192,slow=15,SNR=23	**6.89**	**9**	⇑P	**Pn**	**01 57 12.9**	**+1.0**
KK31				⇑S	**Sn**	**01 58 31.7**	**+2.8**

6.2nm,0.5s,baz=192,slow=24

KZA	**Kyzart** SNR=6.9	**7.50**	**38**	P	**Pn**	**01 57 22.8**	**+2.3**
AAK	**Ala-Archa** SNR=13	**7.59**	**32**	P	**Pn**	**01 57 23.0**	**+1.5**
AAK	**Ala-Archa** 2.7nm,0.3s,baz=200,slow=7.0,SNR=21	**7.59**	**32**	Pn	**Pn**	**01 57 22.5**	**+1.0**
AAK				Sn	**Sn**	**01 58 48.6**	**+2.4**

1.8nm,0.3s,baz=343,slow=19,SNR=10

AAK				Lg	Lg	01 59 38.6	

baz=352,slow=22,SNR=3.6

CHMS	**Chumysh** SNR=9.6	**8.00**	**31**	P	**Pn**	**01 57 28.4**	**+1.5**
USP	**Ospenovka** SNR=7.0	**8.12**	**29**	P	**Pn**	**01 57 29.2**	**+0.6**
ULHL	**Ulahol** SNR=7.4	**8.13**	**41**	P	**Pn**	**01 57 30.5**	**+1.5**
TKM2	**Tokmak 2** 4.4nm,0.6s	**8.31**	**35**	⇑P	**Pn**	**01 57 31.5**	**0.0**
TKM2				⇓S	**Sn**	**01 59 01.6**	**-2.4**

7.4nm,0.9s

MKAR	**Makanchi Array** 0.1nm,0.3s,baz=222,slow=13,SNR=8.3	**14.40**	**39**	Pn	**Pn**	**01 58 52.6**	**-1.7**
AB31	**Akbulak array** 2.6nm,0.7s	**14.58**	**336**	⇓P	**Pn**	**01 58 54.1**	**-2.7**
AB31				⇓S	**Sn**	**02 01 32.2**	**-4.8**

0.2nm,0.3s

KUR17	**Kurchatov Arra** 0.1nm,0.5s	**15.85**	**22**	⇑P	**P**	**01 59 15.9**	**-0.6**
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=212,slow=12,SNR=4.2	**15.86**	**22**	Pn	**Pn**	**01 59 09.8**	**-3.6**
KURK	**Kurchatov** 6.6nm,2.1s	**15.97**	**22**	⇑P	**Pn**	**01 59 15.3**	**+0.5**
AKTO	**Aktyubinsk** 0.4nm,0.6s	**16.25**	**334**	⇑P	**Pn**	**01 59 18.0**	**-0.3**
AKTO	**Aktyubinsk** 0.3nm,0.3s,baz=141,slow=13,SNR=8.1	**16.25**	**334**	Pn	**Pn**	**01 59 18.2**	**-0.2**
VOSK	**Vostochnaya** 1.8nm,0.7s	**16.49**	**4**	⇑P	**Pn**	**01 59 19.2**	**-2.2**
ZRNK	**Zerenda** 1.7nm,0.5s	**16.66**	**360**	⇑P	**Pn**	**01 59 22.0**	**-1.6**
BVA0	**Borovoye Array** 0.3nm,0.7s,baz=167,slow=13,SNR=11	**16.76**	**3**	⇑P	**Pn**	**01 59 24.0**	**-0.9**
BVAR	**Borovoye Array** 0.5nm,0.3s,baz=162,slow=12,SNR=7.7	**16.76**	**3**	P	**Pn**	**01 59 24.3**	**-0.5**
BRVK	**Borovoye** 4.0nm,0.8s	**16.79**	**2**	⇑P	**Pn**	**01 59 24.2**	**-1.0**
TAPN	**Taplejung** 97nm,0.4s	**18.14**	**114**	*e*P	**Pn**	**01 59 44.9**	**+2.6**
ODAN	**Odare** 45nm,0.4s	**18.18**	**116**	*e*P	**Pn**	**01 59 44.5**	**+1.7**
GNI	**Garni** 0.3nm,0.3s,baz=144,slow=13,SNR=3.1	**19.50**	**289**	P	**Pn**	**02 00 00.6**	**+2.1**
ZALV	**Zalesovo Beam** 3.7nm,0.3s,baz=221,slow=8.6,SNR=3.5	**20.77**	**27**	P	**P**	**02 00 08.9**	**-1.5**
AKASG	**Malin Array Be** 1.4nm,0.5s,baz=84,slow=7.4,SNR=4.6	**31.89**	**309**	P	**P**	**02 01 54.4**	**0.0**
FINES	**FINESS Array B** 1.2nm,0.7s,baz=99,slow=9.0,SNR=5.3	**36.81**	**327**	P	**P**	**02 02 37.9**	**+1.1**
HFS	**Hagfors** 3.3nm,0.6s,baz=113,slow=11,SNR=10	**42.29**	**322**	P	**P**	**02 03 23.5**	**+1.1**
NB2	**NORSAR Subarra** comp=Z,2.3nm,0.7s,baz=98,slow=7.9	**43.63**	**323**	P	**P**	**02 03 33.6**	**+0.3**
NOA	**NORSAR Array B** comp=Z,2.5nm,0.8s,baz=99,slow=7.9,SNR=9.8	**43.63**	**323**	P	**P**	**02 03 33.9**	**+0.6**
KEST	**Kesra** comp=Z,0.4nm,0.6s,baz=58,slow=17,SNR=3.8	**47.64**	**288**	P	**P**	**02 04 06.5**	**+1.1**
EKA	**Eskdalemuir Ar** comp=Z,0.9nm,0.6s,baz=92,slow=7.8,SNR=4.5	**51.37**	**316**	P	**P**	**02 04 34.5**	**+1.1**
ESDC	**Sonseca Array** comp=Z,0.3nm,0.6s,baz=40,slow=8.7,SNR=3.4	**56.19**	**297**	P	**P**	**02 05 09.7**	**+0.7**
TORD	**Torodi Ar. Bea** comp=Z,0.9nm,0.6s,baz=51,slow=6.4,SNR=18	**64.17**	**268**	P	**P**	**02 06 01.8**	**-2.0**
INK	**Inuvik** comp=Z,0.5nm,0.6s,baz=44,slow=8.2,SNR=3.6	**74.35**	**9**	P	**P**	**02 07 06.9**	**+0.9**
ILAR	**Eielson Array** comp=Z,0.2nm,0.6s,baz=316,slow=2.5,SNR=3.7	**75.39**	**15**	P	**P**	**02 07 12.0**	**-0.1**

*ISK **21** 01:58:52.2, 37°.14N×28°.44E, h16km, MD2.4*
*DDA **21** 01:58:52.7, 37°.12N×28°.40E, h7km, MD2.8*
*CSEM **21** 01:58:53.3±0.1, 37°.15N×28°.45E, h5km, MD2.4, Error ellipse: s-maj=3.5km s-min=2.2km az=22.0*
ISC 21 01:58:53.2±0.9, 37°.13N±0°.03×28°.43E±0°.03, h13km±7km, n20, σ0s54/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**271**	*e*PG	**Pg**	**01 58 56.3**	**-0.1**
YER				*e*SG	**Sg**	**01 58 58.9**	**+0.2**
YER	**Yerkesik**	**0.12**	**271**	*e*Pg	**Pg**	**01 58 56.3**	**-0.1**
YER				*e*Sg	**Sg**	**01 58 58.9**	**+0.2**
TURN	**Turunc**	**0.29**	**151**	*i* P	**Pb**	**01 58 59.7**	**-0.7**
TURN	**Turunc**	**0.29**	**151**	*i* P	**Pb**	**01 58 59.7**	**-0.7**
MLSB	**Milas**	**0.55**	**288**	*e*PG	**Pg**	**01 59 03.5**	**-0.4**
MLSB				*e*SG	**Sb**	**01 59 11.7**	**-0.7**
MLSB	**Milas**	**0.55**	**288**	*e*Pg	**Pg**	**01 59 03.5**	**-0.4**
MLSB				*e*Sg	**Sb**	**01 59 11.7**	**-0.7**
AYDN	**Tasoluk**	**0.69**	**321**	*i* P	**Pg**	**01 59 06.6**	**+0.1**
AYDN				*i* S	**Sb**	**01 59 16.1**	**-0.4**
AYDN	**Tasoluk**	**0.69**	**321**	*i* P	**Pg**	**01 59 06.6**	**+0.1**
AYDN				*i* S	**Sb**	**01 59 16.1**	**-0.4**
FETY	**Fethiye**	**0.72**	**133**	*e*PG	**Pg**	**01 59 06.6**	**-0.6**
FETY				*e*SG	**Sb**	**01 59 17.1**	**-0.4**
FETY	**Fethiye**	**0.72**	**133**	*e*Pg	**Pg**	**01 59 06.6**	**-0.6**
FETY				*e*Sg	**Sb**	**01 59 17.1**	**-0.4**
DNZL	**Cakiroluk**	**0.74**	**41**	*i* P	**Pg**	**01 59 07.1**	**-0.5**
DNZL	**Cakiroluk**	**0.74**	**41**	*i* P	**Pg**	**01 59 07.1**	**-0.5**
BODT	**Bodrum**	**0.90**	**266**	*e*PG	**Pg**	**01 59 10.6**	**+0.1**
BODT	**Bodrum**	**0.90**	**266**	*e*Pg	**Pg**	**01 59 10.6**	**+0.1**
GOLH	**Golhisar**	**0.91**	**83**	*i* P	**Pb**	**01 59 10.7**	**-0.3**
GOLH				*i* S	**Sn**	**01 59 25.8**	**+0.9**
GOLH	**Golhisar**	**0.91**	**83**	*i* P	**Pb**	**01 59 10.7**	**-0.3**
GOLH				*i* S	**Sn**	**01 59 25.8**	**+0.9**
AKAS	**Kas**	**1.30**	**133**	*i* P	**Pb**	**01 59 17.9**	**+0.2**
AKAS				*i* S	**Sg**	**01 59 36.3**	**+1.1**
AKAS	**Kas**	**1.30**	**133**	*i* P	**Pb**	**01 59 17.9**	**+0.2**
AKAS				*i* S	**Sg**	**01 59 36.3**	**+1.1**
KHAL	**Karahalli**	**1.50**	**34**	*i* P	**Pb**	**01 59 20.8**	**-0.1**
KHAL	**Karahalli**	**1.50**	**34**	*i* P	**Pb**	**01 59 20.8**	**-0.1**

*ISCJB **21** 02:04:31.9±0.3, 42°.44N±0°.02×13°.37E±0°.03, h13km±2km, Error ellipse: s-maj=3.9km s-min=2.9km az=161.4*
*ROM **21** 02:04:32.4±0.1, 42°.45N×13°.39E, h11km, Ml3.1/33, Error ellipse: s-maj=1.1km s-min=0.8km az=71.0*
*CSEM **21** 02:04:32.4±0.1, 42°.45N×13°.37E, h2km, ML3.6/5, Error ellipse: s-maj=3.0km s-min=2.2km az=76.0*
ISC 21 02:04:32.9±0.8, 42°.46N±0°.02×13°.39E±0°.02, h12km±4km, n87, σ1s12/107, 2C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**8**	⇓*i*Pg	**Pg**	**02 04 35.3**	**-0.5**
CAMP				Sg	**Sg**	**02 04 37.2**	**-0.6**

6μm,0.3s

CAMP	**Campotosto**	**0.08**	**8**	⇓*i*Pg	**Pg**	**02 04 35.3**	**-0.5**
CAMP				Sg	**Sg**	**02 04 37.2**	**-0.6**

6μm,0.3s

AQU	**L'Aquila**	**0.10**	**177**	Pg	**Pg**	**02 04 35.7**	**-0.2**
AQU				Sg	**Sg**	**02 04 37.8**	**-0.3**

3μm,0.3s

AQU	**L'Aquila**	**0.10**	**177**	Pg	**Pg**	**02 04 35.7**	**-0.2**
AQU				Sg	**Sg**	**02 04 37.8**	**-0.3**

3μm,0.3s

TERO	**Teramo**	**0.23**	**43**	Pg	**Pg**	**02 04 37.5**	**-0.3**
TERO				Sg	**Sg**	**02 04 41.1**	**-0.1**

3μm,0.2s

TERO	**Teramo**	**0.23**	**43**	Pg	**Pg**	**02 04 37.5**	**-0.3**
TERO				Sg	**Sg**	**02 04 41.1**	**-0.1**

3μm,0.2s

FAGN	**Fagnano** 10μm,0.3s	**0.24**	**144**	Pg	**Pg**	**02 04 37.8**	**-0.2**
FAGN	**Fagnano** 10μm,0.3s	**0.24**	**144**	Pg	**Pg**	**02 04 37.8**	**-0.2**
FIAM	**Fiamignano** 2μm,0.5s	**0.28**	**227**	Pg	**Pg**	**02 04 38.5**	**-0.3**
FIAM	**Fiamignano** 2μm,0.5s	**0.28**	**227**	Pg	**Pg**	**02 04 38.5**	**-0.3**
LNSS	**Leonessa**	**0.30**	**299**	⇑*i*Pg	**Pg**	**02 04 38.8**	**-0.3**
LNSS				Sg	**Sb**	**02 04 43.9**	**-1.3**

5μm,0.4s

LNSS	**Leonessa**	**0.30**	**299**	⇑*i*Pg	**Pg**	**02 04 38.8**	**-0.3**
VCEL	**Villa Celiera**	**0.34**	**101**	Pg	**Pb**	**02 04 40.1**	**-0.8**
VCEL				Sg	**Sb**	**02 04 46.3**	**0.0**

3μm,0.4s

VCEL	**Villa Celiera**	**0.34**	**101**	Pg	**Pb**	**02 04 40.1**	**-0.8**
VCEL				Sg	**Sb**	**02 04 46.3**	**0.0**

3μm,0.4s

NRCA	**Norcia**	**0.43**	**331**	Pg	**Pg**	**02 04 41.0**	**-0.5**
NRCA				Sg	**Sg**	**02 04 47.6**	**+0.4**

3μm,0.2s

NRCA	**Norcia**	**0.43**	**331**	Pg	**Pg**	**02 04 41.0**	**-0.5**
NRCA				Sg	**Sg**	**02 04 47.6**	**+0.4**

3μm,0.2s

PTQR	**Pietraquaria** 158nm,0.4s	**0.43**	**179**	Pg	**Pg**	**02 04 41.0**	**-0.6**
PTQR	**Pietraquaria** 158nm,0.4s	**0.43**	**179**	Pg	**Pg**	**02 04 41.0**	**-0.6**
TRTR	**Tortoreto Alta** 6μm,1.0s	**0.52**	**47**	Pg	**Pb**	**02 04 43.7**	**-0.3**
TRTR	**Tortoreto Alta** 6μm,1.0s	**0.52**	**47**	Pg	**Pb**	**02 04 43.7**	**-0.3**
OFFI	**Offida** 5μm,0.5s	**0.52**	**24**	Pg	**Pb**	**02 04 43.7**	**-0.4**
OFFI	**Offida** 5μm,0.5s	**0.52**	**24**	Pg	**Pb**	**02 04 43.7**	**-0.4**
MNS	**Montasola** 409nm,0.3s	**0.53**	**262**	Pg	**Pg**	**02 04 42.6**	**-0.8**
MNS	**Montasola** 409nm,0.3s	**0.53**	**262**	Pg	**Pg**	**02 04 42.6**	**-0.8**
INTR	**Introdacqua** 1μm,0.3s	**0.58**	**139**	Pg	**Pg**	**02 04 43.8**	**-0.6**
INTR	**Introdacqua** 1μm,0.3s	**0.58**	**139**	Pg	**Pg**	**02 04 43.8**	**-0.6**
CERT	**Cerreto** 2μm,0.5s	**0.59**	**211**	Pg	**Pg**	**02 04 43.7**	**-0.8**
CERT	**Cerreto** 2μm,0.5s	**0.59**	**211**	Pg	**Pg**	**02 04 43.7**	**-0.8**
VVLD	**Villa Vallelon**	**0.61**	**164**	Pg	**Pg**	**02 04 44.3**	**-0.5**
VVLD	**Villa Vallelon**	**0.61**	**164**	Pg	**Pg**	**02 04 44.3**	**-0.5**
CESX	**Cesi** 441nm,0.4s	**0.62**	**285**	Pg	**Pg**	**02 04 44.0**	**-1.0**
CESX	**Cesi** 441nm,0.4s	**0.62**	**285**	Pg	**Pg**	**02 04 44.0**	**-1.0**
FDMO	**Fiordimonte**	**0.62**	**339**	Pg	**Pg**	**02 04 44.2**	**-0.9**
FDMO				Sg	**Sb**	**02 04 53.9**	**-0.6**
FDMO	**Fiordimonte**	**0.62**	**339**	Pg	**Pg**	**02 04 44.2**	**-0.9**
FDMO				Sg	**Sb**	**02 04 53.9**	**-0.6**
MTCE	**Montecelio** 412nm,0.5s	**0.65**	**228**	Pg	**Pg**	**02 04 44.7**	**-0.9**
MTCE	**Montecelio** 412nm,0.5s	**0.65**	**228**	Pg	**Pg**	**02 04 44.7**	**-0.9**
CESI	**CESI - Serrava** 170nm,0.3s	**0.66**	**327**	Pg	**Pg**	**02 04 44.9**	**-0.8**
CESI	**CESI - Serrava** 170nm,0.3s	**0.66**	**327**	Pg	**Pg**	**02 04 44.9**	**-0.8**
GUAR	**Guarcino** 430nm,0.4s	**0.67**	**185**	Pg	**Pg**	**02 04 45.4**	**-0.5**
GUAR	**Guarcino** 430nm,0.4s	**0.67**	**185**	Pg	**Pg**	**02 04 45.4**	**-0.5**
LPEL	**Lama dei Pelig** 1μm,0.3s	**0.71**	**125**	Pg	**Pg**	**02 04 45.6**	**-1.2**
LPEL	**Lama dei Pelig** 1μm,0.3s	**0.71**	**125**	Pg	**Pg**	**02 04 45.6**	**-1.2**
GUMA	**Gualdo di Mace** 2μm,0.4s	**0.72**	**33**	Pg	**Pg**	**02 04 44.5**	**-2.5**
GUMA	**Gualdo di Mace** 2μm,0.4s	**0.72**	**33**	Pg	**Pg**	**02 04 44.5**	**-2.5**
CAFR	**Castel Frentan** 888nm,0.5s	**0.74**	**108**	Pg	**Pg**	**02 04 46.5**	**-0.8**
CAFR	**Castel Frentan** 888nm,0.5s	**0.74**	**108**	Pg	**Pg**	**02 04 46.5**	**-0.8**
POFI	**Posta Fibreno** 256nm,0.7s	**0.78**	**162**	Pg	**Pg**	**02 04 47.2**	**-0.8**
POFI	**Posta Fibreno** 256nm,0.7s	**0.78**	**162**	Pg	**Pg**	**02 04 47.2**	**-0.8**
SDI	**San Donato** 254nm,0.4s	**0.81**	**157**	Pg	**Pg**	**02 04 47.4**	**-1.2**
SDI	**San Donato** 254nm,0.4s	**0.81**	**157**	Pg	**Pg**	**02 04 47.4**	**-1.2**
RMP	**Rome, Mte Porz** 523nm,0.4s	**0.83**	**219**	Pg	**Pg**	**02 04 48.3**	**-0.6**
RMP	**Rome, Mte Porz** 523nm,0.4s	**0.83**	**219**	Pg	**Pg**	**02 04 48.3**	**-0.6**
RDP	**Rocca di Papa** 1μm,0.7s	**0.86**	**216**	Pg	**Pg**	**02 04 48.5**	**-1.1**
RDP	**Rocca di Papa** 1μm,0.7s	**0.86**	**216**	Pg	**Pg**	**02 04 48.5**	**-1.1**
SNTG	**Esanatoglia** 139nm,0.3s	**0.86**	**337**	Pg	**Pg**	**02 04 48.6**	**-1.1**
SNTG	**Esanatoglia** 139nm,0.3s	**0.86**	**337**	Pg	**Pg**	**02 04 48.6**	**-1.1**
GIUL	**Giuliano Di Ro** 295nm,0.8s	**0.90**	**187**	Pg	**Pg**	**02 04 49.5**	**-0.9**
GIUL	**Giuliano Di Ro** 295nm,0.8s	**0.90**	**187**	Pg	**Pg**	**02 04 49.5**	**-0.9**
CING	**Cingoli** 289nm,0.4s	**0.93**	**351**	Pg	**Pg**	**02 04 49.7**	**-1.2**
CING	**Cingoli** 289nm,0.4s	**0.93**	**351**	Pg	**Pg**	**02 04 49.7**	**-1.2**
RNI2	**Rionero Sannit** 420nm,0.8s	**0.94**	**143**	Pg	**Pg**	**02 04 50.0**	**-1.1**
RNI2	**Rionero Sannit** 420nm,0.8s	**0.94**	**143**	Pg	**Pg**	**02 04 50.0**	**-1.1**
CERA	**Filignano** 329nm,0.6s	**0.98**	**151**	Pg	**Pg**	**02 04 50.0**	**-1.8**
CERA	**Filignano** 329nm,0.6s	**0.98**	**151**	Pg	**Pg**	**02 04 50.0**	**-1.8**
MURB	**Monte Urbino** 671nm,0.4s	**1.03**	**322**	Pg	**Pg**	**02 04 51.5**	**-1.3**
MURB	**Monte Urbino** 671nm,0.4s	**1.03**	**322**	Pg	**Pg**	**02 04 51.5**	**-1.3**
MIDA	**Miranda** 196nm,0.4s	**1.04**	**142**	Pg	**Pg**	**02 04 51.0**	**-1.9**
MIDA	**Miranda** 196nm,0.4s	**1.04**	**142**	Pg	**Pg**	**02 04 51.0**	**-1.9**
MGAB	**Montegabbione** 396nm,0.4s	**1.05**	**296**	Pg	**Pg**	**02 04 51.8**	**-1.4**
MGAB	**Montegabbione** 396nm,0.4s	**1.05**	**296**	Pg	**Pg**	**02 04 51.8**	**-1.4**
ARVD	**Arcevia** 211nm,0.9s	**1.09**	**342**	Pg	**Pg**	**02 04 52.6**	**-1.4**
ARVD	**Arcevia** 211nm,0.9s	**1.09**	**342**	Pg	**Pg**	**02 04 52.6**	**-1.4**
AOI	**Ancona** 159nm,0.5s	**1.10**	**8**	Pg	**Pg**	**02 04 53.3**	**-0.9**
AOI	**Ancona** 159nm,0.5s	**1.10**	**8**	Pg	**Pg**	**02 04 53.3**	**-0.9**
SACS	**San Casciano d** 146nm,0.8s	**1.16**	**290**	Pg	**Pb**	**02 04 54.1**	**-0.9**
NVLJ	**Novalja**	**2.36**	**27**	*e*Pn	**Pn**	**02 05 12.4**	**+0.9**
NVLJ				Sn	**Sn**	**02 05 39.1**	**-1.3**
MAIM	**Mastiano**	**2.57**	**305**	P	**Pn**	**02 05 14.7**	**+0.3**
SKDS	**Skadanscina**	**3.12**	**8**	*i* Pn	**Pn**	**02 05 22.6**	**+0.6**
SKDS				*i* Sn	**Sn**	**02 06 00.8**	**+1.7**
SKDS	**Skadanscina**	**3.12**	**8**	*i* Pn	**Pn**	**02 05 22.6**	**+0.6**
SKDS				*i* Sn	**Sn**	**02 06 00.8**	**+1.7**
STON	**Ston**	**3.20**	**81**	*e*Pn	**Pn**	**02 05 24.1**	**+1.0**
STON	**Ston**	**3.20**	**81**	*e*Pn	**Pn**	**02 05 24.0**	**+1.0**
BOJS	**Bojanci**	**3.33**	**23**	*i* Pn	**Pn**	**02 05 26.8**	**+2.0**
BOJS				*i* Sn	**Sn**	**02 06 06.9**	**+2.7**
BOJS	**Bojanci**	**3.33**	**23**	*i* Pn	**Pn**	**02 05 26.8**	**+2.0**
BOJS				*i* Sn	**Sn**	**02 06 06.9**	**+2.7**
VISS	**Visnje**	**3.50**	**17**	*i* Pn	**Pn**	**02 05 29.5**	**+2.3**
VISS				*i* Sn	**Sn**	**02 06 09.9**	**+1.3**
VISS	**Visnje**	**3.50**	**17**	*i* Pn	**Pn**	**02 05 29.5**	**+2.3**
VISS				*i* Sn	**Sn**	**02 06 09.9**	**+1.3**
DIVS	**Divibare**	**5.09**	**69**	*e*Pn	**Pn**	**02 05 48.6**	**-0.4**
BARS	**Barje**	**6.22**	**84**	*e*Pn	**Pn**	**02 06 05

IDC 21 02:07:41.1±7.8, 30.81S×178.39W, h0km, mb3.4/2, mb1 3.7/2, mb1mx3.5/18, mbtmp3.4/2, MS3.6/1, Ms1 3.6/1, ms1mx2.2/11, Error ellipse: s-maj=325.5km s-min=61.4km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.76**	**268**	P	P	02 15 40.6	+0.2
	0.2nm,0.5s,baz=122,slow=8.8,SNR=3.0						
WRA	**Warramunga Arr**	**43.78**	**273**	P	P	02 15 48.3	-0.5
	0.2nm,0.3s,baz=112,slow=8.0,SNR=7.2						
VNDA	**Vanda**	**47.66**	**186**	LR	LR	02 30 55.5	
	comp=Z,68nm,20.9s,baz=281,slow=29						
FINES	**FINESS Array B**	**145.41**	**339**	PKPbc	PKPbc	02 27 19.4	-0.8
	0.5nm,0.7s,baz=29,slow=3.2,SNR=3.8						

IDC 21 02:24:33.6±6.7, 56.01S×27.77W, h129km±60km, mb3.7/3, mb1 3.7/4, mb1mx3.5/17, mbtmp3.7/4, Error ellipse: s-maj=31.2km s-min=27.7km az=60.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA2	**Neumayer--Watz**	**17.35**	**157**	*e*P	Pn	02 28 27.5	+0.1
SNAA	**Sanae**	**18.91**	**156**	*e*P	P	02 28 43.7	-0.2
SNAA	**Sanae**	**18.91**	**156**	P	P	02 28 43.9	0.0
	1.3nm,0.3s,baz=294,slow=14,SNR=173						
LPAZ	**La Paz**	**50.09**	**306**	P	P	02 33 15.9	-0.2
	0.5nm,0.3s,baz=127,slow=5.1,SNR=5.6						
DBIC	**Dimbokro**	**65.27**	**25**	P	P	02 35 01.0	-0.4
	3.8nm,1.0s,baz=164,slow=7.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**73.19**	**30**	P	P	02 35 50.5	+0.4
	0.5nm,0.4s,baz=198,slow=6.4,SNR=18						
FINES	**FINESS Array B**	**124.50**	**28**	PKP	PKPdf	02 43 15.4	-0.6
	0.4nm,0.5s,baz=328,slow=2.9,SNR=3.9						
ARCES	**ARCESS Array B**	**131.03**	**22**	PKP	PKPdf	02 43 27.8	-0.4
	0.9nm,0.8s,baz=213,slow=3.1,SNR=3.7						
ILAR	**Eielson Array**	**149.85**	**312**	PKPbc	PKPbc	02 44 06.5	-0.4
	1.3nm,0.8s,baz=126,slow=1.7,SNR=15						
KDAK	**Kodiak Island**	**150.51**	**297**	PKPbc	PKPbc	02 44 08.4	-0.2
	1.3nm,0.3s,baz=90,slow=2.0,SNR=3.5						
SONM	**Songino Array**	**151.05**	**87**	PKPbc	PKPbc	02 44 10.1	-0.3
	1.0nm,0.4s,baz=221,slow=4.2,SNR=5.5						

NEIC 21 02:41:56.8, 32.10N×115.71W, h6km, ML3.3(ECX), ML3.2(PAS), After ECX.

ECX 21 02:41:56.8±0.7, 32.10N×115.71W, h6km, MD3.1, ML3.2, 16C-6D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDX	**Rancho Dawling**	**0.26**	**229**	⇑*i*P	Pg	02 42 01.3	-0.9
RDX				*e*S	Sg	02 42 05.0	-0.9
RDX	**Rancho Dawling**	**0.26**	**229**	⇑*i*P	Pg	02 42 01.3	-0.9
RDX				*e*S	Sg	02 42 05.0	-0.9
RDX				⇓*e*		02 42 05.9	
	comp=N,2µm,0.3s						
RDX				*e*		02 42 06.5	
	comp=E,4µm,0.3s						
CPBX	**Cerro Prieto**	**0.47**	**48**	⇑*e*P	Pg	02 42 05.2	-0.7
CPBX	**Cerro Prieto**	**0.47**	**48**	⇑*e*P	Pg	02 42 05.2	-0.7
RMX	**La Rumorosa**	**0.59**	**328**	⇑*e*P	Pg	02 42 07.0	-1.4
RMX				*e*S	Sg	02 42 14.9	-1.3
RMX	**La Rumorosa**	**0.59**	**328**	⇑*e*P	Pg	02 42 07.0	-1.4
RMX				*e*S	Sg	02 42 14.9	-1.3
DVTC	**Desert V Tower**	**0.65**	**329**	P	Pg	02 42 08.0	-1.4
	baz=0.6						
DVTC				S	Sg	02 42 16.4	-1.5
	baz=0.6						
ZAX	**El Zacaton**	**0.76**	**219**	⇑*e*P	Pg	02 42 10.2	-1.4
ZAX				*e*S	Sg	02 42 20.6	-0.9
ZAX				⇑*e*		02 42 23.6	
	comp=E,1µm,1.1s						
ZAX				*e*		02 42 25.8	
	comp=N,1µm,0.5s						
CBX	**Cerro Bola**	**0.83**	**285**	⇑*i*P	Pg	02 42 11.7	-1.4
CBX				*e*S	Sg	02 42 22.9	-1.2
CBX				⇓*e*		02 42 24.9	
	comp=N,402nm,0.5s						
CBX				*e*		02 42 29.4	
	comp=E,493nm,0.7s						
SWSC	**Sam W. Stewart**	**0.84**	**355**	P	Pg	02 42 11.5	-1.4
	baz=0.8						
SWSC				S	Sg	02 42 22.8	-1.1
	baz=0.8						
ECBX	**El Chinero**	**0.84**	**138**	⇑*e*P	Pg	02 42 10.1	-2.8
ECBX				*e*S	Sg	02 42 21.5	-2.4
ECBX	**El Chinero**	**0.84**	**138**	⇑*e*P	Pg	02 42 10.1	-2.8
ECBX				*e*S	Sg	02 42 21.5	-2.4
ECBX				⇓*e*		02 42 23.3	
	comp=N,908nm,0.2s						
ECBX				⇓*e*		02 42 23.9	
	comp=E,642nm,0.2s						
ECNX	**Esteban Cantu**	**0.88**	**240**	⇑*e*P	Pg	02 42 12.4	-1.4
ECNX				*e*S	Sg	02 42 24.2	-1.1
ECNX	**Esteban Cantu**	**0.88**	**240**	⇑*e*P	Pg	02 42 12.4	-1.4
ECNX				*e*S	Sg	02 42 24.2	-1.1
ECNX				⇓*e*		02 42 25.2	
	comp=N,1µm,0.8s						
ECNX				*e*		02 42 29.8	
	comp=E,1µm,0.3s						
PBX	**Punta Banda**	**0.94**	**248**	⇑*e*P	Pg	02 42 13.5	-1.4
PBX				*e*S	Sg	02 42 26.1	-0.9
PBX	**Punta Banda**	**0.94**	**248**	⇑*e*P	Pg	02 42 13.5	-1.4
PBX				*e*S	Sg	02 42 26.1	-0.9
PBX				*e*		02 42 30.4	
	comp=N,713nm,0.3s						
PBX				*e*		02 42 32.0	
	comp=E,788nm,0.8s						
MONP	**Monument Peak**	**0.99**	**323**	P	Pg	02 42 14.3	-1.8
	baz=1.0						
MONP				S	Sg	02 42 26.7	-2.4
	baz=1.0						
BAR	**Barrett**	**1.00**	**306**	*e*Pg	Pg	02 42 14.2	-1.8
BAR				*e*S	Sg	02 42 26.7	-2.3
SPX	**San Pedro Mart**	**1.07**	**169**	⇑*e*P	Pg	02 42 15.8	-2.2
SPX				*e*S	Sg	02 42 30.4	-1.8
SPX				*e*		02 42 31.7	
	comp=E,388nm,0.2s						
SPX				⇓*e*		02 42 31.9	
	comp=N,437nm,0.1s						
GLA	**Glamis**	**1.21**	**38**	*e*Pn	Pg	02 42 16.7	-3.4
GLA				*e*S	Sg	02 42 31.4	-4.3
GLA	**Glamis**	**1.21**	**38**	P	Pg	02 42 16.5	-3.5
	baz=1.2						
GLA				S	Sg	02 42 31.1	-4.7
	baz=1.2						
109C	**Camp Elliot, M**	**1.42**	**304**	P	Pn	02 42 21.1	-2.0
	baz=1.4						
109C				S	Sb	02 42 38.8	-3.1
	baz=1.4						
PFO	**Pinyon Flat Ob**	**1.63**	**338**	*e*Pn	Pn	02 42 23.3	-3.0
PFO				*e*S	Sn	02 42 47.1	-0.6
PFO	**Pinyon Flat Ob**	**1.63**	**338**	P	Pn	02 42 23.1	-3.2
	baz=1.6						
113A	**Mohawk Valley,**	**1.77**	**68**	P	Pn	02 42 24.7	-3.3
	baz=1.8						
113A				S	Sn	02 42 45.5	-5.4
	baz=1.8						
MURC	**Murrieta**	**1.95**	**320**	Pb	Pn	02 42 30.3	-0.2
	baz=1.9						
MURC				Sb	Sn	02 42 55.2	-0.2
	baz=1.9						
214A	**Organ Pipe Nat**	**2.47**	**93**	P	Pn	02 42 33.7	-4.0
	baz=2.5						
MWC	**Mount Wilson**	**2.89**	**318**	*e*Pn	Pn	02 42 45.3	+1.6
MWC				*e*S	Sb	02 43 23.1	-1.8
GSC	**Goldstone**	**3.32**	**344**	Pn	Pn	02 42 47.2	-2.2
GSC				*e*Pg	Pg	02 43 00.7	+0.2
GSC				*e*S	Sg	02 43 40.5	-3.2
TUC	**Tucson**	**4.18**	**86**	*e*Pn	Pn	02 43 03.2	+1.9
TUC				*e*Pg	Pg	02 43 19.0	+1.9
TUC				*e*S	Sb	02 44 06.3	+4.6
WUAZ	**Wupatki**	**4.96**	**45**	*e*Pn	Pn	02 43 11.8	-0.3
CCUT	**Cedar City**	**5.77**	**19**	*e*Pn	Pn	02 43 23.1	-0.1

IDC 21 02:53:00.9±1.3, 31.20N×141.12E, h0km, mb3.7/8, mb1 3.7/9, mb1mx3.6/27, mbtmp3.7/9, ML3.3/1, Error ellipse: s-maj=37.5km s-min=26.4km az=70.0
NIED 21 02:53:00, 31.80N×141.10E, h77km, Mw3.8 Best double couple: M0 6.09000×10^14 NP1:ϕs 157.00000°, δ60.00000°, λ-51.00000°. NP2:ϕs 278.00000°, δ48.00000°, λ-138.00000°.
JMA 21 02:53:08.7±0.2, 31.85N×141.09E, h0km, M3.5

ISC 21 02:53:04.2±2.9, 31.76N±0.08×141.2E±0.1, h2km±14km, n25, σ1s76/25, mb3.8/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**1.76**	**318**	P	Pb	02 53 38.8	+1.5
JHCJ				*e*S	Sg	02 54 00.3	-0.5
JHJ2	**Mitsune**	**1.78**	**319**	P	Pg	02 53 39.3	+0.9
JHJ2				S	Sg	02 54 02.1	+0.7
JHJ	**Hachijo jima 2**	**1.80**	**319**	Pn	Pb	02 53 39.4	+1.4
	20nm,0.3s,baz=86,slow=21,SNR=45						
JHJ				Sn	Sg	02 54 01.4	-0.8
	52nm,0.3s,baz=73,slow=22,SNR=11						
BSO1	**Boso 1**	**2.89**	**356**	P	Pb	02 53 56.0	-0.2
BSO1				*e*S	Sb	02 54 32.0	+0.2
JKO	**Kozu shima**	**2.97**	**325**	P	Pb	02 53 57.1	-0.8
BSO2	**Boso 2**	**3.00**	**353**	*e*S	Sb	02 54 34.3	-1.0
BSO3	**Boso 3**	**3.08**	**349**	P	Pb	02 53 58.5	-1.2
BSO3				*e*S	Sb	02 54 36.5	-1.2
BSO4	**Boso 4**	**3.30**	**348**	*e*S	Sb	02 54 41.5	-2.5
JOD2	**Odawara 2**	**3.91**	**334**	P	Pn	02 54 10.4	+5.1
JNY	**Yasuok**	**4.54**	**323**	P	Pn	02 54 20.2	+6.2
JRY	**Ryogami san**	**4.65**	**336**	P	Pn	02 54 21.2	+5.7
JHO	**Hitachi**	**4.86**	**354**	P	Pn	02 54 23.5	+5.1
JHO				*e*S	Sn	02 55 19.1	+3.8
JAG	**Ashikaga**	**4.87**	**343**	P	Pn	02 54 23.6	+5.1
JAG				*e*S	Sn	02 55 18.1	+2.6
MJAR	**Matsushiro Arr**	**5.37**	**333**	Pn	Pn	02 54 31.8	+6.4
	0.9nm,0.3s,baz=161,slow=13,SNR=9.0						
MJAR				Sn	Sb	02 55 39.4	-4.4
	baz=178,slow=30,SNR=4.2						
MAT	**Matsushiro**	**5.37**	**333**	P	Pn	02 54 32.5	+7.1
SONM	**Songino Array**	**30.87**	**311**	P	P	02 59 23.1	+1.1
	0.6nm,0.6s,baz=120,slow=8.0,SNR=6.3						
MKAR	**Makanchi Array**	**46.93**	**306**	P	P	03 01 35.1	-1.2
	1.1nm,0.8s,baz=84,slow=11,SNR=7.4						
KURBB	**Kurchatov Arra**	**49.23**	**312**	P	P	03 01 52.6	-1.3
	0.8nm,0.7s,baz=91,slow=7.6,SNR=6.8						
WRA	**Warramunga Arr**	**51.83**	**188**	P	P	03 02 06.8	-7.1
	0.2nm,0.6s,baz=5.4,slow=7.8,SNR=4.7						
BVAR	**Borovoye Array**	**54.08**	**315**	P	P	03 02 29.4	-0.8
	1.0nm,0.5s,baz=291,slow=7.6,SNR=5.7						
ILAR	**Eielson Array**	**54.08**	**30**	P	P	03 02 31.0	+0.9
	0.1nm,0.5s,baz=291,slow=7.6,SNR=3.4						
JOF	**Joensuu**	**70.54**	**333**	*e*p	P	03 04 19.6	-0.7
	0.9nm,0.4s						
FINES	**FINESS Array B**	**73.40**	**333**	P	P	03 04 37.1	-0.4
	0.8nm,0.8s,baz=66,slow=4.6,SNR=6.9						
NB2	**NORSAR Subarra**	**78.97**	**338**	P	P	03 05 08.5	-0.8
	comp=Z,0.4nm,0.6s,baz=42,slow=5.6						
NOA	**NORSAR Array B**	**78.97**	**338**	P	P	03 05 08.6	-0.8
	comp=Z,0.7nm,0.8s,baz=41,slow=5.4,SNR=4.9						

ISCJB 21 03:33:03.4±0.5, 52.67N±0.08×170.38W±0.06, h99km±4km, mb3.9/10, Error ellipse: s-maj=14.7km s-min=4.4km az=162.4
IDC 21 03:33:03.3±0.9, 52.81N×170.48W, h78km±7km, mb3.7/8, mb1 3.9/11, mb1mx3.6/30, mbtmp3.7/11, MS3.5/2, Ms1 3.5/2, ms1mx2.6/49, Error ellipse: s-maj=22.5km s-min=15.0km az=150.0
NEIC 21 03:33:06.0, 52.82N×170.46W, h28km, mb4.0/4, ML4.1(AEIC), After AEIC.

ISC 21 03:33:03.8±0.7, 52.8N±0.1×170.50W±0.05, h82km±5km, n56, σ1s46/63, mb4.0/10, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKSP	**Okmok Steeple**	**1.40**	**72**	P	Pn	03 33 28.7	+0.8
OKSO	**Okmok South**	**1.51**	**69**	P	Pn	03 33 29.7	+0.4
OKSO				S	Sn	03 33 49.3	+0.7
OKCE	**Okmok Cone E**	**1.53**	**66**	P	Pn	03 33 30.2	+0.6
OKCE				S	Sn	03 33 50.4	+1.4
OKFG	**Magazine Ridge**	**1.67**	**69**	P	Pn	03 33 31.8	+0.5
OKFG				S	Sn	03 33 53.5	+1.3
KOKV	**Korovin Volcan**	**2.28**	**260**	P	Pn	03 33 41.4	+1.9
KOKV				S	Sn	03 34 10.1	+3.3
ATKA	**Atka Island**	**2.34**	**256**	P	Pn	03 33 41.3	+1.1
MGOD	**Makushin Gods**	**2.38**	**65**	P	Pn	03 33 41.6	+0.8
MCIR	**Makushin Cirqu**	**2.44**	**61**	P	Pn	03 33 42.7	+1.2
MREP	**Makushin Rep't**	**2.46**	**65**	P	Pn	03 33 43.3	+1.4
MSW	**Makushin Switc**	**2.48**	**63**	P	Pn	03 33 43.1	+1.0
MTBL	**Makushin Table**	**2.56**	**62**	P	Pn	03 33 44.5	+1.3
UNV	**Unalaska Valle**	**2.61**	**65**	*e*Pn	Pn	03 33 44.7	+0.9
UNV				*e*S	Sn	03 34 16.6	+2.1
AKRB	**Akutan Reef Bi**	**2.95**	**62**	P	Pn	03 33 50.1	+1.7
AKGG	**Akutan Green G**	**3.02**	**61**	P	Pn	03 33 51.1	+1.7
AKLV	**Akutan Long Va**	**3.03**	**62**	P	Pn	03 33 50.9	+1.4
AKUT	**Akutan**	**3.12**	**63**	*e*Pn	Pn	03 33 52.1	+1.4
AKUT				*e*S	Sn	03 34 29.8	+3.1
SSLW	**Shishaldin Wes**	**4.25**	**60**	P	Pn	03 34 07.7	+1.5
SPIA	**Saint Paul Isl**	**4.36**	**2**	P	Pn	03 34 11.1	+3.6
FALS	**False Pass**	**4.66**	**61**	*e*Pn	Pn	03 34 12.9	+1.2
FALS				*e*S	Sn	03 35 08.3	+3.9
DRIA	**Deer Island**	**5.32**	**63**	P	Pn	03 34 21.1	+0.5
DT1	**Dutton Round H**	**5.36**	**62**	P	Pn	03 34 22.1	+1.0
SDPT	**Sand Point**	**6.42**	**63**	*e*Pn	Pn	03 34 35.6	0.0
SDPT				*e*S	Sn	03 35 48.8	+1.6
AMKA	**Amchitka**	**6.45**	**261**	*e*Pn	Pn	03 34 37.9	+1.9
AMKA				*e*S	Sn	03 35 48.0	0.0
VNWF	**Veniaminof 8**	**7.19**	**58**	P	Pn	03 34 47.1	+0.9
VNFG	**Veniaminof 2**	**7.25**	**57**	P	Pn	03 34 48.1	+1.1
CHGN	**Chignik**	**7.84**	**59**	*e*Pn	Pn	03 34 54.6	-0.3
FX1	**Attu Island--F**	**9.88**	**277**	P	Pn	03 35 24.6	+1.8
FX1	**Attu Island--F**	**9.88**	**277**	P	Pn	03 35 26.9	+4.1
	2.1nm,0.3s,baz=94,slow=19,SNR=8.7						
FX1				S	Sn	03 37 10.1	-1.8
	0.5nm,0.3s,baz=117,slow=18,SNR=2.6						
OHAK	**Old Harbor**	**10.81**	**59**	*e*Pn	Pn	03 35 31.8	-3.5
GAMB	**Gambell**	**11.00**	**357**	*e*Pn	Pn	03 35 42.3	+4.4
KDAK	**Kodiak Island**	**11.34**	**57**	*e*Pn	Pn	03 35 40.2	-2.3
	7.3nm,0.4s						
KDAK	**Kodiak Island**	**11.34**	**57**	P	Pn	03 35 40.2	-2.3
	2.1nm,0.3s,baz=245,slow=6.2,SNR=15						
KDAK				S	Sn	03 37 40.3	-7.0
	0.1nm,0.3s,baz=127,slow=20,SNR=2.2						
TNA	**Tin City**	**12.84**	**5**	*e*Pn	P	03 36 06.2	-4.2
SEW	**Sewell**	**13.68**	**50**	*e*Pn	Pn	03 36 12.2	-1.7
PPLA	**Purkeypile**	**13.97**	**37**	*e*Pn	P	03 36 21.6	-1.6
TRF	**Thorofare Moun**	**14.99**	**37**	*e*Pn	P	03 36 33.6	-1.0
	4.4nm,1.0s						
ILAR	**Eielson Array**	**16.97**	**36**	P	P	03 36 55.9	-0.5
	0.6nm,0.3s,baz=219,slow=11,SNR=35						
DOT	**Dot Lake**	**17.49**	**41**	*e*Pn	P	03 37 02.1	+0.1
	6.9nm,0.8s						
PETK	**Petropavlovsk-**	**19.08**	**284**	P	Pn	03 37 21.1	-0.1
	0.7nm,0.3s,baz=87,slow=15,SNR=21						
EGAK	**Eagle**	**19.12**	**40**	*e*Pn	Pn	03 37 20.4	-1.2
	9.5nm,0.3s						
SKAG	**Skagway**	**20.50**	**57**	*e*P	Pn	03 37 36.3	-1.4
	9.4nm,0.8s						
DLBC	**Dease Lake**	**23.25**	**60**	*e*Pn	P	03 38 06.2	+2.3
DLBC	**Dease Lake**	**23.25**	**60**	P	P	03 38 06.1	+2.3
	3.5nm,0.5s,baz=267,slow=8.1,SNR=12						
INK	**Inuvik**	**23.35**	**34**	P	P	03 38 04.0	-0.5
	1.7nm,0.4s,baz=230,slow=11,SNR=33						
INK				pP	pP	03 38 21.5	-0.3
	1.8nm,0.8s,baz=210,slow=9.4,SNR=4.0						
INK				sP	sP	03 38 31.3	-0.6
	1.2nm,0.7s,baz=217,slow=10,SNR=2.5						
INK				LR	LR	03 49 22.4	
	comp=Z,29nm,18.5s,baz=325,slow=42						
YKA	**Yellowknife Ar**	**30.46**	**49**	P	P	03 39 07.0	-1.3
	0.2nm,0.4s,baz=270,slow=8.2,SNR=4.5						
MCMT	**McKenzie Canyo**	**37.86**	**78**	*e*P	P	03 40 13.3	+0.6
	0.5nm,0.4s						
PDAR	**Pinedale Array**	**40.99**	**79**	P	P	03 40 39.2	+0.4
	1.1nm,0.3s,baz=308,slow=4.4,SNR=9.3						
SONM	**Songino Array**	**50.47**	**300**	ScP	ScP	03 46 58.1	-0.4
	0.7nm,0.9s,baz=57,slow=5.3,SNR=3.6						
TXAR	**Lajitas Array**	**53.43**	**88**	P	P	03 42 15.4	+0.1
	0.8nm,0.4s,baz=303,slow=6.3,SNR=23						
TXAR				pP	pP	03 42 34.7	-0.9
	0.5nm,0.5s,baz=302,slow=5.6,SNR=4.9						
ARCES	**ARCESS Array B**	**57.39**	**353**	P	P	03 42 43.0	0.0
	1.9nm,1.0s,baz=359,slow=8.1,SNR=3.2						
FINES	**FINESS Array B**	**65.31**	**351**	P	P	03 43 36.4	-0.1
	1.0nm,0.9s,baz=354,slow=8.4,SNR=3.6						
WRA	**Warramunga Arr**	**86.75**	**231**	P	P	03 45 37.5	-1.2
	0.9nm,0.5s,baz=34,slow=5.8,SNR=12						
ASAR	**Alice Springs**	**90.17**	**229**	P	P	03 45 54.5	-0.3
	3.4nm,0.7s,baz=32,slow=4.8,SNR=27						
ASAR				pP	pP	03 46 15.3	-1.4
	0.3nm,0.3s,baz=22,slow=5.4,SNR=1.3						
MDT	**Midelt**	**93.83**	**12**	LR	LR	04 29 41.1	
	comp=Z,74nm,19.1s,baz=359,slow=36						
MAW	**Mawson**	**150.80**	**219**	PKPbc	PKPbc	03 52 45.1	0.0
	1.9nm,0.5s,baz=191,slow=5.2,SNR=3.5						
BOSA	**Boshof**	**153.14**	**328**	PKPbc	PKPbc	03 52 51.5	-0.3
	4.4nm,1.0s,baz=23,slow=1.7,SNR=3.8						

IDC 21 03:56:25.7±11.0, 7.72S×123.06E, h360km±82km, mb3.1/1, mb1 2.8/4, mb1mx2.6/22, mbtmp2.6/4, Error ellipse: s-maj=142.1km s-min=91.1km az=96.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.62**	**167**	P	Pn	03 58 50.4	-0.7
	0.2nm,0.3s,baz=353,slow=11,SNR=8.5						
FITZ				S	S	04 00 50.2	-0.2
	0.1nm,0.3s,baz=77,slow=18,SNR=2.8						
WRA	**Warramunga Arr**	**16.34**	**139**	P	P	03 59 54.0	-0.6
	0.1nm,0.3s,baz=318,slow=11,SNR=9.7						
ASAR	**Alice Springs**	**18.96**	**148**	P	P	04 00 22.9	+0.4
	0.1nm,0.3s,baz=333,slow=13,SNR=6.8						
STKA	**Stephens Creek**	**29.59**	**147**	P	P	04 01 58.9	-0.1
	0.6nm,0.4s,baz=314,slow=8.9,SNR=3.1						

ATH 21 03:57:30.7, 41.72N×23.89E, h5km, MD2.8/4
ISCJB 21 03:57:31.7±0.6, 41.68N±0.02×23.86E±0.04, h7km±5km, Error ellipse: s-maj=5.2km s-min=3.2km az=170.8
THE 21 03:57:32.2, 41.65N×23.87E, h10km±1km, ML2.3/6, Error ellipse: s-maj=1.0km s-min=0.5km az=205.0
CSEM 21 03:57:32.0±0.2, 41.67N×23.84E, h8km, ML2.3/6, Error ellipse: s-maj=5.3km s-min=3.4km az=77.0
BEO 21 03:57:34.5±1.6, 41.64N×23.63E, h1km±7km, ML2.3/4

ISC 21 03:57:31.9±1.0, 41.68N±0.02×23.88E±0.03, h8km±9km, n30, σ0s85/59, 1C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVR	**Nevrokopi**	**0.33**	**182**	P	Pg	03 57 38.5	+0.1
NVR				S	Sg	03 57 43.1	+0.3
NVR	**Nevrokopi**	**0.33**	**182**	*e*PB	Pg	03 57 38.3	-0.1
NVR				*e*SB	Sg	03 57 43.5	+0.7
NVR	**Nevrokopi**	**0.33**	**182**	*e*Pb	Pg	03 57 38.3	-0.1
NVR				S	Sg	03 57 43.1	+0.3
NVR				*e*Sb	Sg	03 57 43.5	+0.7
SRS	**Serrai**	**0.60**	**201**	P	Pg	03 57 43.7	+0.2
SRS				S	Sg	03 57 51.6	+0.2
SRS	**Serrai**	**0.60**	**201**	P	Pg	03 57 43.7	+0.2
SRS				S	Sg	03 57 51.6	+0.2
PLD	**Plovdiv**	**0.75**	**55**	P	Pb	03 57 47.1	-0.1
PLD				S	Sb	03 57 58.0	+0.5
PLD	**Plovdiv**	**0.75**	**55**	P	Pb	03 57 47.1	-0.1
PLD				S	Sb	03 57 58.0	+0.5
KAVA	**Kavala**	**0.84**	**145**	P	Pg	03 57 47.4	-0.6
KAVA				S	Sg	03 57 59.0	+0.2
KAVA	**Kavala**	**0.84**	**145**	P	Pg	03 57 47.4	-0.6
KAVA				S	Sg	03 57 59.0	+0.2
SOH	**Sokhos**	**0.94**	**205**	P	Pg	03 57 49.4	-0.6
SOH				S	Sg	03 58 02.4	+0.1
SOH	**Sokhos**	**0.94**	**205**	*e*PG	Pg	03 57 49.3	-0.7
SOH	**Sokhos**	**0.94**	**205**	P	Pg	03 57 49.4	-0.6
SOH				S	Sg	03 58 02.4	+0.1
VTS	**Vitosha**	**1.04**	**332**	P	Pg	03 57 51.7	0.0
VTS				S	Sn	03 58 07.5	-0.1
VTS	**Vitosha**	**1.04**	**332**	*i* Pg	Pg	03 57 51.8	0.0
VTS				*e*Sg	Sb	03 58 06.7	+0.7
VTS	**Vitosha**	**1.04**	**332**	*i* Pg	Pg	03 57 51.8	0.0
VTS				*e*Sg	Sb	03 58 06.7	+0.7
VTS				S	Sn	03 58 07.5	-0.1
VAY	**Valandovo**	**1.04**	**250**	*e*Pg	Pn	03 57 55.0	+2.2
VAY				*e*Sg	Sb	03 58 05.9	-0.1
VAY	**Valandovo**	**1.04**	**250**	*e*Pg	Pn	03 57 55.5	+2.7
VAY				*e*Sg	Sg	03 58 01.4	-4.1
PLG	**Polygyros**	**1.35**	**194**	*e*PB	Pn	03 57 57.0	0.0
PLG				*e*SB	Sg	03 58 16.3	+1.1
PLG	**Polygyros**	**1.35**	**194**	*e*Pb	Pn	03 57 57.0	0.0
PLG				*e*Sb	Sg	03 58 16.3	+1.1
OUR	**Ouranopolis**	**1.35**	**177**	P	Pn	03 57 56.3	-0.6
OUR				S	Sb	03 58 14.5	-0.2
OUR	**Ouranopolis**	**1.35**	**177**	P	Pn	03 57 56.3	-0.6
OUR				S	Sb	03 58 14.5	-0.2
ALN	**Alexandroupoli**	**1.81**	**115**	P	Pn	03 58 03.0	-0.3
ALN				S	Sn	03 58 26.6	+0.1
ALN	**Alexandroupoli**	**1.81**	**115**	P	Pn	03 58 03.0	-0.3
ALN	

MSNA				AML	AML	04 07 02.0
	comp=Z,30nm,0.5s					
UPI	**Upington**	**6.81**	**270**	*eP*	Pn	04 05 15.6 +0.4
UPI				*eS*	Sn	04 06 29.9 -3.3
UPI				AML	AML	04 07 08.9
	comp=Z,32nm,0.7s					
SUR	**Sutherland**	**7.98**	**240**	*eP*	Pn	04 05 34.0 +2.6
SUR				*eS*	Sn	04 06 59.2 -3.0
SUR				AML	AML	04 07 54.2
	comp=Z,16nm,0.7s					
CVNA	**Calvinia**	**8.48**	**248**	AML	AML	04 08 31.2
	comp=Z,28nm,0.7s					

PRE 21 04:03:57.2±3.5, 28°64'S×28°98'E, h5km, ML3.5, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SEK	**Senekal**	**1.23**	**284**	*eP*	Pg	04 04 19.4	-1.7
SEK				*eS*	Sg	04 04 36.2	-0.9
SEK				AML	AML	04 04 38.7	
	comp=Z,389nm,0.3s						
KSD	**Kokstad**	**1.94**	**169**	*eS*	Sn	04 04 55.1	-0.8
KSD				AML	AML	04 04 59.1	
	comp=Z,1μm,0.4s						
PRYS	**Parys**	**2.23**	**320**	*eP*	Pn	04 04 34.9	-0.1
PRYS				*eS*	Sn	04 05 00.5	-2.5
PRYS				AML	AML	04 05 03.6	
	comp=Z,212nm,0.4s						
ERPM	**east rand prop**	**2.37**	**344**	*eP*	Pn	04 04 38.5	+1.4
ERPM				*eS*	Sn	04 05 08.1	+1.4
ERPM				AML	AML	04 05 19.7	
	comp=Z,112nm,0.8s						
KLOF	**Kloof**	**2.58**	**332**	*eP*	Pn	04 04 40.3	+0.4
KLOF				AML	AML	04 05 19.0	
	comp=Z,293nm,0.3s						
POGA	**Pongola**	**2.65**	**62**	*eP*	Pn	04 04 42.6	+2.0
POGA				AML	AML	04 05 24.8	
	comp=Z,161nm,0.4s						
SLR	**Silverton**	**2.95**	**348**	*eP*	Pn	04 04 46.0	+1.0
SLR				*eS*	Sn	04 05 21.6	+0.6
SLR				AML	AML	04 05 33.8	
	comp=Z,172nm,0.5s						
BOSA	**Boshof**	**3.27**	**269**	*eS*	Sn	04 05 30.8	+2.1
BOSA				AML	AML	04 05 41.1	
	comp=Z,134nm,0.3s						
KSR	**Koster**	**3.33**	**326**	*eP*	Pn	04 04 52.9	+2.7
KSR				*eS*	Sn	04 05 31.3	+0.9
KSR				AML	AML	04 05 43.4	
	comp=Z,146nm,0.7s						
SWZ	**Schweizer**	**3.53**	**293**	*eS*	Sn	04 05 36.6	+1.3
SWZ				AML	AML	04 05 49.5	
	comp=Z,100nm,0.6s						
LBTB	**Lobatse**	**4.70**	**319**	*eP*	Pn	04 05 08.0	-1.0
LBTB				AML	AML	04 06 27.1	
	comp=Z,48nm,0.5s						

*IDC **21** 04:19:54.9±1.5, 38°.67N×20°.65E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.7/29, mbtmp3.8/8, ML3.9/1, MS2.6/2, Ms1 2.7/2, ms1mx2.1/40, Error ellipse: s-maj=30.2km s-min=22.5km az=91.0*

*ISCJB **21** 04:19:56.3±0.4, 38°.60N±0°.01×20°.42E±0°.02, h10km±2km, mb3.7/9, MS2.5/2, Error ellipse: s-maj=3.1km s-min=1.8km az=140.8*

*CSEM **21** 04:19:57.4±0.1, 38°.60N×20°.51E, h5km, ML3.6/20, Error ellipse: s-maj=3.5km s-min=1.8km az=53.0*

*BEO **21** 04:19:57.8±0.9, 38°.64N×20°.38E, h0km, ML3.3/9*

*THE **21** 04:19:58.5, 38°.62N×20°.61E, h3km, ML3.6/20, Error ellipse: s-maj=0.6km s-min=0.3km az=257.0*

*ATH **21** 04:19:58.1, 38°.59N×20°.52E, h13km±2km, MD3.5/30, ML3.6*

*PDG **21** 04:19:58.3±0.8, 38°.63N×20°.58E, h15km±1km, ML3.6/8, Error ellipse: s-maj=1.0km s-min=1.0km az=90.0*

ISC 21 04:19:57.5±0.8, 38°.62N±0°.02×20°.51E±0°.02, h12km±6km, n215, σ1§41/323, mb3.8/9, 25C-11D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LKD2	**Lefkada island**	**0.21**	**35**	P	**Pg**	**04 20 02.4**	**+0.3**
LKD2				S	**Sg**	04 20 04.3	-0.9
LKD2	**Lefkada island**	**0.21**	**35**	*e*PG	**Pg**	04 20 02.3	+0.2
LKD2				*e*SG	**Sg**	04 20 05.8	+0.6
LKD2	**Lefkada island**	**0.21**	**35**	P	**Pg**	**04 20 02.2**	**+0.2**
LKD2				S	**Sg**	04 20 04.2	-0.4
LKD2				*e*Sg	**Sg**	04 20 05.8	+0.5
VLS	**Valsamata**	**0.45**	**172**	P	**Pg**	**04 20 06.5**	**+0.2**
VLS				S	**Sg**	04 20 13.5	+1.2
VLS	**Valsamata**	**0.45**	**172**	*e*PB	**Pg**	**04 20 06.2**	**-0.1**
VLS				*e*SB	**Sg**	04 20 13.4	+1.2
VLS	**Valsamata**	**0.45**	**172**	P	**Pg**	**04 20 06.2**	**-0.1**
VLS				S	**Sg**	04 20 12.5	+0.3
VLS				*e*Sb	**Sg**	04 20 13.4	+1.2
KFL	**Anninata**	**0.55**	**156**	P	**Pg**	**04 20 08.2**	**-0.1**
KFL				S	**Sg**	04 20 16.3	+0.6
KFL	**Anninata**	**0.55**	**156**	P	**Pg**	**04 20 08.2**	**-0.1**
KFL				S	**Sg**	04 20 16.3	+0.6
IGT	**Igoumenitsa**	**0.92**	**352**	P	**Pb**	**04 20 15.7**	**+0.2**
IGT				S	**Sn**	04 20 30.0	+0.5
IGT	**Igoumenitsa**	**0.92**	**352**	P	**Pb**	04 20 15.7	+0.2
IGT				S	**Sb**	04 20 28.3	+0.6
RLS	**Riolos of Patr**	**0.94**	**126**	P	**Pg**	04 20 14.8	-0.8
RLS				S	**Sg**	04 20 27.7	-0.2
RLS	**Riolos of Patr**	**0.94**	**126**	*e*PG	**Pg**	04 20 15.0	-0.6
RLS	**Riolos of Patr**	**0.94**	**126**	*e*Pg	**Pg**	04 20 15.0	-0.6
RLS				S	**Sg**	04 20 27.7	-0.2
EVR	**Evrytania**	**1.06**	**73**	P	**Pg**	04 20 16.9	-1.1
EVR				S	**Sg**	04 20 31.1	-0.7
EVR	**Evrytania**	**1.06**	**73**	*e*PG	**Pg**	04 20 17.6	-0.4
EVR				*e*SG	**Sn**	04 20 34.4	+1.4
EVR	**Evrytania**	**1.06**	**73**	P	**Pg**	04 20 16.9	-1.1
EVR	**Evrytania**	**1.06**	**73**	*e*Pg	**Pg**	04 20 17.6	-0.4
EVR				S	**Sg**	04 20 31.1	-0.7
EVR				*e*Sg	**Sn**	04 20 34.4	+1.4
JAN	**Janina**	**1.07**	**14**	P	**Pb**	04 20 18.4	+0.4
JAN				S	**Sn**	04 20 33.9	+0.7
JAN	**Janina**	**1.07**	**14**	*e*PG	**Pb**	04 20 18.4	+0.4
JAN	**Janina**	**1.07**	**14**	P	**Pb**	04 20 18.4	+0.4
JAN				S	**Sn**	04 20 33.9	+0.7
EFP	**Efpalio**	**1.11**	**99**	P	**Pg**	04 20 17.6	-1.4
EFP				S	**Sg**	04 20 32.9	-0.6
EFP	**Efpalio**	**1.11**	**99**	*e*PB	**Pg**	04 20 17.4	-1.6
EFP	**Efpalio**	**1.11**	**99**	P	**Pg**	04 20 17.6	-1.4
EFP				S	**Sg**	04 20 32.9	-0.6
LAKA	**Lakka**	**1.22**	**108**	P	**Pn**	04 20 19.4	-1.0
LAKA				S	**Sb**	04 20 36.4	+0.3
LAKA	**Lakka**	**1.22**	**108**	*e*PB	**Pn**	04 20 19.0	-1.4
LAKA				*e*SG	**Sn**	04 20 40.4	+3.7
LAKA	**Lakka**	**1.22**	**108**	*e*Pb	**Pn**	04 20 19.0	-1.4
LAKA	**Lakka**	**1.22**	**108**	P	**Pn**	04 20 19.4	-1.0
LAKA				S	**Sb**	04 20 36.4	+0.3
LAKA				*e*Sg	**Sn**	04 20 40.4	+3.7
KEK	**Kerkira**	**1.22**	**333**	P	**Pn**	04 20 21.5	+1.1
KEK				S	**Sn**	04 20 40.3	+3.4
KEK	**Kerkira**	**1.22**	**333**	*e*PG	**Pn**	04 20 21.6	+1.1
KEK				*e*SN	**Sn**	04 20 39.7	+2.8
KEK	**Kerkira**	**1.22**	**333**	*e*Pg	**Pn**	04 20 21.6	+1.1
KEK				*e*Sn	**Sn**	04 20 39.7	+2.8
TRIZ	**Trizonia**	**1.25**	**101**	P	**Pn**	04 20 19.8	-1.0
TRIZ				S	**Sb**	04 20 37.8	+0.6
TRIZ	**Trizonia**	**1.25**	**101**	*e*PN	**Pn**	04 20 21.0	+0.2
TRIZ	**Trizonia**	**1.25**	**101**	P	**Pn**	04 20 19.8	-1.0
TRIZ	**Trizonia**	**1.25**	**101**	*e*Pn	**Pn**	04 20 21.0	+0.2
TRIZ				S	**Sb**	04 20 37.8	+0.6
KALE	**Kalithea**	**1.30**	**100**	P	**Pn**	04 20 21.4	-0.2
KALE	**Kalithea**	**1.30**	**100**	*e*PN	**Pn**	04 20 21.0	-0.6
KALE				*e*SG	**Sn**	04 20 43.2	+4.3
KALE	**Kalithea**	**1.30**	**100**	*e*Pn	**Pn**	04 20 21.0	-0.6
KALE	**Kalithea**	**1.30**	**100**	P	**Pn**	04 20 21.4	-0.2
KALE				*e*Sg	**Sn**	04 20 43.2	+4.3
MAKR	**Makrakomi, Fth**	**1.33**	**72**	P	**Pn**	04 20 22.1	+0.2
MAKR				S	**Sb**	04 20 40.1	+0.7
MAKR	**Makrakomi, Fth**	**1.33**	**72**	P	**Pn**	04 20 22.1	+0.2
MAKR				S	**Sb**	04 20 40.1	+0.7
KLV	**Kalavryta, Ach**	**1.41**	**113**	*e*PB	**Pn**	04 20 22.3	-0.8
KLV				*e*SG	**Sg**	04 20 46.7	+3.6
KLV	**Kalavryta, Ach**	**1.41**	**113**	*e*Pb	**Pn**	04 20 22.3	-0.8
KLV				*e*Sg	**Sg**	04 20 46.7	+3.6
AGG	**Agios Georgios**	**1.48**	**74**	P	**Pn**	04 20 24.5	+0.5
AGG				S	**Sn**	04 20 43.8	+0.5
AGG	**Agios Georgios**	**1.48**	**74**	*e*PB	**Pg**	04 20 26.1	+0.1
AGG	**Agios Georgios**	**1.48**	**74**	P	**Pn**	04 20 24.5	+0.5
AGG	**Agios Georgios**	**1.48**	**74**	*e*Pb	**Pg**	04 20 26.1	+0.1
AGG				S	**Sn**	04 20 43.8	+0.5
THL	**Klokotos Trika**	**1.51**	**51**	P	**Pn**	04 20 25.1	+0.8
THL				S	**Sn**	04 20 44.6	+0.7
THL	**Klokotos Trika**	**1.51**	**51**	*e*PG	**Pb**	04 20 25.6	+0.2
THL				*e*SG	**Sg**	04 20 49.2	+3.2
THL	**Klokotos Trika**	**1.51**	**51**	P	**Pn**	04 20 25.1	+0.8
THL	**Klokotos Trika**	**1.51**	**51**	*e*Pg	**Pb**	04 20 25.6	+0.2
THL				S	**Sn**	04 20 44.6	+0.7
THL				*e*Sg	**Sg**	04 20 49.2	+3.2
GUR	**Goura**	**1.60**	**115**	P	**Pn**	04 20 25.6	-0.1
GUR				S	**Sn**	04 20 47.1	+0.9
GUR	**Goura**	**1.60**	**115**	P	**Pn**	04 20 25.6	-0.1
GUR				S	**Sn**	04 20 47.1	+0.9
DSF	**Desfina**	**1.60**	**97**	P	**Pn**	04 20 26.1	+0.5
DSF				S	**Sn**	04 20 46.9	+0.7
DSF	**Desfina**	**1.60**	**97**	P	**Pn**	04 20 26.1	+0.5
DSF				S	**Sn**	04 20 46.9	+0.7
ITM	**Ithomi**	**1.82**	**142**	P	**Pn**	04 20 30.1	+1.4
ITM	**Ithomi**	**1.82**	**142**	*e*PN	**Pb**	04 20 31.1	+0.3
ITM	**Ithomi**	**1.82**	**142**	P	**Pn**	04 20 30.1	+1.4
ITM	**Ithomi**	**1.82**	**142**	*e*Pn	**Pb**	04 20 31.1	+0.3
NEST	**Nestorio**	**1.84**	**13**	P	**Pb**	04 20 31.8	+0.6
NEST	**Nestorio**	**1.84**	**13**	P	**Pb**	04 20 31.8	+0.6
VLX	**Vlachokerasia**	**1.93**	**130**	P	**Pn**	04 20 31.0	+0.7
VLX				S	**Sn**	04 20 55.6	+1.0
VLX	**Vlachokerasia**	**1.93**	**130**	*e*PG	**Pb**	04 20 33.2	+0.5
VLX				*e*SG	**Sg**	04 21 02.5	+2.8
VLX	**Vlachokerasia**	**1.93**	**130**	P	**Pb**	04 20 33.2	+0.5
VLX	**Vlachokerasia**	**1.93**	**130**	*e*Pg	**Pb**	04 20 33.2	+0.5
VLX				S	**Sn**	04 20 55.6	+1.0
VLX				*e*Sg	**Sg**	04 21 02.5	+2.8
KZN	**Kozani**	**1.95**	**30**	P	**Pn**	04 20 31.4	+0.9
KZN				S	**Sb**	04 20 57.0	-0.3
KZN	**Kozani**	**1.95**	**30**	*e*PN	**Pb**	04 20 33.0	0.0
KZN	**Kozani**	**1.95**	**30**	P	**Pn**	04 20 31.4	+0.9
KZN	**Kozani**	**1.95**	**30**	*e*Pn	**Pb**	04 20 33.0	0.0
KZN				S	**Sb**	04 20 57.0	-0.3
LKR	**Lokris**	**1.95**	**88**	P	**Pn**	04 20 30.8	+0.4
LKR				S	**Sn**	04 20 55.3	+0.4
LKR	**Lokris**	**1.95**	**88**	*e*PN	**Pb**	04 20 32.7	-0.3
LKR				*e*SG	**Sg**	04 21 02.1	+1.8
LKR	**Lokris**	**1.95**	**88**	P	**Pn**	04 20 30.8	+0.4
LKR	**Lokris**	**1.95**	**88**	*e*Pn	**Pb**	04 20 32.7	-0.3
LKR				S	**Sn**	04 20 55.3	+0.4
LKR				*e*Sg	**Sg**	04 21 02.1	+1.8
PYL	**PYLOS**	**1.98**	**150**	P	**Pn**	04 20 33.3	-0.1
PYL				S	**Sn**	04 20 57.3	+1.8
PYL	**PYLOS**	**1.98**	**150**	*e*PN	**Pb**	04 20 33.3	-0.1
PYL				*e*SG	**Sg**	04 21 01.0	-0.1
PYL	**PYLOS**	**1.98**	**150**	P	**Pn**	04 20 31.1	+0.3
PYL	**PYLOS**	**1.98**	**150**	*e*Pn	**Pb**	04 20 33.3	-0.1
PYL				S	**Sn**	04 20 57.3	+1.8
PYL				*e*Sg	**Sg**	04 21 01.0	-0.1
VLO	**Vlora**	**2.01**	**337**	*i* PN	Pn	04 20 26.8	-4.4
KBN	**Korca**	**2.02**	**6**	*i* PN	**Pb**	04 20 34.1	0.0
KBN	**Korca**	**2.02**	**6**	*i* Pn	**Pb**	04 20 34.1	0.0
LTK	**Loutraki**	**2.02**	**106**	P	**Pn**	04 20 31.6	+0.1
LTK				S	**Sn**	04 20 57.4	+0.7
LTK	**Loutraki**	**2.02**	**106**	*e*PN	**Pb**	04 20 33.7	-0.5
LTK	**Loutraki**	**2.02**	**106**	P	**Pn**	04 20 31.6	+0.1
LTK	**Loutraki**	**2.02**	**106**	*e*Pn	**Pb**	04 20 33.7	-0.5
LTK				S	**Sn**	04 20 57.4	+0.7
SMIA	**Simia**	**2.13**	**82**	P	**Pn**	04 20 33.7	+0.8
SMIA				S	**Sn**	04 21 00.1	+0.8
SMIA	**Simia**	**2.13**	**82**	P	**Pn**	04 20 33.7	+0.8
SMIA				S	**Sn**	04 21 00.1	+0.8
LIT	**Litokhoron**	**2.13**	**45**	P	**Pn**	04 20 34.0	+1.0
LIT				S	**Sn**	04 21 00.8	+1.4
LIT	**Litokhoron**	**2.13**	**45**	*e*PN	**Pb**	04 20 35.2	-0.9
LIT	**Litokhoron**	**2.13**	**45**	P	**Pn**	04 20 34.0	+1.0
LIT	**Litokhoron**	**2.13**	**45**	*e*Pn	**Pb**	04 20 35.2	-0.9
LIT				S	**Sn**	04 21 00.8	+1.4
XOR	**Xorichti**	**2.22**	**70**	P	**Pn**	04 20 34.2	0.0
XOR				S	**Sn**	04 21 02.5	+0.9
XOR	**Xorichti**	**2.22**	**70**	P	**Pn**	04 20 34.2	0.0
XOR				S	**Sn**	04 21 02.5	+0.9
NEO	**Neokhori**	**2.23**	**71**	*e*PN	**Pb**	04 20 37.6	-0.1
NEO	**Neokhori**	**2.23**	**71**	*e*Pn	**Pb**	04 20 37.6	-0.1
FNA	**Florina**	**2.27**	**17**	P	**Pn**	04 20 36.2	+1.4
FNA				S	**Sn**	04 21 04.5	+1.8
FNA	**Florina**	**2.27**	**17**	*e*PB	**Pn**	04 20 36.9	+2.1
FNA	**Florina**	**2.27**	**17**	P	**Pn**	04 20 36.2	+1.4
FNA	**Florina**	**2.27**	**17**	*e*Pb	**Pn**	04 20 36.9	+2.1
FNA				S	**Sn**	04 21 04.5	+1.8
DYR	**Agios Nikonas**	**2.35**	**141**	P	**Pn**	04 20 37.1	+1.1
DYR				S	**Sn**	04 21 07.1	+2.3
DYR	**Agios Nikonas**	**2.35**	**141**	*e*PG	**Pb**	04 20 40.9	+1.1
DYR	**Agios Nikonas**	**2.35**	**141**	P	**Pn**	04 20 37.1	+1.1
DYR	**Agios Nikonas**	**2.35**	**141**	*e*Pg	**Pb**	04 20 40.9	+1.1
DYR				S	**Sn**	04 21 07.1	+2.3
SKIA	**Skiathos**	**2.37**	**76**	P	**Pn**	04 20 36.3	0.0
SKIA				S	**Sn**	04 21 06.0	+0.7
SKIA	**Skiathos**	**2.37**	**76**	P	**Pn**	04 20 36.3	0.0
SKIA				S	**Sn**	04 21 06.0	+0.7
DID	**Didima**	**2.42**	**116**	*e*PB	**Pn**	04 20 38.6	+1.6
DID	**Didima**	**2.42**	**116**	*e*Pb	**Pn**	04 20 38.6	+1.6
BIA	**Bitola**	**2.48**	**14**	*i* Pn	**Pn**	04 20 39.6	+1.8
BIA	**Bitola**	**2.48**	**14**	*i* Pn	**Pn**	04 20 39.6	+1.8
NAIG	**Nisos Aigina**	**2.50**	**109**	*e*PB	**Pn**	04 20 40.2	+2.2
NAIG	**Nisos Aigina**	**2.50**	**109**	*e*Pb	**Pn**	04 20 40.2	+2.2
ATH	**Athens Observa**	**2.61**	**103**	*e*PB	**Pn**	04 20 41.6	+2.2
ATH				*e*SN	**Sn**	04 21 13.0	+2.0
ATH	**Athens Observa**	**2.61**	**103**	*e*Pb	**Pn**	04 20 41.6	+2.2
ATH				*e*Sn	**Sn**	04 21 13.0	+2.0
AOS	**Alonnisos**	**2.69**	**77**	*e*PN	**Pn**	04 20 42.7	+2.1
AOS	**Alonnisos**	**2.69**	**77**	*e*Pn	**Pn**	04 20 42.7	+2.1
VLI	**Veliai**	**2.70**	**134**	P	**Pn**	04 20 41.1	+0.3
VLI				S	**Sn**	04 21 15.5	+2.1
VLI	**Veliai**	**2.70**	**134**	P	**Pn**	04 20 41.1	+0.3
VLI				S	**Sn**	04 21 15.5	+2.1
GRG	**Griva**	**2.75**	**31**	P	**Pn**	04 20 42.4	+0.9
GRG				S	**Sn**	04 21 17.1	+2.4
GRG	**Griva**	**2.75**	**31**	P	**Pn**	04 20 42.4	+0.9
GRG				S	**Sn**	04 21 17.1	+2.4
TIR	**Tirane**	**2.77**	**350**	*i* PN	**Pn**	04 20 44.0	+2.2
TIR	**Tirane**	**2.77**	**350**	⇑*i* PN	**Pn**	04 20 43.9	+2.2
TIR				*e*Sn	**Sn**	04 21 17.8	+2.7
TIR	**Tirane**	**2.77**	**350**	⇑*i* Pn	**Pn**	04 20 43.9	+2.2
TIR				*e*Sn	**Sn**	04 21 17.8	+2.7
PLG	**Polygyros**	**2.87**	**51**	*e*PN	**Pn**	04 20 43.7	+0.6
PLG	**Polygyros**	**2.87**	**51**	*e*Pn	**Pn**	04 20 43.7	+0.6
PHP	**Peshkopia**	**3.06**	**359**	*i* PN	**Pn**	04 20 47.4	+1.6
PHP	**Peshkopia**	**3.06**	**359**	*i* Pn	**Pn**	04 20 47.4	+1.6
KYTH	**Kithira**	**3.08**	**138**	*e*PB	**Pb**	04 20 50.2	-2.1
KYTH	**Kithira**	**3.08**	**138**	*e*Pb	**Pb**	04 20 50.2	-2.1
SOH	**Sokhos**	**3.11**	**44**	*e*PN	**Pn**	04 20 48.4	+2.0
SOH	**Sokhos**	**3.11**	**44**	*e*Pn	**Pn**	04 20 48.4	+2.0
VAY	**Valandovo**	**3.13**	**30**	*i* Pn	**Pb**	04 20 51.5	-1.6
VAY	**Valandovo**	**3.13**	**30**	*i* Pn	**Pb**	04 20 51.9	-1.2
PE1	**Pezze di Greco**	**3.23**	**314**	*e*Sn	**Sn**	04 21 26.7	+0.3
SKO	**Skopje**	**3.42**	**12**	*e*Pn	**Pn**	04 20 52.8	+2.1
SKO	**Skopje**	**3.42**	**12**	*e*Pn	**Pn**	04 20 53.2	+2.5
SKO	**Skopje**	**3.42**	**12**	*e*Pn	**Pn**	04 20 53.2	+2.5
ULC	**Ulcinj**	**3.48**	**344**	⇓*i* PN	**Pn**	04 20 52.0	+0.5
ULC				*e*Sn	**Sn**	04 21 34.9	+2.3
ULC	**Ulcinj**	**3.48**	**344**	⇓*i* Pn	**Pn**	04 20 52.0	+0.5
ULC				*e*Sn	**Sn**	04 21 34.9	+2.3
ANKY	**Antikythira Is**	**3.54**	**140**	*e*PB	**Pb**	04 20 58.0	-2.0
ANKY	**Antikythira Is**	**3.54**	**140**	*e*Pb	**Pb**	04 20 58.0	-2.0
BCI	**Bajram Curri**	**3.76**	**355**	*i* PN	**Pb**	04 21 03.1	-0.7
BUM	**Brajici-Budva**	**3.88**	**342**	⇓*i* PN	**Pn**	04 20 57.8	+0.8
BUM				*e*Sn	**Sn**	04 21 44.0	+1.5
BUM	**Brajici-Budva**	**3.88**	**342**	⇓*i* Pn	**Pn**	04 20 57.8	+0.8
BUM				*e*Sn	**Sn**	04 21 44.0	+1.5
TTG	**Podgorica**	**3.92**	**346**	⇓*i* Pn	**Pn**	04 20 58.5	+1.0
TTG				*e*Sn	**Sn**	04 21 45.5	+2.0
PDG	**Podgorica**	**3.93**	**346**	⇑*i* Pn	**Pn**	04 20 58.1	+0.5
PDG				*e*Sn	**Sn**	04 21 43.4	-0.1
PDG	**Podgorica**	**3.93**	**346**	⇓*i* Pn	**Pn**	04 20 58.5	+0.9
PDG				*e*Sn	**Sn**	04 21 45.5	+2.0
PVY	**Plav**	**3.99**	**354**	⇑*i* PN	**Pn**	04 21 00.4	+1.8
PVY				*e*Sn	**Sn**	04 21 47.1	+1.7
PVY	**Plav**	**3.99**	**354**	⇑*i* Pn	**Pn**	04 21 00.4	+1.8
PVY				*e*Sn	**Sn**	04 21 47.1	+1.7
HCY	**Herceg Novi**	**4.12**	**339**	⇑*i* Pn	**Pn**	04 21 00.3	0.0
HCY				*e*Sn	**Sn**	04 21 49.8	+1.4
HCY	**Herceg Novi**	**4.12**	**339**	⇑*i* PN	**Pn**	04 21 00.3	0.0
HCY				*e*Sn	**Sn**	04 21 49.8	+1.4
BEY	**Berane**	**4.28**	**354**	⇑*i* Pn	**Pn**	04 21 04.0	+1.5
BEY				*e*Sn	**Sn**	04 21 53.6	+1.3
IVA	**Berane**	**4.28**	**354**	⇑*i* Pn	**Pn**	04 21 04.0	+1.5
IVA				*e*Sn	**Sn**	04 21 53.6	+1.3
NKY	**Niksic**	**4.35**	**345**	⇑*i* Pn	**Pn**	04 21 04.5	+1.0
NKY				*e*Sn	**Sn**	04 21 55.5	+1.4
NKY	**Niksic**	**4.35**	**345**	⇑*i* Pn	**Pn**	04 21 04.5	+1.0
NKY				*e*Sn	**Sn**	04 21 55.5	+1.4
VTS	**Vitosha**	**4.47**	**27**	⇑*i* Pn	**Pn**	04 21 07.0	+1.8
VTS				*e*Sn	**Sn**	04 21 57.9	+0.7
VTS	**Vitosha**	**4.47**	**27**	⇑*i* P	**Pn**	04 21 07.0	+1.8
VTS	**Vitosha**	**4.47**	**27**	⇑*i* P	**Pn**	04 21 07.0	+1.8
VTS				*e*Sn	**Sn**	04 21 57.9	+0.7
BRY	**Bratogost**	**4.53**	**341**	⇑*i* Pn	**Pn**	04 21 07.1	+1.0
BRY				*e*Sn	**Sn**	04 21 59.7	+1.0
BRY	**Bratogost**	**4.53**	**341**	⇑*i* Pn	**Pn**	04 21 07.1	+1.0
BRY				*e*Sn	**Sn**	04 21 59.7	+1.0
UPM	**Unac-Piva**	**4.74**	**346**	⇑*i* Pn	**Pn**	04 21 10.1	+1.2
UPM				*e*Sn	**Sn**	04 22 04.9	+1.0
UPM	**Unac-Piva**	**4.74**	**346**	⇑*i* Pn	**Pn**	04 21 10.1	+1.2
UPM				*e*Sn	**Sn**	04 22 04.9	+1.0
STON	**Ston**	**4.75**	**334**	*e*Pn	**Pn**	04 21 08.4	-0.6
STON				Sn	**Sn**	04 22 00.4	-3.5
STON	**Ston**	**4.75**	**334**	*e*Pn	**Pn**	04 21 08.3	-0.6
PLE	**Pljevlja**	**4.78**	**350**	⇑*i* Pn	**Pn**	04 21 10.6	+1.1
PLE				*e*Sn	**Sn**	04 22 06.3	+1.4
PLE	**Pljevlja**	**4.78**	**350**	⇑*i* Pn	**Pn**	04 21 10.6	+1.1
PLE				*e*Sn	**Sn**	04 22 06.3	+1.4
ALN	**Alexandroupoli**	**4.84**	**60**	*e*PN	**Pn**	04 21 11.5	+1.4
ALN	**Alexandroupoli**	**4.84**	**60**	*e*Pn	**Pn**	04 21 11.5	+1.4
ZAPS	**Zavoj**	**4.92**	**18**	⇑*i* Pn	**Pn**	04 21 13.0	+1.7
GRUS	**Gruza**	**5.27**	**2**	*e*Pn	**Pn**	04 21 16.6	+0.6
GRUS				*e*Sn	**Sn**	04 22 16.4	-0.2
GRUS	**Gruza**	**5.27**	**2**	*e*Pn	**Pn**	04 21 16.6	+0.6
GRUS				*e*Sn	**Sn**	04 22 16.4	-0.2
BBLS	**Lazići**	**5.31**	**351**	⇑*i* Pn	**Pn**	04 21 16.5	-0.2
BBLS				*e*Sn	**Sn**	04 22 17.6	-0.1
BBLS	**Lazići**	**5.31**	**351**	⇑*i* Pn	**Pn**	04 21 16.5	-0.2
BBLS				*e*Sn	**Sn**	04 22 17.6	-0.1
DIVS	**Divibare**	**5.49**	**356**	*e*Sn	**Sn**	04 22 19.9	-2.3
TEKS	**Tekeris**	**5.97**	**353**	*e*Pn	**Pn**	04 21 25.1	-0.6
TEKS	**Tekeris**	**5.97**	**353**	*e*Pn	**Pn**	04 21 25.1	-0.6
NVLJ	**Novalja**	**7.29**	**326**	*e*Pn	**Pn**	04 21 44.4	+0.6
NVLJ				Sn	**Sn**	04 23 03.0	-3.3
NVLJ	**Novalja**	**7.29**	**

	108nm,0.3s,baz=188,slow=18,SNR=7.1								
NNA					LR	LR	05 12 33.9		
	comp=Z,399nm,19.1s,baz=128,slow=48								
ARE	**Arequipa**	**5.10**	**111**	*eP*	**Pn**	**05 11 44.0**	**+1.7**
ARE				*eS*	**Sb**	**05 12 51.0**	**-5.7**
ATAH	**Atahualpa**	**7.76**	**346**	P	**Pn**	**05 12 19.4**	**+0.3**
ATAH				S	**Sn**	**05 13 46.9**	**+0.4**
ATAH	**Atahualpa**	**7.76**	**346**	P	**Pn**	**05 12 19.4**	**+0.3**
	1.6nm,0.3s,baz=110,slow=4.1,SNR=6.8								
ATAH				S	**Sn**	**05 13 46.9**	**+0.4**
	2.3nm,0.3s,baz=256,slow=13,SNR=1.8								
LPAZ	**La Paz**	**8.18**	**102**	*eP*	**Pn**	**05 12 27.3**	**+2.3**
	18nm,0.5s								
LPAZ				S	**Sn**	**05 13 58.9**	**+1.7**
LPAZ	**La Paz**	**8.18**	**102**	P	Pn	05 12 27.6	+2.6
	3.3nm,0.3s,baz=292,slow=7.5,SNR=211								
LPAZ				S	**Sn**	**05 13 58.9**	**+1.7**
	baz=77,slow=2.7,SNR=2.2								
LVC	**Limon Verde**	**10.63**	**139**	*ePn*	**Pn**	**05 12 58.1**	**-0.1**
	14nm,0.5s								
LVC				*eSn*	**Sn**	**05 14 53.3**	**-3.4**
SAML	**Samuel**	**14.20**	**68**	*ePn*	Pn	05 13 41.4	-5.4
	7.1nm,0.7s								
SAML				*eSn*	Sn	05 16 10.8	-13
OTAV	**Otavalo**	**14.98**	**352**	*ePn*	**Pn**	**05 13 55.9**	**-2.0**
	6.8nm,0.8s								
CFAA	**Coronel Fontan**	**18.43**	**157**	P	**Pn**	**05 14 43.5**	**+2.4**
CFAA	**Coronel Fontan**	**18.43**	**157**	P	**Pn**	**05 14 43.5**	**+2.4**
	0.1nm,0.3s,baz=330,slow=12,SNR=9.0								
CFAA				LR	LR	05 20 41.8			
	comp=Z,18nm,20.9s,baz=334,slow=33								
ROSC	**El Rosal**	**19.55**	**6**	P	**Pn**	**05 14 54.3**	**-0.8**
ROSC				S	**Sn**	**05 18 40.1**	**+5.8**
ROSC	**El Rosal**	**19.55**	**6**	P	**Pn**	**05 14 54.3**	**-0.8**
	0.4nm,0.3s,baz=108,slow=23,SNR=2.6								
ROSC				S	**Sn**	**05 18 40.1**	**+5.8**
	baz=52,slow=22,SNR=1.9								
ROSC				LR	LR	05 22 11.8			
	comp=Z,102nm,20.2s,baz=188,slow=36								
CPUP	**Villa Florida**	**21.29**	**126**	P	**P**	**05 15 12.9**	**+0.8**
CPUP	**Villa Florida**	**21.29**	**126**	P	**P**	**05 15 12.9**	**+0.8**
	5.4nm,0.8s,baz=283,slow=11,SNR=14								
CPUP				LR	LR	05 25 03.1			
	comp=Z,120nm,18.9s,baz=279,slow=41								
BDFB	**Brasilia**	**27.46**	**96**	P	**P**	**05 16 10.4**	**-1.5**
BDFB	**Brasilia**	**27.46**	**96**	P	**P**	**05 16 10.4**	**-1.5**
	5.6nm,0.8s,baz=266,slow=14,SNR=7.7								
BDFB				LR	LR	05 28 03.1			
	comp=Z,371nm,18.2s,baz=207,slow=38								
TXAR	**Lajitas Array**	**51.06**	**329**	P	**P**	**05 19 27.8**	**-0.1**
TXAR	**Lajitas Array**	**51.06**	**329**	P	**P**	**05 19 27.8**	**-0.1**
	0.9nm,0.6s,baz=150,slow=9.1,SNR=17								
FRNY	**Flat Rock**	**59.31**	**2**	*eP*	**P**	**05 20 26.1**	**-0.9**
	7.4nm,0.8s								
DUG	**Dugway**	**64.23**	**330**	*eP*	**P**	**05 21 01.0**	**+0.6**
	2.4nm,0.6s								
HWUT	**Hardware Ranch**	**64.74**	**332**	*eP*	**P**	**05 21 03.5**	**-0.2**
	3.2nm,0.9s								
PDAR	**Pinedale Array**	**64.77**	**334**	P	**P**	**05 21 03.7**	**-0.3**
PDAR	**Pinedale Array**	**64.77**	**334**	P	**P**	**05 21 03.7**	**-0.3**
	0.4nm,0.5s,baz=223,slow=7.6,SNR=3.0								
NVAR	**Mina Array Bea**	**65.80**	**325**	P	**P**	**05 21 11.5**	**+0.8**
NVAR	**Mina Array Bea**	**65.80**	**325**	P	**P**	**05 21 11.5**	**+0.8**
	0.5nm,0.8s,baz=130,slow=8.4,SNR=3.7								
HLID	**Hailey**	**67.58**	**331**	*eP*	**P**	**05 21 22.0**	**0.0**
	1.3nm,0.6s								
MCMT	**McKenzie Canyo**	**67.85**	**333**	*eP*	**P**	**05 21 23.4**	**-0.4**
	0.5nm,0.6s								
MFID	**Camas Ranch**	**68.14**	**330**	*eP*	**P**	**05 21 25.8**	**+0.4**
	2.2nm,0.7s								
VNA1	**Neumayer--Stat**	**69.04**	**161**	*eP*	P	05 21 44.2	+14
SNAA	**Sanae**	**70.99**	**161**	*eP*	**P**	**05 21 44.8**	**+2.2**
SNAA	**Sanae**	**70.99**	**161**	*eP*	**P**	**05 21 44.5**	**+1.9**
	3.0nm,0.7s								
DBIC	**Dimbokro**	**74.09**	**79**	P	**P**	**05 22 01.3**	**-0.6**
DBIC	**Dimbokro**	**74.09**	**79**	P	**P**	**05 22 01.3**	**-0.6**
	3.4nm,0.9s,baz=260,slow=6.0,SNR=4.2								
TOA0	**Torodi Ar. Sit**	**82.16**	**74**	*eP*	**P**	**05 22 46.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**82.16**	**74**	P	**P**	**05 22 46.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**82.16**	**74**	P	**P**	**05 22 46.3**	**-0.4**
	11nm,0.7s,baz=266,slow=5.3,SNR=86								
YKA	**Yellowknife Ar**	**82.54**	**343**	P	**P**	**05 22 46.9**	**-0.7**
YKA	**Yellowknife Ar**	**82.54**	**343**	P	**P**	**05 22 46.9**	**-0.7**
	1.8nm,0.9s,baz=142,slow=5.8,SNR=19								
TAM	**Tamanrasset**	**88.43**	**66**	P	**P**	**05 23 17.4**	**-0.7**
	1.0nm,0.3s								
ABKAR	**Akbulak array**	**130.52**	**36**	*e*PKPdf	**PKPdf**	**05 29 36.7**	**+0.8**
ULN	**Ulaanbaatar**	**146.81**	**356**	*e*PKPbc	**PKPbc**	**05 30 07.6**	**0.0**
SONM	**Songino Array**	**146.89**	**356**	PKPbc	**PKPbc**	**05 30 07.8**	**0.0**
SONM	**Songino Array**	**146.89**	**356**	PKPbc	**PKPbc**	**05 30 07.8**	**0.0**
	2.3nm,0.5s,baz=338,slow=2.1,SNR=12								

GUC 21 05:27:18.0±0.6, 22°.17S×66°.59W, h322km±15km, ML4.4, 3C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.19**	**258**	*i*P	Pn	05 28 11.4	+2.9
LVC				*i* S	S	05 28 51.6	+2.7
PB09	**Plate Boundary**	**2.49**	**278**	*i*P	Pn	05 28 14.5	+3.6
PB09				*i* S	S	05 28 57.4	+4.2
PB09				AML	AML	05 29 02.1	
	comp=E,274nm,0.3s						
PB01	**Plate Boundary**	**2.92**	**292**	*i*P	Pn	05 28 17.9	+3.3
PB01				*i* S	S	05 29 03.0	+3.0
PB01				AML	AML	05 29 05.3	
	comp=N,227nm,0.4s						
CEN1	**Los Morros**	**3.54**	**249**	*e*P	Pn	05 28 26.4	+5.6
CEN1				*e*S	S	05 29 18.5	+7.4
CEN1				AML	AML	05 29 20.6	
	comp=N,108nm,0.3s						
HMBC	**Humberstone**	**3.60**	**301**	*i*P	Pn	05 28 24.7	+3.3
ANCH	**Antofagasta**	**3.83**	**246**	*e*P	Pn	05 28 28.0	+4.5
ANCH				*e*S	S	05 29 20.2	+4.1

AUST 21 05:34:08.5, 16°.74S×170°.73W, h200km
ISCJB 21 05:35:31.5±1.2, 18°.3S±0°.3×178°.2W±0°.2, h557km, mb3.7/5, Error ellipse: s-maj=52.6km s-min=17.4km az=149.1
IDC 21 05:35:34.5±6.7, 18°.23S×178°.31W, h578km±72km, mb3.2/5, mb1 3.5/5, mb1mx3.1/19, mbtmp3.2/5, Error ellipse: s-maj=82.2km s-min=32.2km az=146.0
ISC 21 05:35:32.3±1.3, 18°.3S±0°.4×178°.2W±0°.3, h557km, n16, σ0.994/17, mb4.1/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMSA	**Cobar Meteorol**	**35.16**	**241**	P	**P**	**05 41 40.0**	**-0.1**
	baz=42,SNR=7.5						
QLP	**Quilpie**	**35.61**	**250**	P	**P**	**05 41 43.9**	**0.0**
	baz=43,SNR=4.6						
COEN	**Coen**	**37.34**	**271**	P	**P**	**05 41 59.7**	**+1.5**
	baz=44,SNR=6.5						
STKA	**Stephens Creek**	**38.64**	**242**	P	**P**	**05 42 08.8**	**+0.2**
	3.8nm,0.7s,baz=89,slow=10,SNR=9.4						
STKA	**Stephens Creek**	**38.64**	**242**	P	**P**	**05 42 09.0**	**+0.3**
	baz=46,SNR=7.9						
BBOO	**Buckleboo**	**43.42**	**241**	P	**P**	**05 42 46.0**	**-0.5**
	baz=50,SNR=11						
WRA	**Warramunga Arr**	**44.79**	**260**	P	**P**	**05 42 57.0**	**-0.3**
	2.8nm,0.4s,baz=97,slow=6.9,SNR=104						
WRA				PcP	**PcP**	**05 44 26.8**	**-0.5**
	0.7nm,0.8s,baz=96,slow=3.7,SNR=3.4						
ASAR	**Alice Springs**	**44.91**	**255**	P	**P**	**05 42 58.0**	**-0.1**
	7.0nm,0.6s,baz=89,slow=8.8,SNR=77						
ASAR				PcP	**PcP**	**05 44 26.8**	**-0.9**
	0.6nm,0.8s,baz=102,slow=4.7,SNR=3.8						
KDU	**Kakadu**	**47.78**	**269**	P	**P**	**05 43 20.2**	**+0.3**
	baz=55,SNR=3.1						
KDU				S	S	05 50 38.7	+63
	baz=55,SNR=3.4						
MTN	**Manton Dam**	**49.02**	**269**	P	**P**	**05 43 26.4**	**-2.7**
	baz=56,SNR=3.7						
FITZ	**Fitzroy Crossi**	**53.19**	**261**	P	**P**	**05 43 59.4**	**+0.1**
	baz=60,SNR=8.5						
PALU	**Palau**	**53.22**	**294**	S	S	05 51 45.5	+56
	baz=59,SNR=4.7						
TXAR	**Lajitas Array**	**86.01**	**58**	P	**P**	**05 47 15.4**	**+0.7**
	0.3nm,0.7s,baz=202,slow=5.4,SNR=4.1						
ILAR	**Eielson Array**	**86.22**	**13**	P	**P**	**05 47 14.2**	**-0.5**
	0.2nm,0.4s,baz=223,slow=4.8,SNR=6.2						
ARCES	**ARCESS Array B**	**126.74**	**350**	PKP	**PKPdf**	**05 53 31.8**	**-0.4**
	1.4nm,0.8s,baz=63,slow=0.5,SNR=6.7						
GERES	**GERESS Array B**	**148.05**	**345**	PKPbc	**PKPbc**	**05 54 16.0**	**+0.3**
	0.2nm,0.6s,baz=343,slow=1.0,SNR=3.7						

ISCJB 21 05:43:41.3±1.4, 7°.90N±0°.05×126°.9E±0°.1, h77km±13km, mb3.9/17, Error ellipse: s-maj=20.5km s-min=7.3km az=168.0
MAN 21 05:43:41, 7°.72N×126°.65E, h44km, mb5.3, ML4.3, MS4.5
IDC 21 05:43:43.5±2.2, 7°.72N×126°.74E, h86km±20km, mb3.7/17, mb1 3.8/17, mb1mx3.8/27, mbtmp3.7/17, Error ellipse: s-maj=26.6km s-min=12.1km az=74.0
AUST 21 05:43:47.4±26.0, 6°.12N×126°.56E, h0km, Error ellipse: s-maj=2.1km s-min=1.5km az=278.0
ISC 21 05:43:42.5±1.9, 7°.88N±0°.06×126°.9E±0°.1, h70km±17km, n40, σ1.924/37, mb4.0/17, 4C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.51**	**238**	P	**Pn**	**05 44 06.7**	**-1.0**
	173nm,0.3s,baz=276,slow=0.9,SNR=12						
DAV				S	**Sn**	**05 44 28.6**	**+1.9**
	217nm,0.3s,baz=97,slow=20,SNR=9.6						
DMPH	**Davao City--Mi**	**1.57**	**240**	*e*P	**Pn**	**05 44 09.1**	**+0.6**
DMPH				*e*S	Sn	05 44 34.2	+6.3
CGP	**Cagayan de Oro**	**2.23**	**285**	*i*P	**Pn**	**05 44 17.4**	**+0.1**
CGP				*i* S	Sn	05 44 52.9	+9.1
CTBH	**Cotabato--PC H**	**2.68**	**256**	*i*P	**Pn**	**05 44 22.4**	**-1.0**
MSLP	**Maasin**	**2.99**	**319**	*e*P	Pn	05 44 35.5	+7.9
MSLP				*e*S	**Sn**	**05 45 01.9**	**-0.6**
PAGZ	**Pagadian**	**3.46**	**270**	*e*P	**Pn**	**05 44 35.4**	**+1.5**
PAGZ				*e*S	Sn	05 45 01.7	-12
TBP	**Tagbilaran**	**3.48**	**301**	*e*P	**Pn**	**05 44 33.5**	**-0.7**
LLP	**Lapu-Lapu**	**3.75**	**310**	*e*P	**Pn**	**05 44 37.1**	**-1.0**
LLP				*e*S	Sn	05 45 31.6	+10
SNPH	**Sibulan**	**3.88**	**292**	*i*P	Pn	05 44 27.5	-12
SNPH				*i* S	Sn	05 45 14.5	-10
CNP	**Catarman**	**5.09**	**335**	*e*P	Pn	05 45 05.6	+9.4
RCP	**Roxas**	**5.47**	**312**	*e*P	**Pn**	**05 45 02.4**	**+0.9**
KALP	**Kalibo**	**5.85**	**311**	*e*P	**Pn**	**05 45 06.8**	**+0.2**
LUWI	**Luwuk**	**9.76**	**205**	S	Sn	05 47 01.7	-47
	baz=8.1,SNR=4.1						
KKM	**Kota Kinabalu**	**10.73**	**261**	P	Pn	05 46 18.6	+5.0
	baz=10,SNR=5.8						
KDU	**Kakadu**	**21.18**	**165**	P	**P**	**05 48 21.5**	**-0.8**
	baz=20,SNR=5.3						
KNRA	**Kununurra**	**23.48**	**175**	P	**P**	**05 48 46.2**	**+0.1**
	baz=22,SNR=4.6						
CISI	**Cisompet, Garu**	**24.41**	**232**	P	**P**	**05 48 55.9**	**+1.2**
	baz=23,SNR=3.2						
FITZ	**Fitzroy Crossi**	**25.85**	**183**	P	**P**	**05 49 05.7**	**-1.9**
	2.6nm,0.5s,baz=140,slow=23,SNR=10						
FITZ	**Fitzroy Crossi**	**25.85**	**183**	P	**P**	**05 49 06.0**	**-1.6**
	baz=24,SNR=16						
COEN	**Coen**	**27.07**	**143**	P	**P**	**05 49 19.6**	**+0.9**
	baz=26,SNR=4.0						
PPI	**Padang Panjang**	**27.66**	**254**	S	S	05 54 23.2	+22
	baz=27,SNR=5.3						
WRA	**Warramunga Arr**	**28.61**	**165**	P	**P**	**05 49 29.4**	**-2.9**
	0.7nm,0.6s,baz=346,slow=9.9,SNR=9.2						
CMAR	**Chiang Mai Arr**	**29.11**	**294**	P	**P**	**05 49 37.2**	**+0.3**
	0.8nm,0.4s,baz=117,slow=9.2,SNR=3.8						
KSRS	**Korea Array**	**29.45**	**2**	P	**P**	**05 49 39.1**	**-0.6**
	0.6nm,0.5s,baz=164,slow=9.6,SNR=2.9						
ASAR	**Alice Springs**	**32.10**	**168**	P	**P**	**05 50 02.5**	**-0.7**
	0.7nm,0.5s,baz=4.9,slow=9.7,SNR=7.4						
USRK	**Ussuriysk Arra**	**36.45**	**6**	P	**P**	**05 50 41.9**	**+1.3**
	2.7nm,0.7s,baz=180,slow=1.9,SNR=6.1						
EIDS	**Eidsvold**	**40.59**	**145**	S	**S**	**05 57 22.3**	**+2.2**
	baz=40,SNR=18						
BBOO	**Buckleboo**	**41.40**	**168**	P	**P**	**05 51 22.4**	**+0.4**
	baz=40,SNR=5.2						
STKA	**Stephens Creek**	**41.96**	**161**	P	**P**	**05 51 24.7**	**-2.0**
	1.2nm,0.6s,baz=338,slow=10,SNR=4.6						
SONM	**Songino Array**	**43.45**	**340**	P	**P**	**05 51 39.4**	**+0.6**
	0.4nm,0.4s,baz=134,slow=10,SNR=3.0						
PETK	**Petropavlovsk-**	**51.57**	**23**	P	**P**	**05 52 42.8**	**+1.4**
	2.8nm,0.7s,baz=196,slow=3.7,SNR=5.0						
MKAR	**Makanchi Array**	**54.28**	**324**	P	**P**	**05 53 01.1**	**-0.5**
	1.6nm,0.5s,baz=118,slow=8.3,SNR=9.7						
ZALV	**Zalesovo Beam**	**57.00**	**332**	P	**P**	**05 53 19.4**	**-1.4**
	2.0nm,0.6s,baz=123,slow=7.3,SNR=6.3						
KURBB	**Kurchatov Arra**	**58.37**	**326**	P	**P**	**05 53 29.6**	**-0.9**
	2.8nm,0.8s,baz=127,slow=6.1,SNR=14						
KURBB				PcP	**PcP**	**05 54 20.9**	**+0.1**
	1.2nm,0.6s,baz=127,slow=6.1,SNR=4.4						
BVAR	**Borovoye Array**	**63.96**	**326**	P	**P**	**05 54 07.6**	**-0.7**
	1.3nm,0.6s,baz=131,slow=6.8,SNR=5.6						
ILAR	**Eielson Array**	**81.32**	**26**	P	**P**	**05 55 52.7**	**+1.6**
	0.4nm,0.6s,baz=245,slow=5.0,SNR=8.5						
ARCES	**ARCESS Array B**	**86.63**	**340**	P	**P**	**05 56 17.9**	**-0.1**
	1.9nm,0.8s,baz=76,slow=5.8,SNR=7.0						
FINES	**FINESS Array B**	**88.26**	**332**	P	**P**	**05 56 24.8**	**-1.2**
	0.7nm,0.4s,baz=116,slow=4.4,SNR=5.3						
YKA	**Yellowknife Ar**	**95.68**	**24**	P	**P**	**05 56 60.0**	**-0.3**
	0.5nm,0.8s,baz=298,slow=4.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**121.68**	**291**	PKP	**PKPdf**	**06 02 28.3**	**-1.1**
	0.2nm,0.4s,baz=72,slow=1.3,SNR=4.3						

NEIC 21 05:53:53.7±0.1, 7°.89N×126°.90E, h14km, mb5.5/106, MS5.3/142, MW5.7, MW5.6, Error ellipse: s-maj=4.9km s-min=3.7km az=77.0, Moment Tensor Solution. s40 Moment tensor: Scale 10^17 Nm; Mrr2.26; Mθθ0.76; Mϕϕ-3.03; Mrθ0.83; Mθϕ1.67; Mϕr1.75; Best double couple: M☉3.70000×10^17 NP1:ϕs8.00000°, δ65.00000°, λ126.00000°. NP2:ϕs128.00000°, δ43.00000°, λ39.00000°. Principal axes: T 3.4600, Plg54.0000°, Azm323.0000°; N 0.5000, Plg31.0000°, Azm170.0000°; P -3.9700, Plg12.0000°, Azm72.0000°;
NEIC Felt [IV PIVS] at Hinatuan, [III PIVS] at Mati and [II PIVS] at Butuan, Cagayan de Oro, Davao, Manay and Nabunturan. Also felt at Bayugan and Tagum.
MAN 21 05:53:53, 7°.74N×127°.33E, h25km, mb6.2, ML5.2, MS5.8
MAN INTENSITY IV - HINATUAN SURIGAO DEL SUR; INTENSITY III - MATI; INTENSITY II - DAVAO.
ISCJB 21 05:53:54.8±0.1, 7°.93N±0°.01×127°.05E±0°.02, h33km, mb5.4/207, MS5.4/233, Error ellipse: s-maj=3.1km s-min=2.1km az=0.5
MOS 21 05:53:55.0±1.0, 7°.84N×126°.72E, h33km, mb5.7/101, MS5.3/69, Error ellipse: s-maj=9.0km s-min=4.1km az=111.6
DJA 21 05:53:57.5±0.8, 8°N±5°×12°7E±°, h46km±6km, M5.5/53, mb5.5/53, mB5.9/45, MLv6.0/4, Mw(mB)5.5/45, Mwp5.7/3
IDC 21 05:53:57.0±1.1, 7°.86N×126°.80E, h35km±8km, mb5.1/45, mb1 5.2/45, mb1mx5.2/46, mbtmp5.1/45, MS5.2/35, Ms1 5.3/35, ms1mx5.2/43, Error ellipse: s-maj=12.1km s-min=7.8km az=82.0
AUST 21 05:53:58.4±0.2, 7°.82N×127°.23E, h52km, Error ellipse: s-maj=0.7km s-min=0.6km az=44.0
GCMT 21 05:53:59.4±0.1, 7°.79N×127°.15E, h19km, MW5.7, Moment Tensor Solution. s102, c191; s55, c58; Moment tensor: Scale 10^17 Nm; Mrr3.02±.05; Mθθ0.61±.03; Mϕϕ-3.63±.04; Mrθ1.57±.10; Mθϕ-0.57±.03; Mϕr3.44±.12; Best double couple: M☉5.10000×10^17 NP1:ϕs171.00000°, δ23.00000°, λ61.00000°. NP2:ϕs21.00000°, δ70.00000°, λ102.00000°. Principal axes: T 4.8400, Plg63.0000°, Azm310.0000°; N 0.4700, Plg11.0000°, Azm197.0000°; P -5.3200, Plg24.0000°, Azm102.0000°; Data Used: II IU CN IC G. Surface waves: sta=104, comp=218, per= 50.
BJI 21 05:53:59.1, 8°.04N×126°.69E, h60km, mB5.7/52, mb5.3/56, Ms5.5/74, MS7 5.4/66
TEH 21 05:54:00.0, 7°.83N×127°.02E, h64km, ML5.9
NEIC 21 05:54:20.3±0.0, 8°.42N×127°.24E, h10km, Moment Tensor Solution. s128 Moment tensor: Scale 10^17 Nm; Mrr2.07; Mθθ0.15; Mϕϕ-2.22; Mrθ-0.53; Mθϕ-0.62; Mϕr2.98; Best double couple: M☉3.80000×10^17 NP1:ϕs355.00000°, δ73.00000°, λ77.00000°. NP2:ϕs213.00000°, δ22.00000°, λ126.00000°. Principal axes: T 3.7500, Plg60.0000°, Azm245.0000°; N 0.0200, Plg12.0000°, Azm358.0000°; P -3.7700, Plg26.0000°, Azm95.0000°;
ISC 21 05:53:58.7±0.3, 7°.92N±0°.02×126°.98E±0°.03, h50km±1km, h50km:pP-P, n1108, σ1.964/1227, mb5.5/216, MS5.4/231, 164C-113D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.21**	**217**	*e*P	**Pn**	**05 54 16.6**	**-2.6**
DAV	**Davao City (W)**	**1.63**	**239**	*e*Pn	**Pn**	**05 54 24.9**	**0.0**
DAV				*e*Sn	**Sn**	**05 54 43.5**	**-1.3**
DAV	**Davao City (W)**	**1.63**	**239**	P	**Pn**	**05 54 25.3**	**+0.4**
	SNR=399						
DAV	**Davao City (W)**	**1.63**	**239**	*e*P	**Pn**	**05 54 26.4**	**+1.4**
DAV	**Davao City (W)**	**1.63**	**239**	P	**Pn**	**05 54 25.2**	**+0.2**
DAV	**Davao City (W)**	**1.63**	**239**	Pn	**Pn**	**05 54 25.0**	**0.0**
	928nm,0.3s,baz=28,slow=2.5,SNR=166						
DAV				Sn	**Sn**	**05 54 47.9**	**+3.1**
	2μm,0.3s,baz=126,slow=17,SNR=7.8						
DMPH	**Davao City--Mi**	**1.68**	**240**	*e*P	**Pn**	**05 54 26.8**	**+1.1**
DMPH				*e*S	Sn	05 54 51.9	+5.8
KCP	**Kidapawan**	**2.08**	**244**	*i*P	Pn	05 54 35.6	+4.4
KCP				*i* S	Sn	05 55 03.6	+7.5
CGP	**Cagayan de Oro**	**2.33**	**283**	*i*P	**Pn**	**05 54 36.2**	**+2.3**
CGP				*i* S	Sn	05 55 08.0	+6.0
CTBH	**Cotabato--PC H**	**2.80**	**256**	*i*P	**Pn**	**05 54 41.2**	**+0.2**
MSLP	**Maasin**	**3.04**	**317**	*e*P	**Pn**	**05 54 45.6**	**+1.3**
TBP	**Tagbilaran**	**3.55**	**300**	*e*P	Pn	05 54 53.5	+2.1
PAGZ	**Pagadian**	**3.57**	**269**	*e*P	**Pn**	**05 54 53.0**	**+1.4**
DCPH	**Dipolog City**	**3.65**	**281**	*e*P	Pn	05 54 55.3	+2.6
LLP	**Lapu-Lapu**	**3.81**	**309**	*e*P	**Pn**	**05 54 55.7**	**+0.8**
LLP				*e*S	Sn	05 55 46.3	+7.7
OCLP	**Ormoc**	**3.89**	**323**	*e*P	Pn	05 54 58.1	+2.1
SNPH	**Sibulan**	**3.96**	**291**	*i*P	Pn	05 54 44.8	-12
SNPH				*i* S	Sn	05 55 35.0	-7.4
ZMPH	**Zamboanga City**	**4.97**	**259**	*i*P	**Pn**	**05 55 11.3**	**+0.5**
CNP	**Catarman**	**5.10**	**334**	*e*P	Pn	05 55 17.6	+5.0
GUIM	**Jordan**	**5.10**	**302**	*e*P	**Pn**	**05 55 13.9**	**+1.3**
RCP	**Roxas**	**5.52**	**311**	*e*P	**Pn**	**05 55 19.6**	**+1.2**
GAMI	**Galela, Maluku**	**6.10**	**172**	P	**Pn**	**05 55 24.5**	**-1.8**
	1μm,1.1s,17μm271μm6.0nm						
PVCP	**Virac**	**6.29**	**334**	*e*P	Pn	05 55 36.8	+8.0
CUYO	**Cuyo Island**	**6.56**	**297**	*e*P	Pn	05 55 34.4	+1.7
OTRP	**Odiongan**	**6.58**	**313**	*e*P	Pn	05 55 34.9	+1.9
MNI	**Manado**	**6.78**	**198**	P	**Pn**	**05 55 37.6**	**+1.9**
	899nm,0.8s,11μm4.1nm						
TNTI	**Ternate**	**7.11**	**177**	P	**Pn**	**05 55 38.2**	**-2.0**
	1μm,1.0s,17μm31μm5.9nm						
GQP	**Guinayangan**	**7.43**	**324**	*e*P	Pn	05 55 52.1	+7.5
PALU	**Palau**	**7.45**	**94**	P	Pn	05 55 40.0	-4.8
	baz=7.2,SNR=4.4						
PALU				S	Sn	05 56 55.4	-13
	baz=7.2,SNR=6.6						
KMSI	**Cibinong**	**7.89**	**202**	P	Pn	05 55 53.3	+2.4
	2μm,1.1s,21μm						
LQP	**Lukban**	**8.15**	**320**	*i*P	Pn	05 56 03.8	+9.1
LBMI	**Labuha**	**8.52**	**176**	P	**Pn**	**05 55 57.7**	**-1.8**
	650nm,1.2s,11μm						
TGY	**Tagaytay City**	**8.54**	**317**	Pn	Pn	05 56 01.9	+2.1
TGY	**Tagaytay City**	**8.54**	**317**	Pn	Pn	05 56 01.9	+2.1
	baz=63,slow=2.7,SNR=7.8						
TGY				LR	LR	05 59 42.0	
	comp=Z,155nm,18.4s,baz=142,slow=41						
MYLDM	**Lahad Datu**	**8.86**	**253**	P	Pn	05 56 08.4	+4.3
MRSI	**Marisa**	**8.94**	**214**	P	**Pn**	**05 56 06.9**	**+1.6**
	584nm,1.1s,5μm						
MRSI				S	**Sn**	**05 57 44.6**	**-0.1**
	584nm,1.1s,5μm						
TSM	**Tawau**	**9.75**	**249**	P	Pn	05 56 18.7	+2.3
LUWI	**Luwuk**	**9.84**	**205**	P	Pn	05 56 20.5	+2.8
	801nm,1.3s,12μm						
LUWI	**Luwuk**	**9.84**	**205**	P	Pn	05 56 24.7	+7.1
	baz=9.9,SNR=10						
SDKM	**Sandakan**	**9.98**	**257**	P	Pn	05 56 22.6	+3.0
KDM	**Kudat**	**10.11**	**265**	P	Pn	05 56 26.8	+5.5
BCPH	**Baguio City Da**	**10.48**	**324**	*i*P	Pn	05 56 32.1	+5.6
KKM	**Kota Kinabalu**	**10.85**	**261**	*e*Pn	Pn	05 56 34.1	+2.6
KKM				*e*Sn	**Sn**	**05 58 34.7**	**+3.1**
KKM	**Kota Kinabalu**	**10.85**	**261**	P	Pn	05 56 35.9	+4.3
KKM	**Kota Kinabalu**	**10.85**	**261**	P	Pn	05 56 35.4	+3.9
	baz=11,SNR=74						
NLAI	**Namlea**	**11.09**	**179**	P	**Pn**	**05 56 35.5**	**+0.8**
	246nm,0.9s,2μm						
AAI	**Ambon**	**11.60**	**174**	P	**Pn**	**05 56 42.1**	**+0.5**
	148nm,1.2s,4μm						
AAI	**Ambon**	**11.60**	**174**	P	**Pn**	**05 56 43.8**	**+2.2**
	baz=12,SNR=3.4						
SKSI	**Soroako,

97nm,1.1s
KSM Kuching 17.80 250 *e*P **P** **05 58 03.5 +0.3**
170nm,1.1s
KSM *e*S **S** **06 01 24.3 -1.2**
KSM Kuching 17.80 250 P **P** **05 58 04.4 +1.1**
KSM Kuching 17.80 250 P **P** **05 58 04.2 +0.9**
baz=18,SNR=33
KSM S **sS** **06 01 45.2 +1.4**
baz=18,SNR=3.5
GUMO Guam 18.45 71 P **P** **05 58 09.2 -1.1**
GUMO S **S** **06 01 41.6 +3.1**
GUMO Guam 18.45 71 P **P** **05 58 09.2 -1.1**
4.3nm,0.3s,baz=58,slow=8.5,SNR=2.4
GUMO S **S** **06 01 41.6 +3.1**
5.4nm,0.3s,baz=239,slow=20,SNR=1.8
GUMO LR LR 06 05 47.5
comp=Z,6μm,18.1s,baz=246,slow=38
PBKI Pangkalan Bun 18.57 236 P **Pn** **05 58 13.8 +1.5**
362nm,1.2s,7μm
QZH Quanzhou 18.73 336⇑*i*P **P** **05 58 12.0 -1.3**
QZH S **Sn** **06 01 39.3 -3.6**
QZH pmax pmax
comp=Z,7μm,9.1s
QZH LR LR
comp=N,23μm,19.2s
QZH LR LR
comp=E,4μm,9.9s
QZH LR LR
comp=Z,18μm,18.0s
JOW Kunigami 18.85 4 *e*P **Pn** **05 58 17.5 +1.9**
comp=Z,1μm,0.8s
JOW *e*S **S** **06 01 49.8 +3.3**
HKC Hong Kong Obse 18.88 321⇑*i*P **Pn** **05 58 15.0 -1.0**
HKC S S 06 01 58.0 +11
WBSI Waikabubak, Su 19.02 204 P **Pn** **05 58 16.6 -1.1**
comp=Z,163nm,1.3s,comp=Z,2μm
KMMI Kalianget 19.74 221 P **Pn** **05 58 26.0 -0.3**
comp=Z,404nm,1.3s,comp=Z,8μm
KHKI Kahang-Kahang 19.75 215 P **P** **05 58 23.9 -0.7**
comp=Z,228nm,1.1s,comp=Z,3μm
SRBI Singaraja 19.76 217 P **Pn** **05 58 25.1 -1.4**
comp=Z,278nm,0.9s,comp=Z,3μm
QIZ Qiongzhong 19.97 305 P **P** **05 58 26.3 -0.7**
QIZ pP **pP** **05 58 36.3 -2.2**
QIZ sP **sP** **05 58 42.4 -2.4**
QIZ pmax pmax
comp=Z,3μm,10.5s
QIZ LR LR
comp=N,10μm,13.9s
QIZ LR LR
comp=E,5μm,16.4s
QIZ LR LR
comp=Z,15μm,15.6s
QIZ Qiongzhong 19.97 305 *e*P **P** **05 58 26.0 -1.0**
comp=Z,116nm,0.8s
QIZ *e*S **Sn** **06 02 13.5 +0.5**
GZH Guangzhou 19.97 321 P **Pn** **05 58 27.9 -1.1**
GZH LR LR
comp=N,9μm,21.7s
GZH LR LR
comp=E,17μm,21.5s
GZH LR LR
comp=Z,19μm,16.8s
IGBI Denpasar 20.39 216 P **P** **05 58 30.5 -1.0**
comp=Z,101nm,1.0s
BLJI Banyuglugur 20.50 221 P Pn 05 58 34.8 -0.5
comp=Z,246nm,0.9s,comp=Z,4μm
GMJI Gumukmas 21.00 220 P Pn 05 58 40.6 -0.6
comp=Z,164nm,1.8s,comp=Z,3μm
MTN Manton Dam 21.04 169 P **P** **05 58 36.4 -2.1**
baz=21,SNR=38
KDU Kakadu 21.19 165 P **P** **05 58 37.8 -2.3**
baz=21,SNR=32
KDU S Sn 06 02 40.3 -2.0
baz=21,SNR=3.8
KRKI Karangkates 21.56 223 P **P** **05 58 47.0 +2.9**
comp=Z,399nm,0.9s,comp=Z,26μm
SJI Sawahan 21.73 225 P **P** **05 58 46.1 +0.1**
comp=Z,173nm,1.4s,comp=Z,5μm
PWJI Pagerwojo 21.90 224 P **P** **05 58 48.9 +1.1**
comp=Z,146nm,1.0s,comp=Z,2μm
TPI Tanjungpandan 22.01 242 P **P** **05 58 47.7 -1.3**
comp=Z,74nm,1.2s,comp=Z,2μm
SMRI Semarang 22.21 228 P **P** **05 58 52.9 +1.8**
UBPT Khong Chiam 22.29 291 P **P** **05 58 51.8 -0.2**
comp=Z,266nm,0.8s
WOJI Wonogiri, Jawa 22.39 226 P **P** **05 58 53.4 +0.3**
comp=Z,220nm,1.8s,comp=Z,4μm
PCJI Pacitan 22.46 225 P **P** **05 58 53.6 -0.2**
comp=Z,183nm,0.9s,comp=Z,4μm
UGM Wanagama 22.73 227 *e*P **P** **05 58 57.5 +0.7**
comp=Z,484nm,1.3s
UGM Wanagama 22.73 227 P P 05 59 01.8 +5.1
baz=23,SNR=5.4
BJII Banjamegara 22.94 229 P **P** **05 58 59.7 +0.8**
comp=Z,304nm,2.2s,comp=Z,6μm
PPBI Pangkal Pinang 23.08 245 P **P** **05 59 00.0 -0.3**
comp=Z,59nm,0.9s,comp=Z,3μm
KNRA Kununurra 23.51 176 P **P** **05 59 02.5 -1.9**
baz=24,SNR=36
KNRA S **S** **06 03 12.3 -2.5**
baz=24,SNR=6.8
SSE Sheshan 23.68 348 P **P** **05 59 07.1 +1.2**
SSE pP pP 05 59 22.0 +3.7
SSE pmax pmax
comp=Z,51nm,1.2s
SSE pmax pmax
comp=Z,2μm,7.7s
SSE LR LR
comp=N,4μm,16.6s
SSE LR LR
comp=E,3μm,16.5s
SSE LR LR
comp=Z,6μm,18.8s
KTGM Kuala Trenggan 23.83 265 P **P** **05 59 08.4 +1.0**
MYKOM Kota Tinggi 23.83 256 P **P** **05 59 07.9 +0.5**
LEM Lembang 24.24 233 P **P** **05 59 12.8 +1.5**
comp=Z,278nm,1.3s,comp=Z,4μm
LEM Lembang 24.24 233 P **P** **05 59 13.9 +2.6**
baz=24,SNR=4.5
KGM Kluang 24.28 257 P **P** **05 59 12.5 +0.9**
CISI Cisompet, Garu 24.53 232 P **P** **05 59 14.3 +0.5**
comp=Z,223nm,1.4s,comp=Z,5μm
CISI Cisompet, Garu 24.53 232 P **P** **05 59 15.1 +1.2**
baz=25,SNR=4.8
CHBT CHBT 24.71 283 P **P** **05 59 15.8 +0.3**
NJ2 Nanjing 25.17 344 *e*P **P** **05 59 21.1 +1.6**
NJ2 pP **pP** **05 59 34.4 +2.2**
NJ2 sP **sP** **05 59 40.1 +1.9**
NJ2 ScP **ScP** **06 06 27.4 -0.2**
NJ2 pmax pmax
comp=Z,30nm,0.8s
NJ2 pmax pmax
comp=Z,2μm,8.0s
NJ2 LR LR
comp=N,5μm,17.6s
NJ2 LR LR
comp=E,5μm,13.8s
NJ2 LR LR
comp=Z,7μm,20.6s
JNU Nakatsue 25.34 8 *e*P **P** **05 59 21.1 +0.1**
comp=Z,260nm,1.0s
JNU S **S** **06 03 48.9 +5.0**
JNU Nakatsue 25.34 8 P **P** **05 59 20.6 -0.4**
comp=Z,156nm,1.0s,baz=164,slow=8.5,SNR=27
JNU S **S** **06 03 48.9 +5.0**
comp=Z,6.9nm,0.9s,baz=222,slow=21,SNR=2.8
JNU LR LR 06 09 28.4
comp=Z,5μm,18.4s,baz=59,slow=37
WHN Wuhan 25.43 334 P **P** **05 59 20.8 -1.0**
WHN S **S** **06 03 46.0 +0.8**
WHN pmax pmax
comp=Z,2μm,10.2s
WHN LR LR
comp=N,9μm,14.0s
WHN LR LR
comp=E,13μm,14.6s
WHN LR LR
comp=Z,30μm,19.4s
FRIM Kepong 25.66 261 P **P** **05 59 25.1 +1.0**
CGJI Cibinong 25.68 236 P **P** **05 59 26.4 +2.2**
comp=Z,143nm,1.4s,comp=Z,3μm
FITZ Fitzroy Crossi 25.89 183 *e*P **P** **05 59 25.0 -1.1**
comp=Z,86nm,0.9s
FITZ *e*S S 06 03 41.9 -11
FITZ S S 06 03 56.8 +4.0
FITZ Fitzroy Crossi 25.89 183 P **P** **05 59 24.7 -1.3**
comp=Z,29nm,0.5s,baz=9.8,slow=9.6,SNR=110
FITZ S **S** **06 03 56.8 +4.0**
comp=Z,4.8nm,0.9s,baz=131,slow=21,SNR=3.9
FITZ Fitzroy Crossi 25.89 183 P **P** **05 59 24.6 -1.5**
baz=26,SNR=148
FITZ S **S** **06 03 59.1 +6.4**
baz=26,SNR=4.7
IPM Ipoh 26.03 264 *e*P **P** **05 59 26.6 -0.9**
comp=Z,112nm,1.0s
IPM Ipoh 26.03 264 P **P** **05 59 28.4 +1.0**
KASI Kota Agung 26.11 240 P **P** **05 59 31.3 +3.2**
comp=Z,101nm,1.1s,comp=Z,2μm
LWLI Liwa 26.23 241 P **P** **05 59 31.4 +2.0**
comp=Z,368nm,0.9s,comp=Z,6μm
KULM Kulim 26.29 266 *e*P **P** **05 59 28.4 -1.4**
comp=Z,275nm,1.5s
KULM *e*S S 06 04 06.8 +7.6
KULM LR LR
comp=Z,7μm,20.0s
KULM Kulim 26.29 266 P **P** **05 59 32.2 +2.4**
PMG Port Moresby 26.46 130 P **P** **05 59 29.3 -2.0**
comp=Z,3.5nm,0.8s
PMG S **S** **06 04 02.4 +0.5**
PMG Port Moresby 26.46 130 P **P** **05 59 30.2 -1.1**
comp=Z,52nm,1.6s,comp=Z,1μm
PMG Port Moresby 26.46 130 P **P** **05 59 29.3 -2.0**
comp=Z,26nm,0.8s,baz=310,slow=6.4,SNR=8.1
PMG S **S** **06 04 02.4 +0.5**
comp=Z,3.0nm,0.4s,baz=295,slow=16,SNR=1.9
PMG LR LR 06 10 57.5
comp=Z,4μm,20.1s,baz=134,slow=38
GYA Guiyang 26.69 316 P **P** **05 59 34.3 +0.8**
GYA pP **pP** **05 59 48.8 +2.5**
GYA sP sP 05 59 56.1 +3.9
GYA PcP **PcP** **06 02 55.8 -0.4**
GYA S **S** **06 04 05.4 -0.3**
GYA sS **sS** **06 04 28.9 +1.5**
GYA ScP **ScP** **06 06 30.0 -2.4**
GYA pmax pmax
comp=Z,70nm,0.7s
GYA pmax pmax
comp=Z,1μm,9.9s
GYA LR LR
comp=N,9μm,18.6s
GYA LR LR
comp=E,9μm,18.0s
GYA LR LR
comp=Z,13μm,19.8s
PBKT Sadao Pong 26.81 291 P **P** **05 59 34.5 +0.1**
comp=Z,260nm,1.0s,comp=Z,3μm
KSI Kapahiang 26.91 246 P **P** **05 59 35.8 +0.3**
comp=Z,200nm,1.1s
COEN Coen 27.03 143 *e*P **P** **05 59 34.7 -1.8**
comp=Z,1000nm,1.2s
COEN *e*S S 06 04 02.6 -8.3
COEN Coen 27.03 143 P **P** **05 59 35.2 -1.3**
baz=27,SNR=18
COEN S **S** **06 04 16.5 +5.6**
baz=27,SNR=4.6
ENH Enshi 27.63 326 *e*P **P** **05 59 39.8 -1.9**
comp=Z,19nm,0.7s
ENH LR LR
comp=Z,9μm,19.0s
PPI Padang Panjang 27.78 254 P **P** **05 59 43.9 +0.7**
comp=Z,119nm,1.0s
SRDT SRDT 28.05 286 P **P** **05 59 46.6 +1.0**
comp=Z,58nm,2.1s,comp=Z,4μm
PSI Prapat 28.39 261 P **P** **05 59 49.5 +0.7**
baz=29,SNR=6.4
WRAB Tennant Creek 28.61 165 *e*P **P** **05 59 48.6 -1.9**
WRAB *e*S S 06 04 42.8 +7.1
WRAB pmax pmax
comp=Z,62nm,1.0s
WRAB MLR MLR
comp=Z,5μm,19.0s
WRAB Tennant Creek 28.61 165 *e*P **P** **05 59 48.6 -1.9**
comp=Z,62nm,1.0s
WRAB *e*S S 06 04 42.8 +7.1
WRAB LR LR
comp=Z,5μm,19.0s
WRAB Tennant Creek 28.61 165 P **P** **05 59 48.0 -2.5**
comp=Z,156nm,1.2s,SNR=7.2
WRA Warramunga Arr 28.62 165 P **P** **05 59 48.8 -1.8**
WRA S **S** **06 04 30.6 -5.2**
WRA *e* 06 32 06.2
WRA Warramunga Arr 28.62 165 P **P** **05 59 48.8 -1.8**
comp=Z,3.9nm,0.7s,baz=333,slow=11,SNR=26
WRA S **S** **06 04 30.6 -5.2**
comp=Z,17nm,1.2s,baz=345,slow=16,SNR=4.8
WRA P3KPbc 06 32 06.2
comp=Z,1.3nm,0.8s,baz=164,slow=4.1,SNR=6.0
KMI Kunming 28.77 309 P **P** **05 59 51.8 -0.4**
KMI pP **pP** **06 00 07.3 +2.2**
KMI sP sP 06 00 14.0 +3.0
KMI PP **PnPn** **06 00 47.8 +2.9**
KMI S **S** **06 04 37.5 -1.1**
KMI sS **sS** **06 05 01.9 +1.6**
KMI pmax pmax
comp=Z,37nm,0.7s
KMI pmax pmax
comp=Z,940nm,6.2s
KMI LR LR
comp=N,4μm,15.3s
KMI LR LR
comp=E,9μm,16.2s
KMI LR LR
comp=Z,12μm,14.1s
CMAR Chiang Mai Arr 29.19 294 P **P** **05 59 55.6 -0.2**
CMAR PcP **PcP** **06 03 03.7 +1.4**
CMAR ScP **ScP** **06 06 41.0 +0.9**
CMAR Chiang Mai Arr 29.19 294 P **P** **05 59 55.6 -0.2**
comp=Z,260nm,0.9s,baz=119,slow=7.0,SNR=83
CMAR PcP **PcP** **06 03 03.7 +1.4**
comp=Z,12nm,0.8s,baz=112,slow=1.1,SNR=10
CMAR ScP **ScP** **06 06 41.0 +0.9**
comp=Z,5.5nm,1.0s,baz=77,slow=1.5,SNR=6.9
CMAR LR LR 06 12 36.7
comp=Z,5μm,18.1s,baz=300,slow=38
CMMT Chiang Mai 29.30 295 P **P** **05 59 57.1 +0.4**
comp=Z,62nm,1.1s,comp=Z,1μm
CHTO Chiang Mai 29.30 295 *e*P **P** **05 59 55.9 -0.8**
CHTO *e* 06 03 03.5
CHTO pmax pmax
comp=Z,51nm,1.0s
CHTO MLR MLR
comp=Z,3μm,20.0s
CHTO Chiang Mai 29.30 295 *e*P **P** **05 59 55.9 -0.8**
comp=Z,51nm,1.0s
CHTO *e*PcP **PcP** **06 03 03.5 +0.9**
CHTO *e*S S 06 05 03.0 +16
CHTO LR LR
comp=Z,3μm,20.0s
CHTO Chiang Mai 29.30 295 P **P** **05 59 56.6 -0.1**
SNR=19
CHTO Chiang Mai 29.30 295 P **P** **05 59 56.2 -0.5**
comp=Z,70nm,1.1s,comp=Z,1μm
KCSI Kotacane, Aceh 29.38 263 P **P** **05 59 57.0 -0.5**
KSAR Wonju Array Be 29.40 1 P **P** **05 59 57.8 +0.5**
KSAR PcP **PcP** **06 03 03.5 +1.1**
KSRS Korea Array 29.41 2 P **P** **05 59 57.8 +0.4**
comp=Z,48nm,0.9s,baz=174,slow=9.9,SNR=75
KSRS PcP **PcP** **06 03 03.5 +1.1**
comp=Z,6.3nm,0.8s,baz=187,slow=3.8,SNR=5.3
KSRS LR LR 06 12 43.1
comp=Z,4μm,18.5s,baz=181,slow=38
INCN Inchon 29.43 359 PFAKE
INCN LR LR 06 00 10.0 +12
comp=Z,4μm,21.0s
MBWA Marble Bar 29.76 194 *e*P **P** **05 59 59.6 -1.1**
comp=Z,48nm,1.0s
MBWA LR LR
comp=Z,2μm,21.0s
GSI Gunungsitoli 30.02 259 P **P** **06 00 02.5 -0.6**
baz=30,SNR=16
GSI S S 06 05 08.1 +10
baz=30,SNR=25
MAJO Matsushiro 30.27 18 *e*P **P** **06 00 04.6 -0.5**
MAJO *e*S **S** **06 04 59.3 -2.3**
MAJO pmax pmax
comp=Z,37nm,0.9s
MAJO MLR MLR
comp=Z,6μm,20.0s
MAJO Matsushiro 30.27 18 *e*P **P** **06 00 04.6 -0.5**
comp=Z,37nm,0.9s
MAJO *e*S **S** **06 04 59.2 -2.3**
MAJO LR LR
comp=Z,6μm,20.0s
MAT Matsushiro 30.27 18 P **P** **06 00 04.2 -0.9**
MAT S **S** **06 05 04.4 +2.9**
MJAR Matsushiro Arr 30.27 18 P **P** **06 00 04.9 -0.2**
MJAR PcP **PcP** **06 03 06.5 +1.7**
MJAR ScP **ScP** **06 06 44.4 +1.2**
MJAR Matsushiro Arr 30.27 18 P **P** **06 00 04.9 -0.2**
comp=Z,28nm,0.8s,baz=199,slow=10,SNR=24
MJAR PcP **PcP** **06 03 06.5 +1.7**
comp=Z,8.3nm,0.9s,baz=186,slow=3.0,SNR=5.8
MJAR ScP **ScP** **06 06 44.4 +1.2**
comp=Z,4.0nm,0.9s,baz=197,slow=4.2,SNR=5.9
XAN Xi'an 30.87 330 P **P** **06 00 07.8 -2.7**
XAN pP **pP** **06 00 21.0 -2.4**
XAN sP **sP** **06 00 27.6 -1.7**
XAN PP **PnPn** **06 01 07.6 -4.9**
XAN S **S** **06 05 12.0 +0.9**
XAN pmax pmax
comp=Z,11nm,0.8s
XAN pmax pmax
comp=Z,210nm,12.1s
XAN LR LR
comp=N,3μm,19.5s
XAN LR LR
comp=E,1μm,22.6s
XAN LR LR
comp=Z,1μm,17.5s
QIS Mount Isa 30.90 157 P **P** **06 00 09.8 -1.0**
baz=31,SNR=8.2
MTSU Mount Surprise 31.04 147 P **P** **06 00 11.7 -0.4**
baz=31,SNR=14
DL2 Dalian 31.22 352⇑*i*P **P** **06 00 14.0 +0.6**
DL2 sP sP 06 00 37.3 +5.0
DL2 PP **PnPn** **06 01 16.8 -0.1**
DL2 *e*S **S** **06 05 16.4 +0.1**
DL2 SS **SnSn** **06 07 02.4 -0.3**
DL2 pmax pmax
comp=Z,70nm,0.7s
DL2 pmax pmax
comp=Z,1μm,6.4s
DL2 LR LR
comp=N,3μm,19.6s
DL2 LR LR
comp=Z,4μm,15.7s
CD2 Chengdu 31.53 320 P **P** **06 00 17.6 +1.3**
CD2 pP pP 06 00 33.3 +4.1
CD2 sP sP 06 00 41.0 +5.8
CD2 PP **PP** **06 01 24.5 -3.7**
CD2 PcP **PcP** **06 03 08.1 -0.2**
CD2 S **S** **06 05 21.3 -0.1**
CD2 PcS **PcS** **06 06 51.5 -1.3**
CD2 pmax pmax
comp=Z,50nm,0.5s
CD2 pmax pmax
comp=Z,1μm,9.6s
CD2 LR LR
comp=N,12μm,17.6s
CD2 LR LR
comp=E,10μm,20.6s
CD2 LR LR
comp=Z,13μm,16.8s
AS31 Alice Springs 32.11 168 *e*P **P** **06 00 19.8 -1.7**
ASAR Alice Springs 32.12 168 P **P** **06 00 19.8 -1.7**
ASAR PcP **PcP** **06 03 10.0 +0.1**
ASAR ScP **ScP** **06 06 49.4 -0.2**
ASAR ScS **ScS** **06 10 48.1 -0.4**
ASAR Alice Springs 32.12 168 P **P** **06 00 19.8 -1.7**
comp=Z,4.0nm,0.5s,baz=349,slow=7.2,SNR=36
ASAR PcP **PcP** **06 03 10.0 +0.1**
comp=Z,5.4nm,0.8s,baz=346,slow=3.0,SNR=3.7
ASAR ScP **ScP** **06 06 49.4 -0.2**
comp=Z,4.2nm,0.8s,baz=348,slow=2.3,SNR=7.3
ASAR ScS **ScS** **06 10 48.1 -0.4**
comp=Z,1.9nm,1.0s,baz=343,slow=5.6,SNR=4.2
ASAR LR LR 06 14 36.5
comp=Z,3μm,19.2s,baz=345,slow=39
TIY Taiyuan 32.46 338 *e*P **P** **06 00 23.3 -1.1**
TIY S **S** **06 05 38.3 +2.5**
TIY pmax pmax
comp=Z,660nm,10.5s
TIY LR LR
comp=N,4μm,12.2s
TIY LR LR
comp=E,3μm,13.3s
TIY LR LR
comp=Z,6μm,18.3s
GIRL Giralia 32.84 202 P **P** **06 00 28.1 +0.3**
baz=33,SNR=4.0
BJT Baijiatuan 33.39 345 *e*P **P** **06 00 31.8 -0.6**
comp=Z,39nm,0.7s
BJT LR LR
comp=Z,4μm,20.0s
BJI Beijing 33.41 345 P **P** **06 00 31.9 -0.7**
BJI S **S** **06 05 52.9 +2.6**
BJI pmax pmax
comp=Z,45nm,0.9s
BJI pmax pmax
comp=Z,1μm,10.3s
BJI LR LR
comp=N,3μm,17.4s
BJI LR LR
comp=E,3μm,16.6s
BJI LR LR
comp=Z,3μm,22.0s
CTA Charters Tower 33.68 146 P **P** **06 00 35.3 +0.1**
CTA S **S** **06 05 54.8 -0.2**
CTA ScP **ScP** **06 06 55.8 +0.7**
CTA Charters Tower 33.68 146 P **P** **06 00 35.3 +0.1**
comp=Z,28nm,0.9s,baz=327,slow=11,SNR=16
CTA S **S** **06 05 54.8 -0.2**
comp=Z,6.5nm,1.1s,baz=62,slow=17,SNR=2.1
CTA ScP **ScP** **06 06 55.8 +0.7**
comp=Z,12nm,1.0s,baz=360,slow=4.0,SNR=4.9
CTA LR LR 06 15 05.6
comp=Z,5μm,18.4s,baz=324,slow=38
CTAO Charters Tower 33.68 146 *e*P **P** **06 00 35.3 +0.1**
CTAO pmax pmax
comp=Z,368nm,2.2s
CTAO MLR MLR
comp=Z,5μm,20.0s
CTAO Charters Tower 33.68 146 *e*P **P** **06 00 35.3 +0.1**
comp=Z,368nm,2.2s
CTAO LR LR
comp=Z,5μm,20.0s
SNY Shenyang 33.90 355⇑P **P** **06 00 37.8 +1.0**
SNY S **S** **06 06 02.1 +4.2**
SNY pmax pmax
comp=Z,71nm,1.1s
SNY pmax pmax
comp=Z,2μm,3.5s
SNY LR LR
comp=N,5μm,19.8s
SNY LR LR
comp=E,3μm,17.1s
SNY LR LR
comp=Z,5μm,20.1s
LZH Lanzhou 35.10 326⇑P **P** **06 00 46.8 -0.7**
LZH pP **pP** **06 01 00.5 -0.1**
LZH sP **sP** **06 01 07.1 +0.6**
LZH S **S** **06 06 15.0 -2.0**
LZH sS **sS** **06 06 36.4 -2.5**
LZH SS **SnSn** **06 08 28.0 -9.1**
LZH pmax pmax
comp=Z,49nm,1.1s
LZH pmax pmax
comp=Z,510nm,7.5s
LZH LR LR
comp=N,6μm,13.6s
LZH LR LR
comp=E,4μm,11.4s
LZH LR LR
comp=Z,7μm,14.1s
MEEK Meekatharra 35.30 193 P **P** **06 00 48.0 -1.1**
baz=36,SNR=15
VLA Vladivostok 35.32 6*c i*P **P** **06 00 50.8 +1.7**
VLA pmax pmax
comp=Z,456nm,2.5s
HHC Hu-ho-hao-te 35.55 340 *e*P **P** **06 00 50.6 -0.6**
HHC PP **PP** **06 02 13.3 +0.6**
HHC PcP **PcP** **06 03 17.6 -1.9**
HHC S **S** **06 06 22.8 -0.8**
HHC ScP **ScP** **06 06 57.3 -4.2**
HHC PcS **PcS** **06 07 03.8 -2.9**
HHC ScS **ScS** **06 11 01.3 -4.9**
HHC pmax pmax
comp=Z,98nm,0.8s

HHC pmax pmax
comp=Z,2μm,8.2s
HHC LR LR
comp=N,9μm,18.4s
HHC LR LR
comp=E,6μm,16.6s
HHC LR LR
comp=Z,8μm,17.6s
CN2 Changchun 35.77 358 *e*P **P** **06 00 52.9 0.0**
CN2 *es*P sP 06 01 15.3 +3.5
CN2 *e*PP **PP** **06 02 16.3 +1.4**
CN2 *e*S **S** **06 06 26.8 +0.2**
CN2 sS sS 06 06 52.5 +4.0
CN2 pmax pmax
comp=Z,70nm,0.9s
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,4μm,15.0s
CN2 LR LR
comp=E,2μm,15.0s
CN2 LR LR
comp=Z,4μm,15.0s
BTO Baotou 35.89 338 *e*P **P** **06 00 52.9 -1.2**
COCO West Island 36.02 237 PFAKE 06 01 10.0 +15
COCO LR LR
comp=Z,3μm,20.0s
USRK Ussuriysk Arra 36.40 6 P **P** **06 00 60.0 +1.7**
comp=Z,136nm,0.8s,baz=190,slow=7.1,SNR=141
USRK S **S** **06 06 38.5 +2.3**
comp=Z,2.3nm,0.7s,baz=143,slow=35,SNR=2.6
USRK LR LR 06 15 40.3
comp=Z,4μm,20.2s,baz=181,slow=36
MDJ Mudanjiang 36.62 3 P **P** **06 01 02.0 +1.8**
MDJ pP **pP** **06 01 13.8 +0.5**
MDJ sP **sP** **06 01 20.1 +0.9**
MDJ PP **PnPn** **06 02 24.8 +0.2**
MDJ PcP **PcP** **06 03 20.9 -1.6**
MDJ S **S** **06 06 39.8 +0.1**
MDJ sS **ScP** **06 07 06.0 +0.8**
MDJ ScS **ScS** **06 11 09.0 -2.8**
MDJ pmax pmax
comp=Z,230nm,0.9s
MDJ pmax pmax
comp=Z,1μm,7.9s
MDJ LR LR
comp=N,2μm,16.1s
MDJ LR LR
comp=E,2μm,16.5s
MDJ LR LR
comp=Z,3μm,16.1s
MDJ Mudanjiang 36.62 3 *e*P **P** **06 01 02.0 +1.8**
comp=Z,219nm,0.9s
MDJ *e*PP **PnPn** **06 02 26.7 +2.1**
MDJ LR LR
comp=Z,3μm,20.0s
ERM Erimo 36.84 20*d i*P **P** **06 01 04.1 +2.0**
ERM pmax pmax
comp=Z,39nm,0.8s
ERM Erimo 36.84 20 *e*P **P** **06 01 03.2 +1.1**
ERM *e*PP **PnPn** **06 02 27.5 +0.2**
ERM LR LR
comp=Z,5μm,20.0s
HNR Honiara 37.09 117 PFAKE 06 01 20.0 +15
HNR LR LR
comp=Z,3μm,19.0s
SHL Shillong 37.74 302⇑ *i*P **P** **06 01 09.5 -0.7**
SHL *e*S **S** **06 07 00.0 +2.4**
QLP Quilpie 38.17 155 P **P** **06 01 11.9 -1.6**
baz=38,SNR=6.5
MORW Morawa 38.26 196 P **P** **06 01 13.4 -0.8**
baz=38,SNR=13
FORT Forrest 38.49 179 *e*P **P** **06 01 14.5 -1.6**
comp=Z,2.0nm,0.8s
FORT Forrest 38.49 179 P **P** **06 01 15.0 -1.1**
baz=39,SNR=24
ASAJ Asahikawa 38.55 18 *e*P **P** **06 01 16.6 +0.2**
ASAJ Asahikawa 38.55 18 P **P** **06 01 16.1 -0.4**
comp=Z,65nm,0.9s,baz=237,slow=15,SNR=35
ASAJ LR LR 06 16 52.5
comp=Z,7μm,19.5s,baz=204,slow=36
KMBL Kambalda 39.37 187 P **P** **06 01 22.8 -0.7**
baz=40,SNR=29
BLDU Ballidu 39.56 194 P **P** **06 01 24.3 -0.8**
baz=40,SNR=25
YUK Yuzh-Kuril'sk 39.57 21*c i*P P 06 01 20.7 -4.3
YUK *i* 06 03 23.4
YUK *i* S S 06 07 17.8 -6.4
YUK *i* SS **SS** **06 10 13.3 -7.4**
YUK *i* SSS SSS 06 10 56.2
YUK *i* 06 11 30.9
YUK pmax pmax
comp=E,216nm,1.0s
YUK pmax pmax
comp=Z,217nm,1.0s
YUK pmax pmax
comp=N,156nm,1.0s
YUK MLR MLR
comp=N,742nm,21.0s
YUK MLR MLR
comp=Z,2μm,21.0s
GTA Gaotai 39.71 326 *e*P **P** **06 01 25.5 -0.9**
GTA pP **pP** **06 01 40.6 +1.0**
GTA sP **sP** **06 01 47.8 +2.3**
GTA PP **PnPn** **06 03 05.0 +3.1**
GTA S **S** **06 07 22.8 -3.9**
GTA sS **sS** **06 07 49.8 +0.9**
GTA SS SS 06 10 12.0 -12
GTA pmax pmax
comp=Z,11nm,1.0s
GTA pmax pmax
comp=Z,950nm,10.2s
GTA LR LR
comp=N,3μm,22.6s
GTA LR LR
comp=E,3μm,21.6s
GTA LR LR
comp=Z,2μm,21.4s
LSA Lhasa 39.98 308 P **P** **06 01 29.5 +0.2**
LSA sP **sP** **06 01 44.8 -3.5**
LSA S **S** **06 07 32.6 +0.8**
LSA pmax pmax
comp=Z,40nm,1.0s
LSA pmax pmax
comp=Z,1μm,11.0s
LSA LR LR
comp=N,2μm,17.0s
LSA LR LR
comp=E,2μm,17.0s
LSA LR LR
comp=Z,4μm,17.0s
LSA Lhasa 39.98 308 *e*P **P** **06 01 29.3 0.0**
LSA *e* 06 03 34.5
LSA pmax pmax
comp=Z,61nm,0.8s
LSA MLR MLR
comp=Z,3μm,21.0s
LSA Lhasa 39.98 308 *e*P **P** **06 01 29.3 0.0**
comp=Z,61nm,0.8s
LSA *e*PcP **PcP** **06 03 34.5 +0.7**
LSA LR LR
comp=Z,3μm,21.0s
WAKE Wake Island 40.08 69 PFAKE 06 01 40.0 +10
WAKE LR LR
comp=Z,2μm,20.0s
RMQ Roma 40.21 149 P P 06 01 43.0 +12
baz=40,SNR=5.6
RMQ S S 06 07 23.0 -11
baz=40,SNR=5.1
KLBR Kellerberrin 40.27 192 P **P** **06 01 30.2 -0.7**
baz=40,SNR=14
EIDS Eidsvold 40.56 145 *e*P **P** **06 01 32.9 -0.6**
comp=Z,109nm,1.9s
EIDS Eidsvold 40.56 145 P **P** **06 01 32.9 -0.6**
baz=40,SNR=5.6
HABR Khabarovsk 40.99 8*ce*P **P** **06 01 36.9 +0.3**
HABR *PP **pP** **06 01 51.4 +1.5**
HABR *e* 06 03 11.7
HABR *e* 06 03 33.6
HABR *e*PPP PPP 06 03 41.2
HABR *e*S **S** **06 07 46.7 +1.5**
HABR *i* 06 10 41.6
HABR SSS SSS 06 11 20.7
HABR *e* 06 11 34.0
HABR pmax pmax
comp=Z,3μm,5.1s
HABR pmax pmax
comp=Z,863nm,2.4s
HABR pmax pmax
comp=N,410nm,2.4s
HABR pmax pmax
comp=E,301nm,2.4s
HABR MLR MLR
comp=Z,5μm,17.0s
HABR MLR MLR
comp=N,4μm,17.0s
HABR MLR MLR
comp=E,5μm,18.0s
YSS Yuzh-Sakhalins 41.17 16⇑ *e*P **P** **06 01 40.3 +2.1**
YSS *e**PP **pP** **06 01 52.0 +0.6**
YSS *e* 06 01 56.0
YSS *e* 06 03 18.0
YSS *e* 06 03 38.0
YSS *e*PPP PPP 06 03 50.0
YSS *e*S **S** **06 07 50.0 +2.0**
YSS *e*SS **SS** **06 10 50.0 -2.4**
YSS *e*SSS SSS 06 11 39.0
YSS pmax pmax
comp=Z,50nm,0.9s
YSS pmax pmax
comp=Z,2μm,6.0s
YSS pmax pmax
comp=Z,800nm,5.0s
YSS pmax pmax
comp=N,700nm,4.0s
YSS smax smax
comp=N,900nm,9.0s
YSS smax smax
comp=E,1μm,8.0s
YSS MLR MLR
comp=Z,2μm,19.0s
YSS MLR MLR
comp=N,3μm,18.0s
KUR Kuril'sk 41.34 22 *e*P **P** **06 01 42.0 +2.4**
KUR pmax pmax
comp=Z,280nm,1.0s
KUR pmax pmax
comp=Z,2μm,5.0s
KLR Kul'dur 41.37 5‖ *i*P **P** **06 01 37.3 -2.5**
KLR *e*S **S** **06 07 46.0 -4.9**
KLR *e*SS **SS** **06 10 54.0 -2.3**
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,250nm,1.8s
KLR pmax pmax
comp=Z,4μm,10.0s
KLR MLR MLR
comp=E,2μm,12.0s
KLR MLR MLR
comp=Z,6μm,12.0s
BBOO Buckleboo 41.42 168 *e*P **P** **06 01 39.1 -1.3**
comp=Z,13nm,0.6s
BBOO Buckleboo 41.42 168 P **P** **06 01 38.8 -1.6**
baz=42,SNR=54
HIA Hailar 41.66 353 *e*P **P** **06 01 43.0 +0.9**
comp=Z,83nm,0.9s
HIA LR LR
comp=Z,6μm,19.0s
NWAO Narrogin (SRO) 41.67 192 P **P** **06 01 41.6 -0.8**
NWAO S **S** **06 07 52.6 -3.1**
NWAO LR LR
comp=Z,1μm,21.0s
NWAO Narrogin (SRO) 41.67 192 P **P** **06 01 41.6 -0.8**
comp=Z,87nm,1.0s,baz=27,slow=8.7,SNR=13
NWAO S **S** **06 07 52.6 -3.1**
comp=Z,50nm,1.3s,baz=357,slow=18,SNR=2.4
TAPN Taplejung 41.87 302 *e*P **P** **06 01 44.1 -0.5**
comp=Z,259nm,1.0s
STKA Stephens Creek 41.97 161 P **P** **06 01 44.3 -0.6**
comp=Z,100nm,0.9s
STKA Stephens Creek 41.97 161 P **P** **06 01 44.3 -0.6**
comp=Z,28nm,1.0s,baz=339,slow=8.3,SNR=26
STKA LR LR 06 21 37.3
comp=Z,2μm,19.4s,baz=334,slow=40
STKA Stephens Creek 41.97 161 P **P** **06 01 44.3 -0.6**
baz=42,SNR=23
ODAN Odare 41.97 302 *e*P **P** **06 01 44.8 -0.6**
comp=Z,316nm,0.8s
RAMN Ramite 42.67 301 *e*P **P** **06 01 50.8 -0.3**
comp=Z,165nm,0.8s
CMSA Cobar Meteorol 43.12 156 P **P** **06 01 54.0 -0.3**
baz=43,SNR=11
ULN Ulaanbaatar 43.26 340 *e*P **P** **06 01 54.1 -1.3**
comp=Z,23nm,0.8s
ULN LR LR
comp=Z,5μm,19.0s
ULN Ulaanbaatar 43.26 340 P **P** **06 01 55.4 0.0**
SNR=13
RKGY Rocky Gully 43.35 192 P **P** **06 01 56.7 +0.7**
baz=44,SNR=9.2
SONM Songino Array 43.45 340 P **P** **06 01 56.3 -0.6**
SONM PcP **PcP** **06 03 45.2 +0.7**
SONM ScP **ScP** **06 07 34.2 +2.2**
SONM S **S** **06 08 27.5 +5.6**
SONM Songino Array 43.45 340 P **P** **06 01 56.3 -0.6**
comp=Z,10nm,0.8s,baz=157,slow=7.8,SNR=41
SONM PcP **PcP** **06 03 45.2 +0.7**
comp=Z,9.8nm,0.8s,baz=147,slow=5.5,SNR=5.4
SONM ScP **ScP** **06 07 34.2 +2.2**
comp=Z,3.6nm,0.9s,baz=85,slow=1.6,SNR=4.7
SONM S **S** **06 08 27.5 +5.6**
comp=Z,0.7nm,0.7s,baz=153,slow=31,SNR=2.8
SONM LR LR 06 22 19.6
comp=Z,4μm,18.5s,baz=157,slow=39
VIS Vishakhapatnam 43.57 287 *e*PKP **P** **06 01 57.7 -0.5**
VIS AMB AMB 06 02 05.7
comp=Z,324nm,3.6s
GUN Gumba 43.59 302 *e*P **P** **06 01 57.9 -0.7**
comp=Z,313nm,0.8s
PKI Pulchoki 43.87 302 *e*P **P** **06 01 59.6 -1.3**
comp=Z,95nm,0.8s
PKIN Phulchoki 43.88 302 *e*P **P** **06 02 00.8 -0.1**
comp=Z,91nm,0.9s
KKN Kakani 44.05 302 *e*P **P** **06 02 01.2 -1.0**
comp=Z,124nm,0.8s
DMN Daman 44.14 302 *e*P **P** **06 02 02.0 -0.9**
comp=Z,132nm,0.8s
ARMA Armidale 44.87 149 *e*P P 06 02 03.6 -4.9
comp=Z,106nm,1.4s
CIT Chita 45.33 348 *e*P **P** **06 02 12.2 +0.4**
CIT *e* 06 02 23.2
CIT *e* 06 02 28.2
KOLN Koldanda 45.46 301 *e*P **P** **06 02 12.6 -0.8**
comp=Z,167nm,0.8s
DANN Dangsing 45.50 302 *e*P **P** **06 02 12.9 -0.9**
comp=Z,177nm,0.8s
PALK Pallekele 45.86 272 LR LR 06 24 29.7
comp=Z,2μm,18.2s,baz=175,slow=40
PYUN Piuthan 46.07 302 *e*P **P** **06 02 17.5 -0.7**
comp=Z,418nm,1.0s
MDRS Chennai 46.19 280 *ex* pP 06 02 29.9 -2.5
TARA Tarawa 46.22 96 PFAKE 06 02 30.0 +11
TARA LR LR
comp=Z,5μm,20.0s
ARPS Mount Arapiles 46.59 164 P **P** **06 02 21.7 -0.1**
baz=47,SNR=16
YNG Young 46.63 155 P **P** **06 02 23.9 +1.7**
baz=47,SNR=5.9
ZAK Zakamensk 46.70 339 *e*P **P** **06 02 22.6 0.0**
ZAK *e* 06 03 56.4
JBP Jabalpur 47.52 294⇑ *i*P **P** **06 02 29.9 +0.5**
JBP *ex* x 06 09 36.1
TLY Talaya 47.67 341*c i*P **P** **06 02 30.1 0.0**
TLY *e* 06 04 23.0
TLY *e*S **S** **06 09 25.5 +3.1**
TLY pmax pmax
comp=Z,46nm,0.8s
TLY MLR MLR
comp=Z,3μm,19.0s
TLY Talaya 47.67 341 P **P** **06 02 30.2 +0.1**
comp=Z,358nm,0.7s,SNR=11
CAN Canberra 47.77 156 *e*P **P** **06 02 31.6 +0.5**
CAN pmax pmax
comp=Z,80nm,1.3s
CAN MLR MLR
comp=Z,3μm,21.0s
CAN Canberra 47.77 156 *e*P **P** **06 02 31.6 +0.5**
comp=Z,80nm,1.3s
CAN LR LR
comp=Z,3μm,21.0s
IRK Irkutsk 47.95 341 *e*P **P** **06 02 32.8 +0.6**
IRK pmax pmax
comp=Z,71nm,0.7s
NGP Nagpur 48.04 291 *e*PKP **P** **06 02 31.4 -2.0**
NGP *ex* x 06 09 53.3
HYB Hyderabad 48.07 286 *i* P **P** **06 02 32.0 -1.7**
HYB *es*P pP 06 02 39.0 -8.2
HYB *e* 06 02 44.5
HYB *e*PP **PP** **06 04 24.0 -2.3**
HYB *e*S **S** **06 09 32.0 +3.0**
TOO Toolangi 48.45 160 P **P** **06 02 36.9 +0.6**
baz=48,SNR=4.0
MOY Mondy 48.57 339 *e*P **P** **06 02 37.1 -0.1**
MOY pmax pmax
comp=Z,125nm,3.1s
CLNS Chul'man 48.82 358*c i*P **P** **06 02 39.8 +0.9**
CLNS *e**PP **pP** **06 02 49.3 -3.1**
CLNS *e* 06 04 00.1
CLNS *e* 06 04 34.3
CLNS *e*PPP PPP 06 05 27.2
CLNS *e*S S 06 09 48.2 +10
CLNS pmax pmax
comp=Z,192nm,0.9s
CLNS pmax pmax
comp=E,51nm,0.9s
CLNS pmax pmax
comp=N,105nm,0.8s
CLNS pmax pmax
comp=E,15nm,0.6s
CLNS pmax pmax
comp=Z,15nm,0.8s
CLNS pmax pmax
comp=N,30nm,0.9s
CLNS smax smax
comp=E,1μm,14.2s
CLNS smax smax
comp=N,481nm,10.0s
CLNS MLR MLR
comp=N,1μm,15.0s
CLNS MLR MLR
comp=Z,1μm,16.0s
CLNS MLR MLR
comp=E,1μm,11.0s
DZM Mont Dzumac 48.83 128 *e*S **S** **06 09 42.5 +2.8**
comp=E,3μm,24.6s
DZM *e*LR LR 06 16 43.7
comp=E,4μm,23.2s
SKR Severo-Kuril's 49.00 24 *e*P P 06 02 33.6 -6.7
SKR *e* 06 02 47.9
SKR *e* 06 04 42.0
SKR *e*PPP PPP 06 05 27.0
SKR *e*SSS SSS 06 13 04.0
SKR pmax pmax
comp=Z,130nm,1.0s
SKR pmax pmax
comp=Z,3μm,10.0s
SKR MLR MLR
comp=E,3μm,16.0s
SKR MLR MLR
comp=Z,2μm,16.0s
TRD Trivandrum 49.49 274 *e*PKP **P** **06 02 44.3 -0.3**
WMQ Urumqi 49.50 323 P **P** **06 02 44.5 +0.1**
WMQ pP **pP** **06 03 00.1 +2.2**
WMQ sP sP 06 03 07.3 +3.6
WMQ PcP **PcP** **06 04 05.6 -0.2**
WMQ PP **PP** **06 04 40.3 +1.3**
WMQ ScP **ScP** **06 07 54.3 -2.9**
WMQ PcS **PcS** **06 08 00.9 -1.5**
WMQ S **S** **06 09 47.0 -1.5**
WMQ sS **sS** **06 10 13.8 +2.5**
WMQ ScS **ScS** **06 12 27.4 -4.6**
WMQ SS **SS** **06 13 15.9 -5.2**
WMQ pmax pmax
comp=Z,35nm,0.7s
WMQ pmax pmax
comp=Z,870nm,4.8s
WMQ LR LR
comp=N,7μm,18.4s
WMQ LR LR
comp=E,5μm,15.6s
WMQ LR LR
comp=Z,4μm,20.2s
MNGI Mangalore 51.47 280 *ex* **PcP** **06 04 14.8 +1.3**
MNGI *ex* x 06 15 25.9
PEA0B Petropavlovsk- 51.49 23 *e*P **P** **06 03 00.9 +1.8**
PETK Petropavlovsk- 51.49 23 P **P** **06 03 00.8 +1.7**
PETK pmax pmax
comp=Z,34nm,0.8s
PETK Petropavlovsk- 51.49 23 P **P** **06 03 00.8 +1.7**
PETK Petropavlovsk- 51.49 23 P **P** **06 03 00.8 +1.7**
comp=Z,34nm,0.8s,baz=193,slow=5.6,SNR=40
PET Petropavlovsk 51.80 24*c i*P **P** **06 03 03.0 +1.6**
PET *i* S **S** **06 10 24.9 +5.0**
PET *e* 06 12 49.3
PET pmax pmax
comp=Z,1μm,5.2s
PET pmax pmax
comp=Z,900nm,7.8s
PET MLR MLR
comp=Z,3μm,17.0s
PET MLR MLR
comp=Z,2μm,20.0s
GOA Goa 52.48 283⇑ *e*PKP **P** **06 03 04.6 -2.5**
POO Poona 52.62 287 *e*PKP **P** **06 03 06.4 -1.8**
POO AMB AMB 06 03 08.6
AJM Ajmer 52.90 297 *e*PKP **P** **06 03 08.4 -1.7**
AJM AMB AMB 06 03 16.5
comp=Z,199nm,3.5s
THN Thein Dam 53.33 305 *e*PKP P 06 03 09.5 -3.6
THN *ex* x 06 04 15.0
TAU Tasmania Unive 53.88 162 P **P** **06 03 15.3 -1.5**
TAU pmax pmax
comp=Z,81nm,1.7s
TAU MLR MLR
comp=Z,3μm,20.0s
TAU Tasmania Unive 53.88 162 P **P** **06 03 15.3 -1.5**
comp=Z,81nm,1.7s
TAU LR LR
comp=Z,3μm,20.0s
YAK Yakutsk 54.04 2 *e*P **P** **06 03 18.5 +0.8**
YAK *e**PP **pP** **06 03 27.9 -3.5**
YAK *e* 06 04 21.7
YAK *e* 06 05 20.5
YAK *e*S **S** **06 10 50.2 +0.1**
YAK *e* 06 11 00.7
YAK *e* 06 13 01.3
YAK *e*SSS SSS 06 16 26.7
YAK pmax pmax
comp=Z,328nm,1.0s
YAK pmax pmax
comp=N,76nm,1.0s
YAK pmax pmax
comp=E,36nm,1.0s
YAK pmax pmax
comp=Z,17nm,0.6s
YAK smax smax
comp=E,470nm,3.0s
YAK smax smax
comp=N,147nm,2.3s
YAK MLR MLR
comp=Z,3μm,18.0s
YAK MLR MLR
comp=N,2μm,17.0s
YAK MLR MLR
comp=E,762nm,15.0s
MK31 Makanchi Array 54.32 323*ce*P **P** **06 03 19.6 -0.5**
MK31 pmax pmax
comp=Z,126nm,0.8s
MK31 Makanchi Array 54.32 323 *e*P **P** **06 03 19.7 -0.5**
MK31 *e*PcP **PcP** **06 04 24.7 +1.0**
MK31 *e*ScP **ScP** **06 08 19.4 +1.4**
MKAR Makanchi Array 54.32 323*ce*P **P** **06 03 19.7 -0.4**
MKAR pmax pmax
comp=Z,93nm,0.8s
MKAR Makanchi Array 54.32 323 P **P** **06 03 19.7 -0.4**
MKAR PcP **PcP** **06 04 23.8 +0.1**
MKAR ScP **ScP** **06 08 18.4 +0.4**
MKAR S **S** **06 10 56.4 +1.9**
MKAR Makanchi Array 54.32 323 P **P** **06 03 19.7 -0.4**
comp=Z,93nm,0.8s,baz=122,slow=7.6,SNR=443
MKAR PcP **PcP** **06 04 23.8 +0.1**
comp=Z,37nm,0.8s,baz=118,slow=4.8,SNR=5.6
MKAR ScP **ScP** **06 08 18.4 +0.4**
comp=Z,4.5nm,0.8s,baz=107,slow=4.1,SNR=4.0
MKAR S **S** **06 10 56.4 +1.9**
comp=Z,1.6nm,0.9s,baz=104,slow=12,SNR=4.0

MKAR LR LR 06 27 55.4
comp=Z,4μm,20.4s,baz=125,slow=38
FUNA Funafuti 54.54 106 PFAKE 06 03 30.0 +7.8
FUNA LR LR
comp=Z,12μm,19.0s
KSH Kashi 55.33 313 *i* P **P** **06 03 28.5 +0.8**
KSH *ep*P **pP** **06 03 44.3 +2.9**
KSH *es*P sP 06 03 51.1 +3.9
KSH *e*PcP **PcP** **06 04 28.3 +0.4**
KSH *e*PP **PP** **06 05 33.3 +1.5**
KSH *e*ScP **ScP** **06 08 20.9 -1.8**
KSH *e*PcS **PcS** **06 08 27.4 -0.6**
KSH *e*S **S** **06 11 04.0 -4.5**
KSH *es*S **sS** **06 11 31.0 -0.5**
KSH *e*ScS **ScS** **06 13 08.3 -4.7**
KSH *e*SS **SS** **06 14 48.3 -5.2**
KSH pmax pmax
comp=Z,42nm,1.2s
KSH pmax pmax
comp=Z,1μm,7.9s
KSH LR LR
comp=N,3μm,17.5s
KSH LR LR
comp=E,4μm,14.3s
KSH LR LR
comp=Z,5μm,18.0s
MIDW Midway 56.10 61 PFAKE 06 03 50.0 +17
MIDW LR LR
comp=Z,2μm,20.0s
ULHL Ulahol 56.14 316 P **P** **06 03 33.4 -0.2**
SNR=31
DGAR Diego Garcia 56.46 256 PFAKE 06 03 50.0 +14
DGAR LR LR
comp=Z,1μm,21.0s
MSVF Nonsavu 56.51 117 *e*P **P** **06 03 37.2 +0.8**
MSVF pmax pmax
comp=Z,72nm,1.2s
MSVF MLR MLR
comp=Z,4μm,21.0s
MSVF Nonsavu 56.51 117 *e*P **P** **06 03 37.2 +0.8**
comp=Z,72nm,1.2s
MSVF LR LR
comp=Z,4μm,21.0s
KZA Kyzart 56.76 316 P **P** **06 03 38.5 +0.2**
SNR=29
TKM2 Tokmak 2 56.84 317 *i* P **P** **06 03 37.5 -1.0**
TKM2 pmax pmax
comp=Z,34nm,0.9s
TKM2 Tokmak 2 56.84 317 *e*P **P** **06 03 37.9 -0.6**
comp=Z,28nm,0.8s
TKM2 LR LR
comp=Z,6μm,22.0s
TKM2 Tokmak 2 56.84 317 P **P** **06 03 38.1 -0.4**
SNR=48
ZAA0 Zalesovo Array 57.01 332 *e*P **P** **06 03 38.1 -1.2**
ZALV Zalesovo Beam 57.01 332 *i* P **P** **06 03 38.2 -1.1**
ZALV pmax pmax
comp=Z,78nm,0.8s
ZALV Zalesovo Beam 57.01 332 P **P** **06 03 38.3 -0.9**
ZALV Zalesovo Beam 57.01 332 P **P** **06 03 38.3 -0.9**
comp=Z,78nm,0.8s,baz=114,slow=6.5,SNR=77
ZALV LR LR 06 30 43.4
comp=Z,3μm,18.1s,baz=280,slow=39
KBK Karagaybulak 57.18 316 P **P** **06 03 40.9 0.0**
SNR=30
UCH Uchtor 57.33 316 P **P** **06 03 42.6 +0.3**
SNR=13
CHMS Chumysh 57.44 317 P **P** **06 03 42.0 -0.6**
SNR=9.9
FRU Bishkek 57.47 316 *e*P **P** **06 03 41.5 -1.3**
FRU pmax pmax
comp=Z,150nm,2.5s
AAK Ala-Archa 57.48 316*c i*P **P** **06 03 42.0 -1.1**
AAK pmax pmax
comp=Z,106nm,2.3s
AAK Ala-Archa 57.48 316 *e*P **P** **06 03 42.5 -0.5**
comp=Z,17nm,0.8s
AAK S **S** **06 11 37.1 +0.1**
AAK Ala-Archa 57.48 316 P **P** **06 03 43.0 0.0**
SNR=15
AAK Ala-Archa 57.48 316 P **P** **06 03 45.2 +2.1**
SNR=8.3
AAK Ala-Archa 57.48 316 P **P** **06 03 42.8 -0.3**
comp=Z,86nm,0.8s,SNR=9.1
AAK Ala-Archa 57.48 316 P **P** **06 03 42.7 -0.3**
comp=Z,11nm,0.8s,baz=160,slow=8.9,SNR=24
AAK S **S** **06 11 37.1 +0.1**
comp=Z,0.5nm,0.3s,baz=81,slow=10,SNR=1.9
AAK LR LR 06 30 27.9
comp=Z,5μm,21.6s,baz=78,slow=38
USP Ospenovka 57.71 317 P **P** **06 03 44.0 -0.5**
SNR=40
AML Almayashu 57.86 315 P **P** **06 03 45.8 -0.2**
SNR=56
SEY Seymchan 57.92 13⇑ *i*P **P** **06 03 48.3 +2.8**
EKS2 Erkin-Say 57.99 316 *e*P **P** **06 03 46.2 -0.4**
EKS2 pmax pmax
comp=Z,44nm,0.9s
EKS2 MLR MLR
comp=Z,4μm,22.0s
EKS2 Erkin-Say 57.99 316 *e*P **P** **06 03 46.2 -0.4**
comp=Z,44nm,0.9s
EKS2 LR LR
comp=Z,4μm,22.0s
EKS2 Erkin-Say 57.99 316 P **P** **06 03 46.5 0.0**
SNR=32
NVS Novosibirsk 58.29 332⇑ *i*P **P** **06 03 46.3 -1.9**
NVS *i* 06 03 54.3
NVS *e* 06 04 37.8
NVS *i* S **S** **06 11 46.6 -0.2**
NVS pmax pmax
comp=Z,92nm,0.9s
NVS pmax pmax
comp=N,30nm,0.8s
NVS pmax pmax
comp=E,34nm,0.8s
NVS smax smax
comp=N,72nm,2.5s
NVS smax smax
comp=E,108nm,2.2s
FX1 Attu Island--F 58.36 31 P **P** **06 03 50.2 +1.5**
FX1 *e*PP **PP** **06 05 56.0 -2.3**
FX1 Attu Island--F 58.36 31 P **P** **06 03 50.2 +1.5**
comp=E,91nm,0.8s,baz=3.9,slow=2.1,SNR=16
FX1 LR LR 06 26 47.9
comp=E,698nm,18.6s,baz=82,slow=34
KURK Kurchatov 58.39 326*c i*P **P** **06 03 48.4 -0.6**
KURK pmax pmax
comp=Z,151nm,0.8s
KURK Kurchatov 58.39 326 P **P** **06 03 48.5 -0.6**
comp=Z,17nm,0.8s
KURK Kurchatov 58.39 326 P **P** **06 03 48.7 -0.3**
SNR=58
KURK Kurchatov 58.39 326 P **P** **06 03 48.5 -0.6**
comp=Z,1μm,0.8s,SNR=34
KURBB Kurchatov Arra 58.40 326 P **P** **06 03 48.5 -0.6**
comp=Z,93nm,0.8s,baz=128,slow=6.1,SNR=361
KURBB LR LR 06 31 13.7
comp=Z,2μm,18.3s,baz=110,slow=38
KBL Kabul 59.25 306 *e*P **P** **06 03 54.4 -1.2**
KBL *e* 06 04 39.2
KBL pmax pmax
comp=Z,29nm,0.8s
KBL Kabul 59.25 306 *e*P **P** **06 03 54.4 -1.2**
comp=Z,29nm,0.8s
KBL *e*PcP **PcP** **06 04 39.2 -4.3**
KK31 Karatay Array 60.40 315*ce*P **P** **06 04 02.0 -1.1**
KK31 pmax pmax
comp=Z,57nm,0.9s
KKAR Karatay Array 60.40 315 *e*P **P** **06 04 01.8 -1.3**
KKAR pmax pmax
comp=Z,27nm,0.7s
KKAR Karatay Array 60.40 315 *e*P **P** **06 04 01.8 -1.3**
comp=Z,27nm,0.7s
VOSK Vostochnaya 63.54 326 P **P** **06 04 22.4 -1.5**
VOSK pmax pmax
comp=Z,31nm,0.8s
TIXI Tiksi 63.67 1*c i*P **P** **06 04 24.6 +0.2**
TIXI pmax pmax
comp=Z,219nm,2.5s
TIXI MLR MLR
comp=Z,4μm,20.0s
BVA0 Borovoye Array 63.99 326 *i* P **P** **06 04 25.8 -1.1**
BVA0 pmax pmax
comp=Z,7.0nm,0.8s
BVAR Borovoye Array 63.99 326 P **P** **06 04 26.0 -0.9**
BVAR S **S** **06 12 59.1 -0.3**
BVAR pmax pmax
comp=Z,47nm,0.8s
BVAR smax smax
comp=N,1.0nm,0.5s
BVAR MLR MLR
comp=Z,2μm,21.2s
BVAR Borovoye Array 63.99 326 P **P** **06 04 26.0 -0.9**
BVAR S **S** **06 12 59.1 -0.3**
BVAR Borovoye Array 63.99 326 P **P** **06 04 26.0 -0.9**
comp=Z,47nm,0.8s,baz=120,slow=8.7,SNR=129
BVAR S **S** **06 12 59.1 -0.3**
comp=Z,0.6nm,0.5s,baz=238,slow=36,SNR=2.0
BVAR LR LR 06 33 40.0
comp=Z,2μm,21.2s,baz=358,slow=37
BRVK Borovoye 64.06 326*c i*P **P** **06 04 26.4 -0.9**
BRVK pmax pmax
comp=Z,69nm,0.8s
BRVK Borovoye 64.06 326 *e*P **P** **06 04 26.6 -0.8**
comp=Z,67nm,0.8s
BRVK LR LR
comp=Z,2μm,20.0s
BRVK Borovoye 64.06 326 P **P** **06 04 27.0 -0.4**
SNR=32
BRVK Borovoye 64.06 326 P **P** **06 04 26.7 -0.6**
comp=Z,528nm,0.8s,SNR=23
AFI Afiamalu 64.53 109 LR LR 06 30 49.9
comp=Z,3μm,18.4s,baz=285,slow=34
RAO Raoul Island 64.61 128 LR LR 06 28 43.0
comp=Z,1μm,21.2s,baz=303,slow=32
ZRNK Zerenda 64.73 325 *i* P **P** **06 04 30.1 -1.7**
ZRNK pmax pmax
comp=Z,70nm,0.8s
RPZ Rata Peaks 65.05 146 *e*P **P** **06 04 34.4 +0.4**
comp=Z,31nm,0.8s
RPZ Rata Peaks 65.05 146 LR LR 06 33 42.8
comp=Z,2μm,19.5s,baz=309,slow=37
URZ Urewera 65.45 138 LR LR 06 31 07.1
comp=Z,3μm,20.9s,baz=122,slow=34
BILL Bilibino 65.47 15*c i*P **P** **06 04 37.5 +1.3**
BILL *i* 06 04 55.2
BILL *i* 06 05 08.9
BILL *i* S **S** **06 13 12.2 -4.8**
BILL pmax pmax
comp=Z,128nm,1.1s
BILL MLR MLR
comp=Z,300nm,20.0s
BILL Bilibino 65.47 15 *e*P **P** **06 04 37.3 +1.1**
comp=Z,52nm,0.9s
BILL LR LR
comp=Z,932nm,20.0s
SNZO South Karori 65.67 142 PFAKE 06 04 50.0 +12
SNZO LR LR
comp=Z,4μm,19.0s
IMYA Miami 66.75 306 *e*P **P** **06 04 42.7 -2.6**
ISRO Mashad 67.25 306 *e*P **P** **06 04 47.3 -1.1**
IMOG Moghan 67.33 306 *e*P **P** **06 04 47.6 -1.5**
JMDO Jabal Madar 67.53 291 P **P** **06 04 49.0 -1.3**
SNR=13
SMDO Samad 67.59 292 P **P** **06 04 49.7 -1.1**
SNR=6.8
IAKL Akhelmad 67.85 306 *e*P **P** **06 04 51.1 -1.3**
IEMG Emamgholi 68.03 307 *e*P **P** **06 04 52.7 -0.9**
HOQ Hoqain 68.27 292 P **P** **06 04 53.9 -1.0**
SNR=17
BSY Bisya 68.37 291 P **P** **06 04 54.5 -1.1**
SNR=7.1
ABKT Ailbek 68.52 308 P **P** **06 04 56.0 -0.3**
comp=Z,362nm,0.9s,SNR=5.8
ARQ Araqi 69.00 292 P **P** **06 04 58.7 -0.8**
SNR=6.0
AB31 Akbulak array 69.11 320*ce*P **P** **06 04 58.6 -1.0**
AB31 pmax pmax
comp=Z,47nm,0.9s
ABKAR Akbulak array 69.11 320 *e*P **P** **06 04 58.4 -1.2**
comp=Z,31nm,0.8s
HATD Hatta, Dubai 69.36 293 P **P** **06 05 01.1 -0.7**
SNR=5.4
UNV Unalaska Valle 69.87 35 *e*P **P** **06 05 05.1 +0.9**
comp=Z,127nm,1.0s
GAMB Gambell 70.50 24 *e*P **P** **06 05 09.8 +1.9**
comp=Z,54nm,1.0s
SVE Sverdlovsk 70.56 328*d i*P **P** **06 05 07.7 -0.7**
SVE *e*PPP PPP 06 09 30.8
SVE *e*S **S** **06 14 19.6 +1.5**
SVE *e*SS **SS** **06 18 54.4 +4.3**
SVE pmax pmax
comp=Z,98nm,0.9s
SVE MLR MLR
comp=Z,3μm,22.0s
SVE MLR MLR
comp=E,2μm,20.0s
AKTO Aktyubinsk 70.57 321 *i* P **P** **06 05 07.2 -1.4**
AKTO Aktyubinsk 70.57 321 P **P** **06 05 07.8 -0.8**
AKTO S S 06 14 26.1 +7.6
AKTO Aktyubinsk 70.57 321 P **P** **06 05 07.8 -0.8**
comp=E,26nm,0.8s,baz=93,slow=7.4,SNR=98
AKTO S S 06 14 26.1 +7.6
comp=E,1.3nm,0.5s,baz=12,slow=14,SNR=3.1
IMEH Mehriz 70.88 300 *e*P **P** **06 05 08.6 -2.6**
ARU Arti 71.56 327*c i*P **P** **06 05 13.1 -1.4**
ARU 06 07 50.0
ARU PPP PPP 06 09 31.0
ARU S **S** **06 14 30.0 +0.2**
ARU SSS SSS 06 22 20.0
ARU pmax pmax
comp=Z,66nm,0.8s
ARU MLR MLR
comp=Z,2μm,20.0s
ARU Arti 71.56 327 P **P** **06 05 13.7 -0.8**
comp=Z,481nm,0.8s,SNR=18
IANJ Anjilo 71.66 305 *e*P **P** **06 05 14.3 -1.5**
FALS False Pass 71.86 35 *e*P **P** **06 05 16.5 +0.2**
comp=Z,108nm,0.7s
ISRV Sarvestan 72.12 298 *e*P **P** **06 05 16.5 -2.3**
ABTO Aybut 72.16 286 P **P** **06 05 18.2 -0.7**
SNR=6.6
IPAR Pars 72.18 299 *e*P **P** **06 05 17.5 -1.7**
ISHM Shahmirzad 72.19 305 *e*P **P** **06 05 17.2 -1.9**
MSEY Mahe Island 72.41 263 PFAKE 06 05 30.0 +10
MSEY LR LR
comp=Z,1μm,21.0s
ILAS Lasjerd 72.44 305 *e*P **P** **06 05 19.3 -1.2**
IFIR Firoozkooh 72.62 305 *e*P **P** **06 05 20.6 -1.0**
TNA Tin City 72.66 23 *e*P **P** **06 05 22.5 +1.6**
comp=Z,131nm,1.9s
IZEF Zefreh 72.87 302 *e*P **P** **06 05 20.8 -2.3**
IDMV Damavand 73.20 305 *e*P **P** **06 05 23.2 -1.9**
SOKR Solikamsk 73.22 330*c i*P **P** **06 05 23.3 -1.0**
SOKR S **S** **06 14 45.3 -3.3**
SOKR pmax pmax
comp=Z,20nm,0.8s
IVRN Varamin 73.43 304 *e*P P 06 05 23.0 -3.2
IVRN *e*P pP 06 05 25.2 -15
SDPT Sand Point 73.61 35 *e*P **P** **06 05 26.9 +0.3**
comp=Z,98nm,0.9s
IR3 Iran Long-Peri 74.02 305 *e*P **P** **06 05 26.9 -2.7**
IRAZ Razeghan 74.91 304 *e*P **P** **06 05 33.0 -2.0**
CASY Casey 74.98 187 *e*P **P** **06 05 33.8 -0.6**
comp=Z,30nm,0.8s
CASY LR LR
comp=Z,778nm,20.0s
DRV Dumont d'Urvil 75.00 175 PP PP 06 09 07.0 +44
DRV S **SKiKP** **06 14 49.0 -5.3**
DRV SP **ScS** **06 15 48.0 +5.8**
DRV SS **SS** **06 20 04.0 +6.2**
DRV L L 06 25 00.0
DRV R 06 30 00.0
XMAS Kiritimati 75.43 90 PFAKE 06 05 50.0 +12
XMAS LR LR
comp=Z,2μm,20.0s
QRN Al-Qurain 76.67 298 *e*P **P** **06 05 43.4 -1.4**
ISRB Sarab 76.76 307 *e*P **P** **06 05 44.8 -0.7**
IKOM Komasi 76.90 303 *e*P **P** **06 05 44.0 -2.3**
MAK Makhachkala 76.95 312 *e*P **P** **06 05 43.6 -2.5**
MAK *e* 06 05 54.2
MAK *i* *PP **pP** **06 05 59.1 -1.4**
MAK *e* 06 08 36.7
MAK *e*PPP PPP 06 10 21.1
MAK *e*S **S** **06 15 30.1 -0.6**
MAK *e**SS **SKKSac** **06 15 56.3 +1.2**
MAK pmax pmax
comp=Z,39nm,0.3s
MIB Mutribah 77.14 299 *e*P **P** **06 05 46.3 -1.2**
MIB AMb AMB 06 05 48.0
comp=Z,119nm,0.8s
NAY Al-Naaiem 77.25 298 *e*P **P** **06 05 46.3 -1.8**
NAY AMb AMB 06 05 49.0
comp=Z,47nm,1.2s
IHRS Heris 77.25 307 *e*P **P** **06 05 46.9 -1.4**
ILIN Lien 77.34 304 *e*P **P** **06 05 47.2 -1.7**
IVIS Veis 77.44 304 *e*P P 06 05 45.7 -3.5
RAR Rarotonga 77.45 114 LR LR 06 37 28.5
comp=Z,1μm,20.2s,baz=294,slow=34
IGHG Ghaleghazi 77.68 303 *e*P **P** **06 05 48.5 -2.2**
IDHR Dehrash 77.82 304 *e*P **P** **06 05 48.8 -2.7**
OHAK Old Harbor 77.82 33 *e*P **P** **06 05 52.0 +1.3**
comp=Z,78nm,0.9s
IAZR Azarshahr 78.10 307 *e*P **P** **06 05 53.0 0.0**
KDAK Kodiak Island 78.24 33 *e*P **P** **06 05 53.7 +0.7**
comp=Z,69nm,0.8s
KDAK S **S** **06 15 46.8 +2.7**
KDAK Kodiak Island 78.24 33 P **P** **06 05 54.8 +1.8**
comp=Z,528nm,0.6s,SNR=17
KDAK Kodiak Island 78.24 33 P **P** **06 05 54.9 +1.9**
comp=Z,75nm,0.8s,baz=260,slow=1.8,SNR=46
KDAK S **S** **06 15 46.8 +2.7**
comp=Z,2.0nm,0.8s,baz=214,slow=22,SNR=1.5
KDAK LR LR 06 36 23.3
comp=Z,1μm,21.1s,baz=157,slow=32
MIR Mirnyy 78.27 193⇓ *i*P P 06 05 56.5 +3.6
MIR *i* 06 06 02.0
MIR *i* 06 06 06.0
MIR pmax pmax
comp=Z,68nm,1.0s
IMRD Marand 78.30 308 *e*P **P** **06 05 53.3 -0.7**
RSO Redoubt South 78.35 30 *e*P **P** **06 05 54.7 +0.8**
comp=Z,95nm,0.9s
ISHB Shabestar 78.38 307 *e*P **P** **06 05 53.3 -1.2**
DGRG David-gareji 78.52 311 P **P** **06 05 55.4 +0.3**
PPLA Purkeypile 78.81 27 *e*P **P** **06 05 56.4 +0.2**
comp=Z,47nm,1.0s
TBLG Delisi 79.00 311 P **P** **06 05 57.2 -0.3**
DUS Dusheti 79.02 311 P **P** **06 06 00.5 +2.8**
GNI Garni 79.02 309 *e*P **P** **06 05 57.8 -0.1**
comp=Z,53nm,1.1s
GNI S **S** **06 15 57.5 +3.9**
GNI LR LR
comp=Z,859nm,22.0s
GNI Garni 79.02 309 P **P** **06 05 58.2 +0.3**
SNR=9.9
GNI Garni 79.02 309 P **P** **06 05 57.9 0.0**
comp=Z,5.0nm,0.3s,baz=351,slow=15,SNR=5.0
GNI S **S** **06 15 57.5 +3.9**
comp=Z,3.1nm,0.3s,baz=124,slow=12,SNR=1.6
RAYN Ar Rayn 79.10 292 P **P** **06 05 57.0 -1.5**
comp=Z,527nm,0.8s,SNR=44
KZR Kazreti 79.25 311 P **P** **06 05 59.0 0.0**
GOR Gori 79.46 311 P **P** **06 06 01.2 +1.0**
TRF Thorofare Moun 79.71 27 *e*P **P** **06 06 01.4 +0.2**
comp=Z,59nm,0.9s
ONI Oni 79.94 312 P **P** **06 06 02.7 0.0**
AKH Akhalkalaki 79.94 311 P **P** **06 06 03.1 +0.2**
COLD Coldfoot 79.96 23 *e*P **P** **06 06 04.2 +1.9**
comp=Z,67nm,1.1s
SEW Seward 79.97 30 *e*P **P** **06 06 03.5 +1.0**
comp=Z,113nm,1.2s
PMR Palmer 80.17 29 *e*P **P** **06 06 04.0 +0.5**
PMR pmax pmax
comp=Z,99nm,0.9s
PMR Palmer 80.17 29 *e*P **P** **06 06 04.0 +0.5**
comp=Z,99nm,0.9s
KBZ Khabaz 80.31 313 P **P** **06 06 03.8 -0.8**
KBZ pmax pmax
comp=Z,14nm,0.9s
KBZ Khabaz 80.31 313 P **P** **06 06 03.8 -0.8**
KBZ Khabaz 80.31 313 P **P** **06 06 03.8 -0.8**
comp=Z,14nm,0.9s,baz=144,slow=3.4,SNR=28
KBZ LR LR 06 47 07.3
comp=Z,3μm,18.3s,baz=76,slow=40
MCK McKinley 80.33 27 *e*P **P** **06 06 05.1 +0.8**
MCK pmax pmax
comp=Z,115nm,0.9s
MCK McKinley 80.33 27 *e*P **P** **06 06 05.1 +0.8**
comp=Z,115nm,0.9s
KIV Kislovodsk 80.46 313*c i*P **P** **06 06 04.5 -1.0**
KIV *e* 06 09 08.5
KIV *e*S **S** **06 16 05.8 -2.6**
KIV *e*SS **SS** **06 21 22.0 +1.1**
KIV pmax pmax
comp=Z,45nm,0.9s
KIV pmax pmax
comp=Z,259nm,4.7s
KIV MLR MLR
comp=Z,3μm,20.0s
KIV Kislovodsk 80.46 313 P **P** **06 06 05.5 0.0**
comp=Z,316nm,0.8s,SNR=6.7
SML Sawmill 80.56 29 *e*P **P** **06 06 07.4 +1.8**
SML *e* 06 09 05.4
SML pmax pmax
comp=Z,60nm,1.5s
SML Sawmill 80.56 29 *e*P **P** **06 06 07.4 +1.8**
comp=Z,60nm,1.5s
SML *e*PP **PP** **06 09 05.4 -4.0**
COLA College 80.83 26 *e*P **P** **06 06 07.1 +0.2**
COLA pmax pmax
comp=Z,28nm,1.0s
COLA MLR MLR
comp=Z,1μm,20.0s
COLA College 80.83 26 *e*P **P** **06 06 07.1 +0.2**
comp=Z,28nm,1.0s
COLA LR LR
comp=Z,1μm,20.0s
CHVG Ch'k'valeri 80.94 312 P **P** **06 06 09.8 +1.8**
ILAR Eielson Array 81.24 26 P **P** **06 06 09.4 +0.3**
ILAR S **S** **06 16 16.3 +0.7**
ILAR PKKPbc **PKKPbc** **06 24 44.5 -2.6**
ILAR P'P' 06 32 59.9
ILAR Eielson Array 81.24 26 P **P** **06 06 09.4 +0.3**
comp=Z,3.8nm,0.7s,baz=250,slow=4.1,SNR=60
ILAR S **S** **06 16 16.3 +0.7**
comp=Z,0.2nm,0.8s,baz=40,slow=2.1,SNR=3.0
ILAR PKKPbc **PKKPbc** **06 24 44.5 -2.6**
comp=Z,0.4nm,0.9s,baz=28,slow=2.1,SNR=4.3
ILAR PKPPKP P'P'df 06 32 59.9 +10
comp=Z,0.6nm,1.1s,baz=8.7,slow=4.0,SNR=4.7
ILAR LR LR 06 42 31.7
comp=Z,1μm,20.8s,baz=118,slow=36
DIV Divide 81.79 29 *e*P **P** **06 06 13.9 +1.7**
comp=Z,106nm,1.0s
PAX Paxson 81.89 27 *e*P **P** **06 06 14.3 +1.6**
PAX pmax pmax
comp=Z,76nm,1.2s
PAX Paxson 81.89 27 *e*P **P** **06 06 14.3 +1.6**
comp=Z,76nm,1.2s
KLMR Klimovskoe 81.90 330*c i*P **P** **06 06 11.8 -0.9**
KLMR *e* 06 06 17.2
KLMR *i* *PP **pP** **06 06 28.5 +1.3**
KLMR *e* 06 09 18.5
KLMR *i* S **S** **06 16 20.9 -1.6**
KLMR 06 16 29.2
KLMR *e*SS **SS** **06 21 39.5 -1.9**
KLMR pmax pmax
comp=Z,145nm,0.8s
KLMR pmax pmax
comp=Z,265nm,6.2s
KLMR MLR MLR
comp=Z,2μm,18.0s
VORD Divnogorie 82.45 320 *e*P **P** **06 06 13.3 -2.5**
VORD *e*S **S** **06 16 23.8 -4.7**
VORD pmax pmax
comp=Z,30nm,0.6s
VORD pmax pmax
comp=N,260nm,0.9s
VORD pmax pmax
comp=E,150nm,0.9s
VORD smax smax
comp=N,150nm,4.3s
VORD smax smax
comp=E,160nm,4.3s
VORD smax smax
comp=Z,20nm,2.1s
DOT Dot Lake 82.50 27 *e*P **P** **06 06 16.7 +0.9**
comp=Z,46nm,1.1s
VSR Storozhevoye 82.52 321 *e*P **P** **06 06 14.5 -1.6**
VSR *e*S **S** **06 16 24.8 -4.4**
VSR pmax pmax
comp=Z,30nm,0.8s
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax

comp=E,30nm,1.0s
VSR smax smax
comp=E,90nm,2.4s
VSR smax smax
comp=Z,20nm,2.3s
VSR smax smax
comp=N,60nm,2.2s
VSR MLR MLR
comp=Z,1µm,20.0s
VSR MLR MLR
comp=N,630nm,16.0s
VSR MLR MLR
comp=E,890nm,18.0s
SOC Sochi 82.62 313 *c iP* **P 06 06 15.2 -1.6**
SOC *e**PP **pP 06 06 29.3 -2.0**
SOC *e*PPP PPP 06 11 12.8
SOC *e*S **S 06 16 27.3 -3.3**
SOC pmax pmax
comp=Z,50nm,1.1s
MENT Mentasta 82.69 27 *e*P **P 06 06 18.5 +1.6**
SFNV Sufian 82.84 306 *e*P P 06 06 11.7 -6.6
SFNV Sufian 82.84 306 *e*P **P 06 06 17.9 -0.3**
ABPO Ambohimpanom 82.97 250 PFAKE 06 06 30.0 +11
ABPO LR LR
comp=Z,929nm,19.0s
MOS Moscow 83.15 325 *e*P **P 06 06 17.6 -1.7**
MOS *e* 06 09 28.7
MOS *e*S **S 06 16 32.2 -3.2**
MOS pmax pmax
comp=Z,800nm,3.5s
MOS pmax pmax
comp=Z,112nm,0.9s
MOS MLR MLR
comp=Z,3µm,17.0s
LVZ Lovozero 83.60 338 *c e*P **P 06 06 20.8 -0.6**
LVZ pmax pmax
comp=Z,72nm,0.8s
LVZ Lovozero 83.60 338 P **P 06 06 21.8 +0.4**
comp=Z,471nm,0.9s,SNR=9.9
EGAK Eagle 83.69 26 *e*P **P 06 06 23.1 +1.2**
comp=Z,24nm,0.8s
EGAK LR LR
comp=Z,987nm,20.0s
OBN Obninsk 83.80 325 *e*P **P 06 06 21.5 -1.1**
OBN *i* 06 06 32.2
OBN *i* 06 09 31.8
OBN *i* S **S 06 16 38.6 -3.4**
OBN pmax pmax
comp=Z,64nm,0.8s
OBN MLR MLR
comp=Z,1µm,17.0s
APA Apatity 84.11 337 ⇑ *iP* **P 06 06 24.4 +0.4**
APA *i* 06 09 37.0
APA *i* 06 16 39.0
APA *i* S **S 06 16 44.0 -0.6**
APA pmax pmax
comp=Z,86nm,1.0s
APA MLR MLR
comp=Z,27µm,18.0s
ANN Anapa 84.16 314 *e*P **P 06 06 22.5 -2.2**
ANN *e**PP **pP 06 06 38.8 -0.4**
ANN *e* 06 09 35.6
ANN *e*S S 06 16 39.7 -6.3
ANN pmax pmax
comp=Z,67nm,0.7s
PNL Peninsula 85.05 31 *e*P **P 06 06 30.1 +1.1**
comp=Z,44nm,0.8s
JOF Joensuu 85.59 333 *e*P **P 06 06 31.8 +0.3**
JOF pmax pmax
comp=Z,181nm,0.8s
JOF Joensuu 85.59 333 *e*p **P 06 06 31.8 +0.3**
comp=Z,181nm,0.8s
BTCH Batrach 85.82 306 *e*P **P 06 06 33.3 0.0**
BTCH Batrach 85.82 306 *e*P **P 06 06 33.6 +0.2**
ASF Jabal al Asfar 85.91 302 P **P 06 06 32.8 -1.1**
ASF S **S 06 17 04.1 0.0**
ASF Jabal al Asfar 85.91 302 P **P 06 06 32.8 -1.1**
comp=Z,30nm,0.8s,baz=341,slow=2.2,SNR=39
ASF S **S 06 17 04.1 0.0**
comp=Z,0.8nm,0.3s,baz=304,slow=4.9,SNR=2.9
WRDH Warideh 85.92 305 *e*P **P 06 06 33.3 -0.5**
WRDH Warideh 85.92 305 *e*P P 06 06 30.8 -3.1
SALA Sala 85.99 302 *e*P **P 06 06 31.7 -2.7**
HAWK Haweek 86.04 304 *e*P **P 06 06 35.0 +0.5**
HAWK Haweek 86.04 304 *e*P **P 06 06 35.3 +0.8**
BIDA Albida 86.05 305 *e*P **P 06 06 35.0 +0.4**
KEV Kevo 86.06 340 *e*P **P 06 06 33.4 -0.3**
KEV pmax pmax
comp=Z,46nm,0.7s
KEV Kevo 86.06 340 *e*p **P 06 06 33.4 -0.3**
comp=Z,46nm,0.7s
KEV Kevo 86.06 340 *e*P **P 06 06 33.4 -0.3**
comp=Z,31nm,0.8s
KEV LR LR
comp=Z,2µm,20.0s
PPT Papeete 86.17 108 LR LR 06 38 49.2
comp=Z,1µm,18.7s,baz=99,slow=31
PPT2 Papeete2 86.17 108 *e*S **S 06 17 08.9 +1.9**
comp=Z,1µm,21.8s
PPT2 *e*SS **SS 06 22 51.4 +4.5**
comp=Z,630nm,25.5s
PPT2 *e*LR LR 06 33 53.4
comp=Z,2µm,22.0s,baz=293
INK Inuvik 86.20 22 P **P 06 06 35.1 +0.7**
INK S S 06 16 57.1 -8.1
INK Inuvik 86.20 22 P **P 06 06 35.1 +0.7**
comp=Z,8.9nm,1.0s,baz=280,slow=6.4,SNR=34
INK S S 06 16 57.1 -8.1
comp=Z,1.0nm,1.0s,baz=128,slow=30,SNR=9.8
ARNB Al Arnab 86.23 306 *e*P **P 06 06 35.2 -0.2**
ARNB Al Arnab 86.23 306 *e*P **P 06 06 35.2 -0.2**
SPA0 Spitsbergen Ar 86.44 349 *e*P **P 06 06 34.5 -1.0**
SPA0 *e*SKS S 06 16 57.3 -10
SPITS Spitsbergen Ar 86.44 349 P **P 06 06 34.5 -1.0**
SPITS Spitsbergen Ar 86.44 349 P **P 06 06 34.5 -1.0**
comp=Z,41nm,0.8s,baz=113,slow=14,SNR=32
HWQ Hawqa 86.45 304 *e*P **P 06 06 36.3 -0.3**
SIM Simferopol' 86.49 315 *c iP* **P 06 06 35.5 -0.9**
SIM *e* 06 06 47.0
SIM *e*S **S 06 17 08.3 -0.7**
SIM pmax pmax
comp=Z,54nm,0.8s
SIM MLR MLR
comp=Z,1µm,21.2s
BRBR Barbar 86.55 303 *e*P **P 06 06 38.1 +0.9**
BRBR Barbar 86.55 303 *e*P **P 06 06 38.0 +0.8**
PUL Pulkovo 86.57 330 ⇓ *eP* **P 06 06 36.3 -0.1**
PUL pmax pmax
comp=Z,117nm,0.8s
ARCES ARCESS Array B 86.63 340 P **P 06 06 35.5 -1.0**
ARCES PKKPbc **PKKPbc 06 24 32.4 -2.2**
ARCES ARCESS Array B 86.63 340 P **P 06 06 35.5 -1.0**
comp=Z,48nm,0.8s,baz=56,slow=4.8,SNR=100
ARCES PKKPbc **PKKPbc 06 24 32.4 -2.2**
comp=Z,2.5nm,0.9s,baz=262,slow=2.7,SNR=3.7
ARCES LR LR 06 53 19.7
comp=Z,2µm,18.9s,baz=77,slow=41
ARE0 ARCESS Array S 86.63 340 *e*P **P 06 06 36.1 -0.5**
ARE0 ARCESS Array S 86.63 340 *e*P **P 06 06 35.8 -0.7**
TCHB Talchebab 86.63 302 *e*P **P 06 06 37.3 -0.1**
BHL Bhannes 86.74 304 *e*P **P 06 06 37.6 -0.3**
KBS Kingsbay 86.95 350 *e*P **P 06 06 37.2 -0.7**
KBS *e*SKS **SKSac 06 17 02.5 +2.0**
KBS AMS AMS 06 48 59.9
comp=Z,1µm,22.0s
KBS Kingsbay 86.95 350 *e*P **P 06 06 36.4 -1.5**
KBS pmax pmax
comp=Z,15nm,0.8s
KBS MLR MLR
comp=Z,2µm,21.0s
KBS Kingsbay 86.95 350 *e*P **P 06 06 36.4 -1.5**
comp=Z,15nm,0.8s
KBS LR LR
comp=Z,2µm,21.0s
MMAI Mount Meron Ar 87.06 303 P **P 06 06 39.1 -0.4**
MMAI S **SKSac 06 17 02.7 -0.4**
MMAI Mount Meron Ar 87.06 303 P **P 06 06 39.1 -0.4**
comp=Z,48nm,0.8s,baz=82,slow=7.7,SNR=44
MMAI S **SKSac 06 17 02.7 -0.4**
comp=Z,0.9nm,0.3s,baz=313,slow=50,SNR=1.9
BJO Bjornoya 87.11 345 AMS AMS 06 53 42.6
comp=Z,2µm,18.0s
SKAG Skagway 87.13 30 *e*P **P 06 06 41.0 +1.8**
comp=Z,16nm,0.8s
TBI Tubuai 87.24 114 *e*SKSac **SKSac 06 17 05.2 +1.0**
comp=Z,2µm,28.5s
TBI *e*SS **SS 06 23 06.3 +4.1**
comp=Z,808nm,29.8s
TBI *e*LR LR 06 34 31.2
comp=Z,3µm,23.2s,baz=290
VNDA Vanda 87.53 173 *e*P **P 06 06 39.9 -0.8**
comp=Z,1.9nm,0.8s
VNDA Vanda 87.53 173 P **P 06 06 39.9 -0.8**
comp=Z,11nm,0.9s,baz=316,slow=6.1,SNR=38
VNDA LR LR 06 46 02.7
comp=Z,2µm,20.4s,baz=340,slow=36
KTK1 Kautokeino 87.54 339 *e*P P 06 06 37.7 -3.3
KTK1 AMB AMB 06 06 40.2
comp=Z,82nm,0.7s
KTK1 *e*SKS **SKSac 06 17 03.2 -1.2**
KTK1 AMS AMS 06 52 41.8
comp=Z,3µm,19.0s
BR131 Keskin Array S 87.56 310 *e*P **P 06 06 40.3 -1.6**
comp=Z,4.2nm,0.6s
BRTR Keskin Array B 87.56 310 P **P 06 06 40.2 -1.6**
BRTR Keskin Array B 87.56 310 P **P 06 06 40.2 -1.6**
comp=Z,7.3nm,0.8s,baz=111,slow=4.0,SNR=34
BRTR LR LR 06 52 34.0
comp=Z,686nm,19.1s,baz=226,slow=40
MAW Mawson 87.75 200 P **P 06 06 41.8 0.0**
MAW Mawson 87.75 200 P **P 06 06 41.8 0.0**
comp=Z,5.9nm,0.9s,baz=229,slow=1.1,SNR=4.1
MAW LR LR 06 39 21.5
comp=Z,535nm,21.2s,baz=70,slow=31
EIL Elat 87.89 299 P **P 06 06 42.8 -0.7**
EIL S S 06 17 15.3 -7.8
EIL Elat 87.89 299 P **P 06 06 42.8 -0.7**
comp=Z,61nm,0.8s,baz=343,slow=4.1,SNR=33
EIL S S 06 17 15.3 -7.8
comp=Z,1.2nm,0.3s,baz=163,slow=22,SNR=1.8
EIL Elat 87.89 299 P **P 06 06 43.7 +0.2**
baz=88,SNR=18
KAF Kangasniemi 88.02 332 *e*P **P 06 06 42.6 -0.8**
KAF pmax pmax
comp=Z,43nm,0.8s
KAF Kangasniemi 88.02 332 *ep* **P 06 06 42.6 -0.8**
comp=Z,43nm,0.8s
ANTO Ankara 88.18 310 *e*P **P 06 06 43.0 -1.7**
ANTO pmax pmax
comp=Z,11nm,0.6s
ANTO MLR MLR
comp=Z,975nm,19.0s
ANTO Ankara 88.18 310 *e*P **P 06 06 43.0 -1.7**
comp=Z,11nm,0.6s
ANTO LR LR
comp=Z,975nm,19.0s
FIA1 FINESS Array S 88.28 332 *e*P **P 06 06 43.3 -1.3**
FINES FINESS Array B 88.28 332 P **P 06 06 43.5 -1.1**
FINES FINESS Array B 88.28 332 P **P 06 06 43.5 -1.1**
comp=Z,44nm,0.8s,baz=85,slow=4.8,SNR=130
SBA Scott Base 88.43 172 *e*P **P 06 06 45.0 +0.1**
SBA pmax pmax
comp=Z,20nm,1.0s
SBA MLR MLR
comp=Z,1µm,20.0s
SBA Scott Base 88.43 172 *e*P **P 06 06 45.0 +0.1**
comp=Z,20nm,1.0s
SBA LR LR
comp=Z,1µm,20.0s
CSS Prodhromos 88.49 305 P **P 06 06 45.7 -0.5**
comp=Z,0.6nm,0.9s
CSS Prodhromos 88.49 305 *e*P **P 06 06 45.1 -1.2**
comp=Z,58nm,0.8s
CSS LR LR
comp=Z,575nm,19.0s
VSU Vasula 88.63 329 *c iP* **P 06 06 45.0 -1.3**
TRO Tromso 88.81 341 *e*P **P 06 06 46.3 -0.6**
TRO *e*SKS **SKSac 06 17 09.2 -2.7**
TRO AMS AMS 06 54 39.4
comp=Z,2µm,16.8s
AKASG Malin Array Be 88.82 321 *c e*P **P 06 06 46.0 -1.4**
AKASG pmax pmax
comp=Z,35nm,0.8s
AKASG Malin Array Be 88.82 321 P **P 06 06 46.0 -1.4**
AKASG S **SKSac 06 17 18.7 +6.0**
AKASG Malin Array Be 88.82 321 P **P 06 06 46.0 -1.4**
comp=Z,35nm,0.8s,baz=73,slow=4.2,SNR=66
AKASG S **SKSac 06 17 18.7 +6.0**
comp=Z,0.2nm,0.2s,baz=45,slow=24,SNR=3.9
AKASG LR LR 06 52 28.9
comp=Z,2µm,18.0s,baz=70,slow=40
AK01 Malin Array Si 88.83 321 *e*P **P 06 06 46.0 -1.4**
KIEV Kiev 88.83 321 *e*P **P 06 06 45.8 -1.6**
KIEV *e*S **S 06 17 29.3 -1.8**
KIEV pmax pmax
comp=Z,28nm,0.8s
KIEV MLR MLR
comp=Z,2µm,19.0s
KIEV Kiev 88.83 321 *e*P **P 06 06 45.8 -1.6**
comp=Z,28nm,0.8s
KIEV *e*S **S 06 17 29.3 -1.8**
KIEV LR LR
comp=Z,2µm,19.0s
AK02 Malin Array Si 88.84 321 *e*P **P 06 06 46.1 -1.4**
MICGM Minsk 88.86 325 ⇓ *eP* **P 06 06 45.0 -2.5**
MNK Minsk 88.89 325 ⇓ *eP* **P 06 06 45.0 -2.6**
MNK *e**PP **pP 06 07 04.0 +1.7**
MNK *e* 06 10 18.0
MNK *e* 06 17 10.0
MNK *e*S **S 06 17 30.0 -1.6**
MNK *e*PS **PnS 06 18 40.0 -1.0**
MNK MLR MLR
comp=Z,6µm,20.0s
ALFC Alevga 89.06 305 P **P 06 06 47.9 -1.0**
comp=Z,1.9nm,0.8s
AKMC Akamas 89.30 305 P **P 06 06 48.6 -1.4**
PPCY Paphos 89.31 305 P **P 06 06 48.5 -1.5**
WRAK Wrangell Islan 89.32 33 *e*P **P 06 06 51.0 +1.5**
comp=Z,39nm,1.4s
WRAK LR LR
comp=Z,658nm,20.0s
NACGM Naroch 89.40 325 *e*P P 06 06 46.0 -4.0
KIS Kishinev 89.80 317 *e*P **P 06 06 50.0 -2.0**
KIS *e* 06 10 22.0
KIS *e*S **S 06 17 36.0 -4.3**
KIS *e*PS **PnS 06 18 48.0 -4.0**
KIS pmax pmax
comp=Z,500nm,10.0s
KIS pmax pmax
comp=Z,800nm,16.0s
KIS Kishinev 89.80 317 *e*P **P 06 06 50.0 -2.0**
comp=Z,500nm,10.0s
KIS Kishinev 89.80 317 *e*PP PP 06 10 22.0 -2.7
KIS *e*S **S 06 17 36.0 -4.3**
KIS Kishinev 89.80 317 *e*PS PS 06 18 48.0 -4.2
KIS *e*SS SS 06 23 16.0 -22
KIS *e*L L 06 42 30.0
KIS LRM MLR 06 53 14.0
comp=Z,2µm,18.0s
KMBO Kilima Mbogo 89.89 269 *e*P **P 06 06 52.6 -0.8**
comp=Z,46nm,1.6s
KMBO S S 06 17 33.4 -10
KMBO Kilima Mbogo 89.89 269 P **P 06 06 53.0 -0.5**
comp=Z,6.9nm,0.9s,baz=47,slow=8.4,SNR=13
KMBO S S 06 17 33.4 -10
comp=Z,0.6nm,0.3s,baz=219,slow=21,SNR=1.6
KMBO LR LR 06 41 10.0
comp=Z,842nm,21.4s,baz=82,slow=32
KMBO Kilima Mbogo 89.89 269 P **P 06 06 54.0 +0.5**
baz=90,SNR=4.3
DLBC Dease Lake 90.04 31 *e*P **P 06 06 54.0 +1.0**
DLBC Dease Lake 90.04 31 P **P 06 06 54.4 +1.4**
comp=Z,1.8nm,0.6s,baz=270,slow=4.6,SNR=5.8
TLCR 90.16 316 ⇑ P **P 06 06 52.3 -1.4**
TLCR 90.16 316 ⇑ *iP* **P 06 06 52.3 -1.4**
ISP Isparta 90.27 308 *e*P **P 06 06 52.5 -2.1**
ISP pmax pmax
comp=Z,20nm,0.8s
ISP MLR MLR
comp=Z,920nm,22.0s
ISP Isparta 90.27 308 *e*P **P 06 06 52.5 -2.1**
comp=Z,20nm,0.8s
ISP LR LR
comp=Z,920nm,22.0s
ISP Isparta 90.27 308 ⇑ *iP* **P 06 06 52.4 -2.1**
TIRR Tirgusor 90.58 315 ⇓ P **P 06 06 55.3 -0.4**
TIRR Tirgusor 90.58 315 ⇓ *iP* **P 06 06 55.3 -0.4**
CFR Carcaliu 90.63 316 ⇑ P **P 06 06 55.5 -0.4**
CFR Carcaliu 90.63 316 ⇑ *iP* **P 06 06 55.5 -0.4**
TESR Tescani 91.36 317 ⇑ *iP* **P 06 06 58.0 -1.4**
VRI Vrincioaia 91.45 317 ⇑ P **P 06 06 59.4 -0.4**
VRI Vrincioaia 91.45 317 ⇑ *iP* **P 06 06 59.4 -0.4**
SUW Suwalki 91.66 325 *e*P **P 06 06 59.4 -1.1**
SUW pmax pmax
comp=Z,105nm,0.9s
SUW Suwalki 91.66 325 *e*P **P 06 06 59.4 -1.1**
comp=Z,104nm,0.9s
SUW Suwalki 91.66 325 *e*P **P 06 06 59.2 -1.3**
SUW *e*S **SKSac 06 17 27.9 -1.2**
SUW LMZ LR 06 56 59.0
MOR8 Moi Rana 91.67 338 *e*P **P 06 06 57.9 -2.5**
MOR8 AMB AMB 06 07 00.4
comp=Z,52nm,0.8s
BURAR Bucovina Array 92.05 318 ⇑ *iP* **P 06 07 02.8 +0.1**
BUR08 Bucovina Ar. S 92.06 319 *e*P **P 06 07 01.9 -0.8**
MLR Muntele Rosu 92.07 316 P **P 06 07 02.5 -0.4**
MLR Muntele Rosu 92.07 316 ⇑ *iP* **P 06 07 02.0 -0.8**
MLR Muntele Rosu 92.07 316 P **P 06 07 02.5 -0.4**
comp=Z,1.0nm,0.9s,baz=9.5,slow=2.1,SNR=5.5
LVV L'vov 92.26 321 *e*P **P 06 07 02.7 -0.8**
LVV *e* 06 10 46.1
LVV *e* 06 17 32.7
LVV *e*S **S 06 18 00.7 -2.0**
LVV *e* 06 19 16.7
LVV *e* 06 24 10.1
KWP Kalwaria Pacla 93.14 321 *e*P **P 06 07 07.4 -0.2**
KWP pmax pmax
comp=Z,51nm,0.8s
KWP MLR MLR
comp=Z,1µm,19.0s
KWP Kalwaria Pacla 93.14 321 *e*P **P 06 07 07.4 -0.2**
comp=Z,51nm,0.8s
KWP LR LR
comp=Z,1µm,19.0s
KWP Kalwaria Pacla 93.14 321 ⇓ *iP* **P 06 07 07.2 -0.3**
KWP Kalwaria Pacla 93.14 321 *e*P **P 06 07 07.2 -0.3**
KWP LMZ LR 06 51 04.3
DAG Danmarks Havn 93.16 353 ⇑ *iP* **P 06 07 06.1 -0.9**
DAG *i* *PP **pP 06 07 17.0 -4.7**
DAG pmax pmax
comp=Z,32nm,0.9s
DAG Danmarks Havn 93.16 353 ⇑ *iP* **P 06 07 06.1 -0.9**
comp=Z,38nm,0.9s
DAG *i* pP **pP 06 07 17.0 -4.7**
DAG
comp=Z,960nm,20.0s
DAG Danmarks Havn 93.16 353 *i* P **PP 06 10 46.9 -3.4**
comp=Z,8.9nm,0.8s
KDZ Kurdzhali 93.34 313 *e*P **P 06 07 06.8 -1.8**
KOLS Kolonicke sedl 93.61 320 *e*P **P 06 07 09.5 -0.3**
KOLS pmax pmax
comp=Z,10.0nm,1.0s
KOLS Kolonicke sedl 93.61 320 *e*P **P 06 07 09.4 -0.3**
TRPA Tarpa 93.66 319 ⇑ *iP* **P 06 07 10.0 +0.1**
BEL Belsk 93.67 323 *e*P **P 06 07 09.6 -0.3**
BEL *e*S **SKSac 06 17 41.8 +1.4**
BEL LMZ LR 06 51 33.0
RES Resolute Bay 93.67 10 *e*P **P 06 07 10.1 +0.7**
comp=Z,25nm,0.9s
RES Resolute Bay 93.67 10 P **P 06 07 10.1 +0.7**
comp=Z,8.2nm,0.9s,baz=305,slow=7.8,SNR=4.2
UZH Uzhgorod 93.68 320 *d iP* **P 06 07 09.5 -0.5**
UZH *e* 06 07 18.9
UZH *i* 06 07 24.7
UZH *e* 06 10 59.1
UZH *e* 06 17 41.3
UZH *e*S **S 06 18 12.9 -2.4**
UZH *e*SS **SS 06 24 37.3 +3.7**
DRGR 93.92 318 ⇑ P **P 06 07 10.7 -0.6**
DRGR 93.92 318 ⇑ *iP* **P 06 07 10.7 -0.6**
MPEP Malo Peshtene 94.12 315 *e*P P 06 07 09.0 -3.2
CRVS Cervenica-Dubn 94.13 320 *e*P **P 06 07 10.3 -1.8**
CRVS pmax pmax
comp=Z,21nm,1.0s
CRVS Cervenica-Dubn 94.13 320 *e*P **P 06 07 10.3 -1.8**
HFS Hagfors 94.44 333 P P **06 07 12.1 -1.1**
HFS Hagfors 94.44 333 P P **06 07 12.1 -1.1**
comp=Z,25nm,0.8s,baz=59,slow=5.7,SNR=50
SANT Santorini 94.52 308 PFAKE 06 07 20.0 +5.8
SANT LR LR
comp=Z,829nm,19.0s
TBLU Trondheim 94.56 336 AMS AMS 06 53 51.4
comp=Z,3µm,21.0s
MMB Musomiste 94.58 313 *e*P P 06 07 09.5 -4.9
VTS Vitosha 94.69 314 ⇑ P **P 06 07 14.0 -1.1**
VTS Vitosha 94.69 314 ⇑ *iP* **P 06 07 13.9 -1.1**
VTS Vitosha 94.69 314 *e*P P 06 07 10.3 -4.7
NIE Niedzica 94.70 321 ⇑ *iP* **P 06 07 14.8 +0.1**
NIE *e* 06 07 21.8
NIE *e* 06 17 47.5
NIE *e*S **ScS 06 18 25.2 -0.1**
NIE Niedzica 94.70 321 *i* P **P 06 07 14.8 +0.1**
NIE *e* 06 07 21.8
NIE *e*SKSac **SKSac 06 17 47.5 +1.3**
NIE *e*S **ScS 06 18 25.2 -0.1**
OJC Ojcow 94.77 322 ⇑ *iP* **P 06 07 14.5 -0.5**
OJC *e* 06 07 21.6
OJC *e**PP **pP 06 07 32.5 +2.9**
OJC *e* 06 11 05.3
OJC *e* 06 17 44.5
OJC *e*S **S 06 18 24.2 -0.5**
OJC Ojcow 94.77 322 *i* P **P 06 07 14.5 -0.5**
OJC *e* 06 07 21.6
OJC *e*pP **pP 06 07 32.5 +2.9**
OJC *e*PP **PP 06 11 05.3 +1.7**
OJC *e*SKSac **SKSac 06 17 44.5 -1.9**
OJC *e*S **S 06 18 24.2 -0.5**
OJC L L 06 56 28.2
comp=Z,2µm,19.8s
NC602 NORSAR Array S 95.15 334 *e*P **P 06 07 14.5 -2.0**
NB2 NORSAR Subarra 95.16 334 P **P 06 07 14.7 -1.9**
comp=Z,16nm,0.8s,baz=64,slow=4.4
NB2 NORSAR Subarra 95.16 334 P **P 06 07 14.7 -1.9**
baz=64,slow=4.4
NOA NORSAR Array B 95.16 334 P **P 06 07 15.2 -1.5**
NOA NORSAR Array B 95.16 334 P **P 06 07 15.2 -1.5**
comp=Z,9.9nm,0.8s,baz=63,slow=4.6,SNR=52
NOA LR LR 06 53 46.1
comp=Z,2µm,21.1s,baz=65,slow=38
GKP Gorka Klasztor 95.25 325 *e*P **P 06 07 16.3 -0.8**
GKP *e*S SKSac 06 17 56.5 +7.7
GKP LMZ LR 06 52 38.5
NAO01 NORSAR Array S 95.39 334 *e*P **P 06 07 15.7 -1.9**
comp=Z,8.1nm,0.8s
PSZ Piszkesteto 95.42 320 *e*P **P 06 07 17.5 -0.6**
PSZ pmax pmax
comp=Z,7.0nm,0.8s
PSZ MLR MLR
comp=Z,1µm,20.0s
PSZ Piszkesteto 95.42 320 *e*P **P 06 07 17.5 -0.6**
comp=Z,7.0nm,0.8s
PSZ LR LR
comp=Z,1µm,20.0s
PSZ Piszkesteto 95.42 320 ⇑ *iP* **P 06 07 17.3 -0.8**
YKW3 Yellowknife Ar 95.56 24 *e*P **P 06 07 18.9 +0.6**
comp=Z,0.2nm,0.9s
YKA Yellowknife Ar 95.60 24 P **P 06 07 19.4 +1.0**
YKA PKKPbc **PKKPdf 06 24 08.4 -2.8**
YKA Yellowknife Ar 95.60 24 P **P 06 07 19.4 +1.0**
comp=Z,10.0nm,0.8s,baz=300,slow=4.7,SNR=78
YKA PKKPbc **PKKPdf 06 24 08.4 -2.8**
comp=Z,0.3nm,0.4s,baz=116,slow=2.5,SNR=5.6
BSD Bornholm Skovb 95.84 328 ⇑ *iP* **P 06 07 18.0 -1.7**
BSD pmax pmax
comp=Z,11nm,0.8s
BSD MLR MLR
comp=Z,1µm,19.0s
BSD Bornholm Skovb 95.84 328 ⇑ *iP* **P 06 07 18.0 -1.7**
comp=Z,11nm,0.8s
BSD
comp=Z,1µm,18.0s
JMIC Jan Mayen 95.86 347 *e*P **P 06 07 19.9 +0.3**
JMIC AMS AMS 06 54 48.7
comp=Z,715nm,14.4s
JMIC Jan Mayen 95.86 347 P P **06 07 20.5 +1.0**
JMIC Jan Mayen 95.86 347 P P **06 07 20.5 +1.0**
comp=Z,31nm,0.7s,baz=99,slow=2.5,SNR=6.1
OKC Ostrava-Krasne 95.90 322 *e*P **P 06 07 20.0 -0.1**
OKC *e* 06 07 26.6
OKC *e* 06 11 08.5
OKC *e* 06 17 52.8
OKC *e* 06 19 56.5
OKC MLR MLR

comp=Z,1µm,16.2s
OKC Ostrava-Krasne 95.90 322 *e*P **P** **06 07 20.0 -0.1**
OKC *e*pP pP 06 07 26.6 -8.2
OKC *e*PP **PP** **06 11 08.5 -3.9**
OKC *e*SKS **SKSac** **06 17 52.8 +0.4**
OKC *e*PS **PS** **06 19 56.5 -2.9**
OKC AMS AMS 06 57 00.0
comp=Z,1µm,16.2s
VYHS Vyhne 95.91 321 *e*P **P** **06 07 19.2 -1.1**
VYHS pmax pmax
comp=Z,30nm,2.4s
VYHS Vyhne 95.91 321 *e*P **P** **06 07 19.2 -1.1**
VYHS *e*PP **PP** **06 11 13.9 +1.3**
MOL Molde 95.97 336 AMS AMS 06 54 45.6
comp=Z,3µm,16.7s
GRUS Gruza 96.09 316 *e*P **P** **06 07 19.4 -1.7**
SYO Syowa Base 96.40 201⇓ *e*P **P** **06 07 20.7 -1.2**
SYO Syowa Base 96.40 201⇑ *e*X pP 06 07 32.6 -3.9
KONO Kongsberg 96.51 333 *e*P **P** **06 07 22.9 +0.2**
KONO *e*SKS **SKSac** **06 17 57.3 +2.0**
KONO AMS AMS 06 55 00.7
comp=Z,2µm,16.9s
KONO Kongsberg 96.51 333 PFAKE 06 07 30.0 +7.3
KONO LR LR
comp=Z,2µm,20.0s
KSP Ksiaz 96.66 323⇑ *e*P **P** **06 07 23.0 -0.6**
KSP *e* 06 11 14.0
KSP *e* 06 17 55.0
KSP *e*SP SP 06 19 59.5 -1.5
KSP *e*SS SS 06 25 27.0 +11
KSP MLR MLR
comp=Z,5µm,20.9s
KSP Ksiaz 96.66 323 *e*P **P** **06 07 23.0 -0.6**
KSP *e*S SKSac 06 18 03.7 +7.3
KSP LMZ LR 06 53 27.9
DPC Dobruska-Polom 96.82 323 *e*P **P** **06 07 24.5 +0.1**
DPC *e* 06 07 31.4
DPC Dobruska-Polom 96.82 323 *e*P **P** **06 07 24.5 +0.1**
DPC *e*pP pP 06 07 31.4 -7.7
NLWA Neilton Lookou 96.91 40 PFAKE 06 07 40.0 +15
NLWA LR LR
comp=Z,637nm,20.0s
UPC Upice 96.95 323 *e*P **P** **06 07 25.0 +0.1**
UPC *e* 06 07 32.0
UPC Upice 96.95 323 *e*P **P** **06 07 25.0 +0.1**
UPC *e*pP pP 06 07 32.0 -7.6
VRAC Vranov 97.03 322 P **P** **06 07 25.5 +0.2**
VRAC Vranov 97.03 322⇑ *i*P **P** **06 07 25.4 +0.1**
VRAC Vranov 97.03 322 P **P** **06 07 25.5 +0.2**
comp=Z,8.2nm,0.5s,baz=100,slow=1.7,SNR=7.7
ZST Bratislava 97.10 321 *e*P **P** **06 07 24.4 -1.2**
ZST pmax pmax
comp=Z,6.0nm,0.5s
ZST Bratislava 97.10 321 *e*P **P** **06 07 24.4 -1.2**
LLD Lille Linde 97.17 328 *i*P Pdif 06 07 26.1 +0.3
LLD pmax pmax
comp=Z,16nm,0.8s
LLD Lille Linde 97.17 328 *i*P Pdif 06 07 26.1 +0.3
comp=Z,16nm,0.8s
TIR Tirane 97.44 313 PFAKE 06 07 40.0 +13
TIR LR LR
comp=Z,1µm,20.0s
TREC Trest 97.71 322 *e*P **P** **06 07 27.8 -0.6**
TREC *e* 06 07 35.4
TREC MLR MLR
comp=Z,2µm,17.1s
TREC Trest 97.71 322 *e*P **P** **06 07 27.8 -0.6**
TREC *e*pP pP 06 07 35.4 -7.7
TREC AMS AMS 06 58 00.0
comp=Z,2µm,17.1s
PVCC Panska Ves 97.80 323 AMS AMS 06 54 10.0
comp=Z,2µm,19.7s
QSPA South Pole Qui 97.80 180 *e*P **P** **06 07 28.2 -0.2**
comp=Z,12nm,1.3s
QSPA LR LR
comp=Z,1µm,21.0s
BER Bergen 98.01 335 *e*P **P** **06 07 27.8 -1.6**
BER AMS AMS 06 56 31.3
comp=Z,1µm,19.8s
PRU Pruhonice 98.02 323 *e*P Pdif 06 07 29.7 -0.1
PRU *e* 06 07 36.7
PRU *e* 06 11 30.4
PRU *e* 06 18 02.6
PRU MLR MLR
comp=Z,2µm,19.8s
PRU Pruhonice 98.02 323 *e*P Pdif 06 07 29.7 -0.1
PRU *e*pP pP 06 07 36.7 -7.7
PRU *e*PP **PP** **06 11 30.4 +1.7**
PRU *e*SKS **SKSac** **06 18 02.6 -0.8**
PRU *ex* x 06 20 09.3
PRU AMS AMS 06 53 50.0
comp=Z,2µm,19.8s
BRG Berggiesshubel 98.03 324 *e*P **P** **06 07 29.2 -0.6**
comp=Z,14nm,1.3s
BRG *e* 06 07 36.5
comp=Z,13nm,1.2s
BRG PP **PP** **06 11 32.0 +3.2**
BRG SKS **SKSac** **06 18 10.0 +6.6**
BRG SP **SP** **06 20 23.0 +7.2**
BRG SS SS 06 25 51.0 +16
BRG
comp=Z,2µm,18.1s
BRG
comp=N,790nm,18.2s
BRG
comp=E,2µm,18.2s
BRG Berggiesshubel 98.03 324 *e*P **P** **06 07 29.2 -0.6**
BRG *e* 06 07 36.5
BRG 06 11 32.0
BRG 06 18 10.0
BRG SP SP 06 20 23.0 +7.2
BRG pmax pmax
comp=Z,14nm,1.3s
BRG MLR MLR
comp=Z,2µm,18.1s
BRG MLR MLR
comp=N,790nm,18.2s
BRG MLR MLR
comp=E,2µm,18.2s
MUD Monsted U'grnd 98.20 330 *i*P **P** **06 07 30.0 -0.3**
MUD pmax pmax
comp=Z,7.0nm,0.9s
MUD MLR MLR
comp=Z,2µm,21.0s
MUD Monsted U'grnd 98.20 330 *i*P **P** **06 07 30.0 -0.3**
comp=Z,7.4nm,0.9s
MUD
comp=Z,2µm,20.0s
CLL Collm 98.40 325 *i*P **P** **06 07 30.6 -0.8**
CLL *e* 06 11 32.0
CLL *e* 06 18 09.0
CLL pmax pmax
comp=Z,8.0nm,1.3s
CLL MLR MLR
comp=Z,2µm,19.3s
CLL Collm 98.40 325 *i*Pdif **P** **06 07 30.6 -0.8**
comp=Z,8.0nm,1.3s
CLL *e*PP **PP** **06 11 32.0 +0.4**
CLL *e* 06 12 27.0
CLL *e*SKSac **SKSac** **06 18 09.0 +3.7**
CLL *e*Sdif **Sdif** **06 19 06.0 +10**
CLL *e*PS **PS** **06 20 28.0 +1.5**
CLL *e* 06 26 30.0
CLL Lm MLR 06 55 00.0
comp=N,1µm,20.5s
CLL Lm MLR 06 55 00.0
comp=E,1µm,19.0s
CLL Lm MLR 06 55 00.0
comp=Z,2µm,19.3s
KHC Kasperske Hory 98.93 322 *e*P **P** **06 07 33.6 -0.3**
KHC *e* 06 07 40.6
KHC *e* 06 11 34.2
KHC *e* 06 18 09.4
KHC MLR MLR
comp=Z,2µm,20.1s
KHC Kasperske Hory 98.93 322 *e*P **P** **06 07 33.6 -0.3**
KHC *e*pP pP 06 07 40.6 -8.0
KHC *e*PP **PP** **06 11 34.2 -1.5**
KHC *e*SKS **SKSac** **06 18 09.4 +1.3**
KHC *e*S pS 06 19 11.4 -8.2
KHC AMS AMS 06 54 40.0
comp=Z,2µm,20.1s
GERES GERESS Array B 98.97 322 P **P** **06 07 34.0 -0.2**
GERES GERESS Array B 98.97 322 P **P** **06 07 34.0 -0.2**
comp=Z,6.5nm,0.8s,baz=57,slow=4.9,SNR=18
GERES LR LR 06 57 11.3
comp=Z,2µm,20.1s,baz=69,slow=38
SCO Scoresbysund 98.99 350 *i*P Pdif 06 07 34.6 +1.0
SCO pmax pmax
comp=Z,6.0nm,1.0s
SCO MLR MLR
comp=Z,820nm,18.0s
SCO Scoresbysund 98.99 350 *i*P Pdif 06 07 34.6 +1.0
comp=Z,6.3nm,1.0s
SCO
comp=Z,820nm,18.0s
SUMG Summit 99.11 356 *i*P **Pdif** **06 07 35.7 +1.1**
SUMG pmax pmax
comp=Z,5.0nm,0.9s
SUMG MLR MLR
comp=Z,770nm,16.0s
SUMG Summit 99.11 356 *e*Pdif **Pdif** **06 07 34.8 +0.1**
comp=Z,7.2nm,1.0s
SUMG Summit 99.11 356 *i*P **Pdif** **06 07 35.7 +1.1**
comp=Z,4.9nm,0.9s
SUMG
comp=Z,770nm,15.0s
SUMG Summit 99.11 356 *i*P **PP** **06 11 38.0 +1.3**
comp=Z,7.9nm,1.1s
NKC Novy Kostel 99.16 324 *e*SKS **SKSac** **06 18 10.6 +1.4**
NKC *e*PS **PS** **06 20 33.2 -1.7**
NKC AMS AMS 06 55 10.0
comp=Z,2µm,20.0s
BOJS Bojanci 99.24 319 *i*P **Pdif** **06 07 36.0 +0.7**
VISS Visnje 99.40 319 *i*P **Pdif** **06 07 36.7 +0.7**
JAVS Javornik 99.87 319 *i*P **Pdif** **06 07 40.6 +2.4**
HAWA Hanford 100.04 40 PFAKE 06 07 50.0 +11
HAWA LR LR
comp=Z,803nm,19.0s
TIP Timpagrande 100.37 312 PFAKE 06 07 50.0 +9.4
TIP LR LR
comp=Z,1µm,20.0s
RKT Rikitea 100.43 112 *e*SKSac **SKSac** **06 18 18.7 +2.4**
comp=Z,1µm,20.2s
RKT *e*LR LR 06 40 38.2
comp=Z,2µm,26.0s,baz=289
LSZ Lusaka 100.49 256 *e*Pdif **Pdif** **06 07 38.7 -2.9**
comp=Z,6.6nm,0.8s
LSZ LR LR
comp=Z,857nm,19.0s
CUC Castrocucco 100.79 313 PFAKE 06 07 50.0 +7.6
CUC LR LR
comp=Z,1µm,20.0s
NEW Newport 100.79 38 *e*Pdif **Pdif** **06 07 42.9 +0.7**
comp=Z,4.5nm,0.9s
NEW LR LR
comp=Z,548nm,19.0s
CEL Celeste 101.31 311 *e*Pdif **Pdif** **06 07 43.2 -1.5**
comp=Z,24nm,1.0s
CEL LR LR
comp=Z,794nm,22.0s
AQU L'Aquila 101.64 316 PFAKE 06 08 00.0 +14
AQU LR LR
comp=Z,1µm,20.0s
BMO Blue Mountains 102.09 41 PFAKE 06 08 00.0 +12
BMO LR LR
comp=Z,638nm,20.0s
WVOR Wild Horse Val 102.16 44 PFAKE 06 08 00.0 +11
WVOR LR LR
comp=Z,1µm,20.0s
DAVOX Davos/Dischmat 102.16 321 P **Pdif** **06 07 48.3 -0.3**
DAVOX Davos/Dischmat 102.16 321 P **Pdif** **06 07 48.3 -0.3**
comp=Z,4.3nm,0.9s,baz=63,slow=10.5,NR=6.5
BSMT Basoo Peak 102.38 37 *e*Pdif **Pdif** **06 07 51.1 +1.6**
comp=Z,5.2nm,1.1s
TUE Stuetta 102.63 321 PFAKE 06 08 00.0 +9.4
TUE LR LR
comp=Z,2µm,20.0s
VLC Villacollemand 102.95 319 PFAKE 06 08 00.0 +8.1
VLC LR LR
comp=Z,1µm,19.0s
CDF Champ du Feu 103.00 324 *e*P **Pdif** **06 07 51.5 -0.6**
comp=Z,10.0nm,0.9s
CDF Champ du Feu 103.00 324 *e*P **Pdif** **06 07 51.5 -0.6**
CDF pmax pmax
comp=Z,10.0nm,0.9s
CDF Champ du Feu 103.00 324 *e*P **Pdif** **06 07 51.5 -0.6**
comp=Z,10.0nm,0.9s
SWMT Swartz Lake 103.01 37 Pdif **Pdif** **06 07 53.1 +0.9**
comp=Z,2.1nm,0.9s
WLF Walferdange 103.05 325 P **Pdif** **06 07 52.3 +0.2**
WLF Walferdange 103.05 325 *e*P **Pdif** **06 07 52.1 -0.1**
WLF pmax pmax
comp=Z,16nm,0.9s
WLF MLR MLR
comp=Z,2µm,19.0s
WLF Walferdange 103.05 325 *e*Pdif **Pdif** **06 07 52.1 -0.1**
comp=Z,16nm,0.9s
WLF LR LR
comp=Z,2µm,19.0s
WDD Wield Dalam 103.15 310 PFAKE 06 08 00.0 +7.1
WDD LR LR
comp=Z,651nm,20.0s
ECH Echery 103.16 323 PFAKE 06 08 00.0 +7.3
ECH LR LR
comp=Z,2µm,19.0s
MSO Missoula 103.36 38 PFAKE 06 08 10.0 +16
MSO LR LR
comp=Z,473nm,19.0s
SLMT Seeley Lake 103.44 38 *e*Pdif **Pdif** **06 07 55.3 +1.1**
comp=Z,7.9nm,1.4s
HINF Hinteralfeld 103.53 323 *e*P **Pdif** **06 07 53.6 -0.8**
HINF Hinteralfeld 103.53 323 *e*P **Pdif** **06 07 53.6 -0.8**
HINF Hinteralfeld 103.53 323 *e*P **Pdif** **06 07 53.6 -0.8**
GIVF Givet 103.58 326 *e*P **Pdif** **06 07 54.3 -0.2**
comp=Z,14nm,0.9s
GIVF Givet 103.58 326 *e*P **Pdif** **06 07 54.3 -0.2**
GIVF pmax pmax
comp=Z,14nm,0.9s
GIVF Givet 103.58 326 *e*P **Pdif** **06 07 54.3 -0.2**
comp=Z,14nm,0.9s
HAU Haudompre 103.74 323 *e*P **Pdif** **06 07 55.0 -0.3**
HAU *e*R
comp=Z,2µm,19.5s
HAU Haudompre 103.74 323 *e*P **Pdif** **06 07 55.0 -0.3**
HAU Haudompre 103.74 323 *e*P **Pdif** **06 07 55.0 -0.3**
BORG Borgarnes 103.76 347 PFAKE 06 08 10.0 +15
BORG LR LR
comp=Z,1µm,19.0s
PAGF Fort de Pagny 103.84 324 *e*P **Pdif** **06 07 55.2 -0.5**
comp=Z,3.1nm,0.9s
PAGF Fort de Pagny 103.84 324 *e*P **Pdif** **06 07 55.2 -0.5**
comp=Z,3.1nm,0.9s
NVAR Mina Array Bea 103.92 47 Pdif **Pdif** **06 07 58.1 +1.5**
NVAR PP **PKiKP** **06 12 15.6 +1.5**
NVAR PKKPbc **PKKPbc** **06 23 46.8 -0.8**
NVAR Mina Array Bea 103.92 47 Pdiff **Pdif** **06 07 58.1 +1.5**
comp=Z,0.9nm,0.8s,baz=276,slow=4.7,SNR=4.2
NVAR PP **PKiKP** **06 12 15.6 +1.5**
comp=Z,0.6nm,0.5s,baz=276,slow=9.0,SNR=2.7
NVAR PKKPbc **PKKPbc** **06 23 46.8 -0.8**
comp=Z,1.3nm,0.9s,baz=154,slow=3.3,SNR=4.8
BMN Battle Mountai 103.92 45 PFAKE 06 08 10.0 +14
BMN LR LR
comp=Z,676nm,20.0s
BAIF Baives 103.94 326 *e*P **Pdif** **06 07 55.7 -0.4**
comp=Z,10nm,1.1s
BAIF Baives 103.94 326 *e*P **Pdif** **06 07 55.7 -0.4**
BAIF pmax pmax
comp=Z,11nm,1.1s
BAIF Baives 103.94 326 *e*P **Pdif** **06 07 55.7 -0.4**
comp=Z,10nm,1.1s
MEZF Maizieres J'vi 104.25 324 *e*P **Pdif** **06 07 57.1 -0.4**
comp=Z,6.9nm,0.5s
MEZF Maizieres J'vi 104.25 324 *e*P **Pdif** **06 07 57.1 -0.4**
comp=Z,6.9nm,0.5s
SFTF Sexfontaines 104.41 324 *e*P **Pdif** **06 07 57.5 -0.7**
SFTF Sexfontaines 104.41 324 *e*P **Pdif** **06 07 57.5 -0.7**
HLID Hailey 104.52 41 PFAKE 06 08 10.0 +11
HLID LR LR
comp=Z,607nm,20.0s
PGF Pioggiola 104.55 318 *e*P **Pdif** **06 07 58.2 -0.9**
comp=Z,6.5nm,0.8s
PGF Pioggiola 104.55 318 *e*P **Pdif** **06 07 58.2 -0.9**
PGF pmax pmax
comp=Z,7.0nm,0.8s
PGF Pioggiola 104.55 318 *e*P **Pdif** **06 07 58.2 -0.9**
comp=Z,6.5nm,0.8s
CABF La Chapelle 104.56 322 *e*P **Pdif** **06 07 58.6 -0.5**
CABF La Chapelle 104.56 322 *e*P **Pdif** **06 07 58.6 -0.5**
CABF La Chapelle 104.56 322 *e*P **Pdif** **06 07 58.6 -0.5**
EKA Eskdalemuir Ar 104.63 333 Pdif **Pdif** **06 07 58.1 -0.9**
EKA Eskdalemuir Ar 104.63 333 Pdiff **Pdif** **06 07 58.1 -0.9**
comp=Z,0.2nm,0.4s,baz=40,slow=12,SNR=3.8
ESK Eskdalemuir 104.66 333 PFAKE 06 08 10.0 +11
ESK LR LR
comp=Z,1µm,20.0s
LPG La Plagne 104.68 321 *e*P **Pdif** **06 07 59.5 -0.4**
comp=Z,8.6nm,1.0s
LPG La Plagne 104.68 321 *e*P **Pdif** **06 07 59.5 -0.4**
LPG pmax pmax
comp=Z,9.0nm,1.0s
LPG La Plagne 104.68 321 *e*P **Pdif** **06 07 59.5 -0.4**
comp=Z,8.6nm,1.0s
LPL La Plagne 104.69 321 *e*P **Pdif** **06 07 59.6 -0.2**
comp=Z,4.2nm,0.7s
LPL La Plagne 104.69 321 *e*P **Pdif** **06 07 59.6 -0.2**
LPL pmax pmax
comp=Z,4.0nm,0.7s
LPL La Plagne 104.69 321 *e*P **Pdif** **06 07 59.6 -0.2**
comp=Z,4.2nm,0.7s
TPH Tonopah 104.84 47 PFAKE 06 08 10.0 +9.3
TPH LR LR
comp=Z,835nm,21.0s
D17A Six Diamond Ra 105.16 37⇑ PKiKP **PKiKP** **06 12 16.7 +0.6**
baz=105
ELK Elko 105.17 44 PKiKP **PKiKP** **06 12 17.4 +1.1**
ELK PKKPbc **PKKPdf** **06 23 52.5 -1.4**
ELK Elko 105.17 44 PKiKP **PKiKP** **06 12 17.4 +1.1**
comp=Z,1.2nm,0.7s,baz=267,slow=2.7,SNR=5.7
ELK PKKPbc **PKKPdf** **06 23 52.5 -1.4**
comp=Z,1.4nm,0.8s,baz=142,slow=2.9,SNR=4.8
H15A Lima 105.18 40⇑ PKiKP **PKiKP** **06 12 17.1 +0.9**
baz=105
J14A Carey 105.21 41⇓ PKiKP **PKiKP** **06 12 17.1 +0.9**
baz=105
SFJD Kangerlussuaq 105.25 359 PFAKE 06 12 30.0
SFJD LR LR
comp=Z,854nm,20.0s
EGMT Eagleton 105.26 36 PFAKE 06 12 30.0
EGMT LR LR
comp=Z,644nm,19.0s
EGMT Eagleton 105.26 36⇓ PKiKP **PKiKP** **06 12 17.3 +1.2**
baz=105
BOZ Bozeman (W) 105.33 38 PFAKE 06 12 30.0
BOZ LR LR
comp=Z,573nm,19.0s
A19A Klindworth Far 105.37 34⇓ PKiKP **PKiKP** **06 12 17.7 +1.4**
baz=105
FFC Flin Flon 105.41 27 PFAKE 06 12 30.0
FFC LR LR
comp=Z,553nm,20.0s
LRMC Laurel Mountai 105.47 50⇓ PKiKP **PKiKP** **06 12 17.2 +0.3**
baz=106
ORIF Oris-en-Rattie 105.50 321 *e*P **Pdif** **06 08 02.7 -0.6**
ORIF *e*R
comp=Z,2µm,19.8s
ORIF Oris-en-Rattie 105.50 321 *e*P **Pdif** **06 08 02.7 -0.6**
ORIF Oris-en-Rattie 105.50 321 *e*P **Pdif** **06 08 02.7 -0.6**
LOR Lormes 105.57 324 *e*P **Pdif** **06 08 02.7 -0.7**
comp=Z,10.0nm,1.1s
LOR *e*R
comp=Z,2µm,20.0s
LOR Lormes 105.57 324 *e*P **Pdif** **06 08 02.7 -0.7**
comp=Z,10.0nm,1.1s
VSL Villasalto 105.57 315 PFAKE 06 12 30.0
VSL LR LR
comp=Z,658nm,19.0s
FRF La Foret Royal 105.64 319 *e*P **Pdif** **06 08 02.9 -0.9**
FRF La Foret Royal 105.64 319 *e*P **Pdif** **06 08 02.9 -0.9**
FRF La Foret Royal 105.64 319 *e*P **Pdif** **06 08 02.9 -0.9**
C19A Slack Wire Ran 105.82 36⇑ PKiKP **PKiKP** **06 12 18.0 +0.9**
baz=106
SSF Saint Saulge 105.88 324 *e*P **Pdif** **06 08 04.3 -0.5**
comp=Z,5.3nm,1.0s
SSF Saint Saulge 105.88 324 *e*P **Pdif** **06 08 04.3 -0.5**
SSF pmax pmax
comp=Z,5.0nm,1.0s
SSF Saint Saulge 105.88 324 *e*P **Pdif** **06 08 04.3 -0.5**
comp=Z,5.3nm,1.0s
SMF Signal de Mont 105.89 323 *e*P **Pdif** **06 08 04.2 -0.7**
comp=Z,18nm,1.2s
SMF Signal de Mont 105.89 323 *e*P **Pdif** **06 08 04.2 -0.7**
SMF pmax pmax
comp=Z,18nm,1.2s
SMF Signal de Mont 105.89 323 *e*P **Pdif** **06 08 04.2 -0.7**
comp=Z,18nm,1.2s
R11A Troy Canyon, C 105.92 47⇑ PKiKP **PKiKP** **06 12 15.9 -1.9**
baz=106
BFSC Mount Baldy Ra 105.95 51⇑ PKiKP **PKiKP** **06 12 18.0 +0.1**
baz=106
AVF Avril sur Loir 106.11 323 *e*P **Pdif** **06 08 05.0 -0.8**
AVF Avril sur Loir 106.11 323 *e*P **Pdif** **06 08 05.0 -0.8**
AVF Avril sur Loir 106.11 323 *e*P **Pdif** **06 08 05.0 -0.8**
SSB Saint Sauveur 106.15 322 PFAKE 06 12 30.0
SSB LR LR
comp=Z,1µm,20.0s
D19A Cripps Ranch, 106.21 36⇓ PKiKP **PKiKP** **06 12 19.9 +2.0**
baz=106
VIVF Saint-Julien-l 106.28 321 *e*P **Pdif** **06 08 06.1 -0.6**
comp=Z,14nm,1.3s
VIVF Saint-Julien-l 106.28 321 *e*P **Pdif** **06 08 06.1 -0.6**
VIVF pmax pmax
comp=Z,14nm,1.3s
VIVF Saint-Julien-l 106.28 321 *e*P **Pdif** **06 08 06.1 -0.6**
comp=Z,14nm,1.3s
F18A Big Timber 106.37 37⇑ PKiKP **PKiKP** **06 12 17.6 -0.6**
baz=106
C20A Veseth Ranch, 106.43 35⇓ PKiKP **PKiKP** **06 12 18.6 +0.4**
baz=106
E19A Rath Farm, Rou 106.64 37⇑ PKiKP **PKiKP** **06 12 18.9 +0.2**
baz=107
C21A Desert Coulee 106.89 35⇓ PKiKP **PKiKP** **06 12 19.0 -0.1**
baz=107
A22A Carney Farms, 106.89 33⇓ PKiKP **PKiKP** **06 12 19.3 +0.2**
baz=107
SNOW Snow King Moun 106.93 40 *e*PKPdf **PKiKP** **06 12 20.0 +0.4**
RLMT Red Lodge 107.03 38 PFAKE 06 12 30.0
RLMT LR LR
comp=Z,672nm,19.0s
AHID Auburn Hatcher 107.04 41 PFAKE 06 12 30.0
AHID LR LR
comp=Z,706nm,21.0s
TCF Toulx Ste Croi 107.05 323 *e*P **Pdif** **06 08 09.7 -0.3**
comp=Z,7.5nm,1.1s
TCF Toulx Ste Croi 107.05 323 *e*P **Pdif** **06 08 09.7 -0.3**
TCF pmax pmax
comp=Z,8.0nm,1.1s
TCF Toulx Ste Croi 107.05 323 *e*P **Pdif** **06 08 09.7 -0.3**
comp=Z,7.5nm,1.1s
DUG Dugway 107.08 44 PFAKE 06 12 30.0
DUG LR LR
comp=Z,637nm,20.0s
DUG Dugway 107.08 44⇓ PKiKP **PKiKP** **06 12 20.4 +0.7**
baz=107
PFO Pinyon Flat Ob 107.11 51 PFAKE 06 12 30.0
PFO LR LR
comp=Z,762nm,20.0s
LDF La Druitiere 107.12 326 *e*P **Pdif** **06 08 09.7 -0.6**
LDF La Druitiere 107.12 326 *e*P **Pdif** **06 08 09.7 -0.6**
LDF La Druitiere 107.12 326 *e*P **Pdif** **06 08 09.7 -0.6**
LASF Ste Croix 107.17 321 *e*P **Pdif** **06 08 09.3 -1.4**
comp=Z,12nm,1.1s
LASF Ste Croix 107.17 321 *e*P **Pdif** **06 08 09.3 -1.4**
comp=Z,12nm,1.1s
FLN La Foliniere 107.22 327 *e*P **Pdif** **06 08 10.0 -0.7**
FLN *e*R
comp=Z,2µm,19.5s
FLN La Foliniere 107.22 327 *e*P **Pdif** **06 08 10.0 -0.7**
FLN La Foliniere 107.22 327 *e*P **Pdif** **06 08 10.0 -0.7**
HWUT Hardware Ranch 107.28 42 PFAKE 06 12 30.0
HWUT LR LR
comp=Z,1µm,21.0s
C22A Vida 107.61 34⇓ PKiKP **PKiKP** **06 12 20.3 -0.1**
baz=108
GRR Gorron 107.64 326 *e*P **Pdif** **06 08 12.2 -0.4**
GRR Gorron 107.64 326 *e*P **Pdif** **06 08 12.2 -0.4**
GRR Gorron 107.64 326 *e*P **Pdif** **06 08 12.2 -0.4**
B23A Brockton 107.70 33⇓ PKiKP **PKiKP** **06 12 20.9 +0.3**
baz=108
D22A Cohagen 107.78 35⇓ PKiKP **PKiKP** **06 12 21.5 +0.8**
baz=108
CAF Calviac 107.84 322 *e*P **Pdif** **06 08 13.6 0.0**
CAF Calviac 107.84 322 *e*P **Pdif** **06 08 13.6 0.0**
CAF Calviac 107.84 322 *e*P **Pdif** **06 08 13.6 0.0**
M17A Scullys Gap (B 107.94 42⇑ PKiKP **PKiKP** **06 12 21.6 +0.1**

baz=108
C23A Lambert 107.97 34 ⇑PKiKP **PKiKP** 06 12 21.4 +0.3
baz=108
RJF Les Rejaudoux 107.98 323 *e*P **Pdif** 06 08 14.3 +0.1
comp=Z,7.1nm,0.9s
RJF *e*R
comp=Z,2μm,20.0s
RJF Les Rejaudoux 107.98 323 *e*P **Pdif** 06 08 14.3 +0.1
RJF pmax pmax
comp=Z,7.0nm,0.9s
RJF Les Rejaudoux 107.98 323 *e*P **Pdif** 06 08 14.3 +0.1
comp=Z,7.1nm,0.9s
BW06 Boulder Array 108.03 40 PFAKE 06 12 30.0
BW06 LR LR
comp=Z,804nm,19.0s
PDAR Pinedale Array 108.03 40 PKiKP **PKiKP** 06 12 22.5 +0.9
PDAR PKKPbc **PKKPbc** 06 23 39.2 +4.1
PDAR Pinedale Array 108.03 40 PKiKP **PKiKP** 06 12 22.5 +0.9
comp=Z,0.7nm,0.8s,baz=318,slow=2.0,SNR=3.6
PDAR PKKPbc **PKKPbc** 06 23 39.2 +4.1
comp=Z,0.9nm,0.9s,baz=134,slow=6.4,SNR=3.8
DGMT Dagmar 108.12 33 PFAKE 06 12 30.0
DGMT LR LR
comp=Z,701nm,21.0s
L18A Fontenelle, Gr 108.14 41 ⇓PKiKP **PKiKP** 06 12 22.2 +0.4
baz=108
MVU Marysvale 108.25 45 PFAKE 06 12 30.0
MVU LR LR
comp=Z,1μm,20.0s
D23A Lindsay 108.31 35 ⇓PKiKP **PKiKP** 06 12 22.0 +0.2
baz=108
I20A Worland 108.33 39 ⇑PKiKP **PKiKP** 06 12 22.3 +0.3
baz=108
E23A Ismay 108.64 35 ⇓PKiKP **PKiKP** 06 12 22.7 +0.4
baz=109
I21A Big Trails, Te 108.92 38 ⇓PKiKP **PKiKP** 06 12 22.9 -0.2
baz=109
ROSF Rostrenen 108.97 327 *e*P **Pdif** 06 08 18.7 +0.2
comp=Z,16nm,1.1s
ROSF Rostrenen 108.97 327 *e*P **Pdif** 06 08 18.7 +0.2
ROSF pmax pmax
comp=Z,16nm,1.1s
ROSF Rostrenen 108.97 327 *e*P **Pdif** 06 08 18.7 +0.2
comp=Z,16nm,1.1s
F23A Volborg 109.02 36 ⇓PKiKP **PKiKP** 06 12 23.6 +0.4
baz=109
H22A Clearmont 109.08 37 ⇑PKiKP **PKiKP** 06 12 24.2 +0.9
baz=109
U15A North Rim 109.10 47 ⇓PKiKP **PKiKP** 06 12 25.0 +1.1
baz=109
SRU San Rafael 109.15 44 ⇑PKiKP **PKiKP** 06 12 23.9 +0.2
baz=109
G23A Biddle 109.31 36 ⇑PKiKP **PKiKP** 06 12 24.6 +0.9
baz=109
O19A Miners Draw (B 109.53 42 ⇑PKiKP **PKiKP** 06 12 24.6 +0.3
baz=110
H23A Clabaugh Cattl 109.66 37 ⇓PKiKP **PKiKP** 06 12 24.2 -0.3
baz=110
N20A Spence Gulch, 109.83 42 ⇓PKiKP **PKiKP** 06 12 26.1 +1.1
baz=110
Z14A Wintersburg 109.91 50 ⇓PKiKP **PKiKP** 06 12 24.9 -0.2
baz=110
M21A Separation Pea 110.03 40 ⇑PKiKP **PKiKP** 06 12 25.8 +0.4
baz=110
H24A Dirks Ranch, A 110.06 36 ⇑PKiKP **PKiKP** 06 12 24.5 -0.6
baz=110
WUAZ Wupatki 110.17 48 *e*PKPdf **PKiKP** 06 12 27.1 +1.4
WUAZ LR LR
comp=Z,770nm,21.0s
WUAZ Wupatki 110.17 48 ⇓PKiKP **PKiKP** 06 12 25.8 +0.1
baz=110
S18A Hurst Farm, Bl 110.18 45 ⇑PKiKP **PKiKP** 06 12 25.5 -0.3
baz=110
O20A White River Ci 110.20 42 ⇓PKiKP **PKiKP** 06 12 27.3 +1.6
baz=110
N21A Black Mountain 110.36 41 ⇑PKiKP **PKiKP** 06 12 27.6 +1.6
baz=110
L22A Ellis Ranch, M 110.40 40 ⇑PKiKP **PKiKP** 06 12 26.9 +0.9
baz=110
I24A Kuemmerle Ranc 110.52 37 ⇓PKiKP **PKiKP** 06 12 25.0 -1.1
baz=110
X16A Lo Mia Camp, P 110.60 49 ⇓PKiKP **PKiKP** 06 12 27.3 +0.7
baz=111
O21A Pagoda 110.67 42 ⇓PKiKP **PKiKP** 06 12 26.8 +0.1
baz=111
RSSD Black Hills 110.72 37 *e*PKiKP **PKiKP** 06 12 27.4 +0.8
RSSD Black Hills 110.72 37 *e*PKPdf **PKiKP** 06 12 27.4 +0.8
J24A Dixon Ranch, L 110.79 38 ⇑PKiKP **PKiKP** 06 12 27.6 +1.0
baz=111
TSUM Tsumeb 110.84 253 PFAKE 06 12 40.0
TSUM LR LR
comp=Z,967nm,20.0s
PV01 Paradox Valley 110.96 44 *e*PKPdf **PKiKP** 06 12 28.2 +0.9
N22A Wattenberg Ran 111.03 41 ⇑PKiKP **PKiKP** 06 12 28.7 +1.4
baz=111
P21A Newcastle 111.03 42 ⇑PKiKP **PKiKP** 06 12 28.7 +1.4
baz=111
S20A Disappointment 111.25 44 ⇓PKiKP **PKiKP** 06 12 29.0 +1.2
baz=111
MVCO Mesa Verde 111.45 45 *e*PKPdf **PKiKP** 06 12 29.2 +1.0
MVCO Mesa Verde 111.45 45 ⇓PKiKP **PKiKP** 06 12 29.4 +1.2
baz=111
SMCO Snowmass 111.53 42 *e*PKPdf **PKiKP** 06 12 29.5 +1.0
O23A Lake Granby, G 111.69 41 ⇓PKiKP **PKiKP** 06 12 30.2 +1.6
baz=112
S21A Coal Bank Pass 111.72 44 ⇓PKiKP **PKiKP** 06 12 30.5 +1.7
baz=112
Q22A Crested Butte, 111.73 43 ⇓PKiKP **PKiKP** 06 12 29.9 +1.1
baz=112
U20A Newcomb 111.83 46 ⇓PKiKP **PKiKP** 06 12 30.2 +1.4
baz=112
TUC Tucson 112.00 51 PFAKE 06 12 40.0
TUC LR LR
comp=Z,783nm,20.0s
K26A Motz Farm, Whi 112.04 38 ⇑PKiKP **PKiKP** 06 12 29.2 +0.2
baz=112
ISCO Idaho Springs 112.10 41 *e*PKiKP **PKiKP** 06 12 30.7 +1.2
ISCO MLR MLR
comp=Z,1μm,19.0s
ISCO Idaho Springs 112.10 41 *e*PKPdf **PKiKP** 06 12 30.7 +1.2
ISCO LR LR
comp=Z,1μm,19.0s
ISCO Idaho Springs 112.10 41 ⇓PKiKP **PKiKP** 06 12 30.6 +1.2
baz=112
R22A Saguache, Gunn 112.15 43 ⇓PKiKP **PKiKP** 06 12 30.8 +1.2
baz=112
T21A Navajo Lake 112.23 45 ⇑PKiKP **PKiKP** 06 12 31.1 +1.5
baz=112
S22A 4UR Ranch, Cre 112.34 44 ⇓PKiKP **PKiKP** 06 12 30.6 +0.6
baz=112
U21A Nageezi 112.42 45 ⇑PKiKP **PKiKP** 06 12 31.7 +1.7
baz=112
Q23A Hartsel 112.43 42 ⇑PKiKP **PKiKP** 06 12 31.1 +1.0
baz=112
W20A Ramah 112.44 47 ⇓PKiKP **PKiKP** 06 12 31.1 +1.0
baz=112
AGMN Agassiz Nation 112.52 29 PFAKE 06 12 40.0
AGMN LR LR
comp=Z,901nm,20.0s
P24A Kohler Place, 112.72 41 ⇑PKiKP **PKiKP** 06 12 31.9 +1.4
baz=113
M26A McRoberts Ranc 112.77 39 ⇓PKiKP **PKiKP** 06 12 31.8 +1.3
baz=113
R23A Moffat 112.80 43 ⇑PKiKP **PKiKP** 06 12 30.6 -0.2
baz=113
U22A Llaves 113.01 45 ⇓PKiKP **PKiKP** 06 12 32.9 +1.7
baz=113
Y20A Horse Springs, 113.09 48 ⇓PKiKP **PKiKP** 06 12 32.5 +1.1
baz=113
P25A Willow Gulch B 113.20 41 ⇑PKiKP **PKiKP** 06 12 33.1 +1.7
baz=113
V22A San Miguel Ran 113.20 46 ⇑PKiKP **PKiKP** 06 12 33.3 +1.7
baz=113
T23A Casias Ranch, 113.25 44 ⇑PKiKP **PKiKP** 06 12 32.6 +0.9
baz=113
SDCO Great Sand Dun 113.25 43 *e*PKPdf **PKiKP** 06 12 33.5 +1.8
SDCO LR LR
comp=Z,1μm,20.0s
R24A Sanders Place, 113.26 43 ⇓PKiKP **PKiKP** 06 12 31.7 +0.1
baz=113
X21A Alamocita Cree 113.28 47 ⇑PKiKP **PKiKP** 06 12 33.3 +1.5
baz=113
Z20A Nine Sixteen R 113.30 49 ⇓PKiKP **PKiKP** 06 12 32.7 +0.9
baz=113
O26A Horse Wrangler 113.35 40 ⇑PKiKP **PKiKP** 06 12 32.5 +0.9
baz=113
Q25A Bedland, Calha 113.47 42 ⇓PKiKP **PKiKP** 06 12 32.7 +0.8
baz=113
U23A El Rito 113.50 45 ⇓PKiKP **PKiKP** 06 12 33.2 +1.0
baz=113
S24A Houchin Ranch, 113.50 43 ⇑PKiKP **PKiKP** 06 12 33.4 +1.2
baz=113
Y21A Point of Rocks 113.56 48 ⇓PKiKP **PKiKP** 06 12 33.3 +1.0
baz=114
P26A Davis Ranch, A 113.70 41 ⇓PKiKP **PKiKP** 06 12 33.2 +0.9
baz=114
OGNE Ogallala 113.75 39 PFAKE 06 12 40.0
OGNE LR LR
comp=Z,740nm,19.0s
R25A Fountain Ranch 113.86 42 ⇑PKiKP **PKiKP** 06 12 33.4 +0.7
baz=114
Q26A Hugo 113.94 41 ⇓PKiKP **PKiKP** 06 12 34.0 +1.2
baz=114
ANMO Albuquerque 114.00 46 *e*PKPdf 06 12 34.6
ANMO LR LR
comp=Z,658nm,19.0s
S25A Robets Cordova 114.02 43 ⇑PKiKP **PKiKP** 06 12 34.4 +1.4
baz=114
W23A Werner Place, 114.11 46 ⇓PKiKP **PKiKP** 06 12 34.3 +1.0
baz=114
Y22A Socorro 114.12 47 ⇓PKiKP **PKiKP** 06 12 34.1 +0.8
baz=114
320A Kipp Ranch, An 114.15 51 ⇑PKiKP **PKiKP** 06 12 34.5 +1.1
baz=114
121A Cookes Peak, D 114.17 49 ⇑PKiKP **PKiKP** 06 12 34.7 +1.3
baz=114
BNM Barren Site 114.26 47 *e*PKPdf PKPdf 06 12 34.5 +0.9
T25A Trinidad 114.31 43 ⇓PKiKP PKPdf 06 12 34.3 +0.7
baz=114
Z22A Elephant Butte 114.44 48 ⇑PKiKP PKPdf 06 12 35.0 +1.1
baz=114
V24A Rampart Ranch, 114.44 45 ⇑PKiKP PKPdf 06 12 35.5 +1.5
baz=114
ESDC Sonsela Array 114.45 320 PP **PP** 06 13 29.3 -0.6
ESDC Sonseca Array 114.45 320 PP **PP** 06 13 29.3 -0.6
comp=Z,0.3nm,0.3s,baz=50,slow=8.2,SNR=5.5
W24A Lazy 6 Ranch, 114.61 46 ⇓PKiKP PKPdf 06 12 35.4 +1.1
baz=115
S26A Kim 114.68 42 ⇑PKiKP PKPdf 06 12 34.8 +0.6
baz=115
U25A Circle Dot Ran 114.70 44 ⇑PKiKP PKPdf 06 12 34.8 +0.5
baz=115
P28A Saint Francis 114.71 40 ⇓PKiKP PKPdf 06 12 34.9 +0.7
baz=115
R27A Eads 114.76 41 ⇑PKiKP PKPdf 06 12 35.5 +1.1
baz=115
PAB San Pablo 114.77 320 PFAKE 06 12 50.0 +16
PAB LR LR
comp=Z,819nm,20.0s
Y23A Lovelace Mesa, 114.78 47 ⇓PKiKP PKPdf 06 12 35.6 +1.0
baz=115
EYMN Ely 114.83 27 PFAKE 06 12 50.0 +16
EYMN LR LR
comp=Z,941nm,20.0s
T26A Comanche Natio 114.84 43 ⇑PKiKP PKPdf 06 12 35.8 +1.2
baz=115
V25A Rancho No Teng 114.84 45 ⇑PKiKP PKPdf 06 12 35.8 +1.2
baz=115
X24A Lazy VL Ranch, 114.92 46 ⇑PKiKP PKPdf 06 12 35.9 +1.0
baz=115
Q28A Sharon Springs 114.96 40 ⇓PKiKP PKPdf 06 12 34.9 +0.3
baz=115
TAM Tamanrasset 115.11 300 PFAKE 06 12 50.0 +15
TAM LR LR
comp=Z,870nm,19.0s
U26A Atchley Ranch, 115.16 44 ⇑PKiKP **PKPdf** 06 12 35.6 +0.3
baz=115
ECSD EROS Data Cent 115.20 34 *e*PKPdf **PKPdf** 06 12 34.7 -0.1
ECSD LR LR
comp=Z,739nm,20.0s
Y24A Capitan 115.23 47 ⇑PKiKP **PKPdf** 06 12 36.7 +1.2
baz=115
W25A X Bar L Ranch, 115.27 45 ⇓PKiKP **PKPdf** 06 12 36.1 +0.6
baz=115
R28A Tribune 115.38 41 ⇓PKiKP **PKPdf** 06 12 36.3 +0.8
baz=115
V26A Tequesquite Ra 115.44 44 ⇓PKiKP **PKiKP** 06 12 35.8 0.0
baz=115
T27A Campo 115.49 43 ⇓PKiKP **PKPdf** 06 12 36.4 +0.6
baz=115
Z24A Sheeppen Canyo 115.58 47 ⇑PKiKP **PKPdf** 06 12 37.4 +1.2
baz=116
S28A Mater 115.74 42 ⇓PKiKP **PKiKP** 06 12 36.1 -0.1
baz=116
U27A Thompson Grove 115.77 43 ⇓PKiKP **PKPdf** 06 12 37.2 +0.9
baz=116
Y25A Mesa, Roswell 115.77 46 ⇑PKiKP **PKPdf** 06 12 37.3 +0.9
baz=116
BGNE Belgrade 115.81 36 ⇑PKiKP **PKiKP** 06 12 36.1 -0.1
baz=116
124A Stringfield Ra 115.82 48 ⇓PKiKP **PKPdf** 06 12 37.0 +0.3
baz=116
W26A Owens Ranch, T 115.83 45 ⇓PKiKP **PKPdf** 06 12 37.4 +0.9
baz=116
224A Cornudas Mount 116.07 49 ⇓PKiKP **PKiKP** 06 12 38.1 +1.0
baz=116
Z25A Roswell 116.07 47 ⇑PKiKP **PKiKP** 06 12 37.6 +0.6
baz=116
X26A CR and CF Fran 116.08 45 ⇑PKiKP **PKiKP** 06 12 37.8 +0.8
baz=116
U28A Mallet 116.19 43 ⇓PKiKP **PKiKP** 06 12 37.8 +0.7
baz=116
MTE Manteigas 116.24 323 PFAKE 06 12 50.0 +13
MTE LR LR
comp=Z,1μm,20.0s
S29A Ulysses 116.24 41 ⇑PKiKP **PKiKP** 06 12 37.9 +0.8
baz=116
W27A Bowe Ranch, En 116.33 45 ⇓PKiKP **PKiKP** 06 12 38.0 +0.5
baz=116
MNTX Cornudas Mount 116.36 49 *e*PKPdf **PKPdf** 06 12 38.2 +0.7
MNTX LR LR
comp=Z,690nm,19.0s
T29A Hugoton 116.38 42 ⇓PKiKP **PKiKP** 06 12 38.2 +0.7
baz=116
R30A Dighton 116.40 40 ⇑PKiKP **PKiKP** 06 12 38.2 +0.8
baz=116
324A Moseley Ranch, 116.41 49 ⇓PKiKP **PKiKP** 06 12 38.1 +0.4
baz=116
SCHQ Schefferville 116.42 9 PKP **PKPdf** 06 12 37.6 +0.7
SCHQ PP **PP** 06 13 43.5 +0.8
SCHQ Schefferville 116.42 9 PKP **PKPdf** 06 12 37.6 +0.7
comp=Z,2.7nm,0.7s,baz=140,slow=0.9,SNR=4.1
SCHQ PP **PP** 06 13 43.5 +0.8
comp=Z,6.5nm,0.9s,baz=349,slow=7.6,SNR=4.9
125A Gardner Draw, 116.43 48 ⇓PKiKP **PKiKP** 06 12 38.1 +0.4
baz=116
V28A Channing 116.54 43 ⇑PKiKP **PKiKP** 06 12 38.6 +0.8
baz=116
225A Deer Hill, Car 116.58 48 ⇑PKiKP **PKiKP** 06 12 38.7 +0.6
baz=116
Z26A Caprock 116.61 47 ⇑PKiKP **PKiKP** 06 12 39.4 +1.3
baz=117
325A Bean Ranch, Si 116.83 49 ⇑PKiKP **PKPdf** 06 12 38.5 0.0
baz=117
Y27A Causey 116.88 46 ⇑PKiKP **PKiKP** 06 12 39.4 +0.8
baz=117
126A Clayton Basin, 116.90 47 ⇑PKiKP **PKiKP** 06 12 39.2 +0.6
baz=117
T30A Plains 116.95 41 ⇑PKiKP **PKiKP** 06 12 38.9 +0.4
baz=117
V29A Stinnett 116.95 43 ⇓PKiKP **PKiKP** 06 12 38.9 +0.3
baz=117
226B Tecolote Peak, 117.08 48 ⇓PKiKP **PKPdf** 06 12 38.9 0.0
baz=117
425A Indio Mountain 117.10 50 ⇓PKiKP **PKPdf** 06 12 38.9 -0.1
baz=117
MSTX Muleshoe 117.11 45 ⇑PKiKP **PKiKP** 06 12 39.8 +0.8
baz=117
Z27A Tatum 117.14 46 ⇑PKiKP **PKiKP** 06 12 40.0 +0.9
baz=117
U30A WK&E Inc. Balk 117.16 42 ⇑PKiKP **PKPdf** 06 12 38.9 0.0
baz=117
X28A Dimmitt 117.22 45 ⇑PKiKP **PKPdf** 06 12 39.0 -0.1
baz=117
COWI Conover 117.29 27 PFAKE 06 12 50.0 +11
COWI LR LR
comp=Z,789nm,20.0s
127A Arkansas Junct 117.36 47 ⇑PKiKP **PKiKP** 06 12 39.8 +0.3
baz=117
AMTX Amarillo 117.38 44 PFAKE 06 12 50.0 +11
AMTX LR LR
comp=Z,1μm,19.0s
Y28A McKinney Farm, 117.51 45 ⇓PKiKP **PKiKP** 06 12 40.3 +0.6
baz=118
326A Caldwell Ranch 117.59 49 ⇑PKiKP **PKiKP** 06 12 40.5 +0.5
baz=118
X29A Tulia 117.61 44 ⇓PKiKP **PKiKP** 06 12 40.2 +0.2
baz=118
EVO Evora 117.67 321 *e*PKIKP **PKPdf** 06 12 40.0 +0.2
comp=Z,36nm,1.2s
EVO *e*R
comp=Z,1μm,21.8s
EVOP Sao Brissos 117.74 321 *e*PKIKP **PKPdf** 06 12 40.0 +0.1
EVOP Sao Brissos 117.74 321 *e*PKPdf **PKPdf** 06 12 40.0 +0.1
227A Bennet, Jal 117.75 48 ⇑PKiKP **PKiKP** 06 12 41.1 +0.8
baz=118
U31A Nine Bar Ranch 117.78 42 ⇓PKiKP **PKiKP** 06 12 41.1 +1.0
baz=118
426A McDonald Obser 117.87 49 ⇓PKiKP **PKiKP** 06 12 41.4 +0.7
baz=118
Y29A Porterfield Fa 117.94 45 ⇑PKiKP **PKiKP** 06 12 41.6 +1.1
baz=118
128A Castleberry Fa 118.02 47 ⇓PKiKP **PKiKP** 06 12 41.2 +0.4
baz=118
526A Mary Lane Ranc 118.12 50 ⇓PKiKP **PKiKP** 06 12 41.5 +0.4
baz=118
V31A Spring Creek L 118.13 42 ⇓PKiKP **PKiKP** 06 12 42.1 +1.3
baz=118
X30A Coker Ranch, T 118.18 44 ⇑PKiKP **PKiKP** 06 12 41.9 +0.9
baz=118
KSU1 Kansas State U 118.18 37 *e*PKPdf **PKPdf** 06 12 40.8 +0.1
KSU1 LR LR
comp=Z,717nm,20.0s
228A UT Block 9, Go 118.21 47 ⇓PKiKP **PKiKP** 06 12 41.8 +0.7
baz=118
Z29A Hungry Hill Ra 118.24 46 ⇓PKiKP **PKiKP** 06 12 41.9 +0.7
baz=118
427A Hayter Ranch, 118.25 49 ⇓PKiKP **PKiKP** 06 12 42.2 +0.9
baz=118
SCIA State Center 118.27 33 PFAKE 06 12 50.0 +9.2
SCIA LR LR
comp=Z,870nm,19.0s
626A Big Bend Ranch 118.33 50 ⇑PKiKP **PKiKP** 06 12 42.2 +0.7
baz=118
W31A Holland Ranch, 118.40 43 ⇑PKiKP **PKiKP** 06 12 42.2 +0.8
baz=118
328A Wristen Ranch, 118.42 48 ⇑PKiKP **PKiKP** 06 12 42.3 +0.7
baz=118
527A Woodward Ranch 118.44 50 ⇓PKiKP **PKiKP** 06 12 42.6 +0.8
baz=118
129A Stewart Farms, 118.46 46 ⇑PKiKP **PKiKP** 06 12 42.5 +0.9
baz=118
Y30A Stafford Cattl 118.47 45 ⇓PKiKP **PKiKP** 06 12 42.1 +0.5
baz=118
Z30A Sanderson Ranc 118.64 45 ⇓PKiKP **PKiKP** 06 12 42.6 +0.7
baz=119
X31A McDonald Ranch 118.69 43 ⇓PKiKP **PKiKP** 06 12 42.7 +0.8
baz=119
TXAR Lajitas Array 118.80 50 PKP **PKPdf** 06 12 43.2 +0.9
TXAR PKKPbc **PKKPbc** 06 22 59.0 +0.8
TXAR SKKP 06 27 03.8
TXAR Lajitas Array 118.80 50 PKP **PKPdf** 06 12 43.2 +0.9
comp=Z,2.1nm,0.9s,baz=294,slow=0.7,SNR=14
TXAR PKKPbc **PKKPbc** 06 22 59.0 +0.8
comp=Z,1.7nm,0.8s,baz=127,slow=5.2,SNR=14
TXAR SKKP 06 27 03.8
comp=Z,1.3nm,1.2s,baz=107,slow=4.3,SNR=3.5
428A Kincaid Ranch, 118.85 49 ⇑PKiKP **PKiKP** 06 12 43.2 +0.7
baz=119
229A Bryant Ranch, 118.85 47 ⇓PKiKP **PKiKP** 06 12 42.8 +0.4
baz=119
Y31A Rekieta Farm, 118.87 44 ⇑PKiKP **PKiKP** 06 12 42.7 +0.4
baz=119
627A Terlingua Ranc 118.95 50 ⇓PKiKP **PKiKP** 06 12 43.6 +0.9
baz=119
329A Wagon Wheel Ra 118.98 47 ⇑PKiKP **PKiKP** 06 12 42.9 +0.3
baz=119
528A Cox Ranch, San 119.06 49 ⇑PKiKP **PKiKP** 06 12 43.2 +0.3
baz=119
JFWS Jewell Farm 119.11 31 *e*PKIKP **PKPdf** 06 12 42.4 0.0
JFWS MLR MLR
comp=Z,982nm,20.0s
JFWS Jewell Farm 119.11 31 *e*PKPdf **PKPdf** 06 12 42.4 0.0
JFWS LR LR
comp=Z,982nm,20.0s
Z31A Sharp Cattle R 119.31 45 ⇓PKiKP **PKiKP** 06 12 43.3 +0.1
baz=119
628A Black Gap, Mar 119.31 50 ⇑PKiKP **PKiKP** 06 12 44.2 +0.9
baz=119
230A Sterling City 119.40 47 ⇓PKiKP **PKiKP** 06 12 44.2 +0.8
baz=119
Y32A R-V Farms, Ver 119.41 44 ⇑PKiKP **PKPdf** 06 12 43.2 0.0
baz=119
WMOK Wichita Mounta 119.44 43 PFAKE 06 13 00.0 +17
WMOK LR LR
comp=Z,1μm,21.0s
429A Davenport Ranc 119.49 48 ⇓PKiKP **PKiKP** 06 12 44.4 +0.8
baz=119
529A Stev Forest Ra 119.50 49 ⇑PKiKP **PKiKP** 06 12 44.5 +0.8
baz=120
RTC Rabat Centre 119.60 316 PFAKE 06 13 00.0 +16
RTC LR LR
comp=Z,533nm,21.0s
330A Mertzon 119.61 47 ⇑PKiKP **PKPdf** 06 12 43.7 -0.1
baz=120
Z32A Haskell 119.78 44 ⇓PKiKP **PKiKP** 06 12 45.0 +1.0
baz=120
430A Baggett Ranch, 119.89 48 ⇑PKiKP **PKiKP** 06 12 45.3 +0.9
baz=120
231A Bronte 119.94 46 ⇓PKiKP **PKiKP** 06 12 44.6 +0.2
baz=120
ABTX Abilene, Hawle 120.04 45 ⇑PKiKP **PKPdf** 06 12 44.6 0.0
baz=120
530A J-C Ranch, Com 120.14 48 ⇑PKiKP **PKiKP** 06 12 45.9 +1.0
baz=120
331A San Angelo 120.20 47 ⇑PKiKP **PKiKP** 06 12 45.6 +0.6
baz=120
431A Sonora 120.40 48 ⇑PKiKP **PKiKP** 06 12 46.0 +0.6
baz=120
232A Coleman 120.44 46 ⇑PKiKP **PKiKP** 06 12 45.6 +0.1
baz=120
332A Millersview 120.65 46 ⇓PKiKP **PKiKP** 06 12 46.5 +0.6
baz=121
TUL1 Tulsa 120.69 40 ⇑PKiKP **PKPdf** 06 12 45.8 +0.1
baz=121
531A Rocksprings 120.72 48 ⇓PKiKP **PKiKP** 06 12 46.8 +0.7
baz=121
432A Menard 120.89 47 ⇓PKiKP **PKiKP** 06 12 46.6 +0.2
baz=121
631A Perdido Creek 121.09 49 ⇑PKiKP **PKiKP** 06 12 47.5 +0.8
baz=121
JCT Junction City 121.10 47 *e*PKIKP **PKPdf** 06 12 47.5 +0.9
JCT MLR MLR
comp=Z,754nm,20.0s
JCT Junction City 121.10 47 *e*PKPdf **PKPdf** 06 12 47.5 +0.9
JCT LR LR
comp=Z,754nm,20.0s
JCT Junction City 121.10 47 ⇓PKiKP **PKiKP** 06 12 47.7 +0.9
baz=121
532A Rocksprings 121.21 48 ⇓PKiKP **PKiKP** 06 12 47.7 +0.7
baz=121
HDIL Hopedale 121.32 32 *e*PKPdf **PKPdf** 06 12 46.5 -0.2
HDIL LR LR
comp=Z,698nm,20.0s
632A Uvalde 121.62 48 ⇓PKiKP **PKiKP** 06 12 48.6 +0.8
baz=122
TOA0 Torodi Ar. Sit 121.77 291 *e*PKPdf **PKPdf** 06 12 47.5 -0.7
TORD Torodi Ar. Bea 121.77 291 PKP **PKPdf** 06 12 47.6 -0.6
TORD PP **PP** 06 14 23.1 +1.4
TORD PKKPbc **PKKPab** 06 22 49.1 +1.1
TORD Torodi Ar. Bea 121.77 291 PKP **PKPdf** 06 12 47.6 -0.6
comp=Z,9.2nm,0.8s,baz=45,slow=2.0,SNR=41
TORD PP **PP** 06 14 23.1 +1.4
comp=Z,3.3nm,0.8s,baz=56,slow=5.3,SNR=3.8
TORD PKKPbc **PKKPab** 06 22 49.1 +1.1
comp=Z,0.5nm,0.7s,baz=275,slow=3.3,SNR=3.6
732A Laxson Ranch, 121.90 49 ⇑PKiKP **PKiKP** 06 12 49.2 +0.8
baz=122
WHTX Lake Whitney 121.92 45 ⇓PKiKP **PKiKP** 06 12 49.2 +0.9
baz=122
SFIN Scholer Farm 122.58 31 ⇑PKiKP **PKiKP** 06 12 50.0 +0.7
baz=122
OLIL Olney 123.28 33 *e*PKPdf **PKPdf** 06 12 50.9 +0.3
UALR University of 123.58 39 PKPdf **PKPdf** 06 12 52.2 +0.9
BLO Bloomington 123.78 31 *e*PKIKP **PKPdf** 06 12 52.0 +0.5
BLO Bloomington 123.78 31 *e*PKPdf **PKPdf** 06 12 52.0 +0.5
PQI Presque Isle 124.03 12 *e*PKPdf **PKPdf** 06 12 50.8 -0.9
LONY Lake Ozonia 124.20 19 PFAKE 06 13 00.0 +7.8
LONY LR LR
comp=Z,612nm,20.0s
HKT Hockley 124.24 46 *e*PKIKP **PKPdf** 06 12 52.5 -0.1
HKT Hockley 124.24 46 *e*PKPdf **PKPdf** 06 12 52.5 -0.1

ERPA	**Erie**	**124.43**	**24**	PFAKE		06 13 00.0	+7.3
ERPA				LR	LR		
	comp=Z,754nm,19.0s						
WCI	**Wyandotte Cave**	**124.60**	**32**	*e*PKIKP	**PKPdf**	**06 12 53.7**	**+0.5**
WCI	**Wyandotte Cave**	**124.60**	**32**	*e*PKPdf	**PKPdf**	**06 12 53.7**	**+0.5**
ACSO	**Alum Creek Sta**	**124.67**	**28**	*e*PKPdf	**PKPdf**	**06 12 53.4**	**+0.2**
ACSO				LR	LR		
	comp=Z,951nm,20.0s						
NCB	**Newcomb**	**124.89**	**19**	PFAKE		06 13 10.0	+16
NCB				LR	LR		
	comp=Z,704nm,21.0s						
WVT	**Waverly**	**125.31**	**34**	*e*PKIKP	**PKPdf**	**06 12 54.5**	**0.0**
WVT	**Waverly**	**125.31**	**34**	*e*PKPdf	**PKPdf**	**06 12 54.5**	**0.0**
LBNH	**Lisbon**	**125.34**	**17**	PFAKE		06 13 10.0	+16
LBNH				LR	LR		
	comp=Z,944nm,19.0s						
OXF	**Oxford**	**125.54**	**37**	PFAKE		06 13 10.0	+15
OXF				LR	LR		
	comp=Z,903nm,20.0s						
BINY	**Binghamton**	**125.88**	**21**	*e*PKPdf	**PKPdf**	**06 12 55.1**	**-0.4**
BINY				LR	LR		
	comp=Z,869nm,20.0s						
VBMS	**Vicksburg**	**126.41**	**40**	PFAKE		06 13 10.0	+13
VBMS				LR	LR		
	comp=Z,926nm,20.0s						
SSPA	**Standing Stone**	**126.52**	**23**	*e*PKPdf	**PKPdf**	**06 12 56.7**	**0.0**
LRAL	**Lakeview Retre**	**128.00**	**37**	PFAKE		06 13 10.0	+10
LRAL				LR	LR		
	comp=Z,933nm,19.0s						
BLA	**Blacksburg**	**128.29**	**28**	PFAKE		06 13 10.0	+10
BLA				LR	LR		
	comp=Z,931nm,20.0s						
CBN	**Corbin**	**128.80**	**25**	PFAKE		06 13 10.0	+8.9
CBN				LR	LR		
	comp=Z,1μm,20.0s						
BRAL	**Brewton**	**129.39**	**38**	PFAKE		06 13 10.0	+7.6
BRAL				LR	LR		
	comp=Z,2μm,19.0s						
KMSC	**Kings Mountain**	**129.51**	**30**	⇓PKiKP	**PKiKP**	**06 13 03.7**	**+0.4**
	baz=129						
DBIC	**Dimbokro**	**129.83**	**285**	PKP	**PKPdf**	**06 13 04.0**	**+0.4**
DBIC				PP	**PP**	**06 15 19.1**	**+3.7**
DBIC				SKPbc	SKPbc	06 16 23.2	+1.0
DBIC				PP'ab		06 28 40.3	
DBIC	**Dimbokro**	**129.83**	**285**	PKP	**PKPdf**	**06 13 04.0**	**+0.4**
	comp=Z,9.4nm,1.1s,baz=78,slow=8.9,SNR=3.6						
DBIC				PP	**PP**	**06 15 19.1**	**+3.7**
	comp=Z,6.0nm,0.9s,baz=150,slow=5.9,SNR=3.0						
DBIC				SKPbc	SKPbc	06 16 23.2	+1.0
	comp=Z,10nm,0.8s,baz=24,slow=5.3,SNR=7.7						
DBIC				PKP2ab		06 28 40.3	
	comp=Z,3.4nm,0.9s,baz=258,slow=5.9,SNR=3.6						
LIC	**Lamto**	**130.12**	**285**	*e*PKIKP	**PKPdf**	**06 13 05.0**	**+0.7**
	comp=Z,34nm,0.8s						
LIC				*e*R			
	comp=Z,776nm,19.2s						
LIC	**Lamto**	**130.12**	**285**	*e*PKPdf	**PKPdf**	**06 13 05.0**	**+0.7**
CNNC	**Cliffs of the**	**131.07**	**27**	PFAKE		06 13 20.0	+15
CNNC				LR	LR		
	comp=Z,1μm,19.0s						
TEIG	**Tepich**	**135.44**	**51**	PFAKE		06 13 30.0	+16
TEIG				LR	LR		
	comp=Z,754nm,21.0s						
BBSR	**BB Station**	**138.41**	**15**	PFAKE		06 13 30.0	+11
BBSR				LR	LR		
	comp=Z,1μm,20.0s						
TGUH	**Tegucigalpa,Un**	**139.60**	**57**	PFAKE		06 13 30.0	+8.1
TGUH				LR	LR		
	comp=Z,465nm,19.0s						
PAYG	**Puerto Ayora**	**142.17**	**81**	PFAKE		06 13 40.0	+13
PAYG				LR	LR		
	comp=Z,1μm,22.0s						
SACV	**Santiago Islan**	**143.02**	**308**	PFAKE		06 13 40.0	+12
SACV				LR	LR		
	comp=Z,739nm,21.0s						
JTS	**JuntasAbangare**	**143.42**	**61**	PFAKE		06 13 40.0	+11
JTS				LR	LR		
	comp=Z,701nm,19.0s						
PLCA	**Paso Flores**	**143.78**	**157**	PKP	**PKPdf**	**06 13 28.1**	**-0.7**
PLCA	**Paso Flores**	**143.78**	**157**	PKP	**PKPdf**	**06 13 28.1**	**-0.7**
	comp=Z,5.4nm,0.9s,baz=162,slow=6.8,SNR=3.0						
MTDJ	**Mount Denham**	**144.49**	**43**	*e*PKPdf	**PKPdf**	**06 13 30.3**	**-0.4**
MTDJ				LR	LR		
	comp=Z,545nm,21.0s						
GTBY	**Guantanamo Bay**	**144.80**	**38**	PFAKE		06 13 40.0	+9.0
GTBY				LR	LR		
	comp=Z,783nm,20.0s						
GRTK	**Grand Turk**	**145.77**	**31**	PFAKE		06 13 40.0	+6.5
GRTK				LR	LR		
	comp=Z,918nm,19.0s						
SDDR	**Presa de Saban**	**147.76**	**34**	*e*PKPbc	**PKPbc**	**06 13 40.0**	**+1.0**
SDDR				LR	LR		
	comp=Z,732nm,20.0s						
BCIP	**Isla Barro Col**	**148.34**	**58**	*e*PKPbc	**PKPbc**	**06 13 41.3**	**+0.6**
BCIP				LR	LR		
	comp=Z,629nm,20.0s						
TRQA	**Tornquist**	**148.92**	**166**	*e*PKPbc	**PKPbc**	**06 13 41.3**	**-0.2**
TRQA				LR	LR		
	comp=Z,1μm,20.0s						
CRPR	**Cabo Rojo, PR**	**150.72**	**28**	*e*PKPbc	**PKPbc**	**06 13 47.3**	**+1.0**
OBIP	**Obispado Ponce**	**150.92**	**27**	*e*PKPbc	**PKPbc**	**06 13 47.3**	**+0.5**
SJG	**San Juan**	**151.06**	**27**	*e*PKPbc	**PKPbc**	**06 13 46.9**	**-0.3**
SJG				LR	LR		
	comp=Z,594nm,21.0s						
MTP	**Monte Pirata**	**151.34**	**25**	*e*PKPbc	**PKPbc**	**06 13 48.6**	**+0.8**
STVI	**Saint Thomas**	**151.36**	**24**	*e*PKPbc	**PKPbc**	**06 13 48.4**	**+0.6**
CDVI	**St. Croix**	**151.97**	**24**	*e*PKPdf	**PKPdf**	**06 13 43.3**	**+0.6**
CDVI				*e*PKPbc	**PKiKP**	**06 13 50.3**	**+0.7**
ANWB	**Willy Bob**	**153.14**	**19**	PFAKE		06 14 00.0	-3.3
ANWB				LR	LR		
	comp=Z,669nm,21.0s						
LCO	**Las Campanas**	**153.22**	**144**	*e*PKPbc	**PKPbc**	**06 13 52.6**	**+0.4**
LCO				*e*PKPab	**PKPab**	**06 14 04.5**	**+0.6**
LCO				LR	LR		
	comp=Z,946nm,20.0s						
OTAV	**Otavalo**	**153.38**	**73**	*e*PKPdf	**PKPdf**	**06 13 46.6**	**+1.1**
OTAV				LR	LR		
	comp=Z,815nm,19.0s						
ROSC	**El Rosal**	**155.24**	**60**	*e*PKPdf	**PKPdf**	**06 13 49.1**	**+1.0**
ROSC				*e*PKPab	**PKPab**	**06 14 14.7**	**+1.6**
ROSC	**El Rosal**	**155.24**	**60**	PKP	**PKPdf**	**06 13 49.1**	**+1.0**
	comp=Z,7.7nm,1.0s,baz=168,slow=3.9,SNR=6.8						
FDF	**Fort de France**	**156.09**	**20**	PFAKE		06 14 00.0	+11
FDF				LR	LR		
	comp=Z,507nm,19.0s						
NNA	**Nana**	**156.19**	**102**	PFAKE		06 14 00.0	+11
NNA				LR	LR		
	comp=Z,1μm,20.0s						
GRGR	**Grenville**	**158.31**	**23**	PFAKE		06 14 00.0	+8.5
GRGR				LR	LR		
	comp=Z,481nm,20.0s						
LVC	**Limon Verde**	**158.86**	**135**	PFAKE		06 14 00.0	+7.7
LVC				LR	LR		
	comp=Z,1μm,19.0s						
CPUP	**Villa Florida**	**161.24**	**168**	PKP	**PKPdf**	**06 13 56.1**	**+1.6**
CPUP				PKPab	**PKPab**	**06 14 38.8**	**+0.8**
CPUP	**Villa Florida**	**161.24**	**168**	PKP	**PKPdf**	**06 13 56.1**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=93,slow=19,SNR=3.6						
CPUP				PKPab	**PKPab**	**06 14 38.8**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=89,slow=19,SNR=4.0						
RCBR	**Riachuelo**	**162.88**	**276**	PFAKE		06 14 10.0	+13
RCBR				LR	LR		
	comp=Z,799nm,19.0s						
LPAZ	**La Paz**	**163.06**	**121**	PKP	**PKPdf**	**06 13 57.8**	**+0.5**
LPAZ				PKPab	**PKPab**	**06 14 48.6**	**+1.4**
LPAZ	**La Paz**	**163.06**	**121**	PKP	**PKPdf**	**06 13 57.8**	**+0.5**
	comp=Z,4.6nm,1.0s,baz=43,slow=2.4,SNR=16						
LPAZ				PKPab	**PKPab**	**06 14 48.6**	**+1.4**
	comp=Z,9.9nm,1.0s,baz=298,slow=4.3,SNR=5.5						
SPB	**Sao Paulo**	**163.52**	**198**	PFAKE		06 14 10.0	+13
SPB				LR	LR		
	comp=Z,762nm,19.0s						
SAML	**Samuel**	**169.89**	**97**	*e*PKPdf	**PKPdf**	**06 14 01.4**	**-0.5**
SAML				*e*PKPab	**PKPab**	**06 15 18.2**	**+1.4**
SAML				LR	LR		
	comp=Z,1μm,20.0s						
BDFB	**Brasilia**	**170.90**	**212**	PKP	**PKPdf**	**06 14 03.2**	**+0.7**
BDFB				PKPab	**PKPab**	**06 15 19.1**	**-1.9**
BDFB	**Brasilia**	**170.90**	**212**	PKP	**PKPdf**	**06 14 03.2**	**+0.7**
	comp=Z,2.9nm,0.9s,baz=214,slow=8.6,SNR=4.0						
BDFB				PKPab	**PKPab**	**06 15 19.1**	**-1.9**
	comp=Z,3.6nm,1.0s,baz=77,slow=2.0,SNR=2.5						

*CSEM **21** 06:05:21.6±0.5,51.5°N×16.07°E,h1km,ML3.2/5,Error ellipse: s-maj=7.9km s-min=7.1km az=6.0*
*ISCJB **21** 06:05:22.5±0.9,51.41°N±0.05×16.08°E±0.04,h0km,Error ellipse: s-maj=6.8km s-min=3.3km az=13.2*
*WAR **21** 06:05:22.8,51.52°N×16.11°E*
*PRU **21** 06:05:24.8,51.40°N×16.07°E,h0km*
ISC 21 06:05:23.9±1.2,51.43°N±0.06×16.08°E±0.03,h0km,n23,s0°71/42,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.60**	**167**	*e*Pg	**Pg**	**06 05 35.7**	**+0.3**
KSP				*e*Sg	**Sg**	**06 05 44.9**	**+1.7**
KSP	**Ksiaz**	**0.60**	**167**	*e*Pg	**Pg**	**06 05 35.7**	**+0.3**
KSP				*e*Sg	**Sg**	**06 05 44.3**	**+1.1**
UPC	**Upice**	**0.93**	**183**	*e*PG	**Pg**	**06 05 41.7**	**+0.1**
UPC	**Upice**	**0.93**	**183**	Pg	**Pg**	**06 05 41.7**	**+0.1**
DPC	**Dobruska-Polom**	**1.09**	**172**	*e*SG	**Sg**	**06 05 59.2**	**+0.3**
	comp=Z,16nm,0.4s						
DPC	**Dobruska-Polom**	**1.09**	**172**	Sg	**Sg**	**06 05 59.2**	**+0.3**
	16nm,0.4s						
PVCC	**Panska Ves**	**1.31**	**227**	*e*PG	**Pb**	**06 05 49.4**	**0.0**
PVCC				*e*SG	**Sg**	**06 06 06.7**	**+0.6**
	comp=Z,102nm,0.2s						
PVCC	**Panska Ves**	**1.31**	**227**	Pg	**Pb**	**06 05 49.4**	**0.0**
PVCC				Sg	**Sg**	**06 06 06.7**	**+0.6**
	102nm,0.2s						
BRG	**Berggiesshubel**	**1.46**	**248**	PG	**Pg**	**06 05 51.4**	**-0.4**
BRG				SG	**Sn**	**06 06 11.4**	**+0.1**
	49nm,0.3s						
PRU	**Pruhonice**	**1.74**	**215**	*e*PG	**Pb**	**06 05 56.4**	**-0.4**
PRU				*e*SG	**Sb**	**06 06 20.0**	**+0.8**
	comp=Z,15nm,0.4s						
PRU	**Pruhonice**	**1.74**	**215**	Pg	**Pb**	**06 05 56.4**	**-0.4**
PRU				Sg	**Sb**	**06 06 20.0**	**+0.8**
	15nm,0.4s						
MORC	**Moravsky Berou**	**1.90**	**150**	*e*Pn	**Pn**	**06 05 56.6**	**-1.0**
MORC				*e*Sg	**Sb**	**06 06 24.0**	**+0.3**
CLL	**Collm**	**1.93**	**268**	*e*(Pg)	**Pg**	**06 06 02.0**	**+1.1**
CLL				*e*Sg	**Sg**	**06 06 26.0**	**0.0**
	comp=Z,13nm,0.5s						
OKC	**Ostrava-Krasne**	**2.07**	**140**	*e*SG	**Sg**	**06 06 29.6**	**-0.7**
OKC	**Ostrava-Krasne**	**2.07**	**140**	Sg	**Sg**	**06 06 29.6**	**-0.7**
VRAC	**Vranov**	**2.15**	**171**	*e*Pn	**Pn**	**06 06 00.7**	**-0.3**
VRAC				*e*Sg	**Sb**	**06 06 32.4**	**+1.5**
NKC	**Novy Kostel**	**2.60**	**244**	*e*PG	**Pb**	**06 06 11.0**	**-0.3**
NKC				*e*SG	**Sg**	**06 06 47.9**	**+0.6**
	comp=Z,19nm,0.3s						
NKC	**Novy Kostel**	**2.60**	**244**	Pg	**Pb**	**06 06 11.0**	**-0.3**
NKC				Sg	**Sg**	**06 06 47.9**	**+0.6**
	comp=Z,19nm,0.3s						
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**06 06 15.0**	**+0.3**
OJC				*e*Sg	**Sg**	**06 06 49.4**	**+0.4**
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**06 06 15.0**	**+0.3**
OJC				*e*Sg	**Sg**	**06 06 49.4**	**+0.4**
KHC	**Kasperske Hory**	**2.81**	**216**	*e*PN	**Pn**	**06 06 09.4**	**-0.7**
KHC				*e*PG	**Pb**	**06 06 15.3**	**+0.4**
KHC				*e*SN	**Sn**	**06 06 43.5**	**-1.1**
KHC				*e*SG	**Sg**	**06 06 53.0**	**-1.0**
	comp=Z,5.2nm,0.4s						
KHC	**Kasperske Hory**	**2.81**	**216**	Pn	**Pn**	**06 06 09.4**	**-0.7**
KHC	**Kasperske Hory**	**2.81**	**216**	Pg	**Pb**	**06 06 15.3**	**+0.4**
KHC				Sn	**Sn**	**06 06 43.5**	**-1.1**
KHC				Sg	**Sg**	**06 06 53.0**	**-1.0**
	comp=Z,5.2nm,0.4s						

*DJA **21** 06:14:02.6±1.4,1.1°N±6.9°×97.7°E±1.1°,h35km±12km,M4.7/5, MLv4.7/5*
*BJI **21** 06:14:04.4,1.11°N×97.07°E,h39km,mB5.2/11,mb4.8/32, Ms5.0/13,Ms7 4.8/13*
*IDC **21** 06:14:06.6±0.6,1.43°N×97.01°E,h25km±3km,mb4.2/25, mb1 4.2/26,mb1mx4.1/35,mbtmp4.2/26,ML4.8/1,Error ellipse: s-maj=22.9km s-min=11.0km az=45.0*
*ISCJB **21** 06:14:07.6±0.8,1.47°N±0.05×97.05°E±0.05,h44km±6km, mb4.5/56,MS4.8/3,Error ellipse: s-maj=10.4km s-min=6.0km az=138.5*
*NEIC **21** 06:14:07.3±0.3,1.53°N×97.04°E,mb4.5/18,Error ellipse: s-maj=8.4km s-min=5.3km az=50.0*
ISC 21 06:14:07.5±0.5,1.40°N±0.05×96.98°E±0.05,h31km±2km, h31km:pP-P,n113,σ1°§50/159,mb4.5/56,MS4.8/4,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**0.60**	**99**	P	**Pb**	**06 14 19.0**	**-0.7**
GSI				S	**Sn**	**06 14 28.7**	**0.0**
SNSI	**Sinabang, Aceh**	**1.20**	**327**	P	**Pn**	**06 14 27.6**	**-0.5**
KCSI	**Kotacane, Aceh**	**2.25**	**21**	P	**Pn**	**06 14 41.4**	**-1.3**
TSI	**Tuntungan**	**2.62**	**37**	P	**Pn**	**06 14 47.8**	**+0.1**
MNSI	**Mandailing Nat**	**2.67**	**103**	P	**Pn**	**06 14 48.4**	**0.0**
LHMI	**Lhok Sumawe**	**3.80**	**360**	P	**Pn**	**06 15 06.7**	**+2.7**
BSI	**Banda Aceh**	**4.40**	**338**	P	Pn	06 15 17.4	+5.1
IPM	**Ipoh**	**5.07**	**53**	*e*Pn	**Pn**	**06 15 20.5**	**-1.0**
KULM	**Kulim**	**5.33**	**43**	*e*Pn	**Pn**	**06 15 23.9**	**-1.1**
CMAR	**Chiang Mai Arr**	**17.06**	**6**	P	**Pn**	**06 18 01.9**	**-1.9**
CMAR	**Chiang Mai Arr**	**17.06**	**6**	P	**Pn**	**06 18 01.9**	**-1.9**
	1.1nm,0.3s,baz=197,slow=11,SNR=18						
CHTO	**Chiang Mai**	**17.41**	**6**	*e*Pn	**Pn**	**06 18 05.5**	**-2.8**
	4.2nm,0.7s						
KKM	**Kota Kinabalu**	**19.74**	**76**	*e*P	**P**	**06 18 35.3**	**+0.2**
	8.7nm,0.5s						
KAPI	**Kappang**	**23.62**	**106**	P	**P**	**06 19 15.7**	**-0.5**
	0.6nm,0.4s						
KAPI	**Kappang**	**23.62**	**106**	P	**P**	**06 19 15.7**	**-0.5**
	7.6nm,0.3s,baz=300,slow=17,SNR=5.3						
KMI	**Kunming**	**24.23**	**13**	P	**P**	**06 19 22.6**	**+0.6**
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
GYA	**Guiyang**	**26.60**	**20**	P	**P**	**06 19 44.6**	**+1.2**
GYA				pP	**pP**	**06 19 53.3**	**+0.9**
GYA				sP	**sP**	**06 19 59.6**	**+3.4**
GYA				PP	**PnPn**	**06 20 28.8**	**+4.1**
GYA				PcP	**PcP**	**06 23 09.4**	**+2.1**
GYA				S	**S**	**06 24 14.5**	**-1.9**
GYA				ScP	**ScP**	**06 26 43.3**	**-1.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ODAN	**Odare**	**26.94**	**341**	*e*P	**P**	**06 19 47.6**	**+1.1**
	comp=Z,42nm,0.8s						
RAMN	**Ramite**	**27.29**	**339**	*e*P	**P**	**06 19 51.3**	**+1.6**
	comp=Z,18nm,0.6s						
TAPN	**Taplejung**	**27.29**	**342**	*e*P	**P**	**06 19 50.9**	**+1.1**
	comp=Z,36nm,0.8s						
GUN	**Gumba**	**28.42**	**339**	*e*P	**P**	**06 20 00.9**	**+1.0**
	comp=Z,38nm,0.6s						
DMN	**Daman**	**28.44**	**337**	*e*P	**P**	**06 20 01.2**	**+1.2**
KKN	**Kakani**	**28.53**	**338**	*e*P	**P**	**06 20 01.6**	**+0.8**
LSA	**Lhasa**	**28.68**	**349**	P	**P**	**06 20 02.5**	**+0.1**
	comp=Z,7.2nm,0.6s						
KOLN	**Koldanda**	**29.18**	**335**	*e*P	**P**	**06 20 07.9**	**+1.3**
	comp=Z,29nm,0.6s						
DANN	**Dangsing**	**29.63**	**336**	*e*P	**P**	**06 20 11.5**	**+0.9**
	comp=Z,14nm,0.5s						
PYUN	**Piuthan**	**29.73**	**334**	*e*P	**P**	**06 20 11.5**	**+0.1**
	comp=Z,19nm,0.8s						
CD2	**Chengdu**	**30.05**	**12**	P	**P**	**06 20 16.5**	**+2.5**
CD2				pP	**pP**	**06 20 26.5**	**+3.5**
CD2				sP	**sP**	**06 20 30.8**	**+4.0**
CD2				PP	**PnPn**	**06 21 14.9**	**+3.4**
CD2				S	**S**	**06 25 10.8**	**+0.4**
CD2				sS	**sS**	**06 25 27.4**	**+2.0**
CD2				SS	**SnSn**	**06 26 48.8**	**+4.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,90nm,5.0s						
ENH	**Enshi**	**31.07**	**21**	*e*P	**P**	**06 20 21.4**	**-1.6**
	comp=Z,26nm,0.8s						
MBWA	**Marble Bar**	**31.59**	**136**	*e*P	**P**	**06 20 29.4**	**+1.7**
YULB	**Yu-li**	**32.16**	**45**	*e*P	**P**	**06 20 32.3**	**-0.3**
SSLB	**Suanglung**	**32.17**	**44**	*e*P	**P**	**06 20 32.1**	**-0.7**
	comp=Z,9.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**34.22**	**126**	*e*P	**P**	**06 20 51.7**	**+1.0**
	comp=Z,1.1nm,0.7s						
XAN	**Xi'an**	**34.34**	**18**	P	**P**	**06 20 49.6**	**-2.0**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LZH	**Lanzhou**	**35.10**	**10**	*e*P	**P**	**06 20 58.3**	**+0.1**
LZH				pP	**pP**	**06 21 07.4**	**0.0**
LZH				sP	**sP**	**06 21 12.5**	**+1.3**
LZH				PP	**PP**	**06 22 18.6**	**+0.3**
LZH				S	**S**	**06 26 26.4**	**-2.7**
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,5.8s						
LZH				LR	LR		
	comp=N,1μm,13.3s						
LZH				LR	LR		
	comp=E,890nm,12.5s						
LZH				LR	LR		
	comp=Z,1μm,14.0s						
NJ2	**Nanjing**	**36.81**	**32**	*e*P	**P**	**06 21 13.3**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
GTA	**Gaotai**	**37.92**	**4**	*e*P	**P**	**06 21 22.0**	**-0.2**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
HHC	**Hu-ho-hao-te**	**41.43**	**17**	*e*P	**P**	**06 21 52.8**	**+1.4**
HHC				PP	**PnPn**	**06 23 32.3**	**0.0**
HHC				PcP	**PcP**	**06 23 51.1**	**+2.0**
HHC				ScP	**ScP**	**06 27 37.3**	**+0.2**
HHC				PcS	**PcS**	**06 27 41.8**	**+1.4**
HHC				S	**S**	**06 28 05.4**	**+0.7**
HHC				SS	**SS**	**06 31 05.4**	**-4.3**
HHC				ScS	**ScS**	**06 31 52.5**	**-0.7**
HHC				pmax	pmax		
	comp=Z,34nm,0.7s						
HHC				LR	LR		
	comp=N,610nm,13.8s						
HHC				LR	LR		
	comp=E,550nm,14.9s						
HHC				LR	LR		
	comp=Z,840nm,15.5s						
BJI	**Beijing**	**42.24**	**22**	P	**P**	**06 21 58.1**	**+0.2**
BJI				pmax	pmax		
	comp=Z,29nm,0.6s						
WRA	**Warramunga Arr**	**42.33**	**122**	P	**P**	**06 21 58.2**	**-0.8**
WRA				pP	**pP**	**06 22 05.8**	**-2.4**
WRA	**Warramunga Arr**	**42.33**	**122**	P	**P**	**06 21 58.2**	**-0.8**
	comp=Z,2.3nm,0.8s,baz=301,slow=9.3,SNR=7.3						
WRA				pP	**pP**	**06 22 05.8**	**-2.4**
	comp=Z,2.6nm,0.6s,baz=302,slow=9.1,SNR=8.9						
WRAB	**Tennant Creek**	**42.33**	**122**	*e*P	**P**	**06 21 59.5**	**+0.5**
	comp=Z,3.9nm,0.8s						
KSH	**Kashi**	**42.50**	**336**	*e*P	**P**	**06 21 59.3**	**-0.9**
KSH				*e*pP	**pP**	**06 22 09.8**	**+0.3**
KSH				*e*sP	**sP**	**06 22 12.8**	**-0.4**
KSH				*e*PP	**PP**	**06 23 40.3**	**+1.2**
KSH				*e*PcP	**PcP**	**06 23 54.3**	**+1.6**
KSH				*e*ScP	**ScP**	**06 27 41.3**	**-0.1**
KSH				*e*PcS	**PcS**	**06 27 45.3**	**+0.6**
KSH				*e*S	**S**	**06 28 15.3**	**-5.2**
KSH				*e*ScS	**ScS**	**06 31 57.1**	**-2.8**
KSH				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,100nm,3.5s						
KSH				LR	LR		
	comp=N,98nm,4.7s						
KSH				LR	LR		
	comp=E,390nm,10.3s						
KSH				LR	LR		
	comp=Z,310nm,6.3s						
WMQ	**Urumqi**	**43.04**	**350**	P	**P**	**06 22 05.1**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,17nm,0.4s						
WMQ				LR	LR		
	comp=N,780nm,13.4s						
WMQ				LR	LR		
	comp=E,690nm,14.4s						
WMQ				LR	LR		
	comp=Z,900nm,17.6s						
FORT	**Forrest**	**43.57**	**140**	P	**P**	**06 22 09.7**	**+0.8**
	comp=Z,26nm,1.0s						
ASAR	**Alice Springs**	**43.69**	**127**	P	**P**	**06 22 09.8**	**-0.2**
ASAR				pP	**pP**	**06 22 17.1**	**-2.2**
ASAR	**Alice Springs**	**43.69**	**127**	P	**P**	**06 22 09.8**	**-0.2**
	comp=Z,2.3nm,1.0s,baz=299,slow=7.6,SNR=9.2						
ASAR				pP	**pP**	**06 22 17.1**	**-2.2**
	comp=Z,1.0nm,0.6s,baz=296,slow=7.5,SNR=5.1						
JNU	**Nakatsue**	**44.80**	**42**	P	**P**	**06 22 17.8**	**-1.0**
JNU	**Nakatsue**	**44.80**	**42**	P	**P**	**06 22 17.8**	**-1.0**
	comp=Z,12nm,0.7s,baz=165,slow=6.1,SNR=5.0						
TKM2	**Tokmak 2**	**45.55**	**338**	*e*P	P	06 22 21.1	-3.6
	comp=Z,7.1nm,1.2s						
AAK	**Ala-Archa**	**45.73**	**337**	*e*P	**P**	**06 22 25.4**	**-0.7**
	comp=Z,7.5nm,1.1s						
KSAR	**Wonju Array Be**	**45.78**	**35**	P	**P**	**06 22 25.5**	**-0.9**
KSRS	**Korea Array**	**45.81**	**35**	P	**P**	**06 22 25.5**	**-1.1**
	comp=Z,6.2nm,0.8s,baz=221,slow=8.5,SNR=16						
EKS2	**Erkin-Say**	**46.04**	**336**	*e*P	**P**	**06 22 28.8**	**+0.3**
	comp=Z,3.7nm,0.6s						
SONM	**Songino Array**	**46.97**	**9**	P	**P**	**06 22 35.6**	**-0.1**
SONM				pP	**pP**	**06 22 43.5**	**-1.5**
SONM	**Songino Array**	**46.97**	**9**	P	**P**	**06 22 35.6**	**-0.1**
	comp=Z,9.4nm,0.8s,baz=189,slow=8.6,SNR=39						
SONM				pP	**pP**	**06 22 43.5**	**-1.5**
	comp=Z,4.9nm,0.6s,baz=192,slow=8.8,SNR=9.1						
MK31	**Makanchi Array**	**47.00**	**346**	*e*P	**P**	**06 22 36.3**	**+0.5**
MKAR	**Makanchi Array**	**47.00**	**346**	P	**P**	**06 22 36.1**	**+0.3**
MKAR	**Makanchi Array**	**47.00**	**346**	P	**P**	**06 22 36.1**	**+0.3**
	comp=Z,8.5nm,0.5s,baz=160,slow=8.8,SNR=84						
ULN	**Ulaanbaatar**	**47.10**	**9**	*e*P	**P**	**06 22 36.5**	**-0.3**
	comp=Z,9.5nm,1.1s						
KKAR	**Karatay Array**	**47.78**	**334**	*e*P	**P**	**06 22 42.9**	**+0.9**
	comp=Z,1.2nm,0.5s						
CN2	**Changchun**	**49.23**	**27**	*e*P	**P**	**06 22 52.5**	**

comp=Z,0.4nm,0.6s,baz=170,slow=6.1,SNR=3.1
BUR08 Bucovina Ar. S 76.75 319 *e*P **P 06 25 56.0 -0.2**
JOF Joensuu 77.87 335 *e*p **P 06 26 02.8 +0.9**
comp=Z,1.3nm,0.6s
FINES FINESS Array B 79.72 333 P **P 06 26 11.9 -0.2**
FINES pP **PcP 06 26 20.6 +0.8**
FINES FINESS Array B 79.72 333 P **P 06 26 11.9 -0.2**
comp=Z,2.1nm,0.6s,baz=104,slow=5.2,SNR=10
FINES pP **PcP 06 26 20.6 +0.8**
comp=Z,2.5nm,0.7s,baz=102,slow=8.0,SNR=5.6
KAF Kangasniemi 79.81 333 *e*p **P 06 26 12.4 -0.2**
comp=Z,2.9nm,0.5s
ARCES ARCESS Array B 82.27 340 P **P 06 26 26.0 +0.4**
ARCES ARCESS Array B 82.27 340 P **P 06 26 26.0 +0.4**
comp=Z,1.6nm,0.5s,baz=106,slow=5.5,SNR=16
URZ Urewera 83.11 129 P **P 06 26 30.8 +0.1**
URZ Urewera 83.11 129 P **P 06 26 30.8 +0.1**
comp=Z,12nm,1.0s,baz=243,slow=4.5,SNR=3.3
GERES GERESS Array B 84.52 319 P **P 06 26 37.7 -0.1**
GERES pP **pP 06 26 46.4 -1.3**
GERES GERESS Array B 84.52 319 P **P 06 26 37.7 -0.1**
comp=Z,0.4nm,0.4s,baz=104,slow=5.6,SNR=7.8
GERES pP **pP 06 26 46.4 -1.3**
comp=Z,1.4nm,0.9s,baz=90,slow=5.7,SNR=5.7
HFS Hagfors 85.44 330 P **P 06 26 42.5 +0.6**
HFS pP **pP 06 26 50.5 -1.5**
HFS Hagfors 85.44 330 P **P 06 26 42.5 +0.6**
comp=Z,0.3nm,0.5s,baz=7.4,slow=4.6,SNR=3.9
HFS pP **pP 06 26 50.5 -1.5**
comp=Z,2.5nm,0.8s,baz=94,slow=5.9,SNR=3.6
SPITS Spitsbergen Ar 86.71 348 P **P 06 26 46.9 -1.0**
SPITS Spitsbergen Ar 86.71 348 P **P 06 26 46.9 -1.0**
comp=Z,1.9nm,0.8s,baz=148,slow=8.7,SNR=3.7
NB2 NORSAR Subarra 86.72 331 P **P 06 26 48.1 -0.3**
comp=Z,2.4nm,0.9s,baz=93,slow=5.1
NOA NORSAR Array B 86.72 331 P **P 06 26 47.2 -1.1**
NOA pP **pP 06 26 56.4 -1.9**
NOA NORSAR Array B 86.72 331 P **P 06 26 47.2 -1.1**
comp=Z,0.9nm,0.8s,baz=93,slow=4.9,SNR=6.0
NOA pP **pP 06 26 56.4 -1.9**
comp=Z,1.7nm,0.9s,baz=92,slow=5.0,SNR=6.0
MVU Marysvale 132.04 31 *e*PKPdf **PKPdf 06 33 21.6 +2.6**
MSU Marysvale 132.06 31 *e*PKPdf **PKPdf 06 33 21.5 +2.6**
TXAR Lajitas Array 143.61 31 PKPpre PKPpre 06 33 36.7
TXAR Lajitas Array 143.61 31 PKhKP PKPpre 06 33 36.7
comp=Z,0.3nm,0.6s,baz=253,slow=0.9,SNR=3.2

IDC 21 06:14:56.9±4.3, 30.50S×138.20E, h0km, mb1 3.0/3, mb1mx3.0/16, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=100.3km s-min=16.9km az=41.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.22**	**116**	Pn	Pn	06 15 47.9	-0.8
	0.2nm,0.3s,baz=303,slow=15,SNR=7.7						
STKA				Pg	Pb	06 15 56.4	+1.4
	0.8nm,0.3s,baz=301,slow=12,SNR=18						
STKA				Sn	Sn	06 16 25.3	-2.5
	0.8nm,0.3s,baz=282,slow=14,SNR=4.0						
STKA				Lg	Lg	06 16 39.0	
	2.8nm,0.3s,baz=216,slow=19,SNR=5.8						
ASAR	**Alice Springs**	**7.81**	**330**	Pn	Pn	06 16 52.4	+0.6
	0.1nm,0.3s,baz=152,slow=12,SNR=4.6						
ASAR				Sn	Sn	06 18 20.7	-0.4
	0.1nm,0.3s,baz=154,slow=22,SNR=3.8						
WRA	**Warramunga Arr**	**11.07**	**341**	Pn	Pn	06 17 36.6	0.0
	0.1nm,0.3s,baz=158,slow=13,SNR=4.6						
WRA				Sn	Sn	06 19 37.9	-3.4
	0.0nm,0.3s,baz=162,slow=24,SNR=3.5						

NNC 21 06:15:00.0±11.0, 53.93N×87.08E, h0km, mb3.6, mpv3.1, 8C-7D, Error ellipse: s-maj=94.7km s-min=62.2km az=58.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.11**	**242**	⇓Pn	Pn	06 16 33.1	+1.6
	4.7nm,0.8s						
KURK				⇑Sn	Sn	06 17 42.5	+0.6
	3.4nm,0.8s						
KURK				⇓Lg	Lg	06 18 16.3	
	14nm,0.9s						
KUR15	**Kurchatov Arra**	**6.19**	**241**	⇑Pn	Pn	06 16 34.4	+1.8
	0.5nm,0.8s,baz=54,slow=14						
KUR15				⇑Sn	Sn	06 17 41.5	-2.6
	0.2nm,0.8s						
KUR15				⇓Lg	Lg	06 18 16.1	
	1.0nm,0.9s,baz=55,slow=37						
MK31	**Makanchi Array**	**7.77**	**205**	⇓Pn	Pn	06 16 59.5	+5.1
	0.8nm,0.7s,baz=25,slow=14,SNR=17						
MK31				⇓Sn	Sn	06 18 29.0	+5.9
	3.5nm,0.9s,baz=23,slow=26,SNR=3.5						
MK31				⇑Lg	Lg	06 19 06.1	
	11nm,1.0s,baz=55,slow=37,SNR=5.5						
VOSK	**Vostochnaya**	**9.71**	**269**	⇑Pn	Pn	06 17 20.6	-0.4
	1.7nm,0.7s						
VOSK				⇓Sn	Sn	06 19 07.6	-3.0
	6.3nm,0.8s						
BVA0	**Borovoye Array**	**10.00**	**272**	⇑Pn	Pn	06 17 21.7	-3.1
	0.1nm,0.5s,baz=91,slow=15,SNR=4.8						
BRVK	**Borovoye**	**10.05**	**272**	⇑Pn	Pn	06 17 23.7	-1.9
	2.6nm,0.6s						
ZRNK	**Zerenda**	**10.83**	**272**	⇓Pn	Pn	06 17 34.2	-2.0
	0.8nm,0.3s						
ZRNK				⇑Sn	Sn	06 19 34.7	-3.3
	5.0nm,1.1s						

*ISCJB **21** 06:21:28.2±0.5, 10.97S±0.06×162.66E±0.06, h46km, mb4.3/17, MS4.2/2, Error ellipse: s-maj=9.3km s-min=7.3km az=145.4*
*IDC **21** 06:21:30.9±0.8, 10.92S×162.38E, h44km±5km, mb4.0/14, mb1 4.1/14, mb1mx4.1/20, mbtmp4.0/14, MS4.3/4, Ms1 4.2/4, ms1mx3.8/33, Error ellipse: s-maj=25.3km s-min=15.4km az=126.0*
*NEIC **21** 06:21:34.0±1.3, 10.84S×162.47E, h76km±12km, mb4.5/6, Error ellipse: s-maj=11.2km s-min=10.5km az=201.0*
ISC 21 06:21:30.6±0.5, 10.88S±0.07×162.55E±0.07, h46km, n51, σ1s29/62, mb4.3/17, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.94**	**299**	*e*Pn	**Pn**	**06 22 15.9**	**+1.0**
HNR				*e*Sn	Sn	06 22 54.6	+5.6
NOUC	**Port Laguerre**	**11.72**	**163**	*e*P	Pn	06 24 22.5	+7.2
DZM	**Mont Dzumac**	**11.73**	**162**	*e*P	**Pn**	**06 24 15.1**	**-0.5**
DZM	**Mont Dzumac**	**11.73**	**162**	*e*Pn	Pn	06 24 19.0	+3.5
	17nm,0.5s						
DZM				*e*Sn	**Sn**	**06 26 23.9**	**-1.3**
PMG	**Port Moresby**	**15.22**	**274**	P	**P**	**06 25 04.9**	**-2.0**
	2.6nm,1.1s						
PMG				*e*S	**Sn**	**06 27 52.8**	**+2.5**
PMG	**Port Moresby**	**15.22**	**274**	P	**P**	**06 25 04.9**	**-2.0**
	1.1nm,0.3s,baz=107,slow=5.5,SNR=6.6						
PMG				LR	LR	06 30 11.9	
	comp=Z,2μm,18.3s,baz=157,slow=35						
MSVF	**Nonsavu**	**16.48**	**116**	*e*Pn	**P**	**06 25 21.9**	**+0.9**
	10nm,0.9s						
EIDS	**Eidsvold**	**18.05**	**216**	P	**P**	**06 25 41.4**	**+3.2**
	27nm,1.3s						
CTA	**Charters Tower**	**18.16**	**238**	P	**Pn**	**06 25 41.5**	**+1.9**
CTA	**Charters Tower**	**18.16**	**238**	P	**Pn**	**06 25 41.5**	**+1.9**
	1.0nm,0.3s,baz=69,slow=12,SNR=28						
CTA				LR	LR	06 30 38.9	
	comp=Z,476nm,19.7s,baz=169,slow=30						
CTAO	**Charters Tower**	**18.16**	**238**	*e*P	**Pn**	**06 25 40.8**	**+1.2**
	48nm,0.9s						
COEN	**Coen**	**19.17**	**259**	*e*P	**Pn**	**06 25 52.6**	**+0.9**
	445nm,0.9s						
STKA	**Stephens Creek**	**28.48**	**220**	P	**P**	**06 27 22.4**	**+0.8**
STKA	**Stephens Creek**	**28.48**	**220**	P	**P**	**06 27 22.4**	**+0.8**
	3.1nm,0.9s,baz=35,slow=9.0,SNR=4.2						
STKA				LR	LR	06 37 18.7	
	comp=Z,688nm,19.5s,baz=17,slow=33						
WRAB	**Tennant Creek**	**28.60**	**248**	*e*P	**P**	**06 27 21.6**	**-1.2**
	6.6nm,0.8s						
WRA	**Warramunga Arr**	**28.61**	**248**	P	**P**	**06 27 21.7**	**-1.3**
WRA				PcP	**PcP**	**06 30 33.2**	**-0.1**
WRA				pPcP		06 30 47.0	
WRA	**Warramunga Arr**	**28.61**	**248**	P	**P**	**06 27 21.7**	**-1.3**
	4.2nm,0.4s,baz=77,slow=8.9,SNR=104						
WRA				PcP	**PcP**	**06 30 33.2**	**-0.1**
	0.6nm,0.9s,baz=74,slow=4.2,SNR=2.8						
WRA				pPcP		06 30 47.0	
	2.2nm,0.8s,baz=81,slow=2.9,SNR=7.7						
AS31	**Alice Springs**	**30.09**	**241**	*e*P	**P**	**06 27 34.5**	**-1.6**
ASAR	**Alice Springs**	**30.09**	**241**	P	**P**	**06 27 34.5**	**-1.5**
ASAR				pPcP		06 30 49.9	
ASAR	**Alice Springs**	**30.09**	**241**	P	**P**	**06 27 34.5**	**-1.5**
	4.2nm,0.5s,baz=68,slow=9.7,SNR=46						
ASAR				pPcP		06 30 49.9	
	2.2nm,0.8s,baz=88,slow=2.3,SNR=10						
FITZ	**Fitzroy Crossi**	**36.40**	**254**	P	**P**	**06 28 29.4**	**-1.5**
FITZ	**Fitzroy Crossi**	**36.40**	**254**	P	**P**	**06 28 29.4**	**-1.5**
	25nm,0.6s,baz=78,slow=7.5,SNR=123						
KAPI	**Kappang**	**42.76**	**274**	P	**P**	**06 29 22.1**	**-1.9**
KAPI	**Kappang**	**42.76**	**274**	P	**P**	**06 29 22.1**	**-1.9**
	3.2nm,0.4s,baz=119,slow=10,SNR=3.1						
KAPI				LR	LR	06 46 01.7	
	comp=Z,200nm,18.8s,baz=180,slow=34						
MJAR	**Matsushiro Arr**	**52.45**	**335**	P	**P**	**06 30 37.8**	**-1.0**
MJAR	**Matsushiro Arr**	**52.45**	**335**	P	**P**	**06 30 37.8**	**-1.0**
	0.7nm,0.3s,baz=155,slow=6.1,SNR=4.1						
KSRS	**Korea Array**	**58.02**	**328**	P	**P**	**06 31 19.9**	**+1.0**
	1.4nm,0.9s,baz=126,slow=6.2,SNR=3.8						
KSAR	**Wonju Array Be**	**58.03**	**328**	P	**P**	**06 31 19.9**	**+0.9**
USRK	**Ussuriysk Arra**	**61.44**	**335**	P	**P**	**06 31 43.3**	**+1.0**
	6.3nm,0.9s,baz=151,slow=7.0,SNR=8.5						
PETK	**Petropavlovsk-**	**63.87**	**357**	P	**P**	**06 31 59.6**	**+1.2**
PETK	**Petropavlovsk-**	**63.87**	**357**	P	**P**	**06 31 59.6**	**+1.2**
	8.7nm,1.2s,baz=190,slow=7.3,SNR=3.5						
VNDA	**Vanda**	**66.62**	**180**	P	**P**	**06 32 16.2**	**+0.3**
VNDA	**Vanda**	**66.62**	**180**	P	**P**	**06 32 16.2**	**+0.3**
	0.4nm,0.3s,baz=345,slow=6.3,SNR=4.4						
SONM	**Songino Array**	**76.71**	**325**	P	**P**	**06 33 18.0**	**+0.9**
SONM	**Songino Array**	**76.71**	**325**	P	**P**	**06 33 18.0**	**+0.9**
	3.6nm,0.8s,baz=131,slow=5.5,SNR=11						
BILL	**Bilibino**	**78.76**	**1**	*e*P	**P**	**06 33 27.5**	**-0.5**
	11nm,1.1s						
DIB	**Dawson Inlet,**	**84.25**	**33**	T	T	08 07 13.3	
ILAR	**Eielson Array**	**84.38**	**19**	P	**P**	**06 33 57.2**	**-0.5**
ILAR				pP	**pP**	**06 34 11.0**	**-0.3**
ILAR	**Eielson Array**	**84.38**	**19**	P	**P**	**06 33 57.2**	**-0.5**
	0.3nm,0.5s,baz=247,slow=4.3,SNR=7.7						
ILAR				pP	**pP**	**06 34 11.0**	**-0.3**
	0.4nm,0.5s,baz=237,slow=4.6,SNR=3.8						
NVAR	**Mina Array Bea**	**88.33**	**51**	P	**P**	**06 34 20.5**	**+2.5**
NVAR				pP	**pP**	**06 34 32.7**	**+1.0**
NVAR	**Mina Array Bea**	**88.33**	**51**	P	**P**	**06 34 20.5**	**+2.5**
	1.1nm,0.6s,baz=220,slow=7.3,SNR=8.0						
NVAR				pP	**pP**	**06 34 32.7**	**+1.0**
	0.7nm,0.8s,baz=251,slow=9.2,SNR=3.1						
MKAR	**Makanchi Array**	**91.27**	**317**	P	**P**	**06 34 30.9**	**-0.4**
MKAR				pP	**pP**	**06 34 44.2**	**-0.8**
MKAR	**Makanchi Array**	**91.27**	**317**	P	**P**	**06 34 30.9**	**-0.4**
	0.5nm,0.5s,baz=92,slow=7.2,SNR=4.6						
MKAR				pP	**pP**	**06 34 44.2**	**-0.8**
	0.7nm,0.7s,baz=90,slow=6.3,SNR=4.4						
YKA	**Yellowknife Ar**	**96.28**	**28**	P	**P**	**06 34 53.4**	**-0.4**
YKA	**Yellowknife Ar**	**96.28**	**28**	P	**P**	**06 34 53.4**	**-0.4**
	0.4nm,0.7s,baz=258,slow=5.3,SNR=4.4						
ARCES	**ARCESS Array B**	**115.37**	**345**	PKP	**PKPdf**	**06 40 06.0**	**-0.7**
ARCES	**ARCESS Array B**	**115.37**	**345**	PKP	**PKPdf**	**06 40 06.1**	**-0.7**
	1.2nm,0.7s,baz=87,slow=2.0,SNR=4.7						
KEST	**Kesra**	**145.33**	**320**	PKPbc	**PKPbc**	**06 41 02.6**	**-1.2**
KEST				pPKPbc	pPKPbc	06 41 17.6	-0.4
KEST	**Kesra**	**145.33**	**320**	PKPbc	**PKPbc**	**06 41 02.6**	**-1.2**
	0.9nm,0.8s,baz=25,slow=5.2,SNR=4.3						
KEST				pPKPbc	pPKPbc	06 41 17.6	-0.4
	2.7nm,0.9s,baz=168,slow=1.9,SNR=9.1						
TORD	**Torodi Ar. Bea**	**161.14**	**279**	PKP	**PKPdf**	**06 41 26.3**	**-0.8**
TORD				pPKP	**pPKPdf**	**06 41 40.1**	**-1.2**
TORD				PKPab	**PKPab**	**06 42 10.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**161.14**	**279**	PKP	**PKPdf**	**06 41 26.3**	**-0.8**
	0.1nm,0.3s,baz=338,slow=1.6,SNR=3.9						
TORD				pPKP	**pPKPdf**	**06 41 40.1**	**-1.2**
	0.9nm,0.9s,baz=0.3,slow=2.6,SNR=4.2						
TORD				PKPab	**PKPab**	**06 42 10.9**	**+0.3**
	0.7nm,0.9s,baz=117,slow=2.6,SNR=1.9						

*DDA **21** 06:33:53.8, 37.86N×27.56E, h7km, MD2.7*
*ISCJB **21** 06:33:54.2±0.5, 37.86N±0.03×27.55E±0.05, h10km±7km, Error ellipse: s-maj=6.4km s-min=4.1km az=156.5*
*ISK **21** 06:33:54.0, 37.87N×27.56E, h9km, MD2.6*
*CSEM **21** 06:33:54.2±0.3, 37.87N×27.54E, h10km, MD2.7, Error ellipse: s-maj=6.5km s-min=4.4km az=102.0*
ISC 21 06:33:54.1±0.9, 37.87N±0.03×27.54E±0.03, h13km±8km, n22, σ096/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.30**	**235**	*i* P	**Pg**	**06 34 00.4**	**+0.2**
GCAM				*i* S	**Sg**	**06 34 04.2**	**-0.1**
GCAM	**G?zelcaml?**	**0.30**	**235**	*i* P	**Pg**	**06 34 00.4**	**+0.2**
GCAM				*i* S	**Sg**	**06 34 04.2**	**-0.1**
AYDN	**Tasoluk**	**0.34**	**128**	*i* P	**Pg**	**06 34 01.2**	**+0.1**
AYDN				*i* S	**Sg**	**06 34 05.4**	**-0.3**
AYDN	**Tasoluk**	**0.34**	**128**	*i* P	**Pg**	**06 34 01.2**	**+0.1**
AYDN				*i* S	**Sg**	**06 34 05.4**	**-0.3**
IZM	**Izmir**	**0.57**	**338**	*e*PG	**Pb**	**06 34 06.2**	**+0.2**
IZM				*e*SG	**Sg**	**06 34 13.3**	**+0.4**
MLSB	**Milas**	**0.60**	**162**	*e*PG	**Pg**	**06 34 06.0**	**+0.1**
MLSB				*e*SG	**Sb**	**06 34 15.1**	**+0.1**
MLSB	**Milas**	**0.60**	**162**	*e*Pg	**Pg**	**06 34 06.0**	**+0.1**
MLSB				*e*Sg	**Sb**	**06 34 15.1**	**+0.1**
BODT	**Bodrum**	**0.83**	**193**	*e*PG	**Pg**	**06 34 10.1**	**0.0**
BODT				*e*SG	**Sb**	**06 34 22.6**	**+1.2**
BODT	**Bodrum**	**0.83**	**193**	*e*Pg	**Pg**	**06 34 10.1**	**0.0**
BODT				*e*Sg	**Sb**	**06 34 22.6**	**+1.2**
YER	**Yerkesik**	**0.94**	**141**	*e*PG	**Pb**	**06 34 12.7**	**+0.3**
YER				*e*SG	**Sb**	**06 34 25.9**	**+1.1**
YER	**Yerkesik**	**0.94**	**141**	*e*Pg	**Pb**	**06 34 12.7**	**+0.3**
YER				*e*Sg	**Sb**	**06 34 25.9**	**+1.1**
MANT	**Manisa**	**1.01**	**52**	*i* P	**Pg**	**06 34 13.3**	**-0.4**
MANT				*i* S	**Sg**	**06 34 25.9**	**-1.1**
MANT	**Manisa**	**1.01**	**52**	*i* P	**Pg**	**06 34 13.3**	**-0.4**
MANT				*i* S	**Sg**	**06 34 25.9**	**-1.1**
AKHS	**Akhisar**	**1.03**	**12**	*i* P	**Pn**	**06 34 14.4**	**+0.1**
AKHS				*i* S	**Sn**	**06 34 28.5**	**-0.2**
AKHS	**Akhisar**	**1.03**	**12**	*i* P	**Pn**	**06 34 14.4**	**+0.1**
AKHS				*i* S	**Sn**	**06 34 28.5**	**-0.2**
KULA	**Kula-Manisa**	**1.09**	**54**	*e*PG	**Pg**	**06 34 14.6**	**-0.6**
KULA	**Kula-Manisa**	**1.09**	**54**	*e*Pg	**Pg**	**06 34 14.6**	**-0.6**
DNZL	**Cakiroluk**	**1.21**	**98**	*i* P	**Pg**	**06 34 19.6**	**+2.2**
DNZL				*i* S	**Sn**	**06 34 33.2**	**0.0**
DNZL	**Cakiroluk**	**1.21**	**98**	*i* P	**Pg**	**06 34 19.6**	**+2.2**
DNZL				*i* S	**Sn**	**06 34 33.2**	**0.0**
TURN	**Turunc**	**1.31**	**139**	*i* P	**Pn**	**06 34 16.9**	**-1.2**
TURN				*i* S	**Sb**	**06 34 32.5**	**-2.7**
TURN	**Turunc**	**1.31**	**139**	*i* P	**Pn**	**06 34 16.9**	**-1.2**
KHAL	**Karahalli**	**1.62**	**71**	*i* P	**Pg**	**06 34 27.4**	**+2.2**
KHAL				*i* S	**Sn**	**06 34 42.7**	**-0.6**

NNC 21 06:35:45.2±4.7, 49.90N×87.08E, h0km, mb3.6, mpv3.1, 11C-8D, Error ellipse: s-maj=36.5km s-min=22.4km az=77.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**4.45**	**228**	⇑Pn	Pn	06 36 58.5	+4.5
	5.3nm,0.5s,baz=50,slow=13,SNR=173						
MK31				⇑Pg	Pg	06 37 10.6	0.0
	2.7nm,0.3s,baz=44,slow=15,SNR=5.5						
MK31				⇓Sn	Sb	06 37 54.1	-4.4
	6.6nm,0.4s						
MK31				⇓Lg	Lg	06 38 08.4	
	63nm,0.9s,baz=48,slow=29,SNR=7.3						
KURK	**Kurchatov**	**5.48**	**282**	⇑Pn	Pn	06 37 09.1	+1.0
	2.1nm,0.5s						
KURK				⇓Sn	Sn	06 38 17.9	+6.1
	8.3nm,0.6s						
KURK				⇑Lg	Lg	06 38 40.8	
	17nm,0.6s						
KUR15	**Kurchatov Arra**	**5.51**	**281**	⇑Pn	Pn	06 37 09.4	+0.9
	0.1nm,0.3s						
KUR15				⇑Sn	Sn	06 38 17.2	+4.7
	0.3nm,0.6s						
KUR15				⇓Lg	Lg	06 38 42.9	
	0.8nm,0.6s						
VOSK	**Vostochnaya**	**10.47**	**292**	⇑Pn	Pn	06 38 12.7	-3.8
	2.4nm,1.1s						
VOSK				⇑Sn	Sn	06 40 13.7	-0.7
	0.9nm,0.4s						
BVA0	**Borovoye Array**	**10.87**	**293**	⇑Sn	Sn	06 40 20.7	-3.6
	0.4nm,0.8s						
BRVK	**Borovoye**	**10.94**	**293**	⇓Sn	Sn	06 40 26.6	+0.7
	4.6nm,0.7s						
ZRNK	**Zerenda**	**11.69**	**292**	⇓Pn	Pn	06 38 31.0	-2.1
	1.5nm,1.1s						
ZRNK				⇓Sn	Sn	06 40 41.3	-2.9
	0.9nm,0.6s						
KK31	**Karatay Array**	**13.26**	**246**	⇑Pn	Pn	06 38 55.4	+0.6
	0.3nm,0.5s,baz=57,slow=13,SNR=5.4						
KK31				⇓Sn	Sn	06 41 24.9	+2.0
	0.5nm,0.5s						
KK31				⇑Lg	Lg	06 42 43.9	
	1.8nm,0.8s						

WEL 21 06:37:42.6±1.0, 38.27S×175.25E, h254km±9km, ML3.5/8, 2D, Error ellipse: s-maj=10.8km s-min=10.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FWVZ	**Far West T-bar**	**1.01**	**167**	PN	Pn	06 38 18.5	+0.1
TRVZ	**Turoa**	**1.05**	**167**	PN	Pn	06 38 18.7	0.0
WNVZ	**Wahianoa**	**1.09**	**166**	PN	Pn	06 38 18.8	0.0
BKZ	**Black Stump Fm**	**1.32**	**133**	⇓PN	Pn	06 38 19.9	-0.2
BKZ				SN	S	06 38 48.9	-0.8
BHHZ	**Black Hill Sta**	**1.37**	**153**	PN	Pn	06 38 19.9	-0.6
URZ	**Urewera**	**1.46**	**90**	⇓PN	Pn	06 38 20.7	-0.3
URZ				SN	S	06 38 50.7	-0.7
NMHZ	**Naumai**	**1.47**	**125**	PN	Pn	06 38 21.8	+0.6
WAZ	**Wanganui**	**1.50**	**188**	PN	Pn	06 38 21.0	-0.3
WAZ				SN	S	06 38 50.7	-1.3
RAHZ	**Arahi**	**1.57**	**115**	PN	Pn	06 38 22.2	+0.3
MCHZ	**McNeill Hill**	**1.63**	**137**	PN	Pn	06 38 22.6	+0.3
MWZ	**Matawai**	**1.79**	**93**	PN	Pn	06 38 21.5	-2.2
PNHZ	**Pukenui**	**1.80**	**156**	PN	Pn	06 38 22.7	-1.1
MRZ	**Mangatainoka R**	**2.40**	**174**	PN	Pn	06 38 27.4	-1.8
OGWZ	**Otaki Gorge**	**2.54**	**181**	PN	Pn	06 38 28.2	-2.4
KIW	**Kapiti Island**	**2.60**	**186**	PN	Pn	06 38 28.6	-2.6
HOWZ	**Holdsworth Sta**	**2.63**	**176**	PN	Pn	06 38 28.5	-3.0
NNZ	**Nelson**	**3.28**	**206**	PN	Pn	06 38 35.0	-3.4
QRZ	**Quartz Range**	**3.31**	**219**	PN	Pn	06 38 35.0	-3.6

MAN 21 06:39:01, 19.04N×119.51E, h38km, mb4.7, ML3.6, MS3.6, Philippine Islands region

IDC 21 06:49:50.0±2.0, 17.71N×84.86W, h0km, mb3.7/6, mb1 4.1/8, mb1mx3.8/26, mbtmp3.8/8, ML2.5/1, MS3.9/3, Ms1 3.9/3, ms1mx3.5/29, Error ellipse: s-maj=85.6km s-min=28.9km az=38.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**4.08**	**308**	Pn	Pn	06 50 53.9	+0.1
	49nm,0.3s,baz=163,slow=1.3,SNR=116						
TEIG				Sn	Sn	06 51 41.1	-1.2
	15nm,0.3s,baz=49,slow=22,SNR=10						
TEIG				LR	LR	06 52 20.8	
	comp=Z,285nm,19.5s,baz=254,slow=37						
ROSC	**El Rosal**	**16.42**	**140**	Pn	P	06 53 44.0	-1.4
	0.3nm,0.3s,baz=308,slow=19,SNR=3.7						
TKL	**Tuckaleechee C**	**17.90**	**3**	S	Sn	06 57 20.2	-0.5
	0.2nm,0.3s,baz=246,slow=5.4,SNR=3.8						
TKL				LR	LR	07 01 42.6	
	comp=Z,355nm,20.7s,baz=332,slow=40						
TXAR	**Lajitas Array**	**20.73**	**307**	P	P	06 54 32.6	+0.3
	1.7nm,0.8s,baz=126,slow=11,SNR=22						
ANMO	**Albuquerque**	**25.78**	**316**	P	P	06 55 22.7	-0.3
	0.4nm,0.4s,baz=159,slow=7.3,SNR=5.4						
PDAR	**Pinedale Array**	**32.62**	**325**	P	P	06 56 24.2	+0.5
	1.3nm,0.7s,baz=134,slow=10,SNR=9.1						
NVAR	**Mina Array Bea**	**35.72**	**312**	P	P	06 56 51.2	+0.4
	0.6nm,0.7s,baz=111,slow=9.8,SNR=3.6						
YKA	**Yellowknife Ar**	**49.30**	**342**	P	P	06 58 41.1	+0.5
	0.3nm,0.7s,baz=138,slow=7.6,SNR=3.5						
YKA				PcP	PcP	07 00 01.0	-2.3
	0.2nm,0.5s,baz=138,slow=2.9,SNR=3.3						
CPUP	**Villa Florida**	**51.31**	**148**	LR	LR	07 24 08.1	
	comp=Z,588nm,20.2s,baz=199,slow=40						
ILAR	**Eielson Array**	**62.30**	**335**	P	P	07 00 13.9	+0.2
	2.0nm,0.6s,baz=112,slow=5.0,SNR=39						

*BJI **21** 07:35:24.9, 7.63N×126.99E, h37km, mB5.1/38, mb5.0/46, Ms4.8/44, Ms7 4.6/45*
*MOS **21** 07:35:25.9±1.1, 7.86N×126.79E, h33km, mb5.3/46, MS4.5/10, Error ellipse: s-maj=12.5km s-min=5.6km az=113.6*
*AUST **21** 07:35:25.8, 7.99N×127.53E, h35km*
*MAN **21** 07:35:26, 7.81N×127.19E, h52km, mb5.6, ML4.7, MS5.1*
MAN INTENSITY II - CATEEL DAVAO ORIENTAL.
*IDC **21** 07:35:27.4±2.1, 7.80N×126.82E, h33km±15km, mb4.6/29, mb1 4.7/30, mb1mx4.6/32, mbtmp4.6/30, ML4.1/1, MS4.4/21, Ms1 4.4/21, ms1mx4.2/37, Error ellipse: s-maj=17.8km s-min=9.1km az=75.0*
*NE

PALU	**Palau**	**7.38**	**94**	P		Pn	07 37 08.6	-5.3	
	baz=6.9,SNR=4.0								
PALU				S		Sn	07 38 25.1	-11	
	baz=6.9,SNR=4.2								
SJMP	**San Jose**	**7.41**	**308**	*e*P		Pn	07 37 17.6	+3.3	
LBMI	**Labuha**	**8.46**	**177**	P		**Pn**	**07 37 29.0**	**+0.2**	
	313nm,1.1s,4µm								
TGY	**Tagaytay City**	**8.62**	**316**	Pn		**Pn**	**07 37 33.3**	**+2.2**	
TGY	**Tagaytay City**	**8.62**	**316**	Pn		**Pn**	**07 37 33.3**	**+2.2**	
	32nm,0.3s,baz=108,slow=9.6,SNR=1.9								
MRSI	**Marisa**	**8.94**	**215**	P		Pn	07 37 37.8	+2.5	
	154nm,0.9s,1µm								
LUWI	**Luwuk**	**9.83**	**206**	P		Pn	07 37 52.7	+5.2	
	597nm,1.1s,6µm								
LUWI	**Luwuk**	**9.83**	**206**	P		Pn	07 37 52.9	+5.3	
	baz=10,SNR=5.2								
KKM	**Kota Kinabalu**	**10.91**	**261**	*e*Pn		Pn	07 38 06.1	+3.6	
KKM	**Kota Kinabalu**	**10.91**	**261**	P		Pn	07 38 07.4	+4.9	
	baz=11,SNR=24								
NLAI	**Namlea**	**11.03**	**180**	P		**Pn**	**07 38 05.0**	**+0.9**	
	88nm,0.8s,1µm								
RKPI	**Ransiki, Papua**	**11.72**	**142**	P		Pn	07 38 19.8	+6.4	
	183nm,1.2s,3µm								
SKSI	**Soroako, Sulaw**	**11.80**	**209**	P		**Pn**	**07 38 15.9**	**+1.3**	
	96nm,1.2s,998nm								
FAKI	**Fak Fak**	**11.90**	**154**	P		**Pn**	**07 38 18.2**	**+2.2**	
	189nm,1.0s,2µm								
FAKI	**Fak Fak**	**11.90**	**154**	P		**Pn**	**07 38 14.4**	**-1.6**	
	baz=12,SNR=11								
FAKI				S		**Sn**	**07 40 22.8**	**-4.7**	
	baz=12,SNR=5.3								
TTSI	**Tana Toraja**	**13.02**	**214**	P		Pn	07 38 34.0	+2.8	
	187nm,0.9s,3µm								
SPSI	**Sidrap Palu**	**13.82**	**212**	P		**Pn**	**07 38 43.4**	**+1.3**	
	38nm,1.0s,1µm								
KAPI	**Kappang**	**14.72**	**210**	*e*Pn		**Pn**	**07 38 52.8**	**-1.4**	
KAPI	**Kappang**	**14.72**	**210**	P		**Pn**	**07 38 52.9**	**-1.4**	
	49nm,1.4s,1µm								
KAPI	**Kappang**	**14.72**	**210**	Pn		**Pn**	**07 38 52.7**	**-1.6**	
	0.8nm,0.3s,baz=18,slow=18,SNR=17								
BKSI	**Bulukumba**	**14.81**	**208**	P		**Pn**	**07 38 54.2**	**-1.2**	
	32nm,0.8s,788nm								
KBKI	**Kotabaru**	**15.52**	**225**	P		P	07 39 13.4	+5.1	
TPUB	**Ta-pu**	**16.54**	**339**	*e*Pn		**Pn**	**07 39 16.3**	**-1.2**	
	38nm,1.1s								
TPUB				*e*Sn		**S**	**07 42 26.0**	**-4.2**	
BBKI	**Banjar Baru**	**16.59**	**228**	P		**P**	**07 39 22.4**	**+2.3**	
	192nm,1.4s,4µm								
SSLB	**Suanglung**	**16.87**	**340**	*e*Pn		**P**	**07 39 22.7**	**-0.6**	
	7.0nm,0.6s								
SSLB				*e*Sn		**Sn**	**07 42 30.9**	**+2.5**	
MMRI	**Maumere**	**17.08**	**196**	P		**P**	**07 39 28.0**	**+2.4**	
	167nm,1.0s,3µm								
KSM	**Kuching**	**17.85**	**250**	P		**Pn**	**07 39 32.8**	**-1.1**	
	104nm,1.4s								
KSM	**Kuching**	**17.85**	**250**	P		**P**	**07 39 36.1**	**+2.0**	
	baz=18,SNR=19								
GUMO	**Guam**	**18.40**	**70**	LR		LR	07 46 06.5		
	comp=Z,502nm,18.0s,baz=258,slow=34								
QZH	**Quanzhou**	**18.80**	**336**	P		**P**	**07 39 44.0**	**-0.5**	
QZH				S		**Sn**	**07 43 08.6**	**-6.4**	
QZH				LR		LR			
	comp=N,3µm,17.6s								
QZH				LR		LR			
	comp=E,2µm,15.6s								
QZH				LR		LR			
	comp=Z,3µm,12.0s								
JOW	**Kunigami**	**18.90**	**3**	*e*P		**Pn**	**07 39 49.5**	**+3.0**	
	comp=Z,123nm,1.4s								
KMMI	**Kalianget**	**19.74**	**222**	P		**Pn**	**07 39 58.1**	**+1.4**	
	comp=Z,101nm,1.2s,comp=Z,2µm								
KHKI	**Kahang-Kahang**	**19.75**	**216**	P		**P**	**07 39 54.5**	**-0.5**	
	comp=Z,70nm,1.3s,comp=Z,1µm								
SRBI	**Singaraja**	**19.76**	**217**	P		**Pn**	**07 39 58.3**	**+1.5**	
	comp=Z,90nm,1.2s,comp=Z,1µm								
QIZ	**Qiongzhong**	**20.06**	**305**	P		**P**	**07 39 55.9**	**-2.4**	
QIZ				pP		**pP**	**07 40 07.3**	**-1.9**	
QIZ				sP		**sP**	**07 40 12.8**	**-2.2**	
QIZ				sS		**sS**	**07 43 56.0**	**-2.9**	
QIZ				pmax		pmax			
	comp=Z,23nm,0.9s								
QIZ				pmax		pmax			
	comp=Z,530nm,13.2s								
QIZ				LR		LR			
	comp=N,2µm,16.4s								
QIZ				LR		LR			
	comp=E,560nm,18.2s								
QIZ				LR		LR			
	comp=Z,2µm,16.8s								
QIZ	**Qiongzhong**	**20.06**	**305**	*e*P		**P**	**07 39 58.1**	**-0.2**	
	comp=Z,26nm,0.6s								
MTN	**Manton Dam**	**20.97**	**169**	P		**P**	**07 40 07.9**	**-0.3**	
	baz=21,SNR=7.6								
GMJI	**Gumukmas**	**21.00**	**221**	P			07 40 13.2		
	comp=Z,78nm,1.0s								
SJI	**Sawahan**	**21.73**	**225**	P		**P**	**07 40 16.9**	**+0.4**	
	comp=Z,70nm,1.1s								
PWJI	**Pagerwojo**	**21.91**	**224**	P		**P**	**07 40 20.4**	**+2.1**	
	comp=Z,52nm,0.9s								
BJII	**Banjamegara**	**22.96**	**229**	P		**P**	**07 40 31.1**	**+1.6**	
KNRA	**Kununurra**	**23.45**	**176**	P		**P**	**07 40 33.8**	**-0.4**	
	baz=24,SNR=20								
SSE	**Sheshan**	**23.75**	**347**	P		**P**	**07 40 39.0**	**+2.1**	
SSE				S		**S**	**07 44 53.5**	**+4.4**	
SSE				pmax		pmax			
	comp=Z,38nm,1.0s								
SSE				pmax		pmax			
	comp=Z,670nm,8.1s								
SSE				LR		LR			
	comp=N,580nm,14.8s								
SSE				LR		LR			
	comp=E,710nm,14.9s								
SSE				LR		LR			
	comp=Z,780nm,17.3s								
NJ2	**Nanjing**	**25.24**	**344**	*e*P		**P**	**07 40 54.3**	**+3.8**	
NJ2				pP		**pP**	**07 41 02.1**	**-0.5**	
NJ2				sP		**sP**	**07 41 06.0**	**-2.1**	
NJ2				S		S	07 45 20.5	+7.5	
NJ2				sS		**sS**	**07 45 35.0**	**+1.7**	
NJ2				ScP		**ScP**	**07 48 02.1**	**+3.3**	
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
NJ2				pmax		pmax			
	comp=Z,330nm,4.6s								
NJ2				LR		LR			
	comp=N,820nm,19.8s								
NJ2				LR		LR			
	comp=E,1µm,19.6s								
NJ2				LR		LR			
	comp=Z,980nm,20.4s								
JNU	**Nakatsue**	**25.38**	**8**	*e*P		**P**	**07 40 53.0**	**+1.2**	
	comp=Z,27nm,1.0s								
JNU	**Nakatsue**	**25.38**	**8**	P		**P**	**07 40 52.5**	**+0.7**	
	comp=Z,27nm,0.8s,baz=145,slow=5.3,SNR=8.1								
JNU				LR		LR	07 51 37.1		
	comp=Z,865nm,18.3s,baz=57,slow=38								
FITZ	**Fitzroy Crossi**	**25.84**	**183**	*e*P		**P**	**07 40 55.9**	**-0.2**	
	comp=Z,35nm,0.8s								
FITZ	**Fitzroy Crossi**	**25.84**	**183**	P		**P**	**07 40 55.7**	**-0.4**	
	comp=Z,29nm,0.7s,baz=5.5,slow=8.6,SNR=35								
FITZ	**Fitzroy Crossi**	**25.84**	**183**	P		**P**	**07 40 55.4**	**-0.7**	
	baz=26,SNR=46								
IPM	**Ipoh**	**26.09**	**264**	*e*P		**P**	**07 40 56.1**	**-2.3**	
	comp=Z,44nm,1.0s								
IPM				*e*pP		**pP**	**07 41 11.5**	**+1.0**	
KULM	**Kulim**	**26.35**	**266**	P		**P**	**07 40 58.8**	**-2.0**	
	comp=Z,5.3nm,0.6s								
PMG	**Port Moresby**	**26.38**	**130**	*e*P		**P**	**07 41 01.0**	**0.0**	
PMG	**Port Moresby**	**26.38**	**130**	P		**P**	**07 41 00.8**	**-0.2**	
	comp=Z,15nm,0.8s,baz=349,slow=6.0,SNR=8.1								
PMG				LR		LR	07 53 11.8		
	comp=Z,494nm,18.4s,baz=144,slow=40								
GYA	**Guiyang**	**26.78**	**316**	*e*P		**P**	**07 41 05.8**	**+1.1**	
GYA				PP		**PnPn**	**07 41 54.3**	**+6.5**	
GYA				PcP		**PcP**	**07 44 30.8**	**+3.8**	
GYA				S		**S**	**07 45 40.5**	**+2.8**	
GYA				sS		**sS**	**07 45 57.5**	**-0.6**	
GYA				SS		**SnSn**	**07 46 53.1**	**+8.1**	
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
GYA				pmax		pmax			
	comp=Z,80nm,7.3s								
GYA				LR		LR			
	comp=N,1µm,16.1s								
GYA				LR		LR			
	comp=E,1µm,17.3s								
GYA				LR		LR			
	comp=Z,2µm,17.3s								
COEN	**Coen**	**26.95**	**143**	*e*P		**P**	**07 41 05.9**	**-0.2**	
	comp=Z,325nm,1.1s								
COEN	**Coen**	**26.95**	**143**	P		**P**	**07 41 05.9**	**-0.2**	
	baz=27,SNR=14								
BKNI	**Bangkinang**	**26.99**	**255**	S		S	07 45 56.7	+16	
	baz=28,SNR=3.2								
JHJ	**Hachijo jima 2**	**27.76**	**23**	LR		LR	07 52 05.2		
	comp=Z,921nm,18.8s,baz=252,slow=36								
PSI	**Prapat**	**28.44**	**261**	P		**P**	**07 41 20.9**	**+1.2**	
	baz=29,SNR=3.5								
WRAB	**Tennant Creek**	**28.55**	**166**	*e*P		**P**	**07 41 21.7**	**+1.3**	
WRAB				pmax		pmax			
	comp=Z,31nm,0.9s								
WRAB	**Tennant Creek**	**28.55**	**166**	*e*P		**P**	**07 41 21.7**	**+1.3**	
	comp=Z,31nm,0.9s								
WRA	**Warramunga Arr**	**28.55**	**166**	P		**P**	**07 41 19.8**	**-0.6**	
WRA				S		S	07 45 59.1	-6.4	
WRA	**Warramunga Arr**	**28.55**	**166**	P		**P**	**07 41 19.8**	**-0.6**	
	comp=Z,4.6nm,0.9s,baz=348,slow=9.6,SNR=21								
WRA				S		S	07 45 59.1	-6.4	
	comp=Z,5.4nm,1.1s,baz=339,slow=15,SNR=4.7								
WRA				LR		LR	07 53 23.3		
	comp=Z,535nm,20.8s,baz=20,slow=38								
KMI	**Kunming**	**28.85**	**309**	P		P	07 41 27.1	+3.7	
KMI				pP		pP	07 41 36.0	+0.5	
KMI				sP		sP	07 41 41.3	+0.3	
KMI				PP		**PnPn**	**07 42 21.4**	**+5.2**	
KMI				S		**S**	**07 46 13.3**	**+2.6**	
KMI				sS		sS	07 46 31.1	0.0	
KMI				SS		**SnSn**	**07 47 43.8**	**+8.0**	
KMI				pmax		pmax			
	comp=Z,14nm,0.9s								
KMI				pmax		pmax			
	comp=Z,190nm,4.7s								
KMI				LR		LR			
	comp=N,490nm,15.8s								
KMI				LR		LR			
	comp=E,1µm,19.0s								
KMI				LR		LR			
	comp=Z,1µm,17.0s								
CMAR	**Chiang Mai Arr**	**29.28**	**294**	P		**P**	**07 41 26.8**	**-0.1**	
CMAR				PcP		**PcP**	**07 44 34.6**	**+1.5**	
CMAR				ScP		**ScP**	**07 48 12.4**	**+1.1**	
CMAR	**Chiang Mai Arr**	**29.28**	**294**	P		**P**	**07 41 26.8**	**-0.1**	
	comp=Z,5.1nm,0.8s,baz=118,slow=7.2,SNR=21								
CMAR				PcP		**PcP**	**07 44 34.6**	**+1.5**	
	comp=Z,3.1nm,0.8s,baz=124,slow=0.8,SNR=7.8								
CMAR				ScP		**ScP**	**07 48 12.4**	**+1.1**	
	comp=Z,1.0nm,0.7s,baz=90,slow=1.8,SNR=7.6								
CMAR				LR		LR	07 51 40.9		
	comp=Z,538nm,21.6s,baz=304,slow=34								
CHTO	**Chiang Mai**	**29.38**	**295**	*e*P		**P**	**07 41 27.8**	**-0.1**	
CHTO				pmax		pmax			
	comp=Z,19nm,1.2s								
CHTO	**Chiang Mai**	**29.38**	**295**	*e*P		**P**	**07 41 27.8**	**-0.1**	
	comp=Z,19nm,1.2s								
KSAR	**Wonju Array Be**	**29.45**	**1**	P		**P**	**07 41 29.6**	**+1.4**	
KSAR				PcP		**PcP**	**07 44 33.9**	**+0.7**	
KSRS	**Korea Array**	**29.46**	**1**	P		**P**	**07 41 29.6**	**+1.3**	
	comp=Z,6.7nm,0.8s,baz=172,slow=9.7,SNR=17								
KSRS				PcP		**PcP**	**07 44 33.9**	**+0.7**	
	comp=Z,2.6nm,0.8s,baz=206,slow=2.5,SNR=5.0								
KSRS				LR		LR	07 54 20.8		
	comp=Z,755nm,18.4s,baz=182,slow=38								
MBWA	**Marble Bar**	**29.73**	**194**	*e*P		**P**	**07 41 30.6**	**-0.2**	
	comp=Z,23nm,0.9s								
MAJO	**Matsushiro**	**30.30**	**18**	*e*P		**P**	**07 41 38.8**	**+3.0**	
MAJO				pmax		pmax			
	comp=Z,44nm,1.8s								
MAJO	**Matsushiro**	**30.30**	**18**	*e*P		**P**	**07 41 38.8**	**+3.0**	
	comp=Z,44nm,1.8s								
MAT	**Matsushiro**	**30.30**	**18**	P		**P**	**07 41 35.3**	**-0.5**	
MAT				S		**S**	**07 46 31.8**	**-0.9**	
MJAR	**Matsushiro Arr**	**30.30**	**18**	P		**P**	**07 41 35.3**	**-0.5**	
MJAR				PcP		**PcP**	**07 44 36.5**	**+1.1**	
MJAR				ScP		**ScP**	**07 48 16.9**	**+2.7**	
MJAR	**Matsushiro Arr**	**30.30**	**18**	P		**P**	**07 41 35.3**	**-0.5**	
	comp=Z,4.4nm,0.7s,baz=199,slow=10,SNR=12								
MJAR				PcP		**PcP**	**07 44 36.5**	**+1.1**	
	comp=Z,0.9nm,0.3s,baz=191,slow=2.9,SNR=4.5								
MJAR				ScP		**ScP**	**07 48 16.9**	**+2.7**	
	comp=Z,1.7nm,0.9s,baz=200,slow=3.2,SNR=4.2								
QIS	**Mount Isa**	**30.83**	**157**	P		**P**	**07 41 40.7**	**+0.1**	
	baz=31,SNR=5.7								
XAN	**Xi'an**	**30.95**	**330**	P		**P**	**07 41 39.1**	**-2.5**	
XAN				S		**S**	**07 46 48.4**	**+5.4**	
XAN				ScS		**ScS**	**07 52 06.6**	**-6.9**	
XAN				pmax		pmax			
	comp=Z,3.0nm,0.7s								
XAN				pmax		pmax			
	comp=Z,54nm,10.9s								
XAN				LR		LR			
	comp=N,390nm,15.4s								
XAN				LR		LR			
	comp=Z,190nm,14.4s								
MTSU	**Mount Surprise**	**30.95**	**147**	P		**P**	**07 41 42.6**	**+0.9**	
	baz=31,SNR=8.9								
CD2	**Chengdu**	**31.61**	**320**	P		P	07 41 50.8	+3.3	
CD2				pP		pP	07 42 00.6	+0.9	
CD2				sP		sP	07 42 04.8	-0.4	
CD2				PP		**PP**	**07 42 56.3**	**-3.2**	
CD2				PcP		**PcP**	**07 44 41.8**	**+2.7**	
CD2				S		**S**	**07 46 56.8**	**+3.3**	
CD2				sS		sS	07 47 13.5	-0.4	
CD2				PcS		**PcS**	**07 48 25.3**	**+1.6**	
CD2				SS		**SnSn**	**07 48 48.1**	**+5.6**	
CD2				pmax		pmax			
	comp=Z,40nm,0.5s								
CD2				pmax		pmax			
	comp=Z,130nm,6.8s								
CD2				LR		LR			
	comp=N,1µm,15.2s								
CD2				LR		LR			
	comp=E,1µm,16.6s								
CD2				LR		LR			
	comp=Z,1µm,16.2s								
AS31	**Alice Springs**	**32.05**	**168**	*e*P		**P**	**07 41 52.0**	**+0.7**	
ASAR	**Alice Springs**	**32.05**	**168**	P		**P**	**07 41 51.3**	**0.0**	
ASAR				PcP		**PcP**	**07 44 40.3**	**0.0**	
ASAR				S		**S**	**07 46 57.0**	**-3.3**	
ASAR				ScP		**ScP**	**07 48 21.1**	**+0.8**	
ASAR	**Alice Springs**	**32.05**	**168**	P		**P**	**07 41 51.3**	**0.0**	
	comp=Z,1.7nm,0.5s,baz=345,slow=7.1,SNR=24								
ASAR				PcP		**PcP**	**07 44 40.3**	**0.0**	
	comp=Z,1.5nm,0.6s,baz=340,slow=2.5,SNR=5.6								
ASAR				S		**S**	**07 46 57.0**	**-3.3**	
	comp=Z,1.7nm,1.0s,baz=357,slow=19,SNR=4.5								
ASAR				ScP		**ScP**	**07 48 21.1**	**+0.8**	
	comp=Z,1.6nm,0.9s,baz=336,slow=2.5,SNR=5.0								
ASAR				LR		LR	07 57 08.5		
	comp=Z,340nm,18.1s,baz=331,slow=41								
BJI	**Beijing**	**33.48**	**345**	P		P	07 42 06.9	+3.3	
BJI				S		**S**	**07 47 23.9**	**+1.7**	
BJI				pmax		pmax			
	comp=Z,10.0nm,0.9s								
BJI				pmax		pmax			
	comp=Z,190nm,9.0s								
BJI				LR		LR			
	comp=N,340nm,17.6s								
BJI				LR		LR			
	comp=E,500nm,24.0s								
BJI				LR		LR			
	comp=Z,230nm,24.0s								
CTA	**Charters Tower**	**33.60**	**146**	P		**P**	**07 42 06.1**	**+1.2**	
CTA	**Charters Tower**	**33.60**	**146**	P		**P**	**07 42 06.1**	**+1.2**	
	comp=Z,17nm,0.8s,baz=331,slow=11,SNR=15								
CTA				LR		LR	07 56 26.6		
	comp=Z,733nm,18.1s,baz=326,slow=37								
CTAO	**Charters Tower**	**33.60**	**146**	*e*P		**P**	**07 42 05.9**	**+1.0**	
CTAO				pmax		pmax			
	comp=Z,35nm,1.0s								
CTAO	**Charters Tower**	**33.60**	**146**	*e*P		**P**	**07 42 05.9**	**+1.0**	
	comp=Z,35nm,1.0s								
SNY	**Shenyang**	**33.96**	**355**	⇑P		**P**	**07 42 08.8**	**+1.0**	
SNY				S		S	07 47 38.8	+9.3	
SNY				pmax		pmax			
	comp=Z,28nm,1.2s								
SNY				pmax		pmax			
	comp=Z,330nm,3.5s								
SNY				LR		LR			
	comp=N,770nm,18.7s								
SNY				LR		LR			
	comp=E,470nm,8.3s								
SNY				LR		LR			
	comp=Z,760nm,19.8s								
LZH	**Lanzhou**	**35.18**	**326**	*e*P		**P**	**07 42 18.9**	**+0.2**	
LZH				pP		**pP**	**07 42 28.1**	**-2.9**	
LZH				sP		**sP**	**07 42 32.1**	**-4.3**	
LZH				PP		**PP**	**07 43 39.3**	**+0.1**	
LZH				S		S	07 47 42.6	-6.4	
LZH				pmax		pmax			
	comp=Z,17nm,1.0s								
LZH				pmax		pmax			
	comp=Z,99nm,6.1s								
LZH				LR		LR			
	comp=N,570nm,14.3s								
LZH				LR		LR			
	comp=E,560nm,15.0s								
LZH				LR		LR			
	comp=Z,730nm,16.0s								
MEEK	**Meekatharra**	**35.26**	**193**	P		**P**	**07 42 19.0**	**-0.3**	
	baz=36,SNR=9.5								
HHC	**Hu-ho-hao-te**	**35.62**	**340**	*e*P		**P**	**07 42 21.8**	**-0.5**	
HHC				PP		**PP**	**07 43 43.3**	**-0.6**	
HHC				PcP		**PcP**	**07 44 48.9**	**-1.4**	
HHC				S		**S**	**07 47 55.9**	**+0.5**	
HHC				ScP		**ScP**	**07 48 31.0**	**-1.7**	
HHC				PcS		**PcS**	**07 48 35.0**	**-2.5**	
HHC				SS		**SnSn**	**07 50 18.3**	**-1.4**	
HHC				ScS		**ScS**	**07 52 35.6**	**-2.0**	
HHC				pmax		pmax			
	comp=Z,38nm,0.7s								
HHC				pmax		pmax			
	comp=Z,400nm,6.1s								
HHC				LR		LR			
	comp=N,1µm,14.5s								
HHC				LR		LR			
	comp=E,910nm,13.9s								
HHC				LR		LR			
	comp=Z,990nm,14.6s								
CN2	**Changchun**	**35.82**	**358**	*e*P		**P**	**07 42 22.9**	**-0.9**	
CN2				*e*PP		**PP**	**07 43 45.9**	**0.0**	
CN2				*e*S		**S**	**07 47 58.8**	**+0.6**	
CN2				*e*SS		**SnSn**	**07 50 22.0**	**-2.2**	
CN2				pmax		pmax			
	comp=Z,20nm,0.9s								
CN2				pmax		pmax			
	comp=Z,200nm,4.0s								
CN2				LR		LR			
	comp=N,500nm,16.0s								
CN2				LR		LR			
	comp=E,500nm,16.0s								
CN2				LR		LR			
	comp=Z,500nm,17.0s								
USRK	**Ussuriysk Arra**	**36.45**	**6**	P		**P**	**07 42 30.8**	**+1.6**	
	comp=Z,15nm,0.8s,baz=190,slow=7.7,SNR=32								
MDJ	**Mudanjiang**	**36.67**	**3**	P		**P**	**07 42 32.8**	**+1.7**	
MDJ				pP		**pP**	**07 42 41.6**	**-1.8**	
MDJ				sP		**sP**	**07 42 45.6**	**-3.3**	
MDJ				PP		**PnPn**	**07 43 56.0**	**+0.5**	
MDJ				PcP		**PcP**	**07 44 52.8**	**-0.4**	
MDJ				S		**S**	**07 48 12.9**	**+1.7**	
MDJ				sS		**sS**	**07 48 30.0**	**-1.9**	
MDJ				ScS		**ScS**	**07 52 45.0**	**+2.0**	
MDJ				pmax		pmax			
	comp=Z,52nm,1.3s								
MDJ				pmax		pmax			
	comp=Z,210nm,5.0s								
MDJ				LR		LR			
	comp=N,360nm,15.7s								
MDJ				LR		LR			
	comp=E,380nm,17.6s								
MDJ				LR		LR			
	comp=Z,420nm,16.7s								
MDJ	**Mudanjiang**	**36.67**	**3**	*e*P		**P**	**07 42 32.9**	**+1.9**	
	comp=Z,66nm,1.1s								
ERM	**Erimo**	**36.87**	**20**	*c i*P		P	07 42 39.0	+6.2	
ERM				pmax		pmax			
	comp=Z,15nm,1.1s								
ERM	**Erimo**	**36.87**	**20**	*e*P		P	07 42 36.1	+3.3	
	comp=Z,21nm,1.0s								
SHL	**Shillong**	**37.83**	**302**	⇑*i*P		**P**	**07 42 40.5**	**-0.9**	
SHL				*e*S		**S**	**07 48 31.5**	**+1.9**	
QLP	**Quilpie**	**38.09**	**155**	P		**P**	**07 42 43.0**	**-0.2**	
	baz=38,SNR=8.3								
MORW	**Morawa**	**38.23**	**196**	P		**P**	**07 42 44.1**	**-0.3**	
	baz=39,SNR=5.1								
FORT	**Forrest**	**38.44**	**179**	*e*P		**P**	**07 42 45.9**	**-0.2**	
	comp=Z,46nm,0.7s								
FORT	**Forrest**	**38.44**	**179**	P		**P**	**07 42 46.0**	**-0.1**	
	baz=39,SNR=11								
ASAJ	**Asahikawa**	**38.57**	**18**	*e*P		**P**	**07 42 49.8**	**+2.6**	
ASAJ	**Asahikawa**	**38.57**	**18**	P		**P**	**07 42 49.6**	**+2.5**	
	comp=Z,14nm,0.7s,baz=150,slow=5.8,SNR=9.1								
KMBL	**Kambalda**	**39.33**	**187**	P		**P**	**07 42 53.6**	**0.0**	
	baz=40,SNR=16								
BLDU	**Ballidu**	**39.53**	**194**	P		**P**	**07 42 55.3**	**0.0**	
	baz=40,SNR=22								
YUK	**Yuzh-Kuril'sk**	**39.59**	**21**	*d i*P		P	07 42 52.3	-3.3	
YUK				*i*S		**S**	**07 48 53.8**	**-1.5**	
YUK				MLR		MLR			
	comp=N,211nm,18.0s								
YUK				MLR		MLR			
	comp=Z,276nm,18.0s								
GTA	**Gaotai**	**39.79**	**326**	*e*P		**P**	**07 42 57.0**	**-0.6**	
GTA				pP		**pP**	**07 43 06.0**	**-4.0**	
GTA				sP		**sP**	**07 43 10.9**	**-4.5**	
GTA				PcP		**PcP**	**07 45 04.3**	**+1.1**	
GTA				S		**S**	**07 48 57.8**	**-0.9**	
GTA				sS		**sS**	**07 49 14.4**	**-5.1**	
GTA				SS		**SS**	**07 51 49.8**	**-6.3**	
GTA				pmax		pmax			
	comp=Z,7.0nm,0.8s								
GTA				pmax		pmax			
	comp=Z,160nm,7.6s								
GTA				LR		LR			
	comp=N,460nm,18.0s								
GTA				LR		LR			
	comp=E,320nm,18.1s								
GTA				LR		LR			
	comp=Z,440nm,20.0s								
LSA	**Lhasa**	**40.07**	**308**	*e*P		**P**	**07 43 00.6**	**+0.2**	
LSA				pmax		pmax			
	comp=Z,10.0nm,0.6s								
LSA	**Lhasa**	**40.07**	**308**	*e*P		**P**	**07 43 00.6**	**+0.2**	
	comp=Z,10nm,0.6s								
RMQ	**Roma**	**40.13**	**149**	S		**PcS**	**07 48 53.6**	**-1.1**	

ODAN Odare 42.06 302 *e*P P 07 43 16.0 -0.6
comp=Z,67nm,0.8s
CMSA Cobar Meteorol 43.05 156 P P 07 43 25.7 +1.5
baz=43,SNR=13
RKGY Rocky Gully 43.31 192 P P 07 43 27.6 +1.4
baz=44,SNR=11
ULN Ulaanbaatar 43.33 340 *e*P P 07 43 26.4 0.0
comp=Z,6.7nm,0.8s
SONM Songino Array 43.52 340 P P 07 43 27.5 -0.5
SONM PcP PcP 07 45 15.6 +0.3
SONM Songino Array 43.52 340 P P 07 43 27.5 -0.5
comp=Z,2.2nm,0.8s,baz=160,slow=9.3,SNR=11
SONM PcP PcP 07 45 15.6 +0.3
comp=Z,2.4nm,0.7s,baz=158,slow=4.8,SNR=4.1
SONM LR LR 08 03 49.9
comp=Z,429nm,18.2s,baz=266,slow=39
GUN Gumba 43.67 302 *e*P P 07 43 29.1 -0.7
comp=Z,44nm,0.7s
PKI Pulchoki 43.96 302 *e*P P 07 43 30.7 -1.3
KKN Kakani 44.14 302 *e*P P 07 43 32.2 -1.1
DMN Daman 44.23 302 *e*P P 07 43 33.0 -1.1
comp=Z,26nm,0.8s
KOLN Koldanda 45.55 301 *e*P P 07 43 43.6 -0.9
comp=Z,23nm,0.5s
DANN Dangsing 45.59 302 *e*P P 07 43 43.8 -1.2
comp=Z,22nm,0.4s
PYUN Piuthan 46.16 302 *e*P P 07 43 48.5 -0.9
comp=Z,66nm,0.9s
ARPS Mount Arapiles 46.52 164 P P 07 43 53.4 +1.7
baz=47,SNR=11
ZAK Zakamensk 46.77 339 *e*P P 07 43 53.0 -0.7
TLY Talaya 47.74 340 *e*P P 07 44 01.4 +0.3
TLY *e*S sS 07 51 09.7 -5.7
TLY *e* 07 54 08.3
TLY pmax pmax
comp=Z,8.0nm,0.8s
TLY MLR MLR
comp=Z,388nm,17.0s
HYB Hyderabad 48.15 286 *i* P P 07 44 03.5 -1.3
HYB *e*pP pP 07 44 16.0 -1.5
MOY Mondy 48.65 339 *e*P P 07 44 08.6 +0.4
DZM Mont Dzumac 48.75 128 *e*LR LR 07 58 11.3
comp=Z,503nm,23.7s
CLNS Chul'man 48.87 358 *e*P P 07 44 11.0 +1.2
CLNS pmax pmax
comp=Z,52nm,1.0s
CLNS pmax pmax
comp=E,13nm,0.9s
CLNS pmax pmax
comp=N,27nm,0.9s
WMQ Urumqi 49.59 323 P P 07 44 15.6 +0.1
WMQ pP pP 07 44 25.5 -2.7
WMQ sP sP 07 44 29.4 -4.2
WMQ PcP PcP 07 45 37.1 +0.5
WMQ PP PP 07 46 10.6 +0.4
WMQ PcS PcS 07 49 32.4 -0.9
WMQ S S 07 51 20.3 -0.2
WMQ sS sS 07 51 36.9 -4.9
WMQ ScS ScS 07 54 01.6 -1.9
WMQ SS SS 07 54 48.8 -4.3
WMQ pmax pmax
comp=Z,18nm,0.5s
WMQ pmax pmax
comp=Z,240nm,4.6s
WMQ LR LR
comp=N,1μm,18.2s
WMQ LR LR
comp=E,690nm,14.0s
WMQ LR LR
comp=Z,490nm,18.2s
PEA0B Petropavlovsk- 51.51 23 *e*P P 07 44 31.6 +1.8
PETK Petropavlovsk- 51.51 23 P P 07 44 31.9 +2.1
PETK Petropavlovsk- 51.51 23 P P 07 44 31.9 +2.1
PETK Petropavlovsk- 51.51 23 P P 07 44 31.9 +2.1
comp=Z,11nm,0.8s,baz=187,slow=6.0,SNR=12
YAK Yakutsk 54.09 2 *e*P P 07 44 49.5 +0.9
YAK *e**PP pP 07 45 02.6 +1.1
YAK *e* 07 45 56.6
YAK *e* 07 46 50.5
YAK *e*PPP PPP 07 47 58.3
YAK *e*S S 07 52 21.6 0.0
YAK *e**SS sS 07 52 45.9 +2.8
YAK *e* 07 54 27.6
YAK *e*SSS SSS 07 57 57.2
YAK pmax pmax
comp=Z,75nm,0.9s
YAK pmax pmax
comp=N,39nm,1.2s
YAK pmax pmax
comp=E,11nm,1.0s
YAK pmax pmax
comp=N,39nm,1.5s
YAK pmax pmax
comp=Z,10.0nm,0.6s
YAK smax smax
comp=E,87nm,3.3s
YAK smax smax
comp=N,84nm,13.0s
MK31 Makanchi Array 54.40 323 *i* P P 07 44 50.3 -0.9
MK31 pmax pmax
comp=Z,19nm,0.7s
MK31 Makanchi Array 54.40 323 *e*P P 07 44 51.1 -0.1
MKAR Makanchi Array 54.40 323 P P 07 44 50.8 -0.4
MKAR 07 45 54.1
MKAR Makanchi Array 54.40 323 P P 07 44 50.8 -0.4
MKAR PcP PcP 07 45 54.1 -0.4
MKAR ScP ScP 07 49 50.1 +0.9
MKAR Makanchi Array 54.40 323 P P 07 44 50.8 -0.4
comp=Z,18nm,0.7s,baz=124,slow=8.1,SNR=132
MKAR PcP PcP 07 45 54.1 -0.4
comp=Z,9.2nm,0.8s,baz=119,slow=4.1,SNR=5.9
MKAR ScP ScP 07 49 50.1 +0.9
comp=Z,1.1nm,0.9s,baz=120,slow=5.2,SNR=3.9
MKAR LR LR 08 09 25.9
comp=Z,371nm,19.6s,baz=127,slow=38
KSH Kashi 55.41 313 P P 07 44 59.9 +1.1
KSH *e*pP pP 07 45 10.1 -1.6
KSH *e*sP sP 07 45 14.1 -2.9
KSH *e*PcP PcP 07 46 00.8 +2.1
KSH *e*PP PP 07 47 04.6 +1.6
KSH *e*ScP ScP 07 49 56.1 +2.1
KSH *e*PcS PcS 07 50 00.5 +1.6
KSH *e*S S 07 52 38.5 -1.9
KSH *e*ScS ScS 07 54 43.1 -1.4
KSH *e*SS SS 07 56 22.5 -3.1
KSH pmax pmax
comp=Z,29nm,1.3s
KSH pmax pmax
comp=Z,230nm,7.8s
KSH LR LR
comp=N,760nm,18.8s
KSH LR LR
comp=E,730nm,18.7s
KSH LR LR
comp=Z,340nm,12.5s
ULHL Ulahol 56.22 316 P P 07 45 04.4 -0.2
SNR=6.4
KZA Kyzart 56.84 316 P P 07 45 09.7 +0.4
SNR=14
TKM2 Tokmak 2 56.92 317 *i* P P 07 45 08.8 -0.8
TKM2 pmax pmax
comp=Z,12nm,1.0s
TKM2 Tokmak 2 56.92 317 *e*P P 07 45 09.0 -0.6
comp=Z,7.6nm,0.8s
TKM2 Tokmak 2 56.92 317 P P 07 45 09.1 -0.5
SNR=11
ZALV Zalesovo Beam 57.09 332 P P 07 45 09.6 -0.7
ZALV Zalesovo Beam 57.09 332 P P 07 45 09.6 -0.7
ZALV Zalesovo Beam 57.09 332 P P 07 45 09.6 -0.7
comp=Z,19nm,0.8s,baz=115,slow=6.7,SNR=19
ZALV LR LR 08 12 14.0
comp=Z,320nm,18.1s,baz=70,slow=39
KBK Karagaybulak 57.27 316 P P 07 45 11.6 -0.4
SNR=5.5
FRU Bishkek 57.56 316 *e*P P 07 45 19.0 +5.1
AAK Ala-Archa 57.57 316 *c**i*P P 07 45 13.9 -0.2
AAK pmax pmax
comp=Z,10.0nm,0.7s
AAK Ala-Archa 57.57 316 *e*P P 07 45 13.7 -0.5
comp=Z,5.7nm,0.9s
AAK Ala-Archa 57.57 316 P P 07 45 13.1 -1.0
comp=Z,3.0nm,0.7s,baz=150,slow=10,SNR=8.1
USP Ospenovka 57.80 317 P P 07 45 15.0 -0.6
SNR=11
AML Almayashu 57.95 315 P P 07 45 16.9 -0.2
SNR=24
SEY Seymchan 57.96 13⇑ *i*P P 07 45 19.6 +3.4
EKS2 Erkin-Say 58.07 316 *e*P P 07 45 17.4 -0.3
EKS2 pmax pmax
comp=Z,10.0nm,0.8s
EKS2 Erkin-Say 58.07 316 *e*P P 07 45 17.4 -0.3
comp=Z,9.5nm,0.8s
EKS2 Erkin-Say 58.07 316 P P 07 45 17.5 -0.1
SNR=9.8
NVS Novosibirsk 58.37 332⇑ *i*P P 07 45 17.2 -2.1
NVS *e*S S 07 53 07.9 -11
NVS pmax pmax
comp=N,12nm,0.9s
NVS pmax pmax
comp=E,10.0nm,0.9s
NVS pmax pmax
comp=Z,29nm,0.9s
NVS smax smax
comp=N,19nm,2.2s
NVS smax smax
comp=E,32nm,2.0s
KURK Kurchatov 58.47 326*c* *i*P P 07 45 19.3 -0.8
KURK pmax pmax
comp=Z,71nm,1.2s
KURK Kurchatov 58.47 326 P P 07 45 19.6 -0.5
KURBB Kurchatov Arra 58.48 326 P P 07 45 19.6 -0.6
comp=Z,22nm,0.7s,baz=126,slow=6.2,SNR=115
KBL Kabul 59.33 306 *e*P P 07 45 25.5 -1.2
KBL pmax pmax
comp=Z,10.0nm,0.8s
KBL Kabul 59.33 306 *e*P P 07 45 25.4 -1.2
comp=Z,10nm,0.8s
KK31 Karatay Array 60.48 315 *i* P P 07 45 33.0 -1.1
KK31 pmax pmax
comp=Z,4.0nm,0.4s
KKAR Karatay Array 60.48 315 *e*P P 07 45 33.6 -0.6
KKAR pmax pmax
comp=Z,6.0nm,0.6s
KKAR Karatay Array 60.48 315 *e*P P 07 45 33.6 -0.6
comp=Z,6.1nm,0.6s
VOSK Vostochnaya 63.62 326 P P 07 45 52.9 -2.1
VOSK pmax pmax
comp=Z,10.0nm,0.7s
TIXI Tiksi 63.73 1*c* *i*P P 07 45 55.5 +0.2
TIXI pmax pmax
comp=Z,81nm,2.5s
TIXI MLR MLR
comp=Z,566nm,22.0s
BVA0 Borovoye Array 64.07 326 P P 07 45 57.2 -0.7
BRVK Borovoye 64.14 326*c* *i*P P 07 45 57.6 -0.8
BRVK pmax pmax
comp=Z,19nm,0.7s
BRVK Borovoye 64.14 326 *e*P P 07 45 58.0 -0.3
comp=Z,19nm,0.8s
AFI Afiamalu 64.44 109 LR LR 08 11 44.8
comp=Z,388nm,19.8s,baz=237,slow=34
RPZ Rata Peaks 64.97 146 LR LR 08 15 24.7
comp=Z,465nm,19.4s,baz=267,slow=37
URZ Urewera 65.37 138 LR LR 08 12 02.5
comp=Z,413nm,19.3s,baz=314,slow=34
BILL Bilibino 65.50 15⇑ *i*P P 07 46 08.6 +1.7
BILL *i**PP pP 07 46 19.8 -0.3
BILL *i* 07 46 40.1
BILL pmax pmax
comp=Z,66nm,1.1s
BILL Bilibino 65.50 15 *e*P P 07 46 08.3 +1.4
comp=Z,44nm,1.3s
BILL *e*pP pP 07 46 20.3 +0.1
AB31 Akbulak array 69.19 320 *i* P P 07 46 29.1 -1.6
AB31 pmax pmax
comp=Z,5.0nm,0.5s
ABKAR Akbulak array 69.19 320 *e*P P 07 46 29.7 -0.9
comp=Z,6.2nm,0.7s
GAMB Gambell 70.52 24 *e*P P 07 46 40.9 +2.4
comp=Z,35nm,1.1s
GAMB *e*pP pP 07 46 52.4 +0.6
SVE Sverdlovsk 70.64 328⇑ *i*P P 07 46 38.8 -0.6
SVE *e*PPP PPP 07 51 01.8
SVE *e*S S 07 55 44.7 -5.2
SVE pmax pmax
comp=Z,23nm,0.7s
SVE MLR MLR
comp=Z,335nm,18.0s
ARU Arti 71.64 327*c* *i*P P 07 46 44.1 -1.4
ARU S S 07 56 01.1 -0.5
ARU pmax pmax
comp=Z,16nm,0.8s
TNA Tin City 72.68 23 *e*P P 07 46 54.1 +2.6
comp=Z,5.5nm,0.8s
SDPT Sand Point 73.62 35 *e*P P 07 46 59.3 +2.1
comp=Z,108nm,1.0s
SDPT *e*pP pP 07 47 10.1 -0.5
CASY Casey 74.94 187 *e*P P 07 47 05.0 +0.4
comp=Z,16nm,0.8s
CASY *e*pP pP 07 47 16.2 -1.8
RDF Al-Radifah 77.07 298 *e*P P 07 47 16.9 -0.7
RDF AMb AMB 07 47 18.1
comp=Z,27nm,1.4s
MIB Mutribah 77.23 299 *e*P P 07 47 17.2 -1.3
MIB AMb AMB 07 47 18.1
comp=Z,40nm,0.8s
NAY Al-Naaiem 77.33 298 *e*P P 07 47 17.7 -1.4
NAY AMb AMB 07 47 18.6
comp=Z,17nm,1.0s
OHAK Old Harbor 77.83 33 *e*P P 07 47 23.8 +2.5
comp=Z,38nm,0.9s
OHAK *e*pP pP 07 47 35.0 +0.2
KDAK Kodiak Island 78.25 33 *e*P P 07 47 26.1 +2.5
comp=Z,36nm,0.8s
KDAK *e*pP pP 07 47 37.3 +0.2
RSO Redoubt South 78.36 30 *e*P P 07 47 26.4 +1.9
comp=Z,34nm,0.8s
RSO *e*pP pP 07 47 39.9 +1.9
PPLA Purkeypile 78.83 27 *e*P P 07 47 29.2 +2.3
comp=Z,17nm,1.0s
PPLA *e*pP pP 07 47 40.7 +0.3
RAYN Ar Rayn 79.19 292 P P 07 47 28.5 -1.0
comp=Z,159nm,0.8s,SNR=11
TRF Thorofare Moun 79.73 27 *e*P P 07 47 33.0 +1.2
comp=Z,43nm,1.1s
TRF *e*pP pP 07 47 44.8 -0.5
COLD Coldfoot 79.98 23 *e*P P 07 47 35.8 +2.9
comp=Z,21nm,1.1s
COLD *e*pP pP 07 47 47.4 +0.9
SEW Seward 79.99 30 *e*P P 07 47 35.2 +2.2
comp=Z,41nm,1.1s
PMR Palmer 80.19 29 *e*P P 07 47 35.3 +1.2
PMR *e**PP pP 07 47 47.1 -0.5
PMR pmax pmax
comp=Z,48nm,1.0s
PMR Palmer 80.19 29 *e*P P 07 47 35.3 +1.2
comp=Z,48nm,1.0s
PMR *e*pP pP 07 47 47.1 -0.5
MCK McKinley 80.34 27 *e*P P 07 47 35.9 +0.9
MCK *e**PP pP 07 47 48.4 -0.1
MCK pmax pmax
comp=Z,66nm,1.0s
MCK McKinley 80.34 27 *e*P P 07 47 35.9 +0.9
comp=Z,66nm,1.0s
MCK *e*pP pP 07 47 48.4 -0.1
KBZ Khabaz 80.39 313 P P 07 47 34.3 -1.2
KBZ Khabaz 80.39 313 P P 07 47 34.3 -1.2
KBZ Khabaz 80.39 313 P P 07 47 34.3 -1.2
comp=Z,3.1nm,0.8s,baz=78,slow=2.6,SNR=8.3
KBZ LR LR 08 28 38.3
comp=Z,277nm,18.3s,baz=75,slow=40
KIV Kislovodsk 80.54 313 *e*P P 07 47 36.0 -0.5
KIV pmax pmax
comp=Z,9.0nm,0.7s
KIV MLR MLR
comp=Z,245nm,19.0s
COLA College 80.84 26 *e*P P 07 47 38.1 +0.6
COLA pmax pmax
comp=Z,11nm,1.0s
COLA College 80.84 26 *e*P P 07 47 38.1 +0.6
comp=Z,11nm,1.0s
ILAR Eielson Array 81.25 26 P P 07 47 40.4 +0.6
ILAR PKKPbc PKKPbc 08 06 25.1 +7.5
ILAR Eielson Array 81.25 26 P P 07 47 40.4 +0.6
comp=Z,4.0nm,0.8s,baz=237,slow=5.6,SNR=62
ILAR PKKPbc PKKPbc 08 06 25.1 +7.5
comp=Z,0.2nm,0.7s,baz=50,slow=0.9,SNR=4.6
ILAR LR LR 08 23 38.5
comp=Z,164nm,20.2s,baz=305,slow=36
DIV Divide 81.80 29 *e*P P 07 47 45.2 +2.4
comp=Z,65nm,1.1s
DIV *e*pP pP 07 47 57.4 +1.0
PAX Paxson 81.90 27 *e*P P 07 47 45.3 +1.9
PAX pmax pmax
comp=Z,7.0nm,0.6s
PAX Paxson 81.90 27 *e*P P 07 47 45.2 +1.9
comp=Z,7.4nm,0.6s
KLMR Klimovskoe 81.98 330*c* *i*P P 07 47 42.8 -0.8
KLMR pmax pmax
comp=Z,50nm,0.9s
DOT Dot Lake 82.51 27 *e*P P 07 47 47.1 +0.7
comp=Z,21nm,1.0s
DOT *e*pP pP 07 47 59.9 -0.1
VORD Divnogorie 82.54 320 *e*P P 07 47 44.5 -2.2
VORD pmax pmax
comp=Z,7.0nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VSR Storozhevoye 82.60 321 *e*P P 07 47 44.6 -2.5
VSR pmax pmax
comp=Z,8.0nm,0.8s
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,5.0nm,0.4s
MENT Mentasta 82.70 27 *e*P P 07 47 49.8 +2.3
MENT *e*pP pP 07 48 01.5 +0.5
LVZ Lovozero 83.67 338 *e*P P 07 47 51.8 -0.6
LVZ pmax pmax
comp=Z,42nm,1.5s
EGAK Eagle 83.71 26 *e*P P 07 47 54.7 +2.2
comp=Z,9.2nm,0.8s
EGAK *e*pP pP 07 48 06.5 +0.4
OBN Obninsk 83.89 325*c* *i*P P 07 47 52.7 -0.9
OBN *i* 07 47 58.6
OBN *i**PP pP 07 48 09.0 +1.8
OBN pmax pmax
comp=Z,47nm,1.5s
OBN MLR MLR
comp=Z,200nm,17.0s
APA Apatity 84.18 337⇑ *i*P P 07 47 50.0 -4.9
APA pmax pmax
comp=Z,22nm,0.9s
APA MLR MLR
comp=Z,300nm,17.0s
JOF Joensuu 85.67 333 *e*P P 07 48 02.8 +0.4
JOF pmax pmax
comp=Z,37nm,0.8s
JOF Joensuu 85.67 333 *e*p P 07 48 02.8 +0.4
comp=Z,37nm,0.8s
PPT Papeete 86.09 108 LR LR 08 22 30.7
comp=Z,241nm,18.9s,baz=172,slow=33
PPT2 Papeete2 86.09 108 *e*LR LR 08 15 19.2
comp=Z,358nm,23.0s
KEV Kevo 86.14 340 *e*P P 07 48 04.6 0.0
KEV pmax pmax
comp=Z,15nm,0.8s
KEV Kevo 86.14 340 *e*p P 07 48 04.6 0.0
comp=Z,15nm,0.8s
SIM Simferopol' 86.58 315 *e*P P 07 48 06.8 -0.5
SIM pmax pmax
comp=Z,24nm,0.8s
ARCES ARCESS Array B 86.70 340 P P 07 48 07.0 -0.4
ARCES ARCESS Array B 86.70 340 P P 07 48 07.0 -0.4
comp=Z,9.6nm,0.7s,baz=62,slow=5.6,SNR=31
ARCES LR LR 08 32 58.1
comp=Z,303nm,19.7s,baz=77,slow=40
ARE0 ARCESS Array S 86.70 340 *e*P P 07 48 07.1 -0.3
TBI Tubuai 87.15 114 *e*LR LR 08 15 57.3
comp=Z,365nm,27.2s,baz=289
PMOR Pomariorio Ree 87.28 105 *e*T T 09 25 00.0
comp=Z,1.4nm,0.2s
VNDA Vanda 87.47 173 *e*P P 07 48 10.6 -0.2
comp=Z,9.7nm,0.8s
VNDA *e*pP pP 07 48 22.6 -2.0
VNDA Vanda 87.47 173 P P 07 48 11.3 +0.4
comp=Z,4.8nm,0.9s,baz=316,slow=6.7,SNR=26
BR131 Keskin Array S 87.64 310 *e*P P 07 48 11.1 -1.7
comp=Z,1.9nm,0.6s
BRTR Keskin Array B 87.64 310 P P 07 48 11.4 -1.4
BRTR Keskin Array B 87.64 310 P P 07 48 11.4 -1.4
comp=Z,2.0nm,0.7s,baz=126,slow=5.1,SNR=11
EIL Elat 87.97 300 P P 07 48 14.8 +0.4
baz=88,SNR=5.1
KAF Kangasniemi 88.10 332 *e*P P 07 48 13.4 -0.9
KAF pmax pmax
comp=Z,11nm,0.7s
KAF Kangasniemi 88.10 332 *e*p P 07 48 13.4 -0.9
comp=Z,11nm,0.7s
FIA1 FINESS Array S 88.36 332 *e*P P 07 48 14.8 -0.7
FINES FINESS Array B 88.36 332 P P 07 48 14.8 -0.6
FINES FINESS Array B 88.36 332 P P 07 48 14.8 -0.6
comp=Z,12nm,0.8s,baz=90,slow=5.7,SNR=42
SBA Scott Base 88.36 172 *e*P P 07 48 16.5 +1.4
SBA *e**PP pP 07 48 28.2 -0.6
SBA pmax pmax
comp=Z,8.0nm,0.8s
SBA Scott Base 88.36 172 *e*P P 07 48 16.5 +1.4
comp=Z,8.3nm,0.8s
SBA *e*pP pP 07 48 28.2 -0.6
AKASG Malin Array Be 88.90 321 P P 07 48 17.3 -1.0
AKASG Malin Array Be 88.90 321 P P 07 48 17.3 -1.0
AKASG Malin Array Be 88.90 321 P P 07 48 17.3 -1.0
comp=Z,9.6nm,0.7s,baz=71,slow=4.4,SNR=23
AKASG LR LR 08 33 00.8
comp=Z,254nm,19.1s,baz=90,slow=39
AK01 Malin Array Si 88.91 321 *e*P P 07 48 17.1 -1.2
KIEV Kiev 88.91 321 *e*P P 07 48 17.2 -1.1
KIEV pmax pmax
comp=Z,6.0nm,0.8s
KIEV Kiev 88.91 321 *e*P P 07 48 17.2 -1.1
comp=Z,6.4nm,0.8s
AK02 Malin Array Si 88.92 321 *e*P P 07 48 17.3 -1.1
KMBO Kilima Mbogo 89.95 269 P P 07 48 23.8 -0.5
KMBO Kilima Mbogo 89.95 269 P P 07 48 23.8 -0.5
comp=Z,0.5nm,0.3s,baz=49,slow=19,SNR=3.5
BUR08 Bucovina Ar. S 92.14 319 *e*P P 07 48 33.4 -0.3
KOLS Kolonicke sedl 93.69 320 *e*P P 07 48 40.4 -0.2
KOLS pmax pmax
comp=Z,6.0nm,1.5s
KOLS Kolonicke sedl 93.69 320 *e*P P 07 48 40.4 -0.2
UZH Uzhgorod 93.76 320 *e*P P 07 48 40.0 -0.9
UZH *e* 07 48 47.3
UZH *e* 07 48 52.7
CRVS Cervenica-Dubn 94.21 320 *e*P P 07 48 41.5 -1.5
CRVS pmax pmax
comp=Z,12nm,1.3s
CRVS Cervenica-Dubn 94.21 320 *e*P P 07 48 41.5 -1.5
NB2 NORSAR Subarra 95.24 334 P P 07 48 45.6 -1.9
comp=Z,3.6nm,0.8s,baz=64,slow=4.4
NB2 NORSAR Subarra 95.24 334 P P 07 48 45.6 -1.9
baz=64,slow=4.4
NOA NORSAR Array B 95.24 334 P P 07 48 46.0 -1.5
NOA NORSAR Array B 95.24 334 P P 07 48 46.0 -1.5
comp=Z,2.5nm,0.8s,baz=63,slow=4.6,SNR=18
NOA LR LR 08 35 16.1
comp=Z,252nm,20.3s,baz=55,slow=38
YKW3 Yellowknife Ar 95.58 24 *e*P P 07 48 50.4 +1.4
comp=Z,0.1nm,1.1s
YKA Yellowknife Ar 95.62 24 P P 07 48 50.4 +1.2
YKA PKKPbc PKKPbc 08 05 46.5 +4.5
YKA Yellowknife Ar 95.62 24 P P 07 48 50.3 +1.2
comp=Z,2.6nm,0.7s,baz=301,slow=4.7,SNR=31
YKA PKKPbc PKKPbc 08 05 46.5 +4.5
comp=Z,0.6nm,0.7s,baz=124,slow=3.0,SNR=6.1
VYHS Vyhne 96.00 321 *e*P P 07 48 52.1 +0.9
VYHS pmax pmax
comp=Z,2.0nm,1.4s
VYHS Vyhne 96.00 321 *e*P P 07 48 52.1 +0.9
SYO Syowa Base 96.38 201⇑ *e*P P 07 48 51.2 -1.1
CLL Collm 98.48 325 *e*P Pdif 07 49 02.0 -0.3
CLL MLR MLR
comp=Z,200nm,18.5s
CLL Collm 98.48 325 *e*Pdif Pdif 07 49 02.0 -0.3
CLL LmV 08 40 00.0
comp=Z,200nm,18.5s
GERES GERESS Array B 99.05 322 P Pdif 07 49 04.9 -0.1
GERES GERESS Array B 99.05 322 P Pdif 07 49 04.9 -0.1
comp=Z,1.4nm,0.7s,baz=68,slow=4.9,SNR=17
GRF Grafenberg Arr 100.19 324 *e*Pdiff Pdif 07 49 09.6 -0.4
GRF *e*L L 08 37 34.9
comp=Z,177nm,19.7s
GRF Grafenberg Arr 100.19 324 *e*P Pdif 07 49 09.6 -0.4
GRF MLR MLR

comp=Z,200nm,19.7s
RKT Rikitea 100.35 112 *e*LR LR 08 22 03.1
comp=Z,364nm,23.8s
NVAR Mina Array Bea 103.90 47 Pdif **Pdif 07 49 29.2 +2.2**
NVAR PKKPbc **PKKPbc 08 05 17.0 -1.1**
NVAR PKKP **PKKPdf 08 05 28.6 +1.9**
NVAR Mina Array Bea 103.90 47 Pdiff **Pdif 07 49 29.2 +2.2**
comp=Z,0.3nm,0.6s,baz=282,slow=5.4,SNR=3.1
NVAR PKKPbc **PKKPbc 08 05 17.0 -1.1**
comp=Z,0.5nm,0.7s,baz=136,slow=4.2,SNR=4.8
NVAR PKKP **PKKPdf 08 05 28.6 +1.9**
comp=Z,0.6nm,0.7s,baz=143,slow=5.2,SNR=4.4
PDAR Pinedale Array 108.03 40 PKKP **PKKPdf 08 05 15.2 -4.0**
comp=Z,0.3nm,0.5s,baz=126,slow=7.5,SNR=4.0
PV01 Paradox Valley 110.95 44 *e*PKPdf **PKiKP 07 53 59.7 +1.9**
S20A Disappointment 111.24 44 P 07 53 59.4
baz=111
O23A Lake Granby, G 111.68 41 P 07 54 00.7
baz=112
P23A Jefferson 112.17 42 P 07 54 01.7
baz=112
T21A Navajo Lake 112.22 45 P 07 54 02.0
baz=112
U21A Nageezi 112.41 45 P 07 54 02.3
baz=112
Q23A Hartsel 112.42 42 P 07 54 01.9
baz=112
W20A Ramah 112.42 47 P 07 54 02.4
baz=112
X21A Alamocita Cree 113.26 47 P 07 54 03.8
baz=113
220A Playas Peak, P 113.88 50 P 07 54 03.8
baz=114
S25A Robets Cordova 114.01 43 P PKPdf 07 54 04.6 +1.1
baz=114
Z22A Elephant Butte 114.43 48 P PKPdf 07 54 05.9 +1.4
baz=114
V24A Rampart Ranch, 114.44 45 P PKPdf 07 54 06.2 +1.7
baz=114
T26A Comanche Natio 114.83 43 P PKPdf 07 54 06.7 +1.5
baz=115
V25A Rancho No Teng 114.83 45 P PKPdf 07 54 06.6 +1.4
baz=115
Y24A Capitan 115.22 47 P **PKPdf 07 54 06.9 +0.9**
baz=115
W25A X Bar L Ranch, 115.26 45 P **PKPdf 07 54 07.3 +1.3**
baz=115
V26A Tequesquite Ra 115.43 44 P **PKPdf 07 54 07.1 +0.8**
baz=115
Y25A Mesa, Roswell 115.76 46 P **PKPdf 07 54 08.1 +1.2**
baz=116
124A Stringfield Ra 115.81 48 P **PKPdf 07 54 08.5 +1.3**
baz=116
W26A Owens Ranch, T 115.82 45 P **PKPdf 07 54 07.7 +0.6**
baz=116
X26A CR and CF Fran 116.06 45 P **PKPdf 07 54 08.8 +1.2**
baz=116
125A Gardner Draw, 116.41 48 P **PKPdf 07 54 08.7 +0.5**
baz=116
226B Tecolote Peak, 117.06 48 P **PKPdf 07 54 10.3 +0.8**
baz=117
425A Indio Mountain 117.08 50 P **PKPdf 07 54 09.9 +0.3**
baz=117
X29A Tulia 117.60 45 P **PKPdf 07 54 11.7 +1.3**
baz=118
128A Castleberry Fa 118.01 47 P **PKPdf 07 54 12.7 +1.4**
baz=118
526A Mary Lane Ranc 118.11 50 P **PKPdf 07 54 13.2 +1.6**
baz=118
427A Hayter Ranch, 118.24 49 P **PKPdf 07 54 12.4 +0.6**
baz=118
328A Wristen Ranch, 118.41 48 P **PKPdf 07 54 13.0 +1.0**
baz=118
129A Stewart Farms, 118.45 46 P **PKPdf 07 54 12.7 +0.6**
baz=118
Z30A Sanderson Ranc 118.62 45 P **PKPdf 07 54 13.1 +0.7**
baz=119
TXAR Lajitas Array 118.78 50 PKP **PKPdf 07 54 13.6 +0.7**
TXAR PKKPbc **PKKPbc 08 04 29.4 +0.6**
TXAR Lajitas Array 118.78 50 PKP **PKPdf 07 54 13.6 +0.7**
comp=Z,0.7nm,0.7s,baz=212,slow=1.6,SNR=12
TXAR PKKPbc **PKKPbc 08 04 29.4 +0.6**
comp=Z,0.7nm,0.8s,baz=122,slow=6.1,SNR=7.7
428A Kincaid Ranch, 118.83 49 P **PKPdf 07 54 14.4 +1.5**
baz=119
Y31A Rekieta Farm, 118.86 44 P **PKPdf 07 54 14.3 +1.5**
baz=119
627A Terlingua Ranc 118.93 50 P **PKPdf 07 54 14.2 +1.1**
baz=119
528A Cox Ranch, San 119.04 49 P **PKPdf 07 54 14.5 +1.1**
baz=119
628A Black Gap, Mar 119.30 50 P **PKPdf 07 54 14.9 +1.1**
baz=119
230A Sterling City 119.38 47 P **PKPdf 07 54 15.1 +1.2**
baz=119
429A Davenport Ranc 119.47 48 P **PKPdf 07 54 15.4 +1.3**
baz=120
529A Stev Forest Ra 119.48 49 P **PKPdf 07 54 15.5 +1.3**
baz=120
330A Mertzon 119.59 47 P **PKPdf 07 54 15.6 +1.3**
baz=120
Z32A Haskell 119.77 44 P **PKPdf 07 54 16.1 +1.6**
baz=120
430A Baggett Ranch, 119.87 48 P **PKPdf 07 54 16.3 +1.4**
baz=120
530A J-C Ranch, Com 120.13 48 P **PKPdf 07 54 17.2 +1.8**
baz=120
331A San Angelo 120.19 47 P **PKPdf 07 54 16.4 +1.0**
baz=120
431A Sonora 120.39 48 P **PKPdf 07 54 16.9 +1.1**
baz=120
332A Millersview 120.64 46 P **PKPdf 07 54 17.2 +0.9**
baz=121
TUL1 Tulsa 120.68 40 P **PKPdf 07 54 17.5 +1.3**
baz=121
531A Rocksprings 120.70 48 P **PKPdf 07 54 17.7 +1.2**
baz=121
432A Menard 120.88 47 P **PKPdf 07 54 17.7 +1.0**
baz=121
631A Perdido Creek 121.07 49 P **PKPdf 07 54 18.4 +1.2**
baz=121
JCT Junction City 121.08 47 *e*PKIKP **PKPdf 07 54 18.5 +1.3**
JCT Junction City 121.08 47 *e*PKPdf **PKPdf 07 54 18.5 +1.3**
JCT Junction City 121.08 47 P **PKPdf 07 54 18.3 +1.1**
baz=121
532A Rocksprings 121.19 48 P **PKPdf 07 54 18.5 +1.1**
baz=121
632A Uvalde 121.61 48 P **PKPdf 07 54 19.8 +1.6**
baz=122
TOA0 Torodi Ar. Sit 121.85 291 *e*PKPdf **PKPdf 07 54 18.6 -0.4**
TORD Torodi Ar. Bea 121.85 291 PKP **PKPdf 07 54 18.5 -0.4**
TORD Torodi Ar. Bea 121.85 291 PKP **PKPdf 07 54 18.5 -0.4**
comp=Z,3.0nm,0.7s,baz=71,slow=2.0,SNR=26
732A Laxson Ranch, 121.88 49 P **PKPdf 07 54 19.9 +1.2**
baz=122
DBIC Dimbokro 129.91 285 SKPbc SKPbc 07 57 53.8 +0.4
comp=Z,4.1nm,0.9s,baz=34,slow=6.4,SNR=3.5
PLCA Paso Flores 143.71 157 PKP **PKPdf 07 54 59.4 +0.1**
PLCA Paso Flores 143.71 157 PKP **PKPdf 07 54 59.4 +0.1**
comp=Z,2.1nm,0.8s,baz=233,slow=10,SNR=3.0
TRQA Tornquist 148.86 166 *e*PKPbc **PKPbc 07 55 12.6 +0.7**
LRS Lares 150.61 28 *e*PKPdf **PKPdf 07 55 12.2 +0.9**
LRS *e*PKPbc **PKiKP 07 55 17.8 +0.4**
LRS *e*PKPab **PKPab 07 55 24.1 +0.7**
CPUP Villa Florida 161.17 168 PKPab **PKPab 07 56 07.0 -1.2**
CPUP Villa Florida 161.17 168 PKPab **PKPab 07 56 07.0 -1.2**
comp=Z,0.2nm,0.3s,baz=243,slow=2.3,SNR=3.8
LPAZ La Paz 162.97 121 PKP **PKPdf 07 55 27.3 -0.5**
LPAZ PKPab **PKPab 07 56 17.3 -0.1**
LPAZ La Paz 162.97 121 PKP **PKPdf 07 55 27.3 -0.5**
comp=Z,1.7nm,0.9s,baz=309,slow=17,SNR=7.1
LPAZ PKPab **PKPab 07 56 17.3 -0.1**
comp=Z,1.9nm,0.8s,baz=256,slow=5.6,SNR=3.6

DJA 21 08:08:41.0±1.0, 9°S±5°×111°2E±°, h22km±12km, M3.5/7, MLv3.5/7, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRKI	**Karangkates**	**1.09**	**19**	P		Pn	08 09 00.7	-0.3
KRKI				S		Sb	08 09 14.6	-0.4
PWJI	**Pagerwojo**	**1.21**	**346**	P		Pn	08 09 02.2	-0.4
PWJI				S		Sn	08 09 17.3	-0.9
PCJI	**Pacitan**	**1.35**	**318**	P		Pn	08 09 03.9	-0.7
PCJI				S		Sn	08 09 20.6	-1.3
SJI	**Sawahan**	**1.49**	**347**	P		Pn	08 09 06.5	-0.1
SJI				S		Sb	08 09 27.2	+0.4
GMJI	**Gumukmas**	**1.62**	**55**	P		Pn	08 09 07.0	-1.2
UGM	**Wanagama**	**2.02**	**309**	P		Pn	08 09 14.4	+0.6
BLJI	**Banyuglugur**	**2.07**	**46**	P		Pn	08 09 14.8	+0.4

*ISK **21** 08:16:45.0, 36°.86N×36°.08E, h9km, MD2.6*
*CSEM **21** 08:16:46.2±0.4, 36°.90N×36°.06E, h10km, MD2.6, Error ellipse: s-maj=9.8km s-min=6.5km az=9.0*
*DDA **21** 08:16:46.9, 36°.83N×36°.01E, h7km, MD2.7*
ISC 21 08:16:45.9±1.2, 36°.86N±0°.04×36°.06E±0°.03, h8km±10km, n18, σ1s07/30, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEYT	**Ceyhan**	**0.29**	**301**	*e*PG		**Pg**	**08 16 51.5**	**-0.2**
CEYT				*e*SG		**Sg**	**08 16 56.3**	**+0.7**
CEYT	**Ceyhan**	**0.29**	**301**	*e*Pg		**Pg**	**08 16 51.5**	**-0.2**
CEYT				*e*Sg		**Sg**	**08 16 56.3**	**+0.7**
YURE	**YUREGIR**	**0.35**	**264**	*i* P		**Pg**	**08 16 52.9**	**+0.1**
YURE				*i* S		**Sb**	**08 16 60.0**	**-0.1**
YURE	**YUREGIR**	**0.35**	**264**	*i* P		**Pg**	**08 16 52.9**	**+0.1**
YURE				*i* S		**Sb**	**08 17 00.0**	**-0.1**
KOZT	**Kozan**	**0.65**	**343**	*e*PG		**Pg**	**08 16 57.2**	**-1.2**
KOZT				*e*SG		**Sb**	**08 17 08.3**	**-0.4**
KOZT	**Kozan**	**0.65**	**343**	*e*Pg		**Pg**	**08 16 57.2**	**-1.2**
KOZT				*e*Sg		**Sb**	**08 17 08.3**	**-0.4**
HTY	**Hatay**	**0.74**	**175**	*e*PG		**Pb**	**08 17 00.7**	**-0.4**
HTY	**Hatay**	**0.74**	**175**	*e*Pg		**Pb**	**08 17 00.7**	**-0.4**
AYKD	**Aykdinkavak**	**0.81**	**47**	*i* P		**Pn**	**08 17 03.5**	**-0.3**
AYKD				*i* S		**Sn**	**08 17 15.7**	**-0.3**
KUZU	**Kuzuini**	**0.82**	**96**	*i* P		**Pn**	**08 17 03.6**	**-0.2**
KUZU				*i* S		**Sn**	**08 17 15.7**	**-0.5**
KUZU	**Kuzuini**	**0.82**	**96**	*i* P		**Pn**	**08 17 03.6**	**-0.2**
KUZU				*i* S		**Sn**	**08 17 15.7**	**-0.5**
KMRS	**Kahramanmaras**	**0.93**	**46**	*e*PG		**Pg**	**08 17 03.8**	**0.0**
KMRS	**Kahramanmaras**	**0.93**	**46**	*e*Pg		**Pg**	**08 17 03.8**	**0.0**
GAZ	**Gaziantep**	**0.97**	**71**	*e*PG		**Pg**	**08 17 03.1**	**-1.5**
GAZ	**Gaziantep**	**0.97**	**71**	*e*Pg		**Pg**	**08 17 03.1**	**-1.5**
GULE	**Gulek**	**1.11**	**293**	*i* P		**Pb**	**08 17 07.8**	**+0.3**
GULE				*i* S		**Sn**	**08 17 23.4**	**-0.2**
GULE	**Gulek**	**1.11**	**293**	*i* P		**Pb**	**08 17 07.8**	**+0.3**
GULE				*i* S		**Sn**	**08 17 23.4**	**-0.2**
GZT	**Gaziantep**	**1.30**	**67**	*i* P		**Pg**	**08 17 12.7**	**+1.9**
GZT				*i* S		**Sn**	**08 17 32.2**	**+4.0**

*ISCJB **21** 08:21:44.7±0.2, 46°.47N±0°.01×14°.88E±0°.02, h6km±4km, Error ellipse: s-maj=2.4km s-min=2.0km az=11.9*
*VIE **21** 08:21:44.8±0.1, 46°.46N×14°.90E, h8km±1km, mb2.3/7, ML2.8/7, Error ellipse: s-maj=1.1km s-min=0.9km az=137.0 16 km SSE of Bleiburg felt 3-4 ems98 at Bleiburg and Neuhaus / CARINTHIA*
*LJU **21** 08:21:44.9, 46°.47N×14°.89E, h10km, ML2.2*
*CSEM **21** 08:21:45.1±0.1, 46°.48N×14°.88E, h10km, ML3.2/23, Error ellipse: s-maj=1.3km s-min=1.1km az=14.0*
ISC 21 08:21:45.0±0.8, 46°.47N±0°.02×14°.90E±0°.01, h12km±6km, n82, σ0s45/150, 21C-21D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PERS	**Pernice**	**0.23**	**42**	⇓*i*Pg		**Pg**	**08 21 49.9**	**0.0**
PERS				*i* Sg		**Sg**	**08 21 52.9**	**-0.3**
PERS								
	comp=Z,1μm,0.1s							
PERS	**Pernice**	**0.23**	**42**	⇓*i*Pg		**Pg**	**08 21 49.9**	**0.0**
PERS				*i* Sg		**Sg**	**08 21 52.9**	**-0.3**
	comp=Z,1μm,0.1s							
SOKA	**Soboth**	**0.23**	**24**	⇓*i*Pg		**Pg**	**08 21 50.0**	**0.0**
	comp=Z,61nm,0.1s							
SOKA				⇑*i*Sg		**Sg**	**08 21 53.0**	**-0.4**
	comp=Z,707nm,0.3s							
SOKA	**Soboth**	**0.23**	**24**	Pg		**Pg**	**08 21 50.0**	**0.0**
	comp=Z,61nm,0.1s							
SOKA				Sg		**Sg**	**08 21 53.0**	**-0.4**
	comp=Z,707nm,0.3s							
OBKA	**Obir**	**0.24**	**281**	⇑*i*Pg		**Pg**	**08 21 50.5**	**+0.3**
	comp=Z,29nm,0.1s							
OBKA				⇑*i*Sg		**Sg**	**08 21 53.5**	**-0.2**
	comp=Z,229nm,0.1s							
OBKA	**Obir**	**0.24**	**281**	Pg		**Pg**	**08 21 50.5**	**+0.3**
	comp=Z,29nm,0.1s							
OBKA				Sg		**Sg**	**08 21 53.5**	**-0.2**
	comp=Z,229nm,0.1s							
MOZS	**Mozjanca**	**0.36**	**242**	⇓*i*Pg		**Pg**	**08 21 52.4**	**+0.2**
MOZS								
	comp=Z,170nm,0.1s							
MOZS	**Mozjanca**	**0.36**	**242**	⇓*i*Pg		**Pg**	**08 21 52.4**	**+0.2**
	comp=Z,170nm,0.1s							
VNDS	**Vrh nad Dolski**	**0.39**	**200**	⇓*i*Pg		**Pg**	**08 21 53.3**	**+0.5**
VNDS				*i* Sg		**Sg**	**08 21 58.9**	**+1.0**
VNDS								
	comp=Z,87nm,0.1s							
PDKS	**Podkum**	**0.41**	**170**	⇓*i*Pg		**Pg**	**08 21 53.8**	**+0.6**
PDKS				*i* Sg		**Sg**	**08 21 58.9**	**+0.3**
PDKS								
	comp=Z,60nm,0.1s							
PDKS	**Podkum**	**0.41**	**170**	⇓*i*Pg		**Pg**	**08 21 53.8**	**+0.6**
PDKS				*i* Sg		**Sg**	**08 21 58.9**	**+0.3**
	comp=Z,60nm,0.1s							
GROS	**Grobnik**	**0.42**	**90**	*i* Pg		**Pg**	**08 21 53.2**	**-0.2**
GROS				*i* Sg		**Sg**	**08 21 58.8**	**-0.2**
GROS								
	comp=Z,129nm,0.1s							
GROS	**Grobnik**	**0.42**	**90**	*i* Pg		**Pg**	**08 21 53.2**	**-0.2**
GROS				*i* Sg		**Sg**	**08 21 58.8**	**-0.2**
	comp=Z,129nm,0.1s							
LJU	**Ljubljana**	**0.49**	**211**	*i* Pg		**Pg**	**08 21 55.1**	**+0.4**
LJU				*i* Sg		**Sg**	**08 22 01.5**	**+0.3**
LJU								
	comp=Z,84nm,0.1s							
LJU	**Ljubljana**	**0.49**	**211**	*i* Pg		**Pg**	**08 21 55.1**	**+0.4**
LJU				*i* Sg		**Sg**	**08 22 01.5**	**+0.3**
	comp=Z,84nm,0.1s							
DOBS	**Dobrina**	**0.51**	**128**	*i* Pg		**Pg**	**08 21 55.1**	**+0.2**
DOBS								
	comp=Z,42nm,0.1s							
DOBS	**Dobrina**	**0.51**	**128**	*i* Pg		**Pg**	**08 21 55.2**	**+0.2**
	comp=Z,42nm,0.1s							
CRNS	**Crni Vrh**	**0.58**	**229**	⇓*i*Pg		**Pg**	**08 21 56.6**	**+0.2**
CRNS				*i* Sg		**Sg**	**08 22 04.8**	**+0.6**
CRNS								
	comp=Z,135nm,0.2s							
LEGS	**Legarje**	**0.59**	**150**	⇓*i*Pg		**Pb**	**08 21 57.1**	**-0.3**
LEGS				*i* Sg		**Sg**	**08 22 04.8**	**+0.4**
LEGS	**Legarje**	**0.59**	**150**	⇓*i*Pg		**Pb**	**08 21 57.1**	**-0.3**
LEGS				*i* Sg		**Sg**	**08 22 04.8**	**+0.4**
CESS	**Cesta pri Krsk**	**0.63**	**141**	*i* Pg		**Pb**	**08 21 57.9**	**0.0**
CESS				*i* Sg		**Sb**	**08 22 06.5**	**-0.2**
CESS								
	comp=Z,90nm,0.1s							
CESS	**Cesta pri Krsk**	**0.63**	**141**	*i* Pg		**Pb**	**08 21 57.9**	**0.0**
CESS				*i* Sg		**Sb**	**08 22 06.5**	**-0.2**
	comp=Z,90nm,0.1s							
GORS	**Gorjuse**	**0.64**	**257**	⇑*i*Pg		**Pg**	**08 21 57.5**	**0.0**
GORS				*i* Sg		**Sg**	**08 22 06.0**	**0.0**
GORS								
	comp=Z,23nm,0.1s							
GORS	**Gorjuse**	**0.64**	**257**	⇑*i*Pg		**Pg**	**08 21 57.5**	**0.0**
GORS				*i* Sg		**Sg**	**08 22 06.0**	**0.0**
	comp=Z,23nm,0.1s							
VISS	**Visnje**	**0.66**	**183**	*i* Pg		**Pg**	**08 21 58.2**	**+0.3**
VISS				*i* Sg		**Sb**	**08 22 07.6**	**-0.1**
VISS								
	comp=Z,16nm,0.1s							
VISS	**Visnje**	**0.66**	**183**	*i* Pg		**Pg**	**08 21 58.2**	**+0.3**
VISS				*i* Sg		**Sb**	**08 22 07.6**	**-0.1**
	comp=Z,16nm,0.1s							
GOLS	**Golise**	**0.68**	**132**	*i* Pg		**Pb**	**08 21 58.7**	**-0.1**
GOLS				*i* Sg		**Sg**	**08 22 07.6**	**+0.4**
GOLS	**Golise**	**0.68**	**132**	*i* Pg		**Pb**	**08 21 58.7**	**-0.1**
GOLS				*i* Sg		**Sg**	**08 22 07.6**	**+0.4**
CRES	**Cresnjev**	**0.75**	**148**	*i* Pg		**Pg**	**08 21 59.7**	**+0.2**
CRES				*i* Sg		**Sb**	**08 22 10.0**	**-0.2**
CRES								
	comp=Z,14nm,0.2s							
CRES	**Cresnjev**	**0.75**	**148**	*i* Pg		**Pg**	**08 21 59.7**	**+0.2**
CRES				*i* Sg		**Sb**	**08 22 10.0**	**-0.2**
	comp=Z,14nm,0.2s							
GCIS	**Gornji Cirnik**	**0.79**	**139**	*i* Pg		**Pn**	**08 22 01.3**	**-0.6**
GCIS				*e*Sg		**Sb**	**08 22 11.5**	**+0.3**
CEY	**Cerknica**	**0.80**	**204**	⇓*i*Pg		**Pg**	**08 22 00.4**	**0.0**
CEY				*i* Sg		**Sg**	**08 22 10.2**	**-0.7**
CEY								
	comp=Z,119nm,0.3s							
CEY	**Cerknica**	**0.80**	**204**	⇓*i*Pg		**Pg**	**08 22 00.4**	**0.0**
CEY				*i* Sg		**Sg**	**08 22 10.2**	**-0.7**
	comp=Z,119nm,0.3s							
JAVS	**Javornik**	**0.81**	**226**	⇓*i*Pg		**Pg**	**08 22 00.5**	**-0.3**
JAVS				*i* Sg		**Sb**	**08 22 12.3**	**+0.2**
JAVS								
	comp=Z,20nm,0.1s							
JAVS	**Javornik**	**0.81**	**226**	⇓*i*Pg		**Pg**	**08 22 00.4**	**-0.3**
JAVS				*i* Sg		**Sb**	**08 22 12.3**	**+0.2**
	comp=Z,20nm,0.1s							
VOJS	**Vojsko**	**0.83**	**239**	*i* Pg		**Pg**	**08 22 00.8**	**-0.2**
VOJS				*i* Sg		**Sb**	**08 22 12.6**	**+0.1**
VOJS								
	comp=Z,44nm,0.2s							
VOJS	**Vojsko**	**0.83**	**239**	*i* Pg		**Pg**	**08 22 00.8**	**-0.2**
VOJS				*i* Sg		**Sb**	**08 22 12.6**	**+0.1**
	comp=Z,44nm,0.2s							
CADS	**Cadrg**	**0.84**	**254**	*i* Pg		**Pg**	**08 22 00.8**	**-0.4**
CADS				*i* Sg		**Sb**	**08 22 13.7**	**+0.9**
CADS								
	comp=Z,36nm,0.1s							
CADS	**Cadrg**	**0.84**	**254**	*i* Pg		**Pg**	**08 22 00.8**	**-0.4**
CADS				*i* Sg		**Sb**	**08 22 13.7**	**+0.9**
	comp=Z,36nm,0.1s							
MYKA	**Terra Mystica**	**0.88**	**281**	⇑*i*Pg		**Pg**	**08 22 01.9**	**-0.2**
	comp=Z,4.2nm,0.1s							
MYKA				⇓*i*Sg		**Sb**	**08 22 14.4**	**+0.3**
	comp=Z,30nm,0.1s							
MYKA	**Terra Mystica**	**0.88**	**281**	Pg		**Pg**	**08 22 01.9**	**-0.2**
	comp=Z,4.2nm,0.1s							
MYKA				Sg		**Sb**	**08 22 14.4**	**+0.3**
	comp=Z,30nm,0.1s							
ARSA	**Arzberg**	**0.90**	**28**	⇓*i*Pg		**Pg**	**08 22 01.5**	**-0.8**
	comp=Z,34nm,0.2s							
ARSA	**Arzberg**	**0.90**	**28**	Pg		**Pg**	**08 22 01.5**	**-0.8**
	comp=Z,34nm,0.2s							
DRE	**Drenchia**	**0.92**	**252**	*e*Pg		**Pg**	**08 22 02.1**	**-0.6**
DRE				*e*Sg		**Sb**	**08 22 15.2**	**+0.2**
DRE	**Drenchia**	**0.92**	**252**	*e*P		**Pg**	**08 22 02.1**	**-0.6**
DRE				*e*Sg		**Sb**	**08 22 15.2**	**+0.2**
GBRS	**Gornja Briga**	**0.94**	**184**	*i* Pg		**Pb**	**08 22 03.3**	**+0.1**
GBRS				*i* Sg		**Sg**	**08 22 15.5**	**+0.2**
	comp=Z,18nm,0.1s							
KOGS	**Kog**	**0.94**	**91**	*i* Pg		**Pg**	**08 22 03.0**	**0.0**
KOGS				*i*			08 22 04.5	
KOGS				*i* Sg		**Sb**	**08 22 16.2**	**+0.6**
KOGS								
	comp=Z,27nm,0.2s							
KOGS	**Kog**	**0.94**	**91**	*i* Pg		**Pg**	**08 22 03.0**	**0.0**
KOGS				*i* Sg		**Sb**	**08 22 16.2**	**+0.6**
	comp=Z,27nm,0.2s							
LSR	**Lussari**	**0.95**	**271**	⇑*e*Pg		**Pg**	**08 22 03.1**	**-0.2**
LSR	**Lussari**	**0.95**	**271**	⇑*e*Pg		**Pg**	**08 22 03.1**	**-0.2**
ACOM	**Acomizza, Ital**	**0.96**	**275**	⇑*e*Pg		**Pg**	**08 22 03.1**	**-0.5**
ACOM				*e*Sg		**Sg**	**08 22 15.9**	**-0.2**
ACOM	**Acomizza, Ital**	**0.96**	**275**	*e*P		**Pg**	**08 22 03.1**	**-0.5**
ACOM				*e*Sg		**Sg**	**08 22 15.9**	**-0.2**
ROBS	**Robic**	**0.99**	**258**	*i* Pg		**Pg**	**08 22 03.4**	**-0.6**
ROBS				*i* Sg		**Sb**	**08 22 17.4**	**+0.4**
ROBS								
	comp=Z,12nm,0.1s							
ROBS	**Robic**	**0.99**	**258**	*i* Pg		**Pg**	**08 22 03.4**	**-0.6**
ROBS				*i* Sg		**Sb**	**08 22 17.4**	**+0.4**
	comp=Z,12nm,0.1s							
BOJS	**Bojanci**	**0.99**	**165**	*i* Pg		**Pn**	**08 22 04.9**	**+0.1**
BOJS				*i* Sg		**Sb**	**08 22 17.7**	**+0.5**
BOJS								
	comp=Z,42nm,0.3s							
BOJS	**Bojanci**	**0.99**	**165**	*i* Pg		**Pn**	**08 22 04.9**	**+0.1**
BOJS				*i* Sg		**Sb**	**08 22 17.7**	**+0.5**
	comp=Z,42nm,0.3s							
KNDS	**Knezji Dol**	**1.00**	**201**	*i* Pg		**Pn**	**08 22 04.8**	**-0.2**
KNDS				*i* Sg		**Sg**	**08 22 17.5**	**+0.1**
KNDS								
	comp=Z,59nm,0.2s							
KNDS	**Knezji Dol**	**1.00**	**201**	*i* Pg		**Pn**	**08 22 04.8**	**-0.2**
KNDS				*i* Sg		**Sg**	**08 22 17.5**	**+0.1**
	comp=Z,59nm,0.2s							
SABO	**M.te Sabotino**	**1.02**	**242**	⇑*e*Pg		**Pb**	**08 22 03.8**	**-0.9**
SABO				*e*Sg		**Sg**	**08 22 18.2**	**+0.2**
SABO	**M.te Sabotino**	**1.02**	**242**	*e*P		**Pb**	**08 22 03.8**	**-0.9**
SABO				*e*Sg		**Sg**	**08 22 18.2**	**+0.2**
COLI	**Coloredo**	**1.10**	**253**	*e*Pg		**Pb**	**08 22 06.1**	**+0.1**
COLI				*e*Sg		**Sn**	**08 22 21.3**	**-0.2**
COLI	**Coloredo**	**1.10**	**253**	*e*P		**Pb**	**08 22 06.1**	**+0.1**
COLI				*e*Sg		**Sn**	**08 22 21.3**	**-0.2**
SKDS	**Skadanscina**	**1.11**	**214**	*i* Pg		**Pb**	**08 22 05.4**	**-0.7**
SKDS				*i* Sg		**Sb**	**08 22 20.6**	**+0.2**
SKDS								
	comp=Z,22nm,0.1s							
SKDS	**Skadanscina**	**1.11**	**214**	*i* Pg		**Pb**	**08 22 05.4**	**-0.7**
SKDS				*i* Sg		**Sb**	**08 22 20.6**	**+0.2**
	comp=Z,22nm,0.1s							
VINO	**Villanova**	**1.14**	**260**	⇑*e*Pg		**Pb**	**08 22 06.1**	**-0.6**
VINO				*e*Sg		**Sg**	**08 22 22.1**	**+0.4**
VINO	**Villanova**	**1.14**	**260**	*e*P		**Pb**	**08 22 06.1**	**-0.6**
VINO				*e*Sg		**Sg**	**08 22 22.1**	**+0.4**
BAD	**Bernadia**	**1.17**	**259**	⇑*e*Pg		**Pb**	**08 22 06.7**	**-0.5**
BAD				*e*Sg		**Sn**	**08 22 23.1**	**0.0**
BAD	**Bernadia**	**1.17**	**259**	*e*P		**Pb**	**08 22 06.7**	**-0.5**
BAD				*e*Sg		**Sn**	**08 22 23.1**	**0.0**
PLRO	**Paularo**	**1.21**	**275**	⇑*e*Pg		**Pn**	**08 22 07.8**	**-0.1**
PLRO	**Paularo**	**1.21**	**275**	⇑*e*Pg		**Pn**	**08 22 07.8**	**-0.1**
KBA	**Koelnbreinsper**	**1.23**	**300**	⇑*i*Pn		**Pn**	**08 22 08.1**	**-0.1**
KBA				⇓*i*Pg		**Pb**	**08 22 08.5**	**+0.2**
	comp=Z,9.0nm,0.2s							
KBA				⇓*i*Sg		**Sn**	**08 22 25.0**	**+0.1**
	comp=Z,20nm,0.1s							
KBA	**Koelnbreinsper**	**1.23**	**300**	⇑*i*Pn		**Pn**	**08 22 08.1**	**-0.1**
KBA	**Koelnbreinsper**	**1.23**	**300**	Pg		**Pb**	**08 22 08.5**	**+0.2**
	comp=Z,9.0nm,0.2s							
KBA				Sg		**Sn**	**08 22 25.0**	**+0.1**
	comp=Z,20nm,0.1s							
FUSE	**Fusea**	**1.31**	**268**	*e*Pg		**Pg**	**08 22 10.3**	**+0.1**
FUSE	**Fusea**	**1.31**	**268**	*e*Pg		**Pg**	**08 22 10.3**	**+0.1**
ZOU	**Zoufplan**	**1.33**	**275**	*e*Pg		**Pb**	**08 22 10.4**	**+0.4**
MOA	**Molln**	**1.45**	**343**	⇑*i*Pn		**Pb**	**08 22 11.8**	**-0.2**
MOA				⇓*i*Pg		**Pg**	**08 22 12.7**	**-0.1**
	comp=Z,9.2nm,0.3s							
MOA				⇑*i*Sn		**Sg**	**08 22 31.4**	**-0.3**
MOA				⇓*i

121nm,0.3s
PMAR Madeira 7.50 123 eP Pn 08 44 59.1 -2.8
PMPST Porto Santo, M 7.70 118 eP Pn 08 45 01.1 -3.4
PMPST eS Sn 08 46 22.7 -9.0
PMPST A 08 46 35.8
26nm,0.8s
PMPST Porto Santo, M 7.70 118 eP Pn 08 45 01.1 -3.4
PMPS Porto Santo 7.71 118 eP Pn 08 45 01.0 -3.6
PMPS A 08 46 26.1
28nm,0.1s
PMPS Porto Santo 7.71 118 eP Pn 08 45 01.0 -3.6
28nm,0.1s
PMAFR Mafra 12.10 76 eS Sn 08 48 04.4 -15
PFVI Vila Bisbo 12.45 85 eS Sn 08 48 12.0 -16
PNCL Nicolau / Gran 12.66 80 eS Sn 08 48 15.8 -18
MOE Montemor 12.80 78 eS Sn 08 48 21.0 -16
EVOP Sao Brissos 12.98 78 ePn Pn 08 46 12.3 -4.6
PCVE Castro Verde 13.05 82 eP Pn 08 46 06.5 -11
PCVE eS Sn 08 48 26.3 -17
EVO Evora 13.07 78 ePn Pn 08 46 12.3 -5.8
EVO eR
329nm,19.5s
PBDV Barranco-do-Ve 13.16 84 eP Pn 08 46 07.7 -12
PBDV eS Sn 08 48 28.8 -17
PVAQ Vaqueiros 13.32 83 eP Pn 08 46 15.1 -6.4
PVAQ eS Sn 08 48 33.6 -16
PGAV Gavieira, Arco 13.41 63 eP Pn 08 46 16.6 -6.3
PGAV eS Sn 08 48 32.7 -19
PCAB Cabril 13.52 65 eS Sn 08 48 36.8 -18
PMRV Marv??o 13.60 75 eP Pn 08 46 16.4 -9.0
PMRV eS Sn 08 48 39.6 -17
POLO Lamas de Olo 13.61 66 eS Sn 08 48 38.7 -18
PBAR Barrancos 13.83 80 eP Pn 08 46 20.4 -8.1
PBAR eS Sn 08 48 42.4 -20
MVO Moncorvo 14.13 68 eS Sn 08 48 51.5 -18
ESDC Sonseca Array 16.27 74 Pn Pn 08 47 00.8 -0.2
ESDC Sonseca Array 16.27 74 Pn Pn 08 47 00.8 -0.2
0.6nm,0.3s,baz=336,slow=19,SNR=6.4
ESDC LR LR 08 52 11.2
comp=Z,272nm,19.8s,baz=335,slow=33
ESDC Sonseca Array 16.27 74 Pn Pn 08 47 00.8 -0.2
MDT Midelt 16.77 99 LR LR 08 52 49.1
comp=Z,359nm,18.1s,baz=174,slow=34
SJPF Ste Jean 18.74 64 eP Pn 08 47 31.9 +0.2
40nm,1.3s
SJPF Ste Jean 18.74 64 eP Pn 08 47 31.9 +0.2
40nm,1.3s
SJPF Ste Jean 18.74 64 eP Pn 08 47 31.9 +0.2
20nm,1.3s
QUIF Quistinic 19.03 48 eP Pn 08 47 34.8 -0.4
44nm,1.4s
QUIF Quistinic 19.03 48 eP Pn 08 47 34.8 -0.4
44nm,1.4s
QUIF Quistinic 19.03 48 eP Pn 08 47 34.8 -0.4
22nm,1.4s
ROSF Rostrenen 19.17 47 eP Pn 08 47 36.0 -0.8
25nm,1.2s
ROSF Rostrenen 19.17 47 eP Pn 08 47 36.0 -0.8
25nm,1.2s
ROSF Rostrenen 19.17 47 eP Pn 08 47 36.0 -0.8
13nm,1.2s
ETSF Etsaut 19.18 65 eP Pn 08 47 37.0 -0.1
ETSF Etsaut 19.18 65 eP Pn 08 47 37.0 -0.1
ETSF Etsaut 19.18 65 eP Pn 08 47 37.0 -0.1
SGMF Saint Gilles 19.55 48 eP Pn 08 47 40.4 -1.0
SGMF Saint Gilles 19.55 48 eP Pn 08 47 40.4 -1.0
SGMF Saint Gilles 19.55 48 eP Pn 08 47 40.4 -1.0
EPF Esparros 19.86 65 eP Pn 08 47 44.6 -0.5
31nm,1.3s
EPF Esparros 19.86 65 eP Pn 08 47 44.6 -0.5
31nm,1.3s
EPF Esparros 19.86 65 eP Pn 08 47 44.6 -0.5
16nm,1.3s
MFF Saint Martin d 20.41 54 eP P 08 47 49.1 -0.3
82nm,1.2s
MFF Saint Martin d 20.41 54 eP P 08 47 49.1 -0.3
82nm,1.2s
MFF Saint Martin d 20.41 54 eP P 08 47 49.1 -0.3
41nm,1.2s
LFF La Frestale 20.52 59 eP P 08 47 50.7 0.0
48nm,1.1s
LFF La Frestale 20.52 59 eP P 08 47 50.7 0.0
48nm,1.1s
LFF La Frestale 20.52 59 eP P 08 47 50.7 0.0
24nm,1.1s
GRR Gorron 20.63 49 eP Pn 08 47 52.3 -1.8
84nm,1.1s
GRR Gorron 20.63 49 eP Pn 08 47 52.3 -1.8
84nm,1.1s
GRR Gorron 20.63 49 eP Pn 08 47 52.3 -1.8
42nm,1.1s
FLN La Foliniere 21.02 48 eP P 08 47 56.2 +0.2
24nm,0.9s
FLN eR
240nm,21.8s
FLN La Foliniere 21.02 48 eP P 08 47 56.2 +0.2
24nm,0.9s
FLN La Foliniere 21.02 48 eP P 08 47 56.2 +0.2
12nm,0.9s
RJF Les Rejaudoux 21.15 59 eP P 08 47 58.2 +0.7
RJF eR
382nm,21.5s
RJF Les Rejaudoux 21.15 59 eP P 08 47 58.2 +0.7
RJF Les Rejaudoux 21.15 59 eP P 08 47 58.2 +0.7
LDF La Druitiere 21.16 49 eP P 08 47 57.5 -0.1
30nm,1.2s
LDF La Druitiere 21.16 49 eP P 08 47 57.5 -0.1
30nm,1.2s
LDF La Druitiere 21.16 49 eP P 08 47 57.5 -0.1
15nm,1.2s
MTLF Montolieu 21.26 64 eP P 08 47 59.3 +0.6
27nm,1.5s
MTLF Montolieu 21.26 64 eP P 08 47 59.3 +0.6
27nm,1.5s
MTLF Montolieu 21.26 64 eP P 08 47 59.3 +0.6
14nm,1.5s
CAF Calviac 21.44 60 eP P 08 48 00.1 -0.5
32nm,1.0s
CAF Calviac 21.44 60 eP P 08 48 00.1 -0.5
32nm,1.0s
CAF Calviac 21.44 60 eP P 08 48 00.1 -0.5
16nm,1.0s
TCF Toulx Ste Croi 21.87 57 eP P 08 48 03.8 -1.4
77nm,1.4s
TCF Toulx Ste Croi 21.87 57 eP P 08 48 03.8 -1.4
77nm,1.4s
TCF Toulx Ste Croi 21.87 57 eP P 08 48 03.8 -1.4
39nm,1.4s
LASF Ste Croix 22.55 63 eP P 08 48 11.2 -1.3
35nm,1.2s
LASF Ste Croix 22.55 63 eP P 08 48 11.2 -1.3
35nm,1.2s
LASF Ste Croix 22.55 63 eP P 08 48 11.2 -1.3
18nm,1.2s
AVF Avril sur Loir 22.76 56 eP P 08 48 13.9 -0.8
50nm,1.5s
AVF Avril sur Loir 22.76 56 eP P 08 48 13.9 -0.8
50nm,1.5s
AVF Avril sur Loir 22.76 56 eP P 08 48 13.9 -0.8
25nm,1.5s
SSF Saint Saulge 22.94 55 eP P 08 48 14.6 -2.0
9.3nm,0.8s
SSF Saint Saulge 22.94 55 eP P 08 48 14.6 -2.0
9.3nm,0.8s
SSF Saint Saulge 22.94 55 eP P 08 48 14.6 -2.0
4.7nm,0.8s
SMF Signal de Mont 23.05 56 eP P 08 48 17.7 -0.1
45nm,1.5s
SMF Signal de Mont 23.05 56 eP P 08 48 17.7 -0.1
45nm,1.5s
SMF Signal de Mont 23.05 56 eP P 08 48 17.7 -0.1
22nm,1.5s
LOR Lormes 23.22 55 eP P 08 48 16.7 -2.9
68nm,1.6s
LOR eR
184nm,22.5s
LOR Lormes 23.22 55 eP P 08 48 16.7 -2.9
68nm,1.6s
VIVF Saint-Julien-l 23.24 61 eP P 08 48 19.2 -0.6
VIVF Saint-Julien-l 23.24 61 eP P 08 48 19.2 -0.6
VIVF Saint-Julien-l 23.24 61 eP P 08 48 19.2 -0.6
EKA Eskdalemuir Ar 23.35 32 P P 08 48 19.8 -0.9
EKA Eskdalemuir Ar 23.35 32 P P 08 48 19.8 -0.9
0.9nm,0.5s,baz=227,slow=7.9,SNR=3.9
EKA Eskdalemuir Ar 23.35 32 P P 08 48 19.8 -0.9
SMRF Simiane la Rot 23.76 64 eP P 08 48 24.8 -0.1
25nm,1.3s
SMRF Simiane la Rot 23.76 64 eP P 08 48 24.8 -0.1
25nm,1.3s
SMRF Simiane la Rot 23.76 64 eP P 08 48 24.8 -0.1
13nm,1.3s
SFTF Sexfontaines 24.25 53 eP P 08 48 28.8 -0.7
52nm,1.3s
SFTF Sexfontaines 24.25 53 eP P 08 48 28.8 -0.7
52nm,1.3s
SFTF Sexfontaines 24.25 53 eP P 08 48 28.8 -0.7
26nm,1.3s
BAIF Baives 24.34 49 eP P 08 48 28.7 -1.5
BAIF Baives 24.34 49 eP P 08 48 28.7 -1.5
BAIF Baives 24.34 49 eP P 08 48 28.7 -1.5
FRF La Foret Royal 24.49 65 eP P 08 48 31.0 -0.7
34nm,1.3s
FRF La Foret Royal 24.49 65 eP P 08 48 31.0 -0.7
34nm,1.3s
FRF La Foret Royal 24.49 65 eP P 08 48 31.0 -0.7
17nm,1.3s
GIVF Givet 24.73 49 eP P 08 48 31.1 -2.6
33nm,1.0s
GIVF Givet 24.73 49 eP P 08 48 31.1 -2.6
33nm,1.0s
SBF Sospel 25.09 64 eP P 08 48 37.9 +0.8
41nm,1.1s
SBF Sospel 25.09 64 eP P 08 48 37.9 +0.8
41nm,1.1s
SBF Sospel 25.09 64 eP P 08 48 37.9 +0.8
20nm,1.1s
SENIN Lac Senin/Sane 25.32 58 eP P 08 48 48.8 +9.3
12nm,1.3s
WLF Walferdange 25.39 50 eP P 08 48 37.5 -2.2
16nm,1.0s
WLF eS S 08 53 15.5 +9.3
WLF Walferdange 25.39 50 eP P 08 48 37.5 -2.2
16nm,1.0s
KEST Kesra 27.14 82 eP P 08 48 55.3 -0.5
KEST Kesra 27.14 82 P P 08 48 57.1 +1.3
1.0nm,0.8s,baz=310,slow=2.3,SNR=3.1
KEST LR LR 08 58 43.6
comp=Z,25nm,22.0s,baz=188,slow=34
KEST Kesra 27.14 82 eP P 08 48 55.3 -0.5
DAVOX Davos/Dischmat 27.14 58 LR LR 08 58 28.5
comp=Z,242nm,19.0s,baz=259,slow=34
GERES GERESS Array B 30.01 55 P P 08 49 21.4 +0.2
GERES GERESS Array B 30.01 55 P P 08 49 21.4 +0.2
0.4nm,0.8s,baz=256,slow=8.0,SNR=3.1
GERES LR LR 08 59 23.7
comp=Z,84nm,20.6s,baz=94,slow=32
GERES GERESS Array B 30.01 55 P P 08 49 21.5 +0.2
VRAC Vranov 31.95 54 LR LR 09 02 35.4
comp=Z,83nm,19.3s,baz=81,slow=36
TIP Timpagrande 32.28 73 eP P 08 49 42.3 +1.0
31nm,1.2s
TIP Timpagrande 32.28 73 eP P 08 49 42.3 +1.0
31nm,1.2s
NOA NORSAR Array B 32.84 32 P P 08 49 45.5 -0.5
NOA NORSAR Array B 32.84 32 P P 08 49 45.5 -0.5
0.4nm,0.8s,baz=242,slow=19,SNR=2.5
NOA LR LR 09 00 50.6
comp=Z,116nm,21.2s,baz=240,slow=32
NOA NORSAR Array B 32.84 32 P P 08 49 45.5 -0.5
TORD Torodi Ar. Bea 33.31 129 P P 08 49 50.1 -0.3
TORD Torodi Ar. Bea 33.31 129 P P 08 49 50.1 -0.3
3.0nm,1.0s,baz=324,slow=6.6,SNR=13
TORD LR LR 09 02 13.1
comp=Z,86nm,18.2s,baz=5.0,slow=4
TORD Torodi Ar. Bea 33.31 129 P P 08 49 50.2 -0.3
VYHS Vyhne 33.35 56 eP P 08 49 53.0 +2.5
HFS Hagfors 33.48 34 LR LR 09 01 06.5
comp=Z,82nm,20.1s,baz=64,slow=32
SCHQ Schefferville 33.83 315 LR LR 09 00 50.6
comp=Z,110nm,20.8s,baz=86,slow=31
CRVS Cervenica-Dubn 35.11 55 eP P 08 50 07.9 +2.1
CRVS Cervenica-Dubn 35.11 55 eP P 08 50 07.9 +2.1
KOLS Kolonicke sedl 35.65 55 eP P 08 50 12.2 +1.8
KOLS Kolonicke sedl 35.65 55 eP P 08 50 12.2 +1.8
MLR Muntele Rosu 38.26 61 LR LR 09 06 53.1
comp=Z,40nm,20.0s,baz=101,slow=37
FINES FINESS Array B 39.62 36 LR LR 09 04 39.4
comp=Z,69nm,21.1s,baz=270,slow=32
AKASG Malin Array Be 40.15 53 P P 08 50 48.5 +0.1
AKASG Malin Array Be 40.15 53 P P 08 50 48.5 +0.1
0.4nm,0.4s,baz=268,slow=6.5,SNR=3.4
AKASG Malin Array Be 40.15 53 P P 08 50 48.5 +0.1
ARCES ARCESS Array B 42.08 24 P P 08 51 03.5 -0.5
ARCES ARCESS Array B 42.08 24 P P 08 51 03.5 -0.5
2.0nm,0.9s,baz=236,slow=8.6,SNR=7.5
ARCES ARCESS Array B 42.08 24 P P 08 51 03.5 -0.5
SPITS Spitsbergen Ar 44.65 11 LR LR 09 04 27.8
comp=Z,49nm,20.6s,baz=175,slow=29
BRTR Keskin Array B 44.91 68 P P 08 51 27.6 +0.2
BRTR Keskin Array B 44.91 68 P P 08 51 27.6 +0.2
2.1nm,0.9s,baz=270,slow=6.2,SNR=8.0
BRTR LR LR 09 10 52.2
comp=Z,71nm,19.1s,baz=291,slow=37
BRTR Keskin Array B 44.91 68 P P 08 51 27.6 +0.2
BLO Bloomington 48.08 293 eP P 08 51 53.2 +1.1
14nm,0.9s
BLO Bloomington 48.08 293 eP P 08 51 53.2 +1.1
14nm,0.9s
ASF Jabal al Asfar 49.95 76 LR LR 09 13 50.4
comp=Z,33nm,19.1s,baz=325,slow=37
SDV Santo Domingo 50.26 248 eP P 08 52 10.6 +1.3
17nm,1.4s
SDV Santo Domingo 50.26 248 eP P 08 52 10.6 +1.3
17nm,1.4s
KBZ Khabaz 50.46 60 P P 08 52 11.1 +0.9
KBZ Khabaz 50.46 60 P P 08 52 11.1 +0.9
5.2nm,1.0s,baz=314,slow=5.3,SNR=10
KBZ Khabaz 50.46 60 P P 08 52 11.1 +0.9
LRAL Lakeview Retre 50.60 285 eP P 08 52 11.0 -0.4
39nm,1.8s
LRAL Lakeview Retre 50.60 285 eP P 08 52 11.0 -0.4
39nm,1.8s
SPMN St. Paul 50.78 302 ⇑P P 08 52 11.5 -1.1
baz=51
ULM Lac du Bonnet 51.47 309 LR LR 09 11 53.2
comp=Z,140nm,21.4s,baz=289,slow=34
GNI Garni 52.90 64 LR LR 09 16 49.2
comp=Z,26nm,19.5s,baz=107,slow=38
ROSC El Rosal 55.66 247 LR LR 09 12 49.4
comp=Z,99nm,20.3s,baz=8.5,slow=32
BGNE Belgrade 55.70 299 ⇑P P 08 52 48.2 -0.8
baz=56
TUL1 Tulsa 56.12 292 ⇓P P 08 52 50.8 -1.2
baz=56
BDFB Brasilia 56.89 207 P P 08 52 57.6 -0.1
BDFB Brasilia 56.89 207 P P 08 52 57.6 -0.1
3.7nm,0.8s,baz=0.0,slow=7.1,SNR=4.9
BDFB Brasilia 56.89 207 P P 08 52 57.6 -0.1
M29A Burnside Ranch 57.46 300 ⇑P P 08 53 00.9 -0.7
baz=57
C24A Savage 57.67 308 ⇑P P 08 53 03.8 +0.9
baz=58
B23A Brockton 57.69 309 ⇑P P 08 53 04.5 +1.4
baz=58
D24A Glendive 57.76 307 ⇑P P 08 53 04.3 +0.7
baz=58
YKA Yellowknife Ar 58.03 327 P P 08 53 04.2 -0.9
YKA PcP PcP 08 53 55.2 -1.7
YKA Yellowknife Ar 58.03 327 P P 08 53 04.2 -0.9
0.6nm,0.7s,baz=67,slow=7.2,SNR=5.5
YKA PcP PcP 08 53 55.2 -1.7
0.5nm,0.6s,baz=70,slow=4.9,SNR=4.7
YKA Yellowknife Ar 58.03 327 P P 08 53 04.2 -0.9
C23A Lambert 58.05 308 ⇓P P 08 53 05.9 +0.4
baz=58
A22A Carney Farms, 58.07 310 ⇑P P 08 53 06.4 +0.6
baz=58
AKTO Aktyubinsk 58.12 48 LR LR 09 18 21.9
comp=Z,57nm,19.0s,baz=293,slow=36
D23A Lindsay 58.30 308 ⇑P P 08 53 08.1 +0.7
baz=58
F24A Ekalaka 58.30 306 ⇑P P 08 53 07.3 -0.1
baz=58
B22A Reddig Ranch S 58.38 309 ⇓P P 08 53 08.4 +0.5
baz=58
SAML Samuel 58.40 227 eP P 08 53 08.3 +0.1
9.7nm,1.3s
SAML Samuel 58.40 227 eP P 08 53 08.3 +0.1
9.7nm,1.3s
R30A Dighton 58.42 296 ⇑P P 08 53 08.0 -0.3
baz=58
T31A Randall Ranch, 58.48 295 ⇑P P 08 53 08.2 -0.6
baz=58
C22A Vida 58.51 308 ⇑P P 08 53 09.2 +0.4
baz=58
E23A Ismay 58.61 307 ⇓P P 08 53 09.6 +0.1
baz=58
H24A Dirks Ranch, A 58.79 305 ⇓P P 08 53 10.3 -0.6
baz=59
S30A Montezuma 58.83 296 ⇑P P 08 53 10.6 -0.6
baz=59
D22A Cohagen 58.92 308 ⇓P P 08 53 12.3 +0.7
baz=59
P28A Saint Francis 58.95 298 ⇓P P 08 53 11.6 -0.4
baz=59
B21A Ellsworth Farm 58.96 310 ⇓P P 08 53 12.3 +0.4
baz=59
N27A Anderson Farm, 58.99 300 ⇓P P 08 53 12.7 +0.3
baz=59
WHTX Lake Whitney 59.05 289 ⇑P P 08 53 12.2 -0.5
baz=59,SNR=5.4
G23A Biddle 59.16 306 ⇑P P 08 53 13.4 -0.1
baz=59
V31A Spring Creek L 59.17 294 ⇑P P 08 53 13.5 0.0
baz=59
O27A Beecher Island 59.20 299 ⇑P P 08 53 13.8 0.0
baz=59
C21A Desert Coulee 59.24 309 ⇑P P 08 53 14.5 +0.6
baz=59
S29A Ulysses 59.31 296 ⇓P P 08 53 14.8 +0.3
baz=59
A20A Cobblestone Ra 59.35 310 ⇑P P 08 53 14.8 +0.2
baz=59
J24A Dixon Ranch, L 59.42 303 ⇓P P 08 53 15.7 +0.4
baz=59
L25A Engebretsen Ra 59.43 302 ⇑P P 08 53 15.2 -0.2
baz=59
D21A La Casta Ranch 59.47 308 ⇑P P 08 53 15.7 +0.3
baz=59
W31A Holland Ranch, 59.49 293 ⇑P P 08 53 15.2 -0.6
baz=59
R28A Tribune 59.50 297 ⇓P P 08 53 16.0 +0.1
baz=59
P27A Ficken Ranch, 59.53 299 ⇑P P 08 53 15.8 -0.3
baz=59
B20A Solberg Farm, 59.57 310 ⇓P P 08 53 17.0 +0.8
baz=59
Y32A R-V Farms, Ver 59.64 292 ⇓P P 08 53 16.4 -0.5
baz=60
O26A Horse Wrangler 59.76 300 ⇓P P 08 53 17.4 -0.3
baz=60
X31A McDonald Ranch 59.76 292 ⇓P P 08 53 17.2 -0.5
baz=60
KSCO Kaye Shedlock' 59.80 298 ⇑P P 08 53 18.4 +0.4
baz=60
C20A Veseth Ranch, 59.85 309 ⇑P P 08 53 18.6 +0.5
baz=60
S28A Manter 59.88 296 ⇓P P 08 53 18.2 -0.3
baz=60
Z32A Haskell 59.98 291 ⇓P P 08 53 18.8 -0.3
baz=60
H22A Clearmont 60.03 305 ⇓P P 08 53 19.5 0.0
baz=60
TGUH Tegucigalpa,Un 60.06 265 eP P 08 53 21.3 +1.5
20nm,1.1s
TGUH Tegucigalpa,Un 60.06 265 eP P 08 53 21.3 +1.5
20nm,1.1s
P26A Davis Ranch, A 60.07 299 ⇓P P 08 53 20.3 +0.5
baz=60
B19A Brinkman Farms 60.13 310 ⇑P P 08 53 20.6 +0.6
baz=60
D20A Manuel Ranch, 60.17 308 ⇓P P 08 53 21.3 +0.9
baz=60
R27A Eads 60.23 297 ⇑P P 08 53 21.0 +0.1
baz=60
Y31A Rekieta Farm, 60.27 292 ⇓P P 08 53 20.8 -0.4
baz=60
M24A Cheyenne 60.29 301 ⇓P P 08 53 22.5 +1.1
baz=60
K23A Bowen Ranch, D 60.30 303 ⇓P P 08 53 21.7 +0.3
baz=60
V29A Stinnett 60.35 294 ⇑P P 08 53 21.7 0.0
baz=60
O25A Wiggins 60.38 300 ⇓P P 08 53 21.9 0.0
baz=60
I22A 9 Mile Ranch, 60.41 305 ⇓P P 08 53 21.6 -0.5
baz=60
E20A Meyer Farm, Mu 60.41 308 ⇓P P 08 53 22.4 +0.5
baz=60
ABTX Abilene, Hawle 60.41 290 ⇑P P 08 53 21.8 -0.3
baz=60
Q26A Hugo 60.46 298 ⇑P P 08 53 22.1 -0.5
baz=60
H21A Big Horn, Sher 60.47 306 ⇓P P 08 53 22.8 +0.4
baz=60
Z31A Sharp Cattle R 60.47 291 ⇓P P 08 53 22.0 -0.5
baz=60
C19A Slack Wire Ran 60.48 309 ⇑P P 08 53 23.4 +0.9
baz=60
A18A Metzger Ranch, 60.50 311 ⇑P P 08 53 23.9 +1.5
baz=60
X30A Coker Ranch, T 60.51 293 ⇓P P 08 53 22.6 -0.1
baz=60
D19A Cripps Ranch, 60.61 309 ⇑P P 08 53 23.3 0.0
baz=60
L23A Garrett 60.62 302 ⇑P P 08 53 23.5 -0.2
baz=60
P25A Willow Gulch B 60.67 299 ⇓P P 08 53 24.6 +0.7
baz=60
B18A Beardsley Farm 60.67 310 ⇑P P 08 53 24.1 +0.4
baz=60
R26A Arlington 60.68 298 ⇓P P 08 53 24.1 +0.1
baz=60
232A Coleman 60.75 289 ⇑P P 08 53 24.0 -0.4
baz=61,SNR=5.8
W29A Amraillo 60.78 294 ⇓P P 08 53 25.0 +0.3
baz=61
EGMT Eagleton 60.80 310 eP P 08 53 25.1 +0.5
9.6nm,1.6s
EGMT Eagleton 60.80 310 eP P 08 53 25.1 +0.5
9.6nm,1.6s
K22A Casper 60.95 303 ⇑P P 08 53 26.6 +0.8
baz=61
I21A Big Trails, Te 60.97 305 ⇓P P 08 53 26.3 +0.4
baz=61
G20A Bridger 60.98 307 ⇑P P 08 53 26.7 +0.7
baz=61
S26A Kim 60.99 297 ⇑P P 08 53 26.7 +0.6
baz=61
A17A Triple J Farms 61.00 311 ⇓P P 08 53 25.9 0.0
baz=61
332A Millersview 61.06 289 ⇓P P 08 53 26.8 +0.2
baz=61
U27A Thompson Grove 61.06 295 ⇑P P 08 53 27.0 +0.4
baz=61
H20A Greybull 61.15 306 ⇑P P 08 53 27.2 +0.1
baz=61
D18A Linhart Farms, 61.17 309 ⇓P P 08 53 27.8 +0.7
baz=61
Z30A Sanderson Ranc 61.22 292 ⇑P P 08 53 27.6 0.0
baz=61
231A Bronte 61.23 290 ⇑P P 08 53 27.4 -0.4
baz=61
J21A Lysite 61.27 304 ⇓P P 08 53 27.6 -0.4
baz=61
T26A Comanche Natio 61.28 297 ⇑P P 08 53 28.6 +0.4
baz=61
N23A Red Feather La 61.30 301 ⇓P P 08 53 29.2 +0.9
baz=61
B17A L&G Farms, Che 61.33 311 ⇓P P 08 53 28.8 +0.6
baz=61
432A Menard 61.33 289 ⇑P P 08 53 28.6 +0.1
baz=61
V27A Dan Oppiter Fa 61.36 295 ⇓P P 08 53 28.5 -0.1
baz=61
Y29A Porterfield Fa 61.36 292 ⇑P P 08 53 28.4 -0.2
baz=61
I20A Worland 61.46 305 ⇓P P 08 53 29.8 +0.6
baz=61
E18A Harlowton 61.50 308 ⇓P P 08 53 30.4 +0.9
baz=61
JCT Junction City 61.52 288 eP P 08 53 29.7 -0.1
14nm,1.0s
JCT Junction City 61.52 288 eP P 08 53 29.7 -0.1
14nm,1.0s
JCT Junction City 61.52 288 ⇓P P 08 53 29.2 -0.6
baz=61,SNR=6.4
M22A Cedar Creek Ra 61.53 302 ⇑P P 08 53 30.3 +0.4
baz=61
ISCO Idaho Springs 61.55 300 ⇓P P 08 53 30.5 +0.4
baz=61

331A	San Angelo baz=62	61.61 289	⇓P	P	08 53 30.8 +0.5
F18A	Big Timber baz=62	61.66 308	⇑P	P	08 53 30.9 +0.4
S25A	Robets Cordova baz=62	61.66 297	⇑P	P	08 53 31.2 +0.4
Z29A	Hungry Hill Ra baz=62	61.66 292	⇓P	P	08 53 30.8 +0.1
J20A	Shoshoni baz=62	61.69 305	⇑P	P	08 53 31.3 +0.5
N22A	Wattenberg Ran baz=62	61.69 301	⇑P	P	08 53 30.7 -0.3
H19A	Powell baz=62	61.71 306	⇑P	P	08 53 31.7 +0.8
D17A	Six Diamond Ra baz=62	61.74 309	⇑P	P	08 53 31.3 +0.3
532A	Rocksprings baz=62	61.77 288	⇓P	P	08 53 31.2 -0.2
OTAV	Otavalo	61.80 247	eP	P	08 53 32.6 +0.4
OTAV	Otavalo	61.80 247	eP	P	08 53 32.6 +0.4
L21A	Rawlins baz=62	61.81 303	⇓P	P	08 53 31.7 0.0
B16A	M & M Farms, S baz=62	61.83 311	⇑P	P	08 53 32.2 +0.6
W27A	Bowe Ranch, En baz=62	61.84 294	⇓P	P	08 53 32.2 +0.3
T25A	Trinidad baz=62	61.88 297	⇓P	P	08 53 31.4 -0.8
R24A	Sanders Place, baz=62	61.88 298	⇑P	P	08 53 31.3 -1.0
M21A	Separation Pea baz=62	61.96 303	⇑P	P	08 53 33.7 +0.9
I19A	Meeteetse baz=62	61.99 306	⇓P	P	08 53 33.2 +0.4
V26A	Tequesquite Ra baz=62,SNR=6.3	62.03 295	⇑P	P	08 53 33.7 +0.5
O22A	Kremmling baz=62	62.03 301	⇑P	P	08 53 34.2 +0.8
431A	Sonora baz=62,SNR=5.4	62.04 289	⇑P	P	08 53 32.9 -0.3
X27A	F and S Farms, baz=62	62.05 294	⇑P	P	08 53 33.0 -0.3
129A	Stewart Farms, baz=62	62.07 291	⇑P	P	08 53 33.3 -0.1
C16A	Fuhringer Ranc baz=62	62.11 310	⇑P	P	08 53 34.0 +0.5
MSTX	Muleshoe baz=62,SNR=5.7	62.12 293	⇓P	P	08 53 33.8 -0.1
330A	Mertzon baz=62,SNR=5.1	62.13 290	⇑P	P	08 53 33.6 -0.2
E17A	Martinsdale baz=62	62.14 309	⇑P	P	08 53 34.2 +0.4
Z28A	Tucker Farm, M baz=62	62.16 292	⇑P	P	08 53 33.8 -0.2
A15A	Johnson Ranch, baz=62	62.21 312	⇓P	P	08 53 33.8 -0.3
U25A	Circle Dot Ran baz=62,SNR=10.0	62.21 296	⇓P	P	08 53 35.2 +0.7
531A	Rocksprings baz=62	62.24 288	⇓P	P	08 53 34.4 -0.1
F17A	Fitzpatrick Pl baz=62	62.25 308	⇓P	P	08 53 35.1 +0.6
229A	Bryant Ranch, baz=62	62.34 291	⇓P	P	08 53 35.5 +0.2
J19A	Crowheart baz=62	62.36 305	⇑P	P	08 53 35.1 -0.2
T24A	Torres, Weston baz=62	62.36 297	⇑P	P	08 53 36.6 +1.0
B15A	Bradely Ranch, baz=62	62.39 311	⇑P	P	08 53 35.0 -0.3
R23A	Moffat baz=62,SNR=6.6	62.41 298	⇑P	P	08 53 36.8 +0.9
N21A	Black Mountain baz=62	62.44 302	⇓P	P	08 53 37.3 +1.3
L20A	Wamsutter baz=62	62.44 303	⇑P	P	08 53 36.2 +0.2
Y27A	Causey baz=62	62.45 293	⇓P	P	08 53 36.1 +0.1
430A	Baggett Ranch, baz=62	62.47 289	⇑P	P	08 53 36.3 +0.2
732A	Laxson Ranch, baz=62	62.49 286	⇓P	P	08 53 36.1 0.0
128A	Castleberry Fa baz=62	62.54 291	⇑P	P	08 53 36.6 0.0
M20A	Sweetwater, Wa baz=62	62.56 303	⇓P	P	08 53 37.5 +0.7
V25A	Rancho No Teng baz=62	62.61 296	⇓P	P	08 53 37.0 -0.2
E16A	East Helena baz=62	62.62 309	⇓P	P	08 53 38.4 +1.5
X26A	CR and CF Fran baz=62	62.62 294	⇓P	P	08 53 36.9 -0.2
A14A	Double T Ranch baz=62	62.62 312	⇑P	P	08 53 37.2 +0.3
631A	Perdido Creek baz=62	62.62 287	⇓P	P	08 53 36.8 -0.3
C15A	Salmond Ranch, baz=62	62.65 311	⇓P	P	08 53 36.8 -0.3
329A	Wagon Wheel Ra baz=63	62.70 290	⇑P	P	08 53 37.5 -0.1
Z27A	Tatum baz=63,SNR=6.3	62.76 292	⇑P	P	08 53 37.9 -0.2
SMCO	Snowmass 3.2nm,0.9s	62.77 300	eP	P	08 53 39.0 +0.6
SMCO	Snowmass 3.2nm,0.9s	62.77 300	eP	P	08 53 39.0 +0.6
W25A	X Bar L Ranch, baz=63	62.78 295	⇓P	P	08 53 38.6 +0.4
U24A	Moreno Valley baz=63	62.83 296	⇑P	P	08 53 39.9 +1.2
530A	J-C Ranch, Com baz=63,SNR=5.4	62.85 289	⇑P	P	08 53 38.5 -0.2
Q22A	Crested Butte, baz=63	62.86 300	⇑P	P	08 53 39.5 +0.6
N20A	Spence Gulch, baz=63	62.91 302	⇑P	P	08 53 39.9 +0.8
PDAR	Pinedale Array	62.91 304	P	P	08 53 38.4 -0.8
PDAR	Pinedale Array 1.2nm,0.8s,baz=66,slow=7.2,SNR=8.1	62.91 304	P	P	08 53 38.4 -0.8
PDAR	comp=Z,87nm,18.1s,baz=71,slow=35	LR		LR	09 19 57.2
PDAR	Pinedale Array	62.91 304	P	P	08 53 38.3 -0.8
D15A	Lincoln baz=63	62.92 310	⇓P	P	08 53 41.1 +2.1
P21A	Newcastle baz=63	62.94 300	⇑P	P	08 53 40.5 +1.2
429A	Davenport Ranc baz=63	63.04 289	⇑P	P	08 53 39.9 0.0
R22A	Saguache, Gunn baz=63,SNR=6.5	63.04 299	⇑P	P	08 53 41.3 +1.2
L19A	Farson baz=63	63.08 304	⇓P	P	08 53 40.6 +0.4
T23A	Casias Ranch, baz=63	63.08 297	⇑P	P	08 53 41.2 +0.8
V24A	Rampart Ranch, baz=63	63.14 296	⇑P	P	08 53 42.2 +1.5
H16A	Russell Place, baz=63	63.15 307	⇑P	P	08 53 41.2 +0.5
127A	Arkansas Junct baz=63	63.16 292	⇓P	P	08 53 41.1 +0.3
M19A	Rock Springs baz=63	63.21 303	⇑P	P	08 53 41.0 -0.1
S22A	4UR Ranch, Cre baz=63	63.32 298	⇑P	P	08 53 42.7 +0.8
Q21A	Lamborn Mesa, baz=63	63.34 300	⇓P	P	08 53 42.3 +0.3
Z26A	Caprock baz=63	63.34 293	⇓P	P	08 53 42.4 +0.5
328A	Wristen Ranch, baz=63	63.37 290	⇑P	P	08 53 42.1 0.0
SNOW	Snow King Moun 6.6nm,1.3s	63.39 306	eP	P	08 53 43.2 +0.9
SNOW	Snow King Moun 6.6nm,1.3s	63.39 306	eP	P	08 53 43.2 +0.9
W24A	Lazy 6 Ranch, baz=63	63.48 295	⇑P	P	08 53 43.5 +0.6
D14A	Greenough baz=63	63.50 310	⇑P	P	08 53 45.0 +2.2
U23A	El Rito baz=63,SNR=9.0	63.52 297	⇑P	P	08 53 44.6 +1.3
529A	Stev Forest Ra baz=63,SNR=7.6	63.53 289	⇑P	P	08 53 43.3 +0.1
R21A	Cimarron baz=63	63.54 299	⇑P	P	08 53 44.6 +1.3
Y25A	Mesa, Roswell baz=63	63.56 294	⇑P	P	08 53 44.1 +0.7
428A	Kincaid Ranch, baz=64	63.59 290	⇓P	P	08 53 43.8 +0.2
P20A	De Beque baz=63	63.60 301	⇑P	P	08 53 44.6 +0.9
L18A	Fontenelle, Gr baz=63	63.61 304	⇓P	P	08 53 43.5 -0.3
T22A	Edith baz=64,SNR=8.4	63.71 298	⇓P	P	08 53 45.8 +1.3
G15A	Dillon baz=64	63.73 308	⇓P	P	08 53 45.0 +0.6
O19A	Miners Draw (B baz=64	63.74 302	⇑P	P	08 53 45.3 +0.8
V23A	Ortiz Mt. (NFS baz=64	63.78 296	⇑P	P	08 53 46.4 +1.5
Q20A	Ridgley Place, baz=64,SNR=6.5	63.78 300	⇓P	P	08 53 45.9 +1.1
E14A	Clinton baz=64	63.79 310	⇓P	P	08 53 46.5 +1.7
Z25A	Roswell baz=64,SNR=6.4	63.88 293	⇓P	P	08 53 46.6 +1.1
C13A	Hot Springs baz=64	63.88 311	⇓P	P	08 53 45.6 +0.3
528A	Cox Ranch, San baz=64,SNR=6.2	63.94 289	⇑P	P	08 53 45.9 0.0
P19A	Cripple Cowboy baz=64	63.94 301	⇑P	P	08 53 47.5 +1.5
U22A	Llaves baz=64	63.97 297	⇑P	P	08 53 47.2 +1.0
S21A	Coal Bank Pass baz=64	64.03 299	⇑P	P	08 53 47.4 +0.7
W23A	Werner Place, baz=64	64.03 296	⇓P	P	08 53 48.4 +1.8
226B	Tecolote Peak, baz=64	64.05 292	⇑P	P	08 53 47.4 +0.8
427A	Hayter Ranch, baz=64	64.07 290	⇓P	P	08 53 46.7 -0.1
D13A	Huson baz=64	64.08 311	⇑P	P	08 53 46.8 +0.2
BVAR	Borovoye Array comp=Z,89nm,19.3s,baz=72,slow=36	64.08 42	LR	LR	09 21 34.7
Y24A	Capitan baz=64	64.10 294	⇑P	P	08 53 47.8 +0.8
125A	Gardner Draw, baz=64	64.13 292	⇑P	P	08 53 48.0 +0.8
T21A	Navajo Lake baz=64	64.16 298	⇓P	P	08 53 48.3 +0.8
R20A	Redvale baz=64	64.20 299	⇓P	P	08 53 48.9 +1.2
V22A	San Miguel Ran baz=64,SNR=7.7	64.23 297	⇑P	P	08 53 48.3 +0.4
M17A	Scullys Gap (B baz=64	64.23 304	⇓P	P	08 53 47.9 0.0
326A	Caldwell Ranch baz=64,SNR=5.0	64.28 291	⇑P	P	08 53 48.6 +0.5
Z24A	Sheeppen Canyo baz=64	64.33 293	⇓P	P	08 53 49.5 +0.9
X23A	Hourglass Bar baz=64,SNR=8.0	64.34 295	⇓P	P	08 53 50.0 +1.4
628A	Black Gap, Mar baz=64	64.35 289	⇑P	P	08 53 48.8 +0.2
ANMO	Albuquerque 2.9nm,1.1s	64.36 296	eP	P	08 53 50.2 +1.5
ANMO	Albuquerque 2.9nm,1.1s	64.36 296	eP	P	08 53 50.2 +1.5
C12B	Naegeli Ranch, baz=64	64.41 312	⇑P	P	08 53 49.8 +1.1
U21A	Nageezi baz=64	64.52 297	⇓P	P	08 53 51.2 +1.4
225A	Deer Hill, Car baz=64	64.52 292	⇑P	P	08 53 49.7 -0.1
Y23A	Lovelace Mesa, baz=64,SNR=6.6	64.55 294	⇓P	P	08 53 50.9 +0.9
527A	Woodward Ranch baz=64,SNR=5.5	64.57 290	⇓P	P	08 53 50.5 +0.4
426A	McDonald Obser baz=64,SNR=7.3	64.63 290	⇑P	P	08 53 50.8 +0.2
124A	Stringfield Ra baz=65,SNR=11	64.70 293	⇑P	P	08 53 51.9 +0.9
MVCO	Mesa Verde baz=65	64.74 299	⇓P	P	08 53 52.5 +1.2
627A	Terlingua Ranc baz=65	64.74 289	⇑P	P	08 53 51.8 +0.6
P18A	Preston Nutter baz=65	64.81 302	⇑P	P	08 53 51.7 0.0
C11A	Tepee Creek (N baz=65	64.82 312	⇓P	P	08 53 52.1 +0.8
BNM	Barren Site 2.4nm,1.0s	64.86 295	eP	P	08 53 53.5 +1.4
BNM	Barren Site 2.4nm,1.0s	64.86 295	eP	P	08 53 53.5 +1.4
526A	Mary Lane Ranc baz=65	64.97 290	⇑P	P	08 53 53.3 +0.5
325A	Bean Ranch, Si baz=65	64.99 291	⇓P	P	08 53 53.1 +0.2
TXAR	Lajitas Array	65.01 289	P	P	08 53 53.1 +0.2
TXAR	Lajitas Array 4.0nm,0.8s,baz=75,slow=7.3,SNR=47	65.01 289	P	P	08 53 53.1 +0.2
TXAR	comp=Z,98nm,18.2s,baz=5.0,slow=34	LR		LR	09 19 46.6
TXAR	Lajitas Array	65.01 289	P	P	08 53 53.2 +0.2
224A	Cornudas Mount baz=65	65.06 292	⇓P	P	08 53 53.7 +0.4
LAZ	Ladron 4.1nm,1.3s	65.11 295	eP	P	08 53 55.4 +1.8
LAZ	Ladron 4.1nm,1.3s	65.11 295	eP	P	08 53 55.4 +1.8
NEW	Newport baz=65	65.13 313	⇓P	P	08 53 56.3 +2.9
U20A	Newcomb baz=65	65.15 298	⇓P	P	08 53 55.1 +1.2
F12A	Elk City baz=65	65.19 310	⇓P	P	08 53 54.7 +0.8
Y22A	Socorro baz=65,SNR=5.4	65.21 295	⇑P	P	08 53 55.5 +1.2
J14A	Carey baz=65	65.24 307	⇓P	P	08 53 55.2 +0.9
SRU	San Rafael baz=65	65.25 301	⇑P	P	08 53 55.3 +0.9
626A	Big Bend Ranch baz=65	65.26 289	⇑P	P	08 53 55.2 +0.6
425A	Indio Mountain baz=65,SNR=6.9	65.29 291	⇑P	P	08 53 55.2 +0.4
324A	Moseley Ranch, baz=65	65.34 292	⇑P	P	08 53 55.1 0.0
I13A	Wildhorse Cree baz=65	65.34 307	⇑P	P	08 53 56.0 +0.9
V20A	Brimhall baz=65	65.39 297	⇓P	P	08 53 57.0 +1.5
H12A	Diamond D Ranc baz=65	65.51 308	⇑P	P	08 53 57.0 +1.0
G12A	Big Creek, Yel baz=65	65.53 309	⇑P	P	08 53 58.1 +2.0
Z22A	Elephant Butte baz=65	65.54 294	⇑P	P	08 53 58.6 +2.2
S18A	Hurst Farm, Bl baz=65	65.56 300	⇓P	P	08 53 58.1 +1.5
X21A	Alamocita Cree baz=65,SNR=9.4	65.56 296	⇑P	P	08 53 58.1 +1.5
J13A	Cove Ranch, Pi baz=65	65.62 307	⇓P	P	08 54 00.7 +3.9
Y21A	Point of Rocks baz=66,SNR=8.3	65.69 295	⇓P	P	08 53 58.9 +1.5
HLID	Hailey baz=66	65.70 307	⇑P	P	08 53 58.6 +1.3
W20A	Ramah baz=66	65.74 297	⇑P	P	08 53 59.5 +1.7
Q16A	Castle Valley baz=66	65.78 301	⇓P	P	08 53 58.4 +0.5
X20A	Quemado baz=66	66.02 296	⇑P	P	08 54 01.3 +1.7
Z21A	St. Cloud Mine baz=66	66.03 294	⇑P	P	08 54 01.3 +1.6
I12A	Atlanta baz=66	66.05 308	⇑P	P	08 54 01.0 +1.5
222A	Williams Famil baz=66	66.21 293	⇑P	P	08 54 01.5 +0.8
Y20A	Horse Springs, baz=66,SNR=6.0	66.25 295	⇑P	P	08 54 02.3 +1.2
DUG	Dugway baz=66	66.27 303	⇑P	P	08 54 01.7 +0.7
121A	Cookes Peak, D baz=66	66.50 294	⇑P	P	08 54 04.4 +1.8
MVU	Marysvale	66.69 301	eP	P	08 54 05.0 +1.2
MVU	Marysvale	66.69 301	eP	P	08 54 05.0 +1.2
Z20A	Nine Sixteen R baz=67	66.80 295	⇑P	P	08 54 06.3 +1.9
X18A	Snowflake baz=67	67.07 297	⇑P	P	08 54 07.8 +1.5
120A	U Bar Ranch, L baz=67	67.11 294	⇓P	P	08 54 08.0 +1.5
LPAZ	La Paz	67.13 226	P	P	08 54 06.8 -0.4
LPAZ	La Paz 1.5nm,1.0s,baz=45,slow=7.2,SNR=4.6	67.13 226	P	P	08 54 06.8 -0.4
LPAZ	La Paz	67.13 226	P	P	08 54 06.8 -0.4
220A	Playas Peak, P baz=67	67.36 294	⇑P	P	08 54 09.5 +1.5
WUAZ	Wupatki baz=67	67.59 298	⇑P	P	08 54 11.1 +1.6
320A	Kipp Ranch, An baz=68	67.64 293	⇓P	P	08 54 11.8 +2.0
U15A	North Rim baz=68	67.78 299	⇑P	P	08 54 12.5 +1.7
ARUT	Antelope Range 2.8nm,1.0s	67.89 301	eP	P	08 54 12.1 +0.8
ARUT	Antelope Range 2.8nm,1.0s	67.89 301	eP	P	08 54 12.1 +0.8
CCUT	Cedar City 18nm,2.0s	67.95 301	eP	P	08 54 12.6 +0.8
CCUT	Cedar City 18nm,2.0s	67.95 301	eP	P	08 54 12.6 +0.8
319A	Douglas baz=68	68.18 293	⇑P	P	08 54 14.8 +1.7
X16A	Lo Mia Camp, P baz=68	68.19 297	⇑P	P	08 54 15.1 +1.8
COLD	Coldfoot 4.7nm,1.1s	68.30 340	eP	P	08 54 14.3 +1.1
COLD	Coldfoot 4.7nm,1.1s	68.30 340	eP	P	08 54 14.3 +1.1
KMBO	Kilima Mbogo comp=Z,52nm,19.1s,baz=97,slow=36	68.40 109	LR	LR	09 24 50.3
TUC	Tucson	68.80 295	eP	P	08 54 18.5 +1.5
TUC	Tucson	68.80 295	eP	P	08 54 18.5 +1.5
DOT	Dot Lake 6.6nm,1.1s	68.93 335	eP	P	08 54 18.4 +1.3
DOT	Dot Lake 6.6nm,1.1s	68.93 335	eP	P	08 54 18.5 +1.3
R11A	Troy Canyon, C baz=69	69.06 303	⇓P	P	08 54 19.7 +1.0
ILAR	Eielson Array	69.07 337	P	P	08 54 17.9 -0.2
ILAR	Eielson Array 1.0nm,0.9s,baz=31,slow=5.5,SNR=17	69.07 337	P	P	08 54 17.9 -0.2
ILAR	Eielson Array	69.07 337	P	P	08 54 17.9 -0.2
NNA	Nana 38nm,0.7s	69.27 236	eP	P	08 54 18.4 -1.6
NNA	Nana 38nm,0.7s	69.27 236	eP	P	08 54 18.4 -1.6
MENT	Mentasta	69.29 335	eP	P	08 54 20.5 +1.0
MENT	Mentasta	69.29 335	eP	P	08 54 20.5 +1.0
Y14A	Wickenburg baz=69	69.55 297	⇑P	P	08 54 22.9 +1.3
W13A	Hualapai Mount baz=69	69.57 299	⇑P	P	08 54 23.3 +1.4
CPUP	Villa Florida	70.20 211	P	P	08 54 24.9 -0.4
CPUP	Villa Florida 2.1nm,0.6s,baz=4.9,slow=4.9,SNR=8.9	70.20 211	P	P	08 54 24.9 -0.4
CPUP	Villa Florida	70.20 211	P	P	08 54 24.9 -0.4
214A	Organ Pipe Nat baz=70	70.45 296	⇓P	P	08 54 28.8 +1.7
113A	Mohawk Valley, baz=71	70.71 297	⇓P	P	08 54 30.5 +1.9
NVAR	Mina Array Bea	70.84 304	P	P	08 54 29.2 -0.4
NVAR	Mina Array Bea 0.2nm,0.3s,baz=78,slow=4.2,SNR=3.7	70.84 304	P	P	08 54 29.2 -0.4
NVAR	Mina Array Bea	70.84 304	P	P	08 54 29.2 -0.4
ZAA0	Zalesovo Array	70.88 36	eP	P	08 54 29.3 0.0
ZAA0	Zalesovo Array	70.88 36	eP	P	08 54 29.3 0.0
ZALV	Zalesovo Beam	70.88 36	P	P	08 54 29.1 -0.2
ZALV	Zalesovo Beam 3.3nm,0.6s,baz=308,slow=7.3,SNR=13	70.88 36	P	P	08 54 29.1 -0.2
ZALV	comp=Z,420nm,20.2s,baz=73,slow=35	LR		LR	09 24 08.1
ZALV	Zalesovo Beam	70.88 36	P	P	08 54 29.1 -0.2
IRM	Iron Mountain baz=71	70.95 299	⇑P	P	08 54 32.0 +1.8
TRF	Thorofare Moun 5.8nm,1.0s	71.06 337	eP	P	08 54 30.0 -0.5
TRF	Thorofare Moun 5.8nm,1.0s	71.06 337	eP	P	08 54 30.0 -0.5
EKS2	Erkin-Say 8.6nm,1.2s	71.31 50	eP	P	08 54 33.4 +1.0
EKS2	Erkin-Say 8.6nm,1.2s	71.31 50	eP	P	08 54 33.3 +1.0
HEC	Hector,Ludlow baz=71	71.42 300	⇑P	P	08 54 34.8 +1.7
GSC	Goldstone baz=71	71.49 300	⇓P	P	08 54 34.8 +1.3
MPMC	Manual Prospec baz=71	71.56 301	⇑P	P	08 54 35.8 +1.8
BELC	Belle Mtn. Jos baz=72	71.63 299	⇑P	P	08 54 36.2 +1.8
YBH	Yreka Blue Hor comp=Z,57nm,20.2s,baz=57,slow=34	71.88 309	LR	LR	09 24 15.5
PMR	Palmer 8.4nm,1.0s	72.05 336	eP	P	08 54 37.2 +1.0
PMR	Palmer 8.4nm,1.0s	72.05 336	eP	P	08 54 37.2 +1.0
PFO	Pinyon Flat Ob comp=Z,85nm,18.2s,baz=316,slow=35	72.16 299	LR	LR	09 25 45.5
LPIG	La Paz comp=Z,4.4nm,21.3s,baz=180,slow=32	72.80 287	LR	LR	09 21 39.6
CIS	Catalina Islan baz=74	73.63 300	⇑P	P	08 54 48.5 +2.3
BLG	Laguna Peak baz=74	73.70 301	⇓P	P	08 54 49.5 +2.9
MKAR	Makanchi Array	73.90 43	P	P	08 54 47.1 -0.4
MKAR	Makanchi Array 3.0nm,0.8s,baz=310,slow=4.9,SNR=14	73.90 43	P	P	08 54 47.1 -0.4
MKAR	comp=Z,69nm,20.7s,baz=352,slow=35	LR		LR	09 26 46.7
MKAR	Makanchi Array	73.90 43	P	P	08 54 47.1 -0.4
KSH	Kashi	74.45 52	P	P	08 54 52.0 +1.0
KSH			eP	pP	08 54 56.8 +2.5
KSH			eS	sP	08 54 59.3 +3.8
KSH			ePcP	PcP	08 55 07.4 +1.8
KSH			ePP	PP	08 57 39.1 +2.2
KSH			eS	S	09 04 23.9 -2.0
KSH			sS	sS	09 04 32.1 +0.8
KSH	Kashi	74.45 52	eSKS	SKSac	09 04 54.5 -4.8
KSH	Kashi	74.45 52	eScS	SKSac	09 04 58.6 -0.7
KSH	Kashi	74.45 52	eSS	SS	09 09 12.0 +0.4
KSH	comp=Z,18nm,0.7s		pmax	pmax	
KSH	comp=Z,74nm,2.6s		pmax	pmax	
KSH	comp=N,78nm,4.1s		LR	LR	
KSH	comp=E,89nm,4.3s		LR	LR	
KSH	comp=Z,66nm,2.6s		LR	LR	
KDAK	Kodiak Island comp=Z,52nm,18.8s,baz=78,slow=34	76.06 334	LR	LR	09 26 28.8
SONM	Songino Array	84.82 31	P	P	08 55 47.1 -0.1
SONM	Songino Array comp=Z,2.8nm,1.1s,baz=307,slow=5.4,SNR=10	84.82 31	P	P	08 55 47.1 -0.1
SONM	comp=Z,55nm,18.5s,baz=165,slow=38		LR	LR	09 36 28.0
SONM	Songino Array	84.82 31	P	P	08 55 47.1 -0.1
FX1	Attu Island--F comp=Z,26nm,20.2s,baz=304,slow=35	89.19 349	LR	LR	09 35 34.6
FITZ	Fitzroy Crossi	147.65 63	PKPbc	PKPdf	09 02 55.5 +0.7
FITZ	Fitzroy Crossi comp=Z,5.1nm,0.9s,baz=326,slow=1.1,SNR=6.7	147.65 63	PKPbc	PKPdf	09 02 55.5 +0.7
FITZ	Fitzroy Crossi	147.65 63	PKPbc	PKPdf	09 02 55.5 +0.7
WRA	Warramunga Arr	154.84 53	PKPbc	PKPbc	09 03 13.4 -1.0
WRA	Warramunga Arr comp=Z,0.4nm,0.8s,baz=326,slow=2.2,SNR=4.7	154.84 53	PKPbc	PKPbc	09 03 13.4 -1.0
WRA	Warramunga Arr	154.84 53	PKPbc	PKPbc	09 03 13.4 -1.0
ASAR	Alice Springs	157.11 61	PKPab	PKPab	09 03 38.4 -0.9
ASAR	Alice Springs comp=Z,0.4nm,0.9s,baz=319,slow=5.2,SNR=4.6	157.11 61	PKPab	PKPab	09 03 38.4 -0.9
ASAR	Alice Springs	157.11 61	PKPab	PKPab	09 03 38.4 -0.9

IDC 21 09:15:02.1±2.6, 15°01S×174°21W, h99km±26km, mb3.6/7, mb1 3.9/8, mb1mx3.6/21, mbtmp3.6/8, Error ellipse: s-maj=39.3km s-min=17.6km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu 77nm,0.3s,baz=252,slow=20,SNR=143	2.59	65	P	Pn	09 15 42.5	-0.1
AFI				S	Sn	09 16 09.6	-4.1
STKA	Stephens Creek 1.6nm,0.8s,baz=108,slow=3.2,SNR=2.8	43.56	239	P	P	09 22 57.1	+0.7

WRA	**Warramunga Arr**	**49.18**	**256**	P	P	09 23 40.4	-0.2
	0.9nm,0.6s,baz=91,slow=7.7,SNR=16							
ASAR	**Alice Springs**	**49.49**	**252**	P	P	09 23 42.4	-0.6
	8.6nm,0.6s,baz=87,slow=8.0,SNR=162							
NVAR	**Mina Array Bea**	**74.56**	**42**	P	P	09 26 31.3	+0.6
	0.5nm,0.7s,baz=233,slow=8.9,SNR=4.6							
QSPA	**South Pole Qui**	**75.03**	**180**	P	P	09 26 32.6	-0.2
	1.2nm,0.8s,baz=343,slow=2.2,SNR=4.6							
ILAR	**Eielson Array**	**82.22**	**11**	P	P	09 27 11.6	-0.3
	0.2nm,0.4s,baz=210,slow=5.2,SNR=5.5							
PDAR	**Pinedale Array**	**82.50**	**42**	P	P	09 27 14.0	-0.2
	0.3nm,0.4s,baz=235,slow=3.2,SNR=3.7							

WEL 21 09:22:29.3±0.3, 37.85S×176.09E, h168km±3km, ML3.7/5, 6C, Error ellipse: s-maj=3.2km s-min=3.0km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALRZ	**Allen Road**	**0.74**	**165**	PN	Pn	09 22 54.6	+0.6
URZ	**Urewera**	**0.90**	**117**	⇑PN	Pn	09 22 55.1	+0.1
URZ				SN	Sn	09 23 14.5	-0.4
MWZ	**Matawai**	**1.23**	**114**	PN	Pn	09 22 57.8	+0.1
MWZ				SN	Sn	09 23 19.3	-0.4
RAHZ	**Arahi**	**1.32**	**144**	PN	Pn	09 22 58.6	+0.1
RAHZ				SN	Sn	09 23 20.6	-0.6
OTVZ	**Oturere**	**1.35**	**194**	PN	Pn	09 22 59.3	+0.3
NMHZ	**Naumai**	**1.36**	**156**	PN	Pn	09 22 59.4	+0.4
NMHZ				SN	Sn	09 23 22.3	+0.2
WPVZ	**Whakapapa**	**1.42**	**197**	PN	Pn	09 22 59.8	+0.2
TUVZ	**Tukino**	**1.46**	**194**	⇑PN	Pn	09 23 00.0	+0.1
FWVZ	**Far West T-bar**	**1.46**	**197**	⇑PN	Pn	09 22 59.9	-0.3
TRVZ	**Turoa**	**1.51**	**196**	⇑PN	Pn	09 23 00.5	-0.1
WNVZ	**Wahianoa**	**1.52**	**195**	⇑PN	Pn	09 23 00.5	-0.1
PKVZ	**Pokaka**	**1.55**	**202**	PN	Pn	09 23 00.8	0.0
MOVZ	**Moawhango**	**1.58**	**190**	PN	Pn	09 23 00.3	-0.7
MTVZ	**Mangateitei**	**1.61**	**197**	PN	Pn	09 23 01.2	-0.2
BHHZ	**Black Hill Sta**	**1.63**	**181**	⇑PN	Pn	09 23 00.9	-0.8
VRZ	**Vera Road**	**1.65**	**219**	PN	Pn	09 23 02.5	+0.8
MCHZ	**McNeill Hill**	**1.66**	**164**	PN	Pn	09 23 01.7	-0.1
MXZ	**Matakaoa Point**	**1.78**	**81**	PN	Pn	09 23 03.4	+0.3
CNGZ	**Carnagh Statio**	**1.78**	**111**	PN	Pn	09 23 03.5	+0.4
MHGZ	**Mahia Peninsul**	**1.93**	**133**	PN	Pn	09 23 04.3	-0.4
KAHZ	**Kahuranaki**	**2.03**	**163**	PN	Pn	09 23 05.1	-0.8
PNHZ	**Pukenui**	**2.06**	**178**	PN	Pn	09 23 04.9	-1.3
WAZ	**Wanganui**	**2.09**	**204**	PN	Pn	09 23 06.1	-0.4
WPHZ	**Waipukurau**	**2.23**	**173**	PN	Pn	09 23 06.7	-1.4
PXZ	**Pawanui**	**2.26**	**165**	⇑PN	Pn	09 23 07.0	-1.4
DVHZ	**Dannevirke**	**2.44**	**179**	PN	Pn	09 23 08.5	-2.1
DVHZ				SN	Sn	09 23 38.3	-4.5
PRHZ	**Porangahau**	**2.45**	**170**	PN	Pn	09 23 08.9	-1.8
POWZ	**Post Office Ro**	**2.55**	**186**	PN	Pn	09 23 09.7	-2.2
BFZ	**Birch Farm**	**2.83**	**178**	PN	Pn	09 23 12.7	-2.5
MRZ	**Mangatainoka R**	**2.83**	**188**	PN	Pn	09 23 12.6	-2.7
TIWZ	**Tintock**	**2.93**	**183**	PN	Pn	09 23 13.7	-2.8
OGWZ	**Otaki Gorge**	**3.05**	**193**	PN	Pn	09 23 15.2	-2.7
HOWZ	**Holdsworth Sta**	**3.08**	**188**	PN	Pn	09 23 15.1	-3.2
KIW	**Kapiti Island**	**3.14**	**197**	PN	Pn	09 23 16.0	-3.1
TMWZ	**Te Maipa**	**3.25**	**183**	PN	Pn	09 23 17.4	-3.2
MTW	**Mount Morrison**	**3.33**	**188**	PN	Pn	09 23 17.8	-3.7
CAW	**Cannon Point**	**3.35**	**193**	PN	Pn	09 23 18.3	-3.3
TRWZ	**Traveller**	**3.56**	**185**	PN	Pn	09 23 20.8	-3.5
MSWZ	**Moikau Station**	**3.62**	**190**	PN	Pn	09 23 21.1	-4.0
TCW	**Tory Channel**	**3.64**	**202**	PN	Pn	09 23 22.0	-3.3
PLWZ	**Palliser**	**3.77**	**190**	PN	Pn	09 23 22.8	-4.2
TUWZ	**Tuamarina**	**3.94**	**204**	PN	Pn	09 23 25.9	-3.2

*IDC **21** 09:31:33.8±2.3, 50.95N×177.53W, h0km, mb3.2/3, mb1 3.8/5, mb1mx3.4/30, mbtmp3.5/5, ML3.3/2, Error ellipse: s-maj=67.2km s-min=18.4km az=4.0*
*NEIC **21** 09:31:37.9, 51.63N×177.60W, h1km, ML4.3(AEIC), After AEIC.*

ISC 21 09:31:37.8±1.5, 51.5N±0.2×177.60W±0.05, h20km±10km, n13, σ0s86/17, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERAA	**Semis' Rag'd T**	**1.75**	**286**	P	**Pn**	**09 32 06.9**	**-0.2**
CESW	**Semis' Southwe**	**1.82**	**285**	P	**Pn**	**09 32 07.7**	**-0.4**
CESW				S	**Sn**	**09 32 31.5**	**+0.9**
AMKA	**Amchitka**	**1.94**	**269**	P	**Pn**	**09 32 09.8**	**+0.1**
AMKA				S	**Sb**	**09 32 37.3**	**+1.0**
ATKA	**Atka Island**	**2.24**	**69**	P	**Pn**	**09 32 12.7**	**-1.0**
ATKA				S	**Sn**	**09 32 40.3**	**-0.4**
KOWE	**Korovin West**	**2.26**	**65**	P	**Pn**	**09 32 14.2**	**+0.1**
KOKV	**Korovin Volcan**	**2.31**	**66**	P	**Pn**	**09 32 15.4**	**+0.6**
KOKV				S	**Sn**	**09 32 44.1**	**+1.5**
KOFP	**Korovin Flat P**	**2.32**	**68**	P	**Pn**	**09 32 15.3**	**+0.4**
LSPA	**Little Sitkin**	**2.44**	**283**	P	**Pn**	**09 32 16.9**	**+0.4**
LSPA				S	**Sb**	**09 32 48.8**	**-1.6**
FX1	**Attu Island--F**	**5.86**	**288**	Pn	**Pn**	**09 33 03.4**	**-0.1**
	1.3nm,0.3s,baz=122,slow=9.5,SNR=4.8						
KDAK	**Kodiak Island**	**15.75**	**57**	Pn	**Pn**	**09 35 18.7**	**+0.5**
	0.4nm,0.3s,baz=243,slow=6.8,SNR=5.0						
ILAR	**Eielson Array**	**20.71**	**38**	P	Pn	09 36 19.9	+0.9
	0.4nm,0.8s,baz=235,slow=7.6,SNR=5.1						
PDAR	**Pinedale Array**	**45.57**	**73**	P	**P**	**09 39 56.0**	**-0.3**
	0.4nm,0.5s,baz=291,slow=3.6,SNR=2.3						
TXAR	**Lajitas Array**	**57.90**	**82**	P	**P**	**09 41 27.9**	**-0.6**
	0.4nm,0.8s,baz=297,slow=5.5,SNR=4.7						

*NEIC **21** 09:47:38.9±1.4, 7.47S×128.39E, h76km±14km, mb4.4/4, Error ellipse: s-maj=16.3km s-min=8.1km az=63.0*
*IDC **21** 09:47:39.8±3.1, 7.49S×128.31E, h81km±28km, mb4.0/13, mb1 4.2/16, mb1mx4.1/22, mbtmp4.1/16, MS3.1/1, Ms1 3.1/1, ms1mx2.2/26, Error ellipse: s-maj=29.3km s-min=12.4km az=75.0*
*ISCJB **21** 09:47:43.5±0.4, 7.80S±0.05×128.3E±0.1, h150km, mb4.0/16, Error ellipse: s-maj=16.9km s-min=5.5km az=163.9*

ISC 21 09:47:46.5±0.5, 7.78S±0.08×128.1E±0.2, h150km, n49, σ1s62/48, mb4.1/16, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.53**	**193**	*e*Pn	**Pn**	**09 50 11.9**	**-1.6**
	16nm,0.4s						
FITZ				S	Sn	09 52 03.6	-6.6
FITZ				*e*Sn	Sn	09 52 05.9	-4.2
FITZ	**Fitzroy Crossi**	**10.53**	**193**	P	**Pn**	**09 50 12.0**	**-1.6**
	6.3nm,0.3s,baz=30,slow=12,SNR=90						
FITZ				S	Sn	09 52 03.6	-6.6
	6.5nm,0.3s,baz=56,slow=11,SNR=3.9						
FITZ				LR	LR	09 55 13.9	
	comp=Z,84nm,18.4s,baz=239,slow=42						
WRAB	**Tennant Creek**	**13.52**	**154**	*e*Pn	Pn	09 50 48.7	-3.7
	16nm,0.6s						
WRAB				*e*Sn	Sn	09 53 12.3	-10
WRA	**Warramunga Arr**	**13.52**	**154**	P	Pn	09 50 48.9	-3.5
WRA				S	Sn	09 53 10.4	-12
WRA	**Warramunga Arr**	**13.52**	**154**	P	Pn	09 50 48.9	-3.5
	1.7nm,0.3s,baz=344,slow=10.0,SNR=156						
WRA				S	Sn	09 53 10.4	-12
	8.5nm,0.3s,baz=329,slow=22,SNR=15						
AS31	**Alice Springs**	**16.75**	**161**	*e*Pn	**P**	**09 51 32.2**	**+0.1**
AS31				*e*Sn	**Sn**	**09 54 33.5**	**-6.2**
ASAR	**Alice Springs**	**16.75**	**161**	P	P	09 51 32.3	+0.2
ASAR				S	Sn	09 54 27.9	-12
ASAR	**Alice Springs**	**16.75**	**161**	P	**P**	**09 51 32.3**	**+0.2**
	1.6nm,0.3s,baz=331,slow=9.6,SNR=82						
ASAR				S	Sn	09 54 27.9	-12
	0.7nm,0.3s,baz=332,slow=18,SNR=6.8						
KSM	**Kuching**	**19.97**	**297**	*e*P	**P**	**09 52 06.8**	**-0.5**
	15nm,0.6s						
STKA	**Stephens Creek**	**27.08**	**154**	P	**P**	**09 53 16.7**	**+1.6**
STKA	**Stephens Creek**	**27.08**	**154**	P	**P**	**09 53 16.7**	**+1.6**
	1.9nm,0.6s,baz=322,slow=6.4,SNR=8.0						
CMAR	**Chiang Mai Arr**	**38.81**	**312**	P	**P**	**09 54 57.0**	**-0.1**
CMAR	**Chiang Mai Arr**	**38.81**	**312**	P	**P**	**09 54 57.0**	**-0.1**
	1.1nm,0.6s,baz=141,slow=7.2,SNR=4.7						
KSAR	**Wonju Array Be**	**44.99**	**360**	P	**P**	**09 55 45.9**	**-0.9**
KSRS	**Korea Array**	**45.00**	**360**	P	**P**	**09 55 45.9**	**-0.9**
	2.1nm,0.8s,baz=179,slow=9.1,SNR=5.3						
MJAR	**Matsushiro Arr**	**45.10**	**12**	P	P	09 55 44.3	-3.5
MJAR	**Matsushiro Arr**	**45.10**	**12**	P	P	09 55 44.3	-3.5
	3.7nm,0.6s,baz=192,slow=9.8,SNR=13						
MAJO	**Matsushiro**	**45.10**	**12**	*e*P	P	09 55 43.2	-4.5
	5.0nm,0.8s						
USRK	**Ussuriysk Arra**	**51.86**	**4**	P	**P**	**09 56 38.3**	**-1.0**
	1.0nm,0.4s,baz=173,slow=6.9,SNR=5.5						
ULN	**Ulaanbaatar**	**58.44**	**344**	*e*P	**P**	**09 57 26.3**	**-0.4**
	3.1nm,0.3s						
SONM	**Songino Array**	**58.60**	**343**	P	**P**	**09 57 27.7**	**0.0**
SONM	**Songino Array**	**58.60**	**343**	P	**P**	**09 57 27.7**	**0.0**
	4.6nm,0.7s,baz=162,slow=7.6,SNR=27						
POO	**Poona**	**59.54**	**297**	*ex*	**PcP**	**09 58 18.0**	**-2.5**
PETK	**Petropavlovsk-**	**65.66**	**19**	P	**P**	**09 58 13.1**	**-1.5**
PETK	**Petropavlovsk-**	**65.66**	**19**	P	**P**	**09 58 13.1**	**-1.5**
	5.9nm,0.7s,baz=178,slow=6.1,SNR=21						
MKAR	**Makanchi Array**	**67.86**	**328**	P	**P**	**09 58 29.0**	**+0.4**
MKAR				PcP	**PcP**	**09 58 54.5**	**+0.5**
MKAR	**Makanchi Array**	**67.86**	**328**	P	**P**	**09 58 29.0**	**+0.4**
	2.6nm,0.5s,baz=119,slow=8.3,SNR=46						
MKAR				PcP	**PcP**	**09 58 54.5**	**+0.5**
	0.8nm,0.6s,baz=128,slow=6.0,SNR=3.9						
ZAA0	**Zalesovo Array**	**71.46**	**335**	*e*P	**P**	**09 58 49.6**	**-0.8**
ZALV	**Zalesovo Beam**	**71.46**	**335**	P	**P**	**09 58 49.9**	**-0.5**
ZALV	**Zalesovo Beam**	**71.46**	**335**	P	**P**	**09 58 49.9**	**-0.5**
	3.3nm,0.5s,baz=132,slow=4.7,SNR=18						
VNDA	**Vanda**	**71.91**	**173**	*e*P	**P**	**09 58 54.4**	**+1.6**
VNDA	**Vanda**	**71.91**	**173**	P	**P**	**09 58 55.2**	**+2.4**
	0.5nm,0.3s,baz=308,slow=8.0,SNR=13						
KURK	**Kurchatov**	**72.21**	**330**	*e*P	**P**	**09 58 55.0**	**+0.1**
	2.7nm,0.6s						
BVAR	**Borovoye Array**	**77.72**	**328**	P	**P**	**09 59 26.5**	**0.0**
BVAR	**Borovoye Array**	**77.72**	**328**	P	**P**	**09 59 26.5**	**0.0**
	1.7nm,0.5s,baz=137,slow=5.8,SNR=8.2						
AKTO	**Aktyubinsk**	**83.53**	**323**	P	**P**	**09 59 58.1**	**+0.5**
AKTO	**Aktyubinsk**	**83.53**	**323**	P	**P**	**09 59 58.1**	**+0.5**
	1.1nm,0.5s,baz=120,slow=4.0,SNR=7.0						
GAMB	**Gambell**	**84.36**	**23**	*e*P	**P**	**10 00 00.7**	**-0.7**
ILAR	**Eielson Array**	**94.86**	**25**	P	**P**	**10 00 48.8**	**-2.3**
ILAR	**Eielson Array**	**94.86**	**25**	P	**P**	**10 00 48.7**	**-2.3**
	0.2nm,0.8s,baz=256,slow=5.9,SNR=4.4						
TXAR	**Lajitas Array**	**126.95**	**59**	PKP	**PKPdf**	**10 06 34.4**	**+1.0**
TXAR	**Lajitas Array**	**126.95**	**59**	PKP	**PKPdf**	**10 06 34.4**	**+1.0**
	0.1nm,0.4s,baz=341,slow=1.9,SNR=3.6						
TORD	**Torodi Ar. Bea**	**127.09**	**281**	PKP	**PKPdf**	**10 06 34.3**	**+0.4**
TORD	**Torodi Ar. Bea**	**127.09**	**281**	PKP	**PKPdf**	**10 06 34.3**	**+0.4**
	0.5nm,0.6s,baz=89,slow=1.9,SNR=7.5						
CPUP	**Villa Florida**	**145.69**	**171**	PKPbc	**PKPab**	**10 07 10.7**	**+1.8**
CPUP	**Villa Florida**	**145.69**	**171**	PKPbc	**PKPab**	**10 07 10.7**	**+1.8**
	0.8nm,0.5s,baz=66,slow=14,SNR=4.4						
LPAZ	**La Paz**	**151.20**	**146**	*e*PKPbc	**PKPbc**	**10 07 25.8**	**+2.0**
LPAZ				PKPab	**PKPab**	**10 07 34.5**	**+2.5**
LPAZ	**La Paz**	**151.20**	**146**	PKPbc	**PKPbc**	**10 07 25.8**	**+2.0**
	1.3nm,0.4s,baz=12,slow=0.8,SNR=8.2						
LPAZ				PKPab	**PKPab**	**10 07 34.5**	**+2.5**
	2.3nm,0.6s,baz=179,slow=3.1,SNR=9.9						
SDDR	**Presa de Saban**	**158.14**	**57**	*e*PKPdf	**PKPdf**	**10 07 28.6**	**+2.1**

IDC 21 09:58:46.0±2.2, 9.72S×116.89E, h0km, mb3.1/2, mb1 3.4/5, mb1mx3.3/23, mbtmp3.3/5, ML3.1/3, Error ellipse: s-maj=62.2km s-min=25.7km az=58.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.47**	**31**	Pn	Pn	10 00 08.7	-0.1
	0.7nm,0.3s,baz=221,slow=11,SNR=5.7						
KAPI				S	Sn	10 01 04.6	-7.8
	1.0nm,0.3s,baz=300,slow=20,SNR=2.0						
FITZ	**Fitzroy Crossi**	**11.89**	**135**	Pn	Pn	10 01 36.0	-0.9
	0.2nm,0.3s,baz=312,slow=14,SNR=5.0						
WRA	**Warramunga Arr**	**19.67**	**123**	P	P	10 03 17.4	+0.6
	0.0nm,0.3s,baz=299,slow=12,SNR=3.8						
ASAR	**Alice Springs**	**21.36**	**133**	P	P	10 03 35.2	0.0
	0.3nm,0.7s,baz=312,slow=10,SNR=4.8						
MKAR	**Makanchi Array**	**64.17**	**334**	P	P	10 09 22.4	0.0
	0.2nm,0.4s,baz=156,slow=6.1,SNR=3.4						

*IDC **21** 11:02:53.2±0.9, 35.40N×143.05E, h0km, mb3.5/9, mb1 3.8/11, mb1mx3.6/28, mbtmp3.5/11, ML3.6/2, Error ellipse: s-maj=22.3km s-min=19.7km az=115.0*
*ISCJB **21** 11:02:56.5±1.2, 35.44N±0.05×142.94E±0.08, h34km±11km, mb3.5/9, Error ellipse: s-maj=10.9km s-min=7.8km az=4.4*
*JMA **21** 11:02:56.9±0.3, 35.54N×142.91E, h79km, M3.3*

ISC 21 11:02:57.4±3.3, 35.41N±0.06×142.95E±0.07, h28km±23km, n23, σ0s88/26, mb3.6/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.73**	**280**	P	**Pn**	**11 03 25.2**	**-0.4**
BSO1	**Boso 1**	**1.79**	**246**	P	**Pn**	**11 03 26.1**	**+0.2**
BSO1				*e*S	**Sn**	**11 03 48.4**	**+1.0**
BSO3	**Boso 3**	**2.09**	**254**	P	**Pn**	**11 03 31.4**	**+1.1**
JFT	**Otama**	**2.98**	**316**	P	**Pn**	**11 03 41.3**	**-1.5**
JFT				*e*S	Sn	11 04 14.1	-3.5
JAG	**Ashikaga**	**3.01**	**291**	P	**Pn**	**11 03 42.1**	**-1.2**
JAG				*e*S	Sn	11 04 15.9	-2.5
JOD2	**Odawara 2**	**3.16**	**268**	P	**Pn**	**11 03 45.2**	**-0.1**
JOD2				*e*S	Sn	11 04 21.0	-1.1
JRY	**Ryogami san**	**3.35**	**282**	P	**Pn**	**11 03 47.9**	**0.0**
JHJ2	**Mitsune**	**3.46**	**229**	P	**Pn**	**11 03 50.0**	**+0.6**
JHJ2				*e*S	**Sn**	**11 04 29.2**	**-0.3**
JHJ	**Hachijo jima 2**	**3.48**	**230**	Pn	Pn	11 03 48.9	-0.8
	12nm,0.3s,baz=82,slow=22,SNR=31						
JHJ				Sn	**Sn**	**11 04 29.5**	**-0.5**
	42nm,0.3s,baz=69,slow=23,SNR=8.9						
JYN	**Shimob**	**3.60**	**273**	P	**Pn**	**11 03 51.7**	**+0.3**
JNS	**Sasagawa**	**3.78**	**310**	P	**Pn**	**11 03 53.0**	**-0.8**
MJAR	**Matsushiro Arr**	**4.01**	**288**	Pn	**Pn**	**11 03 57.1**	**+0.1**
	5.8nm,0.3s,baz=174,slow=8.8,SNR=44						
MJAR				Sn	**Sn**	**11 04 45.1**	**+2.1**
	1.1nm,0.3s,baz=216,slow=19,SNR=5.1						
MAT	**Matsushiro**	**4.01**	**288**	P	**Pn**	**11 03 57.2**	**+0.2**
MAT				S	**Sn**	**11 04 43.9**	**+0.9**
ASAJ	**Asahikawa**	**8.70**	**358**	Pn	Pn	11 04 58.0	-3.4
	0.7nm,0.3s,baz=315,slow=12,SNR=8.8						
ASAJ				Sn	Sn	11 06 30.3	-8.1
	0.2nm,0.3s,baz=155,slow=19,SNR=1.9						
SONM	**Songino Array**	**29.73**	**306**	P	P	**11 09 02.7**	**+1.4**
	0.3nm,0.5s,baz=102,slow=9.3,SNR=3.0						
MKAR	**Makanchi Array**	**46.04**	**304**	P	P	**11 11 18.8**	**+0.2**
	0.1nm,0.4s,baz=80,slow=8.4,SNR=2.7						
KURBB	**Kurchatov Arra**	**47.98**	**309**	P	P	**11 11 34.5**	**+0.9**
	0.4nm,0.7s,baz=83,slow=8.5,SNR=4.1						
ILAR	**Eielson Array**	**50.21**	**32**	P	P	**11 11 50.1**	**-0.3**
	0.6nm,0.7s,baz=260,slow=6.1,SNR=8.9						
WRA	**Warramunga Arr**	**55.65**	**190**	P	P	**11 12 30.5**	**-0.5**
	0.4nm,0.7s,baz=9.9,slow=7.5,SNR=6.8						
ASAR	**Alice Springs**	**59.38**	**190**	P	P	**11 12 57.7**	**+0.4**
	0.3nm,0.7s,baz=15,slow=10,SNR=6.3						
YKA	**Yellowknife Ar**	**64.58**	**30**	P	P	**11 13 31.1**	**-0.7**
	0.1nm,0.3s,baz=292,slow=10,SNR=3.6						
ARCES	**ARCESS Array B**	**65.95**	**340**	P	P	**11 13 40.4**	**-0.1**
	3.7nm,1.0s,baz=58,slow=7.0,SNR=4.1						
NVAR	**Mina Array Bea**	**74.96**	**53**	P	P	**11 14 37.2**	**+0.9**
	0.3nm,0.7s,baz=311,slow=4.7,SNR=2.9						

*ISCJB **21** 11:11:06.2±1.2, 59.21N±0.03×28.0E±0.1, h0km, Error ellipse: s-maj=11.3km s-min=4.2km az=14.5*
*CSEM **21** 11:11:06.6±0.5, 59.19N×28.14E, h1km, Ms5.7, Error ellipse: s-maj=12.5km s-min=4.1km az=107.0, Mining explosion.*
*HEL **21** 11:11:08.3±0.2, 59.22N×28.01E, h0km, ML1.1, Explosion*
*NAO **21** 11:11:09.3±1.4, 59.23N×27.50E, ML2.1*
*BER **21** 11:11:09.7±3.1, 59.25N×27.64E, h0km, ML2.1(NAO), Suspected explosion*

ISC 21 11:11:07.5±1.4, 59.23N±0.04×27.96E±0.09, h0km, n32, σ1s17/46, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	**1.00**	**220**	Pg	**Pg**	**11 11 25.8**	**-0.8**
VSU				Lg	Lg	11 11 38.7	
VSU	**Vasula**	**1.00**	**220**	Pg	**Pg**	**11 11 25.8**	**-0.8**
VSU				Lg	Lg	11 11 38.7	
VSU	**Vasula**	**1.00**	**220**	*e*P	**Pg**	**11 11 26.1**	**-0.5**
VSU	**Vasula**	**1.00**	**220**	Pg	**Pg**	**11 11 25.8**	**-0.8**
VSU	**Vasula**	**1.00**	**220**	P	**Pg**	**11 11 26.1**	**-0.5**
VSU				Lg	Lg	11 11 38.7	
VSU				*e*S	**Sg**	**11 11 38.9**	**-0.6**
	50nm,0.9s,SNR=90						
VJF	**Virojoki**	**1.33**	**351**	*e*P	**Pg**	**11 11 32.2**	**-0.8**
VJF				*e*S	**Sg**	**11 11 49.7**	**-0.6**
VJF	**Virojoki**	**1.33**	**351**	P	**Pg**	**11 11 32.2**	**-0.8**
VJF				S	**Sg**	**11 11 49.6**	**-0.6**
PVF	**Pernaja**	**1.69**	**322**	*e*P	**Pn**	**11 11 38.5**	**+0.2**
PVF				*e*S	**Sn**	**11 12 00.3**	**-0.3**
PVF	**Pernaja**	**1.69**	**322**	P	**Pn**	**11 11 38.5**	**+0.2**
PVF				S	**Sn**	**11 12 00.3**	**-0.3**
MEF	**Metsahovi**	**2.06**	**300**	*e*P	**Pb**	**11 11 44.7**	**-1.0**
MEF				*e*S	**Sn**	**11 12 10.3**	**+0.6**
MEF	**Metsahovi**	**2.06**	**300**	P	**Pb**	**11 11 44.7**	**-1.0**
MEF				*e*S	**Sn**	**11 12 10.4**	**+0.7**
	17nm,0.4s,SNR=50						
MTSE	**Matsula**	**2.21**	**258**	*e*P	**Pn**	**11 11 46.5**	**+1.2**
MTSE	**Matsula**	**2.21**	**258**	P	**Pn**	**11 11 46.5**	**+1.2**
FIA0	**FINESS Array S**	**2.41**	**338**	Pn	**Pn**	**11 11 48.9**	**+0.7**
	baz=150,slow=18						
FIA0				Pg	**Pb**	**11 11 50.4**	**-1.4**
	baz=156,slow=14						
FIA0				Lg	Lg	11 12 22.9	
	baz=154,slow=28						
FIA0				Rg	Rg	11 12 36.8	
	baz=162,slow=37						
FIA0	**FINESS Array S**	**2.41**	**338**	Pn	**Pn**	**11 11 48.9**	**+0.7**
	baz=150,slow=18						
FIA0				Pg	**Pb**	**11 11 50.4**	**-1.4**
	baz=156,slow=14						
FIA0				Lg	Lg	11 12 22.9	
	baz=154,slow=28						
FIA0				Rg	Rg	11 12 36.8	
	baz=162,slow=37						
FIA0	**FINESS Array S**	**2.41**	**338**	*e*P	**Pn**	**11 11 49.3**	**+1.1**
FIA0				*e*S	**Sn**	**11 12 19.8**	**+1.4**
FIA0	**FINESS Array S**	**2.41**	**338**	Pn	**Pn**	**11 11 48.9**	**+0.7**
	baz=150,slow=17,SNR=3.2						
FIA0	**FINESS Array S**	**2.41**	**338**	P	**Pn**	**11 11 49.3**	**+1.1**
FIA0	**FINESS Array S**	**2.41**	**338**	Pg	**Pb**	**11 11 50.4**	**-1.4**
	baz=156,slow=14						
FIA0				S	**Sn**	**11 12 19.8**	**+1.4**
FIA0				Lg	Lg	11 12 22.9	
	baz=154,slow=26,SNR=5.2						
KAF	**Kangasniemi**	**3.01**	**345**	*e*PB	**Pb**	**11 12 00.2**	**-1.7**
KAF				*e*S	**Sn**	**11 12 33.4**	**+0.3**
KAF				*e*SG	**Sb**	**11 12 40.8**	**+1.7**
KAF	**Kangasniemi**	**3.01**	**345**	Pb	**Pb**	**11 12 00.2**	**-1.7**
KAF				S	**Sn**	**11 12 33.3**	**+0.3**
KEF	**Keuruu**	**3.32**	**334**	*e*PB	**Pb**	**11 12 04.8**	**-2.4**
KEF				*e*S	**Sn**	**11 12 41.3**	**+0.6**
SLIT	**Slitere, Latvi**	**3.38**	**244**	*e*S	**Sn**	**11 12 42.1**	**-0.2**
	SNR=50						
RAF	**Rauma**	**3.58**	**303**	*e*P	**Pn**	**11 12 06.2**	**+1.9**
RAF				*e*S	**Sn**	**11 12 47.3**	**+0.1**
RAF	**Rauma**	**3.58**	**303**	P	**Pn**	**11 12 06.1**	**+1.9**
RAF				*e*S	**Sn**	**11 12 47.8**	**+0.6**
	8.0nm,0.5s,SNR=50						
JOF	**Joensuu**	**4.05**	**22**	*e*SG	**Sb**	**11 13 12.3**	**+3.3**
JOF				MSG		11 13 13.3	
	comp=Z,0.3nm,0.3s						
HFS	**Hagfors**	**7.28**	**283**	Lg	Lg	11 14 47.7	
	baz=77,slow=28						
HFS	**Hagfors**	**7.28**	**283**	Lg	Lg	11 14 47.7	
	baz=77,slow=28						
HFS	**Hagfors**	**7.28**	**283**	Lg	Lg	11 14 47.7	
	baz=77,slow=26,SNR=4.7						
ARA0	**ARCESS Array S**	**10.40**	**355**	Pn	**Pn**	**11 13 37.1**	**-0.7**
	baz=165,slow=16						
ARA0	**ARCESS Array S**	**10.40**	**355**	Pn	**Pn**	**11 13 37.1**	**-0.7**
	baz=165,slow=16						
ARA0	**ARCESS Array S**	**10.40**	**355**	Pn	**Pn**	**11 13 37.1**	**-0.7**
	baz=165,slow=14						

*NEIC **21** 11:45:18.2, 19.37N×68.46W, h94km, MD2.8(RSPR), After RSPR.*

**RSPR 21 11:45:18.2

2.3nm,0.3s,baz=239,slow=6.2,SNR=56
BDFB Brasilia 22.30 80 LR LR 12 02 42.5
comp=Z,45nm,19.3s,baz=150,slow=37
NVAR Mina Array Bea 74.02 323 LR LR 12 29 02.5
comp=Z,61nm,20.3s,baz=249,slow=33
TORD Torodi Ar. Bea 78.89 71 P P 12 00 55.1 -0.7
1.1nm,0.4s,baz=249,slow=5.5,SNR=27
YKA Yellowknife Ar 90.15 341 P P 12 01 50.1 -1.5
0.3nm,0.8s,baz=137,slow=4.0,SNR=4.0
WRA Warramunga Arr 132.42 213 PKP PKPdf 12 08 08.4 +1.2
0.3nm,0.9s,baz=144,slow=1.6,SNR=3.7
MKAR Makanchi Array 146.27 34 PKPbc PKPbc 12 08 32.6 0.0
0.6nm,0.5s,baz=332,slow=2.8,SNR=7.5

IDC 21 11:54:18.2±4.8, 0.84N×98.84E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/25, mbtmp3.6/3, Error ellipse: s-maj=182.1km s-min=29.3km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.46**	**123**	P	P	12 01 58.7	-0.2
	0.3nm,0.8s,baz=308,slow=9.3,SNR=3.3						
SONM	**Songino Array**	**47.27**	**7**	P	P	12 02 53.4	+0.1
	0.7nm,0.4s,baz=188,slow=9.7,SNR=8.7						
MKAR	**Makanchi Array**	**48.00**	**345**	P	P	12 02 58.6	-0.3
	0.5nm,0.5s,baz=158,slow=7.9,SNR=5.1						

*IDC **21** 12:01:33.0±1.5, 5.53S×122.21E, h0km, mb3.2/2, mb1 3.6/5, mb1mx3.5/24, mbtmp3.5/5, ML3.3/3, Error ellipse: s-maj=56.3km s-min=21.7km az=50.0*
*DJA **21** 12:01:38.8±1.1, 6.3S±10.4×12.1E±1.5, h181km±17km, M3.7/5, MLv3.7/5*

ISC 21 12:01:34.7±1.0, 5.54S±0.06×121.99E±0.06, h17km, n13, σ1§36/14, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBSI	**Bau Bau**	**0.58**	**85**	P	Pg	12 01 43.5	-2.8
BSSI	**Bau Bau, Buton**	**1.61**	**248**	P	**Pg**	**12 02 05.0**	**-0.7**
BKSI	**Bulukumba**	**1.87**	**276**	P	**Pb**	**12 02 08.6**	**+0.1**
BKSI				S	**Sg**	**12 02 37.4**	**+2.4**
KAPI	**Kappang**	**2.29**	**283**	P	**Pb**	**12 02 14.9**	**-0.7**
KAPI	**Kappang**	**2.29**	**283**	Pn	**Pb**	**12 02 14.0**	**-1.6**
	14nm,0.3s,baz=108,slow=9.3,SNR=50						
KAPI				Sn	**Sb**	**12 02 42.2**	**-1.4**
	31nm,0.3s,baz=276,slow=19,SNR=11						
SPSI	**Sidrap Palu**	**2.71**	**305**	P	**Pb**	**12 02 23.3**	**+0.5**
SPSI				S	**Sb**	**12 02 54.2**	**-1.5**
SKSI	**Soroako, Sulaw**	**3.06**	**348**	P	**Pg**	**12 02 32.7**	**-0.7**
TTSI	**Tana Toraja**	**3.29**	**319**	P	**Pb**	**12 02 32.0**	**-0.6**
FITZ	**Fitzroy Crossi**	**12.99**	**164**	Pn	**Pn**	**12 04 38.9**	**+0.3**
	0.1nm,0.3s,baz=357,slow=17,SNR=2.7						
DAV	**Davao City (W)**	**13.03**	**16**	P	P	12 04 45.7	-3.8
WRA	**Warramunga Arr**	**18.69**	**141**	P	**P**	**12 05 51.3**	**-1.1**
	0.1nm,0.3s,baz=318,slow=12,SNR=8.4						
ASAR	**Alice Springs**	**21.37**	**149**	P	**P**	**12 06 20.9**	**-0.6**
	0.3nm,0.5s,baz=332,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**62.83**	**330**	P	**P**	**12 12 01.7**	**+2.1**
	0.3nm,0.7s,baz=134,slow=7.3,SNR=3.6						

*ATH **21** 12:11:01.4, 41.18N×20.50E, h14km±2km, MD3.1/8*
*TIR **21** 12:11:02.3, 41.05N×20.52E, h7km, ML3.4*
*SKO **21** 12:11:02.3, 40.98N×20.49E, h6km, M2.4, ML2.7*
*CSEM **21** 12:11:03.3±0.2, 40.99N×20.52E, h0km±1km, ML3.4, Error ellipse: s-maj=4.2km s-min=2.6km az=49.0*
*PDG **21** 12:11:04.0±0.5, 41.00N×20.48E, h11km±1km, ML2.7/9, Error ellipse: s-maj=0.9km s-min=1.2km az=0.0*
*BEO **21** 12:11:04.7±0.9, 41.07N×20.49E, h3km±4km, ML2.7/8*

ISC 21 12:11:03.3±1.1, 41.05N±0.02×20.52E±0.02, h0km±10km, n82, σ1§02/139, 9C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.47**	**154**	*i* PG	**Pg**	**12 11 12.0**	**-0.3**
KBN				*i* SG	**Sb**	**12 11 20.6**	**-1.3**
KBN	**Korca**	**0.47**	**154**	P	**Pg**	**12 11 12.4**	**+0.1**
KBN				S	**Sg**	**12 11 19.3**	**+1.0**
KBN	**Korca**	**0.47**	**154**	*i* Pg	**Pg**	**12 11 12.0**	**-0.3**
KBN	**Korca**	**0.47**	**154**	P	**Pg**	**12 11 12.4**	**+0.1**
KBN				S	**Sg**	**12 11 19.3**	**+1.0**
TIR	**Tirane**	**0.58**	**302**	*i* PG	**Pg**	**12 11 14.0**	**-0.4**
TIR				*i* SG	**Sg**	**12 11 22.7**	**+0.8**
TIR	**Tirane**	**0.58**	**302**	P	**Pg**	**12 11 13.2**	**-1.2**
TIR				S	**Sg**	**12 11 21.6**	**-0.3**
TIR	**Tirane**	**0.58**	**302**	⇑*i* Pg	**Pg**	**12 11 13.5**	**-0.9**
TIR				*e*Sg	**Sg**	**12 11 22.8**	**+0.8**
TIR	**Tirane**	**0.58**	**302**	P	**Pg**	**12 11 13.2**	**-1.2**
TIR	**Tirane**	**0.58**	**302**	*i* Pg	**Pg**	**12 11 14.0**	**-0.4**
TIR				S	**Sg**	**12 11 21.6**	**-0.3**
TIR				*e*Sg	**Sg**	**12 11 22.8**	**+0.8**
BIA	**Bitola**	**0.61**	**92**	P	**Pg**	**12 11 14.5**	**-0.5**
BIA				S	**Sg**	**12 11 23.6**	**+0.7**
BIA	**Bitola**	**0.61**	**92**	*i* Pg	**Pg**	**12 11 14.2**	**-0.9**
BIA				*i* Sg	**Sg**	**12 11 23.4**	**+0.5**
BIA	**Bitola**	**0.61**	**92**	*i* Pg	**Pg**	**12 11 14.1**	**-0.9**
BIA	**Bitola**	**0.61**	**92**	P	**Pg**	**12 11 14.5**	**-0.5**
BIA				*i* Sg	**Sg**	**12 11 23.3**	**+0.5**
BIA				S	**Sg**	**12 11 23.6**	**+0.7**
PHP	**Peshkopia**	**0.64**	**355**	*i* PG	**Pg**	**12 11 15.1**	**-0.6**
PHP				*i* SG	**Sg**	**12 11 24.6**	**+0.6**
PHP	**Peshkopia**	**0.64**	**355**	P	**Pg**	**12 11 15.0**	**-0.6**
PHP				S	**Sg**	**12 11 24.1**	**+0.1**
PHP	**Peshkopia**	**0.64**	**355**	P	**Pg**	**12 11 15.0**	**-0.6**
PHP				S	**Sg**	**12 11 24.1**	**+0.1**
FNA	**Florina**	**0.70**	**112**	P	**Pg**	**12 11 16.4**	**-0.2**
FNA				S	**Sg**	**12 11 26.9**	**+1.1**
FNA	**Florina**	**0.70**	**112**	*e*PB	**Pg**	**12 11 16.5**	**-0.2**
FNA				*e*SB	**Sg**	**12 11 26.8**	**+1.0**
FNA	**Florina**	**0.70**	**112**	*e*Pb	**Pg**	**12 11 16.5**	**-0.2**
FNA				*e*Sb	**Sg**	**12 11 26.8**	**+1.0**
NEST	**Nestorio**	**0.75**	**147**	P	**Pg**	**12 11 17.2**	**-0.4**
NEST				S	**Sb**	**12 11 28.9**	**-1.1**
NEST	**Nestorio**	**0.75**	**147**	P	**Pg**	**12 11 17.2**	**-0.4**
NEST				S	**Sb**	**12 11 28.9**	**-1.1**
PUK	**Puka**	**1.10**	**335**	*i* PG	**Pg**	**12 11 23.9**	**-0.6**
PUK				*i* SG	**Sb**	**12 11 40.2**	**0.0**
SKO	**Skopje**	**1.16**	**36**	P	**Pn**	**12 11 27.0**	**+0.3**
SKO				S	**Sn**	**12 11 42.5**	**-0.7**
SKO	**Skopje**	**1.16**	**36**	*i* Pg	**Pn**	**12 11 27.0**	**+0.3**
SKO				*i* Sg	**Sn**	**12 11 42.4**	**-0.7**
SKO				*i* Sg	**Sb**	**12 11 43.3**	**+1.6**
	comp=N,252nm,0.4s						
SKO	**Skopje**	**1.16**	**36**	P	**Pn**	**12 11 27.0**	**+0.3**
SKO	**Skopje**	**1.16**	**36**	*i* Pg	**Pn**	**12 11 27.5**	**+0.8**
SKO				S	**Sn**	**12 11 42.5**	**-0.7**
SKO				*i* Sg	**Sb**	**12 11 42.9**	**+1.2**
KZN	**Kozani**	**1.20**	**127**	*e*PG	**Pg**	**12 11 25.5**	**-0.9**
KZN				*e*SB	**Sn**	**12 11 44.0**	**-0.5**
KZN	**Kozani**	**1.20**	**127**	*e*Pg	**Pg**	**12 11 25.5**	**-0.9**
KZN				*e*Sb	**Sn**	**12 11 44.0**	**-0.5**
ULC	**Ulcinj**	**1.33**	**314**	⇑*i* Pg	**Pn**	**12 11 27.8**	**-1.3**
ULC				*e*Sg	**Sn**	**12 11 48.9**	**+1.4**
ULC	**Ulcinj**	**1.33**	**314**	⇑*i* Pg	**Pn**	**12 11 27.8**	**-1.3**
ULC				*e*Sg	**Sn**	**12 11 48.9**	**+1.4**
JAN	**Janina**	**1.41**	**170**	*e*PG	**Pn**	**12 11 29.8**	**-0.4**
JAN	**Janina**	**1.41**	**170**	*e*Pg	**Pn**	**12 11 29.8**	**-0.4**
GRG	**Griva**	**1.43**	**93**	P	**Pn**	**12 11 29.6**	**-0.9**
GRG	**Griva**	**1.43**	**93**	*e*PB	**Pn**	**12 11 29.9**	**-0.6**
GRG	**Griva**	**1.43**	**93**	P	**Pn**	**12 11 29.6**	**-0.9**
GRG	**Griva**	**1.43**	**93**	*e*Pb	**Pn**	**12 11 29.9**	**-0.6**
KEK	**Kerkira**	**1.44**	**203**	*e*PG	**Pb**	**12 11 30.5**	**-0.5**
KEK				*e*SB	**Sg**	**12 11 52.5**	**+2.9**
KEK	**Kerkira**	**1.44**	**203**	*e*Pg	**Pb**	**12 11 30.5**	**-0.5**
KEK				*e*Sb	**Sg**	**12 11 52.5**	**+2.9**
VAY	**Valandovo**	**1.57**	**79**	*i* Pg	**Pb**	**12 11 33.2**	**-0.1**
VAY				*i* Sg	**Sg**	**12 11 53.8**	**0.0**
	comp=E,50nm,0.6s						
VAY	**Valandovo**	**1.57**	**79**	*i* Pg	**Pg**	**12 11 33.6**	**+0.2**
VAY				*i* Sg	**Sg**	**12 11 54.3**	**+0.5**
	comp=E,50nm,0.6s						
PVY	**Plav**	**1.60**	**345**	⇓*i* Pn	**Pg**	**12 11 34.6**	**+0.5**
PVY				*e*Sn	**Sg**	**12 11 57.0**	**+2.1**
PVY	**Plav**	**1.60**	**345**	⇓*i* Pn	**Pg**	**12 11 34.6**	**+0.5**
PVY				*e*Sn	**Sg**	**12 11 57.0**	**+2.1**
TTG	**Podgorica**	**1.67**	**326**	⇑*i* Pn	**Pb**	**12 11 34.5**	**-0.5**
TTG				*e*Sn	**Sg**	**12 11 59.1**	**+2.0**
PDG	**Podgorica**	**1.68**	**326**	*e*Pn	**Pn**	**12 11 33.5**	**-0.4**
PDG	**Podgorica**	**1.68**	**326**	⇑*i* Pn	**Pb**	**12 11 34.5**	**-0.5**
PDG				*e*Sn	**Sg**	**12 11 59.1**	**+1.9**
BUM	**Brajici-Budva**	**1.75**	**316**	⇑*i* Pn	**Pn**	**12 11 34.8**	**-0.1**
BUM				*e*Sn	**Sg**	**12 12 00.6**	**+1.1**
BUM	**Brajici-Budva**	**1.75**	**316**	⇑*i* Pn	**Pn**	**12 11 34.8**	**-0.1**
BUM				*e*Sn	**Sg**	**12 12 00.6**	**+1.1**
LIT	**Litokhoron**	**1.77**	**122**	P	**Pn**	**12 11 34.4**	**-0.8**
LIT	**Litokhoron**	**1.77**	**122**	*e*PN	**Pn**	**12 11 35.4**	**+0.2**
LIT	**Litokhoron**	**1.77**	**122**	P	**Pn**	**12 11 34.4**	**-0.8**
LIT	**Litokhoron**	**1.77**	**122**	*e*Pn	**Pn**	**12 11 35.4**	**+0.2**
THL	**Klokotos Trika**	**1.87**	**142**	*e*PB	**Pn**	**12 11 35.7**	**-0.8**
THL				*e*SN	**Sg**	**12 12 02.9**	**-0.4**
THL	**Klokotos Trika**	**1.87**	**142**	*e*Pb	**Pn**	**12 11 35.7**	**-0.8**
THL				*e*Sn	**Sg**	**12 12 02.9**	**-0.4**
IVA	**Berane**	**1.88**	**346**	*e*Pn	**Pb**	**12 11 38.6**	**0.0**
IVA				*e*Sn	**Sg**	**12 12 04.2**	**+0.4**
BEY	**Berane**	**1.88**	**346**	*e*Pn	**Pb**	**12 11 38.6**	**0.0**
BEY				*e*Sn	**Sg**	**12 12 04.2**	**+0.3**
BARS	**Barje**	**2.02**	**28**	*e*Pn	**Pn**	**12 11 38.6**	**0.0**
BARS				*e*Sg	**Sg**	**12 12 09.6**	**+1.5**
BARS	**Barje**	**2.02**	**28**	*e*Pn	**Pn**	**12 11 38.6**	**0.0**
BARS				*e*Sg	**Sg**	**12 12 09.6**	**+1.5**
HCY	**Herceg Novi**	**2.06**	**313**	⇓*i* Pn	**Pn**	**12 11 39.5**	**+0.3**
HCY				*e*Sn	**Sb**	**12 12 07.5**	**-0.3**
HCY	**Herceg Novi**	**2.06**	**313**	⇓*i* Pn	**Pn**	**12 11 39.5**	**+0.3**
HCY				*e*Sn	**Sb**	**12 12 07.5**	**-0.3**
NKY	**Niksic**	**2.10**	**328**	*e*Pn	**Pb**	**12 11 41.4**	**-1.0**
NKY				*e*Sn	**Sb**	**12 12 08.8**	**-0.2**
NKY	**Niksic**	**2.10**	**328**	*e*Pn	**Pb**	**12 11 41.4**	**-1.0**
NKY				*e*Sn	**Sb**	**12 12 08.8**	**-0.2**
SELS	**Selova**	**2.22**	**11**	*e*Pn	**Pb**	**12 11 43.0**	**-1.3**
SELS				*e*Sn	**Sn**	**12 12 08.1**	**-1.4**
SJES	**Sjenica**	**2.25**	**350**	*e*Sg	**Sb**	**12 12 14.3**	**+1.0**
PLG	**Polygyros**	**2.32**	**106**	*e*PN	**Pn**	**12 11 42.0**	**-0.8**
PLG	**Polygyros**	**2.32**	**106**	*e*Pn	**Pn**	**12 11 42.0**	**-0.8**
BRY	**Bratogost**	**2.37**	**322**	⇑*i* Pn	**Pb**	**12 11 45.1**	**-1.9**
BRY				*e*Sn	**Sb**	**12 12 16.1**	**-0.7**
BRY	**Bratogost**	**2.37**	**322**	⇑*i* Pn	**Pb**	**12 11 45.1**	**-1.9**
BRY				*e*Sn	**Sb**	**12 12 16.1**	**-0.7**
UPM	**Unac-Piva**	**2.47**	**331**	⇓*i* Pn	**Pb**	**12 11 46.4**	**-2.2**
UPM				*e*Sn	**Sb**	**12 12 18.8**	**-0.9**
UPM	**Unac-Piva**	**2.47**	**331**	⇓*i* Pn	**Pb**	**12 11 46.4**	**-2.2**
UPM				*e*Sn	**Sb**	**12 12 18.8**	**-0.9**
NVR	**Nevrokopi**	**2.54**	**82**	*e*PN	Pn	12 11 41.0	-4.8
NVR	**Nevrokopi**	**2.54**	**82**	*e*Pn	Pn	12 11 41.0	-4.8
ZAPS	**Zavoj**	**2.73**	**35**	*e*Pn	**Pn**	**12 11 49.5**	**+1.2**
GRUS	**Gruza**	**2.84**	**3**	*e*Pn	**Pn**	**12 11 49.6**	**-0.3**
GRUS	**Gruza**	**2.84**	**3**	*e*Pn	**Pn**	**12 11 49.6**	**-0.3**
BBLS	**Lazići**	**2.94**	**344**	*e*Pn	**Pn**	**12 11 52.2**	**+0.9**
BBLS				*e*Sg	**Sg**	**12 12 36.1**	**-1.6**
BBLS	**Lazići**	**2.94**	**344**	*e*Pn	**Pn**	**12 11 52.2**	**+0.9**
BBLS				*e*Sg	**Sg**	**12 12 36.1**	**-1.6**
DIVS	**Divibare**	**3.08**	**353**	*e*Pn	**Pn**	**12 11 54.6**	**+1.4**
DIVS				*e*Sn	**Sn**	**12 12 31.8**	**+1.1**
DIVS	**Divibare**	**3.08**	**353**	*e*Pn	**Pn**	**12 11 54.6**	**+1.4**
DIVS				*e*Sn	**Sn**	**12 12 31.8**	**+1.1**
VYHS	**Vyhne**	**7.54**	**351**	*e*PN	**Pn**	**12 12 54.2**	**-0.3**
VYHS	**Vyhne**	**7.54**	**351**	*e*Pn	**Pn**	**12 12 54.2**	**-0.3**
SMOL	**Smolenice**	**7.78**	**345**	*e*PN	**Pn**	**12 13 00.2**	**+2.4**
SMOL	**Smolenice**	**7.78**	**345**	*e*Pn	**Pn**	**12 13 00.2**	**+2.4**

*ISCJB **21** 12:14:41.9±0.9, 33.09N±0.04×35.68E±0.07, h23km±14km, Error ellipse: s-maj=10.4km s-min=5.7km az=166.7*
*GRAL **21** 12:14:43.4±0.3, 33.14N×35.59E, h14km±3km, MD2.7*
*CSEM **21** 12:14:43.4, 33.14N×35.59E, h14km, ML2.7, After GRAL*
*NSSC **21** 12:14:44.2±1.1, 33.08N×35.87E, h4km±10km, ML1.6*

ISC 21 12:14:41.7±1.2, 33.09N±0.04×35.66E±0.06, h23km±13km, n9, σ0§74/15, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRBR	**Barbar**	**0.40**	**38**	*e*P	**Pb**	**12 14 50.6**	**+0.2**
BRBR				*e*S	**Sb**	**12 14 55.8**	**-0.5**
BRBR				AML	AML	12 14 58.6	
	comp=E,88nm,0.2s						
BRBR				AML	AML	12 14 58.9	
	comp=N,57nm,0.1s						
BRBR				AML	AML	12 14 59.2	
	comp=Z,90nm,0.4s						
RCY	**Rachaya**	**0.43**	**20**	*e*P	**Pb**	**12 14 51.2**	**+0.4**
RCY				*e*S	**Sb**	**12 14 57.0**	**+0.1**
NAQL	**Naqoura**	**0.43**	**273**	*e*P	**Pb**	**12 14 50.6**	**-0.1**
TCHB	**Talchebab**	**0.50**	**148**	*e*P	**Pb**	**12 14 52.2**	**+0.4**
TCHB				*e*S	**Sb**	**12 14 58.4**	**-0.3**
TCHB				AML	AML	12 15 00.1	
	comp=N,75nm,0.7s						
TCHB				AML	AML	12 15 00.5	
	comp=E,80nm,0.3s						
TCHB				AML	AML	12 15 03.0	
	comp=Z,46nm,0.3s						
BHL	**Bhannes**	**0.81**	**360**	*e*P	**Pb**	**12 14 57.0**	**-0.2**
BHL	**Bhannes**	**0.81**	**360**	*e*P	**Pb**	**12 14 57.0**	**-0.2**
SALA	**Sala**	**0.98**	**113**	*e*P	**Pn**	**12 15 00.9**	**+0.7**
SALA				*e*S	**Sb**	**12 15 10.7**	**-2.0**
SALA				AML	AML	12 15 16.2	
	comp=Z,25nm,0.3s						
SALA				AML	AML	12 15 18.8	
	comp=N,27nm,0.3s						
HWQ	**Hawqa**	**1.21**	**11**	*e*P	**Pn**	**12 15 03.7**	**+0.5**
HWQ				*e*S	**Sn**	**12 15 18.7**	**-0.3**
HWQ	**Hawqa**	**1.21**	**11**	*e*P	**Pn**	**12 15 03.7**	**+0.5**
HWQ				*e*S	**Sn**	**12 15 18.7**	**-0.3**

*NIED **21** 12:19:00, 44.10N×148.20E, h83km, Mw3.8 Best double couple: M0 6.58000×10^14 NP1:φ=157.00000°, δ=55.00000°, λ=-102.00000°. NP2:φ=358.00000°, δ=36.00000°, λ=-73.00000°.*
*IDC **21** 12:19:17.4±2.5, 44.41N×148.07E, h78km±23km, mb3.4/11, mb1 3.7/15, mb1mx3.6/27, mbtmp3.5/15, Error ellipse: s-maj=20.5km s-min=14.8km az=136.0*
*ISCJB **21** 12:19:17.1±0.8, 44.29N±0.05×148.16E±0.08, h96km±6km, mb3.7/14, Error ellipse: s-maj=11.4km s-min=5.8km az=38.6*
*MOS **21** 12:19:17.3±1.3, 44.34N×148.11E, h100km, mb4.4/6, Error ellipse: s-maj=13.9km s-min=9.5km az=57.0*
*JMA **21** 12:19:18.8±0.3, 44.12N×148.16E, h86km, M4.6*
*SKHL **21** 12:19:19.4±0.7, 44.34N×148.14E, h82km±1km, mb5.1/2, msh5.8/2*

ISC 21 12:19:16.0±1.0, 44.21N±0.06×148.32E±0.07, h67km±8km, n53, σ1§99/71, mb3.8/14, 2C-5D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.07**	**343**	⇓*i* PN	**Pn**	**12 19 36.8**	**+1.6**
KUR				*i* S	**Sn**	**12 19 50.2**	**+0.7**
KUR				pmax	pmax		
	comp=Z,4μm,1.0s						
KUR				pmax	pmax		
	comp=Z,1220μm,0.5s						
KUR				pmax	pmax		
	comp=N,380nm,0.5s						
KUR				pmax	pmax		
	comp=E,680nm,0.5s						
KUR				smax	smax		
	comp=N,2μm,0.5s						
KUR				smax	smax		
	comp=E,4μm,0.5s						
KUR				smax	smax		
	comp=N,5μm,1.6s						
KUR				smax	smax		
	comp=E,4μm,1.6s						
KUR	**Kuril'sk**	**1.07**	**343**	⇓*i* P	**Pn**	**12 19 36.8**	**+1.6**
KUR				AMB	AMB	12 19 37.0	
	comp=E,380nm,0.5s						
KUR				AMB	AMB	12 19 37.0	
	comp=E,680nm,0.5s						
KUR				AMB	AMB	12 19 37.0	
	comp=E,1μm,0.5s						
KUR				AMB	AMB	12 19 37.0	
	comp=E,2μm,1.0s						
KUR				*i* S	**Sn**	**12 19 50.2**	**+0.7**
KUR				A	A	12 19 51.0	
	comp=E,5μm,1.6s						
KUR				A	A	12 19 51.0	
	comp=E,4μm,1.6s						
KUR				A	A	12 19 51.5	
	comp=E,2μm,0.5s						
KUR				A	A	12 19 51.5	
	comp=E,4μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.78**	**265**	*c i* PN	**Pn**	**12 19 46.3**	**+1.8**
YUK				*i* S	**Sn**	**12 20 06.8**	**+0.6**
YUK				pmax	pmax		
	comp=E,156nm,0.3s						
YUK				pmax	pmax		
	comp=Z,524nm,0.2s						
YUK				pmax	pmax		
	comp=N,200nm,0.1s						
YUK				smax	smax		
	comp=E,2μm,0.5s						
YUK				smax	smax		
	comp=N,129nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.78**	**265**	⇑*i* P	**Pn**	**12 19 46.4**	**+1.9**
YUK				AMB	AMB	12 19 47.1	
	comp=N,200nm,0.3s						
YUK				AMB	AMB	12 19 47.1	
	comp=N,160nm,0.3s						
YUK				AMB	AMB	12 19 47.1	
	comp=N,520nm,0.3s						
YUK				*i* S	**Sn**	**12 20 06.8**	**+0.6**
YUK				A	A	12 20 10.6	
	comp=N,1μm,0.5s						
YUK				A	A	12 20 10.6	
	comp=N,2μm,0.5s						
NEM2	**Nemuro 2**	**2.05**	**246**	P	**Pn**	**12 19 49.9**	**+1.7**
NEM2				*e*S	**Sn**	**12 20 13.2**	**+0.5**
JRA	**Rausu**	**2.32**	**264**	P	**Pn**	**12 19 54.1**	**+2.2**
JRA				*e*S	**Sn**	**12 20 21.1**	**+1.8**
JNK	**Nakash**	**2.68**	**258**	P	**Pn**	**12 19 58.7**	**+2.0**
JNK				*e*S	**Sn**	**12 20 29.4**	**+1.4**
JAK	**Akkeshi**	**2.90**	**246**	P	**Pn**	**12 20 01.3**	**+1.6**
JAK				*e*S	**Sn**	**12 20 33.2**	**-0.2**
JTKR	**Abashiri--Toko**	**3.19**	**267**	P	**Pn**	**12 20 05.7**	**+2.0**
JAR	**Ashorobuto**	**3.42**	**256**	P	**Pn**	**12 20 09.4**	**+2.5**
JAR				*e*S	**Sn**	**12 20 47.2**	**+1.0**
JCH	**Churui**	**3.95**	**248**	P	**Pn**	**12 20 15.7**	**+1.6**
JCH				*e*S	**Sn**	**12 20 58.2**	**-0.9**
JKK2	**Kamakawa 2**	**4.03**	**267**	P	**Pn**	**12 20 17.6**	**+2.4**
ASAJ	**Asahikawa**	**4.12**	**271**	P	**Pn**	**12 20 18.9**	**+2.5**
	comp=N,14nm,0.3s,baz=73,slow=21,SNR=91						
JSE	**Soyaes**	**4.16**	**282**	P	**Pn**	**12 20 18.5**	**+1.5**
JFR	**Furan**	**4.28**	**258**	P	**Pn**	**12 20 21.1**	**+2.4**
JFR				*e*S	**Sn**	**12 21 09.4**	**+2.1**
ERM	**Erimo**	**4.37**	**242**	*d i* PN	**Pn**	**12 20 22.9**	**+3.1**
ERM	**Erimo**	**4.37**	**242**	*e*P	**Pn**	**12 20 22.9**	**+3.1**
JNBK	**Urakawa-nobuka**	**4.50**	**247**	P	**Pn**	**12 20 22.8**	**+1.2**
JNBK				*e*S	**Sn**	**12 21 12.5**	**-0.1**
JWK2	**Keihoku**	**4.70**	**286**	P	**Pn**	**12 20 27.3**	**+2.9**
YSS	**Yuzh-Sakhalins**	**4.77**	**307**	⇓*i* PN	**Pn**	**12 20 27.0**	**+1.7**
YSS				*e*S	**Sn**	**12 21 17.1**	**-2.1**
YSS				smax	smax		
	comp=N,50nm,1.0s						
YSS				smax	smax		
	comp=E,50nm,0.8s						
YSS	**Yuzh-Sakhalins**	**4.77**	**307**	⇓*i* P	**Pn**	**12 20 27.0**	**+1.7**
YSS				*e*S	**Sn**	**12 21 17.1**	**-2.1**
YSS				A	A	12 21 23.2	
	comp=E,50nm,0.9s						
JEW	**Eniwo**	**5.18**	**257**	P	**Pn**	**12 20 33.8**	**+2.9**
JSK	**Shakotan**	**5.74**	**264**	P	Pn	12 20 41.8	+3.2
JKB	**Kayabe**	**5.82**	**249**	P	**Pn**	**12 20 41.0**	**+1.3**
JKB				*e*S	**Sn**	**12 21 41.5**	**-3.5**
JOT	**Ohata**	**6.05**	**245**	P	**Pn**	**12 20 43.3**	**+0.5**
JOT				*e*S	**Sn**	**12 21 47.1**	**-3.5**
JOSM	**Okushiri--Mats**	**6.81**	**255**	P	**Pn**	**12 20 54.2**	**+1.0**
MJA0	**Matsu Arr-Jizo**	**10.84**	**228**	*e*PN	**Pn**	**12 21 49.4**	**+1.1**
PETK	**Petropavlovsk-**	**10.84**	**31**	*e*PN	**Pn**	**12 21 48.4**	**+0.2**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**10.84**	**31**	P	**Pn**	**12 21 47.1**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=208,slow=15,SNR=14						
MAJO	**Matsushiro**	**10.86**	**229**	*e*PN	**Pn**	**12 21 49.3**	**+0.7**
MAT	**Matsushiro**	**10.86**	**229**	P	**Pn**	**12 21 48.7**	**+0.1**
MJAR	**Matsushiro Arr**	**10.86**	**229**	P	**Pn**	**12 21 49.4**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=29,slow=12,SNR=13						
USRK	**Ussuriysk Arra**	**11.72**	**276**	P	**Pn**	**12 22 00.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=86,slow=14,SNR=8.3						
JHJ	**Hachijo jima 2**	**12.92**	**214**	S	**Sn**	**12 24 33.4**	**-5.2**
	comp=Z,4.2nm,0.3s,baz=11,slow=16,SNR=5.2						
KSRS	**Korea Array**	**16.82**	**253**	P	**Pn**	**12 23 06.7**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=62,slow=13,SNR=3.8						
SONM	**Songino Array**	**29.07**	**292**	P	**P**	**12 25 08.7**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=86,slow=9.2,SNR=2.9						
TIXI	**Tiksi**	**29.09**	**347**	*e*P	**P**	**12 25 09.2**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s	

LDG ***21*** *12:33:52.4±0.2,36˚.11N×77˚.66E,h102km,Mb5.6/46, Ms3.5/7,Error ellipse: s-maj=11.6km s-min=6.7km az=59.0*

MOS ***21*** *12:33:53.5±0.9,36˚.25N×77˚.51E,h93km,mb5.5/93,Error ellipse: s-maj=5.6km s-min=2.8km az=121.8*

BGS ***21*** *12:33:54.4±1.3,36˚.22N×77˚.80E,h100km, mb5.3*

TEH ***21*** *12:33:54.0,36˚.21N×77˚.49E,h84km, ML5.4*

BJI ***21*** *12:33:54.3,36˚.37N×77˚.72E,h89km, mB5.1/29, mb5.2/57, Ms4.6/33,Ms7 4.4/28*

DJA ***21*** *12:33:55.0±1.1,36˚.N±8˚×7˚.8E±˚,h73km±16km,M5.8/6, mB5.7/6, mb5.5/6, MLv6.4/2, Mw(mB)5.2/6, Mwp5.8/1*

IDC ***21*** *12:33:55.8±0.4,36˚.30N×77˚.54E,h98km±2km, mb4.9/30, mb1 5.0/35,mb1mx5.0/35,mbtmp4.9/35,MS3.8/19, Ms1 3.8/19,ms1mx3.6/42,Error ellipse: s-maj=8.9km s-min=6.7km az=34.0*

NEIC ***21*** *12:33:55.7±0.1,36˚.27N×77˚.54E,mb5.5/128,Error ellipse: s-maj=3.3km s-min=2.2km az=23.0*

GCMT ***21*** *12:33:58.2±0.2,36˚.28N×77˚.62E,h114km±1km,MW5.1, Moment Tensor Solution. s51,c61; s87,c140; Moment tensor: Scale 10^{16}Nm; M_{rr}4.88±.11; $M_{\theta\theta}$-5.85±.14; $M_{\phi\phi}$0.97±.14; $M_{r\theta}$0.55±.14; $M_{\theta\phi}$-0.59±.14; $M_{\phi r}$-0.89±.11; Best double couple: $M_0$5.50000×10^{16} NP1:$\phi_0$252.00000°, δ44.00000°,λ71.00000°. NP2:$\phi_0$97.00000°,δ49.00000°, λ107.00000°. Principal axes: T 5.1100, Plg77.0000°, Azm74.0000°; N 0.8100, Plg13.0000°, Azm266.0000°; P -5.9200, Plg3.0000°, Azm175.0000°; Data Used: II IU IC G CN.*

ISC 21 12:33:55.0±0.2,36˚.22N±0˚.03×77˚.50E±0˚.02,h94km±1km, h93km:pP-P,n1123,σ1˚.21/1313,mb5.4/291,266C-101D, Kashmir-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.51**	**340**	⇓*iP*		P	12 34 45.4	
KSH				*es*P		Sn	12 35 04.5	-24
KSH				*i* S		**Sn**	**12 35 24.4**	**-3.7**
KSH	comp=N,15μm,0.5s			smax		smax		
KSH	comp=E,19μm,0.6s			smax		smax		
DLH	**Dalhousie**	**3.88**	**200**	*e*PKP		**Pn**	**12 34 54.0**	**+1.3**
DLH				*ex*		x	12 35 41.0	
THN	**Thein Dam**	**4.06**	**202**	*e*PKP		Pn	12 34 50.9	-3.9
THN				*es*		**Sn**	**12 35 36.0**	**-5.2**
DHRM	**DHARAMSHALA**	**4.08**	**194**	*e*PKP		**Pn**	**12 34 57.8**	**+2.4**
JMU	**Jammu**	**4.10**	**212**	*e*PKP		**Pn**	**12 34 55.5**	**+0.1**
JMU				*ex*		x	12 35 30.5	
CHCP	**Chirah Chowk**	**4.32**	**235**	P		**Pn**	**12 35 00.0**	**+1.6**
SDNR	**Sundarnagar**	**4.73**	**186**	*e*PKP		**Pn**	**12 35 05.6**	**+1.6**
SDNR				*es*		**Sn**	**12 35 54.4**	**-3.2**
BHK	**Bhakra**	**4.88**	**191**	*e*PKP		**Pn**	**12 35 05.6**	**-0.4**
BHK				*es*		**Sn**	**12 35 58.8**	**-2.4**
SMLA	**Simla**	**5.09**	**183**	*i* P		**Pn**	**12 35 10.1**	**+1.3**
SMLA				*i* S		**Sn**	**12 36 04.3**	**-2.0**
CEP	**Cherat**	**5.17**	**244**	P		**Pn**	**12 35 10.0**	**-0.1**
CEP				S		**Sn**	**12 36 06.0**	**-2.6**
THW	**Thamme Wali**	**5.86**	**236**	P		**Pn**	**12 35 18.9**	**-0.4**
SARP	**Sargodha**	**5.87**	**224**	P		**Pn**	**12 35 20.0**	**+0.6**
DDI	**Dehra Dun**	**5.90**	**175**	⇓*iP*		**Pn**	**12 35 21.5**	**+1.6**
DDI				*es*		**Sn**	**12 36 23.6**	**-2.6**
ULHL	**Ulahol**	**6.10**	**351**	*i* P		**Pn**	**12 35 23.4**	**+0.7**
ULHL	**Ulahol** SNR=63	**6.10**	**351**	P		**Pn**	**12 35 23.4**	**+0.7**
KZA	**Kyzart**	**6.11**	**344**	*i* P		**Pn**	**12 35 23.1**	**+0.1**
KZA	**Kyzart** SNR=862	**6.11**	**344**	P		**Pn**	**12 35 23.1**	**+0.1**
UCH	**Uchtor**	**6.43**	**340**	*i* P		**Pn**	**12 35 27.6**	**+0.1**
UCH	**Uchtor** SNR=224	**6.43**	**340**	P		**Pn**	**12 35 27.6**	**+0.1**
AML	**Almayashu**	**6.60**	**335**	*i* P		**Pn**	**12 35 29.5**	**-0.2**
AML	**Almayashu** SNR=153	**6.60**	**335**	P		**Pn**	**12 35 29.5**	**-0.2**
KBK	**Karagaybulak**	**6.72**	**344**	*i* P		**Pn**	**12 35 31.5**	**+0.3**
KBK	**Karagaybulak** SNR=369	**6.72**	**344**	P		**Pn**	**12 35 31.5**	**+0.3**
AAK	**Ala-Archa**	**6.81**	**341**	P		**Pn**	**12 35 33.7**	**+1.3**
AAK				S		**Sn**	**12 36 48.7**	**+0.2**
AAK	comp=Z,116nm,0.3s			pmax		pmax		
AAK	comp=N,56nm,0.3s			smax		smax		
AAK	**Ala-Archa**	**6.81**	**341**	*e*Pn		**Pn**	**12 35 32.8**	**+0.4**
AAK				*es*Sn		**Sn**	**12 36 46.6**	**-1.9**
AAK				S		**Sn**	**12 36 48.7**	**+0.2**
AAK	**Ala-Archa** SNR=772	**6.81**	**341**	P		**Pn**	**12 35 33.0**	**+0.7**
AAK	**Ala-Archa** SNR=767	**6.81**	**341**	P		**Pn**	**12 35 32.9**	**+0.5**
AAK	**Ala-Archa** comp=N,6μm,0.5s	**6.81**	**341**	Pn		**Pn**	**12 35 33.1**	**+0.7**
AAK	**Ala-Archa** comp=N,116nm,0.3s,baz=146,slow=8.0,SNR=391	**6.81**	**341**	P		**Pn**	**12 35 33.7**	**+1.3**
AAK	comp=N,56nm,0.3s,baz=26,slow=21,SNR=8.1			S		**Sn**	**12 36 48.7**	**+0.2**
TKM2	**Tokmak 2** comp=N,353nm,0.7s	**6.85**	**348**	⇑P		**Pn**	**12 35 32.8**	**-0.2**
TKM2	comp=N,1μm,0.8s			⇓S		**Sn**	**12 36 54.6**	**+5.1**
TKM2	**Tokmak 2**	**6.85**	**348**	*i* P		**Pn**	**12 35 32.0**	**-1.0**
TKM2	comp=Z,353nm,0.6s			pmax		pmax		
TKM2	**Tokmak 2**	**6.85**	**348**	*e*Pn		**Pn**	**12 35 32.8**	**-0.2**
TKM2	**Tokmak 2** SNR=30	**6.85**	**348**	P		**Pn**	**12 35 33.6**	**+0.7**
FRU	**Bishkek**	**6.97**	**342**	⇓*iP*		**Pn**	**12 35 34.5**	**+0.1**
FRU				*es*		**Sn**	**12 36 51.5**	**-0.6**
FRU	comp=Z,1μm,1.6s			pmax		pmax		
FRU	comp=N,3μm,1.8s			smax		smax		
KNDC	**Almaty** comp=N,685nm,0.7s	**7.00**	**357**	⇑P		**Pn**	**12 35 35.9**	**+1.1**
KNDC	comp=N,4μm,1.1s			⇑S		Sn	12 36 59.7	+6.8
PTH	**Pithoragarh**	**7.03**	**160**	*e*PKP		**Pn**	**12 35 36.7**	**+1.2**
PTH				*ex*		x	12 36 44.0	
EKS2	**Erkin-Say**	**7.05**	**337**	*e*P		**Pn**	**12 35 35.5**	**0.0**
EKS2	**Erkin-Say**	**7.05**	**337**	*e*Pn		**Pn**	**12 35 35.5**	**0.0**
EKS2	**Erkin-Say** SNR=424	**7.05**	**337**	P		**Pn**	**12 35 36.4**	**+0.8**
AAA	**Alma-Ata**	**7.05**	**357**	*i* P		**Pn**	**12 35 35.7**	**+0.1**
AAA				*es*		**Sn**	**12 36 53.7**	**-0.5**
AAA	comp=Z,2μm,2.5s			pmax		pmax		
AAA	comp=N,2μm,1.3s			smax		smax		
AAA	comp=Z,12μm,3.0s			MLR		MLR		
CHMS	**Chumysh**	**7.09**	**343**	*i* P		**Pn**	**12 35 36.4**	**+0.3**
CHMS	**Chumysh** SNR=576	**7.09**	**343**	P		**Pn**	**12 35 36.4**	**+0.3**
KBL	**Kabul**	**7.11**	**259**	*e*P		**Pn**	**12 35 35.1**	**-1.4**
KBL				*e*			12 36 53.1	
KBL	**Kabul**	**7.11**	**259**	*e*Pn		**Pn**	**12 35 35.1**	**-1.4**
KBL				*es*Sn		**Sn**	**12 36 53.1**	**-2.8**
USP	**Ospenovka**	**7.41**	**343**	*i* P		**Pn**	**12 35 40.6**	**+0.2**
USP	**Ospenovka** SNR=67	**7.41**	**343**	P		**Pn**	**12 35 40.5**	**+0.2**
KK31	**Karatay Array** comp=Z,81nm,0.6s,baz=147,slow=12,SNR=716	**8.73**	**324**	P		**Pn**	**12 35 57.1**	**-1.3**
KK31	comp=Z,299nm,0.7s,baz=139,slow=24,SNR=6.0			⇑S		**Sn**	**12 37 31.1**	**-4.0**
KK31	**Karatay Array**	**8.73**	**324**	*ce*P		**Pn**	**12 35 57.1**	**-1.3**
KK31	comp=Z,31nm,0.2s			pmax		pmax		
KKAR	**Karatay Array**	**8.73**	**324**	*e*P		**Pn**	**12 35 57.3**	**-1.1**
KKAR				*e*			12 37 31.4	
KKAR	**Karatay Array**	**8.73**	**324**	*e*Pn		**Pn**	**12 35 57.3**	**-1.1**
KKAR				*es*Sn		**Sn**	**12 37 31.4**	**-3.7**
PYUN	**Piuthan** comp=Z,568nm,0.3s	**9.34**	**149**	*e*P		**Pn**	**12 36 04.2**	**-2.7**
DANN	**Dangsing** comp=Z,285nm,0.3s	**9.46**	**144**	*e*P		Pn	12 36 05.3	-3.4
KOLN	**Koldanda** comp=Z,193nm,0.3s	**9.88**	**147**	*e*P		**Pn**	**12 36 11.6**	**-2.8**
AJM	**Ajmer**	**10.01**	**195**	*e*PKP		**Pn**	**12 36 14.0**	**-1.9**
AJM				*ex*		x	12 37 59.0	
KKN	**Kakani** comp=Z,162nm,0.5s	**10.68**	**140**	*e*P		Pn	12 36 21.1	-4.1
DMN	**Daman** comp=Z,96nm,0.3s	**10.74**	**141**	*e*P		Pn	12 36 22.2	-3.8
WMQ	**Urumqi**	**10.89**	**43**	P		**Pn**	**12 36 24.8**	**-3.0**
WMQ				PP			12 36 35.3	
WMQ				sP			12 36 46.4	
WMQ				S		**Sn**	**12 38 26.8**	**-0.8**
WMQ				SS			12 38 42.5	
WMQ				PcP		**PcP**	**12 42 17.8**	**-1.5**
WMQ				PcS		**PcS**	**12 45 50.3**	**-2.7**
WMQ				ScS		**ScS**	**12 49 16.3**	**-2.1**
WMQ	comp=E,2μm,3.0s			LR		LR		
WMQ	comp=Z,3μm,3.4s			LR		LR		
GUN	**Gumba** comp=Z,152nm,0.4s	**10.91**	**137**	*e*P		Pn	12 36 24.8	-3.6
PKIN	**Phulchoki** comp=Z,142nm,0.3s	**10.91**	**140**	*e*P		Pn	12 36 24.7	-3.7
PKI	**Pulchoki** comp=Z,177nm,0.5s	**10.93**	**140**	*e*P		Pn	12 36 24.8	-3.8
MK31	**Makanchi Array** comp=Z,101nm,0.2s	**11.15**	**17**	⇓P		**Pn**	**12 36 28.7**	**-2.6**
MK31	**Makanchi Array**	**11.15**	**17**	*ce*P		**Pn**	**12 36 28.8**	**-2.5**
MK31	comp=Z,101nm,0.2s			pmax		pmax		
MK31	**Makanchi Array**	**11.15**	**17**	*e*Pn		**Pn**	**12 36 29.1**	**-2.3**
MK31				*es*Sn		Sn	12 38 25.5	-8.5
MKAR	**Makanchi Array**	**11.15**	**17**	*e*P		**Pn**	**12 36 29.6**	**-1.7**
MKAR				S		Sn	12 38 26.1	-7.9
MKAR	**Makanchi Array**	**11.15**	**17**	*e*Pn		**Pn**	**12 36 29.6**	**-1.7**
MKAR				S		Sn	12 38 26.1	-7.9
MKAR	**Makanchi Array** comp=Z,64nm,0.3s,baz=199,slow=13,SNR=1477	**11.15**	**17**	P		**Pn**	**12 36 29.7**	**-1.6**
MKAR	comp=Z,37nm,0.3s,baz=199,slow=20,SNR=18			S		Sn	12 38 26.1	-7.9
MKAR	comp=Z,236nm,19.8s,baz=209,slow=43			LR		LR	12 41 48.4	
RAMN	**Ramite** comp=Z,333nm,0.7s	**12.06**	**137**	*e*P		Pn	12 36 39.1	-4.7
TAPN	**Taplejung** comp=Z,101nm,0.4s	**12.38**	**133**	*e*P		Pn	12 36 43.8	-4.4
ODAN	**Odare** comp=Z,250nm,0.7s	**12.57**	**135**	*e*P		Pn	12 36 46.0	-4.6
LSA	**Lhasa**	**13.17**	**116**	P		**Pn**	**12 37 00.6**	**+1.9**
LSA				pP		P	12 37 14.0	+8.7
LSA				sP			12 37 33.9	
LSA				S		Sn	12 39 09.5	-15
LSA				sS		S	12 39 55.0	+13
LSA	comp=Z,40nm,0.8s			pmax		pmax		
LSA	comp=Z,440nm,4.0s			pmax		pmax		
LSA	comp=N,620nm,6.0s			LR		LR		
LSA	comp=E,520nm,9.0s			LR		LR		
LSA	comp=Z,930nm,9.0s			LR		LR		
LSA	**Lhasa**	**13.17**	**116**	P		**Pn**	**12 36 57.6**	**-1.1**
LSA				pP		P	12 37 14.0	+8.7
LSA				pmax		pmax		
LSA	comp=Z,30nm,1.0s			pmax		pmax		
LSA	comp=Z,440nm,4.0s			LR		LR		
LSA	comp=N,620nm,6.0s			LR		LR		
LSA	comp=E,520nm,9.0s			LR		LR		
LSA	comp=Z,930nm,9.0s			LR		LR		
LSA	**Lhasa**	**13.17**	**116**	*e*P		**Pn**	**12 36 58.1**	**-0.6**
LSA	comp=Z,76nm,0.8s			pmax		pmax		
LSA	**Lhasa** comp=Z,76nm,0.8s	**13.17**	**116**	*e*Pn		**Pn**	**12 36 58.1**	**-0.6**
JBP	**Jabalpur**	**13.19**	**170**	⇑*iP*		**Pn**	**12 36 55.7**	**-2.8**
JBP				*ex*		x	12 39 10.9	
IMYA	**Miami**	**14.04**	**276**	*e*P		Pn	12 37 04.6	-5.2
KURBB	**Kurchatov Arra** comp=Z,0.3nm,0.3s,baz=189,slow=12,SNR=92	**14.42**	**3**	P		Pn	12 37 11.0	-3.3
KURBB	comp=Z,93nm,21.9s,baz=190,slow=42			LR		LR	12 44 04.8	
KUR17	**Kurchatov Arra** comp=Z,13nm,1.2s	**14.42**	**2**	⇑P		Pn	12 37 10.7	-3.7
KUR17	comp=Z,6.4nm,1.1s			⇓S		**Sn**	**12 39 56.5**	**+3.4**
KURK	**Kurchatov** comp=Z,183nm,1.2s	**14.51**	**3**	⇑P		Pn	12 37 10.9	-4.6
KURK	comp=Z,114nm,1.1s			⇑S		**Sn**	**12 39 59.4**	**+4.2**
KURK	**Kurchatov** comp=Z,147nm,1.2s	**14.51**	**3**	*ce*P		Pn	12 37 11.8	-3.7
KURK				pmax		pmax		
KURK	**Kurchatov**	**14.51**	**3**	*e*Pn		Pn	12 37 12.2	-3.3
KURK	**Kurchatov** SNR=54	**14.51**	**3**	P		Pn	12 37 12.3	-3.3
KURK	**Kurchatov** comp=Z,610nm,0.9s,SNR=25	**14.51**	**3**	Pn		**Pn**	**12 37 12.6**	**-2.9**
ISRO	**Mashad**	**14.55**	**276**	*e*P		Pn	12 37 12.9	-3.4
IMOG	**Moghan**	**14.68**	**275**	*e*P		Pn	12 37 12.8	-5.3
IPAY	**Payeh**	**14.92**	**276**	*e*P		Pn	12 37 17.4	-3.8
IDAH	**Dahanechah**	**14.95**	**262**	*e*P		**Pn**	**12 37 20.5**	**-1.1**
NGP	**Nagpur**	**15.08**	**174**	*ex*		**Pn**	**12 37 18.7**	**-4.3**
NGP				*ex*		x	12 39 50.6	
IAKL	**Akhelmad**	**15.10**	**277**	*e*P		**Pn**	**12 37 19.8**	**-3.7**
IEMG	**Emamgholi**	**15.15**	**280**	*e*P		Pn	12 37 18.3	-5.8
ABKT	**Ailbek** comp=Z,568nm,1.0s,SNR=9.5	**15.57**	**282**	Pn		**Pn**	**12 37 24.5**	**-4.6**
ISFR	**Sfrayin**	**15.68**	**279**	*e*P		**Pn**	**12 37 26.8**	**-4.0**
ISHV	**Shirvan**	**15.90**	**281**	*e*P		**Pn**	**12 37 29.3**	**-4.2**
SHL	**Shillong**	**16.26**	**127**	*e*PKP		**Pn**	**12 37 35.0**	**-3.0**
SHL				*ex*		x	12 40 20.5	
AGT	**Agartala**	**17.09**	**132**	*ex*		**pP**	**12 38 09.0**	**+3.0**
AGT				*ex*		x	12 38 44.0	
VOSK	**Vostochnaya** comp=Z,63nm,1.1s	**17.13**	**346**	⇓P		**Pn**	**12 37 46.3**	**-2.0**
VOSK	comp=Z,56nm,0.8s			⇓S		**S**	**12 41 04.4**	**+2.5**
BVA0	**Borovoye Array** comp=Z,25nm,0.8s	**17.53**	**346**	⇓P		**P**	**12 37 49.8**	**-3.1**
BVA0	comp=Z,13nm,1.3s,baz=245,slow=35,SNR=3.9			⇑S		**S**	**12 41 10.6**	**+0.7**
BVA0	**Borovoye Array** comp=Z,24nm,0.7s	**17.53**	**346**	P		**P**	**12 37 51.8**	**-1.2**
BVA0				pmax		pmax		
BVAR	**Borovoye Array**	**17.53**	**346**	P		**Pn**	**12 37 53.2**	**0.0**
BVAR	comp=Z,4.0nm,0.3s			pmax		pmax		
BVAR	comp=Z,535nm,20.4s			MLR		MLR		
BVAR	**Borovoye Array**	**17.53**	**346**	P		**Pn**	**12 37 53.2**	**0.0**
BVAR				S		S	12 41 23.4	+13
BVAR	**Borovoye Array** comp=Z,3.9nm,0.3s,baz=156,slow=11,SNR=84	**17.53**	**346**	P		**Pn**	**12 37 53.2**	**0.0**
BVAR	baz=154,slow=28,SNR=5.5			S		S	12 41 23.4	+13
BVAR	comp=Z,535nm,20.4s,baz=106,slow=39			LR		LR	12 45 12.3	
BRVK	**Borovoye** comp=Z,467nm,0.9s	**17.59**	**345**	⇓P		**P**	**12 37 51.9**	**-1.6**
BRVK	comp=Z,136nm,1.2s			⇓S		**S**	**12 41 10.8**	**-0.1**
BRVK	**Borovoye**	**17.59**	**345**	*d*iP		**P**	**12 37 52.6**	**-0.9**
BRVK	comp=Z,143nm,0.8s			pmax		pmax		
BRVK	**Borovoye** comp=Z,298nm,0.9s	**17.59**	**345**	*e*Pn		**P**	**12 37 53.0**	**-0.5**
BRVK	**Borovoye** SNR=107	**17.59**	**345**	P		**P**	**12 37 52.4**	**-1.1**
BRVK	**Borovoye** comp=Z,1μm,0.8s,SNR=51	**17.59**	**345**	P		**Pn**	**12 37 53.8**	**0.0**
LATR	**Latur**	**17.75**	**183**	*ex*		x	12 37 47.0	
LATR				*ex*		x	12 40 40.0	
ZRNK	**Zerenda** comp=Z,56nm,0.8s	**17.77**	**343**	⇓P		**P**	**12 37 54.4**	**-1.1**
ZRNK	comp=Z,132nm,1.1s			⇓S		**S**	**12 41 19.3**	**+4.7**
GTA	**Gaotai**	**17.91**	**73**	P		**P**	**12 37 56.4**	**-1.0**
GTA				pP		**pP**	**12 38 12.8**	**-2.3**
GTA				sP		**sP**	**12 38 25.5**	**-1.5**
GTA				S		**Sn**	**12 41 16.3**	**-1.3**
GTA	comp=Z,480nm,7.1s			pmax		pmax		
GTA	comp=N,520nm,7.1s			LR		LR		
GTA	comp=E,430nm,7.8s			LR		LR		
POO	**Poona**	**17.92**	**191**	⇓*iP*		**Pn**	**12 37 58.0**	**-0.1**
AB31	**Akbulak array** comp=E,94nm,0.7s	**18.27**	**321**	⇑P		**P**	**12 38 00.0**	**-1.1**
AB31	comp=E,21nm,0.7s,baz=130,slow=27,SNR=6.6			⇑S		S	12 41 13.6	-11
AB31	**Akbulak array**	**18.27**	**321**	*ce*P		**P**	**12 38 00.0**	**-1.1**
AB31	comp=Z,61nm,0.5s			pmax		pmax		
ABKAR	**Akbulak array**	**18.27**	**321**	*e*P		**P**	**12 38 00.5**	**-0.6**
ZAA0	**Zalesovo Array**	**18.45**	**14**	*e*P		**P**	**12 38 00.6**	**-2.3**
ZALV	**Zalesovo Beam**	**18.45**	**14**	*i* P		**P**	**12 38 01.0**	**-1.9**
ZALV	comp=Z,29nm,0.6s			pmax		pmax		
ZALV	**Zalesovo Beam**	**18.45**	**14**	P		**P**	**12 38 01.6**	**-1.3**
ZALV				S		S	12 41 19.1	-9.2
ZALV	**Zalesovo Beam** comp=Z,3.2nm,0.3s,baz=201,slow=11,SNR=92	**18.45**	**14**	P		**P**	**12 38 01.6**	**-1.3**
ZALV	comp=Z,0.7nm,0.3s,baz=196,slow=21,SNR=6.2			S		S	12 41 19.1	-9.2
HYB	**Hyderabad** comp=Z,115nm,0.8s	**18.75**	**177**	*i* P		**P**	**12 38 04.5**	**-2.1**
HYB				*e*			12 41 17.0	
HYB				*es*		**S**	**12 41 35.0**	**-0.1**
HYB	**Hyderabad**	**18.75**	**177**	P		**P**	**12 38 04.5**	**-2.1**
HYB				*es*		S	12 41 17.0	-18
HYB	**Hyderabad**	**18.75**	**177**	*e*PKP		**Pn**	**12 38 07.5**	**-0.6**
HVS	**Khovu-Aksy**	**18.90**	**33**	*e*P		**P**	**12 38 08.4**	**+0.4**
NVS	**Novosibirsk**	**19.04**	**10**	*e*P		**P**	**12 38 08.4**	**-1.0**
NVS				*es*		S	12 41 28.6	-12
IANJ	**Anjilo**	**19.13**	**275**	*e*P		**P**	**12 38 11.3**	**+0.4**
IKIA	**Kiasar**	**19.21**	**277**	*e*P		**Pn**	**12 38 14.6**	**+0.9**
ICHK	**Chekchek**	**19.49**	**265**	*e*P		**P**	**12 38 15.7**	**+0.9**
IMEH	**Mehriz**	**19.61**	**262**	*e*P		**P**	**12 38 16.8**	**+0.7**
IBND	**Bandar-abas**	**19.81**	**250**	*e*P		**P**	**12 38 18.8**	**+0.7**
IBND				*e*P		**Pn**	**12 38 19.1**	**-1.4**
ILAS	**Lasjerd**	**19.92**	**275**	*e*P		**P**	**12 38 20.2**	**+0.8**
AKTO	**Aktyubinsk** comp=Z,18nm,0.8s	**19.98**	**321**	⇑P		**P**	**12 38 18.7**	**-1.1**
AKTO	comp=Z,25nm,1.0s			⇑S		**S**	**12 41 52.6**	**-6.7**
AKTO	**Aktyubinsk**	**19.98**	**321**	P		**P**	**12 38 19.8**	**0.0**
AKTO				S		**S**	**12 41 55.3**	**-3.9**
AKTO	comp=Z,7.0nm,0.3s			pmax		pmax		
AKTO	comp=N,1.0nm,0.3s			smax		smax		
AKTO	comp=Z,393nm,21.3s			MLR		MLR		
AKTO	**Aktyubinsk**	**19.98**	**321**	P		**P**	**12 38 19.8**	**0.0**
AKTO				S		**S**	**12 41 55.3**	**-3.9**
AKTO	**Aktyubinsk** comp=Z,6.6nm,0.3s,baz=118,slow=9.3,SNR=222	**19.98**	**321**	P		**P**	**12 38 19.8**	**0.0**
AKTO	comp=Z,1.4nm,0.3s,baz=109,slow=24,SNR=8.4			S		**S**	**12 41 55.3**	**-3.9**
AKTO	comp=Z,393nm,21.3s,baz=142,slow=36			LR		LR	12 45 57.8	
ISAD	**Sadrabad**	**20.18**	**265**	*e*P		**P**	**12 38 22.8**	**+0.5**
BANOM	**Banah** SNR=13	**20.82**	**246**	P		Pn	12 38 33.8	+1.5
IZEF	**Zefreh**	**20.98**	**268**	*e*P		**P**	**12 38 31.7**	**+0.8**
WBK	**Wadi Bani Khal** SNR=11	**21.04**	**235**	P		**P**	**12 38 34.0**	**+2.7**
LZH	**Lanzhou**	**21.25**	**83**	⇑P		**P**	**12 38 34.1**	**+0.4**
LZH				pP		**pP**	**12 38 54.6**	**+2.6**
LZH				PP		**PnPn**	**12 39 01.8**	**+3.8**
LZH				sP		**sP**	**12 39 05.8**	**+2.1**
LZH				S		**S**	**12 42 20.8**	**-4.0**
LZH				sS		Sn	12 42 46.3	+8.4
LZH	comp=Z,76nm,1.1s			pmax		pmax		
LZH	comp=Z,220nm,4.8s			pmax		pmax		
LZH	comp=N,550nm,10.5s			LR		LR		
LZH	comp=E,500nm,7.0s			LR		LR		
LZH	comp=Z,690nm,10.3s			LR		LR		
SMDO	**Samad** SNR=24	**21.35**	**237**	P		**P**	**12 38 36.7**	**+1.9**
IGAR	**Gharneh**	**21.35**	**267**	*e*P		**P**	**12 38 36.3**	**+1.4**
IPAR	**Pars**	**21.44**	**260**	*e*P		**P**	**12 38 35.7**	**-0.2**
HOQ	**Hoqain** SNR=12	**21.51**	**240**	P		**P**	**12 38 37.9**	**+1.5**
ISRV	**Sarvestan**	**21.57**	**259**	*e*P		**P**	**12 38 37.9**	**+0.6**
ASHO	**Ashiyiah** SNR=27	**21.72**	**244**	P		**P**	**12 38 41.1**	**+2.5**
JMDO	**Jabal Madar** SNR=15	**21.78**	**236**	P		**P**	**12 38 41.3**	**+2.1**
NAZ	**Nazwa, Dubai** SNR=10	**21.83**	**245**	P		**P**	**12 38 41.6**	**+1.9**
BSY	**Bisya** SNR=19	**22.14**	**238**	P		**P**	**12 38 45.2**	**+2.1**
ARQ	**Araqi** SNR=16	**22.22**	**240**	P		**P**	**12 38 46.4**	**+2.4**
ASUD	**Al Ashush, Dub** SNR=13	**22.29**	**245**	P		**P**	**12 38 47.2**	**+2.6**
CD2	**Chengdu**	**22.48**	**96**	P		**P**	**12 38 46.0**	**-0.6**
CD2				pP		**pP**	**12 39 04.5**	**-0.6**
CD2				sP		**sP**	**12 39 15.1**	**-1.7**
CD2				PP		**PnPn**	**12 39 17.4**	**+2.8**
CD2				PcP		**PcP**	**12 42 39.3**	**+1.9**
CD2				S		**S**	**12 42 41.9**	**-4.9**
CD2				sS		Sn	12 43 13.1	+6.1
CD2				SS		**SnSn**	**12 43 29.3**	**+4.7**
CD2	comp=Z,40nm,0.4s			pmax		pmax		
CD2	comp=Z,240nm,4.3s			pmax		pmax		
CD2	comp=N,320nm,9.8s			LR		LR		
CD2	comp=E,910nm,15.6s			LR		LR		
MOY	**Mondy**	**22.76**	**40**	*e*P		**P**	**12 38 50.3**	**+0.9**
MOY				*e*			12 39 26.7	
MOY	comp=Z,120nm,2.2s			pmax		pmax		
ZAK	**Zakamensk** comp=Z,63nm,0.9s	**23.35**	**45**	*e*P		**P**	**12 38 55.2**	**+0.2**
ZAK				pmax		pmax		
SVE	**Sverdlovsk**	**23.53**	**336**	*d* iP		**P**	**12 38 56.6**	**+0.1**
SVE				*e*			12 39 35.9	
SVE				*es*		**S**	**12 43 02.1**	**-1.0**
SVE	comp=Z,88nm,1.0s			pmax		pmax		
ARU	**Arti**	**23.93**	**334**	*c* iP		**P**	**12 38 59.9**	**-0.1**
ARU							12 39 27.3	
ARU				PPP		PPP	12 39 36.6	
ARU				S		**S**	**12 43 11.8**	**+2.3**
ARU				SS		**SnSn**	**12 44 05.5**	**+6.0**
ARU	comp=Z,76nm,0.8s			pmax		pmax		
ARU	**Arti** comp=Z,571nm,0.7s,SNR=29	**23.93**	**334**	P		**P**	**12 39 00.0**	**-0.1**
MAK	**Makhachkala**	**23.99**	**296**	*e*P		**P**	**12 39 04.3**	**+3.5**
MAK				*e*			12 39 32.6	
MAK				*es*S		sS	12 44 03.7	+17
MAK				*es*SS		SSS	12 44 17.0	
MAK	comp=Z,152nm,1.0s			pmax		pmax		
MAK	comp=Z,487nm,14.0s			MLR		MLR		
TLY	**Talaya**	**24.17**	**42**	*e*P		**P**	**12 39 03.7**	**+1.4**
TLY				*e*			12 39 36.9	
TLY				*e*PPP		PPP	12

KMI PP **PnPn** 12 39 41.9 +2.3
KMI S **S** 12 43 14.3 -2.1
KMI sS sS 12 43 46.9 -5.8
KMI SS **SnSn** 12 44 13.8 +4.5
KMI pmax pmax
comp=Z,160nm,3.4s
KMI LR LR
comp=N,270nm,11.7s
KMI LR LR
comp=E,200nm,10.5s
IKOM Komasi 24.55 274 *e*P **P** 12 39 06.9 +0.8
ULN Ulaanbaatar 24.68 53 *e*P **P** 12 39 07.9 +0.7
comp=E,125nm,0.9s
ULN Ulaanbaatar 24.68 53 P **P** 12 39 08.3 +1.1
SNR=66
ULN Ulaanbaatar 24.68 53 P **P** 12 39 08.1 +0.9
comp=E,164nm,0.9s,comp=E,2µm
IRK Irkutsk 24.79 41 *e*P **P** 12 39 08.7 +0.8
IRK *e* 12 39 38.8
IRK pmax pmax
comp=Z,150nm,1.1s
ITBZ Tabriz 24.99 284 *e*P **P** 12 39 12.5 +2.4
IAZR Azarshahr 25.18 283 *e*P **P** 12 39 14.0 +2.1
IMRD Marand 25.30 285 *e*P **P** 12 39 15.1 +2.2
ISHB Shabestar 25.40 284 *e*P **P** 12 39 16.3 +2.4
DGRG David-gareji 25.48 292 P **P** 12 39 16.6 +2.2
CHTO Chiang Mai 25.64 127 *e*P **P** 12 39 15.4 -0.5
CHTO pmax pmax
comp=Z,51nm,0.9s
CHTO Chiang Mai 25.64 127 *e*P **P** 12 39 15.4 -0.5
comp=Z,51nm,0.9s
CHTO Chiang Mai 25.64 127 P **P** 12 39 15.8 -0.1
SNR=23
CHTO Chiang Mai 25.64 127 P **P** 12 39 15.6 -0.3
comp=Z,70nm,1.0s,comp=Z,765nm
CMMT Chiang Mai 25.64 127 P **P** 12 39 16.1 +0.1
XAN Xi'an 25.73 86 P **P** 12 39 16.3 -0.4
XAN sP **sP** 12 39 48.0 -0.6
XAN pmax pmax
comp=Z,21nm,1.1s
XAN pmax pmax
comp=Z,29nm,4.5s
BTO Baotou 25.77 70 *e*P **P** 12 39 17.8 +0.8
UMR Umm Al-Rimmam 25.82 264 *e*P **P** 12 39 17.9 +0.5
CMAR Chiang Mai Arr 25.90 127 P **P** 12 39 18.9 +0.6
CMAR PcP **PcP** 12 42 46.3 +1.4
CMAR Chiang Mai Arr 25.90 127 P **P** 12 39 18.9 +0.6
comp=Z,67nm,0.9s,baz=311,slow=9.1,SNR=53
CMAR PcP **PcP** 12 42 46.3 +1.4
comp=Z,8.2nm,0.8s,baz=299,slow=4.4,SNR=6.2
SEAG Tbilisi Sea 25.91 292 P **P** 12 39 15.0 -3.2
TBLG Delisi 25.96 292 *e*P **P** 12 39 19.8 +1.2
TBLG Delisi 25.96 292 P **P** 12 39 19.9 +1.2
GNI Garni 25.96 289 *e*P **P** 12 39 20.9 +2.0
comp=Z,198nm,1.1s
GNI Garni 25.96 289 P **P** 12 39 21.7 +2.8
SNR=58
GNI Garni 25.96 289 P **P** 12 39 21.2 +2.3
comp=Z,50nm,0.7s,baz=32,slow=1.1,SNR=55
QRN Al-Qurain 25.98 262 *e*P **P** 12 39 19.0 +0.1
QRN AMb AMB 12 39 23.6
comp=Z,277nm,1.0s
KBD Kabd 25.98 263 *e*P **P** 12 39 19.4 +0.4
KBD AMb AMB 12 39 23.8
comp=Z,123nm,0.8s
DUS Dusheti 26.00 293 P **P** 12 39 22.8 +3.7
MIB Mutribah 26.03 264 *e*P **P** 12 39 19.6 +0.2
MIB AMb AMB 12 39 24.4
comp=Z,354nm,1.2s
GUDG Gudauri 26.18 294 P **P** 12 39 25.6 +4.8
RDF Al-Radifah 26.20 262 *e*P **P** 12 39 21.8 +0.9
RDF AMb AMB 12 39 27.1
comp=Z,188nm,1.3s
NAY Al-Naaiem 26.32 263 *e*P **P** 12 39 22.5 +0.5
NAY AMb AMB 12 39 23.8
comp=Z,129nm,0.9s
RST Umm Al-Ruwaisa 26.42 264 *e*P **P** 12 39 22.9 0.0
GOR Gori 26.44 293 P **P** 12 39 23.4 +0.4
GYA Guiyang 26.65 103 P **P** 12 39 25.3 +0.1
GYA pP **pP** 12 39 44.6 -1.5
GYA sP **sP** 12 39 55.9 -1.2
GYA PP **PnPn** 12 40 11.3 -0.3
GYA PcP **PcP** 12 42 47.9 +1.1
GYA S **S** 12 43 56.3 +2.7
GYA sS sS 12 44 21.6 -8.6
GYA SS **SnSn** 12 45 05.8 -0.8
GYA ScP **ScP** 12 46 18.9 +0.7
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.2s
GYA LR LR
comp=N,4µm,15.8s
GYA LR LR
comp=E,3µm,17.0s
GYA LR LR
comp=Z,5µm,16.3s
DGPR DIGLIPUR 26.81 145 *e*PKP **P** 12 39 27.6 +1.1
DGPR AMB AMB 12 39 41.2
comp=Z,63nm,0.7s
AKH Akhalkalaki 26.89 292 P **P** 12 39 29.9 +2.6
HHC Hu-ho-hao-te 26.94 70 *e*P **P** 12 39 28.3 +0.7
HHC PP **PnPn** 12 40 16.6 +1.4
HHC PcP **PcP** 12 42 48.6 +1.4
HHC S **S** 12 43 58.0 +0.2
HHC sS sS 12 44 27.8 -6.6
HHC SS **SnSn** 12 45 15.3 +2.1
HHC ScP **ScP** 12 46 20.6 +1.8
HHC PcS **PcS** 12 46 29.0 +0.3
HHC ScS **ScS** 12 50 10.9 +0.9
HHC pmax pmax
comp=Z,24nm,0.6s
HHC pmax pmax
comp=Z,260nm,6.1s
HHC LR LR
comp=N,2µm,10.2s
HHC LR LR
comp=E,2µm,9.7s
HHC LR LR
comp=Z,2µm,9.5s
SOKR Solikamsk 26.97 337*c* *i*P **P** 12 39 27.8 +0.4
SOKR S **S** 12 43 56.8 -0.8
SOKR pmax pmax
comp=Z,80nm,1.1s
SOKR MLR MLR
comp=Z,220nm,23.0s
ENH Enshi 27.32 93 *e*P **P** 12 39 31.1 +0.1
comp=Z,25nm,0.8s
KBZ Khabaz 27.41 297 P **P** 12 39 32.3 +0.7
KBZ pmax pmax
comp=Z,12nm,1.0s
KBZ Khabaz 27.41 297 P **P** 12 39 32.3 +0.7
KBZ Khabaz 27.41 297 P **P** 12 39 32.3 +0.7
comp=Z,12nm,0.9s,baz=101,slow=5.3,SNR=19
CHVG Ch'k'valeri 27.96 294 P **P** 12 39 39.6 +3.0
PBKT Sadao Pong 28.59 127 P **P** 12 39 43.1 +0.8
comp=Z,54nm,1.2s
PALK Pallekele 28.96 173 P **P** 12 39 47.3 +1.7
PALK Pallekele 28.96 173 P **P** 12 39 47.3 +1.7
comp=Z,21nm,1.1s,baz=18,slow=8.5,SNR=4.3
SRDT SRDT 29.13 133 P **P** 12 39 48.7 +1.5
SOC Sochi 29.71 296*c* *i*P **P** 12 39 52.4 +0.4
SOC *e*S **S** 12 44 42.3 +1.2
SOC pmax pmax
comp=Z,35nm,0.9s
RAYN Ar Rayn 30.35 254 P **P** 12 39 58.0 0.0
comp=Z,425nm,0.9s,SNR=33
RAYN Ar Rayn 30.35 254 *e*P **P** 12 39 58.6 +0.6
comp=Z,62nm,0.9s
BJI Beijing 30.50 71 P **P** 12 39 58.8 -0.2
BJI S **S** 12 44 54.8 +1.3
BJI pmax pmax
comp=Z,56nm,0.8s
BJI pmax pmax
comp=Z,160nm,3.5s
BJI LR LR
comp=N,280nm,24.1s
BJI LR LR
comp=E,170nm,25.3s
VORD Divnogorie 30.96 311 *e*P **P** 12 40 02.7 -0.2
VORD *e**PP pP 12 40 36.3 +12
VSR Storozhevoye 31.09 311 *e*P **P** 12 40 03.5 -0.7
VSR *e**PP pP 12 40 37.2 +12
WHN Wuhan 31.16 90 P **P** 12 40 05.1 +0.2
WHN S **S** 12 45 03.6 -0.4
WHN pmax pmax
comp=Z,150nm,0.9s
WHN LR LR
comp=Z,310nm,13.9s
ANN Anapa 31.38 298 *e*P **P** 12 40 06.5 -0.3
ANN *e**PP **pP** 12 40 24.6 -3.4
ANN *e*S **S** 12 45 07.7 +0.5
ANN pmax pmax
comp=Z,152nm,1.4s
QIZ Qiongzhong 33.18 112 P **P** 12 40 22.9 +0.2
QIZ pP **pP** 12 40 42.3 -1.8
QIZ sP **sP** 12 40 51.1 -3.8
QIZ S **S** 12 45 37.3 +1.7
QIZ pmax pmax
comp=Z,24nm,1.2s
HIA Hailar 33.21 54 *e*P **P** 12 40 22.3 -0.5
comp=Z,24nm,1.0s
MOS Moscow 33.27 319 *e*P **P** 12 40 22.5 -0.6
MOS *i* 12 40 56.4
MOS *e* 12 41 31.5
MOS *e*S **S** 12 45 34.0 -2.2
MOS *e* 12 46 12.9
MOS pmax pmax
comp=Z,200nm,1.5s
MOS pmax pmax
comp=Z,134nm,1.3s
OBN Obninsk 33.64 317*c* *i*P **P** 12 40 26.3 0.0
OBN *i* *PP **pP** 12 40 47.7 0.0
OBN *i* 12 43 04.0
OBN *i* S S 12 45 48.6 +6.5
OBN pmax pmax
comp=Z,172nm,2.0s
OBN MLR MLR
comp=Z,100nm,17.0s
NJ2 Nanjing 34.29 85 *e*P **P** 12 40 33.0 +0.7
NJ2 pmax pmax
comp=Z,50nm,0.8s
KLMR Klimovskoe 34.41 328*c* *i*P **P** 12 40 32.6 -0.3
KLMR *i* S **S** 12 45 51.7 -2.1
KLMR pmax pmax
comp=Z,98nm,1.1s
KLMR MLR MLR
comp=Z,297nm,15.0s
BR131 Keskin Array S 34.50 289 *e*P **P** 12 40 35.3 +1.1
comp=Z,50nm,0.7s
BRTR Keskin Array B 34.50 289 P **P** 12 40 35.2 +1.0
BRTR Keskin Array B 34.50 289 P **P** 12 40 35.2 +1.0
comp=Z,54nm,0.7s,baz=98,slow=7.8,SNR=123
DL2 Dalian 34.83 72 P **P** 12 40 37.5 +0.7
DL2 pmax pmax
comp=Z,63nm,1.1s
ANTO Ankara 35.12 290 *e*P **P** 12 40 40.4 +0.9
ANTO pmax pmax
comp=Z,92nm,1.2s
ANTO Ankara 35.12 290 *e*P **P** 12 40 40.4 +0.9
comp=Z,92nm,1.2s
ANTO Ankara 35.12 290 P **P** 12 40 41.0 +1.5
SNR=12
SNY Shenyang 35.89 67 ⇓P **P** 12 40 44.8 -1.1
SNY S **S** 12 46 18.0 +1.0
SNY pmax pmax
comp=Z,10.0nm,0.5s
SNY pmax pmax
comp=Z,180nm,4.1s
SNY LR LR
comp=N,210nm,4.5s
SNY LR LR
comp=E,230nm,3.6s
SNY LR LR
comp=Z,200nm,11.1s
SSE Sheshan 36.49 85 P **P** 12 40 50.6 -0.5
SSE sP **sP** 12 41 19.0 -4.5
SSE PP **PP** 12 42 14.4 -1.4
SSE S **S** 12 46 27.1 +0.8
SSE pmax pmax
comp=Z,94nm,1.2s
SSE pmax pmax
comp=Z,260nm,3.8s
SSE LR LR
comp=N,270nm,3.7s
SSE LR LR
comp=E,280nm,3.7s
SSE LR LR
comp=Z,490nm,3.9s
CN2 Changchun 37.06 63 *e*P **P** 12 40 56.6 +0.8
CN2 *ep*P **pP** 12 41 14.9 -2.6
CN2 *es*P **sP** 12 41 23.8 -4.5
CN2 PcP **PcP** 12 43 14.9 +0.3
CN2 *e*S **S** 12 46 35.9 +1.1
CN2 pmax pmax
comp=Z,20nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,500nm,13.0s
CN2 LR LR
comp=E,300nm,13.0s
CN2 LR LR
comp=Z,200nm,13.0s
AKASG Malin Array Be 37.23 308 P **P** 12 40 56.5 -0.6
AKASG *SP **sP** 12 41 31.0 +1.5
AKASG 12 42 21.3
AKASG pmax pmax
comp=Z,12nm,0.5s
AKASG MLR MLR
comp=Z,101nm,20.1s
AKASG Malin Array Be 37.23 308 P **P** 12 40 56.5 -0.6
AKASG sP **sP** 12 41 31.0 +1.5
AKASG PP **PP** 12 42 21.3 -2.3
AKASG Malin Array Be 37.23 308 P **P** 12 40 56.5 -0.6
comp=Z,12nm,0.5s,baz=78,slow=8.2,SNR=28
AKASG sP **sP** 12 41 31.0 +1.5
comp=Z,20nm,0.8s,baz=77,slow=7.6,SNR=3.6
AKASG PP **PP** 12 42 21.3 -2.3
comp=Z,19nm,1.1s,baz=88,slow=12,SNR=4.1
AKASG LR LR 12 58 37.7
comp=Z,101nm,20.1s,baz=55,slow=40
AK01 Malin Array Si 37.23 308 *e*P **P** 12 40 56.5 -0.7
AK02 Malin Array Si 37.23 308 *e*P **P** 12 40 57.1 -0.1
KIEV Kiev 37.24 308 *e*P **P** 12 40 56.7 -0.5
KIEV Kiev 37.24 308 *e*P **P** 12 40 56.7 -0.5
KIS Kishinev 37.41 302*a* *i*P **P** 12 40 57.5 -1.2
KIS *i* 12 41 22.0
KIS *i* 12 41 32.0
KIS Kishinev 37.41 302 *i* P **P** 12 40 57.5 -1.2
KULM Kulim 37.41 140 *e*P **P** 12 40 58.9 -0.1
comp=Z,71nm,1.3s
KULM Kulim 37.41 140 P **P** 12 40 59.4 +0.4
TLCR 37.49 299 ⇓P **P** 12 41 00.3 +0.9
TLCR 37.49 299 ⇓*i*P **P** 12 41 00.3 +0.9
TIRR Tirgusor 37.83 298 ⇑P **P** 12 41 03.0 +0.7
TIRR Tirgusor 37.83 298 *e*P **P** 12 41 02.3 0.0
TIRR Tirgusor 37.83 298 ⇑*i*P **P** 12 41 03.0 +0.7
CFR Carcaliu 37.97 299 ⇑*i*P **P** 12 41 04.2 +0.8
CFR Carcaliu 37.97 299 ⇑*i*P **P** 12 41 04.2 +0.8
IPM Ipoh 38.29 140 *e*P **P** 12 41 05.2 -1.3
comp=Z,45nm,0.8s
IPM Ipoh 38.29 140 P **P** 12 41 06.2 -0.3
KSL Kastellorizon 38.36 285 *e*P **P** 12 41 07.0 +0.2
MICGM Minsk 38.42 314⇑*e*P **P** 12 41 06.0 -1.2
MNK Minsk 38.45 314⇑*e*P **P** 12 41 06.0 -1.4
MNK *e* 12 41 40.0
MNK pmax pmax
comp=Z,220nm,1.0s
PRD Provadia 38.69 296 *e*P **P** 12 41 10.5 +1.0
KTGM Kuala Trenggan 38.72 136 P **P** 12 41 11.0 +1.0
JOF Joensuu 38.80 328 *e*P **P** 12 41 11.4 +1.2
JOF pmax pmax
comp=Z,151nm,0.6s
JOF Joensuu 38.80 328 *ep* **P** 12 41 11.4 +1.2
comp=Z,150nm,0.6s
VRI Vrincioaia 38.91 300 ⇑P **P** 12 41 12.9 +1.5
VRI Vrincioaia 38.91 300 ⇑*i*P **P** 12 41 12.9 +1.5
TESR Tescani 38.92 302 ⇓*i*P **P** 12 41 12.5 +1.1
INCN Inchon 38.98 73 *e*P **P** 12 41 13.0 +0.9
comp=Z,139nm,1.3s
ISR Istrita 39.10 299 ⇑P **P** 12 41 14.9 +1.9
ISR Istrita 39.10 299 ⇑*i*P **P** 12 41 14.9 +1.9
NACGM Naroch 39.11 315 *e*P **P** 12 41 11.0 -1.9
IDID Didziasalis 39.19 316 *e*P **P** 12 41 13.9 +0.4
IDID AMB AMB 12 41 14.5
comp=Z,16nm,1.0s
SSLB Suanglung 39.31 96 *e*P **P** 12 41 15.9 +0.9
ARG Arkhangelos 39.48 285 *e*P **P** 12 41 16.6 +0.4
IIGN Ignalina 39.48 316 *e*P **P** 12 41 16.4 +0.4
IIGN AMB AMB 12 41 18.4
comp=Z,21nm,1.4s
MLR Muntele Rosu 39.48 300 ⇓*i*P **P** 12 41 18.1 +1.8
IZAR Zarasai 39.52 316 *e*P **P** 12 41 16.7 +0.4
IZAR AMB AMB 12 41 17.5
comp=Z,31nm,0.8s
ISAL Salakas 39.57 316 *e*P **P** 12 41 17.1 +0.4
ISAL AMB AMB 12 41 17.9
comp=Z,24nm,0.8s
NACB Ninganchiao 39.65 95 *e*P **P** 12 41 20.2 +2.5
comp=Z,78nm,1.2s
FRIM Kepong 39.66 140 P **P** 12 41 18.3 +0.5
VSU Vasula 39.71 320*c* *i*P **P** 12 41 17.7 -0.1
VSU pmax pmax
comp=Z,84nm,1.0s
SZH Strazhica 39.74 296 *e*P **P** 12 41 19.0 +0.7
LVZ Lovozero 39.74 336*ce*P **P** 12 41 17.8 -0.2
LVZ pmax pmax
comp=Z,175nm,0.9s
LVZ Lovozero 39.74 336 P **P** 12 41 18.4 +0.4
comp=Z,1µm,0.9s,SNR=23
YULB Yu-li 39.78 96 *e*P **P** 12 41 17.6 -1.2
comp=Z,37nm,1.4s
DOPR Dopca 39.83 301 ⇑*i*P **P** 12 41 20.8 +1.8
BURAR Bucovina Array 39.84 303 ⇓*i*P **P** 12 41 19.8 +0.7
BUR08 Bucovina Ar. S 39.84 303 *e*P **P** 12 41 19.4 +0.1
TWG Pinlang 39.88 97 *e*P **P** 12 41 20.8 +1.2
comp=Z,181nm,1.0s
MDJ Mudanjiang 39.95 61 P **P** 12 41 20.5 +0.5
MDJ pP **pP** 12 41 39.3 -2.5
MDJ sP **sP** 12 41 48.2 -3.8
MDJ PcP **PcP** 12 43 20.6 -3.0
MDJ S **S** 12 47 20.8 +2.6
MDJ sS **sS** 12 47 53.3 -2.5
MDJ pmax pmax
comp=Z,50nm,1.0s
MDJ Mudanjiang 39.95 61 *e*P **P** 12 41 20.1 +0.1
comp=Z,55nm,1.0s
KSAR Wonju Array Be 39.95 73 P **P** 12 41 19.6 -0.5
KSAR PcP **PcP** 12 43 24.1 +0.4
KSRS Korea Array 39.98 73 P **P** 12 41 19.6 -0.7
comp=Z,6.9nm,0.8s,baz=277,slow=8.0,SNR=16
KSRS PcP **PcP** 12 43 24.1 +0.3
comp=Z,11nm,0.9s,baz=259,slow=2.3,SNR=15
APA Apatity 39.99 335 *i* P **P** 12 41 20.0 0.0
APA *i* S **S** 12 47 20.0 +1.7
APA pmax pmax
comp=Z,34nm,1.0s
APA MLR MLR
comp=Z,300nm,16.0s
VOIR 40.12 300 ⇑P **P** 12 41 22.4 +0.9
VOIR 40.12 300 ⇑*i*P **P** 12 41 22.4 +0.9
PVL Pavlikeni 40.18 297 *e*P **P** 12 41 23.3 +1.4
LVV L'vov 40.54 307 ⇓*i*P **P** 12 41 24.9 +0.1
LVV *e* 12 41 48.7
LVV *i* 12 41 59.7
LVV *e*S **S** 12 47 26.5 -0.4
LVV *e* 12 50 26.3
FIA1 FINESS Array S 40.69 325 *e*P **P** 12 41 25.5 -0.3
FINES FINESS Array B 40.69 325 P **P** 12 41 26.1 +0.2
FINES S **S** 12 47 27.8 -1.0
FINES FINESS Array B 40.69 325 P **P** 12 41 26.1 +0.2
comp=Z,74nm,0.6s,baz=101,slow=9.9,SNR=394
FINES S **S** 12 47 27.8 -1.0
comp=Z,21nm,0.9s,baz=97,slow=16,SNR=12
FINES LR LR 12 59 11.1
comp=Z,171nm,18.6s,baz=90,slow=37
KAF Kangasniemi 40.76 326 *e*P **P** 12 41 26.7 +0.3
KAF pmax pmax
comp=Z,53nm,0.8s
KAF Kangasniemi 40.76 326 *ep* **P** 12 41 26.7 +0.3
comp=Z,53nm,0.8s
KLR Kul'dur 41.06 54 ⇓*i*P **P** 12 41 26.0 -3.1
KLR *e* 12 43 23.8
KLR pmax pmax
comp=E,40nm,0.9s
KLR pmax pmax
comp=Z,60nm,0.9s
KLR MLR MLR
comp=Z,1µm,11.5s
SUW Suwalki 41.13 313 *e*P **P** 12 41 29.6 +0.1
SUW pmax pmax
comp=Z,96nm,1.0s
SUW Suwalki 41.13 313 *e*P **P** 12 41 29.6 +0.1
comp=Z,96nm,1.0s
SUW Suwalki 41.13 313 *e*P **P** 12 41 29.3 -0.2
YAK Yakutsk 41.18 34*c* *i*P **P** 12 41 29.4 -0.5
YAK *e**PP pP 12 42 02.2 +10
YAK *e*PPP PPP 12 43 31.5
YAK *e* 12 43 41.8
YAK S S 12 47 28.2 -7.9
YAK pmax pmax
comp=Z,67nm,1.0s
YAK pmax pmax
comp=E,22nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.3s
YAK smax smax
comp=E,111nm,13.6s
APE Apeiranthos 41.27 287 ⇑P **P** 12 41 29.9 -1.2
APE Apeiranthos 41.27 287 ⇑*i*P **P** 12 41 29.9 -1.2
MPEP Malo Peshtene 41.31 297 *e*P **P** 12 41 32.8 +1.6
KWP Kalwaria Pacla 41.40 307 *e*P **P** 12 41 32.6 +0.7
NVR Nevrokopi 41.57 294 *e*P **P** 12 41 34.5 +1.1
KGM Kluang 41.58 139 P **P** 12 41 34.2 +0.5
DRGR 41.60 302 ⇑P **P** 12 41 34.9 +1.3
DRGR 41.60 302 ⇑*i*P **P** 12 41 34.9 +1.3
TRPA Tarpa 41.60 304 ⇓*i*P **P** 12 41 34.9 +1.4
TRPA Tarpa 41.60 304⇑*e*P **P** 12 41 34.5 +1.0
MMB Musomiste 41.62 294 *e*P **P** 12 41 34.7 +0.8
USRK Ussuriysk Arra 41.70 62 P **P** 12 41 34.7 +0.3
comp=E,5.5nm,0.7s,baz=285,slow=6.3,SNR=9.4
USRK PcP **PcP** 12 43 29.8 +0.5
comp=E,3.1nm,0.6s,baz=245,slow=4.1,SNR=4.0
USRK LR LR 13 00 31.2
comp=E,155nm,20.5s,baz=188,slow=38
KOLS Kolonicke sedl 41.72 306 *e*P **P** 12 41 35.1 +0.6
KOLS pmax pmax
comp=Z,23nm,1.3s
KOLS Kolonicke sedl 41.72 306 *e*P **P** 12 41 35.1 +0.6
KOLS *ep*P **pP** 12 41 58.4 +1.9
KOLS *es*P **sP** 12 42 09.3 +2.1
KOLS *e*PP **PnPn** 12 43 16.6 -1.7
KOLS *e*S **S** 12 47 44.1 -0.4
UZH Uzhgorod 41.73 305*de*P **P** 12 41 34.9 +0.4
UZH *i* 12 41 58.1
UZH *e* 12 42 08.7
KRY Khrisi 41.76 284 *e*P **P** 12 41 35.4 +0.4
VTS Vitosha 41.82 296 ⇓P **P** 12 41 36.2 +0.6
VTS Vitosha 41.82 296 ⇓*i*P **P** 12 41 36.2 +0.6
VTS Vitosha 41.82 296 *e*P **P** 12 41 36.5 +0.9
LAST Lasithi 41.84 284 *e*P **P** 12 41 36.6 +0.8
KKB Krupnik 42.05 295 *e*P **P** 12 41 38.0 +0.7
MYKOM Kota Tinggi 42.05 139 P **P** 12 41 38.2 +0.7
PLG Polygyros 42.08 293 *e*P **P** 12 41 38.5 +0.9
CRVS Cervenica-Dubn 42.26 306 *e*P **P** 12 41 38.1 -0.8
CRVS pmax pmax
comp=Z,7.0nm,0.9s
CRVS Cervenica-Dubn 42.26 306 *e*P **P** 12 41 38.1 -0.8
CRVS *e*SS SS 12 51 06.9 +3.1
IDI Anoyia 42.27 285 *e*P **P** 12 41 39.4 +0.2
comp=Z,184nm,1.8s
SIVA Sivas 42.41 285 *e*P **P** 12 41 40.9 +0.6
NEO Neokhori 42.48 291 *e*P **P** 12 41 41.2 +0.3
BZS Buzias 42.49 301 ⇑P **P** 12 41 41.9 +1.1
BZS Buzias 42.49 301 ⇑*i*P **P** 12 41 41.9 +1.1
BEL Belsk 42.54 310 *e*P **P** 12 41 41.3 +0.2
LIT Litokhoron 42.85 292 *e*P **P** 12 41 43.7 -0.1
NIE Niedzica 42.97 306 ⇑*i*P **P** 12 41 46.1 +1.4
NIE *i* *SP **sP** 12 42 20.1 +2.7
NIE Niedzica 42.97 306 *i* P **P** 12 41 46.1 +1.4
NIE *i* sP **sP** 12 42 20.1 +2.7
GVD Gavdhos 43.03 285 *e*P **P** 12 41 45.4 +0.1
GVD Gavdhos 43.03 285 *e*P **P** 12 41 45.5 +0.2
KEV Kevo 43.07 337 *e*P **P** 12 41 45.5 +0.4
KEV pmax pmax
comp=Z,52nm,0.9s
KEV Kevo 43.07 337 *ep* **P** 12 41 45.3 +0.2
comp=Z,52nm,0.8s
KEV Kevo 43.07 337 *e*P **P** 12 41 45.5 +0.4
comp=Z,52nm,0.9s

OJC **Ojcow** 43.25 308⇑ *i*P **P** 12 41 47.0 +0.2
OJC *i* *SP **sP** 12 42 20.7 +1.1
OJC **Ojcow** 43.25 308 *e*P **P** 12 41 46.6 -0.2
comp=Z,74nm,1.1s
OJC **Ojcow** 43.25 308 *i* P **P** 12 41 47.0 +0.2
HABR **Khabarovsk** 43.29 55*c*e*P **P** 12 41 45.8 -1.4
HABR *e**PP **pP** 12 42 04.6 -4.7
HABR *e**SP sP 12 42 14.0 -5.9
HABR *e* 12 43 26.9
HABR *e* 12 43 33.6
HABR *e*S **S** 12 48 07.7 +0.3
HABR *e* 12 51 37.6
HABR *e*SSS SSS 12 52 05.2
HABR pmax pmax
comp=N,11nm,1.0s
HABR pmax pmax
comp=Z,67nm,1.6s
HABR pmax pmax
comp=E,27nm,1.0s
PSZ **Piszkesteto** 43.39 304⇑ P **P** 12 41 49.1 +1.0
PSZ **Piszkesteto** 43.39 304 *e*P **P** 12 41 48.5 +0.4
comp=E,36nm,1.2s
PSZ **Piszkesteto** 43.39 304⇑ *i*P **P** 12 41 49.1 +1.0
PSZ **Piszkesteto** 43.39 304⇑ *e*P **P** 12 41 48.8 +0.7
ARCES **ARCESS Array B** 43.46 336 P **P** 12 41 49.1 +0.8
ARCES **ARCESS Array B** 43.46 336 P **P** 12 41 49.1 +0.8
comp=E,87nm,0.8s,baz=99,slow=7.5,SNR=222
ARE0 **ARCESS Array S** 43.46 336 *e*P **P** 12 41 48.5 +0.2
ARE0 **ARCESS Array S** 43.46 336 *e*P **P** 12 41 48.3 0.0
JNU **Nakatsue** 43.55 78 *e*P **P** 12 41 50.4 +0.9
comp=E,41nm,0.9s
JNU **Nakatsue** 43.55 78 P **P** 12 41 50.3 +0.7
comp=E,84nm,0.9s,baz=294,slow=1.7,SNR=25
EVR **Evrytania** 43.65 291 *e*P **P** 12 41 50.5 +0.2
LAKA **Lakka** 43.69 290 *e*P **P** 12 41 50.2 -0.4
DYR **Agios Nikonas** 43.82 288 *e*P **P** 12 41 52.5 +0.8
ITM **Ithomi** 44.02 289 *e*P **P** 12 41 52.0 -1.2
BUD **Budapest** 44.02 304⇑ *e*P **P** 12 41 54.1 +1.0
VYHS **Vyhne** 44.03 305 *e*P **P** 12 41 53.8 +0.6
VYHS pmax pmax
comp=Z,17nm,1.3s
VYHS **Vyhne** 44.03 305 *e*P **P** 12 41 53.8 +0.6
VYHS *e*pP **pP** 12 42 17.3 +2.0
VYHS *e*sP **sP** 12 42 28.4 +2.4
VYHS *e*PP **PP** 12 43 41.2 +4.0
VYHS *e*S **S** 12 48 17.8 -0.5
VYHS *e*SS ScS 12 51 52.6 +10
KTK1 **Kautokeino** 44.03 335 *e*P **P** 12 41 50.9 -2.0
KTK1 *e*S **S** 12 48 15.2 -2.6
KTK1 *e*SS **SS** 12 51 36.3 -1.3
TIXI **Tiksi** 44.12 21*c*e*P **P** 12 41 52.8 -0.7
TIXI pmax pmax
comp=Z,54nm,1.7s
IVA **Berane** 44.17 297⇑ *i*P **P** 12 41 55.4 +0.9
PVY **Plav** 44.18 297⇑ *i*P **P** 12 41 55.4 +0.8
PYL **PYLOS** 44.24 288 *e*P **P** 12 41 53.4 -1.6
OKC **Ostrava-Krasne** 44.34 307 *e*P **P** 12 41 55.8 +0.2
OKC *e*S **S** 12 48 21.5 -1.2
OKC **Ostrava-Krasne** 44.34 307⇑ *e*P **P** 12 41 55.8 +0.2
OKC *e*S **S** 12 48 21.5 -1.2
PKSM **Moragy** 44.46 302 ⇑P **P** 12 41 57.4 +0.8
PKSM **Moragy** 44.46 302⇑ *i*P **P** 12 41 57.4 +0.8
PKSM **Moragy** 44.46 302⇑ *e*P **P** 12 41 57.4 +0.8
LKD2 **Lefkada island** 44.55 291 *e*P **P** 12 41 57.3 -0.1
GKP **Gorka Klasztor** 44.66 312 *e*P **P** 12 41 58.6 +0.5
TTG **Podgorica** 44.72 297⇑ *i*P **P** 12 41 59.1 +0.4
MORC **Moravsky Berou** 44.73 307 ⇑P **P** 12 41 59.4 +0.6
MORC **Moravsky Berou** 44.73 307 *e*P **P** 12 41 59.1 +0.3
comp=Z,35nm,1.0s
MORC **Moravsky Berou** 44.73 307⇑ *i*P **P** 12 41 59.4 +0.6
UPM **Unac-Piva** 44.81 298⇑ *i*P **P** 12 41 59.7 0.0
NKY **Niksic** 44.83 297⇑ *i*P **P** 12 42 00.0 +0.3
ULC **Ulcinj** 44.83 296⇑ *i*P **P** 12 41 59.6 0.0
SMOL **Smolenice** 44.96 305 *e*P **P** 12 42 01.9 +1.4
SMOL **Smolenice** 44.96 305 *e*P **P** 12 42 01.9 +1.4
BUM **Brajici-Budva** 45.01 296⇑ *i*P **P** 12 42 01.5 +0.4
BRY **Bratogost** 45.14 297⇑ *i*P **P** 12 42 02.7 +0.5
KRLC **Kraliky** 45.19 308 *e*P **P** 12 42 03.1 +0.7
KRLC **Kraliky** 45.19 308⇑ *e*P **P** 12 42 03.1 +0.7
ZST **Bratislava** 45.21 305 *e*P **P** 12 42 02.7 +0.2
ZST pmax pmax
comp=Z,10.0nm,0.9s
ZST **Bratislava** 45.21 305 *e*P **P** 12 42 02.7 +0.2
ZST *e*pP **pP** 12 42 25.9 +1.1
ZST *e*sP **sP** 12 42 36.8 +1.4
VRAC **Vranov** 45.40 307⇑ *i*P **P** 12 42 05.2 +1.1
KSP **Ksiaz** 45.42 309⇑ *e*P **P** 12 42 04.8 +0.6
KSP *e**SP **sP** 12 42 38.7 +1.6
KSP *e*S **S** 12 48 38.0 -0.3
KSP **Ksiaz** 45.42 309 *e*P **P** 12 42 04.8 +0.6
DPC **Dobruska-Polom** 45.46 308 *e*pP **pP** 12 42 29.5 +2.7
DPC *e*sP sP 12 42 40.0 +2.6
UPC **Upice** 45.64 308⇑ *i*P **P** 12 42 06.6 +0.7
UPC *e* 12 42 30.5
UPC *e* 12 42 41.3
UPC **Upice** 45.64 308⇑ *i*P **P** 12 42 06.6 +0.7
UPC *e*pP **pP** 12 42 30.5 +2.4
UPC *e*sP **sP** 12 42 41.3 +2.5
SOP **Sopron** 45.65 304⇑ *e*P **P** 12 42 06.7 +0.7
TRO **Tromso** 45.68 335 *e*P **P** 12 42 05.3 -0.5
TRO AMB AMB 12 42 07.3
comp=Z,45nm,2.5s
TRO *e*SS SS 12 52 15.0 +8.6
BEHE **Becsehely** 45.70 303⇑ *e*P **P** 12 42 07.3 +0.9
BSD **Bornholm Skovb** 45.94 315 *i* P **P** 12 42 06.8 -1.3
BSD pmax pmax
comp=Z,34nm,0.9s
BSD **Bornholm Skovb** 45.94 315 *i* P **P** 12 42 06.8 -1.3
comp=Z,34nm,0.8s
KSM **Kuching** 46.02 131 *e*P **P** 12 42 09.5 +0.3
comp=Z,82nm,1.1s
KSM **Kuching** 46.02 131 P **P** 12 42 10.1 +0.9
CONA **Conrad Observa** 46.08 305 *i* P **P** 12 42 10.2 +0.7
comp=Z,89nm,1.5s,SNR=56
TREC **Trest** 46.12 307⇑ *i*P **P** 12 42 10.8 +1.1
TREC *e* 12 42 34.6
TREC **Trest** 46.12 307⇑ *i*P **P** 12 42 10.8 +1.1
TREC *e*pP **pP** 12 42 34.6 +2.6
KDM **Kudat** 46.26 119 P **P** 12 42 12.1 +1.0
ARSA **Arzberg** 46.41 304 *i* P **P** 12 42 12.5 +0.5
comp=Z,21nm,0.8s,SNR=13
BTM **Bintulu** 46.43 127 P **P** 12 42 14.0 +1.6
KKM **Kota Kinabalu** 46.45 121 *e*P **P** 12 42 13.1 +0.3
comp=Z,112nm,0.8s
KKM **Kota Kinabalu** 46.45 121 P **P** 12 42 13.9 +1.2
SBUM **Sibu** 46.45 128 P **P** 12 42 13.7 +1.1
PVCC **Panska Ves** 46.55 308 *e*P **P** 12 42 13.9 +0.9
PVCC *e* 12 42 37.9
PVCC **Panska Ves** 46.55 308⇑ *e*P **P** 12 42 13.9 +0.9
PVCC *e*pP **pP** 12 42 37.9 +2.6
STEI **Steigen** 46.61 333 *e*P **P** 12 42 15.6 +2.3
PRU **Pruhonice** 46.64 308⇑ *i*P **P** 12 42 14.6 +0.9
PRU *e* 12 42 38.5
PRU *e* 12 42 49.2
PRU *e*S **S** 12 48 55.2 -0.5
PRU **Pruhonice** 46.64 308⇑ *i*P **P** 12 42 14.6 +0.9
PRU *e*pP **pP** 12 42 38.5 +2.5
PRU *e*sP **sP** 12 42 49.2 +2.5
PRU *ex* x 12 44 35.8
PRU *e*S **S** 12 48 55.2 -0.5
MOR8 **Moi Rana** 46.65 330 *e*P **P** 12 42 12.7 -0.9
PERS **Pernice** 46.79 303 *i* P **P** 12 42 15.6 +0.5
RUE **Ruedersdorf** 46.81 311 *e*P **P** 12 42 14.9 -0.1
comp=Z,33nm,0.8s
SOKA **Soboth** 46.84 303⇑ *i*P **P** 12 42 16.2 +0.7
comp=Z,102nm,1.1s
BRG **Berggiesshubel** 46.90 309⇑ *i*P **P** 12 42 16.6 +0.9
comp=Z,61nm,1.1s
BRG pP **pP** 12 42 40.9 +2.8
comp=Z,26nm,1.0s
BRG sP **sP** 12 42 50.8 +2.1
comp=Z,60nm,1.2s
BRG *e* 12 43 01.3
comp=Z,42nm,1.3s
BRG *e* 12 43 30.4
comp=Z,13nm,0.9s
BRG PCP **PcP** 12 43 47.4 +0.4
comp=Z,13nm,0.9s
BRG **Berggiesshubel** 46.90 309 *e*P **P** 12 42 16.3 +0.6
comp=Z,30nm,0.6s
BRG **Berggiesshubel** 46.90 309⇑ *i*P **P** 12 42 16.6 +0.9
BRG *PP **pP** 12 42 40.9 +2.8
BRG *SP **sP** 12 42 50.8 +2.1
BRG 12 43 47.4
BRG pmax pmax
comp=Z,61nm,1.1s
BOJS **Bojanci** 46.92 302 *i* P **P** 12 42 16.7 +0.8
BJO **Bjornoya** 47.09 342 *e*P **P** 12 42 17.5 +0.6
FLOS **Flostrand** 47.11 330 *e*P **P** 12 42 17.2 +0.1
VISS **Visnje** 47.14 302 *i* P **P** 12 42 18.5 +0.8
MOA **Molln** 47.15 305 *i* P **P** 12 42 18.1 +0.3
comp=Z,42nm,1.1s,SNR=25
STOK **Stokkvaagen** 47.25 330 *e*P **P** 12 42 17.4 -0.7
LJU **Ljubljana** 47.31 302 *e*P **P** 12 42 19.5 +0.5
COP **Copenhagen** 47.32 316 *i* P **P** 12 42 19.0 +0.1
COP pmax pmax
comp=Z,57nm,0.9s
COP **Copenhagen** 47.32 316 *i* P **P** 12 42 19.0 +0.1
comp=Z,57nm,0.8s
GEC2 **GERESS Array S** 47.35 306 *e*P **P** 12 42 20.4 +1.1
comp=Z,20nm,0.9s
GEC2 **GERESS Array S** 47.35 306 *e*P **P** 12 42 20.5 +1.1
GEC2 **GERESS Array S** 47.35 306 *e*P **P** 12 42 20.5 +1.1
GERES **GERESS Array B** 47.35 306 P **P** 12 42 20.1 +0.6
GERES pP **pP** 12 42 43.9 +2.1
GERES sP **sP** 12 42 54.3 +1.9
GERES **GERESS Array B** 47.35 306 P **P** 12 42 20.1 +0.6
comp=Z,18nm,0.8s,baz=77,slow=7.0,SNR=115
GERES pP **pP** 12 42 43.9 +2.1
comp=Z,10nm,0.9s,baz=66,slow=6.4,SNR=4.7
GERES sP **sP** 12 42 54.3 +1.9
comp=Z,10nm,0.9s,baz=77,slow=7.5,SNR=3.9
GERES LR LR 13 04 07.5
comp=Z,100nm,19.7s,baz=322,slow=38
TIP **Timpagrande** 47.37 293 *e*P **P** 12 42 20.0 +0.4
comp=Z,159nm,1.1s
TIP *e*pP **pP** 12 42 44.7 +2.7
TIP *e*sP **sP** 12 42 54.0 +1.3
KHC **Kasperske Hory** 47.38 307⇑ *i*P **P** 12 42 20.3 +0.7
KHC *e* 12 42 44.6
KHC *e* 12 42 55.5
KHC *e*S **S** 12 49 07.7 +1.2
KHC MLR MLR
comp=Z,100nm,22.3s
KHC **Kasperske Hory** 47.38 307 *e*P **P** 12 42 19.4 -0.2
comp=Z,34nm,0.8s
KHC **Kasperske Hory** 47.38 307⇑ *i*P **P** 12 42 20.3 +0.7
KHC *e*pP **pP** 12 42 44.6 +2.6
KHC *e*sP **sP** 12 42 55.5 +2.9
KHC *ex* x 12 44 43.1
KHC *e*S **S** 12 49 07.7 +1.2
KHC AMS AMS 13 02 10.0
comp=Z,100nm,22.3s
SDKM **Sandakan** 47.41 120 P **P** 12 42 20.4 +0.2
CLL **Collm** 47.43 310 *e*P **P** 12 42 20.2 +0.4
comp=Z,24nm,0.7s
CLL **Collm** 47.43 310⇑ *i*P **P** 12 42 19.8 0.0
CLL *e**PP **pP** 12 42 44.0 +1.8
CLL *i* *SP **sP** 12 42 54.5 +1.7
CLL *e*S **S** 12 49 09.0 +2.1
CLL *e**SS sS 12 49 52.0 +6.6
CLL pmax pmax
comp=Z,39nm,0.9s
CLL **Collm** 47.43 310⇑ *i*P **P** 12 42 19.8 0.0
comp=Z,39nm,0.9s
CLL *e*pP **pP** 12 42 44.0 +1.8
CLL *i* sP **sP** 12 42 54.5 +1.7
comp=Z,32nm,0.9s
CLL *e*PP 12 44 31.0
CLL *e*(sPP) 12 44 48.0
CLL *e*PPP PPP 12 45 00.0
CLL *es*PPP 12 45 38.0
CLL *e*(ScP) 12 47 29.0
CLL *e*S **S** 12 49 09.0 +2.1
CLL *e*sS sS 12 49 52.0 +6.6
CLL *e*(SS) 12 52 42.0
CLL LmV 13 03 00.0
comp=Z,200nm,20.7s
LLD **Lille Linde** 47.47 315 *i* P **P** 12 42 20.4 +0.4
LLD pmax pmax
comp=Z,79nm,0.8s
LLD **Lille Linde** 47.47 315 *i* P **P** 12 42 20.4 +0.4
comp=Z,79nm,0.8s
NC602 **NORSAR Array S** 47.60 323 *e*P **P** 12 42 21.0 -0.1
JAVS **Javornik** 47.66 302 *i* P **P** 12 42 22.1 +0.3
VOY **Vojsko** 47.74 303 *e*P **P** 12 42 22.3 -0.2
VOY *e* 12 42 22.7
VOY *e* 12 42 26.9
VOY *e* 12 42 34.7
VOY *e* 12 42 57.4
NB2 **NORSAR Subarra** 47.76 323 P **P** 12 42 22.1 -0.2
comp=Z,85nm,0.6s,baz=90,slow=7.9
NB2 **NORSAR Subarra** 47.76 323 P **P** 12 42 22.1 -0.2
baz=90,slow=7.9
NOA **NORSAR Array B** 47.76 323 P **P** 12 42 22.4 +0.1
NOA S **S** 12 49 10.2 -1.4
NOA **NORSAR Array B** 47.76 323 P **P** 12 42 22.4 +0.1
comp=Z,84nm,0.7s,baz=91,slow=7.6,SNR=496
NOA S **S** 12 49 10.2 -1.4
comp=Z,3.1nm,1.0s,baz=94,slow=13,SNR=4.2
NOA LR LR 13 03 20.3
comp=Z,112nm,21.8s,baz=110,slow=37
MYKA **Terra Mystica** 47.79 303⇑ *i*P **P** 12 42 23.1 +0.3
comp=Z,14nm,1.1s
CUC **Castrococco** 47.84 294 *e*P **P** 12 42 23.6 +0.4
comp=Z,97nm,0.8s
WET **Wettzell** 47.84 307 *e*P **P** 12 42 23.6 +0.5
comp=Z,12nm,0.6s
WET **Wettzell** 47.84 307 *e*P **P** 12 42 23.6 +0.5
WET pmax pmax
comp=Z,12nm,0.6s
TANN **Tannenbergstha** 47.90 309 *e*P **P** 12 42 24.2 +0.6
comp=Z,26nm,1.0s
TRI **Trieste** 47.90 302 *e*P **P** 12 42 24.0 +0.5
TRI pmax pmax
comp=Z,94nm,1.0s
TRI **Trieste** 47.90 302 *e*P **P** 12 42 24.0 +0.5
comp=Z,94nm,1.0s
KBA **Koelnbreinsper** 47.91 304 *i* P **P** 12 42 24.0 +0.2
comp=Z,24nm,1.2s,SNR=11
NAO01 **NORSAR Array S** 47.92 323 *e*P **P** 12 42 23.2 -0.3
comp=Z,48nm,0.6s
NKC **Novy Kostel** 47.94 308⇑ *i*P **P** 12 42 24.6 +0.8
NKC *e* 12 42 48.7
NKC **Novy Kostel** 47.94 308⇑ *i*P **P** 12 42 24.6 +0.8
NKC *e*pP **pP** 12 42 48.7 +2.4
MAJO **Matsushiro** 48.13 71 *e*P **P** 12 42 25.1 -0.4
MAJO **Matsushiro** 48.13 71 *e*P **P** 12 42 25.1 -0.4
MAT **Matsushiro** 48.13 71 P **P** 12 42 24.8 -0.7
MAT S **S** 12 49 14.8 -2.5
MJAR **Matsushiro Arr** 48.13 71 P **P** 12 42 25.8 +0.3
MJAR **Matsushiro Arr** 48.13 71 P **P** 12 42 25.8 +0.3
comp=Z,34nm,0.8s,baz=285,slow=9.8,SNR=89
RJOB **Jochberg** 48.14 305 *e*P **P** 12 42 25.9 +0.4
comp=Z,13nm,0.8s
ROTZ **Rotzenmuhle** 48.16 308 *e*P **P** 12 42 26.5 +0.9
comp=Z,19nm,0.9s
TBLU **Trondheim** 48.23 326 *e*P P 12 42 20.2 -5.6
CEL **Celeste** 48.28 292 *e*P **P** 12 42 27.1 +0.4
comp=Z,47nm,1.0s
MOX **Moxa** 48.40 309 *e*P **P** 12 42 27.7 +0.4
comp=Z,26nm,0.9s
MOX **Moxa** 48.40 309 *e*P **P** 12 42 27.7 +0.4
MOX pmax pmax
comp=Z,26nm,0.9s
KONO **Kongsberg** 48.60 321 *e*P **P** 12 42 28.7 -0.1
KONO AMB AMB 12 42 29.9
KONO **Kongsberg** 48.60 321 *e*P **P** 12 42 28.6 -0.1
KONO pmax pmax
comp=Z,86nm,0.8s
KONO **Kongsberg** 48.60 321 *e*P **P** 12 42 28.6 -0.1
comp=Z,86nm,0.8s
MYLDM **Lahad Datu** 48.65 120 P **P** 12 42 31.6 +1.9
YSS **Yuzh-Sakhalins** 48.66 56⇑ *e*P **P** 12 42 30.2 +0.8
YSS *e* 12 43 05.0
YSS pmax pmax
comp=Z,90nm,1.2s
BSEG **Bad Segeberg** 48.71 314 *e*P **P** 12 42 30.6 +1.0
comp=Z,101nm,0.8s
BSEG **Bad Segeberg** 48.71 314 *e*P **P** 12 42 30.6 +1.0
BSEG pmax pmax
comp=Z,101nm,0.8s
GRF **Grafenberg Arr** 48.81 308 *e*P **P** 12 42 32.1 +1.6
comp=Z,50nm,1.0s
GRF *eL* L 13 04 58.3
comp=Z,78nm,18.5s
GRF **Grafenberg Arr** 48.81 308 *e*P **P** 12 42 32.1 +1.6
GRF pmax pmax
comp=Z,50nm,1.0s
GRF MLR MLR
comp=Z,100nm,18.5s
GRFO **Grafenberg** 48.81 308 *e*P **P** 12 42 30.7 +0.2
GRFO pmax pmax
comp=Z,82nm,1.2s
GRFO **Grafenberg** 48.81 308 *e*P **P** 12 42 30.7 +0.2
comp=Z,82nm,1.2s
TSM **Tawau** 48.84 121 P **P** 12 42 31.0 -0.1
AQU **L'Aquila** 48.95 298 *e*P **P** 12 42 32.1 +0.4
comp=Z,59nm,0.9s
SPA0 **Spitsbergen Ar** 48.99 346 *e*P **P** 12 42 32.4 +0.9
WTTA **Wattenberg** 49.01 305⇑ *i*P **P** 12 42 32.1 -0.2
comp=Z,44nm,1.0s
NRDL **Niedersach Rie** 49.04 312 *e*P **P** 12 42 32.8 +0.7
comp=Z,55nm,0.9s
FUR **Furstenfeldbru** 49.06 306 *e*P **P** 12 42 33.7 +1.2
comp=Z,93nm,0.8s
FUR **Furstenfeldbru** 49.06 306 *e*P **P** 12 42 33.7 +1.2
FUR pmax pmax
comp=Z,93nm,0.8s
MUD **Monsted U'grnd** 49.07 317 *i* P **P** 12 42 31.7 -0.6
MUD pmax pmax
comp=Z,23nm,1.0s
MUD **Monsted U'grnd** 49.07 317 *i* P **P** 12 42 31.7 -0.6
comp=Z,23nm,0.9s
MUD *i* 12 42 45.7
ASAJ **Asahikawa** 49.20 60 *e*P **P** 12 42 32.9 -0.6
MOTA **Moosalm** 49.34 305⇑ *i*P **P** 12 42 34.0 -0.8
comp=Z,32nm,0.9s,SNR=15
UBBA **Unterbreizbach** 49.38 309 *e*P **P** 12 42 35.0 +0.3
comp=Z,12nm,0.8s
MOL **Molde** 49.48 325 *e*P **P** 12 42 36.3 +1.0
RETA **Reutte** 49.54 305⇑ *i*P **P** 12 42 36.1 -0.1
comp=Z,47nm,1.6s,SNR=15
FETA **Feichten** 49.67 304⇑ *i*P **P** 12 42 36.7 -0.5
comp=Z,27nm,0.8s,SNR=19
KBS **Kingsbay** 50.07 347 *e*P **P** 12 42 40.0 +0.4
KBS *e*S **S** 12 49 45.0 +1.7
KBS *e*SS **SS** 12 53 20.6 +3.8
KBS **Kingsbay** 50.07 347*d* *i*P **P** 12 42 40.4 +0.8
KBS pmax pmax
comp=Z,52nm,1.0s
KBS **Kingsbay** 50.07 347 *e*P **P** 12 42 40.1 +0.5
comp=Z,35nm,0.8s
FUORN **Ofenpass-Fuorn** 50.07 304 *e*P **P** 12 42 40.6 +0.2
ERM **Erimo** 50.15 62*c* *i*P **P** 12 42 41.0 +0.2
ERM pmax pmax
comp=Z,5.0nm,0.4s
ERM **Erimo** 50.15 62 *e*P **P** 12 42 41.3 +0.6
comp=Z,53nm,1.4s
ERM **Erimo** 50.15 62 P **P** 12 42 41.4 +0.6
comp=Z,151nm,0.7s,SNR=14
DAVA **Damuels** 50.17 305 *i* P **P** 12 42 41.0 -0.1
comp=Z,137nm,0.9s,SNR=61
STU **Stuttgart** 50.29 307 *e*P **P** 12 42 42.4 +0.6
comp=Z,76nm,1.0s
STU **Stuttgart** 50.29 307 *e*P **P** 12 42 42.4 +0.6
STU pmax pmax
comp=Z,75nm,1.1s
STU **Stuttgart** 50.29 307 *e*P **P** 12 42 42.4 +0.6
comp=Z,75nm,1.1s
TNS **Taunus Mts** 50.46 309 *e*P **P** 12 42 43.6 +0.5
comp=Z,18nm,0.7s
TNS **Taunus Mts** 50.46 309 *e*P **P** 12 42 43.6 +0.5
TNS pmax pmax
comp=Z,18nm,0.7s
IBBN **Ibbenburen** 50.49 312 *e*P **P** 12 42 43.9 +0.7
comp=Z,27nm,0.6s
VLC **Villacollemand** 50.60 301 *e*P **P** 12 42 45.0 +0.8
comp=Z,85nm,0.9s
RUND **Rundenannen** 50.66 322 *e*P **P** 12 42 44.1 -0.3
RUND AMB AMB 12 42 45.6
comp=Z,165nm,1.1s
SPAK **Spaichingen-Ko** 50.70 306 *e*P **P** 12 42 45.5 +0.5
TUE **Stuetta** 50.72 304 *e*P **P** 12 42 44.6 -0.6
comp=Z,16nm,0.7s
ASK **Askoy** 50.74 322 *e*P **P** 12 42 44.3 -0.6
ASK AMB AMB 12 42 46.0
comp=Z,112nm,1.0s
EGD **Espegrend** 50.75 322 *e*P **P** 12 42 44.4 -0.6
EGD AMB AMB 12 42 46.2
comp=Z,98nm,1.4s
BUG **Bochum--Univer** 50.95 311 *e*P **P** 12 42 47.2 +0.6
comp=Z,44nm,0.9s
WTSB **Winterswijk** 51.13 311 *e*P **P** 12 42 48.2 +0.3
comp=Z,63nm,0.8s
LANF **Langenberg** 51.14 307⇑ *e*P **P** 12 42 48.8 +0.7
LANF **Langenberg** 51.14 307⇑ *e*P **P** 12 42 48.8 +0.7
LANF **Langenberg** 51.14 307⇑ *e*P **P** 12 42 48.8 +0.7
FELD **Feldberg im Sc** 51.27 306⇑ *e*P **P** 12 42 49.3 0.0
FELD **Feldberg im Sc** 51.27 306⇑ *e*P **P** 12 42 49.3 0.0
RUP **Ruppelstein** 51.45 309 *e*P **P** 12 42 51.1 +0.6
RUP **Ruppelstein** 51.45 309 *e*P **P** 12 42 51.1 +0.6
COCO **West Island** 51.49 156 *e*P P 12 42 58.5 +7.5
COCO **West Island** 51.49 156 *e*P P 12 42 58.5 +7.5
YUK **Yuzh-Kuril'sk** 51.49 59⇓ *i*P **P** 12 42 49.0 -1.8
YUK *e* 12 44 49.5
YUK *e*S **S** 12 50 07.5 +3.7
CDF **Champ du Feu** 51.61 307 *e*P **P** 12 42 51.8 0.0
comp=Z,88nm,1.1s
CDF **Champ du Feu** 51.61 307 *e*P **P** 12 42 51.8 0.0
CDF pmax pmax
comp=Z,88nm,1.1s
CDF **Champ du Feu** 51.61 307 *e*P **P** 12 42 51.8 0.0
comp=Z,88nm,1.1s
BBS **Basel-Blauen** 51.69 306 *e*P **P** 12 42 52.4 +0.1
BBS **Basel-Blauen** 51.69 306 *e*P **P** 12 42 52.4 +0.1
SEY **Seymchan** 51.71 34*c* *i*P **P** 12 42 52.5 +0.4
ECH **Echery** 51.74 307 *e*P **P** 12 42 52.5 -0.1
ECH pmax pmax
comp=Z,28nm,1.2s
ECH **Echery** 51.74 307 *e*P **P** 12 42 52.5 -0.1
comp=Z,28nm,1.2s
MOF **Molkenrain** 51.84 306⇑ *e*P **P** 12 42 53.8 +0.3
MOF **Molkenrain** 51.84 306⇑ *e*P **P** 12 42 53.8 +0.3
MOF **Molkenrain** 51.84 306⇑ *e*P **P** 12 42 53.8 +0.3
MEM **Membach** 51.91 310 P **P** 12 42 54.0 +0.2
comp=Z,34nm,1.1s
HGN **Heimansgroeve** 51.92 310 *e*P **P** 12 42 54.0 +0.1
comp=Z,22nm,0.7s
PGF **Pioggiola** 52.02 299 *e*P **P** 12 42 54.8 -0.1
comp=Z,106nm,0.9s
PGF *e*pP **pP** 12 43 19.2 +1.5
PGF **Pioggiola** 52.02 299 *e*P **P** 12 42 54.8 -0.1
PGF *e**PP **pP** 12 43 19.2 +1.5
PGF pmax pmax
comp=Z,106nm,0.9s
PGF **Pioggiola** 52.02 299 *e*P **P** 12 42 54.8 -0.1
comp=Z,106nm,0.9s
PGF *e*pP **pP** 12 43 19.2 +1.5
WLF **Walferdange** 52.03 309 P **P** 12 42 54.8 +0.1
comp=Z,51nm,1.2s
WLF **Walferdange** 52.03 309 *e*P **P** 12 42 55.8 +1.0
comp=Z,43nm,0.8s
WLF **Walferdange** 52.03 309 *e*P **P** 12 42 55.2 +0.4
WLF pmax pmax
comp=Z,56nm,0.8s
WLF **Walferdange** 52.03 309 *e*P **P** 12 42 55.2 +0.4
comp=Z,56nm,0.8s
HINF **Hinteralfeld** 52.03 306 *e*P **P** 12 42 54.9 0.0
comp=Z,163nm,0.9s
HINF *e*pP **pP** 12 43 19.1 +1.5
comp=Z,163nm,0.9s
HINF **Hinteralfeld** 52.03 306 *e*P **P** 12 42 54.9 0.0
HINF *e**PP **pP** 12 43 19.1 +1.5
HINF pmax pmax
comp=Z,163nm,0.9s
HINF **Hinteralfeld** 52.03 306 *e*P **P** 12 42 54.9 0.0
comp=Z,163nm,0.9s
HINF *e*pP **pP** 12 43 19.1 +1.5
BEBN **Eben Emael** 52.07 310 P **P** 12 42 55.3 +0.3
comp=Z,8.9nm,1.2s
SENIN **Lac Senin/Sane** 52.12 304 *e*P **P** 12 42 55.5 -0.2
LOMF **Lomont** 52.17 306⇑ *e*P **P** 12 42 55.7 -0.2
LOMF **Lomont** 52.17 306⇑ *e*P **P** 12 42 55.7 -0.2
LOMF **Lomont** 52.17 306⇑ *e*P **P** 12 42 55.7 -0.2
HAU **Haudompre** 52.31 307 *e*P **P** 12 42 57.0 +0.1
comp=Z,147nm,1.0s
HAU *eR*
comp=Z,46nm,20.0s
HAU **Haudompre** 52.31 307 *e*P **P** 12 42 57.0 +0.1
HAU pmax pmax

comp=Z,147nm,1.0s
HAU Haudompre 52.31 307 *e*P **P 12 42 57.0 +0.1**
comp=Z,147nm,1.0s
BCLA Clavier 52.39 310 P **P 12 42 58.0 +0.6**
comp=Z,13nm,1.0s
PAGF Fort de Pagny 52.58 307⇑*i*P **P 12 42 59.4 +0.6**
comp=Z,38nm,1.0s
PAGF Fort de Pagny 52.58 307⇑*i*P **P 12 42 59.4 +0.6**
comp=Z,38nm,1.0s
SAOF Saorge 52.61 301⇑*e*P **P 12 42 59.8 +0.7**
SAOF Saorge 52.61 301⇑*e*P **P 12 42 59.8 +0.7**
SAOF Saorge 52.61 301⇑*e*P **P 12 42 59.8 +0.7**
AUTN L'Aution 52.69 301⇑*e*P **P 12 43 01.8 +1.8**
AUTN L'Aution 52.69 301⇑*e*P **P 12 43 01.8 +1.8**
AUTN L'Aution 52.69 301⇑*e*P **P 12 43 01.8 +1.8**
LPG La Plagne 52.72 303 *e*P **P 12 43 00.8 +0.5**
comp=Z,181nm,0.8s
LPG La Plagne 52.72 303 *e*P **P 12 43 00.8 +0.5**
LPG pmax pmax
comp=Z,181nm,0.8s
LPG La Plagne 52.72 303 *e*P **P 12 43 00.8 +0.5**
comp=Z,181nm,0.8s
SBF Sospel 52.73 301 *e*P **P 12 43 00.5 +0.4**
comp=Z,303nm,0.9s
SBF Sospel 52.73 301 *e*P **P 12 43 00.5 +0.4**
SBF pmax pmax
comp=Z,303nm,0.9s
SBF Sospel 52.73 301 *e*P **P 12 43 00.5 +0.4**
comp=Z,303nm,0.9s
LPL La Plagne 52.73 303 *e*P **P 12 43 00.8 +0.5**
comp=Z,236nm,0.9s
LPL La Plagne 52.73 303 *e*P **P 12 43 00.8 +0.5**
LPL pmax pmax
comp=Z,237nm,0.9s
LPL La Plagne 52.73 303 *e*P **P 12 43 00.8 +0.5**
comp=Z,236nm,0.9s
KMBO Kilima Mbogo 52.73 234 *e*P **P 12 43 01.7 +1.0**
KMBO Kilima Mbogo 52.73 234 P **P 12 43 01.9 +1.2**
KMBO Kilima Mbogo 52.73 234 P **P 12 43 02.3 +1.7**
SNR=6.3
KMBO Kilima Mbogo 52.73 234 P **P 12 43 01.9 +1.2**
comp=Z,13nm,0.9s,baz=32,slow=11,SNR=20
KMBO LR LR 13 05 17.7
comp=Z,125nm,18.6s,baz=93,slow=36
GIVF Givet 52.76 309 *e*P **P 12 43 00.7 +0.6**
comp=Z,140nm,0.8s
GIVF Givet 52.76 309 *e*P **P 12 43 00.7 +0.6**
GIVF pmax pmax
comp=Z,140nm,0.8s
GIVF Givet 52.76 309 *e*P **P 12 43 00.7 +0.6**
comp=Z,140nm,0.8s
REVF Revere 52.81 301 *e*P **P 12 43 00.9 +0.2**
REVF Revere 52.81 301 *e*P **P 12 43 00.9 +0.2**
REVF Revere 52.81 301 *e*P **P 12 43 00.9 +0.2**
TOUF Mont Tournerai 52.81 302⇑*e*P **P 12 43 01.5 +0.7**
TOUF Mont Tournerai 52.81 302⇑*e*P **P 12 43 01.5 +0.7**
TOUF Mont Tournerai 52.81 302⇑*e*P **P 12 43 01.5 +0.7**
CABF La Chapelle 52.85 305 *e*P **P 12 43 01.2 +0.2**
comp=Z,109nm,0.9s
CABF La Chapelle 52.85 305 *e*P **P 12 43 01.2 +0.2**
CABF pmax pmax
comp=Z,109nm,0.9s
CABF La Chapelle 52.85 305 *e*P **P 12 43 01.2 +0.2**
comp=Z,109nm,0.9s
DOU Dourbes 52.91 309 P **P 12 43 01.8 +0.6**
comp=Z,34nm,1.1s
MVIF Mont Vial 52.91 301⇑*e*P **P 12 43 02.0 +0.5**
MVIF Mont Vial 52.91 301⇑*e*P **P 12 43 02.0 +0.5**
MVIF Mont Vial 52.91 301⇑*e*P **P 12 43 02.0 +0.5**
MBDF Montbardon 52.93 303 *e*P **P 12 43 01.2 -0.4**
comp=Z,61nm,0.7s
MBDF Montbardon 52.93 303 *e*P **P 12 43 01.2 -0.4**
MBDF pmax pmax
comp=Z,61nm,0.7s
MBDF Montbardon 52.93 303 *e*P **P 12 43 01.2 -0.4**
comp=Z,61nm,0.7s
MEZF Maizieres J'vi 53.02 307 *e*P **P 12 43 02.6 +0.5**
comp=Z,201nm,1.0s
MEZF Maizieres J'vi 53.02 307 *e*P **P 12 43 02.6 +0.5**
comp=Z,201nm,1.0s
SFTF Sexfontaines 53.11 307 *e*P **P 12 43 02.9 +0.2**
comp=Z,132nm,1.0s
SFTF Sexfontaines 53.11 307 *e*P **P 12 43 02.9 +0.2**
comp=Z,132nm,1.0s
CALN Calern 53.13 301⇑*e*P **P 12 43 03.4 +0.2**
CALN Calern 53.13 301⇑*e*P **P 12 43 03.4 +0.2**
CALN Calern 53.13 301⇑*e*P **P 12 43 03.4 +0.2**
BAIF Baives 53.16 310 *e*P **P 12 43 03.6 +0.6**
comp=Z,156nm,1.2s
BAIF Baives 53.16 310 *e*P **P 12 43 03.6 +0.6**
BAIF pmax pmax
comp=Z,156nm,1.2s
BAIF Baives 53.16 310 *e*P **P 12 43 03.6 +0.6**
comp=Z,156nm,1.2s
FRF La Foret Royal 53.36 301 *e*P **P 12 43 04.7 0.0**
comp=Z,99nm,0.8s
FRF La Foret Royal 53.36 301 *e*P **P 12 43 04.7 0.0**
FRF pmax pmax
comp=Z,99nm,0.8s
FRF La Foret Royal 53.36 301 *e*P **P 12 43 04.7 0.0**
comp=Z,99nm,0.8s
ORIF Oris-en-Rattie 53.48 303 *e*P **P 12 43 05.2 -0.4**
comp=Z,31nm,0.8s
ORIF *e*R
comp=Z,132nm,22.0s
ORIF Oris-en-Rattie 53.48 303 *e*P **P 12 43 05.2 -0.4**
ORIF pmax pmax
comp=Z,31nm,0.8s
ORIF Oris-en-Rattie 53.48 303 *e*P **P 12 43 05.2 -0.4**
comp=Z,31nm,0.8s
LMR La Mourre 53.53 301 *e*P **P 12 43 05.9 +0.1**
comp=Z,89nm,1.2s
LMR La Mourre 53.53 301 *e*P **P 12 43 05.9 +0.1**
LMR pmax pmax
comp=Z,89nm,1.2s
LMR La Mourre 53.53 301 *e*P **P 12 43 05.9 +0.1**
comp=Z,89nm,1.2s
LRW Lerwick 53.93 323⇑*e*P **P 12 43 08.4 -0.1**
LRW AMB AMB 12 43 09.2
comp=Z,75nm,1.0s
LRW Lerwick 53.93 323 P **P 12 43 08.4 -0.1**
LRW AMB AMB 12 43 09.2
comp=Z,75nm,1.0s
SMRF Simiane la Rot 53.97 302 *e*P **P 12 43 09.4 +0.2**
comp=Z,61nm,1.2s
SMRF Simiane la Rot 53.97 302 *e*P **P 12 43 09.4 +0.2**
comp=Z,61nm,1.2s
KEST Kesra 54.07 291 *e*P **P 12 43 10.2 +0.2**
KEST Kesra 54.07 291 P **P 12 43 10.6 +0.6**
comp=Z,5.7nm,0.7s,baz=349,slow=2.1,SNR=24
LOR Lormes 54.13 306 *e*P **P 12 43 09.7 -0.6**
comp=Z,84nm,0.8s
LOR *e*R
comp=Z,63nm,19.0s
LOR Lormes 54.13 306 *e*P **P 12 43 09.7 -0.6**
comp=Z,84nm,0.8s
SSB Saint Sauveur 54.27 304 *e*P **P 12 43 11.2 -0.1**
SSB pmax pmax
comp=Z,43nm,0.8s
SSB Saint Sauveur 54.27 304 *e*P **P 12 43 11.2 -0.1**
comp=Z,42nm,0.8s
SSB Saint Sauveur 54.27 304⇑*e*P **P 12 43 11.5 +0.2**
VIVF Saint-Julien-l 54.31 303 *e*P **P 12 43 11.8 +0.2**
comp=Z,56nm,0.8s
VIVF Saint-Julien-l 54.31 303 *e*P **P 12 43 11.8 +0.2**
VIVF pmax pmax
comp=Z,56nm,0.8s
VIVF Saint-Julien-l 54.31 303 *e*P **P 12 43 11.8 +0.2**
comp=Z,56nm,0.8s
SMF Signal de Mont 54.33 306 *e*P **P 12 43 11.5 -0.2**
comp=Z,211nm,0.9s
SMF *e*pP **pP 12 43 35.8 +1.2**
SMF Signal de Mont 54.33 306 *e*P **P 12 43 11.5 -0.2**
SMF *e**PP **pP 12 43 35.8 +1.2**
SMF pmax pmax
comp=Z,211nm,0.9s
SMF Signal de Mont 54.33 306 *e*P **P 12 43 11.5 -0.2**
comp=Z,211nm,0.9s
SMF *e*pP **pP 12 43 35.8 +1.2**
SSF Saint Saulge 54.43 306 *e*P **P 12 43 12.1 -0.3**
comp=Z,143nm,0.9s
SSF *e*pP **pP 12 43 36.4 +1.1**
SSF Saint Saulge 54.43 306 *e*P **P 12 43 12.1 -0.3**
SSF *e**PP **pP 12 43 36.4 +1.1**
SSF pmax pmax
comp=Z,143nm,0.9s
SSF Saint Saulge 54.43 306 *e*P **P 12 43 12.1 -0.3**
comp=Z,143nm,0.9s
SSF *e*pP **pP 12 43 36.4 +1.1**
AVF Avril sur Loir 54.61 306 *e*P **P 12 43 13.5 -0.1**
comp=Z,210nm,0.9s
AVF Avril sur Loir 54.61 306 *e*P **P 12 43 13.5 -0.1**
AVF pmax pmax
comp=Z,210nm,0.9s
AVF Avril sur Loir 54.61 306 *e*P **P 12 43 13.5 -0.1**
comp=Z,210nm,0.9s
ELSH Elham, Standar 54.76 311⇑*e*P **P 12 43 14.7 0.0**
ELSH AMB AMB 12 43 16.0
comp=Z,180nm,1.0s
ELSH Elham, Standar 54.76 311 P **P 12 43 14.7 0.0**
ELSH AMB AMB 12 43 16.0
comp=Z,180nm,1.0s
HYF Humbligny 54.93 307 *e*P **P 12 43 16.2 +0.2**
HYF Humbligny 54.93 307 *e*P **P 12 43 16.2 +0.2**
AGO Saint Agoulin 54.98 305⇑*e*P **P 12 43 16.8 +0.4**
AGO Saint Agoulin 54.98 305⇑*e*P **P 12 43 16.8 +0.4**
BGF Bois d'Agland 55.01 306 *e*P **P 12 43 16.3 -0.3**
comp=Z,66nm,0.9s
BGF Bois d'Agland 55.01 306 *e*P **P 12 43 16.3 -0.3**
BGF pmax pmax
comp=Z,67nm,0.9s
BGF Bois d'Agland 55.01 306 *e*P **P 12 43 16.3 -0.3**
comp=Z,66nm,0.9s
LASF Ste Croix 55.12 303 *e*P **P 12 43 17.8 +0.4**
comp=Z,153nm,1.1s
LASF Ste Croix 55.12 303 *e*P **P 12 43 17.8 +0.4**
comp=Z,153nm,1.1s
PYM Petit Puy Mans 55.15 305⇑*e*P **P 12 43 18.1 +0.4**
PYM Petit Puy Mans 55.15 305⇑*e*P **P 12 43 18.1 +0.4**
PYM Petit Puy Mans 55.15 305⇑*e*P **P 12 43 18.1 +0.4**
LBL Lubilhac 55.16 304 *e*P **P 12 43 18.2 +0.4**
LBL Lubilhac 55.16 304 *e*P **P 12 43 18.2 +0.4**
LBL Lubilhac 55.16 304 *e*P **P 12 43 18.2 +0.4**
CMAH Djebel Manchou 55.18 293 P **P 12 43 17.8 -0.2**
ABSA Djebel Ababsia 55.27 292 P **P 12 43 19.1 +0.4**
DRUM Mains of Drumt 55.32 319 *e*P **P 12 43 18.1 -0.5**
DRUM AMB AMB 12 43 19.3
comp=Z,59nm,0.9s
DRUM Mains of Drumt 55.32 319 P **P 12 43 18.1 -0.5**
DRUM AMB AMB 12 43 19.3
comp=Z,59nm,0.9s
MME1 Meikle Cairn 55.47 319⇑*i*P **P 12 43 19.4 -0.3**
MME1 Meikle Cairn 55.47 319 P **P 12 43 19.4 -0.3**
TCF Toulx Ste Croi 55.51 306 *e*P **P 12 43 20.4 +0.2**
comp=Z,184nm,1.0s
TCF Toulx Ste Croi 55.51 306 *e*P **P 12 43 20.4 +0.2**
TCF pmax pmax
comp=Z,184nm,1.0s
TCF Toulx Ste Croi 55.51 306 *e*P **P 12 43 20.4 +0.2**
comp=Z,184nm,1.0s
MCD Coleburn Disti 55.55 320⇑*i*P **P 12 43 20.4 +0.1**
MCD Coleburn Disti 55.55 320 P **P 12 43 20.4 +0.1**
ESY Stoneypath 55.64 318⇑*i*P **P 12 43 20.8 -0.2**
ESY Stoneypath 55.64 318 P **P 12 43 20.8 -0.2**
XAL Allendale 55.70 316⇑*e*P **P 12 43 21.3 -0.2**
XAL Allendale 55.70 316 P **P 12 43 21.3 -0.2**
EBL Broad Law 55.91 318⇑*i*P **P 12 43 22.7 -0.2**
EBL Broad Law 55.91 318 P **P 12 43 22.7 -0.2**
MVH1 Achvaich 55.95 320⇑*i*P **P 12 43 22.6 -0.5**
MVH1 Achvaich 55.95 320 P **P 12 43 22.6 -0.5**
EDI Edinburgh 55.95 318 AMB AMB 12 43 22.2
comp=Z,80nm,0.8s
EDI Edinburgh 55.95 318 AMB AMB 12 43 22.2
comp=Z,80nm,0.8s
CASM Ain Smara 56.01 293 P **P 12 43 24.1 +0.1**
CAF Calviac 56.05 304 *e*P **P 12 43 24.5 +0.4**
comp=Z,121nm,0.8s
CAF Calviac 56.05 304 *e*P **P 12 43 24.5 +0.4**
CAF pmax pmax
comp=Z,121nm,0.8s
CAF Calviac 56.05 304 *e*P **P 12 43 24.5 +0.4**
comp=Z,121nm,0.8s
ELO Logie Almond 56.09 319 *e*P **P 12 43 23.8 -0.3**
ELO Logie Almond 56.09 319 P **P 12 43 23.8 -0.3**
EAU Auchinoon 56.11 318⇑*e*P **P 12 43 24.3 0.0**
EAU Auchinoon 56.11 318 P **P 12 43 24.3 0.0**
ECK Cauldkaine Hil 56.12 317⇑*i*P **P 12 43 24.2 -0.2**
ECK Cauldkaine Hil 56.12 317 P **P 12 43 24.2 -0.2**
ESK Eskdalemuir 56.13 317⇑*e*P **P 12 43 24.1 -0.3**
ESK AMB AMB 12 43 25.4
comp=Z,74nm,1.0s
ESK Eskdalemuir 56.13 317 P **P 12 43 24.1 -0.3**
ESK AMB AMB 12 43 25.4
comp=Z,74nm,1.0s
ESK Eskdalemuir 56.13 317 *e*P **P 12 43 24.1 -0.3**
ESK pmax pmax
comp=Z,77nm,0.9s
ESK Eskdalemuir 56.13 317 *e*P **P 12 43 24.1 -0.3**
comp=Z,76nm,0.9s
ESK Eskdalemuir 56.13 317 P **P 12 43 24.7 +0.3**
comp=Z,500nm,0.7s,SNR=13
WOL Wolverton 56.13 312⇑*e*P **P 12 43 24.4 -0.1**
WOL AMB AMB 12 43 25.7
comp=Z,170nm,1.0s
WOL Wolverton 56.13 312 P **P 12 43 24.4 -0.1**
WOL AMB AMB 12 43 25.7
comp=Z,170nm,1.0s
CTEI Djebel Teioual 56.15 293 P **P 12 43 25.3 +0.3**
MDO Dochfour 56.17 320⇑*e*P **P 12 43 23.9 -0.8**
MDO Dochfour 56.17 320 P **P 12 43 23.9 -0.8**
KESW Keswick, Cumbr 56.27 316⇑*e*P **P 12 43 25.7 +0.2**
KESW AMB AMB 12 43 26.3
comp=Z,72nm,0.9s
KESW Keswick, Cumbr 56.27 316 P **P 12 43 25.7 +0.2**
KESW AMB AMB 12 43 26.3
comp=Z,72nm,0.9s
LDF La Druitiere 56.29 309 *e*P **P 12 43 25.5 -0.2**
comp=Z,215nm,0.7s
LDF La Druitiere 56.29 309 *e*P **P 12 43 25.5 -0.2**
LDF pmax pmax
comp=Z,215nm,0.7s
LDF La Druitiere 56.29 309 *e*P **P 12 43 25.5 -0.2**
comp=Z,215nm,0.7s
RJF Les Rejaudoux 56.29 305 *e*P **P 12 43 26.3 +0.5**
comp=Z,88nm,0.9s
RJF *e*R
comp=Z,57nm,20.8s
RJF Les Rejaudoux 56.29 305 *e*P **P 12 43 26.3 +0.5**
RJF pmax pmax
comp=Z,88nm,0.9s
RJF Les Rejaudoux 56.29 305 *e*P **P 12 43 26.3 +0.5**
comp=Z,88nm,0.9s
SSW Stow on the Wo 56.31 313⇑*e*P **P 12 43 26.2 +0.4**
SSW Stow on the Wo 56.31 313 P **P 12 43 26.2 +0.4**
SJAF Saint Jean de 56.32 301⇑*e*P **P 12 43 26.0 0.0**
SJAF Saint Jean de 56.32 301⇑*e*P **P 12 43 26.0 0.0**
DFRA Djebel Bou Aff 56.35 293 P **P 12 43 26.7 +0.2**
DAG Danmarks Havn 56.46 344 *i* P **P 12 43 25.6 -0.9**
DAG pmax pmax
comp=Z,24nm,0.9s
DAG Danmarks Havn 56.46 344 *i* P **P 12 43 25.6 -0.9**
comp=Z,28nm,0.9s
FLN La Foliniere 56.46 309 *e*P **P 12 43 26.5 -0.4**
comp=Z,125nm,0.9s
FLN *e*R
comp=Z,145nm,21.8s
FLN La Foliniere 56.46 309 *e*P **P 12 43 26.5 -0.4**
FLN pmax pmax
comp=Z,125nm,0.9s
FLN La Foliniere 56.46 309 *e*P **P 12 43 26.5 -0.4**
comp=Z,125nm,0.9s
PETK Petropavlovsk- 56.47 45 P **P 12 43 26.6 -0.3**
PETK *PP **pP 12 43 51.5 +1.5**
PETK *SP **sP 12 44 01.5 +1.1**
PETK pmax pmax
comp=Z,12nm,1.0s
PETK MLR MLR
comp=Z,72nm,18.1s
PETK Petropavlovsk- 56.47 45 P **P 12 43 26.6 -0.3**
PETK pP **pP 12 43 51.5 +1.5**
PETK sP **sP 12 44 01.5 +1.1**
PETK Petropavlovsk- 56.47 45 P **P 12 43 26.6 -0.3**
comp=Z,12nm,1.0s,baz=224,slow=3.2,SNR=8.6
PETK pP **pP 12 43 51.5 +1.5**
comp=Z,4.9nm,0.8s,baz=252,slow=7.6,SNR=3.2
PETK sP **sP 12 44 01.5 +1.1**
comp=Z,20nm,0.9s,baz=207,slow=5.8,SNR=7.4
PETK LR LR 13 10 46.1
comp=Z,72nm,18.1s,baz=104,slow=39
MTLF Montolieu 56.48 302 *e*P **P 12 43 27.4 +0.2**
comp=Z,54nm,0.8s
MTLF Montolieu 56.48 302 *e*P **P 12 43 27.4 +0.2**
MTLF pmax pmax
comp=Z,54nm,0.8s
MTLF Montolieu 56.48 302 *e*P **P 12 43 27.4 +0.2**
comp=Z,54nm,0.8s
EAB Aberfoyle 56.50 318⇑*e*P **P 12 43 27.0 0.0**
EAB Aberfoyle 56.50 318 P **P 12 43 27.0 0.0**
FILF Fillols 56.52 301⇑*e*P **P 12 43 28.0 +0.5**
FILF Fillols 56.52 301⇑*e*P **P 12 43 28.0 +0.5**
BILL Bilibino 56.52 27*c i*P **P 12 43 27.5 +0.5**
BILL *i* 12 44 21.5
BILL pmax pmax
comp=Z,31nm,1.2s
KAC Achnashellach 56.64 320⇑*i*P **P 12 43 27.9 -0.1**
KAC Achnashellach 56.64 320 P **P 12 43 27.9 -0.1**
PGBU Glenifferbraes 56.69 318⇑*e*P **P 12 43 28.6 +0.3**
PGBU AMB AMB 12 43 29.1
comp=Z,82nm,0.8s
PGBU Glenifferbraes 56.69 318 P **P 12 43 28.6 +0.3**
PGBU AMB AMB 12 43 29.1
comp=Z,82nm,0.8s
HLM1 Long Mynd 56.75 314⇑*e*P **P 12 43 28.6 -0.3**
HLM1 AMB AMB 12 43 29.6
comp=Z,44nm,1.0s
HLM1 Long Mynd 56.75 314 P **P 12 43 28.6 -0.3**
HLM1 AMB AMB 12 43 29.6
comp=Z,44nm,1.0s
CARF Carcanieres 56.78 302⇑*e*P **P 12 43 29.4 0.0**
CARF Carcanieres 56.78 302⇑*e*P **P 12 43 29.4 0.0**
KSB Sheil Bridge 56.78 320⇑*e*P **P 12 43 28.6 -0.5**
KSB Sheil Bridge 56.78 320 P **P 12 43 28.6 -0.5**
MBAR Mbarara 56.79 241 *e*P **P 12 43 28.9 -0.9**
MBAR Mbarara 56.79 241 P **P 12 43 29.0 -0.9**
comp=Z,109nm,0.6s,SNR=5.2
GRR Gorron 56.82 309 *e*P **P 12 43 29.1 -0.3**
comp=Z,277nm,0.7s
GRR Gorron 56.82 309 *e*P **P 12 43 29.1 -0.3**
GRR Gorron 56.82 309 *e*P **P 12 43 29.1 -0.3**
comp=Z,277nm,0.7s
FOEL Foel Wylfa 56.83 314 *e*P **P 12 43 28.9 -0.6**
FOEL AMB AMB 12 43 30.3
comp=Z,65nm,1.0s
FOEL Foel Wylfa 56.83 314 P **P 12 43 28.9 -0.6**
FOEL AMB AMB 12 43 30.3
comp=Z,65nm,1.0s
SET Setif 56.84 293 P **P 12 43 31.0 +1.1**
KPL Plockton 56.87 320⇑*e*P **P 12 43 29.5 -0.1**
KPL AMB AMB 12 43 30.6
comp=Z,60nm,0.8s
KPL Plockton 56.87 320 P **P 12 43 29.5 -0.1**
KPL AMB AMB 12 43 30.6
comp=Z,60nm,0.8s
LFF La Frestale 56.93 304 *e*P **P 12 43 30.7 +0.4**
comp=Z,111nm,0.9s
LFF La Frestale 56.93 304 *e*P **P 12 43 30.7 +0.4**
LFF pmax pmax
comp=Z,111nm,0.9s
LFF La Frestale 56.93 304 *e*P **P 12 43 30.7 +0.4**
comp=Z,111nm,0.9s
MFF Saint Martin d 56.95 307 *e*P **P 12 43 30.0 -0.4**
comp=Z,88nm,0.9s
MFF Saint Martin d 56.95 307 *e*P **P 12 43 30.0 -0.4**
MFF pmax pmax
comp=Z,88nm,0.9s
MFF Saint Martin d 56.95 307 *e*P **P 12 43 30.0 -0.4**
comp=Z,88nm,0.9s
VALF Valcebollere 56.95 301⇑*e*P **P 12 43 31.1 +0.4**
VALF Valcebollere 56.95 301⇑*e*P **P 12 43 31.1 +0.4**
MCH1 Michaelchurch 56.98 313⇑*e*P **P 12 43 30.1 -0.4**
MCH1 AMB AMB 12 43 31.4
comp=Z,147nm,0.8s
MCH1 Michaelchurch 56.98 313 P **P 12 43 30.1 -0.4**
MCH1 AMB AMB 12 43 31.4
comp=Z,147nm,0.8s
GAL1 Galloway 57.09 317⇑*e*P **P 12 43 30.8 -0.4**
GAL1 AMB AMB 12 43 32.4
comp=Z,55nm,1.0s
GAL1 Galloway 57.09 317 P **P 12 43 30.8 -0.4**
GAL1 AMB AMB 12 43 32.4
comp=Z,55nm,1.0s
WPM1 Penmaenmawr 57.12 315⇑*i*P **P 12 43 31.6 +0.1**
WPM1 Penmaenmawr 57.12 315 P **P 12 43 31.6 +0.1**
WME Myndd Eilian 57.30 315⇑*e*P **P 12 43 32.8 +0.1**
WME Myndd Eilian 57.30 315 P **P 12 43 32.8 +0.1**
YLL Llanberis 57.31 315⇑*e*P **P 12 43 32.9 +0.1**
YLL Llanberis 57.31 315 P **P 12 43 32.9 +0.1**
MLS Moulis 57.39 302⇑*e*P **P 12 43 33.5 -0.1**
MLS Moulis 57.39 302⇑*e*P **P 12 43 33.5 -0.1**
WLF1 Llynfaes 57.39 315⇑*e*P **P 12 43 33.6 +0.2**
WLF1 AMB AMB 12 43 34.1
comp=Z,53nm,0.9s
WLF1 Llynfaes 57.39 315 P **P 12 43 33.6 +0.2**
WLF1 AMB AMB 12 43 34.1
comp=Z,53nm,0.9s
YRE Yr Eifl 57.50 315⇑*e*P **P 12 43 34.4 +0.2**
YRE Yr Eifl 57.50 315 P **P 12 43 34.4 +0.2**
YRC Rhoscolyn 57.51 315⇑*i*P **P 12 43 34.3 +0.2**
YRC Rhoscolyn 57.51 315 P **P 12 43 34.3 +0.2**
EPF Esparros 57.88 302 *e*P **P 12 43 36.2 -0.8**
comp=Z,20nm,0.5s
EPF Esparros 57.88 302 *e*P **P 12 43 36.2 -0.8**
EPF pmax pmax
comp=Z,20nm,0.5s
EPF Esparros 57.88 302 *e*P **P 12 43 36.2 -0.8**
comp=Z,20nm,0.5s
SGMF Saint Gilles 57.93 309 *e*P **P 12 43 37.2 -0.1**
comp=Z,175nm,0.9s
SGMF Saint Gilles 57.93 309 *e*P **P 12 43 37.2 -0.1**
SGMF pmax pmax
comp=Z,175nm,0.9s
SGMF Saint Gilles 57.93 309 *e*P **P 12 43 37.2 -0.1**
comp=Z,175nm,0.9s
GMM Mts of Mourne 57.97 317⇑*i*P **P 12 43 37.0 -0.3**
GMM Mts of Mourne 57.97 317 P **P 12 43 37.0 -0.3**
DYA Yadsworthy 58.04 312 *e*P **P 12 43 37.6 -0.4**
DYA AMB AMB 12 43 38.0
comp=Z,33nm,0.9s
DYA Yadsworthy 58.04 312 P **P 12 43 37.6 -0.4**
DYA AMB AMB 12 43 38.0
comp=Z,33nm,0.9s
ROSF Rostrenen 58.35 309 *e*P **P 12 43 40.1 -0.1**
comp=Z,153nm,0.7s
ROSF Rostrenen 58.35 309 *e*P **P 12 43 40.1 -0.1**
ROSF Rostrenen 58.35 309 *e*P **P 12 43 40.1 -0.1**
comp=Z,153nm,0.7s
QUIF Quistinic 58.43 309 *e*P **P 12 43 40.4 -0.3**
comp=Z,112nm,0.7s
QUIF Quistinic 58.43 309 *e*P **P 12 43 40.4 -0.3**
QUIF pmax pmax
comp=Z,112nm,0.7s
QUIF Quistinic 58.43 309 *e*P **P 12 43 40.4 -0.3**
comp=Z,112nm,0.7s
ETSF Etsaut 58.54 303 *e*P **P 12 43 42.0 +0.3**
comp=Z,76nm,0.6s
ETSF Etsaut 58.54 303 *e*P **P 12 43 42.0 +0.3**
ETSF pmax pmax
comp=Z,76nm,0.6s
ETSF Etsaut 58.54 303 *e*P **P 12 43 42.0 +0.3**
comp=Z,76nm,0.6s
LARF Larrau 58.78 303⇑*e*P **P 12 43 44.0 +0.7**
LARF Larrau 58.78 303⇑*e*P **P 12 43 44.0 +0.7**
SJPF Ste Jean 58.91 303 *e*P **P 12 43 43.9 -0.3**
comp=Z,33nm,0.6s
SJPF Ste Jean 58.91 303 *e*P **P 12 43 43.9 -0.3**
SJPF pmax pmax
comp=Z,33nm,0.6s
SJPF Ste Jean 58.91 303 *e*P **P 12 43 43.9 -0.3**
comp=Z,33nm,0.6s
SCO Scoresbysund 59.37 337 *i* P **P 12 43 48.4 +1.5**
SCO pmax pmax
comp=Z,8.0nm,0.7s
SCO Scoresbysund 59.37 337 *i* P **P 12 43 48.4 +1.5**
comp=Z,8.3nm,0.7s
ALE Alert 59.87 354 P **P 12 43 50.0 -0.1**
comp=Z,69nm,0.6s,SNR=7.6
ESDC Sonseca Array 62.18 300 P **P 12 44 06.5 0.0**
ESDC pP **pP 12 44 31.4 +1.5**
ESDC sP **sP 12 44 41.4 +1.1**
ESDC Sonseca Array 62.18 300 P **P 12 44 06.5 0.0**
comp=Z,28nm,0.7s,baz=56,slow=7.3,SNR=124
ESDC pP **pP 12 44 31.4 +1.5**
comp=Z,8.7nm,0.8s,baz=56,slow=7.4,SNR=3.6
ESDC sP **sP 12 44 41.4 +1.1**
comp=Z,8.4nm,0.8s,baz=55,slow=7.3,SNR=2.7
ESLA Sonseca Array 62.18 300 *e*P **P 12 44 06.4 -0.1**

comp=Z,2.5nm,0.7s
TAM Tamanrasset 62.78 279 *e*P **P** 12 44 10.6 -0.3
TAM pmax pmax
comp=Z,28nm,1.4s
TAM Tamanrasset 62.78 279 *e*P **P** 12 44 10.6 -0.3
comp=Z,28nm,1.4s
SUMG Summit 62.98 342 *i* P **P** 12 44 11.5 -0.2
SUMG pmax pmax
comp=Z,70nm,1.0s
SUMG Summit 62.98 342 *i* P **P** 12 44 11.5 -0.2
comp=Z,70nm,1.0s
PBRG Braganca 63.17 304 *e*P **P** 12 44 12.8 -0.3
comp=Z,23nm,1.5s
MVO Moncorvo 63.64 303 *e*P **P** 12 44 16.1 -0.1
comp=Z,56nm,1.1s
GUMO Guam 63.90 92 LR LR 13 14 48.9
comp=Z,26nm,18.9s,baz=295,slow=38
PVRL Vila Real 64.06 303 *e*P **P** 12 44 18.6 -0.3
comp=Z,41nm,0.7s
POLO Lamas de Olo 64.07 303 *e*P **P** 12 44 19.2 +0.2
comp=Z,21nm,1.5s
PCAB Cabril 64.08 304 *e*P **P** 12 44 20.0 +1.0
comp=Z,90nm,1.7s
PGAV Gavieira, Arco 64.13 304 *e*P **P** 12 44 19.5 +0.1
comp=Z,50nm,1.2s
MTE Manteigas 64.33 302 *e*P **P** 12 44 21.6 +0.9
comp=Z,70nm,1.3s
MTE Manteigas 64.33 302 *e*P **P** 12 44 20.9 +0.1
comp=Z,60nm,1.0s
PVIS Viseu 64.43 303 *e*P **P** 12 44 22.1 +0.7
comp=Z,76nm,1.3s
PMRV Marv??o 64.67 301 *e*P **P** 12 44 22.8 -0.1
comp=Z,34nm,1.1s
PBAR Barrancos 64.99 300 *e*P **P** 12 44 25.3 +0.3
comp=Z,58nm,1.4s
PESTR Estremoz 65.06 301 *e*P **P** 12 44 25.9 +0.5
comp=Z,27nm,1.2s
PTOM Tomar 65.28 302 *e*P **P** 12 44 27.3 +0.5
comp=Z,101nm,1.1s
PMTG Montargil 65.41 301 *e*P **P** 12 44 27.6 0.0
comp=Z,31nm,1.2s
EVO Evora 65.51 301 ⇑*i*P **P** 12 44 29.1 +0.8
comp=Z,76nm,1.4s
EVO *e*R
comp=Z,37nm,22.0s
EVOP Sao Brissos 65.59 301 ⇑*i*P **P** 12 44 29.1 +0.3
EVOP pmax pmax
comp=Z,76nm,1.4s
EVOP Sao Brissos 65.59 301 ⇑*i*P **P** 12 44 29.1 +0.3
comp=Z,76nm,1.4s
PBEJ Beja 65.64 300 *e*P **P** 12 44 29.2 0.0
comp=Z,41nm,1.3s
PVAQ Vaqueiros 65.83 300 *e*P **P** 12 44 30.6 +0.2
comp=Z,74nm,1.4s
PCVE Castro Verde 65.94 300 *e*P **P** 12 44 30.7 -0.4
comp=Z,29nm,1.0s
PBDV Barranco-do-Ve 66.05 299 *e*P **P** 12 44 32.3 +0.4
comp=Z,106nm,1.2s
PNCL Nicolau / Gran 66.06 301 *e*P **P** 12 44 32.5 +0.7
comp=Z,19nm,1.7s
PMAFR Mafra 66.19 302 *e*P **P** 12 44 33.0 +0.3
comp=Z,141nm,1.8s
GAMB Gambell 66.45 27 *e*P **P** 12 44 34.0 +0.2
comp=Z,22nm,1.2s
PTEO Sao Teotonio 66.47 300 *e*P **P** 12 44 34.8 +0.4
comp=Z,49nm,1.3s
TNA Tin City 66.73 24 *e*P **P** 12 44 35.5 -0.1
comp=Z,30nm,1.2s
PFVI Vila Bisbo 66.73 300 *e*P **P** 12 44 35.6 -0.6
comp=Z,65nm,1.1s
LSZ Lusaka 69.22 232 *e*P **P** 12 44 52.2 +0.2
LSZ Lusaka 69.22 232 *e*P **P** 12 44 51.8 -0.3
comp=Z,25nm,1.1s
SFJD Kangerlussuaq 69.83 341 *e*P **P** 12 44 54.5 -0.4
comp=Z,59nm,0.8s
SFJD Kangerlussuaq 69.83 341 *i* P **P** 12 44 54.3 -0.6
comp=Z,51nm,0.8s
FITZ Fitzroy Crossi 70.64 131 *e*P **P** 12 44 59.2 -1.3
comp=Z,27nm,1.2s
FITZ Fitzroy Crossi 70.64 131 LR LR 13 24 06.5
comp=Z,56nm,18.9s,baz=322,slow=43
COLD Coldfoot 70.73 18 *e*P **P** 12 45 00.4 0.0
comp=Z,48nm,1.0s
TOA0 Torodi Ar. Sit 70.97 273 *e*P **P** 12 45 01.9 -0.8
TORD Torodi Ar. Bea 70.97 273 P **P** 12 45 02.0 -0.7
TORD pP **pP** 12 45 28.3 +1.6
TORD PP **PP** 12 47 40.5 -0.6
TORD Torodi Ar. Bea 70.97 273 P **P** 12 45 02.0 -0.7
comp=Z,17nm,0.6s,baz=49,slow=5.1,SNR=150
TORD pP **pP** 12 45 28.3 +1.6
comp=Z,16nm,0.9s,baz=50,slow=5.5,SNR=4.4
TORD PP **PP** 12 47 40.5 -0.6
comp=Z,4.4nm,0.9s,baz=55,slow=6.6,SNR=2.9
TORD LR LR 13 19 38.2
comp=Z,62nm,18.0s,baz=195,slow=39
COLA College 73.18 19 *e*P **P** 12 45 15.0 -0.1
COLA College 73.18 19 *e*P **P** 12 45 15.0 -0.1
INK Inuvik 73.23 12 S **S** 12 54 33.2 -2.4
comp=Z,1.6nm,1.1s,baz=204,slow=27,SNR=7.4
INK LR LR 13 21 16.9
comp=Z,48nm,18.3s,baz=323,slow=39
ILAR Eielson Array 73.51 18 P **P** 12 45 16.6 -0.4
ILAR pP **pP** 12 45 41.9 +0.8
ILAR ⇑*e* 13 12 52.1
ILAR Eielson Array 73.51 18 P **P** 12 45 16.6 -0.4
comp=Z,18nm,0.9s,baz=314,slow=4.6,SNR=153
ILAR pP **pP** 12 45 41.9 +0.8
comp=Z,9.9nm,0.9s,baz=298,slow=5.7,SNR=5.2
ILAR PKP2bc 13 12 52.1
comp=Z,0.7nm,1.1s,baz=192,slow=1.9,SNR=4.1
ILAR LR LR 13 22 19.9
comp=Z,46nm,18.5s,baz=333,slow=40
MSNA Messina 73.53 225 *e*P **P** 12 45 18.5 +0.7
MSNA AMB AMB 12 45 19.1
comp=Z,38nm,1.5s
TRF Thorofare Moun 73.66 20 *e*P **P** 12 45 17.1 -1.0
comp=Z,13nm,0.8s
MCK McKinley 73.81 20 *e*P **P** 12 45 18.5 -0.3
MCK McKinley 73.81 20 *e*P **P** 12 45 18.5 -0.3
EGAK Eagle 74.87 16 *e*P **P** 12 45 24.6 -0.3
comp=Z,24nm,1.1s
DOT Dot Lake 75.14 18 *e*P **P** 12 45 25.9 -0.7
comp=Z,26nm,0.8s
PAX Paxson 75.34 19 *e*P **P** 12 45 27.6 -0.2
PAX pmax pmax
comp=Z,36nm,0.8s
PAX Paxson 75.34 19 *e*P **P** 12 45 27.6 -0.2
comp=Z,36nm,0.8s
PMR Palmer 75.45 21 *e*P **P** 12 45 27.0 -1.3
PMR pmax pmax
comp=Z,15nm,0.8s
PMR Palmer 75.45 21 *e*P **P** 12 45 27.0 -1.3
comp=Z,15nm,0.8s
SML Sawmill 75.51 21 *e*P **P** 12 45 29.2 +0.4
SML pmax pmax
comp=Z,21nm,0.9s
SML Sawmill 75.51 21 *e*P **P** 12 45 29.2 +0.4
comp=Z,21nm,0.9s
MENT Mentasta 75.82 18 *e*P **P** 12 45 30.6 +0.1
SEW Seward 76.55 22 *e*P **P** 12 45 33.7 -0.9
comp=Z,29nm,1.1s
POGA Pongola 76.61 221 *e*P **P** 12 45 35.8 +0.4
POGA AMB AMB 12 45 36.2
comp=Z,57nm,0.8s
KDAK Kodiak Island 77.36 25 *e*P **P** 12 45 39.3 +0.1
comp=Z,51nm,1.1s
KDAK Kodiak Island 77.36 25 P **P** 12 45 39.9 +0.8
comp=Z,281nm,0.9s,SNR=9.1
WRA Warramunga Arr 77.49 126 P **P** 12 45 40.2 -0.2
WRA pP **pP** 12 46 05.6 +0.9
WRA PKKPbc **PKKPbc** 13 04 45.0 +1.1
WRA Warramunga Arr 77.49 126 P **P** 12 45 40.2 -0.2
comp=Z,40nm,1.1s,baz=324,slow=5.4,SNR=156
WRA pP **pP** 12 46 05.6 +0.9
comp=Z,10nm,1.1s,baz=315,slow=6.8,SNR=2.8
WRA PKKPbc **PKKPbc** 13 04 45.0 +1.1
comp=Z,1.0nm,0.8s,baz=130,slow=2.0,SNR=8.2
WRAB Tennant Creek 77.49 126 *e*P **P** 12 45 40.2 -0.2
WRAB pmax pmax
comp=Z,74nm,1.2s
WRAB Tennant Creek 77.49 126 *e*P **P** 12 45 40.2 -0.2
comp=Z,74nm,1.2s
WRAB Tennant Creek 77.49 126 P **P** 12 45 40.9 +0.5
comp=Z,252nm,0.9s,SNR=19
OHAK Old Harbor 77.55 26 *e*P **P** 12 45 40.1 -0.1
comp=Z,31nm,1.0s
ERPM east rand prop 77.65 224 *e*P **P** 12 45 41.8 +0.4
ERPM AMB AMB 12 45 42.0
comp=Z,26nm,1.0s
LBTB Lobatse 78.16 227 ⇑*i*P **P** 12 45 44.6 +0.5
LBTB AMB AMB 12 45 46.1
comp=Z,67nm,1.1s
LBTB Lobatse 78.16 227 *e*P **P** 12 45 44.8 +0.6
comp=Z,80nm,1.1s
PRYS Parys 78.60 224 ⇑*i*P **P** 12 45 46.1 -0.4
PRYS AMB AMB 12 45 47.1
comp=Z,36nm,1.1s
TSUM Tsumeb 79.01 236 ⇑*i*P **P** 12 45 49.5 +0.5
TSUM *e*P **PcP** 12 46 01.6 +4.4
COEN Coen 79.49 116 *e*P **P** 12 45 51.1 -0.4
comp=Z,205nm,1.0s
SEK Senekal 79.53 223 *e*P **P** 12 45 52.1 +0.5
SEK AMB AMB 12 45 53.0
comp=Z,38nm,1.0s
PNL Peninsula 79.70 18 *e*P **P** 12 45 52.7 +0.6
comp=Z,36nm,0.8s
AS31 Alice Springs 79.89 129 *e*P **P** 12 45 53.0 -0.6
ASAR Alice Springs 79.89 129 P **P** 12 45 53.8 +0.2
ASAR pP **pP** 12 46 19.0 +1.0
ASAR S **S** 12 55 50.8 +1.2
ASAR PKKPbc **PKKPbc** 13 04 38.9 +0.2
ASAR Alice Springs 79.89 129 P **P** 12 45 53.8 +0.2
comp=Z,21nm,0.9s,baz=314,slow=5.5,SNR=214
ASAR pP **pP** 12 46 19.0 +1.0
comp=Z,5.2nm,0.9s,baz=306,slow=4.7,SNR=2.5
ASAR S **S** 12 55 50.8 +1.2
comp=Z,0.3nm,0.8s,baz=327,slow=13,SNR=4.7
ASAR PKKPbc **PKKPbc** 13 04 38.9 +0.2
comp=Z,0.3nm,0.5s,baz=153,slow=2.7,SNR=5.9
DBIC Dimbokro 79.94 271 *e*P **P** 12 45 54.0 0.0
comp=Z,54nm,0.9s
DBIC pP **pP** 12 46 19.8 +1.3
DBIC Dimbokro 79.94 271 P **P** 12 45 54.0 0.0
comp=Z,62nm,0.9s,baz=34,slow=6.7,SNR=55
DBIC pP **pP** 12 46 19.8 +1.3
comp=Z,15nm,1.0s,baz=35,slow=7.2,SNR=2.9
SWZ Schweizer 79.95 226 *e*P **P** 12 45 54.3 +0.3
SWZ AMB AMB 12 45 54.6
comp=Z,61nm,1.2s
LIC Lamto 80.34 271 ⇑*i*P **P** 12 45 56.4 +0.2
comp=Z,88nm,0.7s
LIC Lamto 80.34 271 ⇑*i*P **P** 12 45 56.4 +0.2
comp=Z,88nm,0.7s
SKAG Skagway 80.86 16 *e*P **P** 12 45 58.9 +0.6
comp=Z,45nm,1.0s
YKW3 Yellowknife Ar 81.08 6 *e*P **P** 12 45 58.8 -0.6
BOSA Boshof 81.08 225 ⇓*i*P **P** 12 46 00.3 +0.4
BOSA AMB AMB 12 46 00.6
comp=Z,32nm,1.0s
BOSA Boshof 81.08 225 *e*P **P** 12 45 59.8 -0.2
comp=Z,26nm,0.9s
BOSA pP **pP** 12 46 26.0 +1.6
BOSA Boshof 81.08 225 P **P** 12 46 00.1 +0.2
comp=Z,26nm,0.9s,baz=42,slow=5.0,SNR=26
BOSA pP **pP** 12 46 26.0 +1.6
comp=Z,23nm,1.0s,baz=49,slow=7.4,SNR=6.6
BOSA LR LR 13 20 04.2
comp=Z,75nm,18.4s,baz=346,slow=34
YKA Yellowknife Ar 81.14 6 P **P** 12 45 59.2 -0.4
YKA pP **pP** 12 46 24.8 +0.6
YKA S **S** 12 56 00.1 -1.4
YKA PKKPbc **PKKPbc** 13 04 33.6 -1.5
YKA Yellowknife Ar 81.14 6 P **P** 12 45 59.2 -0.4
comp=Z,32nm,0.6s,baz=345,slow=5.3,SNR=451
YKA pP **pP** 12 46 24.7 +0.6
comp=Z,15nm,0.9s,baz=346,slow=5.1,SNR=4.4
YKA S **S** 12 56 00.1 -1.4
comp=Z,0.5nm,0.9s,baz=348,slow=9.6,SNR=5.9
YKA PKKPbc **PKKPbc** 13 04 33.6 -1.5
comp=Z,0.3nm,0.6s,baz=157,slow=2.2,SNR=5.7
FORT Forrest 81.80 138 *e*P **P** 12 46 03.5 0.0
comp=Z,45nm,0.7s
DLBC Dease Lake 82.92 14 *e*P **P** 12 46 09.4 +0.2
SCHQ Schefferville 84.28 340 *e*P **P** 12 46 15.4 -0.7
comp=Z,28nm,1.2s
SCHQ Schefferville 84.28 340 P **P** 12 46 15.7 -0.4
comp=Z,11nm,0.8s,baz=28,slow=6.0,SNR=14
WRAK Wrangell Islan 84.30 16 *e*P **P** 12 46 16.3 +0.2
comp=Z,24nm,0.9s
CTA Charters Tower 85.72 119 P **P** 12 46 24.1 +0.3
CTA Charters Tower 85.72 119 P **P** 12 46 24.1 +0.3
comp=Z,79nm,0.8s,baz=315,slow=6.3,SNR=101
CTAO Charters Tower 85.72 119 *e*P **P** 12 46 23.9 +0.1
CTAO pmax pmax
comp=Z,77nm,0.8s
CTAO Charters Tower 85.72 119 *e*P **P** 12 46 23.9 +0.1
comp=Z,77nm,0.8s
BBOO Buckleboo 87.82 134 *e*P **P** 12 46 33.3 -0.4
comp=Z,1µm,1.4s
FFC Flin Flon 89.42 360 *i* P **P** 12 46 40.8 -0.3
FFC Flin Flon 89.42 360 *e*P **P** 12 46 40.7 -0.3
comp=Z,45nm,0.9s
FFC *ep*P **pP** 12 47 06.3 +0.5
FFC *es*P **sP** 12 47 15.9 +0.1
FFC Flin Flon 89.42 360 P **P** 12 46 40.9 -0.1
comp=Z,270nm,0.9s,SNR=30
STKA Stephens Creek 90.49 130 P **P** 12 46 45.5 -0.7
STKA Stephens Creek 90.49 130 P **P** 12 46 45.5 -0.7
comp=Z,4.2nm,0.9s,baz=358,slow=6.3,SNR=8.6
ULM Lac du Bonnet 93.70 356 P **P** 12 47 00.3 -0.7
ULM Lac du Bonnet 93.70 356 P **P** 12 47 00.3 -0.7
comp=Z,19nm,0.8s,baz=351,slow=5.3,SNR=13
ULM LR LR 13 32 16.7
comp=Z,71nm,20.6s,baz=53,slow=37
A12A Yaak River Ran 94.42 9 ⇑P **P** 12 47 03.8 -0.5
baz=94
A14A Double T Ranch 94.63 7 ⇓P **P** 12 47 04.6 -0.8
baz=94,SNR=8.5
A15A Johnson Ranch, 94.69 7 ⇓P **P** 12 47 05.1 -0.5
baz=94,SNR=33
B12A Libby 94.88 9 ⇑P **P** 12 47 06.0 -0.4
baz=94
NEW Newport 94.88 10 *e*P **P** 12 47 06.4 0.0
comp=Z,8.5nm,0.7s
NEW Newport 94.88 10 ⇓P **P** 12 47 06.3 -0.1
baz=94,SNR=9.8
A17A Triple J Farms 94.89 5 ⇓P **P** 12 47 06.0 -0.5
baz=94,SNR=16
A18A Metzger Ranch, 94.98 5 ⇓P **P** 12 47 06.6 -0.3
baz=95,SNR=22
A19A Klindworth Far 95.04 4 ⇑P **P** 12 47 06.8 -0.4
baz=95,SNR=5.3
B13A Whitefish 95.11 8 ⇓P **P** 12 47 07.4 -0.1
baz=95,SNR=9.0
A22A Carney Farms, 95.11 2 ⇑P **P** 12 47 07.4 -0.1
baz=95
A20A Cobblestone Ra 95.14 4 ⇓P **P** 12 47 07.4 -0.2
baz=95
A23A Redstone 95.17 2 ⇓P **P** 12 47 08.2 +0.5
baz=95
A24A Westby 95.22 1 ⇓P **P** 12 47 08.5 +0.5
baz=95,SNR=10
B14A Marquette Ranc 95.25 7 ⇑P **P** 12 47 07.5 -0.7
baz=95
B16A M & M Farms, S 95.34 6 ⇓P **P** 12 47 08.0 -0.6
baz=95
B15A Bradely Ranch, 95.36 7 ⇓P **P** 12 47 07.9 -0.8
baz=95,SNR=31
C11A Tepee Creek (N 95.41 9 ⇑P **P** 12 47 08.9 0.0
baz=95
B19A Brinkman Farms 95.50 4 ⇓P **P** 12 47 08.7 -0.6
baz=95,SNR=7.0
B18A Beardsley Farm 95.51 5 ⇑P **P** 12 47 08.7 -0.7
baz=95,SNR=9.4
B17A L&G Farms, Che 95.54 6 ⇑P **P** 12 47 09.1 -0.3
baz=95
B20A Sorg Farm, 95.57 4 ⇓P **P** 12 47 09.4 -0.2
baz=95,SNR=7.3
BSMT Bassoo Peak 95.58 8 *e*P **P** 12 47 09.3 -0.6
comp=Z,31nm,1.2s
B21A Ellsworth Farm 95.63 3 ⇓P **P** 12 47 09.9 0.0
baz=95
EYMN Ely 95.63 353 *e*P **P** 12 47 09.6 -0.2
comp=Z,38nm,1.0s
C12B Naegeli Ranch, 95.64 9 ⇓P **P** 12 47 10.2 +0.3
baz=95
AGMN Agassiz Nation 95.65 356 *e*P **P** 12 47 09.5 -0.4
comp=Z,17nm,0.8s
LONY Lake Ozonia 95.65 340 *e*P **P** 12 47 09.0 -1.0
comp=Z,22nm,1.0s
B23A Brockton 95.66 2 ⇑P **P** 12 47 10.2 +0.2
baz=95,SNR=8.8
DGMT Dagmar 95.67 1 *e*P **P** 12 47 10.2 +0.2
comp=Z,35nm,0.9s
DGMT Dagmar 95.67 1 ⇓P **P** 12 47 10.4 +0.3
baz=95,SNR=7.0
JTMT Jette 95.75 8 *e*P **P** 12 47 10.6 +0.1
comp=Z,9.7nm,1.0s
C13A Hot Springs 95.78 8 ⇓P **P** 12 47 10.5 -0.1
baz=95,SNR=31
B22A Reddig Ranch S 95.80 2 ⇑P **P** 12 47 11.0 +0.4
baz=95
EGMT Eagleton 95.88 5 *e*P **P** 12 47 10.8 -0.2
comp=Z,13nm,1.0s
EGMT Eagleton 95.88 5 ⇑P **P** 12 47 10.5 -0.6
baz=96,SNR=11
C15A Salmond Ranch, 95.89 7 ⇑P **P** 12 47 10.8 -0.4
baz=96,SNR=12
C16A Fuhringer Ranc 95.94 6 ⇑P **P** 12 47 10.5 -0.8
baz=96,SNR=5.6
SWMT Swartz Lake 96.01 8 *e*P **P** 12 47 11.7 0.0
comp=Z,3.9nm,0.9s
C17A Wharram Farm, 96.19 6 ⇑P **P** 12 47 11.7 -0.8
baz=96
C19A Slack Wire Ran 96.22 4 ⇓P **P** 12 47 11.8 -0.8
baz=96,SNR=5.1
C21A Desert Coulee 96.23 3 ⇓P **P** 12 47 12.3 -0.3
baz=96,SNR=11
MDND Maddock 96.27 358 ⇓P **P** 12 47 12.3 -0.4
baz=96
C20A Veseth Ranch, 96.30 4 ⇑P **P** 12 47 12.4 -0.5
baz=96,SNR=5.8
D12A Red Ives Fores 96.30 9 ⇓P **P** 12 47 12.4 -0.6
baz=96
C23A Lambert 96.32 2 ⇑P **P** 12 47 13.6 +0.6
baz=96,SNR=17
C22A Vida 96.35 2 ⇑P **P** 12 47 13.6 +0.4
baz=96,SNR=10
D13A Huson 96.37 8 ⇓P **P** 12 47 12.8 -0.5
baz=96
D14A Greenough 96.49 8 ⇓P **P** 12 47 13.2 -0.7
baz=96,SNR=7.9
D15A Lincoln 96.63 7 ⇓P **P** 12 47 13.9 -0.6
baz=96
D17A Six Diamond Ra 96.68 6 ⇑P **P** 12 47 14.5 -0.2
baz=96,SNR=10.0
CHMT Chamberlain Mo 96.68 7 *e*P **P** 12 47 14.4 -0.5
comp=Z,4.3nm,0.7s
MSO Missoula 96.69 8 ⇑P **P** 12 47 14.1 -0.7
baz=96
D18A Linhart Farms, 96.70 5 ⇓P **P** 12 47 14.6 -0.2
baz=96
D16A Dana Ranch, Ca 96.73 6 ⇑P **P** 12 47 14.3 -0.6
baz=96
D19A Cripps Ranch, 96.79 4 ⇓P **P** 12 47 14.7 -0.5
baz=96
D20A Manuel Ranch, 96.91 4 ⇑P **P** 12 47 15.3 -0.5
baz=96
D22A Cohagen 96.94 3 ⇓P **P** 12 47 16.4 +0.5
baz=96,SNR=12
D23A Lindsay 96.95 2 ⇓P **P** 12 47 16.0 +0.1
baz=96,SNR=7.1
D21A La Casta Ranch 96.99 3 ⇓P **P** 12 47 15.7 -0.3
baz=97
D24A Glendive 97.02 1 ⇓P **P** 12 47 15.8 -0.4
baz=97
E13A Victor 97.04 8 ⇑P **P** 12 47 15.7 -0.7
baz=97
E14A Clinton 97.14 8 ⇓P **P** 12 47 16.0 -0.9
baz=97,SNR=6.2
E16A East Helena 97.21 6 ⇓P **P** 12 47 17.0 -0.2
baz=97
E15A Deer Lodge 97.22 7 ⇑P **P** 12 47 16.6 -0.6
baz=97,SNR=5.2
E18A Harlowton 97.32 5 ⇑P **P** 12 47 17.6 0.0
baz=97
E17A Martinsdale 97.35 6 ⇓P **P** 12 47 17.8 -0.1
baz=97
E20A Meyer Farm, Mu 97.50 4 ⇑P **P** 12 47 17.8 -0.5
baz=97
E19A Rath Farm, Rou 97.50 4 ⇑P **P** 12 47 18.4 -0.1
baz=97,SNR=6.1
E24A Baker 97.58 1 ⇑P Pdif 12 47 19.2 +0.4
baz=97
F12A Elk City 97.59 9 ⇑P **P** 12 47 18.1 -0.8
baz=97
F13A Darby 97.67 8 ⇑P **P** 12 47 18.7 -0.5
baz=97
F15A Butte 97.82 7 ⇓P **P** 12 47 19.4 -0.6
baz=97,SNR=5.4
LRM Limekiln Ridge 97.84 7 *e*P **P** 12 47 19.6 -0.5
comp=Z,49nm,1.1s
F17A Fitzpatrick Pl 97.92 6 ⇑P **P** 12 47 20.3 -0.1
baz=98
F16A Kennard Place, 97.96 6 ⇑P **P** 12 47 20.3 -0.2
baz=98
F18A Big Timber 97.99 5 ⇓P **P** 12 47 20.3 -0.4
baz=98,SNR=5.5
BOZ Bozeman (W) 98.09 6 *e*P Pdif 12 47 21.5 +0.3
BOZ pmax pmax
comp=Z,3.0nm,1.0s
BOZ Bozeman (W) 98.09 6 *e*P Pdif 12 47 21.4 +0.2
comp=Z,3.1nm,1.0s
F20A Billings 98.19 4 ⇑P **P** 12 47 21.5 -0.1
baz=98
G13A Cobalt 98.37 8 ⇑P **P** 12 47 22.3 -0.2
baz=98
F23A Volborg 98.39 2 ⇓P **P** 12 47 22.3 -0.1
baz=98
SPMN St. Paul 98.46 353 ⇓P **P** 12 47 22.6 0.0
baz=98
G15A Dillon 98.49 7 ⇑P **P** 12 47 22.8 -0.2
baz=98
G16A Moss Hill, Enn 98.49 7 ⇓P Pdif 12 47 23.0 0.0
baz=98
G20A Bridger 98.77 4 ⇑Pdiff **P** 12 47 23.7 -0.5
baz=98
MCMT McKenzie Canyo 98.78 7 *e*P **P** 12 47 24.3 -0.1
comp=Z,1.4nm,1.0s
H13A Challis 98.89 8 ⇓Pdiff **P** 12 47 24.7 -0.1
baz=98
H14A Leadore 98.94 8 ⇑Pdiff **P** 12 47 24.9 -0.1
baz=98
H15A Lima 99.01 7 ⇑Pdiff **Pdif** 12 47 25.2 -0.2
baz=99
H16A Russell Place, 99.06 6 ⇓Pdiff **Pdif** 12 47 25.3 -0.3
baz=99
H18A Shoshone NF, C 99.22 5 ⇓Pdiff **Pdif** 12 47 26.3 0.0
baz=99
H19A Powell 99.27 5 ⇑Pdiff **Pdif** 12 47 26.1 -0.3
baz=99
H24A Dirks Ranch, A 99.39 1 ⇑Pdiff **Pdif** 12 47 26.7 -0.2
baz=99
H21A Big Horn, Sher 99.42 3 ⇑Pdiff **Pdif** 12 47 27.1 0.0
baz=99
H22A Clearmont 99.48 3 ⇑Pdiff **Pdif** 12 47 27.4 0.0
baz=99
I12A Atlanta 99.54 9 ⇑Pdiff **Pdif** 12 47 27.4 -0.3
baz=99
H23A Clabaugh Catl 99.55 2 ⇑Pdiff **Pdif** 12 47 27.5 -0.1
baz=99
I14A Mackay 99.61 8 ⇓Pdiff **Pdif** 12 47 28.1 0.0
baz=99
BRSD Miller 99.65 357 ⇓Pdiff **Pdif** 12 47 28.3 +0.3
baz=99
MFID Camas Ranch 99.81 10 ⇑Pdiff **Pdif** 12 47 28.9 +0.1
baz=99
HLID Hailey 99.86 9 ⇓Pdiff **Pdif** 12 47 29.2 0.0
baz=99
I20A Worland 100.04 4 ⇓Pdiff **Pdif** 12 47 30.1 +0.3
baz=100
J13A Cove Ranch, Pi 100.05 9 ⇓Pdiff **Pdif** 12 47 30.4 +0.5
baz=100
I22A 9 Mile Ranch, 100.18 3 ⇓Pdiff **Pdif** 12 47 30.8 +0.3
baz=100
I21A Big Trails, Te 100.22 4 ⇑Pdiff **Pdif** 12 47 31.0 +0.2
baz=100
J19A Crowheart 100.67 5 ⇑Pdiff **Pdif** 12 47 33.1 +0.4
baz=100
PDAR Pinedale Array 101.12 5 P **Pdif** 12 47 35.1 +0.2
PDAR PP PP 12 51 34.5 -8.8
PDAR PKiKP **PKiKP** 12 51 59.4 +0.1
PDAR PKKPab PKKPdf 13 04 07.5 +18
PDAR Pinedale Array 101.12 5 P **Pdif** 12 47 35.1 +0.2
comp=Z,1.3nm,0.8s,baz=58,slow=3.5,SNR=7.5
PDAR PP PP 12 51 34.5 -8.8
comp=Z,0.3nm,0.6s,baz=30,slow=3.6,SNR=3.9
PDAR PKiKP **PKiKP** 12 51 59.4 +0.1
comp=Z,1.1nm,0.7s,baz=100,slow=3.8,SNR=5.0
PDAR PKKPab PKKPdf 13 04 07.5 +18
comp=Z,0.7nm,0.9s,baz=192,slow=5.8,SNR=3.9
K20A Yellowstone Ra 101.31 4 ⇓Pdiff **Pdif** 12 47 35.5 -0.2

	baz=101							
L19A	**Farson**	**101.80**	**5**	⇑Pdiff	**Pdif**	**12 47 38.0**	**+0.1**	
	baz=101							
L18A	**Fontenelle, Gr**	**101.92**	**6**	⇑Pdiff	**Pdif**	**12 47 38.7**	**+0.3**	
	baz=102							
L23A	**Garrett**	**101.98**	**2**	⇑Pdiff	**Pdif**	**12 47 38.6**	**-0.1**	
	baz=102							
L21A	**Rawlins**	**102.06**	**4**	⇑Pdiff	**Pdif**	**12 47 38.8**	**-0.3**	
	baz=102							
N21A	**Black Mountain**	**103.25**	**4**	⇑Pdiff	**Pdif**	**12 47 43.9**	**-0.5**	
	baz=103							
O19A	**Miners Draw (B**	**103.61**	**5**	⇑Pdiff	**Pdif**	**12 47 46.6**	**+0.7**	
	baz=103							
NVAR	**Mina Array Bea**	**104.30**	**13**	Pdif	**Pdif**	**12 47 49.2**	**+0.1**	
NVAR				PP	PKiKP	12 51 59.9	-5.3	
NVAR				PKiKP	**PP**	**12 52 05.4**	**-1.7**	
NVAR				PKKPbc	**PKKPbc**	**13 03 36.7**	**+1.2**	
NVAR				PKKPab	**PKKPab**	**13 03 55.0**	**-3.7**	
NVAR	**Mina Array Bea**	**104.30**	**13**	Pdiff	**Pdif**	**12 47 49.2**	**+0.1**	
	comp=Z,0.8nm,0.9s,baz=341,slow=4.3,SNR=5.4							
NVAR				PP	PKiKP	12 51 59.9	-5.3	
	comp=Z,0.6nm,0.9s,baz=341,slow=8.5,SNR=3.6							
NVAR				PKiKP	**PP**	**12 52 05.4**	**-1.7**	
	comp=Z,0.4nm,0.6s,baz=335,slow=4.0,SNR=3.7							
NVAR				PKKPbc	**PKKPbc**	**13 03 36.7**	**+1.2**	
	comp=Z,0.7nm,0.8s,baz=191,slow=4.4,SNR=4.5							
NVAR				PKKPab	**PKKPab**	**13 03 55.0**	**-3.7**	
	comp=Z,0.8nm,0.8s,baz=190,slow=6.3,SNR=5.4							
R11A	**Troy Canyon, C**	**104.82**	**11**	⇓Pdiff	**Pdif**	**12 47 50.3**	**-1.0**	
	baz=104							
U21A	**Nageezi**	**107.56**	**4**	⇓PKiKP	**PKiKP**	**12 52 10.9**	**-0.4**	
	baz=107							
U25A	**Circle Dot Ran**	**107.72**	**2**	⇑PKiKP	**PKiKP**	**12 52 11.2**	**-0.3**	
	baz=107							
V20A	**Brimhall**	**108.13**	**5**	⇑PKiKP	**PKiKP**	**12 52 12.5**	**+0.2**	
	baz=108							
WUAZ	**Wupatki**	**108.15**	**8**	⇑PKiKP	**PKiKP**	**12 52 12.8**	**+0.4**	
	baz=108							
SYO	**Syowa Base**	**108.60**	**194**	⇑*e*PP	PP	12 52 43.8	+4.5	
X21A	**Alamocita Cree**	**109.52**	**5**	⇑PKiKP	**PKiKP**	**12 52 16.1**	**+1.1**	
	baz=109							
Y20A	**Horse Springs,**	**110.02**	**5**	⇓PKiKP	**PKiKP**	**12 52 16.3**	**+0.3**	
	baz=110							
Z14A	**Wintersburg**	**110.09**	**9**	⇓PKiKP	**PKiKP**	**12 52 15.5**	**-0.3**	
	baz=110							
Y23A	**Lovelace Mesa,**	**110.13**	**3**	⇓PKiKP	**PKiKP**	**12 52 16.3**	**+0.2**	
	baz=110							
Z22A	**Elephant Butte**	**110.76**	**4**	⇓PKiKP	**PKiKP**	**12 52 17.5**	**+0.2**	
	baz=110							
Z24A	**Sheeppen Canyo**	**110.76**	**3**	⇓PKiKP	**PKiKP**	**12 52 17.9**	**+0.5**	
	baz=110							
Z31A	**Sharp Cattle R**	**110.79**	**358**	⇑PKiKP	**PKiKP**	**12 52 17.2**	**0.0**	
	baz=110							
Z20A	**Nine Sixteen R**	**110.79**	**5**	⇓PKiKP	**PKiKP**	**12 52 17.7**	**+0.4**	
	baz=110							
Z27A	**Tatum**	**110.82**	**1**	⇑PKiKP	**PKiKP**	**12 52 17.4**	**+0.1**	
	baz=110							
Z30A	**Sanderson Ranc**	**110.84**	**359**	⇑PKiKP	**PKiKP**	**12 52 17.1**	**-0.2**	
	baz=110							
Z26A	**Caprock**	**110.85**	**1**	⇑PKiKP	**PKiKP**	**12 52 17.1**	**-0.3**	
	baz=110							
124A	**Stringfield Ra**	**111.38**	**3**	⇑PKiKP	**PKiKP**	**12 52 19.0**	**+0.5**	
	baz=111							
121A	**Cookes Peak, D**	**111.43**	**5**	⇓PKiKP	**PKiKP**	**12 52 18.6**	**0.0**	
	baz=111							
131A	**Roby**	**111.44**	**358**	⇑PKiKP	**PKiKP**	**12 52 18.6**	**+0.1**	
	baz=111							
125A	**Gardner Draw,**	**111.45**	**2**	⇓PKiKP	**PKiKP**	**12 52 19.0**	**+0.4**	
	baz=111							
225A	**Deer Hill, Car**	**111.99**	**2**	⇓PKiKP	**PKiKP**	**12 52 20.0**	**+0.3**	
	baz=112							
226B	**Tecolote Peak,**	**112.04**	**2**	⇑PKiKP	**PKiKP**	**12 52 20.3**	**+0.6**	
	baz=112							
232A	**Coleman**	**112.19**	**357**	⇑PKiKP	**PKiKP**	**12 52 19.1**	**-0.8**	
	baz=112							
324A	**Moseley Ranch,**	**112.63**	**3**	⇑PKiKP	**PKiKP**	**12 52 20.9**	**0.0**	
	baz=112							
332A	**Millersview**	**112.70**	**357**	⇑PKiKP	**PKiKP**	**12 52 20.2**	**-0.6**	
	baz=112							
330A	**Mertzon**	**112.72**	**359**	⇑PKiKP	**PKiKP**	**12 52 20.4**	**-0.5**	
	baz=112							
325A	**Bean Ranch, Si**	**112.72**	**2**	⇓PKiKP	**PKiKP**	**12 52 20.3**	**-0.8**	
	baz=112							
328A	**Wristen Ranch,**	**112.75**	**0**	⇓PKiKP	**PKiKP**	**12 52 20.7**	**-0.3**	
	baz=112							
331A	**San Angelo**	**112.80**	**358**	⇓PKiKP	**PKiKP**	**12 52 20.8**	**-0.3**	
	baz=112							
326A	**Caldwell Ranch**	**112.80**	**1**	⇑PKiKP	**PKiKP**	**12 52 21.4**	**+0.2**	
	baz=112							
427A	**Hayter Ranch,**	**113.28**	**1**	⇓PKiKP	**PKiKP**	**12 52 22.7**	**+0.6**	
	baz=113							
425A	**Indio Mountain**	**113.31**	**2**	⇓PKiKP	**PKiKP**	**12 52 22.3**	**+0.2**	
	baz=113							
428A	**Kincaid Ranch,**	**113.41**	**0**	⇓PKiKP	**PKiKP**	**12 52 22.5**	**+0.2**	
	baz=113							
431A	**Sonora**	**113.42**	**358**	⇑PKiKP	**PKiKP**	**12 52 22.6**	**+0.3**	
	baz=113							
426A	**McDonald Obser**	**113.45**	**1**	⇓PKiKP	**PKiKP**	**12 52 22.4**	**-0.1**	
	baz=113							
429A	**Davenport Ranc**	**113.50**	**359**	⇓PKiKP	**PKiKP**	**12 52 22.7**	**+0.3**	
	baz=113							
JCT	**Junction City**	**113.60**	**357**	*e*PKiKP	**PKiKP**	**12 52 22.6**	**0.0**	
JCT	**Junction City**	**113.60**	**357**	*e*PKPdf	**PKiKP**	**12 52 22.6**	**0.0**	
JCT	**Junction City**	**113.60**	**357**	⇓PKiKP	**PKiKP**	**12 52 22.5**	**0.0**	
	baz=113							
531A	**Rocksprings**	**113.94**	**358**	⇑PKiKP	**PKiKP**	**12 52 23.2**	**-0.1**	
	baz=114							
532A	**Rocksprings**	**113.96**	**358**	⇑PKiKP	**PKiKP**	**12 52 23.0**	**-0.3**	
	baz=114							
528A	**Cox Ranch, San**	**113.97**	**0**	⇑PKiKP	**PKiKP**	**12 52 23.6**	**+0.2**	
	baz=114							
530A	**J-C Ranch, Com**	**113.97**	**359**	⇑PKiKP	**PKiKP**	**12 52 23.6**	**+0.3**	
	baz=114							
527A	**Woodward Ranch**	**113.98**	**1**	⇑PKiKP	**PKiKP**	**12 52 23.2**	**-0.2**	
	baz=114							
526A	**Mary Lane Ranc**	**114.05**	**2**	⇑PKiKP	PKPdf	12 52 24.0	+0.3	
	baz=114							
626A	**Big Bend Ranch**	**114.56**	**2**	⇓PKiKP	**PKiKP**	**12 52 24.4**	**-0.2**	
	baz=114							
632A	**Uvalde**	**114.57**	**357**	⇑PKiKP	**PKiKP**	**12 52 24.0**	**-0.5**	
	baz=114							
628A	**Black Gap, Mar**	**114.64**	**0**	⇓PKiKP	PKPdf	12 52 24.7	+0.1	
	baz=114							
627A	**Terlingua Ranc**	**114.67**	**1**	⇑PKiKP	**PKiKP**	**12 52 24.6**	**-0.2**	
	baz=114							
631A	**Perdido Creek**	**114.69**	**358**	⇑PKiKP	**PKiKP**	**12 52 24.4**	**-0.3**	
	baz=114							
AFI	**Afiamalu**	**114.73**	**89**	PKP	PKPdf	12 52 26.4	+1.4	
AFI	**Afiamalu**	**114.73**	**89**	PKP	PKPdf	12 52 26.4	+1.4	
	comp=Z,34nm,1.0s,baz=236,slow=7.3,SNR=3.2							
TXAR	**Lajitas Array**	**114.78**	**1**	PKP	PKPdf	12 52 25.6	+0.6	
TXAR				PP	**PP**	**12 53 24.2**	**+1.4**	
TXAR				PKKPab	**PKKPab**	**13 03 10.4**	**-1.4**	
TXAR	**Lajitas Array**	**114.78**	**1**	PKP	PKPdf	12 52 25.6	+0.6	
	comp=Z,0.7nm,0.6s,baz=259,slow=1.3,SNR=5.3							
TXAR				PP	**PP**	**12 53 24.2**	**+1.4**	
	comp=Z,0.5nm,0.7s,baz=355,slow=6.7,SNR=3.6							
TXAR				PKKPab	**PKKPab**	**13 03 10.4**	**-1.4**	
	comp=Z,0.6nm,1.0s,baz=182,slow=6.3,SNR=3.5							
732A	**Laxson Ranch,**	**115.35**	**358**	⇑PKiKP	**PKiKP**	**12 52 25.9**	**-0.1**	
	baz=115							
RPZ	**Rata Peaks**	**116.20**	**126**	PKP	**PKPdf**	**12 52 27.0**	**+0.1**	
RPZ	**Rata Peaks**	**116.20**	**126**	PKP	**PKPdf**	**12 52 27.0**	**+0.1**	
	comp=Z,16nm,0.9s,baz=266,slow=3.2,SNR=4.3							
MAIT	**Maitri**	**116.43**	**200**	*e*P	PKPdf	12 52 16.8	-10	
URZ	**Urewera**	**117.97**	**118**	PKP	**PKPdf**	**12 52 29.0**	**-1.5**	
URZ	**Urewera**	**117.97**	**118**	PKP	**PKPdf**	**12 52 29.0**	**-1.5**	
	comp=Z,8.7nm,0.6s,baz=306,slow=3.4,SNR=8.8							
SNAA	**Sanae**	**121.01**	**201**	*e*PKP	**PKPdf**	**12 52 35.8**	**+0.4**	
SNAA	**Sanae**	**121.01**	**201**	*e*	PKPdf	12 53 02.7	+27	
VNA2	**Neumayer--Watz**	**122.14**	**203**	*e*PKP	**PKPdf**	**12 52 38.5**	**+1.0**	
VNA2	**Neumayer--Watz**	**122.14**	**203**	*e*	PKPdf	12 53 06.0	+28	
VNA1	**Neumayer--Stat**	**122.33**	**203**	*e*PKP	**PKPdf**	**12 52 39.2**	**+1.3**	
VNDA	**Vanda**	**123.84**	**165**	PKP	**PKPdf**	**12 52 39.6**	**-1.1**	
VNDA				PKKPbc	**PKKPbc**	**13 02 28.6**	**-0.7**	
VNDA	**Vanda**	**123.84**	**165**	PKP	**PKPdf**	**12 52 39.6**	**-1.1**	
	comp=Z,2.6nm,0.9s,baz=286,slow=4.5,SNR=9.4							
VNDA				PKKPbc	**PKKPbc**	**13 02 28.6**	**-0.7**	
	comp=Z,0.6nm,0.6s,baz=141,slow=0.3,SNR=4.4							
BDFB	**Brasilia**	**127.61**	**278**	PKP	**PKPdf**	**12 52 50.9**	**+1.1**	
BDFB	**Brasilia**	**127.61**	**278**	PKP	**PKPdf**	**12 52 50.9**	**+1.1**	
	comp=Z,1.7nm,0.5s,baz=91,slow=6.1,SNR=3.2							
TGUH	**Tegucigalpa,Un**	**127.97**	**341**	*e*PKPdf	**PKPdf**	**12 52 51.4**	**+1.0**	
ROSC	**El Rosal**	**131.37**	**321**	PKP	**PKPdf**	**12 52 57.5**	**0.0**	
ROSC	**El Rosal**	**131.37**	**321**	PKP	**PKPdf**	**12 52 57.5**	**0.0**	
	comp=Z,7.2nm,0.5s,baz=259,slow=9.3,SNR=8.0							
SAML	**Samuel**	**135.16**	**297**	*e*PKPdf	**PKPdf**	**12 53 04.1**	**+0.1**	

OTAV	**Otavalo**	**137.39**	**323**	*e*PKPdf	**PKPdf**	**12 53 09.1**	**+0.3**	
CPUP	**Villa Florida**	**140.46**	**271**	PKPpre	PKPpre	12 53 05.5		
CPUP				PKP	**PKPdf**	**12 53 13.2**	**-0.2**	
CPUP	**Villa Florida**	**140.46**	**271**	PKhKP	PKPpre	12 53 05.5		
	comp=Z,1.5nm,0.6s,baz=45,slow=7.1,SNR=5.8							
CPUP				PKP	**PKPdf**	**12 53 13.2**	**-0.2**	
	comp=Z,4.4nm,0.7s,baz=26,slow=2.3,SNR=9.3							
LPAZ	**La Paz**	**143.61**	**294**	PKPpre	PKPpre	12 53 17.0		
LPAZ	**La Paz**	**143.61**	**294**	PKhKP	PKPpre	12 53 17.0		
	comp=Z,2.8nm,0.8s,baz=21,slow=5.9,SNR=10.0							
TRQA	**Tornquist**	**147.82**	**254**	*e*PKPdf	**PKPdf**	**12 53 26.7**	**+0.8**	
LVC	**Limon Verde**	**147.93**	**286**	*e*PKPdf	**PKPdf**	**12 53 28.4**	**+1.5**	
LVC				*e*PKPbc	**PKiKP**	**12 53 30.9**	**-0.8**	
PLCA	**Paso Flores**	**154.67**	**250**	PKP	**PKPdf**	**12 53 37.6**	**+1.3**	
PLCA				PKPbc	**PKiKP**	**12 53 45.1**	**+0.1**	
PLCA				PKPab	**PKPab**	**12 54 00.9**	**+0.7**	
PLCA	**Paso Flores**	**154.67**	**250**	PKP	**PKPdf**	**12 53 37.6**	**+1.3**	
	comp=Z,4.2nm,0.9s,baz=27,slow=2.3,SNR=4.4							
PLCA				PKPbc	**PKiKP**	**12 53 45.1**	**+0.1**	
	comp=Z,3.6nm,0.6s,baz=51,slow=2.8,SNR=6.8							
PLCA				PKPab	**PKPab**	**12 54 00.9**	**+0.7**	
	comp=Z,7.9nm,1.0s,baz=94,slow=3.7,SNR=6.3							

*CSEM **21** 12:37:50.8,37.°54N×37.°46E,h7km,MD3.0,After DDA*

DDA 21 12:37:50.9,37.°54N×37.°46E,h7km,MD3.0,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GZT	**Gaziantep**	**0.20**	**155**	*i* P	Pg	12 37 54.5	-0.6
GZT				*i* S	Sg	12 38 02.9	+5.0
AYKD	**Aykdinkavak**	**0.53**	**257**	*i* P	Pg	12 38 00.5	-0.7
AYKD				*i* S	Sg	12 38 08.1	-0.1
AYKD	**Aykdinkavak**	**0.53**	**257**	*i* P	Pg	12 38 00.5	-0.7
AYKD				*i* S	Sg	12 38 08.1	-0.1
AKCD	**Akcadag**	**0.84**	**26**	*i* P	Pb	12 38 08.5	+0.5
AKCD	**Akcadag**	**0.84**	**26**	*i* P	Pb	12 38 08.5	+0.4
ANDN	**Andirin**	**0.89**	**273**	*i* P	Pn	12 38 09.5	-0.4
ANDN	**Andirin**	**0.89**	**273**	*i* P	Pn	12 38 09.5	-0.4

IDC 21 12:44:21.9±1.5,18.°56S×177.°58W,h554km±20km, mb3.2/8,mb1 3.4/9,mb1mx3.2/21,mbtmp3.2/9,Error ellipse: s-maj=27.8km s-min=13.2km az=135.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.24**	**51**	P	P	12 46 13.2	+0.6
	2.0nm,0.3s,baz=220,slow=7.9,SNR=3.3						
AFI				S	S	12 47 43.1	0.0
	1.0nm,0.3s,baz=257,slow=14,SNR=2.3						
URZ	**Urewera**	**20.17**	**192**	P	P	12 48 18.2	-0.9
	6.2nm,0.9s,baz=130,slow=12,SNR=7.1						
STKA	**Stephens Creek**	**39.01**	**242**	P	P	12 51 02.4	+1.0
	4.2nm,1.1s,baz=80,slow=12,SNR=3.3						
WRA	**Warramunga Arr**	**45.29**	**260**	P	P	12 51 50.5	-0.4
	2.1nm,0.6s,baz=98,slow=7.0,SNR=46						
ASAR	**Alice Springs**	**45.37**	**255**	P	P	12 51 51.6	+0.1
	3.5nm,0.7s,baz=95,slow=7.2,SNR=35						
ASAR				PcP	PcP	12 53 18.8	-0.4
	0.3nm,0.5s,baz=105,slow=4.0,SNR=4.9						
MJAR	**Matsushiro Arr**	**68.90**	**323**	P	P	12 54 31.1	-0.6
	1.2nm,0.6s,baz=173,slow=6.1,SNR=5.2						
PETK	**Petropavlovsk-**	**74.51**	**345**	P	P	12 55 03.4	-0.5
	2.7nm,1.0s,baz=126,slow=8.2,SNR=4.8						
NVAR	**Mina Array Bea**	**79.35**	**43**	P	P	12 55 31.9	+1.0
	0.5nm,0.7s,baz=226,slow=6.1,SNR=3.7						
ILAR	**Eielson Array**	**86.34**	**13**	P	P	12 56 04.2	-0.9
	0.3nm,0.4s,baz=222,slow=4.8,SNR=12						
ARCES	**ARCESS Array B**	**127.09**	**350**	PKP	PKPdf	13 02 22.2	-0.6
	2.4nm,0.9s,baz=32,slow=7.1,SNR=4.1						
BRTR	**Keskin Array B**	**145.80**	**315**	PKPbc	PKPdf	13 02 59.0	+0.8
	0.9nm,0.6s,baz=83,slow=2.5,SNR=4.5						
CLL	**Collm**	**146.26**	**348**	*i* P	PKPbc	13 03 00.2	-0.3
	comp=Z,4.0nm,0.8s						
GERES	**GERESS Array B**	**148.44**	**346**	PKPbc	PKPbc	13 03 06.4	-0.1
	comp=Z,1.1nm,0.8s,baz=27,slow=3.3,SNR=7.1						

*ISCJB **21** 12:52:00.2±0.7,50.°72N±0.°08×73.°80E±0.°07,h10km, mb3.4/1,Error ellipse: s-maj=12.0km s-min=4.6km az=24.6*

*IDC **21** 12:52:01.6±1.3,50.°82N×73.°66E,h0km,mb3.3/1, mb1 3.1/4,mb1mx3.0/30,mbtmp2.9/4,ML2.5/3,Error ellipse: s-maj=28.8km s-min=8.5km az=36.0*

*NNC **21** 12:52:02.5±0.6,50.°88N×73.°71E,h0km,mb3.0,mpv2.7, Error ellipse: s-maj=10.0km s-min=4.9km az=33.0*

ISC 21 12:52:02.5±0.8,50.°85N±0.°08×73.°69E±0.°05,h10km,n14, σ1$62/19,15C-7D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VOSK	**Vostochnaya**	**2.52**	**319**	⇓Pn	**Pn**	**12 52 43.5**	**+0.1**
	12nm,1.1s						
VOSK				⇑Sn	**Sb**	**12 53 16.6**	**-2.1**
	33nm,0.8s						
VOSK				⇓Rg	Rg	12 53 35.8	
	94nm,1.6s						
BVA0	**Borovoye Array**	**2.98**	**318**	Pn	**Pb**	**12 52 53.4**	**-2.3**
	0.7nm,0.6s,baz=246,slow=40,SNR=25						
BVA0				⇑Lg	Lg	12 53 32.8	
	4.5nm,0.9s,baz=124,slow=25,SNR=12						
BVAR	**Borovoye Array**	**2.98**	**318**	Pn	**Pn**	**12 52 51.3**	**+1.5**
	0.9nm,0.3s,baz=137,slow=15,SNR=13						
BVAR				Pg	**Pb**	**12 52 54.4**	**-1.3**
	1.2nm,0.3s,baz=135,slow=16,SNR=14						
BVAR				Lg	Lg	12 53 35.4	
	2.8nm,0.3s,baz=136,slow=30,SNR=9.9						
BVAR				Rg	Rg	12 54 05.2	
	3.9nm,0.6s,baz=125,slow=34,SNR=1.9						
BRVK	**Borovoye**	**3.05**	**318**	⇓Pn	Pb	12 52 53.4	-3.4
	8.4nm,0.8s						
BRVK				⇑Lg	Lg	12 53 37.0	
	56nm,0.6s						
KUR15	**Kurchatov Arra**	**3.11**	**92**	⇑Pn	**Pn**	**12 52 52.7**	**+1.2**
	0.2nm,0.7s,baz=279,slow=14						
KUR15				⇑Pg	**Pg**	**12 52 59.9**	**-2.0**
	0.3nm,0.6s,baz=280,slow=16						
KUR15				⇑Lg	Lg	12 53 39.3	
	2.4nm,0.9s,baz=273,slow=33						
KURK	**Kurchatov**	**3.13**	**91**	⇑Pn	**Pn**	**12 52 52.6**	**+0.8**
	2.7nm,0.7s						
KURK				⇓Pg	**Pb**	**12 52 58.6**	**+0.4**
	5.1nm,0.7s						
KURK				⇑Lg	Lg	12 53 39.7	
	35nm,0.8s						
ZRNK	**Zerenda**	**3.58**	**308**	⇑Pn	**Pn**	**12 52 58.6**	**+0.6**
ZRNK				⇓Pg	**Pb**	**12 53 06.4**	**+0.6**
	2.5nm,0.7s						
ZRNK				⇑Sn	**Sn**	**12 53 42.9**	**+2.6**
	8.8nm,0.7s						
ZRNK				⇓Lg	Lg	12 53 53.0	
	21nm,0.8s						
MK31	**Makanchi Array**	**6.98**	**122**	⇑Lg	Lg	12 55 41.9	
	10nm,0.9s,baz=310,slow=24,SNR=6.1						
MKAR	**Makanchi Array**	**6.98**	**122**	Pn	**Pn**	**12 53 44.7**	**0.0**
	0.1nm,0.3s,baz=294,slow=14,SNR=2.9						
MKAR				Pg	**Pb**	**12 54 06.5**	**+2.8**
	0.1nm,0.3s,baz=291,slow=14,SNR=6.0						
MKAR				Sn	**Sn**	**12 55 02.0**	**-2.1**
	0.1nm,0.3s,baz=326,slow=23,SNR=2.7						
MKAR				Lg	Lg	12 55 44.4	
	0.4nm,0.3s,baz=310,slow=22,SNR=9.3						
ZALV	**Zalesovo Beam**	**7.48**	**61**	Pn	**Pn**	**12 53 52.6**	**+1.0**
	0.1nm,0.3s,baz=251,slow=13,SNR=2.9						
ZALV				Sn	**Sn**	**12 55 17.5**	**+1.1**
	0.2nm,0.3s,baz=252,slow=22,SNR=4						
ZALV				Lg	Lg	12 56 03.5	
	0.1nm,0.3s,baz=245,slow=24,SNR=3.4						
TKM2	**Tokmak 2**	**8.04**	**170**	⇑Lg	Lg	12 56 18.2	
	11nm,0.9s						
KK31	**Karatay Array**	**8.05**	**197**	⇑Pn	Pn	12 54 03.8	+4.5
	0.2nm,0.3s						
KK31				⇓Lg	Lg	12 56 16.1	
	6.3nm,0.8s						
AB31	**Akbulak array**	**8.99**	**265**	⇑Pn	**Pn**	**12 54 11.4**	**-0.7**
	0.3nm,0.5s,baz=82,slow=12,SNR=4.3						
AB31				⇑Lg	Lg	12 56 46.1	
	3.7nm,1.1s,baz=0.0,slow=0.1,SNR=4.5						
ILAR	**Eielson Array**	**60.50**	**19**	P	**P**	**13 02 12.1**	**+0.1**
	0.3nm,0.9s,baz=328,slow=5.3,SNR=4.4						

*IDC **21** 13:12:58.1±1.8,27.°75S×139.°92E,h0km,mb3.4/3,*

mb1 3.8/4,mb1mx3.5/18,mbtmp3.5/4,ML3.8/1,MS3.6/1, Ms1 3.6/1,ms1mx2.4/21,Error ellipse: s-maj=100.9km s-min=27.7km az=114.0

*ISCJB **21** 13:13:04.0±0.8,2.°94S±0.°09×139.°58E±0.°08,h46km, mb3.5/2,MS3.6/1,Error ellipse: s-maj=16.1km s-min=6.5km az=143.5*

*AUST **21** 13:13:04.2±90.0,3.°00S×139.°66E,h19km,Error ellipse: s-maj=2.5km s-min=0.9km az=327.0*

ISC 21 13:13:05.2±1.0,3.°0S±0.°1×139.°64E±0.°09,h46km,n10, σ2$35/13,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.16**	**67**	P	**Pn**	**13 13 25.4**	**+0.3**
	baz=1.1,SNR=6.4						
JAY				S	**Sn**	**13 13 39.8**	**0.0**
	baz=1.1,SNR=6.7						
FAKI	**Fak Fak**	**7.38**	**270**	P	**Pn**	**13 14 51.2**	**+0.7**
	baz=7.4,SNR=3.2						
KDU	**Kakadu**	**11.97**	**216**	P	**Pn**	**13 15 54.1**	**+0.7**
	baz=12,SNR=12						
MTN	**Manton Dam**	**12.92**	**220**	P	**Pn**	**13 16 07.3**	**+1.0**
	baz=13,SNR=10						
KNRA	**Kununurra**	**16.55**	**220**	P	**P**	**13 16 55.8**	**-0.5**
	baz=17,SNR=7.8						
WRA	**Warramunga Arr**	**17.64**	**197**	P	**P**	**13 17 08.4**	**+0.1**
	0.3nm,0.3s,baz=19,slow=12,SNR=18						
WRA				S	**Sn**	**13 20 20.5**	**-3.0**
	0.2nm,0.3s,baz=14,slow=23,SNR=7.5						
FITZ	**Fitzroy Crossi**	**20.35**	**221**	P	**P**	**13 17 39.3**	**+1.3**
	1.8nm,0.9s,baz=26,slow=12,SNR=8.0						
FITZ				S	**S**	**13 21 18.6**	**-5.1**
	1.9nm,0.5s,baz=199,slow=14,SNR=7.7						
ASAR	**Alice Springs**	**21.30**	**195**	P	**P**	**13 17 50.5**	**+2.3**
	1.1nm,0.5s,baz=28,slow=11,SNR=14						
ASAR				S	**S**	**13 21 45.5**	**+3.0**
	0.2nm,0.5s,baz=1.4,slow=26,SNR=4.3						
PALK	**Pallekele**	**59.69**	**280**	LR	LR	13 49 13.0	
	comp=Z,46nm,18.9s,baz=192,slow=36						
ILAR	**Eielson Array**	**85.69**	**24**	P	**P**	**13 25 37.4**	**-1.6**
	0.3nm,0.8s,baz=251,slow=5.1,SNR=4.5						

*NEIC **21** 13:18:59.0,19.°51N×66.°38W,h38km,MD3.5(RSPR), After RSPR.*

RSPR 21 13:18:59.0,19.°51N×66.°38W,h38km±24km,MD3.5/7, 12C-5D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOPR	**Arecibo Observ**	**1.21**	**197**	⇑*e*P	Pn	13 19 18.0	-1.4
AOPR	**Arecibo Observ**	**1.21**	**197**	*e*S	Sn	13 19 33.4	-1.2
AOPR	**Arecibo Observ**	**1.21**	**197**	⇓*e*P	Pn	13 19 18.0	-1.4
AOPR				*e*S	Sn	13 19 33.4	-1.2
AGPR	**Aguadilla, PR**	**1.25**	**214**	*e*Pn	Pn	13 19 18.8	-1.1
AGPR				*e*Sn	Sn	13 19 34.9	-0.5
LRS	**Lares**	**1.29**	**200**	*e*Pn	Pn	13 19 19.6	-0.9
CBYP	**Canovanas**	**1.33**	**158**	⇓*e*P	Pn	13 19 19.7	-1.4
CBYP	**Canovanas**	**1.33**	**158**	*e*S	Sn	13 19 36.0	-1.6
CBYP	**Canovanas**	**1.33**	**158**	⇓*e*P	Pn	13 19 19.7	-1.4
CBYP				*e*S	Sn	13 19 36.0	-1.6
SJG	**San Juan**	**1.41**	**171**	⇑*e*P	Pn	13 19 21.4	-0.7
SJG	**San Juan**	**1.41**	**171**	*e*S	Sn	13 19 38.0	-1.4
SJG	**San Juan**	**1.41**	**171**	⇑*i*P

SKO					*e*Sn	**Sn**	**13 26 45.6**	**-0.1**
SKO					*e*Lg	Lg	13 26 46.5	
	comp=N,670nm,0.4s							
SKO					*e*Lg	Lg	13 26 47.3	
	comp=E,419nm,0.6s							
SKO	**Skopje**	**1.15**	**36**	P	**Pg**		**13 26 28.4**	**-0.3**
SKO	**Skopje**	**1.15**	**36**	*i* Pn	**Pn**		**13 26 29.6**	**+0.1**
SKO					*e*Sn	**Sn**	**13 26 46.1**	**+0.4**
SKO					*e*Lg	Lg	13 26 47.8	
	comp=E,419nm,0.6s							
KZN	**Kozani**	**1.20**	**128**	*e*PN	**Pg**		**13 26 29.1**	**-0.6**
KZN					*e*SB	**Sn**	**13 26 48.6**	**+1.5**
KZN	**Kozani**	**1.20**	**128**	*e*Pn	**Pg**		**13 26 29.1**	**-0.6**
KZN					*e*Sb	**Sn**	**13 26 48.6**	**+1.5**
ULC	**Ulcinj**	**1.33**	**314**	⇑ *i* Pg	**Pn**		**13 26 30.2**	**-1.8**
ULC					*e*Sg	**Sn**	**13 26 52.1**	**+2.0**
ULC	**Ulcinj**	**1.33**	**314**	⇑ *i* Pg	**Pn**		**13 26 30.2**	**-1.8**
ULC					*e*Sg	**Sn**	**13 26 52.1**	**+2.0**
BCI	**Bajram Curri**	**1.36**	**346**	*i* PG	**Pg**		**13 26 35.4**	**+2.7**
BCI	**Bajram Curri**	**1.36**	**346**	*i* Pg	**Pg**		**13 26 35.4**	**+2.7**
JAN	**Janina**	**1.41**	**170**	*e*PB	**Pg**		**13 26 34.8**	**+1.1**
JAN	**Janina**	**1.41**	**170**	*e*Pb	**Pg**		**13 26 34.8**	**+1.1**
GRG	**Griva**	**1.42**	**93**	*e*PB	**Pb**		**13 26 33.6**	**-0.1**
GRG					*e*SB	**Sg**	**13 26 53.7**	**+1.4**
GRG	**Griva**	**1.42**	**93**	*e*Pb	**Pb**		**13 26 33.6**	**-0.1**
GRG					*e*Sb	**Sg**	**13 26 53.7**	**+1.4**
KEK	**Kerkira**	**1.45**	**203**	P	**Pn**		**13 26 33.7**	**+0.1**
KEK					S	**Sg**	**13 26 54.7**	**+1.6**
KEK	**Kerkira**	**1.45**	**203**	*e*PG	**Pb**		**13 26 34.0**	**-0.1**
KEK					*e*SB	**Sg**	**13 26 55.8**	**+2.7**
KEK	**Kerkira**	**1.45**	**203**	P	**Pn**		**13 26 33.7**	**+0.1**
KEK	**Kerkira**	**1.45**	**203**	*e*Pg	**Pb**		**13 26 34.0**	**-0.1**
KEK					S	**Sg**	**13 26 54.7**	**+1.6**
KEK					*e*Sb	**Sb**	**13 26 55.8**	**+2.9**
VAY	**Valandovo**	**1.57**	**79**	*e*Pn	**Pn**		**13 26 34.7**	**-0.6**
VAY					*i* Sn	**Sb**	**13 26 55.5**	**-0.8**
VAY					*e*Lg	Lg	13 26 56.5	
	comp=N,264nm,0.7s							
VAY	**Valandovo**	**1.57**	**79**	*i* Pn	**Pb**		**13 26 35.4**	**-0.8**
VAY					*e*Sn	**Sg**	**13 26 56.6**	**-0.4**
VAY					*e*Lg	Lg	13 26 58.0	
	comp=E,135nm,0.6s							
VAY					*e*Lg	Lg	13 27 01.1	
	comp=N,601nm,1.1s							
VAY	**Valandovo**	**1.57**	**79**	*e*Pn	**Pn**		**13 26 34.5**	**-0.7**
VAY					*e*Sg	**Sg**	**13 26 56.7**	**-0.3**
VAY	**Valandovo**	**1.57**	**79**	*i* Pn	**Pb**		**13 26 35.9**	**-0.3**
VAY					*e*Sg	**Sg**	**13 26 56.7**	**-0.3**
VAY					*e*Sn	**Sb**	**13 26 57.1**	**+0.8**
VAY					*e*Lg	Lg	13 27 01.6	
	comp=N,601nm,1.1s							
PVY	**Plav**	**1.60**	**345**	⇑ *i* Pn	**Pb**		**13 26 36.1**	**-0.8**
PVY					*e*Sn	**Sg**	**13 27 00.9**	**+2.8**
PVY	**Plav**	**1.60**	**345**	⇑ *i* Pn	**Pb**		**13 26 36.1**	**-0.8**
PVY					*e*Sn	**Sg**	**13 27 00.9**	**+2.8**
PDG	**Podgorica**	**1.68**	**326**	*e*Pn	**Pn**		**13 26 36.9**	**+0.2**
PDG					*e*Sg	**Sg**	**13 27 03.3**	**+2.8**
PDG	**Podgorica**	**1.68**	**326**	⇑ *i* Pn	**Pn**		**13 26 36.8**	**+0.1**
PDG					*e*Sn	**Sg**	**13 27 02.8**	**+2.3**
PDG					*e*Sg	**Sg**	**13 27 03.3**	**+2.8**
TTG	**Podgorica**	**1.68**	**326**	⇑ *i* Pn	**Pn**		**13 26 36.8**	**+0.1**
TTG					*e*Sn	**Sg**	**13 27 02.8**	**+2.3**
BUM	**Brajici-Budva**	**1.75**	**316**	*e*Pn	**Pb**		**13 26 38.6**	**-0.7**
BUM					*e*Sn	**Sg**	**13 27 04.8**	**+2.0**
BUM	**Brajici-Budva**	**1.75**	**316**	*e*Pn	**Pb**		**13 26 38.6**	**-0.7**
BUM					*e*Sn	**Sg**	**13 27 04.8**	**+2.0**
LIT	**Litokhoron**	**1.77**	**122**	*e*PN	**Pb**		**13 26 38.9**	**-0.8**
LIT	**Litokhoron**	**1.77**	**122**	*e*Pn	**Pb**		**13 26 38.9**	**-0.8**
THL	**Klokotos Trika**	**1.87**	**142**	*e*PN	**Pb**		**13 26 41.0**	**-0.3**
THL	**Klokotos Trika**	**1.87**	**142**	*e*Pn	**Pb**		**13 26 41.0**	**-0.3**
BEY	**Berane**	**1.88**	**346**	*e*Pn	**Pb**		**13 26 42.0**	**+0.4**
BEY					*e*Sn	**Sg**	**13 27 07.9**	**+0.8**
IVA	**Berane**	**1.88**	**346**	*e*Pn	**Pb**		**13 26 42.0**	**+0.4**
IVA					*e*Sn	**Sg**	**13 27 07.9**	**+0.8**
BARS	**Barje**	**2.01**	**28**	*e*Pn	**Pn**		**13 26 41.4**	**0.0**
BARS					*e*Sg	**Sg**	**13 27 13.4**	**+2.1**
BARS	**Barje**	**2.01**	**28**	*e*Pn	**Pn**		**13 26 41.4**	**0.0**
BARS					*e*Sg	**Sg**	**13 27 13.4**	**+2.1**
HCY	**Herceg Novi**	**2.06**	**313**	⇓ *i* Pn	**Pn**		**13 26 42.3**	**+0.2**
HCY					*e*Sn	**Sg**	**13 27 12.1**	**-0.9**
HCY	**Herceg Novi**	**2.06**	**313**	⇓ *i* Pn	**Pn**		**13 26 42.3**	**+0.2**
HCY					*e*Sn	**Sg**	**13 27 12.1**	**-0.9**
NKY	**Niksic**	**2.10**	**328**	⇑ *i* Pn	**Pb**		**13 26 44.1**	**-1.3**
NKY					*e*Sn	**Sb**	**13 27 12.9**	**+1.1**
NKY	**Niksic**	**2.10**	**328**	⇑ *i* Pn	**Pb**		**13 26 44.1**	**-1.3**
NKY					*e*Sn	**Sb**	**13 27 12.9**	**+1.1**
SOH	**Sokhos**	**2.15**	**95**	*e*PN	**Pb**		**13 26 45.0**	**-1.2**
SOH	**Sokhos**	**2.15**	**95**	*e*Pn	**Pb**		**13 26 45.0**	**-1.2**
SELS	**Selova**	**2.21**	**11**	*e*Pn	**Pb**		**13 26 46.6**	**-0.6**
LKD2	**Lefkada island**	**2.26**	**177**	*e*PB	**Pn**		**13 26 46.0**	**+1.2**
LKD2	**Lefkada island**	**2.26**	**177**	*e*Pb	**Pn**		**13 26 46.0**	**+1.2**
PE1	**Pezze di Greco**	**2.36**	**265**	*e*Pn	**Pn**		**13 26 44.9**	**-1.3**
BRY	**Bratogost**	**2.37**	**322**	*e*Pn	**Pn**		**13 26 46.9**	**+0.5**
BRY					*e*Sn	**Sb**	**13 27 19.4**	**-0.2**
BRY	**Bratogost**	**2.37**	**322**	*e*Pn	**Pn**		**13 26 46.9**	**+0.5**
BRY					*e*Sn	**Sb**	**13 27 19.4**	**-0.2**
AGG	**Agios Georgios**	**2.45**	**145**	*e*PN	**Pb**		**13 26 49.8**	**-1.5**
AGG	**Agios Georgios**	**2.45**	**145**	*e*Pn	**Pb**		**13 26 49.8**	**-1.5**
UPM	**Unac-Piva**	**2.47**	**331**	⇓ *i* Pn	**Pb**		**13 26 49.8**	**-1.9**
UPM					*e*Sn	**Sb**	**13 27 21.8**	**-0.7**
UPM	**Unac-Piva**	**2.47**	**331**	⇓ *i* Pn	**Pb**		**13 26 49.8**	**-1.9**
UPM					*e*Sn	**Sb**	**13 27 21.8**	**-0.7**
VTS	**Vitosha**	**2.53**	**52**	*e*Pn	**Pn**		**13 26 49.5**	**+0.9**
VTS					*e*Sn	**Sn**	**13 27 19.9**	**0.0**
VTS	**Vitosha**	**2.53**	**52**	*e*Pn	**Pn**		**13 26 49.5**	**+0.9**
VTS					*e*Sn	**Sn**	**13 27 19.9**	**0.0**
NVR	**Nevrokopi**	**2.54**	**82**	*e*PG	**Pg**		**13 26 54.6**	**-0.6**
NVR	**Nevrokopi**	**2.54**	**82**	*e*Pg	**Pg**		**13 26 54.6**	**-0.6**
ZAPS	**Zavoj**	**2.72**	**34**	*e*Pn	**Pn**		**13 26 52.7**	**+1.6**
ZAPS					*e*Sn	**Sn**	**13 27 25.1**	**+0.6**
STON	**Ston**	**2.79**	**312**	*e*Pn	**Pn**		**13 26 51.6**	**-0.3**
STON					Sn	**Sg**	**13 27 34.0**	**-2.1**
STON	**Ston**	**2.79**	**312**	*e*Pn	**Pn**		**13 26 51.6**	**-0.3**
EFP	**Efpalio**	**2.83**	**157**	*e*PN	**Pb**		**13 26 57.2**	**-0.5**
GRUS	**Gruza**	**2.84**	**3**	*e*Pn	**Pn**		**13 26 53.3**	**+0.5**
GRUS					*e*Sn	**Sb**	**13 27 31.3**	**-1.7**
GRUS					*e*Sg	**Sg**	**13 27 39.0**	**+1.1**
GRUS	**Gruza**	**2.84**	**3**	*e*Pn	**Pn**		**13 26 53.3**	**+0.5**
GRUS					*e*Sn	**Sb**	**13 27 31.3**	**-1.7**
GRUS					*e*Sg	**Sg**	**13 27 39.0**	**+1.1**
VLS	**Valsamata**	**2.87**	**179**	*e*PN	**Pn**		**13 26 52.3**	**-0.9**
VLS	**Valsamata**	**2.87**	**179**	*e*Pn	**Pn**		**13 26 52.3**	**-0.9**
KALE	**Kalithea**	**2.93**	**154**	*e*PG	**Pg**		**13 27 01.3**	**-1.5**
KALE	**Kalithea**	**2.93**	**154**	*e*Pg	**Pg**		**13 27 01.3**	**-1.5**
TRIZ	**Trizonia**	**2.93**	**156**	*e*PB	**Pb**		**13 26 57.1**	**-2.4**
TRIZ	**Trizonia**	**2.93**	**156**	*e*Pb	**Pb**		**13 26 57.1**	**-2.4**
BBLS	**Lazići**	**2.94**	**344**	*e*Sg	**Sg**		**13 27 43.4**	**+2.5**
BBLS	**Lazići**	**2.94**	**344**	*e*Sg	**Sg**		**13 27 43.4**	**+2.5**
BOLS	**Boljevac**	**2.97**	**20**	*e*Pn	**Pn**		**13 26 56.1**	**+1.5**
BOLS	**Boljevac**	**2.97**	**20**	*e*Pn	**Pn**		**13 26 56.1**	**+1.5**
LAKA	**Lakka**	**3.02**	**158**	*e*PB	**Pb**		**13 26 58.3**	**-2.7**
LAKA	**Lakka**	**3.02**	**158**	*e*Pb	**Pb**		**13 26 58.3**	**-2.7**
DIVS	**Divibare**	**3.07**	**353**	*e*Pn	**Pn**		**13 26 57.7**	**+1.7**
DIVS					*e*Sn	**Sb**	**13 27 37.0**	**-2.8**
DIVS	**Divibare**	**3.07**	**353**	*e*Pn	**Pn**		**13 26 57.7**	**+1.7**
DIVS					*e*Sn	**Sb**	**13 27 37.0**	**-2.8**
KLV	**Kalavryta, Ach**	**3.25**	**157**	*e*PB	**Pb**		**13 27 02.1**	**-2.9**
KLV	**Kalavryta, Ach**	**3.25**	**157**	*e*Pb	**Pb**		**13 27 02.1**	**-2.9**
TEKS	**Tekeris**	**3.57**	**348**	*e*Pn	**Pn**		**13 27 03.9**	**+1.0**
TEKS	**Tekeris**	**3.57**	**348**	*e*Pn	**Pn**		**13 27 03.9**	**+1.0**
VOY	**Vojsko**	**6.93**	**318**	Pn	**Pn**		**13 27 48.8**	**-0.2**
VYHS	**Vyhne**	**7.54**	**351**	*e*PN	Pn		13 27 52.6	-4.7

IDC 21 13:26:46.8±0.9, 20°.72N×145°.91E, h0km, mb3.5/9, mb1 3.7/9, mb1mx3.5/28, mbtmp3.5/9, Error ellipse: s-maj=37.0km s-min=18.2km az=98.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**41.72**	**320**	P	P	13 34 38.0	+0.4
	0.2nm,0.4s,baz=118,slow=7.1,SNR=2.6						
WRA	**Warramunga Arr**	**41.97**	**196**	P	P	13 34 39.8	+0.1
	0.2nm,0.3s,baz=18,slow=8.9,SNR=8.0						
FITZ	**Fitzroy Crossi**	**43.40**	**209**	P	P	13 34 51.3	-0.1
	0.7nm,0.6s,baz=27,slow=15,SNR=3.9						
ASAR	**Alice Springs**	**45.64**	**195**	P	P	13 35 08.9	-0.4
	0.3nm,0.8s,baz=16,slow=6.9,SNR=3.5						
MKAR	**Makanchi Array**	**57.23**	**313**	P	P	13 36 35.8	-0.2
	0.2nm,0.4s,baz=89,slow=11,SNR=4.2						
ILAR	**Eielson Array**	**61.76**	**27**	P	P	13 37 06.6	-0.2
	0.2nm,0.6s,baz=257,slow=4.6,SNR=3.3						
BVAR	**Borovoye Array**	**65.06**	**320**	P	P	13 37 29.2	+0.2
	0.5nm,0.4s,baz=68,slow=7.6,SNR=4.1						
YKA	**Yellowknife Ar**	**76.12**	**28**	P	P	13 38 36.8	+0.6
	0.2nm,0.6s,baz=282,slow=6.1,SNR=3.5						
FINES	**FINESS Array B**	**85.14**	**335**	P	P	13 39 23.2	-1.4
	1.5nm,1.0s,baz=72,slow=6.2,SNR=4.8						

*SKO **21** 13:31:03.8, 41°.06N×20°.50E, h7km, M2.7, ML2.9*
*PDG **21** 13:31:04.6±0.5, 41°.03N×20°.56E, h8km, ML3.2/2, Error ellipse: s-maj=1.1km s-min=2.7km az=0.0*
*TIR **21** 13:31:04.6, 41°.07N×20°.54E, h6km, ML3.5*
*ATH **21** 13:31:04.9, 41°.07N×20°.53E, h19km±3km, MD3.4/11*
*BEO **21** 13:31:04.2±0.8, 40°.96N×20°.55E, h2km±4km, ML3.0/1*
*CSEM **21** 13:31:04.7±0.2, 41°.05N×20°.52E, h2km, ML3.5, Error ellipse: s-maj=4.5km s-min=3.1km az=57.0*

ISC 21 13:31:04.9±1.1, 41°.05N±0°.02×20°.54E±0°.02, h5km±10km, n72, σ1s01/116, 6C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBN	**Korca**	**0.46**	**156**	*i* PG	**Pg**	**13 31 13.4**	**-0.4**
KBN				*i* SG	**Sb**	**13 31 21.4**	**-1.4**
KBN	**Korca**	**0.46**	**156**	P	**Pg**	**13 31 13.7**	**-0.1**
KBN				S	**Sg**	**13 31 21.2**	**+1.4**
KBN	**Korca**	**0.46**	**156**	*i* Pg	**Pg**	**13 31 13.4**	**-0.4**
KBN	**Korca**	**0.46**	**156**	P	**Pg**	**13 31 13.7**	**-0.1**
KBN				S	**Sg**	**13 31 21.2**	**+1.4**
TIR	**Tirane**	**0.59**	**301**	*i* PG	**Pg**	**13 31 14.9**	**-1.4**
TIR				*i* SG	**Sb**	**13 31 25.1**	**-1.4**
TIR	**Tirane**	**0.59**	**301**	P	**Pg**	**13 31 15.4**	**-0.9**
TIR	**Tirane**	**0.59**	**301**	⇑ *i* Pg	**Pg**	**13 31 14.8**	**-1.5**
TIR				*e*Sg	**Sb**	**13 31 25.3**	**-1.2**
TIR	**Tirane**	**0.59**	**301**	*i* Pg	**Pg**	**13 31 14.9**	**-1.4**
TIR	**Tirane**	**0.59**	**301**	P	**Pg**	**13 31 15.4**	**-0.9**
TIR				*i* Sg	**Sb**	**13 31 25.1**	**-1.4**
BIA	**Bitola**	**0.59**	**92**	P	**Pg**	**13 31 15.5**	**-0.8**
BIA				S	**Sg**	**13 31 24.7**	**+0.7**
BIA	**Bitola**	**0.59**	**92**	*i* Pg	**Pg**	**13 31 15.6**	**-0.8**
BIA				*e*Sg	**Sb**	**13 31 25.4**	**-1.2**
BIA	**Bitola**	**0.59**	**92**	P	**Pg**	**13 31 15.5**	**-0.8**
BIA				S	**Sg**	**13 31 24.7**	**+0.7**
BIA				*e*Sg	**Sb**	**13 31 25.4**	**-1.2**
PHP	**Peshkopia**	**0.64**	**353**	*i* PG	**Pg**	**13 31 16.5**	**-0.8**
PHP				*i* SG	**Sg**	**13 31 26.5**	**+0.9**
PHP	**Peshkopia**	**0.64**	**353**	P	**Pg**	**13 31 16.3**	**-1.0**
PHP				S	**Sg**	**13 31 26.3**	**+0.7**
PHP	**Peshkopia**	**0.64**	**353**	*i* Pg	**Pg**	**13 31 16.5**	**-0.8**
PHP				S	**Sg**	**13 31 26.3**	**+0.7**
FNA	**Florina**	**0.69**	**112**	P	**Pg**	**13 31 17.7**	**-0.4**
FNA				S	**Sg**	**13 31 27.1**	**+0.1**
FNA	**Florina**	**0.69**	**112**	*e*PB	**Pg**	**13 31 17.9**	**-0.2**
FNA				*e*SN	**Sb**	**13 31 28.5**	**-0.7**
FNA	**Florina**	**0.69**	**112**	*e*Pb	**Pg**	**13 31 17.9**	**-0.2**
FNA				S	**Sg**	**13 31 27.1**	**+0.1**
FNA				*e*Sn	**Sb**	**13 31 28.5**	**-0.7**
NEST	**Nestorio**	**0.74**	**148**	P	**Pg**	**13 31 18.8**	**-0.3**
NEST				S	**Sb**	**13 31 30.4**	**-0.5**
PUK	**Puka**	**1.11**	**334**	*i* PG	**Pg**	**13 31 25.3**	**-0.9**
PUK				*i* SG	**Sb**	**13 31 41.4**	**0.0**
PUK	**Puka**	**1.11**	**334**	*i* Pg	**Pg**	**13 31 25.3**	**-0.9**
PUK				*i* Sg	**Sb**	**13 31 41.4**	**0.0**
SKO	**Skopje**	**1.14**	**36**	P	**Pg**	**13 31 26.6**	**-0.3**
SKO				S	**Sb**	**13 31 42.6**	**+0.2**
SKO	**Skopje**	**1.14**	**36**	*i* Pn	**Pg**	**13 31 26.6**	**-0.3**
SKO				*i* Pg	**Pn**	**13 31 28.4**	**+0.7**
SKO				*e*Sn	**Sb**	**13 31 42.8**	**+0.3**
	comp=E,226nm,0.3s						
SKO	**Skopje**	**1.14**	**36**	P	**Pg**	**13 31 26.6**	**-0.3**
SKO	**Skopje**	**1.14**	**36**	*i* Pn	**Pb**	**13 31 27.1**	**-0.1**
SKO	**Skopje**	**1.14**	**36**	*i* Pg	**Pn**	**13 31 28.9**	**+1.2**
SKO				S	**Sb**	**13 31 42.6**	**+0.2**
SKO				*e*Sn	**Sn**	**13 31 43.2**	**-0.6**
	comp=E,226nm,0.3s						
KZN	**Kozani**	**1.19**	**128**	P	**Pg**	**13 31 27.0**	**-0.8**
KZN				S	**Sg**	**13 31 43.4**	**+0.2**
KZN	**Kozani**	**1.19**	**128**	*e*PB	**Pg**	**13 31 27.0**	**-0.8**
KZN				*e*SN	**Sn**	**13 31 45.3**	**+0.3**
KZN	**Kozani**	**1.19**	**128**	S	**Sg**	**13 31 43.4**	**+0.2**
KZN				*e*Sn	**Sn**	**13 31 45.3**	**+0.3**
BCI	**Bajram Curri**	**1.36**	**345**	*i* PG	**Sb**	**13 31 48.1**	**-0.7**
JAN	**Janina**	**1.41**	**170**	*e*PN	**Pg**	**13 31 33.1**	**+1.2**
JAN				*e*SN	**Sg**	**13 31 50.9**	**+0.7**
JAN	**Janina**	**1.41**	**170**	*e*Pn	**Pg**	**13 31 33.1**	**+1.2**
JAN				*e*Sn	**Sg**	**13 31 50.9**	**+0.7**
GRG	**Griva**	**1.41**	**93**	P	**Pn**	**13 31 29.9**	**-1.5**
GRG	**Griva**	**1.41**	**93**	*e*PB	**Pn**	**13 31 30.7**	**-0.7**
GRG				*e*SN	**Sg**	**13 31 52.4**	**+2.2**
GRG	**Griva**	**1.41**	**93**	P	**Pn**	**13 31 29.9**	**-1.5**
GRG				*e*Sn	**Sg**	**13 31 52.4**	**+2.2**
KEK	**Kerkira**	**1.45**	**203**	*e*PN	**Pb**	**13 31 31.9**	**-0.5**
KEK				*e*SN	**Sg**	**13 31 52.4**	**+1.0**
KEK	**Kerkira**	**1.45**	**203**	*e*Pn	**Pb**	**13 31 31.9**	**-0.5**
KEK				*e*Sn	**Sg**	**13 31 52.4**	**+1.0**
VAY	**Valandovo**	**1.56**	**79**	*i* Pn	**Pn**	**13 31 33.0**	**-0.3**
VAY				*e*Sn	**Sb**	**13 31 54.3**	**+0.1**
VAY				*e*Lg	Lg	13 31 55.1	
	comp=N,179nm,0.7s						
VAY				*e*Lg	Lg	13 31 55.3	
	comp=E,119nm,0.6s						
VAY	**Valandovo**	**1.56**	**79**	*e*Sg	**Sb**	**13 31 54.1**	**-0.1**
VAY	**Valandovo**	**1.56**	**79**	*e*Sg	**Sb**	**13 31 54.1**	**-0.1**
VAY				*e*Sn	**Sg**	**13 31 54.8**	**-0.1**
VAY				*e*Lg	Lg	13 31 55.7	
	comp=E,119nm,0.6s						
PDG	**Podgorica**	**1.68**	**326**	⇑ *i* Pn	**Pn**	**13 31 35.3**	**+0.2**
PDG				*e*Sg	**Sg**	**13 32 00.1**	**+1.1**
PDG	**Podgorica**	**1.68**	**326**	⇓ *i* Pn	**Pn**	**13 31 34.4**	**-0.7**
TTG	**Podgorica**	**1.68**	**326**	⇓ *i* Pn	**Pn**	**13 31 34.4**	**-0.7**
TTG				*e*Sn	**Sg**	**13 32 00.6**	**+1.6**
LIT	**Litokhoron**	**1.76**	**122**	P	**Pn**	**13 31 35.2**	**-0.9**
LIT	**Litokhoron**	**1.76**	**122**	*e*PN	**Pn**	**13 31 36.3**	**+0.2**
THL	**Klokotos Trika**	**1.86**	**142**	*e*PN	**Pn**	**13 31 38.2**	**+0.7**
THL				*e*SN	**Sn**	**13 32 01.8**	**+0.4**
THL	**Klokotos Trika**	**1.86**	**142**	*e*Pn	**Pn**	**13 31 38.2**	**+0.7**
THL				*e*Sn	**Sn**	**13 32 01.8**	**+0.4**
BEY	**Berane**	**1.89**	**345**	⇑ *i* Pn	**Pg**	**13 31 41.1**	**0.0**
IVA	**Berane**	**1.89**	**345**	⇑ *i* Pn	**Pg**	**13 31 41.1**	**0.0**
IVA				*e*Sn	**Sg**	**13 32 08.1**	**+2.6**
BARS	**Barje**	**2.01**	**28**	⇑ *i* Pn	**Pn**	**13 31 39.2**	**-0.3**
BARS				*e*Sg	**Sg**	**13 32 11.5**	**+2.1**
BARS	**Barje**	**2.01**	**28**	⇑ *i* Pn	**Pn**	**13 31 39.2**	**-0.3**
BARS				*e*Sg	**Sg**	**13 32 11.5**	**+2.1**
SELS	**Selova**	**2.21**	**11**	*e*Pn	**Pb**	**13 31 44.7**	**-0.8**
SELS				*e*Sg	**Sg**	**13 32 16.4**	**+0.4**
LKD2	**Lefkada island**	**2.26**	**178**	*e*PN	**Pn**	**13 31 43.8**	**+0.8**
PLG	**Polygyros**	**2.31**	**106**	*e*PN	**Pn**	**13 31 44.0**	**+0.3**
VTS	**Vitosha**	**2.52**	**51**	*e*Pn	**Pn**	**13 31 47.2**	**+0.5**
VTS	**Vitosha**	**2.52**	**51**	*e*Pn	**Pn**	**13 31 47.2**	**+0.5**
NVR	**Nevrokopi**	**2.52**	**82**	*e*PN	**Pn**	**13 31 47.4**	**+0.7**
NEO	**Neokhori**	**2.69**	**129**	*e*PB	**Pb**	**13 31 51.5**	**-2.1**
NEO	**Neokhori**	**2.69**	**129**	*e*Pb	**Pb**	**13 31 51.5**	**-2.1**
ZAPS	**Zavoj**	**2.71**	**34**	*e*Pn	**Pn**	**13 31 50.6**	**+1.3**
GRUS	**Gruza**	**2.84**	**3**	*e*Pn	**Pn**	**13 31 51.2**	**+0.2**
GRUS	**Gruza**	**2.84**	**3**	*e*Pn	**Pn**	**13 31 51.2**	**+0.2**
BBLS	**Lazići**	**2.94**	**344**	*e*Pn	**Pn**	**13 31 54.5**	**+2.1**
BBLS	**Lazići**	**2.94**	**344**	*e*Pn	**Pn**	**13 31 54.5**	**+2.1**
BOLS	**Boljevac**	**2.97**	**20**	*e*Pn	**Pn**	**13 31 53.3**	**+0.5**
BOLS	**Boljevac**	**2.97**	**20**	*e*Pn	**Pn**	**13 31 53.3**	**+0.5**
LKR	**Lokris**	**3.05**	**141**	*e*PB	**Pn**	**13 31 56.0**	**+2.1**
LKR	**Lokris**	**3.05**	**141**	*e*Pb	**Pn**	**13 31 56.0**	**+2.1**
DIVS	**Divibare**	**3.08**	**353**	*e*Pn	**Pn**	**13 31 55.5**	**+1.2**
DIVS	**Divibare**	**3.08**	**353**	*e*Pn	**Pn**	**13 31 55.5**	**+1.2**
TEKS	**Tekeris**	**3.58**	**348**	*e*Pn	**Pn**	**13 32 01.8**	**+0.7**
TEKS	**Tekeris**	**3.58**	**348**	*e*Pn	**Pn**	**13 32 01.8**	**+0.7**

IDC 21 13:40:25.9±2.3, 20°.96N×144°.94E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.3/26, mbtmp3.6/3, Error ellipse: s-maj=351.7km s-min=27.8km az=110.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.95**	**195**	P	P	13 48 18.6	-0.1
	0.4nm,0.6s,baz=17,slow=9.0,SNR=2.8						
ILAR	**Eielson Array**	**61.95**	**27**	P	P	13 50 47.4	0.0
	0.6nm,0.8s,baz=264,slow=5.0,SNR=9.9						
YKA	**Yellowknife Ar**	**76.34**	**28**	P	P	13 52 16.6	0.0
	0.5nm,0.6s,baz=291,slow=5.6,SNR=4.9						

IDC 21 13:41:32.8±8.6, 1°.56N×124°.99E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.2/24, Error ellipse: s-maj=172.9km s-min=133.3km az=67.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.25**	**157**	P	P	13 46 42.1	0.0
	0.4nm,0.5s,baz=334,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.53**	**161**	P	P	13 47 13.4	+1.0
	0.2nm,0.5s,baz=346,slow=7.9,SNR=8.3						
KSRS	**Korea Array**	**35.82**	**4**	LR	LR	14 03 33.1	
	comp=Z,31nm,18.5s,baz=212,slow=37						
STKA	**Stephens Creek**	**36.79**	**156**	P	P	13 48 41.4	-1.1
	1.2nm,0.9s,baz=330,slow=9.2,SNR=2.5						

*SZGRF **21** 13:51:52.1, 52°.06N×157°.77E, h33km, mb5.1, Kamchatka Peninsula, Russia*
*DJA **21** 13:52:22.0±5.5, 53°.N±12°×15°.4E±2°.1, h269km±49km, M4.9/11, mB5.3/2, mb4.9/11, Mw(mB)4.8/2*
*KRSC **21** 13:52:39.5±2.0, 52°.07N×153°.88E, h521km±41km, ML5.1*
*BJI **21** 13:52:39.5, 52°.61N×153°.85E, h457km, mB4.6/24, mb4.8/43*
*NEIC **21** 13:52:43.9±0.3, 52°.57N×153°.04E, h452km±3km, mb4.6/135, Error ellipse: s-maj=4.0km s-min=2.3km az=164.0*
*ISCJB **21** 13:52:43.7±0.1, 52°.56N±0°.03×153°.18E±0°.03, h461km±1km, mb4.5/234, Error ellipse: s-maj=4.3km s-min=2.5km az=153.2*
*MOS **21** 13:52:44.4±0.8, 52°.54N×153°.18E, h472km, mb4.7/112, Error ellipse: s-maj=7.1km s-min=4.3km az=97.2*
*IDC **21** 13:52:45.1±0.5, 52°.59N×153°.12E, h464km±5km, mb4.1/32, mb1 4.2/37, mb1mx4.2/38, mbtmp4.1/37, Error ellipse: s-maj=8.0km s-min=5.2km az=146.0*
*TEH **21** 13:52:45.0, 52°.54N×153°.06E, h458km, ML4.5*

**ISC 21 13:52:44.5±0.3, 52°.51N±0°.04×153°.25E±0

SMKR	**Semkarok**	**6.28**	**46**	*e*P	**P**	**13 54 23.6**	**+1.6**
SMKR				*i* S	**S**	**13 55 39.5**	**-2.4**
OKH	**Okha**	**6.32**	**284**	*i* PN	**P**	**13 54 24.0**	**+1.7**
OKH				*i* S	**S**	**13 55 44.8**	**+2.4**
OKH				pmax	pmax		
	comp=Z,2µm,1.0s						
OKH				smax	smax		
	comp=N,3µm,5.0s						
OKH				smax	smax		
	comp=E,1µm,4.0s						
KBG	**Krutoberegovo**	**6.67**	**52**	PN	**P**	**13 54 25.0**	**-0.9**
KBG	**Krutoberegovo**	**6.67**	**52**	*i* P	**P**	**13 54 25.0**	**-0.9**
KBG				*i* S	S	13 55 41.5	-7.5
PALN	**Palana**	**7.60**	**27**	*e*P	**P**	**13 54 36.7**	**+1.2**
BKI	**Bering**	**7.99**	**65**	PN	**P**	**13 54 37.7**	**-2.0**
BKI	**Bering**	**7.99**	**65**	P	**P**	**13 54 37.7**	**-2.0**
BKI				*i* S	S	13 56 05.0	-9.4
KUR	**Kuril'sk**	**8.10**	**208**	*e*PN	**P**	**13 54 40.5**	**-0.6**
KUR				*e*S	**S**	**13 56 15.0**	**-1.9**
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				pmax	pmax		
	comp=N,3µm,3.0s						
KUR				pmax	pmax		
	comp=E,2µm,2.0s						
KUR				smax	smax		
	comp=N,190nm,1.0s						
KUR				smax	smax		
	comp=E,280nm,1.0s						
YSS	**Yuzh-Sakhalins**	**8.78**	**235**⇑	*i* PN	**P**	**13 54 51.1**	**+2.7**
YSS				pmax	pmax		
	comp=N,80nm,0.8s						
YSS				pmax	pmax		
	comp=E,60nm,0.8s						
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**9.80**	**213***c*	*i* PN	**P**	**13 54 58.4**	**-1.1**
YUK				*i*		13 56 48.7	
YUK				pmax	pmax		
	comp=Z,45µm,0.8s						
YUK				pmax	pmax		
	comp=N,46nm,0.8s						
YUK				pmax	pmax		
	comp=Z,298nm,0.8s						
YUK				pmax	pmax		
	comp=E,221nm,0.7s						
SEY	**Seymchan**	**10.46**	**358***c*	*i* PN	**P**	**13 55 08.2**	**+1.9**
TILK	**Tilichiki**	**10.66**	**37**	*e*P	**P**	**13 55 09.4**	**+0.9**
ASAJ	**Asahikawa**	**10.98**	**224**	*e*P	**P**	**13 55 09.2**	**-3.0**
ASAJ	**Asahikawa**	**10.98**	**224**	P	**P**	**13 55 12.2**	**0.0**
	comp=E,1.1nm,0.3s,baz=26,slow=6.0,SNR=36						
ASAJ				S	**S**	**13 57 16.4**	**+2.4**
	baz=24,slow=20,SNR=6.7						
FX1	**Attu Island--F**	**12.09**	**80**	*e*P	**P**	**13 55 23.8**	**-0.2**
FX1	**Attu Island--F**	**12.09**	**80**	P	**P**	**13 55 25.1**	**+1.1**
	comp=E,62nm,0.3s,baz=298,slow=3.2,SNR=148						
FX1				S	**S**	**13 57 35.0**	**-0.6**
	comp=E,1.4nm,0.3s,baz=246,slow=20,SNR=2.1						
HABR	**Khabarovsk**	**12.27**	**258**	*e*PN	**P**	**13 55 26.1**	**+0.1**
HABR				*e*S	**S**	**13 57 40.5**	**+1.2**
HABR				pmax	pmax		
	comp=E,47nm,1.8s						
HABR				pmax	pmax		
	comp=Z,71nm,1.8s						
HABR				pmax	pmax		
	comp=N,16nm,1.8s						
HABR				MLR	MLR		
	comp=Z,32nm,16.0s						
ERM	**Erimo**	**12.52**	**217**	*e*PN	**P**	**13 55 27.3**	**-1.6**
ERM	**Erimo**	**12.52**	**217**	*e*P	**P**	**13 55 26.1**	**-2.8**
KLR	**Kul'dur**	**13.96**	**265**	*e*P	**P**	**13 55 42.0**	**-2.2**
KLR				*e*S	**S**	**13 58 11.9**	**-0.6**
YAK	**Yakutsk**	**15.82**	**316***d*	*i* P	**P**	**13 56 02.9**	**-0.8**
YAK				*e*S	**S**	**13 58 46.0**	**-2.3**
YAK				pmax	pmax		
	comp=Z,46nm,1.1s						
YAK				pmax	pmax		
	comp=N,21nm,1.3s						
YAK				pmax	pmax		
	comp=E,38nm,1.2s						
YAK				smax	smax		
	comp=N,114nm,1.8s						
YAK				smax	smax		
	comp=E,198nm,2.3s						
AMKA	**Amchitka**	**16.08**	**84**	*e*P	**P**	**13 56 06.4**	**-0.2**
	comp=E,204nm,0.5s						
AMKA				*e*S	**S**	**13 58 55.2**	**+1.8**
USRK	**Ussuriysk Arra**	**16.35**	**248**	P	**P**	**13 56 09.4**	**-0.2**
	comp=E,0.4nm,0.3s,baz=66,slow=9.4,SNR=10.0						
BILL	**Bilibino**	**16.80**	**17**⇑	*i* P	**P**	**13 56 13.3**	**-0.6**
BILL				*i* S	**S**	**13 59 03.8**	**-2.9**
BILL				pmax	pmax		
	comp=Z,166nm,0.9s						
BILL	**Bilibino**	**16.80**	**17**	*e*P	**P**	**13 56 13.3**	**-0.6**
	comp=Z,27nm,0.7s						
BILL				*e*S	**S**	**13 59 06.7**	**0.0**
CLNS	**Chul'man**	**16.90**	**296**	*e*P	**P**	**13 56 15.5**	**+0.3**
CLNS				*e*S	**S**	**13 59 11.0**	**+2.0**
CLNS				pmax	pmax		
	comp=Z,57nm,0.9s						
CLNS				pmax	pmax		
	comp=N,29nm,1.0s						
CLNS				pmax	pmax		
	comp=E,46nm,1.0s						
CLNS				smax	smax		
	comp=E,16nm,1.0s						
CLNS				smax	smax		
	comp=N,29nm,1.4s						
VLA	**Vladivostok**	**17.09**	**245**	*e*P	**P**	**13 56 16.6**	**-0.8**
MDJ	**Mudanjiang**	**17.48**	**253**	P	**P**	**13 56 20.3**	**-1.1**
MDJ				S	**S**	**13 59 17.5**	**-2.2**
MDJ				PcP	**PcP**	**14 00 36.9**	**+2.1**
MDJ				PcS	**PcS**	**14 04 13.1**	**+1.9**
MDJ				ScS	**ScS**	**14 07 03.8**	**-2.0**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,63nm,4.7s						
MDJ	**Mudanjiang**	**17.48**	**253**	*e*P	**P**	**13 56 20.2**	**-1.2**
	comp=Z,4.6nm,0.5s						
MAJO	**Matsushiro**	**19.17**	**220**	*e*P	**P**	**13 56 36.1**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,21nm,0.8s						
MAJO	**Matsushiro**	**19.17**	**220**	*e*P	**P**	**13 56 36.1**	**-1.5**
	comp=Z,21nm,0.8s						
MAT	**Matsushiro**	**19.17**	**220**	P	**P**	**13 56 37.8**	**+0.2**
MAT				S	**S**	**13 59 49.2**	**+1.5**
MJAR	**Matsushiro Arr**	**19.17**	**220**	P	**P**	**13 56 38.1**	**+0.4**
MJAR				S	**S**	**13 59 50.1**	**+2.4**
MJAR				PcP	**PcP**	**14 00 37.5**	**-0.4**
MJAR	**Matsushiro Arr**	**19.17**	**220**	P	**P**	**13 56 38.1**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=14,slow=10,SNR=28						
MJAR				S	**S**	**13 59 50.1**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=17,slow=18,SNR=5.7						
MJAR				PcP	**PcP**	**14 00 37.5**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=112,slow=0.7,SNR=4.4						
ATKA	**Atka Island**	**19.80**	**78**	*e*P	**P**	**13 56 42.7**	**-0.4**
	comp=Z,53nm,0.7s						
CN2	**Changchun**	**20.39**	**256**	*e*P	**P**	**13 56 47.6**	**-1.0**
CN2				*e*S	**S**	**14 00 04.8**	**-2.5**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
HIA	**Hailar**	**21.28**	**275**	*e*P	**P**	**13 56 55.2**	**-1.5**
	comp=Z,48nm,0.7s						
GAMB	**Gambell**	**21.35**	**44**	*e*P	**P**	**13 56 56.6**	**-0.4**
	comp=Z,14nm,0.7s						
TIXI	**Tiksi**	**22.02**	**340***d*	*i* P	**P**	**13 57 03.3**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,40nm,1.0s						
KSRS	**Korea Array**	**23.23**	**240**	P	**P**	**13 57 15.2**	**+0.8**
	comp=Z,2.5nm,0.4s,baz=39,slow=8.5,SNR=12						
KSRS				PcP	**PcP**	**14 00 46.1**	**+0.2**
	comp=Z,3.0nm,0.7s,baz=355,slow=2.5,SNR=8.4						
KSAR	**Wonju Array Be**	**23.26**	**240**	P	**P**	**13 57 15.2**	**+0.6**
KSAR				PcP	**PcP**	**14 00 46.1**	**+0.2**
TNA	**Tin City**	**23.39**	**41**	*e*P	**P**	**13 57 16.1**	**+0.7**
	comp=Z,24nm,0.8s						
BJI	**Beijing**	**28.17**	**259**	P	**P**	**13 57 57.8**	**-0.2**
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
SVW2	**Sparrevohn**	**28.60**	**52**	*e*P	**P**	**13 58 01.8**	**+0.2**
	comp=Z,11nm,1.0s						
SVW2				*e*ScP	**ScP**	**14 03 55.8**	**+0.9**
ULN	**Ulaanbaatar**	**29.54**	**280**	*e*P	**P**	**13 58 08.5**	**-1.7**
	comp=Z,7.0nm,0.9s						
ULN	**Ulaanbaatar**	**29.54**	**280**	P	P	13 58 06.2	-3.9
	comp=Z,8.4nm,1.2s						
SONM	**Songino Array**	**29.95**	**280**	P	**P**	**13 58 13.8**	**+0.2**
SONM				PP	**PP**	**13 59 39.0**	**+0.9**
SONM				PcP	**PcP**	**14 01 01.4**	**-0.6**
SONM				ScP	**ScP**	**14 03 58.3**	**-1.3**
SONM	**Songino Array**	**29.95**	**280**	P	**P**	**13 58 13.8**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=48,slow=7.4,SNR=14						
SONM				PP	**PP**	**13 59 39.0**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=62,slow=6.9,SNR=4.7						
SONM				PcP	**PcP**	**14 01 01.4**	**-0.6**
	comp=Z,3.3nm,0.7s,baz=72,slow=1.9,SNR=12						
SONM				ScP	**ScP**	**14 03 58.3**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=80,slow=1.5,SNR=11						
TLY	**Talaya**	**30.01**	**289**	*e*P	**P**	**13 58 15.0**	**+1.0**
TLY				pmax	pmax		
	comp=Z,20nm,0.9s						
PPLA	**Purkeypile**	**30.01**	**48**	*e*P	**P**	**13 58 14.1**	**+0.1**
	comp=Z,48nm,1.3s						
RSO	**Redoubt South**	**30.06**	**53**	*e*P	**P**	**13 58 13.8**	**-0.7**
SPU	**Mount Spurr**	**30.29**	**52**	*e*P	**P**	**13 58 17.4**	**+1.1**
SPU				*e*ScP	**ScP**	**14 04 00.1**	**-0.3**
OHAK	**Old Harbor**	**30.45**	**60**	*e*P	**P**	**13 58 16.4**	**-1.2**
	comp=Z,40nm,0.6s						
HHC	**Hu-ho-hao-te**	**30.47**	**264**	*e*P	**P**	**13 58 17.5**	**-0.7**
HHC				pP	**pP**	**13 59 38.9**	**0.0**
HHC				PP	**PP**	**13 59 42.6**	**-1.0**
HHC				PcP	**PcP**	**14 01 05.1**	**+1.6**
HHC				S	**S**	**14 02 45.0**	**-0.7**
HHC				ScP	**ScP**	**14 04 03.9**	**+2.5**
HHC				PcS	**PcS**	**14 04 47.6**	**-0.3**
HHC				ScS	**ScS**	**14 08 00.0**	**+1.2**
HHC				pmax	pmax		
	comp=Z,31nm,0.6s						
HHC				pmax	pmax		
	comp=Z,210nm,5.4s						
COLD	**Coldfoot**	**30.66**	**40**	*e*P	**P**	**13 58 19.8**	**+0.4**
	comp=Z,26nm,0.8s						
COLD				*e*ScP	**ScP**	**14 04 02.6**	**+1.2**
KDAK	**Kodiak Island**	**30.68**	**58**	P	**P**	**13 58 19.4**	**-0.2**
KDAK				PcP	**PcP**	**14 01 03.9**	**+0.3**
KDAK				S	**S**	**14 02 48.0**	**-0.4**
KDAK				ScP	**ScP**	**14 04 01.6**	**0.0**
KDAK	**Kodiak Island**	**30.68**	**58**	P	**P**	**13 58 19.4**	**-0.2**
	comp=Z,23nm,0.5s,baz=296,slow=4.1,SNR=49						
KDAK				PcP	**PcP**	**14 01 03.9**	**+0.3**
	comp=Z,3.4nm,0.5s,baz=175,slow=1.0,SNR=4.6						
KDAK				S	**S**	**14 02 48.0**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=315,slow=20,SNR=4.3						
KDAK				ScP	**ScP**	**14 04 01.6**	**0.0**
	comp=Z,6.8nm,0.7s,baz=262,slow=2.2,SNR=11						
ZAK	**Zakamensk**	**30.72**	**286**	*e*P	**P**	**13 58 20.8**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,14nm,1.2s						
TRF	**Thorofare Moun**	**30.82**	**47**	*e*P	**P**	**13 58 20.9**	**-0.1**
	comp=Z,32nm,0.9s						
TRF				*e*ScP	**ScP**	**14 04 01.2**	**-1.0**
MCK	**McKinley**	**31.39**	**46**	*e*P	**P**	**13 58 25.7**	**0.0**
MCK				pmax	pmax		
	comp=Z,25nm,0.8s						
MCK	**McKinley**	**31.39**	**46**	*e*P	**P**	**13 58 25.7**	**0.0**
	comp=Z,26nm,0.8s						
MCK				*e*ScP	**ScP**	**14 04 03.7**	**-0.3**
MOY	**Mondy**	**31.55**	**290**	*e*P	**P**	**13 58 28.0**	**+0.6**
MOY				pmax	pmax		
	comp=Z,31nm,1.4s						
PMR	**Palmer**	**31.61**	**50**	*e*P	**P**	**13 58 27.7**	**+0.1**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PMR	**Palmer**	**31.61**	**50**	*e*P	**P**	**13 58 27.7**	**+0.1**
	comp=Z,8.0nm,0.6s						
PMR				*e*ScP	**ScP**	**14 04 04.3**	**-0.4**
COLA	**College**	**31.73**	**44**	*e*P	**P**	**13 58 28.9**	**+0.3**
COLA				pmax	pmax		
	comp=Z,55nm,0.8s						
COLA	**College**	**31.73**	**44**	*e*P	**P**	**13 58 28.9**	**+0.3**
	comp=Z,55nm,0.8s						
SEW	**Seward**	**31.74**	**53**	*e*P	**P**	**13 58 28.5**	**-0.2**
	comp=Z,57nm,0.6s						
JOW	**Kunigami**	**31.74**	**226**	*e*P	**P**	**13 58 28.6**	**-0.7**
	comp=Z,11nm,0.6s						
SML	**Sawmill**	**31.94**	**50**	*e*P	**P**	**13 58 31.2**	**+0.7**
SML				pmax	pmax		
	comp=Z,29nm,0.9s						
SML	**Sawmill**	**31.94**	**50**	*e*P	**P**	**13 58 31.2**	**+0.7**
	comp=Z,29nm,0.9s						
ILAR	**Eielson Array**	**32.15**	**44**	P	**P**	**13 58 32.6**	**+0.3**
ILAR				PP	**PP**	**14 00 04.8**	**+4.0**
ILAR				S	**S**	**14 03 11.3**	**+0.4**
ILAR				ScP	**ScP**	**14 04 04.8**	**-1.8**
ILAR	**Eielson Array**	**32.15**	**44**	P	**P**	**13 58 32.6**	**+0.3**
	comp=Z,17nm,0.7s,baz=275,slow=10.0,SNR=280						
ILAR				PP	**PP**	**14 00 04.8**	**+4.0**
	comp=Z,2.1nm,0.9s,baz=263,slow=8.8,SNR=4.2						
ILAR				S	**S**	**14 03 11.3**	**+0.4**
	comp=Z,0.4nm,1.0s,baz=286,slow=17,SNR=5.2						
ILAR				ScP	**ScP**	**14 04 04.8**	**-1.8**
	comp=Z,1.7nm,0.8s,baz=273,slow=3.2,SNR=12						
NJ2	**Nanjing**	**32.20**	**244**	*e*P	**P**	**13 58 33.3**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,30nm,0.9s						
DIV	**Divide**	**33.29**	**51**	*e*P	**P**	**13 58 42.4**	**+0.3**
	comp=Z,34nm,0.8s						
DOT	**Dot Lake**	**33.55**	**46**	*e*P	**P**	**13 58 43.8**	**-0.3**
	comp=Z,65nm,0.6s						
MENT	**Mentasta**	**33.84**	**47**	*e*P	**P**	**13 58 46.6**	**0.0**
RAGM	**Ragged Mountai**	**33.99**	**52**	*e*P	**P**	**13 58 49.2**	**+1.3**
	comp=Z,27nm,0.6s						
EGAK	**Eagle**	**34.58**	**43**	*e*P	**P**	**13 58 52.9**	**+0.1**
	comp=Z,47nm,1.0s						
WHN	**Wuhan**	**35.85**	**248**	P	**P**	**13 59 03.9**	**0.0**
HVS	**Khovu-Aksy**	**35.93**	**292***d*	*i* P	**P**	**13 59 05.6**	**+1.2**
HVS				pmax	pmax		
	comp=Z,285nm,1.7s						
XAN	**Xi'an**	**36.48**	**257**	P	**P**	**13 59 08.3**	**-0.9**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,9.0nm,3.5s						
INK	**Inuvik**	**36.84**	**36**	P	**P**	**13 59 12.6**	**+1.0**
INK				PP	**PP**	**14 00 50.5**	**+1.9**
INK				PcP	**PcP**	**14 01 21.4**	**+0.1**
INK				ScP	**S**	**14 04 21.9**	**+0.4**
INK	**Inuvik**	**36.84**	**36**	P	**P**	**13 59 12.6**	**+1.0**
	comp=Z,10nm,0.3s,baz=301,slow=7.4,SNR=134						
INK				PP	**PP**	**14 00 50.5**	**+1.9**
	comp=Z,2.8nm,0.8s,baz=272,slow=10,SNR=6.3						
INK				PcP	**PcP**	**14 01 21.4**	**+0.1**
	comp=Z,2.3nm,0.5s,baz=329,slow=1.0,SNR=6.0						
INK				ScP	**S**	**14 04 21.9**	**+0.4**
	comp=Z,3.9nm,0.8s,baz=36,slow=3.5,SNR=11						
LZH	**Lanzhou**	**38.16**	**265**	⇓P	**P**	**13 59 24.1**	**+1.0**
LZH				pP	**pP**	**14 00 49.3**	**+2.1**
LZH				PP	**PP**	**14 01 05.3**	**+1.9**
LZH				sP	**sP**	**14 01 40.0**	**+0.2**
LZH				S	**S**	**14 04 42.8**	**+0.4**
LZH				sS	**sS**	**14 07 19.3**	**+3.1**
LZH				pmax	pmax		
	comp=Z,47nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.2s						
GTA	**Gaotai**	**38.51**	**272**	*e*P	**P**	**13 59 26.5**	**+0.6**
GTA				pP	**pP**	**14 00 49.8**	**-0.3**
GTA				sP	**sP**	**14 01 40.1**	**-2.6**
GTA				pmax	pmax		
	comp=Z,20nm,1.1s						
SKAG	**Skagway**	**38.74**	**51**	*e*P	**P**	**13 59 28.9**	**+1.5**
	comp=Z,15nm,1.1s						
ENH	**Enshi**	**38.85**	**253**	*e*P	**P**	**13 59 26.9**	**-1.8**
	comp=Z,41nm,0.7s						
ZAA0	**Zalesovo Array**	**39.54**	**300**	*e*P	**P**	**13 59 32.1**	**-1.8**
ZALV	**Zalesovo Beam**	**39.54**	**300**	*i* P	**P**	**13 59 33.5**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZALV	**Zalesovo Beam**	**39.54**	**300**	P	**P**	**13 59 33.5**	**-0.4**
ZALV				PcP	**PcP**	**14 01 29.4**	**-0.7**
ZALV	**Zalesovo Beam**	**39.54**	**300**	P	**P**	**13 59 33.5**	**-0.4**
	comp=Z,9.5nm,0.7s,baz=59,slow=7.4,SNR=53						
ZALV				PcP	**PcP**	**14 01 29.4**	**-0.7**
	comp=Z,3.9nm,0.7s,baz=52,slow=2.4,SNR=6.3						
NVS	**Novosibirsk**	**39.97**	**302**	*i* P	**P**	**13 59 37.7**	**+0.4**
NVS				pmax	pmax		
	comp=Z,73nm,0.9s						
NVS				pmax	pmax		
	comp=N,14nm,0.7s						
NVS				pmax	pmax		
	comp=E,30nm,0.7s						
WRAK	**Wrangell Islan**	**41.47**	**54**	*e*P	**P**	**13 59 50.8**	**+1.5**
	comp=E,39nm,1.1s						
DLBC	**Dease Lake**	**41.67**	**50**	*e*P	**P**	**13 59 51.3**	**+0.3**
DLBC	**Dease Lake**	**41.67**	**50**	P	**P**	**13 59 53.2**	**+2.2**
	comp=E,13nm,0.6s,baz=292,slow=7.6,SNR=37						
CD2	**Chengdu**	**41.77**	**259**	P	**P**	**13 59 51.6**	**-0.6**
CD2				pP	**pP**	**14 01 18.1**	**0.0**
CD2				PP	**PcP**	**14 01 39.4**	**+1.5**
CD2				sP	**sP**	**14 02 08.6**	**-1.6**
CD2				PcS	**PcS**	**14 05 30.1**	**-0.3**
CD2				S	**S**	**14 05 34.4**	**-0.8**
CD2				sS	**sS**	**14 08 08.3**	**-3.1**
CD2				SS	SS	14 08 51.3	-7.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
WMQ	**Urumqi**	**43.19**	**286**	P	**P**	**14 00 03.8**	**+0.6**
WMQ				pP	**pP**	**14 01 29.0**	**-0.7**
WMQ				PP	**PP**	**14 01 54.3**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,38nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.4s						
GYA	**Guiyang**	**43.34**	**252**⇑	*i* P	**P**	**14 00 04.8**	**+0.1**
GYA				pP	**pP**	**14 01 32.9**	**+1.5**
GYA				PcP	**PcP**	**14 01 46.0**	**+2.7**
GYA				sP	**sP**	**14 02 22.6**	**-0.6**
GYA				ScP	**ScP**	**14 04 51.3**	**+1.4**
GYA				PcS	**PcS**	**14 05 36.8**	**-0.3**
GYA				S	**S**	**14 05 55.4**	**-2.5**
GYA				ScS	**ScS**	**14 09 11.3**	**-1.2**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.3s						
KURK	**Kurchatov**	**44.45**	**299***ce*	P	**P**	**14 00 12.8**	**0.0**
KURK				pmax	pmax		
	comp=Z,124nm,1.5s						
KURK	**Kurchatov**	**44.45**	**299**	*e*P	**P**	**14 00 13.0**	**+0.2**
	comp=Z,140nm,1.3s						
KURK				PcP	**PcP**	**14 01 46.0**	**-0.5**
KURK	**Kurchatov**	**44.45**	**299**	P	**P**	**14 00 13.2**	**+0.5**
	SNR=26						
KURBB	**Kurchatov Arra**	**44.54**	**299**	P	**P**	**14 00 13.7**	**+0.1**
	comp=Z,28nm,0.5s,baz=61,slow=7.7,SNR=148						
KURBB				PcP	**PcP**	**14 01 46.0**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=58,slow=3.8,SNR=4.5						
MK31	**Makanchi Array**	**44.60**	**292**	*i* P	**P**	**14 00 13.9**	**-0.2**
MK31				pmax	pmax		
	comp=Z,17nm,0.6s						
MK31	**Makanchi Array**	**44.60**	**292**	*e*P	**P**	**14 00 13.0**	**-1.1**
MKAR	**Makanchi Array**	**44.60**	**292***ce*	P	**P**	**14 00 14.1**	**0.0**
MKAR				pmax	pmax		
	comp=Z,19nm,0.8s						
MKAR	**Makanchi Array**	**44.60**	**292**	*e*P	**P**	**14 00 14.1**	**0.0**
MKAR				PcP	**PcP**	**14 01 46.7**	**-0.5**
MKAR	**Makanchi Array**	**44.60**	**292**	P	**P**	**14 00 14.1**	**0.0**
	comp=Z,19nm,0.8s,baz=54,slow=6.8,SNR=103						
MKAR				PcP	**PcP**	**14 01 46.7**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=65,slow=5.9,SNR=2.8						
YKW3	**Yellowknife Ar**	**46.30**	**40**	*e*P	**P**	**14 00 26.0**	**-0.9**
	comp=Z,0.2nm,0.8s						
YKA	**Yellowknife Ar**	**46.34**	**40**	P	**P**	**14 00 27.8**	**+0.7**
YKA				PcP	**PcP**	**14 01 53.2**	**+0.2**
YKA				ScP	**ScP**	**14 05 01.4**	**-0.1**
YKA				S	**S**	**14 06 40.2**	**+1.1**
YKA	**Yellowknife Ar**	**46.34**	**40**	P	**P**	**14 00 27.8**	**+0.7**
	comp=Z,11nm,0.5s,baz=302,slow=7.4,SNR=145						
YKA				PcP	**PcP**	**14 01 53.2**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=311,slow=3.6,SNR=13						
YKA				ScP	**ScP**	**14 05 01.4**	**-0.1**
	comp=Z,2.3nm,0.6s,baz=302,slow=4.1,SNR=22						
YKA				S	**S**	**14 06 40.2**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=301,slow=13,SNR=5.9						
KMI	**Kunming**	**46.65**	**254**	P	**P**	**14 00 30.3**	**0.0**
KMI				pmax	pmax		
	comp=Z,23nm,1.1s						
SPITS	**Spitsbergen Ar**	**46.96**	**349**	P	**P**	**14 00 31.1**	**-0.7**
SPITS	**Spitsbergen Ar**	**46.96**	**349**	P	**P**	**14 00 31.1**	**-0.7**
	comp=Z,5.2nm,0.4s,baz=62,slow=7.6,SNR=105						
VOSK	**Vostochnaya**	**47.30**	**305**	P	**P**	**14 00 33.5**	**-1.1**
VOSK				pmax	pmax		
	comp=Z,18nm,0.6s						
BVA0	**Borovoye Array**	**47.42**	**306**	*i* P	**P**	**14 00 35.3**	**-0.2**
BVA0				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BVAR	**Borovoye Array**	**47.42**	**306**	P	**P**	**14 00 35.4**	**-0.1**
BVAR						14 01 56.1	
BVAR						14 02 33.5	
BVAR				pmax	pmax		
	comp=Z,29nm,0.6s						
BVAR	**Borovoye Array**	**47.42**	**306**	P	**P**	**14 00 35.4**	**-0.1**
BVAR				PcP	**PcP**	**14 01 56.1**	**-1.0**
BVAR				PP	**PP**	**14 02 33.5**	**+1.6**
BVAR	**Borovoye Array**	**47.42**	**306**	P	**P**	**14 00 35.4**	**-0.1**
	comp=Z,29nm,0.6s,baz=58,slow=8.4,SNR=136						
BVAR				PcP	**PcP**	**14 01 56.1**	**-1.0**
	comp=Z,4.5nm,0.4s,baz=75,slow=2.2,SNR=9.5						
BVAR				PP	**PP**	**14 02 33.5**	**+1.6**
	comp=Z,4.4nm,0.8s,baz=54,slow=7.5,SNR=4.6						
BRVK	**Borovoye**	**47.45**	**306***d*	*i* P	**P**	**14 00 35.6**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,43nm,0.7s						
BRVK	**Borovoye**	**47.45**	**306**	*e*P	**P**	**14 00 35.3**	**-0.5**
	comp=Z,45nm,0.7s						
BRVK	**Borovoye**	**47.45**	**306**	P	**P**	**14 00 36.0**	**+0.3**
	SNR=15						
ZRNK	**Zerenda**	**48.15**	**306**	P	**P**	**14 00 40.4**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,38nm,0.7s						
SVE	**Sverdlovsk**	**49.77**	**314**	*e*P	**P**	**14 00 53.2**	**+0.2**
SVE				pmax	pmax		
	comp=Z,46nm,0.9s						
PGC	**Sidney**	**50.23**	**59**

SNR=13
AAK Ala-Archa 51.53 292 P P 14 01 06.9 +0.5
SNR=25
LVZ Lovozero 51.55 335 *ce*P P 14 01 05.3 -0.6
LVZ pmax pmax
comp=Z,31nm,0.9s
EKS2 Erkin-Say 51.92 293 *e*P P 14 01 08.3 -0.9
EKS2 pmax pmax
comp=Z,22nm,0.6s
EKS2 Erkin-Say 51.92 293 *e*P P 14 01 08.2 -0.9
comp=Z,22nm,0.6s
EKS2 Erkin-Say 51.92 293 P P 14 01 09.8 +0.6
SNR=7.0
KEV Kevo 51.96 339 *e*P P 14 01 06.6 -2.2
KEV pmax pmax
comp=Z,13nm,0.7s
KEV Kevo 51.96 339 *e*p P 14 01 07.9 -0.9
comp=Z,9.7nm,0.4s
KEV Kevo 51.96 339 *e*P P 14 01 06.6 -2.2
comp=Z,13nm,0.7s
AML Almayashu 52.31 292 *i* P P 14 01 12.9 +0.6
AML Almayashu 52.31 292 P P 14 01 12.9 +0.6
SNR=12
LVP Lakeview Peak 52.40 61 P P 14 01 14.1 +1.5
ARCES ARCESS Array B 52.46 339 P P 14 01 11.7 -0.7
ARCES ARCESS Array B 52.46 339 P P 14 01 11.7 -0.7
comp=Z,9.7nm,0.5s,baz=44,slow=8.1,SNR=157
ARE0 ARCESS Array S 52.46 339 *e*P P 14 01 11.8 -0.7
ARE0 ARCESS Array S 52.46 339 *e*P P 14 01 11.4 -1.1
ETW Entiat 52.51 58 P P 14 01 14.2 +0.9
TWW Teanaway 52.53 59 P P 14 01 14.8 +1.4
WTV Waterville 52.65 58 P P 14 01 15.1 +0.9
TBM Table Mountain 52.65 59 P P 14 01 15.4 +1.1
KSH Kashi 52.72 289 ⇓*i*P P 14 01 19.1 +4.2
KSH *e*PcP PcP 14 02 22.1 +4.9
KSH *ep*P pP 14 02 48.1 +2.0
KSH *e*PP PP 14 03 25.6 +5.7
KSH *e*PcS PcS 14 06 19.8 +3.1
KSH *e*S S 14 08 10.8 +3.6
KSH *e*ScS ScS 14 10 19.3 +3.8
KSH pmax pmax
comp=Z,31nm,1.0s
UBPT Khong Chiam 52.87 244 P P 14 01 16.4 +0.3
comp=Z,22nm,0.8s
VLL Laurance Lake 53.18 61 P P 14 01 19.7 +1.6
KTK1 Kautokeino 53.37 340 *e*P P 14 01 16.4 -2.5
KK31 Karatay Array 53.46 295 *i* P P 14 01 19.6 -0.4
KK31 pmax pmax
comp=Z,17nm,0.7s
KKAR Karatay Array 53.46 295 *e*P P 14 01 19.9 -0.1
KKAR Karatay Array 53.46 295 *e*P P 14 01 19.9 -0.1
TRO Tromso 53.71 342 *e*P P 14 01 20.6 -0.7
NEW Newport 53.73 56 *e*P P 14 01 22.9 +0.9
NEW Newport 53.73 56 P P 14 01 22.5 +0.6
comp=Z,7.2nm,0.8s,baz=330,slow=6.7,SNR=10.0
NEW Newport 53.73 56 ⇑P P 14 01 22.7 +0.7
baz=54,SNR=7.3
CMMT Chiang Mai 53.74 253 P P 14 01 21.9 -0.4
comp=Z,32nm,1.0s
CHTO Chiang Mai 53.74 253 *e*P P 14 01 22.8 +0.5
CHTO pmax pmax
comp=Z,30nm,1.1s
CHTO Chiang Mai 53.74 253 *e*P P 14 01 22.8 +0.5
comp=Z,30nm,1.1s
CHTO Chiang Mai 53.74 253 P P 14 01 22.3 0.0
comp=Z,35nm,1.0s
CMAR Chiang Mai Arr 54.02 252 P P 14 01 25.0 +0.7
CMAR PcP PcP 14 02 22.2 -0.1
CMAR Chiang Mai Arr 54.02 252 P P 14 01 25.0 +0.7
comp=Z,10nm,0.8s,baz=24,slow=6.8,SNR=59
CMAR PcP PcP 14 02 22.2 -0.1
comp=Z,2.3nm,0.6s,baz=12,slow=3.2,SNR=7.8
TAPN Taplejung 54.07 269 *e*P P 14 01 25.4 +0.4
comp=Z,217nm,0.8s
BBOR Butler Butte 54.33 64 P P 14 01 28.6 +2.2
PBKT Sadao Pong 54.34 249 P P 14 01 25.7 -0.9
comp=Z,11nm,0.6s
HUMO Hull Mountain 54.36 65 *e*P P 14 01 28.2 +1.8
comp=Z,21nm,1.3s
VIPM Ingram Point 54.38 61 P P 14 01 28.1 +1.4
VIPM Ingram Point 54.38 61 P P 14 01 28.1 +1.4
ODAN Odare 54.62 269 *e*P P 14 01 28.8 0.0
comp=Z,70nm,0.6s
GUN Gumba 54.79 271 *e*P P 14 01 30.1 +0.1
comp=Z,132nm,0.6s
WALA Waterton Lakes 54.81 54 *e*P P 14 01 29.8 +0.2
comp=Z,0.6nm,1.0s
AB31 Akbulak array 54.91 307 *i* P P 14 01 29.8 -0.4
AB31 pmax pmax
comp=Z,20nm,0.4s
ABKAR Akbulak array 54.91 307 *e*P P 14 01 29.8 -0.4
comp=Z,36nm,0.6s
C12B Naegeli Ranch, 54.93 56 ⇓P P 14 01 31.7 +1.3
baz=55,SNR=6.9
SUMG Summit 54.94 4 ⇓*i*P P 14 01 30.3 -0.2
SUMG pmax pmax
comp=Z,9.0nm,0.8s
SUMG Summit 54.94 4 *e*P P 14 01 30.2 -0.2
comp=Z,15nm,1.0s
SUMG Summit 54.94 4 ⇓*i*P P 14 01 30.3 -0.2
comp=Z,8.5nm,0.8s
B13A Whitefish 54.99 54 ⇓P P 14 01 31.9 +1.1
baz=55
RAMN Ramite 55.04 270 *e*P P 14 01 31.9 +0.2
comp=Z,369nm,0.5s
AKTO Aktyubinsk 55.05 309 P P 14 01 29.4 -1.8
YBH Yreka Blue Hor 55.08 65 *e*P P 14 01 32.0 +0.4
comp=Z,13nm,1.0s
A14A Double T Ranch 55.11 53 ⇓P P 14 01 32.4 +0.6
baz=55,SNR=8.2
BSMT Bassoo Peak 55.18 55 *e*P P 14 01 33.9 +1.5
KKN Kakani 55.24 271 *e*P P 14 01 33.5 +0.4
comp=Z,199nm,0.5s
KLMR Klimovskoe 55.27 327 *d i*P P 14 01 32.2 -0.3
KLMR *e* 14 03 43.5
KLMR pmax pmax
comp=Z,51nm,1.3s
BLMT Blacktail Moun 55.29 55 *e*P P 14 01 33.4 +0.3
PKI Pulchoki 55.32 271 *e*P P 14 01 34.1 +0.3
comp=Z,181nm,0.8s
C13A Hot Springs 55.41 55 ⇑P P 14 01 35.1 +1.3
baz=55,SNR=11
A15A Johnson Ranch, 55.44 53 ⇓P P 14 01 34.4 +0.3
baz=55,SNR=14
DMN Daman 55.48 271 *e*P P 14 01 35.4 +0.6
comp=Z,308nm,0.7s
JTMT Jette 55.51 55 *e*P P 14 01 35.0 +0.4
B14A Marquette Ranc 55.59 54 ⇑P P 14 01 35.9 +0.7
baz=55,SNR=7.0
DANN Dangsing 55.77 273 *e*P P 14 01 37.3 +0.5
comp=Z,191nm,0.7s
SWMT Swartz Lake 55.81 55 *e*P P 14 01 37.1 +0.5
D13A Huson 55.86 56 ⇑P P 14 01 37.8 +0.9
baz=56,SNR=5.7
BMO Blue Mountains 55.91 59 *e*P P 14 01 37.1 -0.3
comp=Z,4.9nm,0.8s
B15A Bradely Ranch, 55.98 53 ⇓P P 14 01 38.3 +0.5
baz=56,SNR=8.0
JOF Joensuu 56.24 332 *e*P P 14 01 39.4 +0.2
JOF pmax pmax
comp=Z,17nm,0.5s
JOF Joensuu 56.24 332 *e*p P 14 01 39.4 +0.2
comp=Z,17nm,0.5s
SLMT Seeley Lake 56.24 55 *e*P P 14 01 40.9 +1.1
KOLN Koldanda 56.28 273 *e*P P 14 01 40.6 +0.3
comp=Z,122nm,0.7s
MOD Modoc 56.29 64 *e*P P 14 01 41.5 +1.3
comp=Z,16nm,0.6s
MSO Missoula 56.30 56 *e*P P 14 01 40.5 +0.5
comp=Z,9.6nm,0.9s
MSO Missoula 56.30 56 ⇓P P 14 01 41.0 +1.0
baz=56,SNR=10
C15A Salmond Ranch, 56.32 54 ⇓P P 14 01 41.5 +1.3
baz=56,SNR=21
B16A M & M Farms, S 56.33 53 ⇑P P 14 01 40.6 +0.4
baz=56
FFC Flin Flon 56.34 42 *ce*P P 14 01 41.0 +1.0
FFC Flin Flon 56.34 42 *e*P P 14 01 40.0 0.0
comp=Z,11nm,0.7s
D14A Greenough 56.34 55 ⇑P P 14 01 41.4 +1.0
baz=56,SNR=17
F12A Elk City 56.36 57 ⇓P P 14 01 41.9 +1.4
baz=56,SNR=20
PYUN Piuthan 56.41 273 *e*P P 14 01 41.5 +0.2
E13A Victor 56.44 56 ⇑P P 14 01 41.8 +0.8
baz=56,SNR=6.0
A17A Triple J Farms 56.45 52 ⇑P P 14 01 41.6 +0.6
baz=56,SNR=7.8
CHMT Chamberlain Mo 56.59 55 *e*P P 14 01 42.7 +0.6
C16A Fuhringer Ranc 56.73 53 ⇑P P 14 01 44.0 +1.0
baz=57,SNR=9.4
E14A Clinton 56.81 56 ⇓P P 14 01 44.6 +1.0
baz=57,SNR=13
F13A Darby 56.81 57 ⇓P P 14 01 44.3 +0.7
baz=57,SNR=6.8
WVOR Wild Horse Val 56.84 62 *e*P P 14 01 44.0 +0.1
WVOR pmax pmax
comp=Z,16nm,0.9s
WVOR Wild Horse Val 56.84 62 *e*P P 14 01 44.0 +0.1
comp=Z,16nm,0.9s
D15A Lincoln 56.86 55 ⇓P P 14 01 45.1 +1.1
baz=57,SNR=8.0
A18A Metzger Ranch, 56.88 51 ⇑P P 14 01 44.3 +0.4
baz=57
E15A Deer Lodge 57.23 55 ⇑P P 14 01 47.6 +1.1
baz=57,SNR=5.1
SCO Scoresbysund 57.27 358 *e*P P 14 01 39.1 -7.1
SCO Scoresbysund 57.27 358 *i* P P 14 01 39.1 -7.1
comp=Z,5.3nm,1.0s
B18A Beardsley Farm 57.27 52 ⇓P P 14 01 47.6 +0.9
baz=57,SNR=8.2
C17A Wharram Farm, 57.32 53 ⇓P P 14 01 47.7 +0.6
baz=57
G13A Colt 57.34 57 ⇓P P 14 01 48.0 +0.7
baz=57,SNR=5.7
D16A Dana Ranch, Ca 57.35 54 ⇓P P 14 01 48.5 +1.2
baz=57,SNR=6.0
H12A Diamond D Ranc 57.39 58 ⇓P P 14 01 48.5 +0.8
baz=57,SNR=12
A19A Klindworth Far 57.40 51 ⇑P P 14 01 48.2 +0.7
baz=57
OHCM Honcut 57.40 67 *e*P P 14 01 48.1 +0.5
HRY Holter Researc 57.44 54 *e*P P 14 01 48.9 +1.0
EGMT Eagleton 57.54 52 *e*P P 14 01 48.6 +0.1
comp=Z,13nm,1.1s
EGMT Eagleton 57.54 52 ⇓P P 14 01 49.4 +0.8
baz=57,SNR=6.8
MOR8 Moi Rana 57.57 342 *e*P P 14 01 45.8 -2.6
MOR8 AMB AMB 14 01 47.1
comp=Z,29nm,0.5s
G14A Jackson 57.63 57 ⇑P P 14 01 50.0 +0.7
baz=58
B19A Brinkman Farms 57.63 51 ⇓P P 14 01 50.1 +1.0
baz=57,SNR=6.6
E16A East Helena 57.63 55 ⇓P P 14 01 50.7 +1.4
baz=58,SNR=13
BEKR Beckworth 57.66 65 *e*P P 14 01 50.0 +0.4
comp=Z,5.6nm,0.9s
MFID Camas Ranch 57.66 60 *e*P P 14 01 50.6 +1.0
comp=Z,21nm,1.4s
MFID Camas Ranch 57.66 60 ⇓P P 14 01 50.8 +1.3
baz=58
H13A Challis 57.69 58 ⇓P P 14 01 50.7 +1.0
baz=58,SNR=16
D17A Six Diamond Ra 57.69 53 ⇑P P 14 01 50.6 +0.9
baz=58,SNR=9.9
F15A Butte 57.71 56 ⇓P P 14 01 51.1 +1.2
baz=58,SNR=8.1
LRM Limekiln Ridge 57.74 56 *e*P P 14 01 51.3 +1.1
I12A Atlanta 57.77 59 ⇑P P 14 01 51.6 +1.3
baz=58,SNR=14
A20A Cobblestone Ra 57.82 50 ⇓P P 14 01 51.0 +0.6
baz=58
DDI Dehra Dun 57.82 279 *ex* P 14 01 49.0 -1.7
DLMT Dillon 57.99 56 *e*P P 14 01 53.4 +1.7
comp=Z,18nm,1.0s
B20A Solberg Farm, 58.08 51 ⇑P P 14 01 53.0 +0.9
baz=58,SNR=7.5
C19A Slack Wire Ran 58.08 52 ⇓P P 14 01 53.5 +1.3
baz=58,SNR=8.5
E17A Martinsdale 58.09 54 ⇓P P 14 01 54.1 +1.6
baz=58,SNR=10
D18A Linhart Farms, 58.10 53 ⇓P P 14 01 53.5 +1.1
baz=58
H14A Leadore 58.11 57 ⇑P P 14 01 53.5 +0.8
baz=58
G15A Dillon 58.18 56 ⇑P P 14 01 54.3 +1.2
baz=58,SNR=16
F16A Kennard Place, 58.18 55 ⇑P P 14 01 54.2 +1.2
baz=58,SNR=6.9
I13A Wildhorse Cree 58.21 58 ⇓P P 14 01 55.1 +1.7
baz=58,SNR=58
MCMT McKenzie Canyo 58.23 57 *e*P P 14 01 53.8 +0.3
comp=Z,3.6nm,0.8s
KAF Kangasniemi 58.28 334 *e*P P 14 01 52.6 -0.6
KAF pmax pmax
comp=Z,19nm,0.6s
KAF Kangasniemi 58.28 334 *e*p P 14 01 52.6 -0.6
comp=Z,19nm,0.6s
HLID Hailey 58.30 59 *e*P P 14 01 54.7 +0.8
comp=Z,6.1nm,1.1s
HLID Hailey 58.30 59 ⇑P P 14 01 55.4 +1.5
baz=58,SNR=7.7
G16A Moss Hill, Enn 58.48 56 ⇓P P 14 01 56.4 +1.3
baz=58,SNR=30
E18A Harlowton 58.48 53 ⇑P P 14 01 56.7 +1.6
baz=58,SNR=6.7
J13A Cove Ranch, Pi 58.54 59 ⇑P P 14 01 57.4 +1.9
baz=58,SNR=9.7
I14A Mackay 58.55 58 ⇑P P 14 01 57.7 +2.0
baz=58,SNR=12
D19A Cripps Ranch, 58.57 52 ⇑P P 14 01 56.8 +1.2
baz=58,SNR=5.5
F17A Fitzpatrick Pl 58.58 54 ⇓P P 14 01 57.2 +1.4
baz=58
C20A Veseth Ranch, 58.60 51 ⇓P P 14 01 57.1 +1.3
baz=58,SNR=16
A22A Carney Farms, 58.68 49 ⇓P P 14 01 57.2 +1.0
baz=58,SNR=12
FIA1 FINESS Array S 58.89 333 *e*P P 14 01 54.9 -2.4
FINES FINESS Array B 58.89 333 P P 14 01 56.8 -0.6
FINES FINESS Array B 58.89 333 P P 14 01 56.8 -0.6
comp=Z,37nm,0.7s,baz=35,slow=7.6,SNR=168
CMB Columbia Colle 58.92 67 *e*P P 14 01 59.3 +1.3
CMB pmax pmax
comp=Z,24nm,1.4s
CMB Columbia Colle 58.92 67 *e*P P 14 01 59.3 +1.3
comp=Z,24nm,1.4s
J14A Carey 58.94 58 ⇑P P 14 02 00.5 +2.3
baz=59,SNR=33
QLMT Earthquake Lak 58.95 56 *e*P P 14 01 59.4 +1.0
G17A Pierce Place, 58.95 55 ⇓P P 14 02 00.1 +1.8
baz=59,SNR=6.7
C21A Desert Coulee 58.95 51 ⇑P P 14 01 59.3 +1.2
baz=59
D20A Manuel Ranch, 58.98 52 ⇑P P 14 01 59.9 +1.6
baz=59,SNR=8.9
F18A Big Timber 59.05 54 ⇓P P 14 02 00.4 +1.6
baz=59,SNR=10
E19A Rath Farm, Rou 59.11 53 ⇑P P 14 02 00.7 +1.4
baz=59,SNR=6.4
H16A Russell Place, 59.13 56 ⇓P P 14 02 01.2 +1.6
baz=59,SNR=29
E20A Meyer Farm, Mu 59.40 53 ⇑P P 14 02 02.7 +1.5
baz=59
SFJD Kangerlussuaq 59.46 11 *i* P P 14 01 59.2 -1.9
comp=Z,4.1nm,0.7s
B23A Brockton 59.48 49 ⇑P P 14 02 02.6 +0.9
baz=59
G18A Lazy EL Ranch, 59.54 54 ⇑P P 14 02 03.2 +1.0
baz=59
D21A La Casta Ranch 59.54 51 ⇑P P 14 02 03.4 +1.3
baz=59,SNR=5.0
C22A Vida 59.58 50 ⇑P P 14 02 03.2 +0.9
baz=59
I16A Newdale 59.59 57 ⇑P P 14 02 04.2 +1.5
baz=59
A24A Westby 59.60 48 ⇓P P 14 02 03.5 +1.0
baz=59
H17A Grant Village 59.69 56 ⇓P P 14 02 06.3 +2.9
baz=60,SNR=11
NVAR Mina Array Bea 59.80 65 P P 14 02 05.8 +1.7
NVAR Mina Array Bea 59.80 65 P P 14 02 05.8 +1.7
comp=Z,11nm,0.8s,baz=299,slow=6.8,SNR=74
ELK Elko 59.84 61 *e*P P 14 02 05.1 +0.7
comp=Z,51nm,0.9s
DGMT Dagmar 59.84 49 ⇓P P 14 02 05.3 +1.3
baz=60
IMW Indian Meadow 59.86 56 *e*P P 14 02 06.9 +2.3
comp=Z,4.9nm,0.7s
C23A Lambert 59.87 50 ⇓P P 14 02 05.6 +1.3
baz=60,SNR=6.0
D22A Cohagen 59.87 51 ⇑P P 14 02 05.4 +1.2
baz=60,SNR=6.0
E21A Keefer Ranch, 59.88 52 ⇓P P 14 02 05.9 +1.5
baz=60,SNR=5.8
NV11 Mina Array Sit 59.88 65 *e*P P 14 02 05.6 +0.9
H18A Shoshone NF, C 59.95 55 ⇓P P 14 02 06.0 +0.9
baz=60
RRI2 Red Ridge 60.05 57 *e*P P 14 02 08.2 +2.4
comp=Z,14nm,0.7s
MOOW Moose Ponds 60.06 56 *e*P P 14 02 06.7 +0.9
comp=Z,4.9nm,0.9s
TPAW Teton Pass 60.14 57 *e*P P 14 02 07.9 +1.5
comp=Z,10.0nm,0.8s
KBL Kabul 60.16 289 *e*P P 14 02 05.3 -1.3
KBL pmax pmax
comp=Z,32nm,0.8s
KBL Kabul 60.16 289 *e*P P 14 02 05.3 -1.3
comp=Z,32nm,0.8s
LOHW Long Hollow 60.23 56 *e*P P 14 02 07.8 +0.9
comp=Z,12nm,1.3s
G20A Bridger 60.27 54 ⇓P P 14 02 07.9 +0.8
baz=60,SNR=5.4
H19A Powell 60.29 54 ⇑P P 14 02 07.9 +0.7
baz=60
D23A Lindsay 60.31 50 ⇓P P 14 02 08.4 +1.1
baz=60
F21A Absaloka Mine, 60.37 52 ⇑P P 14 02 08.9 +1.2
baz=60
E22A Miles City 60.49 51 ⇑P P 14 02 09.5 +1.1
baz=60
I18A Diamond G Ranc 60.57 56 ⇑P P 14 02 10.9 +1.7
baz=60
OBN Obninsk 60.65 324 *c i*P P 14 02 08.6 -0.6
OBN *e* 14 02 46.5
OBN *e**PP pP 14 03 45.8 +2.1
OBN *e* 14 04 28.4
OBN *e*S S 14 09 48.9 +0.2
OBN pmax pmax
comp=Z,17nm,0.8s
PTRM Twissleman Ran 60.70 69 *e*P P 14 02 11.6 +1.6
E23A Ismay 60.76 51 ⇑P P 14 02 11.5 +1.3
baz=61
G21A Lodge Grass 60.77 53 ⇓P P 14 02 11.3 +0.9
baz=61
D24A Glendive 60.77 50 ⇓P P 14 02 11.5 +1.3
baz=61,SNR=13
F22A Rosebud 60.82 52 ⇑P P 14 02 11.7 +1.1
baz=61
HWUT Hardware Ranch 61.17 58 *e*P P 14 02 13.8 +0.6
comp=Z,11nm,0.9s
VSU Vasula 61.17 331 *d i*P P 14 02 12.2 -0.4
VSU pmax pmax
comp=Z,54nm,0.7s
E24A Baker 61.18 50 ⇑P P 14 02 13.9 +0.8
baz=61
VES Vestal, Richgr 61.21 68 ⇑P P 14 02 14.5 +1.2
baz=61
G22A Birney 61.22 52 ⇑P P 14 02 14.2 +0.9
baz=61
I20A Worland 61.23 55 ⇑P P 14 02 14.9 +1.4
baz=61,SNR=6.2
J19A Crowheart 61.27 56 ⇓P P 14 02 15.3 +1.5
baz=61
F23A Volborg 61.28 52 ⇓P P 14 02 14.6 +1.0
baz=61,SNR=6.9
H21A Big Horn, Sher 61.28 53 ⇑P P 14 02 14.8 +1.0
baz=61,SNR=5.7
GRAC Grapevine Rang 61.34 66 ⇑P P 14 02 16.1 +2.0
baz=61,SNR=5.6
CWC Cottonwood Cre 61.34 67 ⇑P P 14 02 15.7 +1.3
baz=61
R11A Troy Canyon, C 61.36 64 ⇑P P 14 02 15.7 +1.2
baz=61,SNR=9.8
BW06 Boulder Array 61.37 56 *e*P P 14 02 15.0 +0.5
comp=Z,11nm,0.8s
PDAR Pinedale Array 61.37 56 P P 14 02 15.6 +1.1
PDAR Pinedale Array 61.37 56 P P 14 02 15.6 +1.1
comp=Z,9.9nm,0.7s,baz=324,slow=2.0,SNR=74
PKM Peak Mountain 61.47 69 ⇑P P 14 02 16.7 +1.5
baz=61
DUG Dugway 61.53 60 *e*P P 14 02 16.9 +1.4
DUG pmax pmax
comp=Z,12nm,0.8s
DUG Dugway 61.53 60 *e*P P 14 02 16.9 +1.4
comp=Z,12nm,0.8s
DUG Dugway 61.53 60 ⇑P P 14 02 17.1 +1.6
baz=61,SNR=8.9
H22A Clearmont 61.64 53 ⇑P P 14 02 17.0 +0.9
baz=62
F24A Ekalaka 61.64 51 ⇑P P 14 02 17.1 +1.0
baz=61
G23A Biddle 61.66 52 ⇑P P 14 02 17.1 +0.8
baz=62
ISA Isabella 61.68 68 *e*P P 14 02 16.7 +0.2
ISA pmax pmax
comp=Z,6.0nm,0.9s
ISA Isabella 61.68 68 *e*P P 14 02 16.7 +0.2
comp=Z,5.5nm,0.9s
J20A Shoshoni 61.69 55 ⇑P P 14 02 17.7 +1.2
baz=62
K19A Absolon Red Bu 61.69 56 ⇓P P 14 02 17.4 +0.8
baz=62
L18A Fontenelle, Gr 61.73 57 ⇑P P 14 02 18.0 +1.1
baz=62,SNR=5.4
M17A Scullys Gap (B 61.74 58 ⇓P P 14 02 17.9 +1.0
baz=62,SNR=8.3
I21A Big Trails, Te 61.75 54 ⇓P P 14 02 17.9 +1.0
baz=62,SNR=12
PMG Port Moresby 61.89 187 P P 14 02 18.5 +0.7
PMG Port Moresby 61.89 187 P P 14 02 18.5 +0.7
comp=Z,12nm,0.8s,baz=337,slow=9.6,SNR=4.1
MPMC Manual Prospec 61.95 67 ⇑P P 14 02 19.6 +1.2
baz=62,SNR=8.6
L19A Farson 61.95 57 ⇑P P 14 02 19.3 +1.0
baz=62
FURC Furnace Creek, 62.01 66 ⇑P P 14 02 20.1 +1.6
baz=62,SNR=21
J21A Lysite 62.01 55 ⇓P P 14 02 19.6 +0.9
baz=62,SNR=7.8
G24A Alzada 62.04 51 ⇑P P 14 02 19.6 +0.9
baz=62
K20A Yellowstone Ra 62.06 56 ⇑P P 14 02 19.6 +0.6
baz=62
M18A Lyman 62.08 58 ⇑P P 14 02 20.2 +1.0
baz=62
I22A 9 Mile Ranch, 62.09 54 ⇑P P 14 02 20.0 +0.9
baz=62
KSM Kuching 62.13 230 *e*P P 14 02 20.5 +0.9
ULM Lac du Bonnet 62.16 43 P P 14 02 19.3 0.0
ULM Lac du Bonnet 62.16 43 P P 14 02 19.3 0.0
comp=Z,3.0nm,0.3s,baz=336,slow=6.8,SNR=4.7
DAU Daniels Canyon 62.20 59 *e*P P 14 02 22.1 +2.0
DAU Daniels Canyon 62.20 59 *e*P P 14 02 22.1 +2.0
LRMC Laurel Mountai 62.26 67 ⇓P P 14 02 21.5 +1.2
baz=62
MPU Maple Canyon 62.28 60 *e*P P 14 02 22.4 +1.9
comp=Z,10nm,0.7s
OSI Osito Adit 62.29 69 ⇑P P 14 02 21.8 +1.4
baz=62
MDND Maddock 62.38 47 ⇓P P 14 02 21.6 +0.8
baz=62
H24A Dirks Ranch, A 62.40 52 ⇑P P 14 02 21.6 +0.5
baz=62,SNR=6.3
BLG Laguna Peak 62.46 69 ⇑P P 14 02 23.3 +1.8
baz=62
EDW2 Edwards Air Fo 62.52 68 ⇑P P 14 02 23.2 +1.3
baz=62,SNR=11
VSR Storozhevoye 62.71 320 *e*P P 14 02 21.8 -1.0
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.8s
SHOC Shoshone 62.74 66 ⇓P P 14 02 24.7 +1.4
baz=63
DECC Green Verdugo 62.78 69 ⇑P P 14 02 24.8 +1.2
baz=63
NB2 NORSAR Subarra 62.81 340 P P 14 02 22.7 -0.7
comp=Z,16nm,0.7s,baz=24,slow=6.9
NB2 NORSAR Subarra 62.81 340 P P 14 02 22.7 -0.7
baz=24,slow=6.9
NOA NORSAR Array B 62.81 340 P P 14 02 22.7 -0.7
NOA NORSAR Array B 62.81 340 P P 14 02 22.7 -0.7
comp=Z,14nm,0.7s,baz=25,slow=6.5,SNR=85
VORD Divnogorie 62.86 320 *e*P P 14 02 22.0 -1.8
VORD pmax pmax
comp=Z,20nm,0.6s
VORD pmax pmax

comp=N,20nm,0.3s
VORD pmax pmax

comp=E,30nm,0.5s
GSC Goldstone 62.88 67 *e*P **P 14 02 25.5 +1.2**
GSC pmax pmax

comp=Z,11nm,1.0s
GSC Goldstone 62.88 67 *e*P **P 14 02 25.5 +1.2**
comp=Z,11nm,1.0s
GSC Goldstone 62.88 67 ⇑P **P 14 02 25.5 +1.2**
baz=63,SNR=5.8
K22A Casper 62.98 55 ⇓P **P 14 02 25.8 +0.8**
baz=63
M20A Sweetwater, Wa 63.00 56 ⇑P **P 14 02 26.4 +1.2**
baz=63
NC602 NORSAR Array S 63.02 340 *e*P **P 14 02 23.9 -0.8**
NAO01 NORSAR Array S 63.06 340 *e*P **P 14 02 23.6 -1.3**
comp=Z,14nm,1.0s
L21A Rawlins 63.06 56 ⇓P **P 14 02 26.2 +0.7**
baz=63
MVU Marysvale 63.08 61 *e*P **P 14 02 27.6 +1.9**
MSU Marysvale 63.09 61 *e*P **P 14 02 27.6 +1.8**
MSU Marysvale 63.09 61 *e*P **P 14 02 27.6 +1.8**
RSSD Black Hills 63.11 52 *e*P **P 14 02 26.6 +0.8**
RSSD pmax pmax

comp=Z,12nm,1.0s
RSSD Black Hills 63.11 52 *e*P **P 14 02 26.6 +0.8**
comp=Z,12nm,1.0s
CCUT Cedar City 63.15 63 *e*P **P 14 02 27.8 +1.6**
comp=Z,3.8nm,0.7s
P17A Butcher Ranch, 63.15 60 ⇑P **P 14 02 27.4 +1.3**
baz=63
BFSC Mount Baldy Ra 63.17 68 ⇓P **P 14 02 27.3 +1.1**
baz=63,SNR=6.1
TUQ Turquoise Moun 63.28 66 ⇓P **P 14 02 28.3 +1.3**
baz=63,SNR=8.4
P18A Preston Nutter 63.30 59 ⇓P **P 14 02 28.6 +1.4**
baz=63,SNR=7.1
Q16A Castle Valley 63.33 60 ⇑P **P 14 02 29.0 +1.7**
baz=63
M21A Separation Pea 63.33 56 ⇓P **P 14 02 28.0 +0.6**
baz=63
O19A Miners Draw (B 63.39 58 ⇑P **P 14 02 28.4 +0.8**
baz=63,SNR=5.6
N20A Spence Gulch, 63.44 57 ⇑P **P 14 02 29.4 +1.4**
baz=63,SNR=12
L22A Ellis Ranch, M 63.48 55 ⇑P **P 14 02 29.5 +1.3**
baz=63
HEC Hector,Ludlow 63.49 67 ⇑P **P 14 02 29.6 +1.4**
baz=63
SRU San Rafael 63.53 60 ⇓P **P 14 02 29.7 +1.2**
baz=63,SNR=13
BBRC Big Bear Solar 63.57 68 ⇑P **P 14 02 30.0 +1.0**
baz=64
IZAR Zarasai 63.59 330 *e*P **P 14 02 28.2 -0.2**
IZAR AMB AMB 14 02 29.0

comp=Z,13nm,0.7s
KULM Kulim 63.76 242 *e*P **P 14 02 30.9 +0.8**
comp=Z,12nm,0.8s
ISAL Salakas 63.78 330 *e*P **P 14 02 29.4 -0.2**
ISAL AMB AMB 14 02 30.3

comp=Z,14nm,0.9s
L23A Garrett 63.79 54 ⇓P **P 14 02 30.7 +0.4**
baz=64
IDID Didziasalis 63.80 329 AMB AMB 14 02 29.4
comp=Z,14nm,1.2s
M22A Cedar Creek Ra 63.87 56 ⇓P **P 14 02 32.0 +1.2**
baz=64
N21A Black Mountain 63.88 57 ⇓P **P 14 02 31.3 +0.4**
baz=64
MURC Murrieta 63.90 68 ⇑P **P 14 02 32.2 +1.4**
baz=64
IMYA Miami 63.91 296 *e*P **P 14 02 31.6 +0.6**
IEMG Emamgholi 63.91 298 *e*P **P 14 02 31.5 +0.3**
IIGN Ignalina 63.93 329 *e*P **P 14 02 30.4 -0.2**
IIGN AMB AMB 14 02 31.3

comp=Z,22nm,0.6s
P19A Cripple Cowboy 63.95 58 ⇑P **P 14 02 32.1 +0.8**
baz=64,SNR=7.0
O20A White River Ci 63.97 58 ⇓P **P 14 02 32.4 +1.0**
baz=64
IPM Ipoh 64.24 241 *e*P **P 14 02 33.3 +0.1**
comp=Z,9.6nm,0.7s
M23A Laramie 64.26 55 ⇓P **P 14 02 34.0 +0.7**
baz=64
BELC Belle Mtn. Jos 64.28 67 ⇓P **P 14 02 34.3 +0.8**
baz=64
O21A Pagoda 64.31 57 ⇓P **P 14 02 34.7 +1.1**
baz=64
PFO Pinyon Flat Ob 64.31 68 ⇑P **P 14 02 34.4 +0.8**
baz=64
N22A Wattenberg Ran 64.39 56 ⇓P **P 14 02 35.4 +1.3**
baz=64,SNR=6.6
IAKL Akhelmad 64.45 297 *e*P **P 14 02 35.1 +0.5**
ISFR Sfrayin 64.53 298 *e*P **P 14 02 35.6 +0.5**
U15A North Rim 64.55 63 ⇓P **P 14 02 36.8 +1.5**
baz=64,SNR=7.8
N23A Red Feather La 64.58 56 ⇑P **P 14 02 36.1 +0.8**
baz=64
IRM Iron Mountain 64.64 67 ⇑P **P 14 02 36.8 +1.3**
baz=64,SNR=7.3
W13A Hualapai Mount 64.66 65 ⇓P **P 14 02 37.2 +1.3**
baz=64
M24A Cheyenne 64.71 54 ⇑P **P 14 02 37.1 +1.1**
baz=64
Q20A Ridgley Place, 64.81 58 ⇑P **P 14 02 37.9 +1.1**
baz=65
O22A Kremmling 64.82 56 ⇓P **P 14 02 38.0 +1.1**
baz=65
P21A Newcastle 64.83 57 ⇓P **P 14 02 38.3 +1.4**
baz=65
BC3 Big Chuckawall 64.84 67 ⇓P **P 14 02 38.1 +1.1**
baz=65
S18A Hurst Farm, BI 64.86 60 ⇓P **P 14 02 38.0 +0.8**
baz=65
MONP Monument Peak 64.86 68 ⇓P **P 14 02 38.1 +0.9**
baz=65
PV04 Paradox Valley 64.91 59 *e*P **P 14 02 38.9 +1.5**
O23A Lake Granby, G 65.10 56 ⇓P **P 14 02 40.1 +1.4**
baz=65
PDMCI Parker Dam,Lak 65.11 66 ⇓P **P 14 02 39.7 +1.3**
baz=65
BRSD Miller 65.26 49 ⇑P **P 14 02 40.3 +1.0**
baz=65
Q21A Lamborn Mesa, 65.28 58 ⇑P **P 14 02 40.7 +1.0**
baz=65
Y12C Blythe 65.30 66 ⇑P **P 14 02 41.4 +1.7**
baz=65
SMCO Snowmass 65.33 57 *e*P **P 14 02 41.5 +1.2**
comp=Z,6.6nm,0.6s
R20A Redvale 65.34 59 ⇑P **P 14 02 41.4 +1.3**
baz=65
ISCO Idaho Springs 65.56 56 *e*P **P 14 02 43.3 +1.7**
ISCO pmax pmax

comp=Z,7.0nm,1.2s
ISCO Idaho Springs 65.56 56 *e*P **P 14 02 43.3 +1.7**
comp=Z,6.7nm,1.2s
ISCO Idaho Springs 65.56 56 ⇓P **P 14 02 43.3 +1.7**
baz=65
Q22A Crested Butte, 65.60 58 ⇓P **P 14 02 43.4 +1.5**
baz=65
S20A Disappointment 65.62 59 ⇑P **P 14 02 43.4 +1.4**
baz=66
R21A Cimarron 65.64 58 ⇓P **P 14 02 43.2 +1.2**
baz=66,SNR=5.2
GLA Glamis 65.64 67 *e*P **P 14 02 43.5 +1.6**
GLA pmax pmax

comp=Z,11nm,0.8s
GLA Glamis 65.64 67 *e*P **P 14 02 43.5 +1.6**
comp=Z,11nm,0.8s
GLA Glamis 65.64 67 ⇑P **P 14 02 43.3 +1.3**
baz=66,SNR=8.4
WUAZ Wupatki 65.73 63 *e*P **P 14 02 42.6 +0.1**
comp=Z,10.0nm,1.1s
WUAZ Wupatki 65.73 63 ⇑P **P 14 02 44.4 +1.8**
baz=66
SUW Suwalki 66.00 330 *e*P **P 14 02 42.8 -0.9**
Y14A Wickenburg 66.00 65 ⇑P **P 14 02 45.5 +1.3**
baz=66,SNR=7.9
MVCO Mesa Verde 66.01 60 *e*P **P 14 02 44.6 +0.2**
comp=Z,2.4nm,0.6s
MVCO Mesa Verde 66.01 60 ⇑P **P 14 02 45.3 +0.9**
baz=66
S21A Coal Bank Pass 66.04 59 ⇑P **P 14 02 46.1 +1.4**
baz=66,SNR=5.2
R22A Saguache, Gunn 66.16 58 ⇓P **P 14 02 46.5 +1.1**
baz=66
N27A Anderson Farm, 66.34 53 ⇑P **P 14 02 47.2 +1.0**
baz=66

Q24A Divide 66.43 56 ⇑P **P 14 02 48.3 +1.2**
baz=66
113A Mohawk Valley, 66.45 67 ⇓P **P 14 02 48.6 +1.8**
baz=66
Z14A Wintersburg 66.46 66 ⇑P **P 14 02 48.4 +1.4**
baz=66
OGNE Ogallala 66.48 53 ⇓P **P 14 02 48.0 +0.9**
baz=66
S22A 4UR Ranch, Cre 66.48 58 ⇑P **P 14 02 48.9 +1.5**
baz=66
X16A Lo Mia Camp, P 66.51 64 ⇑P **P 14 02 49.3 +1.8**
baz=66,SNR=12
R23A Moffat 66.67 57 ⇑P **P 14 02 50.0 +1.5**
baz=66
T21A Navajo Lake 66.68 59 ⇓P **P 14 02 50.1 +1.5**
baz=66
M29A Burnside Ranch 66.75 52 ⇓P **P 14 02 49.0 +0.3**
baz=66
COEN Coen 66.76 191 *e*P **P 14 02 50.1 +1.2**
comp=Z,92nm,0.6s
O27A Beecher Island 66.84 54 ⇓P **P 14 02 50.0 +0.7**
baz=67
AKASG Malin Array Be 66.84 325 *i* P **P 14 02 47.9 -1.1**
AKASG pmax pmax

comp=Z,13nm,0.6s
AKASG Malin Array Be 66.84 325 P **P 14 02 47.9 -1.1**
AKASG Malin Array Be 66.84 325 P **P 14 02 47.9 -1.1**
comp=Z,13nm,0.6s,baz=32,slow=6.2,SNR=20
KIEV Kiev 66.85 325 *i* P **P 14 02 47.8 -1.3**
AK01 Malin Array Si 66.85 325 *e*P **P 14 02 46.1 -3.0**
ECSD EROS Data Cent 66.88 48 *e*P **P 14 02 49.7 +0.3**
comp=Z,17nm,0.4s
P26A Davis Ranch, A 66.89 55 ⇑P **P 14 02 51.1 +1.4**
baz=67
KBZ Khabaz 66.98 312 P **P 14 02 49.2 -0.8**
KBZ pmax pmax

comp=Z,21nm,0.8s
KBZ Khabaz 66.98 312 P **P 14 02 49.1 -0.8**
KBZ Khabaz 66.98 312 P **P 14 02 49.1 -0.8**
comp=Z,21nm,0.8s,baz=63,slow=4.6,SNR=41
T22A Edith 67.00 59 ⇑P **P 14 02 51.9 +1.4**
baz=67,SNR=5.5
R24A Sanders Place, 67.00 57 ⇑P **P 14 02 51.7 +1.1**
baz=67
U21A Nageezi 67.04 60 ⇑P **P 14 02 52.0 +1.1**
baz=67
HYB Hyderabad 67.08 269 *i* P **P 14 02 49.5 -1.6**
comp=Z,45nm,1.0s
V20A Brimhall 67.08 61 ⇑P **P 14 02 52.1 +1.0**
baz=67
SDCO Great Sand Dun 67.17 58 *e*P **P 14 02 51.5 -0.1**
comp=Z,3.8nm,1.1s
X18A Snowflake 67.24 63 ⇓P **P 14 02 53.6 +1.6**
baz=67
Q26A Hugo 67.28 55 ⇓P **P 14 02 53.4 +1.2**
baz=67
S24A Houchin Ranch, 67.40 57 ⇓P **P 14 02 54.2 +1.1**
baz=67
IKIA Kiasar 67.46 300 *e*P **P 14 02 53.8 +0.4**
R25A Fountain Ranch 67.49 56 ⇑P **P 14 02 54.1 +0.7**
baz=67
W20A Ramah 67.57 61 ⇓P **P 14 02 55.2 +1.1**
baz=67
214A Organ Pipe Nat 67.59 67 ⇑P **P 14 02 55.3 +1.3**
baz=68,SNR=6.1
R26A Arlington 67.80 56 ⇓P **P 14 02 55.9 +0.5**
baz=68
V22A San Miguel Ran 67.83 60 ⇓P **P 14 02 56.7 +1.1**
baz=68
IANJ Anjilo 67.90 300 *e*P **P 14 02 56.8 +0.7**
T24A Torres, Weston 67.91 58 ⇑P **P 14 02 57.5 +1.3**
baz=68
ISHM Shahmirzad 67.97 300 *e*P **P 14 02 57.7 +1.1**
SCHQ Schefferville 67.97 24 P **P 14 02 55.2 -0.8**
SCHQ Schefferville 67.97 24 P **P 14 02 55.2 -0.8**
comp=Z,3.7nm,0.3s,baz=358,slow=6.2,SNR=26
R27A Eads 68.14 55 ⇓P **P 14 02 57.6 +0.2**
baz=68
T25A Trinidad 68.19 57 ⇓P **P 14 02 57.8 -0.1**
baz=68
S26A Kim 68.31 56 ⇓P **P 14 02 59.3 +0.9**
baz=68
GKP Gorka Klasztor 68.37 333 *e*P **P 14 02 57.9 -0.4**
TUC Tucson 68.45 65 *e*P **P 14 03 01.1 +1.7**
TUC pmax pmax

comp=Z,4.0nm,1.1s
TUC Tucson 68.45 65 *e*P **P 14 03 01.1 +1.7**
comp=Z,4.1nm,1.1s
X21A Alamocita Cree 68.47 61 ⇑P **P 14 03 01.4 +1.7**
baz=68,SNR=11
Y20A Horse Springs, 68.56 62 ⇓P **P 14 03 01.9 +1.7**
baz=68
T26A Comanche Natio 68.58 57 ⇓P **P 14 03 00.1 -0.1**
baz=68
BEL Belsk 68.61 331 *e*P **P 14 03 00.0 +0.2**
U25A Circle Dot Ran 68.76 58 ⇓P **P 14 03 02.0 +0.7**
baz=69
V24A Rampart Ranch, 68.83 59 ⇓P **P 14 03 02.9 +1.1**
baz=69
X22A Bernardo 68.84 61 ⇓P **P 14 03 03.8 +2.0**
baz=69
R29A Marienthal 68.86 54 ⇑P **P 14 03 02.3 +0.6**
baz=69
Y21A Point of Rocks 68.86 62 ⇓P **P 14 03 03.9 +1.8**
baz=69
GNI Garni 68.93 309 *e*P **P 14 03 01.7 -0.5**
comp=Z,13nm,0.8s
Z20A Nine Sixteen R 69.05 63 ⇓P **P 14 03 04.6 +1.6**
baz=69
V25A Rancho No Teng 69.08 58 ⇑P **P 14 03 04.2 +0.9**
baz=69
T27A Campo 69.12 56 ⇑P **P 14 03 03.8 +0.4**
baz=69
W24A Lazy 6 Ranch, 69.15 59 ⇑P **P 14 03 04.9 +1.2**
baz=69
IHRS Heris 69.24 306 *e*P **P 14 03 04.0 -0.2**
Z21A St. Cloud Mine 69.40 62 ⇓P **P 14 03 06.8 +1.6**
baz=69
120A U Bar Ranch, L 69.46 63 ⇓P **P 14 03 07.0 +1.5**
baz=69,SNR=10
U27A Thompson Grove 69.56 57 ⇑P **P 14 03 06.3 +0.3**
baz=69
W25A X Bar L Ranch, 69.64 59 ⇓P **P 14 03 07.3 +0.7**
baz=70,SNR=5.2
Y23A Lovece Mesa, 69.79 61 ⇓P **P 14 03 08.9 +1.4**
baz=70,SNR=6.4
Z22A Elephant Butte 69.82 62 ⇑P **P 14 03 09.1 +1.4**
baz=70,SNR=7.8
121A Cookes Peak, D 69.93 63 ⇓P **P 14 03 10.3 +2.0**
baz=70
KWP Kalwaria Pacla 69.94 328 ⇑*i*P **P 14 03 08.4 +0.5**
KWP Kalwaria Pacla 69.94 328 *e*P **P 14 03 08.1 +0.2**
ISHB Shabestar 69.97 307 *e*P **P 14 03 08.7 +0.1**
319A Douglas 69.99 64 ⇓P **P 14 03 10.2 +1.5**
baz=70,SNR=5.2
220A Playas Peak, P 70.00 64 ⇑P **P 14 03 10.3 +1.5**
baz=70
ICHK Chekchek 70.09 297 *e*P **P 14 03 09.7 +0.3**
Y24A Capitan 70.12 60 ⇑P **P 14 03 10.9 +1.4**
baz=70
Z23A Rita Site, Whi 70.21 61 ⇑P **P 14 03 11.6 +1.7**
baz=70
OJC Ojcow 70.34 330 *e*P **P 14 03 10.1 -0.2**
OJC pmax pmax

comp=Z,37nm,1.1s
OJC Ojcow 70.34 330 *e*P **P 14 03 10.1 -0.2**
comp=Z,36nm,1.1s
320A Kipp Ranch, An 70.44 64 ⇑P **P 14 03 12.9 +1.5**
baz=70
W27A Bowe Ranch, En 70.49 58 ⇑P **P 14 03 12.7 +1.1**
baz=70
X26A CR and CF Fran 70.50 59 ⇓P **P 14 03 12.5 +0.9**
baz=70
Y25A Mesa, Roswell 70.52 60 ⇓P **P 14 03 12.8 +1.0**
baz=70
Z24A Sheeppen Canyo 70.62 60 ⇑P **P 14 03 13.8 +1.3**
baz=70,SNR=7.4
IMEH Mehriz 70.63 296 *e*P **P 14 03 12.0 -0.6**
KOLS Kolonicke sedl 70.69 328 *e*P **P 14 03 12.2 -0.2**
KOLS pmax pmax

comp=Z,12nm,1.0s
KOLS Kolonicke sedl 70.69 328 *e*P **P 14 03 12.2 -0.2**
IZEF Zefreh 70.71 299 *e*P **P 14 03 13.9 +0.8**
IKLH Kolahrood 70.78 300 *e*P **P 14 03 14.1 +0.5**
ESK Eskdalemuir 70.79 346 *e*P **P 14 03 12.5 -0.3**
ESK pmax pmax

comp=Z,23nm,1.0s
ESK Eskdalemuir 70.79 346 *e*P **P 14 03 12.5 -0.3**
comp=Z,23nm,1.0s
KSP Ksiaz 70.80 333 *e*P **P 14 03 12.7 -0.3**
BUR08 Bucovina Ar. S 70.83 326 *e*P **P 14 03 12.7 -0.7**
BURAR Bucovina Array 70.85 326 ⇓*i*P **P 14 03 13.2 -0.3**
CRVS Cervenica-Dubn 70.98 329 *e*P **P 14 03 12.3 -1.8**
CRVS pmax pmax

comp=Z,7.0nm,0.7s
CRVS Cervenica-Dubn 70.98 329 *e*P **P 14 03 12.3 -1.8**
Z25A Roswell 71.00 60 ⇑P **P 14 03 15.9 +1.2**
baz=71
124A Stringfield Ra 71.06 61 ⇑P **P 14 03 16.3 +1.1**
baz=71
OKC Ostrava-Krasne 71.17 331 *e*P **P 14 03 14.6 -0.6**
OKC Ostrava-Krasne 71.17 331 ⇓*e*P **P 14 03 14.6 -0.6**
UPC Upice 71.18 333 ⇓*i*P **P 14 03 15.3 0.0**
UPC Upice 71.18 333 ⇓*i*P **P 14 03 15.3 0.0**
CLL Collm 71.27 335 ⇓*i*P **P 14 03 15.0 -0.7**
CLL pmax pmax

comp=Z,24nm,1.0s
CLL Collm 71.27 335 ⇓*i*P **P 14 03 15.0 -0.7**
comp=Z,24nm,1.0s
TESR Tescani 71.30 324 ⇓*i*P **P 14 03 15.6 -0.4**
TRPA Tarpa 71.31 328 ⇓*i*P **P 14 03 16.4 +0.4**
TRPA Tarpa 71.31 328 ⇓*e* **P 14 03 16.2 +0.2**
Y27A Causey 71.35 59 ⇓P **P 14 03 17.5 +0.8**
baz=71
Z26A Caprock 71.40 60 ⇑P **P 14 03 17.9 +0.9**
baz=71,SNR=5.3
MORC Moravsky Berou 71.40 331 *e*P **P 14 03 16.3 -0.3**
MORC pmax pmax

comp=Z,24nm,0.7s
MORC Moravsky Berou 71.40 331 *e*P **P 14 03 16.3 -0.3**
comp=Z,24nm,0.7s
MORC Moravsky Berou 71.40 331 ⇓*i*P **P 14 03 16.6 0.0**
BRG Berggiesshubel 71.42 334 ⇓*i*P **P 14 03 16.1 -0.5**
comp=Z,6.9nm,0.9s
BRG Berggiesshubel 71.42 334 ⇓*i*P **P 14 03 16.1 -0.5**
BRG pmax pmax

comp=Z,7.0nm,0.9s
MSTX Muleshoe 71.49 58 ⇑P **P 14 03 18.3 +0.8**
baz=71
224A Cornudas Mount 71.50 61 ⇓P **P 14 03 19.1 +1.4**
baz=71
125A Gardner Draw, 71.51 60 ⇓P **P 14 03 18.8 +1.1**
baz=71,SNR=5.5
TLCR 71.63 322 ⇓*i*P **P 14 03 17.9 -0.1**
X29A Tulia 71.67 57 ⇑P **P 14 03 19.1 +0.6**
baz=72
Z27A Tatum 71.77 59 ⇓P **P 14 03 19.9 +0.7**
baz=72
VRI Vrincioaia 71.82 324 ⇓*i*P **P 14 03 18.9 -0.2**
126A Clayton Basin, 71.86 60 ⇓P **P 14 03 20.6 +0.9**
baz=72
CFR Carcaliu 71.89 323 ⇑*i*P **P 14 03 19.1 -0.4**
324A Moseley Ranch, 72.01 62 ⇓P **P 14 03 21.4 +0.7**
baz=72
PRU Pruhonice 72.06 333 ⇓*i*P **P 14 03 20.2 -0.2**
PRU Pruhonice 72.06 333 ⇓*i*P **P 14 03 20.2 -0.2**
VRAC Vranov 72.09 332 ⇑*i*P **P 14 03 21.3 +0.6**
VYHS Vyhne 72.16 330 *e*P **P 14 03 21.1 +0.1**
VYHS pmax pmax

comp=Z,7.0nm,0.7s
VYHS Vyhne 72.16 330 *e*P **P 14 03 21.1 +0.1**
226B Tecolote Peak, 72.22 60 ⇑P **P 14 03 22.8 +1.0**
baz=72,SNR=7.9
PSZ Piszkesteto 72.34 329 *e*P **P 14 03 22.6 +0.4**
PSZ pmax pmax

comp=Z,14nm,1.0s
PSZ Piszkesteto 72.34 329 *e*P **P 14 03 22.6 +0.4**
comp=Z,14nm,1.0s
PSZ Piszkesteto 72.34 329 ⇑*i*P **P 14 03 22.4 +0.2**
PSZ Piszkesteto 72.34 329 ⇓*e* **P 14 03 22.2 0.0**
325A Bean Ranch, Si 72.34 61 ⇑P **P 14 03 23.9 +1.2**
baz=72
NKC Novy Kostel 72.39 335 ⇓*i*P **P 14 03 22.2 -0.2**
NKC Novy Kostel 72.39 335 ⇓*i*P **P 14 03 22.2 -0.2**
IDHR Dehrash 72.40 304 *e*P **P 14 03 21.9 -1.0**
TIRR Tirgusor 72.40 322 *e*P **P 14 03 21.9 -0.6**
TIRR Tirgusor 72.40 322 *e*P **P 14 03 21.9 -0.6**
TIRR Tirgusor 72.40 322 ⇓*i*P **P 14 03 22.2 -0.3**
X31A McDonald Ranch 72.40 56 ⇓P **P 14 03 23.4 +0.7**
baz=72
DRGR 72.42 327 ⇑*i*P **P 14 03 22.5 -0.2**
TREC Trest 72.42 333 ⇓*i*P **P 14 03 22.5 -0.1**
TREC Trest 72.42 333 ⇓*i*P **P 14 03 22.5 -0.1**
MLR Muntele Rosu 72.42 324 ⇑*i*P **P 14 03 22.5 -0.3**
ISR Istrita 72.53 323 ⇑*i*P **P 14 03 23.9 +0.6**
CTAO Charters Tower 72.54 187 *e*P **P 14 03 23.9 +0.4**
CTAO pmax pmax

comp=Z,14nm,0.8s
CTAO Charters Tower 72.54 187 *e*P **P 14 03 23.9 +0.4**
comp=Z,14nm,0.8s
SMOL Smolenice 72.56 331 *e*P **P 14 03 24.2 +0.8**
SMOL Smolenice 72.56 331 *e*P **P 14 03 24.2 +0.8**
Z29A Hungry Hill Ra 72.59 58 ⇑P **P 14 03 24.8 +0.8**
baz=72
128A Castleberry Fa 72.69 59 ⇑P **P 14 03 25.4 +0.9**
baz=72
425A Indio Mountain 72.79 62 ⇓P **P 14 03 26.8 +1.6**
baz=73
VOIR 72.79 325 ⇑*i*P **P 14 03 25.2 +0.3**
Z30A Sanderson Ranc 72.87 58 ⇓P **P 14 03 26.4 +0.9**
baz=73
326A Caldwell Ranch 72.92 61 ⇓P **P 14 03 26.8 +0.9**
baz=73
WMOK Wichita Mounta 72.92 55 *e*P **P 14 03 25.8 +0.1**
WMOK Wichita Mounta 72.92 55 *e*P **P 14 03 25.8 +0.1**
ZST Bratislava 72.94 331 *e*P **P 14 03 25.4 -0.2**
ZST pmax pmax

comp=Z,10.0nm,0.7s
ZST Bratislava 72.94 331 *e*P **P 14 03 25.4 -0.2**
ARR Arges 73.00 325 ⇑*i*P **P 14 03 26.9 +0.9**
BUD Budapest 73.00 329 ⇓*e* **P 14 03 26.4 +0.5**
KHC Kasperske Hory 73.10 334 ⇓*i*P **P 14 03 26.5 0.0**
KHC Kasperske Hory 73.10 334 *e*P **P 14 03 26.5 0.0**
comp=Z,14nm,0.8s
KHC Kasperske Hory 73.10 334 ⇓*i*P **P 14 03 26.5 0.0**
Y32A R-V Farms, Ver 73.17 56 ⇑P **P 14 03 27.6 +0.5**
baz=73
GRF Grafenberg Arr 73.21 335 *e*P **P 14 03 26.9 -0.2**
comp=Z,17nm,0.9s
GRF Grafenberg Arr 73.21 335 *e*P **P 14 03 26.9 -0.2**
GRF pmax pmax

comp=Z,17nm,0.9s
GRFO Grafenberg 73.21 335 *e*P **P 14 03 27.2 +0.1**
GRFO pmax pmax

comp=Z,21nm,0.8s
GRFO Grafenberg 73.21 335 *e*P **P 14 03 27.2 +0.1**
comp=Z,21nm,0.8s
GERES GERESS Array B 73.33 333 P **P 14 03 27.6 -0.3**
GERES GERESS Array B 73.33 333 P **P 14 03 27.6 -0.3**
comp=Z,7.7nm,0.5s,baz=30,slow=5.2,SNR=61
Z31A Sharp Cattle R 73.35 57 ⇓P **P 14 03 28.6 +0.4**
baz=73
426A McDonald Obser 73.39 61 ⇑P **P 14 03 29.6 +0.9**
baz=73
TUL1 Tulsa 73.46 52 ⇓P **P 14 03 29.1 +0.3**
baz=73
328A Wristen Ranch, 73.49 60 ⇑P **P 14 03 30.0 +0.9**
baz=73,SNR=5.8
CONA Conrad Observa 73.55 332 ⇓*i*P **P 14 03 29.5 +0.3**
comp=Z,15nm,0.6s,SNR=27
SOP Sopron 73.57 331 ⇓*e* **P 14 03 29.8 +0.6**
427A Hayter Ranch, 73.59 61 ⇓P **P 14 03 30.8 +1.1**
baz=73,SNR=5.7
MEM Membach 73.59 339 P **P 14 03 28.6 -0.7**
comp=Z,13nm,1.1s
Z32A Haskell 73.70 56 ⇓P **P 14 03 30.2 0.0**
baz=74
131A Roby 73.74 57 ⇑P **P 14 03 31.1 +0.7**
baz=74
BZS Buzias 73.81 327 ⇑*i*P **P 14 03 29.8 -0.8**
526A Mary Lane Ranc 73.84 62 ⇑P **P 14 03 32.4 +1.2**
baz=74,SNR=8.2
329A Wagon Wheel Ra 73.84 59 ⇑P **P 14 03 31.7 +0.6**
baz=74
TOD Tromm 73.89 337 *e*P **P 14 03 30.8 -0.2**
TOD Tromm 73.89 337 *e*P **P 14 03 30.8 -0.2**
BCLA Clavier 73.92 339 P **P 14 03 31.0 -0.1**
WRAB Tennant Creek 73.99 198 *e*P **P 14 03 31.8 0.0**
WRAB pmax pmax

comp=Z,24nm,0.8s
WRAB Tennant Creek 73.99 198 *e*P **P 14 03 31.8 0.0**
comp=Z,24nm,0.8s

WRA Warramunga Arr 74.00 198 P P 14 03 32.1 +0.2
WRA Warramunga Arr 74.00 198 P P 14 03 32.1 +0.2
comp=Z,20nm,0.7s,baz=14,slow=5.9,SNR=146
527A Woodward Ranch 74.03 61 ⇓P P 14 03 33.2 +0.9
baz=74,SNR=5.5
428A Kincaid Ranch, 74.07 60 ⇓P P 14 03 34.0 +1.5
baz=74,SNR=12
MOA Molln 74.08 333 ⇑*i*P P 14 03 32.0 -0.2
comp=Z,9.2nm,0.8s,SNR=8.2
RUP Ruppelstein 74.21 338 *e*P P 14 03 32.5 -0.3
RUP Ruppelstein 74.21 338 *e*P P 14 03 32.5 -0.3
626A Big Bend Ranch 74.21 62 ⇓P P 14 03 34.4 +1.1
baz=74,SNR=7.6
PKSM Moragy 74.25 329 ⇓*e* P 14 03 32.2 -0.9
ARSA Arzberg 74.26 332 ⇑*i*P P 14 03 33.2 0.0
comp=Z,8.6nm,0.8s,SNR=7.6
BR131 Keskin Array S 74.28 316 *e*P P 14 03 33.2 -0.3
comp=Z,7.4nm,0.6s
BRTR Keskin Array B 74.28 316 P P 14 03 33.2 -0.4
BRTR Keskin Array B 74.28 316 P P 14 03 33.2 -0.4
comp=Z,8.9nm,0.6s,baz=47,slow=3.0,SNR=51
FITZ Fitzroy Crossi 74.30 207 P P 14 03 34.2 +0.7
FITZ Fitzroy Crossi 74.30 207 P P 14 03 34.2 +0.7
comp=Z,18nm,0.8s,baz=19,slow=3.9,SNR=51
GIVF Givet 74.33 340 *e*P P 14 03 32.8 -0.6
comp=Z,31nm,1.1s
GIVF Givet 74.33 340 *e*P P 14 03 32.8 -0.6
GIVF pmax pmax
comp=Z,31nm,1.1s
GIVF Givet 74.33 340 *e*P P 14 03 32.8 -0.6
comp=Z,31nm,1.1s
330A Mertzon 74.33 59 ⇓P P 14 03 34.1 +0.2
baz=74
DOU Dourbes 74.38 340 P P 14 03 33.6 -0.1
comp=Z,4.8nm,1.3s
WLF Walferdange 74.45 339 P P 14 03 35.8 +1.7
528A Cox Ranch, San 74.46 61 ⇓P P 14 03 36.0 +1.4
baz=74,SNR=7.7
BAIF Baives 74.50 340 *e*P P 14 03 33.9 -0.5
comp=Z,25nm,1.1s
BAIF Baives 74.50 340 *e*P P 14 03 33.9 -0.5
BAIF pmax pmax
comp=Z,25nm,1.1s
BAIF Baives 74.50 340 *e*P P 14 03 33.9 -0.5
comp=Z,25nm,1.1s
ANTO Ankara 74.52 316 *e*P P 14 03 35.3 +0.4
ANTO pmax pmax
comp=Z,20nm,0.6s
ANTO Ankara 74.52 316 *e*P P 14 03 35.3 +0.4
comp=Z,20nm,0.6s
429A Davenport Ranc 74.57 60 ⇑P P 14 03 35.3 +0.1
baz=74
STU Stuttgart 74.57 336 *e*P P 14 03 34.9 +0.1
STU Stuttgart 74.57 336 *e*P P 14 03 34.9 +0.1
TXAR Lajitas Array 74.63 62 P P 14 03 37.1 +1.4
TXAR pP pP 14 05 17.8 +2.6
TXAR Lajitas Array 74.63 62 P P 14 03 37.1 +1.4
comp=Z,4.0nm,0.5s,baz=296,slow=4.6,SNR=40
TXAR pP pP 14 05 17.8 +2.6
comp=Z,0.2nm,0.4s,baz=298,slow=3.8,SNR=3.3
627A Terlingua Ranc 74.69 62 ⇑P P 14 03 37.3 +1.3
baz=75,SNR=5.2
LANF Langenberg 74.71 337 *e*P P 14 03 35.5 -0.1
LANF Langenberg 74.71 337 *e*P P 14 03 35.5 -0.1
LANF Langenberg 74.71 337 *e*P P 14 03 35.5 -0.1
232A Coleman 74.74 57 ⇑P P 14 03 36.6 +0.4
baz=75
430A Baggett Ranch, 74.78 59 ⇓P P 14 03 36.9 +0.4
baz=75,SNR=5.1
529A Stev Forest Ra 74.79 60 ⇓P P 14 03 37.5 +1.0
baz=75,SNR=7.7
331A San Angelo 74.80 58 ⇓P P 14 03 36.7 +0.2
baz=75
HATD Hatta, Dubai 74.83 291 P P 14 03 36.2 -0.5
SNR=6.2
SOKA Soboth 74.92 332 ⇑*i*P P 14 03 36.5 -0.5
comp=Z,14nm,0.7s
628A Black Gap, Mar 74.93 61 ⇑P P 14 03 38.3 +1.0
baz=75,SNR=5.6
ASHO Ashiyiah 74.99 291 P P 14 03 37.1 -0.6
SNR=5.6
KBA Koelnbreinsper 75.04 333 ⇓*i*P P 14 03 38.2 +0.4
comp=Z,40nm,0.6s,SNR=41
MPEP Malo Peshtene 75.06 324 P P 14 03 37.2 -0.5
332A Millersview 75.09 58 ⇑P P 14 03 38.7 +0.5
baz=75
HOQ Hoqain 75.12 289 P P 14 03 38.2 -0.1
SNR=5.6
431A Sonora 75.20 59 ⇓P P 14 03 39.7 +0.9
baz=75
530A J-C Ranch, Com 75.23 60 ⇑P P 14 03 39.8 +0.9
baz=75
SPAK Spaichingen-Ko 75.29 336 *e*P P 14 03 38.8 -0.2
CDF Champ du Feu 75.36 337 *e*P P 14 03 38.9 -0.5
comp=Z,35nm,0.9s
CDF Champ du Feu 75.36 337 *e*P P 14 03 38.9 -0.5
CDF pmax pmax
comp=Z,35nm,0.9s
CDF Champ du Feu 75.36 337 *e*P P 14 03 38.9 -0.5
comp=Z,35nm,0.9s
MYKA Terra Mystica 75.36 333 ⇑*i*P P 14 03 38.8 -0.6
comp=Z,10nm,0.9s
MOTA Moosalm 75.40 334 ⇑*i*P P 14 03 39.5 -0.2
comp=Z,25nm,1.0s
ECH Echery 75.58 337 *e*P P 14 03 38.9 -1.6
ECH pmax pmax
comp=Z,13nm,0.9s
ECH Echery 75.58 337 *e*P P 14 03 38.9 -1.6
comp=Z,13nm,0.9s
ECH Echery 75.58 337 *e*P P 14 03 39.9 -0.6
PAGF Fort de Pagny 75.59 338 *e*P P 14 03 40.5 -0.1
comp=Z,11nm,0.7s
PAGF Fort de Pagny 75.59 338 *e*P P 14 03 40.5 -0.1
comp=Z,11nm,0.7s
JMDO Jabal Madar 75.60 288 P P 14 03 41.2 +0.1
SNR=6.8
531A Rocksprings 75.64 59 ⇑P P 14 03 42.0 +0.7
baz=76
FELD Feldberg im Sc 75.69 337 *e*P P 14 03 40.8 -0.5
FELD Feldberg im Sc 75.69 337 *e*P P 14 03 40.8 -0.5
ARQ Araqi 75.77 290 P P 14 03 41.9 -0.1
SNR=6.1
MIB Mutribah 75.78 300 *e*P P 14 03 41.0 -0.9
MIB AMb AMB 14 03 42.3
comp=Z,113nm,0.7s
MEZF Maizieres J'vi 75.79 339 *e*P P 14 03 41.5 -0.2
comp=Z,26nm,0.7s
MEZF Maizieres J'vi 75.79 339 *e*P P 14 03 41.5 -0.2
comp=Z,26nm,0.7s
FETA Feichten 75.80 335 ⇓*e*P P 14 03 42.0 0.0
comp=Z,12nm,0.7s,SNR=11
BSY Bisya 75.83 289 P P 14 03 42.2 -0.2
SNR=10
THEF They Montfort 75.84 338 *e*P P 14 03 41.6 -0.4
THEF They Montfort 75.84 338 *e*P P 14 03 41.6 -0.4
THEF They Montfort 75.84 338 *e*P P 14 03 41.6 -0.4
VTS Vitosha 75.92 324 ⇑*i*P P 14 03 42.5 -0.2
VTS Vitosha 75.92 324 P P 14 03 41.9 -0.8
MOF Molkenrain 75.92 337 *e*P P 14 03 41.9 -0.7
MOF Molkenrain 75.92 337 *e*P P 14 03 41.9 -0.7
MOF Molkenrain 75.92 337 *e*P P 14 03 41.9 -0.7
HAU Haudompre 75.96 338 *e*P P 14 03 42.0 -0.7
comp=Z,18nm,0.9s
HAU Haudompre 75.96 338 *e*P P 14 03 42.0 -0.7
HAU pmax pmax
comp=Z,18nm,0.9s
HAU Haudompre 75.96 338 *e*P P 14 03 42.0 -0.7
comp=Z,18nm,0.9s
HINF Hinteralfeld 76.02 337 *e*P P 14 03 42.2 -0.9
comp=Z,8.6nm,0.8s
HINF Hinteralfeld 76.02 337 *e*P P 14 03 42.2 -0.9
HINF pmax pmax
comp=Z,9.0nm,0.8s
HINF Hinteralfeld 76.02 337 *e*P P 14 03 42.2 -0.9
comp=Z,8.6nm,0.8s
SFTF Sexfontaines 76.07 339 *e*P P 14 03 42.9 -0.4
comp=Z,51nm,0.8s
SFTF Sexfontaines 76.07 339 *e*P P 14 03 42.9 -0.4
comp=Z,51nm,0.8s
BBS Basel-Blauen 76.19 337 *e*P P 14 03 43.8 -0.2
BBS Basel-Blauen 76.19 337 *e*P P 14 03 43.8 -0.2
RST Umm Al-Ruwaisa 76.20 300 *e*P P 14 03 43.3 -1.0
RST AMb AMB 14 03 44.4
comp=Z,873nm,0.8s
631A Perdido Creek 76.22 60 ⇑P P 14 03 44.9 +0.5
baz=76

NAY Al-Naaiem 76.27 300 *e*P P 14 03 43.9 -0.8
NAY AMb AMB 14 03 45.0
comp=Z,46nm,1.0s
FUORN Ofenpass-Fuorn 76.29 335 *e*P P 14 03 45.1 +0.3
comp=Z,13nm,0.7s
QRN Al-Qurain 76.31 299 *e*P P 14 03 44.3 -0.6
QRN AMb AMB 14 03 45.4
comp=Z,78nm,0.8s
RDF Al-Radifah 76.36 300 *e*P P 14 03 45.1 -0.1
RDF AMb AMB 14 03 46.5
comp=Z,116nm,1.2s
MMB Musomiste 76.61 324 P P 14 03 45.7 -0.7
FLN La Foliniere 76.66 342 *e*P P 14 03 45.8 -0.7
comp=Z,40nm,1.1s
FLN La Foliniere 76.66 342 *e*P P 14 03 45.8 -0.7
FLN pmax pmax
comp=Z,40nm,1.1s
FLN La Foliniere 76.66 342 *e*P P 14 03 45.8 -0.7
comp=Z,40nm,1.1s
TUE Stuetta 76.66 335 *e*P P 14 03 46.9 0.0
LDF La Druitiere 76.75 342 *e*P P 14 03 46.3 -0.7
comp=Z,14nm,0.7s
LDF La Druitiere 76.75 342 *e*P P 14 03 46.3 -0.7
LDF pmax pmax
comp=Z,14nm,0.7s
LDF La Druitiere 76.75 342 *e*P P 14 03 46.3 -0.7
comp=Z,14nm,0.7s
732A Laxson Ranch, 77.08 60 ⇑P P 14 03 50.1 +0.9
baz=77
GRR Gorron 77.09 343 *e*P P 14 03 48.5 -0.3
comp=Z,41nm,0.8s
GRR Gorron 77.09 343 *e*P P 14 03 48.5 -0.3
GRR pmax pmax
comp=Z,41nm,0.8s
GRR Gorron 77.09 343 *e*P P 14 03 48.5 -0.3
comp=Z,41nm,0.8s
LOR Lormes 77.22 339 *e*P P 14 03 49.0 -0.6
comp=Z,30nm,0.9s
LOR Lormes 77.22 339 *e*P P 14 03 49.0 -0.6
comp=Z,30nm,0.9s
SENIN Lac Senin/Sane 77.28 337 *e*P P 14 03 50.1 -0.1
comp=Z,4.7nm,0.8s
CABF La Chapelle 77.33 337 *e*P P 14 03 49.8 -0.6
comp=Z,20nm,1.0s
CABF La Chapelle 77.33 337 *e*P P 14 03 49.8 -0.6
CABF pmax pmax
comp=Z,20nm,1.0s
CABF La Chapelle 77.33 337 *e*P P 14 03 49.8 -0.6
comp=Z,20nm,1.0s
SSF Saint Saulge 77.49 339 *e*P P 14 03 50.5 -0.6
comp=Z,18nm,0.9s
SSF Saint Saulge 77.49 339 *e*P P 14 03 50.5 -0.6
SSF pmax pmax
comp=Z,18nm,0.9s
SSF Saint Saulge 77.49 339 *e*P P 14 03 50.5 -0.6
comp=Z,18nm,0.9s
SGMF Saint Gilles 77.52 344 *e*P P 14 03 50.9 -0.3
comp=Z,25nm,0.7s
SGMF Saint Gilles 77.52 344 *e*P P 14 03 50.9 -0.3
SGMF pmax pmax
comp=Z,25nm,0.7s
SGMF Saint Gilles 77.52 344 *e*P P 14 03 50.9 -0.3
comp=Z,25nm,0.7s
ROSF Rostrenen 77.56 344 *e*P P 14 03 51.0 -0.4
comp=Z,19nm,0.8s
ROSF Rostrenen 77.56 344 *e*P P 14 03 51.0 -0.4
ROSF pmax pmax
comp=Z,19nm,0.8s
ROSF Rostrenen 77.56 344 *e*P P 14 03 51.0 -0.4
comp=Z,19nm,0.8s
AS31 Alice Springs 77.71 198 *e*P P 14 03 52.7 +0.3
ASAR Alice Springs 77.71 198 P P 14 03 53.5 +1.0
ASAR Alice Springs 77.71 198 P P 14 03 53.5 +1.0
comp=Z,27nm,0.6s,baz=12,slow=5.1,SNR=445
AVF Avril sur Loir 77.78 339 *e*P P 14 03 52.2 -0.4
comp=Z,41nm,1.1s
AVF Avril sur Loir 77.78 339 *e*P P 14 03 52.2 -0.4
AVF pmax pmax
comp=Z,41nm,1.1s
AVF Avril sur Loir 77.78 339 *e*P P 14 03 52.2 -0.4
comp=Z,41nm,1.1s
SMF Signal de Mont 77.81 339 *e*P P 14 03 52.3 -0.5
comp=Z,89nm,1.6s
SMF Signal de Mont 77.81 339 *e*P P 14 03 52.3 -0.5
SMF pmax pmax
comp=Z,89nm,1.6s
SMF Signal de Mont 77.81 339 *e*P P 14 03 52.3 -0.5
comp=Z,89nm,1.6s
QUIF Quistinic 77.95 344 *e*P P 14 03 53.0 -0.5
comp=Z,12nm,0.8s
QUIF Quistinic 77.95 344 *e*P P 14 03 53.0 -0.5
QUIF pmax pmax
comp=Z,12nm,0.8s
QUIF Quistinic 77.95 344 *e*P P 14 03 53.0 -0.5
comp=Z,12nm,0.8s
BGF Bois d'Agland 78.11 340 *e*P P 14 03 54.0 -0.5
comp=Z,9.3nm,0.8s
BGF Bois d'Agland 78.11 340 *e*P P 14 03 54.0 -0.5
BGF pmax pmax
comp=Z,9.0nm,0.8s
BGF Bois d'Agland 78.11 340 *e*P P 14 03 54.0 -0.5
comp=Z,9.3nm,0.8s
TIR Tirane 78.19 326 *e*P P 14 03 54.6 -0.4
TIR Tirane 78.19 326 *e*P P 14 03 54.6 -0.4
LPL La Plagne 78.21 337 *e*P P 14 03 55.6 +0.3
comp=Z,34nm,0.7s
LPL La Plagne 78.21 337 *e*P P 14 03 55.6 +0.3
LPL pmax pmax
comp=Z,34nm,0.7s
LPL La Plagne 78.21 337 *e*P P 14 03 55.6 +0.3
comp=Z,34nm,0.7s
LPG La Plagne 78.22 337 *e*P P 14 03 55.8 +0.4
comp=Z,33nm,0.7s
LPG La Plagne 78.22 337 *e*P P 14 03 55.8 +0.4
LPG pmax pmax
comp=Z,33nm,0.7s
LPG La Plagne 78.22 337 *e*P P 14 03 55.8 +0.4
comp=Z,33nm,0.7s
TCF Toulx Ste Croi 78.50 340 *e*P P 14 03 56.3 -0.3
comp=Z,27nm,1.1s
TCF Toulx Ste Croi 78.50 340 *e*P P 14 03 56.3 -0.3
TCF pmax pmax
comp=Z,27nm,1.1s
TCF Toulx Ste Croi 78.50 340 *e*P P 14 03 56.3 -0.3
comp=Z,27nm,1.1s
AGO Saint Agoulin 78.53 339 *e*P P 14 03 57.2 +0.5
AGO Saint Agoulin 78.53 339 *e*P P 14 03 57.2 +0.5
VLC Villacollemand 78.54 334 *e*P P 14 03 57.2 +0.4
comp=Z,20nm,0.7s
MFF Saint Martin d 78.67 342 *e*P P 14 03 57.4 -0.1
comp=Z,28nm,1.0s
MFF Saint Martin d 78.67 342 *e*P P 14 03 57.4 -0.1
MFF pmax pmax
comp=Z,28nm,1.0s
MFF Saint Martin d 78.67 342 *e*P P 14 03 57.4 -0.1
comp=Z,28nm,1.0s
PYM Petit Puy Mans 78.84 339 *e*P P 14 03 58.7 +0.2
PYM Petit Puy Mans 78.84 339 *e*P P 14 03 58.7 +0.2
PYM Petit Puy Mans 78.84 339 *e*P P 14 03 58.7 +0.2
MBDF Montbardon 78.94 336 *e*P P 14 03 58.8 -0.3
comp=Z,15nm,0.7s
MBDF Montbardon 78.94 336 *e*P P 14 03 58.8 -0.3
MBDF pmax pmax
comp=Z,15nm,0.7s
MBDF Montbardon 78.94 336 *e*P P 14 03 58.8 -0.3
comp=Z,15nm,0.7s
SSB Saint Sauveur 78.95 338 *e*P P 14 03 57.4 -1.6
SSB pmax pmax
comp=Z,18nm,1.1s
SSB Saint Sauveur 78.95 338 *e*P P 14 03 57.4 -1.6
comp=Z,18nm,1.1s
SSB Saint Sauveur 78.95 338 *e*P P 14 03 59.1 +0.1
ORIF Oris-en-Rattie 78.97 337 *e*P P 14 03 59.5 +0.2
comp=Z,23nm,0.8s
ORIF Oris-en-Rattie 78.97 337 *e*P P 14 03 59.5 +0.2
ORIF pmax pmax
comp=Z,23nm,0.8s
ORIF Oris-en-Rattie 78.97 337 *e*P P 14 03 59.5 +0.2
comp=Z,23nm,0.8s
LBL Lubilhac 79.28 339 *e*P P 14 04 01.4 +0.5
LBL Lubilhac 79.28 339 *e*P P 14 04 01.4 +0.5
LBL Lubilhac 79.28 339 *e*P P 14 04 01.4 +0.5
VIVF Saint-Julien-l 79.32 338 *e*P P 14 04 01.1 +0.1
comp=Z,25nm,0.9s
VIVF Saint-Julien-l 79.32 338 *e*P P 14 04 01.1 +0.1
VIVF pmax pmax
comp=Z,25nm,0.9s
VIVF Saint-Julien-l 79.32 338 *e*P P 14 04 01.1 +0.1
comp=Z,25nm,0.9s
SAOF Saorge 79.44 336 *e*P P 14 04 00.9 -0.8
SAOF Saorge 79.44 336 *e*P P 14 04 00.9 -0.8
SAOF Saorge 79.44 336 *e*P P 14 04 00.9 -0.8
AUTN L'Aution 79.46 336 *e*P P 14 04 01.6 -0.4
AUTN L'Aution 79.46 336 *e*P P 14 04 01.6 -0.4
AUTN L'Aution 79.46 336 *e*P P 14 04 01.6 -0.4
TOUF Mont Tournerai 79.49 336 *e*P P 14 04 01.4 -0.7
TOUF Mont Tournerai 79.49 336 *e*P P 14 04 01.4 -0.7
TOUF Mont Tournerai 79.49 336 *e*P P 14 04 01.4 -0.7
RJF Les Rejaudoux 79.58 340 *e*P P 14 04 02.4 0.0
comp=Z,8.2nm,0.7s
RJF Les Rejaudoux 79.58 340 *e*P P 14 04 02.4 0.0
RJF pmax pmax
comp=Z,8.0nm,0.7s
RJF Les Rejaudoux 79.58 340 *e*P P 14 04 02.4 0.0
comp=Z,8.2nm,0.7s
SBF Sospel 79.58 336 *e*P P 14 04 01.7 -0.8
comp=Z,31nm,0.7s
SBF Sospel 79.58 336 *e*P P 14 04 01.7 -0.8
SBF pmax pmax
comp=Z,31nm,0.7s
SBF Sospel 79.58 336 *e*P P 14 04 01.7 -0.8
comp=Z,31nm,0.7s
MVIF Mont Vial 79.62 336 *e*P P 14 04 02.2 -0.6
MVIF Mont Vial 79.62 336 *e*P P 14 04 02.2 -0.6
MVIF Mont Vial 79.62 336 *e*P P 14 04 02.2 -0.6
REVF Revere 79.72 336 *e*P P 14 04 02.7 -0.5
REVF Revere 79.72 336 *e*P P 14 04 02.7 -0.5
REVF Revere 79.72 336 *e*P P 14 04 02.7 -0.5
CAF Calviac 79.83 340 *e*P P 14 04 03.9 +0.2
comp=Z,13nm,0.8s
CAF Calviac 79.83 340 *e*P P 14 04 03.9 +0.2
CAF pmax pmax
comp=Z,13nm,0.8s
CAF Calviac 79.83 340 *e*P P 14 04 03.9 +0.2
comp=Z,13nm,0.8s
SMRF Simiane la Rot 79.94 337 *e*P P 14 04 04.7 +0.4
comp=Z,6.9nm,0.8s
SMRF Simiane la Rot 79.94 337 *e*P P 14 04 04.7 +0.4
comp=Z,6.9nm,0.8s
FRF La Foret Royal 80.07 336 *e*P P 14 04 04.2 -0.7
comp=Z,15nm,0.9s
FRF La Foret Royal 80.07 336 *e*P P 14 04 04.2 -0.7
FRF pmax pmax
comp=Z,15nm,0.9s
FRF La Foret Royal 80.07 336 *e*P P 14 04 04.2 -0.7
comp=Z,15nm,0.9s
LFF La Frestale 80.09 341 *e*P P 14 04 05.1 +0.1
comp=Z,12nm,0.5s
LFF La Frestale 80.09 341 *e*P P 14 04 05.1 +0.1
LFF pmax pmax
comp=Z,12nm,0.5s
LFF La Frestale 80.09 341 *e*P P 14 04 05.1 +0.1
comp=Z,12nm,0.5s
LASF Ste Croix 80.24 338 *e*P P 14 04 05.7 -0.2
comp=Z,19nm,1.2s
LASF Ste Croix 80.24 338 *e*P P 14 04 05.7 -0.2
comp=Z,19nm,1.2s
LMR La Mourre 80.31 336 *e*P P 14 04 05.8 -0.4
comp=Z,27nm,0.9s
LMR La Mourre 80.31 336 *e*P P 14 04 05.8 -0.4
LMR pmax pmax
comp=Z,27nm,0.9s
LMR La Mourre 80.31 336 *e*P P 14 04 05.8 -0.4
comp=Z,27nm,0.9s
PGF Pioggiola 80.41 334 *e*P P 14 04 06.1 -0.8
comp=Z,24nm,0.8s
PGF Pioggiola 80.41 334 *e*P P 14 04 06.1 -0.8
PGF pmax pmax
comp=Z,24nm,0.8s
PGF Pioggiola 80.41 334 *e*P P 14 04 06.1 -0.8
comp=Z,24nm,0.8s
COCO West Island 80.53 236 *e*pP pP 14 05 46.3 -2.8
CUC Castrocucco 80.75 328 *e*P P 14 04 06.8 -1.8
comp=Z,10nm,1.0s
TIP Timpagrande 81.18 327 *e*P P 14 04 10.6 -0.3
comp=Z,18nm,1.0s
MTLF Montolieu 81.31 339 *e*P P 14 04 11.5 +0.1
comp=Z,12nm,0.8s
MTLF Montolieu 81.31 339 *e*P P 14 04 11.5 +0.1
MTLF pmax pmax
comp=Z,12nm,0.8s
MTLF Montolieu 81.31 339 *e*P P 14 04 11.5 +0.1
comp=Z,12nm,0.8s
EPF Esparros 82.00 340 *e*P P 14 04 14.7 -0.4
comp=Z,9.7nm,0.6s
EPF Esparros 82.00 340 *e*P P 14 04 14.7 -0.4
EPF pmax pmax
comp=Z,10.0nm,0.6s
EPF Esparros 82.00 340 *e*P P 14 04 14.7 -0.4
comp=Z,9.7nm,0.6s
SJPF Ste Jean 82.24 341 *e*P P 14 04 16.5 +0.3
SJPF Ste Jean 82.24 341 *e*P P 14 04 16.5 +0.3
SJPF Ste Jean 82.24 341 *e*P P 14 04 16.5 +0.3
ETSF Etsaut 82.31 341 *e*P P 14 04 16.7 0.0
comp=Z,10nm,0.6s
ETSF Etsaut 82.31 341 *e*P P 14 04 16.7 0.0
ETSF pmax pmax
comp=Z,11nm,0.6s
ETSF Etsaut 82.31 341 *e*P P 14 04 16.7 0.0
comp=Z,10nm,0.6s
STKA Stephens Creek 84.64 190 P P 14 04 28.4 +0.2
STKA Stephens Creek 84.64 190 P P 14 04 28.4 +0.2
comp=Z,6.9nm,0.9s,baz=6.0,slow=3.9,SNR=18
FORT Forrest 85.81 202 *e*P P 14 04 34.0 +0.2
comp=Z,44nm,0.6s
ESDC Sonseca Array 86.08 343 P P 14 04 33.6 -1.7
ESDC Sonseca Array 86.08 343 P P 14 04 33.6 -1.7
comp=Z,0.3nm,0.2s,baz=353,slow=4.4,SNR=8.4
KEST Kesra 86.66 331 *e*P P 14 04 38.0 -0.2
KEST Kesra 86.66 331 P P 14 04 38.0 -0.2
comp=Z,1.9nm,0.8s,baz=19,slow=3.4,SNR=7.9
TORD Torodi Ar. Bea 110.16 330 PKiKP PKiKP 14 10 21.9 -1.2
TORD PP PP 14 11 00.6 -4.1
TORD Torodi Ar. Bea 110.16 330 PKiKP PKiKP 14 10 21.9 -1.2
comp=Z,0.5nm,0.7s,baz=6.1,slow=1.9,SNR=5.0
TORD PP PP 14 11 00.6 -4.1
comp=Z,1.5nm,0.8s,baz=9.0,slow=8.4,SNR=6.9
DBIC Dimbokro 118.17 335 PKP PKPdf 14 10 37.4 -1.0
DBIC Dimbokro 118.17 335 PKP PKPdf 14 10 37.4 -1.0
comp=Z,1.8nm,0.4s,baz=341,slow=1.1,SNR=3.7
VNDA Vanda 129.87 178 PKP PKPdf 14 10 58.2 -0.7
VNDA Vanda 129.87 178 PKP PKPdf 14 10 58.2 -0.7
comp=Z,0.3nm,0.7s,baz=334,slow=4.2,SNR=9.8
LPAZ La Paz 131.38 58 PKP PKPdf 14 11 04.1 -0.3
LPAZ SKPbc SKPbc 14 13 44.0 -1.7
LPAZ La Paz 131.38 58 PKP PKPdf 14 11 04.1 -0.3
comp=Z,0.5nm,0.6s,baz=315,slow=4.3,SNR=5.9
LPAZ SKPbc SKPbc 14 13 44.0 -1.7
comp=Z,2.9nm,0.8s,baz=8.3,slow=9.2,SNR=8.1
BOSA Boshof 135.06 281 PKhKP PKPpre 14 10 55.8
comp=Z,2.5nm,0.6s,baz=143,slow=17,SNR=4.0
MAW Mawson 137.11 214 PKhKP PKPpre 14 11 02.1
comp=Z,2.2nm,0.5s,baz=269,slow=14,SNR=2.8
QSPA South Pole Qui 142.25 180 PKhKP PKPpre 14 11 17.5
comp=Z,13nm,0.6s,baz=286,slow=0.5,SNR=74
CFAA Coronel Fontan 143.46 72 PKP PKPbc 14 11 23.6 0.0
CFAA SKPbc SKPbc 14 14 18.9 -0.6
CFAA Coronel Fontan 143.46 72 PKP PKPbc 14 11 23.6 0.0
comp=Z,1.5nm,0.6s,baz=309,slow=2.4,SNR=18
CFAA SKPbc SKPbc 14 14 18.9 -0.6
comp=Z,0.1nm,0.3s,baz=247,slow=2.2,SNR=3.6
CPUP Villa Florida 145.22 53 PKPbc PKPbc 14 11 28.9 -0.3
CPUP SKPbc SKPbc 14 14 23.2 -0.5
CPUP Villa Florida 145.22 53 PKPbc PKPbc 14 11 28.9 -0.3
comp=Z,2.5nm,0.4s,baz=308,slow=2.5,SNR=13
CPUP SKPbc SKPbc 14 14 23.2 -0.5
comp=Z,0.4nm,0.3s,baz=0.6,slow=9.6,SNR=3.7
SYO Syowa Base 145.76 216 ⇑*e*PKPdf PKPdf 14 11 27.3 -0.7
PLCA Paso Flores 148.18 86 PKPbc PKPbc 14 11 37.7 +0.7
PLCA Paso Flores 148.18 86 PKPbc PKPbc 14 11 37.7 +0.7
comp=Z,8.8nm,0.7s,baz=301,slow=1.7,SNR=18
SNAA Sanae 158.06 200 *e*PKP PKPab 14 12 21.9 -1.0
SNAA Sanae 158.06 200 PKPab PKPab 14 12 21.6 -1.3
SNAA Sanae 158.06 200 PKPab PKPab 14 12 21.6 -1.3
comp=Z,0.7nm,0.6s,baz=248,slow=3.8,SNR=7.7
VNA2 Neumayer--Watz 159.56 198 *e*PKP PKPab 14 12 28.8 -0.6

*ISCJB **21** 14:07:10.3±0.6,7°.14S±0°.05×147°.7E±0°.1,h65km, mb3.9/14, Error ellipse: s-maj=15.8km s-min=6.4km az=7.2*

*IDC **21** 14:07:12.0±2.2, 7°.24S×147°.84E, h70km±22km, mb3.7/14, mb1 3.9/17, mb1mx3.8/23, mbtmp3.8/17, MS3.1/2, Ms1 3.1/2, ms1mx2.6/34, Error ellipse: s-maj=23.9km s-min=13.7km az=115.0*
*AUST **21** 14:07:32.6±2.9, 8°.29S×146°.93E, h176km, Error ellipse: s-maj=2.7km s-min=1.4km az=227.0*

ISC 21 14:07:12.0±0.7, 7°.22S±0°.07×147°.6E±0°.1, h65km, n30, σ1§57/33, mb4.0/13, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.22**	**192**	P	**Pn**	**14 07 47.8**	**+1.2**
	48nm,0.3s,baz=30,slow=5.7,SNR=298						
PMG				S	**Sn**	**14 08 14.5**	**+1.6**
	54nm,0.3s,baz=0.0,slow=20,SNR=3.7						
COEN	**Coen**	**7.99**	**213**	S	**Sn**	**14 10 30.0**	**-4.5**
	baz=6.8,SNR=3.9						
MTSU	**Mount Surprise**	**11.31**	**196**	P	**Pn**	**14 09 52.2**	**+1.2**
	baz=10,SNR=85						
CTA	**Charters Tower**	**12.86**	**186**	P	**Pn**	**14 10 13.8**	**+1.7**
	0.9nm,0.3s,baz=7.4,slow=14,SNR=16						
CTA				LR	LR	14 14 30.8	
	comp=Z,74nm,19.8s,baz=224,slow=34						
QIS	**Mount Isa**	**15.36**	**210**	P	**P**	**14 10 47.4**	**-1.0**
	baz=14,SNR=6.5						
KDU	**Kakadu**	**15.86**	**249**	P	**Pn**	**14 10 52.2**	**+0.7**
	baz=15,SNR=6.8						
MTN	**Manton Dam**	**17.15**	**250**	P	**P**	**14 11 11.2**	**+2.8**
	baz=16,SNR=3.3						
WRA	**Warramunga Arr**	**18.05**	**224**	P	**Pn**	**14 11 18.4**	**-0.1**
	1.0nm,0.3s,baz=51,slow=12,SNR=51						
WRA				S	**S**	**14 14 45.1**	**+3.9**
	0.0nm,0.3s,baz=41,slow=20,SNR=3.5						
RMQ	**Roma**	**19.19**	**177**	P	**Pn**	**14 11 32.5**	**+0.3**
	baz=18,SNR=7.4						
QLP	**Quilpie**	**19.52**	**189**	P	**Pn**	**14 11 35.2**	**-0.8**
	baz=18,SNR=33						
KNRA	**Kununurra**	**20.28**	**244**	P	**P**	**14 11 42.8**	**+0.3**
	baz=19,SNR=4.2						
ASAR	**Alice Springs**	**20.99**	**217**	P	**P**	**14 11 50.0**	**-0.2**
	2.9nm,0.7s,baz=54,slow=9.1,SNR=41						
ASAR				pP	**pP**	**14 12 02.0**	**-2.1**
	12nm,0.7s,baz=41,slow=14,SNR=46						
ASAR				S	**S**	**14 15 38.1**	**-2.5**
	1.0nm,0.9s,baz=36,slow=22,SNR=5.1						
FITZ	**Fitzroy Crossi**	**23.98**	**241**	P	**P**	**14 12 20.1**	**-0.6**
	1.3nm,0.3s,baz=80,slow=7.2,SNR=18						
FITZ	**Fitzroy Crossi**	**23.98**	**241**	P	**P**	**14 12 20.1**	**-0.6**
	baz=23,SNR=13						
STKA	**Stephens Creek**	**25.17**	**192**	P	**P**	**14 12 30.8**	**-0.6**
	2.7nm,0.3s,baz=4.0,slow=9.3,SNR=30						
STKA				LR	LR	14 21 42.3	
	comp=Z,58nm,20.6s,baz=202,slow=34						
STKA	**Stephens Creek**	**25.17**	**192**	P	**P**	**14 12 30.8**	**-0.6**
	baz=24,SNR=23						
LUWI	**Luwuk**	**25.51**	**283**	S	S	14 16 29.7	-28
	baz=25,SNR=4.2						
MEEK	**Meekatharra**	**33.65**	**232**	P	**P**	**14 13 46.6**	**-0.3**
	baz=32,SNR=3.4						
MJAR	**Matsushiro Arr**	**44.41**	**349**	P	**P**	**14 15 14.9**	**-1.6**
	0.9nm,0.5s,baz=178,slow=9.4,SNR=4.4						
KSRS	**Korea Array**	**48.10**	**339**	P	**P**	**14 15 45.5**	**+0.1**
	0.7nm,0.7s,baz=154,slow=9.1,SNR=4.0						
CMAR	**Chiang Mai Arr**	**54.36**	**299**	P	**P**	**14 16 34.0**	**+1.3**
	1.2nm,0.5s,baz=127,slow=6.0,SNR=9.6						
PETK	**Petropavlovsk-**	**60.70**	**7**	P	**P**	**14 17 17.7**	**+1.2**
	1.3nm,0.6s,baz=168,slow=6.6,SNR=6.6						
SONM	**Songino Array**	**65.76**	**331**	P	**P**	**14 17 50.5**	**+0.3**
	0.5nm,0.8s,baz=159,slow=4.4,SNR=4.7						
MKAR	**Makanchi Array**	**78.82**	**320**	P	**P**	**14 19 08.3**	**+0.2**
	1.4nm,0.7s,baz=110,slow=6.6,SNR=11						
ZALV	**Zalesovo Beam**	**80.36**	**328**	P	**P**	**14 19 15.4**	**-0.8**
	0.9nm,0.3s,baz=133,slow=6.3,SNR=4.2						
KURBB	**Kurchatov Arra**	**82.56**	**323**	P	**P**	**14 19 28.2**	**+0.2**
	0.3nm,0.3s,baz=119,slow=3.7,SNR=3.7						
QSPA	**South Pole Qui**	**82.75**	**180**	P	**P**	**14 19 28.3**	**-0.6**
	1.5nm,0.5s,baz=333,slow=6.8,SNR=12						
ILAR	**Eielson Array**	**86.36**	**23**	P	**P**	**14 19 46.0**	**-0.8**
	2.6nm,0.7s,baz=252,slow=5.1,SNR=36						
BVAR	**Borovoye Array**	**88.11**	**324**	P	**P**	**14 19 54.8**	**-0.7**
	0.4nm,0.4s,baz=126,slow=7.2,SNR=3.6						
TORD	**Torodi Ar. Bea**	**145.96**	**283**	PKPbc	**PKPbc**	**14 26 45.4**	**-0.1**
	1.2nm,0.5s,baz=80,slow=3.4,SNR=12						

*IDC **21** 14:07:14.1±5.4, 36°.20N×70°.76E, h167km±49km, mb3.2/7, mb1 3.2/12, mb1mx3.0/32, mbtmp3.1/12, Error ellipse: s-maj=38.2km s-min=18.6km az=31.0*
*ISCJB **21** 14:07:17.6±0.5, 36°.48N±0°.04×70°.72E±0°.10, h204km, mb3.3/6, Error ellipse: s-maj=10.9km s-min=5.3km az=168.6*
*NNC **21** 14:07:25.7±8.1, 37°.16N×70°.42E, h156km±88km, mb2.6, mpv3.2, Error ellipse: s-maj=66.8km s-min=38.5km az=18.0*

ISC 21 14:07:18.4±0.7, 36°.51N±0°.06×70°.73E±0°.10, h204km, n23, σ1§62/27, mb3.5/6, 8C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.85**	**160**	⇓P	**Pn**	**14 08 06.6**	**-0.1**
CEP				S	**S**	**14 08 43.0**	**-0.8**
CHCP	**Chirah Chowk**	**3.52**	**143**	P	**Pn**	**14 08 14.9**	**+0.4**
SARP	**Sargodha**	**4.85**	**160**	P	**Pn**	**14 08 30.5**	**-0.5**
THN	**Thein Dam**	**5.79**	**133**	*e*PKP	Pn	14 08 37.0	-5.9
THN				*e*S	S	14 09 41.1	-8.4
KK31	**Karatay Array**	**6.58**	**359**	P	**Pn**	**14 08 54.0**	**+0.8**
	0.3nm,0.2s,baz=178,slow=13,SNR=14						
KK31				S	S	14 09 58.9	-9.3
	11nm,0.5s,baz=188,slow=20,SNR=29						
AAK	**Ala-Archa**	**6.77**	**24**	P	**Pn**	**14 08 55.8**	**+0.2**
	0.5nm,0.3s,baz=179,slow=8.2,SNR=5.1						
AAK				S	**S**	**14 10 12.0**	**-0.7**
	0.8nm,0.3s,baz=331,slow=22,SNR=14						
TKM2	**Tokmak 2**	**7.42**	**29**	⇑P	**Pn**	**14 09 04.6**	**+0.5**
	2.9nm,0.8s						
TKM2				⇑S	**S**	**14 10 24.2**	**-3.9**
	2.4nm,0.8s						
MKAR	**Makanchi Array**	**13.41**	**36**	P	**Pn**	**14 10 21.6**	**+0.9**
	0.1nm,0.3s,baz=214,slow=12,SNR=4.6						
AB31	**Akbulak array**	**14.97**	**332**	⇑P	**Pn**	**14 10 39.8**	**0.0**
	0.5nm,0.5s,baz=144,slow=12,SNR=11						
AB31				⇓S	**S**	**14 13 21.1**	**-4.6**
	0.9nm,0.6s,baz=156,slow=23,SNR=3.5						
KURBB	**Kurchatov Arra**	**15.18**	**19**	P	**P**	**14 10 44.4**	**+1.7**
	0.0nm,0.3s,baz=208,slow=11,SNR=2.7						
VOSK	**Vostochnaya**	**16.21**	**1**	⇑P	**Pn**	**14 10 55.8**	**+1.0**
	0.8nm,0.4s						
BVA0	**Borovoye Array**	**16.51**	**359**	⇑P	**Pn**	**14 10 60.0**	**+1.5**
	0.1nm,0.5s,baz=155,slow=9.9,SNR=7.2						
BVAR	**Borovoye Array**	**16.51**	**359**	P	**Pn**	**14 10 59.8**	**+1.3**
	0.4nm,0.3s,baz=160,slow=9.2,SNR=7.4						
BRVK	**Borovoye**	**16.55**	**359**	⇑P	**Pn**	**14 11 00.3**	**+1.5**
	1.2nm,0.4s						
AKTO	**Aktyubinsk**	**16.66**	**331**	⇑P	**Pn**	**14 11 00.9**	**+0.7**
	0.3nm,0.5s						
AKTO				⇑S	**S**	**14 14 03.5**	**+0.8**
	0.3nm,1.0s						
AKTO	**Aktyubinsk**	**16.66**	**331**	P	**Pn**	**14 11 01.4**	**+1.2**
	0.4nm,0.3s,baz=137,slow=9.9,SNR=11						
ZALV	**Zalesovo Beam**	**19.99**	**25**	P	**P**	**14 11 36.6**	**+1.5**
	1.0nm,0.3s,baz=214,slow=10,SNR=5.5						
FINES	**FINESS Array B**	**37.35**	**326**	P	**P**	**14 12 12.6**	**+1.7**
	0.7nm,0.4s,baz=125,slow=9.5,SNR=9.3						
ARCES	**ARCESS Array B**	**41.05**	**338**	P	**P**	**14 12 42.9**	**+1.5**
	1.2nm,0.6s,baz=108,slow=7.8,SNR=7.6						
NOA	**NORSAR Array B**	**44.24**	**323**	P	**P**	**14 15 07.8**	**+0.6**
	0.4nm,0.5s,baz=98,slow=7.8,SNR=3.5						
TORD	**Torodi Ar. Bea**	**65.50**	**268**	P	**P**	**14 17 39.5**	**-0.6**
	0.5nm,0.5s,baz=47,slow=5.8,SNR=7.1						
WRA	**Warramunga Arr**	**82.18**	**122**	P	**P**	**14 19 15.7**	**-1.0**
	0.4nm,0.5s,baz=325,slow=5.1,SNR=9.4						
ASAR	**Alice Springs**	**84.44**	**125**	P	**P**	**14 19 26.9**	**-1.2**
	0.2nm,0.5s,baz=317,slow=5.5,SNR=5.1						

MAN 21 14:11:48, 15°.69N×121°.19E, h1km, mb4.2, ML3.0, MS2.8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCPH	**Palayan**	**0.16**	**214**	⇓*i*P	Pg	14 11 51.6	+0.6
PCPH				*e*S	Sg	14 11 55.3	+2.2
BALP	**Baler**	**0.38**	**83**	*e*P	Pg	14 11 54.7	-0.6
BCPH	**Baguio City Da**	**0.90**	**320**	⇑*i*P	Pb	14 12 06.7	0.0
CAUP	**Cauayan**	**1.38**	**26**	*e*P	Pn	14 12 14.4	-0.1
APYP	**Conner**	**2.16**	**1**	*e*P	Pb	14 12 27.9	0.0
APYP				*e*S	Sg	14 13 01.4	+4.0

*ISK **21** 14:14:44.6, 39°.32N×27°.92E, h5km, MD3.1*
*ISCJB **21** 14:14:45.5±0.6, 39°.29N±0°.02×27°.93E±0°.03, h1km±6km, Error ellipse: s-maj=4.2km s-min=3.6km az=164.6*
*DDA **21** 14:14:45.6, 39°.31N×27°.97E, h7km, MD2.9*
*CSEM **21** 14:14:46.1±0.1, 39°.30N×27°.93E, h5km, MD3.1, Error ellipse: s-maj=2.9km s-min=2.5km az=67.0*

ISC 21 14:14:45.7±1.2, 39°.31N±0°.02×27°.92E±0°.02, h5km±10km, n58, σ0§63/76, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DST	**Dursunbey**	**0.61**	**61**	*e*PG	**Pg**	**14 14 57.4**	**-0.1**
DST				*e*SG	**Sb**	**14 15 07.0**	**-0.9**
DST	**Dursunbey**	**0.61**	**61**	*e*Pg	**Pg**	**14 14 57.4**	**-0.1**
DST				*e*Sg	**Sb**	**14 15 07.0**	**-0.9**
GONE	**Gonen-Balikesi**	**0.76**	**346**	*e*PG	**Pg**	**14 15 00.3**	**0.0**
GONE				*e*SG	**Sb**	**14 15 11.6**	**-0.4**
GONE	**Gonen-Balikesi**	**0.76**	**346**	*e*Pg	**Pg**	**14 15 00.3**	**0.0**
GONE				*e*Sg	**Sb**	**14 15 11.6**	**-0.4**
AYVA	**Ayvalik**	**0.96**	**270**	*i* P	**Pb**	**14 15 05.1**	**+0.4**
AYVA				*i* S	**Sn**	**14 15 19.5**	**-0.2**
AYVA	**Ayvalik**	**0.96**	**270**	*i* P	**Pb**	**14 15 05.1**	**+0.4**
AYVA				*i* S	**Sn**	**14 15 19.5**	**-0.2**
MANT	**Manisa**	**0.96**	**149**	*i* P	**Pg**	**14 15 04.3**	**+0.2**
MANT				*i* S	**Sg**	**14 15 16.5**	**-0.1**
MANT	**Manisa**	**0.96**	**149**	*i* P	**Pg**	**14 15 04.3**	**+0.2**
MANT				*i* S	**Sg**	**14 15 16.5**	**-0.1**
KULA	**Kula-Manisa**	**0.98**	**144**	*e*PG	**Pg**	**14 15 04.4**	**-0.2**
KULA	**Kula-Manisa**	**0.98**	**144**	*e*Pg	**Pg**	**14 15 04.4**	**-0.2**
KCTX	**Karacabey (Bur**	**1.01**	**19**	*e*PG	**Pg**	**14 15 04.9**	**-0.2**
KCTX				*e*SG	**Sb**	**14 15 04.9**	**-0.2**
KCTX	**Karacabey (Bur**	**1.01**	**19**	*e*Pg	**Pg**	**14 15 04.9**	**-0.2**
KCTX				*e*Sg	**Sb**	**14 15 19.5**	**+0.2**
IZM	**Izmir**	**1.05**	**210**	*e*PG	**Pg**	**14 15 05.8**	**0.0**
IZM	**Izmir**	**1.05**	**210**	*e*Pg	**Pg**	**14 15 05.8**	**0.0**
BLCB	**Balcova**	**1.15**	**217**	*e*PN	**Pg**	**14 15 07.5**	**-0.3**
BLCB	**Balcova**	**1.15**	**217**	*e*Pn	**Pg**	**14 15 07.5**	**-0.3**
KRBG	**Karabiga-Canak**	**1.18**	**336**	*e*PN	**Pg**	**14 15 08.1**	**-0.3**
KRBG	**Karabiga-Canak**	**1.18**	**336**	*e*Pn	**Pg**	**14 15 08.1**	**-0.3**
GDZ	**Gediz**	**1.23**	**100**	*i* P	**Pb**	**14 15 09.6**	**+0.1**
GDZ				*i* S	**Sg**	**14 15 25.5**	**+0.2**
GDZ	**Gediz**	**1.23**	**100**	*i* P	**Pb**	**14 15 09.6**	**+0.1**
GDZ				*i* S	**Sg**	**14 15 25.5**	**+0.2**
ULDT	**Uludag**	**1.25**	**48**	*i* P	**Pn**	**14 15 10.4**	**+0.4**
ULDT				*i* S	**Sg**	**14 15 25.9**	**-0.1**
ULDT	**Uludag**	**1.25**	**48**	*i* P	**Pn**	**14 15 10.4**	**+0.4**
ULDT				*i* S	**Sg**	**14 15 25.9**	**-0.1**
MRMT	**Marmara Adasi**	**1.31**	**349**	*e*PN	**Pn**	**14 15 11.0**	**+0.2**
MRMT	**Marmara Adasi**	**1.31**	**349**	*e*Pn	**Pn**	**14 15 11.0**	**+0.2**
ARMT	**Armutlu**	**1.45**	**30**	*e*PN	**Pn**	**14 15 12.8**	**+0.2**
ARMT	**Armutlu**	**1.45**	**30**	*e*Pn	**Pn**	**14 15 12.8**	**+0.2**
KHAL	**Karahalli**	**1.54**	**127**	*i* P	**Pn**	**14 15 13.9**	**-0.1**
KHAL				*i* S	**Sn**	**14 15 33.8**	**-0.7**
KHAL	**Karahalli**	**1.54**	**127**	*i* P	**Pn**	**14 15 13.9**	**-0.1**
KHAL				*i* S	**Sn**	**14 15 33.8**	**-0.7**
GELI	**Tayfur-Gelibol**	**1.56**	**315**	*e*PN	**Pb**	**14 15 14.8**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.56**	**315**	*e*Pn	**Pb**	**14 15 14.8**	**-0.2**
KHL	**Karahalli**	**1.59**	**128**	*e*PN	**Pb**	**14 15 15.5**	**-0.2**
KHL	**Karahalli**	**1.59**	**128**	*e*Pn	**Pb**	**14 15 15.5**	**-0.2**
AYDN	**Tasoluk**	**1.65**	**181**	*i* P	**Pb**	**14 15 16.2**	**-0.4**
AYDN				*i* S	**Sn**	**14 15 36.7**	**-0.3**
AYDN	**Tasoluk**	**1.65**	**181**	*i* P	**Pb**	**14 15 16.2**	**-0.4**
AYDN				*i* S	**Sn**	**14 15 36.7**	**-0.3**
CAVI	**Cavuskoy**	**1.73**	**58**	*e*PN	**Pn**	**14 15 17.2**	**+0.8**
CAVI	**Cavuskoy**	**1.73**	**58**	*e*Pn	**Pn**	**14 15 17.2**	**+0.8**
ERIK	**Erikli-Kesan**	**1.74**	**322**	*e*PN	**Pb**	**14 15 17.4**	**-0.7**
ERIK	**Erikli-Kesan**	**1.74**	**322**	*e*Pn	**Pb**	**14 15 17.4**	**-0.7**
ADVT	**Abdulvahap**	**1.79**	**51**	*e*PN	**Pn**	**14 15 18.1**	**+0.8**
ADVT	**Abdulvahap**	**1.79**	**51**	*e*Pn	**Pn**	**14 15 18.1**	**+0.8**
SLVT	**Silivri**	**1.93**	**6**	*e*PN	**Pn**	**14 15 19.9**	**+0.7**
SLVT	**Silivri**	**1.93**	**6**	*e*Pn	**Pn**	**14 15 19.9**	**+0.7**
ISK	**Istanbul-Kandi**	**1.96**	**26**	*e*PN	**Pn**	**14 15 20.2**	**+0.6**
ISK	**Istanbul-Kandi**	**1.96**	**26**	*e*Pn	**Pn**	**14 15 20.2**	**+0.6**
ENEZ	**Enez**	**1.97**	**317**	*e*PN	**Pn**	**14 15 20.6**	**+0.9**
ENEZ	**Enez**	**1.97**	**317**	*e*Pn	**Pn**	**14 15 20.6**	**+0.9**
BGKT	**Bogazkoy**	**1.98**	**19**	*e*PN	**Pn**	**14 15 20.5**	**+0.7**
BGKT	**Bogazkoy**	**1.98**	**19**	*e*Pn	**Pn**	**14 15 20.5**	**+0.7**
GPA	**Golpazari**	**2.08**	**61**	*e*PN	**Pn**	**14 15 22.6**	**+1.3**
GPA	**Golpazari**	**2.08**	**61**	*e*Pn	**Pn**	**14 15 22.6**	**+1.3**
SHUT	**Suhut-Afyon**	**2.19**	**109**	*e*PN	**Pn**	**14 15 24.1**	**+1.3**
SHUT	**Suhut-Afyon**	**2.19**	**109**	*e*Pn	**Pn**	**14 15 24.1**	**+1.3**
ESKT	**Eskisehir**	**2.28**	**84**	*e*PN	**Pn**	**14 15 25.5**	**+1.4**
ESKT	**Eskisehir**	**2.28**	**84**	*e*Pn	**Pn**	**14 15 25.5**	**+1.4**
GULT	**Gulveren**	**2.29**	**60**	*e*PN	**Pn**	**14 15 25.2**	**+1.0**
GULT	**Gulveren**	**2.29**	**60**	*e*Pn	**Pn**	**14 15 25.2**	**+1.0**
EDRB	**Edirne**	**2.69**	**341**	*e*PN	**Pn**	**14 15 30.8**	**+1.2**
EDRB	**Edirne**	**2.69**	**341**	*e*Pn	**Pn**	**14 15 30.8**	**+1.2**

MAN 21 14:19:23, 10°.21N×124°.89E, h19km, mb4.4, ML3.2, MS3.0, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.08**	**203**	*e*P	Pg	14 19 27.8	+1.1
MSLP				*e*S	Sg	14 19 30.1	+1.0
OCLP	**Ormoc**	**0.88**	**342**	*e*P	Pb	14 19 39.9	+0.2
LLP	**Lapu-Lapu**	**0.92**	**277**	*e*P	Pb	14 19 40.5	+0.2
LLP				*e*S	Sn	14 19 53.8	+0.2
TBP	**Tagbilaran**	**1.14**	**243**	*e*P	Pg	14 19 44.6	-0.5
GUIM	**Jordan**	**2.30**	**281**	*e*P	Pn	14 19 56.1	-3.8

IDC 21 14:19:27.0±4.3, 17°.64S×176°.98W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/19, mbtmp3.6/4, Error ellipse: s-maj=189.9km s-min=32.9km az=139.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.95**	**241**	P	P	14 27 04.3	+1.0
	0.9nm,0.8s,baz=72,slow=13,SNR=4.7						
WRA	**Warramunga Arr**	**46.02**	**259**	P	P	14 27 52.1	-0.5
	0.3nm,0.4s,baz=98,slow=7.6,SNR=10						
ASAR	**Alice Springs**	**46.17**	**254**	P	P	14 27 53.2	-0.6
	0.9nm,0.7s,baz=95,slow=7.3,SNR=18						
ILAR	**Eielson Array**	**85.33**	**12**	P	P	14 32 05.5	0.0
	0.1nm,0.3s,baz=223,slow=4.8,SNR=3.5						

CASC 21 14:22:58.8±1.7, 13°.45N×90°.80W, h20km±5km, MD3.5, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCG	**Pacaya**	**0.96**	**11**	*e*P	Pb	14 23 17.2	0.0
PCG				*e*S	Sb	14 23 29.4	-0.2
FUG	**Fuego 3**	**1.00**	**358**	*e*P	Pb	14 23 17.3	-0.4
FUG				*e*S	Sn	14 23 31.1	-0.5
JAT	**Jato**	**1.19**	**317**	*e*P	Pn	14 23 20.4	+0.1
JAT				*e*S	Sb	14 23 35.4	-0.2
RTR	**El Retiro**	**1.21**	**68**	*e*P	Pn	14 23 20.3	-0.5
SBLS	**San Blas**	**1.21**	**71**	*e*P	Pn	14 23 20.0	-0.9
NBG	**Las Nubes**	**1.22**	**21**	*e*P	Pb	14 23 22.1	+0.5
NBG				*e*S	Sn	14 23 38.5	+1.3
SNJE	**San Jose**	**1.24**	**70**	*e*P	Pn	14 23 20.6	-0.7
RBDL	**Robledal**	**1.27**	**58**	*e*P	Pn	14 23 21.3	-0.3
BOQS	**Boqueron**	**1.51**	**79**	*e*P	Pn	14 23 24.9	-0.1
LFU	**La Fuente**	**1.67**	**79**	*e*P	Pn	14 23 27.1	+0.1
MTO2	**Montecristo 2**	**1.69**	**56**	*e*P	Pn	14 23 27.8	+0.4
MTO2				*e*S	Sb	14 23 50.1	-0.4
LFRS	**El Faro**	**1.70**	**84**	*e*P	Pn	14 23 27.4	-0.1
MRL	**Marmol**	**1.94**	**34**	*e*P	Pn	14 23 32.2	+1.4
MRL				*e*S	Sb	14 24 00.1	+2.6
BLLM	**Bellamira**	**2.49**	**90**	*e*S	Sn	14 24 09.9	+1.6

*SZGRF **21** 14:29:39.4, 23°.52S×177°.88W, h33km, South of Fiji Islands*
*ISCJB **21** 14:30:27.6±0.9, 22°.28S±0°.05×178°.98W±0°.04, h420km±9km, mb4.5/62, Error ellipse: s-maj=9.1km s-min=5.1km az=147.7*
*AUST **21** 14:30:29.6, 22°.05S×178°.67W, h450km*
*IDC **21** 14:30:29.8±1.0, 22°.29S×179°.02W, h426km±9km, mb4.1/32, mb1 4.2/32, mb1mx4.2/33, mbtmp4.1/32, Error ellipse: s-maj=9.0km s-min=7.1km az=138.0*
*BJI **21** 14:30:32.8, 22°.05S×179°.22W, h460km, mB4.8/15, mb4.6/25*
*NEIC **21** 14:30:33.0±0.6, 22°.24S×179°.07W, h466km±6km, mb4.5/25, Error ellipse: s-maj=10.2km s-min=6.5km az=154.0*
*BGS **21** 14:30:36.1±5.7, 22°.24S×179°.07W, h466km, mb4.5(NEIC)*

ISC 21 14:30:31.3±0.4, 22°.29S±0°.05×178°.95W±0°.05, h448km±3km, h449km; pP-P, n692, σ1§09/787, mb4.5/61, 137C-131D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**9.03**	**71**	P	P	14 32 35.4	-2.4
	baz=8.7,SNR=5.8						
NIUE				S	**S**	**14 34 17.7**	**-4.3**
	baz=8.7,SNR=12						
AFI	**Afiamalu**	**10.76**	**40**	P	P	14 32 52.6	-4.3
	8.9nm,0.3s,baz=219,slow=6.5,SNR=12						
AFI				S	S	14 34 46.4	-10
	19nm,0.3s,baz=56,slow=20,SNR=8.4						
DZM	**Mont Dzumac**	**13.54**	**268**	*e*P	**P**	**14 33 27.9**	**+1.0**
DZM	**Mont Dzumac**	**13.54**	**268**	*e*P	**P**	**14 33 26.1**	**-0.9**
	109nm,0.8s						
NOUC	**Port Laguerre**	**13.66**	**268**	*e*P	P	14 33 32.0	+3.8
URZ	**Urewera**	**16.28**	**191**	P	**P**	**14 33 52.0**	**-3.9**
URZ	**Urewera**	**16.28**	**191**	P	**P**	**14 33 52.0**	**-3.9**
	8.8nm,0.3s,baz=59,slow=5.1,SNR=19						
URZ				S	**S**	**14 36 41.8**	**-3.1**
	1.8nm,0.3s,baz=262,slow=18,SNR=8.4						
RPZ	**Rata Peaks**	**22.92**	**199**	*e*P	**P**	**14 34 58.5**	**-0.6**
RPZ				S	**S**	**14 38 38.7**	**+2.8**
RPZ	**Rata Peaks**	**22.92**	**199**	P	**P**	**14 34 57.4**	**-1.8**
	10.0nm,0.4s,baz=23,slow=11,SNR=12						
RPZ				S	**S**	**14 38 38.7**	**+2.8**
	15nm,0.9s,baz=10,slow=14,SNR=2.7						
HNR	**Honiara**	**23.95**	**299**	P	**P**	**14 35 08.1**	**-0.6**
HNR	**Honiara**	**23.95**	**299**	P	**P**	**14 35 08.0**	**-0.6**
	67nm,0.6s,baz=160,slow=1.6,SNR=9.8						
EIDS	**Eidsvold**	**27.56**	**258**	P	**P**	**14 35 40.6**	**+0.1**
	baz=28,SNR=3.4						
PPT	**Papeete**	**27.98**	**86**	P	**P**	**14 35 44.0**	**-0.4**
PPT	**Papeete**	**27.98**	**86**	P	**P**	**14 35 44.0**	**-0.4**
	25nm,0.9s,baz=280,slow=6.1,SNR=3.2						
MGCD	**Mangrove Creek**	**28.55**	**241**	P	**P**	**14 35 50.1**	**+1.0**
	baz=29,SNR=4.9						
RMQ	**Roma**	**29.66**	**255**	P	**P**	**14 36 00.1**	**+1.1**
	baz=30,SNR=6.5						
CNB	**Canberra Magne**	**30.51**	**238**	P	**P**	**14 36 07.1**	**+0.7**
	baz=31,SNR=5.0						
CTA	**Charters Tower**	**32.48**	**267**	P	**P**	**14 36 23.5**	**+0.1**
CTA				PcP	**PcP**	**14 38 58.9**	**+1.1**
CTA	**Charters Tower**	**32.48**	**267**	P	**P**	**14 36 23.5**	**+0.1**
	22nm,0.4s,baz=94,slow=10,SNR=96						
CTA				PcP	**PcP**	**14 38 58.9**	**+1.1**
	8.3nm,0.7s,baz=115,slow=1.3,SNR=6.4						
CMSA	**Cobar Meteorol**	**32.73**	**246**	P	**P**	**14 36 25.1**	**-0.3**
	baz=33,SNR=15						
QLP	**Quilpie**	**33.72**	**255**	P	**P**	**14 36 33.6**	**-0.3**
	baz=34,SNR=21						
TOO	**Toolangi**	**34.15**	**235**	P	**P**	**14 36 37.3**	**0.0**
	baz=34,SNR=16						
MTSU	**Mount Surprise**	**34.66**	**270**	P	**P**	**14 36 42.0**	**0.0**
	baz=35,SNR=31						
PMG	**Port Moresby**	**34.93**	**286**	P	**P**	**14 36 44.2**	**-0.1**
	33nm,0.8s,baz=93,slow=5.5,SNR=16						
PMG				S	**S**	**14 41 43.4**	**+0.4**
	4.6nm,0.9s,baz=298,slow=15,SNR=3.4						
STKA	**Stephens Creek**	**36.24**	**246**	P	**P**	**14 36 54.8**	**-0.2**
STKA				PcP	**PcP**	**14 39 09.5**	**+0.9**
STKA				ScP	**ScP**	**14 42 15.3**	**+3.5**
STKA				PKiKP	**PK

4.6nm,0.6s,baz=163,slow=6.1,SNR=6.4
MAT Matsushiro 71.13 325 P P 14 41 03.0 -0.4
KSM Kuching 72.80 279 P P 14 41 13.7 0.0
baz=73,SNR=3.5
ASAJ Asahikawa 74.88 332 P P 14 41 26.2 +1.5
ASAJ Asahikawa 74.88 332 P P 14 41 26.2 +1.5
13nm,0.8s,baz=197,slow=5.9,SNR=11
FX1 Attu Island--F 75.16 355 P P 14 41 26.0 -0.2
FX1 Attu Island--F 75.16 355 P P 14 41 26.0 -0.2
34nm,0.6s,baz=203,slow=2.3,SNR=20
AKUT Akutan 76.95 8 eP P 14 41 35.4 -0.6
AKUT eP cP P cP 14 41 44.8 -0.1
KSRS Korea Array 77.65 319 P P 14 41 41.4 +1.1
1.5nm,0.8s,baz=134,slow=7.2,SNR=5.3
KSAR Wonju Array Be 77.66 319 P P 14 41 41.4 +1.0
PEA0B Petropavlovsk- 77.77 346 eP P 14 41 39.6 -1.0
PETK Petropavlovsk- 77.77 346 P P 14 41 41.0 +0.3
PETK Petropavlovsk- 77.77 346 P P 14 41 41.0 +0.3
19nm,0.7s,baz=169,slow=4.5,SNR=72
MAW Mawson 79.59 200 P P 14 41 50.8 +0.5
MAW Mawson 79.59 200 P P 14 41 50.8 +0.5
3.7nm,0.7s,baz=113,slow=7.7,SNR=4.0
PKM Peak Mountain 79.87 46 ⇓P P 14 41 53.6 +1.0
baz=80
USRK Ussuriysk Arra 79.95 327 P P 14 41 53.2 +0.8
12nm,0.9s,baz=140,slow=3.4,SNR=11
NJ2 Nanjing 80.34 310 eP P 14 41 55.1 +0.3
NJ2 pmax pmax
comp=Z,10.0nm,0.9s
MONP Monument Peak 81.04 49 ⇓P P 14 41 59.9 +1.1
baz=81
EDW2 Edwards Air Fo 81.08 47 ⇓P P 14 41 59.8 +1.1
baz=81
DVTC Desert V Tower 81.14 49 ⇓P P 14 42 00.3 +1.2
baz=81
ISA Isabella 81.21 46 ⇓P P 14 42 00.5 +1.2
baz=82
PFO Pinyon Flat Ob 81.42 48 P P 14 42 01.9 +1.3
PFO Pinyon Flat Ob 81.42 48 P P 14 42 01.9 +1.3
comp=Z,2.0nm,0.7s,baz=169,slow=5.2,SNR=3.0
PFO Pinyon Flat Ob 81.42 48 ⇑P P 14 42 01.6 +1.0
baz=82
MDJ Mudanjiang 81.47 326 P P 14 42 01.3 +0.9
MDJ pP pP 14 43 38.3 -1.7
MDJ sP sP 14 44 28.3 +1.8
MDJ PP PP 14 45 15.3 +0.6
MDJ S S 14 51 28.9 -5.1
MDJ sS sS 14 54 31.3 -0.1
MDJ pmax pmax
comp=Z,9.0nm,0.7s
MDJ pmax pmax
comp=Z,55nm,4.0s
MDJ Mudanjiang 81.47 326 eP P 14 41 59.1 -1.4
comp=Z,7.7nm,0.6s
SWSC Sam W. Stewart 81.51 49 ⇑P P 14 42 02.1 +1.2
baz=82
WDC Whiskeytown Da 81.61 40 eP P 14 42 00.5 -0.7
comp=Z,18nm,1.3s
LRMC Laurel Mountai 81.62 46 ⇓P P 14 42 02.5 +0.9
baz=82
CWC Cottonwood Cre 81.92 45 ⇓P P 14 42 04.0 +0.9
baz=82
BELC Belle Mtn. Jos 81.95 48 ⇓P P 14 42 04.4 +1.1
baz=82
MPMC Manual Prospec 82.09 46 ⇓P P 14 42 05.0 +1.0
baz=82
GSC Goldstone 82.12 47 ⇑P P 14 42 05.0 +0.9
baz=82
BC3 Big Chuckawall 82.14 49 ⇑P P 14 42 05.6 +1.3
baz=82
HEC Hector,Ludlow 82.18 48 ⇑P P 14 42 05.3 +0.9
baz=82
YBH Yreka Blue Hor 82.23 39 P P 14 42 06.3 +1.8
YBH Yreka Blue Hor 82.23 39 P P 14 42 06.3 +1.8
comp=Z,8.2nm,0.8s,baz=256,slow=4.2,SNR=11
GLA Glamis 82.25 50 ⇑P P 14 42 06.4 +1.6
baz=82
LBCM Butte Creek Ri 82.47 40 P P 14 42 06.8 +0.9
BEKR Beckworth 82.48 41 eP P 14 42 05.8 -0.2
comp=Z,2.3nm,0.6s
IRM Iron Mountain 82.62 49 ⇑P P 14 42 08.0 +1.3
baz=83
FURC Furnace Creek, 82.74 46 ⇑P P 14 42 08.3 +1.2
baz=83
KDAK Kodiak Island 82.75 14 eP P 14 42 06.5 -0.1
comp=Z,30nm,1.1s
KDAK Kodiak Island 82.75 14 P P 14 42 07.5 +0.9
comp=Z,20nm,1.1s,baz=184,slow=6.6,SNR=10
TUQ Turquoise Moun 82.79 47 ⇑P P 14 42 08.6 +1.0
baz=83
SHOC Shoshone 82.81 47 ⇓P P 14 42 08.3 +0.8
baz=83
Y12C Blythe 82.84 49 ⇓P P 14 42 09.0 +1.4
baz=83
113A Mohawk Valley, 82.85 50 ⇑P P 14 42 08.9 +1.2
baz=83
NVAR Mina Array Bea 82.92 44 P P 14 42 09.1 +0.8
NVAR Mina Array Bea 82.92 44 P P 14 42 09.1 +0.8
comp=Z,7.8nm,0.8s,baz=224,slow=7.9,SNR=44
NV11 Mina Array Sit 83.02 44 eP P 14 42 06.8 -1.8
214A Organ Pipe Nat 83.11 52 ⇑P P 14 42 10.4 +1.3
baz=83
CN2 Changchun 83.18 323 eP P 14 42 09.3 +0.2
CN2 eP PP PP 14 45 30.4 +1.9
CN2 eS S 14 51 48.8 -2.3
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,200nm,3.0s
PDMCI Parker Dam,Lak 83.40 49 ⇓P P 14 42 11.8 +1.3
baz=84
Z14A Wintersburg 83.75 50 ⇑P P 14 42 13.9 +1.6
baz=84
BROR Big Rock Looko 83.97 37 P P 14 42 14.3 +1.2
W13A Hualapai Mount 84.01 48 ⇓P P 14 42 14.8 +1.0
baz=84
Y14A Wickenburg 84.01 50 ⇓P P 14 42 14.6 +1.0
baz=84
GSI Gunungsitoli 84.45 274 P P 14 42 18.6 +2.3
baz=85,SNR=3.3
R11A Troy Canyon, C 84.63 45 ⇑P P 14 42 18.2 +1.4
baz=85
TUC Tucson 84.77 52 eP P 14 42 16.2 -1.2
comp=Z,3.4nm,1.3s
SYO Syowa Base 84.80 193 ⇓eP P 14 42 14.4 -2.4
SYO Syowa Base 84.80 193 ⇑ePcP PcP 14 42 18.8 -0.5
VIPM Ingram Point 85.15 38 P P 14 42 19.8 +0.7
X16A Lo Mia Camp, P 85.37 50 ⇓P P 14 42 21.7 +1.3
baz=86
TDL Tradedollar La 85.41 36 P P 14 42 21.8 +1.5
319A Douglas 85.42 54 ⇓P P 14 42 22.3 +1.7
baz=86
OSD Olympics--Snow 85.57 34 P P 14 42 22.6 +1.5
U15A North Rim 85.81 48 ⇓P P 14 42 24.0 +1.3
baz=86
LON Longmire 85.88 35 eP P 14 42 21.4 -1.0
comp=Z,3.7nm,0.9s
320A Kipp Ranch, An 85.96 54 ⇑P P 14 42 25.0 +1.7
baz=86
GAMB Gambell 85.96 3 eP P 14 42 21.8 -0.5
comp=Z,21nm,1.1s
WUAZ Wupatki 85.98 49 ⇑P P 14 42 24.2 +0.9
baz=86
220A Playas Peak, P 86.23 53 ⇑P P 14 42 26.1 +1.5
baz=86
SNAA Sanae 86.26 179 eP P 14 42 22.9 -1.1
SNAA Sanae 86.26 179 epP pP 14 44 08.6 +3.8
ENH Enshi 86.31 305 eP P 14 42 23.0 -1.9
comp=Z,15nm,0.9s
120A U Bar Ranch, L 86.47 53 ⇑P P 14 42 27.3 +1.5
baz=87
X18A Snowflake 86.48 51 ⇓P P 14 42 26.9 +1.1
baz=87
BJI Beijing 86.54 316 P P 14 42 26.1 +0.4
BJI S S 14 52 23.3 -0.6
BJI SS SS 14 58 17.8 0.0
BJI pmax pmax
comp=Z,10.0nm,0.5s
BJI pmax pmax
comp=Z,100nm,4.2s
EBG Ellensburg 86.65 36 P P 14 42 27.4 +1.3
GYA Guiyang 86.77 300 eP P 14 42 26.8 -0.5
GYA pP pP 14 44 11.8 +3.5
GYA sP sP 14 44 57.6 +3.1
GYA PP PP 14 45 58.4 +0.6
GYA SKS SKSac 14 52 07.1 -4.0
GYA S SKKSac 14 52 22.0 +0.8
GYA pmax pmax
comp=Z,10.0nm,0.7s
Z20A Nine Sixteen R 86.77 52 ⇑P P 14 42 28.8 +1.6
baz=87
221A Mesquite Ranch 86.84 54 ⇓P P 14 42 28.9 +1.4
baz=87
121A Cookes Peak, D 87.09 53 ⇓P P 14 42 30.1 +1.4
baz=87
ETW Entiat 87.20 35 P P 14 42 29.6 +0.8
BMO Blue Mountains 87.25 39 eP P 14 42 28.3 -0.8
comp=Z,1.7nm,0.5s
MFID Camas Ranch 87.31 41 ⇑P P 14 42 30.2 +0.8
baz=88
Y20A Horse Springs, 87.31 52 ⇓P P 14 42 31.5 +1.7
baz=88
PPLA Purkeypile 87.50 12 eP P 14 42 29.0 -0.8
comp=Z,9.1nm,0.8s
X20A Quemado 87.53 51 ⇑P P 14 42 31.9 +1.0
baz=88
Z21A St. Cloud Mine 87.54 53 ⇑P P 14 42 32.2 +1.4
baz=88
122A Conniff Cattle 87.75 53 ⇓P P 14 42 33.2 +1.5
baz=88
W20A Ramah 87.82 51 ⇓P P 14 42 33.2 +1.0
baz=88
PNL Peninsula 87.85 19 eP P 14 42 30.9 -0.5
comp=Z,34nm,0.9s
Y21A Point of Rocks 87.87 52 ⇓P P 14 42 33.8 +1.4
baz=88
I12A Atlanta 87.94 41 ⇑P P 14 42 33.5 +1.0
baz=88,SNR=9.5
F10A Beach Ranch, E 87.95 38 P P 14 42 32.4 +0.1
TNA Tin City 87.97 5 eP P 14 42 31.4 -0.4
comp=Z,7.8nm,0.7s
X21A Alamocita Cree 88.00 52 ⇓P P 14 42 34.1 +1.0
baz=88
Z22A Elephant Butte 88.04 53 ⇑P P 14 42 34.4 +1.2
baz=88,SNR=9.7
B08A Colville Reser 88.19 35 P P 14 42 33.6 +0.3
HLID Hailey 88.25 41 ⇑P P 14 42 34.8 +0.9
baz=88,SNR=12
123A Bell Site, Whi 88.27 54 ⇑P P 14 42 34.8 +0.7
baz=88
J13A Cove Ranch, Pi 88.30 41 ⇓P P 14 42 35.2 +1.1
baz=88,SNR=13
324A Moseley Ranch, 88.31 55 ⇑P P 14 42 35.3 +0.9
baz=88,SNR=13
HVU Hansel Valley 88.31 43 eP P 14 42 32.9 -1.2
Y22A Socorro 88.36 52 ⇓P P 14 42 35.7 +1.1
baz=89
425A Indio Mountain 88.39 56 ⇓P P 14 42 35.8 +1.0
baz=89,SNR=12
SRU San Rafael 88.39 46 ⇓P P 14 42 35.3 +0.7
baz=89
626A Big Bend Ranch 88.49 57 ⇓P P 14 42 36.4 +1.1
baz=89,SNR=11
MNTX Cornudas Mount 88.50 55 eP P 14 42 34.9 -0.3
comp=Z,15nm,1.4s
XAN Xi'an 88.51 308 P P 14 42 35.8 +0.6
XAN pmax pmax
comp=Z,5.0nm,0.8s
H12A Diamond D Ranc 88.53 40 ⇑P P 14 42 35.7 +0.6
baz=89,SNR=15
224A Cornudas Mount 88.56 54 ⇑P P 14 42 36.8 +1.2
baz=89,SNR=7.1
Z23A Rita Site, Whi 88.58 53 ⇑P P 14 42 36.6 +1.0
baz=89
I13A Wildhorse Cree 88.62 41 ⇓P P 14 42 36.5 +0.8
baz=89,SNR=5.3
325A Bean Ranch, Si 88.66 55 ⇑P P 14 42 37.0 +0.9
baz=89,SNR=10
J14A Carey 88.67 42 ⇑P P 14 42 37.0 +1.1
baz=89,SNR=15
BNM Barren Site 88.71 52 eP P 14 42 35.7 -0.6
comp=Z,2.1nm,0.9s
526A Mary Lane Ranc 88.75 57 ⇓P P 14 42 37.7 +1.2
baz=89,SNR=9.0
TXAR Lajitas Array 88.76 58 P P 14 42 38.1 +1.6
TXAR Lajitas Array 88.76 58 P P 14 42 38.1 +1.6
comp=Z,5.4nm,0.9s,baz=214,slow=6.2,SNR=36
P18A Preston Nutter 88.84 46 ⇑P P 14 42 37.6 +0.7
baz=89
H13A Challis 88.89 40 ⇑P P 14 42 37.6 +0.8
baz=89,SNR=9.2
124A Stringfield Ra 88.90 54 ⇓P P 14 42 38.1 +0.9
baz=89,SNR=5.2
F12A Elk City 88.96 39 ⇓P P 14 42 37.6 +0.5
baz=89,SNR=17
Y23A Lovelace Mesa, 89.02 53 ⇑P P 14 42 38.4 +0.6
baz=89,SNR=5.2
627A Terlingua Ranc 89.03 58 ⇑P P 14 42 38.9 +1.1
baz=89,SNR=9.5
I14A Mackay 89.03 41 ⇑P P 14 42 38.7 +1.2
baz=89,SNR=6.2
U21A Nageezi 89.04 50 ⇑P P 14 42 38.7 +0.8
baz=89,SNR=8.0
426A McDonald Obser 89.07 56 ⇑P P 14 42 39.0 +1.0
baz=89,SNR=10
225A Deer Hill, Car 89.11 55 ⇓P P 14 42 39.2 +1.1
baz=89,SNR=7.0
527A Woodward Ranch 89.16 57 ⇓P P 14 42 39.2 +0.7
baz=89,SNR=8.4
ANMO Albuquerque 89.20 52 P P 14 42 39.3 +0.7
ANMO Albuquerque 89.20 52 P P 14 42 39.3 +0.7
comp=Z,4.9nm,1.0s,baz=233,slow=3.0,SNR=7.4
S20A Disappointment 89.23 48 ⇑P P 14 42 39.3 +0.6
baz=90
Z24A Sheeppen Canyo 89.26 53 ⇑P P 14 42 39.4 +0.5
baz=90
NEW Newport 89.33 36 ⇑P P 14 42 39.1 +0.5
baz=90
KMI Kunming 89.38 297 P P 14 42 41.8 +2.2
KMI pmax pmax
comp=Z,12nm,0.9s
MENT Mentasta 89.38 15 eP P 14 42 37.1 -1.5
628A Black Gap, Mar 89.43 58 ⇑P P 14 42 40.4 +0.9
baz=90
H14A Leadore 89.45 41 ⇓P P 14 42 40.1 +0.6
baz=90
Y24A Capitan 89.48 53 ⇓P P 14 42 40.8 +0.9
baz=90,SNR=11
125A Garner Draw, 89.48 54 ⇑P P 14 42 40.8 +1.0
baz=90
M17A Scullys Gap (B 89.50 44 ⇑P P 14 42 40.9 +1.1
baz=90
F13A Darby 89.52 39 ⇑P P 14 42 39.9 +0.2
baz=90,SNR=7.3
W23A Werner Place, 89.53 52 ⇓P P 14 42 40.7 +0.6
baz=90
S21A Coal Bank Pass 89.54 49 ⇑P P 14 42 40.8 +0.6
baz=90
C11A Tepee Creek (N 89.56 37 ⇓P P 14 42 40.5 +0.7
baz=90
226B Tecolote Peak, 89.59 55 ⇓P P 14 42 41.1 +0.8
baz=90,SNR=6.7
D12A Red Ives Fores 89.63 38 ⇑P P 14 42 40.8 +0.7
baz=90
427A Hayter Ranch, 89.63 56 ⇑P P 14 42 41.7 +1.2
baz=90,SNR=17
I15A Monteview 89.66 41 ⇓P P 14 42 41.4 +1.0
baz=90
P19A Cripple Cowboy 89.69 47 ⇑P P 14 42 41.7 +1.0
baz=90
Z25A Roswell 89.72 54 ⇑P P 14 42 42.5 +1.6
baz=90
G14A Jackson 89.73 40 ⇑P P 14 42 41.8 +0.9
baz=90
528A Cox Ranch, San 89.81 57 ⇑P P 14 42 42.3 +0.9
baz=90,SNR=6.2
Q20A Ridgley Place, 89.82 47 ⇑P P 14 42 42.3 +1.0
baz=90
T22A Edith 89.86 50 ⇑P P 14 42 42.6 +1.0
baz=90
M18A Lyman 89.86 45 ⇑P P 14 42 42.0 +0.5
baz=90,SNR=8.2
MCMT McKenzie Canyo 89.88 41 P P 14 42 42.8 +1.2
CM31 Chiang Mai Arr 89.88 290 eP P 14 42 40.4 -1.4
comp=Z,15nm,0.9s
CMAR Chiang Mai Arr 89.88 290 P P 14 42 43.4 +1.6
CMAR Chiang Mai Arr 89.88 290 P P 14 42 43.4 +1.6
comp=Z,13nm,0.8s,baz=124,slow=3.3,SNR=50
H15A Lima 89.89 41 ⇓P P 14 42 42.5 +1.0
baz=90,SNR=6.9
O19A Miners Draw (B 89.92 46 ⇑P P 14 42 42.9 +1.2
baz=90
126A Clayton Basin, 89.96 55 ⇑P P 14 42 42.5 +0.5
baz=90
HHC Hu-ho-hao-te 89.97 315 eP P 14 42 37.0 -4.9
HHC pP pP 14 44 23.3 -0.3
HHC sP sP 14 45 12.6 +3.1
HHC PP PP 14 46 19.3 -3.6
HHC SKS SKSac 14 52 21.3 -8.0
HHC Hu-ho-hao-te 89.97 315 S S 14 52 46.8 -9.1
HHC Hu-ho-hao-te 89.97 315 sS sS 14 55 57.9 +0.4
HHC Hu-ho-hao-te 89.97 315 SS SS 14 59 02.4 -5.1
HHC pmax pmax
comp=Z,40nm,0.7s
HHC pmax pmax
comp=Z,150nm,6.3s
P20A De Beque 90.02 47 ⇓P P 14 42 42.8 +0.6
baz=90
CHTO Chiang Mai 90.02 290 eP P 14 42 42.6 +0.1
comp=Z,15nm,0.8s
Y25A Mesa, Roswell 90.03 53 ⇓P P 14 42 43.0 +0.6
baz=90
DLBC Dease Lake 90.03 23 eP P 14 42 41.4 -0.3
R21A Cimarron 90.05 48 ⇑P P 14 42 43.2 +0.8
baz=90
W24A Lazy 6 Ranch, 90.09 52 ⇑P P 14 42 43.0 +0.3
baz=90
428A Kincaid Ranch, 90.13 57 ⇑P P 14 42 43.8 +0.9
baz=90
COLA College 90.13 13 eP P 14 42 40.2 -1.7
comp=Z,38nm,1.0s
D13A Huson 90.16 38 ⇓P P 14 42 43.5 +1.0
baz=90
I16A Newdale 90.21 42 ⇓P P 14 42 44.3 +1.3
baz=90
529A Stev Forest Ra 90.23 57 ⇑P P 14 42 43.6 +0.3
baz=90,SNR=5.4
ILAR Eielson Array 90.24 13 P P 14 42 41.7 -0.7
ILAR PP PP 14 46 20.4 -4.0
ILAR PKiKP PKiKP 14 47 33.6 -1.1
ILAR PKKPbc PKKPdf 15 00 09.4 +1.1
ILAR Eielson Array 90.24 13 P P 14 42 41.7 -0.7
comp=Z,5.3nm,0.5s,baz=217,slow=5.2,SNR=132
ILAR PP PP 14 46 20.4 -4.0
comp=Z,1.3nm,0.9s,baz=222,slow=6.9,SNR=4.6
ILAR PKiKP PKiKP 14 47 33.6 -1.1
comp=Z,0.2nm,0.3s,baz=311,slow=2.5,SNR=5.3
ILAR PKKPbc PKKPdf 15 00 09.4 +1.1
comp=Z,0.3nm,0.4s,baz=334,slow=2.1,SNR=6.2
S22A 4UR Ranch, Cre 90.25 49 ⇓P P 14 42 44.2 +0.7
baz=90,SNR=5.5
Z26A Caprock 90.27 54 ⇓P P 14 42 43.8 +0.4
baz=90,SNR=6.5
G15A Dillon 90.27 40 ⇓P P 14 42 44.2 +1.0
baz=90
B12A Libby 90.29 37 ⇑P P 14 42 44.0 +0.9
baz=90
E14A Clinton 90.35 39 ⇑P P 14 42 44.3 +0.7
baz=91
V24A Rampart Ranch, 90.42 51 ⇓P P 14 42 44.7 +0.4
baz=91
M19A Rock Springs 90.49 45 ⇓P P 14 42 45.0 +0.5
baz=91
R22A Saguache, Gunn 90.53 49 ⇑P P 14 42 45.3 +0.5
baz=91
F15A Butte 90.63 40 ⇑P P 14 42 45.4 +0.5
baz=91
L19A Farson 90.66 44 ⇓P P 14 42 45.6 +0.4
baz=91,SNR=5.8
D14A Greenough 90.70 38 ⇑P P 14 42 45.3 +0.1
baz=91
429A Davenport Ranc 90.70 57 ⇑P P 14 42 46.0 +0.5
baz=91
BILL Bilibino 90.72 354 eP P 14 42 42.3 -2.2
comp=Z,23nm,0.9s
G16A Moss Hill, Enn 90.72 41 ⇓P P 14 42 46.6 +1.3
baz=91
Q22A Crested Butte, 90.72 48 ⇓P P 14 42 46.2 +0.5
baz=91
N20A Spence Gulch, 90.75 46 ⇑P P 14 42 46.1 +0.4
baz=91,SNR=7.1
W25A X Bar L Ranch, 90.78 52 ⇓P P 14 42 45.8 0.0
baz=91,SNR=5.6
H16A Russell Place, 90.78 41 ⇓P P 14 42 46.9 +1.2
baz=91,SNR=8.1
Z27A Tatum 90.86 54 ⇑P P 14 42 46.2 +0.1
baz=91
BW06 Boulder Array 90.86 44 eP P 14 42 43.2 -2.9
comp=Z,5.2nm,0.9s
PDAR Pinedale Array 90.86 44 P P 14 42 46.2 +0.1
PDAR PKKPbc PKKPbc 15 00 10.6 +0.6
PDAR Pinedale Array 90.86 44 P P 14 42 46.2 +0.1
comp=Z,6.7nm,1.0s,baz=206,slow=3.1,SNR=28
PDAR PKKPbc PKKPbc 15 00 10.6 +0.6
comp=Z,0.3nm,0.6s,baz=104,slow=3.7,SNR=3.6
530A J-C Ranch, Com 90.93 58 ⇑P P 14 42 47.3 +0.8
baz=91
V25A Rancho No Teng 90.95 51 ⇓P P 14 42 47.0 +0.3
baz=91
329A Wagon Wheel Ra 91.00 56 ⇑P P 14 42 47.6 +0.8
baz=91
CD2 Chengdu 91.01 303 P P 14 42 46.0 -0.8
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
BOZ Bozeman (W) 91.04 40 eP P 14 42 46.5 -0.3
comp=Z,1.6nm,0.6s
128A Castleberry Fa 91.11 55 ⇓P P 14 42 48.1 +0.8
baz=91
F16A Kennard Place, 91.11 40 ⇑P P 14 42 48.3 +1.2
baz=91
M20A Sweetwater, Wa 91.12 45 ⇑P P 14 42 48.2 +0.8
baz=91
Y27A Causey 91.15 54 ⇓P P 14 42 48.1 +0.6
baz=91
I18A Diamond G Ranc 91.16 43 ⇓P P 14 42 48.6 +1.1
baz=91
N21A Black Mountain 91.21 46 ⇓P P 14 42 48.4 +0.6
baz=91
631A Perdido Creek 91.22 59 ⇑P P 14 42 48.5 +0.7
baz=91
D15A Lincoln 91.25 39 ⇑P P 14 42 48.1 +0.4
baz=92
L20A Wamsutter 91.27 45 ⇑P P 14 42 48.8 +0.8
baz=92,SNR=5.2
430A Baggett Ranch, 91.28 57 ⇓P P 14 42 48.5 +0.3
baz=92
S24A Houchin Ranch, 91.34 50 ⇓P P 14 42 49.3 +0.8
baz=92
K19A Absolon Red Bu 91.34 44 ⇑P P 14 42 48.4 +0.1
baz=92
U25A Circle Dot Ran 91.35 51 ⇑P P 14 42 48.6 +0.1
baz=92
732A Laxson Ranch, 91.42 60 ⇓P P 14 42 49.4 +0.7
baz=92
J19A Crowheart 91.43 43 ⇓P P 14 42 48.8 +0.2
baz=92,SNR=8.2
E16A East Helena 91.47 40 ⇓P P 14 42 49.3 +0.6
baz=92
MSTX Muleshoe 91.48 54 ⇑P P 14 42 49.4 +0.3
baz=92
B14A Marquette Ranc 91.52 37 ⇓P P 14 42 49.0 +0.1
baz=92
V26A Tequesquite Ra 91.53 52 ⇓P P 14 42 49.9 +0.6
baz=92
531A Rocksprings 91.56 58 ⇓P P 14 42 50.0 +0.6
baz=92
O22A Kremmling 91.58 47 ⇓P P 14 42 49.8 +0.2
baz=92
C15A Salmond Ranch, 91.58 38 ⇑P P 14 42 49.8 +0.6
baz=92
K20A Yellowstone Ra 91.59 44 ⇑P P 14 42 49.7 +0.3
baz=92
330A Mertzon 91.59 57 ⇑P P 14 42 49.9 +0.4
baz=92
T25A Trinidad 91.68 50 ⇑P P 14 42 50.3 +0.3
baz=92
R24A Sanders Place, 91.68 49 ⇑P P 14 42 50.5 +0.5
baz=92
M21A Separation Pea 91.72 45 ⇓P P 14 42 50.3 +0.2
baz=92,SNR=5.4
H18A Shoshone NF, C 91.75 42 ⇓P P 14 42 51.1 +1.0
baz=92
F17A Fitzpatrick Pl 91.76 40 ⇑P P 14 42 50.6 +0.5
baz=92
A14A Double T Ranch 91.76 37 ⇓P P 14 42 50.2 +0.2
baz=92
D16A Dana Ranch, Ca 91.81 39 ⇑P P 14 42 50.9 +0.6
baz=92
U26A Atchley Ranch, 91.83 51 ⇓P P 14 42 51.4 +0.7
baz=92

I19A	Meeteetse	91.84	43	⇓P		P		14 42 51.8	+1.2	
	baz=92									
L21A	Rawlins	91.89	45	⇑P		P		14 42 51.2	+0.4	
	baz=92									
632A	Uvalde	91.89	59	⇓P		P		14 42 51.8	+0.9	
	baz=92									
N22A	Wattenberg Ran	91.94	46	⇓P		P		14 42 51.8	+0.5	
	baz=92									
Z29A	Hungry Hill Ra	91.97	55	⇓P		P		14 42 52.0	+0.7	
	baz=92									
Q24A	Divide	91.99	49	⇑P		P		14 42 51.8	+0.3	
	baz=92									
ISCO	Idaho Springs	92.05	48	⇑P		P		14 42 52.3	+0.5	
	baz=92									
532A	Rocksprings	92.05	58	⇓P		P		14 42 52.1	+0.4	
	baz=92									
J20A	Shoshoni	92.09	44	⇓P		P		14 42 52.2	+0.5	
	baz=92,SNR=8.9									
C16A	Fuhringer Ranc	92.09	38	⇑P		P		14 42 52.2	+0.7	
	baz=92									
G18A	Lazy EL Ranch,	92.13	41	⇑P		P		14 42 52.1	+0.3	
	baz=92									
M22A	Cedar Creek Ra	92.13	46	⇑P		P		14 42 52.5	+0.4	
	baz=92									
A15A	Johnson Ranch,	92.15	37	⇑P		P		14 42 52.1	+0.3	
	baz=92									
JCT	Junction City	92.28	58	⇑P		P		14 42 52.9	+0.2	
	baz=92									
T26A	Comanche Natio	92.28	51	⇓P		P		14 42 52.9	+0.1	
	baz=92									
F18A	Big Timber	92.33	41	⇑P		P		14 42 53.6	+1.0	
	baz=93									
N23A	Red Feather La	92.33	47	⇑P		P		14 42 53.1	+0.1	
	baz=93									
I20A	Worland	92.35	43	⇓P		P		14 42 53.8	+1.0	
	baz=93									
D17A	Six Diamond Ra	92.38	39	⇓P		P		14 42 53.2	+0.4	
	baz=93									
Z30A	Sanderson Ranc	92.42	55	⇑P		P		14 42 54.0	+0.7	
	baz=93									
432A	Menard	92.45	58	⇑P		P		14 42 53.6	+0.2	
	baz=93									
231A	Bronte	92.48	57	⇑P		P		14 42 53.9	+0.3	
	baz=93									
J21A	Lysite	92.49	44	⇓P		P		14 42 54.0	+0.4	
	baz=93,SNR=5.9									
L22A	Ellis Ranch, M	92.53	45	⇑P		P		14 42 54.3	+0.5	
	baz=93									
E18A	Harlowton	92.54	40	⇑P		P		14 42 54.6	+1.0	
	baz=93									
S26A	Kim	92.57	50	⇓P		P		14 42 54.5	+0.5	
	baz=93									
C17A	Wharram Farm,	92.58	39	⇓P		P		14 42 54.5	+0.8	
	baz=93									
332A	Millersview	92.70	57	⇑P		P		14 42 54.9	+0.3	
	baz=93									
131A	Roby	92.73	56	⇓P		P		14 42 54.9	+0.2	
	baz=93									
M23A	Laramie	92.74	46	⇓P		P		14 42 55.1	+0.3	
	baz=93									
K22A	Casper	92.76	45	⇓P		P		14 42 55.5	+0.7	
	baz=93									
A16A	West Butte Ran	92.77	38	⇑P		P		14 42 54.9	+0.2	
	baz=93									
I21A	Big Trails, Te	92.81	43	⇓P		P		14 42 55.7	+0.7	
	baz=93									
R26A	Arlington	92.88	50	⇓P		P		14 42 55.6	+0.2	
	baz=93									
P25A	Willow Gulch B	92.91	48	⇓P		P		14 42 56.1	+0.5	
	baz=93									
232A	Coleman	92.98	57	⇓P		P		14 42 56.4	+0.6	
	baz=93									
L23A	Garrett	93.05	46	⇓P		P		14 42 56.9	+0.7	
	baz=93									
LZH	Lanzhou	93.15	308	*e*P		P		14 42 59.3	+2.6	
LZH				sP		sP		14 45 31.3	+6.7	
LZH				pmax		pmax				
	comp=Z,19nm,1.2s									
E19A	Rath Farm, Rou	93.16	41	⇓P		P		14 42 57.3	+0.9	
	baz=93									
A17A	Triple J Farms	93.28	38	⇓P		P		14 42 57.5	+0.6	
	baz=94									
ABTX	Abilene, Hawle	93.28	56	⇑P		P		14 42 57.6	+0.4	
	baz=94									
R27A	Eads	93.33	50	⇑P		P		14 42 57.8	+0.4	
	baz=94									
M24A	Cheyenne	93.34	46	⇑P		P		14 42 57.7	+0.2	
	baz=94									
D19A	Cripps Ranch,	93.45	40	⇓P		P		14 42 58.4	+0.7	
	baz=94									
B18A	Beardsley Farm	93.53	39	⇑P		P		14 42 58.6	+0.6	
	baz=94									
C19A	Slack Wire Ran	93.63	39	⇑P		P		14 42 59.4	+0.9	
	baz=94									
Z32A	Haskell	93.69	56	⇑P		P		14 42 59.7	+0.6	
	baz=94									
KSCO	Kaye Shedlock'	93.77	49	⇓P		P		14 43 00.1	+0.7	
	baz=94									
H22A	Clearmont	93.78	43	⇑P		P		14 43 00.2	+0.9	
	baz=94									
D20A	Manuel Ranch,	93.86	40	⇑P		P		14 43 00.6	+1.0	
	baz=94									
R28A	Tribune	94.06	50	⇓P		P		14 43 01.1	+0.3	
	baz=94									
LCO	Las Campanas	94.14	123	P		P		14 43 06.8	+5.2	
	baz=94,SNR=8.6									
C20A	Veseth Ranch,	94.24	40	⇑P		P		14 43 02.3	+1.0	
	baz=94									
INK	Inuvik	96.22	15	P		P		14 43 09.4	-0.3	
INK				PP		PP		14 47 02.7	-7.6	
INK				PKiKP		PKiKP		14 47 44.0	-0.8	
INK	Inuvik	96.22	15	P		P		14 43 09.4	-0.3	
	comp=Z,2.1nm,0.6s,baz=228,slow=4.2,SNR=16									
INK				PP		PP		14 47 02.7	-7.6	
	comp=Z,1.4nm,0.9s,baz=171,slow=5.9,SNR=5.1									
INK				PKiKP		PKiKP		14 47 44.0	-0.8	
	comp=Z,0.8nm,0.7s,baz=13,slow=3.4,SNR=4.1									
SONM	Songino Array	96.52	319	P		P		14 43 12.0	+0.3	
SONM	Songino Array	96.52	319	P		P		14 43 12.0	+0.3	
	comp=Z,0.6nm,0.6s,baz=124,slow=2.7,SNR=5.6									
YKA	Yellowknife Ar	98.50	25	P		Pdif		14 43 19.1	-0.9	
YKA				PKiKP		PKiKP		14 47 49.3	+0.3	
YKA				PKKPbc		PKKPbc		14 59 47.0	-3.2	
YKA	Yellowknife Ar	98.50	25	P		Pdif		14 43 19.1	-0.9	
	comp=Z,0.4nm,0.6s,baz=241,slow=4.6,SNR=7.6									
YKA				PKiKP		PKiKP		14 47 49.3	+0.3	
	comp=Z,0.4nm,0.6s,baz=239,slow=1.5,SNR=5.7									
YKA				PKKPbc		PKKPbc		14 59 47.0	-3.2	
	comp=Z,0.4nm,0.4s,baz=41,slow=2.4,SNR=7.8									
ZALV	Zalesovo Beam	111.32	321	PKiKP		PKiKP		14 48 12.1	-0.9	
ZALV	Zalesovo Beam	111.32	321	PKiKP		PKiKP		14 48 12.1	-0.9	
	comp=Z,2.5nm,0.5s,baz=90,slow=0.3,SNR=16									
MK31	Makanchi Array	111.77	313	*e*PKPdf		PKiKP		14 48 13.1	-1.0	
MKAR	Makanchi Array	111.77	313	PKiKP		PKiKP		14 48 13.6	-0.5	
MKAR	Makanchi Array	111.77	313	PKiKP		PKiKP		14 48 13.6	-0.5	
	comp=Z,2.6nm,0.6s,baz=77,slow=3.1,SNR=32									
KSH	Kashi	115.17	304	*e*PKP		PKPdf		14 48 21.9	+0.9	
KSH				*e*PKS		PKSdf		14 51 57.5	-0.3	
KSH				*e*SKS		SKSdf		14 54 48.8	-1.3	
KSH				AMB		AMB				
	comp=Z,120nm,4.6s									
TKM2	Tokmak 2	115.92	308	*e*PKPdf		PKPdf		14 48 21.7	-0.8	
TKM2	Tokmak 2	115.92	308	P		PKPdf		14 48 21.9	-0.5	
	SNR=7.8									
KBK	Karagaybulak	116.36	308	P		PKPdf		14 48 23.0	-0.2	
	SNR=5.3									
CHMS	Chumysh	116.55	308	P		PKPdf		14 48 22.3	-1.1	
	SNR=6.1									
AAK	Ala-Archa	116.69	308	*e*PKPdf		PKPdf		14 48 23.3	-0.6	
USP	Ospenovka	116.76	308	P		PKPdf		14 48 23.4	-0.4	
	SNR=7.5									
EKS2	Erkin-Say	117.22	308	*e*PKPdf		PKPdf		14 48 23.8	-1.1	
EKS2	Erkin-Say	117.22	308	P		PKPdf		14 48 24.4	-0.4	
	SNR=5.8									
AML	Almayashu	117.23	307	P		PKPdf		14 48 25.1	-0.1	
	SNR=16									
KKAR	Karatay Array	119.65	308	*e*PKPdf		PKPdf		14 48 29.0	-0.4	
BRVK	Borovoye	119.92	319	*e*PKPdf		PKPdf		14 48 28.7	-0.9	
KBL	Kabul	119.95	298	*e*PKPdf		PKPdf		14 48 30.6	+0.1	
SCHQ	Schefferville	120.61	39	PKP		PKPdf		14 48 29.3	-1.6	
SCHQ	Schefferville	120.61	39	PKP		PKPdf		14 48 29.3	-1.6	
	comp=Z,1.4nm,0.3s,baz=228,slow=11,SNR=8.9									
BOSA	Boshof	124.27	206	PKP		PKPdf		14 48 40.0	+1.0	
BOSA	Boshof	124.27	206	PKP		PKPdf		14 48 40.0	+1.0	
	comp=Z,2.2nm,0.6s,baz=163,slow=4.8,SNR=5.4									
DAG	Danmarks Havn	124.59	5	*i* P		PKPdf		14 48 36.8	-1.0	
	comp=Z,6.1nm,0.6s									
SUMG	Summit	125.09	14	*i* P		PKPdf		14 48 40.4	+1.0	
	comp=Z,5.7nm,0.8s									
ABKAR	Akbulak array	126.75	316	*e*PKPdf		PKPdf		14 48 42.3	-0.5	
KEV	Kevo	130.04	349	*e*pkp		PKPdf		14 48 37.6	-11	
ARCES	ARCESS Array B	130.50	349	PKP		PKPdf		14 48 49.5	+0.2	
ARCES				SKPbc		SKPab		14 51 33.0	+2.2	
ARCES	ARCESS Array B	130.50	349	PKhKP		PKPpre		14 48 38.2		
	comp=Z,1.6nm,0.8s,baz=354,slow=0.4,SNR=12									
ARCES				PKP		PKPdf		14 48 49.5	+0.2	
	comp=Z,8.4nm,0.4s,baz=32,slow=1.0,SNR=58									
ARCES				SKPbc		SKPab		14 51 33.0	+2.2	
	comp=Z,3.0nm,0.8s,baz=42,slow=3.8,SNR=5.6									
ARE0	ARCESS Array S	130.50	349	*e*PKPdf		PKPdf		14 48 49.2	-0.1	
JOF	Joensuu	134.54	341	*e*pkp		PKPdf		14 48 47.5	-10	
BORG	Borgarnes	135.07	13	PKP		PKPdf		14 49 00.1	+2.1	
BORG	Borgarnes	135.07	13	PKP		PKPdf		14 49 00.1	+2.1	
	comp=Z,5.6nm,0.7s,baz=347,slow=5.0									
KAF	Kangasniemi	136.60	343	*e*pkp		PKPdf		14 48 50.0	-11	
FIA1	FINESS Array S	137.21	343	*e*PKPdf		PKPdf		14 49 02.4	+0.4	
FINES	FINESS Array B	137.22	343	PKP		PKPdf		14 49 02.8	+0.7	
FINES				SKPbc		SKPbc		14 51 54.2	+1.6	
FINES	FINESS Array B	137.22	343	PKhKP		PKPpre		14 48 51.2		
	comp=Z,2.0nm,0.5s,baz=86,slow=4.3,SNR=14									
FINES				PKP		PKPdf		14 49 02.8	+0.7	
	comp=Z,6.3nm,0.4s,baz=64,slow=3.2,SNR=20									
FINES				SKPbc		SKPbc		14 51 54.2	+1.6	
	comp=Z,3.2nm,0.6s,baz=62,slow=3.5,SNR=8.7									
KMBO	Kilima Mbogo	137.72	241	PKP		PKPdf		14 49 05.6	+0.8	
KMBO	Kilima Mbogo	137.72	241	PKP		PKPdf		14 49 05.6	+0.8	
	comp=Z,2.0nm,0.6s,baz=54,slow=16,SNR=6.4									
RDF	Al-Radifah	137.76	289	*e*P		PKPdf		14 48 52.8	-11	
MIB	Mutribah	137.97	290	*e*P		PKPdf		14 48 53.1	-11	
MIB				AMb		AMB		14 48 58.3		
	comp=Z,12nm,0.5s									
NAY	Al-Naaiem	138.04	289	*e*P		PKPdf		14 48 53.4	-11	
NAY				AMb		AMB		14 49 07.6		
	comp=Z,16nm,1.1s									
GNI	Garni	139.07	306	PKP		PKPdf		14 49 08.0	+1.6	
GNI	Garni	139.07	306	PKP		PKPdf		14 49 08.0	+1.6	
	comp=Z,3.9nm,0.4s									
KBZ	Khabaz	139.45	312	PKP		PKPdf		14 49 09.5	+2.8	
KBZ	Khabaz	139.45	312	PKP		PKPdf		14 49 09.5	+2.8	
	comp=Z,4.0nm,0.8s,baz=103,slow=1.5,SNR=8.4									
NB2	NORSAR (Subarra	140.63	352	PKP		PKPdf		14 49 01.6	-6.8	
	comp=Z,2.5nm,0.5s,baz=16,slow=3.2									
NOA	NORSAR Array B	140.63	352	PKP		PKPdf		14 49 10.9	+2.5	
NOA				SKPbc		SKiKP		14 52 03.7	-0.3	
NOA				SKPab		SKPab		14 52 18.5	+3.0	
NOA	NORSAR Array B	140.63	352	PKhKP		PKPpre		14 49 01.9		
	comp=Z,11nm,0.8s,baz=16,slow=4.7,SNR=49									
NOA				PKP		PKPdf		14 49 10.9	+2.5	
	comp=Z,4.4nm,0.6s,baz=14,slow=3.8,SNR=11									
NOA				SKPbc		SKiKP		14 52 03.7	-0.3	
	comp=Z,2.5nm,0.8s,baz=12,slow=4.3,SNR=8.3									
NOA				SKPab		SKPab		14 52 18.5	+3.0	
	comp=Z,2.4nm,0.9s,baz=15,slow=3.2,SNR=4.0									
TUTA	Tutak	140.68	305	*i* P		PKPdf		14 49 03.8	-5.6	
DDEM	Demirkent	141.10	308	*i* P		PKPdf		14 49 04.6	-5.3	
HFS	Hagfors	141.15	350	PKhKP		PKPpre		14 49 03.4		
	comp=Z,24nm,0.7s,baz=54,slow=4.6,SNR=105									
HFS				SKPbc		SKiKP		14 52 06.0	+0.9	
	comp=Z,4.5nm,0.7s,baz=73,slow=2.0,SNR=7.0									
IZAR	Zarasai	141.71	337	*e*P		PKPdf		14 49 03.7	-6.6	
ISAL	Salakas	141.89	337	*e*P		PKPdf		14 49 05.0	-5.7	
IGN	Ignalina	142.02	337	*e*P		PKPdf		14 49 07.2	-3.8	
KELT	Kelkit	143.13	308	*i* P		PKPbc		14 49 11.6	+0.1	
SUSE	Susehri	143.88	308	*i* P		PKPab		14 49 13.1	-0.7	
KEMA	Kemaliye	143.95	307	*i* P		PKPdf		14 49 14.7	-0.3	
AKASG	Malin Array Be	144.11	329	PKP		PKPbc		14 49 13.6	-0.3	
AKASG				SKPbc		SKiKP		14 52 12.3	+0.8	
AKASG	Malin Array Be	144.11	329	PKP		PKPbc		14 49 13.6	-0.3	
	comp=Z,25nm,0.4s,baz=43,slow=4.1,SNR=129									
AKASG				SKPbc		SKiKP		14 52 12.3	+0.8	
	comp=Z,4.4nm,0.7s,baz=53,slow=2.6,SNR=6.9									
AK01	Malin Array Si	144.13	329	*e*PKPdf		PKPbc		14 49 13.2	-0.8	
KIEV	Kiev	144.13	329	*e*PKPdf		PKPbc		14 49 13.2	-0.8	
AK02	Malin Array Si	144.15	329	*e*PKPdf		PKPbc		14 49 13.3	-0.8	
SUW	Suwalki	144.17	338	*e*PKPdf		PKPbc		14 49 13.6	-0.4	
SUW	Suwalki	144.17	338	*e*PKPc		PKPbc		14 49 14.1	+0.1	
MVH1	Achvaich	144.20	5	*e*P		PKPbc		14 49 12.9	-1.1	
MVH1	Achvaich	144.20	5	P		PKPbc		14 49 12.9	-1.1	
KAC	Achnashellach	144.52	6	*e*P		PKPbc		14 49 14.7	-0.3	
KAC	Achnashellach	144.52	6	P		PKPbc		14 49 14.7	-0.3	
MCD	Coleburn Disti	144.60	4	*e*P		PKPbc		14 49 14.5	-0.8	
MCD	Coleburn Disti	144.60	4	P		PKPbc		14 49 14.5	-0.8	
KPL	Plockton	144.65	6	*e*P		PKPdf		14 49 14.5	-1.0	
KPL	Plockton	144.65	6	P		PKPdf		14 49 14.5	-1.0	
ERBA	Erbaa	144.77	310	*i* P		PKPab		14 49 17.0	+0.1	
KSB	Sheil Bridge	144.79	6	*e*P		PKPdf		14 49 15.5	-0.2	
KSB	Sheil Bridge	144.79	6	P		PKPdf		14 49 15.5	-0.2	
MME1	Meikle Cairn	144.89	4	*e*P		PKPdf		14 49 15.7	-0.3	
MME1	Meikle Cairn	144.89	4	P		PKPdf		14 49 15.7	-0.3	
GZT	Gaziantep	145.18	304	*i* P		PKPdf		14 49 17.4	+0.1	
DRUM	Mains of Drumt	145.32	3	*e*P		PKPdf		14 49 16.9	+0.2	
DRUM	Mains of Drumt	145.32	3	P		PKPdf		14 49 16.9	+0.2	
MUD	Monsted U'grnd	145.35	352	*i* P		PKPdf		14 49 17.2	+0.5	
	comp=Z,30nm,0.7s									
COP	Copenhagen	145.58	349	⇑*i*P		PKPbc		14 49 18.3	0.0	
	comp=Z,21nm,0.7s									
BSD	Bornholm Skovb	145.61	346	⇑*i*P		PKPdf		14 49 18.0	+0.8	
	comp=Z,86nm,0.8s									
ELO	Logie Almond	145.68	5	*e*P		PKPdf		14 49 18.2	+0.9	
ELO	Logie Almond	145.68	5	P		PKPdf		14 49 18.2	+0.9	
AYKD	Aykdinkavak	145.75	304	*i* P		PKPbc		14 49 19.4	-0.1	
EAB	Aberfoyle	145.91	5	*e*P		PKPdf		14 49 18.8	+1.1	
EAB	Aberfoyle	145.91	5	P		PKPdf		14 49 18.8	+1.1	
LLD	Lille Linde	145.96	349	*i* P		PKPbc		14 49 19.9	+0.5	
	comp=Z,43nm,0.8s									
ANDN	Antirin	146.05	305	*i* P		PKPbc		14 49 20.9	+0.4	
PGBU	Glenifferbraes	146.26	6	*e*P		PKPdf		14 49 19.5	+1.2	
PGBU	Glenifferbraes	146.26	6	P		PKPdf		14 49 19.5	+1.2	
ESY	Stoneypath	146.30	4	*e*P		PKPbc		14 49 20.0	-0.4	
ESY	Stoneypath	146.30	4	P		PKPbc		14 49 20.0	-0.4	
EAU	Auchinoon	146.32	5	*e*P		PKPbc		14 49 20.3	-0.1	
EAU	Auchinoon	146.32	5	P		PKPbc		14 49 20.3	-0.1	
EBL	Broad Law	146.42	4	*e*P		PKPbc		14 49 20.5	-0.2	
EBL	Broad Law	146.42	4	P		PKPbc		14 49 20.5	-0.2	
YAYL	Yayladag	146.65	302	*i* P		PKPbc		14 49 22.0	-0.2	
GKP	Gorka Klasztor	146.69	342	*e*PKPc		PKPbc		14 49 21.9	+0.4	
ILGA	Ilgaz	146.76	312	*i* P		PKPbc		14 49 23.5	+1.0	
BEL	Belsk	146.78	338	*e*PKPc		PKPbc		14 49 22.5	+0.7	
BALT	Daday	146.78	313	*i* P		PKPbc		14 49 22.9	+0.4	
YURE	YUREGIR	146.81	304	*i* P		PKPbc		14 49 23.3	+0.8	
EKA	Eskdalemuir Ar	146.85	4	PKPbc		PKPbc		14 49 21.4	-0.5	
EKA	Eskdalemuir Ar	146.85	4	PKPbc		PKPbc		14 49 21.4	-0.5	
	comp=Z,23nm,0.7s,baz=350,slow=2.6,SNR=56									
CDAG	Cicekdag	146.85	309	*i* P		PKPbc		14 49 21.8	-0.8	
ESK	Eskdalemuir	146.86	4	*e*P		PKPbc		14 49 21.2	-0.8	
ESK	Eskdalemuir	146.86	4	P		PKPbc		14 49 21.2	-0.8	
ESK	Eskdalemuir	146.86	4	*e*PKPdf		PKPdf		14 49 19.1	-0.2	
ESK				*e*PKPbc		PKPbc		14 49 21.6	-0.3	
ECK	Cauldkaine Hil	147.00	4	*e*P		PKPbc		14 49 21.7	-0.6	
ECK	Cauldkaine Hil	147.00	4	P		PKPbc		14 49 21.7	-0.6	
GAL1	Galloway	147.18	6	*e*P		PKPbc		14 49 21.9	-0.9	
GAL1	Galloway	147.18	6	P		PKPbc		14 49 21.9	-0.9	
GULE	Gulek	147.34	305	*i* P		PKPbc		14 49 24.6	+0.6	
BR131	Keskin Array S	147.34	310	*e*PKPdf		PKPdf		14 49 20.1	-0.7	
BR131				*e*PKPbc		PKPbc		14 49 23.9	0.0	
BRTR	Keskin Array B	147.34	310	PKPbc		PKPbc		14 49 24.3	+0.4	
BRTR	Keskin Array B	147.34	310	PKPbc		PKPbc		14 49 24.3	+0.4	
	comp=Z,21nm,0.7s,baz=142,slow=3.7,SNR=87									
KESW	Keswick, Cumbr	147.59	5	*e*P		PKPbc		14 49 23.6	-0.3	
KESW	Keswick, Cumbr	147.59	5	P		PKPbc		14 49 23.6	-0.3	
BSEG	Bad Segeberg	147.62	350	*e*PKPbc		PKPbc		14 49 24.1	+0.1	
BBAL	Bala	147.78	310	*i* P		PKPbc		14 49 24.8	-0.3	
TLCR		147.80	322	⇓*i*P		PKPbc		14 49 25.4	+0.7	
KWP	Kalwaria Pacla	147.80	333	*e*PKPbc		PKPbc		14 49 24.8	+0.2	
KWP	Kalwaria Pacla	147.80	333	⇑*i*P		PKPbc		14 49 25.1	+0.5	
KWP	Kalwaria Pacla	147.80	333	*e*PKPc		PKPbc		14 49 24.9	+0.2	
MMAI	Mount Meron Ar	147.88	297	PKPbc		PKPbc		14 49 26.4	+0.9	
MMAI	Mount Meron Ar	147.88	297	PKPbc		PKPbc		14 49 26.4	+0.9	
	comp=Z,24nm,0.5s,baz=65,slow=5.1,SNR=17									
ANTO	Ankara	147.88	310	*e*PKPdf		PKPdf		14 49 21.4	-0.2	
ANTO				*e*PKPbc		PKPbc		14 49 25.5	+0.2	
BUR08	Bucovina Ar. S	148.13	328	*e*PKPdf		PKPdf		14 49 22.0	+0.2	
BUR08				*e*PKPbc		PKPbc		14 49 26.2	+0.5	
BURAR	Bucovina Array	148.14	328	⇓*i*P		PKPbc		14 49 27.3	+1.6	
TESR	Tescani	148.16	326	⇑*i*P		PKPbc		14 49 25.9	+0.2	
CFR	Carcaliu	148.19	322	⇓*i*P		PKPbc		14 49 26.2	+0.5	
RUE	Ruedersdorf	148.30	345	*e*PKPbc		PKPbc		14 49 25.6	-0.2	
TIRR	Tirgusor	148.45	321	*e*PKPdf		PKPdf		14 49 21.5	-0.8	
TIRR				*e*PKPbc		PKPbc		14 49 26.6	+0.1	
TIRR	Tirgusor	148.45	321	⇓*i*P		PKPbc		14 49 26.8	+0.4	
OJC	Ojcow	148.47	337	*i* PKP		PKPbc		14 49 26.5	+0.2	
KOLS	Kolonicke sedl	148.52	333	*e*PKP		PKPbc		14 49 27.2	+0.7	
VRI	Vrincioaia	148.54	325	⇓*i*P		PKPbc		14 49 26.9	+0.3	
WME	Myndd Eilian	148.67	6	*e*P		PKPbc		14 49 26.2	-0.5	
WME	Myndd Eilian	148.67	6	P		PKPbc		14 49 26.2	-0.5	
MANR	Mangalia	148.72	320	⇓*i*P		PKPbc		14 49 28.3	+1.2	
WLF1	Llynfaes	148.77	6	*e*P		PKPbc		14 49 26.2	-0.6	
WLF1	Llynfaes	148.77	6	P		PKPbc		14 49 26.2	-0.6	
HENT	Hendek	148.78	313	*i* P		PKPbc		14 49 26.8	-0.7	
YRC	Rhoscolyn	148.79	7	*e*P		PKPbc		14 49 25.9	-1.0	
YRC	Rhoscolyn	148.79	7	P		PKPbc		14 49 25.9	-1.0	
WPM1	Penmaenmawr	148.84	6	*e*P		PKPbc		14 49 26.6	-0.5	
WPM1	Penmaenmawr	148.84	6	P		PKPbc		14 49 26.6	-0.5	
CRVS	Cervenica-Dubn	148.88	334	*e*PKP		PKPbc		14 49 26.6	-0.8	
KDHN	Kadinhani	148.89	308	*i* P		PKPbc		14 49 27.4	-0.5	
NIE	Niedzica	148.93	335	*i* PKP		PKPbc		14 49 28.4	+0.9	
YLL	Llanberis	148.94	6	*e*P		PKPbc		14 49 27.2	-0.2	
YLL	Llanberis	148.94	6	P		PKPbc		14 49 27.2	-0.2	
ERMK	Ermenek	148.95	305	*i* P		PKPbc		14 49 28.1	-0.1	
TRPA	Tarpa	149.01	332	⇓*i*P		PKPbc		14 49 28.3	+0.6	
TRPA	Tarpa	149.01	332	⇓*e*		PKPbc		14 49 28.3	+0.6	
KBI1	Birley Grange	149.02	3	*e*P		PKPbc		14 49 27.1	-0.5	
KBI1	Birley Grange	149.02	3	P		PKPbc		14 49 27.1	-0.5	
KSP	Ksiaz	149.11	341	*e*PKPc		PKPbc		14 49 28.5	+0.7	
ISR	Istrita	149.11	324	⇓*i*P		PKPbc

BCLA				PKPab	**PKPab**	**14 49 44.5**	**-0.2**
SOP	**Sopron**	**151.76**	**338**‖	*e*	**PKPbc**	**14 49 34.9**	**+0.8**
CONA	**Conrad Observa**	**151.79**	**339**⇑	*i*PKiKP	**PKPbc**	**14 49 34.6**	**+0.3**
	comp=Z,43nm,1.1s,SNR=19						
PKS9	**Tamasi**	**152.02**	**334**‖	*e*	**PKPbc**	**14 49 35.0**	**+0.3**
TURN	**Turunc**	**152.10**	**308**	*i P*	**PKPbc**	**14 49 35.8**	**+0.6**
DOU	**Dourbes**	**152.10**	**355**	PKPbc	**PKPbc**	**14 49 35.0**	**+0.2**
DOU				PKPab	**PKPab**	**14 49 46.4**	**+0.1**
PKSM	**Moragy**	**152.18**	**333**‖	*i P*	**PKPbc**	**14 49 35.4**	**+0.3**
PKSM	**Moragy**	**152.18**	**333**‖	*e*	**PKPbc**	**14 49 35.4**	**+0.3**
RUP	**Ruppelstein**	**152.23**	**352**	PKP	**PKPdf**	**14 49 29.1**	**+1.1**
AYDN	**Tasoluk**	**152.29**	**310**	*i P*	**PKPbc**	**14 49 36.1**	**+0.4**
MOA	**Molln**	**152.38**	**341**⇑	*i*PKiKP	**PKPbc**	**14 49 35.3**	**-0.2**
	comp=Z,7.6nm,0.5s						
WLF	**Walferdange**	**152.38**	**353**	PKPbc	**PKPbc**	**14 49 36.4**	**+0.9**
WLF				PKPab	**PKPab**	**14 49 47.8**	**+0.3**
WLF				AP		15 32 07.4	
	comp=Z,20nm,1.3s						
WLF	**Walferdange**	**152.38**	**353**	*e*PKPdf	**PKPdf**	**14 49 28.4**	**+0.2**
WLF				*e*PKPbc	**PKiKP**	**14 49 36.5**	**+0.9**
WLF				*e*PKPab	**PKPab**	**14 49 48.0**	**+0.4**
WLF	**Walferdange**	**152.38**	**353**	*e*PKPdf	**PKPdf**	**14 49 28.3**	**+0.2**
WLF				*e*PKPbc	**PKPbc**	**14 49 35.8**	**+0.4**
WLF				*e*PKPab	**PKPab**	**14 49 46.5**	**-1.1**
VTS	**Vitosha**	**152.58**	**323**‖	*i P*	**PKPbc**	**14 49 36.7**	**+0.4**
STU	**Stuttgart**	**152.78**	**348**	*e*PKPdf	**PKPdf**	**14 49 28.9**	**+0.1**
STU				*e*PKPbc	**PKPbc**	**14 49 36.5**	**+0.2**
STU				*e*PKPab	**PKPab**	**14 49 49.4**	**+0.1**
LANF	**Langenberg**	**152.82**	**350**	PKP	**PKPdf**	**14 49 30.0**	**+1.1**
LANF	**Langenberg**	**152.82**	**350**	PKP	**PKPdf**	**14 49 30.0**	**+1.1**
FUR	**Furstenfeldbru**	**152.91**	**345**	*e*PKPab	**PKPab**	**14 49 50.4**	**+0.5**
RJOB	**Jochberg**	**152.91**	**342**	*e*PKPbc	**PKPbc**	**14 49 36.4**	**-0.3**
RJOB				*e*PKPab	**PKPab**	**14 49 50.7**	**+0.7**
SOKA	**Soboth**	**153.16**	**338**⇑	*i*PKPbc	**PKPbc**	**14 49 36.6**	**-0.8**
	comp=Z,19nm,1.4s						
KBA	**Koelnbreinsper**	**153.35**	**341**⇑	*i*PKPbc	**PKPbc**	**14 49 36.8**	**-1.0**
	comp=Z,10nm,0.8s						
CDF	**Champ du Feu**	**153.46**	**351**	*e*PKiKP	**PKPdf**	**14 49 29.8**	**-0.1**
SPAK	**Spaichingen-Ko**	**153.50**	**348**	PKP	**PKPdf**	**14 49 30.7**	**+0.8**
FLN	**La Foliniere**	**153.55**	**2**	*e*PKiKP	**PKPdf**	**14 49 30.0**	**+0.1**
WATA	**Walderalm**	**153.61**	**344**⇑	*i*PKiKP	**PKPbc**	**14 49 37.9**	**-0.5**
	comp=Z,7.7nm,0.5s						
MYKA	**Terra Mystica**	**153.66**	**340**‖	*i*PKPbc	**PKPbc**	**14 49 37.8**	**-0.6**
	comp=Z,7.3nm,0.5s						
WTTA	**Wattenberg**	**153.66**	**344**⇑	*i*PKiKP	**PKPbc**	**14 49 38.3**	**-0.3**
	comp=Z,14nm,0.4s						
ECH	**Echery**	**153.67**	**351**	*e*PKPab	**PKPab**	**14 49 52.8**	**-0.4**
MOTA	**Moosalm**	**153.72**	**344**‖	*i*PKiKP	**PKPbc**	**14 49 38.4**	**-0.2**
	comp=Z,20nm,1.1s						
LDF	**La Druitiere**	**153.73**	**2**	*e*PKiKP	**PKPdf**	**14 49 30.2**	**+0.1**
	comp=Z,7.5nm,0.7s						
THEF	**They Montfort**	**153.81**	**353**	PKP	**PKPdf**	**14 49 28.9**	**-1.4**
THEF	**They Montfort**	**153.81**	**353**	PKP	**PKPdf**	**14 49 28.9**	**-1.4**
FELD	**Feldberg im Sc**	**153.86**	**349**	PKP	**PKPdf**	**14 49 29.8**	**-0.7**
FELD	**Feldberg im Sc**	**153.86**	**349**	PKP	**PKPdf**	**14 49 29.8**	**-0.7**
ABTA	**Abfaltersbach**	**153.89**	**342**⇑	*i*PKPbc	**PKPbc**	**14 49 38.1**	**-0.8**
	comp=Z,13nm,0.6s						
GRR	**Gorron**	**153.91**	**3**	*e*PKiKP	**PKPdf**	**14 49 30.6**	**+0.2**
HAU	**Haudompre**	**153.99**	**352**	*e*PKiKP	**PKPdf**	**14 49 30.9**	**+0.3**
MOF	**Molkenrain**	**154.03**	**351**	PKP	**PKPdf**	**14 49 30.4**	**-0.3**
MOF	**Molkenrain**	**154.03**	**351**	PKP	**PKPdf**	**14 49 30.4**	**-0.3**
HINF	**Hinteralfeld**	**154.10**	**351**	*e*PKiKP	**PKPdf**	**14 49 30.9**	**+0.2**
FETA	**Feichten**	**154.11**	**345**‖	*i*PKPdf	**PKPdf**	**14 49 31.2**	**+0.3**
	comp=Z,11nm,0.8s						
BBS	**Basel-Blauen**	**154.34**	**350**	PKP	**PKPdf**	**14 49 31.5**	**+0.4**
DAVOX	**Davos/Dischmat**	**154.54**	**346**	PKP	**PKPdf**	**14 49 32.0**	**+0.4**
DAVOX				PKPbc	**PKPbc**	**14 49 41.0**	**+0.6**
DAVOX				PKPab	**PKPab**	**14 49 57.9**	**+0.8**
DAVOX	**Davos/Dischmat**	**154.54**	**346**	PKP	**PKPdf**	**14 49 32.0**	**+0.4**
	comp=Z,5.0nm,0.6s,baz=190,slow=5.2,SNR=8.8						
DAVOX				PKPbc	**PKPbc**	**14 49 41.0**	**+0.6**
	comp=Z,7.9nm,0.5s,baz=285,slow=2.4,SNR=12						
DAVOX				PKPab	**PKPab**	**14 49 57.9**	**+0.8**
	comp=Z,12nm,0.7s,baz=331,slow=3.6,SNR=10						
LOMF	**Lomont**	**154.56**	**351**	PKP	**PKPdf**	**14 49 27.0**	**-4.4**
TUE	**Stuetta**	**154.95**	**346**	*e*PKPdf	**PKPdf**	**14 49 31.6**	**-0.6**
LOR	**Lormes**	**154.97**	**355**	*e*PKiKP	**PKPdf**	**14 49 32.3**	**+0.4**
	comp=Z,12nm,0.9s						
SSF	**Saint Saulge**	**155.20**	**356**	*e*PKiKP	**PKPdf**	**14 49 32.6**	**+0.4**
	comp=Z,14nm,0.9s						
CABF	**La Chapelle**	**155.39**	**352**	*e*PKiKP	**PKPdf**	**14 49 33.3**	**+0.7**
	comp=Z,31nm,1.2s						
SMF	**Signal de Mont**	**155.59**	**355**	*e*PKiKP	**PKPdf**	**14 49 32.9**	**+0.1**
	comp=Z,5.4nm,0.8s						
MFF	**Saint Martin d**	**155.72**	**2**	*e*PKiKP	**PKPdf**	**14 49 33.2**	**+0.3**
	comp=Z,11nm,0.9s						
BGF	**Bois d'Agland**	**155.74**	**357**	*e*PKiKP	**PKPdf**	**14 49 33.4**	**+0.5**
	comp=Z,13nm,0.7s						
TCF	**Toulx Ste Croi**	**156.04**	**358**	*e*PKiKP	**PKPdf**	**14 49 33.6**	**+0.2**
	comp=Z,11nm,0.8s						
AGO	**Saint Agoulin**	**156.23**	**356**	PKP	**PKPdf**	**14 49 34.0**	**+0.4**
AGO	**Saint Agoulin**	**156.23**	**356**	PKP	**PKPdf**	**14 49 34.0**	**+0.4**
LPL	**La Plagne**	**156.37**	**350**	*e*PKiKP	**PKPdf**	**14 49 34.6**	**+0.5**
LPG	**La Plagne**	**156.38**	**350**	*e*PKiKP	**PKPdf**	**14 49 34.6**	**+0.4**
PYM	**Petit Puy Mans**	**156.54**	**357**	PKP	**PKPdf**	**14 49 34.4**	**+0.3**
PYM	**Petit Puy Mans**	**156.54**	**357**	PKP	**PKPdf**	**14 49 34.4**	**+0.3**
RJF	**Les Rejaudoux**	**157.03**	**359**	*e*PKiKP	**PKPdf**	**14 49 35.0**	**+0.3**
	comp=Z,7.9nm,0.9s						
LBL	**Lubilhac**	**157.04**	**356**	PKP	**PKPdf**	**14 49 35.8**	**+1.0**
LBL	**Lubilhac**	**157.04**	**356**	PKP	**PKPdf**	**14 49 35.8**	**+1.0**
ORIF	**Oris-en-Rattie**	**157.08**	**351**	*e*PKiKP	**PKPdf**	**14 49 35.3**	**+0.5**
	comp=Z,6.2nm,0.8s						
VIVF	**Saint-Julien-l**	**157.29**	**353**	*e*PKiKP	**PKPdf**	**14 49 35.6**	**+0.6**
CAF	**Calviac**	**157.40**	**358**	*e*PKiKP	**PKPdf**	**14 49 35.6**	**+0.4**
SAOF	**Saorge**	**157.70**	**348**	PKP	**PKPdf**	**14 49 35.9**	**+0.3**
SAOF	**Saorge**	**157.70**	**348**	PKP	**PKPdf**	**14 49 35.9**	**+0.3**
AUTN	**L'Aution**	**157.71**	**348**	PKP	**PKPdf**	**14 49 35.0**	**-0.8**
AUTN	**L'Aution**	**157.71**	**348**	PKP	**PKPdf**	**14 49 35.0**	**-0.8**
TOUF	**Mont Tournerai**	**157.73**	**348**	PKP	**PKPdf**	**14 49 36.3**	**+0.5**
TOUF	**Mont Tournerai**	**157.73**	**348**	PKP	**PKPdf**	**14 49 36.3**	**+0.5**
REVF	**Revere**	**157.97**	**348**	PKP	**PKPdf**	**14 49 35.2**	**-0.7**
REVF	**Revere**	**157.97**	**348**	PKP	**PKPdf**	**14 49 35.2**	**-0.7**
SMRF	**Simiane la Rot**	**158.04**	**351**	*e*PKiKP	**PKPdf**	**14 49 36.7**	**+0.7**
LASF	**Ste Croix**	**158.14**	**355**	*e*PKiKP	**PKPdf**	**14 49 36.7**	**+0.6**
	comp=Z,10nm,1.1s						
FRF	**La Foret Royal**	**158.28**	**349**	*e*PKiKP	**PKPdf**	**14 49 37.2**	**+1.0**
LMR	**La Mourre**	**158.52**	**349**	*e*PKiKP	**PKPdf**	**14 49 37.4**	**+0.9**
	comp=Z,9.0nm,0.9s						
EPF	**Esparros**	**159.30**	**1**	*e*PKiKP	**PKPdf**	**14 49 38.1**	**+0.6**
EVO	**Evora**	**162.04**	**24**⇑	*i*PKiKP	**PKPdf**	**14 49 41.4**	**+0.9**
	comp=Z,12nm,0.8s						
ESDC	**Sonseca Array**	**162.15**	**13**	PKPab	**PKPab**	**14 50 30.6**	**+0.4**
ESDC	**Sonseca Array**	**162.15**	**13**	PKPab	**PKPab**	**14 50 30.6**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=346,slow=4.4,SNR=19						
LIC	**Lamto**	**162.99**	**159**	*e*PKiKP	**PKPdf**	**14 49 42.4**	**+0.2**
	comp=Z,9.0nm,0.6s						
DBIC	**Dimbokro**	**163.46**	**159**	PKP	**PKPdf**	**14 49 42.2**	**-0.4**
DBIC	**Dimbokro**	**163.46**	**159**	PKP	**PKPdf**	**14 49 42.2**	**-0.4**
	comp=Z,5.9nm,0.6s,baz=177,slow=1.6,SNR=9.2						
KEST	**Kesra**	**164.77**	**333**	PKPab	**PKPab**	**14 50 42.7**	**+0.7**
KEST	**Kesra**	**164.77**	**333**	PKPab	**PKPab**	**14 50 42.7**	**+0.7**
	comp=Z,4.0nm,0.8s,baz=313,slow=2.3,SNR=16						
MDT	**Midelt**	**168.37**	**24**	PKP	**PKPdf**	**14 49 47.4**	**+1.3**
MDT				PKPab	**PKPab**	**14 50 57.8**	**-0.2**
MDT	**Midelt**	**168.37**	**24**	PKP	**PKPdf**	**14 49 47.4**	**+1.3**
	comp=Z,3.1nm,0.8s,baz=36,slow=0.5,SNR=4.4						
MDT				PKPab	**PKPab**	**14 50 57.8**	**-0.2**
	baz=27,slow=4.5						
TOA0	**Torodi Ar. Sit**	**170.89**	**184**	*e*PKPdf	**PKPdf**	**14 49 46.7**	**-1.2**
TORD	**Torodi Ar. Bea**	**170.89**	**184**	PKP	**PKPdf**	**14 49 46.6**	**-1.3**
TORD				PKPab	**PKPab**	**14 51 08.7**	**-0.5**
TORD	**Torodi Ar. Bea**	**170.89**	**184**	PKP	**PKPdf**	**14 49 46.6**	**-1.3**
	comp=Z,6.1nm,0.8s,baz=329,slow=0.6,SNR=35						
TORD				PKPab	**PKPab**	**14 51 08.7**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=177,slow=5.0,SNR=7.6						

*ISCJB **21** 14:32:28.6±0.9,3˚.54S±0˚.08×128˚.94E±0˚.10,h33km, mb3.9/1,MS3.2/1,Error ellipse: s-maj=13.9km s-min=11.9km az=11.1*

*IDC **21** 14:32:28.4±2.5,3˚.48S×130˚.44E,h0km,mb3.7/2, mb1 4.0/4,mb1mx3.6/22,mbtmp3.8/4,ML3.5/2,MS3.3/1, Ms1 3.3/1,ms1mx2.4/38,Error ellipse: s-maj=133.1km s-min=27.3km az=74.0*

*AUST **21** 14:32:31.8±0.0,3˚.33S×129˚.02E,h70km,Error ellipse: s-maj=1.3km s-min=1.2km az=43.0*

ISC 21 14:32:30.9±1.2,3˚.5S±0˚.1×129˚.0E±0˚.1,h35km,n12, σ1§50/9,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.29**	**80**	P		**Pn**		**14 33 21.1**	**+1.1**
	baz=3.3,SNR=21								
SWI	**Sorong**	**3.44**	**41**	P		**Pn**		**14 33 22.0**	**-0.1**
	baz=3.3,SNR=8.8								
LUWI	**Luwuk**	**6.67**	**291**	P		**Pn**		**14 34 06.4**	**-0.1**
	baz=6.6,SNR=3.0								
MTN	**Manton Dam**	**9.54**	**167**	P		Pn		14 34 52.9	+7.0
	baz=9.7,SNR=3.5								
KDU	**Kakadu**	**9.78**	**160**	P		**Pn**		**14 34 48.6**	**-0.5**
	baz=10.0,SNR=5.0								
KNRA	**Kununurra**	**12.13**	**181**	P		**Pn**		**14 35 23.4**	**+2.1**
	baz=12,SNR=4.8								
FITZ	**Fitzroy Crossi**	**14.90**	**193**	Pn		**P**		**14 36 04.6**	**+0.2**
	0.1nm,0.3s,baz=31,slow=12,SNR=5.6								
FITZ	**Fitzroy Crossi**	**14.90**	**193**	P		**P**		**14 36 04.3**	**-0.1**
	baz=15,SNR=4.4								
WRA	**Warramunga Arr**	**17.18**	**163**	Pn		**Pn**		**14 36 25.6**	**-2.7**
	0.2nm,0.3s,baz=350,slow=11,SNR=10.0								
ASAR	**Alice Springs**	**20.63**	**167**	P		**P**		**14 37 06.8**	**-0.7**
	2.2nm,0.7s,baz=352,slow=13,SNR=31								
CTA	**Charters Tower**	**23.58**	**136**	LR		LR		14 45 38.7	
	comp=Z,80nm,18.9s,baz=208,slow=35								
MKAR	**Makanchi Array**	**64.75**	**326**	P		P		14 43 14.0	+8.1
	1.0nm,0.8s,baz=120,slow=7.7,SNR=5.6								

*IDC **21** 14:38:04.4±1.2,35˚.45N×143˚.04E,h0km,mb3.4/3, mb1 3.6/6,mb1mx3.4/28,mbtmp3.5/6,ML3.3/3,Error ellipse: s-maj=30.7km s-min=22.1km az=109.0*

*JMA **21** 14:38:07.7±0.4,35˚.56N×142˚.96E,h77km,M3.2*

ISC 21 14:38:04.9±3.7,35˚.53N±0˚.05×143˚.01E±0˚.07,h9km±24km, n22,σ1§61/32,mb3.5/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.76**	**276**	P		**Pn**		**14 38 36.6**	**+1.1**
BSO1	**Boso 1**	**1.88**	**243**	P		**Pn**		**14 38 37.2**	**+0.5**
BSO1				S		**Sn**		**14 39 00.0**	**-0.2**
BSO3	**Boso 3**	**2.17**	**251**	P		**Pb**		**14 38 42.9**	**-1.2**
BSO4	**Boso 4**	**2.25**	**257**	S		**Sb**		**14 39 12.6**	**-0.9**
JFT	**Otama**	**2.93**	**314**	P		**Pn**		**14 38 52.6**	**+1.0**
JFT				*e*S		**Sn**		**14 39 26.0**	**-0.9**
JAG	**Ashikaga**	**3.02**	**288**	P		**Pn**		**14 38 53.2**	**+0.4**
JAG				*e*S		**Sn**		**14 39 26.8**	**-2.3**
JOD2	**Odawara 2**	**3.21**	**266**	P		**Pn**		**14 38 56.4**	**+0.9**
JOD2				*e*S		**Sn**		**14 39 32.5**	**-1.5**
JRY	**Ryogami san**	**3.37**	**280**	P		**Pn**		**14 38 59.1**	**+1.3**
JHJ2	**Mitsune**	**3.57**	**229**	P		**Pn**		**14 39 01.6**	**+1.1**
JHJ2				*e*S		**Sn**		**14 39 40.8**	**-2.0**
JHJ	**Hachijo jima 2**	**3.59**	**229**	Pn		**Pn**		**14 39 00.5**	**-0.2**
	8.1nm,0.3s,baz=77,slow=21,SNR=18								
JHJ					Sn		**Sn**	**14 39 40.4**	**-2.8**
	40nm,0.3s,baz=81,slow=22,SNR=8.8								
JYN	**Shimob**	**3.64**	**271**	P		**Pn**		**14 39 02.9**	**+1.4**
JMK	**Ichinoseki**	**3.70**	**338**	P		**Pn**		**14 39 02.2**	**-0.1**
JMK				S		Sn		14 39 42.9	-3.1
JYK	**Kaneyama**	**3.99**	**329**	P		**Pn**		**14 39 06.3**	**+0.1**
JYK				*e*S		**Sn**		**14 39 50.4**	**-2.7**
MJAR	**Matsushiro Arr**	**4.02**	**286**	Pn		**Pn**		**14 39 09.0**	**+2.4**
	3.9nm,0.3s,baz=98,slow=14,SNR=48								
MJAR					Sn		**Sn**	**14 39 55.4**	**+1.6**
	0.9nm,0.3s,baz=11,slow=17,SNR=4.3								
MAT	**Matsushiro**	**4.02**	**286**	P		**Pn**		**14 39 08.7**	**+2.1**
MAT				S		**Sn**		**14 39 55.5**	**+1.6**
MAT	**Matsushiro**	**4.02**	**286**	P		**Pn**		**14 39 08.9**	**+2.3**
JOM	**Ohasama**	**4.17**	**341**	P		**Pn**		**14 39 09.7**	**+1.1**
JOM				S		**Sn**		**14 39 54.8**	**-2.7**
JSD	**Sado**	**4.56**	**305**	P		**Pn**		**14 39 15.6**	**+1.6**
ASAJ	**Asahikawa**	**8.58**	**358**	Pn		**Pn**		**14 40 09.1**	**-0.1**
	0.3nm,0.3s,baz=207,slow=14,SNR=4.2								
ILAR	**Eielson Array**	**50.09**	**32**	P		**P**		**14 47 01.6**	**+1.8**
	0.5nm,0.9s,baz=263,slow=6.2,SNR=3.0								
WRA	**Warramunga Arr**	**55.77**	**190**	P		**P**		**14 47 42.2**	**0.0**
	0.5nm,0.7s,baz=10,slow=7.7,SNR=3.2								
ASAR	**Alice Springs**	**59.50**	**190**	P		**P**		**14 48 08.9**	**+0.5**
	0.4nm,1.0s,baz=14,slow=12,SNR=4.5								

HEL 21 14:45:39.8±0.2,67˚.19N×20˚.82E,h0km,ML0.9, Explosion,Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HEF	**Hetta**	**1.63**	**40**	*e*P		Pn		14 46 08.7	-1.1
HEF				*e*S		Sn		14 46 30.1	-1.3
KIF	**Kilpisjarvi**	**1.82**	**360**	*e*P		Pn		14 46 12.5	+0.2
KIF				*e*S		Sb		14 46 36.9	-0.4
RNF	**Rovaniemi**	**2.13**	**104**	*e*PB		Pn		14 46 16.9	+0.3
RNF				*e*SB		Sn		14 46 44.3	+0.6
SGF	**Sodankyl**	**2.23**	**81**	*e*P		Pn		14 46 18.1	+0.1
SGF				*e*SB		Sn		14 46 47.2	+1.1
ARA0	**ARCESS Array S**	**2.92**	**34**	*e*P		Pn		14 46 27.1	-0.4
ARA0				*e*SB		Sb		14 47 07.0	-2.0
KEV	**Kevo**	**3.44**	**39**	MSG				14 47 24.8	
	comp=Z,0.2nm,0.3s								
KEV				*e*SG		Sb		14 47 25.2	+1.4

*DJA **21** 14:49:24.8±3.4,8˚.N±32˚×12˚7E±˚,h68km±32km,M5.2/7, mB5.4/6,mb5.2/7,MLv5.5/2,Mw(mB)4.8/6*

*NEIC **21** 14:49:24.5±0.3,7˚.82N×127˚.00E,h10km,mb4.9/23,Error ellipse: s-maj=9.5km s-min=6.1km az=82.0*

*MOS **21** 14:49:25.7±1.2,7˚.75N×126˚.73E,h33km,mb5.0/22,Error ellipse: s-maj=14.5km s-min=6.2km az=108.9*

*MAN **21** 14:49:25,7˚.71N×127˚.31E,h46km,mb5.4,ML4.4,MS4.7*

*ISCJB **21** 14:49:28.6±0.5,7˚.77N±0˚.02×127˚.07E±0˚.04,h60km±4km, mb4.7/80,Error ellipse: s-maj=6.9km s-min=3.6km az=161.7*

*BJI **21** 14:49:30.4,7˚.88N×126˚.88E,h61km,mB5.0/29,mb4.7/34, Ms4.6/34,Ms7 4.3/34*

*GCMT **21** 14:49:30.4±0.3,7˚.70N×127˚.26E,h22km±1km,MW5.0, Moment Tensor Solution. s32,c40; s68,c101; Moment tensor: Scale 10^16^Nm; Mrr3.11±.19; Mθθ0.22±.11; Mφφ-3.32±.13; Mrθ1.16±.20; Mθφ-0.56±.08; Mφr1.89±.18; Best double couple: M0:4.00000×10^16^ NP1:φ175.00000°, δ30.00000°,λ67.00000°. NP2:φ22.00000°,δ62.00000°, λ103.00000°. Principal axes: T 3.8900, Plg70.0000°, Azm319.0000°; N 0.1300, Plg12.0000°, Azm196.0000°; P -4.0100, Plg16.0000°, Azm102.0000°; Data Used: IU IC G II CN.*

*AUST **21** 14:49:30.9,7˚.49N×127˚.52E,h60km*

*IDC **21** 14:49:34.3±1.2,7˚.70N×126˚.85E,h94km±10km,mb4.2/34, mb1 4.2/35,mb1mx4.2/39,mbtmp4.2/35,MS4.0/17, Ms1 4.1/17,ms1mx3.8/35,Error ellipse: s-maj=14.4km s-min=7.1km az=81.0*

ISC 21 14:49:29.9±0.3,7˚.77N±0˚.03×127˚.08E±0˚.04,h55km±2km, h54km:pP-P,n242,σ1§60/303,mb4.7/79,MS4.1/32,15C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.15**	**225**	*e*P		**Pn**		**14 49 47.5**	**-2.3**
DAV	**Davao City (W)**	**1.64**	**245**	*e*Pn		**Pn**		**14 49 56.2**	**-0.2**
DAV	**Davao City (W)**	**1.64**	**245**	P		**Pn**		**14 49 57.7**	**+1.3**
DAV	**Davao City (W)**	**1.64**	**245**	P		**Pn**		**14 49 57.6**	**+1.2**
	166nm,0.3s,baz=80,slow=7.5,SNR=87								
DAV				S		**Sn**		**14 50 18.1**	**+1.7**
	347nm,0.3s,baz=122,slow=18,SNR=7.4								
DMPH	**Davao City--Mi**	**1.70**	**246**⇑	*e*P		**Pn**		**14 49 58.4**	**+1.2**
DMPH				*e*S		**Sn**		**14 50 23.4**	**+5.6**
BUTP	**Butuan**	**1.87**	**310**	*e*P		**Pn**		**14 49 58.8**	**-0.8**
KCP	**Kidapawan**	**2.11**	**249**‖	*e*P		Pn		14 50 09.3	+6.4
CGP	**Cagayan de Oro**	**2.46**	**286**⇑	*i*P		**Pn**		**14 50 08.2**	**+0.6**
CGP				*i* S		**Sn**		**14 50 42.3**	**+5.9**
CTBH	**Cotabato--PC H**	**2.86**	**259**‖	*e*P		**Pn**		**14 50 12.8**	**-0.3**
MSLP	**Maasin**	**3.21**	**317**	*e*P		**Pn**		**14 50 18.1**	**+0.2**
PAGZ	**Pagadian**	**3.66**	**271**	*e*P		**Pn**		**14 50 24.7**	**+0.7**
TBP	**Tagbilaran**	**3.71**	**301**	*e*P		**Pn**		**14 50 25.3**	**+0.6**
DCPH	**Dipolog City**	**3.77**	**283**‖	*e*P		**Pn**		**14 50 26.4**	**+0.8**
LLP	**Lapu-Lapu**	**3.98**	**310**	*e*P		**Pn**		**14 50 28.3**	**-0.2**
LLP				*e*S		Sn		14 51 20.7	+6.8
OCLP	**Ormoc**	**4.07**	**323**	*e*P		**Pn**		**14 50 29.2**	**-0.5**
SNPH	**Sibulan**	**4.11**	**293**‖	*i*P		Pn		14 50 16.7	-14
SNPH				*i* S		Sn		14 51 07.9	-9.2
GUIM	**Jordan**	**5.26**	**303**	*e*P		**Pn**		**14 50 45.8**	**-0.2**
CNP	**Catarman**	**5.28**	**333**	*e*P		Pn		14 50 49.7	+3.4
RCP	**Roxas**	**5.70**	**312**‖	*e*P		**Pn**		**14 50 52.0**	**0.0**
MNI	**Manado**	**6.67**	**200**	P		Pn		**14 51 06.9**	**+1.6**
	253nm,0.9s,3µm1.6nm								
CUYO	**Cuyo Island**	**6.72**	**298**	*e*P		**Pn**		**14 51 06.3**	**+0.3**
TNTI	**Ternate**	**6.96**	**178**	P		**Pn**		**14 51 09.2**	**-0.1**
	392nm,1.1s,3µm								

PALU	**Palau**	**7.35**	**93**	P		**Pn**	**14 51 11.5**	**-3.1**
	baz=6.9,SNR=3.7							
PALU				S		Sn	14 52 26.1	-11
	baz=6.9,SNR=6.3							
SJMP	**San Jose**	**7.49**	**309**	*e*P		**Pn**	**14 51 18.9**	**+2.3**
KMSI	**Cibinong**	**7.78**	**204**	P		**Pn**	**14 51 23.0**	**+2.4**
	306nm,1.1s,5µm							
LBMI	**Labuha**	**8.36**	**177**	P		**Pn**	**14 51 28.3**	**-0.3**
	230nm,0.9s,3µm							
TGY	**Tagaytay City**	**8.71**	**317**	P		Pn	14 51 41.3	+7.8
	26nm,0.3s,baz=246,slow=19,SNR=5.0							
MRSI	**Marisa**	**8.87**	**215**	P		**Pn**	**14 51 37.0**	**+1.5**
	134nm,1.0s,1µm							
SWI	**Sorong**	**9.54**	**154**	P		**Pn**	**14 51 42.1**	**-2.5**
	50nm,0.7s							
SWI	**Sorong**	**9.54**	**154**	P		**Pn**	**14 51 42.1**	**-2.5**
	baz=9.2,SNR=8.3							
SWI				S		Sn	14 53 22.0	-8.4
	baz=9.2,SNR=4.5							
LUWI	**Luwuk**	**9.75**	**206**	P		**Pn**	**14 51 49.2**	**+1.7**
LUWI	**Luwuk**	**9.75**	**206**	P		Pn	14 51 52.5	+5.0
	baz=9.8,SNR=4.3							
KKM	**Kota Kinabalu**	**10.92**	**262**	*e*Pn		**Pn**	**14 52 02.3**	**-1.4**
KKM	**Kota Kinabalu**	**10.92**	**262**	P		Pn	14 52 07.6	+3.9
	baz=11,SNR=20							
SKSI	**Soroako, Sulaw**	**11.72**	**209**	P		**Pn**	**14 52 13.8**	**-0.8**
FAKI	**Fak Fak**	**11.80**	**154**	P		**Pn**	**14 52 13.9**	**-1.8**
FAKI	**Fak Fak**	**11.80**	**154**	P		**Pn**	**14 52 13.7**	**-2.0**
	baz=11,SNR=14							
FAKI				S		Sn	14 54 16.8	-9.1
	baz=11,SNR=8.2							
KAPI	**Kappang**	**14.65**	**210**	P		**Pn**	**14 52 53.1**	**-1.1**
KAPI	**Kappang**	**14.65**	**210**	P		**Pn**	**14 52 53.1**	**-1.1**
	2.9nm,0.3s,baz=24,slow=20,SNR=9.1							
YULB	**Yu-li**	**16.50**	**341**	*e*Pn		**Pn**	**14 53 17.2**	**-0.6**
	56nm,1.9s							
TPUB	**Ta-pu**	**16.64**	**339**	*e*Pn		**Pn**	**14 53 17.2**	**-2.4**

MJAR	**Matsushiro Arr**	**30.39**	**18**	P		**P**		**14 55 38.5**	**+1.6**
	comp=Z,2.0nm,0.8s,baz=197,slow=9.7,SNR=7.9								
QIS	**Mount Isa**	**30.73**	**157**	P		**P**		**14 55 40.0**	**-0.1**
	baz=30,SNR=19								
MTSU	**Mount Surprise**	**30.86**	**147**	P		**P**		**14 55 42.4**	**+1.2**
	baz=30,SNR=13								
XAN	**Xi'an**	**31.05**	**330**	P		P		14 55 39.4	-3.4
XAN				S		S		15 00 36.6	-7.7
XAN				pmax		pmax			
	comp=Z,1.0nm,0.6s								
XAN				pmax		pmax			
	comp=Z,22nm,5.6s								
XAN				LR		LR			
	comp=N,180nm,20.4s								
XAN				LR		LR			
	comp=Z,83nm,15.3s								
CD2	**Chengdu**	**31.70**	**320**	P		**P**		**14 55 48.8**	**+0.2**
CD2				pP		**pP**		**14 56 02.1**	**-0.4**
CD2				sP		**sP**		**14 56 08.4**	**-0.5**
CD2				PP		**PnPn**		**14 56 55.0**	**+0.6**
CD2				PcP		**PcP**		**14 58 39.6**	**+0.2**
CD2				S		**S**		**15 00 53.3**	**-1.3**
CD2				sS		**sS**		**15 01 16.3**	**-1.7**
CD2				PcS		**PcS**		**15 02 22.9**	**-1.2**
CD2				SS		**SnSn**		**15 02 45.6**	**-0.1**
CD2				pmax		pmax			
	comp=Z,20nm,0.5s								
CD2				pmax		pmax			
	comp=Z,160nm,5.6s								
CD2				LR		LR			
	comp=N,740nm,16.6s								
CD2				LR		LR			
	comp=E,690nm,18.6s								
CD2				LR		LR			
	comp=Z,680nm,15.7s								
ASAR	**Alice Springs**	**31.95**	**168**	P		**P**		**14 55 50.8**	**0.0**
ASAR				PcP		**PcP**		**14 58 41.0**	**+0.8**
ASAR				S		**S**		**15 00 57.0**	**-1.4**
ASAR	**Alice Springs**	**31.95**	**168**	P		**P**		**14 55 50.8**	**0.0**
	comp=Z,1.9nm,0.7s,baz=342,slow=6.6,SNR=16								
ASAR				PcP		**PcP**		**14 58 40.9**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=345,slow=2.7,SNR=3.1								
ASAR				S		**S**		**15 00 57.0**	**-1.4**
	comp=Z,1.0nm,1.0s,baz=353,slow=20,SNR=4.0								
CTA	**Charters Tower**	**33.50**	**146**	P		**P**		**14 56 05.0**	**+0.5**
CTA	**Charters Tower**	**33.50**	**146**	P		**P**		**14 56 05.0**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=318,slow=8.5,SNR=5.1								
CTAO	**Charters Tower**	**33.50**	**146**	*e*P		**P**		**14 56 06.5**	**+2.1**
CTAO				pmax		pmax			
	comp=Z,16nm,0.9s								
CTAO	**Charters Tower**	**33.50**	**146**	*e*P		**P**		**14 56 06.5**	**+2.1**
	comp=Z,16nm,0.9s								
BJI	**Beijing**	**33.58**	**345**	P		**P**		**14 56 05.6**	**+0.8**
BJI				S		**S**		**15 01 24.9**	**+1.5**
BJI				pmax		pmax			
	comp=Z,7.0nm,0.8s								
BJI				pmax		pmax			
	comp=Z,110nm,3.5s								
BJI				LR		LR			
	comp=N,220nm,15.9s								
BJI				LR		LR			
	comp=E,220nm,16.9s								
BJI				LR		LR			
	comp=Z,140nm,21.7s								
MEEK	**Meekatharra**	**35.17**	**193**	P		**P**		**14 56 18.5**	**-0.3**
	baz=35,SNR=7.6								
LZH	**Lanzhou**	**35.28**	**326**	*e*P		**P**		**14 56 21.8**	**+2.0**
LZH				pP		**pP**		**14 56 37.3**	**+3.5**
LZH				sP		**sP**		**14 56 44.0**	**+3.8**
LZH				PP		**PP**		**14 57 42.8**	**+2.0**
LZH				S		**S**		**15 01 50.3**	**+0.2**
LZH				sS		**sS**		**15 02 14.8**	**+1.1**
LZH				pmax		pmax			
	comp=Z,16nm,1.0s								
LZH				pmax		pmax			
	comp=Z,52nm,4.0s								
LZH				LR		LR			
	comp=N,370nm,12.3s								
LZH				LR		LR			
	comp=E,310nm,12.0s								
LZH				LR		LR			
	comp=Z,640nm,13.8s								
HHC	**Hu-ho-hao-te**	**35.72**	**340**	*e*P		**P**		**14 56 23.8**	**+0.3**
HHC				PP		**PP**		**14 57 46.4**	**+0.9**
HHC				PcP		**PcP**		**14 58 51.5**	**+0.8**
HHC				S		**S**		**15 01 56.3**	**-0.4**
HHC				ScP		**ScP**		**15 02 32.3**	**0.0**
HHC				PcS		**PcS**		**15 02 37.0**	**-1.0**
HHC				SS		**SnSn**		**15 04 18.9**	**-4.0**
HHC				ScS		**ScS**		**15 06 36.3**	**-1.1**
HHC				pmax		pmax			
	comp=Z,44nm,0.7s								
HHC				pmax		pmax			
	comp=Z,280nm,6.3s								
HHC				LR		LR			
	comp=N,450nm,14.0s								
HHC				LR		LR			
	comp=E,390nm,13.7s								
HHC				LR		LR			
	comp=Z,460nm,13.5s								
CN2	**Changchun**	**35.92**	**358**	*e*P		**P**		**14 56 27.5**	**+2.5**
CN2				*es*P		**sP**		**14 56 45.1**	**-0.3**
CN2				*e*S		**S**		**15 02 02.4**	**+3.0**
CN2				LR		LR			
	comp=N,200nm,14.0s								
CN2				LR		LR			
	comp=E,200nm,14.0s								
CN2				LR		LR			
	comp=Z,200nm,15.0s								
USRK	**Ussuriysk Arra**	**36.54**	**6**	P		**P**		**14 56 32.2**	**+1.9**
	comp=Z,3.5nm,0.8s,baz=190,slow=9.7,SNR=7.7								
MDJ	**Mudanjiang**	**36.77**	**3**	P		**P**		**14 56 33.8**	**+1.6**
MDJ				pP		**pP**		**14 56 46.9**	**+0.7**
MDJ				sP		**sP**		**14 56 52.8**	**+0.1**
MDJ				PP		**PnPn**		**14 57 58.8**	**+1.5**
MDJ				S		**S**		**15 02 14.9**	**+2.6**
MDJ				ScS		**ScS**		**15 06 41.4**	**-1.4**
MDJ				pmax		pmax			
	comp=Z,37nm,1.3s								
MDJ				pmax		pmax			
	comp=Z,120nm,3.3s								
MDJ				LR		LR			
	comp=N,180nm,16.4s								
MDJ				LR		LR			
	comp=E,130nm,14.5s								
MDJ				LR		LR			
	comp=Z,260nm,17.1s								
MDJ	**Mudanjiang**	**36.77**	**3**	*e*P		**P**		**14 56 31.6**	**-0.6**
	comp=Z,112nm,1.6s								
MDJ				*ep*P		**pP**		**14 56 45.3**	**-1.0**
HNR	**Honiara**	**36.93**	**117**	LR		LR		15 09 53.9	
	comp=Z,165nm,20.2s,baz=296,slow=33								
QLP	**Quilpie**	**37.99**	**155**	P		**P**		**14 56 44.8**	**+2.1**
	baz=38,SNR=4.2								
MORW	**Morawa**	**38.14**	**196**	P		**P**		**14 56 44.2**	**+0.2**
	baz=38,SNR=5.5								
FORT	**Forrest**	**38.34**	**179**	*e*P		**P**		**14 56 46.2**	**+0.6**
	comp=Z,33nm,0.7s								
ASAJ	**Asahikawa**	**38.66**	**18**	P		**P**		**14 56 50.8**	**+2.6**
ASAJ	**Asahikawa**	**38.66**	**18**	P		**P**		**14 56 50.8**	**+2.6**
	comp=Z,5.4nm,0.6s,baz=235,slow=21,SNR=8.6								
KMBL	**Kambalda**	**39.23**	**187**	P		**P**		**14 56 53.3**	**+0.2**
	baz=39,SNR=4.4								
BLDU	**Ballidu**	**39.44**	**194**	P		**P**		**14 56 54.8**	**-0.1**
	baz=40,SNR=9.4								
YUK	**Yuzh-Kuril'sk**	**39.68**	**21**	*c i*P		**P**		**14 56 54.8**	**-1.8**
YUK				*i* S		**S**		**15 02 50.5**	**-5.7**
YUK				*i* SS		**SS**		**15 05 54.6**	**+1.2**
YUK				MLR		MLR			
	comp=N,118nm,21.0s								
YUK				MLR		MLR			
	comp=Z,147nm,21.0s								
YUK				MLR		MLR			
	comp=E,153nm,21.0s								
GTA	**Gaotai**	**39.89**	**326**	*e*P		**P**		**14 56 57.8**	**-0.9**
GTA				pP		**pP**		**14 57 12.8**	**0.0**
GTA				sP		**sP**		**14 57 20.1**	**+0.9**
GTA				pmax		pmax			
	comp=Z,2.0nm,0.9s								
KLBR	**Kellerberrin**	**40.14**	**192**	P		**P**		**14 57 00.7**	**0.0**
	baz=40,SNR=8.5								
LSA	**Lhasa**	**40.15**	**308**	*e*P		**P**		**14 57 01.6**	**+0.2**
LSA				pmax		pmax			
	comp=Z,5.0nm,0.4s								
LSA	**Lhasa**	**40.15**	**308**	*e*P		**P**		**14 57 01.6**	**+0.2**
	comp=Z,4.9nm,0.4s								
HABR	**Khabarovsk**	**41.12**	**8**	*e*P		**P**		**14 57 07.4**	**-1.1**
HABR				*e*S		**S**		**15 03 17.9**	**+0.2**
HABR				*e*SS		**SS**		**15 06 23.0**	**+0.9**
HABR				*e*SSS		SSS		15 06 51.8	
HABR				*e*				15 07 06.7	
HABR				MLR		MLR			
	comp=Z,283nm,18.0s								
BBOO	**Buckleboo**	**41.25**	**168**	*e*P		**P**		**14 57 10.4**	**+0.6**
	comp=Z,2μm,2.1s								
BBOO	**Buckleboo**	**41.25**	**168**	P		P		14 57 06.1	-3.7
	baz=41,SNR=7.6								
KLR	**Kul'dur**	**41.51**	**5**	*e*P		**P**		**14 57 09.4**	**-2.3**
KLR				pmax		pmax			
	comp=Z,50nm,1.8s								
NWAO	**Narrogin (SRO)**	**41.54**	**193**	P		**P**		**14 57 12.3**	**+0.1**
NWAO	**Narrogin (SRO)**	**41.54**	**193**	P		**P**		**14 57 12.3**	**+0.1**
	comp=Z,16nm,0.9s,baz=9.8,slow=6.6,SNR=6.4								
STKA	**Stephens Creek**	**41.79**	**161**	P		**P**		**14 57 15.6**	**+1.4**
	comp=Z,27nm,0.8s								
STKA	**Stephens Creek**	**41.79**	**161**	P		**P**		**14 57 15.6**	**+1.4**
	comp=Z,2.8nm,0.7s,baz=355,slow=6.9,SNR=6.7								
STKA				LR		LR		15 14 58.9	
	comp=Z,243nm,21.9s,baz=10,slow=36								
STKA	**Stephens Creek**	**41.79**	**161**	P		**P**		**14 57 14.4**	**+0.2**
	baz=42,SNR=5.0								
TAPN	**Taplejung**	**42.03**	**303**	*e*P		**P**		**14 57 15.6**	**-1.1**
	comp=Z,27nm,0.9s								
ODAN	**Odare**	**42.13**	**302**	*e*P		**P**		**14 57 16.7**	**-0.8**
	comp=Z,28nm,0.8s								
RAMN	**Ramite**	**42.83**	**302**	*e*P		**P**		**14 57 22.1**	**-1.1**
	comp=Z,18nm,0.9s								
SONM	**Songino Array**	**43.63**	**340**	P		**P**		**14 57 28.5**	**-0.6**
SONM	**Songino Array**	**43.63**	**340**	P		**P**		**14 57 28.5**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=158,slow=11,SNR=6.3								
SONM				LR		LR		15 17 42.9	
	comp=Z,248nm,19.1s,baz=156,slow=39								
GUN	**Gumba**	**43.75**	**303**	*e*P		**P**		**14 57 29.5**	**-1.2**
	comp=Z,22nm,0.8s								
PKI	**Pulchoki**	**44.03**	**302**	*e*P		**P**		**14 57 31.3**	**-1.6**
PKIN	**Phulchoki**	**44.05**	**302**	*e*P		**P**		**14 57 31.6**	**-1.4**
KKN	**Kakani**	**44.21**	**302**	*e*P		**P**		**14 57 32.6**	**-1.6**
	comp=Z,12nm,0.8s								
DMN	**Daman**	**44.30**	**302**	*e*P		**P**		**14 57 34.0**	**-1.0**
KOLN	**Koldanda**	**45.62**	**301**	*e*P		**P**		**14 57 43.9**	**-1.5**
	comp=Z,17nm,0.9s								
DANN	**Dangsing**	**45.66**	**302**	*e*P		**P**		**14 57 44.5**	**-1.3**
	comp=Z,14nm,0.7s								
ARPS	**Mount Arapiles**	**46.42**	**164**	P		**P**		**14 57 52.8**	**+1.6**
	baz=46,SNR=5.7								
ZAK	**Zakamensk**	**46.87**	**339**	*e*P		**P**		**14 57 54.3**	**-0.5**
ZAK				*e*				14 59 27.5	
DZM	**Mont Dzumac**	**48.66**	**128**	*e*LR		LR		15 12 12.8	
	comp=Z,256nm,24.1s								
CLNS	**Chul'man**	**48.97**	**358**	*e*P		**P**		**14 58 11.8**	**+1.0**
CLNS				pmax		pmax			
	comp=Z,22nm,1.0s								
CLNS				pmax		pmax			
	comp=N,12nm,0.9s								
CLNS				pmax		pmax			
	comp=E,5.0nm,1.0s								
WMQ	**Urumqi**	**49.68**	**323**	P		**P**		**14 58 17.3**	**+0.8**
WMQ				pP		**pP**		**14 58 29.8**	**-1.2**
WMQ				sP		**sP**		**14 58 35.0**	**-2.3**
WMQ				PcP		**PcP**		**14 59 38.6**	**+1.5**
WMQ				PP		**PP**		**15 00 12.6**	**+1.2**
WMQ				PcS		**PcS**		**15 03 36.0**	**+2.1**
WMQ				S		**S**		**15 05 21.0**	**-0.4**
WMQ				sS		**sS**		**15 05 42.3**	**-3.5**
WMQ				ScS		**ScS**		**15 08 01.9**	**-1.5**
WMQ				SS		**SS**		**15 08 49.8**	**-4.6**
WMQ				pmax		pmax			
	comp=Z,8.0nm,0.6s								
WMQ				pmax		pmax			
	comp=Z,110nm,4.6s								
WMQ				LR		LR			
	comp=N,490nm,20.6s								
WMQ				LR		LR			
	comp=E,370nm,19.2s								
WMQ				LR		LR			
	comp=Z,230nm,20.4s								
PETK	**Petropavlovsk-**	**51.59**	**23**	P		**P**		**14 58 32.6**	**+2.0**
PETK	**Petropavlovsk-**	**51.59**	**23**	P		**P**		**14 58 32.6**	**+2.0**
PETK	**Petropavlovsk-**	**51.59**	**23**	P		**P**		**14 58 32.6**	**+2.0**
	comp=Z,3.2nm,0.8s,baz=205,slow=6.6,SNR=4.1								
PET	**Petropavlovsk**	**51.90**	**24**	*e*P		P		14 58 39.0	+6.1
PET				*e*S		**S**		**15 05 57.4**	**+5.7**
PET								15 11 16.8	
PET				MLR		MLR			
	comp=Z,200nm,17.0s								
YAK	**Yakutsk**	**54.19**	**2**	*e*P		**P**		**14 58 49.4**	**-0.2**
YAK				pmax		pmax			
	comp=Z,33nm,1.0s								
YAK				pmax		pmax			
	comp=N,17nm,1.2s								
YAK				pmax		pmax			
	comp=E,5.0nm,1.1s								
MK31	**Makanchi Array**	**54.49**	**324**	*ce*P		**P**		**14 58 51.2**	**-1.0**
MK31				pmax		pmax			
	comp=Z,10.0nm,0.7s								
MK31	**Makanchi Array**	**54.49**	**324**	*e*P		**P**		**14 58 50.5**	**-1.7**
MKAR	**Makanchi Array**	**54.49**	**324**	*ce*P		**P**		**14 58 51.4**	**-0.8**
MKAR				pmax		pmax			
	comp=Z,9.0nm,0.8s								
MKAR	**Makanchi Array**	**54.49**	**324**	P		**P**		**14 58 51.1**	**-1.0**
MKAR	**Makanchi Array**	**54.49**	**324**	P		**P**		**14 58 51.1**	**-1.0**
	comp=Z,9.4nm,0.8s,baz=125,slow=8.0,SNR=61								
MKAR				LR		LR		15 24 10.9	
	comp=Z,186nm,18.9s,baz=139,slow=38								
KSH	**Kashi**	**55.50**	**313**	*e*P		**P**		**14 59 00.5**	**+0.8**
KSH				*ep*P		**pP**		**14 59 16.5**	**+2.1**
KSH				*es*P		**sP**		**14 59 23.3**	**+2.6**
KSH				*e*PcP		**PcP**		**15 00 00.9**	**+1.7**
KSH				*e*PP		**PP**		**15 01 06.0**	**+1.9**
KSH				*e*ScP		**ScP**		**15 03 53.8**	**+0.1**
KSH				*e*PcS		**PcS**		**15 03 59.4**	**-0.1**
KSH				*e*S		**S**		**15 06 37.8**	**-3.4**
KSH				*es*S		**sS**		**15 07 04.9**	**-1.0**
KSH				*e*ScS		**ScS**		**15 08 40.8**	**-3.7**
KSH				*e*SS		**SS**		**15 10 22.3**	**-4.4**
KSH				pmax		pmax			
	comp=Z,19nm,1.6s								
KSH				LR		LR			
	comp=N,71nm,3.9s								
KSH				LR		LR			
	comp=E,64nm,3.4s								
KSH				LR		LR			
	comp=Z,55nm,3.8s								
ZAA0	**Zalesovo Array**	**57.19**	**332**	*e*P		**P**		**14 59 09.7**	**-1.6**
ZALV	**Zalesovo Beam**	**57.19**	**332**	*i* P		**P**		**14 59 10.3**	**-1.0**
ZALV				pmax		pmax			
	comp=Z,7.0nm,0.8s								
ZALV	**Zalesovo Beam**	**57.19**	**332**	P		**P**		**14 59 09.8**	**-1.4**
ZALV	**Zalesovo Beam**	**57.19**	**332**	P		**P**		**14 59 09.8**	**-1.4**
	comp=Z,7.1nm,0.8s,baz=114,slow=7.0,SNR=29								
ZALV				LR		LR		15 26 16.4	
	comp=Z,132nm,18.9s,baz=117,slow=38								
SEY	**Seymchan**	**58.05**	**13**	*ce*P		P		14 59 20.9	+3.8
EKS2	**Erkin-Say**	**58.16**	**316**	*e*P		**P**		**14 59 18.7**	**+0.2**
EKS2				pmax		pmax			
	comp=Z,6.0nm,0.9s								
EKS2	**Erkin-Say**	**58.16**	**316**	*e*P		**P**		**14 59 18.7**	**+0.2**
	comp=Z,5.5nm,0.9s								
NVS	**Novosibirsk**	**58.47**	**332**	*i* P		**P**		**14 59 18.5**	**-1.7**
KURK	**Kurchatov**	**58.57**	**326**	*ce*P		**P**		**14 59 20.6**	**-0.4**
KURK				pmax		pmax			
	comp=Z,29nm,1.2s								
KURK	**Kurchatov**	**58.57**	**326**	*e*P		**P**		**14 59 20.2**	**-0.8**
KURBB	**Kurchatov Arra**	**58.58**	**326**	P		**P**		**14 59 19.6**	**-1.4**
	comp=Z,9.6nm,0.8s,baz=127,slow=6.1,SNR=56								
KK31	**Karatay Array**	**60.57**	**315**	*ce*P		**P**		**14 59 33.5**	**-1.5**
KK31				pmax		pmax			
	comp=Z,1.0nm,0.2s								
KKAR	**Karatay Array**	**60.57**	**315**	*e*P		**P**		**14 59 34.5**	**-0.5**
KKAR				*e**PP		**pP**		**14 59 47.9**	**-2.0**
KKAR	**Karatay Array**	**60.57**	**315**	*e*P		**P**		**14 59 34.5**	**-0.5**
KKAR				*ep*P		**pP**		**14 59 47.9**	**-2.0**
VOSK	**Vostochnaya**	**63.72**	**326**	P		**P**		**14 59 53.6**	**-2.3**
VOSK				pmax		pmax			
	comp=Z,4.0nm,0.8s								
TIXI	**Tiksi**	**63.83**	**1**	*ce*P		**P**		**14 59 56.3**	**+0.1**
TIXI				pmax		pmax			
	comp=Z,27nm,2.5s								
BVA0	**Borovoye Array**	**64.17**	**326**	*i* P		**P**		**14 59 57.2**	**-1.6**
BVA0				pmax		pmax			
	comp=Z,1.0nm,0.9s								
BVAR	**Borovoye Array**	**64.17**	**326**	P		**P**		**14 59 57.9**	**-0.9**
BVAR	**Borovoye Array**	**64.17**	**326**	P		**P**		**14 59 57.9**	**-0.9**
BVAR	**Borovoye Array**	**64.17**	**326**	P		**P**		**14 59 57.9**	**-0.9**
	comp=Z,4.7nm,0.7s,baz=120,slow=8.7,SNR=36								
BRVK	**Borovoye**	**64.24**	**326**	*ce*P		**P**		**14 59 58.8**	**-0.4**
BRVK				pmax		pmax			
	comp=Z,7.0nm,0.6s								
BRVK	**Borovoye**	**64.24**	**326**	*e*P		**P**		**14 59 58.6**	**-0.6**
	comp=Z,8.2nm,0.8s								
BILL	**Bilibino**	**65.59**	**15**	*e*P		**P**		**15 00 09.4**	**+1.7**
BILL				*i*				15 00 19.1	
BILL				*i*				15 00 25.1	
BILL				*i*				15 00 38.7	
BILL				*i*				15 02 35.0	
BILL				*i* S		**S**		**15 08 47.2**	**-1.6**
BILL				*i* SS		**SS**		**15 13 09.2**	**+5.8**
BILL				pmax		pmax			
	comp=Z,5.0nm,1.2s								
BILL	**Bilibino**	**65.59**	**15**	*e*P		**P**		**15 00 07.5**	**-0.3**
	comp=Z,17nm,1.2s								
BILL				*ep*P		**pP**		**15 00 20.9**	**-1.9**
AB31	**Akbulak array**	**69.28**	**320**	*ce*P		**P**		**15 00 30.1**	**-1.3**
ABKAR	**Akbulak array**	**69.28**	**320**	*e*P		**P**		**15 00 29.9**	**-1.5**
	comp=Z,2.6nm,0.8s								
ABKAR				*ep*P		**pP**		**15 00 45.2**	**-1.4**
GAMB	**Gambell**	**70.59**	**24**	*e*P		**P**		**15 00 39.0**	**-0.1**
	comp=Z,11nm,1.1s								
GAMB				*ep*P		**pP**		**15 00 53.6**	**-0.7**
SVE	**Sverdlovsk**	**70.74**	**328**	*e*P		**P**		**15 00 39.5**	**-0.7**
SVE				pmax		pmax			
	comp=Z,8.0nm,0.9s								
AKTO	**Aktyubinsk**	**70.75**	**321**	*i* P		**P**		**15 00 37.6**	**-2.8**
AKTO	**Aktyubinsk**	**70.75**	**321**	P		**P**		**15 00 39.9**	**-0.5**
AKTO	**Aktyubinsk**	**70.75**	**321**	P		**P**		**15 00 39.9**	**-0.5**
	comp=Z,2.5nm,0.7s,baz=91,slow=6.9,SNR=13								
ARU	**Arti**	**71.74**	**327**	*c i*P		**P**		**15 00 45.0**	**-1.3**
ARU								15 03 21.1	
ARU				S		**S**		**15 09 59.8**	**-2.4**
ARU				pmax		pmax			
	comp=Z,7.0nm,0.8s								
CASY	**Casey**	**74.84**	**187**	*e*P		**P**		**15 01 04.5**	**+0.3**
	comp=Z,36nm,0.6s								
MAK	**Makhachkala**	**77.12**	**312**	*e*P		**pP**		**15 01 33.3**	**+0.1**
MAK				MLR		MLR			
	comp=Z,153nm,17.0s								
OHAK	**Old Harbor**	**77.90**	**33**	*e*P		**P**		**15 01 23.8**	**+2.0**
	comp=Z,14nm,0.9s								
KDAK	**Kodiak Island**	**78.32**	**33**	*e*P		**P**		**15 01 24.3**	**+0.2**
	comp=Z,20nm,1.1s								
KDAK	**Kodiak Island**	**78.32**	**33**	P		**P**		**15 01 26.2**	**+2.1**
	comp=Z,8.3nm,0.7s,baz=294,slow=5.3,SNR=12								
RAYN	**Ar Rayn**	**79.25**	**292**	*e*P		**P**		**15 01 29.1**	**-0.9**
	comp=Z,11nm,0.9s								
TRF	**Thorofare Moun**	**79.80**	**27**	*e*P		**P**		**15 01 33.9**	**+1.5**
COLD	**Coldfoot**	**80.06**	**23**	*e*P		P		15 01 37.3	+3.8
	comp=Z,6.1nm,1.0s								
PMR	**Palmer**	**80.26**	**29**	*e*P		P		15 01 30.7	-3.9
PMR	**Palmer**	**80.26**	**29**	*e*P		P		15 01 30.7	-3.9
MCK	**McKinley**	**80.42**	**27**	*e*P		**P**		**15 01 37.7**	**+2.1**
MCK	**McKinley**	**80.42**	**27**	*e*P		**P**		**15 01 37.6**	**+2.1**
	comp=Z,23nm,1.0s								
KBZ	**Khabaz**	**80.48**	**313**	LR		LR		15 41 58.6	
	comp=Z,79nm,19.7s,baz=75,slow=39								
SML	**Sawmill**	**80.65**	**29**	*e*P		P		15 01 40.3	+3.5
SML	**Sawmill**	**80.65**	**29**	*e*P		P		15 01 40.2	+3.5
ILAR	**Eielson Array**	**81.33**	**26**	P		**P**		**15 01 40.9**	**+0.6**
ILAR	**Eielson Array**	**81.33**	**26**	P		**P**		**15 01 40.9**	**+0.6**
	comp=Z,3.9nm,1.0s,baz=242,slow=6.0,SNR=21								
KLMR	**Klimovskoe**	**82.08**	**330**	*e*P		P		15 01 41.1	-3.2
KLMR				pmax		pmax			
	comp=Z,18nm,0.8s								
OBN	**Obninsk**	**83.98**	**325**	*e*P		**P**		**15 01 52.7**	**-1.5**
OBN				pmax		pmax			
	comp=Z,4.0nm,0.7s								
JOF	**Joensuu**	**85.77**	**333**	*e*P		**P**		**15 02 03.1**	**0.0**
JOF				pmax		pmax			
	comp=Z,7.0nm,0.7s								
JOF	**Joensuu**	**85.77**	**333**	*ep*		**P**		**15 02 03.1**	**0.0**
	comp=Z,6.8nm,0.7s								
PPT	**Papeete**	**86.03**	**108**	LR		LR		15 35 34.3	
	comp=Z,190nm,18.2s,baz=332,slow=32								
PPT2	**Papeete2**	**86.03**	**108**	*e*S		**S**		**15 12 37.4**	**+1.5**
	comp=Z,72nm,24.5s								
PPT2				*e*LR		LR		15 29 18.8	
	comp=Z,126nm,23.2s								
PAE	**Paea**	**86.04**	**108**	*e*T		T		15 01 54.5	
	comp=Z,3.6nm,0.3s								
ASF	**Jabal al Asfar**	**86.07**	**302**	P		**P**		**15 02 04.6**	**-0.8**
ASF	**Jabal al Asfar**	**86.07**	**302**	P		**P**		**15 02 04.6**	**-0.8**
	comp=Z,5.1nm,0.8s,baz=297,slow=1.4,SNR=7.6								
ASF				LR		LR		15 46 04.3	
	comp=Z,71nm,19.3s,baz=126,slow=40								
SPITS	**Spitsbergen Ar**	**86.61**	**349**	P		**P**		**15 02 06.5**	**-0.5**
SPITS	**Spitsbergen Ar**	**86.61**	**349**	P		**P**		**15 02 06.5**	**-0.5**
	comp=Z,4.1nm,0.8s,baz=101,slow=7.8,SNR=7.1								
ARCES	**ARCESS Array B**	**86.80**	**340**	P		**P**		**15 02 07.1**	**-0.9**
ARCES	**ARCESS Array B**	**86.80**	**340**	P		**P**		**15 02 07.1**	**-0.9**
	comp=Z,3.2nm,0.8s,baz=74,slow=5.5,SNR=20								
TBI	**Tubuai**	**87.09**	**114**	*e*LR		LR		15 29 53.2	
	comp=Z,173nm,27.0s								
MMAI	**Mount Meron Ar**	**87.22**	**303**	P		**P**		**15 02 11.3**	**+0.3**
MMAI	**Mount Meron Ar**	**87.22**	**303**	P		**P**		**15 02 11.3**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=72,slow=5.4,SNR=7.5								
VNDA	**Vanda**	**87.36**	**173**	P		**P**		**15 02 11.1**	**+0.5**
VNDA	**Vanda**	**87.36**	**173**	P		**P**		**15 02 11.1**	**+0.5**
	comp=Z,2.3nm,

*ISCJB **21** 14:51:48.9±0.7,51°.45N±0'.04×16°.09E±0'.03,h0km,Error ellipse: s-maj=5.4km s-min=2.9km az=11.8*
*CSEM **21** 14:51:49.7±0.3,51°.49N×16°.09E,h2km,ML3.2/9,Error ellipse: s-maj=4.9km s-min=3.7km az=4.0*
*WAR **21** 14:51:50.6,51°.51N×16°.12E*
*PRU **21** 14:51:51.1,51°.46N×16°.09E,h0km*
*IDC **21** 14:51:51.1±1.0,51°.46N×16°.13E,h0km,mb1 3.2/4, mb1mx3.1/26,mbtmp3.0/4,ML2.6/4,Error ellipse: s-maj=22.1km s-min=9.5km az=110.0*

ISC 21 14:51:48.7±0.8,51°.58N±0'.04×16°.12E±0'.02,h0km,n31, σ0§90/57,1D,Poland

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**171**		*e*Pg		**Pg**	**14 52 03.3**	**+0.4**
KSP					*e*Sg		**Sg**	**14 52 12.1**	**-0.4**
KSP	**Ksiaz**	**0.74**	**171**	⇓	*i*Pg		**Pg**	**14 52 03.3**	**+0.4**
KSP					*e*Sg		**Sg**	**14 52 12.1**	**-0.4**
UPC	**Upice**	**1.07**	**184**		*e*PG		**Pg**	**14 52 09.2**	**0.0**
UPC	**Upice**	**1.07**	**184**		Pg		**Pg**	**14 52 09.2**	**0.0**
DPC	**Dobruska-Polom**	**1.24**	**174**		*e*PG		**Pg**	**14 52 12.1**	**-0.2**
DPC					*e*SG		**Sg**	**14 52 26.8**	**-1.5**
	comp=Z,31nm,0.3s								
DPC	**Dobruska-Polom**	**1.24**	**174**		Pg		**Pg**	**14 52 12.1**	**-0.2**
DPC					Sg		**Sg**	**14 52 26.8**	**-1.5**
	31nm,0.3s								
PVCC	**Panska Ves**	**1.44**	**223**		*e*PG		**Pn**	**14 52 16.2**	**+0.3**
PVCC					*e*SG		**Sg**	**14 52 34.3**	**-0.4**
	comp=Z,96nm,0.2s								
PVCC	**Panska Ves**	**1.44**	**223**		Pg		**Pn**	**14 52 16.2**	**+0.3**
PVCC					Sg		**Sg**	**14 52 34.3**	**-0.4**
	96nm,0.2s								
BRG	**Berggiesshubel**	**1.54**	**244**		PG		**Pg**	**14 52 18.6**	**+0.5**
BRG					SG		**Sg**	**14 52 38.8**	**+0.7**
	33nm,0.5s								
BRG					PG			15 32 01.1	
BRG					SG			15 32 21.5	
	9.7nm,0.5s								
KRLC	**Kraliky**	**1.56**	**164**		*e*PG		**Pn**	**14 52 17.9**	**+0.2**
KRLC	**Kraliky**	**1.56**	**164**		Pg		**Pn**	**14 52 17.9**	**+0.2**
PRU	**Pruhonice**	**1.88**	**213**		*e*PG		**Pb**	**14 52 23.6**	**-0.2**
PRU					*e*SG		**Sn**	**14 52 47.1**	**+0.7**
	comp=Z,23nm,0.6s								
PRU	**Pruhonice**	**1.88**	**213**		Pg		**Pb**	**14 52 23.6**	**-0.2**
PRU					Sg		**Sn**	**14 52 47.1**	**+0.7**
	23nm,0.6s								
CLL	**Collm**	**1.97**	**263**		*e*Pn		**Pn**	**14 52 23.0**	**-0.2**
CLL					*i* Pg		**Pg**	**14 52 26.7**	**+0.3**
CLL					*e*			14 52 31.0	
CLL					*e*Sg		**Sg**	**14 52 52.0**	**+0.2**
	comp=Z,13nm,0.6s								
CLL					*i*			14 53 01.9	
MORC	**Moravsky Berou**	**2.02**	**153**		*e*Pn		**Pn**	**14 52 23.8**	**-0.2**
MORC					*e*Sg		**Sn**	**14 52 50.9**	**+0.9**
	comp=Z,23nm,0.5s,baz=335								
OKC	**Ostrava-Krasne**	**2.17**	**143**		*e*PG		**Pg**	**14 52 30.5**	**+0.3**
OKC					*e*SG		**Sb**	**14 52 56.7**	**+0.5**
	comp=Z,25nm,0.4s								
OKC	**Ostrava-Krasne**	**2.17**	**143**		Pg		**Pg**	**14 52 30.5**	**+0.3**
OKC					Sg		**Sb**	**14 52 56.7**	**+0.5**
	comp=Z,25nm,0.4s								
VRAC	**Vranov**	**2.29**	**172**		Pn		**Pn**	**14 52 28.3**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=341,slow=17,SNR=3.0								
VRAC					Lg		Lg	14 53 00.5	
	comp=Z,2.9nm,0.3s,baz=256,slow=23,SNR=6.3								
VRAC	**Vranov**	**2.29**	**172**		*e*Pn		**Pn**	**14 52 27.4**	**-0.3**
VRAC					*e*Sg		**Sb**	**14 53 00.1**	**+0.3**
	comp=Z,8.0nm,0.2s,baz=354								
TREC	**Trest**	**2.32**	**190**		*e*PN		**Pn**	**14 52 29.5**	**+1.4**
TREC	**Trest**	**2.32**	**190**		Pn		**Pn**	**14 52 29.5**	**+1.4**
KRUC	**Moravsky**	**2.53**	**176**		*e*Pn		**Pn**	**14 52 30.2**	**-0.7**
	baz=357								
KRUC					*e*Sg		**Sb**	**14 53 07.8**	**+1.3**
	comp=Z,14nm,0.5s,baz=357								
NKC	**Novy Kostel**	**2.69**	**241**		*e*PN		**Pn**	**14 52 34.2**	**+1.1**
NKC					*e*PG		**Pg**	**14 52 39.5**	**-0.6**
NKC					*e*SG		**Sg**	**14 53 15.8**	**+0.9**
	comp=Z,19nm,0.4s								
NKC	**Novy Kostel**	**2.69**	**241**		Pn		**Pn**	**14 52 34.2**	**+1.1**
OJC	**Ojcow**	**2.70**	**119**		*e*Pn		**Pn**	**14 52 33.0**	**-0.3**
OJC					*e*PP		**Pb**	**14 52 38.4**	**+0.6**
OJC					*e*Pg		**Pg**	**14 52 42.0**	**+1.6**
OJC					*e*Sn		**Sn**	**14 53 04.8**	**-1.9**
OJC					*e*Sg		**Sg**	**14 53 17.2**	**+1.9**
OJC	**Ojcow**	**2.70**	**119**		*e*Pn		**Pn**	**14 52 33.0**	**-0.3**
KHC	**Kasperske Hory**	**2.94**	**215**		*e*PN		**Pn**	**14 52 36.9**	**+0.2**
KHC					*e*PG		**Pb**	**14 52 43.0**	**+1.0**
KHC					*e*SN		**Sn**	**14 53 11.3**	**-1.4**
KHC					*e*SG		**Sg**	**14 53 21.2**	**-1.9**
	comp=Z,11nm,0.8s								
KHC	**Kasperske Hory**	**2.94**	**215**		Pn		**Pn**	**14 52 36.9**	**+0.2**
GERES	**GERESS Array B**	**3.15**	**210**		Pn		**Pn**	**14 52 40.6**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=29,slow=12,SNR=19								
GERES					Pg		**Pb**	**14 52 46.5**	**+1.1**
	comp=Z,2.1nm,0.3s,baz=31,slow=16,SNR=24								
GERES					Lg		Lg	14 53 27.8	
	comp=Z,1.8nm,0.3s,baz=30,slow=28,SNR=6.0								
FINES	**FINESS Array B**	**11.30**	**25**		Pn		**Pn**	**14 54 30.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=213,slow=9.9,SNR=2.6								
ARCES	**ARCESS Array B**	**18.55**	**10**		Pn		**P**	**14 56 04.5**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=198,slow=11,SNR=3.5								

*TIR **21** 15:16:27.1,42°.36N×19°.40E,h7km,ML3.0*
*ISCJB **21** 15:16:28.3±0.3,42°.36N±0'.02×19°.46E±0'.03,h11km±3km, Error ellipse: s-maj=4.0km s-min=3.2km az=15.1*
*PDG **21** 15:16:28.6±0.3,42°.37N×19°.43E,h14km,MD2.1/1, ML2.0/9,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*CSEM **21** 15:16:28.4±0.2,42°.35N×19°.41E,h20km,ML2.0/9,Error ellipse: s-maj=4.5km s-min=3.4km az=21.0*
*BEO **21** 15:16:29.2±0.5,42°.42N×19°.56E,h0km,ML1.8/6*

ISC 21 15:16:28.6±1.1,42°.36N±0'.02×19°.43E±0'.02,h15km±9km, n41,σ0§67/76,7C-10D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TTG	**Podgorica**	**0.14**	**299**	⇑	*i*Pg		**Pb**	**15 16 32.6**	**-0.4**
TTG					*e*Sg		**Sb**	**15 16 35.7**	**-0.2**
PDG	**Podgorica**	**0.15**	**298**	⇑	*i*Pg		**Pb**	**15 16 32.6**	**-0.5**
PDG					*e*Sg		**Sb**	**15 16 35.6**	**+0.2**
PDG	**Podgorica**	**0.15**	**298**	⇑	*i*Pg		**Pb**	**15 16 32.6**	**-0.5**
PDG					*e*Sg		**Sb**	**15 16 35.7**	**-0.3**
BUM	**Brajici-Budva**	**0.40**	**262**	⇓	*i*Pg		**Pg**	**15 16 36.5**	**-0.2**
BUM					*e*Sg		**Sb**	**15 16 43.3**	**-0.2**
BUM	**Brajici-Budva**	**0.40**	**262**	⇓	*i*Pg		**Pg**	**15 16 36.5**	**-0.2**
BUM					*e*Sg		**Sb**	**15 16 43.3**	**-0.2**
ULC	**Ulcinj**	**0.42**	**199**		*e*Pg		**Pg**	**15 16 36.2**	**-0.8**
ULC					*e*Sg		**Sb**	**15 16 43.6**	**-0.3**
ULC	**Ulcinj**	**0.42**	**199**		*e*Pg		**Pg**	**15 16 36.2**	**-0.8**
ULC					*e*Sg		**Sb**	**15 16 43.6**	**-0.3**
PVY	**Plav**	**0.46**	**59**	⇑	*i*Pg		**Pg**	**15 16 37.5**	**-0.2**
PVY					*e*Sg		**Sb**	**15 16 45.4**	**+0.4**
PVY	**Plav**	**0.46**	**59**	⇑	*i*Pg		**Pg**	**15 16 37.5**	**-0.2**
PVY					*e*Sg		**Sb**	**15 16 45.4**	**+0.4**
PUK	**Puka**	**0.47**	**133**		*i* PG		**Pg**	**15 16 37.2**	**-0.7**
PUK					*i* SG		**Sb**	**15 16 44.8**	**-0.5**
PUK	**Puka**	**0.47**	**133**		*i* Pg		**Pg**	**15 16 37.2**	**-0.7**
PUK					*i* Sg		**Sb**	**15 16 44.8**	**-0.5**
BCI	**Bajram Curri**	**0.47**	**89**		*i* PG		**Pg**	**15 16 37.1**	**-0.8**
BCI					*i* SG		**Sb**	**15 16 44.6**	**-0.8**
BCI	**Bajram Curri**	**0.47**	**89**		*i* Pg		**Pg**	**15 16 37.1**	**-0.8**
BCI					*i* Sg		**Sb**	**15 16 44.6**	**-0.8**
NKY	**Niksic**	**0.56**	**325**	⇓	*i*Pg		**Pg**	**15 16 38.8**	**-0.8**
NKY					*e*Sg		**Sb**	**15 16 47.9**	**0.0**
NKY	**Niksic**	**0.56**	**325**	⇓	*i*Pg		**Pg**	**15 16 38.8**	**-0.8**
NKY					*e*Sg		**Sb**	**15 16 47.9**	**0.0**
BEY	**Berane**	**0.61**	**33**	⇓	*i*Pg		**Pg**	**15 16 40.1**	**-0.6**
BEY					*e*Sg		**Sb**	**15 16 49.8**	**+0.2**
IVA	**Berane**	**0.62**	**34**	⇓	*i*Pg		**Pg**	**15 16 40.1**	**-0.6**
IVA					*e*Sg		**Sb**	**15 16 49.8**	**+0.2**
HCY	**Herceg Novi**	**0.70**	**278**	⇓	*i*Pg		**Pg**	**15 16 41.5**	**-0.7**
HCY					*e*Sg		**Sb**	**15 16 52.9**	**+1.0**
HCY	**Herceg Novi**	**0.70**	**278**	⇓	*i*Pg		**Pg**	**15 16 41.5**	**-0.7**
BRY	**Bratogost**	**0.85**	**310**	⇑	*i*Pg		**Pg**	**15 16 44.0**	**-1.1**
BRY					*e*Sg		**Sn**	**15 16 58.2**	**-0.3**
BRY	**Bratogost**	**0.85**	**310**	⇑	*i*Pg		**Pg**	**15 16 44.0**	**-1.1**
UPM	**Unac-Piva**	**0.93**	**335**	⇓	*i*Pg		**Pb**	**15 16 46.3**	**-0.2**
UPM					*e*Sg		**Sn**	**15 17 00.4**	**0.0**
UPM	**Unac-Piva**	**0.93**	**335**	⇓	*i*Pg		**Pb**	**15 16 46.3**	**-0.2**
UPM					*e*Sg		**Sn**	**15 17 00.4**	**0.0**
PHP	**Peshkopia**	**1.01**	**132**		*i* PN		**Pn**	**15 16 48.2**	**0.0**
PHP					*i* SN		**Sn**	**15 17 02.4**	**+0.2**
PHP	**Peshkopia**	**1.01**	**132**		*i* Pn		**Pn**	**15 16 48.2**	**0.0**
PHP					*i* Sn		**Sn**	**15 17 02.4**	**+0.2**
TIR	**Tirane**	**1.06**	**162**		*i* PN		**Pb**	**15 16 48.2**	**-0.4**
TIR					*i* SN		**Sn**	**15 17 03.9**	**+0.5**
TIR	**Tirane**	**1.06**	**162**		*i* Pn		**Pb**	**15 16 48.2**	**-0.4**
TIR					*i* Sn		**Sn**	**15 17 03.9**	**+0.5**
STON	**Ston**	**1.38**	**292**		*i* Pn		**Pn**	**15 16 53.3**	**0.0**
STON					Sn		**Sg**	**15 17 14.6**	**+1.6**
STON	**Ston**	**1.38**	**292**		*i* Pn		**Pn**	**15 16 53.2**	**0.0**
STON					Sn		**Sg**	**15 17 14.5**	**+1.6**
BBLS	**Lazići**	**1.51**	**359**		*e*Pg		**Pb**	**15 16 55.8**	**-0.5**
BBLS	**Lazići**	**1.51**	**359**		*e*Pg		**Pb**	**15 16 55.8**	**-0.5**
SELS	**Selova**	**1.51**	**55**		*e*Pg		**Pn**	**15 16 54.9**	**-0.2**
SELS					*e*Sg		**Sb**	**15 17 14.8**	**-0.5**
SELS	**Selova**	**1.51**	**55**		*e*Pg		**Pn**	**15 16 54.9**	**-0.2**
SELS					*e*Sg		**Sb**	**15 17 14.8**	**-0.5**
DIVS	**Divibare**	**1.79**	**13**		*e*Pg		**Pn**	**15 16 59.0**	**0.0**
DIVS					*e*Sg		**Sb**	**15 17 22.0**	**-1.3**
DIVS	**Divibare**	**1.79**	**13**		*e*Pg		**Pn**	**15 16 59.0**	**0.0**
DIVS					*e*Sg		**Sb**	**15 17 22.0**	**-1.3**
GRUS	**Gruza**	**1.79**	**31**		*e*Pg		**Pn**	**15 16 59.0**	**0.0**
GRUS	**Gruza**	**1.79**	**31**		*e*Pg		**Pn**	**15 16 59.0**	**0.0**
BARS	**Barje**	**1.82**	**75**		*e*Pn		**Pn**	**15 16 59.7**	**+0.4**
BARS					*e*Sg		**Sn**	**15 17 22.5**	**+0.4**
BARS	**Barje**	**1.82**	**75**		*e*Pn		**Pn**	**15 16 59.7**	**+0.4**
BARS					*e*Sg		**Sn**	**15 17 22.5**	**+0.4**
ZAPS	**Zavoj**	**2.53**	**68**		*e*Pn		**Pn**	**15 17 11.0**	**+1.9**
ZAPS					*e*Sn		**Sn**	**15 17 40.3**	**+0.7**
ZAPS	**Zavoj**	**2.53**	**68**		*e*Pn		**Pn**	**15 17 11.0**	**+1.9**
ZAPS					*e*Sn		**Sn**	**15 17 40.3**	**+0.7**

*HLW **21** 15:28:20.7,38°.90N×20°.41E,h33km±34km,Md0.0,Ml3.9*
*IDC **21** 15:28:24.2±0.7,38°.63N×20°.53E,h0km,mb4.2/19, mb1 4.2/28,mb1mx4.1/40,mbtmp4.1/28,ML4.2/7,MS3.4/4, Ms1 3.4/4,ms1mx2.9/46,Error ellipse: s-maj=14.1km s-min=13.0km az=8.0*
*ISCJB **21** 15:28:24.6±0.4,38°.62N±0'.01×20°.31E±0'.02,h11km±3km, mb4.3/46,MS4.2/4,Error ellipse: s-maj=2.7km s-min=1.7km az=42.0*
*BEO **21** 15:28:24.8±0.9,38°.53N×20°.26E,h0km,ML4.0/9*
*TIR **21** 15:28:24.7,38°.52N×20°.60E,h30km,ML4.1*
*LDG **21** 15:28:24.0±0.2,38°.89N×20°.82E,h10km,Mb4.4/18, Ms2.8/5,Error ellipse: s-maj=14.2km s-min=5.9km az=32.0*
*BJI **21** 15:28:24.3,38°.63N×19°.55E,h52km,mB5.0/4,mb4.5/12, Ms4.9/3,Ms7 4.7/2*
*MOS **21** 15:28:25.5±1.3,38°.67N×20°.38E,h17km,mb4.5/29,Error ellipse: s-maj=5.5km s-min=3.4km az=88.7*
*PDG **21** 15:28:26.8±0.5,38°.65N×20°.48E,h11km±1km,ML3.9/9, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*CSEM **21** 15:28:26.4±0.1,38°.62N×20°.44E,h10km,mb4.4/33,Ms2.8, Error ellipse: s-maj=4.0km s-min=2.3km az=42.0*
*THE **21** 15:28:27.2,38°.59N×20°.50E,h0km±2km,ML4.4/5,Error ellipse: s-maj=3.1km s-min=0.9km az=251.0*
*NEIC **21** 15:28:27.0,38°.59N×20°.54E,h13km,mb4.2/12, ML4.2(ATH),After ATH.*
*ATH **21** 15:28:27.0,38°.59N×20°.54E,h13km,MD3.7/39,ML4.2*

ISC 21 15:28:26.3±0.8,38°.57N±0'.01×20°.51E±0'.02,h16km±4km, n660,σ1§42/758,mb4.3/46,MS4.2/4,45C-26D,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.25**	**28**		P		**Pg**	**15 28 31.4**	**-0.4**
LKD2					S		**Sg**	**15 28 34.5**	**-1.2**
LKD2	**Lefkada island**	**0.25**	**28**		*e*Pg		**Pg**	**15 28 31.5**	**-0.4**
LKD2					*e*Sg		**Sg**	**15 28 35.1**	**-0.6**
LKD2	**Lefkada island**	**0.25**	**28**		*e*PG		**Pg**	**15 28 31.5**	**-0.4**
LKD2					*e*SG		**Sg**	**15 28 35.1**	**-0.6**
LKD2	**Lefkada island**	**0.25**	**28**		*e*Pg		**Pg**	**15 28 31.5**	**-0.4**
LKD2					*e*Sg		**Sg**	**15 28 35.1**	**-0.6**
VLS	**Valsamata**	**0.40**	**170**		*e*P		**Pb**	**15 28 35.3**	**+0.3**
VLS					*e*			15 28 41.8	
VLS	**Valsamata**	**0.40**	**170**		P		**Pb**	**15 28 35.3**	**+0.3**
VLS					S		**Sb**	**15 28 41.9**	**+1.1**
VLS	**Valsamata**	**0.40**	**170**		*e*Pb		**Pb**	**15 28 35.3**	**+0.3**
VLS					*e*Sb		**Sb**	**15 28 41.8**	**+1.0**
VLS	**Valsamata**	**0.40**	**170**		*e*PB		**Pb**	**15 28 35.3**	**+0.3**
VLS					*e*SB		**Sb**	**15 28 41.8**	**+1.0**
VLS	**Valsamata**	**0.40**	**170**		*e*Pb		**Pb**	**15 28 35.3**	**+0.3**
VLS					*e*Sb		**Sb**	**15 28 41.8**	**+1.0**
KFL	**Anninata**	**0.51**	**154**		P		**Pb**	**15 28 37.0**	**+0.1**
RLS	**Riolos of Patr**	**0.91**	**124**		P		**Pb**	**15 28 44.0**	**+0.3**
RLS					S		**Sn**	**15 28 58.4**	**+1.1**
RLS	**Riolos of Patr**	**0.91**	**124**		*e*Pg		**Pb**	**15 28 44.0**	**+0.3**
RLS					*e*Sb		**Sn**	**15 28 57.5**	**+0.2**
RLS	**Riolos of Patr**	**0.91**	**124**		*e*PG		**Pb**	**15 28 44.0**	**+0.3**
RLS					*e*SB		**Sn**	**15 28 57.5**	**+0.2**
RLS	**Riolos of Patr**	**0.91**	**124**		P		**Pb**	**15 28 44.0**	**+0.3**
RLS					*e*Sb		**Sn**	**15 28 57.5**	**+0.2**
RLS					S		**Sn**	**15 28 58.4**	**+1.1**
IGT	**Igoumenitsa**	**0.97**	**352**		P		**Pn**	**15 28 45.1**	**-0.3**
IGT					S		**Sn**	**15 29 01.7**	**+2.8**
IGT	**Igoumenitsa**	**0.97**	**352**		P		**Pn**	**15 28 45.1**	**-0.3**
IGT					S		**Sn**	**15 29 01.7**	**+2.8**
EVR	**Evrytania**	**1.08**	**71**		P		**Pn**	**15 28 46.6**	**-0.3**
EVR					S		**Sn**	**15 29 03.9**	**+2.4**
EVR	**Evrytania**	**1.08**	**71**		*e*Pb		**Pg**	**15 28 45.8**	**-1.4**
EVR					*e*Sb		**Sn**	**15 29 01.7**	**+0.2**
EVR	**Evrytania**	**1.08**	**71**		*e*PB		**Pg**	**15 28 45.8**	**-1.4**
EVR					*e*SB		**Sn**	**15 29 01.7**	**+0.2**
EVR	**Evrytania**	**1.08**	**71**		*e*Pb		**Pg**	**15 28 45.8**	**-1.4**
EVR	**Evrytania**	**1.08**	**71**		P		**Pn**	**15 28 46.6**	**-0.3**
EVR					*e*Sb		**Sn**	**15 29 01.7**	**+0.2**
EVR					S		**Sn**	**15 29 03.9**	**+2.4**
EFP	**Efpalio**	**1.11**	**97**		P		**Pn**	**15 28 47.3**	**+0.1**
EFP					S		**Sn**	**15 29 05.8**	**+3.7**
EFP	**Efpalio**	**1.11**	**97**		*e*Pn		**Pn**	**15 28 48.2**	**+1.0**
EFP					*e*Sb		**Sn**	**15 29 03.3**	**+1.2**
EFP	**Efpalio**	**1.11**	**97**		*e*PN		**Pn**	**15 28 48.2**	**+1.0**
EFP					*e*SB		**Sn**	**15 29 03.3**	**+1.2**
EFP	**Efpalio**	**1.11**	**97**		P		**Pn**	**15 28 47.3**	**+0.1**
EFP	**Efpalio**	**1.11**	**97**		*e*Pn		**Pn**	**15 28 48.2**	**+1.0**
EFP					*e*Sb		**Sn**	**15 29 03.3**	**+1.2**
EFP					S		**Sn**	**15 29 05.8**	**+3.7**
JAN	**Janina**	**1.12**	**14**		*e*P		**Pn**	**15 28 48.1**	**+0.7**
JAN					*e*			15 29 02.6	
JAN	**Janina**	**1.12**	**14**		P		**Pn**	**15 28 48.0**	**+0.7**
JAN					S		**Sn**	**15 29 04.3**	**+1.8**
JAN	**Janina**	**1.12**	**14**		*e*Pn		**Pn**	**15 28 48.1**	**+0.7**
JAN					*e*Sb		**Sn**	**15 29 02.6**	**+0.1**
JAN	**Janina**	**1.12**	**14**		*e*PN		**Pn**	**15 28 48.1**	**+0.7**
JAN					*e*SB		**Sn**	**15 29 02.6**	**+0.1**
JAN	**Janina**	**1.12**	**14**		*e*Pn		**Pn**	**15 28 48.1**	**+0.7**
JAN					*e*Sb		**Sn**	**15 29 02.6**	**+0.1**
JAN					S		**Sn**	**15 29 04.3**	**+1.8**
LAKA	**Lakka**	**1.20**	**105**		P		**Pg**	**15 28 49.7**	**+0.2**
LAKA					S		**Sn**	**15 29 06.7**	**+2.2**
LAKA	**Lakka**	**1.20**	**105**		*e*Pn		**Pg**	**15 28 48.8**	**-0.7**
LAKA					*e*Sb		**Sn**	**15 29 06.4**	**+1.9**
LAKA	**Lakka**	**1.20**	**105**		*e*PN		**Pg**	**15 28 48.8**	**-0.7**
LAKA					*e*SB		**Sn**	**15 29 06.4**	**+1.9**
LAKA	**Lakka**	**1.20**	**105**		*e*Pn		**Pg**	**15 28 48.8**	**-0.7**
LAKA	**Lakka**	**1.20**	**105**		P		**Pg**	**15 28 49.7**	**+0.2**
LAKA					*e*Sb		**Sn**	**15 29 06.4**	**+1.9**
LAKA					S		**Sn**	**15 29 06.7**	**+2.2**
TRIZ	**Trizonia**	**1.25**	**99**		P		**Pn**	**15 28 48.9**	**-0.2**
TRIZ					S		**Sn**	**15 29 09.6**	**+4.1**
TRIZ	**Trizonia**	**1.25**	**99**		*e*PN		**Pg**	**15 28 49.4**	**-1.0**
TRIZ					*e*SB		**Sn**	**15 29 06.2**	**+0.7**
TRIZ	**Trizonia**	**1.25**	**99**		P		**Pn**	**15 28 48.9**	**-0.2**
TRIZ					*e*Sb		**Sn**	**15 29 06.2**	**+0.7**
TRIZ					S		**Sn**	**15 29 09.6**	**+4.1**
KEK	**Kerkira**	**1.27**	**335**		P		**Pg**	**15 28 50.9**	**+0.1**
KEK	**Kerkira**	**1.27**	**335**		*e*Pb		**Pg**	**15 28 50.8**	**0.0**
KEK	**Kerkira**	**1.27**	**335**		*e*PB		**Pg**	**15 28 50.8**	**0.0**
KEK	**Kerkira**	**1.27**	**335**		*e*Pb		**Pg**	**15 28 50.8**	**0.0**
KALE	**Kalithea**	**1.29**	**97**		P		**Pg**	**15 28 50.8**	**-0.5**
KALE					S		**Sg**	**15 29 11.8**	**+3.6**
KALE	**Kalithea**	**1.29**	**97**		*e*Pg		**Pg**	**15 28 50.8**	**-0.5**
KALE					*e*Sb		**Sg**	**15 29 08.0**	**-0.2**
KALE	**Kalithea**	**1.29**	**97**		*e*PG		**Pg**	**15 28 50.8**	**-0.5**
KALE					*e*SB		**Sg**	**15 29 08.0**	**-0.2**
KALE	**Kalithea**	**1.29**	**97**		P		**Pg**	**15 28 50.8**	**-0.5**
KALE					*e*Sb		**Sg**	**15 29 08.0**	**-0.2**
KALE					S		**Sg**	**15 29 11.8**	**+3.6**
MAKR	**Makrakomi, Fth**	**1.35**	**70**		P		**Pg**	**15 28 51.9**	**-0.4**
MAKR					S		**Sg**	**15 29 11.5**	**+1.7**
MAKR	**Makrakomi, Fth**	**1.35**	**70**		P		**Pg**	**15 28 51.9**	**-0.4**
MAKR					S		**Sg**	**15 29 11.5**	**+1.7**
KLV	**Kalavryta, Ach**	**1.40**	**111**		*e*Pg		**Pg**	**15 28 52.3**	**-0.9**
KLV					*e*Sb		**Sg**	**15 29 12.6**	**+1.2**
KLV	**Kalavryta, Ach**	**1.40**	**111**		*e*PG		**Pg**	**15 28 52.3**	**-0.9**
KLV					*e*SB		**Sg**	**15 29 12.6**	**+1.2**
KLV	**Kalavryta, Ach**	**1.40**	**111**		*e*Pg		**Pg**	**15 28 52.3**	**-0.9**
KLV					*e*Sb		**Sg**	**15 29 12.6**	**+1.2**
AGG	**Agios Georgios**	**1.50**	**72**		*e*P		**Pg**	**15 28 54.9**	**-0.2**
AGG	**Agios Georgios**	**1.50**	**72**		P		**Pg**	**15 28 54.9**	**-0.2**
AGG					S		**Sg**	**15 29 16.3**	**+1.7**
AGG	**Agios Georgios**	**1.50**	**72**		*e*Pb		**Pg**	**15 28 54.9**	**-0.2**
AGG	**Agios Georgios**	**1.50**	**72**		*e*PB		**Pg**	**15 28 54.9**	**-0.2**
AGG	**Agios Georgios**	**1.50**	**72**		P		**Pg**	**15 28 54.9**	**-0.2**
AGG					S		**Sg**	**15 29 16.3**	**+1.7**
THL	**Klokotos Trika**	**1.54**	**49**		P		**Pg**	**15 28 54.8**	**-1.2**
THL					S		**Sg**	**15 29 18.0**	**+2.0**
THL	**Klokotos Trika**	**1.54**	**49**		*e*Pg		**Pg**	**15 28 55.0**	**-1.0**
THL					*e*Sb		**Sg**	**15 29 16.4**	**+0.4**
THL	**Klokotos Trika**	**1.54**	**49**		*e*PG		**Pg**	**15 28 55.0**	**-1.0**
THL					*e*SB		**Sg**	**15 29 16.4**	**+0.4**
THL	**Klokotos Trika**	**1.54**	**49**		P		**Pg**	**15 28 54.8**	**-1.2**
THL					S		**Sg**	**15 29 18.0**	**+2.0**
GUR	**Goura**	**1.58**	**113**		P		**Pb**	**15 28 55.0**	**-0.2**
GUR					S		**Sg**	**15 29 18.8**	**+1.6**
GUR	**Goura**	**1.58**	**113**		*e*Pg		**Pg**	**15 28 55.7**	**-1.0**
GUR	**Goura**	**1.58**	**113**		*e*PG		**Pg**	**15 28 55.7**	**-1.0**
GUR	**Goura**	**1.58**	**113**		P		**Pb**	**15 28 55.0**	**-0.2**
GUR	**Goura**	**1.58**	**113**		*e*Pg		**Pg**	**15 28 55.7**	**-1.0**
GUR					S		**Sg**	**15 29 18.8**	**+1.6**
DSF	**Desfina**	**1.59**	**95**		P		**Pg**	**15 28 56.3**	**-0.7**
DSF	**Desfina**	**1.59**	**95**		P		**Pg**	**15 28 56.3**	**-0.7**
AXAR	**Agios Charalam**	**1.70**	**83**		P		**Pg**	**15 28 57.6**	**-1.4**
AXAR	**Agios Charalam**	**1.70**	**83**		P		**Pg**	**15 28 57.6**	**-1.4**
THAL	**Thalero**	**1.78**	**107**		P		**Pb**	**15 28 58.4**	**-0.1**
THAL	**Thalero**	**1

PTL	**Penteli**	2.69	100	*e*Pb	**Pb**	**15 29 12.0 -2.2**
PTL				*e*Sn	**Sb**	**15 29 44.9 -2.1**
AOS	**Alonnisos**	2.70	76	P	**Pn**	**15 29 10.7 +1.6**
AOS	**Alonnisos**	2.70	76	*e*Pb	**Pn**	**15 29 11.2 +2.1**
AOS	**Alonnisos**	2.70	76	*e*PB	**Pn**	**15 29 11.2 +2.1**
AOS	**Alonnisos**	2.70	76	P	**Pn**	**15 29 10.7 +1.6**
AOS	**Alonnisos**	2.70	76	*e*Pb	**Pn**	**15 29 11.2 +2.1**
GRG	**Griva**	2.80	31	*e*P	**Pn**	**15 29 11.7 +1.2**
GRG	**Griva**	2.80	31	P	**Pn**	**15 29 11.8 +1.2**
GRG	**Griva**	2.80	31	*e*Pn	**Pn**	**15 29 11.7 +1.2**
GRG	**Griva**	2.80	31	*e*PN	**Pn**	**15 29 11.7 +1.2**
GRG	**Griva**	2.80	31	*e*Pn	**Pn**	**15 29 11.7 +1.2**
THE	**Thessaloniki**	2.80	42	P	**Pn**	**15 29 11.8 +1.3**
THE	**Thessaloniki**	2.80	42	P	**Pn**	**15 29 11.8 +1.3**
TIR	**Tirane**	2.82	350	*i* PN	**Pn**	**15 29 12.4 +1.6**
TIR				*i* SN	**Sn**	**15 29 45.3 +0.8**
TIR	**Tirane**	2.82	350	*i* PN	**Pb**	**15 29 14.4 -1.9**
TIR				*i* SN	**Sn**	**15 29 45.2 +0.8**
TIR	**Tirane**	2.82	350	*e*P	**Pn**	**15 29 12.3 +1.6**
TIR	**Tirane**	2.82	350	P	**Pn**	**15 29 12.4 +1.6**
TIR	**Tirane**	2.82	350	*e*Pn	**Pn**	**15 29 12.3 +1.6**
TIR	**Tirane**	2.82	350	*e*P	**Pn**	**15 29 12.3 +1.6**
TIR				*i* Sn	**Sn**	**15 29 45.2 +0.8**
HORT	**Hortiatis**	2.85	44	P	**Pn**	**15 29 12.3 +1.1**
HORT	**Hortiatis**	2.85	44	P	**Pn**	**15 29 12.3 +1.1**
PLG	**Polygyros**	2.90	51	*e*P	**Pn**	**15 29 13.4 +1.5**
PLG	**Polygyros**	2.90	51	P	**Pn**	**15 29 13.3 +1.4**
PLG	**Polygyros**	2.90	51	*e*Pn	**Pn**	**15 29 13.4 +1.5**
PLG	**Polygyros**	2.90	51	*e*PN	**Pn**	**15 29 13.4 +1.5**
PLG	**Polygyros**	2.90	51	*e*Pn	**Pn**	**15 29 13.4 +1.5**
TIP	**Timpagrande**	2.99	283	*e*Pn	**Pn**	**15 29 15.1 +2.0**
TIP	**Timpagrande**	2.99	283	*e*Pn	**Pn**	**15 29 15.1 +2.0**
KYTH	**Kithira**	3.04	138	*e*Pb	**Pb**	**15 29 19.5 -0.6**
KYTH	**Kithira**	3.04	138	*e*PB	**Pb**	**15 29 19.5 -0.6**
KYTH	**Kithira**	3.04	138	*e*Pb	**Pb**	**15 29 19.5 -0.6**
SOH	**Sokhos**	3.15	43	*e*P	**Pn**	**15 29 17.5 +2.2**
SOH	**Sokhos**	3.15	43	P	**Pn**	**15 29 17.2 +1.9**
SOH	**Sokhos**	3.15	43	*e*Pn	**Pn**	**15 29 17.5 +2.2**
SOH	**Sokhos**	3.15	43	*e*PN	**Pn**	**15 29 17.5 +2.2**
SOH	**Sokhos**	3.15	43	P	**Pn**	**15 29 17.2 +1.9**
SOH	**Sokhos**	3.15	43	*e*Pn	**Pn**	**15 29 17.5 +2.2**
TAR1	**Taranto**	3.17	309	*e*Pn	**Pn**	**15 29 17.1 +1.6**
VAY	**Valandovo**	3.18	29	P	**Pn**	**15 29 16.0 +0.4**
VAY	**Valandovo**	3.18	29	*i* Pn	**Pn**	**15 29 16.4 +0.8**
VAY				*i* Pg	**Pb**	**15 29 20.5 -1.8**
VAY	**Valandovo**	3.18	29	P	**Pn**	**15 29 16.0 +0.4**
VAY	**Valandovo**	3.18	29	*i* Pn	**Pn**	**15 29 16.9 +1.3**
VAY	**Valandovo**	3.18	29	*i* Pg	**Pb**	**15 29 21.0 -1.4**
OUR	**Ouranopolis**	3.22	56	P	**Pn**	**15 29 17.7 +1.5**
OUR	**Ouranopolis**	3.22	56	P	**Pn**	**15 29 17.7 +1.5**
PE1	**Pezze di Greco**	3.26	314	*e*Pn	**Pn**	**15 29 18.7 +1.9**
PE1				*e*Sn	**Sn**	**15 29 56.0 +0.7**
SKO	**Skopje**	3.48	12	P	**Pn**	**15 29 22.2 +2.5**
SKO	**Skopje**	3.48	12	*i* Pn	**Pn**	**15 29 21.8 +2.0**
SKO	**Skopje**	3.48	12	⇑*i*Pn	**Pn**	**15 29 21.4 +1.7**
SKO	**Skopje**	3.48	12	⇑*i*Pn	**Pn**	**15 29 21.4 +1.7**
SKO	**Skopje**	3.48	12	P	**Pn**	**15 29 22.2 +2.5**
SRS	**Serrai**	3.48	42	P	**Pn**	**15 29 21.1 +1.2**
SRS	**Serrai**	3.48	42	P	**Pn**	**15 29 21.1 +1.2**
ANKY	**Antikythira Is**	3.50	140	*e*Pn	Pb	15 29 24.7 -3.2
ANKY	**Antikythira Is**	3.50	140	*e*PN	Pb	15 29 24.7 -3.2
ANKY	**Antikythira Is**	3.50	140	*e*Pn	Pb	15 29 24.7 -3.2
ULC	**Ulcinj**	3.53	345	⇑*i*Pn	**Pn**	**15 29 20.9 +0.4**
ULC				*e*Sn	**Sn**	**15 30 01.5 -0.4**
ULC	**Ulcinj**	3.53	345	⇑*i*Pn	**Pn**	**15 29 20.9 +0.4**
ULC				*e*Sn	**Sn**	**15 30 01.5 -0.4**
CEL	**Celeste**	3.63	267	*e*Pn	**Pn**	**15 29 23.4 +1.5**
CEL				*e*Sn	**Sn**	**15 30 01.1 -3.5**
CEL	**Celeste**	3.63	267	*e*Pn	**Pn**	**15 29 23.5 +1.5**
CEL				*e*Sn	**Sn**	**15 30 01.1 -3.5**
BAI	**Bari**	3.77	313	*e*Pn	**Pn**	**15 29 25.5 +1.7**
BAI				*e*Sn	**Sn**	**15 30 08.5 +0.7**
NVR	**Nevrokopi**	3.79	42	P	**Pn**	**15 29 25.2 +1.1**
NVR	**Nevrokopi**	3.79	42	*e*Pn	**Pn**	**15 29 26.0 +1.9**
NVR	**Nevrokopi**	3.79	42	*e*PN	**Pn**	**15 29 26.0 +1.9**
NVR	**Nevrokopi**	3.79	42	P	**Pn**	**15 29 25.2 +1.1**
NVR	**Nevrokopi**	3.79	42	*e*Pn	**Pn**	**15 29 26.0 +1.9**
LIA	**Limnos Island**	3.87	68	*e*Pn	**Pn**	**15 29 27.4 +2.3**
LIA	**Limnos Island**	3.87	68	*e*PN	**Pn**	**15 29 27.4 +2.3**
LIA	**Limnos Island**	3.87	68	*e*Pn	**Pn**	**15 29 27.4 +2.3**
CUC	**Castrocucco**	3.91	293	*e*Pn	Pn	15 29 29.3 +3.6
CUC	**Castrocucco**	3.91	293	*e*Pn	Pn	15 29 29.3 +3.6
BUM	**Brajici-Budva**	3.93	342	⇓*i*Pn	**Pn**	**15 29 26.6 +0.6**
BUM				*e*Sn	**Sn**	**15 30 12.5 +0.7**
BUM	**Brajici-Budva**	3.93	342	⇓*i*Pn	**Pn**	**15 29 26.6 +0.6**
BUM				*e*Sn	**Sn**	**15 30 12.5 +0.7**
KAVA	**Kavala**	3.93	51	P	**Pn**	**15 29 27.1 +1.2**
KAVA	**Kavala**	3.93	51	P	**Pn**	**15 29 27.1 +1.2**
PDG	**Podgorica**	3.98	347	⇑*i*Pn	**Pn**	**15 29 27.2 +0.7**
PDG				*e*Sn	**Sn**	**15 30 12.4 -0.4**
PDG	**Podgorica**	3.98	347	⇑*i*Pn	**Pn**	**15 29 27.2 +0.7**
PDG				*e*Sn	**Sn**	**15 30 12.4 -0.4**
TTG	**Podgorica**	3.98	347	⇑*i*Pn	**Pn**	**15 29 27.3 +0.7**
TTG				*e*Sn	**Sn**	**15 30 13.7 +0.9**
PVY	**Plav**	4.04	354	⇑*i*Pn	**Pn**	**15 29 29.5 +1.8**
PVY				*e*Sn	**Sn**	**15 30 15.7 +0.9**
PVY	**Plav**	4.04	354	⇑*i*Pn	**Pn**	**15 29 29.5 +1.8**
PVY				*e*Sn	**Sn**	**15 30 15.7 +0.9**
HCY	**Herceg Novi**	4.17	339	⇓*i*Pn	**Pn**	**15 29 29.4 +0.1**
HCY				*e*Sn	**Sn**	**15 30 17.9 +0.3**
HCY	**Herceg Novi**	4.17	339	⇓*i*Pn	**Pn**	**15 29 29.4 +0.1**
HCY				*e*Sn	**Sn**	**15 30 17.9 +0.3**
APE	**Apeiranthos**	4.25	109	*e*P	Pb	15 29 35.7 -5.1
APE	**Apeiranthos**	4.25	109	*e*Pn	Pb	15 29 35.6 -5.1
APE	**Apeiranthos**	4.25	109	*e*PN	Pb	15 29 35.6 -5.1
APE	**Apeiranthos**	4.25	109	⇑*i*P	Pb	15 29 35.7 -5.0
APE	**Apeiranthos**	4.25	109	*e*Pn	Pb	15 29 35.6 -5.1
VAM	**Vamos**	4.32	136	*e*P	Pn	15 29 35.3 +3.9
VAM	**Vamos**	4.32	136	*e*Pn	Pn	15 29 35.3 +3.9
VAM	**Vamos**	4.32	136	*e*PN	Pn	15 29 35.3 +3.9
VAM	**Vamos**	4.32	136	*e*Pn	Pn	15 29 35.3 +3.9
BEY	**Berane**	4.33	354	*e*Pn	**Pn**	**15 29 33.2 +1.7**
BEY				*e*Sn	**Sn**	**15 30 22.8 +1.2**
IVA	**Berane**	4.33	354	*e*Pn	**Pn**	**15 29 33.2 +1.7**
IVA				*e*Sn	**Sn**	**15 30 22.8 +1.2**
SMTH	**Samothraki Isl**	4.33	62	*e*Pn	**Pn**	**15 29 33.2 +1.8**
SMTH	**Samothraki Isl**	4.33	62	*e*PN	**Pn**	**15 29 33.2 +1.8**
SMTH	**Samothraki Isl**	4.33	62	*e*Pn	**Pn**	**15 29 33.2 +1.8**
CHOS	**Chios island**	4.36	91	*e*Pn	Pn	15 29 37.0 +5.0
CHOS	**Chios island**	4.36	91	*e*PN	Pn	15 29 37.0 +5.0
CHOS	**Chios island**	4.36	91	*e*Pn	Pn	15 29 37.0 +5.0
BARS	**Barje**	4.36	13	⇑*i*Pn	**Pn**	**15 29 33.0 +1.1**
BARS	**Barje**	4.36	13	⇑*i*Pn	**Pn**	**15 29 33.0 +1.1**
NKY	**Niksic**	4.39	345	⇓*i*Pn	**Pn**	**15 29 33.4 +0.9**
NKY				*e*Sn	**Sn**	**15 30 22.9 -0.5**
NKY	**Niksic**	4.39	345	⇓*i*Pn	**Pn**	**15 29 33.4 +0.9**
NKY				*e*Sn	**Sn**	**15 30 22.9 -0.5**
VTS	**Vitosha**	4.52	26	P	**Pn**	**15 29 36.0 +1.8**
VTS	**Vitosha**	4.52	26	⇑*i*Pn	**Pn**	**15 29 36.0 +1.8**
VTS				*e*Sn	**Sn**	**15 30 27.9 +1.5**
VTS	**Vitosha**	4.52	26	⇑*i*P	**Pn**	**15 29 36.3 +2.1**
VTS	**Vitosha**	4.52	26	P	**Pn**	**15 29 36.0 +1.8**
VTS				*e*Sn	**Sn**	**15 30 27.9 +1.5**
PRK	**Paraskevi**	4.55	80	*e*P	Pn	15 29 38.3 +3.8
PRK	**Paraskevi**	4.55	80	*e*Pn	Pn	15 29 38.3 +3.8
PRK	**Paraskevi**	4.55	80	*e*PN	Pn	15 29 38.3 +3.8
PRK	**Paraskevi**	4.55	80	*e*Pn	Pn	15 29 38.3 +3.8
BRY	**Bratogost**	4.58	342	⇓*i*Pn	**Pn**	**15 29 34.8 -0.3**
BRY				*e*Sn	**Sn**	**15 30 27.4 -0.6**
BRY	**Bratogost**	4.58	342	⇓*i*Pn	**Pn**	**15 29 34.8 -0.3**
BRY				*e*Sn	**Sn**	**15 30 27.4 -0.6**
SELS	**Selova**	4.67	6	⇓*i*Pn	**Pn**	**15 29 36.2 0.0**
MS1	**Monte Sant'Ang**	4.70	313	*e*Pn	**Pn**	**15 29 38.2 +1.6**
MS1				*e*Sn	**Sn**	**15 30 29.4 -1.3**
GVD	**Gavdhos**	4.70	141	*e*Pn	Pn	15 29 40.5 +3.9
GVD	**Gavdhos**	4.70	141	*e*PN	Pn	15 29 40.5 +3.9
GVD	**Gavdhos**	4.70	141	*e*Pn	Pn	15 29 40.5 +3.9
UPM	**Unac-Piva**	4.79	346	⇓*i*Pn	**Pn**	**15 29 38.9 +1.0**
UPM				*e*Sn	**Sn**	**15 30 33.4 +0.2**
UPM	**Unac-Piva**	4.79	346	⇓*i*Pn	**Pn**	**15 29 38.9 +1.0**
UPM				*e*Sn	**Sn**	**15 30 33.4 +0.2**
STON	**Ston**	4.80	335	*i* Pn	**Pn**	**15 29 38.1 +0.2**
STON				Sn	**Sn**	**15 30 30.5 -2.6**
STON	**Ston**	4.80	335	*i* Pn	**Pn**	**15 29 38.1 +0.2**
STON				Sn	**Sn**	**15 30 30.5 -2.6**
ALN	**Alexandroupoli**	4.86	60	*e*P	**Pn**	**15 29 41.0 +2.2**
ALN	**Alexandroupoli**	4.86	60	*e*Pn	**Pn**	**15 29 41.0 +2.2**
ALN	**Alexandroupoli**	4.86	60	*e*PN	**Pn**	**15 29 41.0 +2.2**
ALN	**Alexandroupoli**	4.86	60	*e*Pn	**Pn**	**15 29 41.0 +2.2**
SIVA	**Sivas**	4.95	134	*e*Pn	Pn	15 29 44.6 +4.6
SIVA	**Sivas**	4.95	134	*e*PN	Pn	15 29 44.6 +4.6
SIVA	**Sivas**	4.95	134	*e*Pn	Pn	15 29 44.6 +4.6
ZAPS	**Zavoj**	4.97	18	⇑*i*Pn	**Pn**	**15 29 42.3 +2.0**
ZAPS				*e*Sn	**Sn**	**15 30 40.1 +2.6**
LAST	**Lasithi**	5.24	129	*e*Pn	Pn	15 29 48.2 +4.1
LAST	**Lasithi**	5.24	129	*e*PN	Pn	15 29 48.2 +4.1
LAST	**Lasithi**	5.24	129	*e*Pn	Pn	15 29 48.2 +4.1
GRUS	**Gruza**	5.32	2	⇑*i*Pn	**Pn**	**15 29 45.2 +0.1**
GRUS	**Gruza**	5.32	2	⇑*i*Pn	**Pn**	**15 29 45.2 +0.1**
BBLS	**Lazići**	5.36	351	⇑*i*Pn	**Pn**	**15 29 45.6 -0.1**
BBLS				*e*Sn	**Sn**	**15 30 46.4 -0.7**
BBLS	**Lazići**	5.36	351	⇑*i*Pn	**Pn**	**15 29 45.6 -0.1**
BBLS				*e*Sn	**Sn**	**15 30 46.4 -0.7**
BOLS	**Boljevac**	5.37	11	*e*Pn	**Pn**	**15 29 44.4 -1.4**
BOLS	**Boljevac**	5.37	11	*e*Pn	**Pn**	**15 29 44.4 -1.4**
WDD	**Wield Dalam**	5.48	242	*e*Pn	**Pn**	**15 29 49.1 +1.8**
518nm,0.8s						
WDD				*e*Sn	**Sn**	**15 30 48.6 -1.4**
WDD	**Wield Dalam**	5.48	242	*e*Pn	**Pn**	**15 29 49.1 +1.8**
518nm,0.8s						
DIVS	**Divibare**	5.54	356	⇑*i*Pn	**Pn**	**15 29 47.8 -0.4**
DIVS				*e*Sn	**Sn**	**15 30 50.9 -0.7**
DIVS	**Divibare**	5.54	356	⇑*i*Pn	**Pn**	**15 29 47.8 -0.4**
DIVS				*e*Sn	**Sn**	**15 30 50.9 -0.7**
ZKR	**Zakros**	5.73	125	*e*Pn	Pn	15 29 55.0 +4.2
ZKR	**Zakros**	5.73	125	*e*PN	Pn	15 29 55.0 +4.2
ZKR	**Zakros**	5.73	125	*e*Pn	Pn	15 29 55.0 +4.2
AQU	**L'Aquila**	6.61	307	*e*Pn	**Pn**	**15 30 04.5 +1.7**
63nm,0.8s						
AQU				*e*Sn	**Sn**	**15 31 22.0 +4.3**
AQU	**L'Aquila**	6.61	307	⇑*i*P	Pn	15 30 06.5 +3.7
AQU	**L'Aquila**	6.61	307	*e*P	**Pn**	**15 30 04.5 +1.7**
63nm,0.8s						
FGSL	**Fruska Gora**	6.61	356	*e*Pn	**Pn**	**15 30 02.0 -0.7**
FRGS	**Fruska Gora**	6.61	356	*e*Pn	**Pn**	**15 30 02.0 -0.8**
HUMR	**Humele**	6.83	28	⇓*i*P	Pn	15 30 12.6 +6.7
BZS	**Buzias**	7.09	6	⇑*i*P	**Pn**	**15 30 09.1 -0.3**
LOT	**Lotru**	7.29	18	⇑*i*P	**Pn**	**15 30 12.8 +0.5**
NVLJ	**Novalja**	7.33	327	*i* Pn	**Pn**	**15 30 13.1 +0.5**
NVLJ				Sn	**Sn**	**15 31 32.4 -3.1**
NVLJ	**Novalja**	7.33	327	*i* Pn	**Pn**	**15 30 13.1 +0.5**
NVLJ				Sn	**Sn**	**15 31 32.3 -3.1**
ARR	**Arges**	7.46	23	⇓*i*P	**Pn**	**15 30 16.0 +1.5**
VOIR		7.65	25	⇓*i*P	**Pn**	**15 30 19.2 +2.0**
PKSM	**Moragy**	7.76	350	⇓*i*P	**Pn**	**15 30 18.1 -0.5**
PKSM	**Moragy**	7.76	350	*e*Pn	**Pn**	**15 30 17.7 -0.9**
ISR	**Istrita**	7.95	33	⇑*i*P	Pn	15 30 24.8 +3.6
BOJS	**Bojanci**	7.96	332	*i* Pn	**Pn**	**15 30 21.4 +0.2**
MLR	**Muntele Rosu**	8.01	29	Pn	**Pn**	**15 30 23.7 +1.5**
MLR				Lg	Lg	15 32 35.1
MLR	**Muntele Rosu**	8.01	29	⇑*i*P	Pn	15 30 25.3 +3.1
MLR	**Muntele Rosu**	8.01	29	Pn	**Pn**	**15 30 23.7 +1.5**
baz=180,slow=8.1						
MLR				Lg	Lg	15 32 35.1
baz=90,slow=20,SNR=2.0						
MLR	**Muntele Rosu**	8.01	29	P	**Pn**	**15 30 23.7 +1.5**
SLUM		8.04	150	S	Sn	15 31 42.5 -11
baz=150						
SLUM				AMP		15 32 00.0
comp=E,40µm,0.6s,logA/T=4.8,baz=150						
SLUM		8.04	150	P	**Pn**	**15 30 20.1 -2.4**
SLUM				S	Sn	15 31 42.5 -11
CRES	**Cresnjev**	8.16	334	*i* Pn	**Pn**	**15 30 23.8 -0.3**
CRES				*i* Sn	**Sn**	**15 31 51.0 -4.9**
DOPR	**Dopca**	8.23	25	⇓*i*P	**Pn**	**15 30 27.8 +2.7**
TIRR	**Tirgusor**	8.35	43	*e*P	**Pn**	**15 30 26.8 +0.1**
TIRR	**Tirgusor**	8.35	43	*e*Pn	**Pn**	**15 30 26.8 +0.1**
TIRR	**Tirgusor**	8.35	43	⇑*i*P	**Pn**	**15 30 28.6 +1.9**
TIRR	**Tirgusor**	8.35	43	*e*P	**Pn**	**15 30 26.8 +0.1**
BEHE	**Becsehely**	8.36	342	*e*Pn	**Pn**	**15 30 25.9 -0.9**
SKDS	**Skadanscina**	8.48	327	*i* Pn	**Pn**	**15 30 28.1 -0.4**
SKDS				*i* Sn	**Sn**	**15 32 00.1 -3.7**
VRI	**Vrincioaia**	8.63	30	⇑*i*P	Pn	15 30 33.6 +3.1
VOY	**Vojsko**	8.92	329	*e*Pn	**Pn**	**15 30 34.2 -0.4**
PERS	**Pernice**	8.99	336	*i* Pn	**Pn**	**15 30 34.7 -0.7**
PERS				*i* Sn	Sn	15 32 07.7 -8.6
SOKA	**Soboth**	9.05	335	⇑*i*Pn	**Pn**	**15 30 35.8 -0.6**
SOKA				⇑*i*Sn	Sn	15 32 11.5 -6.5
SOKA	**Soboth**	9.05	335	Pn	**Pn**	**15 30 35.8 -0.6**
OBKA	**Obir**	9.07	333	⇓*i*Pn	**Pn**	**15 30 36.0 -0.6**
OBKA				⇓*i*Sn	**Sn**	**15 32 14.3 -4.1**
OBKA	**Obir**	9.07	333	Pn	**Pn**	**15 30 36.0 -0.6**
OBKA				Sn	**Sn**	**15 32 14.3 -4.1**
TESR	**Tescani**	9.14	28	⇑*i*P	Pn	15 30 44.0 +6.5
HMAT	**Matruh**	9.21	142	P	**Pn**	**15 30 36.4 -2.2**
baz=142						
HMAT				AMP		15 32 00.0
comp=E,20µm,0.9s,logA/T=4.3,baz=142						
HMAT	**Matruh**	9.21	142	P	**Pn**	**15 30 36.4 -2.2**
KEST	**Kesra**	9.35	256	Pn	**Pn**	**15 30 42.2 +1.8**
KEST	**Kesra**	9.35	256	Pn	**Pn**	**15 30 42.4 +2.0**
baz=65,slow=8.5,SNR=3.1						
KEST	**Kesra**	9.35	256	Pn	**Pn**	**15 30 42.2 +1.8**
PSZ	**Piszkesteto**	9.36	357	*e*P	**Pn**	**15 30 39.6 -0.9**
PSZ				pmax	pmax	
comp=Z,29nm,1.1s						
PSZ	**Piszkesteto**	9.36	357	*e*Pn	**Pn**	**15 30 39.6 -0.9**
comp=Z,28nm,1.1s						
PSZ	**Piszkesteto**	9.36	357	⇓*i*P	**Pn**	**15 30 40.2 -0.3**
PSZ	**Piszkesteto**	9.36	357	*e*Pn	**Pn**	**15 30 40.1 -0.4**
PSZ	**Piszkesteto**	9.36	357	*e*P	**Pn**	**15 30 39.6 -0.9**
comp=Z,29nm,1.1s						
ARSA	**Arzberg**	9.41	339	⇑*i*Pn	**Pn**	**15 30 40.8 -0.5**
SNR=10						
ARSA				⇓*i*Sn	**Sn**	**15 32 21.7 -5.0**
ARSA	**Arzberg**	9.41	339	Pn	**Pn**	**15 30 40.8 -0.5**
SNR=10						
SOP	**Sopron**	9.56	344	*e*Pn	**Pn**	**15 30 43.9 +0.7**
PGF	**Pioggiola**	9.62	298	*e*P	Pn	15 30 48.0 +3.9
comp=Z,13nm,0.8s						
PGF	**Pioggiola**	9.62	298	*e*P	Pn	15 30 48.0 +3.9
PGF				pmax	pmax	
comp=Z,13nm,0.8s						
PGF	**Pioggiola**	9.62	298	*e*P	Pn	15 30 48.0 +3.9
comp=Z,13nm,0.8s						
TRPA	**Tarpa**	9.67	8	*e*Pn	**Pn**	**15 30 44.0 -0.8**
BUR08	**Bucovina Ar. S**	9.70	19	*e*Pn	**Pn**	**15 30 45.3 +0.1**
BUR08	**Bucovina Ar. S**	9.70	19	*e*Pn	**Pn**	**15 30 45.3 +0.1**
ZST	**Bratislava**	9.94	347	*e*P	**Pn**	**15 30 47.4 -1.0**
ZST	**Bratislava**	9.94	347	*e*PN	**Pn**	**15 30 47.4 -1.0**
ZST	**Bratislava**	9.94	347	*e*P	**Pn**	**15 30 47.4 -1.0**
CONA	**Conrad Observa**	9.95	342	⇓*i*Pn	**Pn**	**15 30 48.2 -0.4**
CONA	**Conrad Observa**	9.95	342	Pn	**Pn**	**15 30 48.2 -0.4**
KBA	**Koelnbreinsper**	10.00	331	⇑*i*Pn	**Pn**	**15 30 48.4 -1.0**
SNR=7.6						
KBA				⇑*i*Sn	**Sn**	**15 32 35.7 -5.6**
KBA	**Koelnbreinsper**	10.00	331	Pn	**Pn**	**15 30 48.4 -1.0**
SNR=7.6						
VYHS	**Vyhne**	10.00	354	*e*P	**Pn**	**15 30 49.3 +0.1**
VYHS	**Vyhne**	10.00	354	*e*PN	**Pn**	**15 30 49.3 +0.1**
VYHS	**Vyhne**	10.00	354	*e*P	**Pn**	**15 30 49.3 +0.1**
UZH	**Uzhgorod**	10.14	7	*e*P	**Pn**	**15 30 51.8 +0.6**
UZH	**Uzhgorod**	10.14	7	*e*P	**Pn**	**15 30 51.8 +0.6**
SWA2		10.17	155	P	**Pn**	**15 30 49.1 -2.5**
baz=155						
SWA2		10.17	155	P	**Pn**	**15 30 49.1 -2.5**
BR131	**Keskin Array S**	10.27	79	*e*Pn	Pn	15 30 58.5 +5.4
comp=Z,2.7nm,0.7s						
BRTR	**Keskin Array B**	10.27	79	Pn	Pn	15 30 56.5 +3.4
BRTR	**Keskin Array B**	10.27	79	Pn	Pn	15 30 56.5 +3.4
comp=Z,0.6nm,0.3s,baz=266,slow=11,SNR=13						
BRTR	**Keskin Array B**	10.27	79	P	Pn	15 30 56.5 +3.4
comp=Z,1.0nm,0.3s						
MOA	**Molln**	10.33	336	⇓*i*Pn	**Pn**	**15 30 53.0 -0.8**
SNR=23						
MOA				⇑*i*Sn	**Sn**	**15 32 47.7 -1.5**
MOA	**Molln**	10.33	336	Pn	**Pn**	**15 30 53.0 -0.8**
SNR=23						
MOA				Sn	**Sn**	**15 32 47.7 -1.5**
CRVS	**Cervenica-Dubn**	10.36	4	*e*P	**Pn**	**15 30 53.5 -0.6**
CRVS	**Cervenica-Dubn**	10.36	4	*e*PN	**Pn**	**15 30 53.5 -0.6**
CRVS	**Cervenica-Dubn**	10.36	4	*e*P	**Pn**	**15 30 53.5 -0.6**
KOLS	**Kolonicke sedl**	10.44	6	*e*P	**Pn**	**15 30 56.4 +1.1**
KOLS	**Kolonicke sedl**	10.44	6	*e*PN	**Pn**	**15 30 56.4 +1.1**
KOLS	**Kolonicke sedl**	10.44	6	*e*P	**Pn**	**15 30 56.4 +1.1**
WTTA	**Wattenberg**	10.85	326	⇓*i*Pn	**Pn**	**15 30 59.6 -1.5**
SNR=11						
WTTA				⇑*i*Sn	**Sn**	**15 32 56.9 -5.2**
WTTA	**Wattenberg**	10.85	326	Pn	**Pn**	**15 30 59.6 -1.5**
SNR=11						
CSS	**Prodhromos**	10.90	105	P	**Pn**	**15 31 04.6 +3.0**
CSS	**Prodhromos**	10.90	105	P	**Pn**	**15 31 04.6 +3.0**
WATA	**Walderalm**	10.93	326	⇑*i*Pn	**Pn**	**15 31 01.4 -0.7**
SNR=15						
WATA				⇓*i*Sn	**Sn**	**15 33 00.1 -4.0**
WATA	**Walderalm**	10.93	326	Pn	**Pn**	**15 31 01.4 -0.7**
SNR=15						
WATA				Sn	**Sn**	**15 33 00.1 -4.0**
MOTA	**Moosalm**	11.14	325	⇓*i*Pn	**Pn**	**15 31 02.8 -2.2**
SNR=15						
MOTA				⇑*i*Sn	**Sn**	**15 33 04.8 -4.6**
SBF	**Sospel**	11.17	302	*e*P	**Pn**	**15 31 08.2 +2.8**
SBF	**Sospel**	11.17	302	*e*P	**Pn**	**15 31 08.2 +2.8**
SBF	**Sospel**	11.17	302	*e*P	**Pn**	**15 31 08.2 +2.8**
SBF	**Sospel**	11.17	302	*e*P	**Pn**	**15 31 08.2 +2.8**
TREC	**Trest**	11.31	343	AMS	AMS	15 36 00.0
comp=Z,300nm,11.3s						
DAVOX	**Davos/Dischmat**	11.33	320	Pn	**Pn**	**15 31 07.5 -0.1**
DAVOX				Sn	**Sn**	**15 33 14.4 +0.5**
DAVOX	**Davos/Dischmat**	11.33	320	Pn	**Pn**	**15 31 07.5 -0.1**
comp=Z,0.4nm,0.3s,baz=138,slow=17,SNR=5.3						
DAVOX				Sn	**Sn**	**15 33 14.4 +0.5**
comp=Z,1.6nm,0.3s,baz=342,slow=21,SNR=6.8						
DAVOX				LR	LR	15 35 57.8
comp=Z,108nm,18.2s,baz=82,slow=40						
DAVOX	**Davos/Dischmat**	11.33	320	P	**Pn**	**15 31 07.5 -0.1**
comp=Z,2.0nm,0.3s						
GERES	**GERESS Array B**	11.39	337	Pn	**Pn**	**15 31 07.4 -0.9**
GERES				Sn	**Sn**	**15 33 09.8 -

baz=124
HNKL **Nakhl** 14.07 124 P Pn 15 31 43.3 -1.8
PAGF **Fort de Pagny** 14.62 318 *e*P Pn 15 31 51.8 -0.6
comp=Z,10nm,1.2s
PAGF **Fort de Pagny** 14.62 318 *e*P Pn 15 31 51.8 -0.6
comp=Z,10nm,1.2s
SMF **Signal de Mont** 14.67 309 *e*P Pn 15 31 53.5 +0.4
comp=Z,4.4nm,0.6s
SMF **Signal de Mont** 14.67 309 *e*P Pn 15 31 53.5 +0.4
SMF pmax pmax
comp=Z,4.0nm,0.6s
SMF **Signal de Mont** 14.67 309 *e*P Pn 15 31 53.5 +0.4
comp=Z,4.4nm,0.6s
RUE **Ruedersdorf** 14.68 344 Pn P 15 31 59.3 0.0
EIL **Elat** 14.88 122 Pn Pn 15 31 56.4 +0.3
EIL Sn Sn 15 34 28.1 -13
EIL **Elat** 14.88 122 Pn Pn 15 31 56.4 +0.3
comp=Z,0.3nm,0.3s,baz=336,slow=19,SNR=4.6
EIL Sn Sn 15 34 28.1 -13
comp=Z,0.6nm,0.3s,baz=277,slow=17,SNR=3.7
MEZF **Maizieres J'vi** 14.95 317 *e*P Pn 15 31 57.2 +0.4
comp=Z,50nm,1.0s
MEZF **Maizieres J'vi** 14.95 317 *e*P Pn 15 31 57.2 +0.4
comp=Z,50nm,1.0s
LOR **Lormes** 14.96 311 *e*P Pn 15 31 55.5 -1.5
comp=Z,4.3nm,0.5s
LOR *e*R
comp=Z,85nm,21.2s
LOR **Lormes** 14.96 311 *e*P Pn 15 31 55.5 -1.5
comp=Z,4.3nm,0.5s
HDK1 **Dakhla** 15.01 147 P Pn 15 31 56.4 -1.4
baz=148
HDK1 **Dakhla** 15.01 147 P Pn 15 31 56.4 -1.4
AVF **Avril sur Loir** 15.03 309 *e*P Pn 15 31 58.2 +0.2
comp=Z,4.9nm,0.7s
AVF **Avril sur Loir** 15.03 309 *e*P Pn 15 31 58.2 +0.2
AVF pmax pmax
comp=Z,5.0nm,0.7s
AVF **Avril sur Loir** 15.03 309 *e*P Pn 15 31 58.2 +0.2
comp=Z,4.9nm,0.7s
SSF **Saint Saulge** 15.07 310 *e*P Pn 15 31 58.5 +0.1
comp=Z,9.0nm,0.8s
SSF **Saint Saulge** 15.07 310 *e*P Pn 15 31 58.5 +0.1
SSF pmax pmax
comp=Z,9.0nm,0.8s
SSF **Saint Saulge** 15.07 310 *e*P Pn 15 31 58.5 +0.1
comp=Z,9.0nm,0.8s
WLF **Walferdange** 15.11 322 *e*P P 15 32 06.9 +2.7
WLF pmax pmax
comp=Z,24nm,0.9s
WLF **Walferdange** 15.11 322 *e*Pn P 15 32 06.9 +2.7
comp=Z,24nm,0.9s
SUW **Suwalki** 15.56 6 P Pn 15 32 01.9 -2.9
SUW **Suwalki** 15.56 6 Pn Pn 15 32 01.9 -2.9
MEM **Membach** 15.83 324 AP pP 15 32 15.5 -1.1
comp=Z,11nm,1.2s
DOU **Dourbes** 16.16 321 AP pP 15 32 18.8 -1.4
comp=Z,8.6nm,1.0s
BAIF **Baives** 16.33 320 *e*P Pn 15 32 14.9 +0.1
comp=Z,27nm,0.9s
BAIF **Baives** 16.33 320 *e*P Pn 15 32 14.9 +0.1
BAIF pmax pmax
comp=Z,27nm,0.9s
BAIF **Baives** 16.33 320 *e*P Pn 15 32 14.9 +0.1
comp=Z,27nm,0.9s
BAIF **Baives** 16.33 320 *e*P Pn 15 32 14.9 +0.1
comp=Z,14nm,0.9s
KBZ **Khabaz** 17.62 66 P P 15 32 32.1 +0.2
KBZ **Khabaz** 17.62 66 P P 15 32 32.0 +0.2
KBZ **Khabaz** 17.62 66 P P 15 32 32.0 +0.2
comp=Z,0.1nm,0.3s,baz=285,slow=12,SNR=4.9
KBZ **Khabaz** 17.62 66 P P 15 32 32.1 +0.2
VORD **Divnogorie** 18.15 41 *e*P P 15 32 38.5 +0.8
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORD pmax pmax
comp=N,8.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD **Divnogorie** 18.15 41 *e*P P 15 32 38.5 +0.8
comp=E,8.0nm,0.8s
VSR **Storozhevoye** 18.23 40 *e*P P 15 32 39.1 +0.5
VSR pmax pmax
comp=Z,7.0nm,0.5s
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR **Storozhevoye** 18.23 40 *e*P P 15 32 39.1 +0.5
comp=E,10.0nm,1.1s
ESDC **Sonseca Array** 19.01 281 P Pn 15 32 47.7 -0.4
ESDC **Sonseca Array** 19.01 281 P Pn 15 32 47.7 -0.4
comp=E,0.5nm,0.3s,baz=73,slow=11,SNR=8.3
ESDC **Sonseca Array** 19.01 281 P Pn 15 32 47.7 -0.4
ESLA **Sonseca Array** 19.01 281 P Pn 15 32 48.9 +0.8
ESLA **Sonseca Array** 19.01 281 P Pn 15 32 48.9 +0.8
OBN **Obninsk** 19.79 28 *i*P Pn 15 32 56.9 -0.3
OBN pmax pmax
comp=Z,17nm,1.2s
OBN MLR MLR
comp=Z,200nm,16.0s
OBN **Obninsk** 19.79 28 *i* P Pn 15 32 56.9 -0.3
comp=Z,200nm,16.0s
TAM **Tamanrasset** 20.28 223 P P 15 33 01.7 +0.2
TAM **Tamanrasset** 20.28 223 P P 15 33 01.7 +0.2
TAM **Tamanrasset** 20.28 223 P P 15 33 01.7 +0.2
VSU **Vasula** 20.32 9 *e*P P 15 33 01.3 -0.1
VSU pmax pmax
comp=Z,71nm,0.7s
MOS **Moscow** 20.65 28 *e*P Pn 15 33 16.7 +9.3
MOS *e* 15 33 39.2
HFS **Hagfors** 22.01 351 P P 15 33 19.5 -0.2
HFS **Hagfors** 22.01 351 P P 15 33 19.5 -0.2
comp=Z,9.2nm,0.5s,baz=163,slow=10,SNR=47
HFS **Hagfors** 22.01 351 P P 15 33 19.5 -0.2
comp=Z,9.0nm,0.5s
KONO **Kongsberg** 22.22 345 P P 15 33 18.4 -3.5
KONO **Kongsberg** 22.22 345 P P 15 33 18.4 -3.5
NAO01 **NORSAR Array S** 23.10 348 *e*P P 15 33 30.5 -0.7
comp=Z,5.1nm,0.7s
NAO01 **NORSAR Array S** 23.10 348 *e*P P 15 33 30.5 -0.7
comp=Z,5.1nm,0.7s
EKA **Eskdalemuir Ar** 23.10 324 P P 15 33 31.8 +0.5
EKA **Eskdalemuir Ar** 23.10 324 P P 15 33 31.8 +0.5
comp=Z,15nm,0.8s,baz=122,slow=11,SNR=36
EKA **Eskdalemuir Ar** 23.10 324 P P 15 33 31.8 +0.5
comp=Z,15nm,0.8s
ESK **Eskdalemuir** 23.12 324 *e*P P 15 33 31.4 0.0
ESK pmax pmax
comp=Z,22nm,1.0s
ESK **Eskdalemuir** 23.12 324 *e*P P 15 33 31.4 0.0
comp=Z,22nm,1.0s
ESK **Eskdalemuir** 23.12 324 *e*P P 15 33 31.4 0.0
comp=Z,22nm,1.0s
FINES **FINESS Array B** 23.16 7 P P 15 33 30.4 -1.4
FINES PcP PcP 15 37 20.7 +1.0
FINES **FINESS Array B** 23.16 7 P P 15 33 30.4 -1.4
comp=Z,19nm,0.7s,baz=163,slow=12,SNR=61
FINES PcP PcP 15 37 20.7 +1.0
comp=Z,0.8nm,0.6s,baz=209,slow=2.2,SNR=4.3
FINES **FINESS Array B** 23.16 7 P P 15 33 30.4 -1.4
comp=Z,19nm,0.7s
FINES **FINESS Array B** 23.16 7 PcP PcP 15 37 20.7 +1.0
FIA1 **FINESS Array S** 23.16 7 *e*P P 15 33 29.4 -2.4
NB2 **NORSAR Subarra** 23.23 349 P P 15 33 32.4 -0.2
comp=Z,5.8nm,0.8s,baz=156,slow=11
NB2 **NORSAR Subarra** 23.23 349 P P 15 33 32.4 -0.2
comp=Z,5.8nm,0.8s,SNR=7.8
NOA **NORSAR Array B** 23.23 349 P P 15 33 32.2 -0.4
NOA **NORSAR Array B** 23.23 349 P P 15 33 32.2 -0.4
comp=Z,5.7nm,0.6s,baz=166,slow=11,SNR=34
NOA **NORSAR Array B** 23.23 349 P P 15 33 32.2 -0.4
comp=Z,6.0nm,0.6s
KAF **Kangasniemi** 23.84 7 *e*P P 15 33 37.5 -1.0
KAF pmax pmax
comp=Z,5.0nm,0.4s
KAF **Kangasniemi** 23.84 7 *e*p P 15 33 37.5 -1.0
comp=Z,5.2nm,0.4s
KAF **Kangasniemi** 23.84 7 *e*P P 15 33 37.5 -1.0
comp=Z,5.0nm,0.4s
JOF **Joensuu** 25.25 12 *e*P P 15 33 51.3 0.0
JOF pmax pmax
comp=Z,7.0nm,0.4s
JOF **Joensuu** 25.25 12 *e*p P 15 33 51.3 0.0
comp=Z,7.2nm,0.4s
JOF **Joensuu** 25.25 12 *e*P P 15 33 51.3 0.0
comp=Z,7.0nm,0.4s
KLMR **Klimovskoe** 25.28 22 *e*P P 15 33 50.5 -1.1
KLMR pmax pmax
comp=Z,20nm,0.8s
KLMR **Klimovskoe** 25.28 22 *e*P P 15 33 50.5 -1.1
comp=Z,20nm,0.8s
AKTO **Aktyubinsk** 28.96 54 *i* P P 15 34 21.8 -3.0
AKTO **Aktyubinsk** 28.96 54 P P 15 34 24.4 -0.4
AKTO **Aktyubinsk** 28.96 54 P P 15 34 24.4 -0.4
comp=Z,1.0nm,0.4s,baz=241,slow=8.9,SNR=5.2
AKTO **Aktyubinsk** 28.96 54 P P 15 34 24.4 -0.4
AB31 **Akbulak array** 30.04 56 *c*e P P 15 34 34.2 -0.2
AB31 pmax pmax
comp=Z,1.0nm,0.3s
AB31 **Akbulak array** 30.04 56 *e*P P 15 34 34.2 -0.2
comp=Z,1.0nm,0.3s
TOA0 **Torodi Ar. Sit** 30.32 218 *e*P P 15 34 38.3 +1.1
TOA0 **Torodi Ar. Sit** 30.32 218 *e*P P 15 34 38.3 +1.1
TORD **Torodi Ar. Bea** 30.32 218 P P 15 34 38.0 +0.8
TORD **Torodi Ar. Bea** 30.32 218 P P 15 34 38.0 +0.8
comp=Z,1.2nm,0.6s,baz=30,slow=9.5,SNR=13
TORD **Torodi Ar. Bea** 30.32 218 P P 15 34 38.0 +0.8
ARU **Arti** 30.78 42 *d i*P P 15 34 41.5 +0.7
ARU 15 35 36.9
ARU S S 15 39 44.1 +0.8
ARU pmax pmax
comp=Z,2.0nm,0.7s
ARU **Arti** 30.78 42 *i* P P 15 34 41.5 +0.7
comp=Z,2.0nm,0.7s
ARCES **ARCESS Array B** 31.14 3 P P 15 34 43.5 -0.4
ARCES **ARCESS Array B** 31.14 3 P P 15 34 43.5 -0.4
comp=Z,2.1nm,0.6s,baz=191,slow=10.0,SNR=23
ARCES LR LR 15 48 22.9
comp=Z,148nm,19.0s,baz=28,slow=39
ARCES **ARCESS Array B** 31.14 3 P P 15 34 43.6 -0.4
comp=Z,148nm,19.0s
ARE0 **ARCESS Array S** 31.14 3 P P 15 34 41.7 -2.3
KEV **Kevo** 31.44 4 *e*P P 15 34 46.4 -0.1
KEV pmax pmax
comp=Z,3.0nm,0.6s
KEV **Kevo** 31.44 4 *e*p P 15 34 46.4 -0.1
comp=Z,3.4nm,0.6s
KEV **Kevo** 31.44 4 *e*P P 15 34 46.4 -0.1
comp=Z,3.0nm,0.6s
ZRNK **Zerenda** 36.04 50 *i* P P 15 35 26.6 -0.1
ZRNK pmax pmax
comp=Z,2.0nm,0.5s
ZRNK **Zerenda** 36.04 50 *i* P P 15 35 26.6 -0.1
comp=Z,2.0nm,0.5s
BRVK **Borovoye** 36.82 50 *c i*P P 15 35 33.5 +0.2
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BRVK **Borovoye** 36.82 50 *e*P P 15 35 33.2 -0.2
comp=Z,4.0nm,0.7s
BRVK **Borovoye** 36.82 50 *i* P P 15 35 33.5 +0.2
comp=Z,6.0nm,1.0s
BVA0 **Borovoye Array** 36.88 50 *i* P P 15 35 34.2 +0.3
BVA0 **Borovoye Array** 36.88 50 *i* P P 15 35 34.2 +0.3
BVAR **Borovoye Array** 36.88 50 P P 15 35 33.7 -0.2
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BVAR **Borovoye Array** 36.88 50 P P 15 35 33.7 -0.2
BVAR **Borovoye Array** 36.88 50 P P 15 35 33.7 -0.2
comp=Z,3.2nm,0.7s,baz=267,slow=7.5,SNR=21
BVAR **Borovoye Array** 36.88 50 P P 15 35 33.7 -0.2
comp=Z,3.0nm,0.7s
KK31 **Karatay Array** 37.65 67 *c*e P P 15 35 40.5 -0.1
KK31 pmax pmax
comp=Z,2.0nm,0.3s
KK31 **Karatay Array** 37.65 67 *e*P P 15 35 40.5 -0.1
comp=Z,2.0nm,0.3s
KKAR **Karatay Array** 37.65 67 *e*P P 15 35 40.4 -0.2
KKAR pmax pmax
comp=Z,2.0nm,0.4s
KKAR **Karatay Array** 37.65 67 *e*P P 15 35 40.4 -0.2
comp=Z,1.8nm,0.4s
KKAR **Karatay Array** 37.65 67 *e*P P 15 35 40.4 -0.2
comp=Z,1.8nm,0.4s
DBIC **Dimbokro** 39.17 222 P P 15 35 54.2 +0.7
comp=Z,5.3nm,0.9s
DBIC **Dimbokro** 39.17 222 P P 15 35 54.2 +0.7
comp=Z,5.3nm,0.9s
SPITS **Spitsbergen Ar** 39.76 359 P P 15 35 58.6 +0.8
SPITS **Spitsbergen Ar** 39.76 359 P P 15 35 58.6 +0.8
comp=Z,3.5nm,0.8s,baz=146,slow=15,SNR=6.1
SPITS **Spitsbergen Ar** 39.76 359 P P 15 35 58.6 +0.8
comp=Z,4.0nm,0.8s
EKS2 **Erkin-Say** 40.09 67 *e*P P 15 36 01.4 +0.3
EKS2 pmax pmax
comp=Z,5.0nm,0.9s
EKS2 **Erkin-Say** 40.09 67 *e*P P 15 36 01.4 +0.3
comp=Z,4.6nm,0.9s
EKS2 **Erkin-Say** 40.09 67 *e*P P 15 36 01.4 +0.3
comp=Z,4.6nm,0.9s
AAK **Ala-Archa** 40.62 66 *e*P P 15 36 06.1 +0.6
AAK pmax pmax
comp=Z,10.0nm,1.7s
AAK **Ala-Archa** 40.62 66 *e*P P 15 36 04.7 -0.9
comp=Z,1.5nm,0.6s
AAK **Ala-Archa** 40.62 66 *e*P P 15 36 06.1 +0.6
comp=Z,10.0nm,1.7s
KURK **Kurchatov** 42.06 54 *c*e P P 15 36 17.7 +0.7
KURK pmax pmax
comp=Z,3.0nm,1.7s
KURK **Kurchatov** 42.06 54 *e*P P 15 36 17.7 +0.7
comp=Z,3.0nm,1.7s
KSH **Kashi** 42.51 71 *e*P P 15 36 22.0 +1.0
KSH *e*pP pP 15 36 35.4 +9.4
KSH *e*sP sP 15 36 44.6 +17
KSH *e*PP PP 15 38 04.0 +4.5
KSH *e*PcP PcP 15 38 15.0 +1.4
KSH *e*ScP ScP 15 41 59.0 -4.6
KSH *e*PcS PcS 15 42 05.5 -0.1
KSH *e*S S 15 42 39.3 -3.3
KSH *e*sS sS 15 43 03.0 +12
KSH *e*SS SS 15 45 43.8 -8.2
KSH *e*ScS ScS 15 46 15.6 -6.6
KSH pmax pmax
comp=Z,2.0nm,0.5s
KSH pmax pmax
comp=Z,51nm,3.3s
KSH LR LR
comp=E,53nm,3.5s
NVS **Novosibirsk** 44.42 47 *i* P P 15 36 35.1 -1.0
NVS pmax pmax
comp=E,2.0nm,0.5s
NVS pmax pmax
comp=Z,6.0nm,0.5s
NVS **Novosibirsk** 44.42 47 *i* P P 15 36 35.1 -1.0
MK31 **Makanchi Array** 45.11 59 *c*e P P 15 36 41.2 -0.5
MK31 pmax pmax
comp=Z,1.0nm,0.3s
MK31 **Makanchi Array** 45.11 59 *e*P P 15 36 40.6 -1.1
MK31 **Makanchi Array** 45.11 59 *e*P P 15 36 41.2 -0.5
comp=Z,1.0nm,0.3s
MKAR **Makanchi Array** 45.11 59 *c*e P P 15 36 41.4 -0.3
MKAR pmax pmax
comp=Z,2.0nm,0.4s
MKAR **Makanchi Array** 45.11 59 P P 15 36 41.4 -0.3
MKAR **Makanchi Array** 45.11 59 P P 15 36 41.4 -0.3
comp=Z,1.8nm,0.4s,baz=281,slow=7.5,SNR=44
MKAR **Makanchi Array** 45.11 59 *e*P P 15 36 41.4 -0.3
comp=Z,2.0nm,0.4s
ZAA0 **Zalesovo Array** 45.44 48 *e*P P 15 36 43.3 -0.9
ZAA0 **Zalesovo Array** 45.44 48 *e*P P 15 36 43.3 -0.9
ZALV **Zalesovo Beam** 45.44 48 *i* P P 15 36 43.7 -0.5
ZALV pmax pmax
comp=Z,17nm,0.6s
ZALV **Zalesovo Beam** 45.44 48 P P 15 36 44.0 -0.2
ZALV **Zalesovo Beam** 45.44 48 P P 15 36 44.0 -0.2
comp=Z,17nm,0.6s,baz=277,slow=8.5,SNR=91
ZALV **Zalesovo Beam** 45.44 48 P P 15 36 44.0 -0.2
WMQ **Urumqi** 49.58 61 *e*P P 15 37 17.3 +0.6
HVS **Khovu-Aksy** 51.32 51 *e*P P 15 37 30.3 +0.6
HVS pmax pmax
comp=Z,14nm,0.8s
HVS **Khovu-Aksy** 51.32 51 *e*P P 15 37 30.3 +0.6
comp=Z,14nm,0.8s
SCHQ **Schefferville** 58.17 317 P P 15 38 19.4 +0.2
SCHQ **Schefferville** 58.17 317 P P 15 38 19.4 +0.2
comp=Z,1.5nm,0.5s,baz=57,slow=7.1,SNR=6.5
SCHQ **Schefferville** 58.17 317 P P 15 38 19.4 +0.2
SONM **Songino Array** 60.22 51 P P 15 38 33.7 0.0
SONM **Songino Array** 60.22 51 P P 15 38 33.7 0.0
comp=Z,1.9nm,0.8s,baz=283,slow=8.9,SNR=16
SONM **Songino Array** 60.22 51 P P 15 38 33.7 0.0
comp=Z,2.0nm,0.8s
ULN **Ulaanbaatar** 60.61 50 *e*P P 15 38 34.9 -1.4
comp=Z,2.0nm,0.8s
ULN **Ulaanbaatar** 60.61 50 *e*P P 15 38 34.9 -1.4
comp=Z,2.0nm,0.8s
LBTB **Lobatse** 63.43 175 P P 15 38 53.9 -1.3
LZH **Lanzhou** 64.04 63 *e*P P 15 38 59.8 +0.3
LZH pP pP 15 39 14.3 +10
LZH sP sP 15 39 21.0 +14
LZH pmax pmax
comp=Z,14nm,1.0s
CD2 **Chengdu** 66.64 68 P P 15 39 16.0 -0.3
HHC **Hu-ho-hao-te** 66.83 56 *e*P P 15 39 16.9 -0.5
HHC PcP PcP 15 39 46.1 0.0
HHC PP PP 15 41 45.3 +1.0
HHC ScP 15 43 44.3
HHC PcS 15 43 49.5
HHC S S 15 48 03.8 -5.5
HHC ScS SKSac 15 49 06.0 -7.8
HHC pmax pmax
comp=Z,30nm,0.7s
HHC pmax pmax
comp=Z,140nm,6.9s
HHC LR LR
comp=N,290nm,17.3s
HHC LR LR
comp=E,260nm,16.7s
HHC LR LR
comp=Z,260nm,17.7s
BOSA **Boshof** 66.98 175 LR LR 16 10 41.4
comp=Z,56nm,18.0s,baz=168,slow=38
KMI **Kunming** 69.01 74 P P 15 39 33.8 +2.3
KMI pmax pmax
comp=Z,5.0nm,1.0s
CMAR **Chiang Mai Arr** 69.85 82 P P 15 39 36.2 -0.3
CMAR **Chiang Mai Arr** 69.85 82 P P 15 39 36.2 -0.3
comp=Z,0.6nm,0.7s,baz=312,slow=8.4,SNR=5.1
CMAR **Chiang Mai Arr** 69.85 82 P P 15 39 36.2 -0.3
comp=Z,1.0nm,0.7s
BJI **Beijing** 70.22 54 P P 15 39 36.0 -2.5
BJI S S 15 48 42.9 -6.5
BJI pmax pmax
comp=Z,7.0nm,0.5s
BJI pmax pmax
comp=Z,120nm,5.8s
BJI LR LR
comp=N,220nm,16.6s
BJI LR LR
comp=E,140nm,13.4s
BILL **Bilibino** 70.64 13 *i* P P 15 39 40.2 -0.4
BILL *i* 15 40 02.6
BILL pmax pmax
comp=Z,14nm,1.0s
BILL **Bilibino** 70.64 13 *i* P P 15 39 40.2 -0.4
comp=Z,14nm,1.0s
BILL **Bilibino** 70.64 13 *i* PcP PcP 15 40 02.6 +1.1
GYA **Guiyang** 71.20 71 *e*P P 15 39 44.0 -0.8
GYA pmax pmax
comp=Z,10.0nm,1.0s
YKA **Yellowknife Ar** 73.02 340 P P 15 39 54.9 -0.1
YKA **Yellowknife Ar** 73.02 340 P P 15 39 54.8 -0.1
comp=Z,0.1nm,0.3s,baz=38,slow=5.5,SNR=4.2
YKA **Yellowknife Ar** 73.02 340 P P 15 39 54.8 -0.1
CN2 **Changchun** 73.63 47 *e*P P 15 39 58.3 -0.6
CN2 *es*P PcP 15 40 16.8 +2.1
CN2 *e*PP PP 15 42 44.3 +1.7
CN2 *e*S SKiKP 15 49 21.8 -6.3
ILAR **Eielson Array** 76.52 354 P P 15 40 15.5 +0.3
ILAR **Eielson Array** 76.52 354 P P 15 40 15.5 +0.3
comp=Z,0.4nm,0.8s,baz=15,slow=3.8,SNR=6.0
ILAR **Eielson Array** 76.52 354 P P 15 40 15.5 +0.3
USRK **Ussuriysk Arra** 77.01 43 P P 15 40 18.5 +0.2
comp=Z,2.2nm,0.6s,baz=285,slow=5.8,SNR=6.5
KSAR **Wonju Array Be** 79.08 51 P P 15 40 30.4 +0.5
KSAR **Wonju Array Be** 79.08 51 P P 15 40 30.4 +0.5
KSRS **Korea Array** 79.09 51 P P 15 40 30.4 +0.4
comp=Z,1.6nm,0.7s,baz=314,slow=4.6,SNR=4.6
KSRS **Korea Array** 79.09 51 P P 15 40 30.4 +0.4
comp=Z,2.0nm,0.7s
MJAR **Matsushiro Arr** 85.72 46 P P 15 41 05.2 +0.5
MJAR **Matsushiro Arr** 85.72 46 P P 15 41 05.2 +0.5
comp=Z,2.6nm,0.7s,baz=316,slow=4.5,SNR=9.0
MJAR **Matsushiro Arr** 85.72 46 P P 15 41 05.2 +0.5
comp=Z,3.0nm,0.7s
WRA **Warramunga Arr** 120.56 92 PKP PKPdf 15 47 17.5 -0.1
WRA **Warramunga Arr** 120.56 92 PKP PKPdf 15 47 17.5 -0.1
comp=Z,0.3nm,0.8s,baz=298,slow=2.0,SNR=5.3
ASAR **Alice Springs** 122.23 96 PKP PKPdf 15 47 20.9 +0.3
ASAR **Alice Springs** 122.23 96 PKP PKPdf 15 47 20.9 +0.3
comp=Z,0.3nm,0.7s,baz=310,slow=1.6,SNR=7.1

IDC 21 15:30:06.1±1.3, 9.2°21S×124.44E, h0km, mb3.7/4, mb1 4.1/7, mb1mx3.8/21, mbtmp3.9/7, ML4.1/3, Error ellipse: s-maj=81.9km s-min=22.9km az=64.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**8.91**	**173**	Pn	Pn	15 32 16.3	+0.1
	1.9nm,0.3s,baz=359,slow=11,SNR=90						
FITZ				Sn	Sn	15 33 47.0	-10
	1.5nm,0.3s,baz=301,slow=4.8,SNR=9.6						
WRA	**Warramunga Arr**	**14.33**	**139**	Pn	Pn	15 33 30.5	0.0
	0.6nm,0.3s,baz=310,slow=13,SNR=22						
WRA				Sn	Sn	15 35 59.5	-11
	0.8nm,0.3s,baz=315,slow=23,SNR=12						
ASAR	**Alice Springs**	**16.99**	**149**	Pn	Pn	15 34 05.5	+0.2
	0.7nm,0.3s,baz=320,slow=11,SNR=128						
ASAR				Sn	Sn	15 37 04.4	-11
	0.3nm,0.3s,baz=316,slow=22,SNR=13						
CMAR	**Chiang Mai Arr**	**37.27**	**318**	P	P	15 37 20.5	+0.5
	1.2nm,1.0s,baz=139,slow=6.0,SNR=5.1						
SONM	**Songino Array**	**59.01**	**346**	P	P	15 40 07.3	-0.5
	0.2nm,0.5s,baz=141,slow=7.1,SNR=2.9						
MKAR	**Makanchi Array**	**67.21**	**330**	P	P	15 41 02.5	+0.3
	0.3nm,0.7s,baz=126,slow=7.3,SNR=4.0						
AKTO	**Aktyubinsk**	**82.52**	**324**	P	P	15 42 30.4	-0.4
	1.0nm,0.9s,baz=107,slow=4.4,SNR=4.6						

DJA ***21*** *15:55:05.7±3.8, 8.7°N±32.7°×12.8°E±1.2°, h10km, M5.2/8, mB5.5/7, mb5.2/8, MLv5.3/4, Mw(mB)5.0/7*
MAN ***21*** *15:55:09, 7.73°N×127.36°E, h29km, mb5.4, ML4.4, MS4.6*
MOS ***21*** *15:55:11.2±1.1, 7.74°N×126.72°E, h33km, mb4.9/33, Error ellipse: s-maj=14.7km s-min=6.2km az=111.2*
ISCJB ***21*** *15:55:11.1±0.2, 7.88°N±0.02°×127.24°E±0.03°, h33km, mb4.6/86, MS4.1/35, Error ellipse: s-maj=4.6km s-min=3.1km az=167.0*
AUST ***21*** *15:55:11.8±0.3, 7.92°N×127.52E, h36km, Error ellipse: s-maj=1.0km s-min=0.7km az=228.0*
NEIC ***21*** *15:55:13.3±0.3, 7.78°N×126.90E, mb4.7/30, Error ellipse: s-maj=10.1km s-min=6.4km az=80.0*
IDC ***21*** *15:55:13.1±3.3, 7.74°N×126.80E, h33km±25km, mb4.2/28, mb1 4.3/29, mb1mx4.3/32, mbtmp4.2/29, MS4.1/21, Ms1 4.1/21, ms1mx3.9/36, Error ellipse: s-maj=19.2km s-min=9.9km az=80.0*
GCMT ***21*** *15:55:16.5±0.3, 7.76°N×127.28E, h17km±1km, MW4.9, Moment Tensor Solution. s23,c27; s61,c86; Moment tensor: Scale 10^16Nm; Mrr2.07±.19; Mθθ0.35±.10; Mϕϕ-2.42±.13; Mrθ1.29±.33; Mrϕ-0.34±.07; Mθϕ2.04±.33; Best double couple: M0 3.30000×10^16 NP1:ϕs 167.00000°, δ26.00000°, λ54.00000°. NP2:ϕs 26.00000°, δ69.00000°, λ106.00000°. Principal axes: T 3.2700, Plg62.0000°, Azm320.0000°; N 0.1100, Plg15.0000°, Azm200.0000°; P -3.3800, Plg23.0000°, Azm103.0000°; Data Used: II G IU IC.*
BJI ***21*** *15:55:20.0, 8.11°N×126.69E, h90km, mB4.9/29, mb4.6/36*

ISC 21 15:55:13.4±0.3, 7.85°N±0.03°×126.88E±0.05°, h35km, n248, σ1 874/252, mb4.7/85, MS4.1/34, 9C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.50**	**239**	Pn	Pn	15 55 41.8	+3.9
DAV				Sn	Sn	15 56 05.1	+8.9
DAV	**Davao City (W)**	**1.50**	**239**	P	Pn	15 55 43.4	+5.5
DAV	**Davao City (W)**	**1.50**	**239**	Pn	Pn	15 55 41.8	+3.9
	223nm,0.3s,baz=76,slow=5.3,SNR=74						
DAV				Sn	Sn	15 56 05.1	+8.9
	316nm,0.3s,baz=288,slow=21,SNR=6.7						
DMPH	**Davao City--Mi**	**1.56**	**241**	*e*P	Pn	15 55 44.0	+5.4

DMPH eS Sn 15 56 09.5 +12
BUTP Butuan 1.67 312 eP Pn 15 55 44.2 +4.0
CGP Cagayan de Oro 2.25 286⇑ eP Pn 15 55 57.6 +10
CGP i S Sn 15 56 29.1 +14
CTBH Cotabato--PC H 2.68 257⇑ eP Pn 15 55 58.3 +4.2
MSLP Maasin 3.02 319 eP Pn 15 56 02.6 +3.8
PAGZ Pagadian 3.46 270 eP Pn 15 56 10.7 +5.9
TBP Tagbilaran 3.50 302 eP Pn 15 56 09.5 +4.1
DCPH Dipolog City 3.57 282⇓ eP Pn 15 56 11.7 +5.4
LLP Lapu-Lapu 3.78 311 eP Pn 15 56 13.2 +4.0
LLP eS Sn 15 57 08.6 +16
OCLP Ormoc 3.89 325 eP Pn 15 56 14.5 +3.7
SNPH Sibulan 3.90 293⇓ eP Pn 15 56 02.1 -8.7
SNPH i S **Sn** **15 56 50.5 -4.9**
GUIM Jordan 5.05 303 eP Pn 15 56 30.9 +4.2
RCP Roxas 5.50 312 eP Pn 15 56 37.4 +4.6
GAMI Galela, Maluku 6.04 171 P **Pn** **15 56 39.9 -0.4**
156nm,0.6s,5μm1.3nm
MNI Manado 6.68 198 P Pn 15 56 53.9 +4.8
141nm,0.5s,3μm0.7nm
TNTI Ternate 7.04 176 P **Pn** **15 56 55.2 +1.1**
187nm,1.6s,3μm0.9nm
PALU Palau 7.55 93 P Pn 15 56 48.3 -13
baz=6.9,SNR=5.5
PALU S Sn 15 58 09.5 -16
baz=6.9,SNR=8.9
KMSI Cibinong 7.78 202 P Pn 15 57 09.5 +5.3
285nm,1.0s,4μm
LBMI Labuha 8.45 176 P **Pn** **15 57 14.8 +1.4**
118nm,1.5s,2μm
TGY Tagaytay City 8.52 317 Pn Pn 15 57 19.7 +5.2
TGY Tagaytay City 8.52 317 Pn Pn 15 57 19.7 +5.2
baz=157,slow=19,SNR=3.1
MYLDM Lahad Datu 8.73 253 P Pn 15 57 28.3 +11
MRSI Marisa 8.82 214 P Pn 15 57 23.9 +5.4
89nm,1.2s,939nm
TSM Tawau 9.62 249 P Pn 15 57 38.0 +8.5
SWI Sorong 9.69 153 P **Pn** **15 57 28.9 -1.5**
25nm,0.6s
SWI Sorong 9.69 153 P **Pn** **15 57 28.0 -2.5**
baz=9.5,SNR=8.9
SWI S Sn 15 59 10.4 -7.7
baz=9.5,SNR=3.9
LUWI Luwuk 9.73 205 P Pn 15 57 36.6 +5.6
LUWI Luwuk 9.73 205 P Pn 15 57 37.9 +6.9
baz=10,SNR=16
SDKM Sandakan 9.86 258 P Pn 15 57 42.9 +10
KDM Kudat 10.01 265 P Pn 15 57 44.7 +10
KKM Kota Kinabalu 10.74 261⇑ ePn Pn 15 57 51.7 +6.9
43nm,1.4s
KKM Kota Kinabalu 10.74 261 P Pn 15 57 54.2 +9.4
KKM Kota Kinabalu 10.74 261 P Pn 15 57 53.7 +8.9
baz=11,SNR=4.1
FAKI Fak Fak 11.96 153 P **Pn** **15 57 59.2 -2.3**
baz=12,SNR=8.7
FAKI S Sn 16 00 04.8 -9.1
baz=12,SNR=6.8
BTM Bintulu 14.48 252 P **P** **15 58 44.7 +2.4**
KAPI Kappang 14.62 209 Pn **Pn** **15 58 37.9 +0.1**
KAPI Kappang 14.62 209 Pn **Pn** **15 58 37.9 +0.1**
baz=217,slow=20
KAPI LR LR 16 03 45.8
comp=Z,233nm,19.3s,baz=219,slow=35
SBUM Sibu 15.55 251 P **P** **15 58 57.8 +3.7**
TPUB Ta-pu 16.50 339 ePn **Pn** **15 59 01.4 -0.8**
13nm,0.8s
TPUB eS **S** **16 02 11.5 -3.8**
KSM Kuching 17.68 250 ePn P 15 59 22.0 +4.3
41nm,1.3s
KSM Kuching 17.68 250 P P 15 59 23.3 +5.5
KSM Kuching 17.68 250 P **P** **15 59 21.1 +3.4**
baz=18,SNR=12
GUMO Guam 18.57 71 LR LR 16 06 11.3
comp=Z,303nm,18.4s,baz=257,slow=35
QZH Quanzhou 18.75 336 P **P** **15 59 28.8 -0.7**
QZH LR LR
comp=Z,1μm,13.0s
JOW Kunigami 18.93 4 eP **Pn** **15 59 35.1 +2.9**
comp=Z,21nm,1.0s
QIZ Qiongzhong 19.93 306 P **P** **15 59 43.3 +0.9**
QIZ S **S** **16 03 23.3 -1.6**
QIZ pmax pmax
comp=Z,270nm,11.1s
QIZ LR LR
comp=N,700nm,14.7s
QIZ LR LR
comp=E,330nm,14.4s
QIZ LR LR
comp=Z,1μm,16.1s
QIZ Qiongzhong 19.93 306 P **P** **15 59 42.1 -0.2**
MTN Manton Dam 20.98 168 P **P** **15 59 53.1 -0.7**
baz=21,SNR=23
KDU Kakadu 21.14 165 P **P** **15 59 53.9 -1.6**
baz=21,SNR=18
KNRA Kununurra 23.45 175 P **P** **16 00 18.8 -1.0**
baz=24,SNR=40
MYKOM Kota Tinggi 23.71 256 P **P** **16 00 26.0 +3.6**
KTGM Kuala Trenggan 23.72 265 P **P** **16 00 25.6 +3.1**
SSE Sheshan 23.73 348 P **P** **16 00 21.3 -1.1**
SSE pmax pmax
comp=Z,29nm,1.1s
SSE pmax pmax
comp=Z,220nm,6.0s
SSE LR LR
comp=N,270nm,15.6s
SSE LR LR
comp=E,320nm,15.6s
SSE LR LR
comp=Z,410nm,18.6s
KGM Kluang 24.17 257 P **P** **16 00 30.2 +3.6**
NJ2 Nanjing 25.22 344 eP **P** **16 00 37.8 +1.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
JNU Nakatsue 25.42 8 eP P 16 00 30.1 -7.8
comp=Z,15nm,0.9s
JNU Nakatsue 25.42 8 P **P** **16 00 38.1 +0.2**
comp=Z,12nm,0.9s,baz=176,slow=14,SNR=4.0
JNU LR LR 16 11 03.3
comp=Z,398nm,18.8s,baz=345,slow=37
FITZ Fitzroy Crossi 25.81 183 eP **P** **16 00 40.8 -0.6**
comp=Z,14nm,0.8s
FITZ Fitzroy Crossi 25.81 183 P **P** **16 00 41.1 -0.4**
comp=Z,3.1nm,0.4s,baz=356,slow=11,SNR=22
FITZ Fitzroy Crossi 25.81 183 P **P** **16 00 41.1 -0.4**
baz=26,SNR=23
IPM Ipoh 25.92 264 eP P 16 00 36.0 -6.6
comp=Z,21nm,1.3s
IPM Ipoh 25.92 264 P **P** **16 00 45.7 +3.2**
KULM Kulim 26.18 266 P **P** **16 00 47.7 +2.8**
comp=Z,27nm,1.4s
KULM Kulim 26.18 266 P **P** **16 00 48.1 +3.2**
PMG Port Moresby 26.49 130 P **P** **16 00 45.6 -2.1**
PMG Port Moresby 26.49 130 P **P** **16 00 45.6 -2.1**
comp=Z,10nm,0.8s,baz=315,slow=4.3,SNR=4.3
GYA Guiyang 26.68 316 eP **P** **16 00 50.6 +1.2**
GYA pP pP 16 01 11.5 +12
GYA sP sP 16 01 22.9 +19
GYA PP PnPn 16 01 38.8 +7.6
GYA PcP **PcP** **16 04 12.3 -0.5**
GYA S **S** **16 05 17.8 -4.9**
GYA ScP ScP 16 07 42.3 -8.0
GYA ScS ScS 16 11 31.0 -10
GYA pmax pmax
comp=Z,10.0nm,0.8s
COEN Coen 27.04 143 eP **P** **16 00 50.4 -2.2**
comp=Z,107nm,1.1s
COEN Coen 27.04 143 P **P** **16 00 51.0 -1.6**
baz=27,SNR=6.1
JHJ Hachijo jima 2 27.85 24 LR LR 16 11 50.6
comp=Z,457nm,18.7s,baz=283,slow=36
WRAB Tennant Creek 28.57 165 eP **P** **16 01 05.7 -0.6**
WRAB pmax pmax
comp=Z,7.0nm,0.6s
WRAB Tennant Creek 28.57 165 eP **P** **16 01 05.7 -0.6**
comp=Z,7.3nm,0.6s
WRA Warramunga Arr 28.57 165 P **P** **16 01 04.4 -1.9**
WRA Warramunga Arr 28.57 165 P **P** **16 01 04.4 -1.9**
comp=Z,1.0nm,0.6s,baz=344,slow=10,SNR=16
KMI Kunming 28.74 310 P **P** **16 01 10.4 +2.4**
KMI pP pP 16 01 30.0 +12
KMI sP sP 16 01 40.6 +18
KMI PP **PnPn** **16 02 03.9 +4.5**
KMI S **S** **16 05 51.5 -3.9**
KMI sS sS 16 06 25.3 +13
KMI pmax pmax
comp=Z,4.0nm,1.1s
KMI pmax pmax
comp=Z,86nm,3.5s
KMI LR LR
comp=N,270nm,12.0s
KMI LR LR
comp=E,410nm,18.0s
KMI LR LR
comp=Z,540nm,16.9s
CMAR Chiang Mai Arr 29.13 294 P **P** **16 01 11.7 +0.4**
CMAR PcP **PcP** **16 04 19.1 +0.4**
CMAR ScP **ScP** **16 07 58.0 +0.2**
CMAR Chiang Mai Arr 29.13 294 P **P** **16 01 11.7 +0.4**
comp=Z,2.6nm,0.9s,baz=119,slow=6.8,SNR=14
CMAR PcP **PcP** **16 04 19.1 +0.4**
comp=Z,0.3nm,0.3s,baz=149,slow=0.9,SNR=4.8
CMAR ScP **ScP** **16 07 58.0 +0.2**
comp=Z,1.4nm,1.1s,baz=132,slow=1.3,SNR=6.1
KSAR Wonju Array Be 29.48 2 P **P** **16 01 15.6 +1.5**
KSRS Korea Array 29.49 2 P **P** **16 01 15.6 +1.4**
comp=Z,5.1nm,1.0s,baz=181,slow=10,SNR=8.9
KSRS LR LR 16 13 38.0
comp=Z,408nm,18.3s,baz=187,slow=37
GSI Gunungsitoli 29.91 259 P **P** **16 01 20.3 +2.0**
baz=31,SNR=3.6
MJAR Matsushiro Arr 30.38 18 P **P** **16 01 22.5 +0.4**
MJAR Matsushiro Arr 30.38 18 P **P** **16 01 22.5 +0.4**
comp=Z,2.1nm,0.8s,baz=198,slow=9.1,SNR=6.1
QIS Mount Isa 30.88 156 P **P** **16 01 25.6 -1.1**
baz=31,SNR=19
XAN Xi'an 30.88 330 P **P** **16 01 24.8 -1.9**
XAN S S 16 06 17.8 -11
XAN pmax pmax
comp=Z,2.0nm,0.9s
XAN pmax pmax
comp=Z,21nm,6.9s
XAN LR LR
comp=N,200nm,18.4s
XAN LR LR
comp=E,92nm,17.4s
XAN LR LR
comp=Z,1.0nm,17.4s
MTSU Mount Surprise 31.03 146 P **P** **16 01 27.6 -0.5**
baz=31,SNR=12
CD2 Chengdu 31.52 320 P **P** **16 01 35.1 +2.8**
CD2 pP pP 16 01 56.5 +14
CD2 sP sP 16 02 08.0 +21
CD2 PP **PP** **16 02 43.3 -0.6**
CD2 PcP **PcP** **16 04 25.3 +0.5**
CD2 S **S** **16 06 36.0 -2.6**
CD2 sS sS 16 07 13.5 +18
CD2 PcS **PcS** **16 08 08.8 -0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,100nm,4.1s
CD2 LR LR
comp=N,620nm,17.1s
CD2 LR LR
comp=E,1μm,19.6s
CD2 LR LR
comp=Z,590nm,14.7s
AS31 Alice Springs 32.06 168 eP **P** **16 01 35.7 -1.5**
ASAR Alice Springs 32.06 168 P **P** **16 01 36.8 -0.4**
ASAR PcP **PcP** **16 04 26.2 -0.1**
ASAR S S 16 06 40.4 -6.7
ASAR Alice Springs 32.06 168 P **P** **16 01 36.8 -0.4**
comp=Z,0.8nm,0.3s,baz=344,slow=7.8,SNR=26
ASAR PcP **PcP** **16 04 26.2 -0.1**
comp=Z,1.1nm,0.5s,baz=345,slow=2.7,SNR=5.1
ASAR S S 16 06 40.4 -6.7
comp=Z,1.1nm,0.6s,baz=337,slow=13,SNR=8.6
CTA Charters Tower 33.68 146 P **P** **16 01 51.1 -0.2**
CTA Charters Tower 33.68 146 P **P** **16 01 51.1 -0.2**
comp=Z,5.3nm,0.8s,baz=335,slow=9.8,SNR=8.1
CTA LR LR 16 17 05.0
comp=Z,383nm,20.0s,baz=299,slow=39
LZH Lanzhou 35.11 327 eP **P** **16 02 02.8 -0.9**
LZH pP pP 16 02 26.8 +13
LZH sP sP 16 02 38.0 +20
LZH PP **PnPn** **16 03 22.3 +0.5**
LZH S **S** **16 07 29.0 -5.4**
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,90nm,5.6s
LZH LR LR
comp=N,330nm,14.2s
LZH LR LR
comp=E,280nm,11.9s
LZH LR LR
comp=Z,470nm,15.2s
MEEK Meekatharra 35.20 193 P **P** **16 02 04.6 +0.2**
baz=36,SNR=9.3
HHC Hu-ho-hao-te 35.58 340 eP **P** **16 02 09.8 +2.1**
HHC sP sP 16 02 44.1 +22
HHC PP **PP** **16 03 33.3 +4.4**
HHC PcP **PcP** **16 04 36.4 +0.3**
HHC S **S** **16 07 39.3 -2.1**
HHC ScP ScP 16 08 12.3 -7.3
HHC PcS **PcS** **16 08 22.3 -1.1**
HHC ScS ScS 16 12 15.3 -9.1
HHC pmax pmax
comp=Z,35nm,0.6s
HHC pmax pmax
comp=Z,190nm,5.9s
HHC LR LR
comp=N,360nm,13.9s
HHC LR LR
comp=E,380nm,12.2s
HHC LR LR
comp=Z,390nm,14.6s
CN2 Changchun 35.84 358 eP **P** **16 02 11.3 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
USRK Ussuriysk Arra 36.49 6 P **P** **16 02 16.5 +1.3**
comp=Z,8.4nm,0.9s,baz=202,slow=7.9,SNR=14
MDJ Mudanjiang 36.71 3 P **P** **16 02 18.9 +1.8**
MDJ pP pP 16 02 39.6 +12
MDJ sP sP 16 02 50.5 +19
MDJ PP **PnPn** **16 03 44.6 +3.5**
MDJ S **S** **16 07 54.1 -4.1**
MDJ sS ScP 16 08 34.4 +11
MDJ pmax pmax
comp=Z,27nm,1.3s
MDJ pmax pmax
comp=Z,120nm,5.3s
MDJ LR LR
comp=N,180nm,18.5s
MDJ LR LR
comp=E,130nm,14.8s
MDJ LR LR
comp=Z,190nm,16.5s
MDJ Mudanjiang 36.71 3 eP **P** **16 02 18.7 +1.6**
comp=Z,44nm,1.3s
HNR Honiara 37.14 117 LR LR 16 17 29.0
comp=Z,127nm,19.4s,baz=249,slow=36
QLP Quilpie 38.14 154 S **S** **16 08 16.0 -4.5**
baz=38,SNR=4.1
MORW Morawa 38.16 195 P **P** **16 02 30.2 +0.6**
baz=39,SNR=5.3
ASAJ Asahikawa 38.65 18 P **P** **16 02 35.2 +1.7**
ASAJ Asahikawa 38.65 18 P **P** **16 02 35.2 +1.7**
comp=Z,2.8nm,0.4s,baz=218,slow=6.9,SNR=8.7
KMBL Kambalda 39.28 187 P **P** **16 02 39.2 +0.3**
baz=40,SNR=8.9
BLDU Ballidu 39.47 194 P **P** **16 02 41.0 +0.5**
baz=40,SNR=14
YUK Yuzh-Kuril'sk 39.68 22 P P 16 02 37.8 -4.3
YUK i S **S** **16 08 46.6 +3.4**
YUK i SSS SSS 16 12 11.3
YUK MLR MLR
comp=Z,175nm,22.0s
YUK MLR MLR
comp=E,127nm,22.0s
YUK MLR MLR
comp=N,55nm,22.0s
GTA Gaotai 39.71 327 eP **P** **16 02 42.9 +0.2**
GTA pP pP 16 03 05.3 +12
GTA sP sP 16 03 17.1 +20
GTA S **ScP** **16 08 39.9 +4.6**
GTA sS sS 16 09 19.6 +19
GTA SS **SS** **16 11 33.3 -7.3**
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,89nm,7.8s
GTA LR LR
comp=N,230nm,15.9s
GTA LR LR
comp=E,170nm,17.8s
GTA LR LR
comp=Z,340nm,14.7s
LSA Lhasa 39.95 308 eP **P** **16 02 45.8 +0.7**
LSA pmax pmax
comp=Z,9.0nm,0.8s
LSA Lhasa 39.95 308 eP **P** **16 02 45.8 +0.7**
comp=Z,8.6nm,0.8s
KLBR Kellerberrin 40.17 192 P **P** **16 02 46.9 +0.5**
baz=41,SNR=14
HABR Khabarovsk 41.08 8 eP **P** **16 02 53.5 -0.1**
HABR e*PP **pP** **16 03 06.3 +2.4**
HABR e 16 04 28.9
HABR e 16 04 50.9
HABR ePPP PPP 16 04 57.6
HABR eS **S** **16 09 04.2 +0.3**
HABR SS **SS** **16 12 09.7 +2.5**
HABR SSS SSS 16 12 38.8
HABR e 16 12 52.4
HABR pmax pmax
comp=N,24nm,1.7s
HABR pmax pmax
comp=E,32nm,2.2s
HABR pmax pmax
comp=Z,25nm,1.7s
HABR MLR MLR
comp=Z,257nm,20.0s
BBOO Buckleboo 41.37 168 P **P** **16 02 55.4 -0.8**
baz=42,SNR=13
KLR Kul'dur 41.45 5 eP P 16 02 53.8 -2.9
KLR pmax pmax
comp=Z,42nm,1.8s
HIA Hailar 41.72 353 eP **P** **16 02 59.2 +0.3**
comp=Z,8.3nm,0.9s
TAPN Taplejung 41.82 303 eP **P** **16 03 01.1 +0.6**
comp=Z,21nm,0.8s
ODAN Odare 41.93 302 eP **P** **16 03 02.0 +0.8**
comp=Z,14nm,0.5s
STKA Stephens Creek 41.93 161 P **P** **16 02 59.9 -0.9**
STKA Stephens Creek 41.93 161 P **P** **16 02 59.9 -0.9**
comp=Z,2.1nm,0.8s,baz=344,slow=8.3,SNR=8.1
STKA LR LR 16 22 59.1
comp=Z,161nm,18.9s,baz=14,slow=40
RAMN Ramite 42.62 302 eP **P** **16 03 07.6 +0.7**
comp=Z,33nm,1.1s
RKGY Rocky Gully 43.25 192 P **P** **16 03 13.2 +1.7**
baz=44,SNR=6.6
ULN Ulaanbaatar 43.29 341 eP **P** **16 03 09.4 -2.5**
comp=Z,4.6nm,0.9s
SONM Songino Array 43.49 340 P **P** **16 03 13.9 +0.5**
SONM PcP **PcP** **16 05 01.4 +0.3**
SONM Songino Array 43.49 340 P **P** **16 03 13.9 +0.5**
comp=Z,1.6nm,0.8s,baz=156,slow=8.3,SNR=12
SONM PcP **PcP** **16 05 01.4 +0.3**
comp=Z,1.3nm,0.7s,baz=159,slow=4.3,SNR=4.5
SONM LR LR 16 23 27.5
comp=Z,144nm,19.7s,baz=160,slow=39
GUN Gumba 43.54 303 eP **P** **16 03 15.4 +0.9**
comp=Z,39nm,1.0s
PKI Pulchoki 43.83 302 eP **P** **16 03 17.1 +0.4**
PKIN Phulchoki 43.84 302 eP **P** **16 03 17.1 +0.3**
KKN Kakani 44.00 302 eP **P** **16 03 18.7 +0.7**
DMN Daman 44.09 302 eP **P** **16 03 19.3 +0.5**
comp=Z,17nm,1.1s
KOLN Koldanda 45.41 301 eP **P** **16 03 29.5 +0.3**
comp=Z,12nm,0.6s
DANN Dangsing 45.45 302 eP **P** **16 03 29.5 -0.2**
comp=Z,16nm,0.5s
PYUN Piuthan 46.02 302 eP **P** **16 03 34.8 +0.7**
TLY Talaya 47.70 341 eP **P** **16 03 48.6 +2.0**
TLY eS S 16 10 49.0 +8.7
TLY pmax pmax
comp=Z,4.0nm,1.0s
TLY MLR MLR
comp=Z,121nm,17.0s
MOY Mondy 48.61 339 eP **P** **16 03 55.7 +2.0**
DZM Mont Dzumac 48.87 128 eLR LR 16 17 49.6
comp=Z,162nm,24.2s
CLNS Chul'man 48.89 359 eP **P** **16 03 56.6 +0.9**
CLNS pmax pmax
comp=Z,25nm,1.1s
CLNS pmax pmax
comp=N,16nm,1.0s
CLNS pmax pmax
comp=E,9.0nm,1.1s
WMQ Urumqi 49.50 323 P **P** **16 04 01.5 +0.9**
WMQ pP pP 16 04 20.3 +9.2
WMQ PP **PP** **16 05 57.6 +2.5**
WMQ PcS **PcS** **16 09 17.6 -1.3**
WMQ S **S** **16 11 02.3 -3.7**
WMQ ScS **ScS** **16 13 42.8 -7.1**
WMQ SS SS 16 14 31.0 -7.3
WMQ pmax pmax
comp=Z,9.0nm,0.8s
WMQ pmax pmax
comp=Z,160nm,5.2s
WMQ LR LR
comp=N,430nm,21.6s
WMQ LR LR
comp=E,310nm,15.2s
WMQ LR LR
comp=Z,210nm,17.6s
HVS Khovu-Aksy 51.11 334 eP **P** **16 04 14.2 +1.5**
HVS pmax pmax
comp=Z,26nm,1.2s
PETK Petropavlovsk- 51.60 23 P **P** **16 04 18.0 +1.8**
PETK Petropavlovsk- 51.60 23 P **P** **16 04 18.0 +1.8**
PETK Petropavlovsk- 51.60 23 P **P** **16 04 18.0 +1.8**
comp=Z,2.6nm,0.7s,baz=195,slow=3.9,SNR=14
YAK Yakutsk 54.12 2 eP **P** **16 04 34.2 -0.4**
YAK e*PP **pP** **16 04 47.1 +1.9**
YAK e 16 05 38.1
YAK eS **S** **16 12 07.8 -0.8**
YAK eSSS SSS 16 17 50.0
YAK pmax pmax
comp=Z,43nm,1.1s
YAK pmax pmax
comp=N,22nm,1.3s
YAK pmax pmax
comp=E,6.0nm,1.1s
YAK smax smax
comp=E,77nm,12.8s
YAK smax smax
comp=N,29nm,11.4s
YAK MLR MLR
comp=N,103nm,17.0s
YAK MLR MLR
comp=Z,138nm,17.0s
YAK MLR MLR
comp=E,77nm,17.0s
MK31 Makanchi Array 54.31 324 ceP **P** **16 04 34.9 -1.5**
MK31 pmax pmax
comp=Z,15nm,0.8s
MK31 Makanchi Array 54.31 324 eP **P** **16 04 36.5 +0.1**
MK31 ePcP **PcP** **16 05 39.1 -1.1**
MKAR Makanchi Array 54.31 324 ceP **P** **16 04 36.7 +0.4**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
MKAR Makanchi Array 54.31 324 P **P** **16 04 36.8 +0.4**
MKAR PcP **PcP** **16 05 39.7 -0.5**
MKAR Makanchi Array 54.31 324 P **P** **16 04 36.8 +0.4**
comp=Z,7.4nm,0.7s,baz=122,slow=7.7,SNR=65
MKAR PcP **PcP** **16 05 39.7 -0.5**
comp=Z,3.2nm,0.7s,baz=120,slow=4.5,SNR=4.1
MKAR LR LR 16 30 06.4
comp=Z,128nm,18.7s,baz=130,slow=38
KSH Kashi 55.30 313 eP **P** **16 04 46.1 +2.3**
KSH ePcP **PcP** **16 05 45.3 +1.0**
KSH ePP **PP** **16 06 52.0 +4.3**
KSH ePcS **PcS** **16 09 44.1 -0.3**
KSH eS **S** **16 12 25.6 -0.1**
KSH pmax pmax
comp=Z,13nm,1.1s
KSH pmax pmax
comp=Z,150nm,4.6s
KSH LR LR
comp=N,62nm,3.9s
KSH LR LR
comp=E,50nm,3.4s
KSH LR LR
comp=Z,75nm,4.3s
TKM2 Tokmak 2 56.82 317 eP **P** **16 04 54.5 -0.3**

TKM2 pmax pmax
comp=Z,4.0nm,0.9s
TKM2 Tokmak 2 56.82 317 *eP* **P 16 04 54.5 -0.3**
comp=Z,3.9nm,0.9s
ZAA0 Zalesovo Array 57.03 332 *eP* **P 16 04 54.7 -1.0**
ZALV Zalesovo Beam 57.03 332 *i P* **P 16 04 55.0 -0.7**
ZALV pmax pmax
comp=Z,9.0nm,0.9s
ZALV Zalesovo Beam 57.03 332 P **P 16 04 55.6 -0.1**
ZALV Zalesovo Beam 57.03 332 P **P 16 04 55.6 -0.1**
comp=Z,9.3nm,0.9s,baz=116,slow=6.8,SNR=37
ZALV LR LR 16 30 42.5
comp=Z,118nm,18.5s,baz=92,slow=37
EKS2 Erkin-Say 57.97 316 *eP* **P 16 05 03.2 +0.5**
EKS2 pmax pmax
comp=Z,3.0nm,0.8s
EKS2 Erkin-Say 57.97 316 *eP* **P 16 05 03.2 +0.5**
comp=Z,3.3nm,0.8s
SEY Seymchan 58.02 13 *eP* **P 16 05 05.4 +2.9**
NVS Novosibirsk 58.31 332 *eP* **P 16 05 03.1 -1.6**
NVS pmax pmax
comp=Z,12nm,1.0s
NVS pmax pmax
comp=N,3.0nm,0.7s
NVS pmax pmax
comp=E,9.0nm,1.0s
KURK Kurchatov 58.40 326*c i P* **P 16 05 05.4 0.0**
KURK pmax pmax
comp=Z,38nm,1.2s
KURK Kurchatov 58.40 326 *eP* **P 16 05 05.3 0.0**
comp=Z,25nm,0.9s
KK31 Karatay Array 60.38 315*ceP* **P 16 05 19.2 -0.1**
KK31 pmax pmax
comp=Z,2.0nm,0.3s
KKAR Karatay Array 60.38 315 *eP* **P 16 05 18.8 -0.5**
KKAR pmax pmax
comp=Z,5.0nm,0.7s
KKAR Karatay Array 60.38 315 *eP* **P 16 05 18.8 -0.5**
comp=Z,4.6nm,0.7s
TIXI Tiksi 63.75 1*d i P* **P 16 05 42.0 +0.7**
TIXI pmax pmax
comp=Z,30nm,1.7s
BVA0 Borovoye Array 63.99 326 P **P 16 05 42.2 -1.1**
BRVK Borovoye 64.06 326 *eP* **P 16 05 43.7 0.0**
BRVK pmax pmax
comp=Z,14nm,1.2s
BRVK Borovoye 64.06 326 *eP* **P 16 05 43.4 -0.3**
comp=Z,9.4nm,0.8s
AFI Afiamalu 64.60 109 LR LR 16 32 04.0
comp=Z,282nm,18.0s,baz=286,slow=34
RPZ Rata Peaks 65.05 146 LR LR 16 34 30.0
comp=Z,294nm,21.9s,baz=99,slow=36
URZ Urewera 65.46 138 LR LR 16 33 42.9
comp=Z,190nm,18.8s,baz=302,slow=35
BILL Bilibino 65.56 15 *eP* **P 16 05 54.5 +1.3**
BILL *i* 16 06 06.1
BILL *i* 16 06 21.5
BILL *i* 16 08 19.5
BILL *eS* sS 16 15 13.1 +20
BILL pmax pmax
comp=Z,10.0nm,1.6s
AB31 Akbulak array 69.10 320*ceP* **P 16 06 14.9 -1.0**
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 69.10 320 *eP* **P 16 06 15.3 -0.6**
comp=Z,7.7nm,0.6s
SVE Sverdlovsk 70.57 328 *eP* **P 16 06 23.4 -1.4**
SVE *e* 16 06 46.0
SVE *e* 16 09 10.8
SVE pmax pmax
comp=Z,11nm,0.8s
SVE MLR MLR
comp=Z,151nm,16.0s
GAMB Gambell 70.61 24 *eP* **P 16 06 26.1 +1.2**
comp=Z,17nm,1.3s
ARU Arti 71.57 327*d i P* **P 16 06 30.7 -0.2**
ARU S **S** **16 15 46.9 -0.7**
ARU pmax pmax
comp=Z,6.0nm,0.7s
TNA Tin City 72.77 23 P **P 16 06 37.9 0.0**
CASY Casey 74.89 187 *eP* **P 16 06 49.3 -0.9**
comp=Z,8.5nm,0.8s
MIB Mutribah 77.09 299 *eP* **P 16 07 02.8 -0.8**
MIB AMb AMB 16 07 04.2
comp=Z,17nm,0.8s
NAY Al-Naaiem 77.19 298 *eP* **P 16 07 03.4 -0.8**
NAY AMb AMB 16 07 04.7
comp=Z,8.7nm,0.9s
RST Umm Al-Ruwaisa 77.40 298 *eP* **P 16 07 04.0 -1.3**
OHAK Old Harbor 77.94 33 *eP* **P 16 07 06.8 -1.0**
comp=Z,11nm,1.0s
KDAK Kodiak Island 78.36 33 *eP* **P 16 07 11.2 +1.2**
comp=Z,8.5nm,0.8s
KDAK Kodiak Island 78.36 33 P **P 16 07 11.2 +1.2**
comp=Z,7.3nm,0.7s,baz=266,slow=6.7,SNR=16
PPLA Purkeypile 78.93 27 *eP* **P 16 07 14.5 +1.1**
comp=Z,19nm,1.4s
COLD Coldfoot 80.07 23 P P 16 07 16.2 -3.1
comp=Z,8.6nm,1.1s
KBZ Khabaz 80.29 313 P **P 16 07 21.6 +0.7**
KBZ Khabaz 80.29 313 P **P 16 07 21.6 +0.7**
KBZ Khabaz 80.29 313 P **P 16 07 21.6 +0.7**
comp=Z,1.7nm,0.8s,baz=194,slow=7.3,SNR=4.4
KBZ LR LR 16 48 42.6
comp=Z,90nm,18.1s,baz=318,slow=40
PMR Palmer 80.29 29 *eP* **P 16 07 21.2 +0.7**
PMR *e*PP* **pP** **16 07 33.4 +1.9**
PMR pmax pmax
comp=Z,9.0nm,0.8s
PMR Palmer 80.29 29 *eP* **P 16 07 21.2 +0.7**
comp=Z,9.1nm,0.8s
PMR *epP* **pP** **16 07 33.4 +1.9**
MCK McKinley 80.44 27 *eP* **P 16 07 21.4 0.0**
MCK pmax pmax
comp=Z,19nm,0.9s
MCK McKinley 80.44 27 *eP* **P 16 07 21.4 0.0**
comp=Z,19nm,0.9s
SML Sawmill 80.67 29 *eP* **P 16 07 23.8 +1.1**
SML pmax pmax
comp=Z,6.0nm,1.1s
SML Sawmill 80.67 29 *eP* **P 16 07 23.8 +1.1**
comp=Z,5.6nm,1.1s
ILAR Eielson Array 81.35 26 P **P 16 07 27.2 +1.0**
ILAR Eielson Array 81.35 26 P **P 16 07 27.2 +1.0**
comp=Z,3.9nm,1.0s,baz=245,slow=5.2,SNR=33
KLMR Klimovskoe 81.92 330 *eP* P 16 07 25.9 -3.3
KLMR *e* 16 07 31.0
KLMR pmax pmax
comp=Z,29nm,1.0s
VSR Storozhevoye 82.51 321 *eP* **P 16 07 31.5 -1.0**
VSR pmax pmax
comp=Z,10.0nm,1.4s
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.1s
MENT Mentasta 82.80 27 *eP* **P 16 07 34.8 +0.9**
EGAK Eagle 83.80 26 *eP* **P 16 07 40.0 +1.1**
comp=E,3.8nm,0.6s
OBN Obninsk 83.80 325 *eP* **P 16 07 38.7 -0.4**
OBN *eS* S 16 17 52.7 -7.0
OBN *eSS* **SS** **16 23 27.6 +0.4**
OBN pmax pmax
comp=Z,8.0nm,1.2s
OBN MLR MLR
comp=Z,100nm,17.0s
ANN Anapa 84.14 314 *eP* **P 16 07 40.0 -1.0**
JOF Joensuu 85.61 333 *eP* **P 16 07 48.6 +0.6**
JOF Joensuu 85.61 333 *ep* **P 16 07 48.6 +0.6**
KEV Kevo 86.10 340 *eP* **P 16 07 51.1 +0.8**
KEV Kevo 86.10 340 *ep* **P 16 07 51.1 +0.8**
PPT Papeete 86.24 108 LR LR 16 41 05.6
comp=Z,190nm,20.7s,baz=339,slow=32
PPT2 Papeete2 86.24 108 *eS* S 16 18 35.5 +10
comp=Z,69nm,25.8s
PPT2 *eLR* LR 16 35 16.9
comp=Z,112nm,23.8s
INK Inuvik 86.31 22 P **P 16 07 51.2 -0.2**
INK Inuvik 86.31 22 P **P 16 07 51.2 -0.2**
comp=Z,1.8nm,0.9s,baz=277,slow=8.5,SNR=5.9
ARCES ARCESS Array B 86.66 340 P **P 16 07 52.8 -0.4**
ARCES ARCESS Array B 86.66 340 P **P 16 07 52.8 -0.4**
comp=Z,1.9nm,0.4s,baz=85,slow=6.2,SNR=28
TBI Tubuai 87.30 114 *eS* S 16 18 45.5 +10
comp=Z,86nm,24.8s
TBI *eLR* LR 16 35 54.0
comp=Z,160nm,28.0s
VNDA Vanda 87.47 173 P **P 16 07 57.0 +0.2**
VNDA Vanda 87.47 173 P **P 16 07 57.0 +0.2**
comp=Z,2.0nm,0.7s,baz=308,slow=5.5,SNR=12
VNDA LR LR 16 43 14.8
comp=Z,75nm,20.6s,baz=298,slow=33
BRTR Keskin Array B 87.53 310 P **P 16 07 57.0 -1.2**
BRTR Keskin Array B 87.53 310 P **P 16 07 57.0 -1.2**
comp=Z,0.3nm,0.3s,baz=139,slow=3.2,SNR=4.0
BRTR LR LR 16 56 49.4
comp=Z,53nm,18.4s,baz=275,slow=42
EIL Elat 87.83 299 P **P 16 08 01.1 +1.5**
baz=88,SNR=4.7
KAF Kangasniemi 88.04 332 *eP* **P 16 07 59.9 0.0**
KAF pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 88.04 332 *ep* **P 16 07 59.9 0.0**
comp=Z,2.7nm,0.5s
FINES FINESS Array B 88.30 332 P **P 16 08 00.7 -0.4**
FINES FINESS Array B 88.30 332 P **P 16 08 00.7 -0.4**
comp=Z,4.1nm,0.6s,baz=68,slow=4.8,SNR=29
FINES LR LR 16 56 06.5
comp=Z,105nm,19.1s,baz=90,slow=41
AKASG Malin Array Be 88.81 321 P **P 16 08 03.4 -0.4**
AKASG Malin Array Be 88.81 321 P **P 16 08 03.4 -0.4**
AKASG Malin Array Be 88.81 321 P **P 16 08 03.4 -0.4**
comp=Z,3.2nm,0.7s,baz=70,slow=4.3,SNR=8.4
AKASG LR LR 16 52 46.9
comp=Z,89nm,19.2s,baz=55,slow=39
AK01 Malin Array Si 88.82 321 *eP* **P 16 08 03.1 -0.7**
KIEV Kiev 88.82 321 *eP* **P 16 08 02.5 -1.3**
KIEV *e*PP* **pP** **16 08 12.8 -2.2**
KIEV pmax pmax
comp=Z,4.0nm,0.9s
KIEV Kiev 88.82 321 *eP* **P 16 08 02.5 -1.3**
comp=Z,4.0nm,0.9s
KIEV *epP* **pP** **16 08 12.8 -2.2**
AK02 Malin Array Si 88.83 321 *eP* **P 16 08 03.2 -0.7**
KOLS Kolonicke sedl 93.60 320 *eP* **P 16 08 26.0 -0.1**
KOLS pmax pmax
comp=Z,3.0nm,1.5s
KOLS Kolonicke sedl 93.60 320 *eP* **P 16 08 26.0 -0.1**
KOLS *epP* **pP** **16 08 38.1 +0.8**
UZH Uzhgorod 93.67 320 *eP* **P 16 08 27.0 +0.6**
CRVS Cervenica-Dubn 94.12 320 *eP* **P 16 08 27.6 -1.0**
CRVS pmax pmax
comp=Z,8.0nm,1.5s
CRVS Cervenica-Dubn 94.12 320 *eP* **P 16 08 27.5 -1.0**
NB2 NORSAR Subarra 95.19 334 P **P 16 08 31.4 -1.8**
comp=Z,4.3nm,1.2s,baz=66,slow=4.6
NOA NORSAR Array B 95.19 334 P **P 16 08 31.4 -1.8**
NOA NORSAR Array B 95.19 334 P **P 16 08 31.4 -1.8**
comp=Z,1.2nm,0.8s,baz=62,slow=4.7,SNR=5.7
NOA LR LR 16 55 02.3
comp=Z,108nm,19.8s,baz=50,slow=38
YKA Yellowknife Ar 95.71 24 P **P 16 08 36.1 +0.7**
YKA Yellowknife Ar 95.71 24 P **P 16 08 36.1 +0.7**
comp=Z,0.8nm,0.7s,baz=299,slow=4.6,SNR=9.3
GERES GERESS Array B 98.96 322 P **Pdif 16 08 50.6 0.0**
GERES GERESS Array B 98.96 322 P **Pdif 16 08 50.6 0.0**
comp=Z,0.3nm,0.6s,baz=65,slow=4.7,SNR=5.4
TXAR Lajitas Array 118.92 50 PKP **PKPdf 16 13 59.5 +0.4**
TXAR Lajitas Array 118.92 50 PKP **PKPdf 16 13 59.5 +0.4**
comp=Z,0.2nm,0.5s,baz=252,slow=1.8,SNR=3.8
TORD Torodi Ar. Bea 121.70 291 PKP **PKPdf 16 14 03.0 -1.6**
TORD Torodi Ar. Bea 121.70 291 PKP **PKPdf 16 14 03.0 -1.6**
comp=Z,0.7nm,0.4s,baz=72,slow=1.9,SNR=11

IDC 21 16:32:13.6±28.0, 16°21'S×176°03'W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/20, mbtmp4.0/4, Error ellipse: s-maj=548.6km s-min=146.8km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.45**	**240**	P	P	16 40 02.5	+0.2
	2.5nm,0.8s,baz=85,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	**47.20**	**258**	P	P	16 40 48.4	-0.2
	0.4nm,0.3s,baz=94,slow=7.1,SNR=34						
ASAR	**Alice Springs**	**47.46**	**253**	P	P	16 40 50.3	-0.3
	4.0nm,0.6s,baz=87,slow=8.8,SNR=87						
FITZ	**Fitzroy Crossi**	**55.57**	**259**	P	P	16 41 51.1	-0.2
	1.3nm,0.8s,baz=96,slow=9.2,SNR=3.6						

*ISCJB **21** 16:36:41.1±0.8, 38°32'N±0°03'×26°38'E±0°05, h13km±4km, Error ellipse: s-maj=6.7km s-min=4.5km az=152.7*
*DDA **21** 16:36:41.5, 38°36'N×26°45'E, h24km, MD3.1*
*CSEM **21** 16:36:41.5±0.3, 38°33'N×26°40'E, h12km, MD3.1, Error ellipse: s-maj=6.9km s-min=4.3km az=66.0*
*ISK **21** 16:36:42.0, 38°26'N×26°55'E, h29km, MD3.4*
ISC 21 16:36:40.4±1.1, 38°29N±0°03×26°35E±0°03, h19km±3km, n74, σ1°07/94, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.20**	**70**	*i* P	**Pg**	**16 36 46.0**	**+0.4**
URLA				*i* S	**Sg**	**16 36 48.7**	**-0.4**
URLA	**Izmir**	**0.20**	**70**	*i* P	**Pg**	**16 36 46.0**	**+0.4**
URLA				*i* S	**Sg**	**16 36 48.7**	**-0.4**
BLCB	**Balcova**	**0.55**	**80**	*ePG*	**Pg**	**16 36 51.7**	**+0.2**
BLCB				*eSG*	**Sb**	**16 36 58.3**	**-0.5**
BLCB	**Balcova**	**0.55**	**80**	*ePg*	**Pg**	**16 36 51.7**	**+0.2**
BLCB				*eSg*	**Sb**	**16 36 58.3**	**-0.5**
IZM	**Izmir**	**0.72**	**81**	*ePG*	**Pg**	**16 36 55.1**	**+0.4**
IZM				*eSG*	**Sg**	**16 37 04.1**	**-0.2**
IZM	**Izmir**	**0.72**	**81**	*ePg*	**Pg**	**16 36 55.1**	**+0.4**
IZM				*eSg*	**Sg**	**16 37 04.1**	**-0.2**
GCAM	**G?zelcaml?**	**0.91**	**130**	*i* P	**Pg**	**16 36 60.0**	**+1.8**
GCAM				*i* S	**Sn**	**16 37 11.5**	**+0.8**
GCAM	**G?zelcaml?**	**0.91**	**130**	*i* P	**Pg**	**16 37 00.0**	**+1.8**
GCAM				*i* S	**Sn**	**16 37 11.5**	**+0.8**
AYVA	**Ayvalik**	**1.05**	**14**	*i* P	**Pn**	**16 37 00.2**	**+0.2**
AYVA				*i* S	**Sn**	**16 37 14.0**	**-0.2**
AYVA	**Ayvalik**	**1.05**	**14**	*i* P	**Pn**	**16 37 00.2**	**+0.2**
AYVA				*i* S	**Sn**	**16 37 14.0**	**-0.2**
AKHS	**Akhisar**	**1.29**	**62**	*i* P	**Pb**	**16 37 04.5**	**+0.5**
AKHS				*i* S	**Sn**	**16 37 20.5**	**+0.5**
AKHS	**Akhisar**	**1.29**	**62**	*i* P	**Pb**	**16 37 04.5**	**+0.5**
AKHS				*i* S	**Sn**	**16 37 20.5**	**+0.5**
AYDN	**Tasoluk**	**1.36**	**117**	*i* P	**Pg**	**16 37 06.7**	**0.0**
AYDN				*i* S	**Sb**	**16 37 23.3**	**+1.0**
AYDN	**Tasoluk**	**1.36**	**117**	*i* P	**Pg**	**16 37 06.7**	**0.0**
AYDN				*i* S	**Sb**	**16 37 23.3**	**+1.0**
APE	**Apeiranthos**	**1.38**	**208**	*ePN*	**Pg**	**16 37 07.5**	**+0.3**
APE	**Apeiranthos**	**1.38**	**208**	*ePn*	**Pg**	**16 37 07.5**	**+0.3**
BODT	**Bodrum**	**1.44**	**148**	*ePN*	**Pn**	**16 37 05.5**	**0.0**
BODT	**Bodrum**	**1.44**	**148**	*ePn*	**Pn**	**16 37 05.5**	**0.0**
MLSB	**Milas**	**1.50**	**131**	*ePN*	**Pn**	**16 37 05.3**	**-1.0**
MLSB	**Milas**	**1.50**	**131**	*ePn*	**Pn**	**16 37 05.3**	**-1.0**
EZN	**Ezine**	**1.53**	**359**	*ePN*	**Pb**	**16 37 08.4**	**+0.2**
EZN	**Ezine**	**1.53**	**359**	*ePn*	**Pb**	**16 37 08.4**	**+0.2**
BOZC	**Bozcaada**	**1.57**	**351**	*i* P	**Pn**	**16 37 08.0**	**+0.8**
BOZC				*i* S	**Sn**	**16 37 24.6**	**-2.3**
MANT	**Manisa**	**1.74**	**83**	*i* P	**Pb**	**16 37 11.2**	**-0.7**
MANT				*i* S	**Sb**	**16 37 34.2**	**+0.7**
MANT	**Manisa**	**1.74**	**83**	*i* P	**Pb**	**16 37 11.2**	**-0.7**
MANT				*i* S	**Sb**	**16 37 34.2**	**+0.7**
BALY	**Balya**	**1.75**	**34**	*i* P	**Pb**	**16 37 12.3**	**+0.3**
BALY	**Balya**	**1.75**	**34**	*i* P	**Pb**	**16 37 12.3**	**+0.3**
BALB	**Balikesir**	**1.80**	**41**	*ePN*	**Pn**	**16 37 11.1**	**+0.8**
BALB	**Balikesir**	**1.80**	**41**	*ePn*	**Pn**	**16 37 11.1**	**+0.8**
KULA	**Kula-Manisa**	**1.83**	**82**	*ePN*	**Pb**	**16 37 12.5**	**-0.7**
KULA	**Kula-Manisa**	**1.83**	**82**	*ePn*	**Pb**	**16 37 12.5**	**-0.7**
YER	**Yerkesik**	**1.92**	**126**	*ePN*	**Pn**	**16 37 10.7**	**-1.4**
YER	**Yerkesik**	**1.92**	**126**	*ePn*	**Pn**	**16 37 10.7**	**-1.4**
DEMI	**Demirci**	**2.00**	**67**	*i* P	**Pg**	**16 37 17.8**	**-1.0**
GONE	**Gonen-Balikesi**	**2.04**	**30**	*ePN*	**Pn**	**16 37 14.9**	**+1.3**
GONE	**Gonen-Balikesi**	**2.04**	**30**	*ePn*	**Pn**	**16 37 14.9**	**+1.3**
LPK	**Lapseki**	**2.10**	**8**	*ePN*	**Pb**	**16 37 16.7**	**-1.2**
LPK	**Lapseki**	**2.10**	**8**	*ePn*	**Pb**	**16 37 16.7**	**-1.2**
GELI	**Tayfur-Gelibol**	**2.11**	**2**	*ePN*	**Pn**	**16 37 15.9**	**+1.3**
GELI	**Tayfur-Gelibol**	**2.11**	**2**	*ePn*	**Pn**	**16 37 15.9**	**+1.3**
DURS	**Dursunbey**	**2.11**	**51**	*i* P	**Pn**	**16 37 15.9**	**+1.2**
DURS				*i* S	**Sn**	**16 37 39.7**	**-0.7**
DURS	**Dursunbey**	**2.11**	**51**	*i* P	**Pn**	**16 37 15.9**	**+1.2**
DURS				*i* S	**Sn**	**16 37 39.7**	**-0.7**
DST	**Dursunbey**	**2.20**	**53**	*ePN*	**Pn**	**16 37 15.7**	**-0.3**
DST	**Dursunbey**	**2.20**	**53**	*ePn*	**Pn**	**16 37 15.7**	**-0.3**
DNZL	**Cakiroluk**	**2.21**	**105**	*i* P	**Pb**	**16 37 18.8**	**-1.1**
DNZL	**Cakiroluk**	**2.21**	**105**	*i* P	**Pb**	**16 37 18.8**	**-1.1**
KRBG	**Karabiga-Canak**	**2.22**	**19**	*ePN*	**Pn**	**16 37 16.6**	**+0.4**
KRBG	**Karabiga-Canak**	**2.22**	**19**	*ePn*	**Pn**	**16 37 16.6**	**+0.4**
DALY	**Dalyan (Mu¨la**	**2.35**	**128**	*ePN*	**Pn**	**16 37 17.6**	**-0.3**
DALY	**Dalyan (Mu¨la**	**2.35**	**128**	*ePn*	**Pn**	**16 37 17.6**	**-0.3**
ERIK	**Erikli-Kesan**	**2.38**	**3**	*ePN*	**Pn**	**16 37 19.9**	**+1.5**
ERIK	**Erikli-Kesan**	**2.38**	**3**	*ePn*	**Pn**	**16 37 19.9**	**+1.5**
ENEZ	**Enez**	**2.45**	**356**	*ePN*	**Pb**	**16 37 22.1**	**-1.7**
ENEZ	**Enez**	**2.45**	**356**	*ePn*	**Pb**	**16 37 22.1**	**-1.7**
KHAL	**Karahalli**	**2.47**	**87**	*i* P	**Pn**	**16 37 21.6**	**+1.9**
KHAL	**Karahalli**	**2.47**	**87**	*i* P	**Pn**	**16 37 21.6**	**+1.9**
MRMT	**Marmara Adasi**	**2.50**	**22**	*ePN*	**Pn**	**16 37 20.6**	**+0.5**
MRMT	**Marmara Adasi**	**2.50**	**22**	*ePn*	**Pn**	**16 37 20.6**	**+0.5**
KCTX	**Karacabey (Bur**	**2.51**	**38**	*ePN*	**Pn**	**16 37 21.2**	**+1.0**
KCTX	**Karacabey (Bur**	**2.51**	**38**	*ePn*	**Pn**	**16 37 21.2**	**+1.0**
GDZ	**Gediz**	**2.57**	**71**	*i* P	**Pg**	**16 37 28.5**	**-1.3**
MFT	**Murefte**	**2.59**	**16**	*ePN*	**Pn**	**16 37 23.9**	**+2.5**
MFT	**Murefte**	**2.59**	**16**	*ePn*	**Pn**	**16 37 23.9**	**+2.5**
TVSB	**Tavsanli**	**2.69**	**64**	*ePN*	**Pn**	**16 37 23.0**	**+0.3**
TVSB	**Tavsanli**	**2.69**	**64**	*ePn*	**Pn**	**16 37 23.0**	**+0.3**
FETY	**Fethiye**	**2.73**	**126**	*ePN*	**Pn**	**16 37 22.4**	**-0.8**
FETY	**Fethiye**	**2.73**	**126**	*ePn*	**Pn**	**16 37 22.4**	**-0.8**
GOLH	**Golhisar**	**2.75**	**112**	*i* P	**Pb**	**16 37 27.4**	**-1.6**
GOLH	**Golhisar**	**2.75**	**112**	*i* P	**Pb**	**16 37 27.4**	**-1.6**
ULDT	**Uludag**	**2.84**	**49**	*i* P	**Pb**	**16 37 30.1**	**-0.6**
ULDT				*i* S	**Sb**	**16 38 04.7**	**-0.4**
ARMT	**Armutlu**	**2.99**	**40**	*ePN*	**Pn**	**16 37 28.2**	**+1.5**
ARMT	**Armutlu**	**2.99**	**40**	*ePn*	**Pn**	**16 37 28.3**	**+1.5**
AKAS	**Kas**	**3.31**	**127**	*i* P	**Pn**	**16 37 33.4**	**+2.2**
AKAS	**Kas**	**3.31**	**127**	*i* P	**Pn**	**16 37 33.4**	**+2.2**

*ISCJB **21** 16:39:29.9±0.7, 6°56N±0°09×126°6E±0°1, h10km, mb3.7/8, Error ellipse: s-maj=19.0km s-min=6.9km az=138.4*
*IDC **21** 16:39:29.5±0.8, 6°67N×126°62E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/25, mbtmp3.8/8, Error ellipse: s-maj=32.3km s-min=13.6km az=57.0*
ISC 21 16:39:30.6±0.8, 6°77N±0°09×126°62E±0°10, h10km, n17, σ1°04/19, mb3.8/8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.40**	**297**	*eP*	Pn	16 39 45.9	+3.4
DAV	**Davao City (W)**	**1.07**	**286**	Pn	**Pn**	**16 39 53.1**	**+1.4**
	192nm,0.3s,baz=83,slow=6.5,SNR=54						
DAV				Sn	**Sn**	**16 40 07.3**	**+0.6**
	501nm,0.3s,baz=294,slow=20,SNR=51						
DMPH	**Davao City--Mi**	**1.15**	**286**	*ip*	**Sn**	**16 40 07.9**	**-0.6**
CTBH	**Cotabato--PC H**	**2.40**	**281**	*iP*	Pn	**16 40 10.0**	**0.0**
BUTP	**Butuan**	**2.40**	**336**	*eP*	**Pg**	**16 40 17.9**	**+1.2**
CGP	**Cagayan de Oro**	**2.54**	**312**	*eP*	**Pg**	**16 40 19.3**	**0.0**
CGP				*eS*	**Sb**	**16 40 47.6**	**-0.1**
PAGZ	**Pagadian**	**3.38**	**289**	*eP*	**Pn**	**16 40 24.7**	**+1.2**
MSLP	**Maasin**	**3.77**	**333**	*eP*	**Pb**	**16 40 34.6**	**-2.8**
GUIM	**Jordan**	**5.53**	**314**	*eP*	Pn	16 40 56.0	+3.0
FITZ	**Fitzroy Crossi**	**24.73**	**182**	P	**P**	**16 44 52.5**	**+0.2**
	1.5nm,0.6s,baz=65,slow=8.9,SNR=7.1						
WRA	**Warramunga Arr**	**27.61**	**164**	P	**P**	**16 45 17.5**	**-0.9**
	0.9nm,0.6s,baz=344,slow=10,SNR=9.2						
WRA				PcP	**PcP**	**16 48 35.8**	**-0.3**
	0.2nm,0.7s,baz=339,slow=2.5,SNR=3.1						
ASAR	**Alice Springs**	**31.07**	**167**	P	**P**	**16 45 48.3**	**-0.8**
	0.6nm,0.5s,baz=342,slow=6.7,SNR=20						
ASAR				PcP	**PcP**	**16 48 44.4**	**-0.4**
	0.4nm,0.8s,baz=344,slow=2.6,SNR=4.9						
STKA	**Stephens Creek**	**41.00**	**160**	P	**P**	**16 47 14.2**	**+0.2**
	1.6nm,0.5s,baz=340,slow=8.7,SNR=8.6						
SONM	**Songino Array**	**44.41**	**341**	P	P	16 47 44.1	+2.4
	0.3nm,0.5s,baz=161,slow=8.1,SNR=4.5						
SONM				PcP	**PP**	**16 49 25.4**	**+0.1**
	0.4nm,0.6s,baz=160,slow=4.6,SNR=4.0						
MKAR	**Makanchi Array**	**55.03**	**324**	P	**P**	**16 49 02.5**	**0.0**
	0.6nm,0.5s,baz=122,slow=7.9,SNR=11						
ZALV	**Zalesovo Beam**	**57.86**	**332**	P	**P**	**16 49 23.8**	**+1.4**
	0.3nm,0.3s,baz=124,slow=7.3,SNR=2.4						
ARCES	**ARCESS Array B**	**87.58**	**340**	P	**P**	**16 52 19.4**	**+0.7**
	0.6nm,0.7s,baz=76,slow=7.5,SNR=3.7						

IDC 21 16:54:42.5±24.0, 19°27S×178°13W, h521km±241km, mb3.3/5, mb1 3.4/5, mb1mx2.9/21, mbtmp3.3/5, Error ellipse: s-maj=146.3km s-min=97.8km az=92.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.51**	**263**	P	P	17 00 38.7	0.0
	4.7nm,0.4s,baz=88,slow=11,SNR=13						
STKA	**Stephens Creek**	**38.23**	**243**	P	P	17 01 17.5	-0.2
	0.9nm,0.7s,baz=90,slow=15,SNR=4.6						
WRA	**Warramunga Arr**	**44.66**	**261**	P	P	17 02 08.7	-0.2
	1.0nm,0.3s,baz=97,slow=7.0,SNR=58						
ASAR	**Alice Springs**	**44.69**	**256**	P	P	17 02 08.8	-0.3
	3.5nm,0.6s,baz=89,slow=8.4,SNR=87						
FITZ	**Fitzroy Crossi**	**53.08**	**261**	P	P	17 03 11.4	0.0
	1.4nm,0.7s,baz=108,slow=9.6,SNR=6.1						
GERES	**GERESS Array B**	**148.94**	**345**	PKPbc	PKPbc	17 13 31.2	-0.4
	0.4nm,0.7s,baz=29,slow=2.2,SNR=4.0						

*CSEM **21** 16:55:59.3±0.3, 43°51N×12°90E, h19km, ML1.8/4, Error ellipse: s-maj=9.0km s-min=6.9km az=118.0*
ROM 21 16:55:58.5±0.6, 43°51N×12°93E, h25km±5km, Md1.8/4, Ml1.5/3, Error ellipse: s-maj=4.1km s-min=3.5km az=122.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARVD	**Arcevia**	**0.01**	**123**	Pg	Pb	16 56 03.0	+0.2
ARVD				Sg	Sb	16 56 06.0	+0.3
	75nm,0.1s						
ARVD	**Arcevia**	**0.01**	**123**	Pg	Pb	16 56 03.0	+0.2
ARVD				Sg	Sb	16 56 06.0	+0.3
	75nm,0.1s						
FSSB	**Fossombrone**	**0.21**	**330**	Pg	Pb	16 56 04.1	-0.3
FSSB				Sg	Sb	16 56 09.6	+1.2
	41nm,0.3s						
FSSB	**Fossombrone**	**0.21**	**330**	Pg	Pb	16 56 04.1	-0.3
FSSB				Sg	Sb	16 56 09.6	+1.2
	41nm,0.3s						
PIEI	**Pieia**	**0.28**	**276**	Pg	Pb	16 56 05.3	-0.1
PIEI				Sg	Sb	16 56 10.2	+0.1
	21nm,0.1s						
PIEI	**Pieia**	**0.28**	**276**	Pg	Pb	16 56 05.3	-0.1
PIEI				Sg	Sb	16 56 10.2	+0.1
	21nm,0.1s						
MURB	**Monte Urbino**	**0.38**	**230**	Pg	Pb	16 56 07.0	+0.1
MURB				Sg	Sb	16 56 13.3	+0.7
	64nm,0.3s						
MURB	**Monte Urbino**	**0.38**	**230**	Pg	Pb	16 56 07.0	+0.1
MURB				Sg	Sb	16 56 13.3	+0.7
	64nm,0.3s						

*IDC **21** 16:58:18.6±1.4, 1°01S×127°80E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.4/21, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=119.4km s-min=21.9km az=70.0*
*AUST **21** 16:58:21.8±99.0, 1°39S×127°23E, h0km, Error ellipse: s-maj=1.7km s-min=1.0km az=26.0*
**ISC 21 16:58:22.4±1.0, 0°9S±0°1×127°

MAN 21 17:06:33, 16°37N×122°01E, h33km, mb4.4, ML3.3, MS3.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAUP	**Cauayan**	**0.60**	**342**	*eP*	Pb	17 06 46.8	+1.6
CAUP				*eS*	Sb	17 06 51.7	-1.8
BALP	**Baler**	**0.76**	**214**	*eP*	Pb	17 06 48.6	+0.9
PALP	**Palanan**	**0.79**	**30**	⇓*eP*	Pb	17 06 48.3	-0.1
APYP	**Conner**	**1.65**	**334**	*eP*	Pn	17 07 01.0	+1.3

IDC 21 17:12:57.4±2.0, 11°55N×86°27W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.6/21, mbtmp3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.5/30, Error ellipse: s-maj=63.8km s-min=46.5km az=57.0, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**24.00**	**320**	P	P	17 18 14.1	-0.1
	1.2nm,0.7s,baz=138,slow=9.6,SNR=15						
TXAR				PcP	PcP	17 21 57.3	+0.9
	0.4nm,0.7s,baz=155,slow=4.5,SNR=4.1						
SADO	**Sadowa**	**33.66**	**9**	LR	LR	17 33 10.4	
	comp=Z,26nm,21.0s,baz=129,slow=36						
PDAR	**Pinedale Array**	**37.11**	**331**	P	P	17 20 10.0	-0.1
	0.4nm,0.5s,baz=120,slow=8.4,SNR=3.3						
NVAR	**Mina Array Bea**	**39.14**	**319**	PcP	PcP	17 22 37.5	+0.6
	0.4nm,0.7s,baz=132,slow=4.0,SNR=5.0						
SCHQ	**Schefferville**	**45.82**	**16**	P	P	17 21 21.1	+0.1
	1.1nm,0.5s,baz=212,slow=9.5,SNR=4.0						
YKA	**Yellowknife Ar**	**54.78**	**344**	P	P	17 22 28.5	-0.2
	0.2nm,0.6s,baz=131,slow=8.6,SNR=5.2						
YKA				PcP	PcP	17 23 31.0	-0.2
	0.2nm,0.5s,baz=146,slow=3.9,SNR=5.6						
ASAR	**Alice Springs**	**140.00**	**247**	PKP	PKPdf	17 32 28.2	-0.5
	0.4nm,0.9s,baz=74,slow=3.3,SNR=3.5						
WRA	**Warramunga Arr**	**140.12**	**253**	PKP	PKPdf	17 32 27.6	-1.5
	0.2nm,0.6s,baz=83,slow=2.3,SNR=3.0						
CMAR	**Chiang Mai Arr**	**149.75**	**350**	PKPbc	PKPbc	17 32 49.0	-1.3
	0.8nm,0.7s,baz=312,slow=2.2,SNR=6.8						

WEL 21 17:14:31.4±0.5, 36°12S×178°14E, h189km±6km, ML3.5/10, Error ellipse: s-maj=10.2km s-min=8.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.44**	**175**	PN	Pn	17 15 03.8	+0.2
MXZ				SN	Sn	17 15 27.9	-0.8
PUZ	**Puketiti**	**1.95**	**177**	PN	Pn	17 15 08.7	+0.1
PUZ				SN	Sn	17 15 35.9	-1.7
MWZ	**Matawai**	**2.26**	**192**	PN	Pn	17 15 12.0	+0.1
MWZ				SN	Sn	17 15 43.7	0.0
URZ	**Urewera**	**2.29**	**201**	PN	Pn	17 15 12.2	+0.1
URZ				SN	Sn	17 15 44.8	+0.8
CNGZ	**Carnagh Statio**	**2.36**	**179**	PN	Pn	17 15 13.5	+0.5
RAHZ	**Arahi**	**2.91**	**196**	PN	Pn	17 15 19.3	-0.1
KNZ	**Kokohu**	**2.92**	**187**	PN	Pn	17 15 18.8	-0.6
NMHZ	**Naumai**	**3.15**	**199**	PN	Pn	17 15 22.6	+0.2
BKZ	**Black Stump Fm**	**3.31**	**203**	PN	Pn	17 15 23.6	-0.6
MCHZ	**McNeill Hill**	**3.51**	**199**	PN	Pn	17 15 26.4	-0.2
BHHZ	**Black Hill Sta**	**3.74**	**205**	PN	Pn	17 15 28.5	-1.1
KAHZ	**Kahuranaki**	**3.80**	**195**	PN	Pn	17 15 29.6	-0.6
MRZ	**Mangatainoka R**	**4.96**	**203**	PN	Pn	17 15 42.4	-2.5
TIWZ	**Tintock**	**4.97**	**200**	PN	Pn	17 15 42.9	-2.3
OGWZ	**Otaki Gorge**	**5.23**	**206**	PN	Pn	17 15 45.8	-2.7
KIW	**Kapiti Island**	**5.37**	**207**	PN	Pn	17 15 47.2	-3.0
CAW	**Cannon Point**	**5.53**	**205**	PN	Pn	17 15 49.0	-3.3
TUWZ	**Tuamarina**	**6.23**	**210**	PN	Pn	17 15 58.0	-3.4
KHZ	**Kahutara**	**7.23**	**208**	PN	Pn	17 16 11.0	-3.4
LTZ	**Lake Taylor**	**8.05**	**213**	PN	Pn	17 16 21.2	-4.1

*ISK **21** 17:14:51.9, 37°14N×28°24E, h12km, MD2.5*
*DDA **21** 17:14:51.7, 37°15N×28°24E, h7km, MD2.8*
*ISCJB **21** 17:14:52.3±0.5, 37°20N±0°04×28°27E±0°05, h7km±7km, Error ellipse: s-maj=9.0km s-min=4.3km az=44.3*
*CSEM **21** 17:14:52.4±0.2, 37°18N×28°27E, h8km, MD2.5, Error ellipse: s-maj=4.8km s-min=3.2km az=26.0*

ISC 21 17:14:52.1±0.9, 37°17N±0°03×28°27E±0°03, h12km±5km, n20, σ0°63/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.03**	**159**	*e*PG	**Pg**	**17 14 54.6**	**+0.2**
YER				*e*SG	**Sg**	**17 14 55.9**	**-0.1**
YER	**Yerkesik**	**0.03**	**159**	*e*Pg	**Pg**	**17 14 54.6**	**+0.2**
YER				*e*Sg	**Sg**	**17 14 55.9**	**-0.1**
MLSB	**Milas**	**0.41**	**288**	*e*PG	**Pg**	**17 15 00.5**	**+0.2**
MLSB				*e*SG	**Sg**	**17 15 06.2**	**+0.3**
MLSB	**Milas**	**0.41**	**288**	*e*Pg	**Pg**	**17 15 00.5**	**+0.2**
MLSB				*e*Sg	**Sg**	**17 15 06.2**	**+0.3**
DALY	**Dalyan (Mu¨la**	**0.47**	**138**	*e*PG	**Pg**	**17 15 01.3**	**+0.1**
DALY				*e*SG	**Sb**	**17 15 08.4**	**-0.5**
DALY	**Dalyan (Mu¨la**	**0.47**	**138**	*e*Pg	**Pg**	**17 15 01.3**	**+0.1**
DALY				*e*Sg	**Sb**	**17 15 08.4**	**-0.5**
AYDN	**Tasoluk**	**0.58**	**328**	*i* P	**Pg**	**17 15 03.9**	**+0.4**
AYDN				*i* S	**Sg**	**17 15 11.3**	**+0.1**
AYDN	**Tasoluk**	**0.58**	**328**	*i* P	**Pg**	**17 15 03.9**	**+0.4**
AYDN				*i* S	**Sg**	**17 15 11.3**	**+0.1**
BODT	**Bodrum**	**0.77**	**263**	*e*PG	**Pg**	**17 15 07.0**	**0.0**
BODT	**Bodrum**	**0.77**	**263**	*e*Pg	**Pg**	**17 15 07.0**	**0.0**
DNZL	**Cakiroluk**	**0.81**	**50**	*i* P	**Pg**	**17 15 07.7**	**-0.1**
DNZL				*i* S	**Sb**	**17 15 19.7**	**+0.5**
DNZL	**Cakiroluk**	**0.81**	**50**	*i* P	**Pg**	**17 15 07.7**	**-0.1**
DNZL				*i* S	**Sb**	**17 15 19.7**	**+0.5**
FETY	**Fethiye**	**0.84**	**129**	*e*PG	**Pg**	**17 15 08.5**	**+0.2**
FETY	**Fethiye**	**0.84**	**129**	*e*Pg	**Pg**	**17 15 08.5**	**+0.2**
GOLH	**Golhisar**	**1.03**	**86**	*i* P	**Pb**	**17 15 11.1**	**-0.8**
GOLH				*i* S	**Sn**	**17 15 27.8**	**+0.9**
GOLH	**Golhisar**	**1.03**	**86**	*i* P	**Pb**	**17 15 11.1**	**-0.8**
GOLH				*i* S	**Sn**	**17 15 27.8**	**+0.9**
AKAS	**Kas**	**1.42**	**130**	*i* P	**Pg**	**17 15 19.7**	**+0.3**
AKAS				*i* S	**Sg**	**17 15 38.3**	**+0.4**
AKAS	**Kas**	**1.42**	**130**	*i* P	**Pg**	**17 15 19.7**	**+0.3**
AKAS				*i* S	**Sg**	**17 15 38.3**	**+0.4**
KHAL	**Karahalli**	**1.54**	**39**	*i* P	**Pn**	**17 15 20.2**	**+0.8**
KHAL				*i* S	**Sn**	**17 15 37.8**	**-1.7**
KHAL	**Karahalli**	**1.54**	**39**	*i* P	**Pn**	**17 15 20.2**	**+0.8**
KHAL				*i* S	**Sn**	**17 15 37.8**	**-1.7**

*ISCJB **21** 17:15:21.7±0.4, 29°22N±0°04×105°02E±0°06, h10km, mb3.7/10, MS3.1/3, Error ellipse: s-maj=8.0km s-min=4.3km az=153.6*
*IDC **21** 17:15:22.1±0.7, 29°24N×104°94E, h0km, mb3.7/10, mb1 3.8/11, mb1mx3.6/28, mbtmp3.7/11, ML3.3/1, MS3.1/5, Ms1 3.1/5, ms1mx2.7/34, Error ellipse: s-maj=74.9km s-min=14.7km az=58.0*
*BJI **21** 17:15:23.5, 29°37N×105°01E, h10km, mb3.9/2, ML3.9/15, Ms3.9/6, Ms7 3.8/5*

ISC 21 17:15:23.4±0.6, 29°26N±0°04×104°95E±0°06, h10km, n22, σ1°84/26, mb3.7/10, MS3.1/3, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.94**	**328**	⇑*i*Pn	**Pb**	**17 15 57.8**	**-1.1**
CD2				Pg	**Pg**	**17 16 00.3**	**-0.4**
CD2				Sn	**Sb**	**17 16 21.3**	**-1.9**
CD2				Sg	**Sg**	**17 16 24.4**	**-1.4**
CD2				smax	smax		
	comp=N,5μm,0.7s						
CD2				smax	smax		
	comp=E,4μm,0.6s						
GYA	**Guiyang**	**3.18**	**151**	Pn	**Pb**	**17 16 17.0**	**-3.1**
GYA				Pg	**Pg**	**17 16 25.3**	**+0.9**
GYA				Sn	**Sn**	**17 16 53.4**	**+1.7**
GYA				Sg	**Sg**	**17 17 04.3**	**-1.3**
GYA				smax	smax		
	comp=N,90nm,0.7s						
GYA				smax	smax		
	comp=E,110nm,0.8s						
KMI	**Kunming**	**4.57**	**206**	Pg	Pg	17 16 52.4	+1.4
KMI				Sg	**Sg**	**17 17 49.9**	**-0.2**
KMI				smax	smax		
	comp=N,25nm,2.4s						
KMI				smax	smax		
	comp=E,27nm,3.9s						
KMI				LR	LR		
	comp=N,570nm,4.1s						
KMI				LR	LR		
	comp=E,820nm,4.1s						
XAN	**Xi'an**	**5.84**	**34**	Pn	**Pn**	**17 16 49.8**	**-0.4**
XAN				Pg	**Pb**	**17 17 07.4**	**+1.9**
XAN				Sn	**Sn**	**17 17 51.8**	**-5.5**
XAN				Sg	Sb	17 18 22.3	+6.7
XAN				smax	smax		
	comp=N,190nm,1.0s						
XAN				smax	smax		
	comp=E,63nm,0.9s						
XAN				LR	LR		
	comp=N,280nm,7.4s						
XAN				LR	LR		
	comp=E,180nm,7.1s						
XAN				LR	LR		
	comp=Z,180nm,4.3s						
LZH	**Lanzhou**	**6.87**	**353**	*e*Pn	Pn	17 17 07.5	+3.1
LZH				*e*Sn	**Sn**	**17 18 26.6**	**+3.9**
LZH				smax	smax		
	comp=N,320nm,1.2s						
LZH				smax	smax		
	comp=E,260nm,1.1s						
LZH				LR	LR		
	comp=N,300nm,5.6s						
LZH				LR	LR		
	comp=E,470nm,7.1s						
LZH				LR	LR		
	comp=Z,510nm,7.6s						
WHN	**Wuhan**	**8.26**	**79**	*e*P	Pn	17 17 25.5	+2.2
WHN				*e*S	**Sn**	**17 18 55.6**	**-1.1**
GTA	**Gaotai**	**10.97**	**339**	*e*P	Pn	17 18 09.6	+8.9
GTA				pP		17 18 14.0	
GTA				sP		17 18 17.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**12.07**	**208**	LR	LR	17 23 29.4	
	comp=Z,80nm,20.4s,baz=10.0,slow=40						
SONM	**Songino Array**	**18.58**	**3**	P	**Pn**	**17 19 41.8**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=178,slow=10,SNR=5.6						
SONM				LR	LR	17 28 30.0	
	comp=Z,21nm,19.1s,baz=78,slow=42						
KSRS	**Korea Array**	**20.82**	**61**	LR	LR	17 29 09.9	
	comp=Z,63nm,18.4s,baz=245,slow=40						
JNU	**Nakatsue**	**22.49**	**74**	LR	LR	17 30 24.4	
	comp=Z,80nm,18.5s,baz=301,slow=40						
MKAR	**Makanchi Array**	**24.86**	**321**	P	**P**	**17 20 47.6**	**+1.6**
	comp=Z,1.8nm,0.8s,baz=127,slow=8.6,SNR=11						
ZALV	**Zalesovo Beam**	**28.69**	**335**	P	**P**	**17 21 20.4**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=133,slow=8.5,SNR=5.1						
MJAR	**Matsushiro Arr**	**28.75**	**67**	LR	LR	17 32 21.9	
	comp=Z,53nm,20.9s,baz=55,slow=35						
KURBB	**Kurchatov Arra**	**29.15**	**324**	P	**P**	**17 21 25.1**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=130,slow=9.7,SNR=5.4						
BVAR	**Borovoye Array**	**34.69**	**323**	P	**P**	**17 22 13.5**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=119,slow=10,SNR=2.9						
WRA	**Warramunga Arr**	**56.54**	**146**	P	**P**	**17 25 06.5**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=339,slow=8.0,SNR=14						
FINES	**FINESS Array B**	**59.50**	**327**	P	**P**	**17 25 26.7**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=105,slow=10,SNR=4.0						
ASAR	**Alice Springs**	**59.54**	**149**	P	**P**	**17 25 27.4**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=332,slow=7.1,SNR=11						
ASAR				PcP	**PcP**	**17 26 14.7**	**0.0**
	comp=Z,0.2nm,0.6s,baz=334,slow=3.4,SNR=5.1						
NOA	**NORSAR Array B**	**66.60**	**328**	P	**P**	**17 26 12.8**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=74,slow=6.4,SNR=2.9						
GERES	**GERESS Array B**	**69.36**	**315**	P	**P**	**17 26 32.1**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=72,slow=4.2,SNR=2.8						
STKA	**Stephens Creek**	**70.07**	**147**	P	**P**	**17 26 36.1**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=321,slow=6.5,SNR=2.9						

*IDC **21** 17:17:42.1±0.6, 11°92N×86°04W, h0km, mb4.3/16, mb1 4.6/16, mb1mx4.3/26, mbtmp4.4/16, MS4.0/16, Ms1 4.1/16, ms1mx3.8/29, Error ellipse: s-maj=32.9km s-min=13.6km az=52.0*
*CASC **21** 17:17:44.8±1.3, 11°09N×86°95W, h31km±15km, ML4.0, mb4.7(NEIC)*
*ISCJB **21** 17:17:45.3±0.5, 11°25N±0°05×86°77W±0°05, h51km±4km, mb4.7/93, MS4.1/19, Error ellipse: s-maj=11.2km s-min=3.8km az=40.9*
*BJI **21** 17:17:48.1, 11°30N×86°70W, h61km, mB5.1/3, Ms4.8/3, Ms7 4.7/1*
*NEIC **21** 17:17:48.3±0.8, 11°32N×86°70W, h61km±7km, mb4.7/75, Error ellipse: s-maj=9.6km s-min=4.8km az=45.0*

ISC 21 17:17:44.1±1.4, 11°12N±0°06×86°88W±0°06, h29km±8km, n499, σ1°913/504, mb4.7/93, MS4.1/19, 145C-158D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGN	**Cerro Negro**	**1.38**	**8**	*e*S	**Sb**	**17 18 31.4**	**+4.8**
VCR	**Vista de Mar**	**1.58**	**129**	*e*P	**Pn**	**17 18 10.0**	**-0.3**
JTS	**JuntasAbangare**	**2.07**	**113**	*e*P	**Pn**	**17 18 17.5**	**+0.5**
FORC	**Fortuna**	**2.27**	**106**	*e*P	**Pn**	**17 18 20.7**	**+1.0**
CNCH	**Conchagua**	**2.33**	**337**	*e*P	**Pn**	**17 18 21.3**	**+0.5**
CGA2	**Cerro Gallo 2**	**2.62**	**115**	*e*P	**Pn**	**17 18 26.5**	**+1.8**
BLLM	**Bellamira**	**2.66**	**330**	*e*P	**Pn**	**17 18 25.5**	**+0.3**
BLLM				*e*S	**Sn**	**17 18 57.3**	**+0.8**
VSM	**San Miguel**	**2.66**	**329**	*e*P	**Pn**	**17 18 26.0**	**+0.5**
CAHU	**Cacacuatique**	**2.93**	**334**	*e*P	**Pn**	**17 18 30.5**	**+1.4**
CAHU				*e*S	**Sn**	**17 19 05.5**	**+2.0**
TGUH	**Tegucigalpa,Un**	**2.94**	**353**	*e*P	**Pn**	**17 18 30.1**	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.94**	**353**	*e*P	**Pn**	**17 18 30.4**	**+1.4**
TGUH				*e*S	**Sn**	**17 19 05.2**	**+1.8**
SJS	**Escuela Geolog**	**3.02**	**113**	*e*P	**Pn**	**17 18 31.4**	**+1.2**
SNVI	**San Vicente**	**3.13**	**323**	*e*P	**Pn**	**17 18 32.1**	**+0.5**
SNVI				*e*S	**Sn**	**17 19 10.1**	**+1.9**
QCR	**Quepos**	**3.16**	**122**	*e*P	**Pb**	**17 18 39.0**	**-0.7**
LFRS	**El Faro**	**3.27**	**320**	*e*P	**Pn**	**17 18 33.9**	**+0.3**
LBRS	**Las Brisas**	**3.35**	**321**	*e*P	**Pn**	**17 18 35.5**	**+0.8**
LBRS				*e*S	**Sn**	**17 19 14.0**	**+0.5**
LFU	**La Fuente**	**3.40**	**320**	*e*P	**Pn**	**17 18 36.3**	**+0.9**
SNET	**Serv Nac Est T**	**3.43**	**318**	AML	AML	17 19 23.4	
	comp=Z,764nm,0.3s						
BUS	**Buena Vista**	**3.45**	**117**	*e*P	**Pn**	**17 18 39.2**	**+2.9**
BOQS	**Boqueron**	**3.50**	**318**	*e*P	**Pn**	**17 18 37.4**	**+0.6**
SBLS	**San Blas**	**3.80**	**316**	*e*P	**Pn**	**17 18 42.2**	**+1.2**
RTR	**El Retiro**	**3.86**	**316**	*e*P	**Pn**	**17 18 43.0**	**+1.2**
RBDL	**Robledal**	**4.04**	**318**	*e*P	**Pn**	**17 18 45.3**	**+1.1**
RBDL				*e*S	**Sn**	**17 19 31.7**	**+1.0**
MTO2	**Montecristo 2**	**4.06**	**324**	*e*P	**Pn**	**17 18 45.0**	**+0.5**
ACR	**Cerro Adams**	**4.41**	**124**	*e*P	**Pn**	**17 18 51.5**	**+2.3**
BCIP	**Isla Barro Col**	**7.20**	**105**	*e*P	**Pn**	**17 19 28.6**	**+1.0**
	comp=Z,80nm,1.1s						
TEIG	**Tepich**	**9.15**	**352**	*e*P	**Pn**	**17 19 56.0**	**+1.7**
	comp=Z,40nm,1.0s						
TEIG	**Tepich**	**9.15**	**352**	Pn	**Pn**	**17 19 54.6**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=147,slow=11,SNR=12						
OTAV	**Otavalo**	**13.68**	**142**	P	**P**	**17 21 02.1**	**-3.1**
	comp=Z,18nm,1.4s						
ROSC	**El Rosal**	**13.90**	**116**	LR	LR	17 26 30.7	
	comp=Z,388nm,21.0s,baz=165,slow=39						
SDDR	**Presa de Saban**	**16.96**	**61**	P	**Pn**	**17 21 39.5**	**0.0**
ATAH	**Atahualpa**	**20.01**	**155**	P	Pn	17 22 22.2	+5.1
ATAH	**Atahualpa**	**20.01**	**155**	P	Pn	17 22 22.2	+5.1
	comp=Z,3.7nm,0.5s,baz=337,slow=7.7,SNR=2.4						
ATAH				LR	LR	17 29 07.4	
	comp=Z,778nm,19.6s,baz=170,slow=34						
TIGA	**Tifton**	**20.45**	**8**	⇓P	**P**	**17 22 20.3**	**+0.9**
	baz=20,SNR=7.6						
HKT	**Hockley**	**20.50**	**337**	*e*P	Pn	17 22 21.0	-1.2
	comp=Z,106nm,1.4s						
CELP	**Cerrillos**	**20.82**	**68**	*e*P	**P**	**17 22 24.0**	**+0.5**
SJG	**San Juan**	**21.22**	**68**	*e*P	**P**	**17 22 28.1**	**+0.2**
	comp=Z,61nm,1.2s						
732A	**Laxson Ranch,**	**21.37**	**327**	⇑P	**P**	**17 22 29.9**	**+0.5**
	baz=21,SNR=20						
LRAL	**Lakeview Retre**	**21.81**	**360**	*e*P	**P**	**17 22 35.2**	**+1.2**
	comp=Z,37nm,0.8s						
632A	**Uvalde**	**21.90**	**329**	⇓P	**P**	**17 22 35.5**	**+0.5**
	baz=22						
631A	**Perdido Creek**	**22.23**	**327**	⇓P	**P**	**17 22 40.3**	**+1.6**
	baz=22,SNR=25						
532A	**Rocksprings**	**22.46**	**329**	⇑P	**P**	**17 22 41.9**	**+0.8**
	baz=22,SNR=21						
JCT	**Junction City**	**22.70**	**330**	*e*P	**P**	**17 22 42.3**	**-1.3**
	comp=Z,26nm,0.8s						
JCT	**Junction City**	**22.70**	**330**	⇑P	**P**	**17 22 44.0**	**+0.4**
	baz=23,SNR=9.5						
531A	**Rocksprings**	**22.82**	**328**	⇑P	**P**	**17 22 45.5**	**+0.6**
	baz=23,SNR=8.3						
WHTX	**Lake Whitney**	**22.95**	**336**	⇓P	**P**	**17 22 46.0**	**-0.2**
	baz=23,SNR=12						
432A	**Menard**	**23.02**	**331**	⇑P	**P**	**17 22 46.6**	**-0.4**
	baz=23						
530A	**J-C Ranch, Com**	**23.22**	**327**	⇑P	**P**	**17 22 49.4**	**+0.3**
	baz=23,SNR=28						
431A	**Sonora**	**23.26**	**329**	⇑P	**P**	**17 22 49.7**	**+0.2**
	baz=23,SNR=22						
OXF	**Oxford**	**23.40**	**355**	*e*P	**P**	**17 22 50.6**	**0.0**
	comp=Z,80nm,0.8s						
332A	**Millersview**	**23.41**	**331**	⇓P	**P**	**17 22 50.5**	**-0.4**
	baz=23,SNR=36						
628A	**Black Gap, Mar**	**23.59**	**323**	⇓P	**P**	**17 22 52.8**	**+0.1**
	baz=24,SNR=18						
430A	**Baggett Ranch,**	**23.67**	**328**	⇓P	**P**	**17 22 52.5**	**-0.9**
	baz=24,SNR=8.9						
331A	**San Angelo**	**23.68**	**330**	⇑P	**P**	**17 22 52.4**	**-1.1**
	baz=24,SNR=12						
529A	**Stev Forest Ra**	**23.69**	**325**	⇓P	**P**	**17 22 52.7**	**-0.9**
	baz=24						
232A	**Coleman**	**23.79**	**332**	⇓P	**P**	**17 22 53.6**	**-1.0**
	baz=24,SNR=26						
627A	**Terlingua Ranc**	**23.87**	**322**	⇑P	**P**	**17 22 55.9**	**+0.5**
	baz=24,SNR=33						
429A	**Davenport Ranc**	**23.89**	**327**	⇓P	**P**	**17 22 54.8**	**-0.8**
	baz=24,SNR=26						
TXAR	**Lajitas Array**	**23.95**	**322**	P	**P**	**17 22 57.5**	**+1.3**
TXAR				PcP	**PcP**	**17 26 41.7**	**+3.4**
TXAR				ScP	ScP	17 30 22.4	+7.6
TXAR	**Lajitas Array**	**23.95**	**322**	P	**P**	**17 22 57.5**	**+1.3**
	comp=Z,19nm,0.8s,baz=137,slow=11,SNR=124						
TXAR				PcP	**PcP**	**17 26 41.7**	**+3.4**
	comp=Z,6.1nm,0.9s,baz=145,slow=4.6,SNR=13						
TXAR				ScP	ScP	17 30 22.4	+7.6
	comp=Z,1.7nm,0.9s,baz=159,slow=2.8,SNR=8.6						
SWET	**Sewanee**	**24.00**	**2**	*e*P	**P**	**17 22 55.7**	**-0.8**
	comp=Z,28nm,0.6s						
528A	**Cox Ranch, San**	**24.04**	**324**	⇑P	**P**	**17 22 56.5**	**-0.5**
	baz=24,SNR=16						
UALR	**University of**	**24.07**	**349**	*e*P	**P**	**17 22 56.1**	**-0.9**
	comp=Z,118nm,1.4s						
330A	**Mertzon**	**24.13**	**329**	⇓P	**P**	**17 22 56.2**	**-1.6**
	baz=24						
231A	**Bronte**	**24.14**	**331**	⇓P	**P**	**17 22 56.3**	**-1.5**
	baz=24						
CPCT	**Cooper Cave**	**24.31**	**5**	*e*P	**P**	**17 22 59.7**	**+0.4**
626A	**Big Bend Ranch**	**24.39**	**321**	⇑P	**P**	**17 23 01.0**	**+0.7**
	baz=24,SNR=27						
428A	**Kincaid Ranch,**	**24.40**	**325**	⇓P	**P**	**17 23 00.8**	**+0.5**
	baz=24,SNR=26						
ABTX	**Abilene, Hawle**	**24.41**	**333**	⇑P	**P**	**17 22 59.6**	**-0.7**
	baz=24,SNR=11						
KMSC	**Kings Mountain**	**24.44**	**11**	⇓P	**P**	**17 22 59.0**	**-1.4**
	baz=24						
230A	**Sterling City**	**24.49**	**330**	⇓P	**P**	**17 23 00.4**	**-0.7**
	baz=24						
527A	**Woodward Ranch**	**24.50**	**323**	⇑P	**P**	**17 23 01.7**	**+0.4**
	baz=24,SNR=14						
TKL	**Tuckaleechee C**	**24.59**	**6**	P	**P**	**17 23 02.4**	**+0.6**
TKL	**Tuckaleechee C**	**24.59**	**6**	P	**P**	**17 23 02.4**	**+0.6**
	comp=Z,25nm,0.8s,baz=194,slow=8.3,SNR=12						
329A	**Wagon Wheel Ra**	**24.61**	**328**	⇑P	**P**	**17 23 02.2**	**0.0**
	baz=25,SNR=12						
526A	**Mary Lane Ranc**	**24.73**	**322**	⇓P	**P**	**17 23 04.3**	**+1.0**
	baz=25,SNR=23						
131A	**Roby**	**24.79**	**332**	⇑P	**P**	**17 23 02.8**	**-0.9**
	baz=25						
427A	**Ryker Ranch,**	**24.90**	**324**	⇑P	**P**	**17 23 04.9**	**0.0**
	baz=25						
229A	**Bryant Ranch,**	**24.90**	**329**	⇓P	**P**	**17 23 04.4**	**-0.5**
	baz=25,SNR=14						
Z32A	**Haskell**	**24.92**	**334**	⇓P	**P**	**17 23 04.6**	**-0.3**
	baz=25,SNR=14						
328A	**Wristen Ranch,**	**24.97**	**326**	⇑P	**P**	**17 23 05.4**	**0.0**
	baz=25,SNR=27						
130A	**Snyder**	**25.00**	**331**	⇓P	**P**	**17 23 04.9**	**-0.7**
	baz=25						
426A	**McDonald Obser**	**25.13**	**323**	⇑P	**P**	**17 23 07.0**	**-0.1**
	baz=25,SNR=17						
Z31A	**Sharp Cattle R**	**25.22**	**333**	⇓P	**P**	**17 23 06.8**	**-0.8**
	baz=25,SNR=16						
228A	**UT Block 9, Go**	**25.43**	**328**	⇑P	**P**	**17 23 08.8**	**-0.7**
	baz=25,SNR=7.7						
129A	**Stewart Farms,**	**25.46**	**330**	⇑P	**P**	**17 23 09.4**	**-0.5**
	baz=26,SNR=7.0						
Y32A	**R-V Farms, Ver**	**25.51**	**335**	⇓P	**P**	**17 23 09.8**	**-0.4**
	baz=26						
326A	**Caldwell Ranch**	**25.58**	**324**	⇑P	**P**	**17 23 11.0**	**+0.1**
	baz=26,SNR=17						
Z30A	**Sanderson Ranc**	**25.64**	**332**	⇓P	**P**	**17 23 10.4**	**-1.1**
	baz=26,SNR=20						
227A	**Bennet, Jal**	**25.72**	**326**	⇑P	**P**	**17 23 12.4**	**+0.2**
	baz=26						
LPIG	**La Paz**	**25.74**	**303**	LR	LR	17 35 12.2	
	comp=Z,24nm,18.8s,baz=196,slow=40						
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baz=28,SNR=7.6
T31A **Randall Ranch,** 28.31 338 ⇓P P 17 23 35.2 -0.2
baz=28,SNR=7.8
Y24A **Capitan** 28.34 326 ⇑P P 17 23 36.7 +0.7
baz=28,SNR=23
221A **Mesquite Ranch** 28.35 320 ⇑P P 17 23 36.8 +0.8
baz=28
W26A **Owens Ranch, T** 28.37 330 ⇑P P 17 23 36.2 +0.1
baz=28
320A **Kipp Ranch, An** 28.38 318 ⇑P P 17 23 37.3 +1.1
baz=28,SNR=5.5
X25A **Clemmons Ranch** 28.39 328 ⇓P P 17 23 36.4 +0.2
baz=28
T30A **Plains** 28.59 337 ⇓P P 17 23 38.3 +0.3
baz=29
Y23A **Lovelace Mesa,** 28.69 325 ⇑P P 17 23 39.8 +0.8
baz=29,SNR=22
121A **Cookes Peak, D** 28.71 321 ⇓P P 17 23 40.8 +1.6
baz=29,SNR=6.0
U28A **Mallet** 28.72 334 ⇑P P 17 23 39.6 +0.5
baz=29
Z22A **Elephant Butte** 28.72 323 ⇓P P 17 23 40.4 +1.2
baz=29
220A **Playas Peak, P** 28.75 319 ⇓P P 17 23 40.7 +1.2
baz=29,SNR=9.8
W25A **X Bar L Ranch,** 28.82 329 ⇑P P 17 23 40.6 +0.4
baz=29,SNR=9.4
X24A **Lazy VL Ranch,** 28.82 327 ⇑P P 17 23 40.7 +0.5
baz=29
319A **Douglas** 28.90 318 ⇑P P 17 23 41.3 +0.5
baz=29
V26A **Tequesquite Ra** 28.95 331 ⇓P P 17 23 41.9 +0.6
baz=29,SNR=5.7
T29A **Hugoton** 28.99 336 ⇑P P 17 23 41.4 -0.1
baz=29
U27A **Thompson Grove** 29.02 333 ⇑P P 17 23 42.4 +0.6
baz=29,SNR=8.7
S30A **Montezuma** 29.09 337 ⇓P P 17 23 42.4 0.0
baz=29
SFIN **Scholer Farm** 29.14 360 ⇑P P 17 23 41.3 -1.4
baz=29
BNM **Barren Site** 29.17 325 eP P 17 23 44.8 +1.4
comp=Z,13nm,1.1s
Z21A **St. Cloud Mine** 29.17 322 ⇑P P 17 23 43.8 +0.4
baz=29
KSU1 **Kansas State U** 29.18 344 eP P 17 23 42.5 -0.6
comp=Z,47nm,0.9s
ACSO **Alum Creek Sta** 29.20 6 eP P 17 23 42.8 -0.5
comp=Z,43nm,0.8s
Y22A **Socorro** 29.21 324 ⇓P P 17 23 43.9 +0.3
baz=29
120A **U Bar Ranch, L** 29.25 320 ⇓P P 17 23 45.0 +1.0
baz=29,SNR=5.8
LPM **Los Pinos Moun** 29.29 325 eP P 17 23 45.1 +0.7
comp=Z,3.8nm,0.8s
W24A **Lazy 6 Ranch,** 29.30 328 ⇓P P 17 23 44.7 +0.3
baz=29
S29A **Ulysses** 29.32 336 ⇓P P 17 23 44.9 +0.5
baz=29
LENM **Lemitar** 29.38 325 eP P 17 23 50.9 +5.8
comp=Z,8.3nm,0.9s
V25A **Rancho No Teng** 29.39 330 ⇓P P 17 23 45.2 -0.1
baz=29
HDIL **Hopedale** 29.39 356 eP P 17 23 43.5 -1.4
comp=Z,35nm,0.8s
U26A **Atchley Ranch,** 29.42 332 ⇑P P 17 23 45.2 -0.2
baz=29
T27A **Campo** 29.50 334 ⇓P P 17 23 45.5 -0.7
baz=30
SDMD **Soldier's Deli** 29.55 16 eP P 17 23 46.4 0.0
comp=Z,20nm,0.8s
R30A **Dighton** 29.59 338 ⇑P P 17 23 45.8 -1.0
baz=30
Z20A **Nine Sixteen R** 29.60 321 ⇑P P 17 23 47.5 +0.4
baz=30
S28A **Manter** 29.61 335 ⇓P P 17 23 46.9 -0.1
baz=30
V24A **Rampart Ranch,** 29.63 329 ⇓P P 17 23 47.4 0.0
baz=30
X22A **Bernardo** 29.64 325 ⇓P P 17 23 47.9 +0.4
baz=30
W23A **Werner Place,** 29.66 327 ⇓P P 17 23 48.7 +1.0
baz=30,SNR=12
ANMO **Albuquerque** 29.66 326 eP P 17 23 48.8 +1.2
comp=Z,5.9nm,0.8s
ANMO PcP PcP 17 26 54.4 +2.6
ANMO **Albuquerque** 29.66 326 P P 17 23 48.9 +1.2
comp=Z,4.6nm,0.6s,baz=135,slow=10,SNR=7.2
ANMO PcP PcP 17 26 54.4 +2.6
comp=Z,4.4nm,0.9s,baz=210,slow=3.8,SNR=5.6
Y21A **Point of Rocks** 29.67 323 ⇑P P 17 23 49.0 +1.2
baz=30,SNR=11
U25A **Circle Dot Ran** 29.73 331 ⇑P P 17 23 48.4 +0.1
baz=30,SNR=9.2
W22A **Albuquerque** 29.98 326 ⇓P P 17 23 50.7 +0.2
baz=30
T26A **Comanche Natio** 29.99 333 ⇓P P 17 23 50.3 -0.2
baz=30
Y20A **Horse Springs,** 30.01 322 ⇓P P 17 23 51.1 +0.3
baz=30,SNR=11
R29A **Marienthal** 30.03 337 ⇓P P 17 23 51.0 +0.3
baz=30
X21A **Alamocita Cree** 30.04 324 ⇓P P 17 23 51.5 +0.4
baz=30
R28A **Tribune** 30.22 336 ⇓P P 17 23 52.1 -0.3
baz=30
S26A **Kim** 30.30 333 ⇑P P 17 23 53.2 0.0
baz=30
T25A **Trinidad** 30.33 332 ⇓P P 17 23 54.0 +0.4
baz=30,SNR=6.9
SSPA **Standing Stone** 30.45 14 eP P 17 23 54.2 -0.1
comp=Z,29nm,0.8s
TUC **Tucson** 30.48 317 eP P 17 23 55.8 +0.9
comp=Z,1.5nm,0.9s
X20A **Quemado** 30.53 323 ⇓P P 17 23 55.4 0.0
baz=30
R27A **Eads** 30.57 335 ⇓P P 17 23 55.6 +0.1
baz=31
V22A **San Miguel Ran** 30.63 327 ⇑P P 17 23 55.9 -0.4
baz=31
S25A **Robets Cordova** 30.77 332 ⇓P P 17 23 57.7 +0.3
baz=31
Q28A **Sharon Springs** 30.85 337 ⇓P P 17 23 57.8 -0.2
baz=31
R26A **Arlington** 30.86 334 ⇓P P 17 23 56.0 -2.1
baz=31
SAML **Samuel** 30.88 129 eP P 17 23 58.5 +0.1
comp=Z,13nm,1.1s
W20A **Ramah** 30.94 324 ⇑P P 17 23 60.0 +1.0
baz=31
V21A **Milan** 30.95 326 ⇓P P 17 24 00.4 +1.4
baz=31
T23A **Casias Ranch,** 31.04 329 ⇑P P 17 24 00.4 +0.5
baz=31
R25A **Fountain Ranch** 31.10 333 ⇓P P 17 23 60.0 -0.3
baz=31
S24A **Houchin Ranch,** 31.11 331 ⇓P P 17 24 01.1 +0.5
baz=31,SNR=6.9
P28A **Saint Francis** 31.26 338 ⇑P P 17 24 01.4 -0.2
baz=31
SDCO **Great Sand Dun** 31.34 331 eP P 17 24 02.9 +0.4
comp=Z,7.2nm,0.6s
V20A **Brimhall** 31.40 325 ⇓P P 17 24 03.2 +0.1
baz=31
Q26A **Hugo** 31.41 335 ⇓P P 17 24 02.5 -0.5
baz=31
U21A **Nageezi** 31.42 327 ⇑P P 17 24 02.8 -0.4
baz=31
T22A **Edith** 31.46 328 ⇓P P 17 24 03.2 -0.3
baz=32
ERPA **Erie** 31.46 10 eP P 17 24 02.6 -0.6
comp=Z,81nm,0.7s
R24A **Sanders Place,** 31.54 332 ⇑P P 17 24 04.0 -0.3
baz=32
214A **Organ Pipe Nat** 31.65 315 ⇓P P 17 24 05.1 0.0
baz=32
W18A **Petrified Fore** 31.66 323 ⇓P P 17 24 05.4 +0.1
baz=32
BGNE **Belgrade** 31.75 344 ⇑P P 17 24 05.6 -0.3
baz=32
T21A **Navajo Lake** 31.77 328 ⇑P P 17 24 06.4 +0.2
baz=32
JFWS **Jewell Farm** 31.81 355 eP P 17 24 04.3 -2.0
comp=Z,44nm,1.0s
R23A **Moffat** 31.84 331 ⇑P P 17 24 07.2 +0.2
baz=32,SNR=12
U20A **Newcomb** 31.85 326 ⇑P P 17 24 07.5 +0.6
baz=32,SNR=9.6

P26A **Davis Ranch, A** 31.88 335 ⇓P P 17 24 06.5 -0.6
baz=32
S22A **4UR Ranch, Cre** 31.98 329 ⇓P P 17 24 08.4 +0.1
baz=32,SNR=12
P25A **Willow Gulch B** 32.18 334 ⇓P P 17 24 09.9 +0.1
baz=32
X16A **Lo Mia Camp, P** 32.24 320 ⇑P P 17 24 11.1 +0.7
baz=32,SNR=6.0
R22A **Saguache, Gunn** 32.32 330 ⇓P P 17 24 11.8 +0.6
baz=32,SNR=8.0
BINY **Binghamton** 32.39 15 eP P 17 24 11.3 -0.1
comp=Z,44nm,0.8s
S21A **Coal Bank Pass** 32.41 328 ⇑P P 17 24 11.9 -0.1
baz=32
O26A **Horse Wrangler** 32.44 336 ⇑P P 17 24 12.2 +0.2
baz=32
MVCO **Mesa Verde** 32.45 327 ⇓P P 17 24 12.1 -0.2
baz=32
P23A **Jefferson** 32.80 332 ⇑P P 17 24 16.0 +0.6
baz=33
S20A **Disappointment** 32.84 328 ⇑P P 17 24 16.1 +0.5
baz=33
Q22A **Crested Butte,** 32.89 331 ⇓P P 17 24 16.6 +0.4
baz=33,SNR=8.1
WUAZ **Wupatki** 32.91 322 eP P 17 24 18.2 +1.9
comp=Z,14nm,0.9s
WUAZ **Wupatki** 32.91 322 ⇑P P 17 24 17.6 +1.3
baz=33
LPAZ **La Paz** 32.95 145 LR LR 17 37 58.0
comp=Z,283nm,19.4s,baz=307,slow=37
ISCO **Idaho Springs** 33.04 333 eP P 17 24 17.4 -0.1
comp=Z,3.4nm,0.7s
ISCO **Idaho Springs** 33.04 333 ⇑P P 17 24 17.3 -0.2
baz=33
R20A **Redvale** 33.11 328 ⇓P P 17 24 18.5 +0.5
baz=33
PV01 **Paradox Valley** 33.17 328 eP P 17 24 19.8 +1.3
comp=Z,562nm,0.8s
SMCO **Snowmass** 33.17 331 eP P 17 24 19.2 +0.4
comp=Z,8.2nm,0.9s
PV04 **Paradox Valley** 33.54 328 eP P 17 24 22.2 +0.5
ECSD **EROS Data Cent** 33.57 347 eP P 17 24 19.9 -1.8
comp=Z,35nm,0.9s
N24A **Carr** 33.58 335 ⇑P P 17 24 22.3 +0.3
baz=34
S18A **Hurst Farm, Bl** 33.61 326 ⇓P P 17 24 23.2 +0.8
baz=34,SNR=27
L27A **T5 Ranch, Ells** 33.67 339 ⇑P P 17 24 22.4 -0.3
baz=34
GLA **Glamis** 33.67 315 eP P 17 24 23.3 +0.5
comp=Z,5.3nm,0.5s
P21A **Newcastle** 33.67 331 ⇓P P 17 24 22.3 -0.6
baz=34
O22A **Kremmling** 33.76 332 ⇓P P 17 24 23.3 -0.4
baz=34
PDMCI **Parker Dam,Lak** 33.92 317 ⇑P P 17 24 25.1 +0.2
baz=34
U15A **North Rim** 34.08 322 ⇓P P 17 24 26.5 0.0
baz=34,SNR=5.9
N23A **Red Feather La** 34.08 334 ⇑P P 17 24 25.6 -0.9
baz=34
M24A **Cheyenne** 34.09 336 ⇓P P 17 24 26.2 -0.2
baz=34
P20A **De Beque** 34.11 330 ⇓P P 17 24 27.0 +0.3
baz=34,SNR=9.4
SADO **Sadowa** 34.18 10 P P 17 24 25.5 -1.5
SADO **Sadowa** 34.18 10 P P 17 24 25.5 -1.5
comp=Z,23nm,0.8s,baz=216,slow=8.3,SNR=11
N22A **Wattenberg Ran** 34.23 333 ⇑P P 17 24 28.1 +0.3
baz=34
W13A **Hualapai Mount** 34.23 319 ⇑P P 17 24 27.4 -0.4
baz=34
SPMN **St. Paul** 34.36 353 ⇑P P 17 24 26.7 -1.8
baz=34,SNR=9.8
BC3 **Big Chuckawall** 34.44 315 ⇑P P 17 24 29.6 +0.1
baz=34,SNR=5.8
P19A **Cripple Cowboy** 34.51 329 ⇑P P 17 24 28.5 -1.7
baz=34
IRM **Iron Mountain** 34.52 316 ⇑P P 17 24 29.0 -1.1
baz=34
O20A **White River Ci** 34.53 330 ⇓P P 17 24 29.7 -0.6
baz=34
N21A **Black Mountain** 34.68 332 ⇑P P 17 24 30.5 -1.1
baz=35
K25A **Mack Ranch, Ha** 34.69 338 ⇑P P 17 24 30.7 -0.9
baz=35
MONP **Monument Peak** 34.71 313 ⇑P P 17 24 31.6 -0.4
baz=35
BRSD **Miller** 34.79 345 ⇑P P 17 24 31.5 -0.8
baz=35,SNR=13
COWI **Conover** 34.91 357 eP P 17 24 30.8 -2.5
comp=Z,42nm,0.8s
SRU **San Rafael** 34.92 327 ⇓P P 17 24 33.7 -0.1
baz=35,SNR=23
L23A **Garrett** 34.99 335 ⇓P P 17 24 34.4 +0.1
baz=35
BELC **Belle Mtn. Jos** 35.01 315 ⇑P P 17 24 35.1 +0.7
baz=35,SNR=5.0
LONY **Lake Ozonia** 35.02 15 eP P 17 24 33.1 -1.1
comp=Z,29nm,0.9s
N20A **Spence Gulch,** 35.09 331 ⇓P P 17 24 35.4 +0.3
baz=35,SNR=9.7
O19A **Miners Draw (B** 35.09 330 ⇑P P 17 24 35.0 0.0
baz=35
PFO **Pinyon Flat Ob** 35.12 314 P P 17 24 38.0 +2.7
PFO **Pinyon Flat Ob** 35.12 314 P P 17 24 38.0 +2.7
comp=Z,1.4nm,0.3s,baz=117,slow=7.8,SNR=4.8
PFO **Pinyon Flat Ob** 35.12 314 ⇑P P 17 24 35.6 +0.2
baz=35
Q16A **Castle Valley** 35.14 326 ⇑P P 17 24 36.2 +0.6
baz=35
P18A **Preston Nutter** 35.16 328 ⇑P P 17 24 36.3 +0.5
baz=35,SNR=12
L22A **Ellis Ranch, M** 35.23 334 ⇓P P 17 24 36.4 +0.1
baz=35,SNR=7.5
M21A **Separation Pea** 35.28 333 ⇓P P 17 24 36.5 -0.4
baz=35
P17A **Butcher Ranch,** 35.30 327 ⇓P P 17 24 37.5 +0.5
baz=35,SNR=8.8
MSU **Marysvale** 35.41 325 eP P 17 24 39.0 +1.0
comp=Z,4.6nm,0.7s
MVU **Marysvale** 35.43 325 eP P 17 24 38.9 +0.8
comp=Z,6.6nm,0.9s
CCUT **Cedar City** 35.46 322 eP P 17 24 39.7 +1.3
comp=Z,6.2nm,0.9s
M20A **Sweetwater, Wa** 35.56 332 ⇑P P 17 24 38.7 -0.5
baz=36
L21A **Rawlins** 35.58 333 ⇓P P 17 24 39.1 -0.3
baz=36
MURC **Murrieta** 35.64 314 ⇓P P 17 24 40.4 +0.6
baz=36
HEC **Hector,Ludlow** 35.70 316 ⇓P P 17 24 40.5 +0.2
baz=36
I24A **Kuemmerle Ranc** 36.05 338 ⇓P P 17 24 42.4 -0.8
baz=36
RSSD **Black Hills** 36.06 339 eP P 17 24 42.6 -0.8
comp=Z,5.6nm,0.9s
K21A **Ava** 36.07 334 ⇓P P 17 24 43.1 -0.4
baz=36
MPU **Maple Canyon** 36.17 327 eP P 17 24 44.7 +0.3
comp=Z,19nm,0.9s
DAU **Daniels Canyon** 36.26 328 eP P 17 24 46.4 +1.1
comp=Z,15nm,0.9s
BFSC **Mount Baldy Ra** 36.30 314 ⇑P P 17 24 45.9 +0.4
baz=36
J22A **Midwest** 36.38 336 ⇓P P 17 24 46.2 0.0
baz=36
JLU **Jordanelle** 36.50 328 eP P 17 24 46.6 -0.6
comp=Z,15nm,0.9s
K20A **Yellowstone Ra** 36.56 333 ⇓P P 17 24 47.1 -0.6
baz=37
L19A **Farson** 36.59 331 ⇑P P 17 24 46.9 -1.0
baz=37
J21A **Lysite** 36.73 335 ⇓P P 17 24 48.8 -0.4
baz=37,SNR=8.4
M17A **Scullys Gap (B** 36.74 330 ⇓P P 17 24 48.6 -0.6
baz=37,SNR=10
L18A **Fontenelle, Gr** 36.77 331 ⇑P P 17 24 49.0 -0.5
baz=37,SNR=5.9
I22A **9 Mile Ranch,** 36.79 336 ⇓P P 17 24 49.1 -0.4
baz=37
H24A **Dirks Ranch, A** 36.79 339 ⇑P P 17 24 49.1 -0.4
baz=37,SNR=7.3
EDW2 **Edwards Air Fo** 36.87 315 ⇑P P 17 24 50.2 -0.1
baz=37
EYMN **Ely** 36.91 355 eP P 17 24 47.6 -2.7
comp=Z,15nm,0.9s
K19A **Absolon Red Bu** 36.92 333 ⇑P P 17 24 50.0 -0.7

baz=37
DUG **Dugway** 36.94 326 eP P 17 24 51.6 +0.7
comp=Z,8.9nm,1.0s
DUG **Dugway** 36.94 326 ⇑P P 17 24 50.6 -0.3
baz=37
J20A **Shoshoni** 37.01 334 ⇓P P 17 24 51.6 +0.1
baz=37,SNR=7.4
I21A **Big Trails, Te** 37.05 335 ⇑P P 17 24 51.1 -0.7
baz=37
MPMC **Manual Prospec** 37.18 317 ⇓P P 17 24 53.5 +0.4
baz=37
BW06 **Boulder Array** 37.20 332 eP P 17 24 52.4 -0.7
comp=Z,6.4nm,0.6s
PDAR **Pinedale Array** 37.20 332 P P 17 24 53.1 -0.1
PDAR PcP PcP 17 27 13.7 +0.9
PDAR ScP ScP 17 31 02.8 +4.7
PDAR **Pinedale Array** 37.20 332 P P 17 24 53.1 -0.1
comp=Z,4.5nm,0.7s,baz=120,slow=10,SNR=23
PDAR PcP PcP 17 27 13.7 +0.9
comp=Z,2.0nm,0.8s,baz=139,slow=4.7,SNR=5.6
PDAR ScP ScP 17 31 02.8 +4.7
comp=Z,0.9nm,0.9s,baz=188,slow=3.2,SNR=4.3
HWUT **Hardware Ranch** 37.29 329 eP P 17 24 53.9 -0.1
comp=Z,24nm,0.8s
R11A **Troy Canyon, C** 37.32 321 ⇑P P 17 24 54.1 -0.1
baz=37
H22A **Clearmont** 37.32 337 ⇑P P 17 24 54.3 +0.2
baz=37
J19A **Crowheart** 37.36 333 ⇓P P 17 24 54.3 -0.2
baz=37,SNR=9.6
I20A **Worland** 37.51 335 ⇓P P 17 24 55.5 -0.1
baz=38,SNR=6.2
H21A **Big Horn, Sher** 37.62 336 ⇓P P 17 24 56.3 -0.3
baz=38
GRAC **Grapevine Rang** 37.63 318 ⇑P P 17 24 57.6 +0.9
baz=38,SNR=6.2
AGMN **Agassiz Nation** 37.81 350 eP P 17 24 55.5 -2.5
comp=Z,46nm,1.0s
G22A **Birney** 37.83 337 ⇑P P 17 24 57.5 -0.8
baz=38
F23A **Volborg** 37.93 339 ⇓P P 17 24 58.8 -0.4
baz=38
I19A **Meeteetse** 37.95 334 ⇑P P 17 24 59.3 -0.2
baz=38
HVU **Hansel Valley** 38.04 328 eP P 17 25 01.0 +0.8
comp=Z,9.4nm,0.8s
I18A **Diamond G Ranc** 38.05 333 ⇑P P 17 25 00.3 -0.1
baz=38
MDND **Maddock** 38.14 346 ⇓P P 17 25 00.5 -0.3
baz=38
VES **Vestal, Richgr** 38.14 315 ⇓P P 17 25 01.8 +0.9
baz=38
REDW **Red Top Meadow** 38.26 331 eP P 17 25 01.8 -0.3
comp=Z,0.2nm,0.6s
SNOW **Snow King Moun** 38.29 332 eP P 17 25 02.9 +0.4
comp=Z,20nm,0.6s
F22A **Rosebud** 38.29 338 ⇓P P 17 25 01.9 -0.3
baz=38
LOHW **Long Hollow** 38.34 332 eP P 17 25 02.9 +0.1
comp=Z,7.0nm,0.6s
TPAW **Teton Pass** 38.40 331 eP P 17 25 03.6 +0.2
comp=Z,10nm,0.6s
RRI2 **Red Ridge** 38.47 331 eP P 17 25 03.5 -0.5
comp=Z,7.5nm,0.6s
MOOW **Moose Ponds** 38.51 332 eP P 17 25 03.9 -0.4
comp=Z,7.0nm,0.8s
I17A **Pilgrim Ck.** 38.56 332 ⇑P P 17 25 04.0 -0.7
baz=39
E23A **Ismay** 38.57 340 ⇓P P 17 25 03.7 -0.8
baz=38
G20A **Bridger** 38.58 336 ⇑P P 17 25 04.0 -0.7
baz=39
ELK **Elko** 38.66 325 P P 17 25 06.6 +1.0
ELK PcP PcP 17 27 19.1 +1.7
ELK **Elko** 38.66 325 P P 17 25 06.6 +1.0
comp=Z,5.5nm,0.8s,baz=122,slow=7.0,SNR=11
ELK PcP PcP 17 27 19.1 +1.7
comp=Z,2.9nm,0.8s,baz=162,slow=3.2,SNR=5.7
IMW **Indian Meadow** 38.71 332 eP P 17 25 05.4 -0.6
comp=Z,5.9nm,0.8s
E22A **Miles City** 38.74 339 ⇓P P 17 25 04.6 -1.3
baz=39
H18A **Shoshone NF, C** 38.75 334 ⇑P P 17 25 05.4 -0.8
baz=39
D24A **Glendive** 38.79 341 ⇑P P 17 25 04.8 -1.5
baz=39
RLMT **Red Lodge** 38.94 335 eP P 17 25 07.0 -0.7
comp=Z,6.0nm,0.7s
NV11 **Mina Array Sit** 38.97 320 eP P 17 25 09.0 +0.9
F20A **Billings** 39.03 336 ⇑P P 17 25 07.0 -1.4
baz=39
NVAR **Mina Array Bea** 39.06 319 P P 17 25 10.9 +1.9
NVAR PcP PcP 17 27 20.6 +2.0
NVAR ScP S 17 31 12.2 +5.4
NVAR **Mina Array Bea** 39.06 319 P P 17 25 10.9 +1.9
comp=Z,4.1nm,0.8s,baz=130,slow=8.4,SNR=18
NVAR PcP PcP 17 27 20.6 +2.0
comp=Z,8.5nm,0.8s,baz=131,slow=3.7,SNR=23
NVAR ScP S 17 31 12.2 +5.4
comp=Z,0.9nm,0.7s,baz=145,slow=4.9,SNR=5.6
NVAR LR LR 17 45 13.7
comp=Z,242nm,18.7s,baz=227,slow=42
D23A **Lindsay** 39.12 340 ⇓P P 17 25 09.1 -0.1
baz=39
G18A **Lazy EL Ranch,** 39.22 335 ⇓P P 17 25 09.6 -0.4
baz=39,SNR=8.1
E21A **Keefer Ranch,** 39.24 338 ⇓P P 17 25 09.8 -0.3
baz=39
F19A **Roth Farm, Mol** 39.39 336 ⇑P P 17 25 11.1 -0.3
baz=39
D22A **Cohagen** 39.44 339 ⇓P P 17 25 11.8 +0.1
baz=39,SNR=6.4
H16A **Russell Place,** 39.47 332 ⇑P P 17 25 12.5 +0.2
baz=40,SNR=9.6
J14A **Carey** 39.53 329 ⇓P P 17 25 13.2 +0.5
baz=40,SNR=16
E20A **Meyer Farm, Mu** 39.61 337 ⇑P P 17 25 13.2 0.0
baz=40,SNR=13
BMN **Battle Mountai** 39.61 323 eP P 17 25 16.4 +3.0
comp=Z,12nm,1.1s
GCMT **Greycliff** 39.64 335 eP P 17 25 13.0 -0.6
comp=Z,4.3nm,0.8s
D21A **La Casta Ranch** 39.65 338 ⇓P P 17 25 13.0 -0.5
baz=40
C23A **Lambert** 39.67 341 ⇑P P 17 25 13.2 -0.4
baz=40
ULM **Lac du Bonnet** 39.71 351 P P 17 25 11.0 -2.9
ULM **Lac du Bonnet** 39.71 351 P P 17 25 11.0 -2.9
comp=Z,32nm,0.9s,baz=175,slow=8.5,SNR=17
F18A **Big Timber** 39.75 335 ⇓P P 17 25 14.4 -0.1
baz=40,SNR=6.3
E19A **Rath Farm, Rou** 39.83 336 ⇑P P 17 25 14.8 -0.2
baz=40
C22A **Vida** 39.85 340 ⇓P P 17 25 15.0 -0.1
baz=40,SNR=12
J13A **Cove Ranch, Pi** 39.92 329 ⇑P P 17 25 16.4 +0.5
baz=40,SNR=7.6
I14A **Mackay** 39.94 330 ⇓P P 17 25 16.6 +0.5
baz=40,SNR=15
DGMT **Dagmar** 39.95 342 eP P 17 25 16.3 +0.3
comp=Z,20nm,0.8s
DGMT **Dagmar** 39.95 342 ⇑P P 17 25 16.3 +0.3
baz=40
H15A **Lima** 40.05 331 ⇑P P 17 25 17.4 +0.3
baz=40,SNR=12
D20A **Manuel Ranch,** 40.10 337 ⇑P P 17 25 17.0 -0.2
baz=40
F17A **Fitzpatrick Pl** 40.15 334 ⇓P P 17 25 17.5 -0.3
baz=40
HLID **Hailey** 40.16 329 eP P 17 25 18.0 +0.1
comp=Z,5.7nm,0.7s
HLID **Hailey** 40.16 329 ⇓P P 17 25 18.4 +0.5
baz=40,SNR=12
I13A **Wildhorse Cree** 40.26 329 ⇓P P 17 25 19.0 +0.1
baz=40,SNR=12
A24A **Westby** 40.30 343 ⇓P P 17 25 18.2 -0.6
baz=40
MCMT **McKenzie Canyo** 40.31 331 eP P 17 25 20.0 +0.8
comp=Z,4.9nm,0.8s
C21A **Desert Coulee** 40.34 339 ⇑P P 17 25 19.1 -0.1
baz=40,SNR=8.8
E18A **Harlowton** 40.37 335 ⇓P P 17 25 19.2 -0.3
baz=40
B22A **Reddig Ranch S** 40.37 340 ⇓P P 17 25 18.8 -0.6
baz=40
BOZ **Bozeman (W)** 40.37 333 eP P 17 25 19.2 -0.4
comp=Z,3.7nm,0.6s
G15A **Dillon** 40.40 332 ⇑P P 17 25 20.0 +0.1

	baz=40									
H14A	**Leadore**	40.40	331	⇓P		P		17 25 20.4	+0.4	
	baz=40,SNR=10									
D19A	**Cripps Ranch,**	40.44	337	⇑P		P		17 25 20.1	-0.1	
	baz=40,SNR=9.2									
F16A	**Kennard Place,**	40.48	333	⇑P		P		17 25 20.3	-0.2	
	baz=40									
C20A	**Veseth Ranch,**	40.57	338	⇑P		P		17 25 20.4	-0.7	
	baz=40									
DLMT	**Dillon**	40.59	332	*e*P		P		17 25 21.7	+0.2	
	comp=Z,8.9nm,1.0s									
E17A	**Martinsdale**	40.68	334	⇑P		P		17 25 21.4	-0.8	
	baz=41									
I12A	**Atlanta**	40.69	328	⇓P		P		17 25 22.4	0.0	
	baz=41									
MFID	**Camas Ranch**	40.79	327	*e*P		P		17 25 23.3	+0.2	
	comp=Z,4.3nm,0.9s									
MFID	**Camas Ranch**	40.79	327	⇓P		P		17 25 23.2	+0.1	
	baz=41									
H13A	**Challis**	40.80	330	⇓P		P		17 25 23.3	+0.1	
	baz=41,SNR=14									
LRM	**Limekiln Ridge**	40.88	333	*e*P		P		17 25 23.4	-0.5	
	comp=Z,124nm,1.2s									
F15A	**Butte**	40.91	333	⇓P		P		17 25 23.8	-0.4	
	baz=41									
A22A	**Carmey Farms,**	40.95	341	⇑P		P		17 25 23.6	-0.6	
	baz=41									
C19A	**Slack Wire Ran**	40.98	337	⇑P		P		17 25 24.4	-0.1	
	baz=41,SNR=11									
E16A	**East Helena**	41.08	334	⇓P		P		17 25 25.2	-0.3	
	baz=41,SNR=7.2									
H12A	**Diamond D Ranc**	41.08	329	⇑P		P		17 25 25.6	+0.1	
	baz=41									
D17A	**Six Diamond Ra**	41.15	335	⇓P		P		17 25 25.8	-0.2	
	baz=41,SNR=6.0									
G13A	**Cobalt**	41.17	330	⇓P		P		17 25 25.7	-0.5	
	baz=41									
B20A	**Solberg Farm,**	41.19	339	⇑P		P		17 25 25.5	-0.7	
	baz=41									
BEKR	**Beckworth**	41.20	320	*e*P		P		17 25 27.7	+1.2	
	comp=Z,3.6nm,0.9s									
D16A	**Dana Ranch, Ca**	41.42	334	⇑P		P		17 25 28.1	-0.2	
	baz=41,SNR=6.8									
E15A	**Deer Lodge**	41.42	333	⇑P		P		17 25 27.2	-1.0	
	baz=41									
EGMT	**Eagleton**	41.49	337	*e*P		P		17 25 27.8	-0.9	
	comp=Z,6.6nm,0.8s									
EGMT	**Eagleton**	41.49	337	⇑P		P		17 25 28.5	-0.2	
	baz=42									
C17A	**Wharram Farm,**	41.57	336	⇑P		P		17 25 28.9	-0.5	
	baz=42									
WVOR	**Wild Horse Val**	41.70	324	*e*P		P		17 25 30.8	+0.2	
	comp=Z,12nm,0.9s									
F13A	**Darby**	41.73	331	⇓P		P		17 25 30.7	-0.1	
	baz=42,SNR=11									
G12A	**Big Creek, Yel**	41.73	330	⇓P		P		17 25 30.4	-0.5	
	baz=42									
E14A	**Clinton**	41.80	332	⇓P		P		17 25 31.2	-0.2	
	baz=42,SNR=5.7									
D15A	**Lincoln**	41.84	334	⇓P		P		17 25 30.9	-0.8	
	baz=42									
CHMT	**Chamberlain Mo**	42.07	333	*e*P		P		17 25 32.9	-0.8	
	comp=Z,1.8nm,0.8s									
E13A	**Victor**	42.14	332	⇓P		P		17 25 33.2	-0.9	
	baz=42									
F12A	**Elk City**	42.15	330	⇓P		P		17 25 33.5	-0.7	
	baz=42,SNR=39									
A18A	**Metzger Ranch,**	42.26	338	⇑P		P		17 25 34.2	-0.7	
	baz=42									
MSO	**Missoula**	42.31	332	⇓P		P		17 25 34.8	-0.8	
	baz=42									
C15A	**Salmond Ranch,**	42.45	334	⇑P		P		17 25 36.2	-0.4	
	baz=42,SNR=8.0									
BMO	**Blue Mountains**	42.55	328	*e*P		P		17 25 36.0	-1.5	
	comp=Z,7.4nm,0.8s									
B16A	**M & M Farms, S**	42.57	336	⇓P		P		17 25 37.2	-0.4	
	baz=43									
A17A	**Triple J Farms**	42.60	337	⇓P		P		17 25 37.4	-0.4	
	baz=43									
D13A	**Huson**	42.75	332	⇓P		P		17 25 38.2	-0.9	
	baz=43									
B15A	**Bradely Ranch,**	42.85	335	⇑P		P		17 25 38.8	-1.0	
	baz=43									
C14A	**Swan Lake**	42.94	333	⇓P		P		17 25 39.5	-1.0	
	baz=43									
A16A	**West Butte Ran**	42.96	336	⇓P		P		17 25 39.7	-1.0	
	baz=43									
D12A	**Red Ives Fores**	43.13	332	⇑P		P		17 25 41.4	-0.8	
	baz=43									
B14A	**Marquette Ranc**	43.18	334	⇓P		P		17 25 41.7	-0.9	
	baz=43									
C13A	**Hot Springs**	43.24	333	⇓P		P		17 25 42.3	-0.6	
	baz=43									
A15A	**Johnson Ranch,**	43.44	335	⇑P		P		17 25 44.2	-0.4	
	baz=43,SNR=7.6									
BSMT	**Bassoo Peak**	43.46	333	*e*P		P		17 25 45.0	+0.1	
	comp=Z,1.2nm,0.7s									
B13A	**Whitefish**	43.71	333	⇓P		P		17 25 46.0	-0.8	
	baz=44									
A14A	**Double T Ranch**	43.72	335	⇓P		P		17 25 46.5	-0.4	
	baz=44,SNR=12									
A13A	**Flathead Natio**	44.11	334	⇓P		P		17 25 49.2	-0.8	
	baz=44									
C11A	**Tepee Creek (N**	44.12	332	⇓P		P		17 25 49.7	-0.4	
	baz=44									
B12A	**Libby**	44.28	333	⇑P		P		17 25 50.8	-0.5	
	baz=44									
NEW	**Newport**	44.83	331	*e*P		P		17 25 54.3	-1.5	
	comp=Z,8.5nm,1.3s									
NEW					PcP		PcP	17 27 37.0	-0.2	
NEW	**Newport**	44.83	331	P		P		17 25 54.1	-1.6	
	comp=Z,2.6nm,0.7s,baz=136,slow=9.6,SNR=4.4									
NEW					PcP		PcP	17 27 37.0	-0.2	
	comp=Z,2.4nm,0.7s,baz=184,slow=1.6,SNR=4.1									
NEW	**Newport**	44.83	331	⇑P		P		17 25 55.0	-0.8	
	baz=45									
FFC	**Flin Flon**	45.10	348	*e*P		P		17 25 56.4	-1.4	
	comp=Z,13nm,1.1s									
LON	**Longmire**	46.17	327	*e*P		P		17 26 05.8	-0.6	
	comp=Z,6.7nm,1.0s									
SCHQ	**Schefferville**	46.39	16	P		P		17 26 05.5	-2.4	
SCHQ	**Schefferville**	46.39	16	P		P		17 26 05.5	-2.4	
	comp=Z,13nm,0.9s,baz=223,slow=6.5,SNR=12									
SCHQ					LR		LR	17 47 20.6		
	comp=Z,321nm,18.1s,baz=208,slow=39									
BDFB	**Brasilia**	46.78	124	P		P		17 26 11.7	+0.1	
BDFB	**Brasilia**	46.78	124	P		P		17 26 11.7	+0.1	
	comp=Z,4.2nm,0.6s,baz=292,slow=9.4,SNR=5.7									
BDFB					LR		LR	17 46 35.3		
	comp=Z,465nm,18.4s,baz=101,slow=37									
CPUP	**Villa Florida**	47.03	143	P		P		17 26 15.8	+2.7	
CPUP	**Villa Florida**	47.03	143	P		P		17 26 15.8	+2.7	
	comp=Z,1.3nm,0.6s,baz=337,slow=11,SNR=4.6									
CPUP					LR		LR	17 47 30.0		
	comp=Z,154nm,18.9s,baz=61,slow=38									
RCBR	**Riachuelo**	53.46	106	LR		LR		17 51 13.9		
	comp=Z,223nm,20.3s,baz=106,slow=38									
YKA	**Yellowknife Ar**	55.03	345	P		P		17 27 11.2	-1.6	
YKA					PcP		PcP	17 28 14.2	0.0	
YKA					ScP		ScP	17 32 14.7	+3.6	
YKA	**Yellowknife Ar**	55.03	345	P		P		17 27 11.2	-1.6	
	comp=Z,6.5nm,1.0s,baz=136,slow=7.5,SNR=76									
YKA					PcP		PcP	17 28 14.1	0.0	
	comp=Z,1.3nm,0.6s,baz=144,slow=4.2,SNR=14									
YKA					ScP		ScP	17 32 14.6	+3.6	
	comp=Z,0.5nm,0.7s,baz=140,slow=4.3,SNR=9.2									
DLBC	**Dease Lake**	57.34	335	*e*P		P		17 27 28.7	-0.8	
RKT	**Rikitea**	58.08	234	*e*T		T		18 30 10.0		
	comp=Z,4.4nm,0.2s									
PMOR	**Pomariorio Ree**	65.77	248	*e*T		T		18 39 47.3		
	comp=Z,4.0nm,0.2s									
ILAR	**Eielson Array**	67.45	336	P		P		17 28 36.3	-0.7	
ILAR	**Eielson Array**	67.45	336	P		P		17 28 36.3	-0.7	
	comp=Z,3.2nm,0.9s,baz=113,slow=4.3,SNR=34									
SUMG	**Summit**	67.73	14	*e*P		P		17 28 36.8	-2.4	
	comp=Z,7.1nm,0.9s									
PPT	**Papeete**	68.16	246	LR		LR		17 51 01.8		
	comp=Z,191nm,21.4s,baz=348,slow=29									
PPT2	**Papeete2**	68.17	246	eLR		LR		17 49 20.9		
	comp=Z,153nm,27.0s									
TRF	**Thorofare Moun**	68.37	334	*e*P		P		17 28 41.2	-1.8	
	comp=Z,27nm,1.7s									
BBTS	**Babate**	68.43	79	LR		LR		17 52 49.7		
	comp=Z,62nm,21.0s,baz=157,slow=31									
PPLA	**Purkeypile**	69.01	334	*e*P		P		17 28 45.9	-1.1	
	comp=Z,9.7nm,1.2s									
COLD	**Coldfoot**	69.63	338	*e*P		P		17 28 51.0	+0.4	
	comp=Z,7.7nm,1.0s									
TBI	**Tubuai**	70.13	240	*e*LR		LR		17 50 17.4		
	comp=Z,131nm,27.0s									
TBI				*e*T		T		18 45 13.0		
	comp=Z,7.6nm,0.3s									
UNV	**Unalaska Valle**	74.98	323	*e*P		P		17 29 24.1	+1.4	
DBIC	**Dimbokro**	80.95	85	P		P		17 29 54.7	-2.0	
DBIC	**Dimbokro**	80.95	85	P		P		17 29 54.7	-2.0	
	comp=Z,2.4nm,0.9s,baz=271,slow=3.6,SNR=2.8									
NOA	**NORSAR Array B**	84.25	29	P		P		17 30 11.1	-2.0	
NOA	**NORSAR Array B**	84.25	29	P		P		17 30 11.1	-2.0	
	comp=Z,0.8nm,0.8s,baz=285,slow=4.9,SNR=2.9									
NOA					LR		LR	18 10 33.7		
	comp=Z,55nm,18.5s,baz=270,slow=38									
BILL	**Bilibino**	85.95	339	*e*P		P		17 30 20.7	-0.6	
	comp=Z,18nm,1.1s									
ARCES	**ARCESS Array B**	87.25	19	P		P		17 30 26.3	-1.4	
ARCES	**ARCESS Array B**	87.25	19	P		P		17 30 26.3	-1.4	
	comp=Z,1.9nm,1.0s,baz=308,slow=2.1,SNR=3.1									
ARCES					LR		LR	18 12 55.0		
	comp=Z,75nm,19.4s,baz=346,slow=38									
GERES	**GERESS Array B**	88.58	41	LR		LR		18 10 13.9		
	comp=Z,64nm,18.1s,baz=98,slow=36									
FINES	**FINESS Array B**	90.91	26	LR		LR		18 08 19.6		
	comp=Z,76nm,20.9s,baz=270,slow=34									
PETK	**Petropavlovsk-**	95.80	327	LR		LR		18 12 03.8		
	comp=Z,36nm,21.6s,baz=240,slow=34									
AKASG	**Malin Array Be**	97.28	35	LR		LR		18 12 15.1		
	comp=Z,85nm,21.3s,baz=325,slow=34									
ZALV	**Zalesovo Beam**	114.80	5	PKiKP		PKiKP		17 36 21.4	-0.6	
ZALV	**Zalesovo Beam**	114.80	5	PKiKP		PKiKP		17 36 21.4	-0.6	
	comp=Z,0.7nm,0.4s,baz=329,slow=1.7,SNR=3.3									
KURK	**Kurchatov**	117.14	10	PKP		PKPdf		17 36 27.0	+0.4	
KURBB	**Kurchatov Arra**	117.21	10	PKP		PKPdf		17 36 27.0	+0.2	
	comp=Z,0.7nm,0.6s,baz=355,slow=1.7,SNR=6.0									
SONM	**Songino Array**	120.13	350	PKP		PKPdf		17 36 33.0	+0.4	
SONM	**Songino Array**	120.13	350	PKP		PKPdf		17 36 33.0	+0.4	
	comp=Z,1.9nm,0.8s,baz=339,slow=1.6,SNR=11									
MKAR	**Makanchi Array**	121.54	9	PKP		PKPdf		17 36 34.4	-0.8	
MKAR	**Makanchi Array**	121.54	9	PKP		PKPdf		17 36 34.4	-0.8	
	comp=Z,0.4nm,0.7s,baz=334,slow=2.6,SNR=3.6									
KSRS	**Korea Array**	121.69	328	PKP		PKPdf		17 36 37.0	+1.3	
	comp=Z,5.7nm,0.8s,baz=13,slow=1.5,SNR=19									
KSAR	**Wonju Array Be**	121.71	328	PKP		PKPdf		17 36 37.0	+1.3	
AAK	**Ala-Archa**	123.85	16	PKP		PKPdf		17 36 41.0	+1.0	
AAK	**Ala-Archa**	123.85	16	PKP		PKPdf		17 36 41.0	+1.0	
	comp=Z,0.5nm,0.3s,baz=346,slow=4.2,SNR=4.4									
BJI	**Beijing**	124.78	339	PKP		PKPdf		17 36 40.0	-1.6	
BJI				SS		SS		17 55 16.6	-3.6	
BJI				LR		LR				
	comp=N,100nm,25.5s									
BJI				LR		LR				
	comp=E,91nm,25.3s									
WMQ	**Urumqi**	125.10	5	*e*P		PKPdf		17 36 41.3	-0.9	
WMQ				LR		LR				
	comp=N,74nm,22.2s									
WMQ				LR		LR				
	comp=E,45nm,20.4s									
HHC	**Hu-ho-hao-te**	125.55	343	*e*PKP		PKPdf		17 36 38.5	-4.7	
HHC				PP		PP		17 38 32.6	-0.7	
HHC				PKS		PKSdf		17 40 14.0	-5.9	
HHC				SKS		SKSac		17 43 45.4	-0.7	
HHC				SKKS		SKKSac		17 45 20.8	-1.0	
HHC				SS		SS		17 55 24.0	-5.9	
HHC				AMB		AMB				
	comp=Z,92nm,9.8s									
HHC				LR		LR				
	comp=N,210nm,21.5s									
HHC				LR		LR				
	comp=E,140nm,21.0s									
HHC				LR		LR				
	comp=Z,170nm,21.0s									
GTA	**Gaotai**	129.34	353	*e*PKP		PKPdf		17 36 51.8	+1.2	
STKA	**Stephens Creek**	130.86	237	PKP		PKPdf		17 36 58.4	+4.9	
STKA	**Stephens Creek**	130.86	237	PKP		PKPdf		17 36 58.4	+4.9	
	comp=Z,2.5nm,0.7s,baz=86,slow=2.9,SNR=7.7									
LZH	**Lanzhou**	131.97	348	*e*PKP		PKPdf		17 36 53.6	-2.1	
LZH				sPKP				17 37 14.3		
XAN	**Xi'an**	132.64	342	PKP		PKPdf		17 36 57.8	+1.0	
ENH	**Enshi**	135.93	339	*e*PKPdf		PKPdf		17 37 03.5	+0.5	
ASAR	**Alice Springs**	139.27	247	PKPpre		PKPpre		17 37 08.0		
ASAR				SKP				17 40 51.1		
ASAR	**Alice Springs**	139.27	247	PKhKP		PKPpre		17 37 08.0		
	comp=Z,1.2nm,0.7s,baz=108,slow=3.1,SNR=8.1									
ASAR				SKP				17 40 51.1		
	comp=Z,0.9nm,1.0s,baz=93,slow=3.5,SNR=4.4									
WRA	**Warramunga Arr**	139.42	252	PKPpre		PKPpre		17 37 08.8		
WRA				PKP		PKiKP		17 37 14.7	+2.7	
WRA	**Warramunga Arr**	139.42	252	PKhKP		PKPpre		17 37 08.8		
	comp=Z,1.9nm,0.8s,baz=94,slow=2.6,SNR=12									
WRA				PKP		PKiKP		17 37 14.7	+2.7	
	comp=Z,2.9nm,1.0s,baz=92,slow=2.3,SNR=12									
GYA	**Guiyang**	140.39	341	*e*PKP		PKPdf		17 37 09.4	-2.1	
GYA				sPKP				17 37 33.3		
GYA				AMB		AMB				
	comp=Z,90nm,7.6s									
KMI	**Kunming**	142.77	345	PKP		PKPdf		17 37 13.9	-2.0	
FITZ	**Fitzroy Crossi**	147.81	254	PKP		PKPab		17 37 28.5	-1.3	
FITZ				PKPbc		PKiKP		17 37 32.9	+3.6	
FITZ	**Fitzroy Crossi**	147.81	254	PKP		PKPab		17 37 28.5	-1.3	
	comp=Z,2.3nm,0.7s,baz=90,slow=2.0,SNR=5.1									
FITZ				PKPbc		PKiKP		17 37 32.9	+3.6	
	comp=Z,3.9nm,0.9s,baz=143,slow=4.5,SNR=6.3									
CHTO	**Chiang Mai**	149.70	349	*e*PKPdf		PKPdf		17 37 27.2	-0.3	
CMAR	**Chiang Mai Arr**	150.05	349	PKP		PKPdf		17 37 29.2	+1.1	
CMAR				PKPbc		PKiKP		17 37 34.4	+0.4	
CMAR	**Chiang Mai Arr**	150.05	349	PKP		PKPdf		17 37 29.2	+1.1	
	comp=Z,5.3nm,0.8s,baz=314,slow=1.8,SNR=14									
CMAR				PKPbc		PKiKP		17 37 34.4	+0.4	
	comp=Z,10nm,0.8s,baz=328,slow=3.2,SNR=40									

IDC 21 17:22:37.4±1.8, 25°03'S×179°92'E, h475km±17km, mb3.7/15, mb1 3.8/17, mb1mx3.6/25, mbtmp3.7/17, Error ellipse: s-maj=18.4km s-min=13.6km az=88.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
URZ	**Urewera**	13.41	190	P		P	17	25	31.4	+0.5
	1.9nm,0.3s,baz=11,slow=20,SNR=15									
URZ				S		S	17	27	54.0	-0.2
	0.3nm,0.3s,baz=261,slow=23,SNR=2.8									
AFI	**Afiamalu**	13.54	37	P		P	17	25	34.7	+1.9
	3.5nm,0.3s,baz=309,slow=23,SNR=2.9									
AFI				S		S	17	27	50.4	-7.1
	1.4nm,0.3s,baz=346,slow=13,SNR=2.2									
RPZ	**Rata Peaks**	20.01	199	P		P	17	26	36.9	-0.4
	5.2nm,0.5s,baz=7.1,slow=8.1,SNR=4.9									
HNR	**Honiara**	24.53	306	P		P	17	27	17.7	-0.7
	66nm,0.7s,baz=72,slow=2.6,SNR=8.1									
CTA	**Charters Tower**	31.43	272	P		P	17	28	19.7	+0.9
	19nm,0.4s,baz=95,slow=10,SNR=43									
STKA	**Stephens Creek**	34.25	250	P		P	17	28	42.5	-0.2
	1.3nm,0.5s,baz=101,slow=12,SNR=8.0									
PMG	**Port Moresby**	34.81	291	P		P	17	28	47.3	-0.3
	10nm,0.7s,baz=107,slow=5.3,SNR=6.4									
ASAR	**Alice Springs**	41.80	262	P		P	17	29	44.4	-0.2
	3.2nm,0.6s,baz=93,slow=7.0,SNR=108									
ASAR				S		S	17	35	23.6	-3.6
	0.6nm,0.9s,baz=97,slow=15,SNR=4.7									
WRA	**Warramunga Arr**	42.27	267	P		P	17	29	47.8	-0.6
	4.5nm,0.3s,baz=99,slow=6.9,SNR=257									
WRA				S		S	17	35	29.0	-5.1
	1.4nm,0.9s,baz=101,slow=14,SNR=4.6									
QSPA	**South Pole Qui**	65.06	180	P		P	17	32	30.4	+0.5
	1.4nm,0.7s,baz=26,slow=2.3,SNR=8.3									
MJAR	**Mahiro Arr**	72.79	326	P		P	17	33	16.4	-0.4
	4.6nm,0.8s,baz=168,slow=5.8,SNR=13									
JNU	**Nakatsue**	74.32	319	P		P	17	33	25.6	-0.1
	8.4nm,1.0s,baz=219,slow=23,SNR=1.7									
KSRS	**Korea Array**	79.06	320	P		P	17	33	52.3	+0.7
	1.8nm,0.6s,baz=125,slow=6.1,SNR=8.7									
PETK	**Petropavlovsk-**	80.18	347	P		P	17	33	57.3	+0.2
	5.3nm,0.8s,baz=141,slow=7.3,SNR=11									
USRK	**Ussuriysk Arra**	81.67	327	P		P	17	34	05.9	+0.9
	1.3nm,0.5s,baz=155,slow=4.1,SNR=4.3									
CMAR	**Chiang Mai Arr**	89.85	290	P		P	17	34	46.6	+1.3
	1.3nm,0.8s,baz=136,slow=2.6,SNR=8.1									
ILAR	**Eielson Array**	93.14	14	P		P	17	34	58.6	-0.7
	0.2nm,0.5s,baz=215,slow=6.4,SNR=3.4									
KURBB	**Kurchatov Arra**	116.01	316	PKP		PKPdf	17	40	24.1	-1.2
	0.3nm,0.3s,baz=68,slow=2.9,SNR=7.2									
ARCES	**ARCESS Array B**	132.97	348	PKP		PKPdf	17	40	56.7	-0.6
	1.0nm,0.6s,baz=72,slow=2.9,SNR=9.1									
ARCES				SKP			17	43	39.1	
	1.5nm,0.7s,baz=20,slow=3.9,SNR=8.5									
FINES	**FINESS Array B**	139.49	341	PKhKP		PKPpre	17	41	00.8	
	0.4nm,0.3s,baz=90,slow=3.8,SNR=7.3									
FINES				PKP		PKiKP	17	41	10.9	-1.1
	0.4nm,0.3s,baz=75,slow=1.7,SNR=5.6									
FINES				SKP			17	43	58.5	
	2.6nm,0.8s,baz=31,slow=3.2,SNR=8.2									
NB2	**NORSAR Subarra**	143.18	351	PKP		PKPab	17	41	13.1	-0.7
	comp=Z,3.4nm,0.8s,baz=16,slow=3.2									
NOA	**NORSAR Array B**	143.18	351	PKP		PKPab	17	41	13.3	-0.4
	comp=Z,2.6nm,0.8s,baz=15,slow=4.9,SNR=11									
NOA				SKP			17	44	07.2	
	comp=Z,0.5nm,0.6s,baz=13,slow=4.1,SNR=3.7									
AKASG	**Malin Array Be**	145.87	326	PKPbc		PKPdf	17	41	21.2	+0.1
	comp=Z,3.0nm,0.5s,baz=44,slow=4.2,SNR=12									
BRTR	**Keskin Array B**	148.19	306	PKPbc		PKPbc	17	41	28.9	-0.5
	comp=Z,1.2nm,0.7s,baz=96,slow=2.6,SNR=7.8									
BRTR				PKPab		PKPab	17	41	33.9	-0.3
	comp=Z,1.2nm,0.7s,baz=72,slow=4.6,SNR=6.9									
GERES	**GERESS Array B**	153.88	339	PKPab		PKPab	17	41	57.5	-0.2
	comp=Z,0.5nm,0.7s,baz=3.8,slow=4.0,SNR=5.5									

*FUNV **21** 17:34:06.7, 6°99N×72°19W, h18km, MW4.4*
*IDC **21** 17:34:14.3±3.1, 7°10N×72°08W, h73km±28km, mb3.7/12, mb1 3.9/13, mb1mx3.7/26, mbtmp3.7/13, Error ellipse: s-maj=20.4km s-min=16.2km az=55.0*

ISC 21 17:34:09.0±1.4, 7°17N×0°05'×72°03'W×0°05', h26km±10km, n33, σ0°83/47, mb4.0/11, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
CAPV	**Capacho**	0.75	338	⇑*e*P		Pb	17	34	23.4	-0.2
CAPV				*e*S		Sn	17	34	35.4	+0.7
SOCV	**Socops**	1.61	46	*e*P		Pn	17	34	36.6	+0.9
SOCV				*e*S		Sb	17	34	58.7	+0.8
VIGV	**El Vigia**	1.79	22	*e*P		Pb	17	34	39.9	-1.2
VIGV				*e*S		Sb	17	35	03.0	-0.1
ELOV	**Elorza**	2.53	94	*e*P		Pn	17	34	48.8	+0.4
ELOV				*e*S		Sn	17	35	19.6	+1.1
ROSC	**El Rosal**	3.24	225	P		Pb	17	35	02.2	-3.9
	34nm,0.3s,baz=91,slow=13,SNR=42									
ROSC				S		Sb	17	35	46.1	+0.8
	36nm,0.3s,baz=77,slow=20,SNR=2.1									
QARV	**Quebrada Arrib**	3.37	26	*e*P		Pn	17	35	00.5	+0.5
QARV				*e*S		Sn	17	35	40.1	+0.9
SANV	**Sanarito**	3.39	47	*e*P		Pn	17	35	00.4	+0.1
SANV				*e*S		Sn	17	35	41.1	+1.4
CURV	**Curarigua**	3.49	36	*e*P		Pn	17	35	02.3	+0.6
CURV				*e*S		Sn	17	35	44.5	+2.2
TEPV	**Terepaima**	3.95	45	*e*P		Pn	17	35	08.2	+0.2
TEPV				*e*S		Sn	17	35	53.8	+0.3
DABV	**Dabajuro**	3.98	20	*e*P		Pn	17	35	08.7	+0.4
DABV				*e*S		Sn	17	35	54.9	+0.8
SIQV	**Siquisique**	4.10

ISC 21 17:51:29.5±0.9, 57°.82N±0°.04×22°.64E±0°.03, h0km, n39, σ1§26/55, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLIT	**Slitere, Latvi**	**0.27**	**224**	*eP*	**Pg**	**17 51 36.8**	**+2.1**
SLIT				*eS*	**Sb**	**17 51 42.5**	**+0.1**
MTSE	**Matsula**	**1.09**	**34**	*eP*	**Pg**	**17 51 49.1**	**-1.3**
MTSE				*eSN*	**Sn**	**17 52 07.6**	**-0.1**
VSU	**Vasula**	**2.26**	**72**	*eP*	**Pb**	**17 52 10.0**	**-1.3**
VSU				*eS*	**Sb**	**17 52 38.9**	**-0.9**
VSU	**Vasula**	**2.26**	**72**	P	**Pb**	**17 52 09.9**	**-1.3**
VSU				S	**Sb**	**17 52 38.8**	**-0.9**
MEF	**Metsahovi**	**2.57**	**20**	*eP*	**Pn**	**17 52 14.1**	**+1.8**
MEF				*eSB*	**Sn**	**17 52 45.9**	**+1.7**
MEF	**Metsahovi**	**2.57**	**20**	P	**Pn**	**17 52 14.1**	**+1.8**
AAL	**Aland**	**2.73**	**331**	*eP*	**Pn**	**17 52 16.5**	**+1.9**
AAL				*eSG*	**Sb**	**17 52 53.2**	**+0.1**
AAL	**Aland**	**2.73**	**331**	P	**Pn**	**17 52 16.4**	**+1.9**
AAL				Sg	**Sb**	**17 52 53.2**	**+0.1**
BYXU	**Byxelkrok**	**3.08**	**262**	*eP*	**Pn**	**17 52 20.6**	**+1.2**
BYXU	**Byxelkrok**	**3.08**	**262**	P	**Pn**	**17 52 20.5**	**+1.2**
PVF	**Pernaja**	**3.19**	**30**	*eP*	**Pn**	**17 52 23.1**	**+2.2**
PVF				*eSB*	**Sb**	**17 53 06.2**	**-0.3**
PVF	**Pernaja**	**3.19**	**30**	P	**Pn**	**17 52 23.1**	**+2.2**
PVF				Sb	**Sb**	**17 53 06.2**	**-0.3**
RAF	**Rauma**	**3.24**	**352**	*eP*	**Pn**	**17 52 22.1**	**+0.5**
RAF				*eSB*	**Sb**	**17 53 06.8**	**-1.0**
RAF	**Rauma**	**3.24**	**352**	P	**Pn**	**17 52 22.1**	**+0.5**
RAF				Sb	**Sb**	**17 53 06.8**	**-1.0**
ESKU	**Eskilstuna**	**3.56**	**296**	*eP*	**Pn**	**17 52 26.6**	**+0.6**
ESKU	**Eskilstuna**	**3.56**	**296**	P	**Pn**	**17 52 26.6**	**+0.6**
OSKU	**Oskarshamn**	**3.58**	**263**	*eP*	**Pn**	**17 52 28.2**	**+1.9**
OSKU	**Oskarshamn**	**3.58**	**263**	P	**Pn**	**17 52 28.1**	**+1.9**
VJF	**Virojoki**	**3.72**	**41**	*eP*	**Pn**	**17 52 30.0**	**+1.9**
VJF				*ePG*	**Pb**	**17 52 37.6**	**+1.7**
VJF				*eS*	**Sn**	**17 53 11.8**	**-0.7**
VJF	**Virojoki**	**3.72**	**41**	P	**Pn**	**17 52 30.0**	**+1.9**
LNKU	**Linkoeping**	**3.81**	**279**	*eP*	**Pn**	**17 52 30.6**	**+1.2**
LNKU	**Linkoeping**	**3.81**	**279**	P	**Pn**	**17 52 30.6**	**+1.2**
EKSU	**Eksjoe**	**3.94**	**269**	*eP*	**Pn**	**17 52 31.6**	**+0.3**
EKSU	**Eksjoe**	**3.94**	**269**	P	**Pn**	**17 52 31.6**	**+0.3**
BLEU	**Blekinge**	**4.03**	**251**	*eP*	**Pn**	**17 52 32.7**	**+0.4**
BLEU	**Blekinge**	**4.03**	**251**	P	**Pn**	**17 52 32.7**	**+0.4**
FINES	**FINESS Array B**	**4.03**	**24**	Pn	**Pn**	**17 52 33.0**	**+0.7**
	0.2nm,0.3s,baz=204,slow=11,SNR=11						
FINES				Pg	**Pb**	**17 52 41.3**	**0.0**
	0.2nm,0.3s,baz=212,slow=15,SNR=13						
FINES				Sn	**Sn**	**17 53 18.8**	**-1.4**
	0.4nm,0.3s,baz=208,slow=20,SNR=3.5						
FINES				Lg	Lg	17 53 35.9	
	0.6nm,0.3s,baz=206,slow=27,SNR=6.1						
ASKU	**Askersund**	**4.25**	**288**	*eP*	**Pn**	**17 52 36.2**	**+0.8**
ASKU	**Askersund**	**4.25**	**288**	P	**Pn**	**17 52 36.2**	**+0.8**
VXJU	**Vaexsjoe**	**4.27**	**261**	*eP*	**Pn**	**17 52 36.5**	**+0.8**
VXJU	**Vaexsjoe**	**4.27**	**261**	P	**Pn**	**17 52 36.5**	**+0.8**
NRAU	**Nora**	**4.33**	**297**	*eP*	**Pn**	**17 52 36.6**	**0.0**
NRAU	**Nora**	**4.33**	**297**	P	**Pn**	**17 52 36.6**	**0.0**
KAF	**Kangasniemi**	**4.68**	**22**	MSG		17 53 56.3	
	comp=Z,1.4nm,0.3s						
FKPU	**Falk**	**4.76**	**278**	P	**Pn**	**17 52 43.4**	**+1.0**
BSD	**Bornholm Skovb**	**5.07**	**241**	*i P*	**Pn**	**17 52 46.2**	**-0.5**
BSD				*i S*	**Sn**	**17 53 44.0**	**-1.9**
BSD	**Bornholm Skovb**	**5.07**	**241**	*i P*	**Pn**	**17 53 44.0**	**-0.8**
BSD				*i S*	**Sn**	**17 53 44.0**	**-1.9**
NOA	**NORSAR Array B**	**6.66**	**304**	Pn	**Pn**	**17 53 07.0**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=106,slow=14,SNR=15						
NOA				Sn	**Sn**	**17 54 23.9**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=129,slow=20,SNR=2.3						
NOA				Lg	Lg	17 55 00.6	
	comp=Z,0.3nm,0.3s,baz=77,slow=20,SNR=4.6						
ARCES	**ARCESS Array B**	**11.82**	**5**	Pn	Pn	17 54 15.1	-4.1
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=8.9						

*PGC **21** 18:29:59.7±6.9, 59°.97N×140°.36W, h5km, ML2.6/3, 90km northwest of Yakutat, Ak Southeastern Alaska*
*NEIC **21** 18:30:00.8, 60°.26N×140°.50W, h1km, ML2.6(PGC), ML2.6(AEIC), After AEIC.*
*ISCJB **21** 18:30:01.4±0.5, 60°.27N±0°.04×140°.41W±0°.07, h14km, Error ellipse: s-maj=6.2km s-min=4.1km az=30.0*

IDC 21 18:30:00.0±0.9, 60°.18N±0°.05×140°.52W±0°.03, h14km, n23, σ1§80/30, 1C-6D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHX	**Chaix Hills**	**0.32**	**250**	P	**Pn**	**18 30 10.2**	**-0.2**
PNL	**Peninsula**	**0.76**	**132**	P	**Pb**	**18 30 15.9**	**+0.9**
PNL				S	**Sn**	**18 30 26.9**	**-0.7**
GRNC	**Granite Creek**	**0.83**	**313**	P	**Pg**	**18 30 16.0**	**-0.1**
GRNC				S	**Sg**	**18 30 26.6**	**-0.4**
BARN	**Barnard Glacie**	**1.05**	**328**	P	**Pb**	**18 30 18.3**	**-0.8**
BARN				S	**Sb**	**18 30 32.6**	**-1.2**
KIAG	**Kiagna River**	**1.18**	**310**	P	**Pn**	**18 30 21.8**	**-0.4**
KIAG				S	**Sb**	**18 30 37.4**	**-0.1**
BALM	**Baldy**	**1.25**	**314**	P	**Pn**	**18 30 22.9**	**-0.3**
HYT	**Haines Junctio**	**1.63**	**65**	⇑Pn	**Pb**	**18 30 30.0**	**+0.1**
HYT	**Haines Junctio**	**1.63**	**65**	⇑Pn	**Pb**	**18 30 30.0**	**+0.1**
HYT				⇓Sg	**Sb**	**18 30 50.4**	**+0.1**
MCARA	**McCarthy VSAT**	**1.73**	**316**	P	**Pb**	**18 30 31.4**	**-0.1**
VRDI	**Verde Repeater**	**1.79**	**307**	P	**Pn**	**18 30 31.8**	**+1.1**
RAGM	**Ragged Mountai**	**2.08**	**278**	P	**Pn**	**18 30 36.4**	**+1.8**
GOAT	**Goat Mountain**	**2.13**	**283**	P	**Pb**	**18 30 37.7**	**-0.7**
DIV	**Divide**	**2.76**	**293**	P	**Pn**	**18 30 46.4**	**+2.5**
WHY	**Whitehorse**	**2.84**	**78**	⇓Pg	**Pb**	**18 30 48.6**	**-1.8**
WHY	**Whitehorse**	**2.84**	**78**	⇓Pg	**Pb**	**18 30 48.6**	**-1.8**
WHY				⇓Sg	**Sg**	**18 31 28.0**	**-3.1**
KLU	**Klutina**	**2.96**	**299**	P	**Pn**	**18 30 49.4**	**+2.8**
BCA3	**Beaver Creek A**	**2.96**	**349**	P	**Pn**	**18 30 49.2**	**+2.6**
MENT	**Mentasta**	**3.17**	**332**	*eP*	**Pb**	**18 30 53.1**	**-2.9**
DOT	**Dot Lake**	**3.87**	**336**	*eP*	**Pn**	**18 31 01.6**	**+2.6**
DAWY	**Dawson**	**3.94**	**7**	⇓Pn	**Pn**	**18 31 02.4**	**+2.3**
DAWY	**Dawson**	**3.94**	**7**	⇓Pn	**Pn**	**18 31 02.4**	**+2.3**
DAWY				⇑Sn	**Sn**	**18 31 47.0**	**+0.9**
TRF	**Thorofare Moun**	**5.68**	**310**	P	**Pn**	**18 31 27.0**	**+3.0**
BM3	**Burnt Mountain**	**7.49**	**348**	P	**Pn**	**18 31 51.3**	**+2.5**

*NIC **21** 18:49:48.0±0.2, 34°.45N×31°.99E, h30km, ML2.9, MW2.8*
*ISK **21** 18:49:47.9, 34°.38N×32°.42E, h16km, MD2.8*
*CSEM **21** 18:49:47.4±0.7, 34°.46N×32°.17E, h20km, Mw2.8, Error ellipse: s-maj=11.7km s-min=9.1km az=20.0*

ISC 21 18:49:46.8±3.3, 34°.5N±0°.1×32°.1E±0°.1, h29km, n15, σ0§23/25, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPCY	**Paphos**	**0.47**	**23**	P	**Pb**	**18 49 56.8**	**+0.1**
PPCY	**Paphos**	**0.47**	**23**	P	**Pb**	**18 49 56.8**	**+0.1**
AKMC	**Akamas**	**0.60**	**16**	P	**Pb**	**18 49 59.0**	**+0.2**
AKMC	**Akamas**	**0.60**	**16**	P	**Pb**	**18 49 59.0**	**+0.2**
ALFC	**Alevga**	**0.81**	**29**	P	**Pn**	**18 50 01.9**	**-0.3**
	5.7nm,0.1s						
ALFC				S	**Sb**	**18 50 12.7**	**-0.1**
ALFC	**Alevga**	**0.81**	**29**	P	**Pn**	**18 50 01.9**	**-0.3**
	5.7nm,0.1s						
ALFC				S	**Sb**	**18 50 12.7**	**-0.1**
LEF	**Lefka**	**0.92**	**43**	*ePG*	**Pn**	**18 50 03.7**	**0.0**
LEF				*eSG*	**Sb**	**18 50 16.1**	**+0.2**
LEF	**Lefka**	**0.92**	**43**	*ePg*	**Pn**	**18 50 03.7**	**0.0**
LEF				*eSg*	**Sb**	**18 50 16.1**	**+0.2**
CSS	**Prodhromos**	**1.12**	**62**	P	**Pn**	**18 50 06.6**	**+0.1**
	1.7nm,0.2s						
CSS				S	**Sb**	**18 50 21.8**	**+0.2**
CSS	**Prodhromos**	**1.12**	**62**	*ePG*	**Pn**	**18 50 06.5**	**+0.1**
CSS				*eSG*	**Sn**	**18 50 20.5**	**-0.4**
CSS	**Prodhromos**	**1.12**	**62**	P	**Pn**	**18 50 06.6**	**+0.1**
	1.7nm,0.2s						
CSS				*eSg*	**Sn**	**18 50 20.5**	**-0.4**
CSS				S	**Sb**	**18 50 21.8**	**+0.2**
MAMC	**Mammari**	**1.15**	**51**	P	**Pb**	**18 50 07.9**	**-0.2**
MAMC	**Mammari**	**1.15**	**51**	P	**Pb**	**18 50 07.9**	**-0.2**
LFK	**Lefkose**	**1.42**	**54**	*ePN*	**Pb**	**18 50 12.6**	**-0.1**
LFK				*eSN*	**Sn**	**18 50 28.9**	**+0.4**
LFK	**Lefkose**	**1.42**	**54**	*ePn*	**Pb**	**18 50 12.6**	**-0.1**
LFK				*eSn*	**Sn**	**18 50 28.9**	**+0.4**

*AUST **21** 18:50:21.9±0.0, 4°.39S×102°.05E, h88km, Error ellipse: s-maj=2.3km s-min=0.7km az=236.0*
*ISCJB **21** 18:50:25.3±0.5, 3°.87S±0°.08×102°.57E±0°.07, h110km±4km, mb4.2/15, Error ellipse: s-maj=17.2km s-min=4.9km az=41.7*
*IDC **21** 18:50:27.0±1.0, 3°.75S×102°.87E, h105km±7km, mb3.7/12, mb1 3.8/12, mb1mx3.6/24, mbtmp3.7/12, Error ellipse: s-maj=41.3km s-min=9.7km az=49.0*
*DJA **21** 18:50:27.3±0.3, 4°.5S×6°.10°.3E±°, h89km±5km, M4.5/11, mb4.7/5, mB5.4/1, MLv4.4/11, Mw(mB)4.8/1*

ISC 21 18:50:26.1±0.7, 3°.88S±0°.08×102°.56E±0°.07, h105km±5km, n60, σ1§35/65, mb4.1/15, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**0.23**	**9**	P	**Pn**	**18 50 40.7**	**-0.5**
KSI				S	**Sn**	**18 50 51.8**	**-0.5**
LHSI	**Lahat**	**0.96**	**87**	P	**Sn**	**18 51 01.5**	**-0.5**
LWLI	**Liwa**	**1.87**	**127**	P	**Pn**	**18 50 58.0**	**+0.6**
KASI	**Kota Agung**	**2.53**	**130**	P	**Pn**	**18 51 06.1**	**+0.3**
BLSI	**Bandar Lampung**	**3.06**	**119**	P	**Pn**	**18 51 13.5**	**+0.7**
PPBI	**Pangkal Pinang**	**3.96**	**65**	P	**Pn**	**18 51 24.9**	**0.0**
PPI	**Padang Panjang**	**4.03**	**328**	P	**Pn**	**18 51 26.6**	**+0.7**
	baz=4.3,SNR=11						
CGJI	**Cibinong**	**4.14**	**131**	P	**Pn**	**18 51 28.1**	**+0.8**
SISI	**Saibi**	**4.29**	**306**	P	**Pn**	**18 51 30.3**	**+0.9**
BKNI	**Bangkinang**	**4.45**	**340**	P	**Pn**	**18 51 32.6**	**+1.1**
BKNI	**Bangkinang**	**4.45**	**340**	P	**Pn**	**18 51 33.1**	**+1.6**
	baz=4.8,SNR=15						
DBJI	**Dramaga**	**4.95**	**123**	P	**Pn**	**18 51 40.5**	**+2.3**
TPI	**Tanjungpandan**	**5.21**	**78**	P	**Pn**	**18 51 42.3**	**+0.5**
	36nm,0.6s,0.2nm						
LEM	**Lembang**	**5.83**	**120**	P	**Pn**	**18 51 51.8**	**+1.5**
	44nm,0.9s						
CISI	**Cisompet, Garu**	**6.38**	**125**	P	**Pn**	**18 51 56.1**	**-1.6**
	baz=6.5,SNR=10						
GSI	**Gunungsitoli**	**7.16**	**316**	P	**Pn**	**18 52 07.7**	**-0.6**
	179nm,0.4s,3μm						
GSI	**Gunungsitoli**	**7.16**	**316**	P	**Pn**	**18 52 07.3**	**-1.0**
	baz=7.2,SNR=97						
GSI				S	**Sn**	**18 53 23.4**	**-4.8**
	baz=7.2,SNR=8.0						
XMI	**Christmas Isla**	**7.23**	**155**	P	Pn	18 52 02.6	-6.6
	baz=7.0,SNR=3.7						
XMI				S	Sn	18 53 20.6	-9.2
	baz=7.0,SNR=5.1						
XMIS	**Christmas Isla**	**7.24**	**155**	P	Pn	18 52 02.4	-6.9
	baz=7.1,SNR=9.1						
XMIS				S	Sn	18 53 19.4	-11
	baz=7.1,SNR=7.2						
KCSI	**Kotacane, Aceh**	**8.77**	**327**	P	**Pn**	**18 52 29.0**	**-1.2**
SNSI	**Sinabang, Aceh**	**8.82**	**315**	P	**Pn**	**18 52 30.9**	**0.0**
UGM	**Wanagama**	**8.88**	**117**	P	**Pn**	**18 52 32.2**	**+0.5**
	baz=9.1,SNR=4.2						
STKI	**Sintang**	**9.74**	**66**	P	Pn	18 52 57.1	+14
LHMI	**Lhok Sumawe**	**10.64**	**328**	P	**Pn**	**18 52 53.3**	**-2.4**
	baz=11,SNR=4.8						
LUWI	**Luwuk**	**20.39**	**83**	P	**P**	**18 54 56.8**	**+2.0**
	baz=21,SNR=4.1						
CMAR	**Chiang Mai Arr**	**22.48**	**351**	P	**P**	**18 55 16.1**	**-0.9**
	1.3nm,0.6s,baz=182,slow=8.4,SNR=14						
FITZ	**Fitzroy Crossi**	**26.65**	**124**	P	**P**	**18 55 55.5**	**+0.2**
	1.7nm,0.5s,baz=228,slow=5.3,SNR=19						
FITZ	**Fitzroy Crossi**	**26.65**	**124**	P	**P**	**18 55 55.7**	**+0.4**
	baz=27,SNR=18						
KNRA	**Kununurra**	**28.31**	**116**	P	**P**	**18 56 09.2**	**-0.9**
	baz=29,SNR=8.7						
MTN	**Manton Dam**	**29.61**	**109**	P	**P**	**18 56 20.2**	**-1.4**
	baz=30,SNR=7.0						
KDU	**Kakadu**	**30.84**	**108**	P	**P**	**18 56 30.4**	**-2.1**
	baz=31,SNR=7.8						
ODAN	**Odare**	**33.90**	**335**	*eP*	**P**	**18 57 00.1**	**+0.7**
	6.8nm,0.5s						
TAPN	**Taplejung**	**34.20**	**336**	*eP*	**P**	**18 57 02.5**	**+0.4**
	6.9nm,0.5s						
RAMN	**Ramite**	**34.31**	**334**	*eP*	**P**	**18 57 04.2**	**+1.2**
	5.2nm,0.5s						
WRA	**Warramunga Arr**	**34.84**	**120**	P	**P**	**18 57 07.3**	**-0.1**
	2.2nm,0.4s,baz=307,slow=8.7,SNR=64						
WRA				pP	**pP**	**18 57 31.2**	**+0.1**
	1.1nm,0.6s,baz=299,slow=8.9,SNR=3.3						
WRA				PcP	**PcP**	**18 59 38.4**	**-0.1**
	0.4nm,0.5s,baz=309,slow=2.3,SNR=5.4						
WRA				S	**S**	**19 02 26.5**	**-4.5**
	0.4nm,0.7s,baz=291,slow=14,SNR=5.2						
PKI	**Pulchoki**	**35.38**	**333**	*eP*	**P**	**18 57 13.0**	**+0.8**
	5.9nm,0.5s						
PKIN	**Phulchoki**	**35.39**	**333**	*eP*	**P**	**18 57 12.4**	**+0.1**
	4.0nm,0.4s						
GUN	**Gumba**	**35.46**	**334**	*eP*	**P**	**18 57 13.5**	**+0.5**
	24nm,0.4s						
DMN	**Daman**	**35.55**	**333**	*eP*	**P**	**18 57 13.9**	**+0.3**
	2.4nm,0.3s						
KKN	**Kakani**	**35.62**	**333**	*eP*	**P**	**18 57 14.4**	**+0.2**
	14nm,0.5s						
ASAR	**Alice Springs**	**36.09**	**126**	P	**P**	**18 57 18.4**	**+0.4**
	2.6nm,0.4s,baz=297,slow=7.5,SNR=223						
ASAR				PcP	**PcP**	**18 59 43.1**	**+1.0**
	0.6nm,0.5s,baz=302,slow=2.4,SNR=4.8						
ASAR				S	**S**	**19 02 46.5**	**-3.5**
	3.8nm,1.3s,baz=294,slow=14,SNR=9.8						
KOLN	**Koldanda**	**36.39**	**331**	*eP*	**P**	**18 57 21.4**	**+0.6**
	12nm,0.4s						
DANN	**Dangsing**	**36.80**	**332**	*eP*	**P**	**18 57 24.8**	**+0.5**
	33nm,0.5s						
QIS	**Mount Isa**	**39.67**	**118**	P	**P**	**18 57 48.5**	**+0.3**
	baz=40,SNR=6.9						
MTSU	**Mount Surprise**	**43.23**	**112**	P	**P**	**18 58 17.3**	**-0.1**
	baz=44,SNR=6.8						
QLP	**Quilpie**	**45.79**	**124**	S	S	19 05 01.1	-13
	baz=46,SNR=6.1						
STKA	**Stephens Creek**	**46.00**	**132**	P	**P**	**18 58 40.1**	**+1.0**
	1.7nm,0.5s,baz=278,slow=5.3,SNR=8.1						
SONM	**Songino Array**	**51.61**	**3**	P	**P**	**18 59 23.0**	**+1.1**
	0.7nm,0.6s,baz=185,slow=9.2,SNR=7.8						
SONM				PcP	**PcP**	**19 00 34.6**	**+0.3**
	0.4nm,0.5s,baz=182,slow=3.9,SNR=4.3						
MKAR	**Makanchi Array**	**53.54**	**343**	P	**P**	**18 59 36.5**	**+0.5**
	0.8nm,0.4s,baz=156,slow=8.7,SNR=14						
ZALV	**Zalesovo Beam**	**59.50**	**348**	P	**P**	**19 00 17.6**	**-0.5**
	0.8nm,0.3s,baz=174,slow=5.8,SNR=3.8						
RDF	**Al-Radifah**	**62.02**	**306**	*eP*	**P**	**19 00 37.1**	**+1.4**
NAY	**Al-Naaiem**	**62.39**	**306**	*eP*	**P**	**19 00 39.3**	**+1.1**
NAY				AMb	AMB	19 00 39.9	
	comp=Z,5.9nm,0.6s						
MIB	**Mutribah**	**62.52**	**306**	*eP*	**P**	**19 00 40.1**	**+1.1**
MIB				AMb	AMB	19 00 41.1	
	comp=Z,6.9nm,0.7s						
RST	**Umm Al-Ruwaisa**	**62.68**	**306**	*eP*	**P**	**19 00 40.8**	**+0.7**
RST				AMb	AMB	19 00 42.0	
	comp=Z,58nm,0.7s						
PETK	**Petropavlovsk-**	**73.13**	**31**	P	**P**	**19 01 45.1**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=219,slow=11,SNR=3.2						
BRTR	**Keskin Array B**	**76.47**	**312**	P	**P**	**19 02 05.2**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=120,slow=8.8,SNR=4.7						
BRTR				pP	**pP**	**19 02 31.7**	**0.0**
	comp=Z,0.5nm,0.6s,baz=128,slow=5.3,SNR=3.0						
FINES	**FINESS Array B**	**86.96**	**332**	P	**P**	**19 03 00.6**	**+1.4**
	comp=Z,0.3nm,0.4s,baz=107,slow=6.6,SNR=7.8						
ARCES	**ARCESS Array B**	**89.10**	**340**	P	**P**	**19 03 10.3**	**+1.0**
	comp=Z,1.4nm,1.0s,baz=102,slow=5.4,SNR=5.4						
PDAR	**Pinedale Array**	**131.90**	**32**	SKPbc	**SKPbc**	**19 12 44.2**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=0.0,slow=1.5,SNR=11						
TXAR	**Lajitas Array**	**144.52**	**42**	PKP	PKPbc	19 09 50.8	+0.8
	comp=Z,0.5nm,0.6s,baz=271,slow=0.9,SNR=7.2						
TXAR				pPKP	pPKPdf	19 10 18.2	-1.7
	comp=Z,0.3nm,0.4s,baz=303,slow=2.5,SNR=3.1						
TXAR				SKPbc	**SKPbc**	**19 13 21.6**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=298,slow=2.7,SNR=3.6						

MAN 21 19:12:02, 7°.67N×127°.23E, h33km, mb4.4, ML3.2, MS3.0, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.20**	**233**	*eP*	Pn	19 12 22.7	+0.2
MATI				*eS*	Sn	19 12 37.7	0.0
BUTP	**Butuan**	**2.05**	**309**	*eP*	Pn	19 12 35.2	+1.0
CGP	**Cagayan de Oro**	**2.63**	**288**	*ePn*	Pn	19 12 43.1	+0.9
CGP				*eS*	Sb	19 13 19.1	-1.2
CTBH	**Cotabato--PC H**	**2.99**	**262**	*i P*	Pn	19 12 49.3	+2.1
MSLP	**Maasin**	**3.39**	**317**	*eP*	Pn	19 12 53.0	+0.4

TRN 21 19:22:19.0, 15°.05N×61°.27W, h150km, MD3.6, M3.0(FDF), 3C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**0.34**	**159**	⇓*eP*	Pn	19 22 40.7	+0.9
FDF	**Fort de France**	**0.34**	**159**	*eP*	Pn	19 22 40.7	+1.0
FDF				⇓*eS*	Sn	19 22 56.3	+0.8
FDF				*eS*	Sn	19 22 56.9	+1.4
DVCT	**Vielle Casse P**	**0.58**	**347**	*eS*	Sn	19 22 59.1	+1.8
MVM	**Montagne Vaucl**	**0.61**	**143**	*eP*	Pn	19 22 41.6	+0.6
MGG	**Marie-Galante**	**0.87**	**357**	⇑*eP*	Pn	19 22 43.3	+0.7
TBG	**Guadaloupe-3**	**0.88**	**336**	*eP*	Pn	19 22 43.4	+0.7
HMG	**Houelmont**	**1.02**	**336**	*eP*	Pn	19 22 45.3	+1.4
PHG	**Guadaloupe-2**	**1.02**	**340**	*eP*	Pn	19 22 45.2	+1.1
DOG	**Dongo Capester**	**1.03**	**341**	*eP*	Pn	19 22 45.0	+0.9
SCG	**Saint Claude**	**1.05**	**338**	*eP*	Pn	19 22 45.5	+1.2
SLW	**Petit Monier**	**1.07**	**162**	*eP*	Pn	19 22 45.8	+1.3
SLW				*eS*	Sn	19 23 04.2	+0.3
BCG	**Bois Riant Cap**	**1.08**	**342**	*eP*	Pn	19 22 45.6	+1.1
LZG	**Guadaloupe-1**	**1.19**	**336**	⇑*iP*	Pn	19 22 46.7	+1.3
SLPE	**Piton Saint Es**	**1.23**	**167**	*eP*	Pn	19 22 47.7	+1.8
SLPE				*eS*	Sn	19 23 07.7	+1.2
SLB	**Belfond**	**1.23**	**169**	*eP*	Pn	19 22 47.1	+1.1
SLB				*eS*	Sn	19 23 06.9	+0.3
SLDE	**Delcer**	**1.25**	**170**	*eS*	Sn	19 23 08.3	+1.5
SEG	**Port Louis**	**1.36**	**351**	⇑*iP*	Pn	19 22 48.1	+0.9
MCLT	**Moule a Chique**	**1.37**	**166**	*eP*	Pn	19 22 48.9	+1.7
MCLT				*eS*	Sn	19 23 09.3	+0.4
SVB	**Belmont**	**1.77**	**179**	*eP*	Pn	19 22 52.6	+1.1
SVB				*eS*	Sn	19 23 16.6	+0.2
BPA	**Boggy Peak**	**2.06**	**344**	*eP*	Pn	19 22 55.9	+1.0
BPA				*eS*	Sn	19 23 22.5	-0.1

*IDC **21** 19:34:07.9±1.0, 0°.86S×123°.40E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.7/21, mbtmp3.7/7, ML4.0/1, MS2.8/1, Ms1 2.8/1, ms1mx2.1/28, Error ellipse: s-maj=39.1km s-min=19.4km az=78.0*
*DJA **21** 19:34:12.7±0.9, 1°.5S×12°.3E±°, h10km, M5.1/6, mb6.0/2, mB5.9/2, MLv4.6/6, Mw(mB)5.5/2*
*ISCJB **21** 19:34:13.6±0.5, 1°.10S±0°.04×123°.29E±0°.04, h40km, mb3.7/8, Error ellipse: s-maj=6.4km s-min=5.3km az=40.2*

ISC 21 19:34:14.3±0.8, 1°.09S±0°.06×123°.26E±0°.05, h40km, n25, σ1§94/22, mb3.7/8, 1C, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.49**	**276**	P	**Pn**	**19 34 23.0**	**-1.9**
LUWI				S	**Sn**	**19 34 30.8**	**-1.5**
KMSI	**Cibinong**	**1.80**	**24**	P	**Pn**	**19 34 41.8**	**-1.1**
MRSI	**Marisa**	**2.04**	**320**	P	**Pn**	**19 34 46.6**	**+0.5**
MRSI				S	**Sn**	**19 35 11.9**	**+1.5**
MNI	**Manado**	**2.97**	**32**	P	**Pn**	**19 35 01.2**	**+2.2**
KKSI	**Kolaka, Sulawe**	**3.46**	**208**	P	**Pn**	**19 35 07.6**	**+1.9**
TTSI	**Tana Toraja**	**3.95**	**240**	P	**Pn**	**19 35 14.5**	**+2.1**
LBMI	**Labuha**	**4.27**	**84**	P	**Pn**	**19 35 18.7**	**+1.9**
LBMI				S	**Sn**	**19 36 03.5**	**-1.9**
BBSI	**Bau Bau**	**4.42**	**189**	P	Pn	19 35 36.5	+18
TNTI	**Ternate**	**4.51**	**66**	P	Pn	19 35 13.9	-6.2
KAPI	**Kappang**	**5.24**	**222**	P	Pn	19 35 36.4	+6.2
KAPI	**Kappang**	**5.24**	**222**	Pn	**Pn**	**19 35 31.7**	**+1.5**
	4.6nm,0.3s,baz=40,slow=3.9,SNR=40						
KAPI				Sn	**Sn**	**19 36 31.2**	**+1.8**
	11nm,0.3s,baz=240,slow=23,SNR=9.5						
KAPI				LR	LR	19 37 43.1	
	comp=Z,100nm,

MTVR	**Mutnovka**	**2.30**	**220**	*e*P		Pn	20 17 32.0	+2.7
MTVR				S		Sn	20 18 00.7	+3.6
KBG	**Krutoberegovo**	**2.33**	**30**	P		Pn	20 17 31.9	+2.5
KBG				*e*S		Sn	20 18 00.5	+3.2
BDR	**Baidarnaya**	**2.34**	**8**	*e*P		Pn	20 17 32.1	+2.4
BDR				S		Sn	20 18 00.7	+3.0
SMKR	**Semkarok**	**2.38**	**11**	*e*P		Pn	20 17 31.6	+1.4
SMKR				S		Sn	20 17 59.7	+1.0
SRKR	**Sorokina**	**2.42**	**7**	P		Pn	20 17 32.8	+2.1
SRKR				S		Sn	20 18 02.3	+2.6
APC	**Apacha**	**2.46**	**238**	*e*P		Pn	20 17 33.0	+1.9
ASAK	**Asacha**	**2.49**	**222**	*i* P		Pn	20 17 34.4	+2.7
ASAK				*e*S		Sn	20 18 05.2	+3.8
MIPR	**Malaya Ipel'ka**	**3.05**	**231**	P		Pn	20 17 41.7	+2.5
BKI	**Bering**	**3.24**	**71**	*e*P		Pn	20 17 43.7	+2.0
BKI				*e*S		Sn	20 18 19.9	+0.7

IDC 21 21:09:32.2±3.2,**7°01'S**×**155°69'E, h62**km±33km, **mb3.6**/7, **mb1 3.8**/9, **mb1mx3.7**/20, **mbtmpg3.7**/9, **ML3.4/2, MS3.1**/4, **Ms1 3.1**/4, **ms1mx2.8**/25, **Error ellipse: s-maj=33.0km s-min=22.8km az=146.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.85**	**120**	P	Pn	21 10 43.4	+0.7
	9.3nm,0.3s,baz=180,slow=5.1,SNR=2.0						
HNR				S	Sn	21 11 43.3	+5.7
	7.5nm,0.3s,baz=53,slow=20,SNR=2.9						
HNR				LR	LR	21 12 28.6	
	comp=Z,224nm,20.8s,baz=274,slow=36						
PMG	**Port Moresby**	**8.77**	**254**	P	Pn	21 11 34.6	-1.9
	0.7nm,0.3s,baz=198,slow=19,SNR=2.1						
PMG				S	Sn	21 13 16.9	+3.0
	1.2nm,0.3s,baz=152,slow=22,SNR=5.5						
CTA	**Charters Tower**	**15.90**	**214**	LR	LR	21 18 09.5	
	comp=Z,100nm,19.6s,baz=224,slow=32						
GUMO	**Guam**	**23.12**	**332**	LR	LR	21 21 39.9	
	comp=Z,33nm,19.5s,baz=236,slow=32						
WRA	**Warramunga Arr**	**24.38**	**236**	P	P	21 14 45.3	+0.4
	2.8nm,0.8s,baz=60,slow=9.8,SNR=14						
ASAR	**Alice Springs**	**26.68**	**229**	P	P	21 15 05.8	0.0
	0.5nm,0.5s,baz=61,slow=9.4,SNR=10.0						
STKA	**Stephens Creek**	**28.02**	**206**	LR	LR	21 26 28.0	
	comp=Z,43nm,19.1s,baz=212,slow=36						
USRK	**Ussuriysk Arra**	**55.28**	**339**	P	P	21 19 00.2	+0.9
	0.8nm,0.5s,baz=136,slow=7.0,SNR=2.8						
CMAR	**Chiang Mai Arr**	**61.41**	**295**	P	P	21 19 43.5	+0.9
	2.6nm,0.7s,baz=122,slow=5.4,SNR=18						
SONM	**Songino Array**	**69.72**	**327**	P	P	21 20 35.7	-0.1
	0.7nm,0.5s,baz=138,slow=6.9,SNR=6.8						
ILAR	**Eielson Array**	**83.14**	**21**	P	P	21 21 50.8	-0.4
	0.1nm,0.4s,baz=254,slow=5.4,SNR=4.3						
MKAR	**Makanchi Array**	**83.87**	**319**	P	P	21 21 54.3	-1.2
	1.3nm,1.0s,baz=94,slow=4.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**153.70**	**285**	PKPbc	PKPbc	21 29 24.6	-0.7
	0.3nm,0.4s,baz=69,slow=2.1,SNR=11						

*NIED **21** 21:11:00,43.70N×139.80E,h250km,Mw3.7 Best double couple: M0 3.77000×10^14 NP1:φ=89.00000°, δ=71.00000°, λ=-154.00000°. NP2:φ=350.00000°, δ=65.00000°, λ=-21.00000°.*
*ISCJB **21** 21:11:43.1±0.4,43.65N±0.05×139.86E±0.06, h235km±4km, mb3.5/8, Error ellipse: s-maj=9.0km s-min=6.7km az=143.3*
*IDC **21** 21:11:43.9±0.9,43.73N×139.76E,h221km±11km, mb3.2/8, mb1 3.3/11, mb1mx3.1/28, mbtmpg3.2/11, Error ellipse: s-maj=20.0km s-min=16.3km az=6.0*
*JMA **21** 21:11:44.0±0.2,43.72N×139.79E,h225km±2km, M3.5*
ISC 21 21:11:44.2±0.7,**43°64'N**±0.06×**139°87E**±0.06, **h230**km±6km, **n29**, σ=**98**/43, **mb3.5**/8, **Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSK	**Shakotan**	**0.53**	**122**	P	**Pn**	**21 12 14.5**	**-0.4**
JSK				*e*S	**S**	**21 12 38.8**	**0.0**
JSH	**Shimam**	**1.00**	**172**	P	**Pn**	**21 12 17.1**	**-0.1**
JSH				*e*S	**S**	**21 12 42.0**	**-0.9**
JHR	**Hokuryu**	**1.35**	**85**	P	**Pn**	**21 12 19.9**	**+0.4**
JYG	**Yagishiri**	**1.38**	**54**	P	**Pn**	**21 12 18.8**	**-0.8**
JYG				*e*S	**S**	**21 12 45.3**	**-2.0**
JEW	**Eniwo**	**1.41**	**124**	P	**Pn**	**21 12 20.3**	**+0.4**
JEW				*e*S	**S**	**21 12 49.3**	**+1.6**
JOSM	**Okushiri--Mats**	**1.58**	**191**	P	**Pn**	**21 12 21.7**	**+0.4**
JOSM				*e*S	**S**	**21 12 51.0**	**+0.7**
JKB	**Kayabe**	**1.95**	**153**	P	**Pn**	**21 12 24.7**	**+0.1**
ASAJ	**Asahikawa**	**2.03**	**75**	P	**Pn**	**21 12 25.1**	**-0.2**
	10.0nm,0.3s,baz=244,slow=10,SNR=55						
ASAJ				S	**S**	**21 12 56.9**	**-0.5**
	1.4nm,0.3s,baz=240,slow=20,SNR=11						
JFR	**Furan**	**2.04**	**102**	P	**Pn**	**21 12 25.7**	**+0.2**
JFR				*e*S	**S**	**21 12 58.2**	**+0.5**
JKK2	**Kamakawa 2**	**2.10**	**83**	P	**Pn**	**21 12 26.5**	**+0.5**
JKK2				*e*S	**S**	**21 12 58.7**	**0.0**
JWK2	**Keihoku**	**2.22**	**40**	P	**Pn**	**21 12 27.3**	**+0.2**
JSE	**Soyaes**	**2.36**	**55**	P	**Pn**	**21 12 28.4**	**-0.1**
JSE				*e*S	**S**	**21 13 02.9**	**-0.3**
JOT	**Ohata**	**2.42**	**158**	P	**Pn**	**21 12 28.9**	**-0.3**
JNBK	**Urakawa-nobuka**	**2.52**	**122**	*e*S	**S**	**21 13 07.6**	**+1.4**
JCH	**Churui**	**2.76**	**111**	P	**Pn**	**21 12 31.6**	**-1.2**
JCH				*e*S	**S**	**21 13 08.2**	**-2.6**
JAR	**Ashorobuto**	**2.86**	**95**	P	**Pn**	**21 12 34.2**	**+0.3**
JAR				*e*S	**S**	**21 13 12.8**	**-0.1**
JTKR	**Abashiri--Toko**	**2.95**	**82**	P	**Pn**	**21 12 35.2**	**+0.4**
JTKR				*e*S	**S**	**21 13 12.9**	**-1.6**
JANG	**Nango**	**3.48**	**159**	P	**Pn**	**21 12 40.2**	**-0.9**
JANG				*e*S	**S**	**21 13 23.6**	**-2.2**
JAK	**Akkeshi**	**3.58**	**99**	P	**Pn**	**21 12 41.4**	**-0.7**
JAK				*e*S	**S**	**21 13 26.5**	**-1.2**
USRK	**Ussuriysk Arra**	**5.71**	**278**	P	**Pn**	**21 13 07.4**	**-0.7**
	0.3nm,0.3s,baz=95,slow=12,SNR=4.7						
PETK	**Petropavlovsk-**	**15.14**	**45**	P	**Pn**	**21 15 08.2**	**+1.6**
	0.3nm,0.3s,baz=219,slow=12,SNR=5.0						
SONM	**Songino Array**	**23.62**	**292**	P	**P**	**21 16 33.8**	**-0.7**
	0.4nm,0.3s,baz=85,slow=8.3,SNR=6.3						
ZALV	**Zalesovo Beam**	**36.82**	**306**	P	**P**	**21 18 29.6**	**-0.4**
	1.4nm,0.4s,baz=91,slow=7.3,SNR=7.0						
MKAR	**Makanchi Array**	**39.91**	**295**	P	**P**	**21 18 55.2**	**-0.5**
	0.6nm,0.6s,baz=90,slow=8.8,SNR=9.0						
ARCES	**ARCESS Array B**	**57.43**	**338**	P	**P**	**21 21 08.0**	**-0.3**
	3.0nm,1.1s,baz=61,slow=7.3,SNR=3.1						
YKA	**Yellowknife Ar**	**58.75**	**32**	P	**P**	**21 21 18.2**	**+0.7**
	0.1nm,0.3s,baz=306,slow=6.9,SNR=3.2						
FINES	**FINESS Array B**	**62.46**	**330**	P	**P**	**21 21 42.0**	**-0.6**
	1.9nm,0.5s,baz=55,slow=7.6,SNR=45						
WRA	**Warramunga Arr**	**63.47**	**186**	P	**P**	**21 21 50.8**	**+1.2**
	0.4nm,0.9s,baz=0.2,slow=7.0,SNR=2.9						
NOA	**NORSAR Array B**	**67.67**	**336**	P	**P**	**21 22 15.7**	**-0.3**
	0.5nm,0.5s,baz=36,slow=6.5,SNR=4.8						

*ISK **21** 21:15:47.1,37.52N×42.63E,h6km,MD3.3*
*DDA **21** 21:15:48.2,37.74N×42.79E,h9km,MD3.2,ML3.4*
*CSEM **21** 21:15:48.2±0.3,37.73N×42.79E,h2km,ML3.4, Error ellipse: s-maj=7.5km s-min=5.9km az=5.0*
ISC 21 21:15:47.9±1.1,**37°73N**±0.03×**42°81E**±0.02, **h7**km±10km, **n39**, σ=**101**/54, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIRN	**S˜¨rnak**	**0.39**	**234**	*i* P	**Pg**	**21 15 56.2**	**+0.7**
SIRN				*i* S	**Sb**	**21 16 02.9**	**-0.5**
SIRN	**S˜¨rnak**	**0.39**	**234**	*i* P	**Pg**	**21 15 56.2**	**+0.7**
SIRN				*i* S	**Sb**	**21 16 02.9**	**-0.5**
GEVA	**Gevas**	**0.62**	**19**	*i* P	**Pg**	**21 15 59.6**	**-0.3**
GEVA				*i* S	**Sg**	**21 16 07.5**	**-0.5**
GEVA	**Gevas**	**0.62**	**19**	*i* P	**Pg**	**21 15 59.6**	**-0.3**
GEVA				*i* S	**Sg**	**21 16 07.5**	**-0.5**
HAKT	**HAKKARI**	**0.73**	**103**	*i* P	**Pg**	**21 16 02.1**	**0.0**
HAKT				*i* S	**Sb**	**21 16 14.3**	**+0.7**
HAKT	**HAKKARI**	**0.73**	**103**	*i* P	**Pg**	**21 16 02.1**	**0.0**
HAKT				*i* S	**Sb**	**21 16 14.3**	**+0.7**
CUKT	**Cukurca**	**0.80**	**127**	*e*PG	**Pg**	**21 16 03.1**	**-0.1**
CUKT				*e*SG	**Sb**	**21 16 15.7**	**+0.5**
CUKT	**Cukurca**	**0.80**	**127**	*e*Pg	**Pg**	**21 16 03.1**	**-0.1**
CUKT				*e*Sg	**Sb**	**21 16 15.7**	**+0.5**
TATV	**Tatvan**	**0.89**	**332**	*i* P	**Pg**	**21 16 05.0**	**0.0**
TATV	**Tatvan**	**0.89**	**332**	*i* P	**Pg**	**21 16 05.0**	**0.0**
TVAN	**Van**	**0.93**	**30**	*i* P	**Pg**	**21 16 06.2**	**+0.4**
TVAN	**Van**	**0.93**	**30**	*i* P	**Pg**	**21 16 06.2**	**+0.4**
BTMT	**Batman**	**1.14**	**294**	*e*PN	**Pn**	**21 16 10.4**	**0.0**
BTMT				*e*SN	**Sn**	**21 16 28.1**	**+1.7**
BTMT	**Batman**	**1.14**	**294**	*e*Pn	**Pn**	**21 16 10.4**	**0.0**
BTMT				*e*Sn	**Sn**	**21 16 28.1**	**+1.7**
CLDR	**Caldiran**	**1.66**	**31**	*e*PN	**Pg**	**21 16 20.1**	**+0.3**
CLDR	**Caldiran**	**1.66**	**31**	*e*Pn	**Pg**	**21 16 20.1**	**+0.3**
MARD	**Mardin**	**1.66**	**256**	*i* P	**Pg**	**21 16 19.8**	**0.0**
MARD				*i* S	**Sg**	**21 16 42.5**	**+1.1**
TUTA	**Tutak**	**1.67**	**0**	*i* P	**Pb**	**21 16 19.4**	**+0.2**
TUTA				*i* S	**Sg**	**21 16 43.0**	**+1.2**
TUTA	**Tutak**	**1.67**	**0**	*i* P	**Pb**	**21 16 19.4**	**+0.2**
VRTB	**Varto-Mus**	**1.78**	**324**	*e*PN	**Pb**	**21 16 21.0**	**0.0**
VRTB	**Varto-Mus**	**1.78**	**324**	*e*Pn	**Pb**	**21 16 21.0**	**0.0**
BNGL	**BINGOL**	**1.79**	**314**	*i* P	**Pg**	**21 16 22.0**	**-0.2**
BNGL				*i* S	**Sg**	**21 16 47.2**	**+1.8**
DIY	**Diyarbakir**	**2.05**	**276**	*e*PN	**Pn**	**21 16 21.3**	**-1.6**
DIY	**Diyarbakir**	**2.05**	**276**	*e*Pn	**Pn**	**21 16 21.3**	**-1.6**
BNGB	**Bing˜¶l**	**2.10**	**308**	*e*PN	**Pn**	**21 16 24.4**	**+0.8**
DIYA	**Diyarbakir**	**2.14**	**276**	*i* P	**Pb**	**21 16 26.8**	**-0.2**
DIYA				*i* S	**Sb**	**21 16 52.6**	**-1.1**
DIYA	**Diyarbakir**	**2.14**	**276**	*i* P	**Pb**	**21 16 26.8**	**-0.2**
DIYA				*i* S	**Sb**	**21 16 52.6**	**-1.1**
BINT	**Bingol**	**2.15**	**303**	*e*Pn	**Pn**	**21 16 24.4**	**0.0**
EZM	**Erzurum**	**2.45**	**333**	*e*PN	**Pb**	**21 16 30.8**	**-1.7**
SVRC	**Sivrice-ELAZID**	**2.84**	**284**	*e*PN	**Pn**	**21 16 33.1**	**-0.8**
SVRC	**Sivrice-ELAZID**	**2.84**	**284**	*e*Pn	**Pn**	**21 16 33.1**	**-0.8**
GNI	**Garni**	**2.85**	**31**	*e*PN	**Pb**	**21 16 38.1**	**-1.2**
GNI	**Garni**	**2.85**	**31**	*e*Pn	**Pb**	**21 16 38.1**	**-1.2**
PTK	**Pertek**	**2.93**	**294**	*e*PN	**Pn**	**21 16 35.0**	**0.0**
PTK	**Pertek**	**2.93**	**294**	*e*Pn	**Pn**	**21 16 35.1**	**0.0**
ERZN	**Erzincan**	**3.05**	**309**	*e*PN	**Pn**	**21 16 38.3**	**+1.6**
URFA	**Urfa**	**3.18**	**266**	*e*PN	**Pn**	**21 16 36.4**	**-2.0**
URFA	**Urfa**	**3.18**	**266**	*e*Pn	**Pn**	**21 16 36.4**	**-2.0**
EZC	**Erzincan**	**3.37**	**308**	*e*Pn	**Pn**	**21 16 38.3**	**-2.9**

*DDA **21** 21:17:11.3,37.78N×42.79E,h12km,MD3.1,ML3.3*
*CSEM **21** 21:17:11.3,37.78N×42.79E,h12km,ML3.3, After DDA*
ISC 21 21:17:11.4±1.0,**37.75N**±0.03×**42.85E**±0.03, **h14**km±9km, **n19**, σ=**65**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIRN	**S˜¨rnak**	**0.43**	**234**	*i* P	**Pg**	**21 17 19.5**	**-0.4**
SIRN				*i* S	**Sg**	**21 17 26.0**	**+0.2**
SIRN	**S˜¨rnak**	**0.43**	**234**	*i* P	**Pg**	**21 17 19.5**	**-0.4**
SIRN				*i* S	**Sg**	**21 17 26.0**	**+0.2**
GEVA	**Gevas**	**0.59**	**16**	*i* P	**Pg**	**21 17 22.8**	**-0.3**
GEVA				*i* S	**Sg**	**21 17 30.7**	**-0.2**
GEVA	**Gevas**	**0.59**	**16**	*i* P	**Pg**	**21 17 22.8**	**-0.3**
GEVA				*i* S	**Sg**	**21 17 30.7**	**-0.2**
HAKT	**HAKKARI**	**0.71**	**105**	*i* P	**Pb**	**21 17 25.9**	**+0.2**
HAKT				*i* S	**Sn**	**21 17 37.3**	**-0.7**
HAKT	**HAKKARI**	**0.71**	**105**	*i* P	**Pb**	**21 17 25.9**	**+0.2**
HAKT				*i* S	**Sn**	**21 17 37.3**	**-0.7**
CUKT	**Cukurca**	**0.78**	**129**	*e*PG	**Pg**	**21 17 26.5**	**-0.1**
TATV	**Tatvan**	**0.89**	**329**	*i* P	**Pg**	**21 17 28.5**	**-0.2**
TATV	**Tatvan**	**0.89**	**329**	*i* P	**Pg**	**21 17 28.5**	**-0.2**
TVAN	**Van**	**0.90**	**29**	*i* P	**Pb**	**21 17 28.5**	**-0.4**
TVAN	**Van**	**0.90**	**29**	*i* P	**Pb**	**21 17 28.5**	**-0.4**
BTMT	**Batman**	**1.16**	**293**	*e*PN	**Pg**	**21 17 33.5**	**-0.3**
BTMT				*e*SN	**Sg**	**21 17 50.8**	**+1.8**
TUTA	**Tutak**	**1.65**	**359**	*i* P	**Pb**	**21 17 42.0**	**+0.2**
TUTA	**Tutak**	**1.65**	**359**	*i* P	**Pb**	**21 17 42.0**	**+0.2**
MARD	**Mardin**	**1.70**	**256**	*i* P	**Pb**	**21 17 41.8**	**-0.7**
MARD				*i* S	**Sg**	**21 18 06.2**	**+0.1**
BNGL	**BINGOL**	**1.80**	**313**	*i* P	**Pg**	**21 17 45.5**	**-0.5**
BNGL				*i* S	**Sg**	**21 18 08.8**	**-0.5**
BNGB	**Bing˜¶l**	**2.11**	**307**	*e*PN	**Pn**	**21 17 47.4**	**+1.1**
DIYA	**Diyarbakir**	**2.17**	**276**	*i* P	**Pn**	**21 17 48.2**	**+1.1**
DIYA				*i* S	**Sb**	**21 18 16.5**	**-0.6**
DIYA	**Diyarbakir**	**2.17**	**276**	*i* P	**Pn**	**21 17 48.2**	**+1.1**
DIYA				*i* S	**Sb**	**21 18 16.5**	**-0.6**

IDC 21 21:25:14.4±2.8,**24°26N**×**142°50E, h0**km, **mb3.7**/3, **mb1 3.9**/3, **mb1mx3.4**/24, **mbtmpg3.7**/3, **Error ellipse: s-maj=124.5km s-min=29.7km az=79.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.65**	**191**	P	P	21 33 28.8	-0.2
	0.3nm,0.4s,baz=7.2,slow=8.0,SNR=14						
MKAR	**Makanchi Array**	**52.52**	**311**	P	P	21 34 30.1	+0.6
	0.3nm,0.6s,baz=89,slow=8.4,SNR=3.5						
FINES	**FINESS Array B**	**80.61**	**334**	P	P	21 37 28.2	-0.5
	0.6nm,0.4s,baz=80,slow=6.2,SNR=9.8						

ISC 21 21:40:50.5±1.5,**44°16N**±0.08×**15°9E**±0.1, **h5**km±15km, **n5**, σ=**41**/10, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVLJ	**Novalja**	**0.84**	**299**	*e*Pg	**Pg**	**21 41 06.3**	**-0.2**
NVLJ				Sg	**Sb**	**21 41 19.4**	**+0.4**
BOJS	**Bojanci**	**1.42**	**342**	*i* Pg	**Pb**	**21 41 17.1**	**-0.4**
BOJS				*i* Sg	**Sg**	**21 41 36.8**	**+0.7**
CRES	**Cresnjev**	**1.70**	**350**	*i* Pn	**Pn**	**21 41 20.9**	**+0.2**
CRES				*i* Sg	**Sn**	**21 41 42.8**	**0.0**
VISS	**Visnje**	**1.81**	**336**	*i* Pn	**Pb**	**21 41 23.7**	**-0.3**
VISS				*i* Sg	**Sb**	**21 41 46.9**	**-0.1**
STON	**Ston**	**1.84**	**134**	*e*Pn	**Pb**	**21 41 24.4**	**-0.1**
STON				Sn	**Sg**	**21 41 49.8**	**+0.2**

*NOU **21** 21:43:17.2±0.3, 12.84S×167.85E, h30km, ML3.3*
*ISCJB **21** 21:43:23.1±1.5, 13.36S±0.05×166.95E±0.08, h85km±12km, mb4.7/38, Error ellipse: s-maj=13.3km s-min=7.2km az=161.3*
*IDC **21** 21:43:24.9±0.9, 13.45S×167.00E, h90km±6km, mb4.1/16, mb1 4.2/18, mb1mx4.1/23, mbtmpg4.1/18, MS3.5/8, Ms1 3.6/8, ms1mx3.2/29, Error ellipse: s-maj=16.8km s-min=13.6km az=116.0*
*NEIC **21** 21:43:24.9±0.3, 13.42S×167.01E, mb5.0/11, Error ellipse: s-maj=9.1km s-min=6.9km az=111.0*
*BJI **21** 21:43:25.8, 13.03S×166.85E, h93km, mB4.9/22, mb5.0/33*
*AUST **21** 21:44:09.6, 14.43S×165.39E, h450km*
ISC 21 21:43:25.8±0.5,**13°42S**±0.05×**167°05E**±0.07, **h100**km±2km, **h100**km:**pP-P, n124**, σ=**146**/186, **mb4.8**/38, **1C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**8.01**	**299**	*e*Pn	**Pn**	**21 45 18.8**	**-0.6**
HNR				*e*Sn	**Sn**	**21 46 44.8**	**-3.6**
HNR	**Honiara**	**8.01**	**299**	P	**Pn**	**21 45 19.9**	**+0.5**
	18nm,0.3s,baz=156,slow=7.9,SNR=7.0						
HNR				S	**Sn**	**21 46 45.2**	**-3.2**
	44nm,0.3s,baz=168,slow=20,SNR=11						
DZM	**Mont Dzumac**	**8.62**	**184**	*e*P	**Pn**	**21 45 28.0**	**+0.1**
DZM	**Mont Dzumac**	**8.62**	**184**	*e*Pn	**Pn**	**21 45 28.1**	**+0.2**
	50nm,0.4s						
DZM				*e*Sn	**Sn**	**21 47 05.7**	**+2.2**
NOUC	**Port Laguerre**	**8.66**	**185**	*e*S	**Sn**	**21 47 05.1**	**+0.8**
NOUC				AMP		21 47 22.1	
	comp=Z,19nm,3.7s						
BAYA	**Yate Dam**	**8.69**	**181**	*e*P	**Pn**	**21 45 28.3**	**-0.4**
EIDS	**Eidsvold**	**19.16**	**229**	*e*Pn	**Pn**	**21 47 42.6**	**-0.7**
	comp=Z,20nm,0.6s						
EIDS	**Eidsvold**	**19.16**	**229**	P	**Pn**	**21 47 43.1**	**-0.2**
	baz=17,SNR=9.5						
PMG	**Port Moresby**	**19.89**	**279**	P	**P**	**21 47 49.2**	**-0.2**
PMG	**Port Moresby**	**19.89**	**279**	P	**P**	**21 47 49.2**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=148,slow=9.5,SNR=3.7						
AFI	**Afiamalu**	**20.59**	**94**	LR	LR	21 54 30.0	
	comp=Z,93nm,20.1s,baz=284,slow=32						
CTA	**Charters Tower**	**20.97**	**249**	P	**P**	**21 48 00.7**	**-0.3**
CTA	**Charters Tower**	**20.97**	**249**	P	**P**	**21 48 00.7**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=68,slow=11,SNR=2.8						
CTA				LR	LR	21 54 39.5	
	comp=Z,137nm,18.0s,baz=53,slow=32						
RMQ	**Roma**	**21.52**	**230**	P	**P**	**21 48 07.8**	**+1.0**
	baz=20,SNR=7.3						
NIUE	**Niue**	**22.80**	**107**	P	pP	21 48 48.6	+8.6
	baz=24,SNR=3.1						
COEN	**Coen**	**23.20**	**266**	P	**P**	**21 48 25.0**	**+0.9**
	baz=22,SNR=7.5						
URZ	**Urewera**	**26.31**	**162**	LR	LR	21 57 26.0	
	comp=Z,194nm,19.9s,baz=283,slow=32						

CMSA	**Cobar Meteorol**	**26.64**	**224**	P		**P**	**21 48 58.0**	**+2.9**
	baz=25,SNR=8.6								
STKA	**Stephens Creek**	**29.69**	**228**	*e*P		**P**	**21 49 21.6**	**-0.7**
STKA				PcP		**PcP**	**21 52 23.7**	**-0.6**
STKA				ScP		**ScP**	**21 55 58.4**	**+1.1**
STKA	**Stephens Creek**	**29.69**	**228**	P		**P**	**21 49 22.5**	**+0.2**
	comp=Z,3.0nm,0.5s,baz=50,slow=8.9,SNR=13								
STKA				PcP		**PcP**	**21 52 23.7**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=53,slow=3.4,SNR=5.5								
STKA				ScP		**ScP**	**21 55 58.4**	**+1.1**
	comp=Z,4.8nm,0.8s,baz=60,slow=1.8,SNR=6.9								
STKA	**Stephens Creek**	**29.69**	**228**	P		**P**	**21 49 22.8**	**+0.5**
	baz=28,SNR=14								
WRAB	**Tennant Creek**	**31.95**	**254**	*e*P		**P**	**21 49 40.6**	**-1.7**
WRA	**Warramunga Arr**	**31.96**	**254**	P		**P**	**21 49 40.7**	**-1.7**
WRA				PcP		**PcP**	**21 52 30.2**	**-0.3**
WRA				PKiKP		**PKiKP**	**21 59 57.0**	**-1.9**
WRA	**Warramunga Arr**	**31.96**	**254**	P		**P**	**21 49 40.7**	**-1.7**
	comp=Z,1.6nm,0.5s,baz=85,slow=9.4,SNR=33								
WRA				PcP		**PcP**	**21 52 30.2**	**-0.3**
	comp=Z,1.6nm,1.0s,baz=81,slow=3.5,SNR=8.3								
WRA				PKiKP		**PKiKP**	**21 59 57.0**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=3.9,slow=0.6,SNR=4.7								
ASAR	**Alice Springs**	**32.96**	**247**	P		**P**	**21 49 49.5**	**-1.7**
ASAR				PcP		**PcP**	**21 52 32.7**	**-0.6**
ASAR				ScP		**ScP**	**21 56 09.6**	**+1.1**
ASAR	**Alice Springs**	**32.96**	**247**	P		**P**	**21 49 49.5**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=76,slow=9.4,SNR=16								
ASAR				PcP		**PcP**	**21 52 32.7**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=72,slow=2.4,SNR=12								
ASAR				ScP		**ScP**	**21 56 09.6**	**+1.1**
	comp=Z,1.4nm,0.7s,baz=85,slow=3.4,SNR=9.5								
KNRA	**Kununurra**	**37.09**	**262**	P		**P**	**21 50 26.0**	**-0.7**
	baz=35,SNR=5.6								
FITZ	**Fitzroy Crossi**	**40.06**	**258**	*e*P		**P**	**21 50 50.4**	**-1.2**
FITZ	**Fitzroy Crossi**	**40.06**	**258**	P		**P**	**21 50 52.0**	**+0.4**
	baz=38,SNR=4.2								
PPT	**Papeete**	**41.94**	**101**	LR		LR	22 04 07.0		
	comp=Z,58nm,21.2s,baz=182,slow=30								
MEEK	**Meekatharra**	**47.10**	**246**	P		**P**	**21 51 47.8**	**-0.2**
	baz=45,SNR=13								
KAPI	**Kappang**	**47.35**	**276**	*e*P		**P**	**21 51 48.9**	**-1.2**
	comp=Z,17nm,0.9s								
NWAO	**Narrogin (SRO)**	**49.24**	**238**	*e*P		**P**	**21 52 03.5**	**-0.9**
MORW	**Morawa**	**49.65**	**243**	P		**P**	**21 52 07.2**	**-0.3**
	baz=48,SNR=5.1								
KKM	**Kota Kinabalu**	**54.05**	**288**	*e*P		**P**	**21 52 40.7**	**+0.2**
	comp=Z,64nm,1.4s								
KKM	**Kota Kinabalu**	**54.05**	**288**	P		**P**	**21 52 40.7**	**+0.2**
	baz=53,SNR=4.7								
MJAR	**Matsushiro Arr**	**56.65**	**332**	P		**P**	**21 52 58.0**	**-0.6**
MJAR	**Matsushiro Arr**	**56.65**	**332**	P		**P**	**21 52 58.0**	**-0.6**
	comp=Z,5.8nm,0.5s,baz=172,slow=8.5,SNR=21								
MAJO	**Matsushiro**	**56.65**	**332**	*e*P		**P**	**21 52 58.1**	**-0.6**
	comp=Z,34nm,1.5s								
MAT	**Matsushiro**	**56.65**	**332**	P		**P**	**21 52 58.2**	**-0.4**
KSM	**Kuching**	**58.15**	**280**	*e*P		**P**	**21 53 09.3**	**-0.4**
	comp=Z,24nm,1.4s								
KSM	**Kuching**	**58.15**	**280**	P		**P**	**21 53 09.9**	**+0.3**
	baz=57,SNR=5.1								
TPUB	**Ta-pu**	**58.26**	**308**	*e*P		**P**	**21 53 09.8**	**-0.4**

CD2				PP	**PP**	21 57 49.8	+3.5
CD2				S	**S**	22 04 26.1	-1.0
CD2				SKS	**SKSac**	22 04 52.1	-5.0
CD2				ScS	**SKKSac**	22 04 57.3	-0.1
CD2				SS	**SS**	22 09 19.5	+1.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.2s						
LZH	**Lanzhou**	**77.28**	**312**	*e*P	**P**	21 55 11.3	+1.7
LZH				pP	**pP**	21 55 35.3	-0.1
LZH				sP	**sP**	21 55 45.6	-0.6
LZH				PP	**PP**	21 58 08.5	+3.3
LZH				S	**S**	22 04 52.4	+0.7
LZH				sS	**sS**	22 05 37.3	+1.3
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,5.9s						
LZH				LR	LR		
	comp=N,430nm,18.3s						
LZH				LR	LR		
	comp=E,490nm,17.2s						
LZH				LR	LR		
	comp=Z,630nm,19.1s						
ULN	**Ulaanbaatar**	**80.96**	**324**	*e*P	**P**	21 55 30.0	+0.6
	comp=Z,8.1nm,0.8s						
SONM	**Songino Array**	**81.32**	**324**	P	**P**	21 55 31.5	+0.3
SONM	**Songino Array**	**81.32**	**324**	P	**P**	21 55 31.5	+0.3
	comp=Z,2.8nm,0.8s,baz=130,slow=5.9,SNR=21						
SONM				LR	LR	22 28 19.1	
	comp=Z,37nm,20.0s,baz=241,slow=33						
GTA	**Gaotai**	**81.61**	**314**	*e*P	**P**	21 55 34.4	+1.4
GTA				pP	**pP**	21 55 59.0	0.0
GTA				sP	**sP**	21 56 09.8	0.0
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
LSA	**Lhasa**	**84.68**	**302**	*e*P	**P**	21 55 49.9	+0.5
	comp=Z,8.4nm,0.7s						
ILAR	**Eielson Array**	**85.35**	**18**	P	**P**	21 55 50.7	-0.7
ILAR				pP	**pP**	21 56 15.8	-1.9
ILAR	**Eielson Array**	**85.35**	**18**	P	**P**	21 55 50.7	-0.7
	comp=Z,1.7nm,0.5s,baz=239,slow=5.5,SNR=37						
ILAR				pP	**pP**	21 56 15.8	-1.9
	comp=Z,1.6nm,0.8s,baz=235,slow=6.2,SNR=5.5						
ILAR				LR	LR	22 32 56.8	
	comp=Z,30nm,19.5s,baz=249,slow=35						
TAPN	**Taplejung**	**86.86**	**299**	*e*P	**P**	21 55 59.9	-0.1
	comp=Z,19nm,1.0s						
ODAN	**Odare**	**86.99**	**298**	*e*P	**P**	21 56 00.6	0.0
	comp=Z,41nm,0.8s						
RAMN	**Ramite**	**87.69**	**298**	*e*P	**P**	21 56 03.8	-0.2
	comp=Z,17nm,0.6s						
GUN	**Gumba**	**88.58**	**299**	*e*P	**P**	21 56 08.0	-0.3
	comp=Z,29nm,0.8s						
PKI	**Pulchoki**	**88.88**	**299**	*e*P	**P**	21 56 09.1	-0.6
	comp=Z,49nm,0.9s						
PKIN	**Phulchoki**	**88.90**	**299**	*e*P	**P**	21 56 09.1	-0.6
	comp=Z,26nm,0.8s						
KKN	**Kakani**	**89.05**	**299**	*e*P	**P**	21 56 10.0	-0.3
	comp=Z,27nm,0.8s						
DMN	**Daman**	**89.15**	**299**	*e*P	**P**	21 56 10.8	-0.1
	comp=Z,49nm,0.7s						
DANN	**Dangsing**	**90.50**	**299**	*e*P	**P**	21 56 16.0	-1.2
	comp=Z,18nm,0.8s						
PYUN	**Piuthan**	**91.09**	**298**	*e*P	**P**	21 56 18.7	-1.1
	comp=Z,22nm,0.9s						
WMQ	**Urumqi**	**91.66**	**315**	*e*P	**P**	21 56 22.5	+0.6
TXAR	**Lajitas Array**	**95.84**	**61**	LR	LR	22 33 52.4	
	comp=Z,34nm,18.3s,baz=85,slow=32						
MK31	**Makanchi Array**	**96.11**	**317**	*e*P	**P**	21 56 42.0	-0.2
MKAR	**Makanchi Array**	**96.11**	**317**	P	**P**	21 56 42.1	-0.2
MKAR				pP	**pP**	21 57 07.0	-1.8
MKAR	**Makanchi Array**	**96.11**	**317**	P	**P**	21 56 42.1	-0.2
	comp=Z,1.9nm,0.6s,baz=93,slow=5.4,SNR=25						
MKAR				pP	**pP**	21 57 07.0	-1.8
	comp=Z,1.3nm,0.7s,baz=95,slow=6.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**96.21**	**324**	P	**P**	21 56 41.7	-0.8
ZALV	**Zalesovo Beam**	**96.21**	**324**	P	**P**	21 56 41.7	-0.8
	comp=Z,1.7nm,0.6s,baz=108,slow=3.8,SNR=7.3						
YKA	**Yellowknife Ar**	**96.49**	**27**	P	**P**	21 56 42.4	-1.2
YKA				pP	**pP**	21 57 07.7	-2.3
YKA	**Yellowknife Ar**	**96.49**	**27**	P	**P**	21 56 42.3	-1.2
	comp=Z,0.3nm,0.6s,baz=262,slow=4.8,SNR=4.7						
YKA				pP	**pP**	21 57 07.7	-2.3
	comp=Z,0.2nm,0.6s,baz=263,slow=4.1,SNR=2.6						
KSH	**Kashi**	**99.22**	**308**	*e*P	**Pdif**	21 56 58.0	+1.5
KSH				*e*pP	**pP**	21 57 24.4	+1.3
KSH				*e*sP	**sP**	21 57 34.6	+0.8
KSH				*e*PP	**PP**	22 01 03.3	+2.6
KSH				*e*SKS	**SKSac**	22 07 26.0	0.0
KSH				*e*S	**ScS**	22 08 17.3	-2.6
KSH				*e*sS	**sS**	22 09 03.3	-2.7
KSH				*e*SS	**SS**	22 15 12.3	+1.1
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KSH				LR	LR		
	comp=N,42nm,3.8s						
KSH				LR	LR		
	comp=E,54nm,5.7s						
KSH				LR	LR		
	comp=Z,42nm,3.5s						
ARCES	**ARCESS Array B**	**118.94**	**346**	PKP	**PKPdf**	22 02 01.4	-0.7
ARCES				PKKPbc	**PKKPab**	22 12 15.6	-3.3
ARCES	**ARCESS Array B**	**118.94**	**346**	PKP	**PKPdf**	22 02 01.4	-0.7
	comp=Z,3.3nm,0.6s,baz=48,slow=1.3,SNR=37						
ARCES				PKKPbc	**PKKPab**	22 12 15.6	-3.3
	comp=Z,0.5nm,0.6s,baz=216,slow=2.9,SNR=5.7						
JOF	**Joensuu**	**121.60**	**338**	*e*pkp	**PKPdf**	22 02 06.9	-0.4
KAF	**Kangasniemi**	**123.90**	**339**	*e*pkp	**PKPdf**	22 02 11.0	-0.7
BOSA	**Boshof**	**124.22**	**221**	PKP	**PKPdf**	22 02 13.7	0.0
BOSA	**Boshof**	**124.22**	**221**	PKP	**PKPdf**	22 02 13.7	0.0
	comp=Z,3.1nm,0.7s,baz=99,slow=2.5,SNR=3.9						
FINES	**FINESS Array B**	**124.43**	**338**	PKP	**PKPdf**	22 02 12.4	-0.3
FINES				PKKP	PKKPdf	22 12 48.9	+10
FINES	**FINESS Array B**	**124.43**	**338**	PKP	**PKPdf**	22 02 12.4	-0.3
	comp=Z,1.6nm,0.7s,baz=66,slow=3.4,SNR=7.7						
FINES				PKKP	PKKPdf	22 12 48.9	+10
	comp=Z,0.5nm,0.6s,baz=252,slow=2.2,SNR=3.5						
NB2	**NORSAR Subarra**	**129.31**	**345**	PKPdf	**PKPdf**	22 02 21.6	-0.6
	comp=Z,1.0nm,0.8s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**129.31**	**345**	PKP	**PKPdf**	22 02 22.7	+0.5
NOA	**NORSAR Array B**	**129.31**	**345**	PKP	**PKPdf**	22 02 22.7	+0.5
	comp=Z,1.1nm,0.7s,baz=32,slow=2.1,SNR=7.8						
HFS	**Hagfors**	**129.41**	**343**	PKP	**PKPdf**	22 02 21.8	-0.6
HFS	**Hagfors**	**129.41**	**343**	PKP	**PKPdf**	22 02 21.8	-0.6
	comp=Z,1.1nm,0.7s,baz=207,slow=0.6,SNR=4.1						
GERES	**GERESS Array B**	**138.38**	**333**	PKP	**PKPdf**	22 02 39.9	+0.2
GERES	**GERESS Array B**	**138.38**	**333**	PKP	**PKPdf**	22 02 39.9	+0.2
	comp=Z,0.9nm,0.8s,baz=66,slow=2.5,SNR=6.0						
CEL	**Celeste**	**144.41**	**319**	*e*PKPdf	**PKPab**	22 02 48.7	-0.4
KEST	**Kesra**	**150.06**	**322**	*e*PKPbc	**PKPbc**	22 03 05.4	+0.1
KEST	**Kesra**	**150.06**	**322**	PKPbc	**PKPbc**	22 03 05.5	+0.2
	comp=Z,3.5nm,0.7s,baz=71,slow=1.5,SNR=19						
PGAV	**Gavieira, Arco**	**151.27**	**353**	*e*PKP	**PKPbc**	22 03 08.4	+0.4
POLO	**Lamas de Olo**	**151.79**	**352**	*e*PKP	**PKPbc**	22 03 09.7	+0.5
MVO	**Moncorvo**	**151.88**	**350**	*e*PKP	**PKPbc**	22 03 09.1	-0.2
ESDC	**Sonseca Array**	**152.67**	**345**	PKPbc	**PKPbc**	22 03 11.3	+0.1
ESDC				PKPab	**PKPab**	22 03 22.5	+0.5
ESDC	**Sonseca Array**	**152.67**	**345**	PKPbc	**PKPbc**	22 03 11.3	+0.1
	comp=Z,1.8nm,0.7s,baz=8,0,slow=2.6,SNR=14						
ESDC				PKPab	**PKPab**	22 03 22.5	+0.5
	comp=Z,1.3nm,0.7s,baz=9.4,slow=4.3,SNR=5.8						
MTE	**Manteigas**	**152.71**	**351**	*e*PKP	**PKPbc**	22 03 11.7	+0.5
PMRV	**Marv??o**	**153.63**	**350**	*e*PKP	**PKPbc**	22 03 13.6	+0.4
TORD	**Torodi Ar. Bea**	**165.74**	**271**	PKP	**PKPdf**	22 03 19.3	-0.4
TORD				PKPab	**PKPab**	22 04 19.3	-0.2
TORD	**Torodi Ar. Bea**	**165.74**	**271**	PKP	**PKPdf**	22 03 19.3	-0.4
	comp=Z,1.2nm,0.9s,baz=76,slow=1.6,SNR=5.9						
TORD				PKPab	**PKPab**	22 04 19.3	-0.2
	comp=Z,1.5nm,0.8s,baz=85,slow=3.5,SNR=8.5						

*IDC **21** 21:48:52.6±1.2,34°.83N×26°.43E, h0km, mb3.7/6, mb1 3.6/8, mb1mx3.4/28, mbtmp3.6/8, ML3.3/2, Error ellipse: s-maj=27.8km s-min=23.9km az=71.0*
*ISCJB **21** 21:48:57.6±0.7,34°.66N±0°.07×26°.51E±0°.04, h68km±6km, mb3.5/6, Error ellipse: s-maj=12.2km s-min=5.3km az=177.4*
*ATH **21** 21:49:00.7, 34°.90N×26°.35E, h48km±3km, MD3.5/11*
*CSEM **21** 21:49:00.6±0.5, 34°.79N×26°.43E, h40km, MD3.5, Error ellipse: s-maj=13.4km s-min=3.8km az=172.0*
ISC 21 21:48:57.7±1.0,**34°.64N**±0°.06×**26°.52E**±0°.04,**h50**km±11km,
n55,σ1°**75**/68,**mb3.5**/6,**Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.54**	**332**	*e*P	**Pn**	**21 49 09.8**	**+0.3**
ZKR				*e*S	**Sn**	**21 49 15.9**	**-2.1**
ZKR	**Zakros**	**0.54**	**332**	*e*P	**Pn**	**21 49 09.8**	**+0.3**
ZKR				*e*S	**Sn**	**21 49 15.9**	**-2.1**
NPS	**Neapolis**	**0.97**	**310**	*e*P	**Pn**	**21 49 16.1**	**+1.0**
NPS				*e*S	**Sn**	**21 49 25.1**	**-2.9**
NPS	**Neapolis**	**0.97**	**310**	*e*P	**Pn**	**21 49 16.1**	**+1.0**
NPS				*e*S	**Sn**	**21 49 25.1**	**-2.9**
LAST	**Lasithi**	**1.01**	**302**	*e*P	**Pn**	**21 49 16.3**	**+0.7**
LAST				*e*S	**Sn**	**21 49 27.0**	**-1.8**
LAST	**Lasithi**	**1.01**	**302**	*e*P	**Pn**	**21 49 16.3**	**+0.7**
LAST				*e*S	**Sn**	**21 49 27.0**	**-1.8**
KARP	**Karpathos**	**1.05**	**30**	*e*P	**Pn**	**21 49 18.9**	**+2.7**
KARP				*e*S	**Sn**	**21 49 31.3**	**+1.5**
KARP	**Karpathos**	**1.05**	**30**	*e*P	**Pn**	**21 49 18.9**	**+2.7**
KARP				*e*S	**Sn**	**21 49 31.3**	**+1.5**
SIVA	**Sivas**	**1.46**	**286**	*e*P	**Pn**	**21 49 23.3**	**+1.6**
SIVA	**Sivas**	**1.46**	**286**	*e*P	**Pn**	**21 49 23.3**	**+1.6**
IDI	**Anoyia**	**1.49**	**296**	*e*P	**Pn**	**21 49 23.4**	**+1.2**
IDI	**Anoyia**	**1.49**	**296**	*e*P	**Pn**	**21 49 23.4**	**+1.2**
SANT	**Santorini**	**1.94**	**334**	*e*P	**Pn**	**21 49 28.6**	**+0.4**
SANT	**Santorini**	**1.94**	**334**	*e*P	**Pn**	**21 49 28.6**	**+0.4**
ARG	**Arkhangelos**	**2.05**	**39**	*e*P	**Pn**	**21 49 32.2**	**+2.5**
ARG	**Arkhangelos**	**2.05**	**39**	*e*P	**Pn**	**21 49 32.2**	**+2.5**
VAM	**Vamos**	**2.06**	**293**	*e*P	**Pn**	**21 49 31.1**	**+1.3**
VAM	**Vamos**	**2.06**	**293**	*e*P	**Pn**	**21 49 31.1**	**+1.3**
APE	**Apeiranthos**	**2.56**	**342**	*e*P	**Pn**	**21 49 37.4**	**+0.6**
APE	**Apeiranthos**	**2.56**	**342**	*e*P	**Pn**	**21 49 37.4**	**+0.6**
TURN	**Turunc**	**2.80**	**37**	*i* P	**Pn**	**21 49 38.3**	**-1.7**
TURN				*i* S	**Sn**	**21 50 08.4**	**-4.1**
TURN	**Turunc**	**2.80**	**37**	*i* P	**Pn**	**21 49 38.3**	**-1.7**
ANKY	**Antikythira Is**	**2.91**	**296**	*e*P	**Pn**	**21 49 43.2**	**+1.7**
ANKY	**Antikythira Is**	**2.91**	**296**	*e*P	**Pn**	**21 49 43.2**	**+1.7**
AKAS	**Kas**	**2.98**	**57**	*i* P	**Pn**	**21 49 44.4**	**+1.8**
AKAS				*i* S	**Sn**	**21 50 16.6**	**-0.5**
AKAS	**Kas**	**2.98**	**57**	*i* P	**Pn**	**21 49 44.4**	**+1.8**
AKAS				*i* S	**Sn**	**21 50 16.6**	**-0.5**
KYTH	**Kithira**	**3.29**	**301**	*e*P	**Pn**	**21 49 47.7**	**+1.0**
KYTH	**Kithira**	**3.29**	**301**	*e*P	**Pn**	**21 49 47.7**	**+1.0**
GOLH	**Golhisar**	**3.58**	**43**	*i* P	**Pn**	**21 49 52.9**	**+2.1**
GOLH	**Golhisar**	**3.58**	**43**	*i* P	**Pn**	**21 49 52.9**	**+2.1**
VLI	**Veliai**	**3.58**	**306**	*e*P	**Pn**	**21 49 50.4**	**-0.4**
VLI	**Veliai**	**3.58**	**306**	*e*P	**Pn**	**21 49 50.4**	**-0.4**
KORT	**Korkueli**	**3.90**	**52**	*i* P	**Pn**	**21 49 57.2**	**+1.9**
KORT	**Korkueli**	**3.90**	**52**	*i* P	**Pn**	**21 49 57.2**	**+1.9**
DYR	**Agios Nikonas**	**4.02**	**303**	*e*P	**Pn**	**21 49 57.2**	**+0.5**
DYR	**Agios Nikonas**	**4.02**	**303**	*e*P	**Pn**	**21 49 57.2**	**+0.5**
KHAL	**Karahalli**	**4.43**	**32**	*i* P	**Pn**	**21 50 03.5**	**+1.1**
KHAL	**Karahalli**	**4.43**	**32**	*i* P	**Pn**	**21 50 03.5**	**+1.1**
LTK	**Loutraki**	**4.43**	**321**	*e*P	**Pn**	**21 50 04.2**	**+1.7**
LTK	**Loutraki**	**4.43**	**321**	*e*P	**Pn**	**21 50 04.2**	**+1.7**
ITM	**Ithomi**	**4.51**	**306**	*e*P	**Pn**	**21 50 03.9**	**+0.4**
ITM	**Ithomi**	**4.51**	**306**	*e*P	**Pn**	**21 50 03.9**	**+0.4**
GAZI	**Gazipasa**	**4.99**	**70**	*i* P	**Pn**	**21 50 10.7**	**+0.6**
GAZI	**Gazipasa**	**4.99**	**70**	*i* P	**Pn**	**21 50 10.7**	**+0.6**
LAKA	**Lakka**	**5.13**	**316**	*e*P	**Pn**	**21 50 12.6**	**+0.5**
LAKA	**Lakka**	**5.13**	**316**	*e*P	**Pn**	**21 50 12.6**	**+0.5**
ERMK	**Ermenek**	**5.57**	**67**	*i* P	**Pn**	**21 50 21.2**	**+2.9**
MMAI	**Mount Meron Ar**	**7.56**	**100**	Pn	**Pn**	**21 50 46.5**	**+1.1**
	1.0nm,0.3s,baz=282,slow=11,SNR=6.8						
MMAI				Sn	**Sn**	**21 52 06.0**	**-3.9**
	0.7nm,0.3s,baz=322,slow=11,SNR=3.1						
EIL	**Elat**	**8.69**	**122**	Pn	**Pn**	**21 51 01.3**	**+0.5**
	0.2nm,0.3s,baz=62,slow=19,SNR=9.7						
EIL				Sn	**Sn**	**21 52 32.8**	**-4.6**
	1.0nm,0.3s,baz=325,slow=18,SNR=6.3						
FINES	**FINESS Array B**	**26.83**	**360**	P	**P**	**21 54 32.6**	**-0.4**
	1.4nm,1.0s,baz=170,slow=11,SNR=3.7						
HFS	**Hagfors**	**26.85**	**346**	P	**P**	**21 54 32.4**	**-0.9**
	0.4nm,0.6s,baz=145,slow=11,SNR=3.6						
EKA	**Eskdalemuir Ar**	**29.11**	**324**	P	**P**	**21 54 53.2**	**-0.3**
	0.2nm,0.4s,baz=128,slow=9.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**31.04**	**233**	P	**P**	**21 55 12.7**	**+1.8**
	0.3nm,0.4s,baz=35,slow=8.8,SNR=15						
ARCES	**ARCESS Array B**	**34.96**	**359**	P	**P**	**21 55 43.9**	**-0.6**
	1.3nm,0.9s,baz=173,slow=8.2,SNR=5.6						
SCHQ	**Schefferville**	**64.31**	**320**	P	**P**	**21 59 28.6**	**+0.9**
	1.1nm,0.4s,baz=80,slow=6.6,SNR=6.7						

*ISCJB **21** 21:53:55.3±1.5, 39°.05N±0°.05×44°.29E±0°.08, h2km±10km, Error ellipse: s-maj=10.6km s-min=7.9km az=5.5*
*DDA **21** 21:53:56.3, 39°.00N×44°.16E, h8km, MD2.8*
*CSEM **21** 21:53:56.3, 39°.00N×44°.16E, h8km, MD2.8, After DDA*
ISC 21 21:53:55.7±1.4,**38°.99N**±0°.03×**44°.23E**±0°.06,**h7**km±11km,
n13,σ1°**17**/24,**Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLDR	**Caldiran**	**0.29**	**303**	*e*PG	**Pg**	**21 54 00.9**	**-0.6**
CLDR				*e*SG	**Sg**	**21 54 05.4**	**+0.1**
DYDN	**Diyadin**	**0.69**	**323**	*i* P	**Pg**	**21 54 08.7**	**-0.4**
DYDN				*i* S	**Sg**	**21 54 18.2**	**0.0**
DYDN	**Diyadin**	**0.69**	**323**	*i* P	**Pg**	**21 54 08.7**	**-0.4**
DYDN				*i* S	**Sg**	**21 54 18.2**	**0.0**
TVAN	**Van**	**0.79**	**235**	*i* P	**Pb**	**21 54 12.1**	**+0.2**
TVAN				*i* S	**Sn**	**21 54 26.2**	**+0.6**
TVAN	**Van**	**0.79**	**235**	*i* P	**Pb**	**21 54 12.1**	**+0.2**
TVAN				*i* S	**Sn**	**21 54 26.2**	**+0.6**
TUTA	**Tutak**	**1.17**	**291**	*i* P	**Pb**	**21 54 18.4**	**-0.1**
TUTA				*i* S	**Sg**	**21 54 33.1**	**-0.4**
TUTA	**Tutak**	**1.17**	**291**	*i* P	**Pb**	**21 54 18.4**	**-0.1**
TUTA				*i* S	**Sg**	**21 54 33.1**	**-0.4**
GNI	**Garni**	**1.23**	**19**	*e*PN	**Pb**	**21 54 18.4**	**-1.0**
HAKT	**HAKKARI**	**1.48**	**196**	*i* P	**Pg**	**21 54 24.7**	**+0.5**
HAKT				*i* S	**Sg**	**21 54 44.4**	**+0.9**
HAKT	**HAKKARI**	**1.48**	**196**	*i* P	**Pg**	**21 54 24.7**	**+0.5**
HAKT				*i* S	**Sg**	**21 54 44.4**	**+0.9**
DIGO	**Kars**	**1.57**	**335**	*i* P	**Pn**	**21 54 24.4**	**+0.1**
DIGO				*i* S	**Sg**	**21 54 49.2**	**+3.0**
DIGO	**Kars**	**1.57**	**335**	*i* P	**Pn**	**21 54 24.4**	**+0.1**
DIGO				*i* S	**Sg**	**21 54 49.2**	**+3.0**
CUKT	**Cukurca**	**1.81**	**196**	*e*PN	**Pn**	**21 54 25.2**	**-2.1**

*DDA **21** 22:00:23.8, 34°.58N×26°.86E, h20km, MD3.4*
*ISCJB **21** 22:00:29.6±1.9, 35°.06N±0°.07×27°.28E±0°.05, h12km±15km, Error ellipse: s-maj=12.3km s-min=5.6km az=160.3*
*ATH **21** 22:00:30.6, 35°.08N×27°.18E, h21km±1km, MD3.2/9*
*CSEM **21** 22:00:31.4±0.4, 35°.13N×27°.23E, h15km, MD3.2, Error ellipse: s-maj=13.3km s-min=6.0km az=160.0*
ISC 21 22:00:30.3±1.5,**35°.06N**±0°.06×**27°.26E**±0°.04,**h16**km±11km,
n32,σ1°**93**/41,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.49**	**351**	*e*PB	**Pb**	**22 00 39.9**	**-0.7**
KARP				*e*SB	**Sb**	**22 00 47.3**	**-0.3**
KARP	**Karpathos**	**0.49**	**351**	*e*Pb	**Pb**	**22 00 39.9**	**-0.7**
KARP				*e*Sb	**Sb**	**22 00 47.3**	**-0.3**
ZKR	**Zakros**	**0.85**	**274**	*e*PN	**Pb**	**22 00 46.1**	**-0.6**
ARG	**Arkhangelos**	**1.35**	**31**	*e*PN	**Pg**	**22 00 56.6**	**+0.2**
ARG				*e*SN	**Sg**	**22 01 16.0**	**+1.9**
ARG	**Arkhangelos**	**1.35**	**31**	*e*Pn	**Pg**	**22 00 56.6**	**+0.2**
NPS	**Neapolis**	**1.36**	**279**	*e*PN	**Pg**	**22 00 55.4**	**-1.1**
NPS				*e*SN	**Sn**	**22 01 12.8**	**+0.4**
NPS	**Neapolis**	**1.36**	**279**	*e*Pn	**Pg**	**22 00 55.4**	**-1.1**
NPS				*e*Sn	**Sn**	**22 01 12.8**	**+0.4**
LAST	**Lasithi**	**1.46**	**275**	*e*PN	**Pb**	**22 00 57.0**	**-0.1**
LAST	**Lasithi**	**1.46**	**275**	*e*Pn	**Pb**	**22 00 57.0**	**-0.1**
IDI	**Anoyia**	**1.95**	**277**	*e*PN	**Pn**	**22 01 03.8**	**+1.0**
IDI	**Anoyia**	**1.95**	**277**	*e*Pn	**Pn**	**22 01 03.8**	**+1.0**
SANT	**Santorini**	**1.96**	**312**	*e*PB	**Pn**	**22 01 03.2**	**+0.3**
SANT	**Santorini**	**1.96**	**312**	*e*Pb	**Pn**	**22 01 03.2**	**+0.3**
SIVA	**Sivas**	**2.01**	**270**	*e*PN	**Pb**	**22 01 05.0**	**-1.4**
SIVA	**Sivas**	**2.01**	**270**	*e*Pn	**Pb**	**22 01 05.0**	**-1.4**
TURN	**Turunc**	**2.12**	**31**	*i* P	**Pn**	**22 01 02.5**	**-2.4**
TURN				*i* S	**Sn**	**22 01 30.6**	**-0.3**
TURN	**Turunc**	**2.12**	**31**	*i* P	**Pn**	**22 01 02.5**	**-2.4**
TURN				*i* S	**Sn**	**22 01 30.6**	**-0.3**
AKAS	**Kas**	**2.24**	**58**	*i* P	**Pn**	**22 01 07.8**	**+0.9**
AKAS				*i* S	**Sn**	**22 01 34.6**	**+0.3**
AKAS	**Kas**	**2.24**	**58**	*i* P	**Pn**	**22 01 07.8**	**+0.9**
AKAS				*i* S	**Sn**	**22 01 34.6**	**+0.3**
VAM	**Vamos**	**2.53**	**279**	*e*PN	**Pn**	**22 01 12.0**	**+1.4**
VAM	**Vamos**	**2.53**	**279**	*e*Pn	**Pn**	**22 01 12.0**	**+1.4**
AYDN	**Tasoluk**	**2.65**	**11**	*i* P	**Pn**	**22 01 13.1**	**+0.8**
GOLH	**Golhisar**	**2.86**	**40**	*i* P	**Pn**	**22 01 16.3**	**+0.9**
GOLH	**Golhisar**	**2.86**	**40**	*i* P	**Pn**	**22 01 16.3**	**+0.9**
ANKY	**Antikythira Is**	**3.33**	**285**	*e*PN	**Pn**	**22 01 22.8**	**+1.2**
ANKY	**Antikythira Is**	**3.33**	**285**	*e*Pn	**Pn**	**22 01 22.8**	**+1.2**
VLI	**Veliai**	**3.88**	**297**	*e*PN	**Pn**	**22 01 30.0**	**+0.8**
VLI	**Veliai**	**3.88**	**297**	*e*Pn	**Pn**	**22 01 30.0**	**+0.8**
DEMI	**Demirci**	**4.14**	**16**	*i* P	**Pn**	**22 01 33.5**	**+0.6**
GAZI	**Gazipasa**	**4.28**	**73**	*i* P	**Pn**	**22 01 34.6**	**-0.2**
GAZI	**Gazipasa**	**4.28**	**73**	*i* P	**Pn**	**22 01 34.6**	**-0.2**

*IDC **21** 22:02:01.4±3.9, 31°.49N×70°.09E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.3/32, mbtmp3.5/7, ML3.5/2, MS3.0/3, Ms1 3.0/3, ms1mx2.4/37, Error ellipse: s-maj=99.8km s-min=26.7km az=131.0*
*ISCJB **21** 22:02:04.4±1.0, 31°.60N±0°.06×70°.3E±0°.1, h33km, mb3.4/4, MS3.0/3, Error ellipse: s-maj=14.8km s-min=6.8km az=150.8*
ISC 21 22:02:06.3±1.3,**31°.5N**±0°.1×**70°.2E**±0°.1,**h35**km,**n19**,
σ0°**89**/16,**mb3.5**/4,**MS3.1**/3,**1D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**11.56**	**1**	Pn	**Pn**	**22 04 48.1**	**-0.6**
	0.7nm,0.5s,baz=175,slow=12,SNR=20						
KK31				⇓Sn	**Sn**	**22 06 56.1**	**-0.4**
	0.9nm,0.5s,baz=171,slow=20						
AAK	**Ala-Archa**	**11.59**	**16**	Pn	**Pn**	**22 04 49.9**	**+0.5**
	0.5nm,0.3s,baz=184,slow=7.0,SNR=9.7						
AAK				Sn	**Sn**	**22 06 56.7**	**-0.9**
	0.1nm,0.3s,baz=120,slow=20,SNR=2.2						
PYUN	**Piuthan**	**11.60**	**104**	*e*P	**Pn**	**22 04 50.1**	**+0.6**
	20nm,0.5s						
DANN	**Dangsing**	**12.15**	**102**	*e*P	**Pn**	**22 04 58.6**	**+1.4**
DMN	**Daman**	**13.52**	**103**	*e*P	**Pn**	**22 05 15.3**	**-0.6**
KKN	**Kakani**	**13.61**	**102**	*e*P	**Pn**	**22 05 15.9**	**-1.1**
	11nm,0.6s						
PKIN	**Phulchoki**	**13.78**	**103**	*e*P	**Pn**	**22 05 18.5**	**-0.8**
	5.1nm,0.5s						
PKI	**Pulchoki**	**13.79**	**103**	*e*P	**Pn**	**22 05 18.6**	**-1.0**
	6.8nm,0.5s						
GUN	**Gumba**	**14.07**	**101**	*e*P	**Pn**	**22 05 22.2**	**-1.2**
	14nm,0.4s						
ODAN	**Odare**	**15.69**	**103**	*e*P	Pn	22 05 38.0	-6.9
TAPN	**Taplejung**	**15.79**	**101**	*e*P	Pn	22 05 39.3	-6.9
MKAR	**Makanchi Array**	**17.85**	**28**	P	**P**	**22 06 13.0**	**+0.8**
	0.1nm,0.3s,baz=205,slow=11,SNR=8.2						
KURBB	**Kurchatov Arra**	**20.05**	**16**	P	Pn	22 06 37.6	-0.6
	0.6nm,0.7s,baz=209,slow=9.8,SNR=6.1						
BVAR	**Borovoye Array**	**21.48**	**0**	P	**P**	**22 06

DEMI	**Demirci**	**1.32**	**346**	*i* P	**Pb**	**22 10 09.2**	**+0.3**
DEMI				*i* S	**Sg**	**22 10 27.7**	**+1.3**
AKAS	**Kas**	**1.57**	**166**	*i* P	**Pg**	**22 10 15.6**	**+1.4**
AKAS				*i* S	**Sg**	**22 10 38.4**	**+3.7**
AKAS	**Kas**	**1.57**	**166**	*i* P	**Pg**	**22 10 15.6**	**+1.4**

*IDC **21** 22:20:01.9±1.5, 36°.58N×28°.31E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.3/27, mbtmp3.6/5, ML3.9/2, MS2.5/1, Ms1 2.5/1, ms1mx1.8/36, Error ellipse: s-maj=37.6km s-min=21.3km az=141.0*
*DDA **21** 22:20:08.7, 36°.48N×28°.44E, h42km, MD3.3*
*ISK **21** 22:20:08.6, 36°.40N×28°.45E, h64km, MD3.6*
*ISCJB **21** 22:20:08.4±0.2, 36°.37N±0°.02×28°.49E±0°.02, h74km±4km, mb3.3/3, Error ellipse: s-maj=3.9km s-min=3.2km az=155.8*
*CSEM **21** 22:20:09.9±0.1, 36°.40N×28°.45E, h60km, Mw3.0, Error ellipse: s-maj=3.1km s-min=2.6km az=138.0*
*ATH **21** 22:20:11.0, 36°.50N×28°.21E, h55km±3km, MD3.3/8*
*NIC **21** 22:20:13.7±0.1, 36°.39N×28°.86E, h81km, ML3.4, MW3.0*
*HLW **21** 22:20:17.0, 35°.69N×28°.60E, h32km±36km, Md0.0, Ml3.4*

ISC 21 22:20:09.2±0.8, 36°.40N±0°.03×28°.49E±0°.03, h65km±6km, n132, σ1s39/160, mb3.4/3, 2C-6D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.34**	**238**	⇓*iP*	**Pn**	**22 20 21.0**	**+0.9**
ARG				*eS*	**Sn**	**22 20 28.5**	**+0.4**
ARG	**Arkhangelos**	**0.34**	**238**	⇓*iP*	**Pn**	**22 20 21.0**	**+0.9**
ARG				*eS*	**Sn**	**22 20 28.5**	**+0.4**
DALY	**Dalyan (Mu¨la**	**0.44**	**18**	*e*PG	**Pn**	**22 20 21.5**	**+0.6**
DALY				*e*SG	**Sn**	**22 20 29.1**	**-0.4**
DALY	**Dalyan (Mu¨la**	**0.44**	**18**	*e*Pg	**Pn**	**22 20 21.5**	**+0.6**
DALY				*e*Sg	**Sn**	**22 20 29.1**	**-0.4**
TURN	**Turunc**	**0.48**	**11**	*i* P	**Pn**	**22 20 20.9**	**-0.4**
TURN	**Turunc**	**0.48**	**11**	*i* P	**Pn**	**22 20 20.9**	**-0.4**
FETY	**Fethiye**	**0.54**	**64**	*e*PG	**Pn**	**22 20 22.2**	**+0.3**
FETY				*e*SG	**Sn**	**22 20 31.6**	**+0.3**
FETY	**Fethiye**	**0.54**	**64**	*e*Pg	**Pn**	**22 20 22.2**	**+0.3**
FETY				*e*Sg	**Sn**	**22 20 31.6**	**+0.3**
YER	**Yerkesik**	**0.75**	**348**	*e*PG	**Pn**	**22 20 25.2**	**+0.8**
YER				*e*SG	**Sn**	**22 20 35.7**	**+0.1**
AKAS	**Kas**	**0.92**	**100**	*i* P	**Pn**	**22 20 27.9**	**+1.4**
AKAS				*i* S	**Sn**	**22 20 41.2**	**+1.8**
MLSB	**Milas**	**1.06**	**328**	*e*PG	**Pn**	**22 20 28.9**	**+0.7**
MLSB	**Milas**	**1.06**	**328**	*e*Pg	**Pn**	**22 20 28.9**	**+0.7**
GLHS	**Glhisar (BURDU**	**1.11**	**47**	*e*PN	**Pn**	**22 20 30.5**	**+1.6**
GLHS	**Glhisar (BURDU**	**1.11**	**47**	*e*Pn	**Pn**	**22 20 30.5**	**+1.6**
BODT	**Bodrum**	**1.15**	**305**	*e*PN	**Pn**	**22 20 29.2**	**-0.1**
BODT	**Bodrum**	**1.15**	**305**	*e*Pn	**Pn**	**22 20 29.3**	**-0.1**
ELL	**Elmali**	**1.20**	**73**	*e*PN	**Pn**	**22 20 32.4**	**+2.3**
ELL	**Elmali**	**1.20**	**73**	*e*Pn	**Pn**	**22 20 32.4**	**+2.3**
GOLH	**Golhisar**	**1.20**	**46**	*i* P	**Pn**	**22 20 32.0**	**+1.9**
GOLH				*i* S	**Sn**	**22 20 47.3**	**+1.6**
GOLH	**Golhisar**	**1.20**	**46**	*i* P	**Pn**	**22 20 32.0**	**+1.9**
GOLH				*i* S	**Sn**	**22 20 47.3**	**+1.6**
AYDN	**Tasoluk**	**1.35**	**339**	*i* P	**Pn**	**22 20 32.4**	**+0.4**
AYDN				*i* S	**Sn**	**22 20 44.7**	**-4.5**
AYDN	**Tasoluk**	**1.35**	**339**	*i* P	**Pn**	**22 20 32.4**	**+0.4**
AYDN				*i* S	**Sn**	**22 20 44.7**	**-4.5**
DNZL	**Cakiroluk**	**1.36**	**19**	*i* P	**Pn**	**22 20 32.8**	**+0.5**
DNZL	**Cakiroluk**	**1.36**	**19**	*i* P	**Pn**	**22 20 32.8**	**+0.5**
KARP	**Karpathos**	**1.37**	**232**	*e*P	**Pn**	**22 20 33.4**	**+1.1**
KARP				*e*S	**Sn**	**22 20 50.0**	**+0.3**
KARP	**Karpathos**	**1.37**	**232**	*e*P	**Pn**	**22 20 33.4**	**+1.1**
KARP				*e*S	**Sn**	**22 20 50.0**	**+0.3**
DENT	**Denizli**	**1.42**	**18**	*e*PN	**Pn**	**22 20 33.6**	**+0.6**
DENT	**Denizli**	**1.42**	**18**	*e*Pn	**Pn**	**22 20 33.6**	**+0.6**
KORT	**Korkueli**	**1.61**	**68**	*i* P	**Pn**	**22 20 38.2**	**+2.6**
KORT	**Korkueli**	**1.61**	**68**	*i* P	**Pn**	**22 20 38.2**	**+2.6**
GCAM	**G?zelcaml?**	**1.64**	**323**	*i* P	**Pn**	**22 20 36.0**	**+0.2**
GCAM	**G?zelcaml?**	**1.64**	**323**	*i* P	**Pn**	**22 20 36.0**	**+0.2**
KHL	**Karahalli**	**2.09**	**23**	*e*PN	**Pn**	**22 20 42.3**	**+0.3**
KHL	**Karahalli**	**2.09**	**23**	*e*Pn	**Pn**	**22 20 42.3**	**+0.3**
KULA	**Kula-Manisa**	**2.11**	**4**	*e*PN	**Pn**	**22 20 42.3**	**-0.1**
KULA	**Kula-Manisa**	**2.11**	**4**	*e*Pn	**Pn**	**22 20 42.3**	**-0.1**
KHAL	**Karahalli**	**2.12**	**22**	*i* P	**Pn**	**22 20 42.6**	**+0.1**
KHAL	**Karahalli**	**2.12**	**22**	*i* P	**Pn**	**22 20 42.6**	**+0.1**
ISP	**Isparta**	**2.16**	**48**	*e*PN	**Pn**	**22 20 44.6**	**+1.6**
ISP	**Isparta**	**2.16**	**48**	*e*Pn	**Pn**	**22 20 44.6**	**+1.6**
IZM	**Izmir**	**2.22**	**334**	*e*PN	**Pn**	**22 20 43.7**	**0.0**
IZM	**Izmir**	**2.22**	**334**	*e*Pn	**Pn**	**22 20 43.7**	**0.0**
ZKR	**Zakros**	**2.25**	**236**	*e*P	**Pn**	**22 20 46.1**	**+2.0**
ZKR				*e*S	**Sn**	**22 21 11.1**	**+0.3**
ZKR	**Zakros**	**2.25**	**236**	*e*P	**Pn**	**22 20 46.1**	**+2.0**
ZKR				*e*S	**Sn**	**22 21 11.1**	**+0.3**
BLCB	**Balcova**	**2.29**	**330**	*e*PN	**Pn**	**22 20 44.5**	**-0.1**
BLCB	**Balcova**	**2.29**	**330**	*e*Pn	**Pn**	**22 20 44.5**	**-0.1**
SANT	**Santorini**	**2.44**	**270**	*e*P	**Pn**	**22 20 47.2**	**+0.5**
SANT	**Santorini**	**2.44**	**270**	*e*P	**Pn**	**22 20 47.2**	**+0.5**
APE	**Apeiranthos**	**2.47**	**287**	*e*PN	**Pn**	**22 20 47.8**	**+0.7**
APE	**Apeiranthos**	**2.47**	**287**	*e*P	**Pn**	**22 20 47.2**	**+0.1**
APE	**Apeiranthos**	**2.47**	**287**	*e*P	**Pn**	**22 20 47.2**	**+0.1**
APE	**Apeiranthos**	**2.47**	**287**	*e*Pn	**Pn**	**22 20 47.8**	**+0.7**
AKHS	**Akhisar**	**2.53**	**348**	*i* P	**Pn**	**22 20 47.4**	**-0.5**
AKHS	**Akhisar**	**2.53**	**348**	*i* P	**Pn**	**22 20 47.4**	**-0.5**
NPS	**Neapolis**	**2.60**	**245**	*e*P	**Pn**	**22 20 49.4**	**+0.6**
NPS				*e*S	**Sn**	**22 21 17.1**	**-2.2**
NPS	**Neapolis**	**2.60**	**245**	*e*P	**Pn**	**22 20 49.4**	**+0.6**
NPS				*e*S	**Sn**	**22 21 17.1**	**-2.2**
DEMI	**Demirci**	**2.64**	**4**	*i* P	**Pn**	**22 20 49.4**	**-0.1**
DEMI	**Demirci**	**2.64**	**4**	*i* P	**Pn**	**22 20 49.4**	**-0.1**
SHUT	**Suhut-Afyon**	**2.70**	**37**	*e*PN	**Pn**	**22 20 50.7**	**+0.3**
SHUT	**Suhut-Afyon**	**2.70**	**37**	*e*Pn	**Pn**	**22 20 50.7**	**+0.3**
LAST	**Lasithi**	**2.74**	**244**	*e*P	**Pn**	**22 20 51.5**	**+0.6**
LAST	**Lasithi**	**2.74**	**244**	*e*P	**Pn**	**22 20 51.5**	**+0.6**
GDZ	**Gediz**	**2.80**	**16**	*i* P	**Pn**	**22 20 51.9**	**+0.3**
GDZ	**Gediz**	**2.80**	**16**	*i* P	**Pn**	**22 20 51.9**	**+0.3**
GAZI	**Gazipasa**	**3.10**	**92**	*i* P	**Pn**	**22 20 56.2**	**+0.5**
IDI	**Anoyia**	**3.12**	**250**	*e*P	**Pn**	**22 20 56.2**	**+0.1**
IDI	**Anoyia**	**3.12**	**250**	*e*P	**Pn**	**22 20 56.2**	**+0.1**
TVSB	**Tavsanli**	**3.14**	**14**	*e*PN	**Pn**	**22 20 56.5**	**+0.2**
TVSB	**Tavsanli**	**3.14**	**14**	*e*Pn	**Pn**	**22 20 56.5**	**+0.2**
SIVA	**Sivas**	**3.29**	**246**	*e*P	**Pn**	**22 20 59.9**	**+1.6**
SIVA	**Sivas**	**3.29**	**246**	*e*P	**Pn**	**22 20 59.9**	**+1.6**
BALY	**Balya**	**3.40**	**349**	*i* P	**Pn**	**22 20 59.7**	**-0.2**
BALY	**Balya**	**3.40**	**349**	*i* P	**Pn**	**22 20 59.7**	**-0.2**
AKMC	**Akamas**	**3.42**	**113**	⇑P	**Pn**	**22 21 00.9**	**+0.9**
AKMC				S	**Sn**	**22 21 36.4**	**-2.9**
AKMC	**Akamas**	**3.42**	**113**	⇑P	**Pn**	**22 21 00.9**	**+0.9**
AKMC				S	**Sn**	**22 21 36.4**	**-2.9**
KONT	**Konya--Tatoy**	**3.46**	**62**	*e*PN	**Pn**	**22 21 02.6**	**+2.0**
KONT	**Konya--Tatoy**	**3.46**	**62**	*e*Pn	**Pn**	**22 21 02.6**	**+2.0**
PPCY	**Paphos**	**3.49**	**115**	⇓P	**Pn**	**22 21 02.0**	**+1.0**
PPCY				S	**Sn**	**22 21 36.7**	**-4.3**
PPCY	**Paphos**	**3.49**	**115**	⇓P	**Pn**	**22 21 02.0**	**+1.0**
PPCY				S	**Sn**	**22 21 36.7**	**-4.3**
ALFC	**Alevga**	**3.57**	**109**	P	**Pn**	**22 21 02.8**	**+0.7**
	3.4nm,0.2s						
ALFC				S	**Sn**	**22 21 41.6**	**-1.4**
ALFC	**Alevga**	**3.57**	**109**	P	**Pn**	**22 21 02.8**	**+0.7**
	3.4nm,0.2s						
ALFC				S	**Sn**	**22 21 41.6**	**-1.4**
ERMK	**Ermenek**	**3.57**	**85**	*i* P	**Pn**	**22 21 05.3**	**+3.0**
ERMK	**Ermenek**	**3.57**	**85**	*i* P	**Pn**	**22 21 05.3**	**+3.0**
LADK	**Ladik-KONYA**	**3.58**	**59**	*e*PN	**Pn**	**22 21 04.3**	**+2.0**
LADK	**Ladik-KONYA**	**3.58**	**59**	*e*Pn	**Pn**	**22 21 04.3**	**+2.0**
KDHN	**Kadinhani**	**3.58**	**53**	*i* P	**Pn**	**22 21 03.6**	**+1.3**
KDHN	**Kadinhani**	**3.58**	**53**	*i* P	**Pn**	**22 21 03.6**	**+1.3**
VAM	**Vamos**	**3.62**	**255**	*e*P	**Pn**	**22 21 03.3**	**+0.5**
VAM	**Vamos**	**3.62**	**255**	*e*P	**Pn**	**22 21 03.3**	**+0.5**
SEYT	**Eskypehyr**	**3.63**	**30**	*i* P	**Pn**	**22 21 03.7**	**+0.7**
SEYT	**Eskypehyr**	**3.63**	**30**	*i* P	**Pn**	**22 21 03.7**	**+0.7**
KIZT	**Kizilcal**	**3.66**	**46**	*e*PN	**Pn**	**22 21 05.3**	**+1.9**
KIZT	**Kizilcal**	**3.66**	**46**	*e*Pn	**Pn**	**22 21 05.3**	**+1.9**
GONE	**Gonen-Balikesi**	**3.69**	**350**	*e*PN	**Pn**	**22 21 03.7**	**0.0**
GONE	**Gonen-Balikesi**	**3.69**	**350**	*e*Pn	**Pn**	**22 21 03.7**	**0.0**
LEF	**Lefka**	**3.80**	**108**	*e*PN	**Pn**	**22 21 05.3**	**0.0**
CSS	**Prodhromos**	**4.20**	**109**	⇓P	**Pn**	**22 21 11.4**	**+0.7**
	0.6nm,0.2s						
CSS				S	**Sn**	**22 21 56.6**	**-1.9**
CSS	**Prodhromos**	**4.20**	**109**	*e*PN	**Pn**	**22 21 12.1**	**+1.4**
CSS	**Prodhromos**	**4.20**	**109**	⇓P	**Pn**	**22 21 11.4**	**+0.7**
	0.6nm,0.2s						
CSS				S	**Sn**	**22 21 56.6**	**-1.9**
ANKY	**Antikythira Is**	**4.23**	**264**	*e*P	**Pn**	**22 21 11.9**	**+0.8**
ANKY	**Antikythira Is**	**4.23**	**264**	*e*P	**Pn**	**22 21 11.9**	**+0.8**
LFK	**Lefkose**	**4.25**	**104**	*e*PN	**Pn**	**22 21 12.2**	**+0.8**
GELI	**Tayfur-Gelibol**	**4.29**	**339**	*e*PN	**Pn**	**22 21 13.1**	**+1.2**
GELI	**Tayfur-Gelibol**	**4.29**	**339**	*e*Pn	**Pn**	**22 21 13.1**	**+1.2**
GULT	**Gulveren**	**4.33**	**21**	*e*PN	**Pn**	**22 21 13.7**	**+1.2**
GULT	**Gulveren**	**4.33**	**21**	*e*Pn	**Pn**	**22 21 13.7**	**+1.2**
VLI	**Veliai**	**4.48**	**276**	*e*P	**Pn**	**22 21 16.0**	**+1.5**
VLI	**Veliai**	**4.48**	**276**	*e*P	**Pn**	**22 21 16.0**	**+1.5**
BRTR	**Keskin Array B**	**5.25**	**49**	Pn	**Pn**	**22 21 26.3**	**+1.2**
	0.1nm,0.3s,baz=235,slow=13,SNR=4.7						
BRTR				Pg		22 21 38.0	
	0.4nm,0.3s,baz=230,slow=17,SNR=8.1						
BRTR				Sn	**Sn**	**22 22 24.8**	**+0.5**
	0.4nm,0.3s,baz=214,slow=23,SNR=9.7						
HMAT	**Matruh**	**5.42**	**193**	P	**Pn**	**22 21 27.2**	**-0.2**
HMAT				S	Sn	22 22 16.6	-12
SLUM		**5.60**	**210**	P	**Pn**	**22 21 30.1**	**+0.2**
	baz=215						
SLUM				AMP		22 22 00.0	
	comp=N,40μm,0.2s,logA/T=5.3,baz=215						
SLUM		**5.60**	**210**	P	**Pn**	**22 21 30.1**	**+0.2**
MMAI	**Mount Meron Ar**	**6.62**	**119**	Pn	**Pn**	**22 21 44.0**	**+0.1**
	comp=N,8.2nm,0.3s,baz=307,slow=12,SNR=88						
MMAI				Sn	**Sn**	**22 22 54.3**	**-3.8**
	comp=N,7.3nm,0.3s,baz=307,slow=28,SNR=16						
RSH		**6.96**	**140**	P	**Pn**	**22 21 49.2**	**+0.6**
	baz=136						
RSH		**6.96**	**140**	P	**Pn**	**22 21 49.2**	**+0.6**
AMAG	**Maghara**	**6.96**	**144**	P	**Pn**	**22 21 48.5**	**-0.1**
	baz=141						
AMAG	**Maghara**	**6.96**	**144**	P	**Pn**	**22 21 48.5**	**-0.1**
KOT	**Kottamia**	**7.04**	**156**	P	**Pn**	**22 21 49.2**	**-0.4**
	baz=153						
KOT	**Kottamia**	**7.04**	**156**	P	**Pn**	**22 21 49.2**	**-0.4**
SUZ		**7.49**	**150**	P	**Pn**	**22 21 55.8**	**0.0**
	baz=147						
SUZ		**7.49**	**150**	P	**Pn**	**22 21 55.8**	**0.0**
SWA2		**7.58**	**201**	P	**Pn**	**22 21 57.6**	**+0.6**
	baz=204						
SWA2				S	Sn	22 23 09.3	-12
	baz=204						
SWA2		**7.58**	**201**	P	**Pn**	**22 21 57.6**	**+0.6**
SWA2				S	Sn	22 23 09.3	-12
HNKL	**Nakhl**	**7.93**	**143**	P	**Pn**	**22 22 01.8**	**0.0**
	baz=140						
HNKL	**Nakhl**	**7.93**	**143**	P	**Pn**	**22 22 01.8**	**0.0**
ASF	**Jabal al Asfar**	**8.14**	**119**	LR	LR	22 26 55.0	
	comp=N,29nm,18.3s,baz=16,slow=50						
EIL	**Elat**	**8.63**	**139**	Pn	**Pn**	**22 22 11.2**	**-0.1**
	comp=N,0.4nm,0.3s,baz=333,slow=9.0,SNR=11						
EIL				Sn	**Sn**	**22 23 42.2**	**-5.0**
	comp=N,1.4nm,0.3s,baz=288,slow=20,SNR=9.4						
HFRF	**Wahat Farafira**	**9.23**	**181**	P	**Pn**	**22 22 19.7**	**+0.2**
	baz=182						
HFRF	**Wahat Farafira**	**9.23**	**181**	P	**Pn**	**22 22 19.7**	**+0.2**
TORD	**Torodi Ar. Bea**	**33.38**	**233**	P	**P**	**22 26 42.0**	**+0.6**
	comp=N,0.3nm,0.6s,baz=32,slow=9.3,SNR=9.1						
KURBB	**Kurchatov Arra**	**38.23**	**52**	P	**P**	**22 27 23.9**	**+1.3**
	comp=N,0.5nm,0.6s,baz=276,slow=9.2,SNR=7.1						
MKAR	**Makanchi Array**	**40.83**	**58**	P	**P**	**22 27 44.0**	**-0.4**
	comp=N,0.1nm,0.5s,baz=268,slow=8.7,SNR=3.8						

*IDC **21** 22:29:14.2±1.6, 50°.15N×87°.67E, h0km, mb3.6/3, mb1 3.7/9, mb1mx3.5/33, mbtmp3.7/9, ML3.7/6, Error ellipse: s-maj=18.1km s-min=11.9km az=96.0*
*NNC **21** 22:29:17.5±4.5, 49°.93N×87°.36E, h19km±28km, mb3.6, mpv3.5, Error ellipse: s-maj=40.0km s-min=23.6km az=82.0*

ISC 21 22:29:17.1±1.5, 50°.15N±0°.06×87°.4E±0°.1, h10km, n18, σ2s34/30, mb3.5/3, 14C-8D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZALV	**Zalesovo Beam**	**4.13**	**338**	Pn	**Pn**	**22 30 21.0**	**+0.9**
	4.6nm,0.3s,baz=158,slow=16,SNR=46						
ZALV				Pg	**Pb**	**22 30 31.9**	**+2.1**
	5.5nm,0.3s,baz=153,slow=15,SNR=14						
ZALV				Sn	**Sn**	**22 31 11.1**	**+2.6**
	5.3nm,0.3s,baz=157,slow=21,SNR=8.1						
ZALV				Lg	Lg	22 31 27.4	
	8.0nm,0.3s,baz=154,slow=27,SNR=6.2						
MK31	**Makanchi Array**	**4.78**	**227**	⇑Pn	**Pn**	**22 30 31.3**	**+2.2**
	12nm,0.5s,baz=52,slow=13,SNR=374						
MK31				⇓Pg	**Pb**	**22 30 43.6**	**+2.8**
	12nm,0.6s,baz=49,slow=15,SNR=5.4						
MK31				⇓Sn	**Sn**	**22 31 27.0**	**+2.4**
	7.6nm,0.5s,baz=64,slow=25,SNR=3.8						
MK31				⇑Lg	Lg	22 31 47.2	
	19nm,0.5s						
MKAR	**Makanchi Array**	**4.78**	**227**	Pn	**Pn**	**22 30 31.1**	**+2.0**
	8.2nm,0.3s,baz=46,slow=14,SNR=334						
MKAR				Pg	**Pb**	**22 30 42.8**	**+1.9**
	7.2nm,0.3s,baz=46,slow=16,SNR=15						
MKAR				Sn	**Sn**	**22 31 28.4**	**+3.8**
	4.8nm,0.3s,baz=50,slow=27,SNR=5.7						
MKAR				Lg	Lg	22 31 48.9	
	12nm,0.3s,baz=45,slow=29,SNR=9.7						
KURK	**Kurchatov**	**5.64**	**279**	⇑Pn	**Pn**	**22 30 41.6**	**+0.7**
	2.3nm,0.3s						
KURK				⇑Sn	**Sn**	**22 31 50.3**	**+4.6**
	17nm,1.0s						
KURK				⇑Lg	Lg	22 32 13.9	
	35nm,0.7s						
KURBB	**Kurchatov Arra**	**5.70**	**278**	Pn	**Pn**	**22 30 42.6**	**+0.9**
	1.1nm,0.3s,baz=91,slow=15,SNR=229						
KURBB				Sn	**Sn**	**22 31 50.4**	**+3.3**
	0.7nm,0.3s,baz=88,slow=28,SNR=4.4						
KURBB				Lg	Lg	22 32 18.8	
	1.7nm,0.3s,baz=88,slow=34,SNR=13						
KUR17	**Kurchatov Arra**	**5.74**	**278**	⇓Pn	**Pn**	**22 30 43.2**	**+1.0**
	0.2nm,0.3s,baz=91,slow=14						
KUR17				⇓Sn	**Sn**	**22 31 51.1**	**+3.0**
	0.4nm,0.4s						
KUR17				⇑Lg	Lg	22 32 15.7	
	4.2nm,1.1s						
VOSK	**Vostochnaya**	**10.57**	**290**	⇑Pn	**Pn**	**22 31 47.7**	**-0.9**
	1.5nm,0.8s						
VOSK				⇓Sn	**Sn**	**22 33 43.6**	**-3.4**
	2.3nm,0.6s						
VOSK				⇓Lg	Lg	22 34 51.4	
	6.3nm,0.9s						
TKM2	**Tokmak 2**	**10.87**	**233**	⇑Pn	Pn	22 31 49.5	-3.4
	2.5nm,1.0s						
TKM2				⇑Lg	Lg	22 35 01.4	
	4.4nm,0.9s						
BVAR	**Borovoye Array**	**10.97**	**292**	Pn	**Pn**	**22 31 54.0**	**0.0**
	0.4nm,0.3s,baz=96,slow=14,SNR=3.8						
BVAR				Sn	**Sn**	**22 33 52.8**	**-3.9**
	0.9nm,0.3s,baz=97,slow=22,SNR=7.1						
AAK	**Ala-Archa**	**11.65**	**235**	Pn	**Pn**	**22 32 03.4**	**-0.1**
	0.3nm,0.3s,baz=105,slow=4.3,SNR=3.6						
ZRNK	**Zerenda**	**11.79**	**291**	⇓Pn	**Pn**	**22 32 05.2**	**0.0**
	1.0nm,0.5s						
ZRNK				⇑Sn	**Sn**	**22 34 17.6**	**+0.8**
	0.9nm,0.4s						
ZRNK				⇑Lg	Lg	22 35 28.2	
	3.9nm,0.9s						
KK31	**Karatay Array**	**13.56**	**245**	Pn	**Pn**	**22 32 26.3**	**-3.1**
	0.3nm,0.3s,baz=54,slow=13,SNR=21						
KK31				⇑Sn	**Sn**	**22 34 58.8**	**-1.4**
	0.6nm,0.6s						
KK31				⇓Lg	Lg	22 36 24.0	
	2.3nm,0.7s						
AB31	**Akbulak array**	**17.75**	**278**	⇑P	**Pn**	**22 33 23.8**	**-0.3**
	0.3nm,0.4s,baz=78,slow=10,SNR=8.2						
AKTO	**Aktyubinsk**	**18.73**	**282**	⇑P	**P**	**22 33 33.3**	**-2.4**
	0.3nm,0.8s						
AKTO	**Aktyubinsk**	**18.73**	**282**	P	**P**	**22 33 34.5**	**-1.3**
	0.1nm,0.3s,baz=68,slow=11,SNR=6.4						
FINES	**FINESS Array B**	**34.94**	**313**	P	**P**	**22 36 09.4**	**+0.7**
	0.8nm,0.8s,baz=72,slow=9.2,SNR=3.8						
BRTR	**Keskin Array B**	**38.68**	**276**	P	**P**	**22 36 41.1**	**+0.1**
	0.6nm,0.5s,baz=54,slow=7.3,SNR=5.2						
TORD	**Torodi Ar. Bea**	**77.30**	**275**	P	**P**	**22 41 09.8**	**-2.0**
	0.3nm,0.8s,baz=38,slow=4.1,SNR=3.3						

MEX 21 22:30:36.0±0.5, 16°.30N×96°.31W, h30km±13km, MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.56**	**159**	*e*P	Pb	22 30 45.2	-2.2
HUIG				*i* S	Sb	22 30 53.8	-1.4
VHO	**Vista Hermosa**	**0.87**	**332**	*i* P	Pn	22 30 50.3	-2.2
VHO				*e*S	Sn	22 31 00.8	-3.6
OXX	**Oaxaca**	**0.88**	**333**	*i* P	Pn	22 30 50.7	-1.8
OXX				*e*S	Sn	22 31 00.6	-3.9
PNIG	**Pinotepa**	**1.75**	**273**	*i* P	Pn	22 31 02.8	-1.5
PNIG				*e*S	Sn	22 31 22.9	-2.7
PCIG		**3.03**	**101**	*i* P	Pn	22 31 21.1	-0.8
PCIG				*i* S	Sn	22 31 54.9	-2.4
YAIG	**Yautepec**	**3.66**	**315**	*i* P	Pn	22 31 29.7	-1.1
YAIG				*i* S	Sn	22 32 10.7	-2.5

NNC 21 22:38:37.2±2.6, 37°.17N×70°.20E, h0km, mb3.5, mpv3.3, 5C-1D, Error ellipse: s-maj=21.9km s-min=20.0km az=99.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.94**	**2**	Pn	Pn	22 40 09.4	+3.0
	1.1nm,0.3s,baz=183,slow=11,SNR=55						
KK31				Sn	Sn	22 41 21.5	+6.3
	2.9nm,0.4s,baz=191,slow=21,SNR=14						
TKM2	**Tokmak 2**	**7.08**	**34**	⇑Pn	Pn	22 40 20.4	-2.1
	0.6nm,0.4s						
TKM2				⇑Sn	Sn	22 41 46.0	+2.1
	1.9nm,0.9s						
AB31	**Akbulak array**	**14.19**	**332**	⇑Pn	Pn	22 41 59.6	+0.1
	0.5nm,0.3s,baz=150,slow=14,SNR=22						
AB31				⇓Sn	Sn	22 44 36.2	-1.4
	0.3nm,0.5s						
AKTO	**Aktyubinsk**	**15.88**	**330**	⇑Pn	Pn	22 42 22.9	+0.8
	0.3nm,0.8s						
AKTO				⇑Sn	Sn	22 45 22.3	+3.5
	0.2nm,1.1s						

GUC 21 22:39:14.5±0.5, 32°.99S×68°.94W, h3km±6km, MD3.6, ML3.2, 4C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**1.18**	**253**	⇑*iP*	Pg	22 39 36.1	-1.5
FCH				*i* S	Sg	22 39 53.0	-0.2
FCH				AML	AML	22 39 53.6	
	comp=N,801nm,0.2s						
LMEL	**Las Melosas**	**1.36**	**231**	⇓*iP*	Pn	22 39 38.5	-2.1
LMEL				*i* S	Sg	22 39 57.2	-1.4
LMEL				AML	AML	22 39 58.7	
	comp=N,550nm,0.1s						
CLCH	**Cerro Calan**	**1.40**	**253**	⇓*iP*	Pn	22 39 39.8	-1.2
CLCH				*i* S	Sg	22 39 59.5	-0.2
CLCH				AML	AML	22 40 00.8	
	comp=N,393nm,0.8s						
JACH	**Jahuel**	**1.42**	**282**	*e*P	Pn	22 39 40.6	-0.9
JACH				*e*S	Sb	22 40 00.5	0.0
PCH	**Pirque**	**1.46**	**244**	⇑*iP*	Pn	22 39 40.9	-1.1
PCH				*i* S	Sb	22 40 01.1	-0.5
PEL	**Peldehue**	**1.47**	**264**	⇑*iP*	Pn	22 39 41.0	-1.0
PEL				*i* S	Sb	22 40 01.5	-0.4
PEL				AML	AML	22 40 03.9	
	comp=N,181nm,0.7s						
CHCH	**Chadas Angostu**	**1.71**	**236**	⇓*iP*	Pn	22 39 45.1	-0.3
CHCH				*i* S

4.5nm,1.0s
DBIC Dimbokro 67.17 17 LR LR 23 21 48.9
comp=Z,47nm,18.6s,baz=273,slow=30
KMBO Kilima Mbogo 73.14 62 LR LR 23 29 41.2
comp=Z,82nm,18.4s,baz=95,slow=34
TORD Torodi Ar. Bea 74.62 22 P **P** **22 59 58.4 +0.8**
TORD Torodi Ar. Bea 74.62 22 P **P** **22 59 58.4 +0.8**
1.6nm,0.7s,baz=191,slow=5.5,SNR=7.0
TORD LR LR 23 24 31.4
comp=Z,52nm,21.5s,baz=115,slow=29
ROSC El Rosal 76.98 304 LR LR 23 33 58.8
comp=Z,48nm,18.3s,baz=217,slow=36
STKA Stephens Creek 87.66 165 LR LR 23 37 48.5
comp=Z,159nm,20.8s,baz=206,slow=34
ASAR Alice Springs 94.38 156 P **P** **23 01 37.2 -1.2**
ASAR Alice Springs 94.38 156 P **P** **23 01 37.2 -1.2**
0.3nm,0.6s,baz=174,slow=4.5,SNR=3.7
WRA Warramunga Arr 98.09 156 P **P** **23 01 53.1 -2.2**
WRA Warramunga Arr 98.09 156 P **P** **23 01 53.1 -2.2**
0.3nm,0.8s,baz=198,slow=4.8,SNR=3.6
FINES FINESS Array B 125.88 25 PKP **PKPdf** **23 07 21.4 +2.6**
FINES FINESS Array B 125.88 25 PKP **PKPdf** **23 07 21.4 +2.6**
0.5nm,0.7s,baz=219,slow=1.8,SNR=6.3
YKA Yellowknife Ar 141.28 312 PKP **PKPdf** **23 07 48.0 +0.4**
YKA Yellowknife Ar 141.28 312 PKP **PKPdf** **23 07 48.0 +0.4**
0.2nm,0.6s,baz=128,slow=2.8,SNR=3.7
SONM Songino Array 147.23 87 PKPbc **PKPdf** **23 07 59.2 +0.5**
SONM Songino Array 147.23 87 PKPbc **PKPdf** **23 07 59.2 +0.5**
0.9nm,0.8s,baz=219,slow=2.7,SNR=7.1
INK Inuvik 150.90 315 PKPbc **PKPbc** **23 08 08.5 -1.0**
INK Inuvik 150.90 315 PKPbc **PKPbc** **23 08 08.5 -1.0**
1.5nm,1.0s,baz=111,slow=1.2,SNR=5.1

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*BJI **21** 23:03:55.5,51˙81N×175˙70W,h25km,mB4.9/8,mb4.7/18, Ms4.4/5,Ms7 4.3/4*
*MOS **21** 23:03:57.6±0.8,51˙68N×175˙84W,h33km,mb4.9/30, Error ellipse: s-maj=11.1km s-min=7.1km az=77.3*
*NEIC **21** 23:03:59.5,51˙37N×175˙68W,h25km,mb4.7/68, ML4.5(AEIC),After AEIC.*
*ISCJB **21** 23:03:59.3±0.5,51˙60N±0˙05×175˙85W±0˙03,h50km±4km, mb4.5/97,MS3.8/27,Error ellipse: s-maj=8.6km s-min=3.1km az=172.4*
*IDC **21** 23:04:00.3±1.7,51˙65N×175˙87W,h43km±14km,mb4.0/24, mb1 4.2/28,mb1mx4.1/32,mbtmp4.0/28,ML4.1/3,MS3.7/28, Ms1 3.7/28,ms1mx3.6/50,Error ellipse: s-maj=18.7km s-min=9.5km az=168.0*
ISC 21 23:04:00.4±0.8,51˙56N±0˙08×175˙88W±0˙03,h47km±6km, n544,σ1§01/548,mb4.6/106,MS3.9/27,136C-102D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.23**	**58**	*e*P		**Pn**	**23 04 18.9**	**-2.2**
ATKA				*e*Sn		**Sn**	**23 04 36.4**	**-0.2**
KOKL	**Mount Kliuchef**	**1.29**	**53**	P		**Pn**	**23 04 21.6**	**-0.5**
KOKV	**Korovin Volcan**	**1.33**	**52**	P		**Pn**	**23 04 22.4**	**-0.2**
CERAA	**Semis' Rag'd T**	**2.78**	**279**	P		**Pn**	**23 04 43.5**	**+1.2**
CETU	**Semis' Tuman**	**2.90**	**280**	P		**Pn**	**23 04 45.2**	**+1.2**
AMKA	**Amchitka**	**3.02**	**268**	*e*Pn		**Pn**	**23 04 45.8**	**+0.2**
AMKA				*e*Sn		**Sn**	**23 05 21.8**	**+1.4**
LSNW	**Little Sitkin**	**3.50**	**279**	P		**Pn**	**23 04 53.7**	**+1.4**
LSSA	**Little Sitkin**	**3.51**	**279**	P		**Pn**	**23 04 52.8**	**+0.5**
OKSP	**Okmok Steeple**	**4.95**	**67**	P		**Pn**	**23 05 11.2**	**-0.9**
OKSO	**Okmok South**	**5.05**	**66**	P		**Pn**	**23 05 12.8**	**-0.8**
MREP	**Makushin Rep't**	**6.00**	**64**	P		**Pn**	**23 05 25.9**	**-0.6**
MSW	**Makushin Switc**	**6.01**	**63**	P		**Pn**	**23 05 25.8**	**-0.9**
UNV	**Unalaska Valle**	**6.15**	**64**	*e*Pn		**Pn**	**23 05 31.2**	**+2.7**
UNV				*e*Sn		**Sn**	**23 06 40.4**	**+3.1**
AKRB	**Akutan Reef Bi**	**6.48**	**63**	P		**Pn**	**23 05 32.1**	**-1.0**
SPIA	**Saint Paul Isl**	**6.52**	**28**	*e*Pn		Pn	23 05 36.8	+3.2
SPIA				*e*Sn		**Sn**	**23 06 49.1**	**+2.5**
AKUT	**Akutan**	**6.65**	**63**	*e*Pn		**Pn**	**23 05 37.3**	**+2.0**
AKUT				*e*Sn		**Sn**	**23 06 52.3**	**+2.7**
FX1	**Attu Island--F**	**6.86**	**285**	*e*Pn		**Pn**	**23 05 40.4**	**+2.2**
FX1				*e*Sn		**Sn**	**23 06 56.5**	**+1.5**
FX1	**Attu Island--F**	**6.86**	**285**	P		**Pn**	**23 05 39.8**	**+1.5**
	4.9nm,0.3s,baz=232,slow=17,SNR=9.3							
FX1				S		**Sn**	**23 06 55.6**	**+0.6**
	3.2nm,0.3s,baz=324,slow=19,SNR=3.9							
FX1				LR		LR	23 08 16.2	
	comp=Z,490nm,20.8s,baz=310,slow=37							
WESE	**West Dahl East**	**7.41**	**62**	P		**Pn**	**23 05 44.7**	**-1.2**
FALS	**False Pass**	**8.18**	**61**	*e*Pn		**Pn**	**23 05 57.5**	**+1.2**
SDPT	**Sand Point**	**9.94**	**62**	*e*Pn		**Pn**	**23 06 20.6**	**+0.2**
GAMB	**Gambell**	**12.45**	**9**	*e*Pn		**Pn**	**23 06 55.2**	**+0.6**
OHAK	**Old Harbor**	**14.30**	**58**	*e*Pn		**Pn**	**23 07 17.0**	**-2.8**
TNA	**Tin City**	**14.62**	**13**	*e*Pn		**P**	**23 07 26.8**	**-2.5**
SVW2	**Sparrevohn**	**14.70**	**42**	*e*Pn		**P**	**23 07 28.6**	**-1.7**
KDAK	**Kodiak Island**	**14.80**	**56**	*e*Pn		**Pn**	**23 07 24.3**	**-2.1**
	35nm,0.6s							
KDAK	**Kodiak Island**	**14.80**	**56**	P		**Pn**	**23 07 24.4**	**-2.0**
	1.7nm,0.3s,baz=258,slow=6.2,SNR=17							
RSO	**Redoubt South**	**15.63**	**46**	*e*Pn		**Pn**	**23 07 39.1**	**+1.7**
PETK	**Petropavlovsk-**	**16.19**	**286**	P		**Pn**	**23 07 42.4**	**-2.0**
PETK	**Petropavlovsk-**	**16.19**	**286**	P		**Pn**	**23 07 42.4**	**-2.0**
PETK	**Petropavlovsk-**	**16.19**	**286**	P		**Pn**	**23 07 42.4**	**-2.0**
	0.0nm,0.3s,baz=70,slow=13,SNR=2.9							
PETK				LR		LR	23 13 58.8	
	comp=Z,63nm,19.0s,baz=276,slow=37							
SPU	**Mount Spurr**	**16.25**	**44**	*e*P		**P**	**23 07 46.5**	**-0.9**
PPLA	**Purkeypile**	**17.01**	**39**	*e*Pn		**Pn**	**23 07 53.6**	**-1.1**
	25nm,0.7s							
SEW	**Seward**	**17.03**	**50**	*e*Pn		**Pn**	**23 07 52.9**	**-1.9**
	20nm,0.7s							
TRF	**Thorofare Moun**	**18.03**	**39**	*e*P		**Pn**	**23 08 06.3**	**-1.0**
	24nm,0.7s							
SML	**Sawmill**	**18.13**	**45**	*e*P		**P**	**23 08 05.9**	**-2.4**
SML				pmax		pmax		
	comp=Z,4.0nm,0.8s							
SML	**Sawmill**	**18.13**	**45**	*e*P		**P**	**23 08 05.9**	**-2.4**
	comp=Z,4.4nm,0.8s							
BILL	**Bilibino**	**18.68**	**339**	*d* i P		**Pn**	**23 08 16.7**	**+1.8**
BILL				pmax		pmax		
	comp=Z,27nm,1.2s							
MCK	**McKinley**	**18.70**	**39**	*e*P		**P**	**23 08 14.3**	**-0.1**
MCK				pmax		pmax		
	comp=Z,33nm,0.7s							
MCK	**McKinley**	**18.70**	**39**	*e*P		**P**	**23 08 14.3**	**-0.1**
	comp=Z,33nm,0.7s							
DIV	**Divide**	**19.07**	**48**	*e*P		**P**	**23 08 18.6**	**0.0**
	comp=Z,13nm,0.5s							
COLA	**College**	**19.66**	**37**	*e*P		**P**	**23 08 23.8**	**-1.1**
COLA				pmax		pmax		
	comp=Z,28nm,1.0s							
COLA	**College**	**19.66**	**37**	*e*P		**P**	**23 08 23.8**	**-1.1**
	comp=Z,28nm,1.0s							
ILAR	**Eielson Array**	**19.98**	**37**	P		**P**	**23 08 27.2**	**-1.2**
ILAR				ScP		**ScP**	**23 16 14.8**	**+0.1**
ILAR	**Eielson Array**	**19.98**	**37**	P		**P**	**23 08 27.2**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=243,slow=10,SNR=58							
ILAR				ScP		**ScP**	**23 16 14.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=259,slow=3.5,SNR=6.1							
ILAR				LR		LR	23 16 48.1	
	comp=Z,210nm,18.5s,baz=279,slow=39							
COLD	**Coldfoot**	**20.18**	**29**	*e*P		Pn	23 08 32.3	-0.6
	comp=Z,44nm,0.9s							
SEY	**Seymchan**	**20.36**	**316**	*c* i P		Pn	23 08 36.8	+1.9
MENT	**Mentasta**	**20.54**	**44**	*e*P		**P**	**23 08 35.1**	**+0.6**
DOT	**Dot Lake**	**20.64**	**42**	*e*P		**P**	**23 08 34.7**	**-0.9**
	comp=Z,125nm,0.6s							
PNL	**Peninsula**	**21.90**	**54**	*e*P		**P**	**23 08 49.7**	**+0.6**
	comp=Z,18nm,0.7s							
EGAK	**Eagle**	**22.23**	**40**	*e*P		**P**	**23 08 52.1**	**-0.5**
	comp=Z,28nm,0.8s							
CRAG	**Craig**	**25.42**	**64**	*e*P		**P**	**23 09 25.5**	**+2.4**
	comp=Z,42nm,0.9s							
WRAK	**Wrangell Islan**	**25.71**	**62**	*e*P		**P**	**23 09 27.6**	**+1.8**
	comp=Z,26nm,0.8s							
INK	**Inuvik**	**26.27**	**34**	P		**P**	**23 09 30.1**	**-0.7**
INK				PcP		**PcP**	**23 12 56.1**	**+0.4**
INK				ScP		**ScP**	**23 16 31.9**	**+0.6**
INK	**Inuvik**	**26.27**	**34**	P		**P**	**23 09 30.1**	**-0.7**
	comp=Z,4.1nm,0.5s,baz=246,slow=7.1,SNR=19							
INK				PcP		**PcP**	**23 12 56.1**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=302,slow=3.6,SNR=6.5							
INK				ScP		**ScP**	**23 16 31.9**	**+0.6**
	comp=Z,1.3nm,0.9s,baz=309,slow=4.0,SNR=7.7							
INK				LR		LR	23 21 03.5	
	comp=Z,204nm,18.7s,baz=287,slow=39							
DLBC	**Dease Lake**	**26.73**	**57**	P		**P**	**23 09 34.8**	**-0.3**
DLBC	**Dease Lake**	**26.73**	**57**	P		**P**	**23 09 34.8**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=270,slow=6.1,SNR=5.1							

ASAJ	**Asahikawa**	**28.53**	**271**	LR		LR	23 19 52.7	
	comp=Z,51nm,20.4s,baz=104,slow=33							
YKA	**Yellowknife Ar**	**33.78**	**47**	P		**P**	**23 10 37.0**	**-0.2**
YKA				PcP		**PcP**	**23 13 16.3**	**+1.1**
YKA				ScP		**ScP**	**23 16 56.2**	**+0.4**
YKA	**Yellowknife Ar**	**33.78**	**47**	P		**P**	**23 10 36.9**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=283,slow=8.7,SNR=29							
YKA				PcP		**PcP**	**23 13 16.3**	**+1.1**
	comp=Z,1.7nm,0.5s,baz=289,slow=3.2,SNR=16							
YKA				ScP		**ScP**	**23 16 56.2**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=279,slow=4.3,SNR=3.7							
LON	**Longmire**	**35.01**	**76**	P		**P**	**23 10 45.4**	**-2.7**
LON				pmax		pmax		
	comp=Z,5.0nm,0.7s							
LON	**Longmire**	**35.01**	**76**	P		**P**	**23 10 45.4**	**-2.7**
	comp=Z,5.4nm,0.7s							
USRK	**Ussuriysk Arra**	**35.08**	**279**	P		**P**	**23 10 48.7**	**+0.1**
	comp=Z,4.9nm,0.6s,baz=55,slow=8.4,SNR=9.5							
MJAR	**Matsushiro Arr**	**35.62**	**263**	P		**P**	**23 10 54.1**	**+0.8**
MJAR	**Matsushiro Arr**	**35.62**	**263**	P		**P**	**23 10 54.1**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=54,slow=7.7,SNR=6.7							
MDJ	**Mudanjiang**	**36.34**	**281**	P		P	23 10 53.8	-5.6
MDJ				pP		pP	23 11 12.5	+0.5
MDJ				sP		sP	23 11 22.3	+4.7
MDJ				PP		**PnPn**	**23 12 18.5**	**-3.8**
MDJ				S		**S**	**23 16 33.3**	**-3.6**
MDJ				sS		**ScP**	**23 17 02.5**	**-2.8**
MDJ				SS		**SS**	**23 19 13.8**	**-2.8**
MDJ				pmax		pmax		
	comp=Z,4.0nm,0.5s							
MDJ				pmax		pmax		
	comp=Z,60nm,4.5s							
MDJ				LR		LR		
	comp=N,24nm,18.9s							
MDJ				LR		LR		
	comp=E,36nm,19.5s							
MDJ				LR		LR		
	comp=Z,57nm,19.2s							
HAWA	**Hanford**	**36.56**	**75**	*e*P		**P**	**23 11 02.1**	**+0.9**
	comp=Z,17nm,0.8s							
NEW	**Newport**	**37.10**	**71**	*e*P		**P**	**23 11 06.6**	**+0.6**
	comp=Z,14nm,0.6s							
NEW	**Newport**	**37.10**	**71**	⇓P		**P**	**23 11 06.5**	**+0.6**
	baz=37,SNR=20							
C12B	**Naegeli Ranch,**	**38.34**	**71**	⇑P		**P**	**23 11 17.0**	**+0.6**
	baz=38							
MOD	**Modoc**	**38.44**	**82**	*e*P		**P**	**23 11 20.6**	**+3.1**
	comp=Z,2.8nm,0.6s							
B13A	**Whitefish**	**38.61**	**70**	⇑P		**P**	**23 11 19.2**	**+0.5**
	baz=38							
WALA	**Waterton Lakes**	**38.61**	**68**	*e*P		**P**	**23 11 18.1**	**-0.7**
	comp=Z,0.3nm,0.9s							
BSMT	**Bassoo Peak**	**38.68**	**71**	*e*P		**P**	**23 11 19.8**	**+0.4**
BMO	**Blue Mountains**	**38.68**	**76**	*e*P		**P**	**23 11 20.0**	**+0.6**
	comp=Z,4.5nm,0.9s							
BLMT	**Blacktail Moun**	**38.85**	**70**	*e*P		**P**	**23 11 21.3**	**+0.4**
C13A	**Hot Springs**	**38.89**	**71**	⇑P		**P**	**23 11 21.4**	**+0.4**
	baz=39,SNR=14							
A14A	**Double T Ranch**	**38.94**	**68**	⇓P		**P**	**23 11 21.9**	**+0.4**
	baz=39,SNR=9.1							
JTMT	**Jette**	**39.03**	**71**	*e*P		**P**	**23 11 22.8**	**+0.5**
YBMT	**Yellow Bay**	**39.13**	**70**	*e*P		P	23 11 19.4	-3.7
WVOR	**Wild Horse Val**	**39.17**	**80**	*e*P		P	23 11 19.9	-3.6
WVOR				pmax		pmax		
	comp=Z,8.0nm,0.7s							
WVOR	**Wild Horse Val**	**39.17**	**80**	*e*P		P	23 11 19.9	-3.6
	comp=Z,8.1nm,0.7s							
D13A	**Huson**	**39.24**	**72**	⇑P		**P**	**23 11 24.7**	**+0.7**
	baz=39							
SWMT	**Swartz Lake**	**39.31**	**71**	*e*P		**P**	**23 11 24.9**	**+0.3**
B14A	**Marquette Ranc**	**39.32**	**69**	⇓P		**P**	**23 11 25.0**	**+0.3**
	baz=39,SNR=6.2							
A15A	**Johnson Ranch,**	**39.34**	**68**	⇓P		**P**	**23 11 25.0**	**+0.2**
	baz=39							
F12A	**Elk City**	**39.45**	**74**	⇑P		**P**	**23 11 26.3**	**+0.5**
	baz=39,SNR=13							
MSO	**Missoula**	**39.69**	**72**	*e*P		**P**	**23 11 27.2**	**-0.5**
	comp=Z,6.7nm,1.0s							
MSO	**Missoula**	**39.69**	**72**	⇑P		**P**	**23 11 28.1**	**+0.4**
	baz=40							
E13A	**Victor**	**39.73**	**72**	⇓P		**P**	**23 11 28.7**	**+0.5**
	baz=40							
G12A	**Big Creek, Yel**	**39.73**	**75**	⇑P		**P**	**23 11 28.9**	**+0.6**
	baz=40							
SLMT	**Seeley Lake**	**39.74**	**71**	*e*P		**P**	**23 11 28.6**	**+0.3**
D14A	**Greenough**	**39.81**	**71**	⇑P		**P**	**23 11 28.9**	**0.0**
	baz=40,SNR=18							
F13A	**Darby**	**39.99**	**73**	⇑P		**P**	**23 11 30.5**	**+0.2**
	baz=40,SNR=6.9							
C15A	**Salmond Ranch,**	**40.00**	**70**	⇓P		**P**	**23 11 30.9**	**+0.5**
	baz=39,SNR=23							
CHMT	**Chamberlain Mo**	**40.05**	**71**	*e*P		**P**	**23 11 31.0**	**+0.1**
E14A	**Clinton**	**40.16**	**72**	⇓P		**P**	**23 11 32.0**	**+0.3**
	baz=40,SNR=9.5							
H12A	**Diamond D Ranc**	**40.33**	**75**	⇑P		**P**	**23 11 33.4**	**+0.3**
	baz=40							
MFID	**Camas Ranch**	**40.35**	**77**	*e*P		**P**	**23 11 33.7**	**+0.4**
	comp=Z,7.3nm,1.1s							
MFID	**Camas Ranch**	**40.35**	**77**	⇓P		**P**	**23 11 34.2**	**+0.9**
	baz=40							
G13A	**Cobalt**	**40.41**	**74**	⇑P		**P**	**23 11 34.6**	**+0.9**
	baz=40							
D15A	**Lincoln**	**40.42**	**71**	⇑P		**P**	**23 11 34.1**	**+0.3**
	baz=40,SNR=10							
C16A	**Fuhringer Ranc**	**40.49**	**69**	⇑P		**P**	**23 11 34.9**	**+0.5**
	baz=40							
A17A	**Triple J Farms**	**40.52**	**67**	⇓P		**P**	**23 11 35.0**	**+0.4**
	baz=40							
F14A	**Wisdom**	**40.55**	**73**	⇑P		**P**	**23 11 35.4**	**+0.4**
	baz=40							
I12A	**Atlanta**	**40.57**	**76**	⇑P		**P**	**23 11 35.9**	**+0.7**
	baz=40							
E15A	**Deer Lodge**	**40.66**	**71**	⇑P		**P**	**23 11 36.0**	**+0.1**
	baz=40,SNR=7.4							
HRY	**Holter Researc**	**40.99**	**71**	*e*P		**P**	**23 11 35.9**	**-2.6**
D16A	**Dana Ranch, Ca**	**40.99**	**70**	⇑P		**P**	**23 11 38.5**	**-0.1**
	baz=41							
A18A	**Metzger Ranch,**	**41.03**	**67**	⇓P		**P**	**23 11 38.7**	**0.0**
	baz=41							
F15A	**Butte**	**41.05**	**72**	⇓P		**P**	**23 11 39.5**	**+0.4**
	baz=41							
LRM	**Limekiln Ridge**	**41.09**	**72**	*e*P		**P**	**23 11 39.9**	**+0.4**
I13A	**Wildhorse Cree**	**41.12**	**76**	⇑P		**P**	**23 11 40.2**	**+0.5**
	baz=41,SNR=15							
HLID	**Hailey**	**41.13**	**76**	*e*P		**P**	**23 11 40.2**	**+0.5**
	comp=Z,8.1nm,1.0s							
HLID	**Hailey**	**41.13**	**76**	⇓P		**P**	**23 11 40.2**	**+0.5**
	baz=41							
E16A	**East Helena**	**41.17**	**71**	⇓P		**P**	**23 11 40.3**	**+0.2**
	baz=41,SNR=7.4							
H14A	**Leadore**	**41.19**	**74**	⇑P		**P**	**23 11 40.5**	**+0.3**
	baz=41							
B18A	**Beardsley Farm**	**41.33**	**67**	⇑P		**P**	**23 11 41.1**	**-0.1**
	baz=41							
J13A	**Cove Ranch, Pi**	**41.37**	**76**	⇑P		**P**	**23 11 42.2**	**+0.5**
	baz=41,SNR=11							
MCMT	**McKenzie Canyo**	**41.38**	**74**	*e*P		**P**	**23 11 42.1**	**+0.1**
D17A	**Six Diamond Ra**	**41.43**	**69**	⇓P		**P**	**23 11 42.3**	**+0.1**
	baz=41							
KSRS	**Korea Array**	**41.46**	**273**	P		**P**	**23 11 44.0**	**+1.8**
	comp=Z,3.7nm,0.7s,baz=54,slow=7.7,SNR=13							
KSRS				LR		LR	23 27 43.3	
	comp=Z,23nm,18.5s,baz=119,slow=34							
KSAR	**Wonju Array Be**	**41.49**	**273**	P		**P**	**23 11 44.0**	**+1.5**
I14A	**Mackay**	**41.51**	**75**	⇑P		**P**	**23 11 43.6**	**+0.7**
	baz=41							
EGMT	**Eagleton**	**41.53**	**68**	*e*P		**P**	**23 11 43.9**	**+1.0**
	comp=Z,10nm,1.1s							
EGMT				*e*S		**S**	**23 17 56.9**	**+1.8**
EGMT	**Eagleton**	**41.53**	**68**	⇑P		**P**	**23 11 43.4**	**+0.5**
	baz=41							
F16A	**Kennard Place,**	**41.60**	**72**	⇑P		**P**	**23 11 44.7**	**+1.1**
	baz=41							
A19A	**Klindworth Far**	**41.65**	**66**	⇓P		**P**	**23 11 44.5**	**+0.7**
	baz=41							
E17A	**Martinsdale**	**41.69**	**70**	⇓P		**P**	**23 11 45.0**	**+0.6**
	baz=42,SNR=6.0							
NVAR	**Mina Array Bea**	**41.72**	**85**	P		**P**	**23 11 45.7**	**+1.0**
NVAR				PcP		**PcP**	**23 13 41.4**	**+1.0**
NVAR	**Mina Array Bea**	**41.72**	**85**	P		**P**	**23 11 45.7**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=302,slow=5.8,SNR=11							
NVAR				PcP		**PcP**	**23 13 41.4**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=289,slow=2.8,SNR=5.3							
B19A	**Brinkman Farms**	**41.78**	**67**	⇑P		**P**	**23 11 45.0**	**+0.1**
	baz=42,SNR=6.1							
G16A	**Moss Hill, Enn**	**41.79**	**72**	⇑P		**P**	**23 11 45.5**	**+0.4**
	baz=42,SNR=12							

J14A	**Carey**	**41.81**	**76**	⇑P		**P**	**23 11 46.3**	**+1.0**
	baz=42,SNR=6.2							
D18A	**Linhart Farms,**	**41.93**	**69**	⇑P		**P**	**23 11 47.1**	**+0.9**
	baz=42							
C19A	**Slack Wire Ran**	**42.09**	**68**	⇑P		**P**	**23 11 48.3**	**+0.9**
	baz=42,SNR=11							
F17A	**Fitzpatrick Pl**	**42.11**	**71**	⇓P		**P**	**23 11 48.2**	**+0.5**
	baz=42							
E18A	**Harlowton**	**42.19**	**70**	⇑P		**P**	**23 11 49.1**	**+0.7**
	baz=42							
ELK	**Elko**	**42.23**	**80**	*e*P		**P**	**23 11 48.6**	**-0.2**
	comp=Z,42nm,0.8s							
B20A	**Solberg Farm,**	**42.31**	**66**	⇑P		**P**	**23 11 50.0**	**+0.8**
	baz=42							
G17A	**Pierce Place,**	**42.37**	**72**	⇑P		**P**	**23 11 50.2**	**+0.3**
	baz=42							
H16A	**Russell Place,**	**42.41**	**73**	⇑P		**P**	**23 11 50.9**	**+0.7**
	baz=42							
FFC	**Flin Flon**	**42.55**	**56**	*e*P		**P**	**23 11 50.8**	**-0.2**
FFC				pmax		pmax		
	comp=Z,19nm,2.0s							
FFC	**Flin Flon**	**42.55**	**56**	*e*P		**P**	**23 11 50.8**	**-0.2**
	comp=Z,19nm,2.0s							
F18A	**Big Timber**	**42.66**	**70**	⇓P		**P**	**23 11 52.8**	**+0.6**
	baz=42							
C20A	**Veseth Ranch,**	**42.70**	**67**	⇑P		**P**	**23 11 53.0**	**+0.6**
	baz=42,SNR=6.7							
I16A	**Newdale**	**42.72**	**74**	⇑P		**P**	**23 11 53.7**	**+1.0**
	baz=42							
GCMT	**Greycliff**	**42.75**	**71**	*e*P		**P**	**23 11 53.6**	**+0.7**
B21A	**Ellsworth Farm**	**42.89**	**66**	⇓P		**P**	**23 11 54.5**	**+0.6**
	baz=43							
E19A	**Rath Farm, Rou**	**42.91**	**69**	⇑P		**P**	**23 11 54.9**	**+0.8**
	baz=43							
D20A	**Manuel Ranch,**	**42.95**	**68**	⇓P		**P**	**23 11 55.3**	**+0.9**
	baz=43							
H17A	**Grant Village**	**42.98**	**73**	⇓P		**P**	**23 11 56.5**	**+1.6**
	baz=43,SNR=6.0							
IMW	**Indian Meadow**	**43.04**	**74**	*e*P		**P**	**23 11 56.3**	**+0.9**
	comp=Z,8.7nm,1.1s							
G18A	**Lazy EL Ranch,**	**43.07**	**71**	⇑P		**P**	**23 11 56.0**	**+0.5**
	baz=43							
RRI2	**Red Ridge**	**43.12**	**75**	*e*P		**P**	**23 11 56.6**	**+0.5**
	comp=Z,14nm,1.1s							
HVU	**Hansel Valley**	**43.13**	**77**	*e*P		**P**	**23 11 57.3**	**+1.2**
HVU				pmax		pmax		
	comp=Z,6.0nm,0.8s							
HVU	**Hansel Valley**	**43.13**	**77**	*e*P		**P**	**23 11 57.3**	**+1.2**
	comp=Z,5.6nm,0.8s							
F19A	**Roth Farm, Mol**	**43.14**	**70**	⇑P		**P**	**23 11 56.9**	**+0.9**
	baz=43							
C21A	**Desert Coulee**	**43.16**	**67**	⇑P		**P**	**23 11 57.0**	**+0.9**
	baz=43,SNR=8.8							
A22A	**Carney Farms,**	**43.23**	**65**	⇓P		**P**	**23 11 57.2**	**+0.6**
	baz=43,SNR=7.0							
MOOW	**Moose Ponds**	**43.24**	**74**	*e*P		**P**	**23 11 57.6**	**+0.6**
	comp=Z,24nm,2.5s							
RLMT	**Red Lodge**	**43.35**	**71**	*e*P		**P**	**23 11 58.2**	**+0.3**
	comp=Z,12nm,0.9s							
SBC	**Santa Barbara**	**43.36**	**91**	⇑P		**P**	**23 12 00.4**	**+2.6**
	baz=43							
H18A	**Shoshone NF, C**	**43.36**	**72**	⇑P		**P**	**23 11 58.8**	**+0.8**
	baz=43							
R11A	**Troy Canyon, C**	**43.45**	**83**	⇓P		**P**	**23 12 00.0**	**+1.3**
	baz=43							
D21A	**La Casta Ranch**	**43.62**	**68**	⇓P		**P**	**23 12 00.4**	**+0.6**
	baz=43							
F20A	**Billings**	**43.64**	**70**	⇓P		**P**	**23 12 00.8**	**+0.8**
	baz=43							
MPMC	**Manual Prospec**	**43.70**	**87**	⇑P		**P**	**23 12 02.7**	**+1.9**
	baz=44							
BSC	**Santa Cruz Isl**	**43.70**	**91**	⇓P		**P**	**23 12 02.8**	**+2.2**
	baz=44							
H19A	**Powell**	**43.77**	**72**	⇑P		**P**	**23 12 02.2**	**+1.0**
	baz=44,SNR=6.2							
FURC	**Furnace Creek,**	**43.84**	**86**	⇓P		**P**	**23 12 03.9**

K21A Alcova 45.97 73 ⇓P P 23 12 18.5 -0.3
baz=46,SNR=6.4
SRU San Rafael 46.11 79 ⇑P P 23 12 21.0 +1.2
baz=46
O19A Miners Draw (B 46.24 77 ⇑P P 23 12 21.5 +0.7
baz=46
L21A Rawlins 46.29 74 ⇑P P 23 12 21.3 0.0
baz=46,SNR=8.5
H24A Dirks Ranch, A 46.33 69 ⇑P P 23 12 21.3 -0.1
baz=46
K22A Casper 46.39 72 ⇓P P 23 12 22.2 +0.2
baz=46
N20A Spence Gulch, 46.43 76 ⇓P P 23 12 23.6 +1.1
baz=46
M21A Separation Pea 46.51 74 ⇑P P 23 12 23.2 +0.1
baz=46
U15A North Rim 46.70 83 ⇑P P 23 12 25.5 +0.9
baz=46,SNR=7.1
P19A Cripple Cowboy 46.73 77 ⇑P P 23 12 25.0 +0.3
baz=46,SNR=11
L22A Ellis Ranch, M 46.81 73 ⇓P P 23 12 25.9 +0.6
baz=47
K23A Bowen Ranch, D 46.87 72 ⇑P P 23 12 26.1 +0.4
baz=47
O20A White River Ci 46.87 76 ⇑P P 23 12 25.9 +0.1
baz=47,SNR=8.0
N21A Black Mountain 46.93 75 ⇑P P 23 12 26.4 +0.1
baz=47
RSSD Black Hills 47.00 69 *e*P P 23 12 26.4 -0.4
RSSD pmax pmax
comp=Z,8.0nm,1.2s
RSSD Black Hills 47.00 69 *e*P P 23 12 26.4 -0.4
comp=Z,7.5nm,1.2s
M22A Cedar Creek Ra 47.09 74 ⇓P P 23 12 27.4 -0.2
baz=47
P20A De Beque 47.17 77 ⇑P P 23 12 28.7 +0.5
baz=47
L23A Garrett 47.20 73 ⇑P P 23 12 28.3 -0.1
baz=47,SNR=12
O21A Pagoda 47.29 76 ⇑P P 23 12 29.2 +0.1
baz=47,SNR=5.5
S18A Hurst Farm, Bl 47.32 80 ⇑P P 23 12 29.5 0.0
baz=47,SNR=6.4
MDND Maddock 47.38 63 ⇑P P 23 12 29.7 +0.3
baz=47
PV10 Paradox Valley 47.47 79 *e*P P 23 12 31.2 +0.6
TLY Talaya 47.50 304 *e*P P 23 12 33.6 +3.3
TLY pmax pmax
comp=Z,3.0nm,0.7s
N22A Wattenberg Ran 47.54 74 ⇓P P 23 12 31.3 +0.2
baz=47
PV04 Paradox Valley 47.54 79 *e*P P 23 12 31.3 +0.2
M23A Laramie 47.58 73 ⇑P P 23 12 31.5 +0.2
baz=47
N23A Red Feather La 47.79 74 ⇓P P 23 12 33.6 +0.5
baz=48
WUAZ Wupatki 47.86 83 *e*P P 23 12 32.4 -1.1
comp=Z,4.1nm,0.7s
WUAZ Wupatki 47.86 83 ⇑P P 23 12 34.3 +0.8
baz=48
Y14A Wickenburg 47.88 86 ⇓P P 23 12 34.9 +1.4
baz=48
PV01 Paradox Valley 47.91 79 *e*P P 23 12 33.3 -0.7
ULM Lac du Bonnet 48.05 58 P P 23 12 34.6 0.0
ULM Lac du Bonnet 48.05 58 P P 23 12 34.6 0.0
comp=Z,3.8nm,0.4s,baz=324,slow=7.5,SNR=5.2
SONM Songino Array 48.19 298 P P 23 12 36.2 +0.3
SONM PcP PcP 23 14 01.3 -1.2
SONM ScP ScP 23 17 53.8 +1.0
SONM Songino Array 48.19 298 P P 23 12 36.2 +0.3
comp=Z,0.9nm,0.6s,baz=55,slow=9.0,SNR=9.3
SONM PcP PcP 23 14 01.3 -1.2
comp=Z,2.7nm,0.9s,baz=60,slow=1.6,SNR=8.8
SONM ScP ScP 23 17 53.8 +1.0
comp=Z,0.5nm,0.9s,baz=58,slow=3.6,SNR=3.6
L25A Engebretsen Ra 48.21 71 ⇑P P 23 12 36.7 +0.6
baz=48
O23A Lake Granby, G 48.23 75 ⇑P P 23 12 36.8 +0.3
baz=48,SNR=5.4
SMCO Snowmass 48.23 76 *e*P P 23 12 35.9 -0.8
comp=Z,3.5nm,0.6s
S20A Disappointment 48.23 79 ⇑P P 23 12 37.2 +0.7
baz=48
X16A Lo Mia Camp, P 48.53 84 ⇓P P 23 12 39.9 +1.2
baz=48
ISCO Idaho Springs 48.67 75 *e*P P 23 12 40.3 +0.4
ISCO pmax pmax
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 48.67 75 *e*P P 23 12 40.3 +0.4
comp=Z,3.6nm,0.8s
ISCO Idaho Springs 48.67 75 ⇑P P 23 12 40.8 +0.9
baz=48
R22A Saguache, Gunn 48.96 77 ⇑P P 23 12 43.0 +0.8
baz=49
Q23A Hartsel 49.09 76 ⇓P P 23 12 44.4 +1.2
baz=49
AGMN Agassiz Nation 49.17 60 *e*P P 23 12 42.2 -1.1
comp=Z,16nm,0.9s
S22A 4UR Ranch, Cre 49.22 78 ⇑P P 23 12 45.1 +1.0
baz=49
GUMO Guam 49.27 234 LR LR 23 33 17.8
comp=Z,44nm,18.9s,baz=92,slow=36
T21A Navajo Lake 49.27 79 ⇓P P 23 12 45.4 +1.0
baz=49
HHC Hu-ho-hao-te 49.38 288 *e*P P 23 12 48.8 +3.7
HHC pP pP 23 12 56.6 -1.5
HHC sP sP 23 12 59.8 -3.8
HHC PP **PP 23 14 43.6 +4.4**
HHC S **S 23 19 52.8 +4.3**
HHC sS sS 23 20 05.8 -4.4
HHC ScS **ScS 23 22 35.8 +3.2**
HHC pmax pmax
comp=Z,24nm,0.7s
HHC pmax pmax
comp=Z,120nm,6.4s
HHC LR LR
comp=N,120nm,17.8s
HHC LR LR
comp=E,210nm,15.5s
HHC LR LR
comp=Z,190nm,14.3s
U21A Nageezi 49.56 80 ⇑P P 23 12 47.1 +0.5
baz=49,SNR=5.3
T22A Edith 49.65 79 ⇓P P 23 12 48.6 +1.2
baz=49
P25A Willow Gulch B 49.72 74 ⇓P P 23 12 48.7 +1.0
baz=50,SNR=5.8
R24A Sanders Place, 49.96 76 ⇓P P 23 12 50.6 +1.0
baz=50
SDCO Great Sand Dun 50.03 77 *e*P P 23 12 50.7 +0.5
comp=Z,3.1nm,0.8s
Q25A Bedland, Calha 50.05 75 ⇑P P 23 12 51.2 +0.9
baz=50
U22A Llaves 50.09 79 ⇑P P 23 12 51.4 +0.8
baz=50
P26A Davis Ranch, A 50.18 74 ⇑P P 23 12 52.1 +0.8
baz=50
S24A Houchin Ranch, 50.27 77 ⇑P P 23 12 53.0 +0.9
baz=50
X20A Quemado 50.27 82 ⇑P P 23 12 53.2 +1.2
baz=50
SPITS Spitsbergen Ar 50.31 357 LR LR 23 34 28.0
comp=Z,115nm,19.9s,baz=20,slow=36
TUC Tucson 50.35 86 *e*P P 23 12 52.4 -0.1
TUC Tucson 50.35 86 *e*P P 23 12 52.4 -0.1
comp=Z,0.7nm,0.8s
R25A Fountain Ranch 50.51 76 ⇓P P 23 12 54.9 +1.1
baz=50
T24A Torres, Weston 50.74 77 ⇓P P 23 12 56.4 +0.8
baz=50
Y20A Horse Springs, 50.77 83 ⇑P P 23 12 57.1 +1.3
baz=50
X21A Alamocita Cree 50.78 82 ⇑P P 23 12 57.1 +1.2
baz=50
T25A Trinidad 51.09 77 ⇓P P 23 12 59.0 +0.9
baz=51,SNR=7.6
Z20A Nine Sixteen R 51.17 84 ⇑P P 23 12 59.5 +0.7
baz=51
LAZ Ladron 51.21 81 *e*P P 23 12 59.9 +0.8
X22A Bernardo 51.22 81 ⇓P P 23 12 59.9 +0.8
baz=51
R27A Eads 51.32 75 ⇑P P 23 13 00.6 +0.8
baz=51
S26A Kim 51.34 76 ⇓P P 23 13 00.2 +0.2
baz=51
Q28A Sharon Springs 51.40 73 ⇑P P 23 13 00.7 +0.3
baz=51

V24A Rampart Ranch, 51.48 79 ⇓P P 23 13 01.8 +0.6
baz=51
120A U Bar Ranch, L 51.52 84 ⇓P P 23 13 02.8 +1.4
baz=51
U25A Circle Dot Ran 51.57 78 ⇑P P 23 13 02.5 +0.8
baz=51
Z21A St. Cloud Mine 51.61 83 ⇑P P 23 13 03.2 +1.1
baz=51
Y22A Socorro 51.62 82 ⇓P P 23 13 03.1 +0.9
baz=51
BNM Barren Site 51.69 81 *e*P P 23 13 02.8 +0.1
EYMN Ely 51.73 58 *e*P P 23 13 02.2 -0.4
comp=Z,12nm,0.8s
W24A Lazy 6 Ranch, 51.74 79 ⇑P P 23 13 04.1 +1.1
baz=52
V25A Rancho No Teng 51.81 78 ⇓P P 23 13 04.6 +1.1
baz=52
R28A Tribune 51.88 74 ⇓P P 23 13 04.5 +0.6
baz=52
U26A Atchley Ranch, 51.98 77 ⇓P P 23 13 05.3 +0.5
baz=52
220A Playas Peak, P 52.03 85 ⇑P P 23 13 05.6 +0.4
baz=52,SNR=5.3
121A Cookes Peak, D 52.06 84 ⇑P P 23 13 06.0 +0.5
baz=52
T27A Campo 52.16 76 ⇑P P 23 13 06.3 +0.2
baz=52
Y23A Lovelace Mesa, 52.19 81 ⇑P P 23 13 06.8 +0.4
baz=52,SNR=6.2
S28A Manter 52.31 75 ⇑P P 23 13 07.6 +0.4
baz=52
W25A X Bar L Ranch, 52.31 79 ⇑P P 23 13 07.6 +0.3
baz=52,SNR=5.7
V26A Tequesquite Ra 52.34 78 ⇓P P 23 13 07.8 +0.4
baz=52
320A Kipp Ranch, An 52.41 85 ⇑P P 23 13 08.6 +0.6
baz=52
U27A Thompson Grove 52.52 76 ⇑P P 23 13 09.0 +0.3
baz=52
Y24A Capitan 52.58 81 ⇑P P 23 13 10.1 +0.9
baz=52,SNR=9.4
X25A Clemmons Ranch 52.65 80 ⇓P P 23 13 10.6 +0.9
baz=52
SUMG Summit 52.67 15 *i* P P 23 13 09.8 +0.1
SUMG pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 52.67 15 *e*P P 23 13 09.5 -0.1
comp=Z,8.1nm,0.8s
SUMG Summit 52.67 15 *i* P P 23 13 09.8 +0.1
comp=Z,6.3nm,1.0s
U28A Mallet 52.91 76 ⇑P P 23 13 12.3 +0.8
baz=53
Z24A Sheeppen Canyo 53.02 81 ⇓P P 23 13 13.2 +0.7
baz=53
Y25A Mesa, Roswell 53.03 80 ⇑P P 23 13 13.1 +0.5
baz=53
S30A Montezuma 53.14 74 ⇓P P 23 13 13.4 +0.1
baz=53
X26A CR and CF Fran 53.16 79 ⇓P P 23 13 13.6 +0.2
baz=53
124A Stringfield Ra 53.39 82 ⇓P P 23 13 16.0 +0.7
baz=53
U30A WK&E Inc. Balk 53.76 75 ⇓P P 23 13 17.6 -0.2
baz=54
224A Cornudas Mount 53.77 82 ⇓P P 23 13 18.3 +0.3
baz=54
125A Gardner Draw, 53.91 81 ⇑P P 23 13 19.5 +0.5
baz=54
Z26A Caprock 53.91 80 ⇓P P 23 13 19.4 +0.4
baz=54
Y27A Causey 54.00 79 ⇓P P 23 13 20.1 +0.5
baz=54
MNTX Cornudas Mount 54.12 83 *e*P P 23 13 20.7 +0.3
comp=Z,2.5nm,0.8s
COWI Conover 54.15 59 *e*P P 23 13 19.5 -0.9
comp=Z,8.6nm,0.7s
COWI *e*PcP PcP 23 14 21.8 -2.7
MSTX Muleshoe 54.18 79 ⇓P P 23 13 21.5 +0.6
baz=54
225A Deer Hill, Car 54.18 82 ⇑P P 23 13 21.8 +0.7
baz=54
325A Bean Ranch, Si 54.60 83 ⇑P P 23 13 24.3 +0.3
baz=54,SNR=5.6
226B Tejolote Peak, 54.61 81 ⇑P P 23 13 24.6 +0.5
baz=54
425A Indio Mountain 54.99 83 ⇓P P 23 13 27.5 +0.6
baz=55,SNR=5.0
W31A Holland Ranch, 55.08 76 ⇓P P 23 13 27.8 +0.4
baz=55
ZALV Zalesovo Beam 55.22 315 PcP PcP 23 14 28.2 -0.2
ZALV Zalesovo Beam 55.22 315 PcP PcP 23 14 28.2 -0.2
comp=Z,3.1nm,0.7s,baz=33,slow=3.4,SNR=9.4
ZALV LR LR 23 39 18.6
comp=Z,112nm,19.4s,baz=86,slow=38
326A Caldwell Ranch 55.25 82 ⇑P P 23 13 28.9 +0.2
baz=55
128A Castleberry Fa 55.27 80 ⇑P P 23 13 29.1 +0.3
baz=55,SNR=5.1
Z29A Hungry Hill Ra 55.31 79 ⇓P P 23 13 29.1 -0.1
baz=55
Y30A Stafford Cattl 55.39 78 ⇑P P 23 13 30.0 +0.4
baz=55
XAN Xi'an 55.41 283 P P 23 13 29.9 +0.2
XAN pP pP 23 13 35.4 -7.5
XAN pmax pmax
comp=Z,4.0nm,1.0s
X31A McDonald Ranch 55.44 76 ⇑P P 23 13 30.2 +0.3
baz=55
JFWS Jewell Farm 55.60 63 *e*P P 23 13 30.6 -0.4
JFWS pmax pmax
comp=Z,12nm,0.8s
JFWS Jewell Farm 55.60 63 *e*P P 23 13 30.6 -0.4
comp=Z,12nm,0.8s
Z30A Sanderson Ranc 55.65 78 ⇑P P 23 13 31.4 -0.1
baz=55
426A McDonald Obser 55.66 83 ⇓P P 23 13 31.8 0.0
baz=55,SNR=5.5
328A Wristen Ranch, 55.92 81 ⇓P P 23 13 33.3 -0.2
baz=56,SNR=5.0
427A Hayter Ranch, 55.93 82 ⇑P P 23 13 33.7 +0.2
baz=56
526A Mary Lane Ranc 56.05 83 ⇓P P 23 13 34.7 +0.2
baz=56,SNR=6.1
WMOK Wichita Mounta 56.09 75 *e*P P 23 13 34.9 +0.3
WMOK pmax pmax
comp=Z,6.0nm,0.9s
WMOK Wichita Mounta 56.09 75 *e*P P 23 13 34.9 +0.3
comp=Z,5.5nm,0.9s
Y32A R-V Farms, Ver 56.19 76 ⇓P P 23 13 35.4 +0.1
baz=56
527A Woodward Ranch 56.29 83 ⇑P P 23 13 36.2 0.0
baz=56
329A Wagon Wheel Ra 56.36 80 ⇓P P 23 13 36.6 -0.1
baz=56
626A Big Bend Ranch 56.38 84 ⇑P P 23 13 36.9 +0.2
baz=56,SNR=8.4
428A Kincaid Ranch, 56.46 82 ⇓P P 23 13 37.7 +0.4
baz=56,SNR=8.6
131A Roby 56.52 78 ⇓P P 23 13 38.0 +0.3
baz=56
230A Sterling City 56.62 79 ⇑P P 23 13 38.6 +0.1
baz=56,SNR=11
Z32A Haskell 56.64 77 ⇓P P 23 13 38.5 0.0
baz=56,SNR=5.8
528A Cox Ranch, San 56.79 82 ⇓P P 23 13 39.7 0.0
baz=56
TXAR Lajitas Array 56.82 83 P P 23 13 39.8 -0.2
TXAR Lajitas Array 56.82 83 P P 23 13 39.8 -0.2
comp=Z,4.0nm,0.9s,baz=297,slow=5.3,SNR=36
627A Terlingua Ranc 56.91 83 ⇑P P 23 13 40.7 +0.1
baz=57
330A Mertzon 56.91 80 ⇑P P 23 13 40.2 -0.3
baz=57
ABTX Abilene, Hawle 57.01 78 ⇑P P 23 13 41.3 +0.2
baz=57
429A Davenport Ranc 57.02 81 ⇑P P 23 13 40.9 -0.4
baz=57
231A Bronte 57.08 79 ⇓P P 23 13 41.6 0.0
baz=57
LZH Lanzhou 57.08 288 *e*P P 23 13 34.3 -7.4
LZH pP pP 23 13 53.5 -1.5
LZH sP sP 23 14 05.6 +5.2
LZH pmax pmax
comp=Z,16nm,1.1s
529A Stev Forest Ra 57.16 82 ⇑P P 23 13 42.2 -0.1
baz=57
628A Black Gap, Mar 57.20 83 ⇑P P 23 13 42.7 +0.1
baz=57,SNR=9.7

430A Baggett Ranch, 57.31 80 ⇓P P 23 13 43.3 -0.1
baz=57,SNR=7.8
JMIC Jan Mayen 57.43 5 LR LR 23 36 50.3
comp=Z,49nm,20.4s,baz=66,slow=34
331A San Angelo 57.44 79 ⇓P P 23 13 44.0 -0.2
baz=57
232A Coleman 57.52 78 ⇓P P 23 13 44.7 -0.1
baz=57,SNR=7.4
530A J-C Ranch, Com 57.69 81 ⇓P P 23 13 46.1 +0.1
baz=58,SNR=9.9
431A Sonora 57.77 80 ⇑P P 23 13 46.2 -0.3
baz=58,SNR=8.9
332A Millersview 57.81 79 ⇑P P 23 13 46.7 -0.1
baz=58,SNR=6.0
432A Menard 58.13 79 ⇓P P 23 13 49.0 -0.1
baz=58
531A Rocksprings 58.17 80 ⇑P P 23 13 49.2 -0.2
baz=58
ARCES ARCESS Array B 58.21 351 P P 23 13 49.8 +0.8
ARCES ARCESS Array B 58.21 351 P P 23 13 49.8 +0.8
comp=Z,0.7nm,0.5s,baz=24,slow=6.9,SNR=8.8
ARCES LR LR 23 39 48.2
comp=Z,51nm,18.6s,baz=226,slow=37
JCT Junction City 58.40 80 ⇓P P 23 13 50.6 -0.3
baz=58
532A Rocksprings 58.59 80 ⇑P P 23 13 51.9 -0.3
baz=58
631A Perdido Creek 58.68 81 ⇓P P 23 13 52.8 -0.1
baz=58
SCHQ Schefferville 58.72 40 P P 23 13 51.8 -1.0
SCHQ Schefferville 58.72 40 P P 23 13 51.8 -1.0
comp=Z,4.6nm,0.9s,baz=309,slow=10,SNR=5.4
SCHQ LR LR 23 40 30.0
comp=Z,147nm,19.2s,baz=25,slow=37
WHTX Lake Whitney 58.78 77 ⇓P P 23 13 53.1 -0.4
baz=58
SFIN Scholer Farm 59.05 63 ⇓P P 23 13 55.4 +0.1
baz=59
732A Laxson Ranch, 59.53 81 ⇑P P 23 13 59.2 +0.4
baz=59
KURK Kurchatov 60.20 315 *e*P P 23 14 03.4 +0.4
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 60.20 315 *e*P P 23 14 02.0 -1.0
comp=Z,6.8nm,0.4s
KURBB Kurchatov Arra 60.31 315 LR LR 23 41 59.3
comp=Z,92nm,19.1s,baz=45,slow=38
MK31 Makanchi Array 61.34 310 *e*P P 23 14 09.6 -1.3
MK31 Makanchi Array 61.34 310 *e*P P 23 14 09.6 -1.3
MKAR Makanchi Array 61.34 310 *ce*P P 23 14 15.3 +4.4
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 61.34 310 P P 23 14 10.0 -0.8
MKAR Makanchi Array 61.34 310 P P 23 14 10.0 -0.8
comp=Z,2.0nm,0.5s,baz=47,slow=7.2,SNR=19
MKAR LR LR 23 41 10.5
comp=Z,42nm,18.9s,baz=223,slow=36
BVAR Borovoye Array 61.91 321 LR LR 23 43 38.9
comp=Z,176nm,19.7s,baz=48,slow=38
BRVK Borovoye 61.93 321 *e*P P 23 14 15.4 +0.7
BRVK pmax pmax
comp=Z,3.0nm,0.8s
BRVK Borovoye 61.93 321 *e*P P 23 14 14.8 +0.1
comp=Z,3.2nm,0.6s
ALLY Alegheny Colle 61.94 58 *e*P P 23 14 15.3 +0.3
comp=Z,78nm,0.8s
GYA Guiyang 62.11 278 *e*P P 23 14 19.8 +3.3
GYA pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 63.39 330 P P 23 14 25.1 +0.7
SSPA Standing Stone 63.85 57 *e*P P 23 14 27.9 +0.2
comp=Z,18nm,0.7s
JOF Joensuu 63.87 347 *e*P P 23 14 28.0 +0.6
JOF pmax pmax
comp=Z,1.0nm,0.4s
JOF Joensuu 63.87 347 *e*p P 23 14 28.0 +0.6
comp=Z,1.0nm,0.4s
HNR Honiara 64.23 207 LR LR 23 40 37.2
comp=Z,81nm,19.3s,baz=316,slow=34
LUPA Lehigh Univers 65.19 56 *e*P P 23 14 36.6 +0.3
comp=Z,167nm,0.6s
AFI Afiamalu 65.29 176 LR LR 23 38 21.8
comp=Z,70nm,20.1s,baz=296,slow=32
KAF Kangasniemi 65.31 349 *e*P P 23 14 37.4 +0.6
KAF Kangasniemi 65.31 349 *e*p P 23 14 37.4 +0.6
KMI Kunming 65.50 280 P P 23 14 33.3 -5.6
KMI pmax pmax
comp=Z,6.0nm,0.7s
QIZ Qiongzhong 65.59 270 P P 23 14 38.3 -1.0
QIZ S S 23 23 15.8 -5.4
QIZ pmax pmax
comp=Z,18nm,1.9s
KMSC Kings Mountain 65.98 63 ⇑P P 23 14 41.7 +0.2
baz=66
FINES FINESS Array B 65.99 349 P P 23 14 41.4 +0.2
FINES FINESS Array B 65.99 349 P P 23 14 41.4 +0.2
comp=Z,0.5nm,0.6s,baz=26,slow=7.7,SNR=7.1
FINES LR LR 23 45 09.4
comp=Z,65nm,20.9s,baz=270,slow=38
URVA University of 66.28 59 *e*P P 23 14 43.4 0.0
NOA NORSAR Array B 67.61 356 P P 23 14 51.6 0.0
NOA NORSAR Array B 67.61 356 P P 23 14 51.6 0.0
comp=Z,0.8nm,0.8s,baz=5.9,slow=6.5,SNR=4.8
NOA LR LR 23 42 25.9
comp=Z,30nm,20.3s,baz=355,slow=34
AAK Ala-Archa 68.13 311 *e*P P 23 14 56.2 +0.8
AAK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 68.13 311 *e*P P 23 14 55.4 0.0
comp=Z,1.1nm,0.5s
AAK Ala-Archa 68.13 311 LR LR 23 48 43.5
comp=Z,73nm,18.4s,baz=24,slow=39
HFS Hagfors 68.40 355 LR LR 23 42 14.4
comp=Z,74nm,21.4s,baz=53,slow=34
AKTO Aktyubinsk 68.57 326 LR LR 23 49 02.7
comp=Z,78nm,18.8s,baz=239,slow=40
ABKAR Akbulak array 68.88 324 *e*P P 23 14 59.6 0.0
KKAR Karatay Array 69.59 314 *e*P P 23 15 04.4 +0.2
KKAR Karatay Array 69.59 314 *e*P P 23 15 04.4 +0.2
KSH Kashi 69.84 308 *i* P P 23 15 09.8 +3.9
KSH *e*pP pP 23 15 22.8 +3.3
KSH *e*PcP **PcP 23 15 31.1 +2.9**
KSH *e*PP PP 23 17 48.3 +8.0
KSH *e*S S 23 24 18.1 +6.3
KSH *e*SKS **SKKSac 23 25 03.0 +0.1**
KSH *e*ScS **ScS 23 25 05.8 +1.9**
KSH pmax pmax
comp=Z,17nm,0.6s
KSH pmax pmax
comp=Z,92nm,8.4s
KSH LR LR
comp=N,77nm,4.7s
KSH LR LR
comp=E,69nm,3.3s
PMOR Pomariorio Ree 70.62 151 *e*T T 00 32 34.4
comp=E,3.1nm,0.2s
PPT Papeete 72.57 154 LR LR 23 40 34.1
comp=E,187nm,20.0s,baz=358,slow=30
PPT2 Papeete2 72.59 154 *e*LR LR 23 37 45.9
comp=E,87nm,21.5s
CMAR Chiang Mai Arr 72.80 278 P P 23 15 24.8 +0.9
CMAR Chiang Mai Arr 72.80 278 P P 23 15 24.8 +0.9
comp=E,3.8nm,0.7s,baz=31,slow=6.9,SNR=15
TAPN Taplejung 72.84 292 *e*P P 23 15 24.8 +0.4
comp=E,11nm,0.7s
ODAN Odare 73.40 292 *e*P P 23 15 27.4 -0.3
comp=E,8.1nm,0.6s
GUN Gumba 73.47 294 *e*P P 23 15 28.7 +0.5
comp=E,32nm,0.4s
RAMN Ramite 73.78 293 *e*P P 23 15 30.1 +0.2
comp=E,18nm,0.5s
KKN Kakani 73.90 294 *e*P P 23 15 31.3 +0.7
comp=E,24nm,0.9s
PKI Pulchoki 73.99 294 *e*P P 23 15 31.5 +0.2
comp=E,18nm,0.9s
PKIN Phulchoki 74.00 294 *e*P P 23 15 31.4 +0.2
comp=E,8.8nm,0.5s
DANN Dangsing 74.33 296 *e*P P 23 15 33.7 +0.5
comp=E,33nm,0.7s
DZM Mont Dzumac 74.94 197 *e*LR LR 23 38 43.3
comp=E,124nm,29.3s
PYUN Piuthan 74.95 296 *e*P P 23 15 37.3 +0.6
comp=E,62nm,0.9s
AKASG Malin Array Be 75.91 344 P P 23 15 40.7 -0.8
AKASG Malin Array Be 75.91 344 P P 23 15 40.7 -0.8
AKASG Malin Array Be 75.91 344 P P 23 15 40.7 -0.8
comp=E,1.0nm,0.5s,baz=17,slow=5.4,SNR=4.0

AKASG LR LR 23 52 21.0
comp=E,66nm,20.6s,baz=325,slow=38
KBL Kabal 77.14 310 *eP* **P 23 15 48.1 -0.9**
KBL pmax pmax
comp=Z,6.0nm,0.8s
KBL Kabul 77.14 310 *eP* **P 23 15 48.1 -0.9**
comp=Z,6.2nm,0.8s
CLL Collm 77.23 354 *eP* **P 23 15 48.0 -1.0**
TBI Tubuai 78.11 155 *eLR* LR 23 40 19.2
comp=Z,80nm,26.0s
BAIF Baives 78.76 360 *eP* **P 23 15 56.3 -1.2**
comp=Z,9.7nm,1.0s
BAIF Baives 78.76 360 *eP* **P 23 15 56.3 -1.2**
BAIF pmax pmax
comp=Z,10.0nm,1.0s
BAIF Baives 78.76 360 *eP* **P 23 15 56.3 -1.2**
comp=Z,9.7nm,1.0s
CRVS Cervenica-Dubn 78.83 348 *eP* **P 23 15 57.3 -0.6**
CRVS Cervenica-Dubn 78.83 348 *eP* **P 23 15 57.3 -0.6**
VRAC Vranov 78.95 352 LR LR 23 49 50.7
comp=Z,60nm,21.8s,baz=330,slow=35
KBZ Khabaz 79.32 332 LR LR 23 52 33.7
comp=Z,42nm,19.4s,baz=256,slow=37
VYHS Vyhne 79.53 350 *eP* **P 23 16 03.6 +1.8**
VYHS Vyhne 79.53 350 *eP* **P 23 16 03.6 +1.8**
GERES GERESS Array B 79.64 354 P **P 23 16 00.6 -1.8**
GERES GERESS Array B 79.64 354 P **P 23 16 00.6 -1.8**
comp=Z,0.4nm,0.6s,baz=8.9,slow=7.0,SNR=4.9
GERES LR LR 23 53 56.6
comp=Z,37nm,18.3s,baz=315,slow=38
SMOL Smolenice 79.66 351 *eP* **P 23 16 00.6 -1.8**
SMOL Smolenice 79.66 351 *eP* **P 23 16 00.6 -1.8**
FLN La Foliniere 79.98 3 *eP* **P 23 16 04.0 -0.1**
FLN *eR*
comp=Z,52nm,21.2s
FLN La Foliniere 79.98 3 *eP* **P 23 16 04.0 -0.1**
FLN La Foliniere 79.98 3 *eP* **P 23 16 04.0 -0.1**
LDF La Druitiere 80.16 3 *eP* **P 23 16 05.0 -0.1**
comp=Z,13nm,1.0s
LDF La Druitiere 80.16 3 *eP* **P 23 16 05.0 -0.1**
LDF pmax pmax
comp=Z,13nm,1.0s
LDF La Druitiere 80.16 3 *eP* **P 23 16 05.0 -0.1**
comp=Z,13nm,1.0s
PAGF Fort de Pagny 80.26 359 *eP* **P 23 16 05.5 -0.1**
comp=Z,7.2nm,1.0s
PAGF Fort de Pagny 80.26 359 *eP* **P 23 16 05.5 -0.1**
comp=Z,7.2nm,1.0s
GRR Gorron 80.34 3 *eP* **P 23 16 06.1 0.0**
comp=Z,21nm,1.0s
GRR Gorron 80.34 3 *eP* **P 23 16 06.1 0.0**
GRR pmax pmax
comp=Z,21nm,1.0s
GRR Gorron 80.34 3 *eP* **P 23 16 06.1 0.0**
comp=Z,21nm,1.0s
CDF Champ du Feu 80.37 358 *eP* **P 23 16 05.6 -0.8**
CDF Champ du Feu 80.37 358 *eP* **P 23 16 05.6 -0.8**
CDF Champ du Feu 80.37 358 *eP* **P 23 16 05.6 -0.8**
SGMF Saint Gilles 80.40 5 *eP* **P 23 16 06.6 +0.2**
comp=Z,30nm,1.1s
SGMF Saint Gilles 80.40 5 *eP* **P 23 16 06.6 +0.2**
SGMF pmax pmax
comp=Z,30nm,1.1s
SGMF Saint Gilles 80.40 5 *eP* **P 23 16 06.6 +0.2**
comp=Z,30nm,1.1s
SFTF Sexfontaines 80.61 359 *eP* **P 23 16 07.1 -0.5**
comp=Z,20nm,0.9s
SFTF Sexfontaines 80.61 359 *eP* **P 23 16 07.1 -0.5**
comp=Z,20nm,0.9s
HAU Haudompre 80.80 358 *eP* **P 23 16 08.0 -0.6**
HAU *eR*
comp=Z,47nm,17.2s
HAU Haudompre 80.80 358 *eP* **P 23 16 08.0 -0.6**
HAU Haudompre 80.80 358 *eP* **P 23 16 08.0 -0.6**
HINF Hinteralfeld 80.98 358 *eP* **P 23 16 09.4 -0.2**
HINF Hinteralfeld 80.98 358 *eP* **P 23 16 09.4 -0.2**
HINF Hinteralfeld 80.98 358 *eP* **P 23 16 09.4 -0.2**
LOR Lormes 81.55 0 *eP* **P 23 16 12.2 -0.4**
LOR *eR*
comp=Z,56nm,21.8s
LOR Lormes 81.55 0 *eP* **P 23 16 12.2 -0.4**
SSF Saint Saulge 81.76 0 *eP* **P 23 16 13.3 -0.4**
comp=Z,12nm,1.2s
SSF Saint Saulge 81.76 0 *eP* **P 23 16 13.3 -0.4**
SSF pmax pmax
comp=Z,12nm,1.2s
SSF Saint Saulge 81.76 0 *eP* **P 23 16 13.3 -0.4**
comp=Z,12nm,1.2s
AVF Avril sur Loir 82.03 1 *eP* **P 23 16 15.3 +0.2**
comp=Z,9.7nm,0.9s
AVF Avril sur Loir 82.03 1 *eP* **P 23 16 15.3 +0.2**
AVF pmax pmax
comp=Z,10.0nm,0.9s
AVF Avril sur Loir 82.03 1 *eP* **P 23 16 15.3 +0.2**
comp=Z,9.7nm,0.9s
MFF Saint Martin d 82.15 3 *eP* **P 23 16 15.9 +0.2**
comp=Z,14nm,0.9s
MFF Saint Martin d 82.15 3 *eP* **P 23 16 15.9 +0.2**
MFF pmax pmax
comp=Z,14nm,0.9s
MFF Saint Martin d 82.15 3 *eP* **P 23 16 15.9 +0.2**
comp=Z,14nm,0.9s
SMF Signal de Mont 82.18 0 *eP* **P 23 16 16.2 +0.3**
comp=Z,11nm,0.8s
SMF Signal de Mont 82.18 0 *eP* **P 23 16 16.2 +0.3**
SMF pmax pmax
comp=Z,11nm,0.8s
SMF Signal de Mont 82.18 0 *eP* **P 23 16 16.2 +0.3**
comp=Z,11nm,0.8s
BGF Bois d'Agland 82.26 1 *eP* **P 23 16 16.6 +0.3**
BGF Bois d'Agland 82.26 1 *eP* **P 23 16 16.6 +0.3**
BGF Bois d'Agland 82.26 1 *eP* **P 23 16 16.6 +0.3**
TCF Toulx Ste Croi 82.52 1 *eP* **P 23 16 17.0 -0.7**
comp=Z,10nm,0.9s
TCF Toulx Ste Croi 82.52 1 *eP* **P 23 16 17.0 -0.7**
TCF pmax pmax
comp=Z,10.0nm,0.9s
TCF Toulx Ste Croi 82.52 1 *eP* **P 23 16 17.0 -0.7**
comp=Z,10nm,0.9s
WRA Warramunga Arr 83.43 226 P **P 23 16 21.5 -1.1**
WRA Warramunga Arr 83.43 226 P **P 23 16 21.5 -1.1**
comp=Z,0.8nm,0.6s,baz=33,slow=6.0,SNR=7.7
LFF La Frestale 83.84 2 *eP* **P 23 16 24.8 +0.3**
comp=Z,9.0nm,0.9s
LFF La Frestale 83.84 2 *eP* **P 23 16 24.8 +0.3**
LFF pmax pmax
comp=Z,9.0nm,0.9s
LFF La Frestale 83.84 2 *eP* **P 23 16 24.8 +0.3**
comp=Z,9.0nm,0.9s
CAF Calviac 83.88 1 *eP* **P 23 16 24.4 -0.3**
comp=Z,4.6nm,0.8s
CAF Calviac 83.88 1 *eP* **P 23 16 24.4 -0.3**
CAF pmax pmax
comp=Z,5.0nm,0.8s
CAF Calviac 83.88 1 *eP* **P 23 16 24.4 -0.3**
comp=Z,4.6nm,0.8s
LASF Ste Croix 84.75 0 *eP* **P 23 16 28.2 -0.9**
LASF Ste Croix 84.75 0 *eP* **P 23 16 28.2 -0.9**
SMRF Simiane la Rot 84.84 359 *eP* **P 23 16 29.7 +0.1**
comp=Z,12nm,1.0s
SMRF Simiane la Rot 84.84 359 *eP* **P 23 16 29.7 +0.1**
comp=Z,12nm,1.0s
BRTR Keskin Array B 85.51 338 P **P 23 16 32.8 -0.4**
BRTR Keskin Array B 85.51 338 P **P 23 16 32.8 -0.4**
comp=Z,1.0nm,0.8s,baz=34,slow=2.9,SNR=6.4
HYB Hyderabad 85.84 293 *iP* **P 23 16 34.0 -1.0**
PGF Pioggiola 86.18 356 *eP* **P 23 16 35.5 -0.9**
comp=Z,7.5nm,0.9s
PGF Pioggiola 86.18 356 *eP* **P 23 16 35.5 -0.9**
PGF pmax pmax
comp=Z,8.0nm,0.9s
PGF Pioggiola 86.18 356 *eP* **P 23 16 35.5 -0.9**
comp=Z,7.5nm,0.9s
ASAR Alice Springs 86.88 225 P **P 23 16 40.0 +0.2**
ASAR Alice Springs 86.88 225 P **P 23 16 40.0 +0.2**
comp=Z,1.5nm,0.8s,baz=24,slow=4.7,SNR=10
POO Poona 87.62 297 *ex* **P 23 16 41.0 -2.7**
ESDC Sonseca Array 88.87 6 P **P 23 16 48.9 -0.4**
ESDC Sonseca Array 88.87 6 P **P 23 16 48.9 -0.4**
comp=Z,0.4nm,0.5s,baz=2.2,slow=3.5,SNR=5.5
STKA Stephens Creek 91.09 215 P **P 23 16 59.8 +0.4**
STKA Stephens Creek 91.09 215 P **P 23 16 59.8 +0.4**
comp=Z,2.1nm,0.6s,baz=0.0,slow=6.1,SNR=5.5
STKA LR LR 23 56 36.6
comp=Z,94nm,19.5s,baz=205,slow=35
TORD Torodi Ar. Bea 115.53 3 PKP **PKPdf 23 22 36.9 -0.3**
comp=Z,0.9nm,0.5s,baz=347,slow=2.0,SNR=31
DBIC Dimbokro 121.49 10 PKP **PKPdf 23 22 48.7 0.0**
DBIC Dimbokro 121.49 10 PKP **PKPdf 23 22 48.7 0.0**
comp=Z,2.6nm,0.9s,baz=21,slow=2.1,SNR=3.6
MAW Mawson 147.74 218 PKPbc **PKPbc 23 23 39.1 +0.8**
MAW Mawson 147.74 218 PKPbc **PKPbc 23 23 39.1 +0.8**
comp=Z,5.2nm,0.8s,baz=146,slow=3.6,SNR=4.6
LBTB Lobatse 148.82 320 *e*PKPbc **PKPbc 23 23 42.9 +0.4**
BOSA Boshof 152.15 317 PKPbc **PKPbc 23 23 50.5 0.0**
BOSA Boshof 152.15 317 PKPbc **PKPbc 23 23 50.5 0.0**
comp=Z,7.6nm,0.7s,baz=11,slow=3.3,SNR=13

ISCJB ***22*** *00:14:09.9±0.6,24.80N±0.04×122.44E±0.02, h9km±5km, Error ellipse: s-maj=7.6km s-min=3.1km az=13.8*
TAP ***22*** *00:14:10.9,24.82N×122.34E, h11km, ML2.7, D*
JMA ***22*** *00:14:11.1±0.3,24.44N×122.35E, h13km, M2.2*
ISC 22 00:14:10.1±1.0,24.78N±0.04×122.42E±0.03, h15km±9km, n19, σ0.33/31, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.45**	**278**	P	**Pg**	**00 14 19.1**	**+0.1**
	baz=273						
EGS				*e*S	**Sb**	**00 14 25.7**	**-0.6**
	baz=273						
TWB1	**Santiao Chiao**	**0.45**	**300**	P	**Pg**	**00 14 19.1**	**0.0**
	baz=300						
TWB1				S	**Sg**	**00 14 24.8**	**-0.4**
	baz=300						
TWC	**Suao**	**0.55**	**252**	P	**Pg**	**00 14 20.8**	**-0.1**
	baz=244						
TWC				*e*S	**Sb**	**00 14 29.6**	**+0.5**
	baz=244						
YOJ	**Yonaguni jima**	**0.62**	**121**	P	**Pb**	**00 14 22.7**	**0.0**
YOJ				*e*S	**Sg**	**00 14 30.8**	**+0.2**
NWF	**Wu-fen Shan**	**0.65**	**296**	P	**Pb**	**00 14 23.6**	**+0.4**
	baz=296						
NWF				S	**Sb**	**00 14 32.0**	**-0.1**
	baz=296						
TWE	**Neicheng**	**0.69**	**265**	*e*P	**Pb**	**00 14 23.7**	**-0.1**
	baz=260						
TWE				S	**Sb**	**00 14 33.0**	**-0.1**
	baz=260						
ENA	**Nanau**	**0.71**	**240**	*e*P	**Pb**	**00 14 24.1**	**-0.1**
	baz=234						
ENTT	**Nioudou**	**0.79**	**260**	*e*P	**Pb**	**00 14 25.9**	**+0.3**
	baz=255						
TWY	**Chenhua**	**0.89**	**304**	*e*P	**Pg**	**00 14 27.7**	**+0.3**
	baz=304						
TWY				*e*S	**Sb**	**00 14 39.4**	**+0.4**
	baz=304						
PCYT	**Pengchaiyu**	**0.90**	**339**	*e*P	**Pb**	**00 14 27.2**	**-0.2**
	baz=343						
NSK	**Sanguang**	**0.97**	**264**	*e*P	**Pb**	**00 14 28.3**	**-0.4**
	baz=260						
NSK				*e*S	**Sb**	**00 14 41.0**	**-0.4**
	baz=260						
NNS	**Nan Shan**	**1.01**	**251**	*e*P	**Pb**	**00 14 29.5**	**+0.1**
	baz=246						
NNS				*e*S	**Sg**	**00 14 43.2**	**+0.3**
	baz=246						
WHF	**Hehuan Shan**	**1.23**	**239**	P	**Pb**	**00 14 33.8**	**+0.4**
	baz=235						
WHF				*e*S	**Sg**	**00 14 50.2**	**+0.2**
	baz=235						
IRIF	**Iriomote-Funau**	**1.27**	**110**	P	**Pg**	**00 14 34.6**	**0.0**
IRIF				*e*S	**Sg**	**00 14 50.9**	**-0.3**
HATJ	**Hateruma jima**	**1.45**	**120**	P	**Pn**	**00 14 35.9**	**0.0**
HATJ				*e*S	**Sn**	**00 14 54.0**	**-0.7**
JKRS	**Kuro-shima**	**1.54**	**110**	P	**Pn**	**00 14 37.5**	**+0.4**
JIJ	**Ishigaki jima**	**1.62**	**105**	*e*S	**Sn**	**00 14 59.3**	**+0.5**
TYC	**Yuchr**	**1.67**	**239**	*e*P	**Pg**	**00 14 42.0**	**-0.3**
	baz=235						
CHN5	**Tsauling**	**1.98**	**234**	*e*P	**Pn**	**00 14 43.2**	**-0.1**
	baz=231						

ISCJB ***22*** *00:14:49.9±0.5,38.58N±0.02×26.67E±0.03, h1km±5km, Error ellipse: s-maj=4.7km s-min=3.5km az=146.0*
ATH ***22*** *00:14:49.7,38.53N×26.43E, h54km±4km, MD2.9/3*
DDA ***22*** *00:14:49.6,38.60N×26.69E, h7km, MD2.8*
ISK ***22*** *00:14:50.0,38.59N×26.78E, h5km, MD3.0*
CSEM ***22*** *00:14:50.3±0.2,38.58N×26.67E, h2km, MD3.0, Error ellipse: s-maj=4.3km s-min=3.2km az=57.0*
ISC 22 00:14:49.9±1.0,38.59N±0.02×26.66E±0.02, h10km±11km, n47, σ0.82/66, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.36**	**124**	*e*PG	**Pg**	**00 14 57.0**	**-0.2**
BLCB				*e*SG	**Sg**	**00 15 02.3**	**+0.3**
BLCB	**Balcova**	**0.36**	**124**	*e*Pg	**Pg**	**00 14 57.0**	**-0.2**
BLCB				*e*Sg	**Sg**	**00 15 02.3**	**+0.3**
IZM	**Izmir**	**0.51**	**112**	*e*PG	**Pg**	**00 14 59.4**	**-0.5**
IZM				*e*SG	**Sg**	**00 15 06.6**	**-0.1**
IZM	**Izmir**	**0.51**	**112**	*e*Pg	**Pg**	**00 14 59.4**	**-0.5**
IZM				*e*Sg	**Sg**	**00 15 06.6**	**-0.1**
CHOS	**Chios island**	**0.52**	**247**	*e*P	**Pg**	**00 15 00.0**	**0.0**
CHOS				*e*S	**Sg**	**00 15 07.4**	**+0.6**
CHOS	**Chios island**	**0.52**	**247**	*e*P	**Pg**	**00 15 00.0**	**0.0**
CHOS				*e*S	**Sg**	**00 15 07.4**	**+0.6**
AYVA	**Ayvalik**	**0.72**	**2**	*i* P	**Pg**	**00 15 02.9**	**-0.9**
AYVA				*i* S	**Sb**	**00 15 14.6**	**+0.2**
AYVA	**Ayvalik**	**0.72**	**2**	*i* P	**Pg**	**00 15 02.9**	**-0.9**
AYVA				*i* S	**Sb**	**00 15 14.6**	**+0.2**
PRK	**Paraskevi**	**0.72**	**335**	*e*P	**Pg**	**00 15 04.1**	**+0.2**
PRK				*e*S	**Sb**	**00 15 15.7**	**+1.2**
PRK	**Paraskevi**	**0.72**	**335**	*e*P	**Pg**	**00 15 04.1**	**+0.2**
PRK				*e*S	**Sb**	**00 15 15.7**	**+1.2**
AKHS	**Akhisar**	**0.95**	**72**	*i* P	**Pb**	**00 15 08.5**	**0.0**
AKHS				*i* S	**Sb**	**00 15 21.0**	**-0.1**
GCAM	**G?zelcaml?**	**1.00**	**153**	*i* P	**Pg**	**00 15 07.9**	**-1.2**
GCAM				*i* S	**Sb**	**00 15 23.2**	**+0.7**
AYDN	**Tasoluk**	**1.34**	**134**	*i* P	**Pn**	**00 15 14.2**	**-0.5**
AYDN				*i* S	**Sb**	**00 15 31.8**	**-0.6**
BALY	**Balya**	**1.37**	**33**	*i* P	**Pg**	**00 15 16.1**	**-0.1**
BALY				*i* S	**Sg**	**00 15 34.8**	**+0.8**
BALY	**Balya**	**1.37**	**33**	*i* P	**Pg**	**00 15 16.1**	**-0.1**
BALY				*i* S	**Sg**	**00 15 34.8**	**+0.8**
BALB	**Balikesir**	**1.42**	**42**	*e*Pn	**Pg**	**00 15 16.9**	**-0.2**
BALB	**Balikesir**	**1.42**	**42**	*e*Pn	**Pg**	**00 15 16.9**	**-0.2**
MANT	**Manisa**	**1.49**	**93**	*i* P	**Pg**	**00 15 18.9**	**+0.3**
MANT				*i* S	**Sg**	**00 15 37.8**	**-0.2**
MLSB	**Milas**	**1.57**	**145**	*e*PN	**Pb**	**00 15 19.4**	**+0.4**
MLSB	**Milas**	**1.57**	**145**	*e*Pn	**Pb**	**00 15 19.4**	**+0.4**
KULA	**Kula-Manisa**	**1.57**	**92**	*e*PN	**Pb**	**00 15 18.9**	**-0.2**
KULA	**Kula-Manisa**	**1.57**	**92**	*e*Pn	**Pb**	**00 15 18.9**	**-0.2**
BODT	**Bodrum**	**1.61**	**161**	*e*PN	**Pb**	**00 15 20.4**	**+0.6**
BODT	**Bodrum**	**1.61**	**161**	*e*Pn	**Pb**	**00 15 20.4**	**+0.6**
GONE	**Gonen-Balikesi**	**1.66**	**28**	*e*PN	**Pb**	**00 15 20.8**	**+0.3**
GONE	**Gonen-Balikesi**	**1.66**	**28**	*e*Pn	**Pb**	**00 15 20.8**	**+0.3**
DEMI	**Demirci**	**1.67**	**74**	*i* P	**Pn**	**00 15 18.7**	**-0.6**
DEMI				*i* S	**Sb**	**00 15 41.9**	**0.0**
DURS	**Dursunbey**	**1.74**	**54**	*i* P	**Pb**	**00 15 21.8**	**-0.1**
DURS				*i* S	**Sb**	**00 15 43.7**	**-0.2**
DURS	**Dursunbey**	**1.74**	**54**	*i* P	**Pb**	**00 15 21.8**	**-0.1**
DURS				*i* S	**Sb**	**00 15 43.7**	**-0.2**
LIA	**Limnos Island**	**1.74**	**319**	*e*P	**Pn**	**00 15 17.7**	**-2.4**
LIA	**Limnos Island**	**1.74**	**319**	*e*P	**Pn**	**00 15 17.7**	**-2.4**
GELI	**Tayfur-Gelibol**	**1.81**	**356**	*e*PN	**Pb**	**00 15 23.7**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.81**	**356**	*e*Pn	**Pb**	**00 15 23.7**	**+0.5**
DST	**Dursunbey**	**1.83**	**56**	*e*PN	**Pb**	**00 15 22.8**	**-0.8**
DST	**Dursunbey**	**1.83**	**56**	*e*Pn	**Pb**	**00 15 22.8**	**-0.8**
KRBG	**Karabiga-Canak**	**1.87**	**15**	*e*PN	**Pb**	**00 15 24.0**	**-0.1**
KRBG	**Karabiga-Canak**	**1.87**	**15**	*e*Pn	**Pb**	**00 15 24.0**	**-0.1**
ERIK	**Erikli-Kesan**	**2.08**	**357**	*e*PN	**Pb**	**00 15 27.4**	**-0.3**
ERIK	**Erikli-Kesan**	**2.08**	**357**	*e*Pn	**Pb**	**00 15 27.5**	**-0.3**
KCTX	**Karacabey (Bur**	**2.13**	**38**	*e*PN	**Pb**	**00 15 27.2**	**-1.4**
KCTX	**Karacabey (Bur**	**2.13**	**38**	*e*Pn	**Pb**	**00 15 27.2**	**-1.4**
TVSB	**Tavsanli**	**2.35**	**68**	*e*PN	**Pn**	**00 15 29.9**	**+1.3**
TVSB	**Tavsanli**	**2.35**	**68**	*e*Pn	**Pn**	**00 15 29.9**	**+1.3**
ALN	**Alexandroupoli**	**2.35**	**349**	*e*P	**Pn**	**00 15 27.9**	**-0.7**
ALN	**Alexandroupoli**	**2.35**	**349**	*e*P	**Pn**	**00 15 27.9**	**-0.7**
MDNY	**Mudanya-Bursa**	**2.47**	**43**	*e*PN	**Pn**	**00 15 32.2**	**+1.9**
MDNY	**Mudanya-Bursa**	**2.47**	**43**	*e*Pn	**Pn**	**00 15 32.2**	**+1.9**

AUST ***22*** *00:18:10.4±0.0, 7.12S×122.30E, h74km±1km, Error ellipse: s-maj=2.5km s-min=1.3km az=319.0*

IDC ***22*** *00:18:30.2±1.7, 8.39S×124.39E, h0km, mb3.1/1, mb1 3.7/4, mb1mx3.5/21, mbtmp3.5/4, ML3.7/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/9, Error ellipse: s-maj=118.1km s-min=26.4km az=65.0*
ISC 22 00:18:32.3±1.4, 8.32S±0.09×124.9E±0.1, h24km, n9, σ1.6/65/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**7.59**	**127**	P	Pb	00 20 38.4	-4.9
	baz=10,SNR=8.0						
KNRA	**Kununurra**	**8.22**	**153**	P	Pn	00 20 37.7	+7.5
	baz=11,SNR=7.1						
KDU	**Kakadu**	**8.61**	**121**	P	Pn	00 20 52.6	+17
	baz=12,SNR=11						
FAKI	**Fak Fak**	**9.06**	**54**	P	**Pn**	**00 20 40.4**	**-1.3**
	baz=11,SNR=3.7						
FAKI				S	**Sn**	**00 22 24.0**	**+1.0**
	baz=11,SNR=3.5						
FITZ	**Fitzroy Crossi**	**9.75**	**176**	Pn	**Pn**	**00 20 50.1**	**-1.0**
	0.9nm,0.3s,baz=7.4,slow=10,SNR=29						
FITZ				Sn	Sn	00 22 26.5	-13
	0.5nm,0.3s,baz=109,slow=21,SNR=6.8						
FITZ	**Fitzroy Crossi**	**9.75**	**176**	P	**Pn**	**00 20 50.4**	**-0.7**
	baz=12,SNR=5.2						
FITZ				S	Sn	00 22 29.5	-10
	baz=12,SNR=3.1						
WRA	**Warramunga Arr**	**14.72**	**143**	Pn	**P**	**00 22 04.9**	**-0.2**
	0.3nm,0.3s,baz=322,slow=13,SNR=8.8						
WRA				Sn	**Sn**	**00 24 42.0**	**+0.3**
	0.2nm,0.3s,baz=313,slow=23,SNR=5.0						
ASAR	**Alice Springs**	**17.52**	**152**	P	**P**	**00 22 39.1**	**+3.0**
	0.1nm,0.3s,baz=320,slow=12,SNR=6.1						
ASAR				LR	LR	00 29 04.6	
	comp=Z,138nm,21.0s,baz=261,slow=36						
MKAR	**Makanchi Array**	**66.68**	**330**	P	**P**	**00 29 21.7**	**+0.5**
	0.1nm,0.6s,baz=140,slow=7.5,SNR=2.2						

ISCJB ***22*** *00:24:19.0±0.2, 13.82N±0.03×90.79W±0.02, h68km, mb5.0/188, Error ellipse: s-maj=4.2km s-min=2.5km az=34.0*
SZGRF ***22*** *00:24:18.1, 14.20N×90.16W, h33km, mb4.9, Guatemala*
MOS ***22*** *00:24:19.2±1.1, 14.00N×90.60W, h64km, mb5.2/42, MS4.6/4, Error ellipse: s-maj=8.3km s-min=4.6km az=111.4*
IDC ***22*** *00:24:20.7±0.4, 14.04N×90.56W, h64km±3km, mb4.4/22, mb1 4.6/23, mb1mx4.6/24, mbtmp4.4/23, MS4.4/25, Ms1 4.4/25, ms1mx4.4/26, Error ellipse: s-maj=15.8km s-min=9.4km az=61.0*
CASC ***22*** *00:24:20.8±1.8, 13.66N×91.03W, h27km±8km, MD4.4, ML5.3, mb5.2(NEIC)*
GCMT ***22*** *00:24:21.6±0.1, 13.82N×91.15W, h60km±1km, MW5.4, Moment Tensor Solution. s91,c162; s17,c17; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.69±.02; $M_{\theta\theta}$0.80±.02; $M_{\phi\phi}$-0.10±.02; $M_{r\theta}$0.50±.02; $M_{\theta\phi}$-0.62±.02; $M_{\phi r}$-1.04±.02; Best double couple: $M_0$1.50000×10^{17} NP1:ϕ_s85.00000°, δ31.00000°, λ-148.00000°. NP2:ϕ_s327.00000°, δ74.00000°, λ-63.00000°. Principal axes: T 1.5400, Plg25.0000°, Azm36.0000°; N -0.0600, Plg26.0000°, Azm139.0000°; P -1.4800, Plg53.0000°, Azm269.0000°; Data Used: ll IU IC G CN. Surface waves: sta= 94, comp=180, per= 50.*
NEIC ***22*** *00:24:21.1±0.2, 13.88N×90.74W, mb5.2/143, MW5.5, MW5.3, MD5.4(SNET) Error ellipse: s-maj=5.0km s-min=3.3km az=34.0, Moment Tensor Solution. s33 Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s195.00000°, δ19.00000°, λ-44.00000°. NP2:ϕ_s328.00000°, δ77.00000°, λ-104.00000°. Principal axes: T 1.3100, Plg30.0000°, Azm68.0000°; N -0.1000, Plg13.0000°, Azm330.0000°; P -1.2200, Plg56.0000°, Azm219.0000°;*
NEIC Felt [IV] at Antigua Guatemala and Panajachel; [III] at Guatemala and Mixco. Also felt at Amatitlan, Ciudad Vieja, Escuintla, Palin, Petapa, Quetzaltenango, Salama, San Bartolome Milpas Altas, San Jose Pinula, Santa Catarina Pinula, Tactic, Taxisco, Tecpan Guatemala and Villa Nueva. Felt [III] at San Salvador, El Salvador. Also felt at Opico. Felt at Tapachula, Mexico.
BJI ***22*** *00:24:21.0, 13.90N×90.70W, h72km, mB5.1/19, Ms5.4/23, Ms7 5.1/19*
MEX ***22*** *00:24:21.7±0.3, 13.52N×91.32W, h17km±18km, MD5.1*
NEIC ***22*** *00:24:32.4±0.0, 13.17N×90.10W, h46km, Moment Tensor Solution. s150 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.73; $M_{\theta\theta}$1.19; $M_{\phi\phi}$-0.46; $M_{r\theta}$-0.19; $M_{\theta\phi}$-0.83; $M_{\phi r}$-1.76; Best double couple: $M_0$2.10000×10^{17} NP1: ϕ_s336.00000°, δ76.00000°, λ-49.00000°. NP2:ϕ_s83.00000°, δ42.00000°, λ-157.00000°. Principal axes: T 1.7200, Plg20.0000°, Azm36.0000°; N 0.7700, Plg38.0000°, Azm143.0000°; P -2.4900, Plg44.0000°, Azm285.0000°;*
ISC 22 00:24:20.6±0.3, 13.85N±0.03×90.96W±0.03, h69km±1km, h69km:pP-P, n973, σ2.26/1816, mb5.1/187, 508C-474D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.59**	**56**	*e*P	**Pn**	**00 24 35.5**	**+1.1**
FUG	**Fuego 3**	**0.61**	**11**	*e*P	**Pn**	**00 24 36.0**	**+1.4**
PCG	**Pacaya**	**0.65**	**32**	*e*P	**Pn**	**00 24 36.8**	**+1.7**
JAT	**Jato**	**0.81**	**306**	*e*P	**Pn**	**00 24 37.3**	**+0.7**
GCG	**Guatemala City**	**0.85**	**29**	*e*P	Pn	00 24 41.1	+3.7
GCG				*e*S	Sn	00 24 56.2	+6.5
NBG	**Las Nubes**	**0.95**	**39**	*e*P	Pn	00 24 41.9	+3.2
RBDL	**Robledal**	**1.27**	**78**	*e*P	**Pn**	**00 24 43.5**	**+0.9**
RTR	**El Retiro**	**1.28**	**88**	*e*P	**Pn**	**00 24 44.3**	**+1.5**
SBLS	**San Blas**	**1.30**	**90**	*e*P	**Pn**	**00 24 44.2**	**+1.0**
SNJE	**San Jose**	**1.32**	**89**	*e*P	**Pn**	**00 24 44.7**	**+1.4**
BOQS	**Boqueron**	**1.64**	**94**	*e*P	**Pn**	**00 24 48.7**	**+1.2**
THIG		**1.65**	**310**	*i* P	**Pn**	**00 24 47.4**	**-0.1**
THIG				*e*S	**Sn**	**00 25 05.8**	**-1.9**
THIG		**1.65**	**310**	*i* P	**Pn**	**00 24 47.4**	**-0.1**
THIG				*e*S	**Sn**	**00 25 05.8**	**-1.9**
MTO2	**Montecristo 2**	**1.65**	**70**	*e*P	**Pn**	**00 24 49.2**	**+1.5**
SNET	**Serv Nac Est T**	**1.69**	**95**	*e*P	**Pn**	**00 24 49.5**	**+1.4**
SNET				*e*S	**Sn**	**00 25 10.8**	**+1.9**
SNET				AML	AML	00 25 16.0	
	comp=Z,35μm,0.3s						
MRL	**Marmol**	**1.73**	**45**	*e*P	Pn	00 24 52.0	+3.3
LFU	**La Fuente**	**1.80**	**93**	*e*P	**Pn**	**00 24 51.2**	**+1.6**
LFRS	**El Faro**	**1.86**	**97**	*e*P	**Pn**	**00 24 51.7**	**+1.3**
LBRS	**Las Brisas**	**1.87**	**93**	*e*P	**Pn**	**00 24 51.1**	**+1.4**
SNVI	**San Vicente**	**2.08**	**96**	*e*P	**Pn**	**00 24 54.9**	**+1.5**
VSM	**San Miguel**	**2.65**	**99**	*e*P	**Pn**	**00 25 02.7**	**+1.5**
CAHU	**Cacacuatique**	**2.67**	**91**	*e*P	**Pn**	**00 25 03.2**	**+1.6**
CCIG	**Comitan**	**2.67**	**335**	*i* P	**Pn**	**00 25 04.1**	**+2.6**
CCIG				*i* S	**Sn**	**00 25 37.0**	**+4.1**
CCIG	**Comitan**	**2.67**	**335**	*i* P	**Pn**	**00 25 04.1

OXX **Oaxaca** 6.42 301 *i* P Pn 00 25 57.1 +4.4
VHO **Vista Hermosa** 6.42 301 *i* P **Pn** **00 25 52.7 0.0**
VHO *eS* **Sn** **00 27 03.6 -1.2**
VHO Vista Hermosa 6.42 301 *i* P **Pn** **00 25 52.7 0.0**
VHO *eS* **Sn** **00 27 03.6 -1.2**
AMAS Alto Masis 6.66 118 *i* P **Pn** **00 25 57.8 +1.8**
TEIG Tepich 6.85 22 *e*Pn **Pn** **00 25 59.1 +0.7**
TEIG S **Sn** **00 27 16.6 +1.7**
TEIG Tepich 6.85 22 P **Pn** **00 26 00.4 +2.0**
comp=Z,477nm,0.3s,baz=208,slow=4.4,SNR=1040
TEIG S **Sn** **00 27 16.6 +1.7**
baz=217,slow=23,SNR=12
JTS JuntasAbangare 6.86 120 *e*Pn **Pn** **00 26 00.2 +1.7**
JTS *e*Sn **Sn** **00 27 11.8 -3.5**
PNIG Pinotepa 7.37 291 *i* P **Pn** **00 26 04.7 -0.9**
PNIG *i* S **Sn** **00 27 24.2 -3.5**
PNIG Pinotepa 7.37 291 *i* P **Pn** **00 26 04.7 -0.9**
PNIG *i* S **Sn** **00 27 24.2 -3.5**
TPIG Tehuac#an 7.65 307 *i* P **Pn** **00 26 10.2 +0.7**
TPIG *i* S **Sn** **00 27 34.5 -0.3**
TPIG Tehuac#an 7.65 307 *i* P **Pn** **00 26 10.2 +0.7**
TPIG *i* S **Sn** **00 27 34.5 -0.3**
PPM Popocatepetl 9.00 306 *i* P **Pn** **00 26 29.6 +1.4**
PPM *i* S **Sn** **00 28 08.1 -0.3**
PPM Popocatepetl 9.00 306 *i* P **Pn** **00 26 29.6 +1.4**
PPM *i* S **Sn** **00 28 08.1 -0.3**
PPM Popocatepetl 9.00 306 *i* P **Pn** **00 26 28.5 +0.2**
PPM *i* P **Pn** **00 26 29.6 +1.4**
PPM *i* S **Sn** **00 28 08.1 -0.3**
ACX Acapulco 9.09 290 *i* P **Pn** **00 26 28.9 -0.2**
ACX Acapulco 9.09 290 *i* P **Pn** **00 26 28.9 -0.2**
BCIP Isla Barro Col 11.85 112 *e*Pn **Pn** **00 27 07.0 +0.2**
SFJM Santa Fe 13.29 301 *i* P **Pn** **00 27 28.8 +2.3**
SFJM Santa Fe 13.29 301 *i* P **Pn** **00 27 28.8 +2.3**
MBJ Montego Bay 13.38 68 *i* P **Pn** **00 27 30.2 +2.6**
MCJ Malvern 13.40 71⇑ *i*P **Pn** **00 27 30.9 +3.0**
MTDJ Mount Denham 13.62 70 *e*Pn **Pn** **00 27 33.2 +2.3**
PCJ Portland Cotta 13.84 72 *i* P **P** **00 27 36.7 -3.0**
STH Stony Hill 14.24 71 *i* P **P** **00 27 42.4 -1.9**
HOJ Hope 14.28 71⇑ *i*P **P** **00 27 42.8 -1.9**
GWJ Greenwich 14.32 71 *i* P **P** **00 27 42.5 -2.7**
PAYG Puerto Ayora 14.44 177 *e*P **P** **00 27 49.6 +3.1**
GTBY Guantanamo Bay 16.33 66 *e*P **P** **00 28 07.5 +0.1**
comp=Z,178nm,1.1s
HKT Hockley 16.65 345 *e*P **P** **00 28 11.1 +0.3**
HKT pmax pmax
comp=Z,236nm,1.3s
HKT Hockley 16.65 345 *e*Pn **P** **00 28 11.1 +0.3**
comp=Z,236nm,1.3s
HKT *e*S **S** **00 31 20.5 -0.7**
732A Laxson Ranch, 17.01 332 ⇑P **P** **00 28 15.0 +0.1**
baz=17,SNR=54
BRAL Brewton 17.46 11 *e*P P 00 28 25.5 +5.7
comp=Z,2µm,1.5s
632A Uvalde 17.60 334 ⇑P **P** **00 28 22.1 +0.7**
baz=18
631A Perdido Creek 17.87 332 ⇑P **Pn** **00 28 25.8 +1.2**
baz=18,SNR=22
631A ⇑ScP **ScP** **00 36 27.6 +0.4**
baz=18
631A ⇑ScP **ScP** **00 36 27.6 +0.4**
baz=18
532A Rocksprings 18.19 334 ⇓P **Pn** **00 28 29.8 +1.4**
baz=18,SNR=87
532A ⇑ScP **ScP** **00 36 30.5 +2.6**
baz=18
532A ⇑ScP **ScP** **00 36 30.5 +2.6**
baz=18
VBMS Vicksburg 18.29 1 *e*Pn **Pn** **00 28 31.6 +1.9**
comp=Z,2µm,0.8s
OTAV Otavalo 18.34 136 *e*Pn **Pn** **00 28 33.2 +2.4**
comp=Z,13nm,1.5s
JCT Junction City 18.45 335 *e*P **Pn** **00 28 32.3 +0.7**
JCT pmax pmax
comp=Z,158nm,1.3s
JCT Junction City 18.45 335 *e*P **Pn** **00 28 32.3 +0.7**
comp=Z,158nm,1.3s
JCT *e*ScP **ScP** **00 36 30.8 +2.3**
JCT Junction City 18.45 335 ⇓P **Pn** **00 28 32.6 +1.0**
baz=19,SNR=22
JCT ⇑ScP **ScP** **00 36 31.8 +3.3**
baz=19
JCT ⇑ScP **ScP** **00 36 31.8 +3.3**
baz=19
531A Rocksprings 18.50 333 ⇓P **Pn** **00 28 33.5 +1.3**
baz=19,SNR=64
531A ⇓ScP **ScP** **00 36 32.5 +3.9**
baz=19
531A ⇓ScP **ScP** **00 36 32.5 +3.9**
baz=19
ROSC El Rosal 18.67 117 *e*P **Pn** **00 28 37.5 +2.8**
ROSC S Sn 00 32 19.0 +15
ROSC El Rosal 18.67 117 P **Pn** **00 28 37.3 +2.6**
comp=Z,1.9nm,0.3s,baz=285,slow=23,SNR=49
ROSC S Sn 00 32 19.0 +15
comp=Z,1.9nm,0.3s,baz=107,slow=17,SNR=2.4
TIGA Tifton 18.78 20 ⇓P **Pn** **00 28 35.1 -0.4**
baz=19,SNR=17
432A Menard 18.80 336 ⇓P **Pn** **00 28 36.9 +1.1**
baz=19,SNR=49
530A J-C Ranch, Com 18.84 331 ⇑P **Pn** **00 28 37.5 +1.2**
baz=19,SNR=114
530A ⇓ScP **ScP** **00 36 33.3 +3.9**
baz=19
530A ⇓ScP **ScP** **00 36 33.3 +3.9**
baz=19
431A Sonora 18.97 334 ⇓P **Pn** **00 28 38.4 +0.6**
baz=19,SNR=135
431A ⇑ScP **ScP** **00 36 32.9 +3.3**
baz=19
431A ⇑ScP **ScP** **00 36 32.9 +3.3**
baz=19
WHTX Lake Whitney 19.02 343 ⇓P **Pn** **00 28 37.9 -0.4**
baz=19,SNR=35
WHTX ⇑ScP **ScP** **00 36 33.5 +3.9**
baz=19
WHTX ⇑ScP **ScP** **00 36 33.5 +3.9**
baz=19
628A Black Gap, Mar 19.08 327 ⇓P **Pn** **00 28 39.5 +0.3**
baz=19,SNR=55
332A Millersview 19.23 337 ⇑P **Pn** **00 28 40.8 -0.1**
baz=19,SNR=63
529A Stev Forest Ra 19.25 329 ⇓P **Pn** **00 28 41.5 +0.3**
baz=19,SNR=24
529A ⇑ScP **ScP** **00 36 34.1 +3.8**
baz=19
529A ⇑ScP **ScP** **00 36 34.1 +3.8**
baz=19
627A Terlingua Ranc 19.33 325 ⇑P **Pn** **00 28 43.3 +1.1**
baz=20,SNR=144
627A ⇓ScP **ScP** **00 36 33.6 +3.1**
baz=20
627A ⇓ScP **ScP** **00 36 33.6 +3.1**
baz=20
430A Baggett Ranch, 19.33 332 ⇓P **Pn** **00 28 42.6 +0.4**
baz=20,SNR=66
430A ⇓ScP **ScP** **00 36 34.1 +3.6**
baz=20
430A ⇓ScP **ScP** **00 36 34.1 +3.6**
baz=20
TXAR Lajitas Array 19.39 325 P **Pn** **00 28 44.0 +1.1**
TXAR PcP **PcP** **00 33 02.3 +1.7**
TXAR pPcP 00 33 21.1
TXAR ScP **ScP** **00 36 33.9 +3.2**
TXAR Lajitas Array 19.39 325 P **Pn** **00 28 44.0 +1.1**
comp=Z,1.5nm,0.3s,baz=152,slow=11,SNR=420
TXAR PcP **PcP** **00 33 02.3 +1.7**
comp=Z,0.2nm,0.3s,baz=145,slow=4.6,SNR=5.9
TXAR pPcP 00 33 21.1
comp=Z,0.4nm,0.3s,baz=149,slow=2.6,SNR=6.8
TXAR ScP **ScP** **00 36 33.9 +3.2**
comp=Z,0.2nm,0.3s,baz=147,slow=5.1,SNR=9.4
331A San Angelo 19.43 335 ⇑P **Pn** **00 28 42.9 -0.5**
baz=20,SNR=64
331A ⇓ScP **ScP** **00 36 33.8 +3.2**
baz=20
331A ⇓ScP **ScP** **00 36 33.8 +3.2**
baz=20
LRAL Lakeview Retre 19.44 10 *e*Pn **Pn** **00 28 43.6 +0.2**
comp=Z,386nm,1.4s
429A Davenport Ranc 19.50 331 ⇑P **Pn** **00 28 44.3 +0.2**
baz=20,SNR=102
429A ⇓S **Sn** **00 32 21.7 -0.9**
baz=20
429A ⇓S **Sn** **00 32 21.7 -0.9**
baz=20
429A ⇓ScP **ScP** **00 36 34.9 +4.0**
baz=20
429A ⇓ScP **ScP** **00 36 34.9 +4.0**
baz=20
SDDR Presa de Saban 19.55 72 *e*Pn **P** **00 28 43.1 +0.2**
comp=Z,157nm,1.3s
528A Cox Ranch, San 19.57 328 ⇑P **Pn** **00 28 45.2 +0.2**
baz=20,SNR=37
528A ⇑ScP **ScP** **00 36 36.2 +5.1**
baz=20
528A ⇑ScP **ScP** **00 36 36.2 +5.1**
baz=20
232A Coleman 19.64 338 ⇑P **Pn** **00 28 44.8 -1.0**
baz=20,SNR=83
232A ⇓ScP **ScP** **00 36 35.1 +4.0**
baz=20
232A ⇓ScP **ScP** **00 36 35.1 +4.0**
baz=20
RFTA Plano 19.78 346 *e*P **P** **00 28 44.8 -0.4**
626A Big Bend Ranch 19.82 324 ⇑P **Pn** **00 28 48.5 +0.5**
baz=20,SNR=247
626A ⇑ScP **ScP** **00 36 34.7 +3.0**
baz=20
626A ⇑ScP **ScP** **00 36 34.7 +3.0**
baz=20
330A Mertzon 19.84 333 ⇓P **Pn** **00 28 47.4 -0.7**
baz=20,SNR=82
330A ⇑ScP **ScP** **00 36 35.2 +3.5**
baz=20
330A ⇑ScP **ScP** **00 36 35.2 +3.5**
baz=20
231A Bronte 19.94 336 ⇑P **P** **00 28 48.0 +0.9**
baz=20,SNR=74
231A ⇓ScP **ScP** **00 36 35.0 +3.1**
baz=20
231A ⇓ScP **ScP** **00 36 35.0 +3.1**
baz=20
428A Kincaid Ranch, 19.97 329 ⇑P **Pn** **00 28 49.6 -0.1**
baz=20,SNR=58
527A Woodward Ranch 19.99 326 ⇓P **Pn** **00 28 50.4 +0.4**
baz=20,SNR=92
527A ⇓ScP **ScP** **00 36 36.1 +4.0**
baz=20
527A ⇓ScP **ScP** **00 36 36.1 +4.0**
baz=20
526A Mary Lane Ranc 20.18 325 ⇑P Pn 00 28 52.4 0.0
baz=20,SNR=68
526A ⇑ScP **ScP** **00 36 36.8 +4.2**
baz=20
526A ⇑ScP **ScP** **00 36 36.8 +4.2**
baz=20
230A Sterling City 20.23 334 ⇓P Pn 00 28 51.5 -1.2
baz=20,SNR=8.7
230A ⇓ScP **ScP** **00 36 36.4 +3.9**
baz=20
230A ⇓ScP **ScP** **00 36 36.4 +3.9**
baz=20
329A Wagon Wheel Ra 20.26 332 ⇓P **P** **00 28 51.7 +1.1**
baz=20,SNR=52
ABTX Abilene, Hawle 20.30 338 ⇑P **P** **00 28 51.8 +0.9**
baz=20,SNR=78
GRTK Grand Turk 20.36 65 *e*P **P** **00 28 52.4 +0.8**
comp=Z,1µm,1.8s
427A Hayter Ranch, 20.43 328 ⇓P **P** **00 28 53.8 +1.3**
baz=21,SNR=61
427A ⇓ScP **ScP** **00 36 37.0 +4.0**
baz=21
427A ⇓ScP **ScP** **00 36 37.0 +4.0**
baz=21
328A Wristen Ranch, 20.57 330 ⇓P **P** **00 28 55.2 +1.3**
baz=21,SNR=116
328A ⇓ScP **ScP** **00 36 36.8 +3.5**
baz=21
328A ⇓ScP **ScP** **00 36 36.8 +3.5**
baz=21
229A Bryant Ranch, 20.59 333 ⇑P **P** **00 28 55.1 +1.0**
baz=21,SNR=20
229A ⇑ScP **ScP** **00 36 37.0 +3.6**
baz=21
229A ⇑ScP **ScP** **00 36 37.0 +3.6**
baz=21
426A McDonald Obser 20.62 326 ⇑P Pn 00 28 56.7 -0.9
baz=21,SNR=160
426A ⇑ScP **ScP** **00 36 36.9 +3.2**
baz=21
426A ⇑ScP **ScP** **00 36 36.9 +3.2**
baz=21
131A Roby 20.62 337 ⇑P **P** **00 28 55.7 +1.3**
baz=21,SNR=22
OXF Oxford 20.62 4 *e*P **P** **00 28 54.7 +0.3**
OXF pmax pmax
comp=Z,474nm,1.0s
OXF Oxford 20.62 4 *e*P **P** **00 28 54.7 +0.3**
comp=Z,474nm,1.0s
130A Snyder 20.78 336 ⇑P **P** **00 28 57.2 +1.0**
baz=21,SNR=14
130A ⇑ScP **ScP** **00 36 37.5 +3.7**
baz=21
130A ⇑ScP **ScP** **00 36 37.5 +3.7**
baz=21
Z32A Haskell 20.87 340 ⇓P **P** **00 28 57.5 +0.5**
baz=21,SNR=64
UALR University of 20.88 357 *e*P **P** **00 28 57.4 +0.3**
comp=Z,183nm,1.0s
327A Balmorhea Ranc 20.90 329 ⇓P **P** **00 28 57.9 +0.5**
baz=21
LPIG La Paz 20.92 302 P Pn 00 29 00.1 -0.7
LPIG La Paz 20.92 302 P Pn 00 29 00.1 -0.7
comp=Z,12nm,0.7s,baz=168,slow=3.7,SNR=16
LPIG LR LR 00 36 47.9
comp=Z,84nm,21.4s,baz=21,slow=35
228A UT Block 9, Go 21.07 332 ⇓P **P** **00 28 59.2 -0.1**
baz=21,SNR=18
228A ⇑ScP **ScP** **00 36 37.3 +2.7**
baz=21
228A ⇑ScP **ScP** **00 36 37.3 +2.7**
baz=21
326A Caldwell Ranch 21.10 328 ⇓P **P** **00 29 00.8 +1.2**
baz=21,SNR=101
326A ⇑ScP **ScP** **00 36 38.6 +4.0**
baz=21
326A ⇑ScP **ScP** **00 36 38.6 +4.0**
baz=21
Z31A Sharp Cattle R 21.11 338 ⇑P **P** **00 28 59.3 -0.4**
baz=21,SNR=75
129A Stewart Farms, 21.19 334 ⇓P **P** **00 29 00.3 -0.2**
baz=21,SNR=30
PLAL Pickwick Lake 21.21 7 *e*P **P** **00 29 01.0 +0.4**
comp=Z,215nm,1.1s
425A Indio Mountain 21.24 325 ⇓P **P** **00 29 01.7 +0.6**
baz=21,SNR=325
425A ⇓ScP **ScP** **00 36 38.3 +3.2**
baz=21
425A ⇓ScP **ScP** **00 36 38.3 +3.2**
baz=21
227A Bennet, Jal 21.32 330 ⇓P **P** **00 29 03.0 +1.0**
baz=22,SNR=21
128A Castleberry Fa 21.45 333 ⇓P **P** **00 29 03.3 0.0**
baz=22,SNR=27
128A ⇑ScP **ScP** **00 36 39.1 +3.6**
baz=22
128A ⇑ScP **ScP** **00 36 39.1 +3.6**
baz=22
Z30A Sanderson Ranc 21.45 336 ⇑P **P** **00 29 03.9 +0.5**
baz=22,SNR=50
Y32A R-V Farms, Ver 21.49 340 ⇓P **P** **00 29 04.2 +0.5**
baz=22,SNR=9.9
NHSC New Hope 21.55 25 *e*P **P** **00 29 06.8 +2.6**
comp=Z,751nm,1.3s
HBAR Harrisburg 21.62 1 *e*P **P** **00 29 06.0 +1.0**
Z29A Hungry Hill Ra 21.66 335 ⇑P **P** **00 29 05.3 -0.3**
baz=22,SNR=46
325A Bean Ranch, Si 21.67 326 ⇑P **P** **00 29 06.4 +0.5**
baz=22,SNR=102
325A ⇑ScP **ScP** **00 36 39.2 +3.0**
baz=22
325A ⇑ScP **ScP** **00 36 39.2 +3.0**
baz=22
Y31A Rekieta Farm, 21.73 339 ⇓P **P** **00 29 06.3 0.0**
baz=22,SNR=32
SWET Sewanee 21.76 11 *e*P **P** **00 29 07.8 +1.2**
comp=Z,116nm,0.8s
226B Tecolote Peak, 21.80 329 ⇓P **P** **00 29 07.8 +0.7**
baz=22,SNR=89
226B ⇓ScP **ScP** **00 36 39.6 +3.2**
baz=22
226B ⇓ScP **ScP** **00 36 39.6 +3.2**
baz=22
CLNB Carlsbad 21.81 329 *e*P **P** **00 29 09.2 +2.0**
comp=Z,7.6nm,1.0s
Y30A Stafford Cattl 21.89 337 ⇓P **P** **00 29 08.0 0.0**
baz=22,SNR=8.7
127A Arkansas Junct 21.90 331 ⇓P **P** **00 29 08.4 +0.2**
baz=22,SNR=9.5
127A ⇑ScP **ScP** **00 36 40.3 +3.7**
baz=22
127A ⇑ScP **ScP** **00 36 40.3 +3.7**
baz=22
WMOK Wichita Mounta 21.97 343 *e*P **P** **00 29 07.1 -1.7**
WMOK pmax pmax
comp=Z,82nm,1.2s
WMOK Wichita Mounta 21.97 343 *e*P **P** **00 29 07.1 -1.7**
comp=Z,82nm,1.2s
Z28A Tucker Farm, M 21.97 334 ⇑P **P** **00 29 09.0 0.0**
baz=22,SNR=8.5
Z28A ⇓ScP **ScP** **00 36 39.3 +2.4**
baz=22
Z28A ⇓ScP **ScP** **00 36 39.3 +2.4**
baz=22
GDL2 Guadalupe Moun 22.00 328 *e*P **P** **00 29 10.8 +1.5**
comp=Z,116nm,1.0s
324A Moseley Ranch, 22.01 325 ⇑P **P** **00 29 10.0 +0.5**
baz=22,SNR=217
324A ⇑ScP **ScP** **00 36 40.6 +3.6**
baz=22
324A ⇑ScP **ScP** **00 36 40.6 +3.6**
baz=22
HALT Halls 22.02 4 *e*P **P** **00 29 10.6 +1.3**
GNAR Gosnell 22.04 2 *e*P **P** **00 29 10.2 +0.7**
comp=Z,5µm,1.4s
MNTX Cornudas Mount 22.15 326 *e*P **P** **00 29 11.4 +0.6**
comp=Z,154nm,1.2s
MNTX *e*PcP **PcP** **00 33 06.7 +1.1**
MNTX *e*ScP **ScP** **00 36 40.0 +2.8**
225A Deer Hill, Car 22.17 327 ⇑P **P** **00 29 12.2 +1.0**
baz=22,SNR=118
Y29A Porterfield Fa 22.17 336 ⇓P **P** **00 29 11.4 +0.3**
baz=22,SNR=18
Y29A ⇓ScP **ScP** **00 36 41.3 +4.0**
baz=22
Y29A ⇓ScP **ScP** **00 36 41.3 +4.0**
baz=22
126A Clayton Basin, 22.19 330 ⇑P **P** **00 29 11.3 0.0**
baz=22,SNR=12
X31A McDonald Ranch 22.25 340 ⇓P **P** **00 29 11.9 +0.1**
baz=22,SNR=13
CPCT Cooper Cave 22.28 14 *e*P **P** **00 29 13.3 +1.2**
Z27A Tatum 22.36 332 ⇑P **P** **00 29 13.3 +0.1**
baz=22,SNR=13
WVT Waverly 22.37 7 *e*P **P** **00 29 12.7 -0.3**
WVT pmax pmax
comp=Z,229nm,1.0s
WVT Waverly 22.37 7 *e*P **P** **00 29 12.7 -0.3**
comp=Z,229nm,1.0s
GLAT Glass 22.38 4 *e*P **P** **00 29 13.4 +0.3**
X30A Coker Ranch, T 22.39 338 ⇓P **P** **00 29 13.0 -0.4**
baz=22,SNR=22
TUL1 Tulsa 22.40 350 ⇑P **P** **00 29 12.7 -0.7**
baz=22,SNR=18
Y28A McKinney Farm, 22.45 335 ⇑P **P** **00 29 13.9 -0.2**
baz=23,SNR=31
UTMT University of 22.48 4 *e*P **P** **00 29 14.5 +0.2**
comp=Z,493nm,1.2s
224A Cornudas Mount 22.52 326 ⇑P **P** **00 29 15.1 +0.3**
baz=23,SNR=147
224A ⇓ScP **ScP** **00 36 41.7 +3.4**
baz=23
224A ⇓ScP **ScP** **00 36 41.7 +3.4**
baz=23
125A Gardner Draw, 22.52 329 ⇓P **P** **00 29 15.1 +0.3**
baz=23,SNR=44
125A ⇑ScP **ScP** **00 36 42.2 +4.0**
baz=23
125A ⇑ScP **ScP** **00 36 42.2 +4.0**
baz=23
TKL Tuckaleechee C 22.66 15 P **P** **00 29 17.2 +1.0**
TKL Tuckaleechee C 22.66 15 P **P** **00 29 17.2 +1.0**
comp=Z,133nm,0.8s,baz=189,slow=10.0,SNR=98
TKL LR LR 00 39 11.6
comp=Z,2µm,21.4s,baz=201,slow=40
Z26A Caprock 22.68 331 ⇑P **P** **00 29 16.4 -0.2**
baz=23,SNR=18
Z26A ⇑ScP **ScP** **00 36 41.6 +2.9**
baz=23
Z26A ⇑ScP **ScP** **00 36 41.6 +2.9**
baz=23
X29A Tulia 22.70 336 ⇓P **P** **00 29 16.8 +0.1**
baz=23,SNR=12
X29A ⇓ScP **ScP** **00 36 42.3 +3.6**
baz=23
X29A ⇓ScP **ScP** **00 36 42.3 +3.6**
baz=23
MSTX Muleshoe 22.72 334 ⇑P **P** **00 29 17.5 +0.5**
baz=23,SNR=16
MSTX ⇑ScP **ScP** **00 36 42.3 +3.5**
baz=23
MSTX ⇑ScP **ScP** **00 36 42.3 +3.5**
baz=23
W31A Holland Ranch, 22.74 341 ⇓P **P** **00 29 17.4 +0.3**
baz=23,SNR=8.3
Y27A Causey 22.82 333 ⇑P **P** **00 29 18.5 +0.5**
baz=23,SNR=13
Y27A ⇑ScP **ScP** **00 36 42.6 +3.6**
baz=23
Y27A ⇑ScP **ScP** **00 36 42.6 +3.6**
baz=23
KMSC Kings Mountain 22.92 21 ⇑P **P** **00 29 18.0 -0.8**
baz=23,SNR=24
W30A Crocket Farms 22.95 339 ⇓P **P** **00 29 19.2 0.0**
baz=23
X28A Dimmitt 22.96 336 ⇓P **P** **00 29 19.0 -0.4**
baz=23
X28A ⇓ScP **ScP** **00 36 44.6 +5.3**
baz=23
X28A ⇓ScP **ScP** **00 36 44.6 +5.3**
baz=23
124A Stringfield Ra 22.96 327 ⇓P **P** **00 29 20.8 +1.2**
baz=23,SNR=275
124A ⇓ScP **ScP** **00 36 44.5 +4.9**
baz=23
124A ⇓ScP **ScP** **00 36 44.5 +4.9**
baz=23
223A Chaparral, Ant 22.96 325 ⇓P **P** **00 29 19.2 -0.3**
baz=23
Z25A Roswell 23.05 329 ⇑P **P** **00 29 20.9 +0.6**
baz=23,SNR=38
AMTX Amarillo 23.08 337 *e*P **P** **00 29 19.4 -1.2**
comp=Z,171nm,1.0s
Y26A Elida 23.15 332 ⇓P **P** **00 29 20.7 -0.6**
baz=23
Y26A ⇓ScP **ScP** **00 36 43.2 +3.3**
baz=23
Y26A ⇓ScP **ScP** **00 36 43.2 +3.3**
baz=23
V31A Spring Creek L 23.25 341 ⇓P **P** **00 29 22.0 -0.1**
baz=23,SNR=11
W29A Amraillo 23.27 337 ⇑P **P** **00 29 22.2 -0.2**
baz=23,SNR=6.0
W29A ⇓ScP **ScP** **00 36 44.4 +4.2**
baz=23
W29A ⇓ScP **ScP** **00 36 44.4 +4.2**
baz=23
123A Bell Site, Whi 23.34 326 ⇓P **P** **00 29 24.4 +1.2**
baz=24,SNR=11
123A ⇑ScP **ScP** **00 36 45.7 +5.2**
baz=24
123A ⇑ScP **ScP** **00 36 45.7 +5.2**
baz=24
Z24A Sheeppen Canyo 23.41 328 ⇑P **P** **00 29 23.9 +0.1**
baz=24,SNR=88
Z24A ⇓ScP **ScP** **00 36 46.0 +5.3**
baz=24
Z24A ⇓ScP **ScP** **00 36 46.0 +5.3**
baz=24
222A Williams Famil 23.42 324 ⇑P **P** **00 29 25.2 +1.3**
baz=24,SNR=12
X27A F and S Farms, 23.44 334 ⇑P **P** **00 29 24.0 -0.1**
baz=24
V30A Spur Ranch, Mi 23.51 340 ⇑P **P** **00 29 24.9 +0.2**
baz=24
V30A ⇑ScP **ScP** **00 36 45.1 +4.3**
baz=24
V30A ⇑ScP **ScP** **00 36 45.1 +4.3**
baz=24
Y25A Mesa, Roswell 23.55 330 ⇑P **P** **00 29 26.1 +1.0**
baz=24,SNR=32

Y25A ⇑ScP **ScP** **00 36 45.7 +4.7**
baz=24
Y25A ⇑ScP **ScP** **00 36 45.7 +4.7**
baz=24
TZTN **Tazewell** **23.56 15** *eP* **P** **00 29 25.4 +0.5**
comp=Z,118nm,0.8s
W28A **Vega** **23.61 337** ⇓P **P** **00 29 25.2 -0.3**
baz=24,SNR=10
X26A **CR and CF Fran** **23.67 333** ⇓P **P** **00 29 26.4 +0.3**
baz=24
X26A ⇑ScP **ScP** **00 36 45.6 +4.3**
baz=24
X26A ⇑ScP **ScP** **00 36 45.6 +4.3**
baz=24
320A **Kipp Ranch, An** **23.73 320** ⇑P **P** **00 29 29.1 +2.4**
baz=24,SNR=48
320A ⇓ScP **ScP** **00 36 46.4 +4.9**
baz=24
320A ⇓ScP **ScP** **00 36 46.4 +4.9**
baz=24
221A **Mesquite Ranch** **23.75 322** ⇑P **P** **00 29 29.1 +2.3**
baz=24,SNR=40
W27A **Bowe Ranch, En** **23.78 335** ⇑P **P** **00 29 27.2 +0.1**
baz=24,SNR=50
W27A ⇓ScP **ScP** **00 36 45.5 +3.9**
baz=24
W27A ⇓ScP **ScP** **00 36 45.5 +3.9**
baz=24
122A **Conniff Cattle** **23.80 325** ⇓P **P** **00 29 29.1 +1.7**
baz=24,SNR=12
122A ⇑ScP **ScP** **00 36 46.0 +4.4**
baz=24
122A ⇑ScP **ScP** **00 36 46.0 +4.4**
baz=24
U31A **Nine Bar Ranch** **23.80 342** ⇓P **P** **00 29 27.5 +0.3**
baz=24
Z23A **Rita Site, Whi** **23.81 327** ⇓P **P** **00 29 29.1 +1.7**
baz=24,SNR=49
Z23A ⇑ScP **ScP** **00 36 46.4 +4.7**
baz=24
Z23A ⇑ScP **ScP** **00 36 46.4 +4.7**
baz=24
CELP **Cerrillos** **23.81 77** *eP* **P** **00 29 24.9 -2.5**
SIUC **Southern Illin** **23.82 3** *eP* **P** **00 29 27.6 +0.3**
comp=Z,312nm,1.0s
V29A **Stinnett** **23.90 338** ⇓P **P** **00 29 28.6 +0.5**
baz=24
Y24A **Capitan** **23.92 329** ⇑P **P** **00 29 29.7 +1.2**
baz=24,SNR=65
X25A **Clemmons Ranch** **24.04 331** ⇑P **P** **00 29 30.3 +0.9**
baz=24,SNR=22
V28A **Channing** **24.05 337** ⇑P **P** **00 29 30.3 +0.8**
baz=24,SNR=5.7
W26A **Owens Ranch, T** **24.10 334** ⇓P **P** **00 29 31.1 +1.1**
baz=24
220A **Playas Peak, P** **24.12 321** ⇓P **P** **00 29 32.3 +2.1**
baz=24
220A ⇑ScP **ScP** **00 36 46.7 +4.1**
baz=24
220A ⇑ScP **ScP** **00 36 46.7 +4.1**
baz=24
121A **Cookes Peak, D** **24.13 323** ⇑P **P** **00 29 32.7 +2.4**
baz=24,SNR=118
121A ⇑ScP **ScP** **00 36 47.4 +4.8**
baz=24
121A ⇑ScP **ScP** **00 36 47.4 +4.8**
baz=24
Z22A **Elephant Butte** **24.20 326** ⇓P **P** **00 29 32.8 +1.9**
baz=24,SNR=105
Z22A ⇑ScP **ScP** **00 36 47.3 +4.5**
baz=24
Z22A ⇑ScP **ScP** **00 36 47.3 +4.5**
baz=24
U30A **WK&E Inc. Balk** **24.20 341** ⇓P **P** **00 29 31.9 +1.1**
baz=24,SNR=11
U30A ⇑ScP **ScP** **00 36 47.4 +4.7**
baz=24
U30A ⇑ScP **ScP** **00 36 47.4 +4.7**
baz=24
USIN **University of** **24.20 6** *eP* **P** **00 29 30.4 -0.3**
comp=Z,306nm,0.8s
SJG **San Juan** **24.22 77** *eP* **P** **00 29 28.5 -2.5**
comp=Z,24nm,0.8s
319A **Douglas** **24.23 319** ⇑P **P** **00 29 33.1 +1.9**
baz=24,SNR=24
319A ⇓ScP **ScP** **00 36 47.2 +4.3**
baz=24
319A ⇓ScP **ScP** **00 36 47.2 +4.3**
baz=24
Y23A **Lovelace Mesa,** **24.24 328** ⇓P **P** **00 29 32.7 +1.4**
baz=24,SNR=62
Y23A ⇓ScP **ScP** **00 36 47.2 +4.3**
baz=24
Y23A ⇓ScP **ScP** **00 36 47.2 +4.3**
baz=24
V27A **Dan Oppiter Fa** **24.29 336** ⇓P **P** **00 29 33.4 +1.7**
baz=24,SNR=9.4
ATAH **Atahualpa** **24.29 148** P **P** **00 29 33.7 +1.5**
ATAH PcP **PcP** **00 33 11.4 +0.5**
ATAH **Atahualpa** **24.29 148** P **P** **00 29 33.7 +1.5**
comp=Z,26nm,1.0s,baz=345,slow=6.0,SNR=10
ATAH PcP **PcP** **00 33 11.4 +0.5**
comp=Z,12nm,1.1s,baz=344,slow=7.4,SNR=2.7
U29A **Oasis Ranch, S** **24.33 340** ⇑P **P** **00 29 32.9 +0.8**
baz=24,SNR=5.2
CNNC **Cliffs of the** **24.35 27** *eP* **P** **00 29 32.2 +0.2**
comp=Z,104nm,0.7s
T31A **Randall Ranch,** **24.43 343** ⇓P **P** **00 29 33.8 +0.9**
baz=25
T31A ⇑ScP **ScP** **00 36 45.9 +2.8**
baz=25
T31A ⇑ScP **ScP** **00 36 45.9 +2.8**
baz=25
X24A **Lazy VL Ranch,** **24.43 330** ⇑P **P** **00 29 34.0 +0.9**
baz=25,SNR=9.0
CBYP **Canovanas** **24.52 76** *eP* **P** **00 29 29.1 -4.7**
W25A **X Bar L Ranch,** **24.52 333** ⇑P **P** **00 29 34.8 +1.0**
baz=25,SNR=13
W25A ⇓ScP **ScP** **00 36 47.5 +3.9**
baz=25
W25A ⇓ScP **ScP** **00 36 47.5 +3.9**
baz=25
U28A **Mallet** **24.61 338** ⇓P **P** **00 29 35.3 +0.7**
baz=25,SNR=5.4
U28A ⇑ScP **ScP** **00 36 46.8 +3.0**
baz=25
U28A ⇑ScP **ScP** **00 36 46.8 +3.0**
baz=25
Z21A **St. Cloud Mine** **24.63 325** ⇑P **P** **00 29 36.5 +1.6**
baz=25,SNR=84
Z21A ⇑ScP **ScP** **00 36 47.6 +3.5**
baz=25
Z21A ⇑ScP **ScP** **00 36 47.6 +3.5**
baz=25
120A **U Bar Ranch, L** **24.64 322** ⇑P **P** **00 29 37.0 +2.0**
baz=25,SNR=43
120A ⇑ScP **ScP** **00 36 47.9 +3.9**
baz=25
120A ⇑ScP **ScP** **00 36 47.9 +3.9**
baz=25
WCI **Wyandotte Cave** **24.64 9** *eP* **P** **00 29 34.5 -0.2**
WCI pmax pmax
comp=Z,223nm,0.8s
WCI **Wyandotte Cave** **24.64 9** *eP* **P** **00 29 34.5 -0.2**
comp=Z,223nm,0.8s
T30A **Plains** **24.64 341** ⇓P **P** **00 29 35.4 +0.6**
baz=25
SLM **Saint Louis** **24.70 1** *eP* **P** **00 29 35.7 +0.5**
SLM **Saint Louis** **24.70 1** *eP* **P** **00 29 35.7 +0.5**
BNM **Barren Site** **24.70 328** *eP* **P** **00 29 37.5 +1.9**
V26A **Tequesquite Ra** **24.71 334** ⇓P **P** **00 29 36.7 +1.1**
baz=25,SNR=10.0
Y22A **Socorro** **24.72 327** ⇑P **P** **00 29 37.2 +1.6**
baz=25,SNR=44
Y22A ⇑ScP **ScP** **00 36 47.8 +3.6**
baz=25
Y22A ⇑ScP **ScP** **00 36 47.8 +3.6**
baz=25
MTP **Monte Pirata** **24.78 77** *eP* **P** **00 29 34.0 -2.2**
comp=Z,49nm,1.0s
Y22D **IRIS PASSCAL I** **24.80 327** ⇑P **P** **00 29 37.6 +1.2**
baz=25
X23A **Hourglass Bar** **24.82 329** ⇓P **P** **00 29 38.0 +1.4**
baz=25,SNR=17
X23A ⇓ScP **ScP** **00 36 48.7 +4.1**
baz=25
X23A ⇓ScP **ScP** **00 36 48.7 +4.1**
baz=25
LPM **Los Pinos Moun** **24.83 328** *eP* **P** **00 29 39.3 +2.6**
S31A **Mullinville** **24.86 344** ⇑P **P** **00 29 37.1 +0.3**
baz=25
U27A **Thompson Grove** **24.87 337** ⇑P **P** **00 29 38.4 +1.4**
baz=25,SNR=19
LENM **Lemitar** **24.90 327** *eP* **P** **00 29 39.8 +2.5**
LENM *eSP* 00 36 49.0
OLIL **Olney** **24.92 5** *eP* **P** **00 29 37.4 +0.2**
comp=Z,174nm,0.8s
OLIL *eScP* **ScP** **00 36 45.0 +0.6**
W24A **Lazy 6 Ranch,** **24.95 331** ⇑P **P** **00 29 39.0 +1.2**
baz=25,SNR=18
W24A ⇓ScP **ScP** **00 36 48.7 +3.8**
baz=25
W24A ⇓ScP **ScP** **00 36 48.7 +3.8**
baz=25
T29A **Hugoton** **24.98 340** ⇑P **P** **00 29 38.6 +0.7**
baz=25,SNR=6.2
T29A ⇑ScP **ScP** **00 36 48.5 +3.7**
baz=25
T29A ⇑ScP **ScP** **00 36 48.5 +3.7**
baz=25
Z20A **Nine Sixteen R** **25.02 323** ⇓P **P** **00 29 40.9 +2.5**
baz=25,SNR=85
Z20A ⇓ScP **ScP** **00 36 48.8 +3.7**
baz=25
Z20A ⇓ScP **ScP** **00 36 48.8 +3.7**
baz=25
BLA **Blacksburg** **25.10 20** *eP* **P** **00 29 39.7 +0.7**
BLA pmax pmax
comp=Z,282nm,1.3s
BLA **Blacksburg** **25.10 20** *eP* **P** **00 29 39.7 +0.7**
comp=Z,282nm,1.3s
V25A **Rancho No Teng** **25.11 333** ⇑P **P** **00 29 40.9 +1.7**
baz=25,SNR=18
Y21A **Point of Rocks** **25.15 326** ⇓P **P** **00 29 42.0 +2.2**
baz=25,SNR=54
Y21A ⇓ScP **ScP** **00 36 50.2 +4.6**
baz=25
Y21A ⇓ScP **ScP** **00 36 50.2 +4.6**
baz=25
S30A **Montezuma** **25.16 342** ⇑P **P** **00 29 40.2 +0.7**
baz=25
S30A ⇑ScP **ScP** **00 36 49.6 +4.3**
baz=25
S30A ⇑ScP **ScP** **00 36 49.6 +4.3**
baz=25
LAZ **Ladron** **25.17 327** *eP* **P** **00 29 42.5 +2.7**
X22A **Bernardo** **25.18 328** ⇓P **P** **00 29 41.9 +2.1**
baz=25,SNR=9.4
X22A ⇓ScP **ScP** **00 36 49.6 +4.1**
baz=25
X22A ⇓ScP **ScP** **00 36 49.6 +4.1**
baz=25
U26A **Atchley Ranch,** **25.21 335** ⇓P **P** **00 29 40.5 +0.4**
baz=25,SNR=13
ANMO **Albuquerque** **25.24 329** *eP* **P** **00 29 42.0 +1.5**
comp=Z,10.0nm,0.8s
ANMO *ePcP* **PcP** **00 33 14.0 +1.6**
ANMO *eScP* **ScP** **00 36 48.6 +2.8**
ANMO **Albuquerque** **25.24 329** P **P** **00 29 42.1 +1.7**
comp=Z,7.5nm,0.8s,baz=146,slow=12,SNR=29
ANMO PcP **PcP** **00 33 13.8 +1.4**
comp=Z,7.1nm,0.9s,baz=156,slow=11,SNR=3.5
ANMO ScP **ScP** **00 36 47.6 +1.8**
comp=Z,6.2nm,0.8s,baz=160,slow=5.5,SNR=4.6
ANMO LR LR 00 41 57.4
comp=Z,342nm,20.1s,baz=29,slow=42
W23A **Werner Place,** **25.26 330** ⇓P **P** **00 29 42.5 +1.8**
baz=25,SNR=18
W23A ⇓ScP **ScP** **00 36 49.6 +3.8**
baz=25
W23A ⇓ScP **ScP** **00 36 49.6 +3.8**
baz=25
V24A **Rampart Ranch,** **25.30 332** ⇑P **P** **00 29 42.8 +1.8**
baz=26,SNR=15
S29A **Ulysses** **25.35 341** ⇑P **P** **00 29 41.9 +0.7**
baz=26,SNR=6.4
STVI **Saint Thomas** **25.38 76** *eP* **P** **00 29 38.8 -2.8**
T27A **Campo** **25.39 338** ⇑P **P** **00 29 42.3 +0.6**
baz=26
Y20A **Horse Springs,** **25.47 325** ⇓P **P** **00 29 43.7 +1.2**
baz=26,SNR=192
Y20A ⇑ScP **ScP** **00 36 51.1 +4.6**
baz=26
Y20A ⇑ScP **ScP** **00 36 51.1 +4.6**
baz=26
U25A **Circle Dot Ran** **25.49 334** ⇑P **P** **00 29 44.0 +1.3**
baz=26
BLO **Bloomington** **25.53 8** *eP* **P** **00 29 42.6 -0.2**
BLO **Bloomington** **25.53 8** *eP* **P** **00 29 42.6 -0.2**
comp=Z,320nm,1.1s
X21A **Alamocita Cree** **25.54 326** ⇓P **P** **00 29 45.4 +2.1**
baz=26,SNR=142
X21A ⇓ScP **ScP** **00 36 51.0 +4.3**
baz=26
X21A ⇓ScP **ScP** **00 36 51.0 +4.3**
baz=26
W22A **Albuquerque** **25.55 329** ⇓P **P** **00 29 44.9 +1.6**
baz=26,SNR=5.9
S28A **Manter** **25.58 340** ⇓P **P** **00 29 44.5 +1.2**
baz=26
S28A ⇑ScP **ScP** **00 36 49.7 +3.2**
baz=26
S28A ⇑ScP **ScP** **00 36 49.7 +3.2**
baz=26
KSU1 **Kansas State U** **25.65 350** *eP* **P** **00 29 44.6 +0.8**
comp=Z,62nm,0.8s
R30A **Dighton** **25.71 343** ⇑P **P** **00 29 44.7 +0.3**
baz=26,SNR=5.4
R30A ⇓ScP **ScP** **00 36 50.3 +3.5**
baz=26
R30A ⇓ScP **ScP** **00 36 50.3 +3.5**
baz=26
V23A **Ortiz Mt. (NFS** **25.75 331** ⇑P **P** **00 29 47.2 +2.2**
baz=26,SNR=16
V23A ⇑ScP **ScP** **00 36 51.5 +4.3**
baz=26
V23A ⇑ScP **ScP** **00 36 51.5 +4.3**
baz=26
TUC **Tucson** **25.81 319** *eP* **P** **00 29 47.8 +2.3**
TUC *e* 00 33 14.4
TUC pmax pmax
comp=Z,9.0nm,1.0s
TUC **Tucson** **25.81 319** *eP* **P** **00 29 47.8 +2.3**
comp=Z,9.4nm,1.0s
TUC *ePcP* **PcP** **00 33 14.4 +0.8**
TUC *eScP* **ScP** **00 36 50.4 +3.1**
T26A **Comanche Natio** **25.82 336** ⇑P **P** **00 29 46.8 +1.1**
baz=26
T26A ⇓ScP **ScP** **00 36 51.9 +4.5**
baz=26
T26A ⇓ScP **ScP** **00 36 51.9 +4.5**
baz=26
U24A **Moreno Valley** **25.88 333** ⇓P **P** **00 29 47.3 +1.0**
baz=26
U24A ⇑ScP **ScP** **00 36 51.9 +4.2**
baz=26
U24A ⇑ScP **ScP** **00 36 51.9 +4.2**
baz=26
W21A **San Fidel** **25.98 328** ⇑P **P** **00 29 48.7 +1.5**
baz=26,SNR=19
X20A **Quemado** **26.00 325** ⇑P **P** **00 29 47.8 +0.4**
baz=26,SNR=34
X20A ⇑ScP **ScP** **00 36 51.5 +3.6**
baz=26
X20A ⇑ScP **ScP** **00 36 51.5 +3.6**
baz=26
S27A **Las Animas** **26.01 338** ⇑P **P** **00 29 48.0 +0.7**
baz=26
R29A **Marienthal** **26.09 342** ⇑P **P** **00 29 48.0 0.0**
baz=26
T25A **Trinidad** **26.12 335** ⇑P **P** **00 29 50.3 +1.9**
baz=26,SNR=26
S26A **Kim** **26.17 337** ⇑P **P** **00 29 49.9 +1.2**
baz=26
U23A **El Rito** **26.22 331** ⇑P **P** **00 29 50.3 +0.9**
baz=26,SNR=23
R28A **Tribune** **26.23 340** ⇑P **P** **00 29 49.0 -0.2**
baz=26,SNR=6.1
R28A ⇑ScP **ScP** **00 36 51.3 +2.9**
baz=26
R28A ⇑ScP **ScP** **00 36 51.3 +2.9**
baz=26
V22A **San Miguel Ran** **26.23 330** ⇑P **P** **00 29 50.4 +1.0**
baz=26,SNR=14
V22A ⇓ScP **ScP** **00 36 52.4 +3.8**
baz=26
T24A **Torres, Weston** **26.33 334** ⇑P **P** **00 29 51.5 +1.1**
baz=26,SNR=7.7
T24A ⇓ScP **ScP** **00 36 52.7 +3.8**
baz=26
T24A ⇓ScP **ScP** **00 36 52.7 +3.8**
baz=26
W20A **Ramah** **26.44 326** ⇓P **P** **00 29 53.0 +1.6**
baz=27,SNR=52
W20A ⇑ScP **ScP** **00 36 53.5 +4.2**
baz=27
W20A ⇑ScP **ScP** **00 36 53.5 +4.2**
baz=27
JSRW **J. Sargeant Re** **26.45 24** *eP* **P** **00 29 49.0 -2.1**
JSRW *epP* **pP** **00 30 08.3 +0.9**
URVA **University of** **26.48 24** *eP* **P** **00 29 51.6 +0.2**
URVA *eS* **S** **00 34 16.3 -4.1**
V21A **Milan** **26.51 328** ⇓P **P** **00 29 53.7 +1.7**
baz=27,SNR=11
V21A ⇓ScP **ScP** **00 36 53.7 +4.3**
baz=27
V21A ⇓ScP **ScP** **00 36 53.7 +4.3**
baz=27
R27A **Eads** **26.51 339** ⇑P **P** **00 29 53.4 +1.6**
baz=27
U22A **Llaves** **26.58 330** ⇓P **P** **00 29 53.9 +1.3**
baz=27
U22A ⇑ScP **ScP** **00 36 51.5 +1.9**
baz=27
U22A ⇑ScP **ScP** **00 36 51.5 +1.9**
baz=27
S25A **Robets Cordova** **26.58 336** ⇑P **P** **00 29 53.7 +1.2**
baz=27
SFIN **Scholer Farm** **26.65 7** ⇑P **P** **00 29 53.1 +0.3**
baz=27,SNR=6.9
HDIL **Hopedale** **26.65 3** *eP* **P** **00 29 51.9 -1.0**
comp=Z,269nm,1.1s
T23A **Casias Ranch,** **26.73 332** ⇑P **P** **00 29 54.9 +0.9**
baz=27
T23A ⇓ScP **ScP** **00 36 53.3 +3.1**
baz=27
T23A ⇓ScP **ScP** **00 36 53.3 +3.1**
baz=27
R26A **Arlington** **26.76 338** ⇓P **P** **00 29 56.0 +1.9**
baz=27
X18A **Snowflake** **26.82 323** ⇓P **P** **00 29 56.3 +1.6**
baz=27,SNR=22
X18A ⇑ScP **ScP** **00 36 53.6 +3.3**
baz=27
X18A ⇑ScP **ScP** **00 36 53.6 +3.3**
baz=27
S24A **Houchin Ranch,** **26.88 334** ⇑P **P** **00 29 56.9 +1.5**
baz=27
S24A ⇓ScP **ScP** **00 36 53.3 +2.7**
baz=27
S24A ⇓ScP **ScP** **00 36 53.3 +2.7**
baz=27
Q28A **Sharon Springs** **26.89 341** ⇑P **P** **00 29 56.6 +1.4**
baz=27
214A **Organ Pipe Nat** **26.93 316** ⇓P **P** **00 29 57.5 +2.0**
baz=27,SNR=38
214A ⇓ScP **ScP** **00 36 54.7 +4.2**
baz=27
214A ⇓ScP **ScP** **00 36 54.7 +4.2**
baz=27
V20A **Brimhall** **26.93 327** ⇑P **P** **00 29 57.3 +1.5**
baz=27,SNR=9.8
V20A ⇑ScP **ScP** **00 36 54.8 +4.1**
baz=27
V20A ⇑ScP **ScP** **00 36 54.8 +4.1**
baz=27
R25A **Fountain Ranch** **26.94 336** ⇓P **P** **00 29 56.5 +0.8**
baz=27
R25A ⇓ScP **ScP** **00 36 51.9 +1.4**
baz=27
R25A ⇓ScP **ScP** **00 36 51.9 +1.4**
baz=27
U21A **Nageezi** **27.01 329** ⇓P **P** **00 29 58.9 +2.4**
baz=27,SNR=17
U21A ⇓ScP **ScP** **00 36 55.1 +4.1**
baz=27
U21A ⇓ScP **ScP** **00 36 55.1 +4.1**
baz=27
SDCO **Great Sand Dun** **27.09 334** *eP* **P** **00 29 58.8 +1.6**
comp=Z,10nm,0.9s
SDCO *ePcP* **PcP** **00 33 18.3 +1.5**
SDCO *eScP* **ScP** **00 36 53.0 +1.8**
CBN **Corbin** **27.10 24** *eP* **P** **00 29 57.0 +0.2**
comp=Z,67nm,1.0s
CBN *epP* **pP** **00 30 15.1 +1.8**
CBN *eScP* **ScP** **00 36 51.8 +1.0**
KSCO **Kaye Shedlock'** **27.10 340** ⇑P **P** **00 29 58.0 +0.9**
baz=27
T22A **Edith** **27.11 331** ⇓P **P** **00 29 59.4 +2.0**
baz=27,SNR=8.7
T22A ⇑ScP **ScP** **00 36 54.0 +2.7**
baz=27
T22A ⇑ScP **ScP** **00 36 54.0 +2.7**
baz=27
W18A **Petrified Fore** **27.12 325** ⇓P **P** **00 29 59.1 +1.7**
baz=27,SNR=19
ACSO **Alum Creek Sta** **27.20 13** *eP* **P** **00 29 58.0 +0.1**
comp=Z,326nm,1.7s
S23A **Nye Farm, Mont** **27.27 333** ⇓ScP **ScP** **00 36 55.7 +4.0**
baz=27
P28A **Saint Francis** **27.34 342** ⇑P **P** **00 29 59.3 +0.2**
baz=28
Q26A **Hugo** **27.34 338** ⇓P **P** **00 29 59.8 +0.5**
baz=28
Q26A ⇑ScP **ScP** **00 36 54.7 +3.0**
baz=28
Q26A ⇑ScP **ScP** **00 36 54.7 +3.0**
baz=28
R24A **Sanders Place,** **27.34 335** ⇓P **P** **00 30 00.4 +1.0**
baz=28
T21A **Navajo Lake** **27.39 330** ⇓P **P** **00 30 01.3 +1.5**
baz=28,SNR=7.9
T21A ⇓ScP **ScP** **00 36 55.8 +3.7**
baz=28
T21A ⇓ScP **ScP** **00 36 55.8 +3.7**
baz=28
U20A **Newcomb** **27.40 328** ⇓P **P** **00 30 01.3 +1.4**
baz=28,SNR=12
U20A ⇓ScP **ScP** **00 36 55.9 +3.9**
baz=28
U20A ⇓ScP **ScP** **00 36 55.9 +3.9**
baz=28
P27A **Ficken Ranch,** **27.58 340** ⇓P **P** **00 30 02.4 +1.0**
baz=28
P27A ⇑ScP **ScP** **00 36 55.9 +3.5**
baz=28
P27A ⇑ScP **ScP** **00 36 55.9 +3.5**
baz=28
Q25A **Bedland, Calha** **27.59 337** ⇑P **P** **00 30 02.1 +0.5**
baz=28
Q25A ⇓ScP **ScP** **00 36 56.0 +3.4**
baz=28
Q25A ⇓ScP **ScP** **00 36 56.0 +3.4**
baz=28
R23A **Moffat** **27.61 334** ⇑P **P** **00 30 03.3 +1.4**
baz=28,SNR=10
R23A ⇑ScP **ScP** **00 36 56.5 +3.7**
baz=28
R23A ⇑ScP **ScP** **00 36 56.5 +3.7**
baz=28
X16A **Lo Mia Camp, P** **27.62 321** ⇑P **P** **00 30 04.0 +2.1**
baz=28,SNR=47
X16A ⇑ScP **ScP** **00 36 56.5 +3.7**
baz=28
X16A ⇑ScP **ScP** **00 36 56.5 +3.7**
baz=28
S22A **4UR Ranch, Cre** **27.68 332** ⇑P **P** **00 30 04.3 +1.8**
baz=28,SNR=18
S22A ⇓ScP **ScP** **00 36 56.2 +3.2**
baz=28,SNR=5.6
S22A ⇓ScP **ScP** **00 36 56.2 +3.2**
baz=28,SNR=5.6
P26A **Davis Ranch, A** **27.84 339** ⇓P **P** **00 30 04.8 +1.0**
baz=28
P26A ⇑ScP **ScP** **00 36 57.2 +3.9**
baz=28
P26A ⇑ScP **ScP** **00 36 57.2 +3.9**
baz=28
Z14A **Wintersburg** **27.88 318** ⇓P **P** **00 30 06.2 +2.2**
baz=28,SNR=11
Z14A ⇓ScP **ScP** **00 36 57.9 +4.6**
baz=28

Z14A				⇓ScP	ScP	00 36 57.9	+4.6
	baz=28						
Q24A	Divide	27.99	336	⇓P	P	00 30 06.7	+1.5
	baz=28						
Q24A				⇑ScP	ScP	00 36 57.5	+3.5
	baz=28						
Q24A				⇑ScP	ScP	00 36 57.5	+3.5
	baz=28						
R22A	Saguache, Gunn	28.04	333	⇑P	P	00 30 06.7	+0.9
	baz=28						
R22A				⇑ScP	ScP	00 36 58.4	+4.3
	baz=28						
R22A				⇑ScP	ScP	00 36 58.4	+4.3
	baz=28						
MVCO	Mesa Verde	28.04	329	eP	P	00 30 07.3	+1.6
	comp=Z,25nm,1.0s						
MVCO				eScP	ScP	00 36 56.7	+2.6
MVCO	Mesa Verde	28.04	329	⇑P	P	00 30 06.2	+0.6
	baz=28						
S21A	Coal Bank Pass	28.05	331	⇓P	P	00 30 06.7	+0.8
	baz=28						
S21A				⇓ScP	ScP	00 36 58.2	+4.0
	baz=28,SNR=5.6						
S21A				⇓ScP	ScP	00 36 58.2	+4.0
	baz=28,SNR=5.6						
113A	Mohawk Valley,	28.06	316	⇓P	P	00 30 07.6	+2.0
	baz=28,SNR=11						
113A				⇑ScP	ScP	00 36 58.3	+4.4
	baz=28						
113A				⇑ScP	ScP	00 36 58.3	+4.4
	baz=28						
P25A	Willow Gulch B	28.09	338	⇓P	P	00 30 06.8	+0.8
	baz=28						
O27A	Beecher Island	28.12	341	⇑P	P	00 30 07.2	+1.0
	baz=28						
BGNE	Belgrade	28.17	349	⇓P	P	00 30 07.3	+0.8
	baz=28						
Q23A	Hartsel	28.21	335	⇓P	P	00 30 09.0	+1.8
	baz=28						
Q23A				⇑ScP	ScP	00 36 58.1	+3.4
	baz=28						
Q23A				⇑ScP	ScP	00 36 58.1	+3.4
	baz=28						
Y14A	Wickenburg	28.28	319	⇑P	P	00 30 09.6	+2.0
	baz=28,SNR=18						
Y14A				⇑ScP	ScP	00 36 58.8	+4.2
	baz=28						
Y14A				⇑ScP	ScP	00 36 58.8	+4.2
	baz=28						
WUAZ	Wupatki	28.34	323	eP	P	00 30 11.4	+3.1
	comp=Z,73nm,1.1s						
WUAZ				ePcP	PcP	00 33 21.5	+1.9
WUAZ				eScP	ScP	00 36 58.6	+3.7
WUAZ	Wupatki	28.34	323	⇑P	P	00 30 09.9	+1.6
	baz=28,SNR=38						
WUAZ				⇑ScP	ScP	00 36 59.6	+4.7
	baz=28						
WUAZ				⇑ScP	ScP	00 36 59.6	+4.7
	baz=28						
SDMD	Soldier's Deli	28.35	23	eP	P	00 30 07.7	-0.3
	comp=Z,46nm,0.6s						
SDMD				epP	pP	00 30 26.1	+1.6
SDMD				ePcP	PcP	00 33 19.2	-0.2
P24A	Kohler Place,	28.37	337	⇑P	P	00 30 09.6	+1.1
	baz=28						
P24A				⇓ScP	ScP	00 36 58.9	+3.9
	baz=28						
P24A				⇓ScP	ScP	00 36 58.9	+3.9
	baz=28						
O26A	Horse Wrangler	28.44	340	⇑P	P	00 30 10.0	+0.9
	baz=29						
O26A				⇑ScP	ScP	00 36 59.1	+4.0
	baz=29						
O26A				⇑ScP	ScP	00 36 59.1	+4.0
	baz=29						
S20A	Disappointment	28.46	330	⇑P	P	00 30 11.4	+2.0
	baz=29,SNR=16						
S20A				⇓ScP	ScP	00 36 59.5	+4.1
	baz=29						
S20A				⇓ScP	ScP	00 36 59.5	+4.1
	baz=29						
R21A	Cimarron	28.51	332	⇓P	P	00 30 11.7	+1.9
	baz=29						
O25A	Wiggins	28.60	339	⇑P	P	00 30 12.5	+2.0
	baz=29						
O25A				⇑ScP	ScP	00 36 59.1	+3.5
	baz=29						
O25A				⇑ScP	ScP	00 36 59.1	+3.5
	baz=29						
P23A	Jefferson	28.61	335	⇑P	P	00 30 11.9	+1.1
	baz=29						
Q22A	Crested Butte,	28.63	333	⇓P	P	00 30 11.9	+0.9
	baz=29						
Q22A				⇓ScP	ScP	00 36 59.4	+3.4
	baz=29,SNR=7.9						
Q22A				⇓ScP	ScP	00 36 59.4	+3.4
	baz=29,SNR=7.9						
OGNE	Ogallala	28.68	342	⇓P	P	00 30 12.3	+1.1
	baz=29						
OGNE				⇓ScP	ScP	00 36 59.2	+3.4
	baz=29						
OGNE				⇓ScP	ScP	00 36 59.2	+3.4
	baz=29						
N27A	Anderson Farm,	28.70	342	⇓P	P	00 30 11.7	+0.4
	baz=29						
N27A				⇓ScP	ScP	00 37 00.3	+4.4
	baz=29						
N27A				⇓ScP	ScP	00 37 00.3	+4.4
	baz=29						
R20A	Redvale	28.75	331	⇑P	P	00 30 14.0	+2.1
	baz=29,SNR=9.9						
R20A				⇓ScP	ScP	00 37 00.2	+4.0
	baz=29						
R20A				⇓ScP	ScP	00 37 00.2	+4.0
	baz=29						
PV01	Paradox Valley	28.80	330	eP	P	00 30 15.3	+2.9
ISCO	Idaho Springs	28.89	336	eP	P	00 30 13.7	+0.5
ISCO				e		00 33 22.8	
ISCO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ISCO	Idaho Springs	28.89	336	eP	P	00 30 13.7	+0.5
	comp=Z,8.9nm,0.9s						
ISCO				ePcP	PcP	00 33 22.8	+1.6
ISCO				eScP	ScP	00 36 59.4	+2.7
ISCO	Idaho Springs	28.89	336	⇑P	P	00 30 14.1	+0.9
	baz=29						
ISCO				⇓ScP	ScP	00 37 00.6	+3.9
	baz=29						
ISCO				⇓ScP	ScP	00 37 00.6	+3.9
	baz=29						
Q21A	Lamborn Mesa,	28.90	332	⇑P	P	00 30 14.8	+1.6
	baz=29						
Q21A				⇑ScP	ScP	00 37 00.0	+3.4
	baz=29,SNR=6.7						
Q21A				⇑ScP	ScP	00 37 00.0	+3.4
	baz=29,SNR=6.7						
SMCO	Snowmass	28.92	334	eP	P	00 30 14.6	+0.9
	comp=Z,18nm,1.1s						
SMCO				ePcP	PcP	00 33 22.4	+1.0
SMCO				eScP	ScP	00 36 59.6	+2.6
N26A	Koester Ranch,	28.94	341	⇑P	P	00 30 14.9	+1.4
	baz=29						
GLA	Glamis	28.94	315	eP	P	00 30 16.1	+2.6
GLA				e		00 33 22.2	
GLA				e		00 36 59.7	
GLA				pmax	pmax		
	comp=Z,81nm,1.2s						
GLA	Glamis	28.94	315	eP	P	00 30 16.1	+2.6
	comp=Z,81nm,1.2s						
GLA				ePcP	PcP	00 33 22.2	+1.1
GLA				eScP	ScP	00 36 59.7	+3.0
GLA	Glamis	28.94	315	⇓P	P	00 30 15.8	+2.3
	baz=29,SNR=20						
GLA				⇑ScP	ScP	00 37 00.2	+3.5
	baz=29						
GLA				⇑ScP	ScP	00 37 00.2	+3.5
	baz=29						
O24A	Longmont	28.96	337	⇑P	P	00 30 14.6	+0.9
	baz=29						
JFWS	Jewell Farm	28.97	1	eP	P	00 30 12.5	-1.1
JFWS				e		00 36 57.0	
JFWS	Jewell Farm	28.97	1	eP	P	00 30 12.4	-1.1
	comp=Z,150nm,1.0s						
JFWS				eScP	ScP	00 36 57.0	+0.4
SSPA	Standing Stone	29.04	21	eP	P	00 30 14.1	-0.1
	comp=Z,28nm,0.9s						
SSPA				epP	pP	00 30 31.6	+0.9
SSPA				eScP	ScP	00 36 57.2	+0.5
MVL	Millersville	29.05	24	eP	P	00 30 14.8	+0.6
	comp=Z,44nm,1.0s						
Y12C	Blythe	29.15	317	⇓P	P	00 30 17.5	+2.2
	baz=29,SNR=7.2						
Y12C				⇑ScP	ScP	00 37 00.9	+3.6
	baz=29						
Y12C				⇑ScP	ScP	00 37 00.9	+3.6
	baz=29						
PV04	Paradox Valley	29.17	330	eP	P	00 30 17.1	+1.5
S18A	Hurst Farm, Bl	29.17	328	⇑P	P	00 30 17.5	+1.8
	baz=29,SNR=39						
S18A				⇑ScP	ScP	00 37 02.2	+4.5
	baz=29						
S18A				⇑ScP	ScP	00 37 02.2	+4.5
	baz=29						
P22A	Eagle	29.18	334	⇑P	P	00 30 17.2	+1.5
	baz=29						
N25A	Grover	29.21	339	⇓P	P	00 30 17.4	+1.5
	baz=29						
PV10	Paradox Valley	29.22	330	eP	P	00 30 17.4	+1.3
PV10				ePcP	PcP	00 33 24.2	+2.2
NNA	Nana	29.23	151	LR	LR	00 41 03.6	
	comp=Z,281nm,20.6s,baz=331,slow=34						
PDMCI	Parker Dam,Lak	29.24	318	⇓P	P	00 30 18.3	+2.3
	baz=29,SNR=14						
PDMCI				⇓ScP	ScP	00 37 01.9	+4.3
	baz=29						
PDMCI				⇓ScP	ScP	00 37 01.9	+4.3
	baz=29						
ALLY	Alegheny Colle	29.26	17	eP	P	00 30 15.7	-0.5
	comp=Z,115nm,1.1s						
ALLY				epP	pP	00 30 33.5	+0.9
Q20A	Ridgley Place,	29.33	332	⇑P	P	00 30 18.6	+1.6
	baz=30						
O23A	Lake Granby, G	29.36	336	⇓P	P	00 30 18.4	+1.0
	baz=30						
O23A				⇑ScP	ScP	00 37 01.7	+3.5
	baz=30						
O23A				⇑ScP	ScP	00 37 01.7	+3.5
	baz=30						
P21A	Newcastle	29.41	333	⇑P	P	00 30 19.2	+1.4
	baz=30						
P21A				⇑ScP	ScP	00 37 02.2	+3.9
	baz=30						
P21A				⇑ScP	ScP	00 37 02.2	+3.9
	baz=30						
N24A	Carr	29.51	338	⇑P	P	00 30 20.2	+1.6
	baz=30						
N24A				⇑ScP	ScP	00 37 01.7	+3.2
	baz=30						
N24A				⇑ScP	ScP	00 37 01.7	+3.2
	baz=30						
U15A	North Rim	29.51	323	⇑P	P	00 30 21.2	+2.4
	baz=30,SNR=52						
U15A				⇑ScP	ScP	00 37 02.3	+3.6
	baz=30						
U15A				⇑ScP	ScP	00 37 02.3	+3.6
	baz=30						
SWSC	Sam W. Stewart	29.55	314	⇓P	P	00 30 21.1	+2.3
	baz=30,SNR=14						
SWSC				⇓ScP	ScP	00 37 02.6	+4.1
	baz=30						
SWSC				⇓ScP	ScP	00 37 02.6	+4.1
	baz=30						
O22A	Kremmling	29.57	335	⇑P	P	00 30 20.4	+1.1
	baz=30						
O22A				⇑ScP	ScP	00 37 02.1	+3.2
	baz=30						
O22A				⇑ScP	ScP	00 37 02.1	+3.2
	baz=30						
W13A	Hualapai Mount	29.58	320	⇑P	P	00 30 21.1	+1.8
	baz=30,SNR=33						
W13A				⇑ScP	ScP	00 37 02.7	+3.7
	baz=30						
W13A				⇑ScP	ScP	00 37 02.7	+3.7
	baz=30						
DVTC	Desert V Tower	29.61	314	⇓P	P	00 30 22.2	+2.8
	baz=30,SNR=11						
BC3	Big Chuckawall	29.72	316	⇑P	P	00 30 22.4	+2.0
	baz=30,SNR=47						
BC3				⇓ScP	ScP	00 37 03.1	+3.8
	baz=30						
BC3				⇓ScP	ScP	00 37 03.1	+3.8
	baz=30						
ERPA	Erie	29.73	17	eP	P	00 30 20.2	-0.2
	comp=Z,44nm,0.8s						
M25A	Palm-Egli Farm	29.76	340	⇓P	P	00 30 21.4	+0.6
	baz=30						
M25A				⇑ScP	ScP	00 37 02.8	+3.5
	baz=30						
M25A				⇑ScP	ScP	00 37 02.8	+3.5
	baz=30						
P20A	De Beque	29.81	332	⇑P	P	00 30 22.6	+1.3
	baz=30						
P20A				⇓ScP	ScP	00 37 03.1	+3.5
	baz=30						
P20A				⇓ScP	ScP	00 37 03.1	+3.5
	baz=30						
IRM	Iron Mountain	29.82	317	⇑P	P	00 30 23.5	+2.3
	baz=30,SNR=20						
IRM				⇑ScP	ScP	00 37 03.5	+4.0
	baz=30						
IRM				⇑ScP	ScP	00 37 03.5	+4.0
	baz=30						
NEE2	Needles Airpor	29.84	318	⇑P	P	00 30 22.8	+1.5
	baz=30						
LUPA	Lehigh Univers	29.94	24	eP	P	00 30 22.9	+0.7
	comp=Z,401nm,0.8s						
MONP	Monument Peak	29.96	314	⇑P	P	00 30 24.1	+1.4
	baz=30,SNR=12						
MONP				⇑ScP	ScP	00 37 04.1	+3.9
	baz=30						
MONP				⇑ScP	ScP	00 37 04.1	+3.9
	baz=30						
N23A	Red Feather La	29.96	337	⇓P	P	00 30 23.7	+1.0
	baz=30						
N23A				⇓ScP	ScP	00 37 03.0	+2.9
	baz=30						
N23A				⇓ScP	ScP	00 37 03.0	+2.9
	baz=30						
L26A	Underwood Farm	29.99	342	⇑P	P	00 30 23.4	+0.6
	baz=30						
O21A	Pagoda	30.00	334	⇓P	P	00 30 23.6	+0.6
	baz=30						
O21A				⇑ScP	ScP	00 37 03.6	+3.3
	baz=30						
O21A				⇑ScP	ScP	00 37 03.6	+3.3
	baz=30						
BAR	Barrett	30.02	313	eP	P	00 30 25.4	+2.4
	comp=Z,51nm,1.5s						
BAR				ePP	PP	00 31 37.6	+5.7
M24A	Cheyenne	30.05	339	⇓P	P	00 30 24.2	+0.9
	baz=30						
M24A				⇑ScP	ScP	00 37 02.9	+2.6
	baz=30						
M24A				⇑ScP	ScP	00 37 02.9	+2.6
	baz=30						
N22A	Wattenberg Ran	30.08	336	⇑P	P	00 30 24.8	+1.0
	baz=30						
N22A				⇓ScP	ScP	00 37 03.5	+3.0
	baz=30						
N22A				⇓ScP	ScP	00 37 03.5	+3.0
	baz=30						
ECSD	EROS Data Cent	30.18	352	eP	P	00 30 24.0	-0.3
	comp=Z,39nm,1.1s						
P19A	Cripple Cowboy	30.19	332	⇑P	P	00 30 25.3	+0.7
	baz=30						
P19A				⇑ScP	ScP	00 37 04.4	+3.6
	baz=30,SNR=12						
P19A				⇑ScP	ScP	00 37 04.4	+3.6
	baz=30,SNR=12						
BBSR	BB Station	30.26	48	eP	P	00 30 25.3	+0.2
	comp=Z,76nm,0.9s						
O20A	White River Ci	30.26	333	⇓P	P	00 30 27.4	+2.2
	baz=30,SNR=7.7						
O20A				⇓ScP	ScP	00 37 04.3	+3.3
	baz=30,SNR=9.3						
O20A				⇓ScP	ScP	00 37 04.3	+3.3
	baz=30,SNR=9.3						
BELC	Belle Mtn. Jos	30.29	316	⇑P	P	00 30 27.4	+1.8
	baz=30,SNR=14						
BELC				⇓ScP	ScP	00 37 05.4	+4.2
	baz=30						
BELC				⇓ScP	ScP	00 37 05.4	+4.2
	baz=30						
BRNJ	Basking Ridge	30.34	25	eP	P	00 30 25.9	+0.2
	comp=Z,12µm,0.8s						
LDFC	Landfair	30.35	318	eP	P	00 30 29.5	+3.5
	comp=Z,107nm,1.2s						
LDFC				ePcP	PcP	00 33 26.5	+1.8
M23A	Laramie	30.37	338	⇓P	P	00 30 27.5	+1.2
	baz=30						
L25A	Engebretsen Ra	30.38	341	⇓ScP	ScP	00 37 04.2	+3.0
	baz=30						
PFO	Pinyon Flat Ob	30.38	315	P	P	00 30 28.0	+1.6
	comp=Z,122nm,1.1s,SNR=12						
PFO	Pinyon Flat Ob	30.38	315	eP	P	00 30 28.6	+2.3
	comp=Z,35nm,1.2s						
PFO				ePcP	PcP	00 33 25.6	+0.8
PFO				eScP	ScP	00 37 05.2	+3.8
PFO	Pinyon Flat Ob	30.38	315	ScP	ScP	00 37 05.8	+4.4
	comp=Z,8.6nm,0.9s,baz=116,slow=3.3,SNR=9.0						
PFO				LR	LR	00 44 37.5	
	comp=Z,575nm,18.7s,baz=131,slow=40						
PFO	Pinyon Flat Ob	30.38	315	⇓P	P	00 30 27.9	+1.6
	baz=31						
109C	Camp Elliot, M	30.44	313	⇑P	P	00 30 28.5	+1.8
	baz=31						
N21A	Black Mountain	30.47	335	⇑P	P	00 30 29.4	+2.2
	baz=31,SNR=7.9						
N21A				⇑ScP	ScP	00 37 04.9	+3.1
	baz=31,SNR=9.2						
N21A				⇑ScP	ScP	00 37 04.9	+3.1
	baz=31,SNR=9.2						
SRU	San Rafael	30.52	329	⇑P	P	00 30 29.4	+1.9
	baz=31,SNR=9.3						
SRU				⇓ScP	ScP	00 37 05.2	+3.3
	baz=31						
SRU				⇓ScP	ScP	00 37 05.2	+3.3
	baz=31						
L24A	Wheatland	30.60	339	⇓ScP	ScP	00 37 05.5	+3.5
	baz=31						
K26A	Motz Farm, Whi	30.63	342	⇑ScP	ScP	00 37 05.7	+3.7
	baz=31						
M22A	Cedar Creek Ra	30.65	337	⇑P	P	00 30 29.9	+1.2
	baz=31						
Q16A	Castle Valley	30.70	328	⇓P	P	00 30 30.8	+1.6
	baz=31,SNR=6.5						
K25A	Mack Ranch, Ha	30.76	341	⇓P	P	00 30 30.9	+1.4
	baz=31						
K25A				⇑ScP	ScP	00 37 06.0	+3.5
	baz=31						
K25A				⇑ScP	ScP	00 37 06.0	+3.5
	baz=31						
P18A	Preston Nutter	30.78	330	⇓P	P	00 30 32.0	+1.9
	baz=31,SNR=11						
P18A				⇑ScP	ScP	00 37 06.2	+3.4
	baz=31,SNR=14						
P18A				⇑ScP	ScP	00 37 06.2	+3.4
	baz=31,SNR=14						
O19A	Miners Draw (B	30.79	332	⇓P	P	00 30 30.9	+1.0
	baz=31						
O19A				⇑ScP	ScP	00 37 06.0	+3.4
	baz=31						
O19A				⇑ScP	ScP	00 37 06.0	+3.4
	baz=31						
N20A	Spence Gulch,	30.84	334	⇓P	P	00 30 31.7	+1.2
	baz=31,SNR=19						
N20A				⇑ScP	ScP	00 37 05.0	+2.0
	baz=31,SNR=12						
N20A				⇑ScP	ScP	00 37 05.0	+2.0
	baz=31,SNR=12						
MURC	Murrieta	30.89	314	⇓P	P	00 30 33.1	+2.4
	baz=31,SNR=7.2						
CCUT	Cedar City	30.90	324	eP	P	00 30 33.9	+2.9
	comp=Z,58nm,1.1s						
CCUT				epP	pP	00 30 50.5	+3.0
CCUT				ePcP	PcP	00 33 28.5	+2.2
CCUT				eScP	ScP	00 37 07.0	+3.7
MSU	Marysvale	30.93	326	eP	P	00 30 33.8	+2.6
MSU				e		00 33 28.0	
MSU	Marysvale	30.93	326	eP	P	00 30 33.8	+2.6
MSU				ePcP	PcP	00 33 28.0	+1.7
MSU				eScP	ScP	00 37 06.8	+3.5
L23A	Garrett	30.93	338	⇓P	P	00 30 31.4	+0.2
	baz=31,SNR=7.7						
L23A				⇓ScP	ScP	00 37 05.9	+2.7
	baz=31						
L23A				⇓ScP	ScP	00 37 05.9	+2.7
	baz=31						
MVU	Marysvale	30.94	326	eP	P	00 30 33.7	+2.4
	comp=Z,18nm,0.9s						
MVU				ePcP	PcP	00 33 28.9	+2.5
MVU				eScP	ScP	00 37 07.0	+3.7
HEC	Hector,Ludlow	31.00	317	⇓P	P	00 30 33.8	+2.1
	baz=31,SNR=14						
HEC				⇓ScP	ScP	00 37 07.2	+3.8
	baz=31						
HEC				⇓ScP	ScP	00 37 07.2	+3.8
	baz=31						
BBRC	Big Bear Solar	31.07	315	⇓P	P	00 30 33.9	+1.4
	baz=31						
BINY	Binghamton	31.09	22	eP	P	00 30 32.0	-0.4
	comp=Z,102nm,1.1s						
BINY				epP	pP	00 30 49.7	+0.9
BINY				eScP	ScP	00 37 03.2	-0.2
TUQ	Turquoise Moun	31.09	318	⇓P	P	00 30 34.7	+2.1
	baz=31,SNR=24						
TUQ				⇓ScP	ScP	00 37 06.4	+2.6
	baz=31						
TUQ				⇓ScP	ScP	00 37 06.4	+2.6
	baz=31						
ARUT	Antelope Range	31.11	324	eP	P	00 30 35.8	+3.1
ARUT	Antelope Range	31.11	324	eP	P	00 30 35.8	+3.1
ARUT				eScP	ScP	00 37 07.5	+3.7
M21A	Separation Pea	31.12	336	⇑P	P	00 30 34.1	+1.2
	baz=31,SNR=7.1						
M21A				⇑ScP	ScP	00 37 06.2	+2.3
	baz=31						
M21A				⇑ScP	ScP	00 37 06.2	+2.3
	baz=31						
L22A	Ellis Ranch, M	31.12	337	⇑ScP	ScP	00 37 06.5	+2.7
	baz=31						
K24A	Anderson Ranch	31.16	340	⇑ScP	ScP	00 37 05.9	+2.0
	baz=31						
BRSD	Miller	31.25	349	⇑P	P	00 30 33.2	-0.5
	baz=31						
SPMN	St. Paul	31.32	357	⇑P	P	00 30 33.7	-0.5
	baz=31,SNR=16						
SPMN				⇓ScP	ScP	00 37 06.2	+2.1
	baz=31						
SPMN				⇓ScP	ScP	00 37 06.2	+2.1
	baz=31						
M20A	Sweetwater, Wa	31.36	335	⇑P	P	00 30 35.9	+1.0
	baz=32,SNR=5.4						
M20A				⇑ScP	ScP	00 37 06.9	+2.3
	baz=32,SNR=8.4						
M20A				⇑ScP	ScP	00 37 06.9	+2.3
	baz=32,SNR=8.4						
L21A	Rawlins	31.43	336	⇓P	P	00 30 36.0	+0.5
	baz=32,SNR=18						
L21A				⇑ScP	ScP	00 37 06.7	+1.8
	baz=32						
L21A				⇑ScP	ScP	00 37 06.7	+1.8
	baz=32						
K23A	Bowen Ranch, D	31.47	339	⇓P	P	00 30 35.9	+0.1
	baz=32						
K23A				⇑ScP	ScP	00 37 07.5	+2.6
	baz=32						
K23A				⇑ScP	ScP	00 37 07.5	+2.6
	baz=32						
SCI	San Clemente I	31.52	312	⇑P	P	00 30 36.9	+0.6
	baz=32						
BFSC	Mount Baldy Ra	31.56	315	⇑P	P	00 30 39.0	+2.3
	baz=32,SNR=16						
GSC	Goldstone	31.59	317	eP	P	00 30 39.5	+2.6
GSC				e		00 33 29.0	
GSC				pmax	pmax		
	comp=Z,38nm,1.4s						
GSC	Goldstone	31.59	317	eP	P	00 30 39.5	+2.6
	comp=Z,38nm,1.4s						
GSC				ePcP	PcP	00 33 29.0	+1.0
GSC				eScP	ScP	00 37 09.0	+3.6
GSC	Goldstone	31.59	317	⇑P	P	00 30 39.0	+2.1
	baz=32,SNR=11						
GSC				⇑ScP	ScP	00 37 08.8	+3.4
	baz=32						
GSC				⇑ScP	ScP	00 37 08.8	+3.4
	baz=32						
SHOC	Shoshone	31.60	319	⇓P	P	00 30 38.7	+1.8
	baz=32						
CIS	Catalina Islan	31.64	313	⇑P	P	00 30 38.0	+0.7
	baz=32						
CIS				⇓ScP	ScP	00 37 08.4	+2.9

baz=32
CIS ⇓ScP **ScP** **00 37 08.4 +2.9**
baz=32
J24A Dixon Ranch, L 31.66 341 ⇑P **P** **00 30 37.9 +0.5**
baz=32
J24A ⇓ScP **ScP** **00 37 07.0 +1.5**
baz=32
J24A ⇓ScP **ScP** **00 37 07.0 +1.5**
baz=32
K22A Casper 31.70 338 ⇓P **P** **00 30 38.0 +0.1**
baz=32
K22A ⇑ScP **ScP** **00 37 07.7 +2.1**
baz=32
K22A ⇑ScP **ScP** **00 37 07.7 +2.1**
baz=32
MPU Maple Canyon 31.76 329 *e*P **P** **00 30 40.6 +2.1**
M19A Rock Springs 31.78 334 ⇑ScP **ScP** **00 37 08.4 +2.4**
baz=32,SNR=15
MWC Mount Wilson 31.83 314 *e*P **P** **00 30 41.4 +2.2**
MWC pmax pmax
comp=Z,52nm,1.1s
MWC Mount Wilson 31.83 314 *e*P **P** **00 30 41.4 +2.2**
comp=Z,52nm,1.1s
L20A Wamsutter 31.85 335 ⇓P **P** **00 30 38.0 -1.2**
baz=32
L20A ⇓ScP **ScP** **00 37 08.3 +2.0**
baz=32
L20A ⇓ScP **ScP** **00 37 08.3 +2.0**
baz=32
DAU Daniels Canyon 31.88 330 *e*P **P** **00 30 42.2 +2.5**
DAU Daniels Canyon 31.88 330 *e*P **P** **00 30 42.2 +2.5**
DAU *e*ScP **ScP** **00 37 09.6 +3.0**
PASC Pasadena Art C 31.89 314 *e*P **P** **00 30 41.0 +1.5**
comp=Z,29nm,1.1s
PASC *e*PcP **PcP** **00 33 29.3 +0.6**
K21A Alcova 31.95 337 ⇓P **P** **00 30 39.5 -0.7**
baz=32
K21A ⇓ScP **ScP** **00 37 08.9 +2.3**
baz=32
K21A ⇓ScP **ScP** **00 37 08.9 +2.3**
baz=32
DECC Green Verdugo 32.03 314 ⇑P **P** **00 30 42.3 +1.6**
baz=32
JLU Jordanelle 32.12 330 *e*P **P** **00 30 43.9 +2.2**
comp=Z,23nm,1.3s
I24A Kuemmerle Ranc 32.12 341 ⇑P **P** **00 30 41.3 -0.3**
baz=32
I24A ⇓ScP **ScP** **00 37 08.3 +1.3**
baz=32
I24A ⇓ScP **ScP** **00 37 08.3 +1.3**
baz=32
EDW2 Edwards Air Fo 32.14 315 ⇑P **P** **00 30 43.5 +1.8**
baz=32,SNR=12
EDW2 ⇑ScP **ScP** **00 37 10.0 +2.8**
baz=32
EDW2 ⇑ScP **ScP** **00 37 10.0 +2.8**
baz=32
RSSD Black Hills 32.18 342 *e*P **P** **00 30 41.8 -0.3**
RSSD pmax pmax
comp=Z,7.0nm,1.0s
RSSD Black Hills 32.18 342 *e*P **P** **00 30 41.8 -0.3**
comp=Z,6.6nm,1.0s
RSSD *e*ScP **ScP** **00 37 07.4 +0.1**
COWI Conover 32.19 2 *e*P **P** **00 30 40.8 -1.1**
comp=Z,91nm,0.9s
COWI *e*PcP **PcP** **00 33 28.8 -0.5**
COWI *e*S **S** **00 35 48.2 -1.8**
COWI *e*ScP **ScP** **00 37 07.1 0.0**
LRMC Laurel Mountai 32.28 317 ⇑P **P** **00 30 42.9 -0.1**
baz=32
FURC Furnace Creek, 32.32 319 ⇑P **P** **00 30 44.7 +1.6**
baz=32,SNR=15
FURC ⇓ScP **ScP** **00 37 11.5 +3.9**
baz=32
FURC ⇓ScP **ScP** **00 37 11.5 +3.9**
baz=32
L19A Farson 32.35 334 ⇓P **P** **00 30 43.2 -0.5**
baz=32
L19A ⇓ScP **ScP** **00 37 10.6 +2.6**
baz=32,SNR=12
L19A ⇓ScP **ScP** **00 37 10.6 +2.6**
baz=32,SNR=12
K20A Yellowstone Ra 32.40 336 ⇓P **P** **00 30 43.6 -0.4**
baz=32
K20A ⇓ScP **ScP** **00 37 10.5 +2.4**
baz=32
K20A ⇓ScP **ScP** **00 37 10.5 +2.4**
baz=32
SADO Sadowa 32.42 16 P **P** **00 30 43.4 -0.6**
SADO ScP **ScP** **00 37 06.9 -1.0**
SADO Sadowa 32.42 16 P **P** **00 30 43.4 -0.6**
comp=Z,36nm,0.9s,baz=218,slow=8.5,SNR=17
SADO ScP **ScP** **00 37 06.9 -1.0**
comp=Z,7.1nm,0.9s,baz=266,slow=1.8,SNR=4.5
M17A Scullys Gap (B 32.43 332 ⇓P **P** **00 30 45.1 +0.7**
baz=33,SNR=6.2
M17A ⇑ScP **ScP** **00 37 09.7 +1.4**
baz=33,SNR=5.6
M17A ⇑ScP **ScP** **00 37 09.7 +1.4**
baz=33,SNR=5.6
BLG Laguna Peak 32.47 313 ⇑P **P** **00 30 45.2 +0.6**
baz=33
I23A Meade Ranch, G 32.48 340 ⇓P **P** **00 30 44.5 -0.1**
baz=33
MPMC Manual Prospec 32.48 318 ⇓P **P** **00 30 45.9 +1.0**
baz=33,SNR=64
MPMC ⇓ScP **ScP** **00 37 11.5 +3.0**
baz=33
MPMC ⇓ScP **ScP** **00 37 11.5 +3.0**
baz=33
DUG Dugway 32.50 328 *e*P **P** **00 30 47.7 +2.8**
DUG *e* 00 33 32.5
DUG pmax pmax
comp=Z,15nm,1.1s
DUG Dugway 32.50 328 *e*P **P** **00 30 47.7 +2.8**
comp=Z,15nm,1.1s
DUG *e*PcP **PcP** **00 33 32.5 +2.1**
DUG *e*ScP **ScP** **00 37 10.9 +2.5**
DUG Dugway 32.50 328 ⇓P **P** **00 30 45.8 +0.9**
baz=33,SNR=15
DUG ⇑ScP **ScP** **00 37 11.5 +3.0**
baz=33
DUG ⇑ScP **ScP** **00 37 11.5 +3.0**
baz=33
OSI Osito Adit 32.50 314 *e*P **P** **00 30 47.0 +2.2**
comp=Z,82nm,1.3s
OSI Osito Adit 32.50 314 ⇑P **P** **00 30 45.6 +0.7**
baz=33
L18A Fontenelle, Gr 32.51 333 ⇑P **P** **00 30 45.9 +0.9**
baz=33,SNR=8.4
L18A ⇓ScP **ScP** **00 37 11.0 +2.5**
baz=33,SNR=14
L18A ⇓ScP **ScP** **00 37 11.0 +2.5**
baz=33,SNR=14
QUA2 Belchertown 32.59 26 *e*P **P** **00 30 45.2 -0.3**
J21A Lysite 32.64 337 ⇓P **P** **00 30 46.4 +0.3**
baz=33,SNR=14
J21A ⇑ScP **ScP** **00 37 10.9 +1.9**
baz=33,SNR=20
J21A ⇑ScP **ScP** **00 37 10.9 +1.9**
baz=33,SNR=20
R11A Troy Canyon, C 32.73 323 ⇓P **P** **00 30 48.9 +1.9**
baz=33,SNR=103
R11A ⇓ScP **ScP** **00 37 12.7 +3.4**
baz=33
R11A ⇓ScP **ScP** **00 37 12.7 +3.4**
baz=33
K19A Absolon Red Bu 32.74 335 ⇓P **P** **00 30 46.9 -0.1**
baz=33
K19A ⇑ScP **ScP** **00 37 11.0 +1.7**
baz=33,SNR=17
K19A ⇑ScP **ScP** **00 37 11.0 +1.7**
baz=33,SNR=17
I22A 9 Mile Ranch, 32.77 339 ⇑P **P** **00 30 47.1 0.0**
baz=33,SNR=6.9
I22A ⇑ScP **ScP** **00 37 10.7 +1.4**
baz=33
I22A ⇑ScP **ScP** **00 37 10.7 +1.4**
baz=33
BSC Santa Cruz Isl 32.82 313 ⇓P **P** **00 30 48.7 +1.0**
baz=33
ARVC Arvin 32.85 315 ⇑P **P** **00 30 50.0 +2.1**
baz=33,SNR=16
J20A Shoshoni 32.88 337 ⇓P **P** **00 30 48.8 +0.6**
baz=33,SNR=7.3
J20A ⇑ScP **ScP** **00 37 12.2 +2.5**
baz=33,SNR=9.1
J20A ⇑ScP **ScP** **00 37 12.2 +2.5**
baz=33,SNR=9.1
H24A Dirks Ranch, A 32.90 342 ⇓P **P** **00 30 48.3 0.0**
baz=33,SNR=8.8
H24A ⇓ScP **ScP** **00 37 11.5 +1.8**
baz=33
H24A ⇓ScP **ScP** **00 37 11.5 +1.8**
baz=33
ISA Isabella 32.91 316 *e*P **P** **00 30 50.7 +2.2**
ISA *e* 00 33 34.0
ISA pmax pmax
comp=Z,36nm,1.1s
ISA Isabella 32.91 316 *e*P **P** **00 30 50.7 +2.2**
comp=Z,36nm,1.1s
ISA *e*PcP **PcP** **00 33 34.0 +2.4**
ISA *e*ScP **ScP** **00 37 13.8 +3.9**
ISA Isabella 32.91 316 ⇓P **P** **00 30 50.0 +1.5**
baz=33,SNR=19
ISA ⇓ScP **ScP** **00 37 12.1 +2.3**
baz=33
ISA ⇓ScP **ScP** **00 37 12.1 +2.3**
baz=33
HWUT Hardware Ranch 32.95 331 *e*P **P** **00 30 50.8 +1.9**
comp=Z,30nm,1.1s
HWUT *e*PP **PnPn** **00 31 59.4 -0.8**
HWUT *e*PcP **PcP** **00 33 32.8 +1.1**
HWUT *e*ScP **ScP** **00 37 12.2 +2.2**
GRAC Grapevine Rang 32.97 319 ⇓P **P** **00 30 49.6 +0.7**
baz=33
ACCN Adirondack Com 32.98 23 *e*P **P** **00 30 48.4 -0.5**
comp=Z,124nm,1.8s
ACCN *e*pP **pP** **00 31 06.0 +0.6**
I21A Big Trails, Te 32.98 338 ⇓P **P** **00 30 49.3 +0.2**
baz=33
I21A ⇑ScP **ScP** **00 37 11.4 +1.3**
baz=33,SNR=11
I21A ⇑ScP **ScP** **00 37 11.4 +1.3**
baz=33,SNR=11
BW06 Boulder Array 32.99 334 *e*P **P** **00 30 50.3 +1.1**
comp=Z,4.8nm,0.9s
PDAR Pinedale Array 32.99 334 P **P** **00 30 49.1 -0.1**
PDAR PcP **PcP** **00 33 32.2 +0.3**
PDAR pPcP 00 33 50.5
PDAR ScP **ScP** **00 37 11.9 +1.8**
PDAR PKiKP **PKiKP** **00 40 58.2 +0.2**
PDAR Pinedale Array 32.99 334 P **P** **00 30 49.1 -0.1**
comp=Z,2.9nm,1.0s,baz=137,slow=9.9,SNR=14
PDAR PcP **PcP** **00 33 32.2 +0.3**
comp=Z,5.4nm,1.0s,baz=151,slow=3.4,SNR=5.2
PDAR pPcP 00 33 50.5
comp=Z,1.6nm,0.7s,baz=122,slow=5.9,SNR=4.1
PDAR ScP **ScP** **00 37 11.9 +1.8**
comp=Z,7.8nm,0.8s,baz=140,slow=4.9,SNR=26
PDAR PKiKP **PKiKP** **00 40 58.2 +0.2**
comp=Z,0.8nm,0.7s,baz=126,slow=4.6,SNR=3.8
PDAR LR LR 00 48 39.2
comp=Z,394nm,18.5s,baz=154,slow=44
SBC Santa Barbara 33.10 313 ⇓P **P** **00 30 51.0 +0.9**
baz=33
HRV Adam Dziewonsk 33.12 27 *e*P **P** **00 30 49.7 -0.4**
HRV *e**PP **pP** **00 31 07.6 +0.9**
HRV Adam Dziewonsk 33.12 27 *e*P **P** **00 30 49.7 -0.4**
HRV *e*pP **pP** **00 31 07.5 +0.9**
J19A Crowheart 33.19 336 ⇓P **P** **00 30 51.9 +1.0**
baz=33,SNR=6.3
J19A ⇓ScP **ScP** **00 37 11.3 +0.5**
baz=33,SNR=8.3
J19A ⇓ScP **ScP** **00 37 11.3 +0.5**
baz=33,SNR=8.3
NCB Newcomb 33.27 22 *e*P **P** **00 30 50.3 -1.1**
comp=Z,184nm,1.8s
NCB *e*pP **pP** **00 31 08.5 +0.5**
H22A Clearmont 33.34 340 ⇑P **P** **00 30 51.9 -0.3**
baz=34
H22A ⇓ScP **ScP** **00 37 12.4 +1.2**
baz=34
H22A ⇓ScP **ScP** **00 37 12.4 +1.2**
baz=34
G24A Alzada 33.39 343 ⇓P **P** **00 30 52.4 -0.2**
baz=34
I20A Worland 33.41 337 ⇑P **P** **00 30 52.8 0.0**
baz=34,SNR=13
I20A ⇑ScP **ScP** **00 37 12.9 +1.4**
baz=34
I20A ⇑ScP **ScP** **00 37 12.9 +1.4**
baz=34
PKM Peak Mountain 33.41 314 ⇑P **P** **00 30 55.0 +2.0**
baz=34,SNR=8.2
PKM ⇓ScP **ScP** **00 37 13.6 +1.8**
baz=34
PKM ⇓ScP **ScP** **00 37 13.6 +1.8**
baz=34
VES Vestal, Richgr 33.42 316 ⇓P **P** **00 30 54.8 +2.0**
baz=34,SNR=27
G23A Biddle 33.57 341 ⇑P **P** **00 30 54.8 +0.7**
baz=34
G23A ⇓ScP **ScP** **00 37 14.2 +2.2**
baz=34
G23A ⇓ScP **ScP** **00 37 14.2 +2.2**
baz=34
H21A Big Horn, Sher 33.60 339 ⇑P **P** **00 30 55.2 +0.7**
baz=34
H21A ⇑ScP **ScP** **00 37 13.6 +1.5**
baz=34
H21A ⇑ScP **ScP** **00 37 13.6 +1.5**
baz=34
HVU Hansel Valley 33.66 330 *e*P **P** **00 30 57.7 +2.6**
HVU *e**PP **pP** **00 31 13.7 +2.0**
HVU *e* 00 33 35.0
HVU pmax pmax
comp=Z,58nm,1.4s
HVU Hansel Valley 33.66 330 *e*P **P** **00 30 57.7 +2.6**
comp=Z,58nm,1.4s
HVU *e*pP **pP** **00 31 13.7 +2.0**
HVU *e*PcP **PcP** **00 33 35.0 +1.3**
HVU *e*ScP **ScP** **00 37 14.6 +2.1**
LONY Lake Ozonia 33.70 21 *e*P **P** **00 30 54.7 -0.4**
comp=Z,77nm,1.0s
LONY *e*pP **pP** **00 31 12.4 +0.7**
LONY *e*S **S** **00 36 11.4 -2.0**
SMMC Simmler 33.76 314 ⇑P **P** **00 30 58.1 +2.3**
baz=34,SNR=6.3
RCTC Rector, Farmer 33.79 317 ⇑P **P** **00 30 56.9 +0.9**
baz=34
I19A Meeteetse 33.81 336 ⇑P **P** **00 30 57.8 +1.4**
baz=34,SNR=9.8
I19A ⇓ScP **ScP** **00 37 15.1 +2.1**
baz=34
I19A ⇓ScP **ScP** **00 37 15.1 +2.1**
baz=34
H20A Greybull 33.82 338 ⇑P **P** **00 30 56.3 0.0**
baz=34,SNR=5.2
H20A ⇓ScP **ScP** **00 37 14.4 +1.5**
baz=34
H20A ⇓ScP **ScP** **00 37 14.4 +1.5**
baz=34
I18A Diamond G Ranc 33.86 335 ⇑P **P** **00 30 56.9 0.0**
baz=34
G22A Birney 33.87 340 ⇓P **P** **00 30 56.7 0.0**
baz=34
G22A ⇓ScP **ScP** **00 37 13.9 +0.9**
baz=34
G22A ⇓ScP **ScP** **00 37 13.9 +0.9**
baz=34
F24A Ekalaka 33.87 343 ⇓P **P** **00 30 56.4 -0.3**
baz=34
F24A ⇓ScP **ScP** **00 37 14.4 +1.4**
baz=34
F24A ⇓ScP **ScP** **00 37 14.4 +1.4**
baz=34
MSNY Massena 33.93 21 *e*P **P** **00 30 57.0 -0.1**
MSNY *e*pP **pP** **00 31 13.8 +0.1**
EYMN Ely 34.00 359 *e*P **P** **00 30 56.6 -1.1**
comp=Z,42nm,0.9s
EYMN *e*S **S** **00 36 14.2 -3.8**
EYMN *e*ScP **ScP** **00 37 13.9 +0.6**
REDW Red Top Meadow 34.02 334 *e*P **P** **00 31 00.5 +2.3**
comp=Z,0.7nm,1.0s
F23A Volborg 34.04 342 ⇓P **P** **00 30 58.1 0.0**
baz=34
F23A ⇑ScP **ScP** **00 37 15.0 +1.4**
baz=34
F23A ⇑ScP **ScP** **00 37 15.0 +1.4**
baz=34
SNOW Snow King Moun 34.06 334 *e*P **P** **00 30 60.0 +1.4**
comp=Z,42nm,0.8s
LOHW Long Hollow 34.12 334 *e*P **P** **00 30 59.9 +0.8**
comp=Z,29nm,1.4s
LOHW *e*ScP **ScP** **00 37 15.9 +1.8**
TPAW Teton Pass 34.17 334 *e*P **P** **00 31 00.8 +1.3**
comp=Z,46nm,1.3s
TPAW *e*PcP **PcP** **00 33 36.0 +0.8**
TPAW *e*ScP **ScP** **00 37 17.8 +3.5**
ELK Elko 34.17 326 *e*P **P** **00 31 02.1 +2.6**
comp=Z,204nm,0.9s
ELK *e*PcP **PcP** **00 33 36.8 +1.5**
ELK *e*ScP **ScP** **00 37 16.9 +2.5**
G21A Lodge Grass 34.18 339 ⇓P **P** **00 30 59.2 -0.3**
baz=34
G21A ⇓ScP **ScP** **00 37 15.9 +1.7**
baz=34
G21A ⇓ScP **ScP** **00 37 15.9 +1.7**
baz=34
RRI2 Red Ridge 34.21 333 *e*P **P** **00 31 01.4 +1.5**
comp=Z,42nm,1.3s
RRI2 *e*ScP **ScP** **00 37 16.4 +1.9**
FRNY Flat Rock 34.24 22 *e*P **P** **00 30 59.4 -0.4**
comp=Z,200nm,1.9s
FRNY *e*pP **pP** **00 31 17.3 +0.8**
MOOW Moose Ponds 34.29 334 *e*P **P** **00 31 00.8 +0.3**
comp=Z,13nm,1.1s
MOOW *e*ScP **ScP** **00 37 16.1 +1.4**
NV11 Mina Array Sit 34.34 320 *e*P **P** **00 31 03.5 +2.6**
NV11 *e*PcP **PcP** **00 33 37.6 +1.9**
NV11 *e*ScP **ScP** **00 37 17.6 +2.7**
H19A Powell 34.35 337 ⇓P **P** **00 31 00.8 -0.1**
baz=34
H19A ⇑ScP **ScP** **00 37 17.2 +2.4**
baz=34,SNR=5.6
H19A ⇑ScP **ScP** **00 37 17.2 +2.4**
baz=34,SNR=5.6
I17A Pilgrim Ck. 34.36 335 ⇓P **P** **00 31 00.3 -0.8**
baz=34
F22A Rosebud 34.36 341 ⇑P **P** **00 31 00.5 -0.4**
baz=34
F22A ⇑ScP **ScP** **00 37 16.5 +1.8**
baz=34
F22A ⇑ScP **ScP** **00 37 16.5 +1.8**
baz=34
NVAR Mina Array Bea 34.43 320 P **P** **00 31 04.9 +3.1**
NVAR PcP **PcP** **00 33 37.9 +1.9**
NVAR pPcP 00 33 56.4
NVAR ScP **ScP** **00 37 18.8 +3.4**
NVAR PKiKP **PKiKP** **00 41 00.5 +1.2**
NVAR Mina Array Bea 34.43 320 P **P** **00 31 04.9 +3.1**
comp=Z,28nm,0.8s,baz=134,slow=8.2,SNR=134
NVAR PcP **PcP** **00 33 37.9 +1.9**
comp=Z,15nm,0.8s,baz=139,slow=3.7,SNR=14
NVAR pPcP 00 33 56.4
comp=Z,9.0nm,0.7s,baz=134,slow=3.9,SNR=8.9
NVAR ScP **ScP** **00 37 18.8 +3.4**
comp=Z,6.5nm,0.6s,baz=123,slow=3.7,SNR=31
NVAR PKiKP **PKiKP** **00 41 00.5 +1.2**
comp=Z,0.4nm,0.7s,baz=50,slow=2.9,SNR=3.7
NVAR LR LR 00 46 51.2
comp=Z,1μm,20.3s,baz=231,slow=39
E24A Baker 34.49 344 ⇑P **P** **00 31 02.3 +0.3**
baz=35,SNR=6.5
E24A ⇑ScP **ScP** **00 37 17.2 +2.0**
baz=35
E24A ⇑ScP **ScP** **00 37 17.2 +2.0**
baz=35
IMW Indian Meadow 34.49 334 *e*P **P** **00 31 04.5 +2.2**
IMW *e*pP **pP** **00 31 22.6 +3.6**
IMW *e*PcP **PcP** **00 33 38.2 +2.0**
IMW *e*ScP **ScP** **00 37 17.3 +1.8**
G20A Bridger 34.53 338 ⇑P **P** **00 31 01.6 -0.9**
baz=35
G20A ⇓ScP **ScP** **00 37 17.6 +2.2**
baz=35
G20A ⇓ScP **ScP** **00 37 17.6 +2.2**
baz=35
AGMN Agassiz Nation 34.59 354 *e*P **P** **00 31 01.9 -0.8**
comp=Z,19nm,0.8s
AGMN *e*PcP **PcP** **00 33 35.2 -0.8**
AGMN *e*S **S** **00 36 24.4 -2.7**
AGMN *e*ScP **ScP** **00 37 16.7 +1.3**
H18A Shoshone NF, C 34.61 336 ⇓P **P** **00 31 03.7 +0.4**
baz=35,SNR=13
H18A ⇓ScP **ScP** **00 37 18.2 +2.3**
baz=35
H18A ⇓ScP **ScP** **00 37 18.2 +2.3**
baz=35
MDND Maddock 34.66 350 ⇓P **P** **00 31 02.9 -0.5**
baz=35,SNR=6.7
F21A Absaloka Mine, 34.68 340 ⇑P **P** **00 31 03.3 -0.4**
baz=35
F21A ⇓ScP **ScP** **00 37 18.2 +2.3**
baz=35
F21A ⇓ScP **ScP** **00 37 18.2 +2.3**
baz=35
I16A Newdale 34.71 334 ⇓P **P** **00 31 04.1 0.0**
baz=35
I16A ⇑ScP **ScP** **00 37 18.9 +2.7**
baz=35
I16A ⇑ScP **ScP** **00 37 18.9 +2.7**
baz=35
E23A Ismay 34.71 343 ⇓P **P** **00 31 03.6 -0.4**
baz=35
H17A Grant Village 34.74 335 ⇑P **P** **00 31 04.5 0.0**
baz=35
H17A ⇑ScP **ScP** **00 37 19.0 +2.6**
baz=35
H17A ⇑ScP **ScP** **00 37 19.0 +2.6**
baz=35
RLMT Red Lodge 34.84 337 *e*P **P** **00 31 05.2 -0.1**
comp=Z,12nm,1.1s
RLMT *e*ScP **ScP** **00 37 18.5 +1.9**
D24A Glendive 35.00 344 ⇑P **P** **00 31 06.1 -0.3**
baz=35
D24A ⇑ScP **ScP** **00 37 19.2 +2.3**
baz=35
D24A ⇑ScP **ScP** **00 37 19.2 +2.3**
baz=35
F20A Billings 35.01 339 ⇑P **P** **00 31 06.0 -0.5**
baz=35
F20A ⇓ScP **ScP** **00 37 19.0 +1.9**
baz=35
F20A ⇓ScP **ScP** **00 37 19.0 +1.9**
baz=35
BMN Battle Mountai 35.06 324 *e*P **P** **00 31 10.1 +2.9**
BMN pmax pmax
comp=Z,35nm,1.0s
BMN Battle Mountai 35.06 324 *e*P **P** **00 31 10.1 +2.9**
comp=Z,35nm,1.0s
G18A Lazy EL Ranch, 35.11 337 ⇓P **P** **00 31 07.9 +0.4**
baz=35,SNR=5.5
G18A ⇓ScP **ScP** **00 37 19.9 +2.4**
baz=35
G18A ⇓ScP **ScP** **00 37 19.9 +2.4**
baz=35
YMR Madison River 35.13 335 *e*P **P** **00 31 09.5 +1.8**
comp=Z,18nm,1.0s
YMR *e*ScP **ScP** **00 37 20.3 +2.5**
J14A Carey 35.19 331 ⇑P **P** **00 31 08.6 +0.4**
baz=35
I15A Monteview 35.24 333 ⇓ScP **ScP** **00 37 21.3 +3.3**
baz=35
H16A Russell Place, 35.27 335 ⇑P **P** **00 31 08.6 -0.3**
baz=35
H16A ⇓ScP **ScP** **00 37 21.4 +3.1**
baz=35
H16A ⇓ScP **ScP** **00 37 21.4 +3.1**
baz=35
E21A Keefer Ranch, 35.30 341 ⇑P **P** **00 31 09.7 +0.7**
baz=35,SNR=7.4
E21A ⇓ScP **ScP** **00 37 19.6 +1.6**
baz=35
E21A ⇓ScP **ScP** **00 37 19.6 +1.6**
baz=35
D23A Lindsay 35.30 343 ⇑P **P** **00 31 08.7 -0.3**
baz=35
F19A Roth Farm, Mol 35.34 338 ⇑P **P** **00 31 10.0 +0.6**
baz=36,SNR=8.0
F19A ⇑ScP **ScP** **00 37 19.9 +1.6**
baz=36
F19A ⇑ScP **ScP** **00 37 19.9 +1.6**
baz=36
C24A Savage 35.41 344 ⇑P **P** **00 31 10.9 +0.9**
baz=36
C24A ⇓ScP **ScP** **00 37 20.0 +1.6**
baz=36
C24A ⇓ScP **ScP** **00 37 20.0 +1.6**
baz=36

CMB	**Columbia Colle**	**35.52 318**	*e*P	**P**	**00 31 13.4 +2.5**
CMB			*e*		00 33 40.1	
CMB			pmax	pmax		
	comp=Z,24nm,1.0s					
CMB	**Columbia Colle**	**35.52 318**	*e*P	**P**	**00 31 13.4 +2.5**
	comp=Z,24nm,1.0s					
CMB			*e*PcP	**PcP**	**00 33 40.1 +1.2**
SAO	**San Andreas Ge**	**35.52 315**	*e*P	**P**	**00 31 13.8 +2.8**
SAO			pmax	pmax		
	comp=Z,30nm,1.1s					
SAO	**San Andreas Ge**	**35.52 315**	*e*P	**P**	**00 31 13.8 +2.8**
	comp=Z,30nm,1.1s					
GCMT	**Greycliff**	**35.55 337**	*e*P	**P**	**00 31 12.9 +1.6**
GCMT			*e*ScP	**ScP**	**00 37 20.4 +1.2**
D22A	**Cohagen**	**35.56 342**	⇑P	**P**	**00 31 11.2 0.0**
	baz=36					
D22A			⇓ScP	**ScP**	**00 37 21.1 +2.1**
	baz=36					
D22A			⇓ScP	**ScP**	**00 37 21.1 +2.1**
	baz=36					
J13A	**Cove Ranch, Pi**	**35.56 330**	⇑P	**P**	**00 31 12.4 +1.0**
	baz=36,SNR=15					
J13A			⇓ScP	**ScP**	**00 37 22.5 +3.2**
	baz=36,SNR=25					
J13A			⇓ScP	**ScP**	**00 37 22.5 +3.2**
	baz=36,SNR=25					
G17A	**Pierce Place,**	**35.57 336**	⇑P	**P**	**00 31 12.8 +1.3**
	baz=36					
E20A	**Meyer Farm, Mu**	**35.61 340**	⇓P	**P**	**00 31 12.9 +1.2**
	baz=36,SNR=6.9					
E20A			⇓ScP	**ScP**	**00 37 21.1 +1.9**
	baz=36					
E20A			⇓ScP	**ScP**	**00 37 21.1 +1.9**
	baz=36					
I14A	**Mackay**	**35.63 332**	⇑P	**P**	**00 31 13.6 +1.6**
	baz=36,SNR=14					
I14A			⇑ScP	**ScP**	**00 37 23.1 +3.6**
	baz=36,SNR=7.2					
I14A			⇑ScP	**ScP**	**00 37 23.1 +3.6**
	baz=36,SNR=7.2					
F18A	**Big Timber**	**35.66 337**	⇓P	**P**	**00 31 13.3 +1.1**
	baz=36,SNR=10					
F18A			⇓ScP	**ScP**	**00 37 21.9 +2.4**
	baz=36,SNR=11					
F18A			⇓ScP	**ScP**	**00 37 21.9 +2.4**
	baz=36,SNR=11					
SAML	**Samuel**	**35.68 128**	*e*P	**P**	**00 31 11.6 -1.0**
	comp=Z,102nm,1.3s					
SAML			*e*pP	**pP**	**00 31 29.8 +0.5**
SAML			*e*PcP	**PcP**	**00 33 40.6 +0.8**
SAML			*e*ScP	**ScP**	**00 37 24.6 +4.7**
D21A	**La Casta Ranch**	**35.73 341**	⇓P	**P**	**00 31 13.6 +0.8**
	baz=36					
D21A			⇓ScP	**ScP**	**00 37 21.4 +1.7**
	baz=36					
D21A			⇓ScP	**ScP**	**00 37 21.4 +1.7**
	baz=36					
H15A	**Lima**	**35.80 333**	⇑P	**P**	**00 31 15.7 +2.2**
	baz=36					
HLID	**Hailey**	**35.80 330**	*e*P	**P**	**00 31 15.7 +2.2**
	comp=Z,12nm,0.9s					
HLID			*e*PcP	**PcP**	**00 33 41.3 +1.4**
HLID			*e*ScP	**ScP**	**00 37 22.9 +2.7**
HLID	**Hailey**	**35.80 330**	⇓P	**P**	**00 31 14.1 +0.6**
	baz=36,SNR=24					
HLID			⇑ScP	**ScP**	**00 37 23.0 +2.8**
	baz=36,SNR=22					
HLID			⇑ScP	**ScP**	**00 37 23.0 +2.8**
	baz=36,SNR=22					
E19A	**Rath Farm, Rou**	**35.80 339**	⇓P	**P**	**00 31 14.6 +1.2**
	baz=36,SNR=9.2					
E19A			⇑ScP	**ScP**	**00 37 21.0 +1.1**
	baz=36,SNR=12					
E19A			⇑ScP	**ScP**	**00 37 21.0 +1.1**
	baz=36,SNR=12					
WCN	**Washoe City**	**35.86 320**	*e*P	P	00 31 17.4 +3.4
WCN			*e*		00 33 42.3	
WCN			pmax	pmax		
	comp=Z,29nm,1.4s					
WCN	**Washoe City**	**35.86 320**	*e*P	P	00 31 17.4 +3.4
	comp=Z,29nm,1.4s					
WCN			*e*PcP	**PcP**	**00 33 42.3 +2.2**
C23A	**Lambert**	**35.87 344**	⇑P	**P**	**00 31 14.8 +0.9**
	baz=36					
C23A			⇑ScP	**ScP**	**00 37 22.3 +2.2**
	baz=36					
C23A			⇑ScP	**ScP**	**00 37 22.3 +2.2**
	baz=36					
I13A	**Wildhorse Cree**	**35.93 331**	⇑P	**P**	**00 31 16.4 +1.8**
	baz=36					
I13A			⇓ScP	**ScP**	**00 37 23.6 +2.9**
	baz=36,SNR=22					
I13A			⇓ScP	**ScP**	**00 37 23.6 +2.9**
	baz=36,SNR=22					
G16A	**Moss Hill, Enn**	**35.93 335**	⇑P	**P**	**00 31 15.5 +0.9**
	baz=36					
G16A			⇓ScP	**ScP**	**00 37 23.6 +3.0**
	baz=36					
G16A			⇓ScP	**ScP**	**00 37 23.6 +3.0**
	baz=36					
C22A	**Vida**	**36.01 343**	⇓P	**P**	**00 31 15.9 +0.8**
	baz=36					
C22A			⇓ScP	**ScP**	**00 37 23.2 +2.5**
	baz=36					
C22A			⇓ScP	**ScP**	**00 37 23.2 +2.5**
	baz=36					
F17A	**Fitzpatrick Pl**	**36.02 336**	⇑P	**P**	**00 31 16.2 +0.9**
	baz=36,SNR=9.3					
F17A			⇓ScP	**ScP**	**00 37 23.4 +2.5**
	baz=36					
F17A			⇓ScP	**ScP**	**00 37 23.4 +2.5**
	baz=36					
MCMT	**McKenzie Canyo**	**36.06 333**	*e*P	**P**	**00 31 17.5 +1.8**
MCMT			*e*ScP	**ScP**	**00 37 23.9 +2.7**
H14A	**Leadore**	**36.12 332**	⇓P	**P**	**00 31 17.8 +1.5**
	baz=36,SNR=11					
H14A			⇓ScP	**ScP**	**00 37 24.2 +2.9**
	baz=36,SNR=6.7					
H14A			⇓ScP	**ScP**	**00 37 24.2 +2.9**
	baz=36,SNR=6.7					
D20A	**Manuel Ranch,**	**36.13 340**	⇓P	**P**	**00 31 16.4 +0.4**
	baz=36					
D20A			⇓ScP	**ScP**	**00 37 23.7 +2.6**
	baz=36					
D20A			⇓ScP	**ScP**	**00 37 23.7 +2.6**
	baz=36					
G15A	**Dillon**	**36.17 334**	⇓P	**P**	**00 31 17.7 +1.0**
	baz=36					
BOZ	**Bozeman (W)**	**36.20 335**	*e*P	**P**	**00 31 17.1 +0.3**
BOZ			pmax	pmax		
	comp=Z,5.0nm,0.9s					
BOZ	**Bozeman (W)**	**36.20 335**	*e*P	**P**	**00 31 17.1 +0.3**
	comp=Z,4.7nm,0.9s					
BOZ			*e*ScP	**ScP**	**00 37 22.8 +1.3**
DGMT	**Dagmar**	**36.22 345**	⇓P	**P**	**00 31 17.6 +0.8**
	baz=36					
DGMT			⇑ScP	**ScP**	**00 37 24.7 +3.3**
	baz=36					
DGMT			⇑ScP	**ScP**	**00 37 24.7 +3.3**
	baz=36					
E18A	**Harlowton**	**36.30 338**	⇓P	**P**	**00 31 18.9 +1.3**
	baz=36,SNR=5.8					
E18A			⇑ScP	**ScP**	**00 37 24.8 +3.0**
	baz=36					
E18A			⇑ScP	**ScP**	**00 37 24.8 +3.0**
	baz=36					
F16A	**Kennard Place,**	**36.31 335**	⇓P	**P**	**00 31 18.4 +0.7**
	baz=36					
I12A	**Atlanta**	**36.32 330**	⇑P	**P**	**00 31 19.1 +1.2**
	baz=36,SNR=34					
I12A			⇓ScP	**ScP**	**00 37 24.7 +2.6**
	baz=36,SNR=9.7					
I12A			⇓ScP	**ScP**	**00 37 24.7 +2.6**
	baz=36,SNR=9.7					
DLMT	**Dillon**	**36.37 334**	*e*P	**P**	**00 31 19.5 +1.2**
	comp=Z,12nm,1.0s					
DLMT			*e*ScP	**ScP**	**00 37 25.1 +2.9**
MFID	**Camas Ranch**	**36.39 329**	*e*P	**P**	**00 31 20.6 +2.1**
	comp=Z,18nm,1.1s					
MFID			*e*PcP	**PcP**	**00 33 42.5 +1.0**
MFID			*e*ScP	**ScP**	**00 37 25.1 +2.9**
MFID	**Camas Ranch**	**36.39 329**	⇑P	**P**	**00 31 19.7 +1.3**
	baz=36,SNR=12					
MFID			⇑ScP	**ScP**	**00 37 25.2 +2.9**
	baz=36,SNR=13					
MFID			⇑ScP	**ScP**	**00 37 25.2 +2.9**
	baz=36,SNR=13					
B23A	**Brockton**	**36.42 344**	⇑P	**P**	**00 31 19.0 +0.4**
	baz=36					
B23A			⇑ScP	**ScP**	**00 37 24.1 +1.9**
	baz=36					
B23A			⇑ScP	**ScP**	**00 37 24.1 +1.9**
	baz=36					
D19A	**Cripps Ranch,**	**36.44 339**	⇓P	**P**	**00 31 20.0 +1.2**
	baz=37,SNR=5.2					
C21A	**Desert Coulee**	**36.44 342**	⇑P	**P**	**00 31 20.1 +1.3**
	baz=37,SNR=7.0					
C21A			⇑ScP	**ScP**	**00 37 23.8 +1.5**
	baz=37					
C21A			⇑ScP	**ScP**	**00 37 23.8 +1.5**
	baz=37					
H13A	**Challis**	**36.48 332**	⇑P	**P**	**00 31 20.1 +0.9**
	baz=37					
ULM	**Lac du Bonnet**	**36.53 355**	*e*P	**P**	**00 31 17.8 -1.5**
	comp=Z,43nm,1.1s					
ULM			ScP	**ScP**	**00 37 23.9 +1.5**
ULM	**Lac du Bonnet**	**36.53 355**	P	**P**	**00 31 17.5 -1.8**
	comp=Z,44nm,1.1s,baz=175,slow=8.4,SNR=18					
ULM			ScP	**ScP**	**00 37 23.9 +1.5**
	comp=Z,14nm,1.0s,baz=223,slow=4.1,SNR=4.4					
ULM			LR	LR	00 49 36.0	
	comp=Z,762nm,20.0s,baz=169,slow=42					
B22A	**Reddig Ranch S**	**36.55 343**	⇑P	**P**	**00 31 20.6 +0.9**
	baz=37					
B22A			⇑ScP	**ScP**	**00 37 24.6 +2.0**
	baz=37					
B22A			⇑ScP	**ScP**	**00 37 24.6 +2.0**
	baz=37					
E17A	**Martinsdale**	**36.56 337**	⇑P	**P**	**00 31 19.6 -0.4**
	baz=37					
E17A			⇑ScP	**ScP**	**00 37 25.1 +2.2**
	baz=37					
E17A			⇑ScP	**ScP**	**00 37 25.1 +2.2**
	baz=37					
BEKR	**Beckworth**	**36.57 321**	*e*P	**P**	**00 31 23.1 +3.0**
	comp=Z,15nm,1.0s					
BEKR			*e*PcP	**PcP**	**00 33 44.0 +1.7**
BEKR			*e*ScP	**ScP**	**00 37 23.9 +0.8**
A24A	**Westby**	**36.60 346**	⇑P	**P**	**00 31 20.4 +0.4**
	baz=37					
A24A			⇓ScP	**ScP**	**00 37 24.4 +1.7**
	baz=37					
A24A			⇓ScP	**ScP**	**00 37 24.4 +1.7**
	baz=37					
C20A	**Veseth Ranch,**	**36.63 341**	⇓P	**P**	**00 31 21.5 +1.2**
	baz=37,SNR=6.4					
C20A			⇓ScP	**ScP**	**00 37 24.5 +1.5**
	baz=37					
C20A			⇓ScP	**ScP**	**00 37 24.5 +1.5**
	baz=37					
LRM	**Limekiln Ridge**	**36.68 335**	*e*P	**P**	**00 31 21.9 +0.9**
LRM			*e*PcP	**PcP**	**00 33 44.0 +1.5**
LRM			*e*ScP	**ScP**	**00 37 25.6 +2.2**
F15A	**Butte**	**36.71 335**	⇓P	**P**	**00 31 22.5 +1.2**
	baz=37,SNR=14					
F15A			⇓ScP	**ScP**	**00 37 25.6 +2.1**
	baz=37,SNR=17					
F15A			⇓ScP	**ScP**	**00 37 25.6 +2.1**
	baz=37,SNR=17					
H12A	**Diamond D Ranc**	**36.75 331**	⇑P	**P**	**00 31 23.0 +1.4**
	baz=37,SNR=26					
H12A			⇓ScP	**ScP**	**00 37 26.7 +3.0**
	baz=37,SNR=6.0					
H12A			⇓ScP	**ScP**	**00 37 26.7 +3.0**
	baz=37,SNR=6.0					
D18A	**Linhart Farms,**	**36.79 338**	⇑P	**P**	**00 31 22.4 +0.6**
	baz=37					
D18A			⇑ScP	**ScP**	**00 37 26.1 +2.5**
	baz=37					
D18A			⇑ScP	**ScP**	**00 37 26.1 +2.5**
	baz=37					
A23A	**Redstone**	**36.85 345**	⇓P	**P**	**00 31 22.8 +0.7**
	baz=37					
G13A	**Cobalt**	**36.88 332**	⇑P	**P**	**00 31 23.5 +0.9**
	baz=37					
G13A			⇑ScP	**ScP**	**00 37 26.4 +2.3**
	baz=37,SNR=8.7					
G13A			⇑ScP	**ScP**	**00 37 26.4 +2.3**
	baz=37,SNR=8.7					
E16A	**East Helena**	**36.94 336**	⇓P	**P**	**00 31 23.5 +0.4**
	baz=37,SNR=8.6					
E16A			⇑ScP	**ScP**	**00 37 26.1 +1.9**
	baz=37,SNR=9.0					
E16A			⇑ScP	**ScP**	**00 37 26.1 +1.9**
	baz=37,SNR=9.0					
B21A	**Ellsworth Farm**	**36.96 342**	⇓ScP	**ScP**	**00 37 26.3 +2.2**
	baz=37					
C19A	**Slack Wire Ran**	**36.99 340**	⇑P	**P**	**00 31 24.8 +1.3**
	baz=37,SNR=7.1					
C19A			⇓ScP	**ScP**	**00 37 26.3 +2.0**
	baz=37,SNR=7.5					
C19A			⇓ScP	**ScP**	**00 37 26.3 +2.0**
	baz=37,SNR=7.5					
F14A	**Wisdom**	**37.06 334**	⇓P	**P**	**00 31 24.8 +0.7**
	baz=37					
F14A			⇓ScP	**ScP**	**00 37 27.0 +2.2**
	baz=37					
F14A			⇓ScP	**ScP**	**00 37 27.0 +2.2**
	baz=37					
D17A	**Six Diamond Ra**	**37.08 338**	⇑P	**P**	**00 31 25.6 +1.4**
	baz=37,SNR=10.0					
D17A			⇓ScP	**ScP**	**00 37 27.0 +2.3**
	baz=37,SNR=17					
D17A			⇓ScP	**ScP**	**00 37 27.0 +2.3**
	baz=37,SNR=17					
A22A	**Carney Farms,**	**37.15 344**	⇓P	**P**	**00 31 25.3 +0.5**
	baz=37					
A22A			⇓ScP	**ScP**	**00 37 26.7 +1.9**
	baz=37,SNR=5.7					
A22A			⇓ScP	**ScP**	**00 37 26.7 +1.9**
	baz=37,SNR=5.7					
WVOR	**Wild Horse Val**	**37.19 325**	*e*P	**P**	**00 31 26.3 +1.1**
WVOR			pmax	pmax		
	comp=Z,29nm,1.0s					
WVOR	**Wild Horse Val**	**37.19 325**	*e*P	**P**	**00 31 26.3 +1.1**
	comp=Z,29nm,1.0s					
WVOR			*e*ScP	**ScP**	**00 37 28.1 +2.9**
E15A	**Deer Lodge**	**37.24 335**	⇑P	**P**	**00 31 26.8 +1.2**
	baz=37,SNR=6.9					
E15A			⇓ScP	**ScP**	**00 37 27.9 +2.5**
	baz=37,SNR=7.5					
E15A			⇓ScP	**ScP**	**00 37 27.9 +2.5**
	baz=37,SNR=7.5					
B20A	**Solberg Farm,**	**37.27 341**	⇑P	**P**	**00 31 26.5 +0.7**
	baz=37					
D16A	**Dana Ranch, Ca**	**37.30 337**	⇓P	**P**	**00 31 26.1 -0.1**
	baz=37					
D16A			⇓ScP	**ScP**	**00 37 27.5 +2.0**
	baz=37					
D16A			⇓ScP	**ScP**	**00 37 27.5 +2.0**
	baz=37					
G12A	**Big Creek, Yel**	**37.41 331**	⇓P	**P**	**00 31 28.4 +1.3**
	baz=38,SNR=12					
G12A			⇑ScP	**ScP**	**00 37 28.0 +1.9**
	baz=38					
G12A			⇑ScP	**ScP**	**00 37 28.0 +1.9**
	baz=38					
F13A	**Darby**	**37.46 333**	⇓P	**P**	**00 31 29.1 +1.6**
	baz=38,SNR=5.8					
F13A			⇓ScP	**ScP**	**00 37 29.0 +2.8**
	baz=38,SNR=18					
F13A			⇓ScP	**ScP**	**00 37 29.0 +2.8**
	baz=38,SNR=18					
EGMT	**Eagleton**	**37.48 339**	*e*P	**P**	**00 31 28.1 +0.5**
	comp=Z,24nm,1.1s					
EGMT			*e*ScP	**ScP**	**00 37 27.0 +0.8**
EGMT	**Eagleton**	**37.48 339**	⇑P	**P**	**00 31 28.7 +1.1**
	baz=38,SNR=7.9					
EGMT			⇑ScP	**ScP**	**00 37 28.0 +1.8**
	baz=38,SNR=7.2					
EGMT			⇑ScP	**ScP**	**00 37 28.0 +1.8**
	baz=38,SNR=7.2					
LPAZ	**La Paz**	**37.49 142**	*e*P	**P**	**00 31 29.4 +0.8**
	comp=Z,6.4nm,1.0s					
LPAZ			*e*PcP	**PcP**	**00 33 47.2 +1.3**
LPAZ			PcP	PP	00 33 47.9 +52	
LPAZ			pPcP		00 34 06.2	
LPAZ			ScP	**ScP**	**00 37 28.6 +1.2**
LPAZ	**La Paz**	**37.49 142**	P	**P**	**00 31 29.3 +0.8**
	comp=Z,2.4nm,0.8s,baz=337,slow=7.4,SNR=8.8					
LPAZ			PcP	**PcP**	**00 33 47.9 +2.0**
	comp=Z,6.8nm,1.1s,baz=180,slow=0.6,SNR=5.4					
LPAZ			pPcP		00 34 06.2	
	comp=Z,1.6nm,0.5s,baz=212,slow=4.3,SNR=4.7					
LPAZ			ScP	**ScP**	**00 37 28.6 +1.2**
	comp=Z,0.9nm,0.8s,baz=45,slow=1.4,SNR=3.0					
LPAZ			LR	LR	00 46 16.8	
	comp=Z,340nm,21.9s,baz=309,slow=35					
C17A	**Wharram Farm,**	**37.51 338**	⇑P	**P**	**00 31 27.9 +0.1**
	baz=38					
C17A			⇑ScP	**ScP**	**00 37 27.6 +1.3**
	baz=38					
C17A			⇑ScP	**ScP**	**00 37 27.6 +1.3**
	baz=38					
B19A	**Brinkman Farms**	**37.58 340**	⇑P	**P**	**00 31 29.7 +1.3**
	baz=38,SNR=10.0					
B19A			⇑ScP	**ScP**	**00 37 27.8 +1.3**
	baz=38,SNR=5.7					
B19A			⇑ScP	**ScP**	**00 37 27.8 +1.3**
	baz=38,SNR=5.7					
E14A	**Clinton**	**37.59 334**	⇑P	**P**	**00 31 28.4 -0.2**
	baz=38					
E14A			⇑ScP	**ScP**	**00 37 29.6 +2.9**
	baz=38,SNR=11					
E14A			⇑ScP	**ScP**	**00 37 29.6 +2.9**
	baz=38,SNR=11					
D15A	**Lincoln**	**37.69 336**	⇓P	**P**	**00 31 29.4 -0.1**
	baz=38					
D15A			⇑ScP	**ScP**	**00 37 28.3 +1.2**
	baz=38					
D15A			⇑ScP	**ScP**	**00 37 28.3 +1.2**
	baz=38					
J08A	**Circle Bar Ran**	**37.72 327**	P	**P**	**00 31 31.6 +1.9**
MOD	**Modoc**	**37.79 323**	*e*P	**P**	**00 31 32.3 +2.0**
	comp=Z,27nm,1.1s					
MOD			*e*PcP	**PcP**	**00 33 46.2 +0.3**
B18A	**Beardsley Farm**	**37.81 339**	⇓P	**P**	**00 31 30.7 +0.3**
	baz=38					
B18A			⇑ScP	**ScP**	**00 37 29.2 +1.8**
	baz=38					
B18A			⇑ScP	**ScP**	**00 37 29.2 +1.8**
	baz=38					
F12A	**Elk City**	**37.85 332**	⇓P	**P**	**00 31 31.9 +1.1**
	baz=38,SNR=22					
F12A			⇑ScP	**ScP**	**00 37 29.7 +2.1**
	baz=38,SNR=8.6					
F12A			⇑ScP	**ScP**	**00 37 29.7 +2.1**
	baz=38,SNR=8.6					
CHMT	**Chamberlain Mo**	**37.89 335**	*e*P	**P**	**00 31 31.8 +0.6**
CHMT			*e*ScP	**ScP**	**00 37 28.0 +0.1**
E13A	**Victor**	**37.91 334**	⇓P	**P**	**00 31 32.3 +1.1**
	baz=38,SNR=7.1					
E13A			⇑ScP	**ScP**	**00 37 30.4 +2.6**
	baz=38,SNR=8.6					
E13A			⇑ScP	**ScP**	**00 37 30.4 +2.6**
	baz=38,SNR=8.6					
A19A	**Klindworth Far**	**37.93 341**	⇓P	**P**	**00 31 31.4 +0.1**
	baz=38					
A19A			⇓ScP	**ScP**	**00 37 28.9 +1.1**
	baz=38					
A19A			⇓ScP	**ScP**	**00 37 28.9 +1.1**
	baz=38					
C16A	**Fuhringer Ranc**	**38.02 337**	⇑P	**P**	**00 31 32.6 +0.4**
	baz=38					
C16A			⇑ScP	**ScP**	**00 37 30.6 +2.4**
	baz=38,SNR=6.9					
C16A			⇑ScP	**ScP**	**00 37 30.6 +2.4**
	baz=38,SNR=6.9					
LTIM	**Timbered Crate**	**38.04 322**	P	**P**	**00 31 35.6 +3.2**
B17A	**L&G Farms, Che**	**38.08 338**	⇑P	**P**	**00 31 33.1 +0.5**
	baz=38					
B17A			⇓ScP	**ScP**	**00 37 29.7 +1.3**
	baz=38,SNR=7.6					
B17A			⇓ScP	**ScP**	**00 37 29.7 +1.3**
	baz=38,SNR=7.6					
MSO	**Missoula**	**38.10 334**	*e*P	**P**	**00 31 35.0 +2.1**
	comp=Z,42nm,2.0s					
MSO	**Missoula**	**38.10 334**	⇑P	**P**	**00 31 34.0 +1.1**
	baz=38,SNR=8.5					
MSO			⇓ScP	**ScP**	**00 37 29.8 +1.3**
	baz=38,SNR=8.3					
MSO			⇓ScP	**ScP**	**00 37 29.8 +1.3**
	baz=38,SNR=8.3					
D14A	**Greenough**	**38.12 335**	⇑P	**P**	**00 31 33.2 +0.1**
	baz=38					
D14A			⇑ScP	**ScP**	**00 37 30.9 +2.2**
	baz=38,SNR=11					
D14A			⇑ScP	**ScP**	**00 37 30.9 +2.2**
	baz=38,SNR=11					
BMO	**Blue Mountains**	**38.16 329**	*e*P	**P**	**00 31 33.4 0.0**
	comp=Z,19nm,1.4s					
BMO			*e*ScP	**ScP**	**00 37 30.0 +1.2**
SLMT	**Seeley Lake**	**38.25 335**	*e*P	**P**	**00 31 36.2 +2.1**
	comp=Z,2.3nm,0.7s					
SLMT			*e*ScP	**ScP**	**00 37 31.7 +2.5**
A18A	**Metzger Ranch,**	**38.28 340**	⇑P	**P**	**00 31 34.4 +0.1**
	baz=38					
A18A			⇓ScP	**ScP**	**00 37 29.9 +0.8**
	baz=38					
A18A			⇓ScP	**ScP**	**00 37 29.9 +0.8**
	baz=38					
C15A	**Salmond Ranch,**	**38.32 336**	⇑P	**P**	**00 31 35.9 +1.1**
	baz=38,SNR=7.2					
C15A			⇑ScP	**ScP**	**00 37 30.9 +1.5**
	baz=38,SNR=15					
C15A			⇑ScP	**ScP**	**00 37 30.9 +1.5**
	baz=38,SNR=15					
WDC	**Whiskeytown Da**	**38.34 320**	*e*P	**P**	**00 31 34.9 +0.1**
WDC			pmax	pmax		
	comp=Z,12nm,1.1s					
WDC	**Whiskeytown Da**	**38.34 320**	*e*P	**P**	**00 31 34.9 +0.1**
	comp=Z,12nm,1.1s					
LASM	**Arnica Sink**	**38.35 322**	P	**P**	**00 31 37.4 +2.2**
B16A	**M & M Farms, S**	**38.51 338**	⇑P	**P**	**00 31 36.8 +0.6**
	baz=39					
B16A			⇓ScP	**ScP**	**00 37 30.8 +0.7**
	baz=39,SNR=7.2					
B16A			⇓ScP	**ScP**	**00 37 30.8 +0.7**
	baz=39,SNR=7.2					
D13A	**Huson**	**38.53 334**	⇓P	**P**	**00 31 37.8 +1.4**
	baz=39,SNR=12					
D13A			⇓ScP	**ScP**	**00 37 31.7 +1.6**
	baz=39					
D13A			⇓ScP	**ScP**	**00 37 31.7 +1.6**
	baz=39					
A17A	**Triple J Farms**	**38.60 339**	⇓P	**P**	**00 31 37.6 +0.7**
	baz=39,SNR=6.8					
A17A			⇓ScP	**ScP**	**00 37 31.7 +1.4**
	baz=39,SNR=17					
A17A			⇓ScP	**ScP**	**00 37 31.7 +1.4**
	baz=39,SNR=17					
SWMT	**Swartz Lake**	**38.67 335**	*e*P	**P**	**00 31 37.7 0.0**
SWMT			*e*PcP	**PcP**	**00 33 50.1 +1.7**
SWMT			*e*ScP	**ScP**	**00 37 32.6 +1.9**
B15A	**Bradely Ranch,**	**38.75 337**	⇓P	**P**	**00 31 38.4 +0.2**
	baz=39					
C14A	**Swan Lake**	**38.77 335**	⇓P	**P**	**00 31 38.8 +0.3**
	baz=39					
D12A	**Red Ives Fores**	**38.89 333**	⇓P	**P**	**00 31 40.1 +0.7**
	baz=39,SNR=12					
D12A			⇑ScP	**S**	**00 37 33.1 +0.4**
	baz=39,SNR=12					
D12A			⇑ScP	**S**	**00 37 33.1 +0.4**
	baz=39,SNR=12					
A16A	**West Butte Ran**	**38.92 338**	⇑P	**P**	**00 31 40.1 +0.4**
	baz=39					
YBMT	**Yellow Bay**	**38.95 335**	*e*P	**P**	**00 31 40.7 +0.7**
YBMT			*e*PcP	**PcP**	**00 33 51.0 +1.7**
YBMT			*e*ScP	**S**	**00 37 33.8 +0.1**
JTMT	**Jette**	**38.97 335**	*e*P	**P**	**00 31 41.2 +1.0**
JTMT			*e*PcP	**PcP**	**00 33 50.9 +1.4**
JTMT			*e*ScP	**S**	**00 37 33.9 -0.2**
C13A	**Hot Springs**	**39.04 335**	⇓P	**P**	**00 31 41.5 +0.9**
	baz=39,SNR=6.2					
C13A			⇑ScP	**ScP**	**00 37 33.1 +1.1**
	baz=39,SNR=12					
C13A			⇑ScP	**ScP**	**00 37 33.1 +1.1**
	baz=39,SNR=12					
B14A	**Marquette Ranc**	**39.06 336**	⇑P	**P**	**00 31 41.4 +0.5**
	baz=39					
B14A			⇓ScP	**ScP**	**00 37 33.2 +1.0**
	baz=39					
B14A			⇓ScP	**ScP**	**00 37 33.2 +1.0**
	baz=39					
YBH	**Yreka Blue Hor**	**39.11 321**	ScP	**S**	**00 37 34.9 -1.3**
YBH	**Yreka Blue Hor**	**39.11 321**	ScP	**S**	**00 37 34.9 -1.3**
	comp=Z,2.6nm,0.8s,baz=110,slow=8.0,SNR=3.5					
YBH			LR	LR	00 49 59.9	
	comp=Z,979nm,21.1s,baz=32,slow=39					
KHMM	**Horse Mountain**	**39.25 320**	*e*P	**P**	**00 31 44.8 +2.1**
	comp=Z,45nm,1.0s					
KHMM			*e*PcP	**PcP**	**00 33 53.2 +2.7**

BSMT **Bassoo Peak** 39.27 335 *e*P **P** **00 31 43.8 +1.1**
BSMT *e*PcP **PcP** **00 33 51.3 +0.9**
BSMT *e*ScP **ScP** **00 37 34.8 +1.6**
A15A **Johnson Ranch,** 39.36 337 ⇓P **P** **00 31 43.4 0.0**
baz=40
A15A ⇓ScP **ScP** **00 37 34.5 +1.2**
baz=40,SNR=6.4
A15A ⇓ScP **ScP** **00 37 34.5 +1.2**
baz=40,SNR=6.4
C12B **Naegeli Ranch,** 39.45 334 ⇑P **P** **00 31 44.2 +0.1**
baz=40
C12B ⇓ScP **ScP** **00 37 36.1 +2.5**
baz=40
C12B ⇓ScP **ScP** **00 37 36.1 +2.5**
baz=40
B13A **Whitefish** 39.55 335 ⇓P **P** **00 31 45.2 +0.4**
baz=40
B13A ⇑ScP **ScP** **00 37 35.4 +1.4**
baz=40
B13A ⇑ScP **ScP** **00 37 35.4 +1.4**
baz=40
A14A **Double T Ranch** 39.62 337 ⇑P **P** **00 31 45.8 +0.2**
baz=40,SNR=17
A14A ⇑ScP **ScP** **00 37 36.1 +1.8**
baz=40,SNR=13
A14A ⇑ScP **ScP** **00 37 36.1 +1.8**
baz=40,SNR=13
HUMO **Hull Mountain** 39.77 322 *e*P **P** **00 31 48.2 +1.4**
comp=Z,72nm,2.0s
BBOR **Butler Butte** 39.78 323 P **P** **00 31 48.7 +1.6**
WALA **Waterton Lakes** 39.87 336 *e*P **P** **00 31 50.0 +2.3**
WALA *e*PcP **PcP** **00 33 53.5 +1.3**
A13A **Flathead Natio** 39.97 336 ⇑P **P** **00 31 48.5 +0.1**
baz=40
A13A ⇓ScP **ScP** **00 37 37.6 +2.0**
baz=40
A13A ⇓ScP **ScP** **00 37 37.6 +2.0**
baz=40
B12A **Libby** 40.08 334 ⇑P **P** **00 31 49.4 +0.1**
baz=40
B12A ⇑ScP **ScP** **00 37 38.8 +2.7**
baz=40
B12A ⇑ScP **ScP** **00 37 38.8 +2.7**
baz=40
IRO **Indian Ridge** 40.22 325 P **P** **00 31 52.6 +2.0**
KBO **Bosley Butte** 40.31 321 *e*P P 00 31 54.6 +3.3
comp=Z,515nm,1.7s
KBO *ep*P pP 00 32 10.8 +2.5
A12A **Yaak River Ran** 40.47 335 ⇓P **P** **00 31 52.4 -0.2**
baz=41
A12A ⇓ScP **ScP** **00 37 41.3 +3.6**
baz=41
A12A ⇓ScP **ScP** **00 37 41.3 +3.6**
baz=41
BROR **Big Rock Looko** 40.49 325 P **P** **00 31 53.8 +1.1**
NEW **Newport** 40.58 333 *e*P **P** **00 31 53.0 -0.4**
comp=Z,19nm,1.6s
NEW *e*PcP **PcP** **00 33 54.6 +0.2**
NEW **Newport** 40.58 333 ⇓P **P** **00 31 53.7 +0.2**
baz=41
VFP **Flag Point** 40.62 327 P **P** **00 31 56.2 +2.2**
OD2 **Odessa Site #2** 40.66 331 P **P** **00 31 55.0 +0.9**
KEBM **Edson Butte** 40.75 322 *e*P **P** **00 31 57.7 +2.7**
comp=Z,302nm,1.2s
TRW **Toppenish Ridg** 40.79 328 P **P** **00 31 57.2 +2.0**
VLL **Laurance Lake** 40.83 327 P **P** **00 31 58.4 +2.7**
COR **Corvallis** 41.17 325 *e*P **P** **00 32 00.6 +2.3**
COR pmax pmax
comp=Z,118nm,1.3s
COR **Corvallis** 41.17 325 *e*P **P** **00 32 00.6 +2.3**
comp=Z,118nm,1.3s
EBG **Ellensburg** 41.23 329 P **P** **00 32 01.1 +2.3**
FFC **Flin Flon** 41.69 350 *ce*P **P** **00 32 02.4 0.0**
FFC **Flin Flon** 41.69 350 *e*P **P** **00 32 02.4 0.0**
comp=Z,21nm,1.1s
FFC *e*ScP **ScP** **00 37 42.0 -0.2**
FFC **Flin Flon** 41.69 350 P **P** **00 32 02.3 -0.1**
comp=Z,112nm,0.8s,SNR=19
LON **Longmire** 41.75 328 *e*P **P** **00 32 04.3 +1.2**
LON pmax pmax
comp=Z,19nm,1.0s
LON **Longmire** 41.75 328 *e*P **P** **00 32 04.3 +1.2**
comp=Z,19nm,1.0s
LON *e*ScP **ScP** **00 37 43.3 +0.6**
LVC **Limon Verde** 42.19 149 *e*P **P** **00 32 08.5 +1.4**
comp=Z,7.0nm,1.2s
RPW **Rockport** 42.75 330 P **P** **00 32 11.6 +0.5**
NLWA **Neilton Lookou** 43.24 327 *e*P **P** **00 32 17.2 +2.2**
comp=Z,180nm,1.9s
PGC **Sidney** 43.84 329 *e*P **P** **00 32 20.6 +0.8**
DRLN **Deer Lake** 44.72 31 *e*P **P** **00 32 25.4 -1.4**
comp=Z,61nm,1.2s
DRLN *ep*P **pP** **00 32 43.6 -0.5**
SCHQ **Schefferville** 45.02 20 *e*P **P** **00 32 28.1 -1.2**
comp=Z,144nm,0.8s
SCHQ *ep*P **pP** **00 32 46.7 +0.3**
SCHQ *e*PcP **PcP** **00 34 08.2 -1.0**
SCHQ *e*ScP **ScP** **00 37 54.8 -1.0**
SCHQ **Schefferville** 45.02 20 P **P** **00 32 28.2 -1.0**
comp=Z,139nm,0.9s,baz=216,slow=6.5,SNR=134
SCHQ ScP **ScP** **00 37 55.1 -0.6**
SCHQ LR LR 00 52 21.9
comp=Z,2μm,19.8s,baz=225,slow=38
LCO **Las Campanas** 46.89 155 *e*P **P** **00 32 44.9 +0.4**
comp=Z,24nm,1.0s
YKA **Yellowknife Ar** 51.41 346 P **P** **00 33 17.4 -0.8**
YKA PcP **PcP** **00 34 31.0 -0.9**
YKA ScP **ScP** **00 38 22.2 -0.4**
YKA P'P' 01 03 42.8
YKA **Yellowknife Ar** 51.41 346 P **P** **00 33 17.4 -0.8**
comp=Z,5.9nm,0.7s,baz=148,slow=7.6,SNR=92
YKA PcP **PcP** **00 34 31.0 -0.9**
comp=Z,2.9nm,0.7s,baz=149,slow=4.0,SNR=6.9
YKA ScP **ScP** **00 38 22.2 -0.4**
comp=Z,1.1nm,0.6s,baz=147,slow=4.5,SNR=9.6
YKA PKPPKP P'P'df 01 03 42.8 -16
comp=Z,0.3nm,0.8s,baz=8.7,slow=3.2,SNR=4.2
YKW3 **Yellowknife Ar** 51.47 346 *e*P **P** **00 33 17.9 -0.8**
comp=Z,0.6nm,1.1s
YKW3 *e*ScP **ScP** **00 38 22.3 -0.6**
BDFB **Brasilia** 51.59 123 P **P** **00 33 20.1 -0.4**
BDFB PcP **PcP** **00 34 35.6 +2.1**
BDFB **Brasilia** 51.59 123 P **P** **00 33 20.1 -0.4**
comp=Z,8.1nm,0.8s,baz=281,slow=9.4,SNR=9.8
BDFB PcP **PcP** **00 34 35.6 +2.1**
comp=Z,12nm,0.8s,baz=279,slow=4.4,SNR=8.5
BDFB LR LR 00 54 21.6
comp=Z,302nm,21.1s,baz=280,slow=35
CPUP **Villa Florida** 51.62 141 *e*P **P** **00 33 19.9 -0.4**
CPUP PcP **PcP** **00 34 33.5 +0.2**
CPUP **Villa Florida** 51.62 141 P **P** **00 33 19.6 -0.7**
comp=Z,2.4nm,0.8s,baz=308,slow=8.3,SNR=5.3
CPUP PcP **PcP** **00 34 33.5 +0.2**
comp=Z,0.9nm,0.5s,baz=336,slow=6.8,SNR=2.4
CPUP LR LR 00 54 39.3
comp=Z,395nm,21.7s,baz=305,slow=35
DLBC **Dease Lake** 53.21 336 *e*P **P** **00 33 33.4 +1.7**
DLBC *e*ScP **ScP** **00 38 32.4 +1.7**
SPB **Sao Paulo** 56.54 131 *e*P **P** **00 33 57.3 +1.1**
comp=Z,42nm,1.2s
SPB *ep*P **pP** **00 34 14.4 +0.4**
RKT **Rikitea** 56.61 230 *e*P **P** **00 33 56.8 +0.1**
comp=Z,116nm,1.1s
RKT *e*S **S** **00 41 40.3 -3.6**
comp=Z,419nm,28.0s
RKT *e*LQ LQ 00 48 07.9
comp=Z,511nm,35.5s
RKT *e*LR LR 00 50 33.8
comp=Z,2μm,27.8s,baz=48
PLCA **Paso Flores** 57.51 162 *e*P **P** **00 34 04.3 +1.4**
comp=Z,74nm,1.5s
PLCA **Paso Flores** 57.51 162 P **P** **00 34 02.5 -0.3**
comp=Z,17nm,1.1s,baz=332,slow=6.8,SNR=8.0
PLCA LR LR 00 53 21.5
comp=Z,370nm,20.0s,baz=354,slow=30
RCBR **Riachuelo** 58.03 106 *e*P **P** **00 34 06.2 -0.8**
comp=Z,61nm,1.1s
TRQA **Tornquist** 58.35 153 *e*P **P** **00 34 09.4 +0.7**
comp=Z,134nm,1.3s
CAM4 **Nova Friburgo** 59.53 127 ⇑*i*P **P** **00 34 17.4 0.0**
CAM4 *i* 00 34 19.6
CAM4 *i* 00 34 32.3
CAM4 *i* 00 34 34.9
CAM4 *i* 00 34 39.7
CAM4 *i* 00 35 01.0
CAM4 *i* 00 35 11.7
CAM4 *i* 00 35 49.8
RAGM **Ragged Mountai** 60.53 333 *e*P **P** **00 34 26.2 +2.6**
comp=Z,39nm,0.6s
EGAK **Eagle** 61.23 338 *e*P **P** **00 34 27.0 -1.1**
comp=Z,6.5nm,0.9s
MENT **Mentasta** 61.29 335 *e*P **P** **00 34 28.6 -0.1**
MENT *ep*P **pP** **00 34 46.8 +0.1**
DIV **Divide** 61.34 333 *e*P **P** **00 34 30.7 +1.7**
DOT **Dot Lake** 61.77 336 *e*P **P** **00 34 32.4 +0.6**
comp=Z,16nm,1.2s
POHA **Pohakuloa** 61.79 285 *e*P **P** **00 34 33.8 +0.9**
comp=Z,134nm,1.1s
PAX **Paxson** 62.02 335 *e*P **P** **00 34 34.0 +0.4**
PAX pmax pmax
comp=Z,16nm,0.6s
PAX **Paxson** 62.02 335 *e*P **P** **00 34 34.0 +0.4**
comp=Z,16nm,0.6s
PMR **Palmer** 63.01 333 *e*P **P** **00 34 40.6 +0.5**
PMR pmax pmax
comp=Z,13nm,0.8s
PMR **Palmer** 63.01 333 *e*P **P** **00 34 40.6 +0.5**
comp=Z,13nm,0.8s
PMOR **Pomariorio Ree** 63.19 245 *e*P **P** **00 34 42.8 +0.8**
comp=Z,207nm,1.3s
KDAK **Kodiak Island** 63.38 328 P **P** **00 34 44.0 +1.4**
KDAK pP **pP** **00 35 01.4 +0.8**
KDAK **Kodiak Island** 63.38 328 P **P** **00 34 44.0 +1.4**
comp=Z,14nm,0.8s,baz=96,slow=1.8,SNR=8.4
KDAK pP **pP** **00 35 01.4 +0.8**
comp=Z,7.6nm,0.4s,baz=90,slow=4.0,SNR=4.4
ILAR **Eielson Array** 63.38 337 P **P** **00 34 42.0 -0.4**
ILAR ScP 00 39 15.9
ILAR ⇑*e* 01 03 44.5
ILAR **Eielson Array** 63.38 337 P **P** **00 34 42.0 -0.4**
comp=Z,11nm,1.0s,baz=127,slow=4.1,SNR=62
ILAR ScP 00 39 15.9
comp=Z,1.1nm,0.9s,baz=123,slow=1.4,SNR=4.3
ILAR PKP2bc 01 03 44.5
comp=Z,0.6nm,1.0s,baz=302,slow=4.2,SNR=6.5
ILAR LR LR 01 04 47.0
comp=Z,603nm,21.7s,baz=296,slow=38
OHAK **Old Harbor** 63.58 327 *e*P **P** **00 34 45.2 +1.3**
comp=Z,46nm,1.2s
MCK **McKinley** 63.76 335 *e*P **P** **00 34 45.9 +0.8**
MCK **McKinley** 63.76 335 *e*P **P** **00 34 45.9 +0.8**
COLA **College** 63.80 337 *e*P **P** **00 34 45.1 -0.1**
COLA pmax pmax
comp=Z,12nm,0.7s
COLA **College** 63.80 337 *e*P **P** **00 34 45.1 -0.1**
comp=Z,12nm,0.7s
OPA **Opana** 63.92 288 *e*P **P** **00 34 49.0 +2.2**
OPA **Opana** 63.92 288 *e*P **P** **00 34 49.0 +2.2**
HON **Honolulu** 63.94 287 *e*P **P** **00 34 48.9 +2.0**
HON **Honolulu** 63.94 287 *e*P **P** **00 34 48.9 +2.0**
KIP **Kipapa** 63.95 287 *ce*P **P** **00 34 48.2 +1.2**
KIP **Kipapa** 63.95 287 *e*P **P** **00 34 48.9 +2.0**
comp=Z,190nm,1.5s
SPU **Mount Spurr** 64.18 332 *e*P **P** **00 34 48.5 +0.6**
SPU *ep*P **pP** **00 35 06.6 +0.6**
TRF **Thorofare Moun** 64.21 335 *e*P **P** **00 34 47.8 -0.3**
comp=Z,18nm,0.8s
RSO **Redoubt South** 64.28 331 *e*P **P** **00 34 48.9 +0.2**
MEH **Mehetia** 64.54 242 *e*P **P** **00 34 51.9 +1.0**
comp=Z,230nm,1.4s
PPLA **Purkeypile** 64.81 334 *e*P **P** **00 34 51.4 -0.7**
comp=Z,13nm,0.9s
TIAR **Tiarei** 65.51 243 *e*P **P** **00 34 58.0 +0.8**
comp=Z,195nm,1.3s
TVO **Taravao** 65.52 243 *e*P **P** **00 34 57.8 +0.5**
comp=Z,203nm,1.6s
COLD **Coldfoot** 65.64 338 *e*P **P** **00 34 58.0 +0.8**
comp=Z,9.6nm,1.0s
PPT **Papeete** 65.72 243 P **P** **00 35 00.5 +2.0**
PPT **Papeete** 65.72 243 P **P** **00 35 00.5 +2.0**
comp=Z,12nm,0.3s,baz=75,slow=16,SNR=5.4
PPT LR LR 00 55 24.0
comp=Z,778nm,21.9s,baz=355,slow=28
PPT2 **Papeete2** 65.73 243 *e*P **P** **00 34 59.6 +1.0**
comp=Z,57nm,1.3s
PPT2 *e*S **S** **00 43 38.4 -1.6**
comp=Z,112nm,25.5s
PPT2 *e*LR LR 00 54 43.4
comp=Z,2μm,24.0s,baz=70
PAE **Paea** 65.76 243 *e*P **P** **00 34 59.4 +0.7**
comp=Z,30nm,1.3s
SVW2 **Sparrevohn** 65.79 331 *e*P **P** **00 34 57.7 -0.5**
comp=Z,7.7nm,0.8s
CHGN **Chignik** 66.11 326 *e*P **P** **00 35 01.3 +1.0**
SUMG **Summit** 66.12 15 *i*P **P** **00 34 59.7 -1.0**
SUMG *i* 00 35 14.7
SUMG pmax pmax
comp=Z,12nm,0.8s
SUMG **Summit** 66.12 15 *e*P **P** **00 34 59.4 -1.2**
SUMG *ep*P **pP** **00 35 18.5 -0.4**
SUMG **Summit** 66.12 15 *i*P **P** **00 34 59.7 -1.0**
comp=Z,12nm,0.8s
SUMG *i* 00 35 14.7
XMAS **Kiritimati** 66.69 266 *e*P **P** **00 35 06.5 +1.7**
comp=Z,203nm,1.3s
TBI **Tubuai** 68.11 238 *e*P **P** **00 35 13.9 +0.3**
comp=Z,101nm,1.2s
TBI *e*S **S** **00 44 07.7 -0.8**
comp=Z,276nm,40.8s
TBI *e*LR LR 00 55 50.4
comp=Z,3μm,28.8s
PMOZ **Porto Moniz, M** 69.09 60 *e*LR LR 00 56 42.0
comp=Z,261nm,20.0s
UNV **Unalaska Valle** 70.41 322 *e*P **P** **00 35 27.8 +0.5**
comp=Z,145nm,1.3s
UNV *ep*P **pP** **00 35 45.9 +0.2**
TNA **Tin City** 72.10 335 *e*P **P** **00 35 37.7 +0.4**
comp=Z,12nm,1.3s
DAG **Danmarks Havn** 72.58 13 *i*P **P** **00 35 37.8 -2.2**
DAG *i* 00 35 56.4
DAG pmax pmax
comp=Z,13nm,1.1s
DAG **Danmarks Havn** 72.58 13 *i*P **P** **00 35 37.8 -2.2**
comp=Z,10nm,1.1s
DAG *i* 00 35 56.4
PGAV **Gavieira, Arco** 75.49 50 *e*S **S** **00 45 33.5 +0.4**
PGAV *e*LQ LQ 00 55 48.8
PGAV *e*LR LR 00 59 27.3
comp=Z,298nm,20.0s
PFVI **Vila Bisbo** 75.57 55 *e*P **P** **00 35 55.1 -3.1**
comp=Z,88nm,2.0s
PMTG **Montargil** 75.83 53 *e*P **P** **00 35 58.0 -1.6**
comp=Z,24nm,1.5s
PVIS **Viseu** 75.90 51 *e*P **P** **00 35 58.5 -1.6**
comp=Z,42nm,1.6s
EVOP **Sao Brissos** 75.97 53 *e*P **P** **00 35 57.5 -2.9**
EVOP pmax pmax
comp=Z,10.0nm,0.8s
EVOP **Sao Brissos** 75.97 53 *e*P **P** **00 35 57.5 -2.9**
comp=Z,10nm,0.8s
EVO **Evora** 76.05 53 *e*P P 00 35 57.5 -3.4
comp=Z,10nm,0.8s
EVO *e*R
comp=Z,396nm,21.5s
MTE **Manteigas** 76.20 51 *e*P **P** **00 35 58.7 -3.1**
comp=Z,31nm,1.8s
MTE *e*S **S** **00 45 39.3 -1.6**
MTE *e*LR LR 00 59 34.3
comp=Z,363nm,20.0s
PBEJ **Beja** 76.23 54 *e*P **P** **00 35 59.5 -2.4**
comp=Z,17nm,1.7s
PVAQ **Vaqueiros** 76.42 54 *e*S **S** **00 45 42.4 -0.8**
PVAQ *e*LQ LQ 00 55 58.9
PVAQ *e*LR LR 01 00 07.0
comp=Z,320nm,22.0s
PMRV **Marv??o** 76.43 52 *e*S **S** **00 45 43.9 +0.6**
PMRV *e*LR LR 00 59 34.3
comp=Z,219nm,22.0s
MVO **Moncorvo** 76.50 51 *e*P **P** **00 36 02.0 -1.5**
comp=Z,20nm,1.5s
MVO *e*S **S** **00 45 45.4 +1.2**
MVO *e*LR LR 01 00 03.1
comp=Z,194nm,24.0s
PBAR **Barrancos** 76.86 54 *e*P **P** **00 36 02.9 -2.5**
comp=Z,20nm,1.9s
ESK **Eskdalemuir** 77.48 36 *i*P **P** **00 36 07.9 -0.7**
ESDC **Sonseca Array** 79.02 52 P **P** **00 36 14.7 -2.8**
ESDC pP **pP** **00 36 33.1 -3.1**
ESDC **Sonseca Array** 79.02 52 P **P** **00 36 14.7 -2.8**
comp=Z,0.8nm,0.4s,baz=286,slow=5.7,SNR=14
ESDC pP **pP** **00 36 33.1 -3.1**
comp=Z,1.1nm,0.4s,baz=290,slow=4.5,SNR=7.0
ESDC LR LR 01 08 12.3
comp=Z,203nm,20.9s,baz=225,slow=34
GRR **Gorron** 79.86 43 *e*P **P** **00 36 19.9 -1.9**
comp=Z,24nm,0.9s
GRR *ep*P **pP** **00 36 38.0 -2.5**
GRR **Gorron** 79.86 43 *e*P **P** **00 36 19.9 -1.9**
GRR *e**PP **pP** **00 36 38.0 -2.5**
GRR pmax pmax
comp=Z,24nm,0.9s
GRR **Gorron** 79.86 43 *e*P **P** **00 36 19.9 -1.9**
comp=Z,24nm,0.9s
GRR *ep*P **pP** **00 36 38.0 -2.5**
LDF **La Druitiere** 80.31 42 *e*P **P** **00 36 22.4 -1.8**
comp=Z,16nm,1.0s
LDF **La Druitiere** 80.31 42 *e*P **P** **00 36 22.4 -1.8**
LDF pmax pmax
comp=Z,16nm,1.0s
LDF **La Druitiere** 80.31 42 *e*P **P** **00 36 22.4 -1.8**
comp=Z,16nm,1.0s
MFF **Saint Martin d** 80.64 44 *e*P **P** **00 36 24.1 -1.9**
MFF **Saint Martin d** 80.64 44 *e*P **P** **00 36 24.1 -1.9**
MFF **Saint Martin d** 80.64 44 *e*P **P** **00 36 24.1 -1.9**
LFF **La Frestale** 81.55 46 *e*P **P** **00 36 29.3 -1.6**
comp=Z,7.6nm,0.6s
LFF **La Frestale** 81.55 46 *e*P **P** **00 36 29.3 -1.6**
LFF pmax pmax
comp=Z,8.0nm,0.6s
LFF **La Frestale** 81.55 46 *e*P **P** **00 36 29.3 -1.6**
comp=Z,7.6nm,0.6s
BILL **Bilibino** 81.98 338 ⇓*i*P **P** **00 36 32.9 +0.2**
BILL *e* 00 39 47.7
BILL pmax pmax
comp=Z,19nm,1.2s
RJF **Les Rejaudoux** 82.02 45 *e*P **P** **00 36 31.5 -1.9**
RJF *e*R
comp=Z,227nm,20.5s
RJF **Les Rejaudoux** 82.02 45 *e*P **P** **00 36 31.5 -1.9**
RJF **Les Rejaudoux** 82.02 45 *e*P **P** **00 36 31.5 -1.9**
TCF **Toulx Ste Croi** 82.30 44 *e*P **P** **00 36 32.7 -2.2**
TCF *ep*P **pP** **00 36 49.5 -4.2**
TCF **Toulx Ste Croi** 82.30 44 *e*P **P** **00 36 32.7 -2.2**
TCF *e**PP **pP** **00 36 49.5 -4.2**
TCF **Toulx Ste Croi** 82.30 44 *e*P **P** **00 36 32.7 -2.2**
TCF *ep*P **pP** **00 36 49.5 -4.2**
BAIF **Baives** 82.80 40 *e*P **P** **00 36 36.5 -0.8**
BAIF **Baives** 82.80 40 *e*P **P** **00 36 36.5 -0.8**
BAIF **Baives** 82.80 40 *e*P **P** **00 36 36.5 -0.8**
AVF **Avril sur Loir** 82.96 44 *e*P **P** **00 36 37.4 -0.8**
AVF **Avril sur Loir** 82.96 44 *e*P **P** **00 36 37.4 -0.8**
AVF **Avril sur Loir** 82.96 44 *e*P **P** **00 36 37.4 -0.8**
SSF **Saint Saulge** 83.00 43 *e*P **P** **00 36 36.2 -2.3**
comp=Z,14nm,1.1s
SSF **Saint Saulge** 83.00 43 *e*P **P** **00 36 36.2 -2.3**
SSF pmax pmax
comp=Z,14nm,1.1s
SSF **Saint Saulge** 83.00 43 *e*P **P** **00 36 36.2 -2.3**
comp=Z,14nm,1.1s
GIVF **Givet** 83.17 40 *e*P **P** **00 36 38.0 -1.3**
GIVF **Givet** 83.17 40 *e*P **P** **00 36 38.0 -1.3**
GIVF **Givet** 83.17 40 *e*P **P** **00 36 38.0 -1.3**
LOR **Lormes** 83.19 43 *e*P **P** **00 36 37.5 -2.0**
comp=Z,20nm,1.2s
LOR *ep*P **pP** **00 36 54.5 -3.8**
LOR *e*R
comp=Z,352nm,22.5s
LOR **Lormes** 83.19 43 *e*P **P** **00 36 37.5 -2.0**
comp=Z,20nm,1.2s
LOR *ep*P **pP** **00 36 54.5 -3.8**
SMF **Signal de Mont** 83.32 44 *e*P **P** **00 36 37.7 -2.4**
SMF *ep*P **pP** **00 36 54.6 -4.4**
SMF **Signal de Mont** 83.32 44 *e*P **P** **00 36 37.7 -2.4**
SMF *e**PP **pP** **00 36 54.6 -4.4**
SMF **Signal de Mont** 83.32 44 *e*P **P** **00 36 37.7 -2.4**
SMF *ep*P **pP** **00 36 54.6 -4.4**
MEZF **Maizieres J'vi** 83.69 42 *e*P **P** **00 36 39.9 -2.1**
MEZF *ep*P **pP** **00 36 57.3 -3.5**
MEZF **Maizieres J'vi** 83.69 42 *e*P **P** **00 36 39.9 -2.1**
MEZF *ep*P **pP** **00 36 57.3 -3.5**
SFTF **Sexfontaines** 83.75 42 *e*P **P** **00 36 40.7 -1.6**
comp=Z,18nm,1.1s
SFTF **Sexfontaines** 83.75 42 *e*P **P** **00 36 40.7 -1.6**
comp=Z,18nm,1.1s
NB2 **NORSAR Subarra** 83.80 29 P **P** **00 36 41.1 -1.2**
comp=Z,27nm,1.7s,baz=289,slow=5.1
NB2 **NORSAR Subarra** 83.80 29 P **P** **00 36 41.1 -1.2**
baz=289,slow=5.1
NOA **NORSAR Array B** 83.80 29 P **P** **00 36 41.1 -1.2**
NOA pP **pP** **00 36 59.4 -1.8**
NOA **NORSAR Array B** 83.80 29 P **P** **00 36 41.1 -1.2**
comp=Z,2.2nm,0.9s,baz=289,slow=5.0,SNR=7.2
NOA pP **pP** **00 36 59.4 -1.8**
comp=Z,1.9nm,0.9s,baz=290,slow=5.2,SNR=3.3
NOA LR LR 01 12 01.7
comp=Z,170nm,20.2s,baz=285,slow=34
PAGF **Fort de Pagny** 84.11 42 *e*P **P** **00 36 42.7 -1.4**
PAGF *ep*P **pP** **00 36 59.6 -3.4**
PAGF **Fort de Pagny** 84.11 42 *e*P **P** **00 36 42.7 -1.4**
PAGF *ep*P **pP** **00 36 59.6 -3.4**
THEF **They Montfort** 84.36 42 *e*P **P** **00 36 46.7 +1.3**
LIC **Lamto** 84.60 85 *e*P **P** **00 36 45.1 -2.1**
comp=Z,14nm,0.4s,baz=273
LIC *e*R
comp=Z,254nm,23.0s
LIC **Lamto** 84.60 85 *e*P **P** **00 36 45.1 -2.1**
comp=Z,14nm,0.4s
HAU **Haudompre** 84.65 42 *e*P **P** **00 36 45.3 -1.6**
HAU *ep*P **pP** **00 37 02.2 -3.6**
HAU *e*R
comp=Z,348nm,21.5s
HAU **Haudompre** 84.65 42 *e*P **P** **00 36 45.3 -1.6**
HAU *e**PP **pP** **00 37 02.2 -3.6**
HAU **Haudompre** 84.65 42 *e*P **P** **00 36 45.3 -1.6**
HAU *ep*P **pP** **00 37 02.2 -3.6**
DBIC **Dimbokro** 84.67 84 *e*P **P** **00 36 45.2 -2.3**
comp=Z,14nm,0.8s
DBIC **Dimbokro** 84.67 84 P **P** **00 36 45.2 -2.3**
comp=Z,13nm,0.8s,baz=264,slow=5.5,SNR=21
DBIC LR LR 01 13 16.5
comp=Z,162nm,19.1s,baz=272,slow=35
ORIF **Oris-en-Rattie** 85.12 45 *e*P **P** **00 36 48.4 -1.0**
ORIF *e*R
comp=Z,320nm,22.5s
ORIF **Oris-en-Rattie** 85.12 45 *e*P **P** **00 36 48.4 -1.0**
ORIF **Oris-en-Rattie** 85.12 45 *e*P **P** **00 36 48.4 -1.0**
ECH **Echery** 85.12 42 *e*P **P** **00 36 50.2 +0.9**
LOMF **Lomont** 85.14 43 *e*P **P** **00 36 50.4 +1.0**
CDF **Champ du Feu** 85.15 41 *e*P **P** **00 36 48.0 -1.5**
CDF *ep*P **pP** **00 37 04.6 -3.8**
CDF **Champ du Feu** 85.15 41 *e*P **P** **00 36 48.0 -1.5**
CDF *e**PP **pP** **00 37 04.6 -3.8**
CDF **Champ du Feu** 85.15 41 *e*P **P** **00 36 48.0 -1.5**
CDF *ep*P **pP** **00 37 04.6 -3.8**
MOF **Molkenrain** 85.20 42 *e*P **P** **00 36 50.6 +0.9**
LANF **Langenberg** 85.33 41 *e*P **P** **00 36 51.1 +0.8**
FELD **Feldberg im Sc** 85.76 42 *e*P **P** **00 36 51.9 -0.7**
ARCES **ARCESS Array B** 85.97 18 P **P** **00 36 51.5 -1.4**
ARCES pP **pP** **00 37 09.9 -2.0**
ARCES **ARCESS Array B** 85.97 18 P **P** **00 36 51.5 -1.4**
comp=Z,2.8nm,0.7s,baz=283,slow=4.4,SNR=14
ARCES pP **pP** **00 37 09.9 -2.0**
comp=Z,3.3nm,0.6s,baz=273,slow=4.8,SNR=4.8
ARCES LR LR 01 15 57.5
comp=Z,412nm,21.8s,baz=252,slow=36
TUE **Stuetta** 87.04 43 *e*P **P** **00 36 56.9 -2.0**
comp=Z,6.0nm,1.1s
DAVA **Damuels** 87.15 42 ⇑*i*P **P** **00 36 58.2 -1.2**
comp=Z,16nm,1.3s
GRF **Grafenberg Arr** 87.27 39 *e*P **P** **00 36 57.4 -2.4**
comp=Z,15nm,1.4s
GRF **Grafenberg Arr** 87.27 39 *e*P **P** **00 36 57.4 -2.4**
GRF pmax pmax
comp=Z,15nm,1.4s
RETA **Reutte** 87.66 42 ⇑*i*P **P** **00 36 59.6 -2.1**
comp=Z,9.6nm,1.2s
CLL **Collm** 87.83 38 ⇑*i*P **P** **00 37 00.5 -1.8**
CLL *e* 00 37 17.0
CLL *e* 00 47 24.0
CLL *e*S **S** **00 47 34.0 -5.6**
CLL pmax pmax
comp=Z,9.0nm,1.3s
NKC **Novy Kostel** 87.85 39 *e*P **P** **00 37 01.1 -1.4**
NKC *e* 00 37 20.2
NKC MLR MLR

comp=Z,300nm,24.6s
NKC Novy Kostel 87.85 39 *e*P **P 00 37 01.1 -1.4**
NKC *e*pP **pP 00 37 20.2 -1.3**
NKC *ex* x 00 47 11.0
NKC AMS AMS 01 12 20.0
comp=Z,300nm,24.6s
BRG Berggiesshubel 88.53 38 *e*P **P 00 37 04.3 -1.4**
comp=Z,8.0nm,1.4s
BRG *e* 00 37 22.1
comp=Z,6.2nm,1.4s
BRG PP PP 00 40 46.0 +12
BRG SKS **SKSac 00 47 28.0 -0.9**
BRG S **S 00 47 46.0 -0.3**
BRG SS **SS 00 53 36.0 -1.5**
BRG pmax pmax
comp=Z,1.7nm,0.9s
BRG *e* 00 54 31.7
comp=Z,4.7nm,1.4s
BRG *e*PKPPKP **P'P'df 01 02 53.9 -3.1**
comp=Z,1.5nm,0.8s
BRG
comp=N,290nm,29.4s
BRG
comp=E,242nm,22.2s
BRG
comp=Z,383nm,26.3s
BRG Berggiesshubel 88.53 38 *e*P **P 00 37 04.3 -1.4**
BRG *e* 00 37 22.0
BRG 00 47 28.0
BRG S **S 00 47 46.0 -0.3**
BRG SS **SS 00 53 36.0 -1.5**
BRG pmax pmax
comp=Z,8.0nm,1.4s
BRG pmax pmax
comp=Z,2.0nm,0.9s
KHC Kasperske Hory 88.91 39 *e*P **P 00 37 06.0 -1.6**
KHC *e* 00 37 26.0
KHC *e* 00 47 30.3
KHC MLR MLR
comp=Z,300nm,24.7s
KHC Kasperske Hory 88.91 39 *e*P **P 00 37 05.8 -1.8**
comp=Z,3.0nm,1.2s
KHC Kasperske Hory 88.91 39 *e*P **P 00 37 06.0 -1.6**
KHC *ep*P **pP 00 37 26.0 -0.6**
KHC *e*SKS **SKSac 00 47 30.3 -1.0**
KHC AMS AMS 01 10 40.0
comp=Z,300nm,24.7s
PVCC Panska Ves 89.02 38 AMS AMS 01 14 10.0
comp=Z,400nm,24.2s
GERES GERESS Array B 89.08 40 P **P 00 37 06.2 -2.3**
GERES pP **pP 00 37 26.1 -1.4**
GERES GERESS Array B 89.08 40 P **P 00 37 06.2 -2.3**
comp=Z,1.2nm,0.9s,baz=282,slow=2.6,SNR=9.7
GERES pP **pP 00 37 26.1 -1.4**
comp=Z,0.5nm,0.5s,baz=298,slow=5.0,SNR=3.4
GERES LR LR 01 10 55.9
comp=Z,201nm,21.7s,baz=277,slow=32
PRU Pruhonice 89.20 38 *e*P **P 00 37 11.7 +2.9**
PRU *e* 00 47 31.0
PRU MLR MLR
comp=Z,400nm,23.9s
PRU Pruhonice 89.20 38 *e*P **P 00 37 11.7 +2.9**
PRU *e*SKS **SKSac 00 47 31.0 -1.9**
PRU AMS AMS 01 13 10.0
comp=Z,400nm,23.9s
SEY Seymchan 89.31 336 *e*P **P 00 37 09.0 -0.1**
TORD Torodi Ar. Bea 89.44 77 P P 00 37 06.4 -4.2
TORD PKKPbc **PKKPbc 00 54 45.6 +0.4**
TORD Torodi Ar. Bea 89.44 77 P P 00 37 06.4 -4.2
comp=Z,2.5nm,0.9s,baz=291,slow=3.7,SNR=19
TORD PKKPbc **PKKPbc 00 54 45.6 +0.4**
comp=Z,1.0nm,1.0s,baz=340,slow=1.1,SNR=4.7
TORD LR LR 01 14 35.0
comp=Z,238nm,20.8s,baz=290,slow=34
TREC Trest 90.02 39 AMS AMS 01 13 20.0
comp=Z,400nm,23.5s
DPC Dobruska-Polom 90.13 38 *e*SKS **SKSac 00 47 40.3 +1.9**
DPC AMS AMS 01 15 00.0
comp=Z,300nm,23.2s
KEST Kesra 90.18 53 P P 00 37 09.8 -4.1
KEST Kesra 90.18 53 P P 00 37 09.8 -4.1
comp=Z,0.4nm,0.7s,baz=239,slow=3.2,SNR=3.6
KEST LR LR 01 11 12.2
comp=Z,51nm,21.3s,baz=232,slow=31
FINES FINESS Array B 90.21 25 P **P 00 37 10.8 -2.5**
FINES FINESS Array B 90.21 25 P **P 00 37 10.8 -2.5**
comp=Z,5.5nm,1.1s,baz=289,slow=5.8,SNR=8.4
FINES LR LR 01 17 53.7
comp=Z,351nm,21.1s,baz=270,slow=36
PET Petropavlovsk 90.85 326 *e*P **P 00 37 19.4 +2.9**
PET *e* 00 41 00.2
PET *e* 00 47 48.5
PET *e*S **S 00 48 06.2 -1.5**
PET *e*SS **SS 00 54 14.8 +3.9**
PET pmax pmax
comp=Z,100nm,13.4s
PETK Petropavlovsk- 91.34 326 P **P 00 37 20.5 +1.7**
PETK Petropavlovsk- 91.34 326 P **P 00 37 20.4 +1.7**
PETK Petropavlovsk- 91.34 326 P **P 00 37 20.4 +1.7**
comp=Z,7.4nm,0.8s,baz=90,slow=8.9,SNR=6.8
PETK LR LR 01 17 15.9
comp=Z,64nm,21.2s,baz=256,slow=35
OKC Ostrava-Krasne 91.42 38 AMS AMS 01 15 50.0
comp=Z,200nm,22.9s
ZST Bratislava 91.42 40 *e*P **P 00 37 17.7 -1.5**
ZST pmax pmax
comp=Z,6.0nm,1.5s
ZST Bratislava 91.42 40 *e*P **P 00 37 17.6 -1.6**
VYHS Vyhne 92.37 39 *e*P **P 00 37 23.2 -0.5**
VYHS pmax pmax
comp=Z,7.0nm,2.1s
VYHS Vyhne 92.37 39 *e*P **P 00 37 23.2 -0.5**
VYHS *es*P **sP 00 37 52.1 +1.9**
KOLS Kolonicke sedl 94.24 37 *e*P **P 00 37 31.8 -0.5**
KOLS pmax pmax
comp=Z,28nm,3.1s
KOLS Kolonicke sedl 94.24 37 *e*P **P 00 37 31.8 -0.5**
UZH Uzhgorod 94.39 38 *e*P **P 00 37 32.1 -0.8**
UZH *e* 00 37 49.7
KLMR Klimovskoe 95.82 22 *e*P P 00 37 35.6 -3.5
KLMR *e*PP pP 00 37 55.4 -2.8
KLMR *e* 00 41 26.8
KLMR *e*S **SKSac 00 48 04.9 -4.4**
KLMR pmax pmax
comp=Z,10.0nm,2.2s
AKASG Malin Array Be 97.30 34 LR LR 01 22 30.7
comp=Z,205nm,21.6s,baz=285,slow=36
OBN Obninsk 98.36 27 *e*P P 00 37 47.4 -3.3
OBN *i* S **SKSac 00 48 23.6 +1.0**
OBN *i* PS **SP 00 50 35.4 -1.6**
OBN pmax pmax
comp=Z,4.0nm,1.0s
OBN MLR MLR
comp=Z,200nm,18.0s
BRTR Keskin Array B 105.91 41 PKKPbc PKKPbc 00 54 00.2 -0.6
BRTR Keskin Array B 105.91 41 PKKPbc PKKPbc 00 54 00.2 -0.6
comp=Z,0.8nm,0.9s,baz=348,slow=5.2,SNR=4.6
DZM Mont Dzumac 106.57 251 *e*LR LR 01 13 37.6
comp=Z,744nm,26.4s
ABKAR Akbulak array 112.12 20 *e*PKPdf **PKiKP 00 42 48.8 +0.5**
ZALV Zalesovo Beam 112.38 3 PKiKP **PKiKP 00 42 47.7 -1.0**
ZALV *e* 00 43 06.3
ZALV Zalesovo Beam 112.38 3 PKiKP **PKiKP 00 42 47.7 -1.0**
ZALV *e* 00 43 06.3
ZALV Zalesovo Beam 112.38 3 PKiKP **PKiKP 00 42 47.7 -1.0**
comp=Z,0.6nm,0.4s,baz=318,slow=2.0,SNR=5.0
ZALV pPKiKP **pPKiKP 00 43 06.3 -2.2**
comp=Z,1.6nm,0.5s,baz=285,slow=2.1,SNR=5.8
KURK Kurchatov 115.07 7 *i* PKIKP **PKPdf 00 42 53.9 0.0**
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 115.07 7 *e*PKPdf **PKPdf 00 42 53.5 -0.4**
SONM Songino Array 116.67 347 PKP **PKPdf 00 42 58.3 +1.0**
SONM pPKP pPKPdf 00 43 16.0 -1.1
SONM PKKPbc **PKKPbc 00 53 23.2 -2.8**
SONM Songino Array 116.67 347 PKP **PKPdf 00 42 58.3 +1.0**
comp=Z,1.1nm,0.8s,baz=333,slow=1.3,SNR=7.1
SONM pPKP pPKPdf 00 43 16.0 -1.1
comp=Z,1.0nm,0.6s,baz=6.2,slow=1.5,SNR=6.1
SONM PKKPbc **PKKPbc 00 53 23.2 -2.8**
comp=Z,0.8nm,0.8s,baz=192,slow=4.5,SNR=5.6
KSRS Korea Array 117.24 326 PKP **PKPdf 00 42 59.0 +0.5**
comp=Z,4.3nm,0.7s,baz=6.7,slow=1.6,SNR=16
KSRS pPKP **pPKPdf 00 43 17.4 -0.8**
comp=Z,4.7nm,0.7s,baz=15,slow=1.5,SNR=6.3
KSAR Wonju Array Be 117.27 326 PKP **PKPdf 00 42 59.0 +0.4**
KSAR pPKP **pPKPdf 00 43 17.4 -0.9**
MK31 Makanchi Array 119.34 5 *e*PKIKP **PKPdf 00 43 01.2 -1.1**
MK31 *e* 00 43 20.2
MK31 Makanchi Array 119.34 5 *e*PKPdf **PKPdf 00 43 01.2 -1.1**
MK31 *ep*PKPdf **pPKPdf 00 43 20.2 -1.9**
MKAR Makanchi Array 119.34 5*c i*PKIKP **PKPdf 00 43 01.7 -0.6**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 119.34 5 PKP **PKPdf 00 43 01.7 -0.6**
MKAR pPKP **pPKPdf 00 43 20.2 -1.9**
MKAR SKP 00 46 31.5
comp=Z,2.5nm,0.8s,baz=12,slow=2.4,SNR=20
MKAR Makanchi Array 119.34 5 PKP **PKPdf 00 43 01.7 -0.6**
comp=Z,2.7nm,0.8s,baz=346,slow=2.3,SNR=8.6
MKAR pPKP **pPKPdf 00 43 20.2 -1.9**
MKAR SKP 00 46 31.5
comp=Z,0.5nm,0.6s,baz=8.5,slow=2.5,SNR=4.0
BOSA Boshof 119.38 115 *e*PKPdf **PKPdf 00 43 03.8 +0.9**
BOSA PKP **PKPdf 00 43 04.0 +1.1**
BOSA *ep*PKPdf **pPKPdf 00 43 22.0 -0.7**
BOSA pPKP 00 43 22.4
BOSA Boshof 119.38 115 PKP **PKPdf 00 43 04.0 +1.1**
comp=Z,17nm,0.8s,baz=244,slow=0.8,SNR=20
BOSA pPKP **pPKPdf 00 43 22.4 -0.4**
comp=Z,6.9nm,0.6s,baz=325,slow=1.6,SNR=4.2
LBTB Lobatse 119.61 111 *e*PKPdf **PKPdf 00 43 03.7 +0.2**
BJI Beijing 120.75 336 PKP **PKPdf 00 43 05.3 +0.2**
BJI SS SS 01 00 58.3 +0.8
BJI LR LR
comp=N,110nm,29.4s
BJI LR LR
comp=E,93nm,28.1s
RST Umm Al-Ruwaisa 120.82 43 *e*P **PKPdf 00 43 04.9 -0.7**
RST AMb AMB 00 43 06.5
comp=Z,71nm,0.9s
MIB Mutribah 120.85 42 *e*P **PKPdf 00 43 05.3 -0.3**
MIB AMb AMB 00 43 06.6
comp=Z,11nm,0.8s
NAY Al-Naaiem 121.15 43 *e*P **PKPdf 00 43 05.7 -0.6**
NAY AMb AMB 00 43 06.7
comp=Z,4.2nm,0.8s
HHC Hu-ho-hao-te 121.72 340 *e*PKP **PKPdf 00 43 05.3 -1.8**
HHC PP **PP 00 44 42.8 +3.4**
HHC PKS **PKSdf 00 46 40.4 -3.5**
HHC SKS SKSdf 00 50 05.8 -7.7
HHC SKKS SKKSac 00 51 24.3 -10
HHC SS **SS 01 01 07.4 -2.6**
HHC AMB AMB
comp=Z,93nm,9.5s
HHC LR LR
comp=N,510nm,20.4s
HHC LR LR
comp=E,330nm,20.4s
HHC LR LR
comp=Z,670nm,20.0s
AAK Ala-Archa 122.23 13 *i* PKIKP **PKPdf 00 43 08.5 +0.3**
AAK pmax pmax
comp=Z,20nm,1.7s
AAK Ala-Archa 122.23 13 *e*PKPdf **PKPdf 00 43 08.5 +0.3**
AAK *ep*PKPdf **pPKPdf 00 43 26.1 -1.8**
WMQ Urumqi 122.60 1 *e*PKP PKPdf 00 43 14.3 +5.6
WMQ PP PP 00 44 55.5 +10
WMQ LR LR
comp=N,510nm,28.0s
WMQ LR LR
comp=E,240nm,25.6s
WMQ LR LR
comp=Z,580nm,30.8s
MAW Mawson 123.62 168 PKP **PKPdf 00 43 10.2 +0.5**
MAW Mawson 123.62 168 PKP **PKPdf 00 43 10.2 +0.5**
comp=Z,3.5nm,0.7s,baz=221,slow=11,SNR=3.1
CTA Charters Tower 125.14 255 PKP **PKPdf 00 43 14.8 +0.7**
CTA Charters Tower 125.14 255 PKP **PKPdf 00 43 14.8 +0.7**
comp=Z,6.2nm,0.8s,baz=134,slow=1.2,SNR=6.1
KSH Kashi 125.54 12 *e*PKP **PKPdf 00 43 13.0 -1.5**
KSH *e*PKS **PKSdf 00 46 48.6 -2.7**
KSH *e*SKS **SKSdf 00 50 14.1 -6.7**
KSH AMB AMB
comp=Z,190nm,4.2s
KSH LR LR
comp=N,96nm,4.9s
KSH LR LR
comp=E,59nm,3.9s
KSH LR LR
comp=Z,61nm,4.2s
GTA Gaotai 126.08 350 PKP **PKPdf 00 43 16.1 +0.5**
GTA sPKP 00 43 40.1
GTA PP PP 00 45 13.9 +5.4
GTA PKS **PKSdf 00 46 51.8 -0.5**
GTA SKS **SKSdf 00 50 16.8 -5.0**
GTA SKKS **SKKSac 00 51 55.3 -6.6**
GTA SS **SS 01 02 01.3 -3.5**
GTA AMB AMB
comp=Z,58nm,4.3s
GTA LR LR
comp=N,310nm,20.4s
GTA LR LR
comp=E,210nm,20.4s
GTA LR LR
comp=Z,470nm,23.7s
NJ2 Nanjing 126.16 328 *e*PKP **PKPdf 00 43 10.8 -4.9**
NJ2 sPKP 00 43 48.6
NJ2 PP **PP 00 45 11.0 +1.5**
NJ2 PKS PKSdf 00 46 45.5 -6.9
NJ2 AMB AMB
comp=Z,70nm,8.6s
NJ2 LR LR
comp=N,160nm,26.6s
NJ2 LR LR
comp=E,340nm,30.1s
NJ2 LR LR
comp=Z,200nm,28.9s
KMBO Kilima Mbogo 127.26 81 PKP **PKPdf 00 43 17.6 -1.1**
KMBO Kilima Mbogo 127.26 81 PKP **PKPdf 00 43 17.6 -1.1**
comp=Z,0.5nm,0.3s,baz=216,slow=6.3,SNR=3.9
COEN Coen 127.55 263 *e*PKPdf **PKPdf 00 43 20.1 +1.3**
KBL Kabul 128.26 21 *e*PKIKP **PKPdf 00 43 19.8 -0.2**
KBL Kabul 128.26 21 *e*PKPdf **PKPdf 00 43 19.8 -0.2**
LZH Lanzhou 128.40 345 *e*PKP **PKPdf 00 43 21.4 +1.2**
LZH sPKP 00 43 45.4
LZH PP PP 00 45 32.1 +8.1
LZH PKS **PKSdf 00 46 55.3 -1.6**
LZH SKS **SKSdf 00 50 22.8 -3.5**
LZH SKKS **SKKSac 00 52 12.1 -4.7**
LZH SS **SS 01 02 32.3 -1.7**
LZH AMB AMB
comp=Z,84nm,5.4s
LZH LR LR
comp=N,510nm,18.9s
LZH LR LR
comp=E,440nm,16.3s
LZH LR LR
comp=Z,590nm,20.2s
XAN Xi'an 128.75 339 PKP **PKPdf 00 43 20.9 +0.2**
XAN SKS **SKSdf 00 50 21.8 -5.0**
XAN AMB AMB
comp=Z,26nm,7.0s
XAN LR LR
comp=N,210nm,22.6s
XAN LR LR
comp=E,42nm,21.5s
XAN LR LR
comp=Z,120nm,20.5s
STKA Stephens Creek 128.85 240 PKP **PKPdf 00 43 22.1 +1.3**
STKA Stephens Creek 128.85 240 PKP **PKPdf 00 43 22.1 +1.3**
comp=Z,17nm,1.0s,baz=49,slow=2.2,SNR=13
WHN Wuhan 129.59 331 PKPbc PKPdf 00 43 41.1 +19
WHN PP PP 00 45 51.8 +20
WHN LR LR
comp=Z,670nm,24.6s
SSLB Suanglung 131.29 320 *e*PKPdf **PKPdf 00 43 26.9 +1.1**
SSLB *ep*PKPdf **pPKPdf 00 43 45.4 -0.2**
ENH Enshi 131.92 336 *e*PKPdf **PKPdf 00 43 26.7 -0.2**
ENH *ep*PKPdf **pPKPdf 00 43 47.0 +0.4**
ENH *e*SKPbc **SKPab 00 46 47.9 +0.1**
CD2 Chengdu 133.31 343 PKP **PKPdf 00 43 28.4 -1.1**
CD2 sPKP 00 43 57.3
CD2 PP **PP 00 45 59.0 +3.4**
CD2 PKS **PKSdf 00 47 03.3 -2.7**
CD2 SKS **SKSdf 00 50 30.4 -4.7**
CD2 SKKS **SKKSac 00 52 41.8 -5.1**
CD2 SS **SS 01 03 33.5 -0.3**
CD2 AMB AMB
comp=Z,230nm,6.8s
CD2 LR LR
comp=N,500nm,21.1s
CD2 LR LR
comp=E,490nm,22.0s
CD2 LR LR
comp=Z,390nm,25.5s
WRAB Tennant Creek 136.32 256 *e*PKIKP **PKPdf 00 43 36.1 +0.9**
WRAB *e* 00 43 55.6
WRAB Tennant Creek 136.32 256 *e*PKPdf **PKPdf 00 43 36.1 +0.9**
WRAB *ep*PKPdf **pPKPdf 00 43 55.6 +0.6**
WRAB *e*PP **PP 00 46 13.4 -3.4**
WRAB *e*SKPab **SKPab 00 47 08.3 +1.0**
WRA Warramunga Arr 136.33 256 PKPpre PKPpre 00 43 22.4
WRA PKP **PKPdf 00 43 35.7 +0.4**
WRA pPKP pPKPdf 00 43 56.0 +0.9
WRA PP **PP 00 46 13.6 -3.2**
WRA SKPab **SKPab 00 47 07.8 +0.4**
WRA Warramunga Arr 136.33 256 PKhKP PKPpre 00 43 22.4
comp=Z,2.4nm,1.0s,baz=90,slow=2.9,SNR=5.0
WRA PKP **PKPdf 00 43 35.7 +0.4**
comp=Z,9.8nm,0.8s,baz=85,slow=1.4,SNR=34
WRA pPKP pPKPdf 00 43 56.0 +0.9
comp=Z,6.5nm,0.9s,baz=88,slow=2.6,SNR=4.5
WRA PP **PP 00 46 13.6 -3.2**
comp=Z,7.8nm,1.2s,baz=88,slow=6.2,SNR=10
WRA SKPab **SKPab 00 47 07.8 +0.4**
comp=Z,3.2nm,0.6s,baz=87,slow=3.0,SNR=14
GYA Guiyang 136.43 337 Pdif **Pdif 00 40 38.8 -2.1**
GYA PKP **PKPdf 00 43 34.8 -0.7**
GYA sPKP 00 44 02.5
GYA PP **PP 00 46 18.9 +3.3**
GYA PKS **PKSdf 00 47 09.4 -2.6**
GYA SKKS 00 53 01.6
GYA SS **SS 01 04 11.0 -0.7**
GYA AMB AMB
comp=Z,140nm,8.0s
GYA LR LR
comp=N,280nm,22.6s
GYA LR LR
comp=E,190nm,24.2s
GYA LR LR
comp=Z,270nm,23.8s
AS31 Alice Springs 136.56 250 *e*PKPdf **PKPdf 00 43 35.6 -0.1**
ASAR Alice Springs 136.56 250 PKPpre PKPpre 00 43 21.6
ASAR PKP **PKPdf 00 43 36.2 +0.6**
ASAR PP **PP 00 46 16.1 -2.0**
ASAR SKPab **SKPab 00 47 09.2 +0.9**
ASAR Alice Springs 136.56 250 PKhKP PKPpre 00 43 21.6
comp=Z,2.3nm,0.9s,baz=100,slow=3.8,SNR=7.1
ASAR PKP **PKPdf 00 43 36.2 +0.6**
comp=Z,4.9nm,0.8s,baz=102,slow=2.1,SNR=19
ASAR PP **PP 00 46 16.1 -2.0**
comp=Z,1.6nm,1.0s,baz=104,slow=5.3,SNR=5.2
ASAR SKPab **SKPab 00 47 09.2 +0.9**
comp=Z,3.8nm,1.0s,baz=103,slow=2.7,SNR=7.1
LSA Lhasa 136.66 357 *e*PKIKP **PKPdf 00 43 37.9 +1.6**
LSA *e* 00 43 56.4
LSA Lhasa 136.66 357 *e*PKPdf **PKPdf 00 43 37.9 +1.6**
LSA *ep*PKPdf **pPKPdf 00 43 56.4 +0.3**
LSA *e*SKPdf **SKPdf 00 47 04.8 -0.7**
KMI Kunming 139.03 341 PKP **PKPdf 00 43 41.6 +1.1**
KMI sPKP 00 44 08.9
KMI PP PP 00 46 37.6 +5.8
KMI SS SS 01 04 41.8 -0.8
KMI AMB AMB
comp=Z,41nm,5.8s
KMI LR LR
comp=N,180nm,23.8s
KMI LR LR
comp=E,86nm,24.9s
KMI LR LR
comp=Z,220nm,28.0s
QIZ Qiongzhong 141.44 327 PKP **PKPdf 00 43 45.3 +0.7**
QIZ PP **PP 00 46 47.9 +1.1**
QIZ SS SS 01 05 13.6 +2.5
QIZ LR LR
comp=N,150nm,21.3s
QIZ LR LR
comp=Z,190nm,26.2s
FITZ Fitzroy Crossi 144.59 258 *e*PKPab **PKPdf 00 43 50.0 -0.2**
FITZ Fitzroy Crossi 144.59 258 PKPbc **PKPdf 00 43 49.9 -0.2**
comp=Z,63nm,1.0s,baz=103,slow=2.8,SNR=50
CHTO Chiang Mai 146.11 343 *e*PKP2 **PKPdf 00 43 53.1 +0.2**
CHTO Chiang Mai 146.11 343 *e*PKPdf **PKPdf 00 43 53.0 +0.2**
CHTO *ep*PKPdf **pPKPdf 00 44 11.6 -1.1**
CHTO *e*SKPbc **SKiKP 00 47 28.3 +0.8**
CMAR Chiang Mai Arr 146.45 343 PKPbc **PKPbc 00 43 54.5 -0.3**
CMAR pPKPbc pPKPbc 00 44 13.4 -0.9
CMAR SKPbc **SKiKP 00 47 29.6 +1.5**
CMAR Chiang Mai Arr 146.45 343 PKPbc **PKPbc 00 43 54.5 -0.3**
comp=Z,18nm,0.6s,baz=335,slow=3.1,SNR=90
CMAR pPKPbc pPKPbc 00 44 13.4 -0.9
comp=Z,12nm,0.8s,baz=330,slow=3.7,SNR=5.9
CMAR SKPbc **SKiKP 00 47 29.6 +1.5**
comp=Z,2.2nm,0.5s,baz=340,slow=2.8,SNR=6.3
KKM Kota Kinabalu 146.56 304 *e*PKPdf **PKPbc 00 43 55.8 +0.4**
HYB Hyderabad 147.26 19 *i* PKP **PKPdf 00 43 55.0 +0.2**
HYB *ep*PKP **pPKPdf 00 44 14.0 -0.7**
NWAO Narrogin (SRO) 148.06 229 PKPbc **PKPbc 00 43 58.8 -0.1**
NWAO Narrogin (SRO) 148.06 229 PKPbc **PKPbc 00 43 58.8 -0.1**
comp=Z,54nm,1.0s,baz=140,slow=3.9,SNR=7.2
KAPI Kappang 148.49 283 *e*PKPdf **PKPdf 00 43 57.2 +0.3**
KAPI *e*PKPbc **PKPbc 00 44 00.5 -0.1**
KAPI PKPbc **PKPbc 00 44 00.6 +0.1**
KAPI Kappang 148.49 283 PKPbc **PKPbc 00 44 00.6 +0.1**
comp=Z,38nm,1.0s,baz=119,slow=2.3,SNR=13
MBWA Marble Bar 149.88 252 *e*PKPdf **PKPdf 00 43 60.0 +1.0**
MBWA *e*PKPbc **PKPbc 00 44 04.1 +0.3**
KSM Kuching 154.00 304 *e*PKPdf **PKPdf 00 44 07.2 +1.8**
KSM *e*PKPbc **PKiKP 00 44 15.1 +1.6**
KSM *ep*PKPdf **PKPab 00 44 28.0 +1.1**

*IDC **22** 00:25:41.9±3.5, 20.81S×170.01E, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.6/17, mbtmp3.8/2, Error ellipse: s-maj=178.3km s-min=40.2km az=155.0*

NOU 22 00:25:51.4±1.5, 22.19S×170.26E, h30km, MD2.9, ML2.9, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.13**	**270**	*e*P		Pn	00 26 37.3	-1.4
BAYA				*e*S		Sn	00 27 11.9	-3.3
BAYA				AMP			00 27 14.3	
comp=Z,16nm,2.1s								
PLUM	**Mont Dore**	**3.36**	**268**	*e*P		Pn	00 26 40.8	-1.1
PLUM				*e*S		Sn	00 27 17.9	-2.8
NORM	**Noumea**	**3.50**	**269**	*e*P		Pn	00 26 42.1	-1.7
NORM				*e*S		Sn	00 27 19.8	-4.5
MVNO	**Noumea**	**3.54**	**268**	*e*P		Pn	00 26 43.2	-1.2
MVNO				*e*S		Sn	00 27 21.3	-3.9
MVNO				AMP			00 27 25.5	
comp=Z,17nm,3.3s								
DZM	**Mont Dzumac**	**3.54**	**271**	*e*P		Pn	00 26 42.6	-1.9
DZM				*e*S		Sn	00 27 21.2	-4.3
DZM				AMP			00 27 23.7	
comp=Z,640nm,0.8s								
NOUC	**Port Laguerre**	**3.67**	**271**	*e*P		Pn	00 26 48.0	+1.8
NOUC				*e*S		Sn	00 27 27.9	-0.6
NOUC				AMP			00 27 30.3	
comp=Z,117nm,2.5s								
ASAR	**Alice Springs**	**33.46**	**260**	P		P	00 32 23.1	-5.0
comp=Z,0.9nm,0.6s,baz=83,slow=8.9,SNR=12								
WRA	**Warramunga Arr**	**33.55**	**267**	P		P	00 32 22.4	-6.5
comp=Z,0.4nm,0.3s,baz=98,slow=8.5,SNR=15								
ARCES	**ARCESS Array B**	**128.15**	**345**	PKP		PKPdf	00 44 46.0	-8.0
comp=Z,1.3nm,1.0s,baz=66,slow=2.2,SNR=4.3								
GERES	**GERESS Array B**	**147.53**	**331**	PKPbc		PKPdf	00 45 24.2	-5.8
comp=Z,0.5nm,0.5s,baz=27,slow=3.5,SNR=9.8								

IDC 22 00:26:13.8±1.4, 11.59S×166.41E, h0km, mb3.9/10, mb1 4.1/10, mb1mx4.0/21, mbtmp3.9/10, MS3.2/1, Ms1 3.2/1, ms1mx2.5/24, Error ellipse: s-maj=60.4km s-min=19.3km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**21.14**	**244**	P		P	00 31 02.5	+2.0
3.3nm,0.8s,baz=80,slow=12,SNR=3.9								
CTA				LR		LR	00 36 54.1	
comp=Z,57nm,18.1s,baz=236,slow=30								
STKA	**Stephens Creek**	**30.51**	**225**	P		P	00 32 29.9	+1.0

1.8nm,0.6s,baz=31,slow=5.9,SNR=4.1
WRA Warramunga Arr 31.92 251 P P 00 32 41.0 -0.4
2.9nm,0.8s,baz=85,slow=9.1,SNR=16
ASAR Alice Springs 33.14 244 P P 00 32 51.2 -1.0
2.2nm,0.7s,baz=70,slow=9.4,SNR=20
FITZ Fitzroy Crossi 39.88 256 P P 00 33 48.4 -1.3
1.8nm,0.7s,baz=104,slow=12,SNR=5.3
SONM Songino Array 79.49 324 P P 00 38 22.9 +0.4
0.4nm,0.6s,baz=146,slow=7.2,SNR=3.7
ILAR Eielson Array 83.82 18 P P 00 38 45.1 +0.3
0.2nm,0.5s,baz=212,slow=6.1,SNR=4.7
NVAR Mina Array Bea 85.88 50 P P 00 38 56.0 0.0
0.5nm,0.7s,baz=241,slow=8.7,SNR=3.2
MKAR Makanchi Array 94.37 317 P P 00 39 36.4 +0.8
0.4nm,0.6s,baz=98,slow=7.2,SNR=6.4
YKA Yellowknife Ar 95.16 27 P P 00 39 37.8 -1.0
0.1nm,0.5s,baz=255,slow=4.4,SNR=3.0

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*IDC **22** 00:44:54.3±0.4, 15°.59S×173°.59W, h0km, mb4.8/18, mb1 5.0/20, mb1mx4.8/27, mbtmp4.8/20, ML4.1/2, MS4.1/12, Ms1 4.1/12, ms1mx3.9/27, Error ellipse: s-maj=18.3km s-min=12.2km az=133.0*
*ISCJB **22** 00:44:58.6±0.2, 16°.05S±0°.05×173°.59W±0°.04, h40km, mb4.9/84, MS4.3/14, Error ellipse: s-maj=7.7km s-min=4.3km az=151.8*
*BJI **22** 00:44:59.7, 15°.90S×173°.70W, h45km, mB5.1/15, mb4.9/20, Ms5.0/7, Ms7 4.7/9*
*NEIC **22** 00:44:59.6±0.1, 15°.95S×173°.65W, h35km, mb4.8/54, Error ellipse: s-maj=7.7km s-min=3.9km az=144.0*
*AUST **22** 00:45:02.3±0.0, 15°.91S×172°.99W, h94km, Error ellipse: s-maj=1.3km s-min=1.1km az=258.0*
ISC 22 00:45:04.2±0.3, 16°.08S±0°.07×173°.48W±0°.06, h79km, n573, σ0s84/578, mb4.8/84, 174C-167D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.71**	**38**	*e*Pn	Pn	00 45 37.6	-8.2
AFI				*e*Sn	Sn	00 46 01.9	-16
AFI	**Afiamalu**	**2.71**	**38**	Pn	Pn	00 45 37.9	-7.8
	388nm,0.3s,baz=168,slow=1.4,SNR=303						
AFI				Sn	Sn	00 46 03.4	-14
	4µm,0.3s,baz=65,slow=22,SNR=85						
NIUE	**Niue**	**4.51**	**132**	P	Pn	00 46 05.5	-4.6
	baz=4.3,SNR=64						
NIUE				S	Sn	00 46 51.8	-10
	baz=4.3,SNR=12						
MSVF	**Nonsavu**	**8.27**	**257**	*e*Pn	Pn	00 47 07.8	+6.2
RAR	**Rarotonga**	**13.95**	**114**	Pn	**Pn**	**00 48 16.4**	**-2.0**
RAR	**Rarotonga**	**13.95**	**114**	Pn	**Pn**	**00 48 16.3**	**-2.0**
	4.9nm,0.3s,baz=270,slow=3.8,SNR=4.7						
RAR				LR	LR	00 52 22.8	
	comp=Z,407nm,20.8s,baz=271,slow=32						
DZM	**Mont Dzumac**	**19.88**	**249**	*e*P	**P**	**00 49 28.2**	**-1.2**
	165nm,1.0s						
DZM				*e*LR	LR	00 54 07.7	
	2µm,27.4s						
DZM	**Mont Dzumac**	**19.88**	**249**	*e*Pn	**P**	**00 49 28.2**	**-1.2**
	73nm,0.9s						
NOUC	**Port Laguerre**	**20.01**	**249**	*e*P	**Pn**	**00 49 35.3**	**+2.1**
NFK	**Norfolk Island**	**21.43**	**230**	P	**P**	**00 49 41.7**	**-4.2**
	baz=22,SNR=5.3						
PAE	**Paea**	**22.92**	**97**	*e*P	**P**	**00 50 00.5**	**-1.3**
	12nm,1.2s						
PPT2	**Papeete2**	**22.93**	**97**	*e*P	**P**	**00 50 01.0**	**-1.0**
	79nm,1.3s						
TIAR	**Tiarei**	**23.14**	**97**	*e*P	**P**	**00 50 04.8**	**+0.8**
	79nm,1.1s						
TVO	**Taravao**	**23.24**	**98**	*e*P	**P**	**00 50 04.0**	**-0.9**
	110nm,1.2s						
URZ	**Urewera**	**23.60**	**199**	*e*P	**P**	**00 50 06.2**	**-1.8**
	32nm,0.6s						
URZ	**Urewera**	**23.60**	**199**	P	**P**	**00 50 06.7**	**-1.2**
	33nm,0.6s,baz=0.9,slow=4.6,SNR=31						
URZ				LR	LR	00 57 50.3	
	comp=Z,429nm,20.3s,baz=127,slow=33						
XMAS	**Kiritimati**	**23.99**	**43**	*e*P	**P**	**00 50 08.9**	**-2.7**
	88nm,0.8s						
PMOR	**Pomariorio Ree**	**24.67**	**91**	*e*P	**P**	**00 50 17.1**	**-0.7**
	126nm,1.2s						
RPZ	**Rata Peaks**	**30.53**	**202**	P	**P**	**00 51 09.9**	**-0.1**
RPZ	**Rata Peaks**	**30.53**	**202**	P	**P**	**00 51 09.9**	**-0.1**
	13nm,0.7s,baz=0.0,slow=7.1,SNR=6.3						
EIDS	**Eidsvold**	**34.32**	**248**	P	**P**	**00 51 41.9**	**-1.5**
	baz=35,SNR=4.1						
ARMA	**Armidale**	**34.93**	**240**	P	**P**	**00 51 49.3**	**+0.5**
	baz=35,SNR=6.6						
RMQ	**Roma**	**36.56**	**247**	P	**P**	**00 52 02.1**	**-0.5**
	baz=37,SNR=6.4						
RKT	**Rikitea**	**36.86**	**107**	*e*LR	LR	01 01 49.4	
	587nm,29.0s						
CNB	**Canberra Magne**	**38.28**	**233**	P	**P**	**00 52 17.0**	**-0.1**
	baz=39,SNR=5.1						
CTA	**Charters Tower**	**38.42**	**258**	P	**P**	**00 52 17.0**	**-1.4**
CTA	**Charters Tower**	**38.42**	**258**	P	**P**	**00 52 17.0**	**-1.4**
	6.0nm,0.7s,baz=80,slow=9.2,SNR=10						
CTAO	**Charters Tower**	**38.42**	**258**	*e*P	**P**	**00 52 16.1**	**-2.3**
	6.8nm,0.8s						
PMG	**Port Moresby**	**38.91**	**275**	*e*P	P	00 52 18.6	-4.0
	44nm,1.0s						
PMG	**Port Moresby**	**38.91**	**275**	P	**P**	**00 52 20.9**	**-1.6**
	41nm,0.9s,baz=80,slow=9.5,SNR=7.0						
CMSA	**Cobar Meteorol**	**40.15**	**240**	P	**P**	**00 52 31.9**	**-0.7**
	baz=41,SNR=39						
MTSU	**Mount Surprise**	**40.33**	**261**	P	**P**	**00 52 34.0**	**-0.4**
	baz=41,SNR=18						
QLP	**Quilpie**	**40.59**	**248**	P	**P**	**00 52 35.3**	**-1.0**
	baz=41,SNR=12						
COEN	**Coen**	**41.86**	**267**	*e*P	**P**	**00 52 46.8**	**-0.1**
	150nm,0.8s						
COEN	**Coen**	**41.86**	**267**	P	**P**	**00 52 47.5**	**+0.6**
	baz=42,SNR=14						
TOO	**Toolangi**	**41.98**	**231**	P	**P**	**00 52 47.3**	**-0.3**
	baz=42,SNR=7.6						
STKA	**Stephens Creek**	**43.63**	**241**	*e*P	**P**	**00 53 00.9**	**-0.2**
	7.6nm,0.9s						
STKA	**Stephens Creek**	**43.63**	**241**	P	**P**	**00 53 00.8**	**-0.3**
	31nm,0.8s,baz=79,slow=7.8,SNR=40						
STKA	**Stephens Creek**	**43.63**	**241**	P	**P**	**00 53 00.9**	**-0.2**
	baz=44,SNR=32						
ARPS	**Mount Arapiles**	**44.53**	**234**	P	**P**	**00 53 07.7**	**-0.5**
	baz=45,SNR=7.1						
BBOO	**Buckleboo**	**48.41**	**240**	*e*P	**P**	**00 53 37.7**	**-0.9**
	837nm,1.4s						
BBOO	**Buckleboo**	**48.41**	**240**	P	**P**	**00 53 37.9**	**-0.7**
	baz=49,SNR=18						
WRAB	**Tennant Creek**	**49.61**	**257**	*e*P	**P**	**00 53 46.6**	**-1.4**
	25nm,1.0s						
WRA	**Warramunga Arr**	**49.62**	**257**	P	**P**	**00 53 46.9**	**-1.2**
WRA	**Warramunga Arr**	**49.62**	**257**	P	**P**	**00 53 46.9**	**-1.2**
	11nm,0.7s,baz=91,slow=6.8,SNR=129						
WRA				LR	LR	01 13 43.7	
	comp=Z,171nm,21.8s,baz=0.0,slow=35						
AS31	**Alice Springs**	**49.83**	**252**	*e*P	**P**	**00 53 48.3**	**-1.3**
ASAR	**Alice Springs**	**49.83**	**252**	P	**P**	**00 53 48.6**	**-1.0**
ASAR	**Alice Springs**	**49.83**	**252**	P	**P**	**00 53 48.6**	**-1.0**
	40nm,0.7s,baz=84,slow=8.5,SNR=158						
ASAR				LR	LR	01 13 45.2	
	comp=Z,337nm,21.0s,baz=100,slow=35						
KDU	**Kakadu**	**52.35**	**266**	P	**P**	**00 54 08.0**	**-0.5**
	baz=53,SNR=9.4						
MTN	**Manton Dam**	**53.60**	**266**	P	**P**	**00 54 17.1**	**-0.6**
	baz=54,SNR=9.4						
FORT	**Forrest**	**55.04**	**244**	P	**P**	**00 54 27.1**	**-0.9**
	baz=56,SNR=9.4						
KNRA	**Kununurra**	**55.39**	**262**	P	**P**	**00 54 28.0**	**-2.8**
	baz=56,SNR=5.5						
SWI	**Sorong**	**56.50**	**280**	P	**P**	**00 54 39.1**	**+0.4**
	baz=57,SNR=5.5						
FITZ	**Fitzroy Crossi**	**58.00**	**258**	*e*P	**P**	**00 54 48.8**	**-0.4**
	7.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**58.00**	**258**	P	**P**	**00 54 49.1**	**-0.2**
	5.5nm,0.6s,baz=128,slow=5.5,SNR=30						
FITZ	**Fitzroy Crossi**	**58.00**	**258**	P	**P**	**00 54 49.0**	**-0.2**
	baz=58,SNR=19						
SBA	**Scott Base**	**62.57**	**185**	*e*P	P	00 55 23.1	+3.7
	8.5nm,0.8s						
VNDA	**Vanda**	**62.70**	**186**	P	**P**	**00 55 22.8**	**+2.6**
VNDA	**Vanda**	**62.70**	**186**	P	**P**	**00 55 22.8**	**+2.6**
	5.3nm,0.8s,baz=7.6,slow=6.3,SNR=31						
VNDA				LR	LR	01 18 30.4	
	comp=Z,170nm,21.1s,baz=86,slow=32						
MBWA	**Marble Bar**	**63.10**	**254**	*e*P	**P**	**00 55 22.5**	**-1.4**
	60nm,1.4s						
MEEK	**Meekatharra**	**63.49**	**248**	P	**P**	**00 55 26.0**	**-0.4**
	baz=64,SNR=3.6						
KLBR	**Kellerberrin**	**63.86**	**242**	P	**P**	**00 55 28.6**	**-0.2**
	baz=64,SNR=5.8						
MORW	**Morawa**	**65.53**	**245**	P	**P**	**00 55 40.3**	**+0.7**
	baz=66,SNR=3.3						
MJAR	**Matsushiro Arr**	**69.41**	**320**	LR	LR	01 23 25.8	
	comp=Z,57nm,20.6s,baz=40,slow=33						
CASY	**Casey**	**69.76**	**205**	*e*P	**P**	**00 56 06.6**	**+1.0**
	27nm,1.0s						
PKM	**Peak Mountain**	**71.85**	**44**	⇓P	**P**	**00 56 19.8**	**+0.8**
	baz=72						
OSI	**Osito Adit**	**72.43**	**45**	⇑P	**P**	**00 56 22.7**	**+0.5**
	baz=73						
ARVC	**Arvin**	**72.65**	**44**	⇑P	**P**	**00 56 23.9**	**+0.4**
	baz=73						
VES	**Vestal, Richgr**	**72.89**	**44**	⇓P	**P**	**00 56 25.1**	**+0.2**
	baz=73						
MURC	**Murrieta**	**72.91**	**47**	⇑P	**P**	**00 56 25.4**	**+0.2**
	baz=73						
BFSC	**Mount Baldy Ra**	**72.95**	**46**	⇑P	**P**	**00 56 25.4**	**-0.1**
	baz=73						
EDW2	**Edwards Air Fo**	**73.08**	**45**	⇓P	**P**	**00 56 26.4**	**+0.2**
	baz=73,SNR=6.3						
MONP	**Monument Peak**	**73.08**	**48**	⇑P	**P**	**00 56 26.6**	**+0.2**
	baz=73						
DVTC	**Desert V Tower**	**73.18**	**48**	⇑P	**P**	**00 56 26.8**	**0.0**
	baz=73						
ISA	**Isabella**	**73.19**	**44**	*e*P	**P**	**00 56 27.8**	**+1.0**
	19nm,1.3s						
ISA	**Isabella**	**73.19**	**44**	⇑P	**P**	**00 56 27.2**	**+0.4**
	baz=73,SNR=8.6						
PETK	**Petropavlovsk-**	**73.25**	**342**	P	**P**	**00 56 27.4**	**+0.7**
PETK	**Petropavlovsk-**	**73.25**	**342**	P	**P**	**00 56 27.4**	**+0.7**
	5.9nm,0.8s,baz=126,slow=8.0,SNR=7.0						
CMB	**Columbia Colle**	**73.32**	**41**	*e*P	**P**	**00 56 28.2**	**+0.8**
	13nm,1.0s						
PFO	**Pinyon Flat Ob**	**73.44**	**47**	⇑P	**P**	**00 56 28.7**	**+0.4**
	baz=74						
BBRC	**Big Bear Solar**	**73.47**	**46**	⇑P	**P**	**00 56 28.5**	**-0.2**
	baz=74						
SWSC	**Sam W. Stewart**	**73.55**	**48**	⇑P	**P**	**00 56 29.2**	**+0.4**
	baz=74						
CWC	**Cottonwood Cre**	**73.89**	**44**	⇑P	**P**	**00 56 31.3**	**+0.3**
	baz=74,SNR=6.2						
QSPA	**South Pole Qui**	**73.97**	**180**	*e*P	**P**	**00 56 32.7**	**+1.7**
	13nm,1.0s						
QSPA	**South Pole Qui**	**73.97**	**180**	P	**P**	**00 56 33.2**	**+2.3**
	13nm,0.9s,baz=36,slow=1.7,SNR=36						
BELC	**Belle Mtn. Jos**	**73.97**	**47**	⇑P	**P**	**00 56 31.8**	**+0.3**
	baz=74						
MPMC	**Manual Prospec**	**74.07**	**44**	⇑P	**P**	**00 56 32.6**	**+0.5**
	baz=74,SNR=15						
MTUM	**Tungsten Hills**	**74.10**	**43**	*e*P	**P**	**00 56 33.4**	**+1.1**
GSC	**Goldstone**	**74.12**	**45**	*e*P	**P**	**00 56 32.6**	**+0.3**
	14nm,1.1s						
GSC	**Goldstone**	**74.12**	**45**	⇓P	**P**	**00 56 32.5**	**+0.3**
	baz=74,SNR=7.0						
BC3	**Big Chuckawall**	**74.17**	**47**	⇑P	**P**	**00 56 33.1**	**+0.4**
	baz=74,SNR=5.4						
HEC	**Hector,Ludlow**	**74.19**	**46**	⇓P	**P**	**00 56 32.8**	**+0.1**
	baz=74,SNR=11						
GLA	**Glamis**	**74.30**	**48**	*e*P	**P**	**00 56 34.4**	**+1.1**
	18nm,1.1s						
GLA	**Glamis**	**74.30**	**48**	⇓P	**P**	**00 56 33.7**	**+0.4**
	baz=74,SNR=8.3						
BEKR	**Beckworth**	**74.44**	**40**	*e*P	**P**	**00 56 34.3**	**+0.2**
	6.5nm,1.1s						
WCN	**Washoe City**	**74.47**	**40**	*e*P	**P**	**00 56 34.7**	**+0.4**
	22nm,1.3s						
HUMO	**Hull Mountain**	**74.60**	**36**	*e*P	**P**	**00 56 36.3**	**+1.5**
	25nm,1.3s						
IRM	**Iron Mountain**	**74.65**	**47**	⇓P	**P**	**00 56 35.7**	**+0.4**
	baz=75,SNR=6.0						
GRAC	**Grapevine Rang**	**74.68**	**44**	⇓P	**P**	**00 56 35.7**	**+0.3**
	baz=75						
FURC	**Furnace Creek,**	**74.72**	**44**	⇑P	**P**	**00 56 36.0**	**+0.4**
	baz=75						
TUQ	**Turquoise Moun**	**74.80**	**46**	⇓P	**P**	**00 56 36.5**	**+0.3**
	baz=75,SNR=8.1						
SHOC	**Shoshone**	**74.80**	**45**	⇓P	**P**	**00 56 36.4**	**+0.2**
	baz=75						
Y12C	**Blythe**	**74.88**	**48**	⇑P	**P**	**00 56 37.1**	**+0.5**
	baz=75						
NVAR	**Mina Array Bea**	**74.88**	**42**	P	**P**	**00 56 37.3**	**+0.5**
NVAR	**Mina Array Bea**	**74.88**	**42**	P	**P**	**00 56 37.3**	**+0.5**
	6.8nm,0.8s,baz=227,slow=9.9,SNR=47						
NVAR				LR	LR	01 21 24.6	
	comp=Z,214nm,20.7s,baz=183,slow=29						
113A	**Mohawk Valley,**	**74.92**	**49**	⇓P	**P**	**00 56 37.1**	**+0.3**
	baz=75						
NV11	**Mina Array Sit**	**74.98**	**42**	*e*P	**P**	**00 56 37.7**	**+0.4**
214A	**Organ Pipe Nat**	**75.21**	**50**	⇓P	**P**	**00 56 39.2**	**+0.6**
	baz=75						
PDMCI	**Parker Dam,Lak**	**75.44**	**47**	⇓P	**P**	**00 56 40.2**	**+0.5**
	baz=76,SNR=5.1						
MOD	**Modoc**	**75.70**	**38**	*e*P	**P**	**00 56 42.0**	**+0.7**
	25nm,0.9s						
Z14A	**Wintersburg**	**75.81**	**49**	⇑P	**P**	**00 56 42.4**	**+0.4**
	baz=76						
W13A	**Hualapai Mount**	**76.03**	**47**	⇑P	**P**	**00 56 43.7**	**+0.3**
	baz=76						
Y14A	**Wickenburg**	**76.06**	**48**	⇓P	**P**	**00 56 43.8**	**+0.4**
	baz=76,SNR=10						
KSRS	**Korea Array**	**76.59**	**316**	P	**P**	**00 56 46.4**	**+0.1**
	0.3nm,0.3s,baz=118,slow=6.3,SNR=4.2						
R11A	**Troy Canyon, C**	**76.61**	**43**	⇓P	**P**	**00 56 46.9**	**+0.3**
	baz=77						
KSAR	**Wonju Array Be**	**76.61**	**316**	P	**P**	**00 56 46.4**	**0.0**
TUC	**Tucson**	**76.88**	**51**	*e*P	**P**	**00 56 49.0**	**+0.8**
	8.8nm,1.8s						
WVOR	**Wild Horse Val**	**77.01**	**38**	*e*P	**P**	**00 56 48.8**	**+0.1**
	14nm,1.1s						
X16A	**Lo Mia Camp, P**	**77.42**	**48**	⇓P	**P**	**00 56 52.0**	**+0.8**
	baz=78,SNR=15						
319A	**Douglas**	**77.57**	**52**	⇑P	**P**	**00 56 52.7**	**+0.6**
	baz=78,SNR=5.6						
CCUT	**Cedar City**	**77.66**	**45**	*e*P	**P**	**00 56 53.9**	**+1.3**
	16nm,1.2s						
U15A	**North Rim**	**77.82**	**46**	⇑P	**P**	**00 56 54.5**	**+0.9**
	baz=78,SNR=21						
WUAZ	**Wupatki**	**78.01**	**47**	*e*P	**P**	**00 56 55.3**	**+0.8**
	18nm,1.3s						
WUAZ	**Wupatki**	**78.01**	**47**	⇑P	**P**	**00 56 55.1**	**+0.6**
	baz=78,SNR=6.2						
320A	**Kipp Ranch, An**	**78.12**	**52**	⇑P	**P**	**00 56 55.9**	**+0.7**
	baz=78,SNR=6.2						
ELK	**Elko**	**78.14**	**41**	*e*P	**P**	**00 56 55.9**	**+0.7**
	6.8nm,1.1s						
220A	**Playas Peak, P**	**78.38**	**52**	⇓P	**P**	**00 56 57.5**	**+0.9**
	baz=79,SNR=17						
X18A	**Snowlake**	**78.55**	**49**	⇓P	**P**	**00 56 58.0**	**+0.4**
	baz=79						
120A	**U Bar Ranch, L**	**78.59**	**51**	⇑P	**P**	**00 56 58.6**	**+0.9**
	baz=79,SNR=6.7						
Z20A	**Nine Sixteen R**	**78.89**	**51**	⇓P	**P**	**00 57 00.5**	**+1.2**
	baz=79,SNR=13						
MVU	**Marysvale**	**78.93**	**45**	*e*P	**P**	**00 57 00.8**	**+1.2**
MSU	**Marysvale**	**78.96**	**45**	*e*P	**P**	**00 57 00.9**	**+1.2**
W18A	**Petrified Fore**	**78.99**	**49**	⇓P	**P**	**00 57 00.2**	**+0.3**
	baz=79						
221A	**Mesquite Ranch**	**79.00**	**52**	⇓P	**P**	**00 57 00.9**	**+1.0**
	baz=79						
BMO	**Blue Mountains**	**79.21**	**37**	*e*P	**P**	**00 56 60.0**	**-0.8**
	7.5nm,0.9s						
121A	**Cookes Peak, D**	**79.23**	**52**	⇓P	**P**	**00 57 01.9**	**+0.7**
	baz=79						
MFID	**Camas Ranch**	**79.26**	**39**	*e*P	**P**	**00 57 01.6**	**+0.5**
	9.1nm,1.2s						
MFID	**Camas Ranch**	**79.26**	**39**	⇓P	**P**	**00 57 01.3**	**+0.1**
	baz=80,SNR=5.8						
DUG	**Dugway**	**79.41**	**43**	*e*P	**P**	**00 57 01.8**	**-0.2**
	14nm,1.5s						
DUG	**Dugway**	**79.41**	**43**	⇓P	**P**	**00 57 02.3**	**+0.3**
	baz=80						
Y20A	**Horse Springs,**	**79.41**	**50**	⇓P	**P**	**00 57 03.5**	**+1.2**
	baz=80,SNR=13						
MDJ	**Mudanjiang**	**79.52**	**323**	P	**P**	**00 57 02.8**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.8s						
MDJ				pmax	pmax		
	comp=Z,23nm,2.8s						
222A	**Williams Famil**	**79.55**	**52**	⇑P	**P**	**00 57 03.8**	**+0.9**
	baz=80						
X20A	**Quemado**	**79.62**	**50**	⇓P	**P**	**00 57 04.2**	**+0.8**
	baz=80						
Z21A	**St. Cloud Mine**	**79.66**	**51**	⇑P	**P**	**00 57 04.8**	**+1.2**
	baz=80,SNR=16						
Q16A	**Castle Valley**	**79.84**	**45**	⇓P	**P**	**00 57 05.0**	**+0.5**
	baz=80						
W20A	**Ramah**	**79.89**	**49**	⇓P	**P**	**00 57 05.9**	**+1.1**
	baz=80,SNR=22						
I12A	**Atlanta**	**79.89**	**39**	⇑P	**P**	**00 57 04.9**	**+0.3**
	baz=80						
122A	**Conniff Cattle**	**79.89**	**52**	⇑P	**P**	**00 57 05.9**	**+1.1**
	baz=80						
Y21A	**Point of Rocks**	**79.98**	**50**	⇓P	**P**	**00 57 06.5**	**+1.1**
	baz=80,SNR=7.7						
S18A	**Hurst Farm, BI**	**80.04**	**46**	⇑P	**P**	**00 57 06.1**	**+0.4**
	baz=80						
X21A	**Alamocita Cree**	**80.09**	**50**	⇑P	**P**	**00 57 06.9**	**+0.9**
	baz=80,SNR=5.5						
Z22A	**Elephant Butte**	**80.17**	**51**	⇑P	**P**	**00 57 07.2**	**+0.9**
	baz=80,SNR=14						
HLID	**Hailey**	**80.20**	**39**	*e*P	**P**	**00 57 06.9**	**+0.6**
	comp=Z,12nm,1.2s						
HLID	**Hailey**	**80.20**	**39**	⇑P	**P**	**00 57 06.9**	**+0.6**
	baz=80,SNR=15						
V20A	**Brimhall**	**80.22**	**48**	⇓P	**P**	**00 57 07.1**	**+0.5**
	baz=80						
J13A	**Cove Ranch, Pi**	**80.26**	**39**	⇑P	**P**	**00 57 07.1**	**+0.5**
	baz=80,SNR=13						
SRU	**San Rafael**	**80.38**	**45**	⇑P	**P**	**00 57 07.9**	**+0.5**
	baz=81						
U20A	**Newcomb**	**80.45**	**48**	⇑P	**P**	**00 57 08.5**	**+0.7**
	baz=81,SNR=5.3						
Y22A	**Socorro**	**80.47**	**51**	⇓P	**P**	**00 57 08.9**	**+1.0**
	baz=81						
H12A	**Diamond D Ranc**	**80.48**	**38**	⇓P	**P**	**00 57 07.7**	**0.0**
	baz=81						
W21A	**San Fidel**	**80.50**	**49**	⇑P	**P**	**00 57 08.8**	**+0.7**
	baz=81						
324A	**Moseley Ranch,**	**80.50**	**53**	⇓P	**P**	**00 57 08.5**	**+0.3**
	baz=81						
JLU	**Jordanelle**	**80.51**	**43**	*e*P	**P**	**00 57 08.9**	**+0.8**
	comp=Z,7.3nm,1.2s						
NJ2	**Nanjing**	**80.51**	**307**	*e*P	**P**	**00 57 04.8**	**-3.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
G12A	**Big Creek, Yel**	**80.52**	**38**	⇓P	**P**	**00 57 08.2**	**+0.2**
	baz=81,SNR=13						
LAZ	**Ladron**	**80.55**	**50**	*e*P	**P**	**00 57 09.2**	**+0.9**
	comp=Z,4.7nm,1.4s						
Y22D	**IRIS PASSCAL I**	**80.56**	**51**	⇑P	**P**	**00 57 08.3**	**-0.1**
	baz=81						
LENM	**Lemitar**	**80.57**	**50**	*e*P	**P**	**00 57 09.8**	**+1.3**
I13A	**Wildhorse Cree**	**80.57**	**39**	⇑P	**P**	**00 57 08.2**	**-0.1**
	baz=81						
425A	**Indio Mountain**	**80.61**	**54**	⇓P	**P**	**00 57 09.4**	**+0.7**
	baz=81,SNR=17						
J14A	**Carey**	**80.62**	**40**	⇑P	**P**	**00 57 09.1**	**+0.6**
	baz=81						
MNTX	**Cornudas Mount**	**80.69**	**53**	*e*P	**P**	**00 57 09.1**	**+0.1**
	comp=Z,11nm,1.3s						
X22A	**Bernardo**	**80.69**	**50**	⇑P	**P**	**00 57 09.1**	**0.0**
	baz=81						
Z23A	**Rita Site, Whi**	**80.72**	**52**	⇑P	**P**	**00 57 09.7**	**+0.5**
	baz=81						
224A	**Cornudas Mount**	**80.75**	**53**	⇓P	**P**	**00 57 10.2**	**+0.8**
	baz=81,SNR=12						
626A	**Big Bend Ranch**	**80.77**	**56**	⇑P	**P**	**00 57 10.2**	**+0.7**
	baz=81,SNR=10						
BNM	**Barren Site**	**80.82**	**51**	*e*P	**P**	**00 57 10.2**	**+0.3**
	comp=Z,7.4nm,1.1s						
P18A	**Preston Nutter**	**80.82**	**44**	⇓P	**P**	**00 57 09.9**	**+0.1**
	baz=81						
V21A	**Milan**	**80.82**	**49**	⇓P	**P**	**00 57 10.7**	**+0.9**
	baz=81,SNR=16						
H13A	**Challis**	**80.84**	**38**	⇑P	**P**	**00 57 10.1**	**+0.4**
	baz=81						
MVCO	**Mesa Verde**	**80.86**	**47**	⇑P	**P**	**00 57 10.5**	**+0.4**
	baz=81						
325A	**Bean Ranch, Si**	**80.87**	**54**	⇓P	**P**	**00 57 10.4**	**+0.3**
	baz=81,SNR=21						
F12A	**Elk City**	**80.92**	**37**	⇑P	**P**	**00 57 09.9**	**-0.1**
	baz=81,SNR=13						
I14A	**Mackay**	**80.98**	**39**	⇑P	**P**	**00 57 10.6**	**+0.1**
	baz=81						
526A	**Mary Lane Ranc**	**81.01**	**55**	⇑P	**P**	**00 57 11.3**	**+0.4**
	baz=81,SNR=9.8						
W22A	**Albuquerque**	**81.05**	**50**	⇑P	**P**	**00 57 10.9**	**-0.1**
	baz=81						
TXAR	**Lajitas Array**	**81.05**	**56**	P	**P**	**00 57 11.8**	**+0.7**
TXAR	**Lajitas Array**	**81.05**	**56**	P	**P**	**00 57 11.8**	**+0.7**
	comp=Z,5.0nm,1.0s,baz=229,slow=5.8,SNR=28						
TXAR				LR	LR	01 24 35.4	
	comp=Z,138nm,21.3s,baz=345,slow=29						
124A	**Stringfield Ra**	**81.06**	**52**	⇓P	**P**	**00 57 11.8**	**+0.6**
	baz=81,SNR=9.0						
U21A	**Nageezi**	**81.09**	**48**	⇑P	**P**	**00 57 12.1**	**+0.8**
	baz=81,SNR=23						
PV04	**Paradox Valley**	**81.14**	**46**	*e*P	**P**	**00 57 12.5**	**+1.1**
Y23A	**Lovelace Mesa,**	**81.15**	**51**	⇑P	**P**	**00 57 11.9**	**+0.4**
	baz=81,SNR=6.5						
G13A	**Cobalt**	**81.15**	**38**	⇓P	**P**	**00 57 11.1**

O19A	Miners Draw (B baz=82	81.90	44	⇑P		P	00 57 15.4	+0.1
E13A	Victor baz=82	81.92	37	⇓P		P	00 57 14.9	-0.3
RRI2	Red Ridge	82.00	41	eP		P	00 57 16.1	+0.1
P20A	De Beque baz=82,SNR=5.8	82.01	45	⇑P		P	00 57 16.4	+0.4
R21A	Cimarron baz=82,SNR=7.2	82.06	46	⇓P		P	00 57 17.2	+0.8
528A	Cox Ranch, San baz=82	82.08	56	⇑P		P	00 57 17.1	+0.6
D13A	Huson baz=82,SNR=6.5	82.12	36	⇓P		P	00 57 15.4	-0.8
126A	Clayton Basin, baz=82,SNR=5.6	82.14	53	⇑P		P	00 57 17.0	+0.3
I16A	Newdale baz=82	82.16	40	⇓P		P	00 57 17.1	+0.4
Y25A	Mesa, Roswell baz=82,SNR=6.6	82.16	51	⇑P		P	00 57 17.0	+0.1
W24A	Lazy 6 Ranch, baz=82,SNR=7.1	82.19	50	⇓P		P	00 57 17.2	+0.2
G15A	Dillon baz=82	82.23	39	⇓P		P	00 57 17.2	+0.2
Q21A	Lamborn Mesa, baz=82,SNR=7.2	82.26	46	⇑P		P	00 57 18.2	+0.8
DLMT	Dillon comp=Z,8.2nm,1.1s	82.27	38	eP		P	00 57 17.5	+0.4
MSO	Missoula comp=Z,6.3nm,1.3s	82.27	37	eP		P	00 57 16.9	-0.2
MSO	Missoula baz=82	82.27	37	⇓P		P	00 57 16.6	-0.4
S22A	4UR Ranch, Cre baz=82,SNR=20	82.28	47	⇓P		P	00 57 18.4	+0.8
TPAW	Teton Pass comp=Z,10nm,1.1s	82.30	41	eP		P	00 57 18.4	+0.9
E14A	Clinton baz=82	82.30	37	⇑P		P	00 57 17.1	-0.2
BSMT	Bassoo Peak	82.36	35	eP		P	00 57 17.6	0.0
C13A	Hot Springs baz=83	82.38	36	⇓P		P	00 57 17.3	-0.2
428A	Kincaid Ranch, baz=83,SNR=5.8	82.39	55	⇓P		P	00 57 18.8	+0.7
SNOW	Snow King Moun comp=Z,16nm,1.2s	82.41	41	eP		P	00 57 19.5	+1.5
O20A	White River Ci baz=83	82.42	45	⇓P		P	00 57 18.1	0.0
Z26A	Caprock baz=83,SNR=13	82.43	52	⇓P		P	00 57 18.5	+0.3
X25A	Clemmons Ranch baz=83	82.44	51	⇑P		P	00 57 18.5	+0.2
M19A	Rock Springs baz=83	82.46	43	⇓P		P	00 57 18.3	-0.1
V24A	Rampart Ranch, baz=83	82.51	50	⇓P		P	00 57 19.0	+0.3
IMW	Indian Meadow comp=Z,14nm,1.2s	82.51	40	eP		P	00 57 18.3	-0.3
529A	Stev Forest Ra baz=83,SNR=9.2	82.52	56	⇑P		P	00 57 18.7	0.0
T23A	Casias Ranch, baz=83	82.53	48	⇓P		P	00 57 19.2	+0.4
R22A	Saguache, Gunn baz=83	82.56	47	⇑P		P	00 57 19.7	+0.7
328A	Wristen Ranch, baz=83,SNR=6.4	82.56	54	⇓P		P	00 57 18.8	-0.1
MOOW	Moose Ponds	82.56	41	eP		P	00 57 19.6	+0.8
LOHW	Long Hollow	82.58	41	eP		P	00 57 19.6	+0.7
F15A	Butte baz=83,SNR=6.9	82.58	38	⇑P		P	00 57 18.8	0.0
LRM	Limekiln Ridge	82.60	38	eP		P	00 57 19.4	+0.5
L19A	Farson baz=83,SNR=5.3	82.62	42	⇓P		P	00 57 19.2	+0.1
D14A	Greenough baz=83	82.66	37	⇓P		P	00 57 18.8	-0.3
127A	Arkansas Junct baz=83,SNR=6.6	82.66	53	⇓P		P	00 57 19.5	+0.1
P21A	Newcastle baz=83	82.67	45	⇓P		P	00 57 19.8	+0.3
G16A	Moss Hill, Enn baz=83	82.67	39	⇑P		P	00 57 19.6	+0.3
DOT	Dot Lake comp=Z,17nm,0.9s	82.68	13	eP		P	00 57 18.9	+0.2
QLMT	Earthquake Lak comp=Z,0.3nm,0.2s	82.69	39	eP		P	00 57 20.9	+1.5
CHMT	Chamberlain Mo	82.71	37	eP		P	00 57 19.5	0.0
N20A	Spence Gulch, baz=83,SNR=7.8	82.73	44	⇑P		P	00 57 20.2	+0.4
H16A	Russell Place, baz=83,SNR=11	82.74	40	⇓P		P	00 57 20.7	+1.0
Q22A	Crested Butte, baz=83	82.74	46	⇑P		P	00 57 20.3	+0.4
I17A	Pilgrim Ck. baz=83	82.75	40	⇓P		P	00 57 20.1	+0.3
U24A	Moreno Valley baz=83	82.80	49	⇓P		P	00 57 20.9	+0.6
E15A	Deer Lodge baz=83	82.80	38	⇑P		P	00 57 19.7	-0.2
Y26A	Elida baz=83	82.82	52	⇓P		P	00 57 20.5	+0.2
BW06	Boulder Array comp=Z,8.5nm,1.0s	82.82	42	eP		P	00 57 19.9	-0.3
PDAR	Pinedale Array	82.82	42	P		P	00 57 20.3	+0.1
PDAR	Pinedale Array comp=Z,5.3nm,0.9s,baz=220,slow=3.9,SNR=32	82.82	42	P		P	00 57 20.3	+0.1
PDAR				LR		LR	01 27 29.3	
	comp=Z,115nm,19.2s,baz=272,slow=31							
SMCO	Snowmass comp=Z,13nm,1.1s	82.84	46	eP		P	00 57 21.5	+0.9
S23A	Nye Farm, Mont baz=83	82.85	48	⇓P		P	00 57 20.9	+0.4
W25A	X Bar L Ranch, baz=83,SNR=5.5	82.89	50	⇑P		P	00 57 20.5	-0.1
O21A	Pagoda baz=83	82.97	45	⇑P		P	00 57 21.0	0.0
429A	Davenport Ranc baz=83,SNR=17	82.98	55	⇓P		P	00 57 21.2	+0.2
H17A	Grant Village baz=83	82.99	40	⇓P		P	00 57 21.7	+0.7
228A	UT Block 9, Go baz=83	83.02	54	⇑P		P	00 57 21.5	+0.3
Z27A	Tatum baz=83	83.03	53	⇑P		P	00 57 21.2	-0.1
V25A	Rancho No Teng baz=83,SNR=17	83.04	50	⇓P		P	00 57 21.9	+0.5
COLA	College comp=Z,8.3nm,0.8s	83.04	11	eP		P	00 57 20.1	-0.3
F16A	Kennard Place, baz=83	83.07	38	⇑P		P	00 57 21.4	+0.2
X26A	CR and CF Fran baz=83,SNR=5.8	83.09	51	⇑P		P	00 57 21.7	+0.1
M20A	Sweetwater, Wa baz=83,SNR=5.8	83.10	43	⇑P		P	00 57 21.9	+0.3
I18A	Diamond G Ranc baz=83	83.12	41	⇓P		P	00 57 21.7	0.0
ILAR	Eielson Array	83.12	11	P		P	00 57 20.3	-0.6
ILAR	Eielson Array comp=Z,1.7nm,0.5s,baz=232,slow=6.2,SNR=57	83.12	11	P		P	00 57 20.3	-0.6
P22A	Eagle baz=83	83.17	46	⇑P		P	00 57 22.1	0.0
LKWY	Lake comp=Z,8.7nm,1.0s	83.19	40	eP		P	00 57 23.4	+1.3
R23A	Moffat baz=83,SNR=7.1	83.19	47	⇓P		P	00 57 22.8	+0.5
N21A	Black Mountain baz=83,SNR=12	83.20	44	⇓P		P	00 57 22.6	+0.4
D15A	Lincoln baz=83	83.20	37	⇓P		P	00 57 21.8	-0.2
SDCO	Great Sand Dun comp=Z,8.5nm,1.2s	83.23	48	eP		P	00 57 22.6	+0.1
530A	J-C Ranch, Com baz=83	83.23	56	⇓P		P	00 57 22.8	+0.5
L20A	Wamsutter baz=83,SNR=12	83.24	43	⇓P		P	00 57 22.9	+0.5
329A	Wagon Wheel Ra baz=83,SNR=8.9	83.25	55	⇓P		P	00 57 22.6	+0.2
T24A	Torres, Weston baz=83,SNR=7.9	83.25	49	⇓P		P	00 57 23.2	+0.6
Y27A	Causey baz=84,SNR=9.4	83.30	52	⇑P		P	00 57 22.7	0.0
K19A	Absolon Red Bu baz=84	83.31	42	⇑P		P	00 57 22.2	-0.5
128A	Castleberry Fa baz=84,SNR=9.7	83.31	53	⇓P		P	00 57 22.8	+0.1
W26A	Owens Ranch, T baz=84	83.35	51	⇑P		P	00 57 22.9	0.0
G17A	Pierce Place, baz=84	83.36	39	⇓P		P	00 57 23.1	+0.3
S24A	Houchin Ranch, baz=84,SNR=11	83.39	48	⇑P		P	00 57 23.8	+0.5
J19A	Crowheart baz=84,SNR=9.8	83.39	42	⇑P		P	00 57 22.8	-0.2
E16A	East Helena baz=84,SNR=6.2	83.43	38	⇓P		P	00 57 23.0	-0.1
U25A	Circle Dot Ran baz=84,SNR=10	83.43	49	⇑P		P	00 57 23.6	+0.1
B14A	Marquette Ranc baz=84	83.48	36	⇓P		P	00 57 23.0	-0.4
Q23A	Hartsel baz=84	83.50	47	⇓P		P	00 57 23.9	0.0
C15A	Salmond Ranch, baz=84	83.55	36	⇑P		P	00 57 23.3	-0.3
K20A	Yellowstone Ra baz=84	83.55	42	⇓P		P	00 57 23.6	-0.3
430A	Baggett Ranch, baz=84	83.56	56	⇓P		P	00 57 24.4	+0.3
631A	Perdido Creek baz=84	83.56	57	⇑P		P	00 57 24.2	+0.2
229A	Bryant Ranch, baz=84	83.57	54	⇑P		P	00 57 24.6	+0.5
O22A	Kremmling baz=84,SNR=7.7	83.58	45	⇓P		P	00 57 24.5	+0.3
V26A	Tequesquite Ra baz=84,SNR=7.0	83.63	50	⇓P		P	00 57 24.2	-0.2
MSTX	Muleshoe baz=84,SNR=14	83.63	52	⇓P		P	00 57 24.5	0.0
Z28A	Tucker Farm, M baz=84	83.65	53	⇓P		P	00 57 24.5	0.0
X27A	F and S Farms, baz=84	83.67	51	⇑P		P	00 57 24.8	+0.2
M21A	Separation Pea baz=84,SNR=11	83.69	44	⇑P		P	00 57 24.7	0.0
H18A	Shoshone NF, C baz=84	83.70	40	⇓P		P	00 57 24.4	-0.2
F17A	Fitzpatrick Pl baz=84	83.71	39	⇑P		P	00 57 24.8	+0.2
P23A	Jefferson baz=84	83.71	46	⇑P		P	00 57 24.5	-0.5
R24A	Sanders Place, baz=84,SNR=6.0	83.72	47	⇑P		P	00 57 25.6	+0.7
A14A	Double T Ranch baz=84	83.73	35	⇓P		P	00 57 24.5	-0.1
T25A	Trinidad baz=84,SNR=5.2	83.74	49	⇓P		P	00 57 25.0	0.0
D16A	Dana Ranch, Ca baz=84	83.76	37	⇑P		P	00 57 24.6	-0.2
129A	Stewart Farms, baz=84	83.79	54	⇑P		P	00 57 25.3	+0.1
I19A	Meeteetse baz=84,SNR=5.8	83.80	41	⇓P		P	00 57 25.3	+0.2
330A	Mertzon baz=84	83.85	55	⇓P		P	00 57 26.6	+1.0
B15A	Bradely Ranch, baz=84	83.86	36	⇓P		P	00 57 24.5	-0.7
L21A	Rawlins baz=84,SNR=5.7	83.86	43	⇓P		P	00 57 25.2	-0.3
W27A	Bowe Ranch, En baz=84,SNR=16	83.86	51	⇑P		P	00 57 25.5	-0.1
531A	Rocksprings baz=84	83.87	56	⇓P		P	00 57 26.3	+0.7
E17A	Martinsdale baz=84	83.88	38	⇑P		P	00 57 24.8	-0.7
U26A	Atchley Ranch, baz=84,SNR=10	83.91	50	⇓P		P	00 57 26.0	+0.1
N22A	Wattenberg Ran baz=84,SNR=6.4	83.93	45	⇑P		P	00 57 26.4	+0.4
S25A	Robets Cordova baz=84	83.95	48	⇓P		P	00 57 25.6	-0.5
Y28A	McKinney Farm, baz=84	84.01	52	⇓P		P	00 57 26.4	+0.1
Q24A	Divide baz=84	84.01	47	⇑P		P	00 57 26.5	0.0
431A	Sora baz=84	84.02	56	⇓P		P	00 57 26.6	+0.2
O23A	Lake Granby, G baz=84,SNR=5.0	84.03	45	⇓P		P	00 57 26.9	+0.4
J20A	Shoshoni baz=84,SNR=11	84.05	42	⇑P		P	00 57 26.7	+0.4
C16A	Fuhringer Ranc baz=84	84.05	37	⇑P		P	00 57 25.7	-0.5
ISCO	Idaho Springs comp=Z,15nm,1.8s	84.06	46	eP		P	00 57 26.9	+0.2
ISCO	Idaho Springs baz=84	84.06	46	⇓P		P	00 57 26.6	-0.1
G18A	Lazy EL Ranch, baz=84	84.08	40	⇑P		P	00 57 26.3	-0.2
230A	Sterling City baz=84	84.09	55	⇑P		P	00 57 26.8	+0.1
M22A	Cedar Creek Ra baz=84	84.11	44	⇓P		P	00 57 26.7	-0.2
H19A	Powell baz=84	84.12	40	⇓P		P	00 57 27.1	+0.4
A15A	Johnson Ranch, baz=84	84.12	35	⇑P		P	00 57 26.6	+0.1
RLMT	Red Lodge comp=Z,6.1nm,1.0s	84.16	40	eP		P	00 57 27.6	+0.6
Z29A	Hungry Hill Ra baz=84	84.16	53	⇓P		P	00 57 27.1	0.0
632A	Uvalde baz=84	84.24	57	⇓P		P	00 57 27.2	-0.2
K21A	Alcova baz=84	84.25	43	⇑P		P	00 57 27.2	-0.3
R25A	Fountain Ranch baz=84	84.27	48	⇑P		P	00 57 27.8	+0.2
F18A	Big Timber baz=84	84.28	39	⇑P		P	00 57 27.3	-0.1
X28A	Dimmitt baz=84	84.29	52	⇑P		P	00 57 27.8	0.0
I20A	Worland baz=84,SNR=8.7	84.31	41	⇑P		P	00 57 27.6	-0.1
V27A	Dan Oppiter Fa baz=84	84.32	50	⇑P		P	00 57 27.6	-0.3
N23A	Red Feather La baz=84	84.32	45	⇑P		P	00 57 27.8	-0.2
D17A	Six Diamond Ra baz=84	84.33	38	⇑P		P	00 57 27.7	0.0
T26A	Comanche Natio baz=84	84.35	49	⇑P		P	00 57 27.8	-0.3
532A	Rocksprings baz=85	84.37	57	⇓P		P	00 57 28.4	+0.2
B16A	M & M Farms, S baz=85	84.39	36	⇑P		P	00 57 27.2	-0.7
331A	San Angelo baz=85	84.40	55	⇓P		P	00 57 28.2	-0.1
Y29A	Porterfield Fa baz=85,SNR=5.3	84.43	53	⇑P		P	00 57 28.4	0.0
J21A	Lysite baz=85,SNR=16	84.46	42	⇓P		P	00 57 28.5	0.0
130A	Snyder baz=85	84.48	54	⇑P		P	00 57 28.9	+0.2
E18A	Harlowton baz=85	84.49	38	⇓P		P	00 57 28.8	+0.3
L22A	Ellis Ranch, M baz=85	84.51	44	⇑P		P	00 57 28.6	-0.2
C17A	Wharram Farm, baz=85	84.53	37	⇑P		P	00 57 28.6	0.0
O24A	Longmont baz=85	84.57	46	⇓P		P	00 57 29.8	+0.7
JCT	Junction City baz=85	84.59	56	⇓P		P	00 57 29.4	+0.2
U27A	Thompson Grove baz=85	84.60	50	⇓P		P	00 57 29.1	-0.2
Z30A	Sanderson Ranc baz=85,SNR=12	84.62	53	⇓P		P	00 57 29.1	-0.2
S26A	Kim baz=85	84.63	49	⇓P		P	00 57 29.1	-0.4
X29A	Tulia baz=85	84.64	52	⇑P		P	00 57 29.4	-0.1
H20A	Greybull baz=85	84.64	41	⇑P		P	00 57 28.8	-0.5
F19A	Roth Farm, Mol baz=85	84.72	39	⇑P		P	00 57 29.6	-0.1
M23A	Laramie baz=85	84.73	44	⇓P		P	00 57 29.7	-0.2
231A	Bronte baz=85	84.73	55	⇑P		P	00 57 29.7	-0.3
K22A	Casper baz=85	84.73	43	⇓P		P	00 57 29.1	-0.8
A16A	West Butte Ran baz=85	84.74	36	⇓P		P	00 57 29.2	-0.5
432A	Menard baz=85	84.74	56	⇑P		P	00 57 29.9	-0.1
V28A	Channing baz=85	84.77	51	⇓P		P	00 57 30.0	-0.1
I21A	Big Trails, Te baz=85,SNR=6.8	84.77	42	⇓P		P	00 57 29.7	-0.4
COLD	Coldfoot	84.82	9	eP		P	00 57 30.5	+1.0
AMTX	Amarillo	84.83	52	eP		P	00 57 30.4	0.0
	comp=Z,22nm,0.9s							
B17A	L&G Farms, Che baz=85	84.85	37	⇓P		P	00 57 30.0	-0.2
D18A	Linhart Farms, baz=85	84.87	38	⇑P		P	00 57 29.9	-0.5
R26A	Arlington baz=85	84.93	48	⇓P		P	00 57 30.8	-0.1
P25A	Willow Gulch B baz=85	84.93	47	⇑P		P	00 57 30.9	-0.1
T27A	Campo baz=85	84.94	49	⇑P		P	00 57 31.0	0.0
W29A	Amraillo baz=85	84.95	51	⇑P		P	00 57 31.1	+0.1
131A	Roby baz=85	84.95	54	⇓P		P	00 57 31.0	0.0
332A	Millersview baz=85	84.97	56	⇓P		P	00 57 31.6	+0.4
N24A	Carr baz=85	85.01	45	⇑P		P	00 57 30.9	-0.4
U28A	Mallet baz=85	85.02	50	⇓P		P	00 57 31.3	0.0
Y30A	Stafford Cattl baz=85	85.03	53	⇑P		P	00 57 31.4	0.0
L23A	Garrett baz=85,SNR=6.2	85.03	44	⇓P		P	00 57 31.3	-0.2
E19A	Rath Farm, Rou baz=85	85.11	39	⇓P		P	00 57 31.8	+0.2
Q26A	Hugo baz=85	85.14	47	⇓P		P	00 57 32.5	+0.5
F20A	Billings baz=85	85.18	40	⇑P		P	00 57 31.5	-0.4
232A	Coleman baz=85	85.24	55	⇑P		P	00 57 32.7	+0.2
A17A	Triple J Farms baz=85	85.24	36	⇓P		P	00 57 32.2	0.0
X30A	Coker Ranch, T baz=85	85.27	52	⇑P		P	00 57 32.6	0.0
I22A	9 Mile Ranch, baz=86	85.33	42	⇓P		P	00 57 32.6	-0.2
R27A	Eads baz=86	85.39	48	⇑P		P	00 57 33.2	0.0
Z31A	Sharp Cattle R baz=86	85.39	54	⇓P		P	00 57 33.4	+0.2
B18A	Beardsley Farm baz=86	85.49	37	⇓P		P	00 57 33.4	0.0
L24A	Wheatland baz=86	85.51	44	⇓P		P	00 57 33.6	-0.1
ABTX	Abilene, Hawle baz=86	85.52	54	⇑P		P	00 57 34.1	+0.3
E20A	Meyer Farm, Mu baz=86	85.53	39	⇓P		P	00 57 33.8	+0.2
Y31A	Rekieta Farm, baz=86	85.55	53	⇑P		P	00 57 34.0	+0.1
C19A	Slack Wire Ran baz=86	85.58	38	⇓P		P	00 57 34.1	+0.3
H22A	Clearmont baz=86	85.73	41	⇑P		P	00 57 35.1	+0.4
D20A	Manuel Ranch, baz=86	85.81	39	⇓P		P	00 57 35.3	+0.3
BJI	Beijing	85.88	314		P	P	00 57 36.1	+0.7
BJI					S	S	01 08 06.9	+4.4
BJI					SS	SS	01 13 45.0	+3.1
BJI					pmax	pmax		
	comp=Z,9.0nm,1.1s							
BJI					pmax	pmax		
	comp=Z,58nm,4.8s							
BJI					LR	LR		
	comp=N,94nm,28.4s							
BJI					LR	LR		
	comp=E,95nm,28.4s							
BJI					LR	LR		
	comp=Z,130nm,37.5s							
Z32A	Haskell baz=86	85.90	54	⇑P		P	00 57 36.1	+0.4
B19A	Brinkman Farms baz=86	86.00	37	⇓P		P	00 57 36.6	+0.8
X31A	McDonald Ranch baz=86	86.02	52	⇓P		P	00 57 37.0	+0.7
R28A	Tribune baz=86	86.12	48	⇓P		P	00 57 37.3	+0.5
C20A	Veseth Ranch, baz=86	86.19	38	⇑P		P	00 57 37.3	+0.5
Y32A	R-V Farms, Ver baz=86	86.19	53	⇑P		P	00 57 37.4	+0.2
U30A	WK&E Inc. Balk baz=86	86.25	50	⇑P		P	00 57 37.7	+0.3
W31A	Holland Ranch, baz=86	86.26	52	⇓P		P	00 57 37.6	+0.1
F22A	Rosebud baz=86	86.34	40	⇓P		P	00 57 37.6	-0.1
V31A	Spring Creek L baz=87	86.56	51	⇓P		P	00 57 40.3	+1.3
H24A	Dirks Ranch, A baz=87	86.95	42	⇓P		P	00 57 40.3	-0.4
K26A	Motz Farm, Whi baz=87	86.97	44	⇓P		P	00 57 41.0	+0.2
WHTX	Lake Whitney baz=87	87.01	56	⇑P		P	00 57 41.9	+0.7
MAW	Mawson	87.13	199		P	P	00 57 42.6	+1.5
MAW	Mawson comp=Z,6.1nm,0.7s,baz=144,slow=8.5,SNR=10	87.13	199		P	P	00 57 42.6	+1.5
T31A	Randall Ranch, baz=87	87.19	50	⇑P		P	00 57 42.7	+0.8
R30A	Dighton baz=87	87.20	49	⇓P		P	00 57 42.7	+0.7
C22A	Vida baz=88	87.47	39	⇑P		P	00 57 43.5	+0.5
C23A	Lambert baz=88	87.92	39	⇓P		P	00 57 45.6	+0.5
D24A	Glendive baz=88	88.13	40	⇑P		P	00 57 47.1	+0.9
GYA	Guiyang	88.29	298		eP	P	00 57 47.6	0.0
GYA					pP	pP	00 57 58.8	-10
GYA					sP	sP	00 58 02.3	-15
GYA					PP	PP	01 01 16.9	+0.7
GYA					SKS	SKSac	01 08 10.5	+0.7
GYA					S	S	01 08 26.8	+0.2
GYA					sS	ScS	01 08 43.3	+11
GYA					pmax	pmax		
	comp=Z,10.0nm,1.0s							
GYA					pmax	pmax		
	comp=Z,90nm,5.9s							
XAN	Xi'an	88.97	306		P	P	00 57 51.4	+0.9
XAN					pP	PcP	00 58 01.1	+9.2
XAN					pmax	pmax		
	comp=Z,17nm,6.1s							
PLCA	Paso Flores comp=Z,98nm,18.9s,baz=360,slow=29	89.11	132		LR	LR	01 27 59.3	
HHC	Hu-ho-hao-te	89.43	313		eP	P	00 57 51.5	-1.1
HHC					sP	sP	00 58 15.0	-7.5
HHC					PP	PP	01 01 25.4	+0.4
HHC					SKS	SKSac	01 08 14.4	-1.5
HHC					S	S	01 08 34.0	-2.6
HHC					sS	sS	01 09 03.0	-10
HHC					SS	SS	01 14 33.4	-0.6
HHC					pmax	pmax		
	comp=Z,50nm,0.7s							
HHC					pmax	pmax		
	comp=Z,150nm,6.8s							
HHC					LR	LR		
	comp=N,270nm,16.8s							
HHC					LR	LR		
	comp=E,190nm,17.8s							
HHC					LR	LR		
	comp=Z,250nm,17.4s							
YKA	Yellowknife Ar	90.75	23		P	P	00 57 58.0	-0.1
YKA	Yellowknife Ar comp=Z,1.1nm,0.9s,baz=238,slow=4.3,SNR=16	90.75	23		P	P	00 57 57.9	-0.1
KMI	Kunming	91.25	296		P	P	00 58 01.3	-0.2
KMI					pmax	pmax		
	comp=Z,14nm,0.6s							
JTS	JuntasAbangare comp=Z,111nm,1.1s	91.41	80	eP		P	00 58 04.4	+2.1
SYO	Syowa Base	91.92	191	⇑eP		P	00 58 02.8	-0.7
CD2	Chengdu	92.10	301		P	P	00 58 05.0	-0.1
CD2					pP	pP	00 58 16.1	-10
CD2					sP	sP	00 58 20.3	-15
CD2					PP	PP	01 01 47.0	+0.8
CD2					SKS	SKSac	01 08 33.3	+1.7
CD2					S	S	01 09 01.1	-0.2
CD2					sS	sS	01 09 19.8	-18
CD2					SS	SS	01 15 13.3	+0.5
CD2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
CD2					pmax	pmax		
	comp=Z,80nm,5.2s							
CD2					LR	LR		

comp=N,500nm,21.1s
CD2 LR LR
comp=E,490nm,22.0s
CD2 LR LR
comp=Z,390nm,25.4s
SNAA Sanae 92.23 177 *e*P **P 00 58 06.5 +1.4**
SNAA Sanae 92.23 177 *e*P **P 00 58 05.4 +0.3**
CMAR Chiang Mai Arr 92.75 288 P **P 00 58 09.1 +0.7**
CMAR Chiang Mai Arr 92.75 288 P **P 00 58 09.1 +0.7**
comp=Z,1.2nm,0.6s,baz=113,slow=3.0,SNR=9.3
VNA1 Neumayer--Stat 92.88 175 *e*P **P 00 58 10.4 +2.5**
LZH Lanzhou 93.56 306 *e*P P 00 58 07.5 -4.4
LZH pP pP 00 58 23.3 -10
LZH sP sP 00 58 29.8 -12
LZH pmax pmax
comp=Z,17nm,1.0s
ULM Lac du Bonnet 94.51 39 LR LR 01 33 02.7
comp=Z,141nm,21.7s,baz=286,slow=31
SPMN St. Paul 94.86 44 ⇓P **P 00 58 17.7 +0.2**
baz=95
GTA Gaotai 97.54 309 *e*P Pdif 00 58 31.3 +1.3
GTA pP pP 00 58 48.4 -3.1
GTA pmax pmax
comp=Z,2.0nm,0.9s
LPAZ La Paz 99.65 110 LR LR 01 32 19.7
comp=Z,88nm,20.9s,baz=63,slow=28
MKAR Makanchi Array 111.25 314 PKiKP **PKiKP 01 03 28.7 -0.3**
MKAR Makanchi Array 111.25 314 PKiKP **PKiKP 01 03 28.7 -0.3**
comp=Z,0.6nm,0.7s,baz=226,slow=0.9,SNR=7.1
KBL Kabul 121.44 301 *e*PKPdf **PKPdf 01 03 49.7 +0.6**
ARCES ARCESS Array B 125.27 352 PKP **PKPdf 01 03 55.7 +0.5**
ARCES ARCESS Array B 125.27 352 PKP **PKPdf 01 03 55.7 +0.5**
comp=Z,2.2nm,0.5s,baz=38,slow=1.0,SNR=36
JOF Joensuu 130.11 345 *ep* **PKPdf 01 04 04.3 -0.3**
comp=Z,3.6nm,0.6s
KAF Kangasniemi 131.94 348 *ep* **PKPdf 01 04 07.5 -0.6**
comp=Z,2.5nm,0.6s
BOSA Boshof 132.01 202 PKP **PKPdf 01 04 10.3 +0.8**
BOSA Boshof 132.01 202 PKP **PKPdf 01 04 10.3 +0.8**
comp=Z,1.9nm,0.7s,baz=228,slow=6.9,SNR=5.3
FINES FINESS Array B 132.59 347 PKP **PKPdf 01 04 09.3 0.0**
FINES FINESS Array B 132.59 347 PKP **PKPdf 01 04 09.3 0.0**
comp=Z,1.3nm,0.5s,baz=19,slow=2.6,SNR=13
AKASG Malin Array Be 140.93 337 PKP **PKPdf 01 04 25.7 +0.7**
AKASG Malin Array Be 140.93 337 PKP **PKPdf 01 04 25.7 +0.7**
comp=Z,1.0nm,0.5s,baz=25,slow=2.8,SNR=4.6
CLL Collm 144.48 353 *i* PKPdf **PKPdf 01 04 30.9 -0.4**
comp=Z,4.0nm,0.7s
CLL *ep*PKiKP pPKiKP 01 04 47.0 -10
BRG Berggiesshubel 144.78 352 *e*PKP **PKPdf 01 04 32.2 +0.3**
comp=Z,1.4nm,0.6s
BRG Berggiesshubel 144.78 352 *e*PKP **PKPdf 01 04 32.2 +0.3**
comp=Z,1.0nm,0.6s
KOLS Kolonicke sedl 144.79 342 *e*PKP **PKPdf 01 04 31.8 -0.2**
UPC Upice 144.81 349 *e*PKP **PKPdf 01 04 31.9 -0.1**
UPC *es*PKP 01 04 49.3
NIE Niedzica 144.90 344 *e*PX **PKPab 01 04 32.2 +0.7**
DPC Dobruska-Polom 144.91 349 *e*PKP **PKPdf 01 04 32.6 +0.4**
DPC *es*PKP 01 04 50.5
BUR08 Bucovina Ar. S 144.95 338 *e*PKPdf **PKPdf 01 04 32.2 -0.2**
BURAR Bucovina Array 144.97 338 ⇓*i*P **PKPab 01 04 30.1 -1.8**
PVCC Panska Ves 145.03 351 *e*PKP **PKPdf 01 04 32.9 +0.6**
OKC Ostrava-Krasne 145.03 347 *e*PKP **PKPdf 01 04 31.8 -0.6**
OKC *ex* x 01 04 52.1
CRVS Cervenica-Dubn 145.06 343 *e*PKP **PKPbc 01 04 31.4 -0.6**
KMBO Kilima Mbogo 145.17 243 *e*PKPbc **PKPdf 01 04 35.1 +1.1**
KMBO Kilima Mbogo 145.17 243 PKPbc **PKPdf 01 04 34.8 +0.8**
comp=Z,6.6nm,1.0s,baz=74,slow=3.3,SNR=13
MORC Moravsky Berou 145.22 347 *e*PKPbc **PKPdf 01 04 32.5 -0.3**
MORC Moravsky Berou 145.22 347 ⇓*i*P **PKPdf 01 04 33.2 +0.4**
TESR Tescani 145.33 335 ⇑*i*P **PKPab 01 04 33.3 +0.2**
GZT Gaziantep 145.35 314 *i* P **PKPab 01 04 33.7 0.0**
CTKT Corum 145.39 321 *i* P **PKPab 01 04 34.6 +0.8**
TRPA Tarpa 145.43 341 ⇑*i*P **PKPab 01 04 33.8 +0.4**
TRPA Tarpa 145.43 341 ⇑*e*PKPbc **PKPab 01 04 33.9 +0.5**
TLCR 145.45 332 ⇑*i*P **PKPab 01 04 34.0 +0.4**
PRU Pruhonice 145.56 351 *e*PKP **PKPab 01 04 34.1 +0.3**
NKC Novy Kostel 145.60 353 *e*PKP **PKPdf 01 04 33.0 -0.4**
BCLA Clavier 145.73 1 PKP **PKPab 01 04 35.6 +1.2**
CFR Carcaliu 145.76 332 ⇑*i*P **PKPab 01 04 34.5 -0.2**
VRI Vrincioaia 145.82 335 ⇑*i*P **PKPab 01 04 35.2 +0.2**
VRAC Vranov 145.86 348 ⇑*i*P **PKPab 01 04 35.6 +0.6**
ANDN Andirin 146.08 315 *i* P **PKPab 01 04 36.3 -0.1**
VYHS Vyhne 146.13 345 *e*PKP **PKPab 01 04 36.4 +0.3**
TIRR Tirgusor 146.19 331 *e*PKPbc **PKPab 01 04 36.0 -0.4**
TIRR Tirgusor 146.19 331 ⇑*i*P **PKPab 01 04 36.4 0.0**
CDAG Cicekdag 146.24 320 *i* P **PKPbc 01 04 35.9 -0.2**
DOPR Dopca 146.28 336 ⇑*i*P **PKPab 01 04 37.3 +0.6**
PSZ Piszkesteto 146.39 344 ⇑*e*PKPdf **PKPab 01 04 38.0 +0.8**
SMOL Smolenice 146.44 347 *e*PKP **PKPab 01 04 37.7 +0.5**
MLR Muntele Rosu 146.45 335 ⇓*i*P **PKPab 01 04 37.3 -0.3**
WLF Walferdange 146.50 0 PKP **PKPab 01 04 38.0 +0.6**
WLF Walferdange 146.50 0 *e*PKPbc **PKPab 01 04 37.9 +0.5**
WLF *ep*PKPdf **pPKPdf 01 04 53.3 -4.0**
ISR Istrita 146.50 334 ⇑*i*P **PKPab 01 04 37.6 -0.1**
KHC Kasperske Hory 146.54 352 *e*PKPbc **PKPab 01 04 37.2 -0.5**
KHC Kasperske Hory 146.54 352 *e*PKP **PKPab 01 04 37.3 -0.3**
KHC *ex* x 01 04 55.7
DRGR 146.55 340 ⇑*i*P **PKPab 01 04 37.3 -0.5**
BR131 Keskin Array S 146.63 320 *e*PKPbc **PKPab 01 04 37.8 -0.7**
BRTR Keskin Array B 146.63 320 *e*PKPbc **PKPab 01 04 37.6 -0.9**
BRTR Keskin Array B 146.63 320 PKPbc **PKPab 01 04 37.6 -0.9**
comp=Z,9.4nm,0.7s,baz=115,slow=2.2,SNR=74
COBT Iskenderun 146.68 313 *i* P **PKPdf 01 04 35.2 -0.7**
GERES GERESS Array B 146.80 351 PKPbc **PKPab 01 04 37.8 -0.9**
GERES GERESS Array B 146.80 351 PKPbc **PKPab 01 04 37.8 -0.9**
comp=Z,1.7nm,0.6s,baz=21,slow=3.0,SNR=15
ZST Bratislava 146.81 347 *e*PKP **PKPab 01 04 37.6 -1.1**
VOIR 146.85 336 ⇑*i*P **PKPab 01 04 39.0 -0.1**
SULR 146.98 334 ⇓*i*P **PKPdf 01 04 35.5 -0.3**
YAYL Yayladag 147.02 313 *i* P **PKPdf 01 04 36.0 -0.3**
BBAL Bala 147.06 320 *i* P **PKPab 01 04 38.7 -1.4**
ARR Arges 147.07 336 ⇑*i*P **PKPab 01 04 40.0 +0.1**
GULE Gulek 147.29 316 *i* P **PKPbc 01 04 39.1 -0.2**
CONA Conrad Observa 147.32 348 ⇓*i*PKPab **PKPab 01 04 40.2 -0.7**
comp=Z,5.3nm,0.6s
SOP Sopron 147.41 347 ⇑*e*PKPdf **PKPab 01 04 40.4 -0.7**
BFO Black Forest 147.81 358 *e*PKPbc **PKPbc 01 04 40.8 +0.7**
BZS Buzias 147.94 340 ⇑*i*P **PKPbc 01 04 41.2 +0.7**
PKSM Moragy 148.30 344 ⇑*e*PKPdf **PKPdf 01 04 38.8 +0.9**
KDHN Kadinhani 148.30 320 *i* P **PKPbc 01 04 41.6 -0.3**
RETA Reutte 148.49 354 ⇑*i*PKiKP **PKPbc 01 04 42.9 +0.9**
comp=Z,1.8nm,0.5s
MOTA Moosalm 148.59 354 ⇑*i*PKiKP **PKPbc 01 04 43.0 +0.6**
comp=Z,6.3nm,1.2s
WTTA Wattenberg 148.62 353 ⇓*i*PKiKP **PKPbc 01 04 43.3 +0.9**
comp=Z,6.0nm,0.5s
SOKA Soboth 148.68 349 ⇑*i*PKPbc **PKPbc 01 04 40.2 -2.3**
comp=Z,2.0nm,0.6s
ABTA Abfaltersbach 149.02 352 ⇑*i*PKiKP **PKPbc 01 04 43.8 +0.5**
comp=Z,6.8nm,0.7s
MPEP Malo Peshtene 149.10 335 P **PKPbc 01 04 44.4 +0.8**
CSS Prodhromos 149.51 313 *e*PKPdf **PKPdf 01 04 41.1 +0.8**
CSS *e*PKPbc **PKiKP 01 04 45.2 -0.8**
VISS Visnje 149.56 348 *i* PKPdf **PKPbc 01 04 45.2 +0.6**
TUE Stuetta 149.61 356 *e*PKPbc **PKPbc 01 04 46.2 +1.2**
JAVS Javornik 149.61 350 *i* PKPdf **PKPbc 01 04 45.1 +0.2**
BOJS Bojanci 149.76 348 *i* PKPdf **PKPbc 01 04 46.1 +0.9**
VTS Vitosha 149.96 335 ⇑*i*P **PKPbc 01 04 46.8 +0.9**
VTS Vitosha 149.96 335 P **PKPbc 01 04 46.6 +0.7**
KHAL Karahalli 149.99 322 *i* P **PKPbc 01 04 45.0 -1.1**
BALY Balya 150.09 326 *i* P **PKPdf 01 04 42.3 +1.2**
MANT Manisa 150.45 323 *i* P **PKPbc 01 04 45.5 -1.8**
MMB Musomiste 150.56 333 P **PKPbc 01 04 47.5 +0.3**
KKB Krupnik 150.61 334 P **PKPbc 01 04 47.7 +0.4**
SSB Saint Sauveur 150.84 3 *e*PKPbc **PKPbc 01 04 48.0 +0.2**
SSB *es*PKPdf **sPKPdf 01 05 06.0 -6.7**
AKAS Kas 151.29 319 *i* P **PKPbc 01 04 49.4 +0.1**
AYDN Tasoluk 151.41 323 *i* P **PKPbc 01 04 49.8 +0.5**
TURN Turunc 151.50 321 *i* P **PKPbc 01 04 50.1 +0.6**
ESDC Sonseca Array 154.77 19 PKPbc **PKPbc 01 04 57.2 +0.5**
ESDC Sonseca Array 154.77 19 PKPbc **PKPbc 01 04 57.2 +0.5**
comp=Z,0.5nm,0.6s,baz=357,slow=2.5,SNR=5.2
TORD Torodi Ar. Bea 174.49 121 PKP **PKPdf 01 05 04.6 -1.1**
TORD PKPab **PKPab 01 06 39.9 +0.8**
TORD Torodi Ar. Bea 174.49 121 PKP **PKPdf 01 05 04.6 -1.1**
comp=Z,0.7nm,0.9s,baz=263,slow=1.4,SNR=3.5
TORD PKPab **PKPab 01 06 39.9 +0.8**
comp=Z,1.4nm,0.9s,baz=255,slow=4.0,SNR=5.1

*ISCJB **22** 00:53:21.8±0.5,39°.11N±0°.02×22°.01E±0°.04,h23km±3km,*

Error ellipse: s-maj=5.4km s-min=3.5km az=17.3
*THE **22** 00:53:21.9,39°.11N×22°.03E,h16km,ML2.2/5,Error ellipse: s-maj=0.7km s-min=0.4km az=313.0*
*ATH **22** 00:53:21.4,39°.11N×22°.02E,h22km±1km,MD2.9/14*
*CSEM **22** 00:53:21.3±0.2,39°.11N×22°.03E,h16km±1km,ML2.2/5,Error ellipse: s-maj=4.2km s-min=2.8km az=99.0*
ISC 22 00:53:21.6±0.9,39°.11N±0°.02×22°.04E±0°.02,h16km±7km, n48,σ0s45/84,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MAKR	**Makrakomi, Fth**	**0.12**	**144**	P		**Pb**	**00 53 25.5**	**-0.1**
MAKR				S		**Sb**	**00 53 28.6**	**+0.4**
MAKR	**Makrakomi, Fth**	**0.12**	**144**	P		**Pb**	**00 53 25.5**	**-0.1**
MAKR				S		**Sb**	**00 53 28.6**	**+0.4**
AGG	**Agios Georgios**	**0.24**	**112**	P		**Pb**	**00 53 27.5**	**-0.2**
AGG				S		**Sb**	**00 53 32.2**	**+0.5**
AGG	**Agios Georgios**	**0.24**	**112**	*e*PB		**Pb**	**00 53 27.5**	**-0.2**
AGG				*e*SB		**Sb**	**00 53 32.1**	**+0.4**
AGG	**Agios Georgios**	**0.24**	**112**	P		**Pb**	**00 53 27.5**	**-0.2**
AGG				S		**Sb**	**00 53 32.2**	**+0.5**
EVR	**Evrytania**	**0.27**	**223**	P		**Pg**	**00 53 27.3**	**-0.2**
EVR				S		**Sg**	**00 53 31.8**	**+0.3**
EVR	**Evrytania**	**0.27**	**223**	*e*PB		**Pg**	**00 53 27.3**	**-0.2**
EVR				*e*SB		**Sb**	**00 53 31.9**	**-0.6**
EVR	**Evrytania**	**0.27**	**223**	P		**Pg**	**00 53 27.3**	**-0.2**
EVR				S		**Sg**	**00 53 31.8**	**+0.3**
THL	**Klokotos Trika**	**0.45**	**357**	P		**Pg**	**00 53 30.6**	**-0.2**
THL				S		**Sb**	**00 53 38.1**	**+0.3**
THL	**Klokotos Trika**	**0.45**	**357**	*e*PB		**Pg**	**00 53 30.7**	**-0.1**
THL				*e*SB		**Sb**	**00 53 38.1**	**+0.3**
THL	**Klokotos Trika**	**0.45**	**357**	*e*Pb		**Pg**	**00 53 30.7**	**-0.1**
THL				S		**Sb**	**00 53 38.1**	**+0.3**
AXAR	**Agios Charalam**	**0.59**	**125**	P		**Pg**	**00 53 33.3**	**-0.1**
AXAR				S		**Sb**	**00 53 42.1**	**+0.3**
AXAR	**Agios Charalam**	**0.59**	**125**	P		**Pg**	**00 53 33.3**	**-0.1**
AXAR				S		**Sb**	**00 53 42.1**	**+0.3**
EFP	**Efpalio**	**0.69**	**189**	P		**Pg**	**00 53 34.8**	**-0.4**
EFP				S		**Sn**	**00 53 45.8**	**-1.3**
EFP	**Efpalio**	**0.69**	**189**	*e*PN		**Pg**	**00 53 34.8**	**-0.4**
EFP				*e*SN		**Sb**	**00 53 45.6**	**+1.0**
EFP	**Efpalio**	**0.69**	**189**	P		**Pg**	**00 53 34.8**	**-0.4**
EFP				*e*Sn		**Sb**	**00 53 45.6**	**+1.0**
KALE	**Kalithea**	**0.72**	**174**	P		**Pg**	**00 53 35.4**	**-0.4**
KALE				S		**Sb**	**00 53 46.2**	**+0.6**
KALE	**Kalithea**	**0.72**	**174**	*e*PN		**Pg**	**00 53 35.0**	**-0.8**
KALE				*e*SN		**Sb**	**00 53 46.1**	**+0.5**
KALE	**Kalithea**	**0.72**	**174**	*e*Pn		**Pg**	**00 53 35.0**	**-0.8**
KALE	**Kalithea**	**0.72**	**174**	P		**Pg**	**00 53 35.4**	**-0.4**
KALE				*e*Sn		**Sb**	**00 53 46.1**	**+0.5**
TRIZ	**Trizonia**	**0.75**	**178**	P		**Pb**	**00 53 35.8**	**-0.5**
TRIZ				S		**Sb**	**00 53 46.8**	**+0.7**
TRIZ	**Trizonia**	**0.75**	**178**	*e*PN		**Pb**	**00 53 35.7**	**-0.5**
TRIZ				*e*SN		**Sb**	**00 53 46.6**	**+0.5**
TRIZ	**Trizonia**	**0.75**	**178**	P		**Pb**	**00 53 35.8**	**-0.5**
TRIZ				*e*Sn		**Sb**	**00 53 46.6**	**+0.5**
DSF	**Desfina**	**0.80**	**151**	P		**Pb**	**00 53 36.6**	**-0.5**
DSF				S		**Sg**	**00 53 48.2**	**+0.5**
DSF	**Desfina**	**0.80**	**151**	P		**Pb**	**00 53 36.6**	**-0.5**
DSF				S		**Sg**	**00 53 48.2**	**+0.5**
LAKA	**Lakka**	**0.87**	**183**	P		**Pg**	**00 53 38.4**	**-0.2**
LAKA	**Lakka**	**0.87**	**183**	*e*PN		**Pg**	**00 53 38.4**	**-0.2**
LAKA	**Lakka**	**0.87**	**183**	P		**Pg**	**00 53 38.4**	**-0.2**
LKR	**Lokris**	**0.88**	**121**	*e*PN		**Pb**	**00 53 38.1**	**-0.4**
LKR				*e*SN		**Sg**	**00 53 50.4**	**+0.1**
LKR	**Lokris**	**0.88**	**121**	*e*Pn		**Pb**	**00 53 38.1**	**-0.4**
LKR				*e*Sn		**Sg**	**00 53 50.4**	**+0.1**
XOR	**Xorichti**	**0.93**	**74**	P		**Pb**	**00 53 39.0**	**-0.4**
XOR				S		**Sn**	**00 53 52.7**	**-0.4**
XOR	**Xorichti**	**0.93**	**74**	P		**Pb**	**00 53 39.0**	**-0.4**
XOR				S		**Sn**	**00 53 52.7**	**-0.4**
NEO	**Neokhori**	**0.94**	**78**	*e*PN		**Pb**	**00 53 39.3**	**-0.3**
NEO				*e*SN		**Sn**	**00 53 53.5**	**+0.2**
NEO	**Neokhori**	**0.94**	**78**	*e*Pn		**Pb**	**00 53 39.3**	**-0.3**
NEO				*e*Sn		**Sn**	**00 53 53.5**	**+0.2**
SMIA	**Simia**	**0.94**	**104**	P		**Pg**	**00 53 39.7**	**-0.2**
SMIA				S		**Sn**	**00 53 53.1**	**-0.2**
SMIA	**Simia**	**0.94**	**104**	P		**Pg**	**00 53 39.7**	**-0.2**
SMIA				S		**Sn**	**00 53 53.1**	**-0.2**
LIT	**Litokhoron**	**1.05**	**19**	*e*PN		**Pn**	**00 53 41.5**	**-0.2**
LIT				*e*SN		**Sn**	**00 53 56.0**	**0.0**
LIT	**Litokhoron**	**1.05**	**19**	*e*Pn		**Pn**	**00 53 41.5**	**-0.2**
LIT				*e*Sn		**Sn**	**00 53 56.0**	**0.0**
KLV	**Kalavryta, Ach**	**1.07**	**175**	*e*PN		**Pb**	**00 53 41.7**	**-0.1**
KLV				*e*SN		**Sn**	**00 53 57.8**	**+1.2**
KLV	**Kalavryta, Ach**	**1.07**	**175**	*e*Pn		**Pb**	**00 53 41.7**	**-0.1**
KLV				*e*Sn		**Sn**	**00 53 57.8**	**+1.2**
RLS	**Riolos of Patr**	**1.15**	**203**	*e*PN		**Pg**	**00 53 43.7**	**-0.1**
RLS	**Riolos of Patr**	**1.15**	**203**	*e*Pn		**Pg**	**00 53 43.7**	**-0.1**
GUR	**Goura**	**1.20**	**169**	P		**Pn**	**00 53 43.5**	**-0.3**
GUR	**Goura**	**1.20**	**169**	*e*PN		**Pb**	**00 53 44.0**	**0.0**
GUR	**Goura**	**1.20**	**169**	P		**Pn**	**00 53 43.5**	**-0.3**
GUR	**Goura**	**1.20**	**169**	*e*Pn		**Pb**	**00 53 44.0**	**0.0**
KZN	**Kozani**	**1.21**	**350**	*e*PN		**Pb**	**00 53 44.2**	**0.0**
KZN	**Kozani**	**1.21**	**350**	*e*Pn		**Pb**	**00 53 44.2**	**0.0**

*ISK **22** 00:56:29.6,37°.38N×36°.45E,h7km,MD3.0*
*DDA **22** 00:56:30.1,37°.43N×36°.42E,h8km,MD3.0*
*CSEM **22** 00:56:30.2±0.2,37°.41N×36°.42E,h2km,MD3.0,Error ellipse: s-maj=5.7km s-min=3.5km az=163.0*
ISC 22 00:56:30.2±1.1,37°.41N±0°.02×36°.43E±0°.02,h3km±11km, n36,σ0s62/51,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.19**	**340**	*i* P		**Pg**	**00 56 33.6**	**-0.3**
ANDN				*i* S		**Sg**	**00 56 36.6**	**+0.2**
ANDN	**Andirin**	**0.19**	**340**	*i* P		**Pg**	**00 56 33.6**	**-0.3**
ANDN				*i* S		**Sg**	**00 56 36.6**	**+0.2**
AYKD	**Aykdinkavak**	**0.30**	**88**	*i* P		**Pg**	**00 56 36.4**	**+0.3**
AYKD				*i* S		**Sg**	**00 56 40.0**	**0.0**
KMRS	**Kahramanmaras**	**0.39**	**75**	*e*PG		**Pg**	**00 56 37.7**	**-0.1**
KMRS				*e*SG		**Sg**	**00 56 43.2**	**+0.4**
KMRS	**Kahramanmaras**	**0.39**	**75**	*e*Pg		**Pg**	**00 56 37.7**	**-0.1**
KMRS				*e*Sg		**Sg**	**00 56 43.2**	**+0.4**
KOZT	**Kozan**	**0.48**	**279**	*e*PG		**Pg**	**00 56 40.0**	**+0.5**
KOZT	**Kozan**	**0.48**	**279**	*e*Pg		**Pg**	**00 56 40.0**	**+0.5**
GAZ	**Gaziantep**	**0.67**	**110**	*e*PG		**Pg**	**00 56 42.6**	**-0.4**
GAZ				*e*SG		**Sg**	**00 56 51.6**	**-0.1**
GAZ	**Gaziantep**	**0.67**	**110**	*e*Pg		**Pg**	**00 56 42.6**	**-0.4**
GAZ				*e*Sg		**Sg**	**00 56 51.6**	**-0.1**
CEYT	**Ceyhan**	**0.67**	**234**	*e*PG		**Pg**	**00 56 42.5**	**-0.6**
CEYT	**Ceyhan**	**0.67**	**234**	*e*Pg		**Pg**	**00 56 42.5**	**-0.6**
YURE	**YUREGIR**	**0.86**	**228**	*i* P		**Pn**	**00 56 49.6**	**+0.3**
COBT	**Iskenderun**	**0.89**	**189**	*i* P		**Pb**	**00 56 48.3**	**-0.2**
COBT	**Iskenderun**	**0.89**	**189**	*i* P		**Pb**	**00 56 48.3**	**-0.2**
GZT	**Gaziantep**	**0.91**	**93**	*i* P		**Pn**	**00 56 49.5**	**-0.6**
SARI	**SarD1z-Kayseri**	**1.00**	**360**	*e*PG		**Pg**	**00 56 49.5**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.00**	**360**	*e*Pg		**Pg**	**00 56 49.5**	**+0.1**
HTY	**Hatay**	**1.30**	**190**	*e*PN		**Pn**	**00 56 54.7**	**-0.6**
HTY	**Hatay**	**1.30**	**190**	*e*Pn		**Pn**	**00 56 54.7**	**-0.6**
GULE	**Gulek**	**1.32**	**265**	*i* P		**Pn**	**00 56 54.0**	**-1.8**
GULE				*i* S		**Sn**	**00 57 14.9**	**+0.9**
GULE	**Gulek**	**1.32**	**265**	*i* P		**Pn**	**00 56 54.0**	**-1.8**
GULE				*i* S		**Sn**	**00 57 14.9**	**+0.9**
YAYL	**Yayladag**	**1.39**	**191**	*i* P		**Pg**	**00 56 57.0**	**+0.1**
YAYL				*i* S		**Sg**	**00 57 16.2**	**+1.3**
YAYL	**Yayladag**	**1.39**	**191**	*i* P		**Pg**	**00 56 57.0**	**+0.1**
YAYL				*i* S		**Sg**	**00 57 16.2**	**+1.3**
DARE	**Darende-Malaty**	**1.43**	**35**	*e*PN		**Pn**	**00 56 56.5**	**-0.7**
AKCD	**Akcadag**	**1.48**	**53**	*i* P		**Pg**	**00 56 58.9**	**+0.3**
AKCD				*i* S		**Sg**	**00 57 18.2**	**+0.4**
AKCD	**Akcadag**	**1.48**	**53**	*i* P		**Pg**	**00 56 58.9**	**+0.3**
AKCD				*i* S		**Sg**	**00 57 18.2**	**+0.4**
ATAB	**Bozova**	**1.49**	**87**	*i* P		**Pg**	**00 56 59.0**	**+0.2**
ATAB				*i* S		**Sg**	**00 57 18.2**	**+0.1**
ATAB	**Bozova**	**1.49**	**87**	*i* P		**Pg**	**00 56 59.0**	**+0.2**
ATAB				*i* S		**Sg**	**00 57 18.2**	**+0.1**
NIG	**Nigde**	**1.60**	**297**	*e*PN		**Pn**	**00 56 59.3**	**-0.5**
NIG	**Nigde**	**1.60**	**297**	*e*Pn		**Pn**	**00 56 59.3**	**-0.5**
MYA	**Malataya**	**1.83**	**59**	*e*PN		**Pn**	**00 57 02.1**	**-0.6**
MYA	**Malataya**	**1.83**	**59**	*e*Pn		**Pn**	**00 57 02.1**	**-0.6**
URFA	**Urfa**	**1.91**	**88**	*e*PN		**Pn**	**00 57 03.0**	**-0.8**
URFA	**Urfa**	**1.91**	**88**	*e*Pn		**Pn**	**00 57 03.0**	**-0.8**
PTK	**Pertek**	**2.77**	**57**	*e*PN		**Pn**	**00 57 16.1**	**+0.4**
PTK	**Pertek**	**2.77**	**57**	*e*Pn		**Pn**	**00 57 16.1**	**+0.4**

*ISK **22** 01:17:50.5,40°.45N×35°.40E,h15km,MD2.5*
*DDA **22** 01:17:51.0,40°.47N×35°.26E,h7km,MD2.8*
*CSEM **22** 01:17:50.9±0.2,40°.49N×35°.35E,h5km,MD2.8,Error ellipse: s-maj=5.3km s-min=4.0km az=146.0*
ISC 22 01:17:51.0±1.2,40°.48N±0°.03×35°.31E±0°.03,h1km±13km, n16,σ0s55/26,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.42**	**290**	*i* P		**Pg**	**01 17 59.1**	**0.0**
CTKT	**Corum**	**0.42**	**290**	*i* P		**Pg**	**01 17 59.1**	**0.0**
CORM	**Corum**	**0.60**	**240**	*e*PG		**Pb**	**01 18 03.7**	**-0.6**
CORM				*e*SG		**Sb**	**01 18 13.2**	**-0.1**
CORM	**Corum**	**0.60**	**240**	*e*Pg		**Pb**	**01 18 03.7**	**-0.6**
CORM				*e*Sg		**Sb**	**01 18 13.2**	**-0.1**
KVT	**Kavak**	**0.82**	**43**	*e*PG		**Pg**	**01 18 06.4**	**-0.3**
KVT				*e*SG		**Sg**	**01 18 17.9**	**+0.5**
KVT	**Kavak**	**0.82**	**43**	*e*Pg		**Pg**	**01 18 06.4**	**-0.3**
KVT				*e*Sg		**Sg**	**01 18 17.9**	**+0.5**
YOZ	**Yozgat**	**0.84**	**180**	*e*PG		**Pg**	**01 18 06.7**	**-0.3**
YOZ				*e*SG		**Sg**	**01 18 18.6**	**+0.7**
YOZ	**Yozgat**	**0.84**	**180**	*e*Pg		**Pg**	**01 18 06.7**	**-0.3**
YOZ				*e*Sg		**Sg**	**01 18 18.6**	**+0.7**
BYBT	**Boyabat**	**1.07**	**338**	*e*PN		**Pb**	**01 18 12.2**	**-0.1**
BYBT	**Boyabat**	**1.07**	**338**	*e*Pn		**Pb**	**01 18 12.2**	**-0.1**
ERBA	**Erbaa**	**1.12**	**79**	*i* P		**Pg**	**01 18 11.9**	**-0.5**
ERBA				*i* S		**Sn**	**01 18 30.4**	**+0.6**
ERBA	**Erbaa**	**1.12**	**79**	*i* P		**Pg**	**01 18 11.9**	**-0.5**
ILGA	**Ilgaz**	**1.34**	**296**	*i* P		**Pb**	**01 18 17.0**	**0.0**
ILGA				*i* S		**Sb**	**01 18 33.7**	**-1.1**
ILGA	**Ilgaz**	**1.34**	**296**	*i* P		**Pb**	**01 18 17.0**	**0.0**
ILGA				*i* S		**Sb**	**01 18 33.7**	**-1.1**
BBAL	**Bala**	**1.92**	**242**	*i* P		**Pn**	**01 18 25.4**	**+0.5**
BBAL				*i* S		**Sg**	**01 18 53.1**	**+0.4**
BBAL	**Bala**	**1.92**	**242**	*i* P		**Pn**	**01 18 25.4**	**+0.5**

IDC 22 01:26:20.1±2.1,15°.24S×174°.01W,h0km,mb4.0/4, mb1 4.2/5,mb1mx3.8/21,mbtmp4.0/5,ML2.2/1,Error ellipse: s-maj=139.6km s-min=25.4km az=151.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.53**	**59**	P	Pn	Pn	01 27 02.1	-0.5
	27nm,0.3s,baz=109,slow=1.7,SNR=26							
AFI				S	Sn	Sn	01 27 27.8	-6.5
	421nm,0.3s,baz=64,slow=22,SNR=52							
STKA	**Stephens Creek**	**43.61**	**240**	P	P	P	01 34 26.2	-0.1
	2.1nm,0.8s,baz=56,slow=7.4,SNR=3.0							
WRA	**Warramunga Arr**	**49.31**	**257**	P	P	P	01 35 11.2	-0.2
	0.7nm,0.7s,baz=91,slow=6.9,SNR=20							
ASAR	**Alice Springs**	**49.60**	**252**	P	P	P	01 35 13.2	-0.4
	2.2nm,0.6s,baz=86,slow=8.4,SNR=18							
FITZ	**Fitzroy Crossi**	**57.67**	**258**	P	P	P	01 36 12.6	-0.2
	1.7nm,1.0s,baz=121,slow=5.9,SNR=2.5							
BRTR	**Keskin Array B**	**145.67**	**321**	PKPbc	PKPbc		01 46 01.2	-0.1
	0.6nm,0.6s,baz=71,slow=1.6,SNR=4.7							

*IDC **22** 01:43:09.9±0.8,7°.69N×127°.01E,h0km,mb3.9/8, mb1 4.0/8,mb1mx3.8/25,mbtmp3.9/8,Error ellipse: s-maj=58.8km s-min=17.2km az=76.0*
*ISCJB **22** 01:43:15.2±0.7,7°.65N±0°.07×127°.20E±0°.07,h52km, mb3.8/8,Error ellipse: s-maj=11.1km s-min=9.7km az=40.4*
ISC 22 01:43:16.8±0.8,7°.66N±0°.08×127°.2E±0°.1,h52km,n15, σ0s97/17,mb3.9/8,2C,Philippine Islands region

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

PNIG	**Pinotepa**	**3.08**	**102**	*i* P	Pn	02 31 28.4	-2.1
PNIG				*i* S	Sn	02 32 03.0	-3.8

IDC 22 02:56:44.6±1.1, 2.76S×139.11E, h0km, mb3.8/5, mb1 4.2/6, mb1mx3.9/18, mbtmp3.9/6, ML4.2/1, MS3.4/7, Ms1 3.4/7, ms1mx2.9/38, Error ellipse: s-maj=50.9km s-min=21.9km az=95.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**17.22**	**19**	LR	LR	03 06 51.4	
	comp=Z,65nm,19.2s,baz=104,slow=35						
WRA	**Warramunga Arr**	**17.70**	**195**	P	Pn	03 00 50.9	-1.9
	0.9nm,0.3s,baz=16,slow=13,SNR=48						
WRA				S	Sn	03 03 59.5	-11
	0.1nm,0.3s,baz=9.3,slow=23,SNR=3.4						
CTA	**Charters Tower**	**18.58**	**158**	LR	LR	03 08 21.5	
	comp=Z,99nm,19.7s,baz=230,slow=38						
FITZ	**Fitzroy Crossi**	**20.17**	**220**	P	P	03 01 20.3	-0.6
	2.0nm,0.4s,baz=21,slow=12,SNR=13						
FITZ				LR	LR	03 09 21.3	
	comp=Z,111nm,19.2s,baz=13,slow=38						
ASAR	**Alice Springs**	**21.38**	**193**	P	P	03 01 34.1	+0.1
	5.6nm,0.6s,baz=16,slow=11,SNR=26						
ASAR				S	S	03 05 24.9	-7.5
	1.2nm,0.8s,baz=15,slow=25,SNR=3.1						
JNU	**Nakatsue**	**36.53**	**348**	LR	LR	03 17 41.6	
	comp=Z,33nm,18.2s,baz=136,slow=34						
URZ	**Urewera**	**49.52**	**140**	LR	LR	03 25 21.7	
	comp=Z,103nm,18.8s,baz=24,slow=35						
SONM	**Songino Array**	**57.94**	**335**	LR	LR	03 32 17.5	
	comp=Z,34nm,19.3s,baz=106,slow=37						
FX1	**Attu Island--F**	**62.39**	**23**	LR	LR	03 29 23.3	
	comp=Z,25nm,20.4s,baz=121,slow=31						
MKAR	**Makanchi Array**	**70.08**	**322**	P	P	03 07 59.0	+0.2
	0.3nm,0.3s,baz=98,slow=8.0,SNR=13						
VNDA	**Vanda**	**75.69**	**175**	P	P	03 08 32.0	+0.6
	2.0nm,0.7s,baz=322,slow=5.5,SNR=18						
ILAR	**Eielson Array**	**85.71**	**24**	P	P	03 09 24.5	-0.8
	0.4nm,0.6s,baz=267,slow=4.6,SNR=9.2						
TORD	**Torodi Ar. Bea**	**136.66**	**286**	PKP	PKPdf	03 16 10.6	+0.5
	0.4nm,0.9s,baz=83,slow=1.2,SNR=4.6						

MEX 22 03:02:25.0±0.7, 17.26N×100.70W, h34km±14km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.46**	**117**	*i* P	Pb	03 02 33.1	-1.9
CAIG				*e*S	Sb	03 02 40.1	-1.9
ZIIG	**Zihuatanejo**	**0.81**	**295**	*i* P	Pn	03 02 37.9	-2.2
ZIIG				*i* S	Sn	03 02 48.8	-2.1
ACX	**Acapulco**	**0.89**	**116**	*i* P	Pn	03 02 39.1	-2.0
ACX				*i* S	Sn	03 02 49.0	-3.9
ARIG	**Puente Sto Nin**	**1.07**	**18**	*i* P	Pn	03 02 41.1	-2.5
ARIG				*i* S	Sn	03 02 55.0	-2.4
MEIG	**Mezcala**	**1.22**	**57**	*i* P	Pn	03 02 44.1	-1.8
MEIG				*e*S	Sn	03 02 58.8	-2.5
PLIG	**Platanillo**	**1.60**	**45**	*i* P	Pn	03 02 49.7	-1.4
PLIG				*i* S	Sn	03 03 08.3	-2.4
YAIG	**Yautepec**	**2.22**	**44**	*i* P	Pn	03 02 57.8	-1.9
YAIG				*e*S	Sn	03 03 24.8	-1.4
PNIG	**Pinotepa**	**2.61**	**109**	*i* P	Pn	03 03 04.0	-0.9
PNIG				*i* S	Sn	03 03 33.2	-2.2
PPM	**Popocatepetl**	**2.67**	**47**	*i* P	Pn	03 03 04.5	-1.7
PPM				*i* P	Pb	03 03 04.8	-8.0
PPM				*i* S	Sn	03 03 35.4	-2.5
TPIG	**Tehuac#an**	**3.38**	**70**	*i* P	Pn	03 03 14.7	-1.0
TPIG				*i* S	Sn	03 03 51.8	-2.9
OXX	**Oaxaca**	**3.80**	**92**	*i* P	Pb	03 03 31.4	-0.4
SFJM	**Santa Fe**	**3.90**	**326**	*i* P	Pb	03 03 30.0	-3.4

IDC 22 03:15:48.5±10.0, 5.93S×129.79E, h102km±112km, mb3.7/2, mb1 4.0/6, mb1mx3.5/22, mbtmp3.9/6, ML4.0/4, MS3.1/1, Ms1 3.1/1, ms1mx2.3/32, Error ellipse: s-maj=60.7km s-min=33.0km az=14.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.76**	**198**	P	Pn	03 18 46.2	0.0
	1.6nm,0.3s,baz=36,slow=6.8,SNR=47						
FITZ				S	Sn	03 20 58.7	-8.0
	0.5nm,0.3s,baz=168,slow=20,SNR=2.8						
WRA	**Warramunga Arr**	**14.62**	**163**	P	Pn	03 19 10.1	-0.3
	0.5nm,0.3s,baz=346,slow=12,SNR=17						
WRA				S	Sn	03 21 42.4	-9.3
	0.8nm,0.3s,baz=331,slow=23,SNR=6.3						
PMG	**Port Moresby**	**17.56**	**102**	P	P	03 19 46.0	-0.6
	0.5nm,0.3s,baz=261,slow=18,SNR=1.9						
ASAR	**Alice Springs**	**18.08**	**168**	P	P	03 19 52.0	-0.2
	0.9nm,0.3s,baz=341,slow=9.7,SNR=52						
ASAR				S	S	03 23 00.8	-14
	0.2nm,0.3s,baz=349,slow=18,SNR=10.0						
CTA	**Charters Tower**	**21.31**	**133**	P	P	03 20 27.7	+0.4
	10nm,0.8s,baz=325,slow=12,SNR=12						
ASAJ	**Asahikawa**	**51.14**	**12**	LR	LR	03 45 20.4	
	comp=Z,20nm,18.9s,baz=38,slow=35						
MKAR	**Makanchi Array**	**67.22**	**327**	P	P	03 26 31.9	0.0
	0.4nm,0.5s,baz=115,slow=8.2,SNR=7.3						

IDC 22 03:27:43.6±7.2, 16.09S×175.23W, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.8/19, mbtmp4.0/3, Error ellipse: s-maj=315.5km s-min=33.7km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.98**	**57**	Sn	Sn	03 29 27.9	-5.5
	7.3nm,0.3s,baz=240,slow=20,SNR=5.5						
WRA	**Warramunga Arr**	**47.98**	**257**	P	P	03 36 24.8	+0.2
	0.9nm,0.6s,baz=93,slow=7.0,SNR=21						
ASAR	**Alice Springs**	**48.23**	**252**	P	P	03 36 26.1	-0.4
	5.4nm,0.7s,baz=86,slow=8.6,SNR=53						
ILAR	**Eielson Array**	**83.47**	**12**	P	P	03 40 12.8	0.0
	0.4nm,0.6s,baz=221,slow=6.6,SNR=11						

MEX 22 04:11:21.1±0.6, 15.98N×97.65W, h25km±20km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.62**	**312**	*i* P	Pb	04 11 31.2	-2.2
PNIG				*e*S	Sb	04 11 39.3	-2.5
VHO	**Vista Hermosa**	**1.40**	**39**	*i* P	Pn	04 11 42.9	-2.4
VHO				*i* S	Sn	04 11 59.2	-4.0
HUIG	**Huatulco**	**1.49**	**98**	*i* P	Pn	04 11 44.1	-2.3
HUIG				*i* S	Sn	04 12 01.1	-4.1
CAIG	**El Cayaco**	**2.73**	**293**	*i* P	Pn	04 12 00.8	-2.6
CAIG				*e*S	Sn	04 12 32.3	-3.4
PLIG	**Platanillo**	**2.99**	**324**	*i* P	Pn	04 12 05.5	-1.6
PLIG				*i* S	Sn	04 12 38.7	-3.5
ARIG	**Puente Sto Nin**	**3.45**	**312**	*i* P	Pn	04 12 12.2	-1.2
ARIG				*i* S	Sn	04 12 49.9	-3.7

*ISCJB **22** 04:12:33.4±0.4, 46.48N±0.02×14.89E±0.03, h7km±7km, Error ellipse: s-maj=3.5km s-min=2.8km az=155.7*
*VIE **22** 04:12:33.5±0.3, 46.48N×14.89E, h9km±5km, mb0.8/3, ML2.0/4, Error ellipse: s-maj=1.7km s-min=0.9km az=7.0*
14 km SSE of Bleiburg
*LJU **22** 04:12:33.4, 46.48N×14.89E, h12km, ML1.9*
*ROM **22** 04:12:33.6±0.8, 46.49N×14.97E, h11km±8km, Md2.4/6, Ml1.8/3, Error ellipse: s-maj=8.9km s-min=2.5km az=136.0*
*CSEM **22** 04:12:33.8±0.1, 46.48N×14.89E, h2km, ML2.5/11, Error ellipse: s-maj=2.0km s-min=1.5km az=157.0*

ISC 22 04:12:33.4±0.8, 46.49N±0.02×14.90E±0.02, h13km±6km, n53, σ0.945/88, 2C-26D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PERS	**Pernice**	**0.21**	**45**	⇓*i* Pg	**Pb**	**04 12 38.6**	**-0.5**
PERS				*i* Sg	**Sg**	**04 12 41.5**	**+0.2**
PERS							
	comp=Z,248nm,0.1s						
PERS	**Pernice**	**0.21**	**45**	⇓*i* Pg	**Pb**	**04 12 38.6**	**-0.5**
PERS				*i* Sg	**Sg**	**04 12 41.5**	**+0.2**
	comp=Z,248nm,0.1s						
SOKA	**Soboth**	**0.21**	**25**	⇓*i* Pg	**Pb**	**04 12 38.6**	**-0.5**
SOKA				⇑*i* Sg	**Sg**	**04 12 41.3**	**-0.1**
	comp=Z,65nm,0.1s						
SOKA	**Soboth**	**0.21**	**25**	Pg	**Pb**	**04 12 38.6**	**-0.5**
SOKA				Sg	**Sg**	**04 12 41.3**	**-0.1**
	comp=Z,65nm,0.1s						
BISS	**Bistriski jare**	**0.22**	**44**	⇓*i* Pg	**Pb**	**04 12 38.8**	**-0.5**
BISS				*i* Sg	**Sg**	**04 12 41.9**	**+0.2**
BISS							
	comp=Z,182nm,0.1s						
BISS	**Bistriski jare**	**0.22**	**44**	⇓*i* Pg	**Pb**	**04 12 38.8**	**-0.5**
BISS				*i* Sg	**Sg**	**04 12 41.8**	**+0.2**
	comp=Z,182nm,0.1s						
OBKA	**Obir**	**0.24**	**275**	⇓*e* Pg	**Pb**	**04 12 39.1**	**-0.7**
	SNR=79						
OBKA				⇓*i* Sg	**Sg**	**04 12 42.0**	**-0.3**
	comp=Z,59nm,0.1s						
OBKA	**Obir**	**0.24**	**275**	Pg	**Pb**	**04 12 39.1**	**-0.7**
	SNR=79						
OBKA				Sg	**Sg**	**04 12 42.0**	**-0.3**
	comp=Z,59nm,0.1s						
MOZS	**Mozjanca**	**0.37**	**239**	⇓*i* Pg	**Pg**	**04 12 41.0**	**+0.1**
MOZS							
	comp=Z,74nm,0.1s						
MOZS	**Mozjanca**	**0.37**	**239**	⇓*i* Pg	**Pg**	**04 12 41.0**	**+0.1**
	comp=Z,74nm,0.1s						
VNDS	**Vrh nad Dolski**	**0.41**	**200**	⇓*i* Pg	**Pb**	**04 12 42.0**	**-0.6**
VNDS				*i* Sg	**Sb**	**04 12 47.8**	**-0.8**
VNDS							
	comp=Z,33nm,0.1s						
GROS	**Grobnik**	**0.41**	**94**	*i* Pg	**Pb**	**04 12 42.0**	**-0.6**
GROS							
	comp=Z,26nm,0.1s						
GROS	**Grobnik**	**0.41**	**94**	*i* Pg	**Pb**	**04 12 42.0**	**-0.6**
	comp=Z,26nm,0.1s						
PDKS	**Podkum**	**0.43**	**171**	⇓*i* Pg	**Pb**	**04 12 42.4**	**-0.5**
PDKS							
	comp=Z,13nm,0.1s						
PDKS	**Podkum**	**0.43**	**171**	⇓*i* Pg	**Pb**	**04 12 42.4**	**-0.5**
	comp=Z,13nm,0.1s						
LJU	**Ljubljana**	**0.52**	**210**	⇓*i* Pg	**Pb**	**04 12 43.8**	**-0.5**
LJU							
	comp=Z,21nm,0.1s						
LJU	**Ljubljana**	**0.52**	**210**	⇓*i* Pg	**Pb**	**04 12 43.8**	**-0.5**
	comp=Z,21nm,0.1s						
DOBS	**Dobrina**	**0.52**	**131**	*i* Pg	**Pb**	**04 12 44.0**	**-0.4**
DOBS							
	comp=Z,12nm,0.1s						
DOBS	**Dobrina**	**0.52**	**131**	*i* Pg	**Pb**	**04 12 44.0**	**-0.4**
	comp=Z,12nm,0.1s						
CRNS	**Crni Vrh**	**0.60**	**228**	*i* Pg	**Pg**	**04 12 45.3**	**+0.1**
CRNS							
	comp=Z,26nm,0.1s						
LEGS	**Legarje**	**0.61**	**152**	⇓*i* Pg	**Pb**	**04 12 45.7**	**-0.2**
LEGS				*i* Sg	**Sg**	**04 12 53.3**	**-0.2**
LEGS	**Legarje**	**0.61**	**152**	⇓*i* Pg	**Pb**	**04 12 45.7**	**-0.2**
LEGS				*i* Sg	**Sg**	**04 12 53.3**	**-0.2**
GORS	**Gorjuse**	**0.65**	**255**	*i* Pg	**Pg**	**04 12 46.1**	**0.0**
GORS	**Gorjuse**	**0.65**	**255**	*i* Pg	**Pg**	**04 12 46.1**	**0.0**
VISS	**Visnje**	**0.69**	**184**	⇓*i* Pg	**Pb**	**04 12 46.9**	**-0.3**
VISS				*i* Sg	**Sg**	**04 12 56.0**	**+0.2**
VISS	**Visnje**	**0.69**	**184**	⇓*i* Pg	**Pb**	**04 12 46.9**	**-0.3**
VISS				*e*Sg	**Sg**	**04 12 56.0**	**+0.2**
GOLS	**Golise**	**0.69**	**133**	⇓*i* Pg	**Pb**	**04 12 47.5**	**+0.2**
GOLS	**Golise**	**0.69**	**133**	⇓*i* Pg	**Pb**	**04 12 47.5**	**+0.2**
CRES	**Cresnjev**	**0.77**	**150**	*i* Pg	**Pb**	**04 12 48.7**	**+0.1**
CRES				*i* Sg	**Sb**	**04 12 58.6**	**-0.3**
CRES							
	comp=Z,6.0nm,0.1s						
CRES	**Cresnjev**	**0.77**	**150**	*i* Pg	**Pb**	**04 12 48.7**	**+0.1**
CRES				*i* Sg	**Sb**	**04 12 58.6**	**-0.3**
	comp=Z,6.0nm,0.1s						
CEY	**Cerknica**	**0.82**	**204**	⇓*i* Pg	**Pg**	**04 12 49.1**	**-0.2**
CEY				*i* Sg	**Sg**	**04 12 60.0**	**0.0**
CEY							
	comp=Z,12nm,0.1s						
CEY	**Cerknica**	**0.82**	**204**	⇓*i* Pg	**Pg**	**04 12 49.1**	**-0.2**
CEY				*i* Sg	**Sg**	**04 13 00.0**	**0.0**
	comp=Z,12nm,0.1s						
VOY	**Vojsko**	**0.84**	**237**	*e*Pg	**Pg**	**04 12 49.3**	**-0.3**
VOY				*e*		04 12 52.2	
VOY				*e*Sg	**Sb**	**04 13 00.7**	**-0.3**
VOY	**Vojsko**	**0.84**	**237**	*e*Pg	**Pg**	**04 12 49.3**	**-0.3**
VOY				*e*Sg	**Sb**	**04 13 00.7**	**-0.3**
ARSA	**Arzberg**	**0.87**	**29**	⇓*e*Pg	**Pb**	**04 12 50.2**	**-0.2**
	SNR=12						
ARSA	**Arzberg**	**0.87**	**29**	Pg	**Pb**	**04 12 50.2**	**-0.2**
ARSA				Sg	**Sg**	**04 13 01.1**	**-0.7**
	comp=Z,12nm,0.5s						
ARSA	**Arzberg**	**0.87**	**29**	Pg	**Pb**	**04 12 50.2**	**-0.2**
	SNR=12						
ARSA				Sg	**Sg**	**04 13 01.1**	**-0.7**
	comp=Z,12nm,0.5s						
MYKA	**Terra Mystica**	**0.88**	**280**	⇓*i* Pg	**Pg**	**04 12 50.3**	**-0.1**
MYKA				⇑*i* Sg	**Sb**	**04 13 02.9**	**+0.6**
	comp=Z,4.6nm,0.1s						
MYKA	**Terra Mystica**	**0.88**	**280**	Pg	**Pg**	**04 12 50.3**	**-0.1**
MYKA				Sg	**Sb**	**04 13 02.9**	**+0.6**
	comp=Z,4.6nm,0.1s						
DRE	**Drenchia**	**0.93**	**251**	⇓*i* Pg	**Pg**	**04 12 51.0**	**-0.3**
DRE	**Drenchia**	**0.93**	**251**	⇓*i* Pg	**Pg**	**04 12 51.0**	**-0.3**
ACOM	**Acomizza, Ital**	**0.96**	**274**	Pg	**Pb**	**04 12 52.1**	**+0.1**
ACOM				Sg	**Sn**	**04 13 05.6**	**-0.7**
	comp=Z,21nm,0.4s						
ACOM	**Acomizza, Ital**	**0.96**	**274**	Pg	**Pb**	**04 12 52.1**	**+0.1**
ACOM				Sg	**Sn**	**04 13 05.6**	**-0.7**
	comp=Z,21nm,0.4s						
SABO	**M.te Sabotino**	**1.04**	**241**	Pg	**Pb**	**04 12 52.1**	**-1.1**
SABO				Sg	**Sn**	**04 13 08.0**	**0.0**
	comp=Z,32nm,0.3s						
SABO	**M.te Sabotino**	**1.04**	**241**	Pg	**Pb**	**04 12 52.1**	**-1.1**
SABO				Sg	**Sn**	**04 13 08.0**	**0.0**
	comp=Z,32nm,0.3s						
PTCC	**Patocco-Chiusa**	**1.07**	**266**	Pg	**Pn**	**04 12 55.1**	**+0.9**
PTCC				Sg	**Sn**	**04 13 09.0**	**+0.1**
	comp=Z,1.0nm,0.3s						
PTCC	**Patocco-Chiusa**	**1.07**	**266**	Pg	**Pn**	**04 12 55.1**	**+0.9**
PTCC				Sg	**Sn**	**04 13 09.0**	**+0.1**
	comp=Z,1.0nm,0.3s						
TRI	**Trieste**	**1.11**	**226**	Pg	**Pg**	**04 12 54.9**	**+0.1**
TRI				Sg	**Sn**	**04 13 09.5**	**-0.2**
TRI	**Trieste**	**1.11**	**226**	Pg	**Pg**	**04 12 54.9**	**+0.1**
TRI				Sg	**Sn**	**04 13 09.5**	**-0.2**
VINO	**Villanova**	**1.15**	**259**	Pg	**Pb**	**04 12 54.8**	**-0.3**
VINO				Sg	**Sn**	**04 13 11.7**	**+1.0**
VINO	**Villanova**	**1.15**	**259**	Pg	**Pb**	**04 12 54.8**	**-0.3**
VINO				Sg	**Sn**	**04 13 11.7**	**+1.0**
NVLJ	**Novalja**	**1.93**	**181**	*e*Pn	**Pb**	**04 13 08.2**	**-0.1**
NVLJ				Sn	**Sb**	**04 13 31.7**	**-0.5**
NVLJ	**Novalja**	**1.93**	**181**	*e*Pn	**Pb**	**04 13 08.1**	**-0.1**
NVLJ				Sn	**Sb**	**04 13 31.7**	**-0.5**

*IDC **22** 04:16:42.2±2.5, 22.52S×148.11E, h0km, mb3.3/1, mb1 3.6/5, mb1mx3.5/16, mbtmp3.5/5, ML3.2/4, Error ellipse: s-maj=32.1km s-min=18.8km az=78.0*
*AUST **22** 04:16:52.8±99.0, 22.13S×147.74E, h28km±2km, Error ellipse: s-maj=74.8km s-min=3.1km az=302.0*

ISC 22 04:16:45.9±1.8, 22.36S±0.10×148.0E±0.2, h10km, n11, σ1.903/10, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.77**	**324**	Pn	**Pn**	**04 17 31.2**	**+0.8**
	2.9nm,0.3s,baz=135,slow=16,SNR=18						
CTA				Pg	**Pb**	**04 17 36.4**	**+0.8**
	6.3nm,0.3s,baz=141,slow=17,SNR=30						
CTA				Lg	Lg	04 18 15.5	
	13nm,0.3s,baz=62,slow=20,SNR=10						
RMQ	**Roma**	**4.17**	**170**	S	**Sb**	**04 18 50.2**	**+0.5**
	baz=4.5,SNR=5.1						
MTSU	**Mount Surprise**	**5.43**	**320**	P	**Pn**	**04 18 08.2**	**+1.2**
	baz=5.1,SNR=4.6						
QIS	**Mount Isa**	**8.00**	**281**	P	**Pn**	**04 18 43.6**	**+1.4**
	baz=7.7,SNR=5.6						
STKA	**Stephens Creek**	**11.04**	**210**	Pn	Pn	04 19 19.4	-4.5
	0.1nm,0.3s,baz=39,slow=12,SNR=4.0						
STKA				Lg	Lg	04 22 29.2	
	0.1nm,0.3s,baz=194,slow=14,SNR=2.9						
WRA	**Warramunga Arr**	**12.95**	**278**	Pn	**Pn**	**04 19 48.6**	**-1.4**
	0.1nm,0.3s,baz=100,slow=12,SNR=4.7						
WRA				Lg	Lg	04 23 38.4	
	0.1nm,0.3s,baz=107,slow=27,SNR=6.5						
ASAR	**Alice Springs**	**13.02**	**262**	Pn	**Pn**	**04 19 50.8**	**-0.2**
	0.2nm,0.3s,baz=89,slow=14,SNR=4.4						
ASAR				Lg	Lg	04 23 41.3	
	0.1nm,0.3s,baz=80,slow=30,SNR=4.5						
FITZ	**Fitzroy Crossi**	**21.37**	**277**	P	**P**	**04 21 33.7**	**0.0**
	1.4nm,0.9s,baz=125,slow=12,SNR=3.0						
PALU	**Palau**	**32.35**	**334**	P	P	04 23 26.6	+11
	baz=32,SNR=4.0						
JAGI	**Jajag, Banyuwa**	**35.30**	**288**	S	**S**	**04 29 15.4**	**-0.2**
	baz=35,SNR=3.1						
TORD	**Torodi Ar. Bea**	**146.67**	**260**	PKPbc	**PKPdf**	**04 36 26.4**	**-0.7**
	0.5nm,0.7s,baz=99,slow=2.8,SNR=4.0						

IDC 22 04:26:38.3±1.5, 15.13S×173.55W, h0km, mb3.8/7, mb1 4.1/8, mb1mx3.9/20, mbtmp3.8/8, Error ellipse: s-maj=97.6km s-min=17.8km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.10**	**55**	Pn	Pn	04 27 13.4	-1.5
	80nm,0.3s,baz=37,slow=2.5,SNR=30						
AFI				Sn	Sn	04 27 33.4	-8.5
	277nm,0.3s,baz=272,slow=22,SNR=18						
STKA	**Stephens Creek**	**44.05**	**240**	P	P	04 34 48.5	+0.3
	1.1nm,0.4s,baz=127,slow=17,SNR=4.5						
WRA	**Warramunga Arr**	**49.76**	**257**	P	P	04 35 32.3	-0.8
	0.6nm,0.8s,baz=90,slow=6.8,SNR=12						
ASAR	**Alice Springs**	**50.06**	**252**	P	P	04 35 34.7	-0.6
	2.7nm,0.6s,baz=85,slow=8.1,SNR=36						
NVAR	**Mina Array Bea**	**74.23**	**42**	P	P	04 38 17.9	+0.3
	0.8nm,0.7s,baz=235,slow=11,SNR=5.6						
TXAR	**Lajitas Array**	**80.58**	**56**	P	P	04 38 53.4	+0.2
	0.2nm,0.6s,baz=256,slow=5.0,SNR=3.8						
PDAR	**Pinedale Array**	**82.16**	**42**	P	P	04 39 01.7	+0.2
	0.5nm,0.6s,baz=177,slow=3.0,SNR=3.8						
ILAR	**Eielson Array**	**82.21**	**11**	P	P	04 39 00.5	-0.4
	0.4nm,0.7s,baz=223,slow=5.8,SNR=6.0						
GERES	**GERESS Array B**	**145.85**	**351**	PKPbc	PKPbc	04 46 19.7	0.0
	0.7nm,0.8s,baz=35,slow=4.9,SNR=6.1						
BRTR	**Keskin Array B**	**145.86**	**321**	PKPbc	PKPbc	04 46 20.2	+0.1
	0.4nm,0.5s,baz=51,slow=6.5,SNR=3.9						

IDC 22 04:43:40.0±46.0, 15.65S×174.90W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/19, mbtmp4.1/3, Error ellipse: s-maj=879.8km s-min=171.7km az=78.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**42.66**	**240**	P	P	04 51 38.6	0.0
	1.4nm,0.5s,baz=67,slow=7.7,SNR=4.0						
WRA	**Warramunga Arr**	**48.38**	**257**	P	P	04 52 23.6	-0.5
	0.5nm,0.5s,baz=93,slow=7.2,SNR=28						
ASAR	**Alice Springs**	**48.66**	**252**	P	P	04 52 26.3	+0.1
	4.6nm,0.6s,baz=88,slow=8.3,SNR=50						

IDC 22 04:45:18.5±20.0, 18.25S×178.17W, h383km±179km, mb3.4/4, mb1 3.6/4, mb1mx3.2/19, mbtmp3.4/4, Error ellipse: s-maj=156.3km s-min=41.7km az=125.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.80**	**260**	P	P	04 52 55.5	-0.7
	1.0nm,0.5s,baz=94,slow=7.2,SNR=19						
ASAR	**Alice Springs**	**44.92**	**255**	P	P	04 52 57.6	+0.4
	9.4nm,0.6s,baz=88,slow=8.1,SNR=54						
PETK	**Petropavlovsk-**	**74.06**	**345**	P	P	04 56 13.8	+0.5
	3.6nm,0.8s,baz=120,slow=8.5,SNR=4.6						
ILAR	**Eielson Array**	**86.16**	**13**	P	P	04 57 16.2	-0.7
	0.2nm,0.6s,baz=226,slow=3.6,SNR=5.1						
ARCES	**ARCESS Array B**	**126.69**	**350**	PKP	PKPdf	05 03 36.1	-0.2
	2.1nm,0.9s,baz=36,slow=4.9,SNR=4.4						
BRTR	**Keskin Array B**	**145.18**	**315**	PKPbc	PKPdf	05 04 10.5	-0.9
	0.9nm,0.6s,baz=86,slow=1.8,SNR=5.4						
GERES	**GERESS Array B**	**148.00**	**345**	PKPbc	PKPbc	05 04 19.3	-0.1
	1.1nm,0.6s,baz=29,slow=3.0,SNR=6.8						

*ISCJB **22** 04:53:08.6±0.2, 5.68N±0.03×72.63W±0.03, h23km, mb4.5/78, MS3.9/11, Error ellipse: s-maj=4.8km s-min=3.4km az=147.9*
*NEIC **22** 04:53:10.2±0.2, 5.64N×72.60W, mb4.7/63, Error ellipse: s-maj=4.5km s-min=3.8km az=134.0*
*IDC **22** 04:53:10.1±0.5, 5.65N×72.67W, h21km±2km, mb3.9/16, mb1 4.2/17, mb1mx4.0/26, mbtmp4.0/17, ML3.8/1, MS3.7/10, Ms1 3.7/10, ms1mx3.5/26, Error ellipse: s-maj=12.5km s-min=10.9km az=4.0*
*BJI **22** 04:53:10.2, 5.70N×72.50W, h23km, mB5.3/3, Ms5.1/3, Ms7 4.9/2*
*FUNV **22** 04:53:12.2, 5.51N×72.74W, h27km, MW5.0*

ISC 22 04:53:10.0±0.4, 5.65N±0.04×72.62W±0.05, h24km±2km, n503, σ0.989/554, mb4.6/79, MS3.8/12, 152C-154D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**1.88**	**245**	*e*Pn	**Pb**	**04 53 43.7**	**-0.2**
ROSC				*e*Sn	**Sb**	**04 54 08.9**	**+1.8**
ROSC				Lg	Lg	04 54 09.6	
ROSC	**El Rosal**	**1.88**	**245**	Pn	**Pb**	**04 53 42.4**	**-1.5**
	138nm,0.3s,baz=281,slow=20,SNR=172						
ROSC				Lg	Lg	04 54 09.6	
	729nm,0.3s,baz=65,slow=20,SNR=11						
CAPV	**Capacho**	**2.22**	**8**	*e*P	**Pb**	**04 53 48.8**	**-0.8**
CAPV				*e*S	Sn	04 53 59.8	-13
CAPV	**

CBYP **Canovanas** 14.18 27 *e*Pn Pn 04 56 29.2 -0.3
31nm,0.6s
STVI **Saint Thomas** 14.68 30 *e*Pn Pn 04 56 36.9 +0.7
TGUH **Tegucigalpa,Un** 16.67 301 *e*Pn Pn 04 57 02.2 0.0
48nm,1.1s
SAML **Samuel** 17.29 147 *e*Pn Pn 04 57 09.8 -0.2
2.2nm,0.4s
SAML *e*Sn Sn 05 00 11.9 -10
NNA **Nana** 18.02 193 *e*P P 04 57 20.1 +0.7
18nm,1.0s
TEIG **Tepich** 21.01 315 *e*P P 04 57 53.4 +1.4
82nm,1.6s
TEIG **Tepich** 21.01 315 P P 04 57 53.6 +1.6
14nm,0.9s,baz=77,slow=14,SNR=14
LPAZ **La Paz** 22.25 169 *e*P P 04 58 07.3 +1.4
19nm,0.9s
LPAZ **La Paz** 22.25 169 P P 04 58 07.2 +1.3
4.5nm,0.5s,baz=354,slow=9.8,SNR=42
LVC **Limon Verde** 28.32 173 *e*P P 04 59 03.1 +0.7
6.9nm,1.0s
KMSC **Kings Mountain** 30.43 346 ⇑P P 04 59 20.1 -0.6
baz=31
BDFB **Brasilia** 32.27 131 LR LR 05 13 39.5
comp=Z,334nm,18.7s,baz=8.1,slow=38
PLAL **Pickwick Lake** 32.49 336 *e*P P 04 59 40.4 +1.6
77nm,2.2s
732A **Laxson Ranch,** 34.60 315 ⇑P P 04 59 56.5 -0.8
baz=35
WCI **Wyandotte Cave** 34.73 341 *e*P P 04 59 59.8 +1.5
7.4nm,0.8s
632A **Uvalde** 34.94 316 ⇑P P 04 59 59.7 -0.6
baz=35
WHTX **Lake Whitney** 35.02 322 ⇓P P 05 00 00.4 -0.5
baz=35
532A **Rocksprings** 35.40 317 ⇓P P 05 00 03.8 -0.5
baz=36,SNR=8.5
631A **Perdido Creek** 35.43 315 ⇓P P 05 00 03.9 -0.6
baz=36
JCT **Junction City** 35.55 317 ⇓P P 05 00 04.9 -0.7
baz=36
BLO **Bloomington** 35.66 341 *e*P P 05 00 07.4 +1.1
432A **Menard** 35.79 318 ⇑P P 05 00 06.8 -0.8
baz=36
OLIL **Olney** 35.80 339 *e*P P 05 00 08.1 +0.6
15nm,0.6s
531A **Rocksprings** 35.86 316 ⇓P P 05 00 07.6 -0.6
baz=36
332A **Millersview** 36.08 319 ⇑P P 05 00 09.4 -0.6
baz=36
431A **Sonora** 36.22 317 ⇑P P 05 00 10.6 -0.7
baz=36
232A **Coleman** 36.34 319 ⇓P P 05 00 12.0 -0.3
baz=36
530A **J-C Ranch, Com** 36.40 315 ⇓P P 05 00 12.4 -0.5
baz=36,SNR=6.9
331A **San Angelo** 36.48 318 ⇓P P 05 00 12.9 -0.6
baz=37
231A **Bronte** 36.80 319 ⇓P P 05 00 15.5 -0.7
baz=37
ABTX **Abilene, Hawle** 36.81 320 ⇑P P 05 00 16.0 -0.3
baz=37
TUL1 **Tulsa** 36.89 328 ⇓P P 05 00 16.4 -0.4
baz=37
SFIN **Scholer Farm** 36.94 341 ⇑P P 05 00 17.1 -0.2
baz=37
529A **Stev Forest Ra** 37.01 315 ⇑P P 05 00 17.6 -0.5
baz=37
330A **Mertzon** 37.05 317 ⇑P P 05 00 17.8 -0.5
baz=37
429A **Davenport Ranc** 37.07 316 ⇑P P 05 00 18.0 -0.6
baz=37
628A **Black Gap, Mar** 37.13 313 ⇑P P 05 00 18.3 -0.7
baz=37
Z32A **Haskell** 37.16 321 ⇓P P 05 00 19.2 -0.1
baz=37,SNR=7.2
CFAA **Coronel Fontan** 37.28 174 P P 05 00 20.2 0.0
CFAA **Coronel Fontan** 37.28 174 P P 05 00 20.2 0.0
0.2nm,0.6s,baz=342,slow=7.8,SNR=5.0
230A **Sterling City** 37.30 318 ⇑P P 05 00 20.0 -0.5
baz=37
131A **Roby** 37.32 320 ⇑P P 05 00 20.2 -0.4
baz=37
528A **Cox Ranch, San** 37.43 314 ⇓P P 05 00 21.1 -0.6
baz=38
627A **Terlingua Ranc** 37.47 313 ⇓P P 05 00 21.8 -0.3
baz=38,SNR=5.8
Z31A **Sharp Cattle R** 37.58 321 ⇑P P 05 00 22.9 +0.1
baz=38
Y32A **R-V Farms, Ver** 37.60 322 ⇓P P 05 00 22.9 -0.1
baz=38
TXAR **Lajitas Array** 37.61 312 P P 05 00 23.2 0.0
TXAR pP pP 05 00 29.9 -0.6
TXAR PcP PcP 05 02 41.6 +0.9
TXAR **Lajitas Array** 37.61 312 P P 05 00 23.2 0.0
1.3nm,0.8s,baz=127,slow=9.3,SNR=20
TXAR pP pP 05 00 29.9 -0.6
3.4nm,0.8s,baz=128,slow=8.5,SNR=22
TXAR PcP PcP 05 02 41.6 +0.9
0.7nm,0.8s,baz=132,slow=4.0,SNR=4.0
329A **Wagon Wheel Ra** 37.64 317 ⇑P P 05 00 22.9 -0.5
baz=38,SNR=5.3
130A **Snyder** 37.65 319 ⇓P P 05 00 23.1 -0.3
baz=38
428A **Kincaid Ranch,** 37.68 315 ⇓P P 05 00 23.6 -0.2
baz=38,SNR=6.2
WMOK **Wichita Mounta** 37.71 324 *e*P P 05 00 22.6 -1.3
10.0nm,0.9s
229A **Bryant Ranch,** 37.82 317 ⇑P P 05 00 24.5 -0.4
baz=38
527A **Woodward Ranch** 38.01 314 ⇓P P 05 00 26.2 -0.4
baz=38
626A **Big Bend Ranch** 38.07 312 ⇑P P 05 00 26.7 -0.4
baz=38
Y31A **Rekieta Farm,** 38.08 321 ⇑P P 05 00 27.1 +0.1
baz=38,SNR=8.1
328A **Wristen Ranch,** 38.15 316 ⇓P P 05 00 27.3 -0.4
baz=38
Z30A **Sanderson Ranc** 38.19 320 ⇓P P 05 00 27.6 -0.4
baz=38
427A **Hayter Ranch,** 38.26 315 ⇑P P 05 00 28.0 -0.7
baz=38,SNR=9.0
129A **Stewart Farms,** 38.26 318 ⇑P P 05 00 28.2 -0.4
baz=38,SNR=5.8
526A **Mary Lane Ranc** 38.31 313 ⇓P P 05 00 28.7 -0.5
baz=38
X31A **McDonald Ranch** 38.35 322 ⇓P P 05 00 29.2 -0.1
baz=38
RCBR **Riachuelo** 38.39 107 P P 05 00 30.8 +0.9
RCBR **Riachuelo** 38.39 107 P P 05 00 30.8 +0.9
1.2nm,0.4s,baz=78,slow=23,SNR=4.8
Y30A **Stafford Cattl** 38.42 321 ⇓P P 05 00 29.8 -0.2
baz=38
Z29A **Hungry Hill Ra** 38.55 319 ⇓P P 05 00 30.5 -0.5
baz=39,SNR=10
426A **McDonald Obser** 38.60 314 ⇓P P 05 00 31.2 -0.5
baz=39,SNR=9.6
128A **Castleberry Fa** 38.67 318 ⇓P P 05 00 31.9 -0.2
baz=39,SNR=9.9
W31A **Holland Ranch,** 38.71 323 ⇓P P 05 00 32.1 -0.2
baz=39
X30A **Coker Ranch, T** 38.78 321 ⇓P P 05 00 33.0 +0.1
baz=39,SNR=10.0
Y29A **Porterfield Fa** 38.91 320 ⇑P P 05 00 33.7 -0.4
baz=39,SNR=6.3
Z28A **Tucker Farm, M** 39.01 319 ⇓P P 05 00 34.4 -0.5
baz=39,SNR=5.6
V31A **Spring Creek L** 39.05 324 ⇑P P 05 00 35.0 -0.2
baz=39
X29A **Tulia** 39.30 321 ⇑P P 05 00 36.9 -0.4
baz=39
Y28A **McKinney Farm,** 39.31 320 ⇓P P 05 00 36.8 -0.6
baz=39,SNR=7.1
425A **Indio Mountain** 39.36 313 ⇓P P 05 00 37.4 -0.5
baz=39,SNR=6.3
226B **Tecolote Peak,** 39.49 316 ⇑P P 05 00 38.7 -0.3
baz=40
AMTX **Amarillo** 39.57 321 *e*P P 05 00 39.5 -0.1
23nm,0.8s
Z27A **Tatum** 39.58 318 ⇑P P 05 00 39.2 -0.5
baz=40,SNR=20
X28A **Dimmitt** 39.66 320 ⇑P P 05 00 39.9 -0.5
baz=40
325A **Bean Ranch, Si** 39.66 314 ⇓P P 05 00 40.0 -0.6
baz=40,SNR=5.1
MSTX **Muleshoe** 39.69 319 ⇑P P 05 00 40.0 -0.6
baz=40
GDL2 **Guadalupe Moun** 39.70 316 *e*P P 05 00 41.6 +0.8
2.6nm,0.7s

W29A **Amraillo** 39.70 321 ⇓P P 05 00 40.4 -0.3
baz=40
T31A **Randall Ranch,** 39.88 325 ⇑P P 05 00 41.6 -0.5
baz=40
Y27A **Causey** 39.89 319 ⇑P P 05 00 41.9 -0.4
baz=40
225A **Deer Hill, Car** 39.97 315 ⇑P P 05 00 42.2 -0.8
baz=40
U30A **WK&E Inc. Balk** 40.05 324 ⇑P P 05 00 42.6 -0.9
baz=40
Z26A **Caprock** 40.06 317 ⇑P P 05 00 43.2 -0.5
baz=40,SNR=10
324A **Moseley Ranch,** 40.07 314 ⇓P P 05 00 43.2 -0.7
baz=40,SNR=6.9
V29A **Stinnett** 40.12 322 ⇑P P 05 00 44.6 +0.4
baz=40
MNTX **Cornudas Mount** 40.14 314 *e*P P 05 00 43.8 -0.5
9.2nm,1.0s
125A **Gardner Draw,** 40.17 316 ⇑P P 05 00 44.4 -0.2
baz=40,SNR=6.1
JFWS **Jewell Farm** 40.26 340 *e*P P 05 00 45.3 +0.3
14nm,0.7s
T30A **Plains** 40.34 325 ⇑P P 05 00 46.0 +0.2
baz=40
Y26A **Elida** 40.35 318 ⇑P P 05 00 45.7 -0.4
baz=40,SNR=5.2
224A **Cornudas Mount** 40.44 315 ⇑P P 05 00 46.7 -0.2
baz=40
W27A **Bowe Ranch, En** 40.56 320 ⇓P P 05 00 47.6 -0.2
baz=41,SNR=6.0
Z25A **Roswell** 40.57 317 ⇓P P 05 00 48.0 +0.1
baz=41,SNR=11
X26A **CR and CF Fran** 40.72 319 ⇑P P 05 00 48.9 -0.3
baz=41,SNR=7.0
124A **Stringfield Ra** 40.74 316 ⇑P P 05 00 49.6 +0.1
baz=41
T29A **Hugoton** 40.85 324 ⇑P P 05 00 50.4 +0.2
baz=41
Y25A **Mesa, Roswell** 40.93 318 ⇑P P 05 00 51.0 +0.1
baz=41,SNR=6.1
W26A **Owens Ranch, T** 41.02 320 ⇓P P 05 00 51.6 0.0
baz=41
Z24A **Sheeppen Canyo** 41.04 316 ⇑P P 05 00 51.9 0.0
baz=41
R30A **Dighton** 41.06 326 ⇓P P 05 00 51.9 +0.1
baz=41
S29A **Ulysses** 41.07 325 ⇓P P 05 00 52.1 +0.1
baz=41
X25A **Clemmons Ranch** 41.26 318 ⇑P P 05 00 53.9 +0.2
baz=41
123A **Bell Site, Whi** 41.27 315 ⇓P P 05 00 53.8 0.0
baz=41
U27A **Thompson Grove** 41.28 322 ⇓P P 05 00 53.8 +0.1
baz=41
Y24A **Capitan** 41.43 317 ⇓P P 05 00 55.3 +0.1
baz=42,SNR=13
V26A **Tequesquite Ra** 41.48 321 ⇓P P 05 00 55.3 -0.1
baz=42
S28A **Manter** 41.50 324 ⇓P P 05 00 55.5 0.0
baz=42,SNR=9.4
W25A **X Bar L Ranch,** 41.55 319 ⇑P P 05 00 56.1 +0.1
baz=42,SNR=6.0
222A **Williams Famil** 41.59 314 ⇑P P 05 00 56.5 +0.1
baz=42
T27A **Campo** 41.63 323 ⇑P P 05 00 56.7 +0.1
baz=42
U26A **Atchley Ranch,** 41.83 321 ⇓P P 05 00 58.3 0.0
baz=42
Y23A **Lovelace Mesa,** 41.85 317 ⇓P P 05 00 58.2 -0.4
baz=42
R28A **Tribune** 41.96 325 ⇑P P 05 00 59.0 -0.3
baz=42,SNR=7.1
221A **Mesquite Ranch** 42.03 313 ⇑P P 05 00 59.6 -0.4
baz=42
V25A **Rancho No Teng** 42.03 320 ⇓P P 05 00 59.8 -0.2
baz=42
Z22A **Elephant Butte** 42.11 315 ⇑P P 05 01 00.8 +0.2
baz=42
W24A **Lazy 6 Ranch,** 42.16 319 ⇓P P 05 01 01.0 -0.1
baz=42
T26A **Comanche Natio** 42.23 322 ⇑P P 05 01 01.7 0.0
baz=42
320A **Kipp Ranch, An** 42.24 312 ⇑P P 05 01 01.6 -0.1
baz=42
U25A **Circle Dot Ran** 42.24 321 ⇑P P 05 01 01.9 +0.2
baz=42,SNR=6.4
121A **Cookes Peak, D** 42.30 314 ⇑P P 05 01 02.3 0.0
baz=42
BNM **Barren Site** 42.37 317 *e*P P 05 01 02.7 -0.1
V24A **Rampart Ranch,** 42.38 319 ⇑P P 05 01 03.2 +0.3
baz=42,SNR=6.8
S26A **Kim** 42.45 323 ⇑P P 05 01 03.4 +0.1
baz=43
Q28A **Sharon Springs** 42.47 326 ⇑P P 05 01 03.5 +0.1
baz=43
Y22A **Socorro** 42.48 316 ⇓P P 05 01 03.8 +0.1
baz=43
R27A **Eads** 42.49 324 ⇓P P 05 01 03.7 +0.1
baz=43,SNR=6.8
220A **Playas Peak, P** 42.52 312 ⇑P P 05 01 04.8 +0.8
baz=43,SNR=12
W23A **Werner Place,** 42.62 318 ⇑P P 05 01 04.9 0.0
baz=43
Z21A **St. Cloud Mine** 42.63 315 ⇑P P 05 01 05.1 +0.2
baz=43
ANMO **Albuquerque** 42.71 318 *e*P P 05 01 05.9 +0.4
9.7nm,1.4s
T25A **Trinidad** 42.71 322 ⇑P P 05 01 06.0 +0.4
baz=43
P28A **Saint Francis** 42.78 326 ⇑P P 05 01 06.4 +0.5
baz=43
U24A **Moreno Valley** 42.80 320 ⇓P P 05 01 06.7 +0.3
baz=43
319A **Douglas** 42.82 311 ⇑P P 05 01 06.9 +0.5
baz=43,SNR=5.3
X22A **Bernardo** 42.83 317 ⇓P P 05 01 06.9 +0.4
baz=43
LAZ **Ladron** 42.86 316 *e*P P 05 01 07.3 +0.5
5.3nm,0.9s
R26A **Arlington** 42.88 324 ⇑P P 05 01 07.2 +0.4
baz=43
KSCO **Kaye Shedlock'** 42.88 325 ⇑P P 05 01 07.2 +0.4
baz=43
120A **U Bar Ranch, L** 42.92 313 ⇓P P 05 01 07.8 +0.5
baz=43
V23A **Ortiz Mt. (NFS** 42.99 319 ⇑P P 05 01 08.5 +0.7
baz=43
Y21A **Point of Rocks** 43.01 316 ⇑P P 05 01 08.8 +0.7
baz=43
W22A **Albuquerque** 43.05 317 ⇑P P 05 01 09.2 +0.8
baz=43
S25A **Robets Cordova** 43.06 322 ⇓P P 05 01 09.1 +0.7
baz=43
T24A **Torres, Weston** 43.07 321 ⇑P P 05 01 09.2 +0.6
baz=43
Z20A **Nine Sixteen R** 43.19 314 ⇓P P 05 01 10.0 +0.6
baz=43
R25A **Fountain Ranch** 43.28 323 ⇓P P 05 01 11.0 +1.0
baz=43
X21A **Alamocita Cree** 43.33 316 ⇓P P 05 01 11.5 +0.8
baz=43,SNR=6.3
Q26A **Hugo** 43.34 324 ⇑P P 05 01 11.2 +0.6
baz=44
U23A **El Rito** 43.34 319 ⇑P P 05 01 11.4 +0.7
baz=43
ECSD **EROS Data Cent** 43.41 335 *e*P P 05 01 10.4 -0.4
7.1nm,1.1s
Y20A **Horse Springs,** 43.45 315 ⇓P P 05 01 12.7 +1.1
baz=44,SNR=6.1
S24A **Houchin Ranch,** 43.52 322 ⇑P P 05 01 13.0 +0.8
baz=44
V22A **San Miguel Ran** 43.57 318 ⇓P P 05 01 13.4 +0.9
baz=44,SNR=6.0
W21A **San Fidel** 43.61 317 ⇓P P 05 01 13.4 +0.5
baz=44
O27A **Beecher Island** 43.61 326 ⇑P P 05 01 13.3 +0.7
baz=44
P26A **Davis Ranch, A** 43.67 325 ⇑P P 05 01 13.6 +0.5
baz=44
T23A **Casias Ranch,** 43.67 320 ⇓P P 05 01 14.2 +0.9
baz=44,SNR=6.8
SDCO **Great Sand Dun** 43.77 322 *e*P P 05 01 15.2 +1.0
6.6nm,0.8s
U22A **Llaves** 43.80 319 ⇑P P 05 01 14.9 +0.5
baz=44
R24A **Sanders Place,** 43.83 322 ⇑P P 05 01 15.1 +0.5
baz=44
X20A **Quemado** 43.88 316 ⇓P P 05 01 16.0 +1.0
baz=44,SNR=5.9
OGNE **Ogallala** 43.90 328 ⇓P P 05 01 15.7 +0.8
baz=44
V21A **Milan** 43.99 318 ⇑P P 05 01 16.4 +0.5
baz=44
S23A **Nye Farm, Mont** 44.05 321 ⇑P P 05 01 16.9 +0.5
baz=44
N27A **Anderson Farm,** 44.07 327 ⇑P P 05 01 17.0 +0.7
baz=44
P25A **Willow Gulch B** 44.11 324 ⇑P P 05 01 17.3 +0.5
baz=44
O26A **Horse Wrangler** 44.11 326 ⇑P P 05 01 17.1 +0.4
baz=44
T22A **Edith** 44.21 320 ⇑P P 05 01 18.0 +0.4
baz=44
R23A **Moffat** 44.25 322 ⇓P P 05 01 18.2 +0.2
baz=44
U21A **Nageezi** 44.36 319 ⇑P P 05 01 19.2 +0.3
baz=44
TUC **Tucson** 44.39 312 *e*P P 05 01 19.4 +0.5
1.4nm,1.0s
V20A **Brimhall** 44.54 317 ⇓P P 05 01 20.7 +0.4
baz=45
S22A **4UR Ranch, Cre** 44.60 321 ⇑P P 05 01 21.2 +0.3
baz=45
T21A **Navajo Lake** 44.60 319 ⇓P P 05 01 21.2 +0.4
baz=45
Q23A **Hartsel** 44.70 323 ⇑P P 05 01 22.1 +0.4
baz=45
R22A **Saguache, Gunn** 44.85 321 ⇑P P 05 01 23.4 +0.6
baz=45
X18A **Snowflake** 44.88 315 ⇑P P 05 01 24.0 +1.0
baz=45
P23A **Jefferson** 45.00 323 ⇓P P 05 01 25.2 +1.1
baz=45
BRSD **Miller** 45.00 333 ⇑P P 05 01 25.3 +1.7
baz=45
W18A **Petrified Fore** 45.04 316 ⇑P P 05 01 25.4 +1.1
baz=45
EYMN **Ely** 45.13 342 *e*P P 05 01 24.9 +0.3
13nm,0.7s
EYMN *e*pP pP 05 01 31.6 -0.3
ISCO **Idaho Springs** 45.14 324 *e*P P 05 01 26.1 +1.0
8.6nm,1.0s
ISCO *e*PcP PcP 05 03 05.2 -0.3
ISCO **Idaho Springs** 45.14 324 ⇓P P 05 01 25.7 +0.6
baz=45,SNR=5.9
S21A **Coal Bank Pass** 45.16 320 ⇓P P 05 01 26.1 +0.8
baz=45
Q22A **Crested Butte,** 45.33 322 ⇓P P 05 01 27.2 +0.5
baz=45,SNR=5.2
MVCO **Mesa Verde** 45.36 319 *e*P P 05 01 27.1 +0.3
1.0nm,0.5s
MVCO *e*pP pP 05 01 34.3 +0.1
MVCO **Mesa Verde** 45.36 319 ⇓P P 05 01 27.5 +0.6
baz=46
N24A **Carr** 45.39 325 ⇑P P 05 01 27.8 +0.9
baz=46
SMCO **Snowmass** 45.56 322 *e*P P 05 01 29.3 +0.7
S20A **Disappointment** 45.62 320 ⇑P P 05 01 29.8 +0.8
baz=46,SNR=13
214A **Organ Pipe Nat** 45.75 310 ⇑P P 05 01 30.4 +0.6
baz=46
R20A **Redvale** 45.85 320 ⇑P P 05 01 31.6 +1.0
baz=46,SNR=6.0
X16A **Lo Mia Camp, P** 45.89 314 ⇓P P 05 01 31.4 +0.3
baz=46
O22A **Kremmling** 45.92 323 ⇑P P 05 01 31.6 +0.3
baz=46
PV01 **Paradox Valley** 45.94 320 *e*P P 05 01 32.3 +0.9
569nm,0.8s
PHWY **Pilot Hill** 46.03 325 *e*P P 05 01 33.2 +1.1
3.7nm,0.8s
PHWY *e*pP pP 05 01 39.6 +0.1
N23A **Red Feather La** 46.04 325 ⇓P P 05 01 32.9 +0.7
baz=46,SNR=6.0
P21A **Newcastle** 46.06 322 ⇓P P 05 01 32.9 +0.5
baz=46
Q20A **Ridgley Place,** 46.24 321 ⇓P P 05 01 34.2 +0.5
baz=46,SNR=6.4
PV04 **Paradox Valley** 46.30 320 *e*P P 05 01 42.5 +8.3
WUAZ **Wupatki** 46.39 315 *e*P P 05 01 35.7 +0.7
16nm,0.9s
WUAZ **Wupatki** 46.39 315 ⇓P P 05 01 35.4 +0.4
baz=46,SNR=7.7
Z14A **Wintersburg** 46.49 312 ⇓P P 05 01 36.2 +0.6
baz=47
O21A **Pagoda** 46.50 323 ⇑P P 05 01 36.5 +0.6
baz=47
S18A **Hurst Farm, Bl** 46.61 318 ⇓P P 05 01 37.2 +0.5
baz=47
P20A **De Beque** 46.63 322 ⇓P P 05 01 37.2 +0.5
baz=47
L23A **Garrett** 46.70 326 ⇓P P 05 01 37.8 +0.5
baz=47
Y14A **Wickenburg** 46.80 312 ⇓P P 05 01 38.2 +0.2
baz=47,SNR=5.0
113A **Mohawk Valley,** 46.84 311 ⇑P P 05 01 38.7 +0.5
baz=47
N21A **Black Mountain** 46.87 323 ⇓P P 05 01 39.0 +0.3
baz=47
AGMN **Agassiz Nation** 46.89 339 *e*P P 05 01 38.6 +0.2
6.5nm,0.8s
AGMN *e*pP pP 05 01 45.4 -0.4
O20A **White River Ci** 46.92 322 ⇑P P 05 01 39.2 +0.2
baz=47
J24A **Dixon Ranch, L** 46.97 328 ⇑P P 05 01 39.5 +0.3
baz=47
P19A **Cripple Cowboy** 47.08 321 ⇓P P 05 01 40.3 0.0
baz=47
K23A **Bowen Ranch, D** 47.09 327 ⇓P P 05 01 40.3 +0.1
baz=47
M21A **Separation Pea** 47.31 324 ⇓P P 05 01 42.1 0.0
baz=47
N20A **Spence Gulch,** 47.36 323 ⇓P P 05 01 42.7 +0.1
baz=48
U15A **North Rim** 47.50 316 ⇑P P 05 01 44.2 +0.5
baz=48,SNR=5.1
K22A **Casper** 47.51 326 ⇓P P 05 01 43.9 +0.3
baz=48
O19A **Miners Draw (B** 47.56 322 ⇑P P 05 01 44.1 +0.1
baz=48
M20A **Sweetwater, Wa** 47.72 324 ⇓P P 05 01 45.3 0.0
baz=48
SRU **San Rafael** 47.75 320 ⇑P P 05 01 45.8 +0.3
baz=48,SNR=6.3
GLA **Glamis** 47.76 310 *e*P P 05 01 46.2 +0.6
GLA **Glamis** 47.76 310 ⇓P P 05 01 45.7 +0.1
baz=48
P18A **Preston Nutter** 47.87 321 ⇓P P 05 01 46.3 -0.2
baz=48
K21A **Alcova** 47.91 326 ⇑P P 05 01 47.1 +0.4
baz=48,SNR=8.3
MDND **Maddock** 47.96 336 ⇑P P 05 01 47.4 +0.6
baz=48
Q16A **Castle Valley** 48.06 319 ⇓P P 05 01 48.1 +0.2
baz=48
L20A **Wamsutter** 48.13 324 ⇑P P 05 01 48.6 +0.2
baz=48
I22A **9 Mile Ranch,** 48.32 327 ⇑P P 05 01 49.9 +0.2
baz=48
J21A **Lysite** 48.48 326 ⇓P P 05 01 51.3 +0.2
baz=49
MSU **Marysvale** 48.50 318 *e*P P 05 01 52.4 +1.0
MVU **Marysvale** 48.52 318 *e*P P 05 01 52.3 +0.8
12nm,0.9s
MVU *e*pP pP 05 01 59.6 +0.6
K20A **Yellowstone Ra** 48.54 325 ⇑P P 05 01 51.7 +0.2
baz=49
ULM **Lac du Bonnet** 48.55 340 P P 05 01 50.8 -0.4
ULM **Lac du Bonnet** 48.55 340 P P 05 01 50.8 -0.4
2.6nm,0.5s,baz=144,slow=9.3,SNR=3.8
ULM LR LR 05 23 15.5
comp=Z,103nm,20.4s,baz=137,slow=37
F24A **Ekalaka** 48.62 331 ⇓P P 05 01 52.0 0.0
baz=49
G23A **Biddle** 48.64 329 ⇓P P 05 01 52.2 0.0
baz=49
I21A **Big Trails, Te** 48.70 327 ⇓P P 05 01 52.5 -0.2
baz=49,SNR=5.3
L19A **Farson** 48.79 324 ⇓P P 05 01 53.1 -0.4
baz=49
CCUT **Cedar City** 48.80 316 *e*P P 05 01 54.5 +0.8
J20A **Shoshoni** 48.84 326 ⇓P P 05 01 53.6 -0.2
baz=49
K19A **Absolon Red Bu** 48.94 325 ⇓P P 05 01 54.2 -0.4
baz=49
DAU **Daniels Canyon** 48.95 321 *e*P P 05 01 55.8 +0.9

DAU epP pP 05 02 02.6 +0.3
MPU Maple Canyon 48.97 320 eP P 05 01 55.5 +0.6
12nm,0.8s
MPU epP pP 05 02 02.5 +0.1
ARUT Antelope Range 48.98 317 eP P 05 01 55.4 +0.4
12nm,1.2s
F23A Volborg 49.01 330 ⇓P P 05 01 54.8 -0.2
baz=49
L18A Fontenelle, Gr 49.08 323 ⇑P P 05 01 55.2 -0.6
baz=49
G22A Birney 49.11 329 ⇑P P 05 01 55.6 -0.2
baz=49,SNR=5.2
JLU Jordanelle 49.18 321 eP P 05 01 57.8 +1.2
M17A Scullys Gap (B 49.20 322 ⇑P P 05 01 56.1 -0.6
baz=49
I20A Worland 49.25 326 ⇓P P 05 01 56.6 -0.3
baz=49,SNR=6.6
SCHQ Schefferville 49.26 4 P P 05 01 57.8 +1.1
SCHQ Schefferville 49.26 4 P P 05 01 57.8 +1.1
1.4nm,0.6s,baz=257,slow=18,SNR=2.9
SCHQ LR LR 05 21 08.1
comp=Z,94nm,21.5s,baz=92,slow=34
PDAR Pinedale Array 49.31 324 P P 05 01 57.5 0.0
PDAR pP pP 05 02 04.7 -0.3
PDAR Pinedale Array 49.31 324 P P 05 01 57.5 0.0
2.9nm,1.0s,baz=120,slow=8.8,SNR=13
PDAR pP pP 05 02 04.7 -0.3
4.8nm,1.0s,baz=128,slow=9.6,SNR=13
BW06 Boulder Array 49.31 324 eP P 05 01 57.3 -0.2
7.7nm,1.0s
J19A Crowheart 49.33 325 ⇑P P 05 01 56.9 -0.7
baz=49
D24A Glendive 49.48 332 ⇑P P 05 01 58.5 0.0
baz=50,SNR=6.0
H20A Greybull 49.53 327 ⇓P P 05 01 58.6 -0.4
baz=50
I19A Meeteetse 49.78 326 ⇓P P 05 02 00.4 -0.7
baz=50
DUG Dugway 49.82 320 eP P 05 02 02.2 +0.9
7.1nm,0.8s
DUG epP pP 05 02 09.3 +0.5
DUG Dugway 49.82 320 ⇓P P 05 02 01.2 -0.1
baz=50,SNR=6.3
HWUT Hardware Ranch 49.82 322 eP P 05 02 01.0 -0.4
5.7nm,0.9s
HWUT epP pP 05 02 08.2 -0.6
C24A Savage 49.83 332 ⇑P P 05 02 01.1 0.0
baz=50
F21A Absaloka Mine, 49.95 329 ⇓P P 05 02 01.9 -0.3
baz=50
G20A Bridger 50.12 328 ⇓P P 05 02 03.8 +0.3
baz=50,SNR=5.4
GSC Goldstone 50.21 312 eP P 05 02 04.5 +0.2
GSC Goldstone 50.21 312 ⇑P P 05 02 04.0 -0.4
baz=50
C23A Lambert 50.38 332 ⇑P P 05 02 05.6 +0.2
baz=50
D22A Cohagen 50.39 331 ⇓P P 05 02 06.1 +0.6
baz=50,SNR=13
DGMT Dagmar 50.41 333 eP P 05 02 06.6 +1.1
DGMT Dagmar 50.41 333 ⇓P P 05 02 05.9 +0.3
baz=50
SNOW Snow King Moun 50.43 324 eP P 05 02 06.4 +0.3
13nm,1.1s
LOHW Long Hollow 50.44 325 eP P 05 02 06.5 +0.5
LOHW epP pP 05 02 13.3 -0.2
F20A Billings 50.47 328 ⇑P P 05 02 06.1 -0.1
baz=51
TPAW Teton Pass 50.56 324 eP P 05 02 07.5 +0.4
6.7nm,0.9s
TPAW epP pP 05 02 14.8 +0.3
MOOW Moose Ponds 50.60 325 eP P 05 02 07.5 +0.3
4.9nm,0.8s
CIS Catalina Islan 50.64 309 ⇑P P 05 02 07.5 -0.1
baz=51
A24A Westby 50.66 334 ⇑P P 05 02 08.2 +0.7
baz=51,SNR=5.6
C22A Vida 50.67 331 ⇓P P 05 02 07.6 +0.1
baz=51
RRI2 Red Ridge 50.69 324 eP P 05 02 08.7 +0.6
13nm,0.8s
R11A Troy Canyon, C 50.73 316 ⇓P P 05 02 08.5 +0.2
baz=51,SNR=6.1
D21A La Casta Ranch 50.73 330 ⇑P P 05 02 08.4 +0.3
baz=51
B23A Brockton 50.77 333 ⇓P P 05 02 08.3 +0.1
baz=51
IMW Indian Meadow 50.80 325 eP P 05 02 09.2 +0.4
8.9nm,1.0s
G18A Lazy EL Ranch, 50.91 327 ⇓P P 05 02 09.5 -0.1
baz=51
F19A Roth Farm, Mol 50.92 328 ⇑P P 05 02 09.6 0.0
baz=51
E20A Meyer Farm, Mu 50.93 329 ⇓P P 05 02 10.1 +0.6
baz=51,SNR=10
MPMC Manual Prospec 51.04 313 ⇑P P 05 02 10.6 -0.1
baz=51
I16A Newdale 51.10 324 ⇑P P 05 02 11.3 +0.2
baz=51
E19A Rath Farm, Rou 51.24 328 ⇑P P 05 02 12.1 +0.2
baz=51
GCMT Greycliff 51.27 327 eP P 05 02 12.5 +0.3
6.9nm,0.9s
C21A Desert Coulee 51.31 331 ⇑P P 05 02 12.5 +0.2
baz=51
D20A Manuel Ranch, 51.33 329 ⇓P P 05 02 12.7 +0.2
baz=51
F18A Big Timber 51.37 327 ⇑P P 05 02 13.1 +0.2
baz=52,SNR=8.7
H16A Russell Place, 51.47 325 ⇓P P 05 02 13.7 -0.1
baz=52
G17A Pierce Place, 51.56 326 ⇓P P 05 02 14.7 +0.3
baz=52
A22A Carney Farms, 51.58 333 ⇓P P 05 02 14.6 +0.3
baz=52
C20A Veseth Ranch, 51.68 330 ⇑P P 05 02 15.4 +0.2
baz=52,SNR=5.2
ELK Elko 51.68 319 eP P 05 02 23.2 +7.7
B21A Ellsworth Farm 51.69 331 ⇓P P 05 02 15.7 +0.5
baz=52
D19A Cripps Ranch, 51.75 329 ⇑P P 05 02 16.0 +0.3
baz=52,SNR=9.2
F17A Fitzpatrick Pl 51.88 327 ⇓P P 05 02 16.9 +0.2
baz=52
E18A Harlowton 51.90 328 ⇑P P 05 02 16.9 0.0
baz=52
J14A Carey 51.99 323 ⇓P P 05 02 17.6 0.0
baz=52
G16A Moss Hill, Enn 52.10 326 ⇓P P 05 02 18.5 +0.1
baz=52
VES Vestal, Richgr 52.12 312 ⇑P P 05 02 18.8 +0.2
baz=52
B20A Solberg Farm, 52.18 331 ⇑P P 05 02 19.6 +0.7
baz=52,SNR=8.7
H15A Lima 52.21 324 ⇓P P 05 02 19.8 +0.5
baz=52
C19A Slack Wire Ran 52.22 330 ⇓P P 05 02 19.3 +0.1
baz=52,SNR=6.6
BOZ Bozeman (W) 52.25 326 eP P 05 02 19.8 +0.3
3.2nm,1.1s
BOZ epP pP 05 02 26.9 -0.1
I14A Mackay 52.29 323 ⇑P P 05 02 20.0 +0.1
baz=52
F16A Kennard Place, 52.34 326 ⇓P P 05 02 20.3 +0.1
baz=52
E17A Martinsdale 52.34 327 ⇑P P 05 02 20.3 +0.1
baz=52,SNR=6.9
J13A Cove Ranch, Pi 52.42 322 ⇓P P 05 02 20.8 -0.1
baz=52,SNR=5.4
A20A Cobblestone Ra 52.44 331 ⇓P P 05 02 21.2 +0.4
baz=53,SNR=6.6
G15A Dillon 52.45 325 ⇓P P 05 02 21.3 +0.3
baz=52
MCMT McKenzie Canyo 52.45 325 eP P 05 02 22.0 +0.8
3.7nm,0.9s
MCMT epP pP 05 02 29.1 +0.5
DLMT Dillon 52.63 325 eP P 05 02 22.2 -0.2
H14A Leadore 52.63 324 ⇓P P 05 02 22.6 +0.1
baz=53
NVAR Mina Array Bea 52.66 315 P P 05 02 22.9 +0.1
NVAR pP pP 05 02 30.4 +0.2
NVAR PcP PcP 05 03 33.5 +1.0
NVAR Mina Array Bea 52.66 315 P P 05 02 22.8 +0.1
0.9nm,0.9s,baz=142,slow=5.1,SNR=5.0
NVAR pP pP 05 02 30.4 +0.2
1.4nm,0.6s,baz=118,slow=7.0,SNR=12
NVAR PcP PcP 05 03 33.5 +1.0
1.5nm,0.8s,baz=132,slow=4.4,SNR=6.2
HLID Hailey 52.66 322 eP P 05 02 23.1 +0.4
4.7nm,0.8s
HLID epP pP 05 02 30.1 0.0
HLID Hailey 52.66 322 ⇑P P 05 02 22.8 +0.1
baz=53,SNR=6.1
I13A Wildhorse Cree 52.68 323 ⇓P P 05 02 22.9 +0.1
baz=53,SNR=6.1
D17A Six Diamond Ra 52.68 328 ⇓P P 05 02 22.7 0.0
baz=53,SNR=6.7
EGMT Eagleton 52.76 329 eP P 05 02 23.6 +0.3
9.0nm,1.1s
EGMT Eagleton 52.76 329 ⇑P P 05 02 23.5 +0.3
baz=53
LRM Limekiln Ridge 52.82 326 eP P 05 02 24.3 +0.5
LRM epP pP 05 02 31.2 -0.1
E16A East Helena 52.82 327 ⇓P P 05 02 23.8 0.0
baz=53
F15A Butte 52.85 326 ⇑P P 05 02 24.1 0.0
baz=53
A19A Klindworth Far 52.87 331 ⇓P P 05 02 24.2 +0.3
baz=53
B18A Beardsley Farm 53.02 330 ⇓P P 05 02 25.3 +0.2
baz=53
C17A Wharram Farm, 53.03 328 ⇑P P 05 02 25.1 0.0
baz=53,SNR=5.2
D16A Dana Ranch, Ca 53.06 327 ⇑P P 05 02 25.5 0.0
baz=53
H13A Challis 53.12 324 ⇓P P 05 02 25.8 -0.3
baz=53
I12A Atlanta 53.23 322 ⇑P P 05 02 26.6 -0.3
baz=53
E15A Deer Lodge 53.29 326 ⇑P P 05 02 27.1 0.0
baz=53
F14A Wisdom 53.33 325 ⇓P P 05 02 27.3 -0.2
baz=53
A18A Metzger Ranch, 53.40 330 ⇓P P 05 02 27.8 0.0
baz=54
G13A Cobalt 53.41 324 ⇑P P 05 02 27.8 -0.4
baz=54
MFID Camas Ranch 53.45 322 eP P 05 02 28.5 +0.1
7.5nm,0.8s
MFID epP pP 05 02 35.8 -0.1
MFID Camas Ranch 53.45 322 ⇓P P 05 02 28.5 +0.1
baz=54,SNR=6.0
B17A L&G Farms, Che 53.47 329 ⇓P P 05 02 28.1 -0.3
baz=54
H12A Diamond D Ranc 53.47 323 ⇑P P 05 02 28.4 -0.2
baz=54
D15A Lincoln 53.59 327 ⇑P P 05 02 29.3 -0.1
baz=54
C16A Fuhringer Ranc 53.65 328 ⇓P P 05 02 29.7 -0.1
baz=54
E14A Clinton 53.75 326 ⇓P P 05 02 30.4 -0.2
baz=54
A17A Triple J Farms 53.84 330 ⇑P P 05 02 31.1 0.0
baz=54,SNR=5.6
F13A Darby 53.87 325 ⇓P P 05 02 31.2 -0.2
baz=54
B16A M & M Farms, S 54.01 329 ⇓P P 05 02 32.2 -0.2
baz=54
WCN Washoe City 54.06 315 eP P 05 02 33.5 +0.5
3.8nm,0.8s
G12A Big Creek, Yel 54.07 324 ⇓P P 05 02 32.5 -0.5
baz=54
C15A Salmond Ranch, 54.09 328 ⇑P P 05 02 32.5 -0.5
baz=54
D14A Greenough 54.16 327 ⇑P P 05 02 33.1 -0.4
baz=54
SLMT Seeley Lake 54.24 327 eP P 05 02 34.4 +0.2
MSO Missoula 54.25 326 eP P 05 02 34.2 +0.1
1.0nm,0.9s
MSO epP pP 05 02 41.0 -0.6
MSO Missoula 54.25 326 ⇑P P 05 02 33.6 -0.5
baz=54
A16A West Butte Ran 54.30 329 ⇓P P 05 02 34.3 -0.2
baz=54
FFC Flin Flon 54.35 340 eP P 05 02 34.2 -0.4
14nm,1.4s
F12A Elk City 54.38 324 ⇓P P 05 02 35.0 -0.2
baz=54
B15A Bradely Ranch, 54.40 328 ⇓P P 05 02 35.1 -0.1
baz=54
D13A Huson 54.69 326 ⇓P P 05 02 37.1 -0.2
baz=55
C14A Swan Lake 54.70 327 ⇑P P 05 02 37.2 -0.2
baz=55
WVOR Wild Horse Val 54.73 319 eP P 05 02 37.8 0.0
11nm,1.1s
B14A Marquette Ranc 54.80 328 ⇓P P 05 02 37.9 -0.3
baz=55
YBMT Yellow Bay 54.90 327 eP P 05 02 39.1 +0.2
8.0nm,1.1s
A15A Johnson Ranch, 54.90 329 ⇑P P 05 02 38.4 -0.4
baz=55
JTMT Jette 54.98 327 eP P 05 02 39.9 +0.4
1.7nm,0.9s
JTMT epP pP 05 02 47.2 +0.2
C13A Hot Springs 55.09 327 ⇓P P 05 02 39.8 -0.4
baz=55
D12A Red Ives Fores 55.17 326 ⇓P P 05 02 40.3 -0.5
baz=55
BLMT Blacktail Moun 55.17 327 eP P 05 02 41.7 +0.7
13nm,0.9s
BLMT epP pP 05 02 48.7 +0.2
A14A Double T Ranch 55.25 328 ⇑P P 05 02 41.0 -0.4
baz=55
BSMT Bassoo Peak 55.31 327 eP P 05 02 42.9 +0.9
BSMT epP pP 05 02 49.6 +0.1
B13A Whitefish 55.45 327 ⇑P P 05 02 42.3 -0.4
baz=56
WALA Waterton Lakes 55.56 328 eP P 05 02 42.6 -1.0
0.1nm,1.0s
C12B Naegeli Ranch, 55.61 326 ⇑P P 05 02 43.7 -0.2
baz=56
A13A Flathead Natio 55.75 328 ⇓P P 05 02 44.6 -0.4
baz=56
C11A Tepee Creek (N 56.12 326 ⇓P P 05 02 47.6 0.0
baz=56,SNR=5.2
A12A Yaak River Ran 56.41 327 ⇓P P 05 02 49.6 0.0
baz=56
NEW Newport 56.84 326 ⇑P P 05 02 52.4 -0.3
baz=57
YKA Yellowknife Ar 64.53 340 P P 05 03 44.5 -0.3
YKA pP pP 05 03 52.0 -0.3
YKA Yellowknife Ar 64.53 340 P P 05 03 44.4 -0.3
3.1nm,0.6s,baz=132,slow=6.8,SNR=97
YKA pP pP 05 03 52.0 -0.3
7.5nm,0.9s,baz=132,slow=6.5,SNR=38
YKW3 Yellowknife Ar 64.58 340 eP P 05 03 44.7 -0.3
YKW3 epP pP 05 03 51.8 -0.9
EVOP Sao Brissos 66.62 50 eP P 05 03 56.8 -2.0
7.4nm,0.8s
EVO 66.71 50 eP P 05 03 56.8 -2.5
7.4nm,0.8s
LIC Lamto 67.19 86 eP P 05 04 00.4 -2.4
8.0nm,0.6s
LIC Lamto 67.19 86 eP P 05 04 00.4 -2.4
8.0nm,0.6s
DBIC Dimbokro 67.33 85 eP P 05 04 05.4 +1.7
7.9nm,0.8s
DBIC pP pP 05 04 11.7 +0.4
DBIC Dimbokro 67.33 85 P P 05 04 05.0 +1.3
1.6nm,0.6s,baz=233,slow=5.3,SNR=3.9
DBIC pP pP 05 04 11.7 +0.4
4.0nm,0.7s,baz=280,slow=4.5,SNR=4.5
MDT Midelt 68.49 57 LR LR 05 29 13.0
comp=Z,37nm,19.0s,baz=156,slow=32
DLBC Dease Lake 68.58 332 eP P 05 04 11.5 +0.6
DLBC epP pP 05 04 18.6 +0.1
DLBC Dease Lake 68.58 332 P P 05 04 10.3 -0.6
2.5nm,0.8s,baz=146,slow=8.4,SNR=7.1
TOA0 Torodi Ar. Sit 73.49 78 eP P 05 04 42.6 +1.3
TORD Torodi Ar. Bea 73.49 78 P P 05 04 42.5 +1.2
TORD pP pP 05 04 49.1 +0.1
TORD Torodi Ar. Bea 73.49 78 P P 05 04 42.5 +1.2
0.5nm,0.5s,baz=281,slow=5.5,SNR=16
TORD pP pP 05 04 49.1 +0.1
1.7nm,0.6s,baz=282,slow=5.7,SNR=9.0
TORD LR LR 05 36 17.3
comp=Z,82nm,19.7s,baz=245,slow=35
MFF Saint Martin d 73.89 43 eP P 05 04 41.8 -1.3
14nm,0.9s
MFF Saint Martin d 73.89 43 eP P 05 04 41.8 -1.3
14nm,0.9s
TCF Toulx Ste Croi 75.46 44 eP P 05 04 50.7 -1.6
10nm,1.2s
TCF Toulx Ste Croi 75.46 44 eP P 05 04 50.7 -1.6
10nm,1.2s
EGAK Eagle 75.85 336 eP P 05 04 55.1 +1.0
12nm,1.2s
DOT Dot Lake 76.77 334 eP P 05 05 00.1 +0.7
14nm,1.0s
DOT epP pP 05 05 07.4 +0.3
TAM Tamanrasset 76.92 68 eP P 05 05 01.9 +0.8
4.3nm,0.9s
ILAR Eielson Array 78.23 335 P P 05 05 07.5 0.0
ILAR pP pP 05 05 14.2 -1.0
ILAR Eielson Array 78.23 335 P P 05 05 07.5 0.0
1.3nm,0.7s,baz=107,slow=4.3,SNR=19
ILAR pP pP 05 05 14.2 -1.0
2.6nm,0.9s,baz=111,slow=3.7,SNR=15
ILAR LR LR 05 41 05.8
comp=Z,44nm,21.1s,baz=120,slow=37
SML Sawmill 78.31 332 eP P 05 05 09.3 +1.3
5.7nm,1.1s
COLA College 78.65 335 eP P 05 05 10.4 +0.7
4.1nm,0.8s
MCK McKinley 78.91 334 eP P 05 05 11.8 +0.5
15nm,1.3s
MCK epP pP 05 05 19.0 0.0
TRF Thorofare Moun 79.46 333 eP P 05 05 14.1 -0.4
11nm,1.1s
COLD Coldfoot 80.01 337 eP P 05 05 18.3 +1.1
7.1nm,1.0s
COLD epP pP 05 05 25.6 +0.6
KEST Kesra 80.21 55 eP P 05 05 19.3 +0.3
KEST Kesra 80.21 55 P P 05 05 20.4 +1.4
0.5nm,0.8s,baz=300,slow=20,SNR=2.2
PPLA Purkeypile 80.24 333 eP P 05 05 18.6 -0.1
21nm,1.0s
PPLA epP PcP 05 05 26.0 +0.1
NB2 NORSAR Subarra 82.10 29 P P 05 05 37.1 +8.6
comp=Z,0.9nm,0.7s,baz=268,slow=5.6
NOA NORSAR Array B 82.10 29 pP pP 05 05 35.9 -0.4
NOA NORSAR Array B 82.10 29 pP pP 05 05 35.9 -0.4
comp=Z,1.2nm,0.9s,baz=268,slow=5.5,SNR=6.4
NOA LR LR 05 36 50.3
comp=Z,32nm,21.7s,baz=245,slow=32
GERES GERESS Array B 83.36 42 P P 05 05 35.6 +0.2
GERES pP pP 05 05 43.4 +0.2
GERES GERESS Array B 83.36 42 P P 05 05 35.6 +0.2
comp=Z,0.2nm,0.3s,baz=187,slow=6.9,SNR=3.5
GERES pP pP 05 05 43.4 +0.2
comp=Z,0.7nm,0.6s,baz=302,slow=6.1,SNR=4.1
VNA1 Neumayer--Stat 87.06 162 eP P 05 05 54.0 +0.8
VNA1 Neumayer--Stat 87.06 162 epP pP 05 06 02.2 +1.2
ARCES ARCESS Array B 87.59 20 P P 05 05 56.7 +0.8
ARCES ARCESS Array B 87.59 20 P P 05 05 56.7 +0.8
comp=Z,1.4nm,0.9s,baz=261,slow=4.7,SNR=3.9
SNAA Sanae 89.08 163 eP P 05 06 02.6 -0.3
SNAA Sanae 89.08 163 epP pP 05 06 10.0 -0.8
SNAA Sanae 89.08 163 eP P 05 06 02.3 -0.6
comp=Z,10nm,1.8s
SNAA epP pP 05 06 09.5 -1.3
FINES FINESS Array B 89.23 28 LR LR 05 41 14.1
comp=Z,41nm,19.1s,baz=90,slow=32
AKASG Malin Array Be 93.12 39 LR LR 05 48 03.6
comp=Z,30nm,19.0s,baz=20,slow=35
BRTR Keskin Array B 98.78 49 LR LR 05 48 49.3
comp=Z,17nm,20.9s,baz=164,slow=34
KMBO Kilima Mbogo 109.89 89 ePKP **PKiKP 05 11 40.4 -0.4**
MDJ Mudanjiang 126.13 340 PKP **PKPdf 05 12 09.8 -0.9**
WMQ Urumqi 127.65 18 ePKP **PKPdf 05 12 12.0 -1.7**
WMQ LR LR
comp=N,27nm,16.4s
WMQ LR LR
comp=E,110nm,30.2s
CN2 Changchun 128.14 343 ePKP **PKPdf 05 12 18.0 +3.4**
HHC Hu-ho-hao-te 133.57 356 ePKP **PKPdf 05 12 22.4 -2.7**
HHC sPKP 05 12 37.6
HHC PP **PP 05 14 54.1 +2.1**
HHC PKS **PKSdf 05 15 57.0 -4.6**
HHC SKS SKSdf 05 19 28.1 -7.1
HHC SKKS **SKKSac 05 21 41.3 -6.6**
HHC SS **SS 05 32 34.1 -1.4**
HHC AMB AMB
comp=Z,210nm,9.3s
HHC LR LR
comp=N,150nm,20.3s
HHC LR LR
comp=E,130nm,20.2s
HHC LR LR
comp=Z,140nm,21.4s
GTA Gaotai 134.62 8 sP PKPbc 05 12 28.9
LZH Lanzhou 138.35 4 ePKP **PKPdf 05 12 31.4 -2.8**
LZH sPKP 05 12 44.3
STKA Stephens Creek 138.72 226 PKP **PKPdf 05 12 35.4 +0.7**
STKA Stephens Creek 138.72 226 PKP **PKPdf 05 12 35.4 +0.7**
comp=Z,5.4nm,1.1s,baz=1.6,slow=6.5,SNR=2.9
PMG Port Moresby 140.40 262 ePKPdf **PKPdf 05 12 38.3 0.0**
WHN Wuhan 143.40 350 ePKPbc PKPab 05 12 32.3 -6.9
CD2 Chengdu 143.48 5 PKP **PKPdf 05 12 42.3 -1.1**
COEN Coen 143.82 254 ePKPdf **PKPdf 05 12 44.7 +0.4**
GYA Guiyang 148.07 1 ePKPbc **PKPdf 05 12 49.8 -1.7**
GYA PKPab **PKiKP 05 12 56.5 +0.1**
GYA sPKP 05 13 02.1
GYA PKS **PP 05 16 22.0 +1.3**
GYA PP PP 05 16 23.8 +3.1
GYA AMB AMB
comp=Z,80nm,7.8s
AS31 Alice Springs 148.81 232 ePKPbc **PKPbc 05 12 55.2 -1.3**
ASAR Alice Springs 148.81 232 PKPbc **PKPbc 05 12 55.0 -1.5**
ASAR Alice Springs 148.81 232 PKPbc **PKPbc 05 12 55.0 -1.5**
comp=Z,5.4nm,0.7s,baz=122,slow=2.8,SNR=39
KMI Kunming 149.08 8 PKPbc **PKPdf 05 12 51.8 -1.5**
WRAB Tennant Creek 150.18 239 ePKPbc **PKPbc 05 12 58.6 -1.3**
WRA Warramunga Arr 150.19 239 PKP **PKPdf 05 12 54.1 -0.7**
WRA PKPbc **PKPbc 05 12 58.9 -1.1**
WRA pPKPbc **PKPab 05 13 06.2 +0.2**
WRA Warramunga Arr 150.19 239 PKP **PKPdf 05 12 54.1 -0.7**
comp=Z,11nm,0.6s,baz=109,slow=2.5,SNR=14
WRA PKPbc **PKPbc 05 12 58.9 -1.1**
comp=Z,11nm,0.6s,baz=109,slow=2.5,SNR=133
WRA pPKPbc **PKPab 05 13 06.2 +0.2**
comp=Z,9.2nm,0.6s,baz=108,slow=2.5,SNR=17

DDA ***22*** *04:58:43.9, 36.89N×43.88E, h7km, MD3.3*
ISK ***22*** *04:58:43.8, 37.12N×43.92E, h5km, MD3.5*
CSEM 22 04:58:45.7±1.3, 37.06N×43.92E, h2km, MD3.5, Error ellipse: s-maj=25.9km s-min=17.8km az=114.0, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUKT	**Cukurca**	**0.32**	**307**	*e*PG	Pg	04 58 49.8	-2.3
CUKT				*e*SG	Sg	04 58 55.9	-0.4
HAKT	**HAKKARI**	**0.53**	**341**	*i* P	Pg	04 58 55.3	-1.0
HAKT				*i* S	Sg	04 59 04.1	+0.8
HAKT	**HAKKARI**	**0.53**	**341**	*i* P	Pg	04 58 55.3	-0.9
HAKT				*i* S	Sg	04 59 04.1	+0.7
SIRN	**S¯¯rnak**	**1.28**	**290**	*i* P	Pg	04 59 08.9	-1.5
SIRN				*i* S	Sb	04 59 27.8	0.0
SIRN	**S¯¯rnak**	**1.28**	**290**	*i* P	Pg	04 59 08.9	-1.5
SIRN				*i* S	Sb	04 59 27.8	+0.1
GEVA	**Gevas**	**1.43**	**332**	*i* P	Pg	04 59 13.4	0.0
GEVA				*i* S	Sn	04 59 35.5	+3.0
GEVA	**Gevas**	**1.43**	**332**	*i* P	Pg	04 59 13.4	0.0
GEVA				*i* S	Sn	04 59 35.5	+3.0
BTMT	**Batman**	**2.24**	**301**	*e*PN	Pn	04 59 25.1	+1.1
BTMT	**Batman**	**2.24**	**301**	*e*Pn	Pn	04 59 25.1	+1.2
MARD	**Mardin**	**2.52**	**277**	*i* P	Pn	04 59 28.6	+0.6
BNGB	**Bing¶ll**	**3.21**	**308**	*e*PN	Pn	04 59 36.6	-0.7
BINT	**Bingol**	**3.27**	**305**	*e*Pn	Pn	04 59 36.6	-1.5
PTK	**Pertek**	**4.02**	**298**	*e*PN	Pn	04 59 49.1	+0.5
PTK	**Pertek**	**4.02**	**298**	*e*Pn	Pn	04 59 49.1	+0.5
URFA	**Urfa**	**4.09**	**277**	*e*PN	Pn	04 59 49.8	+0.4
URFA	**Urfa**	**4.09**	**277**	*e*Pn	Pn	04 59 49.8	+0.4

NEIC ***22*** *05:29:30.4, 37.65S×177.40E, h104km, MG4.1(WEL), After WEL.*
WEL 22 05:29:30.4±0.2, 37.65S×177.40E, h104km±1km, ML4.1/15, 2C-34D, Error ellipse: s-maj=1.5km s-min=1.4km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.21**	**306**	PN	Pn	05 29 44.8	-0.3
WIZ				SN	Sn	05 29 56.1	+0.1
WIZ	**White Island**	**0.21**	**306**	Pn	Pn	05 29 44.8	-0.3

WIZ				Sn	Sn	05 29 56.1 +0.1
URZ	**Urewera**	**0.65**	**201**	ǁPN	Pn	05 29 47.7 -0.1
URZ				SN	Sn	05 30 01.0 +0.3
URZ	**Urewera**	**0.65**	**201**	ǁPn	Pn	05 29 47.7 -0.1
URZ				Sn	Sn	05 30 01.0 +0.3
MARZ	**Manawahe**	**0.67**	**240**	ǁPN	Pn	05 29 48.0 0.0
MARZ				SN	Sn	05 29 60.0 -1.1
MARZ	**Manawahe**	**0.67**	**240**	ǁPn	Pn	05 29 48.0 0.0
MARZ				Sn	Sn	05 29 60.0 -1.1
MWZ	**Matawai**	**0.69**	**172**	ǁPN	Pn	05 29 48.1 0.0
MWZ				SN	Sn	05 30 02.3 +0.8
MWZ	**Matawai**	**0.69**	**172**	ǁPn	Pn	05 29 48.1 0.0
MWZ				Sn	Sn	05 30 02.3 +0.8
EDRZ	**Edgecumbe**	**0.69**	**229**	ǁPN	Pn	05 29 48.4 +0.2
EDRZ	**Edgecumbe**	**0.69**	**229**	ǁPn	Pn	05 29 48.4 +0.2
OPRZ	**Ohinepanea**	**0.70**	**254**	ǁPN	Pn	05 29 48.1 0.0
OPRZ				SN	Sn	05 30 01.6 +0.1
OPRZ	**Ohinepanea**	**0.70**	**254**	ǁPn	Pn	05 29 48.1 0.0
OPRZ				Sn	Sn	05 30 01.6 +0.1
MXZ	**Matakaoa Point**	**0.72**	**83**	⇑PN	Pn	05 29 48.4 0.0
MXZ	**Matakaoa Point**	**0.72**	**83**	⇑Pn	Pn	05 29 48.4 0.0
PUZ	**Puketiti**	**0.80**	**122**	PN	Pn	05 29 48.8 -0.3
PUZ	**Puketiti**	**0.80**	**122**	Pn	Pn	05 29 48.9 -0.3
TARZ	**Mount Tarawera**	**0.92**	**230**	ǁPN	Pn	05 29 50.7 +0.3
TARZ	**Mount Tarawera**	**0.92**	**230**	ǁPn	Pn	05 29 50.7 +0.3
OMRZ	**Omania**	**0.93**	**241**	PN	Pn	05 29 50.6 +0.1
OMRZ	**Omania**	**0.93**	**241**	Pn	Pn	05 29 50.6 +0.1
RRRZ	**Republican Roa**	**0.98**	**225**	ǁPN	Pn	05 29 51.0 +0.1
RRRZ	**Republican Roa**	**0.98**	**225**	ǁPn	Pn	05 29 51.0 +0.1
CNGZ	**Carnagh Statio**	**1.05**	**143**	PN	Pn	05 29 52.0 +0.4
CNGZ	**Carnagh Statio**	**1.05**	**143**	Pn	Pn	05 29 52.0 +0.4
HRRZ	**Handcock Road**	**1.15**	**230**	PN	Pn	05 29 52.9 +0.1
HRRZ	**Handcock Road**	**1.15**	**230**	Pn	Pn	05 29 53.0 +0.1
PRRZ	**Plateau Road**	**1.16**	**223**	PN	Pn	05 29 52.8 -0.1
PRRZ	**Plateau Road**	**1.16**	**223**	Pn	Pn	05 29 52.8 -0.1
ALRZ	**Allen Road**	**1.23**	**222**	ǁPN	Pn	05 29 53.7 0.0
ALRZ	**Allen Road**	**1.23**	**222**	ǁPn	Pn	05 29 53.7 0.0
RAHZ	**Arahi**	**1.29**	**191**	ǁPN	Pn	05 29 54.3 -0.1
RAHZ	**Arahi**	**1.29**	**191**	ǁPn	Pn	05 29 54.3 -0.1
PRGZ	**Paritu Road**	**1.32**	**164**	PN	Pn	05 29 54.6 -0.2
PRGZ	**Paritu Road**	**1.32**	**164**	Pn	Pn	05 29 54.6 -0.2
KNZ	**Kokohu**	**1.38**	**171**	PN	Pn	05 29 54.8 -0.6
KNZ	**Kokohu**	**1.38**	**171**	Pn	Pn	05 29 54.8 -0.6
TOZ	**Tahuroa Road**	**1.51**	**266**	ǁPN	Pn	05 29 57.3 +0.4
TOZ	**Tahuroa Road**	**1.51**	**266**	ǁPn	Pn	05 29 57.3 +0.4
NMHZ	**Naumai**	**1.52**	**198**	PN	Pn	05 29 57.2 0.0
NMHZ	**Naumai**	**1.52**	**198**	Pn	Pn	05 29 57.2 0.0
MHGZ	**Mahia Peninsul**	**1.55**	**165**	PN	Pn	05 29 57.2 -0.3
MHGZ	**Mahia Peninsul**	**1.55**	**165**	Pn	Pn	05 29 57.2 -0.3
KUZ	**Kuaotunu**	**1.62**	**303**	PN	Pn	05 29 57.7 -0.6
KUZ	**Kuaotunu**	**1.62**	**303**	Pn	Pn	05 29 57.8 -0.6
BKZ	**Black Stump Fm**	**1.67**	**205**	ǁPN	Pn	05 29 58.1 -1.0
BKZ	**Black Stump Fm**	**1.67**	**205**	ǁPn	Pn	05 29 58.1 -1.0
MKAZ	**Moumakai**	**1.86**	**286**	PN	Pn	05 30 01.8 +0.4
MKAZ	**Moumakai**	**1.86**	**286**	Pn	Pn	05 30 01.8 +0.4
MCHZ	**McNeill Hill**	**1.87**	**197**	PN	Pn	05 30 00.9 -0.6
MCHZ	**McNeill Hill**	**1.87**	**197**	Pn	Pn	05 30 00.9 -0.6
KATZ	**Kakaramea**	**1.88**	**225**	PN	Pn	05 30 01.7 -0.1
KATZ	**Kakaramea**	**1.88**	**225**	Pn	Pn	05 30 01.7 -0.1
CKHZ	**Cape Kidnapper**	**2.02**	**187**	PN	Pn	05 30 02.1 -1.2
CKHZ	**Cape Kidnapper**	**2.02**	**187**	Pn	Pn	05 30 02.1 -1.2
OTVZ	**Oturere**	**2.04**	**222**	ǁPN	Pn	05 30 03.2 -0.5
OTVZ	**Oturere**	**2.04**	**222**	ǁPn	Pn	05 30 03.2 -0.5
NGZ	**Ngauruhoe**	**2.08**	**222**	PN	Pn	05 30 03.7 -0.6
NGZ	**Ngauruhoe**	**2.08**	**222**	Pn	Pn	05 30 03.7 -0.6
TWVZ	**Taurewa**	**2.10**	**227**	PN	Pn	05 30 04.0 -0.5
TWVZ	**Taurewa**	**2.10**	**227**	Pn	Pn	05 30 04.0 -0.5
BHHZ	**Black Hill Sta**	**2.11**	**209**	PN	Pn	05 30 03.3 -1.4
BHHZ	**Black Hill Sta**	**2.11**	**209**	Pn	Pn	05 30 03.3 -1.3
TUVZ	**Tukino**	**2.12**	**220**	PN	Pn	05 30 04.0 -0.9
TUVZ	**Tukino**	**2.12**	**220**	Pn	Pn	05 30 04.0 -0.9
WPVZ	**Whakapapa**	**2.13**	**223**	PN	Pn	05 30 04.3 -0.6
WPVZ	**Whakapapa**	**2.13**	**223**	Pn	Pn	05 30 04.3 -0.6
FWVZ	**Far West T-bar**	**2.16**	**222**	PN	Pn	05 30 04.5 -1.0
FWVZ	**Far West T-bar**	**2.16**	**222**	Pn	Pn	05 30 04.5 -1.0
KAHZ	**Kahuranaki**	**2.18**	**191**	ǁPN	Pn	05 30 04.3 -1.2
KAHZ	**Kahuranaki**	**2.18**	**191**	ǁPn	Pn	05 30 04.3 -1.2
MOVZ	**Moawhango**	**2.18**	**216**	ǁPN	Pn	05 30 04.0 -1.5
MOVZ	**Moawhango**	**2.18**	**216**	ǁPn	Pn	05 30 04.0 -1.5
WNVZ	**Wahianoa**	**2.19**	**220**	ǁPN	Pn	05 30 04.7 -1.1
WNVZ	**Wahianoa**	**2.19**	**220**	ǁPn	Pn	05 30 04.7 -1.1
TRVZ	**Turoa**	**2.20**	**221**	PN	Pn	05 30 05.0 -1.0
TRVZ	**Turoa**	**2.20**	**221**	Pn	Pn	05 30 05.0 -1.0
PXZ	**Pawanui**	**2.41**	**190**	ǁPN	Pn	05 30 06.4 -2.1
PXZ	**Pawanui**	**2.41**	**190**	ǁPn	Pn	05 30 06.4 -2.1
PNHZ	**Pukenui**	**2.45**	**202**	PN	Pn	05 30 06.8 -2.2
PNHZ	**Pukenui**	**2.45**	**202**	Pn	Pn	05 30 06.8 -2.2
WPHZ	**Waipukurau**	**2.52**	**197**	ǁPN	Pn	05 30 07.8 -2.1
WPHZ	**Waipukurau**	**2.52**	**197**	ǁPn	Pn	05 30 07.8 -2.1
PRHZ	**Porangahau**	**2.68**	**193**	PN	Pn	05 30 09.6 -2.3
PRHZ	**Porangahau**	**2.68**	**193**	Pn	Pn	05 30 09.7 -2.3
DVHZ	**Dannevirke**	**2.81**	**200**	PN	Pn	05 30 10.9 -2.9
DVHZ	**Dannevirke**	**2.81**	**200**	Pn	Pn	05 30 10.9 -2.9
POWZ	**Post Office Ro**	**3.02**	**204**	PN	Pn	05 30 13.9 -2.6
POWZ	**Post Office Ro**	**3.02**	**204**	Pn	Pn	05 30 13.9 -2.6
BFZ	**Birch Farm**	**3.15**	**196**	PN	Pn	05 30 15.1 -3.2
BFZ	**Birch Farm**	**3.15**	**196**	Pn	Pn	05 30 15.1 -3.2
MRZ	**Mangatainoka R**	**3.32**	**205**	PN	Pn	05 30 17.2 -3.4
MRZ	**Mangatainoka R**	**3.32**	**205**	Pn	Pn	05 30 17.2 -3.4
TIWZ	**Tintock**	**3.33**	**200**	PN	Pn	05 30 17.6 -3.1
TIWZ	**Tintock**	**3.33**	**200**	Pn	Pn	05 30 17.6 -3.1
HOWZ	**Holdsworth Sta**	**3.56**	**204**	PN	Pn	05 30 20.0 -3.7
HOWZ	**Holdsworth Sta**	**3.56**	**204**	Pn	Pn	05 30 20.0 -3.7
OGWZ	**Otaki Gorge**	**3.60**	**208**	PN	Pn	05 30 20.9 -3.4
OGWZ	**Otaki Gorge**	**3.60**	**208**	Pn	Pn	05 30 20.9 -3.4
TMWZ	**Te Maipa**	**3.64**	**198**	PN	Pn	05 30 21.3 -3.6
TMWZ	**Te Maipa**	**3.64**	**198**	Pn	Pn	05 30 21.3 -3.6
KIW	**Kapiti Island**	**3.74**	**210**	PN	Pn	05 30 23.1 -3.1
KIW	**Kapiti Island**	**3.74**	**210**	Pn	Pn	05 30 23.1 -3.1
MTW	**Mount Morrison**	**3.80**	**202**	PN	Pn	05 30 22.7 -4.2
MTW	**Mount Morrison**	**3.80**	**202**	Pn	Pn	05 30 22.7 -4.2
CAW	**Cannon Point**	**3.90**	**207**	PN	Pn	05 30 24.2 -4.0
CAW	**Cannon Point**	**3.90**	**207**	Pn	Pn	05 30 24.2 -4.0
TRWZ	**Traveller**	**3.97**	**199**	PN	Pn	05 30 25.1 -4.1
TRWZ	**Traveller**	**3.97**	**199**	Pn	Pn	05 30 25.1 -4.1
PAWZ	**Paruwai Farm**	**4.03**	**202**	PN	Pn	05 30 25.5 -4.5
PAWZ	**Paruwai Farm**	**4.03**	**202**	Pn	Pn	05 30 25.5 -4.5
DUWZ	**D'Urville Isla**	**4.15**	**220**	PN	Pn	05 30 27.8 -3.8
DUWZ	**D'Urville Isla**	**4.15**	**220**	Pn	Pn	05 30 27.8 -3.8
SNZO	**South Karori**	**4.21**	**209**	Sn	Sn	05 31 14.0 -5.5
SNZO	**South Karori**	**4.21**	**209**	Sn	Sn	05 31 14.9 -5.5
TCW	**Tory Channel**	**4.30**	**213**	PN	Pn	05 30 29.3 -4.4
TCW	**Tory Channel**	**4.30**	**213**	Pn	Pn	05 30 29.3 -4.4
TUWZ	**Tuamarina**	**4.62**	**214**	PN	Pn	05 30 33.4 -4.6
TUWZ	**Tuamarina**	**4.62**	**214**	Pn	Pn	05 30 33.4 -4.6
NNZ	**Nelson**	**4.73**	**220**	PN	Pn	05 30 34.6 -4.8
NNZ	**Nelson**	**4.73**	**220**	Pn	Pn	05 30 34.6 -4.8
BSWZ	**Blackbirch Sta**	**4.88**	**213**	PN	Pn	05 30 36.7 -4.8
BSWZ	**Blackbirch Sta**	**4.88**	**213**	Pn	Pn	05 30 36.7 -4.8
QRZ	**Quartz Range**	**4.94**	**229**	PN	Pn	05 30 38.4 -3.8
QRZ	**Quartz Range**	**4.94**	**229**	Pn	Pn	05 30 38.4 -3.8
THZ	**Tophouse**	**5.37**	**219**	PN	Pn	05 30 43.5 -4.7
THZ	**Tophouse**	**5.37**	**219**	Pn	Pn	05 30 43.5 -4.7
KHZ	**Kahutara**	**5.61**	**211**	PN	Pn	05 30 46.2 -5.0
KHZ	**Kahutara**	**5.61**	**211**	Pn	Pn	05 30 46.2 -5.0
LTZ	**Lake Taylor**	**6.46**	**216**	ePN	Pn	05 30 56.4 -6.5
LTZ	**Lake Taylor**	**6.46**	**216**	ePn	Pn	05 30 56.4 -6.5
MQZ	**McQueen's Vall**	**7.04**	**209**	PN	Pn	05 31 03.3 -7.5
MQZ	**McQueen's Vall**	**7.04**	**209**	Pn	Pn	05 31 03.3 -7.5
WVZ	**Waitaha Valley**	**7.43**	**221**	SN	Sn	05 32 27.4 -11
WVZ	**Waitaha Valley**	**7.43**	**221**	Sn	Sn	05 32 27.4 -11
RPZ	**Rata Peaks**	**7.74**	**217**	SN	Sn	05 32 35.4 -11
RPZ	**Rata Peaks**	**7.74**	**217**	Sn	Sn	05 32 35.4 -11
FOZ	**Fox Glacier**	**8.32**	**222**	ePN	Pn	05 31 21.9 -6.2
FOZ	**Fox Glacier**	**8.32**	**222**	ePn	Pn	05 31 21.9 -6.2
ODZ	**Otahua Downs**	**8.96**	**212**	PN	Pn	05 31 30.0 -6.9
ODZ	**Otahua Downs**	**8.96**	**212**	Pn	Pn	05 31 30.0 -6.9

*ISCJB **22** 05:37:01.3±1.7,29.0N±0.2×69.7E±0.2, h12km, mb3.6/10, MS2.8/2, Error ellipse: s-maj=35.7km s-min=19.7km az=144.9*
*IDC **22** 05:37:01.0±1.9,28.96N×69.62E, h0km, mb3.6/11, mb1 3.8/12,mb1mx3.6/32,mbtmp3.7/12,ML3.7/1,MS2.9/2, Ms1 2.9/2,ms1mx2.3/40, Error ellipse: s-maj=45.8km s-min=23.8km az=144.0*
ISC 22 05:37:03.4±1.1,29.1N±0.1×69.5E±0.1, h12km, n16, σ1ǂ09/15, mb3.7/10, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AJM	**Ajmer**	**5.20**	**118**	*e*PKP		**Pg**	**05 38 42.0**	**-1.1**
AJM				*e*S		**Sg**	**05 39 52.0**	**+1.5**
DDI	**Dehra Dun**	**7.53**	**78**	*ex*		x	05 39 08.5	
AAK	**Ala-Archa**	**14.14**	**15**	Pn		**Pn**	**05 40 23.5**	**-0.2**
	0.4nm,0.3s,baz=176,slow=8.0,SNR=6.1							
MKAR	**Makanchi Array**	**20.33**	**26**	P		**P**	**05 41 38.5**	**-0.9**
	0.8nm,0.7s,baz=203,slow=11,SNR=10							
KURBB	**Kurchatov Arra**	**22.60**	**15**	P		**P**	**05 42 02.3**	**-1.5**
	1.8nm,0.8s,baz=208,slow=9.3,SNR=13							
AKTO	**Aktyubinsk**	**23.07**	**341**	P		**P**	**05 42 09.6**	**+0.9**
	0.4nm,0.4s,baz=132,slow=15,SNR=2.1							
GNI	**Garni**	**23.14**	**305**	LR		LR	05 52 29.5	
	comp=Z,15nm,18.8s,baz=176,slow=40							
BVAR	**Borovoye Array**	**23.96**	**1**	P		**P**	**05 42 19.4**	**+1.8**
	1.0nm,0.6s,baz=172,slow=11,SNR=7.9							
ZALV	**Zalesovo Beam**	**27.27**	**20**	P		**P**	**05 42 46.5**	**-1.0**
	0.4nm,0.4s,baz=212,slow=5.1,SNR=2.4							
SONM	**Songino Array**	**34.01**	**46**	P		**P**	**05 43 47.4**	**+0.1**
	0.9nm,0.7s,baz=252,slow=7.8,SNR=4.6							
ARCES	**ARCESS Array B**	**47.65**	**341**	P		**P**	**05 45 40.2**	**+1.0**
	1.3nm,0.7s,baz=123,slow=6.0,SNR=7.6							
ARCES				LR		LR	06 07 49.0	
	comp=Z,25nm,21.8s,baz=195,slow=39							
NB2	**NORSAR Subarra**	**49.77**	**327**	P		**P**	**05 45 55.1**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=104,slow=7.9							
NOA	**NORSAR Array B**	**49.77**	**327**	P		**P**	**05 45 55.0**	**-0.6**
	comp=Z,1.4nm,0.7s,baz=104,slow=7.6,SNR=6.5							
TORD	**Torodi Ar. Bea**	**64.47**	**271**	P		**P**	**05 47 40.0**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=61,slow=5.7,SNR=9.7							
ILAR	**Eielson Array**	**82.28**	**15**	P		**P**	**05 49 24.1**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=304,slow=5.3,SNR=2.8							
YKA	**Yellowknife Ar**	**88.72**	**2**	P		**P**	**05 49 57.4**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=349,slow=4.9,SNR=14							

*ISK **22** 06:05:48.7,39.10N×29.03E, h4km, ML3.3*
*DDA **22** 06:05:48.8,39.10N×29.01E, h11km, MD3.3*
*CSEM **22** 06:05:49.3±0.1,39.10N×29.03E, h2km, MD3.3, Error ellipse: s-maj=2.0km s-min=1.9km az=77.0*
*ATH **22** 06:05:53.3,39.14N×28.68E, h38km, MD3.5/5*
ISC 22 06:05:49.4±1.1,39.11N±0.02×29.02E±0.02, h3km±10km, n138, σ0ǂ64/162, 6C-5D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.25**	**255**	*i* P		**Pg**	**06 05 54.2**	**0.0**
DEMI				*i* S		**Sg**	**06 05 57.7**	**+0.3**
DEMI	**Demirci**	**0.25**	**255**	*i* P		**Pg**	**06 05 54.2**	**0.0**
DEMI				*i* S		**Sg**	**06 05 57.7**	**+0.3**
GDZ	**Gediz**	**0.36**	**93**	*i* P		**Pg**	**06 05 56.1**	**-0.2**
GDZ				*i* S		**Sg**	**06 06 01.3**	**+0.3**
GDZ	**Gediz**	**0.36**	**93**	*i* P		**Pg**	**06 05 56.1**	**-0.2**
GDZ				*i* S		**Sg**	**06 06 01.3**	**+0.3**
TVSB	**Tavsanli**	**0.48**	**45**	PG		**Pg**	**06 05 58.3**	**-0.4**
TVSB				eSG		**Sg**	**06 06 05.0**	**0.0**
TVSB	**Tavsanli**	**0.48**	**45**	*i* Pg		**Pg**	**06 05 58.3**	**-0.4**
TVSB				eSg		**Sg**	**06 06 05.0**	**0.0**
DST	**Dursunbey**	**0.59**	**328**	*e*PG		**Pg**	**06 06 00.7**	**-0.1**
DST				*e*SG		**Sg**	**06 06 09.3**	**+1.0**
DST	**Dursunbey**	**0.59**	**328**	*e*Pg		**Pg**	**06 06 00.6**	**-0.1**
DST				*e*Sg		**Sg**	**06 06 09.3**	**+1.0**
KULA	**Kula-Manisa**	**0.66**	**206**	*e*PG		**Pg**	**06 06 01.6**	**-0.4**
KULA	**Kula-Manisa**	**0.66**	**206**	*e*Pg		**Pg**	**06 06 01.6**	**-0.4**
KHL	**Karahalli**	**0.88**	**153**	*e*PG		**Pg**	**06 06 06.0**	**-0.2**
KHL				*e*SG		**Sg**	**06 06 17.9**	**+0.4**
KHL	**Karahalli**	**0.88**	**153**	*e*Pg		**Pg**	**06 06 06.0**	**-0.2**
KHL				*e*Sg		**Sg**	**06 06 17.9**	**+0.4**
ORLT	**Orhaneli**	**0.94**	**354**	*e*PG		**Pg**	**06 06 07.2**	**-0.3**
ORLT	**Orhaneli**	**0.94**	**354**	*e*Pg		**Pg**	**06 06 07.2**	**-0.3**
AKHS	**Akhisar**	**0.97**	**257**	*i* P		**Pg**	**06 06 07.8**	**-0.2**
AKHS				*i* S		**Sb**	**06 06 21.3**	**-0.8**
AKHS	**Akhisar**	**0.97**	**257**	*i* P		**Pg**	**06 06 07.8**	**-0.2**
AKHS				*i* S		**Sb**	**06 06 21.3**	**-0.8**
BALB	**Balikesir**	**1.03**	**301**	*e*PG		**Pg**	**06 06 09.1**	**-0.1**
BALB				*e*SG		**Sb**	**06 06 24.4**	**+0.4**
BALB	**Balikesir**	**1.03**	**301**	*e*Pg		**Pg**	**06 06 09.1**	**-0.1**
BALB				*e*Sg		**Sb**	**06 06 24.4**	**+0.4**
BALY	**Balya**	**1.26**	**301**	*i* P		**Pg**	**06 06 13.2**	**-0.3**
BALY				*i* S		**Sg**	**06 06 29.7**	**-0.2**
BALY	**Balya**	**1.26**	**301**	*i* P		**Pg**	**06 06 13.2**	**-0.3**
BALY				*i* S		**Sg**	**06 06 29.7**	**-0.2**
CAVI	**Cavuskoy**	**1.26**	**30**	*e*PN		**Pg**	**06 06 13.4**	**-0.3**
CAVI	**Cavuskoy**	**1.26**	**30**	*e*Pn		**Pg**	**06 06 13.4**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.27**	**355**	*e*PN		**Pg**	**06 06 13.3**	**-0.4**
MDNY				*e*SN		**Sn**	**06 06 31.6**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.27**	**355**	*e*Pn		**Pg**	**06 06 13.3**	**-0.4**
MDNY				*e*Sn		**Sn**	**06 06 31.7**	**+0.1**
KCTX	**Karacabey (Bur**	**1.27**	**336**	*e*PN		**Pg**	**06 06 13.5**	**-0.2**
KCTX	**Karacabey (Bur**	**1.27**	**336**	*e*Pn		**Pg**	**06 06 13.5**	**-0.2**
SHUT	**Suhut-Afyon**	**1.31**	**114**	*e*PN		**Pn**	**06 06 14.4**	**-0.4**
SHUT	**Suhut-Afyon**	**1.31**	**114**	*e*Pn		**Pn**	**06 06 14.4**	**-0.4**
GEMT	**Gemlik**	**1.33**	**5**	*e*PN		**Pn**	**06 06 14.8**	**-0.1**
GEMT	**Gemlik**	**1.33**	**5**	*e*Pn		**Pn**	**06 06 14.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.40**	**313**	*e*PN		**Pn**	**06 06 15.2**	**-0.6**
GONE	**Gonen-Balikesi**	**1.40**	**313**	*e*Pn		**Pn**	**06 06 15.2**	**-0.6**
DNZL	**Cakiroluk**	**1.42**	**179**	*i* P		**Pn**	**06 06 15.4**	**-0.8**
DNZL				*i* S		**Sn**	**06 06 37.3**	**+1.7**
DNZL	**Cakiroluk**	**1.42**	**179**	*i* P		**Pn**	**06 06 15.4**	**-0.8**
ADVT	**Abdulvahap**	**1.43**	**22**	*e*PN		**Pn**	**06 06 16.2**	**-0.1**
ADVT	**Abdulvahap**	**1.43**	**22**	*e*Pn		**Pn**	**06 06 16.2**	**-0.1**
ARMT	**Armutlu**	**1.46**	**355**	*e*PN		**Pn**	**06 06 16.7**	**-0.1**
ARMT	**Armutlu**	**1.46**	**355**	*e*Pn		**Pn**	**06 06 16.7**	**-0.1**
ESKT	**Eskisehir**	**1.48**	**73**	*e*PN		**Pn**	**06 06 16.7**	**-0.4**
ESKT	**Eskisehir**	**1.48**	**73**	*e*Pn		**Pn**	**06 06 16.7**	**-0.4**
YLV	**Yalova**	**1.48**	**10**	*e*PN		**Pb**	**06 06 17.5**	**-0.2**
YLV	**Yalova**	**1.48**	**10**	*e*Pn		**Pb**	**06 06 17.5**	**-0.2**
GPA	**Golpazari**	**1.54**	**40**	*e*PN		**Pn**	**06 06 17.9**	**0.0**
GPA	**Golpazari**	**1.54**	**40**	*e*Pn		**Pn**	**06 06 17.9**	**0.0**
IZM	**Izmir**	**1.55**	**243**	*e*PN		**Pn**	**06 06 17.8**	**-0.2**
IZM	**Izmir**	**1.55**	**243**	*e*Pn		**Pn**	**06 06 17.8**	**-0.2**
BOLV	**Bolvadin**	**1.55**	**104**	*i* P		**Pn**	**06 06 17.7**	**-0.4**
BOLV				*i* S		**Sn**	**06 06 38.0**	**-0.8**
BOLV	**Bolvadin**	**1.55**	**104**	*i* P		**Pn**	**06 06 17.7**	**-0.4**
BOLV				*i* S		**Sn**	**06 06 38.0**	**-0.8**
AYDN	**Tasoluk**	**1.70**	**212**	*i* P		**Pn**	**06 06 19.5**	**-0.6**
AYDN				*i* S		**Sg**	**06 06 45.0**	**+0.9**
AYDN	**Tasoluk**	**1.70**	**212**	*i* P		**Pn**	**06 06 19.5**	**-0.6**
AYDN				*i* S		**Sg**	**06 06 45.0**	**+0.9**
BLCB	**Balcova**	**1.71**	**246**	*e*PN		**Pn**	**06 06 20.6**	**+0.5**
BLCB	**Balcova**	**1.71**	**246**	*e*Pn		**Pn**	**06 06 20.6**	**+0.5**
ISP	**Isparta**	**1.74**	**137**	ǁ*i*P		**Pb**	**06 06 21.5**	**-0.6**
ISP				S		**Sb**	**06 06 43.9**	**-0.5**
GULT	**Gulveren**	**1.75**	**40**	*e*PN		**Pn**	**06 06 20.8**	**0.0**
GULT	**Gulveren**	**1.75**	**40**	*e*Pn		**Pn**	**06 06 20.8**	**0.0**
AYVA	**Ayvalik**	**1.82**	**277**	*i* P		**Pg**	**06 06 24.3**	**-0.1**
AYVA				*i* S		**Sg**	**06 06 47.9**	**-0.1**
AYVA	**Ayvalik**	**1.82**	**277**	*i* P		**Pg**	**06 06 24.3**	**-0.1**
AYVA				*i* S		**Sg**	**06 06 47.9**	**-0.1**
KRBG	**Karabiga-Canak**	**1.85**	**315**	*e*PN		**Pn**	**06 06 22.3**	**+0.2**
KRBG	**Karabiga-Canak**	**1.85**	**315**	*e*Pn		**Pn**	**06 06 22.3**	**+0.2**
MRMT	**Marmara Adasi**	**1.85**	**324**	*e*PN		**Pn**	**06 06 21.5**	**-0.7**
MRMT	**Marmara Adasi**	**1.85**	**324**	*e*Pn		**Pn**	**06 06 21.5**	**-0.7**
SPNC	**Sapanca-Adapaz**	**1.86**	**32**	*e*PN		**Pn**	**06 06 22.8**	**+0.6**
SPNC	**Sapanca-Adapaz**	**1.86**	**32**	*e*Pn		**Pn**	**06 06 22.8**	**+0.6**
ISK	**Istanbul-Kandi**	**1.96**	**1**	*e*PN		**Pn**	**06 06 24.0**	**+0.5**
ISK	**Istanbul-Kandi**	**1.96**	**1**	*e*Pn		**Pn**	**06 06 24.0**	**+0.5**
SVRH	**Sivrihisar-ESK**	**1.97**	**79**	*e*PN		**Pn**	**06 06 23.9**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.97**	**79**	*e*Pn		**Pn**	**06 06 23.9**	**+0.1**
GLHS	**Gihisar (BURDU**	**1.98**	**169**	*e*PN		**Pn**	**06 06 24.3**	**+0.3**
GLHS	**Gihisar (BURDU**	**1.98**	**169**	*e*Pn		**Pn**	**06 06 24.3**	**+0.3**
YER	**Yerkesik**	**2.05**	**197**	*e*PN		**Pn**	**06 06 25.0**	**+0.1**
YER	**Yerkesik**	**2.05**	**197**	*e*Pn		**Pn**	**06 06 25.0**	**+0.1**
MLSB	**Milas**	**2.06**	**209**	*e*PN		**Pn**	**06 06 25.3**	**+0.3**
MLSB	**Milas**	**2.06**	**209**	*e*Pn		**Pn**	**06 06 25.3**	**+0.3**
BGKT	**Bogazkoy**	**2.08**	**355**	*e*PN		**Pn**	**06 06 25.4**	**+0.2**
BGKT	**Bogazkoy**	**2.08**	**355**	*e*Pn		**Pn**	**06 06 25.4**	**+0.2**
ELBA	**Catalca**	**2.09**	**348**	*i* P		**Pg**	**06 06 29.1**	**-0.4**
ELBA				*i* S		**Sn**	**06 06 50.9**	**-1.0**
SILT	**Sile**	**2.10**	**13**	*e*PN		**Pn**	**06 06 25.7**	**+0.2**
SILT	**Sile**	**2.10**	**13**	*e*Pn		**Pn**	**06 06 25.7**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.12**	**319**	*e*PN		**Pn**	**06 06 26.1**	**+0.2**
RKY	**Sarkoy-Tekirda**	**2.12**	**319**	*e*Pn		**Pn**	**06 06 26.1**	**+0.2**
KLYT	**Kilyos**	**2.14**	**0**	*e*PN		**Pn**	**06 06 26.4**	**+0.3**
KLYT	**Kilyos**	**2.14**	**0**	*e*Pn		**Pn**	**06 06 26.4**	**+0.3**
PRK	**Paraskevi**	**2.14**	**275**	*e*PN		**Pn**	**06 06 25.0**	**-1.1**
PRK	**Paraskevi**	**2.14**	**275**	*e*Pn		**Pn**	**06 06 25.0**	**-1.1**
MFT	**Murefte**	**2.15**	**322**	*e*PN		**Pn**	**06 06 26.5**	**+0.3**
MFT	**Murefte**	**2.15**	**322**	*e*Pn		**Pn**	**06 06 26.5**	**+0.3**
LPK	**Lapseki**	**2.15**	**307**	*e*PN		**Pn**	**06 06 26.5**	**+0.2**
LPK	**Lapseki**	**2.15**	**307**	*e*Pn		**Pn**	**06 06 26.5**	**+0.2**
MDUB	**Mudurnu**	**2.16**	**50**	*e*PN		**Pn**	**06 06 26.5**	**+0.1**
MDUB	**Mudurnu**	**2.16**	**50**	*e*Pn		**Pn**	**

ZALV	Zalesovo Beam	45.14	318	P		P	07 07 11.4	-0.1	
	0.5nm,0.3s,baz=78,slow=8.8,SNR=3.7								
GUN	Gumba	46.03	281	*e*P		P	07 07 19.0	-0.2	
MKAR	Makanchi Array	46.19	307	P		P	07 07 19.5	-0.2	
	0.9nm,0.5s,baz=92,slow=11,SNR=9.2								
DMN	Daman	46.77	281	*e*P		P	07 07 24.0	-0.8	
DANN	Dangsing	47.70	282	*e*P		P	07 07 31.9	0.0	
	7.3nm,0.3s								
KOLN	Koldanda	48.01	281	*e*P		P	07 07 33.9	-0.1	
PYUN	Piuthan	48.42	282	*e*P		P	07 07 37.1	-0.1	
	25nm,0.4s								
KURBB	Kurchatov Arra	48.71	313	P		P	07 07 38.4	-0.3	
	1.1nm,0.4s,baz=91,slow=9.7,SNR=17								
WRA	Warramunga Arr	50.21	186	P		P	07 07 51.0	+0.8	
	0.3nm,0.5s,baz=1.9,slow=7.9,SNR=7.2								
BVAR	Borovoye Array	53.69	316	P		P	07 08 15.2	+0.1	
	1.2nm,0.3s,baz=97,slow=8.2,SNR=7.6								
AKTO	Aktyubinsk	61.69	314	P		P	07 09 08.6	-1.5	
	1.3nm,0.5s,baz=65,slow=6.9,SNR=4.5								
ARCES	ARCESS Array B	69.50	340	P		P	07 10 00.1	+1.2	
	0.5nm,0.4s,baz=72,slow=8.5,SNR=10								
FINES	FINESS Array B	73.74	333	P		P	07 10 24.6	+0.7	
	1.1nm,0.5s,baz=44,slow=4.8,SNR=9.3								
BRTR	Keskin Array B	81.68	311	P		P	07 11 08.2	+0.4	
	0.3nm,0.3s,baz=42,slow=3.8,SNR=3.7								

ISCJB ***22*** *07:16:44.0±1.0, 37.74N±0.03×26.97E±0.07, h0km±8km, Error ellipse: s-maj=10.2km s-min=4.5km az=160.5*
ISK ***22*** *07:16:43.7, 37.76N×27.00E, h4km, MD2.8*
DDA ***22*** *07:16:43.3, 37.71N×26.97E, h7km, MD2.8*
CSEM ***22*** *07:16:44.6±0.3, 37.75N×27.01E, h2km, MD2.8, Error ellipse: s-maj=10.2km s-min=3.5km az=72.0*

ISC 22 07:16:43.8±1.4, 37.75N±0.03×26.96E±0.06, h7km±11km, n22, σ0.65/34, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.22	103	*i*	P		Pg	07 16 48.9	+0.7
GCAM				*i*	S		Sg	07 16 50.2	-0.9
GCAM	G?zelcaml?	0.22	103	*i*	P		Pg	07 16 48.9	+0.7
GCAM				*i*	S		Sg	07 16 50.2	-0.9
BLCB	Balcova	0.64	6	*e*	PG		Pg	07 16 56.4	+0.3
BLCB				*e*	SG		Sb	07 17 06.0	-0.5
BLCB	Balcova	0.64	6	*e*	Pg		Pg	07 16 56.4	+0.3
BLCB				*e*	Sg		Sb	07 17 06.0	-0.5
IZM	Izmir	0.69	20	*e*	PG		Pg	07 16 57.4	+0.3
IZM				*e*	SG		Sb	07 17 07.5	-0.6
IZM	Izmir	0.69	20	*e*	Pg		Pg	07 16 57.4	+0.3
IZM				*e*	Sg		Sb	07 17 07.5	-0.6
BODT	Bodrum	0.74	158	*e*	PG		Pg	07 16 58.5	+0.5
BODT				*e*	SG		Sb	07 17 09.4	0.0
BODT	Bodrum	0.74	158	*e*	Pg		Pg	07 16 58.5	+0.5
BODT				*e*	Sg		Sb	07 17 09.4	0.0
MLSB	Milas	0.79	125	*e*	PG		Pg	07 16 59.3	+0.3
MLSB				*e*	SG		Sb	07 17 10.3	-0.5
MLSB	Milas	0.79	125	*e*	Pg		Pg	07 16 59.3	+0.3
MLSB				*e*	Sg		Sb	07 17 10.4	-0.5
YER	Yerkesik	1.22	120	*e*	PN		Pn	07 17 07.3	-0.1
YER	Yerkesik	1.22	120	*e*	Pn		Pn	07 17 07.3	-0.1
KULA	Kula-Manisa	1.54	60	*e*	PN		Pb	07 17 12.4	-0.4
KULA	Kula-Manisa	1.54	60	*e*	Pn		Pb	07 17 12.4	-0.4
DALY	Dalyan (Mu˘la	1.64	124	*e*	PN		Pb	07 17 13.9	-0.5
DALY	Dalyan (Mu˘la	1.64	124	*e*	Pn		Pb	07 17 13.9	-0.5
DNZL	Cakiroluk	1.65	91	*i*	P		Pn	07 17 13.7	+0.2
DNZL				*i*	S		Sg	07 17 37.7	+0.7
DNZL	Cakiroluk	1.65	91	*i*	P		Pn	07 17 13.7	+0.2
DNZL				*i*	S		Sg	07 17 37.7	+0.7
EZN	Ezine	2.13	347	*e*	PN		Pb	07 17 22.0	-0.8
EZN	Ezine	2.13	347	*e*	Pn		Pb	07 17 22.0	-0.8
GONE	Gonen-Balikesi	2.36	14	*e*	PN		Pn	07 17 24.5	+1.4
GONE	Gonen-Balikesi	2.36	14	*e*	Pn		Pn	07 17 24.5	+1.4

SZGRF ***22*** *07:18:03.3, 22.35S×179.53W, h33km, South of Fiji Islands*
AUST ***22*** *07:19:10.6, 20.57S×178.80W, h600km*
ISCJB ***22*** *07:19:14.5±0.6, 20.72S±0.05×179.27W±0.04, h653km±7km, mb4.5/120, Error ellipse: s-maj=8.7km s-min=4.6km az=155.4*
IDC ***22*** *07:19:15.2±0.5, 20.66S×179.29W, h648km±6km, mb4.0/27, mb1 4.2/28, mb1mx4.1/30, mbtmp4.0/28, Error ellipse: s-maj=11.1km s-min=7.6km az=146.0*
NEIC ***22*** *07:19:16.7±0.5, 20.69S×179.32W, h667km±6km, mb4.5/82, Error ellipse: s-maj=7.6km s-min=4.5km az=154.0*
BJI ***22*** *07:19:20.1, 20.03S×179.96W, h668km, mB4.6/15, mb4.5/25*

ISC 22 07:19:16.1±0.4, 20.71S±0.06×179.20W±0.06, h662km±3km, h663km; pP-P, n657, σ0.92/717, mb4.5/119, 179C-175D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.94	318	*e*	Pn		P	07 20 44.8	-1.2
NIUE	Niue	8.88	81	S			S	07 23 19.8	+8.1
	baz=8.5,SNR=6.2								
AFI	Afiamalu	9.80	48	*e*	Pn		P	07 21 29.7	-4.7
AFI				S			S	07 23 21.4	-6.1
AFI	Afiamalu	9.80	48	P			P	07 21 30.4	-4.0
	24nm,0.3s,baz=261,slow=6.5,SNR=35								
AFI				S			S	07 23 21.4	-6.1
	6.3nm,0.3s,baz=44,slow=14,SNR=5.2								
DZM	Mont Dzumac	13.44	262	*e*	P		P	07 22 08.7	+0.8
	315nm,1.5s								
NOUC	Port Laguerre	13.57	262	*e*	P		P	07 22 13.3	+4.3
OUZ	Omahuta	15.78	202	*e*	P		P	07 22 31.2	+2.2
	38nm,0.7s								
URZ	Urewera	17.77	190	*e*	P		P	07 22 45.0	-2.1
	22nm,1.0s								
URZ				S			S	07 25 35.0	-2.8
URZ	Urewera	17.77	190	P			P	07 22 45.5	-1.6
	2.5nm,0.3s,baz=13,slow=6.4,SNR=25								
URZ				S			S	07 25 35.0	-2.8
	1.0nm,0.3s,baz=287,slow=19,SNR=5.8								
RPZ	Rata Peaks	24.34	197	P			P	07 23 44.9	-0.6
RPZ	Rata Peaks	24.34	197	P			P	07 23 44.9	-0.6
	10nm,0.7s,baz=180,slow=20,SNR=4.8								
EIDS	Eidsvold	27.70	255	*e*	P		P	07 24 14.9	-0.2
	24nm,0.5s								
EIDS	Eidsvold	27.70	255	P			P	07 24 15.1	0.0
	baz=28,SNR=15								
ARMA	Armidale	27.96	244	*e*	P		P	07 24 18.1	+0.6
	46nm,0.6s								
ARMA	Armidale	27.96	244	P			P	07 24 18.6	+1.1
	baz=28,SNR=7.8								
PPT2	Papeete2	28.14	89	*e*	P		P	07 24 19.4	+0.3
	24nm,1.0s								
PPT	Papeete	28.14	89	P			P	07 24 18.8	-0.3
PPT	Papeete	28.14	89	P			P	07 24 18.8	-0.3
	16nm,0.7s,baz=78,slow=12,SNR=3.1								
TIAR	Tiarei	28.36	89	*e*	P		P	07 24 21.3	+0.4
	29nm,0.7s								
TVO	Taravao	28.41	89	*e*	P		P	07 24 21.8	+0.4
	31nm,0.7s								
MGCD	Mangrove Creek	29.13	239	P			P	07 24 28.5	+1.1
	baz=30,SNR=9.0								
MEH	Mehetia	29.50	90	*e*	P		P	07 24 31.2	+0.5
	43nm,0.8s								
RMQ	Roma	29.87	253	P			P	07 24 34.8	+1.1
	baz=30,SNR=22								
CNB	Canberra Magne	31.18	235	P			P	07 24 45.7	+0.9
	baz=32,SNR=18								
YNG	Young	31.61	238	P			P	07 24 49.0	+0.6
	baz=32,SNR=8.7								
CTAO	Charters Tower	32.35	265	*e*	P		P	07 24 54.8	0.0
	79nm,0.5s								
CMSA	Cobar Meteorol	33.18	244	P			P	07 25 02.2	+0.6
	baz=34,SNR=18								
QLP	Quilpie	33.92	253	P			P	07 25 08.0	+0.2
	baz=34,SNR=16								
PMG	Port Moresby	34.30	284	*e*	P		P	07 25 11.1	0.0
	78nm,0.8s								
MTSU	Mount Surprise	34.45	268	P			P	07 25 12.6	+0.2
	baz=35,SNR=158								
TOO	Toolangi	34.86	233	P			P	07 25 16.0	+0.5
	baz=35,SNR=21								
COEN	Coen	36.47	274	*e*	P		P	07 25 29.3	+0.4
	325nm,1.0s								
COEN	Coen	36.47	274	P			P	07 25 29.3	+0.4
	baz=37,SNR=26								
STKA	Stephens Creek	36.68	244	*e*	P		P	07 25 31.2	+0.8
	15nm,1.0s								
STKA	Stephens Creek	36.68	244	P			P	07 25 31.1	+0.8
	43nm,0.6s,baz=91,slow=9.6,SNR=124								
STKA	Stephens Creek	36.68	244	P			P	07 25 31.2	+0.8
	baz=37,SNR=90								
ARPS	Mount Arapiles	37.43	236	P			P	07 25 36.8	+0.4
	baz=38,SNR=20								
QIS	Mount Isa	38.47	263	P			P	07 25 44.7	-0.3
	baz=39,SNR=10								
BBOO	Buckleboo	41.44	244	*e*	P		P	07 26 08.4	+0.1
	1µm,0.7s								
BBOO	Buckleboo	41.44	244	P			P	07 26 08.5	+0.3
	baz=42,SNR=127								
AS31	Alice Springs	43.37	257	*e*	P		P	07 26 23.2	-0.2
ASAR	Alice Springs	43.37	257	P			P	07 26 23.5	+0.1
ASAR					PcP		PcP	07 27 56.6	+0.4
ASAR					ScP		ScP	07 30 48.6	+2.5
ASAR				S			S	07 32 05.0	-1.1
ASAR	Alice Springs	43.37	257	P			P	07 26 23.5	+0.1
	65nm,0.6s,baz=94,slow=7.6,SNR=1070								
ASAR					PcP		PcP	07 27 56.6	+0.4
	5.3nm,0.9s,baz=104,slow=2.7,SNR=5.4								
ASAR					ScP		ScP	07 30 48.6	+2.5
	3.5nm,0.9s,baz=118,slow=4.4,SNR=7.5								
ASAR				S			S	07 32 05.0	-1.1
	9.7nm,0.9s,baz=93,slow=15,SNR=31								
WRAB	Tennant Creek	43.45	263	*e*	P		P	07 26 23.1	-0.9
	77nm,0.9s								
WRA	Warramunga Arr	43.45	263	P			P	07 26 23.4	-0.7
WRA					ScP		ScP	07 30 49.1	+2.6
WRA				S			S	07 32 05.7	-1.6
WRA	Warramunga Ar	43.45	263	P			P	07 26 23.4	-0.7
	42nm,0.5s,baz=97,slow=8.0,SNR=572								
WRA					ScP		ScP	07 30 49.1	+2.6
	2.0nm,1.0s,baz=91,slow=4.0,SNR=4.9								
WRA				S			S	07 32 05.7	-1.6
	5.5nm,0.9s,baz=96,slow=14,SNR=13								
KDU	Kakadu	46.83	272	P			P	07 26 49.1	-0.5
	baz=47,SNR=47								
MTN	Manton Dam	48.04	271	P			P	07 26 58.0	-0.6
	baz=48,SNR=26								
FORT	Forrest	48.17	247	*e*	P		P	07 26 58.2	-1.2
	83nm,0.7s								
FORT	Forrest	48.17	247	P			P	07 26 59.0	-0.4
	baz=48,SNR=12								
KNRA	Kununurra	49.52	267	P			P	07 27 09.2	-0.2
	baz=50,SNR=14								
FAKI	Fak Fak	50.45	284	P			P	07 27 16.0	-0.2
	baz=51,SNR=3.1								
FITZ	Fitzroy Crossi	51.88	263	*e*	P		P	07 27 26.1	-0.3
	11nm,0.5s								
FITZ	Fitzroy Crossi	51.88	263	P			P	07 27 26.2	-0.2
	11nm,0.5s,baz=132,slow=4.4,SNR=58								
FITZ	Fitzroy Crossi	51.88	263	P			P	07 27 26.5	+0.1
	baz=52,SNR=18								
PALU	Palau	53.37	297	S			S	07 34 54.4	+32
	baz=54,SNR=4.2								
MBWA	Marble Bar	56.71	258	*e*	P		P	07 27 59.6	-0.3
	25nm,0.6s								
MEEK	Meekatharra	56.78	251	P			P	07 27 59.7	-0.7
	baz=57,SNR=12								
KLBR	Kellerberrin	56.94	245	P			P	07 28 01.3	-0.1
	baz=57,SNR=8.7								
VNDA	Vanda	57.60	185	P			P	07 28 06.7	+1.8
VNDA					ScP		ScP	07 31 48.4	+2.1
VNDA	Vanda	57.60	185	P			P	07 28 06.7	+1.8
	1.0nm,0.4s,baz=18,slow=7.0,SNR=19								
VNDA					ScP		ScP	07 31 48.4	+2.1
	2.6nm,1.1s,baz=360,slow=4.2,SNR=6.2								
BLDU	Ballidu	57.94	246	P			P	07 28 07.9	-0.1
	baz=58,SNR=11								
MORW	Morawa	58.70	248	P			P	07 28 13.0	-0.2
	baz=59,SNR=7.0								
CASY	Casey	63.29	205	*e*	P		P	07 28 42.7	+0.4
	3.3nm,0.4s								
UGM	Wanagama	68.83	269	P			P	07 29 17.3	-0.1
	baz=69,SNR=3.7								
QSPA	South Pole Qui	69.35	180	*e*	P		P	07 29 20.5	+0.8
	14nm,1.0s								
QSPA					epP		pP	07 31 30.9	+0.9
MJAR	Matsushiro Arr	69.72	324	P			P	07 29 21.4	-0.7
MJAR	Matsushiro Arr	69.72	324	P			P	07 29 21.4	-0.7
	11nm,0.6s,baz=164,slow=6.2,SNR=26								
MAJO	Matsushiro	69.72	324	*e*	P		P	07 29 22.1	-0.1
	14nm,0.7s								
MAT	Matsushiro	69.72	324	P			P	07 29 21.7	-0.4
JNU	Nakatsue	71.66	317	*e*	P		P	07 29 33.7	+0.2
	7.2nm,0.9s								
JNU	Nakatsue	71.66	317	P			P	07 29 33.5	-0.1
	11nm,0.8s,baz=124,slow=4.5,SNR=6.7								
KSM	Kuching	72.33	279	*e*	P		P	07 29 38.4	+0.7
	5.0nm,0.4s								
TWG	Pinlang	72.55	303	*e*	P		P	07 29 36.9	-1.9
	99nm,0.5s								
ATKA	Atka Island	72.74	3	*e*	P		P	07 29 38.5	-0.6
	90nm,1.0s								
TPUB	Ta-pu	73.15	304	*e*	P		P	07 29 41.2	-1.0
	55nm,0.7s								
SSLB	Ssuslung	73.16	304	*e*	P		P	07 29 41.5	-0.8
	20nm,0.6s								
ASAJ	Asahikawa	73.39	332	*e*	P		P	07 29 44.5	+1.4
	8.8nm,0.9s								
ASAJ	Asahikawa	73.39	332	P			P	07 29 43.6	+0.5
	16nm,0.8s,baz=212,slow=8.2,SNR=17								
FX1	Attu Island--F	73.58	355	*e*	P		P	07 29 43.0	-0.9
FX1	Attu Island--F	73.58	355	P			P	07 29 43.3	-0.6
	23nm,0.7s,baz=126,slow=21,SNR=7.1								
PETK	Petropavlovsk-	76.20	346	P			P	07 29 58.3	-0.2
PETK	Petropavlovsk-	76.20	346	P			P	07 29 58.3	-0.2
	13nm,0.7s,baz=190,slow=5.8,SNR=31								
KSRS	Korea Array	76.31	319	P			P	07 30 00.2	+0.9
	3.0nm,0.7s,baz=132,slow=6.0,SNR=11								
KSAR	Wonju Array Be	76.32	319	P			P	07 30 00.2	+0.8
USRK	Ussuriysk Arra	78.51	326	P			P	07 30 12.5	+1.4
	12nm,0.7s,baz=117,slow=3.5,SNR=27								
BSC	Santa Cruz Isl	78.57	47	⇓P			P	07 30 12.7	+1.0
	baz=79								
MCCM	Marconi Confer	78.87	42	*e*	P		P	07 30 13.8	+0.7
	123nm,0.6s								
PKM	Peak Mountain	78.95	46	⇓P			P	07 30 14.9	+1.0
	baz=79								
SAO	San Andreas Ge	78.96	44	*e*	P		P	07 30 15.2	+1.5
	17nm,0.9s								
SMMC	Simmler	79.07	46	⇓P			P	07 30 15.3	+1.1
	baz=79								
NJ2	Nanjing	79.15	310	*e*	P		P	07 30 11.3	-3.4
NJ2					pP		pP	07 32 27.6	-2.8
NJ2					PP		PP	07 33 23.3	-4.3
NJ2					sP		sP	07 33 34.0	-2.9
NJ2					S		S	07 39 17.5	-4.9
NJ2					pmax		pmax		
	comp=Z,10.0nm,0.6s								
NJ2					pmax		pmax		
	comp=Z,140nm,4.3s								
KCPM	Cahto Peak	79.38	40	*e*	P		P	07 30 20.4	+4.5
	comp=Z,15nm,0.5s								
BAR	Barrett	79.91	49	*e*	P		P	07 30 19.1	+0.4
	comp=Z,2.1nm,0.8s								
VES	Vestal, Richgr	79.98	46	⇓P			P	07 30 19.5	+0.5
	baz=80,SNR=5.1								
MURC	Murrieta	80.03	48	⇓P			P	07 30 19.9	+0.5
	baz=80								
MDJ	Mudanjiang	80.05	326	P			P	07 30 20.3	+1.2
MDJ					pP		pP	07 32 36.0	+0.7
MDJ					sP		sP	07 33 42.3	+0.7
MDJ					S		S	07 39 32.3	+1.3
MDJ					ScS		ScS	07 39 45.9	+0.6
MDJ					pmax		pmax		
	comp=Z,14nm,1.1s								
MDJ					pmax		pmax		
	comp=Z,17nm,3.7s								
MDJ	Mudanjiang	80.05	326	*e*	P		P	07 30 20.3	+1.2
	comp=Z,9.1nm,0.8s								
BFSC	Mount Baldy Ra	80.06	48	⇑P			P	07 30 20.0	+0.4
	baz=80								
EDW2	Edwards Air Fo	80.19	47	⇓P			P	07 30 20.9	+0.8
	baz=80,SNR=8.6								
ISA	Isabella	80.29	46	*e*	P		P	07 30 21.6	+1.0
	comp=Z,14nm,0.9s								
ISA	Isabella	80.29	46	⇓P			P	07 30 21.5	+0.8
	baz=80,SNR=14								
CMB	Columbia Colle	80.39	43	*e*	P		P	07 30 21.8	+0.7
	comp=Z,20nm,1.1s								
OHCM	Honcut	80.46	42	*e*	P		P	07 30 22.1	+0.8
PFO	Pinyon Flat Ob	80.56	49	P			P	07 30 22.8	+0.6
PFO	Pinyon Flat Ob	80.56	49	P			P	07 30 22.8	+0.6
	comp=Z,2.1nm,0.8s,baz=296,slow=3.8,SNR=4.8								
PFO	Pinyon Flat Ob	80.56	49	⇓P			P	07 30 22.8	+0.6
	baz=81								
WDC	Whiskeytown Da	80.56	40	*e*	P		P	07 30 23.0	+1.1
	comp=Z,19nm,1.0s								
SWSC	Sam W. Stewart	80.67	50	⇑P			P	07 30 23.5	+0.9
	baz=81								
CWC	Cottonwood Cre	80.99	46	⇓P			P	07 30 24.8	+0.4
	baz=81								
BELC	Belle Mtn. Jos	81.09	49	⇓P			P	07 30 25.8	+0.9
	baz=81,SNR=8.1								
MLAC	Mammoth Lakes	81.16	44	⇑P			P	07 30 26.0	+0.7
	baz=81								
YBH	Yreka Blue Hor	81.16	39	*e*	P		P	07 30 26.3	+1.3
	comp=Z,39nm,1.3s								
YBH	Yreka Blue Hor	81.16	39	P			P	07 30 26.7	+1.7
	comp=Z,20nm,0.8s,baz=214,slow=1.5,SNR=31								
MPMC	Manual Prospec	81.18	46	⇑P			P	07 30 26.0	+0.6
	baz=81,SNR=17								
MTUM	Tungsten Hills	81.18	45	*e*	P		P	07 30 26.4	+1.0
GSC	Goldstone	81.23	47	*e*	P		P	07 30 26.5	+1.0
	comp=Z,6.8nm,0.7s								
GSC	Goldstone	81.23	47	⇑P			P	07 30 26.0	+0.4
	baz=82,SNR=7.7								
BC3	Big Chuckawall	81.29	49	⇓P			P	07 30 26.6	+0.7
	baz=82								
KDAK	Kodiak Island	81.29	14	P			P	07 30 25.7	+0.6
KDAK	Kodiak Island	81.29	14	P			P	07 30 25.7	+0.6
	comp=Z,5.6nm,0.7s,baz=231,slow=2.0,SNR=7.4								
HEC	Hector,Ludlow	81.30	48	⇑P			P	07 30 26.5	+0.6
	baz=82,SNR=7.4								
GLA	Glamis	81.42	50	*e*	P		P	07 30 28.4	+1.8
	comp=Z,21nm,0.9s								
GLA	Glamis	81.42	50	⇓P			P	07 30 27.9	+1.4
	baz=82,SNR=6.5								
BEKR	Beckworth	81.47	42	*e*	P		P	07 30 27.4	+0.7
	comp=Z,2.3nm,0.5s								
WCN	Washoe City	81.52	42	*e*	P		P	07 30 27.9	+0.8
	comp=Z,19nm,1.1s								
HUMO	Hull Mountain	81.56	38	*e*	P		P	07 30 28.8	+1.9
	comp=Z,22nm,1.0s								
BUOR	Burton Butte	81.77	39	P			P	07 30 29.6	+1.4
IRM	Iron Mountain	81.77	49	⇓P			P	07 30 29.3	+1.1
	baz=82								
GRAC	Grapevine Rang	81.78	45	⇓P			P	07 30 29.1	+0.9
	baz=82,SNR=16								
CN2	Changchun	81.79	323	*e*	P		P	07 30 28.6	+0.6
CN2				*e*	pP		pP	07 32 46.5	+1.5
CN2				*e*	S		S	07 39 49.6	+1.2
CN2				pmax			pmax		
	comp=Z,20nm,1.2s								
FURC	Furnace Creek,	81.83	46	⇑P			P	07 30 29.0	+0.6
	baz=82,SNR=8.4								
TUQ	Turquoise Moun	81.91	47	⇑P			P	07 30 29.6	+0.6
	baz=82,SNR=9.8								
SHOC	Shoshone	81.91	47	⇑P			P	07 30 29.4	+0.5
	baz=82,SNR=7.0								
NVAR	Mina Array Bea	81.96	44	P			P	07 30 30.0	+0.7
NVAR	Mina Array Bea	81.96	44	P			P	07 30 30.0	+0.7
	comp=Z,11nm,0.8s,baz=225,slow=8.4,SNR=69								
Y12C	Blythe	82.00	50	⇓P			P	07 30 30.4	+1.1
	baz=82								
113A	Mohawk Valley,	82.04	51	⇓P			P	07 30 30.6	+1.0
	baz=82,SNR=13								
IPM	Ipoh	82.04	278	*e*	P		P	07 30 30.9	+0.9
	comp=Z,15nm,0.7s								
NV11	Mina Array Sit	82.05	44	*e*	P		P	07 30 30.3	+0.6
HOG	Hogback Mounta	82.07	39	P			P	07 30 30.9	+1.2
LDFC	Landfair	82.28	48	*e*	P		P	07 30 32.1	+1.3
	comp=Z,41nm,0.9s								
214A	O'gan Lipe Nat	82.33	52	⇓P			P	07 30 32.1	+1.1
	baz=83,SNR=6.9								
NEE2	Needles Airpor	82.46	49	⇓P			P	07 30 32.6	+1.0
	baz=83								
PDMCI	Parker Dam,Lak	82.56	49	⇑P			P	07 30 33.1	+1.0
	baz=83,SNR=5.1								
MOD	Modoc	82.70	40	*e*	P		P	07 30 33.8	+0.9
	comp=Z,16nm,0.7s								
Z14A	Wintersburg	82.94	51	⇓P			P	07 30 35.3	+1.2
	baz=83,SNR=8.7								
W13A	Hualapai Mount	83.15	49	⇓P			P	07 30 36.2	+0.9
	baz=83,SNR=11								
Y14A	Wickenburg	83.18	50	⇓P			P	07 30 36.2	+0.8
	baz=83,SNR=13								
R11A	Troy Canyon, C	83.70	45	⇓P			P	07 30 37.9	0.0
	baz=84								
BMN	Battle Mountai	83.77	43	*e*	P		P	07 30 39.2	+1.0
	comp=Z,10nm,0.9s								
TUC	Tucson	84.00	52	*e*	P		P	07 30 40.6	+1.2
	comp=Z,2.7nm,1.0s								
WVOR	Wild Horse Val	84.02	40	*e*	P		P	07 30 39.9	+0.5
	comp=Z,14nm,1.0s								
NLWA	Neilton Lookou	84.04	34	*e*	P		P	07 30 40.3	+1.1
	comp=Z,23nm,1.3s								
VIPM	Ingram Point	84.06	38	P			P	07 30 40.3	+0.8
FL2	Flat

baz=87,SNR=6.6
OD2 **Odessa Site #2** 86.83 36 P P 07 30 53.0 +0.5
F10A **Beach Ranch, E** 86.86 38 P P 07 30 53.0 +0.2
TRF **Thorofare Moun** 86.90 13 eP P 07 30 50.8 -1.7
comp=Z,33nm,0.8s
I12A **Atlanta** 86.91 41 ⇑P P 07 30 54.1 +1.0
baz=87,SNR=22
Q16A **Castle Valley** 86.95 46 ⇑P P 07 30 54.9 +1.4
baz=87
122A **Conniff Cattle** 87.01 54 ⇑P P 07 30 54.9 +1.2
baz=87
W20A **Ramah** 87.01 51 ⇓P P 07 30 54.7 +0.8
baz=87,SNR=16
Y21A **Point of Rocks** 87.10 52 ⇑P P 07 30 55.5 +1.2
baz=87,SNR=9.0
223A **Chaparral, Ant** 87.13 54 ⇑P P 07 30 55.3 +1.0
baz=87
S18A **Hurst Farm, Bl** 87.16 48 ⇑P P 07 30 55.1 +0.5
baz=87
X21A **Alamocita Cree** 87.22 52 ⇑P P 07 30 55.8 +0.9
baz=87,SNR=8.0
HLID **Hailey** 87.23 41 eP P 07 30 55.3 +0.7
comp=Z,15nm,1.0s
HLID **Hailey** 87.23 41 ⇓P P 07 30 55.6 +1.0
baz=88,SNR=31
Z22A **Elephant Butte** 87.29 53 ⇑P P 07 30 56.0 +0.9
baz=88,SNR=5.6
J13A **Cove Ranch, Pi** 87.29 41 ⇓P P 07 30 56.0 +1.1
baz=88,SNR=27
HVU **Hansel Valley** 87.33 43 eP P 07 30 55.5 +0.4
comp=Z,19nm,1.2s
V20A **Brimhall** 87.35 50 ⇓P P 07 30 56.1 +0.7
baz=88
XAN **Xi'an** 87.37 308 P P 07 30 56.3 +1.0
XAN pmax pmax
comp=Z,4.0nm,0.9s
MCK **McKinley** 87.43 13 eP P 07 30 54.4 -0.4
comp=Z,17nm,0.8s
H12A **Diamond D Ranc** 87.48 40 ⇓P P 07 30 56.3 +0.5
baz=88,SNR=25
SRU **San Rafael** 87.48 47 ⇑P P 07 30 56.5 +0.6
baz=88,SNR=18
G12A **Big Creek, Yel** 87.51 40 ⇑P P 07 30 56.7 +0.9
baz=88
SKAG **Skagway** 87.58 21 eP P 07 30 57.1 +1.5
comp=Z,28nm,1.6s
U20A **Newcomb** 87.58 50 ⇑P P 07 30 56.7 +0.3
baz=88
Y22A **Socorro** 87.59 52 ⇓P P 07 30 57.3 +0.7
baz=88,SNR=6.8
I13A **Wildhorse Cree** 87.59 41 ⇓P P 07 30 57.2 +0.9
baz=88,SNR=7.7
JLU **Jordanelle** 87.60 45 eP P 07 30 57.3 +0.8
comp=Z,24nm,1.7s
324A **Moseley Ranch,** 87.61 55 ⇓P P 07 30 57.3 +0.7
baz=88,SNR=11
W21A **San Fidel** 87.62 51 ⇑P P 07 30 57.7 +1.0
baz=88
DAU **Daniels Canyon** 87.63 45 eP P 07 30 57.9 +1.2
J14A **Carey** 87.66 42 ⇑P P 07 30 57.9 +1.3
baz=88,SNR=31
425A **Indio Mountain** 87.71 56 ⇓P P 07 30 58.1 +1.0
baz=88,SNR=16
MNTX **Cornudas Mount** 87.80 55 eP P 07 30 58.0 +0.6
comp=Z,7.9nm,1.1s
X22A **Bernardo** 87.81 52 ⇑P P 07 30 58.4 +0.8
baz=88
SNAA **Sanae** 87.82 179 eP P 07 30 56.7 -0.1
Z23A **Rita Site, Whi** 87.84 53 ⇑P P 07 30 58.6 +1.0
baz=88,SNR=6.2
626A **Big Bend Ranch** 87.85 57 ⇓P P 07 30 58.9 +1.2
baz=88,SNR=18
224A **Cornudas Mount** 87.85 55 ⇓P P 07 30 58.5 +0.8
baz=88
H13A **Challis** 87.85 40 ⇑P P 07 30 58.2 +0.8
baz=88,SNR=18
F12A **Elk City** 87.89 39 ⇓P P 07 30 57.9 +0.3
baz=88,SNR=36
P18A **Preston Nutter** 87.92 46 ⇓P P 07 30 58.6 +0.5
baz=88,SNR=8.3
V21A **Milan** 87.95 51 ⇑P P 07 30 58.8 +0.6
baz=88
325A **Bean Ranch, Si** 87.97 55 ⇑P P 07 30 58.9 +0.5
baz=88,SNR=17
LPM **Los Pinos Moun** 88.01 52 eP P 07 30 59.5 +1.1
I14A **Mackay** 88.01 41 ⇓P P 07 30 59.3 +1.0
baz=88,SNR=19
HWUT **Hardware Ranch** 88.02 44 eP P 07 30 58.6 +0.2
comp=Z,15nm,1.4s
526A **Mary Lane Ranc** 88.09 57 ⇓P P 07 30 59.8 +0.9
baz=88,SNR=12
TXAR **Lajitas Array** 88.12 58 P P 07 31 00.1 +1.1
TXAR pP pP 07 33 17.7 -1.2
TXAR PKKPbc PKKPbc 07 48 40.3 +0.7
TXAR **Lajitas Array** 88.12 58 P P 07 31 00.1 +1.1
comp=Z,7.2nm,0.8s,baz=222,slow=5.9,SNR=99
TXAR pP pP 07 33 17.7 -1.2
comp=Z,0.2nm,0.8s,baz=248,slow=4.8,SNR=2.6
TXAR PKKPbc PKKPbc 07 48 40.3 +0.7
comp=Z,0.1nm,0.7s,baz=96,slow=3.8,SNR=4.6
G13A **Cobalt** 88.15 40 ⇓P P 07 30 59.3 +0.5
baz=88,SNR=6.9
PV10 **Paradox Valley** 88.15 48 eP P 07 30 59.0 -0.2
comp=Z,70nm,0.7s
W22A **Albuquerque** 88.17 51 ⇑P P 07 31 00.0 +0.8
baz=88
124A **Stringfield Ra** 88.18 54 ⇓P P 07 31 00.2 +0.8
baz=88,SNR=8.7
NEW **Newport** 88.21 36 eP P 07 30 59.3 +0.4
comp=Z,5.2nm,0.9s
NEW **Newport** 88.21 36 P P 07 30 58.9 0.0
comp=Z,4.3nm,0.8s,baz=240,slow=1.9,SNR=9.0
NEW **Newport** 88.21 36 ⇓P P 07 30 58.9 0.0
baz=88,SNR=6.1
U21A **Nageezi** 88.22 50 ⇓P P 07 30 60.0 +0.5
baz=88,SNR=18
Y23A **Lovelace Mesa,** 88.27 53 ⇓P P 07 31 00.1 +0.4
baz=88,SNR=10
PV01 **Paradox Valley** 88.36 48 eP P 07 31 00.2 +0.1
comp=Z,598nm,1.1s
S20A **Disappointment** 88.37 48 ⇓P P 07 31 00.6 +0.5
baz=89,SNR=6.0
627A **Terlingua Ranc** 88.39 58 ⇑P P 07 31 01.2 +0.9
baz=89,SNR=17
426A **McDonald Obser** 88.40 56 ⇑P P 07 31 01.3 +0.9
baz=89,SNR=16
225A **Deer Hill, Car** 88.40 55 ⇓P P 07 31 01.2 +0.9
baz=89,SNR=9.6
ANMO **Albuquerque** 88.42 52 eP P 07 31 01.0 +0.6
comp=Z,8.5nm,1.0s
H14A **Leadore** 88.42 41 ⇑P P 07 31 01.0 +0.8
baz=89,SNR=14
KMI **Kunming** 88.44 297 P P 07 31 01.8 +1.0
KMI pmax pmax
comp=Z,7.0nm,0.8s
X23A **Hourglass Bar** 88.45 52 ⇑P P 07 31 01.0 +0.4
baz=89,SNR=5.9
F13A **Darby** 88.46 39 ⇓P P 07 30 00.3 +0.1
baz=89,SNR=12
527A **Woodward Ranch** 88.51 57 ⇓P P 07 31 01.4 +0.5
baz=89,SNR=8.0
Z24A **Sheeppen Canyo** 88.52 54 ⇓P P 07 31 01.5 +0.6
baz=89
R20A **Redvale** 88.52 48 ⇓P P 07 31 01.4 +0.6
baz=89
V22A **San Miguel Ran** 88.52 51 ⇓P P 07 31 01.0 +0.1
baz=89
D12A **Red Ives Fores** 88.54 38 ⇓P P 07 31 01.0 +0.5
baz=89
M17A **Scullys Gap (B** 88.54 44 ⇓P P 07 31 01.7 +0.8
baz=89
T21A **Navajo Lake** 88.56 49 ⇑P P 07 31 01.2 +0.2
baz=89
I15A **Monteview** 88.65 42 ⇓P P 07 31 02.3 +1.1
baz=89,SNR=5.2
VNA1 **Neumayer--Stat** 88.66 177 eP P 07 31 00.8 +0.2
COLA **College** 88.66 13 eP P 07 30 59.5 -1.0
comp=Z,24nm,1.0s
S21A **Coal Bank Pass** 88.69 49 ⇓P P 07 31 02.4 +0.7
baz=89
G14A **Jackson** 88.69 40 ⇑P P 07 31 02.8 +1.4
baz=89
DLBC **Dease Lake** 88.69 23 eP P 07 31 01.6 +0.7
DLBC **Dease Lake** 88.69 23 P P 07 31 01.9 +1.0
comp=Z,4.2nm,0.8s,baz=230,slow=5.3,SNR=15
HHC **Hu-ho-hao-te** 88.70 315 eP P 07 31 02.3 +0.9
HHC pP pP 07 33 22.6 +1.1
HHC sP sP 07 34 27.4 +0.6
HHC PP PP 07 34 47.4 +3.7
HHC SKS SKSac 07 40 28.6 -0.4
HHC S S 07 40 53.8 -0.7
HHC pmax pmax
comp=Z,67nm,0.8s
HHC pmax pmax
comp=Z,150nm,6.7s
326A **Caldwell Ranch** 88.71 56 ⇑P P 07 31 02.3 +0.6
baz=89
Y24A **Capitan** 88.72 53 ⇑P P 07 31 02.4 +0.6
baz=89,SNR=29
125A **Gardner Draw,** 88.76 54 ⇓P P 07 31 02.6 +0.6
baz=89,SNR=5.3
U22A **Llaves** 88.77 50 ⇓P P 07 31 02.5 +0.5
baz=89
ILAR **Eielson Array** 88.78 13 P P 07 31 00.0 -1.1
ILAR pP pP 07 33 18.8 -2.4
ILAR **Eielson Array** 88.78 13 P P 07 31 00.0 -1.1
comp=Z,7.9nm,0.8s,baz=223,slow=5.5,SNR=78
ILAR pP pP 07 33 18.8 -2.4
comp=Z,1.0nm,1.0s,baz=231,slow=5.7,SNR=5.2
P19A **Cripple Cowboy** 88.78 47 ⇑P P 07 31 02.4 +0.4
baz=89,SNR=5.3
GDL2 **Guadalupe Moun** 88.79 55 eP P 07 31 03.3 +1.2
628A **Black Gap, Mar** 88.80 58 ⇓P P 07 31 02.9 +0.8
baz=89,SNR=8.0
C12B **Naegeli Ranch,** 88.82 37 ⇑P P 07 31 02.0 +0.3
baz=89,SNR=9.4
MCMT **McKenzie Canyo** 88.85 41 eP P 07 31 03.1 +0.9
comp=Z,5.3nm,1.0s
H15A **Lima** 88.86 41 ⇑P P 07 31 03.1 +0.9
baz=89,SNR=16
E13A **Victor** 88.89 39 ⇓P P 07 31 02.3 +0.1
baz=89
226B **Tecolote Peak,** 88.89 55 ⇓P P 07 31 03.1 +0.6
baz=89,SNR=12
Q20A **Ridgley Place,** 88.94 47 ⇑P P 07 31 03.0 +0.4
baz=89,SNR=6.2
427A **Hayter Ranch,** 88.97 56 ⇓P P 07 31 03.8 +0.9
baz=89,SNR=23
V23A **Ortiz Mt. (NFS** 88.97 51 ⇑P P 07 31 04.0 +1.0
baz=89,SNR=5.1
Z25A **Roswell** 88.98 54 ⇑P P 07 31 03.7 +0.7
baz=89,SNR=6.4
O19A **Miners Draw (B** 89.00 46 ⇓P P 07 31 03.2 +0.3
baz=89,SNR=18
T22A **Edith** 89.02 50 ⇓P P 07 31 03.7 +0.5
baz=89
F14A **Wisdom** 89.04 40 ⇓P P 07 31 03.5 +0.5
baz=89
RRI2 **Red Ridge** 89.05 43 eP P 07 31 04.4 +1.2
comp=Z,11nm,0.8s
D13A **Huson** 89.08 38 ⇓P P 07 31 03.0 0.0
baz=89,SNR=6.3
P20A **De Beque** 89.12 47 ⇓P P 07 31 04.0 +0.5
baz=89,SNR=10
CMAR **Chiang Mai Arr** 89.13 290 P P 07 31 04.3 +0.6
CMAR **Chiang Mai Arr** 89.13 290 P P 07 31 04.3 +0.6
comp=Z,7.5nm,0.9s,baz=129,slow=3.1,SNR=26
528A **Cox Ranch, San** 89.16 57 ⇑P P 07 31 04.4 +0.6
baz=89
L18A **Fontenelle, Gr** 89.18 44 ⇓P P 07 31 04.2 +0.5
baz=89
R21A **Cimarron** 89.18 48 ⇓P P 07 31 04.7 +0.7
baz=89,SNR=6.4
I16A **Newdale** 89.21 42 ⇑P P 07 31 04.9 +1.1
baz=90,SNR=9.0
U23A **El Rito** 89.23 51 ⇓P P 07 31 04.5 +0.4
baz=90,SNR=8.2
MSO **Missoula** 89.24 39 eP P 07 31 03.4 -0.4
MSO **Missoula** 89.24 39 ⇑P P 07 31 03.9 +0.1
baz=90
G15A **Dillon** 89.24 41 ⇑P P 07 31 04.9 +0.9
baz=90
126A **Clayton Basin,** 89.24 55 ⇑P P 07 31 04.6 +0.5
baz=90
CHTO **Chiang Mai** 89.26 290 eP P 07 31 05.9 +1.6
comp=Z,4.7nm,0.6s
DLMT **Dillon** 89.28 40 eP P 07 31 05.1 +1.0
comp=Z,5.7nm,0.9s
Y25A **Mesa, Roswell** 89.28 53 ⇓P P 07 31 04.6 +0.2
baz=90,SNR=5.3
E14A **Clinton** 89.28 39 ⇓P P 07 31 04.2 +0.1
baz=90,SNR=6.7
BSMT **Basoo Peak** 89.29 37 eP P 07 31 04.2 +0.1
W24A **Lazy 6 Ranch,** 89.31 52 ⇑P P 07 31 04.5 0.0
baz=90,SNR=7.7
C13A **Hot Springs** 89.32 38 ⇑P P 07 31 04.2 +0.1
baz=90
TPAW **Teton Pass** 89.35 43 eP P 07 31 05.3 +0.7
comp=Z,8.4nm,1.0s
Q21A **Lamborn Mesa,** 89.38 48 ⇑P P 07 31 05.3 +0.6
baz=90,SNR=5.6
A12A **Yaak River Ran** 89.39 36 ⇓P P 07 31 05.0 +0.6
baz=90
S22A **4UR Ranch, Cre** 89.41 49 ⇓P P 07 31 05.6 +0.6
baz=90,SNR=9.8
SNOW **Snow King Moun** 89.46 43 eP P 07 31 06.3 +1.2
428A **Kincaid Ranch,** 89.47 57 ⇓P P 07 31 05.7 +0.4
baz=90
O20A **White River Ci** 89.52 46 ⇑P P 07 31 05.8 +0.4
baz=90,SNR=11
JTMT **Jette** 89.52 38 eP P 07 31 05.3 +0.2
comp=Z,1.7nm,0.8s
Z26A **Caprock** 89.54 54 ⇓P P 07 31 05.5 0.0
baz=90,SNR=8.4
M19A **Rock Springs** 89.55 45 ⇓P P 07 31 06.0 +0.5
baz=90
IMW **Indian Meadow** 89.56 42 eP P 07 31 06.8 +1.2
comp=Z,10.0nm,0.9s
X25A **Clemmons Ranch** 89.56 53 ⇑P P 07 31 06.1 +0.5
baz=90
F15A **Butte** 89.58 40 ⇓P P 07 31 05.7 +0.2
baz=90,SNR=8.5
529A **Stev Forest Ra** 89.59 58 ⇑P P 07 31 06.1 +0.3
baz=90,SNR=6.2
LRM **Limekiln Ridge** 89.60 40 eP P 07 31 06.2 +0.6
MOOW **Moose Ponds** 89.61 42 eP P 07 31 06.2 +0.5
comp=Z,1.1nm,0.7s
D14A **Greenough** 89.62 39 ⇓P P 07 31 05.0 -0.6
baz=90,SNR=6.6
V24A **Rampart Ranch,** 89.63 51 ⇑P P 07 31 06.4 +0.4
baz=90,SNR=9.1
LOHW **Long Hollow** 89.63 43 eP P 07 31 06.5 +0.7
comp=Z,3.7nm,0.8s
328A **Wristen Ranch,** 89.65 56 ⇑P P 07 31 06.3 +0.3
baz=90
T23A **Casias Ranch,** 89.65 50 ⇑P P 07 31 06.4 +0.2
baz=90
R22A **Saguache, Gunn** 89.68 49 ⇑P P 07 31 06.8 +0.5
baz=90,SNR=5.9
CHMT **Chamberlain Mo** 89.68 39 eP P 07 31 06.0 +0.1
comp=Z,3.1nm,0.8s
G16A **Moss Hill, Enn** 89.69 41 ⇑P P 07 31 06.5 +0.5
baz=90,SNR=6.5
L19A **Farson** 89.70 44 ⇑P P 07 31 06.6 +0.5
baz=90,SNR=12
SLMT **Seeley Lake** 89.71 38 eP P 07 31 05.3 -0.7
comp=Z,2.5nm,0.9s
B13A **Whitefish** 89.75 37 ⇓P P 07 31 06.3 +0.2
baz=90
127A **Arkansas Junct** 89.76 55 ⇓P P 07 31 06.7 +0.1
baz=90,SNR=6.7
H16A **Russell Place,** 89.77 41 ⇑P P 07 31 07.7 +1.3
baz=90,SNR=7.7
P21A **Newcastle** 89.78 47 ⇑P P 07 31 07.2 +0.5
baz=90
E15A **Deer Lodge** 89.79 39 ⇓P P 07 31 07.3 +0.9
baz=90
N20A **Spence Gulch,** 89.83 46 ⇑P P 07 31 07.4 +0.6
baz=90,SNR=19
C14A **Swan Lake** 89.84 38 ⇓P P 07 31 06.5 0.0
baz=90
BW06 **Boulder Array** 89.89 44 eP P 07 31 07.2 +0.2
comp=Z,10.0nm,1.2s
PDAR **Pinedale Array** 89.89 44 P P 07 31 07.3 +0.3
PDAR **Pinedale Array** 89.89 44 P P 07 31 07.3 +0.3
comp=Z,7.3nm,1.0s,baz=204,slow=3.3,SNR=26
Y26A **Elida** 89.93 54 ⇑P P 07 31 07.5 +0.2
baz=90
PLCA **Paso Flores** 89.94 134 P P 07 31 08.6 +1.3
PLCA **Paso Flores** 89.94 134 P P 07 31 08.6 +1.3
comp=Z,2.5nm,0.9s,baz=149,slow=5.2,SNR=3.3
SMCO **Snowmass** 89.95 48 eP P 07 31 08.4 +0.8
comp=Z,5.0nm,0.8s
CD2 **Chengdu** 89.96 303 P P 07 31 08.1 +0.7
S23A **Nye Farm, Mont** 89.97 49 ⇑P P 07 31 07.7 +0.1
baz=90
BOZ **Bozeman (W)** 90.00 40 eP P 07 31 07.9 +0.5
comp=Z,4.3nm,1.0s
W25A **X Bar L Ranch,** 90.01 52 ⇑P P 07 31 07.7 +0.1
baz=90,SNR=9.2
H17A **Grant Village** 90.03 42 ⇑P P 07 31 09.6 +1.9
baz=90
429A **Davenport Ranc** 90.06 57 ⇑P P 07 31 08.2 +0.4
baz=90,SNR=18
F16A **Kennard Place,** 90.08 40 ⇑P P 07 31 08.3 +0.6
baz=90,SNR=5.2
A13A **Flathead Natio** 90.08 37 ⇓P P 07 31 08.3 +0.7
baz=90
EGAK **Eagle** 90.11 15 eP P 07 31 07.0 -0.2
comp=Z,15nm,1.1s
228A **UT Block 9, Go** 90.12 56 ⇑P P 07 31 08.3 +0.2
baz=90
Z27A **Tatum** 90.14 54 ⇑P P 07 31 08.3 0.0
baz=90
V25A **Rancho No Teng** 90.16 52 ⇑P P 07 31 08.4 0.0
baz=90,SNR=7.3
I18A **Diamond G Ranc** 90.17 43 ⇑P P 07 31 08.8 +0.5
baz=90
D15A **Lincoln** 90.18 39 ⇓P P 07 31 08.4 +0.2
baz=90,SNR=6.6
M20A **Sweetwater, Wa** 90.19 45 ⇑P P 07 31 08.9 +0.4
baz=90
P22A **Eagle** 90.29 47 ⇑P P 07 31 09.8 +0.8
baz=90
COLD **Coldfoot** 90.30 11 eP P 07 31 08.6 +0.5
comp=Z,8.0nm,0.9s
N21A **Black Mountain** 90.30 46 ⇑P P 07 31 09.5 +0.5
baz=90,SNR=17
530A **J-C Ranch, Com** 90.30 58 ⇓P P 07 31 09.5 +0.5
baz=90
R23A **Moffat** 90.31 49 ⇑P P 07 31 09.8 +0.6
baz=90
L20A **Wamsutter** 90.33 45 ⇑P P 07 31 09.8 +0.7
baz=91,SNR=8.5
329A **Wagon Wheel Ra** 90.34 56 ⇓P P 07 31 09.5 +0.3
baz=91
SDCO **Great Sand Dun** 90.35 50 eP P 07 31 09.6 +0.2
comp=Z,4.3nm,1.4s
K19A **Absolon Red Bu** 90.38 44 ⇑P P 07 31 09.5 +0.2
baz=91
G17A **Pierce Place,** 90.39 41 ⇑P P 07 31 10.6 +1.4
baz=91
128A **Castleberry Fa** 90.41 55 ⇑P P 07 31 10.0 +0.5
baz=91
Y27A **Causey** 90.42 54 ⇓P P 07 31 09.4 -0.2
baz=91,SNR=5.1
E16A **East Helena** 90.42 40 ⇑P P 07 31 09.5 +0.2
baz=91
B14A **Marquette Ranc** 90.42 38 ⇓P P 07 31 09.1 -0.2
baz=91,SNR=26
WALA **Waterton Lakes** 90.43 37 eP P 07 31 09.2 0.0
comp=Z,0.1nm,0.8s
J19A **Crowheart** 90.45 43 ⇑P P 07 31 09.7 +0.1
baz=91,SNR=6.8
W26A **Owens Ranch, T** 90.47 53 ⇓P P 07 31 10.1 +0.3
baz=91
C15A **Salmond Ranch,** 90.50 38 ⇓P P 07 31 09.4 -0.2
baz=91,SNR=5.1
S24A **Houchin Ranch,** 90.51 50 ⇓P P 07 31 10.3 +0.2
baz=91
U25A **Circle Dot Ran** 90.55 51 ⇑P P 07 31 10.2 0.0
baz=91,SNR=6.1
631A **Perdido Creek** 90.61 59 ⇑P P 07 31 10.8 +0.3
baz=91,SNR=16
Q23A **Hartsel** 90.62 48 ⇑P P 07 31 11.3 +0.7
baz=91
K20A **Yellowstone Ra** 90.63 44 ⇓P P 07 31 10.6 +0.2
baz=91
430A **Baggett Ranch,** 90.64 57 ⇓P P 07 31 10.5 0.0
baz=91
A14A **Double T Ranch** 90.66 37 ⇓P P 07 31 10.3 0.0
baz=91,SNR=11
229A **Bryant Ranch,** 90.66 56 ⇑P P 07 31 10.7 0.0
baz=91
O22A **Kremmling** 90.69 47 ⇓P P 07 31 11.1 +0.2
baz=91,SNR=8.0
F17A **Fitzpatrick Pl** 90.72 41 ⇓P P 07 31 11.5 +0.8
baz=91,SNR=6.6
D16A **Dana Ranch, Ca** 90.75 39 ⇓P P 07 31 11.1 +0.3
baz=91,SNR=9.2
MSTX **Muleshoe** 90.75 54 ⇓P P 07 31 10.9 -0.2
baz=91
V26A **Tequesquite Ra** 90.75 52 ⇑P P 07 31 11.3 +0.2
baz=91
Z28A **Tucker Farm, M** 90.76 55 ⇓P P 07 31 11.0 -0.2
baz=91
X27A **F and S Farms,** 90.78 53 ⇓P P 07 31 11.6 +0.3
baz=91
M21A **Separation Pea** 90.79 45 ⇑P P 07 31 11.2 0.0
baz=91,SNR=14
B15A **Bradely Ranch,** 90.81 38 ⇑P P 07 31 10.8 -0.2
baz=91
P23A **Jefferson** 90.83 48 ⇑P P 07 31 12.3 +0.7
baz=91
732A **Laxson Ranch,** 90.83 60 ⇓P P 07 31 11.6 +0.1
baz=91,SNR=5.6
R24A **Sanders Place,** 90.84 49 ⇓P P 07 31 12.0 +0.5
baz=91
I19A **Meeteetse** 90.86 43 ⇓P P 07 31 12.3 +0.8
baz=91
T25A **Trinidad** 90.87 50 ⇑P P 07 31 12.3 +0.6
baz=91
E17A **Martinsdale** 90.88 40 ⇓P P 07 31 12.1 +0.6
baz=91
330A **Mertzon** 90.93 57 ⇑P P 07 31 12.2 +0.3
baz=91
531A **Rocksprings** 90.94 58 ⇑P P 07 31 12.2 +0.3
baz=91,SNR=7.9
C16A **Fuhringer Ranc** 91.02 39 ⇓P P 07 31 11.8 -0.2
baz=91,SNR=7.3
U26A **Atchley Ranch,** 91.04 51 ⇓P P 07 31 12.4 -0.1
baz=91,SNR=5.9
N22A **Wattenberg Ran** 91.04 46 ⇑P P 07 31 12.9 +0.5
baz=91,SNR=14
A15A **Johnson Ranch,** 91.05 37 ⇓P P 07 31 11.7 -0.4
baz=91,SNR=7.3
S25A **Robets Cordova** 91.07 50 ⇓P P 07 31 12.9 +0.3
baz=91
431A **Sonora** 91.09 58 ⇓P P 07 31 12.8 +0.1
baz=91
G18A **Lazy EL Ranch,** 91.11 41 ⇑P P 07 31 13.3 +0.8
baz=91
J20A **Shoshoni** 91.12 44 ⇑P P 07 31 13.0 +0.4
baz=91,SNR=7.2
O23A **Lake Granby, G** 91.14 47 ⇑P P 07 31 13.9 +0.9
baz=91
H19A **Powell** 91.16 42 ⇑P P 07 31 13.7 +0.9
baz=91
ISCO **Idaho Springs** 91.17 48 eP P 07 31 13.6 +0.5
comp=Z,2.9nm,1.0s
ISCO **Idaho Springs** 91.17 48 ⇑P P 07 31 14.0 +0.9
baz=91
230A **Sterling City** 91.18 56 ⇑P P 07 31 13.8 +0.8
baz=91
M22A **Cedar Creek Ra** 91.21 46 ⇓P P 07 31 14.5 +1.3
baz=91
632A **Uvalde** 91.28 59 ⇓P P 07 31 14.1 +0.6
baz=92,SNR=8.0
F18A **Big Timber** 91.30 41 ⇓P P 07 31 14.0 +0.7
baz=92
D17A **Six Diamond Ra** 91.32 39 ⇓P P 07 31 13.9 +0.5
baz=92,SNR=12
K21A **Alcova** 91.33 45 ⇑P P 07 31 14.1 +0.5
baz=92
B16A **M & M Farms, S** 91.35 38 ⇑P P 07 31 13.4 0.0
baz=92
I20A **Worland** 91.37 43 ⇑P P 07 31 14.3 +0.6
baz=92
R25A **Fountain Ranch** 91.39 50 ⇑P P 07 31 14.4 +0.4
baz=92
N23A **Red Feather La** 91.43 47 ⇑P P 07 31 14.6 +0.3
baz=92,SNR=6.8
532A **Rocksprings** 91.43 58 ⇓P P 07 31 14.6 +0.4
baz=92
V27A **Dan Oppiter Fa** 91.44 52 ⇓P P 07 31 14.7 +0.5
baz=92
T26A **Comanche Natio** 91.47 51 ⇓P P 07 31 14.7 +0.3
baz=92
331A **San Angelo** 91.48 57 ⇑P P 07 31 14.6 +0.1
baz=92
E18A **Harlowton** 91.50 40 ⇓P P 07 31 15.4 +1.1
baz=92
C17A **Wharram Farm,** 91.51 39 ⇓P P 07 31 14.4 +0.2
baz=92,SNR=11

J21A	Lysite	91.53	44	⇓P		P	07 31 14.8	+0.2	
	baz=92,SNR=6.2								
Y29A	Porterfield Fa	91.54	54	⇑P		P	07 31 15.0	+0.3	
	baz=92								
JCT	Junction City	91.65	58	⇓P		P	07 31 15.5	+0.3	
	baz=92								
U27A	Thompson Grove	91.72	52	⇓P		P	07 31 15.7	+0.2	
	baz=92								
Z30A	Sanderson Ranc	91.72	55	⇑P		P	07 31 16.0	+0.5	
	baz=92								
F19A	Roth Farm, Mol	91.75	41	⇑P		P	07 31 15.7	+0.3	
	baz=92								
S26A	Kim	91.75	50	⇑P		P	07 31 15.4	-0.3	
	baz=92,SNR=6.8								
X29A	Tulia	91.75	54	⇓P		P	07 31 16.1	+0.5	
	baz=92								
432A	Menard	91.81	58	⇓P		P	07 31 15.9	-0.1	
	baz=92								
B17A	L&G Farms, Che	91.81	38	⇑P		P	07 31 16.0	+0.5	
	baz=92								
231A	Bronte	91.82	57	⇑P		P	07 31 15.6	-0.3	
	baz=92								
I21A	Big Trails, Te	91.84	44	⇑P		P	07 31 15.7	-0.2	
	baz=92,SNR=6.2								
LZH	Lanzhou	92.01	308	*e*P		P	07 31 17.4	+0.5	
LZH				pP		pP	07 33 36.8	-0.8	
LZH				sP		sP	07 34 41.8	-0.8	
LZH				pmax		pmax			
	comp=Z,16nm,1.0s								
332A	Millersview	92.05	57	⇓P		P	07 31 16.8	-0.2	
	baz=92,SNR=9.3								
R26A	Arlington	92.05	50	⇑P		P	07 31 16.9	-0.1	
	baz=92,SNR=11								
P25A	Willow Gulch B	92.05	48	⇑P		P	07 31 17.5	+0.5	
	baz=92								
N24A	Carr	92.12	47	⇑P		P	07 31 17.7	+0.4	
	baz=92								
L23A	Garrett	92.13	46	⇓P		P	07 31 17.5	+0.2	
	baz=92,SNR=6.8								
E19A	Rath Farm, Rou	92.13	41	⇓P		P	07 31 17.6	+0.5	
	baz=92								
A17A	Triple J Farms	92.19	38	⇓P		P	07 31 17.4	+0.2	
	baz=92,SNR=12								
Q26A	Hugo	92.26	49	⇓P		P	07 31 18.0	0.0	
	baz=92								
EGMT	Eagleton	92.29	39	⇓P		P	07 31 18.5	+0.7	
	baz=92								
232A	Coleman	92.32	57	⇓P		P	07 31 18.2	0.0	
	baz=92								
I22A	9 Mile Ranch,	92.40	44	⇑P		P	07 31 18.5	+0.1	
	baz=93,SNR=5.4								
M24A	Cheyenne	92.44	46	⇓P		P	07 31 19.1	+0.4	
	baz=93								
B18A	Beardsley Farm	92.46	39	⇑P		P	07 31 18.8	+0.3	
	baz=93,SNR=7.0								
Z31A	Sharp Cattle R	92.49	55	⇓P		P	07 31 18.9	-0.1	
	baz=93								
R27A	Eads	92.51	50	⇑P		P	07 31 19.3	+0.2	
	baz=93								
E20A	Meyer Farm, Mu	92.55	41	⇓P		P	07 31 19.7	+0.7	
	baz=93								
C19A	Slack Wire Ran	92.57	39	⇓P		P	07 31 19.8	+0.7	
	baz=93,SNR=6.9								
ABTX	Abilene, Hawle	92.61	56	⇑P		P	07 31 20.0	+0.5	
	baz=93								
P26A	Davis Ranch, A	92.65	49	⇑P		P	07 31 20.9	+1.2	
	baz=93								
A18A	Metzger Ranch,	92.67	38	⇓P		P	07 31 19.3	-0.1	
	baz=93,SNR=8.4								
D20A	Manuel Ranch,	92.82	40	⇓P		P	07 31 21.1	+0.9	
	baz=93								
S28A	Manter	92.88	51	⇑P		P	07 31 21.7	+1.0	
	baz=93								
KSCO	Kaye Shedlock'	92.93	49	⇑P		P	07 31 21.5	+0.5	
	baz=93								
B19A	Brinkman Farms	92.97	39	⇑P		P	07 31 21.2	+0.4	
	baz=93,SNR=5.2								
Z32A	Haskell	93.00	56	⇑P		P	07 31 22.1	+0.8	
	baz=93								
C20A	Veseth Ranch,	93.19	40	⇓P		P	07 31 22.6	+0.7	
	baz=93								
R28A	Tribune	93.24	50	⇑P		P	07 31 22.5	+0.1	
	baz=94,SNR=12								
A19A	Klindworth Far	93.31	39	⇓P		P	07 31 22.8	+0.4	
	baz=94								
D21A	La Casta Ranch	93.50	41	⇓P		P	07 31 24.5	+1.1	
	baz=94								
O27A	Beecher Island	93.52	48	⇑P		P	07 31 24.3	+0.7	
	baz=94								
Q28A	Sharon Springs	93.52	50	⇓P		P	07 31 24.3	+0.7	
	baz=94								
R29A	Marienthal	93.76	50	⇓P		P	07 31 25.6	+0.8	
	baz=94								
A20A	Cobblestone Ra	93.77	39	⇑P		P	07 31 25.5	+1.0	
	baz=94								
P28A	Saint Francis	93.78	49	⇓P		P	07 31 25.5	+0.7	
	baz=94								
C21A	Desert Coulee	93.78	40	⇑P		P	07 31 24.6	0.0	
	baz=94								
E22A	Miles City	93.87	42	⇑P		P	07 31 25.3	+0.3	
	baz=94								
F23A	Volborg	93.89	42	⇓P		P	07 31 25.6	+0.4	
	baz=94								
H24A	Dirks Ranch, A	94.02	44	⇑P		P	07 31 25.3	-0.4	
	baz=94,SNR=6.4								
D22A	Cohagen	94.04	41	⇓P		P	07 31 26.1	+0.3	
	baz=94								
K26A	Motz Farm, Whi	94.07	46	⇑P		P	07 31 26.8	+0.8	
	baz=94								
RSSD	Black Hills	94.09	44	*e*P		P	07 31 26.0	-0.3	
	comp=Z,5.8nm,1.0s								
E23A	Ismay	94.29	42	⇓P		P	07 31 27.7	+0.8	
	baz=94								
R30A	Dighton	94.33	51	⇓P		P	07 31 28.1	+0.8	
	baz=94								
D23A	Lindsay	94.65	41	⇓P		P	07 31 29.3	+0.8	
	baz=95								
INK	Inuvik	94.78	15	P		P	07 31 27.9	-0.6	
INK	Inuvik	94.78	15	P		P	07 31 27.9	-0.6	
	comp=Z,2.9nm,0.9s,baz=222,slow=4.1,SNR=12								
C23A	Lambert	94.93	41	⇓P		P	07 31 30.7	+0.9	
	baz=95								
C24A	Savage	95.28	41	⇓P		P	07 31 32.4	+1.1	
	baz=96								
B23A	Brockton	95.33	40	⇑P		P	07 31 32.6	+1.1	
	baz=96								
GTA	Gaotai	96.24	310	*e*P		P	07 31 38.1	+2.2	
GTA				pP		pP	07 33 59.8	+2.6	
GTA				sP		sP	07 35 03.8	+1.8	
YKA	Yellowknife Ar	97.18	25	P		Pdif	07 31 38.8	-0.6	
YKA	Yellowknife Ar	97.18	25	P		Pdif	07 31 38.8	-0.6	
	comp=Z,1.1nm,0.7s,baz=246,slow=4.5,SNR=22								
ZALV	Zalesovo Beam	109.95	321	PKiKP		PKiKP	07 36 32.5	-1.4	
ZALV	Zalesovo Beam	109.95	321	PKiKP		PKiKP	07 36 32.5	-1.4	
	comp=Z,1.9nm,0.6s,baz=140,slow=1.2,SNR=5.0								
MKAR	Makanchi Array	110.53	313	PKiKP		PKiKP	07 36 34.4	-0.9	
MKAR				PKKPbc		PKKPbc	07 47 36.5	-1.1	
MKAR	Makanchi Array	110.53	313	PKiKP		PKiKP	07 36 34.4	-0.9	
	comp=Z,1.4nm,0.7s,baz=67,slow=2.1,SNR=13								
MKAR				PKKPbc		PKKPbc	07 47 36.5	-1.1	
	comp=Z,0.7nm,0.9s,baz=269,slow=4.9,SNR=6.0								
KURK	Kurchatov	113.39	317	*e*PKPdf		PKiKP	07 36 39.1	-1.4	
KURBB	Kurchatov Arra	113.44	317	PKiKP		PKiKP	07 36 39.3	-1.3	
	comp=Z,1.9nm,0.8s,baz=94,slow=1.9,SNR=20								
KSH	Kashi	114.09	305	*e*PKPbc		PKPdf	07 36 35.3	-7.1	
KSH				*e*PP		PKiKP	07 37 10.4	+28	
KSH				*es*PKP			07 40 08.3		
KSH				*e*PKS		PKSdf	07 40 10.3	-8.9	
KSH				*e*SKS		SKSdf	07 42 41.8	-12	
KSH				*e*SKKS		SKKSac	07 43 06.8	-37	
AAK	Ala-Archa	115.55	308	PKP		PKPdf	07 36 44.7	-0.5	
AAK	Ala-Archa	115.55	308	PKP		PKPdf	07 36 44.7	-0.5	
	comp=Z,3.0nm,0.3s,baz=245,slow=9.0,SNR=4.5								
KKAR	Karatay Array	118.50	309	*e*PKPdf		PKPdf	07 36 49.7	-1.0	
BVAR	Borovoye Array	118.52	320	PKP		PKPdf	07 36 49.5	-0.8	
BVAR	Borovoye Array	118.52	320	PKP		PKPdf	07 36 49.5	-0.8	
	comp=Z,2.8nm,0.3s,baz=96,slow=1.5,SNR=25								
BRVK	Borovoye	118.58	320	*e*PKPdf		PKPdf	07 36 49.5	-1.0	
KBL	Kabul	119.00	299	*e*PKPdf		PKPdf	07 36 52.3	+0.1	
SPITS	Spitsbergen Ar	122.01	356	PKP		PKPdf	07 36 56.0	-0.4	
SPITS	Spitsbergen Ar	122.01	356	PKP		PKPdf	07 36 56.0	-0.4	
	comp=Z,7.6nm,0.7s,baz=110,slow=4.5,SNR=20								
DAG	Danmarks Havn	123.06	5	*i* P		PKPdf	07 36 56.3	-2.1	
	comp=Z,2.6nm,0.9s								
SUMG	Summit	123.62	13	*i* P		PKPdf	07 36 59.7	-0.4	
	comp=Z,5.0nm,1.0s								
ABKAR	Akbulak array	125.47	316	*e*PKPdf		PKPdf	07 37 03.7	-0.1	
AKTO	Aktyubinsk	126.47	318	PKP		PKPdf	07 37 05.5	-0.2	
AKTO	Aktyubinsk	126.47	318	PKP		PKPdf	07 37 05.5	-0.2	
	comp=Z,3.9nm,0.6s,baz=82,slow=2.8,SNR=8.0								
KEV	Kevo	128.46	349	*ep*		PKPdf	07 37 07.4	-1.5	
	comp=Z,0.5nm,0.4s								
ARCES	ARCESS Array B	128.92	349	PKP		PKPdf	07 37 09.3	-0.5	
ARCES	ARCESS Array B	128.92	349	PKP		PKPdf	07 37 09.3	-0.5	
	comp=Z,6.3nm,0.7s,baz=98,slow=1.0,SNR=39								
ARE0	ARCESS Array S	128.92	349	*e*PKPdf		PKPdf	07 37 09.1	-0.7	
JOF	Joensuu	132.98	341	*ep*		PKPdf	07 37 16.0	-1.6	
	comp=Z,7.4nm,0.6s								
KAF	Kangasniemi	135.04	343	*ep*		PKPdf	07 37 19.4	-2.1	
	comp=Z,6.0nm,0.7s								
FINES	FINESS Array B	135.65	343	PKP		PKPdf	07 37 23.6	+1.0	
FINES				pPKP		pPKPdf	07 39 51.7	-1.7	
FINES	FINESS Array B	135.65	343	PKP		PKPdf	07 37 23.6	+1.0	
	comp=Z,3.3nm,0.5s,baz=40,slow=3.4,SNR=13								
FINES				pPKP		pPKPdf	07 39 51.7	-1.7	
	comp=Z,0.9nm,0.6s,baz=342,slow=3.0,SNR=2.1								
NB2	NORSAR Subarra	139.05	352	PKP		PKPdf	07 37 20.2	-8.8	
	comp=Z,1.9nm,0.7s,baz=13,slow=3.1								
NOA	NORSAR Array B	139.05	352	PKPpre		PKPpre	07 37 21.2		
NOA				PKP		PKPdf	07 37 29.7	+0.7	
NOA	NORSAR Array B	139.05	352	PKhKP		PKPpre	07 37 21.2		
	comp=Z,2.6nm,0.9s,baz=18,slow=2.8,SNR=11								
NOA				PKP		PKPdf	07 37 29.7	+0.7	
	comp=Z,2.1nm,0.7s,baz=14,slow=4.0,SNR=6.9								
SUW	Suwalki	142.63	338	*e*PKP		PKPdf	07 37 32.8	-2.7	
AKASG	Malin Array Be	142.65	330	PKPpre		PKPpre	07 37 32.4		
AKASG	Malin Array Be	142.65	330	PKhKP		PKPpre	07 37 32.4		
	comp=Z,23nm,0.5s,baz=43,slow=4.3,SNR=60								
AK01	Malin Array Si	142.66	330	*e*PKPdf		PKPdf	07 37 32.4	-3.2	
KIEV	Kiev	142.66	330	*e*PKPdf		PKPdf	07 37 32.3	-3.3	
AK02	Malin Array Si	142.68	330	*e*PKPdf		PKPdf	07 37 32.6	-3.1	
MUD	Monsted U'grnd	143.77	352	⇓*i*P		PKPbc	07 37 36.5	-0.4	
	comp=Z,34nm,0.9s								
GKP	Gorka Klasztor	145.13	343	*e*PKP		PKPbc	07 37 41.0	-0.1	
BEL	Belsk	145.25	338	*e*PKP		PKPbc	07 37 41.8	+0.3	
KIS	Kishinev	145.29	326	*e*P		PKPdf	07 37 41.0	+0.7	
BSEG	Bad Segeberg	146.04	350	*e*PKPbc		PKPbc	07 37 43.7	+0.1	
BR131	Keskin Array S	146.14	311	*e*PKPbc		PKPbc	07 37 44.0	-0.6	
BRTR	Keskin Array B	146.14	311	PKPbc		PKPdf	07 37 43.3	+1.1	
BRTR				pPKPbc		pPKPbc	07 40 08.4	-4.2	
BRTR	Keskin Array B	146.14	311	PKPbc		PKPdf	07 37 43.3	+1.1	
	comp=Z,6.4nm,0.7s,baz=78,slow=2.9,SNR=31								
BRTR				pPKPbc		pPKPbc	07 40 08.4	-4.2	
	comp=Z,1.0nm,0.7s,baz=99,slow=3.9,SNR=3.8								
KWP	Kalwaria Pacla	146.29	334	⇓*i*P		PKPbc	07 37 44.5	0.0	
KWP	Kalwaria Pacla	146.29	334	*e*PKP		PKPbc	07 37 44.6	0.0	
TLCR		146.41	323	⇑*i*P		PKPbc	07 37 45.0	+0.1	
BUR08	Bucovina Ar. S	146.67	329	*e*PKPbc		PKPbc	07 37 46.3	+0.6	
BURAR	Bucovina Array	146.68	329	⇓*i*P		PKPbc	07 37 46.3	+0.6	
TESR	Tescani	146.73	327	⇑*i*P		PKPbc	07 37 45.6	-0.2	
CFR	Carcaliu	146.80	324	⇑*i*P		PKPbc	07 37 45.8	-0.1	
OJC	Ojcow	146.94	337	*i* PKP		PKPbc	07 37 46.0	-0.2	
KOLS	Kolonicke sedl	147.01	334	*e*PKP		PKPbc	07 37 47.2	+0.8	
KOLS				*e*			07 37 50.6		
TIRR	Tirgusor	147.08	322	⇑*i*P		PKPbc	07 37 46.6	-0.1	
VRI	Vrincioaia	147.12	326	⇓*i*P		PKPbc	07 37 46.6	-0.2	
CRVS	Cervenica-Dubn	147.37	334	*e*PKP		PKPbc	07 37 46.5	-0.9	
CRVS				*e*			07 37 50.8		
NIE	Niedzica	147.41	336	*i* PKP		PKPbc	07 37 48.1	+0.6	
NRDL	Niedersach Rie	147.47	349	*e*PKPbc		PKPbc	07 37 47.3	-0.1	
TRPA	Tarpa	147.52	332	⇓*i*P		PKPbc	07 37 47.7	0.0	
TRPA	Tarpa	147.52	332	⇓*e*		PKPbc	07 37 47.8	0.0	
KSP	Ksiaz	147.55	342	*e*PKPdf		PKPbc	07 37 48.0	+0.3	
DOPR	Dopca	147.75	327	⇑*i*P		PKPbc	07 37 49.2	+0.8	
MLR	Muntele Rosu	147.78	326	⇓*i*P		PKPbc	07 37 48.2	-0.5	
OKC	Ostrava-Krasne	147.84	339	⇑*e*PKP		PKPbc	07 37 47.9	-0.6	
UPC	Upice	147.93	342	⇑*i*PKP		PKPbc	07 37 49.1	+0.4	
UPC				*e*PKPAB		PKPab	07 37 54.6	+0.6	
DPC	Dobruska-Polom	147.98	341	⇑*i*PKP		PKPbc	07 37 49.5	+0.6	
DPC				*e*PKPAB		PKPab	07 37 54.4	+0.2	
CLL	Collm	148.00	345	*e*PKPdf		PKPdf	07 37 45.0	+0.3	
CLL				⇓*i*PKPbc		PKPbc	07 37 48.6	-0.2	
	comp=Z,37nm,0.9s								
CLL				⇑*i*PKPab		PKPab	07 37 53.6	-0.6	
	comp=Z,11nm,0.8s								
CLL				*i* SKPdf		SKPdf	07 40 15.4	-2.0	
CLL				*i* pPKPab		pPKPab	07 40 18.8	+0.6	
CSS	Prodhromos	148.08	303	*e*PKPbc		PKPbc	07 37 49.3	-0.3	
MORC	Moravsky Berou	148.09	339	*e*PKPbc		PKPbc	07 37 48.5	-0.7	
MORC				*e*PKPab		PKPab	07 37 54.5	-0.2	
MORC	Moravsky Berou	148.09	339	⇑*i*P		PKPbc	07 37 49.3	+0.1	
BRG	Berggiesshubel	148.17	344	*e*PKP		PKPdf	07 37 37.8	-7.2	
	comp=Z,3.5nm,0.7s								
BRG				*i*			07 37 49.4		
	comp=Z,21nm,0.9s								
BRG				*i*			07 37 54.8		
	comp=Z,10nm,0.7s								
BRG				*ep*PKP		pPKPdf	07 40 03.7	-12	
	comp=Z,2.2nm,0.5s								
BRG	Berggiesshubel	148.17	344	*e*PKPbc		PKPbc	07 37 49.4	+0.1	
BRG				*e*PKPab		PKPab	07 37 54.7	-0.2	
FBE	Freiberg	148.28	345	*e*PKPbc		PKPbc	07 37 49.9	+0.4	
VOIR		148.28	327	⇓*i*P		PKPbc	07 37 49.6	-0.3	
PVCC	Panska Ves	148.32	343	⇑*i*PKP		PKPbc	07 37 50.2	+0.5	
NEUB	Neuenburg	148.37	347	*e*PKPbc		PKPbc	07 37 49.8	+0.1	
DRGR		148.46	331	⇓*i*P		PKPbc	07 37 50.0	-0.2	
ARR	Arges	148.54	327	⇑*i*P		PKPbc	07 37 51.6	+1.1	
VYHS	Vyhne	148.72	337	*e*PKP		PKPbc	07 37 51.2	+0.5	
VYHS				*e*			07 37 58.1		
PSZ	Piszkesteto	148.79	335	*e*PKPbc		PKPbc	07 37 50.7	-0.4	
PSZ	Piszkesteto	148.79	335	⇑*i*P		PKPbc	07 37 50.6	-0.4	
PSZ	Piszkesteto	148.79	335	⇓*e*		PKPbc	07 37 51.0	0.0	
VRAC	Vranov	148.81	340	⇓*i*P		PKPbc	07 37 51.0	+0.1	
PRU	Pruhonice	148.82	343	⇑*i*PKP		PKPbc	07 37 51.3	+0.4	
PRU				*e*PKPAB		PKPab	07 37 57.7	+0.1	
MOX	Moxa	148.94	347	*e*PKPbc		PKPbc	07 37 51.1	-0.1	
TANN	Tannenbergstha	148.96	345	*e*PKPbc		PKPbc	07 37 51.3	0.0	
PLN	Plauen	148.96	346	*e*PKPbc		PKPbc	07 37 51.3	+0.1	
WERD	Werda	148.96	346	*e*PKPbc		PKPbc	07 37 51.3	0.0	
GUNZ	Gunzen	149.04	346	*e*PKPbc		PKPbc	07 37 51.7	+0.2	
WERN	Wernitzgruen	149.10	345	*e*PKPab		PKPab	07 37 59.1	+0.3	
NKC	Novy Kostel	149.13	345	⇑*i*PKP		PKPbc	07 37 51.8	+0.1	
NKC				*e*PKPAB		PKPab	07 37 59.2	+0.2	
TREC	Trest	149.16	341	⇑*e*PKP		PKPbc	07 37 52.2	+0.4	
BUD	Budapest	149.48	335	⇓*e*		PKPbc	07 37 52.5	0.0	
ZST	Bratislava	149.60	338	*e*PKP		PKPbc	07 37 52.8	0.0	
ZST				*e*			07 38 01.0		
ROTZ	Rotzenmuhle	149.62	345	*e*PKPbc		PKPbc	07 37 53.1	+0.3	
BEBN	Eben Emael	149.73	354	PKPbc		PKPbc	07 37 53.1	+0.1	
BZS	Buzias	149.84	330	⇓*i*P		PKPbc	07 37 53.3	-0.2	
KHC	Kasperske Hory	149.86	343	*e*PKPbc		PKPbc	07 37 53.0	-0.4	
KHC				*e*PKPab		PKPab	07 38 02.1	0.0	
KHC	Kasperske Hory	149.86	343	⇑*i*PKP		PKPbc	07 37 53.6	+0.1	
KHC				*e*PKPAB		PKPab	07 38 02.6	+0.5	
MEM	Membach	149.88	353	PKPbc		PKPbc	07 37 52.9	-0.4	
GRF	Grafenberg Arr	149.92	346	*e*PKPbc		PKPbc	07 37 53.7	+0.2	
TNS	Taunus Mts	149.94	350	*e*PKPbc		PKPbc	07 37 53.7	+0.1	
WET	Wettzell	150.03	344	*e*PKPab		PKPab	07 38 03.1	+0.3	
GEC2	GERESS Array S	150.09	343	*e*PKPbc		PKPbc	07 37 53.9	-0.2	
GERES	GERESS Array B	150.09	343	PKP		PKPdf	07 37 46.3	-1.9	
GERES				PKPbc		PKPbc	07 37 54.2	+0.1	
GERES				pPKPbc		pPKPbc	07 40 20.9	-2.7	
GERES	GERESS Array B	150.09	343	PKP		PKPdf	07 37 46.3	-1.9	
	comp=Z,0.3nm,0.4s,baz=28,slow=6.0,SNR=4.8								
GERES				PKPbc		PKPbc	07 37 54.2	+0.1	
	comp=Z,7.7nm,0.8s,baz=48,slow=2.0,SNR=40								
GERES				pPKPbc		pPKPbc	07 40 20.9	-2.7	
	comp=Z,2.0nm,0.9s,baz=350,slow=5.0,SNR=1.4								
BCLA	Clavier	150.14	354	PKPab		PKPab	07 38 02.8	-0.4	
SOP	Sopron	150.22	338	⇓*e*		PKPbc	07 37 54.5	+0.2	
CONA	Conrad Observa	150.25	339	⇓*i*PKPdf		PKPdf	07 37 49.0	+0.5	
	comp=Z,2.7nm,0.6s								
CONA				⇑*i*PKiKP		PKiKP	07 37 55.1	+0.1	
	comp=Z,34nm,1.4s								
CONA				⇑*i*PKPab		PKPab	07 38 04.6	+0.8	
	comp=Z,17nm,1.0s								
CSNA	Conrad Observa	150.25	339	⇑*i*PKiKP		PKPbc	07 37 54.6	+0.2	
DOU	Dourbes	150.53	355	PKPbc		PKPbc	07 37 54.9	0.0	
PKSM	Moragy	150.67	334	⇓*i*P		PKPbc	07 37 55.0	-0.3	
PKSM	Moragy	150.67	334	⇓*e*		PKPbc	07 37 55.1	-0.3	
WLF	Walferdange	150.80	353	PKPbc		PKPbc	07 37 56.0	+0.5	
WLF				PKPab		PKPab	07 38 06.0	+0.1	
WLF	Walferdange	150.80	353	*e*PKPbc		PKPbc	07 37 56.1	+0.5	
WLF	Walferdange	150.80	353	*e*PKPbc		PKPbc	07 37 55.9	+0.4	
MOA	Molln	150.82	341	⇑*i*PKPbc		PKPbc	07 37 55.7	0.0	
	comp=Z,6.2nm,0.7s								
BEHE	Becsehely	151.18	337	⇓*e*P		PKPbc	07 37 56.5	0.0	
VTS	Vitosha	151.19	324	⇑*i*P		PKPbc	07 37 56.4	-0.5	
SOKA	Soboth	151.62	339	⇑*i*PKPdf		PKPdf	07 37 51.0	+0.4	
	comp=Z,2.0nm,0.7s								
SOKA				⇓*i*PKPbc		PKPbc	07 37 57.0	-0.6	
	comp=Z,7.7nm,0.9s								
SOKA				⇑*i*PKPab		PKPab	07 38 09.6	0.0	
	comp=Z,11nm,1.2s								
PERS	Pernice	151.62	339	*i* PKPdf		PKPbc	07 37 56.7	-0.9	
PERS				*i*			07 38 09.6		
BFO	Black Forest	151.79	349	*e*PKPbc		PKPbc	07 37 57.5	-0.4	
BFO	Black Forest	151.79	349	*e*PKPbc		PKPbc	07 37 57.4	-0.4	
BFO				*e*PKPab		PKPab	07 38 09.4	-0.8	
KBA	Koelnbreinsper	151.79	342	⇑*i*PKPbc		PKPbc	07 37 57.4	-0.7	
	comp=Z,8.4nm,1.1s								
ECH	Echery	152.09	351	*e*PKPbc		PKPbc	07 37 57.9	-0.6	
ECH				*e*PKPab		PKPab	07 38 10.1	-1.3	
WTTA	Wattenberg	152.09	344	⇑*i*PKPdf		PKPdf	07 37 51.2	-0.2	
	comp=Z,3.6nm,0.6s								
WTTA				⇓*i*PKPbc		PKPbc	07 37 58.3	-0.5	
	comp=Z,10nm,0.5s								
WTTA				⇑*i*PKPab		PKPab	07 38 12.1	+0.4	
	comp=Z,8.3nm,0.6s								
RETA	Reutte	152.10	345	⇑*i*PKPbc		PKPbc	07 37 58.5	-0.1	
	comp=Z,5.4nm,0.8s								
MYKA	Terra Mystica	152.10	341	⇓*i*PKPbc		PKPbc	07 37 57.6	-1.1	
	comp=Z,7.3nm,0.6s								
MOTA	Moosalm	152.15	345	⇑*i*PKPbc		PKPbc	07 37 58.5	-0.3	
	comp=Z,5.3nm,0.6s								
ABTA	Abfaltersbach	152.33	343	⇓*i*PKPdf		PKPdf	07 37 51.4	-0.2	
	comp=Z,7.1nm,1.0s								
ABTA				⇑*i*PKPbc		PKPbc	07 37 58.6	-0.5	
	comp=Z,14nm,0.7s								
ABTA				⇓*i*PKPab		PKPab	07 38 12.6	0.0	
	comp=Z,5.7nm,0.6s								
CRNS	Crni Vrh	152.40	340	*i* PKPdf		PKPbc	07 37 58.5	-0.7	
VISS	Visnje	152.44	338	*i* PKPdf		PKPbc	07 37 58.7	-0.6	
VISS				*i*			07 38 12.4		
DAVA	Damuels	152.48	347	⇑*i*PKiKP		PKPbc	07 37 59.4	-0.1	
	comp=Z,8.9nm,1.0s								
FETA	Feichten	152.54	345	⇑*i*PKPdf		PKPdf	07 37 51.8	-0.2	
	comp=Z,7.7nm,0.9s								
FETA				⇑*i*PKiKP		PKPbc	07 37 59.8	0.0	
	com

comp=Z,18nm,0.4s
CRNS Crni Vrh 1.40 45⇑*i*Pg Pn 07 39 55.0 -0.1
CRNS *i* Sg **Sb 07 40 13.6 -0.1**
GBRS Gornja Briga 1.45 72 *i* Pg Pn 07 39 55.8 -0.1
LSR Lussari 1.46 19⇑*e*Pg Pn 07 39 55.7 -0.4
LSR *e*Sg **Sb 07 40 16.0 +0.4**
LSR Lussari 1.46 19⇑*e*Pg Pn 07 39 55.7 -0.4
ZOU Zoufplan 1.46 4⇓*e*Pg Pn 07 39 55.8 -0.4
FVI Forni Avoltri 1.50 358 Pg Pn 07 39 56.6 0.0
comp=Z,30nm,0.4s
FVI Forni Avoltri 1.50 358 Pg Pn 07 39 56.6 0.0
comp=Z,30nm,0.4s
ASQU Asqua 1.50 210 Pg Pb 07 39 57.4 0.0
comp=Z,13nm,0.3s
ASQU Asqua 1.50 210 Pg Pb 07 39 57.4 0.0
comp=Z,13nm,0.3s
ACOM Acomizza, Ital 1.52 18 *e*Pg Pn 07 39 56.9 -0.1
ACOM Acomizza, Ital 1.52 18 Pg Pn 07 39 57.0 -0.1
ACOM Sg **Sg 07 40 19.4 +1.1**
comp=Z,45nm,0.5s
ACOM Acomizza, Ital 1.52 18 *e*Pg Pn 07 39 56.9 -0.1
ACOM Sg **Sg 07 40 19.4 +1.1**
comp=Z,45nm,0.5s
NVLJ Novalja 1.54 110 *e*Pn Pn 07 39 56.0 -1.0
NVLJ Sn **Sn 07 40 16.6 -0.6**
NVLJ Novalja 1.54 110 *e*Pn Pn 07 39 56.0 -1.0
NVLJ Sn **Sn 07 40 16.5 -0.6**
PIEI Pieia 1.58 188 Pg Pn 07 39 57.7 +0.1
comp=Z,17nm,0.3s
PIEI Pieia 1.58 188 Pg Pn 07 39 57.7 +0.1
comp=Z,17nm,0.3s
MYKA Terra Mystica 1.63 20⇓*i*Pn Pn 07 39 58.7 +0.3
comp=Z,3.2nm,0.2s
MYKA ⇓*i*Sg **Sb 07 40 20.9 +0.5**
comp=Z,16nm,0.3s
MYKA Terra Mystica 1.63 20⇓*i*Pn Pn 07 39 58.7 +0.3
MYKA Sg **Sb 07 40 20.9 +0.5**
comp=Z,16nm,0.3s
ABTA Abfaltersbach 1.67 352⇓*i*Pn Pn 07 39 59.9 +1.0
comp=Z,3.8nm,0.2s
ABTA ⇓*i*Sg **Sb 07 40 22.4 +1.0**
comp=Z,15nm,0.6s
ABTA Abfaltersbach 1.67 352⇓*i*Pn Pn 07 39 59.8 +1.0
ABTA Sg **Sb 07 40 22.4 +1.0**
comp=Z,15nm,0.6s
KOSI Kohlern 1.71 324 Pg Pb 07 40 01.2 +0.2
KOSI Sg **Sb 07 40 23.5 +0.8**
comp=Z,32nm,0.5s
KOSI Kohlern 1.71 324 Pg Pb 07 40 01.2 +0.2
OBKA Obir 1.85 40⇓*i*Pn Pb 07 40 03.4 0.0
comp=Z,2.0nm,0.1s
OBKA ⇓*i*Sg **Sg 07 40 28.9 +0.3**
comp=Z,8.9nm,0.2s
OBKA Obir 1.85 40 Pn Pb 07 40 03.4 0.0
comp=Z,2.0nm,0.1s
KBA Koelnbreinsper 2.01 10 ⇓Pn Pn 07 40 04.3 +0.6
comp=Z,1.3nm,0.2s
KBA ⇑*i*Sg **Sg 07 40 33.1 -0.8**
comp=Z,2.4nm,0.2s
KBA Koelnbreinsper 2.01 10⇓*e*Pn Pn 07 40 04.3 +0.6
SOKA Soboth 2.20 43⇓*i*Pn Pn 07 40 05.9 -0.4
SOKA ⇓*e*Pg **Pb 07 40 10.2 +0.9**
comp=Z,1.3nm,0.3s
SOKA ⇓*i*Sg **Sg 07 40 39.1 -0.7**
comp=Z,13nm,0.7s
SOKA Soboth 2.20 43⇓*i*Pn Pn 07 40 05.8 -0.4
WTTA Wattenberg 2.32 339⇑*i*Pn Pn 07 40 06.8 -1.2
WTTA ⇑*i*Pg **Pg 07 40 14.3 +0.5**
comp=Z,3.4nm,0.3s
WTTA ⇓*i*Sg **Sg 07 40 43.6 -0.3**
comp=Z,18nm,0.4s
WTTA Wattenberg 2.32 339⇑*e*Pn Pn 07 40 06.8 -1.2

*PLV **22** 07:58:09.8±1.8,20°.57N×100°.78E, h17km±409km, MD3.9*
*IDC **22** 07:58:11.3±0.9,20°.43N×100°.93E, h0km, mb3.9/9, mb1 3.9/10, mb1mx3.7/28, mbtmp3.8/10, ML4.0/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/39, Error ellipse: s-maj=21.6km s-min=13.8km az=104.0*
ISC 22 07:58:11.5±1.8, 20°.4N±0°.1×100°.88E±0°.08, h0km±14km, n23, σ0s89/22, mb3.8/9, MS3.4/9, Laos

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBV	**Dienbien**	**2.22**	**64**	***e*Pg**	**Pb**	**07 58 53.1**	**+0.4**
DBV				*e*Sg	**Sg**	**07 59 23.5**	**+0.5**
TGV	**Tuan Giao**	**2.64**	**64**	***e*Pg**	**Pb**	**07 59 00.6**	**+0.9**
TGV				*e*Sg	**Sg**	**07 59 35.4**	**-1.0**
CMAR	**Chiang Mai Arr**	**2.68**	**223**	Pn	**Pn**	**07 58 56.3**	**+0.4**
	6.7nm,0.3s,baz=35,slow=12,SNR=16						
CMAR				Pg	**Pg**	**07 59 02.6**	**-0.3**
	54nm,0.3s,baz=33,slow=16,SNR=64						
CMAR				Lg	Lg	07 59 37.1	
	89nm,0.3s,baz=60,slow=31,SNR=14						
SLVN	**Son La**	**2.97**	**72**	***e*Pg**	**Pg**	**07 59 07.4**	**-1.1**
SLVN				*e*Sg	**Sg**	**07 59 45.6**	**-1.4**
TTVN	**Tram Tau**	**3.41**	**72**	***e*Pg**	**Pg**	**07 59 16.5**	**-0.4**
TTVN				*e*Sg	**Sg**	**08 00 02.5**	**+1.2**
MCVV	**Moc Chau**	**3.56**	**83**	***e*Pg**	**Pg**	**07 59 19.8**	**+0.1**
MCVV				*e*Sg	**Sg**	**08 00 06.6**	**+0.8**
PALK	**Pallekele**	**23.51**	**239**	LR	LR	08 12 01.1	
	comp=Z,111nm,18.8s,baz=287,slow=35						
SONM	**Songino Array**	**27.70**	**8**	P	**P**	**08 04 02.5**	**+1.1**
	0.4nm,0.5s,baz=187,slow=10,SNR=6.3						
KSRS	**Korea Array**	**28.97**	**48**	LR	LR	08 16 38.4	
	comp=Z,78nm,21.2s,baz=49,slow=38						
JNU	**Nakatsue**	**29.50**	**58**	LR	LR	08 17 11.2	
	comp=Z,111nm,18.4s,baz=118,slow=39						
MKAR	**Makanchi Array**	**30.35**	**334**	P	**P**	**08 04 25.1**	**+0.2**
	1.7nm,0.7s,baz=140,slow=9.0,SNR=16						
MKAR				LR	LR	08 17 28.6	
	comp=Z,31nm,19.2s,baz=158,slow=38						
KURBB	**Kurchatov Arra**	**34.91**	**335**	P	**P**	**08 05 04.8**	**+0.1**
	0.9nm,0.7s,baz=144,slow=9.3,SNR=8.0						
ZALV	**Zalesovo Beam**	**35.64**	**344**	P	**P**	**08 05 11.9**	**+0.9**
	0.5nm,0.4s,baz=140,slow=9.4,SNR=4.6						
MJAR	**Matsushiro Arr**	**36.27**	**56**	LR	LR	08 22 05.7	
	comp=Z,91nm,18.1s,baz=280,slow=40						
BVAR	**Borovoye Array**	**40.11**	**332**	P	**P**	**08 05 48.6**	**-0.3**
	0.9nm,0.5s,baz=129,slow=12,SNR=6.7						
GUMO	**Guam**	**42.52**	**92**	LR	LR	08 24 53.4	
	comp=Z,29nm,18.0s,baz=275,slow=38						
WRA	**Warramunga Arr**	**51.80**	**139**	P	**P**	**08 07 21.2**	**-0.2**
	1.3nm,0.8s,baz=327,slow=8.1,SNR=7.3						
PETK	**Petropavlovsk-**	**54.10**	**39**	LR	LR	08 30 19.0	
	comp=Z,39nm,20.1s,baz=71,slow=36						
ASAR	**Alice Springs**	**54.38**	**142**	P	**P**	**08 07 39.3**	**-1.1**
	0.8nm,0.9s,baz=342,slow=7.9,SNR=5.2						
FINES	**FINESS Array B**	**65.00**	**329**	P	**P**	**08 08 52.2**	**-0.9**
	1.4nm,0.7s,baz=89,slow=12,SNR=4.3						
KMBO	**Kilima Mbogo**	**65.81**	**259**	LR	LR	08 36 49.1	
	comp=Z,33nm,18.5s,baz=92,slow=35						
NB2	**NORSAR Subarra**	**72.19**	**329**	P	**P**	**08 09 38.6**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=78,slow=6.2						
NOA	**NORSAR Array B**	**72.19**	**329**	P	**P**	**08 09 36.7**	**-1.4**
	comp=Z,1.1nm,0.7s,baz=81,slow=6.1,SNR=4.5						
NOA				LR	LR	08 41 36.3	
	comp=Z,15nm,19.7s,baz=220,slow=36						

IDC 22 07:59:51.7±30.0, 21°.23S×179°.41W, h0km, mb4.3/4, mb1 4.5/4, mb1mx3.9/19, mbtmp4.3/4, Error ellipse: s-maj=564.8km s-min=134.7km az=89.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.28**	**245**	P	P	08 06 55.6	-1.4
	1.8nm,0.4s,baz=91,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**43.07**	**258**	P	P	08 07 53.0	-0.7
	2.6nm,0.5s,baz=100,slow=7.0,SNR=40						
WRA	**Warramunga Arr**	**43.20**	**263**	P	P	08 07 55.8	+1.1
	2.1nm,0.3s,baz=91,slow=8.4,SNR=292						
FITZ	**Fitzroy Crossi**	**51.62**	**263**	P	P	08 09 00.7	+0.3
	1.6nm,0.5s,baz=109,slow=7.8,SNR=14						

*ISCJB **22** 08:01:07.8±1.0, 39°.09N±0°.04×27°.50E±0°.06, h3km±7km, Error ellipse: s-maj=9.2km s-min=4.3km az=143.1*
*ISK **22** 08:01:07.9, 39°.08N×27°.55E, h10km, MD2.8*
*DDA **22** 08:01:08.6, 39°.11N×27°.61E, h7km, MD2.6*
*CSEM **22** 08:01:08.3±0.2, 39°.08N×27°.52E, h8km, MD2.6, Error ellipse: s-maj=5.6km s-min=2.9km az=47.0*
ISC 22 08:01:08.6±1.2, 39°.08N±0°.03×27°.55E±0°.05, h10km±10km, n32, σ0s40/44, Turkey

2009 MAY

22d 9h

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.29**	**134**	***i*P**	**Pg**	**08 01 14.3**	**-0.1**
AKHS				*i*S	**Sb**	**08 01 20.0**	**-0.8**
AKHS	**Akhisar**	**0.29**	**134**	***i*P**	**Pg**	**08 01 14.3**	**-0.1**
AKHS				*i*S	**Sb**	**08 01 20.0**	**-0.8**
BALY	**Balya**	**0.66**	**5**	***i*P**	**Pg**	**08 01 20.8**	**-0.6**
BALY	**Balya**	**0.66**	**5**	***i*P**	**Pg**	**08 01 20.8**	**-0.6**
DURS	**Dursunbey**	**0.89**	**54**	***i*P**	**Pg**	**08 01 25.4**	**-0.2**
DURS	**Dursunbey**	**0.89**	**54**	***i*P**	**Pg**	**08 01 25.4**	**-0.2**
DEMI	**Demirci**	**0.91**	**92**	***i*P**	**Pn**	**08 01 27.4**	**-0.1**
DEMI				*i*S	**Sn**	**08 01 40.6**	**-0.2**
DEMI	**Demirci**	**0.91**	**92**	***i*P**	**Pn**	**08 01 27.4**	**-0.1**
DEMI				*i*S	**Sn**	**08 01 40.6**	**-0.2**
GONE	**Gonen-Balikesi**	**0.97**	**6**	*e*PG	**Pg**	**08 01 27.0**	**-0.2**
GONE				*e*SG	**Sb**	**08 01 41.0**	**+0.6**
GONE	**Gonen-Balikesi**	**0.97**	**6**	*e*PG	**Pg**	**08 01 27.0**	**-0.2**
GONE				*e*Sg	**Sb**	**08 01 41.0**	**+0.6**
DST	**Dursunbey**	**0.98**	**57**	*e*PG	**Pg**	**08 01 27.3**	**-0.1**
DST				*e*SG	**Sb**	**08 01 41.2**	**+0.4**
DST	**Dursunbey**	**0.98**	**57**	*e*Pg	**Pg**	**08 01 27.3**	**-0.1**
DST				*e*Sg	**Sb**	**08 01 41.2**	**+0.4**
MANT	**Manisa**	**0.98**	**126**	*i*P	**Pg**	**08 01 27.6**	**+0.1**
MANT				*i*S	**Sg**	**08 01 40.7**	**+0.4**
MANT	**Manisa**	**0.98**	**126**	*i*P	**Pg**	**08 01 27.6**	**+0.1**
MANT				*i*S	**Sg**	**08 01 40.7**	**+0.4**
KULA	**Kula-Manisa**	**1.04**	**123**	*e*PG	**Pg**	**08 01 28.0**	**-0.5**
KULA				*e*SG	**Sb**	**08 01 43.4**	**+1.0**
KULA	**Kula-Manisa**	**1.04**	**123**	*e*Pg	**Pg**	**08 01 28.0**	**-0.5**
KULA				*e*Sg	**Sb**	**08 01 43.4**	**+1.0**
EZN	**Ezine**	**1.21**	**308**	*e*PN	**Pb**	**08 01 31.4**	**-0.1**
EZN	**Ezine**	**1.21**	**308**	*e*Pn	**Pb**	**08 01 31.4**	**-0.1**
KRBG	**Karabiga-Canak**	**1.32**	**352**	*e*PN	**Pn**	**08 01 33.1**	**-0.1**
KCTX	**Karacabey (Bur**	**1.34**	**28**	*e*PN	**Pn**	**08 01 33.1**	**-0.3**
KCTX	**Karacabey (Bur**	**1.34**	**28**	*e*Pn	**Pn**	**08 01 33.1**	**-0.3**
MRMT	**Marmara Adasi**	**1.52**	**1**	*e*PN	**Pn**	**08 01 35.9**	**0.0**
TVSB	**Tavsanli**	**1.53**	**75**	*e*PN	**Pn**	**08 01 35.9**	**-0.2**
TVSB	**Tavsanli**	**1.53**	**75**	*e*Pn	**Pn**	**08 01 35.9**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.56**	**328**	*e*PN	**Pn**	**08 01 36.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.56**	**328**	*e*Pn	**Pn**	**08 01 36.5**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.63**	**350**	*e*PN	**Pn**	**08 01 37.3**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.63**	**350**	*e*Pn	**Pn**	**08 01 37.3**	**-0.2**
MFT	**Murefte**	**1.72**	**353**	*e*PN	**Pn**	**08 01 38.8**	**+0.1**
MFT	**Murefte**	**1.72**	**353**	*e*Pn	**Pn**	**08 01 38.8**	**+0.1**
ERIK	**Erikli-Kesan**	**1.78**	**334**	*e*PN	**Pn**	**08 01 39.6**	**+0.2**
ERIK	**Erikli-Kesan**	**1.78**	**334**	*e*Pn	**Pn**	**08 01 39.6**	**+0.2**

*IDC **22** 08:20:41.8±5.7, 7°.15S×129°.14E, h77km±52km, mb3.7/4, mb1 3.7/7, mb1mx3.5/20, mbtmp3.6/7, ML3.7/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/38, Error ellipse: s-maj=96.9km s-min=21.0km az=64.0*
*AUST **22** 08:20:45.5±0.9, 7°.38S×128°.62E, h81km, Error ellipse: s-maj=1.5km s-min=1.1km az=296.0*
*ISCJB **22** 08:20:46.4±0.7, 7°.46S±0°.04×128°.75E±0°.08, h131km, mb3.7/4, Error ellipse: s-maj=11.3km s-min=6.0km az=179.1*
ISC 22 08:20:47.7±0.7, 7°.52S±0°.06×128°.72E±0°.09, h131km, n19, σ2s47/25, mb3.8/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**5.76**	**38**	P	**Pn**	**08 22 11.3**	**+0.2**
	baz=5.7,SNR=26						
FAKI				S	**Sn**	**08 23 13.5**	**-2.7**
	baz=5.7,SNR=7.6						
MTN	**Manton Dam**	**5.80**	**156**	P	**Pn**	**08 22 14.6**	**+3.1**
	baz=6.0,SNR=14						
MTN				S	**Sn**	**08 23 16.1**	**-0.9**
	baz=6.0,SNR=14						
KDU	**Kakadu**	**6.33**	**145**	P	**Pn**	**08 22 21.3**	**+2.8**
	baz=6.5,SNR=74						
KDU				S	**Sn**	**08 23 28.3**	**-1.3**
	baz=6.5,SNR=12						
KNRA	**Kununurra**	**8.11**	**180**	P	**Pn**	**08 22 44.8**	**+2.3**
	baz=8.3,SNR=12						
KNRA				S	**Sn**	**08 24 09.2**	**-3.5**
	baz=8.3,SNR=5.5						
FITZ	**Fitzroy Crossi**	**10.94**	**196**	P	**Pn**	**08 23 21.5**	**+0.9**
	0.4nm,0.3s,baz=52,slow=9.9,SNR=18						
FITZ				S	**Sn**	**08 25 18.0**	**-3.2**
	1.3nm,0.3s,baz=330,slow=21,SNR=6.2						
FITZ	**Fitzroy Crossi**	**10.94**	**196**	P	**Pn**	**08 23 21.6**	**+1.1**
	baz=11,SNR=10						
WRA	**Warramunga Arr**	**13.50**	**157**	P	**Pn**	**08 23 51.6**	**-2.4**
	0.4nm,0.3s,baz=339,slow=13,SNR=34						
WRA				S	Sn	08 26 15.1	-8.0
	1.3nm,0.3s,baz=334,slow=22,SNR=11						
COEN	**Coen**	**15.57**	**115**	P	**P**	**08 24 21.5**	**-0.1**
	baz=16,SNR=16						
QIS	**Mount Isa**	**16.70**	**142**	P	**P**	**08 24 35.7**	**+1.6**
	baz=17,SNR=5.8						
ASAR	**Alice Springs**	**16.81**	**163**	P	**Pn**	**08 24 36.8**	**+1.4**
	0.4nm,0.3s,baz=338,slow=9.7,SNR=25						
ASAR				S	**Sn**	**08 27 36.9**	**-5.9**
	0.4nm,0.3s,baz=347,slow=25,SNR=5.3						
ASAR				LR	LR	08 30 31.4	
	comp=Z,130nm,21.9s,baz=94,slow=35						
MTSU	**Mount Surprise**	**18.49**	**126**	P	**Pn**	**08 24 56.6**	**+1.1**
	baz=19,SNR=6.0						
MEEK	**Meekatharra**	**21.30**	**206**	P	**P**	**08 25 27.7**	**+3.6**
	baz=22,SNR=6.1						
MORW	**Morawa**	**24.54**	**208**	P	**P**	**08 25 58.7**	**+3.5**
	baz=25,SNR=4.0						
STKA	**Stephens Creek**	**27.04**	**155**	P	**P**	**08 26 18.6**	**+0.8**
	1.0nm,0.5s,baz=23,slow=14,SNR=3.0						
SONM	**Songino Array**	**58.54**	**343**	P	**P**	**08 30 28.8**	**-1.7**
	0.4nm,0.4s,baz=190,slow=6.9,SNR=3.0						
MKAR	**Makanchi Array**	**67.97**	**328**	P	**P**	**08 31 32.3**	**-0.2**
	0.8nm,0.4s,baz=115,slow=7.7,SNR=21						
ZALV	**Zalesovo Beam**	**71.49**	**334**	P	**P**	**08 31 52.8**	**-1.2**
	1.0nm,0.5s,baz=149,slow=5.4,SNR=5.6						
CPUP	**Villa Florida**	**145.84**	**170**	PKPbc	**PKPdf**	**08 40 12.9**	**+1.3**
	0.5nm,0.4s,baz=230,slow=19,SNR=4.3						
LPAZ	**La Paz**	**151.06**	**145**	PKPbc	**PKPbc**	**08 40 27.4**	**+0.4**
	0.6nm,0.4s,baz=79,slow=5.2,SNR=7.7						

*DDA **22** 08:22:21.7, 40°.00N×35°.25E, h7km, MD2.8*
*CSEM **22** 08:22:21.7, 40°.00N×35°.25E, h7km, MD2.8, After DDA*
ISC 22 08:22:17.3±2.2, 40°.13N±0°.04×35°.6E±0°.1, h3km±15km, n13, σ1s68/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOZ	**Yozgat**	**0.54**	**206**	*e*PG	**Pg**	**08 22 27.8**	**+0.1**
YOZ				*e*SG	**Sg**	**08 22 34.9**	**+0.1**
CORM	**Corum**	**0.77**	**274**	*e*PG	**Pb**	**08 22 32.8**	**-0.6**
CTKT	**Corum**	**0.81**	**308**	*i*P	**Pb**	**08 22 34.5**	**+0.3**
CTKT				*i*S	**Sg**	**08 22 38.7**	**-4.6**
CTKT	**Corum**	**0.81**	**308**	*i*P	**Pb**	**08 22 34.5**	**+0.3**
CTKT				*i*S	**Sg**	**08 22 38.7**	**-4.6**
BNN	**Bunyan**	**1.29**	**172**	*e*PN	Pg	08 22 37.8	-4.2
AVNT	**Avonos**	**1.48**	**204**	*i*P	**Pn**	**08 22 44.9**	**-0.1**
AVNT				*i*S	**Sb**	**08 23 04.1**	**-0.6**
AVNT	**Avonos**	**1.48**	**204**	*i*P	**Pn**	**08 22 44.9**	**-0.1**
AVNT				*i*S	**Sb**	**08 23 04.1**	**-0.6**
ELDT	**Eldivan**	**1.72**	**283**	*i*P	**Pb**	**08 22 49.8**	**+0.1**
ELDT				*i*S	**Sb**	**08 23 11.7**	**-0.1**
ELDT	**Eldivan**	**1.72**	**283**	*i*P	**Pb**	**08 22 49.8**	**+0.1**
ELDT				*i*S	**Sb**	**08 23 11.7**	**-0.1**
ILGA	**Ilgaz**	**1.72**	**303**	*e*P	**Pg**	**08 22 52.3**	**+2.0**
ILGA				*i*S	**Sg**	**08 23 13.6**	**+1.0**
ILGA	**Ilgaz**	**1.72**	**303**	*e*P	**Pg**	**08 22 52.3**	**+2.0**
ILGA				*i*S	**Sg**	**08 23 13.6**	**+1.0**
BBAL	**Bala**	**2.01**	**254**	*i*P	**Pb**	**08 22 55.2**	**+0.5**
BBAL				*i*S	**Sg**	**08 23 21.6**	**-0.4**
BBAL	**Bala**	**2.01**	**254**	*i*P	**Pb**	**08 22 55.2**	**+0.5**
BBAL				*i*S	**Sg**	**08 23 21.6**	**-0.4**

*ISCJB **22** 08:40:15.1±0.9, 35°.40N±0°.09×139°.2E±0°.2, h130km±6km, mb3.6/2, Error ellipse: s-maj=34.3km s-min=8.1km az=159.7*
*JMA **22** 08:40:16.9±0.1, 35°.43N×139°.33E, h113km, M2.8*
*IDC **22** 08:40:17.2±0.8, 35°.20N×138°.68E, h118km±11km, mb3.3/2, mb1 3.5/3, mb1mx3.0/27, mbtmp3.3/3, Error ellipse: s-maj=39.3km s-min=7.3km az=48.0*
ISC 22 08:40:15.9±1.3, 35°.43N±0°.07×139°.3E±0°.2, h121km±9km, n12, σ0s56/16, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOD2	**Odawara 2**	**0.24**	**227**	P	**Pn**	**08 40 32.9**	**0.0**
JOD2				S	**Sn**	**08 40 45.2**	**-0.4**
JYN	**Shimob**	**0.62**	**277**	P	**Pn**	**08 40 35.5**	**+0.6**
JRY	**Ryogami san**	**0.67**	**331**	P	**Pn**	**08 40 36.0**	**+0.8**
JIM2	**Oshima 3**	**0.72**	**172**	P	**Pn**	**08 40 35.4**	**-0.2**
JIZS	**Izushimoda**	**0.79**	**206**	P	**Pn**	**08 40 36.5**	**+0.4**
JAG	**Ashikaga**	**1.00**	**7**	P	**Pn**	**08 40 38.5**	**+0.4**
MJAR	**Matsushiro Arr**	**1.42**	**322**	P	**Pn**	**08 40 42.9**	**+0.3**
	4.7nm,0.3s,baz=162,slow=11,SNR=30						
MJAR				S	**Sn**	**08 41 02.5**	**-0.3**
	6.0nm,0.3s,baz=164,slow=20,SNR=13						
MAT	**Matsushiro**	**1.42**	**322**	P	**Pn**	**08 40 43.0**	**+0.4**
MAT				S	**Sn**	**08 41 02.5**	**-0.4**
MAT	**Matsushiro**	**1.42**	**322**	P	**Pn**	**08 40 43.3**	**+0.7**
JHJ	**Hachijo jima 2**	**2.34**	**170**	P	**Pn**	**08 40 54.6**	**+0.9**
	24nm,0.3s,baz=59,slow=22,SNR=12						
JHJ				S	**Sn**	**08 41 23.0**	**+0.4**
	13nm,0.3s,baz=66,slow=20,SNR=4.2						
WRA	**Warramunga Arr**	**55.27**	**186**	P	**P**	**08 49 36.3**	**-0.4**
	0.9nm,0.4s,baz=1.3,slow=7.7,SNR=37						
ASAR	**Alice Springs**	**58.99**	**186**	P	**P**	**08 50 02.3**	**-0.5**
	0.2nm,0.4s,baz=14,slow=9.0,SNR=4.2						

*IDC **22** 08:51:47.5±2.6, 8°.48S×110°.96E, h0km, mb3.8/6, mb1 3.9/7, mb1mx3.7/22, mbtmp3.8/7, ML3.7/1, Error ellipse: s-maj=136.9km s-min=17.2km az=53.0*
*AUST **22** 08:51:58.7, 8°.92S×110°.89E, h35km*
*ISCJB **22** 08:52:00.0±0.6, 8°.8S±0°.1×111°.15E±0°.05, h98km±11km, mb3.7/6, Error ellipse: s-maj=19.6km s-min=6.9km az=12.3*
*DJA **22** 08:52:04.2±0.6, 9°.S±12°×11°.1E±°, h59km±11km, M3.9/12, MLv3.9/12*
ISC 22 08:52:00.6±0.8, 8°.70S±0°.08×111°.04E±0°.04, h101km±7km, n36, σ1s94/37, mb3.8/6, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**0.51**	**15**	P	**Pn**	**08 52 16.5**	**-0.2**
PCJI				S	**Sn**	**08 52 28.6**	**0.0**
UGM	**Wanagama**	**0.93**	**326**	P	**Pn**	**08 52 20.8**	**+0.3**
UGM				S	**Sn**	**08 52 35.8**	**+0.4**
UGM	**Wanagama**	**0.93**	**326**	P	**Pn**	**08 52 20.8**	**+0.3**
	baz=1.1,SNR=59						
UGM				S	**Sn**	**08 52 35.4**	**0.0**
	baz=1.1,SNR=6.8						
PWJI	**Pagerwojo**	**1.01**	**48**	P	**Pn**	**08 52 21.1**	**-0.1**
PWJI				S	**Sn**	**08 52 37.1**	**+0.4**
YOGI	**Yogyakarta**	**1.15**	**320**	P	**Pn**	**08 52 24.3**	**+1.5**
SJI	**Sawahan**	**1.19**	**37**	P	**Pn**	**08 52 23.6**	**+0.2**
KRKI	**Karangkates**	**1.49**	**69**	P	**Pn**	**08 52 29.3**	**+2.5**
SMRI	**Semarang**	**1.74**	**340**	P	**Pn**	**08 52 30.8**	**+0.8**
SMRI	**Semarang**	**1.74**	**340**	P	**Pn**	**08 52 30.9**	**+0.9**
	baz=1.9,SNR=5.9						
SMRI				S	**Sn**	**08 52 54.9**	**+2.6**
	baz=1.9,SNR=5.5						
BJII	**Banjamegara**	**1.89**	**316**	P	**Pn**	**08 52 34.1**	**+2.2**
CLJI	**Cilicap**	**2.23**	**296**	P	**Pn**	**08 52 38.9**	**+2.7**
BLJI	**Banyuglugur**	**2.70**	**70**	P	Pn	08 52 46.5	+4.1
JAGI	**Jajag, Banyuwa**	**3.08**	**86**	P	**Pn**	**08 52 50.7**	**+3.2**
JAGI	**Jajag, Banyuwa**	**3.08**	**86**	P	**Pn**	**08 52 47.4**	**-0.1**
	baz=3.3,SNR=4.5						
JAGI				S	**Sn**	**08 53 21.0**	**-2.7**
	baz=3.3,SNR=8.9						
CISI	**Cisompet, Garu**	**3.39**	**289**	P	**Pn**	**08 52 53.2**	**+1.5**
CISI	**Cisompet, Garu**	**3.39**	**289**	P	**Pn**	**08 52 52.2**	**+0.5**
	baz=3.3,SNR=6.7						
CISI				S	**Sn**	**08 53 29.2**	**-2.0**
	baz=3.3,SNR=5.0						
LEM	**Lembang**	**3.87**	**298**	P	Pn	08 53 02.8	+4.6
IGBI	**Denpasar**	**4.06**	**92**	P	Pn	08 52 57.3	-3.3
XMIS	**Christmas Isla**	**5.61**	**251**	S	Sn	08 54 17.6	-7.1
	baz=5.4,SNR=5.0						
WSI	**Waingapu**	**9.19**	**97**	S	Sn	08 56 22.9	+31
	baz=9.3,SNR=4.2						
GIRL	**Giralia**	**14.20**	**168**	P	**Pn**	**08 55 16.4**	**-0.8**
	baz=14,SNR=4.7						
GSI	**Gununggsitoli**	**16.70**	**306**	S	S	08 59 11.7	+13
	baz=17,SNR=4.4						
FITZ	**Fitzroy Crossi**	**16.99**	**125**	P	**Pn**	**08 55 50.9**	**-1.2**
	0.2nm,0.3s,baz=295,slow=9.7,SNR=6.0						
FITZ				S	Sn	08 58 46.5	-15
	0.1nm,0.3s,baz=37,slow=20,SNR=4.7						
FITZ	**Fitzroy Crossi**	**16.99**	**125**	P	**P**	**08 55 53.4**	**+1.0**
	baz=17,SNR=4.3						
KNRA	**Kununurra**	**18.65**	**114**	P	**P**	**08 56 11.2**	**+0.5**
	baz=19,SNR=3.7						
MEEK	**Meekatharra**	**19.24**	**159**	P	**Pn**	**08 56 22.6**	**+3.6**
	baz=19,SNR=10						
MTN	**Manton Dam**	**20.16**	**104**	P	**P**	**08 56 27.2**	**+0.2**
	baz=20,SNR=4.0						
MTN

*ISCJB **22** 09:51:43.5±1.4, 37.7°73N±0.1°04×26.9°9E±0.1°1, h14km±8km, Error ellipse: s-maj=13.6km s-min=5.4km az=168.2*
*ISK **22** 09:51:44.1, 37.7°75N×27.1°03E, h15km, MD2.5*
*DDA **22** 09:51:44.3, 37.7°73N×26.9°93E, h5km, MD2.8*
*CSEM **22** 09:51:44.3±0.2, 37.7°74N×26.9°97E, h12km, MD2.5, Error ellipse: s-maj=6.3km s-min=2.3km az=77.0*

ISC 22 09:51:44.6±1.4, 37.74N±0.03×26.98E±0.07, h18km±6km, n12, σ0♦40/22, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcami?**	**0.20**	**102**	*i* P	**Pg**	**09 51 49.3**	**-0.2**
GCAM				*i* S	**Sg**	**09 51 53.1**	**+0.2**
GCAM	**G?zelcami?**	**0.20**	**102**	*i* P	**Pg**	**09 51 49.3**	**-0.2**
GCAM				*i* S	**Sg**	**09 51 53.1**	**+0.2**
BLCB	**Balcova**	**0.64**	**4**	*e*PG	**Pb**	**09 51 56.9**	**-0.4**
BLCB				*e*SG	**Sg**	**09 52 06.5**	**+0.6**
BLCB	**Balcova**	**0.64**	**4**	*e*Pg	**Pb**	**09 51 56.9**	**-0.4**
BLCB				*e*Sg	**Sg**	**09 52 06.5**	**+0.6**
IZM	**Izmir**	**0.69**	**18**	*e*PG	**Pb**	**09 51 57.7**	**-0.4**
IZM				*e*SG	**Sb**	**09 52 07.6**	**+0.2**
IZM	**Izmir**	**0.69**	**18**	*e*Pg	**Pb**	**09 51 57.7**	**-0.4**
IZM				*e*Sg	**Sb**	**09 52 07.6**	**+0.2**
AYDN	**Tasoluk**	**0.71**	**96**	*i* P	**Pb**	**09 51 58.5**	**0.0**
AYDN				*i* S	**Sb**	**09 52 08.2**	**+0.1**
AYDN	**Tasoluk**	**0.71**	**96**	*i* P	**Pb**	**09 51 58.5**	**0.0**
AYDN				*i* S	**Sb**	**09 52 08.2**	**+0.1**
BODT	**Bodrum**	**0.73**	**159**	*e*PG	**Pb**	**09 51 58.5**	**-0.3**
BODT				*e*SG	**Sb**	**09 52 08.9**	**+0.5**
BODT	**Bodrum**	**0.73**	**159**	*e*Pg	**Pb**	**09 51 58.5**	**-0.3**
BODT				*e*Sg	**Sb**	**09 52 08.9**	**+0.5**
MLSB	**Milas**	**0.77**	**125**	*e*PG	**Pb**	**09 51 59.0**	**-0.5**
MLSB	**Milas**	**0.77**	**125**	*e*Pg	**Pb**	**09 51 59.0**	**-0.5**

*IDC **22** 10:00:09.7±1.1, 2.2°19S×121.0°8E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.7/23, mbtmp3.9/6, ML3.5/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/38, Error ellipse: s-maj=40.5km s-min=18.3km az=70.0*
*ISCJB **22** 10:00:12.0±1.2, 2.1°6S±0.0°5×121.1°2E±0.0°6, h24km±9km, mb3.8/5, MS3.1/1, Error ellipse: s-maj=11.3km s-min=5.7km az=37.2*
*DJA **22** 10:00:13.4±0.5, 2.2°S±3.3°×121.1°E±°, h15km±4km, M4.5/9, mb4.8/1, mB5.2/1, MLv4.3/9, Mw(mB)4.6/1*

ISC 22 10:00:11.5±1.5, 2.18S±0.05×121.08E±0.05, h9km±10km, n20, σ0♦97/26, mb3.9/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKSI	**Soroako, Sulaw**	**0.43**	**144**	P	**Pg**	**10 00 19.3**	**-0.7**
SKSI				S	**Sb**	**10 00 27.9**	**-0.2**
TTSI	**Tana Toraja**	**1.52**	**236**	P	**Pn**	**10 00 39.1**	**+0.1**
TTSI				S	**Sg**	**10 01 02.2**	**+1.6**
LUWI	**Luwuk**	**2.04**	**56**	P	**Pn**	**10 00 45.9**	**-0.1**
LUWI				S	**Sb**	**10 01 15.3**	**+1.2**
KKSI	**Kolaka, Sulawe**	**2.06**	**164**	P	**Pg**	**10 00 51.1**	**0.5**
SPSI	**Sidrap Palu**	**2.20**	**216**	P	**Pn**	**10 00 48.0**	**0.3**
SPSI				S	**Sn**	**10 01 17.1**	**+1.4**
MRSI	**Marisa**	**2.77**	**18**	P	**Pn**	**10 00 56.8**	**+0.6**
KAPI	**Kappang**	**3.11**	**205**	P	**Pn**	**10 01 00.8**	**0.0**
KAPI	**Kappang**	**3.11**	**205**	Pn	**Pn**	**10 01 00.1**	**-0.7**
KAPI	5.2nm,0.3s,baz=34,slow=7.4,SNR=20			Pn	**Sn**	**10 01 36.8**	**-1.4**
	10.0nm,0.3s,baz=41,slow=20,SNR=8.2						
BKSI	**Bulukumba**	**3.27**	**197**	P	**Pn**	**10 01 04.7**	**+1.8**
BKSI				S	**Sn**	**10 01 43.5**	**+1.6**
BBSI	**Bau Bau**	**3.61**	**156**	P	**Pg**	**10 01 21.3**	**+0.5**
BSSI	**Bau Bau, Buton**	**3.98**	**188**	P	**Pn**	**10 01 13.2**	**+0.4**
BSSI				S	**Sn**	**10 02 00.4**	**+0.7**
KBKI	**Kotabaru**	**5.03**	**257**	P	**Pb**	**10 01 38.9**	**-0.9**
LBMI	**Labuha**	**6.60**	**77**	P	**Pn**	**10 01 48.7**	**-0.1**
LBMI				S	**Sn**	**10 03 05.4**	**+1.1**
FITZ	**Fitzroy Crossi**	**16.45**	**165**	LR	LR	10 12 03.1	
	comp=Z,97nm,18.3s,baz=312,slow=43						
WRA	**Warramunga Arr**	**21.90**	**145**	P	**P**	**10 05 04.0**	**-1.2**
	3.0nm,0.8s,baz=320,slow=11,SNR=17						
ASAR	**Alice Springs**	**24.71**	**151**	P	**P**	**10 05 32.8**	**-0.5**
	2.7nm,0.9s,baz=331,slow=7.3,SNR=14						
STKA	**Stephens Creek**	**35.31**	**149**	P	**P**	**10 07 07.0**	**-0.1**
	3.1nm,0.8s,baz=337,slow=10,SNR=4.5						
KSRS	**Korea Array**	**39.94**	**8**	LR	LR	10 24 24.1	
	comp=Z,25nm,18.3s,baz=195,slow=36						
MKAR	**Makanchi Array**	**59.49**	**330**	P	**P**	**10 10 15.4**	**+0.4**
	0.4nm,0.6s,baz=131,slow=7.0,SNR=5.5						
ZALV	**Zalesovo Beam**	**63.52**	**337**	P	**P**	**10 10 41.0**	**-1.1**
	0.3nm,0.3s,baz=136,slow=6.8,SNR=2.5						

*AUST **22** 10:14:27.7, 3.9°99S×128.5°1E, h100km*
*ISCJB **22** 10:14:28.7±0.3, 3.8°80S±0.0°03×128.6°60E±0.0°4, h141km±4km, mb3.9/16, Error ellipse: s-maj=6.1km s-min=4.5km az=153.8*
*IDC **22** 10:14:31.8±2.5, 3.8°84S×128.5°2E, h153km±24km, mb3.8/14, mb1 4.0/16, mb1mx3.9/27, mbtmp3.9/16, MS2.8/1, Ms1 2.8/1, ms1mx2.1/32, Error ellipse: s-maj=27.2km s-min=10.3km az=71.0*
*DJA **22** 10:14:32.0±0.6, 4°S±5°×12°9E±°, h104km±5km, M4.5/9, mb4.4/2, mB4.7/1, MLv4.6/9, Mw(mB)3.9/1*
*NEIC **22** 10:14:32.5±1.8, 3.8°87S×128.5°0E, h162km±18km, mb4.6/8, Error ellipse: s-maj=12.7km s-min=6.6km az=56.0*

ISC 22 10:14:30.0±0.6, 3.83S±0.04×128.60E±0.04, h140km±5km, n69, σ1♦18/87, mb4.0/16, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**0.43**	**289**	P	**Pn**	**10 14 50.2**	**+0.4**
AAI				S	**Sn**	**10 15 02.6**	**-2.3**
AAI	**Ambon**	**0.43**	**289**	S	**Pn**	**10 14 50.2**	**+0.4**
	baz=0.4,SNR=222						
NLAI	**Namlea**	**1.61**	**291**	P	**Pn**	**10 14 59.4**	**-0.6**
NLAI				S	**Sn**	**10 15 21.8**	**-1.1**
LBMI	**Labuha**	**3.35**	**341**	P	**Pn**	**10 15 21.4**	**-0.1**
LBMI				S	**Sn**	**10 15 59.4**	**-2.1**
FAKI	**Fak Fak**	**3.75**	**76**	P	**Pn**	**10 15 28.3**	**+1.5**
FAKI				S	**Sn**	**10 16 09.5**	**-1.3**
FAKI	**Fak Fak**	**3.75**	**76**	P	**Pn**	**10 15 28.3**	**+1.5**
	baz=3.9,SNR=36						
FAKI				S	**Sn**	**10 16 08.9**	**-1.9**
	baz=3.9,SNR=12						
SWI	**Sorong**	**3.97**	**42**	P	**Pn**	**10 15 29.9**	**+0.3**
SWI				S	**Sn**	**10 16 12.6**	**-3.2**
SWI	**Sorong**	**3.97**	**42**	P	**Pn**	**10 15 30.1**	**+0.5**
	baz=4.2,SNR=42						
SWI				S	**Sn**	**10 16 14.9**	**-0.9**
	baz=4.2,SNR=18						
TNTI	**Ternate**	**4.73**	**345**	P	**Pn**	**10 15 39.5**	**-0.2**
RKPI	**Ransiki, Papua**	**6.03**	**68**	P	Pn	10 16 02.8	+5.8
RKPI				S	**Sn**	**10 17 03.3**	**-1.7**
LUWI	**Luwuk**	**6.45**	**295**	P	**Pn**	**10 16 02.1**	**-0.5**
	76nm,1.1s,0.3nm						
SKSI	**Soroako, Sulaw**	**7.37**	**280**	P	**Pn**	**10 16 16.3**	**+1.3**
MTN	**Manton Dam**	**9.30**	**165**	P	**Pn**	**10 16 41.8**	**+1.0**
	baz=9.2,SNR=6.5						
KDU	**Kakadu**	**9.60**	**157**	P	**Pn**	**10 16 45.3**	**+0.4**
	baz=9.5,SNR=34						
KDU				S	**Sn**	**10 18 29.5**	**-1.6**
	baz=9.5,SNR=8.3						
KNRA	**Kununurra**	**11.78**	**179**	P	**Pn**	**10 17 13.5**	**-0.2**
	baz=12,SNR=16						
FITZ	**Fitzroy Crossi**	**14.48**	**191**	*e*Pn	**Pn**	**10 17 48.6**	**+0.2**
	35nm,0.6s						
FITZ				*e*S	**S**	**10 20 37.1**	**-1.3**
FITZ	**Fitzroy Crossi**	**14.48**	**191**	P	**Pn**	**10 17 49.0**	**+0.6**
	4.5nm,0.3s,baz=21,slow=9.4,SNR=154						
FITZ	**Fitzroy Crossi**	**14.48**	**191**	P	**Pn**	**10 17 49.6**	**+1.2**
	baz=14,SNR=103						
WRAB	**Tennant Creek**	**16.96**	**161**	*e*P	**Pn**	**10 18 19.1**	**+0.1**
	32nm,0.6s						
WRAB				*e*S	**S**	**10 21 28.4**	**0.0**
WRA	**Warramunga Arr**	**16.97**	**161**	P	**Pn**	**10 18 19.0**	**-0.1**
WRA				S	S	10 21 21.1	-7.4
WRA	**Warramunga Arr**	**16.97**	**161**	P	**Pn**	**10 18 19.0**	**-0.1**
	6.8nm,0.3s,baz=343,slow=13,SNR=203						
WRA				S	S	10 21 21.1	-7.4
	0.8nm,0.3s,baz=335,slow=21,SNR=7.0						
COEN	**Coen**	**17.56**	**126**	*e*P	**Pn**	**10 18 27.3**	**+1.1**
	58nm,0.8s						
COEN	**Coen**	**17.56**	**126**	P	**Pn**	**10 18 27.2**	**+1.0**
	baz=18,SNR=20						
COEN				S	S	10 21 30.6	-10
	baz=18,SNR=5.5						
SMRI	**Semarang**	**18.36**	**259**	S	Sn	10 22 12.2	+10
	baz=18,SNR=9.1						
KSM	**Kuching**	**19.02**	**286**	*e*P	**P**	**10 18 41.8**	**+0.6**
	16nm,0.8s						
MBWA	**Marble Bar**	**19.27**	**206**	*e*P	**P**	**10 18 43.4**	**-0.4**
	22nm,0.4s						
QIS	**Mount Isa**	**19.79**	**148**	P	**P**	**10 18 50.5**	**+1.1**
	baz=20,SNR=25						
QIS				S	**S**	**10 22 23.8**	**-1.0**
	baz=20,SNR=6.4						
AS31	**Alice Springs**	**20.38**	**166**	*e*P	**P**	**10 18 56.7**	**+0.9**
ASAR	**Alice Springs**	**20.38**	**166**	P	**P**	**10 18 56.8**	**+1.0**
ASAR				S	**S**	**10 22 32.7**	**-3.9**
ASAR				PcP	**PcP**	**10 23 03.2**	**+0.3**
ASAR				ScP	**ScP**	**10 26 25.3**	**-1.3**
ASAR	**Alice Springs**	**20.38**	**166**	P	**P**	**10 18 56.8**	**+1.0**
	80nm,0.9s,baz=346,slow=11,SNR=336						
ASAR				S	**S**	**10 22 32.7**	**-3.9**
	4.3nm,0.8s,baz=349,slow=23,SNR=12						
ASAR				PcP	**PcP**	**10 23 03.2**	**+0.3**
	1.4nm,0.6s,baz=3.8,slow=1.4,SNR=4.9						
ASAR				ScP	**ScP**	**10 26 25.3**	**-1.3**
	0.6nm,0.6s,baz=355,slow=1.7,SNR=4.4						
MTSU	**Mount Surprise**	**20.95**	**134**	P	**P**	**10 19 03.1**	**+1.2**
	baz=21,SNR=11						
CTA	**Charters Tower**	**23.61**	**135**	P	**P**	**10 19 30.5**	**+2.2**
CTA	**Charters Tower**	**23.61**	**135**	P	**P**	**10 19 30.5**	**+2.2**
	3.1nm,0.6s,baz=326,slow=12,SNR=9.0						
MEEK	**Meekatharra**	**24.61**	**202**	P	**P**	**10 19 37.1**	**-0.3**
	baz=24,SNR=4.6						
KMBL	**Kambalda**	**28.12**	**192**	P	**P**	**10 20 08.5**	**-0.2**
	baz=28,SNR=7.9						
BBOO	**Buckleboo**	**29.67**	**167**	P	**P**	**10 20 22.8**	**+0.3**
	baz=30,SNR=17						
STKA	**Stephens Creek**	**30.46**	**158**	*e*P	**P**	**10 20 30.1**	**+0.6**
	0.7nm,0.7s						
STKA	**Stephens Creek**	**30.46**	**158**	P	**P**	**10 20 30.1**	**+0.6**
	1.6nm,0.8s,baz=324,slow=8.6,SNR=15						
STKA	**Stephens Creek**	**30.46**	**158**	P	**P**	**10 20 30.4**	**+0.9**
	baz=30,SNR=13						
CMSA	**Cobar Meteorol**	**31.91**	**152**	P	**P**	**10 20 43.7**	**+1.4**
	baz=32,SNR=14						
ARPS	**Mount Arapiles**	**34.97**	**161**	P	**P**	**10 21 10.3**	**+1.6**
	baz=35,SNR=7.9						
CMAR	**Chiang Mai Arr**	**36.66**	**308**	P	**P**	**10 21 24.2**	**+0.8**
CMAR	**Chiang Mai Arr**	**36.66**	**308**	P	**P**	**10 21 24.2**	**+0.8**
	2.9nm,0.5s,baz=133,slow=7.0,SNR=14						
CHTO	**Chiang Mai**	**36.86**	**309**	*e*P	**P**	**10 21 25.9**	**+0.9**
	3.8nm,0.9s						
KSAR	**Wonju Array Be**	**41.06**	**359**	P	**P**	**10 22 00.9**	**+1.2**
KSRS	**Korea Array**	**41.07**	**359**	P	**P**	**10 22 00.9**	**+1.1**
	2.5nm,0.7s,baz=174,slow=9.1,SNR=16						
KSRS				LR	LR	10 40 12.3	
	comp=Z,11nm,18.9s,baz=160,slow=38						
MJAR	**Matsushiro Arr**	**41.15**	**12**	P	**P**	**10 21 60.0**	**-0.5**
MJAR	**Matsushiro Arr**	**41.15**	**12**	P	**P**	**10 21 60.0**	**-0.5**
	0.9nm,0.6s,baz=199,slow=9.5,SNR=3.6						
USRK	**Ussuriysk Arra**	**47.91**	**3**	P	**P**	**10 22 54.8**	**+0.9**
	1.7nm,0.5s,baz=177,slow=7.1,SNR=4.6						
SONM	**Songino Array**	**55.01**	**342**	P	**P**	**10 23 47.5**	**+0.5**
SONM	**Songino Array**	**55.01**	**342**	P	**P**	**10 23 47.5**	**+0.5**
	1.7nm,1.0s,baz=154,slow=6.0,SNR=6.8						
MK31	**Makanchi Array**	**64.82**	**327**	*e*P	**P**	**10 24 53.7**	**-0.2**
MKAR	**Makanchi Array**	**64.82**	**327**	P	**P**	**10 24 53.7**	**-0.1**
MKAR	**Makanchi Array**	**64.82**	**327**	P	**P**	**10 24 53.7**	**-0.1**
	2.4nm,0.6s,baz=119,slow=8.1,SNR=17						
KURBB	**Kurchatov Arra**	**69.09**	**328**	P	**P**	**10 25 20.6**	**0.0**
	2.2nm,0.6s,baz=130,slow=5.5,SNR=22						
KURBB				pP	**pP**	**10 25 54.8**	**-0.1**
	0.4nm,0.3s,baz=127,slow=5.1,SNR=3.1						
KURK	**Kurchatov**	**69.10**	**329**	*e*P	**P**	**10 25 20.7**	**0.0**
	6.8nm,1.0s						
KURK				pP	**pP**	**10 25 54.8**	**-0.1**
BVAR	**Borovoye Array**	**74.65**	**328**	P	**P**	**10 25 53.9**	**0.0**
BVAR	**Borovoye Array**	**74.65**	**328**	P	**P**	**10 25 53.9**	**0.0**
	0.8nm,0.5s,baz=151,slow=3.4,SNR=5.9						
VNDA	**Vanda**	**75.75**	**173**	P	**P**	**10 25 59.0**	**-0.7**
VNDA	**Vanda**	**75.75**	**173**	P	**P**	**10 25 59.0**	**-0.7**
	1.0nm,0.8s,baz=300,slow=4.3,SNR=4.6						
ABKAR	**Akbulak array**	**79.17**	**322**	*e*P	**P**	**10 26 18.9**	**-0.4**
	0.7nm,0.5s						
AKTO	**Aktyubinsk**	**80.72**	**322**	P	**P**	**10 26 27.4**	**-0.2**
AKTO	**Aktyubinsk**	**80.72**	**322**	P	**P**	**10 26 27.4**	**-0.2**
	1.3nm,0.5s,baz=109,slow=7.0,SNR=6.1						
ARCES	**ARCESS Array B**	**98.14**	**340**	P	**P**	**10 27 49.4**	**-1.1**
ARCES	**ARCESS Array B**	**98.14**	**340**	P	**P**	**10 27 49.4**	**-1.1**
	0.6nm,0.8s,baz=95,slow=6.7,SNR=3.2						
TORD	**Torodi Ar. Bea**	**126.77**	**283**	PKP	**PKPdf**	**10 33 18.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**126.77**	**283**	PKP	**PKPdf**	**10 33 18.3**	**+0.3**
	0.6nm,1.0s,baz=29,slow=1.8,SNR=3.1						
CPUP	**Villa Florida**	**149.48**	**169**	PKPbc	**PKPbc**	**10 34 03.7**	**+0.3**
CPUP	**Villa Florida**	**149.48**	**169**	PKPbc	**PKPbc**	**10 34 03.7**	**+0.3**
	0.6nm,0.4s,baz=108,slow=3.2,SNR=2.6						

*PRE **22** 10:16:32.8±3.5, 26.4°42S×27.3°37E, h2km, ML3.4*
*ISCJB **22** 10:16:33.3±0.6, 26.4°41S±0.0°03×27.3°38E±0.0°03, h17km±7km, mb3.9/1, MS3.7/2, Error ellipse: s-maj=5.1km s-min=4.6km az=144.1*
*IDC **22** 10:16:35.8±3.3, 26.3°32S×26.8°88E, h0km, mb3.9/1, mb1 3.7/2, mb1mx3.4/24, mbtmp3.7/2, ML3.5/1, MS3.7/2, Ms1 3.6/2, ms1mx2.8/33, Error ellipse: s-maj=92.8km s-min=16.4km az=109.0*

ISC 22 10:16:32.8±1.1, 26.35S±0.03×27.32E±0.03, h9km±8km, n24, σ2♦06/39, 2C-3D, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLOF	**Kloof**	**0.26**	**89**	*e*P	**Pg**	**10 16 38.2**	**0.0**
KLOF				*e*S	**Sg**	**10 16 40.8**	**-0.9**
KLOF				AML	AML	10 16 42.1	
	comp=Z,2μm,0.4s						
PRYS	**Parys**	**0.57**	**176**	*e*P	**Pg**	**10 16 43.5**	**-0.5**
PRYS				*e*S	**Sg**	**10 16 50.5**	**-0.9**
PRYS				AML	AML	10 16 54.9	
	comp=Z,1μm,0.5s						
KSR	**Koster**	**0.63**	**323**	↑*i*P	**Pn**	**10 16 47.5**	**-0.6**
KSR				*e*S	**Sb**	**10 16 55.6**	**+0.5**
KSR				AML	AML	10 16 57.5	
	comp=Z,368nm,0.5s						
ERPM	**east rand prop**	**0.83**	**90**	↑*i*P	**Pg**	**10 16 48.4**	**-0.3**
ERPM				*e*S	**Sg**	**10 16 56.9**	**-2.7**
ERPM				AML	AML	10 16 58.1	
	comp=Z,135nm,0.4s						
SLR	**Silverton**	**1.06**	**55**	↓*i*P	**Pg**	**10 16 53.3**	**+0.1**
SLR				*e*S	**Sg**	**10 17 07.4**	**+0.3**
SLR				AML	AML	10 17 12.0	
	comp=Z,411nm,0.4s						
SWZ	**Schweizer**	**1.96**	**245**	*e*P	**Pb**	**10 17 08.2**	**-0.7**
SWZ				*e*S	**Sb**	**10 17 34.1**	**+0.7**
SWZ				AML	AML	10 17 37.2	
	comp=Z,400nm,0.5s						
LBTB	**Lobatse**	**2.05**	**310**	↓*i*P	**Pg**	**10 17 11.4**	**-0.7**
LBTB				*e*S	**Sg**	**10 17 38.5**	**-0.2**
LBTB				AML	AML	10 17 41.0	
	comp=Z,524nm,0.3s						
BOSA	**Boshof**	**2.90**	**219**	↓*i*P	**Pn**	**10 17 20.4**	**+1.0**
BOSA				*e*S	**Sn**	**10 17 56.2**	**+2.1**
BOSA				AML	AML	10 18 01.9	
	comp=Z,104nm,0.4s						
BOSA	**Boshof**	**2.90**	**219**	Pn	**Pn**	**10 17 20.4**	**+1.0**
	comp=Z,4.9nm,0.3s,baz=40,slow=15,SNR=92						
BOSA				Pg	**Pb**	**10 17 25.4**	**+0.5**
	comp=Z,4.7nm,0.3s,baz=41,slow=18,SNR=21						
BOSA				Sn	**Sn**	**10 17 55.7**	**+1.2**
	comp=Z,5.2nm,0.3s,baz=332,slow=13,SNR=4.6						
BOSA				Lg	Lg	10 18 01.5	
	comp=Z,37nm,0.3s,baz=90,slow=18,SNR=21						
POGA	**Pongola**	**3.96**	**106**	*e*P	**Pn**	**10 17 34.6**	**+0.8**
POGA				*e*S	**Sn**	**10 18 20.0**	**-0.6**
POGA				AML	AML	10 18 38.2	
	comp=Z,55nm,0.4s						
HVD	**Gariep Dam**	**4.53**	**200**	*e*P	**Pn**	**10 17 42.8**	**+1.0**
HVD				*e*S	**Sn**	**10 18 31.4**	**-3.3**
HVD				AML	AML	10 18 58.1	
	comp=Z,33nm,0.5s						
KSD	**Kokstad**	**4.56**	**157**	*e*P	**Pn**	**10 17 44.3**	**+2.1**
KSD				*e*S	**Sn**	**10 18 36.6**	**+1.1**
KSD				AML	AML	10 18 54.5	
	comp=Z,72nm,0.4s						
MSNA	**Messina**	**4.69**	**32**	*e*S	**Sn**	**10 18 39.1**	**+0.6**
MSNA				AML	AML	10 19 00.3	
	comp=Z,24nm,0.4s						
UPI	**Upington**	**5.75**	**248**	*e*P	**Pn**	**10 18 00.0**	**+1.5**
UPI				*e*S	**Sn**	**10 19 02.9**	**-1.8**
UPI				AML	AML	10 19 35.2	
	comp=Z,26nm,0.5s						
SOE	**Somerset East**	**6.52**	**193**	*e*S	**Sn**	**10 19 21.6**	**-2.0**
SOE				AML	AML	10 19 54.5	
	comp=Z,17nm,0.7s						
GRM	**Grahamstown**	**6.97**	**186**	*e*S	**Sn**	**10 19 29.5**	**-5.2**
GRM				AML	AML	10 20 18.6	
	comp=Z,14nm,0.6s						
SUR	**Sutherland**	**8.26**	**222**	*e*P	**Pn**	**10 18 35.0**	**+1.9**
SUR				*e*S	**Sn**	**10 20 05.3**	**-1.4**
SUR				AML	AML	10 20 59.5	
	comp=Z,10nm,0.6s						
CVNA	**Calvinia**	**8.36**	**231**	*e*P	**Pn**	**10 18 35.8**	**+1.4**
CVNA				*e*S	**Sn**	**10 20 03.8**	**-5.3**
CVNA				AML	AML	10 20 58.0	
	comp=Z,26nm,0.6s						
KOMG	**Komaggas**	**9.34**	**246**	*e*P	**Pn**	**10 18 48.9**	**+1.2**
KOMG				*e*S	**Sn**	**10 20 27.4**	**-5.5**
KOMG				AML	AML	10 21 37.3	
	comp=Z,13nm,0.5s						
TSUM	**Tsumeb**	**11.46**	**306**	*e*P	**Pn**	**10 19 18.6**	**+1.8**
TORD	**Torodi Ar. Bea**	**46.51**	**324**	P	**P**	**10 25 02.7**	**+2.0**
	comp=Z,0.8nm,0.5s,baz=134,slow=6.4,SNR=22						
MAW	**Mawson**	**46.56**	**162**	LR	LR	10 41 32.2	
	comp=Z,128nm,21.3s,baz=152,slow=32						
SNAA	**Sanae**	**48.37**	**192**	LR	LR	10 41 57.6	
	comp=Z,56nm,20.7s,baz=20,slow=32						
NVAR	**Mina Array Bea**	**148.75**	**301**	PKPbc	**PKPab**	**10 36 24.4**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=80,slow=3.1,SNR=3.0						

IDC 22 10:26:18.6±0.7, 45.98S×35.06E, h0km, mb4.0/8, mb1 4.2/10, mb1mx4.0/22, mbtmp4.1/10, ML4.1/2, MS3.9/10, Ms1 3.9/10, ms1mx3.7/24, Error ellipse: s-maj=30.6km s-min=16.6km az=61.0, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**17.47**	**316**	P	Pn	10 30 21.9	-1.9
	0.6nm,0.3s,baz=145,slow=16,SNR=6.5						
SUR				LR	LR	10 35 52.5	
	comp=Z,632nm,18.9s,baz=152,slow=33						
BOSA	**Boshof**	**18.98**	**333**	P	P	10 30 40.2	-1.4
	0.5nm,0.3s,baz=168,slow=12,SNR=8.1						
BOSA				LR	LR	10 36 38.4	
	comp=Z,550nm,19.4s,baz=162,slow=33						
MAW	**Mawson**	**26.05**	**156**	P	P	10 31 52.6	-0.5
	3.9nm,0.8s,baz=0.0,slow=4.0,SNR=3.5						
SNAA	**Sanae**	**31.35**	**202**	P	P	10 32 39.3	-1.1
	0.9nm,0.9s,baz=0.0,slow=7.1,SNR=3.6						
QSPA	**South Pole Qui**	**44.24**	**180**	P	P	10 34 29.1	-0.3
	1.3nm,0.7s,baz=77,slow=4.9,SNR=9.8						
KMBO	**Kilima Mbogo**	**44.71**	**3**	LR	LR	10 51 23.2	
	comp=Z,94nm,18.6s,baz=112,slow=34						
VNDA	**Vanda**	**52.50**	**167**	P	P	10 35 33.4	+0.7
	1.9nm,0.8s,baz=240,slow=7.6,SNR=13						
TORD	**Torodi Ar. Bea**	**66.09**	**324**	P	P	10 37 08.4	+1.0
	3.6nm,0.5s,baz=160,slow=6.8,SNR=26						
PLCA	**Paso Flores**	**71.14**	**231**	LR	LR	11 01 35.6	
	comp=Z,60nm,20.8s,baz=180,slow=30						
CPUP	**Villa Florida**	**73.14**	**250**	P	P	10 37 51.5	+0.5
	0.5nm,0.4s,baz=90,slow=15,SNR=3.2						
CPUP				LR	LR	11 02 46.3	
	comp=Z,67nm,19.1s,baz=10,slow=30						
BDFB	**Brasilia**	**74.15**	**264**	LR	LR	11 04 43.3	
	comp=Z,63nm,19.2s,baz=282,slow=31						
ASAR	**Alice Springs**	**79.18**	**113**	P	P	10 38 25.4	-0.1
	0.7nm,0.6s,baz=225,slow=5.5,SNR=12						
WRA	**Warramunga Arr**	**82.11**	**110**	P	P	10 38 41.1	-0.1
	1.2nm,0.9s,baz=218,slow=3.9,SNR=6.9						
KEST	**Kesra**	**84.58**	**339**	LR	LR	11 18 21.2	
	comp=Z,86nm,18.5s,baz=242,slow=37						
CMAR	**Chiang Mai Arr**	**86.23**	**59**	LR	LR	11 11 16.6	
	comp=Z,38nm,18.1s,baz=184,slow=31						
LPAZ	**La Paz**	**87.31**	**249**	LR	LR	11 11 57.1	
	comp=Z,62nm,19.1s,baz=319,slow=31						
GERES	**GERESS Array B**	**96.26**	**346**	LR	LR	11 26 21.7	
	comp=Z,69nm,18.6s,baz=342,slow=37						
TXAR	**Lajitas Array**	**143.80**	**257**	PKP	PKPbc	10 45 54.4	+1.1
	0.7nm,0.7s,baz=140,slow=5.4,SNR=10						
PDAR	**Pinedale Array**	**154.63**	**276**	PKPbc	PKPbc	10 46 23.

ICHK	**Chekchek**	**5.51**	**347**	*e*Pn	**Pn**	**10 33 43.3**	**+1.6**
ICHK				*e*		10 33 49.1	
	comp=Z,392nm,0.3s						
ICHK	**Chekchek**	**5.51**	**347**	*e*Pn	**Pn**	**10 33 43.3**	**+1.6**
IGAR	**Gharneh**	**6.46**	**329**	*e*Pn	**Pn**	**10 33 56.3**	**+1.6**
IGAR				*e*		10 34 04.9	
	comp=Z,421nm,0.1s						
IZEF	**Zefreh**	**6.76**	**333**	*e*Pn	**Pn**	**10 33 59.8**	**+0.9**
IZEF				*e*		10 34 09.9	
	comp=Z,173nm,0.1s						
IZEF	**Zefreh**	**6.76**	**333**	*e*Pn	**Pn**	**10 33 59.8**	**+0.9**
QRN	**Al-Qurain**	**7.32**	**287**	*e*P	**Pn**	**10 34 06.9**	**+0.5**
QRN				AML	AML	10 35 26.9	
	comp=Z,18nm,0.4s						
RDF	**Al-Radifah**	**7.67**	**287**	*e*P	**Pn**	**10 34 12.3**	**+1.1**
RDF				AML	AML	10 35 35.3	
	comp=Z,15nm,0.4s						
RDF	**Al-Radifah**	**7.67**	**287**	*e*P	**Pn**	**10 34 12.3**	**+1.1**
UMR	**Umm Al-Rimmam**	**7.71**	**292**	*e*P	**Pn**	**10 34 11.7**	**+0.1**
UMR	**Umm Al-Rimmam**	**7.71**	**292**	*e*P	**Pn**	**10 34 11.7**	**+0.1**
NAY	**Al-Naaiem**	**8.02**	**289**	*e*P	**Pn**	**10 34 16.4**	**+0.5**
NAY	**Al-Naaiem**	**8.02**	**289**	*e*P	**Pn**	**10 34 16.4**	**+0.5**
MIB	**Mutribah**	**8.10**	**293**	*e*P	**Pn**	**10 34 17.5**	**+0.5**
MIB				AML	AML	10 35 47.8	
	comp=Z,13nm,0.4s						
MIB	**Mutribah**	**8.10**	**293**	*e*P	**Pn**	**10 34 17.5**	**+0.5**
GNI	**Garni**	**16.17**	**328**	Pn	P	10 36 18.8	+8.8
	comp=Z,0.8nm,0.3s,baz=12,slow=20,SNR=7.0						
ASF	**Jabal al Asfar**	**17.36**	**292**	P	**P**	**10 36 23.1**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=320,slow=7.2,SNR=4.0						
ASF				S	**Sn**	**10 39 28.6**	**-6.4**
	comp=Z,0.2nm,0.3s,baz=188,slow=15,SNR=2.7						
ASF				LR	LR	10 42 55.0	
	comp=Z,18nm,20.3s,baz=339,slow=37						
EIL	**Elat**	**18.67**	**283**	P	**Pn**	**10 36 38.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=143,slow=20,SNR=2.9						
EIL				S	**S**	**10 40 11.6**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=86,slow=15,SNR=2.0						
EIL				LR	LR	10 43 58.7	
	comp=Z,22nm,20.6s,baz=96,slow=38						
MMAI	**Mount Meron Ar**	**18.78**	**294**	P	**Pn**	**10 36 39.6**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=110,slow=13,SNR=2.9						
KBZ	**Khabaz**	**19.85**	**331**	P	**Pn**	**10 36 51.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=154,slow=9.9,SNR=7.2						
BRTR	**Keskin Array B**	**22.53**	**310**	P	**P**	**10 37 19.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=137,slow=12,SNR=3.5						
AKTO	**Aktyubinsk**	**23.58**	**3**	P	**P**	**10 37 29.8**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=189,slow=15,SNR=4.8						
BVAR	**Borovoye Array**	**28.27**	**19**	P	**P**	**10 38 12.3**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=204,slow=9.8,SNR=5.6						
MKAR	**Makanchi Array**	**28.78**	**39**	P	**P**	**10 38 17.9**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=177,slow=5.3,SNR=3.1						
KURBB	**Kurchatov Arra**	**29.33**	**30**	P	**P**	**10 38 22.1**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=230,slow=8.6,SNR=4.7						
ZALV	**Zalesovo Beam**	**34.43**	**30**	P	**P**	**10 39 05.9**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=247,slow=7.7,SNR=4.2						
FINES	**FINESS Array B**	**39.95**	**338**	P	**P**	**10 39 52.8**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=138,slow=15,SNR=5.4						
HFS	**Hagfors**	**43.92**	**331**	LR	LR	11 01 28.4	
	comp=Z,29nm,19.9s,baz=315,slow=40						
SONM	**Songino Array**	**44.34**	**48**	P	**P**	**10 40 31.3**	**+1.6**
	comp=Z,0.3nm,0.7s,baz=263,slow=8.6,SNR=2.6						
NOA	**NORSAR Array B**	**45.43**	**331**	P	P	10 40 41.6	+3.6
	comp=Z,0.3nm,0.6s,baz=133,slow=9.1,SNR=2.6						
NOA				LR	LR	11 02 03.2	
	comp=Z,14nm,21.3s,baz=105,slow=39						
ARCES	**ARCESS Array B**	**46.22**	**346**	P	**P**	**10 40 44.2**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=159,slow=7.7,SNR=2.5						
TORD	**Torodi Ar. Bea**	**52.38**	**266**	P	**P**	**10 41 31.2**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=60,slow=7.2,SNR=22						
KSRS	**Korea Array**	**60.54**	**60**	P	**P**	**10 42 30.5**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=281,slow=7.4,SNR=2.8						
ILAR	**Eielson Array**	**86.94**	**10**	P	**P**	**10 45 03.5**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=321,slow=3.5,SNR=5.9						

*ISCJB **22** 10:37:28.3±0.4, 38°.16N±0°.02×22°.67E±0°.03, h7km±3km, Error ellipse: s-maj=4.0km s-min=3.2km az=173.7*
*THE **22** 10:37:28.5, 38°.15N×22°.68E, h10km, ML2.4/4, Error ellipse: s-maj=0.7km s-min=0.3km az=230.0*
*ATH **22** 10:37:28.4, 38°.15N×22°.67E, h5km±3km, MD3.0/17*
*CSEM **22** 10:37:28.0±0.1, 38°.15N×22°.70E, h8km, ML2.4/4, Error ellipse: s-maj=3.3km s-min=2.4km az=96.0*

ISC 22 10:37:28.1±0.8, 38°.15N±0°.02×22°.69E±0°.02, h14km±5km, n58, σ0s66/85, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
THAL	**Thalero**	**0.11**	**191**	P		**Pg**	**10 37 31.2**	**-0.2**
THAL				S		**Sg**	**10 37 33.5**	**-0.1**
THAL	**Thalero**	**0.11**	**191**	P		**Pg**	**10 37 31.2**	**-0.2**
THAL				S		**Sg**	**10 37 33.5**	**-0.1**
LTK	**Loutraki**	**0.25**	**119**	P		**Pg**	**10 37 33.7**	**+0.1**
LTK				S		**Sb**	**10 37 38.0**	**-0.7**
LTK	**Loutraki**	**0.25**	**119**	*e*PG		**Pg**	**10 37 33.7**	**+0.1**
LTK				*e*SG		**Sb**	**10 37 38.1**	**-0.7**
LTK	**Loutraki**	**0.25**	**119**	P		**Pg**	**10 37 33.7**	**+0.1**
LTK				S		**Sb**	**10 37 38.0**	**-0.7**
DSF	**Desfina**	**0.29**	**334**	P		**Pg**	**10 37 34.1**	**-0.2**
DSF				S		**Sg**	**10 37 38.7**	**+0.2**
DSF	**Desfina**	**0.29**	**334**	P		**Pg**	**10 37 34.1**	**-0.2**
DSF				S		**Sg**	**10 37 38.7**	**+0.2**
GUR	**Goura**	**0.34**	**233**	P		**Pg**	**10 37 34.9**	**-0.3**
GUR	**Goura**	**0.34**	**233**	*e*PG		**Pg**	**10 37 34.9**	**-0.3**
GUR				*e*SB		**Sg**	**10 37 39.2**	**-0.8**
GUR	**Goura**	**0.34**	**233**	P		**Pg**	**10 37 34.9**	**-0.3**
GUR				*e*Sb		**Sg**	**10 37 39.2**	**-0.8**
KLV	**Kalavryta, Ach**	**0.44**	**257**	*e*PG		**Pg**	**10 37 36.4**	**-0.5**
KLV	**Kalavryta, Ach**	**0.44**	**257**	*e*Pg		**Pg**	**10 37 36.4**	**-0.5**
KALE	**Kalithea**	**0.50**	**300**	P		**Pg**	**10 37 37.9**	**-0.1**
KALE				S		**Sb**	**10 37 45.0**	**-0.9**
KALE	**Kalithea**	**0.50**	**300**	*e*PB		**Pg**	**10 37 37.8**	**-0.2**
KALE	**Kalithea**	**0.50**	**300**	*e*Pb		**Pg**	**10 37 37.8**	**-0.2**
KALE				S		**Sb**	**10 37 45.0**	**-0.9**
TRIZ	**Trizonia**	**0.53**	**295**	P		**Pg**	**10 37 38.6**	**0.0**
TRIZ	**Trizonia**	**0.53**	**295**	*e*PB		**Pg**	**10 37 38.6**	**0.0**
TRIZ				*e*SB		**Sb**	**10 37 46.4**	**-0.4**
TRIZ	**Trizonia**	**0.53**	**295**	P		**Pg**	**10 37 38.6**	**0.0**
TRIZ				*e*Sb		**Sb**	**10 37 46.4**	**-0.4**
LKR	**Lokris**	**0.56**	**26**	*e*PB		**Pg**	**10 37 38.6**	**-0.6**
LKR				*e*SB		**Sb**	**10 37 48.1**	**+0.5**
LKR	**Lokris**	**0.56**	**26**	*e*Pb		**Pg**	**10 37 38.6**	**-0.6**
LKR				*e*Sb		**Sb**	**10 37 48.1**	**+0.5**
LAKA	**Lakka**	**0.57**	**280**	P		**Pg**	**10 37 39.2**	**-0.1**
LAKA	**Lakka**	**0.57**	**280**	*e*PB		**Pg**	**10 37 39.2**	**-0.1**
LAKA	**Lakka**	**0.57**	**280**	P		**Pg**	**10 37 39.2**	**-0.1**
ATAL	**Atalanti**	**0.60**	**25**	P		**Pg**	**10 37 39.6**	**-0.4**
ATAL				S		**Sb**	**10 37 48.9**	**0.0**
ATAL	**Atalanti**	**0.60**	**25**	P		**Pg**	**10 37 39.6**	**-0.4**
ATAL				S		**Sb**	**10 37 48.9**	**0.0**
AXAR	**Agios Charalam**	**0.62**	**358**	P		**Pg**	**10 37 40.0**	**-0.3**
AXAR	**Agios Charalam**	**0.62**	**358**	P		**Pg**	**10 37 40.0**	**-0.3**
EFP	**Efpalio**	**0.68**	**295**	P		**Pb**	**10 37 41.5**	**-0.2**
EFP	**Efpalio**	**0.68**	**295**	*e*PB		**Pb**	**10 37 42.2**	**+0.5**
EFP	**Efpalio**	**0.68**	**295**	P		**Pb**	**10 37 41.5**	**-0.2**
EFP	**Efpalio**	**0.68**	**295**	*e*Pb		**Pb**	**10 37 42.2**	**+0.5**
DID	**Didima**	**0.77**	**146**	*e*PB		**Pb**	**10 37 43.8**	**+0.4**
DID				*e*SB		**Sn**	**10 37 55.3**	**-0.8**
DID	**Didima**	**0.77**	**146**	*e*Pb		**Pb**	**10 37 43.8**	**+0.4**
DID				*e*Sb		**Sn**	**10 37 55.3**	**-0.8**
VLX	**Vlachokerasia**	**0.81**	**198**	P		**Pg**	**10 37 43.6**	**-0.3**
VLX				S		**Sn**	**10 37 55.9**	**-1.2**
VLX	**Vlachokerasia**	**0.81**	**198**	*e*PB		**Pg**	**10 37 42.8**	**-1.1**
VLX				*e*SB		**Sn**	**10 37 56.3**	**-0.8**
VLX	**Vlachokerasia**	**0.81**	**198**	*e*Pb		**Pg**	**10 37 42.8**	**-1.1**
VLX	**Vlachokerasia**	**0.81**	**198**	P		**Pg**	**10 37 43.6**	**-0.3**
VLX				S		**Sn**	**10 37 55.9**	**-1.2**
VLX				*e*Sb		**Sn**	**10 37 56.3**	**-0.8**
AGG	**Agios Georgios**	**0.92**	**342**	P		**Pg**	**10 37 45.8**	**-0.2**
AGG				S		**Sn**	**10 37 58.9**	**-0.8**
AGG	**Agios Georgios**	**0.92**	**342**	*e*PB		**Pg**	**10 37 45.7**	**-0.2**
AGG	**Agios Georgios**	**0.92**	**342**	*e*Pb		**Pg**	**10 37 45.7**	**-0.2**
AGG				S		**Sn**	**10 37 58.9**	**-0.8**
RLS	**Riolos of Patr**	**0.97**	**265**	*e*PN		**Pn**	**10 37 48.6**	**+1.3**
RLS	**Riolos of Patr**	**0.97**	**265**	*e*Pn		**Pn**	**10 37 48.6**	**+1.3**
MAKR	**Makrakomi, Fth**	**0.97**	**333**	P		**Pg**	**10 37 46.8**	**-0.1**
MAKR	**Makrakomi, Fth**	**0.97**	**333**	P		**Pg**	**10 37 46.8**	**-0.1**
EVR	**Evrytania**	**1.03**	**318**	*e*PN		**Pn**	**10 37 50.0**	**+1.7**
EVR	**Evrytania**	**1.03**	**318**	*e*Pn		**Pn**	**10 37 50.0**	**+1.7**
ITM	**Ithomi**	**1.14**	**212**	P		**Pg**	**10 37 49.7**	**-0.4**
ITM	**Ithomi**	**1.14**	**212**	*e*PB		**Pg**	**10 37 51.6**	**+1.5**
ITM	**Ithomi**	**1.14**	**212**	P		**Pg**	**10 37 49.7**	**-0.4**
ITM	**Ithomi**	**1.14**	**212**	*e*Pb		**Pg**	**10 37 51.6**	**+1.5**
AOS	**Alonnisos**	**1.38**	**42**	P		**Pn**	**10 37 53.2**	**+0.2**
AOS				S		**Sb**	**10 38 11.9**	**+0.6**
AOS	**Alonnisos**	**1.38**	**42**	P		**Pn**	**10 37 53.2**	**+0.2**
AOS				S		**Sb**	**10 38 11.9**	**+0.6**
DYR	**Agios Nikonas**	**1.41**	**192**	*e*PG		**Pb**	**10 37 54.4**	**+0.2**
DYR	**Agios Nikonas**	**1.41**	**192**	*e*Pg		**Pb**	**10 37 54.4**	**+0.2**
PYL	**PYLOS**	**1.46**	**211**	*e*PB		**Pg**	**10 37 57.2**	**+1.0**
PYL	**PYLOS**	**1.46**	**211**	*e*Pb		**Pg**	**10 37 57.2**	**+1.0**
THL	**Klokotos Trika**	**1.51**	**340**	*e*PG		**Pg**	**10 37 56.6**	**-0.6**
THL	**Klokotos Trika**	**1.51**	**340**	*e*Pg		**Pg**	**10 37 56.6**	**-0.6**

TRN 22 11:11:27.7, 15°.35N×60°.82W, h27km, MD3.8, M3.8(FDF), 8C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
FDF	**Fort de France**	**0.69**	**208**	⇑*i*	*i*P	Pn	11 11 42.8	+1.0
FDF	**Fort de France**	**0.69**	**208**	⇑	*i*P	Pn	11 11 42.8	+1.0
FDF				⇑	*i*eS	Sn	11 11 53.0	+1.2
FDF				⇑	*i*eS	Sb	11 11 53.4	+2.8
MGG	**Marie-Galante**	**0.74**	**320**	⇑	*i*P	Pn	11 11 43.1	+0.7
MVM	**Montagne Vaucl**	**0.79**	**186**	⇓	*e*P	Pn	11 11 44.0	+0.9
MVM				⇓	*e*S	Sn	11 11 55.2	+1.1
BIM	**Bigot**	**0.86**	**197**	*e*P		Pn	11 11 44.2	0.0
TBG	**Guadaloupe-3**	**0.94**	**302**	⇑	*i*P	Pb	11 11 46.3	+0.9
SFG	**Saint Francois**	**0.97**	**338**	*e*P		Pb	11 11 45.8	-0.1
DEG	**La Desirade**	**0.99**	**346**	*e*P		Pn	11 11 45.8	-0.2
DOG	**Dongo Capester**	**1.03**	**311**	*e*P		Pb	11 11 47.8	+0.8
PHG	**Guadaloupe-2**	**1.04**	**310**	*e*P		Pb	11 11 47.9	+0.7
BCG	**Bois Riant Cap**	**1.07**	**314**	⇑	*i*P	Pb	11 11 48.2	+0.6
SCG	**Saint Claude**	**1.07**	**309**	*e*P		Pb	11 11 48.6	+0.8
LZG	**Guadaloupe-1**	**1.22**	**311**	*e*P		Pb	11 11 50.2	+0.1
SEG	**Port Louis**	**1.24**	**328**	⇑	*i*P	Pb	11 11 50.9	+0.4
SLW	**Petit Monier**	**1.32**	**185**	*e*P		Pb	11 11 51.4	-0.6
SLW	**Petit Monier**	**1.32**	**185**	*e*P		Pb	11 11 51.5	-0.5
SLW				*e*S		Sb	11 12 09.7	+1.1
SLB	**Belfond**	**1.53**	**188**	*e*P		Pb	11 11 55.0	-0.5
SLB				*e*S		Sb	11 12 13.5	-1.0
MCLT	**Moule a Chique**	**1.63**	**184**	*e*P		Pb	11 11 56.4	-0.8
MCLT				*e*S		Sn	11 12 15.5	+0.6
SVV	**Soufriere Volc**	**2.06**	**191**	*e*P		Pb	11 12 02.8	-1.6
SVV				*e*S		Sn	11 12 27.4	+2.0
SVB	**Belmont**	**2.11**	**192**	*e*P		Pb	11 12 03.4	-1.9
SVB				*e*S		Sn	11 12 28.2	+1.6
FCV	**Fort Charlotte**	**2.22**	**191**	*e*S		Sn	11 12 31.6	+2.2

IDC 22 11:14:13.8±0.8, 24°.26N×142°.90E, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.8/26, mbtmp3.8/12, MS3.2/4, Ms1 3.3/4, ms1mx2.7/43, Error ellipse: s-maj=28.4km s-min=17.5km az=88.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KSRS	**Korea Array**	**18.36**	**319**	LR		LR	11 25 11.9	
	comp=Z,24nm,18.1s,baz=225,slow=36							
CMAR	**Chiang Mai Arr**	**41.22**	**271**	P		P	11 22 02.2	+1.5
	0.8nm,0.4s,baz=58,slow=7.5,SNR=4.3							
CMAR				LR		LR	11 39 01.1	
	comp=Z,29nm,20.7s,baz=195,slow=36							
WRA	**Warramunga Arr**	**44.72**	**191**	P		P	11 22 28.8	0.0
	0.8nm,0.3s,baz=6.9,slow=7.9,SNR=30							
ASAR	**Alice Springs**	**48.43**	**191**	P		P	11 22 57.7	-0.3
	0.3nm,0.6s,baz=13,slow=7.5,SNR=8.0							
ZALV	**Zalesovo Beam**	**52.07**	**320**	P		P	11 23 23.8	-1.5
	0.5nm,0.4s,baz=76,slow=7.6,SNR=3.7							
MKAR	**Makanchi Array**	**52.80**	**311**	P		P	11 23 30.6	-0.3
	0.2nm,0.4s,baz=86,slow=9.6,SNR=4.6							
KURBB	**Kurchatov Arra**	**55.50**	**316**	P		P	11 23 49.5	-1.0
	1.2nm,0.6s,baz=94,slow=7.5,SNR=13							
STKA	**Stephens Creek**	**55.83**	**181**	P		P	11 23 52.0	-0.9
	2.6nm,0.9s,baz=0.0,slow=14,SNR=2.9							
ILAR	**Eielson Array**	**59.90**	**28**	P		P	11 24 21.6	+0.4
	0.2nm,0.9s,baz=253,slow=6.3,SNR=3.7							
BVAR	**Borovoye Array**	**60.58**	**319**	P		P	11 24 25.9	-0.1
	2.1nm,0.5s,baz=86,slow=6.7,SNR=13							
YKA	**Yellowknife Ar**	**74.33**	**28**	P		P	11 25 53.1	+0.3
	0.3nm,0.8s,baz=294,slow=6.0,SNR=3.0							
ARCES	**ARCESS Array B**	**76.42**	**341**	P		P	11 26 05.7	+0.9
	1.0nm,0.7s,baz=71,slow=8.1,SNR=3.6							
FINES	**FINESS Array B**	**80.77**	**334**	P		P	11 26 28.8	-0.1
	0.5nm,0.3s,baz=74,slow=6.8,SNR=8.7							
NOA	**NORSAR Array B**	**86.48**	**339**	LR		LR	12 12 23.3	
	comp=Z,9.8nm,18.1s,baz=180,slow=40							
TXAR	**Lajitas Array**	**96.77**	**54**	LR		LR	12 02 49.9	
	comp=Z,36nm,21.4s,baz=125,slow=30							

*ISCJB **22** 11:27:49.3±0.7, 40°.79N±0°.05×39°.36E±0°.06, h17km±11km, Error ellipse: s-maj=9.2km s-min=5.8km az=147.2*
*DDA **22** 11:27:49.1, 40°.79N×39°.29E, h9km, MD2.5*
*CSEM **22** 11:27:49.1, 40°.79N×39°.29E, h9km, MD2.5, After DDA*

ISC 22 11:27:48.7±1.1, 40°.81N±0°.05×39°.35E±0°.04, h23km±11km, n16, σ1s08/20, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MACK	**Trabzon**	**0.34**	**66**	*i*	P	**Pb**	**11 27 56.8**	**+0.5**
MACK				*i*	S	**Sb**	**11 28 02.4**	**+1.0**
MACK	**Trabzon**	**0.34**	**66**	*i*	P	**Pb**	**11 27 56.8**	**+0.5**
MACK				*i*	S	**Sb**	**11 28 02.4**	**+1.0**
GUMT	**Gumushane**	**0.36**	**164**	*e*PG		**Pb**	**11 27 55.7**	**-0.9**
GUMT				*e*SG		**Sb**	**11 28 01.0**	**-1.0**
ESPY	**Espiye-Giresun**	**0.49**	**283**	*e*PG		**Pb**	**11 27 58.1**	**-0.6**
KELT	**Kelkit**	**0.66**	**186**	*i*	P	**Pn**	**11 28 02.0**	**-0.9**
KELT				*i*	S	**Sb**	**11 28 10.6**	**+0.1**
KELT	**Kelkit**	**0.66**	**186**	*i*	P	**Pn**	**11 28 02.0**	**-0.9**
KELT				*i*	S	**Sb**	**11 28 10.6**	**+0.1**
BAYT	**Ayd¨–ntepe-Bay**	**0.73**	**124**	*e*PG		**Pb**	**11 28 02.7**	**-0.1**
SUSE	**Susehri**	**1.06**	**236**	*i*	P	**Pb**	**11 28 08.8**	**+0.3**
SUSE				*i*	S	**Sn**	**11 28 22.3**	**-0.2**
SUSE	**Susehri**	**1.06**	**236**	*i*	P	**Pb**	**11 28 08.8**	**+0.3**
SUSE				*i*	S	**Sn**	**11 28 22.3**	**-0.2**
KOPT	**Kop Dagi**	**1.18**	**132**	*i*	P	Pn	11 28 06.2	-3.9
KOPT	**Kop Dagi**	**1.18**	**132**	*i*	P	Pn	11 28 06.2	-3.9
KEMA	**Kemaliye**	**1.67**	**204**	*i*	P	**Pb**	**11 28 21.2**	**+2.4**
KEMA	**Kemaliye**	**1.67**	**204**	*i*	P	**Pb**	**11 28 21.2**	**+2.4**
DAGI	**Agillar**	**1.96**	**81**	*i*	P	**Pb**	**11 28 23.1**	**-0.7**
DAGI				*i*	S	**Sn**	**11 28 45.4**	**+0.8**
ARTV	**Artvin**	**1.99**	**78**	*i*	P	Pn	11 28 14.4	-6.7
ARTV	**Artvin**	**1.99**	**78**	*i*	P	Pn	11 28 14.4	-6.7

*CSEM **22** 11:30:30.2, 35°.72N×36°.30E, h2km, ML1.0, After NSSC*

NSSC 22 11:30:30.2±1.5, 35°.72N×36°.30E, h2km±9km, MD0.3, ML1.0, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SLNF	**Slenfeh**	**0.14**	**208**	*e*P		Pg	11 30 31.9	-1.2
SLNF				*e*S		Sg	11 30 36.0	+0.9
SLNF					AML	AML	11 30 39.4	
	comp=N,87nm,0.4s							
SLNF					AML	AML	11 30 40.9	
	comp=E,88nm,0.3s							
SLNF	**Slenfeh**	**0.14**	**208**	*e*P		Pg	11 30 31.9	-1.2
	SNR=101							
SLNF				*e*S		Sg	11 30 36.0	+0.9
	comp=E,88nm,0.3s,SNR=101							
WRDH	**Warideh**	**0.23**	**157**	*e*P		Pg	11 30 34.1	-0.6
WRDH				*e*S		Sg	11 30 39.4	+1.7
WRDH					AML	AML	11 30 42.7	
	comp=N,13nm,0.3s							
WRDH					AML	AML	11 30 43.0	
	comp=E,15nm,0.3s							
WRDH	**Warideh**	**0.23**	**157**	*e*P		Pg	11 30 34.1	-0.6
	SNR=95							
WRDH				*e*S		Sg	11 30 39.4	+1.7
	comp=E,15nm,0.3s,SNR=95							
ARNB	**Al Arnab**	**0.30**	**298**	*e*P		Pg	11 30 36.8	+0.6
ARNB				*e*S		Sg	11 30 41.2	+0.9
ARNB					AML	AML	11 30 43.5	
	comp=E,16nm,0.3s							
ARNB					AML	AML	11 30 43.6	
	comp=N,14nm,0.3s							
ARNB	**Al Arnab**	**0.30**	**298**	*e*P		Pg	11 30 36.8	+0.6
	SNR=94							
ARNB				*e*S		Sg	11 30 41.2	+0.9
	comp=N,14nm,0.3s,SNR=59							
BTCH	**Batrach**	**0.34**	**22**	*e*P		Pg	11 30 37.4	+0.5
BTCH				*e*S		Sg	11 30 42.2	+0.7
BTCH					AML	AML	11 30 44.5	
	comp=E,24nm,0.4s							
BTCH					AML	AML	11 30 46.4	
	comp=N,14nm,0.2s							
BTCH	**Batrach**	**0.34**	**22**	*e*P		Pg	11 30 37.4	+0.5
	SNR=94							
BTCH				*e*S		Sg	11 30 42.2	+0.7
	comp=N,14nm,0.2s,SNR=59							

*CSEM **22** 11:32:37.7, 40°.25N×30°.00E, h15km, MD2.7, After ISK*

ISK 22 11:32:37.7, 40°.25N×30°.00E, h15km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
CAVI	**Cavuskoy**	**0.13**	**249**	*e*PG		Pg	11 32 41.5	+0.1
CAVI				*e*SG		Sb	11 32 44.8	0.0
CAVI	**Cavuskoy**	**0.13**	**249**	*e*Pg		Pg	11 32 41.5	+0.1
CAVI				*e*Sg		Sb	11 32 44.8	0.0
GPA	**Golpazari**	**0.24**	**81**	*e*PG		Pg	11 32 43.1	+0.1
GPA				*e*SG		Sb	11 32 47.5	-0.4
GPA	**Golpazari**	**0.24**	**81**	*e*Pg		Pg	11 32 43.1	+0.1
GPA				*e*Sg		Sb	11 32 47.6	-0.3
ADVT	**Abdulvahap**	**0.27**	**312**	*e*PG		Pb	11 32 44.1	-0.3
ADVT				*e*SG		Sb	11 32 48.3	-0.5
ADVT	**Abdulvahap**	**0.27**	**312**	*e*Pg		Pb	11 32 44.1	-0.2
ADVT				*e*Sg		Sb	11 32 48.3	-0.5
GULT	**Gulveren**	**0.43**	**65**	*e*PG		Pb	11 32 46.9	-0.3
GULT				*e*SG		Sb	11 32 53.6	0.0
GULT	**Gulveren**	**0.43**	**65**	*e*Pg		Pb	11 32 46.9	-0.3
GULT				*e*Sg		Sb	11 32 53.6	0.0
YLV	**Yalova**	**0.57**	**304**	*e*PG		Pb	11 32 50.3	+0.7
YLV	**Yalova**	**0.57**	**304**	*e*Pg		Pb	11 32 50.3	+0.7
TVSB	**Tavsanli**	**0.90**	**208**	*e*PG		Pg	11 32 55.5	+0.2
TVSB	**Tavsanli**	**0.90**	**208**	*e*Pg		Pg	11 32 55.5	+0.2
ARMT	**Armutlu**	**0.93**	**290**	*e*PG		Pg	11 32 55.8	+0.1
ARMT	**Armutlu**	**0.93**	**290**	*e*Pg		Pg	11 32 55.8	+0.1
MDUB	**Mudurnu**	**0.94**	**76**	*e*PG		Pn	11 32 56.4	-0.1
MDUB	**Mudurnu**	**0.94**	**76**	*e*Pg		Pn	11 32 56.4	-0.1
ISK	**Istanbul-Kandi**	**1.08**	**319**	*e*PN		Pg	11 32 58.9	+0.2
ISK	**Istanbul-Kandi**	**1.08**	**319**	*e*Pn		Pg	11 32 58.9	+0.2

IDC 22 11:38:14.3±1.3, 31°.16S×177°.64W, h0km, mb4.2/5, mb1 4.3/5, mb1mx4.0/20, mbtmp4.2/5, MS3.6/3, Ms1 3.5/3, ms1mx3.1/23, Error ellipse: s-maj=32.6km s-min=24.9km az=67.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
RAO	**Raoul Island**	**1.92**	**353**	P		Pn	11 38 48.7	+0.5
	64nm,0.3s,baz=148,slow=19,SNR=3.0

KMSI				S	Sn	12 49 19.3	+0.9		
LBMI	**Labuha**	**2.44**	**144**	P	Pn	12 48 55.5	+0.5		
LUWI	**Luwuk**	**4.06**	**234**	P	Pn	12 49 18.8	+1.5		
LUWI	**Luwuk**	**4.06**	**234**	P	Pn	12 49 18.9	+1.6		
baz=4.0,SNR=7.2									
MRSI	**Marisa**	**4.22**	**258**	P	Pn	12 49 19.9	+0.5		
AAI	**Ambon**	**5.43**	**157**	P	Pn	12 49 37.1	+1.0		
103nm,0.5s,0.4nm									
AAI	**Ambon**	**5.43**	**157**	P	Pn	12 49 37.3	+1.2		
baz=5.3,SNR=4.3									
MATI	**Mati**	**5.57**	**2**	*e*P	Pn	12 49 37.0	-1.0		
SWI	**Sorong**	**5.64**	**113**	P	Pn	12 49 40.5	+1.6		
26nm,0.8s,0.1nm									
DAV	**Davao City (W)**	**5.71**	**355**	Pn	Pn	12 49 38.1	-1.8		
DAV				Sn	Sn	12 50 49.1	+5.0		
DAV	**Davao City (W)**	**5.71**	**355**	Pn	Pn	12 49 38.1	-1.8		
22nm,0.3s,baz=30,slow=20,SNR=2.5									
DAV				Sn	Sn	12 50 49.1	+5.0		
74nm,0.3s,baz=76,slow=14,SNR=4.2									
SKSI	**Soroako, Sulaw**	**6.10**	**231**	P	Pn	12 49 45.9	+0.6		
304nm,0.6s,3µm1.0nm									
CTBH	**Cotabato--PC H**	**6.11**	**343**	⇑*i*P	Pn	12 49 46.6	+1.2		
PAGZ	**Pagadian**	**6.99**	**338**	*e*P	Pn	12 49 57.3	-0.2		
IPIL	**Ipil**	**7.29**	**332**	*e*P	Pn	12 50 01.6	+0.1		
FAKI	**Fak Fak**	**7.49**	**124**	P	Pn	12 50 06.7	+2.3		
55nm,0.9s									
FAKI	**Fak Fak**	**7.49**	**124**	P	Pn	12 50 07.0	+2.6		
baz=7.4,SNR=13									
TTSI	**Tana Toraja**	**7.62**	**235**	P	Pn	12 50 06.5	+0.4		
116nm,0.7s,2µm									
BBSI	**Bau Bau**	**7.63**	**207**	P	Pn	12 50 08.0	+1.7		
179nm,0.8s,2µm									
SPSI	**Sidrap Palu**	**8.21**	**230**	P	Pn	12 50 15.7	+1.5		
98nm,0.6s									
MYLDM	**Lahad Datu**	**8.46**	**297**	P	Pn	12 50 20.3	+2.7		
TSM	**Tawau**	**8.69**	**290**	P	Pn	12 50 21.4	+0.6		
BKSI	**Bulukumba**	**8.90**	**222**	P	Pn	12 50 24.2	+0.6		
75nm,1.0s,809nm									
KAPI	**Kappang**	**8.93**	**225**	*e*Pn	Pn	12 50 23.8	-0.2		
KAPI				*e*Sn	Sn	12 52 01.1	-2.2		
KAPI	**Kappang**	**8.93**	**225**	P	Pn	12 50 24.1	+0.1		
79nm,1.2s									
KAPI	**Kappang**	**8.93**	**225**	Pn	Pn	12 50 22.9	-1.1		
baz=36,slow=7.3									
KAPI				Sn	Sn	12 52 02.6	-0.7		
2.3nm,0.3s,baz=38,slow=19,SNR=5.4									
BSSI	**Bau Bau, Buton**	**9.29**	**217**	P	Pn	12 50 29.4	+0.4		
104nm,0.6s									
SDKM	**Sandakan**	**9.83**	**296**	P	Pn	12 50 37.2	+0.8		
PALU	**Palau**	**10.28**	**54**	P	Pn	12 50 47.4	+4.8		
baz=10,SNR=6.2									
MMRI	**Maumere**	**10.62**	**201**	P	Pn	12 50 48.8	+1.5		
40nm,1.5s									
KKM	**Kota Kinabalu**	**10.88**	**296**	*e*Pn	Pn	12 50 53.8	+3.0		
KKM	**Kota Kinabalu**	**10.88**	**296**	P	Pn	12 50 53.3	+2.5		
KKM	**Kota Kinabalu**	**10.88**	**296**	P	Pn	12 50 53.9	+3.0		
baz=11,SNR=4.3									
SBUM	**Sibu**	**13.88**	**275**	P	Pn	12 51 33.7	+1.9		
KHKI	**Kahang-Kahang**	**14.21**	**227**	P	**P**	12 51 43.9	+1.9		
STKI	**Sintang**	**14.64**	**265**	P	**P**	12 51 44.8	-2.1		
MTN	**Manton Dam**	**14.97**	**161**	P	Pn	12 51 44.7	-1.3		
baz=15,SNR=16									
KDU	**Kakadu**	**15.32**	**156**	P	Pn	12 51 48.0	-2.6		
baz=15,SNR=8.7									
JAGI	**Jajag, Banyuwa**	**15.37**	**230**	P	**P**	12 51 57.1	+2.2		
JAGI	**Jajag, Banyuwa**	**15.37**	**230**	P	**P**	12 51 57.5	+2.5		
baz=15,SNR=5.3									
KNRA	**Kununurra**	**17.12**	**171**	P	Pn	12 52 13.2	-0.1		
baz=17,SNR=27									
FITZ	**Fitzroy Crossi**	**19.33**	**181**	*e*P	**P**	12 52 37.3	-1.3		
15nm,0.8s									
FITZ	**Fitzroy Crossi**	**19.33**	**181**	P	**P**	12 52 35.8	-2.8		
0.6nm,0.3s,baz=22,slow=9.5,SNR=28									
FITZ	**Fitzroy Crossi**	**19.33**	**181**	P	**P**	12 52 37.6	-1.0		
baz=19,SNR=29									
TWG	**Pinlang**	**21.89**	**348**	*e*P	**P**	12 53 02.7	-3.6		
163nm,1.4s									
TPUB	**Ta-pu**	**22.45**	**347**	*e*P	**P**	12 53 11.1	-1.2		
28nm,0.7s									
WRAB	**Tennant Creek**	**22.65**	**159**	*e*P	**P**	12 53 13.5	-1.0		
20nm,0.6s									
WRA	**Warramunga Arr**	**22.66**	**159**	P	**P**	12 53 13.3	-1.2		
WRA				S	**S**	12 57 14.7	-4.3		
WRA	**Warramunga Arr**	**22.66**	**159**	P	**P**	12 53 13.3	-1.2		
15nm,0.5s,baz=336,slow=11,SNR=120									
WRA				S	**S**	12 57 14.7	-4.3		
2.5nm,0.8s,baz=341,slow=16,SNR=5.2									
KGM	**Kluang**	**22.75**	**272**	P	**P**	12 53 17.0	+1.4		
COEN	**Coen**	**22.77**	**132**	*e*P	**P**	12 53 14.6	-1.2		
76nm,0.6s									
COEN	**Coen**	**22.77**	**132**	P	**P**	12 53 15.3	-0.5		
baz=23,SNR=10									
MBWA	**Marble Bar**	**23.21**	**195**	*e*P	**P**	12 53 18.6	-1.5		
20nm,0.8s									
KTGM	**Kuala Trenggan**	**23.23**	**280**	P	**P**	12 53 22.5	+2.1		
PMG	**Port Moresby**	**23.57**	**117**	P	**P**	12 53 23.9	+0.4		
PMG	**Port Moresby**	**23.57**	**117**	P	**P**	12 53 23.9	+0.4		
5.5nm,0.5s,baz=307,slow=17,SNR=2.9									
JOW	**Kunigami**	**25.43**	**5**	*e*P	**P**	12 53 41.8	+1.4		
9.4nm,0.6s									
QIS	**Mount Isa**	**25.49**	**149**	P	**P**	12 53 42.8	+1.7		
baz=25,SNR=26									
AS31	**Alice Springs**	**26.00**	**163**	*e*P	**P**	12 53 45.4	-0.3		
ASAR	**Alice Springs**	**26.00**	**163**	P	**P**	12 53 45.5	-0.3		
ASAR				S	**S**	12 58 13.5	+0.6		
ASAR	**Alice Springs**	**26.00**	**163**	P	**P**	12 53 45.5	-0.3		
4.9nm,0.4s,baz=345,slow=10,SNR=84									
ASAR				S	**S**	12 58 13.5	+0.6		
0.9nm,0.8s,baz=351,slow=20,SNR=4.4									
MTSU	**Mount Surprise**	**26.41**	**138**	P	**P**	12 53 50.0	+0.6		
baz=26,SNR=7.4									
MEEK	**Meekatharra**	**28.73**	**194**	P	**P**	12 54 10.6	+0.5		
baz=29,SNR=4.7									
CTA	**Charters Tower**	**29.08**	**138**	P	**P**	12 54 15.4	+2.1		
CTA	**Charters Tower**	**29.08**	**138**	P	**P**	12 54 15.4	+2.1		
3.0nm,0.9s,baz=331,slow=11,SNR=4.2									
GYA	**Guiyang**	**31.17**	**325**	*e*P	**P**	12 54 34.6	+2.8		
GYA				pP	**pP**	12 54 43.8	-1.7		
GYA				PP	**PnPn**	12 55 38.0	+2.7		
GYA				S	**S**	12 59 37.4	+3.1		
GYA				sS	**sS**	12 59 53.6	-3.9		
GYA				ScP	**ScP**	13 01 07.5	+2.9		
GYA				ScS	**ScS**	13 05 03.8	+1.7		
GYA				pmax	pmax				
comp=Z,10.0nm,0.8s									
NJ2	**Nanjing**	**31.29**	**348**	*e*P	**P**	12 54 32.0	-0.6		
NJ2				pP	**pP**	12 54 43.3	-3.1		
NJ2				sP	sP	12 54 47.3	-5.4		
NJ2				PP	**PnPn**	12 55 36.3	-0.4		
NJ2				S	**S**	12 59 36.0	+0.3		
NJ2				pmax	pmax				
comp=Z,10.0nm,0.7s									
NJ2				pmax	pmax				
comp=Z,110nm,4.4s									
NJ2				LR	LR				
comp=N,80nm,21.0s									
NJ2				LR	LR				
comp=E,320nm,23.0s									
NJ2				LR	LR				
comp=Z,60nm,25.2s									
MORW	**Morawa**	**31.73**	**197**	P	**P**	12 54 36.5	0.0		
baz=32,SNR=3.4									
JNU	**Nakatsue**	**31.93**	**8**	P	**P**	12 54 40.2	+1.9		
JNU	**Nakatsue**	**31.93**	**8**	P	**P**	12 54 40.2	+1.9		
comp=Z,9.4nm,0.8s,baz=233,slow=15,SNR=4.1									
FORT	**Forrest**	**32.00**	**177**	*e*P	**P**	12 54 38.7	-0.3		
comp=Z,53nm,0.8s									
FORT	**Forrest**	**32.00**	**177**	P	**P**	12 54 39.4	+0.5		
baz=32,SNR=8.0									
KMI	**Kunming**	**32.65**	**318**	P	**P**	12 54 45.5	+0.6		
KMI				pP	**pP**	12 54 55.9	-2.8		
KMI				sP	**sP**	12 55 00.4	-4.7		
KMI				PP	**PP**	12 55 57.6	-2.0		
KMI				S	**S**	13 00 02.5	+4.9		
KMI				SS	**SnSn**	13 01 59.3	+2.6		
KMI				pmax	pmax				
comp=Z,8.0nm,0.8s									
KMI				pmax	pmax				
comp=Z,47nm,3.7s									
KMI				LR	LR				
comp=N,110nm,18.2s									
KMI				LR	LR				
comp=E,90nm,20.1s									
KMI				LR	LR				
comp=Z,130nm,23.6s									
KMBL	**Kambalda**	**32.77**	**187**	P	**P**	12 54 46.4	+0.7		
baz=33,SNR=6.4									
BLDU	**Ballidu**	**33.01**	**195**	P	**P**	12 54 47.6	-0.1		
baz=33,SNR=4.7									
KLBR	**Kellerberrin**	**33.69**	**193**	P	**P**	12 54 54.3	+0.6		
baz=34,SNR=5.4									
BBOO	**Buckleboo**	**35.26**	**165**	P	**P**	12 55 09.1	+1.9		
baz=35,SNR=8.3									
KSAR	**Wonju Array Be**	**35.96**	**2**	P	**P**	12 55 14.2	+1.1		
KSRS	**Korea Array**	**35.97**	**3**	P	**P**	12 55 14.2	+1.0		
comp=Z,2.6nm,0.7s,baz=182,slow=9.9,SNR=14									
STKA	**Stephens Creek**	**36.17**	**157**	*e*P	**P**	12 55 15.0	-0.1		
comp=Z,10.0nm,1.7s									
STKA	**Stephens Creek**	**36.17**	**157**	P	**P**	12 55 15.3	+0.3		
comp=Z,8.8nm,0.7s,baz=328,slow=8.2,SNR=17									
STKA	**Stephens Creek**	**36.17**	**157**	P	**P**	12 55 15.4	+0.4		
baz=36,SNR=14									
CD2	**Chengdu**	**36.21**	**326**	P	**P**	12 55 17.5	+2.0		
CD2				pP	**pP**	12 55 27.6	-1.8		
CD2				sP	**sP**	12 55 31.8	-3.9		
CD2				PP	**PP**	12 56 41.3	+2.6		
CD2				S	**S**	13 00 55.5	+3.5		
CD2				sS	**sS**	13 01 12.3	-3.2		
CD2				SS	**SnSn**	13 03 21.3	-1.3		
CD2				pmax	pmax				
comp=Z,10.0nm,0.5s									
CD2				pmax	pmax				
comp=Z,80nm,5.2s									
XAN	**Xi'an**	**36.27**	**336**	P	**P**	12 55 14.1	-1.8		
XAN				pmax	pmax				
comp=Z,5.0nm,0.7s									
MJAR	**Matsushiro Arr**	**36.78**	**16**	P	**P**	12 55 19.6	-0.6		
MJAR	**Matsushiro Arr**	**36.78**	**16**	P	**P**	12 55 19.6	-0.6		
comp=Z,4.4nm,0.9s,baz=198,slow=9.3,SNR=5.2									
BJI	**Beijing**	**39.55**	**348**	P	**P**	12 55 45.6	+2.2		
BJI				pmax	pmax				
comp=Z,11nm,0.6s									
LZH	**Lanzhou**	**40.24**	**332**	*e*P	**P**	12 55 50.3	+0.8		
LZH				pP	**pP**	12 55 58.5	-5.0		
LZH				sP	sP	12 56 03.8	-6.0		
LZH				PP	**PnPn**	12 57 25.1	-1.9		
LZH				*e*S	**S**	13 01 56.4	+3.3		
LZH				sS	**sS**	13 02 15.3	-1.5		
LZH				pmax	pmax				
comp=Z,23nm,1.1s									
LZH				pmax	pmax				
comp=Z,83nm,4.5s									
LZH				LR	LR				
comp=N,220nm,16.0s									
LZH				LR	LR				
comp=E,170nm,14.2s									
LZH				LR	LR				
comp=Z,290nm,16.4s									
SNY	**Shenyang**	**40.36**	**357**	⇑P	**P**	12 55 51.3	+1.2		
SNY				pmax	pmax				
comp=Z,14nm,0.6s									
ARPS	**Mount Arapiles**	**40.66**	**160**	P	**P**	12 55 53.7	+1.0		
baz=41,SNR=9.0									
HHC	**Hu-ho-hao-te**	**41.46**	**343**	*e*P	**P**	12 56 02.4	+3.1		
HHC				pP	**pP**	12 56 12.5	-0.9		
HHC				sP	**sP**	12 56 16.1	-3.6		
HHC				PP	**PnPn**	12 57 41.8	+0.7		
HHC				S	**S**	13 02 16.5	+5.6		
HHC				sS	**sS**	13 02 33.1	-1.6		
HHC				SS	**SS**	13 05 17.3	+0.2		
HHC				ScS	**ScS**	13 06 02.4	+4.0		
HHC				pmax	pmax				
comp=Z,40nm,0.6s									
HHC				pmax	pmax				
comp=Z,130nm,5.2s									
HHC				LR	LR				
comp=N,150nm,16.7s									
HHC				LR	LR				
comp=E,200nm,16.7s									
HHC				LR	LR				
comp=Z,180nm,16.7s									
CN2	**Changchun**	**42.28**	**359**	*e*P	P	12 56 10.0	+4.2		
USRK	**Ussuriysk Arra**	**42.99**	**6**	P	**P**	12 56 13.7	+2.0		
comp=Z,5.0nm,0.8s,baz=187,slow=5.6,SNR=7.5									
MDJ	**Mudanjiang**	**43.20**	**4**	P	**P**	12 56 16.0	+2.7		
MDJ				pP	**pP**	12 56 24.9	-2.5		
MDJ				sP	**sP**	12 56 28.8	-4.9		
MDJ				ScP	**ScP**	13 01 52.8	+4.0		
MDJ				PcS	**PcS**	13 01 56.6	+2.3		
MDJ				S	S	13 02 43.3	+7.1		
MDJ				sS	**sS**	13 02 58.5	-1.6		
MDJ				pmax	pmax				
comp=Z,8.0nm,0.9s									
MDJ				pmax	pmax				
comp=Z,23nm,4.2s									
MDJ				LR	LR				
comp=N,13nm,20.0s									
MDJ				LR	LR				
comp=E,40nm,29.0s									
GTA	**Gaotai**	**44.82**	**331**	*e*P	**P**	12 56 26.1	-0.4		
GTA				pP	**pP**	12 56 35.9	-4.9		
GTA				sP	sP	12 56 39.9	-7.1		
GTA				S	**S**	13 03 01.8	+1.6		
GTA				sS	sS	13 03 18.3	-5.9		
GTA				SS	**ScS**	13 06 15.4	-4.1		
GTA				pmax	pmax				
comp=Z,4.0nm,1.0s									
GTA				pmax	pmax				
comp=Z,54nm,4.3s									
GTA				LR	LR				
comp=N,74nm,18.0s									
GTA				LR	LR				
comp=E,83nm,17.6s									
GTA				LR	LR				
comp=Z,76nm,16.6s									
TAPN	**Taplejung**	**44.93**	**309**	*e*P	**P**	12 56 27.5	-0.3		
ODAN	**Odare**	**44.95**	**308**	*e*P	**P**	12 56 28.3	+0.4		
ASAJ	**Asahikawa**	**45.05**	**17**	*e*P	**P**	12 56 29.8	+1.7		
comp=Z,3.1nm,0.8s									
ASAJ	**Asahikawa**	**45.05**	**17**	P	**P**	12 56 29.4	+1.3		
comp=Z,7.7nm,0.8s,baz=216,slow=12,SNR=9.1									
GUN	**Gumba**	**46.63**	**308**	*e*P	**P**	12 56 40.5	-0.8		
comp=Z,27nm,0.7s									
PKIN	**Phulchoki**	**46.86**	**308**	*e*P	**P**	12 56 42.9	-0.1		
KKN	**Kakani**	**47.05**	**308**	*e*P	**P**	12 56 43.9	-0.5		
DMN	**Daman**	**47.10**	**307**	*e*P	**P**	12 56 44.5	-0.4		
KOLN	**Koldanda**	**48.37**	**307**	*e*P	**P**	12 56 53.7	-1.0		
comp=Z,30nm,0.7s									
DANN	**Dangsing**	**48.50**	**308**	*e*P	**P**	12 56 54.3	-1.4		
comp=Z,35nm,0.7s									
PYUN	**Piuthan**	**49.00**	**307**	*e*P	**P**	12 56 58.6	-0.9		
comp=Z,55nm,0.8s									
ULN	**Ulaanbaatar**	**49.18**	**343**	*e*P	**P**	12 57 00.3	-0.2		
comp=Z,4.2nm,0.6s									
SONM	**Songino Array**	**49.35**	**343**	P	**P**	12 57 01.2	-0.5		
SONM	**Songino Array**	**49.35**	**343**	P	**P**	12 57 01.2	-0.5		
comp=Z,1.8nm,0.6s,baz=159,slow=9.3,SNR=15									
WMQ	**Urumqi**	**54.31**	**326**	*e*P	**P**	12 57 40.3	+1.6		
WMQ				pP	**pP**	12 57 50.3	-3.0		
WMQ				sP	**sP**	12 57 54.3	-5.1		
WMQ				PP	**PP**	12 59 43.6	+2.5		
WMQ				ScP	**ScP**	13 02 38.3	+2.2		
WMQ				S	**S**	13 05 14.0	+1.3		
WMQ				sS	sS	13 05 30.8	-6.4		
WMQ				ScS	**ScS**	13 07 23.4	0.0		
WMQ				SS	**SS**	13 08 55.8	+0.3		
WMQ				pmax	pmax				
comp=Z,10.0nm,0.5s									
WMQ				pmax	pmax				
comp=Z,77nm,5.0s									
WMQ				LR	LR				
comp=N,120nm,4.8s									
WMQ				LR	LR				
comp=E,74nm,4.8s									
WMQ				LR	LR				
comp=Z,48nm,18.6s									
PETK	**Petropavlovsk-**	**57.87**	**22**	P	**P**	12 58 05.4	+1.5		
PETK	**Petropavlovsk-**	**57.87**	**22**	P	**P**	12 58 05.4	+1.5		
comp=Z,3.2nm,0.8s,baz=186,slow=6.1,SNR=10.0									
MK31	**Makanchi Array**	**59.14**	**326**	*e*P	**P**	12 58 12.0	-0.8		
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	12 58 11.8	-1.1		
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	12 58 11.8	-1.1		
comp=Z,2.4nm,0.4s,baz=122,slow=8.5,SNR=51									
KSH	**Kashi**	**59.28**	**316**	*e*P	**P**	12 58 15.3	+1.2		
KSH				*ep*P	**pP**	12 58 25.3	-3.5		
KSH				*es*P	sP	12 58 29.3	-5.7		
KSH				*e*PcP	**PcP**	12 59 03.1	+1.3		
KSH				*e*PP	**PP**	13 00 27.1	+1.6		
KSH				*e*ScP	**ScP**	13 03 00.4	+2.2		
KSH				*e*PcS	**PcS**	13 03 04.1	+0.2		
KSH				*e*S	**S**	13 06 17.1	-1.5		
KSH				*es*S	sS	13 06 34.3	-9.1		
KSH				*e*ScS	**ScS**	13 07 58.5	-1.4		
KSH				*e*SS	**SS**	13 10 13.3	-0.7		
KSH				pmax	pmax				
comp=Z,8.0nm,0.6s									
KSH				pmax	pmax				
comp=Z,38nm,3.0s									
KSH				LR	LR				
comp=N,64nm,3.6s									
KSH				LR	LR				
comp=E,57nm,4.3s									
KSH				LR	LR				
comp=Z,48nm,5.3s									
TKM2	**Tokmak 2**	**61.10**	**320**	*e*P	**P**	12 58 25.9	-0.7		
comp=Z,2.4nm,0.7s									
AAK	**Ala-Archa**	**61.69**	**319**	*e*P	**P**	12 58 31.8	+1.3		
comp=Z,0.5nm,0.9s									
AAK	**Ala-Archa**	**61.69**	**319**	P	**P**	12 58 29.7	-0.8		
comp=Z,1.9nm,0.8s,baz=134,slow=4.4,SNR=6.2									
ZALV	**Zalesovo Beam**	**62.41**	**334**	P	**P**	12 58 32.9	-2.0		
ZALV	**Zalesovo Beam**	**62.41**	**334**	P	**P**	12 58 32.9	-2.0		
comp=Z,1.3nm,0.4s,baz=111,slow=6.6,SNR=8.9									
KURBB	**Kurchatov Arra**	**63.39**	**328**	P	**P**	12 58 40.2	-1.3		
comp=Z,3.7nm,0.6s,baz=131,slow=6.4,SNR=41									
KURK	**Kurchatov**	**63.40**	**328**	*e*P	**P**	12 58 40.5	-1.0		
comp=Z,6.6nm,0.7s									
KKAR	**Karatay Array**	**64.53**	**318**	*e*P	**P**	12 58 47.9	-1.3		
CASY	**Casey**	**68.39**	**187**	*e*P	**P**	12 59 14.3	+1.1		
comp=Z,4.4nm,0.9s									
BVAR	**Borovoye Array**	**68.96**	**328**	P	**P**	12 59 16.0	-1.1		
BVAR	**Borovoye Array**	**68.96**	**328**	P	**P**	12 59 16.0	-1.1		
comp=Z,1.2nm,0.4s,baz=133,slow=8.3,SNR=6.9									
ABKAR	**Akbulak array**	**73.58**	**321**	*e*P	**P**	12 59 43.9	-1.2		
comp=Z,2.4nm,0.7s									
MIB	**Mutribah**	**79.55**	**300**	*e*P	**P**	13 00 17.6	-1.7		
MIB				AMb	AMB	13 00 27.6			
comp=Z,15nm,0.7s									
NAY	**Al-Naaiem**	**79.59**	**299**	*e*P	**P**	13 00 17.6	-1.9		
NAY				AMb	AMB	13 00 28.2			
comp=Z,4.6nm,0.6s									
RST	**Umm Al-Ruwaisa**	**79.82**	**300**	*e*P	**P**	13 00 18.8	-2.0		
RST				AMb	AMB	13 00 23.9			
comp=Z,116nm,0.7s									
VNDA	**Vanda**	**81.16**	**173**	P	**P**	13 00 27.5	+0.6		
VNDA	**Vanda**	**81.16**	**173**	P	**P**	13 00 27.5	+0.6		
comp=Z,2.1nm,0.7s,baz=319,slow=6.3,SNR=13									
KBZ	**Khabaz**	**84.13**	**314**	P	**P**	13 00 42.6	-0.5		
KBZ	**Khabaz**	**84.13**	**314**	P	**P**	13 00 42.6	-0.5		
comp=Z,1.6nm,0.7s,baz=172,slow=8.2,SNR=5.5									
ILAR	**Eielson Array**	**87.53**	**25**	P	**P**	13 01 00.3	+0.9		
ILAR	**Eielson Array**	**87.53**	**25**	P	**P**	13 01 00.3	+0.9		
comp=Z,0.2nm,0.5s,baz=286,slow=11,SNR=5.2									
KMBO	**Kilima Mbogo**	**88.84**	**269**	P	**P**	13 01 07.6	+0.5		
KMBO	**Kilima Mbogo**	**88.84**	**269**	P	**P**	13 01 07.6	+0.5		
comp=Z,0.9nm,0.5s,baz=230,slow=23,SNR=3.9									
ARCES	**ARCESS Array B**	**92.44**	**340**	P	**P**	13 01 23.5	+1.1		
ARCES	**ARCESS Array B**	**92.44**	**340**	P	**P**	13 01 23.5	+1.1		
comp=Z,2.2nm,0.9s,baz=81,slow=7.5,SNR=7.1									
FINES	**FINESS Array B**	**93.61**	**332**	P	**P**	13 01 28.2	+0.4		
FINES	**FINESS Array B**	**93.61**	**332**	P	**P**	13 01 28.2	+0.4		
comp=Z,2.1nm,0.6s,baz=37,slow=5.5,SNR=9.3									
BUR08	**Bucovina Ar. S**	**96.33**	**318**	*e*P	**P**	13 01 40.6	-0.1		
NOA	**NORSAR Array B**	**100.61**	**333**	P	**Pdif**	13 02 01.4	+1.8		
NOA	**NORSAR Array B**	**100.61**	**333**	P	**Pdif**	13 02 01.4	+1.8		
comp=Z,0.7nm,0.8s,baz=68,slow=8.2,SNR=3.3									
TORD	**Torodi Ar. Bea**	**122.99**	**287**	PKP	**PKPdf**	13 07 10.5	+1.4		
TORD	**Torodi Ar. Bea**	**122.99**	**287**	PKP	**PKPdf**	13 07 10.5	+1.4		
comp=Z,0.8nm,0.7s,baz=60,slow=1.8,SNR=6.6									

IDC 22 13:04:22.2±1.7, 27°23S×176°63W, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/18, mbtmpg3.8/4, ML5.0/1, MS3.6/4, Ms1 3.6/4, ms1mx3.1/30, Error ellipse: s-maj=42.3km s-min=27.4km az=110.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.31**	**209**	Pn	Pb	13 05 03.2	-1.6
348nm,0.3s,baz=323,slow=20,SNR=11							
RAO				Sn	Sn	13 05 31.9	+1.2
273nm,0.3s,baz=90,slow=20,SNR=5.1							
URZ	**Urewera**	**12.19**	**204**	Pn	Pn	13 07 08.9	-8.2
0.4nm,0.3s,baz=300,slow=20,SNR=3.8							
URZ				Sn	Sn	13 09 22.4	-11
1.5nm,0.3s,baz=81,slow=21,SNR=14							
DZM	**Mont Dzumac**	**

1.2nm,0.9s,baz=114,slow=2.9,SNR=8.3
ZALV Zalesovo Beam 153.09 284 PKPab PKPab 13 36 10.0 -0.2
0.3nm,0.3s,baz=184,slow=5.8,SNR=2.9

NIED ***22*** *13:31:00,46˚.50N×153˚.00E,h14km,Mw4.5 Best double couple: M₀6.40000×10¹⁵ NP1:φs328.00000˚,δ82.00000˚; λ58.00000˚. NP2:φs225.00000˚,δ33.00000˚,λ164.00000˚.*
JMA ***22*** *13:31:27.7±0.7,46˚.55N×153˚.02E,h30km,M5.0*
ISCJB ***22*** *13:31:27.9±0.5,46˚.51N±0˚.04×152˚.73E±0˚.04,h41km±4km, mb4.7/144,MS4.0/35,Error ellipse: s-maj=6.6km s-min=3.1km az=153.4*
BJI ***22*** *13:31:29.1,46˚.48N×152˚.72E,h52km,mB4.8/28,mb4.7/38, Ms4.3/31,Ms7 4.1/32*
NEIC ***22*** *13:31:30.6±0.2,46˚.59N×152˚.61E,mb4.7/78,Error ellipse: s-maj=6.8km s-min=3.7km az=155.0*
SKHL ***22*** *13:31:30.2±1.5,46˚.72N×153˚.00E,h64km±9km,mb6.0/1, Ms4.0/1,msh5.7/1*
IDC ***22*** *13:31:30.9±0.5,46˚.64N×152˚.62E,h50km±4km,mb4.1/25, mb1 4.3/28,mb1mx4.3/32,mbtmp4.2/28,MS3.8/23, Ms1 3.8/23,ms1mx3.7/34,Error ellipse: s-maj=13.2km s-min=10.4km az=140.0*
MOS ***22*** *13:31:31.1±1.1,46˚.60N×152˚.63E,h68km,mb5.0/60,Error ellipse: s-maj=7.9km s-min=5.1km az=101.9*
SZGRF ***22*** *13:31:40.1,48˚.50N×151˚.20E,h33km,mb5.0,Kuril Islands, Russia*
ISC 22 13:31:30.5±0.3,46˚.52N±0˚.05×152˚.65E±0˚.04,h49km±2km, h49km:pP-P,n578,σ1s25/649,mb4.7/153,MS4.0/35, 96C-81D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.58**	**251**	⇑*i* Op	*i*PN	**Pn**	**13 32 26.2**	**+2.7**
KUR					*e*S	**Sn**	**13 33 08.5**	**+4.0**
KUR					pmax	pmax		
	comp=E,90nm,0.7s							
KUR					pmax	pmax		
	comp=Z,430nm,0.7s							
KUR					pmax	pmax		
	comp=N,120nm,0.4s							
KUR					pmax	pmax		
	comp=Z,1μm,2.0s							
KUR					smax	smax		
	comp=N,6μm,2.0s							
KUR					smax	smax		
	comp=E,5μm,2.0s							
KUR					smax	smax		
	comp=N,1μm,0.8s							
KUR					smax	smax		
	comp=E,2μm,0.8s							
KUR	**Kuril'sk**	**3.58**	**251**	⇑*i*	*i*P	**Pn**	**13 32 26.2**	**+2.7**
KUR					AMB	AMB	13 32 26.6	
	comp=E,90nm,0.7s							
KUR					AMB	AMB	13 32 26.6	
	comp=E,430nm,0.7s							
KUR					AMB	AMB	13 32 26.6	
	comp=E,120nm,0.4s							
KUR					AMB	AMB	13 32 29.0	
	comp=E,1μm,2.0s							
KUR					*e*S	**Sn**	**13 33 08.5**	**+4.0**
KUR					A	A	13 33 23.0	
	comp=E,6μm,2.0s							
KUR					A	A	13 33 23.0	
	comp=E,5μm,2.0s							
KUR					A	A	13 33 25.7	
	comp=E,1μm,0.8s							
KUR					A	A	13 33 25.7	
	comp=E,2μm,0.8s							
SKR	**Severo-Kuril's**	**4.76**	**28**	*e*PN		Pn	13 32 33.5	-6.1
SKR					pmax	pmax		
	comp=E,70nm,0.5s							
SKR					pmax	pmax		
	comp=Z,90nm,0.5s							
SKR					pmax	pmax		
	comp=N,20nm,0.4s							
SKR					MLR	MLR		
	comp=E,2μm,12.0s							
SKR					MLR	MLR		
	comp=Z,2μm,12.0s							
SKR	**Severo-Kuril's**	**4.76**	**28**	*e*P		Pn	13 32 33.5	-6.1
SKR					AMB	AMB	13 32 37.5	
	comp=Z,70nm,0.5s							
SKR					AMB	AMB	13 32 37.5	
	comp=Z,90nm,0.5s							
SKR					AMB	AMB	13 32 37.5	
	comp=Z,20nm,0.4s							
SKR					*e*S	Sn	13 33 24.7	-8.7
SKR					A	A	13 33 48.5	
	comp=Z,390nm,0.5s							
SKR					A	A	13 33 48.5	
	comp=Z,170nm,0.5s							
SKR					A	A	13 33 48.5	
	comp=Z,100nm,0.5s							
SKR					AMS	AMS	13 34 38.0	
	comp=Z,2μm,12.0s							
SKR					AMS	AMS	13 34 38.0	
	comp=Z,2μm,12.0s							
YUK	**Yuzh-Kuril'sk**	**5.40**	**245**	*i*	PN	**Pn**	**13 32 51.4**	**+3.0**
YUK				*i*	S	**Sn**	**13 33 53.1**	**+3.9**
YUK					pmax	pmax		
	comp=N,66nm,0.3s							
YUK					pmax	pmax		
	comp=E,64nm,0.3s							
YUK					pmax	pmax		
	comp=Z,173nm,0.3s							
YUK					smax	smax		
	comp=N,162nm,0.8s							
YUK					smax	smax		
	comp=E,301nm,0.8s							
YUK					MLR	MLR		
	comp=Z,378nm,11.0s							
YUK	**Yuzh-Kuril'sk**	**5.40**	**245**	⇑*i*	*i*P	**Pn**	**13 32 51.4**	**+3.0**
YUK					AMB	AMB	13 32 59.9	
	comp=Z,66nm,0.3s							
YUK					AMB	AMB	13 32 59.9	
	comp=Z,64nm,0.3s							
YUK					AMB	AMB	13 32 59.9	
	comp=Z,173nm,0.3s							
YUK					*i* S	**Sn**	**13 33 53.2**	**+4.0**
YUK					A	A	13 34 09.3	
	comp=Z,162nm,0.8s							
YUK					A	A	13 34 09.3	
	comp=Z,301nm,0.8s							
NEM2	**Nemuro 2**	**5.83**	**240**	P		**Pn**	**13 32 54.5**	**+0.2**
NEM2					*e*S	**Sn**	**13 33 58.6**	**-1.2**
JRA	**Rausu**	**5.91**	**247**	P		Pn	13 32 58.7	+3.3
JNK	**Nakash**	**6.34**	**245**	P		**Pn**	**13 33 03.5**	**+2.2**
JNK					*e*S	**Sn**	**13 34 13.7**	**+1.4**
JAK	**Akkeshi**	**6.67**	**241**	P		**Pn**	**13 33 06.3**	**+0.5**
JAK					*e*S	**Sn**	**13 34 19.2**	**-1.2**
JTKR	**Abashiri--Toko**	**6.68**	**251**	P		Pn	13 33 09.4	+3.5
YSS	**Yuzh-Sakhalins**	**6.82**	**277**	⇑*i*	PN	Pn	13 33 12.3	+4.5
YSS					*e*S	**Sn**	**13 34 27.6**	**+3.6**
YSS					pmax	pmax		
	comp=Z,80nm,1.0s							
YSS					MLR	MLR		
	comp=Z,1μm,16.0s							
YSS	**Yuzh-Sakhalins**	**6.82**	**277**	⇑*i*	*i*P	Pn	13 33 12.3	+4.5
YSS					AMB	AMB	13 33 14.3	
	comp=Z,80nm,1.0s							
YSS					*e*S	**Sn**	**13 34 27.6**	**+3.6**
YSS					*e*LQ	LQ	13 34 54.0	
YSS					*e*LR	LR	13 35 17.0	
YSS					AMS	AMS	13 35 52.0	
	comp=Z,1μm,16.0s							
JMP	**Maruseppu**	**7.02**	**252**	P		Pn	13 33 14.1	+3.4
JAR	**Ashorobuto**	**7.08**	**246**	P		**Pn**	**13 33 14.1**	**+2.6**
JAR					*e*S	**Sn**	**13 34 33.4**	**+2.8**
JSE	**Soyaes**	**7.22**	**261**	P		Pn	13 33 17.3	+4.0
JOB	**Onbets**	**7.25**	**243**	P		**Pn**	**13 33 15.0**	**+1.3**
JOB					*e*S	**Sn**	**13 34 34.5**	**-0.1**
PEA0B	**Petropavlovsk-**	**7.36**	**24**	*e*P		**Pn**	**13 33 13.6**	**-1.6**
PETK	**Petropavlovsk-**	**7.36**	**24**	PN		**Pn**	**13 33 14.7**	**-0.5**
PETK					S	Sn	13 34 44.0	+6.8
PETK					pmax	pmax		
	comp=Z,1.0nm,0.3s							
PETK	**Petropavlovsk-**	**7.36**	**24**	P		**Pn**	**13 33 14.7**	**-0.5**
PETK					S	Sn	13 34 44.0	+6.8
PETK	**Petropavlovsk-**	**7.36**	**24**	P		**Pn**	**13 33 14.7**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=187,slow=13,SNR=24							
PETK					S	Sn	13 34 44.0	+6.8
	baz=152,slow=19,SNR=2.0							
PETK					LR	LR	13 36 26.1	
	comp=Z,112nm,19.2s,baz=210,slow=41							
JKK2	**Kamakawa 2**	**7.48**	**253**	P		Pn	13 33 20.7	+3.7
ASAJ	**Asahikawa**	**7.48**	**255**	*e*P		**Pn**	**13 33 17.7**	**+0.7**
ASAJ	**Asahikawa**	**7.48**	**255**	P		Pn	13 33 21.3	+4.3
ASAJ	**Asahikawa**	**7.48**	**255**	P		Pn	13 33 21.4	+4.3
	comp=Z,3.3nm,0.3s,baz=88,slow=14,SNR=76							
ASAJ					S	Sn	13 34 57.9	+17
	comp=Z,0.4nm,0.3s,baz=248,slow=26,SNR=4.9							
ASAJ					LR	LR	13 36 07.8	
	comp=Z,599nm,20.2s,baz=223,slow=37							
UGL	**Uglegorsk**	**7.57**	**294**	*e*P		Pn	13 33 22.0	+3.8
UGL					AMB	AMB	13 33 25.0	
	comp=Z,220nm,1.1s							
UGL					*e*L	L	13 35 20.0	
UGL					AMS	AMS	13 36 12.0	
	comp=Z,500nm,16.0s							
UGL					AMS	AMS	13 36 12.0	
	comp=Z,550nm,18.0s							
PET	**Petropavlovsk**	**7.58**	**29**	*e*PN		**Pn**	**13 33 16.7**	**-1.5**
PET					pmax	pmax		
	comp=Z,100nm,4.9s							
PET					pmax	pmax		
	comp=Z,26nm,0.6s							
PET					MLR	MLR		
	comp=Z,200nm,16.0s							
PET					MLR	MLR		
	comp=Z,300nm,16.0s							
JWK2	**Keihoku**	**7.60**	**265**	P		Pn	13 33 24.9	+6.4
JCH	**Churui**	**7.70**	**243**	P		**Pn**	**13 33 21.0**	**+1.1**
JCH					*e*S	**Sn**	**13 34 43.7**	**-1.9**
JFR	**Furan**	**7.90**	**248**	P		**Pn**	**13 33 25.3**	**+2.6**
TYV	**Tymovskoe**	**7.91**	**307**	*e*P		**Pn**	**13 33 25.2**	**+2.4**
TYV					AMB	AMB	13 33 27.0	
	comp=Z,13nm,0.8s							
TYV					AMB	AMB	13 33 27.0	
	comp=Z,26nm,0.8s							
TYV					AMS	AMS	13 36 26.0	
	comp=Z,1μm,18.0s							
TYV					AMS	AMS	13 36 26.0	
	comp=Z,2μm,16.0s							
JAB	**Ashibetsu**	**7.98**	**252**	P		Pn	13 33 27.7	+3.9
ERM	**Erimo**	**8.16**	**240**	*e*PN		**Pn**	**13 33 27.5**	**+1.2**
ERM					pmax	pmax		
	comp=Z,25nm,0.5s							
ERM	**Erimo**	**8.16**	**240**	*e*Pn		**Pn**	**13 33 26.9**	**+0.6**
JEM	**Erimo**	**8.16**	**240**	P		**Pn**	**13 33 27.3**	**+1.0**
JEM					*e*S	**Sn**	**13 34 55.5**	**-1.6**
JBT2	**Biratori 2**	**8.23**	**247**	P		**Pn**	**13 33 28.7**	**+1.5**
JNBK	**Urakawa-nobuka**	**8.26**	**243**	P		**Pn**	**13 33 27.6**	**0.0**
JNBK					*e*S	**Sn**	**13 34 56.5**	**-2.9**
JSK	**Shakotan**	**9.20**	**254**	P		**Pn**	**13 33 43.2**	**+2.8**
JNB	**Noboribetsu**	**9.23**	**248**	P		**Pn**	**13 33 42.4**	**+1.5**
JNB					*e*S	**Sn**	**13 35 22.9**	**-0.5**
JKB	**Kayabe**	**9.54**	**245**	P		**Pn**	**13 33 44.8**	**-0.3**
JKB					*e*S	**Sn**	**13 35 26.8**	**-4.1**
JYM2	**Yakumo 2**	**9.84**	**248**	P		**Pn**	**13 33 50.2**	**+1.0**
JSR	**Shiriuchi**	**10.12**	**245**	*e*S		**Sn**	**13 35 41.7**	**-3.4**
JANG	**Nango**	**10.16**	**237**	P		**Pn**	**13 33 51.3**	**-2.3**
JANG					*e*S	Sn	13 35 38.2	-7.9
JTM	**Tenmabayashi**	**10.16**	**240**	*e*S		**Sn**	**13 35 40.6**	**-5.4**
JTH	**Tanohata**	**10.25**	**234**	*e*S		Sn	13 35 39.7	-8.7
JOSM	**Okushiri--Mats**	**10.43**	**250**	P		**Pn**	**13 33 58.3**	**+1.0**
OFUJ	**Ofunato**	**10.96**	**231**	*e*S		Sn	13 35 57.8	-8.0
JRG	**Rokugo**	**11.32**	**235**	P		**Pn**	**13 34 08.2**	**-1.2**
JRG					*e*S	**Sn**	**13 36 09.0**	**-5.4**
JIO	**Ouri**	**11.59**	**230**	*e*S		Sn	13 36 12.1	-9.0
HABR	**Khabarovsk**	**12.07**	**286**	*ce*PN		**Pn**	**13 34 18.8**	**-0.8**
HABR					pmax	pmax		
	comp=N,15nm,2.2s							
HABR					pmax	pmax		
	comp=Z,15nm,2.2s							
HABR					pmax	pmax		
	comp=E,19nm,1.6s							
HABR					MLR	MLR		
	comp=Z,444nm,16.0s							
JYA	**Atsumi**	**12.39**	**235**	P		**Pn**	**13 34 23.3**	**-0.8**
JHO	**Hitachi**	**13.39**	**227**	S		Sn	13 36 56.0	-9.1
JHK	**Hiroka**	**13.73**	**232**	P		**Pn**	**13 34 40.9**	**-1.5**
JAG	**Ashikaga**	**14.11**	**229**	P		**Pn**	**13 34 46.0**	**-1.5**
JAG					S	**Sn**	**13 37 17.9**	**-4.6**
KLR	**Kul'dur**	**14.28**	**289**	*e*P		**Pn**	**13 34 49.3**	**-0.4**
KLR					pmax	pmax		
	comp=Z,64nm,1.8s							
KLR					MLR	MLR		
	comp=Z,1μm,13.0s							
MAJO	**Matsushiro**	**14.69**	**232**	*e*P		**Pn**	**13 34 53.0**	**-2.2**
MAJO	**Matsushiro**	**14.69**	**232**	*e*Pn		**Pn**	**13 34 53.0**	**-2.2**
MAT	**Matsushiro**	**14.69**	**232**	P		**Pn**	**13 34 53.6**	**-1.6**
MAT					*e*S	**Sn**	**13 37 37.0**	**+0.4**
MAT	**Matsushiro**	**14.69**	**232**	P		**Pn**	**13 34 53.5**	**-1.6**
MJAR	**Matsushiro Arr**	**14.69**	**232**	P		**Pn**	**13 34 53.6**	**-1.6**
MJAR	**Matsushiro Arr**	**14.69**	**232**	P		**Pn**	**13 34 53.6**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=33,slow=12,SNR=11							
MJAR					LR	LR	13 41 11.8	
	comp=Z,98nm,19.5s,baz=50,slow=39							
FX1	**Attu Island--F**	**14.69**	**57**	*e*Pn		Pn	13 34 51.5	-3.6
FX1	**Attu Island--F**	**14.69**	**57**	P		**Pn**	**13 34 53.1**	**-2.0**
	comp=Z,13nm,0.3s,baz=309,slow=4.5,SNR=34							
FX1					S	Sn	13 37 22.6	-14
	comp=Z,4.3nm,0.3s,baz=357,slow=22,SNR=8.9							
FX1					LR	LR	13 39 53.2	
	comp=Z,122nm,21.9s,baz=212,slow=34							
USRK	**Ussuriysk Arra**	**14.71**	**268**	P		**Pn**	**13 34 56.0**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=76,slow=12,SNR=26							
USRK					LR	LR	13 40 31.9	
	comp=Z,338nm,19.4s,baz=68,slow=37							
JNG	**Nsakai**	**14.85**	**232**	P		**Pn**	**13 34 55.8**	**-1.5**
JGN	**Niukaw**	**15.41**	**234**	P		**Pn**	**13 35 04.5**	**-0.2**
MDJ	**Mudanjiang**	**16.25**	**272**	P		**Pn**	**13 35 15.0**	**-0.2**
MDJ					pP	**pP**	**13 35 27.6**	**-1.2**
MDJ					sP	**sP**	**13 35 32.9**	**-2.2**
MDJ					S	**Sn**	**13 38 13.8**	**-0.6**
MDJ					ScP	**ScP**	**13 43 39.3**	**+2.3**
MDJ					PcS	**PcS**	**13 43 44.3**	**+1.9**
MDJ					pmax	pmax		
	comp=Z,6.0nm,1.5s							
MDJ					LR	LR		
	comp=N,180nm,19.7s							
MDJ					LR	LR		
	comp=E,190nm,22.3s							
MDJ					LR	LR		
	comp=Z,340nm,21.6s							
SEY	**Seymchan**	**16.45**	**360**	⇑*e*P		**P**	**13 35 20.0**	**+0.4**
ZEA	**Zeya**	**17.75**	**303**	*e*P		**P**	**13 35 34.2**	**+0.1**
ZEA					AMB	AMB	13 35 35.5	
	comp=Z,13nm,0.8s							
CN2	**Changchun**	**19.34**	**272**	*e*P		**Pn**	**13 35 52.8**	**-0.3**
CN2					*e*sP	**sP**	**13 36 09.0**	**-0.2**
CN2					*e*S	**S**	**13 39 21.5**	**-6.2**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CN2					LR	LR		
	comp=N,300nm,18.0s							
CN2					LR	LR		
	comp=E,200nm,18.0s							
CN2					LR	LR		
	comp=Z,300nm,18.0s							
CLNS	**Chul'man**	**19.93**	**311**	*e*P		**P**	**13 35 58.3**	**+0.3**
CLNS					pmax	pmax		
	comp=Z,11nm,0.6s							
CLNS					pmax	pmax		
	comp=N,5.0nm,0.6s							
CLNS					MLR	MLR		
	comp=Z,409nm,16.0s							
CLNS					MLR	MLR		
	comp=N,215nm,16.0s							
CLNS					MLR	MLR		
	comp=E,222nm,19.0s							
YAK	**Yakutsk**	**20.34**	**328**	*e*P		**P**	**13 36 02.9**	**+0.6**
YAK					*e**PP	pP	13 36 24.2	+10
YAK					*e*S	**S**	**13 39 46.5**	**-0.8**
YAK					*e*		13 40 12.6	
YAK					*e**SS	sS	13 40 19.4	+14
YAK					pmax	pmax		
	comp=Z,31nm,0.9s							
YAK					pmax	pmax		
	comp=N,12nm,1.1s							
YAK					pmax	pmax		
	comp=E,16nm,1.1s							
YAK					smax	smax		
	comp=N,65nm,2.3s							
YAK					smax	smax		
	comp=E,12nm,1.8s							
KSRS	**Korea Array**	**20.43**	**253**	P		Pn	13 36 05.9	0.0
	comp=E,8.0nm,0.7s,baz=56,slow=11,SNR=32							
KSRS					LR	LR	13 42 55.3	
	comp=E,148nm,21.3s,baz=359,slow=33							
KSAR	**Wonju Array Be**	**20.46**	**253**	P		Pn	13 36 05.9	-0.4
INCN	**Inchon**	**21.26**	**254**	*e*P		**P**	**13 36 15.7**	**+3.2**
	comp=E,22nm,0.7s							
JNU	**Nakatsue**	**21.33**	**239**	*e*P		**P**	**13 36 10.9**	**-2.4**
	comp=E,8.3nm,1.0s							
JNU	**Nakatsue**	**21.33**	**239**	P		**P**	**13 36 15.1**	**+1.8**
	comp=E,18nm,1.0s,baz=101,slow=4.2,SNR=6.8							
BILL	**Bilibino**	**22.69**	**13**	*e*P		**P**	**13 36 26.9**	**-0.5**
BILL					*i* *PP	**pP**	**13 36 40.3**	**+1.3**
BILL					pmax	pmax		
	comp=Z,6.0nm,0.8s							
BILL					MLR	MLR		
	comp=Z,100nm,16.0s							
BILL	**Bilibino**	**22.69**	**13**	*e*P		**P**	**13 36 25.6**	**-1.8**
	comp=Z,6.0nm,0.8s							
BJI	**Beijing**	**27.16**	**269**	P		**P**	**13 37 09.4**	**+0.4**
BJI					S	**S**	**13 41 45.3**	**+1.4**
BJI					pmax	pmax		
	comp=Z,11nm,0.6s							
BJI					pmax	pmax		
	comp=Z,73nm,3.9s							
BJI					LR	LR		
	comp=N,150nm,13.1s							
BJI					LR	LR		
	comp=E,320nm,16.1s							
BJI					LR	LR		
	comp=Z,200nm,22.2s							
HHC	**Hu-ho-hao-te**	**29.99**	**274**	*e*P		**P**	**13 37 34.4**	**+0.1**
HHC					PP	**PnPn**	**13 38 32.8**	**+0.4**
HHC					PcP	**PcP**	**13 40 36.8**	**+1.3**
HHC					S	**S**	**13 42 27.3**	**-1.5**
HHC					SS	**SnSn**	**13 44 06.3**	**+2.4**
HHC					ScP	**ScP**	**13 44 13.9**	**+0.5**
HHC					PcS	**PcS**	**13 44 19.3**	**+0.3**
HHC					ScS	**ScS**	**13 48 07.6**	**-1.3**
HHC					pmax	pmax		
	comp=Z,30nm,0.6s							
HHC					pmax	pmax		
	comp=Z,160nm,6.0s							
HHC					LR	LR		
	comp=N,390nm,13.4s							
HHC					LR	LR		
	comp=E,410nm,12.7s							
HHC					LR	LR		
	comp=Z,400nm,13.0s							
ULN	**Ulaanbaatar**	**30.67**	**289**	*e*P		**P**	**13 37 39.7**	**-0.6**
	comp=Z,7.8nm,0.9s							
SONM	**Songino Array**	**31.11**	**290**	P		**P**	**13 37 43.4**	**-0.7**
SONM					PcP	**PcP**	**13 40 39.1**	**+0.7**
SONM	**Songino Array**	**31.11**	**290**	P		**P**	**13 37 43.4**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=61,slow=8.5,SNR=7.7							
SONM					PcP	**PcP**	**13 40 39.1**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=116,slow=2.1,SNR=4.4							
SONM					LR	LR	13 51 17.3	
	comp=Z,256nm,18.8s,baz=360,slow=38							
TLY	**Talaya**	**32.00**	**298**	*e*P		**P**	**13 37 51.2**	**-0.6**
ZAK	**Zakamensk**	**32.49**	**295**	*e*P		**P**	**13 37 54.7**	**-1.5**
ZAK				*e*			13 40 41.2	
ZAK					pmax	pmax		
	comp=Z,2.0nm,1.0s							
GUMO	**Guam**	**33.48**	**194**	LR		LR	13 51 18.4	
	comp=Z,82nm,18.6s,baz=268,slow=35							
WHN	**Wuhan**	**33.56**	**255**	*e*P		**P**	**13 38 05.3**	**-0.3**
TPUB	**Ta-pu**	**34.64**	**239**	*e*P		**P**	**13 38 12.3**	**-2.8**
XAN	**Xi'an**	**35.18**	**265**	P		**P**	**13 38 20.5**	**+0.8**
XAN					pP	**pP**	**13 38 34.0**	**+1.4**
XAN					sP	**sP**	**13 38 40.5**	**+2.1**
XAN					pmax	pmax		
	comp=Z,4.0nm,0.9s							
XAN					pmax	pmax		
	comp=Z,12nm,4.8s							
XAN					LR	LR		
	comp=N,100nm,18.4s							
XAN					LR	LR		
	comp=E,35nm,16.3s							
XAN					LR	LR		
	comp=Z,52nm,17.3s							
TRF	**Thorofare Moun**	**35.42**	**41**	*e*P		**P**	**13 38 20.3**	**-1.3**
	comp=Z,7.2nm,1.0s							
COLD	**Coldfoot**	**35.70**	**34**	*e*P		**P**	**13 38 22.1**	**-1.6**
	comp=Z,5.6nm,0.8s							
SEW	**Seward**	**35.92**	**46**	*e*P		**P**	**13 38 24.0**	**-1.6**
MCK	**McKinley**	**36.03**	**40**	*e*P		**P**	**13 38 27.2**	**+0.6**
MCK					pmax	pmax		
	comp=Z,8.0nm,1.0s							
MCK	**McKinley**	**36.03**	**40**	*e*P		**P**	**13 38 27.2**	**+0.6**
	comp=Z,8.3nm,1.0s							
COLA	**College**	**36.51**	**38**	*e*P		**P**	**13 38 29.0**	**-1.6**
COLA					pmax	pmax		
	comp=Z,15nm,0.7s							
COLA	**College**	**36.51**	**38**	*e*P		**P**	**13 38 29.0**	**-1.6**
	comp=Z,15nm,0.7s							
ILAR	**Eielson Array**	**36.93**	**38**	P		**P**	**13 38 33.8**	**-0.4**
ILAR	**Eielson Array**	**36.93**	**38**	P		**P**	**13 38 33.8**	**-0.4**
	comp=Z,3.8nm,1.1s,baz=260,slow=7.9,SNR=30							
LZH	**Lanzhou**	**37.58**	**272**	*e*P		**P**	**13 38 42.5**	**+2.3**
LZH					pP	**pP**	**13 38 50.3**	**-2.9**
LZH					sP	**sP**	**13 38 57.5**	**-1.6**
LZH					*e*S	**S**	**13 44 26.0**	**-0.2**
LZH					SS	**SnSn**	**13 47 01.3**	**-6.6**
LZH					pmax	pmax		
	comp=Z,40nm,1.4s							
LZH					pmax	pmax		
	comp=Z,87nm,4.2s							
LZH					LR	LR		
	comp=N,300nm,14.7s							
LZH					LR	LR		
	comp=E,350nm,15.5s							
LZH					LR	LR		
	comp=Z,450nm,16.6s							
DOT	**Dot Lake**	**38.20**	**40**	*e*P		**P**	**13 38 43.0**	**-2.0**
	comp=Z,4.5nm,0.8s							
GTA	**Gaotai**	**38.69**	**279**	*e*P		**P**	**13 38 51.1**	**+1.6**
GTA					pP	**pP**	**13 39 03.3**	**+0.7**
GTA					sP	**sP**	**13 39 08.8**	**+0.4**
GTA					PcP	**PcP**	**13 41 02.4**	**+1.8**
GTA					S	**S**	**13 44 43.1**	**+0.2**
GTA					sS	**sS**	**13 45 04.5**	**-0.3**
GTA					SS	**SS**	**13 47 26.5**	**-7.8**
GTA					pmax	pmax		
	comp=Z,3.0nm,1.3s							
GTA					pmax	pmax		
	comp=Z,59nm,4.5s							
GTA					LR	LR		
	comp=N,77nm,15.2s							
GTA					LR	LR		
	comp=E,87nm,16.6s							
GTA					LR	LR		
	comp=Z,120nm,15.0s							
EGAK	**Eagle**	**39.38**	**38**	*e*P		**P**	**13 38 54.2**	**-0.6**
	comp=Z,10nm,0.9s							
CD2	**Chengdu**	**40.54**	**265**	P		**P**	**13 39 06.3**	**+1.4**
CD2					pP	**pP**	**13 39 19.3**	**+1.3**
CD2					sP	**sP**	**13 39 25.1**	**+1.3**
CD2					PP	**PnPn**	**13 40 43.9**	**+0.8**
CD2					PcS	**PcS**	**13 44 58.5**	**+1.2**
CD2					S	**S**	**13 45 11.3**	**+0.7**
CD2					sS	**sS**	**13 45 33.0**	**+0.4**
CD2					SS	**SS**	**13 48 06.6**	**-5.0**
CD2					pmax	pmax		
	comp=Z,20nm,0.5s							
CD2					pmax	pmax		
	comp=Z,120nm,5.2s							
CD2					LR	LR		
	comp=N,170nm,15.2s							
CD2					LR	LR		
	comp=Z,160nm,14.7s							
GYA	**Guiyang**	**41.35**	**257**

GYA LR LR
comp=Z,370nm,17.8s
ZALV Zalesovo Beam 42.49 306 *i* P **P 13 39 19.0 -1.5**
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV Zalesovo Beam 42.49 306 P **P 13 39 19.0 -1.5**
ZALV PcP **PcP 13 41 12.9 +0.6**
ZALV Zalesovo Beam 42.49 306 P **P 13 39 19.0 -1.5**
comp=Z,1.8nm,0.5s,baz=77,slow=7.2,SNR=9.5
ZALV PcP **PcP 13 41 12.9 +0.6**
comp=Z,5.7nm,0.8s,baz=64,slow=3.4,SNR=17
ZALV LR LR 13 58 08.9
comp=Z,378nm,18.9s,baz=68,slow=38
QIZ Qiongzhong 44.47 247 P **P 13 39 34.4 -2.4**
QIZ S **S 13 46 11.8 +3.4**
QIZ LR LR
comp=Z,120nm,12.7s
WMQ Urumqi 44.71 291 *e*P **P 13 39 40.6 +2.0**
WMQ pP **pP 13 39 52.9 +1.0**
WMQ sP **sP 13 39 58.3 +0.7**
WMQ PP **PP 13 41 26.3 +2.8**
WMQ PcS **PcS 13 45 15.5 +1.7**
WMQ S **S 13 46 12.8 +1.1**
WMQ sS **sS 13 46 33.6 -0.3**
WMQ ScS **ScS 13 49 31.9 +0.3**
WMQ pmax pmax
comp=Z,6.0nm,0.5s
WMQ pmax pmax
comp=Z,92nm,4.8s
WMQ LR LR
comp=N,190nm,12.8s
WMQ LR LR
comp=E,170nm,13.6s
WMQ LR LR
comp=Z,120nm,18.4s
KMI Kunming 44.89 259 P **P 13 39 41.9 +1.5**
KMI pP **pP 13 39 54.6 +0.9**
KMI sP **sP 13 40 00.3 +0.9**
KMI PP **PP 13 41 28.3 +2.5**
KMI S **S 13 46 15.8 +0.9**
KMI sS **sS 13 46 37.9 +0.8**
KMI SS ScS 13 49 26.3 -7.2
KMI pmax pmax
comp=Z,8.0nm,0.7s
KMI LR LR
comp=N,130nm,16.8s
KMI LR LR
comp=E,67nm,13.4s
KMI LR LR
comp=Z,97nm,19.7s
DLBC Dease Lake 45.98 46 *e*P **P 13 39 46.0 -2.5**
MK31 Makanchi Array 46.76 297 *e*P **P 13 39 52.9 -1.8**
MK31 Makanchi Array 46.76 297 *e*P **P 13 39 52.9 -1.8**
MKAR Makanchi Array 46.76 297 *i* P **P 13 39 53.7 -1.0**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 46.76 297 *e*P **P 13 39 53.8 -1.0**
MKAR PcP **PcP 13 41 27.7 +0.4**
MKAR Makanchi Array 46.76 297 P **P 13 39 53.7 -1.0**
comp=Z,2.6nm,0.7s,baz=70,slow=7.2,SNR=24
MKAR PcP **PcP 13 41 27.7 +0.4**
comp=Z,3.6nm,0.8s,baz=58,slow=3.2,SNR=8.3
MKAR LR LR 14 00 41.9
comp=Z,335nm,19.0s,baz=44,slow=38
KURK Kurchatov 47.23 304*c i* P **P 13 39 57.5 -0.7**
KURK pmax pmax
comp=Z,10.0nm,1.2s
KURK MLR MLR
comp=Z,191nm,17.0s
KURK Kurchatov 47.23 304 *e*P **P 13 39 56.5 -1.7**
comp=Z,5.8nm,0.7s
LSA Lhasa 49.97 273 *e*P **P 13 40 19.0 -1.1**
LSA pmax pmax
comp=Z,14nm,0.6s
LSA Lhasa 49.97 273 *e*P **P 13 40 18.9 -1.1**
comp=Z,14nm,0.6s
BRVK Borovoye 50.80 309⇑ *e*P **P 13 40 25.0 -0.5**
BRVK pmax pmax
comp=Z,6.0nm,1.2s
BRVK MLR MLR
comp=Z,218nm,20.0s
YKW3 Yellowknife Ar 51.26 36 *e*P P 13 40 25.1 -3.7
YKA Yellowknife Ar 51.30 36 P **P 13 40 29.1 0.0**
YKA pP **pP 13 40 42.5 -0.1**
YKA PcP **PcP 13 41 43.8 +0.4**
YKA Yellowknife Ar 51.30 36 P **P 13 40 29.1 0.0**
comp=Z,1.8nm,0.7s,baz=298,slow=7.2,SNR=21
YKA pP **pP 13 40 42.4 -0.1**
comp=Z,2.5nm,0.7s,baz=295,slow=7.0,SNR=10
YKA PcP **PcP 13 41 43.7 +0.4**
comp=Z,1.3nm,0.8s,baz=301,slow=3.8,SNR=5.2
CHTO Chiang Mai 51.76 256 *e*P **P 13 40 33.5 +0.4**
CHTO pmax pmax
comp=Z,12nm,0.9s
CHTO Chiang Mai 51.76 256 *e*P **P 13 40 33.5 +0.4**
comp=Z,12nm,0.9s
CM31 Chiang Mai Arr 52.01 256 *e*P **P 13 40 34.5 -0.5**
comp=Z,6.7nm,0.9s
CMAR Chiang Mai Arr 52.01 256 P **P 13 40 36.5 +1.6**
CMAR Chiang Mai Arr 52.01 256 P **P 13 40 36.5 +1.6**
comp=Z,6.2nm,0.8s,baz=35,slow=7.5,SNR=34
CMAR LR LR 14 03 51.3
comp=Z,84nm,18.1s,baz=238,slow=37
TKM2 Tokmak 2 52.81 296 *e*P **P 13 40 40.7 -0.2**
TKM2 pmax pmax
comp=Z,6.0nm,1.2s
TKM2 Tokmak 2 52.81 296 *e*P **P 13 40 40.7 -0.2**
comp=Z,5.6nm,1.2s
AAK Ala-Archa 53.65 296⇓ *e*P **P 13 40 46.7 -0.3**
AAK pmax pmax
comp=Z,10.0nm,0.8s
AAK MLR MLR
comp=Z,496nm,19.0s
AAK Ala-Archa 53.65 296 *e*P **P 13 40 46.4 -0.6**
comp=Z,0.9nm,0.9s
TAPN Taplejung 53.79 273 *e*P **P 13 40 49.3 +0.9**
comp=Z,37nm,0.9s
EKS2 Erkin-Say 54.08 297 *e*P **P 13 40 50.7 +0.6**
EKS2 pmax pmax
comp=Z,5.0nm,0.8s
EKS2 Erkin-Say 54.08 297 *e*P **P 13 40 50.7 +0.6**
comp=Z,4.6nm,0.8s
ODAN Odare 54.32 273 *e*P **P 13 40 53.4 +1.2**
KSH Kashi 54.45 292 *e*P P 13 40 59.0 +6.2
KSH *ep*P pP 13 41 11.8 +5.4
KSH *es*P sP 13 41 17.1 +5.0
KSH *e*PcP PcP 13 42 03.1 +7.2
KSH *e*PP PP 13 43 02.3 +7.3
KSH *e*PcS PcS 13 46 01.3 +5.7
KSH *e*S S 13 48 34.1 +6.2
KSH *e*ScS **ScS 13 50 41.0 +3.3**
KSH *e*SS **SS 13 52 11.3 +1.1**
KSH pmax pmax
comp=Z,3.0nm,0.4s
KSH pmax pmax
comp=Z,89nm,3.4s
GUN Gumba 54.70 275 *e*P **P 13 40 56.1 +1.0**
RAMN Ramite 54.81 273 *e*P **P 13 40 56.8 +1.0**
comp=Z,92nm,0.9s
ARU Arti 54.97 317*d i* P **P 13 40 55.0 -1.1**
ARU 13 41 56.8
ARU S **S 13 48 33.2 -0.9**
ARU pmax pmax
comp=Z,6.0nm,1.2s
KKN Kakani 55.19 275 *e*P **P 13 41 00.1 +1.6**
comp=Z,48nm,0.7s
PKI Pulchoki 55.24 275 *e*P **P 13 41 00.0 +1.0**
comp=Z,71nm,1.1s
PKIN Phulchoki 55.24 275 *e*P **P 13 41 00.0 +1.1**
comp=Z,29nm,0.9s
DMN Daman 55.42 275 *e*P **P 13 41 01.5 +1.3**
comp=Z,94nm,0.9s
KKAR Karatay Array 55.83 299 *e*P **P 13 41 03.0 +0.4**
KKAR Karatay Array 55.83 299 *e*P **P 13 41 03.0 +0.4**
DANN Dangsing 55.88 277 *e*P **P 13 41 04.9 +1.4**
comp=Z,81nm,0.7s
HNR Honiara 56.08 171 LR LR 14 00 27.6
comp=Z,58nm,21.2s,baz=284,slow=31
KOLN Koldanda 56.36 276 *e*P **P 13 41 08.0 +1.2**
comp=Z,62nm,0.8s
PYUN Piuthan 56.57 277 *e*P **P 13 41 09.4 +1.1**
comp=Z,151nm,1.0s
ARCES ARCESS Array B 57.96 341 P **P 13 41 16.1 -1.1**
ARCES ARCESS Array B 57.96 341 P **P 13 41 16.1 -1.1**
comp=Z,1.1nm,0.8s,baz=30,slow=9.8,SNR=7.4

ARCES LR LR 14 12 01.8
comp=Z,75nm,18.3s,baz=274,slow=42
ABKAR Akbulak array 58.33 310 *e*P **P 13 41 19.5 -0.7**
WALA Waterton Lakes 58.83 50 *e*P **P 13 41 22.6 -1.2**
comp=Z,0.2nm,1.3s
B13A Whitefish 58.94 51⇑P **P 13 41 24.9 +0.4**
baz=59,SNR=5.4
A14A Double T Ranch 59.14 50⇑P **P 13 41 25.9 -0.1**
baz=59
C13A Hot Springs 59.30 52⇑P **P 13 41 27.0 +0.1**
baz=59
BMO Blue Mountains 59.47 56 *e*P **P 13 41 28.3 +0.1**
comp=Z,5.3nm,1.0s
MOD Modoc 59.48 60 *e*P P 13 41 24.0 -4.5
A15A Johnson Ranch, 59.50 50⇑P **P 13 41 28.3 -0.2**
baz=59
B14A Marquette Ranc 59.59 50⇑P **P 13 41 29.1 +0.1**
baz=59
D13A Huson 59.71 52⇓P **P 13 41 29.7 -0.2**
baz=60
B15A Bradely Ranch, 59.99 50⇑P **P 13 41 31.7 -0.1**
baz=60
F12A Elk City 60.08 54⇑P **P 13 41 32.6 +0.2**
baz=60
SLMT Seeley Lake 60.15 52 *e*P **P 13 41 32.8 -0.1**
WVOR Wild Horse Val 60.15 59 *e*P **P 13 41 33.3 +0.3**
WVOR pmax pmax
comp=Z,10.0nm,1.1s
WVOR Wild Horse Val 60.15 59 *e*P **P 13 41 33.3 +0.3**
comp=Z,9.7nm,1.1s
MSO Missoula 60.15 52 *e*P **P 13 41 33.8 +0.9**
comp=Z,7.5nm,1.1s
MSO Missoula 60.15 52⇑P **P 13 41 32.7 -0.2**
baz=60
D14A Greenough 60.24 52⇓P **P 13 41 33.5 0.0**
baz=60,SNR=6.8
E13A Victor 60.25 53⇑P **P 13 41 33.8 +0.2**
baz=60
C15A Salmond Ranch, 60.30 51⇓P **P 13 41 33.9 -0.1**
baz=60,SNR=8.8
F13A Darby 60.57 53⇑P **P 13 41 36.0 +0.1**
baz=60
A17A Triple J Farms 60.59 49⇓P **P 13 41 35.4 -0.4**
baz=60,SNR=5.3
E14A Clinton 60.65 52⇓P **P 13 41 36.6 +0.2**
baz=60
KULM Kulim 60.69 244 *e*P **P 13 41 38.4 +1.6**
comp=Z,9.1nm,0.8s
C16A Fuhringer Ranc 60.74 50⇓P **P 13 41 37.1 +0.2**
baz=60
B17A L&G Farms, Che 60.94 49⇓P **P 13 41 38.0 -0.2**
baz=61
SUMG Summit 60.95 4 *e*P **P 13 41 38.2 -0.1**
SUMG pmax pmax
comp=Z,14nm,0.9s
SUMG Summit 60.95 4 *e*P **P 13 41 38.2 -0.1**
comp=Z,14nm,0.9s
G13A Cobalt 61.05 54⇑P **P 13 41 39.5 +0.4**
baz=61
E15A Deer Lodge 61.11 52⇑P **P 13 41 39.5 0.0**
baz=61
FFC Flin Flon 61.12 40 *e*P **P 13 41 37.6 -1.6**
FFC pmax pmax
comp=Z,9.0nm,0.9s
FFC Flin Flon 61.12 40 *e*P **P 13 41 37.6 -1.6**
comp=Z,9.3nm,0.9s
D16A Dana Ranch, Ca 61.32 51⇑P **P 13 41 41.5 +0.6**
baz=61
C17A Wharram Farm, 61.37 50⇑P **P 13 41 40.4 -0.7**
baz=61
H13A Challis 61.37 54⇑P **P 13 41 41.3 0.0**
baz=61
JOF Joensuu 61.40 334 *e*P **P 13 41 38.9 -2.0**
JOF pmax pmax
comp=Z,4.0nm,0.7s
JOF Joensuu 61.40 334 *ep* **P 13 41 38.9 -2.0**
comp=Z,4.1nm,0.7s
B18A Beardsley Farm 61.41 49⇓P **P 13 41 41.4 0.0**
baz=61,SNR=5.3
F15A Butte 61.55 52⇓P **P 13 41 42.7 +0.2**
baz=61,SNR=5.5
E16A East Helena 61.56 51⇓P **P 13 41 42.5 0.0**
baz=61
LRM Limekiln Ridge 61.59 52 *e*P **P 13 41 42.5 -0.3**
A19A Klindworth Far 61.60 48⇑P **P 13 41 43.0 +0.4**
baz=61
EGMT Eagleton 61.65 49 *e*P **P 13 41 43.7 +0.7**
comp=Z,13nm,1.3s
EGMT Eagleton 61.65 49⇓P **P 13 41 42.9 -0.1**
baz=61,SNR=5.9
D17A Six Diamond Ra 61.71 50⇓P **P 13 41 43.6 +0.1**
baz=61,SNR=5.8
B19A Brinkman Farms 61.80 48⇓P **P 13 41 43.9 -0.1**
baz=62,SNR=7.0
H14A Leadore 61.83 54⇑P **P 13 41 44.3 -0.2**
baz=62
I13A Wildhorse Cree 61.85 55⇑P **P 13 41 44.5 -0.2**
baz=62
KBL Kabul 61.85 292 *e*P **P 13 41 45.0 +0.2**
KBL pmax pmax
comp=Z,10.0nm,1.0s
KBL Kabul 61.85 292 *e*P **P 13 41 45.0 +0.2**
comp=Z,10.0nm,1.0s
HLID Hailey 61.90 55 *e*P **P 13 41 46.3 +1.4**
comp=Z,5.2nm,1.1s
HLID Hailey 61.90 55⇑P **P 13 41 45.1 +0.2**
baz=62
G15A Dillon 61.98 53⇓P **P 13 41 45.6 +0.2**
baz=62
MCMT McKenzie Canyo 61.99 53 *e*P **P 13 41 45.9 +0.3**
comp=Z,1.1nm,0.9s
E17A Martinsdale 62.05 51⇓P **P 13 41 46.4 +0.5**
baz=62
F16A Kennard Place, 62.06 52⇓P **P 13 41 46.1 +0.3**
baz=62
J13A Cove Ranch, Pi 62.14 55⇓P **P 13 41 46.9 +0.4**
baz=62
BOZ Bozeman (W) 62.15 52 *e*P **P 13 41 45.5 -1.0**
BOZ pmax pmax
comp=Z,5.0nm,1.4s
BOZ Bozeman (W) 62.15 52 *e*P **P 13 41 45.5 -1.0**
comp=Z,5.2nm,1.4s
D18A Linhart Farms, 62.15 50⇑P **P 13 41 46.5 +0.1**
baz=62
C19A Slack Wire Ran 62.20 49⇓P **P 13 41 46.6 -0.1**
baz=62,SNR=7.2
I14A Mackay 62.22 55⇓P **P 13 41 47.3 +0.2**
baz=62
H15A Lima 62.23 54⇓P **P 13 41 47.4 +0.2**
baz=62
B20A Solberg Farm, 62.28 48⇓P **P 13 41 47.3 0.0**
baz=62
G16A Moss Hill, Enn 62.31 53⇑P **P 13 41 47.6 0.0**
baz=62
E18A Harlowton 62.49 50⇓P **P 13 41 48.8 +0.1**
baz=62
J14A Carey 62.56 55⇓P **P 13 41 50.0 +0.7**
baz=62
C20A Veseth Ranch, 62.76 49⇓P **P 13 41 50.9 +0.5**
baz=62
NVAR Mina Array Bea 62.82 62 P **P 13 41 51.9 +0.7**
NVAR pP **pP 13 42 05.8 +0.7**
NVAR Mina Array Bea 62.82 62 P **P 13 41 51.9 +0.7**
comp=Z,1.6nm,0.8s,baz=292,slow=6.9,SNR=9.6
NVAR pP **pP 13 42 05.8 +0.7**
comp=Z,4.3nm,0.9s,baz=286,slow=6.6,SNR=11
H16A Russell Place, 62.95 53⇓P **P 13 41 52.1 +0.2**
baz=63
A22A Carney Farms, 62.99 46⇓P **P 13 41 51.3 -0.6**
baz=63,SNR=6.6
F18A Big Timber 63.02 51⇓P **P 13 41 52.1 -0.1**
baz=63
D20A Manuel Ranch, 63.09 49⇓P **P 13 41 53.3 +0.7**
baz=63
GCMT Greycliff 63.12 51 *e*P **P 13 41 54.1 +1.1**
comp=Z,12nm,1.5s
C21A Desert Coulee 63.15 48⇓P **P 13 41 53.4 +0.4**
baz=63
E19A Rath Farm, Rou 63.15 50⇓P **P 13 41 53.1 0.0**
baz=63
F19A Roth Farm, Mol 63.46 51⇑P **P 13 41 55.3 +0.1**
baz=63
KAF Kangasniemi 63.52 335 *e*P **P 13 41 53.2 -1.9**
KAF pmax pmax
comp=Z,5.0nm,0.6s
KAF Kangasniemi 63.52 335 *ep* **P 13 41 53.2 -1.9**
comp=Z,5.4nm,0.6s
H17A Grant Village 63.52 53⇓P **P 13 41 56.8 +1.0**
baz=63
IMW Indian Meadow 63.64 53 *e*P **P 13 41 58.3 +1.7**
comp=Z,5.0nm,1.0s
RRI2 Red Ridge 63.78 54 *e*P **P 13 41 57.2 -0.3**
comp=Z,8.4nm,0.8s
B23A Brockton 63.80 46⇑P **P 13 41 57.3 0.0**
baz=64
H18A Shoshone NF, C 63.84 52⇑P **P 13 41 58.1 +0.3**
baz=64
MOOW Moose Ponds 63.84 53 *e*P **P 13 41 59.4 +1.5**
comp=Z,5.7nm,1.2s
TPAW Teton Pass 63.89 54 *e*P **P 13 42 00.0 +1.8**
comp=Z,12nm,1.1s
A24A Westby 63.99 46⇑P **P 13 41 59.1 +0.6**
baz=64
FINES FINESS Array B 64.11 335 P **P 13 41 58.1 -0.9**
FINES FINESS Array B 64.11 335 P **P 13 41 58.1 -0.9**
comp=Z,8.1nm,0.6s,baz=38,slow=9.6,SNR=28
FINES LR LR 14 12 32.1
comp=Z,77nm,18.2s,baz=90,slow=38
C23A Lambert 64.14 47⇑P **P 13 42 00.2 +0.6**
baz=64
DGMT Dagmar 64.19 46⇓P **P 13 41 60.0 +0.1**
baz=64
CWC Cottonwood Cre 64.22 64⇓P **P 13 42 00.9 +0.5**
baz=64
G20A Bridger 64.26 51⇓P **P 13 42 00.9 +0.4**
baz=64
GRAC Grapevine Rang 64.30 63⇑P **P 13 42 01.9 +1.1**
baz=64
ISA Isabella 64.48 64 *e*P **P 13 42 01.5 -0.5**
ISA pmax pmax
comp=Z,2.0nm,0.6s
ISA Isabella 64.48 64 *e*P **P 13 42 01.5 -0.5**
comp=Z,1.6nm,0.6s
R11A Troy Canyon, C 64.52 61⇓P **P 13 42 02.4 +0.1**
baz=64
I19A Meeteetse 64.62 52⇑P **P 13 42 03.1 +0.2**
baz=64
BSC Santa Cruz Isl 64.82 67⇓P **P 13 42 04.9 +0.7**
baz=65
MPMC Manual Prospec 64.83 64⇑P **P 13 42 04.6 +0.2**
baz=65
F22A Rosebud 64.93 49⇓P **P 13 42 04.9 +0.2**
baz=65
E23A Ismay 64.95 48⇑P **P 13 42 05.6 +0.8**
baz=65
FURC Furnace Creek, 64.95 63⇑P **P 13 42 05.6 +0.7**
baz=65
DUG Dugway 64.97 57 *e*P **P 13 42 06.1 +0.9**
DUG pmax pmax
comp=Z,15nm,1.2s
DUG Dugway 64.97 57 *e*P **P 13 42 06.1 +0.9**
comp=Z,15nm,1.2s
DUG Dugway 64.97 57⇓P **P 13 42 05.2 0.0**
baz=65
D24A Glendive 65.03 47⇓P **P 13 42 05.8 +0.4**
baz=65
J19A Crowheart 65.09 53⇑P **P 13 42 06.5 +0.5**
baz=65
BW06 Boulder Array 65.14 54 *e*P **P 13 42 06.5 +0.2**
comp=Z,6.4nm,1.6s
PDAR Pinedale Array 65.14 54 P **P 13 42 06.5 +0.2**
PDAR pP **pP 13 42 20.6 +0.3**
PDAR Pinedale Array 65.14 54 P **P 13 42 06.5 +0.2**
comp=Z,2.2nm,1.0s,baz=288,slow=2.3,SNR=12
PDAR pP **pP 13 42 20.6 +0.3**
comp=Z,4.4nm,0.9s,baz=318,slow=2.0,SNR=11
PDAR LR LR 14 08 30.0
comp=Z,55nm,18.6s,baz=272,slow=34
I20A Worland 65.14 52⇑P **P 13 42 06.3 0.0**
baz=65
EDW2 Edwards Air Fo 65.28 65⇓P **P 13 42 07.6 +0.4**
baz=65
G22A Birney 65.28 50⇓P **P 13 42 07.1 0.0**
baz=65
M17A Scullys Gap (B 65.36 55⇑P **P 13 42 07.7 -0.1**
baz=65
F23A Volborg 65.42 49⇓P **P 13 42 08.3 +0.4**
baz=65
I21A Big Trails, Te 65.69 51⇓P **P 13 42 10.2 +0.4**
baz=65
GSC Goldstone 65.75 64 *ep*P pP 13 42 24.8 +0.7
F24A Ekalaka 65.83 48⇑P **P 13 42 10.6 0.0**
baz=66
I22A 9 Mile Ranch, 66.07 51⇑P **P 13 42 12.5 +0.3**
baz=66
HEC Hector,Ludlow 66.35 64⇑P **P 13 42 14.5 +0.5**
baz=66
CCUT Cedar City 66.37 60 *e*P **P 13 42 15.4 +1.1**
comp=Z,5.5nm,1.0s
MVU Marysvale 66.42 58 *e*P **P 13 42 13.0 -1.7**
comp=Z,3.4nm,1.0s
H24A Dirks Ranch, A 66.52 49⇑P **P 13 42 14.9 -0.1**
baz=66
CTA Charters Tower 66.55 187 P **P 13 42 15.2 0.0**
CTA Charters Tower 66.55 187 P **P 13 42 15.2 0.0**
comp=Z,1.1nm,0.3s,baz=41,slow=11,SNR=4.4
K22A Casper 66.88 52⇓P **P 13 42 17.9 +0.4**
baz=67
LDFC Landfair 66.94 63 *e*P **P 13 42 17.9 0.0**
comp=Z,34nm,1.3s
SRU San Rafael 67.01 57⇑P **P 13 42 19.0 +0.6**
baz=67
M21A Separation Pea 67.13 53⇑P **P 13 42 18.7 -0.4**
baz=67
N20A Spence Gulch, 67.15 54⇑P **P 13 42 19.9 +0.6**
baz=67
RSSD Black Hills 67.21 49 *e*P **P 13 42 19.9 +0.3**
RSSD pmax pmax
comp=Z,7.0nm,0.8s
RSSD Black Hills 67.21 49 *e*P **P 13 42 19.9 +0.3**
comp=Z,6.6nm,0.8s
M22A Cedar Creek Ra 67.69 53⇓P **P 13 42 22.6 -0.1**
baz=67
L23A Garrett 67.69 52⇑P **P 13 42 22.8 +0.1**
baz=67
U15A North Rim 67.76 60⇑P **P 13 42 24.1 +0.9**
baz=68
WRA Warramunga Arr 68.19 199 P **P 13 42 26.1 +0.5**
WRA Warramunga Arr 68.19 199 P **P 13 42 26.1 +0.5**
comp=Z,0.8nm,0.6s,baz=23,slow=7.0,SNR=12
S18A Hurst Farm, BI 68.27 58⇓P **P 13 42 26.1 -0.3**
baz=68
NB2 NORSAR Subarra 68.34 341 P **P 13 42 25.4 -0.8**
comp=Z,12nm,0.8s,baz=27,slow=6.5
NOA NORSAR Array B 68.34 341 P **P 13 42 25.3 -0.9**
NOA NORSAR Array B 68.34 341 P **P 13 42 25.3 -0.9**
comp=Z,11nm,0.8s,baz=27,slow=6.3,SNR=32
NOA LR LR 14 16 45.0
comp=Z,51nm,18.4s,baz=35,slow=40
N23A Red Feather La 68.39 53⇓P **P 13 42 27.3 +0.2**
baz=68
P21A Newcastle 68.49 55⇑P **P 13 42 27.5 -0.2**
baz=68
NAO01 NORSAR Array S 68.59 341 *e*P **P 13 42 26.6 -1.1**
comp=Z,12nm,1.0s
M24A Cheyenne 68.61 52⇓P **P 13 42 28.5 +0.1**
baz=68
PV01 Paradox Valley 68.80 57 *e*P **P 13 42 29.2 -0.4**
comp=Z,326nm,0.7s
WUAZ Wupatki 68.92 60⇑P **P 13 42 31.2 +0.8**
baz=69
SMCO Snowmass 69.00 55 *e*P **P 13 42 31.3 +0.2**
comp=Z,5.8nm,0.8s
S20A Disappointment 69.12 57⇑P **P 13 42 32.3 +0.6**
baz=69
R21A Cimarron 69.22 56⇓P **P 13 42 32.7 +0.4**
baz=69
ISCO Idaho Springs 69.33 54 *e*P **P 13 42 32.7 -0.4**
ISCO pmax pmax
comp=Z,11nm,1.2s
ISCO Idaho Springs 69.33 54 *e*P **P 13 42 32.7 -0.4**
comp=Z,11nm,1.2s
ISCO Idaho Springs 69.33 54⇑P **P 13 42 33.6 +0.5**
baz=69
MVCO Mesa Verde 69.47 57 *e*P **P 13 42 33.9 0.0**
comp=Z,11nm,1.1s
X16A Lo Mia Camp, P 69.62 61⇓P **P 13 42 34.8 +0.1**
baz=69
S22A 4UR Ranch, Cre 70.06 56⇓P **P 13 42 37.9 +0.4**
baz=70
R23A Moffat 70.33 55⇑P **P 13 42 39.8 +0.6**
baz=70
P25A Willow Gulch B 70.33 53⇑P **P 13 42 39.0 -0.1**
baz=70
EYMN Ely 70.55 40 *e*P **P 13 42 39.6 -0.4**
comp=Z,7.7nm,1.0s

R24A	**Sanders Place,**	**70.70**	**55**	⇑P		**P**		**13 42 41.7**	**+0.3**
	baz=70								
Q25A	**Bedland, Calha**	**70.71**	**54**	⇓P		**P**		**13 42 41.8**	**+0.4**
	baz=70								
KIV	**Kislovodsk**	**70.73**	**314**	*i* P		**P**		**13 42 43.6**	**+2.3**
KBZ	**Khabaz**	**70.79**	**314**	P		**P**		**13 42 42.1**	**+0.6**
KBZ				pmax	pmax				
	comp=Z,5.0nm,0.8s								
KBZ				MLR	MLR				
	comp=Z,128nm,18.7s								
KBZ	**Khabaz**	**70.79**	**314**	P		**P**		**13 42 42.0**	**+0.6**
KBZ	**Khabaz**	**70.79**	**314**	P		**P**		**13 42 42.0**	**+0.6**
	comp=Z,5.0nm,0.8s,baz=351,slow=1.7,SNR=14								
KBZ				LR	LR			14 18 27.1	
	comp=Z,128nm,18.7s,baz=274,slow=40								
SDCO	**Great Sand Dun**	**70.82**	**55**	*e*P		**P**		**13 42 42.6**	**+0.4**
	comp=Z,7.5nm,1.4s								
Q26A	**Hugo**	**71.10**	**53**	⇓P		**P**		**13 42 43.7**	**0.0**
	baz=71								
R25A	**Fountain Ranch**	**71.22**	**54**	⇓P		**P**		**13 42 44.5**	**0.0**
	baz=71								
ECSD	**EROS Data Cent**	**71.27**	**46**	*e*P		**P**		**13 42 44.3**	**-0.2**
	comp=Z,11nm,1.1s								
AKASG	**Malin Array Be**	**71.56**	**326**	P		**P**		**13 42 45.2**	**-0.8**
AKASG				pmax	pmax				
	comp=Z,9.0nm,0.6s								
AKASG				MLR	MLR				
	comp=Z,107nm,19.9s								
AKASG	**Malin Array Be**	**71.56**	**326**	P		**P**		**13 42 45.2**	**-0.8**
AKASG	**Malin Array Be**	**71.56**	**326**	P		**P**		**13 42 45.2**	**-0.8**
	comp=Z,9.2nm,0.6s,baz=33,slow=6.1,SNR=20								
AKASG				LR	LR			14 16 10.1	
	comp=Z,107nm,19.9s,baz=30,slow=38								
AK01	**Malin Array Si**	**71.57**	**326**	*e*P		**P**		**13 42 45.2**	**-0.8**
KIEV	**Kiev**	**71.57**	**326**	*e*P		**P**		**13 42 45.1**	**-1.0**
KIEV				pmax	pmax				
	comp=Z,11nm,0.7s								
KIEV	**Kiev**	**71.57**	**326**	*e*P		**P**		**13 42 45.1**	**-1.0**
	comp=Z,11nm,0.7s								
R26A	**Arlington**	**71.58**	**54**	⇓P		**P**		**13 42 46.7**	**+0.2**
	baz=71								
AK02	**Malin Array Si**	**71.60**	**326**	*e*P		**P**		**13 42 44.1**	**-2.1**
T25A	**Trinidad**	**71.86**	**55**	⇑P		**P**		**13 42 48.6**	**+0.2**
	baz=72								
AS31	**Alice Springs**	**71.89**	**198**	*e*P		**P**		**13 42 48.3**	**0.0**
ASAR	**Alice Springs**	**71.89**	**198**	P		**P**		**13 42 49.8**	**+1.6**
ASAR	**Alice Springs**	**71.89**	**198**	P		**P**		**13 42 49.8**	**+1.6**
	comp=Z,2.4nm,0.6s,baz=10,slow=5.4,SNR=59								
S26A	**Kim**	**72.05**	**54**	⇑P		**P**		**13 42 49.8**	**+0.4**
	baz=72								
LAZ	**Ladron**	**72.21**	**59**	*e*P		**P**		**13 42 50.6**	**+0.2**
	comp=Z,3.7nm,1.3s								
ANMO	**Albuquerque**	**72.23**	**58**	*e*P		**P**		**13 42 50.6**	**0.0**
	comp=Z,4.4nm,1.0s								
ANMO	**Albuquerque**	**72.23**	**58**	LR		LR		14 10 40.1	
	comp=Z,32nm,21.4s,baz=80,slow=32								
T26A	**Comanche Natio**	**72.30**	**55**	⇓P		**P**		**13 42 51.0**	**0.0**
	baz=72								
U25A	**Circle Dot Ran**	**72.39**	**56**	⇓P		**P**		**13 42 51.9**	**+0.4**
	baz=72								
120A	**U Bar Ranch, L**	**72.61**	**61**	⇓P		**P**		**13 42 52.7**	**-0.1**
	baz=72,SNR=5.6								
W24A	**Lazy 6 Ranch,**	**72.65**	**57**	⇑P		**P**		**13 42 53.4**	**+0.3**
	baz=72								
R29A	**Marienthal**	**72.77**	**52**	⇓P		**P**		**13 42 53.8**	**+0.2**
	baz=72								
U26A	**Atchley Ranch,**	**72.77**	**55**	⇑P		**P**		**13 42 53.8**	**0.0**
	baz=72								
T27A	**Campo**	**72.87**	**54**	⇑P		**P**		**13 42 54.2**	**-0.1**
	baz=73								
319A	**Douglas**	**73.03**	**62**	⇑P		**P**		**13 42 55.3**	**0.0**
	baz=73,SNR=7.7								
Z22A	**Elephant Butte**	**73.11**	**59**	⇓P		**P**		**13 42 56.0**	**+0.2**
	baz=73								
W25A	**X Bar L Ranch,**	**73.19**	**56**	⇑P		**P**		**13 42 56.1**	**-0.1**
	baz=73								
SCHQ	**Schefferville**	**73.64**	**23**	P		**P**		**13 42 58.0**	**-0.3**
SCHQ	**Schefferville**	**73.64**	**23**	P		**P**		**13 42 58.0**	**-0.3**
	comp=Z,5.2nm,1.0s,baz=336,slow=10.0,SNR=3.2								
SCHQ				LR		LR		14 18 00.6	
	comp=Z,47nm,21.1s,baz=315,slow=38								
Z26A	**Caprock**	**74.86**	**58**	⇓P		**P**		**13 43 05.6**	**-0.4**
	baz=75,SNR=6.4								
125A	**Gardner Draw,**	**74.90**	**58**	⇓P		**P**		**13 43 06.3**	**+0.1**
	baz=75								
Z27A	**Tatum**	**75.27**	**57**	⇑P		**P**		**13 43 07.8**	**-0.5**
	baz=75,SNR=7.5								
OJC	**Ojcow**	**75.37**	**331**	*e*P		**P**		**13 43 08.6**	**+0.1**
OJC				pmax	pmax				
	comp=Z,8.0nm,0.8s								
OJC	**Ojcow**	**75.37**	**331**	*e*P		**P**		**13 43 08.6**	**+0.1**
	comp=Z,7.9nm,0.8s								
OJC	**Ojcow**	**75.37**	**331**	*e*P		**P**		**13 43 08.2**	**-0.2**
BUR08	**Bucovina Ar. S**	**75.58**	**326**	*e*P		**P**		**13 43 09.9**	**0.0**
KOLS	**Kolonicke sedl**	**75.60**	**329**	*e*P		**P**		**13 43 09.8**	**0.0**
KOLS				pmax	pmax				
	comp=Z,7.0nm,0.9s								
KOLS	**Kolonicke sedl**	**75.60**	**329**	*e*P		**P**		**13 43 09.8**	**0.0**
BURAR	**Bucovina Array**	**75.60**	**326**	⇑*i*P		**P**		**13 43 10.4**	**+0.4**
NIE	**Niedzica**	**75.87**	**330**	*e*P		**P**		**13 43 10.9**	**-0.5**
NIE	**Niedzica**	**75.87**	**330**	*e*P		**P**		**13 43 10.9**	**-0.5**
CRVS	**Cervenica-Dubn**	**75.91**	**329**	*e*P		**P**		**13 43 09.9**	**-1.7**
CRVS				pmax	pmax				
	comp=Z,5.0nm,1.1s								
CRVS	**Cervenica-Dubn**	**75.91**	**329**	*e*P		**P**		**13 43 09.9**	**-1.7**
TESR	**Tescani**	**75.95**	**325**	⇓*i*P		**P**		**13 43 11.8**	**0.0**
425A	**Indio Mountain**	**76.05**	**60**	⇑P		**P**		**13 43 12.2**	**-0.6**
	baz=76,SNR=5.5								
TRPA	**Tarpa**	**76.17**	**328**	⇑*i*P		**P**		**13 43 13.0**	**0.0**
OKC	**Ostrava-Krasne**	**76.24**	**332**	*e*P		**P**		**13 43 12.9**	**-0.5**
OKC	**Ostrava-Krasne**	**76.24**	**332**	*e*P		**P**		**13 43 12.9**	**-0.5**
UPC	**Upice**	**76.34**	**333**	*i* P		**P**		**13 43 14.1**	**+0.1**
UPC	**Upice**	**76.34**	**333**	*i* P		**P**		**13 43 14.1**	**+0.1**
DPC	**Dobruska-Polom**	**76.38**	**333**	*i* P		**P**		**13 43 14.4**	**+0.1**
DPC	**Dobruska-Polom**	**76.38**	**333**	*e*P		**P**		**13 43 14.3**	**+0.1**
	comp=Z,12nm,0.9s								
DPC	**Dobruska-Polom**	**76.38**	**333**	*i* P		**P**		**13 43 14.4**	**+0.1**
CFR	**Carcaliu**	**76.43**	**323**	⇓P		**P**		**13 43 14.5**	**0.0**
CFR	**Carcaliu**	**76.43**	**323**	⇓*i*P		**P**		**13 43 14.5**	**0.0**
MORC	**Moravsky Berou**	**76.49**	**332**	*e*P		**P**		**13 43 14.7**	**-0.2**
MORC				pmax	pmax				
	comp=Z,11nm,0.9s								
MORC	**Moravsky Berou**	**76.49**	**332**	*e*P		**P**		**13 43 14.7**	**-0.2**
	comp=Z,11nm,0.9s								
MORC	**Moravsky Berou**	**76.49**	**332**	⇑*i*P		**P**		**13 43 14.4**	**-0.5**
Z30A	**Sanderson Ranc**	**76.50**	**56**	⇑P		**P**		**13 43 15.1**	**-0.1**
	baz=76,SNR=5.6								
CLL	**Collm**	**76.54**	**335**	*e*P		**P**		**13 43 14.3**	**-0.8**
	comp=Z,20nm,0.9s								
CLL	**Collm**	**76.54**	**335**	⇑*i*P		**P**		**13 43 14.3**	**-0.8**
CLL				*e**PP		**pP**		**13 43 29.0**	**-0.3**
CLL				pmax	pmax				
	comp=Z,20nm,0.9s								
CLL	**Collm**	**76.54**	**335**	⇑*i*P		**P**		**13 43 14.3**	**-0.8**
	comp=Z,20nm,0.9s								
CLL				*ep*P		**pP**		**13 43 29.0**	**-0.3**
CLL				LmV				14 19 00.0	
	comp=Z,100nm,18.6s								
BRG	**Berggiesshubel**	**76.65**	**335**	*e*P		**P**		**13 43 15.2**	**-0.5**
	comp=Z,6.5nm,1.0s								
BRG	**Berggiesshubel**	**76.65**	**335**	*e*P		**P**		**13 43 15.2**	**-0.5**
BRG				pmax	pmax				
	comp=Z,7.0nm,1.0s								
WMOK	**Wichita Mounta**	**76.75**	**53**	*e*P		**P**		**13 43 16.2**	**-0.4**
WMOK				*e**PP		**pP**		**13 43 30.2**	**-0.6**
WMOK				pmax	pmax				
	comp=Z,8.0nm,1.3s								
WMOK	**Wichita Mounta**	**76.75**	**53**	*e*P		**P**		**13 43 16.2**	**-0.4**
	comp=Z,7.8nm,1.3s								
WMOK				*ep*P		**pP**		**13 43 30.2**	**-0.6**
PVCC	**Panska Ves**	**76.77**	**334**	*e*P		**P**		**13 43 16.5**	**+0.1**
PVCC	**Panska Ves**	**76.77**	**334**	*e*P		**P**		**13 43 16.5**	**+0.1**
328A	**Wristen Ranch,**	**76.91**	**58**	⇓P		**P**		**13 43 17.2**	**-0.4**
	baz=77,SNR=7.0								
Z31A	**Sharp Cattle R**	**77.03**	**55**	⇑P		**P**		**13 43 18.4**	**+0.2**
	baz=77								
MLR	**Muntele Rosu**	**77.07**	**325**	⇓*i*P		**P**		**13 43 18.7**	**+0.4**
526A	**Mary Lane Ranc**	**77.10**	**60**	⇑P		**P**		**13 43 18.9**	**0.0**
	baz=77,SNR=5.6								
VYHS	**Vyhne**	**77.17**	**331**	*e*P		**P**		**13 43 18.5**	**-0.2**
VYHS				pmax	pmax				
	comp=Z,6.0nm,1.0s								
VYHS	**Vyhne**	**77.17**	**331**	*e*P		**P**		**13 43 18.5**	**-0.2**
VRAC	**Vranov**	**77.21**	**332**	⇑*i*P		**P**		**13 43 18.8**	**-0.1**
DRGR		**77.24**	**327**	⇑P		**P**		**13 43 18.8**	**-0.4**
DRGR		**77.24**	**327**	⇑*i*P		**P**		**13 43 18.8**	**-0.4**
PRU	**Pruhonice**	**77.25**	**334**	*i* P		**P**		**13 43 19.0**	**-0.1**
PRU				MLR	MLR				
	comp=Z,100nm,14.9s								
PRU	**Pruhonice**	**77.25**	**334**	*i* P		**P**		**13 43 19.0**	**-0.1**
PRU				AMS	AMS			14 21 00.0	
	comp=Z,100nm,14.9s								
527A	**Woodward Ranch**	**77.33**	**60**	⇑P		**P**		**13 43 19.6**	**-0.5**
	baz=77								
626A	**Big Bend Ranch**	**77.44**	**60**	⇓P		**P**		**13 43 20.8**	**+0.1**
	baz=77								
VOIR		**77.47**	**325**	⇑P		**P**		**13 43 21.3**	**+0.8**
VOIR		**77.47**	**325**	⇑*i*P		**P**		**13 43 21.3**	**+0.8**
LPIG	**La Paz**	**77.50**	**68**	LR		LR		14 09 01.0	
	comp=Z,4.9nm,21.4s,baz=20,slow=29								
MOX	**Moxa**	**77.53**	**336**	*e*P		**P**		**13 43 20.4**	**-0.3**
	comp=Z,10.0nm,1.0s								
MOX	**Moxa**	**77.53**	**336**	*e*P		**P**		**13 43 20.4**	**-0.3**
MOX				pmax	pmax				
	comp=Z,10.0nm,1.0s								
TREC	**Trest**	**77.57**	**333**	*e*P		**P**		**13 43 21.1**	**+0.2**
TREC	**Trest**	**77.57**	**333**	*e*P		**P**		**13 43 21.1**	**+0.2**
SMOL	**Smolenice**	**77.62**	**331**	*e*P		**P**		**13 43 22.3**	**+1.1**
SMOL	**Smolenice**	**77.62**	**331**	*e*P		**P**		**13 43 22.3**	**+1.1**
NKC	**Novy Kostel**	**77.66**	**335**	*i* P		**P**		**13 43 21.1**	**-0.3**
NKC	**Novy Kostel**	**77.66**	**335**	*i* P		**P**		**13 43 21.1**	**-0.3**
528A	**Cox Ranch, San**	**77.81**	**59**	⇓P		**P**		**13 43 23.0**	**+0.3**
	baz=78								
TXAR	**Lajitas Array**	**77.88**	**60**	P		**P**		**13 43 23.4**	**+0.3**
TXAR				pP		**pP**		**13 43 37.5**	**+0.2**
TXAR	**Lajitas Array**	**77.88**	**60**	P		**P**		**13 43 23.4**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=305,slow=4.2,SNR=10.0								
TXAR				pP		**pP**		**13 43 37.5**	**+0.2**
	comp=Z,5.7nm,0.6s,baz=303,slow=4.8,SNR=15								
BUG	**Bochum--Univer**	**77.97**	**339**	*e*P		**P**		**13 43 23.2**	**+0.2**
	comp=Z,13nm,0.9s								
ZST	**Bratislava**	**78.01**	**331**	*e*P		**P**		**13 43 21.3**	**-2.1**
ZST				pmax	pmax				
	comp=Z,13nm,1.3s								
ZST	**Bratislava**	**78.01**	**331**	*e*P		**P**		**13 43 21.3**	**-2.1**
ROTZ	**Rotzenmuhle**	**78.15**	**335**	*e*P		**P**		**13 43 24.4**	**+0.3**
	comp=Z,11nm,1.0s								
529A	**Stev Forest Ra**	**78.17**	**59**	⇓P		**P**		**13 43 24.1**	**-0.5**
	baz=78,SNR=5.2								
430A	**Baggett Ranch,**	**78.26**	**58**	⇑P		**P**		**13 43 25.6**	**+0.5**
	baz=78								
KHC	**Kasperske Hory**	**78.31**	**334**	*i* P		**P**		**13 43 25.2**	**+0.2**
KHC				*e*				13 43 39.6	
KHC				MLR	MLR				
	comp=Z,100nm,19.8s								
KHC	**Kasperske Hory**	**78.31**	**334**	*e*P		**P**		**13 43 25.5**	**+0.4**
	comp=Z,12nm,0.8s								
KHC	**Kasperske Hory**	**78.31**	**334**	*i* P		**P**		**13 43 25.2**	**+0.2**
KHC				*ep*P		**pP**		**13 43 39.6**	**+0.3**
KHC				AMS	AMS			14 21 20.0	
	comp=Z,100nm,19.8s								
BRTR	**Keskin Array B**	**78.34**	**316**	P		**P**		**13 43 25.9**	**+0.4**
BRTR	**Keskin Array B**	**78.34**	**316**	P		**P**		**13 43 25.9**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=69,slow=5.0,SNR=25								
BRTR				LR	LR			14 23 44.5	
	comp=Z,68nm,19.6s,baz=194,slow=40								
UMR	**Umm Al-Rimmam**	**78.47**	**301**	*e*P		**P**		**13 43 26.8**	**+0.6**
GRF	**Grafenberg Arr**	**78.50**	**336**	*e*P		**P**		**13 43 26.5**	**+0.4**
	comp=Z,27nm,0.9s								
GRF	**Grafenberg Arr**	**78.50**	**336**	*e*P		**P**		**13 43 26.5**	**+0.4**
GRF				pmax	pmax				
	comp=Z,27nm,0.9s								
WET	**Wettzell**	**78.50**	**334**	*e*P		**P**		**13 43 26.2**	**+0.1**
	comp=Z,14nm,1.0s								
WET	**Wettzell**	**78.50**	**334**	*e*P		**P**		**13 43 26.2**	**+0.1**
WET				pmax	pmax				
	comp=Z,14nm,1.0s								
MIB	**Mutribah**	**78.51**	**301**	*e*P		**P**		**13 43 27.0**	**+0.6**
MIB				AMb	AMB			13 43 27.9	
	comp=Z,72nm,0.9s								
GEC2	**GERESS Array S**	**78.52**	**334**	*e*P		**P**		**13 43 26.0**	**-0.3**
	comp=Z,6.0nm,0.9s								
GEC2	**GERESS Array S**	**78.52**	**334**	*e*P		**P**		**13 43 26.0**	**-0.3**
GEC2				pmax	pmax				
	comp=Z,6.0nm,0.9s								
GEC2	**GERESS Array S**	**78.52**	**334**	*e*P		**P**		**13 43 26.3**	**0.0**
GERES	**GERESS Array B**	**78.52**	**334**	P		**P**		**13 43 26.3**	**0.0**
GERES	**GERESS Array B**	**78.52**	**334**	P		**P**		**13 43 26.3**	**0.0**
	comp=Z,4.1nm,0.7s,baz=35,slow=4.9,SNR=25								
GERES				LR	LR			14 22 08.6	
	comp=Z,115nm,18.3s,baz=281,slow=39								
BZS	**Buzias**	**78.64**	**327**	⇓P		**P**		**13 43 26.6**	**-0.3**
BZS	**Buzias**	**78.64**	**327**	⇓*i*P		**P**		**13 43 26.6**	**-0.3**
CONA	**Conrad Observa**	**78.65**	**332**	⇑*i*P		**P**		**13 43 27.6**	**+0.5**
	comp=Z,14nm,0.8s								
530A	**J-C Ranch, Com**	**78.67**	**58**	⇓P		**P**		**13 43 26.9**	**-0.5**
	baz=78,SNR=5.5								
332A	**Millersview**	**78.69**	**56**	⇓P		**P**		**13 43 27.2**	**-0.3**
	baz=78								
TNS	**Taunus Mts**	**78.78**	**337**	*e*P		**P**		**13 43 27.7**	**0.0**
	comp=Z,14nm,0.8s								
TNS	**Taunus Mts**	**78.78**	**337**	*e*P		**P**		**13 43 27.7**	**0.0**
TNS				pmax	pmax				
	comp=Z,14nm,0.8s								
RST	**Umm Al-Ruwaisa**	**78.93**	**301**	*e*P		**P**		**13 43 28.8**	**0.0**
QRN	**Al-Qurain**	**78.94**	**300**	*e*P		**P**		**13 43 29.6**	**+0.8**
QRN				AMb	AMB			13 43 30.4	
	comp=Z,40nm,0.9s								
NAY	**Al-Naaiem**	**78.97**	**301**	*e*P		**P**		**13 43 29.5**	**+0.5**
NAY				AMb	AMB			13 43 30.5	
	comp=Z,26nm,1.0s								
RDF	**Al-Radifah**	**79.03**	**300**	*e*P		**P**		**13 43 30.3**	**+1.0**
531A	**Rocksprings**	**79.12**	**58**	⇓P		**P**		**13 43 29.9**	**0.0**
	baz=79								
MOA	**Molln**	**79.23**	**333**	⇓*i*P		**P**		**13 43 30.2**	**0.0**
	comp=Z,8.7nm,0.8s								
JCT	**Junction City**	**79.32**	**57**	*ep*P		pP		13 43 45.3	+0.1
ARSA	**Arzberg**	**79.35**	**332**	⇑*i*P		**P**		**13 43 30.8**	**0.0**
	comp=Z,7.6nm,1.1s								
532A	**Rocksprings**	**79.52**	**57**	⇓P		**P**		**13 43 31.8**	**-0.3**
	baz=79,SNR=5.2								
631A	**Perdido Creek**	**79.66**	**58**	⇑P		**P**		**13 43 32.6**	**-0.2**
	baz=79,SNR=5.5								
RJOB	**Jochberg**	**79.78**	**334**	*e*P		**P**		**13 43 33.4**	**+0.2**
	comp=Z,9.0nm,1.0s								
GIVF	**Givet**	**79.81**	**340**	*e*P		**P**		**13 43 33.0**	**-0.2**
GIVF	**Givet**	**79.81**	**340**	*e*P		**P**		**13 43 33.0**	**-0.2**
GIVF	**Givet**	**79.81**	**340**	*e*P		**P**		**13 43 33.0**	**-0.2**
BAIF	**Baives**	**79.99**	**340**	*e*P		**P**		**13 43 34.2**	**0.0**
BAIF	**Baives**	**79.99**	**340**	*e*P		**P**		**13 43 34.2**	**0.0**
BAIF	**Baives**	**79.99**	**340**	*e*P		**P**		**13 43 34.2**	**0.0**
SOKA	**Soboth**	**80.02**	**332**	⇑*i*P		**P**		**13 43 34.5**	**0.0**
	comp=Z,17nm,1.0s								
PERS	**Pernice**	**80.03**	**332**	*i* P		**P**		**13 43 34.2**	**-0.3**
632A	**Uvalde**	**80.05**	**58**	⇓P		**P**		**13 43 34.9**	**0.0**
	baz=80								
KBA	**Koelnbreinsper**	**80.20**	**333**	⇑*i*P		**P**		**13 43 35.6**	**0.0**
	comp=Z,22nm,0.8s								
BFO	**Black Forest**	**80.54**	**337**	*e*P		**P**		**13 43 37.0**	**-0.2**
	comp=Z,12nm,0.9s								
BFO	**Black Forest**	**80.54**	**337**	*e*P		**P**		**13 43 37.0**	**-0.2**
BFO				pmax	pmax				
	comp=Z,12nm,0.9s								
BFO	**Black Forest**	**80.54**	**337**	*e*P		**P**		**13 43 35.6**	**-1.6**
	comp=Z,13nm,1.0s								
WTTA	**Wattenberg**	**80.56**	**334**	⇑*i*P		**P**		**13 43 37.6**	**+0.1**
	comp=Z,20nm,0.8s								
VTS	**Vitosha**	**80.57**	**325**	⇑P		**P**		**13 43 37.4**	**-0.3**
VTS	**Vitosha**	**80.57**	**325**	⇑*i*P		**P**		**13 43 37.4**	**-0.3**
RETA	**Reutte**	**80.62**	**335**	⇑*i*P		**P**		**13 43 37.9**	**+0.2**
	comp=Z,7.9nm,0.8s								
MOTA	**Moosalm**	**80.64**	**335**	⇑*i*P		**P**		**13 43 38.2**	**+0.3**
	comp=Z,22nm,1.0s								
CDF	**Champ du Feu**	**80.75**	**337**	*e*P		**P**		**13 43 38.4**	**0.0**
	comp=Z,32nm,1.0s								
CDF	**Champ du Feu**	**80.75**	**337**	*e*P		**P**		**13 43 38.4**	**0.0**
CDF				pmax	pmax				
	comp=Z,32nm,1.0s								
CDF	**Champ du Feu**	**80.75**	**337**	*e*P		**P**		**13 43 38.4**	**0.0**
	comp=Z,32nm,1.0s								
ECH	**Echery**	**80.96**	**337**	*e*P		**P**		**13 43 36.7**	**-2.8**
ECH				pmax	pmax				
	comp=Z,6.0nm,0.9s								
ECH	**Echery**	**80.96**	**337**	*e*P		**P**		**13 43 36.7**	**-2.8**
	comp=Z,5.8nm,0.9s								
PAGF	**Fort de Pagny**	**81.02**	**338**	*e*P		**P**		**13 43 40.2**	**+0.5**
	comp=Z,10nm,0.9s								
PAGF	**Fort de Pagny**	**81.02**	**338**	*e*P		**P**		**13 43 40.2**	**+0.5**
	comp=Z,10nm,0.9s								
FETA	**Feichten**	**81.05**	**335**	⇑*i*P		**P**		**13 43 40.6**	**+0.4**
	comp=Z,5.8nm,0.9s								
DAVA	**Damuels**	**81.05**	**335**	⇑*i*P		**P**		**13 43 40.2**	**+0.1**
	comp=Z,11nm,0.8s								
PMOR	**Pomariorio Ree**	**81.19**	**123**	*e*T		T		15 12 58.8	
	comp=Z,10.0nm,0.2s								
MEZF	**Maizieres J'vi**	**81.23**	**339**	*e*P		**P**		**13 43 41.2**	**+0.3**
	comp=Z,22nm,0.8s								
MEZF	**Maizieres J'vi**	**81.23**	**339**	*e*P		**P**		**13 43 41.2**	**+0.3**
	comp=Z,22nm,0.8s								
HAU	**Haudompre**	**81.36**	**338**	*e*P		**P**		**13 43 41.5**	**-0.1**
	comp=Z,14nm,0.7s								
HAU				*e*R					
	comp=Z,88nm,23.0s								
HAU	**Haudompre**	**81.36**	**338**	*e*P		**P**		**13 43 41.5**	**-0.1**
HAU				pmax	pmax				
	comp=Z,14nm,0.7s								
HAU	**Haudompre**	**81.36**	**338**	*e*P		**P**		**13 43 41.5**	**-0.1**
	comp=Z,14nm,0.7s								
HINF	**Hinteralfeld**	**81.41**	**337**	*e*P		**P**		**13 43 41.5**	**-0.3**
	comp=Z,7.9nm,0.9s								
HINF	**Hinteralfeld**	**81.41**	**337**	*e*P		**P**		**13 43 41.5**	**-0.3**
HINF				pmax	pmax				
	comp=Z,8.0nm,0.9s								
HINF	**Hinteralfeld**	**81.41**	**337**	*e*P		**P**		**13 43 41.5**	**-0.3**
	comp=Z,7.9nm,0.9s								
SFTF	**Sexfontaines**	**81.51**	**339**	*e*P		**P**		**13 43 42.5**	**+0.1**
	comp=Z,47nm,0.9s								
SFTF	**Sexfontaines**	**81.51**	**339**	*e*P		**P**		**13 43 42.5**	**+0.1**
	comp=Z,47nm,0.9s								
FUORN	**Ofenpass-Fuorn**	**81.55**	**335**	*e*P		**P**		**13 43 44.0**	**+1.1**
	comp=Z,8.4nm,0.9s								
TUE	**Stuetta**	**81.95**	**335**	*e*P		**P**		**13 43 45.1**	**+0.2**
	comp=Z,10.0nm,0.8s								
CSS	**Prodhromos**	**82.25**	**314**	*e*P		**P**		**13 43 47.1**	**+0.7**
FLN	**La Foliniere**	**82.26**	**342**	*e*P		**P**		**13 43 46.3**	**+0.1**
FLN				*e*R					
	comp=Z,68nm,23.0s								
FLN	**La Foliniere**	**82.26**	**342**	*e*P		**P**		**13 43 46.3**	**+0.1**
FLN	**La Foliniere**	**82.26**	**342**	*e*P		**P**		**13 43 46.3**	**+0.1**
PPT	**Papeete**	**82.28**	**125**	LR		LR		14 21 09.7	
	comp=Z,178nm,18.6s,baz=343,slow=36								
PPT2	**Papeete2**	**82.30**	**125**	*e*LR		LR		14 09 42.4	
	comp=Z,138nm,23.8s								
LDF	**La Druitiere**	**82.34**	**342**	*e*P		**P**		**13 43 46.6**	**-0.1**
LDF	**La Druitiere**	**82.34**	**342**	*e*P		**P**		**13 43 46.6**	**-0.1**
LDF	**La Druitiere**	**82.34**	**342**	*e*P		**P**		**13 43 46.6**	**-0.1**
ASF	**Jabal al Asfar**	**82.60**	**310**	P		**P**		**13 43 49.5**	**+1.1**
ASF	**Jabal al Asfar**	**82.60**	**310**	P		**P**		**13 43 49.5**	**+1.1**
	comp=Z,6.1nm,0.9s,baz=283,slow=1.6,SNR=7.6								
LOR	**Lormes**	**82.68**	**339**	*e*P		**P**		**13 43 48.5**	**0.0**
	comp=Z,7.4nm,0.8s								
LOR				*e*R					
	comp=Z,108nm,22.5s								
LOR	**Lormes**	**82.68**	**339**	*e*P		**P**		**13 43 48.5**	**0.0**
	comp=Z,7.4n

BDFB	**Brasilia**	**144.71**	**36**	PKP	**PKPab**	**13 51 00.2**	**-0.7**
BDFB	**Brasilia**	**144.71**	**36**	PKP	**PKPab**	**13 51 00.2**	**-0.7**
	comp=Z,3.8nm,0.6s,baz=217,slow=4.2,SNR=5.1						
PLCA	**Paso Flores**	**148.50**	**95**	PKPbc	**PKPbc**	**13 51 11.7**	**+0.3**
PLCA	**Paso Flores**	**148.50**	**95**	PKPbc	**PKPbc**	**13 51 11.7**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=166,slow=4.3,SNR=4.5						
CPUP	**Villa Florida**	**148.86**	**60**	PKPbc	**PKPbc**	**13 51 12.7**	**+0.2**
CPUP				pPKPbc	**pPKPbc**	**13 51 27.2**	**-0.2**
CPUP	**Villa Florida**	**148.86**	**60**	PKPbc	**PKPbc**	**13 51 12.7**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=272,slow=2.7,SNR=14						
CPUP				pPKPbc	**pPKPbc**	**13 51 27.2**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=292,slow=5.5,SNR=4.5						
SNAA	**Sanae**	**152.24**	**196**	*eP*	**PKPab**	**13 51 34.0**	**+4.6**
SNAA	**Sanae**	**152.24**	**196**	PKPbc	**PKPbc**	**13 51 19.2**	**-0.1**
SNAA				PKPab	**PKPab**	**13 51 29.4**	**0.0**
SNAA				pPKPbc	**pPKPbc**	**13 51 33.7**	**-0.6**
SNAA	**Sanae**	**152.24**	**196**	PKPbc	**PKPbc**	**13 51 19.2**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=213,slow=3.0,SNR=10						
SNAA				PKPab	**PKPab**	**13 51 29.4**	**0.0**
	comp=Z,1.4nm,0.9s,baz=97,slow=8.1,SNR=2.9						
SNAA				pPKPbc	**pPKPbc**	**13 51 33.7**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=178,slow=2.5,SNR=4.9						
VNA1	**Neumayer--Stat**	**154.09**	**194**	*eP*	**PKPab**	**13 51 34.3**	**-2.8**

IDC 22 13:38:13.5±0.7, 27°21'S × 176°17'W, h0 km, mb4.1/12, mb1 4.2/13, mb1mx4.1/21, mbtmp4.1/13, ML3.7/1, MS2.9/2, Ms1 2.9/2, ms1mx2.8/21, Error ellipse: s-maj=22.9km s-min=21.0km az=109.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.55 217**		Pn	Pb	13 38 59.6	-0.6
	281nm,0.3s,baz=47,slow=19,SNR=4.8						
RAO				Sn	Sn	13 39 29.4	+1.6
	566nm,0.3s,baz=113,slow=23,SNR=10						
URZ	**Urewera**	**12.38 205**		Pn	Pn	13 41 10.0	-0.9
	0.5nm,0.3s,baz=217,slow=7.4,SNR=3.2						
URZ				Sn	Sn	13 43 17.9	-12
	2.7nm,0.3s,baz=128,slow=19,SNR=14						
AFI	**Afiamalu**	**13.86 18**		Pn	Pn	13 41 27.6	-3.7
	0.7nm,0.3s,baz=229,slow=20,SNR=2.5						
AFI				Sn	Sn	13 43 48.7	-17
	0.9nm,0.3s,baz=120,slow=20,SNR=2.5						
AFI				LR	LR	13 46 02.2	
	comp=Z,60nm,19.5s,baz=130,slow=34						
RAR	**Rarotonga**	**16.10 72**		Pn	Pn	13 41 55.9	-5.4
	7.5nm,0.3s,baz=270,slow=5.5,SNR=7.5						
RAR				Sn	Sn	13 44 37.2	-23
	1.3nm,0.3s,baz=90,slow=18,SNR=7.3						
DZM	**Mont Dzumac**	**16.61 284**		*e*LR	LR	13 45 58.2	
	153nm,23.7s						
TBI	**Tubuai**	**24.44 87**		*e*LR	LR	13 49 19.1	
	114nm,30.2s						
PPT2	**Papeete2**	**26.34 74**		*e*LR	LR	13 50 09.8	
	104nm,26.5s						
PPT	**Papeete**	**26.35 74**		LR	LR	13 51 37.3	
	comp=Z,20nm,18.4s,baz=139,slow=30						
CTA	**Charters Tower**	**35.04 273**		P	P	13 45 10.1	+1.8
	5.5nm,0.4s,baz=104,slow=11,SNR=13						
STKA	**Stephens Creek**	**36.87 252**		P	P	13 45 24.6	+0.8
	2.2nm,0.5s,baz=308,slow=3.0,SNR=8.3						
RKT	**Rikitea**	**37.39 93**		*e*LR	LR	13 55 01.0	
	1μm,37.2s						
ASAR	**Alice Springs**	**44.99 263**		P	P	13 46 29.4	-1.5
	0.7nm,0.4s,baz=100,slow=7.0,SNR=43						
WRA	**Warramunga Arr**	**45.70 268**		P	P	13 46 34.8	-1.7
	1.0nm,0.5s,baz=104,slow=8.2,SNR=21						
QSPA	**South Pole Qui**	**52.89 180**		P	P	13 48 42.1	+0.8
	4.5nm,0.8s,baz=26,slow=1.4,SNR=15						
MJAR	**Matsushiro Arr**	**76.59 324**		P	P	13 50 05.9	+0.1
	1.0nm,0.6s,baz=178,slow=5.7,SNR=4.7						
SNAA	**Sanae**	**81.28 178**		P	P	13 50 30.7	-0.6
	0.6nm,0.8s,baz=183,slow=17,SNR=4.1						
KSRS	**Korea Array**	**83.00 318**		P	P	13 50 41.6	+1.1
	0.9nm,0.8s,baz=154,slow=6.8,SNR=4.8						
PETK	**Petropavlovsk-**	**83.16 344**		P	P	13 50 40.9	-0.1
	1.6nm,0.8s,baz=129,slow=12,SNR=3.7						
NVAR	**Mina Array Bea**	**84.81 42**		P	P	13 50 51.0	+0.9
	0.1nm,0.4s,baz=250,slow=7.7,SNR=3.8						
CMAR	**Chiang Mai Arr**	**93.89 289**		P	P	13 51 34.6	+1.3
	0.9nm,0.7s,baz=110,slow=3.4,SNR=4.2						
ILAR	**Eielson Array**	**94.48 12**		P	P	13 51 33.9	-1.1
	0.3nm,0.7s,baz=231,slow=5.4,SNR=5.9						
MKAR	**Makanchi Array**	**116.93 311**		PKP	PKPdf	13 56 58.7	-1.4
	0.3nm,0.6s,baz=81,slow=2.9,SNR=3.4						
ARCES	**ARCESS Array B**	**135.80 349**		PKP	PKPdf	13 57 35.0	-0.3
	1.2nm,0.8s,baz=113,slow=1.6,SNR=5.0						
FINES	**FINESS Array B**	**142.65 343**		PKhKP	PKPpre	13 57 42.1	
	1.8nm,1.0s,baz=27,slow=3.4,SNR=2.6						
NB2	**NORSAR Subarra**	**145.81 354**		PKP	PKPdf	13 57 51.1	-2.5
	comp=Z,0.2nm,0.7s,baz=20,slow=3.1						
NOA	**NORSAR Array B**	**145.81 354**		PKPbc	PKPdf	13 57 53.5	-0.1
	comp=Z,1.7nm,0.8s,baz=14,slow=4.5,SNR=5.4						
AKASG	**Malin Array Be**	**149.61 327**		PKPbc	PKPbc	13 58 03.5	-1.1
	comp=Z,1.5nm,0.6s,baz=44,slow=3.9,SNR=4.5						
BRTR	**Keskin Array B**	**152.31 304**		PKPbc	PKPbc	13 58 11.1	-0.5
	comp=Z,0.3nm,0.6s,baz=40,slow=7.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**165.87 171**		PKP	PKPdf	13 58 20.2	-1.0
	comp=Z,0.4nm,0.7s,baz=192,slow=1.3,SNR=2.8						
TORD				PKPab	PKPab	13 59 19.9	-0.5
	comp=Z,1.3nm,0.7s,baz=188,slow=3.7,SNR=9.5						

*ISCJB **22** 13:49:20.9±0.7, 13°.63N±0°.05 × 89°.04W±0°.04, h6 km±4km, mb3.3/1, Error ellipse: s-maj=9.2km s-min=6.1km az=14.9*
*CASC **22** 13:49:20.5±2.9, 13°.65N × 89°.06W, h0 km±8km, MD3.4, ML3.9*
*IDC **22** 13:49:21.4±3.8, 13°.66N × 88°.87W, h0 km, mb3.0/2, mb1 3.6/3, mb1mx3.4/23, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=92.4km s-min=33.2km az=103.0*

ISC 22 13:49:21.5±0.9, 13°.63N±0°.05 × 89°.05W±0°.03, h4 km±6km, n19, σ1°.13/25, 7C-3D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LFRS	**El Faro**	**0.01 225**		↓*iP*	**Pg**	**13 49 22.2**	**-0.1**
LFRS				*eS*	**Sg**	**13 49 23.2**	**+0.3**
LBRS	**Las Brisas**	**0.11 5**		↑*iP*	**Pg**	**13 49 22.9**	**-0.8**
LBRS				*eS*	**Sg**	**13 49 25.5**	**+0.3**
LFU	**La Fuente**	**0.13 333**		↑*iP*	**Pg**	**13 49 23.3**	**-0.8**
SNET	**Serv Nac Est T**	**0.18 287**		↑*iP*	**Pg**	**13 49 24.6**	**-0.5**
SNET				↓*eS*	**Sg**	**13 49 27.7**	**+0.2**
SNET				AML	AML	13 49 28.8	
	comp=Z,12μm,0.3s						
SNVI	**San Vicente**	**0.21 95**		*eP*	**Pg**	**13 49 25.8**	**+0.3**
BOQS	**Boqueron**	**0.24 295**		↓*iP*	**Pg**	**13 49 25.9**	**-0.3**
SNJE	**San Jose**	**0.59 290**		*eP*	**Pg**	**13 49 32.0**	**-0.7**
SBLS	**San Blas**	**0.59 290**		↑*iP*	**Pg**	**13 49 32.5**	**-0.4**
RTR	**El Retiro**	**0.63 295**		↑*iP*	**Pg**	**13 49 33.1**	**-0.5**
RBDL	**Robledal**	**0.78 308**		↑*iP*	**Pg**	**13 49 35.1**	**-1.4**
CAHU	**Cacaocatique**	**0.83 80**		*eP*	**Pg**	**13 49 36.8**	**-0.6**
CNCH	**Conchagua**	**1.24 106**		*eP*	**Pb**	**13 49 44.2**	**-1.3**
MRL	**Marmol**	**1.55 337**		*eP*	**Pn**	**13 49 49.5**	**-0.6**
MRL				*eS*	**Sg**	**13 50 12.8**	**+1.3**
NBG	**Las Nubes**	**1.57 307**		*eP*	**Pn**	**13 49 50.4**	**-0.1**
NBG				*eS*	**Sg**	**13 50 15.8**	**+3.7**
FUG	**Fuego 3**	**1.92 295**		*eP*	**Pb**	**13 49 56.6**	**-0.5**
FUG				*eS*	**Sg**	**13 50 23.7**	**+0.6**
TEIG	**Tepich**	**6.60 6**		Pn	**Pn**	**13 51 01.2**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=190,slow=11,SNR=3.1						
TEIG				Sn	**Sn**	**13 52 14.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=294,slow=20,SNR=2.7						
TEIG				Lg	Lg	13 52 48.8	
	comp=Z,0.5nm,0.3s,baz=99,slow=22,SNR=5.7						
TXAR	**Lajitas Array**	**20.68 321**		P	Pn	13 54 04.6	-0.5
	comp=Z,0.3nm,0.6s,baz=151,slow=10,SNR=3.1						
YKA	**Yellowknife Ar**	**52.07 345**		P	**P**	**13 58 32.3**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=145,slow=7.6,SNR=6.5						
WRA	**Warramunga Arr**	**138.08 255**		PKP	**PKPdf**	**14 08 49.1**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=99,slow=1.5,SNR=8.0						

WEL 22 14:16:32.5±0.4, 38°.07S × 178°.93E, h33 km, ML3.7/5, 2C-1D, Error ellipse: s-maj=4.5km s-min=1.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**0.53 269**		↑↑PN	Pb	14 16 42.5	-1.1
PUZ				SN	Sb	14 16 50.6	-0.7
PUZ				SN	Sn	14 16 51.4	-0.3
CNGZ	**Carnagh Statio**	**0.70 234**		PN	Pn	14 16 45.8	-0.3
CNGZ				SN	Sb	14 16 57.0	+1.1
MXZ	**Matakaoa Point**	**0.71 315**		↑↑PN	Pn	14 16 45.6	-0.5
MXZ				SN	Sb	14 16 56.8	+0.8
MWZ	**Matawai**	**1.14 256**		↓↓PN	Pn	14 16 51.5	-0.7
MWZ				SN	Sn	14 17 06.8	+0.1
KNZ	**Kokohu**	**1.37 226**		PN	Pn	14 16 54.5	-0.8
URZ	**Urewera**	**1.45 262**		PN	Pn	14 16 56.1	-0.3
RAHZ	**Arahi**	**1.68 239**		PN	Pn	14 16 59.7	+0.1
NMHZ	**Naumai**	**1.96 238**		PN	Pn	14 17 03.5	0.0
BKZ	**Black Stump Fm**	**2.20 239**		PN	Pn	14 17 06.4	-0.5
MCHZ	**McNeill Hill**	**2.22 231**		PN	Pn	14 17 06.6	-0.5
PXZ	**Pawanui**	**2.54 219**		*e*PN	Pn	14 17 09.4	-2.0
BHHZ	**Black Hill Sta**	**2.65 237**		PN	Pn	14 17 12.2	-0.9
PNHZ	**Pukenui**	**2.81 228**		PN	Pn	14 17 13.4	-1.9
MRZ	**Mangatainoka R**	**3.67 224**		PN	Pn	14 17 23.7	-3.2
TCW	**Tory Channel**	**4.77 227**		SN	Sn	14 18 32.4	-3.8
NNZ	**Nelson**	**5.31 232**		*e*PN	Pn	14 17 45.8	-3.7
CTZ	**Chatham Island**	**6.59 151**		*e*PN	Pn	14 18 05.8	-1.2
CTZ				SN	Sn	14 19 12.2	-8.7
MQZ	**McQueen's Vall**	**7.37 218**		SN	Sn	14 19 30.0	-10

*ISK **22** 14:23:12.6, 37°.77N × 27°.07E, h5 km, MD3.0*
*ATH **22** 14:23:12.8, 37°.72N × 27°.05E, h13 km±3km, MD3.2/6*
*DDA **22** 14:23:13.3, 37°.76N × 27°.04E, h17 km, MD3.0*
*CSEM **22** 14:23:13.6±0.2, 37°.74N × 26°.99E, h8 km, MD3.0, Error ellipse: s-maj=4.0km s-min=3.5km az=54.0*
*ISCJB **22** 14:23:13.0±0.5, 37°.74N±0°.02 × 26°.97E±0°.03, h3 km±4km, Error ellipse: s-maj=4.1km s-min=3.0km az=154.1*
*THE **22** 14:23:14.0, 37°.70N × 27°.19E, h32 km±25km, ML2.8/4, Error ellipse: s-maj=25.4km s-min=0.8km az=215.0*

ISC 22 14:23:12.9±1.0, 37°.71N±0°.02 × 27°.02E±0°.02, h15 km±9km, n63, σ0°.80/98, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.17 94**		*i*P	**Pb**	**14 23 17.9**	**+0.1**
GCAM				*i*S	**Sb**	**14 23 21.3**	**+0.3**
GCAM	**G?zelcaml?**	**0.17 94**		*i*P	**Pb**	**14 23 17.9**	**+0.1**
GCAM				*i*S	**Sb**	**14 23 21.3**	**+0.3**
BLCB	**Balcova**	**0.67 2**		*e*PG	**Pg**	**14 23 25.5**	**-0.5**
BLCB				*e*SG	**Sb**	**14 23 35.4**	**-0.1**
BLCB	**Balcova**	**0.67 2**		*e*Pg	**Pg**	**14 23 25.5**	**-0.5**
BLCB				*e*Sg	**Sb**	**14 23 35.4**	**-0.1**
AYDN	**Tasoluk**	**0.69 94**		*i*P	**Pb**	**14 23 27.1**	**+0.5**
AYDN				*i*S	**Sb**	**14 23 36.2**	**+0.3**
AYDN	**Tasoluk**	**0.69 94**		*i*P	**Pb**	**14 23 27.1**	**+0.5**
AYDN				*i*S	**Sb**	**14 23 36.2**	**+0.3**
BODT	**Bodrum**	**0.69 160**		*e*PG	**Pb**	**14 23 27.1**	**+0.5**
BODT				*e*SG	**Sn**	**14 23 38.9**	**+0.3**
IZM	**Izmir**	**0.71 16**		*e*PG	**Pg**	**14 23 26.4**	**-0.4**
IZM				*e*SG	**Sb**	**14 23 36.5**	**-0.2**
IZM	**Izmir**	**0.71 16**		*e*Pg	**Pg**	**14 23 26.4**	**-0.4**
IZM				*e*Sg	**Sb**	**14 23 36.5**	**-0.2**
URLA	**Izmir**	**0.73 333**		*i*P	**Pg**	**14 23 26.7**	**-0.4**
URLA				*i*S	**Sg**	**14 23 36.3**	**-0.4**
URLA	**Izmir**	**0.73 333**		*i*P	**Pg**	**14 23 26.7**	**-0.4**
URLA				*i*S	**Sg**	**14 23 36.3**	**-0.4**
MLSB	**Milas**	**0.73 124**		*e*PG	**Pb**	**14 23 27.8**	**+0.4**
MLSB	**Milas**	**0.73 124**		*e*Pg	**Pb**	**14 23 27.8**	**+0.4**
CHOS	**Chios island**	**1.01 312**		P	**Pb**	**14 23 32.3**	**+0.1**
CHOS				S	**Sn**	**14 23 47.2**	**+0.4**
CHOS	**Chios island**	**1.01 312**		*e*PN	**Pg**	**14 23 32.5**	**0.0**
CHOS				*e*SB	**Sg**	**14 23 46.3**	**+0.5**
CHOS	**Chios island**	**1.01 312**		P	**Pb**	**14 23 32.3**	**+0.1**
CHOS	**Chios island**	**1.01 312**		*e*Pn	**Pg**	**14 23 32.5**	**0.0**
CHOS				*e*Sb	**Sg**	**14 23 46.3**	**+0.5**
CHOS				S	**Sn**	**14 23 47.2**	**+0.4**
NIS1	**Nisyros Isl.**	**1.11 173**		P	**Pb**	**14 23 32.3**	**-1.6**
NIS1				S	**Sb**	**14 23 46.9**	**-1.3**
NIS1	**Nisyros Isl.**	**1.11 173**		*e*PB	**Pg**	**14 23 34.9**	**+0.5**
NIS1				*e*SB	**Sn**	**14 23 49.2**	**+0.1**
NIS1	**Nisyros Isl.**	**1.11 173**		S	**Sb**	**14 23 46.9**	**-1.3**
NIS1				*e*Sb	**Sn**	**14 23 49.2**	**+0.1**
YER	**Yerkesik**	**1.16 119**		*e*PN	**Pg**	**14 23 35.8**	**+0.5**
AKHS	**Akhisar**	**1.32 28**		*i*P	**Pg**	**14 23 38.5**	**+0.2**
AKHS				*i*S	**Sg**	**14 23 55.3**	**-0.2**
AKHS	**Akhisar**	**1.32 28**		*i*P	**Pg**	**14 23 38.5**	**+0.2**
AKHS				*i*S	**Sg**	**14 23 55.3**	**-0.2**
APE	**Apeiranthos**	**1.35 242**		*e*PN	**Pg**	**14 23 40.5**	**+1.7**
APE	**Apeiranthos**	**1.35 242**		P	**Pn**	**14 23 37.2**	**0.0**
APE				S	**Sg**	**14 23 56.3**	**0.0**
APE	**Apeiranthos**	**1.35 242**		*e*PB	**Pg**	**14 23 38.9**	**+0.1**
APE	**Apeiranthos**	**1.35 242**		P	**Pn**	**14 23 37.2**	**0.0**
APE	**Apeiranthos**	**1.35 242**		*e*Pb	**Pg**	**14 23 38.9**	**+0.1**
APE	**Apeiranthos**	**1.35 242**		*e*Pn	**Pg**	**14 23 40.5**	**+1.7**
APE				S	**Sg**	**14 23 56.3**	**0.0**
MANT	**Manisa**	**1.44 57**		*i*P	**Pb**	**14 23 39.5**	**-0.1**
MANT				*i*S	**Sb**	**14 23 57.9**	**0.0**
MANT	**Manisa**	**1.44 57**		*i*P	**Pb**	**14 23 39.5**	**-0.1**
MANT				*i*S	**Sb**	**14 23 57.9**	**0.0**
TURN	**Turunc**	**1.52 123**		*i*P	**Pn**	**14 23 38.1**	**-1.4**
TURN				*i*S	**Sn**	**14 23 56.8**	**-2.1**
KULA	**Kula-Manisa**	**1.52 58**		*e*PN	**Pg**	**14 23 41.2**	**+0.3**
KULA	**Kula-Manisa**	**1.52 58**		*e*Pn	**Pb**	**14 23 41.2**	**+0.3**
DALY	**Dalyan (Mu˘la**	**1.58 124**		*e*Pn	**Pg**	**14 23 42.8**	**-0.5**
DNZL	**Cakiroluk**	**1.61 90**		*i*P	**Pb**	**14 23 42.8**	**+0.4**
DNZL				*i*S	**Sg**	**14 24 06.9**	**+2.2**
DNZL	**Cakiroluk**	**1.61 90**		*i*P	**Pb**	**14 23 42.8**	**+0.4**
AYVA	**Ayvalik**	**1.61 351**		*i*P	**Pb**	**14 23 42.7**	**+0.3**
AYVA				*i*S	**Sb**	**14 24 03.1**	**+0.5**
AYVA	**Ayvalik**	**1.61 351**		*i*P	**Pb**	**14 23 42.7**	**+0.3**
AYVA				*i*S	**Sb**	**14 24 03.1**	**+0.5**
PRK	**Paraskevi**	**1.64 339**		P	**Pn**	**14 23 41.2**	**0.0**
PRK				S	**Sn**	**14 24 01.6**	**-0.4**
PRK	**Paraskevi**	**1.64 339**		*e*PG	**Pb**	**14 23 43.1**	**+0.3**
PRK				*e*SB	**Sg**	**14 24 06.1**	**+0.4**
PRK	**Paraskevi**	**1.64 339**		P	**Pn**	**14 23 41.2**	**0.0**
PRK	**Paraskevi**	**1.64 339**		*e*Pg	**Pb**	**14 23 43.1**	**+0.3**
PRK				S	**Sn**	**14 24 01.6**	**-0.4**
ARG	**Arkhangelos**	**1.74 149**		*e*PN	**Pb**	**14 23 44.6**	**+0.1**
SIGR	**SIGRI**	**1.75 329**		P	**Pn**	**14 23 42.6**	**-0.1**
SIGR				S	**Sn**	**14 24 05.3**	**+0.5**
SIGR	**SIGRI**	**1.75 329**		P	**Pn**	**14 23 42.6**	**-0.1**
SIGR				S	**Sn**	**14 24 05.3**	**+0.5**
FETY	**Fethiye**	**1.97 122**		*e*PN	**Pb**	**14 23 48.3**	**-0.2**
BALB	**Balikesir**	**2.04 19**		*e*PN	**Pb**	**14 23 48.6**	**-1.0**
BALB	**Balikesir**	**2.04 19**		*e*Pn	**Pb**	**14 23 48.6**	**-1.0**
KHL	**Karahalli**	**2.07 72**		*e*PN	**Pb**	**14 23 49.2**	**-1.0**
KHL	**Karahalli**	**2.07 72**		*e*Pn	**Pb**	**14 23 49.2**	**-1.0**
BALY	**Balya**	**2.08 13**		*i*P	**Pb**	**14 23 50.5**	**+0.2**
BALY				*i*S	**Sg**	**14 24 18.2**	**-1.5**
BALY	**Balya**	**2.08 13**		*i*P	**Pb**	**14 23 50.5**	**+0.2**
KARP	**Karpathos**	**2.16 177**		*e*PN	**Pb**	**14 23 51.5**	**-0.3**
KARP	**Karpathos**	**2.16 177**		*e*Pn	**Pb**	**14 23 51.5**	**-0.3**
EZN	**Ezine**	**2.18 346**		*e*PN	**Pb**	**14 23 50.8**	**-1.2**
EZN	**Ezine**	**2.18 346**		*e*Pn	**Pb**	**14 23 50.8**	**-1.2**
DURS	**Dursunbey**	**2.20 31**		*i*P	**Pg**	**14 23 54.1**	**-1.1**
DURS				*i*S	**Sg**	**14 24 23.1**	**-0.6**
DST	**Dursunbey**	**2.27 33**		*e*PN	**Pn**	**14 23 51.6**	**+1.7**
DST	**Dursunbey**	**2.27 33**		*e*Pn	**Pn**	**14 23 51.6**	**+1.7**
ELL	**Elmali**	**2.50 112**		*e*PN	**Pb**	**14 23 55.6**	**-2.0**
TVSB	**Tavsanli**	**2.58 47**		*e*PN	**Pn**	**14 23 56.2**	**+2.0**
TVSB	**Tavsanli**	**2.58 47**		*e*Pn	**Pn**	**14 23 56.3**	**+2.0**

IDC 22 14:32:32.7±1.4, 19°.78S × 71°.04W, h0 km, mb4.1/3, mb1 4.1/4, mb1mx3.8/18, mbtmp4.0/4, ML3.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/29, Error ellipse: s-maj=54.3km s-min=25.2km az=135.0, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**4.44 39**		Pn	Pn	14 33 44.0	+1.8
	2.0nm,0.3s,baz=214,slow=9.5,SNR=32						
LPAZ				Pg	Pb	14 33 54.4	+1.9
	4.0nm,0.3s,baz=218,slow=10,SNR=28						
LPAZ				Lg	Lg	14 34 53.0	
	2.3nm,0.3s,baz=0.0,slow=18,SNR=1.7						
ATAH	**Atahualpa**	**14.46 329**		LR	LR	14 42 16.8	
	comp=Z,65nm,20.2s,baz=73,slow=40						
SCHO	**Schefferville**	**74.39 3**		P	P	14 44 11.6	-0.6
	1.8nm,0.7s,baz=218,slow=16,SNR=2.7						
TORD	**Torodi Ar. Bea**	**78.68 72**		P	P	14 44 36.6	-0.7
	1.5nm,0.7s,baz=249,slow=5.4,SNR=14						
YKA	**Yellowknife Ar**	**88.92 341**		P	P	14 45 27.9	-0.7
	0.4nm,0.7s,baz=135,slow=4.9,SNR=11						
MKAR	**Makanchi Array**	**145.35 33**		PKPbc	PKPdf	14 52 13.1	+0.4
	0.7nm,0.7s,baz=317,slow=2.9,SNR=9.2						
SONM	**Songino Array**	**151.94 4**		PKPbc	PKPbc	14 52 30.4	+0.5
	0.6nm,0.5s,baz=303,slow=2.3,SNR=5.7						

IDC 22 14:44:30.4±2.0, 19°.54S × 177°.05W, h343 km±21km, mb4.0/12, mb1 4.0/14, mb1mx3.7/25, mbtmp3.9/14, Error ellipse: s-maj=17.4km s-min=13.1km az=127.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.54 43**		P	Pn	14 46 19.6	+0.5
	4.5nm,0.3s,baz=294,slow=10.0,SNR=8.8						
AFI				S	S	14 47 42.1	-5.5
	6.8nm,0.3s,baz=258,slow=23,SNR=7.0						
URZ	**Urewera**	**19.34 194**		S	S	14 51 46.4	-4.9
	0.3nm,0.3s,baz=90,slow=11,SNR=2.9						
HNR	**Honiara**	**24.40 291**		P	P	14 49 20.1	+1.0
	14nm,0.4s,baz=142,slow=5.1,SNR=4.7						
CTA	**Charters Tower**	**34.49 263**		P	P	14 50 47.5	+0.1
	39nm,0.7s,baz=92,slow=10,SNR=100						
PMG	**Port Moresby**	**36.02 281**		P	P	14 51 00.7	+0.3
	23nm,0.9s,baz=133,slow=5.1,SNR=6.3						
STKA	**Stephens Creek**	**39.02 243**		P	P	14 51 24.9	-0.3
	5.3nm,0.7s,baz=122,slow=7.4,SNR=7.3						
ASAR	**Alice Springs**	**45.62 256**		P	P	14 52 17.6	-0.4
	34nm,0.6s,baz=95,slow=8.0,SNR=724						
ASAR				S	S	14 58 28.9	-5.4
	0.6nm,0.8s,baz=90,slow=14,SNR=4.8						
WRA	**Warramunga Arr**	**45.63 261**		P	P	14 52 17.3	-0.8
	23nm,0.5s,baz=97,slow=5.8,SNR=452						
WRA				S	S	14 58 28.5	-6.1
	0.9nm,0.9s,baz=94,slow=13,SNR=4.6						
MJAR	**Matsushiro Arr**	**69.97 323**		P	P	14 55 05.2	-0.4
	2.9nm,0.8s,baz=154,slow=5.5,SNR=7.9						
QSPA	**South Pole Qui**	**70.53 180**		P	P	14 55 09.9	+1.3
	0.7nm,0.6s,baz=17,slow=20,SNR=6.5						
PETK	**Petropavlovsk-**	**75.58 345**		P	P	14 55 37.2	-0.6
	1.3nm,0.6s,baz=130,slow=8.5,SNR=7.2						
ILAR	**Eielson Array**	**87.18 12**		P	P	14 56 37.5	-0.5
	0.5nm,0.4s,baz=218,slow=5.1,SNR=20						
CMAR	**Chiang Mai Arr**	**90.64 289**		P	P	14 56 56.4	+1.2
	1.3nm,0.8s,baz=125,slow=2.7,SNR=7.5						
YKA	**Yellowknife Ar**	**95.27 24**		P	P	14 57 15.4	+0.1
	0.3nm,0.7s,baz=242,slow=4.3,SNR=7.9						
MKAR	**Makanchi Array**	**111.19 314**		PKiKP	PKiKP	15 02 22.2	-1.4
	0.1nm,0.4s,baz=131,slow=1.2,SNR=4.1						
ARCES	**ARCESS Array B**	**128.13 350**		PKP	PKPdf	15 02 54.9	-0.6
	0.5nm,0.4s,baz=31,slow=1.5,SNR=10						
FINES	**FINESS Array B**	**135.09 344**		PKP	PKPdf	15 03 09.0	+0.2
	1.2nm,0.9s,baz=84,slow=4.3,SNR=4.0						
BRTR	**Keskin Array B**	**146.84 314**		PKPbc	PKPbc	15 03 32.2	-0.9
	1.0nm,0.5s,baz=96,slow=3.2,SNR=4.6						
GERES	**GERESS Array B**	**149.50

σ1°46/18, mb4.2/7, MS3.6/7, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.93**	**153**	*e*Pn	**P**	**15 08 45.5**	**-1.6**
VNA2	**Neumayer--Watz**	**13.32**	**153**	*e*Pn	**P**	**15 08 50.5**	**-1.1**
VNA2	**Neumayer--Watz**	**13.32**	**153**	*e*Sn	**Sn**	**15 11 10.0**	**+0.5**
SNAA	**Sanae**	**14.90**	**151**	*e*Pn	**P**	**15 09 10.9**	**+1.8**
SNAA	**Sanae**	**14.90**	**151**	*e*Sn	**Sn**	**15 11 47.0**	**-1.1**
SNAA	**Sanae**	**14.90**	**151**	Pn	**P**	**15 09 11.0**	**+1.8**
	1.6nm,0.3s,baz=318,slow=14,SNR=75						
SNAA				Sn	**Sn**	**15 11 45.3**	**-2.7**
	0.1nm,0.3s,baz=313,slow=19,SNR=2.7						
SNAA				LR	LR	15 13 57.4	
	comp=Z,80nm,18.5s,baz=195,slow=33						
QSPA	**South Pole Qui**	**30.30**	**180**	P	P	15 11 51.3	+7.3
	1.8nm,0.5s,baz=200,slow=3.4,SNR=26						
PLCA	**Paso Flores**	**33.59**	**284**	P	**P**	**15 12 13.7**	**+0.7**
	2.1nm,0.6s,baz=77,slow=7.7,SNR=4.4						
PLCA				LR	LR	15 26 16.9	
	comp=Z,46nm,19.4s,baz=181,slow=37						
CFAA	**Coronel Fontan**	**39.89**	**296**	P	**P**	**15 13 05.1**	**-1.5**
	0.4nm,0.3s,baz=150,slow=7.7,SNR=15						
CPUP	**Villa Florida**	**40.00**	**313**	LR	LR	15 26 19.9	
	comp=Z,67nm,19.8s,baz=343,slow=32						
VNDA	**Vanda**	**42.72**	**182**	P	P	15 13 35.8	+6.4
	1.6nm,0.9s,baz=180,slow=6.9,SNR=9.3						
BOSA	**Boshof**	**46.35**	**71**	LR	LR	15 29 40.0	
	comp=Z,70nm,20.0s,baz=341,slow=31						
LPAZ	**La Paz**	**53.28**	**306**	P	P	15 14 49.4	-3.0
	1.9nm,0.7s,baz=158,slow=5.1,SNR=8.3						
MBAR	**Mbarara**	**73.31**	**60**	LR	LR	15 47 39.0	
	comp=Z,42nm,19.2s,baz=175,slow=35						
KMBO	**Kilima Mbogo**	**75.79**	**67**	LR	LR	15 46 38.2	
	comp=Z,87nm,19.2s,baz=95,slow=33						
TORD	**Torodi Ar. Bea**	**76.11**	**28**	P	**P**	**15 17 19.6**	**-0.9**
	3.6nm,0.7s,baz=194,slow=6.4,SNR=20						
ASAR	**Alice Springs**	**95.05**	**161**	P	**P**	**15 18 58.3**	**+2.6**
	0.5nm,0.7s,baz=184,slow=3.9,SNR=11						
FITZ	**Fitzroy Crossi**	**98.83**	**153**	LR	LR	16 00 13.2	
	comp=Z,79nm,18.1s,baz=9.0,slow=33						
KEST	**Kesra**	**99.62**	**158**	LR	LR	15 57 00.7	
	comp=Z,17nm,18.4s,baz=293,slow=31						
CMAR	**Chiang Mai Arr**	**122.94**	**112**	PKP	**PKPdf**	**15 24 29.8**	**+0.8**
	0.9nm,0.8s,baz=250,slow=2.8,SNR=5.6						
ARCES	**ARCESS Array B**	**134.26**	**23**	PKP	**PKPdf**	**15 24 48.5**	**-0.4**
	1.0nm,0.9s,baz=210,slow=3.3,SNR=6.4						
MKAR	**Makanchi Array**	**137.29**	**74**	PKP	**PKPdf**	**15 24 55.0**	**-0.2**
	0.2nm,0.6s,baz=249,slow=3.5,SNR=3.0						
KURBB	**Kurchatov Arra**	**138.16**	**68**	PKP	**PKPdf**	**15 24 57.1**	**+0.4**
	0.4nm,0.9s,baz=232,slow=2.5,SNR=3.8						
YKA	**Yellowknife Ar**	**139.52**	**314**	PKP	**PKPdf**	**15 24 58.0**	**-0.8**
	1.7nm,0.7s,baz=125,slow=2.3,SNR=30						
ZALV	**Zalesovo Beam**	**143.26**	**68**	PKhKP	PKPpre	15 25 02.5	
	0.4nm,0.5s,baz=220,slow=3.8,SNR=3.0						
SONM	**Songino Array**	**150.00**	**92**	PKPbc	**PKPbc**	**15 25 23.3**	**+0.9**
	2.4nm,0.8s,baz=220,slow=2.7,SNR=14						
ILAR	**Eielson Array**	**153.16**	**306**	PKPbc	**PKPbc**	**15 25 28.4**	**-0.6**
	0.9nm,0.9s,baz=150,slow=1.6,SNR=9.0						

IDC 22 15:45:39.1±2.5, 3°59.5S×126°24.8E, h0km, mb3.0/2, mb1 3.3/3, mb1mx3.1/22, mbtmp3.1/3, ML3.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.2/11, Error ellipse: s-maj=362.5km s-min=26.8km az=64.0, Buru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**10.61**	**356**	LR	LR	15 52 05.8	
	comp=Z,88nm,19.7s,baz=188,slow=36						
WRA	**Warramunga Arr**	**18.07**	**155**	P	P	15 49 52.4	+0.1
	0.1nm,0.3s,baz=332,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**21.29**	**160**	P	P	15 50 27.1	-0.4
	0.2nm,0.4s,baz=344,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**63.35**	**328**	P	P	15 56 10.2	0.0
	0.2nm,0.6s,baz=131,slow=5.9,SNR=2.6						

DDA 22 15:50:02.6, 39.39N×35.71E, h7km, MD2.9
CSEM 22 15:50:13.9±0.5, 38.61N×35.84E, h8km, MD2.6, Error ellipse: s-maj=12.3km s-min=7.2km az=23.0
ISK 22 15:50:15.2, 38.68N×35.78E, h5km, MD2.6
ISC 22 15:50:13.9±1.3, 38.64N±0.07×35.80E±0.05, h14km±8km, n13, σ1°03/20, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.22**	**9**	*e*PG	**Pg**	**15 50 18.7**	**-0.2**
BNN				*e*SG	**Sg**	**15 50 22.3**	**0.0**
BNN	**Bunyan**	**0.22**	**9**	*e*Pg	**Pg**	**15 50 18.7**	**-0.2**
BNN				*e*Sg	**Sg**	**15 50 22.3**	**0.0**
PINB	**Pinarbasi**	**0.47**	**85**	*i* P	**Pb**	**15 50 24.7**	**+0.5**
PINB				*i* S	**Sn**	**15 50 32.7**	**-2.2**
PINB	**Pinarbasi**	**0.47**	**85**	*i* P	**Pb**	**15 50 24.7**	**+0.5**
SARI	**SarD1z-Kayseri**	**0.54**	**115**	*e*PG	**Pn**	**15 50 26.4**	**-0.9**
SARI				*e*SG	**Sn**	**15 50 35.3**	**-0.9**
SARI	**SarD1z-Kayseri**	**0.54**	**115**	*e*Pg	**Pn**	**15 50 26.4**	**-0.9**
SARI				*e*Sg	**Sn**	**15 50 35.3**	**-0.9**
AVNT	**Avonos**	**0.75**	**281**	*i* P	Pg	15 50 19.7	-9.0
AVNT				*i* S	**Sg**	**15 50 38.5**	**0.0**
YOZ	**Yozgat**	**1.07**	**340**	*e*PG	**Pg**	**15 50 35.2**	**+0.5**
YOZ				*e*SG	**Sn**	**15 50 50.3**	**+0.9**
YOZ	**Yozgat**	**1.07**	**340**	*e*Pg	**Pg**	**15 50 35.2**	**+0.5**
YOZ				*e*Sg	**Sn**	**15 50 50.3**	**+0.9**
DARE	**Darende-Malaty**	**1.32**	**92**	*e*PN	**Pg**	**15 50 41.1**	**+1.7**
DARE	**Darende-Malaty**	**1.32**	**92**	*e*Pn	**Pg**	**15 50 41.1**	**+1.7**
CORM	**Corum**	**1.79**	**330**	*e*PN	**Pb**	**15 50 46.8**	**+0.2**
CORM	**Corum**	**1.79**	**330**	*e*Pn	**Pb**	**15 50 46.8**	**+0.2**

DDA 22 15:51:04.8, 37.46N×35.43E, h7km, MD2.9
ISK 22 15:51:04.8, 37.48N×35.46E, h23km, MD2.5
CSEM 22 15:51:05.2±0.3, 37.47N×35.44E, h22km±4km, MD2.5, Error ellipse: s-maj=7.1km s-min=5.7km az=37.0
ISC 22 15:51:04.6±1.2, 37.46N±0.03×35.45E±0.03, h10km±11km, n19, σ0°86/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.30**	**85**	*e*PG	**Pb**	**15 51 11.8**	**-0.2**
KOZT				*e*SG	**Sb**	**15 51 17.2**	**+0.2**
KOZT	**Kozan**	**0.30**	**85**	*e*Pg	**Pb**	**15 51 11.8**	**-0.2**
KOZT				*e*Sg	**Sb**	**15 51 17.2**	**+0.2**
CEYT	**Ceyhan**	**0.50**	**152**	*e*PG	**Pb**	**15 51 15.9**	**+0.4**
CEYT				*e*SG	**Sb**	**15 51 23.9**	**+1.1**
CEYT	**Ceyhan**	**0.50**	**152**	*e*Pg	**Pb**	**15 51 15.9**	**+0.4**
CEYT				*e*Sg	**Sb**	**15 51 24.0**	**+1.1**
GULE	**Gulek**	**0.57**	**253**	*i* P	**Pg**	**15 51 15.3**	**-0.4**
GULE				*i* S	**Sb**	**15 51 24.9**	**0.0**
GULE	**Gulek**	**0.57**	**253**	*i* P	**Pg**	**15 51 15.3**	**-0.4**
GULE				*i* S	**Sb**	**15 51 24.9**	**0.0**
KRTS	**Karatas**	**0.88**	**184**	*e*PG	**Pn**	**15 51 22.5**	**-0.5**
KRTS				*e*SG	**Sn**	**15 51 35.3**	**-0.5**
KRTS	**Karatas**	**0.88**	**184**	*e*Pg	**Pn**	**15 51 22.5**	**-0.5**
KRTS				*e*Sg	**Sn**	**15 51 35.3**	**-0.5**
NIG	**Nigde**	**0.94**	**315**	*e*PG	**Pb**	**15 51 22.8**	**-0.3**
NIG				*e*SG	**Sb**	**15 51 35.7**	**+0.1**
NIG	**Nigde**	**0.94**	**315**	*e*Pg	**Pb**	**15 51 22.8**	**-0.3**
NIG				*e*Sg	**Sb**	**15 51 35.7**	**+0.1**
AYKD	**Aykdinkavak**	**1.08**	**92**	*i* P	**Pb**	**15 51 25.5**	**+0.2**
AYKD				*i* S	**Sn**	**15 51 42.2**	**+1.4**
AYKD	**Aykdinkavak**	**1.08**	**92**	*i* S	**Sn**	**15 51 42.2**	**+1.4**
KMRS	**Kahramanmaras**	**1.15**	**87**	*e*PN	**Pg**	**15 51 25.7**	**-1.1**
KMRS	**Kahramanmaras**	**1.15**	**87**	*e*Pn	**Pg**	**15 51 25.7**	**-1.1**
SARI	**SarD1z-Kayseri**	**1.22**	**38**	*e*PN	**Pb**	**15 51 26.7**	**-1.1**
AVNT	**Avonos**	**1.40**	**341**	*i* P	**Pn**	**15 51 30.2**	**-0.2**
AVNT				*i* S	**Sg**	**15 51 51.5**	**+1.7**
AVNT	**Avonos**	**1.40**	**341**	*i* P	**Pn**	**15 51 30.2**	**-0.2**
AVNT				*i* S	**Sg**	**15 51 51.5**	**+1.7**
YAYL	**Yayladag**	**1.51**	**160**	*i* P	**Pn**	**15 51 30.7**	**-1.1**
YAYL	**Yayladag**	**1.51**	**160**	*i* P	**Pn**	**15 51 30.7**	**-1.1**

MAN 22 15:52:44, 16.72N×120.48E, h22km, mb4.6, ML3.5, MS3.4, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.35**	**164**	*i* P	Pb	15 52 51.1	-0.6
BOLP	**Bolinao**	**0.64**	**238**	*e*P	Pn	15 52 57.9	+0.2
CAUP	**Cauayan**	**1.31**	**80**	*e*P	Pb	15 53 08.5	+0.7
APYP	**Conner**	**1.35**	**33**	*e*P	Pb	15 53 08.6	0.0
APYP				*e*S	Sb	15 53 25.9	+0.4
BALP	**Baler**	**1.43**	**132**	*e*P	Pn	15 53 08.4	-0.3

ISCJB 22 16:17:08.7±0.9, 51.47N±0.04×16.08E±0.04, h0km, Error ellipse: s-maj=6.6km s-min=3.6km az=12.9
WAR 22 16:17:10.7, 51.50N×16.09E
CSEM 22 16:17:10.3±0.8, 51.46N×16.13E, h2km, ML3.0/4, Error ellipse: s-maj=12.7km s-min=6.7km az=8.0
PRU 22 16:17:11.0, 51.46N×16.10E, h0km
ISC 22 16:17:10.4±1.3, 51.47N±0.06×16.10E±0.03, h0km, n20, σ0°63/37, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.64**	**169**	*e*Pg	**Pg**	**16 17 23.1**	**+0.4**
KSP				*e*Sg	**Sb**	**16 17 32.6**	**-1.4**
KSP	**Ksiaz**	**0.64**	**169**	*e*Pg	**Pg**	**16 17 23.1**	**+0.4**
UPC	**Upice**	**0.97**	**183**	*e*PG	**Pg**	**16 17 29.1**	**+0.2**
UPC	**Upice**	**0.97**	**183**	Pg	**Pg**	**16 17 29.1**	**+0.2**
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*PG	**Pg**	**16 17 31.9**	**-0.2**
DPC				*e*SG	**Sg**	**16 17 46.5**	**-0.2**
	comp=Z,12nm,0.4s						
DPC	**Dobruska-Polom**	**1.13**	**173**	Pg	**Pg**	**16 17 31.9**	**-0.2**
DPC				Sg	**Sg**	**16 17 46.5**	**-0.2**
	12nm,0.4s						
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG	**Pg**	**16 17 36.6**	**+0.3**
PVCC				*e*SG	**Sb**	**16 17 54.9**	**+0.4**
	comp=Z,46nm,0.2s						
PVCC	**Panska Ves**	**1.35**	**226**	Pg	**Pg**	**16 17 36.6**	**+0.3**
PVCC				Sg	**Sb**	**16 17 54.9**	**+0.4**
	46nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**247**	PG	**Pn**	**16 17 38.4**	**0.0**
BRG				SG	**Sn**	**16 17 58.7**	**+0.2**
	25nm,0.4s						
PRU	**Pruhonice**	**1.79**	**214**	*e*PG	**Pg**	**16 17 44.7**	**+0.1**
PRU				*e*SG	**Sb**	**16 18 07.2**	**+0.3**
	comp=Z,7.3nm,0.3s						
PRU	**Pruhonice**	**1.79**	**214**	Pg	**Pg**	**16 17 44.7**	**+0.1**
PRU				Sg	**Sb**	**16 18 07.2**	**+0.3**
	7.3nm,0.3s						
MORC	**Moravsky Berou**	**1.93**	**151**	*e*Pn	**Pn**	**16 17 43.7**	**-0.8**
MORC				*e*Sg	**Sn**	**16 18 10.2**	**+0.7**
CLL	**Collm**	**1.95**	**266**	*e*Pn	**Pn**	**16 17 43.0**	**-1.7**
CLL				*i* Pg	**Pb**	**16 17 46.2**	**-0.6**
CLL				*i*		16 17 50.1	
CLL				*i* Sg	**Sb**	**16 18 12.3**	**+0.7**
	comp=Z,7.0nm,0.6s						
VRAC	**Vranov**	**2.19**	**172**	*e*Sg	**Sg**	**16 18 19.7**	**-1.0**
NKC	**Novy Kostel**	**2.63**	**243**	*e*SG	**Sg**	**16 18 35.4**	**+0.6**
	comp=Z,12nm,0.4s						
NKC	**Novy Kostel**	**2.63**	**243**	Sg	**Sg**	**16 18 35.4**	**+0.6**
	comp=Z,12nm,0.4s						
OJC	**Ojcow**	**2.66**	**117**	*e*Pg	**Pg**	**16 18 01.5**	**+0.2**
OJC				*e*Sg	**Sg**	**16 18 37.0**	**+1.3**
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PN	**Pn**	**16 17 56.9**	**-0.2**
KHC				*e*PG	**Pb**	**16 18 02.9**	**+0.8**
KHC				*e*SN	**Sn**	**16 18 31.8**	**-0.3**
KHC				*e*SG	**Sg**	**16 18 41.6**	**-0.3**
KHC	**Kasperske Hory**	**2.85**	**216**	Pn	**Pn**	**16 17 56.9**	**-0.2**
KHC	**Kasperske Hory**	**2.85**	**216**	Pg	**Pb**	**16 18 02.9**	**+0.8**
KHC				Sn	**Sn**	**16 18 31.8**	**-0.3**
KHC				Sg	**Sg**	**16 18 41.6**	**-0.3**

IDC 22 16:26:25.0±7.8, 30.22S×177.93W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.4/17, mbtmp3.5/2, Error ellipse: s-maj=331.5km s-min=57.1km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.18**	**267**	P	P	16 34 27.4	-0.4
	0.4nm,0.9s,baz=108,slow=7.6,SNR=4.8						
WRA	**Warramunga Arr**	**44.15**	**272**	P	P	16 34 35.8	+0.1
	0.7nm,1.1s,baz=109,slow=8.1,SNR=7.7						
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc	PKPbc	16 46 01.6	-1.2
	1.4nm,0.8s,baz=55,slow=5.3,SNR=2.9						

ISCJB 22 16:43:19.6±0.8, 4.13S±0.06×152.2E±0.1, h200km, mb4.0/12, Error ellipse: s-maj=16.8km s-min=7.6km az=13.7
AUST 22 16:43:22.0±4.8, 4.21S×152.15E, h210km, Error ellipse: s-maj=4.4km s-min=1.3km az=245.0
IDC 22 16:43:22.8±1.9, 4.17S×152.03E, h210km±15km, mb3.7/9, mb1 3.7/11, mb1mx3.5/20, mbtmp3.6/11, Error ellipse: s-maj=23.3km s-min=9.6km az=104.0
ISC 22 16:43:21.5±1.0, 4.17S±0.08×152.1E±0.2, h200km, n32, σ0°92/34, mb4.0/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.15**	**223**	P	**Pn**	**16 45 03.1**	**-0.7**
	4.7nm,0.3s,baz=20,slow=22,SNR=17						
PMG				S	**Sn**	**16 46 24.1**	**-0.9**
	2.4nm,0.3s,baz=36,slow=18,SNR=6.1						
MMPI	**Merauke**	**12.40**	**249**	S	S	16 48 57.9	+28
	baz=12,SNR=4.8						
COEN	**Coen**	**13.12**	**222**	P	**Pn**	**16 46 22.1**	**+1.5**
	baz=13,SNR=16						
MTSU	**Mount Surprise**	**15.83**	**208**	P	**Pn**	**16 46 56.0**	**+2.1**
	baz=16,SNR=18						
CTA	**Charters Tower**	**16.82**	**199**	P	**Pn**	**16 47 06.8**	**+1.1**
	0.5nm,0.3s,baz=24,slow=9.0,SNR=5.5						
FAKI	**Fak Fak**	**19.85**	**273**	P	**P**	**16 47 38.2**	**+0.6**
	baz=20,SNR=4.0						
QIS	**Mount Isa**	**20.33**	**216**	P	**P**	**16 47 43.1**	**+0.6**
	baz=20,SNR=22						
PALU	**Palau**	**20.98**	**303**	P	**P**	**16 47 50.0**	**+0.5**
	baz=21,SNR=7.2						
SWI	**Sorong**	**21.08**	**278**	P	**P**	**16 47 52.2**	**+1.7**
	baz=21,SNR=5.0						
KDU	**Kakadu**	**21.16**	**245**	P	**P**	**16 47 50.1**	**-1.3**
	baz=21,SNR=38						
MTN	**Manton Dam**	**22.44**	**246**	P	**P**	**16 48 04.0**	**0.0**
	baz=22,SNR=17						
WRA	**Warramunga Arr**	**23.35**	**226**	P	**P**	**16 48 13.2**	**+0.9**
	53nm,0.6s,baz=51,slow=9.3,SNR=638						
WRA				S	**S**	**16 52 09.4**	**-0.7**
	1.7nm,0.7s,baz=45,slow=17,SNR=5.1						
QLP	**Quilpie**	**23.52**	**198**	P	**P**	**16 48 14.5**	**+0.8**
	baz=24,SNR=15						
KNRA	**Kununurra**	**25.64**	**242**	P	**P**	**16 48 32.7**	**-0.2**
	baz=29,SNR=25						
ASAR	**Alice Springs**	**26.16**	**221**	P	**P**	**16 48 37.9**	**+0.2**
	6.0nm,0.6s,baz=52,slow=8.4,SNR=158						
ASAR				S	**S**	**16 52 53.6**	**-1.0**
	0.4nm,0.6s,baz=49,slow=13,SNR=3.9						
STKA	**Stephens Creek**	**29.27**	**198**	P	**P**	**16 49 05.0**	**-0.1**
	2.7nm,0.6s,baz=34,slow=12,SNR=8.4						
STKA	**Stephens Creek**	**29.27**	**198**	P	**P**	**16 49 05.2**	**+0.1**
	baz=29,SNR=6.9						
FITZ	**Fitzroy Crossi**	**29.36**	**240**	P	**P**	**16 49 05.9**	**-0.2**
	22nm,0.5s,baz=65,slow=7.0,SNR=224						
FITZ	**Fitzroy Crossi**	**29.36**	**240**	P	**P**	**16 49 05.0**	**-1.0**
	baz=29,SNR=129						
FORT	**Forrest**	**34.84**	**218**	P	**P**	**16 49 53.6**	**0.0**
	baz=35,SNR=12						
MEEK	**Meekatharra**	**39.04**	**232**	P	**P**	**16 50 28.9**	**-0.3**
	baz=39,SNR=17						
KMBL	**Kambalda**	**39.23**	**223**	P	**P**	**16 50 30.3**	**-0.4**
	baz=39,SNR=11						
KSM	**Kuching**	**42.14**	**277**	P	**P**	**16 50 55.8**	**+1.1**
	baz=42,SNR=4.3						
JNU	**Nakatsue**	**42.19**	**333**	P	**P**	**16 50 54.0**	**-0.9**
	8.3nm,0.9s,baz=134,slow=1.3,SNR=5.5						
KSRS	**Korea Array**	**47.13**	**334**	P	**P**	**16 51 33.7**	**0.0**
	0.5nm,0.7s,baz=149,slow=7.5,SNR=4.9						
CMAR	**Chiang Mai Arr**	**56.98**	**295**	P	**P**	**16 52 47.6**	**+0.9**
	3.0nm,0.7s,baz=114,slow=5.3,SNR=22						
SONM	**Songino Array**	**65.43**	**328**	P	**P**	**16 53 43.3**	**+0.3**
	0.3nm,0.6s,baz=147,slow=3.3,SNR=2.8						
VNDA	**Vanda**	**73.48**	**178**	P	**P**	**16 54 32.1**	**+0.4**
	0.9nm,0.6s,baz=333,slow=6.3,SNR=12						
MKAR	**Makanchi Array**	**79.40**	**319**	P	**P**	**16 55 05.2**	**-0.2**
	2.1nm,1.0s,baz=114,slow=4.8,SNR=12						
ZALV	**Zalesovo Beam**	**80.25**	**326**	P	**P**	**16 55 08.3**	**-1.4**
	0.8nm,0.5s,baz=115,slow=6.5,SNR=6.5						
BVAR	**Borovoye Array**	**88.32**	**323**	P	**P**	**16 55 49.3**	**-1.1**
	1.0nm,0.6s,baz=112,slow=5.2,SNR=9.4						
TORD	**Torodi Ar. Bea**	**149.45**	**289**	PKPbc	**PKPbc**	**17 02 47.2**	**-0.9**
	1.8nm,0.8s,baz=69,slow=2.7,SNR=11						

IDC 22 16:45:02.9±20.0, 22.19N×143.27E, h295km±148km, mb2.9/6, mb1 2.9/6, mb1mx2.7/26, mbtmp2.9/6, MS3.1/1, Ms1 3.1/1, ms1mx2.1/10, Error ellipse: s-maj=150.8km s-min=126.4km az=20.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**11.32**	**345**	LR	LR	16 50 55.2	
	comp=Z,104nm,21.3s,baz=166,slow=31						
KSRS	**Korea Array**	**20.18**	**322**	P	P	16 49 16.0	+0.2
	2.0nm,0.6s,baz=146,slow=9.1,SNR=11						
SONM	**Songino Array**	**39.02**	**320**	P	P	16 52 01.3	-0.3
	0.2nm,0.4s,baz=125,slow=7.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**53.88**	**321**	P	P	16 53 56.3	+0.2
	0.2nm,0.2s,baz=111,slow=7.9,SNR=3.3						
MKAR	**Makanchi Array**	**54.43**	**312**	P	P	16 54 00.3	+0.1
	0.1nm,0.5s,baz=101,slow=7.5,SNR=3.4						
BVAR	**Borovoye Array**	**62.35**	**319**	P	P	16 54 54.1	-0.4
	0.3nm,0.3s,baz=101,slow=7.8,SNR=2.7						
FINES	**FINESS Array B**	**82.78**	**334**	P	P	16 56 54.0	+0.1
	0.3nm,0.3s,baz=72,slow=6.2,SNR=6.8						
TORD	**Torodi Ar. Bea**	**128.50**	**309**	PKP	PKPdf	17 03 35.4	-0.3
	1.1nm,0.8s,baz=48,slow=2.1,SNR=4.2						

IDC 22 16:55:06.0±1.6, 6.68S×129.75E, h0km, mb3.8/5, mb1 4.1/8, mb1mx3.8/21, mbtmp4.0/8, ML4.1/3, Error ellipse: s-maj=74.6km s-min=23.3km az=77.0
AUST 22 16:55:15.1, 6.98S×129.54E, h35km
DJA 22 16:55:20.5±0.4, 7°S±4°×13°0E±°, h106km±24km, M5.1/3, mB5.1/1, mb4.8/3, MLv5.3/1, Mw(mB)4.4/1
ISC 22 16:55:16.8±0.7, 7.14S±0.05×129.82E±0.08, h104km, n25, σ2°86/27, mb3.6/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.84**	**30**	P	**Pn**	**16 56 28.5**	**+1.0**
FAKI	**Fak Fak**	**4.84**	**30**	P	**Pn**	**16 56 28.0**	**+0.5**
	baz=4.9,SNR=21						
FAKI				S	**Sn**	**16 57 19.0**	**-3.4**
	baz=4.9,SNR=12						
MTN	**Manton Dam**	**5.81**	**167**	P	**Pn**	**16 56 42.9**	**+2.4**
	baz=6.1,SNR=5.8						
MTN				S	**Sn**	**16 57 49.1**	**+3.3**
	baz=6.1,SNR=8.9						
KDU	**Kakadu**	**6.10**	**155**	P	Pn	16 56 48.7	+4.2
	baz=6.4,SNR=79						
KDU				S	**Sn**	**16 57 56.1**	**+3.3**
	baz=6.4,SNR=5.8						
SWI	**Sorong**	**6.40**	**13**	P	**Pn**	**16 56 49.0**	**+0.4**
SWI	**Sorong**	**6.40**	**13**	P	**Pn**	**16 56 49.5**	**+0.8**
	baz=6.4,SNR=19						
SWI				S	Sn	16 57 55.2	-5.1
	baz=6.4,SNR=19						
LBMI	**Labuha**	**6.86**	**340**	P	Pn	16 56 58.9	+4.0
RKPI	**Ransiki, Papua**	**7.08**	**38**	P	**Pn**	**16 56 58.5**	**+0.6**
KNRA	**Kununurra**	**8.54**	**187**	P	**Pn**	**16 57 20.7**	**+3.0**
	baz=8.7,SNR=160						
KNRA				S	**Sn**	**16 58 51.4**	**-1.0**
	baz=8.7,SNR=6.4						
BAKI	**Biak**	**8.62**	**47**	P	Pn	16 57 22.8	+4.1
	150nm,1.1s,1μm0.5nm						
WSI	**Waingapu**	**9.75**	**254**	P	Pn	16 57 27.9	-6.2
	baz=9.5,SNR=3.3						
MRSI	**Marisa**	**10.91**	**314**	P	Pn	16 57 55.1	+5.2
	15nm,0.8s						
FITZ	**Fitzroy Crossi**	**11.63**	**200**	Pn	**Pn**	**16 58 00.1**	**+0.6**
	1.5nm,0.3s,baz=37,slow=12,SNR=79						
FITZ				Sn	**Sn**	**17 00 04.2**	**-3.3**
	0.9nm,0.3s,baz=97,slow=3.9,SNR=3.2						
FITZ	**Fitzroy Crossi**	**11.63**	**200**	P	**Pn**	**16 58 00.1**	**+0.6**
	baz=12,SNR=53						
FITZ				S	**Sn**	**17 00 03.1**	**-4.4**
	baz=12,SNR=3.6						
WRA	**Warramunga Arr**	**13.46**	**161**	Pn	**Pn**	**16 58 23.8**	**+0.2**
	0.8nm,0.3s,baz=338,slow=13,SNR=40						
WRA				Sn	**Sn**	**17 00 46.3**	**-5.5**
	1.8nm,0.3s,baz=332,slow=23,SNR=11						
COEN	**Coen**	**14.77**	**118**	P	**P**	**16 58 43.9**	**+0.2**
	baz=15,SNR=7.3						
QIS	**Mount Isa**	**16.36**	**146**	S	**Sn**	**17 01 55.2**	**-6.8**
	baz=17,SNR=5.3						
ASAR	**Alice Springs**	**16.89**	**167**	P	**P**	**16 59 09.9**	**+2.6**
	0.6nm,0.3s,baz=341,slow=9.2,SNR=63						
ASAR				S	**Sn**	**17 02 12.1**	**-2.7**
	0.5nm,0.3s,baz=347,slow=28,SNR=6.7						
KSM	**Kuching**	**21.27**	**293**	P	**P**	**16 59 59.3**	**+4.3**
	baz=21,SNR=3.6				

PTRJ	**Pietraroja**	**0.83**	**219**	Pg	Pg	17 01 15.1	+0.4
	285nm,0.3s						
PSB1	**Pescosannita**	**0.85**	**201**	Pg	Pg	17 01 14.9	0.0
PSB1				Sg	Sb	17 01 27.1	-0.4
	123nm,0.7s						
PSB1	**Pescosannita**	**0.85**	**201**	Pg	Pg	17 01 14.9	0.0
PSB1				Sg	Sb	17 01 27.1	-0.4
	123nm,0.7s						
RNI2	**Rionero Sannit**	**0.86**	**249**	Pg	Pb	17 01 16.0	0.0
	152nm,0.3s						
RNI2	**Rionero Sannit**	**0.86**	**249**	Pg	Pb	17 01 16.0	0.0
	152nm,0.3s						
SGTA	**Sant Agata di**	**0.89**	**173**	Pg	Pb	17 01 16.1	-0.3
	487nm,0.7s						
SGTA	**Sant Agata di**	**0.89**	**173**	Pg	Pb	17 01 16.1	-0.3
	487nm,0.7s						
VAGA	**Valle Agricola**	**0.95**	**231**	Pg	Pg	17 01 16.8	-0.1
	203nm,0.3s						
VAGA	**Valle Agricola**	**0.95**	**231**	Pg	Pg	17 01 16.8	-0.1
	203nm,0.3s						
CAFE	**Carife**	**0.99**	**179**	Pg	Pg	17 01 16.9	-0.7
	209nm,0.3s						
CAFE	**Carife**	**0.99**	**179**	Pg	Pg	17 01 16.9	-0.7
	209nm,0.3s						
CERA	**Filignano**	**0.99**	**245**	Pg	Pg	17 01 17.5	-0.2
	140nm,0.4s						
CERA	**Filignano**	**0.99**	**245**	Pg	Pg	17 01 17.5	-0.2
	140nm,0.4s						
SNAL	**S. Angelo Dei**	**1.09**	**181**	Pg	Pg	17 01 18.3	-1.3
	193nm,0.5s						
SNAL	**S. Angelo Dei**	**1.09**	**181**	Pg	Pg	17 01 18.3	-1.3
	193nm,0.5s						
SDI	**San Donato**	**1.10**	**254**	Pg	Pg	17 01 19.6	-0.1
	47nm,0.2s						
SDI	**San Donato**	**1.10**	**254**	Pg	Pg	17 01 19.6	-0.1
	47nm,0.2s						
VULT	**Monte Vulture**	**1.10**	**164**	Pg	Pb	17 01 20.3	+0.2
	361nm,0.3s						
VULT	**Monte Vulture**	**1.10**	**164**	Pg	Pb	17 01 20.3	+0.2
	361nm,0.3s						
POFI	**Posta Fibreno**	**1.17**	**256**	Pg	Pg	17 01 20.7	-0.3
	89nm,0.6s						
POFI	**Posta Fibreno**	**1.17**	**256**	Pg	Pg	17 01 20.7	-0.3
	89nm,0.6s						
MRVN	**Minervino Murg**	**1.20**	**142**	Pg	Pg	17 01 21.2	-0.4
	88nm,0.5s						
MRVN	**Minervino Murg**	**1.20**	**142**	Pg	Pg	17 01 21.2	-0.4
	88nm,0.5s						
PALZ	**Palazzo San Ge**	**1.21**	**152**	Pg	Pn	17 01 22.1	+0.2
	199nm,0.4s						
PALZ	**Palazzo San Ge**	**1.21**	**152**	Pg	Pn	17 01 22.1	+0.2
	199nm,0.4s						
MRLC	**Muro Lucano**	**1.27**	**171**	Pg	Pg	17 01 23.1	+0.1
	120nm,0.6s						
MRLC	**Muro Lucano**	**1.27**	**171**	Pg	Pg	17 01 23.1	+0.1
	120nm,0.6s						

CSEM 22 17:00:59.6, 42°25N×13°46E, h10km, After ROM, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.11**	**339**	Pg	Pb	17 01 03.4	-0.5
AQU				Sg	Sg	17 01 04.9	+0.4
AQU	**L'Aquila**	**0.11**	**339**	Pg	Pb	17 01 03.4	-0.5
AQU				Sg	Sg	17 01 04.9	+0.4
PTQR	**Pietraquaria**	**0.23**	**190**	Pg	Pg	17 01 04.9	+0.3
PTQR				Sg	Sg	17 01 09.1	+1.2
	9.0nm,0.2s						
PTQR	**Pietraquaria**	**0.23**	**190**	Pg	Pg	17 01 04.9	+0.3
PTQR				Sg	Sg	17 01 09.1	+1.2
	9.0nm,0.2s						
FIAM	**Fiamignano**	**0.25**	**274**	Pg	Pg	17 01 05.4	+0.5
FIAM				Sg	Sb	17 01 09.8	-1.1
	29nm,0.6s						
FIAM	**Fiamignano**	**0.25**	**274**	Pg	Pg	17 01 05.4	+0.5
FIAM				Sg	Sb	17 01 09.8	-1.1
	29nm,0.6s						
TERO	**Teramo**	**0.39**	**17**	Pg	Pg	17 01 07.7	+0.4
	126nm,0.5s						
TERO	**Teramo**	**0.39**	**17**	Pg	Pg	17 01 07.7	+0.4
	126nm,0.5s						

*TAP **22** 17:32:26.8, 24°.92N×122°.72E, h127km, ML3.5, C*
*ISCJB **22** 17:32:27.1±0.6, 24°.82N±0°.04×122°.79E±0°.02, h120km±5km, Error ellipse: s-maj=6.7km s-min=3.0km az=169.2*
*JMA **22** 17:32:27.0±0.2, 24°.93N×122°.79E, h120km±3km, M2.8*
ISC 22 17:32:27.7±1.5, 24°82N±0°05×122°79E±0°03, h119km±9km, n41, σ0s85/78, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.41**	**150**	P	**Pn**	**17 32 45.0**	**0.0**
YOJ				S	**Sn**	**17 32 59.0**	**+1.0**
TWC	**Suao**	**0.88**	**256**	*i* P	**Pn**	**17 32 48.1**	**-0.3**
	baz=242						
TWC				*i* S	**Sn**	**17 33 03.8**	**-0.3**
	baz=242						
NWF	**Wu-fen Shan**	**0.95**	**286**	P	**Pn**	**17 32 49.0**	**-0.2**
	baz=279						
NWF				*e*S	**Sn**	**17 33 04.6**	**-0.8**
	baz=279						
IRIF	**Iriomote-Funau**	**0.98**	**119**	P	**Pn**	**17 32 49.3**	**-0.1**
IRIF				*e*S	**Sn**	**17 33 06.3**	**+0.4**
TWE	**Neicheng**	**1.02**	**265**	P	**Pn**	**17 32 49.8**	**0.0**
	baz=253						
TWE				*e*S	**Sn**	**17 33 06.6**	**+0.1**
	baz=253						
ENA	**Nanau**	**1.03**	**248**	P	**Pn**	**17 32 49.9**	**0.0**
	baz=235						
ENA				S	**Sn**	**17 33 06.7**	**0.0**
	baz=235						
ENTT	**Nioudou**	**1.12**	**261**	P	**Pn**	**17 32 51.0**	**+0.2**
	baz=261						
HATJ	**Hateruma jima**	**1.20**	**129**	P	**Pn**	**17 32 52.1**	**+0.5**
HATJ				*e*S	**Sn**	**17 33 11.4**	**+1.6**
JKRS	**Kuro-shima**	**1.25**	**117**	P	**Pn**	**17 32 52.6**	**+0.4**
JKRS				S	**Sn**	**17 33 11.7**	**+0.8**
TWS1	**Kuangyinshan**	**1.27**	**283**	*e*P	**Pn**	**17 32 52.2**	**-0.2**
	baz=278						
TWS1				*e*S	**Sn**	**17 33 11.5**	**+0.3**
	baz=278						
NSK	**Sanguang**	**1.31**	**264**	P	**Pn**	**17 32 52.8**	**-0.1**
	baz=258						
NSK				S	**Sn**	**17 33 11.2**	**-0.8**
	baz=258						
TWD	**Chiawan**	**1.31**	**236**	P	**Pn**	**17 32 52.7**	**-0.2**
	baz=226						
TWD				S	**Sn**	**17 33 11.6**	**-0.4**
	baz=226						
JIJ	**Ishigaki jima**	**1.31**	**110**	P	**Pn**	**17 32 52.7**	**-0.2**
JIJ				S	**Sn**	**17 33 11.6**	**-0.5**
NNS	**Nan Shan**	**1.34**	**254**	*i* P	**Pn**	**17 32 53.3**	**0.0**
	baz=242						
NNS				*e*S	**Sn**	**17 33 12.4**	**-0.4**
	baz=242						
WHF	**Hehuan Shan**	**1.54**	**244**	*i* P	**Pn**	**17 32 55.8**	**-0.2**
	baz=239						
WHF				S	**Sn**	**17 33 16.8**	**-0.6**
	baz=239						
TWT	**Tachien**	**1.57**	**249**	P	**Pn**	**17 32 56.7**	**+0.6**
	baz=244						
TWT				S	**Sn**	**17 33 17.7**	**+0.1**
	baz=244						
ESL	**Shilin**	**1.59**	**231**	*i* P	**Pn**	**17 32 55.3**	**-0.8**
	baz=222						
ESL				*e*S	**Sn**	**17 33 16.1**	**-1.7**
	baz=222						
NSTT	**Nanjuang**	**1.63**	**264**	P	**Pn**	**17 32 56.8**	**+0.2**
	baz=259						
NSTT				S	**Sn**	**17 33 17.4**	**-1.2**
	baz=259						
JTJ	**Tarama**	**1.75**	**95**	P	**Pn**	**17 32 58.0**	**0.0**
JTJ				*e*S	**Sn**	**17 33 21.1**	**0.0**
EHY	**Hungye**	**1.87**	**226**	*e*P	**Pn**	**17 32 58.8**	**-0.7**
	baz=222						
EHY				*e*S	**Sn**	**17 33 21.9**	**-1.8**
	baz=222						
TWQ1	**Liyutan**	**1.89**	**256**	*e*P	**Pn**	**17 32 59.8**	**0.0**
	baz=252						
TWQ1				*e*S	**Sn**	**17 33 23.6**	**-0.7**
	baz=252						
SMLT	**Sun Moon Lake**	**1.96**	**242**	P	**Pn**	**17 33 01.5**	**+0.8**
	baz=234						
SMLT				*e*S	**Sn**	**17 33 27.5**	**+1.7**
	baz=234						
TYC	**Yuchr**	**1.98**	**243**	P	**Pn**	**17 33 01.8**	**+1.0**
	baz=236						
TYC				*e*S	**Sn**	**17 33 27.8**	**+1.6**
	baz=236						
TWF1	**Yuli**	**2.00**	**223**	P	**Pn**	**17 33 00.4**	**-0.6**
	baz=227						
WNT	**Mingjian**	**2.13**	**244**	*e*P	**Pn**	**17 33 03.8**	**+1.0**
	baz=240						
WNT				*e*S	**Sn**	**17 33 30.4**	**+0.7**
	baz=240						
YUS	**Yu-Shan**	**2.13**	**232**	*e*P	**Pn**	**17 33 03.9**	**+0.6**
	baz=223						
YUS				*e*S	**Sn**	**17 33 30.1**	**-0.3**
	baz=223						
CHKT	**Chengkung**	**2.15**	**218**	P	**Pn**	**17 33 02.3**	**-0.6**
	baz=209						
CHKT				*e*S	**Sn**	**17 33 28.1**	**-1.9**
	baz=209						
ALS	**Alishan**	**2.23**	**235**	*i* P	**Pn**	**17 33 05.3**	**+1.0**
	baz=226						
ALS				*e*S	**Sn**	**17 33 34.0**	**+1.7**
	baz=226						
CHN5	**Tsauling**	**2.28**	**238**	P	**Pn**	**17 33 05.4**	**+0.7**
	baz=243						
CHN5				*e*S	**Sn**	**17 33 33.5**	**+0.5**
	baz=243						
ELDTW	**Lidau**	**2.29**	**225**	P	**Pn**	**17 33 04.5**	**-0.3**
	baz=221						
ELDTW				*e*S	**Sn**	**17 33 32.9**	**-0.5**
	baz=221						
WGK	**Gukeng**	**2.32**	**241**	*e*P	**Pn**	**17 33 06.1**	**+1.0**
	baz=247						
WGK				*e*S	**Sn**	**17 33 35.4**	**+1.5**
	baz=247						
JOGS	**Gusukube**	**2.38**	**91**	P	**Pn**	**17 33 06.5**	**+0.6**
JOGS				*e*S	**Sn**	**17 33 35.7**	**+0.5**
CHN4	**Tsaushan**	**2.48**	**234**	*e*P	**Pn**	**17 33 07.9**	**+0.7**
	baz=231						
CHN4				*e*S	**Sn**	**17 33 39.1**	**+1.6**
	baz=231						
WTP	**Ta-pu**	**2.53**	**232**	*e*P	**Pn**	**17 33 08.4**	**+0.6**
	baz=239						
WTP				*e*S	**Sn**	**17 33 40.4**	**+1.7**
	baz=239						
TWG	**Pinlang**	**2.53**	**219**	*e*P	**Pn**	**17 33 07.4**	**-0.5**
	baz=221						
TWG				*e*S	**Sn**	**17 33 37.9**	**-0.9**
	baz=221						
CHN1	**Nanshi**	**2.63**	**232**	*e*P	**Pn**	**17 33 10.0**	**+0.9**
	baz=237						
CHN1				*e*S	**Sn**	**17 33 41.6**	**+0.7**
	baz=237						
ECL	**Taimali**	**2.78**	**218**	*e*P	**Pn**	**17 33 10.2**	**-0.8**
	baz=209						
ECL				*e*S	**Sn**	**17 33 43.5**	**-0.9**
	baz=209						
SSD	**Sandimen**	**2.85**	**224**	*e*P	**Pn**	**17 33 12.8**	**+0.7**
	baz=229						
LAY	**Lan-yu**	**2.99**	**203**	P	**Pn**	**17 33 13.3**	**-0.6**
	baz=195						
LAY				*e*S	**Sn**	**17 33 48.2**	**-1.2**
	baz=195						
EAST	**Anshuo**	**3.01**	**217**	*e*P	**Pn**	**17 33 14.2**	**+0.1**
	baz=211						
JKE	**Kume jima 2**	**3.91**	**67**	P	**Pn**	**17 33 25.2**	**-0.8**
JKE				*e*S	**Sn**	**17 34 10.1**	**-1.1**

*ISK **22** 17:51:12.5, 39°.70N×26°.50E, h2km, MD3.1*
*DDA **22** 17:51:12.3, 39°.65N×26°.53E, h7km, MD2.9*
*CSEM **22** 17:51:12.5±0.4, 39°.66N×26°.45E, h2km, MD3.1, Error ellipse: s-maj=7.5km s-min=4.3km az=53.0*
ISC 22 17:51:12.5±1.0, 39°67N±0°04×26°47E±0°05, h12km±8km, n38, σ1s12/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.19**	**326**	*e*PG	**Pg**	**17 51 16.8**	**+0.1**
EZN				*e*SG	**Sg**	**17 51 20.3**	**+0.7**
EZN	**Ezine**	**0.19**	**326**	*e*Pg	**Pg**	**17 51 16.8**	**+0.1**
EZN				*e*Sg	**Sg**	**17 51 20.3**	**+0.7**
AYVA	**Ayvalik**	**0.40**	**154**	*i* P	**Pg**	**17 51 19.5**	**-0.9**
AYVA				*i* S	**Sg**	**17 51 24.3**	**-1.4**
AYVA	**Ayvalik**	**0.40**	**154**	*i* P	**Pg**	**17 51 19.5**	**-0.9**
AYVA				*i* S	**Sg**	**17 51 24.3**	**-1.4**
GELI	**Tayfur-Gelibol**	**0.73**	**1**	*e*PG	**Pb**	**17 51 26.8**	**-0.3**
GELI				*e*SG	**Sb**	**17 51 37.1**	**0.0**
GELI	**Tayfur-Gelibol**	**0.73**	**1**	*e*Pg	**Pb**	**17 51 26.8**	**-0.3**
GELI				*e*Sg	**Sb**	**17 51 37.1**	**0.0**
BALY	**Balya**	**0.89**	**85**	*i* P	**Pb**	**17 51 30.2**	**+0.3**
BALY				*i* S	**Sb**	**17 51 42.0**	**+0.2**
BALY	**Balya**	**0.89**	**85**	*i* P	**Pb**	**17 51 30.2**	**+0.3**
BALY				*i* S	**Sb**	**17 51 42.0**	**+0.2**
KRBG	**Karabiga-Canak**	**0.97**	**41**	*e*PG	**Pb**	**17 51 30.9**	**-0.2**
KRBG				*e*SG	**Sb**	**17 51 44.7**	**+0.8**
KRBG	**Karabiga-Canak**	**0.97**	**41**	*e*Pg	**Pb**	**17 51 30.9**	**-0.2**
KRBG				*e*Sg	**Sb**	**17 51 44.7**	**+0.8**
ERIK	**Erikli-Kesan**	**1.00**	**2**	*e*PG	**Pb**	**17 51 31.6**	**-0.2**
ERIK	**Erikli-Kesan**	**1.00**	**2**	*e*Pg	**Pb**	**17 51 31.6**	**-0.2**
GONE	**Gonen-Balikesi**	**1.01**	**68**	*e*PG	**Pb**	**17 51 31.8**	**-0.1**
GONE				*e*SG	**Sn**	**17 51 46.4**	**-0.2**
GONE	**Gonen-Balikesi**	**1.01**	**68**	*e*Pg	**Pb**	**17 51 31.8**	**-0.1**
GONE				*e*Sg	**Sn**	**17 51 46.4**	**-0.2**
ENEZ	**Enez**	**1.09**	**347**	*e*PG	**Pn**	**17 51 33.8**	**+0.2**
ENEZ	**Enez**	**1.09**	**347**	*e*Pg	**Pn**	**17 51 33.8**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.16**	**28**	*e*PN	**Pn**	**17 51 34.7**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.16**	**28**	*e*Pn	**Pn**	**17 51 34.7**	**+0.2**
SART	**Tekirdag**	**1.16**	**28**	*i* P	**Pg**	**17 51 33.0**	**-1.8**
SART				*i* S	**Sn**	**17 51 51.1**	**+0.7**
SART	**Tekirdag**	**1.16**	**28**	*i* P	**Pg**	**17 51 33.0**	**-1.8**
MRMT	**Marmara Adasi**	**1.27**	**42**	*e*PN	**Pn**	**17 51 36.9**	**+0.7**
MRMT	**Marmara Adasi**	**1.27**	**42**	*e*Pn	**Pn**	**17 51 36.9**	**+0.7**
MFT	**Murefte**	**1.28**	**29**	*e*PN	**Pn**	**17 51 37.3**	**+1.1**
MFT	**Murefte**	**1.28**	**29**	*e*Pn	**Pn**	**17 51 37.3**	**+1.1**
KCTX	**Karacabey (Bur**	**1.57**	**67**	*e*PN	**Pg**	**17 51 41.6**	**-1.0**
KCTX	**Karacabey (Bur**	**1.57**	**67**	*e*Pn	**Pg**	**17 51 41.6**	**-1.0**
MDNY	**Mudanya-Bursa**	**1.98**	**69**	*e*PN	**Pb**	**17 51 48.1**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.98**	**69**	*e*Pn	**Pb**	**17 51 48.1**	**-0.4**
ARMT	**Armutlu**	**2.04**	**63**	*e*PN	**Pb**	**17 51 48.5**	**-1.0**
ARMT	**Armutlu**	**2.04**	**63**	*e*Pn	**Pb**	**17 51 48.5**	**-1.0**
EDRB	**Edirne**	**2.19**	**5**	*e*PN	**Pb**	**17 51 50.5**	**-1.5**
EDRB	**Edirne**	**2.19**	**5**	*e*Pn	**Pb**	**17 51 50.5**	**-1.5**
ADVT	**Abdulvahap**	**2.63**	**72**	*e*PN	**Pn**	**17 51 56.9**	**+2.2**
ADVT	**Abdulvahap**	**2.63**	**72**	*e*Pn	**Pn**	**17 51 56.9**	**+2.2**
CAVI	**Cavuskoy**	**2.65**	**77**	*e*PN	**Pn**	**17 51 57.5**	**+2.5**
CAVI	**Cavuskoy**	**2.65**	**77**	*e*Pn	**Pn**	**17 51 57.5**	**+2.5**
GULT	**Gulveren**	**3.20**	**75**	*e*PN	**Pn**	**17 52 04.8**	**+2.1**
GULT	**Gulveren**	**3.20**	**75**	*e*Pn	**Pn**	**17 52 04.8**	**+2.1**

*ISCJB **22** 17:51:55.7±0.5, 39°.08N±0°.03×29°.04E±0°.03, h4km±6km, Error ellipse: s-maj=4.4km s-min=3.6km az=159.0*
*ISK **22** 17:51:55.3, 39°.08N×29°.04E, h5km, MD2.9*
*DDA **22** 17:51:55.5, 39°.08N×29°.03E, h7km, MD3.0*
*CSEM **22** 17:51:55.9±0.1, 39°.08N×29°.04E, h5km, MD3.0, Error ellipse: s-maj=2.1km s-min=1.8km az=79.0*
ISC 22 17:51:55.9±0.9, 39°10N±0°02×29°03E±0°02, h9km±9km, n57, σ0s69/76, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.25**	**258**	*i* P	**Pg**	**17 52 01.1**	**+0.2**
DEMI				*i* S	**Sg**	**17 52 04.7**	**+0.4**
DEMI	**Demirci**	**0.25**	**258**	*i* P	**Pg**	**17 52 01.1**	**+0.2**
DEMI				*i* S	**Sg**	**17 52 04.7**	**+0.4**
GDZ	**Gediz**	**0.35**	**91**	*i* P	**Pg**	**17 52 02.9**	**0.0**
GDZ				*i* S	**Sg**	**17 52 07.7**	**+0.2**
GDZ	**Gediz**	**0.35**	**91**	*i* P	**Pg**	**17 52 02.9**	**0.0**
GDZ				*i* S	**Sg**	**17 52 07.7**	**+0.2**
TVSB	**Tavsanli**	**0.49**	**43**	*e*PG	**Pg**	**17 52 05.0**	**-0.4**
TVSB				*e*SG	**Sg**	**17 52 12.2**	**+0.4**
TVSB	**Tavsanli**	**0.49**	**43**	*e*Pg	**Pg**	**17 52 05.0**	**-0.4**
TVSB				*e*Sg	**Sg**	**17 52 12.2**	**+0.4**
KULA	**Kula-Manisa**	**0.65**	**206**	*e*PG	**Pg**	**17 52 08.2**	**-0.2**
KULA				*e*SG	**Sg**	**17 52 16.8**	**-0.1**
KULA	**Kula-Manisa**	**0.65**	**206**	*e*Pg	**Pg**	**17 52 08.2**	**-0.2**
KULA				*e*Sg	**Sg**	**17 52 16.8**	**-0.1**
MANT	**Manisa**	**0.71**	**212**	*i* P	**Pg**	**17 52 09.4**	**-0.1**
MANT				*i* S	**Sg**	**17 52 18.9**	**+0.1**
MANT	**Manisa**	**0.71**	**212**	*i* P	**Pg**	**17 52 09.4**	**-0.1**
MANT				*i* S	**Sg**	**17 52 18.9**	**+0.1**
KHAL	**Karahalli**	**0.81**	**153**	*i* P	**Pb**	**17 52 11.9**	**-0.3**
KHAL				*i* S	**Sg**	**17 52 22.0**	**0.0**
KHAL	**Karahalli**	**0.81**	**153**	*i* P	**Pb**	**17 52 11.9**	**-0.3**
KHAL				*i* S	**Sg**	**17 52 22.0**	**0.0**
ALT	**Altintas**	**0.84**	**92**	*e*PG	**Pg**	**17 52 11.7**	**-0.4**
ALT				*e*SG	**Sg**	**17 52 23.5**	**+0.4**
ALT	**Altintas**	**0.84**	**92**	*e*Pg	**Pg**	**17 52 11.7**	**-0.4**
ALT				*e*Sg	**Sg**	**17 52 23.5**	**+0.4**
KHL	**Karahalli**	**0.86**	**153**	*e*PG	**Pg**	**17 52 12.2**	**-0.3**
KHL				*e*SG	**Sb**	**17 52 24.5**	**-0.3**
KHL	**Karahalli**	**0.86**	**153**	*e*Pg	**Pg**	**17 52 12.2**	**-0.3**
KHL				*e*Sg	**Sb**	**17 52 24.5**	**-0.3**
ORLT	**Orhaneli**	**0.95**	**354**	*e*PG	**Pg**	**17 52 14.4**	**+0.1**
ORLT	**Orhaneli**	**0.95**	**354**	*e*Pg	**Pg**	**17 52 14.4**	**+0.1**
ULDT	**Uludag**	**1.05**	**4**	*i* P	**Pg**	**17 52 27.4**	**-2.3**
BALY	**Balya**	**1.27**	**301**	*i* P	**Pg**	**17 52 20.4**	**+0.2**
BALY				*i* S	**Sn**	**17 52 37.5**	**+0.5**
BALY	**Balya**	**1.27**	**301**	*i* P	**Pg**	**17 52 20.4**	**+0.2**
BALY				*i* S	**Sn**	**17 52 37.5**	**+0.5**
CAVI	**Cavuskoy**	**1.27**	**29**	*e*PN	**Pn**	**17 52 19.9**	**0.0**
CAVI	**Cavuskoy**	**1.27**	**29**	*e*Pn	**Pn**	**17 52 19.9**	**0.0**
MDNY	**Mudanya-Bursa**	**1.28**	**355**	*e*PN	**Pg**	**17 52 20.8**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.28**	**355**	*e*Pn	**Pg**	**17 52 20.8**	**+0.4**
KCTX	**Karacabey (Bur**	**1.28**	**336**	*e*PN	**Pn**	**17 52 20.1**	**+0.1**
KCTX	**Karacabey (Bur**	**1.28**	**336**	*e*Pn	**Pn**	**17 52 20.1**	**+0.1**
SHUT	**Suhut-Afyon**	**1.31**	**114**	*e*PN	**Pn**	**17 52 20.5**	**0.0**
SHUT	**Suhut-Afyon**	**1.31**	**114**	*e*Pn	**Pn**	**17 52 20.5**	**0.0**
DNZL	**Cakiroluk**	**1.40**	**179**	*i* P	**Pn**	**17 52 20.9**	**-0.9**
DNZL				*i* S	**Sg**	**17 52 44.5**	**+3.5**
DNZL	**Cakiroluk**	**1.40**	**179**	*i* P	**Pn**	**17 52 20.9**	**-0.9**
GONE	**Gonen-Balikesi**	**1.41**	**313**	*e*PN	**Pn**	**17 52 21.8**	**+0.1**
GONE	**Gonen-Balikesi**	**1.41**	**313**	*e*Pn	**Pn**	**17 52 21.8**	**+0.1**
ADVT	**Abdulvahap**	**1.44**	**22**	*e*PN	**Pb**	**17 52 23.0**	**0.0**
ADVT	**Abdulvahap**	**1.44**	**22**	*e*Pn	**Pb**	**17 52 23.0**	**0.0**
ARMT	**Armutlu**	**1.47**	**355**	*e*PN	**Pb**	**17 52 23.3**	**-0.2**
ARMT	**Armutlu**	**1.47**	**355**	*e*Pn	**Pb**	**17 52 23.3**	**-0.2**
ESKT	**Eskisehir**	**1.48**	**73**	*e*PN	**Pn**	**17 52 23.0**	**+0.2**
ESKT	**Eskisehir**	**1.48**	**73**	*e*Pn	**Pn**	**17 52 23.0**	**+0.2**
YLV	**Yalova**	**1.49**	**10**	*e*PN	**Pb**	**17 52 23.7**	**-0.1**
YLV	**Yalova**	**1.49**	**10**	*e*Pn	**Pb**	**17 52 23.7**	**-0.1**
BNT	**Bandirma**	**1.52**	**326**	*e*PN	**Pb**	**17 52 24.3**	**0.0**
BNT	**Bandirma**	**1.52**	**326**	*e*Pn	**Pb**	**17 52 24.3**	**0.0**
BUY	**Buyukada**	**1.76**	**2**	*e*PN	**Pb**	**17 52 27.7**	**-0.6**
BUY	**Buyukada**	**1.76**	**2**	*e*Pn	**Pb**	**17 52 27.7**	**-0.6**
GULT	**Gulveren**	**1.76**	**40**	*e*PN	**Pn**	**17 52 27.3**	**+0.7**
GULT	**Gulveren**	**1.76**	**40**	*e*Pn	**Pn**	**17 52 27.3**	**+0.7**
SVRH	**Sivrihisar-ESK**	**1.97**	**79**	*e*PN	**Pn**	**17 52 30.2**	**+0.7**
SVRH	**Sivrihisar-ESK**	**1.97**	**79**	*e*Pn	**Pn**	**17 52 30.2**	**+0.7**
RKY	**Sarkoy-Tekirda**	**2.13**	**319**	*e*PN	**Pb**	**17 52 33.6**	**-1.2**
RKY	**Sarkoy-Tekirda**	**2.13**	**319**	*e*Pn	**Pb**	**17 52 33.6**	**-1.2**
KLYT	**Kilyos**	**2.15**	**0**	*e*PN	**Pn**	**17 52 32.9**	**+0.9**
KLYT	**Kilyos**	**2.15**	**0**	*e*Pn	**Pn**	**17 52 32.9**	**+0.9**
CTKS	**Kestanelik-??a**	**2.18**	**350**	*e*PN	**Pb**	**17 52 33.9**	**-1.5**
CTKS	**Kestanelik-??a**	**2.18**	**350**	*e*Pn	**Pb**	**17 52 33.9**	**-1.5**
KIZT	**Kizilcal**	**2.23**	**95**	*e*PN	**Pn**	**17 52 33.6**	**+0.4**
KIZT	**Kizilcal**	**2.23**	**95**	*e*Pn	**Pn**	**17 52 33.6**	**+0.4**

*DDA **22** 17:56:36.1, 40°.54N×35°.31E, h7km, MD3.0*
*ISCJB **22** 17:56:37.3±0.6, 40°.56N±0°.03×35°.29E±0°.03, h0km±5km, Error ellipse: s-maj=4.4km s-min=4.0km az=166.1*
*ISK **22** 17:56:37.4, 40°.55N×35°.29E, h7km, MD2.9*
*CSEM **22** 17:56:37.4±0.2, 40°.55N×35°.30E, h2km, MD3.0, Error ellipse: s-maj=4.3km s-min=3.9km az=164.0*
ISC 22 17:56:37.6±1.2, 40°55N±0°02×35°30E±0°02, h3km±13km, n33, σ0s76/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.40**	**281**	*i* P	**Pg**	**17 56 45.3**	**0.0**
CTKT				*i* S	**Sg**	**17 56 50.5**	**0.0**
CTKT	**Corum**	**0.40**	**281**	*i* P	**Pg**	**17 56 45.3**	**0.0**
CTKT				*i* S	**Sg**	**17 56 50.5**	**0.0**
CORM	**Corum**	**0.63**	**234**	*e*PG	**Pg**	**17 56 49.8**	**0.0**
CORM				*e*SG	**Sg**	**17 56 59.1**	**+1.1**
CORM	**Corum**	**0.63**	**234**	*e*Pg	**Pg**	**17 56 49.8**	**0.0**
CORM				*e*Sg	**Sg**	**17 56 59.1**	**+1.1**
KVT	**Kavak**	**0.78**	**47**	*e*PG	**Pg**	**17 56 52.7**	**+0.2**
KVT				*e*SG	**Sb**	**17 57 04.3**	**-0.4**
KVT	**Kavak**	**0.78**	**47**	*e*Pg	**Pg**	**17 56 52.7**	**+0.2**
KVT				*e*Sg	**Sb**	**17 57 04.3**	**-0.4**
YOZ	**Yozgat**	**0.91**	**179**	*e*PG	**Pg**	**17 56 54.7**	**-0.4**
YOZ				*e*SG	**Sb**	**17 57 09.0**	**+0.4**
YOZ	**

UGLR					*e*S		**Sn**	18 01 20.9	-0.1
SDLR	**Sedlovina**	**0.81**	**323**		*i* P		**Pn**	18 01 10.6	+0.2
SDLR					*e*S		**Sn**	18 01 20.9	-0.8
SMAR	**Somma**	**0.83**	**319**		*e*P		**Pn**	18 01 10.9	+0.1
SMAR					*e*S		**Sn**	18 01 22.1	-0.2
AVH	**Avacha**	**0.86**	**318**		*i* P		**Pn**	18 01 11.6	+0.6
AVH					*e*S		**Sn**	18 01 23.1	+0.4
KRER	**Koryakskii**	**0.88**	**320**		*i* P		**Pn**	18 01 11.9	+0.5
KRER					*e*S		**Sn**	18 01 23.7	+0.3
KOK	**Koryaka**	**0.92**	**316**		*i* P		**Pn**	18 01 12.3	+0.5
KOK					*e*S		**Sn**	18 01 24.5	+0.3
MTVR	**Mutnovka**	**0.94**	**261**		*i* P		**Pn**	18 01 13.1	+1.0
MTVR					*i* S		**Sn**	18 01 25.9	+1.2
GRL	**Gorelyy**	**1.00**	**266**		*e*P		**Pn**	18 01 14.1	+1.3
GRL					*e*S		**Sn**	18 01 27.4	+1.4
ASAK	**Asacha**	**1.13**	**258**		*e*P		**Pn**	18 01 16.1	+1.5
ASAK					*i* S		**Sn**	18 01 31.1	+2.0
PETK	**Petropavlovsk-**	**1.30**	**292**		*e*PN		**Pn**	18 01 17.2	+0.3
PETK					pmax	pmax			
	comp=Z,52nm,0.3s								
PETK	**Petropavlovsk-**	**1.30**	**292**		Pg		**Pn**	18 01 17.6	+0.7
	comp=Z,52nm,0.3s,baz=98,slow=18,SNR=1049								
PETK					Lg	Lg		18 01 32.8	
	comp=Z,82nm,0.3s,baz=102,slow=36,SNR=35								
KII	**Karymskiy**	**1.41**	**354**		*e*P		**Pn**	18 01 19.1	+0.7
KII					*e*S		**Sn**	18 01 35.8	-0.1
GNL	**Ganaly**	**1.50**	**316**		*e*P		**Pn**	18 01 19.9	+0.3
GNL					*e*S		**Sn**	18 01 37.4	+0.7
MIPR	**Malaya Ipel'ka**	**1.84**	**260**		*e*P		**Pn**	18 01 25.9	+1.8
MIPR					*e*S		**Sn**	18 01 47.4	+1.2
PAU	**Pauzhetka**	**2.13**	**238**		*e*P		**Pn**	18 01 30.5	+2.4
PAU					S		**Sn**	18 01 55.6	+2.2
MKZ	**Mys Kozlova**	**2.27**	**31**		P		**Pn**	18 01 30.2	+0.2
MKZ					*e*S		**Sn**	18 01 55.8	-1.0
TUMR	**Tumrok**	**2.67**	**5**		*e*P		**Pn**	18 01 37.1	+1.6
SKR	**Severo-Kuril's**	**2.97**	**230**		*e*PN		**Pn**	18 01 37.0	-2.5
SKR					*e*S		**Sn**	18 02 11.0	-2.9
SKR					smax	smax			
	comp=N,80nm,0.4s								
SKR					smax	smax			
	comp=E,130nm,0.4s								
SKR	**Severo-Kuril's**	**2.97**	**230**		P		**Pn**	18 01 41.9	+2.4
SKR					S		**Sn**	18 02 15.9	+2.0
KMNR	**Kamenistaya**	**3.14**	**6**		*e*P		**Pn**	18 01 44.3	+2.3
BZMR	**Bezymyannaya**	**3.34**	**8**		P		**Pn**	18 01 47.2	+2.4
ESO	**Esso**	**3.35**	**350**		*e*P		**Pn**	18 01 45.8	+1.0
KPT	**Kopyto**	**3.35**	**5**		P		**Pn**	18 01 47.1	+2.2
BZGR	**Bezymyannyi-Gr**	**3.36**	**10**		P		**Pn**	18 01 47.5	+2.4
BZGR					S		**Sn**	18 02 25.6	+1.9
BZWR	**Bezymyannyi-We**	**3.37**	**8**		P		**Pn**	18 01 47.5	+2.3
KOZ	**Kozyrevsk**	**3.43**	**2**		P		**Pn**	18 01 47.7	+1.8
ZLN	**Zelenaya**	**3.45**	**10**		*e*P		**Pn**	18 01 49.1	+2.9
ZLN					S		**Sn**	18 02 28.5	+2.6
LGNR	**Loginova**	**3.50**	**9**		*e*P		**Pn**	18 01 50.0	+2.9
LGNR					S		**Sn**	18 02 29.1	+1.7
CIRR	**Tsirk**	**3.54**	**10**		P		**Pn**	18 01 49.7	+2.2
KRSR	**Krestovskiy**	**3.62**	**8**		P		**Pn**	18 01 51.4	+2.8
KRSR					S		**Sn**	18 02 31.9	+1.7
SRDR	**Sredinnyy**	**3.69**	**0**		P		**Pn**	18 01 50.9	+1.4
KLY	**Klyuchi**	**3.73**	**8**		P		**Pn**	18 01 52.7	+2.8
KLY					S		**Sn**	18 02 34.4	+1.9
KBTR	**Krutoberegovo**	**4.02**	**26**		P		**Pn**	18 01 55.8	+1.9
KBG	**Krutoberegovo**	**4.03**	**25**		P		**Pn**	18 01 56.8	+2.8
KBG					S		**Sn**	18 02 41.5	+1.6
BDR	**Baidarnaya**	**4.04**	**12**		P		**Pn**	18 01 56.1	+1.8
BDR					S		**Sn**	18 02 40.4	+0.1
SMKR	**Semkarok**	**4.09**	**14**		*e*P		**Pn**	18 01 56.6	+1.7
SMKR					S		**Sn**	18 02 41.3	-0.2
SRKR	**Sorokina**	**4.12**	**11**		P		**Pn**	18 01 58.2	+2.9
SRKR					S		**Sn**	18 02 44.9	+2.7
BKI	**Bering**	**4.51**	**53**		*e*S		**Sn**	18 02 46.5	-5.3
FX1	**Attu Island--F**	**8.17**	**83**		Pn		**Pn**	18 02 53.2	+2.3
	comp=E,1.5nm,0.3s,baz=61,slow=22,SNR=15								
FX1					Sn		**Sn**	18 04 18.5	-3.2
	comp=E,7.9nm,0.3s,baz=69,slow=16,SNR=14								
ASAJ	**Asahikawa**	**14.18**	**240**		Pn		**P**	18 04 19.3	+0.5
	comp=E,0.5nm,0.3s,baz=78,slow=12,SNR=5.0								
BILL	**Bilibino**	**15.78**	**9**		*i* P		**Pn**	18 04 30.8	-2.6
YAK	**Yakutsk**	**18.57**	**312**		*i* P		**P**	18 05 07.2	0.0
ILAR	**Eielson Array**	**29.31**	**45**		P		**P**	18 06 51.0	-1.1
	comp=E,0.3nm,0.7s,baz=269,slow=8.1,SNR=4.5								
YKA	**Yellowknife Ar**	**43.66**	**42**		P		**P**	18 08 50.4	-3.5
	comp=E,0.3nm,0.7s,baz=307,slow=8.9,SNR=2.8								
KURK	**Kurchatov**	**47.77**	**302**		P		**P**	18 09 24.7	-1.8
KURBB	**Kurchatov Arra**	**47.88**	**302**		P		**P**	18 09 24.7	-2.7
	comp=E,0.1nm,0.3s,baz=68,slow=7.1,SNR=3.7								
MKAR	**Makanchi Array**	**48.14**	**296**		P		**P**	18 09 27.9	-1.6
MKAR	**Makanchi Array**	**48.14**	**296**		P		**P**	18 09 27.9	-1.6
	comp=E,0.1nm,0.4s,baz=54,slow=7.4,SNR=3.1								
BVAR	**Borovoye Array**	**50.49**	**308**		P		**P**	18 09 45.4	-1.9
BVAR	**Borovoye Array**	**50.49**	**308**		P		**P**	18 09 45.4	-1.9
	comp=E,0.3nm,0.4s,baz=57,slow=5.3,SNR=3.7								
NVAR	**Mina Array Bea**	**56.12**	**70**		P		**P**	18 10 30.5	+1.4
	comp=E,0.3nm,0.4s,baz=295,slow=8.5,SNR=2.8								
TXAR	**Lajitas Array**	**71.04**	**67**		P		**P**	18 12 08.9	+1.5
	comp=E,0.2nm,0.3s,baz=316,slow=5.8,SNR=3.8								

IDC 22 18:04:14.6±1.1, 45°21S×97°03E, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.7/18, mbtmp3.9/5, Error ellipse: s-maj=47.2km s-min=21.3km az=121.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**36.79**	**67**	P	P	18 11 23.3	-0.9
	1.2nm,1.0s,baz=222,slow=7.4,SNR=6.6						
WRA	**Warramunga Arr**	**39.76**	**63**	P	P	18 11 49.3	+0.2
	1.5nm,0.7s,baz=224,slow=8.6,SNR=18						
QSPA	**South Pole Qui**	**44.93**	**180**	P	P	18 12 31.0	0.0
	2.2nm,0.8s,baz=343,slow=1.3,SNR=13						
SNAA	**Sanae**	**50.75**	**204**	P	P	18 13 15.4	-0.4
	1.5nm,0.8s,baz=126,slow=5.6,SNR=11						
CMAR	**Chiang Mai Arr**	**63.39**	**2**	P	P	18 14 45.9	+0.1
	2.6nm,1.2s,baz=192,slow=7.1,SNR=4.1						
NVAR	**Mina Array Bea**	**152.97**	**92**	PKPbc	PKPbc	18 24 14.5	+0.8
	0.3nm,0.4s,baz=233,slow=4.4,SNR=4.1						
YKA	**Yellowknife Ar**	**154.95**	**35**	PKPbc	PKPbc	18 24 16.4	-0.4
	0.1nm,0.4s,baz=307,slow=2.0,SNR=3.2						

*IDC **22** 18:05:07.1±0.9, 28°.65N×51°.58E, h0km, mb3.8/15, mb1 3.9/20, mb1mx3.8/34, mbtmp3.8/20, ML3.7/4, MS3.1/3, Ms1 3.1/3, ms1mx2.5/44, Error ellipse: s-maj=21.8km s-min=16.1km az=161.0*

*ISCJB **22** 18:05:09.9±0.5, 28°.70N±0°.05×51°.42E±0°.03, h24km, mb3.7/17, MS2.9/2, Error ellipse: s-maj=7.7km s-min=4.2km az=179.3*

*THR **22** 18:05:09.3±0.5, 28°.81N×51°.52E, h15km±7km, ML3.7*

*TEH **22** 18:05:10.7, 28°.64N×51°.50E, h14km, ML3.7*

*CSEM **22** 18:05:11.1±0.2, 28°.79N×51°.51E, h10km, ML3.7, Error ellipse: s-maj=5.4km s-min=2.5km az=172.0*

ISC 22 18:05:11.2±0.6, 28°.72N±0°.06×51°.49E±0°.04, h24km, n73, σ1s34/78, mb3.7/17, 2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	**1.28**	**44**	*e*Pg	**Pb**	**18 05 34.7**	**-0.1**
SHI				*e*Sg	**Sb**	**18 05 52.1**	**+1.2**
SHI				*e*		18 05 54.3	
	comp=E,19μm,0.3s						
GHIR	**Ghir-Karzin**	**1.38**	**108**	*e*Pg	**Pb**	**18 05 35.1**	**-1.4**
GHIR				AML	AML	18 06 01.4	
	comp=E,2μm,0.5s						
GHIR				AML	AML	18 06 01.8	
	comp=N,1μm,0.6s						
GHIR	**Ghir-Karzin**	**1.38**	**108**	*e*Pg	**Pb**	**18 05 35.1**	**-1.4**
ISRV	**Sarvestan**	**1.57**	**65**	*e*Pn	**Pb**	**18 05 38.8**	**-0.9**
ISRV				*e*Sg	**Sb**	**18 06 00.7**	**+1.5**
ISRV				*e*		18 06 06.2	
	comp=Z,10μm,0.3s						
ISRV	**Sarvestan**	**1.57**	**65**	*e*Pn	**Pb**	**18 05 38.8**	**-0.9**
ISRV				*e*Sg	**Sb**	**18 06 00.6**	**+1.4**
IPAR	**Pars**	**1.76**	**50**	*e*Pn	**Pb**	**18 05 41.2**	**-1.8**
IPAR				*e*Sg	**Sb**	**18 06 07.7**	**+2.9**
IPAR				*e*		18 06 19.9	
	comp=Z,9μm,0.4s						
IPAR	**Pars**	**1.76**	**50**	*e*Pn	**Pb**	**18 05 41.2**	**-1.8**
IPAR				*e*Sg	**Sb**	**18 06 07.7**	**+2.9**
KBD	**Kabd**	**3.36**	**279**	*e*P	**Pn**	**18 06 03.7**	**+1.5**
KBD				AML	AML	18 06 45.8	
	comp=Z,113nm,0.4s						

KBD	**Kabd**	**3.36**	**279**		*e*P		**Pn**	**18 06 03.7**	**+1.5**
UMR	**Umm Al-Rimmam**	**3.41**	**285**		*e*P		**Pn**	**18 06 04.5**	**+1.7**
UMR	**Umm Al-Rimmam**	**3.41**	**285**		*e*P		**Pn**	**18 06 04.5**	**+1.7**
RDF	**Al-Radifah**	**3.47**	**274**		*e*P		**Pn**	**18 06 05.6**	**+1.9**
RDF	**Al-Radifah**	**3.47**	**274**		*e*P		**Pn**	**18 06 05.6**	**+1.9**
IGAR	**Gharneh**	**3.71**	**7**		*e*			18 06 44.4	
	comp=Z,781nm,0.3s								
IGAR					*e*Pn		**Pn**	**18 06 08.1**	**+0.9**
ISAD	**Sadrabad**	**3.71**	**30**		*e*Pn		**Pn**	**18 06 08.3**	**+1.0**
ISAD					*e*			18 07 14.0	
	comp=Z,2μm,0.3s								
ISAD	**Sadrabad**	**3.71**	**30**		*e*Pn		**Pn**	**18 06 08.3**	**+1.0**
NAY	**Al-Naaiem**	**3.76**	**279**		*e*P		**Pn**	**18 06 10.0**	**+2.3**
NAY					AML	AML		18 06 56.1	
	comp=Z,34nm,0.4s								
NAY	**Al-Naaiem**	**3.76**	**279**		*e*P		**Pn**	**18 06 10.0**	**+2.3**
MIB	**Mutribah**	**3.79**	**288**		*e*P		**Pn**	**18 06 10.0**	**+1.9**
MIB					AML	AML		18 07 05.2	
	comp=Z,144nm,0.5s								
MIB	**Mutribah**	**3.79**	**288**		*e*P		**Pn**	**18 06 10.0**	**+1.9**
IMEH	**Mehriz**	**3.80**	**45**		*e*			18 06 23.1	
	comp=Z,799nm,0.3s								
IMEH					*e*Pn		**Pn**	**18 06 09.5**	**+1.1**
IZEF	**Zefreh**	**4.23**	**10**		*e*Pn		**Pn**	**18 06 15.3**	**+0.9**
IZEF					*e*			18 06 48.0	
	comp=Z,399nm,0.2s								
IZEF	**Zefreh**	**4.23**	**10**		*e*Pn		**Pn**	**18 06 15.3**	**+0.9**
ICHK	**Chekchek**	**4.32**	**35**		*e*Pn		**Pn**	**18 06 16.3**	**+0.6**
ICHK					*e*			18 06 30.8	
	comp=Z,970nm,0.4s								
ICHK	**Chekchek**	**4.32**	**35**		*e*Pn		**Pn**	**18 06 16.4**	**+0.7**
BNDS	**Bandar-Abbas**	**4.34**	**107**		*e*Pn		**Pn**	**18 06 17.2**	**+1.4**
BNDS	**Bandar-Abbas**	**4.34**	**107**		*e*Pn		**Pn**	**18 06 17.2**	**+1.4**
IKLH	**Kolahrood**	**4.59**	**1**		*e*Pn		**Pn**	**18 06 20.2**	**+0.9**
IKLH					*e*			18 07 50.9	
	comp=Z,533nm,0.3s								
IKLH	**Kolahrood**	**4.59**	**1**		*e*Pn		**Pn**	**18 06 20.2**	**+0.9**
KRBR	**Kerman**	**4.77**	**73**		*e*Pn		**Pn**	**18 06 22.3**	**+0.5**
KRBR					AML	AML		18 07 53.5	
	comp=E,50nm,0.7s								
KRBR					AML	AML		18 07 54.2	
	comp=N,38nm,0.9s								
KRBR	**Kerman**	**4.77**	**73**		*e*Pn		**Pn**	**18 06 22.3**	**+0.5**
KHMZ	**Khomeyn**	**5.18**	**346**		*e*Pn		**Pn**	**18 06 27.6**	**+0.2**
KHMZ	**Khomeyn**	**5.18**	**346**		*e*Pn		**Pn**	**18 06 27.6**	**+0.2**
IKOM	**Komasi**	**6.42**	**329**		*e*Pn		**Pn**	**18 06 45.2**	**+0.8**
IKOM					*e*			18 08 07.0	
	comp=Z,433nm,0.1s								
IKOM	**Komasi**	**6.42**	**329**		*e*Pn		**Pn**	**18 06 45.2**	**+0.8**
IGHG	**Ghaleghazi**	**7.00**	**324**		*e*Pn		**Pn**	**18 06 52.8**	**+0.4**
IGHG					*e*			18 08 20.8	
	comp=Z,510nm,0.3s								
IGHG	**Ghaleghazi**	**7.00**	**324**		*e*Pn		**Pn**	**18 06 52.8**	**+0.4**
IVIS	**Veis**	**7.01**	**327**		*e*Pn		**Pn**	**18 06 53.0**	**+0.5**
IVIS					*e*			18 08 19.5	
	comp=Z,310nm,0.2s								
IVIS	**Veis**	**7.01**	**327**		*e*Pn		**Pn**	**18 06 53.0**	**+0.5**
SNGE	**Sanandaj**	**7.27**	**332**		*e*Pn		**Pn**	**18 06 56.1**	**0.0**
SNGE	**Sanandaj**	**7.27**	**332**		*e*Pn		**Pn**	**18 06 56.1**	**0.0**
ILIN	**Lien**	**7.29**	**329**		*e*Pn		**Pn**	**18 06 56.9**	**+0.5**
ILIN					*e*			18 08 19.8	
	comp=Z,352nm,0.2s								
ILIN	**Lien**	**7.29**	**329**		*e*Pn		**Pn**	**18 06 56.9**	**+0.5**
IDHR	**Dehrash**	**7.38**	**325**		*e*Pn		**Pn**	**18 06 58.0**	**+0.4**
IDHR					*e*			18 08 23.6	
	comp=Z,638nm,0.2s								
IDHR	**Dehrash**	**7.38**	**325**		*e*Pn		**Pn**	**18 06 58.0**	**+0.4**
ITEG	**Tejag**	**7.50**	**54**		*e*Pn		**Pn**	**18 06 59.3**	**0.0**
ITEG					*e*			18 08 09.8	
	comp=Z,51nm,0.1s								
ITEG	**Tejag**	**7.50**	**54**		*e*Pn		**Pn**	**18 06 59.3**	**0.0**
IKIA	**Kiasar**	**7.70**	**13**		*e*Pn		**Pn**	**18 07 02.2**	**+0.2**
IKIA	**Kiasar**	**7.70**	**13**		*e*Pn		**Pn**	**18 07 02.2**	**+0.2**
GNI	**Garni**	**12.69**	**336**		Pn		**Pn**	18 08 13.1	+2.8
	comp=Z,2.7nm,0.3s,baz=177,slow=18,SNR=2.5								
ASF	**Jabal al Asfar**	**13.05**	**289**		Pn		**Pn**	**18 08 14.3**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=90,slow=7.1,SNR=3.5								
ASF					Sn		**Sn**	**18 10 35.5**	**-4.2**
	comp=Z,0.3nm,0.3s,baz=30,slow=20,SNR=3.2								
MMAI	**Mount Meron Ar**	**14.47**	**291**		Pn		**Pn**	**18 08 33.3**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=100,slow=16,SNR=3.7								
MMAI					Sn		**Sn**	**18 11 13.4**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=97,slow=32,SNR=4.6								
EIL	**Elat**	**14.48**	**278**		LR	LR		18 15 15.1	
	comp=Z,104nm,18.0s,baz=76,slow=42								
KBZ	**Khabaz**	**16.49**	**338**		Pn		**P**	**18 09 01.5**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=158,slow=9.9,SNR=5.8								
BRTR	**Keskin Array B**	**18.36**	**311**		P		**Pn**	**18 09 25.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=126,slow=12,SNR=7.8								
AKTO	**Aktyubinsk**	**22.25**	**11**		P		**P**	**18 10 05.8**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=140,slow=7.9,SNR=3.2								
AAK	**Ala-Archa**	**23.19**	**47**		P		**P**	**18 10 18.5**	**+2.2**
AAK					pmax	pmax			
	comp=Z,3.0nm,0.7s								
AAK					MLR	MLR			
	comp=Z,74nm,18.1s								
AAK	**Ala-Archa**	**23.19**	**47**		P		**P**	**18 10 18.5**	**+2.2**
	comp=Z,2.5nm,0.7s,baz=230,slow=5.8,SNR=9.0								
AAK					LR	LR		18 20 58.5	
	comp=Z,74nm,18.1s,baz=44,slow=41								
MLR	**Muntele Rosu**	**26.21**	**317**		P		**P**	**18 10 47.2**	**+3.0**
	comp=Z,0.2nm,0.4s,baz=173,slow=17,SNR=2.9								
AKASG	**Malin Array Be**	**27.65**	**329**		P		**P**	**18 10 57.3**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=124,slow=8.9,SNR=3.3								
BVAR	**Borovoye Array**	**28.00**	**25**		P		**P**	**18 11 00.1**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=214,slow=7.5,SNR=12								
BVAR					LR	LR		18 24 32.1	
	comp=Z,17nm,18.2s,baz=78,slow=42								
KURBB	**Kurchatov Arra**	**29.91**	**36**		P		**P**	**18 11 17.0**	**0.0**
	comp=Z,0.6nm,0.7s,baz=234,slow=10,SNR=6.7								
MKAR	**Makanchi Array**	**30.04**	**45**		P		**P**	**18 11 17.7**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=239,slow=7.0,SNR=7.1								
ZALV	**Zalesovo Beam**	**34.98**	**35**		P		**P**	**18 12 00.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=249,slow=9.2,SNR=7.3								
FINES	**FINESS Array B**	**36.83**	**340**		P		**P**	**18 12 16.7**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=139,slow=7.8,SNR=5.8								
ARCES	**ARCESS Array B**	**43.52**	**347**		P		**P**	**18 13 12.8**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=150,slow=9.3,SNR=7.4								
SONM	**Songino Array**	**46.09**	**50**		P		**P**	**18 13 33.8**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=295,slow=7.8,SNR=2.6								
TORD	**Torodi Ar. Bea**	**48.67**	**262**		P		**P**	**18 13 53.9**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=58,slow=7.3,SNR=22								
DBIC	**Dimbokro**	**57.41**	**259**		P		**P**	**18 14 58.9**	**+0.7**
	comp=Z,4.3nm,0.6s,baz=45,slow=7.1,SNR=14								
ILAR	**Eielson Array**	**85.72**	**8**		P		**P**	**18 17 47.4**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=336,slow=5.2,SNR=4.0								
YKA	**Yellowknife Ar**	**88.42**	**354**		P		**P**	**18 18 01.1**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=9.7,slow=5.1,SNR=5.6								
WRA	**Warramunga Arr**	**93.39**	**111**		P		**P**	**18 18 23.7**	**-1.2**
	comp=Z,0.6nm,1.0s,baz=309,slow=4.0,SNR=2.9								
ASAR	**Alice Springs**	**94.84**	**114**		P		**P**	**18 18 30.1**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=309,slow=4.5,SNR=5.5								

IDC 22 18:09:25.2±0.9, 48°.90S×121°.40E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.9/16, mbtmp3.9/7, MS3.9/8, Ms1 3.9/8, ms1mx3.6/24, Error ellipse: s-maj=50.0km s-min=18.0km az=103.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**16.26**	**347**	LR	LR	18 17 56.2	
	comp=Z,561nm,19.5s,baz=338,slow=31						
STKA	**Stephens Creek**	**22.81**	**49**	LR	LR	18 21 21.4	
	comp=Z,323nm,21.3s,baz=207,slow=31						
ASAR	**Alice Springs**	**27.05**	**26**	P	P	18 15 09.7	+0.5
	1.8nm,1.1s,baz=195,slow=9.1,SNR=5.2						
ASAR				LR	LR	18 24 35.0	
	comp=Z,385nm,21.2s,baz=272,slow=34						
WRA	**Warramunga Arr**	**30.71**	**24**	P	P	18 15 41.7	0.0
	1.1nm,1.0s,baz=199,slow=8.5,SNR=2.7						
VNDA	**Vanda**	**32.58**	**165**	P	P	18 15 57.4	-0.3
	1.0nm,0.9s,baz=296,slow=8.0,SNR=5.7						
VNDA				LR	LR	18 28 02.1	
	comp=Z,198nm,22.0s,baz=320,slow=34						
RPZ	**Rata Peaks**	**34.19**	**100**	LR	LR	18 26 32.0	
	comp=Z,208nm,19.4s,baz=47,slow=30						
MAW	**Mawson**	**34.31**	**215**	P	P	18 16 13.3	+0.6
	4.3nm,0.9s,baz=71,slow=7.3,SNR=4.2						
MAW				LR	LR	18 29 07.0	
	comp=Z,148nm,18.1s,baz=102,slow=34						
QSPA	**South Pole Qui**	**41.23**	**180**	P	P	18 17 11.5	0.0
	7.1nm,1.0s,baz=317,slow=5.3,SNR=11						
QSPA				LR	LR	18 33 35.1	
	comp=Z,145nm,20.8s,baz=156,slow=35						

SNAA	**Sanae**	**53.47**	**199**		P		P	18 18 46.2	-0.4
	1.2nm,0.9s,baz=152,slow=10,SNR=7.8								
SNAA					LR	LR		18 40 28.9	
	comp=Z,85nm,20.3s,baz=192,slow=35								
CMAR	**Chiang Mai Arr**	**69.98**	**337**		P		P	18 20 38.0	-0.4
	0.6nm,0.8s,baz=177,slow=5.4,SNR=3.8								
PDAR	**Pinedale Array**	**144.53**	**80**		PKP		PKPbc	18 29 02.1	+0.2
	0.3nm,0.4s,baz=188,slow=2.7,SNR=3.3								
YKA	**Yellowknife Ar**	**146.80**	**45**		PKPbc		PKPbc	18 29 07.1	-0.8
	1.6nm,0.9s,baz=283,slow=2.1,SNR=13								

*ISCJB **22** 18:13:31.4±0.8, 22°.86S±0°.05×69°.01W±0°.10, h96km±8km, mb3.6/1, Error ellipse: s-maj=15.1km s-min=7.5km az=15.7*

*IDC **22** 18:13:33.8±2.9, 22°.99S×68°.94W, h76km±26km, mb3.6/1, mb1 3.4/3, mb1mx3.3/18, mbtmp3.4/3, Error ellipse: s-maj=74.3km s-min=21.6km az=93.0*

*GUC **22** 18:13:34.2±0.6, 22°.70S×69°.38W, h80km±5km, ML4.0*

ISC 22 18:13:33.4±0.9, 22°.81S±0°.06×69°.08W±0°.08, h87km±8km, n13, σ2s34/20, 1C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.25**	**38**	*e*P	**Pn**	**18 13 46.0**	**-0.5**
LVC				*i* S	**Sn**	**18 13 56.4**	**+0.1**
PB04	**Plate Boundary**	**0.66**	**325**	*i*P	**Pn**	**18 13 51.0**	**+1.8**
PB04				*i* S	**Sn**	**18 14 04.7**	**+3.7**
PB04				AML	AML	18 14 07.9	
	comp=E,5μm,0.3s						
PB09	**Plate Boundary**	**1.02**	**352**	*i*P	**Pn**	**18 13 52.7**	**-0.6**
PB09				*i* S	**Sn**	**18 14 06.8**	**-1.4**
PB09				AML	AML	18 14 08.7	
	comp=E,8μm,0.4s						
CEN1	**Los Morros**	**1.18**	**241**	*e*P	**Pn**	**18 13 56.9**	**+1.8**
CEN1				*i* S	**Sn**	**18 14 13.7**	**+2.3**
PB07	**Plate Boundary**	**1.31**	**325**	*i*P	**Pn**	**18 13 54.6**	**-2.2**
PB07				*i* S	**Sn**	**18 14 10.2**	**-4.2**
PB07				AML	AML	18 14 11.1	
	comp=E,8μm,0.2s						
ANCH	**Antofagasta**	**1.50**	**234**	*e*P	**Pn**	**18 13 57.9**	**-1.1**
ANCH				*i* S	**Sn**	**18 14 16.2**	**-2.1**
ANCH				AML	AML	18 14 21.3	
	comp=E,3μm,0.3s						
PB01	**Plate Boundary**	**1.80**	**348**	*i*P	**Pn**	**18 14 02.3**	**-0.7**
PB01				*i* S	**Sn**	**18 14 23.5**	**-1.9**
PB01				AML	AML	18 14 25.8	
	comp=E,2μm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.83**	**155**	P	**Pn**	**18 37 28.8**	**+2.0**
	baz=5.9,SNR=25						
MTN				S	**Sn**	**18 38 32.6**	**-0.3**
	baz=5.9,SNR=8.8						
FAKI	**Fak Fak**	**5.84**	**39**	P	**Pn**	**18 37 24.6**	**-2.4**
	baz=5.9,SNR=5.3						
KDU	**Kakadu**	**6.38**	**144**	P	**Pn**	**18 37 35.4**	**+1.3**
	baz=6.5,SNR=32						
KDU				S	**Sn**	**18 38 45.0**	**-1.0**
	baz=6.5,SNR=11						
SWI	**Sorong**	**7.13**	**22**	S	**Sn**	**18 39 03.5**	**-0.6**
	baz=7.2,SNR=3.0						
KNRA	**Kununurra**	**8.09**	**179**	P	**Pn**	**18 37 58.9**	**+1.9**
	baz=8.2,SNR=17						
KNRA				S	**Sn**	**18 39 24.1**	**-3.1**
	baz=8.2,SNR=5.0						
WSI	**Waingapu**	**8.49**	**255**	P	**Pn**	**18 38 01.2**	**-1.0**
	baz=8.4,SNR=3.3						
FITZ	**Fitzroy Crossi**	**10.89**	**195**	Pn	**Pn**	**18 38 34.9**	**+0.8**
	0.2nm,0.3s,baz=36,slow=17,SNR=17						
FITZ				Sn	**Sn**	**18 40 29.9**	**-4.8**
	0.3nm,0.3s,baz=122,slow=22,SNR=6.7						
FITZ	**Fitzroy Crossi**	**10.89**	**195**	P	**Pn**	**18 38 34.9**	**+0.8**
	baz=11,SNR=8.7						
MMPI	**Merauke**	**11.70**	**95**	P	**P**	**18 38 50.5**	**-1.4**
	baz=12,SNR=3.2						
MMPI				S	S	18 41 21.9	+10
	baz=12,SNR=3.1						
WRA	**Warramunga Arr**	**13.53**	**156**	Pn	**Pn**	**18 39 08.1**	**-0.2**
	0.2nm,0.3s,baz=334,slow=13,SNR=12						
WRA				Sn	Sn	18 41 32.2	-6.0
	0.6nm,0.3s,baz=337,slow=22,SNR=9.6						
COEN	**Coen**	**15.66**	**115**	P	**P**	**18 39 38.6**	**+2.6**
	baz=16,SNR=4.0						
ASAR	**Alice Springs**	**16.83**	**163**	Pn	**Pn**	**18 39 53.2**	**+4.1**
	0.2nm,0.3s,baz=340,slow=10.0,SNR=29						
ASAR				Sn	**Sn**	**18 42 52.8**	**-3.5**
	0.2nm,0.3s,baz=344,slow=24,SNR=6.4						
MTSU	**Mount Surprise**	**18.57**	**126**	P	Pn	18 40 17.1	+7.2
	baz=19,SNR=7.9						
GSI	**Gunungsitoli**	**32.18**	**285**	S	**S**	**18 47 19.0**	**+0.9**
	baz=32,SNR=8.5						
MKAR	**Makanchi Array**	**67.92**	**328**	P	**P**	**18 46 45.9**	**+1.2**
	0.2nm,0.4s,baz=126,slow=5.9,SNR=4.1						
KURBB	**Kurchatov Arra**	**72.25**	**329**	P	**P**	**18 47 12.3**	**+1.4**
	0.5nm,0.2s,baz=123,slow=5.5,SNR=8.1						

*PLV **22** 18:50:22.7±2.0,21°.47N×102°.07E,h7km±15km,MD3.7*
*IDC **22** 18:50:22.4±0.6,21°.48N×102°.33E,h0km,mb3.9/23,*
mb1 4.1/24,mb1mx4.0/33,mbtmp3.9/24,ML4.6/1,MS3.6/9,
Ms1 3.6/9,ms1mx3.3/42,Error ellipse: s-maj=15.0km
s-min=13.3km az=116.0
*BJI **22** 18:50:24.0,21°.43N×102°.15E,h20km,mB4.5/12,mb4.4/19,*
ML4.6/9,Ms4.5/27,Ms7 4.1/24
*NEIC **22** 18:50:24.2±0.3,21°.49N×102°.24E,h10km,mb4.4/16,Error*
ellipse: s-maj=7.5km s-min=6.1km az=83.0
*DJA **22** 18:50:25.3±0.5,21°.N±4°×10°.2E±°,h10km,M5.0/5,mB5.0/1,*
mb4.5/5,MLv5.3/3,Mw(mB)4.3/1
*ISCJB **22** 18:50:26.1±0.9,21°.65N±0°.03×102°.21E±0°.03,h29km±7km,*
mb4.2/43,MS3.5/10,Error ellipse: s-maj=5.1km
s-min=4.6km az=19.2

ISC 22 18:50:26.6±0.4,21°.59N±0°.03×102°.22E±0°.03,h24km±3km,
n127,σ1.992/150,mb4.2/43,MS3.5/10,1C,Laos

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBV	**Dienbien**	**0.78**	**105**	*e*Pg	**Pb**	**18 50 40.2**	**-1.3**
DBV				*e*Sg	**Sb**	**18 50 52.2**	**+0.4**
TGV	**Tuan Giao**	**1.12**	**90**	*e*Pg	**Pn**	**18 50 46.7**	**0.0**
TGV				*e*Sg	**Sn**	**18 51 04.7**	**+3.4**
SLVN	**Son La**	**1.59**	**99**	*e*Pn	**Pn**	**18 50 52.8**	**-0.6**
SLVN				*e*Pg	**Pb**	**18 50 55.2**	**-0.1**
SLVN				*e*Sg	**Sb**	**18 51 17.9**	**+2.8**
TTVN	**Tram Tau**	**2.00**	**93**	*e*Pn	**Pn**	**18 50 59.0**	**+0.2**
TTVN				*e*Pg	**Pb**	**18 51 03.4**	**+1.2**
TTVN				*e*Sg	**Sb**	**18 51 30.2**	**+3.6**
MCVV	**Moc Chau**	**2.40**	**109**	*e*Pg	**Pb**	**18 51 10.7**	**+1.5**
MCVV				*e*Sg	**Sb**	**18 51 42.4**	**+3.9**
KMI	**Kunming**	**3.55**	**8**	Pn	**Pn**	**18 51 22.0**	**+1.6**
KMI				Pg	**Pb**	**18 51 31.6**	**+2.8**
KMI				Sg	Sb	18 52 20.8	+9.3
KMI				smax	smax		
	comp=N,340nm,0.9s						
KMI				smax	smax		
	comp=E,440nm,1.4s						
KMI				LR	LR		
	comp=N,6μm,6.7s						
KMI				LR	LR		
	comp=E,5μm,8.0s						
KMI				LR	LR		
	comp=Z,5μm,7.1s						
CMMT	**Chiang Mai**	**4.13**	**229**	P	**Pn**	**18 51 25.6**	**-2.6**
CHTO	**Chiang Mai**	**4.13**	**229**	*e*Pn	Pn	18 51 24.7	-3.5
CHTO				*e*Pg	**Pb**	**18 51 38.1**	**-0.5**
CHTO				*e*Sg	**Sb**	**18 52 32.0**	**+3.8**
CHTO	**Chiang Mai**	**4.13**	**229**	P	Pn	18 51 24.9	-3.3
CM31	**Chiang Mai Arr**	**4.38**	**225**	*e*Pn	**Pn**	**18 51 28.8**	**-2.9**
CM31				*e*Pg	**Pb**	**18 51 42.5**	**-0.3**
CM31				*e*Sg	**Sb**	**18 52 40.1**	**+4.8**
CMAR	**Chiang Mai Arr**	**4.38**	**225**	Pn	**Pn**	**18 51 29.0**	**-2.7**
CMAR				Pg	**Pb**	**18 51 42.9**	**+0.1**
CMAR				Lg	Lg	18 52 40.6	
CMAR	**Chiang Mai Arr**	**4.38**	**225**	Pn	**Pn**	**18 51 29.0**	**-2.7**
	comp=Z,8.2nm,0.3s,baz=37,slow=12,SNR=428						
CMAR				Pg	**Pb**	**18 51 42.9**	**+0.1**
	comp=Z,73nm,0.3s,baz=37,slow=17,SNR=187						
CMAR				Lg	Lg	18 52 40.6	
	comp=Z,34nm,0.3s,baz=64,slow=30,SNR=8.3						
PBKT	**Sadao Pong**	**5.13**	**193**	P	**Pn**	**18 51 39.4**	**-2.6**
GYA	**Guiyang**	**6.33**	**39**	Pn	**Pn**	**18 51 58.3**	**-0.2**
GYA				Pg	Pb	18 52 21.6	+5.6
GYA				Sn	**Sn**	**18 53 10.6**	**+0.5**
GYA				smax	smax		
	comp=N,350nm,1.0s						
GYA				smax	smax		
	comp=E,320nm,1.0s						
GYA				LR	LR		
	comp=N,2μm,7.5s						
GYA				LR	LR		
	comp=E,2μm,5.9s						
GYA				LR	LR		
	comp=Z,3μm,7.8s						
UBPT	**Khong Chiam**	**7.00**	**153**	P	**Pn**	**18 52 05.9**	**-1.7**
	comp=Z,38nm,1.2s						
QIZ	**Qiongzhong**	**7.60**	**108**	Pn	**Pn**	**18 52 15.9**	**0.0**
QIZ				Sn	**Sn**	**18 53 40.0**	**-1.3**
QIZ				LR	LR		
	comp=N,4μm,11.1s						
QIZ				LR	LR		
	comp=Z,1μm,10.3s						
QIZ	**Qiongzhong**	**7.60**	**108**	*e*Pn	**Pn**	**18 52 14.7**	**-1.2**
	comp=Z,27nm,0.7s						
QIZ				*e*Sn	**Sn**	**18 53 43.0**	**+1.7**
SHL	**Shillong**	**10.27**	**295**	*e*PKP	**Pn**	**18 52 52.0**	**-0.6**
ENH	**Enshi**	**10.84**	**36**	*e*Pn	**Pn**	**18 52 59.7**	**-0.6**
	comp=Z,11nm,0.7s						
ENH				*e*Lg	Lg	18 56 14.3	
LSA	**Lhasa**	**12.83**	**311**	P	**Pn**	**18 53 29.4**	**+1.4**
LSA				pmax	pmax		
	comp=Z,30nm,0.9s						
LSA				LR	LR		
	comp=N,830nm,14.0s						
LSA				LR	LR		
	comp=E,840nm,14.0s						
LSA				LR	LR		
	comp=Z,700nm,15.0s						
LSA	**Lhasa**	**12.83**	**311**	*e*Pn	**Pn**	**18 53 28.5**	**+0.5**
	comp=Z,3.6nm,0.6s						
XAN	**Xi'an**	**13.74**	**24**	P	**Pn**	**18 53 37.8**	**-2.2**
XAN				pP	**P**	**18 53 45.9**	**-2.5**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
XAN				LR	LR		
	comp=N,1μm,11.3s						
XAN				LR	LR		
	comp=E,960nm,10.5s						
XAN				LR	LR		
	comp=Z,390nm,9.7s						
WHN	**Wuhan**	**14.07**	**48**	P	P	18 54 02.3	+10
WHN				S	**Sn**	**18 56 19.3**	**-0.7**
WHN				LR	LR		
	comp=N,6μm,13.5s						
WHN				LR	LR		
	comp=E,4μm,7.8s						
WHN				LR	LR		
	comp=Z,5μm,6.6s						
TAPN	**Taplejung**	**14.39**	**296**	*e*P	**Pn**	**18 53 48.1**	**-1.1**
	comp=Z,44nm,1.0s						
ODAN	**Odare**	**14.50**	**294**	*e*P	**Pn**	**18 53 52.5**	**+1.9**
	comp=Z,15nm,0.8s						
LZH	**Lanzhou**	**14.51**	**5**	*e*P	**P**	**18 53 54.3**	**-2.8**
LZH				pP	Pn	18 53 57.6	+7.0
LZH				sP		18 54 01.5	
LZH				PP	PnPn	18 54 06.5	+7.7
LZH				*e*S	Sn	18 56 39.1	+8.2
LZH				sS	**S**	**18 56 46.3**	**-3.8**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,73nm,4.2s						
LZH				LR	LR		
	comp=N,560nm,8.2s						
LZH				LR	LR		
	comp=E,610nm,9.1s						
LZH				LR	LR		
	comp=Z,660nm,10.8s						
RAMN	**Ramite**	**15.20**	**294**	*e*P	**Pn**	**18 54 02.1**	**+2.1**
	comp=Z,25nm,0.7s						
GUN	**Gumba**	**16.11**	**296**	*e*P	**Pn**	**18 54 09.9**	**-2.0**
	comp=Z,84nm,1.0s						
KTGM	**Kuala Trenggan**	**16.19**	**177**	P	**P**	**18 54 15.8**	**+0.2**
KULM	**Kulim**	**16.28**	**186**	*e*Pn	**Pn**	**18 54 14.5**	**+0.7**
	comp=Z,36nm,1.3s						
KULM	**Kulim**	**16.28**	**186**	P	**P**	**18 54 16.3**	**-0.3**
PKI	**Pulchoki**	**16.40**	**295**	*e*P	**Pn**	**18 54 16.9**	**+1.3**
PKIN	**Phulchoki**	**16.41**	**295**	*e*P	**Pn**	**18 54 17.0**	**+1.3**
	comp=Z,26nm,1.0s						
KKN	**Kakani**	**16.57**	**295**	*e*P	**Pn**	**18 54 18.1**	**+0.4**
	comp=Z,34nm,0.8s						
DMN	**Daman**	**16.67**	**294**	*e*P	**P**	**18 54 20.6**	**-0.5**
IPM	**Ipoh**	**17.05**	**184**	P	**Pn**	**18 54 24.0**	**+0.5**
GTA	**Gaotai**	**17.88**	**354**	⇑P	**P**	**18 54 35.0**	**+0.7**
GTA				pP	**pP**	**18 54 40.1**	**-0.8**
GTA				sP	**sP**	**18 54 43.4**	**-0.6**
GTA				S	**S**	**18 57 58.1**	**-0.7**
GTA				sS	**sS**	**18 58 06.4**	**-2.7**
GTA				pmax	pmax		
	comp=Z,6.0nm,2.0s						
GTA				pmax	pmax		
	comp=Z,150nm,5.7s						
GTA				LR	LR		
	comp=N,260nm,12.8s						
GTA				LR	LR		
	comp=E,750nm,10.2s						
GTA				LR	LR		
	comp=Z,210nm,13.3s						
DANN	**Dangsing**	**18.02**	**296**	*e*P	**Pn**	**18 54 35.0**	**-0.9**
	comp=Z,34nm,0.8s						
NJ2	**Nanjing**	**18.12**	**51**	*e*P	P	18 54 42.3	+5.5
NJ2				S	**Sn**	**18 57 57.0**	**-1.2**
NJ2				sS	sS	18 58 13.5	-0.2
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,40nm,6.2s						
NJ2				LR	LR		
	comp=N,240nm,15.7s						
NJ2				LR	LR		
	comp=E,310nm,14.7s						
NJ2				LR	LR		
	comp=Z,110nm,10.8s						
FRIM	**Kepong**	**18.25**	**182**	P	**P**	**18 54 42.4**	**+3.9**
KCSI	**Kotacane, Aceh**	**18.47**	**194**	P	**P**	**18 54 39.9**	**-1.0**
	comp=Z,33nm,1.3s,comp=Z,749nm						
PSI	**Prapat**	**18.95**	**190**	P	**Pn**	**18 54 48.7**	**+1.7**
	baz=17,SNR=6.0						
KGM	**Kluang**	**19.49**	**177**	P	**Pn**	**18 54 56.6**	**+3.3**
MYKOM	**Kota Tinggi**	**19.75**	**175**	P	**Pn**	**18 54 59.7**	**+3.3**
BTO	**Baotou**	**20.08**	**18**	*e*P	Pn	18 55 00.3	-0.1
KKM	**Kota Kinabalu**	**20.55**	**137**	P	Pn	18 55 09.1	+3.1
GSI	**Gunungsitoli**	**20.67**	**193**	S	S	18 58 37.1	-18
	baz=18,SNR=3.3						
TPRI	**Tanjung Pinang**	**20.67**	**173**	P	Pn	18 55 09.6	+2.3
BTM	**Bintulu**	**21.11**	**148**	P	**P**	**18 55 13.1**	**+3.4**
SBUM	**Sibu**	**21.37**	**152**	P	**P**	**18 55 15.4**	**+2.9**
SDKM	**Sandakan**	**21.49**	**135**	P	P	18 55 25.7	+12
KSM	**Kuching**	**21.50**	**157**	*e*P	**P**	**18 55 13.2**	**-0.5**
	comp=Z,38nm,1.4s						
KSM	**Kuching**	**21.50**	**157**	P	**P**	**18 55 16.8**	**+3.1**
PALK	**Pallekele**	**25.18**	**239**	P	**P**	**18 55 51.1**	**+0.7**
PALK	**Pallekele**	**25.18**	**239**	P	**P**	**18 55 51.1**	**+0.7**
	comp=Z,6.3nm,0.7s,baz=27,slow=4.5,SNR=2.6						
PALK				LR	LR	19 05 22.7	
	comp=Z,124nm,21.6s,baz=247,slow=36						
WMQ	**Urumqi**	**25.24**	**335**	*e*P	**P**	**18 55 50.8**	**+0.1**
WMQ				pP	**pP**	**18 55 56.4**	**-1.4**
WMQ				sP	**sP**	**18 55 59.6**	**-1.1**
WMQ				PP	**PnPn**	**18 56 29.8**	**+4.4**
WMQ				PcP	**PcP**	**18 59 23.8**	**0.0**
WMQ				S	**S**	**19 00 14.0**	**-1.0**
WMQ				sS	**sS**	**19 00 23.4**	**-3.3**
WMQ				SS	**SnSn**	**19 01 16.0**	**+9.5**
WMQ				PcS	**PcS**	**19 03 02.9**	**-1.3**
WMQ				ScS	**ScS**	**19 06 48.0**	**-2.2**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.4s						
WMQ				pmax	pmax		
	comp=Z,64nm,4.4s						
WMQ				LR	LR		
	comp=N,260nm,15.2s						
WMQ				LR	LR		
	comp=E,320nm,14.2s						
WMQ				LR	LR		
	comp=Z,220nm,20.6s						
SONM	**Songino Array**	**26.40**	**6**	P	**P**	**18 56 02.2**	**+0.9**
SONM	**Songino Array**	**26.40**	**6**	P	**P**	**18 56 02.2**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=186,slow=9.2,SNR=19						
SONM				LR	LR	19 08 02.6	
	comp=Z,225nm,18.0s,baz=1.5,slow=40						
ULN	**Ulaanbaatar**	**26.50**	**7**	*e*P	**P**	**18 56 03.4**	**+1.2**
	comp=Z,2.8nm,0.9s						
ULN	**Ulaanbaatar**	**26.50**	**7**	P	**P**	**18 56 02.8**	**+0.5**
	comp=Z,4.3nm,1.9s						
DAV	**Davao City (W)**	**26.79**	**119**	LR	LR	19 07 04.3	
	comp=Z,87nm,18.4s,baz=217,slow=38						
KSRS	**Korea Array**	**27.27**	**49**	LR	LR	19 06 23.4	
	comp=Z,63nm,21.7s,baz=237,slow=35						
JNU	**Nakatsue**	**27.84**	**60**	LR	LR	19 08 55.3	
	comp=Z,140nm,19.3s,baz=238,slow=40						
TNG	**Tangerang**	**27.93**	**171**	P	sP	18 56 31.5	+6.3
KSH	**Kashi**	**28.65**	**314**	*e*P	**P**	**18 56 22.3**	**+0.7**
KSH				*ep*P	**pP**	**18 56 31.8**	**+3.1**
KSH				*es*P	**sP**	**18 56 35.4**	**+3.8**
KSH				*e*PP	**PnPn**	**18 57 10.4**	**-1.7**
KSH				*e*ScP	**ScP**	**19 03 16.1**	**+4.1**
KSH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,120nm,3.4s						
KSH				LR	LR		
	comp=E,110nm,5.9s						
KSH				LR	LR		
	comp=Z,140nm,9.3s						
MK31	**Makanchi Array**	**29.89**	**332**	*e*P	**P**	**18 56 32.9**	**+0.5**
MKAR	**Makanchi Array**	**29.89**	**332**	P	**P**	**18 56 33.7**	**+1.3**
MKAR	**Makanchi Array**	**29.89**	**332**	P	**P**	**18 56 33.7**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=138,slow=9.7,SNR=19						
MKAR				LR	LR	19 08 57.5	
	comp=Z,94nm,21.2s,baz=138,slow=37						
TKM2	**Tokmak 2**	**30.75**	**320**	*e*P	**P**	**18 56 40.4**	**+0.2**
	comp=Z,3.6nm,0.8s						
HIA	**Hailar**	**30.93**	**23**	P	**P**	**18 56 41.3**	**-0.2**
	comp=Z,3.6nm,0.6s						
AAK	**Ala-Archa**	**31.25**	**319**	*e*P	**P**	**18 56 46.2**	**+1.5**
	comp=Z,7.3nm,1.0s						
EKS2	**Erkin-Say**	**31.71**	**318**	*e*P	**P**	**18 56 50.3**	**+1.6**
	comp=Z,4.4nm,1.0s						
KBL	**Kabul**	**31.84**	**301**	*e*P	P	18 56 53.1	+3.2
	comp=Z,10nm,1.2s						
USRK	**Usuriysk Arra**	**33.37**	**41**	P	**P**	**18 57 01.2**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=232,slow=9.6,SNR=2.6						
KURBB	**Kurchatov Arra**	**34.42**	**333**	P	**P**	**18 57 13.0**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=133,slow=9.9,SNR=26						
KURK	**Kurchatov**	**34.45**	**333**	P	**P**	**18 57 13.0**	**+0.8**
MJAR	**Matsushiro Arr**	**34.58**	**56**	P	**P**	**18 57 12.3**	**-1.3**
MJAR	**Matsushiro Arr**	**34.58**	**56**	P	**P**	**18 57 12.3**	**-1.3**
	comp=Z,1.9nm,0.9s,baz=253,slow=8.9,SNR=5.4						
MJAR				LR	LR	19 12 22.2	
	comp=Z,110nm,18.0s,baz=265,slow=38						
ZAA0	**Zalesovo Array**	**34.91**	**342**	*e*P	**P**	**18 57 16.9**	**+0.8**
ZALV	**Zalesovo Beam**	**34.91**	**342**	P	**P**	**18 57 17.2**	**+1.1**
ZALV	**Zalesovo Beam**	**34.91**	**342**	P	**P**	**18 57 17.2**	**+1.1**
	comp=Z,4.4nm,0.7s,baz=149,slow=8.4,SNR=30						
ZALV				LR	LR	19 12 45.2	
	comp=Z,120nm,21.9s,baz=70,slow=38						
BVAR	**Borovoye Array**	**39.72**	**330**	P	**P**	**18 57 57.6**	**+0.6**
BVAR	**Borovoye Array**	**39.72**	**330**	P	**P**	**18 57 57.6**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=127,slow=9.4,SNR=8.1						
BRVK	**Borovoye**	**39.79**	**330**	*e*P	**P**	**18 57 57.2**	**-0.3**
	comp=Z,2.8nm,0.8s						
GUMO	**Guam**	**41.32**	**94**	LR	LR	19 13 51.5	
	comp=Z,55nm,18.1s,baz=271,slow=34						
ABKAR	**Akbulak array**	**43.31**	**320**	*e*P	**P**	**18 58 26.8**	**+0.2**
	comp=Z,2.1nm,0.6s						
AKTO	**Aktyubinsk**	**44.93**	**321**	P	**P**	**18 58 39.7**	**+0.3**
AKTO	**Aktyubinsk**	**44.93**	**321**	P	**P**	**18 58 39.7**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=113,slow=12,SNR=2.8						
MBWA	**Marble Bar**	**45.80**	**157**	*e*P	**P**	**18 58 45.2**	**-1.5**
	comp=Z,64nm,1.7s						
RDF	**Al-Radifah**	**49.62**	**290**	*e*P	**P**	**18 59 16.5**	**+0.2**
RDF				AMb	AMB	18 59 18.0	
	comp=Z,18nm,1.5s						
MIB	**Mutribah**	**49.74**	**291**	*e*P	**P**	**18 59 15.6**	**-1.6**
MIB				AMb	AMB	18 59 21.7	
	comp=Z,15nm,1.0s						
NAY	**Al-Naaiem**	**49.86**	**291**	*e*P	**P**	**18 59 15.9**	**-2.3**
NAY				AMb	AMB	18 59 22.5	
	comp=Z,8.6nm,1.0s						
WRA	**Warramunga Arr**	**51.87**	**141**	P	**P**	**18 59 32.5**	**-0.8**
WRA	**Warramunga Arr**	**51.87**	**141**	P	**P**	**18 59 32.5**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=332,slow=8.2,SNR=20						
WRAB	**Tennant Creek**	**51.87**	**140**	*e*P	**P**	**18 59 32.1**	**-1.2**
	comp=Z,5.5nm,1.0s						
PETK	**Petropavlovsk-**	**52.42**	**39**	P	**P**	**18 59 35.8**	**-1.3**
PETK	**Petropavlovsk-**	**52.42**	**39**	P	**P**	**18 59 35.8**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=280,slow=8.6,SNR=2.4						
AS31	**Alice Springs**	**54.54**	**144**	*e*P	**P**	**18 59 54.1**	**+1.2**
ASAR	**Alice Springs**	**54.54**	**144**	P	**P**	**18 59 50.9**	**-2.1**
ASAR	**Alice Springs**	**54.54**	**144**	P	**P**	**18 59 50.9**	**-2.1**
	comp=Z,1.6nm,0.8s,baz=324,slow=6.1,SNR=15						
BRTR	**Keskin Array B**	**60.33**	**304**	P	**P**	**19 00 34.5**	**+0.8**
BRTR	**Keskin Array B**	**60.33**	**304**	P	**P**	**19 00 34.5**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=98,slow=5.5,SNR=4.5						
BILL	**Bilibino**	**60.52**	**23**	P	**P**	**19 00 34.1**	**-0.3**
	comp=Z,2.2nm,0.7s						
AKASG	**Malin Array Be**	**62.91**	**317**	P	**P**	**19 00 50.2**	**-0.6**
AKASG	**Malin Array Be**	**62.91**	**317**	P	**P**	**19 00 50.2**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=89,slow=5.8,SNR=4.5						
FINES	**FINESS Array B**	**64.66**	**329**	P	**P**	**19 01 01.8**	**-0.3**
FINES	**FINESS Array B**	**64.66**	**329**	P	**P**	**19 01 01.8**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=110,slow=6.4,SNR=4.4						
MLR	**Muntele Rosu**	**65.45**	**311**	P	**P**	**19 01 08.5**	**+0.7**
MLR	**Muntele Rosu**	**65.45**	**311**	P	**P**	**19 01 08.5**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=85,slow=8.6,SNR=4.2						
KMBO	**Kilima Mbogo**	**67.25**	**259**	P	**P**	**19 01 19.1**	**-0.9**
	comp=Z,5.8nm,1.3s						
VRAC	**Vranov**	**71.15**	**316**	P	**P**	**19 01 43.9**	**+0.6**
VRAC	**Vranov**	**71.15**	**316**	P	**P**	**19 01 43.9**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=56,slow=8.4,SNR=3.1						
NB2	**NORSAR Subarra**	**71.84**	**329**	P	**P**	**19 01 46.3**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=82,slow=6.2						
NOA	**NORSAR Array B**	**71.84**	**329**	P	**P**	**19 01 46.5**	**-0.7**
NOA	**NORSAR Array B**	**71.84**	**329**	P	**P**	**19 01 46.5**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=80,slow=6.1,SNR=2.9						
GERES	**GERESS Array B**	**73.11**	**316**	P	**P**	**19 01 55.0**	**0.0**
GERES	**GERESS Array B**	**73.11**	**316**	P	**P**	**19 01 55.1**	**0.0**
	comp=Z,0.3nm,0.5s,baz=57,slow=7.2,SNR=2.5						
DAVOX	**Davos/Dischmat**	**76.13**	**315**	P	**P**	**19 02 15.4**	**+2.6**
DAVOX	**Davos/Dischmat**	**76.13**	**315**	P	**P**	**19 02 15.4**	**+2.6**
	comp=Z,1.4nm,0.5s,baz=49,slow=9.3,SNR=2.5						
ILAR	**Eielson Array**	**79.15**	**24**	P	**P**	**19 02 30.6**	**+1.5**
ILAR	**Eielson Array**	**79.15**	**24**	P	**P**	**19 02 30.6**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=292,slow=4.8,SNR=3.4						
LSZ	**Lusaka**	**81.29**	**250**	P	**P**	**19 02 40.2**	**-1.4**
	comp=Z,3.1nm,0.8s						
LBTB	**Lobatse**	**87.62**	**242**	P	**P**	**19 03 12.1**	**-1.3**
	comp=Z,5.1nm,0.9s						
YKA	**Yellowknife Ar**	**91.25**	**16**	P	**P**	**19 03 30.8**	**+1.1**
YKA	**Yellowknife Ar**	**91.25**	**16**	P	**P**	**19 03 30.8**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=331,slow=4.7,SNR=4.6						
TORD	**Torodi Ar. Bea**	**94.75**	**286**	P	**P**	**19 03 46.4**	**-0.3**
TORD	**Torodi Ar. Bea**	**94.75**	**286**	P	**P**	**19 03 46.4**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=69,slow=3.4,SNR=2.7						

WEL 22 19:13:33.2±0.4,36°.91S×177°.18E,h5km,ML3.5/3,Error ellipse: s-maj=3.6km s-min=3.0km az=0.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.62**	**180**	P*	Pg	19 13 45.4	+0.3
WIZ				S*	Sg	19 13 53.3	+0.1
MXZ	**Matakaoa Point**	**1.11**	**126**	P*	Pg	19 13 52.9	-1.6
MXZ				S*	Sg	19 14 06.7	-2.1
KUZ	**Kuaotunu**	**1.19**	**277**	P*	Pg	19 13 54.7	-1.2
KUZ				S*	Sg	19 14 11.5	+0.2
TOZ	**Tahuroa Road**	**1.57**	**238**	P*	Pn	19 14 00.7	-1.0
MKAZ	**Moumakai**	**1.63**	**262**	PN	Pn	19 14 01.9	-0.6

BGS ***22*** *19:24:14.7±1.4, 18˚.72N×98˚.97W, h33km, mb5.8*

ISCJB ***22*** *19:24:16.3±0.2, 18˚.20N±0˚.02×98˚.41W±0˚.01, h61km±1km, mb5.8/362, Error ellipse: s-maj=3.0km s-min=1.9km az=30.3*

IGIL ***22*** *19:24:17.6, 18˚.35N×98˚.27W, h56km, mb5.7*

MOS ***22*** *19:24:17.9±0.8, 18˚.36N×98˚.21W, h74km, mb6.2/129, MS5.0/33, Error ellipse: s-maj=8.7km s-min=4.4km az=107.5*

IDC ***22*** *19:24:17.9±0.4, 18˚.30N×98˚.23W, h56km±2km, mb5.4/35, mb1 5.4/38, mb1mx5.4/39, mbtmp5.3/38, MS4.8/33, Ms1 4.8/33, ms1mx4.8/36, Error ellipse: s-maj=10.1km s-min=6.1km az=65.0*

MEX ***22*** *19:24:18.5±0.7, 18˚.11N×98˚.46W, h62km±6km, MD5.7*

NEIC ***22*** *19:24:18.5, 18˚.11N×98˚.46W, h62km, mb5.8/229, ME5.2, MW5.6, MW5.5, MD5.7(MEX) Broadband fault plane solution: P waves. NP1:φ≈295.00000°, δ40.00000°, λ-70.00000°. NP2:φ≈90.00000°, δ53.00000°, λ-106.00000°. Principal axes: T Plg7.0000°, Azm191.0000°; N Plg0.0000°, Azm0.0000°; P Plg76.0000°, Azm308.0000°; Moment Tensor Solution. s47 Moment tensor: Scale 10¹⁷ Nm; Mrr-2.33; Mθθ 1.94; Mφφ0.39; Mrθ-1.08; Mθφ-0.33; Mφr-0.66; Best double couple: M≈2.50000×10¹⁷ NP1:φ≈294.00000°, δ35.00000°, λ-65.00000°. NP2:φ≈84.00000°, δ59.00000°, λ-106.00000°. Principal axes: T 2.2200, Plg12.0000°, Azm185.0000°; N 0.5400, Plg13.0000°, Azm92.0000°; P -2.7500, Plg71.0000°, Azm316.0000°; Depth from synthetics of broadband displacement seismograms. Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism. After MEX.*

NEIC Felt [V] at Metepec; [IV] at Atizapan, Cholula, Cuernavaca, Huixquilucan, Ixtapaluca, Mexico, Puebla, Texcoco, Tlalnepantla and Tultitlan; [III] at Jalapa, Jiutepec, Naucalpan, Tepoztlan and Toluca. Felt in much of central Mexico from Leon and Acapulco to Oaxaca and Veracruz.

BJI ***22*** *19:24:20.4, 18˚.60N×98˚.07W, h84km, mB5.4/34, mb5.7/5, Ms5.5/38, Ms7 5.2/40*

GCMT ***22*** *19:24:22.7±0.1, 18˚.22N×98˚.26W, h59km, MW5.6, Moment Tensor Solution. s103,c204; s45,c48; Moment tensor: Scale 10¹⁷Nm; Mrr-2.93±.05; Mθθ3.51±.04; Mφφ-0.57±.04; Mrθ-1.48±.04; Mθφ0.34±.04; Mφr-0.96±.04; Best double couple: M≈3.70000×10¹⁷ NP1:φ≈282.00000°, δ34.00000°, λ-63.00000°. NP2:φ≈70.00000°, δ60.00000°, λ-107.00000°. Principal axes: T 3.9000, Plg13.0000°, Azm173.0000°; N -0.3800, Plg15.0000°, Azm79.0000°; P -3.5100, Plg70.0000°, Azm303.0000°; Data Used: ll IU CN IC G. Surface waves: sta= 91, comp=177, per= 50.*

NEIC ***22*** *19:24:44.8±0.0, 18˚.29N×97˚.76W, h57km, Moment Tensor Solution. s153 Moment tensor: Scale 10¹⁷Nm; Mrr-2.63; Mθθ2.71; Mφφ-0.08; Mrθ-1.84; Mθφ0.24; Mφr-0.28; Best double couple: M≈3.30000×10¹⁷ NP1:φ≈83.00000°, δ62.00000°, λ-91.00000°. NP2:φ≈268.00000°, δ28.00000°, λ-85.00000°. Principal axes: T 3.3100, Plg17.0000°, Azm174.0000°; N -0.1000, Plg1.0000°, Azm83.0000°; P -3.2200, Plg72.0000°, Azm347.0000°;*

ISC 22 19:24:17.7±0.2, 18˚.15N±0˚.02×98˚.39W±0˚.02, h63km±1km, h62km:pP-P, n1603, σ1º44/2105, mb5.8/361, 177C-561D, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMTT	**Tlapaneco**	**0.39**	**204**	*eP*	**Pn**	**19 24 27.2**	**-1.7**
HMTT				*i* S	**Sn**	**19 24 35.3**	**-1.7**
PHPU	**Puebla**	**0.91**	**13**	*e*P	**Pn**	**19 24 34.3**	**-0.8**
PHPU				*i* S	**Sn**	**19 24 47.5**	**-0.3**
PPM	**Popocatepetl**	**0.94**	**346**	*e*P	**Pn**	**19 24 34.6**	**-1.0**
PPM				*i* S	**Sn**	**19 24 48.5**	**-0.2**
PPM	**Popocatepetl**	**0.94**	**346**	*e*P	**Pn**	**19 24 34.6**	**-1.0**
PPM				*i* S	**Sn**	**19 24 48.5**	**-0.2**
PPM	**Popocatepetl**	**0.94**	**346**	*e*P	**Pn**	**19 24 34.6**	**-1.0**
PPM				*e*P	**Pn**	**19 24 34.7**	**-0.9**
PPM				*i* S	**Sn**	**19 24 48.5**	**-0.2**
YAIG	**Yautepec**	**0.95**	**318**	*e*P	**Pn**	**19 24 34.1**	**-1.4**
YAIG				*i* S	**Sn**	**19 24 46.5**	**-2.1**
YAIG	**Yautepec**	**0.95**	**318**	*e*P	**Pn**	**19 24 34.1**	**-1.4**
YAIG				*i* S	**Sn**	**19 24 46.5**	**-2.1**
TPIG	**Tehuac#an**	**1.02**	**75**	*e*P	**Pn**	**19 24 36.5**	**+0.3**
TPIG				*i* S	**Sn**	**19 24 51.1**	**+1.1**
TPIG	**Tehuac#an**	**1.02**	**75**	*e*P	**Pn**	**19 24 36.5**	**+0.3**
TPIG				*i* S	**Sn**	**19 24 51.1**	**+1.1**
PLIG	**Platanillo**	**1.08**	**283**	*e*P	**Pn**	**19 24 35.5**	**-1.5**
PLIG				*i* S	**Sn**	**19 24 49.5**	**-1.9**
PLIG	**Platanillo**	**1.08**	**283**	*e*P	**Pn**	**19 24 35.5**	**-1.5**
PLIG				*i* S	**Sn**	**19 24 49.5**	**-1.9**
MEIG	**Mezcala**	**1.19**	**259**	*e*P	**Pn**	**19 24 36.9**	**-1.5**
MEIG				*e*S	**Sn**	**19 24 51.5**	**-2.4**
MEIG	**Mezcala**	**1.19**	**259**	*e*P	**Pn**	**19 24 36.9**	**-1.5**
MEIG				*e*S	**Sn**	**19 24 51.5**	**-2.4**
UNM	**Universidad Na**	**1.39**	**328**	*e*P	**Pn**	**19 24 41.0**	**-0.1**
UNM				*e*S	**Sn**	**19 24 58.5**	**-0.4**
UNM	**Universidad Na**	**1.39**	**328**	*e*P	**Pn**	**19 24 41.2**	**-0.1**
UNM				*e*S	**Sn**	**19 24 58.5**	**-0.4**
UNM	**Universidad Na**	**1.39**	**328**	*e*P	**Pn**	**19 24 41.2**	**-0.1**
UNM				*e*S	**Sn**	**19 24 58.5**	**-0.4**
PBVM	**Pinon**	**1.44**	**333**	*e*P	**Pn**	**19 24 41.7**	**0.0**
PBVM				*i* S	**Sn**	**19 24 59.5**	**-0.2**
PBVM	**Pinon**	**1.44**	**333**	*e*P	**Pn**	**19 24 41.7**	**0.0**
PBVM				*i* S	**Sn**	**19 24 59.5**	**-0.2**
PNIG	**Pinotepa**	**1.77**	**172**	*e*P	**Pn**	**19 24 44.7**	**-1.4**
PNIG				*i* S	**Sn**	**19 25 06.5**	**-1.1**
PNIG	**Pinotepa**	**1.77**	**172**	*e*P	**Pn**	**19 24 44.7**	**-1.4**
PNIG				*i* S	**Sn**	**19 25 06.5**	**-1.1**
ARIG	**Puente Sto Nin**	**1.86**	**274**	*e*P	**Pn**	**19 24 46.5**	**-0.8**
ARIG				*i* S	**Sn**	**19 25 07.5**	**-2.4**
ACX	**Acapulco**	**1.89**	**228**	*e*P	**Pn**	**19 24 45.2**	**-2.5**
ACX	**Acapulco**	**1.89**	**228**	*e*P	**Pn**	**19 24 45.2**	**-2.5**
ACP2	**Acapulco**	**1.91**	**229**	*e*P	**Pn**	**19 24 45.9**	**-2.1**
ACP2				*i* S	**Sn**	**19 25 08.9**	**-2.1**
VHO	**Vista Hermosa**	**1.91**	**124**	*e*P	**Pn**	**19 24 48.8**	**+0.6**
VHO				*i* S	**Sn**	**19 25 10.8**	**-0.6**
VHO	**Vista Hermosa**	**1.91**	**124**	*e*P	**Pn**	**19 24 48.8**	**+0.6**
VHO				*i* S	**Sn**	**19 25 10.8**	**-0.6**
OXX	**Oaxaca**	**1.92**	**123**	*e*P	**Pn**	**19 24 49.4**	**+1.1**
OXX	**Oaxaca**	**1.92**	**123**	*e*P	**Pn**	**19 24 49.4**	**+1.1**
CAIG	**El Cayaco**	**2.10**	**239**	*i* P	**Pn**	**19 24 48.4**	**-2.1**
CAIG				*i* S	**Sn**	**19 25 13.5**	**-2.1**
CAIG	**El Cayaco**	**2.10**	**239**	*i* P	**Pn**	**19 24 48.4**	**-2.1**
CAIG				*i* S	**Sn**	**19 25 13.5**	**-2.1**
DEIG	**Demacu**	**2.22**	**344**	*e*P	**Pn**	**19 24 51.8**	**-0.7**
DEIG				*i* S	**Sn**	**19 25 18.2**	**-0.8**
DEIG	**Demacu**	**2.22**	**344**	*e*P	**Pn**	**19 24 51.8**	**-0.7**
DEIG				*i* S	**Sn**	**19 25 18.2**	**-0.8**
LVIG	**Laguna Verde**	**2.44**	**50**	*e*P	**Pn**	**19 24 54.6**	**-0.6**
LVIG				*i* S	**Sn**	**19 25 25.1**	**+1.2**
LVIG	**Laguna Verde**	**2.44**	**50**	*e*P	**Pn**	**19 24 54.6**	**-0.6**
LVIG				*i* S	**Sn**	**19 25 25.1**	**+1.2**
ZIIG	**Zihuatanejo**	**2.98**	**260**	*e*P	**Pn**	**19 25 00.9**	**-1.6**
ZIIG				*i* S	**Sn**	**19 25 35.2**	**-1.8**
ZIIG	**Zihuatanejo**	**2.98**	**260**	*e*P	**Pn**	**19 25 00.9**	**-1.6**
ZIIG				*i* S	**Sn**	**19 25 35.2**	**-1.8**
PANG	**Puerto Angel**	**3.08**	**143**	*e*P	**Pn**	**19 25 05.3**	**+1.3**
PANG				*i* S	**Sn**	**19 25 36.3**	**-3.3**
HUIG	**Huatulco**	**3.22**	**137**	*e*P	**Pn**	**19 25 06.6**	**+0.6**
HUIG				*i* S	**Sn**	**19 25 42.8**	**-0.3**
HUIG	**Huatulco**	**3.22**	**137**	*e*P	**Pn**	**19 25 06.6**	**+0.6**
HUIG				*i* S	**Sn**	**19 25 42.8**	**-0.3**
TUIG	**Tuzandepetl**	**3.78**	**91**	*e*P	**Pn**	**19 25 13.2**	**-0.3**
TUIG				*i* S	**Sn**	**19 25 56.3**	**-0.4**
TUIG	**Tuzandepetl**	**3.78**	**91**	*e*P	**Pn**	**19 25 13.2**	**-0.3**
TUIG				*i* S	**Sn**	**19 25 56.3**	**-0.4**
EZ5V		**5.11**	**286**	*e*P	**Pn**	**19 25 33.5**	**+1.6**
EZ5V				*i* S	**Sn**	**19 26 30.7**	**+0.9**
TGIG		**5.21**	**104**	*e*P	**Pn**	**19 25 33.7**	**+0.5**
TGIG				*i* S	**Sn**	**19 26 33.2**	**+1.2**
TGIG		**5.21**	**104**	*e*P	**Pn**	**19 25 33.7**	**+0.5**
TGIG				*i* S	**Sn**	**19 26 33.2**	**+1.2**
R15V		**5.39**	**282**	*e*P	**Pn**	**19 25 36.1**	**+0.4**
R15V				*i* S	**Sn**	**19 26 35.7**	**-0.8**
PCIG		**5.52**	**115**	*i* P	**Pn**	**19 25 38.6**	**+1.2**
PCIG				*i* S	**Sn**	**19 26 40.2**	**+0.7**
PCIG		**5.52**	**115**	*i* P	**Pn**	**19 25 38.6**	**+1.2**

PCIG				*i* S	**Sn**	**19 26 40.2**	**+0.7**
ZAIG	**Zacatecas**	**6.03**	**320**	*e*P	**Pn**	**19 25 45.0**	**+0.3**
ZAIG				*i* S	**Sn**	**19 26 51.9**	**-0.6**
ZAIG	**Zacatecas**	**6.03**	**320**	*e*P	**Pn**	**19 25 45.0**	**+0.3**
ZAIG				*i* S	**Sn**	**19 26 51.9**	**-0.6**
CCIG	**Comitan**	**6.26**	**106**	*i* P	**Pn**	**19 25 48.3**	**+0.6**
CCIG				*i* S	**Sn**	**19 26 59.3**	**+1.3**
CCIG	**Comitan**	**6.26**	**106**	*i* P	**Pn**	**19 25 48.3**	**+0.6**
CCIG				*i* S	**Sn**	**19 26 59.3**	**+1.3**
CJM	**Chamela**	**6.44**	**283**	*e*P	**Pn**	**19 25 49.9**	**-0.1**
CJM				*i* S	**Sn**	**19 27 01.2**	**-0.9**
CJM	**Chamela**	**6.44**	**283**	*e*P	**Pn**	**19 25 49.9**	**-0.1**
CJM				*i* S	**Sn**	**19 27 01.2**	**-0.9**
ANIG	**Ahuacatlan**	**6.46**	**298**	*e*P	**Pn**	**19 25 50.1**	**-0.2**
ANIG	**Ahuacatlan**	**6.46**	**298**	*e*P	**Pn**	**19 25 50.1**	**-0.2**
THIG		**6.70**	**118**	*i* P	**Pn**	**19 25 54.4**	**+0.8**
THIG				*i* S	**Sn**	**19 27 11.4**	**+2.8**
THIG		**6.70**	**118**	*i* P	**Pn**	**19 25 54.4**	**+0.8**
THIG				*i* S	**Sn**	**19 27 11.4**	**+2.8**
LNIG	**Linares**	**6.79**	**352**	*e*P	**Pn**	**19 25 54.6**	**-0.1**
LNIG				*i* S	**Sn**	**19 27 13.5**	**+2.9**
LNIG	**Linares**	**6.79**	**352**	*e*P	**Pn**	**19 25 54.6**	**-0.1**
LNIG				*i* S	**Sn**	**19 27 13.5**	**+2.9**
MAIG	**Mazatlaan**	**9.03**	**305**	*e*P	**Pn**	**19 26 26.9**	**+1.5**
MAIG	**Mazatlaan**	**9.03**	**305**	*e*P	**Pn**	**19 26 26.9**	**+1.5**
RBDL	**Robledal**	**9.28**	**114**	*e*P	**Pn**	**19 26 32.0**	**+3.0**
SBLS	**San Blas**	**9.46**	**116**	*e*P	**Pn**	**19 26 33.8**	**+2.2**
SNJE	**San Jose**	**9.46**	**115**	*e*P	**Pn**	**19 26 34.4**	**+2.9**
TEIG	**Tepich**	**9.78**	**76**	*e*Pn	**Pn**	**19 26 34.1**	**-1.6**
TEIG				*e*Sn	**Sn**	19 28 10.4	-14
TEIG				S	**Sn**	**19 28 19.1**	**-4.9**
TEIG	**Tepich**	**9.78**	**76**	*e*P	**Pn**	**19 26 35.7**	**0.0**
TEIG	**Tepich**	**9.78**	**76**	P	**Pn**	**19 26 35.2**	**-0.5**
	32nm,0.3s,baz=256,slow=3.3,SNR=56						
TEIG				S	**Sn**	**19 28 19.1**	**-4.9**
	79nm,0.3s,baz=323,slow=20,SNR=7.3						
TEIG				LR	LR	19 31 06.3	
	comp=Z,7μm,21.2s,baz=252,slow=43						
BOQS	**Boqueron**	**9.80**	**115**	*e*P	**Pn**	**19 26 38.8**	**+2.6**
SNET	**Serv Nac Est T**	**9.87**	**115**	*e*P	**Pn**	**19 26 40.0**	**+3.0**
SNET				*e*S	Sn	19 28 38.1	+12
LFU	**La Fuente**	**9.94**	**115**	*e*P	**Pn**	**19 26 40.5**	**+2.6**
LFRS	**El Faro**	**10.04**	**115**	*e*P	**Pn**	**19 26 41.9**	**+2.5**
SNVI	**San Vicente**	**10.24**	**115**	*e*P	**Pn**	**19 26 44.9**	**+2.8**
732A	**Laxson Ranch,**	**10.63**	**352**	⇑P	**Pn**	**19 26 48.1**	**+0.8**
	baz=11,SNR=203						
CAHU	**Cacacuatique**	**10.72**	**113**	*e*P	**Pn**	**19 26 51.0**	**+2.3**
HPIG		**11.02**	**324**	*e*P	**Pn**	**19 26 54.0**	**+1.1**
HPIG		**11.02**	**324**	*e*P	**Pn**	**19 26 54.0**	**+1.1**
632A	**Uvalde**	**11.38**	**354**	⇓P	**Pn**	**19 26 58.2**	**+0.7**
	baz=12,SNR=124						
631A	**Perdido Creek**	**11.39**	**350**	⇑P	**Pn**	**19 26 58.1**	**+0.5**
	baz=12,SNR=211						
TGUH	**Tegucigalpa,Un**	**11.44**	**109**	*e*Pn	**Pn**	**19 26 57.8**	**-0.5**
HKT	**Hockley**	**11.98**	**11**	*e*P	**Pn**	**19 27 04.2**	**-1.4**
HKT	**Hockley**	**11.98**	**11**	*e*Pn	**Pn**	**19 27 04.2**	**-1.4**
532A	**Rocksprings**	**12.00**	**354**	⇑P	**Pn**	**19 27 06.8**	**+0.8**
	baz=12,SNR=343						
628A	**Black Gap, Mar**	**12.01**	**341**	⇓P	**Pn**	**19 27 08.5**	**+2.4**
	baz=12,SNR=205						
531A	**Rocksprings**	**12.12**	**351**	⇑P	**Pn**	**19 27 08.4**	**+0.8**
	baz=12						
TXAR	**Lajitas Array**	**12.13**	**338**	P	**Pn**	**19 27 10.9**	**+3.1**
TXAR	**Lajitas Array**	**12.13**	**338**	P	**Pn**	**19 27 10.9**	**+3.1**
	1.4nm,0.3s,baz=159,slow=11,SNR=438						
TXAR				LR	LR	19 32 19.7	
	comp=Z,23μm,19.7s,baz=40,slow=40						
627A	**Terlingua Ranc**	**12.14**	**339**	⇓P	**Pn**	**19 27 10.3**	**+2.3**
	baz=12,SNR=534						
530A	**J-C Ranch, Com**	**12.24**	**348**	⇓P	**Pn**	**19 27 10.4**	**+1.0**
	baz=12,SNR=234						
JCT	**Junction City**	**12.34**	**354**	⇑*e*P	**Pn**	**19 27 10.7**	**0.0**
JCT	**Junction City**	**12.34**	**354**	⇑*e*Pn	**Pn**	**19 27 10.7**	**0.0**
JCT	**Junction City**	**12.34**	**354**	⇑P	**Pn**	**19 27 10.7**	**0.0**
	baz=12,SNR=113						
529A	**Stev Forest Ra**	**12.42**	**344**	⇓P	**Pn**	**19 27 13.5**	**+1.8**
	baz=12,SNR=498						
626A	**Big Bend Ranch**	**12.50**	**336**	⇓P	**Pn**	**19 27 15.3**	**+2.4**
	baz=13,SNR=414						
LPIG	**La Paz**	**12.59**	**300**	P	**Pn**	**19 27 16.6**	**+2.6**
LPIG	**La Paz**	**12.59**	**300**	P	**Pn**	**19 27 16.6**	**+2.6**
	baz=304,slow=1.6,SNR=25						
LPIG				LR	LR	19 31 59.7	
	comp=Z,922nm,19.7s,baz=118,slow=36						
528A	**Cox Ranch, San**	**12.61**	**342**	⇓P	**Pn**	**19 27 16.7**	**+2.3**
	baz=13,SNR=162						
431A	**Sonora**	**12.64**	**351**	⇑P	**Pn**	**19 27 15.6**	**+0.8**
	baz=13,SNR=106						
432A	**Menard**	**12.73**	**355**	⇓P	**Pn**	**19 27 15.8**	**-0.2**
	baz=13,SNR=94						
429A	**Davenport Ranc**	**12.82**	**346**	⇑P	**Pn**	**19 27 18.9**	**+1.6**
	baz=13,SNR=192						
430A	**Baggett Ranch,**	**12.84**	**349**	⇑P	**Pn**	**19 27 18.9**	**+1.4**
	baz=13,SNR=94						
527A	**Woodward Ranch**	**12.85**	**339**	⇓P	**Pn**	**19 27 20.0**	**+2.2**
	baz=13,SNR=205						
526A	**Mary Lane Ranc**	**12.94**	**337**	⇑P	**Pn**	**19 27 21.8**	**+2.8**
	baz=13,SNR=108						
428A	**Kincaid Ranch,**	**13.11**	**344**	⇓P	**Pn**	**19 27 23.6**	**+2.4**
	baz=13,SNR=134						
331A	**San Angelo**	**13.23**	**352**	⇑P	**Pn**	**19 27 23.3**	**+0.6**
	baz=13,SNR=52						
332A	**Millersview**	**13.23**	**355**	⇑P	**Pn**	**19 27 22.7**	**0.0**
	baz=13,SNR=106						
427A	**Hayter Ranch,**	**13.44**	**341**	⇓P	**Pn**	**19 27 27.8**	**+2.2**
	baz=14,SNR=153						
330A	**Mertzon**	**13.44**	**350**	⇑P	**Pn**	**19 27 26.1**	**+0.5**
	baz=14,SNR=185						
426A	**McDonald Obser**	**13.47**	**339**	⇑P	**Pn**	**19 27 28.0**	**+1.8**
	baz=14,SNR=92						
329A	**Wagon Wheel Ra**	**13.67**	**347**	⇑P	**Pn**	**19 27 29.6**	**+0.9**
	baz=14,SNR=78						
232A	**Coleman**	**13.72**	**356**	⇑P	**Pn**	**19 27 29.1**	**-0.3**
	baz=14,SNR=109						
328A	**Wristen Ranch,**	**13.77**	**344**	⇑P	**Pn**	**19 27 31.4**	**+1.3**
	baz=14,SNR=171						
WHTX	**Lake Whitney**	**13.81**	**3**	⇑P	**Pn**	**19 27 29.9**	**-0.6**
	baz=14,SNR=96						
231A	**Bronte**	**13.84**	**353**	⇓P	**Pn**	**19 27 31.0**	**+0.1**
	baz=14,SNR=81						
230A	**Sterling City**	**13.90**	**350**	⇑P	**Pn**	**19 27 31.9**	**+0.2**
	baz=14,SNR=30						
425A	**Indio Mountain**	**13.93**	**336**	⇑P	**Pn**	**19 27 33.8**	**+1.6**
	baz=14,SNR=379						
327A	**Balmorhea Ranc**	**13.95**	**342**	⇓P	**Pn**	**19 27 33.9**	**+1.5**
	baz=14,SNR=16						
326A	**Caldwell Ranch**	**14.05**	**340**	⇓P	**Pn**	**19 27 35.3**	**+1.5**
	baz=14,SNR=976						
229A	**Bryant Ranch,**	**14.10**	**348**	⇑P	**Pn**	**19 27 34.9**	**+0.4**
	baz=14,SNR=66						
228A	**UT Block 9, Go**	**14.41**	**346**	⇓P	**Pn**	**19 27 38.9**	**+0.3**
	baz=14,SNR=86						
325A	**Bean Ranch, Si**	**14.45**	**337**	⇓P	**Pn**	**19 27 40.1**	**+1.0**
	baz=14,SNR=714						
ABTX	**Abilene, Hawle**	**14.46**	**356**	⇓P	**Pn**	**19 27 38.6**	**-0.5**
	baz=14,SNR=69						
227A	**Bennet, Jal**	**14.49**	**343**	⇓P	**Pn**	**19 27 40.5**	**+0.9**
	baz=15,SNR=490						
130A	**Snyder**	**14.57**	**351**	⇓P	**Pn**	**19 27 40.4**	**-0.2**
	baz=15,SNR=82						
131A	**Roby**	**14.57**	**353**	⇑P	**Pn**	**19 27 40.5**	**-0.1**
	baz=15,SNR=77						
324A	**Moseley Ranch,**	**14.71**	**335**	⇑P	**Pn**	**19 27 43.2**	**+0.7**
	baz=15,SNR=780						
129A	**Stewart Farms,**	**14.75**	**348**	⇓P	**Pn**	**19 27 43.0**	**0.0**
	baz=15,SNR=207						
226B	**Tecolote Peak,**	**14.81**	**340**	⇑P	**Pn**	**19 27 45.0**	**+1.2**
	baz=15,SNR=1000						
128A	**Castleberry Fa**	**14.87**	**346**	⇑P	**Pn**	**19 27 44.7**	**+0.2**
	baz=15,SNR=136						
RFTA	**Plano**	**14.88**	**6**	*e*Pn	**Pn**	**19 27 43.3**	**-1.2**
MNTX	**Cornudas Mount**	**14.90**	**336**	⇓*e*Pn	**Pn**	**19 27 45.4**	**+0.7**
	242nm,0.9s						
CGIG		**14.96**	**326**	*e*P	**Pn**	**19 27 47.3**	**+1.5**
CGIG		**14.96**	**326**	*e*P	**Pn**	**19 27 47.3**	**+1.5**
GDL2	**Guadalupe Moun**	**14.99**	**340**	⇓*e*Pn	**Pn**	**19 27 47.2**	**+1.1**
225A	**Deer Hill, Car**	**15.06**	**339**	⇑P	**Pn**	**19 27 47.9**	**+0.8**
	baz=15,SNR=1000						
Z32A	**Haskell**	**15.12**	**357**	⇑P	**Pn**	**19 27 47.3**	**-0.4**
	baz=15,SNR=159						
127A	**Arkansas Junct**	**15.14**	**344**	⇑P	**Pn**	**19 27 48.3**	**+0.3**
	baz=15,SNR=211						
127A				⇓S	**S**	**19 30 44.0**	**-4.5**
	baz=15						
127A				⇓S	**S**	**19 30 44.0**	**-4.5**

	baz=15						
JTS	**JuntasAbangare**	**15.19**	**119**	*e*Pn	**Pn**	**19 27 49.4**	**+0.8**
	713nm,0.7s						
Z31A	**Sharp Cattle R**	**15.19**	**354**	⇓P	**Pn**	**19 27 48.1**	**-0.4**
	baz=15,SNR=142						
Z30A	**Sanderson Ranc**	**15.27**	**351**	⇑P	**Pn**	**19 27 49.2**	**-0.5**
	baz=15,SNR=478						
224A	**Cornudas Mount**	**15.29**	**336**	⇓P	**Pn**	**19 27 50.7**	**+0.8**
	baz=15						
126A	**Clayton Basin,**	**15.30**	**342**	⇓P	**Pn**	**19 27 50.4**	**+0.4**
	baz=15,SNR=301						
Z29A	**Hungry Hill Ra**	**15.34**	**349**	⇓P	**Pn**	**19 27 50.1**	**-0.4**
	baz=15,SNR=242						
Z28A	**Tucker Farm, M**	**15.49**	**347**	⇓P	**Pn**	**19 27 52.6**	**+0.1**
	baz=16,SNR=77						
125A	**Gardner Draw,**	**15.51**	**340**	⇓P	**Pn**	**19 27 52.6**	**-0.1**
	baz=16,SNR=1000						
223A	**Chaparral, Ant**	**15.59**	**334**	⇑P	**Pn**	**19 27 54.0**	**+0.3**
	baz=16						
SRIG	**Santa Rosalia**	**15.69**	**308**	*e*P	**Pn**	**19 27 53.9**	**-1.0**
SRIG	**Santa Rosalia**	**15.69**	**308**	*e*P	**Pn**	**19 27 53.9**	**-1.0**
VBMS	**Vicksburg**	**15.71**	**25**	*e*Pn	**Pn**	**19 27 52.6**	**-2.5**
	1μm,1.6s						
Z27A	**Tatum**	**15.71**	**345**	⇓P	**Pn**	**19 27 54.8**	**-0.5**
	baz=16,SNR=293						
HSIG		**15.78**	**316**	*e*P	**Pn**	**19 27 57.4**	**+1.2**
HSIG		**15.78**	**316**	*e*P	**Pn**	**19 27 57.4**	**+1.2**
Y32A	**R-V Farms, Ver**	**15.82**	**357**	⇑P	**Pn**	**19 27 55.7**	**-0.9**
	baz=16,SNR=77						
124A	**Stringfield Ra**	**15.82**	**338**	⇑P	**Pn**	**19 27 57.4**	**+0.6**
	baz=16,SNR=1000						
Y30A	**Stafford Cattl**	**15.82**	**352**	⇓P	**Pn**	**19 27 56.2**	**-0.5**
	baz=16,SNR=230						
Y31A	**Rekieta Farm,**	**15.84**	**354**	⇓P	**Pn**	**19 27 55.9**	**-0.8**
	baz=16,SNR=120						
Z26A	**Caprock**	**15.87**	**343**	⇓P	**Pn**	**19 27 57.2**	**-0.2**
	baz=16,SNR=293						
Y29A	**Porterfield Fa**	**15.92**	**350**	⇑P	**Pn**	**19 27 57.6**	**-0.3**
	baz=16						
222A	**Williams Famil**	**15.96**	**332**	⇓P	**Pn**	**19 27 59.4**	**+0.9**
	baz=16,SNR=25						
320A	**Kipp Ranch, An**	**16.02**	**327**	⇑P	**P**	**19 28 00.6**	**-1.0**
	baz=16,SNR=346						
Y28A	**McKinney Farm,**	**16.07**	**348**	⇑P	**Pn**	**19 27 59.7**	**-0.1**
	baz=16,SNR=87						
123A	**Bell Site, Whi**	**16.07**	**335**	⇓P	**Pn**	**19 28 00.1**	**+0.3**
	baz=16,SNR=12						
Z25A	**Roswell**	**16.10**	**341**	⇑P	**Pn**	**19 28 00.2**	**0.0**
	baz=16,SNR=588						
221A	**Mesquite Ranch**	**16.19**	**330**	⇓P	**Pn**	**19 28 02.5**	**+1.1**
	baz=16,SNR=58						
MSTX	**Muleshoe**	**16.23**	**347**	⇓P	**Pn**	**19 28 01.6**	**-0.3**
	baz=16,SNR=117						
Y27A	**Causey**	**16.24**	**346**	⇑P	**Pn**	**19 28 01.4**	**-0.6**
	baz=16,SNR=112						
Z24A	**Sheppers Canyo**	**16.36**	**339**	⇑P	**Pn**	**19 28 04.1**	**+0.6**
	baz=16,SNR=595						
X30A	**Coker Ranch, T**	**16.38**	**353**	⇓P	**Pn**	**19 28 03.2**	**-0.4**
	baz=16,SNR=231						
122A	**Conniff Cattle**	**16.43**	**334**	⇓P	**P**	**19 28 05.5**	**-0.7**
	baz=16,SNR=12						
Y26A	**Elida**	**16.44**	**344**	⇓P	**Pn**	**19 28 04.5**	**0.0**
	baz=16,SNR=68						
319A	**Douglas**	**16.45**	**325**	⇓P	**P**	**19 28 05.8**	**-0.6**
	baz=16,SNR=161						
220A	**Playas Peak, P**	**16.47**	**328**	⇓P	**Pn**	**19 28 05.8**	**+0.8**
	baz=16,SNR=414						
X31A	**McDonald Ranch**	**16.48**	**355**	⇑P	**Pn**	**19 28 04.1**	**-0.8**
	baz=17

ANMO S **S** 19 31 51.2 +0.7
ANMO eS **Sn** 19 31 53.1 +4.2
ANMO Albuquerque 18.20 338 P **Pn** 19 28 27.0 +0.7
comp=Z,6.7nm,0.3s,baz=151,slow=12,SNR=313
ANMO S **S** 19 31 51.2 +0.7
comp=Z,0.1nm,0.3s,baz=127,slow=20,SNR=2.1
ANMO LR LR 19 36 05.3
comp=Z,12µm,19.9s,baz=165,slow=39
V26A Tequesquite Ra 18.21 346 P **P** 19 28 25.9 +0.1
baz=18,SNR=423
X21A Alamocita Cree 18.27 335 ⇓P **Pn** 19 28 27.7 +0.7
baz=18,SNR=140
W23A Werner Place, 18.29 339 ⇓P **Pn** 19 28 27.9 +0.5
baz=18,SNR=182
U29A Oasis Ranch, S 18.41 353 ⇑P **P** 19 28 28.2 +0.3
baz=18,SNR=40
U30A WK&E Inc. Balk 18.42 354 ⇓P **P** 19 28 28.2 +0.2
baz=18,SNR=21
V25A Rancho No Teng 18.46 344 P **P** 19 28 28.9 +0.3
baz=18,SNR=350
W22A Albuquerque 18.46 338 ⇓P **Pn** 19 28 30.3 +0.9
baz=18,SNR=30
U28A Mallet 18.47 350 ⇓P **P** 19 28 28.8 +0.2
baz=19,SNR=41
V24A Rampart Ranch, 18.54 342 ⇑P **Pn** 19 28 30.4 0.0
baz=19,SNR=324
U27A Thompson Grove 18.62 349 ⇑P **P** 19 28 30.7 +0.4
baz=19,SNR=143
HBAR Harrisburg 18.64 20 eP **P** 19 28 28.4 -2.0
X20A Quemado 18.65 333 ⇑P **Pn** 19 28 32.5 +0.8
baz=19,SNR=161
U26A Atchley Ranch, 18.78 346 P **P** 19 28 32.6 +0.5
baz=19,SNR=198
W21A San Fidel 18.80 336 P **Pn** 19 28 33.8 +0.4
baz=19,SNR=74
TIGA Tifton 18.83 43 ⇓P **Pn** 19 28 33.1 -0.5
baz=19
V23A Ortiz Mt. (NFS 18.84 340 P **Pn** 19 28 34.1 +0.2
baz=19,SNR=139
T31A Randall Ranch, 18.91 357 ⇑P **P** 19 28 33.3 0.0
baz=19,SNR=76
T30A Plains 18.92 355 P **Pn** 19 28 34.2 -0.5
baz=19,SNR=244
214A Organ Pipe Nat 18.93 319 P **Pn** 19 28 35.0 +0.1
baz=19,SNR=106
U25A Circle Dot Ran 18.94 345 P **P** 19 28 34.1 +0.3
baz=19,SNR=144
T29A Hugoton 19.11 353 P **P** 19 28 35.8 +0.2
baz=19,SNR=74
PLAL Pickwick Lake 19.11 27 eP **P** 19 28 34.1 -1.5
comp=Z,565nm,1.5s
W20A Ramah 19.15 334 P **Pn** 19 28 37.5 -0.1
baz=19,SNR=103
U24A Moreno Valley 19.18 343 ⇓P **P** 19 28 37.3 +0.7
baz=19,SNR=13
T27A Campo 19.22 349 P **P** 19 28 36.9 +0.1
baz=19,SNR=249
GNAR Gosnell 19.23 21 eP **P** 19 28 35.8 -1.0
V22A San Miguel Ran 19.23 339 P **Pn** 19 28 38.0 -0.6
baz=19,SNR=143
X18A Snowflake 19.30 330 P **Pn** 19 28 39.3 0.0
baz=19,SNR=190
U23A El Rito 19.38 341 ⇓P **Pn** 19 28 39.8 -0.5
baz=20,SNR=249
V21A Milan 19.40 337 ⇓P **Pn** 19 28 40.0 -0.6
baz=20,SNR=80
S31A Mullinville 19.42 357 ⇓P **P** 19 28 38.8 -0.2
baz=20,SNR=8.1
HALT Halls 19.42 23 eP **P** 19 28 37.9 -1.0
T26A Comanche Natio 19.50 347 ⇑P **P** 19 28 40.4 +0.5
baz=20,SNR=299
S30A Montezuma 19.50 355 ⇓P **P** 19 28 40.1 +0.2
baz=20,SNR=30
S29A Ulysses 19.54 354 ⇑P **P** 19 28 40.2 -0.1
baz=20,SNR=92
S28A Manter 19.61 352 P **P** 19 28 41.1 0.0
baz=20,SNR=218
U22A Llaves 19.63 339 ⇑P **P** 19 28 42.4 +0.9
baz=20,SNR=239
T25A Trinidad 19.64 346 P **Pn** 19 28 42.6 -0.9
baz=20,SNR=656
W18A Petrified Fore 19.68 331 P **Pn** 19 28 43.1 -0.8
baz=20,SNR=83
V20A Brimhall 19.71 335 P **Pn** 19 28 43.8 -0.5
baz=20,SNR=223
T24A Torres, Weston 19.74 344 P **P** 19 28 43.6 +0.9
baz=20,SNR=156
GLAT Glass 19.76 22 eP **P** 19 28 41.3 -1.3
MTDJ Mount Denham 19.82 87 eP **Pn** 19 28 45.5 -0.1
comp=Z,379nm,1.2s
S27A Las Animas 19.86 349 ⇓P **P** 19 28 44.2 +0.4
baz=20,SNR=37
S26A Kim 19.90 348 P **P** 19 28 44.7 +0.4
baz=20,SNR=298
X16A Lo Mia Camp, P 19.95 327 P **Pn** 19 28 46.5 -0.5
baz=20,SNR=989
PARMO Parma 19.95 21 eP **P** 19 28 44.0 -0.7
U21A Nageezi 19.96 338 P **P** 19 28 46.1 +1.0
baz=20,SNR=548
T23A Casias Ranch, 19.98 342 P **P** 19 28 46.3 +1.0
baz=20,SNR=101
UTMT University of 19.98 23 eP **P** 19 28 43.6 -1.3
comp=Z,598nm,0.9s
Z14A Wintersburg 20.00 322 P **Pn** 19 28 46.7 -0.7
baz=20,SNR=550
113A Mohawk Valley, 20.08 319 P Pn 19 28 47.3 -1.0
baz=20,SNR=351
R30A Dighton 20.13 356 ⇓P **P** 19 28 46.4 -0.2
baz=20,SNR=112
S25A Robets Cordova 20.15 346 ⇓P **P** 19 28 47.9 +0.9
baz=20,SNR=428
WVT Waverly 20.20 25 eP **P** 19 28 45.2 -2.2
WVT Waverly 20.20 25 eP **P** 19 28 45.2 -2.2
T22A Edith 20.23 340 P **P** 19 28 48.9 +1.0
baz=20,SNR=320
U20A Newcomb 20.24 336 ⇓P **P** 19 28 48.9 +0.9
baz=20,SNR=119
GOGA Godfrey 20.25 38 eP **P** 19 28 45.8 -2.1
GOGA pmax pmax
comp=Z,717nm,1.8s
GOGA Godfrey 20.25 38 eP **P** 19 28 45.8 -2.1
comp=Z,717nm,1.8s
SWET Sewanee 20.29 31 eP **P** 19 28 46.8 -1.6
comp=Z,522nm,1.6s
S24A Houchin Ranch, 20.32 344 P **P** 19 28 49.7 +0.7
baz=20,SNR=252
R28A Tribune 20.34 352 P **P** 19 28 48.5 -0.5
baz=20,SNR=160
R29A Marienthal 20.34 354 ⇑P **P** 19 28 48.3 -0.7
baz=20,SNR=27
T21A Navajo Lake 20.42 339 ⇓P **P** 19 28 51.0 +1.0
baz=20,SNR=124
R27A Eads 20.43 350 P **P** 19 28 50.0 0.0
baz=20,SNR=391
Y14A Wickenburg 20.44 323 ⇓P Pn 19 28 51.6 -1.2
baz=20,SNR=1000
SDCO Great Sand Dun 20.49 344 eP **P** 19 28 51.0 +0.1
comp=Z,296nm,0.9s
R26A Arlington 20.56 349 ⇑P **P** 19 28 52.4 +1.0
baz=21,SNR=948
R25A Fountain Ranch 20.58 347 P **P** 19 28 52.5 +0.8
baz=21,SNR=568
S23A Nye Farm, Mont 20.59 343 ⇓P **P** 19 28 53.1 +1.2
baz=21,SNR=23
WUAZ Wupatki 20.78 329 eP Pn 19 28 55.4 -1.4
comp=Z,2µm,1.0s
WUAZ Wupatki 20.78 329 P Pn 19 28 55.6 -1.3
baz=21,SNR=1000
R24A Sanders Place, 20.85 345 P **P** 19 28 55.1 +0.5
baz=21,SNR=168
S22A 4UR Ranch, Cre 20.88 341 P **P** 19 28 55.7 +0.7
baz=21,SNR=247
GLA Glamis 20.93 318 eP **P** 19 28 56.3 +1.0
GLA pmax pmax
comp=Z,786nm,0.9s
GLA Glamis 20.93 318 eP **P** 19 28 56.3 +1.0
comp=Z,786nm,0.9s
GLA Glamis 20.93 318 P **P** 19 28 56.5 +1.2
baz=21,SNR=239
KSU1 Kansas State U 20.93 4 eP **P** 19 28 54.1 -1.1
comp=Z,448nm,1.0s
R23A Moffat 21.00 343 P **P** 19 28 56.7 +0.4
baz=21,SNR=199
Q28A Sharon Springs 21.05 353 ⇓P **P** 19 28 56.0 -0.6
baz=21,SNR=106
SIUC Southern Illin 21.09 21 eP **P** 19 28 56.8 -0.1
comp=Z,352nm,0.9s
KSCO Kaye Shedlock' 21.11 351 P **P** 19 28 57.4 +0.1
baz=21,SNR=247
S21A Coal Bank Pass 21.11 339 P **P** 19 28 58.1 +0.5
baz=21,SNR=196
Q26A Hugo 21.17 349 P **P** 19 28 58.9 +0.8
baz=21,SNR=76
CPCT Cooper Cave 21.18 33 eP **P** 19 28 56.1 -1.8
Y12C Blythe 21.21 320 P **P** 19 28 59.4 +1.1
baz=21,SNR=208
R22A Saguache, Gunn 21.30 342 P **P** 19 29 00.1 +0.6
baz=21,SNR=250
Q25A Bedland, Calha 21.31 347 P **P** 19 28 59.8 +0.3
baz=21,SNR=160
PDMCI Parker Dam,Lak 21.36 322 P **P** 19 29 01.1 +1.2
baz=21,SNR=231
S20A Disappointment 21.46 338 ⇓P **P** 19 29 01.7 +0.5
baz=22,SNR=244
SWSC Sam W. Stewart 21.48 317 P **P** 19 29 02.0 +0.9
baz=22,SNR=130
DVTC Desert V Tower 21.51 316 P **P** 19 29 02.8 +1.3
baz=22,SNR=57
P28A Saint Francis 21.55 353 ⇑P **P** 19 29 01.5 -0.4
baz=22,SNR=30
Q24A Divide 21.56 346 ⇑P **P** 19 29 02.1 -0.2
baz=22
SLM Saint Louis 21.61 18 eP **P** 19 29 00.7 -1.9
SLM eS **S** 19 32 55.2 -3.4
SLM pmax pmax
comp=Z,357nm,1.0s
SLM Saint Louis 21.61 18 eP **P** 19 29 00.7 -1.9
comp=Z,357nm,1.0s
SLM eS **S** 19 32 55.2 -3.4
P27A Ficken Ranch, 21.64 351 P **P** 19 29 03.2 +0.3
baz=22,SNR=71
Q23A Hartsel 21.67 344 P **P** 19 29 03.5 0.0
baz=22,SNR=42
R21A Cimarron 21.67 340 P **P** 19 29 04.0 +0.5
baz=22,SNR=187
BC3 Big Chuckawall 21.72 319 ⇓P **P** 19 29 04.6 +0.8
baz=22,SNR=648
TKL Tuckaleechee C 21.73 34 P **P** 19 29 03.3 -0.5
TKL S **S** 19 32 57.4 -3.5
TKL Tuckaleechee C 21.73 34 P **P** 19 29 03.3 -0.5
comp=Z,38nm,0.7s,baz=204,slow=8.8,SNR=14
TKL S **S** 19 32 57.4 -3.5
comp=Z,14nm,0.9s,baz=198,slow=20,SNR=3.4
TKL LR LR 19 39 35.8
comp=Z,523nm,20.8s,baz=214,slow=43
P26A Davis Ranch, A 21.76 350 ⇑P **P** 19 29 04.6 +0.2
baz=22,SNR=121
W13A Hualapai Mount 21.79 324 P **P** 19 29 05.8 +1.1
baz=22,SNR=466
R20A Redvale 21.79 338 P **P** 19 29 05.4 +0.7
baz=22,SNR=153
PV01 Paradox Valley 21.81 338 eP **P** 19 29 04.8 -0.1
comp=Z,7µm,0.5s
MONP Monument Peak 21.86 316 P **P** 19 29 06.2 +0.8
baz=22,SNR=246
USIN University of 21.86 23 eP **P** 19 29 04.4 -0.8
comp=Z,418nm,1.1s
IRM Iron Mountain 21.87 320 P **P** 19 29 06.3 +1.0
baz=22,SNR=704
P25A Willow Gulch B 21.87 348 P **P** 19 29 05.1 -0.3
baz=22,SNR=138
BAR Barrett 21.90 315 eP **P** 19 29 06.0 +0.3
comp=Z,186nm,0.9s
Q22A Crested Butte, 21.93 342 ⇑P **P** 19 29 06.0 -0.2
baz=22,SNR=159
U15A North Rim 21.95 329 ⇑P **P** 19 29 08.0 +1.5
baz=22,SNR=573
S18A Hurst Farm, Bl 21.96 335 P **P** 19 29 06.5 -0.1
baz=22,SNR=400
NEE2 Needles Airpor 21.97 322 ⇓P **P** 19 29 07.4 +1.0
baz=22
P24A Kohler Place, 22.03 346 ⇑P **P** 19 29 07.2 0.0
baz=22,SNR=47
GTBY Guantanamo Bay 22.08 82 eP **P** 19 29 07.8 0.0
comp=Z,158nm,0.9s
Q21A Lamborn Mesa, 22.11 341 P **P** 19 29 08.3 +0.3
baz=22,SNR=220
P23A Jefferson 22.11 345 P **P** 19 29 08.6 +0.3
baz=22,SNR=171
NHSC New Hope 22.12 44 eP **P** 19 29 09.2 +1.2
comp=Z,750nm,1.2s
PV04 Paradox Valley 22.16 338 eP **P** 19 29 08.5 -0.1
SMCO Snowmass 22.24 342 eP **P** 19 29 09.4 -0.3
comp=Z,148nm,0.9s
O27A Beecher Island 22.25 352 P **P** 19 29 09.4 -0.1
baz=22,SNR=55
BELC Belle Mtn. Jos 22.29 319 ⇓P **P** 19 29 10.6 +0.6
baz=22
109C Camp Elliot, M 22.32 315 ⇓P **P** 19 29 10.2 0.0
baz=22,SNR=14
PFO Pinyon Flat Ob 22.33 317 P **P** 19 29 11.0 +0.5
comp=Z,1µm,0.9s
PFO Pinyon Flat Ob 22.33 317 eP **P** 19 29 10.6 +0.1
comp=Z,272nm,1.1s
PFO S **S** 19 33 13.5 +1.4
PFO Pinyon Flat Ob 22.33 317 P **P** 19 29 11.4 +0.9
comp=Z,194nm,1.0s,baz=123,slow=8.1,SNR=124
PFO S **S** 19 33 13.5 +1.4
comp=Z,1.2nm,0.5s,baz=94,slow=19,SNR=2.0
PFO LR LR 19 39 14.0
comp=Z,4µm,18.4s,baz=135,slow=40
OLIL Olney 22.39 22 eP **P** 19 29 08.4 -2.4
comp=Z,351nm,1.0s
O26A Horse Wrangler 22.42 350 P **P** 19 29 11.4 0.0
baz=22,SNR=130
O25A Wiggins 22.44 348 ⇓P **P** 19 29 10.8 -0.8
baz=22,SNR=122
Q20A Ridgley Place, 22.45 339 P **P** 19 29 11.5 -0.2
baz=22,SNR=119
ISCO Idaho Springs 22.46 345 eP **P** 19 29 11.0 -1.0
ISCO pmax pmax
comp=Z,763nm,1.3s
ISCO Idaho Springs 22.46 345 eP **P** 19 29 11.0 -1.0
comp=Z,763nm,1.3s
ISCO Idaho Springs 22.46 345 ⇓P **P** 19 29 11.6 -0.4
baz=23
LDFC Landfair 22.47 322 eP **P** 19 29 13.3 +1.3
comp=Z,2µm,1.2s
TZTN Tazewell 22.52 33 eP **P** 19 29 11.3 -1.0
comp=Z,119nm,0.9s
P22A Eagle 22.57 343 P **P** 19 29 12.8 -0.3
baz=23,SNR=79
WCI Wyandotte Cave 22.63 25 eP **P** 19 29 11.2 -2.3
WCI pmax pmax
comp=Z,265nm,1.1s
WCI Wyandotte Cave 22.63 25 eP **P** 19 29 11.2 -2.3
comp=Z,264nm,1.1s
O24A Longmont 22.64 347 ⇓P **P** 19 29 13.4 -0.4
baz=23,SNR=41
P21A Newcastle 22.70 342 ⇑P **P** 19 29 14.4 -0.1
baz=23,SNR=33
KMSC Kings Mountain 22.72 38 ⇑P **P** 19 29 13.0 -1.5
baz=23,SNR=24
MURC Murrieta 22.81 316 P **P** 19 29 16.0 +0.5
baz=23,SNR=78
N27A Anderson Farm, 22.86 352 P **P** 19 29 15.5 -0.5
baz=23,SNR=73
O23A Lake Granby, G 22.93 345 P **P** 19 29 16.6 -0.2
baz=23,SNR=161
OGNE Ogallala 22.93 353 eP **P** 19 29 16.3 -0.4
comp=Z,1µm,1.2s
OGNE Ogallala 22.93 353 ⇓P **P** 19 29 16.2 -0.4
baz=23
P20A De Beque 22.97 340 P **P** 19 29 17.1 -0.1
baz=23,SNR=104
N26A Koester Ranch, 22.98 351 P **P** 19 29 17.1 -0.1
baz=23,SNR=114
HEC Hector,Ludlow 23.04 320 ⇑P **P** 19 29 18.5 +0.7
baz=23
O22A Kremmling 23.04 344 P **P** 19 29 17.4 -0.6
baz=23,SNR=131
BBRC Big Bear Solar 23.04 318 ⇓P **P** 19 29 18.9 +0.9
baz=23
N25A Grover 23.11 349 ⇑P **P** 19 29 18.2 -0.3
baz=23,SNR=38
BGNE Belgrade 23.18 0 ⇓P **P** 19 29 18.0 -1.1
baz=23,SNR=14
TUQ Turquoise Moun 23.20 321 ⇓P **P** 19 29 20.4 +0.9
baz=23
N24A Carr 23.28 347 ⇑P **P** 19 29 20.0 -0.2
baz=23,SNR=39
P19A Cripple Cowboy 23.29 339 P **P** 19 29 19.9 -0.5
baz=23,SNR=290
M29A Burnside Ranch 23.30 356 ⇓P **P** 19 29 19.6 -0.6
baz=23,SNR=32
O21A Pagoda 23.34 342 ⇑P **P** 19 29 21.1 +0.2
baz=23
BLO Bloomington 23.35 24 eP **P** 19 29 18.0 -2.7
BLO Bloomington 23.35 24 eP **P** 19 29 18.0 -2.7
SCI San Clemente I 23.36 313 ⇓P **P** 19 29 21.5 +0.7
baz=23,SNR=20
CCUT Cedar City 23.36 329 eP **P** 19 29 21.8 +0.7
comp=Z,356nm,1.1s
CCUT ePcP **PcP** 19 33 07.8 +1.6
SRU San Rafael 23.40 336 ⇑P **P** 19 29 20.9 -0.4
baz=24
RRX Edison Barstow 23.49 319 ⇑P **P** 19 29 23.0 +1.0
baz=24
Q16A Castle Valley 23.49 334 P **P** 19 29 22.4 +0.2
baz=24,SNR=152
BFSC Mount Baldy Ra 23.50 317 ⇓P **P** 19 29 22.7 +0.4
baz=24
CIS Catalina Islan 23.50 314 ⇑P **P** 19 29 22.6 +0.4
baz=24
O20A White River Ci 23.50 341 P **P** 19 29 22.5 +0.2
baz=24,SNR=226
M27A Reverse DX Ran 23.55 352 ⇓P **P** 19 29 22.2 -0.4
baz=24,SNR=17
N23A Red Feather La 23.58 346 ⇓P **P** 19 29 22.9 -0.2
baz=24
MSU Marysvale 23.58 332 eP **P** 19 29 22.9 -0.2
MSU e 19 33 08.0
MSU Marysvale 23.58 332 eP **P** 19 29 22.9 -0.2
MSU ePcP **PcP** 19 33 08.0 +1.4
ARUT Antelope Range 23.59 329 eP **P** 19 29 23.6 +0.5
ARUT pmax pmax
comp=Z,921nm,1.0s
ARUT Antelope Range 23.59 329 eP **P** 19 29 23.6 +0.5
comp=Z,921nm,1.0s
M26A McRoberts Ranc 23.59 351 ⇑P **P** 19 29 22.5 -0.5
baz=24,SNR=32
MVU Marysvale 23.59 332 eP **P** 19 29 23.2 +0.1
comp=Z,574nm,1.3s
MVU ePcP **PcP** 19 33 07.6 +0.9
FMP Fort Macarthur 23.61 315 ⇓P **P** 19 29 23.5 +0.4
baz=24
N22A Wattenberg Ran 23.62 345 P **P** 19 29 23.5 +0.1
baz=24,SNR=48
GSC Goldstone 23.64 320 eP **P** 19 29 24.0 +0.5
GSC e 19 33 08.0
GSC pmax pmax
comp=Z,373nm,1.0s
GSC Goldstone 23.64 320 eP **P** 19 29 24.0 +0.5
comp=Z,373nm,1.0s
GSC ePcP **PcP** 19 33 08.0 +1.3
GSC Goldstone 23.64 320 ⇓P **P** 19 29 24.3 +0.8
baz=24
HDIL Hopedale 23.67 17 eP **P** 19 29 22.5 -1.1
comp=Z,835nm,1.5s
M25A Palm-Egli Farm 23.71 349 P **P** 19 29 24.5 +0.4
baz=24,SNR=46
SHOC Shoshone 23.73 322 ⇓P **P** 19 29 24.8 +0.6
baz=24
P18A Preston Nutter 23.74 337 P **P** 19 29 24.4 -0.1
baz=24,SNR=310
MWC Mount Wilson 23.75 316 eP **P** 19 29 25.1 +0.5
MWC e 19 33 06.7
MWC pmax pmax
comp=Z,510nm,1.3s
MWC Mount Wilson 23.75 316 eP **P** 19 29 25.1 +0.5
comp=Z,510nm,1.3s
MWC ePcP **PcP** 19 33 06.7 -0.3
PASC Pasadena Art C 23.81 316 eP **P** 19 29 25.5 +0.5
comp=Z,1µm,1.7s
PASC ePcP **PcP** 19 33 08.2 +1.3
PHWY Pilot Hill 23.86 347 eP **P** 19 29 24.9 -0.7
comp=Z,369nm,1.2s
N21A Black Mountain 23.86 343 P **P** 19 29 26.3 +0.7
baz=24,SNR=353
M24A Cheyenne 23.88 348 P **P** 19 29 25.7 0.0
baz=24,SNR=92
O19A Miners Draw (B 23.94 339 ⇑P **P** 19 29 26.3 +0.1
baz=24,SNR=338
DECC Green Verdugo 23.95 316 ⇑P **P** 19 29 27.1 +0.9
baz=24
M23A Laramie 24.07 346 ⇓P **P** 19 29 27.3 -0.2
baz=24,SNR=38
SCIA State Center 24.09 10 eP **P** 19 29 26.0 -1.3
comp=Z,2µm,1.8s
SCIA ePcP **PcP** 19 33 08.2 +0.8
L27A T5 Ranch, Ells 24.09 353 ⇓P **P** 19 29 27.2 -0.3
baz=24,SNR=12
EDW2 Edwards Air Fo 24.11 318 ⇓P **P** 19 29 28.1 +0.4
baz=24
L26A Underwood Farm 24.14 351 ⇑P **P** 19 29 27.6 -0.4
baz=24,SNR=32
N20A Spence Gulch, 24.15 341 ⇑P **P** 19 29 28.6 +0.4
baz=24
SFIN Scholer Farm 24.20 21 P **P** 19 29 26.8 -1.6
baz=24,SNR=26
M22A Cedar Creek Ra 24.22 345 P **P** 19 29 29.2 +0.4
baz=24,SNR=110
LRMC Laurel Mountai 24.30 319 ⇑P **P** 19 29 30.4 +0.8
baz=24
BLG Laguna Peak 24.36 315 ⇑P **P** 19 29 31.1 +1.1
baz=24
L25A Engebretsen Ra 24.39 350 ⇑P **P** 19 29 30.1 -0.2
baz=24,SNR=44
OSI Osito Adit 24.43 316 eP **P** 19 29 31.6 +1.0
comp=Z,405nm,1.0s
OSI Osito Adit 24.43 316 ⇑P **P** 19 29 31.3 +0.7
baz=24
L24A Wheatland 24.46 348 ⇓P **P** 19 29 30.8 -0.1
baz=25,SNR=17
FURC Furnace Creek, 24.46 322 ⇓P **P** 19 29 31.7 +1.0
baz=24
MPMC Manual Prospec 24.56 320 ⇑P **P** 19 29 32.5 +0.6
baz=25
M21A Separation Pea 24.61 344 ⇑P **P** 19 29 32.3 0.0
baz=25
MPU Maple Canyon 24.61 335 eP **P** 19 29 32.3 -0.1
comp=Z,203nm,1.0s
MPU ePcP **PcP** 19 33 09.2 +0.4
BSC Santa Cruz Isl 24.68 314 ⇑P **P** 19 29 33.8 +0.9
baz=25
L23A Garrett 24.69 347 ⇓P **P** 19 29 32.8 -0.2
baz=25
K27A Flueckinger Fa 24.69 353 ⇓P **P** 19 29 32.7 -0.2
baz=25
BLA Blacksburg 24.70 36 eP **P** 19 29 32.0 -1.0
BLA e 19 33 09.7
BLA pmax pmax
comp=Z,134nm,0.9s
BLA Blacksburg 24.70 36 eP **P** 19 29 31.9 -1.0
comp=Z,134nm,0.9s
BLA ePcP **PcP** 19 33 09.7 +0.9
M20A Sweetwater, Wa 24.73 342 ⇓P **P** 19 29 33.2 -0.3
baz=25,SNR=116
DAU Daniels Canyon 24.80 336 eP **P** 19 29 33.9 -0.3
DAU e 19 33 10.7
DAU Daniels Canyon 24.80 336 eP **P** 19 29 33.9 -0.3
DAU ePcP **PcP** 19 33 10.7 +1.4
K26A Motz Farm, Whi 24.81 352 ⇓P **P** 19 29 33.7 -0.3
baz=25
ARVC Arvin 24.81 317 ⇑P **P** 19 29 34.8 +0.8
baz=25
K25A Mack Ranch, Ha 24.82 350 ⇓P **P** 19 29 34.5 +0.3
baz=25
ISA Isabella 24.91 318 eP **P** 19 29 36.0 +1.0
ISA e 19 33 11.1
ISA pmax pmax
comp=Z,290nm,1.0s
ISA Isabella 24.91 318 eP **P** 19 29 36.0 +1.0
comp=Z,290nm,1.0s
ISA ePcP **PcP** 19 33 11.1 +1.7
ISA Isabella 24.91 318 ⇑P **P** 19 29 36.1 +1.0
baz=25
CNNC Cliffs of the 24.92 43 eP **P** 19 29 34.3 -0.7
comp=Z,182nm,0.9s
L21A Rawlins 24.94 344 ⇑P **P** 19 29 35.0 -0.4
baz=25
VWCC Virginia Weste 24.97 37 eP **P** 19 29 34.8 -0.7
SBC Santa Barbara 24.99 315 ⇑P **P** 19 29 36.3 +0.7
baz=25
M19A Rock Springs 25.04 341 ⇑P **P** 19 29 35.6 -0.7
baz=25
JLU Jordanelle 25.04 336 eP **P** 19 29 36.3 -0.1
comp=Z,96nm,1.1s
JLU ePcP **PcP** 19 33 10.9 +1.2
K24A Anderson Ranch 25.09 349 ⇓P **P** 19 29 36.6 -0.1
baz=25
R11A Troy Canyon, C 25.10 327 ⇓P **P** 19 29 38.0 +1.1
baz=25

GRAC **Grapevine Rang** 25.12 322 ⇑P P 19 29 38.2 +1.3
baz=25
CTU **Camp Tracy** 25.24 336 eP P 19 29 38.2 +0.1
comp=Z,137nm,1.2s
CTU ePcP PcP 19 33 09.2 -0.9
L20A **Wamsutter** 25.25 342 ⇑P P 19 29 37.7 -0.5
baz=25
DUG **Dugway** 25.25 333 eP P 19 29 38.4 +0.3
DUG e 19 33 11.3
DUG pmax pmax
comp=Z,209nm,0.9s
DUG **Dugway** 25.25 333 eP P 19 29 38.4 +0.3
comp=Z,208nm,0.9s
DUG ePcP PcP 19 33 11.3 +1.2
DUG **Dugway** 25.25 333 ⇓P P 19 29 38.5 +0.3
baz=25
K23A **Bowen Ranch, D** 25.28 347 ⇑P P 19 29 38.0 -0.4
baz=25
PKM **Peak Mountain** 25.32 315 ⇓P P 19 29 39.8 +1.0
baz=25
K22A **Casper** 25.38 346 ⇓P P 19 29 39.2 -0.1
baz=26
VES **Vestal, Richgr** 25.41 318 ⇓P P 19 29 40.7 +1.3
baz=25
M17A **Scullys Gap (B** 25.51 338 ⇓P P 19 29 40.5 -0.1
baz=26
K21A **Alcova** 25.54 345 ⇑P P 19 29 40.4 -0.4
baz=26
ECSD **EROS Data Cent** 25.55 3 eP P 19 29 38.8 -1.8
comp=Z,489nm,1.3s
ECSD ePcP PcP 19 33 10.5 -0.1
ECSD eS S 19 34 05.6 +1.8
JFWS **Jewell Farm** 25.64 14 eP P 19 29 39.7 -1.7
JFWS pmax pmax
comp=Z,244nm,1.1s
JFWS **Jewell Farm** 25.64 14 eP P 19 29 39.7 -1.7
comp=Z,244nm,1.1s
L19A **Farson** 25.64 341 ⇑P P 19 29 41.7 -0.1
baz=26
J24A **Dixon Ranch, L** 25.66 349 ⇓P P 19 29 42.2 +0.4
baz=26
TIN **Tinemaha** 25.67 321 ⇓P P 19 29 42.8 +0.9
baz=26
SMMC **Simmler** 25.68 316 ⇑P P 19 29 43.2 +1.2
baz=26
L18A **Fontenelle, Gr** 25.70 340 ⇑P P 19 29 41.7 -0.5
baz=26
SDDR **Presa de Saban** 25.70 84 eP P 19 29 44.1 +1.8
comp=Z,104nm,1.0s
ACSO **Alum Creek Sta** 25.71 28 eP P 19 29 40.6 -1.6
comp=Z,517nm,1.1s
ACSO eS S 19 34 04.0 -2.4
RCTC **Rector, Farmer** 25.80 319 ⇓P P 19 29 44.3 +1.3
baz=26
K20A **Yellowstone Ra** 25.85 343 ⇓P P 19 29 42.8 -0.8
baz=26
J23A **Dilts Ranch, B** 25.89 348 ⇓P P 19 29 44.1 +0.2
baz=26
HWUT **Hardware Ranch** 25.95 337 eP P 19 29 44.1 -0.5
comp=Z,194nm,1.0s
HWUT ePcP PcP 19 33 12.7 +0.9
HWUT eScP ScP 19 36 50.1 +4.0
MTUM **Tungsten Hills** 26.06 321 eP P 19 29 46.4 +0.8
K19A **Absolon Red Bu** 26.15 342 ⇑P P 19 29 45.5 -0.8
baz=26
I24A **Kuemmerle Ranc** 26.16 350 ⇑P P 19 29 46.3 -0.1
baz=26
BRSD **Miller** 26.22 359 ⇓P P 19 29 45.3 -1.4
baz=26
J21A **Lysite** 26.26 345 ⇓P P 19 29 47.5 +0.2
baz=26
PDAR **Pinedale Array** 26.31 341 P P 19 29 47.9 +0.1
PDAR PcP PcP 19 33 12.2 -0.4
PDAR S S 19 34 16.4 +0.2
PDAR PKiKP PKiKP 19 40 50.8 -0.8
PDAR **Pinedale Array** 26.31 341 P P 19 29 47.9 +0.1
comp=Z,234nm,0.9s,baz=132,slow=8.9,SNR=315
PDAR PcP PcP 19 33 12.2 -0.4
comp=Z,17nm,1.1s,baz=152,slow=4.1,SNR=6.1
PDAR S S 19 34 16.4 +0.2
comp=Z,2.2nm,1.0s,baz=171,slow=12,SNR=2.1
PDAR PKiKP PKiKP 19 40 50.8 -0.8
comp=Z,1.8nm,1.0s,baz=108,slow=2.0,SNR=4.9
PDAR LR LR 19 41 38.4
comp=Z,2μm,20.6s,baz=166,slow=40
BW06 **Boulder Array** 26.31 341 eP P 19 29 46.8 -1.0
comp=Z,354nm,1.0s
BW06 ePcP PcP 19 33 12.7 +0.1
RSSD **Black Hills** 26.32 351 eP P 19 29 47.6 -0.3
RSSD e 19 33 11.5
RSSD pmax pmax
comp=Z,104nm,0.7s
RSSD **Black Hills** 26.32 351 eP P 19 29 47.6 -0.3
comp=Z,104nm,0.7s
RSSD ePcP PcP 19 33 11.5 -1.1
MLAC **Mammoth Lakes** 26.41 321 ⇑P P 19 29 50.1 +1.4
baz=26
I23A **Meade Ranch, G** 26.41 348 ⇓P P 19 29 48.5 0.0
baz=26
J20A **Shoshoni** 26.43 344 ⇑P P 19 29 48.7 -0.1
baz=26
OTAV **Otavalo** 26.48 130 eP P 19 29 53.1 +3.3
comp=Z,22nm,0.8s
JSRW **J. Sargeant Re** 26.50 39 eP P 19 29 48.3 -0.9
I22A **9 Mile Ranch,** 26.55 347 ⇑P P 19 29 50.0 +0.1
baz=27
NV11 **Mina Array Sit** 26.56 324 eP P 19 29 50.9 +0.9
NV11 ePcP PcP 19 33 14.2 +1.1
NV11 eScP ScP 19 36 50.5 +2.6
HVU **Hansel Valley** 26.57 335 eP P 19 29 49.9 -0.2
HVU e 19 33 13.4
HVU pmax pmax
comp=Z,104nm,0.7s
HVU **Hansel Valley** 26.57 335 eP P 19 29 49.9 -0.2
comp=Z,104nm,0.7s
HVU ePcP PcP 19 33 13.4 +0.3
J19A **Crowheart** 26.61 342 ⇓P P 19 29 49.8 -0.7
baz=27
NVAR **Mina Array Bea** 26.64 323 P P 19 29 52.4 +1.5
NVAR PcP PcP 19 33 15.0 +1.5
NVAR **Mina Array Bea** 26.64 323 P P 19 29 52.4 +1.5
comp=Z,456nm,0.8s,baz=145,slow=9.4,SNR=1932
NVAR PcP PcP 19 33 15.0 +1.5
comp=Z,26nm,1.0s,baz=142,slow=3.1,SNR=7.3
NVAR LR LR 19 41 38.2
comp=Z,9μm,18.7s,baz=225,slow=39
I21A **Big Trails, Te** 26.66 346 ⇓P P 19 29 50.7 -0.1
baz=27
ELK **Elko** 26.78 331 eP P 19 29 52.3 +0.2
comp=Z,2μm,1.1s
ELK ePcP PcP 19 33 14.2 +0.4
ELK PcP PcP 19 33 14.9 +1.2
ELK **Elko** 26.78 331 P P 19 29 52.5 +0.5
comp=Z,68nm,0.9s,baz=142,slow=7.1,SNR=221
ELK PcP PcP 19 33 14.9 +1.2
comp=Z,14nm,1.0s,baz=91,slow=4.1,SNR=4.7
ELK LR LR 19 41 18.6
comp=Z,4μm,19.8s,baz=136,slow=38
AHID **Auburn Hatcher** 26.80 339 eP P 19 29 51.3 -1.0
comp=Z,596nm,1.3s
AHID ePcP PcP 19 33 14.5 +0.8
ROSC **El Rosal** 26.98 116 P P 19 30 01.0 +6.8
ROSC **El Rosal** 26.98 116 P P 19 30 01.0 +6.8
comp=Z,7.9nm,0.4s,baz=116,slow=20,SNR=8.7
ROSC LR LR 19 41 11.1
comp=Z,1μm,19.9s,baz=104,slow=38
H23A **Clabaugh Cattl** 26.98 349 ⇑P P 19 29 52.7 -1.0
baz=27
I20A **Worland** 27.00 344 ⇓P P 19 29 54.2 +0.3
baz=27
H24A **Dirks Ranch, A** 27.02 350 ⇑P P 19 29 53.5 -0.4
baz=27
CBN **Corbin** 27.13 38 eP P 19 29 54.0 -1.0
comp=Z,70nm,0.9s
H22A **Clearmont** 27.20 348 ⇓P P 19 29 55.5 -0.1
baz=27
I18A **Diamond G Ranc** 27.23 342 ⇓P P 19 29 55.9 -0.2
baz=27
REDW **Red Top Meadow** 27.25 340 eP P 19 29 56.4 +0.1
comp=Z,8.0nm,1.0s
I19A **Meeteetse** 27.31 343 ⇓P P 19 29 56.8 +0.1
baz=27
SNOW **Snow King Moun** 27.31 340 eP P 19 29 57.0 +0.2
comp=Z,841nm,0.9s
H21A **Big Horn, Sher** 27.38 346 ⇑P P 19 29 56.9 -0.4
baz=28
RRI2 **Red Ridge** 27.39 339 eP P 19 29 57.3 -0.3

SPMN **St. Paul** 27.40 9 ⇑P P 19 29 55.2 -2.1
baz=28
LOHW **Long Hollow** 27.40 340 eP P 19 29 57.3 -0.2
TPAW **Teton Pass** 27.40 340 eP P 19 29 57.4 -0.2
comp=Z,709nm,1.1s
TPAW ePcP PcP 19 33 16.3 +1.1
H20A **Greybull** 27.47 345 ⇓P P 19 29 57.9 -0.2
baz=28
SAO **San Andreas Ge** 27.49 317 eP P 19 29 57.9 -0.3
SAO pmax pmax
comp=Z,252nm,1.5s
SAO **San Andreas Ge** 27.49 317 eP P 19 29 57.9 -0.3
comp=Z,252nm,1.5s
BMN **Battle Mountai** 27.50 328 eP P 19 29 59.1 +0.7
BMN e 19 33 14.5
BMN pmax pmax
comp=Z,235nm,0.9s
BMN **Battle Mountai** 27.50 328 eP P 19 29 59.1 +0.7
comp=Z,235nm,0.9s
BMN ePcP PcP 19 33 14.4 -0.9
G24A **Alzada** 27.56 351 ⇓P P 19 29 58.3 -0.5
baz=28
MOOW **Moose Ponds** 27.56 340 eP P 19 29 58.7 -0.3
MOOW ePcP PcP 19 33 16.3 +0.7
DCID1 **Drake Creek** 27.57 340 eP P 19 29 59.5 +0.4
G23A **Biddle** 27.60 349 ⇑P P 19 29 58.5 -0.6
baz=28
CMB **Columbia Colle** 27.60 320 eP P 19 29 59.5 +0.2
CMB e 19 33 16.7
CMB pmax pmax
comp=Z,324nm,1.4s
CMB **Columbia Colle** 27.60 320 eP P 19 29 59.5 +0.2
comp=Z,324nm,1.4s
CMB ePcP PcP 19 33 16.7 +1.2
I17A **Pilgrim Ck.** 27.66 341 ⇑P P 19 30 00.5 +0.6
baz=28
IMW **Indian Meadow** 27.76 340 eP P 19 30 00.6 -0.3
comp=Z,192nm,0.8s
IMW ePcP PcP 19 33 17.3 +1.2
IMW eScP ScP 19 36 56.0 +4.4
G22A **Birney** 27.78 348 ⇓P P 19 30 00.4 -0.5
baz=28
H19A **Powell** 27.89 344 ⇓P P 19 30 02.2 +0.3
baz=28
I16A **Newdale** 27.92 340 ⇑P P 19 30 02.2 0.0
baz=28
G21A **Lodge Grass** 27.98 347 ⇑P P 19 30 02.0 -0.6
baz=28
WCN **Washoe City** 28.07 323 eP P 19 30 04.0 +0.5
WCN pmax pmax
comp=Z,134nm,1.1s
WCN **Washoe City** 28.07 323 eP P 19 30 04.0 +0.5
comp=Z,134nm,1.1s
F24A **Ekalaka** 28.07 351 ⇓P P 19 30 02.8 -0.5
baz=28
H18A **Shoshone NF, C** 28.08 343 ⇓P P 19 30 03.3 -0.4
baz=28
H17A **Grant Village** 28.09 341 ⇓P P 19 30 03.8 0.0
baz=28
F23A **Volborg** 28.10 350 ⇓P P 19 30 02.7 -1.0
baz=28
J14A **Carey** 28.17 336 ⇑P P 19 30 04.3 0.0
baz=28
LKWY **Lake** 28.20 342 eP P 19 30 05.3 +0.6
LKWY pmax pmax
comp=Z,175nm,1.0s
LKWY **Lake** 28.20 342 eP P 19 30 05.3 +0.6
comp=Z,175nm,1.0s
G20A **Bridger** 28.21 345 ⇑P P 19 30 03.7 -0.9
baz=28
SDMD **Soldier's Deli** 28.25 37 eP P 19 30 03.4 -1.5
comp=Z,45nm,0.8s
SDMD ePcP PcP 19 33 16.8 -0.2
F22A **Rosebud** 28.32 348 ⇓P P 19 30 04.3 -1.2
baz=28
I15A **Monteview** 28.37 338 ⇓P P 19 30 06.5 +0.3
baz=28
RLMT **Red Lodge** 28.39 344 ⇓P P 19 30 05.6 -0.7
comp=Z,826nm,1.0s
RLMT ePcP PcP 19 33 18.0 +0.4
RLMT eS S 19 34 48.4 -0.5
YMR **Madison River** 28.46 341 ⇓P P 19 30 07.5 +0.5
comp=Z,503nm,1.1s
SDV **Santo Domingo** 28.48 105 eP P 19 30 09.7 +2.2
comp=Z,127nm,0.8s
J13A **Cove Ranch, Pi** 28.49 335 ⇓P P 19 30 06.8 -0.3
baz=29
SSPA **Standing Stone** 28.52 34 ⇓P P 19 30 05.7 -1.6
comp=Z,92nm,1.3s
F21A **Absaloka Mine,** 28.53 347 ⇓P P 19 30 06.8 -0.7
baz=29
ERPA **Erie** 28.58 29 eP P 19 30 05.2 -2.6
H16A **Russell Place,** 28.58 341 ⇑P P 19 30 08.4 +0.3
baz=29
SAC **San Andreas** 28.59 317 eP P 19 30 08.2 +0.2
SAC pmax pmax
comp=Z,319nm,1.8s
SAC **San Andreas** 28.59 317 eP P 19 30 08.2 +0.2
comp=Z,319nm,1.8s
G18A **Lazy EL Ranch,** 28.64 343 ⇓P P 19 30 08.4 -0.2
baz=29
I14A **Mackay** 28.66 337 ⇓P P 19 30 09.4 +0.7
baz=29
HLID **Hailey** 28.72 335 ⇓P P 19 30 09.0 -0.3
comp=Z,167nm,0.9s
HLID ePcP PcP 19 33 19.7 +1.3
HLID **Hailey** 28.72 335 ⇓P P 19 30 09.4 +0.1
baz=29
F20A **Billings** 28.74 346 ⇓P P 19 30 08.9 -0.4
baz=29
E24A **Baker** 28.75 352 ⇑P P 19 30 08.5 -0.9
baz=29
QLMT **Earthquake Lak** 28.75 341 eP P 19 30 10.3 +0.7
BEKR **Beckworth** 28.79 323 ⇓P P 19 30 10.8 +0.8
comp=Z,187nm,1.0s
E23A **Ismay** 28.84 350 ⇓P P 19 30 09.2 -1.0
baz=29
I13A **Wildhorse Cree** 28.90 336 ⇓P P 19 30 11.2 +0.3
baz=29
COWI **Conover** 28.91 13 ⇓P P 19 30 08.7 -2.0
comp=Z,59nm,0.6s
COWI ePcP PcP 19 33 18.2 -0.3
MVL **Millersville** 28.92 37 eP P 19 30 11.1 +0.2
comp=Z,62nm,1.2s
MVL epP pP 19 30 33.9 +7.7
H15A **Lima** 28.97 339 ⇓P P 19 30 12.5 +1.0
baz=29
F19A **Roth Farm, Mol** 28.98 345 ⇑P P 19 30 11.2 -0.3
baz=29
G17A **Pierce Place,** 28.98 342 ⇑P P 19 30 12.7 +1.2
baz=29
OHCM **Honcut** 29.09 321 eP P 19 30 13.2 +0.8
GCMT **Greycliff** 29.11 344 eP P 19 30 12.1 -0.5
comp=Z,301nm,1.1s
MFID **Camas Ranch** 29.18 333 ⇓P P 19 30 13.0 -0.3
comp=Z,147nm,0.9s
MFID ePcP PcP 19 33 20.8 +1.4
MFID eScP ScP 19 37 04.1 +8.3
MFID **Camas Ranch** 29.18 333 ⇓P P 19 30 13.2 -0.1
baz=29
I12A **Atlanta** 29.20 335 ⇓P P 19 30 13.8 +0.2
baz=29
E21A **Keefer Ranch,** 29.21 348 ⇓P P 19 30 13.0 -0.5
baz=29
H14A **Leadore** 29.22 338 ⇑P P 19 30 14.5 +0.8
baz=29
MCMT **McKenzie Canyo** 29.22 339 eP P 19 30 14.0 +0.2
comp=Z,118nm,0.9s
MCMT ePcP PcP 19 33 20.9 +1.2
MCMT eS S 19 35 08.2 +6.1
G16A **Moss Hill, Enn** 29.23 340 ⇑P P 19 30 14.7 +0.9
baz=29
F18A **Big Timber** 29.23 344 ⇑P P 19 30 13.5 -0.2
baz=29
D24A **Glendive** 29.30 352 ⇑P P 19 30 13.9 -0.2
baz=29
G15A **Dillon** 29.39 339 ⇓P P 19 30 16.1 +0.8
baz=30
E20A **Meyer Farm, Mu** 29.40 346 ⇑P P 19 30 15.0 -0.1
baz=30
D23A **Lindsay** 29.48 351 ⇓P P 19 30 15.2 -0.6
baz=30
F17A **Fitzpatrick Pl** 29.49 342 ⇑P P 19 30 16.7 +0.6
baz=30
H13A **Challis** 29.50 337 ⇑P P 19 30 16.6 +0.4
baz=30
E19A **Rath Farm, Rou** 29.51 345 ⇓P P 19 30 15.9 -0.2
baz=30
BOZ **Bozeman (W)** 29.55 341 ⇓iP P 19 30 16.2 -0.4
BOZ e 19 30 35.9
BOZ eS S 19 35 08.5 +1.4
BOZ pmax pmax
comp=Z,283nm,1.3s
BOZ **Bozeman (W)** 29.55 341 ⇓iP P 19 30 16.2 -0.4
comp=Z,283nm,1.3s
BOZ e pP 19 30 35.9 +4.1
BOZ eS S 19 35 08.5 +1.4
DLMT **Dillon** 29.60 340 eP P 19 30 17.6 +0.5
comp=Z,794nm,0.8s
DLMT ePcP PcP 19 33 21.9 +1.4
D22A **Cohagen** 29.62 349 ⇓P P 19 30 16.8 -0.3
baz=30
MDND **Maddock** 29.64 358 ⇓P P 19 30 16.2 -1.0
baz=30
F16A **Kennard Place,** 29.67 341 ⇑P P 19 30 18.0 +0.4
baz=30
D21A **La Casta Ranch** 29.69 348 ⇑P P 19 30 17.7 0.0
baz=30
WVOR **Wild Horse Val** 29.70 329 ⇓iP P 19 30 17.9 -0.1
WVOR e 19 33 22.7
WVOR eS S 19 35 12.0 +2.4
WVOR pmax pmax
comp=Z,877nm,1.1s
WVOR **Wild Horse Val** 29.70 329 ⇓iP P 19 30 17.9 -0.1
comp=Z,877nm,1.1s
WVOR ePcP PcP 19 33 22.7 +1.9
WVOR eS S 19 35 12.0 +2.4
C24A **Savage** 29.72 352 ⇑P P 19 30 17.7 -0.2
baz=30
H12A **Diamond D Ranc** 29.72 336 ⇓P P 19 30 18.6 +0.4
baz=30
G14A **Jackson** 29.80 338 ⇓P P 19 30 19.2 +0.3
baz=30
HOPS **Hopland** 29.85 319 ⇓eP P 19 30 19.7 +0.6
comp=Z,228nm,1.3s
E18A **Harlowton** 29.89 344 ⇑P P 19 30 19.4 -0.2
baz=30
G13A **Cobalt** 29.94 337 ⇑P P 19 30 20.4 +0.4
baz=30
D20A **Manuel Ranch,** 29.95 347 ⇓P P 19 30 19.8 -0.3
baz=30
LRM **Limekiln Ridge** 29.96 340 ⇓iP P 19 30 20.2 -0.1
LRM ePcP PcP 19 33 22.1 +0.6
F15A **Butte** 29.99 340 ⇓P P 19 30 21.0 +0.5
baz=30
AOPR **Arecibo Observ** 30.03 85 eP P 19 30 25.0 +4.0
comp=Z,449nm,2.5s
E17A **Martinsdale** 30.05 343 ⇑P P 19 30 21.2 +0.1
baz=30
C23A **Lambert** 30.09 351 ⇓P P 19 30 21.1 -0.1
baz=30
C22A **Vida** 30.15 350 ⇓P P 19 30 21.7 0.0
baz=30
MOD **Modoc** 30.16 326 ⇓iP P 19 30 22.2 +0.1
MOD ePcP PcP 19 33 23.1 +1.1
D19A **Cripps Ranch,** 30.19 346 ⇓P P 19 30 22.0 -0.2
baz=30
OBIP **Obispado Ponce** 30.20 85 epP pP 19 30 45.2 +7.5
CELP **Cerrillos** 30.22 85 eP P 19 30 22.7 +0.1
EYMN **Ely** 30.25 9 ⇓iP P 19 30 19.9 -2.6
comp=Z,73nm,0.8s
EYMN eScP PcP 19 33 20.6 -1.3
EYMN ePcP PcS 19 37 02.4 -3.0
F14A **Wisdom** 30.26 339 ⇑P P 19 30 23.1 +0.2
baz=30
J08A **Circle Bar Ran** 30.32 330 P P 19 30 23.9 +0.5
E16A **East Helena** 30.36 342 ⇑P P 19 30 24.0 +0.3
baz=30
BRNJ **Basking Ridge** 30.40 37 eP P 19 30 22.9 -1.0
comp=Z,28μm,0.9s
C21A **Desert Coulee** 30.44 348 ⇓P P 19 30 24.3 0.0
baz=30
D18A **Linhart Farms,** 30.45 345 ⇓P P 19 30 24.6 +0.2
baz=30
WDC **Whiskeytown Da** 30.52 322 ⇓iP P 19 30 23.3 -1.7
WDC e 19 33 23.1
WDC pmax pmax
comp=Z,67nm,0.9s
WDC **Whiskeytown Da** 30.52 322 ⇓iP P 19 30 23.3 -1.7
comp=Z,67nm,0.9s
WDC ePcP PcP 19 33 23.1 +0.3
C20A **Veseth Ranch,** 30.52 347 ⇓P P 19 30 24.9 -0.1
baz=31
E15A **Deer Lodge** 30.56 340 ⇓P P 19 30 25.4 -0.1
baz=31
HRY **Holter Researc** 30.57 342 eP P 19 30 25.5 0.0
HRY ePcP PcP 19 33 24.0 +1.0
F13A **Darby** 30.58 338 ⇓P P 19 30 25.8 +0.1
baz=31
KCPM **Cahto Peak** 30.58 320 ⇓iP P 19 30 27.1 +1.4
comp=Z,193nm,1.0s
KIPM **Iron Peak** 30.59 320 eP P 19 30 27.1 +1.2
comp=Z,438nm,0.9s
KIPM ePcP PcP 19 33 24.9 +1.7
DGMT **Dagmar** 30.61 352 eP P 19 30 25.4 -0.4
comp=Z,157nm,0.8s
DGMT ePcP PcP 19 33 23.1 +0.2
DGMT **Dagmar** 30.61 352 ⇓P P 19 30 25.1 -0.7
baz=31
SJG **San Juan** 30.62 85 eP P 19 30 26.7 +0.5
BINY **Binghamton** 30.64 34 ⇓eP P 19 30 24.4 -1.6
comp=Z,141nm,1.3s
BINY ePcP PcP 19 33 22.2 -0.9
D17A **Six Diamond Ra** 30.64 343 ⇓P P 19 30 26.2 0.0
baz=31
B22A **Reddig Ranch S** 30.70 350 ⇓P P 19 30 26.3 -0.3
baz=31
B23A **Brockton** 30.71 351 ⇑P P 19 30 26.5 -0.2
baz=31
C19A **Slack Wire Ran** 30.77 346 ⇑P P 19 30 27.2 0.0
baz=31
D16A **Dana Ranch, Ca** 30.77 342 ⇓P P 19 30 27.2 -0.1
baz=31
CPNY **Central Park** 30.82 38 eP P 19 30 27.2 -0.4
comp=Z,86nm,1.3s
E14A **Clinton** 30.83 339 ⇓P P 19 30 27.9 0.0
baz=31
CBYP **Canovanas** 30.89 85 eP P 19 30 28.7 +0.2
comp=Z,240nm,1.5s
F12A **Elk City** 30.89 337 ⇑P P 19 30 28.7 +0.3
baz=31
HUMP **Col San Antoni** 30.90 85 eP P 19 30 28.8 +0.2
comp=Z,289nm,1.8s
BMO **Blue Mountains** 30.97 333 eP P 19 30 27.6 -1.5
comp=Z,147nm,0.9s
BMO ePcP PcP 19 33 24.5 +0.5
BMO eScP ScP 19 37 05.4 +3.8
B21A **Ellsworth Farm** 31.00 349 ⇓P P 19 30 29.0 -0.2
baz=31
A24A **Westby** 31.03 353 ⇓P P 19 30 29.1 -0.3
baz=31
SADO **Sadowa** 31.05 27 P P 19 30 27.2 -2.4
SADO PcP PcP 19 33 24.1 +0.1
SADO **Sadowa** 31.05 27 P P 19 30 27.2 -2.4
comp=Z,41nm,0.8s,baz=243,slow=9.0,SNR=41
SADO PcP PcP 19 33 24.1 +0.1
comp=Z,22nm,0.9s,baz=238,slow=3.7,SNR=4.7
SADO LR LR 19 45 26.4
comp=Z,1μm,21.2s,baz=222,slow=41
D15A **Lincoln** 31.07 341 ⇓P P 19 30 29.9 -0.1
baz=31
E13A **Victor** 31.09 339 ⇑P P 19 30 30.2 +0.1
baz=31
C17A **Wharram Farm,** 31.10 344 ⇓P P 19 30 30.2 0.0
baz=31
A23A **Redstone** 31.18 352 ⇓P P 19 30 30.7 -0.1
baz=31
CHMT **Chamberlain Mo** 31.19 340 eP P 19 30 30.2 -0.9
MTP **Monte Pirata** 31.19 85 eP P 19 30 31.6 +0.4
comp=Z,262nm,1.3s
EGMT **Eagleton** 31.21 345 eP P 19 30 30.8 -0.3
comp=Z,506nm,1.0s
EGMT ePcP PcP 19 33 25.4 +0.9
EGMT **Eagleton** 31.21 345 ⇑P P 19 30 31.1 0.0
baz=31
B20A **Solberg Farm,** 31.21 348 ⇓P P 19 30 30.9 -0.2
baz=31
MSO **Missoula** 31.34 339 ⇓iP P 19 30 31.7 -0.6
comp=Z,202nm,0.8s
MSO ePcP PcP 19 33 25.6 +0.6
MSO **Missoula** 31.34 339 ⇓P P 19 30 32.2 -0.1
baz=31
YBH **Yreka Blue Hor** 31.36 324 ⇓iP P 19 30 31.1 -1.5

YBH *e*PcP **PcP** **19 33 25.4 +0.2**
comp=Z,64nm,0.7s
YBH PcP PcP 19 33 26.0 +0.9
YBH Yreka Blue Hor 31.36 324 P **P** **19 30 31.2 -1.3**
comp=Z,69nm,0.7s,baz=123,slow=3.3,SNR=137
YBH PcP **PcP** **19 33 26.0 +0.9**
comp=Z,16nm,1.0s,baz=112,slow=2.0,SNR=4.0
A22A Carney Farms, 31.36 350 ⇑P **P** **19 30 32.3 -0.2**
baz=32
KHMM Horse Mountain 31.40 321 *e*P **P** **19 30 33.3 +0.3**
comp=Z,518nm,0.9s
KHMM *e*PcP **PcP** **19 33 27.1 +1.7**
D14A Greenough 31.42 340 ⇓P **P** **19 30 32.6 -0.4**
baz=32
B19A Brinkman Farms 31.42 346 ⇓P **P** **19 30 33.0 +0.1**
baz=32
C16A Fuhringer Ranc 31.53 343 ⇓P **P** **19 30 33.9 0.0**
baz=32
SLMT Seeley Lake 31.55 340 *e*P **P** **19 30 33.3 -0.9**
B18A Beardsley Farm 31.56 345 ⇓P **P** **19 30 34.1 -0.1**
baz=32
A20A Cobblestone Ra 31.61 348 ⇑P **P** **19 30 34.5 -0.1**
baz=32
B17A L&G Farms, Che 31.72 344 ⇓P **P** **19 30 35.4 -0.2**
baz=32
STVI Saint Thomas 31.73 84 *e*P **P** **19 30 36.0 +0.1**
comp=Z,64nm,0.8s
STVI *e*PcP **PcP** **19 33 26.6 +0.2**
D13A Huson 31.75 339 ⇓P **P** **19 30 35.7 -0.1**
baz=32
YLE Yale 31.75 38 *e*P **P** **19 30 35.4 -0.4**
comp=Z,187nm,0.8s
C15A Salmond Ranch, 31.75 342 ⇑P **P** **19 30 35.7 -0.3**
baz=32
A19A Klindworth Far 31.83 347 ⇓P **P** **19 30 36.4 -0.1**
baz=32
F10A Beach Ranch, E 31.84 335 P **P** **19 30 36.2 -0.5**
ATAH Atahualpa 31.95 140 P P 19 30 41.7 +3.4
ATAH pP pP 19 30 56.1 +2.4
ATAH Atahualpa 31.95 140 P P 19 30 41.7 +3.4
comp=Z,10nm,0.7s,baz=337,slow=6.9,SNR=7.9
ATAH pP pP 19 30 56.1 +2.4
comp=Z,33nm,0.8s,baz=324,slow=6.3,SNR=12
ATAH LR LR 19 41 38.5
comp=Z,3µm,19.5s,baz=319,slow=32
SWMT Swartz Lake 31.95 340 *e*P **P** **19 30 37.1 -0.6**
SWMT *e*PcP **PcP** **19 33 27.4 +0.8**
D12A Red Ives Fores 32.02 338 ⇑P **P** **19 30 37.4 -0.9**
baz=32
A18A Metzger Ranch, 32.07 346 ⇑P **P** **19 30 38.1 -0.5**
baz=32
B16A M & M Farms, S 32.07 343 ⇑P **P** **19 30 38.1 -0.6**
baz=32
HUMO Hull Mountain 32.08 325 ⇓*e*P **P** **19 30 37.2 -1.6**
comp=Z,42nm,1.0s
HUMO *e*PcP **PcP** **19 33 28.0 +1.0**
HUMO *e*S **S** **19 35 50.9 +4.4**
ULM Lac du Bonnet 32.09 3 P **P** **19 30 36.2 -2.4**
ULM PcP **PcP** **19 33 26.6 -0.2**
ULM Lac du Bonnet 32.09 3 P **P** **19 30 36.2 -2.4**
comp=Z,105nm,1.0s,baz=188,slow=8.8,SNR=47
ULM PcP **PcP** **19 33 26.6 -0.2**
comp=Z,44nm,1.1s,baz=290,slow=3.0,SNR=4.0
ULM LR LR 19 44 44.2
comp=Z,3µm,19.0s,baz=184,slow=38
C14A Swan Lake 32.10 340 ⇑P **P** **19 30 38.8 -0.1**
baz=32
VIPM Ingram Point 32.21 329 P **P** **19 30 39.9 -0.2**
VIPM Ingram Point 32.21 329 P **P** **19 30 39.9 -0.2**
B15A Bradely Ranch, 32.22 342 ⇑P **P** **19 30 39.3 -0.7**
baz=32
TRY Troy 32.25 35 *e*P **P** **19 30 39.0 -1.2**
comp=Z,61nm,1.0s
JTMT Jette 32.26 340 ⇓*e*P **P** **19 30 39.5 -0.9**
JTMT *e*PcP **PcP** **19 33 26.9 -0.6**
YBMT Yellow Bay 32.27 340 *e*P **P** **19 30 40.0 -0.5**
comp=Z,411nm,0.8s
YBMT *e*PcP **PcP** **19 33 27.5 0.0**
C13A Hot Springs 32.29 339 ⇑P **P** **19 30 40.0 -0.6**
baz=32
A17A Triple J Farms 32.30 345 ⇑P **P** **19 30 40.2 -0.4**
baz=32
B14A Marquette Ranc 32.48 341 ⇑P **P** **19 30 41.7 -0.6**
baz=33
BLMT Blacktail Moun 32.51 340 *e*P **P** **19 30 42.4 -0.3**
BSMT Bassoo Peak 32.51 339 *e*P **P** **19 30 42.0 -0.7**
KBO Bosley Butte 32.53 323 ⇓*e*P **P** **19 30 43.6 +0.7**
comp=Z,1µm,1.2s
C12B Naegeli Ranch, 32.63 338 ⇑P **P** **19 30 42.8 -0.7**
baz=33
E09A Wood Farm, Sta 32.65 334 P **P** **19 30 42.5 -1.2**
ACCN Adirondack Com 32.69 34 *e*P **P** **19 30 43.2 -0.9**
QUA2 Belchertown 32.70 37 *e*P **P** **19 30 42.9 -1.2**
comp=Z,107nm,0.9s
QUA2 *e*PcP **PcP** **19 33 29.5 +0.9**
NCB Newcomb 32.80 33 ⇓*i*P **P** **19 30 43.4 -1.7**
comp=Z,335nm,2.0s
NCB *e*PcP **PcP** **19 33 29.5 +0.6**
B13A Whitefish 32.86 340 ⇓P **P** **19 30 45.6 0.0**
baz=33
A15A Johnson Ranch, 32.87 343 ⇓P **P** **19 30 45.0 -0.7**
baz=33
BRYW Bryant College 32.94 38 ⇓*e*P **P** **19 30 44.6 -1.7**
comp=Z,105nm,0.8s
BROR Big Rock Looko 32.95 327 P **P** **19 30 45.9 -0.4**
KEBM Edson Butte 33.02 324 ⇓*i*P **P** **19 30 47.6 +0.6**
comp=Z,1µm,0.9s
KEBM *e*PP **PP** **19 32 01.4 -1.3**
A14A Double T Ranch 33.07 342 ⇓P **P** **19 30 47.2 -0.2**
baz=33
LONY Lake Ozonia 33.07 32 ⇓*e*P **P** **19 30 45.2 -2.2**
comp=Z,27nm,0.8s
LONY *e*PcP **PcP** **19 33 30.1 +0.5**
HAWA Hanford 33.14 333 ⇓*i*P **P** **19 30 46.7 -1.3**
comp=Z,76nm,0.8s
WALA Waterton Lakes 33.29 341 ⇓*i*P **P** **19 30 48.7 -0.7**
comp=Z,9.0nm,1.0s
HRV Adam Dziewonsk 33.30 37 *e*P **P** **19 30 48.1 -1.3**
HRV pmax pmax
comp=Z,125nm,0.9s
HRV Adam Dziewonsk 33.30 37 *e*P **P** **19 30 48.1 -1.3**
comp=Z,125nm,0.9s
B12A Libby 33.32 339 ⇓P **P** **19 30 49.7 +0.1**
baz=33
A13A Flathead Natio 33.34 341 ⇓P **P** **19 30 49.8 0.0**
baz=33
WES Weston 33.36 38 *e*P **P** **19 30 49.2 -0.7**
WES pmax pmax
comp=Z,167nm,1.0s
WES Weston 33.36 38 *e*P **P** **19 30 49.2 -0.7**
comp=Z,167nm,1.0s
RNO Roman Nose 33.38 326 P **P** **19 30 50.9 +0.8**
VLL Laurance Lake 33.42 330 P **P** **19 30 51.4 +0.8**
BBSR BB Station 33.44 58 *e*P **P** **19 30 50.4 -0.3**
comp=Z,43nm,0.8s
TRW Toppenish Ridg 33.51 332 P **P** **19 30 51.5 +0.2**
COR Corvallis 33.61 327 ⇓*i*P **P** **19 30 52.2 +0.2**
COR *e* 19 33 32.5
COR pmax pmax
comp=Z,887nm,1.0s
COR Corvallis 33.61 327 ⇓*i*P **P** **19 30 52.2 +0.2**
comp=Z,887nm,1.0s
COR *e*PcP **PcP** **19 33 32.5 +1.4**
HNH Hanover 33.65 35 *e*P **P** **19 30 52.0 -0.4**
HNH *e*PcP **PcP** **19 33 32.4 +1.2**
NEW Newport 33.69 337 *e*P **P** **19 30 51.7 -1.1**
comp=Z,135nm,0.8s
NEW *e*PcP **PcP** **19 33 31.3 0.0**
NEW PcP PcP 19 33 31.9 +0.6
NEW Newport 33.69 337 P **P** **19 30 52.5 -0.3**
comp=Z,117nm,0.8s,baz=143,slow=8.5,SNR=139
NEW PcP **PcP** **19 33 31.9 +0.6**
comp=Z,42nm,1.0s,baz=137,slow=1.9,SNR=4.1
NEW Newport 33.69 337 ⇑P **P** **19 30 51.7 -1.1**
baz=34
FRNY Flat Rock 33.73 33 *e*P **P** **19 30 51.7 -1.4**
comp=Z,339nm,1.9s
A12A Yaak River Ran 33.74 339 ⇓P **P** **19 30 53.6 +0.3**
baz=34
FFD Franklin Falls 33.85 36 *e*P **P** **19 30 53.4 -0.7**
comp=Z,36nm,0.7s
LBNH Lisbon 34.20 35 *e*P **P** **19 30 56.6 -0.6**
LBNH pmax pmax
comp=Z,28nm,0.9s
LBNH Lisbon 34.20 35 *e*P **P** **19 30 56.6 -0.6**
comp=Z,28nm,0.9s

TBM Table Mountain 34.21 333 P **P** **19 30 57.7 +0.4**
LTY Liberty 34.31 333 P **P** **19 30 58.1 -0.1**
LON Longmire 34.43 331 *e*P **P** **19 30 59.5 +0.2**
LON *e* 19 33 33.7
LON Longmire 34.43 331 *e*P **P** **19 30 59.5 +0.2**
LON *e*PcP **PcP** **19 33 33.6 +0.1**
NLO Nicolai Mounta 34.73 329 P **P** **19 31 03.2 +1.3**
ANWB Willy Bob 34.80 85 *e*P **P** **19 31 02.5 -0.2**
comp=Z,66nm,0.6s
D05A Enumclaw 34.84 331 P **P** **19 31 02.9 +0.2**
JCW Jim Creek 35.57 333 P **P** **19 31 08.0 -1.0**
CMW Cultus Mountai 35.83 333 P **P** **19 31 10.6 -0.7**
FDF Fort de France 35.84 90 *e*P **P** **19 31 10.9 -0.8**
FDF Fort de France 35.84 90 *e*P **P** **19 31 10.9 -0.8**
NLWA Neilton Lookou 35.86 330 *e*P **P** **19 31 12.0 +0.5**
comp=Z,600nm,1.1s
NLWA *e*PcP **PcP** **19 33 38.5 +0.8**
GRGR Grenville 35.92 94 P **P** **19 31 11.5 -0.9**
comp=Z,2µm,1.6s
PGC Sidney 36.59 332 *e*P **P** **19 31 17.1 -0.4**
comp=Z,13nm,0.8s
PGC *e*PcP **PcP** **19 33 40.7 +1.0**
FFC Flin Flon 36.61 357 *e*P **P** **19 31 16.0 -1.7**
FFC pmax pmax
comp=Z,116nm,0.8s
FFC Flin Flon 36.61 357 *e*P **P** **19 31 15.9 -1.7**
comp=Z,116nm,0.8s
FFC Flin Flon 36.61 357 P **P** **19 31 16.0 -1.7**
comp=Z,1µm,0.8s,SNR=88
NNA Nana 36.73 143 Pn **P** **19 31 19.8 +0.6**
NNA *e*PcP **PcP** **19 33 41.2 +0.4**
NNA PcP **PcP** **19 33 41.5 +0.8**
NNA Nana 36.73 143 PcP **PcP** **19 33 41.5 +0.8**
comp=Z,18nm,0.9s,baz=291,slow=4.8,SNR=6.2
NNA LR LR 19 43 43.7
comp=Z,2µm,21.0s,baz=333,slow=32
PQI Presque Isle 37.87 35 *e*P **P** **19 31 27.6 -0.9**
comp=Z,67nm,1.0s
PQI *e*PcP **PcP** **19 33 44.0 +0.3**
BBB Bella Bella 41.20 332 P **P** **19 31 56.6 +0.5**
BBB PcP **PcP** **19 33 55.8 +1.6**
BBB Bella Bella 41.20 332 P **P** **19 31 56.6 +0.5**
comp=Z,71nm,1.0s,baz=142,slow=8.4,SNR=14
BBB PcP **PcP** **19 33 55.8 +1.6**
comp=Z,51nm,1.1s,baz=162,slow=4.1,SNR=4.3
SCHQ Schefferville 43.84 26 *e*P **P** **19 32 15.7 -1.9**
comp=Z,148nm,1.1s
SCHQ PcP **PcP** **19 34 02.8 -0.2**
SCHQ *e*PcP **PP** **19 34 03.0 +2.4**
SCHQ Schefferville 43.84 26 P **P** **19 32 15.9 -1.6**
comp=Z,40nm,0.5s,baz=230,slow=7.1,SNR=117
SCHQ PcP **PcP** **19 34 02.8 -0.2**
comp=Z,68nm,0.9s,baz=230,slow=3.6,SNR=9.0
SCHQ LR LR 19 54 17.2
comp=Z,1µm,20.5s,baz=12,slow=41
SAML Samuel 43.97 125 *e*P **P** **19 32 18.9 -0.2**
comp=Z,49nm,1.0s
SAML *e* **pP** **19 32 33.0 -2.0**
SAML *e*PcP **PcP** **19 34 05.0 +1.0**
LPAZ La Paz 45.38 137 *e*P **P** **19 32 32.0 +1.1**
LPAZ pP **pP** **19 32 46.6 -0.3**
LPAZ PcP **PcP** **19 34 10.2 +0.6**
LPAZ *e*PcP PP 19 34 10.8 -7.4
LPAZ La Paz 45.38 137 P **P** **19 32 33.0 +2.0**
comp=Z,4.9nm,0.9s,baz=341,slow=7.3,SNR=4.3
LPAZ pP **pP** **19 32 46.6 -0.3**
comp=Z,14nm,0.7s,baz=338,slow=6.8,SNR=17
LPAZ PcP **PcP** **19 34 10.2 +0.6**
comp=Z,5.9nm,0.9s,baz=353,slow=6.7,SNR=3.6
LPAZ LR LR 19 50 23.5
comp=Z,1µm,21.0s,baz=311,slow=34
CRAG Craig 45.61 333 ⇓*i*P **P** **19 32 32.0 +0.5**
comp=Z,261nm,1.2s
YKA Yellowknife Ar 45.72 350 P **P** **19 32 30.9 -1.4**
YKA PcP **PcP** **19 34 09.7 +0.5**
YKA PP **PP** **19 34 21.9 +1.5**
YKA S **S** **19 39 11.6 +0.8**
YKA *e* 20 10 19.2
YKA Yellowknife Ar 45.72 350 P **P** **19 32 30.9 -1.4**
comp=Z,183nm,0.8s,baz=156,slow=7.3,SNR=936
YKA PcP **PcP** **19 34 09.7 +0.5**
comp=Z,33nm,0.9s,baz=152,slow=3.7,SNR=10
YKA PP **PP** **19 34 21.9 +1.5**
comp=Z,25nm,1.1s,baz=156,slow=9.8,SNR=4.0
YKA S **S** **19 39 11.6 +0.8**
comp=Z,0.8nm,0.8s,baz=152,slow=16,SNR=3.8
YKA P4KPbc 20 10 19.2
comp=Z,1.0nm,0.9s,baz=151,slow=4.3,SNR=12
YKW3 Yellowknife Ar 45.78 350 ⇓*i*P **P** **19 32 30.8 -2.0**
comp=Z,3.9nm,0.8s
YKW3 *e*PcP **PcP** **19 34 09.6 +0.1**
YKW3 *e*PP **PP** **19 34 21.6 +0.6**
WRAK Wrangell Islan 45.92 334 *e*P **P** **19 32 34.0 +0.1**
comp=Z,33nm,0.8s
WRAK *e*PcP **PcP** **19 34 10.8 +0.7**
DLBC Dease Lake 46.44 338 ⇓*i*P **P** **19 32 39.1 +1.0**
DLBC *e*PcP **PcP** **19 34 13.3 +1.3**
DLBC Dease Lake 46.44 338 P **P** **19 32 40.0 +1.8**
comp=Z,240nm,0.8s,baz=143,slow=6.4,SNR=430
DLBC PcP **PcP** **19 34 13.3 +1.3**
comp=Z,58nm,1.0s,baz=132,slow=4.0,SNR=4.4
SKAG Skagway 49.13 336 *e*P **P** **19 32 59.2 +0.4**
comp=Z,348nm,1.9s
SKAG *e*PcP **PcP** **19 34 21.1 -0.4**
LVC Limon Verde 49.72 143 *e*P **P** **19 33 05.5 +1.4**
LVC *e*pP **pP** **19 33 20.5 +0.2**
FRB Frobisher Bay 49.90 17 P **P** **19 33 03.8 -0.8**
FRB PcP **PcP** **19 34 24.4 +0.3**
FRB S **S** **19 40 08.1 -1.8**
FRB Frobisher Bay 49.90 17 P **P** **19 33 03.8 -0.8**
comp=Z,173nm,0.8s,baz=224,slow=8.9,SNR=135
FRB PcP **PcP** **19 34 24.4 +0.3**
comp=Z,56nm,0.8s,baz=191,slow=3.8,SNR=3.3
FRB S **S** **19 40 08.1 -1.8**
comp=Z,13nm,0.9s,baz=110,slow=20,SNR=16
FRB LR LR 19 56 30.2
comp=Z,1µm,20.3s,baz=219,slow=39
PNL Peninsula 50.88 335 *e*P **P** **19 33 12.8 +0.7**
comp=Z,179nm,1.2s
STCH Steam Cracks 53.52 281 *e*P **P** **19 33 34.3 +1.9**
PUH Pauahi 53.61 281 *e*P **P** **19 33 34.5 +1.4**
LCO Las Campanas 53.98 150 P **P** **19 33 37.8 +2.1**
comp=Z,20nm,1.1s
DIV Divide 54.32 334 ⇓*i*P **P** **19 33 38.2 +0.5**
comp=Z,168nm,1.0s
DIV *e*PcP **PcP** **19 34 41.1 +0.2**
RKT Rikitea 54.40 222 *e*P **P** **19 33 40.2 +1.6**
comp=Z,93nm,1.4s
RKT *e*S **S** **19 41 12.7 +0.1**
comp=Z,982nm,30.5s
RKT *e*LR LR 19 49 43.0
comp=Z,4µm,27.8s
EGAK Eagle 54.63 339 ⇓*i*P **P** **19 33 39.0 -0.7**
comp=Z,218nm,1.3s
INK Inuvik 54.79 345 P **P** **19 33 40.7 -0.1**
INK PcP **PcP** **19 34 42.9 +0.4**
INK S **S** **19 41 17.4 +0.7**
INK *e* 20 11 00.1
INK Inuvik 54.79 345 P **P** **19 33 40.7 -0.1**
comp=Z,334nm,0.8s,baz=133,slow=8.2,SNR=1112
INK PcP **PcP** **19 34 42.9 +0.4**
comp=Z,66nm,0.9s,baz=153,slow=5.1,SNR=4.0
INK S **S** **19 41 17.4 +0.7**
comp=Z,3.9nm,0.9s,baz=158,slow=19,SNR=3.7
INK P4KPbc 20 11 00.1
comp=Z,2.9nm,1.0s,baz=150,slow=7.0,SNR=6.7
DOT Dot Lake 55.00 337 ⇓*i*P **P** **19 33 42.6 +0.1**
comp=Z,357nm,1.2s
DOT *e* **pP** **19 34 01.5 +2.7**
PAX Paxson 55.16 336 ⇓*i*P **P** **19 33 43.8 +0.1**
PAX *e* 19 34 02.1
PAX *e* 19 34 44.5
PAX pmax pmax
comp=Z,156nm,0.9s
PAX Paxson 55.16 336 ⇓*i*P **P** **19 33 43.8 +0.1**
comp=Z,156nm,0.9s
PAX *e* **pP** **19 34 02.1 +2.0**
PAX *e*PcP **PcP** **19 34 44.5 +0.3**
SEW Seward 55.43 332 ⇓*i*P **P** **19 33 45.6 0.0**
comp=Z,174nm,1.1s
SEW *e*PcP **PcP** **19 34 45.4 +0.3**
SML Sawmill 55.73 334 ⇓*i*P **P** **19 33 48.0 +0.3**
SML *e* 19 34 47.4
SML pmax pmax
comp=Z,47nm,1.1s

SML Sawmill 55.73 334 ⇓*i*P **P** **19 33 48.0 +0.3**
comp=Z,47nm,1.1s
SML *e*PcP **PcP** **19 34 47.4 +1.1**
KIP Kipapa 55.91 284 *d*/*i*P **P** **19 33 51.6 +2.0**
KIP pmax pmax
comp=Z,550nm,1.7s
KIP Kipapa 55.91 284 *e*P **P** **19 33 51.9 +2.2**
comp=Z,785nm,1.5s
HON Honolulu 55.91 284 ⇓*i*P **P** **19 33 51.6 +2.0**
HON Honolulu 55.91 284 ⇓*i*P **P** **19 33 51.6 +2.0**
PMR Palmer 55.96 333 ⇓*i*P **P** **19 33 49.1 -0.2**
PMR *e* 19 34 09.9
PMR pmax pmax
comp=Z,153nm,1.0s
PMR Palmer 55.96 333 ⇓*i*P **P** **19 33 49.1 -0.2**
comp=Z,153nm,1.0s
PMR *e* **pP** **19 34 09.9 +4.1**
KDAK Kodiak Island 55.98 328 ⇓*i*P **P** **19 33 49.7 +0.1**
comp=Z,138nm,1.3s
KDAK Kodiak Island 55.98 328 P **P** **19 33 49.6 +0.1**
comp=Z,447nm,1.4s,SNR=6.7
KDAK Kodiak Island 55.98 328 P **P** **19 33 49.9 +0.4**
comp=Z,45nm,0.9s,baz=91,slow=5.5,SNR=14
OHAK Old Harbor 56.13 328 *e*P **P** **19 33 50.0 -0.5**
comp=Z,372nm,1.5s
RES Resolute Bay 56.58 1 P **P** **19 33 51.9 -1.6**
RES Resolute Bay 56.58 1 P **P** **19 33 51.9 -1.6**
baz=182,slow=9.2
ILAR Eielson Array 56.65 337 P **P** **19 33 54.4 +0.2**
ILAR PcP **PcP** **19 34 50.3 +0.5**
ILAR ⇑*e* 20 04 02.0
ILAR *e* 20 11 07.9
ILAR Eielson Array 56.65 337 P **P** **19 33 54.4 +0.2**
comp=Z,182nm,1.1s,baz=130,slow=5.2,SNR=491
ILAR PcP **PcP** **19 34 50.3 +0.5**
comp=Z,12nm,0.7s,baz=156,slow=2.2,SNR=9.0
ILAR LR LR 20 00 16.1
comp=Z,3µm,19.4s,baz=144,slow=38
ILAR PKP2bc 20 04 02.0
comp=Z,0.9nm,1.1s,baz=264,slow=3.3,SNR=4.1
ILAR P4KPbc 20 11 07.9
comp=Z,0.5nm,0.9s,baz=164,slow=0.5,SNR=4.2
MCK McKinley 56.90 336 ⇓*i*P **P** **19 33 55.9 -0.1**
MCK *e* 19 34 51.0
MCK pmax pmax
comp=Z,188nm,1.0s
MCK McKinley 56.90 336 ⇓*i*P **P** **19 33 55.9 -0.1**
comp=Z,188nm,1.0s
MCK *e*PcP **PcP** **19 34 51.0 +0.2**
COLA College 57.05 337 ⇓*i*P **P** **19 33 56.3 -0.7**
COLA *e* 19 34 52.2
COLA pmax pmax
comp=Z,182nm,0.9s
COLA College 57.05 337 ⇓*i*P **P** **19 33 56.3 -0.7**
comp=Z,182nm,0.9s
COLA *e*PcP **PcP** **19 34 52.2 +0.9**
RSO Redoubt South 57.08 331 *e*P **P** **19 33 57.6 0.0**
comp=Z,531nm,0.8s
TRF Thorofare Moun 57.30 335 ⇓*i*P **P** **19 33 58.4 -0.7**
comp=Z,512nm,0.9s
TRF *e* 19 34 20.4
CFAA Coronel Fontan 57.31 149 P **P** **19 34 01.1 +1.7**
CFAA pP **pP** **19 34 14.6 -1.3**
CFAA Coronel Fontan 57.31 149 P **P** **19 34 01.1 +1.7**
comp=Z,1.6nm,0.8s,baz=329,slow=6.7,SNR=22
CFAA pP **pP** **19 34 14.6 -1.3**
comp=Z,2.4nm,0.8s,baz=324,slow=6.4,SNR=10
SFJD Kangerlussuaq 57.60 20 P P 19 33 56.7 -4.1
SFJD Kangerlussuaq 57.60 20 ⇓*i*P **P** **19 33 59.9 -0.9**
comp=Z,162nm,0.8s
SFJD Kangerlussuaq 57.60 20 P P 19 33 56.7 -4.1
comp=Z,166nm,0.8s,baz=231,slow=5.2,SNR=64
PPLA Purkeypile 57.83 334 ⇓*i*P **P** **19 34 02.0 -0.7**
comp=Z,736nm,1.7s
PPLA *e*PP **PP** **19 36 16.4 +5.2**
PPLA *e*ScP **ScP** **19 38 55.5 +6.1**
CHGN Chignik 58.54 326 *e*P **P** **19 34 06.8 -0.7**
PMOR Pomariorio Ree 58.86 239 *e*P **P** **19 34 13.0 +2.6**
comp=Z,115nm,1.4s
COLD Coldfoot 59.06 339 *e*P **P** **19 34 11.0 -0.1**
comp=Z,132nm,1.0s
SDPT Sand Point 59.44 324 *e*P **P** **19 34 13.7 -0.1**
comp=Z,162nm,1.1s
CPUP Villa Florida 59.55 137 P **P** **19 34 15.6 +0.6**
CPUP pP **pP** **19 34 30.3 -1.3**
CPUP Villa Florida 59.55 137 P **P** **19 34 15.6 +0.6**
comp=Z,0.7nm,0.3s,baz=312,slow=9.2,SNR=7.8
CPUP pP **pP** **19 34 30.3 -1.3**
comp=Z,7.2nm,0.7s,baz=309,slow=7.3,SNR=8.8
CPUP LR LR 19 59 46.4
comp=Z,912nm,21.7s,baz=306,slow=36
BDFB Brasilia 59.92 121 P **P** **19 34 19.2 +1.4**
BDFB pP **pP** **19 34 34.3 -0.1**
BDFB Brasilia 59.92 121 P **P** **19 34 19.2 +1.4**
comp=Z,26nm,1.0s,baz=289,slow=7.0,SNR=18
BDFB pP **pP** **19 34 34.3 -0.1**
comp=Z,22nm,0.7s,baz=291,slow=9.6,SNR=8.6
BDFB LR LR 20 00 27.8
comp=Z,968nm,21.8s,baz=113,slow=36
FALS False Pass 61.00 323 *e*P **P** **19 34 24.0 -0.5**
comp=Z,465nm,0.8s
TVO Taravao 61.45 237 *e*P **P** **19 34 29.9 +1.7**
comp=Z,73nm,1.2s
PPT Papeete 61.60 238 LR LR 19 54 15.6
comp=Z,596nm,19.2s,baz=166,slow=29
PPT2 Papeete2 61.61 238 *e*S **S** **19 42 49.5 +2.4**
comp=Z,606nm,26.2s
PPT2 *e*LQ LQ 19 50 31.5
comp=Z,2µm,35.5s
PPT2 *e*LR LR 19 52 45.9
comp=Z,2µm,28.2s
AKUT Akutan 62.25 322 *e*P **P** **19 34 31.6 -1.3**
comp=Z,80nm,0.7s
AKUT *e*PcP **PcP** **19 35 12.8 +0.5**
UNV Unalaska Valle 62.65 322 ⇓*i*P **P** **19 34 34.7 -0.8**
comp=Z,386nm,1.0s
UNV *e* **pP** **19 34 55.4 +3.1**
SUMG Summit 63.98 17 ⇓*i*P **P** **19 34 44.1 -0.5**
SUMG pmax pmax
comp=Z,260nm,0.9s
SUMG Summit 63.98 17 ⇓*i*P **P** **19 34 43.6 -1.0**
comp=Z,308nm,0.8s
SUMG Summit 63.98 17 ⇓*i*P **P** **19 34 44.1 -0.5**
comp=Z,265nm,0.9s
PLCA Paso Flores 64.05 157 P **P** **19 34 46.3 +1.3**
comp=Z,34nm,1.1s
PLCA *e* **pP** **19 35 01.5 -0.3**
PLCA pP **pwP** **19 35 02.1 +0.3**
PLCA Paso Flores 64.05 157 P **P** **19 34 46.6 +1.6**
comp=Z,5.8nm,1.0s,baz=327,slow=9.5,SNR=3.3
PLCA pP **pwP** **19 35 02.1 +0.3**
comp=Z,14nm,0.9s,baz=332,slow=6.9,SNR=9.9
PLCA LR LR 19 56 36.6
comp=Z,2µm,20.7s,baz=5.8,slow=30
TBI Tubuai 64.71 232 *e*S **S** **19 43 27.7 +2.2**
comp=Z,347nm,31.5s
TBI *e*LQ LQ 19 51 39.3
comp=Z,774nm,28.2s
TBI *e*LR LR 19 54 25.3
comp=Z,2µm,28.5s
TNA Tin City 65.17 335 ⇓*i*P **P** **19 34 52.0 +0.1**
comp=Z,336nm,1.0s
ALE Alert 65.92 5 P **P** **19 34 55.0 -1.6**
comp=Z,263nm,1.1s,SNR=6.5
RCBR Riachuelo 66.06 105 *e*P **P** **19 34 59.8 +1.1**
comp=Z,68nm,1.3s
RCBR Riachuelo 66.06 105 P **P** **19 35 00.3 +1.7**
comp=Z,24nm,1.1s,baz=269,slow=7.2,SNR=5.2
GAMB Gambell 66.50 332 *e*P **P** **19 35 01.2 +0.7**
comp=Z,163nm,1.5s
BORG Borgarnes 68.22 27 *e*P **P** **19 35 12.4 +1.0**
comp=Z,201nm,1.3s
SCO Scoresbysund 68.50 21 ⇓*i*P **P** **19 35 12.4 -0.6**
SCO pmax pmax
comp=Z,47nm,0.8s
SCO Scoresbysund 68.50 21 ⇓*i*P **P** **19 35 12.4 -0.6**
comp=Z,47nm,0.8s
DAG Danmarks Havn 70.10 14 ⇓*i*P **P** **19 35 21.6 -1.3**
DAG pmax pmax
comp=Z,170nm,0.9s
DAG Danmarks Havn 70.10 14 ⇓*i*P **P** **19 35 21.6 -1.3**
comp=Z,203nm,0.9s
AMKA Amchitka 71.27 319 *e*P **P** **19 35 29.9 -0.4**
comp=Z,135nm,0.8s
PMOZ Porto Moniz, M 73.17 60 *e*S **SKiKP** **19 45 08.7 -0.1**
PMOZ *e*LR LR 19 58 20.8

comp=Z,463nm,22.0s
SOFL Sornfelli, Far 74.81 29⇓eP P 19 35 50.7 -0.5
SOFL AMB AMB 19 35 52.5
comp=Z,198nm,1.1s
SOFL AMS AMS 20 04 04.0
comp=Z,1μm,28.8s
SOFL Sornfelli, Far 74.81 29 P P 19 35 50.7 -0.5
SOFL AMB AMB 19 35 52.5
comp=Z,198nm,1.1s
SOFL AMS AMS 20 04 04.0
comp=Z,1μm,28.8s
FX1 Attu Island--F 74.81 321 eP P 19 35 51.1 -0.2
FX1 Attu Island--F 74.81 321 P P 19 35 51.1 -0.2
comp=Z,160nm,0.8s,baz=191,slow=1.4,SNR=39
BILL Bilibino 75.31 337d iP P 19 35 54.1 +0.2
BILL *i* 19 36 04.5
BILL *i* 19 38 42.6
BILL *eS* **SKiKP 19 45 17.9 +7.0**
BILL *eSS* **SS 19 50 16.3 -2.2**
BILL pmax pmax
comp=Z,480nm,1.6s
BILL MLR MLR
comp=Z,200nm,20.0s
KBS Kingsbay 76.12 11⇓iP P 19 35 59.3 +1.0
KBS AMS AMS 20 10 16.0
comp=Z,974nm,21.1s
KBS Kingsbay 76.12 11d iP P 19 35 59.2 +0.8
KBS pmax pmax
comp=Z,173nm,1.2s
KBS Kingsbay 76.12 11 eP P 19 35 59.1 +0.8
comp=Z,80nm,0.8s
DCN Croghan 76.31 38⇓iP P 19 36 01.9 +2.1
KPL Plockton 76.38 34⇓eP P 19 35 59.4 -0.7
KPL AMB AMB 19 36 00.8
comp=Z,203nm,1.1s
KPL AMS AMS 20 05 08.0
comp=Z,635nm,24.3s
KPL Plockton 76.38 34 P P 19 35 59.4 -0.7
KPL AMB AMB 19 36 00.8
comp=Z,203nm,1.1s
KPL AMS AMS 20 05 08.0
comp=Z,635nm,24.3s
KSB Sheil Bridge 76.53 34⇓iP P 19 36 00.5 -0.5
KSB Sheil Bridge 76.53 34 P P 19 36 00.5 -0.5
KAC Achnashellach 76.53 34⇓eP P 19 36 00.7 -0.4
KAC Achnashellach 76.53 34 P P 19 36 00.7 -0.4
GMM Mts of Mourne 76.89 37⇓eP P 19 36 02.9 -0.2
GMM Mts of Mourne 76.89 37 P P 19 36 02.9 -0.2
MVH1 Achvaich 77.02 33⇓iP P 19 36 03.5 -0.3
MVH1 Achvaich 77.02 33 P P 19 36 03.5 -0.3
MDO Dochfour 77.04 34⇓iP P 19 36 03.4 -0.5
MDO Dochfour 77.04 34 P P 19 36 03.4 -0.5
USHA Ushuaia 77.05 163 P P 19 36 04.4 +0.7
USHA Ushuaia 77.05 163 P P 19 36 04.4 +0.7
comp=Z,17nm,1.1s,baz=355,slow=5.1,SNR=3.1
USHA LR LR 20 03 32.3
comp=Z,628nm,20.9s,baz=238,slow=30
SPA0 Spitsbergen Ar 77.24 11⇓iP P 19 36 04.5 -0.2
SPA0 *eS* **S 19 45 52.2 +3.0**
EAB Aberfoyle 77.34 35⇓eP P 19 36 04.4 -1.2
EAB Aberfoyle 77.34 35 P P 19 36 04.4 -1.2
PGBU Glenifferbraes 77.35 35⇓eP P 19 36 05.5 -0.1
PGBU AMB AMB 19 36 07.0
comp=Z,237nm,1.1s
PGBU AMS AMS 20 05 00.7
comp=Z,545nm,22.9s
PGBU Glenifferbraes 77.35 35 P P 19 36 05.5 -0.1
PGBU AMB AMB 19 36 07.0
comp=Z,237nm,1.1s
PGBU AMS AMS 20 05 00.7
comp=Z,545nm,22.9s
GAL1 Galloway 77.45 36⇓eP P 19 36 06.1 -0.1
GAL1 AMB AMB 19 36 07.0
comp=Z,128nm,1.2s
GAL1 AMS AMS 20 04 57.9
comp=Z,467nm,24.3s
GAL1 Galloway 77.45 36 P P 19 36 06.1 -0.1
GAL1 AMB AMB 19 36 07.0
comp=Z,128nm,1.2s
GAL1 AMS AMS 20 04 57.9
comp=Z,467nm,24.3s
MCD Coleburn Disti 77.58 33⇓iP P 19 36 06.8 -0.1
MCD Coleburn Disti 77.58 33 P P 19 36 06.8 -0.1
MME1 Meikle Cairn 77.80 34⇓iP P 19 36 07.6 -0.6
MME1 Meikle Cairn 77.80 34 P P 19 36 07.6 -0.6
GCD Castle Douglas 77.88 36⇓eP P 19 36 08.2 -0.4
GCD Castle Douglas 77.88 36 P P 19 36 08.2 -0.4
EAU Auchinoon 77.91 35 eP P 19 36 08.7 -0.1
EAU Auchinoon 77.91 35 P P 19 36 08.7 -0.1
WLF1 Llynfaes 78.00 38⇓eP P 19 36 09.1 -0.3
WLF1 AMB AMB 19 36 09.9
comp=Z,96nm,1.3s
WLF1 AMS AMS 20 04 25.3
comp=Z,482nm,30.8s
WLF1 Llynfaes 78.00 38 P P 19 36 09.1 -0.3
WLF1 AMB AMB 19 36 09.9
comp=Z,96nm,1.3s
WLF1 AMS AMS 20 04 25.3
comp=Z,482nm,30.8s
WME Myndd Eilian 78.03 38 eP P 19 36 09.4 -0.1
WME Myndd Eilian 78.03 38 P P 19 36 09.4 -0.1
EDI Edinburgh 78.03 35 AMB AMB 19 36 08.3
comp=Z,212nm,1.2s
EDI AMS AMS 20 05 21.3
comp=Z,586nm,20.1s
EDI Edinburgh 78.03 35 AMB AMB 19 36 08.3
comp=Z,212nm,1.2s
EDI AMS AMS 20 05 21.3
comp=Z,586nm,20.1s
YRE Yr Eifl 78.06 38⇓eP P 19 36 09.4 -0.2
YRE Yr Eifl 78.06 38 P P 19 36 09.4 -0.2
PMAFR Mafra 78.15 53 eP P 19 36 10.1 -0.4
comp=Z,165nm,1.4s
EBL Broad Law 78.15 35⇓eP P 19 36 09.8 -0.3
EBL Broad Law 78.15 35 P P 19 36 09.8 -0.3
DRUM Mains of Drumt 78.16 34⇓eP P 19 36 10.0 -0.1
DRUM AMB AMB 19 36 11.5
comp=Z,199nm,0.9s
DRUM Mains of Drumt 78.16 34 P P 19 36 10.0 -0.1
DRUM AMB AMB 19 36 11.5
comp=Z,199nm,0.9s
YLL Llanberis 78.17 38⇓eP P 19 36 11.1 +0.9
YLL Llanberis 78.17 38 P P 19 36 11.1 +0.9
ESK Eskdalemuir 78.18 36⇓eP P 19 36 09.7 -0.6
ESK AMB AMB 19 36 10.9
comp=Z,150nm,1.2s
ESK AMS AMS 20 05 21.2
comp=Z,475nm,25.9s
ESK Eskdalemuir 78.18 36 P P 19 36 09.7 -0.6
ESK AMB AMB 19 36 10.9
comp=Z,150nm,1.2s
ESK AMS AMS 20 05 21.2
comp=Z,475nm,25.9s
ESK Eskdalemuir 78.18 36 *i* P P 19 36 10.5 +0.2
ESK Eskdalemuir 78.18 36⇓*i*P P 19 36 09.8 -0.5
comp=Z,156nm,0.9s
ESK Eskdalemuir 78.18 36 P P 19 36 10.4 +0.2
comp=Z,900nm,0.9s,SNR=30
PGAV Gavieira, Arco 78.19 50 eP P 19 36 11.2 +0.5
comp=Z,101nm,2.3s
PGAV *epP* **pP 19 36 31.2 +3.2**
PGAV *eS* **S 19 46 01.5 +0.7**
PGAV *eLQ* LQ 19 56 36.4
PGAV *eLR* LR 20 00 01.5
comp=Z,456nm,20.0s
ECK Cauldkaine Hil 78.25 36⇓iP P 19 36 10.3 -0.4
ECK Cauldkaine Hil 78.25 36 P P 19 36 10.3 -0.4
WPM1 Penmaenmawr 78.30 38⇓eP P 19 36 10.6 -0.4
WPM1 Penmaenmawr 78.30 38 P P 19 36 10.6 -0.4
LIS Lisbon 78.31 53 eP P 19 36 10.9 -0.4
LIS AMb AMB 19 36 14.3
comp=Z,232nm,1.5s
LIS *eS* **S 19 46 01.2 -0.7**
LIS Lisbon 78.31 53 eP P 19 36 10.9 -0.4
comp=Z,232nm,1.5s
LIS *eS* **S 19 46 01.2 -0.7**
LIS Lisbon 78.31 53 eP P 19 36 10.8 -0.4
LIS *eS* **S 19 46 01.2 -0.7**
ESY Stoneypath 78.35 35⇓iP P 19 36 11.2 0.0
ESY Stoneypath 78.35 35 P P 19 36 11.2 0.0
KESW Keswick, Cumbr 78.42 36⇓eP P 19 36 11.5 -0.1
KESW AMB AMB 19 36 12.4
comp=Z,90nm,1.3s
KESW AMS AMS 20 05 24.1
comp=Z,481nm,32.2s
KESW Keswick, Cumbr 78.42 36 P P 19 36 11.5 -0.1
KESW AMB AMB 19 36 12.4
comp=Z,90nm,1.3s
KESW AMS AMS 20 05 24.1
comp=Z,481nm,32.2s
PCAB Cabril 78.42 50 eP P 19 36 11.9 -0.1
comp=Z,146nm,1.9s
PCAB *epP* **pP 19 36 33.8 +4.5**
HTL Hartland 78.52 40⇓eP P 19 36 12.7 +0.4
HTL AMB AMB 19 36 13.4
comp=Z,182nm,1.5s
HTL AMS AMS 20 06 59.3
comp=Z,650nm,22.7s
HTL Hartland 78.52 40 P P 19 36 12.7 +0.4
HTL AMB AMB 19 36 13.4
comp=Z,182nm,1.5s
HTL AMS AMS 20 06 59.3
comp=Z,650nm,22.7s
ALMR Almeirim 78.63 52 eP P 19 36 12.6 -0.5
ALMR Almeirim 78.63 52 eP P 19 36 12.6 -0.5
ALMR Almeirim 78.63 52 eP P 19 36 12.6 -0.5
PTOM Tomar 78.65 52 eP P 19 36 13.8 +0.6
comp=Z,255nm,1.1s
POLO Lamas de Olo 78.67 50 eP P 19 36 13.6 +0.2
comp=Z,50nm,2.1s
POLO *epP* **pP 19 36 33.8 +3.1**
PVRL Vila Real 78.75 50 eP P 19 36 14.2 +0.4
comp=Z,82nm,1.7s
PVIS Viseu 78.76 51 eP P 19 36 14.2 +0.3
comp=Z,121nm,1.0s
PVIS *epP* **pP 19 36 35.6 +4.4**
XAL Allendale 78.84 36 eP P 19 36 13.9 0.0
XAL Allendale 78.84 36 P P 19 36 13.9 0.0
PTEO Sao Teotonio 78.92 54 eP P 19 36 15.6 +0.9
comp=Z,280nm,1.5s
PTEO *epP* pP 19 36 37.3 +5.3
HEX Exmoor 78.92 40⇓eP P 19 36 14.4 -0.1
HEX Exmoor 78.92 40 P P 19 36 14.4 -0.1
PNCL Nicolau / Gran 78.93 53 eP P 19 36 15.3 +0.6
comp=Z,95nm,1.1s
PFVI Vila Bisbo 78.94 55 eP P 19 36 15.8 +1.0
comp=Z,364nm,1.4s
MORF Marmelete 79.03 54 eP P 19 36 16.2 +0.8
comp=Z,132nm,1.0s
MORF *epP* **pP 19 36 37.1 +4.4**
MORF Marmelete 79.03 54 eP P 19 36 14.8 -0.6
MORF *eS* **S 19 46 09.1 -0.8**
HLM1 Long Mynd 79.09 38⇓eP P 19 36 15.0 -0.4
HLM1 AMB AMB 19 36 16.9
comp=Z,158nm,1.1s
HLM1 Long Mynd 79.09 38 P P 19 36 15.0 -0.4
HLM1 AMB AMB 19 36 16.9
comp=Z,158nm,1.1s
MTE Manteigas 79.10 51 eP P 19 36 15.7 0.0
comp=Z,197nm,1.2s
MTE *eS* **S 19 46 10.9 +0.4**
MTE *eLQ* LQ 19 57 23.2
MTE *eLR* LR 20 02 13.9
comp=Z,504nm,20.0s
MTE Manteigas 79.10 51⇓iP P 19 36 15.3 -0.4
comp=Z,123nm,1.0s
EVOP Sao Brissos 79.13 53⇓iP P 19 36 16.2 +0.3
EVOP *pmax* pmax
comp=Z,371nm,1.1s
EVOP Sao Brissos 79.13 53⇓iP P 19 36 16.2 +0.3
comp=Z,371nm,1.1s
EVO Evora 79.21 53⇓iP P 19 36 16.2 -0.1
comp=Z,371nm,1.1s
EVO *eR*
comp=Z,642nm,21.8s
EVO Evora 79.21 53 eP P 19 36 17.0 +0.7
comp=Z,194nm,1.3s
EVO *epP* **pP 19 36 37.8 +4.2**
MESJ Messejana 79.23 54 eP P 19 36 16.0 -0.4
MESJ AMb AMB 19 36 19.3
comp=Z,150nm,1.4s
MESJ *eS* **S 19 46 11.0 -0.8**
MESJ Messejana 79.23 54 eP P 19 36 16.0 -0.4
comp=Z,150nm,1.4s
MESJ *eS* **S 19 46 11.0 -0.8**
MESJ Messejana 79.23 54 eP P 19 36 15.9 -0.4
MESJ *eS* **S 19 46 10.9 -0.8**
MVO Moncorvo 79.28 50 eP P 19 36 17.2 +0.4
comp=Z,134nm,2.0s
MVO *epP* **pP 19 36 38.2 +4.1**
MVO *eS* **S 19 46 12.9 +0.5**
MVO *eLQ* LQ 19 57 15.0
MVO *eLR* LR 20 01 24.8
comp=Z,434nm,18.0s
STNC Stoke 79.33 38⇓eP P 19 36 16.1 -0.5
STNC AMB AMB 19 36 18.7
comp=Z,245nm,1.2s
STNC AMS AMS 20 13 08.7
comp=Z,458nm,16.5s
STNC Stoke 79.33 38 P P 19 36 16.1 -0.5
STNC AMB AMB 19 36 18.7
comp=Z,245nm,1.2s
STNC AMS AMS 20 13 08.7
comp=Z,458nm,16.5s
PBRG Braganca 79.33 50 eP P 19 36 16.9 -0.1
comp=Z,102nm,2.0s
PBRG *epP* **pP 19 36 38.0 +3.7**
PCVE Castro Verde 79.42 54 eP P 19 36 18.2 +0.7
comp=Z,186nm,1.2s
PCVE *epP* **pP 19 36 38.5 +3.7**
PESTR Estremoz 79.45 53 eP P 19 36 17.7 +0.1
comp=Z,146nm,1.3s
PESTR *epP* **pP 19 36 38.7 +3.8**
PBEJ Beja 79.45 53 eP P 19 36 18.5 +0.9
comp=Z,158nm,1.3s
PMRV Marv??o 79.46 52 eP P 19 36 18.0 +0.3
comp=Z,229nm,1.1s
PMRV *epP* **pP 19 36 39.0 +4.0**
PMRV *eS* **S 19 46 13.9 -0.3**
PMRV *eLQ* LQ 19 55 49.6
PMRV *eLR* LR 20 01 04.1
comp=Z,393nm,18.0s
PBDV Barranco-do-Ve 79.60 54 eP P 19 36 19.5 +1.0
comp=Z,236nm,1.3s
PBDV *epP* **pP 19 36 40.1 +4.3**
KBI1 Birley Grange 79.68 37⇓iP P 19 36 18.8 +0.3
KBI1 Birley Grange 79.68 37 P P 19 36 18.8 +0.3
PVAQ Vaqueiros 79.73 54 eP P 19 36 20.0 +0.9
comp=Z,231nm,1.2s
PVAQ *epP* **pP 19 36 41.1 +4.6**
PVAQ *eS* **S 19 46 17.3 +0.2**
PVAQ *eLQ* LQ 19 57 51.9
PVAQ *eLR* LR 20 01 14.2
comp=Z,286nm,22.0s
SSW Stow on the Wo 79.85 39⇓iP P 19 36 20.0 +0.5
SSW Stow on the Wo 79.85 39 P P 19 36 20.0 +0.5
ROSF Rostrenen 79.98 42⇓iP P 19 36 20.1 -0.2
comp=Z,73nm,0.9s
ROSF Rostrenen 79.98 42⇓iP P 19 36 20.1 -0.2
ROSF *pmax* pmax
comp=Z,73nm,0.9s
ROSF Rostrenen 79.98 42⇓iP P 19 36 20.1 -0.2
comp=Z,73nm,0.9s
SWN1 Swindon 80.01 39⇓eP P 19 36 20.8 +0.5
SWN1 AMB AMB 19 36 22.3
comp=Z,321nm,1.4s
SWN1 AMS AMS 20 08 21.8
comp=Z,640nm,23.6s
SWN1 Swindon 80.01 39 P P 19 36 20.8 +0.5
SWN1 AMB AMB 19 36 22.3
comp=Z,321nm,1.4s
SWN1 AMS AMS 20 08 21.8
comp=Z,640nm,23.6s
PBAR Barrancos 80.05 53 eP P 19 36 21.2 +0.4
comp=Z,165nm,1.3s
PBAR *epP* **pP 19 36 42.2 +4.0**
QUIF Quistinic 80.16 43⇓iP P 19 36 21.2 -0.1
comp=Z,128nm,0.8s
QUIF Quistinic 80.16 43⇓iP P 19 36 21.2 -0.1
QUIF *pmax* pmax
comp=Z,128nm,0.8s
QUIF Quistinic 80.16 43⇓iP P 19 36 21.2 -0.1
comp=Z,128nm,0.8s
WOL Wolverton 80.41 39 eP P 19 36 22.2 -0.3
WOL AMB AMB 19 36 24.3
comp=Z,311nm,1.6s
WOL AMS AMS 20 08 33.1
comp=Z,631nm,26.8s
WOL Wolverton 80.41 39 P P 19 36 22.2 -0.3
WOL AMB AMB 19 36 24.3
comp=Z,311nm,1.6s
WOL AMS AMS 20 08 33.1
comp=Z,631nm,26.8s
JSA Saint Aubin 80.44 41⇓eP P 19 36 23.1 +0.4
JSA AMB AMB 19 36 23.9
comp=Z,108nm,1.2s
JSA AMS AMS 20 15 01.6
comp=Z,531nm,16.0s
JSA Saint Aubin 80.44 41 P P 19 36 23.1 +0.4
JSA AMB AMB 19 36 23.9
comp=Z,108nm,1.2s
JSA AMS AMS 20 15 01.6
comp=Z,531nm,16.0s
SGMF Saint Gilles 80.46 42⇓iP P 19 36 22.5 -0.4
comp=Z,273nm,1.4s
SGMF *epP* **pP 19 36 43.2 +3.0**
SGMF Saint Gilles 80.46 42⇓iP P 19 36 22.5 -0.4
SGMF *e*PP **pP 19 36 43.2 +3.0**
SGMF pmax pmax
comp=Z,273nm,1.4s
SGMF Saint Gilles 80.46 42⇓iP P 19 36 22.5 -0.4
comp=Z,273nm,1.4s
SGMF *epP* **pP 19 36 43.2 +3.0**
SKP1 Kophill 80.54 39⇓eP P 19 36 22.8 -0.4
SKP1 Kophill 80.54 39 P P 19 36 22.8 -0.4
BER Bergen 80.99 29⇓iP P 19 36 25.2 -0.2
BER AMB AMB 19 36 28.6
comp=Z,177nm,2.9s
BER *eS* **S 19 46 31.5 +2.2**
BER AMS AMS 20 07 12.7
comp=Z,662nm,31.3s
HYA Hoyanger 81.10 28 eP P 19 36 26.3 +0.3
LOF Lofoten 81.14 21 eP P 19 36 25.5 -0.5
LOF AMB AMB 19 36 26.6
comp=Z,259nm,2.4s
GRR Gorron 81.51 42⇓iP P 19 36 28.6 +0.2
comp=Z,253nm,1.0s
GRR *epP* **pP 19 36 49.3 +3.5**
GRR Gorron 81.51 42⇓iP P 19 36 28.6 +0.2
GRR *e*PP **pP 19 36 49.3 +3.5**
GRR pmax pmax
comp=Z,253nm,1.0s
GRR Gorron 81.51 42⇓iP P 19 36 28.6 +0.2
comp=Z,253nm,1.0s
GRR *epP* **pP 19 36 49.3 +3.5**
FLN La Foliniere 81.63 41⇓iP P 19 36 29.4 +0.3
comp=Z,278nm,0.9s
FLN *epP* **pP 19 36 50.2 +3.8**
FLN *eR*
comp=Z,799nm,20.0s
FLN La Foliniere 81.63 41⇓iP P 19 36 29.4 +0.3
FLN *e*PP **pP 19 36 50.2 +3.8**
FLN pmax pmax
comp=Z,278nm,0.9s
FLN La Foliniere 81.63 41⇓iP P 19 36 29.4 +0.3
comp=Z,278nm,0.9s
FLN *epP* **pP 19 36 50.2 +3.8**
PAB San Pablo 81.69 51⇓iP P 19 36 29.9 +0.2
PAB *e* 19 36 51.0
PAB pmax pmax
comp=Z,135nm,1.1s
PAB San Pablo 81.69 51⇓iP P 19 36 29.9 +0.2
comp=Z,135nm,1.1s
PAB *e* **pP 19 36 51.0 +3.9**
ODD1 Odda 81.76 29 eP P 19 36 29.0 -0.6
STOK Stokkvaagen 81.77 22 eP P 19 36 31.4 +2.0
STEI Steigen 81.80 20 eP P 19 36 30.9 +1.4
STEI AMB AMB 19 36 33.5
comp=Z,294nm,0.8s
ELSH Elham, Standar 81.87 39 eP P 19 36 30.0 -0.2
ELSH AMB AMB 19 36 32.7
comp=Z,222nm,1.1s
ELSH AMS AMS 20 06 48.4
comp=Z,425nm,32.5s
ELSH Elham, Standar 81.87 39 P P 19 36 30.0 -0.2
ELSH AMB AMB 19 36 32.7
comp=Z,222nm,1.1s
ELSH AMS AMS 20 06 48.4
comp=Z,425nm,32.5s
FLOS Flostrand 81.89 22 eP P 19 36 32.0 +1.9
FLOS AMB AMB 19 36 34.3
comp=Z,630nm,1.8s
LDF La Druitiere 81.91 42⇓iP P 19 36 30.7 +0.2
comp=Z,214nm,0.9s
LDF La Druitiere 81.91 42⇓iP P 19 36 30.7 +0.2
LDF pmax pmax
comp=Z,214nm,0.9s
LDF La Druitiere 81.91 42⇓iP P 19 36 30.7 +0.2
comp=Z,214nm,0.9s
ESDC Sonseca Array 81.94 51 P P 19 36 31.4 +0.5
ESDC sP **sP 19 36 53.1 -2.2**
ESDC Sonseca Array 81.94 51 P P 19 36 31.4 +0.5
comp=Z,40nm,1.0s,baz=304,slow=4.9,SNR=119
ESDC sP **sP 19 36 53.1 -2.2**
comp=Z,2.9nm,0.6s,baz=304,slow=5.5,SNR=2.0
ESLA Sonseca Array 81.94 51⇓iP P 19 36 31.0 0.0
comp=Z,24nm,1.2s
TRO Tromso 82.11 18⇓iP P 19 36 32.1 +0.9
TRO AMB AMB 19 36 35.4
comp=Z,456nm,1.1s
TRO AMS AMS 20 06 44.0
comp=Z,546nm,28.4s
SEY Seymchan 82.41 334⇓eP P 19 36 33.7 +0.9
MFF Saint Martin d 82.52 43⇓iP P 19 36 33.8 0.0
comp=Z,180nm,1.2s
MFF *epP* **pP 19 36 54.7 +3.5**
MFF Saint Martin d 82.52 43⇓iP P 19 36 33.8 0.0
MFF *e*PP **pP 19 36 54.7 +3.5**
MFF pmax pmax
comp=Z,180nm,1.2s
MFF Saint Martin d 82.52 43⇓iP P 19 36 33.8 0.0
comp=Z,180nm,1.2s
MFF *epP* **pP 19 36 54.7 +3.5**
OSSF Osses 82.81 47⇓eP P 19 36 35.4 0.0
OSSF Osses 82.81 47⇓eP P 19 36 35.4 0.0
SJPF Ste Jean 82.88 47⇓iP P 19 36 35.8 0.0
comp=Z,103nm,1.0s
SJPF Ste Jean 82.88 47⇓iP P 19 36 35.8 0.0
SJPF pmax pmax
comp=Z,103nm,1.0s
SJPF Ste Jean 82.88 47⇓iP P 19 36 35.8 0.0
comp=Z,103nm,1.0s
LARF Larrau 83.07 47⇓eP P 19 36 37.8 +1.0
LARF Larrau 83.07 47⇓eP P 19 36 37.8 +1.0
PET Petropavlovsk 83.22 324k iP P 19 36 38.0 +0.8
PET *e*SP **sP 19 36 59.8 -1.8**
PET *e* 19 39 55.1
PET *eS* **S 19 46 53.0 +0.4**
PET *ePS* **PnS 19 47 51.7 +0.9**
PET *ePPS* PPS 19 48 14.2
PET *eSS* **SS 19 52 23.6 +6.0**
PET pmax pmax
comp=Z,1μm,3.7s
PET pmax pmax
comp=Z,500nm,7.3s
PET pmax pmax
comp=Z,180nm,0.9s
PET smax smax
comp=N,300nm,12.5s
PET MLR MLR
comp=Z,300nm,16.0s
KONO Kongsberg 83.25 29⇓iP P 19 36 37.1 -0.2
KONO AMB AMB 19 36 41.9
comp=Z,667nm,1.9s
KONO *eS* **S 19 46 54.8 +2.1**
KONO AMS AMS 20 07 14.2
comp=Z,577nm,32.7s
KONO Kongsberg 83.25 29⇓iP P 19 36 38.2 +1.0
KONO *e* 19 36 58.7
KONO pmax pmax
comp=Z,626nm,1.3s
KONO Kongsberg 83.25 29⇓iP P 19 36 38.2 +1.0
comp=Z,626nm,1.3s
KONO *e* **pP 19 36 58.7 +4.0**
NA001 NORSAR Array S 83.33 28⇓eP P 19 36 38.7 +1.0
comp=Z,307nm,1.3s
NB2 NORSAR Subarra 83.39 27 P P 19 36 39.1 +1.1
comp=Z,429nm,1.1s,baz=298,slow=5.3
NB2 NORSAR Subarra 83.39 27 P P 19 36 39.1 +1.1
baz=298,slow=5.3
NOA NORSAR Array B 83.39 27 P P 19 36 39.7 +1.6
NOA NORSAR Array B 83.39 27 P P 19 36 39.7 +1.6
comp=Z,164nm,0.9s,baz=299,slow=5.2,SNR=259
NOA LR LR 20 17 11.6

comp=Z,162nm,18.1s,baz=300,slow=38
ETSF Etsaut 83.41 47⇓*i*P P 19 36 38.9 +0.3
comp=Z,160nm,0.9s
ETSF Etsaut 83.41 47⇓*i*P P 19 36 38.9 +0.3
ETSF pmax pmax
comp=Z,160nm,0.9s
ETSF Etsaut 83.41 47⇓*i*P P 19 36 38.9 +0.3
comp=Z,160nm,0.9s
REYF Montagne du Re 83.47 47⇓*e*P P 19 36 39.3 +0.4
REYF Montagne du Re 83.47 47⇓*e*P P 19 36 39.3 +0.4
LFF La Frestale 83.64 45⇓*i*P P 19 36 39.7 +0.1
comp=Z,205nm,0.9s
LFF *ep*P **pP 19 37 00.5 +3.5**
LFF La Frestale 83.64 45⇓*i*P P 19 36 39.7 +0.1
LFF *e**PP **pP 19 37 00.5 +3.5**
LFF pmax pmax
comp=Z,205nm,0.9s
LFF La Frestale 83.64 45⇓*i*P P 19 36 39.7 +0.1
comp=Z,205nm,0.9s
LFF *ep*P **pP 19 37 00.5 +3.5**
NC602 NORSAR Array S 83.66 28⇓*i*P P 19 36 40.5 +1.2
PEA0B Petropavlovsk- 83.73 324⇓*i*P P 19 36 40.7 +0.8
PETK Petropavlovsk- 83.73 324 P P 19 36 41.2 +1.3
PETK pmax pmax
comp=Z,428nm,1.0s
PETK Petropavlovsk- 83.73 324 P P 19 36 41.2 +1.3
PETK Petropavlovsk- 83.73 324 P P 19 36 41.2 +1.3
comp=Z,428nm,1.0s,baz=87,slow=9.5,SNR=372
PETK LR LR 20 13 54.5
comp=Z,189nm,21.0s,baz=263,slow=36
KTK1 Kautokeino 83.73 18⇓*i*P P 19 36 37.7 -1.9
KTK1 AMB AMB 19 36 40.8
comp=Z,911nm,1.6s
KTK1 *e*SKS **S 19 46 56.5 -0.7**
KTK1 AMS AMS 20 06 21.6
comp=Z,2μm,34.4s
LABF Labassere 83.80 47⇓*e*P P 19 36 40.9 +0.3
LABF Labassere 83.80 47⇓*e*P P 19 36 40.9 +0.3
VIEF Viey 83.82 47⇓*e*P P 19 36 41.6 +0.9
VIEF Viey 83.82 47⇓*e*P P 19 36 41.6 +0.9
UCC Uccle 83.91 38 P P 19 36 42.0 +1.1
comp=Z,68nm,1.6s
EPF Esparros 83.99 47⇓*i*P P 19 36 41.6 +0.1
comp=Z,98nm,0.9s
EPF Esparros 83.99 47⇓*i*P P 19 36 41.6 +0.1
EPF pmax pmax
comp=Z,98nm,0.9s
EPF Esparros 83.99 47⇓*i*P P 19 36 41.6 +0.1
comp=Z,98nm,0.9s
RJF Les Rejaudoux 84.04 44⇓*i*P P 19 36 41.6 0.0
comp=Z,221nm,1.0s
RJF *e*R
comp=Z,492nm,20.0s
RJF Les Rejaudoux 84.04 44⇓*i*P P 19 36 41.6 0.0
RJF pmax pmax
comp=Z,221nm,1.0s
RJF Les Rejaudoux 84.04 44⇓*i*P P 19 36 41.6 0.0
comp=Z,221nm,1.0s
RESF Ens 84.06 47⇓*e*P P 19 36 42.9 +0.9
RESF Ens 84.06 47⇓*e*P P 19 36 42.9 +0.9
ARCES ARCESS Array B 84.07 17 P P 19 36 42.1 +0.8
ARCES PP **PP 19 39 51.3 -4.2**
ARCES ARCESS Array B 84.07 17 P P 19 36 42.1 +0.8
comp=Z,227nm,0.9s,baz=309,slow=6.1,SNR=402
ARCES PP **PP 19 39 51.3 -4.2**
comp=Z,4.5nm,0.7s,baz=312,slow=12,SNR=3.7
ARCES LR LR 20 15 45.8
comp=Z,671nm,21.7s,baz=313,slow=37
ARE0 ARCESS Array S 84.07 17⇓*i*P P 19 36 41.2 -0.1
ARE0 *e*SKS **S 19 46 59.0 -1.7**
ARE0 ARCESS Array S 84.07 17⇓*i*P P 19 36 40.9 -0.4
BAIF Baives 84.09 39⇓*i*P P 19 36 42.1 +0.3
comp=Z,474nm,1.3s
BAIF *ep*P **pP 19 37 03.0 +3.8**
BAIF Baives 84.09 39⇓*i*P P 19 36 42.1 +0.3
BAIF *e**PP **pP 19 37 03.0 +3.8**
BAIF pmax pmax
comp=Z,474nm,1.3s
BAIF Baives 84.09 39⇓*i*P P 19 36 42.1 +0.3
comp=Z,474nm,1.3s
BAIF *ep*P **pP 19 37 03.0 +3.8**
HYF Humbligny 84.10 42⇓*i*P P 19 36 42.1 +0.2
HYF Humbligny 84.10 42⇓*i*P P 19 36 42.1 +0.2
TCF Toulx Ste Croi 84.16 43⇓*i*P P 19 36 42.1 -0.2
comp=Z,206nm,1.1s
TCF *ep*P **pP 19 37 02.9 +3.2**
TCF Toulx Ste Croi 84.16 43⇓*i*P P 19 36 42.1 -0.2
TCF *e**PP **pP 19 37 02.9 +3.2**
TCF pmax pmax
comp=Z,206nm,1.1s
TCF Toulx Ste Croi 84.16 43⇓*i*P P 19 36 42.1 -0.2
comp=Z,206nm,1.1s
TCF *ep*P **pP 19 37 02.9 +3.2**
DOU Dourbes 84.31 39 P P 19 36 43.5 +0.7
comp=Z,68nm,1.4s
DOU AP **pP 19 37 05.4 +5.1**
MELF Melles 84.33 47⇓*e*P P 19 36 43.6 +0.3
MELF Melles 84.33 47⇓*e*P P 19 36 43.6 +0.3
KEV Kevo 84.34 17⇓*i*P P 19 36 42.3 -0.4
KEV *e* 19 37 03.4
KEV *e* 19 39 52.7
KEV pmax pmax
comp=Z,251nm,1.0s
KEV Kevo 84.34 17 *ep* P 19 36 41.6 -1.1
comp=Z,89nm,0.8s
KEV Kevo 84.34 17⇓*i*P P 19 36 42.3 -0.4
comp=Z,251nm,1.0s
KEV *e* **pP 19 37 03.4 +3.3**
KEV *e*PP **PP 19 39 52.6 -5.0**
MUD Monsted U'grnd 84.36 32⇓*i*P P 19 36 44.3 +1.3
MUD pmax pmax
comp=Z,98nm,1.1s
MUD Monsted U'grnd 84.36 32⇓*i*P P 19 36 44.3 +1.3
comp=Z,98nm,1.1s
GIVF Givet 84.44 39⇓*i*P P 19 36 44.0 +0.4
comp=Z,902nm,1.7s
GIVF Givet 84.44 39⇓*i*P P 19 36 44.0 +0.4
GIVF Givet 84.44 39⇓*i*P P 19 36 44.0 +0.4
comp=Z,902nm,1.7s
BGF Bois d'Agland 84.48 43⇓*i*P P 19 36 43.7 -0.2
comp=Z,323nm,1.2s
BGF Bois d'Agland 84.48 43⇓*i*P P 19 36 43.7 -0.2
BGF pmax pmax
comp=Z,323nm,1.3s
BGF Bois d'Agland 84.48 43⇓*i*P P 19 36 43.7 -0.2
comp=Z,323nm,1.3s
CAF Calviac 84.53 45⇓*i*P P 19 36 44.1 -0.1
comp=Z,105nm,1.2s
CAF Calviac 84.53 45⇓*i*P P 19 36 44.1 -0.1
CAF pmax pmax
comp=Z,105nm,1.2s
CAF Calviac 84.53 45⇓*i*P P 19 36 44.1 -0.1
comp=Z,105nm,1.2s
MLS Moulis 84.54 47⇓*e*P P 19 36 44.6 +0.4
MLS Moulis 84.54 47⇓*e*P P 19 36 44.6 +0.4
BCLA Clavier 84.61 39 P P 19 36 45.0 +0.7
comp=Z,155nm,1.7s
BCLA AP **pP 19 37 04.9 +3.1**
BEBN Eben Emael 84.69 38 P P 19 36 45.6 +0.9
comp=Z,76nm,1.5s
BEBN AP **pP 19 37 06.6 +4.4**
FRNF Fournols 84.70 44⇓*e*P P 19 36 45.7 +0.7
FRNF Fournols 84.70 44⇓*e*P P 19 36 45.7 +0.7
AVF Avril sur Loir 84.72 42⇓*i*P P 19 36 44.6 -0.5
comp=Z,146nm,1.0s
AVF Avril sur Loir 84.72 42⇓*i*P P 19 36 44.6 -0.5
AVF pmax pmax
comp=Z,146nm,1.0s
AVF Avril sur Loir 84.72 42⇓*i*P P 19 36 44.6 -0.5
comp=Z,146nm,1.0s
SSF Saint Saulge 84.72 42⇓*i*P P 19 36 44.9 -0.2
comp=Z,406nm,1.3s
SSF *ep*P **pP 19 37 05.9 +3.3**
SSF Saint Saulge 84.72 42⇓*i*P P 19 36 44.9 -0.2
SSF *e**PP **pP 19 37 05.9 +3.3**
SSF Saint Saulge 84.72 42⇓*i*P P 19 36 44.9 -0.2
comp=Z,406nm,1.3s
SSF *ep*P **pP 19 37 05.9 +3.3**
AGO Saint Agoulin 84.84 43⇓*e*P P 19 36 45.7 0.0
AGO Saint Agoulin 84.84 43⇓*e*P P 19 36 45.7 0.0
HGN Heimansgroeve 84.85 38 *e*P P 19 36 46.3 +0.7
comp=Z,306nm,1.1s
HGN *ep*P **pP 19 37 07.5 +4.5**
HGN *e*S **S 19 47 06.7 -2.3**
HGN *e*SS **SS 19 52 41.6 -0.1**

PYM Petit Puy Mans 84.87 44⇓*e*P P 19 36 46.3 +0.4
PYM Petit Puy Mans 84.87 44⇓*e*P P 19 36 46.3 +0.4
PYM Petit Puy Mans 84.87 44⇓*e*P P 19 36 46.3 +0.4
LOR Lormes 84.88 42⇓*i*P P 19 36 45.9 0.0
comp=Z,412nm,1.0s
LOR *ep*P **pP 19 37 06.9 +3.6**
LOR *e*R
comp=Z,608nm,20.0s
LOR Lormes 84.88 42⇓*i*P P 19 36 45.9 0.0
comp=Z,412nm,1.0s
LOR *ep*P **pP 19 37 06.9 +3.6**
HFS Hagfors 84.89 28 P P 19 36 46.1 +0.5
HFS Hagfors 84.89 28 P P 19 36 46.1 +0.5
comp=Z,43nm,0.9s,baz=298,slow=3.1,SNR=8.5
MEM Membach 84.95 38 P P 19 36 46.7 +0.6
comp=Z,124nm,1.5s
MEM AP **pP 19 37 08.0 +4.4**
MEM PKPbc 20 08 38.1
MEM PKPab 20 08 47.3
SMF Signal de Mont 85.09 43⇓*i*P P 19 36 46.5 -0.4
comp=Z,194nm,1.3s
SMF *ep*P **pP 19 37 07.5 +3.1**
SMF Signal de Mont 85.09 43⇓*i*P P 19 36 46.5 -0.4
SMF *e**PP **pP 19 37 07.5 +3.1**
SMF pmax pmax
comp=Z,194nm,1.3s
SMF Signal de Mont 85.09 43⇓*i*P P 19 36 46.5 -0.4
comp=Z,194nm,1.3s
SMF *ep*P **pP 19 37 07.5 +3.1**
MEZF Maizieres J'vi 85.17 40⇓*i*P P 19 36 47.6 +0.3
comp=Z,508nm,1.3s
MEZF *ep*P **pP 19 37 08.5 +3.8**
MEZF Maizieres J'vi 85.17 40⇓*i*P P 19 36 47.6 +0.3
comp=Z,508nm,1.3s
MEZF *ep*P **pP 19 37 08.5 +3.8**
MTLF Montolieu 85.18 46⇓*i*P P 19 36 47.5 +0.1
comp=Z,275nm,1.1s
MTLF Montolieu 85.18 46⇓*i*P P 19 36 47.5 +0.1
MTLF pmax pmax
comp=Z,275nm,1.1s
MTLF Montolieu 85.18 46⇓*i*P P 19 36 47.5 +0.1
comp=Z,275nm,1.1s
LBL Lubilhac 85.21 44 *e*P P 19 36 48.5 +0.9
LBL Lubilhac 85.21 44 *e*P P 19 36 48.5 +0.9
LBL Lubilhac 85.21 44 *e*P P 19 36 48.5 +0.9
SFTF Sexfontaines 85.27 41⇓*i*P P 19 36 47.9 +0.1
comp=Z,437nm,1.4s
SFTF *ep*P **pP 19 37 08.7 +3.4**
SFTF Sexfontaines 85.27 41⇓*i*P P 19 36 47.9 +0.1
comp=Z,437nm,1.4s
SFTF *ep*P **pP 19 37 08.7 +3.4**
IBBN Ibbenburen 85.30 36 *e*P P 19 36 48.7 +0.9
comp=Z,295nm,1.4s
CARF Carcanieres 85.32 47⇓*e*P P 19 36 48.5 +0.2
CARF Carcanieres 85.32 47⇓*e*P P 19 36 48.5 +0.2
BUG Bochum-Univer 85.36 37 *e*P P 19 36 48.9 +0.8
comp=Z,322nm,1.6s
VALF Valcebollere 85.37 47⇓*e*P P 19 36 49.5 +0.9
VALF Valcebollere 85.37 47⇓*e*P P 19 36 49.5 +0.9
WLF Walferdange 85.40 39 *e*P P 19 36 49.2 +0.8
comp=Z,264nm,1.2s
WLF Walferdange 85.40 39⇓*i*P P 19 36 48.9 +0.5
WLF *e* 19 37 09.9
WLF pmax pmax
comp=Z,378nm,1.5s
WLF Walferdange 85.40 39⇓*i*P P 19 36 48.9 +0.5
comp=Z,378nm,1.5s
WLF *e* **pP 19 37 09.9 +4.0**
LRDF Laroque-de-Fa 85.54 46⇓*e*P P 19 36 49.8 +0.5
LRDF Laroque-de-Fa 85.54 46⇓*e*P P 19 36 49.8 +0.5
SKR Severo-Kuril's 85.56 322 *e*P P 19 36 43.5 -5.6
SKR S **S 19 47 12.0 -4.0**
SKR pmax pmax
comp=Z,220nm,1.0s
SKR smax smax
comp=E,1μm,6.0s
SKR smax smax
comp=N,2μm,0.6s
SKR MLR MLR
comp=Z,900nm,18.0s
PAGF Fort de Pagny 85.57 40⇓*i*P P 19 36 49.6 +0.4
comp=Z,162nm,1.5s
PAGF *ep*P **pP 19 37 10.5 +3.8**
PAGF Fort de Pagny 85.57 40⇓*i*P P 19 36 49.6 +0.4
comp=Z,162nm,1.5s
PAGF *ep*P **pP 19 37 10.5 +3.8**
FILF Fillols 85.69 47⇓*e*P P 19 36 50.1 0.0
FILF Fillols 85.69 47⇓*e*P P 19 36 50.1 0.0
THEF They Montfort 85.85 40⇓*e*P P 19 36 51.3 +0.6
THEF They Montfort 85.85 40⇓*e*P P 19 36 51.3 +0.6
THEF They Montfort 85.85 40⇓*e*P P 19 36 51.3 +0.6
RUP Ruppelstein 85.93 39⇓*e*P P 19 36 52.1 +1.0
RUP Ruppelstein 85.93 39⇓*e*P P 19 36 52.1 +1.0
SJAF Saint Jean de 85.94 47⇓*e*P P 19 36 51.6 +0.4
SJAF Saint Jean de 85.94 47⇓*e*P P 19 36 51.6 +0.4
BSEG Bad Segeberg 86.02 34 *e*P P 19 36 52.3 +1.0
comp=Z,568nm,2.0s
BSEG Bad Segeberg 86.02 34 *e*P P 19 36 52.3 +1.0
BSEG pmax pmax
comp=Z,568nm,2.0s
LASF Ste Croix 86.03 45⇓*i*P P 19 36 52.2 +0.5
comp=Z,481nm,1.2s
LASF *ep*P **pP 19 37 13.3 +4.1**
LASF Ste Croix 86.03 45⇓*i*P P 19 36 52.2 +0.5
comp=Z,481nm,1.2s
LASF *ep*P **pP 19 37 13.3 +4.1**
SSB Saint Sauveur 86.04 44⇓*i*P P 19 36 51.6 -0.1
SSB pmax pmax
comp=Z,51nm,1.0s
SSB Saint Sauveur 86.04 44⇓*i*P P 19 36 51.6 -0.1
comp=Z,51nm,1.0s
SSB Saint Sauveur 86.04 44⇓*e*P P 19 36 52.3 +0.6
ABH Alteburg 86.15 39⇓*e*P P 19 36 52.9 +0.8
HAU Haudompre 86.16 41⇓*i*P P 19 36 52.2 0.0
comp=Z,243nm,1.1s
HAU *ep*P **pP 19 37 13.2 +3.4**
HAU *e*R
comp=Z,471nm,19.2s
HAU Haudompre 86.16 41⇓*i*P P 19 36 52.2 0.0
HAU *e**PP **pP 19 37 13.2 +3.4**
HAU pmax pmax
comp=Z,243nm,1.1s
HAU Haudompre 86.16 41⇓*i*P P 19 36 52.2 0.0
comp=Z,243nm,1.1s
HAU *ep*P **pP 19 37 13.2 +3.4**
VIVF Saint-Julien-l 86.29 44⇓*i*P P 19 36 53.1 +0.2
comp=Z,174nm,1.3s
VIVF *ep*P **pP 19 37 14.2 +3.7**
VIVF Saint-Julien-l 86.29 44⇓*i*P P 19 36 53.1 +0.2
VIVF *e**PP **pP 19 37 14.2 +3.7**
VIVF pmax pmax
comp=Z,174nm,1.3s
VIVF Saint-Julien-l 86.29 44⇓*i*P P 19 36 53.1 +0.2
comp=Z,174nm,1.3s
VIVF *ep*P **pP 19 37 14.2 +3.7**
COP Copenhagen 86.34 32 *i*P P 19 36 53.6 +0.7
COP pmax pmax
comp=Z,25nm,1.0s
COP Copenhagen 86.34 32 *i*P P 19 36 53.6 +0.7
comp=Z,25nm,0.9s
NRDL Niedersach Rie 86.53 36 *e*P P 19 36 54.0 +0.2
comp=Z,56nm,1.3s
CABF La Chapelle 86.54 42⇓*i*P P 19 36 54.1 -0.1
comp=Z,225nm,1.6s
CABF La Chapelle 86.54 42⇓*i*P P 19 36 54.1 -0.1
CABF pmax pmax
comp=Z,225nm,1.6s
CABF La Chapelle 86.54 42⇓*i*P P 19 36 54.1 -0.1
comp=Z,225nm,1.6s
TNS Taunus Mts 86.54 38 *e*P P 19 36 54.6 +0.5
comp=Z,149nm,1.0s
TNS *es*P **sP 19 37 16.7 -1.8**
TNS Taunus Mts 86.54 38 *e*P P 19 36 54.6 +0.5
TNS *e**SP **sP 19 37 16.7 -1.8**
TNS pmax pmax
comp=Z,149nm,1.0s
HINF Hinteralfeld 86.55 41⇓*i*P P 19 36 53.7 -0.5
comp=Z,182nm,1.3s
HINF Hinteralfeld 86.55 41⇓*i*P P 19 36 53.7 -0.5
HINF pmax pmax
comp=Z,182nm,1.3s
HINF Hinteralfeld 86.55 41⇓*i*P P 19 36 53.7 -0.5
comp=Z,182nm,1.3s
CDF Champ du Feu 86.57 40⇓*i*P P 19 36 54.0 -0.3
comp=Z,106nm,1.0s

CDF *ep*P **pP 19 37 15.3 +3.4**
CDF Champ du Feu 86.57 40⇓*i*P P 19 36 54.0 -0.3
CDF *e**PP **pP 19 37 15.3 +3.4**
CDF pmax pmax
comp=Z,106nm,1.0s
CDF Champ du Feu 86.57 40⇓*i*P P 19 36 54.0 -0.3
comp=Z,106nm,1.0s
CDF *ep*P **pP 19 37 15.3 +3.4**
ECH Echery 86.58 40⇓*i*P P 19 36 54.0 -0.3
ECH *e* 19 37 14.9
ECH pmax pmax
comp=Z,104nm,1.4s
ECH Echery 86.58 40⇓*i*P P 19 36 54.0 -0.3
comp=Z,104nm,1.4s
ECH *e* **pP 19 37 14.9 +3.1**
ECH Echery 86.58 40⇓*e*P P 19 36 54.6 +0.3
LANF Langenberg 86.67 39 *e*P P 19 36 55.3 +0.6
LANF Langenberg 86.67 39 *e*P P 19 36 55.3 +0.6
LANF Langenberg 86.67 39 *e*P P 19 36 55.3 +0.6
MOF Molkenrain 86.71 41⇓*e*P P 19 36 55.2 +0.2
MOF Molkenrain 86.71 41⇓*e*P P 19 36 55.2 +0.2
MOF Molkenrain 86.71 41⇓*e*P P 19 36 55.2 +0.2
LOMF Lomont 86.72 41⇓*e*P P 19 36 55.2 +0.2
LOMF Lomont 86.72 41⇓*e*P P 19 36 55.2 +0.2
LOMF Lomont 86.72 41⇓*e*P P 19 36 55.2 +0.2
TOD Tromm 87.00 38 *e*P P 19 36 56.7 +0.4
TOD Tromm 87.00 38 *e*P P 19 36 56.7 +0.4
ORIF Oris-en-Rattie 87.06 44⇓*i*P P 19 36 56.8 0.0
comp=Z,46nm,1.0s
ORIF *e*R
comp=Z,468nm,19.8s
ORIF Oris-en-Rattie 87.06 44⇓*i*P P 19 36 56.8 0.0
ORIF pmax pmax
comp=Z,46nm,1.0s
ORIF Oris-en-Rattie 87.06 44⇓*i*P P 19 36 56.8 0.0
comp=Z,46nm,1.0s
BBS Basel-Blauen 87.09 41⇓*e*P P 19 36 56.8 0.0
BBS Basel-Blauen 87.09 41⇓*e*P P 19 36 56.8 0.0
UBBA Unterbreizbach 87.19 37 *e*P P 19 36 57.2 +0.2
comp=Z,460nm,3.2s
SMRF Simiane la Rot 87.22 45⇓*i*P P 19 36 58.3 +0.8
comp=Z,164nm,1.4s
SMRF *ep*P **pP 19 37 19.3 +4.2**
FELD Feldberg im Sc 87.23 40⇓*e*P P 19 36 57.6 0.0
FELD Feldberg im Sc 87.23 40⇓*e*P P 19 36 57.6 0.0
BFO Black Forest 87.25 40 *e*P P 19 36 57.0 -0.5
comp=Z,146nm,2.1s
BFO Black Forest 87.25 40 *e*P P 19 36 57.0 -0.5
BFO pmax pmax
comp=Z,146nm,2.1s
BFO Black Forest 87.25 40⇓*i*P P 19 36 56.8 -0.7
comp=Z,75nm,1.5s
BFO Black Forest 87.25 40 P P 19 36 57.3 -0.2
comp=Z,126nm,0.8s,SNR=13
LPL La Plagne 87.38 43⇓*i*P P 19 36 58.8 +0.3
comp=Z,87nm,1.2s
LPL La Plagne 87.38 43⇓*i*P P 19 36 58.8 +0.3
LPL pmax pmax
comp=Z,87nm,1.2s
LPL La Plagne 87.38 43⇓*i*P P 19 36 58.8 +0.3
comp=Z,87nm,1.2s
LPG La Plagne 87.40 43⇓*i*P P 19 36 59.1 +0.4
comp=Z,190nm,1.7s
LPG *ep*P **pP 19 37 20.3 +4.1**
LPG La Plagne 87.40 43⇓*i*P P 19 36 59.1 +0.4
LPG *e**PP **pP 19 37 20.3 +4.1**
LPG pmax pmax
comp=Z,190nm,1.7s
LPG La Plagne 87.40 43⇓*i*P P 19 36 59.1 +0.4
comp=Z,190nm,1.7s
LPG *ep*P **pP 19 37 20.3 +4.1**
APA Apatity 87.55 17⇓*i*P P 19 36 58.2 -0.3
APA *e*S **S 19 47 32.0 -2.7**
APA *i* PS PS 19 48 56.0 +12
APA pmax pmax
comp=Z,39nm,1.0s
APA MLR MLR
comp=Z,1μm,23.0s
STU Stuttgart 87.59 39 *e*P P 19 36 59.5 +0.4
comp=Z,67nm,1.1s
STU Stuttgart 87.59 39 *e*P P 19 36 58.9 -0.2
STU pmax pmax
comp=Z,33nm,0.8s
STU Stuttgart 87.59 39 *e*P P 19 36 58.9 -0.2
comp=Z,33nm,0.8s
SPAK Spaichingen-Ko 87.62 40⇓*e*P P 19 36 59.7 +0.3
LVZ Lovozero 87.65 16*d i*P P 19 36 57.9 -1.2
LVZ pmax pmax
comp=Z,104nm,1.0s
LVZ Lovozero 87.65 16 P P 19 36 58.1 -1.0
comp=Z,466nm,1.0s,SNR=13
MBDF Montbardon 87.72 44⇓*i*P P 19 37 00.0 0.0
comp=Z,27nm,0.7s
MBDF Montbardon 87.72 44⇓*i*P P 19 37 00.0 0.0
MBDF pmax pmax
comp=Z,27nm,0.7s
MBDF Montbardon 87.72 44⇓*i*P P 19 37 00.0 0.0
comp=Z,27nm,0.7s
BSD Bornholm Skovb 87.86 32 *i*P P 19 36 58.9 -1.4
BSD pmax pmax
comp=Z,27nm,1.1s
BSD Bornholm Skovb 87.86 32 *i*P P 19 36 58.9 -1.4
comp=Z,27nm,1.0s
LMR La Mourre 88.09 45⇓*i*P P 19 37 01.4 -0.2
comp=Z,98nm,1.2s
LMR La Mourre 88.09 45⇓*i*P P 19 37 01.4 -0.2
LMR pmax pmax
comp=Z,98nm,1.2s
LMR La Mourre 88.09 45⇓*i*P P 19 37 01.4 -0.2
comp=Z,98nm,1.2s
FRF La Foret Royal 88.09 45⇓*i*P P 19 37 01.4 -0.2
comp=Z,98nm,1.2s
FRF La Foret Royal 88.09 45⇓*i*P P 19 37 01.4 -0.2
FRF pmax pmax
comp=Z,98nm,1.2s
FRF La Foret Royal 88.09 45⇓*i*P P 19 37 01.4 -0.2
comp=Z,98nm,1.2s
CALN Calern 88.18 44 *e*P P 19 37 02.4 +0.2
CALN Calern 88.18 44 *e*P P 19 37 02.4 +0.2
CALN Calern 88.18 44 *e*P P 19 37 02.4 +0.2
MOX Moxa 88.19 37 *e*P P 19 37 02.3 +0.3
comp=Z,35nm,1.1s
MOX *e*L L 20 20 07.9
comp=N,365nm,20.5s
MOX Moxa 88.19 37 *e*P P 19 37 02.3 +0.3
MOX pmax pmax
comp=Z,35nm,1.1s
MOX MLR MLR
comp=N,400nm,20.5s
EMHD Djebel Mahouad 88.24 53 P P 19 37 04.0 +1.4
GRF Grafenberg Arr 88.39 38 *e*P P 19 37 03.3 +0.4
comp=Z,54nm,1.1s
GRF *e*L L 20 19 18.1
comp=N,174nm,20.3s
GRF Grafenberg Arr 88.39 38 *e*P P 19 37 03.3 +0.4
GRF pmax pmax
comp=Z,54nm,1.1s
GRF MLR MLR
comp=N,200nm,20.3s
AUTN L'Aution 88.44 44 *e*P P 19 37 03.5 -0.1
AUTN L'Aution 88.44 44 *e*P P 19 37 03.5 -0.1
AUTN L'Aution 88.44 44 *e*P P 19 37 03.5 -0.1
SBF Sospel 88.50 44⇓*i*P P 19 37 03.1 -0.5
comp=N,38nm,0.9s
SBF Sospel 88.50 44⇓*i*P P 19 37 03.1 -0.5
SBF pmax pmax
comp=Z,38nm,0.9s
SBF Sospel 88.50 44⇓*i*P P 19 37 03.1 -0.5
comp=Z,38nm,0.9s
SAOF Saorge 88.53 44⇓*e*P P 19 37 03.7 0.0
SAOF Saorge 88.53 44⇓*e*P P 19 37 03.7 0.0
SAOF Saorge 88.53 44⇓*e*P P 19 37 03.7 0.0
DAVA Damuels 88.64 40⇓*i*P P 19 37 04.7 +0.3
comp=Z,66nm,1.0s,SNR=26
TUE Stuetta 88.65 41⇓*i*P P 19 37 04.7 +0.2
comp=Z,22nm,0.9s
CLL Collm 88.67 36 *e*P P 19 37 04.2 +0.1
comp=Z,47nm,1.1s
CLL Collm 88.67 36⇓*i*P P 19 37 04.3 +0.1
CLL *e**SP **sP 19 37 25.0 -3.6**
CLL *e*S **ScS 19 47 49.0 -2.3**
CLL pmax pmax
comp=Z,52nm,1.2s
CLL MLR MLR
comp=Z,600nm,20.1s

CLL	**Collm**	**88.67**	**36**	⇓*i*P		**P**	**19 37 04.3**	**+0.1**	
	comp=Z,52nm,1.2s								
CLL				*ep*P		**pP**	**19 37 21.0**	**-0.7**	
CLL				*ep*PcP			19 37 25.0		
CLL				*es*P		**sP**	**19 37 29.0**	**+0.4**	
CLL				*e*PP		**PP**	**19 40 30.0**	**-3.0**	
CLL				*e*SKKSac		**SKKSac**	**19 47 35.0**	**-4.3**	
CLL				*e*(S)		**ScS**	**19 47 49.0**	**-2.3**	
CLL				*es*S		**sS**	**19 48 19.0**	**+3.3**	
CLL				*e*SP		**SPn**	**19 48 48.0**	**+0.2**	
CLL				*e*PS		**PnS**	**19 48 53.0**	**-3.4**	
CLL				*e*PPS		PPS	19 49 20.0		
CLL				*e*(SS)			19 53 31.0		
CLL				*es*SS			19 54 06.0		
CLL				*e*			19 54 28.0		
CLL				*e*SSSS			20 00 48.0		
				LmV			20 20 00.0		
	comp=Z,600nm,20.1s								
TANN	**Tannenbergstha**	**88.77**	**37**	*e*P		**P**	**19 37 04.8**	**0.0**	
	comp=Z,40nm,1.2s								
NKC	**Novy Kostel**	**88.85**	**37**	⇓*i*P		**P**	**19 37 05.7**	**+0.6**	
NKC				*e*			19 47 48.9		
NKC				MLR		MLR			
	comp=Z,400nm,15.3s								
NKC	**Novy Kostel**	**88.85**	**37**	⇓*i*P		**P**	**19 37 05.7**	**+0.6**	
NKC				*ex*		x	19 37 14.9		
NKC				*e*S		**S**	**19 47 48.9**	**+1.1**	
NKC				AMS		AMS	20 20 10.0		
	comp=Z,400nm,15.3s								
DAVOX	**Davos/Dischmat**	**88.85**	**41**	P		**P**	**19 37 06.2**	**+0.8**	
DAVOX	**Davos/Dischmat**	**88.85**	**41**	P		**P**	**19 37 06.2**	**+0.8**	
	comp=Z,11nm,0.9s,baz=309,slow=6.5,SNR=15								
ROTZ	**Rotzenmuhle**	**88.92**	**37**	*e*P		**P**	**19 37 05.3**	**-0.1**	
	comp=Z,33nm,1.2s								
KAF	**Kangasniemi**	**88.92**	**23**	*e*P		**P**	**19 37 02.7**	**-2.4**	
KAF				pmax		pmax			
	comp=Z,44nm,0.8s								
KAF	**Kangasniemi**	**88.92**	**23**	*ep*		**P**	**19 37 02.7**	**-2.4**	
	comp=Z,44nm,0.8s								
RETA	**Reutte**	**89.09**	**40**	⇓*i*P		**P**	**19 37 06.5**	**+0.1**	
	comp=Z,51nm,1.0s,SNR=32								
FUR	**Furstenfeldbru**	**89.10**	**39**	*e*P		**P**	**19 37 06.5**	**+0.2**	
	comp=Z,42nm,1.1s								
FUR	**Furstenfeldbru**	**89.10**	**39**	*e*P		**P**	**19 37 06.5**	**+0.2**	
FUR				pmax		pmax			
	comp=Z,42nm,1.1s								
FIA1	**FINESS Array S**	**89.26**	**23**	⇓*i*P		**P**	**19 37 05.8**	**-0.9**	
FIA1				*e*PP		**PP**	**19 40 32.3**	**-5.1**	
FINES	**FINESS Array B**	**89.26**	**23**	P		**P**	**19 37 06.2**	**-0.5**	
FINES				sP		**sP**	**19 37 28.9**	**-2.3**	
FINES				PP		**PP**	**19 40 36.4**	**-1.0**	
FINES	**FINESS Array B**	**89.26**	**23**	P		**P**	**19 37 06.2**	**-0.5**	
	comp=Z,83nm,0.9s,baz=336,slow=4.2,SNR=134								
FINES				sP		**sP**	**19 37 28.9**	**-2.3**	
	comp=Z,11nm,0.8s,baz=324,slow=3.7,SNR=1.9								
FINES				PP		**PP**	**19 40 36.4**	**-1.0**	
	comp=Z,8.8nm,0.9s,baz=350,slow=9.9,SNR=5.4								
FINES				LR		LR	20 19 05.8		
	comp=Z,802nm,19.9s,baz=270,slow=37								
FETA	**Feichten**	**89.27**	**40**	⇓*i*P		**P**	**19 37 07.6**	**+0.3**	
	comp=Z,39nm,1.2s,SNR=18								
MOTA	**Moosalm**	**89.36**	**40**	⇑*i*P		**P**	**19 37 07.9**	**+0.2**	
	comp=Z,42nm,0.9s,SNR=33								
BRG	**Berggiesshubel**	**89.39**	**36**	*i* P		**P**	**19 37 08.0**	**+0.4**	
	comp=Z,58nm,1.1s								
BRG				*i*			19 37 24.0		
BRG				*e*PP		**PP**	**19 40 36.4**	**-2.4**	
	comp=Z,9.8nm,1.3s								
BRG				SKS		**SKSac**	**19 47 34.0**	**+1.6**	
BRG				S		**ScS**	**19 47 57.0**	**-0.3**	
BRG				SS		**SS**	**19 53 44.0**	**-4.0**	
BRG									
	comp=N,456nm,22.0s								
BRG									
	comp=E,446nm,20.4s								
BRG									
	comp=Z,832nm,20.1s								
BRG	**Berggiesshubel**	**89.39**	**36**	*e*P		**P**	**19 37 07.7**	**+0.1**	
	comp=Z,50nm,1.1s								
BRG	**Berggiesshubel**	**89.39**	**36**	*i* P		**P**	**19 37 08.0**	**+0.4**	
BRG				*i*			19 37 24.0		
BRG				*e*			19 40 36.4		
BRG							19 47 34.0		
BRG				SS		SS	19 53 44.0	-4.0	
BRG				pmax		pmax			
	comp=Z,59nm,1.1s								
BRG				pmax		pmax			
	comp=Z,10.0nm,1.3s								
BRG				MLR		MLR			
	comp=N,456nm,22.0s								
BRG				MLR		MLR			
	comp=E,446nm,20.4s								
BRG				MLR		MLR			
	comp=Z,832nm,20.1s								
MSVF	**Nonsavu**	**89.54**	**251**	⇓*e*P		**P**	**19 37 11.9**	**+2.9**	
MSVF				pmax		pmax			
	comp=Z,138nm,1.3s								
MSVF	**Nonsavu**	**89.54**	**251**	⇓*e*P		**P**	**19 37 11.8**	**+2.9**	
	comp=Z,138nm,1.3s								
MSVF	**Nonsavu**	**89.54**	**251**	P		P	19 37 12.3	+3.4	
	comp=Z,443nm,1.1s,SNR=6.3								
WET	**Wettzell**	**89.60**	**38**	*e*P		**P**	**19 37 08.5**	**-0.1**	
	comp=Z,46nm,1.1s								
WET	**Wettzell**	**89.60**	**38**	*e*P		**P**	**19 37 08.5**	**-0.1**	
WET				pmax		pmax			
	comp=Z,46nm,1.1s								
WATA	**Walderalm**	**89.65**	**40**	⇓*i*P		**P**	**19 37 09.3**	**+0.2**	
	comp=Z,53nm,1.4s,SNR=10								
WTTA	**Wattenberg**	**89.72**	**40**	⇑*i*P		**P**	**19 37 09.8**	**+0.3**	
	comp=Z,40nm,1.4s,SNR=16								
PVCC	**Panska Ves**	**89.91**	**36**	*e*P		**P**	**19 37 10.8**	**+0.8**	
PVCC				*e*			19 48 00.3		
PVCC				MLR		MLR			
	comp=Z,900nm,18.8s								
PVCC	**Panska Ves**	**89.91**	**36**	⇓*e*P		**P**	**19 37 10.8**	**+0.8**	
PVCC				*e*S		**S**	**19 48 00.3**	**+2.7**	
PVCC				AMS		AMS	20 20 40.0		
	comp=Z,900nm,18.8s								
KHC	**Kasperske Hory**	**90.01**	**38**	⇓*i*P		**P**	**19 37 10.7**	**+0.1**	
KHC				*e*			19 37 32.5		
KHC				*e*			19 47 36.6		
KHC				*e*			19 48 01.8		
KHC				MLR		MLR			
	comp=Z,700nm,22.0s								
KHC	**Kasperske Hory**	**90.01**	**38**	⇓*i*P		**P**	**19 37 10.4**	**-0.2**	
	comp=Z,40nm,1.4s								
KHC	**Kasperske Hory**	**90.01**	**38**	⇓*i*P		**P**	**19 37 10.7**	**+0.1**	
KHC				*ex*		x	19 37 18.8		
KHC				*ep*P		**pP**	**19 37 32.5**	**+4.3**	
KHC				*e*SKS		**SKSac**	**19 47 36.6**	**+0.4**	
KHC				*e*S		**ScS**	**19 48 01.8**	**-0.9**	
KHC				AMS		AMS	20 19 30.0		
	comp=Z,700nm,22.0s								
PRA	**Prague**	**90.05**	**36**	⇓P		**P**	**19 37 10.0**	**-0.7**	
PRA				PP		**PP**	**19 40 42.0**	**-2.0**	
SET	**Setif**	**90.08**	**52**	P		**P**	**19 37 13.0**	**+1.8**	
PGF	**Pioggiola**	**90.08**	**45**	⇓*i*P		**P**	**19 37 10.5**	**-0.6**	
	comp=Z,51nm,1.1s								
PGF	**Pioggiola**	**90.08**	**45**	⇓*i*P		**P**	**19 37 10.5**	**-0.6**	
PGF				pmax		pmax			
	comp=Z,51nm,1.1s								
PGF	**Pioggiola**	**90.08**	**45**	⇓*i*P		**P**	**19 37 10.5**	**-0.6**	
	comp=Z,51nm,1.1s								
PRU	**Pruhonice**	**90.15**	**36**	⇓*i*P		**P**	**19 37 11.4**	**+0.2**	
PRU				*e*			19 37 31.9		
PRU				*e*			19 47 38.2		
PRU				*e*			19 48 02.5		
PRU				MLR		MLR			
	comp=Z,600nm,24.3s								
PRU	**Pruhonice**	**90.15**	**36**	⇓*i*P		**P**	**19 37 11.4**	**+0.2**	
PRU				*ex*		x	19 37 16.9		
PRU				*ep*P		**pP**	**19 37 31.9**	**+3.1**	
PRU				*e*SKS		**SKSac**	**19 47 38.2**	**+1.3**	
PRU				*e*S		**ScS**	**19 48 02.5**	**-1.2**	
PRU				AMS		AMS	20 18 20.0		
	comp=Z,600nm,24.3s								
JOF	**Joensuu**	**90.16**	**21**	*e*P		**P**	**19 37 09.2**	**-1.7**	
JOF				pmax		pmax			
	comp=Z,8.0nm,0.8s								
JOF	**Joensuu**	**90.16**	**21**	*ep*		**P**	**19 37 09.2**	**-1.7**	
	comp=Z,7.5nm,0.8s								
RJOB	**Jochberg**	**90.20**	**39**	*e*P		**P**	**19 37 11.8**	**+0.3**	
	comp=Z,34nm,1.2s								
GEC2	**GERESS Array S**	**90.22**	**38**	*e*P		**P**	**19 37 11.4**	**-0.2**	
	comp=Z,32nm,1.0s								
GEC2	**GERESS Array S**	**90.22**	**38**	*e*P		**P**	**19 37 11.4**	**-0.2**	
GEC2				pmax		pmax			
	comp=Z,32nm,1.0s								
GERES	**GERESS Array B**	**90.22**	**38**	P		**P**	**19 37 11.8**	**+0.1**	
GERES				sP		**sP**	**19 37 34.1**	**-2.0**	
GERES				PP		**PP**	**19 40 43.4**	**-2.1**	
GERES				PKKP		**PKKPbc**	**19 54 41.6**	**-0.4**	
GERES				P'P'			20 02 49.8		
GERES	**GERESS Array B**	**90.22**	**38**	P		**P**	**19 37 11.8**	**+0.1**	
	comp=Z,11nm,0.8s,baz=320,slow=4.0,SNR=116								
GERES				sP		**sP**	**19 37 34.1**	**-2.0**	
	comp=Z,2.6nm,0.7s,baz=320,slow=4.0,SNR=3.1								
GERES				PP		**PP**	**19 40 43.4**	**-2.1**	
	comp=Z,1.9nm,1.0s,baz=310,slow=6.8,SNR=4.0								
GERES				PKKP		**PKKPbc**	**19 54 41.6**	**-0.4**	
	comp=Z,0.9nm,0.9s,baz=110,slow=2.0,SNR=7.9								
GERES				PKPPKP		**P'P'df**	**20 02 49.8**	**-2.6**	
	comp=Z,0.1nm,0.4s,baz=106,slow=2.1,SNR=3.5								
GERES				LR		LR	20 20 12.9		
	comp=Z,604nm,21.3s,baz=296,slow=37								
CKHR	**Kef el Ahmar**	**90.23**	**52**	P		**P**	**19 37 13.0**	**+1.0**	
DFRA	**Djebel Bou Aff**	**90.30**	**51**	P		**P**	**19 37 13.0**	**+0.7**	
ABTA	**Abfaltersbach**	**90.49**	**40**	⇓*i*P		**P**	**19 37 13.0**	**+0.1**	
	comp=Z,68nm,1.0s,SNR=31								
KSP	**Ksiaz**	**90.71**	**35**	⇓*e*P		**P**	**19 37 14.1**	**+0.4**	
KSP				*e*			19 40 46.3		
KSP				*e*			19 47 39.5		
KSP				*e*S		**S**	**19 48 08.5**	**+3.6**	
KSP				MLR		MLR			
	comp=Z,1μm,19.8s								
KSP	**Ksiaz**	**90.71**	**35**	*e*P		**P**	**19 37 14.1**	**+0.4**	
KSP				LMZ		LR	20 12 12.4		
UPC	**Upice**	**90.72**	**36**	⇓*i*P		**P**	**19 37 14.2**	**+0.4**	
UPC	**Upice**	**90.72**	**36**	⇓*i*P		**P**	**19 37 14.2**	**+0.4**	
KBA	**Koelnbreinsper**	**90.84**	**39**	⇓*i*P		**P**	**19 37 14.7**	**0.0**	
	comp=Z,41nm,1.1s,SNR=23								
CASM	**Ain Smara**	**90.86**	**51**	P		**P**	**19 37 16.0**	**+1.2**	
CTEI	**Djebel Teioual**	**90.88**	**52**	P		**P**	**19 37 15.8**	**+0.8**	
CAEH	**'Ain El Ouahch**	**90.92**	**51**	P		**P**	**19 37 16.5**	**+1.4**	
DPC	**Dobruska-Polom**	**90.97**	**36**	⇓*i*P		**P**	**19 37 15.7**	**+0.7**	
DPC				*e*			19 47 42.9		
DPC				MLR		MLR			
	comp=Z,700nm,19.5s								
DPC	**Dobruska-Polom**	**90.97**	**36**	⇓*i*P		**P**	**19 37 15.7**	**+0.7**	
DPC				*e*SKS		**SKSac**	**19 47 42.9**	**+1.2**	
DPC				*e*S		**ScS**	**19 48 13.8**	**+3.2**	
DPC				AMS		AMS	20 21 30.0		
	comp=Z,700nm,19.5s								
CKFL	**Kef-Lekhel**	**90.98**	**51**	P		**P**	**19 37 16.0**	**+0.5**	
MOA	**Molln**	**91.02**	**38**	⇓*i*P		**P**	**19 37 15.3**	**0.0**	
	comp=Z,33nm,0.9s,SNR=29								
TREC	**Trest**	**91.03**	**37**	⇓*i*P		**P**	**19 37 15.4**	**+0.1**	
TREC				MLR		MLR			
	comp=Z,600nm,23.8s								
TREC	**Trest**	**91.03**	**37**	⇓*i*P		**P**	**19 37 15.4**	**+0.1**	
TREC				AMS		AMS	20 18 40.0		
	comp=Z,600nm,23.8s								
MYKA	**Terra Mystica**	**91.23**	**40**	⇓*i*P		**P**	**19 37 16.1**	**-0.3**	
	comp=Z,26nm,1.0s								
LIC	**Lamto**	**91.27**	**83**	*e*P		**P**	**19 37 16.9**	**-0.1**	
	comp=Z,132nm,1.0s,baz=275								
LIC				*e*R					
	comp=Z,500nm,22.0s								
LIC	**Lamto**	**91.27**	**83**	*e*P		**P**	**19 37 16.9**	**-0.1**	
	comp=Z,132nm,1.0s								
DBIC	**Dimbokro**	**91.29**	**83**	⇓*i*P		**P**	**19 37 17.1**	**0.0**	
	comp=Z,57nm,1.0s								
DBIC				*e*		**pP**	**19 37 33.0**	**-1.8**	
DBIC				pP		**pwP**	**19 37 33.5**	**-1.3**	
DBIC	**Dimbokro**	**91.29**	**83**	P		**P**	**19 37 17.4**	**+0.2**	
	comp=Z,40nm,0.9s,baz=278,slow=4.6,SNR=31								
DBIC				pP		**pwP**	**19 37 33.5**	**-1.3**	
	comp=Z,19nm,0.7s,baz=288,slow=3.8,SNR=8.4								
DBIC				LR		LR	20 12 24.7		
	comp=Z,305nm,21.9s,baz=272,slow=32								
VSU	**Vasula**	**91.39**	**25**	*d*P		**P**	**19 37 15.8**	**-0.9**	
VSU				pmax		pmax			
	comp=Z,99nm,1.9s								
CMAH	**Djebel Manchou**	**91.41**	**51**	P		**P**	**19 37 18.0**	**+0.6**	
YAK	**Yakutsk**	**91.52**	**339**	*d*P		**P**	**19 37 17.8**	**+0.6**	
YAK				*e**PP		pP	19 37 43.1	+8.3	
YAK				*e*			19 40 56.7		
YAK				*e*PPP		PPP	19 42 54.5		
YAK				*e*S		**SKSac**	**19 47 40.1**	**-4.1**	
YAK				*e*			19 48 11.0		
YAK				*e*SS		**SS**	**19 54 16.3**	**-1.6**	
YAK				pmax		pmax			
	comp=Z,277nm,1.0s								
YAK				pmax		pmax			
	comp=N,59nm,1.3s								
YAK				pmax		pmax			
	comp=E,70nm,1.1s								
YAK				pmax		pmax			
	comp=Z,74nm,1.6s								
YAK				pmax		pmax			
	comp=N,41nm,1.6s								
YAK				pmax		pmax			
	comp=E,67nm,1.9s								
YAK				smax		smax			
	comp=N,100nm,2.6s								
YAK				smax		smax			
	comp=E,60nm,2.3s								
ABSA	**Djebel Ababsia**	**91.59**	**51**	P		**P**	**19 37 17.0**	**-1.3**	
VRAC	**Vranov**	**91.65**	**36**	P		**P**	**19 37 18.7**	**+0.6**	
VRAC	**Vranov**	**91.65**	**36**	P		**P**	**19 37 18.7**	**+0.6**	
	comp=E,5.9nm,0.3s,baz=301,slow=6.5,SNR=8.2								
VOY	**Vojsko**	**91.67**	**40**	*e*P		**P**	**19 37 18.5**	**+0.1**	
VOY				*e*			19 37 27.1		
TRI	**Trieste**	**91.74**	**40**	*e*P		**P**	**19 37 17.1**	**-1.5**	
TRI				pmax		pmax			
	comp=Z,140nm,1.5s								
TRI	**Trieste**	**91.74**	**40**	*e*P		**P**	**19 37 17.1**	**-1.5**	
	comp=Z,140nm,1.5s								
JAVS	**Javornik**	**91.84**	**40**	*i* P		**P**	**19 37 19.3**	**+0.1**	
JAVS				*e*S		**SKSac**	**19 47 49.4**	**+2.4**	
JAVS				*e*SKSac		**ScS**	**19 48 19.9**	**+1.8**	
OBKA	**Obir**	**91.84**	**40**	⇑*i*P		**P**	**19 37 18.6**	**-0.6**	
	comp=Z,44nm,1.0s,SNR=12								
MOZS	**Mozjanca**	**91.88**	**40**	⇓*i*P		**P**	**19 37 19.2**	**-0.1**	
CONA	**Conrad Observa**	**91.92**	**38**	*i* P		**P**	**19 37 19.6**	**+0.1**	
	comp=Z,26nm,1.0s,SNR=25								
MORC	**Moravsky Berou**	**91.94**	**36**	⇓*i*P		**P**	**19 37 19.0**	**-0.5**	
MORC				*e*			19 37 39.0		
MORC				pmax		pmax			
	comp=Z,38nm,1.1s								
MORC	**Moravsky Berou**	**91.94**	**36**	⇓*i*P		**P**	**19 37 19.0**	**-0.5**	
	comp=Z,38nm,1.1s								
MORC				*e*		**pP**	**19 37 39.0**	**+1.8**	
MORC	**Moravsky Berou**	**91.94**	**36**	⇓*i*P		**P**	**19 37 19.3**	**-0.2**	
PUL	**Pulkovo**	**91.94**	**23**	*i* P		**P**	**19 37 19.3**	**+0.1**	
SKDS	**Skadanscina**	**91.97**	**41**	*i* P		**P**	**19 37 20.0**	**+0.3**	
SKDS				*e*S		**SKSac**	**19 47 50.0**	**+2.4**	
SKDS				*e*SKSac		**ScS**	**19 48 20.1**	**+1.1**	
LJU	**Ljubljana**	**92.05**	**40**	*i* P		**P**	**19 37 20.2**	**+0.1**	
LJU				*e*S		**SKSac**	**19 47 49.1**	**+1.2**	
ARSA	**Arzberg**	**92.06**	**39**	⇓*i*P		**P**	**19 37 19.9**	**-0.3**	
	comp=Z,14nm,0.9s,SNR=11								
OKC	**Ostrava-Krasne**	**92.24**	**35**	⇓*i*P		**P**	**19 37 21.4**	**+0.5**	
OKC				*e*			19 37 42.8		
OKC				*e*			19 47 51.2		
OKC				MLR		MLR			
	comp=Z,600nm,21.3s								
OKC	**Ostrava-Krasne**	**92.24**	**35**	⇓*i*P		**P**	**19 37 21.4**	**+0.5**	
OKC				*ex*		x	19 37 29.5		
OKC				*ep*P		**pP**	**19 37 42.8**	**+4.3**	
OKC				*e*SKS		**SKSac**	**19 47 51.2**	**+2.4**	
OKC				AMS		AMS	20 22 20.0		
	comp=Z,600nm,21.3s								
ZST	**Bratislava**	**92.51**	**37**	*e*P		**P**	**19 37 21.7**	**-0.4**	
ZST				pmax		pmax			
	comp=Z,49nm,1.3s								
ZST	**Bratislava**	**92.51**	**37**	*e*P		**P**	**19 37 21.7**	**-0.4**	
ZST				*ep*P		**pP**	**19 37 37.6**	**-2.1**	
ZST				*es*P		**sP**	**19 37 43.6**	**-3.0**	
SUW	**Suwalki**	**92.52**	**30**	⇓*i*P		**P**	**19 37 20.8**	**-1.2**	
SUW				pmax		pmax			
	comp=Z,42nm,0.9s								
SUW	**Suwalki**	**92.52**	**30**	⇓*i*P		**P**	**19 37 20.8**	**-1.2**	
	comp=Z,42nm,0.9s								
SUW	**Suwalki**	**92.52**	**30**	*e*P		**P**	**19 37 20.9**	**-1.1**	
SUW				*e*S		**S**	**19 48 17.6**	**-3.4**	
SUW				LMZ		LR	20 12 09.4		
SMOL	**Smolenice**	**92.53**	**37**	*e*P		**P**	**19 37 23.7**	**+1.5**	
SMOL	**Smolenice**	**92.53**	**37**	*e*P		**P**	**19 37 23.7**	**+1.5**	
BEL	**Belsk**	**92.57**	**33**	*e*P		**P**	**19 37 22.5**	**+0.2**	
BEL				LMZ		LR	20 14 54.0		
BOJS	**Bojanci**	**92.75**	**40**	*i* P		**P**	**19 37 23.6**	**+0.3**	
BOJS				*e*S		**SKSac**	**19 47 52.0**	**+0.1**	
IZAR	**Zarasai**	**92.88**	**28**	*e*P		**P**	**19 37 22.7**	**-0.9**	
IZAR				AMB		AMB	19 37 24.6		
	comp=Z,29nm,1.1s								
ISAL	**Salakas**	**92.94**	**28**	*e*P		**P**	**19 37 23.1**	**-0.8**	
ISAL				AMB		AMB	19 37 24.8		
	comp=Z,35nm,1.1s								
OJC	**Ojcow**	**92.94**	**35**	*i* P		**P**	**19 37 24.1**	**0.0**	
OJC				*ep*P		**pP**	**19 37 45.7**	**+4.0**	
OJC				*e*S		**S**	**19 48 22.0**	**-3.0**	
OJC				L		L	20 21 22.5		
	comp=Z,400nm,22.1s								
IIGN	**Ignalina**	**93.11**	**28**	*e*P		**P**	**19 37 23.9**	**-0.9**	
IIGN				AMB		AMB	19 37 25.6		
	comp=Z,32nm,1.2s								
KEST	**Kesra**	**93.19**	**51**	⇓*i*P		**P**	**19 37 25.7**	**+0.1**	
KEST	**Kesra**	**93.19**	**51**	P		**P**	**19 37 26.4**	**+0.8**	
	comp=Z,20nm,1.0s,baz=254,slow=1.6,SNR=40								
KEST				LR		LR	20 18 27.1		
	comp=Z,116nm,19.3s,baz=99,slow=35								
VYHS	**Vyhne**	**93.34**	**36**	*e*P		**P**	**19 37 26.4**	**+0.4**	
VYHS				pmax		pmax			
	comp=Z,23nm,1.3s								
VYHS	**Vyhne**	**93.34**	**36**	*e*P		**P**	**19 37 26.4**	**+0.4**	
VYHS				*ep*P		**pP**	**19 37 40.7**	**-2.9**	
VYHS				*es*P		**sP**	**19 37 47.8**	**-2.6**	
IDID	**Didziasalis**	**93.37**	**28**	*e*P		**P**	**19 37 25.1**	**-0.8**	
IDID				AMB		AMB	19 37 26.6		
	comp=Z,28nm,1.1s								
NIE	**Niedzica**	**93.66**	**35**	⇓*i*P		**P**	**19 37 27.4**	**0.0**	
NIE				*e**PP		**pP**	**19 37 49.9**	**+4.8**	
NIE				*e*			19 41 13.3		
NIE	**Niedzica**	**93.66**	**35**	*i* P		**P**	**19 37 27.4**	**0.0**	
NIE				*ep*P		**pP**	**19 37 49.9**	**+4.8**	
NIE				*e*PP		**PP**	**19 41 13.3**	**+0.8**	
PSZ	**Piszkesteto**	**94.24**	**36**	⇓*i*P		**P**	**19 37 30.8**	**+0.6**	
PSZ				pmax		pmax			
	comp=Z,28nm,1.2s								
PSZ	**Piszkesteto**	**94.24**	**36**	⇓*i*P		**P**	**19 37 30.8**	**+0.6**	
	comp=Z,28nm,1.2s								
PSZ	**Piszkesteto**	**94.24**	**36**	⇑*i*P		**P**	**19 37 31.0**	**+0.8**	
KLMR	**Klimovskoe**	**94.33**	**19**	*c*P		P	19 37 26.8	-3.4	
KLMR				*e**SP		sP	19 37 50.2	-4.5	
KLMR				*e*S		**SKSac**	**19 47 55.5**	**-4.3**	
KLMR				*i* *SS		**SKKSac**	**19 48 25.7**	**+4.6**	
KLMR				*e*PS		**PS**	**19 49 51.7**	**-7.7**	
KLMR				SSS		SSS	19 58 32.9		
KLMR				pmax		pmax			
	comp=Z,154nm,1.4s								
KLMR				pmax		pmax			
	comp=Z,14nm,2.4s								
KLMR				MLR		MLR			
	comp=Z,600nm,21.0s								
MNK	**Minsk**	**94.37**	**28**	⇑*e*P		**P**	**19 37 29.0**	**-1.5**	
MICGM	**Minsk**	**94.39**	**28**	⇑*e*P		**P**	**19 37 29.0**	**-1.6**	
PKSM	**Moragy**	**94.43**	**38**	⇓P		**P**	**19 37 30.7**	**-0.3**	
PKSM	**Moragy**	**94.43**	**38**	⇓*i*P		**P**	**19 37 30.7**	**-0.3**	
CRVS	**Cervenica-Dubn**	**94.57**	**35**	*e*P		**P**	**19 37 30.8**	**-0.8**	
CRVS				pmax		pmax			
	comp=Z,57nm,1.5s								
CRVS	**Cervenica-Dubn**	**94.57**	**35**	*e*P		**P**	**19 37 30.8**	**-0.8**	
CRVS				*ep*P		**pP**	**19 37 45.3**	**-4.0**	
CRVS				*es*P		**sP**	**19 37 51.6**	**-4.5**	
KWP	**Kalwaria Pacla**	**94.83**	**34**	⇑P		**P**	**19 37 33.4**	**+0.6**	
KWP	**Kalwaria Pacla**	**94.83**	**34**	⇓*i*P		**P**	**19 37 33.1**	**+0.4**	
	comp=Z,127nm,1.0s								
KWP	**Kalwaria Pacla**	**94.83**	**34**	⇑*i*P		**P**	**19 37 33.4**	**+0.6**	
KWP	**Kalwaria Pacla**	**94.83**	**34**	*e*P		**P**	**19 37 33.4**	**+0.6**	
KWP				LMZ		LR	20 14 27.8		
KOLS	**Kolonicke sedl**	**94.99**	**35**	*e*P		**P**	**19 37 34.2**	**+0.6**	
KOLS				pmax		pmax			
	comp=Z,44nm,1.3s								
KOLS	**Kolonicke sedl**	**94.99**	**35**	*e*P		**P**	**19 37 34.2**	**+0.6**	
YSS	**Yuzh-Sakhalins**	**95.09**	**323**	*e*P		**P**	**19 37 34.0**	**0.0**	
YSS				*e*			19 37 52.6		
YSS				*e*S		S	19 48 36.0	-7.9	
YSS				*e*SS		SS	19 55 19.0	+9.2	
UZH	**Uzhgorod**	**95.18**	**35**	*d*P		**P**	**19 37 35.2**	**+0.9**	
UZH				*e*			19 37 56.0		
TAM	**Tamanrasset**	**95.27**	**64**	*e*P		**P**	**19 37 36.7**	**+1.2**	
TAM

AK01 Malin Array Si 97.48 31 *e*P **P 19 37 43.5 -1.2**
AK01 *e*PP **PP 19 41 38.6 -3.3**
AK02 Malin Array Si 97.50 31 *e*P **P 19 37 43.6 -1.2**
AK02 *e*PP **PP 19 41 38.5 -3.5**
ERM Erimo 97.53 319⇑ *e*P Pdif 19 37 46.1 +0.9
ERM pmax pmax
comp=Z,75nm,1.7s
MOS Moscow 97.56 23 *e*P **P 19 37 42.0 -3.0**
MOS pmax pmax
comp=Z,200nm,2.0s
MOS pmax pmax
comp=Z,93nm,1.5s
MOS MLR MLR
comp=Z,2μm,25.0s
MOS MLR MLR
comp=N,600nm,26.0s
MOS MLR MLR
comp=E,700nm,27.0s
OBN Obninsk 97.62 24 *d i*P **P 19 37 44.3 -0.9**
OBN *i* S **SKSac 19 48 13.1 -4.2**
OBN *i* PS **SP 19 50 25.0 -2.2**
OBN pmax pmax
comp=Z,128nm,1.8s
OBN MLR MLR
comp=Z,500nm,18.0s
OBN Obninsk 97.62 24 P **P 19 37 44.0 -1.2**
comp=Z,259nm,1.2s,SNR=5.8
LOT Lotru 97.84 37⇓ *i*P **P 19 37 45.8 -0.9**
HABR Khabarovsk 98.38 327 *de*P **P 19 37 47.7 -1.1**
HABR *e**SP **sP 19 38 11.3 -2.0**
HABR *e* 19 41 47.7
HABR PPP PPP 19 43 52.8
HABR *e*PS **PS 19 50 42.9 -1.2**
HABR *e*SSS SSS 19 59 43.3
HABR pmax pmax
comp=Z,270nm,4.6s
HABR pmax pmax
comp=Z,59nm,1.4s
HABR pmax pmax
comp=N,25nm,1.8s
HABR pmax pmax
comp=E,31nm,1.4s
HABR MLR MLR
comp=Z,400nm,23.0s
VOIR 98.57 36⇑ P **P 19 37 49.7 -0.2**
VOIR 98.57 36⇑ *i*P **P 19 37 49.7 -0.2**
MLR Muntele Rosu 99.05 36 P **Pdif 19 37 52.5 +0.4**
MLR Muntele Rosu 99.05 36⇓ *i*P **Pdif 19 37 51.6 -0.5**
MLR Muntele Rosu 99.05 36 P **Pdif 19 37 52.5 +0.4**
comp=Z,4.6nm,0.9s,baz=329,slow=3.0,SNR=37
VRI Vrincioaia 99.25 35⇑ P **Pdif 19 37 52.6 -0.2**
VRI Vrincioaia 99.25 35⇑ *i*P **Pdif 19 37 52.6 -0.2**
KLR Kul'dur 99.53 329 *e*P **Pdif 19 37 50.8 -3.2**
KLR pmax pmax
comp=Z,54nm,2.0s
KIS Kishinev 99.66 34 *e*P **Pdif 19 37 51.0 -3.6**
KIS MLR MLR
comp=Z,300nm,18.0s
KIS MLR MLR
comp=Z,300nm,20.0s
KIS Kishinev 99.66 34 *e*P **Pdif 19 37 51.0 -3.6**
KIS LRM MLR 20 25 58.0
comp=Z,300nm,20.0s
SOKR Solikamsk 99.93 13 *d i*P **Pdif 19 37 54.7 -0.7**
SOKR pmax pmax
comp=Z,20nm,1.0s
SOKR MLR MLR
comp=Z,910nm,29.0s
CFR Carcaliu 100.45 35⇓ P **Pdif 19 37 57.1 -1.0**
CFR Carcaliu 100.45 35⇓ *i*P **Pdif 19 37 57.1 -1.0**
TIRR Tirgusor 101.06 36⇑ P **Pdif 19 38 00.5 -0.4**
TIRR Tirgusor 101.06 36⇑ *i*P **Pdif 19 38 00.4 -0.4**
DZM Mont Dzumac 101.25 250 *e*LR LR 20 11 27.6
comp=Z,916nm,23.2s
VSR Storozhevoye 101.57 26 *e*P **Pdif 19 38 02.3 -0.7**
VSR pmax pmax
comp=Z,70nm,1.2s
VSR pmax pmax
comp=N,20nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VORD Divnogorie 101.81 26 *e*P **Pdif 19 38 02.2 -1.9**
VORD pmax pmax
comp=Z,20nm,1.0s
VORD pmax pmax
comp=N,60nm,0.7s
VORD pmax pmax
comp=E,120nm,0.5s
USRK Ussuriysk Arra 102.77 325 Pdiff **Pdif 19 38 09.7 +1.2**
comp=E,11nm,0.9s,baz=49,slow=4.3,SNR=14
ARU Arti 103.22 13 P **Pdif 19 38 09.3 -0.9**
ARU 19 42 23.5
ARU S **SKSac 19 48 43.6 -1.0**
ARU SP **SP 19 51 26.5 -0.3**
SVE Sverdlovsk 103.27 12 *e*P **Pdif 19 38 10.2 -0.2**
SVE pmax pmax
comp=Z,18nm,1.7s
MJAR Matsushiro Arr 103.77 316 Pdif **Pdif 19 38 13.6 +0.5**
MJAR PKiKP **PP 19 42 29.6 -0.4**
MJAR Matsushiro Arr 103.77 316 Pdiff **Pdif 19 38 13.6 +0.5**
comp=Z,3.3nm,0.8s,baz=54,slow=2.4,SNR=8.1
MJAR PKiKP **PP 19 42 29.6 -0.4**
comp=Z,3.7nm,1.0s,baz=52,slow=3.9,SNR=4.6
MAJO Matsushiro 103.77 316 *e*P **Pdif 19 38 15.2 +2.0**
MAJO pmax pmax
comp=Z,12nm,0.9s
MAJO Matsushiro 103.77 316 *e*Pdif **Pdif 19 38 15.2 +2.0**
comp=Z,12nm,0.9s
CN2 Changchun 106.44 328 *e*Pdif **Pdif 19 38 28.3 +3.5**
CN2 *e*PP PP 19 42 55.3 +6.1
CN2 *e*S **Sdif 19 50 20.3 +0.6**
CN2 LR LR
comp=N,300nm,22.0s
CN2 LR LR
comp=E,200nm,22.0s
CN2 LR LR
comp=Z,400nm,22.0s
BRTR Keskin Array B 107.09 37 Pdif **Pdif 19 38 28.1 +0.1**
BRTR *e* 19 38 46.8
BRTR PKiKP **PKiKP 19 42 37.5 +0.4**
BRTR PP **PP 19 42 57.9 +3.4**
BRTR PKKPbc **PKKPbc 19 53 54.8 -0.2**
BRTR PKKPab **PKKPab 19 54 10.3 -1.1**
BRTR Keskin Array B 107.09 37 Pdiff **Pdif 19 38 28.1 +0.1**
comp=Z,0.5nm,0.7s,baz=302,slow=2.7,SNR=3.1
BRTR pPdiff **pPdif 19 38 46.8 +1.1**
comp=Z,1.1nm,0.8s,baz=344,slow=0.8,SNR=5.6
BRTR PKiKP **PKiKP 19 42 37.5 +0.4**
comp=Z,1.7nm,0.9s,baz=279,slow=1.6,SNR=7.0
BRTR PP **PP 19 42 57.9 +3.4**
comp=Z,2.0nm,0.9s,baz=296,slow=3.9,SNR=6.2
BRTR PKKPbc **PKKPbc 19 53 54.8 -0.2**
comp=Z,1.3nm,1.0s,baz=142,slow=4.7,SNR=6.1
BRTR PKKPab **PKKPab 19 54 10.3 -1.1**
comp=Z,0.6nm,0.7s,baz=17,slow=1.3,SNR=4.2
NVS Novosibirsk 107.29 359 *e*P **Pdif 19 38 29.0 +0.6**
NVS pmax pmax
comp=E,1.0nm,1.0s
NVS pmax pmax
comp=Z,6.0nm,1.0s
NVS pmax pmax
comp=N,2.0nm,1.1s
TLY Talaya 107.85 346 *e*P **Pdif 19 38 33.1 +2.1**
TLY *i* 19 42 57.8
TLY pmax pmax
comp=Z,8.0nm,0.9s
TLY MLR MLR
comp=Z,459nm,20.0s
ZAA0 Zalesovo Array 108.14 358 *e*Pdif **Pdif 19 38 31.9 -0.3**
ZAA0 *e*PP **PP 19 42 57.7 -3.4**
ZALV Zalesovo Beam 108.14 358 P **Pdif 19 38 31.8 -0.4**
ZALV pmax pmax
comp=Z,5.0nm,0.9s
ZALV Zalesovo Beam 108.14 358 Pdif **Pdif 19 38 31.8 -0.4**
ZALV PKiKP **PKiKP 19 42 40.2 +1.7**
ZALV PP **PP 19 43 00.4 -0.8**
ZALV PKKPbc **PKKPbc 19 53 48.6 -3.3**
ZALV Zalesovo Beam 108.14 358 Pdiff **Pdif 19 38 31.8 -0.4**
comp=Z,4.5nm,0.9s,baz=101,slow=0.8,SNR=12
ZALV PKiKP **PKiKP 19 42 40.2 +1.7**
comp=Z,4.1nm,0.9s,baz=355,slow=3.3,SNR=5.6
ZALV PP **PP 19 43 00.4 -0.8**
comp=Z,2.7nm,0.8s,baz=0.0,slow=7.4,SNR=5.7
ZALV PKKPbc **PKKPbc 19 53 48.6 -3.3**
comp=Z,1.1nm,0.9s,baz=143,slow=3.7,SNR=3.8

BRVK Borovoye 108.41 7 *e*P **Pdif 19 38 33.2 -0.2**
BRVK pmax pmax
comp=Z,7.0nm,0.9s
BRVK Borovoye 108.41 7 *e*Pdif **Pdif 19 38 33.2 -0.2**
comp=Z,6.7nm,0.9s
BVAR Borovoye Array 108.46 7 P **Pdif 19 38 34.1 +0.5**
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR Borovoye Array 108.46 7 Pdif **Pdif 19 38 34.1 +0.5**
BVAR PKiKP **PKiKP 19 42 40.2 +1.0**
BVAR PP **PP 19 43 03.2 -0.3**
BVAR Borovoye Array 108.46 7 Pdiff **Pdif 19 38 34.1 +0.5**
comp=Z,1.3nm,0.7s,baz=333,slow=5.0,SNR=10
BVAR PKiKP **PKiKP 19 42 40.2 +1.0**
comp=Z,3.0nm,1.0s,baz=302,slow=3.3,SNR=4.3
BVAR PP **PP 19 43 03.2 -0.3**
comp=Z,1.7nm,0.8s,baz=320,slow=6.6,SNR=3.8
AKTO Aktyubinsk 108.61 16 P **Pdif 19 38 34.5 +0.1**
AKTO 19 43 02.1
AKTO pmax pmax
comp=Z,2.0nm,0.9s
AKTO pmax pmax
comp=Z,5.0nm,0.7s
AKTO Aktyubinsk 108.61 16 Pdif **Pdif 19 38 34.5 +0.1**
AKTO PP **PP 19 43 02.1 -2.6**
AKTO Aktyubinsk 108.61 16 Pdiff **Pdif 19 38 34.5 +0.1**
comp=Z,2.4nm,0.9s,baz=341,slow=1.9,SNR=7.2
AKTO PP **PP 19 43 02.1 -2.6**
comp=Z,4.9nm,0.7s,baz=335,slow=6.3,SNR=6.7
KIV Kislovodsk 108.67 29 *e*P **Pdif 19 38 34.3 -0.6**
KIV *i* 19 43 07.8
KIV *i* PS **PS 19 52 26.4 -5.9**
KIV *e*SS SS 19 58 11.7 -5.8
KIV pmax pmax
comp=Z,5.0nm,1.1s
KIV MLR MLR
comp=Z,100nm,16.0s
KBZ Khabaz 108.94 29 P **Pdif 19 38 37.0 +1.0**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KBZ Khabaz 108.94 29 Pdif **Pdif 19 38 37.0 +1.0**
KBZ PKKPbc **PKKPbc 19 53 49.0 0.0**
KBZ PKKPab **PKKPdf 19 54 02.3 -0.8**
KBZ Khabaz 108.94 29 Pdiff **Pdif 19 38 37.0 +1.0**
comp=Z,2.5nm,0.9s,baz=346,slow=1.7,SNR=5.1
KBZ PKKPbc **PKKPbc 19 53 49.0 0.0**
comp=Z,1.6nm,1.1s,baz=138,slow=5.1,SNR=3.8
KBZ PKKPab **PKKPdf 19 54 02.3 -0.8**
comp=Z,1.5nm,0.9s,baz=165,slow=4.2,SNR=4.0
ZAK Zakamensk 109.14 346 *e*P **Pdif 19 38 36.8 -0.1**
ZAK pmax pmax
comp=Z,5.0nm,1.4s
KSRS Korea Array 109.58 322 Pdiff **Pdif 19 38 39.7 +0.8**
comp=Z,0.4nm,0.6s,baz=46,slow=13,SNR=3.2
KSRS sPdiff 19 39 04.1
comp=Z,1.6nm,0.9s,baz=50,slow=3.4,SNR=5.6
KSRS PKiKP **PKiKP 19 42 42.2 +0.6**
comp=Z,4.6nm,1.0s,baz=17,slow=1.0,SNR=14
KSRS PP **PP 19 43 14.0 +1.7**
comp=Z,1.8nm,1.0s,baz=39,slow=7.1,SNR=4.6
KSRS PKKPab **PKKPab 19 53 60.0 -0.1**
comp=Z,0.5nm,0.6s,baz=251,slow=3.8,SNR=5.1
KSAR Wonju Array Be 109.61 322 Pdif **Pdif 19 38 39.7 +0.6**
KSAR *e* 19 39 04.1
KSAR PKiKP **PKiKP 19 42 42.2 +0.5**
KSAR PP **PP 19 43 14.0 +1.4**
KSAR PKKPab **PKKPab 19 53 60.0 0.0**
VNDA Vanda 109.71 193 Pdif Pdif 19 38 49.1 +11
VNDA PKiKP **PKiKP 19 42 42.5 +1.9**
VNDA PKKPbc **PKKPbc 19 53 45.0 -2.6**
VNDA PKKPab **PKKPab 19 53 56.1 +0.9**
VNDA Vanda 109.71 193 Pdiff Pdif 19 38 49.1 +11
comp=Z,1.9nm,0.5s,baz=78,slow=3.4,SNR=18
VNDA PKiKP **PKiKP 19 42 42.5 +1.9**
comp=Z,1.5nm,1.1s,baz=80,slow=3.6,SNR=4.1
VNDA PKKPbc **PKKPbc 19 53 45.0 -2.6**
comp=Z,1.1nm,0.8s,baz=281,slow=4.3,SNR=5.7
VNDA PKKPab **PKKPab 19 53 56.1 +0.9**
comp=Z,1.4nm,1.1s,baz=257,slow=3.2,SNR=3.6
ULN Ulaanbaatar 110.44 342 *e*Pdif **Pdif 19 38 44.1 +1.4**
SONM Songino Array 110.66 342 Pdif **Pdif 19 38 43.3 -0.4**
SONM PKiKP **PKiKP 19 42 43.8 +0.1**
SONM PP **PP 19 43 20.6 +0.8**
SONM PKKPbc **PKKPbc 19 53 43.8 -0.1**
SONM PKKPab **PKKPdf 19 53 59.1 -1.1**
SONM Songino Array 110.66 342 Pdiff **Pdif 19 38 43.3 -0.4**
comp=Z,1.4nm,0.9s,baz=30,slow=5.5,SNR=10
SONM PKiKP **PKiKP 19 42 43.8 +0.1**
comp=Z,2.1nm,0.8s,baz=322,slow=0.6,SNR=7.4
SONM PP **PP 19 43 20.6 +0.8**
comp=Z,9.3nm,1.1s,baz=18,slow=6.3,SNR=9.6
SONM PKKPbc **PKKPbc 19 53 43.8 -0.1**
comp=Z,0.5nm,0.9s,baz=203,slow=4.6,SNR=4.5
SONM PKKPab **PKKPdf 19 53 59.1 -1.1**
comp=Z,0.8nm,0.7s,baz=205,slow=3.7,SNR=6.0
KURK Kurchatov 111.39 2 Pdif **Pdif 19 38 47.1 +0.5**
KURK *e*PKPdf **PKiKP 19 42 43.7 -1.0**
KURK PKiKP **PKiKP 19 42 45.0 +0.3**
KURK PP **PP 19 43 24.4 -0.2**
KURK PKKPbc **PKKPbc 19 53 40.0 -1.4**
KURK PKKPab **PKKPab 19 53 54.9 +2.4**
KURBB Kurchatov Arra 111.47 2 Pdiff **Pdif 19 38 47.1 0.0**
comp=Z,0.4nm,0.4s,baz=359,slow=4.2,SNR=5.2
KURBB PKiKP **PKiKP 19 42 45.0 +0.2**
comp=Z,3.4nm,0.9s,baz=9.9,slow=2.6,SNR=11
KURBB PP **PP 19 43 24.4 -0.8**
comp=Z,3.6nm,0.8s,baz=355,slow=6.4,SNR=7.0
KURBB PKKPbc **PKKPbc 19 53 40.0 -1.1**
comp=Z,0.2nm,0.3s,baz=191,slow=3.5,SNR=6.7
KURBB PKKPab **PKKPab 19 53 54.9 +2.8**
comp=Z,1.5nm,0.8s,baz=202,slow=4.1,SNR=8.2
MAK Makhachkala 111.58 26 *i* PKiKP **PKiKP 19 42 42.1 -3.2**
MAK *e* 19 43 25.8
MAK *e*PPP PPP 19 45 52.1
MAK *e*SS SS 19 58 58.5 +2.5
MAK pmax pmax
comp=Z,112nm,1.8s
EIL Elat 114.55 44 PKP PKPdf 19 42 51.3 -0.1
EIL Elat 114.55 44 PKP PKPdf 19 42 51.3 -0.1
comp=Z,4.9nm,0.9s,baz=91,slow=0.1,SNR=4.2
HHC Hu-ho-hao-te 115.04 335 *e*PKP **PKPdf 19 42 52.3 +0.1**
HHC sPKP 19 43 29.5
HHC PP **PP 19 43 55.1 +4.0**
HHC SKS **SKSdf 19 49 52.8 -6.4**
HHC SKKS SKKSac 19 50 37.5 -11
HHC SS **SS 19 59 36.8 -5.2**
HHC AMB AMB
comp=Z,400nm,9.0s
HHC LR LR
comp=N,810nm,20.1s
HHC LR LR
comp=E,820nm,20.9s
HHC LR LR
comp=Z,2μm,21.8s
MK31 Makanchi Array 115.36 359 *e*P **Pdif 19 39 05.3 +0.8**
MK31 *e* 19 42 50.8
MK31 Makanchi Array 115.36 359 *e*Pdif **Pdif 19 39 05.3 +0.8**
MK31 *e*PKPdf **PKiKP 19 42 50.8 -1.7**
MKAR Makanchi Array 115.36 359 PKPpre PKPpre 19 42 35.9
MKAR PKP **PKiKP 19 42 52.0 -0.5**
MKAR PKKPbc **PKKPbc 19 53 26.5 -1.6**
MKAR PKKPab **PKKPab 19 53 36.6 +1.7**
MKAR PKKP **PKKPdf 19 53 49.5 -1.6**
MKAR Makanchi Array 115.36 359 PKhKP PKPpre 19 42 35.9
comp=Z,1.5nm,1.0s,baz=3.1,slow=6.7,SNR=4.2
MKAR PKP **PKiKP 19 42 52.0 -0.5**
comp=Z,5.1nm,0.8s,baz=29,slow=2.8,SNR=16
MKAR PKKPbc **PKKPbc 19 53 26.5 -1.6**
comp=Z,0.8nm,0.9s,baz=153,slow=3.5,SNR=3.9
MKAR PKKPab **PKKPab 19 53 36.6 +1.7**
comp=Z,0.7nm,1.0s,baz=143,slow=5.0,SNR=3.0
MKAR PKKP **PKKPdf 19 53 49.5 -1.6**
comp=Z,1.0nm,0.8s,baz=157,slow=6.6,SNR=5.7
WMQ Urumqi 118.08 355 PKP **PKPdf 19 42 57.8 -0.1**
WMQ PP **PP 19 44 16.8 +4.9**
WMQ PKS **PKSdf 19 46 33.3 -1.3**
WMQ LR LR
comp=N,580nm,24.2s
WMQ LR LR
comp=E,730nm,24.4s
WMQ LR LR
comp=Z,630nm,26.2s
KKAR Karatay Array 118.20 9 *e*PKIKP **PKPdf 19 42 57.6 -0.5**
KKAR Karatay Array 118.20 9 *e*PKPdf **PKPdf 19 42 57.6 -0.5**
USP Ospenovka 118.54 6 P **PKPdf 19 42 59.4 +0.6**
SNR=19
NJ2 Nanjing 118.63 324 *e*PKP **PKPdf 19 42 59.0 -0.1**
NJ2 PP **PP 19 44 18.5 +2.1**
NJ2 PKS **PKSdf 19 46 35.5 -0.4**
NJ2 AMB AMB
comp=Z,40nm,8.3s
NJ2 LR LR
comp=N,480nm,34.5s
NJ2 LR LR
comp=E,420nm,32.6s
NJ2 LR LR
comp=Z,240nm,36.0s
CHMS Chumysh 118.83 6 P **PKPdf 19 43 00.1 +0.8**
SNR=8.0
FRU Bishkek 118.98 6 *e*PKIKP **PKPdf 19 42 59.0 -0.6**
TKM2 Tokmak 2 118.98 5 *i* PKIKP **PKPdf 19 43 00.0 +0.2**
TKM2 Tokmak 2 118.98 5 *e*PKPdf **PKPdf 19 42 60.0 +0.2**
TKM2 Tokmak 2 118.98 5 P **PKPdf 19 43 00.0 +0.2**
SNR=12
EKS2 Erkin-Say 119.06 7 *e*PKIKP **PKPdf 19 43 00.1 +0.2**
EKS2 Erkin-Say 119.06 7 *e*PKPdf **PKPdf 19 43 00.1 +0.2**
EKS2 Erkin-Say 119.06 7 P **PKPdf 19 43 00.8 +1.0**
SNR=32
AAK Ala-Archa 119.17 6 *d i*PKIKP **PKPdf 19 43 00.4 +0.3**
AAK pmax pmax
comp=Z,57nm,1.7s
AAK Ala-Archa 119.17 6 *e*PKPdf **PKPdf 19 43 00.7 +0.5**
AAK PKP **PKPdf 19 43 01.0 +0.9**
AAK Ala-Archa 119.17 6 P **PKPdf 19 43 01.0 +0.9**
SNR=5.5
AAK Ala-Archa 119.17 6 P **PKPdf 19 43 01.1 +0.9**
SNR=11
AAK Ala-Archa 119.17 6 PKP **PKPdf 19 43 01.0 +0.9**
comp=Z,8.7nm,0.9s,baz=210,slow=1.5,SNR=26
KBK Karagaybulak 119.19 6 P **PKPdf 19 43 01.1 +0.9**
SNR=12
CTA Charters Tower 119.23 257 PKP **PKPdf 19 43 00.8 +0.3**
CTA Charters Tower 119.23 257 PKP **PKPdf 19 43 00.8 +0.3**
comp=Z,10.0nm,1.0s,baz=6.0,slow=1.9,SNR=7.6
AML Almayashu 119.58 7 P **PKPdf 19 43 02.1 +0.9**
SNR=18
TSUM Tsumeb 119.66 102 *e*PKPdf **PKPdf 19 43 01.9 +0.4**
ULHL Ulahol 119.70 5 P **PKPdf 19 43 02.4 +1.1**
SNR=15
KZA Kyzart 119.79 5 P **PKPdf 19 43 02.6 +0.9**
SNR=12
GTA Gaotai 120.26 344⇓ PKP **PKPdf 19 43 02.3 0.0**
GTA PP PP 19 44 33.5 +6.3
GTA PKS **PKSdf 19 46 38.3 -0.8**
GTA AMB AMB
comp=Z,110nm,8.1s
GTA LR LR
comp=N,440nm,23.3s
GTA LR LR
comp=E,400nm,22.8s
GTA LR LR
comp=Z,670nm,23.7s
XAN Xi'an 121.94 333 PKP **PKPdf 19 43 05.4 -0.1**
XAN PP **PP 19 44 40.3 +1.5**
XAN PKS **PKSdf 19 46 39.3 -3.0**
XAN SKKS 19 51 26.9
XAN AMB AMB
comp=Z,32nm,5.4s
XAN LR LR
comp=N,320nm,28.6s
XAN LR LR
comp=Z,150nm,25.5s
MIB Mutribah 122.00 35 *e*P **PKPdf 19 43 05.8 +0.1**
MIB AMb AMB 19 43 07.2
comp=Z,39nm,1.2s
RST Umm Al-Ruwaisa 122.04 36 *e*P **PKPdf 19 43 06.0 +0.2**
RST AMb AMB 19 43 07.7
comp=Z,387nm,1.0s
LZH Lanzhou 122.10 339⇑ PKP **PKPdf 19 43 07.1 +1.2**
LZH PP **PP 19 44 41.0 +1.1**
LZH PKS **PKSdf 19 46 44.4 +1.6**
LZH SKS **SKSdf 19 50 09.0 -3.9**
LZH SKKS **SKKSac 19 51 28.1 -7.0**
LZH AMB AMB
comp=Z,180nm,5.8s
LZH LR LR
comp=N,530nm,19.8s
LZH LR LR
comp=E,370nm,17.5s
LZH LR LR
comp=Z,660nm,20.4s
WHN Wuhan 122.24 327 PKP **PKPdf 19 43 05.6 -0.5**
WHN LR LR
comp=Z,710nm,17.3s
NAY Al-Naaiem 122.37 36 *e*P **PKPdf 19 43 06.2 -0.2**
NAY AMb AMB 19 43 07.8
comp=Z,27nm,1.2s
KSH Kashi 122.39 5 *e*PKP **PKPdf 19 43 08.1 +1.7**
KSH *e*PKS **PKSdf 19 46 43.3 +0.1**
KSH AMB AMB
comp=Z,390nm,6.0s
KSH LR LR
comp=N,620nm,15.0s
KSH LR LR
comp=E,350nm,11.7s
KSH LR LR
comp=Z,920nm,18.0s
RDF Al-Radifah 122.79 36 *e*P **PKPdf 19 43 07.8 +0.5**
RDF AMb AMB 19 43 09.3
comp=Z,42nm,1.2s
SYO Syowa Base 122.92 163⇑ *e*PKPdf **PKPdf 19 43 05.0 -1.1**
SYO Syowa Base 122.92 163⇑ *e*X sPKPdf 19 43 30.4 -0.7
SSLB Suanglung 123.33 316⇓ *e*PKPdf **PKPdf 19 43 08.3 -0.2**
SUR Sutherland 123.89 117 PKPdf **PKPdf 19 43 10.3 +0.9**
STKA Stephens Creek 124.56 243 *e*PKPdf **PKPdf 19 43 10.6 +0.2**
STKA PKP **PKPdf 19 43 10.8 +0.3**
STKA pPKP **pPKPdf 19 43 27.2 -1.5**
STKA Stephens Creek 124.56 243 PKP **PKPdf 19 43 10.8 +0.3**
comp=Z,20nm,0.9s,baz=75,slow=3.4,SNR=16
STKA pPKP **pPKPdf 19 43 27.2 -1.5**
comp=Z,8.1nm,0.7s,baz=326,slow=3.9,SNR=4.4
ENH Enshi 124.88 330 *e*PKPdf **PKPdf 19 43 11.1 -0.2**
KBL Kabul 126.25 13 *e*PKIKP **PKPdf 19 43 14.3 +0.3**
KBL *e* 19 45 06.0
KBL Kabul 126.25 13 *e*PKPdf **PKPdf 19 43 14.3 +0.3**
KBL *e*PP **PP 19 45 06.0 -1.7**
CD2 Chengdu 126.77 336 PKP **PKPdf 19 43 14.8 -0.1**
CD2 PP **PP 19 45 14.8 +3.6**
CD2 PKS **PKSdf 19 46 50.0 -1.7**
CD2 SKS **SKSdf 19 50 19.1 -2.6**
CD2 SKKS **SKKSac 19 52 00.3 -4.6**
CD2 SS **SS 20 02 11.3 -0.9**
CD2 AMB AMB
comp=Z,320nm,6.8s
CD2 LR LR
comp=N,510nm,23.0s
CD2 LR LR
comp=E,470nm,20.6s
CD2 LR LR
comp=Z,700nm,24.5s
BOSA Boshof 127.64 112 PKP **PKPdf 19 43 16.6 0.0**
BOSA pPKP **pPKPdf 19 43 34.0 -0.9**
BOSA Boshof 127.64 112 PKP **PKPdf 19 43 16.6 0.0**
comp=Z,27nm,1.0s,baz=287,slow=2.6,SNR=18
BOSA pPKP **pPKPdf 19 43 34.0 -0.9**
comp=Z,7.2nm,0.9s,baz=257,slow=5.5,SNR=3.2
LBTB Lobatse 127.77 108 *e*PKPdf **PKPdf 19 43 17.5 +0.6**
FAKI Fak Fak 128.16 281 P **PKPdf 19 43 20.2 +2.3**
comp=Z,41nm,1.3s
LSZ Lusaka 128.90 95 *e*PKPdf **PKPdf 19 43 20.0 +0.6**
LSZ *e* 19 43 36.7
MAW Mawson 129.13 171 PKP **PKPdf 19 43 19.1 +1.1**
MAW pPKP **pPKPdf 19 43 36.2 -0.1**
MAW Mawson 129.13 171 PKP **PKPdf 19 43 19.1 +1.1**
comp=Z,15nm,0.9s,baz=244,slow=4.7,SNR=13
MAW pPKP **pPKPdf 19 43 36.2 -0.1**
comp=Z,12nm,0.7s,baz=239,slow=1.4,SNR=6.9
GYA Guiyang 129.42 331 Pdif **Pdif 19 40 05.4 -2.2**
GYA PKP **PKiKP 19 43 20.6 -0.3**
GYA PP **PP 19 45 28.0 -0.8**
GYA PKS **PKSdf 19 46 54.0 -3.0**
GYA SKKS 19 52 15.8
GYA SS **SS 20 02 43.8 -1.6**
GYA AMB AMB
comp=Z,260nm,7.9s
GYA LR LR
comp=N,380nm,28.3s
GYA LR LR
comp=E,280nm,23.3s
GYA LR LR

	comp=Z,470nm,26.5s								
DHRM	**DHARAMSHALA**	**129.63**	**6**	*e*PKP	**PKPdf**	**19 43 21.4**	**+0.9**
DHRM				AMB	AMB	19 43 33.0	
	comp=Z,28nm,0.7s						
NAZ	**Nazwa, Dubai**	**130.23**	**31**	P	**PKPdf**	**19 43 22.6**	**+1.0**
	SNR=11						
WRAB	**Tennant Creek**	**130.28**	**259**	*e*PKIKP	**PKPdf**	**19 43 22.2**	**+0.5**
WRAB	**Tennant Creek**	**130.28**	**259**	*e*PKPdf	**PKPdf**	**19 43 22.2**	**+0.5**
WRAB				*e*SKP		19 46 54.2	
WRA	**Warramunga Arr**	**130.29**	**259**	PKPpre	PKPpre	19 43 05.3	
WRA				PKP	**PKiKP**	**19 43 22.7**	**+0.1**
WRA				pPKP	pPKPdf	19 43 40.1	+0.1
WRA				sPKP		19 43 46.8	
WRA				PP	**PP**	**19 45 33.8**	**-2.3**
WRA				SKP		19 46 52.6	
WRA				SKKPbc	SKKPbc	19 56 20.6	+2.1
WRA	**Warramunga Arr**	**130.29**	**259**	PKhKP	PKPpre	19 43 05.3	
	comp=Z,0.9nm,0.9s,baz=86,slow=3.5,SNR=5.3						
WRA				PKP	**PKiKP**	**19 43 22.7**	**+0.1**
	comp=Z,31nm,1.0s,baz=81,slow=1.9,SNR=81						
WRA				pPKP	pPKPdf	19 43 40.1	+0.1
	comp=Z,8.6nm,1.0s,baz=79,slow=2.7,SNR=3.2						
WRA				sPKP		19 43 46.8	
	comp=Z,7.6nm,0.9s,baz=80,slow=2.6,SNR=7.1						
WRA				PP	**PP**	**19 45 33.8**	**-2.3**
	comp=Z,4.4nm,1.2s,baz=82,slow=6.3,SNR=6.8						
WRA				SKP		19 46 52.6	
	comp=Z,11nm,0.9s,baz=79,slow=4.0,SNR=17						
WRA				SKKPbc	SKKPbc	19 56 20.6	+2.1
	comp=Z,3.6nm,1.1s,baz=277,slow=2.7,SNR=7.9						
HATD	**Hatta, Dubai**	**130.60**	**31**	P	**PKPdf**	**19 43 22.3**	**0.0**
	SNR=17						
ASHO	**Ashiyiah**	**130.68**	**31**	P	**PKPdf**	**19 43 22.6**	**+0.1**
	SNR=14						
SMLA	**Simla**	**130.82**	**5**	*e*PKP	**PKPdf**	**19 43 23.6**	**+1.1**
AS31	**Alice Springs**	**131.05**	**254**	*e*PKPdf	**PKPdf**	**19 43 23.3**	**+0.2**
ASAR	**Alice Springs**	**131.05**	**254**	PKPpre	PKPpre	19 43 04.7	
ASAR				PKP	**PKiKP**	**19 43 24.4**	**+0.3**
ASAR				sPKP		19 43 47.5	
ASAR				PP	**PP**	**19 45 41.4**	**+0.4**
ASAR				SKPab	**SKPab**	**19 46 46.0**	**+3.3**
ASAR				SKP		19 46 55.4	
ASAR				SKKPbc	**SKKPbc**	**19 56 13.2**	**-2.8**
ASAR	**Alice Springs**	**131.05**	**254**	PKhKP	PKPpre	19 43 04.7	
	comp=Z,0.6nm,0.9s,baz=81,slow=5.7,SNR=3.9						
ASAR				PKP	**PKiKP**	**19 43 24.4**	**+0.3**
	comp=Z,18nm,1.0s,baz=102,slow=2.0,SNR=48						
ASAR				sPKP		19 43 47.5	
	comp=Z,7.7nm,0.8s,baz=91,slow=2.3,SNR=8.1						
ASAR				PP	**PP**	**19 45 41.4**	**+0.4**
	comp=Z,0.9nm,1.0s,baz=120,slow=4.5,SNR=4.3						
ASAR				SKPab	**SKPab**	**19 46 46.0**	**+3.3**
	comp=Z,2.1nm,1.0s,baz=72,slow=3.0,SNR=4.6						
ASAR				SKP		19 46 55.4	
	comp=Z,5.6nm,0.9s,baz=83,slow=3.8,SNR=9.3						
ASAR				SKKPbc	**SKKPbc**	**19 56 13.2**	**-2.8**
	comp=Z,3.5nm,1.2s,baz=277,slow=3.3,SNR=5.9						
LSA	**Lhasa**	**131.55**	**349**	*e*PKIKP	**PKPdf**	**19 43 25.3**	**+0.8**
LSA	**Lhasa**	**131.55**	**349**	*e*PKPdf	**PKPdf**	**19 43 25.3**	**+0.8**
LSA				*e*SKP		19 46 50.8	
ARQ	**Araqi**	**132.04**	**32**	P	**PKPdf**	**19 43 24.8**	**-0.2**
	SNR=10.0						
HOQ	**Hoqain**	**132.22**	**31**	P	**PKPdf**	**19 43 25.2**	**-0.2**
	SNR=11						
KMI	**Kunming**	**132.32**	**334**	PKP	**PKPdf**	**19 43 26.1**	**+0.3**
KMI				PP	**PP**	**19 45 47.9**	**+0.3**
KMI				PKS	PKSdf	19 46 53.9	-8.7
KMI				SS	SS	20 03 18.8	-2.2
KMI				AMB	AMB		
	comp=Z,220nm,8.0s						
KMI				LR	LR		
	comp=N,380nm,22.4s						
KMI				LR	LR		
	comp=E,170nm,26.7s						
KMI				LR	LR		
	comp=Z,440nm,25.0s						
BSY	**Bisya**	**132.87**	**31**	P	**PKPdf**	**19 43 26.9**	**+0.2**
	SNR=14						
SMDO	**Samad**	**133.02**	**30**	P	**PKPdf**	**19 43 27.5**	**+0.5**
	SNR=14						
NDI	**New Delhi**	**133.25**	**5**	*e*PKP	**PKPdf**	**19 43 25.2**	**-2.0**
KMBO	**Kilima Mbogo**	**133.30**	**74**	PKPpre	PKPpre	19 43 17.5	
KMBO				PKP	**PKiKP**	**19 43 30.1**	**+0.9**
KMBO	**Kilima Mbogo**	**133.30**	**74**	P	**PKPdf**	**19 43 31.1**	**+3.1**
	SNR=7.9						
KMBO	**Kilima Mbogo**	**133.30**	**74**	PKhKP	PKPpre	19 43 17.5	
	comp=Z,0.5nm,0.3s,baz=224,slow=23,SNR=2.7						
KMBO				PKP	**PKiKP**	**19 43 30.1**	**+0.9**
	comp=Z,5.8nm,1.0s,baz=283,slow=2.2,SNR=13						
QIZ	**Qiongzhong**	**133.80**	**322**	PKP	**PKPdf**	**19 43 28.5**	**+0.1**
QIZ				PP	**PP**	**19 45 57.1**	**-0.1**
QIZ				SS	SS	20 03 37.5	-1.7
QIZ				LR	LR		
	comp=N,210nm,24.7s						
QIZ				LR	LR		
	comp=Z,380nm,35.7s						
ABTO	**Aybut**	**135.05**	**40**	P	**PKPdf**	**19 43 32.1**	**+1.2**
	SNR=7.0						
AJM	**Ajmer**	**135.12**	**9**	*e*PKP	**PKPdf**	**19 43 30.8**	**0.0**
AJM				AMb	AMB	19 43 32.2	
SHL	**Shillong**	**135.41**	**347**	*e*PKP	**PKPdf**	**19 43 30.0**	**-1.5**
SHL				*ex*	x	19 47 02.0	
MYLDM	**Lahad Datu**	**136.85**	**299**	P	**PKPdf**	**19 43 35.1**	**+0.8**
SDKM	**Sandakan**	**137.67**	**301**	P	**PKPdf**	**19 43 34.0**	**-1.8**
FITZ	**Fitzroy Crossi**	**138.23**	**263**	PKPpre	PKPpre	19 43 27.7	
FITZ				*e*PKPpre	PKPpre	19 43 29.5	
FITZ				PKP	**PKPdf**	**19 43 36.4**	**-0.2**
FITZ				*e*PKPdf	**PKiKP**	**19 43 37.4**	**-1.3**
FITZ	**Fitzroy Crossi**	**138.23**	**263**	PKhKP	PKPpre	19 43 27.7	
	comp=Z,7.3nm,1.0s,baz=180,slow=5.4,SNR=6.9						
FITZ				PKP	**PKPdf**	**19 43 36.4**	**-0.2**
	comp=Z,14nm,1.0s,baz=59,slow=5.8,SNR=4.5						
CHTO	**Chiang Mai**	**139.51**	**334**	P	**PKPdf**	**19 43 40.1**	**+1.1**
	SNR=5.4						
CM31	**Chiang Mai Arr**	**139.83**	**334**	*e*PKPpre	PKPpre	19 43 33.1	
CM31				*e*PKPdf	**PKPdf**	**19 43 40.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**139.83**	**334**	PKPpre	PKPpre	19 43 30.8	
CMAR				PKP	**PKPdf**	**19 43 38.8**	**-0.8**
CMAR				pPKP	pPKPdf	19 43 57.6	-0.3
CMAR				PP	**PP**	**19 46 34.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**139.83**	**334**	PKhKP	PKPpre	19 43 30.8	
	comp=Z,5.4nm,0.9s,baz=0.4,slow=3.3,SNR=17						
CMAR				PKP	**PKPdf**	**19 43 38.8**	**-0.8**
	comp=Z,19nm,0.9s,baz=348,slow=2.6,SNR=33						
CMAR				pPKP	pPKPdf	19 43 57.6	-0.3
	comp=Z,7.3nm,0.9s,baz=338,slow=1.8,SNR=3.8						
CMAR				PP	**PP**	**19 46 34.0**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=13,slow=6.4,SNR=4.7						
KAPI	**Kappang**	**140.52**	**285**	*e*PKPpre	PKPpre	19 43 39.3	
KAPI	**Kappang**	**140.52**	**285**	PKP	**PKPdf**	**19 43 39.4**	**-1.6**
	comp=Z,16nm,0.9s,baz=226,slow=3.3,SNR=5.8						
PBKT	**Sadao Pong**	**140.58**	**330**	P	PKPdf	19 43 30.2	-11
NGP	**Nagpur**	**140.86**	**4**	*e*PKP	**PKPdf**	**19 43 37.6**	**-3.8**
NGP				AMS	AMS	20 07 22.9	
	comp=Z,783nm,20.8s						
POO	**Poona**	**142.76**	**12**	*ex*	**PKPdf**	**19 43 40.0**	**-4.9**
SRDT	**SRDT**	**143.38**	**331**	P	**PKPdf**	**19 43 48.0**	**+2.0**
	comp=Z,50nm,1.1s,comp=Z,2μm						
SBUM	**Sibu**	**143.56**	**301**	P	**PKPdf**	**19 43 45.2**	**-1.1**
MBWA	**Marble Bar**	**144.03**	**259**	*e*PKPpre	PKPpre	19 43 44.4	
VIS	**Vishakhapatnam**	**144.31**	**357**	*e*PKP	PKPbc	19 43 45.9	-0.1
HYB	**Hyderabad**	**144.53**	**5**	*i* PKP	**PKPab**	**19 43 45.0**	**-1.4**
	comp=Z,190nm,1.0s						
HYB	**Hyderabad**	**144.53**	**5**	*e*PKP	**PKPab**	**19 43 45.7**	**-0.8**
HYB				AMS	AMS	19 59 04.7	
	comp=Z,0.4nm,1.9s						
NWAO	**Narrogin (SRO)**	**144.84**	**238**	PKPbc	**PKPab**	**19 43 47.2**	**0.0**
NWAO	**Narrogin (SRO)**	**144.84**	**238**	PKPbc	**PKPab**	**19 43 47.2**	**0.0**
	comp=Z,84nm,1.2s,baz=82,slow=6.9,SNR=5.6						
STKI	**Sintang**	**145.51**	**298**	P	**PKPdf**	**19 43 49.0**	**-0.8**
KHKI	**Kahang-Kahang**	**145.56**	**282**	P	**PKPdf**	**19 43 47.7**	**-2.1**
KSM	**Kuching**	**145.67**	**302**	*e*PKPdf	**PKPab**	**19 43 50.7**	**-0.1**
KSM	**Kuching**	**145.67**	**302**	P	**PKPab**	**19 43 51.4**	**+0.6**
DNP	**Denpasar**	**146.04**	**282**	P	**PKPbc**	**19 43 51.3**	**-0.2**
	comp=Z,493nm,1.3s,comp=Z,8μm						
IGBI	**Denpasar**	**146.15**	**281**	P	**PKPdf**	**19 43 51.2**	**+0.4**
KMMI	**Kalianget**	**146.61**	**285**	P	**PKPab**	**19 43 54.2**	**-0.2**
DGPR	**DIGLIPUR**	**146.93**	**339**	*e*PKP	**PKPdf**	**19 43 52.2**	**+0.1**
JAGI	**Jajag, Banyuwa**	**146.95**	**283**	P	**PKPdf**	**19 43 52.9**	**+0.7**
BLJI	**Banyuglugur**	**147.21**	**284**	P	**PKPdf**	**19 43 52.1**	**-0.5**
ABPO	**Ambohimpanom**	**147.43**	**97**	*e*PKP2	**PKPbc**	**19 43 54.5**	**-1.1**
ABPO	**Ambohimpanom**	**147.43**	**97**	*e*PKPdf	**PKPbc**	**19 43 54.5**	**-1.1**
GMJI	**Gumukmas**	**147.54**	**283**	P	**PKPbc**	**19 43 55.8**	**0.0**
KRKI	**Karangkates**	**148.41**	**284**	P	**PKPdf**	**19 43 50.2**	**-4.4**
SJI	**Sawahan**	**148.89**	**286**	P	**PKPdf**	**19 43 50.4**	**-5.1**
MDRS	**Chennai**	**148.95**	**3**	*e*PKP	**PKPdf**	**19 43 53.8**	**-1.6**
PWJI	**Pagerwojo**	**148.96**	**285**	P	**PKPdf**	**19 43 52.8**	**-2.7**
PCJI	**Pacitan**	**149.60**	**285**	P	**PKPbc**	**19 44 01.1**	**0.0**
	comp=Z,293nm,1.2s,comp=Z,5μm						
SMRI	**Semarang**	**149.83**	**288**	P	**PKPdf**	**19 43 58.9**	**+2.0**
KULM	**Kulim**	**150.07**	**319**	*e*PKPdf	**PKPdf**	**19 43 57.9**	**+0.5**
KULM				*e*PKPbc	**PKiKP**	**19 44 02.8**	**-0.4**
KULM	**Kulim**	**150.07**	**319**	P	**PKPdf**	**19 43 58.1**	**+0.8**
UGM	**Wanagama**	**150.09**	**286**	P	**PKPbc**	**19 44 02.8**	**+0.4**
	comp=Z,388nm,1.2s						
IPM	**Ipoh**	**150.46**	**318**	*e*PKPdf	**PKPdf**	**19 43 58.3**	**+0.3**
IPM				*e*PKPbc	**PKiKP**	**19 44 03.8**	**-0.2**
IPM				*e*PKPab	**PKPab**	**19 44 10.5**	**+0.7**
IPM	**Ipoh**	**150.46**	**318**	P	**PKPdf**	**19 43 58.9**	**+1.0**
MYKOM	**Kota Tinggi**	**150.47**	**310**	P	**PKPbc**	**19 44 04.6**	**+1.3**
BJII	**Banjamegara**	**150.60**	**288**	P	**PKPbc**	**19 44 04.0**	**+0.3**
KGM	**Kluang**	**150.70**	**311**	P	**PKPbc**	**19 44 04.5**	**+0.7**
TGJI	**Tegal**	**150.94**	**289**	P	**PKPbc**	**19 44 04.6**	**+0.2**
FRIM	**Kepong**	**151.00**	**315**	P	**PKPbc**	**19 44 05.2**	**+0.7**
CLJI	**Cilicap**	**151.39**	**288**	P	**PKPbc**	**19 44 05.5**	**+0.1**
LEM	**Lembang**	**152.27**	**291**	P	**PKPdf**	**19 44 00.1**	**-0.7**
CISI	**Cisompet, Garu**	**152.40**	**289**	P	**PKPdf**	**19 44 00.1**	**-0.8**
TRD	**Trivandrum**	**153.12**	**10**	*e*PKP	**PKPdf**	**19 44 00.7**	**-1.1**
BKNI	**Bangkinang**	**153.50**	**312**	P	**PKPdf**	**19 44 02.2**	**-0.3**
PALK	**Pallekele**	**154.72**	**2**	PKPab	**PKPab**	**19 44 27.4**	**-0.2**
PALK	**Pallekele**	**154.72**	**2**	PKPab	**PKPab**	**19 44 27.4**	**-0.2**
	comp=Z,27nm,1.0s,baz=32,slow=4.8,SNR=3.9						

*ISCJB **22** 19:29:39.1±0.6,24°.89N±0°.04×122°.46E±0°.02, h5km±4km, Error ellipse: s-maj=6.5km s-min=3.0km az=12.4*
*TAP **22** 19:29:39.0,24°.89N×122°.43E, h8km, ML3.1, D*
*JMA **22** 19:29:39.0±0.4,24°.83N×122°.44E, h0km, M2.8*

ISC 22 19:29:39.2±1.1,24°.88N±0°.04×122°.46E±0°.02, h8km±11km, n32,σ0°44/47, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.45**	**287**	P		**Pg**	**19 29 48.1**	**+0.2**
	baz=286							
TWB1				S		**Sg**	**19 29 54.3**	**+0.5**
	baz=286							
EGS		**0.48**	**266**	*e*P		**Pb**	**19 29 49.0**	**-0.8**
	baz=264							
EGS				*e*S		**Sb**	**19 29 56.2**	**-0.9**
	baz=264							
TWC	**Suao**	**0.62**	**244**	P		**Pg**	**19 29 51.2**	**+0.1**
	baz=241							
TWC				*e*S		**Sb**	**19 30 01.2**	**+0.2**
	baz=241							
NWF	**Wu-fen Shan**	**0.65**	**288**	P		**Pb**	**19 29 52.5**	**-0.3**
	baz=287							
NWF				*e*S		**Sg**	**19 30 00.5**	**+0.4**
	baz=287							
YOJ	**Yonaguni jima**	**0.65**	**129**	P		**Pg**	**19 29 51.7**	**0.0**
YOJ				S		**Sg**	**19 30 00.7**	**+0.5**
TWE	**Neicheng**	**0.74**	**258**	P		**Pg**	**19 29 53.3**	**0.0**
	baz=256							
TWE				*e*S		**Sb**	**19 30 05.1**	**+0.6**
	baz=256							
ENA	**Nanau**	**0.79**	**236**	*i* P		**Pg**	**19 29 54.4**	**-0.1**
	baz=233							
ENA				*e*S		**Sg**	**19 30 04.7**	**0.0**
	baz=233							
PCYT	**Pengchaiyu**	**0.83**	**335**	P		**Pg**	**19 29 54.5**	**-0.6**
	baz=336							
ENTT	**Nioudou**	**0.85**	**254**	P		**Pb**	**19 29 55.6**	**-0.5**
	baz=252							
ENTT				*e*S		**Sb**	**19 30 07.8**	**+0.1**
	baz=252							
TAP1	**Taipei**	**0.86**	**281**	*e*P		**Pb**	**19 29 56.8**	**+0.3**
	baz=280							
TWY	**Chenhua**	**0.88**	**297**	*e*P		**Pb**	**19 29 56.8**	**+0.1**
	baz=297							
TWY				*e*S		**Sb**	**19 30 08.4**	**-0.1**
	baz=297							
TWS1	**Kuangyinshan**	**0.97**	**283**	*e*P		**Pb**	**19 29 58.0**	**-0.2**
	baz=283							
NSK	**Sanguang**	**1.02**	**259**	*e*P		**Pg**	**19 29 58.5**	**-0.2**
	baz=257							
NNS	**Nan Shan**	**1.08**	**246**	*e*P		**Pb**	**19 29 59.8**	**-0.4**
	baz=244							
NNS				*e*S		**Sb**	**19 30 14.9**	**+0.4**
	baz=244							
TWD	**Chiawan**	**1.12**	**225**	*e*P		**Pn**	**19 30 01.2**	**+0.1**
	baz=223							
IRIF	**Iriomote-Funau**	**1.28**	**115**	P		**Pg**	**19 30 03.6**	**-0.1**
IRIF				*e*S		**Sg**	**19 30 19.9**	**-0.3**
WHF	**Hehuan Shan**	**1.31**	**236**	*e*P		**Pb**	**19 30 03.9**	**-0.4**
	baz=234							
WHF				*e*S		**Sb**	**19 30 21.1**	**-0.4**
	baz=234							
TWT	**Tachien**	**1.32**	**242**	*e*P		**Pn**	**19 30 03.8**	**-0.3**
	baz=241							
NSTT	**Nanjuang**	**1.35**	**260**	*e*P		**Pn**	**19 30 04.2**	**-0.1**
	baz=258							
ESL	**Shilin**	**1.41**	**222**	P		**Pn**	**19 30 05.2**	**0.0**
	baz=220							
HATJ	**Hateruma jima**	**1.47**	**123**	P		**Pb**	**19 30 07.0**	**+0.2**
HATJ				*e*S		**Sg**	**19 30 26.4**	**-0.2**
JKRS	**Kuro-shima**	**1.55**	**114**	P		**Pg**	**19 30 08.9**	**0.0**
JKRS				*e*S		**Sg**	**19 30 28.7**	**-0.3**
JIJ	**Ishigaki jima**	**1.61**	**108**	P		**Pn**	**19 30 07.9**	**-0.1**
JIJ				*e*S		**Sn**	**19 30 29.5**	**+0.5**
TWQ1	**Liyutan**	**1.62**	**251**	*e*P		**Pb**	**19 30 09.0**	**-0.4**
	baz=250							
SMLT	**Sun Moon Lake**	**1.73**	**235**	*e*P		**Pn**	**19 30 10.3**	**+0.6**
	baz=234							
TYC	**Yuchr**	**1.75**	**237**	*e*P		**Pb**	**19 30 11.0**	**-0.6**
	baz=235							
TWF1	**Yuli**	**1.85**	**215**	*e*P		**Pn**	**19 30 11.0**	**-0.3**
	baz=213							
YUS	**Yu-Shan**	**1.95**	**225**	*e*P		**Pn**	**19 30 13.2**	**+0.2**
	baz=223							
ALS	**Alishan**	**2.03**	**228**	*e*P		**Pn**	**19 30 14.8**	**+0.7**
	baz=227							
CHN5	**Tsauling**	**2.07**	**232**	*e*P		**Pn**	**19 30 15.3**	**+1.1**
	baz=231							
ELDTW	**Lidau**	**2.14**	**218**	*e*P		**Pn**	**19 30 14.6**	**-0.7**
	baz=217							
CHN1	**Nanshi**	**2.44**	**227**	*e*P		**Pn**	**19 30 20.1**	**+0.7**
	baz=225							

*NNC **22** 19:31:56.5±9.2,36°.80N×70°.35E, h0km, mb3.9, mpv4.3, Error ellipse: s-maj=82.3km s-min=62.8km az=166.0*
*IDC **22** 19:31:58.4±4.8,36°.24N×70°.88E, h157km±39km, mb3.4/8, mb1 3.4/13,mb1mx3.2/33,mbtmp3.3/13, Error ellipse: s-maj=39.8km s-min=22.1km az=170.0*
*ISCJB **22** 19:32:01.1±0.4,36°.53N±0°.03×70°.98E±0°.07, h188km, mb3.7/7, Error ellipse: s-maj=8.1km s-min=3.6km az=164.6*

ISC 22 19:32:02.2±0.7,36°.54N±0°.05×71°.13E±0°.08, h188km, n49, σ1°45/53, mb3.7/7, 8C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.79**	**166**	⇑P		**Pn**	**19 32 50.5**	**+1.6**
CEP				S		**Sn**	**19 33 26.0**	**+0.8**
CHCP	**Chirah Chowk**	**3.37**	**148**	P		**Pn**	**19 32 58.0**	**+2.2**
THW	**Thamme Wali**	**3.77**	**172**	⇑P		**Pn**	**19 33 02.0**	**+1.2**
SARP	**Sargodha**	**4.78**	**164**	P		**Pn**	**19 33 14.1**	**+0.5**
THN	**Thein Dam**	**5.58**	**136**	*e*PKP		**Pn**	**19 33 21.1**	**-2.7**
THN				*e*S		**Sn**	**19 34 23.7**	**-4.5**
AML	**Almayashu**	**5.92**	**19**	P		**Pn**	**19 33 29.4**	**+0.8**
	SNR=98							
DHRM	**DHARAMSHALA**	**6.05**	**134**	*e*PKP		**Pn**	**19 33 31.0**	**+0.8**
DHRM				*e*S		**Sn**	**19 34 38.0**	**-1.5**
UCH	**Uchtor**	**6.25**	**24**	P		Sn	19 34 43.2	-1.7
	SNR=8.9							
EKS2	**Erkin-Say**	**6.45**	**18**	P		**Pn**	**19 33 36.1**	**+1.0**
	SNR=23							
KK31	**Karatay Array**	**6.57**	**356**	⇑Pn		**Pn**	**19 33 36.4**	**-0.2**
	8.0nm,0.4s,baz=182,slow=13,SNR=229							
KK31				S		Sn	19 34 45.9	-5.5
	21nm,0.5s,baz=185,slow=22,SNR=15							
AAK	**Ala-Archa**	**6.62**	**22**	P		**Pn**	**19 33 38.7**	**+1.3**
	SNR=14							
AAK	**Ala-Archa**	**6.62**	**22**	P		**Pn**	**19 33 38.7**	**+1.3**
	2.5nm,0.3s,baz=197,slow=3.9,SNR=37							
AAK				S		**Sn**	**19 34 52.1**	**-0.6**
	2.1nm,0.3s,baz=294,slow=20,SNR=11							

KBK	**Karagaybulak**	**6.78**	**25**	P		**Pn**	**19 33 41.3**	**+1.8**
	SNR=11								
CHMS	**Chumysh**	**7.03**	**22**	P		**Pn**	**19 33 43.8**	**+1.2**
	SNR=9.2								
USP	**Ospenovka**	**7.20**	**20**	P		**Pn**	**19 33 45.8**	**+0.9**
	SNR=10								
TKM2	**Tokmak 2**	**7.24**	**27**	⇓Pn		**Pn**	**19 33 46.9**	**+1.3**
	14nm,0.6s								
TKM2				⇓Sn		**Sn**	**19 35 06.0**	**-1.5**
	5.1nm,0.7s								
TKM2	**Tokmak 2**	**7.24**	**27**	P		**Pn**	**19 33 46.9**	**+1.3**
	SNR=19								
KHET	**Khetri**	**9.32**	**154**	*e*PKP		**Pn**	**19 34 11.9**	**-1.0**
KHET				*e*S		Sn	19 35 49.7	-7.4
KHET				AML		AML	19 35 57.7	
	comp=N,96nm,0.1s								
KHET				AML		AML	19 35 57.7		
	comp=E,161nm,0.1s								
KUDL	**Kundal**	**9.52**	**150**	*e*PKP		**Pn**	**19 34 13.3**	**-2.1**
KUDL				*e*S		Sn	19 35 54.5	-7.2
AGRA	**Agra**	**10.94**	**146**	*e*PKP		**Pn**	**19 34 32.6**	**-1.2**
AGRA				*ex*		x	19 36 22.8		
AGRA				AML		AML	19 36 57.2		
	comp=E,75nm,0.4s								
AGRA				AML		AML	19 36 57.5		
	comp=N,76nm,0.4s								
PYUN	**Piuthan**	**13.09**	**127**	*e*P		**Pn**	**19 35 00.1**	**-1.3**
	comp=N,19nm,0.3s								
MK31	**Makanchi Array**	**13.20**	**36**	⇑P		**P**	**19 35 05.7**	**0.0**
	comp=N,0.5nm,0.6s,baz=206,slow=11,SNR=4.7								
MKAR	**Makanchi Array**	**13.20**	**36**	P		**P**	**19 35 04.5**	**-1.3**
	comp=N,0.1nm,0.3s,baz=218,slow=7.7,SNR=3.7								
DANN	**Dangsing**	**13.43**	**124**	*e*P		**Pn**	**19 35 06.2**	**+0.5**
KOLN	**Koldanda**	**13.71**	**126**	*e*P		**Pn**	**19 35 08.9**	**-0.2**
DMN	**Daman**	**14.81**	**123**	*e*P		**P**	**19 35 23.6**	**-0.4**
	comp=N,14nm,0.4s								
KKN	**Kakani**	**14.81**	**122**	*e*P		**P**	**19 35 23.1**	**-0.9**
	comp=N,16nm,0.5s								
KKN				*e*S		Sn	19 37 58.1	-10	
PKIN	**Phulchoki**	**15.03**	**122**	*e*P		**P**	**19 35 26.9**	**+0.4**
PKI	**Pulchoki**	**15.04**	**122**	*e*P		**P**	**19 35 26.7**	**0.0**
	comp=N,8.5nm,0.3s								
KURBB	**Kurchatov Arra**	**15.05**	**18**	P		**P**	**19 35 26.3**	**+0.2**
	comp=N,0.1nm,0.3s,baz=206,slow=14,SNR=4.0								
AB31	**Akbulak array**	**15.10**	**331**	⇑P		**Pn**	**19 35 23.1**	**-2.8**
	comp=N,3.7nm,0.7s,baz=144,slow=12,SNR=50								
GUN	**Gumba**	**15.15**	**120**	*e*P		**P**	**19 35 28.0**	**+0.1**
VOSK	**Vostochnaya**	**16.18**	**360**	⇓P		**P**	**19 35 38.3**	**-0.4**
	comp=N,3.4nm,0.9s								
RAMN	**Ramite**	**16.25**	**122**	*e*P		**Pn**	**19 35 41.2**	**+0.8**
	comp=N,23nm,0.5s								
ZRNK	**Zerenda**	**16.48**	**355**	⇑P		**P**	**19 35 40.4**	**-1.4**
	comp=N,0.8nm,0.5s								
BVA0	**Borovoye Array**	**16.49**	**358**	⇑P		**P**	**19 35 40.2**	**-1.9**
	comp=N,0.2nm,0.7s,baz=168,slow=11,SNR=14								
BVAR	**Borovoye Array**	**16.49**	**358**	P		**Pn**	**19 35 42.8**	**+0.1**
	comp=N,0.4nm,0.3s,baz=166,slow=11,SNR=15								
TAPN	**Taplejung**	**16.78**	**118**	*e*P		**Pn**	**19 35 48.9**	**+2.2**
	comp=N,20nm,0.5s								
AKTO	**Aktyubinsk**	**16.80**	**330**	⇑P		**P**	**19 35 44.7**	**-0.7**
	comp=N,0.7nm,0.8s								
AKTO	**Aktyubinsk**	**16.80**	**330**	P		**P**	**19 35 45.4**	**-0.1**
	comp=N,0.5nm,0.3s,baz=142,slow=12,SNR=12								
ODAN	**Odare**	**16.85**	**120**	*e*P		**Pn**	**19 35 48.9**	**+1.3**
	comp=N,11nm,0.5s								
ZALV	**Zalesovo Beam**	**19.83**	**24**	P		**P**	**19 36 19.9**	**+1.5**
	comp=N,0.9nm,0.3s,baz=213,slow=10,SNR=10.0								
SONM	**Songino Array**	**28.23**	**55**	P		**P**	**19 37 40.1**	**+2.5**
	comp=N,0.2nm,0.5s,baz=255,slow=10

	29nm,0.8s										
SBA	Scott Base	56.85	184	*e*P		P		19 58 41.3	+0.5		
	53nm,1.8s										
VNDA	Vanda	56.87	185	P		P		19 58 40.2	-0.7		
VNDA	Vanda	56.87	185	P		P		19 58 40.2	-0.7		
	2.3nm,0.6s,baz=354,slow=7.1,SNR=31										
NWAO	Narrogin (SRO)	57.10	244	P		P		19 58 43.5	+0.2		
NWAO	Narrogin (SRO)	57.10	244	P		P		19 58 43.5	+0.2		
	12nm,1.0s,baz=90,slow=15,SNR=3.1										
JHJ	Hachijo jima 2	67.03	323	P		P		19 59 48.0	+0.7		
	85nm,0.6s,baz=186,slow=10,SNR=5.4										
QSPA	South Pole Qui	68.61	180	*e*P		P		19 59 56.8	+0.2		
	18nm,0.9s										
KKM	Kota Kinabalu	69.10	286	*e*P		P		20 00 00.2	-0.3		
	18nm,0.8s										
JOW	Kunigami	70.07	311	*e*P		P		20 00 04.9	-0.9		
	8.4nm,0.9s										
MJAR	Matsushiro Arr	70.43	325	P		P		20 00 07.7	0.0		
MJAR	Matsushiro Arr	70.43	325	P		P		20 00 07.7	0.0		
	12nm,0.6s,baz=165,slow=6.1,SNR=33										
MAJO	Matsushiro	70.44	325	*e*P		P		20 00 07.1	-0.7		
	20nm,1.0s										
MAT	Matsushiro	70.44	325	P		P		20 00 07.8	0.0		
MAT				S		S		20 08 29.8	-4.7		
JNU	Nakatsue	72.34	317	*e*P		P		20 00 18.5	-0.4		
	8.9nm,1.1s										
JNU	Nakatsue	72.34	317	P		P		20 00 19.0	+0.1		
	12nm,0.9s,baz=112,slow=7.0,SNR=7.2										
KSM	Kuching	72.62	279	⇓*i*P		P		20 00 21.3	+0.3		
	22nm,0.6s										
TWG	Pinlang	73.11	303	*e*P		P		20 00 22.0	-1.5		
	88nm,0.6s										
YULB	Yu-li	73.25	304	*e*P		P		20 00 22.9	-1.4		
	7.3nm,0.6s										
NACB	Ninganchiao	73.44	305	*e*P		P		20 00 23.3	-2.1		
TPUB	Ta-pu	73.71	304	*e*P		P		20 00 26.0	-0.9		
	59nm,0.8s										
SSLB	Suanglung	73.72	304	*e*P		P		20 00 26.2	-0.9		
	21nm,0.7s										
ASAJ	Asahikawa	74.13	332	P		P		20 00 28.4	-0.4		
ASAJ	Asahikawa	74.13	332	P		P		20 00 28.4	-0.4		
	17nm,0.8s,baz=216,slow=8.6,SNR=18										
FX1	Attu Island--F	74.34	355	*e*P		P		20 00 29.6	-0.2		
UNV	Unalaska Valle	75.77	8	*e*P		P		20 00 36.4	-1.3		
PETK	Petropavlovsk-	76.96	346	P		P		20 00 44.6	+0.3		
PETK	Petropavlovsk-	76.96	346	P		P		20 00 44.6	+0.3		
	17nm,0.8s,baz=147,slow=8.5,SNR=33										
KSRS	Korea Array	76.99	319	P		P		20 00 46.0	+1.2		
	3.4nm,1.0s,baz=145,slow=6.1,SNR=11										
KSAR	Wonju Array Be	77.01	319	P		P		20 00 46.0	+1.1		
USRK	Ussuriysk Arra	79.23	326	P		P		20 00 58.4	+1.8		
	14nm,0.9s,baz=127,slow=3.5,SNR=27										
MAW	Mawson	80.34	200	P		P		20 01 02.3	+0.2		
MAW	Mawson	80.34	200	P		P		20 01 02.3	+0.2		
	2.5nm,0.6s,baz=280,slow=6.3,SNR=4.2										
MONP	Monument Peak	80.55	49	⇑P		P		20 01 04.8	+0.7		
	baz=81										
EDW2	Edwards Air Fo	80.56	47	⇑P		P		20 01 04.6	+0.7		
	baz=81										
ISA	Isabella	80.68	46	*e*P		P		20 01 05.7	+1.2		
ISA	Isabella	80.68	46	⇓P		P		20 01 05.5	+1.0		
	baz=81										
MDJ	Mudanjiang	80.77	326	P		P		20 01 05.3	+0.7		
MDJ				pP		pP		20 03 09.4	+0.1		
MDJ				sP		sP		20 04 09.8	+0.7		
MDJ				PP		PP		20 04 20.3	0.0		
MDJ				S		SKSac		20 10 27.6	+0.5		
MDJ				sS		sS		20 14 07.6	+0.8		
MDJ				pmax		pmax					
	comp=Z,13nm,1.2s										
MDJ				pmax		pmax					
	comp=Z,91nm,4.9s										
MDJ	Mudanjiang	80.77	326	*e*P		P		20 01 06.0	+1.4		
	comp=Z,8.3nm,1.0s										
CMB	Columbia Colle	80.81	43	*e*P		P		20 01 06.1	+1.0		
	comp=Z,6.6nm,1.2s										
SWSC	Sam W. Stewart	81.02	49	⇑P		P		20 01 06.8	+0.6		
	baz=81										
BELC	Belle Mtn. Jos	81.45	48	⇑P		P		20 01 09.4	+0.8		
	baz=82										
MPMC	Manual Prospec	81.56	46	⇓P		P		20 01 10.2	+1.1		
	baz=82										
GLA	Glamis	81.76	50	⇑P		P		20 01 11.1	+1.0		
	baz=82										
IRM	Iron Mountain	82.13	49	⇑P		P		20 01 12.2	+0.3		
	baz=82										
WHN	Wuhan	82.26	307	P		P		20 01 11.8	-0.7		
TUQ	Turquoise Moun	82.28	47	⇑P		P		20 01 13.7	+1.0		
	baz=82										
IPM	Ipoh	82.32	278	*e*P		P		20 01 11.4	-1.9		
	comp=Z,28nm,0.7s										
Y12C	Blythe	82.35	49	⇑P		P		20 01 14.3	+1.3		
	baz=82										
NVAR	Mina Array Bea	82.37	44	P		P		20 01 14.2	+1.0		
NVAR	Mina Array Bea	82.37	44	P		P		20 01 14.2	+1.0		
	comp=Z,3.0nm,0.6s,baz=225,slow=8.2,SNR=13										
113A	Mohawk Valley,	82.37	51	⇓P		P		20 01 14.4	+1.3		
	baz=83										
CN2	Changchun	82.49	323	⇑P		P		20 01 14.8	+1.4		
CN2				*e*pP		pP		20 03 23.0	+4.2		
CN2				*e*S		S		20 10 42.5	+0.6		
CN2				pmax		pmax					
	comp=Z,20nm,1.2s										
PDMCI	Parker Dam,Lak	82.91	49	⇓P		P		20 01 17.3	+1.6		
	baz=83										
KULM	Kulim	82.97	278	*e*P		P		20 01 15.2	-1.4		
	comp=Z,13nm,0.7s										
MOD	Modoc	83.16	40	*e*P		P		20 01 17.7	+0.7		
	comp=Z,2.1nm,0.6s										
Z14A	Wintersburg	83.27	50	⇓P		P		20 01 18.7	+1.2		
	baz=84										
W13A	Hualapai Mount	83.51	48	⇓P		P		20 01 19.9	+0.9		
	baz=84										
Y14A	Wickenburg	83.52	50	⇓P		P		20 01 19.9	+1.0		
	baz=84										
TUC	Tucson	84.31	52	*e*P		P		20 01 23.4	+0.6		
	comp=Z,0.7nm,0.7s										
NLWA	Neilton Lookou	84.56	34	*e*P		P		20 01 23.6	0.0		
	comp=Z,88nm,1.8s										
X16A	Lo Mia Camp, P	84.88	50	⇑P		P		20 01 26.8	+1.1		
	baz=85										
319A	Douglas	84.98	54	⇑P		P		20 01 27.7	+1.6		
	baz=85										
CCUT	Cedar City	85.15	47	*e*P		P		20 01 26.8	-0.1		
	comp=Z,13nm,1.9s										
U15A	North Rim	85.30	48	⇑P		P		20 01 29.1	+1.3		
	baz=86										
320A	Kipp Ranch, An	85.52	54	⇓P		P		20 01 30.7	+1.9		
	baz=86										
SYO	Syowa Base	85.58	193	⇑*e*P		P		20 01 26.2	-2.0		
220A	Playas Peak, P	85.79	53	⇑P		P		20 01 31.5	+1.4		
	baz=86										
ENH	Enshi	85.80	305	*e*P		P		20 01 31.0	+1.0		
	comp=Z,18nm,0.8s										
X18A	Snowflake	86.01	51	⇓P		P		20 01 32.4	+1.3		
	baz=86										
120A	U Bar Ranch, L	86.02	53	⇓P		P		20 01 32.8	+1.7		
	baz=86										
PMR	Palmer	86.17	14	*e*P		P		20 01 30.5	-0.4		
	comp=Z,6.1nm,0.7s										
GYA	Guiyang	86.31	300	*e*P		P		20 01 33.0	+0.4		
GYA				pP		pP		20 03 40.4	+0.9		
GYA				sP		sP		20 04 38.5	-0.3		
GYA				PP		PP		20 05 06.3	+1.1		
GYA				SKS		SKSac		20 11 01.8	-1.6		
GYA				S		S		20 11 18.9	-0.9		
GYA				sS		sS		20 15 03.6	-2.3		
GYA				pmax		pmax					
	comp=Z,10.0nm,1.0s										
DIV	Divide	86.56	15	*e*P		P		20 01 32.4	-0.5		
	comp=Z,8.8nm,0.8s										
MFID	Camas Ranch	86.72	41	⇓P		P		20 01 35.3	+1.2		
	baz=87										
Y20A	Horse Springs,	86.85	52	⇑P		P		20 01 36.6	+1.5		
	baz=87										
X20A	Quemado	87.06	51	⇑P		P		20 01 37.4	+1.2		
	baz=87										
SNAA	Sanae	87.08	179	*e*P		P		20 01 34.0	-1.3		
SNAA	Sanae	87.08	179	*e*P		P		20 01 33.5	-1.8		
I12A	Atlanta	87.36	41	⇓P		P		20 01 38.0	+0.8		
	baz=88										
Y21A	Point of Rocks	87.41	52	⇑P		P		20 01 39.1	+1.3		
	baz=88										
X21A	Alamocita Cree	87.54	52	⇓P		P		20 01 39.4	+1.1		
	baz=88										
TRF	Thorofare Moun	87.59	12	⇓*i*P		P		20 01 36.3	-1.5		
	comp=Z,22nm,0.8s										
Z22A	Elephant Butte	87.59	53	⇓P		P		20 01 39.7	+1.2		
	baz=88										
HLID	Hailey	87.67	41	*e*P		P		20 01 39.3	+0.7		
	comp=Z,4.5nm,1.1s										
HLID	Hailey	87.67	41	⇑P		P		20 01 39.7	+1.1		
	baz=88,SNR=5.8										
J13A	Cove Ranch, Pi	87.73	41	⇑P		P		20 01 40.1	+1.2		
	baz=88										
SRU	San Rafael	87.87	46	⇓P		P		20 01 40.7	+1.0		
	baz=88										
324A	Moseley Ranch,	87.88	55	⇓P		P		20 01 40.6	+0.7		
	baz=88,SNR=5.1										
Y22A	Socorro	87.90	52	⇑P		P		20 01 41.1	+1.1		
	baz=88										
VNA1	Neumayer--Stat	87.91	177	*e*P		P		20 01 38.9	-0.2		
H12A	Diamond D Ranc	87.94	40	⇑P		P		20 01 40.6	+0.7		
	baz=88,SNR=6.6										
XAN	Xi'an	87.97	308	P		P		20 01 41.3	+1.2		
XAN				pmax		pmax					
	comp=Z,4.0nm,1.0s										
425A	Indio Mountain	87.97	56	⇓P		P		20 01 41.2	+0.8		
	baz=88,SNR=5.6										
I13A	Wildhorse Cree	88.04	41	⇓P		P		20 01 41.4	+1.0		
	baz=88										
MNTX	Cornudas Mount	88.07	55	*e*P		P		20 01 41.3	+0.7		
	comp=Z,3.1nm,0.8s										
J14A	Carey	88.09	42	⇑P		P		20 01 41.9	+1.3		
	baz=88,SNR=6.8										
626A	Big Bend Ranch	88.09	57	⇑P		P		20 01 41.6	+0.7		
	baz=88,SNR=6.5										
MCK	McKinley	88.11	13	*e*P		P		20 01 39.5	-0.6		
	comp=Z,9.8nm,0.9s										
224A	Cornudas Mount	88.14	55	⇑P		P		20 01 42.3	+1.2		
	baz=88										
Z23A	Rita Site, Whi	88.14	53	⇑P		P		20 01 42.2	+1.2		
	baz=88										
PAX	Paxson	88.22	15	*e*P		P		20 01 41.0	+0.4		
	comp=Z,7.2nm,0.6s										
325A	Bean Ranch, Si	88.24	55	⇑P		P		20 01 42.5	+0.9		
	baz=88										
P18A	Preston Nutter	88.31	46	⇓P		P		20 01 42.8	+0.9		
	baz=88										
TXAR	Lajitas Array	88.36	58	P		P		20 01 43.2	+1.1		
TXAR	Lajitas Array	88.36	58	P		P		20 01 43.2	+1.1		
	comp=Z,3.9nm,0.9s,baz=224,slow=5.2,SNR=23										
I14A	Mackay	88.45	41	⇑P		P		20 01 43.5	+1.2		
	baz=89,SNR=5.2										
124A	Stringfield Ra	88.47	54	⇑P		P		20 01 43.5	+0.8		
	baz=89										
U21A	Nageezi	88.56	50	⇑P		P		20 01 44.1	+1.0		
	baz=89										
Y23A	Lovelace Mesa,	88.57	53	⇓P		P		20 01 44.1	+1.0		
	baz=89										
G13A	Cobalt	88.60	40	⇓P		P		20 01 44.2	+1.3		
	baz=89										
627A	Terlingua Ranc	88.64	58	⇓P		P		20 01 44.1	+0.7		
	baz=89,SNR=6.8										
426A	McDonald Obser	88.66	56	⇑P		P		20 01 44.5	+0.8		
	baz=89										
225A	Deer Hill, Car	88.68	55	⇑P		P		20 01 44.8	+1.2		
	baz=89										
527A	Woodward Ranch	88.76	57	⇓P		P		20 01 44.8	+0.8		
	baz=89										
F13A	Darby	88.92	39	⇓P		P		20 01 45.3	+0.9		
	baz=89										
KMI	Kunming	88.95	297	P		P		20 01 45.3	+0.2		
KMI				pmax		pmax					
	comp=Z,10.0nm,1.0s										
Y24A	Capitan	89.03	53	⇓P		P		20 01 46.0	+0.7		
	baz=89,SNR=8.9										
628A	Black Gap, Mar	89.04	58	⇓P		P		20 01 46.5	+1.3		
	baz=89										
125A	Gardner Draw,	89.05	54	⇓P		P		20 01 45.9	+0.6		
	baz=89										
DOT	Dot Lake	89.13	15	*e*P		P		20 01 44.9	+0.1		
	comp=Z,15nm,0.8s										
226B	Tecolote Peak,	89.17	55	⇓P		P		20 01 46.3	+0.5		
	baz=89,SNR=5.6										
427A	Hayter Ranch,	89.22	56	⇑P		P		20 01 47.2	+1.1		
	baz=89,SNR=14										
MCMT	McKenzie Canyo	89.29	41	*e*P		P		20 01 46.8	+0.5		
	comp=Z,1.1nm,0.8s										
H15A	Lima	89.31	41	⇓P		P		20 01 47.4	+1.2		
	baz=90										
COLA	College	89.35	13	*e*P		P		20 01 44.6	-1.1		
	comp=Z,10.0nm,0.8s										
HHC	Hu-ho-hao-te	89.35	315	*e*P		P		20 01 44.3	-2.2		
HHC				pP		pP		20 03 54.6	+0.2		
HHC				sP		sP		20 04 51.3	-2.0		
HHC				PP		PP		20 05 28.4	-0.5		
HHC				SKS		SKSac		20 11 17.1	-3.6		
HHC				S		S		20 11 42.8	-4.4		
HHC				sS		sS		20 15 33.5	-2.0		
HHC				SS		SS		20 18 01.0	-0.3		
HHC				pmax		pmax					
	comp=Z,36nm,0.7s										
HHC				pmax		pmax					
	comp=Z,150nm,5.8s										
ILAR	Eielson Array	89.46	13	P		P		20 01 45.7	-0.5		
ILAR	Eielson Array	89.46	13	P		P		20 01 45.7	-0.5		
	comp=Z,2.6nm,0.6s,baz=222,slow=5.3,SNR=30										
R21A	Cimarron	89.54	48	⇑P		P		20 01 48.5	+0.9		
	baz=90										
CM31	Chiang Mai Arr	89.55	290	*e*P		P		20 01 49.6	+1.9		
	comp=Z,4.0nm,0.6s										
CMAR	Chiang Mai Arr	89.55	290	P		P		20 01 49.9	+2.2		
CMAR	Chiang Mai Arr	89.55	290	P		P		20 01 49.9	+2.2		
	comp=Z,11nm,0.9s,baz=131,slow=3.2,SNR=57										
Y25A	Mesa, Roswell	89.58	53	⇓P		P		20 01 48.0	+0.3		
	baz=90										
W24A	Lazy 6 Ranch,	89.62	52	⇑P		P		20 01 48.6	+0.6		
	baz=90										
CHTO	Chiang Mai	89.69	290	*e*P		P		20 01 49.7	+1.3		
428A	Kincaid Ranch,	89.73	57	⇑P		P		20 01 49.2	+0.7		
	baz=90										
S22A	4UR Ranch, Cre	89.76	49	⇓P		P		20 01 49.2	+0.6		
	baz=90										
Z26A	Caprock	89.83	54	⇑P		P		20 01 49.1	+0.3		
	baz=90,SNR=5.3										
529A	Stev Forest Ra	89.84	58	⇑P		P		20 01 49.4	+0.5		
	baz=90										
O20A	White River Ci	89.90	46	⇑P		P		20 01 50.0	+0.9		
	baz=90										
R22A	Saguache, Gunn	90.03	49	⇓P		P		20 01 50.7	+0.8		
	baz=90										
L19A	Farson	90.11	44	⇑P		P		20 01 50.6	+0.5		
	baz=90										
H16A	Russell Place,	90.21	41	⇑P		P		20 01 51.8	+1.4		
	baz=90										
N20A	Spence Gulch,	90.22	46	⇓P		P		20 01 51.0	+0.3		
	baz=90,SNR=5.1										
429A	Davenport Ranc	90.31	57	⇑P		P		20 01 51.7	+0.6		
	baz=90										
PDAR	Pinedale Array	90.31	44	P		P		20 01 51.3	+0.3		
PDAR	Pinedale Array	90.31	44	P		P		20 01 51.3	+0.3		
	comp=Z,2.1nm,0.7s,baz=207,slow=3.0,SNR=13										
W25A	X Bar L Ranch,	90.32	52	⇑P		P		20 01 51.3	+0.2		
	baz=90										
V25A	Rancho No Teng	90.48	51	⇑P		P		20 01 52.5	+0.6		
	baz=91										
CD2	Chengdu	90.52	303	P		P		20 01 51.8	-0.2		
N21A	Black Mountain	90.68	46	⇑P		P		20 01 53.7	+0.9		
	baz=91										
128A	Castleberry Fa	90.69	55	⇓P		P		20 01 53.6	+0.8		
	baz=91										
Y27A	Causey	90.71	54	⇓P		P		20 01 53.3	+0.4		
	baz=91										
L20A	Wamsutter	90.73	45	⇑P		P		20 01 53.8	+0.9		
	baz=91										
EGAK	Eagle	90.78	15	*e*P		P		20 01 52.0	-0.3		
	comp=Z,5.1nm,0.9s										
EFI	East Falkland	90.78	148	P		P		20 01 52.8	0.0		
	comp=Z,32nm,0.9s										
B14A	Marquette Ranc	90.90	37	⇑P		P		20 01 53.5	0.0		
	baz=91										
WALA	Waterton Lakes	90.92	37	*e*P		P		20 01 53.6	+0.1		
A14A	Double T Ranch	91.14	37	⇑P		P		20 01 55.5	+0.9		
	baz=91										
M21A	Separation Pea	91.18	45	⇓P		P		20 01 55.3	+0.2		
	baz=91										
T25A	Trinidad	91.20	50	⇑P		P		20 01 55.1	-0.2		
	baz=91										
S25A	Robets Cordova	91.41	50	⇓P		P		20 01 56.6	+0.4		
	baz=92										
J20A	Shoshoni	91.53	44	⇑P		P		20 01 57.1	+0.6		
	baz=92										
I20A	Worland	91.79	43	⇓P		P		20 01 58.1	+0.4		
	baz=92										
T26A	Comanche Natio	91.81	51	⇑P		P		20 01 58.2	+0.2		
	baz=92										
432A	Menard	92.06	58	⇓P		P		20 01 59.1	0.0		
	baz=92										
231A	Bronte	92.07	57	⇑P		P		20 01 59.3	+0.1		
	baz=92										
F19A	Roth Farm, Mol	92.19	41	⇓P		P		20 02 00.1	+0.7		
	baz=92										
I21A	Big Trails, Te	92.26	43	⇑P		P		20 01 59.8	0.0		
	baz=92										
332A	Millersview	92.30	57	⇓P		P		20 02 00.6	+0.4		
	baz=92										
R26A	Arlington	92.39	50	⇑P		P		20 02 00.7	+0.1		
	baz=93										
L23A	Garrett	92.52	46	⇑P		P		20 02 01.9	+0.7		
	baz=93										
LZH	Lanzhou	92.61	308	*e*P		P		20 02 03.5	+1.8		
LZH				pP		pP		20 04 13.6	+3.6		
LZH				sP		sP		20 05 13.0	+4.2		
LZH				pmax		pmax					
	comp=Z,18nm,1.0s										
I22A	9 Mile Ranch,	92.81	44	⇑P		P		20 02 02.3	0.0		
	baz=93										
SONM	Songino Array	95.86	319	P		P		20 02 16.3	+0.2		
SONM	Songino Array	95.86	319	P		P		20 02 16.3	+0.2		
	comp=Z,0.6nm,0.7s,baz=102,slow=3.1,SNR=5.8										
GTA	Gaotai	96.85	310	*e*P		P		20 02 21.9	+1.1		
GTA				pmax		pmax					
	comp=Z,3.0nm,1.4s										
YKA	Yellowknife Ar	97.78	25	P		Pdif		20 02 23.9	-0.2		
YKA	Yellowknife Ar	97.78	25	P		Pdif		20 02 23.9	-0.1		
	comp=Z,0.3nm,0.7s,baz=239,slow=4.5,SNR=4.3										
ZALV	Zalesovo Beam	110.65	321	PKiKP		PKiKP		20 07 16.9	-0.9		
ZALV	Zalesovo Beam	110.65	321	PKiKP		PKiKP		20 07 16.9	-0.9		
	comp=Z,1.2nm,0.6s,baz=137,slow=0.9,SNR=9.3										
MKAR	Makanchi Array	111.17	313	Pdif		Pdif		20 03 27.6	+3.4		
MKAR				PKiKP		PKiKP		20 07 18.4	-0.7		
MKAR	Makanchi Array	111.17	313	Pdiff		Pdif		20 03 27.6	+3.4		
	comp=Z,0.3nm,0.8s,baz=103,slow=4.4,SNR=3.5										
MKAR				PKiKP		PKiKP		20 07 18.4	-0.7		
	comp=Z,0.8nm,0.6s,baz=212,slow=1.0,SNR=11										
AAK	Ala-Archa	116.15	308	PKP		PKPdf		20 07 28.3	-0.7		
AAK	Ala-Archa	116.15	308	PKP		PKPdf		20 07 28.3	-0.7		
	comp=Z,0.6nm,0.4s,baz=164,slow=7.4,SNR=3.7										
BVAR	Borovoye Array	119.20	320	PKP		PKPdf		20 07 34.0	-0.4		
BVAR	Borovoye Array	119.20	320	PKP		PKPdf		20 07 34.0	-0.4		
	comp=Z,2.8nm,0.4s,baz=120,slow=2.1,SNR=30										
KBL	Kabul	119.52	298	*e*PKPdf		PKPdf		20 07 36.0	+0.1		
AKTO	Aktyubinsk	127.15	318	PKP		PKPdf		20 07 49.7	+0.1		
AKTO	Aktyubinsk	127.15	318	PKP		PKPdf		20 07 49.7	+0.1		
	comp=Z,2.0nm,0.5s,baz=99,slow=2.7,SNR=3.6										
KEV	Kevo	129.23	349	*e*pkp		PKPdf		20 07 50.2	-2.8		
ARCES	ARCESS Array B	129.69	349	PKP		PKPdf		20 07 53.8	-0.2		
ARCES	ARCESS Array B	129.69	349	PKP		PKPdf		20 07 53.8	-0.2		
	comp=Z,3.8nm,0.6s,baz=26,slow=1.1,SNR=29										
JOF	Joensuu	133.75	341	*e*pkp		PKPdf		20 08 01.1	-0.6		
	comp=Z,5.3nm,0.5s										
KAF	Kangasniemi	135.81	343	*e*pkp		PKPdf		20 08 05.6	0.0		
FINES	FINESS Array B	136.42	343	PKPpre		PKPpre		20 07 54.5			
FINES				PKP		PKPdf		20 08 08.0	+1.3		
FINES	FINESS Array B	136.42	343	PKhKP		PKPpre		20 07 54.5			
	comp=Z,1.2nm,0.6s,baz=64,slow=4.4,SNR=5.0										
FINES				PKP		PKPdf		20 08 08.0	+1.3		
	comp=Z,3.1nm,0.6s,baz=38,slow=2.3,SNR=12										
NB2	NORSAR Subarra	139.81	352	PKP		PKPdf		20 08 05.9	-7.2		
	comp=Z,2.4nm,0.7s,baz=10.0,slow=3.8										
NOA	NORSAR Array B	139.81	352	PKPpre		PKPpre		20 08 05.9			
NOA				PKP		PKPdf		20 08 13.9	+0.9		
NOA	NORSAR Array B	139.81	352

GERES	**GERESS Array B**	**150.85**	**343**	PKP		**PKPdf**	**20 08 31.8**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=189,slow=5.0,SNR=6.3							
GERES				PKPbc		**PKPbc**	**20 08 38.6**	**+0.2**
	comp=Z,6.8nm,0.8s,baz=33,slow=2.2,SNR=56							
GERES				PKPab		**PKPab**	**20 08 48.9**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=22,slow=4.9,SNR=6.2							
BCLA	**Clavier**	**150.90**	**354**	PKPab		**PKPab**	**20 08 48.5**	**0.0**
CONA	**Conrad Observa**	**151.01**	**339**	⇑iPKiKP		**PKPbc**	**20 08 38.9**	**0.0**
	comp=Z,18nm,1.0s							
DOU	**Dourbes**	**151.28**	**355**	PKPbc		**PKPbc**	**20 08 39.7**	**+0.5**
DOU				PKPab		**PKPab**	**20 08 50.1**	**0.0**
PKSM	**Moragy**	**151.42**	**334**	⇓iP		**PKPbc**	**20 08 39.5**	**-0.2**
WLF	**Walferdange**	**151.56**	**353**	PKPbc		**PKPbc**	**20 08 41.0**	**+1.1**
WLF				PKPab		**PKPab**	**20 08 52.2**	**+0.9**
WLF	**Walferdange**	**151.56**	**353**	*e*PKPbc		**PKPbc**	**20 08 41.0**	**+1.1**
WLF	**Walferdange**	**151.56**	**353**	*e*PKPbc		**PKPbc**	**20 08 40.4**	**+0.5**
VTS	**Vitosha**	**151.90**	**324**	⇑*i*P		**PKPbc**	**20 08 41.3**	**+0.2**
STU	**Stuttgart**	**151.97**	**348**	*e*PKPab		**PKPab**	**20 08 53.4**	**+0.3**
FUR	**Furstenfeldbru**	**152.10**	**345**	*e*PKPbc		**PKPbc**	**20 08 41.4**	**+0.2**
FUR				*e*PKPab		**PKPab**	**20 08 54.6**	**+0.9**
RJOB	**Jochberg**	**152.11**	**343**	*e*PKPab		**PKPab**	**20 08 55.0**	**+1.2**
BFO	**Black Forest**	**152.55**	**349**	*e*PKPbc		**PKPbc**	**20 08 42.4**	**+0.2**
BFO				*e*PKPab		**PKPab**	**20 08 55.3**	**-0.3**
KBA	**Koelnbreinsper**	**152.55**	**342**	⇓*i*PKPbc		**PKPbc**	**20 08 41.9**	**-0.5**
	comp=Z,8.5nm,1.1s							
WTTA	**Wattenberg**	**152.85**	**344**	⇑*i*PKPbc		**PKPbc**	**20 08 42.3**	**-0.7**
	comp=Z,3.9nm,0.5s							
VISS	**Visnje**	**153.20**	**338**	*i* PKPbc		**PKPbc**	**20 08 43.7**	**+0.1**
VISS				*i*			20 08 58.7	
BOJS	**Bojanci**	**153.32**	**337**	*i* PKPbc		**PKPbc**	**20 08 44.1**	**+0.2**
BOJS				*i*			20 08 58.7	
BOJS				*i* pPKPbc		**pPKPbc**	**20 11 03.5**	**+3.4**
JAVS	**Javornik**	**153.39**	**339**	*i* PKPbc		**PKPbc**	**20 08 43.5**	**-0.6**
JAVS				*i*			20 08 58.5	
ESDC	**Sonseca Array**	**161.36**	**12**	PKPab		**PKPab**	**20 09 34.8**	**+0.8**
ESDC	**Sonseca Array**	**161.36**	**12**	PKPab		**PKPab**	**20 09 34.8**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=356,slow=3.9,SNR=7.7							
KEST	**Kesra**	**164.01**	**335**	PKPab		**PKPab**	**20 09 46.6**	**+0.7**
KEST	**Kesra**	**164.01**	**335**	PKPab		**PKPab**	**20 09 46.6**	**+0.7**
	comp=Z,2.6nm,0.7s,baz=29,slow=1.6,SNR=11							
DBIC	**Dimbokro**	**164.24**	**158**	PKP		**PKPdf**	**20 08 48.8**	**-0.5**
DBIC				PKPab		**PKPab**	**20 09 47.4**	**+0.2**
DBIC	**Dimbokro**	**164.24**	**158**	PKP		**PKPdf**	**20 08 48.8**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=180,slow=3.0,SNR=4.0							
DBIC				PKPab		**PKPab**	**20 09 47.4**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=180,slow=5.1,SNR=5.0							
TORD	**Torodi Ar. Bea**	**171.70**	**185**	PKP		**PKPdf**	**20 08 52.1**	**-2.1**
TORD				PKPab		**PKPab**	**20 10 19.6**	**-0.5**
TORD	**Torodi Ar. Bea**	**171.70**	**185**	PKP		**PKPdf**	**20 08 52.1**	**-2.1**
	comp=Z,0.6nm,0.7s,baz=247,slow=1.4,SNR=5.4							
TORD				PKPab		**PKPab**	**20 10 19.6**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=172,slow=4.3,SNR=9.8							

*ISCJB **22** 19:58:14.9±0.6,41.97N±0.03×23.15E±0.04, h8km±7km, Error ellipse: s-maj=5.0km s-min=4.5km az=22.9*
*THE **22** 19:58:15.8,41.95N×23.22E, h7km±2km, ML1.8/5, Error ellipse: s-maj=2.1km s-min=0.7km az=270.0*
*CSEM **22** 19:58:15.5±0.1,41.96N×23.17E, h8km, ML1.8, Error ellipse: s-maj=2.3km s-min=1.5km az=73.0*
*ATH **22** 19:58:16.1,41.92N×23.25E, h27km×3km, MD2.9/4*
*BEO **22** 19:58:17.0±0.3,41.95N×23.14E, h0km, ML1.8/7*

ISC 22 19:58:15.8±1.1,41.95N±0.02×23.20E±0.03,h7km±10km, n31,σ0960/55,1C,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.64**	**0**	P	**Pg**	**19 58 28.0**	**-0.1**
VTS				S	**Sg**	**19 58 36.8**	**+0.3**
VTS	**Vitosha**	**0.64**	**0**	⇑*i*Pg	**Pg**	**19 58 28.2**	**+0.1**
VTS				*e*Sg	**Sg**	**19 58 36.8**	**+0.3**
VTS	**Vitosha**	**0.64**	**0**	P	**Pg**	**19 58 28.0**	**-0.1**
VTS				S	**Sg**	**19 58 36.8**	**+0.3**
NVR	**Nevrokopi**	**0.78**	**140**	P	**Pg**	**19 58 30.6**	**-0.2**
NVR				S	**Sg**	**19 58 41.1**	**+0.2**
NVR	**Nevrokopi**	**0.78**	**140**	*e*PN	**Pg**	**19 58 30.7**	**-0.1**
NVR				*e*SN	**Sg**	**19 58 40.9**	**0.0**
NVR	**Nevrokopi**	**0.78**	**140**	P	**Pg**	**19 58 30.6**	**-0.2**
NVR				*e*Sn	**Sg**	**19 58 40.9**	**0.0**
VAY	**Valandovo**	**0.79**	**217**	P	**Pg**	**19 58 30.9**	**0.0**
VAY				S	**Sg**	**19 58 41.9**	**+0.7**
VAY	**Valandovo**	**0.79**	**217**	*e*Pg	**Pg**	**19 58 30.7**	**-0.2**
VAY				*e*Sg	**Sg**	**19 58 41.0**	**-0.2**
VAY	**Valandovo**	**0.79**	**217**	*e*Pg	**Pg**	**19 58 30.7**	**-0.2**
VAY				*e*Sg	**Sg**	**19 58 41.0**	**-0.2**
VAY				S	**Sg**	**19 58 41.9**	**+0.7**
KNT	**Kendrikon**	**0.82**	**196**	P	**Pg**	**19 58 31.6**	**0.0**
KNT				S	**Sg**	**19 58 42.8**	**+0.5**
KNT	**Kendrikon**	**0.82**	**196**	P	**Pg**	**19 58 31.6**	**0.0**
KNT				S	**Sg**	**19 58 42.8**	**+0.5**
SRS	**Serrai**	**0.88**	**161**	P	**Pg**	**19 58 32.8**	**0.0**
SRS				S	**Sg**	**19 58 44.8**	**+0.6**
SRS	**Serrai**	**0.88**	**161**	P	**Pg**	**19 58 32.8**	**0.0**
SRS				S	**Sg**	**19 58 44.8**	**+0.6**
PLD	**Plovdiv**	**1.13**	**82**	*e*Pg	**Pn**	**19 58 38.3**	**+0.3**
PLD				*e*Sg	**Sn**	**19 58 53.6**	**-0.2**
PLD	**Plovdiv**	**1.13**	**82**	*e*Pg	**Pn**	**19 58 38.3**	**+0.3**
PLD				*e*Sg	**Sn**	**19 58 53.6**	**-0.2**
SOH	**Sokhos**	**1.14**	**174**	P	**Pg**	**19 58 37.3**	**-0.3**
SOH				S	**Sb**	**19 58 53.0**	**+0.2**
SOH	**Sokhos**	**1.14**	**174**	*e*PN	**Pg**	**19 58 37.4**	**-0.2**
SOH				*e*SN	**Sg**	**19 58 52.5**	**+0.2**
SOH	**Sokhos**	**1.14**	**174**	P	**Pg**	**19 58 37.3**	**-0.3**
SOH				*e*Sn	**Sg**	**19 58 52.5**	**+0.2**
SOH				S	**Sb**	**19 58 53.0**	**+0.2**
GRG	**Griva**	**1.16**	**211**	*e*PN	**Pg**	**19 58 37.9**	**-0.2**
GRG	**Griva**	**1.16**	**211**	*e*Pn	**Pg**	**19 58 37.9**	**-0.2**
BARS	**Barje**	**1.34**	**311**	*e*Sg	**Sg**	**19 58 58.1**	**-0.8**
BARS	**Barje**	**1.34**	**311**	*e*Sg	**Sg**	**19 58 58.1**	**-0.8**
KAVA	**Kavala**	**1.37**	**134**	P	**Pn**	**19 58 40.6**	**-0.8**
KAVA				S	**Sb**	**19 58 59.1**	**-0.4**
KAVA	**Kavala**	**1.37**	**134**	P	**Pn**	**19 58 40.6**	**-0.8**
KAVA				S	**Sb**	**19 58 59.1**	**-0.4**
ZAPS	**Zavoj**	**1.39**	**343**	*e*Pg	**Pg**	**19 58 42.4**	**0.0**
ZAPS				*e*Sg	**Sn**	**19 59 01.1**	**+0.9**
SELS	**Selova**	**1.99**	**310**	*e*Sg	**Sg**	**19 59 19.1**	**-0.7**
PAIG	**Paliouri**	**2.06**	**170**	*e*PN	**Pn**	**19 58 50.1**	**-0.7**
PAIG	**Paliouri**	**2.06**	**170**	*e*Pn	**Pn**	**19 58 50.1**	**-0.7**
GRUS	**Gruza**	**2.66**	**317**	*e*Pn	**Pn**	**19 59 01.3**	**+2.2**
GRUS				*e*Sg	**Sg**	**19 59 39.7**	**-1.6**
BBLS	**Lazići**	**3.38**	**306**	*e*Sg	**Sg**	**20 00 03.3**	**-1.1**
BBLS	**Lazići**	**3.38**	**306**	*e*Sg	**Sg**	**20 00 03.3**	**-1.1**

MEX 22 20:02:37.6±0.5,18.50N×103.26W,h39km±12km,MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.23**	**202**	*i* P	Pn	20 02 43.3	-2.1
MMIG				*i* S	Sn	20 02 48.9	-2.7
R15V		**0.96**	**314**	*i* P	Pn	20 02 52.8	-1.9
R15V				*e*S	Sn	20 03 04.4	-2.8
EZ5V		**1.03**	**341**	*i* P	Pn	20 02 54.0	-1.9
EZ5V				*e*S	Sn	20 03 06.3	-3.1
ZIIG	**Zihuatanejo**	**1.92**	**117**	*i* P	Pn	20 03 06.7	-1.1
ZIIG				*i* S	Sn	20 03 28.8	-2.0
ARIG	**Puente Sto Nin**	**2.77**	**94**	*i* P	Pn	20 03 17.9	-1.6
ARIG				*i* S	Sn	20 03 49.8	-2.0
ANIG	**Ahuacatlan**	**2.81**	**335**	*i* P	Pn	20 03 19.3	-0.8
ANIG				*i* S	Sn	20 03 50.5	-2.4

*CSEM **22** 20:07:22.9,39.08N×27.38E, h7km, MD2.6, After DDA*

DDA 22 20:07:22.9,39.08N×27.38E,h7km,MD2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.40**	**121**	*i* P	Pg	20 07 31.0	+0.3
AKHS				*i* S	Sg	20 07 37.2	+1.3
AKHS	**Akhisar**	**0.40**	**121**	*i* P	Pg	20 07 31.0	+0.3
AKHS				*i* S	Sg	20 07 37.2	+1.2
BALY	**Balya**	**0.68**	**16**	*i* P	Pb	20 07 36.8	-0.5
BALY				*i* S	Sg	20 07 45.8	+0.7
BALY	**Balya**	**0.68**	**16**	*i* P	Pb	20 07 36.8	-0.4
BALY				*i* S	Sg	20 07 45.8	+0.7
DURS	**Dursunbey**	**0.99**	**58**	*i* P	Pg	20 07 42.1	-0.1
DURS				*i* S	Sb	20 07 56.0	0.0
DURS	**Dursunbey**	**0.99**	**58**	*i* P	Pg	20 07 42.1	-0.1
DURS				*i* S	Sb	20 07 56.0	0.0
DEMI	**Demirci**	**1.04**	**92**	*i* P	Pb	20 07 43.6	+0.2
DEMI				*i* S	Sg	20 07 57.0	+0.3
DEMI	**Demirci**	**1.04**	**92**	*i* P	Pb	20 07 43.6	+0.2
DEMI				*i* S	Sg	20 07 57.0	+0.3

*JMA **22** 20:15:50.8,37.14N×136.54E, h11km±1km, M3.9*
JMA Felt III J1.
*ISCJB **22** 20:15:51.0±1.1,37.15N±0.04×136.54E±0.08, h17km±11km, Error ellipse: s-maj=11.1km s-min=5.8km az=9.2*

ISC 22 20:15:50.4±1.4,37.15N±0.04×136.53E±0.07,h18km±9km, n7,σ0924/14,3D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJH	**Hakui**	**0.30**	**137**	⇓P	**Pg**	**20 15 56.9**	**-0.1**
JJH				S	**Sg**	**20 16 01.4**	**0.0**
JSZ	**Suzu**	**0.73**	**66**	P	**Pg**	**20 16 04.5**	**-0.3**
JSZ				*e*S	**Sb**	**20 16 14.4**	**0.0**
JHG	**Hegura jima**	**0.77**	**24**	P	**Pg**	**20 16 05.2**	**-0.2**
JHG				*e*S	**Sg**	**20 16 16.0**	**+0.4**
JTT	**Ttatey**	**0.84**	**130**	⇓P	**Pg**	**20 16 06.8**	**-0.1**
JTT				S	**Sg**	**20 16 18.2**	**+0.1**
JKG	**Kaga**	**0.88**	**190**	P	**Pb**	**20 16 07.3**	**0.0**
JKG				S	**Sg**	**20 16 19.6**	**+0.3**
JGN	**Niukaw**	**1.12**	**145**	⇓P	**Pn**	**20 16 11.1**	**-0.2**
JGN				*e*S	**Sb**	**20 16 25.5**	**-0.1**
MAT	**Matsushiro**	**1.48**	**114**	P	**Pn**	**20 16 16.4**	**+0.2**
MAT				S	**Sb**	**20 16 36.1**	**+0.2**

*ISCJB **22** 20:48:40.3±0.8,37.16N±0.04×72.0E±0.1, h150km, Error ellipse: s-maj=14.0km s-min=4.2km az=161.0*
*NNC **22** 20:48:45.7±2.6,37.57N×71.71E, h136km±34km, mb2.9, mpv4.1, Error ellipse: s-maj=22.3km s-min=14.4km az=7.0*

ISC 22 20:48:39.5±1.0,37.12N±0.07×71.8E±0.1,h150km,n28, σ1965/30,3C-1D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.21**	**16**	P	**Pn**	**20 49 56.8**	**+0.8**
	SNR=121						
UCH	**Uchtor**	**5.51**	**21**	P	**Pn**	**20 50 00.6**	**+0.6**
	SNR=7.5						
KZA	**Kyzart**	**5.62**	**27**	P	**Pn**	**20 50 01.6**	**+0.1**
	SNR=8.6						
EKS2	**Erkin-Say**	**5.74**	**15**	P	**Pn**	**20 50 03.8**	**+1.1**
	SNR=21						
AAK	**Ala-Archa**	**5.88**	**20**	P	**Pn**	**20 50 05.8**	**+1.1**
	SNR=37						
KBK	**Karagaybulak**	**6.03**	**23**	P	**Pn**	**20 50 08.5**	**+1.8**
	SNR=11						
KK31	**Karatay Array**	**6.05**	**351**	⇑P	**Pn**	**20 50 07.6**	**+0.7**
	13nm,0.4s,baz=177,slow=13,SNR=377						
KK31				S	**Sn**	**20 51 10.6**	**-4.7**
	21nm,0.6s,baz=172,slow=22,SNR=18						
DHRM	**DHARAMSHALA**	**6.11**	**141**	*e*PKP	**Pn**	**20 50 10.2**	**+2.2**
DHRM				*e*S	**Sn**	**20 51 16.5**	**-0.6**
DHRM				AML	AML	20 51 23.6	
	comp=Z,49nm,0.6s						
ULHL	**Ulahol**	**6.16**	**32**	P	**Pn**	**20 50 08.9**	**+0.5**
	SNR=9.7						
CHMS	**Chumysh**	**6.29**	**20**	P	**Pn**	**20 50 10.7**	**+0.7**
	SNR=21						
USP	**Ospenovka**	**6.47**	**18**	P	**Pn**	**20 50 12.9**	**+0.4**
	SNR=7.7						
TKM2	**Tokmak 2**	**6.48**	**26**	⇑P	**Pn**	**20 50 13.3**	**+0.5**
	comp=Z,8.8nm,0.7s						
TKM2				⇑S	**Sn**	**20 51 24.0**	**-1.8**
	comp=Z,1.7nm,0.6s						
TKM2	**Tokmak 2**	**6.48**	**26**	P	**Pn**	**20 50 13.7**	**+1.0**
	SNR=13						
SMLA	**Simla**	**7.45**	**142**	*e*PKP	**Pn**	**20 50 27.5**	**+1.9**
SMLA				*e*S	**Sn**	**20 51 48.6**	**-0.2**
SMLA				AML	AML	20 52 29.1	
	comp=Z,5.5nm,0.8s						
KKR	**Kurukshetra**	**8.28**	**148**	*e*x	x	20 51 36.6	
KHET	**Khetri**	**9.63**	**158**	*e*S	**Sn**	**20 52 36.8**	**-4.7**
KUDL	**Kundal**	**9.79**	**155**	*e*S	Sn	20 52 39.3	-5.8
KUDL				AML	AML	20 52 45.6	
	comp=E,4.8nm,0.7s						
KUDL				AML	AML	20 52 49.4	
	comp=N,4.0nm,0.4s						
PYUN	**Piuthan**	**13.03**	**130**	*e*P	**Pn**	**20 51 39.1**	**-0.1**
PYUN				*e*S	Sn	20 53 53.9	-10
DANN	**Dangsing**	**13.33**	**128**	*e*P	**Pn**	**20 51 43.6**	**+0.4**
	comp=N,6.3nm,0.3s						
DANN				*e*S	Sn	20 54 00.7	-10
KKN	**Kakani**	**14.69**	**125**	*e*P	**Pn**	**20 52 00.0**	**-0.2**
DMN	**Daman**	**14.70**	**126**	*e*P	**Pn**	**20 52 00.8**	**+0.4**
AB31	**Akbulak array**	**14.87**	**328**	P	**P**	**20 52 04.0**	**-0.1**
	comp=N,0.9nm,0.3s,baz=137,slow=13,SNR=61						
PKIN	**Phulchoki**	**14.91**	**126**	*e*P	**Pn**	**20 52 03.6**	**+0.6**
PKIN				*e*S	Sn	20 54 37.8	-11
PKI	**Pulchoki**	**14.92**	**126**	*e*P	**Pn**	**20 52 03.2**	**0.0**
BVA0	**Borovoye Array**	**15.93**	**357**	P	**P**	**20 52 15.9**	**+0.1**
	comp=N,0.1nm,0.4s,baz=198,slow=24,SNR=11						
RAMN	**Ramite**	**16.12**	**125**	*e*P	**P**	**20 52 18.8**	**+0.5**
AKTO	**Aktyubinsk**	**16.58**	**328**	⇓P	**Pn**	**20 52 25.6**	**+2.5**
	comp=N,0.3nm,0.8s						
TAPN	**Taplejung**	**16.60**	**121**	*e*P	**Pn**	**20 52 24.8**	**+1.0**

*ISK **22** 21:07:53.2,38.71N×30.87E, h2km, MD3.0*
*DDA **22** 21:07:53.3,38.72N×30.87E, h19km, MD3.1*
*ISCJB **22** 21:07:54.3±0.4,38.70N±0.03×30.88E±0.03, h9km±3km, Error ellipse: s-maj=5.0km s-min=3.6km az=174.1*
*CSEM **22** 21:07:54.1±0.1,38.69N×30.87E, h5km, MD3.1, Error ellipse: s-maj=3.6km s-min=2.8km az=173.0*

ISC 22 21:07:53.9±0.8,38.70N±0.03×30.86E±0.02,h15km±5km, n44,σ0983/64,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLV	**Bolvadin**	**0.07**	**72**	*i* P	**Pg**	**21 07 57.1**	**+0.1**
BOLV				*i* S	**Sg**	**21 07 59.0**	**-0.1**
BOLV	**Bolvadin**	**0.07**	**72**	*i* P	**Pg**	**21 07 57.1**	**+0.1**
BOLV				*i* S	**Sg**	**21 07 59.0**	**-0.1**
SHUT	**Suhut-Afyon**	**0.28**	**240**	*e*PG	**Pg**	**21 07 59.8**	**-0.1**
SHUT				*e*SG	**Sb**	**21 08 04.7**	**-0.7**
SHUT	**Suhut-Afyon**	**0.28**	**240**	*e*Pg	**Pg**	**21 07 59.8**	**-0.1**
SHUT				*e*Sg	**Sb**	**21 08 04.7**	**-0.7**
ALT	**Altintas**	**0.69**	**302**	*e*PG	**Pb**	**21 08 07.4**	**-0.3**
ALT				*e*SG	**Sb**	**21 08 17.9**	**+0.8**
ALT	**Altintas**	**0.69**	**302**	*e*Pg	**Pb**	**21 08 07.4**	**-0.3**
ALT				*e*Sg	**Sb**	**21 08 17.9**	**+0.8**
KIZT	**Kizilcal**	**0.82**	**77**	*e*PG	**Pb**	**21 08 09.8**	**-0.1**
KIZT				*e*SG	**Sn**	**21 08 21.9**	**-1.0**
KIZT	**Kizilcal**	**0.82**	**77**	*e*Pg	**Pb**	**21 08 09.8**	**-0.1**
KIZT				*e*Sg	**Sn**	**21 08 21.9**	**-1.0**
ESKT	**Eskisehir**	**0.82**	**359**	*e*PG	**Pb**	**21 08 09.5**	**-0.5**
ESKT				*e*SG	**Sb**	**21 08 21.6**	**+0.6**
ESKT	**Eskisehir**	**0.82**	**359**	*e*Pg	**Pb**	**21 08 09.5**	**-0.5**
ESKT				*e*Sg	**Sb**	**21 08 21.6**	**+0.6**
SEYT	**Eskypehyr**	**0.82**	**359**	*i* P	**Pb**	**21 08 09.6**	**-0.4**
SEYT				*i* S	**Sb**	**21 08 21.1**	**+0.1**
SEYT	**Eskypehyr**	**0.82**	**359**	*i* P	**Pb**	**21 08 09.6**	**-0.4**
SEYT				*i* S	**Sb**	**21 08 21.1**	**+0.1**
SVRH	**Sivrihisar-ESK**	**0.91**	**34**	*e*PG	**Pb**	**21 08 11.3**	**-0.2**
SVRH	**Sivrihisar-ESK**	**0.91**	**34**	*e*Pg	**Pb**	**21 08 11.3**	**-0.2**
ISP	**Isparta**	**0.91**	**197**	*e*PG	**Pg**	**21 08 11.4**	**-0.2**
ISP	**Isparta**	**0.91**	**197**	*e*Pg	**Pg**	**21 08 11.4**	**-0.2**
KDHN	**Kadinhani**	**1.00**	**100**	*i* P	**Pb**	**21 08 13.0**	**0.0**
KDHN				*i* S	**Sb**	**21 08 25.9**	**-0.1**
KDHN	**Kadinhani**	**1.00**	**100**	*i* P	**Pb**	**21 08 13.0**	**0.0**
KDHN				*i* S	**Sb**	**21 08 25.9**	**-0.1**
KHL	**Karahalli**	**1.11**	**251**	*e*PN	**Pn**	**21 08 15.6**	**+0.5**
KHL	**Karahalli**	**1.11**	**251**	*e*Pn	**Pn**	**21 08 15.6**	**+0.5**
KHAL	**Karahalli**	**1.12**	**254**	*i* P	**Pn**	**21 08 16.0**	**+0.8**
KHAL				*i* S	**Sn**	**21 08 31.7**	**+1.2**
KHAL	**Karahalli**	**1.12**	**254**	*i* P	**Pn**	**21 08 16.0**	**+0.8**
KHAL				*i* S	**Sn**	**21 08 31.7**	**+1.2**
GDZ	**Gediz**	**1.15**	**290**	*i* P	**Pb**	**21 08 14.6**	**-0.9**
GDZ				*i* S	**Sg**	**21 08 30.7**	**-0.3**
GDZ	**Gediz**	**1.15**	**290**	*i* P	**Pb**	**21 08 14.6**	**-0.9**
GDZ				*i* S	**Sg**	**21 08 30.7**	**-0.3**
LADK	**Ladik-KONYA**	**1.28**	**112**	*e*PN	**Pg**	**21 08 18.6**	**+0.1**
LADK	**Ladik-KONYA**	**1.28**	**112**	*e*Pn	**Pg**	**21 08 18.6**	**+0.1**
TVSB	**Tavsanli**	**1.32**	**305**	*e*PN	**Pg**	**21 08 19.4**	**0.0**
TVSB	**Tavsanli**	**1.32**	**305**	*e*Pn	**Pg**	**21 08 19.4**	**0.0**
KONT	**Konya--Tatoy**	**1.40**	**122**	*e*PN	**Pg**	**21 08 20.0**	**-0.7**
KONT	**Konya--Tatoy**	**1.40**	**122**	*e*Pn	**Pg**	**21 08 20.0**	**-0.7**
DEMI	**Demirci**	**1.71**	**282**	*i* P	**Pn**	**21 08 24.2**	**+0.9**
DEMI				*i* S	**Sb**	**21 08 47.6**	**+1.1**
DEMI	**Demirci**	**1.71**	**282**	*i* P	**Pn**	**21 08 24.2**	**+0.9**
DEMI				*i* S	**Sb**	**21 08 47.6**	**+1.1**
KULA	**Kula-Manisa**	**1.73**	**265**	*e*PN	**Pb**	**21 08 25.7**	**+0.2**
KULA	**Kula-Manisa**	**1.73**	**265**	*e*Pn	**Pb**	**21 08 25.7**	**+0.2**
GULT	**Gulveren**	**1.75**	**351**	*e*PN	**Pb**	**21 08 25.7**	**-0.2**
GULT	**Gulveren**	**1.75**	**351**	*e*Pn	**Pb**	**21 08 25.7**	**-0.2**
MDUB	**Mudurnu**	**1.79**	**8**	*e*PN	**Pb**	**21 08 26.0**	**-0.5**
MDUB	**Mudurnu**	**1.79**	**8**	*e*Pn	**Pb**	**21 08 26.0**	**-0.5**
ADVT	**Abdulvahap**	**1.94**	**334**	*e*PN	**Pb**	**21 08 28.4**	**-0.6**
ADVT	**Abdulvahap**	**1.94**	**334**	*e*Pn	**Pb**	**21 08 28.4**	**-0.6**
ARMT	**Armutlu**	**2.42**	**321**	*e*PN	**Pb**	**21 08 35.3**	**-1.9**
ARMT	**Armutlu**	**2.42**	**321**	*e*Pn	**Pb**	**21 08 35.3**	**-1.9**
GONE	**Gonen-Balikesi**	**2.81**	**300**	*e*PN	**Pb**	**21 08 41.1**	**-2.6**
GONE	**Gonen-Balikesi**	**2.81**	**300**	*e*Pn	**Pb**	**21 08 41.1**	**-2.6**

*IDC **22** 21:18:52.0±0.8,8.01N×127.40E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/26, mbtmp3.8/10, ML4.3/1, Error ellipse: s-maj=27.8km s-min=15.1km az=81.0*
*ISCJB **22** 21:18:54.3±2.6,7.94N±0.06×127.40E±0.06, h27km±19km, mb3.8/9, Error ellipse: s-maj=11.0km s-min=9.3km az=162.9*

ISC 22 21:18:56.6±3.8,7.85N±0.08×127.3E±0.1,h30km±26km, n18,σ0999/18,mb3.8/9,3C-1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.39**	**230**	*e*P	**Pn**	**21 19 17.8**	**-2.1**
MATI				*e*S	Sn	21 19 30.6	-6.6
DAV	**Davao City (W)**	**1.89**	**246**	Pn	Pn	21 19 28.3	+1.4
	101nm,0.3s,baz=70,slow=12,SNR=19						
DAV				Sn	**Sb**	**21 19 54.0**	**+0.2**
	89nm,0.3s,baz=285,slow=20,SNR=12						
DMPH	**Davao City--Mi**	**1.95**	**247**	⇑*e*P	**Pn**	**21 19 28.4**	**+0.7**
DMPH				*e*S	Sn	21 19 53.5	+2.3
BUTP	**Butuan**	**2.01**	**304**	*e*P	**Pn**	**21 19 28.9**	**+0.4**
KCP	**Kidapawan**	**2.37**	**249**	⇑*e*P	**Pn**	**21 19 32.7**	**-0.7**
KCP				*i* S	**Sn**	**21 20 01.5**	**0.0**
CGP	**Cagayan de Oro**	**2.67**	**283**	⇑*e*P	**Pn**	**21 19 37.1**	**-0.3**
CGP				*e*S	**Sn**	**21 20 09.7**	**+0.9**
CTBH	**Cotabato--PC H**	**3.11**	**259**	⇓*i*P	**Pn**	**21 19 43.0**	**-0.6**
TBP	**Tagbilaran**	**3.87**	**298**	*e*P	Pn	21 19 55.1	+1.0
PAGZ	**Pagadian**	**3.90**	**270**	*e*P	Pn	21 19 55.0	+0.5
FITZ	**Fitzroy Crossi**	**25.84**	**184**	P	**P**	**21 24 26.9**	**+1.3**
	1.3nm,0.5s,baz=5,9,slow=11,SNR=15						
WRA	**Warrumunga Arr**	**28.47**	**166**	P	**P**	**21 24 49.6**	**+0.4**
	0.5nm,1.0s,baz=345,slow=9.6,SNR=4.8						
ASAR	**Alice Springs**	**31.98**	**169**	P	**P**	**21 25 21.1**	**+0.9**
	0.2nm,0.3s,baz=343,slow=7.0,SNR=4.1						
USRK	**Ussuriysk Arra**	**36.44**	**6**	P	**P**	**21 25 57.6**	**-1.0**
	0.4nm,0.7s,baz=183,slow=7.8,SNR=2.2						
STKA	**Stephens Creek**	**41.80**	**162**	P	**P**	**21 26 44.9**	**+1.3**
	2.6nm,0.9s,baz=328,slow=9.5,SNR=2.5						
MKAR	**Makanchi Array**	**54.57**	**323**	P	**P**	**21 28 21.6**	**-0.5**
	0.6nm,0.5s,baz=115,slow=7.9,SNR=11						
ZALV	**Zalesovo Beam**	**57.23**	**332**	P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.90**	**310**	⇑*i*P	**Pn**	**21 50 27.5**	**+0.4**
LVC				*e*S	**S**	**21 50 57.3**	**+0.7**
PB04	**Plate Boundary**	**2.53**	**308**	⇑*i*P	Pn	21 50 39.4	+6.0
PB04				*i* S	S	21 51 17.5	+10
PB04				AML	AML	21 51 19.7	
	comp=N,233nm,0.1s						
CEN1	**Los Morros**	**2.67**	**279**	*e*P	**Pn**	**21 50 35.8**	**+0.7**
CEN1				*i* S	**S**	**21 51 12.2**	**+1.4**
PB09	**Plate Boundary**	**2.69**	**319**	⇑*i*P	**Pn**	**21 50 36.5**	**+1.1**
PB09				*e*S	**S**	**21 51 12.6**	**+1.1**
PB09				AML	AML	21 51 14.1	
	comp=E,690nm,0.3s						
ANCH	**Antofagasta**	**2.83**	**273**	⇑*i*P	**Pn**	**21 50 37.2**	**+0.4**
ANCH				*i* S	**S**	**21 51 13.5**	**-0.3**
PB01	**Plate Boundary**	**3.43**	**324**	⇑*i*P	**Pn**	**21 50 44.0**	**+0.1**
PB01				*i* S	**S**	**21 51 26.7**	**0.0**
PB01				AML	AML	21 51 28.6	
	comp=E,203nm,0.2s						
HMBC	**Humberstone**	**4.27**	**326**	⇑*i*P	**Pn**	**21 50 53.3**	**-0.9**
HMBC				*e*S	**S**	**21 51 43.9**	**-1.5**
HMBC				AML	AML	21 51 50.1	
	comp=N,150nm,0.5s						
PSGC	**Pisagua**	**4.96**	**328**	*e*P	**Pn**	**21 51 01.2**	**-1.7**
PSGC				*i* S	**S**	**21 51 58.8**	**-2.3**
PSGC				AML	AML	21 52 02.2	
	comp=N,45nm,0.4s						
MNMC	**Minimini**	**5.14**	**335**	*e*P	**Pn**	**21 51 05.0**	**-0.4**
MNMC				*i* S	**S**	**21 52 05.0**	**-0.6**
MNMC				AML	AML	21 52 06.7	
	comp=E,187nm,0.3s						
LPAZ	**La Paz**	**7.55**	**354**	P	**Pn**	**21 51 38.1**	**+1.3**
	comp=E,0.2nm,0.3s,baz=168,slow=9.4,SNR=4.9						
LPAZ				S	**S**	**21 53 03.7**	**+1.0**
	comp=E,0.1nm,0.3s,baz=308,slow=18,SNR=4.0						
CFAA	**Coronel Fontan**	**7.78**	**186**	P	**Pn**	**21 51 36.3**	**-2.7**
	comp=E,0.0nm,0.3s,baz=8.1,slow=7.1,SNR=4.8						
CFAA				S	S	21 52 57.4	-10
	comp=E,0.1nm,0.3s,baz=21,slow=18,SNR=6.8						
BDFB	**Brasilia**	**19.91**	**69**	P	**P**	**21 54 03.4**	**-1.4**
	comp=E,0.4nm,0.3s,baz=237,slow=12,SNR=4.9						
TORD	**Torodi Ar. Bea**	**76.79**	**69**	P	**P**	**22 01 18.2**	**+0.4**
	comp=E,0.4nm,0.4s,baz=260,slow=6.7,SNR=7.4						
WRA	**Warramunga Arr**	**131.63**	**208**	PKP	**PKPdf**	**22 08 39.6**	**+2.2**
	comp=E,0.6nm,1.1s,baz=154,slow=2.0,SNR=5.1						
MKAR	**Makanchi Array**	**146.59**	**39**	PKPbc	**PKPab**	**22 09 07.1**	**0.0**
	comp=E,0.5nm,0.7s,baz=309,slow=1.1,SNR=5.7						

IDC 22 22:09:16.7±8.8,0.51N×100.41W, h0km, mb3.9/4, mb1 4.3/4, mb1mx3.9/18, mbtmp3.9/4, MS3.5/12, Ms1 3.5/12, ms1mx3.4/21, Error ellipse: s-maj=316.5km s-min=122.8km az=105.0, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**22.91**	**30**	LR	LR	22 21 54.5	
	comp=Z,62nm,20.8s,baz=85,slow=33						
ATAH	**Atahualpa**	**23.23**	**109**	LR	LR	22 20 07.0	
	comp=Z,55nm,21.1s,baz=336,slow=28						
LPIG	**La Paz**	**25.34**	**338**	LR	LR	22 21 55.0	
	comp=Z,30nm,21.4s,baz=209,slow=30						
NNA	**Nana**	**26.49**	**119**	LR	LR	22 23 33.4	
	comp=Z,158nm,18.1s,baz=324,slow=32						
TXAR	**Lajitas Array**	**28.83**	**354**	P	P	22 15 16.9	-0.1
	1.0nm,1.0s,baz=188,slow=12,SNR=7.3						
TXAR				LR	LR	22 25 30.0	
	comp=Z,294nm,18.2s,baz=185,slow=34						
LPAZ	**La Paz**	**35.95**	**119**	LR	LR	22 28 07.4	
	comp=Z,36nm,21.4s,baz=232,slow=32						
PDAR	**Pinedale Array**	**42.86**	**350**	P	P	22 17 16.9	-0.2
	1.9nm,1.0s,baz=146,slow=8.3,SNR=9.2						
PDAR				LR	LR	22 34 12.0	
	comp=Z,58nm,19.6s,baz=355,slow=35						
PLCA	**Paso Flores**	**49.21**	**150**	LR	LR	22 33 01.8	
	comp=Z,41nm,21.5s,baz=359,slow=29						
CPUP	**Villa Florida**	**49.34**	**126**	LR	LR	22 38 12.7	
	comp=Z,81nm,18.7s,baz=91,slow=35						
ULM	**Lac du Bonnet**	**49.70**	**4**	LR	LR	22 39 02.1	
	comp=Z,134nm,18.2s,baz=95,slow=36						
BDFB	**Brasilia**	**54.16**	**110**	LR	LR	22 40 57.6	
	comp=Z,138nm,20.4s,baz=346,slow=35						
YKA	**Yellowknife Ar**	**62.75**	**353**	P	P	22 19 43.6	+0.2
	2.1nm,0.9s,baz=162,slow=6.4,SNR=26						
ILAR	**Eielson Array**	**72.36**	**341**	P	P	22 20 44.0	-0.2
	1.6nm,1.0s,baz=162,slow=4.3,SNR=12						
ESDC	**Sonseca Array**	**94.64**	**50**	LR	LR	23 03 02.3	
	comp=Z,14nm,18.4s,baz=320,slow=34						

*ISCJB **22** 22:17:30.9±0.4,50.15N±0.03×18.33E±0.03, h0km, Error ellipse: s-maj=4.3km s-min=2.3km az=13.1*
*WAR **22** 22:17:32.0,50.08N×18.45E*
*CSEM **22** 22:17:32.4±0.3,50.12N×18.32E, h2km, ML3.0/9, Error ellipse: s-maj=7.5km s-min=3.9km az=16.0*
*IPEC **22** 22:17:32.1±0.2,50.09N×18.46E, h1km±2km, ML2.1/3, Error ellipse: s-maj=2.0km s-min=1.1km az=160.0*
*PRU **22** 22:17:33.3,50.12N×18.35E, h0km*

ISC 22 22:17:31.7±0.8,50.13N±0.03×18.44E±0.02, h0km, n31, σ0s79/62, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.16**	**252**	*e*Pg	**Pg**	**22 17 36.6**	**+1.8**
RAC				*e*Sg	**Sg**	**22 17 39.8**	**+2.8**
OKC	**Ostrava-Krasne**	**0.35**	**212**	*e*PG	**Pg**	**22 17 38.9**	**+0.5**
OKC				*e*SG	**Sg**	**22 17 42.9**	**0.0**
	comp=Z,177nm,0.7s						
OKC	**Ostrava-Krasne**	**0.35**	**212**	Pg	**Pg**	**22 17 38.9**	**+0.5**
OKC				Sg	**Sg**	**22 17 42.9**	**0.0**
	177nm,0.7s						
MORC	**Moravsky Berou**	**0.68**	**239**	*e*Pg	**Pg**	**22 17 44.8**	**+0.1**
MORC				*e*Sg	**Sg**	**22 17 53.0**	**-0.5**
	61nm,0.4s,baz=61						
OJC	**Ojcow**	**0.88**	**84**	*e*Pg	**Pg**	**22 17 48.8**	**+0.2**
OJC				*e*Sg	**Sg**	**22 18 00.9**	**+0.9**
DPC	**Dobruska-Polom**	**1.37**	**280**	*e*PG	**Pg**	**22 17 58.2**	**+0.1**
DPC				*e*SG	**Sg**	**22 18 15.8**	**0.0**
	comp=Z,62nm,0.5s						
DPC	**Dobruska-Polom**	**1.37**	**280**	Pg	**Pg**	**22 17 58.2**	**+0.1**
DPC				Sg	**Sg**	**22 18 15.8**	**0.0**
	62nm,0.5s						
NIE	**Niedzica**	**1.41**	**120**	*e*Pg	**Pb**	**22 17 58.9**	**-0.1**
NIE				*e*Sg	**Sn**	**22 18 18.4**	**+0.4**
NIE	**Niedzica**	**1.41**	**120**	*e*Pg	**Pb**	**22 17 58.9**	**-0.1**
NIE				*e*Sg	**Sn**	**22 18 18.4**	**+0.4**
VRAC	**Vranov**	**1.45**	**236**	*e*Pg	**Pn**	**22 17 58.6**	**-0.7**
	baz=56						
VRAC				*e*Sg	**Sg**	**22 18 17.4**	**-1.0**
	23nm,0.3s,baz=56						
KSP	**Ksiaz**	**1.54**	**298**	*e*Pg	**Pn**	**22 18 00.2**	**-0.2**
KSP				*e*Sg	**Sn**	**22 18 21.0**	**-0.2**
KSP	**Ksiaz**	**1.54**	**298**	*e*Pg	**Pn**	**22 18 00.3**	**-0.2**
KSP				*e*Sg	**Sn**	**22 18 21.0**	**-0.2**
UPC	**Upice**	**1.60**	**284**	*e*PG	**Pb**	**22 18 01.9**	**-0.2**
UPC				*e*SG	**Sg**	**22 18 23.7**	**+0.7**
UPC	**Upice**	**1.60**	**284**	Pg	**Pb**	**22 18 01.9**	**-0.2**
UPC				Sg	**Sg**	**22 18 23.7**	**+0.7**
VYHS	**Vyhne**	**1.66**	**171**	*e*PN	**Pn**	**22 18 02.2**	**+0.1**
VYHS				*e*SN	**Sn**	**22 18 24.2**	**0.0**
VYHS	**Vyhne**	**1.66**	**171**	*e*Pn	**Pn**	**22 18 02.2**	**+0.1**
VYHS				*e*Sn	**Sn**	**22 18 24.2**	**0.0**
KRUC	**Moravsky**	**1.71**	**232**	*e*Pn	**Pn**	**22 18 02.7**	**0.0**
	baz=52						
KRUC				*e*Sg	**Sn**	**22 18 25.2**	**-0.1**
	8.5nm,0.3s,baz=52						
TREC	**Trest**	**2.09**	**247**	*e*PG	**Pb**	**22 18 09.7**	**-0.8**
TREC				*e*SG	**Sb**	**22 18 37.2**	**+0.2**
	comp=Z,18nm,0.5s						
TREC	**Trest**	**2.09**	**247**	Pg	**Pb**	**22 18 09.7**	**-0.8**
TREC				Sg	**Sb**	**22 18 37.2**	**+0.2**
	18nm,0.5s						
CRVS	**Cervenica-Dubn**	**2.33**	**121**	*e*PN	**Pn**	**22 18 12.7**	**+1.4**
CRVS				*e*SN	**Sb**	**22 18 43.8**	**0.0**
CRVS	**Cervenica-Dubn**	**2.33**	**121**	*e*Pn	**Pn**	**22 18 12.7**	**+1.4**
CRVS				*e*Sn	**Sb**	**22 18 43.8**	**0.0**
PVCC	**Panska Ves**	**2.51**	**281**	*e*PG	**Pg**	**22 18 19.1**	**-0.7**
PVCC				*e*SG	**Sg**	**22 18 51.9**	**-0.4**
	comp=Z,31nm,0.2s						
PVCC	**Panska Ves**	**2.51**	**281**	Pg	**Pg**	**22 18 19.1**	**-0.7**
PVCC				Sg	**Sg**	**22 18 51.9**	**-0.4**
	31nm,0.2s						
PRU	**Pruhonice**	**2.51**	**268**	*e*PG	**Pb**	**22 18 17.5**	**-0.2**
PRU				*e*SG	**Sb**	**22 18 49.7**	**+0.5**
	comp=Z,12nm,0.3s						
PRU	**Pruhonice**	**2.51**	**268**	Pg	**Pb**	**22 18 17.5**	**-0.2**
PRU				Sg	**Sb**	**22 18 49.7**	**+0.5**
	12nm,0.3s						
KOLS	**Kolonicke sedl**	**2.77**	**114**	*e*PN	**Pb**	**22 18 20.8**	**-1.4**
KOLS				*e*SN	**Sb**	**22 18 55.3**	**-1.4**
KOLS	**Kolonicke sedl**	**2.77**	**114**	*e*Pn	**Pb**	**22 18 20.9**	**-1.3**
KOLS				*e*Sn	**Sb**	**22 18 55.3**	**-1.4**
BRG	**Berggiesshubel**	**2.96**	**286**	PG	**Pg**	**22 18 28.1**	**-0.4**
BRG				SG	**Sg**	**22 19 06.0**	**-0.8**
	7.2nm,0.4s						
KHC	**Kasperske Hory**	**3.31**	**254**	*e*PN	**Pn**	**22 18 24.0**	**-0.9**
KHC				*e*PG	**Pb**	**22 18 32.7**	**+1.3**
KHC				*e*SG	**Sg**	**22 19 17.6**	**-0.5**
	comp=Z,9.8nm,0.4s						
KHC	**Kasperske Hory**	**3.31**	**254**	Pn	**Pn**	**22 18 24.0**	**-0.9**
CLL	**Collm**	**3.65**	**291**	*e*Pg	**Pg**	**22 18 43.0**	**+1.4**
CLL				*e*Sg	**Sg**	**22 19 29.0**	**+0.2**
	comp=Z,16nm,1.3s						

*DDA **22** 22:50:00.6,37.57N×35.68E, h7km, MD2.8*
*ISCJB **22** 22:50:01.2±0.5,37.52N±0.03×35.64E±0.03, h12km±5km, Error ellipse: s-maj=5.3km s-min=4.2km az=20.6*
*CSEM **22** 22:50:01.1±0.2,37.52N×35.62E, h15km, MD2.7, Error ellipse: s-maj=3.9km s-min=3.6km az=53.0*
*ISK **22** 22:50:01.1,37.51N×35.61E, h10km, MD2.7*

ISC 22 22:50:01.2±0.9,37.52N±0.03×35.64E±0.02, h17km±6km, n23, σ0s45/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.15**	**104**	*e*PG	**Pg**	**22 50 05.3**	**-0.1**
KOZT				*e*SG	**Sg**	**22 50 08.3**	**+0.2**
KOZT	**Kozan**	**0.15**	**104**	*e*Pg	**Pg**	**22 50 05.3**	**-0.1**
KOZT				*e*Sg	**Sg**	**22 50 08.4**	**+0.2**
CEYT	**Ceyhan**	**0.51**	**170**	*e*PG	**Pg**	**22 50 11.5**	**0.0**
CEYT				*e*SG	**Sb**	**22 50 19.0**	**0.0**
CEYT	**Ceyhan**	**0.51**	**170**	*e*Pg	**Pg**	**22 50 11.5**	**0.0**
CEYT				*e*Sg	**Sb**	**22 50 19.0**	**0.0**
ANDN	**Andirin**	**0.57**	**83**	*i* P	**Pg**	**22 50 11.7**	**-0.8**
ANDN				*i* S	**Sb**	**22 50 20.8**	**+0.1**
ANDN	**Andirin**	**0.57**	**83**	*i* P	**Pg**	**22 50 11.7**	**-0.8**
ANDN				*i* S	**Sb**	**22 50 20.8**	**+0.1**
GULE	**Gulek**	**0.72**	**251**	*i* P	**Pg**	**22 50 15.4**	**-0.1**
GULE				*i* S	**Sn**	**22 50 27.5**	**-0.2**
GULE	**Gulek**	**0.72**	**251**	*i* P	**Pg**	**22 50 15.4**	**-0.1**
GULE				*i* S	**Sn**	**22 50 27.5**	**-0.2**
AYKD	**Aykdinkavak**	**0.94**	**96**	*i* P	**Pb**	**22 50 18.3**	**-0.8**
AYKD				*i* S	**Sb**	**22 50 30.6**	**-0.6**
KRTS	**Karatas**	**0.97**	**193**	*e*PG	**Pb**	**22 50 19.7**	**+0.2**
KRTS				*e*SG	**Sn**	**22 50 33.5**	**+0.1**
KRTS	**Karatas**	**0.97**	**193**	*e*Pg	**Pb**	**22 50 19.7**	**+0.2**
KRTS				*e*Sg	**Sn**	**22 50 33.5**	**+0.1**
KMRS	**Kahramanmaras**	**1.00**	**90**	*e*PG	**Pg**	**22 50 21.1**	**+0.4**
KMRS	**Kahramanmaras**	**1.00**	**90**	*e*Pg	**Pg**	**22 50 21.1**	**+0.4**
NIG	**Nigde**	**1.01**	**306**	*e*PG	**Pb**	**22 50 20.4**	**0.0**
NIG				*e*SG	**Sg**	**22 50 34.6**	**+0.6**
NIG	**Nigde**	**1.01**	**306**	*e*Pg	**Pb**	**22 50 20.4**	**0.0**
NIG				*e*Sg	**Sg**	**22 50 34.7**	**+0.6**
SARI	**SarD1z-Kayseri**	**1.08**	**35**	*e*PN	**Pg**	**22 50 22.7**	**+0.5**
PINB	**Pinarbasi**	**1.30**	**27**	*i* P	**Pn**	**22 50 25.1**	**+0.1**
PINB				*i* S	**Sg**	**22 50 44.0**	**+0.5**
PINB	**Pinarbasi**	**1.30**	**27**	*i* P	**Pn**	**22 50 25.1**	**+0.1**
PINB				*i* S	**Sg**	**22 50 44.0**	**+0.5**
BNN	**Bunyan**	**1.34**	**7**	*e*PN	**Pb**	**22 50 26.2**	**+0.1**
BNN	**Bunyan**	**1.34**	**7**	*e*Pn	**Pb**	**22 50 26.2**	**+0.1**
AVNT	**Avonos**	**1.40**	**334**	*i* P	**Pn**	**22 50 25.1**	**-1.1**
AVNT				*i* S	**Sn**	**22 50 44.6**	**+0.1**
AVNT	**Avonos**	**1.40**	**334**	*i* P	**Pn**	**22 50 25.1**	**-1.1**
AVNT				*i* S	**Sn**	**22 50 44.6**	**+0.1**
GZT	**Gaziantep**	**1.54**	**95**	*i* P	**Pn**	**22 50 28.8**	**+0.6**
GZT				*i* S	**Sn**	**22 50 47.8**	**0.0**

GUC 22 23:02:38.7±0.8,22.89S×68.75W, h109km±5km, ML3.6, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.31**	**331**	*e*P	Pn	23 02 55.5	+0.7
LVC				*i* S	Sn	23 03 07.9	+1.2
SPCH	**San Pedro de A**	**0.51**	**93**	*i* P	Pn	23 02 56.4	+0.5
SPCH				*i* S	Sn	23 03 09.7	+0.9
SPCH				AML	AML	23 03 10.7	
	comp=N,3μm,0.3s						
CEN1	**Los Morros**	**1.43**	**249**	*e*P	Pn	23 03 08.2	+3.4
CEN1				*i* S	Sn	23 03 29.2	+4.7
CEN1				AML	AML	23 03 30.5	
	comp=N,301nm,0.1s						
PB07	**Plate Boundary**	**1.56**	**317**	⇓*i*P	Pn	23 03 07.3	+0.8
PB07				*i* S	Sn	23 03 28.9	+1.3
PB07				AML	AML	23 03 29.7	
	comp=N,3μm,0.2s						
ANCH	**Antofagasta**	**1.72**	**242**	*e*P	Pn	23 03 08.4	+0.2
ANCH				*i* S	Sn	23 03 31.2	+0.7
ANCH				AML	AML	23 03 32.3	
	comp=E,969nm,0.1s						
PB01	**Plate Boundary**	**1.96**	**339**	⇑*i*P	Pn	23 03 11.9	+0.6
PB01				*i* S	Sn	23 03 37.1	+1.0
PB01				AML	AML	23 03 39.0	
	comp=E,709nm,0.2s						
PSGC	**Pisagua**	**3.51**	**338**	⇑*i*P	Pn	23 03 29.8	-1.9
PSGC				*i* S	Sn	23 04 11.2	-1.5
MNMC	**Minimini**	**3.82**	**348**	⇑*i*P	Pn	23 03 35.2	-0.9
MNMC				*i* S	Sn	23 04 19.9	-0.4

*ISCJB **22** 23:58:02.1±0.4,36.81N±0.02×9.66W±0.03, h10km, Error ellipse: s-maj=4.0km s-min=3.0km az=168.1*
*CSEM **22** 23:58:05.7±0.1,36.78N×9.78W, h40km, ML4.5/16, Error ellipse: s-maj=3.4km s-min=2.6km az=109.0*
*MDD **22** 23:58:06.4±0.6,36.77N×9.79W, h42km±13km, mb5.0/32, Error ellipse: s-maj=5.6km s-min=4.4km az=93.0, PRXIMO*
*SFS **22** 23:58:06.0,36.84N×9.74W, h24km, ML3.8*
*IGIL **22** 23:58:07.6,36.85N×9.70W, h21km, ML3.8*
*CNRM **22** 23:58:07.2,36.63N×9.69W, h21km, MD3.6*
*INMG **22** 23:58:08.0±1.2,36.86N×9.68W, h21km±4km, MD3.5, ML3.6, Error ellipse: s-maj=5.1km s-min=3.2km az=37.0*
*LDG **22** 23:58:10.0±0.3,37.22N×9.18W, h20km, Ml3.8/8, Error ellipse: s-maj=6.7km s-min=4.2km az=57.0*

ISC 22 23:58:02.7±1.2,36.84N±0.04×9.69W±0.05, h10km, n232, σ2s04/331, 19C-6D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.75**	**67**	*i* P	**Pn**	**23 58 21.5**	**+2.1**
PFVI				*e*S	**Sn**	**23 58 31.4**	**+0.6**
PFVI				A	A	23 58 34.3	
	631nm,0.2s						
PFVI	**Vila Bisbo**	**0.75**	**67**	⇑Pg	**Pn**	**23 58 21.5**	**+2.1**
	478nm,0.1s,SNR=18						
PFVI				Lg	Lg	23 58 31.1	
	2μm,0.2s,SNR=20						
PFVI	**Vila Bisbo**	**0.75**	**67**	Pg	**Pn**	**23 58 21.5**	**+2.1**
	478nm,0.1s,SNR=18						
PFVI				Lg	Lg	23 58 31.1	
	2μm,0.2s,SNR=20						
PFVI				*e*S	**Sn**	**23 58 31.4**	**+0.6**
	631nm,0.2s						
MORF	**Marmelete**	**0.95**	**60**	*i* P	**Pn**	**23 58 24.4**	**+2.2**
MORF				*e*S	**Sn**	**23 58 36.8**	**+0.9**
MORF				A	A	23 58 37.8	
	855nm,0.1s						
MORF	**Marmelete**	**0.95**	**60**	⇑Pg	**Pn**	**23 58 24.4**	**+2.2**
MORF				Lg	Lg	23 58 36.8	
	855nm,0.1s						
MORF	**Marmelete**	**0.95**	**60**	Pg	**Pn**	**23 58 24.4**	**+2.2**
MORF				*e*S	**Sn**	**23 58 36.8**	**+0.9**
	855nm,0.1s						
MORF				Lg	Lg	23 58 36.8	
	855nm,0.1s						
PTEO	**Sao Teotonio**	**1.05**	**47**	*i* P	**Pn**	**23 58 25.8**	**+2.4**
PTEO				*e*S	**Sn**	**23 58 39.3**	**+1.2**
PTEO				A	A	23 58 40.5	
	592nm,0.4s						
PTEO	**Sao Teotonio**	**1.05**	**47**	⇑Pg	**Pn**	**23 58 25.8**	**+2.4**
PTEO				Lg	Lg	23 58 39.3	
	296nm,0.4s						
PTEO	**Sao Teotonio**	**1.05**	**47**	Pg	**Pn**	**23 58 25.8**	**+2.4**
PTEO				*e*S	**Sn**	**23 58 39.3**	**+1.2**
	592nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.47**	**73**	*i* P	**Pg**	**23 58 31.5**	**+0.7**
PBDV				*e*S	**Sn**	**23 58 49.2**	**+0.7**
PBDV				A	A	23 58 52.2	
	220nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.47**	**73**	⇑Pg	**Pg**	**23 58 31.5**	**+0.7**
PBDV				Lg	Lg	23 58 49.2	
	220nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.47**	**73**	Pg	**Pg**	**23 58 31.5**	**+0.7**
PBDV				*e*S	**Sn**	**23 58 49.2**	**+0.7**
	220nm,0.4s						
PBDV				Lg	Lg	23 58 49.2	
	220nm,0.4s						
PCVE	**Castro Verde**	**1.54**	**58**	*i* P	**Pb**	**23 58 32.6**	**+1.3**
PCVE				*e*S	**Sn**	**23 58 50.7**	**+0.5**
PCVE				A	A	23 59 08.7	
	275nm,0.4s						
PCVE	**Castro Verde**	**1.54**	**58**	⇑Pn	**Pb**	**23 58 32.6**	**+1.3**
PCVE				Sn	**Sn**	**23 58 50.7**	**+0.5**
	275nm,0.4s						
PCVE	**Castro Verde**	**1.54**	**58**	Pn	**Pb**	**23 58 32.6**	**+1.3**
PCVE				*e*S	**Sn**	**23 58 50.7**	**+0.5**
	275nm,0.4s						
MESJ	**Messejana**	**1.54**	**49**	*e*P	**Pb**	**23 58 32.4**	**+1.1**
MESJ				*e*S	**Sn**	**23 58 50.3**	**0.0**
MESJ				AML	AML	23 59 00.1	
	comp=N,382nm,0.4s						
MESJ	**Messejana**	**1.54**	**49**	*e*P	**Pb**	**23 58 32.4**	**+1.1**
MESJ				*e*S	**Sn**	**23 58 50.3**	**0.0**
MESJ	**Messejana**	**1.54**	**49**	Pn	**Pb**	**23 58 32.4**	**+1.1**
MESJ				Sn	**Sn**	**23 58 50.3**	**0.0**
MESJ	**Messejana**	**1.54**	**49**	*e*P	**Pb**	**23 58 32.4**	**+1.1**
MESJ				*e*S	**Sn**	**23 58 50.3**	**0.0**
PNCL	**Nicolau / Gran**	**1.57**	**36**	*i* P	**Pb**	**23 58 32.9**	**+1.0**
PNCL				*e*S	**Sb**	**23 58 52.0**	**+0.2**
PVAQ	**Vaqueiros**	**1.68**	**70**	*i* P	**Pb**	**23 58 34.3**	**+0.7**
PVAQ				*e*S	**Sn**	**23 58 53.8**	**+0.2**
PVAQ				A	A	23 58 55.8	
	comp=N,212nm,0.3s						
PVAQ	**Vaqueiros**	**1.68**	**70**	⇑Pn	**Pb**	**23 58 34.3**	**+0.7**
PVAQ				Sn	**Sn**	**23 58 53.8**	**+0.2**
	comp=N,212nm,0.3s						
PVAQ	**Vaqueiros**	**1.68**	**70**	Pn	**Pb**	**23 58 34.3**	**+0.7**
PVAQ				*e*S	**Sn**	**23 58 53.8**	**+0.2**
	comp=N,212nm,0.3s						
PLML	**Palmela**	**1.82**	**20**	*e*Pn	**Pb**	**23 58 37.0**	**+0.8**
PLML	**Palmela**	**1.82**	**20**	Pn	**Pb**	**23 58 37.0**	**+0.8**
PLML	**Palmela**	**1.82**	**20**	*e*Pn	**Pb**	**23 58 37.0**	**+0.8**
PBEJ	**Beja**	**1.88**	**50**	*i* Pn	**Pn**	**23 58 36.8**	**+2.0**
PBEJ				*e*Sn	**Sn**	**23 58 58.7**	**+0.1**
PBEJ	**Beja**	**1.88**	**50**	⇑Pn	**Pn**	**23 58 36.8**	**+2.0**
PBEJ				Sn	**Sn**	**23 58 58.7**	**+0.1**
PBEJ	**Beja**	**1.88**	**50**	Pn	**Pn**	**23 58 36.8**	**+2.0**
PBEJ				*e*Sn	**Sn**	**23 58 58.7**	**+0.1**
EGRO	**El Granado**	**1.90**	**68**	⇑Pn	**Pn**	**23 58 37.1**	**+2.0**
	comp=N,32nm,0.1s,SNR=18						
EGRO				Sn	**Sn**	**23 58 58.7**	**-0.3**
	comp=N,66nm,0.1s,SNR=6.2						
EGRO	**El Granado**	**1.90**	**68**	Pn	**Pn**	**23 58 37.1**	**+2.0**
	comp=N,32nm,0.1s,SNR=18						
EGRO				Sn	**Sn**	**23 58 58.7**	**-0.3**
	comp=N,66nm,0.1s,SNR=6.2						
LIS	**Lisbon**	**1.92**	**13**	*e*P	**Pn**	**23 58 37.6**	**+2.1**
LIS				*e*S	**Sn**	**23 58 59.2**	**-0.5**
LIS				AML	AML	23 59 02.8	
	comp=E,1μm,0.5s						
LIS	**Lisbon**	**1.92**	**13**	*e*P	**Pn**	**23 58 37.6**	**+2.1**
LIS				*e*S	**Sn**	**23 58 59.2**	**-0.5**
LIS	**Lisbon**	**1.92**	**13**	Pn	**Pn**	**23 58 37.6**	**+2.1**
LIS				Sn	**Sn**	**23 58 59.2**	**-0.5**
LIS	**Lisbon**	**1.92**	**13**	*e*P	**Pn**	**23 58 37.6**	**+2.1**
LIS				*e*S	**Sn**	**23 58 59.2**	**-0.5**
INMG	**Instituto de M**	**1.98**	**13**	*e*Pn	**Pb**	**23 58 39.2**	**+0.3**
INMG				*e*Sn	**Sn**	**23 59 01.6**	**+0.4**
INMG	**Instituto de M**	**1.98**	**13**	Pn	**Pb**	**23 58 39.2**	**+0.3**
INMG				Sn	**Sn**	**23 59 01.6**	**+0.4**
INMG	**Instituto de M**	**1.98**	**13**	*e*Pn	**Pb**	**23 58 39.2**	**+0.3**
INMG				*e*Sn	**Sn**	**23 59 01.6**	**+0.4**
MOE	**Montemor**	**1.99**	**32**	*e*Pn	**Pb**	**23 58 39.4**	**+0.4**
MOE				*e*Sn	**Sn**	**23 59 02.0**	**+0.6**
MOE	**Montemor**	**1.99**	**32**	Pn	**Pb**	**23 58 39.4**	**+0.4**
MOE				Sn	**Sn**	**23 59 02.0**	**+0.6**
MOE	**Montemor**	**1.99**	**32**	*e*Pn	**Pb**	**23 58 39.4**	**+0.4**
MOE				*e*Sn	**Sn**	**23 59 02.0**	**+0.6**
EVOP	**Sao Brissos**	**2.10**	**36**	*e*Pn	**Pn**	**23 58 39.1**	**+1.3**
PMAFR	**Mafra**	**2.14**	**9**	*e*Pn	**Pn**	**23 58 40.5**	**+2.0**
PMA

comp=E,94nm,0.3s
PTOM Tomar 2.95 20 *e*Pn **Pn 23 58 51.9 +2.3**
PTOM Sn **Sn 23 59 24.3 -0.8**
comp=E,94nm,0.3s
CNIL Conil 2.96 98 Pn **Pn 23 58 52.6 +2.8**
CNIL Sn **Sn 23 59 21.4 -4.0**
CNIL Conil 2.96 98 *i* P **Pn 23 58 52.6 +2.8**
CNIL *e*S **Sn 23 59 21.4 -4.0**
ESPR Espera 3.08 88 ⇑Pn **Pn 23 58 53.2 +1.9**
comp=E,114nm,0.1s,SNR=18
ESPR Sn **Sn 23 59 27.2 -1.0**
comp=E,800nm,0.3s,SNR=15
ESPR Espera 3.08 88 Pn **Pn 23 58 53.2 +1.9**
comp=E,114nm,0.1s,SNR=18
ESPR Sn **Sn 23 59 27.2 -1.0**
comp=E,800nm,0.3s,SNR=15
PMRV Marv??o 3.16 34 *e*Pn **Pn 23 58 54.5 +2.0**
PMRV *e*Sn **Sn 23 59 29.1 -1.1**
PMRV A A 23 59 32.3
comp=E,136nm,0.3s
PMRV Marv??o 3.16 34 Pn **Pn 23 58 54.5 +2.0**
PMRV Sn **Sn 23 59 29.1 -1.1**
comp=E,136nm,0.3s
PMRV Marv??o 3.16 34 *e*Pn **Pn 23 58 54.5 +2.0**
PMRV Sn **Sn 23 59 29.1 -1.1**
comp=E,136nm,0.3s
LIJA Lijar 3.44 88 ⇑Pn Pn 23 58 52.9 -3.5
LIJA Sn **Sn 23 59 32.3 -5.0**
LIJA Lijar 3.44 88 *i* P Pn 23 58 52.9 -3.5
LIJA *e*S **Sn 23 59 32.3 -5.0**
ECEU Ceuta 3.61 104 Pn **Pn 23 59 01.8 +3.2**
comp=E,17nm,0.1s,SNR=4.0
ECEU Sn **Sn 23 59 41.6 +0.4**
comp=E,64nm,0.4s,SNR=4.0
ECEU Ceuta 3.61 104 Pn **Pn 23 59 01.8 +3.2**
comp=E,17nm,0.1s,SNR=4.0
ECEU Sn **Sn 23 59 41.6 +0.4**
comp=E,64nm,0.4s,SNR=4.0
MTE Manteigas 3.93 25 *e*Pn **Pn 23 59 05.3 +2.1**
MTE *e*Sn **Sn 23 59 47.5 -1.9**
MTE A A 23 59 50.7
comp=E,141nm,0.3s
MTE Manteigas 3.93 25 Pn **Pn 23 59 05.3 +2.1**
MTE Sn **Sn 23 59 47.5 -1.9**
comp=E,71nm,0.3s
MTE Manteigas 3.93 25 *e*Pn **Pn 23 59 05.3 +2.1**
MTE Sn **Sn 23 59 47.5 -1.9**
comp=E,71nm,0.3s
EMIJ Mijas 3.96 92 Pn **Pn 23 59 05.2 +1.7**
comp=E,1.6nm,0.1s,SNR=16
EMIJ Sn **Sn 23 59 49.8 -0.3**
comp=E,51nm,0.4s,SNR=7.4
EMIJ Mijas 3.96 92 Pn **Pn 23 59 05.2 +1.7**
comp=E,1.6nm,0.1s,SNR=16
EMIJ Sn **Sn 23 59 49.8 -0.3**
comp=E,51nm,0.4s,SNR=7.4
PVIS Viseu 4.12 19 *e*Pn **Pn 23 59 07.6 +1.9**
PVIS *e*Sn **Sn 23 59 53.3 -0.7**
PVIS A A 23 59 54.6
comp=E,66nm,0.1s
PVIS Viseu 4.12 19 Pn **Pn 23 59 07.6 +1.9**
PVIS Sn **Sn 23 59 53.3 -0.7**
comp=E,33nm,0.1s
PVIS Viseu 4.12 19 *e*Pn **Pn 23 59 07.6 +1.9**
PVIS Sn **Sn 23 59 53.3 -0.7**
comp=E,33nm,0.1s
EADA Adamuz 4.28 70 ⇑Pn **Pn 23 59 09.4 +1.5**
comp=E,14nm,0.1s,SNR=18
EADA Sn **Sn 23 59 55.2 -2.7**
SNR=7.9
EADA Lg Lg 23 59 56.6
comp=E,0.5nm,0.4s,SNR=5.4
EADA Adamuz 4.28 70 Pn **Pn 23 59 09.4 +1.5**
comp=E,14nm,0.1s,SNR=18
EADA Sn **Sn 23 59 55.2 -2.7**
SNR=7.9
EADA Lg Lg 23 59 56.6
comp=E,0.5nm,0.4s,SNR=5.4
EPLA Plasencia 4.29 40 ⇑Pn **Pn 23 59 09.8 +1.7**
comp=E,8.5nm,0.1s,SNR=18
EPLA Lg Lg 23 59 56.4
comp=E,114nm,0.2s,SNR=24
EPLA Plasencia 4.29 40 Pn **Pn 23 59 09.8 +1.7**
comp=E,8.5nm,0.1s,SNR=18
EPLA Lg Lg 23 59 56.4
comp=E,114nm,0.2s,SNR=24
PTO Porto 4.38 11 *e*Pn **Pn 23 59 11.0 +1.8**
PTO *e*Sn **Sn 23 59 57.7 -2.5**
PTO A A 00 00 02.5
comp=E,89nm,0.1s
PTO Porto 4.38 11 Pn **Pn 23 59 11.0 +1.8**
PTO Sn **Sn 23 59 57.7 -2.5**
comp=E,44nm,0.1s
PTO Porto 4.38 11 *e*Pn **Pn 23 59 11.0 +1.8**
PTO Sn **Sn 23 59 57.7 -2.5**
comp=E,44nm,0.1s
ELOJ Sierra Loja 4.44 84 Pn **Pn 23 59 12.8 +2.6**
comp=E,3.7nm,0.2s,SNR=6.1
ELOJ Sn **Sn 23 59 59.6 -2.4**
comp=E,25nm,0.4s,SNR=8.7
ELOJ Sierra Loja 4.44 84 Pn **Pn 23 59 12.8 +2.6**
comp=E,3.7nm,0.2s,SNR=6.1
ELOJ Sn **Sn 23 59 59.6 -2.4**
comp=E,25nm,0.4s,SNR=8.7
TGT Taghat 4.68 125 Pn **Pn 23 59 14.0 +0.5**
TGT Taghat 4.68 125 *i* P **Pn 23 59 14.0 +0.5**
PVRL Vila Real 4.69 19 *e*Pn **Pn 23 59 15.2 +1.6**
PVRL *e*Sn **Sn 00 00 05.3 -2.8**
PVRL A A 00 00 09.6
comp=E,111nm,0.2s
PVRL Vila Real 4.69 19 Pn **Pn 23 59 15.2 +1.6**
PVRL Sn **Sn 00 00 05.3 -2.8**
comp=E,56nm,0.2s
PVRL Vila Real 4.69 19 *e*Pn **Pn 23 59 15.2 +1.6**
ERON Agron 4.72 86 Pn **Pn 23 59 16.6 +2.5**
comp=E,4.3nm,0.2s,SNR=7.9
ERON Sn **Sn 00 00 05.1 -3.8**
comp=E,16nm,0.2s,SNR=7.9
POLO Lamas de Olo 4.76 17 *e*Pn **Pn 23 59 16.2 +1.6**
POLO *e*Sn **Sn 00 00 07.2 -2.7**
POLO A A 00 00 11.9
comp=E,25nm,0.2s
POLO Lamas de Olo 4.76 17 *e*Pn **Pn 23 59 16.2 +1.6**
MVO Moncorvo 4.79 25 *e*Pn **Pn 23 59 16.8 +1.8**
MVO *e*Sn **Sn 00 00 08.5 -2.1**
MVO A A 00 00 11.2
comp=E,121nm,0.4s
MVO Moncorvo 4.79 25 ⇓Pn **Pn 23 59 16.8 +1.8**
comp=E,21nm,0.1s,SNR=18
MVO Sn **Sn 00 00 08.4 -2.2**
comp=E,74nm,0.2s,SNR=22
MVO Moncorvo 4.79 25 Pn **Pn 23 59 16.8 +1.8**
comp=E,21nm,0.1s,SNR=18
EGUA Guajares 4.91 88 Pn **Pn 23 59 18.4 +1.8**
comp=E,13nm,0.2s,SNR=7.9
EGUA Sn **Sn 00 00 12.6 -0.9**
comp=E,186nm,0.5s,SNR=7.9
ECOG Cogollos-Vega 4.92 83 Pn **Pn 23 59 18.8 +2.0**
comp=E,7.8nm,0.2s,SNR=12
ECOG Sn **Sn 00 00 11.9 -1.9**
comp=E,31nm,0.2s
ECOG Cogollos-Vega 4.92 83 Pn **Pn 23 59 18.8 +2.0**
comp=E,7.8nm,0.2s,SNR=12
ECOG Sn **Sn 00 00 11.9 -1.9**
comp=E,31nm,0.2s
MIF Mishlifen 5.01 132 Pn **Pn 23 59 19.0 +0.9**
MIF Mishlifen 5.01 132 *i* P **Pn 23 59 19.0 +0.9**
EQUE Quentar 5.01 84 Pn **Pn 23 59 21.0 +2.9**
comp=E,5.0nm,0.2s,SNR=7.9
EQUE Sn **Sn 00 00 14.9 -1.3**
comp=E,22nm,0.3s,SNR=6.6
EQUE Quentar 5.01 84 Pn **Pn 23 59 21.0 +2.9**
comp=E,5.0nm,0.2s,SNR=7.9
EQUE Sn **Sn 00 00 14.9 -1.3**
comp=E,22nm,0.3s,SNR=6.6
PCAB Cabril 5.03 14 *e*Pn **Pn 23 59 19.8 +1.5**
PCAB *e*Sn **Sn 00 00 13.1 -3.4**
PCAB A A 00 00 18.8
comp=E,44nm,0.3s
PCAB Cabril 5.03 14 Pn **Pn 23 59 19.8 +1.5**
PCAB Sn **Sn 00 00 13.1 -3.4**
comp=E,22nm,0.3s
PCAB Cabril 5.03 14 *e*Pn **Pn 23 59 19.8 +1.5**
ELOB Lobios 5.18 14 ⇑Pn **Pn 23 59 21.8 +1.5**
comp=E,16nm,0.2s,SNR=18
ELOB Sn **Sn 00 00 16.4 -3.8**
comp=E,25nm,0.1s,SNR=4.0
ELOB Lobios 5.18 14 Pn **Pn 23 59 21.8 +1.5**
comp=E,16nm,0.2s,SNR=18
KIB El Ksiba 5.21 144 Pn **Pn 23 59 21.0 +0.3**
KIB El Ksiba 5.21 144 *i* P **Pn 23 59 21.0 +0.3**
PGAV Gavieira, Arco 5.24 12 *e*Pn **Pn 23 59 22.7 +1.6**
PGAV *e*Sn **Sn 00 00 18.4 -3.2**
PGAV A A 00 00 22.6
comp=E,70nm,0.4s
PGAV Gavieira, Arco 5.24 12 *e*Pn **Pn 23 59 22.7 +1.6**
CIA Chichaoua 5.32 171 Pn **Pn 23 59 22.0 -0.2**
CIA Chichaoua 5.32 171 *i* P **Pn 23 59 22.0 -0.2**
ESDC Sonseca Array 5.32 56 ⇑Pn **Pn 23 59 23.6 +1.3**
comp=E,115nm,0.1s,baz=241,slow=13,SNR=18
ESDC Sn **Sn 00 00 21.0 -2.7**
comp=E,70nm,0.3s,baz=243,slow=23,SNR=30
ESDC Sonseca Array 5.32 56 Pn **Pn 23 59 23.6 +1.3**
comp=E,115nm,0.1s,baz=241,slow=13,SNR=18
EQES Quesada 5.36 78 ⇓Pn **Pn 23 59 24.1 +1.2**
comp=E,4.9nm,0.1s,SNR=18
EQES Sn **Sn 00 00 21.7 -3.0**
comp=E,24nm,0.2s,SNR=15
EQES Quesada 5.36 78 Pn **Pn 23 59 24.1 +1.2**
comp=E,4.9nm,0.1s,SNR=18
TZC Tazercounte 5.37 150 Pn **Pn 23 59 23.0 -0.1**
TZC Tazercounte 5.37 150 *i* P **Pn 23 59 23.0 -0.1**
CZD Col de Zad 5.38 133 Pn **Pn 23 59 24.0 +0.7**
CZD Col de Zad 5.38 133 *i* P **Pn 23 59 24.0 +0.7**
EBER Berja 5.45 87 Pn **Pn 23 59 26.3 +2.1**
comp=E,7.1nm,0.3s,SNR=16
EBER Sn **Sn 00 00 26.3 -0.8**
comp=E,46nm,0.6s,SNR=5.9
EBER Berja 5.45 87 Pn **Pn 23 59 26.3 +2.1**
comp=E,7.1nm,0.3s,SNR=16
EBER Sn **Sn 00 00 26.3 -0.8**
comp=E,46nm,0.6s,SNR=5.9
PBRG Braganca 5.46 24 *e*Pn **Pn 23 59 26.3 +2.1**
PBRG *e*Sn **Sn 00 00 24.0 -3.1**
PBRG A A 00 00 27.5
comp=E,40nm,0.2s
PBRG Braganca 5.46 24 Pn **Pn 23 59 26.3 +2.1**
PBRG Braganca 5.46 24 *e*Pn **Pn 23 59 26.3 +2.1**
ECAL Calabor 5.59 23 ⇓Pn **Pn 23 59 27.4 +1.5**
comp=E,47nm,0.3s,SNR=18
ECAL Sn **Sn 00 00 27.3 -2.9**
comp=E,112nm,0.4s,SNR=8.4
EMEL Melilla 5.67 104 Sn **Sn 00 00 29.2 -2.9**
comp=E,39nm,0.3s,SNR=4.0
EMLI Melilla 5.67 104 Sn **Sn 00 00 29.2 -2.9**
comp=E,39nm,0.3s,SNR=4.0
MELI Melilla 5.69 104 Sn Sn 00 00 27.5 -5.0
comp=E,82nm,0.6s,SNR=7.9
EHUE Huescar 5.74 78 ⇓Pn **Pn 23 59 29.5 +1.5**
comp=E,4.7nm,0.2s,SNR=18
EHUE Sn **Sn 00 00 30.4 -3.6**
comp=E,32nm,0.3s,SNR=7.9
EHUE Huescar 5.74 78 Pn **Pn 23 59 29.5 +1.5**
comp=E,4.7nm,0.2s,SNR=18
GUD Guadarrama 5.76 47 ⇓Pn **Pn 23 59 29.6 +1.3**
comp=E,14nm,0.2s,SNR=18
GUD Sn **Sn 00 00 31.3 -3.2**
comp=E,48nm,0.3s,SNR=18
GUD Guadarrama 5.76 47 Pn **Pn 23 59 29.6 +1.3**
comp=E,14nm,0.2s,SNR=18
EVIA Vianos 5.97 70 Pn **Pn 23 59 32.3 +1.1**
comp=E,13nm,0.1s,SNR=28
EVIA Sn **Sn 00 00 35.0 -4.8**
comp=E,2.0nm,0.1s,SNR=4.0
EVIA Lg Lg 00 00 37.1
comp=E,8.7nm,0.1s,SNR=7.9
EVIA Vianos 5.97 70 Pn **Pn 23 59 32.3 +1.1**
comp=E,13nm,0.1s,SNR=28
EVIA Lg Lg 00 00 37.1
comp=E,8.7nm,0.1s,SNR=7.9
ENIJ Nijar 6.00 86 Pn **Pn 23 59 33.6 +2.1**
comp=E,10.0nm,0.3s,SNR=7.9
ENIJ Sn **Sn 00 00 36.9 -3.3**
comp=E,20nm,0.5s,SNR=7.9
ENIJ Nijar 6.00 86 Pn **Pn 23 59 33.6 +2.1**
comp=E,10.0nm,0.3s,SNR=7.9
EMAZ Mazaricos 6.13 5 Pn **Pn 23 59 34.1 +0.8**
comp=E,37nm,0.2s,SNR=147
EMAZ Sn Sn 00 00 37.9 -5.6
comp=E,67nm,0.3s,SNR=6.7
EMAZ Mazaricos 6.13 5 Pn **Pn 23 59 34.1 +0.8**
comp=E,37nm,0.2s,SNR=147
ZFT Errachidia 6.51 136 Pn **Pn 23 59 39.0 +0.2**
ZFT Errachidia 6.51 136 *i* P **Pn 23 59 39.0 +0.2**
PMPST Porto Santo, M 6.62 237 *e*P Pn 23 59 38.2 -1.8
PMPST *e*Sn Sn 00 00 41.9 -14
PMPST A A 00 00 54.1
comp=E,40nm,0.4s
PMPST Porto Santo, M 6.62 237 *e*P Pn 23 59 38.2 -1.8
PMPS Porto Santo 6.63 237 *e*Pn Pn 23 59 38.5 -1.7
PMPS *e*Sn Sn 00 00 42.9 -13
PMPS A A 00 00 48.1
comp=E,24nm,0.1s
PMPS Porto Santo 6.63 237 Pn Pn 23 59 38.2 -2.0
PMPS Sn Sn 00 00 41.9 -14
comp=E,20nm,0.4s
PMPS Porto Santo 6.63 237 *e*Pn Pn 23 59 38.5 -1.7
ETOB Tobarra 6.70 72 Pn **Pn 23 59 42.2 +1.0**
comp=E,2.7nm,0.2s,SNR=29
ETOB Sn **Sn 00 00 53.5 -4.1**
comp=E,4.7nm,0.2s
ETOB Tobarra 6.70 72 Pn **Pn 23 59 42.2 +1.0**
comp=E,2.7nm,0.2s,SNR=29
EPON Pontenova 6.77 16 Pn **Pn 23 59 42.5 +0.4**
comp=E,6.1nm,0.2s,SNR=7.5
EPON Sn **Sn 00 00 54.0 -5.2**
comp=E,16nm,0.2s,SNR=4.7
EPON Pontenova 6.77 16 Pn **Pn 23 59 42.5 +0.4**
comp=E,6.1nm,0.2s,SNR=7.5
EMUR La Murta 6.81 79 Pn **Pn 23 59 43.6 +1.0**
comp=E,4.1nm,0.3s,SNR=8.3
EMUR Sn **Sn 00 00 55.9 -4.3**
comp=E,26nm,0.8s,SNR=5.8
EMUR La Murta 6.81 79 Pn **Pn 23 59 43.6 +1.0**
comp=E,4.1nm,0.3s,SNR=8.3
ETOR Torete 7.16 54 Pn **Pn 23 59 48.9 +1.3**
comp=E,82nm,0.3s,SNR=7.9
ETOR Sn **Sn 00 01 03.9 -5.1**
comp=E,93nm,0.3s,SNR=7.9
ETOR Torete 7.16 54 Pn **Pn 23 59 48.9 +1.3**
comp=E,82nm,0.3s,SNR=7.9
PMAR Madeira 7.22 237 *e*Pn Pn 23 59 47.5 -1.0
PMAR *e*Sn Sn 00 00 58.1 -13
PMAR A A 00 01 08.2
comp=E,35nm,0.3s
PMAR Madeira 7.22 237 ⇑Pn Pn 23 59 47.5 -1.0
PMAR Sn Sn 00 00 58.1 -13
comp=E,18nm,0.3s
PMAR Madeira 7.22 237 Pn Pn 23 59 47.5 -1.0
FUL Funchal 7.25 237 *e*Pn Pn 23 59 47.0 -1.7
FUL Funchal 7.25 237 Pn Pn 23 59 47.0 -1.7
EARI Arriondas 7.31 27 Pn **Pn 23 59 52.2 +2.7**
comp=E,6.0nm,0.2s,SNR=54
EARI Sn **Sn 00 01 08.4 -4.2**
comp=E,8.7nm,0.4s
EARI Arriondas 7.31 27 Pn **Pn 23 59 52.2 +2.7**
comp=E,6.0nm,0.2s,SNR=54
EBEN Beniarda 7.72 73 Pn **Pn 23 59 56.4 +1.1**
comp=E,1.0nm,0.2s,SNR=13
EBEN Sn **Sn 00 01 18.4 -4.4**
comp=E,7.9nm,0.6s
EBEN Beniarda 7.72 73 Pn **Pn 23 59 56.4 +1.1**
comp=E,1.0nm,0.2s,SNR=13
EMOS Mosqueruela 8.03 61 ⇑Pn **Pn 00 00 02.1 +2.6**
comp=E,7.4nm,0.3s,SNR=18
EMOS Sn **Sn 00 01 26.0 -4.5**
comp=E,16nm,0.4s,SNR=7.6
EMOS Mosqueruela 8.03 61 Pn **Pn 00 00 02.1 +2.6**
comp=E,7.4nm,0.3s,SNR=18
EFAM Famara 8.34 204 Sn Sn 00 01 26.3 -11
comp=E,22nm,0.4s,SNR=7.9
EARA Aranguren 8.61 44 Sn **Sn 00 01 40.6 -3.8**
comp=E,6.7nm,0.3s,SNR=7.9
IUNC Unciti 8.64 44 Pn **Pn 00 00 09.7 +1.9**
comp=E,1.3nm,0.1s,SNR=7.9
IUNC Sn **Sn 00 01 41.4 -3.9**
comp=E,7.5nm,0.3s,SNR=7.9
IUNC Unciti 8.64 44 Pn **Pn 00 00 09.7 +1.9**
comp=E,1.3nm,0.1s,SNR=7.9
ESAC San Caprasio 8.65 53 Pn Pn 00 00 11.8 +3.8
comp=E,7.5nm,0.2s,SNR=7.5
ESAC Sn **Sn 00 01 41.7 -3.9**
comp=E,35nm,0.3s,SNR=7.9
ESAC San Caprasio 8.65 53 Pn Pn 00 00 11.8 +3.8
comp=E,7.5nm,0.2s,SNR=4.0
IUSE Utxeti 8.74 43 Pn **Pn 00 00 11.4 +2.3**
comp=E,2.1nm,0.1s,SNR=7.9
IUSE Sn **Sn 00 01 42.8 -4.9**
comp=E,2.8nm,0.3s,SNR=7.9
IUSE Utxeti 8.74 43 Pn **Pn 00 00 11.4 +2.3**
comp=E,2.1nm,0.1s,SNR=7.9
IEPA Eparoz 8.79 45 Pn **Pn 00 00 12.9 +3.1**
comp=E,2.6nm,0.2s,SNR=7.9
IEPA Sn **Sn 00 01 44.5 -4.3**
comp=E,11nm,0.4s,SNR=7.9
IEPA Eparoz 8.79 45 Pn **Pn 00 00 12.9 +3.1**
comp=E,2.6nm,0.2s,SNR=7.9
ERTA Horta de San J 8.83 59 Pn **Pn 00 00 12.3 +1.9**
comp=E,0.8nm,0.1s,SNR=7.9
ERTA Sn **Sn 00 01 45.0 -5.0**
comp=E,2.9nm,0.4s,SNR=7.9
ERTA Horta de San J 8.83 59 Pn **Pn 00 00 12.3 +1.9**
comp=E,0.8nm,0.1s,SNR=7.9
IELO Elcoad 8.84 45 Pn **Pn 00 00 12.4 +1.8**
comp=E,1.9nm,0.1s,SNR=7.9
IELO Sn **Sn 00 01 44.8 -5.5**
comp=E,28nm,0.5s,SNR=7.9
IELO Elcoad 8.84 45 Pn **Pn 00 00 12.4 +1.8**
comp=E,1.9nm,0.1s,SNR=7.9
ELIZ Elizondo 8.89 42 Pn **Pn 00 00 13.0 +1.8**
comp=E,5.2nm,0.2s,SNR=28
ELIZ Sn Sn 00 01 44.4 -7.1
comp=E,3.1nm,0.5s,SNR=7.9
ELIZ Elizondo 8.89 42 Pn **Pn 00 00 13.0 +1.8**
comp=E,5.2nm,0.2s,SNR=28
CFUE Fuerteventura 8.91 205 Pn Pn 00 00 09.4 -2.1
comp=E,0.4nm,0.2s,SNR=7.9
CFUE Sn Sn 00 01 41.2 -11
comp=E,15nm,0.2s,SNR=7.9
CFUE Fuerteventura 8.91 205 Pn Pn 00 00 09.4 -2.1
comp=E,0.4nm,0.2s,SNR=7.9
EALK Alkurruntz 8.94 42 Pn **Pn 00 00 13.8 +1.9**
comp=E,4.8nm,0.3s,SNR=11
EALK Sn **Sn 00 01 47.4 -5.2**
comp=E,11nm,0.3s,SNR=5.7
EALK Alkurruntz 8.94 42 Pn **Pn 00 00 13.8 +1.9**
comp=E,4.8nm,0.3s,SNR=11
EIBI Ibiza 8.99 73 Sn **Sn 00 01 48.6 -5.2**
comp=E,2.4nm,0.3s,SNR=7.9
SJPF Ste Jean 9.03 43 *e*P **Pn 00 00 15.0 +2.0**
SJPF *e*Sn Sn 00 01 38.5 -16
comp=E,14nm,0.4s
SJPF Ste Jean 9.03 43 Pn **Pn 00 00 15.0 +2.0**
SJPF Ste Jean 9.03 43 *e*P **Pn 00 00 15.0 +2.0**
CFTV Fuerteventura 9.18 205 Sn Sn 00 01 47.6 -11
comp=E,5.2nm,0.4s,SNR=7.9
ETSF Etsaut 9.27 46 *e*P **Pn 00 00 18.0 +1.6**
ETSF *e*Sn Sn 00 01 44.5 -16
comp=E,13nm,0.5s
ETSF Etsaut 9.27 46 Pn **Pn 00 00 18.0 +1.6**
ETSF Etsaut 9.27 46 *e*P **Pn 00 00 18.0 +1.6**
EPOB Poblet 9.51 58 Pn **Pn 00 00 20.9 +1.2**
comp=E,0.7nm,0.2s,SNR=7.9
EPOB Sn Sn 00 02 00.4 -6.2
comp=E,0.8nm,0.2s,SNR=7.9
EPOB Poblet 9.51 58 Pn **Pn 00 00 20.9 +1.2**
comp=E,0.7nm,0.2s,SNR=7.9
EPF Esparros 9.88 48 *e*P **Pn 00 00 26.4 +1.7**
EPF Esparros 9.88 48 Pn **Pn 00 00 26.4 +1.7**
EPF Esparros 9.88 48 *e*P **Pn 00 00 26.4 +1.7**
CSOR Sort 10.01 53 Pn **Pn 00 00 28.2 +1.5**
comp=E,0.8nm,0.1s,SNR=8.9
CSOR Sn **Sn 00 02 13.9 -5.3**
comp=E,5.2nm,0.3s,SNR=5.9
CSOR Sort 10.01 53 Pn **Pn 00 00 28.2 +1.5**
comp=E,0.8nm,0.1s,SNR=8.9
EOSO Osorio 10.04 211 Sn Sn 00 02 07.7 -12
comp=E,2.5nm,0.2s,SNR=7.9
EMIR Miracle 10.05 56 Pn **Pn 00 00 28.9 +1.7**
comp=E,1.3nm,0.2s,SNR=5.9
EMIR Sn **Sn 00 02 17.0 -3.0**
comp=E,3.1nm,0.4s,SNR=7.9
EMIR Miracle 10.05 56 Pn **Pn 00 00 28.9 +1.7**
comp=E,1.3nm,0.2s,SNR=5.9
CFON Fontmartina 10.60 59 Pn **Pn 00 00 36.9 +2.2**
comp=E,2.6nm,0.3s,SNR=4.0
CFON Fontmartina 10.60 59 Pn **Pn 00 00 36.9 +2.2**
comp=E,2.6nm,0.3s,SNR=4.0
CLLI Llivia 10.61 54 Pn **Pn 00 00 36.9 +2.1**
comp=E,0.1nm,0.2s,SNR=8.1
CLLI Sn Sn 00 02 27.7 -6.0
comp=E,7.2nm,0.5s,SNR=8.0
CLLI Llivia 10.61 54 Pn **Pn 00 00 36.9 +2.1**
comp=E,0.1nm,0.2s,SNR=8.1
EGOM La Gomera 10.73 218 Sn Sn 00 02 21.2 -15
comp=E,2.8nm,0.1s,SNR=4.0
MTLF Montolieu 11.19 51 *e*Pn Pn 00 00 38.8 -3.9
MTLF Montolieu 11.19 51 *e*P **Pn 00 00 44.3 +1.6**
MTLF *e*Sn Sn 00 02 30.3 -18
comp=E,2.0nm,0.5s
MTLF Montolieu 11.19 51 Pn **Pn 00 00 44.3 +1.6**
MTLF Montolieu 11.19 51 *e*P **Pn 00 00 44.3 +1.6**
LFF La Frestale 11.30 41 *e*Pn Pn 00 00 39.7 -4.4
LFF La Frestale 11.30 41 *e*P **Pn 00 00 45.1 +1.0**
LFF *e*Sn Sn 00 02 33.1 -17
comp=E,3.5nm,0.4s
LFF La Frestale 11.30 41 Pn **Pn 00 00 45.1 +1.0**
LFF La Frestale 11.30 41 *e*P **Pn 00 00 45.1 +1.0**
RJF Les Rejaudoux 11.95 41 *e*Pn Pn 00 00 49.1 -4.0
RJF *e*Sn Sn 00 02 48.6 -18
comp=E,3.1nm,0.2s
CAF Calviac 12.01 44 *e*P **Pn 00 00 54.3 +0.4**
CAF *e*Sn Sn 00 02 50.1 -18
comp=E,2.6nm,0.3s
CAF Calviac 12.01 44 Pn **Pn 00 00 54.3 +0.4**
CAF Calviac 12.01 44 *e*P **Pn 00 00 54.3 +0.4**
MFF Saint Martin d 12.07 33 *e*Pn Pn 00 00 50.9 -3.8
MFF *e*Sn Sn 00 02 51.9 -18
comp=E,1.8nm,0.4s

IDC ***23*** *00:17:10.2±3.9,23°.44S×70°.14W,h0km,mb3.8/1, mb1 3.6/2,mb1mx3.4/17,mbtmp3.5/2,ML3.2/1,MS2.9/2, Ms1 2.9/2,ms1mx2.7/19,Error ellipse: s-maj=125.4km s-min=61.1km az=86.0*
ISCJB ***23*** *00:17:13.6±1.3,23°.14S±0°.06×70°.7W±0°.1,h48km±14km, mb3.7/1,MS3.0/1,Error ellipse: s-maj=19.9km s-min=9.4km az=15.8*
GUC ***23*** *00:17:14.6±1.0,23°.09S×70°.49W,h35km±5km,ML3.5*
ISC 23 00:17:13.4±2.0,23°.14S±0°.05×70°.7W±0°.2,h37km±3km,n10, σ0:66/12,3C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**0.55**	**117**	⇓*i*P	**Pn**	**00 17 25.4**	**+0.5**
CEN1				*i* S	**Sn**	**00 17 33.1**	**+0.2**
CEN1				AML	AML	00 17 35.0	
	comp=N,2μm,0.3s						
ANCH	**Antofagasta**	**0.62**	**152**	⇑*i*P	**Pn**	**00 17 26.0**	**+0.2**
ANCH				*i* S	**Sn**	**00 17 34.3**	**-0.2**
ANCH				AML	AML	00 17 37.3	
	comp=E,2μm,0.4s						
PB04	**Plate Boundary**	**1.44**	**53**	⇓*i*P	Pn	00 17 29.6	-7.2
PB04				*i* S	Sn	00 17 41.5	-13
PB04				AML	AML	00 17 44.0	
	comp=E,4μm,0.4s						
LVC	**Limon Verde**	**1.76**	**73**	⇓*i*P	**Pn**	**00 17 41.6**	**+0.1**
LVC				*i* S	**Sn**	**00 18 01.8**	**-0.9**
PB09	**Plate Boundary**	**1.92**	**46**	⇑*i*P	**Pn**	**00 17 44.1**	**+0.5**
PB09				*i* S	**Sn**	**00 18 07.5**	**+0.9**
PB09				AML	AML	00 18 10.6	
	comp=N,4μm,0.2s						
PB01	**Plate Boundary**	**2.38**	**29**	⇑*i*P	**Pn**	**00 17 50.3**	**+0.3**
PB01				*i* S	**Sn**	**00 18 17.4**	**-0.5**
PB01				AML	AML	00 18 28.0	
	comp=E,467nm,0.3s						
LPAZ	**La Paz**	**7.24**	**20**	Pn	Pn	00 18 59.7	+2.4
	comp=E,0.2nm,0.3s,baz=187,slow=5.4,SNR=7.1						
LPAZ				LR	LR	00 22 10.6	
	comp=E,38nm,19.1s,baz=177,slow=41						
BDFB	**Brasilia**	**22.67**	**75**	LR	LR	00 31 09.9	
	comp=E,65nm,21.8s,baz=316,slow=38						
TORD	**Torodi Ar. Bea**	**79.49**	**71**	P	**P**	**00 29 17.0**	**+0.4**
	comp=E,0.8nm,0.8s,baz=261,slow=5.1,SNR=13						
MKAR	**Makanchi Array**	**147.94**	**36**	PKPbc	**PKPab**	**00 36 56.6**	**-0.8**
	comp=E,0.1nm,0.4s,baz=333,slow=3.9,SNR=2.5						

BJI ***23*** *00:40:00.3, 13˚.66N×145˚.77E, h119km, mB5.0/30, mb4.8/38*

DJA ***23*** *00:40:04.0±0.9, 14˚.N±.6˚×14˚.6E±.1˚4, h114km±6km, M5.1/11, mB5.3/5, mb5.1/11, MLv5.3/1, Mw(mB)4.8/5*

MOS ***23*** *00:40:05.1±1.2, 14˚.08N×145˚.07E, h119km, mb5.1/36, Error ellipse: s-maj=10.6km s-min=6.0km az=92.5*

ISCJB ***23*** *00:40:05.6±0.5, 14˚.06N±0˚.04×145˚.18E±0˚.03, h119km±4km, mb4.9/138, Error ellipse: s-maj=6.5km s-min=5.4km az=12.6*

IDC ***23*** *00:40:06.1±0.4, 14˚.00N×145˚.27E, h120km±3km, mb4.4/26, mb1 4.6/26, mb1mx4.5/30, mbtmp4.4/26, MS3.7/20, Ms1 3.7/20, ms1mx3.6/31, Error ellipse: s-maj=14.5km s-min=7.5km az=90.0*

NEIC ***23*** *00:40:07.0±0.2, 14˚.03N×145˚.16E, mb5.1/78, Error ellipse: s-maj=5.5km s-min=4.6km az=111.0*

NEIC Felt on Saipan and Tinian. Felt [II] at Tamuning and Yigo, Guam. Also felt at Agat, Anderson AFB, Dededo, Hagatna, Hagatna Heights, Latte Heights Estates and Mangilao.

GCMT ***23*** *00:40:12.1±0.2, 13˚.79N×145˚.38E, h125km±3km, MW5.1, Moment Tensor Solution. s28,c32; s71,c110; Moment tensor: Scale 10^{16}Nm; M_{rr}1.57±.17; $M_{\theta\theta}$-0.24±.22; $M_{\phi\phi}$-1.32±.22; $M_{r\theta}$4.75±.13; $M_{r\phi}$-1.41±.19; $M_{\theta r}$-1.19±.13; Best double couple: $M_0$5.10000×10^{16} NP1:ϕ_b203.00000°, δ16.00000°, λ19.00000°. NP2:ϕ_b95.00000°, δ85.00000°, λ106.00000°. Principal axes: T 5.9500, Plg48.0000°, Azm21.0000°; N -1.7300, Plg16.0000°, Azm273.0000°; P -4.2100, Plg38.0000°, Azm171.0000°; Data Used: II G IU IC CN.*

ISC 23 00:40:06.7±0.3,**14˚.03N**±0˚.04×**145˚.26E**±0˚.05,**h123**km±2km, **h122**km:**pP-P,n463,**σ1**29**/539,**mb5.0**/138,**60C-65D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.58**	**221**	*e*P n		**Pn**	**00 40 25.3**	**-0.2**
GUMO				*e*Sn		**Sn**	**00 40 38.4**	**-1.2**
GUMO	**Guam**	**0.58**	**221**	P		**Pn**	**00 40 25.6**	**+0.1**
	baz=27,slow=2.3							
GUMO				S		**Sn**	**00 40 38.7**	**-0.9**
	7µm,0.3s,baz=210,slow=20,SNR=84							
JAY	**Jayapura**	**17.05**	**196**	P		Pn	00 44 08.0	+10
JHJ	**Hachijo jima 2**	**19.64**	**346**	P		**Pn**	**00 44 29.0**	**+0.6**
	19nm,0.3s,baz=70,slow=19,SNR=5.5							
JHJ				LR		LR	00 50 31.6	
	comp=Z,294nm,20.2s,baz=92,slow=32							
SWI	**Sorong**	**20.28**	**224**	P		Pn	00 44 34.4	-1.6
	114nm,1.2s,2µm							
JOW	**Kunigami**	**20.35**	**311**	*e*P		Pn	00 44 35.8	-0.9
	24nm,1.1s							
FAKI	**Fak Fak**	**21.21**	**218**	P		**P**	**00 44 43.8**	**+0.9**
	139nm,1.0s,1µm							
JNU	**Nakatsue**	**23.08**	**328**	*e*P		**P**	**00 45 02.8**	**+1.1**
	35nm,1.1s							
JNU	**Nakatsue**	**23.08**	**328**	P		**P**	**00 45 02.8**	**+1.1**
	65nm,1.1s,baz=131,slow=3.8,SNR=17							
MJAR	**Matsushiro Arr**	**23.29**	**346**	P		**P**	**00 45 02.8**	**-0.8**
MJAR	**Matsushiro Arr**	**23.29**	**346**	P		**P**	**00 45 02.8**	**-0.8**
	45nm,0.9s,baz=179,slow=11,SNR=47							
MJAR				LR		LR	00 53 31.4	
	comp=Z,138nm,18.6s,baz=150,slow=35							
MAJO	**Matsushiro**	**23.29**	**346**	*e*P		**P**	**00 45 03.2**	**-0.4**
MAJO				pmax		pmax		
	comp=Z,81nm,0.8s							
MAJO	**Matsushiro**	**23.29**	**346**	*e*P		**P**	**00 45 03.2**	**-0.4**
	comp=Z,81nm,0.8s							
MAT	**Matsushiro**	**23.29**	**346**	P		**P**	**00 45 02.8**	**-0.8**
MAT				S		**S**	**00 49 09.6**	**+3.0**
PMG	**Port Moresby**	**23.36**	**175**	*e*P		**P**	**00 45 03.1**	**-1.3**
	comp=Z,159nm,0.9s							
PMG	**Port Moresby**	**23.36**	**175**	P		**P**	**00 45 02.9**	**-1.5**
	comp=Z,191nm,1.0s,comp=Z,2µm							
PMG	**Port Moresby**	**23.36**	**175**	P		**P**	**00 45 04.0**	**-0.4**
	comp=Z,138nm,0.8s,baz=0.2,slow=5.6,SNR=40							
YULB	**Yu-li**	**24.50**	**296**	*e*P		**P**	**00 45 15.4**	**+0.7**
	comp=Z,20nm,1.1s							
SSLB	**Suanglung**	**24.92**	**297**	*e*P		**P**	**00 45 19.8**	**+1.2**
	comp=Z,33nm,1.1s							
HNR	**Honiara**	**27.49**	**147**	LR		LR	00 56 08.8	
	comp=Z,218nm,19.2s,baz=312,slow=35							
COEN	**Coen**	**27.89**	**184**	*e*P		**P**	**00 45 45.2**	**0.0**
	comp=Z,308nm,1.1s							
ERM	**Erimo**	**27.94**	**357**	*i* P		**P**	**00 45 45.7**	**+0.3**
KSRS	**Korea Array**	**27.97**	**330**	P		**P**	**00 45 46.0**	**+0.3**
	comp=Z,14nm,1.0s,baz=142,slow=11,SNR=45							
KSRS				pP		**pP**	**00 46 12.6**	**+0.3**
	comp=Z,11nm,1.0s,baz=148,slow=9.7,SNR=3.8							
KSRS				PcP		**PcP**	**00 48 58.0**	**0.0**
	comp=Z,2.4nm,0.8s,baz=152,slow=3.0,SNR=6.8							
KSRS				ScP		**ScP**	**00 52 26.9**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=143,slow=4.4,SNR=5.1							
KSAR	**Wonju Array Be**	**27.98**	**330**	P		**P**	**00 45 46.0**	**+0.2**
KSAR				pP		**pP**	**00 46 12.6**	**+0.2**
KSAR				PcP		**PcP**	**00 48 58.0**	**-0.1**
KSAR				ScP		**ScP**	**00 52 26.9**	**-0.8**
NJ2	**Nanjing**	**30.07**	**311**	*e*P		**P**	**00 46 06.3**	**+1.9**
NJ2				S		**S**	**00 50 55.0**	**+1.1**
NJ2				pmax		pmax		
	comp=Z,20nm,0.9s							
NJ2				LR		LR		
	comp=N,100nm,13.0s							
NJ2				LR		LR		
	comp=E,70nm,15.5s							
NJ2				LR		LR		
	comp=Z,140nm,13.0s							
VLA	**Vladivostok**	**31.19**	**341**	*c i* P		**P**	**00 46 15.2**	**+1.1**
VLA				pmax		pmax		
	comp=Z,149nm,1.3s							
USRK	**Ussuriysk Arra**	**32.13**	**342**	P		**P**	**00 46 23.2**	**+0.8**
	comp=Z,18nm,0.8s,baz=157,slow=8.9,SNR=43							
USRK				LR		LR	00 58 34.4	
	comp=Z,165nm,20.0s,baz=324,slow=34							
YSS	**Yuzh-Sakhalins**	**32.89**	**357**	*e*P		**P**	**00 46 28.7**	**-0.2**
MDJ	**Mudanjiang**	**33.27**	**339**	P		**P**	**00 46 33.1**	**+0.8**
MDJ				S		**S**	**00 51 47.8**	**+4.2**
MDJ				pmax		pmax		
	comp=Z,33nm,1.2s							
MDJ				pmax		pmax		
	comp=Z,82nm,5.6s							
MDJ				LR		LR		
	comp=N,120nm,26.7s							
MDJ				LR		LR		
	comp=E,160nm,29.8s							
MDJ				LR		LR		
	comp=Z,260nm,46.5s							
MDJ	**Mudanjiang**	**33.27**	**339**	*e*P		**P**	**00 46 33.2**	**+0.8**
	comp=Z,19nm,1.0s							
SNY	**Shenyang**	**33.47**	**330**	⇓P		**P**	**00 46 35.0**	**+0.9**
SNY				S		S	00 51 54.8	+8.1
SNY				pmax		pmax		
	comp=Z,9.0nm,1.4s							
SNY				pmax		pmax		
	comp=Z,110nm,6.0s							
SNY				LR		LR		
	comp=N,97nm,12.3s							
SNY				LR		LR		
	comp=E,130nm,14.1s							
SNY				LR		LR		
	comp=Z,140nm,13.2s							
CTA	**Charters Tower**	**33.92**	**178**	P		**P**	**00 46 38.7**	**+0.4**
CTA	**Charters Tower**	**33.92**	**178**	P		**P**	**00 46 38.7**	**+0.4**
	comp=Z,27nm,1.0s,baz=359,slow=8.4,SNR=20							
CTAO	**Charters Tower**	**33.92**	**178**	*e*P		**P**	**00 46 38.6**	**+0.4**
CTAO				pmax		pmax		
	comp=Z,136nm,1.6s							
CTAO	**Charters Tower**	**33.92**	**178**	*e*P		**P**	**00 46 38.6**	**+0.4**
	comp=Z,136nm,1.6s							
QIZ	**Qiongzhong**	**34.27**	**283**	P		**P**	**00 46 41.6**	**+0.2**
QIZ				S		**S**	**00 51 01.1**	**+1.5**
HABR	**Khabarovsk**	**35.36**	**348**	*e*P		**P**	**00 46 48.5**	**-1.8**
HABR				*e**PP		**pP**	**00 47 15.2**	**-2.2**
HABR				*e**SP		**sP**	**00 47 29.4**	**-2.1**
HABR				S		**S**	**00 52 14.4**	**-1.2**
HABR				*e**SS		**sS**	**00 53 02.1**	**-0.7**
HABR							00 56 55.5	
HABR				pmax		pmax		
	comp=Z,68nm,1.8s							
HABR				pmax		pmax		
	comp=N,59nm,2.7s							
HABR				pmax		pmax		
	comp=E,43nm,1.8s							
WRAB	**Tennant Creek**	**35.42**	**198**	*e*P		**P**	**00 46 50.5**	**-0.6**
WRAB				pmax		pmax		
	comp=Z,44nm,0.9s							
WRAB	**Tennant Creek**	**35.42**	**198**	*e*P		**P**	**00 46 50.5**	**-0.6**
	comp=Z,44nm,0.9s							
WRAB	**Tennant Creek**	**35.42**	**198**	P		**P**	**00 46 50.0**	**-1.1**
	comp=Z,285nm,0.9s,SNR=14							
WRA	**Warramunga Arr**	**35.43**	**198**	P		**P**	**00 46 50.3**	**-0.9**
WRA				pP		**pP**	**00 47 17.7**	**-0.6**
WRA				ScP		**ScP**	**00 52 51.6**	**-1.5**
WRA	**Warramunga Arr**	**35.43**	**198**	P		**P**	**00 46 50.3**	**-0.9**
	comp=Z,26nm,0.8s,baz=23,slow=10,SNR=118							
WRA				pP		**pP**	**00 47 17.7**	**-0.6**
	comp=Z,10nm,0.8s,baz=19,slow=9.6,SNR=6.7							
WRA				ScP		**ScP**	**00 52 51.6**	**-1.5**
	comp=Z,5.4nm,1.0s,baz=24,slow=4.3,SNR=11							
BJI	**Beijing**	**36.34**	**321**	P		**P**	**00 47 00.1**	**+1.4**
BJI				S		**S**	**00 52 33.6**	**+2.9**
BJI				pmax		pmax		
	comp=Z,13nm,0.8s							
BJI				pmax		pmax		
	comp=Z,70nm,4.5s							
BJI				LR		LR		
	comp=N,170nm,15.3s							
BJI				LR		LR		
	comp=E,130nm,16.5s							
BJI				LR		LR		
	comp=Z,150nm,37.5s							
ENH	**Enshi**	**36.67**	**302**	*e*P		**P**	**00 47 02.3**	**+0.5**
	comp=Z,15nm,0.9s							
KLR	**Kul'dur**	**36.81**	**345**	*e*P		P	00 46 58.4	-4.3
FITZ	**Fitzroy Crossi**	**37.33**	**212**	P		**P**	**00 47 07.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**37.33**	**212**	P		**P**	**00 47 07.0**	**-0.4**
	comp=Z,20nm,0.9s,baz=37,slow=8.4,SNR=43							
GYA	**Guiyang**	**38.11**	**295**	P		**P**	**00 47 15.9**	**+1.8**
GYA				PP		**PnPn**	**00 48 49.8**	**+3.2**
GYA				PcP		**PcP**	**00 49 27.6**	**+0.8**
GYA				S		**S**	**00 52 59.5**	**+1.2**
GYA				ScS		**ScS**	**00 57 11.8**	**-1.6**
GYA				pmax		pmax		
	comp=Z,20nm,0.8s							
GYA				pmax		pmax		
	comp=Z,60nm,5.6s							
XAN	**Xi'an**	**38.42**	**308**	P		**P**	**00 47 17.3**	**+0.8**
XAN				pP		pP	00 47 49.3	+5.4
XAN				S		**S**	**00 53 00.4**	**-2.2**
XAN				SS		**SS**	**00 55 56.3**	**-0.4**
XAN				pmax		pmax		
	comp=Z,3.0nm,0.8s							
ASAR	**Alice Springs**	**39.08**	**197**	P		**P**	**00 47 21.6**	**-0.5**
ASAR				PP		**PP**	**00 48 51.5**	**-2.6**
ASAR				ScP		**ScP**	**00 53 05.5**	**-1.2**
ASAR	**Alice Springs**	**39.08**	**197**	P		**P**	**00 47 21.6**	**-0.5**
	comp=Z,8.0nm,0.8s,baz=20,slow=9.4,SNR=49							
ASAR				PP		**PP**	**00 48 51.5**	**-2.6**
	comp=Z,3.4nm,0.9s,baz=24,slow=9.2,SNR=3.7							
ASAR				ScP		**ScP**	**00 53 05.5**	**-1.2**
	comp=Z,1.7nm,1.0s,baz=16,slow=3.4,SNR=5.2							
ASAR				LR		LR	01 03 28.8	
	comp=Z,208nm,20.0s,baz=46,slow=36							
HHC	**Hu-ho-hao-te**	**39.69**	**319**	*e*P		**P**	**00 47 26.9**	**-0.1**
HHC				PP		**PnPn**	**00 49 03.8**	**-1.1**
HHC				PcP		**PcP**	**00 49 34.6**	**+3.2**
HHC				pmax		pmax		
	comp=Z,42nm,1.2s							
HHC				pmax		pmax		
	comp=Z,170nm,7.1s							
PEA0B	**Petropavlovsk-**	**40.22**	**12**	*e*P		**P**	**00 47 31.8**	**+0.7**
PETK	**Petropavlovsk-**	**40.22**	**12**	P		**P**	**00 47 30.2**	**-0.9**
PETK	**Petropavlovsk-**	**40.22**	**12**	P		**P**	**00 47 30.2**	**-0.9**
PETK	**Petropavlovsk-**	**40.22**	**12**	P		**P**	**00 47 30.2**	**-0.9**
	comp=Z,7.8nm,0.9s,baz=159,slow=8.1,SNR=16							
PETK				LR		LR	01 03 54.7	
	comp=Z,38nm,18.3s,baz=21,slow=36							
BTO	**Baotou**	**40.56**	**318**	*e*P		**P**	**00 47 34.8**	**+0.6**
KMI	**Kunming**	**41.39**	**292**	P		**P**	**00 47 42.8**	**+1.4**
KMI				pP		**pP**	**00 48 09.9**	**+0.8**
KMI				S		**S**	**00 53 47.5**	**0.0**
KMI				pmax		pmax		
	comp=Z,9.0nm,1.1s							
KMI				pmax		pmax		
	comp=Z,76nm,4.8s							
KMI				LR		LR		
	comp=N,130nm,11.2s							
KMI				LR		LR		
	comp=E,80nm,11.2s							
KMI				LR		LR		
	comp=Z,88nm,11.6s							
CD2	**Chengdu**	**41.59**	**301**	P		**P**	**00 47 42.9**	**+0.2**
CD2				PP		**PP**	**00 49 23.8**	**+2.5**
CD2				PcP		**PcP**	**00 49 38.9**	**+1.2**
CD2				PcS		**PcS**	**00 53 29.1**	**-0.3**
CD2				S		**S**	**00 53 49.3**	**-0.6**
CD2				pmax		pmax		
	comp=Z,30nm,0.5s							
CD2				pmax		pmax		
	comp=Z,320nm,5.4s							
CD2				LR		LR		
	comp=N,170nm,12.7s							
CD2				LR		LR		
	comp=Z,160nm,12.7s							
LZH	**Lanzhou**	**43.04**	**308**	*e*P		**P**	**00 47 56.8**	**+2.2**
LZH				PP		**PcP**	**00 49 41.0**	**-1.6**
LZH				PcP		PP	00 49 44.3	+7.4
LZH				*e*S		**S**	**00 54 12.0**	**+0.7**
LZH				SS		**SS**	**00 57 22.3**	**-5.9**
LZH				pmax		pmax		
	comp=Z,27nm,1.0s							
LZH				pmax		pmax		
	comp=Z,160nm,4.0s							
CMAR	**Chiang Mai Arr**	**44.59**	**282**	P		**P**	**00 48 07.8**	**+0.7**
CMAR				PcP		**PcP**	**00 49 49.5**	**+1.6**
CMAR				ScP		**ScP**	**00 53 28.3**	**-0.7**
CMAR	**Chiang Mai Arr**	**44.59**	**282**	P		**P**	**00 48 07.8**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=76,slow=6.0,SNR=4.9							
CMAR				PcP		**PcP**	**00 49 49.5**	**+1.6**
	comp=Z,5.3nm,0.8s,baz=90,slow=1.9,SNR=12							
CMAR				ScP		**ScP**	**00 53 28.3**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=126,slow=1.2,SNR=5.9							
CMAR				LR		LR	01 07 00.1	
	comp=Z,62nm,18.9s,baz=259,slow=36							
FX1	**Attu Island--F**	**44.65**	**24**	*e*P		**P**	**00 48 08.4**	**+1.5**
STKA	**Stephens Creek**	**45.78**	**184**	*e*P		**P**	**00 48 15.7**	**-0.4**
	comp=Z,4.5nm,0.8s							
STKA	**Stephens Creek**	**45.78**	**184**	P		**P**	**00 48 15.9**	**-0.2**
	comp=Z,20nm,0.8s,baz=1.1,slow=8.3,SNR=20							
STKA				LR		LR	01 07 41.2	
	comp=Z,143nm,19.3s,baz=25,slow=36							
ULN	**Ulaanbaatar**	**46.24**	**325**	*e*P		**P**	**00 48 20.2**	**+0.5**
	comp=Z,14nm,1.3s							
ULN	**Ulaanbaatar**	**46.24**	**325**	P		**P**	**00 48 19.1**	**-0.6**
	comp=Z,5.9nm,0.9s,comp=Z,203nm							
SONM	**Songino Array**	**46.59**	**324**	P		**P**	**00 48 22.8**	**+0.3**
SONM				pP		**pP**	**00 48 51.7**	**+1.0**
SONM				ScP		**ScP**	**00 53 35.7**	**-1.2**
SONM	**Songino Array**	**46.59**	**324**	P		**P**	**00 48 22.8**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=138,slow=7.3,SNR=12							
SONM				pP		**pP**	**00 48 51.7**	**+1.0**
	comp=Z,5.7nm,1.0s,baz=135,slow=6.4,SNR=5.0							
SONM				ScP		**ScP**	**00 53 35.7**	**-1.2**
	comp=Z,2.1nm,1.0s,baz=140,slow=4.9,SNR=7.3							
SONM				LR		LR	01 06 31.3	
	comp=Z,95nm,19.8s,baz=84,slow=34							
GTA	**Gaotai**	**47.16**	**311**	⇓P		**P**	**00 48 28.5**	**+1.4**
GTA				pP		**pP**	**00 48 57.9**	**+2.5**
GTA				PP		**PP**	**00 50 21.1**	**+2.1**
GTA				ScP		**ScP**	**00 53 39.3**	**-0.2**
GTA				S		**S**	**00 55 10.6**	**0.0**
GTA				ScS		**ScS**	**00 58 08.1**	**-0.9**
GTA				SS		**SS**	**00 58 33.8**	**-5.5**
GTA				pmax		pmax		
	comp=Z,11nm,1.5s							
GTA				pmax		pmax		
	comp=Z,110nm,6.9s							
GTA				LR		LR		
	comp=N,280nm,21.4s							
GTA				LR		LR		
	comp=E,380nm,22.3s							
GTA				LR		LR		
	comp=Z,55nm,20.9s							
FORT	**Forrest**	**47.52**	**200**	*e*P		**P**	**00 48 30.1**	**+0.4**
	comp=Z,81nm,1.0s							
SEY	**Seymchan**	**49.09**	**4**	⇑*e*P		**P**	**00 48 40.6**	**-0.7**
YAK	**Yakutsk**	**49.21**	**350**	*e*P		**P**	**00 48 40.6**	**-1.6**
YAK				pmax		pmax		
	comp=E,6.0nm,0.9s							
YAK				pmax		pmax		
	comp=Z,43nm,1.1s							
YAK				pmax		pmax		
	comp=N,11nm,1.0s							
ZAK	**Zakamensk**	**49.68**	**326**	*e*P		**P**	**00 48 44.3**	**-1.9**
ZAK				*e*			00 49 11.3	
ZAK				pmax		pmax		
	comp=Z,4.0nm,1.3s							
ATKA	**Atka Island**	**49.93**	**32**	*e*P		**P**	**00 48 48.7**	**+0.9**
	comp=Z,166nm,0.8s							
UNV	**Unalaska Valle**	**54.76**	**33**	*e*P		**P**	**00 49 23.6**	**+0.2**
	comp=Z,103nm,1.0s							
HVS	**Khovu-Aksy**	**55.44**	**323**	*i* P		**P**	**00 49 29.8**	**+1.3**
HVS				pmax		pmax		
	comp=Z,29nm,1.4s							
BILL	**Bilibino**	**55.67**	**9**	⇓*i* P		**P**	**00 49 29.3**	**-0.4**
BILL				pmax		pmax		
	comp=Z,43nm,1.7s							
BILL				MLR		MLR		
	comp=Z,100nm,18.0s							
FALS	**False Pass**	**56.82**	**33**	*e*P		**P**	**00 49 38.8**	**+0.7**
	comp=Z,164nm,0.9s							
WMQ	**Urumqi**	**57.11**	**313**	P		**P**	**00 49 41.3**	**+0.8**
WMQ				PP		**PP**	**00 51 51.1**	**+2.5**
WMQ				ScP		**ScP**	**00 54 21.1**	**-1.3**
WMQ				PcS		**PcS**	**00 54 34.3**	**-0.7**
WMQ				S		**S**	**00 57 23.9**	**-2.3**
WMQ				ScS		**ScS**	**00 59 14.3**	**-3.8**
WMQ				pmax		pmax		
	comp=Z,12nm,1.0s							
WMQ				pmax		pmax		
	comp=Z,140nm,4.8s							
WMQ				LR		LR		
	comp=N,110nm,22.6s							
WMQ				LR		LR		
	comp=E,54nm,28.0s							
WMQ				LR		LR		
	comp=Z,76nm,27.6s							
SDPT	**Sand Point**	**58.57**	**33**	*e*P		**P**	**00 49 50.5**	**+0.2**
	comp=Z,229nm,0.8s							
CHGN	**Chignik**	**60.00**	**32**	*e*P		**P**	**00 50 00.3**	**+0.1**
TNA	**Tin City**	**60.30**	**20**	*e*P		**P**	**00 50 01.2**	**-0.9**
	comp=Z,5.3nm,0.7s							
MK31	**Makanchi Array**	**61.44**	**316**	*e*P		**P**	**00 50 10.1**	**-0.1**
MK31	**Makanchi Array**	**61.44**	**316**	*e*P		**P**	**00 50 10.1**	**-0.1**
MKAR	**Makanchi Array**	**61.44**	**316**	*ce*P		**P**	**00 50 10.5**	**+0.3**
MKAR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
MKAR	**Makanchi Array**	**61.44**	**316**	*e*P		**P**	**00 50 10.8**	**+0.7**
MKAR				pP		**pP**	**00 50 40.5**	**+0.6**
MKAR	**Makanchi Array**	**61.44**	**316**	P		**P**	**00 50 10.5**	**+0.3**
	comp=Z,5.0nm,0.9s,baz=92,slow=8.6,SNR=28							
MKAR				pP		**pP**	**00 50 40.5**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=98,slow=8.8,SNR=3.5							
MKAR				LR		LR	01 19 55.8	
	comp=Z,41nm,18.3s,baz=353,slow=39							
ZAA0	**Zalesovo Array**	**61.48**	**324**	*e*P		**P**	**00 50 08.9**	**-1.4**
ZALV	**Zalesovo Beam**	**61.48**	**324**	*i* P		**P**	**00 50 12.3**	**+2.0**
ZALV				pmax		pmax		
	comp=Z,3.0nm,0.6s							
ZALV	**Zalesovo Beam**	**61.48**	**324**	P		**P**	**00 50 09.9**	**-0.4**
ZALV				pP		**pP**	**00 50 40.1**	**+0.1**
ZALV	**Zalesovo Beam**	**61.48**	**324**	P		**P**	**00 50 09.9**	**-0.4**
	comp=Z,2.5nm,0.6s,baz=106,slow=6.6,SNR=7.7							
ZALV				pP		**pP**	**00 50 40.1**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=101,slow=5.8,SNR=2.8							
ZALV				LR		LR	01 15 20.0	
	comp=Z,61nm,20.3s,baz=249,slow=34							
RPZ	**Rata Peaks**	**62.12**	**159**	P		**P**	**00 50 13.7**	**-0.9**
RPZ	**Rata Peaks**	**62.12**	**159**	P		**P**	**00 50 13.7**	**-0.9**
	comp=Z,23nm,0.9s,baz=338,slow=19,SNR=4.1							
NVS	**Novosibirsk**	**62.62**	**325**	*e*P		**P**	**00 50 16.1**	**-1.7**
NVS				*e*			00 50 46.8	
NVS				pmax		pmax		
	comp=E,5.0nm,1.1s							
NVS				pmax		pmax		
	comp=Z,8.0nm,1.1s							
OHAK	**Old Harbor**	**62.97**	**32**	*e*P		**P**	**00 50 21.1**	**+0.9**
	comp=Z,94nm,1.0s							
KDAK	**Kodiak Island**	**63.50**	**32**	P		**P**	**00 50 24.9**	**+1.3**
	comp=Z,192nm,1.3s,SNR=8.7							
RSO	**Redoubt South**	**64.21**	**29**	*e*P		**P**	**00 50 28.8**	**+0.3**
KURK	**Kurchatov**	**64.49**	**320**	P		**P**	**00 50 29.6**	**-0.6**
	comp=Z,73nm,1.0s,SNR=9.4							
KSH	**Kashi**	**65.27**	**307**	P		**P**	**00 50 38.9**	**+3.2**
KSH				*e*pP		**PcP**	**00 51 10.3**	**+3.2**
KSH				*e*PP		**PP**	**00 53 05.8**	**+5.1**
KSH				*e*PcS			00 55 13.0	
KSH				*e*S		**S**	**00 59 09.5**	**-0.4**
KSH				*e*ScS		**SKSac**	**01 00 18.3**	**-1.3**
KSH				pmax		pmax		
	comp=Z,8.0nm,0.9s							
KSH				pmax		pmax		
	comp=Z,100nm,4.2s							
KSH				LR		LR		
	comp=N,130nm,5.9s							
KSH				LR		LR		
	comp=E,130nm,5.1s							
KSH				LR		LR		
	comp=Z,190nm,6.0s							
SEW	**Seward**	**65.69**	**30**	*e*P		**P**	**00 50 38.1**	**+0.4**
	comp=Z,51nm,0.8s							
TKM2	**Tokmak 2**	**65.71**	**311**	*e*P		**P**	**00 50 38.3**	**-0.3**
TKM2				pmax		pmax		
	comp=Z,6.0nm,1.0s							
TKM2	**Tokmak 2**	**65.71**	**311**	*e*P		**P**	**00 50 38.3**	**-0.3**
	comp=Z,5.6nm,1.0s							
TRF	**Thorofare Moun**	**66.22**	**26**	*e*P		**P**	**00 50 40.2**	**-1.1**
	comp=Z,64nm,1.8s							
PMR	**Palmer**	**66.22**	**28**	*e*P		**P**	**00 50 40.5**	**-0.7**
PMR				pmax		pmax		
	comp=Z,33nm,1.1s							
PMR	**Palmer**	**66.22**	**28**	*e*P		**P**	**00 50 40.5**	**-0.7**
	comp=Z,33nm,1.1s							
AAK	**Ala-Archa**	**66.51**	**311**	⇑*e*P		**P**	**00 50 44.1**	**+0.5**
AAK				pmax		pmax		
	comp=Z,10.0nm,1.7s							
AAK	**Ala-Archa**	**66.51**	**311**	*e*P		**P**	**00 50 43.4**	**-0.2**
SML	**Sawmill**	**66.64**	**28**	*e*P		**P**	**00 50 44.7**	**+0.7**
SML				pmax		pmax		
	comp=Z,19nm,1.0s							
SML	**Sawmill**	**66.64**	**28**	*e*P		**P**	**00 50 44.7**	**+0.7**

KBL **Kabul** 70.92 302 *e*P P 00 51 12.4 +1.3
comp=Z,9.1nm,1.0s
PPT **Papeete** 71.55 114 LR LR 01 14 53.8
comp=Z,20nm,22.0s,baz=341,slow=29
PPT2 **Papeete2** 71.55 114 *e*LR LR 01 13 20.6
comp=Z,60nm,21.8s
PMOR **Pomariorio Ree** 72.14 111 *e*T T 02 10 27.5
comp=Z,3.3nm,0.3s
SKAG **Skagway** 72.65 32 *e*P P 00 51 22.3 +1.5
TBI **Tubuai** 73.86 120 *e*T T 02 12 34.9
comp=Z,7.6nm,0.3s
WRAK **Wrangell Islan** 74.24 35 *e*P P 00 51 30.8 +0.7
comp=Z,37nm,1.0s
DLBC **Dease Lake** 75.41 33 *e*P P 00 51 37.9 +1.0
SVE **Sverdlovsk** 75.45 326⇓ *e*P P 00 51 37.7 +0.6
SVE pmax pmax
comp=Z,12nm,1.1s
ABKAR **Akbulak array** 76.47 318 *e*P P 00 51 42.6 -0.5
ARU **Arti** 76.62 325 *d i*P P 00 51 43.5 -0.2
ARU *PP pP 00 52 14.8 +0.3
ARU 00 54 35.6
ARU S S 01 01 21.2 +1.2
ARU SS SS 01 06 12.5 -5.0
ARU pmax pmax
comp=Z,5.0nm,1.0s
NLWA **Neilton Lookou** 80.40 44 *e*P P 00 52 06.8 +2.0
comp=Z,40nm,0.9s
COR **Corvallis** 81.31 46 *e*P P 00 52 10.4 +0.8
COR **Corvallis** 81.31 46 *e*P P 00 52 10.4 +0.8
FL2 **Flat Top 2** 81.65 45 P P 00 52 13.2 +1.6
KHMM **Horse Mountain** 81.72 50 *e*P P 00 52 14.3 +2.3
comp=Z,37nm,1.0s
LON **Longmire** 81.91 44 *e*P P 00 52 12.7 -0.1
LON pmax pmax
comp=Z,16nm,1.2s
LON **Longmire** 81.91 44 *e*P P 00 52 12.7 -0.1
comp=Z,16nm,1.2s
HUMO **Hull Mountain** 81.94 48 *e*P P 00 52 14.9 +1.9
comp=Z,59nm,1.4s
VLL **Laurance Lake** 82.26 45 P P 00 52 16.2 +1.5
YKW3 **Yellowknife Ar** 82.27 27 *e*P P 00 52 13.1 -1.2
comp=Z,0.1nm,0.9s
YKA **Yellowknife Ar** 82.30 27 P P 00 52 13.8 -0.6
YKA pP pP 00 52 45.2 -0.4
YKA PP PP 00 55 19.1 -5.2
YKA **Yellowknife Ar** 82.30 27 P P 00 52 13.8 -0.6
comp=Z,1.7nm,0.4s,baz=288,slow=5.4,SNR=46
YKA pP pP 00 52 45.2 -0.4
comp=Z,2.8nm,0.8s,baz=287,slow=5.5,SNR=4.5
YKA PP PP 00 55 19.0 -5.2
comp=Z,0.8nm,0.8s,baz=283,slow=7.9,SNR=4.0
YBH **Yreka Blue Hor** 82.30 49 *e*P P 00 52 16.2 +1.2
comp=Z,43nm,1.1s
TBM **Table Mountain** 82.63 43 P P 00 52 17.9 +1.3
WDC **Whiskeytown Da** 82.66 50 *e*P P 00 52 18.0 +1.2
WDC pmax pmax
comp=Z,13nm,1.0s
WDC **Whiskeytown Da** 82.66 50 *e*P P 00 52 18.0 +1.2
comp=Z,13nm,1.0s
WTV **Waterville** 82.94 43 P P 00 52 19.0 +0.8
B08A **Colville Reser** 83.19 42 P P 00 52 20.0 +0.6
VIPM **Ingram Point** 83.20 46 P P 00 52 20.7 +1.0
VIPM **Ingram Point** 83.20 46 P P 00 52 20.6 +1.0
HAWA **Hanford** 83.52 44 *e*P P 00 52 21.8 +0.8
comp=Z,31nm,0.9s
OD2 **Odessa Site #2** 83.83 43 P P 00 52 23.5 +0.9
MOD **Modoc** 84.02 48 *e*P P 00 52 25.2 +1.3
comp=Z,44nm,0.9s
CASY **Casey** 84.12 193 *e*P P 00 52 30.5 +7.1
comp=Z,8.7nm,0.7s
G08A **Pilot Rock** 84.17 45 P P 00 52 25.0 +0.4
BEKR **Beckworth** 84.45 50 *e*P P 00 52 26.9 +0.8
comp=Z,22nm,1.1s
LVZ **Lovozero** 84.62 339 *i* P P 00 52 25.6 -0.6
LVZ pmax pmax
comp=Z,12nm,1.2s
NEW **Newport** 84.65 42 *e*P P 00 52 27.5 +0.8
comp=Z,42nm,0.8s
NEW **Newport** 84.65 42 P P 00 52 27.6 +0.9
baz=85,SNR=44
CMB **Columbia Colle** 84.86 52 *e*P P 00 52 28.9 +0.8
CMB pmax pmax
comp=Z,23nm,1.1s
CMB **Columbia Colle** 84.86 52 *e*P P 00 52 28.9 +0.8
comp=Z,23nm,1.1s
WCN **Washoe City** 85.04 51 *e*P P 00 52 29.8 +0.7
WCN pmax pmax
comp=Z,11nm,1.0s
WCN **Washoe City** 85.04 51 *e*P P 00 52 29.8 +0.7
comp=Z,12nm,1.0s
WVOR **Wild Horse Val** 85.09 48 *e*P P 00 52 29.9 +0.7
WVOR pmax pmax
comp=Z,24nm,0.9s
WVOR **Wild Horse Val** 85.09 48 *e*P P 00 52 29.9 +0.7
comp=Z,24nm,0.9s
APA **Apatity** 85.19 339⇓ *i*P P 00 52 28.6 -0.4
APA MLR MLR
comp=Z,100nm,22.0s
C11A **Tepee Creek (N** 85.32 42 ⇓P P 00 52 31.6 +1.4
baz=85
KLMR **Klimovskoe** 85.34 332 *e*P P 00 52 27.3 -2.6
KLMR *e*PP pP 00 52 59.8 -1.5
KLMR *e* 00 55 45.9
KLMR pmax pmax
comp=Z,7.0nm,1.0s
A12A **Yaak River Ran** 85.41 41 ⇓P P 00 52 32.2 +1.6
baz=85,SNR=9.3
BMO **Blue Mountains** 85.41 45 *e*P P 00 52 31.5 +0.7
BMO pmax pmax
comp=Z,57nm,1.1s
BMO **Blue Mountains** 85.41 45 *e*P P 00 52 31.5 +0.7
comp=Z,57nm,1.1s
B12A **Libby** 85.58 41 P P 00 52 32.9 +1.5
baz=86,SNR=10.0
C12B **Naegeli Ranch,** 85.86 42 P P 00 52 34.2 +1.3
baz=86,SNR=20
PKM **Peak Mountain** 86.06 55 P P 00 52 36.3 +2.1
baz=86,SNR=9.2
D12A **Red Ives Fores** 86.13 43 P P 00 52 35.0 +0.7
baz=86,SNR=64
A13A **Flathead Natio** 86.19 41 ⇑P P 00 52 36.0 +1.4
baz=86
BSMT **Bassoo Peak** 86.27 42 *e*P P 00 52 36.0 +0.9
B13A **Whitefish** 86.32 41 P P 00 52 36.4 +1.2
baz=86,SNR=44
NVAR **Mina Array Bea** 86.35 51 P P 00 52 36.8 +1.1
NVAR **Mina Array Bea** 86.35 51 P P 00 52 36.8 +1.1
comp=Z,13nm,1.0s,baz=267,slow=5.8,SNR=48
VES **Vestal, Richgr** 86.41 54 ⇑P P 00 52 35.8 +0.1
baz=86,SNR=5.4
C13A **Hot Springs** 86.46 42 P P 00 52 36.4 +0.6
baz=86,SNR=42
NV11 **Mina Array Sit** 86.46 51 *e*P P 00 52 36.8 +0.7
WALA **Waterton Lakes** 86.47 40 *e*P P 00 52 36.6 +0.7
comp=Z,1.3nm,0.9s
BLMT **Blacktail Moun** 86.50 41 *e*P P 00 52 37.0 +0.9
F12A **Elk City** 86.56 44 P P 00 52 36.8 +0.4
baz=86,SNR=35
JTMT **Jette** 86.62 42 *e*P P 00 52 37.1 +0.4
BMN **Battle Mountai** 86.64 49 *e*P P 00 52 38.6 +1.7
BMN pmax pmax
comp=Z,24nm,1.0s
BMN **Battle Mountai** 86.64 49 *e*P P 00 52 38.6 +1.7
comp=Z,24nm,1.0s
G12A **Big Creek, Yel** 86.69 44 P P 00 52 37.4 +0.3
baz=87,SNR=88
D13A **Huson** 86.70 42 P P 00 52 37.1 +0.1
baz=87,SNR=33
YBMT **Yellow Bay** 86.77 42 *e*P P 00 52 38.0 +0.6
comp=Z,32nm,1.1s
ARCES **ARCESS Array B** 86.78 342 P P 00 52 35.3 -1.5
ARCES **ARCESS Array B** 86.78 342 P P 00 52 35.3 -1.5
comp=Z,10nm,0.9s,baz=45,slow=5.5,SNR=20
ARCES LR LR 01 32 30.9
comp=Z,62nm,21.2s,baz=29,slow=36
ARE0 **ARCESS Array S** 86.78 342 *e*P P 00 52 35.2 -1.6
A14A **Double T Ranch** 86.81 40 P P 00 52 38.9 +1.3
baz=87,SNR=81
MFID **Camas Ranch** 86.83 46 *e*P P 00 52 38.8 +1.1
comp=Z,70nm,0.9s
MFID **Camas Ranch** 86.83 46 ⇑P P 00 52 39.0 +1.3
baz=87,SNR=49
SWMT **Swartz Lake** 86.88 42 *e*P P 00 52 38.5 +0.6
ISA **Isabella** 86.93 54 *e*P P 00 52 39.3 +0.9
ISA pmax pmax
comp=Z,8.0nm,1.2s

ISA **Isabella** 86.93 54 *e*P P 00 52 39.3 +0.9
comp=Z,8.4nm,1.2s
ISA **Isabella** 86.93 54 ⇑P P 00 52 38.0 -0.3
baz=87
C14A **Swan Lake** 86.96 42 ⇓P P 00 52 38.7 +0.4
baz=87
CWC **Cottonwood Cre** 87.04 53 ⇑P P 00 52 40.7 +1.7
baz=87
E13A **Victor** 87.07 43 P P 00 52 39.1 +0.2
baz=87,SNR=10.0
B14A **Marquette Ranc** 87.09 41 P P 00 52 39.9 +0.9
baz=87,SNR=39
MSO **Missoula** 87.12 42 *e*P P 00 52 39.4 +0.3
comp=Z,8.1nm,1.1s
MSO *ePP PP 00 56 04.1 +0.1
MSO **Missoula** 87.12 42 P P 00 52 39.5 +0.4
baz=87,SNR=13
F13A **Darby** 87.17 44 P P 00 52 39.5 +0.2
baz=87,SNR=43
H12A **Diamond D Ranc** 87.18 45 P P 00 52 40.3 +0.8
baz=87,SNR=26
I12A **Atlanta** 87.20 46 ⇓P P 00 52 40.6 +1.0
baz=87
A15A **Johnson Ranch,** 87.24 40 P P 00 52 40.9 +1.3
baz=87,SNR=6.3
SLMT **Seeley Lake** 87.29 42 *e*P P 00 52 39.7 -0.2
SLMT *ePP PP 00 56 04.5 -0.9
D14A **Greenough** 87.33 42 ⇓P P 00 52 40.1 0.0
baz=87,SNR=17
G13A **Cobalt** 87.44 44 P P 00 52 41.3 +0.6
baz=87,SNR=100
E14A **Clinton** 87.54 43 ⇓P P 00 52 41.5 +0.3
baz=88,SNR=7.8
CHMT **Chamberlain Mo** 87.54 42 *e*P P 00 52 41.2 0.0
B15A **Bradely Ranch,** 87.55 41 P P 00 52 41.4 +0.3
baz=88,SNR=27
MPMC **Manual Prospec** 87.60 54 P P 00 52 42.9 +1.2
baz=88,SNR=29
C15A **Salmond Ranch,** 87.69 41 P P 00 52 42.7 +0.9
baz=88,SNR=8.3
HLID **Hailey** 87.77 46 *e*P P 00 52 43.4 +1.1
comp=Z,38nm,0.9s
HLID *ePP PP 00 56 10.3 +0.9
HLID **Hailey** 87.77 46 ⇑P P 00 52 43.6 +1.2
baz=88,SNR=78
F14A **Wisdom** 87.80 43 ⇑P P 00 52 42.9 +0.5
baz=88
I13A **Wildhorse Cree** 87.87 45 P P 00 52 44.0 +1.1
baz=88,SNR=56
G14A **Jackson** 87.92 44 ⇑P P 00 52 43.6 +0.5
baz=88
A16A **West Butte Ran** 87.96 40 ⇓P P 00 52 43.3 +0.2
baz=88
FURC **Furnace Creek,** 87.98 53 P P 00 52 45.1 +1.9
baz=88,SNR=11
D15A **Lincoln** 87.98 42 P P 00 52 43.6 +0.3
baz=88,SNR=8.7
J13A **Cove Ranch, Pi** 87.98 46 P P 00 52 44.6 +1.2
baz=88,SNR=58
ELK **Elko** 88.00 49 *e*P P 00 52 44.8 +1.2
comp=Z,466nm,0.9s
JOF **Joensuu** 88.06 335 *e*P P 00 52 42.6 -0.4
JOF **Joensuu** 88.06 335 *e*p P 00 52 42.6 -0.4
comp=Z,0.4nm,0.3s
B16A **M & M Farms, S** 88.06 40 ⇑P P 00 52 43.8 +0.3
baz=88,SNR=18
E15A **Deer Lodge** 88.10 43 P P 00 52 44.5 +0.7
baz=88,SNR=76
H14A **Leadore** 88.17 44 P P 00 52 45.5 +1.2
baz=88,SNR=29
C16A **Fuhringer Ranc** 88.24 41 ⇓P P 00 52 44.5 +0.1
baz=88,SNR=16
I14A **Mackay** 88.32 45 P P 00 52 46.5 +1.5
baz=88,SNR=29
GSC **Goldstone** 88.34 54 *e*P P 00 52 46.3 +1.2
GSC pmax pmax
comp=Z,26nm,1.1s
GSC **Goldstone** 88.34 54 *e*P P 00 52 46.3 +1.2
comp=Z,26nm,1.1s
GSC **Goldstone** 88.34 54 ⇓P P 00 52 46.7 +1.6
baz=88,SNR=13
F15A **Butte** 88.38 43 P P 00 52 45.8 +0.6
baz=88,SNR=44
LRM **Limekiln Ridge** 88.41 43 *e*P P 00 52 45.9 +0.5
LRM *ePP PP 00 56 14.6 +0.1
R11A **Troy Canyon, C** 88.43 51 P P 00 52 46.9 +1.3
baz=88,SNR=39
MCMT **McKenzie Canyo** 88.46 44 *e*P P 00 52 46.4 +0.7
comp=Z,11nm,1.1s
DLMT **Dillon** 88.46 44 *e*P P 00 52 46.6 +1.1
J14A **Carey** 88.46 46 P P 00 52 47.3 +1.7
baz=88,SNR=57
A17A **Triple J Farms** 88.52 40 ⇓P P 00 52 45.9 +0.3
baz=88
HRY **Holter Researc** 88.53 42 *e*P P 00 52 46.7 +0.8
SHOC **Shoshone** 88.59 53 ⇑P P 00 52 47.2 +1.1
baz=89,SNR=5.4
G15A **Dillon** 88.59 44 P P 00 52 47.0 +0.8
baz=88,SNR=22
D16A **Dana Ranch, Ca** 88.61 42 P P 00 52 47.3 +1.1
baz=88,SNR=23
H15A **Lima** 88.66 44 P P 00 52 48.1 +1.5
baz=89,SNR=8.6
B17A **L&G Farms, Che** 88.67 40 ⇑P P 00 52 46.6 +0.3
baz=89,SNR=5.4
E16A **East Helena** 88.69 42 P P 00 52 47.2 +0.6
baz=89,SNR=20
109C **Camp Elliot, M** 88.76 57 ⇑P P 00 52 48.5 +1.5
baz=89
HEC **Hector,Ludlow** 88.84 54 P P 00 52 48.8 +1.3
baz=89,SNR=12
I15A **Monteview** 88.97 45 ⇑P P 00 52 49.6 +1.7
baz=89,SNR=6.8
F16A **Kennard Place,** 88.97 43 ⇑P P 00 52 42.9 -5.0
baz=89,SNR=5.5
TUQ **Turquoise Moun** 89.00 54 ⇑P P 00 52 49.6 +1.4
baz=89,SNR=5.9
BOZ **Bozeman (W)** 89.01 43 *e*P P 00 52 48.3 +0.2
BOZ pmax pmax
comp=Z,16nm,1.3s
BOZ **Bozeman (W)** 89.01 43 *e*P P 00 52 48.3 +0.2
comp=Z,16nm,1.3s
G16A **Moss Hill, Enn** 89.03 44 P P 00 52 49.1 +0.9
baz=89,SNR=29
A18A **Metzger Ranch,** 89.06 40 ⇑P P 00 52 48.2 +0.1
baz=89,SNR=8.0
PFO **Pinyon Flat Ob** 89.08 56 ⇑P P 00 52 49.9 +1.2
baz=89,SNR=5.4
KBZ **Khabaz** 89.12 315 P P 00 52 48.2 -0.2
KBZ **Khabaz** 89.12 315 P P 00 52 48.2 -0.2
KBZ **Khabaz** 89.12 315 P P 00 52 48.2 -0.2
comp=Z,1.4nm,0.8s,baz=206,slow=3.1,SNR=4.5
D17A **Six Diamond Ra** 89.13 41 ⇑P P 00 52 49.7 +1.1
baz=89,SNR=6.9
KIV **Kislovodsk** 89.19 315⇑ *e*P P 00 52 48.2 -0.7
KIV *e* 00 56 20.2
KIV *eS* SKSac 01 03 04.3 -3.5
KIV *eSS* SS 01 09 22.5 -1.7
KIV pmax pmax
comp=Z,5.0nm,0.9s
E17A **Martinsdale** 89.25 42 ⇑P P 00 52 49.5 +0.2
baz=89,SNR=8.2
B18A **Beardsley Farm** 89.28 40 ⇑P P 00 52 49.6 +0.4
baz=89
MONP **Monument Peak** 89.31 56 ⇓P P 00 52 50.8 +0.9
baz=89,SNR=9.9
BELC **Belle Mtn. Jos** 89.34 55 ⇓P P 00 52 50.8 +0.9
baz=89
QLMT **Earthquake Lak** 89.41 44 *e*P P 00 52 51.7 +1.6
EGMT **Eagleton** 89.42 40 *e*P P 00 52 50.5 +0.6
HVU **Hansel Valley** 89.46 47 *e*P P 00 52 52.0 +1.7
HVU pmax pmax
comp=Z,31nm,1.0s
HVU **Hansel Valley** 89.46 47 *e*P P 00 52 52.0 +1.7
comp=Z,31nm,1.0s
F17A **Fitzpatrick Pl** 89.57 43 ⇓P P 00 52 52.0 +1.3
baz=90
H16A **Russell Place,** 89.58 44 ⇑P P 00 52 52.3 +1.4
baz=90,SNR=18
I16A **Newdale** 89.69 45 ⇑P P 00 52 53.4 +2.0
baz=90,SNR=11
G17A **Pierce Place,** 89.71 43 ⇑P P 00 52 53.4 +2.0
baz=90
A19A **Klindworth Far** 89.73 39 ⇓P P 00 52 52.1 +0.8
baz=90,SNR=6.1
B19A **Brinkman Farms** 89.78 40 ⇑P P 00 52 51.9 +0.4
baz=90

YMR **Madison River** 89.78 44 *e*P P 00 52 53.6 +1.7
comp=Z,18nm,1.0s
E18A **Harlowton** 89.83 42 ⇑P P 00 52 52.9 +1.0
baz=90,SNR=13
MIB **Mutribah** 89.83 301 *e*P P 00 52 50.5 -1.5
MIB AMb AMB 00 52 54.5
comp=Z,12nm,0.9s
BC3 **Big Chuckawall** 89.87 55 P P 00 52 53.9 +1.5
baz=90,SNR=9.0
DUG **Dugway** 89.93 49 *e*P P 00 52 53.5 +1.0
DUG **Dugway** 89.93 49 *e*P P 00 52 53.5 +1.0
DUG **Dugway** 89.93 49 P P 00 52 53.5 +1.0
baz=90,SNR=35
IRM **Iron Mountain** 89.97 55 ⇑P P 00 52 54.3 +1.6
baz=90,SNR=14
C19A **Slack Wire Ran** 89.97 41 ⇑P P 00 52 53.4 +1.0
baz=90
RRI2 **Red Ridge** 89.97 45 *e*P P 00 52 54.5 +1.6
IMW **Indian Meadow** 90.05 45 *e*P P 00 52 54.3 +1.1
comp=Z,19nm,0.8s
NAY **Al-Naaiem** 90.06 300 *e*P P 00 52 51.7 -1.4
NAY AMb AMB 00 52 52.9
comp=Z,8.2nm,0.9s
H17A **Grant Village** 90.13 44 ⇓P P 00 52 55.7 +2.1
baz=90,SNR=27
TPAW **Teton Pass** 90.18 45 *e*P P 00 52 55.1 +1.3
comp=Z,12nm,1.0s
TPAW *ePP PP 00 56 28.4 -0.3
F18A **Big Timber** 90.19 42 ⇓P P 00 52 54.6 +1.1
baz=90,SNR=12
LKWY **Lake** 90.19 44 *e*P P 00 52 56.5 +2.7
LKWY pmax pmax
comp=Z,33nm,1.1s
LKWY **Lake** 90.19 44 *e*P P 00 52 56.5 +2.7
comp=Z,33nm,1.1s
RST **Umm Al-Ruwaisa** 90.20 300 *e*P P 00 52 51.9 -1.9
RST AMb AMB 00 52 55.9
comp=Z,85nm,1.0s
MOOW **Moose Ponds** 90.24 45 *e*P P 00 52 55.1 +1.1
D19A **Cripps Ranch,** 90.28 41 ⇑P P 00 52 54.8 +0.9
baz=90,SNR=11
I17A **Pilgrim Ck.** 90.29 44 ⇓P P 00 52 56.3 +2.1
baz=90
AHID **Auburn Hatcher** 90.32 46 *e*P P 00 52 55.5 +1.1
comp=Z,12nm,0.8s
SNOW **Snow King Moun** 90.33 45 *e*P P 00 52 55.7 +1.3
comp=Z,4.0nm,0.7s
CCUT **Cedar City** 90.34 51 *e*P P 00 52 56.6 +1.9
comp=Z,14nm,1.1s
HWUT **Hardware Ranch** 90.38 47 *e*P P 00 52 55.0 +0.4
comp=Z,28nm,1.1s
LOHW **Long Hollow** 90.38 45 *e*P P 00 52 55.8 +1.1
KAF **Kangasniemi** 90.47 336 *e*P P 00 52 48.1 -6.2
KAF pmax pmax
comp=Z,2.0nm,0.8s
KAF **Kangasniemi** 90.47 336 *e*p P 00 52 48.1 -6.2
comp=Z,1.7nm,0.8s
G18A **Lazy EL Ranch,** 90.49 43 ⇓P P 00 52 56.4 +1.4
baz=90,SNR=6.2
GLA **Glamis** 90.55 56 *e*P P 00 52 57.3 +1.9
GLA pmax pmax
comp=Z,14nm,0.8s
GLA **Glamis** 90.55 56 *e*P P 00 52 57.3 +1.9
comp=Z,14nm,0.8s
GLA **Glamis** 90.55 56 ⇑P P 00 52 56.6 +1.2
baz=90,SNR=7.6
Y12C **Blythe** 90.59 55 ⇓P P 00 52 55.4 -0.1
baz=91,SNR=5.6
E19A **Rath Farm, Rou** 90.59 42 ⇑P P 00 52 56.1 +0.7
baz=90,SNR=9.2
C20A **Veseth Ranch,** 90.64 40 ⇑P P 00 52 55.7 +0.2
baz=91,SNR=22
H18A **Shoshone NF, C** 90.65 44 ⇓P P 00 52 57.3 +1.5
baz=91,SNR=6.5
W13A **Hualapai Mount** 90.69 54 ⇓P P 00 52 57.3 +1.0
baz=91,SNR=15
F19A **Roth Farm, Mol** 90.71 42 P P 00 52 57.1 +1.1
baz=91,SNR=7.7
PDMCI **Parker Dam,Lak** 90.73 54 ⇓P P 00 52 58.0 +1.9
baz=91
RLMT **Red Lodge** 90.76 43 *e*P P 00 52 57.7 +1.4
D20A **Manuel Ranch,** 90.78 41 ⇓P P 00 52 57.0 +0.8
baz=91,SNR=12
JLU **Jordanelle** 90.79 48 *e*P P 00 52 58.0 +1.3
comp=Z,17nm,0.9s
I18A **Diamond G Ranc** 90.89 44 P P 00 52 58.4 +1.4
baz=91,SNR=8.3
MVU **Marysvale** 90.91 50 *e*P P 00 52 59.1 +1.8
FINES **FINESS Array B** 90.92 335 P P 00 52 55.0 -1.4
FINES **FINESS Array B** 90.92 335 P P 00 52 55.0 -1.4
comp=Z,1.9nm,0.8s,baz=72,slow=4.8,SNR=15
FINES LR LR 01 39 29.1
comp=Z,42nm,18.1s,baz=90,slow=39
B21A **Ellsworth Farm** 90.98 39 ⇓P P 00 52 57.9 +0.8
baz=91
DAU **Daniels Canyon** 90.99 48 *e*P P 00 52 59.0 +1.3
DAU **Daniels Canyon** 90.99 48 *e*P P 00 52 59.0 +1.3
E20A **Meyer Farm, Mu** 91.00 41 P P 00 52 57.8 +0.5
baz=91,SNR=7.3
M17A **Scullys Gap (B** 91.06 47 ⇑P P 00 52 58.4 +0.6
baz=91,SNR=14
H19A **Powell** 91.10 43 ⇓P P 00 52 59.7 +1.8
baz=91,SNR=15
C21A **Desert Coulee** 91.16 40 P P 00 52 59.0 +1.1
baz=91,SNR=7.0
FFC **Flin Flon** 91.24 32 P P 00 52 57.4 -0.7
comp=Z,50nm,0.9s,SNR=5.5
F20A **Billings** 91.25 42 ⇓P P 00 52 59.2 +0.8
baz=91
I19A **Meeteetse** 91.32 44 ⇑P P 00 52 59.9 +0.9
baz=91,SNR=23
L18A **Fontenelle, Gr** 91.35 46 P P 00 53 00.5 +1.3
baz=91,SNR=19
BW06 **Boulder Array** 91.39 45 *e*P P 00 52 59.2 -0.2
comp=Z,3.8nm,0.8s
PDAR **Pinedale Array** 91.39 45 P P 00 52 59.4 0.0
PDAR PP PP 00 56 38.2 +0.1
PDAR **Pinedale Array** 91.39 45 P P 00 52 59.4 0.0
comp=Z,3.4nm,0.7s,baz=276,slow=2.7,SNR=24
PDAR PP PP 00 56 38.2 +0.1
comp=Z,0.3nm,0.4s,baz=306,slow=2.1,SNR=3.8
PDAR LR LR 01 33 56.4
comp=Z,33nm,18.8s,baz=65,slow=35
G20A **Bridger** 91.42 43 ⇑P P 00 52 59.3 0.0
baz=91,SNR=16
A22A **Carney Farms,** 91.43 39 ⇑P P 00 52 59.3 +0.1
baz=91
113A **Mohawk Valley,** 91.48 56 ⇓P P 00 53 01.2 +1.6
baz=92
U15A **North Rim** 91.51 52 P P 00 53 01.7 +1.6
baz=92,SNR=21
D21A **La Casta Ranch** 91.51 41 P P 00 53 00.5 +0.8
baz=91,SNR=8.6
Q16A **Castle Valley** 91.54 49 ⇓P P 00 53 01.5 +1.4
baz=92,SNR=8.2
J19A **Crowheart** 91.56 45 P P 00 53 01.2 +1.2
baz=92,SNR=68
E21A **Keefer Ranch,** 91.66 41 ⇓P P 00 53 01.1 +0.8
baz=92
Y14A **Wickenburg** 91.73 55 ⇓P P 00 53 02.6 +1.7
baz=92,SNR=7.8
L19A **Farson** 91.76 46 ⇑P P 00 53 02.1 +1.1
baz=92,SNR=17
H20A **Greybull** 91.83 43 ⇑P P 00 53 02.1 +0.9
baz=92,SNR=7.8
K19A **Absolon Red Bu** 91.86 45 P P 00 53 01.9 +0.4
baz=92,SNR=19
VNDA **Vanda** 91.88 176 *e*P P 00 53 01.5 +1.0
comp=Z,8.2nm,1.1s
VNDA **Vanda** 91.88 176 P P 00 53 01.4 +1.0
comp=Z,3.3nm,0.9s,baz=327,slow=5.1,SNR=14
VNDA LR LR 01 30 23.2
comp=Z,59nm,19.4s,baz=156,slow=33
I20A **Worland** 91.94 44 P P 00 53 03.1 +1.4
baz=92,SNR=14
SRU **San Rafael** 91.95 49 ⇓P P 00 53 02.8 +0.8
baz=92
Z14A **Wintersburg** 91.96 55 ⇑P P 00 53 03.7 +1.8
baz=92
P18A **Preston Nutter** 91.98 48 P P 00 53 03.2 +0.9
baz=92,SNR=7.7
D22A **Cohagen** 92.00 40 ⇓P P 00 53 02.7 +0.9
baz=92,SNR=13
G21A **Lodge Grass** 92.08 42 P P 00 53 03.4 +1.1
baz=92,SNR=8.1
K20A **Yellowstone Ra** 92.26 45 P P 00 53 03.9 +0.6
baz=92,SNR=28

C23A	Lambert	92.36	39	⇑P		P	00 53 04.2 +0.7
	baz=92,SNR=15						
H21A	Big Horn, Sher	92.41	43	P		P	00 53 05.5 +1.6
	baz=92,SNR=29						
E22A	Miles City	92.42	41	⇓P		P	00 53 04.2 +0.4
	baz=92						
F22A	Rosebud	92.48	42	⇓P		P	00 53 04.4 +0.3
	baz=92,SNR=6.8						
L20A	Wamsutter	92.50	46	⇑P		P	00 53 05.5 +1.0
	baz=92,SNR=7.2						
214A	Organ Pipe Nat	92.50	56	⇑P		P	00 53 06.2 +1.8
	baz=92,SNR=6.0						
WUAZ	Wupatki	92.51	53	*e*P		P	00 53 06.2 +1.6
	comp=Z,9.9nm,0.8s						
WUAZ	Wupatki	92.51	53	⇓P		P	00 53 06.5 +1.9
	baz=92,SNR=5.6						
SBA	Scott Base	92.53	176	*e*P		P	00 53 06.2 +2.8
SBA				pmax		pmax	
	comp=Z,14nm,1.4s						
SBA	Scott Base	92.53	176	*e*P		P	00 53 06.2 +2.8
	comp=Z,14nm,1.4s						
I21A	Big Trails, Te	92.55	44	⇓P		P	00 53 05.3 +0.7
	baz=92,SNR=15						
O19A	Miners Draw (B	92.56	48	⇑P		P	00 53 05.4 +0.7
	baz=92						
D23A	Lindsay	92.59	40	⇓P		P	00 53 05.8 +1.1
	baz=92,SNR=5.9						
J21A	Lysite	92.62	44	⇑P		P	00 53 06.2 +1.2
	baz=92,SNR=7.7						
G22A	Birney	92.67	42	⇓P		P	00 53 06.0 +0.9
	baz=93						
M20A	Sweetwater, Wa	92.80	46	⇑P		P	00 53 07.1 +1.2
	baz=93,SNR=12						
E23A	Ismay	92.80	41	P		P	00 53 06.7 +1.1
	baz=93,SNR=14						
X16A	Lo Mia Camp, P	92.81	54	⇑P		P	00 53 08.1 +2.0
	baz=93,SNR=5.9						
S18A	Hurst Farm, Bl	92.83	50	⇓P		P	00 53 06.7 +0.5
	baz=93,SNR=6.8						
H22A	Clearmont	92.88	43	⇓P		P	00 53 06.7 +0.6
	baz=93						
P19A	Cripple Cowboy	92.90	48	⇓P		P	00 53 07.2 +0.8
	baz=93,SNR=20						
N20A	Spence Gulch,	92.98	47	⇑P		P	00 53 07.5 +0.7
	baz=93,SNR=9.4						
K21A	Alcova	93.02	45	⇑P		P	00 53 07.5 +0.6
	baz=93						
F23A	Volborg	93.05	41	P		P	00 53 07.3 +0.5
	baz=93,SNR=5.6						
I22A	9 Mile Ranch,	93.06	43	⇓P		P	00 53 07.8 +0.9
	baz=93,SNR=8.6						
D24A	Glendive	93.17	40	⇓P		P	00 53 08.0 +0.8
	baz=93,SNR=6.3						
L21A	Rawlins	93.19	45	⇓P		P	00 53 08.5 +0.9
	baz=93,SNR=10						
O20A	White River Ci	93.25	47	⇓P		P	00 53 08.6 +0.6
	baz=93,SNR=8.3						
J22A	Midwest	93.25	44	⇓P		P	00 53 08.4 +0.5
	baz=93						
G23A	Biddle	93.27	42	⇑P		P	00 53 08.4 +0.6
	baz=93,SNR=9.8						
M21A	Separation Pea	93.33	46	P		P	00 53 09.3 +0.9
	baz=93,SNR=18						
P20A	De Beque	93.37	48	⇓P		P	00 53 09.4 +0.9
	baz=93						
PV04	Paradox Valley	93.39	49	*e*P		P	00 53 09.7 +1.1
E24A	Baker	93.41	40	⇑P		P	00 53 08.6 +0.2
	baz=93						
K22A	Casper	93.51	45	⇓P		P	00 53 09.7 +0.6
	baz=93						
N21A	Black Mountain	93.53	47	P		P	00 53 10.4 +1.1
	baz=94,SNR=17						
Q20A	Ridgley Place,	93.64	49	P		P	00 53 10.6 +0.9
	baz=94,SNR=19						
PV01	Paradox Valley	93.73	49	*e*P		P	00 53 10.7 +0.4
	comp=Z,756nm,0.8s						
R20A	Redvale	93.85	49	⇓P		P	00 53 11.7 +0.9
	baz=94						
W18A	Petrified Fore	93.90	53	⇓P		P	00 53 13.1 +2.0
	baz=94						
M22A	Cedar Creek Ra	93.94	46	⇑P		P	00 53 12.4 +1.2
	baz=94						
S20A	Disappointment	93.99	50	⇓P		P	00 53 12.1 +0.6
	baz=94						
H24A	Dirks Ranch, A	94.00	42	P		P	00 53 11.5 +0.4
	baz=94,SNR=12						
TUC	Tucson	94.02	55	*e*P		P	00 53 12.8 +1.3
TUC	Tucson	94.02	55	*e*P		P	00 53 12.8 +1.3
K23A	Bowen Ranch, D	94.08	44	⇓P		P	00 53 12.1 +0.4
	baz=94,SNR=9.8						
Q21A	Lamborn Mesa,	94.20	48	⇓P		P	00 53 13.9 +1.5
	baz=94,SNR=5.9						
N22A	Wattenberg Ran	94.27	46	⇓P		P	00 53 13.8 +1.1
	baz=94						
L23A	Garrett	94.28	45	P		P	00 53 13.4 +0.7
	baz=94,SNR=12						
R21A	Cimarron	94.39	49	⇑P		P	00 53 14.7 +1.4
	baz=94,SNR=14						
O22A	Kremmling	94.44	47	⇑P		P	00 53 14.2 +0.6
	baz=94						
S21A	Coal Bank Pass	94.47	50	⇓P		P	00 53 15.0 +1.2
	baz=94						
P22A	Eagle	94.51	47	P		P	00 53 15.2 +1.3
	baz=94,SNR=6.0						
SMCO	Snowmass	94.51	48	*e*P		P	00 53 14.8 +0.8
	comp=Z,6.8nm,0.9s						
N23A	Red Feather La	94.59	46	P		P	00 53 15.5 +1.3
	baz=94,SNR=8.9						
RSSD	Black Hills	94.59	43	*e*P		P	00 53 14.1 0.0
RSSD				pmax		pmax	
	comp=Z,12nm,0.8s						
RSSD	Black Hills	94.59	43	*e*P		P	00 53 14.1 0.0
	comp=Z,12nm,0.8s						
Q22A	Crested Butte,	94.67	48	P		P	00 53 16.1 +1.5
	baz=95,SNR=5.6						
X20A	Quemado	95.06	53	P		P	00 53 18.7 +2.3
	baz=95,SNR=6.2						
S22A	4UR Ranch, Cre	95.15	49	P		P	00 53 18.1 +1.3
	baz=95,SNR=9.6						
ISCO	Idaho Springs	95.25	47	*e*P		P	00 53 18.5 +1.2
ISCO				pmax		pmax	
	comp=Z,14nm,1.8s						
ISCO	Idaho Springs	95.25	47	*e*P		P	00 53 18.5 +1.2
	comp=Z,14nm,1.8s						
ISCO	Idaho Springs	95.25	47	⇑P		P	00 53 18.5 +1.2
	baz=95						
P23A	Jefferson	95.25	47	⇑P		P	00 53 19.0 +1.6
	baz=95						
V21A	Milan	95.26	51	⇓P		P	00 53 18.6 +1.3
	baz=95						
K25A	Mack Ranch, Ha	95.32	44	⇓P		P	00 53 18.2 +0.9
	baz=95						
N24A	Carr	95.35	46	⇑P		P	00 53 19.1 +1.5
	baz=95						
T22A	Edith	95.37	50	⇓P		P	00 53 18.8 +1.0
	baz=95						
Y20A	Horse Springs,	95.37	53	P		P	00 53 19.7 +1.8
	baz=95,SNR=5.5						
Z20A	Nine Sixteen R	95.48	54	P		P	00 53 20.5 +2.2
	baz=95,SNR=10						
NOA	NORSAR Array B	96.77	339	P		P	00 53 21.7 -1.7
NOA	NORSAR Array B	96.77	339	P		P	00 53 21.7 -1.7
	comp=Z,0.6nm,0.8s,baz=51,slow=4.2,SNR=3.6						
NOA				LR		LR	01 39 36.8
	comp=Z,35nm,21.1s,baz=40,slow=37						
BRTR	Keskin Array B	97.03	314	P		P	00 53 23.6 -1.5
BRTR				pP		pP	00 53 54.7 -2.2
BRTR	Keskin Array B	97.03	314	P		P	00 53 23.6 -1.5
	comp=Z,0.6nm,0.8s,baz=151,slow=2.8,SNR=5.0						
BRTR				pP		pP	00 53 54.7 -2.2
	comp=Z,0.5nm,0.9s,baz=117,slow=9.1,SNR=1.3						
BRTR				LR		LR	01 39 11.0
	comp=Z,21nm,18.3s,baz=297,slow=36						
MNTX	Cornudas Mount	98.53	54	*e*P		P	00 53 32.1 +0.3
	comp=Z,3.7nm,1.1s						
MAW	Mawson	99.98	203	LR		LR	01 32 12.5
	comp=Z,99nm,21.1s,baz=245,slow=31						
ESDC	Sonseca Array	119.36	333	PP		PP	01 00 01.6 -2.2
ESDC	Sonseca Array	119.36	333	PP		PP	01 00 01.6 -2.2
	comp=Z,0.1nm,0.3s,baz=20,slow=7.5,SNR=4.1						
TAM	Tamanrasset	126.20	312	*e*PKIKP		PKPdf	00 58 55.8 0.0
TAM	Tamanrasset	126.20	312	*e*PKPdf		PKPdf	00 58 55.8 0.0
TORD	Torodi Ar. Bea	134.92	305	PKP		PKPdf	00 59 12.4 +0.1
TORD				SKPbc		SKPbc	01 02 30.1 -1.5
TORD	Torodi Ar. Bea	134.92	305	PKP		PKPdf	00 59 12.4 +0.1
	comp=Z,1.4nm,0.9s,baz=25,slow=1.5,SNR=7.9						
TORD				SKPbc		SKPbc	01 02 30.1 -1.5
	comp=Z,3.6nm,1.0s,baz=54,slow=2.1,SNR=13						

DBIC	Dimbokro	143.91	303	PKP		PKPab	00 59 25.6 -0.4
DBIC				pPKP		pPKPdf	01 00 02.8 +1.1
DBIC	Dimbokro	143.91	303	PKP		PKPab	00 59 25.6 -0.4
	comp=Z,12nm,1.0s,baz=65,slow=5.9,SNR=7.9						
DBIC				pPKP		pPKPdf	01 00 02.8 +1.1
	comp=Z,9.5nm,0.9s,baz=332,slow=1.9,SNR=4.2						
CFAA	Coronel Fontan	144.71	125	PKP		PKPab	00 59 29.1 +0.4
CFAA				pPKP		pPKPdf	01 00 02.8 +0.1
CFAA	Coronel Fontan	144.71	125	PKP		PKPab	00 59 29.1 +0.4
	comp=Z,1.0nm,0.8s,baz=254,slow=4.3,SNR=21						
CFAA				pPKP		pPKPdf	01 00 02.8 +0.1
	comp=Z,1.5nm,0.8s,baz=252,slow=2.5,SNR=9.4						
LPAZ	La Paz	147.72	98	*e*PKPbc		PKPbc	00 59 39.9 +1.1
LPAZ				pPKPbc		pPKPbc	01 00 10.8 -0.7
LPAZ	La Paz	147.72	98	PKPbc		PKPdf	00 59 36.9 +1.1
	comp=Z,2.7nm,0.9s,baz=261,slow=1.0,SNR=7.5						
LPAZ				pPKPbc		pPKPbc	01 00 10.8 -0.7
	comp=Z,2.8nm,0.7s,baz=332,slow=2.1,SNR=4.7						
SAML	Samuel	151.69	83	*e*PKPdf		PKPdf	00 59 42.1 +0.7

CSEM ***23*** *00:51:31.6, 69°.30N×30°.41E, h0km, ML1.1, Mining explosion. After HEL*

HEL 23 00:51:31.6±0.5, 69°.30N×30°.41E, h0km, ML1.1, Explosion, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEV	Kevo	1.28	292	*e*p	Pn	00 52 11.3	+15
	0.8nm,0.4s						
KEV	Kevo	1.28	292	*e*P	Pg	00 51 54.2	-1.9
KEV				*e*S	Sg	00 52 11.7	-1.0
KEV	Kevo	1.28	292	P	Pg	00 51 54.1	-2.0
KEV				S	Sg	00 52 11.6	-1.0
VRF	Varrio	1.59	191	*e*P	Pn	00 52 00.4	-0.5
VRF				*e*S	Sn	00 52 20.5	-1.7
VRF	Varrio	1.59	191	P	Pn	00 52 00.4	-0.6
VRF				S	Sn	00 52 20.5	-1.7
SGF	Sodankyl	2.36	219	*e*P	Pn	00 52 11.1	-0.4
SGF				*e*S	Sn	00 52 40.0	-1.1
SGF	Sodankyl	2.36	219	P	Pn	00 52 11.0	-0.5
SGF				S	Sn	00 52 40.0	-1.1
HEF	Hetta	2.61	253	*e*PG	Pb	00 52 18.7	-0.5
HEF				*e*SG	Sb	00 52 51.5	-0.2
HEF				MSG		00 52 55.2	
	comp=Z,0.5nm,0.2s						
HEF	Hetta	2.61	253	Pg	Pb	00 52 18.6	-0.6
HEF				Sg	Sb	00 52 51.5	-0.2
KIF	Kilpisjarvi	3.45	270	*e*SG	Sb	00 53 17.5	+1.7
KIF				MSG		00 53 18.0	
	comp=Z,0.3nm,0.2s						
KIF	Kilpisjarvi	3.45	270	Sg	Sb	00 53 17.4	+1.6

IDC 23 00:54:01.2±10.0, 0°.54N×99°.65W, h0km, mb3.9/3, mb1 4.3/3, mb1mx3.8/18, mbtmp3.9/3, MS3.2/3, Ms1 3.2/3, ms1mx2.8/20, Error ellipse: s-maj=320.0km s-min=186.8km az=107.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	La Paz	25.60	337	LR	LR	01 06 29.6	
	comp=Z,8.9nm,20.5s,baz=211,slow=29						
PDAR	Pinedale Array	42.97	349	P	P	01 02 02.1	-0.3
	1.5nm,0.9s,baz=147,slow=8.4,SNR=7.7						
PLCA	Paso Flores	48.86	151	LR	LR	01 19 04.5	
	comp=Z,64nm,21.7s,baz=179,slow=31						
BDFB	Brasilia	53.46	110	LR	LR	01 25 53.2	
	comp=Z,54nm,19.7s,baz=213,slow=36						
YKA	Yellowknife Ar	62.82	352	P	P	01 04 28.9	+0.5
	1.5nm,0.9s,baz=162,slow=6.4,SNR=16						
ILAR	Eielson Array	72.58	341	P	P	01 05 29.4	-0.6
	0.7nm,0.7s,baz=146,slow=5.5,SNR=6.3						

ISCJB ***23*** *00:58:50.3±0.5, 6°.87N±0°.07×72°.98W±0°.05, h166km, mb3.7/9, Error ellipse: s-maj=10.1km s-min=5.9km az=150.1*

IDC ***23*** *00:58:51.6±1.7, 6°.73N×73°.00W, h170km±17km, mb3.5/9, mb1 3.8/11, mb1mx3.5/25, mbtmp3.6/11, Error ellipse: s-maj=24.8km s-min=17.8km az=64.0*

FUNV ***23*** *00:58:58.1, 7°.12N×72°.69W, h139km, MW3.8*

ISC 23 00:58:51.4±0.7, 6°.91N±0°.08×72°.89W±0°.07, h166km, n32, σ1s59/35, mb3.8/9, 2C-11D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	Capacho	1.11	31	⇓*i*P	Pn	00 59 19.8	+0.9
CAPV				*e*S	Sn	00 59 36.3	-3.7
SOCV	Socops	2.43	56	⇓*e*P	Pn	00 59 34.0	+1.5
SOCV				*e*S	Sn	00 59 59.6	-4.8
VIGV	El Vigia	2.44	38	⇓*i*P	Pn	00 59 34.2	+1.6
VIGV				*e*S	Sn	00 59 59.9	-4.7
ROSC	El Rosal	2.50	215	P	Pn	00 59 32.2	-1.5
	139nm,0.3s,baz=301,slow=3.0,SNR=246						
ROSC				S	Sn	01 00 03.2	-3.3
	292nm,0.3s,baz=90,slow=23,SNR=28						
ELOV	Elorza	3.38	88	⇓*i*P	Pn	00 59 46.2	+2.1
SANV	Sanarito	4.20	52	⇓*e*P	Pn	00 59 56.0	+1.3
CURV	Curarigua	4.23	42	⇓*e*P	Pn	00 59 56.5	+1.3
DABV	Dabajuro	4.56	29	⇓*e*P	Pn	01 00 00.5	+1.1
TEPV	Terepaima	4.75	50	⇓*i*P	Pn	01 00 03.4	+1.5
SIQV	Siquisique	4.80	39	⇓*i*P	Pn	01 00 03.2	+0.7
BAUV	El Baul	5.21	67	*e*P	Pn	01 00 08.1	+0.2
MAPV	Macapo	5.25	56	⇓*i*P	Pn	01 00 09.9	+1.4
IMOV	Isla Los Monje	5.76	20	⇑*e*P	Pn	01 00 15.3	+0.2
MONV	Montecano	5.78	30	⇑*i*P	Pn	01 00 15.7	+0.3
TURV	Turiamo	6.10	54	*e*P	Pn	01 00 20.4	+0.7
MERV	Las Mercedes	6.92	70	⇓*e*P	Pn	01 00 30.8	+0.2
BIRV	Birongo	7.44	61	*e*P	Pn	01 00 37.7	+0.4
CUPV	Cœpira	7.68	65	*e*P	Pn	01 00 41.0	+0.3
PRGV	PARIAGUAN	8.37	77	*e*P	Pn	01 00 50.2	+0.6
PCRV	Puerto La Cruz	8.78	68	*e*P	Pn	01 00 56.4	+1.2
TEIG	Tepich	19.95	313	P	P	01 03 11.9	+1.1
	2.1nm,0.3s,baz=83,slow=8.1,SNR=7.3						
TXAR	Lajitas Array	36.58	311	P	P	01 05 42.0	+0.3
	0.8nm,0.4s,baz=122,slow=8.8,SNR=8.4						
ULM	Lac du Bonnet	47.28	340	P	P	01 07 07.5	-0.5
	3.8nm,0.5s,baz=147,slow=6.3,SNR=3.3						
SCHQ	Schefferville	48.03	5	P	P	01 07 15.5	+1.8
	2.9nm,0.5s,baz=195,slow=6.7,SNR=12						
PDAR	Pinedale Array	48.15	324	P	P	01 07 15.1	0.0
	0.9nm,0.6s,baz=132,slow=8.8,SNR=7.2						
NVAR	Mina Array Bea	51.59	314	P	P	01 07 41.8	+0.7
	0.3nm,0.3s,baz=109,slow=8.0,SNR=4.2						
YBH	Yreka Blue Hor	56.04	316	P	P	01 08 12.1	-1.1
	1.3nm,0.6s,baz=82,slow=6.1,SNR=4.7						
YKA	Yellowknife Ar	63.26	340	P	P	01 09 02.5	+0.5
	2.4nm,0.6s,baz=133,slow=6.5,SNR=61						
TORD	Torodi Ar. Bea	73.49	78	P	P	01 10 06.9	+0.4
	0.6nm,1.1s,baz=280,slow=7.1,SNR=4.2						
ILAR	Eielson Array	76.98	335	P	P	01 10 25.9	+0.4
	0.2nm,0.5s,baz=126,slow=4.7,SNR=4.3						
ASAR	Alice Springs	149.35	234	PKPbc	PKPbc	01 18 20.6	-1.0
	0.6nm,0.4s,baz=115,slow=3.5,SNR=8.1						
WRA	Warramunga Arr	150.58	241	PKPbc	PKPbc	01 18 23.9	-0.7
	0.8nm,0.4s,baz=106,slow=2.8,SNR=50						

IDC 23 01:04:27.8±0.9, 8°.10N×127°.23E, h0km, mb3.9/7, mb1 4.1/7, mb1mx3.7/25, mbtmp3.9/7, 1C, Error ellipse: s-maj=30.3km s-min=19.0km az=93.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	1.93	238	Pn	Pb	01 05 03.0	-0.9
	44nm,0.3s,baz=26,slow=4.7,SNR=5.6						
DAV				Sn	Sn	01 05 27.2	+0.3
	96nm,0.3s,baz=26,slow=7.9,SNR=5.3						
CGP	Cagayan de Oro	2.54	278	*e*P	Pb	01 05 12.7	-1.5
CGP				*e*S	Sg	01 05 52.5	+3.1
FITZ	Fitzroy Crossi	26.08	183	P	P	01 10 02.5	-0.8
	2.3nm,0.9s,baz=8.3,slow=10.0,SNR=7.0						
WRA	Warramunga Arr	28.73	166	P	P	01 10 28.2	+1.1
	0.8nm,0.6s,baz=346,slow=10,SNR=7.5						
MKAR	Makanchi Array	54.32	323	P	P	01 13 57.0	+0.9
	1.8nm,0.7s,baz=124,slow=8.2,SNR=16						
MKAR				PcP	PcP	01 14 59.2	-1.0
	0.4nm,0.8s,baz=119,slow=5.4,SNR=2.3						
ZALV	Zalesovo Beam	56.98	332	P	P	01 14 14.8	-0.2
	0.9nm,0.7s,baz=111,slow=8.1,SNR=4.8						
ILAR	Eielson Array	80.97	26	P	P	01 16 44.8	+0.7
	0.1nm,0.5s,baz=234,slow=4.3,SNR=4.4						

ARCES	ARCESS Array B	86.55	340	P	P	01 17 12.4	-0.1
	1.7nm,0.8s,baz=96,slow=6.1,SNR=4.2						
FINES	FINESS Array B	88.24	332	P	P	01 17 20.5	-0.3
	1.1nm,0.8s,baz=164,slow=3.4,SNR=7.0						
TORD	Torodi Ar. Bea	121.94	291	PKP	PKPdf	01 23 23.2	-2.0
	0.1nm,0.5s,baz=44,slow=2.1,SNR=4.7						

ISK ***23*** *01:04:49.5, 39°.30N×27°.90E, h6km, MD2.8*
DDA ***23*** *01:04:49.5, 39°.30N×27°.93E, h26km, MD2.9*
ISCJB ***23*** *01:04:50.0±0.5, 39°.30N±0°.02×27°.93E±0°.03, h6km±4km, Error ellipse: s-maj=3.9km s-min=3.1km az=150.6*
CSEM ***23*** *01:04:50.2±0.1, 39°.29N×27°.92E, h8km, MD2.8, Error ellipse: s-maj=2.5km s-min=1.9km az=59.0*

ISC 23 01:04:50.0±1.0, 39°.31N±0°.02×27°.92E±0°.02, h12km±9km, n72, σ0s46/98, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALB	Balikesir	0.34	355	*e*PG	Pg	01 04 56.8	+0.1
BALB				*e*SG	Sb	01 05 02.1	-1.1
BALB	Balikesir	0.34	355	*e*Pg	Pg	01 04 56.8	+0.1
BALB				*e*Sg	Sb	01 05 02.1	-1.1
AKHS	Akhisar	0.43	191	*i*P	Pg	01 04 58.5	0.0
AKHS				*i*S	Sb	01 05 05.9	-0.1
AKHS	Akhisar	0.43	191	*i*P	Pg	01 04 58.5	0.0
AKHS				*i*S	Sb	01 05 05.9	-0.1
BALY	Balya	0.49	332	*i*P	Pg	01 04 60.0	+0.3
BALY				*i*S	Sb	01 05 07.5	-0.3
BALY	Balya	0.49	332	*i*P	Pg	01 05 00.0	+0.3
BALY				*i*S	Sb	01 05 07.5	-0.3
DURS	Dursunbey	0.52	55	*i*P	Pg	01 04 59.8	-0.4
DURS				*i*S	Sg	01 05 07.9	+0.7
DURS	Dursunbey	0.52	55	*i*P	Pg	01 04 59.8	-0.4
DURS				*i*S	Sg	01 05 07.9	+0.7
DST	Dursunbey	0.62	61	*e*PG	Pg	01 05 02.2	+0.2
DST				*e*SG	Sb	01 05 11.4	-0.1
DST	Dursunbey	0.62	61	*e*Pg	Pg	01 05 02.3	+0.2
DST				*e*Sg	Sb	01 05 11.4	-0.1
DEMI	Demirci	0.68	113	*i*P	Pg	01 05 03.0	-0.1
DEMI				*i*S	Sb	01 05 12.7	-0.3
DEMI	Demirci	0.68	113	*i*P	Pg	01 05 03.0	-0.1
DEMI				*i*S	Sb	01 05 12.7	-0.3
GONE	Gonen-Balikesi	0.76	347	*e*PG	Pg	01 05 04.7	0.0
GONE				*e*SG	Sb	01 05 15.8	+0.3
GONE	Gonen-Balikesi	0.76	347	*e*Pg	Pg	01 05 04.7	0.0
GONE				*e*Sg	Sb	01 05 15.8	+0.3
AYVA	Ayvalik	0.95	271	*i*P	Pg	01 05 03.7	-4.6
AYVA				*i*S	Sn	01 05 22.8	+0.2
AYVA	Ayvalik	0.95	271	*i*P	Pg	01 05 03.7	-4.6
AYVA				*i*S	Sn	01 05 22.8	+0.2
MANT	Manisa	0.95	148	*i*P	Pg	01 05 08.3	-0.1
MANT				*i*S	Sg	01 05 20.4	-0.5
MANT	Manisa	0.95	148	*i*P	Pg	01 05 08.3	-0.1
MANT				*i*S	Sg	01 05 20.4	-0.5
KULA	Kula-Manisa	0.98	143	*e*PG	Pg	01 05 08.8	-0.1
KULA	Kula-Manisa	0.98	143	*e*Pg	Pg	01 05 08.8	-0.1
KCTX	Karacabey (Bur	1.02	19	*e*PG	Pg	01 05 09.4	-0.2
KCTX				*e*SG	Sn	01 05 24.2	-0.2
KCTX	Karacabey (Bur	1.02	19	*e*Pg	Pg	01 05 09.4	-0.2
KCTX				*e*Sg	Sn	01 05 24.2	-0.2
BNT	Bandirma	1.05	0	*e*PG	Pg	01 05 09.8	-0.4
BNT	Bandirma	1.05	0	*e*Pg	Pg	01 05 09.8	-0.4
ORLT	Orhaneli	1.06	45	*e*PG	Pn	01 05 10.4	-0.3
ORLT				*e*SG	Sn	01 05 26.1	+0.7
ORLT	Orhaneli	1.06	45	*e*Pg	Pn	01 05 10.4	-0.3
ORLT				*e*Sg	Sn	01 05 26.1	+0.7
BLCB	Balcova	1.15	217	*e*PN	Pb	01 05 11.7	0.0
BLCB	Balcova	1.15	217	*e*Pn	Pb	01 05 11.7	0.0
KRBG	Karabiga-Canak	1.19	337	*e*PN	Pg	01 05 12.6	-0.2
KRBG	Karabiga-Canak	1.19	337	*e*Pn	Pg	01 05 12.6	-0.2
TVSB	Tavsanli	1.21	83	*e*PN	Pg	01 05 13.3	+0.1
TVSB	Tavsanli	1.21	83	*e*Pn	Pg	01 05 13.3	+0.1
GDZ	Gediz	1.23	100	*i*P	Pb	01 05 13.3	0.0
GDZ	Gediz	1.23	100	*i*P	Pb	01 05 13.3	0.0
ULDT	Uludag	1.26	48	*i*P	Pg	01 05 14.6	+0.4
ULDT				*i*S	Sb	01 05 29.5	-0.5
ULDT	Uludag	1.26	48	*i*P	Pg	01 05 14.6	+0.4
ULDT				*i*S	Sb	01 05 29.5	-0.5
MDNY	Mudanya-Bursa	1.30	35	*e*PN	Pb	01 05 14.3	0.0
MDNY	Mudanya-Bursa	1.30	35	*e*Pn	Pb	01 05 14.3	0.0
MRMT	Marmara Adasi	1.32	349	*e*PN	Pg	01 05 15.1	-0.2
MRMT	Marmara Adasi	1.32	349	*e*Pn	Pg	01 05 15.1	-0.2
EZN	Ezine	1.33	293	*e*PN	Pb	01 05 14.9	0.0
EZN	Ezine	1.33	293	*e*Pn	Pb	01 05 15.0	0.0
LPK	Lapseki	1.39	320	*e*PN	Pb	01 05 15.9	+0.1
LPK	Lapseki	1.39	320	*e*Pn	Pb	01 05 15.9	+0.1
ARMT	Armutlu	1.45	30	*e*PN	Pg	01 05 17.6	-0.3
ARMT	Armutlu	1.45	30

Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.81**	**192**	P	Pn	02 47 08.8	0.0
	0.5nm,0.3s,baz=13,slow=12,SNR=23						
CTA	**Charters Tower**	**19.26**	**156**	P	P	02 47 25.7	+0.2
	3.3nm,0.3s,baz=334,slow=12,SNR=5.7						
ASAR	**Alice Springs**	**21.52**	**191**	P	P	02 47 50.0	-0.1
	3.9nm,0.8s,baz=22,slow=10,SNR=30						
MKAR	**Makanchi Array**	**69.22**	**323**	P	P	02 54 08.1	0.0
	0.2nm,0.5s,baz=126,slow=7.3,SNR=2.8						

NDI 23 02:44:32.7±2.0, 33.91N×74.35E, h10km, ML3.1, 1C-1D, Southwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**1.87**	**142**	*e*PKP	Pn	02 45 03.9	-0.9
THN				*ex*	x	02 45 25.0	
DLH	**Dalhousie**	**1.93**	**135**	*e*PKP	Pn	02 45 07.0	+1.1
DLH				*e*S	Sn	02 45 30.0	-0.4
AYAN	**Aya Nagar**	**5.92**	**156**	*ex*	x	02 46 56.2	
KHET	**Khetri**	**5.95**	**167**	*e*S	Sn	02 47 05.7	-3.6
KHET				AML	AML	02 47 09.8	
	comp=N,86nm,0.2s						
KHET				AML	AML	02 47 10.2	
	comp=E,132nm,0.1s						
KUDL	**Kundal**	**6.04**	**162**	*e*S	Sn	02 47 05.9	-5.4
KUDL				AML	AML	02 47 48.6	
	comp=N,5.7nm,0.4s						
KUDL				AML	AML	02 47 54.6	
	comp=E,6.1nm,0.4s						
KK31	**Karatay Array**	**9.65**	**343**	‖Pn	Pn	02 46 59.8	+8.1
	comp=E,0.5nm,0.2s,baz=138,slow=13,SNR=6.5						
KK31				⇑Sn	Sn	02 48 45.1	+4.8
	comp=E,0.5nm,0.2s,baz=142,slow=23,SNR=3.8						

IDC 23 02:44:47.6±1.5, 3.15N×83.94W, h0km, mb3.4/6, mb1 3.8/6, mb1mx3.7/20, mbtmp3.4/6, MS3.4/9, Ms1 3.4/9, ms1mx3.2/21, Error ellipse: s-maj=85.1km s-min=22.2km az=51.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**9.74**	**80**	Pn	Pn	02 47 18.0	+8.4
	0.9nm,0.3s,baz=288,slow=23,SNR=6.3						
ROSC				LR	LR	02 50 30.2	
	comp=Z,103nm,21.4s,baz=195,slow=35						
NNA	**Nana**	**16.61**	**155**	LR	LR	02 54 25.3	
	comp=Z,115nm,20.7s,baz=50,slow=35						
TEIG	**Tepich**	**17.49**	**346**	LR	LR	02 55 19.3	
	comp=Z,192nm,18.5s,baz=82,slow=36						
LPAZ	**La Paz**	**24.85**	**141**	P	P	02 50 12.8	0.0
	2.1nm,0.7s,baz=342,slow=8.8,SNR=7.7						
TXAR	**Lajitas Array**	**32.08**	**326**	P	P	02 51 17.0	+0.4
	0.1nm,0.6s,baz=129,slow=7.1,SNR=2.4						
TXAR				LR	LR	03 03 30.5	
	comp=Z,54nm,21.7s,baz=255,slow=35						
CPUP	**Villa Florida**	**39.01**	**140**	LR	LR	03 09 06.7	
	comp=Z,52nm,19.8s,baz=139,slow=37						
BDFB	**Brasilia**	**40.15**	**119**	LR	LR	03 08 16.9	
	comp=Z,89nm,20.3s,baz=360,slow=35						
PFO	**Pinyon Flat Ob**	**42.88**	**319**	LR	LR	03 09 10.1	
	comp=Z,58nm,18.0s,baz=131,slow=34						
PDAR	**Pinedale Array**	**45.58**	**334**	P	P	02 53 09.5	-0.3
	0.4nm,0.6s,baz=66,slow=4.4,SNR=2.9						
PDAR				LR	LR	03 13 19.8	
	comp=Z,79nm,19.9s,baz=90,slow=38						
NVAR	**Mina Array Bea**	**47.07**	**323**	P	P	02 53 21.8	+0.2
	0.5nm,0.6s,baz=142,slow=8.4,SNR=4.1						
ULM	**Lac du Bonnet**	**48.01**	**350**	LR	LR	03 14 51.6	
	comp=Z,48nm,18.2s,baz=0.6,slow=38						
YKA	**Yellowknife Ar**	**63.44**	**345**	P	P	02 55 18.6	-0.4
	0.1nm,0.6s,baz=150,slow=5.7,SNR=3.4						
ILAR	**Eielson Array**	**75.88**	**337**	P	P	02 56 41.7	+5.9
	0.2nm,0.7s,baz=122,slow=4.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**85.05**	**77**	P	P	02 57 26.2	+0.2
	0.5nm,0.8s,baz=267,slow=6.1,SNR=5.0						
WRA	**Warramunga Arr**	**139.10**	**243**	PKP	PKPdf	03 04 15.4	-2.1
	0.3nm,0.8s,baz=98,slow=2.4,SNR=3.1						

ISCJB ***23*** *02:59:26.5±0.5, 24.48S±0.03×178.85E±0.04, h558km±6km, mb5.0/114, Error ellipse: s-maj=5.3km s-min=4.7km az=11.3*

MOS ***23*** *02:59:26.6±1.3, 24.29S×178.84E, h550km, mb5.2/12, Error ellipse: s-maj=9.8km s-min=8.7km az=38.4*

IDC ***23*** *02:59:27.0±0.4, 24.42S×178.84E, h550km±3km, mb4.6/33, mb1 4.7/34, mb1mx4.7/34, mbtmp4.6/34, Error ellipse: s-maj=7.0km s-min=6.4km az=44.0*

BJI ***23*** *02:59:27.2, 24.04S×178.86E, h552km, mB5.1/31, mb5.1/49*

DJA ***23*** *02:59:27.7±2.2, 24°S±6°×17°9E±1°1, h562km±20km, MS5.3/28, mB5.8/14, mb5.5/28, Mw(mB)5.3/14*

TEH ***23*** *02:59:28.0, 24.37S×178.78E, h561km, ML5.1*

NEIC ***23*** *02:59:28.0±0.5, 24.38S×178.85E, h566km±5km, mb5.1/60, MW5.5, Error ellipse: s-maj=5.3km s-min=4.6km az=173.0, Moment Tensor Solution. s8 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.00; $M_{\theta\theta}$=0.41; $M_{\phi\phi}$=-0.42; $M_{r\theta}$=-0.84; $M_{\theta\phi}$=-0.19; $M_{\phi r}$=-1.72; Best double couple: M_0=2.00000×10^{17} NP1: ϕ_s=321.00000°, δ7.00000°, λ23.00000°. NP2: ϕ_s=208.00000°, δ87.00000°, λ97.00000°. Principal axes: T 1.7400, Plg47.0000°, Azm124.0000°; N 0.4000, Plg6.0000°, Azm27.0000°; P -2.1400, Plg41.0000°, Azm291.0000°;*

SZGRF ***23*** *02:59:30.9, 23.64S×179.48W, h585km, South of Fiji Islands*

GCMT ***23*** *02:59:30.7±0.2, 24.40S×178.99E, h561km±1km, MW5.5, Moment Tensor Solution. s68,c94; Moment tensor: Scale 10^{17}Nm; M_{rr}=0.15±.04; $M_{\theta\theta}$=0.05±.07; $M_{\phi\phi}$=-0.19±.06; $M_{r\theta}$=-1.07±.06; $M_{\theta\phi}$=0.15±.05; $M_{\phi r}$=-1.60±.05; Best double couple: M_0=1.90000×10^{17} NP1: ϕ_s=314.00000°, δ5.00000°, λ11.00000°. NP2: ϕ_s=213.00000°, δ89.00000°, λ95.00000°. Principal axes: T 2.0100, Plg46.0000°, Azm128.0000°; N -0.1600, Plg5.0000°, Azm33.0000°; P -1.8500, Plg44.0000°, Azm298.0000°; Data Used: II IU IC G CN.*

ISC 23 02:59:27.4±0.2, 24.47S±0.04×178.88E±0.04, h560km±2km, h560km: pP-P,n762,σ1951/987, mb5.1/113, 75C-80D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.55**	**150**	*e*P	**P**	**03 01 03.3**	**+0.9**
RAO				S	**S**	**03 02 20.1**	**0.0**
RAO	**Raoul Island**	**5.55**	**150**	P	**P**	**03 01 03.1**	**+0.7**
	1μm,0.3s,baz=4.7,slow=3.8,SNR=58						
RAO				S	**S**	**03 02 20.1**	**0.0**
	99nm,0.3s,baz=102,slow=20,SNR=2.3						
MSVF	**Nonsavu**	**6.75**	**353**	*e*P	**P**	**03 01 12.5**	**-1.1**
MSVF				pmax	pmax		
	comp=Z,147nm,1.1s						
MSVF	**Nonsavu**	**6.75**	**353**	*e*P	**P**	**03 01 12.5**	**-1.1**
	comp=Z,147nm,1.1s						
MSVF	**Nonsavu**	**6.75**	**353**	P	**P**	**03 01 12.0**	**-1.6**
	comp=Z,712nm,1.1s,SNR=12						
OUZ	**Omahuta**	**11.65**	**202**	*e*P	P	03 02 05.7	+3.5
	comp=Z,78nm,0.9s						
DZM	**Mont Dzumac**	**11.68**	**279**	*e*P	**P**	**03 02 05.0**	**+2.2**
	comp=Z,589nm,1.1s						
NOUC	**Port Laguerre**	**11.80**	**279**	*e*P	P	03 02 08.8	+4.8
MXZ	**Matakaoa Point**	**13.06**	**182**	PN	**P**	**03 02 15.4**	**-1.3**
MXZ				SN	S	03 04 29.2	-6.9
AFI	**Afiamalu**	**13.71**	**42**	P	P	03 02 17.4	-6.4
AFI				S	S	03 04 40.2	-8.7
AFI	**Afiamalu**	**13.71**	**42**	P	P	03 02 17.4	-6.4
	comp=Z,2.0nm,0.3s,baz=68,slow=19,SNR=3.8						
AFI				S	S	03 04 40.2	-8.7
	comp=Z,3.0nm,0.3s,baz=23,slow=18,SNR=2.2						
URZ	**Urewera**	**13.83**	**186**	*e*P	**P**	**03 02 22.4**	**-2.2**
	comp=Z,152nm,0.8s						
URZ				S	**S**	**03 04 44.5**	**-5.8**
URZ	**Urewera**	**13.83**	**186**	P	**P**	**03 02 21.8**	**-2.8**
	comp=Z,7.5nm,0.3s,baz=357,slow=5.4,SNR=30						
URZ				S	**S**	**03 04 44.5**	**-5.8**
	comp=Z,22nm,0.3s,baz=214,slow=18,SNR=16						
MWZ	**Matawai**	**13.87**	**184**	PN	**P**	**03 02 22.7**	**-2.4**
MWZ				SN	**S**	**03 04 45.4**	**-5.8**
RAHZ	**Arahi**	**14.48**	**186**	PN	**P**	**03 02 32.3**	**+1.0**
RAHZ				SN	**S**	**03 04 57.9**	**-4.8**
NMHZ	**Naumai**	**14.69**	**186**	PN	**P**	**03 02 33.7**	**+0.2**
NMHZ				SN	**S**	**03 05 01.8**	**-4.7**
BKZ	**Black Stump Fm**	**14.79**	**187**	*e*PN	P	03 02 31.1	-3.3
BKZ				SN	**S**	**03 05 03.7**	**-4.6**
MCHZ	**McNeill Hill**	**15.04**	**187**	SN	**S**	**03 05 09.5**	**-3.2**
BFZ	**Birch Farm**	**16.32**	**187**	SN	**S**	**03 05 28.8**	**-5.1**
MRZ	**Mangatainoka R**	**16.38**	**189**	SN	**S**	**03 05 29.2**	**-5.7**
SNZO	**South Karori**	**17.15**	**191**	*e*P	**P**	**03 02 55.5**	**-1.3**
	comp=Z,346nm,1.3s						
KHZ	**Kahutara**	**18.44**	**193**	*e*P	**P**	**03 03 08.8**	**+0.2**
	comp=Z,264nm,1.2s						
RAR	**Rarotonga**	**19.93**	**85**	P	**P**	**03 03 21.7**	**-0.8**
RAR	**Rarotonga**	**19.93**	**85**	P	**P**	**03 03 21.7**	**-0.8**
	comp=Z,2.8nm,0.3s,baz=270,slow=6.6,SNR=6.7						
RPZ	**Rata Peaks**	**20.24**	**197**	*e*P	**P**	**03 03 25.2**	**+0.2**
	comp=Z,409nm,2.0s						
RPZ				S	**S**	**03 06 36.8**	**-0.6**
RPZ	**Rata Peaks**	**20.24**	**197**	P	**P**	**03 03 23.7**	**-1.3**
	comp=Z,41nm,0.5s,baz=22,slow=5.4,SNR=6.4						
RPZ				S	**S**	**03 06 36.8**	**-0.6**
	comp=Z,50nm,0.9s,baz=28,slow=18,SNR=3.8						
HNR	**Honiara**	**23.44**	**306**	*e*P	**P**	**03 03 52.8**	**-1.2**
	comp=Z,518nm,0.7s						
HNR				ScP	**ScP**	**03 10 06.8**	**+1.3**
HNR	**Honiara**	**23.44**	**306**	P	**P**	**03 03 52.6**	**-1.4**
	comp=Z,596nm,0.8s,baz=195,slow=2.5,SNR=30						
HNR				ScP	**ScP**	**03 10 06.8**	**+1.3**
	comp=Z,39nm,0.5s,baz=117,slow=6.8,SNR=5.9						
ARMA	**Armidale**	**24.87**	**250**	*e*P	**P**	**03 04 08.8**	**+2.2**
	comp=Z,124nm,0.8s						
EIDS	**Eidsvold**	**25.21**	**262**	*e*P	**P**	**03 04 10.9**	**+1.3**
	comp=Z,304nm,1.1s						
CAN	**Canberra**	**27.97**	**240**	*e*P	**P**	**03 04 35.6**	**+1.8**
CAN				pmax	pmax		
	comp=Z,271nm,1.2s						
CAN	**Canberra**	**27.97**	**240**	*e*P	**P**	**03 04 35.6**	**+1.8**
	comp=Z,271nm,1.2s						
PAE	**Paea**	**30.15**	**83**	*e*P	**P**	**03 04 52.3**	**-0.4**
	comp=Z,23nm,1.1s						
PPT2	**Papeete2**	**30.18**	**83**	*e*P	**P**	**03 04 52.9**	**-0.2**
	comp=Z,127nm,1.2s						
PPT	**Papeete**	**30.18**	**83**	P	**P**	**03 04 53.3**	**+0.2**
PPT				ScP	**ScP**	**03 10 28.5**	**+2.5**
PPT	**Papeete**	**30.18**	**83**	P	**P**	**03 04 53.3**	**+0.2**
	comp=Z,70nm,0.9s,baz=216,slow=0.5,SNR=6.7						
PPT				ScP	**ScP**	**03 10 28.5**	**+2.5**
	comp=Z,81nm,1.1s,baz=285,slow=6.5,SNR=5.9						
TVO	**Taravao**	**30.41**	**84**	*e*P	**P**	**03 04 54.7**	**-0.4**
	comp=Z,148nm,1.2s						
CTA	**Charters Tower**	**30.47**	**272**	P	**P**	**03 04 56.8**	**+1.3**
CTA				S	**S**	**03 09 18.9**	**+1.0**
CTA				ScP	**ScP**	**03 10 30.2**	**+3.3**
CTA	**Charters Tower**	**30.47**	**272**	P	**P**	**03 04 56.8**	**+1.3**
	comp=Z,528nm,0.6s,baz=98,slow=10,SNR=983						
CTA				S	**S**	**03 09 18.9**	**+1.0**
	comp=Z,9.8nm,0.8s,baz=11,slow=22,SNR=10.0						
CTA				ScP	**ScP**	**03 10 30.2**	**+3.3**
	comp=Z,76nm,1.0s,baz=117,slow=3.0,SNR=17						
CTAO	**Charters Tower**	**30.47**	**272**	*e*P	**P**	**03 04 56.4**	**+0.9**
CTAO	**Charters Tower**	**30.47**	**272**	*e*P	**P**	**03 04 56.4**	**+0.9**
	comp=Z,503nm,0.6s						
TAU	**Tasmania Unive**	**31.80**	**227**	*e*P	**P**	**03 05 07.6**	**+1.1**
TAU				pmax	pmax		
	comp=Z,51nm,0.6s						
TAU	**Tasmania Unive**	**31.80**	**227**	*e*P	**P**	**03 05 07.6**	**+1.1**
	comp=Z,51nm,0.6s						
TAU	**Tasmania Unive**	**31.80**	**227**	P	**P**	**03 05 08.0**	**+1.5**
	comp=Z,754nm,0.6s,SNR=14						
PMOR	**Pomariorio Ree**	**32.59**	**79**	*e*P	**P**	**03 05 13.2**	**-0.3**
	comp=Z,228nm,1.2s						
STKA	**Stephens Creek**	**33.56**	**249**	*e*P	**P**	**03 05 22.3**	**+0.6**
	comp=Z,30nm,0.8s						
STKA				ScP	**ScP**	**03 10 40.0**	**+2.6**
STKA	**Stephens Creek**	**33.56**	**249**	P	**P**	**03 05 22.9**	**+1.3**
	comp=Z,109nm,0.6s,baz=90,slow=9.1,SNR=224						
STKA				ScP	**ScP**	**03 10 40.0**	**+2.6**
	comp=Z,28nm,0.9s,baz=31,slow=3.6,SNR=6.3						
PMG	**Port Moresby**	**33.73**	**291**	*e*P	**P**	**03 05 23.3**	**0.0**
	comp=Z,517nm,0.9s						
PMG				ScP	**ScP**	**03 10 41.6**	**+3.3**
PMG	**Port Moresby**	**33.73**	**291**	P	**P**	**03 05 23.6**	**+0.4**
	comp=Z,651nm,0.9s,comp=Z,5μm						
PMG	**Port Moresby**	**33.73**	**291**	P	**P**	**03 05 23.6**	**+0.4**
	comp=Z,436nm,0.8s,baz=98,slow=4.9,SNR=172						
PMG				ScP	**ScP**	**03 10 41.6**	**+3.3**
	comp=Z,83nm,1.1s,baz=46,slow=3.9,SNR=16						
COEN	**Coen**	**35.21**	**281**	*e*P	**P**	**03 05 36.5**	**+0.9**
	comp=Z,2μm,0.8s						
BBOO	**Buckleboo**	**38.28**	**248**	*e*P	**P**	**03 06 00.6**	**0.0**
	comp=Z,3μm,0.8s						
AS31	**Alice Springs**	**40.94**	**262**	*e*P	**P**	**03 06 22.3**	**+0.3**
ASAR	**Alice Springs**	**40.94**	**262**	P	**P**	**03 06 22.6**	**+0.5**
ASAR				ScP	**ScP**	**03 11 07.2**	**+1.6**
ASAR				S	**S**	**03 11 51.3**	**-2.9**
ASAR	**Alice Springs**	**40.94**	**262**	P	**P**	**03 06 22.6**	**+0.5**
	comp=Z,295nm,1.0s,baz=92,slow=8.4,SNR=720						
ASAR				ScP	**ScP**	**03 11 07.2**	**+1.6**
	comp=Z,9.8nm,0.7s,baz=111,slow=4.3,SNR=8.6						
ASAR				S	**S**	**03 11 51.3**	**-2.9**
	comp=Z,12nm,0.9s,baz=99,slow=15,SNR=9.3						
WRAB	**Tennant Creek**	**41.35**	**267**	*e*P	**P**	**03 06 25.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,335nm,0.9s						
WRAB	**Tennant Creek**	**41.35**	**267**	*e*P	**P**	**03 06 25.0**	**-0.3**
	comp=Z,335nm,0.9s						
WRAB	**Tennant Creek**	**41.35**	**267**	P	**P**	**03 06 25.0**	**-0.3**
	comp=Z,2μm,0.9s						
WRA	**Warramunga Arr**	**41.35**	**267**	P	**P**	**03 06 25.1**	**-0.2**
WRA				ScP	**ScP**	**03 11 09.7**	**+2.3**
WRA				S	**S**	**03 11 57.6**	**-2.7**
WRA	**Warramunga Arr**	**41.35**	**267**	P	**P**	**03 06 25.1**	**-0.2**
	comp=Z,366nm,0.9s,baz=104,slow=8.1,SNR=738						
WRA				ScP	**ScP**	**03 11 09.7**	**+2.3**
	comp=Z,11nm,0.9s,baz=102,slow=4.1,SNR=80						
WRA				S	**S**	**03 11 57.6**	**-2.7**
	comp=Z,30nm,1.2s,baz=102,slow=15,SNR=9.6						
FORT	**Forrest**	**45.16**	**250**	*e*P	**P**	**03 06 54.5**	**-0.3**
	comp=Z,581nm,0.6s						
FITZ	**Fitzroy Crossi**	**49.77**	**266**	*e*P	**P**	**03 07 29.7**	**+0.2**
	comp=Z,208nm,0.8s						
FITZ				ScP	**ScP**	**03 11 45.5**	**+3.1**
FITZ				S	**S**	**03 13 57.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**49.77**	**266**	ScP	**ScP**	**03 11 45.5**	**+3.1**
	comp=Z,19nm,0.9s,baz=152,slow=2.1,SNR=6.7						
FITZ				S	**S**	**03 13 57.8**	**-0.1**
	comp=Z,4.0nm,0.8s,baz=234,slow=18,SNR=9.9						
GUMO	**Guam**	**50.34**	**315**	*e*P	**P**	**03 07 32.1**	**-1.4**
	comp=Z,303nm,1.2s						
GUMO	**Guam**	**50.34**	**315**	P	**P**	**03 07 32.8**	**-0.7**
	comp=Z,81nm,0.5s,baz=174,slow=6.6,SNR=9.3						
VNDA	**Vanda**	**53.73**	**185**	P	**P**	**03 07 58.5**	**+1.5**
VNDA				ScP	**ScP**	**03 11 59.0**	**+0.5**
VNDA	**Vanda**	**53.73**	**185**	P	**P**	**03 07 58.5**	**+1.5**
	comp=Z,19nm,0.8s,baz=358,slow=7.7,SNR=45						
VNDA				ScP	**ScP**	**03 11 59.0**	**+0.5**
	comp=Z,8.6nm,0.8s,baz=333,slow=3.6,SNR=8.1						
SBA	**Scott Base**	**53.75**	**183**	*e*P	**P**	**03 07 59.3**	**+2.2**
SBA				*e*		03 08 55.4	
SBA				pmax	pmax		
	comp=Z,111nm,0.9s						
SBA	**Scott Base**	**53.75**	**183**	*e*P	**P**	**03 07 59.3**	**+2.2**
	comp=Z,111nm,0.9s						
SBA				*e*PcP	**PcP**	**03 08 55.4**	**+1.3**
SBA				*e*ScP	**ScP**	**03 11 58.7**	**+0.1**
NWAO	**Narrogin (SRO)**	**54.07**	**246**	P	**P**	**03 07 59.9**	**-0.3**
NWAO	**Narrogin (SRO)**	**54.07**	**246**	P	**P**	**03 07 59.9**	**-0.3**
	comp=Z,29nm,0.5s,baz=120,slow=6.7,SNR=23						
MBWA	**Marble Bar**	**54.27**	**261**	*e*P	**P**	**03 08 01.2**	**-0.5**
	comp=Z,165nm,1.1s						
MBWA				*e*pP	**pP**	**03 09 48.3**	**0.0**
MBWA	**Marble Bar**	**54.27**	**261**	P	**P**	**03 08 01.9**	**+0.2**
	SNR=5.4						
CASY	**Casey**	**59.15**	**206**	*e*P	**P**	**03 08 34.2**	**-0.1**
	comp=Z,42nm,0.8s						
KAPI	**Kappang**	**59.90**	**279**	*e*P	**P**	**03 08 38.7**	**-1.5**
	comp=Z,204nm,1.4s						
KAPI	**Kappang**	**59.90**	**279**	P	**P**	**03 08 39.5**	**-0.8**
	SNR=17						
KAPI	**Kappang**	**59.90**	**279**	P	**P**	**03 08 39.5**	**-0.8**
	comp=Z,470nm,1.2s,SNR=10						
KAPI	**Kappang**	**59.90**	**279**	P	**P**	**03 08 39.0**	**-1.2**
	comp=Z,103nm,1.6s,comp=Z,1μm						
KAPI	**Kappang**	**59.90**	**279**	P	**P**	**03 08 39.2**	**-1.1**
	comp=Z,36nm,0.9s,baz=132,slow=3.6,SNR=24						
DAV	**Davao City (W)**	**60.66**	**294**	P	**P**	**03 08 44.5**	**-0.7**
DAV	**Davao City (W)**	**60.66**	**294**	P	**P**	**03 08 44.5**	**-0.7**
	comp=Z,207nm,0.4s,baz=57,slow=6.3,SNR=4.9						
QSPA	**South Pole Qui**	**65.61**	**180**	*e*P	**P**	**03 09 17.3**	**+1.0**
	comp=Z,111nm,0.9s						
QSPA				S	**S**	**03 17 20.4**	**+2.4**
QSPA	**South Pole Qui**	**65.61**	**180**	P	**P**	**03 09 17.7**	**+1.4**
	comp=Z,132nm,0.6s,baz=20,slow=1.3,SNR=1150						
QSPA				S	**S**	**03 17 20.4**	**+2.4**
	comp=Z,7.5nm,1.1s,baz=337,slow=23,SNR=26						
MYLDM	**Lahad Datu**	**65.70**	**288**	P	**P**	**03 09 19.4**	**+1.9**
TSM	**Tawau**	**65.81**	**287**	P	**P**	**03 09 19.0**	**+0.7**
SDKM	**Sandakan**	**67.05**	**288**	P	**P**	**03 09 25.6**	**-0.4**
KDM	**Kudat**	**67.99**	**289**	P	**P**	**03 09 32.6**	**+1.0**
KKM	**Kota Kinabalu**	**68.10**	**288**	*e*P	**P**	**03 09 31.8**	**-0.7**
	comp=Z,136nm,1.0s						
KKM	**Kota Kinabalu**	**68.10**	**288**	P	**P**	**03 09 32.1**	**-0.3**
TGY	**Tagaytay City**	**68.32**	**298**	P	**P**	**03 09 33.1**	**-0.5**
TGY	**Tagaytay City**	**68.32**	**298**	P	**P**	**03 09 33.1**	**-0.5**
	comp=Z,202nm,0.3s,baz=175,slow=13,SNR=5.2						
JHJ	**Hachijo jima 2**	**68.32**	**325**	P	**P**	**03 09 33.2**	**0.0**
	comp=Z,47nm,0.4s,baz=66,slow=23,SNR=7.2						
BTM	**Bintulu**	**69.51**	**284**	P	**P**	**03 09 41.5**	**+0.7**
SBUM	**Sibu**	**69.93**	**282**	P	**P**	**03 09 43.7**	**+0.4**
JOW	**Kunigami**	**70.62**	**313**	*e*P	**P**	**03 09 47.0**	**-0.1**
	comp=Z,48nm,0.9s						
JOW				*e*PP	**PP**	**03 12 31.5**	**-2.4**
KSM	**Kuching**	**71.20**	**281**	*e*P	**P**	**03 09 50.5**	**-0.3**
	comp=Z,137nm,0.8s						
KSM	**Kuching**	**71.20**	**281**	P	**P**	**03 09 51.0**	**+0.2**
MJAR	**Matsushiro Arr**	**71.80**	**326**	P	**P**	**03 09 53.2**	**-0.5**
MJAR				pP	**pP**	**03 11 48.4**	**-0.9**
MJAR	**Matsushiro Arr**	**71.80**	**326**	P	**P**	**03 09 53.2**	**-0.5**
	comp=Z,57nm,0.9s,baz=167,slow=5.9,SNR=124						
MJAR				pP	**pP**	**03 11 48.4**	**-0.9**
	comp=Z,3.2nm,1.0s,baz=155,slow=5.3,SNR=2.7						
MAJO	**Matsushiro**	**71.80**	**326**	*e*P	**P**	**03 09 53.2**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,92nm,0.9s						
MAJO	**Matsushiro**	**71.80**	**326**	*e*P	**P**	**03 09 53.2**	**-0.6**
	comp=Z,92nm,0.9s						
MAT	**Matsushiro**	**71.80**	**326**	P	**P**	**03 09 53.4**	**-0.4**
MAT				S	S	03 18 23.2	-6.6
TWG	**Pinlang**	**73.20**	**305**	*e*P	**P**	**03 09 59.5**	**-2.6**
	comp=Z,91nm,0.9s						
JNU	**Nakatsue**	**73.29**	**319**	*e*P	**P**	**03 10 01.8**	**-0.7**
	comp=Z,25nm,0.9s						
JNU	**Nakatsue**	**73.29**	**319**	P	**P**	**03 10 02.0**	**-0.4**
	comp=Z,39nm,0.8s,baz=95,slow=4.0,SNR=33						
NACB	**Ninganchiao**	**73.62**	**307**	*e*P	**P**	**03 10 03.2**	**-1.3**
	comp=Z,124nm,1.1s						
TPUB	**Ta-pu**	**73.81**	**305**	*e*P	**P**	**03 10 03.7**	**-2.0**
	comp=Z,67nm,0.8s						
SSLB	**Suanglung**	**73.86**	**306**	*e*P	**P**	**03 10 03.7**	**-2.2**
	comp=Z,52nm,0.9s						
YHNB	**Yeheng**	**74.08**	**307**	*e*P	**P**	**03 10 06.2**	**-1.0**
	comp=Z,76nm,1.1s						
TATO	**Taipei**	**74.18**	**307**	*e*P	**P**	**03 10 06.8**	**-0.8**
	comp=Z,237nm,1.5s						
ASAJ	**Asahikawa**	**75.92**	**334**	*e*P	**P**	**03 10 17.1**	**+0.2**
	comp=Z,41nm,1.3s						
ASAJ	**Asahikawa**	**75.92**	**334**	P	**P**	**03 10 18.6**	**+1.7**
	comp=Z,54nm,1.1s,baz=231,slow=7.4,SNR=28						
MAW	**Mawson**	**76.86**	**201**	*e*P	**P**	**03 10 22.5**	**+0.7**
	comp=Z,1.4nm,0.4s						
MAW	**Mawson**	**76.86**	**201**	P	**P**	**03 10 22.8**	**+1.0**
	comp=Z,14nm,0.5s,baz=131,slow=6.9,SNR=65						
MYKOM	**Kota Tinggi**	**77.15**	**278**	P	**P**	**03 10 24.6**	**+0.3**
FX1	**Attu Island--F**	**77.19**	**356**	P	**P**	**03 10 23.2**	**-0.4**
FX1	**Attu Island--F**	**77.19**	**356**	P	**P**	**03 10 23.2**	**-0.4**
	comp=Z,12nm,0.7s,baz=105,slow=22,SNR=7.9						
KGM	**Kluang**	**77.72**	**278**	P	**P**	**03 10 28.0**	**+0.5**
KSRS	**Korea Array**	**78.04**	**321**	P	**P**	**03 10 29.2**	**+0.6**
	comp=Z,22nm,0.8s,baz=136,slow=5.6,SNR=70						
KSRS				PP	**PP**	**03 13 31.4**	**-4.0**
	comp=Z,2.0nm,1.0s,baz=132,slow=10,SNR=3.0						
KSAR	**Wonju Array Be**	**78.05**	**321**	P	**P**	**03 10 29.2**	**+0.6**
KSAR				PP	**PP**	**03 13 31.4**	**-4.2**
YSS	**Yuzh-Sakhalins**	**78.22**	**336**k	*i*P	**P**	**03 10 31.3**	**+2.0**
YSS				*e*PP	**pP**	**03 12 28.4**	**+0.8**
YSS				*e*S	S	03 19 45.0	+6.

comp=Z,120nm,1.0s
DL2 Dalían 82.71 319 ⇓P P 03 10 53.3 +0.5
DL2 pP **pP** 03 12 49.9 -2.9
DL2 sP **sP** 03 13 48.3 -1.2
DL2 S **SKSac** 03 20 19.5 -1.4
DL2 pmax pmax
comp=Z,48nm,1.1s
DL2 pmax pmax
comp=Z,140nm,4.5s
SAO San Andreas Ge 82.88 44 *e*P P 03 10 54.4 +0.7
SAO pmax pmax
comp=Z,10.0nm,0.9s
SAO San Andreas Ge 82.88 44 *e*P P 03 10 54.4 +0.7
comp=Z,10nm,0.9s
CHBT CHBT 83.32 287 P P 03 10 57.3 +0.9
comp=Z,59nm,1.0s,comp=Z,3µm
DECC Green Verdugo 83.43 48 ⇓P P 03 10 57.5 +0.8
baz=84
SNY Shenyang 83.46 322 ⇓P P 03 10 56.5 0.0
SNY pP **pP** 03 12 54.1 -2.6
SNY sP **sP** 03 13 54.1 +0.7
SNY S **SKSac** 03 20 23.0 -2.6
SNY pmax pmax
comp=Z,30nm,0.8s
SNY pmax pmax
comp=Z,260nm,4.3s
109C Camp Elliot, M 83.49 50 ⇓P P 03 10 57.9 +1.0
baz=84
ARVC Arvin 83.60 47 ⇑P P 03 10 57.7 +0.3
baz=84
CN2 Changchun 83.75 324 *e*P P 03 10 58.3 +0.4
CN2 *e*pP **pP** 03 12 55.8 -2.4
CN2 *e*S **S** 03 20 39.3 +4.7
CN2 pmax pmax
comp=Z,20nm,1.1s
CN2 pmax pmax
comp=Z,200nm,3.0s
MURC Murrieta 83.83 49 ⇑P P 03 10 58.8 +0.2
baz=84
VES Vestal, Richgr 83.85 46 P P 03 10 59.2 +0.6
baz=84,SNR=7.3
BFSC Mount Baldy Ra 83.88 48 P P 03 10 59.5 +0.5
baz=84,SNR=6.9
MONP Monument Peak 83.97 50 P P 03 11 00.7 +1.2
baz=84,SNR=18
EDW2 Edwards Air Fo 84.02 48 P P 03 11 00.5 +0.9
baz=84,SNR=12
DVTC Desert V Tower 84.06 50 ⇓P P 03 11 01.1 +1.3
baz=84,SNR=5.1
SNAA Sanae 84.11 179 *e*P P 03 10 58.9 -0.5
SNAA Sanae 84.11 179 *e*pP pP 03 13 04.5 +4.7
SNAA Sanae 84.11 179 *e*sP sP 03 14 01.4 +4.7
SNAA Sanae 84.11 179 *e*P P 03 10 58.6 -0.9
comp=Z,32nm,1.1s
ISA Isabella 84.15 47 ⇓P P 03 11 01.3 +1.1
baz=84,SNR=28
PFO Pinyon Flat Ob 84.35 49 P P 03 11 02.0 +0.8
PFO Pinyon Flat Ob 84.35 49 P P 03 11 02.0 +0.8
comp=Z,8.4nm,1.0s,baz=307,slow=0.8,SNR=8.6
PFO Pinyon Flat Ob 84.35 49 ⇓P P 03 11 02.3 +1.0
baz=84,SNR=5.9
SWSC Sam W. Stewart 84.43 50 ⇑P P 03 11 02.8 +1.3
baz=85,SNR=9.9
KLR Kul'dur 84.53 331 *e*P P 03 10 59.2 -2.4
KLR *e*S S 03 20 27.5 -14
LRMC Laurel Mountai 84.57 47 ⇑P P 03 11 03.2 +0.9
baz=85
MAIT Maitri 84.58 184 *e*P P 03 10 51.4 -10
BELC Belle Mtn. Jos 84.88 49 P P 03 11 05.0 +1.1
baz=85,SNR=16
VNA1 Neumayer--Stat 85.01 178 *e*P P 03 11 03.9 +0.2
MPMC Manual Prospec 85.03 47 P P 03 11 05.4 +0.7
baz=85,SNR=10
GSC Goldstone 85.06 48 P P 03 11 05.4 +0.8
baz=85,SNR=12
BC3 Big Chuckawall 85.07 50 P P 03 11 06.1 +1.3
baz=85,SNR=7.3
HEC Hector,Ludlow 85.12 48 ⇑P P 03 11 06.0 +1.0
baz=85,SNR=15
YBH Yreka Blue Hor 85.17 40 P P 03 11 06.2 +1.2
YBH Yreka Blue Hor 85.17 40 P P 03 11 06.2 +1.2
comp=Z,4.7nm,0.8s,baz=170,slow=6.2,SNR=7.3
GLA Glamis 85.17 51 P P 03 11 06.8 +1.6
baz=85,SNR=11
BEKR Beckworth 85.44 42 *e*P P 03 11 06.5 +0.1
comp=Z,16nm,1.6s
IRM Iron Mountain 85.56 49 P P 03 11 08.3 +1.3
baz=86,SNR=17
GRAC Grapevine Rang 85.65 46 ⇑P P 03 11 08.5 +1.1
baz=86
FURC Furnace Creek, 85.69 47 ⇑P P 03 11 08.5 +1.0
baz=86
TUQ Turquoise Moun 85.73 48 ⇑P P 03 11 09.1 +1.1
baz=86
SHOC Shoshone 85.75 47 ⇓P P 03 11 08.9 +1.1
baz=86
Y12C Blythe 85.77 50 ⇓P P 03 11 09.3 +1.3
baz=86,SNR=6.5
113A Mohawk Valley, 85.77 51 ⇓P P 03 11 09.4 +1.4
baz=86
NVAR Mina Array Bea 85.87 44 P P 03 11 09.1 +0.5
NVAR Mina Array Bea 85.87 44 P P 03 11 09.1 +0.5
comp=Z,9.8nm,0.9s,baz=224,slow=8.2,SNR=45
ENH Enshi 85.94 306 *e*P P 03 11 08.7 -0.2
comp=Z,95nm,1.2s
NV11 Mina Array Sit 85.97 45 *e*P P 03 11 09.0 0.0
214A Organ Pipe Nat 86.02 52 ⇓P P 03 11 10.9 +1.6
baz=86,SNR=16
LDFC Landfair 86.09 49 *e*P P 03 11 10.6 +1.0
comp=Z,34nm,0.9s
GYA Guiyang 86.17 301 P P 03 11 09.9 -0.3
GYA pP **pP** 03 13 08.4 -3.0
GYA sP **sP** 03 14 08.8 +0.9
GYA PP **PP** 03 14 40.1 -1.4
GYA SKS **SKSac** 03 20 44.8 +1.4
GYA S **S** 03 20 56.1 -2.8
GYA sS **sS** 03 24 35.0 +0.1
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,50nm,5.8s
PBKT Sadao Pong 86.20 290 P P 03 11 11.6 +1.2
comp=Z,58nm,1.1s,comp=Z,958nm
PDMCI Parker Dam,Lak 86.33 50 ⇑P P 03 11 12.0 +1.3
baz=86
Z14A Wintersburg 86.67 51 P P 03 11 13.7 +1.4
baz=87,SNR=8.1
MOD Modoc 86.70 41 *e*P P 03 11 12.6 +0.2
comp=Z,23nm,1.3s
BJI Beijing 86.74 317 P P 03 11 13.0 +0.6
BJI SS SS 03 27 04.9 +2.1
BJI pmax pmax
comp=Z,38nm,1.0s
BJI pmax pmax
comp=Z,310nm,4.2s
SRDT SRDT 86.82 287 P P 03 11 15.0 +1.7
comp=Z,76nm,1.0s,comp=Z,2µm
Y14A Wickenburg 86.93 51 P P 03 11 14.4 +0.9
baz=87,SNR=11
W13A Hualapai Mount 86.94 49 ⇓P P 03 11 14.7 +0.9
baz=87,SNR=10
R11A Troy Canyon, C 87.58 46 ⇑P P 03 11 17.2 +0.5
baz=88
TUC Tucson 87.67 53 *e*P P 03 11 18.2 +1.1
TUC *e**PP **pP** 03 13 20.0 +1.1
TUC pmax pmax
comp=Z,8.0nm,1.1s
TUC Tucson 87.67 53 *e*P P 03 11 18.2 +1.1
comp=Z,7.6nm,1.1s
TUC *e*pP **pP** 03 13 20.0 +1.1
X16A Lo Mia Camp, P 88.29 51 P P 03 11 21.5 +1.4
baz=88,SNR=18
XAN Xi'an 88.30 309 P P 03 11 20.1 +0.2
XAN pP **pP** 03 13 18.4 -3.5
XAN pmax pmax
comp=Z,17nm,1.1s
XAN pmax pmax
comp=Z,28nm,5.6s
319A Douglas 88.31 54 P P 03 11 22.1 +2.0
baz=88,SNR=14
PLCA Paso Flores 88.59 135 *e*P P 03 11 22.1 +0.7
comp=Z,23nm,1.0s
PLCA *e*pP **pP** 03 13 25.5 +2.1
PLCA Paso Flores 88.59 135 P P 03 11 22.6 +1.2
comp=Z,20nm,1.0s,baz=224,slow=4.5,SNR=14
KMI Kunming 88.63 298 P P 03 11 23.1 +1.2
KMI pP **pP** 03 13 23.1 -0.9
KMI sP **sP** 03 14 18.3 -1.9
KMI PP **PP** 03 15 03.6 +2.4
KMI SKS **SKSac** 03 20 58.6 +0.2
KMI S **S** 03 21 20.3 -1.8
KMI SS **SS** 03 27 31.6 +0.7
KMI pmax pmax
comp=Z,32nm,1.4s
KMI pmax pmax
comp=Z,180nm,4.9s
U15A North Rim 88.74 49 ⇓P P 03 11 23.8 +1.6
baz=89
CMAR Chiang Mai Arr 88.77 291 P P 03 11 23.4 +1.0
CMAR pP **pP** 03 13 22.9 -1.7
CMAR PP **PP** 03 14 59.7 -2.4
CMAR PKKPbc **PKKPbc** 03 28 58.0 -0.6
CMAR Chiang Mai Arr 88.77 291 P P 03 11 23.4 +1.0
comp=Z,20nm,0.9s,baz=135,slow=3.3,SNR=68
CMAR pP **pP** 03 13 22.9 -1.7
comp=Z,1.3nm,0.3s,baz=132,slow=3.9,SNR=3.2
CMAR PP **PP** 03 14 59.7 -2.4
comp=Z,2.7nm,0.5s,baz=125,slow=6.1,SNR=8.5
CMAR PKKPbc **PKKPbc** 03 28 58.0 -0.6
comp=Z,0.7nm,0.6s,baz=302,slow=4.0,SNR=4.9
320A Kipp Ranch, An 88.85 55 P P 03 11 24.7 +2.0
baz=89,SNR=20
WUAZ Wupatki 88.90 50 *e*P P 03 11 23.2 +0.3
comp=Z,22nm,1.3s
WUAZ Wupatki 88.90 50 ⇓P P 03 11 24.2 +1.3
baz=89,SNR=12
CMMT Chiang Mai 88.92 291 P P 03 11 24.8 +1.7
comp=Z,45nm,1.5s,comp=Z,656nm
CHTO Chiang Mai 88.93 291 *e*P P 03 11 23.9 +0.8
CHTO *e**PP **pP** 03 13 24.4 -0.9
CHTO *e* 03 15 02.4
CHTO pmax pmax
comp=Z,52nm,1.2s
CHTO Chiang Mai 88.93 291 *e*P P 03 11 23.9 +0.8
comp=Z,52nm,1.2s
CHTO *e*pP **pP** 03 13 24.4 -0.9
CHTO *e*PP **PP** 03 15 02.4 -0.9
CHTO Chiang Mai 88.93 291 P P 03 11 24.9 +1.8
SNR=7.8
CHTO Chiang Mai 88.93 291 P P 03 11 24.3 +1.2
comp=Z,50nm,1.5s,comp=Z,590nm
220A Playas Peak, P 89.13 54 P P 03 11 25.5 +1.5
baz=89,SNR=17
120A U Bar Ranch, L 89.36 54 P P 03 11 26.8 +1.7
baz=90,SNR=13
X18A Snowflake 89.40 51 ⇑P P 03 11 26.4 +1.2
baz=90,SNR=6.2
SEY Seymchan 89.61 348 ⇓*e*P P 03 11 25.3 +0.1
Z20A Nine Sixteen R 89.67 53 P P 03 11 28.1 +1.6
baz=90,SNR=19
221A Mesquite Ranch 89.73 54 P P 03 11 28.6 +1.9
baz=90,SNR=5.7
MVU Marysvale 89.89 47 *e*P P 03 11 28.4 +1.0
comp=Z,16nm,1.1s
121A Cookes Peak, D 89.98 54 P P 03 11 29.5 +1.6
baz=90,SNR=11
HHC Hu-ho-hao-te 90.11 316 ⇓P P 03 11 29.4 +1.2
HHC pP **pP** 03 13 29.8 -0.4
HHC sP **sP** 03 14 22.3 -4.4
HHC PP **PP** 03 15 15.8 +3.5
HHC SKS **SKSac** 03 21 06.5 +0.6
HHC S **ScS** 03 21 38.6 +1.8
HHC sS **sS** 03 25 09.3 -3.9
HHC SS **SS** 03 27 53.3 +2.0
HHC pmax pmax
comp=Z,89nm,1.4s
HHC pmax pmax
comp=Z,250nm,8.3s
Y20A Horse Springs, 90.22 53 ⇓P P 03 11 30.7 +1.6
baz=90,SNR=28
MFID Camas Ranch 90.26 41 *e*P P 03 11 29.3 +0.4
comp=Z,30nm,1.6s
MFID Camas Ranch 90.26 41 P P 03 11 29.6 +0.7
baz=90,SNR=8.8
222A Williams Famil 90.28 55 ⇑P P 03 11 30.3 +1.0
baz=90
DUG Dugway 90.39 45 ⇑P P 03 11 30.2 +0.6
baz=91
Z21A St. Cloud Mine 90.44 53 P P 03 11 31.6 +1.5
baz=91,SNR=17
X20A Quemado 90.45 52 ⇓P P 03 11 31.4 +1.3
baz=91,SNR=18
CD2 Chengdu 90.55 304 P P 03 11 31.5 +1.1
CD2 pP **pP** 03 13 34.9 +2.0
CD2 sP **sP** 03 14 30.0 +1.1
CD2 PP **PP** 03 15 19.3 +3.5
CD2 SKS **SKSac** 03 21 09.3 +0.6
CD2 S **S** 03 21 37.8 -0.9
CD2 sS **sS** 03 25 16.5 -1.2
CD2 SS **SS** 03 28 00.5 +2.8
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
122A Conniff Cattle 90.64 54 ⇓P P 03 11 32.7 +1.8
baz=91
Y21A Point of Rocks 90.78 53 ⇑P P 03 11 33.1 +1.4
baz=91,SNR=26
I12A Atlanta 90.89 41 ⇓P P 03 11 32.8 +0.9
baz=91
X21A Alamocita Cree 90.91 52 P P 03 11 33.4 +1.1
baz=91,SNR=20
Z22A Elephant Butte 90.94 54 P P 03 11 33.4 +1.1
baz=91,SNR=17
BTO Baotou 90.97 315 *e*P P 03 11 31.4 -0.8
S18A Hurst Farm, Bl 90.97 49 ⇑P P 03 11 33.0 +0.5
baz=91
MPU Maple Canyon 91.06 46 *e*P P 03 11 33.6 +0.8
comp=Z,16nm,0.9s
123A Bell Site, Whi 91.16 55 ⇑P P 03 11 34.1 +0.8
baz=91
324A Meley Ranch, 91.18 56 ⇑P P 03 11 33.7 +0.2
baz=91,SNR=8.9
HLID Hailey 91.20 42 *e*P P 03 11 33.9 +0.6
comp=Z,7.1nm,1.5s
HLID *e*pP **pP** 03 13 37.1 +1.3
HLID *e*PP **PP** 03 15 17.3 -3.5
HLID Hailey 91.20 42 ⇑P P 03 11 34.3 +1.0
baz=91,SNR=6.8
425A Indio Mountain 91.25 57 P P 03 11 34.7 +0.9
baz=91,SNR=11
J13A Cove Ranch, Pi 91.25 42 P P 03 11 34.6 +1.1
baz=91,SNR=6.4
Y22A Socorro 91.26 53 P P 03 11 34.8 +0.9
baz=91,SNR=12
SRU San Rafael 91.33 47 ⇓P P 03 11 35.0 +0.9
baz=92,SNR=25
MNTX Cornudas Mount 91.38 56 *e*P P 03 11 34.6 +0.4
comp=Z,24nm,1.7s
MNTX *e*pP **pP** 03 13 38.1 +1.4
224A Cornudas Mount 91.45 55 ⇑P P 03 11 35.8 +1.1
baz=92,SNR=10
H12A Diamond D Ranc 91.47 41 ⇑P P 03 11 35.0 +0.5
baz=92
325A Bean Ranch, Si 91.53 56 P P 03 11 35.6 +0.5
baz=92,SNR=11
I13A Wildhorse Cree 91.57 42 ⇑P P 03 11 35.9 +0.8
baz=92
TXAR Lajitas Array 91.60 59 P P 03 11 36.2 +0.9
TXAR pP **pP** 03 13 39.4 +1.4
TXAR PP **PP** 03 15 22.0 -2.1
TXAR PKKPbc **PKKPbc** 03 28 53.2 +1.2
TXAR Lajitas Array 91.60 59 P P 03 11 36.2 +0.9
comp=Z,7.0nm,0.9s,baz=212,slow=6.4,SNR=68
TXAR pP **pP** 03 13 39.4 +1.4
comp=Z,0.5nm,1.0s,baz=234,slow=8.8,SNR=2.3
TXAR PP **PP** 03 15 22.0 -2.1
comp=Z,0.6nm,1.0s,baz=168,slow=6.4,SNR=4.2
TXAR PKKPbc **PKKPbc** 03 28 53.2 +1.2
comp=Z,0.3nm,0.6s,baz=72,slow=4.1,SNR=5.6
526A Mary Lane Ranc 91.60 58 ⇓P P 03 11 36.0 +0.6
baz=92,SNR=9.5
BNM Barren Site 91.61 53 *e*P P 03 11 36.1 +0.6
comp=Z,34nm,2.0s
J14A Carey 91.62 42 ⇑P P 03 11 36.2 +1.0
baz=92
V21A Milan 91.68 51 ⇑P P 03 11 36.6 +0.9
baz=92
MVCO Mesa Verde 91.76 50 ⇓P P 03 11 36.6 +0.5
baz=92
P18A Preston Nutter 91.78 47 P P 03 11 35.3 -1.0
baz=92,SNR=24
124A Stringfield Ra 91.79 55 P P 03 11 37.2 +0.9
baz=92,SNR=9.7
627A Terlingua Ranc 91.87 59 ⇓P P 03 11 37.4 +0.7
baz=92,SNR=20
F12A Elk City 91.91 40 ⇓P P 03 11 36.7 +0.3
baz=92
Y23A Lovelace Mesa, 91.92 53 ⇑P P 03 11 37.7 +0.8
baz=92
426A McDonald Obser 91.93 57 P P 03 11 37.7 +0.7
baz=92,SNR=10
HWUT Hardware Ranch 91.94 45 *e*P P 03 11 36.4 -0.3
comp=Z,9.5nm,1.4s
HWUT *e*PP **PP** 03 15 24.6 -2.0
U21A Nageezi 91.97 51 P P 03 11 37.8 +0.7
baz=92,SNR=26
225A Deer Hill, Car 91.99 56 ⇓P P 03 11 37.0 -0.2
baz=92,SNR=7.2
527A Woodward Ranch 92.01 58 ⇓P P 03 11 37.9 +0.5
baz=92
X23A Hourglass Bar 92.13 53 ⇓P P 03 11 38.1 +0.2
baz=92
Z24A Sheeppen Canyo 92.15 54 ⇑P P 03 11 38.5 +0.5
baz=92,SNR=6.5
S20A Disappointment 92.16 49 ⇓P P 03 11 38.2 +0.2
baz=92
PV01 Paradox Valley 92.17 49 *e*P P 03 11 37.8 -0.2
326A Caldwell Ranch 92.26 57 ⇑P P 03 11 38.7 +0.3
baz=92
628A Black Gap, Mar 92.27 59 P P 03 11 39.1 +0.7
baz=92,SNR=13
125A Gardner Draw, 92.36 55 ⇑P P 03 11 39.8 +1.0
baz=92,SNR=6.8
GDL2 Guadalupe Moun 92.37 56 *e*P P 03 11 39.4 +0.5
comp=Z,9.1nm,1.2s
Y24A Capitan 92.38 54 P P 03 11 39.5 +0.5
baz=92,SNR=15
M17A Scullys Gap (B 92.44 45 P P 03 11 39.4 +0.3
baz=93,SNR=6.8
226B Tecolote Peak, 92.47 56 P P 03 11 39.7 +0.4
baz=93,SNR=5.2
427A Hayter Ranch, 92.49 57 P P 03 11 40.3 +0.9
baz=93,SNR=12
C11A Tepee Creek (N 92.50 38 ⇑P P 03 11 39.5 +0.5
baz=93
Z25A Roswell 92.61 55 ⇑P P 03 11 40.7 +0.7
baz=93,SNR=5.9
P19A Cripple Cowboy 92.63 47 ⇑P P 03 11 40.6 +0.5
baz=93,SNR=5.5
COLA College 92.70 14 *e*P P 03 11 38.9 -0.5
COLA College 92.70 14 *e*P P 03 11 38.9 -0.5
BILL Bilibino 92.71 355 ⇑*i*P P 03 11 39.6 +0.2
BILL *i* *PP **pP** 03 13 45.5 +3.4
BILL *e* 03 15 28.1
BILL *e*S **SKSac** 03 21 19.1 +0.2
BILL pmax pmax
comp=Z,78nm,1.2s
Q20A Ridgley Place, 92.76 48 ⇓P P 03 11 40.8 +0.2
baz=93,SNR=5.8
T22A Edith 92.78 50 ⇑P P 03 11 41.0 +0.2
baz=93,SNR=5.0
ILAR Eielson Array 92.83 14 P P 03 11 38.8 -1.2
ILAR pP **pP** 03 13 41.0 -1.7
ILAR PKKP **PKKPdf** 03 28 46.2 -2.1
ILAR Eielson Array 92.83 14 P P 03 11 38.8 -1.2
comp=Z,0.8nm,0.6s,baz=222,slow=5.5,SNR=22
ILAR pP **pP** 03 13 41.0 -1.7
comp=Z,1.6nm,0.9s,baz=232,slow=5.4,SNR=7.5
ILAR PKKP **PKKPdf** 03 28 46.2 -2.1
comp=Z,0.3nm,0.6s,baz=356,slow=2.1,SNR=4.8
MCMT McKenzie Canyo 92.83 41 *e*P P 03 11 41.2 +0.3
comp=Z,1.4nm,1.0s
O19A Miners Draw (B 92.86 47 P P 03 11 41.4 +0.3
baz=93,SNR=7.8
Y25A Mesa, Roswell 92.92 54 ⇑P P 03 11 41.8 +0.4
baz=93,SNR=7.9
LZH Lanzhou 92.92 308 *e*P P 03 11 42.8 +1.4
LZH pP **pP** 03 13 43.5 -0.6
LZH sP **sP** 03 14 38.3 -1.7
LZH PP **PP** 03 15 38.3 +4.0
LZH SKS **SKSac** 03 21 21.8 -0.1
LZH *e*S **S** 03 22 00.0 +0.4
LZH pmax pmax
comp=Z,44nm,1.0s
LZH pmax pmax
comp=Z,210nm,5.6s
U23A El Rito 92.96 51 ⇓P P 03 11 42.3 +0.7
baz=93,SNR=5.9
R21A Cimarron 92.98 49 ⇑P P 03 11 42.4 +0.7
baz=93,SNR=8.4
428A Kincaid Ranch, 92.98 58 ⇑P P 03 11 42.5 +0.8
baz=93
W24A Lazy 6 Ranch, 93.00 53 ⇑P P 03 11 42.0 +0.2
baz=93,SNR=7.4
529A Stev Forest Ra 93.08 58 ⇓P P 03 11 42.2 +0.1
baz=93,SNR=6.4
Z26A Caprock 93.15 55 ⇑P P 03 11 42.9 +0.5
baz=93,SNR=5.8
Q21A Lamborn Mesa, 93.19 49 ⇑P P 03 11 43.0 +0.4
baz=93
X25A Clemmons Ranch 93.22 54 ⇑P P 03 11 42.8 0.0
baz=93
V24A Rampart Ranch, 93.33 52 P P 03 11 43.9 +0.5
baz=94,SNR=5.9
IMW Indian Meadow 93.51 43 *e*P P 03 11 44.8 +0.7
comp=Z,5.0nm,1.1s
429A Davenport Ranc 93.55 58 ⇑P P 03 11 44.6 +0.3
baz=94,SNR=15
LOHW Long Hollow 93.57 43 *e*P P 03 11 44.7 +0.4
L19A Farson 93.61 45 ⇓P P 03 11 44.9 +0.5
baz=94
228A UT Block 9, Go 93.68 56 ⇑P P 03 11 45.2 +0.3
baz=94
W25A X Bar L Ranch, 93.69 53 ⇓P P 03 11 44.9 0.0
baz=94,SNR=9.3
N20A Spence Gulch, 93.70 47 ⇑P P 03 11 45.3 +0.4
baz=94,SNR=5.6
Z27A Tatum 93.74 55 ⇓P P 03 11 45.3 +0.2
baz=94
SMCO Snowmass 93.76 49 *e*P P 03 11 45.6 +0.2
comp=Z,4.2nm,0.9s
530A J-C Ranch, Com 93.77 59 ⇓P P 03 11 45.6 +0.4
baz=94,SNR=5.7
PDAR Pinedale Array 93.81 44 P P 03 11 44.2 -1.1
PDAR pP **pP** 03 13 50.7 +2.6
PDAR PP **PP** 03 15 37.4 -3.7
PDAR Pinedale Array 93.81 44 P P 03 11 44.2 -1.1
comp=Z,1.3nm,0.8s,baz=206,slow=3.3,SNR=7.6
PDAR pP **pP** 03 13 50.7 +2.6
comp=Z,0.9nm,0.9s,baz=302,slow=5.2,SNR=3.6
PDAR PP **PP** 03 15 37.4 -3.7
comp=Z,0.5nm,0.8s,baz=191,slow=4.5,SNR=4.0
V25A Rancho No Teng 93.86 52 P P 03 11 46.1 +0.4
baz=94,SNR=6.0
329A Wagon Wheel Ra 93.86 57 ⇓P P 03 11 46.1 +0.4
baz=94,SNR=5.1
631A Perdido Creek 94.05 60 P P 03 11 46.9 +0.4
baz=94,SNR=16
R23A Moffat 94.09 50 ⇑P P 03 11 47.6 +0.7
baz=94,SNR=6.2
SDCO Great Sand Dun 94.11 50 *e*P P 03 11 46.6 -0.4
comp=Z,5.6nm,1.1s
A13A Flathead Natio 94.13 37 ⇓P P 03 11 47.4 +0.9
baz=94
N21A Black Mountain 94.15 47 P P 03 11 47.4 +0.4
baz=94,SNR=5.4
D15A Lincoln 94.19 40 ⇑P P 03 11 47.3 +0.4
baz=94
732A Laxson Ranch, 94.23 60 ⇓P P 03 11 47.5 +0.2
baz=94
U25A Circle Dot Ran 94.26 52 P P 03 11 48.0 +0.4
baz=94,SNR=5.8
J19A Crowheart 94.38 44 ⇓P P 03 11 48.0 +0.1
baz=94
531A Rocksprings 94.40 59 ⇓P P 03 11 48.7 +0.6
baz=94
330A Mertzon 94.45 58 ⇑P P 03 11 47.9 -0.4
baz=95
LCO Las Campanas 94.57 125 *e*P P 03 11 49.3 0.0
comp=Z,23nm,1.4s
632A Uvalde 94.71 60 ⇓P P 03 11 49.6 +0.1
baz=95,SNR=5.4
YAK Yakutsk 94.74 339 *e*P P 03 11 47.6 -1.1
YAK pmax pmax
comp=Z,11nm,1.0s
S25A Robets Cordova 94.82 51 ⇑P P 03 11 50.4 +0.4
baz=95
532A Rocksprings 94.88 59 P P 03 11 50.6 +0.3

baz=95,SNR=10
CFAA Coronel Fontan 95.02 128 P **P** 03 11 50.9 -0.2
CFAA Coronel Fontan 95.02 128 P **P** 03 11 50.9 -0.2
comp=Z,0.7nm,0.9s,baz=224,slow=2.7,SNR=12
Y29A Porterfield Fa 95.14 55 ⇑P **P** 03 11 51.2 -0.2
baz=95
R25A Fountain Ranch 95.15 50 ⇑P **P** 03 11 51.4 -0.1
baz=95
432A Menard 95.29 59 P **P** 03 11 51.8 -0.3
baz=95,SNR=5.3
D17A Six Diamond Ra 95.32 40 ⇑P **P** 03 11 52.5 +0.5
baz=96
231A Bronte 95.33 57 ⇑P **P** 03 11 51.9 -0.4
baz=96
332A Millersview 95.54 58 P **P** 03 11 53.2 -0.1
baz=96,SNR=5.4
TRQA Tornquist 95.59 136 *e*P **P** 03 11 53.5 +0.1
comp=Z,8.5nm,0.9s
R26A Arlington 95.81 51 ⇓P **P** 03 11 54.4 +0.1
baz=96
ULN Ulaanbaatar 96.50 320 *e*P **P** 03 11 56.6 -0.7
comp=Z,9.4nm,0.9s
ULN Ulaanbaatar 96.50 320 Pdiff **P** 03 11 58.0 +0.7
SNR=5.7
ULN Ulaanbaatar 96.50 320 P **P** 03 11 57.6 +0.3
SONM Songino Array 96.87 320 P **P** 03 11 58.4 -0.6
SONM PP **PP** 03 15 59.8 -4.4
SONM PKKPbc **PKKPbc** 03 28 37.6 -1.3
SONM Songino Array 96.87 320 P **P** 03 11 58.4 -0.6
comp=Z,6.0nm,1.1s,baz=127,slow=3.2,SNR=16
SONM PP **PP** 03 15 59.8 -4.4
comp=Z,1.1nm,0.7s,baz=130,slow=6.0,SNR=3.8
SONM PKKPbc **PKKPbc** 03 28 37.6 -1.3
comp=Z,1.4nm,0.8s,baz=280,slow=2.8,SNR=5.1
GTA Gaotai 97.27 310 P **P** 03 12 01.8 +0.9
GTA pP **pP** 03 14 08.1 +4.1
GTA PP **PP** 03 16 10.3 +2.9
GTA SKS **SKSac** 03 21 44.9 +0.5
GTA S **ScS** 03 22 36.5 -0.1
GTA SS **SS** 03 29 33.1 +0.8
GTA pmax pmax
comp=Z,10.0nm,1.4s
GTA pmax pmax
comp=Z,50nm,6.6s
NNA Nana 97.75 107 *e*P **P** 03 12 04.1 +0.5
LVC Limon Verde 99.25 120 *e*P **Pdif** 03 12 11.5 +1.2
comp=Z,9.5nm,1.2s
ZAK Zakamensk 99.87 321 *e*P **Pdif** 03 12 08.5 -3.7
ZAK pmax pmax
comp=Z,3.0nm,1.3s
YKA Yellowknife Ar 101.32 26 PKKPbc PKKPbc 03 28 24.3 -2.5
YKA Yellowknife Ar 101.32 26 PKKPbc PKKPbc 03 28 24.3 -2.5
comp=Z,0.3nm,0.5s,baz=42,slow=2.4,SNR=9.0
OTAV Otavalo 101.62 95 *e*Pdif **Pdif** 03 12 22.8 +1.5
LPAZ La Paz 103.11 115 *e*Pdif **Pdif** 03 12 30.9 +2.8
LPAZ PP **PP** 03 16 48.7 -2.5
LPAZ La Paz 103.11 115 Pdiff **Pdif** 03 12 29.9 +1.9
comp=Z,1.3nm,0.8s,baz=211,slow=4.2,SNR=5.3
LPAZ PP **PP** 03 16 48.7 -2.5
comp=Z,3.5nm,1.1s,baz=286,slow=6.2,SNR=4.6
SAML Samuel 110.98 111 *e*PKP **PKiKP** 03 16 58.8 +0.5
ZALV Zalesovo Beam 111.74 321 PP PP 03 17 46.4 -5.9
ZALV Zalesovo Beam 111.74 321 PP PP 03 17 46.4 -5.9
comp=Z,1.9nm,0.3s,baz=127,slow=4.3,SNR=1.7
MK31 Makanchi Array 111.79 313 *e*PKiKP **PKiKP** 03 16 57.7 -1.2
MK31 Makanchi Array 111.79 313 *e*PKP **PKiKP** 03 16 57.7 -1.2
MKAR Makanchi Array 111.79 313 P **Pdif** 03 13 08.7 +3.5
MKAR *i* 03 16 57.9
MKAR 03 27 53.9
MKAR Makanchi Array 111.79 313 Pdif **Pdif** 03 13 08.7 +3.5
MKAR PKiKP **PKiKP** 03 16 57.9 -1.0
MKAR PP PP 03 17 45.9 -7.0
MKAR SKP 03 19 40.8
MKAR PKKPbc **PKKPbc** 03 27 53.9 -0.4
MKAR PKKPab **PKKPab** 03 28 04.5 +1.0
MKAR Makanchi Array 111.79 313 Pdiff **Pdif** 03 13 08.7 +3.5
comp=Z,1.0nm,0.7s,baz=95,slow=5.2,SNR=6.9
MKAR PKiKP **PKiKP** 03 16 57.9 -1.0
comp=Z,0.8nm,0.5s,baz=203,slow=1.5,SNR=7.0
MKAR PP PP 03 17 45.9 -7.0
comp=Z,1.9nm,0.9s,baz=103,slow=7.9,SNR=4.5
MKAR SKP 03 19 40.8
comp=Z,2.6nm,0.8s,baz=116,slow=2.8,SNR=5.4
MKAR PKKPbc **PKKPbc** 03 27 53.9 -0.4
comp=Z,2.2nm,0.8s,baz=294,slow=3.9,SNR=11
MKAR PKKPab **PKKPab** 03 28 04.5 +1.0
comp=Z,3.7nm,0.8s,baz=290,slow=3.9,SNR=17
KURK Kurchatov 114.91 316 *e*PKiKP PKPdf 03 17 03.6 -1.1
KURK Kurchatov 114.91 316 *e*PKPdf PKPdf 03 17 03.6 -1.1
KURK PKP **PKiKP** 03 17 03.7 -0.9
KURK PP PP 03 18 05.2 -9.3
KURK SKP 03 19 47.1
KURBB Kurchatov Arra 114.95 316 PKP PKPdf 03 17 03.7 -1.0
comp=Z,3.6nm,0.8s,baz=94,slow=2.4,SNR=18
KURBB PP PP 03 18 05.2 -10
comp=Z,2.8nm,1.0s,baz=96,slow=7.7,SNR=4.7
KURBB SKP 03 19 47.1
comp=Z,1.8nm,0.8s,baz=90,slow=2.0,SNR=4.9
TKM2 Tokmak 2 115.68 308 *e*PKiKP **PKPdf** 03 17 05.8 -0.9
TKM2 Tokmak 2 115.68 308 *e*PKPdf **PKPdf** 03 17 05.8 -0.9
AAK Ala-Archa 116.43 307 *i* PKiKP **PKPdf** 03 17 07.5 -0.6
AAK Ala-Archa 116.43 307 *e*PKPdf **PKPdf** 03 17 07.9 -0.2
EKS2 Erkin-Say 116.96 307 *e*PKiKP **PKPdf** 03 17 08.9 -0.2
EKS2 Erkin-Say 116.96 307 *e*PKPdf **PKPdf** 03 17 08.9 -0.2
KBL Kabul 119.20 297 *e*PKiKP **PKPdf** 03 17 13.6 -0.2
KBL Kabul 119.20 297 *e*PKPdf **PKPdf** 03 17 13.6 -0.2
BDFB Brasilia 119.31 126 PKP **PKPdf** 03 17 12.8 -1.6
BDFB PKKPbc **PKKPbc** 03 27 29.0 +0.4
BDFB Brasilia 119.31 126 PKP **PKPdf** 03 17 12.8 -1.6
comp=Z,3.9nm,0.7s,baz=102,slow=3.5,SNR=7.9
BDFB PKKPbc **PKKPbc** 03 27 29.0 +0.4
comp=Z,3.0nm,0.8s,baz=102,slow=4.5,SNR=4.1
KKAR Karatay Array 119.39 307 *e*PKiKP **PKPdf** 03 17 12.8 -0.8
KKAR Karatay Array 119.39 307 *e*PKPdf **PKPdf** 03 17 12.8 -0.8
SUR Sutherland 119.72 201 *e*PKPdf **PKPdf** 03 17 15.1 +0.2
BVAR Borovoye Array 120.19 318 PKiKP **PKPdf** 03 17 14.3 -0.5
BVAR Borovoye Array 120.19 318 PKP **PKPdf** 03 17 14.3 -0.5
BVAR PP PP 03 18 44.8 -5.7
BVAR SKP 03 19 59.3
BVAR PKKPbc **PKKPbc** 03 27 24.9 -0.6
BVAR Borovoye Array 120.19 318 PKP **PKPdf** 03 17 14.3 -0.5
comp=Z,4.1nm,0.4s,baz=125,slow=2.5,SNR=29
BVAR PP PP 03 18 44.8 -5.7
comp=Z,0.6nm,0.4s,baz=91,slow=7.4,SNR=4.0
BVAR SKP 03 19 59.3
comp=Z,1.0nm,0.5s,baz=258,slow=7.1,SNR=3.8
BVAR PKKPbc **PKKPbc** 03 27 24.9 -0.6
comp=Z,1.4nm,0.7s,baz=289,slow=4.5,SNR=7.5
BRVK Borovoye 120.26 319 *d* iPKiKP **PKPdf** 03 17 14.3 -0.6
BRVK pmax pmax
comp=Z,9.0nm,1.2s
BRVK Borovoye 120.26 319 *e*PKPdf **PKPdf** 03 17 13.9 -1.0
BOSA Boshof 121.43 207 PKP **PKPdf** 03 17 18.0 -0.3
BOSA *e*PKPdf **PKiKP** 03 17 18.5 +0.1
BOSA Boshof 121.43 207 PKP **PKPdf** 03 17 18.0 -0.3
comp=Z,5.7nm,0.9s,baz=307,slow=2.4,SNR=7.7
SCHQ Schefferville 123.56 39 PKP **PKPdf** 03 17 19.1 -2.1
SCHQ Schefferville 123.56 39 PKP **PKPdf** 03 17 19.1 -2.1
comp=Z,2.9nm,0.8s,baz=233,slow=10,SNR=3.0
LBTB Lobatse 124.42 210 *e*PKPdf **PKPdf** 03 17 24.5 +0.5
IMYA Miami 126.67 298 *e*P SKPdf 03 19 53.5 -17
ARU Arti 126.73 323 *i* PKiKP **PKPdf** 03 17 27.3 +0.1
ARU 03 19 31.4
ARU 03 23 38.2
ABKAR Akbulak array 126.88 314 *e*PKPdf **PKPdf** 03 17 27.1 -0.7
ISRO Mashad 127.18 298 *e*P SKPdf 03 19 51.9 -20
ITEG Tejag 127.41 294 *e*P SKPdf 03 19 57.2 -15
IPAY Payeh 127.57 298 *e*P SKPdf 03 19 57.2 -15
IAKL Akhelmad 127.78 298 *e*P SKPdf 03 19 57.7 -15
ASHO Ashiyiah 128.35 283 PKPdf **PKPdf** 03 17 32.1 +0.8
SNR=5.1
LSZ Lusaka 131.23 219 *e*PKPdf **PKPdf** 03 17 38.4 +1.2
KEV Kevo 131.75 347 *e*PKiKP **PKPdf** 03 17 34.3 -2.0
KEV Kevo 131.75 347 *e*pkp **PKPdf** 03 17 34.3 -2.0
KEV Kevo 131.75 347 *e*p **SKPbc** 03 20 09.1 -1.1
comp=Z,12nm,0.8s
ARCES ARCESS Array B 132.23 348 PKPpre PKPpre 03 17 27.1
ARCES PKP **PKPdf** 03 17 36.8 -0.5
ARCES pPKP pPKPdf 03 19 45.3 -2.6
ARCES SKPbc **SKPbc** 03 20 12.6 +0.7
ARCES ARCESS Array B 132.23 348 PKhKP PKPpre 03 17 27.1
comp=Z,1.3nm,0.6s,baz=130,slow=2.1,SNR=13
ARCES PKP **PKPdf** 03 17 36.8 -0.5
comp=Z,2.5nm,0.5s,baz=89,slow=1.9,SNR=25
ARCES pPKP pPKPdf 03 19 45.3 -2.6
comp=Z,4.0nm,1.0s,baz=12,slow=4.6,SNR=2.8
ARCES SKPbc **SKPbc** 03 20 12.6 +0.7
comp=Z,50nm,0.9s,baz=18,slow=4.2,SNR=43
IALA Alasht 132.54 297 *e*P **SKPab** 03 20 16.1 -0.5
IZEF Zefreh 132.79 293 *e*P **SKPab** 03 20 16.1 -1.6
IGAR Gharneh 132.99 292 *e*P **SKPab** 03 20 17.4 -1.2
IKLH Kolahrood 133.44 293 *e*P **SKPab** 03 20 19.6 -1.0
KLMR Klimovskoe 134.24 334 *e*PKiKP **PKPdf** 03 17 40.3 -1.0
KLMR *i* 03 20 16.9
KLMR pmax pmax
comp=Z,10.0nm,1.4s
KMBO Kilima Mbogo 134.93 241 *e*PKPdf **PKPdf** 03 17 44.6 +0.3
KMBO *e*SKP 03 20 24.6
KMBO SKPbc **SKPbc** 03 20 25.1 +2.3
KMBO Kilima Mbogo 134.93 241 SKPbc **SKPbc** 03 20 25.1 +2.3
comp=Z,9.6nm,0.9s,baz=58,slow=3.2,SNR=13
JOF Joensuu 135.91 339 *e*PKHKP PKPpre 03 17 33.8
JOF Joensuu 135.91 339 *e*pkp PKPpre 03 17 33.8
JOF Joensuu 135.91 339 *e*p **SKPbc** 03 20 22.7 -1.1
comp=Z,21nm,0.8s
KBD Kabd 136.43 287 *e*P **SKPdf** 03 20 28.6 0.0
KBD AMb AMB 03 20 30.0
comp=Z,76nm,1.0s
UMR Umm Al-Rimmam 136.45 288 *e*P **SKPdf** 03 20 28.3 -0.3
UMR AMb AMB 03 20 30.5
comp=Z,239nm,1.1s
MIB Mutribah 136.80 288 *e*P **SKPdf** 03 20 28.9 -0.3
MIB AMb AMB 03 20 31.4
comp=Z,132nm,1.2s
NAY Al-Naaiem 136.83 287 *e*P **SKPdf** 03 20 28.9 -0.4
NAY AMb AMB 03 20 32.2
comp=Z,41nm,1.8s
DGRG David-gareji 138.01 305 P **SKiKP** 03 20 34.1 -0.3
KAF Kangasniemi 138.06 341 *e*PKHKP PKPpre 03 17 38.1
KAF Kangasniemi 138.06 341 *e*pkp PKPpre 03 17 38.1
KAF Kangasniemi 138.06 341 *e*p **SKPdf** 03 20 28.4 -2.0
comp=Z,18nm,0.8s
TBLG Delisi 138.43 306 P **SKiKP** 03 20 34.6 -0.6
FINES FINESS Array B 138.65 341 PKPpre PKPpre 03 17 39.4
FINES PKP **PKPdf** 03 17 49.7 +0.3
FINES SKPbc **SKPbc** 03 20 32.4 +0.6
FINES FINESS Array B 138.65 341 PKhKP PKPpre 03 17 39.4
comp=Z,3.4nm,0.7s,baz=60,slow=4.1,SNR=26
FINES PKP **PKPdf** 03 17 49.7 +0.3
comp=Z,3.3nm,0.5s,baz=94,slow=4.2,SNR=13
FINES SKPbc **SKPbc** 03 20 32.4 +0.6
comp=Z,51nm,0.8s,baz=64,slow=4.4,SNR=43
GNI Garni 138.68 304 *e*PKPdf **PKPdf** 03 17 50.9 +0.6
GNI SKPbc **SKiKP** 03 20 35.5 -0.5
GNI Garni 138.68 304 SKPbc **SKiKP** 03 20 35.5 -0.5
comp=Z,6.5nm,0.4s,baz=201,slow=14,SNR=18
OBN Obninsk 138.72 328 *i* PKiKP **PKPdf** 03 17 46.5 -3.2
OBN *e* 03 19 51.9
OBN pmax pmax
comp=Z,15nm,1.3s
GOR Gori 138.85 306 P **SKiKP** 03 20 35.9 -0.2
ONI Oni 139.21 308 P **SKiKP** 03 20 36.8 -0.1
KBZ Khabaz 139.36 309 PKHKP PKPpre 03 17 44.6
KBZ Khabaz 139.36 309 PKPpre PKPpre 03 17 44.6
KBZ Khabaz 139.36 309 PKhKP PKPpre 03 17 44.6
comp=Z,1.9nm,0.9s,baz=148,slow=6.6,SNR=5.0
AKH Akhalkalaki 139.41 306 P **SKiKP** 03 20 37.6 +0.2
KIV Kislovodsk 139.45 310 ⇓ *i* PKiKP **PKPdf** 03 17 52.5 +0.9
KIV *e*SS SS 03 38 35.9 +6.5
KIV pmax pmax
comp=Z,4.0nm,1.1s
NB2 NORSAR Subarra 142.48 350 PKP **PKPdf** 03 17 52.3 -4.1
comp=Z,32nm,1.2s,baz=16,slow=3.2
NOA NORSAR Array B 142.48 350 PKPpre PKPpre 03 17 52.9
NOA SKPbc **SKPbc** 03 20 41.9 +0.2
NOA NORSAR Array B 142.48 350 PKhKP PKPpre 03 17 52.9
comp=Z,13nm,0.9s,baz=16,slow=5.0,SNR=34
NOA SKPbc **SKPbc** 03 20 41.9 +0.2
comp=Z,15nm,0.9s,baz=14,slow=4.2,SNR=18
NAO01 NORSAR Array S 142.71 350 *e*PKPdf **PKPdf** 03 17 53.7 -3.1
ANN Anapa 142.81 313 *e*PKHKP **PKPdf** 03 17 54.5 -2.9
ANN *i* 03 17 57.7
ANN *e* 03 24 07.8
ANN pmax pmax
comp=Z,112nm,1.3s
IZAR Zarasai 142.88 334 *e*P **PKPdf** 03 17 54.9 -2.2
IZAR AMB AMB 03 17 57.5
comp=Z,12nm,1.3s
HFS Hagfors 142.90 348 PKPpre PKPpre 03 17 53.9
HFS SKPbc **SKPbc** 03 20 43.1 +0.4
HFS Hagfors 142.90 348 PKhKP PKPpre 03 17 53.9
comp=Z,20nm,0.4s,baz=64,slow=3.4,SNR=313
HFS SKPbc **SKPbc** 03 20 43.1 +0.4
comp=Z,23nm,0.9s,baz=230,slow=1.2,SNR=15
PTK Pertek 142.96 303 *e*P **PKPdf** 03 17 57.0 -1.2
IDID Didziasalis 142.99 334 *e*P **PKPdf** 03 17 55.2 -2.2
IDID AMB AMB 03 17 56.4
comp=Z,17nm,1.1s
ISAL Salakas 143.05 334 *e*P PKPbc 03 17 55.5 -0.1
ISAL AMB AMB 03 17 56.6
comp=Z,24nm,1.2s
MICGM Minsk 143.08 332 ⇓ *e*P PKPab 03 17 54.0 -1.3
MNK Minsk 143.10 332 ⇓ *e*PKHKP **PKPdf** 03 17 54.0 -3.6
MNK pmax pmax
comp=Z,460nm,0.8s
IIGN Ignalina 143.17 334 *e*P PKPbc 03 17 55.8 -0.2
IIGN AMB AMB 03 17 57.1
comp=Z,26nm,0.9s
NACGM Naroch 143.27 333 *e*P PKPab 03 17 53.0 -3.0
NACGM Naroch 143.27 333 *e* **SKPbc** 03 20 42.0 -1.7
RSDY Resadiye-TOKAT 144.19 306 *e*P **PKPab** 03 18 00.8 +0.7
DARE Darende-Malaty 144.49 303 *e*P **PKPab** 03 18 01.5 +0.1
AKASG Malin Array Be 144.88 326 PKiKP **PKPdf** 03 18 00.8 0.0
AKASG Malin Array Be 144.88 326 PKP **PKPdf** 03 18 00.8 0.0
AKASG SKPbc **SKiKP** 03 20 48.7 +0.6
AKASG Malin Array Be 144.88 326 PKP **PKPdf** 03 18 00.8 0.0
comp=Z,38nm,0.8s,baz=42,slow=4.1,SNR=71
AKASG SKPbc **SKiKP** 03 20 48.7 +0.6
comp=Z,24nm,0.9s,baz=50,slow=2.4,SNR=18
AK01 Malin Array Si 144.90 326 *e*PKPdf **PKPdf** 03 18 00.7 -0.1
AK01 *e*SKPbc **SKiKP** 03 20 48.4 +0.2
KIEV Kiev 144.90 326 *e*PKiKP **PKPdf** 03 18 00.2 -0.6
KIEV Kiev 144.90 326 *e*PKPdf **PKPdf** 03 18 00.2 -0.6
KIEV *e*SKPbc **SKiKP** 03 20 48.2 +0.1
AK02 Malin Array Si 144.92 326 *e*PKPdf **PKPdf** 03 18 00.9 0.0
SIM Simferopol' 144.94 315 *d* iPKiKP PKPbc 03 18 02.0 +0.2
SIM *e* 03 21 21.0
SIM pmax pmax
comp=Z,92nm,0.7s
SIM pmax pmax
comp=Z,70nm,17.0s
KMRS Kahramanmaras 145.15 301 *e*P **PKPbc** 03 18 03.0 +0.2
SARI SarD1z-Kayseri 145.34 303 *e*P **PKPbc** 03 18 03.8 +0.3
DIKM Dikmen 145.34 309 *e*P **PKPbc** 03 18 02.8 -0.3
SUW Suwalki 145.35 335 *e*PKiKP **PKPbc** 03 18 02.2 -0.5
SUW Suwalki 145.35 335 *e*PKPbc **PKPbc** 03 18 02.2 -0.5
SUW *e*SKPbc **SKiKP** 03 20 49.5 +0.5
SUW Suwalki 145.35 335 *e*PKPdf **PKPbc** 03 18 02.3 -0.5
SUW *e* 03 20 49.7
BNN Bunyan 145.68 304 *e*P **PKPbc** 03 18 04.5 +0.2
BYBT Boyabat 145.75 308 *e*P **PKPbc** 03 18 04.7 +0.4
ASF Jabal al Asfar 145.80 292 PKPbc **PKPab** 03 18 05.8 -0.9
ASF SKPbc **SKiKP** 03 20 52.7 +1.9
ASF Jabal al Asfar 145.80 292 PKPbc **PKPab** 03 18 05.8 -0.9
comp=Z,33nm,0.9s,baz=343,slow=1.6,SNR=60
ASF SKPbc **SKiKP** 03 20 52.7 +1.9
comp=Z,3.4nm,0.8s,baz=19,slow=6.8,SNR=4.0
KOZT Kozan 145.99 301 *e*P **PKPbc** 03 18 06.1 +0.9
CEYT Ceyhan 146.15 300 *e*P **PKPbc** 03 18 05.7 +0.2
CORM Corum 146.24 306 *e*P **PKPbc** 03 18 06.5 +0.6
TOS Tosya 146.42 308 *e*P **PKPbc** 03 18 06.8 +0.5
NIG Nigde 146.79 303 *e*P **PKPbc** 03 18 06.8 -0.8
CANT Cankiri 146.84 308 *e*P **PKPbc** 03 18 07.5 +0.1
MMAI Mount Meron Ar 147.00 293 PKPbc **PKPbc** 03 18 09.0 +0.9
MMAI pPKPbc pPKPbc 03 20 14.0 -2.7
MMAI Mount Meron Ar 147.00 293 PKPbc **PKPbc** 03 18 09.0 +0.9
comp=Z,53nm,0.8s,baz=75,slow=4.4,SNR=103
MMAI pPKPbc pPKPbc 03 20 14.0 -2.7
comp=Z,12nm,0.9s,baz=63,slow=4.0,SNR=6.1
BR131 Keskin Array S 147.10 306 *e*PKPbc **PKPbc** 03 18 07.7 -0.5
BR131 *e*PKPab **PKPab** 03 18 11.7 0.0
BRTR Keskin Array B 147.10 306 PKP **PKPdf** 03 18 04.6 -0.5
BRTR PKPbc **PKPbc** 03 18 07.5 -0.7
BRTR pPKPbc **pPKPbc** 03 20 14.4 -2.4
BRTR Keskin Array B 147.10 306 PKP **PKPdf** 03 18 04.6 -0.5
comp=Z,20nm,0.9s,baz=82,slow=8.9,SNR=98
BRTR PKPbc **PKPbc** 03 18 07.5 -0.7
comp=Z,22nm,0.9s,baz=128,slow=3.2,SNR=103
BRTR pPKPbc **pPKPbc** 03 20 14.4 -2.4
comp=Z,2.7nm,1.0s,baz=288,slow=0.4,SNR=3.4
KIS Kishinev 147.23 321 *e*PKP2 **PKPbc** 03 18 08.0 -0.1
KIS Kishinev 147.23 321 *e*P **PKPbc** 03 18 08.0 -0.1
EIL Elat 147.56 287 PKPbc **PKPbc** 03 18 10.2 +0.7
EIL Elat 147.56 287 PKPbc **PKPbc** 03 18 10.2 +0.7
comp=Z,48nm,0.9s,baz=34,slow=1.8,SNR=47
EREN Erenkoy 147.67 298 *e*P **PKPbc** 03 18 09.8 +0.1
ANTO Ankara 147.68 307 *e*P **PKPbc** 03 18 09.4 -0.2
ANTO Ankara 147.68 307 *e*PKiKP **PKPdf** 03 18 05.5 -0.5
ANTO *e* 03 18 14.2
ANTO Ankara 147.68 307 *e*PKPdf **PKPdf** 03 18 05.5 -0.5
ANTO *e*PKPbc **PKPbc** 03 18 09.9 +0.2
ANTO *e*PKPab **PKPab** 03 18 14.2 +0.2
ANTO Ankara 147.68 307 PKPdf **PKPbc** 03 18 10.2 +0.6
SNR=23
LEOM Leova 147.84 320 ⇑ *i*P **PKPbc** 03 18 10.1 +0.4
BEL Belsk 147.95 334 *e*PKP **PKPbc** 03 18 10.2 +0.4
BEL *e* 03 20 17.2
LVV L'vov 148.01 329 *e*PKP2 **PKPbc** 03 18 09.9 -0.1
GKP Gorka Klasztor 148.08 339 *e*PKP **PKPbc** 03 18 10.1 0.0
TLCR 148.18 318 ⇑ *i*P **PKPbc** 03 18 11.0 +0.4
LFK Lefkose 148.23 298 *e*P **PKPbc** 03 18 11.2 0.0
CSS Prodhromos 148.45 297 *e*P **PKPbc** 03 18 11.1 -0.5
CSS Prodhromos 148.45 297 P **PKPbc** 03 18 11.6 0.0
CSS Prodhromos 148.45 297 *e*PKPbc **PKPbc** 03 18 11.3 -0.3
CSS *e*PKPab **PKPab** 03 18 16.5 -0.7
LADK Ladik-KONYA 148.48 304 *e*P **PKPbc** 03 18 10.8 -1.0
KONT Konya--Tatoy 148.55 303 *e*P **PKPbc** 03 18 11.0 -0.8
CFR Carcaliu 148.59 318 ⇓ *i*P **PKPbc** 03 18 11.9 +0.3
TESR Tescani 148.73 322 ⇑ *i*P **PKPbc** 03 18 11.6 -0.4
KWP Kalwaria Pacla 148.76 330 *e*PKHKP **PKPbc** 03 18 12.1 +0.2
KWP *e* 03 18 18.3
KWP Kalwaria Pacla 148.76 330 *e*PKPbc **PKPbc** 03 18 12.1 +0.2
KWP *e*PKPab **PKPab** 03 18 18.3 +0.3
KWP Kalwaria Pacla 148.76 330 ⇓ *i*P **PKPbc** 03 18 12.4 +0.5
KWP Kalwaria Pacla 148.76 330 *i* PKPdf **PKPbc** 03 18 12.3 +0.4
LEF Lefka 148.78 298 *e*P **PKPbc** 03 18 12.1 -0.3
TIRR Tirgusor 148.79 317 *e*PKHKP **PKPbc** 03 18 12.1 0.0
TIRR *e* 03 18 18.4
TIRR Tirgusor 148.79 317 *e*PKPbc **PKPbc** 03 18 12.1 0.0
TIRR *e*PKPab **PKPab** 03 18 18.4 +0.2
TIRR Tirgusor 148.79 317 ⇓ *i*P **PKPbc** 03 18 12.5 +0.4
BUR08 Bucovina Ar. S 148.85 325 *e*PKPbc **PKPbc** 03 18 12.1 -0.2
BUR08 *e*PKPab **PKPab** 03 18 18.0 -0.5
BUR08 *e*SKPdf **SKPdf** 03 20 47.6 -1.1
BURAR Bucovina Array 148.86 325 ⇑ *i*P **PKPbc** 03 18 13.4 +1.1
HARR Harsova 148.97 318 ⇓ *i*P **PKPbc** 03 18 13.2 +0.7
VRI Vrincioaia 149.06 321 ⇑ *i*P **PKPbc** 03 18 12.9 +0.1
GULT Gulveren 149.13 309 *e*P **PKPbc** 03 18 12.3 -0.9
EKA Eskdalemuir Ar 149.14 2 PKPbc **PKPbc** 03 18 12.0 -0.6
EKA *e*PKPbc **pPKPbc** 03 20 19.2 -2.8
EKA Eskdalemuir Ar 149.14 2 PKPbc **PKPbc** 03 18 12.0 -0.6
comp=Z,1.3nm,0.4s,baz=356,slow=3.2,SNR=28
EKA *e*PKPbc **pPKPbc** 03 20 19.2 -2.8
comp=Z,2.1nm,0.8s,baz=0.0,slow=1.7,SNR=4.0
ESK Eskdalemuir 149.15 2 *e*PKHKP **PKPbc** 03 18 12.8 +0.2
ESK Eskdalemuir 149.15 2 *e*PKPbc **PKPbc** 03 18 12.8 +0.2
PSN Preselentsi 149.32 316 *i* P **PKPbc** 03 18 13.6 +0.2
KOLS Kolonicke sedl 149.45 329 *e*PKHKP **PKPbc** 03 18 14.4 +0.8
KOLS *e* 03 18 19.9
KOLS Kolonicke sedl 149.45 329 *e*PKP **PKPbc** 03 18 14.4 +0.8
KOLS *e* 03 18 19.8
KOLS *e* 03 20 22.7
SILT Sile 149.47 311 *e*P **PKPbc** 03 18 13.5 -0.4
OJC Ojcow 149.60 333 *i* PKPbc **PKPbc** 03 18 14.0 +0.1
OJC *e*PKPab **PKPab** 03 18 21.0 -0.4
OJC *e*pPKPdf **pPKPdf** 03 20 21.3 +1.6
UZH Uzhgorod 149.65 329 *e*PKHKP **PKPbc** 03 18 13.7 -0.3
UZH *i* 03 18 20.9
ADVT Abdulvahap 149.68 309 *e*P **PKPbc** 03 18 13.6 -0.8
MLR Muntele Rosu 149.72 321 PKPbc **PKPbc** 03 18 14.5 0.0
MLR Muntele Rosu 149.72 321 ⇓ *i*P **PKPbc** 03 18 14.3 -0.2
MLR Muntele Rosu 149.72 321 PKPbc **PKPbc** 03 18 14.5 0.0
comp=Z,3.4nm,0.7s,baz=356,slow=5.2,SNR=24
SHUT Suhut-Afyon 149.74 305 *e*P **PKPbc** 03 18 14.6 -0.2
RUE Ruedersdorf 149.82 342 *e*PKPbc **PKPbc** 03 18 14.4 +0.1
RUE *e*pPKPbc **pPKPbc** 03 20 28.5 +4.6
RUE Ruedersdorf 149.82 342 *e*PKPbc **PKPbc** 03 18 13.0 -1.3
CRVS Cervenica-Dubn 149.85 330 *e*PKHKP **PKPbc** 03 18 13.2 -1.4
CRVS *e* 03 18 22.1
CRVS Cervenica-Dubn 149.85 330 *e*PKP **PKPbc** 03 18 13.2 -1.4
CRVS *e* 03 18 22.1
CRVS *e* 03 20 22.3
TRPA Tarpa 149.88 328 ⇓ *e* **PKPab** 03 18 23.1 +0.5
ALT Altintas 149.90 306 *e*P **PKPbc** 03 18 14.3 -0.8
ISK Istanbul-Kandi 149.91 311 *e*P **PKPbc** 03 18 14.1 -0.9
BUY Buyukada 149.95 310 *e*P **PKPbc** 03 18 14.5 -0.5
NIE Niedzica 149.98 332 *i* PKHKP **PKPbc** 03 18 15.5 +0.6
NIE *e* 03 18 23.5
ISP Isparta 149.99 304 *e*P **PKPbc** 03 18 14.2 -1.2
ISP Isparta 149.99 304 *e*PKHKP **PKPbc** 03 18 14.5 -0.8
ISP *e* 03 18 22.8
ISP Isparta 149.99 304 *e*PKPbc **PKPbc** 03 18 14.5 -0.8
ISP *e*PKPab **PKPab** 03 18 22.8 -0.8
ISP Isparta 149.99 304 ⇓ *i*P **PKPbc** 03 18 14.6 -0.8
PRD Provadia 150.05 316 *i* P **PKPbc** 03 18 15.9 +0.7
BGKT Bogazkoy 150.06 311 *e*P **PKPbc** 03 18 14.7 -0.5
GEMT Gemlik 150.07 309 *e*P **PKPbc** 03 18 14.6 -0.7
CTKS Kestenelik-??a 150.22 311 *e*P **PKPbc** 03 18 15.0 -0.6
TVSB Tavsanli 150.24 307 *e*P **PKPbc** 03 18 16.2 +0.3
ARMT Armutlu 150.25 310 *e*P **PKPbc** 03 18 15.2 -0.6
VOIR 150.27 321 ⇑ *i*P **PKPbc** 03 18 16.0 +0.3
MDNY Mudanya-Bursa 150.31 310 *e*P **PKPbc** 03 18 15.4 -0.4
SLVT Silivri 150.42 312 *e*P **PKPbc** 03 18 19.4 +3.2
KSP Ksiaz 150.44 337 ⇓ *i*PKiKP **PKPbc** 03 18 15.4 +0.6
KSP *e* 03 18 24.9
KSP Ksiaz 150.44 337 *i* PKPdfd **PKPbc** 03 18 16.3 +0.5
KSP *e*PKPab **PKPab** 03 18 25.1 +0.2
KSP *e* 03 20 30.2
ARR Arges 150.54 321 ⇑ *i*P **PKPdf** 03 18 13.3 +3.0
OKC Ostrava-Krasne 150.56 334 *e*PKiKP **PKPbc** 03 18 16.5 +0.4
OKC *e* 03 18 25.8
OKC Ostrava-Krasne 150.56 334 ⇑ *e*PKP **PKPbc** 03 18 16.5 +0.4
OKC *e*PKPab **PKPab** 03 18 25.8 +0.4
DRGR 150.69 325 ⇓ *i*P **PKPbc** 03 18 16.8 +0.1
NRDL Niedersach Rie 150.74 346 *e*PKPbc **PKPbc** 03 18 16.5 +0.1
NRDL *e*PKPab **PKPab** 03 18 25.5 -0.5
NRDL *e*pPKPbc **pPKPbc** 03 20 30.7 +4.6
UPC Upice 150.81 337 *e*PKiKP **PKPbc** 03 18 17.2 +0.5
UPC *e* 03 18 27.1
UPC Upice 150.81 337 ⇑ *e*PKP **PKPbc** 03 18 17.2 +0.5
UPC *e*PKPab **PKPab** 03 18 27.1 +0.6
UPC *e*pPKP pPKPdf 03 20 31.3 +10
DPC Dobruska-Polom 150.84 337 *e*pPKP pPKPdf 03 20 30.8 +9.1
MORC Moravsky Berou 150.85 335 *e*PKiKP **PKPbc** 03 18 16.7 -0.2
MORC *e* 03 18 26.4
MORC Moravsky Berou 150.85 335 *e*PKPbc **PKPbc** 03 18 16.7 -0.2
MORC *e*PKPab **PKPab** 03 18 26.4 -0.3
MORC Moravsky Berou 150.85 335 ⇓ *i*P **PKPbc** 03 18 17.5 +0.6
JMB Yambol 150.93 315 *i* P **PKPbc** 03 18 18.3 +1.1
SZH Strazhica 150.94 317 *i* P **PKPbc** 03 18 17.3 +0.1
LOT Lotru 150.98 322 ⇓ *i*P **PKPbc** 03 18 16.8 -0.6
CLL Collm 151.09 342 *e*PKPbc **PKPbc** 03 18 17.3 0.0
CLL *e*PKPab **PKPab** 03 18 27.2 -0.4
CLL *e*pPKPbc **pPKPbc** 03 20 31.6 +4.5
CLL Collm 151.09 342 ⇓ *i*PKiKP **PKPbc** 03 18 17.4 +0.1
CLL *i* 03 18 27.8
CLL *e* 03 20 25.0
CLL pmax pmax
comp=Z,39nm,1.3s
CLL pmax pmax
comp

BRG	**Berggiesshubel**	**151.19**	**340**	*e*PKIKP	**PKPdf**	**03 18 12.0**	**+1.0**
BRG				*i*		03 18 17.8	
BRG				*i*		03 18 26.7	
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,20nm,1.0s						
GONE	**Gonen-Balikesi**	**151.28**	**310**	*e*P	**PKPbc**	**03 18 17.6**	**-0.5**
PSZ	**Piszkesteto**	**151.28**	**330**	*e*PKIKP	**PKPbc**	**03 18 17.8**	**-0.2**
PSZ				*e*		03 18 28.9	
PSZ				*e*		03 20 24.5	
PSZ	**Piszkesteto**	**151.28**	**330**	*e*PKPbc	**PKPbc**	**03 18 17.8**	**-0.2**
PSZ				*e*PKPab	**PKPab**	**03 18 28.9**	**+0.2**
PSZ				*ep*PKPdf	**pPKPdf**	**03 20 24.5**	**+2.0**
PSZ	**Piszkesteto**	**151.28**	**330**⇑	*i*P	**PKPbc**	**03 18 18.2**	**+0.2**
PSZ	**Piszkesteto**	**151.28**	**330**⇓	*e*	**PKPbc**	**03 18 18.2**	**+0.2**
PVCC	**Panska Ves**	**151.29**	**339**	*e*PKIKP	**PKPbc**	**03 18 18.0**	**+0.2**
PVCC				*e*		03 18 29.1	
PVCC	**Panska Ves**	**151.29**	**339**⇑	*e*PKP	**PKPbc**	**03 18 18.0**	**+0.2**
PVCC				*e*PKPAB	**PKPab**	**03 18 29.1**	**+0.6**
PVCC				*ep*PKP	pPKPdf	03 20 32.1	+10
BALB	**Balikesir**	**151.30**	**309**	*e*P	**PKPbc**	**03 18 18.0**	**-0.2**
VYHS	**Vyhne**	**151.32**	**332**	*e*PKIKP	**PKPbc**	**03 18 18.1**	**+0.1**
VYHS				*e*		03 18 29.0	
VYHS				*e*		03 20 27.1	
VYHS				*e*		03 22 08.2	
VYHS	**Vyhne**	**151.32**	**332**	*e*PKP	**PKPbc**	**03 18 18.1**	**+0.1**
VYHS				*e*		03 18 29.0	
VYHS				*e*		03 20 27.1	
VYHS				*e*PP	PP	03 22 08.2	+5.7
FBE	**Freiberg**	**151.33**	**341**	*e*PKPbc	**PKPbc**	**03 18 18.4**	**+0.6**
PVL	**Pavlikeni**	**151.34**	**317**	*i* P	**PKPbc**	**03 18 18.8**	**+0.7**
IBBN	**Ibbenburen**	**151.39**	**349**	*e*PKPbc	**PKPbc**	**03 18 18.2**	**+0.3**
IBBN				*e*PKPab	**PKPab**	**03 18 28.8**	**0.0**
IBBN				*ep*PKPbc	**pPKPbc**	**03 20 32.5**	**+4.7**
FETY	**Fethiye**	**151.43**	**302**	*e*P	**PKPbc**	**03 18 18.2**	**-0.4**
VRAC	**Vranov**	**151.59**	**335**	PKPbc	**PKPbc**	**03 18 18.8**	**+0.2**
VRAC				PKPab	**PKPab**	**03 18 29.5**	**-0.3**
VRAC				pPKPbc	**pPKPbc**	**03 20 28.4**	**0.0**
VRAC	**Vranov**	**151.59**	**335**⇑	*i*P	**PKPbc**	**03 18 19.1**	**+0.6**
VRAC	**Vranov**	**151.59**	**335**	PKPbc	**PKPbc**	**03 18 18.8**	**+0.2**
	comp=Z,1.8nm,0.5s,baz=131,slow=1.1,SNR=6.8						
VRAC				PKPab	**PKPab**	**03 18 29.5**	**-0.3**
	comp=Z,7.9nm,0.8s,baz=47,slow=4.9,SNR=14						
VRAC				pPKPbc	**pPKPbc**	**03 20 28.4**	**0.0**
	comp=Z,1.1nm,0.4s,baz=27,slow=4.5,SNR=2.1						
DALY	**Dalyan (Mu¨la**	**151.71**	**303**	*e*P	**PKPbc**	**03 18 18.4**	**-0.7**
PRA	**Prague**	**151.72**	**339**	⇑PKP	**PKPbc**	**03 18 19.0**	**+0.2**
PRA				PKPAB	**PKPab**	**03 18 31.0**	**+0.7**
PRA				pPKP	pPKPdf	03 20 33.0	+10
PRU	**Pruhonice**	**151.76**	**338**	*e*PKIKP	**PKPbc**	**03 18 18.9**	**+0.1**
PRU				*e*		03 18 30.6	
PRU	**Pruhonice**	**151.76**	**338**⇑	*e*PKP	**PKPbc**	**03 18 18.9**	**+0.1**
PRU				*e*PKPAB	**PKPab**	**03 18 30.6**	**+0.1**
PRU				*ep*PKP	pPKPdf	03 20 33.1	+10
DIM	**Dimitrovgrad**	**151.82**	**315**	*i* P	**PKPbc**	**03 18 19.3**	**+0.1**
ERIK	**Erikli-Kesan**	**151.82**	**312**	*e*P	**PKPbc**	**03 18 18.7**	**-0.6**
SMOL	**Smolenice**	**151.90**	**333**	*e*PKIKP	**PKPbc**	**03 18 20.3**	**+1.1**
SMOL				*e*		03 18 31.9	
SMOL				*e*		03 22 08.4	
SMOL	**Smolenice**	**151.90**	**333**	*e*PKP	**PKPbc**	**03 18 20.3**	**+1.1**
SMOL				*e*		03 18 31.9	
SMOL				*e*PP	**PP**	**03 22 08.4**	**+2.8**
GELI	**Tayfur-Gelibol**	**151.97**	**311**	*e*P	**PKPbc**	**03 18 18.7**	**-0.9**
BUD	**Budapest**	**152.00**	**330**⇓	*e*	**PKPbc**	**03 18 19.6**	**+0.1**
TREC	**Trest**	**152.01**	**337**	*e*PKIKP	**PKPbc**	**03 18 19.5**	**0.0**
TREC				*e*		03 18 31.4	
TREC	**Trest**	**152.01**	**337**⇑	*e*PKP	**PKPbc**	**03 18 19.5**	**0.0**
TREC				*e*PKPAB	**PKPab**	**03 18 31.4**	**-0.2**
TREC				*ep*PKP	pPKPdf	03 20 34.0	+10
ALN	**Alexandroupoli**	**152.03**	**312**	P	**PKPbc**	**03 18 18.9**	**-0.8**
TANN	**Tannenbergstha**	**152.04**	**341**	*e*PKPbc	**PKPbc**	**03 18 19.6**	**+0.1**
TANN				*e*PKPAB	**PKPab**	**03 18 32.0**	**+0.3**
TANN				*ep*PKPbc	**pPKPbc**	**03 20 34.0**	**+4.5**
BZS	**Buzias**	**152.04**	**325**⇓	*i*P	**PKPbc**	**03 18 19.5**	**-0.1**
WERD	**Werda**	**152.06**	**342**	*e*PKPbc	pPKPbc	03 20 33.8	+4.3
PLN	**Plauen**	**152.06**	**342**	*e*PKPbc	**PKPbc**	**03 18 19.4**	**-0.1**
PLN				*ep*PKPbc	**pPKPbc**	**03 20 33.8**	**+4.3**
MOX	**Moxa**	**152.07**	**343**	*e*PKPbc	**PKPbc**	**03 18 19.9**	**+0.4**
MOX				*e*PKPab	**PKPab**	**03 18 31.5**	**-0.3**
MOX				*ep*PKPbc	**pPKPbc**	**03 20 34.1**	**+4.6**
MOX				*ep*PKPab	**pPKPab**	**03 20 40.2**	**+3.9**
MOX	**Moxa**	**152.07**	**343**	*e*PKIKP	**PKPbc**	**03 18 19.9**	**+0.4**
MOX				*e*		03 18 31.5	
GUNZ	**Gunzen**	**152.12**	**341**	*ep*PKPbc	pPKPbc	03 20 33.8	+4.1
NKC	**Novy Kostel**	**152.21**	**341**	*e*PKIKP	**PKPbc**	**03 18 20.4**	**+0.5**
NKC				*e*		03 18 33.0	
NKC	**Novy Kostel**	**152.21**	**341**⇑	*e*PKP	**PKPbc**	**03 18 20.4**	**+0.5**
NKC				*e*PKPAB	**PKPab**	**03 18 33.0**	**+0.6**
NKC				*ep*PKP	pPKPdf	03 20 34.7	+11
BUG	**Bochum--Univer**	**152.31**	**349**	*e*PKPab	**PKPab**	**03 18 33.2**	**+0.5**
BUG				*e*PKPbc	**pPKPbc**	**03 20 34.8**	**+4.8**
UBBA	**Unterbreizbach**	**152.33**	**345**	*e*PKPab	**PKPab**	**03 18 32.7**	**0.0**
UBBA				*e*PKPbc	**pPKPbc**	**03 20 34.6**	**+4.7**
UBBA				*ep*PKPab	**pPKPab**	**03 20 41.9**	**+4.8**
PKSG		**152.35**	**331**⇓	*e*	**PKPbc**	**03 18 20.2**	**0.0**
PKS6	**Bocsa**	**152.40**	**328**⇓	*e*	**PKPbc**	**03 18 20.6**	**+0.3**
PGB	**Panagyurishte**	**152.42**	**317**	*i* P	**PKPab**	**03 18 34.5**	**+0.8**
MANZ	**Manzenberg**	**152.53**	**341**	*e*PKPbc	**PKPbc**	**03 18 20.6**	**0.0**
PKST	**T¯'s**	**152.61**	**331**⇓	*e*	**PKPbc**	**03 18 20.3**	**-0.5**
PKS2	**Kecel**	**152.64**	**329**⇓	*e*	**PKPbc**	**03 18 21.0**	**+0.1**
BODT	**Bodrum**	**152.65**	**304**	*e*P	**PKPbc**	**03 18 20.2**	**-1.1**
ROTZ	**Rotzenmuhle**	**152.69**	**341**	*e*PKPab	**PKPab**	**03 18 35.2**	**+0.7**
ROTZ				*ep*PKPbc	**pPKPbc**	**03 20 36.0**	**+5.1**
KHC	**Kasperske Hory**	**152.82**	**339**	*e*PKIKP	**PKPdf**	**03 18 13.9**	**+0.3**
KHC				*e*		03 18 21.3	
KHC				*e*		03 18 35.4	
KHC	**Kasperske Hory**	**152.82**	**339**	*e*PKPdf	**PKPdf**	**03 18 13.8**	**+0.3**
KHC				*e*PKPbc	**PKPbc**	**03 18 21.3**	**+0.1**
KHC				*e*PKPab	**PKPab**	**03 18 35.4**	**+0.3**
KHC	**Kasperske Hory**	**152.82**	**339**⇑	*e*PKP	**PKPbc**	**03 18 21.4**	**+0.1**
KHC				*e*PKPAB	**PKPab**	**03 18 35.6**	**+0.5**
KHC				*ep*PKP	pPKPdf	03 20 35.7	+11
SOP	**Sopron**	**152.91**	**333**⇓	*e*	**PKPbc**	**03 18 21.8**	**+0.4**
VTS	**Vitosha**	**152.99**	**318**	P	**PKPbc**	**03 18 22.1**	**+0.1**
VTS	**Vitosha**	**152.99**	**318**⇑	*i*P	**PKPbc**	**03 18 22.4**	**+0.4**
VTS	**Vitosha**	**152.99**	**318**	*i* P	**PKPab**	**03 18 35.8**	**-0.4**
CONA	**Conrad Observa**	**153.00**	**334**⇑	*i*PKPbc	**PKPbc**	**03 18 20.4**	**-1.3**
	comp=Z,9.2nm,1.2s,SNR=5.8						
CONA				⇓*i*PKPab	**PKPab**	**03 18 36.6**	**+0.7**
	comp=Z,18nm,1.1s						
KAVA	**Kavala**	**153.01**	**314**	P	**PKPbc**	**03 18 21.5**	**-0.4**
PKS9	**Tamasi**	**153.01**	**330**⇓	*e*	**PKPbc**	**03 18 21.4**	**-0.3**
GEC2	**GERESS Array S**	**153.02**	**338**	*e*PKPab	**PKPab**	**03 18 36.1**	**+0.1**
GEC2				*ep*PKPbc	**pPKPbc**	**03 20 36.6**	**+4.7**
GEC2	**GERESS Array S**	**153.02**	**338**	*e*PKP2	**PKPab**	**03 18 36.1**	**+0.1**
GERES	**GERESS Array B**	**153.02**	**338**	PKPbc	**PKPbc**	**03 18 21.6**	**-0.1**
GERES				PKPab	**PKPab**	**03 18 36.2**	**+0.2**
GERES				pPKPbc	**pPKPbc**	**03 20 30.1**	**-1.7**
GERES	**GERESS Array B**	**153.02**	**338**	PKPbc	**PKPbc**	**03 18 21.6**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=75,slow=1.5,SNR=16						
GERES				PKPab	**PKPab**	**03 18 36.2**	**+0.2**
	comp=Z,4.2nm,0.9s,baz=31,slow=3.6,SNR=9.2						
GERES				pPKPbc	**pPKPbc**	**03 20 30.1**	**-1.7**
	comp=Z,1.7nm,0.9s,baz=76,slow=4.1,SNR=4.1						
WET	**Wettzell**	**153.03**	**340**	*e*PKPab	**PKPab**	**03 18 36.4**	**+0.4**
WET				*ep*PKPbc	**pPKPbc**	**03 20 36.7**	**+4.9**
WET	**Wettzell**	**153.03**	**340**	*e*PKP2	**PKPab**	**03 18 36.4**	**+0.4**
GRF	**Grafenberg Arr**	**153.04**	**342**	*e*PKPab	**PKPab**	**03 18 36.3**	**+0.3**
GRF				*ep*PKPbc	**pPKPbc**	**03 20 36.7**	**+4.9**
GRF				*ep*PKPab	**pPKPab**	**03 20 45.6**	**+5.3**
GRF	**Grafenberg Arr**	**153.04**	**342**	*e*PKP2	**PKPab**	**03 18 36.3**	**+0.3**
GRFO	**Grafenberg**	**153.04**	**342**	*e*PKP2	**PKPab**	**03 18 35.8**	**-0.2**
GRFO	**Grafenberg**	**153.04**	**342**	*e*PKPab	**PKPab**	**03 18 35.8**	**-0.2**
PKSM	**Moragy**	**153.12**	**329**⇑	*i*P	**PKPbc**	**03 18 21.5**	**-0.4**
PKSM	**Moragy**	**153.12**	**329**⇓	*e*	**PKPab**	**03 18 22.0**	**+0.1**
MMB	**Musomiste**	**153.21**	**316**	*i* P	**PKPab**	**03 18 36.8**	**-0.2**
TNS	**Taunus Mts**	**153.24**	**346**	*e*PKPab	**PKPab**	**03 18 36.5**	**-0.3**
TNS				*ep*PKPbc	**pPKPbc**	**03 20 36.8**	**+4.6**
TNS	**Taunus Mts**	**153.24**	**346**	*e*PKP2	**PKPab**	**03 18 36.5**	**-0.3**
NVR	**Nevrokopi**	**153.25**	**315**	P	**PKPbc**	**03 18 22.1**	**-0.3**
MEM	**Membach**	**153.33**	**350**	PKPab	**PKPab**	**03 18 38.4**	**+1.3**
MEM				APKPbc		03 20 36.9	
KKB	**Krupnik**	**153.47**	**317**	*i* P	**PKPab**	**03 18 37.4**	**-0.7**
BCLA	**Clavier**	**153.62**	**351**	PKPab	**PKPab**	**03 18 37.8**	**-0.5**
TOD	**Tromm**	**153.74**	**345**	PKP2	**PKPab**	**03 18 38.7**	**-0.2**
TOD	**Tromm**	**153.74**	**345**	PKP	**PKPab**	**03 18 38.7**	**-0.2**
KNT	**Kendrikon**	**153.97**	**316**	P	**PKPbc**	**03 18 25.6**	**+1.7**
RUP	**Ruppelstein**	**154.02**	**348**	PKP2	**PKPab**	**03 18 40.0**	**-0.2**
RUP	**Ruppelstein**	**154.02**	**348**	PKP	**PKPab**	**03 18 40.0**	**-0.2**
PLG	**Polygyros**	**154.02**	**314**	P	**PKPbc**	**03 18 28.7**	**+4.6**
DOU	**Dourbes**	**154.04**	**352**	PKPab	**PKPab**	**03 18 38.6**	**-1.6**
DOU				APKPab		03 20 39.2	
PAIG	**Paliouri**	**154.09**	**312**	P	**PKPbc**	**03 18 23.2**	**-1.0**
WLF	**Walferdange**	**154.22**	**349**	PKPab	**PKPab**	**03 18 40.8**	**-0.2**
WLF				APKPbc		03 20 39.9	
WLF				APKPab		03 20 50.1	
WLF	**Walferdange**	**154.22**	**349**	*e*PKPab	**PKPab**	**03 18 40.8**	**-0.2**
WLF				*ep*PKPbc	**pPKPbc**	**03 20 39.6**	**+5.3**
WLF				*ep*PKPab	**pPKPab**	**03 20 50.2**	**+5.0**
WLF	**Walferdange**	**154.22**	**349**	*e*PKP2	**PKPab**	**03 18 40.9**	**0.0**
WLF	**Walferdange**	**154.22**	**349**	*e*PKPab	**PKPab**	**03 18 40.9**	**0.0**
RJOB	**Jochberg**	**154.28**	**338**	*e*PKPab	**PKPab**	**03 18 41.8**	**+0.4**
RJOB				*ep*PKPab	**pPKPab**	**03 20 50.6**	**+5.0**
GROS	**Grobnik**	**154.32**	**333**	*i* PKPdf	**PKPdf**	**03 18 15.2**	**-0.5**
GROS				*i*		03 18 24.3	
GROS				*i* PKPab	**PKPab**	**03 18 41.4**	**-0.2**
FUR	**Furstenfeldbru**	**154.40**	**341**	*e*PKPab	**PKPab**	**03 18 42.3**	**+0.5**
FUR				*ep*PKPbc	**pPKPbc**	**03 20 39.6**	**+4.8**
FUR				*ep*PKPab	**pPKPab**	**03 20 51.4**	**+5.4**
FUR	**Furstenfeldbru**	**154.40**	**341**	*e*PKP2	**PKPab**	**03 18 42.3**	**+0.5**
STU	**Stuttgart**	**154.42**	**344**	*e*PKPbc	**PKPbc**	**03 18 25.2**	**+0.6**
STU				*e*PKPab	**PKPab**	**03 18 41.9**	**0.0**
STU				*ep*PKPbc	**pPKPbc**	**03 20 39.6**	**+4.8**
STU	**Stuttgart**	**154.42**	**344**	*e*PKP2	**PKPab**	**03 18 41.2**	**-0.7**
LANF	**Langenberg**	**154.55**	**346**	PKP2	**PKPab**	**03 18 42.5**	**+0.1**
LANF	**Langenberg**	**154.55**	**346**	PKP	**PKPab**	**03 18 42.5**	**+0.1**
LANF	**Langenberg**	**154.55**	**346**	PKP	**PKPab**	**03 18 42.5**	**+0.1**
GOLS	**Golise**	**154.63**	**332**	*e*PKPdf	**PKPdf**	**03 18 16.6**	**+0.4**
GOLS				*e*		03 18 25.4	
GOLS				*i* PKPab	**PKPab**	**03 18 42.8**	**-0.1**
XOR	**Xorichti**	**154.69**	**312**	P	**PKPbc**	**03 18 24.6**	**+0.9**
LIT	**Litokhoron**	**154.79**	**314**	P	**PKPbc**	**03 18 24.9**	**-0.8**
BFO	**Black Forest**	**155.04**	**345**	*e*PKPab	**PKPab**	**03 18 44.2**	**-0.4**
BFO				*ep*PKPbc	pPKPbc	03 20 40.8	+4.6
BFO				*ep*PKPab	**pPKPab**	**03 20 53.2**	**+4.5**
BFO	**Black Forest**	**155.04**	**345**	*e*PKP2	**PKPab**	**03 18 44.2**	**-0.4**
BFO	**Black Forest**	**155.04**	**345**	*e*PKPdf	**PKPdf**	**03 18 17.2**	**+0.5**
BFO				*e*PKPab	**PKPab**	**03 18 44.0**	**-0.6**
LJU	**Ljubljana**	**155.06**	**334**	*i* PKPdf	**PKPdf**	**03 18 17.0**	**+0.3**
LJU				*i*		03 18 26.2	
LJU				*i* PKPab	**PKPab**	**03 18 44.2**	**-0.6**
SPAK	**Spaichingen-Ko**	**155.14**	**344**	PKP	**PKPab**	**03 18 45.1**	**0.0**
RETA	**Reutte**	**155.16**	**341**⇑	*i*PKPab	**PKPab**	**03 18 45.7**	**+0.5**
	comp=Z,30nm,1.2s						
PHP	**Peshkopia**	**155.19**	**319**	P	PKPdf	03 18 26.1	+9.0
CEY	**Cerknica**	**155.35**	**333**	*e*PKPab	**PKPab**	**03 18 45.3**	**-0.7**
CEY				*e*		03 20 54.0	
ECH	**Echery**	**155.41**	**347**	PKP2	**PKPab**	**03 18 45.8**	**-0.4**
ECH	**Echery**	**155.41**	**347**	PKP	**PKPab**	**03 18 45.8**	**-0.4**
ECH	**Echery**	**155.41**	**347**	PKP	**PKPab**	**03 18 45.8**	**-0.4**
DID	**Didima**	**155.49**	**308**	P	PKPdf	03 18 25.9	+8.3
FELD	**Feldberg im Sc**	**155.54**	**345**	PKP	**PKPab**	**03 18 45.6**	**-1.3**
FELD	**Feldberg im Sc**	**155.54**	**345**	PKP	**PKPab**	**03 18 45.6**	**-1.3**
FETA	**Feichten**	**155.59**	**340**⇑	*i*PKPdf	**PKPdf**	**03 18 13.2**	**-4.4**
	comp=Z,6.7nm,1.3s						
FETA				⇑*i*PKPab	**PKPab**	**03 18 47.6**	**+0.5**
	comp=Z,18nm,1.1s						
DAVA	**Damuels**	**155.60**	**342**	*i* PKPab	**PKPab**	**03 18 47.7**	**+0.5**
	comp=Z,36nm,1.4s,SNR=11						
THEF	**They Montfort**	**155.63**	**348**	PKP2	**PKPab**	**03 18 46.7**	**-0.4**
THEF	**They Montfort**	**155.63**	**348**	PKP	**PKPab**	**03 18 46.7**	**-0.4**
THEF	**They Montfort**	**155.63**	**348**	PKP	**PKPab**	**03 18 46.7**	**-0.4**
TIR	**Tirane**	**155.74**	**319**	*e*PKP2	**PKPab**	**03 18 48.3**	**+0.5**
TIR	**Tirane**	**155.74**	**319**	*e*PKPab	**PKPab**	**03 18 48.3**	**+0.5**
MOF	**Molkenrain**	**155.76**	**346**	PKP2	**PKPab**	**03 18 47.3**	**-0.5**
MOF	**Molkenrain**	**155.76**	**346**	PKP	**PKPab**	**03 18 47.3**	**-0.5**
MOF	**Molkenrain**	**155.76**	**346**	PKP	**PKPab**	**03 18 47.3**	**-0.5**
BBS	**Basel-Blauen**	**156.05**	**345**	PKP2	**PKPab**	**03 18 49.0**	**0.0**
BBS	**Basel-Blauen**	**156.05**	**345**	PKP	**PKPab**	**03 18 49.0**	**0.0**
DAVOX	**Davos/Dischmat**	**156.06**	**341**	PKPab	**PKPab**	**03 18 49.3**	**+0.1**
DAVOX	**Davos/Dischmat**	**156.06**	**341**	PKPab	**PKPab**	**03 18 49.3**	**+0.1**
	comp=Z,12nm,0.6s,baz=347,slow=3.2,SNR=17						
LOMF	**Lomont**	**156.31**	**346**	PKP2	**PKPab**	**03 18 50.3**	**+0.2**
LOMF	**Lomont**	**156.31**	**346**	PKP	**PKPab**	**03 18 50.3**	**+0.2**
LOMF	**Lomont**	**156.31**	**346**	PKP	**PKPab**	**03 18 50.3**	**+0.2**
LKD2	**Lefkada island**	**156.68**	**313**	P	PKPdf	03 18 34.6	+16
AGO	**Saint Agoulin**	**158.20**	**352**	PKP	**PKPab**	**03 18 57.9**	**-0.4**
AGO	**Saint Agoulin**	**158.20**	**352**	PKP	**PKPab**	**03 18 57.9**	**-0.4**
AQU	**L'Aquila**	**158.49**	**330**	*e*PKPab	**PKPab**	**03 18 59.6**	**-0.1**
PYM	**Petit Puy Mans**	**158.51**	**352**	PKP2	**PKPab**	**03 18 59.5**	**-0.2**
PYM	**Petit Puy Mans**	**158.51**	**352**	PKP	**PKPab**	**03 18 59.5**	**-0.2**
PYM	**Petit Puy Mans**	**158.51**	**352**	PKP	**PKPab**	**03 18 59.5**	**-0.2**
TIP	**Timpagrande**	**158.95**	**318**	*e*PKPdf	**PKPdf**	**03 18 22.3**	**+0.4**
TIP				*e*PKPab	**PKPab**	**03 19 02.5**	**+0.6**
CUC	**Castrocucco**	**158.97**	**321**	*e*PKPab	**PKPab**	**03 19 01.1**	**-0.8**
LBL	**Lubilhac**	**158.99**	**351**	PKP2	**PKPab**	**03 19 01.7**	**-0.1**
LBL	**Lubilhac**	**158.99**	**351**	PKP	**PKPab**	**03 19 01.7**	**-0.1**
LBL	**Lubilhac**	**158.99**	**351**	PKP	**PKPab**	**03 19 01.7**	**-0.1**
SAOF	**Saorge**	**159.28**	**342**	PKP2	**PKPab**	**03 19 02.8**	**-0.3**
SAOF	**Saorge**	**159.28**	**342**	PKP	**PKPab**	**03 19 02.8**	**-0.3**
SAOF	**Saorge**	**159.28**	**342**	PKP	**PKPab**	**03 19 02.8**	**-0.3**
AUTN	**L'Aution**	**159.31**	**342**	PKP2	**PKPab**	**03 19 03.1**	**-0.4**
AUTN	**L'Aution**	**159.31**	**342**	PKP	**PKPab**	**03 19 03.1**	**-0.4**
AUTN	**L'Aution**	**159.31**	**342**	PKP	**PKPab**	**03 19 03.1**	**-0.4**
TOUF	**Mont Tournerai**	**159.34**	**343**	PKP2	**PKPab**	**03 19 02.7**	**-0.9**
TOUF	**Mont Tournerai**	**159.34**	**343**	PKP	**PKPab**	**03 19 02.7**	**-0.9**
TOUF	**Mont Tournerai**	**159.34**	**343**	PKP	**PKPab**	**03 19 02.7**	**-0.9**
MVIF	**Mont Vial**	**159.47**	**343**	PKP2	**PKPab**	**03 19 02.7**	**-1.4**
MVIF	**Mont Vial**	**159.47**	**343**	PKP	**PKPab**	**03 19 02.7**	**-1.4**
MVIF	**Mont Vial**	**159.47**	**343**	PKP	**PKPab**	**03 19 02.7**	**-1.4**
REVF	**Revere**	**159.56**	**342**	PKP2	**PKPab**	**03 19 04.2**	**-0.1**
REVF	**Revere**	**159.56**	**342**	PKP	**PKPab**	**03 19 04.2**	**-0.1**
REVF	**Revere**	**159.56**	**342**	PKP	**PKPab**	**03 19 04.2**	**-0.1**
CEL	**Celeste**	**160.05**	**318**	*e*PKPab	**PKPab**	**03 19 06.6**	**-0.2**
DBIC	**Dimbokro**	**161.94**	**168**	PKP	**PKPdf**	**03 18 25.1**	**-0.7**
DBIC				*e*PKPab	**PKPab**	**03 19 15.4**	**+0.1**
DBIC				PKPab	PKPab	03 19 15.6	+0.2
DBIC	**Dimbokro**	**161.94**	**168**	PKP	**PKPdf**	**03 18 25.1**	**-0.7**
	comp=Z,4.8nm,1.0s,baz=198,slow=3.9,SNR=3.2						
DBIC				PKPab	**PKPab**	**03 19 15.6**	**+0.2**
	comp=Z,16nm,1.0s,baz=165,slow=6.6,SNR=9.2						
ESDC	**Sonseca Array**	**164.65**	**8**	PKPab	**PKPab**	**03 19 26.5**	**-0.3**
ESDC	**Sonseca Array**	**164.65**	**8**	PKPab	**PKPab**	**03 19 26.5**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=335,slow=4.4,SNR=6.9						
KEST	**Kesra**	**165.59**	**324**	*e*PKPdf	**PKPdf**	**03 18 27.8**	**-0.8**
KEST				*e*PKPab	**PKPab**	**03 19 31.5**	**+0.3**
KEST				PKPab	PKPab	03 19 31.9	+0.6
KEST	**Kesra**	**165.59**	**324**	PKPab	**PKPab**	**03 19 31.9**	**+0.6**
	comp=Z,3.4nm,0.9s,baz=299,slow=4.1,SNR=10						
TORD	**Torodi Ar. Bea**	**168.43**	**194**	PKP	**PKPdf**	**03 18 30.4**	**-0.6**
TORD				PKPab	**PKPab**	**03 19 44.3**	**+0.4**
TORD	**Torodi Ar. Bea**	**168.43**	**194**	PKP	**PKPdf**	**03 18 30.4**	**-0.6**
	comp=Z,4.7nm,1.1s,baz=126,slow=0.5,SNR=14						
TORD				PKPab	**PKPab**	**03 19 44.3**	**+0.4**
	comp=Z,22nm,0.9s,baz=165,slow=4.3,SNR=64						
TAM	**Tamanrasset**	**173.69**	**256**	*e*PKIKP	**PKPdf**	**03 18 34.5**	**+0.8**
TAM				*e*		03 20 08.6	
TAM				*e*		03 23 58.4	
TAM	**Tamanrasset**	**173.69**	**256**	*e*PKPdf	**PKPdf**	**03 18 34.5**	**+0.8**
TAM				*e*PKPab	**PKPab**	**03 20 08.6**	**+0.8**
TAM				*e*PP	**PP**	**03 23 58.4**	**-2.4**

IDC ***23*** *03:42:50.3±3.1, 7.°41S×128.°47E, h112km±28km, mb3.8/9, mb1 3.9/12, mb1mx3.8/20, mbtmp3.8/12, MS2.6/1, Ms1 2.6/1, ms1mx1.6/24, Error ellipse: s-maj=32.8km s-min=12.7km az=77.0*

NEIC ***23*** *03:42:50.7±1.3, 7.°45S×128.°40E, h118km±13km, mb4.3/6, Error ellipse: s-maj=10.7km s-min=7.8km az=54.0*

ISCJB ***23*** *03:42:51.9±0.4, 7.°46S±0.°05×128.°45E±0.°09, h151km, mb3.9/11, Error ellipse: s-maj=13.2km s-min=6.9km az=164.0*

ISC 23 03:42:53.7±0.5, 7.°56S±0.°05×128.°43E±0.°09, h151km, n48, σ1ş74/53, mb3.8/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**8.99**	**286**	LR	LR	03 48 17.3	
	comp=Z,39nm,21.8s,baz=340,slow=36						
FITZ	**Fitzroy Crossi**	**10.83**	**194**	P	**Pn**	**03 45 24.2**	**-0.4**
FITZ				S	**Sn**	**03 47 19.3**	**-5.1**
FITZ	**Fitzroy Crossi**	**10.83**	**194**	P	**Pn**	**03 45 24.2**	**-0.4**
	0.9nm,0.3s,baz=26,slow=10,SNR=46						
FITZ				S	**Sn**	**03 47 19.3**	**-5.1**
	4.3nm,0.3s,baz=127,slow=21,SNR=9.1						
WRAB	**Tennant Creek**	**13.58**	**156**	*e*Pn	**Pn**	**03 45 58.8**	**-1.5**
	9.4nm,0.5s						
WRAB				*e*Sn	Sn	03 48 22.7	-7.9
WRA	**Warramunga Arr**	**13.58**	**156**	P	**Pn**	**03 45 58.7**	**-1.6**
WRA				S	Sn	03 48 22.3	-8.5
WRA	**Warramunga Arr**	**13.58**	**156**	P	**Pn**	**03 45 58.7**	**-1.6**
	3.2nm,0.3s,baz=343,slow=13,SNR=72						
WRA				S	Sn	03 48 22.3	-8.5
	3.5nm,0.3s,baz=329,slow=23,SNR=9.4						
COEN	**Coen**	**15.82**	**115**	*e*Pn	**Pn**	**03 46 27.6**	**-0.7**
	87nm,0.5s						
COEN				*e*Sn	Sn	03 49 11.0	-14
MBWA	**Marble Bar**	**15.92**	**211**	*e*P	**P**	**03 46 29.8**	**-0.2**
	29nm,1.3s						
AS31	**Alice Springs**	**16.86**	**162**	*e*P	**Pn**	**03 46 41.7**	**+0.8**
ASAR	**Alice Springs**	**16.86**	**162**	P	**Pn**	**03 46 43.0**	**+2.1**
ASAR				S	**S**	**03 49 47.0**	**-1.3**
ASAR	**Alice Springs**	**16.86**	**162**	P	**Pn**	**03 46

DIVS	**Divibare**	**2.64**	**199**	*e*Pn	**Pb**	**04 05 59.1**	**-1.6**
DIVS				*e*Sg	**Sb**	**04 06 34.4**	**+1.6**
GRUS	**Gruza**	**2.73**	**187**	*e*Pn	**Pn**	**04 05 58.7**	**+1.8**
GRUS				*e*Sg	**Sb**	**04 06 38.0**	**+2.7**
GRUS	**Gruza**	**2.73**	**187**	*e*Pn	**Pn**	**04 05 58.7**	**+1.8**
GRUS				*e*Sg	**Sb**	**04 06 38.0**	**+2.7**
VOIR		**2.93**	**112**	*i*P	**Pn**	**04 06 00.8**	**+1.1**
VOIR		**2.93**	**112**	*i*P	**Pn**	**04 06 00.8**	**+1.1**
BURAR	**Bucovina Array**	**2.93**	**68**	*i*P	**Pn**	**04 06 01.5**	**+1.7**
BURAR	**Bucovina Array**	**2.93**	**68**	*i*P	**Pn**	**04 06 01.5**	**+1.7**
BBLS	**Lazići**	**3.01**	**205**	*e*Pn	**Pn**	**04 06 02.0**	**+1.2**
BBLS				*e*Sg	**Sb**	**04 06 46.7**	**+3.3**
BBLS	**Lazići**	**3.01**	**205**	*e*Pn	**Pn**	**04 06 02.0**	**+1.2**
BBLS				*e*Sg	**Sb**	**04 06 46.7**	**+3.3**
BEHE	**Becsehely**	**3.05**	**269**	*e*Pn	**Pg**	**04 06 10.8**	**-1.7**
BEHE				*e*Pg	Pb	04 06 12.1	+4.4
BEHE				*e*Sn	**Sg**	**04 06 53.9**	**+1.9**
SMOL	**Smolenice**	**3.19**	**308**	*e*PN	**Pn**	**04 06 02.0**	**-1.2**
SMOL				*e*SN	**Sn**	**04 06 38.7**	**-2.1**
SMOL	**Smolenice**	**3.19**	**308**	*e*Pn	**Pn**	**04 06 02.0**	**-1.2**
SMOL				*e*Sn	**Sn**	**04 06 38.7**	**-2.1**
ZST	**Bratislava**	**3.21**	**301**	*e*PN	**Pn**	**04 06 02.8**	**-0.6**
ZST				*e*SN	**Sn**	**04 06 38.3**	**-2.8**
ZST	**Bratislava**	**3.21**	**301**	*e*Pn	**Pn**	**04 06 02.8**	**-0.6**
ZST				*e*Sn	**Sn**	**04 06 38.3**	**-2.8**
SOP	**Sopron**	**3.34**	**291**	*e*Pn	**Pn**	**04 06 05.7**	**+0.4**
SOP	**Sopron**	**3.34**	**291**	*e*Pn	**Pn**	**04 06 05.7**	**+0.4**
SELS	**Selova**	**3.38**	**181**	*e*Pn	**Pn**	**04 06 08.3**	**+2.5**
ZAPS	**Zavoj**	**3.48**	**162**	*e*Sg	**Sg**	**04 07 03.8**	**-1.9**
MLR	**Muntele Rosu**	**3.49**	**107**	*i*P	**Pn**	**04 06 07.4**	**-0.1**
MLR	**Muntele Rosu**	**3.49**	**107**	*i*P	**Pn**	**04 06 07.4**	**-0.1**
BARS	**Barje**	**3.80**	**173**	*e*Pn	**Pn**	04 06 15.6	+3.9
BARS				*e*Sg	**Sg**	**04 07 13.6**	**-2.6**
BARS	**Barje**	**3.80**	**173**	*e*Pn	**Pn**	04 06 15.6	+3.9
BARS				*e*Sg	**Sg**	**04 07 13.6**	**-2.6**
MORC	**Moravsky Berou**	**4.01**	**324**	*i*P	**Pn**	**04 06 15.3**	**+0.7**
MORC	**Moravsky Berou**	**4.01**	**324**	*i*P	**Pn**	**04 06 15.3**	**+0.7**
VRAC	**Vranov**	**4.11**	**313**	*i*P	**Pn**	**04 06 16.2**	**+0.3**
VRAC	**Vranov**	**4.11**	**313**	*i*P	**Pn**	**04 06 16.2**	**+0.3**
VRAC				*e*Sn	**Sn**	**04 07 02.3**	**-1.2**
TREC	**Trest**	**4.69**	**307**	*e*PN	**Pn**	**04 06 23.9**	**+0.1**
TREC	**Trest**	**4.69**	**307**	*e*Pn	**Pn**	**04 06 23.9**	**+0.1**
UPC	**Upice**	**5.21**	**321**	*e*PN	**Pn**	**04 06 31.0**	**0.0**
UPC	**Upice**	**5.21**	**321**	*e*Pn	**Pn**	**04 06 31.0**	**0.0**
PRU	**Pruhonice**	**5.59**	**310**	*e*PN	**Pn**	**04 06 36.5**	**+0.4**
PRU				*e*SN	**Sn**	**04 07 38.5**	**-1.3**
PRU	**Pruhonice**	**5.59**	**310**	*e*Pn	**Pn**	**04 06 36.5**	**+0.4**
PRU				*e*Sn	**Sn**	**04 07 38.5**	**-1.3**
KHC	**Kasperske Hory**	**5.72**	**299**	*e*PN	**Pn**	**04 06 38.8**	**+0.8**
KHC				*e*SN	**Sn**	**04 07 40.6**	**-2.5**
KHC	**Kasperske Hory**	**5.72**	**299**	*e*Pn	**Pn**	**04 06 38.8**	**+0.8**

*ISCJB **23** 04:07:40.7±0.5, 38°.35N±0°.02×35°.86E±0°.03, h3km±5km, Error ellipse: s-maj=4.4km s-min=3.8km az=149.6*
*CSEM **23** 04:07:40.7±0.2, 38°.36N×35°.88E, h2km, MD2.8, Error ellipse: s-maj=4.7km s-min=3.7km az=77.0*
*DDA **23** 04:07:40.3, 38°.36N×35°.84E, h7km, MD3.0*
*ISK **23** 04:07:40.8, 38°.37N×35°.87E, h6km, MD2.8*
ISC 23 04:07:40.1±1.1, 38°.37N±0°.02×35°.89E±0°.02, h13km±10km, n29, σ0°72/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARI	**SarD1z-Kayseri**	**0.42**	**85**	*e*PG	**Pb**	**04 07 49.6**	**+0.1**
SARI				*e*SG	**Sb**	**04 07 56.2**	**+0.3**
BNN	**Bunyan**	**0.48**	**356**	*e*PG	**Pb**	**04 07 50.5**	**0.0**
BNN				*e*SG	**Sb**	**04 07 58.0**	**+0.4**
BNN	**Bunyan**	**0.48**	**356**	*e*Pg	**Pb**	**04 07 50.5**	**0.0**
BNN				*e*Sg	**Sb**	**04 07 58.0**	**+0.4**
PINB	**Pinarbasi**	**0.51**	**53**	*i*P	**Pb**	**04 07 51.2**	**+0.1**
PINB				*i*S	**Sb**	**04 07 59.3**	**+0.8**
PINB	**Pinarbasi**	**0.51**	**53**	*i*P	**Pb**	**04 07 51.2**	**+0.1**
PINB				*i*S	**Sb**	**04 07 59.3**	**+0.8**
ANDN	**Andirin**	**0.87**	**155**	*i*P	**Pg**	**04 07 56.1**	**-0.9**
ANDN				*i*S	**Sb**	**04 08 09.0**	**+0.2**
ANDN	**Andirin**	**0.87**	**155**	*i*P	**Pg**	**04 07 56.1**	**-0.9**
ANDN				*i*S	**Sb**	**04 08 09.0**	**+0.2**
KOZT	**Kozan**	**0.89**	**183**	*e*PG	**Pn**	**04 07 58.5**	**+0.1**
KOZT				*e*SG	**Sn**	**04 08 10.9**	**-0.4**
KOZT	**Kozan**	**0.89**	**183**	*e*Pg	**Pn**	**04 07 58.5**	**+0.1**
KOZT				*e*Sg	**Sn**	**04 08 10.9**	**-0.4**
AVNT	**Avonos**	**0.90**	**297**	*i*P	**Pg**	**04 07 56.8**	**-0.8**
AVNT				*i*S	**Sg**	**04 08 09.1**	**-0.3**
AVNT	**Avonos**	**0.90**	**297**	*i*P	**Pg**	**04 07 56.8**	**-0.8**
AVNT				*i*S	**Sg**	**04 08 09.1**	**-0.3**
NIG	**Nigde**	**1.04**	**256**	*e*PG	**Pn**	**04 08 00.8**	**+0.2**
NIG	**Nigde**	**1.04**	**256**	*e*Pg	**Pn**	**04 08 00.9**	**+0.2**
KMRS	**Kahramanmaras**	**1.18**	**137**	*e*PN	**Pg**	**04 08 03.8**	**+1.0**
KMRS	**Kahramanmaras**	**1.18**	**137**	*e*Pn	**Pg**	**04 08 03.8**	**+1.0**
AYKD	**Aykdinkavak**	**1.20**	**142**	*i*P	**Pg**	**04 08 04.1**	**+0.8**
AYKD				*i*S	**Sn**	**04 08 19.3**	**+0.4**
DARE	**Darende-Malaty**	**1.27**	**81**	*e*PN	**Pg**	**04 08 05.7**	**+1.2**
YOZ	**Yozgat**	**1.34**	**341**	*e*PN	**Pg**	**04 08 06.7**	**+0.8**
YOZ	**Yozgat**	**1.34**	**341**	*e*Pn	**Pg**	**04 08 06.7**	**+0.8**
GULE	**Gulek**	**1.40**	**219**	*i*P	**Pg**	**04 08 07.5**	**+0.5**
GULE				*i*S	**Sb**	**04 08 24.9**	**+0.8**
GULE	**Gulek**	**1.40**	**219**	*i*P	**Pg**	**04 08 07.5**	**+0.5**
GULE				*i*S	**Sb**	**04 08 24.9**	**+0.8**
AKCD	**Akcadag**	**1.60**	**92**	*i*P	**Pn**	**04 08 06.2**	**-2.1**
AKCD				*i*S	**Sb**	**04 08 30.3**	**+0.3**
AKCD	**Akcadag**	**1.60**	**92**	*i*P	**Pn**	**04 08 06.2**	**-2.1**
AKCD				*i*S	**Sb**	**04 08 30.3**	**+0.3**
CDAG	**Cicekdag**	**1.72**	**317**	*i*P	**Pg**	**04 08 11.9**	**+0.3**
CDAG				*i*S	**Sg**	**04 08 35.5**	**+0.1**
CDAG	**Cicekdag**	**1.72**	**317**	*i*P	**Pb**	**04 08 11.9**	**+0.3**
CDAG				*i*S	**Sg**	**04 08 35.5**	**+0.1**
SULT	**Sultanhani-AKS**	**1.87**	**265**	*e*PN	**Pb**	**04 08 14.1**	**-0.2**
SULT	**Sultanhani-AKS**	**1.87**	**265**	*e*Pn	**Pb**	**04 08 14.1**	**-0.2**
CORM	**Corum**	**2.05**	**332**	*e*PN	**Pb**	**04 08 16.8**	**-0.5**
CORM	**Corum**	**2.05**	**332**	*e*Pn	**Pb**	**04 08 16.8**	**-0.5**

IDC 23 04:21:00.2±6.3, 23°.43N×108°.92W, h0km, mb3.1/1, mb1 3.6/4, mb1mx3.5/24, mbtmp3.2/4, ML3.9/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/13, Error ellipse: s-maj=91.6km s-min=24.0km az=157.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.43**	**298**	Pn	Pn	04 21 26.7	-0.8
	16nm,0.3s,baz=93,slow=4.5,SNR=44						
TXAR	**Lajitas Array**	**7.53**	**38**	Pn	Pn	04 22 51.9	+0.5
	0.2nm,0.3s,baz=228,slow=14,SNR=14						
TXAR				Sn	Sn	04 24 09.7	-7.9
	1.3nm,0.3s,baz=217,slow=24,SNR=17						
TXAR				Lg	Lg	04 24 56.6	
	0.4nm,0.3s,baz=202,slow=23,SNR=5.5						
NVAR	**Mina Array Bea**	**16.96**	**334**	Pn	P	04 25 02.7	+1.5
	0.0nm,0.3s,baz=168,slow=14,SNR=3.0						
PDAR	**Pinedale Array**	**19.29**	**359**	P	P	04 25 27.1	+0.3
	0.1nm,0.3s,baz=175,slow=10,SNR=8.1						
TKL	**Tuckaleechee C**	**24.96**	**55**	LR	LR	04 36 38.2	
	comp=Z,50nm,18.2s,baz=94,slow=38						
NEW	**Newport**	**25.62**	**347**	LR	LR	04 36 27.4	
	comp=Z,26nm,18.1s,baz=35,slow=36						
YKA	**Yellowknife Ar**	**39.23**	**356**	P	P	04 28 30.3	+0.3
	0.1nm,0.5s,baz=167,slow=8.3,SNR=4.7						

IDC 23 04:41:32.0±5.1, 8°.49S×119°.12E, h171km±49km, mb3.1/2, mb1 3.3/3, mb1mx3.0/22, mbtmp3.1/3, Error ellipse: s-maj=97.9km s-min=14.7km az=45.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.62**	**129**	P	P	04 45 36.7	+0.1
	0.3nm,0.3s,baz=303,slow=12,SNR=32						
WRA				S	S	04 49 00.6	+0.6
	0.1nm,0.3s,baz=306,slow=24,SNR=4.7						
ASAR	**Alice Springs**	**20.70**	**139**	P	P	04 45 58.9	-0.1
	1.7nm,0.5s,baz=313,slow=9.3,SNR=17						
MKAR	**Makanchi Array**	**64.06**	**333**	P	P	04 51 47.4	-0.1
	0.3nm,0.5s,baz=101,slow=7.5,SNR=3.2						
TORD	**Torodi Ar. Bea**	**118.49**	**280**	PKP	PKPdf	05 00 00.3	0.0
	0.2nm,0.5s,baz=86,slow=0.5,SNR=4.4						

*HLW **23** 04:47:35.1, 36°.77N×21°.84E, h33km±40km, Md0.0, Ml4.4*
*BJI **23** 04:47:36.9, 36°.38N×21°.22E, h38km, mB4.9/21, mb4.7/28, Ms4.8/17, Ms7 4.4/17*

*IDC **23** 04:47:36.3±0.6, 36°.53N×21°.82E, h0km, mb4.3/22, mb1 4.4/31, mb1mx4.3/40, mbtmp4.3/31, ML4.1/8, MS4.1/27, Ms1 4.1/27, ms1mx4.0/47, Error ellipse: s-maj=12.8km s-min=11.4km az=177.0*
*ATH **23** 04:47:37.3, 36°.40N×21°.70E, h13km±2km, MD3.8/45, ML4.5*
*CSEM **23** 04:47:37.9±0.1, 36°.38N×21°.71E, h10km, mb4.7/44, Ms3.9, Mw4.9, Error ellipse: s-maj=3.3km s-min=2.3km az=34.0*
*NEIC **23** 04:47:37.3, 36°.40N×21°.70E, h13km, mb4.6/67, ML4.5(ATH), After ATH.*
*MOS **23** 04:47:37.6±1.4, 36°.45N×21°.76E, h18km, mb4.8/46, Error ellipse: s-maj=4.4km s-min=2.6km az=100.7*
*ISCJB **23** 04:47:38.1±0.4, 36°.38N±0°.01×21°.71E±0°.01, h25km±2km, mb4.6/93, MS4.2/38, Error ellipse: s-maj=2.5km s-min=1.7km az=26.8*
*PDG **23** 04:47:38.2±0.5, 36°.49N×21°.69E, h11km±1km, ML4.3/9, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0*
*THE **23** 04:47:40.1, 36°.51N×21°.87E, h0km±1km, ML4.4/12, Error ellipse: s-maj=1.8km s-min=0.7km az=219.0*
*SZGRF **23** 04:47:40.8, 36°.94N×22°.17E, h10km, mb4.2, Southern Greece*
*TEH **23** 04:47:42.0, 36°.50N×21°.81E, h39km, ML4.7*
*GCMT **23** 04:47:42.9±0.4, 36°.36N×21°.52E, h23km±1km, MW4.9, Moment Tensor Solution. s23,c25; s58,c89; Moment tensor: Scale 10^16Nm; Mrr1.32±.16; Mθθ-1.38±.11; Mφφ0.07±.12; Mrθ0.82±.18; Mrφ2.31±.10; Mθφ-0.21±.17; Best double couple: Mo2.60000×10^16 NP1:ω349.00000°, δ61.00000°, λ164.00000°. NP2:ω87.00000°, δ76.00000°, λ30.00000°. Principal axes: T 1.9600, Plg31.0000°, Azm312.0000°; N 1.2600, Plg57.0000°, Azm110.0000°; P -3.2100, Plg10.0000°, Azm216.0000°; Data Used: IU II CN IC G.*
*PRU **23** 04:47:44.2, 37°.12N×22°.11E, h0km, M4.6*
ISC 23 04:47:38.2±0.6, 36°.44N±0°.02×21°.75E±0°.02, h16km±3km, n1101, σ1°69/1111, mb4.6/93, MS4.1/38, 32C-29D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.46**	**359**	*e*Pg	**Pg**	**04 47 46.9**	**-0.5**
PYL				*e*Sb	**Sb**	**04 47 54.5**	**-0.1**
PYL	**PYLOS**	**0.46**	**359**	*e*PG	**Pg**	**04 47 46.9**	**-0.5**
PYL				*e*SB	**Sb**	**04 47 54.5**	**-0.1**
PYL	**PYLOS**	**0.46**	**359**	*e*Pg	**Pg**	**04 47 46.9**	**-0.5**
PYL				*e*Sb	**Sb**	**04 47 54.5**	**-0.1**
DYR	**Agios Nikonas**	**0.57**	**55**	P	**Pg**	**04 47 48.8**	**-0.7**
DYR	**Agios Nikonas**	**0.57**	**55**	*e*PB	**Pb**	**04 47 49.6**	**-0.3**
DYR				*e*SB	**Sb**	**04 47 58.7**	**+0.9**
DYR	**Agios Nikonas**	**0.57**	**55**	P	**Pg**	**04 47 48.8**	**-0.7**
DYR	**Agios Nikonas**	**0.57**	**55**	*e*Pb	**Pb**	**04 47 49.6**	**-0.3**
DYR				*e*Sb	**Sb**	**04 47 58.7**	**+0.9**
ITM	**Ithomi**	**0.76**	**11**	P	**Pg**	**04 47 52.3**	**-0.7**
ITM				S	**Sg**	**04 48 02.7**	**-0.3**
ITM	**Ithomi**	**0.76**	**11**	*e*Pb	**Pb**	**04 47 52.8**	**-0.2**
ITM				*e*Sb	**Sb**	**04 48 04.6**	**+1.5**
ITM	**Ithomi**	**0.76**	**11**	*e*PB	**Pb**	**04 47 52.8**	**-0.2**
ITM				*e*SB	**Sb**	**04 48 04.6**	**+1.5**
ITM	**Ithomi**	**0.76**	**11**	P	**Pg**	**04 47 52.3**	**-0.7**
ITM	**Ithomi**	**0.76**	**11**	*e*Pb	**Pb**	**04 47 52.8**	**-0.2**
ITM				S	**Sg**	**04 48 02.7**	**-0.3**
ITM				*e*Sb	**Sb**	**04 48 04.6**	**+1.5**
VLI	**Veliai**	**1.00**	**73**	P	**Pb**	**04 47 56.8**	**-0.3**
VLI				S	**Sb**	**04 48 10.4**	**+0.4**
VLI	**Veliai**	**1.00**	**73**	*e*Pg	**Pb**	**04 47 57.0**	**-0.1**
VLI				*e*Sb	**Sn**	**04 48 11.9**	**+0.6**
VLI	**Veliai**	**1.00**	**73**	*e*PG	**Pb**	**04 47 57.0**	**-0.1**
VLI				*e*SB	**Sn**	**04 48 11.9**	**+0.6**
VLI	**Veliai**	**1.00**	**73**	*e*Pg	**Pb**	**04 47 57.0**	**-0.1**
VLI				S	**Sb**	**04 48 10.4**	**+0.4**
VLI				*e*Sb	**Sn**	**04 48 11.9**	**+0.6**
KYTH	**Kithira**	**1.05**	**98**	P	**Pb**	**04 47 57.8**	**-0.2**
KYTH	**Kithira**	**1.05**	**98**	*e*Pn	**Pg**	**04 47 58.0**	**-0.5**
KYTH	**Kithira**	**1.05**	**98**	*e*PN	**Pg**	**04 47 58.0**	**-0.5**
KYTH	**Kithira**	**1.05**	**98**	*e*Pn	**Pg**	**04 47 58.0**	**-0.5**
VLX	**Vlachokerasia**	**1.06**	**28**	P	**Pb**	**04 47 57.7**	**-0.5**
VLX				S	**Sg**	**04 48 13.1**	**+0.5**
VLX	**Vlachokerasia**	**1.06**	**28**	*e*Pg	**Pb**	**04 47 57.8**	**-0.5**
VLX				*e*Sb	**Sg**	**04 48 13.3**	**+0.7**
VLX	**Vlachokerasia**	**1.06**	**28**	*e*PG	**Pb**	**04 47 57.8**	**-0.5**
VLX				*e*SB	**Sg**	**04 48 13.3**	**+0.7**
VLX	**Vlachokerasia**	**1.06**	**28**	*e*Pg	**Pb**	**04 47 57.8**	**-0.5**
VLX				*e*Sb	**Sg**	**04 48 13.3**	**+0.7**
ANKY	**Antikythira Is**	**1.38**	**114**	*e*Pg	**Pb**	**04 48 03.0**	**-0.6**
ANKY	**Antikythira Is**	**1.38**	**114**	*e*PG	**Pb**	**04 48 03.0**	**-0.6**
ANKY	**Antikythira Is**	**1.38**	**114**	*e*Pg	**Pb**	**04 48 03.0**	**-0.6**
DIDY	**Didyma**	**1.57**	**48**	P	**Pb**	**04 48 06.8**	**-0.1**
DIDY	**Didyma**	**1.57**	**48**	P	**Pb**	**04 48 06.8**	**-0.1**
GUR	**Goura**	**1.57**	**17**	P	**Pb**	**04 48 06.8**	**-0.2**
GUR				S	**Sg**	**04 48 28.4**	**-0.5**
GUR	**Goura**	**1.57**	**17**	*e*Pg	**Pb**	**04 48 06.8**	**-0.2**
GUR	**Goura**	**1.57**	**17**	*e*PG	**Pb**	**04 48 06.8**	**-0.2**
GUR	**Goura**	**1.57**	**17**	*e*Pg	**Pb**	**04 48 06.8**	**-0.2**
GUR				S	**Sg**	**04 48 28.4**	**-0.5**
DID	**Didima**	**1.60**	**48**	P	**Pb**	**04 48 06.8**	**-0.6**
DID				S	**Sn**	**04 48 27.1**	**+0.8**
DID	**Didima**	**1.60**	**48**	*e*Pb	**Pb**	**04 48 07.9**	**+0.5**
DID	**Didima**	**1.60**	**48**	*e*PB	**Pb**	**04 48 07.9**	**+0.5**
DID	**Didima**	**1.60**	**48**	P	**Pb**	**04 48 07.3**	**-0.1**
DID	**Didima**	**1.60**	**48**	*e*Pb	**Pb**	**04 48 07.9**	**+0.5**
DID				S	**Sn**	**04 48 27.1**	**+0.8**
RLS	**Riolos of Patr**	**1.64**	**352**	P	**Pg**	**04 48 08.4**	**-1.2**
RLS				S	**Sg**	**04 48 31.2**	**+0.3**
RLS	**Riolos of Patr**	**1.64**	**352**	*e*Pb	**Pg**	**04 48 08.3**	**-1.3**
RLS	**Riolos of Patr**	**1.64**	**352**	*e*PB	**Pg**	**04 48 08.3**	**-1.3**
RLS	**Riolos of Patr**	**1.64**	**352**	*e*Pb	**Pg**	**04 48 08.3**	**-1.3**
RLS				S	**Sg**	**04 48 31.2**	**+0.3**
KLV	**Kalavryta, Ach**	**1.64**	**11**	*e*Pb	**Pb**	**04 48 07.5**	**-0.6**
KLV	**Kalavryta, Ach**	**1.64**	**11**	*e*PB	**Pb**	**04 48 07.5**	**-0.6**
KLV	**Kalavryta, Ach**	**1.64**	**11**	*e*Pb	**Pb**	**04 48 07.5**	**-0.6**
THAL	**Thalero**	**1.76**	**24**	P	**Pb**	**04 48 10.1**	**0.0**
THAL	**Thalero**	**1.76**	**24**	P	**Pb**	**04 48 10.1**	**0.0**
LAKA	**Lakka**	**1.81**	**6**	P	**Pb**	**04 48 10.8**	**-0.2**
LAKA	**Lakka**	**1.81**	**6**	*e*Pg	**Pb**	**04 48 11.4**	**+0.4**
LAKA	**Lakka**	**1.81**	**6**	*e*PG	**Pb**	**04 48 11.4**	**+0.4**
LAKA	**Lakka**	**1.81**	**6**	P	**Pb**	**04 48 10.8**	**-0.2**
LAKA	**Lakka**	**1.81**	**6**	*e*Pg	**Pb**	**04 48 11.4**	**+0.4**
LAKA				S	**Sg**	**04 48 35.5**	**-1.0**
KFL	**Anninata**	**1.84**	**336**	P	**Pb**	**04 48 12.8**	**-0.7**
KFL	**Anninata**	**1.84**	**336**	P	**Pb**	**04 48 10.0**	**-1.5**
LTK	**Loutraki**	**1.86**	**31**	P	**Pb**	**04 48 11.1**	**-0.7**
LTK				S	**Sb**	**04 48 34.6**	**-0.3**
LTK	**Loutraki**	**1.86**	**31**	*e*Pn	**Pb**	**04 48 11.7**	**-0.1**
LTK	**Loutraki**	**1.86**	**31**	*e*PN	**Pb**	**04 48 11.7**	**-0.1**
LTK	**Loutraki**	**1.86**	**31**	P	**Pb**	**04 48 11.1**	**-0.7**
LTK	**Loutraki**	**1.86**	**31**	*e*Pn	**Pb**	**04 48 11.7**	**-0.1**
LTK				S	**Sb**	**04 48 34.6**	**-0.3**
NAIG	**Nisos Aigina**	**1.92**	**46**	*e*Pn	**Pb**	**04 48 12.8**	**0.0**
NAIG	**Nisos Aigina**	**1.92**	**46**	*e*PN	**Pb**	**04 48 12.8**	**0.0**
NAIG	**Nisos Aigina**	**1.92**	**46**	*e*Pn	**Pb**	**04 48 12.8**	**0.0**
TRIZ	**Trizonia**	**1.94**	**7**	P	**Pb**	**04 48 13.5**	**+0.3**
TRIZ	**Trizonia**	**1.94**	**7**	*e*PG	**Pb**	**04 48 13.7**	**+0.5**
TRIZ	**Trizonia**	**1.94**	**7**	P	**Pb**	**04 48 12.5**	**-0.7**
TRIZ	**Trizonia**	**1.94**	**7**	*e*Pg	**Pb**	**04 48 13.7**	**+0.5**
TRIZ				S	**Sb**	**04 48 37.5**	**+0.2**
VLS	**Valsamata**	**1.97**	**332**	*e*P	**Pb**	**04 48 12.4**	**-1.3**
VLS	**Valsamata**	**1.97**	**332**	P	**Pb**	**04 48 12.0**	**-1.7**
VLS				S	**Sg**	**04 48 40.5**	**-1.1**
VLS	**Valsamata**	**1.97**	**332**	*e*Pn	**Pb**	**04 48 12.4**	**-1.3**
VLS	**Valsamata**	**1.97**	**332**	*e*PN	**Pb**	**04 48 12.4**	**-1.3**
VLS	**Valsamata**	**1.97**	**332**	P	**Pb**	**04 48 12.0**	**-1.7**
VLS	**Valsamata**	**1.97**	**332**	*e*Pn	**Pb**	**04 48 12.4**	**-1.3**
VLS				S	**Sg**	**04 48 40.5**	**-1.1**
KALE	**Kalithea**	**1.98**	**9**	P	**Pb**	**04 48 13.9**	**0.0**
KALE				S	**Sb**	**04 48 37.8**	**-0.5**
KALE	**Kalithea**	**1.98**	**9**	*e*Pg	**Pb**	**04 48 14.3**	**+0.4**
KALE	**Kalithea**	**1.98**	**9**	*e*PG	**Pb**	**04 48 14.3**	**+0.4**
KALE	**Kalithea**	**1.98**	**9**	P	**Pb**	**04 48 13.0**	**-0.9**
KALE	**Kalithea**	**1.98**	**9**	*e*Pg	**Pb**	**04 48 14.3**	**+0.4**
KALE				S	**Sb**	**04 48 37.8**	**-0.5**
EFP	**Efpalio**	**1.99**	**4**	P	**Pb**	**04 48 14.2**	**+0.1**
EFP				S	**Sb**	**04 48 38.3**	**-0.4**
EFP	**Efpalio**	**1.99**	**4**	*e*Pg	**Pg**	**04 48 15.0**	**-1.4**
EFP	**Efpalio**	**1.99**	**4**	*e*PG	**Pg**	**04 48 15.0**	**-1.4**
EFP	**Efpalio**	**1.99**	**4**	P	**Pb**	**04 48 13.5**	**-0.6**
EFP	**Efpalio**	**1.99**	**4**	*e*Pg	**Pg**	**04 48 15.0**	**-1.4**
EFP				S	**Sb**	**04 48 38.3**	**-0.4**

DSF	**Desfina**	**2.07**	**17**	P	**Pn**	**04 48 13.5**	**+1.2**
DSF				S	**Sn**	**04 48 39.7**	**+1.9**
DSF	**Desfina**	**2.07**	**17**	P	**Pn**	**04 48 13.5**	**+1.2**
DSF				S	**Sn**	**04 48 39.7**	**+1.9**
VIL2	**Platees**	**2.15**	**34**	P	**Pb**	**04 48 15.0**	**-1.7**
ATH	**Athens Observa**	**2.19**	**45**	*e*P	**Pb**	**04 48 17.0**	**-0.5**
ATH	**Athens Observa**	**2.19**	**45**	*e*Pn	**Pb**	**04 48 17.0**	**-0.5**
ATH	**Athens Observa**	**2.19**	**45**	*e*PN	**Pb**	**04 48 17.0**	**-0.5**
ATH	**Athens Observa**	**2.19**	**45**	*e*Pn	**Pb**	**04 48 17.0**	**-0.5**
ATHU	**Athens Univers**	**2.23**	**46**	P	**Pn**	**04 48 15.7**	**+1.2**
ATHU	**Athens Univers**	**2.23**	**46**	P	**Pn**	**04 48 15.7**	**+1.2**
VAM	**Vamos**	**2.24**	**117**	*e*P	**Pb**	**04 48 17.1**	**-1.1**
VAM	**Vamos**	**2.24**	**117**	P	**Pb**	**04 48 16.7**	**-1.5**
VAM				S	**Sb**	**04 48 46.0**	**+0.3**
VAM	**Vamos**	**2.24**	**117**	*e*Pn	**Pb**	**04 48 17.1**	**-1.1**
VAM	**Vamos**	**2.24**	**117**	*e*PN	**Pb**	**04 48 17.1**	**-1.1**
VAM	**Vamos**	**2.24**	**117**	P	**Pb**	**04 48 16.7**	**-1.5**
VAM	**Vamos**	**2.24**	**117**	*e*Pn	**Pb**	**04 48 17.1**	**-1.1**
VAM				S	**Sb**	**04 48 46.0**	**+0.3**
PTL	**Penteli**	**2.33**	**46**	P	**Pb**	**04 48 18.1**	**-1.8**
PTL	**Penteli**	**2.33**	**46**	*e*Pn	**Pb**	**04 48 18.9**	**-1.0**
PTL	**Penteli**	**2.33**	**46**	*e*PN	**Pb**	**04 48 18.9**	**-1.0**
PTL	**Penteli**	**2.33**	**46**	P	**Pb**	**04 48 18.1**	**-1.8**
PTL	**Penteli**	**2.33**	**46**	*e*Pn	**Pb**	**04 48 18.9**	**-1.0**
LKR	**Lokris**	**2.42**	**24**	*e*Pb	**Pn**	**04 48 18.5**	**+1.3**
LKR	**Lokris**	**2.42**	**24**	*e*PB	**Pn**	**04 48 18.5**	**+1.3**
LKR	**Lokris**	**2.42**	**24**	*e*Pb	**Pn**	**04 48 18.5**	**+1.3**
AXAR	**Agios Charalam**	**2.44**	**17**	P	**Pb**	**04 48 20.3**	**-1.4**
AXAR	**Agios Charalam**	**2.44**	**17**	P	**Pb**	**04 48 20.3**	**-1.4**
ATAL	**Atalanti**	**2.47**	**24**	P	**Pn**	**04 48 18.8**	**+1.0**
ATAL	**Atalanti**	**2.47**	**24**	P	**Pn**	**04 48 18.8**	**+1.0**
EVR	**Evrytania**	**2.48**	**1**	*e*Pn	**Pb**	**04 48 21.1**	**-1.3**
EVR	**Evrytania**	**2.48**	**1**	*e*PN	**Pb**	**04 48 21.1**	**-1.3**
EVR	**Evrytania**	**2.48**	**1**	*e*Pn	**Pb**	**04 48 21.1**	**-1.3**
GVD	**Gavdhos**	**2.48**	**129**	P	**Pb**	**04 48 20.4**	**-2.0**
GVD	**Gavdhos**	**2.48**	**129**	*e*Pn	**Pb**	**04 48 20.4**	**-2.0**
GVD	**Gavdhos**	**2.48**	**129**	*e*PN	**Pb**	**04 48 20.4**	**-2.0**
GVD	**Gavdhos**	**2.48**	**129**	P	**Pb**	**04 48 20.4**	**-2.0**

SIGR	SIGRI	4.27	48	P	Pn	04 48 43.9 +1.4	BEY	Berane	6.59	348	⇓iPn	Pn	04 49 16.3 +1.9						
SIGR	SIGRI	4.27	48	P	Pn	04 48 43.9 +1.4	BEY				eSn	Sn	04 50 29.4 +0.1						
HORT	Hortiatis	4.29	14	P	Pn	04 48 44.2 +1.3	IVA	Berane	6.59	348	⇓iPn	Pn	04 49 16.3 +1.9						
HORT	Hortiatis	4.29	14	P	Pn	04 48 44.2 +1.3	IVA				eSn	Sn	04 50 29.4 +0.1						
URLA	Izmir	4.31	62	iP	Pn	04 48 44.9 +1.7	EDRB	Edirne	6.65	34	ePN	Pn	04 49 15.5 +0.2						
URLA	Izmir	4.31	62	iP	Pn	04 48 44.9 +1.7	GDZ	Gediz	6.67	64	iP	Pn	04 49 21.8 +6.1						
FNA	Florina	4.35	356	P	Pn	04 48 47.1 +3.4	NKY	Niksic	6.72	342	⇓iPn	Pn	04 49 15.9 -0.3						
FNA				S	Sn	04 49 38.4 +4.2	NKY				eSn	Sn	04 50 32.6 +0.1						
FNA	Florina	4.35	356	P	Pn	04 48 47.1 +3.4	NKY	Niksic	6.72	342	⇓iPn	Pn	04 49 15.9 -0.3						
FNA				S	Sn	04 49 38.4 +4.2	NKY				eSn	Sn	04 50 32.6 +0.1						
NIS1	Nisyros Isl.	4.38	86	ePn	Pn	04 48 47.6 +3.6	TVSB	Tavsanli	6.80	61	ePN	Pn	04 49 20.1 +2.7						
NIS1	Nisyros Isl.	4.38	86	ePN	Pn	04 48 47.1 +3.1	MDNY	Mudanya-Bursa	6.84	53	ePN	Pn	04 49 20.1 +2.3						
NIS1	Nisyros Isl.	4.38	86	ePN	Pn	04 48 47.6 +3.6	ULDT	Uludag	6.89	55	iP	Pn	04 49 24.7 +6.0						
NIS1	Nisyros Isl.	4.38	86	ePn	Pn	04 48 47.1 +3.1	BRYT	Bratogost	6.92	340	⇓iPn	Pn	04 49 18.8 -0.2						
KARP	Karpathos	4.48	100	ePn	Pn	04 48 47.1 +1.7	BRY				eSn	Sn	04 50 36.7 -0.8						
KARP	Karpathos	4.48	100	ePN	Pn	04 48 47.1 +1.7	BRY	Bratogost	6.92	340	⇓iPn	Pn	04 49 18.8 -0.2						
KARP	Karpathos	4.48	100	ePN	Pn	04 48 47.1 +1.7	BRY				eSn	Sn	04 50 36.7 -0.8						
BODT	Bodrum	4.51	80	ePN	Pn	04 48 48.0 +2.1	KORT	Korkueli	6.93	83	iP	Pn	04 49 25.0 +5.7						
GRG	Griva	4.54	6	P	Pn	04 48 49.1 +2.8	ARMT	Armutlu	6.94	51	ePN	Pn	04 49 21.0 +1.8						
GRG	Griva	4.54	6	P	Pn	04 48 49.1 +2.8	MS1	Monte Sant'Ang	6.94	321	ePn	Pn	04 49 19.8 +0.6						
PRK	Paraskevi	4.55	51	P	Pn	04 48 48.7 +2.4	MS1				eSn	Sn	04 50 36.6 -1.2						
PRK	Paraskevi	4.55	51	P	Pn	04 48 48.7 +2.4	HMAT	Matruh	6.94	139	AMP		04 50 00.0						
SOH	Sokhos	4.56	16	eP	Pn	04 48 49.4 +2.9		comp=N,110µm,0.8s,logA/T=5.2,baz=140												
SOH	Sokhos	4.56	16	P	Pn	04 48 49.4 +2.9	UPM	Unac-Piva	7.11	343	⇓iPn	Pn	04 49 22.4 +0.7						
SOH				S	Sn	04 49 43.5 +4.3	UPM				eSn	Sn	04 50 42.4 +0.2						
SOH	Sokhos	4.56	16	ePn	Pn	04 48 49.4 +2.9	UPM	Unac-Piva	7.11	343	⇓iPn	Pn	04 49 22.4 +0.7						
SOH	Sokhos	4.56	16	ePN	Pn	04 48 49.4 +2.9	UPM				eSn	Sn	04 50 42.4 +0.2						
SOH	Sokhos	4.56	16	P	Pn	04 48 49.4 +2.9	ALT	Altintas	7.12	66	ePN	Pn	04 49 24.1 +2.3						
SOH				S	Sn	04 49 43.5 +4.3	CTKS	Kestanelik-??a	7.12	46	ePN	Pn	04 49 22.7 +0.9						
GCAM	G?zelcaml?	4.56	72	iP	Pn	04 48 48.2 +1.7	ISP	Isparta	7.14	76	ePN	Pn	04 49 26.6 +3.5						
GCAM	G?zelcaml?	4.56	72	iP	Pn	04 48 48.2 +1.7	ISP	Isparta	7.14	76	⇑Pn	Pn	04 49 26.2 +4.1						
BIA	Bitola	4.59	356	ePn	Pn	04 48 48.9 +1.8	ISP	Isparta	7.14	76	ePn	Pn	04 49 26.1 +4.1						
BIA				eSn	Sn	04 49 42.9 +2.9	ISP	Isparta	7.14	76	⇑iPn	Pn	04 49 26.2 +4.1						
BIA	Bitola	4.59	356	ePn	Pn	04 48 48.8 +1.8	ISP	Isparta	7.14	76	ePn	Pn	04 49 26.1 +4.0						
BIA				eSn	Sn	04 49 42.9 +2.9	STON	Ston	7.15	335	iPn	Pn	04 49 21.6 -0.5						
BLCB	Balcova	4.64	64	ePN	Pn	04 48 48.8 +1.2	STON				Sn	Sn	04 50 40.1 -2.7						
IZM	Izmir	4.80	64	ePN	Pn	04 48 51.3 +1.4	STON	Ston	7.15	335	iPn	Pn	04 49 21.5 -0.5						
KNT	Kendrikon	4.80	10	P	Pn	04 48 51.8 +1.9	CTYL	Yal??k??y-??at	7.16	43	ePN	Pn	04 49 23.6 +1.3						
KNT	Kendrikon	4.80	10	P	Pn	04 48 51.8 +1.9	ANTB	Antalya	7.17	84	ePN	Pn	04 49 25.8 +3.5						
TIP	Timpagrande	4.81	306	ePn	Pn	04 48 50.4 +0.4	BGKT	Bogazkoy	7.25	47	ePN	Pn	04 49 24.9 +1.5						
TIP	Timpagrande	4.81	306	ePn	Pn	04 48 50.4 +0.4	BUY	Buyukada	7.26	50	ePN	Pn	04 49 24.1 +0.5						
AYVA	Ayvalik	4.85	52	iP	Pn	04 48 54.3 +3.8	BUY	Buyukada	7.26	50	iP	Pn	04 49 27.3 +3.8						
AYVA	Ayvalik	4.85	52	iP	Pn	04 48 54.3 +3.8	BUY	Buyukada	7.26	50	iP	Pn	04 49 27.3 +3.8						
SRS	Serrai	4.89	17	P	Pn	04 48 54.3 +3.2	YLV	Yalova	7.26	53	ePN	Pn	04 49 25.4 +1.8						
SRS	Serrai	4.89	17	P	Pn	04 48 54.3 +3.2	SHUT	Suhut-Afyon	7.31	71	ePN	Pn	04 49 26.9 +2.5						
MLSB	Milas	4.91	78	ePN	Pn	04 48 53.6 +2.2	ISK	Istanbul-Kandi	7.35	49	ePN	Pn	04 49 26.7 +1.9						
VAY	Valandovo	4.92	7	P	Pn	04 48 53.3 +1.8	CAVI	Cavuskoy	7.39	57	ePN	Pn	04 49 27.3 +1.9						
VAY	Valandovo	4.92	7	ePn	Pn	04 48 52.7 +1.2	ADUT	Abdulvahap	7.43	55	ePN	Pn	04 49 26.8 +2.0						
VAY				eSn	Sn	04 49 48.7 +0.6	KLYT	Kilyos	7.45	48	ePN	Pn	04 49 27.9 +1.7						
VAY				eLg	Lg	04 49 49.1	SILT	Sile	7.76	50	ePN	Pn	04 49 32.0 +1.6						
	comp=E,445nm,1.4s						SWA2		7.82	155	P	Pn	04 49 31.0 -0.3						
VAY				eLg	Lg	04 49 49.4		baz=157											
	comp=N,494nm,1.2s						SWA2				AMP		04 50 00.0						
VAY	Valandovo	4.92	7	P	Pn	04 48 53.3 +1.8		comp=E,210µm,0.4s,logA/T=5.7,baz=157											
VAY				eSn	Sn	04 49 49.2 +1.1	SWA2		7.82	155	P	Pn	04 49 31.0 -0.3						
VAY				eLg	Lg	04 49 49.8	GULT	Gulveren	7.95	57	ePN	Pn	04 49 34.7 +1.5						
	comp=N,494nm,1.2s						SVRH	Sivrihisar-ESK	8.29	66	ePN	Pn	04 49 39.9 +2.1						
EZN	Ezine	4.95	45	ePN	Pn	04 48 53.1 +1.3	HENT	Hendek	8.39	56	iP	Pn	04 49 45.3 +6.1						
CEL	Celeste	5.01	293	ePn	Pn	04 48 52.5 -0.2	KIZT	Kizilcal	8.40	70	ePN	Pn	04 49 41.7 +2.3						
CEL				eSn	Sn	04 49 49.0 -1.4	MDUB	Mudurnu	8.44	59	ePN	Pn	04 49 41.7 +1.8						
CEL	Celeste	5.01	293	ePn	Pn	04 48 52.5 -0.2	KDHN	Kadinhani	8.50	73	iP	Pn	04 49 45.2 +4.4						
CEL				eSn	Sn	04 49 49.0 -1.4	LADK	Ladik-KONYA	8.64	75	ePN	Pn	04 49 44.9 +2.3						
KAVA	Kavala	5.04	25	P	Pn	04 48 55.1 +2.0	AQU	L'Aquila	8.76	315	ePn	Pn	04 49 46.4 +2.2						
KAVA	Kavala	5.04	25	P	Pn	04 48 55.1 +2.0	AQU	L'Aquila	8.76	315	⇑iPn	Pn	04 49 47.4 +3.2						
AYDN	Tasoluk	5.05	74	iP	Pn	04 48 55.6 +2.2	AQU	L'Aquila	8.76	315	ePn	Pn	04 49 46.4 +2.2						
AYDN	Tasoluk	5.05	74	iP	Pn	04 48 55.6 +2.2	ERMK	Ermenek	8.99	85	iP	Pn	04 49 51.1 +3.6						
TIR	Tirane	5.12	344	eP	Pn	04 48 56.8 +2.6	ERMK	Ermenek	8.99	85	iP	Pn	04 49 51.1 +3.6						
TIR	Tirane	5.12	344	ePn	Pn	04 48 56.8 +2.6	LOT	Lotru	9.13	9	⇑iP	Pn	04 49 51.2 +1.8						
TIR	Tirane	5.12	344	eP	Pn	04 48 56.8 +2.6	LEF	Lefka	9.15	95	ePN	Pn	04 49 51.9 +2.4						
ARG	Arkhangelos	5.15	91	eP	Pn	04 48 58.0 +3.3	BZS	Buzias	9.17	359	⇓P	Pn	04 49 52.1 +2.3						
ARG	Arkhangelos	5.15	91	ePn	Pn	04 48 58.0 +3.3	BZS	Buzias	9.17	359	⇓iP	Pn	04 49 52.1 +2.3						
ARG	Arkhangelos	5.15	91	ePN	Pn	04 48 58.0 +3.3	BZS	Buzias	9.17	359	P	Pn	04 49 52.1 +2.3						
ARG	Arkhangelos	5.15	91	ePn	Pn	04 48 58.0 +3.3	VOIR		9.33	14	⇓P	Pn	04 49 55.0 +2.9						
NVR	Nevrokopi	5.18	18	P	Pn	04 48 58.6 +3.6	VOIR		9.33	14	⇓iP	Pn	04 49 55.0 +2.9						
NVR	Nevrokopi	5.18	18	ePn	Pn	04 48 58.3 +3.3	VOIR		9.33	14	P	Pn	04 49 55.0 +2.9						
NVR	Nevrokopi	5.18	18	ePN	Pn	04 48 58.3 +3.3	ANTO	Ankara	9.35	65	eP	Pn	04 49 54.6 +2.3						
NVR	Nevrokopi	5.18	18	ePn	Pn	04 48 58.3 +3.3	ANTO				pmax	pmax							
NVR	Nevrokopi	5.18	18	P	Pn	04 48 58.6 +3.6		comp=Z,15nm,1.0s											
YER	Yerkesik	5.29	80	ePN	Pn	04 48 59.3 +2.7	ANTO	Ankara	9.35	65	ePn	Pn	04 49 54.6 +2.3						
PHP	Peshkopia	5.34	349	P	Pn	04 49 01.3 +4.0		comp=Z,15nm,1.0s											
PHP	Peshkopia	5.34	349	P	Pn	04 49 01.3 +4.0	ANTO	Ankara	9.35	65	eP	Pn	04 49 54.6 +2.3						
AKHS	Akhisar	5.39	61	iP	Pb	04 49 06.4 -5.6		comp=Z,15nm,1.0s											
GELI	Tayfur-Gelibol	5.42	42	ePN	Pn	04 48 59.4 +1.0	TIRR	Tirgusor	9.48	30	eP	Pn	04 49 54.3 +0.2						
ENEZ	Enez	5.51	37	ePN	Pn	04 49 00.3 +0.8	TIRR	Tirgusor	9.48	30	ePn	Pn	04 49 54.3 +0.2						
TURN	Turunc	5.53	83	iP	Pn	04 48 58.5 -1.3	TIRR	Tirgusor	9.48	30	⇑iP	Pn	04 49 57.3 +3.2						
SKO	Skopje	5.54	358	ePn	Pn	04 49 03.0 +3.1	TIRR	Tirgusor	9.48	30	eP	Pn	04 49 54.3 +0.2						
SKO				eSn	Sn	04 50 01.1 -2.1	BBAL	Bala	9.50	68	iP	Pn	04 50 04.1 +10						
SKO				eLg	Lg	04 50 01.4	CSS	Prodhromos	9.53	95	ePN	Pn	04 49 57.8 +3.0						
	comp=E,184nm,0.9s						CSS	Prodhromos	9.53	95	ePn	Pn	04 49 55.3 +0.5						
SKO				eLg	Lg	04 50 02.1	CSS	Prodhromos	9.53	95	ePn	Pn	04 49 55.3 +0.5						
	comp=N,165nm,0.8s						SUT	Sultanhani-AKS	9.54	75	ePN	Pn	04 49 57.3 +2.4						
SKO	Skopje	5.54	358	ePn	Pn	04 49 01.5 +1.6	MLR	Muntele Rosu	9.59	18	Pn	Pn	04 49 59.2 +3.6						
SKO				eLg	Lg	04 50 01.8	MLR	Muntele Rosu	9.59	18	⇑iP	Pn	04 49 58.1 +2.5						
	comp=N,184nm,0.9s						MLR	Muntele Rosu	9.59	18	Pn	Pn	04 49 59.2 +3.6						
LPK	Lapseki	5.56	44	ePN	Pn	04 49 00.6 +0.3		comp=Z,0.1nm,0.3s,baz=207,slow=10,SNR=6.3											
DALY	Dalyan (Mu˘la	5.56	84	ePN	Pn	04 49 02.9 +2.6	MLR	Muntele Rosu	9.59	18	P	Pn	04 49 58.1 +2.5						
ALN	Alexandroupoli	5.58	36	P	Pn	04 49 02.1 +1.6	MLR	Muntele Rosu	9.59	18	Pn	Pn	04 49 59.2 +3.6						
ALN	Alexandroupoli	5.58	36	P	Pn	04 49 02.1 +1.6	LFK	Lefkose	9.63	93	ePN	Pn	04 49 58.8 +2.6						
ERIK	Erikli-Kesan	5.64	40	ePN	Pn	04 49 02.6 +1.2	NVLJ	Novalja	9.66	329	iPn	Pn	04 49 57.2 +0.7						
BALY	Balya	5.69	53	iP	Pn	04 49 05.3 +3.3	NVLJ				Sn	Sn	04 51 41.2 -3.4						
BALY	Balya	5.69	53	iP	Pn	04 49 05.3 +3.3	NVLJ	Novalja	9.66	329	iPn	Pn	04 49 57.1 +0.7						
SLUM		5.71	149	S	Sn	04 50 03.5 -4.0	BR131	Keskin Array S	9.93	67	ePn	Pn	04 50 02.8 +2.4						
	baz=151							comp=Z,9.8nm,0.8s											
SLUM		5.71	149	P	Pn	04 49 02.7 +0.4	BR131	Keskin Array S	9.93	67	ePn	Pn	04 50 02.8 +2.4						
MANT	Manisa	5.79	67	iP	Pn	04 49 08.9 +5.2		comp=Z,9.8nm,0.8s											
BALB	Balikesir	5.80	55	ePN	Pn	04 49 05.1 +1.5	BRTR	Keskin Array B	9.93	67	Pn	Pn	04 50 04.7 +4.3						
ULC	Ulcinj	5.85	341	⇓iPn	Pn	04 49 04.9 +0.6	BRTR	Keskin Array B	9.93	67	Pn	Pn	04 50 04.7 +4.3						
ULC				eSn	Sn	04 50 11.7 +0.6		comp=Z,0.3nm,0.3s,baz=251,slow=7.7,SNR=23											
ULC	Ulcinj	5.85	341	⇓iPn	Pn	04 49 04.9 +0.6	BRTR	Keskin Array B	9.93	67	P	Pn	04 50 04.7 +4.3						
ULC				eSn	Sn	04 50 11.7 +0.6	CFR	Carcaliu	9.98	27	⇑P	Pn	04 50 03.8 +2.9						
CUC	Castrocucco	5.87	309	ePn	Pn	04 49 06.0 +1.4	CFR	Carcaliu	9.98	27	⇑iP	Pn	04 50 03.8 +2.9						
CUC	Castrocucco	5.87	309	ePn	Pn	04 49 06.0 +1.4	CFR	Carcaliu	9.98	27	P	Pn	04 50 03.8 +2.9						
KULA	Kula-Manisa	5.88	67	ePN	Pn	04 49 06.8 +2.2	ELDT	Eldivan	10.01	63	iP	Pn	04 50 07.6 +6.1						
WDD	Wield Dalam	5.88	267	ePn	Pn	04 49 04.9 +0.3	PKSM	Moragy	10.04	348	⇑P	Pn	04 50 02.9 +1.2						
	comp=N,396nm,0.9s						PKSM	Moragy	10.04	348	⇑iP	Pn	04 50 02.9 +1.2						
WDD				eSn	Sn	04 50 10.8 -0.8	PKSM	Moragy	10.04	348	⇓ePn	Pn	04 50 00.5 -1.2						
WDD	Wield Dalam	5.88	267	ePn	Pn	04 49 04.9 +0.3	PKSM	Moragy	10.04	348	P	Pn	04 50 02.9 +1.2						
	comp=N,396nm,0.9s						KEST	Kesra	10.07	270	ePn	Pn	04 50 04.7 +2.5						
WDD				eSn	Sn	04 50 10.8 -0.8	KEST				Sn	Sn	04 51 57.5 +2.7						
KRBG	Karabiga-Canak	5.88	46	ePN	Pn	04 49 06.3 +1.7	KEST	Kesra	10.07	270	Pn	Pn	04 50 03.9 +1.7						
GONE	Gonen-Balikesi	5.90	51	ePN	Pn	04 49 08.8 +1.9		comp=Z,0.2nm,0.3s,baz=80,slow=10,SNR=9.0											
FETY	Fethiye	5.91	86	ePN	Pn	04 49 08.6 +3.5	KEST				Sn	Sn	04 51 57.5 +2.7						
DNZL	Cakiroluk	5.97	76	iP	Pn	04 49 10.8 +4.8		comp=Z,0.2nm,0.3s,baz=41,slow=19,SNR=4.8											
DENT	Denizli	5.97	75	ePN	Pn	04 49 08.7 +2.8	KEST				LR	LR	04 54 06.0						
RKY	Sarkoy-Tekirda	6.01	43	ePN	Pn	04 49 07.8 +1.4		comp=Z,219nm,19.2s,baz=41,slow=38											
SART	Tekirdag	6.01	43	iP	Pn	04 49 09.0 +2.5	KEST	Kesra	10.07	270	ePn	Pn	04 50 04.7 +2.5						
SART	Tekirdag	6.01	43	iP	Pn	04 49 09.0 +2.5	KEST				Sn	Sn	04 51 57.5 +2.7						
BAI	Bari	6.02	322	ePn	Pn	04 49 07.1 +0.5	HMYD	Mayadein	10.07	129	P	Pn	04 50 01.3 -0.8						
DEMI	Demirci	6.10	63	iP	Pb	04 49 23.1 -1.1		baz=130											
MFT	Murefte	6.13	43	ePN	Pn	04 49 10.0 +1.8	HMYD	Mayadein	10.07	129	P	Pn	04 50 01.3 -0.8						
DURS	Dursunbey	6.18	57	iP	Pn	04 49 12.6 +3.7	EREN	Erenkoy	10.11	91	ePN	Pn	04 50 05.0 +2.4						
DURS	Dursunbey	6.18	57	iP	Pn	04 49 12.6 +3.7	VRI	Vrincioaia	10.14	20	⇓P	Pn	04 50 06.1 +3.0						
MRMT	Marmara Adasi	6.19	46	ePN	Pn	04 49 10.3 +1.4	VRI	Vrincioaia	10.14	20	⇓iP	Pn	04 50 06.1 +3.0						
BNT	Bandirma	6.23	49	ePN	Pn	04 49 10.8 +1.3	VRI	Vrincioaia	10.14	20	P	Pn	04 50 06.1 +3.0						
VTS	Vitosha	6.25	10	⇑P	Pn	04 49 12.7 +2.8	VSL	Villasalto	10.23	291	ePn	Pn	04 50 05.5 +1.1						
VTS	Vitosha	6.25	10	P	Pn	04 49 12.6 +2.7		comp=Z,17nm,1.1s											
VTS	Vitosha	6.25	10	⇑iP	Pn	04 49 12.7 +2.8	VSL	Villasalto	10.23	291	ePn	Pn	04 50 05.5 +1.1						
VTS	Vitosha	6.25	10	P	Pn	04 49 12.6 +2.7		comp=Z,17nm,1.1s											
GLHS	Glhisar (BURDU	6.26	81	ePN	Pn	04 49 13.0 +3.0	DRGR		10.37	4	⇓P	Pn	04 50 09.0 +2.7						
BUM	Brajici-Budva	6.26	340	⇓iPn	Pn	04 49 09.8 -0.2	DRGR		10.37	4	⇓iP	Pn	04 50 09.0 +2.7						
BUM				eSn	Sn	04 50 22.0 +0.8	DRGR		10.37	4	P	Pn	04 50 09.0 +2.7						
BUM	Brajici-Budva	6.26	340	⇓iPn	Pn	04 49 09.8 -0.2	NIG	Nigde	10.38	77	ePN	Pn	04 50 08.2 +1.5						
BUM				eSn	Sn	04 50 22.0 +0.8	BALT	Daday	10.39	57	iP	Pn	04 50 12.9 +6.3						
PDG	Podgorica	6.29	343	⇑iPn	Pn	04 49 10.5 +0.2	ILGA	Ilgaz	10.42	60	iP	Pn	04 50 21.5 +14						
PDG				eSn	Sn	04 50 21.9 +0.1	GULE	Gulek	10.47	81	iP	Pn	04 50 15.0 +7.2						
TTG	Podgorica	6.29	343	⇑iPn	Pn	04 49 10.5 +0.2	KOT	Kottamia	10.64	125	P	Pn	04 50 08.9 -1.2						
TTG				eSn	Sn	04 50 21.9 +0.1		baz=126											
PVY	Plav	6.31	348	⇑iPn	Pn	04 49 12.2 +1.6	KOT	Kottamia	10.64	125	P	Pn	04 50 08.9 -1.2						
PVY				eSn	Sn	04 50 23.1 +0.7	AVNT	Avonos	10.66	73	iP	Pn	04 50 18.1 +7.8						
PVY	Plav	6.31	348	⇑iPn	Pn	04 49 12.2 +1.6	HSAF	As Saff	10.67	127	P	Pn	04 50 09.4 -1.0						
PVY				eSn	Sn	04 50 23.1 +0.7		baz=128											
GOLH	Golhisar	6.32	80	iP	Pn	04 49 16.3 +5.5	HSAF	As Saff	10.67	127	P	Pn	04 50 09.4 -1.0						
AKAS	Kas	6.34	89	iP	Pn	04 49 13.9 +2.7	BEHE	Becsehely	10.70	341	⇑ePn	Pn	04 50 10.9 +0.2						
AKAS	Kas	6.34	89	iP	Pn	04 49 13.9 +2.7	CORM	Corum	10.79	66	ePN	Pn	04 50 13.9 +1.8						
KCTX	Karacabey (Bur	6.45	52	ePN	Pn	04 49 14.3 +1.9	GLL	Jalalah	10.79	126	P	Pn	04 50 11.3 -0.9						
KHAL	Karahalli	6.46	70	iP	Pn	04 49 16.7 +4.0		baz=128											
KHAL	Karahalli	6.46	70	iP	Pn	04 49 16.7 +4.0	GLL	Jalalah	10.79	126	P	Pn	04 50 11.3 -0.9						
HCY	Herceg Novi	6.51	338	⇓iPn	Pn	04 49 12.2 -1.1	HFRF	Wahat Farafira	10.81	147	P	Pn	04 50 11.3 -1.0						
HCY				eSn	Sn	04 50 28.8 +1.5		baz=148											
ELL	Elmali	6.57	85	ePN	Pn	04 49 16.9 +2.6	HFRF	Wahat Farafira	10.81	147	P	Pn	04 50 11.3 -1.0						
							HHAG	Hagoal	10.81	124	P	Pn	04 50 11.2 -1.2						
								baz=125											
							HHAG	Hagoal	10.81	124	P	Pn	04 50 11.1 -1.2						
							KRTS	Karatas	10.97	85	ePN	Pn	04 50 15.8 +1.3						
							LJU	Ljubljana	11.03	333	ePn	Pn	04 50 17.0 +1.8						
							LJU				eSn	Sn	04 52 12.6 -5.6						
							CTKT	Corum	11.04	64	iP	Pn	04 50 18.1 +2.6						
							CTKT	Corum	11.04	64	iP	Pn	04 50 18.1 +2.6						
							AMAG	Maghara	11.17	118	P	Pn	04 50 16.2 -1.0						
								baz=119											
							AMAG	Maghara	11.17	118	P	Pn	04 50 16.2 -1.0						
							YOZ	Yozgat	11.17	69	ePN	Pn	04 50 18.5 +1.1						
							BUD	Budapest	11.22	350	⇑ePn	Pn	04 50 18.0 +0.1						
							VOY	Vojsko	11.26	331	ePn	Pn	04 50 18.6 +0.1						
							VOY				eSn	Sn	04 52 15.6 -8.4						
							VOY				e		04 52 23.3						
							KOZT	Kozan	11.31	81	ePN	Pn	04 50 21.2 +2.0						
							RSH		11.36	115	P	Pn	04 50 18.3 -1.6						
								baz=117											
							RSH		11.36	115	P	Pn	04 50 18.3 -1.6						
							SUZ		11.38	122	P	Pn	04 50 18.8 -1.3						
								baz=123											
							SUZ		11.38	122	P	Pn	04 50 18.8 -1.3						
							SOKA	Soboth	11.40	336	⇑iSn	Sn	04 52 21.1 -6.3						
							BNN	Bunyan	11.43	74	eP	Pn	04 50 22.6 +1.7						
							BURAR	Bucovina Array	11.46	12	⇑iP	Pn	04 50 23.3 +2.0						
							BUR08	Bucovina Ar. S	11.49	12	ePn	Pn	04 50 21.9 +0.3						
							BUR08	Bucovina Ar. S	11.49	12	ePn	Pn	04 50 21.9 +0.3						
							PSZ	Piszkesteto	11.56	354	eP	Pn	04 50 23.4 +0.9						
							PSZ	Piszkesteto	11.56	354	ePn	Pn	04 50 23.4 +0.9						
							PSZ	Piszkesteto	11.56	354	⇑iP	Pn	04 50 23.6 +1.1						
							PSZ	Piszkesteto	11.56	354	⇓ePn	Pn	04 50 23.4 +0.9						
							PSZ	Piszkesteto	11.56	354	eP	Pn	04 50 23.4 +0.9						
							PGF	Pioggiola	11.58	306	ePn	Pn	04 50 21.1 -1.9						
								comp=Z,54nm,1.2s											
							PGF	Pioggiola	11.58	306	eP	Pn	04 50 21.1 -1.9						
							PGF

DAVOX Sn Sn 04 53 19.1 -2.6
TREC Trest 13.64 342 AMS AMS 04 57 00.0
comp=Z,2µm,11.8s
OKC Ostrava-Krasne 13.65 350 eP P 04 51 01.3 +1.5
OKC MLR MLR
comp=Z,1µm,13.0s
OKC Ostrava-Krasne 13.65 350 eP P 04 51 01.3 +1.5
OKC AMS AMS 04 57 40.0
comp=Z,1µm,13.0s
TUE Stuetta 13.66 321 ePn Pn 04 50 53.1 +1.7
TUE Stuetta 13.66 321 ePn Pn 04 50 53.1 +1.7
MORC Moravsky Berou 13.68 348 eP Pn 04 50 53.4 +1.9
MORC Moravsky Berou 13.68 348 ePn Pn 04 50 53.4 +1.9
MORC Moravsky Berou 13.68 348 ePn Pn 04 50 53.4 +1.9
GEC2 GERESS Array S 13.73 337 eP Pn 04 50 55.2 +2.9
GEC2 GERESS Array S 13.73 337 ePn Pn 04 50 55.2 +2.9
GEC2 GERESS Array S 13.73 337 eP Pn 04 50 55.2 +2.9
GERES GERESS Array B 13.73 337 Pn Pn 04 50 51.2 -1.1
GERES Sn Sn 04 53 19.7 -4.8
GERES GERESS Array B 13.73 337 Pn Pn 04 50 51.2 -1.1
comp=Z,0.3nm,0.3s,baz=160,slow=12,SNR=14
GERES Sn Sn 04 53 19.7 -4.8
comp=Z,0.3nm,0.3s,baz=160,slow=24,SNR=3.9
GERES LR LR 04 57 03.1
comp=Z,943nm,19.2s,baz=138,slow=42
GERES GERESS Array B 13.73 337 Pn Pn 04 50 51.2 -1.1
GERES Sn Sn 04 53 19.7 -4.8
OJC Ojcow 13.85 355 eP P 04 51 02.9 +0.8
KHC Kasperske Hory 14.02 337 eP Pn 04 50 56.6 +0.4
KHC Kasperske Hory 14.02 337 ePn Pn 04 50 56.6 +0.4
KHC Kasperske Hory 14.02 337 eP Pn 04 50 58.7 +2.5
KHC ex x 04 51 05.9
KHC ex x 04 51 12.5
KHC AMS AMS 04 57 20.0
comp=Z,2µm,14.7s
KHC Kasperske Hory 14.02 337 ePn Pn 04 50 56.6 +0.4
MBDF Montbardon 14.06 311 eP P 04 50 59.9 -4.7
comp=Z,90nm,1.4s
MBDF Montbardon 14.06 311 eP P 04 50 59.9 -4.7
MBDF pmax pmax
comp=Z,91nm,1.4s
MBDF Montbardon 14.06 311 eP P 04 50 59.9 -4.7
comp=Z,90nm,1.4s
KELT Kelkit 14.24 70 i P P 04 51 06.2 -0.4
KELT Kelkit 14.24 70 i P P 04 51 06.2 -0.4
WET Wettzell 14.26 336 eP Pn 04 51 02.4 +3.0
WET Wettzell 14.26 336 eP Pn 04 51 02.4 +3.0
DPC Dobruska-Polom 14.45 346 AMS AMS 04 57 30.0
comp=Z,2µm,11.4s
LPG La Plagne 14.48 313 eP Pn 04 51 00.3 -2.5
comp=Z,16nm,1.0s
LPG La Plagne 14.48 313 eP Pn 04 51 00.3 -2.5
LPG pmax pmax
comp=Z,16nm,1.0s
LPG La Plagne 14.48 313 eP Pn 04 51 00.3 -2.5
comp=Z,16nm,1.0s
PRU Pruhonice 14.52 341 eP Pn 04 51 02.3 -0.6
PRU MLR MLR
comp=Z,2µm,12.3s
PRU Pruhonice 14.52 341 eP Pn 04 51 02.3 -0.6
PRU ex x 04 51 09.9
PRU AMS AMS 04 57 30.0
comp=Z,2µm,12.3s
ANN Anapa 14.53 50 eP P 04 51 06.5 -3.1
ANN eS Sn 04 53 49.5 +5.7
ANN pmax pmax
comp=Z,24nm,0.8s
ANN MLR MLR
comp=Z,507nm,18.0s
UPC Upice 14.66 345 eP P 04 51 12.8 +1.7
UPC Upice 14.66 345 eP P 04 51 12.8 +1.7
UPC ex x 04 51 27.7
UPC Upice 14.66 345 eP P 04 51 12.8 +1.7
SENIN Lac Senin/Sane 14.68 317 ePn P 04 51 07.9 -3.6
SENIN Lac Senin/Sane 14.68 317 ePn P 04 51 07.9 -3.6
ORIF Oris-en-Rattie 14.71 310 eP Pn 04 51 06.7 +1.1
comp=Z,31nm,1.2s
ORIF eR
comp=Z,1µm,20.2s
ORIF Oris-en-Rattie 14.71 310 eP Pn 04 51 06.7 +1.1
ORIF pmax pmax
comp=Z,31nm,1.2s
ORIF Oris-en-Rattie 14.71 310 eP Pn 04 51 06.7 +1.1
comp=Z,31nm,1.2s
KSP Ksiaz 14.93 346 eP P 04 51 15.6 +1.6
KSP Ksiaz 14.93 346 eP P 04 51 16.0 +2.0
KSP Ksiaz 14.93 346 eP P 04 51 15.6 +1.6
HEDF Idfu 14.96 136 P Pn 04 51 10.5 +1.5
baz=137
PVCC Panska Ves 15.01 342 AMS AMS 04 57 40.0
comp=Z,2µm,11.9s
ROTZ Rotzenmuhle 15.02 335 eP P 04 51 13.7 -1.4
SPAK Spaichingen-Ko 15.07 325 eP P 04 51 13.5 -2.3
AK02 Malin Array Si 15.20 18 ePn Pn 04 51 10.1 -1.9
AK02 Malin Array Si 15.20 18 ePn Pn 04 51 10.1 -1.9
AK01 Malin Array Si 15.23 18 ePn Pn 04 51 10.3 -2.1
AK01 Malin Array Si 15.23 18 ePn Pn 04 51 10.3 -2.1
KIEV Kiev 15.23 18 eP Pn 04 51 10.8 -1.7
KIEV Kiev 15.23 18 ePn Pn 04 51 10.8 -1.7
AKASG Malin Array Be 15.24 18 i P Pn 04 51 10.6 -2.0
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 15.24 18 Pn Pn 04 51 10.6 -2.0
AKASG Malin Array Be 15.24 18 Pn Pn 04 51 10.6 -2.0
comp=Z,1.5nm,0.3s,baz=209,slow=12,SNR=9.8
BBS Basel-Blauen 15.26 321 eP P 04 51 16.9 -0.9
BBS Basel-Blauen 15.26 321 eP P 04 51 16.9 -0.9
BBS Basel-Blauen 15.26 321 eP P 04 51 16.9 -0.9
FELD Feldberg im Sc 15.29 323 eP Pn 04 51 14.6 +1.2
FELD Feldberg im Sc 15.29 323 eP Pn 04 51 14.6 +1.2
GRA1 Grafenberg Arr 15.30 333 eP P 04 51 18.6 +0.4
comp=Z,47nm,1.4s
GRF Grafenberg Arr 15.30 333 eP P 04 51 18.6 +0.4
comp=Z,47nm,1.4s
GRF Grafenberg Arr 15.30 333 eP P 04 51 18.6 +0.4
GRF pmax pmax
comp=Z,47nm,1.4s
GRFO Grafenberg 15.30 333 eP Pn 04 51 13.6 +0.2
GRFO pmax pmax
comp=Z,16nm,0.9s
GRFO Grafenberg 15.30 333 ePn Pn 04 51 13.6 +0.2
comp=Z,16nm,0.9s
GRFO eP pP 04 51 19.6 -2.9
GRFO Grafenberg 15.30 333 ePn Pn 04 51 13.6 +0.2
comp=Z,16nm,0.9s
NKC Novy Kostel 15.34 337 eP P 04 51 19.8 +1.1
NKC MLR MLR
comp=Z,2µm,13.1s
NKC Novy Kostel 15.34 337 eP P 04 51 19.8 +1.1
NKC AMS AMS 04 58 10.0
comp=Z,2µm,13.1s
NKC Novy Kostel 15.34 337 eP P 04 51 19.8 +1.1
comp=Z,2µm,13.1s
STU Stuttgart 15.38 327 eP Pn 04 51 14.9 +0.4
STU Stuttgart 15.38 327 ePn Pn 04 51 14.9 +0.4
STU Stuttgart 15.38 327 ePn Pn 04 51 14.9 +0.4
BEL Belsk 15.41 358 eP P 04 51 22.4 +3.0
BEL eS S 04 54 22.1 +0.9
BEL Belsk 15.41 358 eP P 04 51 22.4 +3.0
BFO Black Forest 15.45 324 eP P 04 51 17.5 -2.4
comp=Z,15nm,1.2s
BFO Black Forest 15.45 324 eP P 04 51 17.3 -2.6
BFO pmax pmax
comp=Z,10.0nm,0.8s
BFO Black Forest 15.45 324 ePn P 04 51 17.3 -2.6
comp=Z,9.7nm,0.8s
BFO Black Forest 15.45 324 ePn P 04 51 17.3 -2.6
comp=Z,9.7nm,0.8s
BRG Berggiesshubel 15.48 341 eP Pn 04 51 16.0 +0.2
comp=Z,5.3nm,1.3s
BRG S Sn 04 54 14.0 +7.0
BRG
comp=N,1µm,11.5s
BRG
comp=E,2µm,11.6s
BRG
comp=Z,2µm,11.6s
BRG Berggiesshubel 15.48 341 eP Pn 04 51 16.0 +0.2
BRG S Sn 04 54 14.0 +7.0
BRG pmax pmax
comp=Z,5.0nm,1.3s
BRG MLR MLR
comp=N,1µm,11.5s
BRG MLR MLR
comp=E,2µm,11.6s
BRG MLR MLR
comp=Z,2µm,11.6s
SOC Sochi 15.49 57 eP P 04 51 21.0 +0.7
SOC e 04 54 14.5
SOC pmax pmax
comp=Z,10.0nm,0.6s
SOC MLR MLR
comp=Z,578nm,16.0s
SOC Sochi 15.49 57 eP P 04 51 21.0 +0.7
comp=Z,10.0nm,0.6s
CABF La Chapelle 15.50 316 eP Pn 04 51 15.6 -0.5
comp=Z,21nm,1.1s
CABF La Chapelle 15.50 316 eP Pn 04 51 15.6 -0.5
CABF pmax pmax
comp=Z,21nm,1.1s
CABF La Chapelle 15.50 316 eP Pn 04 51 15.6 -0.5
comp=Z,21nm,1.1s
LOMF Lomont 15.54 319 eP P 04 51 21.7 +0.8
LOMF Lomont 15.54 319 eP P 04 51 21.7 +0.8
LOMF Lomont 15.54 319 eP P 04 51 21.7 +0.8
LOMF Lomont 15.54 319 eP P 04 51 21.7 +0.8
BNGL BINGOL 15.56 75 i P P 04 51 23.9 +2.5
LASF Ste Croix 15.63 305 eP Pn 04 51 17.7 -0.1
comp=Z,16nm,1.0s
LASF Ste Croix 15.63 305 eP Pn 04 51 17.7 -0.1
comp=Z,16nm,1.0s
MOF Molkenrain 15.71 321 eP P 04 51 21.5 -1.3
MOF Molkenrain 15.71 321 eP P 04 51 21.5 -1.3
MOF Molkenrain 15.71 321 eP P 04 51 21.5 -1.3
MOF Molkenrain 15.71 321 eP P 04 51 21.5 -1.3
HINF Hinteralfeld 15.83 321 eP Pn 04 51 19.5 -0.8
comp=Z,28nm,0.9s
HINF Hinteralfeld 15.83 321 eP Pn 04 51 19.5 -0.8
HINF pmax pmax
comp=Z,28nm,0.9s
HINF Hinteralfeld 15.83 321 eP Pn 04 51 19.5 -0.8
comp=Z,28nm,0.9s
ECH Echery 15.94 322 eP Pn 04 51 22.3 +0.6
ECH pmax pmax
comp=Z,18nm,0.9s
ECH Echery 15.94 322 ePn Pn 04 51 22.3 +0.6
comp=Z,18nm,0.9s
ECH Echery 15.94 322 eP P 04 51 25.8 +0.5
ECH Echery 15.94 322 ePn Pn 04 51 22.3 +0.6
comp=Z,18nm,0.9s
ECH Echery 15.94 322 eP P 04 51 25.8 +0.5
MOX Moxa 15.97 336 eP Pn 04 51 22.5 +0.4
comp=Z,26nm,1.8s
MOX Moxa 15.97 336 eP Pn 04 51 22.5 +0.4
MOX pmax pmax
comp=Z,26nm,1.8s
CDF Champ du Feu 16.01 323 eP Pn 04 51 22.2 -0.5
comp=Z,22nm,1.0s
CDF Champ du Feu 16.01 323 eP Pn 04 51 22.2 -0.5
CDF pmax pmax
comp=Z,22nm,1.0s
CDF Champ du Feu 16.01 323 eP Pn 04 51 22.2 -0.5
comp=Z,22nm,1.0s
CLL Collm 16.13 340 eP Pn 04 51 24.7 +0.6
comp=Z,21nm,1.6s
CLL Collm 16.13 340 eP Pn 04 51 24.0 -0.1
CLL pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 16.13 340 eP Pn 04 51 24.0 -0.1
comp=Z,4.0nm,1.0s
CLL i sP sP 04 51 28.7 -5.1
comp=Z,12nm,1.4s
CLL i PP PnPn 04 51 32.7 -0.2
CLL e 04 51 40.0
CLL LmH 04 56 48.0
comp=N,2µm,20.2s
CLL LmH 04 56 48.0
comp=E,3µm,21.0s
CLL Lmax 04 58 00.0
LANF Langenberg 16.16 325 eP P 04 51 29.9 +2.2
LANF Langenberg 16.16 325 eP P 04 51 29.9 +2.2
LANF Langenberg 16.16 325 eP P 04 51 29.9 +2.2
LANF Langenberg 16.16 325 eP P 04 51 29.9 +2.2
HAU Haudompre 16.21 320 eP Pn 04 51 25.6 +0.4
comp=E,39nm,0.9s
HAU eR
comp=E,814nm,18.0s
HAU Haudompre 16.21 320 eP Pn 04 51 25.6 +0.4
HAU pmax pmax
comp=Z,39nm,0.9s
HAU Haudompre 16.21 320 eP Pn 04 51 25.6 +0.4
comp=Z,39nm,0.9s
DDEM Demirkent 16.24 68 i P sP 04 51 39.6 +4.4
DAGI Agillar 16.39 67 i P P 04 51 32.4 +2.0
ARTV Artvin 16.42 67 i P P 04 51 34.8 +4.0
LBL Lubilhac 16.50 308 eP P 04 51 31.7 +0.1
LBL Lubilhac 16.50 308 eP P 04 51 31.7 +0.1
LBL Lubilhac 16.50 308 eP P 04 51 31.7 +0.1
LBL Lubilhac 16.50 308 eP P 04 51 31.7 +0.1
THEF They Montfort 16.54 320 eP P 04 51 34.3 +2.4
THEF They Montfort 16.54 320 eP P 04 51 34.3 +2.4
THEF They Montfort 16.54 320 eP P 04 51 34.3 +2.4
THEF They Montfort 16.54 320 eP P 04 51 34.3 +2.4
TNS Taunus Mts 16.80 329 eP P 04 51 35.3 +0.4
comp=Z,23nm,1.2s
TNS Taunus Mts 16.80 329 eP P 04 51 35.3 +0.4
TNS pmax pmax
comp=Z,23nm,1.2s
TNS Taunus Mts 16.80 329 eP P 04 51 35.3 +0.4
comp=Z,23nm,1.2s
SMF Signal de Mont 16.81 313 eP Pn 04 51 33.0 +0.2
comp=Z,21nm,1.1s
SMF Signal de Mont 16.81 313 eP Pn 04 51 33.0 +0.2
SMF pmax pmax
comp=Z,21nm,1.1s
SMF Signal de Mont 16.81 313 eP Pn 04 51 33.0 +0.2
comp=Z,21nm,1.1s
SMF Signal de Mont 16.81 313 eP Pn 04 51 33.0 +0.2
comp=Z,10nm,1.1s
PAGF Fort de Pagny 16.88 321 eP Pn 04 51 33.1 -0.6
comp=Z,12nm,0.9s
PAGF Fort de Pagny 16.88 321 eP Pn 04 51 33.1 -0.6
comp=Z,12nm,0.9s
PYM Petit Puy Mans 16.88 309 eP P 04 51 34.9 -0.9
PYM Petit Puy Mans 16.88 309 eP P 04 51 34.9 -0.9
PYM Petit Puy Mans 16.88 309 eP P 04 51 34.9 -0.9
PYM Petit Puy Mans 16.88 309 eP P 04 51 34.9 -0.9
RUP Ruppelstein 17.02 326 eP P 04 51 39.0 +1.8
RUP Ruppelstein 17.02 326 eP P 04 51 39.0 +1.8
RUP Ruppelstein 17.02 326 eP P 04 51 39.0 +1.8
SFTF Sexfontaines 17.02 319 eP Pn 04 51 35.0 -0.4
comp=Z,143nm,1.5s
SFTF Sexfontaines 17.02 319 eP Pn 04 51 35.0 -0.4
comp=Z,143nm,1.5s
GKP Gorka Klasztor 17.13 351 eP P 04 51 41.3 +2.9
GKP Gorka Klasztor 17.13 351 eP P 04 51 41.4 +3.0
LOR Lormes 17.13 315 eP Pn 04 51 36.2 -0.7
comp=Z,17nm,1.1s
LOR eR
comp=Z,838nm,18.0s
LOR Lormes 17.13 315 eP Pn 04 51 36.2 -0.7
comp=Z,17nm,1.1s
CAF Calviac 17.14 306 eP P 04 51 38.8 +0.1
comp=Z,38nm,1.2s
CAF Calviac 17.14 306 eP P 04 51 38.8 +0.1
CAF pmax pmax
comp=Z,38nm,1.2s
CAF Calviac 17.14 306 eP P 04 51 38.8 +0.1
comp=Z,38nm,1.2s
CAF Calviac 17.14 306 eP P 04 51 38.8 +0.1
comp=Z,19nm,1.2s
AVF Avril sur Loir 17.17 313 eP Pn 04 51 36.7 -0.7
comp=Z,17nm,1.1s
AVF Avril sur Loir 17.17 313 eP Pn 04 51 36.7 -0.7
AVF pmax pmax
comp=Z,17nm,1.1s
AVF Avril sur Loir 17.17 313 eP Pn 04 51 36.7 -0.7
comp=Z,17nm,1.1s
MEZF Maizieres J'vi 17.19 320 eP P 04 51 38.8 -0.3
comp=Z,37nm,0.9s
MEZF Maizieres J'vi 17.19 320 eP P 04 51 38.8 -0.3
comp=Z,37nm,0.9s
MEZF Maizieres J'vi 17.19 320 eP P 04 51 38.8 -0.3
comp=Z,18nm,0.9s
SSF Saint Saulge 17.22 314 eP Pn 04 51 36.9 -1.1
comp=Z,15nm,1.0s
SSF Saint Saulge 17.22 314 eP Pn 04 51 36.9 -1.1
SSF pmax pmax
comp=Z,15nm,1.0s
SSF Saint Saulge 17.22 314 eP Pn 04 51 36.9 -1.1
comp=Z,15nm,1.0s
BGF Bois d'Agland 17.36 311 eP P 04 51 39.7 -1.3
comp=Z,27nm,1.0s
BGF Bois d'Agland 17.36 311 eP P 04 51 39.7 -1.3
BGF pmax pmax
comp=Z,27nm,1.0s
BGF Bois d'Agland 17.36 311 eP P 04 51 39.7 -1.3
comp=Z,27nm,1.0s
BGF Bois d'Agland 17.36 311 eP P 04 51 39.7 -1.3
comp=Z,14nm,1.0s
WLF Walferdange 17.41 324 P P 04 51 42.2 +0.7
comp=Z,20nm,1.0s
WLF Walferdange 17.41 324 eP P 04 51 41.8 +0.3
comp=Z,31nm,1.0s
WLF Walferdange 17.41 324 eP P 04 51 41.9 +0.4
WLF pmax pmax
comp=Z,28nm,0.9s
WLF Walferdange 17.41 324 ePn P 04 51 41.9 +0.4
comp=Z,28nm,0.9s
WLF Walferdange 17.41 324 eP P 04 51 41.9 +0.4
comp=Z,28nm,0.9s
SUW Suwalki 17.61 3 eP Pn 04 51 42.3 -0.4
SUW pmax pmax
comp=Z,108nm,1.0s
SUW Suwalki 17.61 3 ePn Pn 04 51 42.3 -0.4
comp=Z,108nm,1.0s
SUW Suwalki 17.61 3 eP Pn 04 51 42.4 -0.3
SUW eS Sn 04 55 00.1 +1.8
SUW Suwalki 17.61 3 eP Pn 04 51 42.3 -0.4
comp=Z,108nm,1.0s
AKH Akhalkalaki 17.62 67 P Pn 04 51 43.3 +0.2
TCF Toulx Ste Croi 17.62 310 eP Pn 04 51 42.6 -0.4
comp=Z,41nm,1.3s
TCF Toulx Ste Croi 17.62 310 eP Pn 04 51 42.6 -0.4
TCF pmax pmax
comp=Z,41nm,1.3s
TCF Toulx Ste Croi 17.62 310 eP Pn 04 51 42.6 -0.4
comp=Z,41nm,1.3s
TCF Toulx Ste Croi 17.62 310 eP Pn 04 51 42.6 -0.4
comp=Z,20nm,1.3s
KIV Kislovodsk 17.64 58↑ eP P 04 51 46.3 +2.0
KIV eS Sn 04 54 54.3 -5.2
KIV pmax pmax
comp=Z,20nm,1.2s
KIV MLR MLR
comp=Z,400nm,18.0s
KIV Kislovodsk 17.64 58 eP P 04 51 46.3 +2.0
comp=Z,20nm,1.2s
RJF Les Rejaudoux 17.65 306 eP P 04 51 44.8 +0.6
comp=Z,64nm,1.4s
RJF eR
comp=Z,522nm,19.2s
RJF Les Rejaudoux 17.65 306 eP P 04 51 44.8 +0.6
RJF pmax pmax
comp=Z,65nm,1.4s
RJF Les Rejaudoux 17.65 306 eP P 04 51 44.8 +0.6
comp=Z,64nm,1.4s
RJF Les Rejaudoux 17.65 306 eP P 04 51 44.8 +0.6
comp=Z,32nm,1.4s
KBZ Khabaz 17.72 59 P P 04 51 45.0 0.0
KBZ MLR MLR
comp=Z,547nm,19.8s
KBZ Khabaz 17.72 59 P P 04 51 45.0 0.0
KBZ Khabaz 17.72 59 P P 04 51 45.0 0.0
comp=Z,0.4nm,0.3s,baz=263,slow=9.3,SNR=25
KBZ LR LR 05 00 00.3
comp=Z,547nm,19.8s,baz=256,slow=42
KBZ Khabaz 17.72 59 P P 04 51 45.0 0.0
comp=Z,547nm,19.8s
LFF La Frestale 18.02 305 eP P 04 51 49.0 +0.7
comp=Z,34nm,1.1s
LFF La Frestale 18.02 305 eP P 04 51 49.0 +0.7
LFF pmax pmax
comp=Z,35nm,1.1s
LFF La Frestale 18.02 305 eP P 04 51 49.0 +0.7
comp=Z,34nm,1.1s
LFF La Frestale 18.02 305 eP P 04 51 49.0 +0.7
comp=Z,17nm,1.1s
NRDL Niedersach Rie 18.04 337 eP P 04 51 50.3 +1.9
comp=Z,44nm,1.5s
MEM Membach 18.14 326 P P 04 51 51.6 +2.0
comp=Z,5.3nm,1.4s
MEM Membach 18.14 326 P P 04 51 51.5 +2.0
comp=Z,5.3nm,1.4s
BUG Bochum--Univer 18.22 330 eP P 04 51 51.7 +1.3
comp=Z,66nm,2.0s
ETSF Etsaut 18.32 297 eP P 04 51 53.7 +2.0
comp=Z,54nm,1.3s
ETSF Etsaut 18.32 297 eP P 04 51 53.7 +2.0
ETSF pmax pmax
comp=Z,54nm,1.3s
ETSF Etsaut 18.32 297 eP P 04 51 53.7 +2.0
comp=Z,54nm,1.3s
ETSF Etsaut 18.32 297 eP P 04 51 53.7 +2.0
comp=Z,27nm,1.3s
BCLA Clavier 18.33 325 P P 04 51 55.4 +3.7
GIVF Givet 18.34 323 eP P 04 51 54.4 +2.6
comp=Z,49nm,0.9s
GIVF Givet 18.34 323 eP P 04 51 54.4 +2.6
GIVF pmax pmax
comp=Z,49nm,0.9s
GIVF Givet 18.34 323 eP P 04 51 54.4 +2.6
comp=Z,49nm,0.9s
GIVF Givet 18.34 323 eP P 04 51 54.4 +2.6
comp=Z,24nm,0.9s
GNI Garni 18.41 71 eP Pn 04 51 54.1 +1.2
comp=Z,28nm,1.0s
GNI Garni 18.41 71 P Pn 04 51 53.6 +0.6
comp=Z,0.6nm,0.3s,baz=194,slow=20,SNR=4.0
GNI LR LR 04 59 09.3
comp=Z,519nm,18.5s,baz=86,slow=38
GNI Garni 18.41 71 eP Pn 04 51 53.9 +1.0
comp=Z,393nm,13.0s
DOU Dourbes 18.45 323 P Pn 04 51 53.8 +0.8
comp=Z,16nm,1.4s
DOU Dourbes 18.45 323 P Pn 04 51 53.8 +0.8
comp=Z,16nm,1.4s
MNK Minsk 18.55 11 eP P 04 51 51.0 -3.0
MICGM Minsk 18.56 11 e P 04 51 51.0 -3.1
TBLG Delisi 18.59 66 eP Pn 04 51 56.2 +1.3
TBLG Delisi 18.59 66 P Pn 04 51 56.3 +1.3
TBLG Delisi 18.59 66 eP Pn 04 51 56.2 +1.3
BAIF Baives 18.61 322 eP Pn 04 51 57.1 +2.1
comp=Z,36nm,1.0s
BAIF Baives 18.61 322 eP Pn 04 51 57.1 +2.1
BAIF pmax pmax
comp=Z,36nm,1.0s
BAIF Baives 18.61 322 eP Pn 04 51 57.1 +2.1
comp=Z,36nm,1.0s
BAIF Baives 18.61 322 eP Pn 04 51 57.1 +2.1
comp=Z,18nm,1.0s
IBBN Ibbenburen 18.70 332 eP Pn 04 51 58.5 +2.4
comp=Z,47nm,1.5s
NACGM Naroch 18.79 9 e P 04 51 53.0 -3.7
SJPF Ste Jean 18.85 298 eP Pn 04 51 59.5 +1.5
comp=Z,50nm,1.1s
SJPF Ste Jean 18.85 298 eP Pn 04 51 59.5 +1.5
SJPF pmax pmax
comp=Z,50nm,1.1s
SJPF Ste Jean 18.85 298 eP Pn 04 51 59.5 +1.5
comp=Z,50nm,1.1s
SJPF Ste Jean 18.85 298 eP Pn 04 51 59.5 +1.5
comp=Z,25nm,1.1s
DGRG David-gareji 19.02 68 P P 04 51 58.5 -0.9
ISHB Shabestar 19.05 77 eP Pn 04 52 00.5 -0.3
ISHB Shabestar 19.05 77 eP Pn 04 52 00.5 -0.3
IIGN Ignalina 19.16 8 eP P 04 52 00.2 -0.6
IIGN AMB AMB 04 52 03.6
comp=Z,16nm,1.1s
IIGN Ignalina 19.16 8 eP P 04 52 00.2 -0.6
comp=Z,16nm,1.1s,SNR=34
IDID Didziasalis 19.19 9 eP P 04 52 00.4 -0.6
IDID AMB AMB 04 52 03.7
comp=Z,8.4nm,1.0s
IDID Didziasalis 19.19 9 eP P 04 52 00.4 -0.6
comp=Z,8.4nm,1.0s,SNR=34
VORD Divnogorie 19.21 35 eP Pn 04 52 02.1 -0.2
VORD eS S 04 55 42.9 +4.5
VORD pmax pmax
comp=Z,20nm,1.1s
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,20nm,0.8s
VORD smax smax
comp=N,200nm,4.6s

VORD smax smax
comp=Z,160nm,3.5s
VORD smax smax
comp=E,150nm,2.7s
VORD MLR MLR
comp=Z,540nm,12.0s
VORD MLR MLR
comp=N,710nm,17.0s
VORD MLR MLR
comp=E,430nm,11.0s
VORD Divnogorie 19.21 35 *e*P **Pn 04 52 02.1 -0.2**
comp=E,20nm,0.9s
MFF Saint Martin d 19.23 309 *e*P **Pn 04 52 04.2 +1.6**
comp=E,31nm,1.2s
MFF Saint Martin d 19.23 309 *e*P **Pn 04 52 04.2 +1.6**
MFF pmax pmax
comp=Z,31nm,1.2s
MFF Saint Martin d 19.23 309 *e*P **Pn 04 52 04.2 +1.6**
comp=Z,31nm,1.2s
MFF Saint Martin d 19.23 309 *e*P **Pn 04 52 04.2 +1.6**
comp=Z,16nm,1.2s
VSR Storozhevoye 19.32 35 *e*P **Pn 04 52 02.9 -0.7**
VSR *e*S **S 04 55 43.4 +2.8**
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=N,8.0nm,0.6s
VSR pmax pmax
comp=E,4.0nm,0.4s
VSR smax smax
comp=E,110nm,2.1s
VSR smax smax
comp=Z,80nm,2.8s
VSR smax smax
comp=N,70nm,1.8s
VSR MLR MLR
comp=Z,750nm,11.0s
VSR MLR MLR
comp=N,470nm,14.0s
VSR MLR MLR
comp=E,400nm,10.0s
VSR Storozhevoye 19.32 35 *e*P **Pn 04 52 02.9 -0.7**
comp=E,8.0nm,0.6s
ISAL Salakas 19.37 8 *e*P **P 04 52 02.4 -0.6**
ISAL AMB AMB 04 52 04.0
comp=Z,12nm,1.2s
ISAL Salakas 19.37 8 *e*P **P 04 52 02.4 -0.6**
comp=Z,12nn,1.2s,SNR=34
TAM Tamanrasset 19.55 230 *e*P **Pn 04 52 08.3 +1.5**
TAM pmax pmax
comp=Z,3.0nm,0.8s
TAM Tamanrasset 19.55 230 *e*P **Pn 04 52 08.3 +1.5**
comp=Z,3.5nm,0.8s
TAM Tamanrasset 19.55 230 *e*P **Pn 04 52 08.3 +1.5**
comp=Z,3.5nm,0.8s
IZAR Zarasai 19.56 8 *e*P **P 04 52 04.4 -0.7**
IZAR AMB AMB 04 52 07.6
comp=Z,11nm,1.4s
IZAR Zarasai 19.56 8 *e*P **P 04 52 04.4 -0.7**
comp=Z,11nn,1.4s,SNR=34
LDF La Druitiere 20.11 314 *e*P Pn 04 52 11.5 -1.5
comp=Z,55nn,1.4s
LDF La Druitiere 20.11 314 *e*P Pn 04 52 11.5 -1.5
LDF pmax pmax
comp=Z,55nn,1.4s
LDF La Druitiere 20.11 314 *e*P Pn 04 52 11.5 -1.5
comp=Z,55nn,1.4s
LDF La Druitiere 20.11 314 *e*P Pn 04 52 11.5 -1.5
comp=Z,28nn,1.4s
IHRS Heris 20.17 77 *e*P **P 04 52 10.7 -1.5**
IHRS Heris 20.17 77 *e*P **P 04 52 10.7 -1.5**
FLN La Foliniere 20.40 314 *e*P **P 04 52 14.0 -0.3**
comp=Z,68nn,1.5s
FLN *e*R
comp=Z,756nm,20.2s
FLN La Foliniere 20.40 314 *e*P **P 04 52 14.0 -0.3**
FLN pmax pmax
comp=Z,68nn,1.5s
FLN La Foliniere 20.40 314 *e*P **P 04 52 14.0 -0.3**
comp=Z,68nn,1.5s
FLN La Foliniere 20.40 314 *e*P **P 04 52 14.0 -0.3**
comp=Z,34nn,1.5s
GRR Gorron 20.44 313 *e*P Pn 04 52 16.2 -0.7
comp=Z,32nn,1.0s
GRR Gorron 20.44 313 *e*P Pn 04 52 16.2 -0.7
GRR pmax pmax
comp=Z,32nn,1.0s
GRR Gorron 20.44 313 *e*P Pn 04 52 16.2 -0.7
comp=Z,32nn,1.0s
GRR Gorron 20.44 313 *e*P Pn 04 52 16.2 -0.7
comp=Z,16nn,1.0s
ESDC Sonseca Array 20.48 287 P Pn 04 52 16.5 -1.1
ESDC Sonseca Array 20.48 287 P Pn 04 52 16.5 -1.1
comp=Z,2.4nn,0.8s,baz=81,slow=10,SNR=15
ESDC Sonseca Array 20.48 287 P Pn 04 52 16.5 -1.1
ESLA Sonseca Array 20.48 287 *e*P Pn 04 52 15.4 -2.2
comp=Z,7.5nn,1.3s
ESLA Sonseca Array 20.48 287 *e*P Pn 04 52 15.4 -2.2
comp=Z,7.5nn,1.3s
MAK Makhachkala 20.82 64 *e*P **P 04 52 19.8 +0.9**
MAK *e* 04 52 39.0
MAK *e*S **S 04 56 10.7 +0.2**
MAK *e*SS **SnSn 04 56 33.5 +2.9**
MAK pmax pmax
comp=Z,140nm,1.6s
MAK MLR MLR
comp=Z,395nm,13.0s
MAK Makhachkala 20.82 64 *e*P **P 04 52 19.8 +0.9**
comp=Z,140nn,1.6s
OBN Obninsk 21.27 24⇑ *i*P **P 04 52 23.1 -0.5**
OBN *e*S **S 04 56 16.9 -2.3**
OBN pmax pmax
comp=Z,23nm,0.5s
OBN MLR MLR
comp=Z,400nm,18.0s
OBN Obninsk 21.27 24 *i* P **P 04 52 23.1 -0.5**
comp=Z,400nn,18.0s
SGMF Saint Gilles 21.40 311 *e*P **P 04 52 26.1 +1.0**
comp=Z,77nn,1.2s
SGMF Saint Gilles 21.40 311 *e*P **P 04 52 26.1 +1.0**
SGMF pmax pmax
comp=Z,77nn,1.2s
SGMF Saint Gilles 21.40 311 *e*P **P 04 52 26.1 +1.0**
comp=Z,77nn,1.2s
SGMF Saint Gilles 21.40 311 *e*P **P 04 52 26.1 +1.0**
comp=Z,39nn,1.2s
QUIF Quistinic 21.64 310 *e*P **P 04 52 27.3 -0.4**
comp=Z,68nn,1.2s
QUIF Quistinic 21.64 310 *e*P **P 04 52 27.3 -0.4**
QUIF pmax pmax
comp=Z,68nn,1.2s
QUIF Quistinic 21.64 310 *e*P **P 04 52 27.3 -0.4**
comp=Z,68nn,1.2s
QUIF Quistinic 21.64 310 *e*P **P 04 52 27.3 -0.4**
comp=Z,34nn,1.2s
ROSF Rostrenen 21.87 311 *e*P **P 04 52 30.4 +0.2**
comp=Z,24nn,0.8s
ROSF Rostrenen 21.87 311 *e*P **P 04 52 30.4 +0.2**
ROSF pmax pmax
comp=Z,24nn,0.8s
ROSF Rostrenen 21.87 311 *e*P **P 04 52 30.4 +0.2**
comp=Z,24nn,0.8s
ROSF Rostrenen 21.87 311 *e*P **P 04 52 30.4 +0.2**
comp=Z,12nn,0.8s
MDT Midelt 21.97 268 P **P 04 52 32.7 +1.2**
MDT Midelt 21.97 268 P **P 04 52 32.7 +1.2**
comp=Z,7.1nm,0.9s,baz=80,slow=9.3,SNR=11
MDT LR LR 05 02 50.8
comp=Z,324nm,19.5s,baz=81,slow=42
MDT Midelt 21.97 268 P **P 04 52 32.7 +1.2**
ZFT Errachidia 22.00 266 *i* P **P 04 52 34.0 +2.1**
MOS Moscow 22.13 24 *e*P **P 04 52 30.0 -2.8**
MOS *e*S S 04 56 28.4 -7.5
MOS pmax pmax
comp=Z,76nm,0.7s
RST Umm Al-Ruwaisa 22.25 101 *e*P **P 04 52 33.7 -0.7**
RST AMb AMB 04 52 41.2
comp=Z,735nm,0.9s
RST Umm Al-Ruwaisa 22.25 101 *e*P **P 04 52 33.7 -0.7**
comp=Z,735nn,0.9s
VSU Vasula 22.28 7 *i* P **P 04 52 32.9 -1.6**
VSU pmax pmax
comp=Z,46nm,0.8s
VSU MLR MLR
comp=Z,714nm,21.0s
NAY Al-Naaiem 22.55 101 *e*P **P 04 52 36.8 -0.8**
NAY AMb AMB 04 52 42.8
comp=Z,48nm,0.9s
NAY Al-Naaiem 22.55 101 *e*P **P 04 52 36.8 -0.8**
comp=Z,48nn,0.9s
PBRG Braganca 22.69 292 *e*P **P 04 52 41.5 +2.4**
comp=Z,26nn,1.6s
PBRG Braganca 22.69 292 *e*P **P 04 52 41.5 +2.4**
comp=Z,26nn,1.6s
UMR Umm Al-Rimmam 22.79 100 *e*P **P 04 52 39.0 -1.2**
UMR AMb AMB 04 52 49.6
comp=Z,119nn,1.2s
UMR Umm Al-Rimmam 22.79 100 *e*P **P 04 52 39.0 -1.2**
comp=Z,119nn,1.2s
MVO Moncorvo 22.87 291 *e*P **P 04 52 41.7 +0.7**
comp=Z,21nn,1.5s
MVO *e*S **S 04 56 50.3 +0.3**
MVO A A 05 02 51.2
comp=Z,239nm,20.0s
MVO Moncorvo 22.87 291 *e*P **P 04 52 41.7 +0.7**
comp=Z,21nn,1.5s
PBAR Barrancos 22.93 283 *e*P **P 04 52 43.6 +2.0**
comp=Z,35nn,1.6s
PBAR Barrancos 22.93 283 *e*P **P 04 52 43.6 +2.0**
comp=Z,35nn,1.6s
PMRV Marv??o 23.14 286 *e*P **P 04 52 43.7 0.0**
comp=Z,28nn,1.2s
PMRV *e*S **S 04 56 57.5 +3.0**
PMRV A A 05 06 07.1
comp=Z,269nm,16.0s
PMRV Marv??o 23.14 286 *e*P **P 04 52 43.7 0.0**
comp=Z,28nn,1.2s
MTE Manteigas 23.24 289 *e*P **P 04 52 44.1 -0.7**
MTE *e*S **S 04 56 58.1 +1.8**
MTE A A 05 06 59.4
comp=Z,337nm,18.0s
MTE Manteigas 23.24 289 *e*P **P 04 52 44.1 -0.7**
PVAQ Vaqueiros 23.54 281 *e*P **P 04 52 48.8 +1.1**
comp=Z,47nn,2.4s
PVAQ *e*S **S 04 57 00.6 -0.5**
PVAQ A A 05 05 15.4
comp=Z,180nm,18.0s
PVAQ Vaqueiros 23.54 281 *e*P **P 04 52 48.8 +1.1**
comp=Z,47nn,2.4s
PBEJ Beja 23.59 283 *e*P **P 04 52 50.0 +1.8**
comp=Z,29nn,1.7s
PBEJ Beja 23.59 283 *e*P **P 04 52 50.0 +1.8**
comp=Z,29nn,1.7s
EVO Evora 23.67 284⇑ *i*P **P 04 52 52.0 +3.0**
comp=Z,19nn,1.0s
EVO *e*R
comp=Z,422nm,17.2s
EVO Evora 23.67 284 *e*P **P 04 52 49.2 +0.2**
EVO Evora 23.67 284 *e*P **P 04 52 49.2 +0.2**
EVOP Sao Brissos 23.75 284⇑ *i*P **P 04 52 52.0 +2.2**
EVOP pmax pmax
comp=Z,19nn,1.0s
EVOP Sao Brissos 23.75 284⇑ *i*P **P 04 52 52.0 +2.2**
comp=Z,19nn,1.0s
EVOP Sao Brissos 23.75 284⇑ *i*P **P 04 52 52.0 +2.2**
comp=Z,9.4nm,1.0s
PMTG Montargil 23.80 285 *e*P **P 04 52 52.5 +2.3**
comp=Z,24nn,1.4s
PGAV Gavieira, Arco 23.84 293 *e*S **S 04 57 09.7 +3.7**
PGAV A A 05 06 35.8
comp=Z,385nm,16.0s
PTOM Tomar 23.92 287 *e*P **P 04 52 53.7 +2.4**
PUL Pulkovo 24.00 11 *i* P **P 04 52 52.3 +0.5**
PUL Pulkovo 24.00 11 *i* P **P 04 52 52.3 +0.5**
HFS Hagfors 24.28 350 P **P 04 52 54.0 -0.5**
HFS Hagfors 24.28 350 P **P 04 52 54.0 -0.5**
comp=Z,5.4nm,0.4s,baz=156,slow=11,SNR=54
HFS LR LR 05 02 39.7
comp=Z,232nm,19.7s,baz=167,slow=37
HFS Hagfors 24.28 350 P **P 04 52 54.0 -0.5**
comp=Z,233nn,19.7s
IKLH Kolahrood 24.62 88 *e*P **P 04 52 59.6 +1.4**
IKLH Kolahrood 24.62 88 *e*P **P 04 52 59.6 +1.4**
FINES FINESS Array B 25.18 5 P **P 04 53 02.2 -0.4**
FINES FINESS Array B 25.18 5 P **P 04 53 02.2 -0.4**
comp=Z,7.9nm,0.6s,baz=154,slow=11,SNR=67
FINES LR LR 05 03 57.5
comp=Z,571nm,20.9s,baz=270,slow=39
FINES FINESS Array B 25.18 5 P **P 04 53 02.2 -0.4**
comp=Z,571nn,20.9s
FIA1 FINESS Array S 25.18 5 *e*P **P 04 53 02.0 -0.6**
FIA1 FINESS Array S 25.18 5 *e*P **P 04 53 02.0 -0.6**
IGAR Gharneh 25.26 90 *e*P **P 04 53 05.0 +1.1**
IZEF Zefreh 25.34 89 *e*P **P 04 53 05.3 +0.6**
IZEF Zefreh 25.34 89 *e*P **P 04 53 05.3 +0.6**
NAO01 NORSAR Array S 25.39 348 *e*P **P 04 53 04.3 -0.3**
comp=Z,13nn,0.8s
NAO01 NORSAR Array S 25.39 348 *e*P **P 04 53 04.3 -0.3**
comp=Z,13nn,0.8s
EKA Eskdalemuir Ar 25.42 326 P **P 04 53 05.6 +0.8**
EKA Eskdalemuir Ar 25.42 326 P **P 04 53 05.6 +0.8**
comp=Z,3.9nm,0.5s,baz=131,slow=8.9,SNR=25
EKA Eskdalemuir Ar 25.42 326 P **P 04 53 05.6 +0.8**
comp=Z,4.0nm,0.5s
ESK Eskdalemuir 25.43 326 *e*P **P 04 53 05.6 +0.7**
ESK pmax pmax
comp=Z,19nn,1.0s
ESK Eskdalemuir 25.43 326 *e*P **P 04 53 05.6 +0.7**
comp=Z,19nn,1.0s
ESK Eskdalemuir 25.43 326 *e*P **P 04 53 05.6 +0.7**
comp=Z,19nn,1.0s
NB2 NORSAR Subarra 25.52 348 P **P 04 53 05.2 -0.5**
comp=Z,4.3nm,0.8s,baz=156,slow=9.3
NB2 NORSAR Subarra 25.52 348 P **P 04 53 05.2 -0.5**
comp=Z,4.3nm,0.8s,SNR=2.7
NOA NORSAR Array B 25.52 348 P **P 04 53 05.3 -0.4**
NOA NORSAR Array B 25.52 348 P **P 04 53 05.3 -0.4**
comp=Z,6.2nm,0.8s,baz=158,slow=9.3,SNR=24
NOA LR LR 05 03 27.8
comp=Z,394nm,20.3s,baz=180,slow=37
NOA NORSAR Array B 25.52 348 P **P 04 53 05.3 -0.5**
KAF Kangasniemi 25.86 5 *e*P **P 04 53 07.2 -1.6**
KAF pmax pmax
comp=Z,17nm,0.8s
KAF Kangasniemi 25.86 5 *e*p **P 04 53 07.2 -1.6**
comp=Z,17nn,0.8s
ISAD Sadrabad 26.73 90 *e*P **P 04 53 17.1 -0.3**
ISAD Sadrabad 26.73 90 *e*P **P 04 53 17.1 -0.3**
KLMR Klimovskoe 26.93 19 *c i*P **P 04 53 16.1 -2.3**
KLMR *e**PP **pP 04 53 25.6 +2.4**
KLMR S S **04 57 48.4 -6.2**
KLMR pmax pmax
comp=Z,53nm,1.0s
KLMR MLR MLR
comp=Z,520nm,15.0s
JOF Joensuu 27.16 10 *e*P **P 04 53 18.1 -2.4**
JOF pmax pmax
comp=Z,4.0nm,0.5s
JOF Joensuu 27.16 10 *e*p **P 04 53 18.1 -2.4**
comp=Z,3.9nm,0.5s
ISRV Sarvestan 27.17 96 *e*P **P 04 53 22.0 +0.6**
ISRV Sarvestan 27.17 96 *e*P **P 04 53 22.0 +0.6**
ICHK Chekchek 27.21 89 *e*P **P 04 53 20.1 -1.5**
ICHK Chekchek 27.21 89 *e*P **P 04 53 20.1 -1.5**
IMEH Mehriz 27.65 91 *e*P **P 04 53 25.4 -0.2**
IMEH Mehriz 27.65 91 *e*P **P 04 53 25.4 -0.2**
TOA0 Torodi Ar. Sit 29.36 223 *e*P **P 04 53 41.4 +0.9**
TOA0 Torodi Ar. Sit 29.36 223 *e*P **P 04 53 41.4 +0.9**
TORD Torodi Ar. Bea 29.36 223 P **P 04 53 41.2 +0.7**
TORD Torodi Ar. Bea 29.36 223 P **P 04 53 41.2 +0.7**
comp=Z,5.3nm,0.8s,baz=32,slow=9.0,SNR=36
TORD LR LR 05 06 49.4
comp=Z,383nm,19.5s,baz=30,slow=39
TORD Torodi Ar. Bea 29.36 223 P **P 04 53 41.2 +0.7**
IEMG Emamgholi 29.40 77 *e*P **P 04 53 41.0 -0.1**
IKRD Kardeh 29.40 78 *e*P P 04 53 46.7 +5.6
AKTO Aktyubinsk 29.49 50 P **P 04 53 40.7 -0.8**
AKTO pmax pmax
comp=Z,1.0nm,0.4s
AKTO MLR MLR
comp=Z,377nm,20.7s
AKTO Aktyubinsk 29.49 50 P **P 04 53 40.6 -0.8**
AKTO Aktyubinsk 29.49 50 P **P 04 53 40.6 -0.8**
comp=Z,0.8nm,0.3s,baz=260,slow=9.9,SNR=6.6
AKTO LR LR 05 08 22.3
comp=Z,377nm,20.7s,baz=80,slow=42
AKTO Aktyubinsk 29.49 50 P **P 04 53 40.7 -0.8**
ABKAR Akbulak array 30.46 53 *e*P **P 04 53 49.1 -0.9**
ABKAR Akbulak array 30.46 53 *e*P **P 04 53 49.1 -0.9**
IMYA Miami 30.74 79 *e*P **P 04 53 52.8 -0.1**
ARU Arti 31.75 39 *d i*P **P 04 54 00.1 -1.2**
ARU 04 55 00.7
ARU S **S 04 59 08.4 -2.0**
ARU pmax pmax
comp=Z,21nm,1.2s
APA Apatity 31.88 8‖ *e*P P 04 54 08.6 +6.3
APA MLR MLR
comp=Z,600nm,16.0s
SVE Sverdlovsk 32.96 39‖ *e*P **P 04 54 11.5 -0.4**
SVE pmax pmax
comp=Z,55nn,1.0s
SVE MLR MLR
comp=Z,445nm,12.0s
ARCES ARCESS Array B 33.22 2 P **P 04 54 13.4 -0.6**
ARCES ARCESS Array B 33.22 2 P **P 04 54 13.4 -0.6**
comp=Z,3.2nm,0.6s,baz=186,slow=11,SNR=25
ARCES LR LR 05 09 32.1
comp=Z,393nm,18.1s,baz=182,slow=40
ARCES ARCESS Array B 33.22 2 P **P 04 54 13.4 -0.6**
KEV Kevo 33.50 3 *e*P **P 04 54 15.3 -1.2**
KEV pmax pmax
comp=Z,1.0nm,0.4s
KEV Kevo 33.50 3 *e*p **P 04 54 15.3 -1.2**
comp=Z,0.9nm,0.4s
BRVK Borovoye 37.46 48 *e*P **P 04 54 49.1 -1.6**
BRVK pmax pmax
comp=Z,18nm,1.0s
BRVK Borovoye 37.46 48 *e*P **P 04 54 49.0 -1.6**
comp=Z,18nn,1.0s
KKAR Karatay Array 37.63 64 *e*P **P 04 54 51.0 -1.3**
KKAR pmax pmax
comp=Z,8.0nm,0.6s
KKAR Karatay Array 37.63 64 *e*P **P 04 54 51.0 -1.3**
comp=Z,8.4nm,0.6s
KKAR Karatay Array 37.63 64 *e*P **P 04 54 51.0 -1.3**
comp=Z,8.4nm,0.6s
DBIC Dimbokro 38.33 226 P **P 04 54 60.0 +1.6**
DBIC Dimbokro 38.33 226 P **P 04 54 60.0 +1.6**
comp=Z,7.5nm,0.8s,baz=20,slow=9.7,SNR=12
DBIC LR LR 05 11 59.9
comp=Z,270nm,18.3s,baz=238,slow=38
DBIC Dimbokro 38.33 226 P **P 04 55 00.0 +1.6**
LIC Lamto 38.79 226 *e*P **P 04 55 03.4 +1.1**
comp=Z,32nm,0.7s
LIC *e*R
comp=Z,397nm,20.2s
LIC Lamto 38.79 226 *e*P **P 04 55 03.4 +1.1**
comp=Z,32nn,0.7s
KMBO Kilima Mbogo 40.06 155 *e*P **P 04 55 14.2 +1.1**
comp=Z,8.0nm,1.2s
KMBO Kilima Mbogo 40.06 155 LR LR 05 12 32.0
comp=Z,202nm,21.3s,baz=302,slow=37
KMBO Kilima Mbogo 40.06 155 *e*P **P 04 55 14.2 +1.1**
comp=Z,8.0nm,1.2s
EKS2 Erkin-Say 40.07 65 *e*P **P 04 55 12.5 -0.4**
EKS2 pmax pmax
comp=Z,15nm,0.8s
EKS2 Erkin-Say 40.07 65 *e*P **P 04 55 12.5 -0.4**
comp=Z,15nn,0.8s
EKS2 Erkin-Say 40.07 65 P **P 04 55 13.0 +0.1**
SNR=14
EKS2 Erkin-Say 40.07 65 *e*P **P 04 55 12.5 -0.4**
comp=Z,15nn,0.8s
AML Almayashu 40.09 65 P **P 04 55 14.9 +1.5**
SNR=6.4
AAK Ala-Archa 40.60 65 *de*P **P 04 55 17.1 -0.2**
AAK pmax pmax
comp=Z,28nn,1.0s
AAK MLR MLR
comp=Z,394nm,17.0s
AAK Ala-Archa 40.60 65 *e*P **P 04 55 17.3 0.0**
comp=Z,24nn,1.0s
AAK Ala-Archa 40.60 65 P **P 04 55 17.8 +0.5**
SNR=12
AAK Ala-Archa 40.60 65 *e*P **P 04 55 17.3 0.0**
comp=Z,24nn,1.0s
FRU Bishkek 40.65 64 *e*P **P 04 55 18.0 +0.4**
FRU *e* 04 55 24.0
FRU pmax pmax
comp=Z,70nm,1.4s
KZA Kyzart 41.24 65 P **P 04 55 24.0 +1.1**
SNR=8.1
TKM2 Tokmak 2 41.35 64 *e*P **P 04 55 22.7 -0.9**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s
TKM2 Tokmak 2 41.35 64 *e*P **P 04 55 22.7 -0.9**
comp=Z,8.2nn,0.9s
TKM2 Tokmak 2 41.35 64 *e*P **P 04 55 22.7 -0.9**
comp=Z,8.2nn,0.9s
ULHL Ulahol 41.94 65 P **P 04 55 29.0 +0.6**
SNR=19
KSH Kashi 42.31 69 P **P 04 55 31.8 +0.4**
KSH *e*pP pP 04 55 42.4 +6.1
KSH *e*sP sP 04 55 46.3 +8.1
KSH *e*PP **PP 04 57 13.0 +3.7**
KSH *e*PcP **PcP 04 57 27.3 +2.4**
KSH *e*PcS **PcS 05 01 18.1 +1.3**
KSH *e*S **S 05 01 48.3 -3.5**
KSH *e*SS SS 05 04 50.6 -10
KSH pmax pmax
comp=Z,8.0nm,0.7s
KSH pmax pmax
comp=Z,240nm,3.5s
KSH LR LR
comp=N,160nm,5.9s
KSH LR LR
comp=E,150nm,4.4s
KSH LR LR
comp=Z,190nm,4.2s
KURK Kurchatov 42.55 52 *e*P **P 04 55 32.1 -0.9**
KURK pmax pmax
comp=Z,20nm,1.3s
KURK Kurchatov 42.55 52 *e*P **P 04 55 32.1 -0.9**
comp=Z,20nn,1.3s
KURK Kurchatov 42.55 52 *e*P **P 04 55 32.1 -0.9**
comp=Z,20nn,1.3s
KBS Kingsbay 42.79 357⇑ *e*P P 04 55 37.9 +3.3
KBS pmax pmax
comp=Z,12nn,1.2s
NVS Novosibirsk 45.17 46 *e*P **P 04 55 52.8 -1.1**
NVS pmax pmax
comp=Z,29nn,1.3s
NVS pmax pmax
comp=N,4.0nm,1.1s
NVS pmax pmax
comp=E,11nm,1.3s
MK31 Makanchi Array 45.40 57 *e*P **P 04 55 55.1 -0.9**
MK31 Makanchi Array 45.40 57 *e*P **P 04 55 55.1 -0.9**
MK31 Makanchi Array 45.40 57 *e*P **P 04 55 55.1 -0.9**
MKAR Makanchi Array 45.40 57 *i* P **P 04 55 55.5 -0.5**
MKAR pmax pmax
comp=Z,3.0nm,0.5s
MKAR Makanchi Array 45.40 57 P **P 04 55 55.4 -0.6**
MKAR Makanchi Array 45.40 57 P **P 04 55 55.4 -0.6**
comp=Z,2.7nm,0.5s,baz=271,slow=7.6,SNR=33
MKAR LR LR 05 18 44.6
comp=Z,124nm,18.1s,baz=81,slow=41
MKAR Makanchi Array 45.40 57 P **P 04 55 55.3 -0.6**
ZAA0 Zalesovo Array 46.14 47 *e*P **P 04 56 02.2 +0.6**
ZAA0 Zalesovo Array 46.14 47 *e*P **P 04 56 02.2 +0.6**
ZALV Zalesovo Beam 46.14 47 *i* P **P 04 56 02.7 +1.0**
ZALV pmax pmax
comp=Z,4.0nm,0.3s
ZALV Zalesovo Beam 46.14 47 P **P 04 56 01.4 -0.3**
ZALV Zalesovo Beam 46.14 47 P **P 04 56 01.4 -0.3**
comp=Z,3.7nm,0.3s,baz=274,slow=8.8,SNR=5.3
ZALV LR LR 05 17 29.2
comp=Z,159nm,19.6s,baz=67,slow=39
ZALV Zalesovo Beam 46.14 47 P **P 04 56 01.4 -0.3**
SUMG Summit 46.80 339 *e*P **P 04 56 07.4 +0.4**
SUMG pmax pmax
comp=Z,15nm,1.2s
SUMG Summit 46.80 339 *e*P **P 04 56 07.4 +0.4**
comp=Z,15nn,1.2s
SUMG Summit 46.80 339 *e*P **P 04 56 07.4 +0.4**
comp=Z,15nn,1.2s
WMQ Urumqi 49.76 60 P P 04 56 26.1 -3.9
WMQ pP pP 04 56 36.0 +1.1
WMQ sP sP 04 56 39.9 +3.0
WMQ PcP **PcP 04 57 47.3 -3.4**
WMQ PP **PP 04 58 21.3 -3.1**
WMQ ScP ScP 05 01 38.4 -7.3
WMQ S S 05 03 31.4 -7.2
WMQ sS sS 05 03 48.1 +1.3
WMQ ScS ScS 05 06 12.0 -9.0
WMQ pmax pmax
comp=Z,11nn,1.2s
WMQ pmax pmax

	comp=Z,66nm,4.2s								
WMQ					LR	LR			
	comp=N,280nm,13.6s								
WMQ					LR	LR			
	comp=E,310nm,14.2s								
WMQ					LR	LR			
	comp=Z,220nm,22.0s								
PYUN	**Piuthan**	**51.70**	**81**	*eP*	**P**		**04 56 44.9**	**0.0**	
	comp=Z,92nm,0.9s								
LSZ	**Lusaka**	**51.79**	**172**	*eP*	**P**		**04 56 46.0**	**+0.6**	
	comp=Z,4.7nm,0.9s								
LSZ	**Lusaka**	**51.79**	**172**	*eP*	**P**		**04 56 46.0**	**+0.6**	
	comp=Z,4.7nm,0.9s								
HVS	**Khovu-Aksy**	**51.93**	**50**	*i* P	**P**		**04 56 46.7**	**+0.5**	
HVS					pmax	pmax			
	comp=Z,21nm,1.0s								
DANN	**Dangsing**	**52.20**	**80**	*eP*	**P**		**04 56 49.0**	**+0.2**	
	comp=Z,90nm,0.7s								
KOLN	**Koldanda**	**52.32**	**81**	*eP*	**P**		**04 56 49.1**	**-0.5**	
	comp=Z,51nm,1.0s								
DMN	**Daman**	**53.59**	**80**	*eP*	**P**		**04 56 58.6**	**-0.4**	
KKN	**Kakani**	**53.65**	**80**	*eP*	**P**		**04 56 58.4**	**-1.0**	
PKIN	**Phulchoki**	**53.84**	**80**	*eP*	**P**		**04 57 00.2**	**-0.6**	
PKI	**Pulchoki**	**53.85**	**80**	*eP*	**P**		**04 57 00.6**	**-0.4**	
	comp=Z,92nm,1.2s								
GUN	**Gumba**	**54.07**	**80**	*eP*	**P**		**04 57 02.3**	**-0.3**	
	comp=Z,116nm,1.2s								
RAMN	**Ramite**	**55.08**	**80**	*eP*	**P**		**04 57 09.1**	**-0.7**	
	comp=Z,79nm,0.9s								
ODAN	**Odare**	**55.74**	**80**	*eP*	**P**		**04 57 14.1**	**-0.5**	
TAPN	**Taplejung**	**55.77**	**79**	*eP*	**P**		**04 57 14.4**	**-0.5**	
ZAK	**Zakamensk**	**57.97**	**48**	*eP*	**P**		**04 57 28.4**	**-1.5**	
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.4s								
GTA	**Gaotai**	**59.79**	**61**	P	**P**		**04 57 44.4**	**+1.6**	
GTA				S	**S**		**05 05 53.3**	**-0.3**	
GTA				SS	**SS**		**05 09 48.9**	**-0.3**	
GTA				pmax	pmax				
	comp=Z,4.0nm,1.0s								
GTA				pmax	pmax				
	comp=Z,92nm,7.1s								
GTA				LR	LR				
	comp=N,280nm,19.0s								
GTA				LR	LR				
	comp=E,220nm,17.6s								
GTA				LR	LR				
	comp=Z,180nm,19.0s								
SCHQ	**Schefferville**	**60.41**	**318**	*eP*	**P**		**04 57 48.0**	**+1.4**	
	comp=Z,21nm,1.3s								
SCHQ	**Schefferville**	**60.41**	**318**	P	**P**		**04 57 47.0**	**+0.4**	
	comp=Z,6.5nm,0.7s,baz=69,slow=7.6,SNR=12								
SCHQ					LR	LR	05 21 14.7		
	comp=Z,124nm,19.3s,baz=54,slow=33								
SCHQ	**Schefferville**	**60.41**	**318**	*eP*	**P**		**04 57 48.0**	**+1.4**	
	comp=Z,21nm,1.3s								
SONM	**Songino Array**	**60.81**	**50**	P	**P**		**04 57 49.4**	**-0.3**	
SONM	**Songino Array**	**60.81**	**50**	P	**P**		**04 57 49.4**	**-0.3**	
	comp=Z,2.7nm,1.1s,baz=282,slow=8.6,SNR=9.3								
SONM	**Songino Array**	**60.81**	**50**	P	**P**		**04 57 49.4**	**-0.3**	
ULN	**Ulaanbaatar**	**61.21**	**50**	*eP*	**P**		**04 57 52.0**	**-0.3**	
	comp=Z,1.6nm,0.5s								
ULN	**Ulaanbaatar**	**61.21**	**50**	*eP*	**P**		**04 57 52.0**	**-0.3**	
	comp=Z,1.6nm,0.5s								
LZH	**Lanzhou**	**64.11**	**63**	*eP*	**P**		**04 58 12.3**	**+0.4**	
LZH				PcP	**PcP**		**04 58 47.6**	**+0.6**	
LZH				PP	**PP**		**05 00 37.0**	**+4.3**	
LZH				*eS*	**S**		**05 06 49.4**	**+1.0**	
LZH				SS	**SS**		**05 10 57.3**	**+0.3**	
LZH				pmax	pmax				
	comp=Z,15nm,1.1s								
LZH				pmax	pmax				
	comp=Z,68nm,4.0s								
LZH				LR	LR				
	comp=N,1μm,14.6s								
LZH				LR	LR				
	comp=E,1μm,14.7s								
LZH				LR	LR				
	comp=Z,1μm,16.8s								
BOSA	**Boshof**	**64.79**	**177**	P	**P**		**04 58 17.3**	**+1.2**	
BOSA	**Boshof**	**64.79**	**177**	P	**P**		**04 58 17.3**	**+1.2**	
	comp=Z,1.2nm,0.4s,baz=28,slow=6.9,SNR=4.1								
BOSA					LR	LR	05 28 30.6		
	comp=Z,361nm,18.1s,baz=353,slow=38								
BOSA	**Boshof**	**64.79**	**177**	P	**P**		**04 58 17.3**	**+1.2**	
CD2	**Chengdu**	**66.51**	**68**	P	**P**		**04 58 27.5**	**+0.1**	
CD2				pP	pP		04 58 39.1	+6.6	
CD2				PcP	**PcP**		**04 58 57.3**	**+0.5**	
CD2				PP	**PP**		**05 00 55.8**	**+2.2**	
CD2				PcS			05 03 00.4		
CD2				S	**S**		**05 07 12.6**	**-5.0**	
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
CD2				pmax	pmax				
	comp=Z,80nm,5.6s								
HHC	**Hu-ho-hao-te**	**67.22**	**55**	*eP*	**P**		**04 58 31.4**	**-0.4**	
HHC				pP	pP		04 58 42.3	+5.4	
HHC				PP	**PP**		**05 01 01.4**	**+1.8**	
HHC				S	**S**		**05 07 20.8**	**-5.2**	
HHC				ScS	SKSac		05 08 21.4	-7.4	
HHC				pmax	pmax				
	comp=Z,39nm,1.0s								
HHC				pmax	pmax				
	comp=Z,220nm,9.5s								
HHC				LR	LR				
	comp=N,360nm,21.4s								
HHC				LR	LR				
	comp=E,460nm,21.4s								
HHC				LR	LR				
	comp=Z,250nm,21.4s								
KMI	**Kunming**	**68.64**	**74**	P	**P**		**04 58 42.3**	**+1.1**	
KMI				pP	pP		04 58 53.8	+7.5	
KMI				PP	**PP**		**05 01 15.3**	**+2.7**	
KMI				S	**S**		**05 07 39.4**	**-4.4**	
KMI				SS	**SS**		**05 12 04.5**	**-3.4**	
KMI				pmax	pmax				
	comp=Z,6.0nm,0.9s								
KMI				pmax	pmax				
	comp=Z,52nm,3.2s								
KMI				LR	LR				
	comp=N,63nm,15.8s								
KMI				LR	LR				
	comp=E,110nm,13.9s								
KMI				LR	LR				
	comp=Z,81nm,20.0s								
XAN	**Xi'an**	**68.75**	**63**	P	**P**		**04 58 41.5**	**0.0**	
XAN				LR	LR				
	comp=N,110nm,23.5s								
XAN				LR	LR				
	comp=E,35nm,21.5s								
XAN				LR	LR				
	comp=Z,43nm,21.5s								
CHTO	**Chiang Mai**	**68.97**	**82**	*eP*	**P**		**04 58 42.0**	**-1.0**	
CHTO				pmax	pmax				
	comp=Z,12nm,1.2s								
CHTO	**Chiang Mai**	**68.97**	**82**	*eP*	**P**		**04 58 42.0**	**-1.0**	
	comp=Z,12nm,1.2s								
CHTO	**Chiang Mai**	**68.97**	**82**	*eP*	**P**		**04 58 42.0**	**-1.0**	
	comp=Z,12nm,1.2s								
CMAR	**Chiang Mai Arr**	**69.16**	**82**	P	**P**		**04 58 44.5**	**+0.3**	
CMAR	**Chiang Mai Arr**	**69.16**	**82**	P	**P**		**04 58 44.5**	**+0.3**	
	comp=Z,2.8nm,0.8s,baz=304,slow=7.9,SNR=13								
CMAR	**Chiang Mai Arr**	**69.16**	**82**	P	**P**		**04 58 44.5**	**+0.3**	
BJI	**Beijing**	**70.66**	**54**	P	**P**		**04 58 53.0**	**-0.1**	
BJI				S	**S**		**05 08 04.0**	**-2.6**	
BJI				pmax	pmax				
	comp=Z,7.0nm,0.6s								
BJI				pmax	pmax				
	comp=Z,58nm,3.6s								
BJI				LR	LR				
	comp=N,190nm,22.5s								
BJI				LR	LR				
	comp=E,150nm,18.1s								
BJI				LR	LR				
	comp=Z,140nm,28.0s								
GYA	**Guiyang**	**70.97**	**71**	*eP*	**P**		**04 58 55.4**	**+0.1**	
GYA				pP	PcP		04 59 07.8	-7.9	
GYA				PP	**PP**		**05 01 34.3**	**+1.9**	
GYA				S	**S**		**05 08 05.4**	**-5.4**	
GYA				SKS	**SKSac**		**05 08 50.9**	**-6.8**	
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
BILL	**Bilibino**	**72.49**	**13**	*eP*	**P**		**04 59 05.8**	**+2.2**	
BILL				*eS*	**S**		**05 08 22.1**	**-4.7**	
BILL				pmax	pmax				
	comp=Z,34nm,1.2s								
CN2	**Changchun**	**74.36**	**47**	*eP*	**P**		**04 59 16.9**	**+1.8**	
CN2				pmax	pmax				
	comp=Z,10.0nm,0.9s								
YKW3	**Yellowknife Ar**	**75.31**	**341**	*eP*	**P**		**04 59 18.0**	**-2.2**	
	comp=Z,0.1nm,1.2s								
YKA	**Yellowknife Ar**	**75.36**	**341**	P	**P**		**04 59 21.3**	**+0.8**	
YKA	**Yellowknife Ar**	**75.36**	**341**	P	**P**		**04 59 21.3**	**+0.8**	
	comp=Z,1.0nm,0.7s,baz=33,slow=5.3,SNR=16								
YKA	**Yellowknife Ar**	**75.36**	**341**	P	**P**		**04 59 21.3**	**+0.8**	
MDJ	**Mudanjiang**	**76.26**	**44**	P	**P**		**04 59 25.9**	**-0.1**	
MDJ				PP	**PP**		**05 02 16.0**	**-0.8**	
MDJ				pmax	pmax				
	comp=Z,3.0nm,0.9s								
MDJ				pmax	pmax				
	comp=Z,38nm,7.9s								
MDJ				LR	LR				
	comp=N,92nm,34.7s								
MDJ				LR	LR				
	comp=E,50nm,32.3s								
MDJ				LR	LR				
	comp=Z,130nm,20.4s								
COWI	**Conover**	**77.02**	**318**	*eP*	**P**		**04 59 31.6**	**+1.3**	
	comp=Z,10.0nm,1.1s								
COWI	**Conover**	**77.02**	**318**	*eP*	**P**		**04 59 31.6**	**+1.3**	
	comp=Z,10.0nm,1.1s								
FFC	**Flin Flon**	**77.18**	**330**	*eP*	**P**		**04 59 32.4**	**+1.4**	
FFC				pmax	pmax				
	comp=Z,10.0nm,1.3s								
FFC	**Flin Flon**	**77.18**	**330**	*eP*	**P**		**04 59 32.4**	**+1.4**	
	comp=Z,10nm,1.3s								
FFC	**Flin Flon**	**77.18**	**330**	*eP*	**P**		**04 59 32.3**	**+1.3**	
	comp=Z,10nm,1.3s								
ULM	**Lac du Bonnet**	**77.68**	**324**	LR	LR		05 33 28.8		
	comp=Z,270nm,21.1s,baz=351,slow=36								
USRK	**Ussuriysk Arra**	**77.87**	**44**	P	**P**		**04 59 34.7**	**-0.4**	
	comp=Z,3.2nm,0.6s,baz=314,slow=4.9,SNR=11								
USRK				LR	LR		05 38 50.2		
	comp=Z,120nm,20.1s,baz=58,slow=40								
KULM	**Kulim**	**77.95**	**92**	*eP*	**P**		**04 59 35.9**	**-0.1**	
	comp=Z,11nm,1.0s								
KULM	**Kulim**	**77.95**	**92**	*eP*	**P**		**04 59 35.9**	**-0.1**	
	comp=Z,11nm,1.0s								
ILAR	**Eielson Array**	**78.73**	**355**	P	**P**		**04 59 39.6**	**+0.2**	
ILAR	**Eielson Array**	**78.73**	**355**	P	**P**		**04 59 39.6**	**+0.2**	
	comp=Z,1.6nm,1.0s,baz=353,slow=4.8,SNR=16								
ILAR				LR	LR		05 34 35.7		
	comp=Z,64nm,18.3s,baz=341,slow=36								
ILAR	**Eielson Array**	**78.73**	**355**	P	**P**		**04 59 39.7**	**+0.2**	
KSAR	**Wonju Array Be**	**79.65**	**51**	P	**P**		**04 59 45.0**	**0.0**	
KSAR	**Wonju Array Be**	**79.65**	**51**	P	**P**		**04 59 45.0**	**0.0**	
KSRS	**Korea Array**	**79.67**	**51**	P	**P**		**04 59 45.0**	**-0.1**	
	comp=Z,5.3nm,0.7s,baz=309,slow=4.8,SNR=16								
KSRS				LR	LR		05 39 48.8		
	comp=Z,94nm,18.6s,baz=51,slow=39								
MCK	**McKinley**	**79.89**	**356**	*eP*	**P**		**04 59 44.5**	**-1.4**	
MCK				pmax	pmax				
	comp=Z,7.0nm,1.0s								
MCK	**McKinley**	**79.89**	**356**	*eP*	**P**		**04 59 44.5**	**-1.4**	
	comp=Z,6.0nm,1.0s								
YSS	**Yuzhno-Sakhalins**	**81.59**	**36**	*eP*	P		04 59 58.0	+2.8	
ECSD	**EROS Data Cent**	**82.55**	**320**	*eP*	**P**		**05 00 01.8**	**+1.5**	
	comp=Z,6.2nm,1.1s								
ECSD	**EROS Data Cent**	**82.55**	**320**	*eP*	**P**		**05 00 01.8**	**+1.5**	
	comp=Z,6.2nm,1.1s								
PETK	**Petropavlovsk-**	**82.97**	**25**	LR	LR		05 44 22.9		
	comp=Z,110nm,18.8s,baz=129,slow=41								
ASAJ	**Asahikawa**	**83.55**	**38**	LR	LR		05 42 26.8		
	comp=Z,130nm,19.3s,baz=185,slow=39								
BDFB	**Brasília**	**83.67**	**245**	LR	LR		05 38 25.8		
	comp=Z,22nm,18.6s,baz=185,slow=36								
WALA	**Waterton Lakes**	**86.22**	**333**	*eP*	**P**		**05 00 18.7**	**-0.3**	
	comp=Z,0.2nm,1.3s								
WALA	**Waterton Lakes**	**86.22**	**333**	*eP*	**P**		**05 00 18.7**	**-0.3**	
	comp=Z,0.2nm,1.3s								
MJAR	**Matsushiro Arr**	**86.49**	**46**	P	**P**		**05 00 21.4**	**+1.0**	
MJAR	**Matsushiro Arr**	**86.49**	**46**	P	**P**		**05 00 21.4**	**+1.0**	
	comp=Z,2.3nm,0.6s,baz=309,slow=5.7,SNR=6.1								
MJAR	**Matsushiro Arr**	**86.49**	**46**	P	**P**		**05 00 21.4**	**+1.0**	
JOW	**Kunigami**	**86.53**	**59**	*eP*	**P**		**05 00 20.4**	**-0.4**	
	comp=Z,15nm,1.1s								
JOW	**Kunigami**	**86.53**	**59**	*eP*	**P**		**05 00 20.4**	**-0.4**	
	comp=Z,15nm,1.1s								
YBMT	**Yellow Bay**	**87.24**	**332**	*eP*	**P**		**05 00 24.2**	**+0.2**	
	comp=Z,3.6nm,1.0s								
YBMT	**Yellow Bay**	**87.24**	**332**	*eP*	**P**		**05 00 24.2**	**+0.2**	
	comp=Z,3.6nm,1.0s								
JTMT	**Jette**	**87.44**	**332**	*eP*	**P**		**05 00 26.5**	**+1.5**	
	comp=Z,8.7nm,1.2s								
JTMT	**Jette**	**87.44**	**332**	*eP*	**P**		**05 00 26.5**	**+1.5**	
	comp=Z,8.7nm,1.2s								
SWMT	**Swartz Lake**	**87.53**	**332**	*eP*	**P**		**05 00 25.3**	**-0.1**	
	comp=Z,2.5nm,0.9s								
SWMT	**Swartz Lake**	**87.53**	**332**	*eP*	**P**		**05 00 25.3**	**-0.1**	
	comp=Z,2.5nm,0.9s								
NEW	**Newport**	**88.05**	**334**	*eP*	**P**		**05 00 27.5**	**-0.3**	
	comp=Z,5.3nm,1.0s								
NEW	**Newport**	**88.05**	**334**	*eP*	**P**		**05 00 27.5**	**-0.3**	
	comp=Z,5.3nm,1.0s								
BOZ	**Bozeman (W)**	**88.11**	**329**	*eP*	**P**		**05 00 29.1**	**+0.8**	
BOZ				pmax	pmax				
	comp=Z,3.0nm,1.3s								
BOZ	**Bozeman (W)**	**88.11**	**329**	*eP*	**P**		**05 00 29.1**	**+0.8**	
	comp=Z,2.9nm,1.3s								
BOZ	**Bozeman (W)**	**88.11**	**329**	*eP*	**P**		**05 00 29.1**	**+0.8**	
	comp=Z,2.9nm,1.3s								
PDAR	**Pinedale Array**	**89.54**	**326**	P	**P**		**05 00 36.2**	**+1.1**	
PDAR	**Pinedale Array**	**89.54**	**326**	P	**P**		**05 00 36.2**	**+1.1**	
	comp=Z,0.7nm,0.7s,baz=57,slow=5.5,SNR=3.8								
PDAR				LR	LR		05 43 10.3		
	comp=Z,171nm,18.3s,baz=40,slow=37								
PDAR	**Pinedale Array**	**89.54**	**326**	P	**P**		**05 00 36.2**	**+1.1**	
WMOK	**Wichita Mounta**	**90.11**	**315**	*eP*	**P**		**05 00 38.6**	**+0.9**	
WMOK				pmax	pmax				
	comp=Z,5.0nm,1.3s								
WMOK	**Wichita Mounta**	**90.11**	**315**	*eP*	**P**		**05 00 38.6**	**+0.9**	
	comp=Z,5.0nm,1.3s								
WMOK	**Wichita Mounta**	**90.11**	**315**	*eP*	**P**		**05 00 38.6**	**+0.9**	
	comp=Z,5.0nm,1.3s								
HWUT	**Hardware Ranch**	**91.36**	**327**	*eP*	**P**		**05 00 44.5**	**+0.9**	
	comp=Z,3.9nm,1.0s								
HWUT	**Hardware Ranch**	**91.36**	**327**	*eP*	**P**		**05 00 44.5**	**+0.9**	
	comp=Z,3.9nm,1.0s								
SDCO	**Great Sand Dun**	**91.52**	**321**	*eP*	**P**		**05 00 45.1**	**+0.6**	
	comp=Z,1.4nm,1.1s								
SDCO	**Great Sand Dun**	**91.52**	**321**	*eP*	**P**		**05 00 45.1**	**+0.6**	
	comp=Z,1.4nm,1.1s								
MFID	**Camas Ranch**	**91.65**	**331**	*eP*	**P**		**05 00 46.0**	**+1.2**	
	comp=Z,8.0nm,1.5s								
MFID	**Camas Ranch**	**91.65**	**331**	*eP*	**P**		**05 00 46.0**	**+1.2**	
	comp=Z,8.0nm,1.5s								
CPUP	**Villa Florida**	**97.11**	**243**	LR	LR		05 46 44.6		
	comp=Z,228nm,19.8s,baz=33,slow=36								
LPAZ	**La Paz**	**99.39**	**257**	LR	LR		05 45 20.4		
	comp=Z,96nm,19.9s,baz=212,slow=35								
ASAR	**Alice Springs**	**120.99**	**98**	PKP	**PKPdf**		**05 06 30.6**	**+0.3**	
ASAR	**Alice Springs**	**120.99**	**98**	PKP	**PKPdf**		**05 06 30.6**	**+0.3**	
	comp=Z,0.6nm,0.6s,baz=283,slow=1.5,SNR=5.5								
ASAR	**Alice Springs**	**120.99**	**98**	PKIKP	**PKPdf**		**05 06 30.6**	**+0.3**	

*ISCJB **23** 05:12:43.5±0.7, 32°.40N±0°.05×105°.31E±0°.08, h15km, mb3.3/4, Error ellipse: s-maj=10.4km s-min=5.4km az=32.7*
*BJI **23** 05:12:43.9, 32°.51N×105°.08E, h8km, ML3.2/13, Ms3.5/2, Ms7 3.4/2*
*IDC **23** 05:12:43.2±1.4, 32°.37N×105°.15E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/27, mbtmp3.4/4, Error ellipse: s-maj=76.1km s-min=26.6km az=52.0*

ISC 23 05:12:45.7±0.8, 32°.43N±0°.05×105°.17E±0°.06, h15km, n8, σ1°56/14, mb3.3/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CD2	**Chengdu**	**1.93**	**219**	Pn	**Pn**		**05 13 18.5**	**+0.4**
CD2				Pg	**Pb**		**05 13 21.1**	**+0.4**
CD2				Sn	**Sb**		**05 13 44.3**	**-0.3**
CD2				Sg	**Sg**		**05 13 47.8**	**-0.1**
CD2				smax	smax			
	comp=N,350nm,0.4s							
CD2				smax	smax			
	comp=E,600nm,0.6s							
XAN	**Xi'an**	**3.54**	**62**	Pn	**Pn**		**05 13 41.8**	**+1.6**
XAN				Sn	**Sn**		**05 14 17.5**	**-4.2**
XAN				Sg	**Sb**		**05 14 32.3**	**+1.5**
XAN				smax	smax			
	comp=N,86nm,0.7s							
XAN				smax	smax			
	comp=E,51nm,0.8s							
LZH	**Lanzhou**	**3.81**	**344**	*e*Pn	**Pn**		**05 13 45.3**	**+1.2**
LZH				Pg	Pb		05 13 50.5	-2.3
LZH				Sn	**Sn**		**05 14 28.3**	**-0.4**
LZH				Sg	**Sb**		**05 14 37.6**	**-1.3**
LZH				smax	smax			
	comp=N,150nm,0.5s							
LZH				smax	smax			
	comp=E,180nm,0.6s							
LZH				LR	LR			
	comp=N,350nm,4.2s							
LZH				LR	LR			
	comp=E,350nm,4.9s							
LZH				LR	LR			
	comp=Z,270nm,4.8s							
GTA	**Gaotai**	**8.21**	**330**	*e*P	Pn		05 14 50.4	+6.0
GTA				pP	Pb		05 14 54.8	-13
GTA				sP			05 14 57.4	
GTA				pmax	pmax			
	comp=Z,3.0nm,1.4s							
MKAR	**Makanchi Array**	**22.61**	**316**	P	**P**		**05 17 46.2**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=114,slow=9.9,SNR=4.8							
KURBB	**Kurchatov Arra**	**26.76**	**321**	P	**P**		**05 18 24.9**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=129,slow=8.7,SNR=4.8							
WRA	**Warramunga Arr**	**59.09**	**148**	P	**P**		**05 22 45.5**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=324,slow=9.5,SNR=4.9							
YKA	**Yellowknife Ar**	**80.16**	**18**	P	**P**		**05 24 54.7**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=328,slow=5.1,SNR=5.3							

*ISCJB **23** 05:31:01.4±0.3, 40°.57S±0°.02×175°.47E±0°.04, h46km±5km, mb3.6/2, Error ellipse: s-maj=5.3km s-min=3.4km az=26.3*
*WEL **23** 05:31:01.9±0.1, 40°.56S×175°.46E, h35km, ML3.9/17, Error ellipse: s-maj=0.9km s-min=0.6km az=90.0, 5.*
WEL Felt between Wanganui, Wellington and Manawatu, maximum reported intensity MM.
*NEIC **23** 05:31:01.9, 40°.56S×175°.46E, h35km, ML3.9(WEL), After WEL.*
NEIC Felt in the Wanganui-Wellington area.
*IDC **23** 05:31:04.7±2.2, 40°.18S×175°.49E, h76km±19km, mb3.5/2, mb1 3.6/4, mb1mx3.5/17, mbtmp3.4/4, Error ellipse: s-maj=38.9km s-min=16.4km az=135.0*

ISC 23 05:31:00.6±0.9, 40°.51S±0°.02×175°.41E±0°.02, h34km±2km, n82, σ0°89/101, 5C-3D, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MRZ	**Mangatainoka R**	**0.20**	**140**	⇓P*	**Pb**		**05 31 07.8**	**+0.4**
MRZ				S*	**Sb**		**05 31 12.2**	**+0.2**
MRZ	**Mangatainoka R**	**0.20**	**140**	P*	**Pb**		**05 31 07.8**	**+0.4**
MRZ				S*	**Sb**		**05 31 12.2**	**+0.2**
POWZ	**Post Office Ro**	**0.30**	**67**	P*	**Pb**		**05 31 08.9**	**+0.4**
POWZ				S*	**Sb**		**05 31 14.9**	**+1.2**
POWZ	**Post Office Ro**	**0.30**	**67**	P*	**Pb**		**05 31 08.8**	**+0.4**
POWZ				S*	**Sb**		**05 31 14.9**	**+1.2**
OGWZ	**Otaki Gorge**	**0.36**	**210**	⇓P*	**Pb**		**05 31 10.0**	**+0.7**
OGWZ				S*	**Sn**		**05 31 16.0**	**+1.0**
OGWZ	**Otaki Gorge**	**0.36**	**210**	P*	**Pb**		**05 31 10.0**	**+0.7**
OGWZ				S*	**Sn**		**05 31 16.0**	**+1.0**
HOWZ	**Holdsworth Sta**	**0.40**	**168**	P*	**Pb**		**05 31 10.2**	**+0.3**
HOWZ				S*	**Sb**		**05 31 17.0**	**+0.9**
HOWZ	**Holdsworth Sta**	**0.40**	**168**	P*	**Pb**		**05 31 10.2**	**+0.3**
HOWZ				S*	**Sb**		**05 31 17.0**	**+0.9**
TIWZ	**Tintock**	**0.45**	**127**	⇑P*	**Pb**		**05 31 11.1**	**+0.5**
TIWZ				S*	**Sn**		**05 31 18.6**	**+0.9**
TIWZ	**Tintock**	**0.45**	**127**	P*	**Pb**		**05 31 11.1**	**+0.5**
TIWZ				S*	**Sn**		**05 31 18.6**	**+0.9**
KIW	**Kapiti Island**	**0.52**	**227**	P*	**Pb**		**05 31 12.5**	**+0.8**
KIW				S*	**Sn**		**05 31 20.5**	**+1.2**
KIW	**Kapiti Island**	**0.52**	**227**	P*	**Pb**		**05 31 12.5**	**+0.8**
KIW				S*	**Sn**		**05 31 20.5**	**+1.2**
DVHZ	**Dannevirke**	**0.61**	**71**	⇑P*	**Pn**		**05 31 13.6**	**+0.7**
DVHZ	**Dannevirke**	**0.61**	**71**	P*	**Pn**		**05 31 13.6**	**+0.7**
CAW	**Cannon Point**	**0.65**	**203**	P*	**Pn**		**05 31 14.0**	**+0.5**
CAW				S*	**Sn**		**05 31 23.5**	**+0.9**
MTW	**Mount Morrison**	**0.66**	**174**	⇑P*	**Pn**		**05 31 13.8**	**+0.3**
MTW				S*	**Sb**		**05 31 23.9**	**+1.1**
MTW	**Mount Morrison**	**0.66**	**174**	P*	**Pn**		**05 31 13.8**	**+0.3**
MTW				S*	**Sb**		**05 31 23.9**	**+1.1**
BFZ	**Birch Farm**	**0.66**	**106**	P*	**Pn**		**05 31 13.8**	**+0.3**
BFZ				S*	**Sn**		**05 31 23.8**	**+1.0**
BFZ	**Birch Farm**	**0.66**	**106**	P*	**Pn**		**05 31 13.8**	**+0.3**
BFZ				S*	**Sn**		**05 31 23.8**	**+1.0**
TMWZ	**Te Maipa**	**0.70**	**149**	P*	**Pn**		**05 31 14.4**	**+0.3**
WAZ	**Wanganui**	**0.82**	**336**	⇑PN	**Pb**		**05 31 18.1**	**+1.6**
WAZ	**Wanganui**	**0.82**	**336**	Pn	**Pb**		**05 31 18.1**	**+1.6**
PNHZ	**Pukenui**	**0.85**	**46**	⇑P*	**Pn**		**05 31 17.4**	**+1.2**
PAWZ	**Paruwai Farm**	**0.87**	**179**	P*	**Pn**		**05 31 17.4**	**+0.8**
PAWZ				S*	**Sn**		**05 31 28.4**	**+0.4**
WPHZ	**Waipukurau**	**0.90**	**61**	P*	**Pn**		**05 31 17.9**	**+0.9**
MSWZ	**Moikau Station**	**0.92**	**188**	P*	**Pn**		**05 31 17.1**	**0.0**
TRWZ	**Traveller**	**0.92**	**167**	⇓P*	**Pn**		**05 31 18.0**	**+0.9**
WEL	**Wellington**	**0.92**	**212**	P*	**Pn**		**05 31 17.9**	**+0.8

*BJI **23** 05:44:32.7, 11°.73N×143°.09E, h34km, mB4.8/15, mb4.7/21, Ms4.4/7, Ms7 4.1/6*
*ISCJB **23** 05:44:34.3±0.4, 11°.92N±0°.06×142°.83E±0°.05, h31km, mb4.4/40, MS3.7/5, Error ellipse: s-maj=8.6km s-min=7.7km az=166.0*
*IDC **23** 05:44:37.5±2.3, 12°.02N×142°.79E, h44km±22km, mb3.9/16, mb1 4.1/17, mb1mx4.0/27, mbtmp4.0/17, ML4.4/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/28, Error ellipse: s-maj=18.1km s-min=14.1km az=104.0*
*NEIC **23** 05:44:37.3±1.4, 12°.00N×142°.79E, h42km±12km, mb4.5/16, Error ellipse: s-maj=9.8km s-min=8.2km az=96.0*

ISC 23 05:44:36.2±0.5, 11°.95N±0°.07×142°.85E±0°.06, h31km, n69, σ1°65/84, mb4.5/40, MS4.0/5, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.56**	**50**	*e*Pn		**Pn**	**05 45 16.4**	**+0.8**
GUMO				*e*Sn		**Sb**	**05 45 51.4**	**-1.0**
GUMO	**Guam**	**2.56**	**50**	P		**Pn**	**05 45 16.1**	**+0.6**
	68nm,0.3s,baz=226,slow=4.5,SNR=14							
GUMO				S		**Sn**	**05 45 47.1**	**+1.5**
	71nm,0.3s,baz=215,slow=23,SNR=7.0							
JOW	**Kunigami**	**20.17**	**319**	*e*P		Pn	05 49 10.0	-0.3
	38nm,1.2s							
JNU	**Nakatsue**	**23.76**	**334**	*e*P		**P**	**05 49 45.5**	**-0.6**
	14nm,0.9s							
JNU	**Nakatsue**	**23.76**	**334**	P		**P**	**05 49 45.4**	**-0.6**
	9.8nm,0.7s,baz=212,slow=4.6,SNR=7.6							
JNU				LR		LR	05 56 53.1	
	comp=Z,67nm,20.2s,baz=57,slow=31							
SSLB	**Suanglung**	**23.89**	**302**	*e*P		**P**	**05 49 46.9**	**-0.5**
	10nm,0.9s							
MJAR	**Matsushiro Arr**	**24.84**	**351**	P		**P**	**05 49 54.1**	**-1.8**
MJAR	**Matsushiro Arr**	**24.84**	**351**	P		**P**	**05 49 54.1**	**-1.8**
	0.7nm,0.3s,baz=166,slow=9.8,SNR=6.1							
COEN	**Coen**	**25.74**	**179**	*e*P		**P**	**05 50 04.6**	**+0.4**
	16nm,0.6s							
KSRS	**Korea Array**	**28.71**	**335**	P		**P**	**05 50 29.7**	**-1.0**
	0.5nm,0.4s,baz=154,slow=9.2,SNR=1.1							
KSAR	**Wonju Array Be**	**28.71**	**335**	P		**P**	**05 50 29.7**	**-1.0**
NJ2	**Nanjing**	**29.79**	**316**	*e*P		**P**	**05 50 41.0**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.7s							
QIZ	**Qiongzhong**	**32.54**	**287**	P		**P**	**05 51 04.8**	**+0.1**
QIZ				S		**S**	**05 56 18.3**	**0.0**
WRAB	**Tennant Creek**	**32.77**	**195**	*e*P		**P**	**05 51 06.1**	**-0.6**
	comp=Z,5.5nm,1.1s							
WRA	**Warramunga Arr**	**32.78**	**195**	P		**P**	**05 51 06.1**	**-0.7**
WRA				PcP		**PcP**	**05 53 52.2**	**+0.4**
WRA	**Warramunga Arr**	**32.78**	**195**	P		**P**	**05 51 06.1**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=18,slow=9.6,SNR=16							
WRA				PcP		**PcP**	**05 53 52.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=3.2,slow=2.8,SNR=4.2							
USRK	**Ussuriysk Arra**	**33.47**	**346**	P		**P**	**05 51 12.5**	**0.0**
	comp=Z,2.8nm,0.7s,baz=165,slow=9.1,SNR=6.1							
MDJ	**Mudanjiang**	**34.48**	**343**	P		**P**	**05 51 22.8**	**+1.4**
MDJ				pmax		pmax		
	comp=Z,5.0nm,0.7s							
MDJ				pmax		pmax		
	comp=Z,36nm,5.8s							
CN2	**Changchun**	**35.11**	**338**	*e*P		**P**	**05 51 28.8**	**+2.0**
ASAR	**Alice Springs**	**36.46**	**194**	P		**P**	**05 51 38.6**	**0.0**
ASAR				PcP		**PcP**	**05 54 01.6**	**-0.7**
ASAR	**Alice Springs**	**36.46**	**194**	P		**P**	**05 51 38.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=20,slow=12,SNR=11							
ASAR				PcP		**PcP**	**05 54 01.6**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=32,slow=3.2,SNR=4.8							
BJI	**Beijing**	**36.57**	**325**	P		**P**	**05 51 40.3**	**+1.0**
BJI				S		**S**	**05 57 21.6**	**+1.7**
BJI				pmax		pmax		
	comp=Z,9.0nm,0.9s							
BJI				pmax		pmax		
	comp=Z,43nm,3.6s							
BJI				LR		LR		
	comp=N,160nm,12.0s							
BJI				LR		LR		
	comp=E,100nm,10.6s							
GYA	**Guiyang**	**36.94**	**298**	*e*P		**P**	**05 51 42.8**	**-0.1**
GYA				pP		**pP**	**05 51 53.4**	**+1.4**
GYA				PP		**PnPn**	**05 53 09.6**	**+1.9**
GYA				PcP		**PcP**	**05 54 05.3**	**+1.3**
GYA				S		**S**	**05 57 25.0**	**-1.3**
GYA				ScS		**ScS**	**06 01 53.4**	**-2.9**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**39.78**	**322**	*e*P		**P**	**05 52 08.9**	**+2.3**
HHC				pP		**pP**	**05 52 19.3**	**+3.6**
HHC				sP		**sP**	**05 52 24.0**	**+4.5**
HHC				PP		**PnPn**	**05 53 44.8**	**+3.2**
HHC				S		**S**	**05 58 12.4**	**+3.5**
HHC				SS		**SS**	**06 01 01.3**	**-4.2**
HHC				pmax		pmax		
	comp=Z,49nm,1.2s							
HHC				pmax		pmax		
	comp=Z,140nm,6.0s							
HHC				LR		LR		
	comp=N,280nm,21.4s							
HHC				LR		LR		
	comp=E,400nm,21.4s							
HHC				LR		LR		
	comp=Z,150nm,21.4s							
KMI	**Kunming**	**40.06**	**295**	P		**P**	**05 52 10.5**	**+1.2**
KMI				pmax		pmax		
	comp=Z,8.0nm,0.5s							
CD2	**Chengdu**	**40.71**	**304**	P		**P**	**05 52 15.1**	**+0.7**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,5.2s							
LZH	**Lanzhou**	**42.55**	**311**	*e*P		P	05 52 24.0	-5.5
LZH				pP		pP	05 52 29.5	-9.2
LZH				sP		sP	05 52 31.0	-11
LZH				pmax		pmax		
	comp=Z,15nm,1.4s							
PETK	**Petropavlovsk-**	**42.74**	**13**	P		**P**	**05 52 29.2**	**-1.3**
PETK	**Petropavlovsk-**	**42.74**	**13**	P		**P**	**05 52 29.2**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=205,slow=6.4,SNR=3.2							
PETK				LR		LR	06 08 01.5	
	comp=Z,44nm,20.4s,baz=350,slow=33							
CMAR	**Chiang Mai Arr**	**42.78**	**284**	P		**P**	**05 52 31.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**42.78**	**284**	P		**P**	**05 52 31.9**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=83,slow=6.2,SNR=8.2							
GTA	**Gaotai**	**46.82**	**314**	*e*P		**P**	**05 53 03.3**	**-0.2**
GTA				S		**S**	**05 59 52.8**	**+0.7**
GTA				SS		**SS**	**06 03 11.8**	**-7.1**
GTA				pmax		pmax		
	comp=Z,4.0nm,1.3s							
GTA				pmax		pmax		
	comp=Z,53nm,4.5s							
GTA				LR		LR		
	comp=N,120nm,18.1s							
GTA				LR		LR		
	comp=E,160nm,18.0s							
GTA				LR		LR		
	comp=Z,98nm,17.3s							
SONM	**Songino Array**	**46.97**	**327**	P		**P**	**05 53 03.6**	**-0.8**
SONM	**Songino Array**	**46.97**	**327**	P		**P**	**05 53 03.6**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=136,slow=7.0,SNR=4.2							
WMQ	**Urumqi**	**56.86**	**315**	*e*P		**P**	**05 54 19.1**	**+0.9**
MKAR	**Makanchi Array**	**61.32**	**317**	P		**P**	**05 54 48.3**	**-0.7**
MKAR	**Makanchi Array**	**61.32**	**317**	P		**P**	**05 54 48.3**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=96,slow=8.5,SNR=11							
ZALV	**Zalesovo Beam**	**61.82**	**325**	P		**P**	**05 54 50.3**	**-1.9**
ZALV	**Zalesovo Beam**	**61.82**	**325**	P		**P**	**05 54 50.3**	**-1.9**
	comp=Z,0.9nm,0.4s,baz=89,slow=7.2,SNR=3.8							
SEW	**Seward**	**68.65**	**30**	*e*P		**P**	**05 55 36.1**	**-0.2**
	comp=Z,22nm,1.0s							
KKAR	**Karatay Array**	**69.05**	**312**	*e*P		**P**	**05 55 38.6**	**-0.6**
	comp=Z,0.6nm,0.4s							
PMR	**Palmer**	**69.15**	**28**	*e*P		**P**	**05 55 38.8**	**-0.7**
	comp=Z,7.8nm,0.6s							
BRVK	**Borovoye**	**70.06**	**322**	*e*P		**P**	**05 55 44.0**	**-1.2**
	comp=Z,5.0nm,0.6s							
COLA	**College**	**70.50**	**25**	*e*P		**P**	**05 55 46.9**	**-0.8**
	comp=Z,2.4nm,0.7s							
ILAR	**Eielson Array**	**70.88**	**25**	P		**P**	**05 55 48.4**	**-1.7**
ILAR	**Eielson Array**	**70.88**	**25**	P		**P**	**05 55 48.4**	**-1.7**
	comp=Z,1.4nm,0.5s,baz=250,slow=5.7,SNR=38							
DOT	**Dot Lake**	**71.87**	**27**	*e*P		**P**	**05 55 55.6**	**-0.4**
	comp=Z,6.9nm,0.8s							
ABKAR	**Akbulak array**	**76.43**	**318**	*e*P		**P**	**05 56 21.6**	**-1.3**
	comp=Z,2.6nm,0.5s							
DLBC	**Dease Lake**	**78.42**	**32**	*e*P		**P**	**05 56 34.5**	**+0.6**
YKA	**Yellowknife Ar**	**85.21**	**27**	P		**P**	**05 57 09.2**	**-0.2**
YKA	**Yellowknife Ar**	**85.21**	**27**	P		**P**	**05 57 09.2**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=287,slow=4.9,SNR=65							
NEW	**Newport**	**87.75**	**41**	*e*P		**P**	**05 57 22.6**	**+0.3**
	comp=Z,3.5nm,1.0s							
ARCES	**ARCESS Array B**	**88.02**	**342**	P		**P**	**05 57 22.0**	**-1.2**
ARCES	**ARCESS Array B**	**88.02**	**342**	P		**P**	**05 57 22.0**	**-1.2**
	comp=Z,0.8nm,0.4s,baz=77,slow=8.1,SNR=22							
JOF	**Joensuu**	**88.94**	**335**	*e*p		P	05 57 24.0	-3.6
	comp=Z,1.9nm,0.6s							
NVAR	**Mina Array Bea**	**89.48**	**51**	P		**P**	**05 57 31.8**	**+0.9**
NVAR	**Mina Array Bea**	**89.48**	**51**	P		**P**	**05 57 31.8**	**+0.9**
	comp=Z,4.1nm,0.7s,baz=264,slow=5.9,SNR=29							
MFID	**Camas Ranch**	**89.95**	**46**	*e*P		**P**	**05 57 33.4**	**+0.5**
	comp=Z,4.0nm,0.9s							
HLID	**Hailey**	**90.89**	**45**	*e*P		**P**	**05 57 38.0**	**+0.6**
	comp=Z,0.8nm,0.8s							
GSC	**Goldstone**	**91.45**	**54**	*e*P		**P**	**05 57 40.6**	**+0.6**
	comp=Z,1.3nm,0.5s							
FINES	**FINESS Array B**	**91.80**	**335**	P		**P**	**05 57 38.6**	**-2.3**
FINES	**FINESS Array B**	**91.80**	**335**	P		**P**	**05 57 38.6**	**-2.3**
	comp=Z,1.5nm,0.5s,baz=50,slow=5.2,SNR=14							
VNA1	**Neumayer--Stat**	**118.66**	**191**	*e*P		**SP**	**06 14 20.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**134.10**	**302**	PKP		**PKPdf**	**06 03 51.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**134.10**	**302**	PKP		**PKPdf**	**06 03 51.3**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=40,slow=3.0,SNR=3.9							
DBIC	**Dimbokro**	**142.94**	**298**	PKPpre	PKPpre		06 04 02.9	
DBIC	**Dimbokro**	**142.94**	**298**	PKhKP	PKPpre		06 04 02.9	
	comp=Z,3.2nm,0.8s,baz=54,slow=5.7,SNR=4.8							
LPAZ	**La Paz**	**149.67**	**102**	*e*PKPbc		**PKPbc**	**06 04 25.8**	**+1.1**
LPAZ	**La Paz**	**149.67**	**102**	PKPbc		**PKPbc**	**06 04 24.9**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=305,slow=2.7,SNR=4.8							

GUC 23 06:52:24.8±1.0, 34°.65S×70°.37W, h5km±4km, MD3.7, ML3.2, 9C-8D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.56**	**340**	⇑*i*P		Pg	06 52 35.7	-0.2
CHCH	**Chadas Angostu**	**0.75**	**341**	⇑*i*P		Pg	06 52 39.3	-0.1
LMEL	**Las Melosas**	**0.81**	**10**	⇑*i*P		Pg	06 52 40.2	-0.4
LMEL				*i* S		Sg	06 52 51.3	0.0
LMEL				AML		AML	06 52 52.3	
	comp=E,2μm,0.1s							
SJCH	**San Jose de Ma**	**1.00**	**1**	⇓*i*P		Pg	06 52 43.0	-1.3
SJCH				*i* S		Sg	06 52 56.8	-0.6
SJCH				AML		AML	06 52 57.4	
	comp=E,992nm,0.3s							
PCH	**Pirque**	**1.03**	**353**	⇓*i*P		Pg	06 52 44.1	-0.6
PCH				*i* S		Sg	06 52 58.6	+0.4
ANTU	**Antumapu**	**1.10**	**348**	⇑*i*P		Pg	06 52 45.4	-0.6
ANTU				*i* S		Sb	06 53 00.7	-0.3
ANTU				AML		AML	06 53 01.1	
	comp=N,945nm,0.2s							
TACH	**Talagante**	**1.10**	**334**	⇓*i*P		Pg	06 52 45.3	-0.6
TACH				*i* S		Sg	06 53 00.5	+0.2
LNV	**Longovilo**	**1.11**	**308**	⇑*i*P		Pg	06 52 45.2	-0.9
FSR	**Penalolen**	**1.17**	**353**	⇓*i*P		Pg	06 52 46.8	-0.6
FSR				*i* S		Sg	06 53 02.8	+0.1
FSR				AML		AML	06 53 03.4	
	comp=N,465nm,0.3s							
LACH	**Col Las Americ**	**1.20**	**353**	⇑*i*P		Pg	06 52 47.0	-0.9
LACH				*i* S		Sg	06 53 03.7	+0.1
LACH				AML		AML	06 53 05.2	
	comp=N,630nm,0.2s							
SAN	**Santiago**	**1.22**	**348**	⇓*i*P		Pg	06 52 47.4	-0.9
SAN				*i* S		Sg	06 53 03.9	-0.1
SAN				AML		AML	06 53 06.9	
	comp=N,603nm,0.3s							
STL	**Santa Lucia**	**1.23**	**349**	*i* P		Pg	06 52 47.4	-1.1
STL				*i* S		Sg	06 53 04.4	-0.1
STL				AML		AML	06 53 05.1	
	comp=E,217nm,0.3s							
CLCH	**Cerro Calan**	**1.26**	**353**	⇑*i*P		Pg	06 52 48.2	-0.8
CLCH				*i* S		Sb	06 53 05.6	-0.1
CLCH				AML		AML	06 53 06.5	
	comp=E,3μm,0.3s							
CLCH				AML		AML	06 53 07.1	
	comp=E,3μm,0.3s							
TALC	**Talca**	**1.28**	**234**	⇑*i*P		Pn	06 52 48.2	-1.1
TALC				*i* S		Sg	06 53 05.3	-0.7
TALC				AML		AML	06 53 07.0	
	comp=E,2μm,0.1s							
PEL	**Peldehue**	**1.52**	**350**	⇓*i*P		Pn	06 52 52.6	-0.1
PEL				*i* S		Sb	06 53 13.6	+0.3
PEL				AML		AML	06 53 14.7	
	comp=N,2μm,0.2s							
LCCH	**Las Cruces**	**1.54**	**319**	*e*P		Pn	06 52 52.7	-0.2
ROCH	**El Roble**	**1.76**	**342**	⇓*i*P		Pn	06 52 56.3	+0.1
ROCH				AML		AML	06 53 27.5	
	comp=N,577nm,0.5s							
IHA	**Instituto Hidr**	**1.94**	**326**	⇓*i*P		Pn	06 52 59.3	+1.0
IHA				*i* S		Sb	06 53 24.8	-0.2
COCH	**Cobquecura**	**2.47**	**233**	⇑*i*P		Pn	06 53 07.3	+1.6
COCH				*i* S		Sb	06 53 39.6	-0.8
COCH				AML		AML	06 53 43.0	
	comp=E,148nm,0.4s							
CHNG	**Los Chungos**	**2.92**	**341**	AML		AML	06 53 57.1	
	comp=E,83nm,0.3s							

GUC 23 07:00:43.7±0.9, 33°.49S×70°.13W, h12km±1km, MD3.6, ML2.6, 7C-9D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SJCH	**San Jose de Ma**	**0.24**	**232**	⇓*i*P		Pg	07 00 48.4	-0.5
SJCH				*i* S		Sg	07 00 52.4	-0.1
SJCH				AML		AML	07 00 53.1	
	comp=N,3μm,0.2s							
FSR	**Penalolen**	**0.34**	**272**	⇓*i*P		Pb	07 00 51.2	-0.6
FSR				*i* S		Sb	07 00 56.8	-0.4
FSR				AML		AML	07 00 57.1	
	comp=E,560nm,0.4s							
LACH	**Col Las Americ**	**0.34**	**276**	⇓*i*P		Pg	07 00 51.1	+0.5
LACH				*i* S		Sb	07 00 56.7	-0.7
LACH				AML		AML	07 00 57.0	
	comp=E,604nm,0.2s							
PCH	**Pirque**	**0.35**	**248**	⇑*i*P		Pb	07 00 51.5	-0.6
PCH				*i* S		Sb	07 00 57.1	-0.6
CLCH	**Cerro Calan**	**0.36**	**285**	⇓*i*P		Pg	07 00 51.5	+0.5
CLCH				*i* S		Sb	07 00 57.3	-0.5
CLCH				AML		AML	07 00 58.4	
	comp=E,1μm,0.5s							
LMEL	**Las Melosas**	**0.36**	**190**	⇑*i*P		Pg	07 00 51.1	-0.1
LMEL				*i* S		Sg	07 00 56.6	+0.4
LMEL				AML		AML	07 00 57.3	
	comp=E,2μm,0.1s							
ANTU	**Antumapu**	**0.43**	**259**	⇓*i*P		Pg	07 00 52.9	+0.5
ANTU				*i* S		Sb	07 00 59.4	-0.6
ANTU				AML		AML	07 01 00.4	
	comp=E,1μm,0.3s							
STL	**Santa Lucia**	**0.43**	**277**	⇓*i*P		Pg	07 00 52.9	+0.5
STL				*i* S		Sb	07 00 59.5	-0.5
STL				AML		AML	07 00 59.9	
	comp=E,120nm,0.2s							
SAN	**Santiago**	**0.45**	**275**	⇑*i*P		Pb	07 00 53.3	-0.4
SAN				*i* S		Sb	07 00 60.0	-0.4
SAN				AML		AML	07 01 00.3	
	comp=E,771nm,0.3s							
PEL	**Peldehue**	**0.58**	**306**	⇑*i*P		Pg	07 00 55.3	+0.2
PEL				*i* S		Sb	07 01 03.7	-0.6
PEL				AML		AML	07 01 04.1	
	comp=N,668nm,0.5s							
CHCH	**Chadas Angostu**	**0.62**	**225**	⇓*i*P		Pg	07 00 56.1	+0.2
CHCH				*i* S		Sb	07 01 05.2	-0.3
TACH	**Talagante**	**0.70**	**256**	⇑*i*P		Pg	07 00 57.5	+0.2
TACH				*i* S		Sb	07 01 07.6	0.0
CACH	**El Canelo**	**0.74**	**212**	⇑*i*P		Pb	07 00 58.6	-0.2
CACH				*i* S		Sb	07 01 09.1	+0.1
JACH	**Jahuel**	**0.90**	**334**	⇑*i*P		Pg	07 01 00.1	-1.1
JACH				*i* S		Sg	07 01 12.9	-0.1
ROCH	**El Roble**	**0.91**	**305**	⇓*i*P		Pg	07 01 01.0	-0.5
ROCH				*i* S		Sg	07 01 13.5	0.0
ROCH				AML		AML	07 01 14.8	
	comp=N,327nm,0.4s							
LNV	**Longovilo**	**1.17**	**246**	⇓*i*P		Pb	07 01 05.2	-0.7
LNV				*i* S		Sb	07 01 21.0	0.0
CHNG	**Los Chungos**	**1.98**	**324**	*e*P		Pb	07 01 19.1	-0.5
CHNG				*i* S		Sb	07 01 45.3	+1.0
CHNG				AML		AML	07 01 47.4	
	comp=E,86nm,0.4s							
CMCH	**Combarbala**	**2.43**	**342**	AML		AML	07 02 08.6	
	comp=E,305nm,0.8s							

IDC 23 07:25:15.1±1.7, 3°.50S×139°.89E, h0km, mb3.7/3, mb1 4.1/4, mb1mx3.8/16, mbtmp3.8/4, ML3.6/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/29, Error ellipse: s-maj=74.9km s-min=28.4km az=98.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**9.30**	**129**	LR		LR	07 30 41.9	
	comp=Z,158nm,20.1s,baz=199,slow=35							
WRA	**Warramunga Arr**	**17.21**	**198**	P		Pn	07 29 15.3	-1.9
	0.2nm,0.3s,baz=19,slow=12,SNR=12							
WRA				S		Sn	07 32 17.1	-12
	0.1nm,0.3s,baz=19,slow=24,SNR=2.8							
CTA	**Charters Tower**	**17.61**	**160**	LR		LR	07 36 10.7	
	comp=Z,94nm,21.0s,baz=188,slow=37							
GUMO	**Guam**	**17.69**	**16**	LR		LR	07 35 38.7	
	comp=Z,23nm,20.8s,baz=212,slow=35							
FITZ	**Fitzroy Crossi**	**20.13**	**223**	P		Pn	07 29 52.9	+0.2
	3.5nm,0.7s,baz=54,slow=13,SNR=9.0							
FITZ				LR		LR	07 38 19.4	
	comp=Z,127nm,18.9s,baz=11,slow=39							
ASAR	**Alice Springs**	**20.86**	**196**	P		P	07 29 59.5	+0.6
	7.1nm,0.8s,baz=24,slow=10.0,SNR=41							
MKAR	**Makanchi Array**	**71.13**	**322**	P		P	07 36 35.8	+0.2
	0.4nm,0.5s,baz=109,slow=7.0,SNR=5.1							
ILAR	**Eielson Array**	**86.06**	**24**	P		P	07 37 57.3	-0.2
	0.3nm,0.8s,baz=257,slow=4.6,SNR=4.4							

*ATH **23** 08:05:39.5, 40°.34N×21°.88E, h20km±2km, MD2.7/4*
*ISCJB **23** 08:05:41.7±0.5, 40°.27N±0°.03×21°.88E±0°.03, h2km±6km, Error ellipse: s-maj=4.9km s-min=3.7km az=136.4*
*SKO **23** 08:05:41.7, 40°.20N×21°.84E, h28km*
*CSEM **23** 08:05:41.9±0.2, 40°.26N×21°.90E, h2km, MD2.7, Error ellipse: s-maj=4.3km s-min=2.9km az=49.0*
*THE **23** 08:05:42.5, 40°.26N×21°.90E, h2km±2km, ML2.3/8, Error ellipse: s-maj=2.3km s-min=0.7km az=296.0*

ISC 23 08:05:41.4±0.9, 40°.32N±0°.03×21°.91E±0°.02, h9km±6km, n34, σ0°65/60, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.11**	**265**	⇑*i*Pg		**Pg**	**08 05 43.9**	**-0.2**
KZN				*e*Sg		**Sg**	**08 05 46.4**	**+0.4**
KZN	**Kozani**	**0.11**	**265**	⇑*i*Pb		**Pg**	**08 05 43.9**	**-0.2**
KZN				*e*Sb		**Sg**	**08 05 46.4**	**+0.4**
LIT	**Litokhoron**	**0.49**	**116**	P		**Pg**	**08 05 50.7**	**-0.2**
LIT				S		**Sg**	**08 05 57.7**	**+0.2**
LIT	**Litokhoron**	**0.49**	**116**	*e*PN		**Pg**	**08 05 50.8**	**-0.2**
LIT				*e*SN		**Sg**	**08 05 57.9**	**+0.4**
LIT	**Litokhoron**	**0.49**	**116**	*e*Pn		**Pg**	**08 05 50.8**	**-0.2**
LIT				S		**Sg**	**08 05 57.7**	**+0.2**
FNA	**Florina**	**0.62**	**319**	P		**Pb**	**08 05 54.4**	**0.0**
FNA				S		**Sn**	**08 06 05.5**	**-1.0**
FNA	**Florina**	**0.62**	**319**	P		**Pb**	**08 05 54.4**	**0.0**
FNA				S		**Sn**	**08 06 05.5**	**-1.0**
NEST	**Nestorio**	**0.66**	**279**	P		**Pg**	**08 05 54.4**	**+0.2**
NEST				S		**Sb**	**08 06 04.7**	**+0.2**
NEST	**Nestorio**	**0.66**	**279**	P		**Pg**	**08 05 54.4**	**+0.2**
NEST				S		**Sb**	**08 06 04.7**	**+0.2**
GRG	**Griva**	**0.74**	**30**	P		**Pn**	**08 05 57.6**	**-0.5**
GRG				S		**Sn**	**08 06 08.6**	**-0.9**
GRG	**Griva**	**0.74**	**30**	P		**Pn**	**08 05 57.6**	**-0.5**
GRG				S		**Sn**	**08 06 08.6**	**-0.9**
THL	**Klokotos Trika**	**0.76**	**174**	P		**Pg**	**08 05 55.4**	**-0.5**
THL				S		**Sg**	**08 06 05.3**	**-0.5**
THL	**Klokotos Trika**	**0.76**	**174**	*e*PN		**Pg**	**08 05 55.0**	**-0.9**
THL				*e*SN		**Sg**	**08 06 05.1**	**-0.7**
THL	**Klokotos Trika**	**0.76**	**174**	*e*Pn		**Pg**	**08 05 55.0**	**-0.9**
THL	**Klokotos Trika**	**0.76**	**174**	P		**Pg**	**08 05 55.4**	**-0.5**
THL				*e*Sn		**Sg**	**08 06 05.1**	**-0.7**
BIA	**Bitola**	**0.83**	**328**	P		**Pb**	**08 05 58.1**	**+0.1**
BIA				S		**Sn**	**08 06 12.2**	**+0.5**
BIA	**Bitola**	**0.83**	**328**	*e*Pg		**Pb**	**08 05 58.0**	**+0.1**
BIA				*e*Sg		**Sn**	**08 06 12.1**	**+0.5**
BIA	**Bitola**	**0.83**	**328**	P		**Pb**	**08 05 58.1**	**+0.1**
BIA				*e*Sg		**Sn**	**08 06 12.1**	**+0.4**
HORT	**Hortiatis**	**0.95**	**72**	P		**Pn**	**08 06 00.6**	**-0.4**
HORT				S		**Sn**	**08 06 15.7**	**+1.0**
HORT	**Hortiatis**	**0.95**	**72**	P		**Pn**	**08 06 00.6**	**-0.4**
HORT				S		**Sn**	**08 06 15.7**	**+1.0**
PLG	**Polygyros**	**1.18**	**87**	P		**Pg**	**08 06 04.9**	**+0.9**
PLG	**Polygyros**	**1.18**	**87**	P		**Pg**	**08 06 04.9**	**+0.9**
SOH	**Sokhos**	**1.21**	**65**	*e*PN		**Pb**	**08 06 02.6**	**-1.9**
MAKR	**Makrakomi, Fth**	**1.31**	**172**	P		**Pb**	**08 06 06.2**	**0.0**
MAKR				S		**Sg**	**08 06 24.4**	**+0.8**
MAKR	**Makrakomi, Fth**	**1.31**	**172**	P

PNIG	**Pinotepa**	**1.70**	**169**	*e*P	**Pn**	**08 23 22.2**	**+0.4**
PNIG				*i* S	**Sn**	**08 23 42.4**	**0.0**
PNIG	**Pinotepa**	**1.70**	**169**	*e*P	**Pn**	**08 23 22.2**	**+0.4**
PNIG				*i* S	**Sn**	**08 23 42.4**	**0.0**
VTVM	**Tizayuca**	**1.71**	**350**	*e*P	**Pn**	**08 23 21.8**	**-0.4**
VTVM				*i* S	**Sn**	**08 23 43.4**	**+0.3**
ACX	**Acapulco**	**1.78**	**228**	*e*P	**Pn**	**08 23 22.6**	**-0.2**
ACX				*e*S	**Sn**	**08 23 44.0**	**-0.4**
ACX	**Acapulco**	**1.78**	**228**	*i* P	**Pn**	**08 23 22.5**	**-0.4**
ACX				*e*P	**Pn**	**08 23 22.6**	**-0.2**
ACX				*e*S	**Sn**	**08 23 44.0**	**-0.4**
ARIG	**Puente Sto Nin**	**1.80**	**277**	*i* P	**Pn**	**08 23 23.8**	**+0.8**
ARIG				*e*S	**Sn**	**08 23 43.9**	**-0.8**
VHO	**Vista Hermosa**	**1.93**	**121**	*e*P	**Pn**	**08 23 25.5**	**+0.4**
VHO				*e*S	**Sn**	**08 23 47.3**	**-1.0**
VHO	**Vista Hermosa**	**1.93**	**121**	*e*P	**Pn**	**08 23 25.5**	**+0.4**
VHO				*e*S	**Sn**	**08 23 47.3**	**-1.0**
CAIG	**El Cayaco**	**1.99**	**240**	*i* P	**Pn**	**08 23 25.2**	**-0.5**
CAIG				*e*S	**Sn**	**08 23 48.4**	**-1.1**
CAIG	**El Cayaco**	**1.99**	**240**	*i* P	**Pn**	**08 23 25.2**	**-0.5**
CAIG				*e*S	**Sn**	**08 23 48.4**	**-1.1**
HUIG	**Huatulco**	**3.22**	**135**	*i* P	**Pn**	**08 23 42.7**	**+0.2**
HUIG				*i* S	**Sn**	**08 24 19.4**	**-0.3**
HUIG	**Huatulco**	**3.22**	**135**	*i* P	**Pn**	**08 23 42.7**	**+0.2**
HUIG				*i* S	**Sn**	**08 24 19.4**	**-0.3**
PCIG		**5.55**	**114**	*i* P	**Pn**	**08 24 15.6**	**+1.0**
PCIG				*i* S	**Sn**	**08 25 17.8**	**+0.6**
PCIG		**5.55**	**114**	*i* P	**Pn**	**08 24 15.6**	**+1.0**
PCIG				*i* S	**Sn**	**08 25 17.8**	**+0.6**
TEIG	**Tepich**	**9.87**	**76**	Pn	**Pn**	**08 25 12.3**	**-1.5**
	0.3nm,0.3s,baz=267,slow=19,SNR=6.5						
TEIG				Sn	Sn	08 26 54.1	-9.2
	0.8nm,0.3s,baz=349,slow=20,SNR=7.7						
TXAR	**Lajitas Array**	**12.18**	**338**	Pn	Pn	08 25 37.5	-7.9
	0.0nm,0.3s,baz=180,slow=13,SNR=3.3						
NVAR	**Mina Array Bea**	**26.66**	**324**	P	**P**	**08 28 29.8**	**+0.5**
	0.2nm,0.5s,baz=128,slow=12,SNR=2.7						
YKA	**Yellowknife Ar**	**45.78**	**350**	P	P	08 31 06.5	-4.8
	0.2nm,0.5s,baz=155,slow=7.4,SNR=4.3						

ISCJB ***23*** *08:29:14.5±0.5, 18°.34N±0°.07×63°.72W±0°.03, h85*^{km}*±6*^{km}*, mb3.8/12, Error ellipse: s-maj=13.1km s-min=2.7km az=19.5*

TRN ***23*** *08:29:14.5, 18°.30N×63°.74W, h69*^{km}*, MD3.6*

IDC ***23*** *08:29:15.2±2.2, 18°.40N×63°.59W, h74*^{km}*±26*^{km}*, mb3.6/12, mb1 3.8/12, mb1mx3.6/26, mbtmp3.6/12, Error ellipse: s-maj=28.2km s-min=14.2km az=33.0*

RSPR ***23*** *08:29:16.6, 18°.29N×63°.74W, h75*^{km}*±2*^{km}*, MD3.8/19*

NEIC ***23*** *08:29:16.6, 18°.29N×63°.74W, h75*^{km}*, MD3.8(RSPR), MD3.6(TRN), After RSPR.*

NEIC Felt on Saint Martin.

ISC 23 08:29:15.2±0.9, 18°.39N±0°.08×63°.69W±0°.04, h74^{km}**±9**^{km}**, n105, σ0.60/132, mb3.9/12, 16C-45D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SABA	**Saba**	**0.87**	**151**	*e*P	**Pn**	**08 29 32.9**	**+0.4**
SABA	**Saba**	**0.87**	**151**	*e*S	**Sn**	**08 29 44.9**	**-0.3**
SABA	**Saba**	**0.87**	**151**	*e*P	**Pn**	**08 29 32.9**	**+0.4**
SABA				*e*S	**Sn**	**08 29 44.9**	**-0.3**
SABA	**Saba**	**0.87**	**151**	*e*P	**Pn**	**08 29 32.9**	**+0.4**
SABA				*e*S	**Sn**	**08 29 44.9**	**-0.3**
TBVI	**Tortola**	**0.88**	**272**	*i* P	**Pn**	**08 29 32.9**	**+0.4**
TBVI	**Tortola**	**0.88**	**272**	*i* Pu	**Pn**	**08 29 32.9**	**+0.4**
TBVI	**Tortola**	**0.88**	**272**	*i* P	**Pn**	**08 29 32.9**	**+0.4**
SEUS	**St. Eustatius**	**1.12**	**143**	*e*P	**Pn**	**08 29 35.6**	**+0.2**
SEUS	**St. Eustatius**	**1.12**	**143**	*e*S	**Sn**	**08 29 50.2**	**-0.3**
SEUS	**St. Eustatius**	**1.12**	**143**	*e*P	**Pn**	**08 29 35.6**	**+0.2**
SEUS				*e*S	**Sn**	**08 29 50.2**	**-0.3**
SEUS	**St. Eustatius**	**1.12**	**143**	*e*P	**Pn**	**08 29 35.6**	**+0.2**
SEUS				*e*S	**Sn**	**08 29 50.2**	**-0.3**
STVI	**Saint Thomas**	**1.20**	**269**	*e*P	**Pn**	**08 29 36.8**	**+0.4**
STVI	**Saint Thomas**	**1.20**	**269**	*e*S	**Sn**	**08 29 51.7**	**-0.6**
STVI	**Saint Thomas**	**1.20**	**269**	*e*P	**Pn**	**08 29 36.8**	**+0.4**
STVI				*e*S	**Sn**	**08 29 51.7**	**-0.6**
STVI	**Saint Thomas**	**1.20**	**269**	*e*P	**Pn**	**08 29 36.8**	**+0.4**
STVI				*e*S	**Sn**	**08 29 51.7**	**-0.6**
CDVI	**St. Croix**	**1.20**	**238**	*e*P	**Pn**	**08 29 36.4**	**-0.1**
CDVI	**St. Croix**	**1.20**	**238**	*e*S	**Sn**	**08 29 51.2**	**-1.1**
CDVI	**St. Croix**	**1.20**	**238**	*e*P	**Pn**	**08 29 36.4**	**-0.1**
CDVI				*e*S	**Sn**	**08 29 51.2**	**-1.1**
CDVI	**St. Croix**	**1.20**	**238**	*e*P	**Pn**	**08 29 36.4**	**-0.1**
CDVI				*e*S	**Sn**	**08 29 51.2**	**-1.1**
BSK	**Brimstone Hill**	**1.31**	**142**	*i* P	**Pn**	**08 29 38.5**	**+0.5**
BSK	**Brimstone Hill**	**1.31**	**142**	*i* P	**Pn**	**08 29 38.5**	**+0.5**
BSK				*e*S	**Sn**	**08 29 54.8**	**-0.2**
NVBH	**Bath Hotel, Ne**	**1.63**	**141**	*i* P	**Pn**	**08 29 42.1**	**+0.8**
NEV	**Hard Times**	**1.64**	**139**	*e*P	**Pn**	**08 29 42.9**	**+0.7**
NEV				*e*S	**Sn**	**08 30 03.3**	**+0.7**
NEV	**Hard Times**	**1.64**	**139**	*e*P	**Pn**	**08 29 42.9**	**+0.7**
NEV				*e*S	**Sn**	**08 30 03.3**	**+0.7**
MTP	**Monte Pirata**	**1.79**	**261**	*e*P	**Pn**	**08 29 44.5**	**+0.4**
MTP	**Monte Pirata**	**1.79**	**261**	*e*S	**Sn**	**08 30 05.3**	**-0.9**
MTP	**Monte Pirata**	**1.79**	**261**	*e*P	**Pn**	**08 29 44.5**	**+0.4**
MTP				*e*S	**Sn**	**08 30 05.3**	**-0.9**
MTP	**Monte Pirata**	**1.79**	**261**	*e*P	**Pn**	**08 29 44.5**	**+0.4**
MTP				*e*S	**Sn**	**08 30 05.3**	**-0.9**
ANWB	**Willy Bob**	**1.95**	**111**	*e*Pn	**Pn**	**08 29 46.0**	**-0.3**
ANWB				*e*Sn	**Sn**	**08 30 09.4**	**-0.6**
CBYP	**Canovanas**	**2.06**	**267**	*e*P	**Pn**	**08 29 47.6**	**-0.2**
CBYP	**Canovanas**	**2.06**	**267**	*e*S	**Sn**	**08 30 12.7**	**0.0**
CBYP	**Canovanas**	**2.06**	**267**	*e*P	**Pn**	**08 29 47.6**	**-0.2**
CBYP				*e*S	**Sn**	**08 30 12.7**	**0.0**
CBYP	**Canovanas**	**2.06**	**267**	*e*P	**Pn**	**08 29 47.6**	**-0.2**
CBYP				*e*S	**Sn**	**08 30 12.7**	**0.0**
HUMP	**Col San Antoni**	**2.06**	**264**	*e*P	**Pn**	**08 29 47.9**	**+0.1**
HUMP	**Col San Antoni**	**2.06**	**264**	*e*S	**Sn**	**08 30 12.8**	**+0.1**
HUMP	**Col San Antoni**	**2.06**	**264**	*e*P	**Pn**	**08 29 47.9**	**+0.1**
HUMP				*e*S	**Sn**	**08 30 12.8**	**+0.1**
HUMP	**Col San Antoni**	**2.06**	**264**	*e*P	**Pn**	**08 29 47.9**	**+0.1**
HUMP				*e*S	**Sn**	**08 30 12.8**	**+0.1**
CPD	**Cerro la Pandu**	**2.14**	**261**	*e*P	**Pn**	**08 29 48.9**	**0.0**
CPD	**Cerro la Pandu**	**2.14**	**261**	*e*S	**Sn**	**08 30 13.8**	**-0.7**
CPD	**Cerro la Pandu**	**2.14**	**261**	*e*P	**Pn**	**08 29 48.9**	**0.0**
CPD				*e*S	**Sn**	**08 30 13.8**	**-0.7**
CPD	**Cerro la Pandu**	**2.14**	**261**	*e*P	**Pn**	**08 29 48.9**	**0.0**
CPD				*e*S	**Sn**	**08 30 13.8**	**-0.7**
BPA	**Boggy Peak**	**2.20**	**127**	*e*P	**Pn**	**08 29 50.4**	**+0.7**
BPA				*e*S	**Sn**	**08 30 15.8**	**-0.3**
SJG	**San Juan**	**2.35**	**264**	*e*P	**Pn**	**08 29 52.1**	**+0.4**
SJG	**San Juan**	**2.35**	**264**	*e*S	**Sn**	**08 30 19.7**	**-0.7**
SJG	**San Juan**	**2.35**	**264**	*i* P	**Pn**	**08 29 52.3**	**+0.6**
SJG				*e*S	**Sn**	**08 30 19.7**	**-0.1**
SJG	**San Juan**	**2.35**	**264**	*i* P	**Pn**	**08 29 52.3**	**+0.6**
SJG				*e*S	**Sn**	**08 30 18.9**	**-0.7**
SJG	**San Juan**	**2.35**	**264**	*i* P	**Pn**	**08 29 52.3**	**+0.6**
SJG	**San Juan**	**2.35**	**264**	*e*P	**Pn**	**08 29 52.8**	**+1.1**
SJG				*e*S	**Sn**	**08 30 18.9**	**-0.7**
SJG				*e*S	**Sn**	**08 30 19.7**	**+0.1**
CELP	**Cerrillos**	**2.76**	**264**	*e*P	**Pn**	**08 29 57.4**	**+0.1**
CELP	**Cerrillos**	**2.76**	**264**	*e*P	**Pn**	**08 29 57.4**	**+0.1**
CELP	**Cerrillos**	**2.76**	**264**	*e*P	**Pn**	**08 29 57.4**	**+0.1**
OBIP	**Obispado Ponce**	**2.79**	**263**	*e*P	**Pn**	**08 29 57.9**	**+0.3**
OBIP	**Obispado Ponce**	**2.79**	**263**	*e*P	**Pn**	**08 29 57.9**	**+0.3**
OBIP	**Obispado Ponce**	**2.79**	**263**	*e*P	**Pn**	**08 29 57.9**	**+0.3**
SEG	**Port Louis**	**2.87**	**133**	*e*P	**Pn**	**08 29 58.7**	**-0.1**
LZG	**Guadaloupe-1**	**2.89**	**140**	*e*P	**Pn**	**08 29 59.1**	**+0.1**
AOPR	**Arecibo Observ**	**2.91**	**270**	*e*P	**Pn**	**08 29 59.2**	**-0.1**
AOPR	**Arecibo Observ**	**2.91**	**270**	*e*P	**Pn**	**08 29 59.2**	**-0.1**
AOPR	**Arecibo Observ**	**2.91**	**270**	*e*P	**Pn**	**08 29 59.2**	**-0.1**
LRS	**Lares**	**3.00**	**269**	*i* P	**Pn**	**08 30 00.2**	**-0.2**
LRS	**Lares**	**3.00**	**269**	*i* Pu	**Pn**	**08 30 00.2**	**-0.2**
LRS	**Lares**	**3.00**	**269**	*i* P	**Pn**	**08 30 00.2**	**-0.2**
BCG	**Bois Riant Cap**	**3.03**	**139**	*e*P	**Pn**	**08 30 01.3**	**+0.3**
SCG	**Saint Claude**	**3.03**	**140**	*e*P	**Pn**	**08 30 01.1**	**+0.1**
GBPR	**Guanica, Bosqu**	**3.06**	**263**	*i* P	**Pn**	**08 30 01.4**	**+0.2**
GBPR	**Guanica, Bosqu**	**3.06**	**263**	*i* P	**Pn**	**08 30 01.4**	**+0.2**
GBPR	**Guanica, Bosqu**	**3.06**	**263**	*i* P	**Pn**	**08 30 01.4**	**+0.2**
HMG	**Houelmont**	**3.06**	**141**	*e*P	**Pn**	**08 30 01.4**	**+0.1**
PHG	**Guadaloupe-2**	**3.07**	**140**	*e*P	**Pn**	**08 30 01.8**	**+0.3**
DOG	**Dongo Capester**	**3.07**	**139**	*e*P	**Pn**	**08 30 01.8**	**+0.4**
TBG	**Guadaloupe-3**	**3.19**	**142**	*e*P	**Pn**	**08 30 03.2**	**+0.1**
LSP	**Las Mesas**	**3.23**	**267**	*e*P	**Pn**	**08 30 04.0**	**+0.3**
LSP	**Las Mesas**	**3.23**	**267**	*e*P	**Pn**	**08 30 04.0**	**+0.3**
LSP	**Las Mesas**	**3.23**	**267**	*e*P	**Pn**	**08 30 04.0**	**+0.3**
AGPR	**Aguadilla, PR**	**3.25**	**272**	*e*P	**Pn**	**08 30 03.4**	**-0.4**
AGPR	**Aguadilla, PR**	**3.25**	**272**	*e*P	**Pn**	**08 30 03.4**	**-0.4**
AGPR	**Aguadilla, PR**	**3.25**	**272**	*e*P	**Pn**	**08 30 03.4**	**-0.4**
DEG	**La Desirade**	**3.25**	**129**	*e*P	**Pn**	**08 30 02.2**	**-1.8**
CRPR	**Cabo Rojo, PR**	**3.27**	**264**	*e*P	**Pn**	**08 30 04.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**3.27**	**264**	*e*P	**Pn**	**08 30 04.3**	**+0.2**
CRPR	**Cabo Rojo, PR**	**3.27**	**264**	*e*P	**Pn**	**08 30 04.3**	**+0.2**
AGP	**Aguadilla**	**3.27**	**271**	*e*Pn	**Pn**	**08 30 03.7**	**-0.5**
MPR	**Mayaguez**	**3.28**	**268**	*e*Pn	**Pn**	**08 30 04.0**	**-0.2**
MPR				*e*Sn	**Sn**	**08 30 40.6**	**-1.6**
MGG	**Marie-Galante**	**3.34**	**137**	*e*P	**Pn**	**08 30 05.5**	**+0.3**
DVCT	**Vielle Casse P**	**3.52**	**141**	*e*P	**Pn**	**08 30 08.9**	**+1.3**
DWS	**Wesley**	**3.61**	**141**	*e*S	**Sn**	**08 30 50.5**	**+0.1**
FDF	**Fort de France**	**4.38**	**146**	*e*Pn	**Pn**	**08 30 19.5**	**+0.2**
MCLT	**Moule a Chique**	**5.35**	**150**	*e*P	**Pn**	**08 30 32.0**	**-0.6**
SVB	**Belmont**	**5.60**	**155**	*e*P	**Pn**	**08 30 36.5**	**+0.5**
SVB	**Belmont**	**5.60**	**155**	*e*P	**Pn**	**08 30 36.5**	**+0.5**
GRGR	**Grenville**	**6.52**	**162**	*e*Pn	Pn	08 30 52.7	+4.1
SDDR	**Presa de Saban**	**7.22**	**276**	*e*Pn	**Pn**	**08 30 57.8**	**-0.4**
SDDR				*e*Sn	**Sn**	**08 32 19.0**	**+0.2**
GRTK	**Grand Turk**	**7.66**	**295**	*e*Pn	**Pn**	**08 31 01.8**	**-2.2**
GRTK				*e*Sn	Sn	08 32 21.1	-8.2
TEIG	**Tepich**	**23.27**	**279**	P	**P**	**08 34 18.5**	**+2.0**
	4.5nm,0.8s,baz=85,slow=1.3,SNR=5.1						
SCHQ	**Schefferville**	**36.46**	**357**	P	**P**	**08 36 14.6**	**+1.7**
	2.0nm,0.7s,baz=169,slow=5.2,SNR=3.5						
BDFB	**Brasilia**	**37.17**	**154**	P	**P**	**08 36 18.7**	**-0.7**
	1.4nm,0.8s,baz=321,slow=4.3,SNR=3.6						
TXAR	**Lajitas Array**	**37.98**	**294**	P	**P**	**08 36 27.0**	**+0.8**
	0.5nm,0.6s,baz=122,slow=8.8,SNR=9.2						
TXAR				PcP	**PcP**	**08 38 40.9**	**+0.2**
	0.2nm,0.6s,baz=114,slow=4.4,SNR=2.7						
ULM	**Lac du Bonnet**	**40.86**	**328**	P	**P**	**08 36 48.5**	**-1.2**
	2.2nm,0.5s,baz=132,slow=5.1,SNR=2.4						
ANMO	**Albuquerque**	**41.28**	**302**	P	**P**	**08 36 54.5**	**+0.8**
	0.6nm,0.7s,baz=101,slow=10,SNR=3.9						
PDAR	**Pinedale Array**	**45.65**	**312**	P	**P**	**08 37 29.2**	**+0.4**
	1.0nm,0.8s,baz=104,slow=9.4,SNR=2.7						
NVAR	**Mina Array Bea**	**51.25**	**305**	P	**P**	**08 38 11.6**	**-0.2**
	0.2nm,0.6s,baz=108,slow=8.6,SNR=3.4						
YKA	**Yellowknife Ar**	**56.24**	**334**	P	**P**	**08 38 47.5**	**-0.1**
	0.8nm,0.6s,baz=109,slow=7.4,SNR=15						
DBIC	**Dimbokro**	**58.38**	**93**	P	**P**	**08 39 03.6**	**+0.2**
	2.6nm,0.6s,baz=278,slow=7.1,SNR=4.5						
TORD	**Torodi Ar. Bea**	**62.86**	**84**	P	**P**	**08 39 33.1**	**-0.8**
	1.4nm,1.1s,baz=275,slow=5.3,SNR=4.0						
ILAR	**Eielson Array**	**70.64**	**333**	P	**P**	**08 40 22.4**	**-0.1**
	0.7nm,0.5s,baz=95,slow=4.1,SNR=14						

MEX 23 08:34:24.6±0.7, 16°.16N×100°.08W, h16^{km}**±23**^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.74**	**16**	*i* P	Pg	08 34 36.6	-2.5
ACX				*i* S	Sg	08 34 45.0	-4.0
CAIG	**El Cayaco**	**0.91**	**348**	*i* P	Pb	08 34 38.5	-3.5
CAIG				*i* S	Sb	08 34 49.3	-4.5
PNIG	**Pinotepa**	**1.89**	**83**	*e*P	Pn	08 34 52.7	-3.5
PNIG				*i* S	Sn	08 35 14.7	-5.1
ARIG	**Puente Sto Nin**	**2.13**	**353**	*i* P	Pn	08 34 56.9	-2.6
ARIG				*i* S	Sn	08 35 21.6	-4.2
PLIG	**Platanillo**	**2.29**	**14**	*i* P	Pn	08 34 59.1	-2.8
PLIG				*i* S	Sn	08 35 25.5	-4.4
YAIG	**Yautepec**	**2.86**	**20**	*i* P	Pn	08 35 06.1	-3.7
YAIG				*i* S	Sn	08 35 40.0	-4.1

TRN 23 08:52:49.2, 16°.76N×61°.24W, h27^{km}**, MD3.5, M3.1**(FDF)**, 2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEG	**Port Louis**	**0.44**	**215**	*i* P	Pn	08 53 00.7	+0.9
SFG	**Saint Francois**	**0.51**	**175**	*e*P	Pn	08 53 01.7	+1.0
BPA	**Boggy Peak**	**0.66**	**296**	*e*P	Pn	08 53 04.6	+1.8
BPA				*e*S	Sn	08 53 15.0	+2.7
BCG	**Bois Riant Cap**	**0.77**	**208**	*e*P	Pn	08 53 05.2	+0.9
BCG	**Bois Riant Cap**	**0.77**	**208**	*e*P	Pn	08 53 05.3	+1.0
LZG	**Guadaloupe-1**	**0.80**	**220**	*e*P	Pn	08 53 05.5	+0.8
DOG	**Dongo Capester**	**0.81**	**207**	*e*P	Pn	08 53 05.9	+0.9
PHG	**Guadaloupe-2**	**0.84**	**208**	*e*P	Pn	08 53 06.4	+1.0
MGG	**Marie-Galante**	**0.84**	**185**	*e*P	Pn	08 53 06.6	+1.2
SCG	**Saint Claude**	**0.84**	**210**	*e*P	Pn	08 53 06.4	+0.9
HMG	**Houelmont**	**0.89**	**210**	*e*P	Pb	08 53 06.9	+0.7
TBG	**Guadaloupe-3**	**0.98**	**203**	*e*P	Pb	08 53 08.1	+0.4
DVCT	**Vielle Casse P**	**1.15**	**188**	*e*P	Pb	08 53 11.9	+1.4
DVCT				*e*S	Sb	08 53 28.1	+3.0
DWS	**Wesley**	**1.19**	**183**	*e*P	Pb	08 53 12.3	+1.1
DWS				*e*S	Sb	08 53 28.6	+2.4
BSK	**Brimstone Hill**	**1.64**	**291**	*e*P	Pb	08 53 18.9	+0.1
BSK	**Brimstone Hill**	**1.64**	**291**	*e*	Pb	08 53 22.6	+3.9
BSK				*e*S	Sb	08 53 38.8	-0.2
FDF	**Fort de France**	**2.02**	**178**	*e*P	Pn	08 53 22.3	+0.7

IDC 23 09:04:18.3±0.8, 24°.21N×142°.81E, h0^{km}**, mb3.8/10, mb1 4.0/11, mb1mx3.8/25, mbtmp3.8/11, ML3.6/1, MS3.2/6, Ms1 3.3/6, ms1mx2.9/37, Error ellipse: s-maj=29.9km s-min=17.9km az=93.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**18.34**	**319**	P	Pn	09 08 33.3	-0.9
	0.2nm,0.3s,baz=132,slow=12,SNR=7.0						
KSRS				LR	LR	09 14 43.8	
	comp=Z,30nm,19.1s,baz=115,slow=34						
ASAJ	**Asahikawa**	**19.86**	**360**	LR	LR	09 16 19.8	
	comp=Z,46nm,18.9s,baz=164,slow=36						
DAV	**Davao City (W)**	**23.74**	**227**	LR	LR	09 17 33.2	
	comp=Z,37nm,18.7s,baz=235,slow=34						
CMAR	**Chiang Mai Arr**	**41.13**	**271**	P	P	09 12 06.1	+1.6
	1.1nm,0.6s,baz=60,slow=7.4,SNR=7.7						
CMAR				LR	LR	09 28 54.8	
	comp=Z,35nm,18.8s,baz=180,slow=36						
CTA	**Charters Tower**	**44.16**	**175**	LR	LR	09 28 20.5	
	comp=Z,264nm,18.6s,baz=167,slow=33						
WRA	**Warramunga Arr**	**44.66**	**191**	P	P	09 12 32.7	-0.3
	2.0nm,0.7s,baz=6.6,slow=7.9,SNR=38						
ASAR	**Alice Springs**	**48.37**	**191**	P	P	09 13 01.8	-0.3
	0.4nm,0.5s,baz=15,slow=10.0,SNR=9.2						
MKAR	**Makanchi Array**	**52.77**	**311**	P	P	09 13 34.6	-0.5
	0.6nm,0.6s,baz=94,slow=8.6,SNR=4.9						
MKAR				LR	LR	09 38 00.0	
	comp=Z,20nm,20.5s,baz=175,slow=38						
STKA	**Stephens Creek**	**55.78**	**181**	P	P	09 13 56.8	-0.3
	1.5nm,0.7s,baz=2.5,slow=11,SNR=3.1						
ILAR	**Eielson Array**	**59.98**	**28**	P	P	09 14 27.1	+0.8
	0.2nm,0.6s,baz=256,slow=6.4,SNR=3.7						
YKA	**Yellowknife Ar**	**74.41**	**28**	P	P	09 15 58.1	+0.3
	0.2nm,0.7s,baz=291,slow=6.4,SNR=3.2						
ARCES	**ARCESS Array B**	**76.44**	**341**	P	P	09 16 09.6	+0.1
	0.5nm,0.5s,baz=71,slow=7.8,SNR=5.7						
FINES	**FINESS Array B**	**80.78**	**334**	P	P	09 16 32.8	-0.7
	0.9nm,0.4s,baz=70,slow=4.6,SNR=15						
BRTR	**Keskin Array B**	**88.38**	**313**	P	P	09 17 11.7	-0.9
	0.7nm,0.7s,baz=35,slow=4.5,SNR=4.1						

WEL 23 09:07:49.6±0.3, 45°.41S×167°.20E, h137^{km}**±2**^{km}**, ML3.6/8, 2C-5D, Error ellipse: s-maj=3.6km s-min=1.3km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	**0.07**	**204**	PN	Pn	09 08 07.6	-0.5
DCZ				SN	Sn	09 08 20.9	-1.2
MLZ	**Mavora Lakes**	**0.69**	**85**	PN	Pn	09 08 10.4	-0.3
MLZ				SN	Sn	09 08 26.3	-0.4
WHZ	**Wether Hill Ro**	**0.71**	**133**	PN	Pn	09 08 10.8	0.0
WHZ				SN	Sn	09 08 26.5	-0.5
MSZ	**Milford Sound**	**0.90**	**35**	PN	Pn	09 08 12.4	+0.1
MSZ				SN	Sn	09 08 28.9	-0.5
WKZ	**Wanaka**	**1.42**	**66**	PN	Pn	09 08 17.2	-0.1
WKZ				SN	Sn	09 08 37.5	-0.9
EAZ	**Earnscleugh**	**1.50**	**84**	PN	Pn	09 08 17.8	-0.4
APZ	**The Paps**	**1.53**	**159**	PN	Pn	09 08 18.4	-0.1
APZ				SN	Sn	09 08 40.0	-0.6
JCZ	**Jackson Bay**	**1.74**	**40**	PN	Pn	09 08 20.3	-0.7
SYZ	**Scrubby Hill**	**1.76**	**130**	PN	Pn	09 08 21.0	-0.1
SYZ				SN	Sn	09 08 44.0	-1.2
TUZ	**Tuapeka**	**1.79**	**109**	PN	Pn	09 08 21.1	-0.4
LBZ	**Lake Benmore**	**2.36**	**65**	PN	Pn	09 08 26.4	-1.9
ODZ	**Otahua Downs**	**2.46**	**83**	PN	Pn	09 08 28.2	-1.4

IDC ***23*** *09:21:52.2±3.6, 36°.39N×70°.58E, h0*^{km}*, mb3.6/3, mb1 3.6/4, mb1mx3.3/28, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=80.9km s-min=32.1km az=140.0*

NNC ***23*** *09:22:15.9±4.8, 37°.63N×71°.40E, h0*^{km}*, mb3.4, mpv3.1, Error ellipse: s-maj=37.0km s-min=34.8km az=176.0*

ISC 23 09:22:09.6±1.1, 36°.96N±0°.06×71°.1E±0°.2, h64^{km}**, n10, σ1.590/8, mb3.5/3, 4C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.20**	**168**	P	**Pn**	**09 22 58.1**	**+0.5**
CEP				S	**Sn**	**09 23 35.0**	**+0.4**
CHCP	**Chirah Chowk**	**3.75**	**151**	P	**Pn**	**09 23 05.7**	**+0.8**
THW	**Thamme Wali**	**4.19**	**172**	P	**Pn**	**09 23 10.5**	**-0.5**
KK31	**Karatay Array**	**6.15**	**356**	Pn	Pn	09 23 41.9	+4.1
	0.7nm,0.3s,baz=172,slow=13,SNR=12						
KK31				Sn	**Sn**	**09 24 49.8**	**+3.0**
	3.4nm,0.4s,baz=168,slow=21,SNR=11						
TKM2	**Tokmak 2**	**6.89**	**29**	Pn	**Pn**	**09 23 48.9**	**+0.8**
	0.8nm,0.3s						
TKM2				Sn	**Sn**	**09 25 03.0**	**-2.1**
	3.7nm,0.9s						
TKM2				Lg	Lg	09 25 28.6	
	3.8nm,0.9s						
MKAR	**Makanchi Array**	**12.88**	**37**	Pn	Pn	09 25 07.1	-2.6
	0.1nm,0.3s,baz=227,slow=19,SNR=6.1						
AB31	**Akbulak array**	**14.72**	**330**	Pn	**P**	**09 25 36.9**	**-1.7**
	0.1nm,0.2s,baz=146,slow=11,SNR=4.7						
FINES	**FINESS Array B**	**37.14**	**326**	P	P	09 29 06.5	-7.2
	1.5nm,0.9s,baz=120,slow=11,SNR=3.8						
NOA	**NORSAR Array B**	**44.06**	**323**	P	P	09 30 03.0	-7.8
	0.3nm,0.5s,baz=100,slow=7.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**65.80**	**268**	P	P	09 32 36.8	-11
	0.3nm,0.6s,baz=46,slow=5.5,SNR=3.8						

NSSC ***23*** *09:27:30.7±2.5, 34°.50N×36°.13E, h0*^{km}*±12*^{km}*, ML3.0*

CSEM ***23*** *09:27:31.7±0.2, 34°.61N×36°.40E, h15*^{km}*, ML3.0, Error ellipse: s-maj=7.8km s-min=4.8km az=96.0*

GRAL ***23*** *09:

	1.0nm,0.6s,baz=1.8,slow=7.6,SNR=27									
ASAR	**Alice Springs**	**59.43**	**187**	P		**P**		**09 53 51.3**	**+0.2**
	0.4nm,0.7s,baz=6.1,slow=9.6,SNR=4.9									
YKA	**Yellowknife Ar**	**65.37**	**30**	P		**P**		**09 54 29.9**	**-0.4**
	0.2nm,0.7s,baz=301,slow=7.2,SNR=5.0									
TXAR	**Lajitas Array**	**91.64**	**52**	P		**P**		**09 56 56.5**	**+1.0**
	0.2nm,0.6s,baz=327,slow=4.8,SNR=3.0									

*ISCJB **23** 09:47:59.9±0.6,28°.72S±0°.04×67°.22W±0°.06,h127km±7km, mb4.0/6, Error ellipse: s-maj=9.1km s-min=5.6km az=157.2*

*IDC **23** 09:48:02.8±0.5,28°.82S×67°.18W,h140km±4km,mb3.8/10, mb1 3.9/13,mb1mx3.8/20,mbtmp3.7/13, Error ellipse: s-maj=17.0km s-min=8.9km az=112.0*

*NEIC **23** 09:48:02.0±0.2,28°.78S×67°.25W,mb4.2/9, Error ellipse: s-maj=6.9km s-min=4.6km az=114.0*

*GUC **23** 09:48:02.7±0.9,28°.82S×67°.51W,h135km±85km,ML5.0*

ISC 23 09:48:01.9±0.5, 28°.73S±0°.04×67°.28W±0°.06, h136km±4km, n103,σ1§12/129, mb4.0/16, 13C-23D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**2.98**	**196**	P	**Pn**	**09 48 49.2**	**+0.7**
CFAA				S	**Sn**	**09 49 24.4**	**-0.2**
CFAA	**Coronel Fontan**	**2.98**	**196**	P	**Pn**	**09 48 49.2**	**+0.7**
	12nm,0.3s,baz=6.8,slow=12,SNR=848						
CFAA				S	**Sn**	**09 49 24.4**	**-0.2**
	30nm,0.3s,baz=119,slow=23,SNR=31						
LCO	**Las Campanas**	**3.02**	**264**	*e*Pn	**Pn**	**09 48 49.7**	**+0.5**
LCO				*e*Sn	**Sn**	**09 49 25.2**	**-0.4**
CPCH	**Copiapo**	**3.04**	**296**	⇓*i*P	**Pn**	**09 48 49.1**	**-0.2**
CPCH				*i* S	**Sn**	**09 49 23.6**	**-2.3**
CPCH	**Copiapo**	**3.04**	**296**	⇓*i*P	**Pn**	**09 48 49.1**	**-0.2**
CPCH				*i* S	**Sn**	**09 49 23.6**	**-2.3**
CPCH				AML	AML	09 49 27.8	
	comp=E,9μm,0.1s						
CDCH	**Caldera**	**3.55**	**297**	*e*P	**Pn**	**09 48 56.1**	**+0.2**
CDCH				*e*S	**Sn**	**09 49 35.1**	**-2.5**
CDCH	**Caldera**	**3.55**	**297**	*e*P	**Pn**	**09 48 56.1**	**+0.2**
CDCH				*e*S	**Sn**	**09 49 35.1**	**-2.5**
CDCH				AML	AML	09 49 39.6	
	comp=N,458nm,0.2s						
CMCH	**Combarbala**	**4.04**	**232**	⇓*i*P	**Pn**	**09 49 01.6**	**-0.8**
CMCH				S	**Sn**	**09 49 49.2**	**-0.3**
CMCH	**Combarbala**	**4.04**	**232**	⇓*i*P	**Pn**	**09 49 01.6**	**-0.8**
CMCH				*i* S	**Sn**	**09 49 49.2**	**-0.3**
CHNG	**Los Chungos**	**4.82**	**228**	⇓*i*P	**Pn**	**09 49 11.1**	**-1.4**
CHNG				S	**Sn**	**09 50 05.1**	**-2.5**
CHNG	**Los Chungos**	**4.82**	**228**	⇓*i*P	**Pn**	**09 49 11.1**	**-1.4**
CHNG				*i* S	**Sn**	**09 50 05.1**	**-2.5**
PEL	**Peldehue**	**5.28**	**213**	⇓*i*P	**Pn**	**09 49 18.0**	**-0.8**
CLCH	**Cerro Calan**	**5.42**	**210**	⇓*i*P	**Pn**	**09 49 20.6**	**-0.2**
SJCH	**San Jose de Ma**	**5.56**	**208**	*e*P	**Pn**	**09 49 22.3**	**-0.3**
SJCH	**San Jose de Ma**	**5.56**	**208**	*e*P	**Pn**	**09 49 22.3**	**-0.3**
PCH	**Pirque**	**5.61**	**209**	*e*P	**Pn**	**09 49 23.3**	**+0.1**
PCH	**Pirque**	**5.61**	**209**	*e*P	**Pn**	**09 49 23.3**	**+0.1**
ANTU	**Antumapu**	**5.61**	**210**	*e*P	**Pn**	**09 49 23.0**	**-0.3**
ANTU	**Antumapu**	**5.61**	**210**	*e*P	**Pn**	**09 49 23.0**	**-0.3**
LMEL	**Las Melosas**	**5.68**	**205**	⇓*i*P	**Pn**	**09 49 24.2**	**-0.1**
LMEL	**Las Melosas**	**5.68**	**205**	⇓*i*P	**Pn**	**09 49 24.2**	**-0.1**
TACH	**Talagante**	**5.82**	**212**	⇓*i*P	**Pn**	**09 49 25.3**	**-0.8**
TACH	**Talagante**	**5.82**	**212**	⇓*i*P	**Pn**	**09 49 25.3**	**-0.8**
CHCH	**Chadas Angostu**	**5.93**	**208**	⇑*i*P	**Pn**	**09 49 27.1**	**-0.5**
CHCH	**Chadas Angostu**	**5.93**	**208**	⇑*i*P	**Pn**	**09 49 27.1**	**-0.5**
CACH	**El Canelo**	**6.07**	**207**	⇓*i*P	**Pn**	**09 49 29.4**	**-0.1**
CACH	**El Canelo**	**6.07**	**207**	⇓*i*P	**Pn**	**09 49 29.4**	**-0.1**
CPUP	**Villa Florida**	**9.15**	**77**	P	**Pn**	**09 50 08.8**	**-1.9**
CPUP	**Villa Florida**	**9.15**	**77**	P	**Pn**	**09 50 08.8**	**-1.9**
	comp=N,2.0nm,0.3s,baz=238,slow=12,SNR=22						
TRQA	**Tornquist**	**10.30**	**156**	*e*Pn	**Pn**	**09 50 25.4**	**-0.7**
	comp=N,5.8nm,0.6s						
TRQA				*e*Sn	**Sn**	**09 52 16.6**	**-3.1**
PLCA	**Paso Flores**	**12.27**	**192**	P	**Pn**	**09 50 50.6**	**-1.4**
PLCA	**Paso Flores**	**12.27**	**192**	P	**Pn**	**09 50 50.6**	**-1.4**
	comp=N,0.3nm,0.3s,baz=349,slow=16,SNR=5.2						
LPAZ	**La Paz**	**12.41**	**356**	*e*Pn	**Pn**	**09 50 53.1**	**-1.5**
	comp=N,3.2nm,0.7s						
LPAZ	**La Paz**	**12.41**	**356**	P	**Pn**	**09 50 53.0**	**-1.6**
	comp=N,0.5nm,0.3s,baz=148,slow=6.2,SNR=13						
SAML	**Samuel**	**20.05**	**12**	*e*P	**P**	**09 52 24.9**	**+0.4**
	comp=N,9.9nm,0.6s						
BDFB	**Brasilia**	**22.05**	**58**	P	**P**	**09 52 44.4**	**-1.5**
BDFB				pP	**pP**	**09 53 12.7**	**+1.9**
BDFB	**Brasilia**	**22.05**	**58**	P	**P**	**09 52 44.4**	**-1.5**
	comp=N,2.9nm,0.4s,baz=222,slow=9.8,SNR=5.0						
BDFB				pP	**pP**	**09 53 12.7**	**+1.9**
	comp=N,5.0nm,0.8s,baz=220,slow=13,SNR=4.0						
SNAA	**Sanae**	**55.00**	**160**	P	**P**	**09 57 19.0**	**+0.3**
SNAA	**Sanae**	**55.00**	**160**	P	**P**	**09 57 19.0**	**+0.3**
	comp=N,0.5nm,0.5s,baz=289,slow=9.0,SNR=20						
QSPA	**South Pole Qui**	**61.49**	**180**	*e*P	**P**	**09 58 05.1**	**+1.2**
	comp=N,5.3nm,0.7s						
732A	**Laxson Ranch,**	**65.14**	**328**	⇓P	**P**	**09 58 29.7**	**+1.5**
	baz=66						
632A	**Uvalde**	**65.72**	**329**	⇓P	**P**	**09 58 33.0**	**+1.0**
	baz=66						
532A	**Rocksprings**	**66.30**	**329**	⇑P	**P**	**09 58 36.9**	**+1.2**
	baz=67						
JCT	**Junction City**	**66.55**	**330**	*e*P	**P**	**09 58 38.0**	**+0.7**
	comp=N,2.1nm,0.5s						
JCT	**Junction City**	**66.55**	**330**	⇑P	**P**	**09 58 38.4**	**+1.1**
	baz=67						
531A	**Rocksprings**	**66.62**	**329**	⇑P	**P**	**09 58 39.7**	**+1.9**
	baz=67						
530A	**J-C Ranch, Com**	**66.97**	**328**	⇓P	**P**	**09 58 41.8**	**+1.8**
	baz=67						
628A	**Black Gap, Mar**	**67.15**	**327**	⇑P	**P**	**09 58 42.5**	**+1.4**
	baz=68						
332A	**Millersview**	**67.30**	**330**	⇑P	**P**	**09 58 42.9**	**+0.9**
	baz=68,SNR=5.7						
529A	**Stev Forest Ra**	**67.36**	**327**	⇓P	**P**	**09 58 43.8**	**+1.4**
	baz=68,SNR=9.4						
627A	**Terlingua Ranc**	**67.37**	**326**	⇑P	**P**	**09 58 43.7**	**+1.1**
	baz=68						
TXAR	**Lajitas Array**	**67.41**	**326**	P	**P**	**09 58 43.6**	**+0.8**
TXAR	**Lajitas Array**	**67.41**	**326**	P	**P**	**09 58 43.6**	**+0.8**
	comp=N,0.9nm,0.7s,baz=151,slow=8.1,SNR=13						
430A	**Baggett Ranch,**	**67.46**	**329**	⇓P	**P**	**09 58 43.7**	**+0.6**
	baz=68,SNR=8.2						
429A	**Davenport Ranc**	**67.63**	**328**	⇑P	**P**	**09 58 45.4**	**+1.3**
	baz=68,SNR=9.2						
528A	**Cox Ranch, San**	**67.66**	**327**	⇑P	**P**	**09 58 44.3**	**-0.1**
	baz=68						
232A	**Coleman**	**67.69**	**331**	⇓P	**P**	**09 58 44.9**	**+0.4**
	baz=68						
626A	**Big Bend Ranch**	**67.82**	**326**	P	**P**	**09 58 46.7**	**+1.4**
	baz=68,SNR=8.3						
330A	**Mertzon**	**67.96**	**329**	⇓P	**P**	**09 58 46.3**	**+0.1**
	baz=68,SNR=5.1						
231A	**Bronte**	**68.02**	**330**	⇓P	**P**	**09 58 47.7**	**+1.1**
	baz=68						
527A	**Woodward Ranch**	**68.05**	**326**	P	**P**	**09 58 48.2**	**+1.3**
	baz=68,SNR=5.4						
526A	**Mary Lane Ranc**	**68.21**	**326**	⇓P	**P**	**09 58 49.2**	**+1.3**
	baz=68,SNR=5.7						
ABTX	**Abilene, Hawle**	**68.32**	**331**	⇑P	**P**	**09 58 49.1**	**+0.8**
	baz=69						
426A	**McDonald Obser**	**68.68**	**326**	⇓P	**P**	**09 58 52.0**	**+1.2**
	baz=69						
131A	**Roby**	**68.69**	**330**	P	**P**	**09 58 51.5**	**+0.9**
	baz=69,SNR=6.3						
328A	**Wristen Ranch,**	**68.69**	**328**	⇑P	**P**	**09 58 52.2**	**+1.5**
	baz=69						
Z31A	**Sharp Cattle R**	**69.13**	**331**	P	**P**	**09 58 54.3**	**+0.9**
	baz=70,SNR=5.1						
DBIC	**Dimbokro**	**69.59**	**70**	P	**P**	**09 58 55.4**	**-1.2**
DBIC	**Dimbokro**	**69.59**	**70**	P	**P**	**09 58 55.4**	**-1.2**
	comp=N,3.2nm,0.8s,baz=240,slow=7.2,SNR=2.8						
MAW	**Mawson**	**77.01**	**163**	P	**P**	**09 59 39.5**	**+0.3**
MAW	**Mawson**	**77.01**	**163**	P	**P**	**09 59 39.5**	**+0.3**
	comp=N,2.8nm,1.0s,baz=211,slow=12,SNR=2.8						
SMCO	**Snowmass**	**77.04**	**329**	*e*P	**P**	**09 59 42.4**	**+2.2**
	comp=N,7.7nm,1.5s						
TOA0	**Torodi Ar. Sit**	**78.53**	**68**	*e*P	**P**	**09 59 48.7**	**+0.3**
TOA0				*e*pP	**pP**	**10 00 21.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**78.53**	**68**	P	**P**	**09 59 48.8**	**+0.3**
TORD				pP	**pP**	**10 00 22.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**78.53**	**68**	P	**P**	**09 59 48.8**	**+0.3**
	comp=N,4.0nm,0.6s,baz=250,slow=4.7,SNR=36						
TORD				pP	**pP**	**10 00 22.1**	**-0.4**
	comp=N,1.8nm,0.7s,baz=248,slow=2.1,SNR=5.4						
BOSA	**Boshof**	**78.83**	**116**	P	**P**	**09 59 50.4**	**+0.2**
BOSA	**Boshof**	**78.83**	**116**	P	**P**	**09 59 50.4**	**+0.2**
	comp=N,4.1nm,0.7s,baz=212,slow=6.5,SNR=8.3						
MSU	**Marysvale**	**78.96**	**326**	*e*P	**P**	**09 59 52.1**	**+1.5**
	comp=N,1.8nm,1.0s						
HWUT	**Hardware Ranch**	**81.08**	**328**	*e*P	**P**	**10 00 02.6**	**+0.8**
	comp=N,1.4nm,0.5s						
HWUT				*e*pP	**pP**	**10 00 38.4**	**+2.2**
PDAR	**Pinedale Array**	**81.09**	**330**	P	**P**	**10 00 02.6**	**+0.6**
PDAR	**Pinedale Array**	**81.09**	**330**	P	**P**	**10 00 02.6**	**+0.6**
	comp=N,1.1nm,0.6s,baz=126,slow=6.5,SNR=8.1						
NVAR	**Mina Array Bea**	**82.08**	**322**	P	**P**	**10 00 08.0**	**+0.8**
NVAR	**Mina Array Bea**	**82.08**	**322**	P	**P**	**10 00 08.0**	**+0.8**
	comp=N,0.5nm,0.8s,baz=151,slow=8.1,SNR=3.5						
MCMT	**McKenzie Canyo**	**84.18**	**329**	*e*P	**P**	**10 00 19.6**	**+1.6**
	comp=N,0.4nm,0.5s						
YKA	**Yellowknife Ar**	**98.46**	**340**	P	**P**	**10 01 24.3**	**+0.3**
YKA	**Yellowknife Ar**	**98.46**	**340**	P	**P**	**10 01 24.3**	**+0.3**
	comp=N,0.5nm,0.6s,baz=134,slow=4.4,SNR=14						
ASAR	**Alice Springs**	**124.05**	**204**	PKP	**PKPdf**	**10 06 44.0**	**-0.7**
ASAR	**Alice Springs**	**124.05**	**204**	PKP	**PKPdf**	**10 06 44.0**	**-0.7**
	comp=N,1.5nm,0.6s,baz=146,slow=1.8,SNR=28						
WRA	**Warramunga Arr**	**127.30**	**206**	PKP	**PKPdf**	**10 06 50.9**	**-0.1**
WRA				pPKP	**pPKPdf**	**10 07 28.6**	**+1.2**
WRA	**Warramunga Arr**	**127.30**	**206**	PKP	**PKPdf**	**10 06 50.9**	**-0.1**
	comp=N,2.9nm,0.5s,baz=161,slow=1.8,SNR=93						
WRA				pPKP	**pPKPdf**	**10 07 28.6**	**+1.2**
	comp=N,0.4nm,0.5s,baz=166,slow=1.5,SNR=2.9						
EKS2	**Erkin-Say**	**145.76**	**56**	*e*PKPbc	**PKPab**	**10 07 26.6**	**+0.9**
KAPI	**Kappang**	**145.77**	**193**	PKPbc	**PKPdf**	**10 07 24.5**	**-0.6**
KAPI	**Kappang**	**145.77**	**193**	PKPbc	**PKPdf**	**10 07 24.5**	**-0.6**
	comp=N,6.3nm,0.6s,baz=170,slow=23,SNR=6.8						
KURBB	**Kurchatov Arra**	**146.24**	**40**	PKPbc	**PKPab**	**10 07 27.0**	**0.0**
	comp=N,4.0nm,0.7s,baz=298,slow=3.4,SNR=40						
KURBB				pPKPbc	pPKPbc	10 08 02.8	+0.9
	comp=N,1.8nm,0.6s,baz=297,slow=3.5,SNR=7.5						
KURK	**Kurchatov**	**146.25**	**40**	PKPbc	**PKPab**	**10 07 27.0**	**0.0**
KURK				pPKPbc	pPKPbc	10 08 02.8	+0.8
AAK	**Ala-Archa**	**146.29**	**55**	*e*PKPdf	**PKPdf**	**10 07 25.2**	**-0.1**
AAK				PKPbc	**PKPab**	**10 07 28.3**	**+0.6**
AAK				pPKPbc	pPKPbc	10 08 04.1	+1.5
AAK	**Ala-Archa**	**146.29**	**55**	PKPbc	**PKPab**	**10 07 28.3**	**+0.6**
	comp=N,4.3nm,0.5s,baz=210,slow=3.2,SNR=17						
AAK				pPKPbc	pPKPbc	10 08 04.1	+1.5
	comp=N,3.3nm,0.7s,baz=192,slow=4.2,SNR=2.9						
TKM2	**Tokmak 2**	**147.02**	**55**	*e*PKPdf	**PKPbc**	**10 07 28.1**	**-0.7**
ZALV	**Zalesovo Beam**	**147.62**	**31**	PKPbc	**PKPbc**	**10 07 30.2**	**+0.4**
ZALV	**Zalesovo Beam**	**147.62**	**31**	PKPbc	**PKPbc**	**10 07 30.2**	**+0.4**
	comp=N,6.9nm,0.4s,baz=292,slow=4.0,SNR=6.5						
MK31	**Makanchi Array**	**150.20**	**44**	*e*PKPbc	**PKPbc**	**10 07 37.2**	**+0.6**
MK31				*e*PKPab	**PKPab**	**10 07 44.0**	**+0.8**
MKAR	**Makanchi Array**	**150.20**	**44**	PKPbc	**PKPbc**	**10 07 37.1**	**+0.6**
MKAR				PKPab	**PKPab**	**10 07 43.7**	**+0.6**
MKAR				pPKPbc	**pPKPbc**	**10 08 14.4**	**+1.6**
MKAR	**Makanchi Array**	**150.20**	**44**	PKPbc	**PKPbc**	**10 07 37.1**	**+0.6**
	comp=N,3.0nm,0.7s,baz=301,slow=2.4,SNR=26						
MKAR				PKPab	**PKPab**	**10 07 43.7**	**+0.6**
	comp=N,4.0nm,1.0s,baz=309,slow=2.9,SNR=11						
MKAR				pPKPbc	**pPKPbc**	**10 08 14.4**	**+1.6**
	comp=N,1.6nm,0.7s,baz=312,slow=2.8,SNR=4.8						

IDC 23 09:48:37.4±2.4, 22°.81S×171°.53E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.6/17, mbtmp3.5/3, MS3.4/1, Ms1 3.4/1, ms1mx2.7/17, Error ellipse: s-maj=168.2km s-min=33.1km az=162.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**28.00**	**245**	LR	LR	10 03 24.1	
	comp=Z,83nm,19.6s,baz=23,slow=32						
ASAR	**Alice Springs**	**34.52**	**261**	P	P	09 55 28.1	+0.5
	0.3nm,0.7s,baz=91,slow=8.7,SNR=7.2						
WRA	**Warramunga Arr**	**34.69**	**268**	P	P	09 55 28.6	-0.5
	0.5nm,1.0s,baz=102,slow=8.5,SNR=3.9						
NVAR	**Mina Array Bea**	**89.59**	**48**	P	P	10 01 37.6	+0.3
	0.5nm,0.8s,baz=205,slow=8.1,SNR=4.7						
BVAR	**Borovoye Array**	**114.51**	**319**	PKP	PKPdf	10 07 17.6	-1.5
	0.4nm,0.5s,baz=93,slow=2.9,SNR=2.7						
GERES	**GERESS Array B**	**148.63**	**331**	PKPbc	PKPbc	10 08 26.1	-0.4
	0.2nm,0.3s,baz=27,slow=2.4,SNR=4.2						
TORD	**Torodi Ar. Bea**	**166.37**	**227**	PKP	PKPdf	10 08 45.3	-0.2
	0.4nm,0.9s,baz=132,slow=2.1,SNR=2.7						

MEX 23 10:08:08.1±0.3, 16°.43N×98°.42W, h34km±6km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.29**	**97**	*i* P	Pn	10 08 14.2	-1.5
PNIG				*e*S	Sn	10 08 19.3	-0.7
ACX	**Acapulco**	**1.44**	**288**	*i* P	Pn	10 08 30.7	-1.2
ACX				*e*S	Sn	10 08 48.4	-1.3
UTMO	**Huajuapan**	**1.52**	**23**	*i* P	Pn	10 08 31.2	-2.0
UTMO				*e*S	Sn	10 08 49.3	-2.6
VHO	**Vista Hermosa**	**1.74**	**68**	*i* P	Pn	10 08 34.6	-1.6
VHO				*e*S	Sn	10 08 55.1	-2.4
CAIG	**El Cayaco**	**1.87**	**290**	*i* P	Pn	10 08 35.7	-2.1
CAIG				*i* S	Sn	10 08 58.5	-1.7
YAIG	**Yautepec**	**2.50**	**346**	*i* P	Pn	10 08 45.6	-1.0
YAIG				*i* S	Sn	10 09 13.9	-2.2

IDC 23 10:10:06.4±13.0, 3°.34S×124°.66E, h0km, mb3.4/2, mb1 3.6/4, mb1mx3.4/23, mbtmp3.5/4, ML3.7/2, Error ellipse: s-maj=222.4km s-min=127.4km az=119.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.70**	**176**	Pn	Pn	10 13 36.1	+0.3
	0.1nm,0.3s,baz=3.5,slow=13,SNR=5.7						
FITZ				Sn	Sn	10 15 59.0	-21
	0.0nm,0.3s,baz=143,slow=16,SNR=2.1						
WRA	**Warramunga Arr**	**19.01**	**151**	P	P	10 14 29.5	-0.6
	0.3nm,0.3s,baz=326,slow=13,SNR=11						
WRA				S	Sn	10 17 47.9	-16
	0.0nm,0.3s,baz=328,slow=22,SNR=2.5						
ASAR	**Alice Springs**	**22.09**	**157**	P	P	10 15 04.7	+1.2
	0.2nm,0.4s,baz=330,slow=12,SNR=7.5						
STKA	**Stephens Creek**	**32.55**	**153**	P	P	10 16 38.8	-0.7
	0.5nm,0.3s,baz=324,slow=8.7,SNR=3.6						

IDC 23 10:19:47.2±2.2, 7°.08S×129°.01E, h0km, mb3.7/1, mb1 3.9/4, mb1mx3.6/20, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=102.5km s-min=27.9km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.44**	**196**	Pn	Pn	10 22 32.9	+0.9
	0.4nm,0.3s,baz=29,slow=10.0,SNR=14						
FITZ				Sn	Sn	10 24 26.8	-14
	1.6nm,0.3s,baz=126,slow=21,SNR=9.8						
WRA	**Warramunga Arr**	**13.79**	**158**	Pn	Pn	10 23 03.5	-0.7
	0.8nm,0.3s,baz=331,slow=14,SNR=82						
WRA				Sn	Sn	10 25 20.6	-18
	1.1nm,0.3s,baz=330,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.15**	**165**	P	Pn	10 23 48.2	-0.3
	0.2nm,0.3s,baz=340,slow=9.9,SNR=13						
ASAR				S	Sn	10 26 43.9	-16
	0.3nm,0.3s,baz=350,slow=24,SNR=7.5						
MKAR	**Makanchi Array**	**67.76**	**327**	P	P	10 30 46.8	0.0
	0.2nm,0.3s,baz=128,slow=8.1,SNR=6.5						

*NEIC **23** 10:24:07.0, 12°.51S×76°.68W, h58km, MG4.2(ARE), After ARE.*

NEIC Felt [III] at Chilca and Lima. Also felt at Chosica.

*ISCJB **23** 10:24:08.3±0.7, 12°.57S±0°.07×76°.7W±0°.1, h65km, mb3.6/6, Error ellipse: s-maj=18.9km s-min=7.0km az=155.3*

*IDC **23** 10:24:08.6±0.8, 12°.45S×76°.67W, h49km±6km, mb3.4/7, mb1 3.7/7, mb1mx3.5/21, mbtmp3.4/7, MS2.6/1, Ms1 2.7/1, ms1mx2.3/14, Error ellipse: s-maj=45.5km s-min=12.9km az=71.0*

*BJI **23** 10:24:09.0, 12°.50S×76°.70W, h58km, mB5.2/1, Ms4.6/2, Ms7 4.3/2*

ISC 23 10:24:09.5±0.5, 12°.51S±0°.08×76°.7W±0°.1, h65km, n33, σ1§65/46, mb3.8/6, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**0.54**	**348**	*e*Pn	**Pn**	**10 24 21.1**	**-1.3**
NNA				*e*Sn	**Sn**	**10 24 29.8**	**-2.0**
NNA	**Nana**	**0.54**	**348**	P	**Pn**	**10 24 21.0**	**-1.3**
	589nm,0.3s,baz=174,slow=13,SNR=1005						
NNA				S	**Sn**	**10 24 29.7**	**-2.0**
	3μm,0.3s,baz=16,slow=20,SNR=133						
ATAH	**Atahualpa**	**5.59**	**343**	P	**Pn**	**10 25 33.0**	**+2.4**
ATAH	**Atahualpa**	**5.59**	**343**	P	**Pn**	**10 25 33.0**	**+2.4**
	6.5nm,0.3s,baz=187,slow=3.0,SNR=30						
ARE	**Arequipa**	**6.42**	**128**	P	**Pn**	**10 25 41.0**	**-0.7**
ARE				*e*S	Sn	10 27 09.0	+15
LPAZ	**La Paz**	**9.14**	**115**	*e*Pn	**Pn**	**10 26 21.8**	**+2.5**
	2.7nm,0.6s						
LPAZ	**La Paz**	**9.14**	**115**	P	**Pn**	**10 26 22.1**	**+2.8**
	0.8nm,0.3s,baz=298,slow=7.8,SNR=21						
LPAZ				LR	LR	10 29 53.2	
	comp=Z,36nm,18.1s,baz=350,slow=38						
OTAV	**Otavalo**	**12.78**	**352**	*e*Pn	P	10 27 14.1	-3.7
OTAV				*e*Sn	**Sn**	**10 29 33.0**	**+3.2**
SAML	**Samuel**	**13.77**	**76**	*e*Pn	**Pn**	**10 27 19.3**	**-2.6**
SAML				*e*Sn	Sn	10 29 42.0	-11
CFAA	**Coronel Fontan**	**20.55**	**159**	P	P	**10 28 43.6**	**+0.7**
CFAA	**Coronel Fontan**	**20.55**	**159**	P	P	**10 28 43.6**	**+0.7**
	0.7nm,0.7s,baz=336,slow=12,SNR=17						
PLCA	**Paso Flores**	**28.63**	**170**	P	P	**10 29 59.5**	**-0.5**
PLCA	**Paso Flores**	**28.63**	**170**	P	P	**10 29 59.5**	**-0.5**
	2.0nm,0.8s,baz=297,slow=12,SNR=3.4						
TXAR	**Lajitas Array**	**49.06**	**328**	P	**P**	**10 32 50.9**	**+0.5**
TXAR				pP	**pP**	**10 33 05.5**	**-1.6**
TXAR				PcP	**PcP**	**10 34 14.6**	**+1.2**
TXAR	**Lajitas Array**	**49.06**	**328**	P	**P**	**10 32 50.9**	**+0.5**
	0.1nm,0.3s,baz=150,slow=7.3,SNR=3.4						
TXAR				pP	**pP**	**10 33 05.5**	**-1.6**
	0.8nm,0.9s,baz=147,slow=10,SNR=6.3						
TXAR				PcP	**PcP**	**10 34 14.6**	**+1.2**
	0.3nm,0.7s,baz=153,slow=7.1,SNR=3.5						
NVAR	**Mina Array Bea**	**63.86**	**325**	P	**P**	**10 34 37.5**	**+1.7**
NVAR				pP	**pP**	**10 34 51.4**	**-1.6**
NVAR	**Mina Array Bea**	**63.86**	**325**	P	**P**	**10 34 37.5**	**+1.7**
	0.9nm,0.7s,baz=140,slow=7.4,SNR=11						
NVAR				pP	**pP**	**10 34 51.4**	**-1.6**
	0.9nm,0.8s,baz=146,slow=6.7,SNR=4.3						
YKA	**Yellowknife Ar**	**80.37**	**343**	P	**P**	**10 36 14.0**	**+0.5**
YKA	**Yellowknife Ar**	**80.37**	**343**	P	**P**	**10 36 14.0**	**+0.5**
	0.5nm,0.7s,baz=138,slow=5.7,SNR=9.2						
TORD	**Torodi Ar. Bea**	**81.83**	**75**	P	**P**	**10 36 23.2**	**+1.0**
TORD	**Torodi Ar. Bea**	**81.83**	**75**	P	**P**	**10 36 23.2**	**+1.0**
	1.2nm,0.6s,baz=261,slow=5.2,SNR=7.7						
ILAR	**Eielson Array**	**93.01**	**336**	P	**P**	**10 37 15.8**	**+0.3**
ILAR	**Eielson Array**	**93.01**	**336**	P	**P**	**10 37 15.8**	**+0.3**
	0.4nm,0.8s,baz=158,slow=1.8,SNR=7.0						
ASAR	**Alice Springs**	**133.19**	**220**	PKP	**PKPdf**	**10 43 19.2**	**+0.3**
ASAR				pPKP	**pPKPdf**	**10 43 34.6**	**-3.1**
ASAR	**Alice Springs**	**133.19**	**220**	PKP	**PKPdf**	**10 43 19.2**	**+0.3**
	0.3nm,0.6s,baz=114,slow=1.8,SNR=8.1						
ASAR				pPKP	**pPKPdf**	**10 43 34.6**	**-3.1**
	0.2nm,0.7s,baz=128,slow=2.2,SNR=1.9						
WRA	**Warramunga Arr**	**135.55**	**224**	PKP	**PKPdf**	**10 43 23.7**	**+0.4**
WRA	**Warramunga Arr**	**135.55**	**224**	PKP	**PKPdf**	**10 43 23.7**	**+0.4**
	1.0nm,0.8s,baz=124,slow=2.1,SNR=10						
WRA				pPKP

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.53**	**152**	P	**Pg**	**10 54 29.4**	**+0.4**
PPI				S	**Sg**	**10 54 36.7**	**+0.7**
BKNI	**Bangkinang**	**0.95**	**71**	P	**Pg**	**10 54 37.0**	**+0.1**
BKNI				S	**Sb**	**10 54 51.2**	**+1.4**
MNSI	**Mandailing Nat**	**0.96**	**324**	P	**Pg**	**10 54 36.7**	**-0.4**
SISI	**Saibi**	**1.70**	**218**	P	**Pn**	**10 54 49.4**	**+1.0**
RGRI	**Rengat**	**2.22**	**99**	P	**Pn**	**10 54 56.4**	**+0.9**
FRIM	**Kepong**	**3.53**	**25**	P	**Pn**	**10 55 14.9**	**+1.4**
KGM	**Kluang**	**3.75**	**58**	P	**Pn**	**10 55 18.0**	**+1.5**
MASI	**Maura Aman, Be**	**3.77**	**146**	P	Pn	10 55 20.8	+3.9
TSI	**Tuntungan**	**3.81**	**336**	P	Pb	10 55 23.7	-2.3
MYKOM	**Kota Tinggi**	**4.10**	**65**	P	**Pn**	**10 55 22.4**	**+0.9**
KSI	**Kapahiang**	**4.39**	**146**	P	Pn	10 55 29.9	+4.5
IPM	**Ipoh**	**4.52**	**11**	*e*Pn	**Pn**	**10 55 29.5**	**+2.3**
IPM				*e*Sg	**Sg**	**10 56 45.1**	**+1.2**
IPM	**Ipoh**	**4.52**	**11**	P	**Pn**	**10 55 29.7**	**+2.4**
KULM	**Kulim** 114nm,0.5s	**5.26**	**5**	*e*Pn	**Pn**	**10 55 38.5**	**+1.1**
KULM				*e*Sg	**Sg**	**10 57 04.3**	**-3.5**
KULM	**Kulim**	**5.26**	**5**	P	**Pn**	**10 55 39.1**	**+1.7**
KTGM	**Kuala Trenggan**	**6.06**	**29**	P	**Pn**	**10 55 50.1**	**+1.7**
KSM	**Kuching**	**10.27**	**82**	Pn	**Pn**	**10 56 44.0**	**-2.1**
XMIS	**Christmas Isla**	**11.78**	**152**	*e*Pn	**Pn**	**10 57 05.9**	**-0.9**
SBUM	**Sibu**	**12.31**	**79**	P	Pn	10 57 19.9	+5.8
BBKI	**Banjar Baru**	**15.09**	**103**	P	**P**	**10 57 56.3**	**-1.1**
KHKI	**Kahang-Kahang**	**17.51**	**119**	P	**P**	**10 58 28.9**	**+4.6**
CMAR	**Chiang Mai Arr**	**18.37**	**356**	P	**P**	**10 58 35.8**	**+2.1**
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=185,slow=11,SNR=12	**18.37**	**356**	P	**P**	**10 58 35.8**	**+2.1**
CMAR	comp=Z,88nm,19.9s,baz=71,slow=37			LR	LR	11 05 30.4	
CHTO	**Chiang Mai** 3.8nm,0.8s	**18.72**	**356**	P	**P**	**10 58 37.9**	**+0.3**
KAPI	**Kappang** 26nm,1.2s	**20.21**	**105**	*e*P	**P**	**10 58 50.5**	**-3.4**
KAPI	**Kappang** 6.1nm,0.8s,baz=246,slow=8.6,SNR=3.9	**20.21**	**105**	P	**P**	**10 58 52.6**	**-1.3**
PALK	**Pallekele** comp=Z,136nm,20.4s,baz=118,slow=32	**20.69**	**291**	LR	LR	11 05 27.2	
DAV	**Davao City (W)** comp=Z,64nm,21.3s,baz=236,slow=39	**26.32**	**74**	LR	LR	11 11 19.6	
FITZ	**Fitzroy Crossi** comp=Z,96nm,18.7s,baz=292,slow=38	**30.86**	**127**	LR	LR	11 13 42.0	
WRA	**Warramunga Arr**	**38.92**	**123**	P	P	11 01 42.4	-2.5
WRA	**Warramunga Arr** 0.7nm,0.5s,baz=304,slow=8.9,SNR=8.4	**38.92**	**123**	P	P	11 01 42.4	-2.5
WRAB	**Tennant Creek** 12nm,1.6s	**38.92**	**123**	*e*P	P	11 01 41.9	-3.1
ASAR	**Alice Springs**	**40.34**	**128**	P	P	11 01 54.0	-2.9
ASAR	**Alice Springs** 1.3nm,0.8s,baz=300,slow=8.1,SNR=12	**40.34**	**128**	P	P	11 01 54.0	-2.9
FORT	**Forrest** 37nm,0.7s	**40.50**	**142**	P	**P**	**11 01 57.5**	**-0.5**
KSAR	**Wonju Array Be**	**45.20**	**31**	P	P	11 02 34.0	-2.0
KSRS	**Korea Array** 1.1nm,0.8s,baz=218,slow=9.5,SNR=7.7	**45.23**	**31**	P	P	11 02 34.0	-2.2
GUMO	**Guam** comp=Z,20nm,18.4s,baz=270,slow=38	**46.30**	**71**	LR	LR	11 23 43.1	
SONM	**Songino Array**	**47.94**	**6**	P	P	11 02 55.6	-1.9
SONM	**Songino Array** 0.4nm,0.6s,baz=184,slow=9.4,SNR=1.9	**47.94**	**6**	P	P	11 02 55.6	-1.9
MK31	**Makanchi Array**	**49.14**	**344**	*e*P	P	11 03 05.0	-1.7
MKAR	**Makanchi Array**	**49.14**	**344**	P	**P**	**11 03 06.2**	**-0.5**
MKAR	**Makanchi Array** 3.5nm,0.6s,baz=152,slow=8.1,SNR=16	**49.14**	**344**	P	**P**	**11 03 06.2**	**-0.5**
CTA	**Charters Tower** comp=Z,80nm,19.8s,baz=65,slow=38	**49.34**	**117**	LR	LR	11 25 08.6	
STKA	**Stephens Creek**	**50.39**	**133**	P	**P**	**11 03 15.1**	**-1.3**
STKA	**Stephens Creek** 1.8nm,0.7s,baz=250,slow=5.3,SNR=3.8	**50.39**	**133**	P	**P**	**11 03 15.1**	**-1.3**
STKA	comp=Z,94nm,19.4s,baz=204,slow=36			LR	LR	11 24 03.5	
KURBB	**Kurchatov Arra** 2.6nm,0.7s,baz=164,slow=7.3,SNR=11	**53.67**	**343**	P	**P**	**11 03 40.0**	**-0.5**
KURK	**Kurchatov** 0.8nm,0.8s	**53.73**	**343**	P	**P**	**11 03 40.0**	**-0.9**
ZALV	**Zalesovo Beam**	**55.23**	**349**	P	**P**	**11 03 50.8**	**-1.0**
ZALV				PcP	**PcP**	**11 04 51.4**	**-1.2**
ZALV	**Zalesovo Beam** 4.1nm,0.7s,baz=175,slow=7.1,SNR=11	**55.23**	**349**	P	**P**	**11 03 50.8**	**-1.0**
ZALV	1.1nm,0.4s,baz=183,slow=5.5,SNR=3.3			PcP	**PcP**	**11 04 51.4**	**-1.2**
RDF	**Al-Radifah**	**57.82**	**305**	*e*P	**P**	**11 04 10.7**	**0.0**
RDF	comp=Z,14nm,1.2s			AMb	AMB	11 04 15.4	
NAY	**Al-Naaiem**	**58.18**	**305**	*e*P	**P**	**11 04 12.4**	**-0.8**
NAY	comp=Z,7.4nm,0.9s			AMb	AMB	11 04 13.4	
MIB	**Mutribah**	**58.30**	**306**	*e*P	**P**	**11 04 13.4**	**-0.6**
MIB	comp=Z,17nm,1.0s			AMb	AMB	11 04 14.5	
BVAR	**Borovoye Array**	**58.36**	**339**	P	**P**	**11 04 13.0**	**-1.0**
BVAR	**Borovoye Array** comp=Z,1.8nm,0.5s,baz=148,slow=8.7,SNR=9.4	**58.36**	**339**	P	**P**	**11 04 13.0**	**-1.0**
RST	**Umm Al-Ruwaisa**	**58.47**	**305**	*e*P	**P**	**11 04 14.2**	**-1.0**
RST	comp=Z,57nm,0.8s			AMb	AMB	11 04 21.0	
ABKAR	**Akbulak array** comp=Z,2.1nm,0.6s	**59.96**	**331**	*e*P	**P**	**11 04 24.1**	**-1.1**
AKTO	**Aktyubinsk**	**61.67**	**331**	P	**P**	**11 04 39.3**	**+2.5**
AKTO	**Aktyubinsk** comp=Z,0.8nm,0.5s,baz=111,slow=15,SNR=4.2	**61.67**	**331**	P	**P**	**11 04 39.3**	**+2.5**
KBZ	**Khabaz**	**66.90**	**318**	P	**P**	**11 05 11.1**	**-0.1**
KBZ	**Khabaz** comp=Z,1.1nm,0.7s,baz=111,slow=9.4,SNR=4.0	**66.90**	**318**	P	**P**	**11 05 11.1**	**-0.1**
ASF	**Jabal al Asfar**	**67.55**	**305**	P	**P**	**11 05 18.3**	**+2.6**
ASF	**Jabal al Asfar** comp=Z,0.9nm,0.3s,baz=178,slow=8.8,SNR=3.1	**67.55**	**305**	P	**P**	**11 05 18.3**	**+2.6**
BRTR	**Keskin Array B**	**72.08**	**312**	P	P	11 05 41.4	-2.2
BRTR	**Keskin Array B** comp=Z,1.1nm,0.7s,baz=117,slow=7.2,SNR=6.7	**72.08**	**312**	P	P	11 05 41.4	-2.2
BR131	**Keskin Array S** comp=Z,1.0nm,0.6s	**72.08**	**312**	*e*P	**P**	**11 05 42.2**	**-1.3**
MAW	**Mawson** comp=Z,47nm,21.1s,baz=104,slow=30	**72.26**	**194**	LR	LR	11 30 25.7	
JOF	**Joensuu** comp=Z,1.2nm,0.5s	**80.47**	**334**	*e*p	**P**	**11 06 29.8**	**-0.8**
FINES	**FINESS Array B**	**82.41**	**332**	P	**P**	**11 06 41.2**	**+0.3**
FINES	**FINESS Array B** comp=Z,1.4nm,0.5s,baz=87,slow=6.9,SNR=13	**82.41**	**332**	P	**P**	**11 06 41.2**	**+0.3**
KAF	**Kangasniemi** comp=Z,1.9nm,0.5s	**82.47**	**333**	*e*p	P	11 06 39.3	-1.8
VNDA	**Vanda**	**84.10**	**169**	P	**P**	**11 06 48.5**	**-0.8**
VNDA	**Vanda** comp=Z,0.5nm,0.5s,baz=333,slow=4.4,SNR=4.9	**84.10**	**169**	P	**P**	**11 06 48.5**	**-0.8**
ARCES	**ARCESS Array B**	**84.64**	**340**	P	**P**	**11 06 51.4**	**-0.8**
ARCES	**ARCESS Array B** comp=Z,1.0nm,0.5s,baz=104,slow=5.1,SNR=9.7	**84.64**	**340**	P	**P**	**11 06 51.4**	**-0.8**
ARCES	comp=Z,45nm,19.1s,baz=65,slow=38			LR	LR	11 47 13.3	
ARE0	**ARCESS Array S**	**84.64**	**340**	P	P	11 06 50.0	-2.2
GERES	**GERESS Array B**	**87.64**	**319**	P	**P**	**11 07 06.6**	**-1.0**
GERES	**GERESS Array B** comp=Z,0.3nm,0.4s,baz=122,slow=1.7,SNR=5.9	**87.64**	**319**	P	**P**	**11 07 06.6**	**-1.0**
NOA	**NORSAR Array B** comp=Z,15nm,21.2s,baz=55,slow=38	**89.47**	**331**	LR	LR	11 50 30.7	
TXAR	**Lajitas Array**	**143.01**	**36**	PKP	PKPab	11 13 49.9	+1.1
TXAR	**Lajitas Array** comp=Z,0.2nm,0.5s,baz=303,slow=0.6,SNR=4.6	**143.01**	**36**	PKP	PKPab	11 13 49.9	+1.1
CPUP	**Villa Florida**	**146.00**	**218**	PKPbc	**PKPdf**	**11 13 59.2**	**+0.5**
CPUP	**Villa Florida** comp=Z,2.2nm,0.6s,baz=143,slow=3.4,SNR=8.4	**146.00**	**218**	PKPbc	**PKPdf**	**11 13 59.2**	**+0.5**

*IDC **23** 10:55:48.2±5.5, 36°.34N×71°.00E, h165km±49km, mb3.2/7, mb1 3.3/11, mb1mx3.1/31, mbtmp3.2/11, MS3.1/2, Ms1 3.0/2, ms1mx2.3/32, Error ellipse: s-maj=40.3km s-min=20.5km az=32.0*

*ISCJB **23** 10:55:50.2±0.5, 36°.60N±0°.04×70°.90E±0°.09, h188km, mb3.4/6, Error ellipse: s-maj=10.2km s-min=5.7km az=175.6*

*NNC **23** 10:55:54.1±8.5, 36°.87N×70°.67E, h165km±86km, mb2.9, mpv3.8, Error ellipse: s-maj=70.4km s-min=44.1km az=20.0*

ISC 23 10:55:51.1±0.8, 36°.63N±0°.07×70°.83E±0°.10, h188km, n22, σ1§77/25, mb3.4/6, 5C-6D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.94**	**162**	⇑P	**Pn**	**10 56 39.1**	**-0.5**
CEP				S	Sn	10 57 12.0	-5.4
CHCP	**Chirah Chowk**	**3.58**	**145**	P	**Pn**	**10 56 47.2**	**0.0**
THW	**Thamme Wali**	**3.90**	**169**	P	**Pn**	**10 56 50.4**	**-0.9**
KK31	**Karatay Array** 4.1nm,0.5s,baz=177,slow=13,SNR=49	**6.47**	**358**	⇑P	**Pn**	**10 57 25.6**	**+1.3**
KK31	13nm,0.5s,baz=186,slow=21,SNR=24			⇓S	Sn	10 58 35.7	-2.2
AAK	**Ala-Archa** 2.5nm,0.3s,baz=143,slow=4.3,SNR=16	**6.63**	**24**	P	**Pn**	**10 57 27.8**	**+1.3**
AAK	1.1nm,0.3s,baz=301,slow=23,SNR=12			S	Sn	10 58 41.1	-0.8
TKM2	**Tokmak 2** 2.7nm,0.5s	**7.28**	**29**	⇓P	**Pn**	**10 57 35.8**	**+0.8**
TKM2	3.7nm,0.9s			⇑S	Sn	10 58 55.1	-2.1
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=209,slow=15,SNR=3.1	**13.27**	**37**	P	**Pn**	**10 58 53.0**	**+0.8**
AB31	**Akbulak array** 1.1nm,0.6s,baz=146,slow=12,SNR=19	**14.90**	**331**	⇓P	**Pn**	**10 59 12.6**	**+0.2**
AB31	0.4nm,0.5s			⇓S	Sn	11 01 53.9	-4.9
BVA0	**Borovoye Array** baz=163,slow=9.6,SNR=5.1	**16.39**	**359**	⇓P	**Pn**	**10 59 30.8**	**+0.3**
BVAR	**Borovoye Array** 0.4nm,0.3s,baz=150,slow=9.8,SNR=5.4	**16.39**	**359**	P	**Pn**	**10 59 32.6**	**+2.1**
BRVK	**Borovoye** 1.6nm,0.5s	**16.43**	**359**	⇑P	**P**	**10 59 30.0**	**-0.2**
AKTO	**Aktyubinsk** 0.3nm,0.5s	**16.60**	**330**	⇓P	**Pn**	**10 59 34.4**	**+1.5**
AKTO	0.1nm,1.0s			⇑S	Sn	11 02 39.4	+0.2
AKTO	**Aktyubinsk** 0.8nm,0.3s,baz=135,slow=9.3,SNR=16	**16.60**	**330**	P	**Pn**	**10 59 35.0**	**+2.0**
ZALV	**Zalesovo Beam** 1.7nm,0.5s,baz=216,slow=13,SNR=8.1	**19.85**	**25**	P	**P**	**11 00 08.5**	**+1.0**
KBZ	**Khabaz** comp=Z,23nm,20.6s,baz=191,slow=44	**22.42**	**297**	LR	LR	11 12 25.1	
FINES	**FINESS Array B** 0.6nm,0.7s,baz=115,slow=8.6,SNR=3.7	**37.30**	**326**	P	**P**	**11 02 46.6**	**+2.0**
ARCES	**ARCESS Array B** 0.9nm,0.6s,baz=112,slow=9.3,SNR=6.5	**40.97**	**338**	P	**P**	**11 03 17.1**	**+2.1**
NOA	**NORSAR Array B** 0.7nm,0.6s,baz=96,slow=7.7,SNR=3.7	**44.19**	**323**	P	**P**	**11 03 42.7**	**+1.7**
KMBO	**Kilima Mbogo** comp=Z,49nm,18.5s,baz=98,slow=40	**48.82**	**227**	LR	LR	11 28 30.6	
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,baz=49,slow=6.2,SNR=4.4	**65.58**	**268**	P	**P**	**11 06 14.7**	**-0.3**
WRA	**Warramunga Arr** 0.3nm,0.5s,baz=326,slow=5.0,SNR=5.0	**82.18**	**122**	P	**P**	**11 07 49.5**	**-1.7**
ASAR	**Alice Springs** 0.5nm,0.8s,baz=309,slow=4.8,SNR=4.4	**84.44**	**125**	P	**P**	**11 08 00.8**	**-1.9**

*IDC **23** 11:13:22.0±1.9, 1°.58N×125°.68E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/20, Error ellipse: s-maj=120.5km s-min=24.4km az=67.0*

*ISCJB **23** 11:13:26.5±1.2, 1°.7N±0°.1×125°.90E±0°.07, h54km, mb3.4/3, Error ellipse: s-maj=18.9km s-min=10.3km az=175.6*

*DJA **23** 11:13:29.4±1.1, 2°N±13°×12°6E±°, h56km±11km, M4.1/5, MLv4.1/5*

ISC 23 11:13:28.2±1.5, 1°.7N±0°.1×125°.9E±0°.1, h54km, n10, σ1§32/10, mb3.3/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**1.03**	**257**	P	**Pn**	**11 13 45.9**	**-0.6**
MNI				S	**Sn**	**11 13 59.4**	**-0.7**
TNTI	**Ternate**	**1.76**	**121**	P	Pn	11 14 04.1	+7.7
KMSI	**Cibinong**	**2.16**	**240**	P	**Pn**	**11 14 03.7**	**+1.8**
KMSI				S	**Sn**	**11 14 28.6**	**+1.1**
MRSI	**Marisa**	**4.08**	**253**	P	**Pn**	**11 14 26.7**	**-1.5**
LUWI	**Luwuk**	**4.09**	**229**	P	**Pn**	**11 14 28.5**	**+0.2**
KAPI	**Kappang** comp=Z,79nm,19.0s,baz=102,slow=40	**9.01**	**222**	LR	LR	11 19 16.7	
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=352,slow=15,SNR=3.0	**19.65**	**181**	P	**P**	**11 17 51.1**	**-1.6**
WRA	**Warramunga Arr** 0.5nm,0.4s,baz=338,slow=10,SNR=14	**23.04**	**159**	P	**P**	**11 18 28.6**	**-0.5**
ASAR	**Alice Springs** 0.3nm,0.4s,baz=336,slow=7.6,SNR=8.5	**26.38**	**163**	P	**P**	**11 19 00.0**	**+0.3**
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=119,slow=6.2,SNR=5.5	**58.75**	**326**	P	**P**	**11 23 22.0**	**+1.2**

*IDC **23** 11:19:07.5±2.6, 36°.70N×26°.86E, h133km±32km, mb3.5/5, mb1 3.6/9, mb1mx3.2/30, mbtmp3.5/9, MS3.8/1, Ms1 3.8/1, ms1mx2.1/30, Error ellipse: s-maj=24.1km s-min=17.8km az=105.0*

*ISCJB **23** 11:19:07.7±0.3, 36°.58N±0°.03×26°.90E±0°.03, h155km±4km, mb3.6/5, Error ellipse: s-maj=4.8km s-min=3.8km az=168.3*

*CSEM **23** 11:19:08.5±0.2, 36°.60N×26°.93E, h147km±3km, MD3.2, Error ellipse: s-maj=3.8km s-min=3.0km az=167.0*

*ATH **23** 11:19:09.4, 36°.79N×26°.65E, h21km±2km, MD3.5/10*

*ISK **23** 11:19:10.8, 36°.79N×26°.93E, h125km, MD3.2*

*HLW **23** 11:19:10.4, 36°.45N×27°.29E, h33km±40km, Md0.0, Ml3.9*

*THE **23** 11:19:12.5, 36°.69N×26°.56E, h1km±3km, ML3.3/2, Error ellipse: s-maj=5.0km s-min=1.2km az=74.0*

*DDA **23** 11:19:34.0, 37°.10N×28°.67E, h5km, MD3.0*

ISC 23 11:19:07.9±0.7, 36°.64N±0°.04×26°.95E±0°.03, h146km±6km, n121, σ1§49/146, mb3.7/5, 4C, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.51**	**34**	*e*PG	**Pn**	**11 19 29.7**	**+0.9**
BODT				*e*SG	**Sn**	**11 19 42.2**	**-2.6**
BODT	**Bodrum**	**0.51**	**34**	*e*Pg	**Pn**	**11 19 29.7**	**+0.9**
MLSB	**Milas**	**0.93**	**45**	*e*PG	**Pn**	**11 19 32.8**	**+1.2**
MLSB	**Milas**	**0.93**	**45**	*e*Pg	**Pn**	**11 19 32.8**	**+1.2**
ARG	**Arkhangelos**	**1.04**	**114**	⇑*i*PN	**Pn**	**11 19 34.3**	**+1.8**
ARG				*e*SN	**Sn**	**11 19 53.0**	**+1.7**
ARG	**Arkhangelos**	**1.04**	**114**	⇑*i*Pn	**Pn**	**11 19 34.3**	**+1.8**
ARG				*e*Sn	**Sn**	**11 19 53.0**	**+1.7**
GCAM	**G?zelcaml?**	**1.08**	**12**	*i* P	**Pn**	**11 19 33.7**	**+0.8**
GCAM	**G?zelcaml?**	**1.08**	**12**	*i* P	**Pn**	**11 19 33.7**	**+0.8**
KARP	**Karpathos**	**1.10**	**171**	⇑*i*PN	**Pn**	**11 19 34.3**	**+1.1**
KARP	**Karpathos**	**1.10**	**171**	⇑*i*Pn	**Pn**	**11 19 34.3**	**+1.1**
YER	**Yerkesik**	**1.18**	**65**	*e*PN	**Pn**	**11 19 35.2**	**+1.3**
YER	**Yerkesik**	**1.18**	**65**	*e*Pn	**Pn**	**11 19 35.2**	**+1.3**
APE	**Apeiranthos**	**1.22**	**291**	*e*PN	**Pn**	**11 19 35.0**	**+0.7**
APE	**Apeiranthos**	**1.22**	**291**	*e*Pn	**Pn**	**11 19 35.0**	**+0.7**
TURN	**Turunc**	**1.35**	**80**	*i* P	**Pn**	**11 19 33.7**	**-1.7**
TURN				*i* S	**Sn**	**11 19 51.0**	**-5.5**
TURN	**Turunc**	**1.35**	**80**	*i* P	**Pn**	**11 19 33.7**	**-1.7**
DALY	**Dalyan (Mu˘la**	**1.38**	**82**	*e*PN	**Pn**	**11 19 37.8**	**+2.0**
DALY	**Dalyan (Mu˘la**	**1.38**	**82**	*e*Pn	**Pn**	**11 19 37.8**	**+2.0**
ZKR	**Zakros**	**1.64**	**202**	P	**Pn**	**11 19 40.4**	**+1.8**
ZKR	**Zakros**	**1.64**	**202**	*e*PN	**Pn**	**11 19 40.0**	**+1.4**
ZKR	**Zakros**	**1.64**	**202**	*e*Pn	**Pn**	**11 19 40.0**	**+1.4**
ZKR	**Zakros**	**1.64**	**202**	P	**Pn**	**11 19 40.4**	**+1.8**
FETY	**Fethiye**	**1.71**	**90**	*e*PN	**Pn**	**11 19 41.5**	**+2.1**
FETY	**Fethiye**	**1.71**	**90**	*e*Pn	**Pn**	**11 19 41.5**	**+2.1**
BLCB	**Balcova**	**1.74**	**2**	*e*PN	**Pn**	**11 19 40.4**	**+0.7**
BLCB	**Balcova**	**1.74**	**2**	*e*Pn	**Pn**	**11 19 40.4**	**+0.7**
NPS	**Neapolis**	**1.75**	**219**	P	**Pn**	**11 19 40.7**	**+0.8**
NPS				S	**Sn**	**11 20 04.0**	**-0.4**
NPS	**Neapolis**	**1.75**	**219**	*e*PN	**Pn**	**11 19 40.6**	**+0.7**
NPS	**Neapolis**	**1.75**	**219**	*e*Pn	**Pn**	**11 19 40.6**	**+0.7**
NPS				S	**Sn**	**11 20 04.0**	**-0.4**
IZM	**Izmir**	**1.77**	**8**	*e*PN	**Pn**	**11 19 40.7**	**+0.6**
IZM	**Izmir**	**1.77**	**8**	*e*Pn	**Pn**	**11 19 40.7**	**+0.6**
CHOS	**Chios island**	**1.88**	**338**	P	**Pn**	**11 19 42.3**	**+0.9**
CHOS	**Chios island**	**1.88**	**338**	P	**Pn**	**11 19 42.3**	**+0.9**
LAST	**Lasithi**	**1.90**	**219**	P	**Pn**	**11 19 42.3**	**+0.6**
LAST				S	**Sn**	**11 20 07.0**	**-0.5**
LAST	**Lasithi**	**1.90**	**219**	*e*PN	**Pn**	**11 19 42.4**	**+0.7**
LAST				*e*SN	**Sn**	**11 20 07.0**	**-0.5**
LAST	**Lasithi**	**1.90**	**219**	*e*Pn	**Pn**	**11 19 42.4**	**+0.7**
LAST				S	**Sn**	**11 20 07.0**	**-0.5**
DENT	**Denizli**	**2.00**	**56**	*e*PN	**Pn**	**11 19 44.1**	**+1.4**
DENT	**Denizli**	**2.00**	**56**	*e*Pn	**Pn**	**11 19 44.1**	**+1.4**
XRY	**Khrisi**	**2.04**	**211**	*e*PB	**Pn**	**11 19 44.1**	**+0.9**
XRY	**Khrisi**	**2.04**	**211**	*e*Pb	**Pn**	**11 19 44.1**	**+0.9**
GLHS	**Glhisar (BURDU**	**2.10**	**75**	*e*PN	**Pn**	**11 19 46.5**	**+2.5**
GLHS	**Glhisar (BURDU**	**2.10**	**75**	*e*Pn	**Pn**	**11 19 46.5**	**+2.5**
IDI	**Anoyia**	**2.15**	**232**	P	**Pn**	**11 19 45.0**	**+0.5**
IDI				S	**Sn**	**11 20 11.3**	**-1.4**
IDI	**Anoyia**	**2.15**	**232**	*e*PN	**Pn**	**11 19 45.1**	**+0.5**
IDI				*e*SN	**Sn**	**11 20 11.4**	**-1.3**
IDI	**Anoyia**	**2.15**	**232**	*e*Pn	**Pn**	**11 19 45.1**	**+0.5**
IDI				*e*Sn	**Sn**	**11 20 11.4**	**-1.3**
AKAS	**Kas**	**2.18**	**100**	*i* P	**Pn**	**11 19 46.8**	**+1.8**
AKAS				*i* S	**Sn**	**11 20 10.4**	**-3.0**
AKAS	**Kas**	**2.18**	**100**	*i* P	**Pn**	**11 19 46.8**	**+1.8**
AKAS				*i* S	**Sn**	**11 20 10.4**	**-3.0**
KULA	**Kula-Manisa**	**2.31**	**35**	*e*PN	**Pn**	**11 19 47.4**	**+0.9**
KULA	**Kula-Manisa**	**2.31**	**35**	*e*Pn	**Pn**	**11 19 47.4**	**+0.9**
SIVA	**Sivas**	**2.38**	**228**	P	**Pn**	**11 19 48.7**	**+1.4**
SIVA				S	**Sn**	**11 20 17.6**	**+0.1**
SIVA	**Sivas**	**2.38**	**228**	*e*PN	**Pn**	**11 19 48.0**	**+0.7**
SIVA				*e*SN	**Sn**	**11 20 18.0**	**+0.5**
SIVA	**Sivas**	**2.38**	**228**	*e*Pn	**Pn**	**11 19 48.0**	**+0.7**
SIVA	**Sivas**	**2.38**	**228**	P	**Pn**	**11 19 48.7**	**+1.4**
SIVA				S	**Sn**	**11 20 17.6**	**+0.1**
SIVA				*e*Sn	Sn	11 20 18.0	+0.5
ELL	**Elmali**	**2.38**	**87**	*e*PN	**Pn**	**11 19 50.0**	**+2.6**
ELL	**Elmali**	**2.38**	**87**	*e*Pn	**Pn**	**11 19 50.0**	**+2.6**
VAM	**Vamos**	**2.55**	**242**	P	**Pn**	**11 19 50.1**	**+0.7**
VAM				S	**Sn**	**11 20 19.5**	**-1.8**
VAM	**Vamos**	**2.55**	**242**	*e*PN	**Pn**	**11 19 50.1**	**+0.7**
VAM	**Vamos**	**2.55**	**242**	P	**Pn**	**11 19 50.1**	**+0.7**
VAM				S	**Sn**	**11 20 19.5**	**-1.8**
KORT	**Korkueli**	**2.75**	**81**	*i* P	**Pn**	**11 19 53.5**	**+1.5**
KORT				*i* S	Sn	11 20 18.4	-7.7
KORT	**Korkueli**	**2.75**	**81**	*i* P	**Pn**	**11 19 53.5**	**+1.5**
GVD	**Gavdhos**	**2.94**	**233**	P	**Pn**	**11 19 55.8**	**+1.5**
GVD				S	**Sn**	**11 20 28.9**	**-1.3**
GVD	**Gavdhos**	**2.94**	**233**	*e*PN	**Pn**	**11 19 55.6**	**+1.3**
GVD	**Gavdhos**	**2.94**	**233**	*e*Pn	**Pn**	**11 19 55.6**	**+1.3**
GVD				S	**Sn**	**11 20 28.9**	**-1.3**
ANKY	**Antikythira Is**	**3.05**	**256**	*e*PN	**Pn**	**11 19 56.2**	**+0.5**
ANKY	**Antikythira Is**	**3.05**	**256**	*e*Pn	**Pn**	**11 19 56.2**	**+0.5**
DID	**Didima**	**3.09**	**287**	P	**Pn**	**11 19 57.7**	**+1.4**
DID	**Didima**	**3.09**	**287**	*e*PN	**Pn**	**11 19 56.2**	**-0.1**
DID	**Didima**	**3.09**	**287**	*e*Pn	**Pn**	**11 19 56.2**	**-0.1**
DID	**Didima**	**3.09**	**287**	P	**Pn**	**11 19 57.7**	**+1.4**
KYTH	**Kithira**	**3.18**	**265**	P	**Pn**	**11 19 58.4**	**+1.1**
KYTH	**Kithira**	**3.18**	**265**	*e*PN	**Pn**	**11 19 58.4**	**+1.1**
KYTH	**Kithira**	**3.18**	**265**	P	**Pn**	**11 19 58.4**	**+1.1**
VLI	**Veliai**	**3.23**	**273**	P	**Pn**	**11 19 59.0**	**+1.0**
VLI				S	**Sn**	**11 20 34.7**	**-2.0**
VLI	**Veliai**	**3.23**	**273**	*e*PB	**Pn**	**11 19 58.9**	**+1.0**
VLI	**Veliai**	**3.23**	**273**	P	**Pn**	**11 19 59.0**	**+1.0**
VLI				S	**Sn**	**11 20 34.7**	**-2.0**
LTK	**Loutraki**	**3.46**	**295**	P	**Pn**	**11 20 02.4**	**+1.4**
LTK	**Loutraki**	**3.46**	**295**	P	**Pn**	**11 20 02.4**	**+1.4**
AOS	**Alonnisos**	**3.50**	**317**	P	**Pn**	**11 20 03.0**	**+1.5**
AOS	**Alonnisos**	**3.50**	**317**	P	**Pn**	**11 20 03.0**	**+1.5**
DYR	**Agios Nikonas**	**3.71**	**273**	P	**Pn**	**11 20 06.6**	**+2.3**
DYR				S	**Sn**	**11 20 46.8**	**-1.2**
DYR	**Agios Nikonas**	**3.71**	**273**	P	**Pn**	**11 20 06.6**	**+2.3**
DYR				S	**Sn**	**11 20 46.8**	**-1.2**
ITM	**Ithomi**	**4.06**	**279**	P	**Pn**	**11 20 10.9**	**+2.1**
ITM	**Ithomi**	**4.06**	**279**	P	**Pn**	**11 20 10.9**	**+2.1**
KIZT	**Kizilcal**	**4.50**	**59**	*e*PN	**Pn**	**11 20 16.7**	**+2.0**
KIZT	**Kizilcal**	**4.50**	**59**	*e*Pn	**Pn**	**11 20 16.7**	**+2.0**
SLUM	**Sluman** baz=200	**5.33**	**196**	S	**Sn**	**11 21 22.1**	**-4.2**
SLUM	comp=N,140µm,0.2s,logA/T=5.9,baz=200			AMP		11 21 00.0	
SLUM	**Sluman**	**5.33**	**196**	P	**Pn**	**11 20 26.2**

VAY				S		Sg	11 35 16.8	-0.1
VAY				*i* Sg		Sg	11 35 17.3	+0.4
VAY				*e*Lg		Lg	11 35 17.3	
	comp=N,3μm,0.3s							
KNT	**Kendrikon**	**0.20**	**133**	P		**Pg**	**11 35 16.7**	**+0.2**
KNT				S		**Sg**	**11 35 19.6**	**+0.2**
KNT	**Kendrikon**	**0.20**	**133**	P		**Pg**	**11 35 16.7**	**+0.2**
KNT				S		**Sg**	**11 35 19.6**	**+0.2**
GRG	**Griva**	**0.41**	**214**	P		**Pg**	**11 35 20.6**	**+0.2**
GRG				S		**Sg**	**11 35 26.7**	**+0.9**
GRG	**Griva**	**0.41**	**214**	*e*PB		**Pg**	**11 35 20.5**	**+0.2**
GRG				*e*SB		**Sg**	**11 35 26.1**	**+0.3**
GRG	**Griva**	**0.41**	**214**	*e*Pb		**Pg**	**11 35 20.5**	**+0.2**
GRG				*e*Sb		**Sg**	**11 35 26.1**	**+0.3**
SOH	**Sokhos**	**0.69**	**134**	P		**Pg**	**11 35 25.2**	**-0.3**
SOH				S		**Sg**	**11 35 34.1**	**-0.4**
SOH	**Sokhos**	**0.69**	**134**	*e*PN		**Pg**	**11 35 25.2**	**-0.3**
SOH				*e*SN		**Sg**	**11 35 34.3**	**-0.2**
SOH	**Sokhos**	**0.69**	**134**	P		**Pg**	**11 35 25.2**	**-0.3**
SOH				*e*Sn		**Sg**	**11 35 34.3**	**-0.2**
SRS	**Serrai**	**0.69**	**105**	P		**Pg**	**11 35 25.5**	**-0.1**
SRS				S		**Sb**	**11 35 35.9**	**0.0**
SRS	**Serrai**	**0.69**	**105**	P		**Pg**	**11 35 25.5**	**-0.1**
SRS				S		**Sb**	**11 35 35.9**	**0.0**
THE	**Thessaloniki**	**0.70**	**163**	P		**Pg**	**11 35 25.6**	**0.0**
THE				S		**Sg**	**11 35 34.6**	**-0.2**
THE	**Thessaloniki**	**0.70**	**163**	P		**Pg**	**11 35 25.6**	**0.0**
THE				S		**Sg**	**11 35 34.6**	**-0.2**
HORT	**Hortiatis**	**0.76**	**157**	P		**Pg**	**11 35 26.7**	**-0.2**
HORT				S		**Sg**	**11 35 37.1**	**+0.2**
HORT	**Hortiatis**	**0.76**	**157**	P		**Pg**	**11 35 26.7**	**-0.2**
HORT				S		**Sg**	**11 35 37.1**	**+0.2**
NVR	**Nevrokopi**	**0.87**	**86**	P		**Pb**	**11 35 29.0**	**-0.4**
NVR				S		**Sb**	**11 35 40.8**	**-0.3**
NVR	**Nevrokopi**	**0.87**	**86**	*e*PN		**Pb**	**11 35 28.9**	**-0.4**
NVR				*e*SN		**Sb**	**11 35 40.9**	**-0.2**
NVR	**Nevrokopi**	**0.87**	**86**	P		**Pb**	**11 35 29.0**	**-0.4**
NVR				S		**Sb**	**11 35 40.8**	**-0.3**
BIA	**Bitola**	**1.08**	**255**	*e*Pg		**Pn**	**11 35 33.4**	**+0.1**
BIA	**Bitola**	**1.08**	**255**	*e*Pg		**Pn**	**11 35 33.3**	**+0.1**
PLG	**Polygyros**	**1.08**	**148**	P		**Pg**	**11 35 32.4**	**-0.6**
PLG				S		**Sn**	**11 35 48.0**	**-0.3**
PLG	**Polygyros**	**1.08**	**148**	*e*PN		**Pg**	**11 35 32.5**	**-0.6**
PLG				*e*SN		**Sg**	**11 35 46.4**	**-0.7**
PLG	**Polygyros**	**1.08**	**148**	P		**Pg**	**11 35 32.4**	**-0.6**
PLG				*e*Sn		**Sg**	**11 35 46.4**	**-0.7**
FNA	**Florina**	**1.13**	**243**	P		**Pn**	**11 35 34.4**	**+0.4**
FNA				S		**Sn**	**11 35 49.3**	**-0.2**
FNA	**Florina**	**1.13**	**243**	*e*PN		**Pn**	**11 35 34.2**	**+0.2**
FNA	**Florina**	**1.13**	**243**	P		**Pn**	**11 35 34.4**	**+0.4**
FNA				S		**Sn**	**11 35 49.3**	**-0.2**
SKO	**Skopje**	**1.16**	**306**	P		**Pn**	**11 35 35.5**	**+1.1**
SKO	**Skopje**	**1.16**	**306**	*e*Pn		**Pn**	**11 35 35.0**	**+0.6**
SKO				*e*Sn		**Sn**	**11 35 51.4**	**+1.2**
SKO				*e*Lg		Lg	11 35 52.9	
	comp=E,34nm,0.5s							
SKO				*e*Lg		Lg	11 35 53.7	
	comp=N,57nm,0.4s							
SKO	**Skopje**	**1.16**	**306**	*e*Pg		**Pg**	**11 35 31.8**	**-2.7**
SKO				*e*Sg		**Sb**	**11 35 49.6**	**+0.3**
SKO	**Skopje**	**1.16**	**306**	*e*Pn		**Pn**	**11 35 35.4**	**+1.1**
SKO				*e*Sg		**Sb**	**11 35 49.8**	**+0.3**
SKO				*e*Sn		**Sn**	**11 35 51.8**	**+1.6**
SKO				*e*Lg		Lg	11 35 54.1	
	comp=N,57nm,0.4s							
LIT	**Litokhoron**	**1.21**	**188**	P		**Pb**	**11 35 34.3**	**-0.8**
LIT	**Litokhoron**	**1.21**	**188**	*e*PN		**Pb**	**11 35 34.5**	**-0.6**
LIT	**Litokhoron**	**1.21**	**188**	P		**Pb**	**11 35 34.3**	**-0.8**
VTS	**Vitosha**	**1.34**	**16**	P		**Pg**	**11 35 38.0**	**0.0**
VTS				S		**Sg**	**11 35 56.0**	**+0.4**
VTS	**Vitosha**	**1.34**	**16**	*e*Pg		**Pg**	**11 35 37.9**	**0.0**
VTS				*e*Sg		**Sg**	**11 35 55.9**	**+0.4**
VTS	**Vitosha**	**1.34**	**16**	P		**Pg**	**11 35 38.0**	**0.0**
VTS				*e*Sg		**Sg**	**11 35 55.9**	**+0.4**
OUR	**Ouranopolis**	**1.37**	**134**	P		**Pg**	**11 35 37.9**	**-0.5**
OUR				S		**Sg**	**11 35 57.1**	**+0.9**
OUR	**Ouranopolis**	**1.37**	**134**	P		**Pg**	**11 35 37.9**	**-0.5**
KAVA	**Kavala**	**1.40**	**102**	P		**Pg**	**11 35 38.4**	**-0.7**
KAVA				S		**Sg**	**11 35 56.8**	**-0.4**
KAVA	**Kavala**	**1.40**	**102**	P		**Pg**	**11 35 38.4**	**-0.7**
PAIG	**Paliouri**	**1.56**	**151**	P		**Pb**	**11 35 40.8**	**-0.2**
PAIG				S		**Sg**	**11 36 02.5**	**+0.2**
PAIG	**Paliouri**	**1.56**	**151**	*e*PN		**Pb**	**11 35 40.8**	**-0.2**
PAIG	**Paliouri**	**1.56**	**151**	P		**Pb**	**11 35 40.8**	**-0.2**
PAIG				S		**Sg**	**11 36 02.5**	**+0.2**
BARS	**Barje**	**1.65**	**337**	*e*Pg		**Pb**	**11 35 42.1**	**-0.6**
BARS				*e*Sg		**Sb**	**11 36 03.5**	**0.0**
BARS	**Barje**	**1.65**	**337**	*e*Pg		**Pb**	**11 35 42.1**	**-0.6**
BARS				*e*Sg		**Sb**	**11 36 03.5**	**0.0**
ZAPS	**Zavoj**	**1.97**	**359**	*e*Pg		**Pb**	**11 35 47.9**	**-0.2**
ZAPS				*e*Sg		**Sb**	**11 36 13.9**	**+1.2**
AGG	**Agios Georgios**	**2.29**	**187**	*e*PB		**Pn**	**11 35 51.0**	**+1.0**
AGG	**Agios Georgios**	**2.29**	**187**	*e*Pb		**Pn**	**11 35 51.0**	**+1.0**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*PN		**Pb**	**11 35 52.3**	**-1.3**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*Pn		**Pb**	**11 35 52.3**	**-1.3**
AOS	**Alonnisos**	**2.31**	**157**	*e*PB		**Pn**	**11 35 50.7**	**+0.6**
AOS	**Alonnisos**	**2.31**	**157**	*e*Pb		**Pn**	**11 35 50.7**	**+0.6**
ALN	**Alexandroupoli**	**2.56**	**98**	P		**Pn**	**11 35 54.5**	**+1.0**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*PN		**Pn**	**11 35 54.5**	**+1.0**
ALN	**Alexandroupoli**	**2.56**	**98**	P		**Pn**	**11 35 54.5**	**+1.0**
BOLS	**Boljevac**	**2.59**	**348**	*e*Pn		**Pn**	**11 35 54.4**	**+0.4**
BOLS	**Boljevac**	**2.59**	**348**	*e*Pn		**Pn**	**11 35 54.4**	**+0.4**
GRUS	**Gruza**	**2.97**	**331**	*e*Pn		**Pn**	**11 35 59.1**	**-0.2**
GRUS	**Gruza**	**2.97**	**331**	*e*Pn		**Pn**	**11 35 59.1**	**-0.2**
DIVS	**Divibare**	**3.44**	**325**	*e*Pn		**Pn**	**11 36 06.0**	**+0.3**
DIVS	**Divibare**	**3.44**	**325**	*e*Pn		**Pn**	**11 36 06.0**	**+0.3**

*IDC **23** 11:40:51.9±1.0,2.°68S×120.°00E, h0km, mb4.1/5, mb1 4.3/7, mb1mx3.9/24, mbtmp4.1/7, ML3.3/2, MS3.6/16, Ms1 3.6/16, ms1mx3.4/39, Error ellipse: s-maj=59.3km s-min=16.3km az=64.0*
*ISCJB **23** 11:40:53.8±1.1,2.°82S±0.°04×119.°71E±0.°06, h19km±9km, mb4.2/11, MS3.6/13, Error ellipse: s-maj=10.0km s-min=7.0km az=167.9*
*DJA **23** 11:40:54.6±0.3,3.°S±4.°×12.°0E±.°, h10km, M5.2/5, mB8.0/2, mb5.9/2, MLv4.8/5, Mw(mB)8.3/2*
*NEIC **23** 11:40:58.8±1.4,2.°88S×119.°75E, h50km±14km, mb4.5/7, Error ellipse: s-maj=27.6km s-min=7.8km az=59.0*
ISC 23 11:40:53.8±1.5, 2.°87S±0.°04×119.°79E±0.°06, h8km±10km, n55, σ1¶25/39, mb4.5/11, MS3.6/13, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.18**	**170**	P	**Pg**	**11 40 57.1**	**-0.4**
SPSI	**Sidrap Palu**	**1.09**	**181**	P	**Pb**	**11 41 13.7**	**-1.1**
SKSI	**Soroako, Sulaw**	**1.58**	**78**	P	**Pb**	**11 41 22.9**	**-0.4**
KAPI	**Kappang**	**2.13**	**181**	*e*Pn	**Pn**	**11 41 29.9**	**+0.2**
KAPI				*e*Sn	**Sn**	**11 41 57.2**	**+0.9**
KAPI				Sn	**Sn**	**11 41 57.3**	**+1.0**
KAPI	**Kappang**	**2.13**	**181**	P	**Pn**	**11 41 29.5**	**-0.2**
KAPI	**Kappang**	**2.13**	**181**	Pn	**Pn**	**11 41 29.8**	**+0.2**
	33nm,0.3s,baz=354,slow=12,SNR=59						
KAPI				Sn	**Sn**	**11 41 57.3**	**+1.0**
	28nm,0.3s,baz=88,slow=15,SNR=7.3						
KAPI				LR	LR	11 42 26.6	
	comp=Z,2μm,18.6s,baz=1,9,slow=41						
BKSI	**Bulukumba**	**2.46**	**172**	P	**Pn**	**11 41 36.1**	**+1.9**
SGKI	**Sangatta, Kali**	**3.19**	**317**	P	Pg	11 41 58.8	+3.9
BSSI	**Bau Bau, Buton**	**3.33**	**168**	P	**Pb**	**11 41 54.4**	**+1.4**
LUWI	**Luwuk**	**3.49**	**59**	P	**Pn**	**11 41 49.2**	**+0.8**
KBKI	**Kotabaru**	**3.64**	**263**	P	**Pn**	**11 41 51.2**	**+0.8**
BBSI	**Bau Bau**	**3.80**	**133**	P	**Pb**	**11 42 00.3**	**-0.9**
MRSI	**Marisa**	**3.96**	**33**	P	**Pn**	**11 41 56.7**	**+1.9**
BBKI	**Banjar Baru**	**4.97**	**263**	P	Pn	11 42 12.2	+3.4
KMSI	**Cibinong**	**5.41**	**51**	P	Pb	11 42 25.0	-3.6
TNTI	**Ternate**	**8.40**	**65**	P	Pn	11 43 03.7	+7.9
KKM	**Kota Kinabalu**	**9.55**	**338**	Pn	**Pn**	**11 43 14.4**	**+2.7**
BJII	**Banjamegara**	**10.97**	**246**	P	Pn	11 43 40.6	+9.4
DAV	**Davao City (W)**	**11.44**	**30**	LR	LR	11 48 07.3	
	comp=Z,283nm,21.1s,baz=122,slow=39						
CBJI	**Citeko**	**13.37**	**254**	P	**P**	**11 44 13.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**16.19**	**160**	Pn	**P**	**11 44 44.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**16.19**	**160**	Pn	**P**	**11 44 44.4**	**-0.5**
	0.0nm,0.3s,baz=337,slow=14,SNR=4.1						
FITZ				LR	LR	11 52 45.0	
	comp=Z,341nm,18.9s,baz=115,slow=44						
PPI	**Padang Panjang**	**19.53**	**277**	P	**P**	**11 45 20.4**	**-1.5**
	3μm,1.1s						
IPM	**Ipoh**	**20.12**	**291**	P	Pn	11 45 29.5	-0.7
	31nm,1.4s						
JAY	**Jayapura**	**20.90**	**90**	P	Pn	11 45 42.6	+3.3
WRA	**Warramunga Arr**	**22.13**	**141**	P	**P**	**11 45 50.0**	**0.0**
WRA	**Warramunga Arr**	**22.13**	**141**	P	**P**	**11 45 50.0**	**0.0**
	5.6nm,0.8s,baz=319,slow=11,SNR=20						
WRAB	**Tennant Creek**	**22.13**	**141**	*e*P	**P**	**11 45 51.0**	**+0.9**
	8.3nm,0.9s						
AS31	**Alice Springs**	**24.78**	**148**	*e*P	**P**	**11 46 17.4**	**+1.2**
ASAR	**Alice Springs**	**24.78**	**148**	P	**P**	**11 46 16.2**	**0.0**
ASAR	**Alice Springs**	**24.78**	**148**	P	**P**	**11 46 16.2**	**0.0**
	3.1nm,0.9s,baz=335,slow=9.5,SNR=20						
ASAR				LR	LR	11 56 51.2	
	comp=Z,185nm,19.3s,baz=274,slow=39						
CMAR	**Chiang Mai Arr**	**29.50**	**317**	P	**P**	**11 47 00.1**	**+1.4**
CMAR	**Chiang Mai Arr**	**29.50**	**317**	P	**P**	**11 47 00.1**	**+1.4**
	0.8nm,0.7s,baz=150,slow=9.3,SNR=4.5						
NWAO	**Narrogin (SRO)**	**30.00**	**184**	LR	LR	11 57 36.7	
	comp=Z,182nm,21.9s,baz=17,slow=33						
CTA	**Charters Tower**	**30.98**	**126**	LR	LR	12 00 02.9	
	comp=Z,133nm,21.4s,baz=103,slow=37						
STKA	**Stephens Creek**	**35.41**	**147**	LR	LR	12 04 59.7	
	comp=Z,157nm,18.7s,baz=22,slow=41						
JNU	**Nakatsue**	**37.30**	**15**	LR	LR	12 04 15.9	
	comp=Z,68nm,19.1s,baz=64,slow=38						
PALK	**Pallekele**	**40.28**	**285**	LR	LR	12 04 56.7	
	comp=Z,107nm,18.6s,baz=111,slow=36						
MJAR	**Matsushiro Arr**	**42.81**	**22**	LR	LR	12 04 48.0	
	comp=Z,62nm,20.4s,baz=195,slow=34						
ASAJ	**Asahikawa**	**51.05**	**21**	LR	LR	12 08 40.2	
	comp=Z,59nm,22.0s,baz=232,slow=33						
ULN	**Ulaanbaatar**	**51.74**	**349**	*e*P	**P**	**11 50 01.3**	**-0.5**
	5.6nm,0.8s						
MK31	**Makanchi Array**	**59.45**	**331**	*e*P	**P**	**11 50 56.7**	**-0.4**
MKAR	**Makanchi Array**	**59.45**	**331**	P	**P**	**11 50 56.2**	**-1.0**
MKAR	**Makanchi Array**	**59.45**	**331**	P	**P**	**11 50 56.2**	**-1.0**
	6.4nm,0.8s,baz=120,slow=7.2,SNR=34						
TKM2	**Tokmak 2**	**60.51**	**324**	*e*P	**P**	**11 51 04.1**	**-0.6**
	6.8nm,1.3s						
AAK	**Ala-Archa**	**60.99**	**323**	*e*P	**P**	**11 51 07.9**	**-0.1**
	4.1nm,0.9s						
AAK	**Ala-Archa**	**60.99**	**323**	LR	LR	12 21 42.4	
	comp=Z,34nm,19.3s,baz=290,slow=40						
EKS2	**Erkin-Say**	**61.44**	**323**	*e*P	**P**	**11 51 09.9**	**-1.0**
	3.9nm,1.0s						
ZAA0	**Zalesovo Array**	**63.66**	**338**	*e*P	**P**	**11 51 23.4**	**-2.0**
ZALV	**Zalesovo Beam**	**63.66**	**338**	P	**P**	**11 51 22.9**	**-2.5**
ZALV	**Zalesovo Beam**	**63.66**	**338**	P	**P**	**11 51 22.9**	**-2.5**
	2.5nm,0.8s,baz=142,slow=4.6,SNR=12						
ZALV				LR	LR	12 19 07.5	
	comp=Z,24nm,18.0s,baz=67,slow=36						
ABKAR	**Akbulak array**	**73.07**	**324**	*e*P	**P**	**11 52 22.9**	**-1.6**
	1.8nm,0.8s						
GNI	**Garni**	**80.47**	**311**	LR	LR	12 31 26.2	
	comp=Z,28nm,20.3s,baz=237,slow=38						
BRTR	**Keskin Array B**	**88.85**	**310**	LR	LR	12 43 16.4	
	comp=Z,14nm,19.6s,baz=258,slow=42						
AKASG	**Malin Array Be**	**92.56**	**320**	LR	LR	12 39 56.1	
	comp=Z,30nm,19.7s,baz=200,slow=38						

*IDC **23** 12:01:27.7±3.8,27.°56N×92.°85E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/27, mbtmp3.5/4, Error ellipse: s-maj=271.1km s-min=22.0km az=63.0*
*ISCJB **23** 12:01:28.4±0.8,27.°59N±0.°06×92.°48E±0.°05, h17km, mb3.6/3, Error ellipse: s-maj=9.1km s-min=6.6km az=16.5*
*DMN **23** 12:01:28.9±0.6,27.°56N×92.°85E, h60km, Ml4.5/8, Error ellipse: s-maj=34.7km s-min=11.0km az=1.0*
ISC 23 12:01:29.9±1.2, 27.°55N±0.°09×92.°49E±0.°08, h17km, n15, σ1¶20/24, mb3.7/3, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.05**	**196**	*i* PN	**Pn**	**12 02 04.0**	**+0.3**
SHL				*i* SN	**Sn**	**12 02 29.0**	**0.0**
TAPN	**Taplejung**	**4.25**	**268**	*e*Pn	**Pn**	**12 02 35.1**	**+0.9**
TAPN				*e*Sn	**Sn**	**12 03 24.7**	**+1.1**
	170nm,0.4s						
ODAN	**Odare**	**4.59**	**263**	*e*Pn	**Pn**	**12 02 39.7**	**+0.9**
ODAN				*e*Sn	**Sn**	**12 03 32.3**	**+0.3**
	227nm,0.3s						
RAMN	**Ramite**	**5.28**	**265**	*e*Pn	**Pn**	**12 02 49.0**	**+0.7**
RAMN				*e*Sn	**Sn**	**12 03 48.8**	**-0.1**
	111nm,0.4s						
GUN	**Gumba**	**5.87**	**275**	*e*Pn	**Pn**	**12 02 57.6**	**+1.1**
GUN				*e*Sn	**Sn**	**12 04 03.7**	**+0.1**
	67nm,0.3s						
PKI	**Pulchoki**	**6.29**	**272**	*e*Pn	**Pn**	**12 03 02.6**	**+0.4**
PKIN	**Phulchoki**	**6.30**	**272**	*e*Pn	**Pn**	**12 03 03.2**	**+0.9**
KKN	**Kakani**	**6.40**	**274**	*e*Pn	**Pn**	**12 03 05.1**	**+1.5**
KKN				*e*Sn	**Sn**	**12 04 16.2**	**-0.3**
	58nm,0.2s						
DMN	**Daman**	**6.56**	**272**	*e*Pn	**Pn**	**12 03 07.2**	**+1.4**
DMN				*e*Sn	**Sn**	**12 04 19.9**	**-0.4**
	41nm,0.4s						
DANN	**Dangsing**	**7.76**	**278**	*e*Pn	**Pn**	**12 03 21.6**	**-0.8**
DANN				*e*Sn	**Sn**	**12 04 47.1**	**-3.1**
	37nm,0.2s						
KOLN	**Koldanda**	**7.89**	**274**	*e*Pn	**Pn**	**12 03 24.1**	**0.0**
KOLN				*e*Sn	**Sn**	**12 04 50.5**	**-2.6**
	44nm,0.2s						
MKAR	**Makanchi Array**	**20.83**	**340**	P	**P**	**12 06 11.1**	**+0.5**
	0.4nm,0.4s,baz=148,slow=13,SNR=7.0						
ZALV	**Zalesovo Beam**	**26.98**	**350**	P	**P**	**12 07 11.9**	**+1.4**
	0.4nm,0.5s,baz=165,slow=12,SNR=3.5						
WRA	**Warramunga Arr**	**62.21**	**135**	P	**P**	**12 11 50.0**	**-0.8**
	0.6nm,0.5s,baz=325,slow=7.0,SNR=18						
ASAR	**Alice Springs**	**64.73**	**138**	P	**P**	**12 12 06.5**	**-0.9**
	0.3nm,0.5s,baz=324,slow=6.6,SNR=7.7						

*IDC **23** 12:22:42.1±1.6,31.°02N×49.°90E, h0km, mb3.8/9, mb1 3.8/13, mb1mx3.6/32, mbtmp3.7/13, ML3.5/4, MS2.8/1, Ms1 2.8/1, ms1mx2.1/42, Error ellipse: s-maj=34.7km s-min=19.2km az=165.0*
*THR **23** 12:22:45.6±0.4,30.°90N×49.°84E, h39km±5km, ML4.0*
*CSEM **23** 12:22:45.2±0.1,31.°04N×49.°92E, h2km, ML4.0, Error ellipse: s-maj=2.3km s-min=1.7km az=136.0*
*TEH **23** 12:22:48.5,31.°05N×49.°94E, h25km, ML3.7*
ISC 23 12:22:45.7±1.3, 31.°03N±0.°03×49.°90E±0.°03, h14km±9km, n67, σ1¶32/69, mb3.8/12, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.43**	**319**	*e*Pg	**Pg**	**12 23 12.9**	**-0.2**
SHGR				AML	AML	12 23 35.7	
	comp=N,3μm,0.4s						
SHGR				AML	AML	12 23 36.5	
	comp=E,2μm,0.6s						
SHGR	**Shooshtar-Gavs**	**1.43**	**319**	*e*Pg	**Pg**	**12 23 12.9**	**-0.2**
IGAR	**Gharneh**	**2.28**	**53**	*e*Pn	**Pn**	**12 23 24.3**	**+1.2**
IGAR				*e*	**Sg**	**12 24 00.5**	**+1.6**
	comp=Z,3μm,0.1s						
UMR	**Umm Al-Rimmam**	**2.40**	**233**	*e*P	**Pn**	**12 23 25.2**	**+0.6**
UMR				AML	AML	12 24 05.4	
	comp=Z,328nm,0.4s						
UMR	**Umm Al-Rimmam**	**2.40**	**233**	*e*P	**Pn**	**12 23 25.2**	**+0.6**
MIB	**Mutribah**	**2.53**	**242**	*e*P	**Pn**	**12 23 27.6**	**+1.2**
MIB				AML	AML	12 24 14.5	
	comp=Z,452nm,0.6s						
MIB	**Mutribah**	**2.53**	**242**	*e*P	**Pn**	**12 23 27.6**	**+1.2**
KBD	**Kabd**	**2.66**	**227**	*e*P	**Pn**	**12 23 29.4**	**+1.2**
KBD				AML	AML	12 24 14.0	
	comp=Z,206nm,0.4s						
KBD	**Kabd**	**2.66**	**227**	*e*P	**Pn**	**12 23 29.4**	**+1.2**
IKLH	**Kolahrood**	**2.69**	**32**	*e*Pn	**Pn**	**12 23 29.9**	**+1.1**
IKLH				*e*		12 24 24.1	
	comp=Z,3μm,0.3s						
IKLH	**Kolahrood**	**2.69**	**32**	*e*Pn	**Pn**	**12 23 29.9**	**+1.1**
KHMZ	**Khomeyn**	**2.70**	**1**	*e*Pn	**Pn**	**12 23 30.5**	**+1.6**
KHMZ				*e*Sg	**Sg**	**12 24 12.4**	**0.0**
KHMZ				AML	AML	12 24 17.1	
	comp=E,229nm,0.8s						
KHMZ	**Khomeyn**	**2.70**	**1**	*e*Pn	**Pn**	**12 23 30.5**	**+1.6**
KHMZ				*e*Sg	**Sg**	**12 24 12.4**	**0.0**
IZEF	**Zefreh**	**2.77**	**47**	*e*Pn	**Pn**	**12 23 31.2**	**+1.2**
IZEF				*e*		12 23 38.5	
	comp=Z,1μm,0.2s						
IZEF				*e*Sg	**Sg**	**12 24 13.9**	**-1.0**
IZEF	**Zefreh**	**2.77**	**47**	*e*Pn	**Pn**	**12 23 31.2**	**+1.2**
IZEF				*e*Sg	**Sg**	**12 24 13.9**	**-1.0**
QRN	**Al-Qurain**	**2.86**	**218**	*e*P	**Pn**	**12 23 31.7**	**+0.8**
NAY	**Al-Naaiem**	**2.91**	**233**	*e*P	**Pn**	**12 23 33.1**	**+1.5**
NAY				AML	AML	12 24 21.2	
	comp=Z,85nm,0.7s						
NAY	**Al-Naaiem**	**2.91**	**233**	*e*P	**Pn**	**12 23 33.1**	**+1.5**
RDF	**Al-Radifah**	**2.93**	**225**	*e*P	**Pn**	**12 23 33.5**	**+1.6**
RDF	**Al-Radifah**	**2.93**	**225**	*e*P	**Pn**	**12 23 33.5**	**+1.6**
IPAR	**Pars**	**2.96**	**113**	*e*Pn	**Pn**	**12 23 33.0**	**+0.4**
IPAR				*e*		12 24 27.5	
	comp=Z,1μm,0.4s						
IPAR	**Pars**	**2.96**	**113**	*e*Pn	**Pn**	**12 23 33.0**	**+0.4**
ISRV	**Sarvestan**	**3.23**	**120**	*e*Sg	**Sg**	**12 24 29.1**	**-0.4**
ISRV	**Sarvestan**	**3.23**	**120**	*e*Sg	**Sg**	**12 24 29.1**	**-0.4**
ISAD	**Sadrabad**	**3.35**	**74**	*e*Pn	**Pn**	**12 23 38.8**	**+0.9**
ISAD				*e*	**Sn**	**12 24 21.3**	**+3.6**
	comp=Z,3μm,0.3s						
ISAD	**Sadrabad**	**3.35**	**74**	*e*Pn	**Pn**	**12 23 38.8**	**+0.9**
GHVR	**GHOM**	**3.63**	**18**	*e*Pn	**Pn**	**12 23 43.1**	**+1.5**
GHVR	**GHOM**	**3.63**	**18**	*e*Pn	**Pn**	**12 23 43.1**	**+1.5**
ICHK	**Chekchek**	**4.03**	**71**	*e*Pn	**Pn**	**12 23 48.0**	**+0.8**
ICHK				*e*		12 23 48.8	
	comp=Z,2μm,0.3s						
ICHK	**Chekchek**	**4.03**	**71**	*e*Pn	**Pn**	**12 23 48.0**	**+0.8**
IMEH	**Mehriz**	**4.05**	**84**	*e*Pn	**Pn**	**12 23 48.3**	**+0.8**
IMEH				*e*		12 24 37.9	
	comp=Z,328nm,0.2s						
IMEH	**Mehriz**	**4.05**	**84**	*e*Pn	**Pn**	**12 23 48.3**	**+0.8**
IVRN	**Varamin**	**4.24**	**21**	*e*Pn	**Pn**	**12 23 50.7**	**+0.8**
IVRN				*e*		12 24 06.0	
	comp=Z,571nm,0.1s						
IVRN	**Varamin**	**4.24**	**21**	*e*Pn	**Pn**	**12 23 50.8**	**+0.8**
IRAZ	**Razeghan**	**4.36**	**0**	*e*Pn	**Pn**	**12 23 52.8**	**+1.1**
IRAZ				*e*		12 25 16.8	
	comp=Z,948nm,0.3s						
IRAZ	**Razeghan**	**4.36**	**0**	*e*Pn	**Pn**	**12 23 52.8**	**+1.1**
SNGE	**Sanandaj**	**4.58**	**333**	*e*Pn	**Pn**	**12 23 55.6**	**+0.8**
SNGE	**Sanandaj**	**4.58**	**333**	*e*Pn	**Pn**	**12 23 55.6**	**+0.8**
IDHR	**Dehrash**	**4.70**	**322**	*e*Pn	**Pn**	**12 23 57.5**	**+1.1**
IDHR				*e*	**Sn**	**12 24 53.5**	**+2.5**
	comp=Z,4μm,0.1s						
IDHR	**Dehrash**	**4.70**	**322**	*e*Pn	**Pn**	**12 23 57.5**	**+1.1**
IDMV	**Damavand**	**4.87**	**21**	*e*Pn	**Pn**	**12 23 59.6**	**+0.8**
IDMV				*e*		12 24 59.5	
	comp=Z,382nm,0.2s						
IDMV	**Damavand**	**4.87**	**21**	*e*Pn	**Pn**	**12 23 59.6**	**+0.8**
ILAS	**Lasjerd**	**5.04**	**30**	*e*Pn	**Pn**	**12 24 01.6**	**+0.5**
ILAS				*e*		12 25 05.5	
	comp=N,586nm,0.1s						
ILAS	**Lasjerd**	**5.04**	**30**	*e*Pn	**Pn**	**12 24 01.6**	**+0.5**
IGZV	**Ghazvin**	**5.34**	**3**	*e*		12 24 32.8	
	comp=Z,272nm,0.2s						
IGZV				*e*Pn	**Pn**	**12 24 06.1**	**+0.8**
ISHM	**Shahmirzad**	**5.54**	**30**	*e*Pn	**Pn**	**12 24 08.6**	**+0.6**
ISHM				*e*		12 25 14.3	
	comp=Z,526nm,0.2s						
ISHM	**Shahmirzad**	**5.54**	**30**	*e*Pn	**Pn**	**12 24 08.6**	**+0.6**
IANJ	**Anjilo**	**5.55**	**36**	*e*		12 24 17.9	
	comp=Z,224nm,0.2s						
IANJ				*e*Pn	**Pn**	**12 24

MTVR	**Mutnovka**	**1.18**	**134**	*e*P		**Pn**		**12 32 55.4**	**+0.7**
SMAR	**Somma**	**1.20**	**91**	*e*P		**Pn**		**12 32 55.3**	**+0.5**
UGLR	**Uglovaya**	**1.22**	**94**	*e*P		**Pn**		**12 32 55.6**	**+0.8**
UGLR				*i* S		**S**		**12 33 27.2**	**+1.1**
SDLR	**Sedlovina**	**1.25**	**91**	*e*P		**Pn**		**12 32 55.3**	**+0.3**
RUS	**Russkaya**	**1.36**	**130**	*e*P		**Pn**		**12 32 55.2**	**-0.3**
RUS				*i* S		**S**		**12 33 25.8**	**-1.6**
NLC	**Nalytchevo**	**1.53**	**94**	*e*P		**Pn**		**12 32 56.4**	**-0.2**
NLC				*i* S		**S**		**12 33 28.1**	**-1.3**
PAU	**Pauzhetka**	**1.85**	**180**	P		**Pn**		**12 32 59.7**	**+0.6**
SPN	**Mys Shipunski**	**1.95**	**95**	*e*P		**Pn**		**12 32 58.7**	**-1.1**
SPN				*i* S		**S**		**12 33 31.3**	**-3.9**
SKR	**Severo-Kuril's**	**2.67**	**189**	*e*P		**Pn**		**12 33 06.8**	**+0.5**
TUMR	**Tumrok**	**2.78**	**43**	*e*P		**Pn**		**12 33 08.7**	**+1.2**
TUMR				*i* S		**S**		**12 33 49.8**	**+0.7**
ESO	**Esso**	**2.84**	**22**	*e*P		**Pn**		**12 33 08.6**	**+0.7**
KMNR	**Kamenistaya**	**3.16**	**38**	*e*P		**Pn**		**12 33 13.4**	**+2.1**
MKZ	**Mys Kozlova**	**3.17**	**65**	*e*P		**Pn**		**12 33 10.1**	**-1.1**
MKZ				*i* S		**S**		**12 33 51.2**	**-4.7**
BZGR	**Bezymyannyi-Gr**	**3.47**	**39**	*e*P		**Pn**		**12 33 15.9**	**+1.3**
LGNR	**Loginova**	**3.58**	**37**	*e*P		**Pn**		**12 33 17.8**	**+1.9**
KRSR	**Krestovskiy**	**3.64**	**35**	*e*P		**Pn**		**12 33 17.9**	**+1.5**
SMKR	**Semkarok**	**4.24**	**37**	*e*P		**Pn**		**12 33 24.3**	**+1.2**
SMKR				*i* S		**S**		**12 34 16.4**	**-1.0**
KBG	**Krutoberegovo**	**4.51**	**47**	*e*P		**Pn**		**12 33 27.6**	**+1.5**
KBG				*i* S		**S**		**12 34 21.3**	**-1.6**
FX1	**Attu Island--F**	**9.85**	**86**	P		**P**		**12 34 36.2**	**+0.1**
	comp=E,0.9nm,0.3s,baz=32,slow=12,SNR=6.8								
FX1				S		**S**		**12 36 24.6**	**+2.2**
	comp=E,0.7nm,0.3s,baz=96,slow=18,SNR=7.8								
YAK	**Yakutsk**	**16.81**	**312**	*e*P		**P**		**12 35 50.0**	**-2.8**
YAK				pmax	pmax				
	comp=N,8.0nm,1.9s								
YAK				pmax	pmax				
	comp=E,7.0nm,0.9s								
YAK				pmax	pmax				
	comp=Z,13nm,0.9s								
MJAR	**Matsushiro Arr**	**21.21**	**225**	P		**P**		**12 36 41.4**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=303,slow=15,SNR=5.6								
ILAR	**Eielson Array**	**30.07**	**45**	P		**P**		**12 37 58.5**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=268,slow=6.2,SNR=8.6								
YKA	**Yellowknife Ar**	**44.33**	**42**	P		**P**		**12 39 57.8**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=300,slow=8.2,SNR=3.1								
KURK	**Kurchatov**	**45.93**	**300**	P		**P**		**12 40 09.4**	**-0.6**
KURBB	**Kurchatov Arra**	**46.03**	**300**	P		**P**		**12 40 09.4**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=63,slow=4.3,SNR=2.4								
MKAR	**Makanchi Array**	**46.27**	**294**	P		**P**		**12 40 11.1**	**-1.7**
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.5s								
MKAR	**Makanchi Array**	**46.27**	**294**	P		**P**		**12 40 11.1**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=56,slow=7.2,SNR=11								
BVAR	**Borovoye Array**	**48.69**	**307**	P		**P**		**12 40 29.7**	**-1.5**
BVAR				pmax	pmax				
	comp=Z,1.0nm,0.4s								
BVAR	**Borovoye Array**	**48.69**	**307**	P		**P**		**12 40 29.7**	**-1.5**
	comp=Z,1.3nm,0.4s,baz=56,slow=6.7,SNR=14								
ARCES	**ARCESS Array B**	**52.44**	**341**	P		**P**		**12 40 57.6**	**-1.2**
	comp=Z,1.3nm,0.9s,baz=36,slow=9.0,SNR=3.6								
CMAR	**Chiang Mai Arr**	**56.31**	**255**	P		**P**		**12 41 27.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=30,slow=7.7,SNR=3.3								
NVAR	**Mina Array Bea**	**57.51**	**68**	P		**P**		**12 41 37.1**	**+1.5**
	comp=Z,1.0nm,1.1s,baz=284,slow=8.2,SNR=4.4								
FINES	**FINESS Array B**	**59.11**	**335**	P		**P**		**12 41 44.2**	**-1.7**
	comp=Z,1.1nm,0.9s,baz=26,slow=9.3,SNR=4.4								
PDAR	**Pinedale Array**	**59.12**	**59**	P		**P**		**12 41 47.6**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=338,slow=3.2,SNR=4.6								
TXAR	**Lajitas Array**	**72.35**	**65**	P		**P**		**12 43 11.8**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=296,slow=4.9,SNR=13								
WRA	**Warramunga Arr**	**75.50**	**202**	P		**P**		**12 43 28.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=16,slow=5.9,SNR=6.3								
ASAR	**Alice Springs**	**79.19**	**201**	P		**P**		**12 43 50.2**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=15,slow=5.3,SNR=7.7								

IDC 23 12:43:00.9±3.0, 2.55N×95.70E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/26, mbtmp3.6/6, ML3.9/1, Error ellipse: s-maj=112.9km s-min=21.3km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.12**	**11**	Pn	Pn	12 46 50.6	+1.5
	0.2nm,0.3s,baz=201,slow=11,SNR=6.2						
WRA	**Warramunga Arr**	**44.02**	**122**	P	P	12 51 10.6	-0.1
	0.2nm,0.5s,baz=302,slow=9.7,SNR=3.7						
ASAR	**Alice Springs**	**45.40**	**127**	P	P	12 51 21.7	-0.1
	0.4nm,1.0s,baz=301,slow=8.1,SNR=2.8						
MKAR	**Makanchi Array**	**45.59**	**347**	P	P	12 51 22.8	0.0
	0.7nm,0.5s,baz=160,slow=8.8,SNR=8.8						
SONM	**Songino Array**	**46.04**	**10**	P	P	12 51 25.7	-0.8
	0.8nm,0.5s,baz=202,slow=7.2,SNR=2.8						
ZALV	**Zalesovo Beam**	**52.00**	**352**	P	P	12 52 11.9	0.0
	0.9nm,0.5s,baz=176,slow=6.5,SNR=5.8						

IDC 23 12:50:14.8±1.7, 35.20N×141.39E, h0km, mb3.4/4, mb1 3.5/7, mb1mx3.3/28, mbtmp3.4/7, ML3.3/3, MS3.7/1, Ms1 3.7/1, ms1mx2.1/33, Error ellipse: s-maj=46.4km s-min=19.9km az=76.0

ISCJB 23 12:50:16.8±1.1, 35.24N±0.04×141.32E±0.08, h30km±6km, mb3.5/4, MS3.7/1, Error ellipse: s-maj=10.5km s-min=5.9km az=175.8

JMA 23 12:50:17.3±0.1, 35.28N×141.27E, h37km±2km, M3.1

ISC 23 12:50:16.9±1.9, 35.24N±0.04×141.29E±0.08, h17km±11km, n18, σ1§11/25, mb3.5/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.58**	**323**	P	**Pg**	**12 50 28.4**	**-0.1**
CHOJ				S	**Sb**	**12 50 36.7**	**-0.1**
BSO1	**Boso 1**	**0.64**	**204**	P	**Pn**	**12 50 30.3**	**-0.4**
BSO1				*e*S	**Sn**	**12 50 39.8**	**-0.4**
BSO3	**Boso 3**	**0.78**	**236**	P	**Pg**	**12 50 32.1**	**+0.1**
BSO3				*e*S	**Sb**	**12 50 42.5**	**+0.5**
KTR	**Katsuura**	**0.81**	**264**	P	**Pb**	**12 50 32.2**	**-0.3**
KTR				*e*S	**Sb**	**12 50 42.7**	**-0.4**
BSO4	**Boso 4**	**0.82**	**253**	P	**Pb**	**12 50 32.7**	**0.0**
BSO4				*e*S	**Sb**	**12 50 44.0**	**+0.5**
JCN	**Nagara**	**0.91**	**282**	P	**Pb**	**12 50 34.4**	**+0.1**
JYT	**Yasato**	**1.33**	**318**	P	**Pn**	**12 50 39.6**	**-1.2**
JYT				S	**Sn**	**12 50 57.4**	**-0.8**
JHO	**Hitachi**	**1.49**	**337**	P	**Pn**	**12 50 41.6**	**-1.4**
JIM2	**Oshima 3**	**1.61**	**252**	P	**Pn**	**12 50 42.6**	**-2.1**
JHJ	**Hachijo jima 2**	**2.46**	**211**	Pn	**Pn**	**12 50 55.9**	**-0.3**
	9.9nm,0.3s,baz=62,slow=18,SNR=16						
JHJ				Sn	**Sn**	**12 51 22.8**	**-3.1**
	22nm,0.3s,baz=91,slow=24,SNR=5.1						
MJAR	**Matsushiro Arr**	**2.82**	**298**	Pn	**Pn**	**12 51 02.8**	**+1.4**
	3.0nm,0.3s,baz=90,slow=20,SNR=44						
MAT	**Matsushiro**	**2.83**	**298**	P	**Pn**	**12 51 03.0**	**+1.7**
MAT				*e*S	**Sn**	**12 51 35.1**	**+0.1**
ASAJ	**Asahikawa**	**8.93**	**6**	Pn	**Pn**	**12 52 25.1**	**+0.1**
	0.5nm,0.3s,baz=238,slow=30,SNR=5.7						
ZALV	**Zalesovo Beam**	**45.97**	**314**	P	**P**	**12 58 16.5**	**+0.8**
	0.4nm,0.4s,baz=86,slow=8.7,SNR=2.9						
MKAR	**Makanchi Array**	**45.01**	**304**	P	**P**	**12 58 32.4**	**+0.9**
	0.2nm,0.5s,baz=89,slow=6.4,SNR=2.8						
CTA	**Charters Tower**	**55.22**	**174**	LR	LR	13 22 22.2	
	comp=Z,60nm,18.2s,baz=246,slow=35						
WRA	**Warramunga Arr**	**55.27**	**188**	P	**P**	**12 59 49.5**	**+0.1**
	0.5nm,0.4s,baz=4.7,slow=8.0,SNR=25						
ASAR	**Alice Springs**	**59.00**	**188**	P	**P**	**13 00 16.4**	**+0.6**
	0.3nm,0.8s,baz=5.5,slow=6.9,SNR=4.1						

ISK 23 12:51:02.9, 37.42N×28.30E, h5km, MD2.5

ISCJB 23 12:51:05.6±0.5, 37.24N±0.05×28.23E±0.05, h14km±9km, Error ellipse: s-maj=9.4km s-min=4.4km az=36.6

CSEM 23 12:51:05.5±0.2, 37.24N×28.25E, h15km, MD2.5, Error ellipse: s-maj=5.3km s-min=3.4km az=25.0

DDA 23 12:51:06.0, 37.22N×28.19E, h7km, MD2.7

ISC 23 12:51:05.5±0.9, 37.24N±0.04×28.23E±0.03, h17km±7km, n19, σ0§45/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.11**	**158**	*e*PG	**Pg**	**12 51 09.0**	**-0.2**
YER	**Yerkesik**	**0.11**	**158**	*e*Pg	**Pg**	**12 51 09.0**	**-0.2**
MLSB	**Milas**	**0.37**	**279**	*e*PG	**Pg**	**12 51 12.1**	**-1.0**
MLSB				*e*SG	**Sg**	**12 51 18.6**	**+0.3**
MLSB	**Milas**	**0.37**	**279**	*e*Pg	**Pg**	**12 51 12.1**	**-1.0**
MLSB				*e*Sg	**Sg**	**12 51 18.6**	**+0.3**
TURN	**Turunc**	**0.47**	**141**	*i* P	**Pg**	**12 51 14.4**	**-0.5**
TURN				*i* S	**Sb**	**12 51 22.1**	**+0.2**
TURN	**Turunc**	**0.47**	**141**	*i* P	**Pg**	**12 51 14.4**	**-0.5**
TURN				*i* S	**Sb**	**12 51 22.1**	**+0.2**
AYDN	**Tasoluk**	**0.51**	**327**	*i* P	**Pb**	**12 51 16.5**	**+0.5**
AYDN				*i* S	**Sb**	**12 51 23.3**	**+0.2**
AYDN	**Tasoluk**	**0.51**	**327**	*i* P	**Pb**	**12 51 16.5**	**+0.5**
AYDN				*i* S	**Sb**	**12 51 23.3**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.54**	**141**	*e*PG	**Pg**	**12 51 16.2**	**0.0**
DALY				*e*SG	**Sn**	**12 51 26.1**	**-1.0**
DALY	**Dalyan (Mu¨la**	**0.54**	**141**	*e*Pg	**Pg**	**12 51 16.2**	**0.0**
BODT	**Bodrum**	**0.76**	**257**	*e*PG	**Pb**	**12 51 20.2**	**0.0**
BODT				*e*SG	**Sn**	**12 51 32.5**	**+0.1**
BODT	**Bodrum**	**0.76**	**257**	*e*Pg	**Pb**	**12 51 20.2**	**0.0**
BODT				*e*Sg	**Sn**	**12 51 32.5**	**+0.1**
DNZL	**Cakiroluk**	**0.79**	**55**	*i* P	**Pb**	**12 51 20.5**	**-0.4**
DNZL				*i* S	**Sb**	**12 51 31.6**	**+0.2**
DNZL	**Cakiroluk**	**0.79**	**55**	*i* P	**Pb**	**12 51 20.5**	**-0.4**
DNZL				*i* S	**Sb**	**12 51 31.6**	**+0.2**
DENT	**Denizli**	**0.82**	**51**	*e*PG	Pb	12 51 16.2	-5.1
FETY	**Fethiye**	**0.91**	**131**	*e*PG	**Pb**	**12 51 22.8**	**0.0**
FETY	**Fethiye**	**0.91**	**131**	*e*Pg	**Pb**	**12 51 22.8**	**0.0**
ELL	**Elmali**	**1.43**	**109**	*e*PN	**Pn**	**12 51 31.1**	**+0.4**
ELL	**Elmali**	**1.43**	**109**	*e*Pn	**Pn**	**12 51 31.1**	**+0.4**

ISCJB 23 12:53:42.7±1.1, 26.03S±0.07×69.0W±0.1, h101km, mb3.7/1, Error ellipse: s-maj=20.7km s-min=5.8km az=25.4

GUC 23 12:53:43.6±0.8, 26.03S×69.05W, h100km, ML4.1

IDC 23 12:53:47.6±12.0, 25.79S×68.61W, h116km±90km, mb3.5/1, mb1 3.4/2, mb1mx3.2/17, mbtmp3.3/2, ML3.6/1, Error ellipse: s-maj=110.6km s-min=83.1km az=62.0

ISC 23 12:53:43.8±1.2, 26.02S±0.09×69.1W±0.2, h101km, n7, σ0§87/11, 1C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**1.76**	**220**	⇓*i*P	**Pn**	**12 54 13.1**	**-0.3**
CPCH				*i* S	**Sn**	**12 54 36.2**	**+0.3**
CDCH	**Caldera**	**1.89**	**236**	*e*P	**Pn**	**12 54 15.3**	**+0.3**
CDCH				*i* S	**Sn**	**12 54 39.0**	**+0.4**
CDCH				AML	AML	12 54 43.6	
	comp=N,349nm,0.7s						
ANCH	**Antofagasta**	**2.62**	**332**	⇓*i*P	**Pn**	**12 54 24.9**	**+0.2**
ANCH				AML	AML	12 55 03.0	
	comp=N,886nm,0.0s						
LVC	**Limon Verde**	**3.39**	**3**	⇑*i*P	**Pn**	**12 54 36.3**	**+1.2**
LVC				*i* S	**Sn**	**12 55 15.4**	**+0.7**
LPAZ	**La Paz**	**9.72**	**5**	P	**Pn**	**12 56 01.6**	**+0.2**
	comp=N,0.3nm,0.3s,baz=194,slow=4.8,SNR=7.5						
LPAZ				S	**Sn**	**12 57 47.2**	**-1.8**
	baz=197,slow=24,SNR=1.7						
TORD	**Torodi Ar. Bea**	**79.04**	**70**	P	**P**	**13 05 36.9**	**-0.4**
	comp=N,0.5nm,0.4s,baz=260,slow=5.6,SNR=12						
MKAR	**Makanchi Array**	**149.27**	**40**	PKPbc	**PKPbc**	**13 13 21.0**	**+0.3**
	comp=N,0.2nm,0.4s,baz=338,slow=3.1,SNR=2.6						

GUC 23 12:55:00.4±0.9, 32.08S×71.38W, h52km±6km, MD3.7, ML3.2, 9C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.23**	**332**	⇑*i*P	**Pn**	**12 55 09.4**	**+0.3**
CHNG				*i* S	Sn	12 55 15.8	+0.4
CHNG				AML	AML	12 55 16.5	
	comp=E,1μm,0.2s						
JACH	**Jahuel**	**0.89**	**132**	⇑*i*P	Pn	12 55 17.3	+0.4
JACH				*i* S	Sn	12 55 30.2	+1.1
ROCH	**El Roble**	**0.94**	**161**	⇓*i*P	Pn	12 55 17.6	-0.1
ROCH				*i* S	Sn	12 55 30.6	+0.2
ROCH				AML	AML	12 55 31.4	
	comp=N,2μm,0.2s						
CMCH	**Combarbala**	**0.96**	**20**	⇓*i*P	Pn	12 55 18.1	+0.2
CMCH				*i* S	Sn	12 55 31.6	+1.0
CMCH				AML	AML	12 55 34.2	
	comp=E,6μm,0.7s						
IHA	**Instituto Hidr**	**0.97**	**193**	*e*P	Pn	12 55 17.5	-0.3
PEL	**Peldehue**	**1.21**	**151**	⇑*i*P	Pn	12 55 21.5	+0.4
PEL				*i* S	Sn	12 55 37.1	+0.6
PEL				AML	AML	12 55 38.0	
	comp=E,724nm,0.4s						
CLCH	**Cerro Calan**	**1.49**	**152**	⇓*i*P	Pn	12 55 25.3	+0.4
CLCH				*i* S	Sn	12 55 44.9	+1.5
CLCH				AML	AML	12 55 45.9	
	comp=N,613nm,0.4s						
CLCH				AML	AML	12 55 46.4	
	comp=N,702nm,0.4s						
SAN	**Santiago**	**1.49**	**156**	*i* S	Sn	12 55 44.3	+0.9
ANTU	**Antumapu**	**1.61**	**157**	⇑*i*P	Pn	12 55 27.4	+0.8
ANTU				*i* S	Sn	12 55 47.5	+1.3
ANTU				AML	AML	12 55 49.1	
	comp=E,356nm,0.3s						
TACH	**Talagante**	**1.61**	**167**	⇑*i*P	Pn	12 55 26.8	+0.3
TACH				*e*S	Sn	12 55 47.3	+1.1
PCH	**Pirque**	**1.70**	**155**	⇓*i*P	Pn	12 55 28.2	+0.4
PCH				*i* S	Sn	12 55 49.8	+1.3
SJCH	**San Jose de Ma**	**1.78**	**151**	⇑*i*P	Pn	12 55 28.8	-0.1
SJCH				*i* S	Sn	12 55 50.7	+0.2
SJCH				AML	AML	12 55 54.6	
	comp=E,170nm,0.1s						
LNV	**Longovilo**	**1.87**	**181**	⇑*i*P	Pn	12 55 29.6	-0.4
LNV				*i* S	Sn	12 55 51.7	-0.8
CHCH	**Chadas Angostu**	**1.94**	**162**	⇑*i*P	Pn	12 55 32.1	+1.0
CHCH				*i* S	Sn	12 55 56.1	+1.7
LMEL	**Las Melosas**	**2.02**	**151**	⇓*i*P	Pn	12 55 33.2	+0.9
LMEL				*i* S	Sn	12 55 58.6	+2.2
CACH	**El Canelo**	**2.13**	**162**	⇑*i*P	Pn	12 55 35.0	+1.3
CACH				*i* S	Sn	12 56 01.6	+2.4

IDC 23 12:55:28.1±1.0, 0.80N×85.85W, h0km, mb3.6/7, mb1 4.0/8, mb1mx3.8/22, mbtmp3.7/8, ML3.6/2, MS4.1/17, Ms1 4.1/17, ms1mx4.0/24, Error ellipse: s-maj=45.0km s-min=17.9km az=55.0

NEIC 23 12:55:29.2±0.8, 1.06N×85.21W, h10km, mb4.1/4, Error ellipse: s-maj=31.4km s-min=11.8km az=45.0

GCMT 23 12:55:32.9±0.2, 1.23N×85.27W, h21km±1km, MW5.1, Moment Tensor Solution. s58,c71; s85,c132; Moment tensor: Scale 10^16 Nm; Mrr=0.36±.15; Mθθ=1.24±.14; Mϕϕ=0.88±.15; Mrθ=0.21±.23; Mθϕ=5.15±.13; Mϕr=0.31±.25; Best double couple: M=5.30000×10^16 NP1:ϕ=96.00000°, δ=87.00000°, λ=-3.00000°. NP2:ϕ=186.00000°, δ=87.00000°, λ=-177.00000°. Principal axes: T 5.4400, Plg=0.0000°, Azm=321.0000°; N -0.3300, Plg=86.0000°, Azm=227.0000°; P -5.1100, Plg=4.0000°, Azm=51.0000°; Data Used: ll IU IC G CN.

ISC 23 12:55:29.0±0.7, 0.72N±0.10×86.0W±0.1, h10km, n37, σ1§41/24, mb3.9/10, MS4.1/14, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	**Otavalo**	**7.53**	**94**	*e*Pn	Pn	12 57 10.1	-9.3
OTAV				*e*Sn	Sn	12 58 26.4	-19
ATAH	**Atahualpa**	**10.86**	**136**	Pn	**Pn**	**12 58 06.3**	**+1.3**
ATAH	**Atahualpa**	**10.86**	**136**	Pn	**Pn**	**12 58 06.3**	**+1.3**
	3.1nm,0.3s,baz=328,slow=9.5,SNR=28						
ROSC	**El Rosal**	**12.32**	**70**	Pn	**Pn**	**12 58 23.2**	**-1.9**
ROSC	**El Rosal**	**12.32**	**70**	Pn	**Pn**	**12 58 23.2**	**-1.9**
	1.9nm,0.3s,baz=89,slow=19,SNR=4.8						
ROSC				LR	LR	13 02 16.8	
	comp=Z,896nm,20.5s,baz=195,slow=34						
NNA	**Nana**	**15.54**	**145**	Pn	**P**	**12 59 12.4**	**-0.4**
NNA	**Nana**	**15.54**	**145**	Pn	**P**	**12 59 12.4**	**-0.4**
	1.1nm,0.3s,baz=305,slow=13,SNR=5.3						
NNA				LR	LR	13 04 18.8	
	comp=Z,1μm,21.7s,baz=320,slow=34						
TEIG	**Tepich**	**19.52**	**353**	LR	LR	13 06 40.2	
	comp=Z,665nm,18.3s,baz=246,slow=35						
LPAZ	**La Paz**	**24.40**	**135**	*e*P	**P**	**13 00 47.0**	**-1.6**
	22nm,1.4s						
LPAZ	**La Paz**	**24.40**	**135**	P	**P**	**13 00 47.9**	**-0.7**
	7.0nm,1.0s,baz=336,slow=9.5,SNR=12						
SAML	**Samuel**	**24.65**	**113**	*e*P	P	13 00 43.4	-6.8
	3.3nm,1.3s						
TXAR	**Lajitas Array**	**33.08**	**331**	P	**P**	**13 02 06.1**	**+0.8**
TXAR	**Lajitas Array**	**33.08**	**331**	P	**P**	**13 02 06.1**	**+0.8**
	0.1nm,0.6s,baz=138,slow=8.2,SNR=2.9						
TXAR				LR	LR	13 14 18.6	
	comp=Z,328nm,20.0s,baz=175,slow=34						
WMOK	**Wichita Mounta**	**35.90**	**342**	P	**P**	**13 02 28.6**	**-0.9**
	3.5nm,1.2s						
CPUP	**Villa Florida**	**38.55**	**136**	LR	LR	13 20 39.5	
	comp=Z,328nm,19.6s,baz=305,slow=39						
BDFB	**Brasilia**	**40.86**	**115**	LR	LR	13 21 26.3	
	comp=Z,526nm,18.8s,baz=324,slow=38						
SMCO	**Snowmass**	**42.83**	**336**	*e*P	**P**	**13 03 28.4**	**+0.6**
	3.1nm,1.0s						
PLCA	**Paso Flores**	**43.58**	**163**	P	**P**	**13 03 34.6**	**+1.1**
PLCA	**Paso Flores**	**43.58**	**163**	P	**P**	**13 03 34.6**	**+1.1**
	2.2nm,0.9s,baz=306,slow=10,SNR=3.5						
PLCA				LR	LR	13 17 44.6	
	comp=Z,263nm,21.9s,baz=228,slow=31						
PDAR	**Pinedale Array**	**46.90**	**336**	LR	LR	13 24 11.3	
	comp=Z,368nm,18.4s,baz=147,slow=37						
NVAR	**Mina Array Bea**	**47.83**	**325**	P	**P**	**13 04 07.0**	**-0.3**
NVAR	**Mina Array Bea**	**47.83**	**325**	P	**P**	**13 04 07.0**	**-0.3**
	0.2nm,0.5s,baz=114,slow=4.4,SNR=3.5						
NVAR				LR	LR	13 23 47.4	
	comp=Z,224nm,18.1s,baz=226,slow=36						
ULM	**Lac du Bonnet**	**50.06**	**352**	LR	LR	13 25 53.8	
	comp=Z,83nm,20.3s,baz=125,slow=36						
PPT	**Papeete**	**65.15**	**250**	LR	LR	13 28 47.3	
	comp=Z,153nm,18.2s,baz=179,slow=31						
PPT2	**Papeete2**	**65.16**	**250**	*e*S	**S**	**13 14 52.4**	**-2.0**
	94nm,25.2s						
PPT2				*e*LR	LR	13 25 49.9	
	470nm,28.2s						
YKA	**Yellowknife Ar**	**65.26**	**346**	P	**P**	**13 06 10.3**	**-0.3**
YKA	**Yellowknife Ar**	**65.26**	**346**	P	**P**	**13 06 10.3**	**-0.3**
	1.0nm,0.8s,baz=139,slow=6.3,SNR=11						
TBI	**Tubuai**	**66.10**	**244**	*e*S	**S**	**13 15 02.4**	**-3.2**
	85nm,26.0s						
TBI				*e*LQ	LQ	13 23 25.2	
	1μm,38.2s						
TBI				*e*LR	LR	13 26 19.4	
	441nm,27.0s						
DLBC	**Dease Lake**	**67.13**	**337**	LR	LR	13 36 55.0	
	comp=Z,169nm,19.1s,baz=101,slow=37						
INK	**Inuvik**	**74.78**	**343**	LR	LR	13 42 25.5	
	comp=Z,121nm,20.1s,baz=112,slow=38						
ILAR	**Eielson Array**	**77.32**	**337**	P	**P**	**13 07 25.6**	**+2.0**
ILAR	**Eielson Array**	**77.32**	**337**	P	**P**	**13 07 25.6**	**+2.0**
	0.4nm,0.8s,baz=136,slow=4.2,SNR=4.6						
DBIC	**Dimbokro**	**81.09**	**83**	LR	LR	13 41 14.1	
	comp=Z,75nm,18.7s,baz=342,slow=34						
ESDC	**Sonseca Array**	**83.38**	**50**	P	**P**	**13 07 57.4**	**+0.6**
ESDC	**Sonseca Array**	**83.38**	**50**	P	**P**	**13 07 57.4**	**+0.6**
	0.4nm,0.6s,baz=278,slow=5.8,SNR=4.3						
ESDC				LR	LR	13 40 46.3	
	comp=Z,54nm,19.8s,baz=235,slow=33						
TORD	**Torodi Ar. Bea**	**87.56**	**77**	LR	LR	13 44 57.9	
	comp=Z,72nm,19.3s,baz=210,slow=34						
NOA	**NORSAR Array B**	**92.86**	**29**	LR	LR	13 45 19.2	
	comp=Z,57nm,22.0s,baz=265,slow=32						

NEIC 23 13:16:13.2, 18.40N×67.15W, h66km, MD3.0(RSPR), After RSPR.

RSPR 23 13:16:13.2, 18.40N×67.15W, h66km±2km, 6C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.08**	**30**	*e*Pn	Pn	13 16 22.5	-0.4
AGPR				*e*Sn	Sn	13 16 28.7	-1.3
AOPR	**Arecibo Observ**	**0.38**	**97**	⇑*e*P	Pn	13 16 24.0	-0.6
AOPR	**Arecibo Observ**	**0.38**	**97**	⇑*e*P	Pn	13 16 24.0	-0.6
CRPR	**Cabo Rojo, PR**	**0.39**	**174**	⇑*e*P	Pn	13 16 24.0	-0.7
CRPR	**Cabo Rojo, PR**	**0.39**	**174**	*e*S	Sn	13 16 32.6	-0.3
CRPR	**Cabo Rojo, PR**	**0.39**	**174**	⇑*e*P	Pn	13 16 24.0	-0.7
CRPR				*e*S	Sn	13 16 32.6	-0.3
MTP	**Monte Pirata**	**1.55**	**101**	⇑*e*P	Pn	13 16 38.1	-0.6
MTP	**Monte Pirata**	**1.55**	**101**	*e*S	Sn	13 16 57.3	-0.7
MTP	**Monte Pirata**	**1.55**	**101**	⇑*e*P	Pn	13 16 38.1	-0.6
MTP				*e*S	Sn	13 16 57.3	-0.7
SDDR	**

comp=N,140nm,9.3s

GTA				LR	LR			
	comp=E,95nm,9.0s							
GTA				LR	LR			
	comp=Z,96nm,10.0s							
KK31	**Karatay Array**	**11.97**	**272**	Pn	Pn	13	26	29.2 +4.8
	comp=Z,0.5nm,0.5s,baz=65,slow=12,SNR=6.4							
KK31				⇑Sn	**Sn**	**13**	**28**	**36.1 -1.2**
	comp=Z,1.5nm,0.8s							
KK31				⇑Lg	Lg	13	29	52.8
	comp=Z,4.7nm,0.8s,baz=77,slow=26,SNR=4.2							
VOSK	**Vostochnaya**	**13.87**	**316**	⇓P	**Pn**	**13**	**26**	**51.6 +1.3**
	comp=Z,0.6nm,0.5s							
BVA0	**Borovoye Array**	**14.33**	**316**	⇓P	**Pn**	**13**	**26**	**57.5 +0.9**
	comp=Z,0.3nm,0.5s							
BVAR	**Borovoye Array**	**14.33**	**316**	Pn	**Pn**	**13**	**26**	**55.2 -1.4**
	comp=Z,0.7nm,0.3s,baz=109,slow=12,SNR=11							
BVAR				Sn	**Sn**	**13**	**29**	**29.8 -5.0**
	comp=Z,0.4nm,0.3s,baz=102,slow=20,SNR=4.0							
BRVK	**Borovoye**	**14.40**	**316**	⇑Pn	**Pn**	**13**	**26**	**58.5 +1.0**
	comp=Z,5.3nm,1.2s							
ZRNK	**Zerenda**	**15.00**	**314**	⇑P	**Pn**	**13**	**27**	**04.7 -1.0**
	comp=Z,1.8nm,0.5s							
LZH	**Lanzhou**	**15.05**	**115**	*e*P	Pn	13	26	34.5 -32
LZH				pP	P	13	26	39.0 -33
LZH				sP	sP	13	26	42.8 -37
LZH				pmax	pmax			
	comp=Z,18nm,1.5s							
DANN	**Dangsing**	**15.62**	**190**	*e*P	**P**	**13**	**27**	**18.9 +0.6**
	comp=Z,5.9nm,0.5s							
GUN	**Gumba**	**15.87**	**183**	*e*P	**P**	**13**	**27**	**22.0 +0.9**
	comp=Z,9.8nm,0.3s							
KKN	**Kakani**	**16.02**	**185**	*e*P	**P**	**13**	**27**	**23.6 +0.9**
	comp=Z,18nm,0.7s							
KOLN	**Koldanda**	**16.21**	**191**	*e*P	**P**	**13**	**27**	**24.6 -0.2**
DMN	**Daman**	**16.21**	**186**	*e*P	**P**	**13**	**27**	**25.9 +1.1**
	comp=Z,8.0nm,0.5s							
PKIN	**Phulchoki**	**16.23**	**185**	*e*P	**P**	**13**	**27**	**25.8 +0.8**
PKI	**Pulchoki**	**16.23**	**185**	*e*P	**P**	**13**	**27**	**25.8 +0.7**
TAPN	**Taplejung**	**16.41**	**178**	*e*P	**P**	**13**	**27**	**27.9 +0.8**
AB31	**Akbulak array**	**19.32**	**296**	P	**Pn**	**13**	**27**	**59.6 -0.1**
	comp=Z,0.5nm,0.4s,baz=83,slow=14,SNR=14							
CMAR	**Chiang Mai Arr**	**27.20**	**154**	P	**P**	**13**	**29**	**17.1 -0.2**
	comp=Z,1.1nm,0.9s,baz=328,slow=9.4,SNR=5.7							
KSRS	**Korea Array**	**31.49**	**87**	P	**P**	**13**	**29**	**55.0 -0.3**
	comp=Z,0.3nm,0.5s,baz=294,slow=9.0,SNR=3.4							
FINES	**FINESS Array B**	**39.27**	**318**	P	**P**	**13**	**31**	**02.9 +1.0**
	comp=Z,0.8nm,0.6s,baz=56,slow=4.8,SNR=4.6							
ARCES	**ARCESS Array B**	**39.89**	**331**	P	**P**	**13**	**31**	**08.4 +1.4**
	comp=Z,0.8nm,0.6s,baz=100,slow=10,SNR=4.3							
ARCES				PcP	**PcP**	**13**	**33**	**12.7 +0.5**
	comp=Z,1.1nm,0.6s,baz=98,slow=6.8,SNR=9.0							
NOA	**NORSAR Array B**	**46.43**	**319**	P	**P**	**13**	**32**	**00.1 +0.2**
	comp=Z,0.4nm,0.5s,baz=75,slow=7.9,SNR=5.1							
ESDC	**Sonseca Array**	**64.56**	**301**	P	**P**	**13**	**34**	**11.8 +1.2**
	comp=Z,0.3nm,0.6s,baz=50,slow=6.2,SNR=5.8							
WRA	**Warramunga Arr**	**76.85**	**135**	P	**P**	**13**	**35**	**25.1 -0.4**
	comp=Z,1.6nm,0.9s,baz=335,slow=5.2,SNR=22							
TORD	**Torodi Ar. Bea**	**77.63**	**276**	P	**P**	**13**	**35**	**30.5 +0.4**
	comp=Z,0.8nm,0.6s,baz=40,slow=5.3,SNR=12							
ASAR	**Alice Springs**	**79.75**	**137**	P	**P**	**13**	**35**	**41.0 -0.4**
	comp=Z,0.7nm,0.6s,baz=334,slow=5.8,SNR=9.6							
DBIC	**Dimbokro**	**86.74**	**276**	P	**P**	**13**	**36**	**17.9 +0.1**
	comp=Z,2.0nm,0.4s,baz=8.7,slow=4.1,SNR=5.6							

*ISCJB **23** 13:30:56.8±0.4,64°.82N±0°.03×148°.02W±0°.07,h17km±3km, mb3.5/4,MS3.6/1,Error ellipse: s-maj=4.9km s-min=4.0km az=31.8*

*IDC **23** 13:30:57.0±1.6,64°.96N×147°.95W,h0km,mb3.5/4, mb1 3.8/6,mb1mx3.5/27,mbtmp3.5/6,ML3.2/2,MS3.5/1, Ms1 3.5/1,ms1mx2.6/30,Error ellipse: s-maj=34.4km s-min=11.4km az=32.0*

*NEIC **23** 13:30:57.2,64°.79N×148°.02W,h10km,ML3.8(AEIC),After AEIC.*

NEIC Felt [III] at Ester and Fairbanks; [II] at Fort Wainwright and North Pole. Also felt at Eielson AFB and Nenana.

ISC 23 13:30:57.5±0.8,64°.82N±0°.03×148°.01W±0°.03,h10km±6km, n53,σ1§25/60,mb3.6/4,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
				Op				
COLA	**College**	**0.09**	**51**	P		**Pg**	**13 30 59.8**	**-0.2**
COLA				S		**Sg**	**13 31 02.5**	**+0.8**
MDM	**Murphy Dome**	**0.17**	**327**	P		**Pg**	**13 31 01.3**	**+0.1**
MDM				S		**Sg**	**13 31 04.3**	**+0.5**
CCB	**Clear Creek Bu**	**0.19**	**152**	P		**Pg**	**13 31 01.1**	**-0.5**
GLM	**Gilmore Dome**	**0.32**	**57**	P		**Pb**	**13 31 04.2**	**-1.0**
GLM				S		**Sb**	**13 31 08.9**	**-1.5**
WRH	**Wood River Hil**	**0.35**	**186**	P		**Pg**	**13 31 04.0**	**-0.4**
ILAR	**Eielson Array**	**0.48**	**95**	Pg		**Pg**	**13 31 06.7**	**-0.2**
ILAR				Lg		Lg	13 31 13.7	
ILAR	**Eielson Array**	**0.48**	**95**	Pg		**Pg**	**13 31 06.7**	**-0.2**
	305nm,0.3s,baz=273,slow=17							
ILAR				Lg		Lg	13 31 13.7	
	553nm,0.3s,baz=268,slow=31,SNR=47							
IL1	**Eielson Array**	**0.48**	**95**	P		**Pg**	**13 31 05.9**	**-1.0**
HDA	**Harding Lake**	**0.62**	**132**	P		**Pg**	**13 31 09.0**	**-0.4**
HDA				S		**Sg**	**13 31 17.0**	**-0.5**
MCK	**McKinley**	**1.16**	**201**	P		**Pb**	**13 31 18.5**	**-1.1**
MCK				S		**Sb**	**13 31 33.1**	**-1.6**
PRP	**Porcupine Dome**	**1.27**	**55**	P		**Pb**	**13 31 20.9**	**-0.5**
RND	**Reindeer**	**1.46**	**195**	P		**Pn**	**13 31 22.9**	**-1.0**
RND				S		**Sn**	**13 31 41.7**	**-1.4**
TRF	**Thorofare Moun**	**1.70**	**217**	P		**Pn**	**13 31 25.4**	**-1.8**
DHY	**Denali Highway**	**1.77**	**171**	P		**Pn**	**13 31 28.2**	**-0.1**
DOT	**Dot Lake**	**2.09**	**122**	P		**Pn**	**13 31 30.6**	**-1.9**
PAX	**Paxson**	**2.17**	**148**	P		**Pn**	**13 31 33.4**	**-0.3**
COLD	**Coldfoot**	**2.58**	**341**	P		**Pn**	**13 31 38.9**	**-0.3**
IM3	**Indian Mountai**	**2.67**	**299**	P		**Pn**	**13 31 39.1**	**-1.3**
PPLA	**Purkeypile**	**2.67**	**226**	P		**Pn**	**13 31 38.8**	**-1.7**
MENT	**Mentasta**	**2.68**	**133**	*e*Pn		**Pn**	**13 31 38.8**	**-1.7**
MENT				*e*Sn		**Sn**	**13 32 12.2**	**-0.8**
HARP	**HAARP**	**2.73**	**151**	P		**Pn**	**13 31 40.3**	**-1.1**
EGAK	**Eagle**	**2.93**	**88**	*e*Pn		**Pn**	**13 31 42.8**	**-1.2**
EGAK				*e*Sn		**Sn**	**13 32 18.1**	**-1.1**
BM3	**Burnt Mountain**	**2.96**	**26**	P		**Pn**	**13 31 44.1**	**-0.3**
SML	**Sawmill**	**3.02**	**183**	*e*Pn		**Pn**	**13 31 44.5**	**-0.9**
SML				*e*Sn		**Sn**	**13 32 20.6**	**-0.9**
BCA3	**Beaver Creek A**	**3.26**	**120**	P		**Pn**	**13 31 46.6**	**-2.0**
PMR	**Palmer**	**3.28**	**189**	P		**Pn**	**13 31 48.3**	**-0.5**
SUA	**Susitna One**	**3.59**	**201**	P		**Pn**	**13 31 53.2**	**0.0**
STLK	**Strandline Lak**	**3.75**	**209**	P		**Pn**	**13 31 55.4**	**0.0**
DAWY	**Dawson**	**3.81**	**98**	P		**Pn**	**13 31 54.8**	**-1.3**
DIV	**Divide**	**3.84**	**164**	*e*Pn		**Pn**	**13 31 56.7**	**+0.1**
DIV				*e*Sn		**Sn**	**13 32 40.7**	**-1.0**
TT01	**Tatalina**	**4.03**	**245**	P		**Pn**	**13 31 57.5**	**-1.6**
VRDI	**Verde Repeater**	**4.16**	**148**	P		**Pn**	**13 32 02.0**	**+0.9**
KIAG	**Kiagna River**	**4.69**	**144**	P		**Pn**	**13 32 09.6**	**+1.3**
BARN	**Barnard Glacie**	**4.76**	**140**	P		**Pn**	**13 32 10.1**	**+0.8**
SEW	**Seward**	**4.78**	**189**	P		**Pn**	**13 32 10.9**	**+1.6**
GRNC	**Granite Creek**	**5.01**	**142**	P		**Pn**	**13 32 14.3**	**+1.6**
INK	**Inuvik**	**6.75**	**52**	Pn		**Pn**	**13 32 37.2**	**+0.8**
INK				Lg		Lg	13 34 24.1	
INK	**Inuvik**	**6.75**	**52**	Pn		**Pn**	**13 32 37.2**	**+0.8**
	0.7nm,0.3s,baz=240,slow=15,SNR=25							
INK				Lg		Lg	13 34 24.1	
	0.8nm,0.3s,baz=238,slow=22,SNR=3.5							
KDAK	**Kodiak Island**	**7.39**	**199**	Pn		**Pn**	**13 32 47.4**	**+2.2**
KDAK	**Kodiak Island**	**7.39**	**199**	Pn		**Pn**	**13 32 47.4**	**+2.2**
	0.6nm,0.3s,baz=16,slow=15,SNR=4.0							
DLBC	**Dease Lake**	**10.65**	**119**	Pn		**Pn**	**13 33 28.2**	**-1.8**
DLBC				Lg		Lg	13 36 31.1	
DLBC	**Dease Lake**	**10.65**	**119**	Pn		**Pn**	**13 33 28.2**	**-1.8**
	0.2nm,0.3s,baz=307,slow=14,SNR=4.9							
DLBC				Lg		Lg	13 36 31.1	
	0.6nm,0.3s,baz=84,slow=17,SNR=8.2							
YKA	**Yellowknife Ar**	**14.91**	**84**	Pn		Pn	13 34 23.5	-4.4
YKA	**Yellowknife Ar**	**14.91**	**84**	Pn		Pn	13 34 23.5	-4.4
	0.1nm,0.3s,baz=292,slow=13,SNR=8.0							
PDAR	**Pinedale Array**	**30.88**	**117**	P		**P**	**13 37 15.5**	**+1.6**
PDAR	**Pinedale Array**	**30.88**	**117**	P		**P**	**13 37 15.5**	**+1.6**
	2.2nm,1.1s,baz=298,slow=4.7,SNR=4.8							
NVAR	**Mina Array Bea**	**31.64**	**132**	P		**P**	**13 37 22.1**	**+1.4**
NVAR	**Mina Array Bea**	**31.64**	**132**	P		**P**	**13 37 22.1**	**+1.4**
	0.2nm,0.5s,baz=316,slow=8.3,SNR=3.7							
TXAR	**Lajitas Array**	**44.95**	**120**	P		**P**	**13 39 14.6**	**+2.2**
TXAR	**Lajitas Array**	**44.95**	**120**	P		**P**	**13 39 14.6**	**+2.2**
	0.2nm,0.6s,baz=321,slow=7.0,SNR=3.4							
FINES	**FINESS Array B**	**53.97**	**4**	P		**P**	**13 40 20.6**	**0.0**
FINES	**FINESS Array B**	**53.97**	**4**	P		**P**	**13 40 20.6**	**0.0**
	0.6nm,0.4s,baz=354,slow=8.5,SNR=6.7							
ZALV	**Zalesovo Beam**	**54.81**	**325**	LR		LR	14 07 01.6	

comp=Z,48nm,20.3s,baz=262,slow=40

*SKO **23** 13:38:53.1,41°.31N×22°.70E,h12km,M1.5,ML1.8*
*ATH **23** 13:38:53.5,41°.28N×22°.72E,h19km±1km,MD2.7/7*
*CSEM **23** 13:38:53.5±0.2,41°.29N×22°.69E,h8km,ML1.7,Error ellipse: s-maj=4.0km s-min=3.2km az=70.0*
*THE **23** 13:38:53.8,41°.29N×22°.72E,h4km±1km,ML2.2/6,Error ellipse: s-maj=2.0km s-min=0.7km az=208.0*
*ISCJB **23** 13:38:53.2±0.4,41°.30N±0°.02×22°.70E±0°.04,h8km±4km, Error ellipse: s-maj=4.7km s-min=3.6km az=173.0*
*BEO **23** 13:38:55.2±0.8,41°.34N×22°.63E,h4km±4km,ML1.7/4*

ISC 23 13:38:53.6±0.8,41°.29N±0°.02×22°.70E±0°.02,h9km±6km, n39,σ0§43/65,2D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
				Op				
VAY	**Valandovo**	**0.10**	**286**	P		**Pg**	**13 38 56.0**	**-0.2**
VAY				S		**Sg**	**13 38 57.9**	**0.0**
VAY	**Valandovo**	**0.10**	**286**	*i* Pg		**Pg**	**13 38 56.0**	**-0.2**
VAY				*e*Lg		Lg	13 38 57.9	
	comp=N,797nm,0.3s							
VAY				*i* Sg		**Sg**	**13 38 58.0**	**0.0**
VAY				*e*Lg		Lg	13 38 58.0	
	comp=E,365nm,0.4s							
VAY	**Valandovo**	**0.10**	**286**	⇓*i* Pg		**Pg**	**13 38 55.9**	**-0.2**
VAY				*e*Sg		**Sg**	**13 38 57.9**	**0.0**
VAY	**Valandovo**	**0.10**	**286**	⇓*i* Pg		**Pg**	**13 38 55.9**	**-0.2**
VAY				S		**Sg**	**13 38 57.9**	**0.0**
VAY				*e*Lg		Lg	13 38 58.5	
	comp=E,365nm,0.4s							
KNT	**Kendrikon**	**0.20**	**132**	P		**Pg**	**13 38 57.9**	**+0.2**
KNT				S		**Sg**	**13 39 00.7**	**+0.3**
KNT	**Kendrikon**	**0.20**	**132**	P		**Pg**	**13 38 57.9**	**+0.2**
KNT				S		**Sg**	**13 39 00.7**	**+0.3**
GRG	**Griva**	**0.41**	**214**	P		**Pg**	**13 39 01.8**	**+0.2**
GRG				S		**Sg**	**13 39 07.7**	**+0.8**
GRG	**Griva**	**0.41**	**214**	*e*PB		**Pg**	**13 39 01.8**	**+0.2**
GRG				*e*SB		**Sg**	**13 39 07.9**	**+1.0**
GRG	**Griva**	**0.41**	**214**	P		**Pg**	**13 39 01.8**	**+0.2**
GRG				S		**Sg**	**13 39 07.7**	**+0.8**
SOH	**Sokhos**	**0.68**	**134**	P		**Pg**	**13 39 06.4**	**-0.4**
SOH				S		**Sg**	**13 39 15.9**	**+0.2**
SOH	**Sokhos**	**0.68**	**134**	*e*PN		**Pg**	**13 39 06.4**	**-0.4**
SOH				*e*SN		**Sg**	**13 39 15.6**	**-0.1**
SOH	**Sokhos**	**0.68**	**134**	P		**Pg**	**13 39 06.4**	**-0.4**
SOH				*e*Sn		**Sg**	**13 39 15.6**	**-0.1**
SOH				S		**Sg**	**13 39 15.9**	**+0.2**
SRS	**Serrai**	**0.69**	**104**	P		**Pg**	**13 39 06.6**	**-0.4**
SRS				S		**Sg**	**13 39 16.2**	**+0.2**
SRS	**Serrai**	**0.69**	**104**	P		**Pg**	**13 39 06.6**	**-0.4**
SRS				S		**Sg**	**13 39 16.2**	**+0.2**
HORT	**Hortiatis**	**0.76**	**157**	P		**Pg**	**13 39 08.0**	**-0.2**
HORT				S		**Sb**	**13 39 18.8**	**-0.7**
HORT	**Hortiatis**	**0.76**	**157**	P		**Pg**	**13 39 08.0**	**-0.2**
HORT				S		**Sb**	**13 39 18.8**	**-0.7**
NVR	**Nevrokopi**	**0.87**	**86**	P		**Pg**	**13 39 10.5**	**0.0**
NVR	**Nevrokopi**	**0.87**	**86**	*e*PN		**Pg**	**13 39 10.4**	**0.0**
NVR	**Nevrokopi**	**0.87**	**86**	P		**Pg**	**13 39 10.5**	**0.0**
PLG	**Polygyros**	**1.08**	**148**	*e*PN		**Pg**	**13 39 13.7**	**-0.6**
PLG				*e*SN		**Sg**	**13 39 28.3**	**0.0**
PLG	**Polygyros**	**1.08**	**148**	*e*Pn		**Pg**	**13 39 13.7**	**-0.6**
PLG				*e*Sn		**Sg**	**13 39 28.3**	**0.0**
FNA	**Florina**	**1.12**	**244**	*e*PN		**Pg**	**13 39 15.0**	**-0.2**
FNA	**Florina**	**1.12**	**244**	*e*Pn		**Pg**	**13 39 15.0**	**-0.2**
LIT	**Litokhoron**	**1.20**	**188**	*e*PN		**Pb**	**13 39 15.7**	**-0.9**
LIT	**Litokhoron**	**1.20**	**188**	*e*Pn		**Pb**	**13 39 15.7**	**-0.9**
VTS	**Vitosha**	**1.35**	**16**	P		**Pg**	**13 39 19.4**	**-0.2**
VTS				S		**Sn**	**13 39 37.0**	**-0.1**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg		**Pb**	**13 39 19.3**	**+0.1**
VTS				*e*Sg		**Sg**	**13 39 37.3**	**+0.2**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg		**Pb**	**13 39 19.3**	**+0.1**
VTS				S		**Sn**	**13 39 37.0**	**-0.1**
VTS				*e*Sg		**Sg**	**13 39 37.3**	**+0.2**
KAVA	**Kavala**	**1.40**	**102**	P		**Pn**	**13 39 19.7**	**+0.3**
KAVA				S		**Sg**	**13 39 38.8**	**+0.2**
KAVA	**Kavala**	**1.40**	**102**	P		**Pn**	**13 39 19.7**	**+0.3**
KAVA				S		**Sg**	**13 39 38.8**	**+0.2**
PAIG	**Paliouri**	**1.55**	**151**	*e*PN		**Pb**	**13 39 22.3**	**-0.3**
PAIG	**Paliouri**	**1.55**	**151**	*e*Pn		**Pb**	**13 39 22.3**	**-0.3**
BARS	**Barje**	**1.66**	**337**	*e*Sg		**Sg**	**13 39 46.4**	**-0.6**
BARS	**Barje**	**1.66**	**337**	*e*Sg		**Sg**	**13 39 46.4**	**-0.6**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Pn		**Pb**	**13 39 29.4**	**-0.5**
ZAPS				*e*Sg		**Sb**	**13 39 55.5**	**+0.8**
AOS	**Alonnisos**	**2.30**	**157**	*e*PN		**Pn**	**13 39 32.6**	**+0.8**
AOS	**Alonnisos**	**2.30**	**157**	*e*Pn		**Pn**	**13 39 32.6**	**+0.8**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*PN		**Pn**	**13 39 35.9**	**+0.6**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*Pn		**Pn**	**13 39 35.9**	**+0.6**

IDC 23 14:05:34.4±3.9,4°.70S×102°.87E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.5/24,mbtmp3.6/6,Error ellipse: s-maj=182.9km s-min=18.9km az=53.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
				Op				
CMAR	**Chiang Mai Arr**	**23.33**	**351**	P		P	14 10 44.5	+0.1
	0.7nm,0.6s,baz=180,slow=8.5,SNR=5.1							
FITZ	**Fitzroy Crossi**	**25.94**	**123**	P		P	14 11 08.6	-0.1
	1.8nm,1.1s,baz=331,slow=10,SNR=3.1							
WRA	**Warramunga Arr**	**34.17**	**119**	P		P	14 12 21.5	-0.3
	0.2nm,0.4s,baz=301,slow=11,SNR=9.2							
ASAR	**Alice Springs**	**35.36**	**125**	P		P	14 12 32.4	+0.4
	0.1nm,0.3s,baz=298,slow=7.8,SNR=7.5							
MKAR	**Makanchi Array**	**54.41**	**343**	P		P	14 15 03.5	+0.2
	0.8nm,0.5s,baz=149,slow=7.9,SNR=10.0							
ZALV	**Zalesovo Beam**	**60.36**	**348**	P		P	14 15 44.8	-0.3
	0.9nm,0.4s,baz=162,slow=5.8,SNR=5.6							
TXAR	**Lajitas Array**	**144.91**	**43**	PKP		PKPab	14 25 13.2	-0.3
	0.3nm,0.6s,baz=338,slow=1.5,SNR=4.9							

WEL 23 14:45:37.7±0.2,36°.89S×177°.86E,h140km±2km,ML3.8/6, 2C-1D,Error ellipse: s-maj=2.3km s-min=1.7km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
				Op				
MXZ	**Matakaoa Point**	**0.77**	**152**	⇑PN		Pn	14 45 59.5	0.0
MXZ				SN		Sn	14 46 16.3	+0.2
PUZ	**Puketiti**	**1.23**	**165**	PN		Pn	14 46 03.5	-0.1
PUZ				SN		Sn	14 46 23.3	-0.2
OPRZ	**Ohinepanea**	**1.41**	**227**	⇓PN		Pn	14 46 05.9	+0.4
OPRZ				SN		Sn	14 46 27.0	+0.3
MWZ	**Matawai**	**1.47**	**190**	PN		Pn	14 46 06.0	-0.1
MWZ				SN		Sn	14 46 28.0	-0.1
URZ	**Urewera**	**1.50**	**203**	⇑PN		Pn	14 46 06.2	-0.1
URZ				SN		Sn	14 46 28.4	0.0
CNGZ	**Carnagh Statio**	**1.62**	**170**	PN		Pn	14 46 08.4	+0.6
KUZ	**Kuaotunu**	**1.72**	**274**	PN		Pn	14 46 08.8	-0.1
RRRZ	**Republican Roa**	**1.80**	**216**	PN		Pn	14 46 10.2	+0.3
PRRZ	**Plateau Road**	**1.99**	**215**	PN		Pn	14 46 12.4	+0.4
PRGZ	**Paritu Road**	**2.04**	**179**	PN		Pn	14 46 12.4	-0.2
TOZ	**Tahuroa Road**	**2.06**	**245**	PN		Pn	14 46 13.5	+0.7
ALRZ	**Allen Road**	**2.06**	**215**	PN		Pn	14 46 13.2	+0.3
RAHZ	**Arahi**	**2.12**	**197**	PN		Pn	14 46 13.6	-0.1
KNZ	**Kokohu**	**2.14**	**184**	PN		Pn	14 46 13.2	-0.6
MHGZ	**Mahia Peninsul**	**2.27**	**179**	PN		Pn	14 46 15.1	-0.2
NMHZ	**Naumai**	**2.36**	**200**	PN		Pn	14 46 16.5	-0.2
BKZ	**Black Stump Fm**	**2.52**	**205**	PN		Pn	14 46 18.1	-0.5
MCHZ	**McNeill Hill**	**2.71**	**199**	PN		Pn	14 46 20.3	-0.7
BHHZ	**Black Hill Sta**	**2.96**	**208**	PN		Pn	14 46 23.0	-1.2
KAHZ	**Kahuranaki**	**3.01**	**195**	PN		Pn	14 46 23.7	-1.1
MOVZ	**Moawhango**	**3.02**	**213**	PN		Pn	14 46 23.7	-1.2
WNVZ	**Wahianoa**	**3.02**	**215**	PN		Pn	14 46 24.3	-0.8
PXZ	**Pawanui**	**3.24**	**194**	PN		Pn	14 46 25.7	-1.9
PNHZ	**Pukenui**	**3.29**	**203**	PN		Pn	14 46 26.3	-2.1
MRZ	**Mangatainoka R**	**4.17**	**205**	PN		Pn	14 46 37.4	-2.5
HOWZ	**Holdsworth Sta**	**4.41**	**204**	PN		Pn	14 46 39.8	-3.2
TUWZ	**Tuamarina**	**5.46**	**213**	PN		Pn	14 46 53.9	-3.1
NNZ	**Nelson**	**5.56**	**217**	PN		Pn	14 46 56.0	-2.2
QRZ	**Quartz Range**	**5.73**	**225**	PN		Pn	14 46 57.7	-2.9
THZ	**Tophouse**	**6.20**	**217**	PN		Pn	14 47 03.8	-3.2
LTZ	**Lake Taylor**	**7.29**	**214**	PN		Pn	14 47 17.9	-3.6

NNC 23 14:50:19.9±3.1,36°.80N×70°.00E,h0km,mb3.6,mpv3.1, 4C-2D,Error ellipse: s-maj=26.5km s-min=24.1km az=96.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
				Op				
KK31	**Karatay Array**	**6.30**	**3**	⇑Pn		Pn	14 51 57.1	+2.9
	0.5nm,0.3s,baz=181,slow=13,SNR=27							
KK31				⇑Sn		Sn	14 53 13.5	+6.5
	1.1nm,0.3s,baz=187,slow=21,SNR=7.6							
TKM2	**Tokmak 2**	**7.47**	**33**	⇑Pn		Pn	14 52 09.5	-1.0
	0.8nm,0.5s							
TKM2				⇓Sn		Sn	14 53 36.9	+0.7
	2.4nm,0.7s							
AB31	**Akbulak array**	**14.44**	**333**	⇑Pn		Pn	14 53 45.3	-0.2
	0.7nm,0.5s,baz=154,slow=13,SNR=13							
AB31				⇓Sn		Sn	14 56 26.7	+0.5
	0.4nm,0.5s							

MEX 23 14:55:19.6±0.5,16°.10N×99°.43W,h15km±9km,MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
				Op				
ACX	**Acapulco**	**0.87**	**332**	*i* P		Pb	14 55 33.6	-2.8
ACX				*e*S		Sb	14 55 44.3	-3.7
CAIG	**El Cayaco**	**1.24**	**320**	*i* P		Pn	14 55 38.7	-3.7
CAIG				*e*S		Sb	14 55 53.8	-4.8
PNIG	**Pinotepa**	**1.28**	**77**	*i* P		Pn	14 55 39.5	-3.6
PNIG				*i* S		Sb	14 55 54.5	-5.4
PLIG	**Platanillo**	**2.28**	**358**	*i* P		Pn	14 55 53.8	-3.1
PLIG				*i* S		Sn	14 56 20.8	-4.1
ARIG	**Puente Sto Nin**	**2.34**	**338**	*i* P		Pn	14 55 54.2	-3.4
ARIG				*i* S		Sn	14 56 21.9	-4.3
ZIIG	**Zihuatanejo**	**2.46**	**308**	*i* P		Pn	14 55 57.2	-2.1
ZIIG				*i* S		Sn	14 56 25.6	-3.5
YAIG	**Yautepec**	**2.77**	**7**	*i* P		Pn	14 56 01.3	-2.4
YAIG				*i* S		Sn	14 56 32.9	-4.1
HUIG	**Huatulco**	**3.21**	**95**	*i* P		Pn	14 56 07.6	-2.0
HUIG				*i* S		Sn	14 56 44.7	-2.9

*CSEM **23** 15:11:49.8±0.2,42°.83N×13°.83E,h20km,MD2.3/4,Error ellipse: s-maj=5.3km s-min=5.2km az=131.0*

ROM 23 15:11:48.7±0.4,42°.79N×13°.91E,h27km±3km,Md2.3/4, Ml1.6/2,Error ellipse: s-maj=8.3km s-min=2.4km az=152.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
				Op				
TRTR	**Tortoreto Alta**	**0.02**	**21**	Pg		Pb	15 11 53.4	+0.2
TRTR				Sg		Sb	15 11 56.8	+0.5
	426nm,0.3s							
TRTR	**Tortoreto Alta**	**0.02**	**21**	Pg		Pb	15 11 53.4	+0.2
TRTR				Sg		Sb	15 11 56.8	+0.5
	426nm,0.3s							
TERO	**Teramo**	**0.28**	**233**	Pg		Pb	15 11 55.7	+0.1
TERO				Sg		Sb	15 12 00.8	+0.4
	116nm,0.2s							
TERO	**Teramo**	**0.28**	**233**	Pg		Pb	15 11 55.7	+0.1
TERO			

CPUP	**Villa Florida**	**11.90**	**54**	P		**Pn**	**15 31 10.9**	**-0.5**
	comp=N,0.3nm,0.3s,baz=233,slow=14,SNR=3.2							
LPAZ	**La Paz**	**17.49**	**360**	P		**Pn**	**15 32 23.6**	**-2.8**
	comp=N,0.1nm,0.3s,baz=175,slow=11,SNR=1.8							
TORD	**Torodi Ar. Bea**	**81.03**	**68**	P		**P**	**15 40 38.1**	**+1.0**
	comp=N,1.0nm,0.7s,baz=229,slow=5.7,SNR=7.9							
KURBB	**Kurchatov Arra**	**150.42**	**45**	PKPbc		**PKPbc**	**15 48 14.2**	**+1.3**
	comp=N,1.0nm,0.7s,baz=298,slow=3.0,SNR=6.4							
ZALV	**Zalesovo Beam**	**152.24**	**35**	PKPbc		**PKPbc**	**15 48 18.6**	**+1.6**
	comp=N,0.9nm,0.5s,baz=299,slow=3.3,SNR=4.7							
MKAR	**Makanchi Array**	**154.10**	**51**	PKPab		**PKPab**	**15 48 36.3**	**+1.3**
	comp=N,0.5nm,0.3s,baz=296,slow=4.6,SNR=8.7							

*ISCJB **23** 15:37:11.9±0.5, 40°.34N±0°.03×27°.87E±0°.04, h10km±4km, Error ellipse: s-maj=5.5km s-min=4.5km az=149.4*
*ISK **23** 15:37:11.8, 40°.35N×27°.86E, h9km, MD2.6*
*DDA **23** 15:37:12.3, 40°.30N×27°.89E, h7km, MD2.5*
*CSEM **23** 15:37:12.1±0.1, 40°.33N×27°.88E, h8km, MD2.6, Error ellipse: s-maj=3.0km s-min=2.7km az=138.0*

ISC 23 15:37:12.4±0.9, **40°.34N**±0°.02×**27°.88E**±0°.02, **h7**km±5km, **n20,σ0$49/36, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BNT	**Bandirma**	**0.04**	**53**	*e*PG		**Pg**	**15 37 13.6**	**-0.3**
BNT				*e*SG		**Sg**	**15 37 15.1**	**+0.1**
BNT	**Bandirma**	**0.04**	**53**	*e*Pg		**Pg**	**15 37 13.6**	**-0.3**
BNT				*e*Sg		**Sg**	**15 37 15.1**	**+0.1**
GONE	**Gonen-Balikesi**	**0.33**	**208**	*e*PG		**Pg**	**15 37 18.6**	**-0.2**
GONE				*e*SG		**Sg**	**15 37 24.1**	**+1.0**
GONE	**Gonen-Balikesi**	**0.33**	**208**	*e*Pg		**Pg**	**15 37 18.6**	**-0.2**
GONE				*e*Sg		**Sg**	**15 37 24.1**	**+1.0**
MRMT	**Marmara Adasi**	**0.35**	**321**	*e*PG		**Pg**	**15 37 18.9**	**-0.3**
MRMT				*e*SG		**Sg**	**15 37 24.0**	**+0.2**
MRMT	**Marmara Adasi**	**0.35**	**321**	*e*Pg		**Pg**	**15 37 18.9**	**-0.3**
MRMT				*e*Sg		**Sg**	**15 37 24.0**	**+0.2**
KRBG	**Karabiga-Canak**	**0.45**	**278**	*e*PG		**Pg**	**15 37 20.2**	**-0.9**
KRBG	**Karabiga-Canak**	**0.45**	**278**	*e*Pg		**Pg**	**15 37 20.2**	**-0.9**
BALY	**Balya**	**0.63**	**199**	*i* P		**Pg**	**15 37 24.5**	**0.0**
BALY				*i* S		**Sg**	**15 37 33.1**	**+0.4**
BALY	**Balya**	**0.63**	**199**	*i* P		**Pg**	**15 37 24.5**	**0.0**
BALY				*i* S		**Sg**	**15 37 33.1**	**+0.4**
ARMT	**Armutlu**	**0.78**	**73**	*e*PG		**Pg**	**15 37 27.4**	**0.0**
ARMT				*e*SG		**Sb**	**15 37 39.0**	**0.0**
ARMT	**Armutlu**	**0.78**	**73**	*e*Pg		**Pg**	**15 37 27.4**	**0.0**
ARMT				*e*Sg		**Sb**	**15 37 39.1**	**0.0**
DURS	**Dursunbey**	**0.86**	**148**	*i* P		**Pg**	**15 37 27.9**	**-1.1**
DURS				*i* S		**Sg**	**15 37 40.0**	**-0.2**
DURS	**Dursunbey**	**0.86**	**148**	*i* P		**Pg**	**15 37 27.9**	**-1.1**
DURS				*i* S		**Sg**	**15 37 40.0**	**-0.2**
CTKS	**Kestanelik-??a**	**1.02**	**28**	*e*PG		**Pg**	**15 37 31.7**	**-0.2**
CTKS				*e*SG		**Sb**	**15 37 46.1**	**+0.3**
CTKS	**Kestanelik-??a**	**1.02**	**28**	*e*Pg		**Pg**	**15 37 31.7**	**-0.2**
CTKS				*e*Sg		**Sb**	**15 37 46.1**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.08**	**274**	*e*PG		**Pg**	**15 37 32.6**	**-0.5**
GELI				*e*SG		**Sb**	**15 37 47.8**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.08**	**274**	*e*Pg		**Pg**	**15 37 32.6**	**-0.5**
GELI				*e*Sg		**Sb**	**15 37 47.8**	**+0.2**
YLV	**Yalova**	**1.16**	**78**	*e*PN		**Pb**	**15 37 34.8**	**0.0**
YLV	**Yalova**	**1.16**	**78**	*e*Pn		**Pb**	**15 37 34.8**	**0.0**

*NIED **23** 15:38:00, 29°.60N×141°.90E, h47km, Mw4.4 Best double couple: M0 3.80000×10^15 NP1:φs 163.00000°, δ79.00000°, λ -79.00000°. NP2:φs 298.00000°, δ16.00000°, λ -134.00000°.*
*IDC **23** 15:38:26.8±0.5, 29°.59N×141°.46E, h0km, mb4.1/27, mb1 4.2/31, mb1mx4.2/36, mbtmp4.1/31, ML3.6/4, MS3.2/14, Ms1 3.2/14, ms1mx3.0/38, Error ellipse: s-maj=16.5km s-min=12.9km az=79.0*
*ISCJB **23** 15:38:29.6±1.1, 29°.56N±0°.02×141°.36E±0°.06, h31km±8km, mb4.3/42, MS3.4/10, Error ellipse: s-maj=9.1km s-min=3.3km az=169.3*
*JMA **23** 15:38:30.6±0.1, 29°.65N×141°.85E, h53km, M4.4*
*MOS **23** 15:38:31.9±1.1, 29°.92N×141°.36E, h33km, mb4.5/24, Error ellipse: s-maj=14.5km s-min=6.7km az=108.4*
*NEIC **23** 15:38:32.1±0.3, 29°.61N×141°.40E, h35km, mb4.7/6, MW4.3(NIED), Error ellipse: s-maj=7.8km s-min=6.3km az=123.0*
*BJI **23** 15:38:37.8, 29°.77N×141°.09E, h89km, mB4.5/8, mb4.3/10, Ms4.0/1, Ms7 4.1/2*

ISC 23 15:38:28.6±2.2, **29°.59N**±0°.05×**141°.42E**±0°.07, **h11**km±13km, **n128,σ1$35/147, mb4.4/42, MS3.5/10, 4C-2D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.58**	**165**	P		**Pn**	**15 39 10.9**	**+0.6**
CBIJ				*e*S		**Sn**	**15 39 39.3**	**-2.4**
JHHJ	**Haha-jima-NKT**	**3.03**	**167**	P		**Pn**	**15 39 17.2**	**+0.7**
JHHJ				*e*S		**Sn**	**15 39 50.8**	**-2.0**
JHCJ	**Hachijojimakas**	**3.73**	**339**	P		**Pn**	**15 39 27.3**	**+1.1**
JHCJ				*e*S		**Sn**	**15 40 09.7**	**-0.5**
JHJ2	**Mitsune**	**3.77**	**339**	P		**Pn**	**15 39 27.3**	**+0.7**
JHJ2				*e*S		**Sn**	**15 40 12.4**	**+1.4**
JHJ	**Hachijo jima 2**	**3.78**	**339**	Pn		**Pn**	**15 39 27.9**	**+1.0**
	14nm,0.3s,baz=70,slow=21,SNR=26							
JHJ				Sn		**Sn**	**15 40 11.5**	**+0.1**
	41nm,0.3s,baz=75,slow=22,SNR=5.7							
JHJ				LR		LR	15 40 55.3	
	comp=Z,217nm,19.6s,baz=134,slow=39							
BSO1	**Boso 1**	**5.06**	**356**	P		**Pn**	**15 39 45.3**	**+1.4**
BSO1				*e*S		**Sn**	**15 40 41.2**	**-0.9**
BSO2	**Boso 2**	**5.17**	**354**	*e*S		**Sn**	**15 40 46.3**	**+1.0**
BSO3	**Boso 3**	**5.25**	**352**	P		**Pn**	**15 39 49.3**	**+2.5**
BSO3				*e*S		**Sn**	**15 40 49.9**	**+2.7**
BSO4	**Boso 4**	**5.46**	**351**	P		**Pn**	**15 39 52.4**	**+2.6**
BSO4				*e*S		**Sn**	**15 40 55.3**	**+2.7**
TATJ	**Tateyama 2**	**5.58**	**347**	P		Pn	15 39 54.8	+3.3
TATJ				*e*S		**Sn**	**15 40 57.1**	**+1.5**
JYO	**Yokosk**	**5.81**	**346**	P		**Pn**	**15 39 57.2**	**+2.5**
JYO				*e*S		**Sn**	**15 41 01.9**	**+0.6**
JOD2	**Odawara 2**	**5.99**	**341**	P		**Pn**	**15 40 00.0**	**+2.8**
JOD2				*e*S		**Sn**	**15 41 07.1**	**+1.3**
JYN	**Shimob**	**6.37**	**338**	P		Pn	15 40 07.5	+5.0
JYN				*e*S		Sn	15 41 22.3	+7.1
JNY	**Yasuok**	**6.49**	**333**	P		Pn	15 40 10.3	+6.2
JHU	**Hanno**	**6.50**	**344**	P		**Pn**	**15 40 06.6**	**+2.5**
JHU				*e*S		**Sn**	**15 41 15.8**	**-2.5**
JYT	**Yasato**	**6.70**	**351**	P		**Pn**	**15 40 08.9**	**+2.0**
JYT				*e*S		**Sn**	**15 41 22.6**	**-0.6**
JRY	**Ryogami san**	**6.75**	**342**	P		**Pn**	**15 40 10.8**	**+3.2**
JRY				*e*S		**Sn**	**15 41 26.1**	**+1.6**
MJAR	**Matsushiro Arr**	**7.43**	**340**	Pn		**Pn**	**15 40 18.5**	**+1.5**
MJAR				Sn		**Sn**	**15 41 42.4**	**+1.0**
MJAR	**Matsushiro Arr**	**7.43**	**340**	Pn		**Pn**	**15 40 18.5**	**+1.5**
	2.0nm,0.3s,baz=164,slow=12,SNR=51							
MJAR				Sn		**Sn**	**15 41 42.4**	**+1.0**
	0.9nm,0.3s,baz=58,slow=20,SNR=4.4							
MJAR				LR		LR	15 42 47.5	
	comp=Z,49nm,21.8s,baz=155,slow=35							
MAJO	**Matsushiro**	**7.43**	**340**	*e*P		**Pn**	**15 40 17.0**	**-0.1**
MAJO				*e*			15 41 38.6	
MAJO				pmax		pmax		
	comp=Z,13nm,0.6s							
MAJO	**Matsushiro**	**7.43**	**340**	*e*Pn		**Pn**	**15 40 17.0**	**-0.1**
	comp=Z,2.1nm,0.6s							
MAJO				*e*Sn		**Sn**	**15 41 38.6**	**-2.8**
MAT	**Matsushiro**	**7.43**	**340**	P		**Pn**	**15 40 19.8**	**+2.7**
MAT				S		**Sn**	**15 41 43.9**	**+2.5**
MAT	**Matsushiro**	**7.43**	**340**	P		**Pn**	**15 40 19.4**	**+2.3**
MAT				*e*S		**Sn**	**15 41 41.9**	**+0.5**
JMK	**Ichinoseki**	**9.34**	**359**	P		**Pn**	**15 40 43.7**	**+0.6**
JMK				*e*S		Sn	15 42 19.5	-8.6
JNU	**Nakatsue**	**9.67**	**294**	LR		LR	15 44 28.8	
	comp=Z,209nm,19.4s,baz=79,slow=37							
JOW	**Kunigami**	**11.91**	**260**	*e*Pn		**Pn**	**15 41 17.8**	**-0.7**
	comp=Z,4.8nm,1.0s							
ERM	**Erimo**	**12.47**	**6**	*e*P		**Pn**	**15 41 25.2**	**-0.8**
KSRS	**Korea Array**	**13.71**	**308**	Pn		**P**	**15 41 50.2**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=115,slow=12,SNR=20							
KSRS				LR		LR	15 47 02.9	
	comp=Z,94nm,18.6s,baz=162,slow=38							
KSAR	**Wonju Array Be**	**13.73**	**308**	Pn		**P**	**15 41 50.1**	**-1.8**
ASAJ	**Asahikawa**	**14.53**	**3**	Pn		Pn	15 41 52.1	-1.9
ASAJ	**Asahikawa**	**14.53**	**3**	Pn		Pn	15 41 52.1	-1.9
	comp=Z,0.6nm,0.3s,baz=16,slow=12,SNR=9.6							
USRK	**Ussuriysk Arra**	**16.39**	**335**	Pn		**Pn**	**15 42 19.1**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=142,slow=8.5,SNR=9.0							
USRK				LR		LR	15 48 14.1	
	comp=Z,57nm,21.3s,baz=69,slow=36							
MDJ	**Mudanjiang**	**17.68**	**331**	P		**P**	**15 42 36.6**	**+0.8**
MDJ				pmax		pmax		
	comp=Z,15nm,0.8s							
MDJ				pmax		pmax		
	comp=Z,30nm,4.8s							
YULB	**Yu-li**	**19.03**	**256**	*e*P		**P**	**15 42 51.3**	**+0.6**
	comp=Z,10.0nm,0.7s							
SSLB	**Suanglung**	**19.17**	**257**	*e*P		**P**	**15 42 52.3**	**+0.1**
	comp=Z,25nm,1.1s							
HABR	**Khabarovsk**	**19.48**	**347**	P		**P**	**15 42 53.3**	**-2.1**
HABR				*e*S		**Sn**	**15 46 29.5**	**-5.5**
HABR				pmax		pmax		
	comp=N,38nm,3.0s							
HABR				pmax		pmax		
	comp=E,60nm,3.0s							
HABR				pmax		pmax		
	comp=Z,27nm,2.2s							
TPUB	**Ta-pu**	**19.63**	**256**	*e*P		**P**	**15 42 57.1**	**-0.3**
KLR	**Kul'dur**	**20.95**	**342**	*e*P		**P**	**15 43 10.0**	**-1.4**
PETK	**Petropavlovsk-**	**26.36**	**22**	LR		LR	15 52 35.2	
	comp=Z,23nm,21.8s,baz=50,slow=32							
SONM	**Songino Array**	**32.48**	**314**	P		**P**	**15 45 00.4**	**+1.2**
SONM	**Songino Array**	**32.48**	**314**	P		**P**	**15 45 00.4**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=95,slow=8.1,SNR=4.8							
SONM				LR		LR	15 58 16.2	
	comp=Z,39nm,18.7s,baz=252,slow=37							
FX1	**Attu Island--F**	**32.89**	**36**	P		**P**	**15 45 03.2**	**+0.6**
FX1	**Attu Island--F**	**32.89**	**36**	P		**P**	**15 45 03.2**	**+0.6**
	comp=Z,2.8nm,0.6s,baz=295,slow=20,SNR=4.7							
FX1				LR		LR	15 58 49.0	
	comp=Z,20nm,19.0s,baz=264,slow=37							
YAK	**Yakutsk**	**33.35**	**350**	*e*P		**P**	**15 45 06.2**	**-0.2**
CMAR	**Chiang Mai Arr**	**40.15**	**264**	P		**P**	**15 46 05.4**	**+0.5**
CMAR	**Chiang Mai Arr**	**40.15**	**264**	P		**P**	**15 46 05.4**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=64,slow=5.7,SNR=7.8							
CMAR				LR		LR	16 02 11.7	
	comp=Z,63nm,18.1s,baz=162,slow=36							
ZALV	**Zalesovo Beam**	**47.18**	**318**	*i* P		**P**	**15 47 01.1**	**+0.1**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**47.18**	**318**	P		**P**	**15 47 01.1**	**+0.1**
ZALV				PcP		**PcP**	**15 48 32.1**	**-0.4**
ZALV	**Zalesovo Beam**	**47.18**	**318**	P		**P**	**15 47 01.1**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=96,slow=8.2,SNR=7.6							
ZALV				PcP		**PcP**	**15 48 32.1**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=98,slow=4.4,SNR=5.4							
ZALV				LR		LR	16 07 06.6	
	comp=Z,24nm,19.7s,baz=339,slow=36							
NVS	**Novosibirsk**	**48.21**	**319**	*e*P		**P**	**15 47 07.8**	**-1.2**
MKAR	**Makanchi Array**	**48.39**	**308**	P		**P**	**15 47 09.8**	**-0.8**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MKAR				MLR		MLR		
	comp=Z,38nm,18.4s							
MKAR	**Makanchi Array**	**48.39**	**308**	P		**P**	**15 47 09.8**	**-0.8**
MKAR	**Makanchi Array**	**48.39**	**308**	P		**P**	**15 47 09.8**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=91,slow=7.4,SNR=10							
MKAR				LR		LR	16 08 33.6	
	comp=Z,38nm,18.4s,baz=164,slow=37							
WRA	**Warramunga Arr**	**49.72**	**189**	P		**P**	**15 47 20.7**	**-0.3**
WRA	**Warramunga Arr**	**49.72**	**189**	P		**P**	**15 47 20.7**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=6.9,slow=7.9,SNR=56							
FITZ	**Fitzroy Crossi**	**49.80**	**200**	LR		LR	16 06 31.3	
	comp=Z,71nm,20.6s,baz=5.7,slow=34							
KURK	**Kurchatov**	**50.77**	**313**	P		**P**	**15 47 28.2**	**-0.5**
KURK				pmax		pmax		
	comp=Z,2.0nm,0.4s							
KURK	**Kurchatov**	**50.77**	**313**	P		**P**	**15 47 28.2**	**-0.5**
KURBB	**Kurchatov Arra**	**50.83**	**313**	P		**P**	**15 47 28.2**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=91,slow=9.6,SNR=26							
AS31	**Alice Springs**	**53.44**	**189**	*e*P		**P**	**15 47 48.9**	**+0.1**
ASAR	**Alice Springs**	**53.45**	**189**	P		**P**	**15 47 48.6**	**-0.2**
ASAR				PcP		**PcP**	**15 48 57.5**	**+1.6**
ASAR	**Alice Springs**	**53.45**	**189**	P		**P**	**15 47 48.6**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=4.2,slow=5.7,SNR=16							
ASAR				PcP		**PcP**	**15 48 57.5**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=16,slow=3.9,SNR=4.7							
KSH	**Kashi**	**53.75**	**299**	*e*P		P	15 47 54.4	+3.3
KSH				*e*PcP		**PcP**	**15 49 00.3**	**+3.2**
KSH				*e*PP		PP	15 49 57.4	+5.4
KSH				*e*PcS		**PcS**	**15 52 58.1**	**+1.7**
KSH				*e*S		**S**	**15 55 24.9**	**-0.7**
KSH				pmax		pmax		
	comp=Z,5.0nm,0.4s							
KSH				pmax		pmax		
	comp=Z,100nm,3.3s							
KSH				LR		LR		
	comp=Z,85nm,5.2s							
AAK	**Ala-Archa**	**54.30**	**303**	*i* P		**P**	**15 47 54.7**	**-0.5**
AAK				pmax		pmax		
	comp=Z,3.0nm,0.7s							
AAK	**Ala-Archa**	**54.30**	**303**	P		**P**	**15 47 54.6**	**-0.6**
AAK	**Ala-Archa**	**54.30**	**303**	P		**P**	**15 47 54.6**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=135,slow=7.1,SNR=7.9							
KIP	**Kipapa**	**54.75**	**84**	*e*P		P	15 48 01.6	+3.1
COLA	**College**	**55.46**	**29**	*e*P		**P**	**15 48 04.5**	**+1.6**
BVAR	**Borovoye Array**	**55.77**	**316**	P		**P**	**15 48 04.9**	**-0.5**
BVAR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
BVAR	**Borovoye Array**	**55.77**	**316**	P		**P**	**15 48 04.9**	**-0.5**
BVAR	**Borovoye Array**	**55.77**	**316**	P		**P**	**15 48 04.9**	**-0.5**
	comp=Z,3.1nm,0.6s,baz=101,slow=7.8,SNR=15							
BRVK	**Borovoye**	**55.83**	**316**	*i* P		**P**	**15 48 05.9**	**+0.1**
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.5s							
ILAR	**Eielson Array**	**55.86**	**29**	P		**P**	**15 48 05.0**	**-1.0**
ILAR	**Eielson Array**	**55.86**	**29**	P		**P**	**15 48 05.0**	**-1.0**
	comp=Z,1.3nm,0.9s,baz=264,slow=5.8,SNR=6.8							
KKAR	**Karatay Array**	**57.10**	**304**	*e*P		**P**	**15 48 14.2**	**-0.9**
KKAR				pmax		pmax		
	comp=Z,5.0nm,0.6s							
KKAR	**Karatay Array**	**57.10**	**304**	*e*P		**P**	**15 48 14.2**	**-0.9**
	comp=Z,4.5nm,0.6s							
SVE	**Sverdlovsk**	**60.85**	**322**	*e*P		**P**	**15 48 41.7**	**+0.9**
SVE				pmax		pmax		
	comp=Z,8.0nm,0.8s							
INK	**Inuvik**	**61.05**	**25**	P		**P**	**15 48 41.6**	**-0.4**
INK	**Inuvik**	**61.05**	**25**	P		**P**	**15 48 41.6**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=264,slow=4.8,SNR=7.4							
STKA	**Stephens Creek**	**61.13**	**180**	P		**P**	**15 48 41.9**	**-1.1**
STKA	**Stephens Creek**	**61.13**	**180**	P		**P**	**15 48 41.9**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=0.0,slow=8.1,SNR=5.5							
ARU	**Arti**	**62.05**	**321**	*d* /P		**P**	**15 48 49.2**	**+0.2**
ARU							15 49 29.6	
ARU				S		**S**	**15 57 11.4**	**-2.0**
ARU				pmax		pmax		
	comp=Z,7.0nm,0.6s							
ABKAR	**Akbulak array**	**62.89**	**313**	*e*P		**P**	**15 48 54.6**	**-0.1**
	comp=Z,4.7nm,0.7s							
YKA	**Yellowknife Ar**	**70.28**	**29**	P		**P**	**15 49 41.2**	**-0.5**
YKA	**Yellowknife Ar**	**70.28**	**29**	P		**P**	**15 49 41.2**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=296,slow=6.3,SNR=3.5							
KEV	**Kevo**	**70.41**	**340**	*e*P		**P**	**15 49 42.1**	**-0.2**
KEV	**Kevo**	**70.41**	**340**	*e*p		**P**	**15 49 42.1**	**-0.2**
	comp=Z,0.3nm,0.3s							
ARCES	**ARCESS Array B**	**70.97**	**340**	P		**P**	**15 49 45.9**	**0.0**
ARCES	**ARCESS Array B**	**70.97**	**340**	P		**P**	**15 49 45.9**	**0.0**
	comp=Z,0.8nm,0.5s,baz=40,slow=8.5,SNR=12							
JOF	**Joensuu**	**72.55**	**333**	*e*P		**P**	**15 49 54.6**	**-0.8**
JOF				pmax		pmax		
	comp=Z,2.0nm,0.6s							
JOF	**Joensuu**	**72.55**	**333**	*e*p		**P**	**15 49 54.6**	**-0.8**
	comp=Z,1.9nm,0.6s							
KAF	**Kangasniemi**	**74.94**	**334**	*e*P		**P**	**15 50 07.8**	**-1.6**
KAF				pmax		pmax		
	comp=Z,2.0nm,0.5s							
KAF	**Kangasniemi**	**74.94**	**334**	*e*p		**P**	**15 50 07.8**	**-1.6**
	comp=Z,1.5nm,0.5s							
FINES	**FINESS Array B**	**75.42**	**333**	P		**P**	**15 50 12.3**	**+0.2**
FINES	**FINESS Array B**	**75.42**	**333**	P		**P**	**15 50 12.3**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=47,slow=6.1,SNR=18							
NEW	**Newport**	**75.53**	**43**	P		**P**	**15 50 13.0**	**-0.1**
NEW	**Newport**	**75.53**	**43**	P		**P**	**15 50 13.0**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=281,slow=5.2,SNR=4.0							
KBZ	**Khabaz**	**75.83**	**312**	P		**P**	**15 50 15.5**	**+0.6**
KBZ				pmax		pmax		
	comp=Z,6.0nm,0.7s							
KBZ	**Khabaz**	**75.83**	**312**	P		**P**	**15 50 15.5**	**+0.6**
KBZ	**Khabaz**	**75.83**	**312**	P		**P**	**15 50 15.5**	**+0.6**
	comp=Z,6.2nm,0.7s,baz=54,slow=5.8,SNR=26							
KIV	**Kislovodsk**	**75.86**	**313**	*i* /P		**P**	**15 50 15.7**	**+0.5**
KIV				*e*			15 53 01.5	
KIV				*e*S		**S**	**16 00 01.3**	**+3.7**
KIV				pmax		pmax		
	comp=Z,6.0nm,0.7s							
KIV				MLR		MLR		
	comp=Z,100nm,18.0s							
RDF	**Al-Radifah**	**79.34**	**297**	*e*P		**P**	**15 50 34.3**	**-0.5**
RDF				AMb		AMB	15 50 37.4	
	comp=Z,9.1nm,0.9s							
NAY	**Al-Naaiem**	**79.43**	**298**	*e*P		**P**	**15 50 34.0**	**-1.2**
NAY				AMb		AMB	15 50 34.9	
	comp=Z,5.6nm,0.8s							
RST	**Umm Al-Ruwaisa**	**79.50**	**298**	*e*P		**P**	**15 50 34.3**	**-1.4**
RST				AMb		AMB	15 50 36.2	
	comp=Z,108nm,0.8s							
NVAR	**Mina Array Bea**	**79.51**	**52**	P		**P**	**15 50 35.8**	**-0.1**
NVAR	**Mina Array Bea**	**79.51**	**52**	P		**P**	**15 50 35.8**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=297,slow=6.0,SNR=11							
LRM	**Limekiln Ridge**	**79.51**	**43**	*e*P		**P**	**15 50 35.6**	**-0.2**
	comp=Z,8.7nm,0.5s							
AKASG	**Malin Array Be**	**80.21**	**323**	*e*P		**P**	**15 50 41.2**	**+2.1**
AKASG	**Malin Array Be**	**80.21**	**323**	P		**P**	**15 50 38.7**	**-0.4**
AKASG	**Malin Array Be**	**80.21**	**323**	P		**P**	**15 50 38.7**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=47,slow=6.1,SNR=4.4							
KIEV	**Kiev**	**80.23**	**323**	*e*P		**P**	**15 50 41.3**	**+2.1**
HFS	**Hagfors**	**80.87**	**336**	P		**P**	**15 50 41.8**	**-0.7**
HFS	**Hagfors**	**80.87**	**336**	P		**P**	**15 50 41.8**	**-0.7**
	comp=Z,1.5nm,0.7s,baz=86,slow=5.9,SNR=7.5							
NOA	**NORSAR Array B**	**81.05**	**338**	P		**P**	**15 50 44.4**	**+0.9**
NOA	**NORSAR Array B**	**81.05**	**338**	P		**P**	**15 50 44.4**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=52,slow=6.2,SNR=3.7							
NOA				LR		LR	16 29 40.7	
	comp=Z,21nm,19.3s,baz=25,slow=38							
BR131	**Keskin Array S**	**83.82**	**312**	*e*P		**P**	**15 50 58.3**	**-0.2**
	comp=Z,5.6nm,0.8s							
BRTR	**Keskin Array B**	**83.82**	**312**	P		**P**	**15 50 59.4**	**+0.9**
BRTR	**Keskin Array B**	**83.82**	**312**	P		**P**	**15 50 59.4**	**+0.9**
	comp=Z,5.7nm,0.7s,baz=93,slow=4.5,SNR=41							
ASF	**Jabal al Asfar**	**85.69**	**305**	P		**P**	**15 51 09.1**	**+1.1**
ASF	**Jabal al Asfar**	**85.69**	**305**	P		**P**	**15 51 09.1**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=103,slow=2.2,SNR=3.1							
MMAI	**Mount Meron Ar**	**86.30**	**306**	P		**P**	**15 51 11.1**	**+0.2**
MMAI	**Mount Meron Ar**	**86.30**	**306**	P		**P**	**15 51 11.1**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=69,slow=7.9,SNR=5.3							
GERES	**GERESS Array B**	**89.03**	**328**	P		**P**	**15 51 23.4**	**-0.4**
GERES	**GERESS Array B**	**89.03**	**328**	P		**P**	**15 51 23.4**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=27,slow=4.6,SNR=4.6							
GERES				LR		LR	16 34 23.0	
	comp=Z,19nm,19.2s,baz=338,slow=38							
TXAR	**Lajitas Array**	**94.64**	**53**	P		**P**	**15 51 50.4**	**+0.2**
TXAR	**Lajitas Array**	**94.64**	**53**	P		**P**	**15 51 50.4**	**+0.2**
	comp=Z,0.7nm,0.9s,baz=308,slow=2.2,SNR=4.6							
LPAZ	**La Paz**	**149.84**	**70**	PKPbc		**PKPbc**	**15 58 20.0**	**-0.3**
LPAZ	**La Paz**	**149.84**	**70**	PKPbc		**PKPbc**	**15 58 20.0**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=333,slow=2.3,SNR=6.1							

*NSSP **23** 15:40:10.9, 39°.65N×44°.47E, h10km, Ms3.2*
*ISK **23** 15:40:15.0,

1.1nm,0.4s,baz=244,slow=6.9,SNR=10.0
YKA Yellowknife Ar 32.01 48 P **P** 15 49 54.8 **+1.9**
0.4nm,0.5s,baz=291,slow=6.6,SNR=4.8
TXAR Lajitas Array 54.41 86 P P 15 53 03.1 +9.0
0.5nm,0.6s,baz=316,slow=5.0,SNR=3.5
ASAR Alice Springs 88.62 228 P P 15 56 13.6 -6.3
0.6nm,0.7s,baz=40,slow=5.0,SNR=8.8

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*SFS **23** 15:45:28.0,37°.85N×0°.49W,h14km,ML2.7*
*CSEM **23** 15:45:28.6±0.3,37°.99N×0°.64W,h8km, ML2.9/8, Error ellipse: s-maj=8.2km s-min=3.8km az=132.0*
*INMG **23** 15:45:28.5±1.2,37°.84N×0°.44W,h15km±3km,ML2.3, Error ellipse: s-maj=6.2km s-min=2.7km az=131.0*
*LDG **23** 15:45:28.9±0.2,37°.92N×0°.55W,h2km, Ml2.8/2, Error ellipse: s-maj=4.5km s-min=2.3km az=142.0*
*MDD **23** 15:45:29.1±0.6,37°.87N×0°.49W,h12km,mbLg2.6/16, Error ellipse: s-maj=6.9km s-min=3.1km az=135.0, PRXIMO*
MDD EMS: III INTENSIDAD MAXIMA.
*ISCJB **23** 15:45:29.8±0.6,38°.02N±0°.05×0°.63W±0°.05,h31km±7km, Error ellipse: s-maj=10.0km s-min=3.8km az=138.8*

ISC 23 15:45:28.9±1.2,**37°.90N**±0°.04×**0°.50W**±0°.04,**h26**km±12km, **n77**,σ1§**15**/99,**1C-2D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CART	**Cartagena**	**0.50**	**232**	⇓Pg	**Pb**	**15 45 39.1**	**-0.1**
CART				Lg	Lg	15 45 46.4	
CART	**Cartagena**	**0.50**	**232**	*i* P	**Pb**	**15 45 39.1**	**-0.1**
CART				Lg	Lg	15 45 46.3	
CART				*e*S	**S**	**15 45 46.3**	**+0.1**
EMUR	**La Murta**	**0.59**	**265**	⇓Pg	**Pb**	**15 45 39.9**	**-0.7**
	7.4nm,0.1s,SNR=18						
EMUR				Lg	Lg	15 45 48.8	
	309nm,0.2s,SNR=20						
EMUR	**La Murta**	**0.59**	**265**	Pg	**Pb**	**15 45 39.9**	**-0.7**
	7.4nm,0.1s,SNR=18						
EMUR				Lg	Lg	15 45 48.8	
	309nm,0.2s,SNR=20						
EBEN	**Beniarda**	**0.83**	**15**	Pg	**Pb**	**15 45 44.5**	**-0.3**
	5.3nm,0.2s,SNR=338						
EBEN				Lg	Lg	15 45 56.5	
	202nm,0.2s,SNR=5.0						
EBEN	**Beniarda**	**0.83**	**15**	Pg	**Pb**	**15 45 44.5**	**-0.3**
	5.3nm,0.2s,SNR=338						
EBEN				Lg	Lg	15 45 56.5	
	202nm,0.2s,SNR=5.0						
ETOB	**Tobarra**	**1.11**	**312**	Pg	**Pb**	**15 45 49.4**	**-0.1**
	12nm,0.2s,SNR=52						
ETOB				Lg	Lg	15 46 03.9	
	53nm,0.2s,SNR=6.6						
ETOB	**Tobarra**	**1.11**	**312**	Pg	**Pb**	**15 45 49.4**	**-0.1**
	12nm,0.2s,SNR=52						
ETOB				Lg	Lg	15 46 03.9	
	53nm,0.2s,SNR=6.6						
ENIJ	**Nijar**	**1.64**	**236**	Pg	**Pn**	**15 45 57.7**	**+1.6**
	4.0nm,0.1s,SNR=7.9						
ENIJ	**Nijar**	**1.64**	**236**	Pg	**Pn**	**15 45 57.7**	**+1.6**
	4.0nm,0.1s,SNR=7.9						
EHUE	**Huescar**	**1.66**	**268**	Pg	**Pn**	**15 45 57.7**	**+1.3**
	1.5nm,0.1s,SNR=7.9						
EHUE				Lg	Lg	15 46 20.5	
	7.2nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**1.66**	**268**	Pg	**Pn**	**15 45 57.7**	**+1.3**
	1.5nm,0.1s,SNR=7.9						
EHUE				Lg	Lg	15 46 20.5	
	7.2nm,0.3s,SNR=7.9						
ECHE	**Chera**	**1.73**	**348**	Pn	**Pn**	**15 45 58.6**	**+1.2**
	1.4nm,0.1s,SNR=7.9						
ECHE				Pg	**Pb**	**15 46 00.7**	**+0.7**
	6.3nm,0.4s,SNR=7.9						
ECHE				Lg	Lg	15 46 23.6	
	22nm,0.2s,SNR=7.9						
ECHE	**Chera**	**1.73**	**348**	Pn	**Pn**	**15 45 58.6**	**+1.2**
	1.4nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**1.74**	**296**	Pn	**Pn**	**15 45 58.2**	**+0.6**
	1.1nm,0.2s,SNR=7.9						
EVIA				Pg	**Pb**	**15 46 00.8**	**+0.5**
	7.0nm,0.2s,SNR=7.9						
EVIA				Sn	**Sb**	**15 46 21.3**	**-0.4**
	32nm,0.4s,SNR=7.9						
EVIA				Lg	Lg	15 46 24.7	
	35nm,0.2s,SNR=7.9						
EVIA	**Vianos**	**1.74**	**296**	Pn	**Pn**	**15 45 58.2**	**+0.6**
	1.1nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**1.83**	**52**	⇑Pn	**Pn**	**15 45 59.5**	**+0.7**
	27nm,0.1s,SNR=18						
EIBI				Sn	**Sn**	**15 46 20.2**	**-1.0**
	34nm,0.3s,SNR=5.0						
EIBI	**Ibiza**	**1.83**	**52**	Pn	**Pn**	**15 45 59.5**	**+0.7**
	27nm,0.1s,SNR=18						
EIBI				Sn	**Sn**	**15 46 20.2**	**-1.0**
	34nm,0.3s,SNR=5.0						
EQES	**Quesada**	**2.04**	**268**	Pg	**Pn**	**15 46 03.8**	**+2.2**
	2.1nm,0.1s,SNR=35						
EQES				Lg	Lg	15 46 29.5	
	11nm,0.2s,SNR=5.0						
EQES	**Quesada**	**2.04**	**268**	Pg	**Pn**	**15 46 03.8**	**+2.2**
	2.1nm,0.1s,SNR=35						
EQES				Lg	Lg	15 46 29.5	
	11nm,0.2s,SNR=5.0						
EBER	**Berja**	**2.15**	**243**	Pg	**Pn**	**15 46 05.3**	**+2.1**
	1.6nm,0.2s,SNR=16						
EBER				Lg	Lg	15 46 35.4	
	32nm,0.8s,SNR=7.9						
EBER	**Berja**	**2.15**	**243**	Pg	**Pn**	**15 46 05.3**	**+2.1**
	1.6nm,0.2s,SNR=16						
EBER				Lg	Lg	15 46 35.4	
	32nm,0.8s,SNR=7.9						
EQUE	**Quentar**	**2.44**	**254**	Pg	**Pb**	**15 46 10.7**	**-1.4**
	7.7nm,0.2s,SNR=4.0						
EQUE				Lg	Lg	15 46 43.7	
	15nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**2.44**	**254**	Pg	**Pb**	**15 46 10.7**	**-1.4**
	7.7nm,0.2s,SNR=4.0						
EQUE				Lg	Lg	15 46 43.7	
	15nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.46**	**1**	Pn	**Pn**	**15 46 08.6**	**+1.0**
	0.9nm,0.1s,SNR=13						
EMOS				Pg	**Pb**	**15 46 13.0**	**+0.4**
	0.8nm,0.1s,SNR=7.9						
EMOS				Sn	**Sn**	**15 46 36.2**	**-0.7**
	6.7nm,0.3s,SNR=5.0						
EMOS	**Mosqueruela**	**2.46**	**1**	Pn	**Pn**	**15 46 08.6**	**+1.0**
	0.9nm,0.1s,SNR=13						
ECOG	**Cogollos-Vega**	**2.51**	**257**	Pg	**Pb**	**15 46 11.5**	**-1.9**
	1.1nm,0.1s,SNR=7.9						
ECOG				Lg	Lg	15 46 46.2	
	15nm,0.4s,SNR=4.0						
ECOG	**Cogollos-Vega**	**2.51**	**257**	Pg	**Pb**	**15 46 11.5**	**-1.9**
	1.1nm,0.1s,SNR=7.9						
ECOG				Lg	Lg	15 46 46.2	
	15nm,0.4s,SNR=4.0						
EBAN	**Banos Encina**	**2.61**	**277**	Pn	**Pn**	**15 46 10.4**	**+1.0**
	2.1nm,0.1s,SNR=6.4						
EBAN				Sn	**Sn**	**15 46 39.8**	**-0.4**
	6.3nm,0.2s,SNR=5.0						
EBAN	**Banos Encina**	**2.61**	**277**	Pn	**Pn**	**15 46 10.4**	**+1.0**
	2.1nm,0.1s,SNR=6.4						
EBAN				Sn	**Sn**	**15 46 39.8**	**-0.4**
	6.3nm,0.2s,SNR=5.0						
EGUA	**Guajares**	**2.66**	**247**	Pn	**Pn**	**15 46 12.6**	**+2.5**
	6.8nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**2.66**	**247**	Pn	**Pn**	**15 46 12.6**	**+2.5**
	6.8nm,0.2s,SNR=7.9						
ERON	**Agron**	**2.77**	**253**	Pn	**Pn**	**15 46 14.1**	**+2.3**
	0.5nm,0.2s,SNR=7.9						
ERON	**Agron**	**2.77**	**253**	Pn	**Pn**	**15 46 14.1**	**+2.3**
	0.5nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**3.12**	**12**	Pn	**Pn**	**15 46 17.9**	**+1.4**
	1.2nm,0.1s,SNR=8.0						
ERTA				Sn	**Sn**	**15 46 52.5**	**-0.4**
	3.8nm,0.2s,SNR=5.0						
ERTA	**Horta de San J**	**3.12**	**12**	Pn	**Pn**	**15 46 17.9**	**+1.4**
	1.2nm,0.1s,SNR=8.0						
ERTA				Sn	**Sn**	**15 46 52.5**	**-0.4**
	3.8nm,0.2s,SNR=5.0						
ETOR	**Torete**	**3.15**	**338**	Pn	Pn	15 46 20.5	+3.5
	1.3nm,0.1s,SNR=7.9						
ETOR				Pg	Pb	15 46 28.2	+3.9
	9.3nm,0.3s,SNR=7.9						
ETOR				Lg	Lg	15 47 06.9	
	24nm,0.3s,SNR=7.9						
ETOR	**Torete**	**3.15**	**338**	Pn	Pn	15 46 20.5	+3.5
	1.3nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**3.23**	**276**	Pn	**Pn**	**15 46 18.3**	**+0.4**
	0.8nm,0.2s,SNR=5.0						
EADA				Sn	**Sn**	**15 46 55.9**	**+0.3**
	2.1nm,0.1s,SNR=5.0						
EADA				Lg	Lg	15 47 08.1	
	5.8nm,0.2s,SNR=4.0						
EADA	**Adamuz**	**3.23**	**276**	Pn	**Pn**	**15 46 18.3**	**+0.4**
	0.8nm,0.2s,SNR=5.0						
EADA				Sn	**Sn**	**15 46 55.9**	**+0.3**
	2.1nm,0.1s,SNR=5.0						
EADA				Lg	Lg	15 47 08.1	
	5.8nm,0.2s,SNR=4.0						
ESDC	**Sonseca Array**	**3.23**	**304**	Pn	**Pn**	**15 46 18.2**	**+0.1**
	0.9nm,0.2s,baz=117,slow=14,SNR=15						
ESDC				Pg	**Pb**	**15 46 26.7**	**+1.0**
	4.4nm,0.4s,baz=122,slow=18,SNR=7.9						
ESDC				Lg	Lg	15 47 08.4	
	6.4nm,0.3s,baz=123,slow=30,SNR=13						
ESDC	**Sonseca Array**	**3.23**	**304**	Pn	**Pn**	**15 46 18.2**	**+0.1**
	0.9nm,0.2s,slow=14,SNR=15						
EPOB	**Poblet**	**3.66**	**19**	Pn	**Pn**	**15 46 24.6**	**+0.7**
	1.1nm,0.2s,SNR=7.9						
EPOB				Sn	**Sn**	**15 47 04.3**	**-2.0**
	1.9nm,0.3s,SNR=5.0						
EPOB	**Poblet**	**3.66**	**19**	Pn	**Pn**	**15 46 24.6**	**+0.7**
	1.1nm,0.2s,SNR=7.9						
EPOB				Sn	**Sn**	**15 47 04.3**	**-2.0**
	1.9nm,0.3s,SNR=5.0						
ESAC	**San Caprasio**	**3.82**	**0**	Pg	**Pb**	**15 46 36.5**	**+0.9**
	4.3nm,0.2s,SNR=4.0						
ESAC				Lg	Lg	15 47 29.1	
	22nm,0.4s,SNR=7.9						
ESAC	**San Caprasio**	**3.82**	**0**	Pg	**Pb**	**15 46 36.5**	**+0.9**
	4.3nm,0.2s,SNR=4.0						
ESAC				Lg	Lg	15 47 29.1	
	22nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**3.94**	**315**	Pg	**Pb**	**15 46 39.7**	**+1.9**
	0.5nm,0.2s,SNR=4.0						
GUD				Lg	Lg	15 47 31.8	
	4.3nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**3.94**	**315**	Pg	**Pb**	**15 46 39.7**	**+1.9**
	0.5nm,0.2s,SNR=4.0						
GUD				Lg	Lg	15 47 31.8	
	4.3nm,0.4s,SNR=7.9						
CSOR	**Sort**	**4.64**	**15**	Pn	**Pn**	**15 46 38.9**	**+1.4**
	0.3nm,0.1s,SNR=7.9						
CSOR	**Sort**	**4.64**	**15**	Pn	**Pn**	**15 46 38.9**	**+1.4**
	0.3nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**4.85**	**298**	Lg	Lg	15 47 58.9	
	2.1nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**4.85**	**298**	Lg	Lg	15 47 58.9	
	2.1nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.89**	**270**	Pn	**Pn**	**15 46 40.9**	**+0.2**
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**15 47 35.6**	**-0.8**
	0.4nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	15 47 58.4	
	0.6nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.89**	**270**	Pn	**Pn**	**15 46 40.9**	**+0.2**
	0.2nm,0.1s,SNR=7.9						
EMIN				Sn	**Sn**	**15 47 35.6**	**-0.8**
	0.4nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	15 47 58.4	
	0.6nm,0.3s,SNR=7.9						
IEPA	**Eparoz**	**4.91**	**353**	Pn	Pn	15 46 44.6	+3.5
	0.6nm,0.2s,SNR=7.9						
IEPA	**Eparoz**	**4.91**	**353**	Pn	Pn	15 46 44.6	+3.5
	0.6nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**4.99**	**360**	*e*Pn	**Pn**	**15 46 42.5**	**+0.2**
ETSF	**Etsaut**	**4.99**	**360**	Pn	**Pn**	**15 46 42.5**	**+0.2**
EPF	**Esparros**	**5.17**	**7**	*e*Pn	**Pn**	**15 46 44.9**	**+0.3**
EPF	**Esparros**	**5.17**	**7**	Pn	**Pn**	**15 46 44.9**	**+0.3**
PBAR	**Barrancos**	**5.17**	**275**	*e*Pn	**Pn**	**15 46 45.0**	**+0.4**
PBAR				*e*Sn	**Sn**	**15 47 42.3**	**-1.1**
PBAR				A	A	15 48 22.8	
	3.6nm,0.8s						
PBAR	**Barrancos**	**5.17**	**275**	Pn	**Pn**	**15 46 45.0**	**+0.4**
PBAR				Sn	**Sn**	**15 47 42.3**	**-1.1**
	3.6nm,0.8s						
PBAR	**Barrancos**	**5.17**	**275**	Pn	**Pn**	**15 46 45.0**	**+0.4**
PBAR				*e*Sn	**Sn**	**15 47 42.3**	**-1.1**
	3.6nm,0.8s						
SJPF	**Ste Jean**	**5.24**	**354**	*e*Pn	**Pn**	**15 46 45.7**	**+0.1**
SJPF				*e*Sn	**Sn**	**15 47 42.8**	**-2.3**
	2.4nm,0.4s						
SJPF	**Ste Jean**	**5.24**	**354**	Pn	**Pn**	**15 46 45.7**	**+0.1**
SJPF				*e*Sn	**Sn**	**15 47 42.8**	**-2.3**
	1.2nm,0.4s						
PVAQ	**Vaqueiros**	**5.75**	**267**	*e*Pn	**Pn**	**15 46 53.1**	**+0.6**
PVAQ				*e*Sn	**Sn**	**15 47 57.0**	**-0.6**
PVAQ	**Vaqueiros**	**5.75**	**267**	Pn	**Pn**	**15 46 53.1**	**+0.6**
PVAQ				Sn	**Sn**	**15 47 57.0**	**-0.6**
PVAQ	**Vaqueiros**	**5.75**	**267**	Pn	**Pn**	**15 46 53.1**	**+0.6**
PVAQ				Sn	**Sn**	**15 47 57.0**	**-0.6**
EVO	**Evora**	**5.95**	**278**	*e*Pn	**Pn**	**15 46 56.3**	**+1.0**
EVO				*e*Sn	**Sn**	**15 48 01.1**	**-1.5**
	1.5nm,0.3s						
PCVE	**Castro Verde**	**5.98**	**270**	*e*Pn	**Pn**	**15 46 55.8**	**+0.1**
PCVE	**Castro Verde**	**5.98**	**270**	Pn	**Pn**	**15 46 55.8**	**+0.1**
PCVE	**Castro Verde**	**5.98**	**270**	Pn	**Pn**	**15 46 55.8**	**+0.1**
EVOP	**Sao Brissos**	**6.04**	**278**	*e*Pn	**Pn**	**15 46 56.3**	**-0.2**
ECAL	**Calabor**	**6.26**	**312**	Pn	**Pn**	**15 47 00.4**	**+0.7**
	0.6nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**6.26**	**312**	Pn	**Pn**	**15 47 00.4**	**+0.7**
	0.6nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**6.66**	**266**	*e*Pn	**Pn**	**15 47 05.8**	**+0.7**
PFVI	**Vila Bisbo**	**6.66**	**266**	*e*Pn	**Pn**	**15 47 05.8**	**+0.7**

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*BJI **23** 16:06:42.3,2°.70S×127°.60E,h35km, mB4.9/30, mb4.8/39, Ms4.6/19, Ms7 4.2/21*
*IDC **23** 16:06:43.8±2.8,2°.74S×127°.62E,h26km±18km, mb4.3/16, mb1 4.5/18, mb1mx4.4/24, mbtmp4.3/18, ML4.9/2, MS3.4/7, Ms1 3.4/7, ms1mx3.0/38, Error ellipse: s-maj=23.2km s-min=7.9km az=71.0*
*ISCJB **23** 16:06:43.8±0.2,2°.67S±0°.03×127°.58E±0°.03, h42km, mb4.7/45, MS3.9/11, Error ellipse: s-maj=4.4km s-min=3.5km az=136.1*
*NEIC **23** 16:06:44.4±0.2,2°.70S×127°.53E, h35km, mb4.8/19, Error ellipse: s-maj=9.1km s-min=4.8km az=63.0*
*DJA **23** 16:06:46.3±0.3,3°S±2°×12°7E±°, h42km±5km, M4.7/3, MLv4.7/3*

ISC 23 16:06:45.6±0.3,**2°.71S**±0°.04×**127°.52E**±0°.04,**h42**km, **h42**km:**pP-P,n144,**σ1§**63**/219,**mb4.8**/45,**MS3.8**/11,**1C, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.54**	**114**	P	**Pn**	**16 07 13.3**	**+2.7**
LBMI	**Labuha**	**2.06**	**360**	P	**Pn**	**16 07 16.6**	**-1.2**
LBMI				S	**Sn**	**16 07 41.4**	**-0.9**
TNTI	**Ternate**	**3.46**	**358**	P	**Pn**	**16 07 36.1**	**-1.0**
SWI	**Sorong**	**4.17**	**64**	P	**Pn**	**16 07 46.0**	**-0.7**
GAMI	**Galela, Maluku**	**4.53**	**3**	P	**Pn**	**16 07 51.5**	**-0.2**
FAKI	**Fak Fak**	**4.73**	**93**	P	**Pn**	**16 07 53.9**	**-0.6**
KMSI	**Cibinong**	**4.81**	**313**	P	Pn	16 07 52.2	-3.4
KMSI				S	**Sn**	**16 08 46.3**	**-3.8**
MNI	**Manado**	**4.92**	**327**	P	**Pn**	**16 07 57.7**	**+0.6**
MNI				S	**Sn**	**16 08 49.3**	**-3.5**
LUWI	**Luwuk**	**5.03**	**289**	P	**Pn**	**16 07 56.5**	**-2.0**
LUWI				S	**Sn**	**16 08 49.9**	**-5.5**
BBSI	**Bau Bau**	**5.65**	**241**	P	Pn	16 08 12.7	+5.6
SKSI	**Soroako, Sulaw**	**6.18**	**272**	P	**Pn**	**16 08 14.6**	**+0.2**
SKSI				S	**Sn**	**16 09 22.4**	**-1.5**
MRSI	**Marisa**	**6.41**	**300**	P	**Pn**	**16 08 14.8**	**-2.8**
MRSI				S	**Sn**	**16 09 25.3**	**-4.3**
PKPI	**Ransiki, Papua**	**6.76**	**80**	P	**Pn**	**16 08 21.1**	**-1.3**
BKSI	**Bulukumba**	**7.82**	**250**	P	**Pn**	**16 08 39.1**	**+2.2**
SPSI	**Sidrap Palu**	**7.83**	**261**	P	**Pn**	**16 08 39.5**	**+2.4**
SPSI				S	**Sn**	**16 10 06.7**	**+2.1**
KAPI	**Kappang**	**8.08**	**253**	*e*Pn	**Pn**	**16 08 39.5**	**-0.9**
KAPI	**Kappang**	**8.08**	**253**	P	**Pn**	**16 08 42.4**	**+1.9**
KAPI	**Kappang**	**8.08**	**253**	Pn	**Pn**	**16 08 42.1**	**+1.6**
	3.5nm,0.3s,baz=129,slow=5.4,SNR=15						
KAPI				Sn	**Sn**	**16 10 06.8**	**-3.7**
	0.3nm,0.3s,baz=132,slow=20,SNR=2.1						
KAPI				LR	LR	16 11 45.7	
	comp=Z,179nm,21.5s,baz=81,slow=37						
SRPI	**Serui, Papua**	**8.76**	**85**	S	**Sn**	**16 10 26.5**	**-0.7**
CTBH	**Cotabato--PC H**	**10.39**	**342**	⇑*i*P	**Pn**	**16 09 10.8**	**-1.4**
SMKI	**Samarinda**	**10.55**	**282**	P	**Pn**	**16 09 14.7**	**+0.4**
TSM	**Tawau**	**11.89**	**306**	P	**Pn**	**16 09 30.8**	**-1.9**
MYLDM	**Lahad Datu**	**11.94**	**311**	P	**Pn**	**16 09 33.0**	**-0.4**
SDKM	**Sandakan**	**13.23**	**309**	P	**Pn**	**16 09 50.7**	**-0.5**
KKM	**Kota Kinabalu**	**14.25**	**308**	P	**Pn**	**16 10 04.9**	**-0.1**
KDM	**Kudat**	**14.33**	**312**	P	**Pn**	**16 10 05.3**	**-0.6**
GMJI	**Gumukmas**	**15.05**	**248**	P	**P**	**16 10 19.9**	**-0.4**
FITZ	**Fitzroy Crossi**	**15.40**	**187**	*e*Pn	**Pn**	**16 10 17.7**	**-2.4**
	12nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.40**	**187**	Pn	**P**	**16 10 22.2**	**-1.9**
	1.1nm,0.3s,baz=14,slow=11,SNR=29						
FITZ				LR	LR	16 16 48.9	
	comp=Z,134nm,20.0s,baz=5.5,slow=39						
SBUM	**Sibu**	**16.13**	**288**	P	**Pn**	**16 10 30.1**	**+0.6**
KSM	**Kuching**	**17.70**	**283**	P	**Pn**	**16 10 49.0**	**-0.2**
WRAB	**Tennant Creek**	**18.37**	**159**	*e*Pn	**P**	**16 10 55.6**	**-1.4**
	28nm,0.4s						
WRAB				*e*Sn	**Sn**	**16 14 18.8**	**-2.9**
WRA	**Warramunga Arr**	**18.37**	**159**	P	**P**	**16 10 57.0**	**0.0**
WRA				S	**Sn**	**16 14 20.5**	**-1.3**
WRA				ScP	**ScP**	**16 19 03.4**	**+3.8**
WRA	**Warramunga Arr**	**18.37**	**159**	P	**P**	**16 10 57.0**	**0.0**
	7.4nm,0.3s,baz=341,slow=12,SNR=469						
WRA				S	**Sn**	**16 14 20.5**	**-1.3**
	0.9nm,0.3s,baz=338,slow=22,SNR=6.3						
WRA				ScP	**ScP**	**16 19 03.4**	**+3.8**
	0.1nm,0.3s,baz=330,slow=2.1,SNR=4.7						
COEN	**Coen**	**19.08**	**127**	*e*P	**P**	**16 11 04.7**	**-0.1**
	155nm,0.7s						
PMG	**Port Moresby**	**20.62**	**110**	*e*P	**P**	**16 11 19.4**	**-2.2**
	21nm,0.7s						
PMG	**Port Moresby**	**20.62**	**110**	P	**P**	**16 11 21.8**	**+0.2**
PMG	**Port Moresby**	**20.62**	**110**	P	Pn	16 11 23.2	-1.0
	19nm,0.7s,baz=319,slow=9.3,SNR=14						
CBJI	**Citeko**	**20.93**	**259**	P	Pn	16 11 26.2	-1.5
AS31	**Alice Springs**	**21.73**	**164**	*e*P	**P**	**16 11 32.5**	**-0.9**
AS31				*e*S	**S**	**16 15 29.4**	**-2.3**
ASAR	**Alice Springs**	**21.73**	**164**	P	**P**	**16 11 33.2**	**-0.3**
ASAR				S	**S**	**16 15 30.1**	**-1.7**
ASAR				ScP	**ScP**	**16 19 09.9**	**+2.6**
ASAR	**Alice Springs**	**21.73**	**164**	P	**P**	**16 11 33.2**	**-0.3**
	14nm,0.5s,baz=344,slow=12,SNR=228						
ASAR				S	**S**	**16 15 30.1**	**-1.7**
	11nm,0.9s,baz=347,slow=21,SNR=13						
ASAR				ScP	**ScP**	**16 19 09.9**	**+2.6**
	0.8nm,0.7s,baz=331,slow=2.1,SNR=7.0						
MYKOM	**Kota Tinggi**	**24.08**	**280**	P	**P**	**16 11 57.9**	**+0.5**
KGM	**Kluang**	**24.64**	**281**	P	**P**	**16 12 04.7**	**+2.1**
CTA	**Charters Tower**	**25.15**	**135**	P	**P**	**16 12 08.1**	**+0.9**
CTA	**Charters Tower**	**25.15**	**135**	P	**P**	**16 12 08.1**	**+0.9**
	4.4nm,0.8s,baz=288,slow=9.6,SNR=9.9						
CTAO	**Charters Tower**	**25.15**	**135**	*e*P	**P**	**16 12 06.3**	**-0.9**
	10nm,1.0s						
TWG	**Pinlang**	**26.15**	**346**	*e*P	**P**	**16 12 14.9**	**-1.1**
	64nm,0.6s						
YULB	**Yu-li**	**26.65**	**347**	*e*P	**P**	**16 12 18.9**	**-1.7**
	12nm,0.8s						
TPUB	**Ta-pu**	**26.71**	**346**	*e*P	**P**	**16 12 21.5**	**+0.3**
	83nm,1.1s						
SSLB	**Suanglung**	**27.11**	**347**	*e*P	**P**	**16 12 23.2**	**-1.5**
	22nm,0.8s						
IPM	**Ipoh**	**27.42**	**285**	*e*P	**P**	**16 12 26.9**	**-0.8**
	22nm,1.0s						
IPM	**Ipoh**	**27.42**	**285**	P	**P**	**16 12 29.9**	**+2.2**
YHNB	**Yeheng**	**27.87**	**348**	*e*P	**P**	**16 12 30.5**	**-1.0**
KULM	**Kulim**	**27.99**	**286**	*e*P	**P**	**16 12 32.6**	**-0.2**
	11nm,1.0s						
KULM	**Kulim**	**27.99**	**286**	P	**P**	**16 12 33.9**	**+1.2**
CHBT	**CHBT**	**29.36**	**302**	P	**P**	**16 12 46.5**	**+1.6**
STKA	**Stephens Creek**	**31.89**	**157**	P	**P**	**16 13 06.5**	**-0.6**
STKA	**Stephens Creek**	**31.89**	**157**	P	**P**	**16 13 06.5**	**-0.6**
	3.4nm,0.4s,baz=338,slow=9.0,SNR=38						
STKA				LR	LR	16 26 11.7	
	comp=Z,149nm,18.4s,baz=214,slow=37						
CMAR	**Chiang Mai Arr**	**35.13**	**308**	P	**P**	**16 13 36.6**	**+1.1**
CMAR				PcP	**PcP**	**16 16 08.4**	**+2.0**
CMAR	**Chiang Mai Arr**	**35.13**	**308**	P	**P**	**16 13 36.6**	**+1.1**
	3.4nm,0.8s,baz=134,slow=7.3,SNR=26						
CMAR				PcP	**PcP**	**16 16 08.4**	**+2.0**
	1.5nm,0.9s,baz=167,slow=1.9,SNR=6.8						
GYA	**Guiyang**	**35.32**	**326**	P	**P**	**16 13 38.4**	**+1.3**
GYA				pP	**pP**	**16 13 48.8**	**+0.2**
GYA				PP	**PP**	**16 15 01.3**	**+3.4**
GYA				PcP	**PcP**	**16 16 08.5**	**+1.5**
GYA				S	**S**	**16 19 11.0**	**+2.3**
GYA				sS	**sS**	**16 19 27.5**	**-0.4**
GYA				ScP	**ScP**	**16 19 50.0**	**+0.4**
GYA				ScS	**ScS**	**16 23 52.3**	**-1.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA		

LZH				LR	LR			
	comp=E,1μm,15.6s							
LZH				LR	LR			
	comp=Z,1μm,16.4s							
HHC	**Hu-ho-hao-te**	**45.74**	**343**	*e*P	P	16 15 06.4	+3.5	
HHC				pP	pP	16 15 15.8	+1.0	
HHC				sP	sP	16 15 20.5	+0.8	
HHC				PcP	**PcP**	**16 16 43.8**	**+3.5**	
HHC				PP	**PP**	**16 16 53.3**	**+2.6**	
HHC				ScP	**ScP**	**16 20 32.1**	**+2.0**	
HHC				S	**S**	**16 21 48.3**	**+4.8**	
HHC				sS	sS	16 22 03.8	+0.6	
HHC				ScS	**ScS**	**16 24 56.1**	**+0.3**	
HHC				pmax	pmax			
	comp=Z,21nm,0.7s							
HHC				pmax	pmax			
	comp=Z,120nm,9.5s							
HHC				LR	LR			
	comp=N,350nm,21.4s							
HHC				LR	LR			
	comp=E,340nm,20.2s							
HHC				LR	LR			
	comp=Z,250nm,17.8s							
CN2	**Changchun**	**46.34**	**358**	*e*P	P	16 15 10.8	+3.3	
USRK	**Ussuriysk Arra**	**46.88**	**4**	P	**P**	**16 15 11.9**	**+0.2**	
	comp=Z,2.1nm,0.5s,baz=178,slow=6.9,SNR=10							
USRK				LR	LR	16 35 15.1		
	comp=Z,24nm,18.0s,baz=220,slow=36							
MDJ	**Mudanjiang**	**47.16**	**2**	P	**P**	**16 15 13.3**	**-0.6**	
MDJ				pP	**pP**	**16 15 22.9**	**-2.8**	
MDJ				S	S	16 21 56.5	-7.0	
MDJ				pmax	pmax			
	comp=Z,6.0nm,1.7s							
MDJ				pmax	pmax			
	comp=Z,35nm,8.9s							
LSA	**Lhasa**	**47.42**	**316**	*e*P	**P**	**16 15 17.5**	**+0.8**	
	comp=Z,35nm,0.7s							
ODAN	**Odare**	**48.61**	**310**	*e*P	**P**	**16 15 27.0**	**+1.3**	
	comp=Z,45nm,0.7s							
TAPN	**Taplejung**	**48.62**	**311**	*e*P	**P**	**16 15 27.2**	**+1.3**	
	comp=Z,61nm,1.0s							
GTA	**Gaotai**	**49.05**	**332**	P	**P**	**16 15 29.4**	**+0.6**	
GTA				pP	**pP**	**16 15 39.1**	**-1.6**	
GTA				sP	**sP**	**16 15 43.3**	**-2.3**	
GTA				PcP	**PcP**	**16 16 54.5**	**+2.4**	
GTA				S	**S**	**16 22 32.6**	**+1.8**	
GTA				sS	**sS**	**16 22 49.5**	**-1.1**	
GTA				SS	**SS**	**16 26 00.9**	**-1.5**	
GTA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,33nm,5.0s							
GTA				LR	LR			
	comp=N,71nm,15.2s							
GTA				LR	LR			
	comp=E,95nm,14.2s							
GTA				LR	LR			
	comp=Z,55nm,16.6s							
RAMN	**Ramite**	**49.26**	**310**	*e*P	**P**	**16 15 32.5**	**+1.7**	
	comp=Z,83nm,0.7s							
GUN	**Gumba**	**50.30**	**310**	*e*P	**P**	**16 15 40.0**	**+1.2**	
	comp=Z,62nm,0.8s							
PKI	**Pulchoki**	**50.49**	**310**	*e*P	**P**	**16 15 40.6**	**+0.4**	
PKIN	**Phulchoki**	**50.50**	**310**	*e*P	**P**	**16 15 40.9**	**+0.7**	
	comp=Z,32nm,1.3s							
KKN	**Kakani**	**50.70**	**310**	*e*P	**P**	**16 15 42.5**	**+0.9**	
	comp=Z,42nm,1.1s							
DMN	**Daman**	**50.74**	**309**	*e*P	**P**	**16 15 43.1**	**+1.1**	
	comp=Z,38nm,0.9s							
KOLN	**Koldanda**	**51.99**	**309**	*e*P	**P**	**16 15 52.6**	**+1.3**	
	comp=Z,61nm,0.7s							
DANN	**Dangsing**	**52.14**	**309**	*e*P	**P**	**16 15 53.4**	**+0.9**	
	comp=Z,85nm,0.8s							
HYB	**Hyderabad**	**52.26**	**294**	*i* P	**P**	**16 15 53.0**	**-0.2**	
PYUN	**Piuthan**	**52.62**	**309**	*e*P	**P**	**16 15 56.9**	**+0.9**	
	comp=Z,121nm,1.0s							
ULN	**Ulaanbaatar**	**53.46**	**343**	*e*P	**P**	**16 16 01.4**	**-0.3**	
	comp=Z,78nm,0.9s							
SONM	**Songino Array**	**53.63**	**342**	P	**P**	**16 16 03.1**	**+0.2**	
SONM				PcP	**PcP**	**16 17 10.1**	**+1.1**	
SONM	**Songino Array**	**53.63**	**342**	P	**P**	**16 16 03.1**	**+0.2**	
	comp=Z,3.3nm,0.8s,baz=163,slow=8.6,SNR=18							
SONM				PcP	**PcP**	**16 17 10.1**	**+1.1**	
	comp=Z,3.0nm,0.7s,baz=167,slow=3.7,SNR=6.9							
SONM				LR	LR	16 42 48.8		
	comp=Z,33nm,19.6s,baz=255,slow=40							
URZ	**Urewera**	**57.40**	**135**	P	**P**	**16 16 30.2**	**+0.1**	
URZ	**Urewera**	**57.40**	**135**	P	**P**	**16 16 30.2**	**+0.1**	
	comp=Z,13nm,0.9s,baz=163,slow=18,SNR=6.6							
WMQ	**Urumqi**	**58.48**	**327**	P	**P**	**16 16 38.3**	**+0.7**	
WMQ				pP	**pP**	**16 16 48.4**	**-1.3**	
WMQ				sP	**sP**	**16 16 52.3**	**-2.3**	
WMQ				PcP	**PcP**	**16 17 27.4**	**-0.4**	
WMQ				PP	**PP**	**16 18 49.9**	**+2.5**	
WMQ				PcS	**PcS**	**16 21 28.1**	**-1.3**	
WMQ				S	**S**	**16 24 37.9**	**-0.2**	
WMQ				sS	**sS**	**16 24 55.6**	**-2.7**	
WMQ				ScS	**ScS**	**16 26 21.8**	**-2.3**	
WMQ				pmax	pmax			
	comp=Z,19nm,0.8s							
WMQ				pmax	pmax			
	comp=Z,130nm,4.4s							
WMQ				LR	LR			
	comp=N,92nm,6.0s							
WMQ				LR	LR			
	comp=E,85nm,6.0s							
WMQ				LR	LR			
	comp=Z,240nm,22.4s							
PETK	**Petropavlovsk-**	**61.11**	**20**	P	**P**	**16 16 56.1**	**+0.7**	
PETK	**Petropavlovsk-**	**61.11**	**20**	P	**P**	**16 16 56.1**	**+0.7**	
	comp=Z,5.0nm,0.7s,baz=191,slow=6.6,SNR=9.8							
KSH	**Kashi**	**63.21**	**317**	P	**P**	**16 17 11.4**	**+1.5**	
KSH				*e*pP	**pP**	**16 17 21.6**	**-0.6**	
KSH				*e*sP	**sP**	**16 17 25.1**	**-1.9**	
KSH				*e*PcP	**PcP**	**16 17 48.1**	**+1.0**	
KSH				*e*PP	**PP**	**16 19 31.3**	**+1.9**	
KSH				*e*ScP		16 21 46.3		
KSH				*e*PcS		16 21 50.3		
KSH				*e*S	**S**	**16 25 37.8**	**-1.0**	
KSH				pmax	pmax			
	comp=Z,12nm,0.7s							
KSH				pmax	pmax			
	comp=Z,130nm,2.9s							
KSH				LR	LR			
	comp=N,94nm,3.5s							
KSH				LR	LR			
	comp=Z,120nm,4.1s							
MK31	**Makanchi Array**	**63.31**	**327**	*e*P	**P**	**16 17 09.1**	**-1.2**	
MK31				*e*pP	**pP**	**16 17 20.4**	**-2.2**	
MKAR	**Makanchi Array**	**63.31**	**327**	P	**P**	**16 17 10.5**	**+0.2**	
MKAR				PcP	**PcP**	**16 17 47.7**	**+0.5**	
MKAR	**Makanchi Array**	**63.31**	**327**	P	**P**	**16 17 10.5**	**+0.2**	
	comp=Z,6.6nm,0.7s,baz=124,slow=8.4,SNR=54							
MKAR				PcP	**PcP**	**16 17 47.7**	**+0.5**	
	comp=Z,3.7nm,0.7s,baz=112,slow=5.4,SNR=6.1							
KZA	**Kyzart**	**64.93**	**319**	P	**P**	**16 17 22.9**	**+1.4**	
	SNR=7.2							
TKM2	**Tokmak 2**	**65.12**	**320**	*e*P	**P**	**16 17 21.8**	**-0.8**	
	comp=Z,8.2nm,0.7s							
TKM2	**Tokmak 2**	**65.12**	**320**	P	**P**	**16 17 23.3**	**+0.8**	
	SNR=11							
KBK	**Karagaybulak**	**65.41**	**320**	P	**P**	**16 17 25.5**	**+1.1**	
	SNR=5.2							
AAK	**Ala-Archa**	**65.69**	**320**	*e*P	**P**	**16 17 26.6**	**+0.5**	
	comp=Z,1.6nm,1.1s							
AML	**Almayashu**	**65.97**	**319**	P	**P**	**16 17 29.1**	**+0.8**	
	SNR=12							
USP	**Ospenovka**	**66.00**	**320**	P	**P**	**16 17 28.4**	**+0.5**	
	SNR=16							
EKS2	**Erkin-Say**	**66.17**	**319**	*e*P	**P**	**16 17 28.7**	**-0.4**	
EKS2	**Erkin-Say**	**66.17**	**319**	P	**P**	**16 17 30.4**	**+1.2**	
	SNR=10							
ZAA0	**Zalesovo Array**	**66.67**	**334**	*e*P	**P**	**16 17 30.1**	**-1.9**	
ZALV	**Zalesovo Beam**	**66.67**	**334**	P	**P**	**16 17 31.1**	**-0.9**	
ZALV	**Zalesovo Beam**	**66.67**	**334**	P	**P**	**16 17 31.1**	**-0.9**	
	comp=Z,2.8nm,0.8s,baz=106,slow=5.2,SNR=17							
FX1	**Attu Island--F**	**67.31**	**28**	*e*P	**P**	**16 17 35.1**	**-0.9**	
KURK	**Kurchatov**	**67.59**	**329**	*e*P	**P**	**16 17 37.0**	**-0.9**	
	comp=Z,15nm,0.7s							
BRVK	**Borovoye**	**73.21**	**328**	*e*P	**P**	**16 18 11.4**	**-0.8**	
	comp=Z,10.0nm,1.0s							
BRVK				*e*pP	**pP**	**16 18 21.5**	**-3.2**	
VNDA	**Vanda**	**76.98**	**173**	P	**P**	**16 18 33.3**	**-0.1**	
VNDA	**Vanda**	**76.98**	**173**	P	**P**	**16 18 33.3**	**-0.1**	
	comp=Z,1.6nm,0.7s,baz=327,slow=6.4,SNR=9.4							
ABKAR	**Akbulak array**	**77.64**	**322**	*e*P	**P**	**16 18 37.0**	**-0.6**	
	comp=Z,22nm,1.1s							
ABKAR				*e*PcP	**PcP**	**16 18 47.2**	**-0.4**	
MIB	**Mutribah**	**82.83**	**300**	*e*P	**P**	**16 19 05.9**	**-0.1**	
MIB				AMb	AMB	16 19 07.7		
	comp=Z,20nm,1.3s							
NAY	**Al-Naaiem**	**82.84**	**300**	*e*P	**P**	**16 19 05.9**	**-0.2**	
NAY				AMb	AMB	16 19 07.1		
	comp=Z,11nm,0.9s							
RST	**Umm Al-Ruwaisa**	**83.09**	**300**	*e*P	**P**	**16 19 07.0**	**-0.4**	
RST				AMb	AMB	16 19 08.7		
	comp=Z,264nm,0.9s							
KBZ	**Khabaz**	**87.97**	**314**	P	**P**	**16 19 32.0**	**+0.8**	
KBZ	**Khabaz**	**87.97**	**314**	P	**P**	**16 19 32.0**	**+0.8**	
	comp=Z,1.8nm,0.9s,baz=146,slow=3.2,SNR=6.1							
ILAR	**Eielson Array**	**90.55**	**25**	P	**P**	**16 19 42.2**	**-0.8**	
ILAR	**Eielson Array**	**90.55**	**25**	P	**P**	**16 19 42.2**	**-0.8**	
	comp=Z,1.1nm,0.8s,baz=248,slow=4.9,SNR=12							
BRTR	**Keskin Array B**	**94.71**	**309**	P	**P**	**16 20 01.1**	**-1.9**	
BRTR	**Keskin Array B**	**94.71**	**309**	P	**P**	**16 20 01.1**	**-1.9**	
	comp=Z,0.9nm,0.8s,baz=108,slow=4.7,SNR=5.0							
ARCES	**ARCESS Array B**	**96.73**	**340**	P	**P**	**16 20 10.3**	**-1.0**	
ARCES	**ARCESS Array B**	**96.73**	**340**	P	**P**	**16 20 10.3**	**-1.0**	
	comp=Z,2.4nm,0.6s,baz=100,slow=4.1,SNR=9.8							
ARCES				LR	LR	17 07 02.3		
	comp=Z,22nm,19.0s,baz=66,slow=37							
KOLS	**Kolonicke sedl**	**102.04**	**319**	PDIF	**Pdif**	**16 20 35.9**	**+0.4**	
CRVS	**Cervenica-Dubn**	**102.57**	**319**	PDIF	**Pdif**	**16 20 37.1**	**-0.8**	
TXAR	**Lajitas Array**	**124.72**	**56**	PKP	**PKPdf**	**16 25 42.9**	**+1.3**	
TXAR	**Lajitas Array**	**124.72**	**56**	PKP	**PKPdf**	**16 25 42.9**	**+1.3**	
	comp=Z,0.2nm,0.6s,baz=346,slow=2.2,SNR=4.9							
TORD	**Torodi Ar. Bea**	**125.46**	**284**	PKP	**PKPdf**	**16 25 44.2**	**+1.0**	
TORD	**Torodi Ar. Bea**	**125.46**	**284**	PKP	**PKPdf**	**16 25 44.2**	**+1.0**	
	comp=Z,1.0nm,0.7s,baz=77,slow=2.1,SNR=6.4							
CPUP	**Villa Florida**	**150.75**	**171**	PKPbc	**PKPbc**	**16 26 35.6**	**+1.4**	
CPUP	**Villa Florida**	**150.75**	**171**	PKPbc	**PKPbc**	**16 26 35.6**	**+1.4**	
	comp=Z,6.6nm,0.8s,baz=141,slow=2.5,SNR=14							

*ISCJB **23** 16:09:31.8±0.7,37.51N±0.05×35.41E±0.04,h6km±10km, Error ellipse: s-maj=7.7km s-min=5.5km az=3.3*
*CSEM **23** 16:09:31.9±0.2,37.51N×35.41E,h8km,MD2.9,Error ellipse: s-maj=4.9km s-min=4.0km az=43.0*
*ISK **23** 16:09:31.3,37.51N×35.40E,h6km,MD2.9*
*DDA **23** 16:09:31.2,37.46N×35.46E,h3km,MD2.9*

ISC 23 16:09:31.0±1.6,37.46N±0.03×35.46E±0.03,h1km±14km, n20,σ0s84/29,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.30**	**87**	*e*PG	**Pb**	**16 09 38.4**	**-0.7**
KOZT				*e*SG	**Sb**	**16 09 43.8**	**-0.7**
KOZT	**Kozan**	**0.30**	**87**	*e*Pg	**Pb**	**16 09 38.4**	**-0.7**
KOZT				*e*Sg	**Sb**	**16 09 43.8**	**-0.7**
CEYT	**Ceyhan**	**0.51**	**153**	*e*PG	**Pb**	**16 09 42.7**	**0.0**
CEYT				*e*SG	**Sb**	**16 09 51.1**	**+0.6**
CEYT	**Ceyhan**	**0.51**	**153**	*e*Pg	**Pb**	**16 09 42.7**	**0.0**
CEYT				*e*Sg	**Sb**	**16 09 51.2**	**+0.6**
GULE	**Gulek**	**0.57**	**252**	*e*P	**Pg**	**16 09 42.4**	**+0.5**
GULE				*e*S	**Sb**	**16 09 51.6**	**-0.9**
GULE	**Gulek**	**0.57**	**252**	*e*P	**Pg**	**16 09 42.4**	**+0.5**
GULE				*e*S	**Sb**	**16 09 51.6**	**-0.9**
KRTS	**Karatas**	**0.89**	**184**	*e*PG	**Pb**	**16 09 49.6**	**+0.4**
KRTS				*e*SG	**Sn**	**16 10 03.1**	**-1.0**
KRTS	**Karatas**	**0.89**	**184**	*e*Pg	**Pb**	**16 09 49.6**	**+0.4**
KRTS				*e*Sg	**Sn**	**16 10 03.1**	**-1.0**
NIG	**Nigde**	**0.93**	**314**	*e*PG	**Pg**	**16 09 48.3**	**-0.5**
NIG	**Nigde**	**0.93**	**314**	*e*Pg	**Pg**	**16 09 48.3**	**-0.5**
KMRS	**Kahramanmaras**	**1.15**	**87**	*e*PN	**Pn**	**16 09 54.4**	**+0.2**
KMRS	**Kahramanmaras**	**1.15**	**87**	*e*Pn	**Pn**	**16 09 54.4**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.21**	**39**	*e*PN	**Pb**	**16 09 54.7**	**-0.1**
AVNT	**Avonos**	**1.40**	**340**	*e*P	**Pg**	**16 09 58.2**	**+0.4**
AVNT				*e*S	**Sn**	**16 10 19.9**	**+3.0**
AVNT	**Avonos**	**1.40**	**340**	*e*P	**Pg**	**16 09 58.2**	**+0.4**
BNN	**Bunyan**	**1.42**	**12**	*e*PN	**Pn**	**16 09 57.7**	**-0.3**
BNN	**Bunyan**	**1.42**	**12**	*e*Pn	**Pn**	**16 09 57.7**	**-0.3**
SULT	**Sultanhani-AKS**	**1.70**	**296**	*e*PN	**Pn**	**16 10 01.6**	**-0.3**
SULT	**Sultanhani-AKS**	**1.70**	**296**	*e*Pn	**Pn**	**16 10 01.6**	**-0.3**
DARE	**Darende-Malaty**	**1.95**	**55**	*e*PN	**Pn**	**16 10 05.9**	**+0.7**

NNC 23 16:09:58.6±3.6,39.04N×69.40E,h0km,mb3.6,mpv3.2, 7C-5D,Error ellipse: s-maj=27.5km s-min=23.5km az=170.0,Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.15**	**11**	Pn	Pn	16 11 05.5	+2.3
	1.0nm,0.4s,baz=203,slow=15,SNR=26						
KK31				↑Pg	Pg	16 11 18.9	+0.8
	3.5nm,0.4s,baz=195,slow=17,SNR=16						
KK31				↑Sn	Sb	16 11 58.2	-5.0
	3.0nm,0.3s						
KK31				↓Lg	Lg	16 12 11.6	
	12nm,0.5s,baz=194,slow=28,SNR=6.3						
TKM2	**Tokmak 2**	**6.09**	**48**	↑Pn	Pn	16 11 28.8	-1.2
	1.4nm,0.5s						
TKM2				↓Sn	Sn	16 12 41.3	+0.7
	5.2nm,0.7s						
TKM2				↑Lg	Lg	16 13 14.4	
	7.7nm,0.7s						
AB31	**Akbulak array**	**12.25**	**330**	↓Pn	Pn	16 12 51.9	-2.3
	0.4nm,0.4s,baz=147,slow=13,SNR=18						
AB31				↑Sn	Sn	16 15 10.9	-0.6
	0.2nm,0.5s						
AKTO	**Aktyubinsk**	**13.95**	**328**	↑Pn	Pn	16 13 18.7	+1.2
	0.4nm,0.6s						
AKTO				↓Sn	Sn	16 15 56.1	+3.1
	0.2nm,1.1s						
BVA0	**Borovoye Array**	**14.01**	**2**	↓Pn	P	16 13 22.4	-3.9
	0.5nm,1.1s,baz=165,slow=9.8,SNR=10						
BRVK	**Borovoye**	**14.04**	**2**	↑Pn	Pn	16 13 19.3	+0.7
	1.7nm,0.5s						

*IDC **23** 16:21:04.1±0.8,6.94S×122.57E,h0km,mb4.0/9, mb1 4.1/12,mb1mx4.0/24,mbtmp4.0/12,ML3.9/3,MS3.2/5, Ms1 3.2/5,ms1mx2.8/34,Error ellipse: s-maj=32.3km s-min=14.5km az=60.0*
*ISCJB **23** 16:21:06.6±0.5,7.02S±0.05×122.59E±0.05,h35km, mb4.0/9,MS3.1/3,Error ellipse: s-maj=7.9km s-min=5.4km az=137.0*
*DJA **23** 16:21:07.8±0.4,7°S±3°×12°3E±°,h44km±14km,M4.4/9, mb4.7/9,mB5.1/4,MLv4.3/9,Mw(mB)4.5/4*

ISC 23 16:21:08.3±0.7,7.09S±0.07×122.55E±0.07,h35km,n30, σ1s22/27,mb4.1/9,MS3.3/3,Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.57**	**191**	P	**Pn**	**16 21 33.7**	**0.0**
BBSI	**Bau Bau**	**1.59**	**1**	P	**Pn**	**16 21 31.6**	**-2.3**
BSSI	**Bau Bau, Buton**	**2.25**	**294**	P	**Pn**	**16 21 42.0**	**-1.1**
BSSI				S	**Sn**	**16 22 10.6**	**+0.9**
BKSI	**Bulukumba**	**2.98**	**306**	P	**Pn**	**16 21 51.3**	**-1.8**
KKSI	**Kolaka, Sulawe**	**3.03**	**343**	P	**Pn**	**16 21 51.7**	**-2.1**
KAPI	**Kappang**	**3.46**	**306**	P	**Pn**	**16 21 59.3**	**-0.4**
KAPI	**Kappang**	**3.46**	**306**	Pn	**Pn**	**16 21 58.4**	**-1.3**
	12nm,0.3s,baz=129,slow=5.8,SNR=25						
KAPI				Sn	**Sn**	**16 22 39.1**	**-0.5**
	8.9nm,0.3s,baz=66,slow=20,SNR=5.7						
SPSI	**Sidrap Palu**	**4.16**	**318**	P	**Pn**	**16 22 08.3**	**-1.0**
SKSI	**Soroako, Sulaw**	**4.69**	**345**	P	**Pn**	**16 22 17.3**	**+0.7**
TTSI	**Tana Toraja**	**4.85**	**326**	P	**Pn**	**16 22 22.5**	**+3.7**
LUWI	**Luwuk**	**6.01**	**2**	P	**Pn**	**16 22 34.5**	**-0.2**
	102nm,0.7s,1μm0.4nm						
MRSI	**Marisa**	**7.54**	**355**	P	**Pn**	**16 22 56.0**	**+0.2**
	51nm,0.6s,527nm						
KMSI	**Cibinong**	**7.74**	**11**	P	**Pn**	**16 22 58.7**	**+0.1**
	100nm,0.7s						
LBMI	**Labuha**	**8.09**	**38**	P	**Pn**	**16 23 03.6**	**+0.3**
	31nm,0.8s						
SWI	**Sorong**	**10.66**	**55**	P	**Pn**	**16 23 37.7**	**-0.9**
	15nm,1.1s						
SWI	**Sorong**	**10.66**	**55**	P	**Pn**	**16 23 40.6**	**+2.0**
	15nm,1.1s						
FITZ	**Fitzroy Crossi**	**11.36**	**165**	Pn	**Pn**	**16 23 47.6**	**-0.5**
	0.5nm,0.3s,baz=4.7,slow=11,SNR=16						
FITZ				LR	LR	16 28 18.7	
	comp=Z,93nm,18.2s,baz=206,slow=38						
WRA	**Warramunga Arr**	**17.15**	**139**	Pn	**Pn**	**16 25 03.2**	**-2.2**
	0.3nm,0.3s,baz=318,slow=13,SNR=17						
ASAR	**Alice Springs**	**19.77**	**148**	P	**Pn**	**16 25 37.0**	**-0.2**
	0.5nm,0.3s,baz=323,slow=12,SNR=39						
ASAR				LR	LR	16 33 31.2	
	comp=Z,130nm,21.3s,baz=297,slow=38						
CTA	**Charters Tower**	**26.37**	**122**	P	**P**	**16 26 43.0**	**+1.6**
	4.5nm,0.8s,baz=297,slow=11,SNR=7.1						
STKA	**Stephens Creek**	**30.40**	**147**	P	P	16 27 19.8	+2.5
	1.7nm,0.7s,baz=323,slow=13,SNR=4.9						
CMAR	**Chiang Mai Arr**	**34.45**	**318**	P	**P**	**16 27 54.0**	**+1.1**
	0.8nm,0.3s,baz=136,slow=6.9,SNR=9.5						
KSRS	**Korea Array**	**44.59**	**6**	LR	LR	16 50 08.6	
	comp=Z,14nm,18.8s,baz=205,slow=39						
MJAR	**Matsushiro Arr**	**45.81**	**18**	P	**P**	**16 29 25.8**	**-1.1**
	2.5nm,1.0s,baz=198,slow=9.6,SNR=6.0						
USRK	**Ussuriysk Arra**	**51.76**	**9**	P	**P**	**16 30 11.9**	**-0.3**
	2.8nm,0.7s,baz=174,slow=7.3,SNR=6.2						
SONM	**Songino Array**	**56.52**	**347**	P	**P**	**16 30 47.8**	**+0.6**
	0.3nm,0.4s,baz=163,slow=7.0,SNR=4.3						
SONM				LR	LR	16 54 41.0	
	comp=Z,21nm,18.0s,baz=71,slow=36						
MKAR	**Makanchi Array**	**64.45**	**331**	LR	LR	16 59 12.3	
	comp=Z,18nm,19.6s,baz=178,slow=36						
PETK	**Petropavlovsk-**	**66.95**	**22**	P	**P**	**16 31 58.1**	**+0.9**
	2.7nm,0.8s,baz=188,slow=9.0,SNR=5.1						
ZALV	**Zalesovo Beam**	**68.58**	**337**	P	**P**	**16 32 06.8**	**-0.7**
	0.8nm,0.7s,baz=126,slow=7.5,SNR=6.3						
VNDA	**Vanda**	**73.34**	**172**	P	P	16 32 38.1	+2.1
	0.6nm,0.8s,baz=321,slow=5.6,SNR=3.2						

DJA 23 16:30:34.9±0.3,3°S±2°×12°0E±°,h10km,M4.0/14,mb4.9/6, mB5.5/1,MLv3.6/14,Mw(mB)5.0/1,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**0.34**	**163**	P	Pg	16 30 39.0	-2.6
TTSI				S	Sg	16 30 45.5	-0.7
MSSI	**Masamba**	**0.62**	**75**	P	Pg	16 30 46.9	-0.2
MJSI	**Majene**	**1.11**	**222**	P	Pb	16 30 55.5	-0.7
SPSI	**Sidrap Palu**	**1.24**	**178**	P	Pn	16 30 56.1	-2.2
SPSI				S	Sn	16 31 15.0	0.0
SKSI	**Soroako, Sulaw**	**1.62**	**83**	P	Pb	16 31 04.5	-0.6
KAPI	**Kappang**	**2.28**	**179**	P	Pn	16 31 13.1	+0.5
KKSI	**Kolaka, Sulawe**	**2.41**	**127**	P	Pn	16 31 14.8	+0.4
BKSI	**Bulukumba**	**2.62**	**171**	P	Pn	16 31 17.7	+0.5
BKSI				S	Sb	16 31 52.9	-1.2
SGKI	**Sangatta, Kali**	**3.03**	**316**	P	Pn	16 31 24.0	+1.0
MPSI	**Mapaga**	**3.04**	**3**	P	Pn	16 31 24.1	+1.0
SMKI	**Samarinda**	**3.38**	**312**	P	Pn	16 31 28.5	+0.8
LUWI	**Luwuk**	**3.48**	**61**	P	Pn	16 31 30.5	+1.4
LUWI				S	Sn	16 32 13.4	+3.1
MMRI	**Maumere**	**6.39**	**157**	P	Pn	16 32 08.4	-0.8
	19nm,0.8s,0.1nm						
TWSI	**Taliwang, Sumb**	**6.61**	**205**	P	Pn	16 32 13.3	+1.1
	2μm,0.6s,9.8nm						
WSI	**Waingapu**	**6.93**	**175**	P	Pn	16 32 17.1	+0.5
	56nm,0.6s,0.3nm						
SRBI	**Singaraja**	**6.97**	**220**	P	Pn	16 32 16.8	-0.3
	18nm,0.8s						
BASI	**Baing, Sumba**	**7.50**	**174**	P	Pn	16 32 32.1	+7.7
	303nm,0.7s,3μm1.2nm						
JAGI	**Jajag, Banyuwa**	**7.96**	**224**	P	Pn	16 32 31.3	+0.6

*ISCJB **23** 16:42:12.6±0.2,43.47N±0.02×105.38W±0.03,h0km,Error ellipse: s-maj=2.7km s-min=2.2km az=171.1*
*NEIC **23** 16:42:13.1±0.4,43.56N×105.33W,h0km,ML3.0,Error ellipse: s-maj=5.5km s-min=5.0km az=179.0,Suspected Mining explosion.*
NEIC 80 km [50 miles] ENE of Midwest.
*IDC **23** 16:42:41.9±2.5,46.25N×104.83W,h0km,mb1 3.5/3, mb1mx3.2/29,mbtmp3.2/3,ML2.8/3,Error ellipse: s-maj=52.0km s-min=18.3km az=106.0*

ISC 23 16:42:12.8±0.7,43.47N±0.02×105.38W±0.02,h0km,n130, σ1s03/157,38C-42D,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
J23A	**Dilts Ranch, B**	**0.14**	**244**	↓P	**Pg**	**16 42 16.6**	**+1.1**
	baz=0.2,SNR=1000						
J23A	**Dilts Ranch, B**	**0.14**	**244**	↓P	**Pg**	**16 42 16.6**	**+1.1**
	baz=0.2,SNR=1000						
I23A	**Meade Ranch, G**	**0.50**	**353**	↓P	**Pg**	**16 42 23.3**	**+0.9**
	baz=0.4,SNR=24						
I23A				S	**Sg**	**16 42 29.3**	**+0.5**
	baz=0.4						
I23A	**Meade Ranch, G**	**0.50**	**353**	↓P	**Pg**	**16 42 23.3**	**+0.9**
	baz=0.4,SNR=24						
I23A				S	**Sg**	**16 42 29.3**	**+0.5**
	baz=0.4						
J24A	**Dixon Ranch, L**	**0.54**	**104**	↓P	**Pb**	**16 42 24.2**	**-1.0**
	baz=0.5,SNR=282						
J24A	**Dixon Ranch, L**	**0.54**	**104**	↓P	**P

L25A	**Engebretsen Ra**	**1.67 141**	⇓Pb	**Pg**	**16 42 44.8**	**-0.1**
	baz=1.7,SNR=50					
L25A	**Engebretsen Ra**	**1.67 141**	⇓Pb	**Pg**	**16 42 44.8**	**-0.1**
	baz=1.7,SNR=50					
G23A	**Biddle**	**1.73 360**	⇑P	**Pn**	**16 42 44.6**	**+0.3**
	baz=1.6,SNR=534					
G23A			Sb	**Sg**	**16 43 09.2**	**+0.7**
	baz=1.6					
G23A	**Biddle**	**1.73 360**	⇑P	**Pn**	**16 42 44.6**	**+0.3**
	baz=1.6,SNR=534					
G23A			Sb	**Sg**	**16 43 09.2**	**+0.7**
	baz=1.6					
K26A	**Motz Farm, Whi**	**1.78 115**	⇑Pb	**Pb**	**16 42 46.1**	**-0.3**
	baz=1.8					
K26A	**Motz Farm, Whi**	**1.78 115**	⇑Pb	**Pb**	**16 42 46.1**	**-0.3**
	baz=1.8					
G22A	**Birney**	**1.87 340**	⇓Pb	**Pn**	**16 42 46.9**	**+0.7**
	baz=1.8,SNR=46					
G22A			Sb	**Sg**	**16 43 13.6**	**+0.7**
	baz=1.8					
G22A	**Birney**	**1.87 340**	⇓Pb	**Pn**	**16 42 46.9**	**+0.7**
	baz=1.8,SNR=46					
G22A			Sb	**Sg**	**16 43 13.6**	**+0.7**
	baz=1.8					
J20A	**Shoshoni**	**1.98 268**	⇓Pb	**Pb**	**16 42 49.4**	**-0.3**
	baz=2.0,SNR=244					
J20A			Sb	**Sg**	**16 43 16.1**	**-0.2**
	baz=2.0					
J20A	**Shoshoni**	**1.98 268**	⇓Pb	**Pb**	**16 42 49.4**	**-0.3**
	baz=2.0,SNR=244					
J20A			Sb	**Sg**	**16 43 16.1**	**-0.2**
	baz=2.0					
G24A	**Alzada**	**1.98 20**	⇑Pb	**Pb**	**16 42 49.2**	**-0.6**
	baz=1.9,SNR=15					
G24A	**Alzada**	**1.98 20**	⇑Pb	**Pb**	**16 42 49.2**	**-0.6**
	baz=1.9,SNR=15					
M23A	**Laramie**	**2.01 187**	Pb	**Pn**	**16 42 49.4**	**-1.0**
	baz=2.1,SNR=158					
M23A	**Laramie**	**2.01 187**	Pb	**Pb**	**16 42 49.4**	**-1.0**
	baz=2.1,SNR=158					
M24A	**Cheyenne**	**2.04 168**	⇓Pb	**Pb**	**16 42 50.5**	**-0.3**
	baz=2.1,SNR=198					
M24A	**Cheyenne**	**2.04 168**	⇓Pb	**Pb**	**16 42 50.5**	**-0.3**
	baz=2.1,SNR=198					
I20A	**Worland**	**2.05 285**	⇑Pb	**Pn**	**16 42 49.8**	**+1.1**
	baz=2.1,SNR=554					
I20A			Sb	**Sb**	**16 43 17.5**	**+0.3**
	baz=2.1					
I20A	**Worland**	**2.05 285**	⇑Pb	**Pb**	**16 42 49.8**	**+1.1**
	baz=2.1,SNR=554					
I20A			Sb	**Sb**	**16 43 17.5**	**+0.3**
	baz=2.1					
L21A	**Rawlins**	**2.10 225**	Pb	**Pn**	**16 42 50.4**	**+1.0**
	baz=2.2,SNR=88					
L21A			Sb	**Sb**	**16 43 18.8**	**+0.1**
	baz=2.2					
L21A	**Rawlins**	**2.10 225**	Pb	**Pn**	**16 42 50.4**	**+1.0**
	baz=2.2,SNR=88					
L21A			Sb	**Sb**	**16 43 18.8**	**+0.1**
	baz=2.2					
H20A	**Greybull**	**2.15 299**	⇓Pb	**Pb**	**16 42 51.5**	**-1.2**
	baz=2.1,SNR=186					
H20A			Sb	**Sb**	**16 43 19.5**	**-0.5**
	baz=2.1					
H20A	**Greybull**	**2.15 299**	⇓Pb	**Pb**	**16 42 51.5**	**-1.2**
	baz=2.1,SNR=186					
H20A			Sb	**Sb**	**16 43 19.5**	**-0.5**
	baz=2.1					
PHWY	**Pilot Hill**	**2.16 182**	*e*Pn	**Pn**	**16 42 51.1**	**+0.7**
PHWY			*e*Sg	**Sb**	**16 43 20.4**	**-0.2**
G21A	**Lodge Grass**	**2.19 324**	⇓P	**Pn**	**16 42 51.3**	**+0.6**
	baz=2.1,SNR=66					
G21A			Sb	**Sb**	**16 43 21.4**	**+0.1**
	baz=2.1					
G21A	**Lodge Grass**	**2.19 324**	⇓P	**Pn**	**16 42 51.3**	**+0.6**
	baz=2.1,SNR=66					
G21A			Sb	**Sb**	**16 43 21.4**	**+0.1**
	baz=2.1					
L26A	**Underwood Farm**	**2.21 129**	⇑Pb	**Pb**	**16 42 53.5**	**-0.3**
	baz=2.2					
L26A	**Underwood Farm**	**2.21 129**	⇑Pb	**Pb**	**16 42 53.5**	**-0.3**
	baz=2.2					
M22A	**Cedar Creek Ra**	**2.25 204**	⇑Pb	**Pb**	**16 42 53.8**	**-0.7**
	baz=2.4,SNR=61					
M22A			Sb	**Sb**	**16 43 23.8**	**+0.8**
	baz=2.4					
M22A	**Cedar Creek Ra**	**2.25 204**	⇑Pb	**Pb**	**16 42 53.8**	**-0.7**
	baz=2.4,SNR=61					
M22A			Sb	**Sb**	**16 43 23.8**	**+0.8**
	baz=2.4					
M25A	**Palm-Egli Farm**	**2.25 154**	⇓Pb	**Pb**	**16 42 53.5**	**-1.0**
	baz=2.3,SNR=8.7					
M25A	**Palm-Egli Farm**	**2.25 154**	⇓Pb	**Pb**	**16 42 53.5**	**-1.0**
	baz=2.3,SNR=8.7					
F23A	**Volborg**	**2.25 359**	⇑P	**Pn**	**16 42 51.7**	**+0.3**
	baz=2.2,SNR=62					
F23A	**Volborg**	**2.25 359**	⇑P	**Pn**	**16 42 51.7**	**+0.3**
	baz=2.2,SNR=62					
K20A	**Yellowstone Ra**	**2.32 251**	Pb	**Pb**	**16 42 54.7**	**-0.9**
	baz=2.4,SNR=85					
K20A	**Yellowstone Ra**	**2.32 251**	Pb	**Pb**	**16 42 54.7**	**-0.9**
	baz=2.4,SNR=85					
M21A	**Separation Pea**	**2.37 219**	⇑Pb	**Pb**	**16 42 55.3**	**-1.2**
	baz=2.5,SNR=87					
M21A	**Separation Pea**	**2.37 219**	⇑Pb	**Pb**	**16 42 55.3**	**-1.2**
	baz=2.5,SNR=87					
F22A	**Rosebud**	**2.40 345**	⇓P	**Pn**	**16 42 53.3**	**0.0**
	baz=2.3,SNR=35					
F22A	**Rosebud**	**2.40 345**	⇓P	**Pn**	**16 42 53.3**	**0.0**
	baz=2.3,SNR=35					
K27A	**Flueckinger Fa**	**2.42 107**	Pb	**Pb**	**16 42 57.1**	**-0.2**
	baz=2.4					
K27A	**Flueckinger Fa**	**2.42 107**	Pb	**Pb**	**16 42 57.1**	**-0.2**
	baz=2.4					
N23A	**Red Feather La**	**2.60 190**	⇑P	**Pn**	**16 42 58.4**	**+1.9**
	baz=2.7,SNR=31					
N23A	**Red Feather La**	**2.60 190**	⇑P	**Pn**	**16 42 58.4**	**+1.9**
	baz=2.7,SNR=31					
N24A	**Carr**	**2.66 172**	⇑Pb	**Pb**	**16 43 01.3**	**-0.2**
	baz=2.8,SNR=39					
N24A	**Carr**	**2.66 172**	⇑Pb	**Pb**	**16 43 01.3**	**-0.2**
	baz=2.8,SNR=39					
I19A	**Meeteetse**	**2.68 283**	P	**Pn**	**16 42 59.3**	**+1.8**
	baz=2.7,SNR=16					
I19A	**Meeteetse**	**2.68 283**	P	**Pn**	**16 42 59.3**	**+1.8**
	baz=2.7,SNR=16					
G20A	**Bridger**	**2.69 312**	⇓P	**Pn**	**16 42 57.4**	**0.0**
	baz=2.6,SNR=61					
G20A	**Bridger**	**2.69 312**	⇓P	**Pn**	**16 42 57.4**	**0.0**
	baz=2.6,SNR=61					
H19A	**Powell**	**2.87 296**	P	**Pn**	**16 43 01.0**	**+1.1**
	baz=2.8,SNR=28					
H19A	**Powell**	**2.87 296**	P	**Pn**	**16 43 01.0**	**+1.1**
	baz=2.8,SNR=28					
M20A	**Sweetwater, Wa**	**2.87 227**	⇑Pb	**Pb**	**16 43 04.7**	**-0.2**
	baz=3.0					
M20A	**Sweetwater, Wa**	**2.87 227**	⇑Pb	**Pb**	**16 43 04.7**	**-0.2**
	baz=3.0					
E22A	**Miles City**	**3.00 352**	⇓P	**Pn**	**16 43 01.3**	**-0.3**
	baz=2.9					
E22A	**Miles City**	**3.00 352**	⇓P	**Pn**	**16 43 01.3**	**-0.3**
	baz=2.9					
N21A	**Black Mountain**	**3.14 211**	⇑P	**Pn**	**16 43 06.0**	**+2.3**
	baz=3.2,SNR=16					
N21A	**Black Mountain**	**3.14 211**	⇑P	**Pn**	**16 43 06.0**	**+2.3**
	baz=3.2,SNR=16					
BW06	**Boulder Array**	**3.14 259**	*e*Pn	**Pn**	**16 43 03.3**	**-0.5**
BW06			*e*Sg	**Sb**	**16 43 50.6**	**+2.0**
RLMT	**Red Lodge**	**3.25 302**	*e*Pn	**Pn**	**16 43 05.9**	**+0.7**
O25A	**Wiggins**	**3.48 164**	P	**Pn**	**16 43 10.2**	**+1.9**
	baz=3.6,SNR=8.8					
O25A	**Wiggins**	**3.48 164**	P	**Pn**	**16 43 10.2**	**+1.9**
	baz=3.6,SNR=8.8					
F19A	**Roth Farm, Mol**	**3.49 314**	⇑P	**Pn**	**16 43 09.1**	**+0.7**
	baz=3.4,SNR=23					
F19A	**Roth Farm, Mol**	**3.49 314**	⇑P	**Pn**	**16 43 09.1**	**+0.7**
	baz=3.4,SNR=23					
G18A	**Lazy EL Ranch,**	**3.53 303**	⇓P	**Pn**	**16 43 09.7**	**+0.7**
	baz=3.5,SNR=41					
G18A	**Lazy EL Ranch,**	**3.53 303**	⇓P	**Pn**	**16 43 09.7**	**+0.7**
	baz=3.5,SNR=41					
OGNE	**Ogallala**	**3.54 134**	*e*Pn	**Pn**	**16 43 10.3**	**+1.2**
OGNE	**Ogallala**	**3.54 134**	P	**Pn**	**16 43 10.6**	**+1.5**
	baz=3.6,SNR=22					
OGNE	**Ogallala**	**3.54 134**	P	**Pn**	**16 43 10.6**	**+1.5**
	baz=3.6,SNR=22					
ISCO	**Idaho Springs**	**3.67 183**	*e*Pn	**Pn**	**16 43 11.6**	**+0.5**
LOHW	**Long Hollow**	**3.80 274**	*e*Pn	**Pn**	**16 43 13.2**	**+0.3**
GCMT	**Greycliff**	**3.84 309**	*e*Pn	**Pn**	**16 43 13.8**	**+0.4**
GCMT			*e*Pg	**Pb**	**16 43 23.5**	**+1.9**
MOOW	**Moose Ponds**	**3.91 276**	*e*Pn	**Pn**	**16 43 13.3**	**-1.0**
IMW	**Indian Meadow**	**4.06 278**	*e*Pn	**Pn**	**16 43 17.8**	**+1.4**
TPAW	**Teton Pass**	**4.06 272**	*e*Pn	**Pn**	**16 43 17.7**	**+1.3**
RRI2	**Red Ridge**	**4.33 270**	*e*Pn	**Pn**	**16 43 21.4**	**+1.2**
SMCO	**Snowmass**	**4.45 196**	*e*Pn	**Pn**	**16 43 24.4**	**+2.5**
BOZ	**Bozeman (W)**	**4.97 298**	*e*Pn	**Pn**	**16 43 28.0**	**-0.8**
BOZ			*e*Sg	**Sb**	**16 44 46.0**	**+4.9**
DAU	**Daniels Canyon**	**5.34 237**	*e*Pn	**Pn**	**16 43 36.7**	**+2.6**
DLMT	**Dillon**	**5.51 293**	Pn	**Pn**	**16 43 36.6**	**+0.4**
LRM	**Limekiln Ridge**	**5.57 297**	*e*Pn	**Pn**	**16 43 37.4**	**+0.3**
HVU	**Hansel Valley**	**5.71 255**	*e*P	**Pn**	**16 43 39.3**	**+0.2**
PV04	**Paradox Valley**	**5.73 209**	*e*Pn	**Pn**	**16 43 41.8**	**+2.5**
PV04			*e*Pg	**Pg**	**16 43 58.8**	**-3.7**
PV01	**Paradox Valley**	**5.85 206**	*e*Pn	**Pn**	**16 43 43.2**	**+2.2**
ECSD	**EROS Data Cent**	**6.37 85**	*e*Pn	**Pn**	**16 43 47.5**	**-0.3**
ECSD			*e*Pg	**Pb**	**16 44 08.2**	**+3.7**
DUG	**Dugway**	**6.45 242**	*e*Pn	**Pn**	**16 43 48.7**	**-0.4**
CHMT	**Chamberlain Mo**	**6.55 305**	*e*Pn	**Pn**	**16 43 50.6**	**+0.1**
CHMT			*e*Pg	**Pb**	**16 44 12.3**	**+4.7**
MVU	**Marysvale**	**7.16 229**	*e*Pn	**Pn**	**16 44 00.5**	**+1.5**
ULM	**Lac du Bonnet**	**9.40 40**	Pn	**Pn**	**16 44 27.2**	**-2.1**
ULM	**Lac du Bonnet**	**9.40 40**	Pn	**Pn**	**16 44 27.2**	**-2.1**
	0.8nm,0.3s,baz=210,slow=9.8,SNR=3.5					
YKA	**Yellowknife Ar**	**19.81 347**	P	**P**	**16 46 43.4**	**-1.2**
YKA	**Yellowknife Ar**	**19.81 347**	P	**P**	**16 46 43.4**	**-1.2**
	0.1nm,0.3s,baz=159,slow=12,SNR=4.0					

*SKO **23** 16:50:54.3, 41.29N×22.73E, h15km, M2.1, ML2.4*
*ISCJB **23** 16:50:54.3±0.3, 41.32N±0.02×22.70E±0.03, h8km±3km, Error ellipse: s-maj=3.5km s-min=2.4km az=147.9*
*THE **23** 16:50:55.2, 41.29N×22.72E, h3km±1km, ML2.6/8, Error ellipse: s-maj=1.4km s-min=0.6km az=211.0*
*CSEM **23** 16:50:55.1±0.1, 41.29N×22.71E, h2km, ML2.3, Error ellipse: s-maj=3.0km s-min=2.1km az=53.0*
*ATH **23** 16:50:55.0, 41.28N×22.73E, h19km±1km, MD2.8/8*
*BEO **23** 16:50:55.8±0.8, 41.28N×22.72E, h0km±3km, ML2.4/7*

ISC 23 16:50:55.1±0.8, 41.29N±0.02×22.71E±0.02, h8km±6km, n64, σ0.8s4/118, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**285**	P	**Pg**	**16 50 57.2**	**-0.4**
VAY				S	**Sg**	**16 50 59.5**	**+0.1**
VAY	**Valandovo**	**0.11**	**285**	*i* Pg	**Pg**	**16 50 57.4**	**-0.2**
VAY				*i* Sg	**Sg**	**16 50 59.4**	**+0.1**
VAY				*e*Lg	Lg	16 50 59.5	
	comp=N,3μm,0.3s						
VAY				*e*Lg	Lg	16 50 59.6	
	comp=E,2μm,0.4s						
VAY	**Valandovo**	**0.11**	**285**	P	**Pg**	**16 50 57.2**	**-0.4**
VAY	**Valandovo**	**0.11**	**285**	*i* Pg	**Pg**	**16 50 57.8**	**+0.2**
VAY				S	**Sg**	**16 50 59.5**	**+0.1**
VAY				*e*Lg	Lg	16 51 00.1	
	comp=E,2μm,0.4s						
KNT	**Kendrikon**	**0.19**	**133**	P	**Pg**	**16 50 59.3**	**+0.3**
KNT				S	**Sg**	**16 51 02.2**	**+0.5**
KNT	**Kendrikon**	**0.19**	**133**	P	**Pg**	**16 50 59.3**	**+0.3**
KNT				S	**Sg**	**16 51 02.2**	**+0.5**
GRG	**Griva**	**0.41**	**215**	P	**Pg**	**16 51 03.2**	**+0.1**
GRG				S	**Sg**	**16 51 09.1**	**+0.7**
GRG	**Griva**	**0.41**	**215**	*e*PB	**Pg**	**16 51 03.2**	**+0.1**
GRG				*e*SB	**Sg**	**16 51 09.1**	**+0.7**
GRG	**Griva**	**0.41**	**215**	P	**Pg**	**16 51 03.2**	**+0.1**
GRG				S	**Sg**	**16 51 09.1**	**+0.7**
SOH	**Sokhos**	**0.68**	**134**	P	**Pg**	**16 51 07.8**	**-0.3**
SOH				S	**Sb**	**16 51 18.4**	**-0.3**
SOH	**Sokhos**	**0.68**	**134**	*e*PN	**Pg**	**16 51 07.9**	**-0.2**
SOH				*e*SN	**Sb**	**16 51 18.0**	**-0.7**
SOH	**Sokhos**	**0.68**	**134**	P	**Pg**	**16 51 07.8**	**-0.3**
SOH				*e*Sn	**Sb**	**16 51 18.0**	**-0.7**
SOH				S	**Sb**	**16 51 18.4**	**-0.3**
THE	**Thessaloniki**	**0.69**	**164**	P	**Pg**	**16 51 08.2**	**-0.1**
THE				S	**Sg**	**16 51 17.3**	**0.0**
THE	**Thessaloniki**	**0.69**	**164**	P	**Pg**	**16 51 08.2**	**-0.1**
THE				S	**Sg**	**16 51 17.3**	**0.0**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**16 51 08.0**	**-0.4**
SRS				S	**Sg**	**16 51 17.5**	**+0.2**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**16 51 08.0**	**-0.4**
SRS				S	**Sg**	**16 51 17.5**	**+0.2**
HORT	**Hortiatis**	**0.75**	**157**	P	**Pg**	**16 51 09.5**	**-0.1**
HORT				S	**Sg**	**16 51 20.2**	**+0.8**
HORT	**Hortiatis**	**0.75**	**157**	P	**Pg**	**16 51 09.5**	**-0.1**
HORT				S	**Sg**	**16 51 20.2**	**+0.8**
NVR	**Nevrokopi**	**0.87**	**86**	P	**Pg**	**16 51 11.5**	**-0.3**
NVR				S	**Sg**	**16 51 23.4**	**+0.3**
NVR	**Nevrokopi**	**0.87**	**86**	*e*PN	**Pg**	**16 51 11.6**	**-0.3**
NVR				*e*SN	**Sg**	**16 51 23.3**	**+0.2**
NVR	**Nevrokopi**	**0.87**	**86**	P	**Pg**	**16 51 11.5**	**-0.3**
NVR				S	**Sg**	**16 51 23.4**	**+0.3**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**16 51 15.2**	**-0.5**
PLG				S	**Sb**	**16 51 30.9**	**+0.7**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pg**	**16 51 15.3**	**-0.5**
PLG				*e*SN	**Sg**	**16 51 28.8**	**-0.8**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**16 51 15.2**	**-0.5**
PLG				*e*Sn	**Sg**	**16 51 28.8**	**-0.8**
PLG				S	**Sb**	**16 51 30.9**	**+0.7**
BIA	**Bitola**	**1.08**	**256**	*e*Pg	**Pg**	**16 51 16.0**	**+0.1**
BIA				*e*Sg	**Sb**	**16 51 30.9**	**+0.5**
BIA	**Bitola**	**1.08**	**256**	*e*Pg	**Pg**	**16 51 15.9**	**+0.1**
BIA				*e*Sg	**Sb**	**16 51 30.9**	**+0.5**
FNA	**Florina**	**1.13**	**244**	P	**Pg**	**16 51 16.5**	**-0.3**
FNA				S	**Sn**	**16 51 33.0**	**0.0**
FNA	**Florina**	**1.13**	**244**	*e*PN	**Pg**	**16 51 16.5**	**-0.3**
FNA				*e*SN	**Sn**	**16 51 33.0**	**0.0**
FNA	**Florina**	**1.13**	**244**	P	**Pg**	**16 51 16.5**	**-0.3**
FNA				S	**Sn**	**16 51 33.0**	**0.0**
SKO	**Skopje**	**1.17**	**306**	*e*Pg	**Pn**	**16 51 17.8**	**0.0**
SKO				*e*Sg	**Sn**	**16 51 34.5**	**+0.6**
SKO				*e*Lg	Lg	16 51 35.1	
	comp=N,53nm,0.4s						
SKO				*e*Lg	Lg	16 51 35.1	
	comp=E,32nm,0.3s						
SKO	**Skopje**	**1.17**	**306**	*e*Pg	**Pn**	**16 51 18.8**	**+1.0**
SKO				*e*Sg	**Sn**	**16 51 34.7**	**+0.7**
SKO	**Skopje**	**1.17**	**306**	*e*Pg	**Pn**	**16 51 18.2**	**+0.4**
SKO				*e*Sg	**Sn**	**16 51 34.7**	**+0.7**
SKO				*e*Lg	Lg	16 51 35.6	
	comp=E,32nm,0.3s						
LIT	**Litokhoron**	**1.20**	**188**	P	**Pb**	**16 51 16.9**	**-1.2**
LIT	**Litokhoron**	**1.20**	**188**	*e*PN	**Pb**	**16 51 17.2**	**-0.9**
LIT	**Litokhoron**	**1.20**	**188**	P	**Pb**	**16 51 16.9**	**-1.2**
LIT	**Litokhoron**	**1.20**	**188**	*e*Pn	**Pb**	**16 51 17.2**	**-0.9**
VTS	**Vitosha**	**1.35**	**16**	P	**Pb**	**16 51 20.9**	**+0.1**
VTS				S	**Sn**	**16 51 38.7**	**+0.1**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg	**Pn**	**16 51 20.5**	**+0.1**
VTS				*e*Sg	**Sg**	**16 51 39.1**	**+0.5**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg	**Pn**	**16 51 20.5**	**+0.1**
VTS	**Vitosha**	**1.35**	**16**	P	**Pb**	**16 51 20.9**	**+0.1**
VTS				S	**Sn**	**16 51 38.7**	**+0.1**
VTS				*e*Sg	**Sg**	**16 51 39.1**	**+0.5**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**16 51 20.3**	**-0.1**
OUR				S	**Sg**	**16 51 40.0**	**+1.2**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**16 51 20.3**	**-0.1**
OUR				S	**Sg**	**16 51 40.0**	**+1.2**
KAVA	**Kavala**	**1.39**	**102**	P	**Pn**	**16 51 20.9**	**+0.1**
KAVA				S	**Sg**	**16 51 40.5**	**+0.6**
KAVA	**Kavala**	**1.39**	**102**	P	**Pn**	**16 51 20.9**	**+0.1**
KAVA				S	**Sg**	**16 51 40.5**	**+0.6**
PAIG	**Paliouri**	**1.55**	**151**	P	**Pn**	**16 51 23.4**	**+0.4**
PAIG				S	**Sn**	**16 51 43.4**	**+0.1**
PAIG	**Paliouri**	**1.55**	**151**	*e*PN	**Pb**	**16 51 23.7**	**-0.3**
PAIG				*e*SN	**Sg**	**16 51 44.6**	**-0.3**
PAIG	**Paliouri**	**1.55**	**151**	P	**Pn**	**16 51 23.4**	**+0.4**
PAIG	**Paliouri**	**1.55**	**151**	*e*Pn	**Pb**	**16 51 23.7**	**-0.3**
PAIG				S	**Sn**	**16 51 43.4**	**+0.1**
PAIG				*e*Sn	**Sg**	**16 51 44.6**	**-0.3**
BARS	**Barje**	**1.66**	**337**	*e*Pn	**Pn**	**16 51 24.8**	**+0.2**
BARS				*e*Sg	**Sg**	**16 51 48.2**	**-0.3**
BARS	**Barje**	**1.66**	**337**	*e*Pn	**Pn**	**16 51 24.8**	**+0.2**
BARS				*e*Sg	**Sg**	**16 51 48.2**	**-0.3**
ZAPS	**Zavoj**	**1.98**	**358**	*i* Pn	**Pb**	**16 51 32.1**	**+0.7**
SELS	**Selova**	**2.26**	**329**	*e*Pn	**Pb**	**16 51 35.1**	**-1.1**
SELS				*e*Sg	**Sg**	**16 52 06.5**	**-1.2**
AGG	**Agios Georgios**	**2.29**	**187**	*e*PB	**Pn**	**16 51 33.8**	**+0.6**
AGG	**Agios Georgios**	**2.29**	**187**	*e*Pb	**Pn**	**16 51 33.8**	**+0.6**
AOS	**Alonnisos**	**2.30**	**157**	*e*PB	**Pn**	**16 51 33.5**	**+0.2**
AOS	**Alonnisos**	**2.30**	**157**	*e*Pb	**Pn**	**16 51 33.5**	**+0.2**
ALN	**Alexandroupoli**	**2.55**	**98**	*e*PN	**Pn**	**16 51 37.5**	**+0.7**
ALN	**Alexandroupoli**	**2.55**	**98**	*e*Pn	**Pn**	**16 51 37.5**	**+0.7**
BOLS	**Boljevac**	**2.60**	**348**	*e*Pn	**Pb**	**16 51 41.1**	**-0.8**
BOLS				*e*Sg	**Sg**	**16 52 18.2**	**-0.3**
BOLS	**Boljevac**	**2.60**	**348**	*e*Pn	**Pb**	**16 51 41.1**	**-0.8**
BOLS				*e*Sg	**Sg**	**16 52 18.2**	**-0.3**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn	**Pn**	**16 51 42.2**	**-0.5**
GRUS				*e*Sg	**Sg**	**16 52 31.2**	**+0.3**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn	**Pn**	**16 51 42.2**	**-0.5**
GRUS				*e*Sg	**Sg**	**16 52 31.2**	**+0.3**
DIVS	**Divibare**	**3.45**	**325**	*e*Pn	**Pn**	**16 51 48.8**	**-0.4**
DIVS				*e*Sg	**Sg**	**16 52 47.0**	**+1.2**
DIVS	**Divibare**	**3.45**	**325**	*e*Pn	**Pn**	**16 51 48.8**	**-0.4**
DIVS				*e*Sg	**Sg**	**16 52 47.0**	**+1.2**

IDC 23 16:51:20.1±1.1, 2.27N×126.25E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/23, mbtmp3.6/6, Error ellipse: s-maj=76.1km s-min=18.8km az=75.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.25**	**182**	P	P	16 55 57.7	+0.5
	2.1nm,1.1s,baz=12,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**23.45**	**161**	P	P	16 56 31.0	-0.4
	0.7nm,0.5s,baz=337,slow=10,SNR=18						
ASAR	**Alice Springs**	**26.83**	**164**	P	P	16 57 03.0	+0.5
	0.4nm,0.8s,baz=338,slow=9.2,SNR=7.6						
KSRS	**Korea Array**	**35.05**	**2**	P	P	16 58 14.4	-0.4
	0.3nm,0.4s,baz=174,slow=9.4,SNR=4.1						
STKA	**Stephens Creek**	**36.95**	**158**	P	P	16 58 30.4	-0.8
	3.6nm,1.1s,baz=331,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**58.49**	**326**	P	P	17 01 18.4	+0.2
	0.3nm,0.6s,baz=123,slow=7.2,SNR=6.2						

*SKO **23** 16:55:15.5, 41.30N×22.70E, h15km, M1.2, ML1.6*
*CSEM **23** 16:55:16.8±0.1, 41.29N×22.72E, h2km, ML1.9/7, Error ellipse: s-maj=2.3km s-min=1.9km az=62.0*
*ATH **23** 16:55:16.5, 41.32N×22.71E, h14km±3km, MD2.6/5*
*ISCJB **23** 16:55:16.1±0.4, 41.31N±0.02×22.71E±0.03, h0km±5km, Error ellipse: s-maj=3.6km s-min=3.0km az=157.4*
*THE **23** 16:55:16.9, 41.30N×22.72E, h2km±1km, ML1.9/7, Error ellipse: s-maj=1.9km s-min=0.6km az=201.0*
*BEO **23** 16:55:18.6±0.7, 41.34N×22.61E, h3km±4km, ML1.5/4*

ISC 23 16:55:16.8±0.8, 41.30N±0.02×22.71E±0.02, h7km±6km, n40, σ0.938/75, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**280**	P	**Pg**	**16 55 19.1**	**-0.1**
VAY				S	**Sg**	**16 55 21.0**	**+0.2**
VAY	**Valandovo**	**0.11**	**280**	*i* Pg	**Pg**	**16 55 19.1**	**-0.1**
VAY				*i* Sg	**Sg**	**16 55 21.1**	**+0.2**
VAY				*e*Lg	Lg	16 55 21.1	
	comp=N,485nm,0.3s						
VAY				*e*Lg	Lg	16 55 21.3	
	comp=E,298nm,0.3s						
VAY	**Valandovo**	**0.11**	**280**	*i* Pg	**Pg**	**16 55 19.1**	**-0.1**
VAY				*i* Sg	**Sg**	**16 55 21.1**	**+0.2**
VAY				*e*Lg	Lg	16 55 21.1	
	comp=N,485nm,0.3s						
VAY				*e*Lg	Lg	16 55 21.4	
	comp=E,298nm,0.3s						
VAY	**Valandovo**	**0.11**	**280**	*e*Pg	**Pg**	**16 55 18.8**	**-0.4**
VAY				*e*Sg	**Sg**	**16 55 21.0**	**+0.2**
VAY	**Valandovo**	**0.11**	**280**	*e*Pg	**Pg**	**16 55 18.8**	**-0.4**
VAY	**Valandovo**	**0.11**	**280**	P	**Pg**	**16 55 19.1**	**-0.1**
VAY				S	**Sg**	**16 55 21.0**	**+0.2**
VAY				*i* Sg	Sg	16 55 21.5	+0.7
VAY				*e*Lg	Lg	16 55 21.6	
	comp=E,485nm,0.3s						
KNT	**Kendrikon**	**0.20**	**135**	P	**Pg**	**16 55 21.0**	**+0.2**
KNT				S	**Sg**	**16 55 23.8**	**+0.3**
KNT	**Kendrikon**	**0.20**	**135**	P	**Pg**	**16 55 21.0**	**+0.2**
KNT				S	**

PRK				eSB	Sg	17 23 39.1	-0.1
PRK	Paraskevi	0.31	73	ePb	Pg	17 23 34.8	-0.2
PRK				eSb	Sg	17 23 39.1	-0.1
PRK				S	Sg	17 23 39.4	+0.2
AYVA	Ayvalik	0.64	76	iP	Pb	17 23 41.6	-0.1
AYVA				iS	Sg	17 23 49.2	-0.3
AYVA	Ayvalik	0.64	76	iP	Pb	17 23 41.6	-0.1
AYVA				iS	Sg	17 23 49.2	-0.3
EZN	Ezine	0.75	26	ePG	Pg	17 23 42.4	-0.8
EZN				eSG	Sg	17 23 50.9	-2.1
EZN	Ezine	0.75	26	ePg	Pg	17 23 42.4	-0.8
EZN				eSg	Sg	17 23 50.9	-2.1
CHOS	Chios island	0.78	171	P	Pg	17 23 43.8	0.0
CHOS				S	Sb	17 23 56.0	+1.3
CHOS	Chios island	0.78	171	⇑iPN	Pg	17 23 43.9	+0.1
CHOS				eSN	Sn	17 23 56.5	-0.6
CHOS	Chios island	0.78	171	P	Pg	17 23 43.8	0.0
CHOS				S	Sb	17 23 56.0	+1.3
CHOS				eSn	Sn	17 23 56.5	-0.6
LIA	Limnos Island	0.92	324	ePN	Pb	17 23 46.5	-0.1
LIA				eSN	Sn	17 24 00.0	-0.5
LIA	Limnos Island	0.92	324	ePn	Pb	17 23 46.5	-0.1
LIA				eSn	Sn	17 24 00.0	-0.5
URLA	Izmir	0.97	145	iP	Pb	17 23 47.3	0.0
URLA				iS	Sn	17 24 01.1	-0.6
URLA	Izmir	0.97	145	iP	Pb	17 23 47.3	0.0
URLA				iS	Sn	17 24 01.1	-0.6
BLCB	Balcova	1.18	130	ePN	Pn	17 23 50.9	-0.1
BLCB				eSN	Sg	17 24 06.8	0.0
BLCB	Balcova	1.18	130	ePn	Pn	17 23 50.9	-0.1
BLCB				eSn	Sg	17 24 06.8	0.0
IZM	Izmir	1.31	125	ePN	Pn	17 23 52.9	+0.1
IZM	Izmir	1.31	125	ePn	Pn	17 23 52.9	+0.1
GELI	Tayfur-Gelibol	1.32	20	ePN	Pn	17 23 52.6	-0.2
GELI	Tayfur-Gelibol	1.32	20	ePn	Pn	17 23 52.6	-0.2
SMTH	Samothraki Isl	1.34	348	ePN	Pn	17 23 52.9	-0.3
SMTH	Samothraki Isl	1.34	348	ePn	Pn	17 23 52.9	-0.3
LPK	Lapseki	1.39	29	ePN	Pn	17 23 53.4	-0.4
LPK	Lapseki	1.39	29	ePn	Pn	17 23 53.4	-0.4
BALY	Balya	1.46	66	iP	Pn	17 23 54.6	-0.2
BALY				iS	Sg	17 24 15.6	-0.1
BALY	Balya	1.46	66	iP	Pn	17 23 54.6	-0.2
BALY				iS	Sg	17 24 15.6	-0.1
AKHS	Akhisar	1.52	100	iP	Pn	17 23 55.8	+0.1
AKHS				iS	Sn	17 24 14.7	-0.7
AKHS	Akhisar	1.52	100	iP	Pn	17 23 55.8	+0.1
AKHS				iS	Sn	17 24 14.7	-0.7
AOS	Alonnisos	1.56	271	P	Pn	17 23 56.4	+0.2
AOS				S	Sn	17 24 16.7	+0.3
AOS	Alonnisos	1.56	271	ePN	Pn	17 23 56.7	+0.5
AOS	Alonnisos	1.56	271	P	Pn	17 23 56.4	+0.2
AOS	Alonnisos	1.56	271	ePn	Pn	17 23 56.7	+0.5
AOS				S	Sn	17 24 16.7	+0.3
ERIK	Erikli-Kesan	1.59	17	ePN	Pn	17 23 57.0	+0.5
ERIK	Erikli-Kesan	1.59	17	ePn	Pn	17 23 57.0	+0.5
ENEZ	Enez	1.59	7	ePN	Pb	17 23 57.3	-0.7
ENEZ	Enez	1.59	7	ePn	Pb	17 23 57.3	-0.7
BALB	Balikesir	1.61	72	ePN	Pn	17 23 56.4	-0.5
BALB	Balikesir	1.61	72	ePn	Pn	17 23 56.4	-0.5
MRMA	Marmari	1.61	228	P	Pn	17 23 56.5	-0.4
MRMA	Marmari	1.61	228	P	Pn	17 23 56.5	-0.4
KRBG	Karabiga-Canak	1.64	41	ePN	Pn	17 23 57.0	-0.3
KRBG	Karabiga-Canak	1.64	41	ePn	Pn	17 23 57.0	-0.3
GONE	Gonen-Balikesi	1.65	57	ePN	Pn	17 23 56.8	-0.5
GONE	Gonen-Balikesi	1.65	57	ePn	Pn	17 23 56.8	-0.5
ALN	Alexandroupoli	1.74	4	P	Pn	17 23 58.6	-0.1
ALN				S	Sn	17 24 20.8	0.0
ALN	Alexandroupoli	1.74	4	P	Pn	17 23 58.6	-0.1
ALN				S	Sn	17 24 20.8	0.0
GCAM	G?zelcaml?	1.79	144	iP	Pn	17 24 00.1	+0.7
GCAM				iS	Sb	17 24 23.2	-0.6
GCAM	G?zelcaml?	1.79	144	iP	Pn	17 24 00.1	+0.7
GCAM				iS	Sb	17 24 23.2	-0.6
RKY	Sarkoy-Tekirda	1.82	32	ePN	Pn	17 23 59.9	+0.1
RKY	Sarkoy-Tekirda	1.82	32	ePn	Pn	17 23 59.9	+0.1
SART	Tekirdag	1.82	32	iP	Pb	17 24 02.0	0.0
SART				iS	Sb	17 24 26.1	+1.3
SART	Tekirdag	1.82	32	iP	Pb	17 24 02.0	0.0
SART				iS	Sb	17 24 26.1	+1.3
MRKA	Markates	1.85	257	P	Pn	17 24 00.2	0.0
MRKA				S	Sn	17 24 23.7	+0.2
MRKA	Markates	1.85	257	P	Pn	17 24 00.2	0.0
MRKA				S	Sn	17 24 23.7	+0.2
PAIG	Paliouri	1.88	295	P	Pn	17 24 01.1	+0.6
PAIG				S	Sn	17 24 24.6	+0.5
PAIG	Paliouri	1.88	295	ePN	Pn	17 24 01.3	+0.8
PAIG	Paliouri	1.88	295	P	Pn	17 24 01.1	+0.6
PAIG				S	Sn	17 24 24.6	+0.5
SKIA	Skiathos	1.89	271	P	Pn	17 24 00.7	0.0
SKIA	Skiathos	1.89	271	P	Pn	17 24 00.7	0.0
PTL	Penteli	1.94	236	P	Pn	17 24 01.2	-0.2
PTL	Penteli	1.94	236	ePN	Pn	17 24 01.0	-0.4
PTL	Penteli	1.94	236	P	Pn	17 24 01.2	-0.2
MFT	Murefte	1.95	33	ePN	Pn	17 24 02.0	+0.4
MFT	Murefte	1.95	33	ePn	Pn	17 24 02.0	+0.4
MRMT	Marmara Adasi	1.95	42	ePN	Pn	17 24 01.9	+0.3
MRMT	Marmara Adasi	1.95	42	ePn	Pn	17 24 01.9	+0.3
BNT	Bandirma	1.97	52	ePN	Pn	17 24 01.3	-0.5
BNT	Bandirma	1.97	52	ePn	Pn	17 24 01.3	-0.5
DURS	Dursunbey	2.05	77	iP	Pn	17 24 03.3	+0.3
DURS				iS	Sn	17 24 29.0	+0.5
DURS	Dursunbey	2.05	77	iP	Pn	17 24 03.3	+0.3
DURS				iS	Sn	17 24 29.0	+0.5
APE	Apeiranthos	2.10	188	⇑iPN	Pn	17 24 02.7	-1.0
APE	Apeiranthos	2.10	188	⇑iPn	Pn	17 24 02.7	-1.0
XOR	Xorichti	2.11	277	P	Pn	17 24 04.5	+0.8
XOR	Xorichti	2.11	277	P	Pn	17 24 04.5	+0.8
KAVA	Kavala	2.12	331	P	Pn	17 24 04.1	+0.2
KAVA				S	Sn	17 24 28.5	-1.6
KAVA	Kavala	2.12	331	P	Pn	17 24 04.1	+0.2
KAVA				S	Sn	17 24 28.5	-1.6
AYDN	Tasoluk	2.16	133	iP	Pb	17 24 06.3	-1.4
AYDN				iS	Sb	17 24 35.7	+1.3
AYDN	Tasoluk	2.16	133	iP	Pb	17 24 06.3	-1.4
AYDN				iS	Sb	17 24 35.7	+1.3
DST	Dursunbey	2.16	77	ePN	Pn	17 24 04.3	-0.1
DST	Dursunbey	2.16	77	ePn	Pn	17 24 04.3	-0.1
MANT	Manisa	2.19	107	iP	Pn	17 24 06.4	+1.4
MANT				iS	Sb	17 24 35.0	-0.3
MANT	Manisa	2.19	107	iP	Pn	17 24 06.4	+1.4
MANT				iS	Sb	17 24 35.0	-0.3
DEMI	Demirci	2.20	92	iP	Pn	17 24 05.1	+0.1
DEMI				iS	Sg	17 24 38.3	-1.1
DEMI	Demirci	2.20	92	iP	Pn	17 24 05.1	+0.1
KCTX	Karacabey (Bur	2.20	59	ePN	Pn	17 24 04.6	-0.4
KCTX	Karacabey (Bur	2.20	59	ePn	Pn	17 24 04.6	-0.4
TKR	Tekirdag	2.22	34	ePN	Pn	17 24 05.4	+0.1
TKR	Tekirdag	2.22	34	ePn	Pn	17 24 05.4	+0.1
KULA	Kula-Manisa	2.25	106	ePN	Pn	17 24 06.3	+0.5
KULA	Kula-Manisa	2.25	106	ePn	Pn	17 24 06.3	+0.5
MLSB	Milas	2.38	141	ePN	Pn	17 24 09.2	+1.8
MLSB	Milas	2.38	141	ePn	Pn	17 24 09.2	+1.8
CRLT	Corlu	2.42	35	ePN	Pn	17 24 08.3	+0.2
CRLT	Corlu	2.42	35	ePn	Pn	17 24 08.3	+0.2
ORLT	Orhaneli	2.48	68	ePN	Pn	17 24 08.8	-0.2
ORLT	Orhaneli	2.48	68	ePn	Pn	17 24 08.8	-0.2
MDNY	Mudanya-Bursa	2.60	61	ePN	Pn	17 24 10.4	-0.1
MDNY	Mudanya-Bursa	2.60	61	ePn	Pn	17 24 10.4	-0.1
DID	Didima	2.66	233	P	Pn	17 24 10.8	-0.5
DID	Didima	2.66	233	P	Pn	17 24 10.8	-0.5
ARMT	Armutlu	2.68	57	ePN	Pn	17 24 11.6	-0.1
ARMT	Armutlu	2.68	57	ePn	Pn	17 24 11.6	-0.1
NVR	Nevrokopi	2.69	325	P	Pn	17 24 12.3	+0.6
NVR	Nevrokopi	2.69	325	P	Pn	17 24 12.3	+0.6
SLVT	Silivri	2.73	40	ePN	Pn	17 24 13.0	+0.8
SLVT	Silivri	2.73	40	ePn	Pn	17 24 13.0	+0.8
YER	Yerkesik	2.76	136	ePN	Pn	17 24 14.8	+2.1
YER	Yerkesik	2.76	136	ePn	Pn	17 24 14.8	+2.1
EDRB	Edirne	2.77	13	ePN	Pn	17 24 13.7	+1.0
EDRB	Edirne	2.77	13	ePn	Pn	17 24 13.7	+1.0
THR3	Thira Island,	2.77	188	P	Pn	17 24 12.4	-0.4
THR3	Thira Island,	2.77	188	P	Pn	17 24 12.4	-0.4
TVSB	Tavsanli	2.79	83	ePN	Pn	17 24 13.4	+0.3
TVSB	Tavsanli	2.79	83	ePn	Pn	17 24 13.4	+0.3
GDZ	Gediz	2.79	90	iP	Pn	17 24 08.9	-4.3
GDZ				iS	Sb	17 24 53.1	+0.4
GDZ	Gediz	2.79	90	iP	Pn	17 24 08.9	-4.3
GEMT	Gemlik	2.84	62	ePN	Pn	17 24 14.0	+0.2
GEMT	Gemlik	2.84	62	ePn	Pn	17 24 14.0	+0.2
CTKS	Kestanelik-??a	2.89	43	ePN	Pn	17 24 14.6	+0.2
CTKS	Kestanelik-??a	2.89	43	ePn	Pn	17 24 14.6	+0.2
KHAL	Karahalli	2.92	104	iP	Pn	17 24 15.6	+0.6
KHAL				iS	Sb	17 24 58.9	+2.5
KHAL	Karahalli	2.92	104	iP	Pn	17 24 15.6	+0.6
CTYL	Yal??k??y-??at	2.95	38	ePN	Pn	17 24 15.7	+0.4
CTYL	Yal??k??y-??at	2.95	38	ePn	Pn	17 24 15.7	+0.4
KHL	Karahalli	2.96	105	ePN	Pn	17 24 15.9	+0.4
KHL	Karahalli	2.96	105	ePn	Pn	17 24 15.9	+0.4
BGKT	Bogazkoy	2.99	47	ePN	Pn	17 24 16.1	+0.2
BGKT	Bogazkoy	2.99	47	ePn	Pn	17 24 16.1	+0.2
BUY	Buyukada	3.00	55	ePN	Pn	17 24 16.1	+0.2
BUY	Buyukada	3.00	55	iP	Pn	17 24 15.9	-0.1
BUY				iS	Sb	17 25 01.1	+2.6
BUY	Buyukada	3.00	55	ePn	Pn	17 24 16.1	+0.2
YLV	Yalova	3.03	61	ePN	Pn	17 24 17.0	+0.6
YLV	Yalova	3.03	61	ePn	Pn	17 24 17.0	+0.6
ISK	Istanbul-Kandi	3.09	51	ePN	Pn	17 24 17.5	+0.4
ISK	Istanbul-Kandi	3.09	51	ePn	Pn	17 24 17.5	+0.4
KLYT	Kilyos	3.19	48	ePN	Pn	17 24 18.8	+0.2
KLYT	Kilyos	3.19	48	ePn	Pn	17 24 18.8	+0.2
CAVI	Cavuskoy	3.22	70	ePN	Pn	17 24 19.2	+0.2
CAVI	Cavuskoy	3.22	70	ePn	Pn	17 24 19.2	+0.2
ADVT	Abdulvahap	3.23	65	ePN	Pn	17 24 19.4	+0.3
ADVT	Abdulvahap	3.23	65	ePn	Pn	17 24 19.4	+0.3
ALT	Altintas	3.28	90	ePN	Pn	17 24 20.4	+0.4
ALT	Altintas	3.28	90	ePn	Pn	17 24 20.4	+0.4
VLI	Veliai	3.37	225	P	Pn	17 24 21.0	-0.1
VLI	Veliai	3.37	225	P	Pn	17 24 21.0	-0.1
SILT	Sile	3.50	54	ePN	Pn	17 24 23.2	+0.4
SILT	Sile	3.50	54	ePn	Pn	17 24 23.2	+0.4
KYTH	Kithira	3.66	219	P	Pn	17 24 24.8	-0.2
KYTH	Kithira	3.66	219	P	Pn	17 24 24.8	-0.2
SPNC	Sapanca-Adapaz	3.72	64	ePN	Pn	17 24 26.6	+0.7
SPNC	Sapanca-Adapaz	3.72	64	ePn	Pn	17 24 26.6	+0.7
GULT	Gulveren	3.78	69	ePN	Pn	17 24 27.3	+0.5
GULT	Gulveren	3.78	69	ePn	Pn	17 24 27.3	+0.5
ESKT	Eskisehir	3.86	83	ePN	Pn	17 24 28.5	+0.6
ESKT	Eskisehir	3.86	83	ePn	Pn	17 24 28.5	+0.6
IDI	Anoyia	3.94	192	P	Pn	17 24 28.7	-0.3
IDI	Anoyia	3.94	192	P	Pn	17 24 28.7	-0.3
LAST	Lasithi	4.00	185	P	Pn	17 24 29.1	-0.7
LAST	Lasithi	4.00	185	P	Pn	17 24 29.1	-0.7
MDUB	Mudurnu	4.29	71	ePN	Pn	17 24 34.4	+0.6
MDUB	Mudurnu	4.29	71	ePn	Pn	17 24 34.4	+0.6
SVRH	Sivrihisar-ESK	4.38	84	ePN	Pn	17 24 35.6	+0.6
SVRH	Sivrihisar-ESK	4.38	84	ePn	Pn	17 24 35.6	+0.6
KIZT	Kizilcal	4.67	92	ePN	Pn	17 24 39.8	+0.7
KIZT	Kizilcal	4.67	92	ePn	Pn	17 24 39.8	+0.7
BARS	Barje	4.78	321	ePn	Pn	17 24 42.1	+1.6

*ISCJB **23** 17:24:22.0±0.3, 42°.51N±0°.02×13°.30E±0°.03, h15km±3km, Error ellipse: s-maj=4.0km s-min=3.4km az=157.7*
*ROM **23** 17:24:22.4±0.1, 42°.50N×13°.30E, h12km±1km, Ml3.2/14, Error ellipse: s-maj=1.0km s-min=0.7km az=74.0*
*CSEM **23** 17:24:22.5±0.1, 42°.51N×13°.31E, h5km, ML3.5/7, Error ellipse: s-maj=3.4km s-min=2.9km az=79.0*
ISC 23 17:24:22.8±0.8**, 42°.52N**±0°.02×**13°.31E**±0°.02**, h15**km±5km**, n64,** σ1**§03**/85**, 1C-1D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L'Aquila	0.17	158	Pg	Pg	17 24 26.7	-0.5
AQU				Sg	Sg	17 24 29.7	-0.3
	6µm,0.5s						
AQU	L'Aquila	0.17	158	Pg	Pg	17 24 26.7	-0.5
AQU				Sg	Sg	17 24 29.7	-0.3
	6µm,0.5s						
LNSS	Leonessa	0.22	293	Pg	Pg	17 24 27.6	-0.3
LNSS				Sg	Sg	17 24 31.4	+0.1
	4µm,0.4s						
LNSS	Leonessa	0.22	293	Pg	Pg	17 24 27.6	-0.3
LNSS				Sg	Sg	17 24 31.4	+0.1
	4µm,0.4s						
TERO	Teramo	0.24	64	Pg	Pg	17 24 27.8	-0.4
TERO				Sg	Sg	17 24 31.6	-0.2
	6µm,0.5s						
TERO	Teramo	0.24	64	Pg	Pg	17 24 27.8	-0.4
TERO				Sg	Sg	17 24 31.6	-0.2
	6µm,0.5s						
FIAM	Fiamignano	0.29	210	Pg	Pg	17 24 28.5	-0.5
FIAM				Sg	Sg	17 24 32.8	-0.4
	510nm,0.6s						
FIAM	Fiamignano	0.29	210	Pg	Pg	17 24 28.5	-0.5
FIAM				Sg	Sg	17 24 32.8	-0.4
	510nm,0.6s						
NRCA	Norcia	0.35	335	Pg	Pg	17 24 29.8	-0.3
NRCA				Sg	Sg	17 24 35.3	+0.3
	2µm,0.1s						
NRCA	Norcia	0.35	335	Pg	Pg	17 24 29.8	-0.3
NRCA				Sg	Sg	17 24 35.3	+0.3
	2µm,0.1s						
VCEL	Villa Celiera	0.41	107	Pg	Pg	17 24 31.2	+0.1
	3µm,0.4s						
VCEL	Villa Celiera	0.41	107	Pg	Pg	17 24 31.2	+0.1
	3µm,0.4s						
MNS	Montasola	0.49	255	Pg	Pg	17 24 31.8	-0.7
MNS				Sg	Sg	17 24 39.0	0.0
	940nm,0.4s						
MNS	Montasola	0.49	255	Pg	Pg	17 24 31.8	-0.7
MNS				Sg	Sg	17 24 39.0	0.0
	940nm,0.4s						
PTQR	Pietraquaria	0.50	172	Pg	Pg	17 24 31.9	-0.8
	96nm,0.3s						
PTQR	Pietraquaria	0.50	172	Pg	Pg	17 24 31.9	-0.8
	96nm,0.3s						
OFFI	Offida	0.50	33	Pg	Pb	17 24 33.4	+0.1
	4µm,0.5s						
OFFI	Offida	0.50	33	Pg	Pb	17 24 33.4	+0.1
	4µm,0.5s						
TRTR	Tortoreto Alta	0.53	56	Pg	Pb	17 24 33.9	+0.1
TRTR	Tortoreto Alta	0.53	56	Pg	Pb	17 24 33.9	+0.1
FDMO	Fiordimonte	0.55	342	Pg	Pg	17 24 33.2	-0.4
FDMO				Sg	Sb	17 24 41.8	+0.1
	628nm,0.3s						
FDMO	Fiordimonte	0.55	342	Pg	Pg	17 24 33.2	-0.4
FDMO				Sg	Sb	17 24 41.8	+0.1
	628nm,0.3s						
CESX	Cesi	0.55	280	Pg	Pg	17 24 32.8	-0.9
	528nm,0.4s						
CESX	Cesi	0.55	280	Pg	Pg	17 24 32.8	-0.9
	528nm,0.4s						
CESI	CESI - Serrava	0.57	329	Pg	Pg	17 24 33.7	-0.5
	188nm,0.5s						
CESI	CESI - Serrava	0.57	329	Pg	Pg	17 24 33.7	-0.5
	188nm,0.5s						
CERT	Cerreto	0.62	204	Pg	Pg	17 24 34.0	-0.9
	2µm,0.4s						
CERT	Cerreto	0.62	204	Pg	Pg	17 24 34.0	-0.9
	2µm,0.4s						
MTCE	Montecelio	0.65	221	Pg	Pg	17 24 34.4	-1.1
MTCE	Montecelio	0.65	221	Pg	Pg	17 24 34.4	-1.1
INTR	Introdacqua	0.67	139	Pg	Pg	17 24 34.9	-1.0
INTR	Introdacqua	0.67	139	Pg	Pg	17 24 34.9	-1.0
GUMA	Gualdo di Mace	0.71	40	Pg	Pg	17 24 33.7	-3.0
GUMA				Sg	Sg	17 24 42.8	-3.4
	4µm,0.4s						
GUMA	Gualdo di Mace	0.71	40	Pg	Pg	17 24 33.7	-3.0
GUAR	Guarcino	0.72	180	Pg	Pg	17 24 36.4	-0.5
GUAR	Guarcino	0.72	180	Pg	Pg	17 24 36.4	-0.5
LPEL	Lama dei Pelig	0.80	126	Pg	Pb	17 24 37.1	-1.3
LPEL	Lama dei Pelig	0.80	126	Pg	Pb	17 24 37.1	-1.3
POFI	Posta Fibreno	0.85	159	Pg	Pb	17 24 38.3	-1.0
POFI	Posta Fibreno	0.85	159	Pg	Pb	17 24 38.3	-1.0
CING	Cingoli	0.86	354	Pg	Pb	17 24 38.8	-0.7
CING	Cingoli	0.86	354	Pg	Pb	17 24 38.8	-0.7
MGAB	Montegabbione	0.97	295	Pg	Pb	17 24 40.9	-0.4
MGAB	Montegabbione	0.97	295	Pg	Pb	17 24 40.9	-0.4
ARVD	Arcevia	1.02	345	Pg	Pb	17 24 41.6	-0.5
ARVD	Arcevia	1.02	345	Pg	Pb	17 24 41.6	-0.5
AOI	Ancona	1.05	12	Pg	Pb	17 24 42.4	-0.4
AOI	Ancona	1.05	12	Pg	Pb	17 24 42.4	-0.4
TOLF	Tolfa	1.07	246	Pg	Pb	17 24 42.2	-0.8
TOLF	Tolfa	1.07	246	Pg	Pb	17 24 42.2	-0.8
MIDA	Miranda	1.12	141	Pg	Pb	17 24 42.7	-1.2
MIDA	Miranda	1.12	141	Pg	Pb	17 24 42.7	-1.2
NVLJ	Novalja	2.34	28	ePn	Pn	17 25 01.6	+1.0
NVLJ				Sn	Sn	17 25 29.6	+0.5
NVLJ	Novalja	2.34	28	ePn	Pn	17 25 01.6	+1.0
NVLJ				Sn	Sn	17 25 29.5	+0.5
MAIM	Mastiano	2.49	305	P	Pb	17 25 05.4	-1.8
STON	Ston	3.25	82	ePn	Pn	17 25 14.7	+1.5
STON				Sn	Sn	17 25 53.2	+1.6
STON	Ston	3.25	82	ePn	Pn	17 25 14.7	+1.5
PE1	Pezze di Greco	3.52	118	ePn	Pn	17 25 19.1	+2.2
VOY	Vojsko	3.54	7	ePn	Pn	17 25 17.8	+0.6
VOY				eSn	Sn	17 26 00.3	+1.5
VOY	Vojsko	3.54	7	Pn	Pn	17 25 17.8	+0.6
VOY				eSn	Sn	17 26 00.3	+1.5
ABTA	Abfaltersbach	4.27	353	⇓iPn	Pn	17 25 27.0	-0.3
ABTA	Abfaltersbach	4.27	353	Pn	Pn	17 25 27.0	-0.3
BBLS	Lazići	4.65	71	⇑iPn	Pn	17 25 35.0	+2.5
KHC	Kasperske Hory	6.62	2	ePN	Pn	17 26 00.0	+0.5
KHC				eSN	Sn	17 27 15.5	+0.9

*GUC **23** 17:36:28.4±2.1, 22°.01S×67°.83W, h197km±18km, ML3.9*
*IDC **23** 17:36:35.7±4.9, 21°.43S×67°.20W, h232km±25km, mb3.8/1, mb1 3.1/3, mb1mx2.9/17, mbtmp3.1/3, Error ellipse: s-maj=99.0km s-min=25.0km az=58.0*
ISC 23 17:36:27.9±1.0**, 22°.01S**±0°.06×**67°.6W**±0°.1**, h187**km±15km**, n14,** σ1**§27**/22**, 6C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.38	244	iP	Pn	17 36 59.8	+0.2
LVC				iS	Sn	17 37 23.4	-0.8
PB09	Plate Boundary	1.57	277	⇑iP	Pn	17 37 02.2	+0.9
PB09				iS	Sn	17 37 28.1	+1.1
PB09				AML	AML	17 37 31.3	
	comp=E,807nm,0.3s						
PB04	Plate Boundary	1.80	261	⇑iP	Pn	17 37 10.2	+7.0
PB04				iS	Sn	17 37 41.4	+11
PB04				AML	AML	17 37 45.1	
	comp=N,427nm,0.4s						
PB01	Plate Boundary	2.03	298	⇑iP	Pn	17 37 06.4	+0.5
PB01				iS	Sn	17 37 34.6	-0.7
PB01				AML	AML	17 37 36.6	
	comp=E,840nm,0.3s						
MACH	Maria Elena	2.04	264	iP	Pn	17 37 06.5	+0.4
MACH				iS	Sn	17 37 35.2	-0.6
PB07	Plate Boundary	2.17	277	⇑iP	Pn	17 37 07.9	+0.4
PB07				iS	Sn	17 37 37.3	-0.9
PB07				AML	AML	17 37 39.7	
	comp=E,456nm,0.4s						
CEN1	Los Morros	2.79	240	⇑iP	Pn	17 37 18.1	+3.6
CEN1				eS	Sn	17 37 53.9	+3.1
CEN1				AML	AML	17 37 54.8	
	comp=N,187nm,0.5s						
ANCH	Antofagasta	3.10	237	⇑iP	Pn	17 37 18.1	0.0
ANCH				iS	Sn	17 37 55.0	-2.3
ANCH				AML	AML	17 37 55.9	
	comp=E,447nm,0.1s						
PSGC	Pisagua	3.39	315	eP	Pn	17 37 21.4	-0.3
PSGC				iS	Sn	17 38 01.7	-2.0
PSGC				AML	AML	17 38 04.1	
	comp=E,95nm,0.5s						
MNMC	Minimini	3.44	326	eP	Pn	17 37 23.4	+0.9
MNMC				iS	Sn	17 38 05.1	0.0
LPAZ	La Paz	5.72	355	P	Pn	17 37 53.0	+1.0
	comp=E,0.3nm,0.3s,baz=165,slow=6.3,SNR=7.2						
LPAZ				S	Sn	17 38 57.3	-0.7
	comp=E,0.1nm,0.3s,baz=46,slow=18,SNR=2.4						
CPUP	Villa Florida	10.29	117	P	P	17 38 58.3	-0.9
	comp=E,0.4nm,0.3s,baz=270,slow=16,SNR=3.7						
TORD	Torodi Ar. Bea	76.36	70	P	P	17 47 56.9	-0.1
	comp=E,1.3nm,0.3s,baz=258,slow=5.6,SNR=31						
MKAR	Makanchi Array	145.30	37	PKP	PKPbc	17 55 44.7	+1.2
	comp=E,0.3nm,0.6s,baz=321,slow=2.9,SNR=4.1						

*MAN **23** 17:41:37, 5°.86N×125°.48E, h91km, mb4.5, ML3.4, MS3.2*
*ISCJB **23** 17:41:39.8±0.6, 6°.03N±0°.06×125°.33E±0°.08, h110km±5km, mb3.7/13, Error ellipse: s-maj=13.4km s-min=10.0km az=167.5*
*IDC **23** 17:41:40.5±0.9, 5°.99N×125°.32E, h100km±7km, mb3.5/13, mb1 3.7/14, mb1mx3.6/27, mbtmp3.6/14, MS2.7/3, Ms1 2.7/3, ms1mx2.3/21, Error ellipse: s-maj=30.0km s-min=10.8km az=86.0*
ISC 23 17:41:39.9±1.5**, 6°.0N**±0°.1×**125°.37E**±0°.09**, h100**km±10km**, n21,** σ1**§06**/19**, mb3.6**/13**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	1.08	345	⇑eP	Pn	17 42 02.5	+1.2
KCP				iS	Sn	17 42 18.7	+1.2
DAV	Davao City (W)	1.12	11	P	Pn	17 42 01.9	+0.1
	289nm,0.3s,baz=208,slow=2.5,SNR=65						
DAV				S	Sn	17 42 18.4	+0.1
	1µm,0.3s,baz=186,slow=19,SNR=19						
MATI	Mati	1.32	42	eP	Pn	17 42 02.8	-1.3
MATI				eS	Sn	17 42 12.4	-10
CTBH	Cotabato--PC H	1.68	318	⇓iP	Pn	17 42 07.5	-0.9
CGP	Cagayan de Oro	2.57	345	⇓eP	Pn	17 42 20.0	0.0
CGP				eS	Sn	17 42 58.5	+7.8
PAGZ	Pagadian	2.72	314	eP	Pn	17 42 22.7	+0.7
PAGZ				eS	Sn	17 42 52.2	-2.2
KAPI	Kappang	12.26	207	P	P	17 44 33.3	-6.0
	0.6nm,0.3s,baz=63,slow=4.5,SNR=4.0						
GUMO	Guam	20.64	67	LR	LR	17 53 40.2	
	comp=Z,17nm,21.0s,baz=276,slow=35						
FITZ	Fitzroy Crossi	23.91	179	P	P	17 46 45.6	+0.9
	4.7nm,0.5s,baz=9.9,slow=8.0,SNR=60						
WRA	Warramunga Arr	27.21	161	P	P	17 47 14.9	+0.4
	0.8nm,0.5s,baz=331,slow=11,SNR=24						
ASAR	Alice Springs	30.60	164	P	P	17 47 45.5	+0.9
	0.4nm,0.3s,baz=342,slow=6.9,SNR=30						
ASAR				ScP	ScP	17 54 13.7	-1.0
	0.4nm,0.8s,baz=340,slow=2.7,SNR=7.0						
KSRS	Korea Array	31.43	4	P	P	17 47 52.5	+0.8
	1.0nm,0.7s,baz=187,slow=9.5,SNR=9.7						
KSRS				LR	LR	18 00 05.1	
	comp=Z,5.2nm,20.7s,baz=320,slow=35						
MJAR	Matsushiro Arr	32.63	19	P	P	17 48 01.8	-0.5
	0.7nm,0.6s,baz=200,slow=9.5,SNR=6.7						
USRK	Ussuriysk Arra	38.53	8	P	P	17 48 54.2	+1.6
	0.6nm,0.6s,baz=182,slow=8.6,SNR=4.8						
STKA	Stephens Creek	40.68	159	P	P	17 49 12.3	+1.6
	1.2nm,0.5s,baz=331,slow=11,SNR=3.7						
PETK	Petropavlovsk-	53.91	24	P	P	17 50 55.0	+2.0
	0.7nm,0.6s,baz=179,slow=5.0,SNR=5.8						
MKAR	Makanchi Array	54.96	325	P	P	17 51 01.7	+0.9
	0.2nm,0.5s,baz=115,slow=7.5,SNR=6.1						
ZALV	Zalesovo Beam	58.00	333	P	P	17 51 21.7	-0.4
	0.2nm,0.3s,baz=106,slow=7.7,SNR=2.3						
ZALV				LR	LR	18 16 10.1	
	comp=Z,22nm,21.4s,baz=68,slow=36						
KURBB	Kurchatov Arra	59.14	327	P	P	17 51 30.0	-0.1
	0.2nm,0.4s,baz=128,slow=6.2,SNR=5.7						
ILAR	Eielson Array	83.69	26	P	P	17 53 57.5	+0.2
	1.2nm,0.6s,baz=247,slow=4.9,SNR=19						
FINES	FINESS Array B	89.24	332	P	P	17 54 23.4	-1.1
	1.7nm,0.9s,baz=99,slow=4.4,SNR=3.3						

*IDC **23** 18:04:26.5±0.4, 0°.57S×133°.17E, h0km, mb5.0/20, mb1 5.1/23, mb1mx5.0/27, mbtmp5.0/23, ML5.2/3, MS4.2/24, Ms1 4.2/24, ms1mx4.0/36, Error ellipse: s-maj=21.2km s-min=10.2km az=78.0*
*ISCJB **23** 18:04:28.7±0.8, 0°.59S±0°.03×133°.20E±0°.02, h25km±6km, mb5.2/111, MS4.2/40, Error ellipse: s-maj=4.5km s-min=3.7km az=7.7*
*BJI **23** 18:04:29.8, 1°.09S×133°.45E, h62km, mB5.1/41, mb5.1/58, Ms4.5/46, Ms7 4.3/44*
*NEIC **23** 18:04:30.7±1.8, 0°.58S×133°.17E, h29km±12km, mb5.2/49, Error ellipse: s-maj=6.6km s-min=4.1km az=66.0*
*MOS **23** 18:04:30.2±1.0, 0°.53S×133°.11E, h33km, mb5.3/46, MS4.2/15, Error ellipse: s-maj=10.9km s-min=5.7km az=107.2*
*GCMT **23** 18:04:31.7±0.3, 0°.78S×133°.04E, h42km±1km, MW5.0, Moment Tensor Solution. s34,c40; s60,c85; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.98±.18; $M_{\theta\theta}$1.66±.11; $M_{\phi\phi}$1.32±.13; $M_{r\theta}$-1.65±.09; $M_{\theta\phi}$-1.23±.08; $M_{\phi r}$1.45±.11; Best double couple: $M_0$3.60000×10^{16} NP1:ϕ_s311.00000°, δ26.00000°, λ-90.00000°. NP2:ϕ_s131.00000°, δ64.00000°, λ-90.00000°. Principal axes: T 3.4800, Plg19.0000°, Azm221.0000°; N 0.2500, Plg0.0000°, Azm311.0000°; P -3.7300, Plg71.0000°, Azm41.0000°; Data Used: II IU IC G CN.*
*DJA **23** 18:04:33.6±0.7, 1°S±3°×13°3E±°, h33km±7km, M5.3/12,*

mB5.7/2,mb5.3/12,Mw(mB)5.2/2
ISC 23 18:04:32.6±0.5,**0°62S**±0°03×**133°15E**±0°04,**h42**km±4km,
n373,σ1°34/430,mb5.3/120,MS4.2/40,9C-24D,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RKPI	**Ransiki, Papua**	**1.35**	**131**	P	**Pn**	**18 04 55.5**	**+0.5**
RKPI				S	**Sn**	**18 05 16.5**	**+4.7**
SWI	**Sorong**	**1.91**	**263**	P	Pn	18 04 59.8	-2.8
SWI				S	**Sn**	**18 05 26.5**	**+1.1**
FAKI	**Fak Fak**	**2.46**	**202**	P	**Pn**	**18 05 08.2**	**-2.0**
BAKI	**Biak**	**3.01**	**101**	P	**Pn**	**18 05 17.2**	**-0.6**
SRPI	**Serui, Papua**	**3.33**	**112**	P	**Pn**	**18 05 21.6**	**-0.6**
MSAI	**Masohi**	**5.01**	**237**	P	**Pn**	**18 05 46.4**	**+1.1**
LBMI	**Labuha**	**5.65**	**270**	P	**Pn**	**18 05 54.4**	**+0.3**
LBMI				S	**Sn**	**18 06 59.2**	**+1.4**
GAMI	**Galela, Maluku**	**5.89**	**294**	P	**Pn**	**18 05 58.8**	**+1.4**
TNTI	**Ternate**	**5.95**	**283**	P	**Pn**	**18 05 59.0**	**+0.8**
TNTI				S	**Sn**	**18 07 05.7**	**+0.6**
MNI	**Manado**	**8.56**	**284**	P	**Pn**	**18 06 35.2**	**+1.2**
SGSI	**Sangihe**	**8.74**	**299**	S	**Sn**	**18 08 14.3**	**+0.6**
KMSI	**Cibinong**	**9.25**	**277**	P	**Pn**	**18 06 43.7**	**+0.3**
LUWI	**Luwuk**	**10.39**	**268**	P	**Pn**	**18 06 57.3**	**-1.8**
DAV	**Davao City (W)**	**10.74**	**315**	Pn	**Pn**	**18 07 03.6**	**-0.4**
DAV	**Davao City (W)**	**10.74**	**315**	Pn	**Pn**	**18 07 05.6**	**+1.6**
	18nm,0.3s,baz=106,slow=5.1,SNR=7.0						
DAV				LR	LR	18 11 35.3	
	comp=Z,808nm,18.2s,baz=155,slow=40						
MRSI	**Marisa**	**11.26**	**276**	P	**Pn**	**18 07 09.8**	**-1.3**
BBSI	**Bau Bau**	**11.62**	**245**	P	**Pn**	**18 07 16.2**	**+0.3**
CTBH	**Cotabato--PC H**	**11.81**	**311**	⇓*i*P	**Pn**	**18 07 18.5**	**-0.1**
SKSI	**Soroako, Sulaw**	**11.96**	**261**	P	**Pn**	**18 07 20.7**	**0.0**
KKSI	**Kolaka, Sulawe**	**12.02**	**253**	P	**Pn**	**18 07 22.5**	**+1.1**
MMRI	**Maumere**	**13.47**	**233**	P	**Pn**	**18 07 41.5**	**+0.2**
TTSI	**Tana Toraja**	**13.54**	**260**	P	**Pn**	**18 07 42.3**	**+0.1**
BSSI	**Bau Bau, Buton**	**13.77**	**246**	P	**Pn**	**18 07 45.4**	**0.0**
SPSI	**Sidrap Palu**	**13.78**	**256**	P	**Pn**	**18 07 45.4**	**0.0**
BKSI	**Bulukumba**	**13.82**	**250**	P	**Pn**	**18 07 46.7**	**+0.7**
KAPI	**Kappang**	**14.07**	**252**	*e*Pn	**Pn**	**18 07 49.0**	**-0.4**
KAPI				Sn	**Sn**	**18 10 25.5**	**+1.1**
KAPI	**Kappang**	**14.07**	**252**	P	**Pn**	**18 07 49.5**	**0.0**
	SNR=29						
KAPI	**Kappang**	**14.07**	**252**	Pn	**Pn**	**18 07 49.4**	**-0.1**
	1μm,0.9s,SNR=20						
KAPI	**Kappang**	**14.07**	**252**	P	**Pn**	**18 07 49.1**	**-0.4**
KAPI	**Kappang**	**14.07**	**252**	Pn	**Pn**	**18 07 49.1**	**-0.4**
	16nm,0.3s,baz=112,slow=5.7,SNR=49						
KAPI				Sn	**Sn**	**18 10 25.5**	**+1.1**
	baz=126,slow=19,SNR=2.1						
KAPI				LR	LR	18 13 57.6	
	comp=Z,431nm,19.9s,baz=70,slow=40						
WSI	**Waingapu**	**15.63**	**234**	P	**Pn**	**18 08 09.1**	**-1.0**
MYLDM	**Lahad Datu**	**15.73**	**292**	P	**Pn**	**18 08 13.3**	**+2.0**
SMKI	**Samarinda**	**15.94**	**271**	P	**Pn**	**18 08 15.2**	**+1.1**
TSM	**Tawau**	**16.03**	**288**	P	**Pn**	**18 08 16.1**	**+0.9**
PMG	**Port Moresby**	**16.45**	**122**	Pn	**Pn**	**18 08 21.8**	**+1.3**
PMG	**Port Moresby**	**16.45**	**122**	P	**P**	**18 08 22.8**	**0.0**
PMG	**Port Moresby**	**16.45**	**122**	Pn	**Pn**	**18 08 21.8**	**+1.3**
	0.8nm,0.3s,baz=310,slow=9.6,SNR=14						
COEN	**Coen**	**16.55**	**144**	*e*Pn	**Pn**	**18 08 19.9**	**-1.9**
	150nm,0.9s						
SDKM	**Sandakan**	**17.10**	**292**	P	**P**	**18 08 31.2**	**+1.1**
KBKI	**Kotabaru**	**17.18**	**261**	P	**Pn**	**18 08 30.6**	**+0.9**
	47nm,1.2s						
KDM	**Kudat**	**17.92**	**295**	P	**P**	**18 08 41.4**	**+2.3**
KKM	**Kota Kinabalu**	**18.16**	**292**	*e*Pn	**Pn**	**18 08 43.3**	**+1.5**
	130nm,1.4s						
KKM	**Kota Kinabalu**	**18.16**	**292**	P	**Pn**	**18 08 43.9**	**+2.0**
MTKI	**Muara Teweh, K**	**18.26**	**269**	P	**P**	**18 08 42.7**	**-0.1**
GUMO	**Guam**	**18.28**	**39**	Pn	**P**	**18 08 39.5**	**-3.5**
GUMO	**Guam**	**18.28**	**39**	P	**Pn**	**18 08 43.9**	**+0.7**
	0.9nm,0.3s,baz=217,slow=20,SNR=3.2						
GUMO				LR	LR	18 14 59.3	
	comp=Z,860nm,18.9s,baz=229,slow=35						
BBKI	**Banjar Baru**	**18.51**	**261**	P	**Pn**	**18 08 47.1**	**+1.0**
FITZ	**Fitzroy Crossi**	**18.88**	**203**	*e*P	P	18 08 44.6	-4.9
	54nm,0.8s						
FITZ				*e*Sn	Sn	18 12 03.7	-17
FITZ				S	S	18 12 04.4	-18
FITZ	**Fitzroy Crossi**	**18.88**	**203**	P	**P**	**18 08 45.8**	**-3.8**
	1.0nm,0.3s,baz=26,slow=13,SNR=37						
FITZ				S	Sn	18 12 04.4	-16
	1.4nm,0.3s,baz=356,slow=5.3,SNR=4.6						
FITZ				LR	LR	18 16 56.0	
	comp=Z,253nm,21.5s,baz=23,slow=40						
TGY	**Tagaytay City**	**18.98**	**321**	P	**P**	**18 08 51.0**	**+0.3**
TGY	**Tagaytay City**	**18.98**	**321**	P	**P**	**18 08 51.0**	**+0.3**
	40nm,0.3s,baz=96,slow=10.0,SNR=5.1						
KHKI	**Kahang-Kahang**	**19.09**	**246**	P	**P**	**18 08 52.4**	**+0.4**
WRAB	**Tennant Creek**	**19.23**	**177**	*e*P	**P**	**18 08 51.8**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,51nm,0.7s						
WRAB	**Tennant Creek**	**19.23**	**177**	*e*P	**P**	**18 08 51.8**	**-1.6**
	comp=Z,51nm,0.7s						
WRAB				*e*Sn	S	18 12 13.4	-16
WRAB	**Tennant Creek**	**19.23**	**177**	P	**P**	**18 08 52.2**	**-1.2**
	comp=Z,269nm,0.7s,SNR=33						
WRA	**Warramunga Arr**	**19.24**	**177**	P	**P**	**18 08 52.5**	**-1.0**
WRA				S	S	18 12 16.1	-13
WRA				PKiKP	**PKiKP**	**18 21 04.5**	**-1.5**
WRA	**Warramunga Arr**	**19.24**	**177**	P	**P**	**18 08 52.5**	**-1.0**
	comp=Z,3.5nm,0.3s,baz=354,slow=12,SNR=98						
WRA				S	S	18 12 16.1	-13
	comp=Z,1.9nm,0.3s,baz=357,slow=22,SNR=6.3						
WRA				PKiKP	**PKiKP**	**18 21 04.5**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=310,slow=1.1,SNR=6.2						
IGBI	**Denpasar**	**19.69**	**245**	P	**Pn**	**18 09 00.1**	**-0.1**
BALP	**Baler**	**19.88**	**325**	*e*P	**P**	**18 09 00.3**	**-0.1**
KMMI	**Kalianget**	**20.17**	**251**	P	Pn	18 09 07.1	+1.3
	comp=Z,198nm,0.9s						
BYJI	**Banyuwangi**	**20.19**	**248**	P	**P**	**18 09 04.9**	**+1.0**
BTM	**Bintulu**	**20.41**	**281**	P	Pn	18 09 09.5	+0.7
JAGI	**Jajag, Banyuwa**	**20.47**	**247**	P	**P**	**18 09 06.8**	**-0.2**
	comp=Z,100nm,1.5s						
PALP	**Palanan**	**20.51**	**329**	*e*P	**P**	**18 09 08.8**	**+1.5**
BLJI	**Banyuglugur**	**20.74**	**250**	P	**P**	**18 09 11.1**	**+1.2**
	comp=Z,263nm,1.0s						
SBUM	**Sibu**	**21.15**	**278**	P	**P**	**18 09 16.7**	**+2.4**
PBKI	**Pangkalan Bun**	**21.57**	**264**	P	**P**	**18 09 21.7**	**+2.8**
	comp=Z,314nm,1.0s,comp=Z,2μm						
STKI	**Sintang**	**21.68**	**272**	P	**P**	**18 09 21.9**	**+1.8**
APYP	**Conner**	**21.79**	**328**	*e*P	**P**	**18 09 21.5**	**+0.4**
ABRA	**Dolores**	**21.90**	**327**	*e*P	**P**	**18 09 22.2**	**-0.1**
KRKI	**Karangkates**	**21.94**	**249**	P	P	18 09 29.0	+6.2
SJI	**Sawahan**	**22.45**	**251**	P	**P**	**18 09 28.1**	**-0.3**
PWJI	**Pagerwojo**	**22.51**	**250**	P	**P**	**18 09 30.7**	**+1.8**
	comp=Z,89nm,1.3s						
AS31	**Alice Springs**	**22.92**	**178**	*e*P	**P**	**18 09 32.3**	**-0.9**
AS31				*e*S	**S**	**18 13 42.5**	**+2.2**
ASAR	**Alice Springs**	**22.92**	**178**	P	**P**	**18 09 32.5**	**-0.7**
ASAR				S	**S**	**18 13 39.4**	**-0.9**
ASAR				PKiKP	**PKiKP**	**18 21 06.3**	**-1.3**
ASAR	**Alice Springs**	**22.92**	**178**	P	**P**	**18 09 32.5**	**-0.7**
	comp=Z,31nm,0.6s,baz=357,slow=6.3,SNR=297						
ASAR				S	**S**	**18 13 39.4**	**-0.9**
	comp=Z,9.4nm,1.0s,baz=3.2,slow=18,SNR=5.9						
ASAR				LR	LR	18 19 08.7	
	comp=Z,440nm,18.2s,baz=12,slow=38						
ASAR				PKiKP	**PKiKP**	**18 21 06.3**	**-1.3**
	comp=Z,0.2nm,0.6s,baz=320,slow=0.5,SNR=4.3						
KSM	**Kuching**	**22.93**	**275**	*e*P	**P**	**18 09 33.4**	**0.0**
	comp=Z,59nm,0.9s						
KSM	**Kuching**	**22.93**	**275**	P	**P**	**18 09 34.9**	**+1.5**
PCJI	**Pacitan**	**23.15**	**250**	P	**P**	**18 09 33.1**	**-2.5**
CTA	**Charters Tower**	**23.21**	**147**	P	**P**	**18 09 36.9**	**+0.7**
CTA	**Charters Tower**	**23.21**	**147**	P	**P**	**18 09 36.9**	**+0.7**
	comp=Z,93nm,0.7s,baz=323,slow=10,SNR=194						
CTA				LR	LR	18 20 01.5	
	comp=Z,3μm,18.9s,baz=328,slow=40						
CTAO	**Charters Tower**	**23.21**	**147**	⇓*i*P	**P**	**18 09 36.7**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,112nm,0.8s						
CTAO	**Charters Tower**	**23.21**	**147**	⇓*i*P	**P**	**18 09 36.7**	**+0.6**
	comp=Z,112nm,0.8s						
SMRI	**Semarang**	**23.53**	**254**	P	**P**	**18 09 42.4**	**+3.1**
	comp=Z,200nm,1.0s						
MBWA	**Marble Bar**	**24.26**	**212**	⇑*e*P	**P**	**18 09 45.8**	**-0.2**
	comp=Z,244nm,1.2s						
MBWA	**Marble Bar**	**24.26**	**212**	P	**P**	**18 09 47.2**	**+1.3**
	SNR=11						
BJII	**Banjamegara**	**24.30**	**253**	P	**P**	**18 09 48.3**	**+1.8**
	comp=Z,127nm,1.5s						
TGJI	**Tegal**	**24.76**	**255**	P	**P**	**18 09 51.1**	**+0.5**
TPI	**Tanjungpandan**	**25.57**	**265**	P	**P**	**18 09 59.8**	**+1.8**
	comp=Z,44nm,0.9s						
CISI	**Cisompet, Garu**	**26.18**	**254**	P	**P**	**18 10 03.3**	**-0.3**
	comp=Z,217nm,0.9s,comp=Z,2μm						
LEM	**Lembang**	**26.20**	**256**	P	**P**	**18 10 04.9**	**+1.0**
YULB	**Yu-li**	**26.51**	**335**	*e*P	**P**	**18 10 06.8**	**+0.5**
	comp=Z,22nm,0.8s						
CBJI	**Citeko**	**26.86**	**257**	P	**P**	**18 10 10.7**	**+1.0**
DBJI	**Dramaga**	**26.99**	**257**	P	P	18 10 17.2	+6.4
SSLB	**Suanglung**	**27.00**	**335**	*e*P	**P**	**18 10 09.2**	**-1.6**
	comp=Z,64nm,1.2s						
PPBI	**Pangkal Pinang**	**27.05**	**266**	P	**P**	**18 10 12.6**	**+1.2**
NACB	**Ninganchiao**	**27.08**	**336**	*e*P	**P**	**18 10 09.1**	**-2.3**
	comp=Z,49nm,1.1s						
YHNB	**Yeheng**	**27.61**	**336**	*e*P	**P**	**18 10 15.0**	**-1.3**
	comp=Z,33nm,0.9s						
JOW	**Kunigami**	**27.69**	**351**	*e*P	**P**	**18 10 16.3**	**-0.6**
	comp=Z,10nm,1.0s						
HNR	**Honiara**	**28.07**	**109**	P	**P**	**18 10 20.4**	**-0.1**
HNR	**Honiara**	**28.07**	**109**	LR	LR	18 20 01.7	
	comp=Z,355nm,20.8s,baz=121,slow=33						
MYKOM	**Kota Tinggi**	**29.39**	**275**	P	**P**	**18 10 33.1**	**+0.8**
KGM	**Kluang**	**29.94**	**275**	P	**P**	**18 10 40.2**	**+3.0**
QIZ	**Qiongzhong**	**30.08**	**312**	P	**P**	**18 10 38.3**	**0.0**
QIZ				S	**S**	**18 15 36.3**	**+2.0**
QIZ				pmax	pmax		
	comp=Z,40nm,1.2s						
QIZ				pmax	pmax		
	comp=Z,100nm,3.9s						
QIZ				LR	LR		
	comp=N,320nm,21.3s						
QIZ				LR	LR		
	comp=Z,370nm,25.1s						
QIZ	**Qiongzhong**	**30.08**	**312**	*e*P	**P**	**18 10 38.0**	**-0.3**
	comp=Z,45nm,1.1s						
EIDS	**Eidsvold**	**30.09**	**146**	*e*P	**P**	**18 10 37.6**	**-0.7**
	comp=Z,260nm,2.6s						
KTGM	**Kuala Trenggan**	**30.55**	**282**	P	P	18 10 49.9	+7.4
KSI	**Kapahiang**	**30.68**	**264**	P	**P**	**18 10 44.1**	**+0.4**
MASI	**Maura Aman, Be**	**30.99**	**265**	P	**P**	**18 10 47.7**	**+1.2**
	comp=Z,352nm,0.9s						
STKA	**Stephens Creek**	**32.10**	**166**	*e*P	**P**	**18 10 55.0**	**-0.9**
	comp=Z,10.0nm,1.1s						
STKA	**Stephens Creek**	**32.10**	**166**	P	**P**	**18 10 55.3**	**-0.6**
	comp=Z,16nm,0.5s,baz=337,slow=9.2,SNR=58						
STKA				LR	LR	18 25 34.4	
	comp=Z,838nm,18.1s,baz=243,slow=39						
BBOO	**Buckleboo**	**32.14**	**175**	*e*P	**P**	**18 10 55.6**	**-0.6**
	comp=Z,2μm,1.4s						
IPM	**Ipoh**	**32.49**	**279**	*e*P	**P**	**18 10 58.8**	**-0.9**
	comp=Z,37nm,0.8s						
IPM				*e*PcP	**PcP**	**18 13 42.9**	**-3.2**
IPM	**Ipoh**	**32.49**	**279**	P	**P**	**18 10 59.7**	**+0.1**
PPI	**Padang Panjang**	**32.75**	**270**	P	P	18 11 08.4	+6.5
KULM	**Kulim**	**32.99**	**281**	*e*P	**P**	**18 11 03.0**	**-0.9**
	comp=Z,30nm,0.9s						
KULM	**Kulim**	**32.99**	**281**	P	**P**	**18 11 03.8**	**-0.1**
CHBT	**CHBT**	**33.34**	**295**	P	**P**	**18 11 07.0**	**+0.1**
SSE	**Sheshan**	**33.53**	**341**	P	**P**	**18 11 08.9**	**+0.5**
SSE				pmax	pmax		
	comp=Z,28nm,0.6s						
SSE				pmax	pmax		
	comp=Z,60nm,4.0s						
SSE				LR	LR		
	comp=N,190nm,24.9s						
SSE				LR	LR		
	comp=E,52nm,25.2s						
SSE				LR	LR		
	comp=Z,210nm,22.2s						
TSI	**Tuntungan**	**34.81**	**277**	P	P	18 11 26.4	+6.6
NJ2	**Nanjing**	**35.20**	**339**	*e*P	**P**	**18 11 24.3**	**+1.5**
NJ2				PP	**PP**	**18 12 44.8**	**+1.5**
NJ2				S	**S**	**18 16 56.0**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,40nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,190nm,4.8s						
NJ2				LR	LR		
	comp=N,240nm,19.9s						
NJ2				LR	LR		
	comp=E,490nm,17.4s						
NJ2				LR	LR		
	comp=Z,270nm,19.5s						
NWAO	**Narrogin (SRO)**	**35.46**	**203**	P	**P**	**18 11 25.9**	**+0.8**
NWAO	**Narrogin (SRO)**	**35.46**	**203**	P	**P**	**18 11 25.9**	**+0.8**
	comp=Z,14nm,0.8s,baz=82,slow=4.1,SNR=5.3						
NWAO				LR	LR	18 26 06.6	
	comp=Z,133nm,18.9s,baz=38,slow=37						
KCSI	**Kotacane, Aceh**	**35.60**	**277**	P	**P**	**18 11 25.0**	**-1.6**
WHN	**Wuhan**	**35.78**	**332**	P	**P**	**18 11 28.8**	**+0.9**
WHN				*e*S	**S**	**18 17 03.6**	**+1.1**
WHN				pmax	pmax		
	comp=Z,96nm,1.2s						
WHN				LR	LR		
	comp=Z,430nm,19.2s						
GYA	**Guiyang**	**37.10**	**318**	P	**P**	**18 11 39.1**	**-0.3**
GYA				PP	**PnPn**	**18 13 05.9**	**+0.7**
GYA				PcP	**PcP**	**18 14 01.0**	**+1.6**
GYA				S	**S**	**18 17 21.3**	**-1.7**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,4.4s						
GYA				LR	LR		
	comp=N,1μm,16.6s						
GYA				LR	LR		
	comp=E,970nm,17.1s						
GYA				LR	LR		
	comp=Z,2μm,16.1s						
MAJO	**Matsushiro**	**37.27**	**7**	*e*P	**P**	**18 11 38.3**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAJO	**Matsushiro**	**37.27**	**7**	*e*P	**P**	**18 11 38.2**	**-2.3**
	comp=Z,8.1nm,0.7s						
MAT	**Matsushiro**	**37.27**	**7**	P	**P**	**18 11 38.6**	**-1.9**
MAT				S	S	18 17 37.4	+12
MJAR	**Matsushiro Arr**	**37.27**	**7**	P	**P**	**18 11 38.2**	**-2.3**
MJAR				PcP	**PcP**	**18 13 59.8**	**+0.3**
MJAR	**Matsushiro Arr**	**37.27**	**7**	P	**P**	**18 11 38.2**	**-2.3**
	comp=Z,5.8nm,0.8s,baz=191,slow=8.8,SNR=26						
MJAR				PcP	**PcP**	**18 13 59.8**	**+0.3**
	comp=Z,4.0nm,0.9s,baz=196,slow=3.8,SNR=7.4						
MJAR				LR	LR	18 24 04.7	
	comp=Z,770nm,21.0s,baz=185,slow=32						
ENH	**Enshi**	**38.10**	**326**	*e*P	**P**	**18 11 46.9**	**-0.8**
	comp=Z,22nm,1.0s						
KSAR	**Wonju Array Be**	**38.18**	**353**	P	**P**	**18 11 48.2**	**0.0**
KSAR				PcP	**PcP**	**18 14 02.5**	**+0.2**
KSRS	**Korea Array**	**38.19**	**353**	P	**P**	**18 11 48.2**	**0.0**
	comp=Z,4.4nm,0.9s,baz=173,slow=10,SNR=24						
KSRS				PcP	**PcP**	**18 14 02.5**	**+0.2**
	comp=Z,3.4nm,1.0s,baz=186,slow=3.3,SNR=8.8						
KSRS				LR	LR	18 27 05.5	
	comp=Z,434nm,18.5s,baz=170,slow=36						
CM31	**Chiang Mai Arr**	**38.60**	**301**	*e*P	**P**	**18 11 51.4**	**-0.6**
	comp=Z,5.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**38.60**	**301**	P	**P**	**18 11 52.0**	**0.0**
CMAR				PcP	**PcP**	**18 14 04.2**	**+0.2**
CMAR	**Chiang Mai Arr**	**38.60**	**301**	P	**P**	**18 11 52.0**	**0.0**
	comp=Z,3.9nm,1.0s,baz=125,slow=7.0,SNR=17						
CMAR				PcP	**PcP**	**18 14 04.2**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=151,slow=1.9,SNR=4.7						
CHTO	**Chiang Mai**	**38.75**	**302**	*e*P	**P**	**18 11 52.8**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	**Chiang Mai**	**38.75**	**302**	*e*P	**P**	**18 11 52.8**	**-0.5**
	comp=Z,12nm,1.0s						
DZM	**Mont Dzumac**	**38.80**	**126**	*e*LR	LR	18 22 38.2	
	comp=Z,491nm,24.1s						
DZM	**Mont Dzumac**	**38.80**	**126**	*e*LR	LR	18 11 25.5	
	comp=Z,134nm,25.2s						
KMI	**Kunming**	**39.00**	**313**	P	**P**	**18 11 55.9**	**+0.4**
KMI				PP	**PnPn**	**18 13 29.1**	**+1.0**
KMI				S	**S**	**18 17 53.4**	**+1.5**
KMI				SS	**SS**	**18 20 40.8**	**-4.3**
KMI				pmax	pmax		
	comp=Z,14nm,1.2s						
KMI				pmax	pmax		
	comp=Z,100nm,4.7s						
KMI				LR	LR		
	comp=N,120nm,23.4s						
KMI				LR	LR		
	comp=E,250nm,17.6s						
KMI				LR	LR		
	comp=Z,250nm,22.2s						
DL2	**Dalian**	**40.73**	**346**	⇓P	**P**	**18 12 10.5**	**+1.1**
DL2				PP	**PnPn**	**18 13 46.8**	**-1.4**
DL2				PcP	**PcP**	**18 14 11.1**	**+0.8**
DL2				*e*S	**S**	**18 18 19.0**	**+1.9**
DL2				pmax	pmax		
	comp=Z,51nm,0.9s						
DL2				pmax	pmax		
	comp=Z,110nm,6.8s						
DL2				LR	LR		
	comp=N,250nm,18.6s						
DL2				LR	LR		
	comp=E,160nm,18.0s						
DL2				LR	LR		
	comp=Z,290nm,17.6s						
XAN	**Xi'an**	**41.30**	**329**	P	**P**	**18 12 13.8**	**-0.5**
XAN				S	**S**	**18 18 24.8**	**-1.1**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,30nm,5.6s						
XAN				LR	LR		
	comp=N,120nm,19.4s						
XAN				LR	LR		
	comp=E,32nm,15.3s						
CD2	**Chengdu**	**41.98**	**321**	P	**P**	**18 12 21.0**	**+1.1**
CD2				PP	**PnPn**	**18 14 02.1**	**-0.9**
CD2				PcP	**PcP**	**18 14 15.9**	**+1.2**
CD2				PcS	**PcS**	**18 18 06.4**	**-0.1**
CD2				S	**S**	**18 18 37.9**	**+1.9**
CD2				SS	**SS**	**18 21 40.5**	**-3.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,320nm,5.6s						
CD2				LR	LR		
	comp=N,190nm,15.2s						
CD2				LR	LR		
	comp=E,490nm,14.2s						
CD2				LR	LR		
	comp=Z,490nm,14.2s						
SNY	**Shenyang**	**43.13**	**350**	⇓P	**P**	**18 12 29.3**	**+0.4**
SNY				S	**S**	**18 18 53.6**	**+1.2**
SNY				pmax	pmax		
	comp=Z,19nm,1.1s						
SNY				pmax	pmax		
	comp=Z,120nm,4.3s						
SNY				LR	LR		
	comp=N,420nm,21.8s						
SNY				LR	LR		
	comp=E,200nm,19.9s						
SNY				LR	LR		
	comp=Z,440nm,22.4s						
BJT	**Baijiatuao**	**43.32**	**341**	*e*P	**P**	**18 12 30.8**	**+0.3**
	comp=Z,184nm,1.1s						
BJI	**Beijing**	**43.34**	**341**	P	**P**	**18 12 31.3**	**+0.7**
BJI				S	**S**	**18 18 58.9**	**+3.4**
BJI				pmax	pmax		
	comp=Z,140nm,0.9s						
BJI				pmax	pmax		
	comp=Z,230nm,3.5s						
BJI				LR	LR		
	comp=N,160nm,23.9s						
BJI				LR	LR		
	comp=E,91nm,20.8s						
BJI				LR	LR		
	comp=Z,200nm,24.6s						
TAU	**Tasmania Unive**	**43.98**	**165**	*e*P	**P**	**18 12 35.5**	**-0.3**
TAU				pmax	pmax		
	comp=Z,38nm,1.0s						
TAU	**Tasmania Unive**	**43.98**	**165**	*e*P	**P**	**18 12 35.5**	**-0.3**
	comp=Z,38nm,1.0s						
USRK	**Ussuriysk Arra**	**44.63**	**359**	P	**P**	**18 12 40.8**	**-0.2**
	comp=Z,8.1nm,0.9s,baz=177,slow=7.0,SNR=12						
USRK				LR	LR	18 30 23.0	
	comp=Z,340nm,18.4s,baz=156,slow=35						
CN2	**Changchun**	**44.76**	**352**	*e*P	**P**	**18 12 41.8**	**-0.2**
CN2				*e*S	**S**	**18 19 20.6**	**+4.5**
CN2				SS	**ScS**	**18 22 33.3**	**-2.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,19.0s						
CN2				LR	LR		
	comp=E,200nm,19.0s						
CN2				LR	LR		
	comp=Z,400nm,23.0s						
MDJ	**Mudanjiang**	**45.15**	**356**	P	**P**	**18 12 45.0**	**-0.1**
MDJ				S	**S**	**18 19 23.8**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,16nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,100nm,9.8s						
MDJ				LR	LR		
	comp=N,170nm,33.0s						
MDJ				LR	LR		
	comp=Z,180nm,33.0s						
MDJ	**Mudanjiang**	**45.15**	**356**	*e*P	**P**	**18 12 44.7**	**-0.4**
	comp=Z,13nm,1.0s						
LZH	**Lanzhou**	**45.57**	**326**	*e*P	**P**	**18 12 49.9**	**+1.1**
LZH				pP	**pP**	**18 13 00.8**	**+0.3**
LZH				PcP	**PcP**	**18 14 25.3**	**-1.6**
LZH				PP	**PP**	**18 14 36.6**	**+0.5**
LZH				*e*S	**S**	**18 19 29.5**	**+1.0**
LZH				SS	**SS**	**18 22 52.3**	**-0.8**
LZH				pmax	pmax		
	comp=Z,54nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,5.5s						
LZH				LR	LR		
	comp=N,1μm,11.0s						
LZH				LR	LR		
	comp=E,1μm,15.6s						
LZH				LR	LR		
	comp=Z,1μm,16.3s						
HHC	**Hu-ho-hao-te**	**45.70**	**337**	⇓P	**P**	**18 12 50.8**	**+1.1**
HHC				PcP	**Pc

comp=Z,15nm,0.8s
LSA Lhasa 50.12 311 *e*P P 18 13 24.7 +0.2
comp=Z,15nm,0.8s
GTA Gaotai 50.18 326 P P 18 13 24.9 +0.5
GTA PcP **PcP** 18 14 43.4 +0.1
GTA PP **PP** 18 15 21.6 +1.6
GTA S **S** 18 20 35.6 +2.0
GTA SS **SS** 18 24 07.0 -0.5
GTA pmax pmax
comp=Z,21nm,1.6s
GTA pmax pmax
comp=Z,200nm,5.5s
GTA LR LR
comp=N,110nm,19.0s
GTA LR LR
comp=E,110nm,17.6s
GTA LR LR
comp=Z,160nm,18.5s
HIA Hailar 51.02 349 *e*P P 18 13 28.6 -1.8
comp=Z,12nm,0.9s
TAPN Taplejung 51.75 306 *e*P P 18 13 36.0 -0.6
comp=Z,37nm,1.1s
ODAN Odare 51.80 305 *e*P P 18 13 36.4 -0.5
comp=Z,46nm,0.8s
RAMN Ramite 52.48 305 *e*P P 18 13 41.2 -0.8
comp=Z,62nm,0.9s
ULN Ulaanbaatar 53.36 338 *e*P P 18 13 48.3 +0.2
comp=Z,20nm,0.9s
ULN Ulaanbaatar 53.36 338 P P 18 13 49.3 +1.3
SNR=18
GUN Gumba 53.46 306 *e*P P 18 13 48.8 -0.5
comp=Z,29nm,0.7s
SONM Songino Array 53.58 338 P P 18 13 49.9 +0.3
SONM PcP **PcP** 18 14 55.7 -0.2
SONM Songino Array 53.58 338 P P 18 13 49.9 +0.3
comp=Z,11nm,1.0s,baz=149,slow=8.3,SNR=23
SONM PcP **PcP** 18 14 55.7 -0.2
comp=Z,5.1nm,0.8s,baz=153,slow=4.0,SNR=5.3
SONM LR LR 18 35 48.9
comp=Z,207nm,19.5s,baz=333,slow=35
PKI Pulchoki 53.70 305 *e*P P 18 13 50.1 -1.0
PKIN Phulchoki 53.72 305 *e*P P 18 13 49.9 -1.2
KKN Kakani 53.89 306 *e*P P 18 13 51.7 -0.7
comp=Z,26nm,0.9s
DMN Daman 53.97 305 *e*P P 18 13 52.3 -0.6
comp=Z,35nm,0.9s
RPZ Rata Peaks 54.59 147 P P 18 13 57.6 +0.7
RPZ Rata Peaks 54.59 147 P P 18 13 57.6 +0.7
comp=Z,19nm,0.6s,baz=27,slow=11,SNR=9.5
KOLN Koldanda 55.26 305 *e*P P 18 14 01.8 -0.5
comp=Z,40nm,0.7s
DANN Dangsing 55.35 306 *e*P P 18 14 02.6 -0.4
comp=Z,46nm,0.7s
PYUN Piuthan 55.88 305 *e*P P 18 14 06.5 -0.2
comp=Z,101nm,1.0s
ZAK Zakamensk 56.85 338⇓ *i*P P 18 14 13.5 +0.4
ZAK *e* 18 14 29.6
ZAK *e* 18 15 07.7
ZAK pmax pmax
comp=Z,11nm,1.4s
PEA0B Petropavlovsk- 57.33 17 *e*P P 18 14 16.3 +0.1
PETK Petropavlovsk- 57.33 17 P P 18 14 16.8 +0.5
PETK 18 15 09.8
PETK pmax pmax
comp=Z,27nm,0.9s
PETK MLR MLR
comp=Z,127nm,21.3s
PETK Petropavlovsk- 57.33 17 P P 18 14 16.8 +0.5
PETK PcP **PcP** 18 15 09.8 -0.2
PETK Petropavlovsk- 57.33 17 P P 18 14 16.8 +0.5
comp=Z,27nm,0.9s,baz=190,slow=5.9,SNR=32
PETK PcP **PcP** 18 15 09.8 -0.2
comp=Z,3.9nm,0.9s,baz=188,slow=4.2,SNR=4.1
PETK LR LR 18 34 42.9
comp=Z,127nm,21.3s,baz=208,slow=32
PET Petropavlovsk 57.55 18 *e*P P 18 14 18.1 +0.3
PET *e*S **S** 18 22 12.0 -0.5
PET pmax pmax
comp=Z,51nm,1.3s
CLNS Chul'man 57.66 355 *e*P P 18 14 19.1 +0.5
CLNS pmax pmax
comp=Z,16nm,1.2s
CLNS pmax pmax
comp=E,6.0nm,1.3s
CLNS pmax pmax
comp=N,10.0nm,1.3s
TLY Talaya 57.76 339 *e*P P 18 14 20.5 +1.1
TLY *e*S S 18 22 04.6 -11
TLY pmax pmax
comp=Z,11nm,0.9s
TLY MLR MLR
comp=Z,143nm,21.0s
IRK Irkutsk 58.00 340 *e*P P 18 14 21.4 +0.4
IRK pmax pmax
comp=Z,53nm,1.6s
MOY Mondy 58.75 337 *e*P P 18 14 27.4 +1.0
MOY pmax pmax
comp=Z,57nm,1.5s
WMQ Urumqi 59.98 323 P P 18 14 36.0 +1.0
WMQ PcP **PcP** 18 15 21.6 +0.7
WMQ PP **PP** 18 16 50.3 +2.6
WMQ PcS **PcS** 18 19 22.4 -0.7
WMQ S **S** 18 22 44.5 -0.2
WMQ ScS **ScS** 18 24 20.1 -2.2
WMQ pmax pmax
comp=Z,81nm,1.0s
WMQ pmax pmax
comp=Z,220nm,3.6s
WMQ LR LR
comp=N,100nm,8.0s
WMQ LR LR
comp=E,100nm,9.2s
WMQ LR LR
comp=Z,120nm,23.4s
YAK Yakutsk 62.54 358 *i*P P 18 14 51.8 0.0
YAK pmax pmax
comp=N,23nm,1.2s
YAK pmax pmax
comp=Z,48nm,0.8s
FX1 Attu Island--F 62.90 26 *e*P P 18 14 54.4 0.0
MK31 Makanchi Array 64.80 324⇓ *i*P P 18 15 07.6 +0.5
MK31 Makanchi Array 64.80 324⇓ *i*P P 18 15 07.6 +0.5
MKAR Makanchi Array 64.80 324 *i*P P 18 15 07.8 +0.7
MKAR pmax pmax
comp=Z,39nm,0.7s
MKAR Makanchi Array 64.80 324 *e*P P 18 15 07.7 +0.7
MKAR Makanchi Array 64.80 324 P P 18 15 07.8 +0.7
comp=Z,39nm,0.7s,baz=113,slow=8.0,SNR=263
SEY Seymchan 65.02 10⇑ *i*P P 18 15 08.7 +0.6
KSH Kashi 65.64 314 P P 18 15 14.3 +1.4
KSH *e*PcP **PcP** 18 15 45.9 +1.8
KSH *e*PP **PP** 18 17 40.1 +2.4
KSH *e*PcS 18 19 48.4
KSH *e*S **S** 18 23 55.1 -0.8
KSH *e*ScS **SKSac** 18 25 03.3 -2.1
KSH pmax pmax
comp=Z,39nm,1.1s
KSH LR LR
comp=N,250nm,7.2s
KSH LR LR
comp=E,320nm,6.0s
KSH LR LR
comp=Z,250nm,6.3s
DRV Dumont d'Urvil 66.09 177 S S 18 23 55.0 -5.0
DRV SS SS 18 29 06.0 +50
DRV L L 18 32 00.0
DRV R 18 36 00.0
KZA Kyzart 67.14 317 P P 18 15 24.0 +1.2
SNR=25
TKM2 Tokmak 2 67.25 318 *i*P P 18 15 23.8 +0.7
TKM2 Tokmak 2 67.25 318⇓ *i*P P 18 15 23.2 +0.1
comp=Z,13nm,0.8s
TKM2 Tokmak 2 67.25 318 P P 18 15 23.9 +0.7
SNR=19
ZAA0 Zalesovo Array 67.40 331⇓ *i*P P 18 15 22.4 -1.2
ZALV Zalesovo Beam 67.40 331 *i*P P 18 15 23.2 -0.4
ZALV pmax pmax
comp=Z,22nm,0.8s
ZALV Zalesovo Beam 67.40 331 P P 18 15 23.1 -0.5
ZALV ⇑ *e* 18 43 49.9
ZALV Zalesovo Beam 67.40 331 P P 18 15 23.1 -0.5
comp=Z,22nm,0.8s,baz=117,slow=5.9,SNR=115
ZALV PKP2bc 18 43 49.9
comp=Z,1.2nm,0.9s,baz=298,slow=3.2,SNR=5.4
ZALV LR LR 18 46 42.9

comp=Z,92nm,21.7s,baz=86,slow=38
CASY Casey 67.47 190 *e*P P 18 15 23.9 +0.1
comp=Z,22nm,1.1s
CHMS Chumysh 67.84 318 P P 18 15 27.0 +0.2
SNR=8.8
AAK Ala-Archa 67.88 317 *i*P P 18 15 27.8 +0.7
AAK pmax pmax
comp=Z,22nm,1.2s
AAK Ala-Archa 67.88 317 *e*P P 18 15 27.0 -0.1
comp=Z,5.9nm,1.5s
AAK Ala-Archa 67.88 317 P P 18 15 28.1 +1.0
SNR=7.6
AAK Ala-Archa 67.88 317 P P 18 15 27.9 +0.7
SNR=8.3
AAK Ala-Archa 67.88 317 P P 18 15 27.5 +0.4
comp=Z,48nm,1.3s,SNR=5.2
USP Ospenovka 68.12 318 P P 18 15 29.1 +0.6
SNR=36
AML Almayashu 68.23 316 P P 18 15 30.6 +0.9
SNR=34
EKS2 Erkin-Say 68.38 317 *e*P P 18 15 30.7 +0.5
EKS2 pmax pmax
comp=Z,21nm,0.9s
EKS2 Erkin-Say 68.38 317 *e*P P 18 15 30.7 +0.5
comp=Z,22nm,0.9s
EKS2 Erkin-Say 68.38 317 P P 18 15 31.2 +1.0
SNR=26
NVS Novosibirsk 68.67 332⇓ *i*P P 18 15 30.3 -1.3
NVS pmax pmax
comp=E,35nm,1.2s
NVS pmax pmax
comp=Z,73nm,1.2s
NVS pmax pmax
comp=N,30nm,1.3s
KURK Kurchatov 68.86 326 *d i*P P 18 15 33.3 +0.4
KURK Kurchatov 68.86 326⇓ *i*P P 18 15 33.0 +0.1
comp=N,83nm,0.9s
KURK Kurchatov 68.86 326 P P 18 15 33.5 +0.7
SNR=45
KURK Kurchatov 68.86 326 P P 18 15 33.2 +0.4
comp=N,572nm,0.8s,SNR=84
KBL Kabul 69.24 307 *e*P P 18 15 34.9 -1.0
KBL pmax pmax
comp=Z,52nm,2.0s
KBL Kabul 69.24 307 *e*P P 18 15 34.9 -1.0
comp=Z,52nm,2.0s
KIP Kipapa 70.58 67⇓ *i*P P 18 15 44.9 +0.9
KIP pmax pmax
comp=Z,59nm,0.8s
KIP Kipapa 70.58 67 *e*P P 18 15 45.9 +1.9
comp=Z,70nm,0.9s
KKAR Karatay Array 70.78 316⇓ *i*P P 18 15 44.7 -0.1
KKAR Karatay Array 70.78 316⇓ *i*P P 18 15 44.7 -0.1
BILL Bilibino 72.24 12⇑ *e*P P 18 15 53.1 0.0
BILL *e* 18 18 30.6
BILL *e*S S 18 25 06.4 -6.3
BILL pmax pmax
comp=Z,6.0nm,1.3s
UNV Unalaska Valle 73.47 32 *e*P P 18 16 00.7 0.0
comp=Z,63nm,1.2s
BRVK Borovoye 74.53 326 *d i*P P 18 16 07.2 +0.3
BRVK pmax pmax
comp=Z,97nm,1.2s
BRVK Borovoye 74.53 326⇓ *i*P P 18 16 07.0 +0.1
comp=Z,56nm,0.8s
BRVK Borovoye 74.53 326 P P 18 16 07.5 +0.5
SNR=24
BRVK Borovoye 74.53 326 P P 18 16 07.4 +0.5
comp=Z,449nm,0.9s,SNR=28
HOQ Hoqain 77.28 294 P P 18 16 23.9 +0.7
SNR=6.9
PPT Papeete 77.68 108 LR LR 18 47 46.6
comp=Z,258nm,18.8s,baz=340,slow=34
PPT2 Papeete2 77.68 108 *e*LR LR 18 40 38.4
comp=Z,162nm,23.5s
TBI Tubuai 78.18 114 *e*LR LR 18 40 50.5
comp=Z,202nm,31.5s
TBI Tubuai 78.18 114 *e*LR LR 18 15 43.6
comp=Z,157nm,26.2s
TBI *e*T T 18 54 15.0
comp=Z,17nm,0.3s
VNDA Vanda 78.39 174 *e*P P 18 16 27.8 -0.5
comp=Z,111nm,1.0s
VNDA Vanda 78.39 174 P P 18 16 28.8 +0.5
comp=Z,6.7nm,0.9s,baz=319,slow=6.2,SNR=18
VNDA LR LR 18 51 41.9
comp=Z,208nm,19.3s,baz=353,slow=36
HATD Hatta, Dubai 78.49 295 P P 18 16 29.9 0.0
SNR=7.5
ABKT Ailbek 78.60 309 P P 18 16 31.0 +0.7
comp=Z,113nm,1.3s,SNR=12
PMOR Pomariorio Ree 79.17 105 *e*P P 18 16 34.7 +0.9
comp=Z,41nm,1.2s
SBA Scott Base 79.23 173 *e*P P 18 16 33.9 +1.0
SBA pmax pmax
comp=Z,100nm,2.1s
SBA Scott Base 79.23 173 *e*P P 18 16 33.9 +1.0
comp=Z,100nm,2.1s
ABKAR Akbulak array 79.56 320⇓ *i*P P 18 16 34.8 -0.4
SVE Sverdlovsk 81.01 328⇑ *e*P P 18 16 42.6 -0.3
SVE pmax pmax
comp=Z,45nm,1.4s
MAW Mawson 82.00 201 P P 18 16 48.6 +0.7
MAW Mawson 82.00 201 P P 18 16 48.6 +0.7
comp=Z,8.1nm,1.0s,baz=55,slow=8.6,SNR=6.7
MAW LR LR 18 48 44.6
comp=Z,134nm,21.4s,baz=44,slow=32
ARU Arti 82.03 327 *d i*P P 18 16 47.8 -0.5
ARU 18 19 54.4
ARU S **S** 18 27 01.3 +1.8
ARU pmax pmax
comp=Z,17nm,1.0s
ARU Arti 82.03 327 P P 18 16 48.5 +0.2
comp=Z,102nm,1.5s,SNR=9.1
PPLA Purkeypile 83.59 26 *e*P P 18 16 57.2 +0.7
comp=Z,26nm,1.1s
SOKR Solikamsk 83.64 330 *d i*P P 18 16 56.6 +0.1
SOKR pmax pmax
comp=Z,50nm,1.9s
TRF Thorofare Moun 84.56 26 *e*P P 18 17 00.2 -1.2
comp=Z,38nm,1.2s
PMR Palmer 84.70 28 *e*P P 18 17 00.9 -1.0
PMR Palmer 84.70 28 *e*P P 18 17 00.8 -1.0
SML Sawmill 85.12 28 *e*P P 18 17 04.5 +0.4
SML pmax pmax
comp=Z,32nm,1.3s
SML Sawmill 85.12 28 *e*P P 18 17 04.5 +0.4
comp=Z,32nm,1.3s
MCK McKinley 85.21 26 *e*P P 18 17 03.7 -0.8
MCK pmax pmax
comp=Z,97nm,1.4s
MCK McKinley 85.21 26 *e*P P 18 17 03.7 -0.8
comp=Z,97nm,1.4s
COLD Coldfoot 85.41 22 *e*P P 18 17 06.0 +0.6
comp=Z,11nm,1.1s
COLA College 85.88 25 *e*P P 18 17 07.4 -0.3
COLA pmax pmax
comp=Z,18nm,0.7s
COLA College 85.88 25 *e*P P 18 17 07.4 -0.3
comp=Z,18nm,0.7s
DIV Divide 86.22 29 *e*P P 18 17 10.1 +0.5
comp=Z,90nm,1.0s
ILAR Eielson Array 86.27 25 P P 18 17 08.9 -0.8
ILAR Eielson Array 86.27 25 P P 18 17 08.9 -0.8
comp=Z,8.0nm,0.6s,baz=254,slow=4.9,SNR=155
ILAR LR LR 18 56 38.7
comp=Z,57nm,19.1s,baz=142,slow=36
RDF Al-Radifah 86.44 299 *e*P P 18 17 11.1 -0.2
RDF AMb AMB 18 17 12.5
comp=Z,26nm,1.0s
PAX Paxson 86.62 27 *e*P P 18 17 11.9 +0.3
PAX pmax pmax
comp=Z,80nm,1.6s
PAX Paxson 86.62 27 *e*P P 18 17 11.9 +0.3
comp=Z,80nm,1.6s
MIB Mutribah 86.67 300 *e*P P 18 17 11.7 -0.7
MIB AMb AMB 18 17 13.2
comp=Z,44nm,1.1s
NAY Al-Naaiem 86.72 299 *e*P P 18 17 11.7 -1.0
NAY AMb AMB 18 17 13.2
comp=Z,27nm,1.2s
RST Umm Al-Ruwaisa 86.95 299 *e*P P 18 17 12.8 -1.0
RST AMb AMB 18 17 14.1
comp=Z,287nm,1.0s
DOT Dot Lake 87.34 26 *e*P P 18 17 14.7 -0.3
comp=Z,71nm,1.3s
RAYN Ar Rayn 88.09 293 P P 18 17 19.6 +0.2

comp=Z,85nm,1.2s,SNR=7.3
RAYN Ar Rayn 88.09 293 *e*P P 18 17 18.1 -1.3
EGAK Eagle 88.71 25 *e*P P 18 17 21.4 0.0
comp=Z,8.8nm,1.2s
QSPA South Pole Qui 89.31 180 *e*P P 18 17 24.1 -0.2
comp=Z,19nm,1.0s
QSPA South Pole Qui 89.31 180 P P 18 17 24.4 0.0
comp=Z,15nm,1.0s,baz=322,slow=1.8,SNR=38
KIV Kislovodsk 90.76 314⇓ *e*P P 18 17 32.5 +0.9
KIV *e*S **SKKSac** 18 28 12.6 -2.4
KIV *e*SS SS 18 34 41.1 +13
KIV pmax pmax
comp=Z,4.0nm,1.0s
KLMR Klimovskoe 92.31 331 *e*P P 18 17 34.0 -4.3
KLMR pmax pmax
comp=Z,25nm,1.5s
DIB Dawson Inlet, 93.12 37 T T 20 01 16.8
OBN Obninsk 94.28 325⇑ *e*P P 18 17 44.5 -2.9
OBN *e*SS SS 18 35 30.2 +13
OBN pmax pmax
comp=Z,8.0nm,1.2s
KMBO Kilima Mbogo 95.89 269 LR LR 18 56 04.9
comp=Z,112nm,19.4s,baz=94,slow=32
KBS Kingsbay 96.36 350 *e*P P 18 17 56.9 +0.4
KBS pmax pmax
comp=Z,17nm,1.4s
ARCES ARCESS Array B 96.70 340 P P 18 17 56.9 -1.3
ARCES ARCESS Array B 96.70 340 P P 18 17 56.9 -1.3
comp=Z,5.1nm,0.6s,baz=86,slow=6.5,SNR=56
ARCES LR LR 19 08 09.4
comp=Z,203nm,19.0s,baz=77,slow=40
ARE0 ARCESS Array S 96.70 340 *e*P P 18 17 56.6 -1.6
MMAI Mount Meron Ar 96.84 303 LR LR 19 04 10.1
comp=Z,38nm,20.2s,baz=110,slow=37
EIL Elat 97.44 300 LR LR 19 05 47.6
comp=Z,62nm,19.0s,baz=278,slow=38
BRTR Keskin Array B 97.72 310 P P 18 18 01.8 -1.9
BRTR Keskin Array B 97.72 310 P P 18 18 01.8 -1.9
comp=Z,0.8nm,0.8s,baz=117,slow=4.7,SNR=6.5
FINES FINESS Array B 98.66 332 P P 18 18 05.5 -1.7
FINES FINESS Array B 98.66 332 P P 18 18 05.5 -1.7
comp=Z,1.2nm,0.8s,baz=103,slow=2.5,SNR=7.0
FINES LR LR 19 06 17.8
comp=Z,183nm,19.9s,baz=90,slow=38
YKA Yellowknife Ar 100.68 26 P Pdif 18 18 15.8 -0.4
YKA PKKPbc **PKKPbc** 18 34 29.4 -3.2
YKA Yellowknife Ar 100.68 26 P Pdif 18 18 15.8 -0.4
comp=Z,3.0nm,1.0s,baz=292,slow=4.7,SNR=21
YKA PKKPbc **PKKPbc** 18 34 29.4 -3.2
comp=Z,0.6nm,1.0s,baz=87,slow=2.3,SNR=5.1
BUR08 Bucovina Ar. S 102.49 319 *e*Pdif **Pdif** 18 18 21.5 -3.3
NVAR Mina Array Bea 104.86 50 Pdif **Pdif** 18 18 37.0 +1.3
NVAR Mina Array Bea 104.86 50 Pdiff **Pdif** 18 18 37.0 +1.3
comp=Z,1.5nm,1.0s,baz=256,slow=4.8,SNR=6.9
NOA NORSAR Array B 105.47 335 Pdif **Pdif** 18 18 35.5 -2.1
NOA NORSAR Array B 105.47 335 Pdiff **Pdif** 18 18 35.5 -2.1
comp=Z,0.5nm,0.7s,baz=65,slow=4.5,SNR=3.0
PDAR Pinedale Array 110.17 44 PKKPab PKKPab 18 34 15.5 +1.9
PDAR Pinedale Array 110.17 44 PKKPab PKKPab 18 34 15.5 +1.9
comp=Z,0.7nm,0.7s,baz=116,slow=6.1,SNR=3.2
U21A Nageezi 113.56 50 P 18 23 06.9
baz=114
S22A 4UR Ranch, Cre 113.77 49 P 18 23 07.8
baz=114
X21A Alamocita Cree 114.05 52 P PKPdf 18 23 09.2 +1.1
baz=114
MEZF Maizieres J'vi 114.73 325 *e*PKIKP PKPdf 18 23 09.3 +0.6
comp=Z,3.7nm,0.5s
MEZF Maizieres J'vi 114.73 325 *e*PKPdf PKPdf 18 23 09.3 +0.6
LPG La Plagne 115.15 321 *e*PKIKP **PKPdf** 18 23 09.8 -0.2
comp=Z,9.3nm,0.9s
LPG La Plagne 115.15 321 *e*PKIKP **PKPdf** 18 23 09.8 -0.2
LPG La Plagne 115.15 321 *e*PKPdf **PKPdf** 18 23 09.8 -0.2
S25A Robets Cordova 115.59 48 P **PKPdf** 18 23 11.6 +0.6
baz=116
T25A Trinidad 115.79 49 P **PKPdf** 18 23 11.6 +0.2
baz=116
Y24A Capitan 116.06 52 P **PKPdf** 18 23 12.5 +0.5
baz=116
V25A Rancho No Teng 116.08 50 P **PKPdf** 18 23 11.6 -0.4
baz=116
R26A Arlington 116.09 47 P **PKPdf** 18 23 12.3 +0.5
baz=116
Y25A Mesa, Roswell 116.65 52 P **PKPdf** 18 23 13.1 0.0
baz=117
324A Moseley Ranch, 116.77 55 P **PKPdf** 18 23 13.2 -0.2
baz=117
T28A Walsh 117.51 48 P **PKPdf** 18 23 14.1 -0.5
baz=117
226B Tecolote Peak, 117.65 54 P **PKPdf** 18 23 14.9 0.0
baz=118
Z27A Tatum 118.01 52 P **PKPdf** 18 23 15.6 -0.1
baz=118
526A Mary Lane Ranc 118.32 56 P **PKPdf** 18 23 16.4 0.0
baz=118
626A Big Bend Ranch 118.44 56 P **PKPdf** 18 23 15.8 -0.7
baz=118
427A Hayter Ranch, 118.65 55 P **PKPdf** 18 23 16.6 -0.3
baz=119
527A Woodward Ranch 118.69 56 P **PKPdf** 18 23 17.5 +0.4
baz=119
TXAR Lajitas Array 118.89 57 PKP **PKPdf** 18 23 17.9 +0.4
TXAR PKKPbc **PKKPbc** 18 33 32.6 -0.3
TXAR Lajitas Array 118.89 57 PKP **PKPdf** 18 23 17.9 +0.4
comp=Z,0.2nm,0.3s,baz=176,slow=2.0,SNR=5.1
TXAR PKKPbc **PKKPbc** 18 33 32.6 -0.3
comp=Z,0.3nm,0.6s,baz=93,slow=5.6,SNR=3.9
328A Wristen Ranch, 118.97 54 P **PKPdf** 18 23 18.1 +0.6
baz=119
Y29A Porterfield Fa 119.03 51 P **PKPdf** 18 23 18.4 +0.8
baz=119
627A Terlingua Ranc 119.08 56 P **PKPdf** 18 23 18.0 +0.2
baz=119
129A Stewart Farms, 119.31 52 P **PKPdf** 18 23 18.0 -0.1
baz=119
628A Black Gap, Mar 119.49 56 P **PKPdf** 18 23 18.6 +0.1
baz=119
329A Wagon Wheel Ra 119.60 54 P **PKPdf** 18 23 19.2 +0.5
baz=120
Z30A Sanderson Ranc 119.66 51 P **PKPdf** 18 23 18.6 -0.2
baz=120
429A Davenport Ranc 119.95 55 P **PKPdf** 18 23 19.6 +0.2
baz=120
X31A McDonald Ranch 120.05 50 P **PKPdf** 18 23 19.9 +0.5
baz=120
430A Baggett Ranch, 120.44 54 P **PKPdf** 18 23 20.5 +0.2
baz=120
530A J-C Ranch, Com 120.56 55 P **PKPdf** 18 23 21.2 +0.6
baz=120
231A Bronte 120.78 53 P **PKPdf** 18 23 21.5 +0.5
baz=121
531A Rocksprings 121.20 55 P **PKPdf** 18 23 22.3 +0.5
baz=121
631A Perdido Creek 121.43 56 P **PKPdf** 18 23 22.7 +0.5
baz=121
332A Millersview 121.43 53 P **PKPdf** 18 23 22.9 +0.7
baz=121
JCT Junction City 121.70 54 P **PKPdf** 18 23 23.3 +0.6
baz=122
532A Rocksprings 121.74 55 P **PKPdf** 18 23 23.3 +0.5
baz=122
632A Uvalde 122.05 55 P **PKPdf** 18 23 24.1 +0.7
baz=122
ESDC Sonseca Array 124.91 320 PKP **PKPdf** 18 23 28.0 -0.7
ESDC Sonseca Array 124.91 320 PKP **PKPdf** 18 23 28.0 -0.7
comp=Z,0.1nm,0.3s,baz=14,slow=4.0,SNR=4.1
EVO Evora 128.14 321⇑ *i*PKIKP **PKPdf** 18 23 39.0 +4.2
EVOP Sao Brissos 128.21 321⇑ *i*PKIKP **PKPdf** 18 23 39.0 +4.1
EVOP Sao Brissos 128.21 321⇑ *i*PKPdf **PKPdf** 18 23 39.0 +4.1
TOA0 Torodi Ar. Sit 130.34 287 *e*PKPdf **PKPdf** 18 23 38.3 -1.2
TORD Torodi Ar. Bea 130.34 287 PKP **PKPdf** 18 23 39.0 -0.6
TORD Torodi Ar. Bea 130.34 287 PKP **PKPdf** 18 23 39.0 -0.6
comp=Z,2.5nm,0.8s,baz=64,slow=2.1,SNR=16
LRAL Lakeview Retre 130.38 45 *e*PKPdf **PKPdf** 18 23 39.6 +0.5
PLCA Paso Flores 133.53 155 PKP **PKPdf** 18 23 45.4 +0.3
PLCA Paso Flores 133.53 155 PKP **PKPdf** 18 23 45.4 +0.3
comp=Z,5.8nm,0.8s,baz=160,slow=4.5,SNR=9.6
LCO Las Campanas 142.74 144 *e*PKPdf **PKPdf** 18 23 59.6 -2.9
NNA Nana 147.69 114 *e*PKPdf **PKPdf** 18 24 11.4 +0.4
OTAV Otavalo 148.40 91 *e*PKPdf **PKPdf** 18 24 12.9 0.0
LVC Limon Verde 148.45 138 *e*PKPdf **PKPdf** 18 24 12.8 +0.3
LVC *e*PKPbc **PKiKP** 18 24 17.8 +0.3
CPUP Villa Florida 151.36 160 PKP **PKPdf** 18 24 16.6 0.0
CPUP PKPbc **PKPbc** 18 24 23.1 +0.5
CPUP Villa Florida 151.36 160 PKP **PKPdf** 18 24 16.6 0.0
comp=Z,1.2nm,0.6s,baz=59,slow=3.3,SNR=4.7

CPUP PKPbc **PKPbc** **18 24 23.1 +0.5**
comp=Z,27nm,0.8s,baz=188,slow=1.4,SNR=62
ROSC El Rosal 152.24 81 PKPbc **PKPbc** **18 24 26.1 +0.6**
ROSC El Rosal 152.24 81 PKPbc **PKPbc** **18 24 26.1 +0.6**
comp=Z,16nm,0.8s,baz=258,slow=21,SNR=6.6
LPAZ La Paz 153.10 130 PKP **PKPdf** **18 24 21.1 +1.0**
LPAZ *e*PKPdf PKPbc **PiKiP** **18 24 21.6 -6.0**
LPAZ PKPbc **PiKiP** **18 24 28.7 +1.0**
LPAZ *e*PKPbc PKPab 18 24 29.0 -10
LPAZ La Paz 153.10 130 PKP **PKPdf** **18 24 21.1 +1.0**
comp=Z,3.9nm,1.0s,baz=180,slow=1.0,SNR=9.3
LPAZ PKPbc **PiKiP** **18 24 28.7 +1.0**
comp=Z,10nm,0.9s,baz=252,slow=1.1,SNR=21
SAML Samuel 161.16 121 *e*PKPdf **PKPdf** **18 24 30.3 +0.6**
SAML *e*PKPab **PKPab** **18 25 13.3 +0.2**

ISK ***23*** *18:05:50.9,39.78N×27.87E,h6km,MD2.9*
ISCJB ***23*** *18:05:51.4±0.4,39.79N±0.02×27.88E±0.03,h1km±4km, Error ellipse: s-maj=3.5km s-min=3.0km az=160.7*
DDA ***23*** *18:05:51.8,39.75N×27.88E,h7km,MD2.9*
CSEM ***23*** *18:05:51.8±0.1,39.78N×27.86E,h8km,MD2.9, Error ellipse: s-maj=2.3km s-min=1.9km az=59.0*

ISC 23 18:05:51.8±0.8,39.78N±0.02×27.87E±0.02,h9km±6km, n70,σ0§37/96,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.14**	**175**	*e*PG	**Pg**	**18 05 54.2**	**-0.8**
BALB				*e*SG	**Sg**	**18 05 57.6**	**+0.5**
BALB	**Balikesir**	**0.14**	**175**	*e*Pg	**Pg**	**18 05 54.2**	**-0.8**
BALB				*e*Sg	**Sg**	**18 05 57.6**	**+0.5**
BALY	**Balya**	**0.19**	**258**	*i* P	**Pg**	**18 05 56.2**	**+0.3**
BALY				*i* S	**Sg**	**18 05 59.2**	**+0.5**
BALY	**Balya**	**0.19**	**258**	*i* P	**Pg**	**18 05 56.2**	**+0.3**
BALY				*i* S	**Sg**	**18 05 59.2**	**+0.5**
GONE	**Gonen-Balikesi**	**0.30**	**333**	*e*PG	**Pg**	**18 05 57.4**	**-0.4**
GONE				*e*SG	**Sg**	**18 06 02.1**	**+0.3**
GONE	**Gonen-Balikesi**	**0.30**	**333**	*e*Pg	**Pg**	**18 05 57.4**	**-0.4**
GONE				*e*Sg	**Sg**	**18 06 02.1**	**+0.3**
BNT	**Bandirma**	**0.58**	**4**	*e*PG	**Pg**	**18 06 02.6**	**-0.4**
BNT	**Bandirma**	**0.58**	**4**	*e*Pg	**Pg**	**18 06 02.6**	**-0.4**
DST	**Dursunbey**	**0.61**	**107**	*e*PG	**Pg**	**18 06 03.2**	**-0.4**
DST				*e*SG	**Sg**	**18 06 11.9**	**+0.3**
DST	**Dursunbey**	**0.61**	**107**	*e*Pg	**Pg**	**18 06 03.2**	**-0.4**
DST				*e*Sg	**Sg**	**18 06 11.9**	**+0.3**
KCTX	**Karacabey (Bur**	**0.61**	**38**	*e*PG	**Pg**	**18 06 03.2**	**-0.6**
KCTX				*e*SG	**Sg**	**18 06 12.1**	**+0.3**
KCTX	**Karacabey (Bur**	**0.61**	**38**	*e*Pg	**Pg**	**18 06 03.2**	**-0.6**
KCTX				*e*Sg	**Sg**	**18 06 12.1**	**+0.3**
KRBG	**Karabiga-Canak**	**0.75**	**325**	*e*PG	**Pg**	**18 06 05.9**	**-0.4**
KRBG	**Karabiga-Canak**	**0.75**	**325**	*e*Pg	**Pg**	**18 06 05.9**	**-0.4**
MRMT	**Marmara Adasi**	**0.85**	**346**	*e*PG	**Pg**	**18 06 07.9**	**-0.3**
MRMT	**Marmara Adasi**	**0.85**	**346**	*e*Pg	**Pg**	**18 06 07.9**	**-0.3**
AKHS	**Akhisar**	**0.90**	**183**	*i* P	**Pg**	**18 06 09.1**	**-0.1**
AKHS				*i* S	**Sb**	**18 06 21.4**	**-0.3**
AKHS	**Akhisar**	**0.90**	**183**	*i* P	**Pg**	**18 06 09.1**	**-0.1**
AKHS				*i* S	**Sb**	**18 06 21.4**	**-0.3**
MDNY	**Mudanya-Bursa**	**0.98**	**53**	*e*PG	**Pg**	**18 06 10.5**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.98**	**53**	*e*Pg	**Pg**	**18 06 10.5**	**-0.1**
DEMI	**Demirci**	**0.99**	**138**	*i* P	**Pb**	**18 06 11.0**	**-0.2**
DEMI				*i* S	**Sb**	**18 06 24.0**	**-0.3**
DEMI	**Demirci**	**0.99**	**138**	*i* P	**Pb**	**18 06 11.0**	**-0.2**
DEMI				*i* S	**Sb**	**18 06 24.0**	**-0.3**
AYVA	**Ayvalik**	**1.02**	**243**	*i* P	**Pb**	**18 06 11.6**	**-0.1**
AYVA				*i* S	**Sn**	**18 06 26.7**	**0.0**
AYVA	**Ayvalik**	**1.02**	**243**	*i* P	**Pb**	**18 06 11.6**	**-0.1**
AYVA				*i* S	**Sn**	**18 06 26.7**	**0.0**
LPK	**Lapseki**	**1.03**	**305**	*e*PG	**Pg**	**18 06 11.1**	**-0.6**
LPK	**Lapseki**	**1.03**	**305**	*e*Pg	**Pg**	**18 06 11.1**	**-0.6**
ULDT	**Uludag**	**1.04**	**69**	*i* P	**Pb**	**18 06 12.1**	**0.0**
ULDT				*i* S	**Sb**	**18 06 26.2**	**+0.3**
ULDT	**Uludag**	**1.04**	**69**	*i* P	**Pb**	**18 06 12.1**	**0.0**
ULDT				*i* S	**Sb**	**18 06 26.2**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.05**	**330**	*e*PG	**Pg**	**18 06 11.4**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.05**	**330**	*e*Pg	**Pg**	**18 06 11.4**	**-0.6**
SART	**Tekirdag**	**1.05**	**330**	*i* P	**Pn**	**18 06 12.8**	**+0.1**
SART				*i* S	**Sn**	**18 06 27.6**	**+0.1**
SART	**Tekirdag**	**1.05**	**330**	*i* P	**Pn**	**18 06 12.8**	**+0.1**
SART				*i* S	**Sn**	**18 06 27.6**	**+0.1**
ARMT	**Armutlu**	**1.09**	**44**	*e*PN	**Pg**	**18 06 12.3**	**-0.6**
ARMT	**Armutlu**	**1.09**	**44**	*e*Pn	**Pg**	**18 06 12.3**	**-0.6**
EZN	**Ezine**	**1.19**	**273**	*e*PN	**Pb**	**18 06 14.1**	**-0.4**
EZN	**Ezine**	**1.19**	**273**	*e*Pn	**Pb**	**18 06 14.1**	**-0.4**
GELI	**Tayfur-Gelibol**	**1.23**	**300**	*e*PN	**Pn**	**18 06 14.9**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.23**	**300**	*e*Pn	**Pn**	**18 06 14.9**	**-0.3**
TVSB	**Tavsanli**	**1.28**	**104**	*e*PN	**Pn**	**18 06 15.7**	**-0.2**
TVSB	**Tavsanli**	**1.28**	**104**	*e*Pn	**Pn**	**18 06 15.7**	**-0.2**
ERIK	**Erikli-Kesan**	**1.36**	**311**	*e*PN	**Pb**	**18 06 17.2**	**-0.2**
ERIK	**Erikli-Kesan**	**1.36**	**311**	*e*Pn	**Pb**	**18 06 17.3**	**-0.2**
MANT	**Manisa**	**1.40**	**157**	*i* P	**Pg**	**18 06 18.9**	**+0.2**
MANT				*i* S	**Sb**	**18 06 36.0**	**-0.2**
MANT	**Manisa**	**1.40**	**157**	*i* P	**Pg**	**18 06 18.9**	**+0.2**
MANT				*i* S	**Sb**	**18 06 36.0**	**-0.2**
YLV	**Yalova**	**1.40**	**55**	*e*PN	**Pn**	**18 06 17.1**	**-0.4**
YLV	**Yalova**	**1.40**	**55**	*e*Pn	**Pn**	**18 06 17.1**	**-0.4**
KULA	**Kula-Manisa**	**1.41**	**154**	*e*PN	**Pn**	**18 06 17.7**	**0.0**
KULA	**Kula-Manisa**	**1.41**	**154**	*e*Pn	**Pg**	**18 06 17.7**	**0.0**
GDZ	**Gediz**	**1.43**	**118**	*i* P	**Pg**	**18 06 19.0**	**-0.3**
GDZ				*i* S	**Sg**	**18 06 38.1**	**+0.3**
GDZ	**Gediz**	**1.43**	**118**	*i* P	**Pg**	**18 06 19.0**	**-0.3**
GDZ				*i* S	**Sg**	**18 06 38.1**	**+0.3**
ELBA	**Catalca**	**1.43**	**17**	*i* P	**Pg**	**18 06 19.5**	**+0.2**
ELBA				*i* S	**Sg**	**18 06 38.2**	**+0.3**
ELBA	**Catalca**	**1.43**	**17**	*i* P	**Pg**	**18 06 19.5**	**+0.2**
ELBA				*i* S	**Sg**	**18 06 38.2**	**+0.3**
SLVT	**Silivri**	**1.47**	**10**	*e*PN	**Pn**	**18 06 18.7**	**+0.2**
SLVT	**Silivri**	**1.47**	**10**	*e*Pn	**Pn**	**18 06 18.7**	**+0.2**
BLCB	**Balcova**	**1.53**	**205**	*e*PN	**Pn**	**18 06 19.5**	**+0.2**
BLCB	**Balcova**	**1.53**	**205**	*e*Pn	**Pn**	**18 06 19.5**	**+0.2**
CTKS	**Kestanelik-??a**	**1.53**	**18**	*e*PN	**Pn**	**18 06 19.7**	**+0.4**
CTKS	**Kestanelik-??a**	**1.53**	**18**	*e*Pn	**Pn**	**18 06 19.7**	**+0.4**
CAVI	**Cavuskoy**	**1.58**	**74**	*e*PN	**Pn**	**18 06 20.1**	**+0.2**
CAVI	**Cavuskoy**	**1.58**	**74**	*e*Pn	**Pn**	**18 06 20.2**	**+0.2**
ADVT	**Abdulvahap**	**1.58**	**65**	*e*PN	**Pn**	**18 06 20.2**	**+0.3**
ADVT	**Abdulvahap**	**1.58**	**65**	*e*Pn	**Pn**	**18 06 20.2**	**+0.3**
ALT	**Altintas**	**1.88**	**112**	*e*PN	**Pn**	**18 06 24.5**	**+0.3**
ALT	**Altintas**	**1.88**	**112**	*e*Pn	**Pn**	**18 06 24.5**	**+0.3**
SILT	**Sile**	**1.93**	**44**	*e*PN	**Pn**	**18 06 25.4**	**+0.7**
SILT	**Sile**	**1.93**	**44**	*e*Pn	**Pn**	**18 06 25.4**	**+0.7**
GULT	**Gulveren**	**2.13**	**71**	*e*PN	**Pn**	**18 06 28.1**	**+0.4**
GULT	**Gulveren**	**2.13**	**71**	*e*Pn	**Pn**	**18 06 28.1**	**+0.4**
EDRB	**Edirne**	**2.23**	**338**	*e*PN	**Pn**	**18 06 29.6**	**+0.6**
EDRB	**Edirne**	**2.23**	**338**	*e*Pn	**Pn**	**18 06 29.6**	**+0.6**

RSPR ***23*** *18:08:42.1,19.17N×64.86W,h10km±8km,MD3.6/5*
NEIC ***23*** *18:08:42.1,19.17N×64.86W,h10km,MD3.6(RSPR), After RSPR.*

ISC 23 18:08:40.3±2.9,19.2N±0.1×64.8W±0.1,h25km,n30, σ0§35/48,15C-9D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.80**	**164**	*e*P	**Pb**	**18 08 55.4**	**-0.2**
TBVI	**Tortola**	**0.80**	**164**	*e*P	**Pb**	**18 08 55.4**	**-0.2**
TBVI	**Tortola**	**0.80**	**164**	*e*P	**Pb**	**18 08 55.4**	**-0.2**
STVI	**Saint Thomas**	**0.84**	**187**	*e*P	**Pb**	**18 08 56.4**	**+0.1**
STVI	**Saint Thomas**	**0.84**	**187**	*e*S	**Sb**	**18 09 07.1**	**-0.1**
STVI	**Saint Thomas**	**0.84**	**187**	*e*P	**Pb**	**18 08 56.4**	**+0.1**
STVI				*e*S	**Sn**	**18 09 07.8**	**-0.4**
MTP	**Monte Pirata**	**1.28**	**212**	*e*P	**Pn**	**18 09 02.9**	**+0.3**
MTP	**Monte Pirata**	**1.28**	**212**	*e*S	**Sn**	**18 09 18.7**	**-0.3**
MTP	**Monte Pirata**	**1.28**	**212**	*e*P	**Pn**	**18 09 02.9**	**+0.3**
MTP				*e*S	**Sn**	**18 09 18.7**	**-0.3**
MTP	**Monte Pirata**	**1.28**	**212**	*e*P	**Pn**	**18 09 02.9**	**+0.3**
MTP				*e*S	**Sn**	**18 09 18.7**	**-0.3**
CBYP	**Canovanas**	**1.33**	**227**	*e*P	**Pn**	**18 09 03.2**	**-0.1**
CBYP	**Canovanas**	**1.33**	**227**	*e*S	**Sn**	**18 09 19.7**	**-0.5**
CBYP	**Canovanas**	**1.33**	**227**	*e*P	**Pn**	**18 09 03.2**	**-0.1**
CBYP				*e*S	**Sn**	**18 09 19.7**	**-0.5**
CBYP	**Canovanas**	**1.33**	**227**	*e*P	**Pn**	**18 09 03.2**	**-0.1**
CBYP				*e*S	**Sn**	**18 09 19.7**	**-0.5**
HUMP	**Col San Antoni**	**1.42**	**223**	*e*P	**Pn**	**18 09 04.4**	**0.0**
HUMP	**Col San Antoni**	**1.42**	**223**	*e*S	**Sn**	**18 09 22.2**	**-0.1**
HUMP	**Col San Antoni**	**1.42**	**223**	*e*P	**Pn**	**18 09 04.4**	**0.0**
HUMP				*e*S	**Sn**	**18 09 22.2**	**-0.1**
HUMP	**Col San Antoni**	**1.42**	**223**	*e*P	**Pn**	**18 09 04.4**	**0.0**

DJA ***23*** *18:22:10.6±0.6,4.5S×6.2×12.8E±1.1,h101km±5km,M3.8/3, mb5.1/1,mB6.0/1,MLv3.2/3,Mw(mB)5.6/1*
ISCJB ***23*** *18:22:14.5±0.7,3.21S±0.07×128.43E±0.05,h10km, mb3.1/2, Error ellipse: s-maj=10.7km s-min=5.2km az=29.7*
IDC ***23*** *18:22:16.4±2.2,3.30S×128.41E,h0km,mb3.2/2, mb1 3.5/3,mb1mx3.3/22,mbtmp3.3/3,ML3.2/1, Error ellipse: s-maj=180.4km s-min=26.7km az=68.0*

ISC 23 18:22:16.2±1.1,3.3S±0.1×128.46E±0.06,h10km,n11, σ1§40/13,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**0.48**	**102**	P	**Pg**	**18 22 26.2**	**+0.5**
MSAI				S	**Sg**	**18 22 32.3**	**+0.3**
LBMI	**Labuha**	**2.76**	**340**	P	**Pn**	**18 23 02.4**	**+1.8**
LBMI				S	**Sn**	**18 23 33.3**	**-0.8**
SWI	**Sorong**	**3.67**	**50**	P	**Pn**	**18 23 13.2**	**+0.1**
FAKI	**Fak Fak**	**3.80**	**85**	P	**Pn**	**18 23 12.9**	**-2.0**
FAKI				S	**Sn**	**18 23 58.9**	**-0.8**
TNTI	**Ternate**	**4.14**	**345**	P	**Pn**	**18 23 17.7**	**-1.9**
KMSI	**Cibinong**	**5.87**	**310**	P	**Pn**	**18 23 42.4**	**-0.9**
MNI	**Manado**	**5.90**	**322**	P	**Pn**	**18 23 42.7**	**-1.1**
LUWI	**Luwuk**	**6.09**	**291**	P	**Pn**	**18 23 45.6**	**-0.8**
WRA	**Warramunga Arr**	**17.56**	**161**	P	**P**	**18 26 21.4**	**-1.0**
	0.1nm,0.3s,baz=343,slow=12,SNR=9.6						
ASAR	**Alice Springs**	**20.97**	**166**	P	Pn	18 27 01.3	-1.0
	0.4nm,0.4s,baz=345,slow=12,SNR=24						
MKAR	**Makanchi Array**	**64.27**	**327**	P	**P**	**18 32 53.7**	**+1.9**
	0.1nm,0.5s,baz=111,slow=8.0,SNR=3.8						

IDC 23 18:24:13.8±0.1,4.45S×144.63E,h161km±83km,mb3.0/3, mb1 3.2/5,mb1mx2.9/19,mbtmp3.0/5,Error ellipse: s-maj=75.1km s-min=24.5km az=142.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.53**	**153**	P	Pn	18 25 35.7	+1.3
	2.1nm,0.3s,baz=321,slow=14,SNR=11						
PMG				S	Sn	18 26 36.7	-0.7
	0.6nm,0.3s,baz=308,slow=19,SNR=3.6						
WRA	**Warramunga Arr**	**18.37**	**212**	P	P	18 28 16.8	+0.3
	0.2nm,0.3s,baz=36,slow=11,SNR=11						
ASAR	**Alice Springs**	**21.72**	**207**	P	P	18 28 53.0	+0.5
	0.5nm,0.4s,baz=29,slow=12,SNR=15						
FITZ	**Fitzroy Crossi**	**23.00**	**232**	P	P	18 29 04.3	-0.4
	0.7nm,0.5s,baz=63,slow=9.0,SNR=6.0						
ILAR	**Eielson Array**	**85.01**	**24**	P	P	18 36 30.4	-0.4
	0.3nm,0.6s,baz=243,slow=4.0,SNR=3.7						

KRSC 23 18:37:07.5±1.8,50.03N×156.82E,h5km±5km,ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.79**	**326**	P	Pg	18 37 23.2	+0.5
SKR				S	Sb	18 37 35.3	+0.5
MIPR	**Malaya Ipel'ka**	**2.25**	**359**	P	Pn	18 37 46.6	+1.2
ASAK	**Asacha**	**2.45**	**16**	P	Pb	18 37 50.9	-1.3
MTVR	**Mutnovka**	**2.60**	**19**	S	Sn	18 38 23.5	+1.0
RUS	**Russkaya**	**2.63**	**23**	P	Pn	18 37 51.2	+0.6
RUS				S	Sn	18 38 23.1	+0.2
UGLR	**Uglovaya**	**3.42**	**21**	P	Pn	18 38 03.5	+1.9
AVH	**Avacha**	**3.45**	**20**	P	Pn	18 38 04.1	+2.1
SDLR	**Sedlovina**	**3.50**	**21**	P	Pn	18 38 04.7	+2.0
SPN	**Mys Shipunski**	**3.67**	**32**	P	Pn	18 38 05.4	+0.6

IDC ***23*** *18:48:42.7±1.0,36.51N×21.77E,h0km,mb3.6/14, mb1 3.6/18,mb1mx3.6/35,mbtmp3.5/18,ML3.3/4,Error ellipse: s-maj=21.4km s-min=17.3km az=3.0*
ATH ***23*** *18:48:43.8,36.40N×21.66E,h8km±3km,ML3.6*
CSEM ***23*** *18:48:44.5±0.3,36.43N×21.72E,h2km,ML3.8,Error ellipse: s-maj=6.9km s-min=4.3km az=44.0*
THE ***23*** *18:48:46.0,36.45N×21.80E,h0km±2km,ML3.9/7,Error ellipse: s-maj=2.8km s-min=1.1km az=228.0*

ISC 23 18:48:45.1±1.2,36.45N±0.03×21.75E±0.03,h15km±7km, n125,σ1§12/157,mb3.7/15,1C,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.45**	**359**	P	**Pg**	**18 48 53.3**	**-0.7**
PYL				S	**Sb**	**18 49 01.2**	**-0.1**
PYL	**PYLOS**	**0.45**	**359**	*e*PB	**Pg**	**18 48 53.3**	**-0.7**
PYL				*e*SB	**Sg**	**18 49 00.8**	**+0.7**
PYL	**PYLOS**	**0.45**	**359**	P	**Pg**	**18 48 53.3**	**-0.7**
PYL				*e*Sb	**Sg**	**18 49 00.8**	**+0.7**
PYL				S	**Sb**	**18 49 01.2**	**-0.1**
DYR	**Agios Nikonas**	**0.57**	**56**	P	**Pg**	**18 48 55.4**	**-0.8**
DYR				S	**Sb**	**18 49 04.5**	**-0.2**
DYR	**Agios Nikonas**	**0.57**	**56**	*e*PB	**Pg**	**18 48 56.4**	**+0.2**
DYR				*e*SB	**Sb**	**18 49 04.7**	**0.0**
DYR	**Agios Nikonas**	**0.57**	**56**	P	**Pg**	**18 48 55.4**	**-0.8**
DYR	**Agios Nikonas**	**0.57**	**56**	*e*Pb	**Pg**	**18 48 56.4**	**+0.2**
DYR				S	**Sb**	**18 49 04.5**	**-0.2**
ITM	**Ithomi**	**0.75**	**11**	P	**Pg**	**18 48 59.2**	**-0.3**
ITM				S	**Sb**	**18 49 10.3**	**+0.4**
ITM	**Ithomi**	**0.75**	**11**	*e*PB	**Pg**	**18 48 59.3**	**-0.3**
ITM				*e*SB	**Sb**	**18 49 10.8**	**+0.9**
ITM	**Ithomi**	**0.75**	**11**	*e*Pb	**Pg**	**18 48 59.3**	**-0.3**
ITM				S	**Sb**	**18 49 10.3**	**+0.4**
ITM				*e*Sb	**Sb**	**18 49 10.8**	**+0.9**
VLI	**Veliai**	**0.99**	**74**	P	**Pg**	**18 49 04.0**	**-0.3**
VLI				S	**Sn**	**18 49 18.9**	**+0.6**
VLI	**Veliai**	**0.99**	**74**	*e*PB	**Pb**	**18 49 04.2**	**+0.2**
VLI				*e*SB	**Sn**	**18 49 20.0**	**+1.7**
VLI	**Veliai**	**0.99**	**74**	P	**Pg**	**18 49 04.0**	**-0.3**
VLI				S	**Sn**	**18 49 18.9**	**+0.6**
VLI				*e*Sb	**Sn**	**18 49 20.0**	**+1.7**
KYTH	**Kithira**	**1.05**	**99**	P	**Pg**	**18 49 04.7**	**-0.7**
KYTH	**Kithira**	**1.05**	**99**	*e*PN	**Pg**	**18 49 05.0**	**-0.4**
KYTH	**Kithira**	**1.05**	**99**	P	**Pg**	**18 49 04.7**	**-0.7**
KYTH	**Kithira**	**1.05**	**99**	*e*Pn	**Pg**	**18 49 05.0**	**-0.4**
VLX	**Vlachokerasia**	**1.05**	**29**	P	**Pg**	**18 49 04.6**	**-0.8**
VLX				S	**Sb**	**18 49 20.5**	**+1.8**
VLX	**Vlachokerasia**	**1.05**	**29**	*e*PG	**Pg**	**18 49 04.8**	**-0.6**
VLX				*e*SB	**Sb**	**18 49 20.2**	**+1.5**
VLX	**Vlachokerasia**	**1.05**	**29**	*e*Pg	**Pg**	**18 49 04.8**	**-0.6**
VLX				*e*Sb	**Sb**	**18 49 20.2**	**+1.5**
VLX				S	**Sb**	**18 49 20.5**	**+1.8**
DIDY	**Didyma**	**1.56**	**48**	P	**Pb**	**18 49 14.0**	**+0.3**
DIDY	**Didyma**	**1.56**	**48**	P	**Pb**	**18 49 14.0**	**+0.3**
GUR	**Goura**	**1.56**	**17**	P	**Pn**	**18 49 13.7**	**+1.3**
GUR				S	**Sg**	**18 49 36.1**	**+0.7**
GUR	**Goura**	**1.56**	**17**	*e*PG	**Pn**	**18 49 13.3**	**+0.9**
GUR	**Goura**	**1.56**	**17**	*e*Pg	**Pn**	**18 49 13.3**	**+0.9**
GUR	**Goura**	**1.56**	**17**	P	**Pg**	**18 49 13.7**	**+1.3**
GUR				S	**Sg**	**18 49 35.9**	**+0.5**
DID	**Didima**	**1.59**	**48**	P	**Pb**	**18 49 14.4**	**+0.1**
DID				S	**Sg**	**18 49 36.8**	**+0.4**
DID	**Didima**	**1.59**	**48**	*e*PG	**Pb**	**18 49 14.7**	**+0.4**
DID	**Didima**	**1.59**	**48**	P	**Pb**	**18 49 14.4**	**+0.1**
DID	**Didima**	**1.59**	**48**	*e*Pg	**Pb**	**18 49 14.7**	**+0.4**
DID				S	**Sg**	**18 49 36.3**	**-0.1**
RLS	**Riolos of Patr**	**1.62**	**352**	P	**Pb**	**18 49 15.1**	**+0.3**
RLS				S	**Sg**	**18 49 38.2**	**+0.8**
RLS	**Riolos of Patr**	**1.62**	**352**	*e*PB	**Pb**	**18 49 15.4**	**+0.6**
RLS	**Riolos of Patr**	**1.62**	**352**	P	**Pb**	**18 49 14.9**	**+0.1**
RLS	**Riolos of Patr**	**1.62**	**352**	*e*Pb	**Pb**	**18 49 15.4**	**+0.6**
RLS				S	**Sg**	**18 49 38.2**	**+0.8**
KLV	**Kalavryta, Ach**	**1.63**	**11**	*e*PG	**Pn**	**18 49 14.7**	**+1.4**
KLV	**Kalavryta, Ach**	**1.63**	**11**	*e*Pg	**Pn**	**18 49 14.7**	**+1.4**
LAKA	**Lakka**	**1.80**	**6**	P	**Pb**	**18 49 18.0**	**+0.2**
LAKA	**Lakka**	**1.80**	**6**	*e*PN	**Pb**	**18 49 17.8**	**0.0**
LAKA	**Lakka**	**1.80**	**6**	*e*Pn	**Pb**	**18 49 17.8**	**0.0**
LTK	**Loutraki**	**1.85**	**31**	P	**Pb**	**18 49 18.2**	**-0.4**
LTK				S	**Sg**	**18 49 43.9**	**-0.7**
LTK	**Loutraki**	**1.85**	**31**	*e*PG	**Pg**	**18 49 19.7**	**-0.9**
LTK	**Loutraki**	**1.85**	**31**	P	**Pn**	**18 49 17.9**	**+1.6**
LTK	**Loutraki**	**1.85**	**31**	*e*Pg	**Pg**	**18 49 19.7**	**-0.9**
LTK				S	**Sg**	**18 49 43.9**	**-0.7**
NAIG	**Nisos Aigina**	**1.91**	**46**	*e*PG	**Pg**	**18 49 21.0**	**-0.7**
NAIG	**Nisos Aigina**	**1.91**	**46**	*e*Pg	**Pg**	**18 49 21.0**	**-0.7**
TRIZ	**Trizonia**	**1.93**	**8**	P	**Pb**	**18 49 20.4**	**+0.4**
TRIZ	**Trizonia**	**1.93**	**8**	*e*PG	**Pb**	**18 49 20.4**	**+0.4**
VLS	**Valsamata**	**1.96**	**332**	P	**Pn**	**18 49 19.8**	**+2.0**
VLS	**Valsamata**	**1.96**	**332**	*e*PN	**Pn**	**18 49 19.1**	**+1.3**
VLS	**Valsamata**	**1.96**	**332**	*e*Pn	**Pn**	**18 49 19.1**	**+1.3**
VLS	**Valsamata**	**1.96**	**332**	P	**Pn**	**18 49 19.8**	**+2.0**
KALE	**Kalithea**	**1.97**	**9**	P	**Pb**	**18 49 20.9**	**+0.3**
KALE	**Kalithea**	**1.97**	**9**	*e*PG	**Pb**	**18 49 20.8**	**+0.2**
EFP	**Efpalio**	**1.98**	**4**	P	**Pb**	**18 49 21.3**	**+0.5**
EFP				S	**Sg**	**18 49 47.7**	**-1.1**
EFP	**Efpalio**	**1.98**	**4**	*e*PG	**Pb**	**18 49 21.3**	**+0.5**
EFP	**Efpalio**	**1.98**	**4**	P	**Pb**	**18 49 20.5**	**+0.3**
EFP	**Efpalio**	**1.98**	**4**	*e*Pg	**Pb**	**18 49 21.3**	**+0.5**
EFP				S	**Sb**	**18 49 46.3**	**+0.9**
DSF	**Desfina**	**2.06**	**17**	P	**Pn**	**18 49 20.4**	**+1.2**
DSF	**Desfina**	**2.06**	**17**	P	**Pn**	**18 49 20.4**	**+1.2**
ATH	**Athens Observa**	**2.19**	**45**	*e*PB	**Pn**	**18 49 22.3**	**+1.4**
ATHU	**Athens Univers**	**2.22**	**46**	P	**Pn**	**18 49 23.0**	**+1.5**
ATHU	**Athens Univers**	**2.22**	**46**	P	**Pn**	**18 49 23.0**	**+1.5**
VAM	**Vamos**	**2.24**	**117**	P	**Pn**	**18 49 23.8**	**+2.1**
VAM				S	**Sb**	**18 49 52.1**	**-0.8**
VAM	**Vamos**	**2.24**	**117**	P	**Pn**	**18 49 23.8**	**+2.1**
VAM				S	**Sb**	**18 49 52.1**	**-0.8**
PTL	**Penteli**	**2.33**	**46**	P	**Pn**	**18 49 24.3**	**+1.4**
PTL				S	**Sb**	**18 49 54.8**	**-0.5**
PTL	**Penteli**	**2.33**	**46**	P	**Pn**	**18 49 24.3**	**+1.4**
PTL				S	**Sb**	**18 49 54.8**	**-0.5**
LKR	**Lokris**	**2.42**	**24**	*e*PB	**Pn**	**18 49 25.0**	**+0.9**
AXAR	**Agios Charalam**	**2.43**	**17**	P	**Pn**	**18 49 27.3**	**-1.2**
AXAR	**Agios Charalam**	**2.43**	**17**	P	**Pn**	**18 49 27.3**	**-1.2**
ATAL	**Atalanti**	**2.46**	**24**	P	**Pn**	**18 49 25.8**	**+1.1**
EVR	**Evrytania**	**2.47**	**1**	*e*PG	**Pb**	**18 49 29.5**	**+0.3**
LKD2	**Lefkada island**	**2.49**	**340**	P	**Pn**	**18 49 27.8**	**+2.6**
LKD2	**Lefkada island**	**2.49**	**340**	P	**Pn**	**18 49 27.8**	**+2.6**
AGG	**Agios Georgios**	**2.61**	**10**	P	**Pn**	**18 49 28.9**	**+2.1**
AGG				S	**Sb**	**18 50 03.2**	**-0.4**
AGG	**Agios Georgios**	**2.61**	**10**	P	**Pn**	**18 49 28.9**	**+2.1**
AGG				S	**Sb**	**18 50 03.2**	**-0.4**
MRMA	**Marmari**	**2.64**	**52**	P	**Pn**	**18 49 28.0**	**+0.8**
MRMA	**Marmari**	**2.64**	**52**	P	**Pn**	**18 49 28.0**	**+0.8**
IDI	**Anoyia**	**2.80**	**113**	P	**Pn**	**18 49 31.1**	**+1.7**
IDI	**Anoyia**	**2.80**	**113**	*e*PB	**Pn**	**18 49 31.7**	**+2.3**
IDI	**Anoyia**	**2.80**	**113**	P	**Pn**	**18 49 31.1**	**+1.7**
IDI	**Anoyia**	**2.80**	**113**	*e*Pb	**Pn**	**18 49 31.7**	**+2.3**
THR3	**Thira Island,**	**2.94**	**90**	P	**Pn**	**18 49 33.3**	**+2.0**
THR3	**Thira Island,**	**2.94**	**90**	P	**Pn**	**18 49 33.3**	**+2.0**
SKIA	**Skiathos**

TPIG	**Tehuac#an**	**3.33**	**73**	*i* P	Pn	18 59 32.5	-2.2
TPIG				*e*S	Sn	19 00 11.3	-3.2
VHO	**Vista Hermosa**	**3.82**	**95**	*i* P	Pn	18 59 38.7	-2.9
VHO				*i* S	Sn	19 00 22.6	-4.2

MEX 23 19:01:15.6±0.4, 15°94'N×97°24'W, h7km±5km, MD3.7, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.96**	**298**	*i* P	Pg	19 01 31.5	-2.7
PNIG				*i* S	Sg	19 01 44.4	-2.4
HUIG	**Huatulco**	**1.10**	**99**	*i* P	Pg	19 01 33.7	-3.1
HUIG				*i* S	Sg	19 01 47.6	-3.5
VHO	**Vista Hermosa**	**1.22**	**23**	*e*P	Pb	19 01 35.7	-3.7
VHO				*i* S	Sg	19 01 51.0	-4.5
UTMO	**Huajuapan**	**1.95**	**344**	*e*P	Pn	19 01 46.5	-3.0
UTMO				*i* S	Sn	19 02 10.0	-4.6

*IDC **23** 19:07:57.3±3.5, 37°61'S×176°94'E, h121km±51km, mb2.9/2, mb1 3.2/2, mb1mx3.1/16, mbtmp2.9/2, Error ellipse: s-maj=168.1km s-min=40.2km az=1.0*
*ISCJB **23** 19:07:58.5±0.6, 38°11'S±0°04'×176°73'E±0°06, h140km±4km, mb3.0/2, Error ellipse: s-maj=7.8km s-min=6.5km az=165.7*
*WEL **23** 19:08:00.2±0.3, 38°05'S×176°76'E, h130km±2km, ML4.1/12, Error ellipse: s-maj=1.4km s-min=1.4km az=90.0*

ISC 23 19:07:58.8±1.0, 38°10'S±0°05'×176°75'E±0°05, h141km±6km, n52, σ0°89/59, 9C-1D, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDRZ	**Edgecumbe**	**0.01**	**236**	⇑PN	**Pn**	**19 08 17.8**	**-0.1**
TARZ	**Mount Tarawera**	**0.23**	**235**	PN	**Pn**	**19 08 18.5**	**+0.3**
OPRZ	**Ohinepanea**	**0.30**	**329**	⇑PN	**Pn**	**19 08 17.8**	**-0.4**
OPRZ				SN	**Sn**	**19 08 31.1**	**-1.9**
RRRZ	**Republican Roa**	**0.30**	**218**	⇑PN	**Pn**	**19 08 18.5**	**+0.2**
URZ	**Urewera**	**0.33**	**119**	P	**Pn**	**19 08 18.0**	**-0.3**
	195nm,0.3s,baz=269,slow=3.3,SNR=1283						
URZ				S	**Sn**	**19 08 32.0**	**-1.1**
	39nm,0.3s,baz=86,slow=19,SNR=18						
HRRZ	**Handcock Road**	**0.47**	**232**	PN	**Pn**	**19 08 19.4**	**+0.4**
PRRZ	**Plateau Road**	**0.48**	**215**	PN	**Pn**	**19 08 19.4**	**+0.4**
PRRZ				SN	**Sn**	**19 08 34.1**	**-0.4**
ALRZ	**Allen Road**	**0.56**	**215**	⇑PN	**Pn**	**19 08 19.9**	**+0.5**
MWZ	**Matawai**	**0.66**	**111**	PN	**Pn**	**19 08 20.0**	**0.0**
MWZ				SN	**Sn**	**19 08 35.2**	**-1.1**
RAHZ	**Arahi**	**0.86**	**162**	⇑PN	**Pn**	**19 08 22.7**	**+1.1**
RAHZ				SN	**Sn**	**19 08 39.3**	**+0.3**
HATZ	**Hinemaiaia**	**0.94**	**213**	PN	**Pn**	**19 08 23.0**	**+0.7**
NMHZ	**Naumai**	**1.00**	**177**	PN	**Pn**	**19 08 24.2**	**+1.4**
TOZ	**Tahuroa Road**	**1.05**	**290**	⇓PN	**Pn**	**19 08 23.8**	**+0.6**
TOZ				SN	**Sn**	**19 08 41.1**	**-0.6**
BKZ	**Black Stump Fm**	**1.08**	**191**	⇑PN	**Pn**	**19 08 24.2**	**+0.6**
BKZ				SN	**Sn**	**19 08 42.1**	**-0.4**
KNZ	**Kokohu**	**1.17**	**142**	PN	**Pn**	**19 08 25.1**	**+0.9**
PUZ	**Puketiti**	**1.19**	**89**	PN	**Pn**	**19 08 24.4**	**-0.1**
PUZ				SN	**Sn**	**19 08 42.5**	**-1.6**
PRGZ	**Paritu Road**	**1.21**	**133**	PN	**Pn**	**19 08 25.5**	**+0.8**
MCHZ	**McNeill Hill**	**1.34**	**182**	PN	**Pn**	**19 08 27.3**	**+1.3**
MXZ	**Matakaoa Point**	**1.35**	**67**	PN	**Pn**	**19 08 26.1**	**+0.1**
OTVZ	**Oturere**	**1.36**	**218**	PN	**Pn**	**19 08 27.5**	**+1.2**
MHGZ	**Mahia Peninsul**	**1.39**	**140**	PN	**Pn**	**19 08 27.7**	**+1.3**
BHHZ	**Black Hill Sta**	**1.48**	**201**	⇑PN	**Pn**	**19 08 28.2**	**+0.7**
FWVZ	**Far West T-bar**	**1.48**	**219**	⇑PN	**Pn**	**19 08 28.8**	**+1.1**
MOVZ	**Moawhango**	**1.52**	**211**	PN	**Pn**	**19 08 28.5**	**+0.5**
WNVZ	**Wahianoa**	**1.52**	**216**	PN	**Pn**	**19 08 28.9**	**+0.9**
TRVZ	**Turoa**	**1.52**	**218**	PN	**Pn**	**19 08 29.1**	**+1.0**
CKHZ	**Cape Kidnapper**	**1.58**	**171**	PN	**Pn**	**19 08 29.7**	**+1.3**
KUZ	**Kuaotunu**	**1.58**	**329**	PN	**Pn**	**19 08 28.6**	**0.0**
MKAZ	**Moumakai**	**1.60**	**308**	⇑PN	**Pn**	**19 08 29.5**	**+0.7**
KAHZ	**Kahuranaki**	**1.69**	**177**	PN	**Pn**	**19 08 30.9**	**+1.1**
PNHZ	**Pukenui**	**1.86**	**193**	PN	**Pn**	**19 08 32.2**	**+0.4**
PXZ	**Pawanui**	**1.93**	**177**	PN	**Pn**	**19 08 33.2**	**+0.7**
DVHZ	**Dannevirke**	**2.24**	**191**	PN	**Pn**	**19 08 36.2**	**-0.1**
POWZ	**Post Office Ro**	**2.41**	**198**	PN	**Pn**	**19 08 38.8**	**+0.4**
BFZ	**Birch Farm**	**2.60**	**188**	PN	**Pn**	**19 08 40.8**	**0.0**
MRZ	**Mangatainoka R**	**2.71**	**199**	PN	**Pn**	**19 08 41.8**	**-0.3**
TIWZ	**Tintock**	**2.75**	**194**	PN	**Pn**	**19 08 42.5**	**-0.1**
WCZ	**Waipu Caves**	**2.89**	**318**	PN	**Pn**	**19 08 45.4**	**+1.0**
HOWZ	**Holdsworth Sta**	**2.95**	**198**	PN	**Pn**	**19 08 44.5**	**-0.7**
OGWZ	**Otaki Gorge**	**2.98**	**204**	PN	**Pn**	**19 08 45.2**	**-0.2**
KIW	**Kapiti Island**	**3.10**	**207**	PN	**Pn**	**19 08 46.3**	**-0.8**
CAW	**Cannon Point**	**3.27**	**203**	PN	**Pn**	**19 08 48.3**	**-0.9**
TRWZ	**Traveller**	**3.39**	**194**	PN	**Pn**	**19 08 49.9**	**-0.9**
MSWZ	**Moikau Station**	**3.50**	**199**	PN	**Pn**	**19 08 51.0**	**-1.2**
PLWZ	**Palliser**	**3.65**	**198**	PN	**Pn**	**19 08 52.7**	**-1.5**
TUWZ	**Tuamarina**	**3.96**	**212**	PN	**Pn**	**19 08 56.6**	**-1.6**
NNZ	**Nelson**	**4.05**	**219**	PN	**Pn**	**19 08 58.7**	**-0.8**
QRZ	**Quartz Range**	**4.25**	**229**	PN	**Pn**	**19 09 00.8**	**-1.2**
ASAR	**Alice Springs**	**39.14**	**279**	P	**P**	**19 15 13.2**	**+0.5**
	0.2nm,0.5s,baz=127,slow=8.9,SNR=7.8						
WRA	**Warramunga Arr**	**40.86**	**284**	P	**P**	**19 15 28.3**	**+1.4**
	0.3nm,0.7s,baz=120,slow=8.1,SNR=4.1						
ARCES	**ARCESS Array B**	**144.93**	**343**	PKP	PKPbc	19 27 17.3	-0.2
	0.5nm,0.6s,baz=66,slow=2.3,SNR=5.0						
FINES	**FINESS Array B**	**150.39**	**332**	PKPbc	**PKPbc**	**19 27 32.4**	**-0.1**
	1.6nm,0.9s,baz=56,slow=5.2,SNR=3.1						

*ISCJB **23** 19:22:38.1±0.5, 50°10N±0°03×18°35E±0°03, h0km, Error ellipse: s-maj=5.0km s-min=2.9km az=5.1*
*WAR **23** 19:22:39.9, 50°05N×18°44E*
*IPEC **23** 19:22:39.4±0.3, 50°14N×18°35E, h0km, ML1.9/3, Error ellipse: s-maj=5.2km s-min=0.8km az=158.0*
*PRU **23** 19:22:40.7, 50°05N×18°38E, h0km*
*CSEM **23** 19:22:41.8±0.5, 50°00N×18°24E, h1km, ML2.8/6, Error ellipse: s-maj=8.6km s-min=5.8km az=96.0*

ISC 23 19:22:39.9±0.9, 50°05N±0°04×18°42E±0°03, h0km, n22, σ0°94/35, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.15**	**284**	*e*Pg	**Pg**	**19 22 44.3**	**+1.5**
RAC				*e*Sg	**Sg**	**19 22 47.5**	**+2.8**
OKC	**Ostrava-Krasne**	**0.28**	**220**	*e*PG	**Pg**	**19 22 46.0**	**+0.9**
OKC				*e*SG	**Sg**	**19 22 50.0**	**+1.3**
	comp=Z,96nm,0.5s						
OKC	**Ostrava-Krasne**	**0.28**	**220**	Pg	**Pg**	**19 22 46.0**	**+0.9**
OKC				Sg	**Sg**	**19 22 50.0**	**+1.3**
	96nm,0.5s						
MORC	**Moravsky Berou**	**0.63**	**245**	*e*Pg	**Pg**	**19 22 51.8**	**-0.1**
	baz=55						
MORC				*e*Sg	**Sg**	**19 22 59.3**	**-0.8**
	22nm,0.5s,baz=55						
OJC	**Ojcow**	**0.90**	**79**	*e*Pg	**Pg**	**19 22 57.0**	**-0.1**
OJC				*e*Sg	**Sg**	**19 23 09.1**	**+0.3**
NIE	**Niedzica**	**1.38**	**116**	*e*Pg	**Pg**	**19 23 06.6**	**+0.3**
NIE				*e*Sg	**Sn**	**19 23 25.2**	**-0.2**
VRAC	**Vranov**	**1.40**	**239**	*e*Pg	**Pn**	**19 23 05.6**	**-1.1**
	baz=53						
VRAC	**Vranov**	**1.40**	**239**	*e*Pn	**Pn**	**19 23 06.2**	**-0.5**
VRAC				*e*Sg	**Sg**	**19 23 23.7**	**-1.1**
	26nm,0.3s,baz=53						
KSP	**Ksiaz**	**1.58**	**301**	*e*Pg	**Pn**	**19 23 09.0**	**-0.1**
KSP				*e*Sg	**Sn**	**19 23 30.2**	**0.0**
UPC	**Upice**	**1.61**	**287**	*e*SG	**Sb**	**19 23 31.5**	**+0.1**
UPC	**Upice**	**1.61**	**287**	Sg	**Sb**	**19 23 31.5**	**+0.1**
KRUC	**Moravsky**	**1.65**	**234**	*e*Pn	**Pn**	**19 23 09.9**	**-0.2**
	baz=49						
KRUC				*e*Sg	**Sn**	**19 23 31.4**	**-0.6**
	10nm,0.3s,baz=49						
TREC	**Trest**	**2.05**	**250**	*e*SG	**Sb**	**19 23 44.4**	**+0.4**
	comp=Z,7.4nm,0.2s						
TREC	**Trest**	**2.05**	**250**	Sg	**Sb**	**19 23 44.4**	**+0.4**
	7.4nm,0.2s						
PRU	**Pruhonice**	**2.50**	**270**	*e*PG	**Pb**	**19 23 25.9**	**+0.2**
PRU				*e*SG	**Sb**	**19 23 58.1**	**+1.1**
	comp=Z,4.5nm,0.3s						
PRU	**Pruhonice**	**2.50**	**270**	Pg	**Pb**	**19 23 25.9**	**+0.2**
PRU				Sg	**Sb**	**19 23 58.1**	**+1.1**
	4.5nm,0.3s						
PVCC	**Panska Ves**	**2.52**	**282**	*e*SG	**Sg**	**19 24 00.7**	**0.0**
	comp=Z,9.7nm,0.2s						
PVCC	**Panska Ves**	**2.52**	**282**	Sg	**Sg**	**19 24 00.7**	**0.0**
	9.7nm,0.2s						
BRG	**Berggiesshubel**	**2.98**	**288**	SG	**Sg**	**19 24 13.8**	**-1.7**
	2.6nm,0.5s						
KHC	**Kasperske Hory**	**3.28**	**256**	*e*PG	**Pg**	**19 23 41.5**	**-1.3**
KHC				*e*SG	**Sg**	**19 24 25.0**	**-0.3**
KHC	**Kasperske Hory**	**3.28**	**256**	Pg	**Pg**	**19 23 41.5**	**-1.3**
KHC				Sg	**Sg**	**19 24 25.0**	**-0.3**
CLL	**Collm**	**3.67**	**292**	*e*Sg	**Sg**	**19 24 37.0**	**-0.7**

IDC 23 19:22:56.7±1.9, 7°19N×124°16E, h511km±23km, mb3.0/15, mb1 3.1/15, mb1mx3.0/29, mbtmp3.0/15, 1D, Error ellipse: s-maj=31.4km s-min=9.8km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.10**	**69**	⇓*i*P	P	19 23 53.6	-4.1
FITZ	**Fitzroy Crossi**	**25.17**	**177**	P	P	19 27 40.9	-0.4
	1.0nm,0.8s,baz=348,slow=9.3,SNR=4.3						
CMAR	**Chiang Mai Arr**	**26.97**	**297**	P	P	19 27 57.6	+0.4
	0.3nm,0.6s,baz=100,slow=7.4,SNR=4.3						
WRA	**Warramunga Arr**	**28.76**	**160**	P	P	19 28 12.1	-0.8
	0.2nm,0.3s,baz=343,slow=9.2,SNR=12						
WRA				PcP	PcP	19 31 07.1	+0.2
	0.2nm,0.4s,baz=334,slow=2.6,SNR=6.4						
WRA				ScP	ScP	19 34 00.4	+0.5
	0.5nm,0.6s,baz=344,slow=3.2,SNR=10.0						
KSRS	**Korea Array**	**30.32**	**6**	P	P	19 28 26.6	+0.4
	0.4nm,0.5s,baz=182,slow=9.7,SNR=4.4						
ASAR	**Alice Springs**	**32.11**	**163**	P	P	19 28 42.1	+0.4
	0.3nm,0.4s,baz=338,slow=7.0,SNR=20						
ASAR				PcP	PcP	19 31 16.2	+0.3
	0.4nm,0.4s,baz=346,slow=3.0,SNR=8.5						
SONM	**Songino Array**	**43.24**	**343**	P	P	19 30 12.9	+0.3
	1.4nm,0.6s,baz=160,slow=8.8,SNR=6.0						
MKAR	**Makanchi Array**	**53.27**	**325**	P	P	19 31 27.8	+0.4
	1.5nm,0.6s,baz=120,slow=7.9,SNR=20						
MKAR				PcP	PcP	19 32 26.9	-0.1
	0.5nm,0.4s,baz=132,slow=4.3,SNR=6.6						
ZALV	**Zalesovo Beam**	**56.37**	**333**	P	P	19 31 48.2	-0.6
	0.9nm,0.3s,baz=120,slow=6.4,SNR=6.7						
KURBB	**Kurchatov Arra**	**57.42**	**27**	P	P	19 31 56.7	+0.3
	1.8nm,0.6s,baz=126,slow=6.2,SNR=30						
BVAR	**Borovoye Array**	**63.04**	**327**	P	P	19 32 33.1	-0.4
	1.1nm,0.7s,baz=135,slow=8.3,SNR=10						
AKTO	**Aktyubinsk**	**69.38**	**321**	P	P	19 33 12.8	-0.1
	1.5nm,0.6s,baz=100,slow=8.7,SNR=8.1						
ILAR	**Eielson Array**	**83.11**	**26**	P	P	19 34 27.5	-0.8
	0.3nm,0.7s,baz=250,slow=4.7,SNR=5.5						
BRTR	**Keskin Array B**	**85.86**	**309**	P	P	19 34 41.0	-1.6
	0.5nm,0.5s,baz=115,slow=4.9,SNR=4.5						
SPITS	**Spitsbergen Ar**	**86.61**	**349**	P	P	19 34 45.0	-0.2
	6.1nm,1.0s,baz=114,slow=4.7,SNR=4.5						
FINES	**FINESS Array B**	**87.59**	**332**	P	P	19 34 49.0	-1.0
	1.4nm,0.6s,baz=49,slow=6.5,SNR=14						
TORD	**Torodi Ar. Bea**	**119.39**	**289**	PKP	PKPdf	19 40 48.5	-0.3
	0.4nm,0.6s,baz=69,slow=2.3,SNR=7.7						

*SZGRF **23** 20:00:36.8, 22°28S×178°11W, h33km, South of Fiji Islands*
*IDC **23** 20:01:29.9±1.5, 20°74S×178°15W, h453km±15km, mb3.5/19, mb1 3.8/21, mb1mx3.7/25, mbtmp3.6/21, Error ellipse: s-maj=15.2km s-min=9.4km az=115.0*
*ISCJB **23** 20:01:32.5±0.5, 20°95S±0°1×178°2W±0°1, h495km, mb3.8/19, Error ellipse: s-maj=17.8km s-min=10.9km az=32.9*
*VIE **23** 20:01:33.6, 20°76S×178°22W, h496km, mb3.4 313 km W of Nuku'alofa*

ISC 23 20:01:33.6±0.5, 20°85S±0°1×178°2W±0°1, h495km, n96, σ0°86/105, mb3.8/19, 11C-13D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.17**	**43**	P	P	20 03 36.8	-5.5
	18nm,0.3s,baz=260,slow=12,SNR=9.2						
URZ	**Urewera**	**17.88**	**192**	P	**P**	**20 05 10.0**	**-2.9**
	5.5nm,0.3s,baz=312,slow=1.4,SNR=38						
URZ				S	**S**	**20 08 14.3**	**+2.3**
	0.4nm,0.3s,baz=68,slow=19,SNR=5.2						
RPZ	**Rata Peaks**	**24.57**	**199**	P	**P**	**20 06 13.4**	**+0.1**
	24nm,0.7s,baz=22,slow=19,SNR=12						
STKA	**Stephens Creek**	**37.52**	**244**	P	**P**	**20 08 04.7**	**0.0**
	3.4nm,0.8s,baz=88,slow=14,SNR=5.6						
ASAR	**Alice Springs**	**44.30**	**257**	P	**P**	**20 08 58.0**	**-1.0**
	1.1nm,0.6s,baz=94,slow=8.2,SNR=24						
ASAR				PcP	**PcP**	**20 10 32.8**	**0.0**
	1.1nm,0.6s,baz=106,slow=3.8,SNR=10						
ASAR				ScP	**ScP**	**20 13 41.6**	**+4.3**
	0.4nm,0.5s,baz=97,slow=4.2,SNR=5.8						
WRA	**Warramunga Arr**	**44.40**	**262**	P	**P**	**20 08 58.6**	**-1.2**
	0.5nm,0.4s,baz=96,slow=7.3,SNR=5.6						
VNDA	**Vanda**	**57.61**	**185**	P	**P**	**20 10 35.6**	**+0.5**
	1.2nm,0.7s,baz=357,slow=6.1,SNR=7.7						
MJAR	**Matsushiro Arr**	**70.35**	**324**	P	**P**	**20 11 56.1**	**-0.9**
	1.6nm,0.5s,baz=138,slow=6.1,SNR=9.5						
PETK	**Petropavlovsk-**	**76.51**	**345**	P	**P**	**20 12 31.8**	**-0.1**
	3.1nm,0.7s,baz=152,slow=4.2,SNR=8.3						
KSRS	**Korea Array**	**77.00**	**319**	P	**P**	**20 12 35.4**	**+0.6**
	0.6nm,0.6s,baz=128,slow=5.9,SNR=4.5						
USRK	**Ussuriysk Arra**	**79.11**	**326**	P	**P**	**20 12 47.4**	**+1.4**
	1.9nm,0.7s,baz=114,slow=2.7,SNR=7.0						
PFO	**Pinyon Flat Ob**	**79.89**	**48**	P	**P**	**20 12 49.8**	**-0.8**
	1.3nm,0.3s,baz=274,slow=11,SNR=4.7						
YBH	**Yreka Blue Hor**	**80.61**	**39**	P	**P**	**20 12 55.0**	**+0.8**
	2.6nm,0.6s,baz=144,slow=1.9,SNR=8.2						
NVAR	**Mina Array Bea**	**81.34**	**43**	P	**P**	**20 12 58.2**	**0.0**
	1.6nm,0.7s,baz=223,slow=9.8,SNR=5.1						
TXAR	**Lajitas Array**	**87.34**	**57**	P	**P**	**20 13 28.9**	**+1.1**
	1.2nm,0.7s,baz=213,slow=7.5,SNR=4.6						
DLBC	**Dease Lake**	**88.38**	**23**	P	**P**	**20 13 32.6**	**+0.7**
	2.4nm,0.8s,baz=184,slow=3.8,SNR=4.5						
ILAR	**Eielson Array**	**88.63**	**13**	P	**P**	**20 13 32.1**	**-0.7**
	4.2nm,0.6s,baz=217,slow=5.4,SNR=66						
PDAR	**Pinedale Array**	**89.28**	**43**	P	**P**	**20 13 36.9**	**+0.2**
	1.1nm,0.6s,baz=187,slow=3.6,SNR=7.6						
CMAR	**Chiang Mai Arr**	**90.06**	**290**	P	**P**	**20 13 42.4**	**+1.8**
	1.3nm,1.0s,baz=115,slow=3.6,SNR=6.1						
INK	**Inuvik**	**94.59**	**15**	P	**P**	**20 13 59.5**	**-0.6**
	1.5nm,1.0s,baz=216,slow=6.0,SNR=4.9						
YKA	**Yellowknife Ar**	**96.84**	**25**	P	**P**	**20 14 10.6**	**+0.1**
	0.2nm,0.7s,baz=229,slow=4.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**110.62**	**321**	PKiKP	**PKiKP**	**20 19 07.9**	**-1.2**
	1.1nm,0.5s,baz=99,slow=0.5,SNR=9.2						
MKAR	**Makanchi Array**	**111.28**	**313**	PKiKP	**PKiKP**	**20 19 09.6**	**-1.1**
	0.6nm,0.4s,baz=88,slow=2.1,SNR=16						
BVAR	**Borovoye Array**	**119.20**	**320**	PKP	**PKPdf**	**20 19 25.0**	**-0.7**
	3.4nm,0.4s,baz=114,slow=2.1,SNR=22						
SPITS	**Spitsbergen Ar**	**122.14**	**356**	PKP	**PKPdf**	**20 19 29.7**	**-1.0**
	4.4nm,0.8s,baz=100,slow=5.9,SNR=4.1						
AKTO	**Aktyubinsk**	**127.17**	**318**	PKP	**PKPdf**	**20 19 41.2**	**+0.1**
	2.3nm,0.6s,baz=162,slow=3.2,SNR=3.1						
ARCES	**ARCESS Array B**	**129.18**	**350**	PKP	**PKPdf**	**20 19 43.9**	**-0.4**
	2.4nm,0.5s,baz=48,slow=1.3,SNR=34						
FINES	**FINESS Array B**	**136.00**	**343**	PKhKP	PKPpre	20 19 44.0	
	1.5nm,1.0s,baz=51,slow=4.4,SNR=3.9						
FINES				PKP	**PKPdf**	**20 19 55.5**	**-1.8**
	1.6nm,0.5s,baz=38,slow=3.3,SNR=9.1						
FINES				SKPbc	**SKPbc**	**20 22 44.8**	**+2.4**
	1.8nm,0.8s,baz=91,slow=7.6,SNR=5.1						
NOA	**NORSAR Array B**	**139.25**	**353**	PKhKP	PKPpre	20 19 54.0	
	0.9nm,0.5s,baz=12,slow=2.4,SNR=6.8						
NOA				PKP	**PKiKP**	**20 20 04.9**	**-0.9**
	0.6nm,0.6s,baz=44,slow=5.6,SNR=4.3						
HFS	**Hagfors**	**139.80**	**351**	PKhKP	PKPpre	20 19 56.1	
	4.2nm,0.4s,baz=29,slow=3.3,SNR=40						
AKASG	**Malin Array Be**	**143.19**	**331**	PKhKP	PKPpre	20 20 08.0	
	12nm,0.5s,baz=44,slow=4.3,SNR=66						
MUD	**Monsted U'grnd**	**143.97**	**353**	*i* P	PKPbc	20 20 10.3	-0.6
COP	**Copenhagen**	**144.26**	**350**	*i* P	PKPbc	20 20 11.0	-0.9
BSD	**Bornholm Skovb**	**144.33**	**347**	*i* P	PKPbc	20 20 10.9	-1.3
	22nm,0.8s						
LLD	**Lille Linde**	**144.63**	**350**	*i* P	PKiKP	20 20 22.6	+5.7
EKA	**Eskdalemuir Ar**	**145.30**	**5**	PKPbc	**PKPbc**	**20 20 14.6**	**-0.6**
	4.3nm,0.6s,baz=340,slow=3.3,SNR=13						
LEOM	**Leova**	**146.53**	**326**	⇑*i*P	**PKPbc**	**20 20 18.7**	**-0.2**
BRTR	**Keskin Array B**	**146.91**	**312**	PKPbc	**PKPbc**	**20 20 20.1**	**-0.3**
	4.3nm,0.6s,baz=110,slow=1.7,SNR=31						
BRTR				PP	PP	20 23 39.8	-10
	0.8nm,0.9s,baz=57,slow=5.2,SNR=3.7						
TLCR		**147.05**	**324**	⇑*i*P	**PKPbc**	**20 20 20.3**	**0.0**
BURAR	**Bucovina Array**	**147.23**	**330**	⇓*i*P	**PKPab**	**20 20 22.7**	**-1.6**
TESR	**Tescani**	**147.32**	**328**	⇑*i*P	**PKPbc**	**20 20 20.7**	**-0.4**
OJC	**Ojcow**	**147.37**	**338**	*e*PX	**PKPbc**	**20 20 21.1**	**0.0**
CFR	**Carcaliu**	**147.43**	**324**	⇑*i*P	**PKPbc**	**20 20 21.5**	**+0.2**
KOLS	**Kolonicke sedl**	**147.50**	**335**	*e*	**PKPbc**	**20 20 22.2**	**+0.7**
NRDL	**Niedersach Rie**	**147.71**	**351**	*e*PKPbc	**PKPbc**	**20 20 21.6**	**-0.1**
VRI	**Vrincioaia**	**147.72**	**327**	⇓*i*P	**PKPbc**	**20 20 21.9**	**-0.2**
TIRR	**Tirgusor**	**147.73**	**323**	⇓*i*P	**PKPbc**	**20 20 22.3**	**+0.2**
CRVS	**Cervenica-Dubn**	**147.85**	**335**	*e*	**PKPbc**	**20 20 21.2**	**-1.2**
NIE	**Niedzica**	**147.86**	**337**	*e*PX	**PKiKP**	**20 20 23.0**	**-0.9**
IBBN	**Ibbenburen**	**148.21**	**353**	*e*PKPbc	**PKPbc**	**20 20 22.8**	**-0.3**
IBBN				*e*PKPab	**PKPab**	**20 20 27.8**	**0.0**
OKC	**Ostrava-Krasne**	**148.25**	**340**	*i* P	**PKPbc**	**20 20 23.2**	**-0.1**
OKC				*ex*	x	20 20 28.5	
UPC	**Upice**	**148.30**	**343**	*i* P	**PKPbc**	**20 20 23.7**	**+0.3**
UPC				*ex*	x	20 20 29.0	
CLL	**Collm**	**148.31**	**347**	*e*PKPbc	**PKPbc**	**20 20 23.1**	**-0.3**
CLL				*e*PKPab	**PKPab**	**20 20 28.0**	**-0.3**
CLL	**Collm**	**148.31**	**347**	⇓*i*PKPbc	**PKPbc**	**20 20 23.5**	**+0.1**
	comp=Z,24nm,0.7s						
CLL				⇑*i*PKPab	**PKPab**	**20 20 28.1**	**-0.3**
	comp=Z,10.0nm,0.8s						
DOPR	**Dopca**	**148.33**	**328**	⇓*i*P	**PKPbc**	**20 20 24.4**	**+0.7**
MLR	**Muntele Rosu**	**148.38**	**327**	⇓*i*P	**PKPbc**	**20 20 23.9**	**-0.1**
BRG	**Berggiesshubel**	**148.50**	**345**	*i* PKP	**PKPbc**	**20 20 24.2**	**+0.3**
	comp=Z,10nm,0.7s						
BRG				*i*		20 20 29.3	
	comp=Z,7.3nm,0.8s						
BRG	**Berggiesshubel**	**148.50**	**345**	*e*PKPbc	**PKPbc**	**20 20 23.7**	**-0.2**
BRG				*e*PKPab	**PKPab**	**20 20 29.2**	**+0.1**
PVCC	**Panska Ves**	**148.66**	**344**	*i* P	**PKPbc**	**20 20 24.7**	**+0.4**
PVCC				*ex*	x	20 20 30.2	
VOIR		**148.87**	**328**	⇓*i*P	**PKPbc**	**20 20 25.6**	**+0.5**
DRGR		**148.99**	**332**	⇑*i*P	**PKPbc**	**20 20 25.2**	**-0.1**
BUG	**Bochum--Univer**	**149.11**	**353**	*e*PKPab	**PKPab**	**20 20 31.7**	**+0.1**
ARR	**Arges**	**149.13**	**328**	⇑*i*P	**PKPbc**	**20 20 26.9**	**+1.2**
PRU	**Pruhonice**	**149.17**	**344**	*i* P	**PKPbc**	**20 20 25.7**	**+0.1**
PRU				*ex*	x	20 20 32.7	
VYHS	**Vyhne**	**149.17**	**338**	*e*	**PKPbc**	**20 20 25.8**	**+0.2**
VRAC	**Vranov**	**149.20**	**341**	PKPbc	**PKPbc**	**20 20 26.2**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=56,slow=3.6,SNR=4.0						
VRAC				PKPab	**PKPab**	**20 20 33.0**	**+0.9**
	comp=Z,3.5nm,0.9s,baz=34,slow=8.6,SNR=5.6						
MOX	**Moxa**	**149.22**	**348**	*e*PKPbc	**PKPbc**	**20 20 25.4**	**-0.3**
TANN	**Tannenbergstha**	**149.26**	**347**	*e*PKPbc	**PKPbc**	**20 20 25.6**	**-0.3**
NKC	**Novy Kostel**	**149.44**	**347**	*i* P	**PKPbc**	**20 20 26.5**	**+0.3**
NKC				*ex*	x	20 20 33.6	
TREC	**Trest**	**149.54**	**342**	*i* P	**PKPbc**	**20 20 26.6**	**+0.1**
ROTZ	**Rotzenmuhle**	**149.93**	**347**	*e*PKPbc	**PKPbc**	**20 20 27.3**	**-0.1**
ISP	**Isparta**	**149.93**	**311**	⇓*i*P	**PKPbc**	**

H21A	**Big Horn, Sher**	**1.54 306**	P	**Pn**	**20 04 38.6**	**+0.8**
	baz=1.6					
H21A			⇑S	**Sg**	**20 05 00.1**	**+1.7**
	baz=1.6					
K25A	**Mack Ranch, Ha**	**1.54 137**	⇑P	**Pg**	**20 04 39.1**	**+0.6**
	baz=1.5					
K25A	**Mack Ranch, Ha**	**1.54 137**	⇑P	**Pg**	**20 04 39.1**	**+0.6**
	baz=1.5					
J21A	**Lysite**	**1.62 256**	P	**Pn**	**20 04 39.0**	**0.0**
	baz=1.7					
J21A			S	**Sn**	**20 05 01.1**	**+0.5**
	baz=1.7					
J21A	**Lysite**	**1.62 256**	P	**Pn**	**20 04 39.0**	**0.0**
	baz=1.7					
J21A			S	**Sn**	**20 05 01.1**	**+0.5**
	baz=1.7					
G22A	**Birney**	**1.64 334**	⇑P	**Pn**	**20 04 40.2**	**+1.0**
	baz=1.6,SNR=35					
G22A	**Birney**	**1.64 334**	⇑P	**Pn**	**20 04 40.2**	**+1.0**
	baz=1.6,SNR=35					
L23A	**Garrett**	**1.66 191**	⇓P	**Pn**	**20 04 40.1**	**+0.5**
	baz=1.8					
L23A	**Garrett**	**1.66 191**	⇓P	**Pn**	**20 04 40.1**	**+0.5**
	baz=1.8					
G24A	**Alzada**	**1.70 21**	⇓P	**Pb**	**20 04 41.3**	**+0.1**
	baz=1.6,SNR=26					
G24A	**Alzada**	**1.70 21**	⇓P	**Pb**	**20 04 41.3**	**+0.1**
	baz=1.6,SNR=26					
L24A	**Wheatland**	**1.72 171**	⇑P	**Pn**	**20 04 41.3**	**+0.9**
	baz=1.8					
L24A	**Wheatland**	**1.72 171**	⇑P	**Pn**	**20 04 41.3**	**+0.9**
	baz=1.8					
K21A	**Alcova**	**1.81 233**	⇑Pb	**Pn**	**20 04 42.8**	**+1.1**
	baz=1.9					
K21A			Sb	**Sb**	**20 05 07.1**	**+0.6**
	baz=1.9					
K21A	**Alcova**	**1.81 233**	⇑Pb	**Pn**	**20 04 42.8**	**+1.1**
	baz=1.9					
K21A			Sb	**Sb**	**20 05 07.1**	**+0.6**
	baz=1.9					
K26A	**Motz Farm, Whi**	**1.87 123**	Sb	**Sg**	**20 05 09.8**	**+0.9**
	baz=1.8					
K26A	**Motz Farm, Whi**	**1.87 123**	Sb	**Sg**	**20 05 09.8**	**+0.9**
	baz=1.8					
L25A	**Engebretsen Ra**	**1.87 148**	⇑Pb	**Pb**	**20 04 44.5**	**+0.4**
	baz=1.9,SNR=18					
L25A			Sb	**Sg**	**20 05 09.5**	**+0.6**
	baz=1.9					
L25A	**Engebretsen Ra**	**1.87 148**	⇑Pb	**Pb**	**20 04 44.5**	**+0.4**
	baz=1.9,SNR=18					
L25A			Sb	**Sg**	**20 05 09.5**	**+0.6**
	baz=1.9					
F23A	**Volborg**	**1.98 358**	⇓P	**Pn**	**20 04 45.0**	**+1.2**
	baz=1.9,SNR=45					
F23A			S	**Sb**	**20 05 11.6**	**+0.5**
	baz=1.9					
F23A	**Volborg**	**1.98 358**	⇓P	**Pn**	**20 04 45.0**	**+1.2**
	baz=1.9,SNR=45					
F23A			S	**Sb**	**20 05 11.6**	**+0.5**
	baz=1.9					
G21A	**Lodge Grass**	**2.02 318**	⇑P	**Pn**	**20 04 45.6**	**+1.2**
	baz=2.0,SNR=29					
G21A	**Lodge Grass**	**2.02 318**	⇑P	**Pn**	**20 04 45.6**	**+1.2**
	baz=2.0,SNR=29					
I20A	**Worland**	**2.06 277**	⇑Pb	**Pn**	**20 04 46.5**	**+1.5**
	baz=2.1					
I20A			Sb	**Sb**	**20 05 14.3**	**+0.7**
	baz=2.1					
I20A	**Worland**	**2.06 277**	⇑Pb	**Pn**	**20 04 46.5**	**+1.5**
	baz=2.1					
I20A			Sb	**Sb**	**20 05 14.3**	**+0.7**
	baz=2.1					
J20A	**Shoshoni**	**2.07 260**	⇓Pb	**Pb**	**20 04 47.9**	**+0.4**
	baz=2.2					
J20A			Sb	**Sg**	**20 05 15.8**	**+0.4**
	baz=2.2					
J20A	**Shoshoni**	**2.07 260**	⇓Pb	**Pb**	**20 04 47.9**	**+0.4**
	baz=2.2					
J20A			Sb	**Sg**	**20 05 15.8**	**+0.4**
	baz=2.2					
H20A	**Greybull**	**2.08 292**	⇓P	**Pn**	**20 04 46.2**	**+0.9**
	baz=2.1,SNR=38					
H20A	**Greybull**	**2.08 292**	⇓P	**Pn**	**20 04 46.2**	**+0.9**
	baz=2.1,SNR=38					
F22A	**Rosebud**	**2.15 342**	⇑P	**Pn**	**20 04 47.0**	**+0.9**
	baz=2.1,SNR=49					
F22A	**Rosebud**	**2.15 342**	⇑P	**Pn**	**20 04 47.0**	**+0.9**
	baz=2.1,SNR=49					
M23A	**Laramie**	**2.30 188**	⇑Pb	**Pb**	**20 04 51.0**	**-0.5**
	baz=2.4,SNR=16					
M23A	**Laramie**	**2.30 188**	⇑Pb	**Pb**	**20 04 51.0**	**-0.5**
	baz=2.4,SNR=16					
M24A	**Cheyenne**	**2.30 171**	Pb	**Pb**	**20 04 52.2**	**+0.6**
	baz=2.4					
M24A	**Cheyenne**	**2.30 171**	Pb	**Pb**	**20 04 52.2**	**+0.6**
	baz=2.4					
L21A	**Rawlins**	**2.35 221**	⇓Pb	**Pb**	**20 04 51.8**	**-0.5**
	baz=2.5,SNR=38					
L21A	**Rawlins**	**2.35 221**	⇓Pb	**Pb**	**20 04 51.8**	**-0.5**
	baz=2.5,SNR=38					
PHWY	**Pilot Hill**	**2.45 183**	*e*Pn	**Pn**	**20 04 52.1**	**+1.6**
K27A	**Flueckinger Fa**	**2.46 114**	P	**Pb**	**20 04 53.0**	**-1.2**
	baz=2.4					
K27A	**Flueckinger Fa**	**2.46 114**	P	**Pb**	**20 04 53.0**	**-1.2**
	baz=2.4					
K20A	**Yellowstone Ra**	**2.48 245**	⇑Pb	**Pb**	**20 04 54.1**	**-0.5**
	baz=2.6,SNR=36					
K20A	**Yellowstone Ra**	**2.48 245**	⇑Pb	**Pb**	**20 04 54.1**	**-0.5**
	baz=2.6,SNR=36					
M25A	**Palm-Egli Farm**	**2.48 158**	P	**Pn**	**20 04 53.1**	**+2.2**
	baz=2.5					
M25A	**Palm-Egli Farm**	**2.48 158**	P	**Pn**	**20 04 53.1**	**+2.2**
	baz=2.5					
M22A	**Cedar Creek Ra**	**2.53 203**	⇑Pb	**Pb**	**20 04 54.3**	**-1.2**
	baz=2.6,SNR=24					
M22A	**Cedar Creek Ra**	**2.53 203**	⇑Pb	**Pb**	**20 04 54.3**	**-1.2**
	baz=2.6,SNR=24					
G20A	**Bridger**	**2.56 306**	⇓P	**Pn**	**20 04 52.4**	**+0.5**
	baz=2.6					
G20A	**Bridger**	**2.56 306**	⇓P	**Pn**	**20 04 52.4**	**+0.5**
	baz=2.6					
M21A	**Separation Pea**	**2.63 216**	⇑P	**Pn**	**20 04 55.4**	**+2.5**
	baz=2.7,SNR=86					
M21A	**Separation Pea**	**2.63 216**	⇑P	**Pn**	**20 04 55.4**	**+2.5**
	baz=2.7,SNR=86					
I19A	**Meeteetse**	**2.69 277**	⇑P	**Pn**	**20 04 55.7**	**+1.9**
	baz=2.8,SNR=36					
I19A	**Meeteetse**	**2.69 277**	⇑P	**Pn**	**20 04 55.7**	**+1.9**
	baz=2.8,SNR=36					
E22A	**Miles City**	**2.73 350**	⇓P	**Pn**	**20 04 54.7**	**+0.5**
	baz=2.7					
E22A	**Miles City**	**2.73 350**	⇓P	**Pn**	**20 04 54.7**	**+0.5**
	baz=2.7					
E23A	**Ismay**	**2.75 360**	⇓P	**Pn**	**20 04 55.4**	**+1.0**
	baz=2.7,SNR=21					
E23A	**Ismay**	**2.75 360**	⇓P	**Pn**	**20 04 55.4**	**+1.0**
	baz=2.7,SNR=21					
J19A	**Crowheart**	**2.78 261**	⇓P	**Pn**	**20 04 57.1**	**+2.2**
	baz=2.9,SNR=61					
J19A	**Crowheart**	**2.78 261**	⇓P	**Pn**	**20 04 57.1**	**+2.2**
	baz=2.9,SNR=61					
H19A	**Powell**	**2.81 290**	⇑P	**Pn**	**20 04 56.7**	**+1.3**
	baz=2.9,SNR=23					
H19A	**Powell**	**2.81 290**	⇑P	**Pn**	**20 04 56.7**	**+1.3**
	baz=2.9,SNR=23					
F20A	**Billings**	**2.89 316**	P	**Pn**	**20 04 56.9**	**+0.5**
	baz=2.9,SNR=43					
F20A	**Billings**	**2.89 316**	P	**Pn**	**20 04 56.9**	**+0.5**
	baz=2.9,SNR=43					
N23A	**Red Feather La**	**2.89 190**	⇑P	**Pn**	**20 04 58.6**	**+2.0**
	baz=3.0,SNR=13					
N23A	**Red Feather La**	**2.89 190**	⇑P	**Pn**	**20 04 58.6**	**+2.0**
	baz=3.0,SNR=13					
E24A	**Baker**	**2.90 14**	⇓P	**Pn**	**20 04 58.2**	**+1.7**
	baz=2.8,SNR=33					
E24A	**Baker**	**2.90 14**	⇓P	**Pn**	**20 04 58.2**	**+1.7**
	baz=2.8,SNR=33					
N22A	**Wattenberg Ran**	**3.07 197**	Pb	**Pb**	**20 05 04.5**	**-0.1**
	baz=3.2					
N22A	**Wattenberg Ran**	**3.07 197**	Pb	**Pb**	**20 05 04.5**	**-0.1**
	baz=3.2					
RLMT	**Red Lodge**	**3.16 297**	*e*Pn	**Pn**	**20 05 01.3**	**+1.1**
BW06	**Boulder Array**	**3.27 254**	*e*Pn	**Pn**	**20 05 03.5**	**+1.9**
PDAR	**Pinedale Array**	**3.27 254**	Pn	**Pn**	**20 05 04.0**	**+2.3**
PDAR			Pg	**Pb**	**20 05 07.7**	**-0.3**
PDAR			Lg	Lg	20 05 48.6	
PDAR	**Pinedale Array**	**3.27 254**	Pn	**Pn**	**20 05 04.0**	**+2.3**
	6.2nm,0.3s,baz=74,slow=16,SNR=38					
PDAR			Pg	**Pb**	**20 05 07.7**	**-0.3**
	14nm,0.3s,baz=66,slow=18,SNR=62					
PDAR			Lg	Lg	20 05 48.6	
	16nm,0.3s,baz=75,slow=29,SNR=12					
I18A	**Diamond G Ranc**	**3.28 271**	⇑P	**Pn**	**20 05 04.7**	**+2.8**
	baz=3.4,SNR=22					
I18A	**Diamond G Ranc**	**3.28 271**	⇑P	**Pn**	**20 05 04.7**	**+2.8**
	baz=3.4,SNR=22					
N26A	**Koester Ranch,**	**3.30 152**	⇓P	**Pn**	**20 05 03.8**	**+1.8**
	baz=3.3					
N26A	**Koester Ranch,**	**3.30 152**	⇓P	**Pn**	**20 05 03.8**	**+1.8**
	baz=3.3					
F19A	**Roth Farm, Mol**	**3.34 310**	⇓P	**Pn**	**20 05 03.9**	**+1.2**
	baz=3.4,SNR=65					
F19A	**Roth Farm, Mol**	**3.34 310**	⇓P	**Pn**	**20 05 03.9**	**+1.2**
	baz=3.4,SNR=65					
N21A	**Black Mountain**	**3.41 210**	⇓P	**Pn**	**20 05 06.0**	**+2.3**
	baz=3.5,SNR=50					
N21A	**Black Mountain**	**3.41 210**	⇓P	**Pn**	**20 05 06.0**	**+2.3**
	baz=3.5,SNR=50					
D23A	**Lindsay**	**3.43 1**	⇓P	**Pn**	**20 05 05.2**	**+1.5**
	baz=3.4,SNR=16					
D23A	**Lindsay**	**3.43 1**	⇓P	**Pn**	**20 05 05.2**	**+1.5**
	baz=3.4,SNR=16					
G18A	**Lazy EL Ranch,**	**3.43 299**	⇓P	**Pn**	**20 05 05.2**	**+1.2**
	baz=3.5,SNR=28					
G18A	**Lazy EL Ranch,**	**3.43 299**	⇓P	**Pn**	**20 05 05.2**	**+1.2**
	baz=3.5,SNR=28					
D24A	**Glendive**	**3.44 11**	⇑P	**Pn**	**20 05 05.8**	**+2.0**
	baz=3.3,SNR=29					
D24A	**Glendive**	**3.44 11**	⇑P	**Pn**	**20 05 05.8**	**+2.0**
	baz=3.3,SNR=29					
N20A	**Spence Gulch,**	**3.65 218**	⇑P	**Pn**	**20 05 08.9**	**+2.0**
	baz=3.8,SNR=8.5					
N20A	**Spence Gulch,**	**3.65 218**	⇑P	**Pn**	**20 05 08.9**	**+2.0**
	baz=3.8,SNR=8.5					
E19A	**Rath Farm, Rou**	**3.67 319**	⇓P	**Pn**	**20 05 07.6**	**+0.5**
	baz=3.7					
E19A	**Rath Farm, Rou**	**3.67 319**	⇓P	**Pn**	**20 05 07.6**	**+0.5**
	baz=3.7					
OGNE	**Ogallala**	**3.70 138**	*e*Pn	**Pn**	**20 05 09.2**	**+1.7**
GCMT	**Greycliff**	**3.73 305**	*e*Pn	**Pn**	**20 05 09.2**	**+1.3**
LKWY	**Lake**	**3.77 284**	*e*Pn	**Pn**	**20 05 09.2**	**+0.7**
F18A	**Big Timber**	**3.81 306**	⇑P	**Pn**	**20 05 10.8**	**+1.7**
	baz=3.8,SNR=27					
F18A	**Big Timber**	**3.81 306**	⇑P	**Pn**	**20 05 10.8**	**+1.7**
	baz=3.8,SNR=27					
C24A	**Savage**	**3.83 9**	⇑P	**Pn**	**20 05 11.4**	**+2.1**
	baz=3.7,SNR=20					
C24A	**Savage**	**3.83 9**	⇑P	**Pn**	**20 05 11.4**	**+2.1**
	baz=3.7,SNR=20					
LOHW	**Long Hollow**	**3.85 270**	*e*Pn	**Pn**	**20 05 11.8**	**+2.0**
D20A	**Manuel Ranch,**	**3.90 330**	⇓P	**Pn**	**20 05 10.6**	**+0.3**
	baz=3.9,SNR=29					
D20A	**Manuel Ranch,**	**3.90 330**	⇓P	**Pn**	**20 05 10.6**	**+0.3**
	baz=3.9,SNR=29					
MOOW	**Moose Ponds**	**3.95 272**	*e*Pn	**Pn**	**20 05 13.2**	**+2.1**
ISCO	**Idaho Springs**	**3.95 184**	*e*Pn	**Pn**	**20 05 12.6**	**+1.4**
ISCO	**Idaho Springs**	**3.95 184**	⇓P	**Pn**	**20 05 13.0**	**+1.8**
	baz=4.0,SNR=8.0					
ISCO	**Idaho Springs**	**3.95 184**	⇓P	**Pn**	**20 05 13.0**	**+1.8**
	baz=4.0,SNR=8.0					
SNOW	**Snow King Moun**	**3.98 268**	*e*Pn	Pn	20 05 16.3	+4.8
C22A	**Vida**	**4.02 354**	⇑P	**Pn**	**20 05 13.8**	**+2.0**
	baz=4.0,SNR=13					
C22A	**Vida**	**4.02 354**	⇑P	**Pn**	**20 05 13.8**	**+2.0**
	baz=4.0,SNR=13					
C23A	**Lambert**	**4.06 1**	⇑P	**Pn**	**20 05 14.3**	**+1.9**
	baz=4.0,SNR=45					
C23A	**Lambert**	**4.06 1**	⇑P	**Pn**	**20 05 14.3**	**+1.9**
	baz=4.0,SNR=45					
IMW	**Indian Meadow**	**4.09 274**	*e*Pn	**Pn**	**20 05 15.1**	**+2.1**
TPAW	**Teton Pass**	**4.12 268**	*e*Pn	**Pn**	**20 05 12.8**	**-0.6**
DCID1	**Drake Creek**	**4.28 270**	*e*Pn	**Pn**	**20 05 13.9**	**-1.7**
E18A	**Harlowton**	**4.32 312**	⇓P	**Pn**	**20 05 17.3**	**+1.3**
	baz=4.3,SNR=29					
E18A	**Harlowton**	**4.32 312**	⇓P	**Pn**	**20 05 17.3**	**+1.3**
	baz=4.3,SNR=29					
AHID	**Auburn Hatcher**	**4.35 259**	Pn	Pn	20 05 20.7	+4.1
RRI2	**Red Ridge**	**4.40 267**	*e*Pn	**Pn**	**20 05 18.2**	**+0.9**
O19A	**Miners Draw (B**	**4.47 221**	⇓P	**Pn**	**20 05 19.6**	**+1.4**
	baz=4.6,SNR=15					
O19A	**Miners Draw (B**	**4.47 221**	⇓P	**Pn**	**20 05 19.6**	**+1.4**
	baz=4.6,SNR=15					
QLMT	**Earthquake Lak**	**4.54 286**	*e*Pg	Pb	20 05 33.0	+3.3
SMCO	**Snowmass**	**4.74 196**	*e*Pn	**Pn**	**20 05 20.4**	**-1.6**
E17A	**Martinsdale**	**4.78 307**	⇑P	**Pn**	**20 05 24.1**	**+1.6**
	baz=4.8,SNR=16					
E17A	**Martinsdale**	**4.78 307**	⇑P	**Pn**	**20 05 24.1**	**+1.6**
	baz=4.8,SNR=16					
DGMT	**Dagmar**	**4.79 9**	*e*Pn	**Pn**	**20 05 22.1**	**-0.3**
BOZ	**Bozeman (W)**	**4.90 295**	*e*Pn	**Pn**	**20 05 24.5**	**+0.4**
P19A	**Cripple Cowboy**	**4.95 215**	⇓P	**Pn**	**20 05 27.2**	**+2.4**
	baz=5.1					
P19A	**Cripple Cowboy**	**4.95 215**	⇓P	**Pn**	**20 05 27.2**	**+2.4**
	baz=5.1					
HWUT	**Hardware Ranch**	**5.09 247**	*e*Pn	**Pn**	**20 05 27.7**	**+0.9**
	8.5nm,0.4s					
EGMT	**Eagleton**	**5.29 326**	*e*Pn	**Pn**	**20 05 30.7**	**+1.4**
	24nm,0.6s					
DLMT	**Dillon**	**5.46 290**	*e*Pn	**Pn**	**20 05 29.4**	**-2.4**
	11nm,0.9s					
HRY	**Holter Researc**	**5.49 305**	*e*Pn	**Pn**	**20 05 33.1**	**+1.1**
	4.7nm,0.6s					
LRM	**Limekiln Ridge**	**5.50 295**	*e*Pn	**Pn**	**20 05 32.3**	**-0.1**
	42nm,0.6s					
MCMT	**McKenzie Canyo**	**5.53 284**	*e*Pn	Pn	20 05 37.8	+5.0
	2.6nm,0.4s					
DAU	**Daniels Canyon**	**5.55 235**	*e*Pn	**Pn**	**20 05 35.0**	**+1.8**
	7.6nm,0.4s					
JLU	**Jordanelle**	**5.55 238**	*e*Pn	**Pn**	**20 05 34.5**	**+1.4**
	3.9nm,0.4s					
R26A	**Arlington**	**5.62 165**	⇓P	**Pn**	**20 05 35.0**	**+1.1**
	baz=5.7					
R26A	**Arlington**	**5.62 165**	⇓P	**Pn**	**20 05 35.0**	**+1.1**
	baz=5.7					
R25A	**Fountain Ranch**	**5.65 172**	⇑P	**Pn**	**20 05 35.4**	**+1.0**
	baz=5.7					
R25A	**Fountain Ranch**	**5.65 172**	⇑P	**Pn**	**20 05 35.4**	**+1.0**
	baz=5.7					
HVU	**Hansel Valley**	**5.85 253**	*e*Pn	**Pn**	**20 05 39.2**	**+2.1**
	6.0nm,0.6s					
E15A	**Deer Lodge**	**5.85 300**	P	**Pn**	**20 05 37.8**	**+0.6**
	baz=5.9,SNR=21					
E15A	**Deer Lodge**	**5.85 300**	P	**Pn**	**20 05 37.8**	**+0.6**
	baz=5.9,SNR=21					
SDCO	**Great Sand Dun**	**6.00 182**	Pn	**Pn**	**20 05 39.9**	**+0.6**
	2.4nm,0.7s					
PV04	**Paradox Valley**	**6.00 208**	*e*Pn	**Pn**	**20 05 40.4**	**+1.2**
R28A	**Tribune**	**6.01 153**	⇑P	**Pn**	**20 05 39.6**	**+0.4**
	baz=6.0					
R28A	**Tribune**	**6.01 153**	⇑P	**Pn**	**20 05 39.6**	**+0.4**
	baz=6.0					
MPU	**Maple Canyon**	**6.02 234**	*e*Pn	**Pn**	**20 05 42.1**	**+2.5**
C16A	**Fuhringer Ranc**	**6.07 314**	⇑P	**Pn**	**20 05 40.4**	**+0.4**
	baz=6.1,SNR=5.6					
C16A	**Fuhringer Ranc**	**6.07 314**	⇑P	**Pn**	**20 05 40.4**	**+0.4**
	baz=6.1,SNR=5.6					
S25A	**Robets Cordova**	**6.12 174**	⇑P	**Pn**	**20 05 41.6**	**+0.8**
	baz=6.2					
S25A	**Robets Cordova**	**6.12 174**	⇑P	**Pn**	**20 05 41.6**	**+0.8**
	baz=6.2					
PV01	**Paradox Valley**	**6.13 205**	*e*Pn	**Pn**	**20 05 43.2**	**+2.2**
	334nm,0.4s					
S26A	**Kim**	**6.27 167**	⇑P	**Pn**	**20 05 43.7**	**+0.7**
	baz=6.3					
S26A	**Kim**	**6.27 167**	⇑P	**Pn**	**20 05 43.7**	**+0.7**
	baz=6.3					
ECSD	**EROS Data Cent**	**6.29 87**	*e*Pn	**Pn**	**20 05 43.4**	**+0.4**
	6.1nm,0.4s					
CHMT	**Chamberlain Mo**	**6.44 302**	*e*Pn	**Pn**	**20 05 46.1**	**+0.8**
	1.7nm,0.4s					
HLID	**Hailey**	**6.62 272**	*e*Pn	**Pn**	**20 05 49.6**	**+1.9**
	4.0nm,1.0s					
DUG	**Dugway**	**6.63 240**	*e*Pn	**Pn**	**20 05 48.7**	**+0.8**
	2.4nm,0.3s					
SWMT	**Swartz Lake**	**7.17 305**	*e*Pn	**Pn**	**20 05 55.0**	**-0.2**
	3.4nm,0.5s					
YBMT	**Yellow Bay**	**7.35 307**	*e*Pn	**Pn**	**20 05 58.9**	**+1.3**
	3.9nm,0.3s					
MVU	**Marysvale**	**7.39 227**	*e*Pn	**Pn**	**20 05 59.2**	**+0.8**
	3.7nm,0.6s					
JTMT	**Jette**	**7.45 306**	*e*Pn	**Pn**	**20 06 00.7**	**+1.7**
	2.0nm,0.4s					
BSMT	**Bassoo Peak**	**7.80 305**	*e*Pn	**Pn**	**20 06 04.5**	**+0.6**
	2.1nm,0.7s					
ELK	**Elko**	**7.96 251**	*e*Pn	Pn	20 06 11.0	+4.7
ULM	**Lac du Bonnet**	**9.14 41**	Pn	**Pn**	**20 06 21.4**	**-0.8**
ULM			Lg	Lg	20 08 52.5	
ULM	**Lac du Bonnet**	**9.14 41**	Pn	**Pn**	**20 06 21.4**	**-0.8**
	1.3nm,0.3s,baz=230,slow=11,SNR=4.7					
ULM			Lg	Lg	20 08 52.5	
	0.7nm,0.3s,baz=323,slow=20,SNR=2.2					
NEW	**Newport**	**9.39 303**	LR	LR	20 10 27.0	
	comp=Z,51nm,21.1s,baz=20,slow=41					
WUAZ	**Wupatki**	**9.46 212**	*e*Pn	**Pn**	**20 06 28.0**	**+1.4**
	3.4nm,0.4s					
FFC	**Flin Flon**	**11.20 10**	*e*Pn	**Pn**	**20 06 48.5**	**-1.7**
	3.1nm,0.6s					
YKA	**Yellowknife Ar**	**19.55 347**	P	**P**	**20 08 36.3**	**-1.7**
YKA	**Yellowknife Ar**	**19.55 347**	P	**P**	**20 08 36.3**	**-1.7**
	0.1nm,0.3s,baz=164,slow=12,SNR=4.3					
ARCES	**ARCESS Array B**	**61.41 18**	P	**P**	**20 14 24.3**	**-2.2**
ARCES	**ARCESS Array B**	**61.41 18**	P	**P**	**20 14 24.3**	**-2.2**
	0.5nm,0.6s,baz=318,slow=5.2,SNR=5.1					
BBTS	**Babate**	**79.14 80**	LR	LR	20 52 54.0	
	comp=Z,30nm,18.6s,baz=180,slow=37					

IDC 23 20:13:28.3±3.9, 18°96N×144°61E, h221km±40km, mb3.1/5, mb1 3.4/6, mb1mx2.9/27, mbtmp3.2/6, Error ellipse: s-maj=75.4km s-min=17.8km az=111.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**5.35**	**177**	P	Pn	20 14 47.4	-0.2
	1.5nm,0.3s,baz=352,slow=19,SNR=2.8						
GUMO				S	S	20 15 45.2	-5.2
	2.9nm,0.3s,baz=45,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**39.95**	**195**	P	P	20 20 41.0	-0.4
	1.5nm,0.7s,baz=18,slow=9.1,SNR=28						
FITZ	**Fitzroy Crossi**	**41.28**	**208**	P	P	20 20 53.0	+0.8
	0.6nm,0.3s,baz=37,slow=10,SNR=13						
ASAR	**Alice Springs**	**43.64**	**194**	P	P	20 21 10.4	-0.8
	0.2nm,0.6s,baz=17,slow=6.9,SNR=4.9						
ILAR	**Eielson Array**	**63.87**	**26**	P	P	20 23 37.5	+0.4
	0.4nm,1.0s,baz=240,slow=7.1,SNR=3.1						
FINES	**FINESS Array B**	**86.21**	**335**	P	P	20 25 43.7	-0.9
	1.9nm,1.1s,baz=90,slow=9.0,SNR=3.3						

*ISK **23** 20:18:55.8, 38°.25N×39°.46E, h2km, MD2.8*
*DDA **23** 20:18:56.8, 38°.25N×39°.38E, h7km, MD2.7*
*ISCJB **23** 20:18:57.4±0.6, 38°.26N±0°.03×39°.38E±0°.05, h10km±6km, Error ellipse: s-maj=7.3km s-min=5.4km az=168.1*
*CSEM **23** 20:18:57.5±0.3, 38°.26N×39°.35E, h8km, MD2.8, Error ellipse: s-maj=7.3km s-min=5.3km az=69.0*

ISC 23 20:18:56.6±1.1, 38°.22N±0°.04×39°.42E±0°.04, h7km±11km, n17, σ0°60/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	**0.18**	**331**	*e*PG	**Pg**	**20 19 00.2**	**-0.1**
SVRC				*e*SG	**Sg**	**20 19 02.7**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.18**	**331**	*e*Pg	**Pg**	**20 19 00.2**	**-0.1**
SVRC				*e*Sg	**Sg**	**20 19 02.7**	**-0.1**
ELZG	**Elazig**	**0.44**	**309**	*i* P	**Pg**	**20 19 04.7**	**-0.5**
ELZG				*i* S	**Sg**	**20 19 11.3**	**+0.4**
ELZG	**Elazig**	**0.44**	**309**	*i* P	**Pg**	**20 19 04.7**	**-0.5**
ELZG				*i* S	**Sg**	**20 19 11.3**	**+0.4**
DIYA	**Diyarbakir**	**0.63**	**118**	*i* P	**Pb**	**20 19 10.1**	**+0.1**
DIYA				*i* S	**Sn**	**20 19 22.3**	**-0.1**
DIYA	**Diyarbakir**	**0.63**	**118**	*i* P	**Pb**	**20 19 10.1**	**+0.1**
DIYA				*i* S	**Sn**	**20 19 22.3**	**-0.1**
PTK	**Pertek**	**0.67**	**358**	*e*PG	**Pg**	**20 19 09.1**	**-0.5**
PTK				*e*SG	**Sg**	**20 19 19.1**	**+0.8**
PTK	**Pertek**	**0.67**	**358**	*e*Pg	**Pg**	**20 19 09.1**	**-0.5**
PTK				*e*Sg	**Sg**	**20 19 19.1**	**+0.8**
URFA	**Urfa**	**0.91**	**211**	*e*PG	**Pb**	**20 19 14.9**	**+0.1**
URFA				*e*SG	**Sn**	**20 19 29.0**	**-0.3**
URFA	**Urfa**	**0.91**	**211**	*e*Pg	**Pb**	**20 19 14.9**	**+0.1**
URFA				*e*Sg	**Sn**	**20 19 29.0**	**-0.3**
BINT	**Bingol**	**1.06**	**52**	*e*Pn	**Pn**	**20 19 19.7**	**+1.6**
BNGB	**Bing¶ll**	**1.25**	**52**	*e*PN	**Pn**	**20 19 19.7**	**-1.0**
ILIC	**ilic-Erzincan**	**1.39**	**332**	*e*PN	**Pb**	**20 19 23.0**	**-0.1**
ILIC	**ilic-Erzincan**	**1.39**	**332**	*e*Pn	**Pb**	**20 19 23.0**	**-0.1**
MARD	**Mardin**	**1.41**	**130**	*i* P	**Pn**	**20 19 22.4**	**-0.5**
DARE	**Darende-Malaty**	**1.56**	**283**	*e*PN	**Pb**	**20 19 25.9**	**+0.1**
GZT	**Gaziantep**	**1.70**	**240**	*i* P	**Sg**	**20 19 52.7**	**+1.3**

KRSC 23 20:35:06.5±1.3, 50°.06N×156°.95E, h5km±5km, ML3.7, Kuril Islands

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

SISC				Sg	Sg	20 43 29.8	-2.2
SISC	**Sisak**	**1.14**	**40**	*e*Pg	**Pb**	**20 43 16.2**	**-0.2**
SISC				Sg	Sg	20 43 29.7	-2.2
LEGS	**Legarje**	**1.35**	**360**	*i* Pn	**Pn**	**20 43 19.4**	**+0.1**
LEGS				*i*		20 43 20.3	
LEGS				*i* Sn	**Sn**	**20 43 39.7**	**+2.8**
LEGS	**Legarje**	**1.35**	**360**	*i* Pn	**Pn**	**20 43 19.4**	**+0.1**
LEGS				*i* Sn	**Sn**	**20 43 39.7**	**+2.8**
PDKS	**Podkum**	**1.48**	**351**	⇓*i* Pn	**Pg**	**20 43 22.9**	**-0.6**
PDKS				*e*Sn	**Sg**	**20 43 44.5**	**+1.7**
PDKS							
	comp=Z,179nm,0.7s						
PDKS	**Podkum**	**1.48**	**351**	⇓*i* Pn	**Pg**	**20 43 22.9**	**-0.6**
LJU	**Ljubljana**	**1.55**	**339**	*i* Pn	**Pg**	**20 43 24.5**	**-0.4**
LJU				*e*Sg	**Sg**	**20 43 46.9**	**+1.8**
LJU	**Ljubljana**	**1.55**	**339**	*i* Pn	**Pg**	**20 43 24.5**	**-0.4**
VNDS	**Vrh nad Dolski**	**1.57**	**344**	*i* Pn	**Pb**	**20 43 24.2**	**+0.5**
AOI	**Ancona**	**1.63**	**231**	Pn	**Pb**	**20 43 25.2**	**+0.4**
AOI				Sn	**Sg**	**20 43 48.3**	**+0.7**
	comp=Z,220nm,0.6s						
AOI	**Ancona**	**1.63**	**231**	Pn	**Pb**	**20 43 25.2**	**+0.4**
AOI				Sn	**Sg**	**20 43 48.3**	**+0.7**
	comp=Z,220nm,0.6s						
VOY	**Vojsko**	**1.76**	**325**	*e*Pn	**Pb**	**20 43 27.6**	**+0.6**
VOY				*e*		20 43 28.1	
VOY				*e*Sn	**Sg**	**20 43 53.7**	**+2.1**
VOY	**Vojsko**	**1.76**	**325**	*e*Pn	**Pb**	**20 43 27.6**	**+0.6**
SABO	**M.te Sabotino**	**1.84**	**319**	Pn	**Pb**	**20 43 28.5**	**+0.1**
SABO				Sn	**Sg**	**20 43 56.3**	**+1.9**
	comp=Z,319nm,0.6s						
SABO	**M.te Sabotino**	**1.84**	**319**	Pn	**Pb**	**20 43 28.5**	**+0.1**
KOGS	**Kog**	**1.96**	**19**	*i* Pn	**Pn**	**20 43 27.9**	**+0.3**
KOGS	**Kog**	**1.96**	**19**	*i* Pn	**Pn**	**20 43 27.9**	**+0.3**
CING	**Cingoli**	**1.97**	**232**	Pn	**Pb**	**20 43 29.9**	**-0.7**
	comp=Z,57nm,0.7s						
CING	**Cingoli**	**1.97**	**232**	Pn	**Pb**	**20 43 29.9**	**-0.7**
	comp=Z,57nm,0.7s						
OBKA	**Obir**	**1.99**	**344**	*e*Pn	**Pb**	**20 43 31.0**	**+0.1**
OBKA				*e*Sn	**Sg**	**20 43 59.7**	**+0.7**
OBKA	**Obir**	**1.99**	**344**	⇑*e*Pn	**Pn**	**20 43 30.0**	**+1.8**
	SNR=14						
OBKA				⇑*i*Sn	**Sn**	**20 43 55.5**	**+2.7**
OBKA	**Obir**	**1.99**	**344**	Pn	**Pn**	**20 43 30.0**	**+1.8**
	SNR=14						
OBKA				Sn	**Sn**	**20 43 55.5**	**+2.7**
ARVD	**Arcevia**	**2.05**	**238**	Pn	**Pn**	**20 43 31.0**	**+2.1**
	comp=Z,38nm,0.6s						
ARVD	**Arcevia**	**2.05**	**238**	Pn	**Pn**	**20 43 31.0**	**+2.1**
	comp=Z,38nm,0.6s						
FSSB	**Fossombrone**	**2.05**	**245**	Pn	**Pn**	**20 43 31.1**	**+2.1**
	comp=Z,22nm,0.3s						
FSSB	**Fossombrone**	**2.05**	**245**	Pn	**Pn**	**20 43 31.1**	**+2.1**
	comp=Z,22nm,0.3s						
SOKA	**Soboth**	**2.09**	**354**	⇑*i* Pn	**Pn**	**20 43 31.1**	**+1.6**
SOKA				⇓*i*Sn	**Sn**	**20 43 57.6**	**+2.3**
SOKA	**Soboth**	**2.09**	**354**	Pn	**Pn**	**20 43 31.1**	**+1.6**
SOKA				Sn	**Sn**	**20 43 57.6**	**+2.3**
BEHE	**Becsehely**	**2.13**	**28**	⇓*e*Pn	**Pg**	**20 43 34.4**	**-1.5**
BEHE				*e*Sn	**Sg**	**20 44 03.8**	**+0.3**
SNTG	**Esanatoglia**	**2.19**	**233**	Pn	**Pn**	**20 43 32.4**	**+1.5**
	comp=Z,40nm,0.8s						
SNTG	**Esanatoglia**	**2.19**	**233**	Pn	**Pn**	**20 43 32.4**	**+1.5**
	comp=Z,40nm,0.8s						
VINO	**Villanova**	**2.20**	**320**	Pn	**Pn**	**20 43 33.4**	**+2.4**
	comp=Z,138nm,0.7s						
VINO	**Villanova**	**2.20**	**320**	Pn	**Pn**	**20 43 33.4**	**+2.4**
	comp=Z,138nm,0.7s						
FDMO	**Fiordimonte**	**2.25**	**227**	Pn	**Pn**	**20 43 33.0**	**+1.2**
	comp=Z,59nm,0.6s						
FDMO	**Fiordimonte**	**2.25**	**227**	Pn	**Pn**	**20 43 33.0**	**+1.2**
	comp=Z,59nm,0.6s						
PIEI	**Pieia**	**2.28**	**243**	Pn	**Pn**	**20 43 34.0**	**+1.9**
	comp=Z,43nm,0.3s						
PIEI	**Pieia**	**2.28**	**243**	Pn	**Pn**	**20 43 34.0**	**+1.9**
	comp=Z,43nm,0.3s						
PTCC	**Patocco-Chiusa**	**2.28**	**323**	Pn	**Pb**	**20 43 35.0**	**-0.9**
	comp=Z,2.0nm,0.8s						
PTCC	**Patocco-Chiusa**	**2.28**	**323**	Pn	**Pb**	**20 43 35.0**	**-0.9**
	comp=Z,2.0nm,0.8s						
ACOM	**Acomizza, Ital**	**2.33**	**327**	Pn	**Pb**	**20 43 36.6**	**-0.2**
	comp=Z,237nm,0.8s						
ACOM	**Acomizza, Ital**	**2.33**	**327**	Pn	**Pb**	**20 43 36.6**	**-0.2**
	comp=Z,237nm,0.8s						
TERO	**Teramo**	**2.34**	**213**	Pn	**Pn**	**20 43 33.7**	**+0.7**
	comp=Z,52nm,0.5s						
TERO	**Teramo**	**2.34**	**213**	Pn	**Pn**	**20 43 33.7**	**+0.7**
	comp=Z,52nm,0.5s						
MYKA	**Terra Mystica**	**2.35**	**330**	⇓*i* Pn	**Pb**	**20 43 36.1**	**-1.0**
MYKA	**Terra Mystica**	**2.35**	**330**	Pn	**Pb**	**20 43 36.1**	**-1.0**
CESI	**CESI - Serrava**	**2.37**	**229**	Pn	**Pn**	**20 43 35.1**	**+1.7**
	comp=Z,20nm,0.4s						
CESI	**CESI - Serrava**	**2.37**	**229**	Pn	**Pn**	**20 43 35.1**	**+1.7**
	comp=Z,20nm,0.4s						
NRCA	**Norcia**	**2.39**	**223**	Pn	**Pn**	**20 43 34.9**	**+1.3**
	comp=Z,19nm,0.4s						
NRCA	**Norcia**	**2.39**	**223**	Pn	**Pn**	**20 43 34.9**	**+1.3**
	comp=Z,19nm,0.4s						
PARC	**Parchiule**	**2.42**	**248**	Pn	**Pn**	**20 43 36.1**	**+2.0**
	comp=Z,35nm,0.5s						
PARC	**Parchiule**	**2.42**	**248**	Pn	**Pn**	**20 43 36.1**	**+2.0**
	comp=Z,35nm,0.5s						
MURB	**Monte Urbino**	**2.43**	**238**	Pn	**Pn**	**20 43 36.5**	**+2.3**
	comp=Z,120nm,0.3s						
MURB	**Monte Urbino**	**2.43**	**238**	Pn	**Pn**	**20 43 36.5**	**+2.3**
	comp=Z,120nm,0.3s						
STON	**Ston**	**2.43**	**134**	*e*Pn	**Pb**	**20 43 36.3**	**-2.1**
STON				Sn	**Sb**	**20 44 07.5**	**-0.8**
STON	**Ston**	**2.43**	**134**	*e*Pn	**Pb**	**20 43 36.3**	**-2.1**
STON				Sn	**Sb**	**20 44 07.4**	**-0.8**
VCEL	**Villa Celiera**	**2.46**	**207**	Pn	**Pn**	**20 43 35.4**	**+0.8**
	comp=Z,63nm,0.7s						
VCEL	**Villa Celiera**	**2.46**	**207**	Pn	**Pn**	**20 43 35.4**	**+0.8**
	comp=Z,63nm,0.7s						
BADI	**Badiali**	**2.48**	**245**	Pn	Pn	20 43 37.5	+2.7
	comp=Z,49nm,0.5s						
BADI	**Badiali**	**2.48**	**245**	Pn	Pn	20 43 37.5	+2.7
	comp=Z,49nm,0.5s						
LNSS	**Leonessa**	**2.60**	**221**	Pn	**Pn**	**20 43 37.7**	**+1.1**
	comp=Z,163nm,0.4s						
LNSS	**Leonessa**	**2.60**	**221**	Pn	**Pn**	**20 43 37.7**	**+1.1**
	comp=Z,163nm,0.4s						
ARSA	**Arzberg**	**2.66**	**3**	*e*Pn	**Pn**	**20 43 38.4**	**+1.1**
ARSA	**Arzberg**	**2.66**	**3**	*e*Pn	**Pn**	**20 43 38.3**	**+1.0**
ARSA	**Arzberg**	**2.66**	**3**	*e*Pn	**Pn**	**20 43 38.3**	**+1.0**
ASQU	**Asqua**	**2.67**	**254**	Pn	Pn	20 43 40.4	+2.9
	comp=Z,44nm,0.9s						
ASQU	**Asqua**	**2.67**	**254**	Pn	Pn	20 43 40.4	+2.9
	comp=Z,44nm,0.9s						
CAFI	**Castiglion Fio**	**2.74**	**244**	Pn	Pn	20 43 41.2	+2.7
	comp=Z,32nm,0.5s						
CAFI	**Castiglion Fio**	**2.74**	**244**	Pn	Pn	20 43 41.2	+2.7
	comp=Z,32nm,0.5s						
INTR	**Introdacqua**	**2.79**	**202**	Pn	**Pn**	**20 43 39.9**	**+0.7**
	comp=Z,54nm,0.6s						
INTR	**Introdacqua**	**2.79**	**202**	Pn	**Pn**	**20 43 39.9**	**+0.7**
	comp=Z,54nm,0.6s						
PKSM	**Moragy**	**2.83**	**54**	*e*Pn	**Pn**	**20 43 40.7**	**+1.0**
PKSM				*e*Sg	**Sb**	**20 44 21.0**	**+1.3**
PKSM	**Moragy**	**2.83**	**54**	⇑*i*P	Pg	20 43 59.3	+10
PKSM	**Moragy**	**2.83**	**54**	⇓*e*Pn	**Pb**	**20 43 44.1**	**-1.2**
PKSM				*e*Sn	**Sn**	**20 44 10.8**	**-2.7**
PKSM	**Moragy**	**2.83**	**54**	*e*Pn	**Pn**	**20 43 40.7**	**+1.0**
KBA	**Koelnbreinsper**	**2.84**	**331**	*e*Pn	**Pb**	**20 43 44.0**	**-1.5**
SGRT	**San Giovanni R**	**2.86**	**174**	Pn	**Pn**	**20 43 39.8**	**-0.3**
SGRT	**San Giovanni R**	**2.86**	**174**	Pn	**Pn**	**20 43 39.8**	**-0.3**
PKS9	**Tamasi**	**2.87**	**45**	⇓*e*Pn	**Pn**	**20 43 39.4**	**-0.8**
PKS9				*e*Sn	**Sn**	**20 44 12.3**	**-2.1**
BRY	**Bratogost**	**2.88**	**125**	⇑*i* Pn	Pn	20 43 42.9	+2.5
BRY				*e*Sn	**Sb**	**20 44 19.9**	**-1.2**
BRY	**Bratogost**	**2.88**	**125**	⇑*i* Pn	Pn	20 43 42.9	+2.5
BRY				*e*Sn	**Sb**	**20 44 19.9**	**-1.2**
MGAB	**Montegabbione**	**2.88**	**235**	Pn	**Pn**	**20 43 42.6**	**+2.3**
	comp=Z,65nm,0.5s						
MGAB	**Montegabbione**	**2.88**	**235**	Pn	**Pn**	**20 43 42.6**	**+2.3**
	comp=Z,65nm,0.5s						
UPM	**Unac-Piva**	**2.94**	**117**	⇓*i* Pn	**Pn**	**20 43 43.2**	**+1.9**
UPM				*e*Sn	**Sb**	**20 44 21.5**	**-1.3**
UPM	**Unac-Piva**	**2.94**	**117**	⇓*i* Pn	**Pn**	**20 43 43.2**	**+1.9**
UPM				*e*Sn	**Sb**	**20 44 21.5**	**-1.3**
MNS	**Montasola**	**2.94**	**222**	Pn	**Pn**	**20 43 42.6**	**+1.5**
	comp=Z,51nm,0.6s						
MNS	**Montasola**	**2.94**	**222**	Pn	**Pn**	**20 43 42.6**	**+1.5**
	comp=Z,51nm,0.6s						
TEKS	**Tekeris**	**3.00**	**89**	*e*Pn	Pn	20 43 44.6	+2.6
TEKS	**Tekeris**	**3.00**	**89**	*e*Pn	Pn	20 43 44.6	+2.6
BBLS	**Lazići**	**3.02**	**103**	*e*Sn	**Sn**	**20 44 20.2**	**+2.0**
BBLS	**Lazići**	**3.02**	**103**	*e*Sn	**Sn**	**20 44 20.2**	**+2.0**
HCY	**Herceg Novi**	**3.15**	**132**	⇑*i* Pn	Pn	20 43 46.8	+2.8
HCY				*e*Sn	**Sb**	**20 44 26.1**	**-2.7**
HCY	**Herceg Novi**	**3.15**	**132**	⇑*i* Pn	Pn	20 43 46.8	+2.8
HCY				*e*Sn	**Sb**	**20 44 26.1**	**-2.7**
NKY	**Niksic**	**3.20**	**123**	⇑*i* Pn	Pn	20 43 47.4	+2.6
NKY				*e*Sn	**Sb**	**20 44 27.4**	**-3.0**
NKY	**Niksic**	**3.20**	**123**	⇑*i* Pn	Pn	20 43 47.4	+2.6
NKY				*e*Sn	**Sb**	**20 44 27.4**	**-3.0**
SOP	**Sopron**	**3.20**	**15**	⇓*e*Pn	**Pn**	**20 43 46.3**	**+1.6**
SOP				*e*Sn	**Sn**	**20 44 20.7**	**-1.8**
FGSL	**Fruska Gora**	**3.23**	**78**	*e*Pn	**Pn**	**20 43 47.0**	**+1.8**
FRGS	**Fruska Gora**	**3.23**	**78**	*e*Pn	**Pn**	**20 43 47.0**	**+1.8**
FRGS				*e*Sn	**Sn**	**20 44 21.3**	**-2.1**
PKST	**T"s**	**3.26**	**34**	⇑*e*Pn	**Pn**	**20 43 45.2**	**-0.4**
PKST				*e*Sn	**Sn**	**20 44 22.5**	**-1.6**
PKS2	**Kecel**	**3.32**	**54**	*e*	**Sn**	**20 44 23.8**	**-1.6**
MOA	**Molln**	**3.33**	**348**	*e*Pn	**Pn**	**20 43 49.2**	**+2.6**
MOA				*e*Sn	**Sn**	**20 44 30.6**	**+4.7**
MOA	**Molln**	**3.33**	**348**	⇑*i* Pn	**Pn**	**20 43 48.4**	**+1.8**
	SNR=8.6						
MOA				⇓*i*Sn	**Sn**	**20 44 29.3**	**+3.4**
MOA	**Molln**	**3.33**	**348**	Pn	**Pn**	**20 43 48.4**	**+1.8**
	SNR=8.6						
MOA				Sn	**Sn**	**20 44 29.3**	**+3.4**
CONA	**Conrad Observa**	**3.35**	**6**	⇑*i* Pn	**Pn**	**20 43 47.8**	**+1.0**
	SNR=36						
CONA				⇓*i*Sn	**Sn**	**20 44 28.1**	**+1.7**
CONA	**Conrad Observa**	**3.35**	**6**	Pn	**Pn**	**20 43 47.8**	**+1.0**
	SNR=36						
CONA				Sn	**Sn**	**20 44 28.1**	**+1.7**
DIVS	**Divibare**	**3.38**	**97**	*e*Pn	Pn	20 43 50.0	+2.7
DIVS				*e*Sg	**Sg**	**20 44 43.5**	**0.0**
DIVS	**Divibare**	**3.38**	**97**	*e*Pn	Pn	20 43 50.0	+2.7
BUM	**Brajici-Budva**	**3.46**	**130**	*e*Pn	Pn	20 43 50.8	+2.4
BUM				*e*Sn	**Sb**	**20 44 33.9**	**-4.0**
BUM	**Brajici-Budva**	**3.46**	**130**	*e*Pn	Pn	20 43 50.8	+2.4
BUM				*e*Sn	**Sb**	**20 44 33.9**	**-4.0**
PKSG		**3.51**	**36**	*e*Pn	**Pn**	**20 43 48.9**	**-0.1**
PKSG				*e*Sn	**Sn**	**20 44 28.1**	**-2.1**
PKS6	**Bocsa**	**3.58**	**55**	*e*Sn	**Sn**	**20 44 29.7**	**-2.2**
PDG	**Podgorica**	**3.58**	**126**	*e*Pn	**Pn**	**20 43 51.2**	**+1.2**
PDG				*e*Sn	**Sn**	**20 44 34.3**	**+2.3**
PDG	**Podgorica**	**3.58**	**126**	⇓*i* Pn	**Pn**	**20 43 51.4**	**+1.4**
PDG				*e*Sn	**Sn**	**20 44 34.3**	**+2.3**
TTG	**Podgorica**	**3.58**	**126**	⇓*i* Pn	**Pn**	**20 43 51.4**	**+1.4**
TTG				*e*Sn	**Sn**	**20 44 36.1**	**+4.1**
RJOB	**Jochberg**	**3.60**	**332**	*e*Pn	Pn	20 43 53.9	+3.6
RJOB				*e*Sn	**Sb**	**20 44 40.2**	**-1.6**
WTTA	**Wattenberg**	**3.71**	**317**	*e*Pn	Pn	20 43 56.0	+4.1
WTTA	**Wattenberg**	**3.71**	**317**	⇑*i* Pn	Pn	20 43 54.7	+2.8
WTTA	**Wattenberg**	**3.71**	**317**	Pn	Pn	20 43 54.7	+2.8
BEY	**Berane**	**3.73**	**116**	*e*Pn	**Pn**	**20 43 54.1**	**+2.0**
BEY				*e*Sn	**Sn**	**20 44 40.4**	**+4.7**
IVA	**Berane**	**3.73**	**116**	*e*Pn	**Pn**	**20 43 54.1**	**+2.0**
IVA				*e*Sn	**Sn**	**20 44 40.4**	**+4.7**
ULC	**Ulcinj**	**3.88**	**131**	⇓*i* Pn	Pn	20 43 57.4	+3.2
ULC				*e*Sn	**Sn**	**20 44 43.4**	**+3.9**
ULC	**Ulcinj**	**3.88**	**131**	⇓*i* Pn	Pn	20 43 57.4	+3.2
ULC				*e*Sn	**Sn**	**20 44 43.4**	**+3.9**
PVY	**Plav**	**3.91**	**119**	*e*Pn	Pn	20 43 57.5	+2.9
PVY				*e*Sn	**Sn**	**20 44 49.4**	**+4.6**
PVY	**Plav**	**3.91**	**119**	*e*Pn	Pn	20 43 57.5	+2.9
PVY				*e*Sn	**Sn**	**20 44 49.4**	**+4.6**
GEC2	**GERESS Array S**	**4.39**	**346**	*e*Pn	**Pn**	**20 44 02.8**	**+1.6**
GEC2				*e*Sn	**Sn**	**20 44 53.8**	**+1.7**
SELS	**Selova**	**4.40**	**106**	*e*Pn	**Pn**	**20 44 02.0**	**+0.7**
BZS	**Buzias**	**4.56**	**75**	*e*Sn	**Sn**	**20 44 52.9**	**-3.2**
PSZ	**Piszkesteto**	**4.58**	**42**	*e*Sn	**Sn**	**20 44 54.3**	**-2.5**
VRAC	**Vranov**	**4.79**	**10**	*e*Pn	**Pn**	**20 44 06.9**	**+0.3**
WET	**Wettzell**	**4.85**	**341**	*e*Pn	**Pn**	**20 44 09.7**	**+2.3**
WET				*e*Sn	**Sn**	**20 45 06.2**	**+3.0**
PCP	**Piancastagn**	**4.85**	**272**	P	**Pn**	**20 44 08.8**	**+1.3**
BARS	**Barje**	**5.03**	**109**	*i* Pn	**Pn**	**20 44 09.5**	**-0.3**
BARS				*e*Sn	**Sn**	**20 45 08.1**	**+0.5**
PGF	**Pioggiola**	**5.04**	**248**	*e*Pn	**Pn**	**20 44 10.4**	**+0.3**
PGF				*e*Sn	**Sn**	**20 45 06.9**	**-1.1**
	comp=Z,3.1nm,0.6s						
PGF	**Pioggiola**	**5.04**	**248**	*e*Pn	**Pn**	**20 44 10.4**	**+0.3**
PGF				*e*Sn	**Sn**	**20 45 06.9**	**-1.1**
	comp=Z,1.5nm,0.6s						
MORC	**Moravsky Berou**	**5.39**	**15**	*e*Pn	**Pn**	**20 44 16.2**	**+1.3**
PRU	**Pruhonice**	**5.42**	**355**	*e*PN	**Pn**	**20 44 16.6**	**+1.4**
PRU				*e*SN	**Sn**	**20 45 16.5**	**-0.7**
PRU	**Pruhonice**	**5.42**	**355**	Pn	**Pn**	**20 44 16.6**	**+1.4**
PRU				Sn	**Sn**	**20 45 16.5**	**-0.7**
ZAPS	**Zavoj**	**5.44**	**102**	⇓*i* Pn	**Pn**	**20 44 15.4**	**-0.1**
ZAPS				*e*Sn	**Sn**	**20 45 15.8**	**-1.9**
ROTZ	**Rotzenmuhle**	**5.59**	**339**	*e*Pn	**Pn**	**20 44 18.6**	**+1.0**
DRGR		**5.61**	**64**	⇑*i*P	Sn	20 45 04.9	+1.7
SBF	**Sospel**	**5.72**	**265**	*e*Pn	**Pn**	**20 44 19.9**	**+0.4**
SBF				*e*Sn	**Sn**	**20 45 23.3**	**-1.5**
	comp=Z,4.1nm,0.4s						
SBF	**Sospel**	**5.72**	**265**	*e*Pn	**Pn**	**20 44 19.9**	**+0.4**
SBF				*e*Sn	**Sn**	**20 45 23.3**	**-1.5**
	comp=Z,2.0nm,0.4s						
BFO	**Black Forest**	**6.11**	**310**	*e*Sg	Sg	20 46 20.2	+9.2
MBDF	**Montbardon**	**6.11**	**274**	*e*Pn	**Pn**	**20 44 25.3**	**+0.5**
MBDF				*e*Sn	**Sn**	**20 45 32.7**	**-1.8**
	comp=Z,3.6nm,0.3s						
MBDF	**Montbardon**	**6.11**	**274**	*e*Pn	**Pn**	**20 44 25.3**	**+0.5**
MBDF				*e*Sn	**Sn**	**20 45 32.7**	**-1.8**
	comp=Z,1.8nm,0.3s						
LPG	**La Plagne**	**6.15**	**281**	*e*Pn	**Pn**	**20 44 26.0**	**+0.5**
LPG	**La Plagne**	**6.15**	**281**	*e*P	Pn	20 44 30.7	+5.2
LPG				*e*Sn	**Sn**	**20 45 33.9**	**-1.7**
	comp=Z,7.0nm,0.6s						
LPG	**La Plagne**	**6.15**	**281**	*e*Pn	**Pn**	**20 44 26.0**	**+0.5**
LPG				*e*Sn	**Sn**	**20 45 33.9**	**-1.7**
	comp=Z,3.5nm,0.6s						
LPL	**La Plagne**	**6.16**	**282**	*e*Pn	Pn	20 44 26.1	+0.5
LPL	**La Plagne**	**6.16**	**282**	*e*P	Pn	20 44 30.8	+5.2
LPL				*e*Sn	**Sn**	**20 45 34.4**	**-1.5**
	comp=Z,4.3nm,0.3s						
LPL	**La Plagne**	**6.16**	**282**	*e*Pn	**Pn**	**20 44 26.1**	**+0.5**
LPL				*e*Sn	**Sn**	**20 45 34.4**	**-1.5**
	comp=Z,2.2nm,0.3s						
FRF	**La Foret Royal**	**6.34**	**264**	*e*Pn	**Pn**	**20 44 28.2**	**+0.3**
FRF				*e*Sn	**Sn**	**20 45 38.2**	**-1.8**
	comp=Z,2.7nm,0.5s						
FRF	**La Foret Royal**	**6.34**	**264**	*e*Pn	**Pn**	**20 44 28.2**	**+0.3**
FRF				*e*Sn	**Sn**	**20 45 38.2**	**-1.8**
	comp=Z,1.4nm,0.5s						
BRG	**Berggiesshubel**	**6.35**	**352**	PG	Pn	**20 44 28.6**	**+0.7**
BRG				*e*		20 45 42.4	
BRG	**Berggiesshubel**	**6.35**	**352**	SG	**Sg**	**20 46 18.1**	**-0.5**
	comp=Z,3.2nm,0.9s						
LMR	**La Mourre**	**6.49**	**262**	*e*Pn	**Pn**	**20 44 30.2**	**+0.3**
LMR				*e*Sn	**Sn**	**20 45 41.7**	**-2.0**
	comp=Z,1.5nm,0.3s						
LMR	**La Mourre**	**6.49**	**262**	*e*Pn	**Pn**	**20 44 30.2**	**+0.3**
LMR				*e*Sn	**Sn**	**20 45 41.7**	**-2.0**
	comp=Z,0.8nm,0.3s						
MOX	**Moxa**	**6.55**	**339**	*e*Pn	**Pn**	**20 44 32.1**	**+1.4**
MOX				*e*Sn	**Sn**	**20 45 46.4**	**+1.3**
HINF	**Hinteralfeld**	**6.71**	**302**	*e*Pn	**Pn**	**20 44 33.2**	**+0.3**
HINF				*e*Sn	**Sn**	**20 45 46.9**	**-2.1**
	comp=Z,3.5nm,0.5s						
HINF	**Hinteralfeld**	**6.71**	**302**	*e*Pn	**Pn**	**20 44 33.2**	**+0.3**
HINF				*e*Sn	**Sn**	**20 45 46.9**	**-2.1**
	comp=Z,1.8nm,0.5s						
ORIF	**Oris-en-Rattie**	**6.74**	**276**	*e*Pn	Pn	20 44 33.9	+0.5
ORIF				*e*Sn	**Sn**	**20 45 47.8**	**-2.1**
	comp=Z,5.0nm,0.4s						
ORIF	**Oris-en-Rattie**	**6.74**	**276**	*e*Pn	**Pn**	**20 44 33.9**	**+0.5**
ORIF				*e*Sn	**Sn**	**20 45 47.8**	**-2.1**
	comp=Z,2.5nm,0.4s						
CDF	**Champ du Feu**	**6.74**	**307**	*e*Pn	**Pn**	**20 44 33.6**	**+0.2**
CDF				*e*Sn	**Sn**	**20 45 47.5**	**-2.4**
	comp=Z,2.4nm,0.5s						
CDF	**Champ du Feu**	**6.74**	**307**	*e*Pn	**Pn**	**20 44 33.6**	**+0.2**
CDF				*e*Sn	**Sn**	**20 45 47.5**	**-2.4**
	comp=Z,1.2nm,0.5s						
CABF	**La Chapelle**	**6.79**	**290**	*e*Pn	**Pn**	**20 44 34.2**	**+0.1**
CABF				*e*Sn	**Sn**	**20 45 49.1**	**-2.1**
	comp=Z,1.6nm,0.5s						
CABF	**La Chapelle**	**6.79**	**290**	*e*Pn	**Pn**	**20 44 34.2**	**+0.1**
CABF				*e*Sn	**Sn**	**20 45 49.1**	**-2.1**
	comp=Z,0.8nm,0.5s						
CLL	**Collm**	**6.89**	**348**	*e*Sg	**Sg**	**20 46 35.0**	**-1.0**
CLL	**Collm**	**6.89**	**348**	*e*Pn	**Pn**	**20 44 37.0**	**+1.6**
CLL				*e*Sn	**Sn**	**20 45 54.0**	**+0.5**
CLL				*e*Sg	Sg	20 46 30.0	-6.0
	comp=Z,6.0nm,1.1s						
SMRF	**Simiane la Rot**	**7.03**	**268**	*e*Pn	**Pn**	**20 44 37.8**	**+0.4**
SMRF				*e*Sn	**Sn**	**20 45 54.6**	**-2.4**
	comp=Z,1.2nm,0.5s						
SMRF	**Simiane la Rot**	**7.03**	**268**	*e*Pn	**Pn**	**20 44 37.8**	**+0.4**
SMRF				*e*Sn	**Sn**	**20 45 54.6**	**-2.4**
	comp=Z,0.6nm,0.5s						
HAU	**Haudompre**	**7.09**	**302**	*e*Pn	**Pn**	**20 44 38.5**	**+0.3**
HAU				*e*Sn	**Sn**	**20 45 56.1**	**-2.4**
	comp=Z,2.6nm,0.4s						
HAU	**Haudompre**	**7.09**	**302**	*e*Pn	**Pn**	**20 44 38.5**	**+0.3**
HAU				*e*Sn	**Sn**	**20 45 56.1**	**-2.4**
	comp=Z,1.3nm,0.4s						
BURAR	**Bucovina Array**	**7.50**	**63**	⇑*i*P	Pn	20 44 33.1	-11
VIVF	**Saint-Julien-l**	**7.60**	**276**	*e*Pn	**Pn**	**20 44 45.3**	**+0.1**
VIVF				*e*Sn	**Sn**	**20 46 08.2**	**-2.7**
	comp=Z,1.2nm,0.4s						
VIVF	**Saint-Julien-l**	**7.60**	**276**	*e*Pn	**Pn**	**20 44 45.3**	**+0.1**
VIVF				*e*Sn	**Sn**	**20 46 08.2**	**-2.7**
	comp=Z,0.6nm,0.4s						
LOR	**Lormes**	**8.43**	**292**	*e*Pn	**Pn**	**20 44 56.7**	**+0.1**
LOR				*e*Sn	**Sn**	**20 46 28.2**	**-3.2**
	comp=Z,1.6nm,0.3s						
LOR	**Lormes**	**8.43**	**292**	*e*Pn	**Pn**	**20 44 56.7**	**+0.1**
LOR				*e*Sn	**Sn**	**20 46 28.2**	**-3.2**
	comp=Z,0.8nm,0.3s						
SSF	**Saint Saulge**	**8.62**	**291**	*e*Pn	**Pn**	**20 44 59.2**	**+0.1**
SSF				*e*Sn	**Sn**	**20 46 32.7**	**-3.3**
	comp=Z,0.6nm,0.2s						
SSF	**Saint Saulge**	**8.62**	**291**	*e*Pn	**Pn**	**20 44 59.2**	**+0.1**
SSF				*e*Sn	**Sn**	**20 46 32.7**	**-3.3**
	comp=Z,0.3nm,0.2s						
BGF	**Bois d'Agland**	**8.98**	**287**	*e*Pn	**Pn**	**20 45 04.2**	**+0.2**
BGF				*e*Sn	**Sn**	**20 46 41.2**	**-3.5**
	comp=Z,2.4nm,0.5s						
BGF	**Bois d'Agland**	**8.98**	**287**	*e*Pn	**Pn**	**20 45 04.2**	**+0.2**
BGF				*e*Sn	**Sn**	**20 46 41.2**	**

ASAR				PcP	PcP	21 07 08.3	+2.7	
	0.3nm,0.8s,baz=10,slow=5.1,SNR=3.1							
ILAR	**Eielson Array**	**61.04**	**29**	P	**P**	21 06 54.8	-0.3	
	0.3nm,0.6s,baz=290,slow=9.0,SNR=5.3							
ARCES	**ARCESS Array B**	**67.90**	**338**	P	**P**	21 07 37.9	-1.9	
	1.4nm,0.9s,baz=61,slow=7.6,SNR=3.4							
ARCES				LR	LR	21 42 30.4		
	comp=Z,26nm,19.6s,baz=322,slow=40							
JOF	**Joensuu**	**68.31**	**331**	*ep*	**P**	21 07 40.0	-2.4	
	0.3nm,0.3s							
FINES	**FINESS Array B**	**71.15**	**330**	P	**P**	21 07 58.4	-1.5	
	1.1nm,0.5s,baz=61,slow=6.0,SNR=18							
YKA	**Yellowknife Ar**	**75.14**	**26**	P	**P**	21 08 23.7	+0.2	
	0.4nm,0.7s,baz=304,slow=5.7,SNR=7.6							
BRTR	**Keskin Array B**	**76.58**	**308**	P	**P**	21 08 33.0	+0.7	
	0.7nm,0.7s,baz=92,slow=4.7,SNR=6.7							
NOA	**NORSAR Array B**	**77.43**	**334**	P	**P**	21 08 35.4	-1.1	
	0.3nm,0.6s,baz=76,slow=4.5,SNR=2.7							
GERES	**GERESS Array B**	**83.88**	**324**	P	**P**	21 09 11.3	0.0	
	0.2nm,0.5s,baz=35,slow=3.6,SNR=3.1							
NVAR	**Mina Array Bea**	**87.25**	**47**	P	**P**	21 09 29.3	+0.8	
	0.2nm,0.4s,baz=296,slow=4.5,SNR=2.5							

IDC 23 21:12:06.8±2.3, 6.71S×129.80E, h0km, mb3.4/1, mb1 3.8/4, mb1mx3.4/20, mbtmp3.6/4, ML3.9/2, Error ellipse: s-maj=89.9km s-min=28.8km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.03**	**199**	Pn	Pn	21 15 00.5	+0.8
	0.3nm,0.3s,baz=23,slow=11,SNR=32						
FITZ				Sn	Sn	21 17 02.3	-12
	0.6nm,0.3s,baz=46,slow=22,SNR=6.7						
WRA	**Warramunga Arr**	**13.88**	**162**	Pn	Pn	21 15 23.7	-1.3
	0.6nm,0.3s,baz=343,slow=13,SNR=39						
WRA				Sn	Sn	21 17 44.8	-15
	0.1nm,0.3s,baz=333,slow=22,SNR=3.6						
ASAR	**Alice Springs**	**17.32**	**167**	P	Pn	21 16 10.5	+0.3
	0.3nm,0.3s,baz=342,slow=8.8,SNR=16						
MKAR	**Makanchi Array**	**67.87**	**327**	P	P	21 23 07.2	0.0
	0.1nm,0.4s,baz=118,slow=7.1,SNR=4.5						

IDC 23 21:12:59.4±2.6, 8.72S×150.76E, h0km, mb2.7/1, mb1 3.3/3, mb1mx3.2/18, mbtmp3.2/3, ML2.7/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/6, Error ellipse: s-maj=74.6km s-min=40.1km az=151.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.62**	**259**	Pn	Pn	21 13 58.7	+1.8
	4.6nm,0.3s,baz=63,slow=6.8,SNR=13						
PMG				Sn	Sn	21 14 40.5	+0.1
	7.5nm,0.3s,baz=69,slow=14,SNR=4.8						
PMG				LR	LR	21 15 21.2	
	comp=Z,150nm,20.2s,baz=244,slow=39						
WRA	**Warramunga Arr**	**19.41**	**233**	P	P	21 17 26.4	-1.0
	baz=56,slow=11,SNR=3.3						
ASAR	**Alice Springs**	**21.94**	**225**	P	P	21 17 54.9	0.0
	0.3nm,0.9s,baz=58,slow=9.5,SNR=3.0						
TORD	**Torodi Ar. Bea**	**149.33**	**281**	PKPbc	PKPbc	21 32 50.9	-0.5
	0.3nm,0.6s,baz=72,slow=3.7,SNR=3.2						

*IDC **23** 21:16:08.2±1.9, 0.71S×132.99E, h0km, mb3.6/3, mb1 3.8/5, mb1mx3.5/22, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=86.1km s-min=23.4km az=74.0*
*ISCJB **23** 21:16:11.6±0.8, 0.64S±0.08×132.92E±0.05, h32km, mb3.6/3, Error ellipse: s-maj=11.2km s-min=7.7km az=7.3*
*DJA **23** 21:16:13.9±0.5, 1°S±5'×13'E±°, h87km±14km, M3.9/6, mb4.0/2, MLv3.8/6*

ISC 23 21:16:13.5±1.1, 0.81S±0.08×132.95E±0.04, h32km, n11, σ0s88/14, mb3.6/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RKPI	**Ransiki, Papua**	**1.41**	**119**	P	**Pn**	**21 16 37.9**	**+0.9**
RKPI				S	**Sb**	**21 16 57.8**	**+0.8**
SWI	**Sorong**	**1.69**	**268**	P	**Pn**	**21 16 41.2**	**+0.4**
SWI				S	**Sb**	**21 17 06.2**	**+1.4**
FAKI	**Fak Fak**	**2.21**	**198**	P	**Pn**	**21 16 49.3**	**+1.3**
FAKI				S	**Sb**	**21 17 18.4**	**-1.3**
BAKI	**Biak**	**3.18**	**97**	P	**Pn**	**21 17 01.7**	**+0.3**
SRPI	**Serui, Papua**	**3.46**	**108**	P	**Pn**	**21 17 05.7**	**+0.5**
LBMI	**Labuha**	**5.45**	**272**	P	**Pn**	**21 17 32.9**	**+0.3**
	18nm,1.6s,0.1nm						
FITZ	**Fitzroy Crossi**	**18.62**	**202**	P	**Pn**	**21 20 28.7**	**-0.3**
	0.1nm,0.3s,baz=16,slow=13,SNR=2.6						
WRA	**Warramunga Arr**	**19.06**	**176**	P	**Pn**	**21 20 34.0**	**-0.3**
	0.1nm,0.3s,baz=355,slow=11,SNR=5.5						
ASAR	**Alice Springs**	**22.74**	**178**	P	**P**	**21 21 13.3**	**+0.2**
	1.1nm,0.5s,baz=356,slow=10,SNR=7.9						
STKA	**Stephens Creek**	**31.96**	**166**	P	**P**	**21 22 36.2**	**-0.4**
	0.6nm,0.3s,baz=329,slow=9.7,SNR=6.6						
MKAR	**Makanchi Array**	**64.83**	**324**	P	**P**	**21 26 48.6**	**-0.8**
	0.1nm,0.2s,baz=122,slow=7.4,SNR=2.6						

IDC 23 21:18:53.8±11.0, 2.39S×126.08E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.4/22, mbtmp3.7/3, Error ellipse: s-maj=175.3km s-min=153.6km az=125.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.22**	**156**	P	P	21 23 19.8	+0.2
	0.3nm,0.3s,baz=334,slow=11,SNR=20						
ASAR	**Alice Springs**	**22.47**	**161**	P	P	21 23 54.2	-0.6
	0.8nm,0.5s,baz=342,slow=11,SNR=10						
STKA	**Stephens Creek**	**32.77**	**155**	P	P	21 25 29.0	+0.3
	1.6nm,0.7s,baz=319,slow=9.3,SNR=4.4						

*ISCJB **23** 21:22:04.8±0.4, 9.30S±0.05×124.47E±0.05, h25km, mb3.9/9, MS3.2/4, Error ellipse: s-maj=9.3km s-min=4.5km az=44.1*
*IDC **23** 21:22:04.2±0.8, 9.32S×124.36E, h0km, mb3.9/6, mb1 4.0/10, mb1mx3.8/21, mbtmp3.9/10, ML3.9/4, MS3.3/6, Ms1 3.3/6, ms1mx2.9/33, Error ellipse: s-maj=54.2km s-min=16.8km az=62.0*
*NEIC **23** 21:22:08.7±0.4, 9.31S×124.52E, h35km, mb4.0/3, Error ellipse: s-maj=26.5km s-min=5.7km az=56.0*
*DJA **23** 21:22:09.8±0.4, 9°S±4'×12'4E±°, h53km±30km, M4.3/8, mb4.5/5, mB4.8/1, MLv4.3/8, Mw(mB)4.1/1*

ISC 23 21:22:06.9±0.6, 9.38S±0.05×124.49E±0.07, h25km, n42, σ1s74/47, mb4.0/9, MS3.3/4, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**2.35**	**288**	P	**Pn**	**21 22 42.2**	**-1.7**
MMRI				S	**Sn**	**21 23 09.2**	**-2.7**
EDFI	**Ende, Flores**	**2.84**	**282**	P	**Pn**	**21 22 49.3**	**-1.4**
BASI	**Baing, Sumba**	**3.95**	**257**	P	**Pn**	**21 23 06.3**	**+0.4**
WSI	**Waingapu**	**4.15**	**266**	P	**Pn**	**21 23 08.4**	**-0.3**
BBSI	**Bau Bau**	**4.31**	**334**	P	**Pn**	**21 23 08.4**	**-2.5**
WBSI	**Waikabubak, Su**	**5.04**	**267**	P	**Pn**	**21 23 20.5**	**-0.5**
BSSI	**Bau Bau, Buton**	**5.10**	**309**	P	Pn	21 23 25.3	+3.5
KDI	**Kendari**	**5.70**	**341**	P	**Pn**	**21 23 27.7**	**-2.2**
BMNI	**Bima**	**5.79**	**278**	P	**Pn**	**21 23 30.1**	**-1.2**
	91nm,0.8s,0.8nm						
BKSI	**Bulukumba**	**5.92**	**313**	P	**Pn**	**21 23 30.5**	**-2.5**
	9.2nm,1.0s,0.0nm						
KAPI	**Kappang**	**6.39**	**312**	Pn	**Pn**	**21 23 39.7**	**+0.1**
KAPI	**Kappang**	**6.39**	**312**	Pn	**Pn**	**21 23 39.7**	**+0.1**
	0.4nm,0.3s,baz=138,slow=15,SNR=2.5						
LUWI	**Luwuk**	**8.45**	**348**	P	**Pn**	**21 24 05.8**	**-2.0**
	24nm,0.7s,633nm						
FITZ	**Fitzroy Crossi**	**8.75**	**173**	*e*Pn	**Pn**	**21 24 13.3**	**+1.5**
	4.9nm,0.4s						
FITZ				*e*Sn	**Sn**	**21 25 47.2**	**-2.5**
FITZ	**Fitzroy Crossi**	**8.75**	**173**	Pn	**Pn**	**21 24 13.4**	**+1.5**
	1.5nm,0.3s,baz=12,slow=11,SNR=38						
FITZ				Sn	**Sn**	**21 25 47.2**	**-2.5**
	0.8nm,0.3s,baz=90,slow=19,SNR=4.5						
FITZ				LR	LR	21 27 58.0	
	comp=Z,80nm,20.7s,baz=354,slow=40						
WRA	**Warramunga Arr**	**14.17**	**139**	Pn	**Pn**	**21 25 26.6**	**+0.4**
WRA				Sn	**Sn**	**21 27 58.9**	**-3.8**
WRA	**Warramunga Arr**	**14.17**	**139**	Pn	**Pn**	**21 25 26.6**	**+0.4**
	1.1nm,0.3s,baz=322,slow=13,SNR=38						
WRA				Sn	**Sn**	**21 27 58.9**	**-3.8**
	0.5nm,0.3s,baz=307,slow=25,SNR=4.6						
WRAB	**Tennant Creek**	**14.17**	**139**	*e*Pn	**Pn**	**21 25 26.8**	**+0.7**
	5.7nm,0.6s						
WRAB				*e*Sn	**Sn**	**21 28 04.7**	**+1.9**
AS31	**Alice Springs**	**16.82**	**149**	*e*Pn	**P**	**21 26 02.1**	**-0.8**
ASAR	**Alice Springs**	**16.82**	**149**	Pn	**P**	**21 26 02.4**	**-0.5**
ASAR				Sn	**Sn**	**21 29 04.0**	**-3.1**
ASAR	**Alice Springs**	**16.82**	**149**	Pn	**P**	**21 26 02.4**	**-0.5**
	0.4nm,0.3s,baz=324,slow=13,SNR=19						
ASAR				Sn	**Sn**	**21 29 04.0**	**-3.1**
	0.1nm,0.3s,baz=312,slow=21,SNR=3.2						
ASAR				LR	LR	21 33 26.1	
	comp=Z,172nm,18.6s,baz=150,slow=40						
CTA	**Charters Tower**	**23.55**	**119**	LR	LR	21 36 02.9	
	comp=Z,108nm,20.1s,baz=130,slow=35						
STKA	**Stephens Creek**	**27.44**	**147**	P	**P**	**21 27 53.1**	**+2.2**
STKA	**Stephens Creek**	**27.44**	**147**	P	**P**	**21 27 53.1**	**+2.2**
	2.8nm,0.8s,baz=320,slow=7.9,SNR=3.1						
STKA				LR	LR	21 39 30.6	
	comp=Z,99nm,19.4s,baz=205,slow=38						
CMAR	**Chiang Mai Arr**	**37.42**	**318**	P	**P**	**21 29 17.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**37.42**	**318**	P	**P**	**21 29 17.8**	**-0.5**
	0.6nm,0.6s,baz=149,slow=6.9,SNR=5.5						
CMAR				LR	LR	21 47 05.6	
	comp=Z,42nm,18.4s,baz=125,slow=40						
KSRS	**Korea Array**	**46.69**	**4**	LR	LR	21 51 25.3	
	comp=Z,9.7nm,19.4s,baz=185,slow=38						
USRK	**Ussuriysk Arra**	**53.75**	**7**	P	**P**	**21 31 29.1**	**+2.1**
	1.0nm,0.7s,baz=224,slow=8.0,SNR=4.4						
SONM	**Songino Array**	**59.18**	**346**	P	**P**	**21 32 06.5**	**+0.7**
SONM	**Songino Array**	**59.18**	**346**	P	**P**	**21 32 06.5**	**+0.7**
	0.7nm,0.5s,baz=157,slow=8.5,SNR=6.1						
MK31	**Makanchi Array**	**67.38**	**330**	*e*P	**P**	**21 33 00.2**	**+0.1**
MKAR	**Makanchi Array**	**67.38**	**330**	P	**P**	**21 33 00.3**	**+0.3**
MKAR	**Makanchi Array**	**67.38**	**330**	P	**P**	**21 33 00.3**	**+0.3**
	1.2nm,0.6s,baz=144,slow=5.8,SNR=14						
KBL	**Kabul**	**68.24**	**313**	*e*P	**P**	**21 33 05.9**	**-0.1**
	4.0nm,0.8s						
AAK	**Ala-Archa**	**68.97**	**323**	*e*P	**P**	**21 33 10.7**	**+0.3**
	0.6nm,0.4s						
ZALV	**Zalesovo Beam**	**71.43**	**337**	P	**P**	**21 33 24.3**	**-0.7**
ZALV	**Zalesovo Beam**	**71.43**	**337**	P	**P**	**21 33 24.3**	**-0.7**
	0.8nm,0.5s,baz=122,slow=5.6,SNR=6.4						
KURK	**Kurchatov**	**71.83**	**331**	*e*P	**P**	**21 33 27.3**	**-0.1**
	0.7nm,0.6s						
TORD	**Torodi Ar. Bea**	**123.87**	**280**	PKP	**PKPdf**	**21 41 05.7**	**+1.9**
TORD	**Torodi Ar. Bea**	**123.87**	**280**	PKP	**PKPdf**	**21 41 05.7**	**+1.9**
	0.5nm,0.7s,baz=104,slow=1.3,SNR=3.4						
CPUP	**Villa Florida**	**144.47**	**177**	PKP	**PKPdf**	**21 41 43.0**	**+1.1**
CPUP	**Villa Florida**	**144.47**	**177**	PKP	**PKPdf**	**21 41 43.0**	**+1.1**
	0.3nm,0.5s,baz=90,slow=20,SNR=3.7						

*ISCJB **23** 21:57:38.9±0.2, 40.51N±0.01×29.13E±0.02, h11km±2km, mb3.2/7, Error ellipse: s-maj=2.4km s-min=2.2km az=142.0*
*DDA **23** 21:57:38.5, 40.47N×29.17E, h19km, ML3.9*
*ISK **23** 21:57:38.8, 40.48N×29.14E, h11km, ML3.8*
*THE **23** 21:57:39.4, 40.51N×29.06E, h0km±1km, ML3.7/2, Error ellipse: s-maj=1.9km s-min=1.2km az=91.0*
*CSEM **23** 21:57:39.4±0.1, 40.47N×29.13E, h8km, ML3.8, Error ellipse: s-maj=1.7km s-min=1.6km az=31.0*
*IDC **23** 21:57:41.4±1.2, 40.87N×29.62E, h0km, mb3.2/7, mb1 3.3/11, mb1mx3.2/31, mbtmp3.2/11, ML3.2/4, MS2.3/1, Ms1 2.3/1, ms1mx1.8/24, Error ellipse: s-maj=23.3km s-min=13.2km az=48.0*

ISC 23 21:57:39.5±0.7, 40.47N±0.01×29.16E±0.01, h14km±4km, n238, σ1s106/284, mb3.3/7, 20C-12D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GEMT	**Gemlik**	**0.04**	**146**	*e*Pg	**Pg**	**21 57 41.5**	**-0.5**
GEMT				*e*SG	**Sg**	**21 57 42.8**	**-1.0**
GEMT	**Gemlik**	**0.04**	**146**	*e*Pg	**Pg**	**21 57 41.6**	**-0.5**
GEMT				*e*Sg	**Sg**	**21 57 42.8**	**-1.0**
YLV	**Yalova**	**0.19**	**60**	*e*PG	**Pg**	**21 57 44.0**	**+0.1**
YLV				*e*SG	**Sg**	**21 57 46.6**	**-0.3**
YLV	**Yalova**	**0.19**	**60**	*e*Pg	**Pg**	**21 57 44.0**	**+0.1**
YLV				*e*Sg	**Sg**	**21 57 46.7**	**-0.3**
MDNY	**Mudanya-Bursa**	**0.23**	**244**	*e*PG	**Pg**	**21 57 44.7**	**+0.2**
MDNY				*e*SG	**Sg**	**21 57 48.3**	**+0.4**
MDNY	**Mudanya-Bursa**	**0.23**	**244**	*e*Pg	**Pg**	**21 57 44.7**	**+0.2**
MDNY				*e*Sg	**Sg**	**21 57 48.3**	**+0.4**
ARMT	**Armutlu**	**0.24**	**293**	*e*PG	**Pg**	**21 57 44.5**	**-0.3**
ARMT	**Armutlu**	**0.24**	**293**	*e*Pg	**Pg**	**21 57 44.5**	**-0.3**
ULDT	**Uludag**	**0.33**	**183**	*i* P	**Pg**	**21 57 46.0**	**-0.3**
ULDT	**Uludag**	**0.33**	**183**	*i* P	**Pg**	**21 57 46.0**	**-0.3**
BUY	**Buyukada**	**0.38**	**356**	*e*PG	**Pg**	**21 57 47.4**	**+0.2**
BUY				*e*SG	**Sg**	**21 57 52.4**	**-0.1**
BUY	**Buyukada**	**0.38**	**356**	*i* P	**Pg**	**21 57 47.5**	**+0.3**
BUY				*i* S	**Sb**	**21 57 53.2**	**-0.7**
BUY	**Buyukada**	**0.38**	**356**	*i* P	**Pg**	**21 57 47.5**	**+0.3**
BUY				*e*Sg	**Sg**	**21 57 52.4**	**-0.1**
BUY				*i* S	**Sb**	**21 57 53.2**	**-0.7**
ADVT	**Abdulvahap**	**0.45**	**95**	*e*PG	**Pg**	**21 57 48.2**	**-0.1**
ADVT	**Abdulvahap**	**0.45**	**95**	*e*Pg	**Pg**	**21 57 48.2**	**-0.1**
ORLT	**Orhaneli**	**0.47**	**205**	*e*PG	**Pg**	**21 57 48.0**	**-0.8**
ORLT	**Orhaneli**	**0.47**	**205**	*e*Pg	**Pg**	**21 57 48.0**	**-0.8**
CAVI	**Cavuskoy**	**0.59**	**117**	*e*PG	**Pg**	**21 57 50.6**	**-0.4**
CAVI	**Cavuskoy**	**0.59**	**117**	*e*Pg	**Pg**	**21 57 50.6**	**-0.4**
ISK	**Istanbul-Kandi**	**0.60**	**353**	*e*PG	**Pg**	**21 57 50.6**	**-0.6**
ISK	**Istanbul-Kandi**	**0.60**	**353**	P	**Pg**	**21 57 51.1**	**-0.1**
ISK				S	**Sg**	**21 57 59.2**	**0.0**
ISK	**Istanbul-Kandi**	**0.60**	**353**	*e*Pg	**Pg**	**21 57 50.6**	**-0.6**
ISK	**Istanbul-Kandi**	**0.60**	**353**	P	**Pg**	**21 57 51.1**	**-0.1**
ISK				S	**Sg**	**21 57 59.2**	**0.0**
KCTX	**Karacabey (Bur**	**0.65**	**252**	*e*PG	**Pg**	**21 57 51.6**	**-0.4**
KCTX	**Karacabey (Bur**	**0.65**	**252**	*e*Pg	**Pg**	**21 57 51.7**	**-0.4**
BGKT	**Bogazkoy**	**0.77**	**338**	*e*PG	**Pg**	**21 57 53.6**	**-0.8**
BGKT	**Bogazkoy**	**0.77**	**338**	*e*Pg	**Pg**	**21 57 53.6**	**-0.8**
SILT	**Sile**	**0.78**	**28**	*e*PG	**Pg**	**21 57 54.1**	**-0.5**
SILT	**Sile**	**0.78**	**28**	*e*Pg	**Pg**	**21 57 54.1**	**-0.5**
KLYT	**Kilyos**	**0.79**	**354**	*e*PG	**Pg**	**21 57 54.5**	**-0.2**
KLYT	**Kilyos**	**0.79**	**354**	*e*Pg	**Pg**	**21 57 54.5**	**-0.2**
ELBA	**Catalca**	**0.87**	**321**	*i* P	**Pb**	**21 57 56.2**	**-0.2**
ELBA				*i* S	**Sg**	**21 58 06.5**	**-1.4**
ELBA	**Catalca**	**0.87**	**321**	*i* P	**Pb**	**21 57 56.2**	**-0.2**
ELBA				*i* S	**Sg**	**21 58 06.5**	**-1.4**
GPA	**Golpazari**	**0.90**	**101**	*e*PG	**Pb**	**21 57 56.4**	**-0.5**
GPA	**Golpazari**	**0.90**	**101**	*e*Pg	**Pb**	**21 57 56.4**	**-0.5**
SPNC	**Sapanca-Adapaz**	**0.90**	**76**	*e*PG	**Pb**	**21 57 56.5**	**-0.4**
SPNC	**Sapanca-Adapaz**	**0.90**	**76**	*e*Pg	**Pb**	**21 57 56.5**	**-0.4**
CTKS	**Kestanelik-??a**	**0.91**	**327**	*e*PG	**Pb**	**21 57 56.3**	**-0.8**
CTKS	**Kestanelik-??a**	**0.91**	**327**	*e*Pg	**Pb**	**21 57 56.3**	**-0.8**
BNT	**Bandirma**	**0.95**	**264**	*e*PG	**Pb**	**21 57 57.5**	**-0.3**
BNT	**Bandirma**	**0.95**	**264**	*e*Pg	**Pb**	**21 57 57.5**	**-0.3**
DST	**Dursunbey**	**0.96**	**206**	*e*PG	**Pb**	**21 57 57.5**	**-0.4**
DST	**Dursunbey**	**0.96**	**206**	*e*Pg	**Pb**	**21 57 57.6**	**-0.4**
DURS	**Dursunbey**	**1.01**	**211**	*i* P	**Pb**	**21 57 58.9**	**0.0**
DURS				*i* S	**Sb**	**21 58 12.0**	**-0.1**
DURS	**Dursunbey**	**1.01**	**211**	*i* P	**Pb**	**21 57 58.9**	**0.0**
DURS				*i* S	**Sb**	**21 58 12.0**	**-0.1**
GULT	**Gulveren**	**1.04**	**92**	*e*PG	**Pb**	**21 57 58.9**	**-0.4**
GULT	**Gulveren**	**1.04**	**92**	*e*Pg	**Pb**	**21 57 58.9**	**-0.4**
SLVT	**Silivri**	**1.04**	**317**	*e*PG	**Pb**	**21 57 58.9**	**-0.5**
SLVT	**Silivri**	**1.04**	**317**	*e*Pg	**Pb**	**21 57 58.9**	**-0.5**
TVSB	**Tavsanli**	**1.05**	**167**	*e*PG	**Pb**	**21 57 59.2**	**-0.2**
TVSB	**Tavsanli**	**1.05**	**167**	*e*Pg	**Pb**	**21 57 59.3**	**-0.2**
MRMT	**Marmara Adasi**	**1.20**	**277**	*e*PN	**Pn**	**21 58 01.9**	**0.0**
MRMT	**Marmara Adasi**	**1.20**	**277**	*e*Pn	**Pn**	**21 58 01.9**	**0.0**
CTYL	**Yal??k??y-??at**	**1.20**	**327**	*e*PN	**Pn**	**21 58 01.8**	**-0.1**
CTYL	**Yal??k??y-??at**	**1.20**	**327**	*e*Pn	**Pn**	**21 58 01.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.20**	**250**	*e*PN	**Pn**	**21 58 01.5**	**-0.4**
GONE	**Gonen-Balikesi**	**1.20**	**250**	*e*Pn	**Pn**	**21 58 01.5**	**-0.4**
CRLT	**Corlu**	**1.26**	**302**	*e*PN	**Pb**	**21 58 02.9**	**-0.2**
CRLT	**Corlu**	**1.26**	**302**	*e*Pn	**Pb**	**21 58 02.9**	**-0.2**
BALB	**Balikesir**	**1.28**	**230**	*e*PN	**Pb**	**21 58 03.4**	**0.0**
BALB	**Balikesir**	**1.28**	**230**	*e*Pn	**Pb**	**21 58 03.4**	**0.0**
TKR	**Tekirdag**	**1.34**	**293**	*e*PN	**Pb**	**21 58 04.1**	**-0.2**
TKR	**Tekirdag**	**1.34**	**293**	*e*Pn	**Pb**	**21 58 04.1**	**-0.2**
HENT	**Hendek**	**1.37**	**75**	*i* P	**Pb**	**21 58 04.7**	**-0.3**
HENT				*i* S	**Sn**	**21 58 21.4**	**-0.8**
HENT	**Hendek**	**1.37**	**75**	*i* P	**Pb**	**21 58 04.7**	**-0.3**
HENT				*i* S	**Sn**	**21 58 21.4**	**-0.8**
BALY	**Balya**	**1.39**	**239**	*i* P	**Pb**	**21 58 04.8**	**-0.4**
BALY				*i* S	**Sn**	**21 58 21.6**	**-1.1**
BALY	**Balya**	**1.39**	**239**	*i* P	**Pb**	**21 58 04.8**	**-0.4**
BALY				*i* S	**Sn**	**21 58 21.6**	**-1.1**
GDZ	**Gediz**	**1.40**	**170**	*i* P	**Pn**	**21 58 05.1**	**+0.3**
GDZ				*i* S	**Sg**	**21 58 25.3**	**+0.6**
GDZ	**Gediz**	**1.40**	**170**	*i* P	**Pn**	**21 58 05.1**	**+0.3**
GDZ				*i* S	**Sg**	**21 58 25.3**	**+0.6**
KRBG	**Karabiga-Canak**	**1.42**	**267**	*e*PN	**Pn**	**21 58 04.2**	**-0.7**
KRBG	**Karabiga-Canak**	**1.42**	**267**	*e*Pn	**Pn**	**21 58 04.2**	**-0.7**
DEMI	**Demirci**	**1.47**	**194**	*i* P	**Pn**	**21 58 05.7**	**+0.1**
DEMI				*i* S	**Sg**	**21 58 26.1**	**-0.6**
DEMI	**Demirci**	**1.47**	**194**	*i* P	**Pn**	**21 58 05.7**	**+0.1**
DEMI				*i* S	**Sg**	**21 58 26.1**	**-0.6**
SART	**Tekirdag**	**1.52**	**279**	*i* P	**Pb**	**21 58 07.5**	**0.0**
SART				*i* S	**Sg**	**21 58 28.3**	**-0.2**
SART	**Tekirdag**	**1.52**	**279**	*i* P	**Pb**	**21 58 07.5**	**0.0**
SART				*i* S	**Sg**	**21 58 28.3**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.52**	**279**	*e*PN	**Pn**	**21 58 06.6**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.52**	**279**	*e*Pn	**Pn**	**21 58 06.6**	**+0.2**
MDUB	**Mudurnu**	**1.56**	**89**	*e*PN	**Pn**	**21 58 07.4**	**+0.5**
MDUB	**Mudurnu**	**1.56**	**89**	*e*Pn	**Pn**	**21 58 07.4**	**+0.5**
ALT	**Altintas**	**1.59**	**152**	*e*PN	**Pn**	**21 58 08.0**	**+0.6**
ALT	**Altintas**	**1.59**	**152**	*e*Pn	**Pn**	**21 58 08.0**	**+0.6**
ESKT	**Eskisehir**	**1.61**	**126**	*e*PN	**Pn**	**21 58 08.3**	**+0.7**
ESKT	**Eskisehir**	**1.61**	**126**	*e*Pn	**Pn**	**21 58 08.3**	**+0.7**
LPK	**Lapseki**	**1.83**	**268**	*e*PN	**Pn**	**21 58 10.1**	**-0.5**
LPK	**Lapseki**	**1.83**	**268**	*e*Pn	**Pn**	**21 58 10.1**	**-0.5**
AKHS	**Akhisar**	**1.90**	**214**	*i* P	**Pn**	**21 58 10.9**	**-0.6**
AKHS				*i* S	**Sn**	**21 58 35.3**	**+0.1**
AKHS	**Akhisar**	**1.90**	**214**	*i* P	**Pn**	**21 58 10.9**	**-0.6**
AKHS				*i* S	**Sn**	**21 58 35.3**	**+0.1**
KDZE	**Karadeniz Ereo**	**1.93**	**63**	*e*PN	**Pn**	**21 58 12.8**	**+0.9**
KDZE	**Karadeniz Ereo**	**1.93**	**63**	*e*Pn	**Pn**	**21 58 12.8**	**+0.9**
KULA	**Kula-Manisa**	**1.99**	**191**	*e*PN	**Pn**	**21 58 13.5**	**+0.6**
KULA	**Kula-Manisa**	**1.99**	**191**	*e*Pn	**Pn**	**21 58 13.5**	**+0.6**
ERIK	**Erikli-Kesan**	**2.02**	**277**	*e*PN	**Pn**	**21 58 13.6**	**+0.4**
ERIK	**Erikli-Kesan**	**2.02**	**277**	*e*Pn	**Pn**	**21 58 13.6**	**+0.4**
MANT	**Manisa**	**2.03**	**193**	*i* P	**Pb**	**21 58 17.0**	**+0.7**
MANT				*i* S	**Sb**	**21 58 43.1**	**+1.5**
MANT	**Manisa**	**2.03**	**193**	*i* P	**Pb**	**21 58 17.0**	**+0.7**
MANT				*i* S	**Sb**	**21 58 43.1**	**+1.5**
GELI	**Tayfur-Gelibol**	**2.05**	**269**	*e*PN	**Pn**	**21 58 14.0**	**+0.5**
GELI	**Tayfur-Gelibol**	**2.05**	**269**	*e*Pn	**Pn**	**21 58 14.0**	**+0.5**
SVRH	**Sivrihisar-ESK**	**2.09**	**119**	*e*PN	**Pn**	**21 58 15.1**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.09**	**119**	*e*Pn	**Pn**	**21 58 15.1**	**+1.0**
KHAL	**Karahalli**	**2.11**	**173**	*i* P	**Pn**	**21 58 14.2**	**-0.3**
KHAL				*i* S	**Sb**	**21 58 45.7**	**+1.9**
KHAL	**Karahalli**	**2.11**	**173**	*i* P	**Pn**	**21 58 14.2**	**-0.3**
KHAL				*i* S	**Sb**	**21 58 45.7**	**+1.9**

DIKM	**Dikmen**	**4.76**	**74**	*e*Pn	**Pn**	**21 58 53.1**	**+2.3**
CFR	**Carcaliu**	**4.76**	**351**	⇑*i*P	**Pn**	**21 58 51.2**	**+0.4**
CFR	**Carcaliu**	**4.76**	**351**	⇑*i*P	**Pn**	**21 58 51.2**	**+0.4**
SMIA	**Simia**	**4.86**	**253**	P	**Pn**	**21 58 52.7**	**+0.5**
SMIA	**Simia**	**4.86**	**253**	P	**Pn**	**21 58 52.7**	**+0.5**
VTS	**Vitosha**	**4.94**	**297**	⇑*i*P	**Pn**	**21 58 54.1**	**+0.6**
VTS	**Vitosha**	**4.94**	**297**	⇑*i*P	**Pn**	**21 58 54.1**	**+0.6**
VAY	**Valandovo**	**5.06**	**282**	*e*Pn	**Pn**	**21 58 55.5**	**+0.5**
VAY	**Valandovo**	**5.06**	**282**	*e*Pn	**Pn**	**21 58 56.0**	**+1.0**
BNN	**Bunyan**	**5.41**	**105**	*e*PN	**Pn**	**21 59 01.5**	**+1.6**
BNN	**Bunyan**	**5.41**	**105**	*e*Pn	**Pn**	**21 59 01.5**	**+1.6**
MLR	**Muntele Rosu**	**5.54**	**336**	⇑*i*P	**Pn**	**21 59 02.9**	**+1.2**
MLR	**Muntele Rosu**	**5.54**	**336**	Pn	**Pn**	**21 59 03.0**	**+1.4**
	0.2nm,0.3s,baz=215,slow=2.7,SNR=8.6						
MLR				Lg	Lg	22 00 34.2	
	0.2nm,0.3s,baz=76,slow=22,SNR=3.2						
MLR	**Muntele Rosu**	**5.54**	**336**	⇑*i*P	**Pn**	**21 59 02.9**	**+1.2**
VRI	**Vrincioaia**	**5.68**	**343**	⇑*i*P	**Pn**	**21 59 04.9**	**+1.5**
VRI	**Vrincioaia**	**5.68**	**343**	⇑*i*P	**Pn**	**21 59 04.9**	**+1.5**
VOIR		**5.81**	**330**	⇓*i*P	**Pn**	**21 59 05.9**	**+0.6**
VOIR		**5.81**	**330**	⇓*i*P	**Pn**	**21 59 05.9**	**+0.6**
ARR	**Arges**	**5.91**	**327**	⇓*i*P	**Pn**	**21 59 06.9**	**+0.2**
ARR	**Arges**	**5.91**	**327**	⇓*i*P	**Pn**	**21 59 06.9**	**+0.2**
BARS	**Barje**	**5.98**	**295**	⇑*i*Pn	**Pn**	**21 59 08.1**	**+0.5**
LEOM	**Leova**	**6.04**	**354**	⇑*i*P	**Pn**	**21 59 10.6**	**+2.3**
LEOM	**Leova**	**6.04**	**354**	⇑*i*P	**Pn**	**21 59 10.6**	**+2.3**
TESR	**Tescani**	**6.31**	**344**	⇑*i*P	**Pn**	**21 59 11.8**	**-0.3**
TESR	**Tescani**	**6.31**	**344**	⇑*i*P	**Pn**	**21 59 11.8**	**-0.3**
LOT	**Lotru**	**6.35**	**323**	⇑*i*P	**Pn**	**21 59 14.5**	**+1.7**
LOT	**Lotru**	**6.35**	**323**	⇑*i*P	**Pn**	**21 59 14.5**	**+1.7**
GRUS	**Gruza**	**7.14**	**301**	⇑*i*Pn	**Pn**	**21 59 24.4**	**+0.9**
BZS	**Buzias**	**7.54**	**315**	⇑*i*P	**Pn**	**21 59 29.0**	**0.0**
BZS	**Buzias**	**7.54**	**315**	⇑*i*P	**Pn**	**21 59 29.0**	**0.0**
BURAR	**Bucovina Array**	**7.69**	**340**	⇓*i*P	**Pn**	**21 59 33.5**	**+2.5**
BURAR	**Bucovina Array**	**7.69**	**340**	⇓*i*P	**Pn**	**21 59 33.5**	**+2.5**
DIVS	**Divibare**	**7.70**	**301**	*e*Pn	**Pn**	**21 59 34.1**	**+2.8**
MMAI	**Mount Meron Ar**	**8.97**	**144**	Pn	Pn	21 59 53.2	+4.5
	0.5nm,0.3s,baz=340,slow=12,SNR=3.4						
AKASG	**Malin Array Be**	**10.23**	**0**	Pn	**Pn**	**22 00 02.9**	**-2.9**
	1.4nm,0.3s,baz=187,slow=11,SNR=3.7						
GERES	**GERESS Array B**	**13.80**	**312**	LR	LR	22 06 34.9	
	comp=Z,13nm,18.5s,baz=298,slow=39						
FINES	**FINESS Array B**	**21.09**	**356**	P	**P**	**22 02 22.6**	**-0.5**
	2.0nm,0.8s,baz=159,slow=11,SNR=8.2						
HFS	**Hagfors**	**21.92**	**339**	P	**P**	**22 02 33.0**	**+0.9**
	1.1nm,0.8s,baz=139,slow=13,SNR=3.6						
NOA	**NORSAR Array B**	**23.36**	**338**	P	**P**	**22 02 48.2**	**+0.9**
	0.5nm,0.7s,baz=151,slow=11,SNR=2.5						
KURBB	**Kurchatov Arra**	**35.43**	**57**	P	**P**	**22 04 34.1**	**-0.8**
	0.1nm,0.8s,baz=278,slow=8.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**36.34**	**229**	P	P	22 04 52.0	+9.0
	0.2nm,0.5s,baz=39,slow=9.4,SNR=3.9						
MKAR	**Makanchi Array**	**38.35**	**62**	P	**P**	**22 04 59.6**	**-0.3**
	0.5nm,0.9s,baz=278,slow=8.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**39.12**	**51**	P	**P**	**22 05 06.0**	**-0.2**
	0.3nm,0.4s,baz=269,slow=8.4,SNR=2.5						

IDC 23 22:17:28.1±4.2, 3.54S×128.43E, h192km±44km, mb3.5/3, mb1 3.8/4, mb1mx3.2/22, mbtmp3.6/4, Error ellipse: s-maj=118.0km s-min=15.6km az=69.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.30**	**161**	P	P	22 21 15.7	-1.3
	0.0nm,0.3s,baz=343,slow=12,SNR=83						
WRA				S	S	22 24 24.2	-2.9
	0.0nm,0.3s,baz=341,slow=22,SNR=3.5						
ASAR	**Alice Springs**	**20.72**	**166**	P	P	22 21 53.3	-0.3
	19nm,0.9s,baz=347,slow=12,SNR=112						
ASAR				S	S	22 25 35.5	+1.4
	1.0nm,0.9s,baz=349,slow=18,SNR=4.8						
STKA	**Stephens Creek**	**30.79**	**158**	P	P	22 23 27.4	+1.5
	2.5nm,0.8s,baz=343,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**64.49**	**327**	P	P	22 27 44.0	-0.3
	0.3nm,0.4s,baz=124,slow=7.7,SNR=4.7						

GUC 23 22:20:39.2±0.8, 21.03S×68.68W, h100km±8km, ML3.7, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**Plate Boundary**	**0.93**	**214**	⇑*i*P	Pn	22 20 59.7	+0.5
PB09				*i* S	Sn	22 21 15.4	+1.2
PB09				AML	AML	22 21 18.2	
	comp=E,2μm,0.8s						
HMBC	**Humberstone**	**1.36**	**303**	*e*P	Pn	22 21 04.1	+0.2
HMBC				*i* S	Sn	22 21 23.3	+0.7
HMBC				AML	AML	22 21 27.5	
	comp=E,579nm,0.4s						
PB04	**Plate Boundary**	**1.45**	**211**	⇑*i*P	Pn	22 21 10.5	+5.7
PB04				*i* S	Sn	22 21 35.0	+11
PB04				AML	AML	22 21 42.7	
	comp=E,472nm,0.3s						
LVC	**Limon Verde**	**1.59**	**188**	⇑*i*P	Pn	22 21 07.5	+0.5
LVC				*i* S	Sn	22 21 29.2	+1.1
PSGC	**Pisagua**	**1.97**	**316**	⇓*i*P	Pn	22 21 11.2	-0.3
PSGC				*i* S	Sn	22 21 36.2	0.0
MNMC	**Minimini**	**2.07**	**335**	*e*P	Pn	22 21 14.0	+0.8
MNMC				*i* S	Sn	22 21 40.9	+1.9
MNMC				AML	AML	22 21 46.1	
	comp=N,572nm,0.5s						
CEN1	**Los Morros**	**2.75**	**211**	*e*P	Pn	22 21 26.1	+4.4
CEN1				*i* S	Sn	22 22 01.4	+7.0
CEN1				AML	AML	22 22 09.8	
	comp=E,292nm,0.5s						
ANCH	**Antofagasta**	**3.09**	**211**	*e*P	Pn	22 21 27.6	+1.4
ANCH				*i* S	Sn	22 22 04.2	+1.7
ANCH				AML	AML	22 22 15.2	
	comp=E,336nm,0.3s						

NNC 23 22:23:01.9±5.6, 40.88N×73.56E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=65.0km s-min=24.6km az=169.0

ISC 23 22:22:53.5±4.3, 40.3N±0.3×73.61E±0.09, h14km, n10, σ1s57/11, 5C-1D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**1.87**	**2**	P	**Pg**	**22 23 30.6**	**+1.2**
	SNR=18						
KZA	**Kyzart**	**2.20**	**34**	P	**Pb**	**22 23 31.4**	**-1.9**
	SNR=22						
EKS2	**Erkin-Say**	**2.40**	**3**	P	**Pg**	**22 23 38.8**	**-0.8**
	SNR=5.6						
AAK	**Ala-Archa**	**2.46**	**15**	P	**Pb**	**22 23 37.3**	**-0.4**
	SNR=17						
KBK	**Karagaybulak**	**2.60**	**22**	P	**Pb**	**22 23 38.4**	**-1.5**
	SNR=5.3						
ULHL	**Ulahol**	**2.81**	**44**	P	**Pn**	**22 23 39.9**	**+1.8**
	SNR=19						
TKM2	**Tokmak 2**	**3.05**	**29**	⇓Pn	**Pn**	**22 23 42.4**	**+0.9**
	2.0nm,0.3s						
TKM2				⇑Pg	**Pb**	**22 23 47.4**	**-0.2**
	4.1nm,0.3s						
TKM2				⇑Lg	Lg	22 24 24.3	
	19nm,0.6s						
TKM2	**Tokmak 2**	**3.05**	**29**	P	**Pn**	**22 23 42.7**	**+1.3**
	SNR=9.8						
KK31	**Karatay Array**	**3.67**	**322**	Pn	**Pb**	**22 23 56.7**	**-1.4**
	0.6nm,0.2s,baz=135,slow=13,SNR=45						
KK31				⇑Lg	Lg	22 24 39.8	
	1.2nm,0.5s,baz=147,slow=18,SNR=3.4						
KNDC	**Almaty**	**3.88**	**39**	⇑Pn	**Pb**	**22 23 59.5**	**-2.1**
	18nm,0.5s						
KNDC				⇑Lg	Lg	22 24 52.6	
	19nm,0.6s						

ISK 23 22:26:07.6, 37.10N×29.14E, h5km, MD3.4
ATH 23 22:26:07.8, 36.97N×29.76E, h45km, MD3.5/3
DDA 23 22:26:08.2, 37.09N×29.15E, h26km, MD3.3
ISCJB 23 22:26:09.2±0.5, 37.15N±0.02×29.12E±0.03, h2km±5km, Error ellipse: s-maj=3.8km s-min=3.1km az=43.2
CSEM 23 22:26:09.5±0.1, 37.15N×29.15E, h2km, MD3.4, Error ellipse: s-maj=3.2km s-min=2.8km az=153.0

ISC 23 22:26:06.9±1.2, 37.13N±0.02×29.09E±0.02, h3km±10km, n79, σ1s78/105, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLHS	**Glhisar (BURDU**	**0.33**	**84**	*e*PG	**Pb**	**22 26 14.4**	**-1.2**
GLHS				*e*SG	**Sb**	**22 26 19.7**	**-1.7**
GOLH	**Golhisar**	**0.40**	**73**	*i* P	**Pb**	**22 26 15.8**	**-0.9**
GOLH				*i* S	**Sb**	**22 26 22.3**	**-0.9**
GOLH	**Golhisar**	**0.40**	**73**	*i* P	**Pb**	**22 26 15.8**	**-0.9**
GOLH				*i* S	**Sb**	**22 26 22.3**	**-0.9**
TURN	**Turunc**	**0.46**	**237**	*i* P	Pn	22 26 23.6	+3.1
TURN				*i* S	Sb	22 26 35.3	+10
TURN	**Turunc**	**0.46**	**237**	*i* P	Pn	22 26 23.6	+3.1
FETY	**Fethiye**	**0.49**	**180**	*e*PG	**Pb**	**22 26 17.9**	**-0.3**
FETY				*e*SG	**Sb**	**22 26 25.5**	**-0.3**
FETY	**Fethiye**	**0.49**	**180**	*e*Pg	**Pb**	**22 26 17.9**	**-0.3**
FETY				*e*Sg	**Sb**	**22 26 25.5**	**-0.3**
DNZL	**Cakiroluk**	**0.56**	**357**	*i* P	**Pb**	**22 26 20.0**	**+0.4**
DNZL				*i* S	**Sn**	**22 26 30.3**	**-1.8**
DNZL	**Cakiroluk**	**0.56**	**357**	*i* P	**Pb**	**22 26 20.0**	**+0.4**
DNZL				*i* S	**Sn**	**22 26 30.3**	**-1.8**
DENT	**Denizli**	**0.63**	**356**	*e*PG	**Pn**	**22 26 21.1**	**-1.8**
DENT	**Denizli**	**0.63**	**356**	*e*Pg	**Pn**	**22 26 21.1**	**-1.8**
YER	**Yerkesik**	**0.64**	**271**	*e*PG	**Pn**	**22 26 22.1**	**-0.9**
YER				*e*SG	**Sn**	**22 26 32.6**	**-1.2**
YER	**Yerkesik**	**0.64**	**271**	*e*Pg	**Pn**	**22 26 22.1**	**-0.9**
YER				*e*Sg	**Sn**	**22 26 32.6**	**-1.2**
AKAS	**Kas**	**0.98**	**155**	*i* P	**Pg**	**22 26 26.3**	**+0.5**
AKAS				*i* S	**Sn**	**22 26 44.4**	**+2.1**
AKAS	**Kas**	**0.98**	**155**	*i* P	**Pg**	**22 26 26.3**	**+0.5**
AKAS				*i* S	**Sn**	**22 26 44.4**	**+2.1**
KORT	**Korkueli**	**1.02**	**97**	*i* P	Pn	22 26 27.9	-0.4
KORT				*i* S	**Sn**	**22 26 45.1**	**+1.9**
KORT	**Korkueli**	**1.02**	**97**	*i* P	Pn	22 26 27.9	-0.4
KORT				*i* S	**Sn**	**22 26 45.1**	**+1.9**
MLSB	**Milas**	**1.06**	**280**	*e*PN	Pn	22 26 29.4	+0.7
MLSB				*e*SN	**Sn**	**22 26 46.3**	**+2.3**
AYDN	**Tasoluk**	**1.10**	**299**	*i* P	Pn	22 26 30.6	+1.3
AYDN				*i* S	**Sn**	**22 26 45.9**	**+0.8**
AYDN	**Tasoluk**	**1.10**	**299**	*i* P	Pn	22 26 30.6	+1.3
AYDN				*i* S	**Sn**	**22 26 45.9**	**+0.8**
ARG	**Arkhangelos**	**1.19**	**221**	*e*P	Pn	22 26 33.4	+2.9
ARG				*e*S	**Sn**	**22 26 52.6**	**+5.4**
ARG	**Arkhangelos**	**1.19**	**221**	*e*P	Pn	22 26 33.4	+2.9
ARG				*e*S	**Sn**	**22 26 52.6**	**+5.4**
KHL	**Karahalli**	**1.25**	**16**	*e*PN	Pn	22 26 32.6	+1.2
KHL	**Karahalli**	**1.25**	**16**	*e*Pn	Pn	22 26 32.6	+1.2
ANTB	**Antalya**	**1.28**	**100**	*e*PN	Pn	22 26 32.3	+0.6
ANTB	**Antalya**	**1.28**	**100**	*e*Pn	Pn	22 26 32.3	+0.6
KHAL	**Karahalli**	**1.28**	**14**	*i* P	Pn	22 26 32.9	+0.9
KHAL				*i* S	**Sn**	**22 26 52.0**	**+2.2**
KHAL	**Karahalli**	**1.28**	**14**	*i* P	Pn	22 26 32.9	+0.9
KHAL				*i* S	**Sn**	**22 26 52.0**	**+2.2**
ISP	**Isparta**	**1.34**	**58**	*e*PN	**Pb**	**22 26 34.0**	**+1.2**
ISP	**Isparta**	**1.34**	**58**	*e*Pn	**Pb**	**22 26 34.0**	**+1.2**
BODT	**Bodrum**	**1.42**	**268**	*e*PN	**Pg**	**22 26 36.2**	**+2.1**
BODT	**Bodrum**	**1.42**	**268**	*e*Pn	**Pg**	**22 26 36.2**	**+2.1**
MANT	**Manisa**	**1.43**	**343**	*i* P	**Pb**	**22 26 35.7**	**+1.3**
MANT				*i* S	**Sn**	**22 26 53.6**	**+0.2**
MANT	**Manisa**	**1.43**	**343**	*i* P	**Pb**	**22 26 35.7**	**+1.3**
MANT				*i* S	**Sn**	**22 26 53.6**	**+0.2**
KULA	**Kula-Manisa**	**1.43**	**347**	*e*PN	**Pb**	**22 26 36.3**	**+2.0**
KULA	**Kula-Manisa**	**1.43**	**347**	*e*Pn	**Pb**	**22 26 36.3**	**+2.0**
GCAM	**G?zelcaml?**	**1.58**	**292**	*i* P	**Pg**	**22 26 38.8**	**+1.5**
GCAM				*i* S	**Sg**	**22 26 58.9**	**+1.1**
GCAM	**G?zelcaml?**	**1.58**	**292**	*i* P	**Pg**	**22 26 38.8**	**+1.5**
GCAM				*i* S	**Sg**	**22 26 58.9**	**+1.1**
SHUT	**Suhut-Afyon**	**1.84**	**39**	*e*PN	**Pg**	**22 26 41.5**	**-0.7**
SHUT	**Suhut-Afyon**	**1.84**	**39**	*e*Pn	**Pg**	**22 26 41.5**	**-0.7**
IZM	**Izmir**	**1.92**	**312**	*e*PN	**Pg**	**22 26 43.5**	**-0.3**
IZM	**Izmir**	**1.92**	**312**	*e*Pn	**Pg**	**22 26 43.5**	**-0.3**
DEMI	**Demirci**	**1.94**	**351**	*i* P	**Pb**	**22 26 42.7**	**-0.3**
DEMI				*i* S	**Sg**	**22 27 13.1**	**+4.0**
DEMI	**Demirci**	**1.94**	**351**	*i* P	**Pb**	**22 26 42.7**	**-0.3**
GDZ	**Gediz**	**1.99**	**9**	*i* P	**Pb**	**22 26 43.5**	**-0.3**
GDZ				*i* S	**Sg**	**22 27 12.1**	**+1.3**
GDZ	**Gediz**	**1.99**	**9**	*i* P	**Pb**	**22 26 43.5**	**-0.3**
GDZ				*i* S	**Sg**	**22 27 12.1**	**+1.3**
AKHS	**Akhisar**	**2.02**	**331**	*i* P	**Pg**	**22 26 45.5**	**-0.2**
AKHS				*i* S	**Sb**	**22 27 09.5**	**-0.4**
AKHS	**Akhisar**	**2.02**	**331**	*i* P	**Pg**	**22 26 45.4**	**-0.2**
AKHS				*i* S	**Sb**	**22 27 09.5**	**-0.4**
BLCB	**Balcova**	**2.05**	**308**	*e*PN	**Pg**	**22 26 45.5**	**-0.7**
BLCB	**Balcova**	**2.05**	**308**	*e*Pn	**Pg**	**22 26 45.5**	**-0.7**
ALT	**Altintas**	**2.09**	**22**	*e*PN	**Pb**	**22 26 45.4**	**-0.2**
ALT	**Altintas**	**2.09**	**22**	*e*Pn	**Pb**	**22 26 45.4**	**-0.2**
KARP	**Karpathos**	**2.21**	**225**	*e*P	**Pg**	**22 26 48.6**	**-0.7**
KARP				*e*S	**Sg**	**22 27 17.7**	**-0.3**
KARP	**Karpathos**	**2.21**	**225**	*e*P	**Pg**	**22 26 48.6**	**-0.7**
KARP				*e*S	**Sg**	**22 27 17.7**	**-0.3**
TVSB	**Tavsanli**	**2.34**	**7**	*e*PN	**Pb**	**22 26 48.2**	**-1.6**
TVSB	**Tavsanli**	**2.34**	**7**	*e*Pn	**Pb**	**22 26 48.2**	**-1.6**
BALB	**Balikesir**	**2.68**	**340**	*e*PN	**Pb**	**22 26 54.5**	**-1.1**
BALB	**Balikesir**	**2.68**	**340**	*e*Pn	**Pb**	**22 26 54.5**	**-1.1**
LADK	**Ladik-KONYA**	**2.81**	**67**	*e*PN	**Pb**	**22 26 55.1**	**-2.8**
LADK	**Ladik-KONYA**	**2.81**	**67**	*e*Pn	**Pb**	**22 26 55.1**	**-2.8**
APE	**Apeiranthos**	**2.84**	**270**	*e*PN	**Pb**	**22 26 57.0**	**-1.4**
APE	**Apeiranthos**	**2.84**	**270**	*e*Pn	**Pb**	**22 26 57.0**	**-1.4**
SVRH	**Sivrihisar-ESK**	**3.01**	**39**	*e*PN	**Pb**	**22 26 58.4**	**-2.8**
SVRH	**Sivrihisar-ESK**	**3.01**	**39**	*e*Pn	**Pb**	**22 26 58.4**	**-2.8**
GONE	**Gonen-Balikesi**	**3.12**	**340**	*e*PN	**Pb**	**22 27 00.5**	**-2.5**
GONE	**Gonen-Balikesi**	**3.12**	**340**	*e*Pn	**Pb**	**22 27 00.5**	**-2.5**
NPS	**Neapolis**	**3.37**	**238**	*e*P	**Pb**	**22 27 04.4**	**-2.9**
NPS				*e*S	**Sb**	**22 27 45.8**	**-2.9**
NPS	**Neapolis**	**3.37**	**238**	*e*P	**Pb**	**22 27 04.4**	**-2.9**
NPS				*e*S	**Sb**	**22 27 45.8**	**-2.9**
ARMT	**Armutlu**	**3.44**	**357**	*e*PN	Pb	22 27 05.0	-3.6
ARMT	**Armutlu**	**3.44**	**357**	*e*Pn	Pb	22 27 05.0	-3.6
GULT	**Gulveren**	**3.49**	**18**	*e*PN	Pn	22 27 05.0	+2.8
GULT	**Gulveren**	**3.49**	**18**	*e*Pn	Pn	22 27 05.0	+2.8
LAST	**Lasithi**	**3.52**	**237**	*e*P	**Pb**	**22 27 06.9**	**-3.0**
LAST				*e*S	**Sb**	**22 27 50.7**	**-2.3**
LAST	**Lasithi**	**3.52**	**237**	*e*P	**Pb**	**22 27 06.9**	**-3.0**
LAST				*e*S	**Sb**	**22 27 50.7**	**-2.3**
GELI	**Tayfur-Gelibol**	**3.85**	**329**	*e*PN	Pb	22 27 11.0	-4.6
GELI	**Tayfur-Gelibol**	**3.85**	**329**	*e*Pn	Pb	22 27 11.0	-4.6
VLI	**Veliai**	**4.94**	**267**	*e*P	Pb	22 27 29.5	-4.6
VLI	**Veliai**	**4.94**	**267**	*e*P	Pb	22 27 29.5	-4.6

IDC 23 22:30:05.5±3.0, 1.51N×101.30W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.7/18, mbtmp3.6/4, MS3.2/3, Ms1 3.2/3, ms1mx2.7/26, Error ellipse: s-maj=187.6km s-min=56.7km az=72.0, Galapagos Triple Junction region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**24.42**	**111**	LR	LR	22 42 38.8	
	comp=Z,65nm,21.3s,baz=345,slow=31						
TXAR	**Lajitas Array**	**27.76**	**356**	P	P	22 35 56.1	-0.1
	0.5nm,0.9s,baz=179,slow=12,SNR=4.1						
TXAR				LR	LR	22 45 49.2	
	comp=Z,29nm,19.8s,baz=0.0,slow=34						
LPAZ	**La Paz**	**37.22**	**120**	LR	LR	22 50 27.0	
	comp=Z,48nm,19.0s,baz=57,slow=33						
PDAR	**Pinedale Array**	**41.73**	**351**	P	P	22 37 57.5	+0.8
	0.6nm,0.8s,baz=168,slow=9.2,SNR=3.9						
YKA	**Yellowknife Ar**	**61.65**	**353**	P	P	22 40 24.5	-0.4
	0.8nm,0.8s,baz=162,slow=6.4,SNR=8.6						
ILAR	**Eielson Array**	**71.12**	**341**	P	P	22 41 25.4	-0.2
	0.7nm,0.8s,baz=152,slow=5.6,SNR=6.6						
BRTR	**Keskin Array B**	**121.86**	**40**	PKP	PKPdf	22 49 02.3	-0.1
	0.3nm,0.7s,baz=315,slow=0.6,SNR=2.9						

ISCJB 23 22:49:52.5±0.4, 44.11N±0.04×82.81E±0.06, h10km, mb3.9/11, Error ellipse: s-maj=6.8km s-min=5.0km az=144.3
IDC 23 22:49:52.5±0.8, 43.95N×82.86E, h0km, mb3.6/8, mb1 3.7/15, mb1mx3.6/34, mbtmp3.6/15, ML3.4/7, MS2.7/2, Ms1 2.7/2, ms1mx2.2/45, Error ellipse: s-maj=13.8km s-min=9.7km az=85.0
BJI 23 22:49:54.5, 44.02N×82.75E, h10km, mb3.9/2, ML3.5/6, Ms7 3.3/2
NNC 23 22:49:59.8±1.8, 44.36N×82.40E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=18.4km s-min=7.5km az=123.0

ISC 23 22:49:52.7±0.6, 43.97N±0.05×82.76E±0.04, h10km, n35, σ2s32/43, mb3.8/11, 19C-11D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**2.84**	**353**	⇑Pn	**Pb**	**22 50 42.4**	**-1.1**
	1.1nm,0.3s,baz=179,slow=17,SNR=34						
MK31				⇑Pg	**Pg**	**22 50 47.5**	**+0.4**
	35nm,0.5s,baz=175,slow=19,SNR=8.2						
MK31				⇑Lg	Lg	22 51 17.5	
	191nm,0.7s,baz=173,slow=25,SNR=13						
MKAR	**Makanchi Array**	**2.84**	**353**	Pn	**Pb**	**22 50 41.8**	**-1.8**
	3.1nm,0.3s,baz=176,slow=15,SNR=111						
MKAR				Pg	**Pg**	**22 50 47.5**	**+0.3**
	26nm,0.3s,baz=170,slow=17,SNR=96						
MKAR				Sn	**Sb**	**22 51 16.7**	**-1.7**
	11nm,0.3s,baz=183,slow=26,SNR=128						
WMQ	**Urumqi**	**3.57**	**91**	Pn	**Pg**	**22 51 01.6**	**+0.6**
WMQ				Sn	**Sb**	**22 51 36.6**	**-2.7**
WMQ				smax	smax		
	comp=N,120nm,0.5s						
WMQ				smax	smax		
	comp=E,110nm,0.5s						
KNDC	**Almaty**	**4.28**	**262**	⇑Pn	**Pb**	**22 51 05.5**	**-2.5**
	comp=E,40nm,0.6s						
KNDC				⇑Sn	**Sb**	**22 51 55.4**	**-4.3**
	comp=E,64nm,0.6s						
KNDC				⇑Lg	Lg	22 52 10.3	
	comp=E,64nm,0.6s						
TKM2	**Tokmak 2**	**5.32**	**261**	⇑Pn	Pn	22 51 18.2	+5.9
	comp=E,10nm,0.7s						
TKM2				⇓Lg	Lg	22 52 41.4	
	comp=E,54nm,0.7s						
AAK	**Ala-Archa**	**6.18**	**260**	Pn	Pn	22 51 30.2	+6.1
	comp=E,0.4nm,0.3s,baz=98,slow=7.1,SNR=3.8						
AAK				Pg	Pb	22 51 46.2	+5.8
	comp=E,0.9nm,0.3s,baz=121,slow=6.7,SNR=14						
AAK				Lg	Lg	22 53 07.7	
	comp=E,1.0nm,0.3s,baz=322,slow=19,SNR=4.6						
KSH	**Kashi**	**6.75**	**231**	*e*Pg	Pg	22 52 06.8	+4.9
KSH				LR	LR		
	comp=N,120nm,3.5s						
KSH				LR	LR		
	comp=E,150nm,6.2s						
KSH				LR	LR		
	comp=Z,110nm,4.4s						
KURBB	**Kurchatov Arra**	**7.25**	**338**	Pn	**Pn**	**22 51 41.1**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=168,slow=12,SNR=12						
KURBB				Lg	Lg	22 53 45.1	
	comp=Z,0.8nm,0.3s,baz=183,slow=30,SNR=9.4						
KUR17	**Kurchatov Arra**	**7.28**	**338**	⇓Pn	**Pn**	**22 51 41.0**	**+2.0**
	comp=Z,0.1nm,0.3s						
KUR17				⇓Sn	**Sn**	**22 53 01.4**	**-0.2**
	comp=Z,0.6nm,0.6s						
KUR17				⇑Lg	Lg	22 53 39.3	
	comp=Z,1.8nm,0.6s						
KURK	**Kurchatov**	**7.31**	**339**	⇑Pn	**Pn**	**22 51 41.9**	**+2.5**
	comp=Z,2.6nm,0.5s						
KURK				⇑Sn	**Sn**	**22 53 01.6**	**-0.8**
	comp=Z,11nm,0.5s						
KURK				⇓Lg	Lg	22 53 38.8	
	comp=Z,79nm,1.1s						
KK31	**Karatay Array**	**8.94**	**269**	⇓Pn	Pn	22 52 08.4	+6.5
	comp=Z,0.6nm,0.6s,baz=69,slow=14,SNR=7.8						
KK31				Lg	Lg	22 54 36.8	
	comp=Z,8.2nm,0.6s,baz=76,slow=28,SNR=4.6						
ZALV	**Zalesovo Beam**	**10.08**	**7**	Pn	**Pn**	**22 52 19.6**	**+2.3**
	comp=Z,0.7nm,0.3s,baz=188,slow=14,SNR=12						
ZALV				Sn	**Sn**	**22 54 06.8**	**-3.6**
	comp=Z,2.8nm,0.3s,baz=180,slow=22,SNR=20						
ZALV				Lg	Lg	22 55 17.1	
	comp=Z,0.5nm,0.3s,baz=194,slow=30,SNR=6.4						
ZALV				LR	LR	22 56 33.3	
	comp=Z,28nm,19.9s,baz=292,slow=40						
VOSK	**Vostochnaya**	**11.74**	**322**

WMQ smax smax
comp=N,140nm,1.1s
WMQ smax smax
comp=E,250nm,1.3s
MKAR Makanchi Array 10.41 333 Pn **Pn** **22 55 58.2 -1.6**
comp=E,1.2nm,0.3s,baz=147,slow=13,SNR=4.2
MKAR Sn **Sn** **22 57 53.6 -1.5**
comp=E,0.4nm,0.3s,baz=155,slow=25,SNR=5.2
MKAR Lg Lg 22 59 01.0
comp=E,0.3nm,0.3s,baz=154,slow=24,SNR=3.4
KSH Kashi 10.51 284 *e*P Pn 22 56 03.4 +2.2
KSH *ep*P 22 56 06.8
KSH *es*P 22 56 09.9
KSH *e*PP **PnPn** **22 56 12.3 +3.5**
KSH *e*S **Sn** **22 57 59.0 +1.2**
KSH *e*SS **SnSn** **22 58 13.1 +3.7**
KSH pmax pmax
comp=Z,11nm,0.9s
KSH LR LR
comp=N,120nm,3.2s
KSH LR LR
comp=E,140nm,3.3s
KSH LR LR
comp=Z,240nm,3.6s
AAK Ala-Archa 12.27 298 Pn **Pn** **22 56 23.5 -1.8**
comp=Z,0.2nm,0.3s,baz=118,slow=15,SNR=2.6
AAK Lg Lg 22 59 50.9
comp=Z,0.1nm,0.3s,baz=282,slow=22,SNR=3.6
AAK LR LR 23 01 56.9
comp=Z,109nm,19.1s,baz=93,slow=42
KURBB Kurchatov Arra 14.98 333 Pn Pn 22 56 57.8 -4.2
comp=Z,0.2nm,0.3s,baz=143,slow=13,SNR=2.9
KURBB Lg Lg 23 01 27.2
comp=Z,0.0nm,0.3s,baz=143,slow=28,SNR=3.0
SONM Songino Array 16.14 46 Pn **P** **22 57 21.0 +0.9**
comp=Z,0.1nm,0.3s,baz=222,slow=13,SNR=7.1
SONM Lg Lg 23 02 07.6
comp=Z,0.1nm,0.3s,baz=227,slow=28,SNR=5.5
ZALV Zalesovo Beam 16.51 351 Pn **Pn** **22 57 21.7 0.0**
comp=Z,0.2nm,0.3s,baz=166,slow=13,SNR=4.7
BVAR Borovoye Array 20.13 326 P **P** **22 58 03.9 +0.1**
comp=Z,1.8nm,0.6s,baz=134,slow=10,SNR=4.1
KSRS Korea Array 30.54 78 LR LR 23 14 57.1
comp=Z,12nm,20.4s,baz=245,slow=42
BRTR Keskin Array B 42.81 291 P **P** **23 01 26.8 -0.8**
comp=Z,0.4nm,0.7s,baz=93,slow=7.2,SNR=4.2
FINES FINESS Array B 45.05 323 P **P** **23 01 44.6 -0.4**
comp=Z,3.0nm,1.1s,baz=209,slow=24,SNR=2.1
ARCES ARCESS Array B 46.07 334 P **P** **23 01 53.3 +0.3**
comp=Z,1.1nm,0.8s,baz=82,slow=6.6,SNR=3.4
ILAR Eielson Array 68.85 22 P **P** **23 04 34.9 +1.4**
comp=Z,0.4nm,1.0s,baz=303,slow=4.2,SNR=4.5
WRA Warramunga Arr 71.35 135 P **P** **23 04 49.6 +0.3**
comp=Z,0.5nm,0.8s,baz=330,slow=6.6,SNR=4.2
ASAR Alice Springs 74.11 138 P **P** **23 05 05.6 -0.1**
comp=Z,0.5nm,0.9s,baz=334,slow=7.1,SNR=4.5
YKA Yellowknife Ar 78.31 11 P **P** **23 05 29.5 +0.5**
comp=Z,0.5nm,0.7s,baz=334,slow=6.0,SNR=3.8
TORD Torodi Ar. Bea 80.14 279 P **P** **23 05 36.9 -3.0**
comp=Z,0.5nm,0.6s,baz=53,slow=5.1,SNR=4.0
TSUM Tsumeb 87.87 244 LR LR 23 44 16.9
comp=Z,56nm,18.6s,baz=357,slow=35

NEIC ***23*** *22:58:32.9, 36.40N×117.84W, h1km, mb4.3/7, MW4.6(PAS), After PAS.*
NEIC Felt [II] at Lone Pine and Trona. Also felt at Bakersfield, North Fork, Ridgecrest, Shaver Lake and Visalia.
BJI ***23*** *22:58:32.0, 36.40N×117.80W, h10km, mB5.1/5, mb4.7/6, Ms4.8/3, Ms7 4.7/4*
IDC ***23*** *22:58:34.4±0.6, 36.33N×117.61W, h0km, mb3.9/12, mb1 4.1/19, mb1mx3.9/35, mbtmp3.9/19, ML3.7/7, MS3.8/33, Ms1 3.8/33, ms1mx3.7/48, Error ellipse: s-maj=12.8km s-min=7.9km az=79.0*

ISC 23 22:58:35.0±0.5, 36.33N±0.02×117.87W±0.02, h7km±3km, n338, σ186/349, mb4.1/19, MS3.9/28, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CWC	**Cottonwood Cre**	**0.20**	**304**	P	**Pg**	**22 58 36.7**	**-2.5**
	baz=0.2						
CWC				S	**Sg**	**22 58 40.1**	**-1.9**
	baz=0.2						
MPMC	**Manual Prospec**	**0.41**	**131**	P	**Pg**	**22 58 41.2**	**-1.8**
	baz=0.4						
MPMC				S	**Sg**	**22 58 47.5**	**-0.8**
	baz=0.4						
CLC	**China Lake**	**0.56**	**156**	*e*Pg	**Pg**	**22 58 44.5**	**-1.3**
TIN	**Tinemaha**	**0.78**	**339**	P	Pg	22 58 46.5	-3.6
	baz=0.7						
TIN				S	**Sg**	**22 58 56.4**	**-3.9**
	baz=0.7						
GRAC	**Grapevine Rang**	**0.78**	**31**	P	Pg	22 58 46.5	-3.7
	baz=0.7						
GRAC				S	**Sg**	**22 58 56.4**	**-4.0**
	baz=0.7						
ISA	**Isabella**	**0.82**	**217**	*e*Pg	**Pg**	**22 58 49.5**	**-1.4**
ISA				*e*Sg	**Sg**	**22 59 01.3**	**-0.2**
ISA	**Isabella**	**0.82**	**217**	P	**Pg**	**22 58 49.7**	**-1.1**
	baz=0.9						
ISA				S	**Sg**	**22 59 01.4**	**-0.2**
	baz=0.9						
FURC	**Furnace Creek,**	**0.83**	**80**	P	**Pg**	**22 58 47.9**	**-3.0**
	baz=0.8						
FURC				S	**Sg**	**22 58 58.6**	**-3.2**
	baz=0.8						
LRMC	**Laurel Mountai**	**0.86**	**170**	P	**Pg**	**22 58 50.5**	**-1.1**
	baz=0.9						
LRMC				S	**Sg**	**22 59 03.0**	**+0.2**
	baz=0.9						
VES	**Vestal, Richgr**	**1.10**	**244**	P	**Pg**	**22 58 54.7**	**-1.3**
	baz=1.1						
VES				S	**Sg**	**22 59 10.3**	**0.0**
	baz=1.1						
RCTC	**Rector, Farmer**	**1.11**	**270**	P	**Pg**	**22 58 54.0**	**-2.2**
	baz=1.1						
RCTC				S	**Sg**	**22 59 09.2**	**-1.4**
	baz=1.1						
GSC	**Goldstone**	**1.34**	**139**	*e*Pn	**Pn**	**22 58 57.9**	**-2.3**
GSC				*e*Sn	**Sg**	**22 59 16.6**	**-1.5**
GSC				*e*Sn	**Sb**	**22 59 18.0**	**+0.1**
GSC	**Goldstone**	**1.34**	**139**	P	**Pn**	**22 58 58.1**	**-2.1**
	baz=1.4						
GSC				S	**Sg**	**22 59 16.7**	**-1.5**
	baz=1.4						
SHOC	**Shoshone**	**1.36**	**108**	P	Pn	22 58 57.3	-3.1
	baz=1.4						
ARVC	**Arvin**	**1.43**	**213**	P	**Pn**	**22 59 00.8**	**-0.5**
	baz=1.5						
ARVC				S	**Sn**	**22 59 20.8**	**+0.4**
	baz=1.5						
EDW2	**Edwards Air Fo**	**1.45**	**184**	P	**Pn**	**22 59 00.3**	**-1.3**
	baz=1.5						
EDW2				Sb	**Sg**	**22 59 21.6**	**+0.1**
	baz=1.5						
MLAC	**Mammoth Lakes**	**1.51**	**330**	P	Pn	22 58 59.9	-2.9
	baz=1.5						
TUQ	**Turquoise Moun**	**1.81**	**119**	P	**Pn**	**22 59 04.3**	**-2.5**
	baz=1.8						
TUQ				Sb	**Sn**	**22 59 30.9**	**+0.8**
	baz=1.8						
ABL	**Mount Abel**	**1.84**	**217**	*e*Pn	**Pn**	**22 59 07.6**	**+0.4**
OSI	**Osito Adit**	**1.84**	**202**	*e*Pn	**Pn**	**22 59 06.5**	**-0.6**
OSI				*e*Sn	**Sn**	**22 59 29.5**	**-1.2**
OSI				*e*Sn	**Sg**	**22 59 34.8**	**+0.5**
OSI	**Osito Adit**	**1.84**	**202**	P	**Pn**	**22 59 06.5**	**-0.6**
	baz=1.9						
HEC	**Hector,Ludlow**	**1.95**	**139**	P	**Pn**	**22 59 06.5**	**-2.1**
	baz=2.0						
HEC				Sb	**Sb**	**22 59 35.5**	**0.0**
	baz=2.0						
SMMC	**Simmler**	**2.00**	**240**	Pb	**Pn**	**22 59 09.8**	**+0.4**
	baz=2.1						
SMMC				Sb	**Sb**	**22 59 37.2**	**+0.1**
	baz=2.1						
BFSC	**Mount Baldy Ra**	**2.09**	**175**	P	**Pn**	**22 59 09.5**	**-1.1**
	baz=2.2						
MWC	**Mount Wilson**	**2.10**	**184**	*e*Pn	**Pn**	**22 59 10.1**	**-0.7**
MWC				*e*Pg	**Pb**	**22 59 13.1**	**-0.5**
MWC				*e*Sn	**Sn**	**22 59 36.0**	**-1.3**
MWC				*e*Sn	**Sg**	**22 59 41.8**	**-0.9**
DECC	**Green Verdugo**	**2.10**	**190**	P	**Pn**	**22 59 09.9**	**-0.8**
	baz=2.2						
NV11	**Mina Array Sit**	**2.12**	**354**	*e*Pn	Pn	22 59 07.7	-3.2
NV11				*e*Pg	Pb	22 59 10.7	-3.1
NVAR	**Mina Array Bea**	**2.13**	**351**	Pn	Pn	22 59 08.3	-2.9
NVAR				Pg	Pb	22 59 10.6	-3.4
NVAR				Lg	Lg	22 59 38.5	
NVAR	**Mina Array Bea**	**2.13**	**351**	Pn	Pn	22 59 08.3	-2.9
	130nm,0.3s,baz=181,slow=15,SNR=384						
NVAR				Pg	Pb	22 59 10.6	-3.4
	167nm,0.3s,baz=172,slow=19,SNR=584						
NVAR				Lg	Lg	22 59 38.5	
	257nm,0.3s,baz=171,slow=34,SNR=7.8						
NVAR				LR	LR	22 59 40.2	
	comp=Z,491nm,21.7s,baz=192,slow=31						
PKM	**Peak Mountain**	**2.13**	**229**	Pb	**Pn**	**22 59 12.1**	**+0.8**
	baz=2.2						
PKM				Sb	**Sb**	**22 59 41.1**	**+0.3**
	baz=2.2						
PASC	**Pasadena Art C**	**2.17**	**187**	*e*Pn	**Pn**	**22 59 10.7**	**-0.8**
PASC				*e*Pg	**Pb**	**22 59 14.3**	**-0.2**
PASC				*e*Sn	**Sb**	**22 59 40.5**	**-1.1**
SHPR	**Sheep Range**	**2.19**	**85**	*e*Pn	**Pn**	**22 59 09.8**	**-2.3**
BBRC	**Big Bear Solar**	**2.20**	**159**	Pg	**Pb**	**22 59 15.3**	**0.0**
	baz=2.3						
SBC	**Santa Barbara**	**2.41**	**219**	Pb	**Pb**	**22 59 17.9**	**-0.8**
	baz=2.5						
SBC				Sb	**Sg**	**22 59 50.7**	**-1.7**
	baz=2.5						
BLG	**Laguna Peak**	**2.42**	**204**	P	**Pn**	**22 59 14.1**	**-0.8**
	baz=2.5						
LDFC	**Landfair**	**2.57**	**118**	*e*Pn	Pn	22 59 13.9	-3.3
LDFC				*e*Pg	**Pb**	**22 59 19.7**	**-1.8**
LDFC				*e*Sn	**Sn**	**22 59 48.5**	**-0.3**
CMB	**Columbia Colle**	**2.63**	**311**	*e*Pn	**Pn**	**22 59 17.6**	**-0.4**
CMB				*e*Sn	**Sn**	**22 59 46.0**	**-4.2**
R11A	**Troy Canyon, C**	**2.72**	**41**	P	Pn	22 59 16.3	-3.0
	baz=2.6						
R11A				Sb	**Sb**	**22 59 56.2**	**-1.5**
	baz=2.6						
MURC	**Murrieta**	**2.77**	**168**	P	**Pn**	**22 59 19.0**	**-0.9**
	baz=2.8						
BELC	**Belle Mtn. Jos**	**2.78**	**146**	P	**Pn**	**22 59 18.4**	**-1.7**
	baz=2.8						
SAO	**San Andreas Ge**	**2.91**	**280**	*e*Pn	**Pn**	**22 59 20.4**	**-1.4**
SAO				*e*Sn	**Sn**	**22 59 56.8**	**-0.3**
PFO	**Pinyon Flat Ob**	**2.95**	**156**	Pn	**Pn**	**22 59 21.0**	**-1.4**
PFO				Pg	**Pb**	**22 59 29.0**	**+1.0**
PFO				Lg	Lg	23 00 07.0	
PFO				*e*Sg	**Sg**	**23 00 08.8**	**-1.0**
PFO	**Pinyon Flat Ob**	**2.95**	**156**	Pn	**Pn**	**22 59 21.0**	**-1.4**
	6.5nm,0.3s,baz=353,slow=11,SNR=61						
PFO				Pg	**Pb**	**22 59 29.0**	**+1.0**
	79nm,0.3s,baz=334,slow=14,SNR=106						
PFO				Lg	Lg	23 00 07.0	
	124nm,0.3s,baz=223,slow=19,SNR=14						
PFO	**Pinyon Flat Ob**	**2.95**	**156**	P	**Pn**	**22 59 21.0**	**-1.4**
	baz=3.0						
NEE2	**Needles Airpor**	**3.07**	**119**	P	**Pn**	**22 59 21.4**	**-2.6**
	baz=3.1						
IRM	**Iron Mountain**	**3.10**	**133**	P	**Pn**	**22 59 21.8**	**-2.6**
	baz=3.1						
BC3	**Big Chuckawall**	**3.32**	**143**	P	**Pn**	**22 59 25.1**	**-2.4**
	baz=3.4						
WCN	**Washoe City**	**3.33**	**334**	*e*Pn	**Pn**	**22 59 26.4**	**-1.3**
WCN				*e*Pg	**Pb**	**22 59 33.6**	**-0.8**
W13A	**Hualapai Mount**	**3.47**	**110**	P	**Pn**	**22 59 27.2**	**-2.4**
	baz=3.5						
109C	**Camp Elliot, M**	**3.49**	**169**	P	**Pn**	**22 59 28.7**	**-0.9**
	baz=3.6						
MONP	**Monument Peak**	**3.63**	**160**	P	**Pn**	**22 59 30.7**	**-1.2**
	baz=3.7						
Y12C	**Blythe**	**3.76**	**132**	P	**Pn**	**22 59 30.9**	**-2.6**
	baz=3.8						
BAR	**Barrett**	**3.77**	**164**	*e*Pn	**Pn**	**22 59 32.8**	**-0.8**
BAR				*e*Pg	**Pb**	**22 59 41.7**	**-0.2**
BAR				*e*Sg	**Sb**	**23 00 30.4**	**+2.7**
SWSC	**Sam W. Stewart**	**3.79**	**153**	P	**Pn**	**22 59 31.3**	**-2.4**
	baz=3.8						
CCUT	**Cedar City**	**3.81**	**70**	*e*Pn	**Pn**	**22 59 32.0**	**-2.4**
CCUT				*e*Pg	**Pb**	**22 59 42.5**	**-0.2**
CCUT				*e*Sg	**Sg**	**23 00 34.9**	**-2.7**
ARUT	**Antelope Range**	**3.83**	**66**	*e*Pn	**Pn**	**22 59 32.2**	**-2.4**
ARUT				*e*Pg	**Pb**	**22 59 43.6**	**+0.5**
ARUT				*e*Sg	**Sb**	**23 00 32.6**	**+2.8**
SAC	**San Andreas**	**3.85**	**290**	*e*Pn	**Pn**	**22 59 32.8**	**-1.8**
SAC				*e*Sn	**Sn**	**23 00 19.0**	**-1.1**
BEKR	**Beckworth**	**4.04**	**332**	*e*Pn	**Pn**	**22 59 37.5**	**0.0**
BEKR				*e*Sg	**Sb**	**23 00 39.6**	**+3.8**
GLA	**Glamis**	**4.12**	**142**	*e*Pn	**Pn**	**22 59 35.7**	**-2.7**
GLA				*e*Pg	**Pb**	**22 59 49.9**	**+2.1**
GLA				*e*Sg	**Sg**	**23 00 43.0**	**-4.3**
GLA	**Glamis**	**4.12**	**142**	P	**Pn**	**22 59 35.6**	**-2.8**
	baz=4.2						
BMN	**Battle Mountai**	**4.13**	**7**	*e*Pn	Pn	22 59 36.0	-2.7
BMN				*e*Pg	**Pb**	**22 59 49.2**	**+1.1**
BMN				*e*Sg	**Sb**	**23 00 42.7**	**+4.4**
MCCM	**Marconi Confer**	**4.39**	**296**	*e*Pn	**Pn**	**22 59 42.1**	**+0.1**
MCCM				*e*Sg	**Sb**	**23 00 45.9**	**+0.3**
U15A	**North Rim**	**4.50**	**87**	P	**Pn**	**22 59 42.8**	**-1.1**
	baz=4.5						
Y14A	**Wickenburg**	**4.64**	**119**	P	**Pn**	**22 59 43.2**	**-2.4**
	baz=4.7						
ELK	**Elko**	**4.87**	**24**	*e*Pn	**Pn**	**22 59 46.9**	**-2.0**
ELK				*e*Pg	**Pb**	**23 00 02.3**	**+1.5**
ELK				Lg	Lg	23 01 03.5	
ELK	**Elko**	**4.87**	**24**	Pn	**Pn**	**22 59 48.0**	**-1.0**
	9.7nm,0.3s,baz=222,slow=13,SNR=58						
ELK				Pg	**Pb**	**23 00 02.7**	**+1.9**
	28nm,0.3s,baz=216,slow=16,SNR=46						
ELK				Lg	Lg	23 01 03.4	
	34nm,0.3s,baz=104,slow=19,SNR=10						
ELK				LR	LR	23 01 53.5	
	comp=Z,2μm,20.1s,baz=202,slow=42						
HOPS	**Hopland**	**4.91**	**304**	*e*Pn	Pn	22 59 45.6	-3.6
MVU	**Marysvale**	**5.00**	**63**	*e*Pn	**Pn**	**22 59 49.7**	**-1.0**
MVU				*e*Pg	**Pb**	**23 00 04.2**	**+1.2**
MVU				*e*Sg	**Sg**	**23 01 12.8**	**-2.8**
Z14A	**Wintersburg**	**5.01**	**125**	P	**Pn**	**22 59 48.4**	**-2.3**
	baz=5.0						
MSU	**Marysvale**	**5.03**	**63**	*e*Pn	**Pn**	**22 59 49.5**	**-1.6**
MSU				*e*Pg	**Pb**	**23 00 05.4**	**+1.9**
MSU				*e*Sg	**Sg**	**23 01 12.7**	**-3.9**
WUAZ	**Wupatki**	**5.33**	**97**	*e*Pn	**Pn**	**22 59 54.8**	**-0.5**
WUAZ				*e*Pg	**Pb**	**23 00 11.6**	**+3.0**
WUAZ	**Wupatki**	**5.33**	**97**	P	**Pn**	**22 59 54.4**	**-0.8**
	baz=5.3						
DUG	**Dugway**	**5.55**	**44**	*e*Pn	**Pn**	**22 59 56.6**	**-1.5**
	177nm,0.9s						
DUG				*e*Pg	**Pb**	**23 00 15.2**	**+2.9**
DUG				*e*Sg	**Sb**	**23 01 21.3**	**+2.3**
X16A	**Lo Mia Camp, P**	**5.59**	**108**	P	**Pn**	**22 59 57.8**	**-0.9**
	baz=5.6						
WDC	**Whiskeytown Da**	**5.61**	**321**	*e*Pn	Pn	22 59 55.5	-3.4
WDC				*e*Sg	**Sb**	**23 01 21.1**	**+0.4**
KCPM	**Cahto Peak**	**5.62**	**308**	*e*Pn	Pn	22 59 55.0	-4.1
KIPM	**Iron Peak**	**5.63**	**310**	*e*Pn	**Pn**	**22 59 58.1**	**-1.2**
MOD	**Modoc**	**5.88**	**342**	*e*Pn	**Pn**	**23 00 01.7**	**-1.0**
WVOR	**Wild Horse Val**	**6.13**	**355**	*e*Pn	**Pn**	**23 00 05.2**	**-0.9**
WVOR				*e*Pg	Pb	23 00 25.5	+3.3
MPU	**Maple Canyon**	**6.14**	**51**	*e*Pn	Pn	22 59 59.2	-7.1
MPU				*e*Pg	Pg	23 00 28.2	-4.4
MPU				*e*Sg	**Sb**	**23 01 40.8**	**+4.6**
S18A	**Hurst Farm, BI**	**6.45**	**75**	P	**Pn**	**23 00 10.2**	**-0.4**
	baz=6.4						
SRU	**San Rafael**	**6.45**	**62**	P	**Pn**	**23 00 11.6**	**+1.0**
	baz=6.4						
KHMM	**Horse Mountain**	**6.46**	**316**	*e*Pg	Pb	23 00 33.0	+5.2
KHMM				*e*Sg	**Sb**	**23 01 49.4**	**+4.2**
YBH	**Yreka Blue Hor**	**6.58**	**327**	*e*Pn	Pn	23 00 15.8	+3.5
YBH				Lg	Lg	23 01 55.4	
YBH	**Yreka Blue Hor**	**6.58**	**327**	Pn	Pn	23 00 16.1	+3.8
	0.2nm,0.3s,baz=149,slow=9.4,SNR=7.9						
YBH				Lg	Lg	23 01 55.4	
	1.4nm,0.3s,baz=233,slow=20,SNR=6.9						
YBH				LR	LR	23 02 21.1	
	comp=Z,494nm,19.3s,baz=154,slow=34						
JLU	**Jordanelle**	**6.60**	**48**	*e*Pn	**Pn**	**23 00 12.9**	**+0.2**
JLU				*e*Pg	**Pg**	**23 00 40.6**	**-0.9**
JLU				*e*Sg	**Sg**	**23 02 01.9**	**-5.1**
DAU	**Daniels Canyon**	**6.61**	**50**	*e*Pn	**Pn**	**23 00 13.2**	**+0.4**
X18A	**Snowflake**	**6.71**	**103**	P	**Pn**	**23 00 14.7**	**+0.5**
	baz=6.7						
HVU	**Hansel Valley**	**6.74**	**34**	*e*Pn	**Pn**	**23 00 14.8**	**+0.3**
HVU				*e*Pg	Pb	23 00 36.8	+4.3
HVU				*e*Sg	Sb	23 02 01.6	+8.4
P18A	**Preston Nutter**	**6.87**	**59**	P	**Pn**	**23 00 18.4**	**+2.0**
	baz=6.8						
TUC	**Tucson**	**7.10**	**122**	*e*Pn	**Pn**	**23 00 17.4**	**-2.0**
TUC				*e*Pg	Pb	23 00 43.7	+5.1
TUC				*e*Sg	Sg	23 02 14.8	-8.2
HWUT	**Hardware Ranch**	**7.21**	**41**	*e*Pn	**Pn**	**23 00 21.9**	**+0.9**
	52nm,1.0s						
HWUT				*e*Sg	**Sg**	**23 02 22.0**	**-4.3**
MFID	**Camas Ranch**	**7.25**	**12**	*e*Pn	**Pn**	**23 00 20.3**	**-1.3**
PV10	**Paradox Valley**	**7.33**	**71**	*e*Pn	**Pn**	**23 00 22.4**	**-0.3**
HUMO	**Hull Mountain**	**7.40**	**329**	*e*Pn	**Pn**	**23 00 24.2**	**+0.7**
PV04	**Paradox Valley**	**7.43**	**71**	*e*Pn	**Pn**	**23 00 23.9**	**-0.2**
MVCO	**Mesa Verde**	**7.57**	**81**	*e*Pn	**Pn**	**23 00 25.4**	**-0.7**
V20A	**Brimhall**	**7.63**	**91**	P	**Pn**	**23 00 28.5**	**+1.6**
	baz=7.6						
PV01	**Paradox Valley**	**7.64**	**74**	*e*Pn	Pn	23 00 22.7	-4.2
PV01				*e*Pg	Pb	23 00 52.7	+4.7
HLID	**Hailey**	**7.70**	**19**	*e*Pn	Pn	23 00 24.2	-3.5
HLID				*e*Pg	Pb	23 00 55.5	+6.6
HLID				*e*Sg	**Sg**	**23 02 38.0**	**-4.1**
W20A	**Ramah**	**7.71**	**96**	P	**Pn**	**23 00 29.6**	**+1.6**
	baz=7.7						
X20A	**Quemado**	**7.86**	**100**	P	**Pn**	**23 00 30.6**	**+0.7**
	baz=7.8						
Q20A	**Ridgley Place,**	**8.04**	**68**	P	**Pn**	**23 00 32.8**	**+0.4**
	baz=8.0						
I13A	**Wildhorse Cree**	**8.11**	**20**	P	**Pn**	**23 00 34.9**	**+1.6**
	baz=8.0						
P20A	**De Beque**	**8.13**	**64**	P	**Pn**	**23 00 34.3**	**+0.6**
	baz=8.1						
Y20A	**Horse Springs,**	**8.14**	**104**	P	**Pn**	**23 00 35.1**	**+1.2**
	baz=8.1						
S21A	**Coal Bank Pass**	**8.18**	**78**	P	**Pn**	**23 00 34.5**	**+0.1**
	baz=8.1						
U21A	**Nageezi**	**8.24**	**86**	P	**Pn**	**23 00 35.8**	**+0.7**
	baz=8.2						
Z20A	**Nine Sixteen R**	**8.28**	**110**	P	**Pn**	**23 00 36.1**	**+0.4**
	baz=8.3						
V21A	**Milan**	**8.30**	**91**	P	**Pn**	**23 00 36.4**	**+0.3**
	baz=8.3						
W21A	**San Fidel**	**8.40**	**95**	P	**Pn**	**23 00 38.5**	**+1.1**
	baz=8.4						
X21A	**Alamocita Cree**	**8.45**	**100**	P	**Pn**	**23 00 39.7**	**+1.7**
	baz=8.4						
R21A	**Cimarron**	**8.47**	**73**	P	**Pn**	**23 00 38.0**	**-0.3**
	baz=8.4						
O20A	**White River Ci**	**8.48**	**60**	P	**Pn**	**23 00 39.6**	**+1.2**
	baz=8.4						
120A	**U Bar Ranch, L**	**8.51**	**114**	P	**Pn**	**23 00 38.4**	**-0.4**
	baz=8.5						
BMO	**Blue Mountains**	**8.53**	**3**	*e*Pn	Pn	23 00 42.6	+3.6
	33nm,1.2s						
H12A	**Diamond D Ranc**	**8.53**	**15**	P	**Pn**	**23 00 40.8**	**+1.8**
	baz=8.5						
RRI2	**Red Ridge**	**8.63**	**34**	*e*Pn	**Pn**	**23 00 40.5**	**-0.1**
RRI2				*e*Sg	Sg	23 03 03.5	-8.6
Y21A	**Point of Rocks**	**8.66**	**102**	P	**Pn**	**23 00 42.5**	**+1.5**
	baz=8.6						
319A	**Douglas**	**8.68**	**122**	P	**Pn**	**23 00 40.4**	**-0.7**
	baz=8.7						
N20A	**Spence Gulch,**	**8.77**	**56**	P	**Pn**	**23 00 44.4**	**+2.0**
	baz=8.7						
P21A	**Newcastle**	**8.83**	**66**	P	**Pn**	**23 00 44.5**	**+1.2**
	baz=8.8						
T22A	**Edith**	**8.84**	**82**	P	**Pn**	**23 00 43.1**	**-0.3**
	baz=8.8						
REDW	**Red Top Meadow**	**8.86**	**35**	*e*Pn	**Pn**	**23 00 46.8**	**+3.2**
REDW				*e*Sg	**Sg**	**23 03 16.2**	**-3.1**
V22A	**San Miguel Ran**	**8.88**	**89**	P	**Pn**	**23 00 44.7**	**+0.8**
	baz=8.8						
DCID1	**Drake Creek**	**8.89**	**33**	*e*Pn	**Pn**	**23 00 47.1**	**+3.1**
U22A	**Llaves**	**8.89**	**86**	P	**Pn**	**23 00 44.9**	**+0.8**
	baz=8.8						
Z21A	**St. Cloud Mine**	**8.91**	**107**	P	**Pn**	**23 00 45.2**	**+0.8**
	baz=8.9						
TPAW	**Teton Pass**	**8.91**	**34**	*e*Pn	**Pn**	**23 00 47.4**	**+3.0**
TPAW				*e*Pg	Pg	23 01 19.2	-6.4
TPAW				*e*Sg	Sg	23 03 14.8	-6.2
220A	**Playas Peak, P**	**8.91**	**117**	P	**Pn**	**23 00 43.2**	**-1.1**
	baz=8.9						
S22A	**4UR Ranch, Cre**	**8.94**	**78**	P	**Pn**	**23 00 44.4**	**-0.5**
	baz=8.9						
LAZ	**Ladron**	**8.97**	**99**	*e*Pn	**Pn**	**23 00 47.4**	**+2.1**
LAZ				*e*Pg	Pg	23 01 23.2	-3.6
LAZ				*e*Sg	**Sg**	**23 03 23.4**	**+0.3**
SNOW	**Snow King Moun**	**8.98**	**35**	*e*Pn	**Pn**	**23 00 48.2**	**+2.8**
	119nm,1.5s						
BW06	**Boulder Array**	**9.09**	**42**	*e*Pn	Pn	**23 00 46.1**	**-0.7**
	18nm,1.2s						
PDAR	**Pinedale Array**	**9.09**	**42**	Pn	Pn	**23 00 47.8**	**+1.0**
PDAR				Lg	Lg	23 03 17.1	
PDAR	**Pinedale Array**	**9.09**	**42**	Pn	**Pn**	**23 00 47.8**	**+1.0**
	0.2nm,0.3s,baz=220,slow=17,SNR=11						
PDAR				Lg	Lg	23 03 17.1	
	0.3nm,0.3s,baz=223,slow=26,SNR=5.1						
SMCO	**Snowmass**	**9.09**	**68**	*e*Pn	**Pn**	**23 00 47.3**	**+0.3**
121A	**Cookes Peak, D**	**9.15**	**112**	P	**Pn**	**23 00 47.7**	**+0.1**
	baz=9.1						
LOHW	**Long Hollow**	**9.17**	**35**	*e*Pn	**Pn**	**23 00 51.0**	**+3.1**
G13A	**Cobalt**	**9.18**	**16**	P	**Pn**	**23 00 49.9**	**+1.9**
	baz=9.1						
MOOW	**Moose Ponds**	**9.21**	**34**	*e*Pn	**Pn**	**23 00 50.5**	**+2.1**
320A	**Kipp Ranch, An**	**9.22**	**120**	P	**Pn**	**23 00 48.7**	**0.0**
	baz=9.2						
IMW	**Indian Meadow**	**9.24**	**33**	*e*Pn	**Pn**	**23 00 52.0**	**+3.2**
N21A	**Black Mountain**	**9.24**	**58**	P	**Pn**	**23 00 50.2**	**+1.4**
	baz=9.2						
Y22A	**Socorro**	**9.24**	**102**	P	**Pn**	**23 00 51.4**	**+2.

BOZ	Bozeman (W)	10.43	25	ePn	Pn	23 01 05.6	+0.4
	10nm,1.1s						
Y24A	Capitan	10.46	100	P	Pn	23 01 08.0	+2.3
	baz=10						
E13A	Victor	10.48	14	P	Pn	23 01 07.8	+2.1
	baz=10						
Z24A	Sheeppen Canyo	10.70	103	P	Pn	23 01 11.3	+2.4
	baz=11						
V25A	Rancho No Teng	10.74	89	P	Pn	23 01 11.1	+1.7
	baz=11						
E15A	Deer Lodge	10.82	20	P	Pn	23 01 12.6	+2.1
	baz=11						
U25A	Circle Dot Ran	10.86	86	P	Pn	23 01 12.8	+1.8
	baz=11						
124A	Stringfield Ra	10.86	106	P	Pn	23 01 12.0	+0.9
	baz=11						
PHWY	Pilot Hill	10.88	59	ePn	Pn	23 01 11.8	+0.3
	4.3nm,0.9s						
MSO	Missoula	10.90	14	ePn	Pn	23 01 13.7	+2.2
MSO	Missoula	10.90	14	P	Pn	23 01 13.7	+2.2
	baz=11						
RLMT	Red Lodge	10.94	34	ePn	Pn	23 01 13.9	+1.7
W25A	X Bar L Ranch,	10.95	92	P	Pn	23 01 10.9	-1.4
	baz=11						
I21A	Big Trails, Te	11.02	44	P	Pn	23 01 13.9	+0.7
	baz=11						
D13A	Huson	11.06	12	P	Pn	23 01 14.8	+1.3
	baz=11						
Y25A	Mesa, Roswell	11.06	99	P	Pn	23 01 15.8	+2.1
	baz=11						
224A	Cornudas Mount	11.07	109	P	Pn	23 01 14.7	+0.9
	baz=11						
H20A	Greybull	11.09	40	P	Pn	23 01 15.9	+1.8
	baz=11						
CHMT	Chamberlain Mo	11.13	17	ePn	Pn	23 01 16.0	+1.3
D14A	Greenough	11.23	15	P	Pn	23 01 16.7	+0.7
	baz=11						
Z25A	Roswell	11.23	102	P	Pn	23 01 18.9	+2.8
	baz=11						
J22A	Midwest	11.25	48	P	Pn	23 01 17.7	+1.4
	baz=11						
MNTX	Cornudas Mount	11.34	110	ePn	Pn	23 01 19.5	+2.0
	25nm,1.1s						
SLMT	Seeley Lake	11.38	15	ePn	Pn	23 01 20.7	+2.5
M24A	Cheyenne	11.38	59	P	Pn	23 01 19.7	+1.5
	baz=11						
324A	Moseley Ranch,	11.39	112	P	Pn	23 01 19.0	+0.7
	baz=11						
U26A	Atchley Ranch,	11.39	85	P	Pn	23 01 20.6	+2.3
	baz=11						
E17A	Martinsdale	11.41	25	P	Pn	23 01 21.0	+2.5
	baz=11						
V26A	Tequesquite Ra	11.41	88	P	Pn	23 01 20.1	+1.5
	baz=11						
125A	Gardner Draw,	11.50	105	P	Pn	23 01 23.2	+3.4
	baz=12						
SWMT	Swartz Lake	11.54	13	ePn	Pn	23 01 17.1	-3.1
225A	Deer Hill, Car	11.59	107	P	Pn	23 01 22.8	+1.7
	baz=12						
JTMT	Jette	11.72	12	ePn	Pn	23 01 24.4	+1.7
BSMT	Bassoo Peak	11.74	10	ePn	Pn	23 01 24.2	+1.2
Y26A	Elida	11.75	98	P	Pn	23 01 26.5	+3.3
	baz=12						
325A	Bean Ranch, Si	11.80	111	P	Pn	23 01 25.7	+1.7
	baz=12						
Z26A	Caprock	11.82	101	P	Pn	23 01 28.2	+4.0
	baz=12						
C14A	Swan Lake	11.84	14	P	Pn	23 01 26.3	+2.0
	baz=12						
E18A	Harlowton	11.84	28	P	Pn	23 01 26.7	+2.4
	baz=12						
YBMT	Yellow Bay	11.88	13	ePn	Pn	23 01 26.5	+1.6
GDL2	Guadalupe Moun	11.91	106	ePn	Pn	23 01 28.2	+2.9
	25nm,1.3s						
NEW	Newport	11.94	2	ePn	Pn	23 01 27.1	+1.4
NEW				Lg	Lg	23 04 52.5	
NEW	Newport	11.94	2	Pn	Pn	23 01 26.4	+0.7
	0.1nm,0.3s,baz=182,slow=11,SNR=2.4						
NEW				Lg	Lg	23 04 52.5	
	0.1nm,0.3s,baz=270,slow=20,SNR=3.9						
NEW				LR	LR	23 06 34.6	
	comp=Z,425nm,19.5s,baz=200,slow=40						
126A	Clayton Basin,	12.00	104	P	Pn	23 01 30.8	+4.2
	baz=12						
425A	Indio Mountain	12.08	114	P	Pn	23 01 30.1	+2.4
	baz=12						
C15A	Salmond Ranch,	12.09	17	P	Pn	23 01 29.1	+1.3
	baz=12						
226B	Tecolote Peak,	12.11	107	P	Pn	23 01 31.5	+3.4
	baz=12						
U27A	Thompson Grove	12.13	85	P	Pn	23 01 30.6	+2.2
	baz=12						
D18A	Linhart Farms,	12.41	26	P	Pn	23 01 34.7	+2.6
	baz=12						
Z27A	Tatum	12.41	100	P	Pn	23 01 34.8	+2.6
	baz=12						
C17A	Wharram Farm,	12.47	23	P	Pn	23 01 35.0	+2.1
	baz=12						
127A	Arkansas Junct	12.51	103	P	Pn	23 01 36.7	+3.1
	baz=12						
B15A	Bradely Ranch,	12.60	16	P	Pn	23 01 37.3	+2.5
	baz=12						
U28A	Mallet	12.62	85	P	Pn	23 01 37.5	+2.5
	baz=13						
T28A	Walsh	12.67	82	P	Pn	23 01 38.3	+2.6
	baz=13						
426A	McDonald Obser	12.85	112	P	Pn	23 01 40.2	+1.8
	baz=13						
WALA	Waterton Lakes	13.05	12	ePn	Pn	23 01 43.6	+2.7
A14A	Double T Ranch	13.05	13	P	Pn	23 01 44.2	+3.3
	baz=13						
526A	Mary Lane Ranc	13.12	114	P	Pn	23 01 43.5	+1.6
	baz=13						
EGMT	Eagleton	13.14	25	ePn	Pn	23 01 44.6	+2.6
EGMT	Eagleton	13.14	25	P	Pn	23 01 44.0	+1.9
	baz=13						
128A	Castleberry Fa	13.22	102	P	Pn	23 01 45.4	+2.2
	baz=13						
427A	Hayter Ranch,	13.24	110	P	Pn	23 01 45.7	+2.3
	baz=13						
AMTX	Amarillo	13.26	91	ePn	Pn	23 01 45.5	+1.8
	17nm,1.1s						
626A	Big Bend Ranch	13.36	116	P	Pn	23 01 48.6	+3.4
	baz=13						
527A	Woodward Ranch	13.43	113	P	Pn	23 01 48.2	+2.1
	baz=13						
B18A	Beardsley Farm	13.45	24	P	Pn	23 01 48.8	+2.5
	baz=13						
Z29A	Hungry Hill Ra	13.63	98	P	Pn	23 01 50.8	+2.0
	baz=14						
129A	Stewart Farms,	13.71	101	P	Pn	23 01 51.8	+2.0
	baz=14						
LPIG	La Paz	13.82	150	LR	LR	23 07 29.9	
	comp=Z,24nm,20.1s,baz=26,slow=39						
TXAR	Lajitas Array	13.82	116	Pn	Pn	23 01 52.1	+0.7
TXAR				Lg	Lg	23 05 50.6	
TXAR	Lajitas Array	13.82	116	Pn	Pn	23 01 52.1	+0.7
	0.1nm,0.3s,baz=290,slow=10,SNR=54						
TXAR				Lg	Lg	23 05 50.6	
	0.1nm,0.3s,baz=281,slow=31,SNR=7.0						
A18A	Metzger Ranch,	13.89	23	P	Pn	23 01 52.3	0.0
	baz=14						
627A	Terlingua Ranc	13.96	115	P	Pn	23 01 56.2	+2.9
	baz=14						
528A	Cox Ranch, San	14.03	112	P	Pn	23 01 57.5	+3.1
	baz=14						
329A	Wagon Wheel Ra	14.05	106	P	Pn	23 01 56.8	+2.3
	baz=14						
628A	Black Gap, Mar	14.31	114	P	Pn	23 02 01.2	+3.2
	baz=14						
130A	Snyder	14.43	100	P	Pn	23 02 02.6	+2.8
	baz=14						
529A	Stev Forest Ra	14.48	111	P	Pn	23 02 03.2	+2.7
	baz=14						
429A	Davenport Ranc	14.49	109	P	Pn	23 02 02.5	+1.9
	baz=14						
230A	Sterling City	14.57	103	P	Pn	23 02 03.6	+1.9
	baz=14						
T31A	Randall Ranch,	14.62	82	P	Pn	23 02 04.0	+1.7
	baz=14						
330A	Mertzon	14.71	105	P	Pn	23 02 05.3	+1.7
	baz=15						
R31A	Burdett	14.73	77	P	Pn	23 02 04.4	+0.6
	baz=15						
430A	Baggett Ranch,	14.92	107	P	Pn	23 02 08.0	+1.5
	baz=15						
530A	J-C Ranch, Com	15.14	109	P	Pn	23 02 10.9	+1.6
	baz=15						
231A	Bronte	15.18	102	P	Pn	23 02 10.8	+0.9
	baz=15						
331A	San Angelo	15.33	104	P	Pn	23 02 13.4	+1.4
	baz=15						
Z32A	Haskell	15.40	96	P	Pn	23 02 13.3	+0.5
	baz=15						
431A	Sonora	15.46	106	P	Pn	23 02 14.9	+1.4
	baz=15						
ABTX	Abilene, Hawle	15.48	98	P	Pn	23 02 14.5	+0.7
	baz=15						
WMOK	Wichita Mounta	15.62	90	eP	P	23 02 24.3	+4.3
232A	Coleman	15.73	101	P	Pn	23 02 17.7	+0.6
	baz=16						
531A	Rocksprings	15.73	108	P	Pn	23 02 18.4	+1.2
	baz=16						
332A	Millersview	15.84	103	P	Pn	23 02 19.4	+0.9
	baz=16						
432A	Menard	16.01	105	P	Pn	23 02 22.0	+1.3
	baz=16						
631A	Perdido Creek	16.07	110	P	Pn	23 02 22.8	+1.3
	baz=16						
JCT	Junction City	16.17	106	eP	Pn	23 02 23.9	+1.2
	16nm,1.0s						
JCT				ePcP	PcP	23 07 22.7	+4.7
532A	Rocksprings	16.25	107	P	Pn	23 02 25.1	+1.4
	baz=16						
632A	Uvalde	16.63	109	P	Pn	23 02 29.7	+1.1
	baz=17						
KSU1	Kansas State U	17.05	74	ePn	Pn	23 02 31.0	-2.8
BBB	Bella Bella	17.44	339	LR	LR	23 09 01.5	
	comp=Z,164nm,19.3s,baz=167,slow=36						
ECSD	EROS Data Cent	17.85	59	eP	Pn	23 02 42.6	-1.2
	16nm,1.6s						
HKT	Hockley	19.50	103	ePn	P	23 03 03.3	+0.7
	80nm,2.2s						
ULM	Lac du Bonnet	21.11	42	eP	P	23 03 19.8	-0.3
	11nm,1.0s						
ULM	Lac du Bonnet	21.11	42	P	P	23 03 18.4	-1.6
	2.9nm,0.6s,baz=233,slow=12,SNR=4.2						
ULM				LR	LR	23 12 18.0	
	comp=Z,111nm,20.0s,baz=297,slow=39						
JFWS	Jewell Farm	22.21	64	eP	P	23 03 29.9	-2.1
	12nm,1.1s						
DLBC	Dease Lake	23.53	344	eP	P	23 03 50.2	+4.6
DLBC	Dease Lake	23.53	344	P	P	23 03 46.2	+0.6
	2.3nm,0.8s,baz=150,slow=7.5,SNR=2.5						
DLBC				LR	LR	23 13 44.7	
	comp=Z,609nm,21.4s,baz=153,slow=39						
COWI	Conover	23.61	57	eP	P	23 03 45.6	-0.9
	12nm,1.1s						
YKA	Yellowknife Ar	26.27	3	P	P	23 04 10.2	-0.5
YKA	Yellowknife Ar	26.27	3	P	P	23 04 10.1	-0.5
	0.6nm,1.0s,baz=171,slow=8.6,SNR=10						
TKL	Tuckaleechee C	27.52	81	LR	LR	23 15 47.6	
	comp=Z,205nm,20.7s,baz=301,slow=38						
INK	Inuvik	33.22	349	LR	LR	23 20 08.1	
	comp=Z,304nm,19.9s,baz=150,slow=39						
ILAR	Eielson Array	33.33	338	P	P	23 05 13.9	+0.7
ILAR	Eielson Array	33.33	338	P	P	23 05 13.9	+0.7
	1.5nm,0.8s,baz=149,slow=6.2,SNR=13						
ILAR				LR	LR	23 18 22.5	
	comp=Z,110nm,18.7s,baz=146,slow=36						
SCHQ	Schefferville	39.21	45	eP	P	23 06 01.2	-2.4
	12nm,1.2s						
SCHQ	Schefferville	39.21	45	P	P	23 06 00.1	-3.5
	7.6nm,1.0s,baz=289,slow=14,SNR=4.2						
SCHQ				LR	LR	23 21 52.7	
	comp=Z,200nm,18.1s,baz=274,slow=36						
FX1	Attu Island--F	49.85	312	LR	LR	23 24 36.7	
	comp=Z,32nm,18.9s,baz=88,slow=31						
ROSC	El Rosal	50.73	118	LR	LR	23 33 52.6	
	comp=Z,80nm,18.5s,baz=300,slow=42						
PETK	Petropavlovsk-	58.81	315	LR	LR	23 29 08.3	
	comp=Z,19nm,20.3s,baz=255,slow=31						
RKT	Rikitea	61.29	198	eLR	LR	23 26 49.0	
	216nm,30.8s						
PPT2	Papeete2	61.43	215	eLR	LR	23 26 56.9	
	105nm,22.5s						
TBI	Tubuai	66.44	212	eLR	LR	23 29 27.2	
	99nm,22.8s						
LPAZ	La Paz	70.32	129	P	P	23 09 48.5	-1.7
LPAZ	La Paz	70.32	129	P	P	23 09 48.5	-1.7
	1.2nm,0.8s,baz=229,slow=2.1,SNR=5.8						
LPAZ				LR	LR	23 43 36.7	
	comp=Z,62nm,18.8s,baz=105,slow=38						
ARCES	ARCESS Array B	71.08	13	P	P	23 09 55.1	+1.6
ARCES	ARCESS Array B	71.08	13	P	P	23 09 55.1	+1.6
	1.1nm,0.8s,baz=317,slow=5.2,SNR=5.5						
ARCES				LR	LR	23 42 46.8	
	comp=Z,98nm,18.7s,baz=315,slow=37						
NOA	NORSAR Array B	74.49	23	LR	LR	23 45 34.0	
	comp=Z,45nm,18.1s,baz=305,slow=38						
HFS	Hagfors	75.97	23	LR	LR	23 46 02.1	
	comp=Z,81nm,18.4s,baz=296,slow=38						
FINES	FINESS Array B	78.26	17	P	P	23 10 36.4	+1.2
FINES	FINESS Array B	78.26	17	P	P	23 10 36.3	+1.2
	1.7nm,0.9s,baz=29,slow=4.4,SNR=3.4						
FINES				LR	LR	23 44 35.2	
	comp=Z,128nm,19.8s,baz=270,slow=35						
FLN	La Foliniere	78.67	37	eP	P	23 10 32.8	-4.9
MJAR	Matsushiro Arr	78.86	307	P	P	23 10 41.2	+2.2
MJAR	Matsushiro Arr	78.86	307	P	P	23 10 41.2	+2.2
	0.6nm,0.8s,baz=102,slow=0.8,SNR=3.4						
MJAR				LR	LR	23 39 32.5	
	comp=Z,34nm,21.2s,baz=195,slow=31						
MDJ	Mudanjiang	78.94	318	P	P	23 10 35.9	-3.3
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,42nm,6.3s						
CN2	Changchun	81.71	319	eP	P	23 10 52.3	-1.8
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
TCF	Toulx Ste Croi	81.71	37	eP	P	23 10 51.5	-2.6
SSF	Saint Saulge	81.78	36	eP	P	23 10 52.7	-1.8
LOR	Lormes	81.80	36	eP	P	23 10 52.4	-2.2
	comp=Z,4.5nm,0.9s						
ESDC	Sonseca Array	82.97	45	LR	LR	23 44 44.7	
	comp=Z,46nm,18.3s,baz=80,slow=34						
BDFB	Brasilia	83.69	114	LR	LR	23 54 21.0	
	comp=Z,59nm,19.0s,baz=356,slow=40						
CPUP	Villa Florida	84.48	128	LR	LR	23 52 45.5	
	comp=Z,32nm,18.6s,baz=175,slow=39						
GERES	GERESS Array B	84.91	30	LR	LR	23 49 29.8	
	comp=Z,92nm,18.5s,baz=112,slow=36						
DAVOX	Davos/Dischmat	84.91	33	LR	LR	23 51 34.3	
	comp=Z,68nm,19.3s,baz=88,slow=38						
MDT	Midelt	87.16	51	LR	LR	23 48 52.8	
	comp=Z,51nm,19.2s,baz=306,slow=35						
SONM	Songino Array	87.35	332	P	P	23 11 24.6	+1.8
SONM	Songino Array	87.35	332	P	P	23 11 24.6	+1.8
	comp=Z,0.4nm,0.7s,baz=20,slow=4.6,SNR=4.2						
SONM				LR	LR	23 51 24.6	
	comp=Z,56nm,19.4s,baz=216,slow=36						
ZALV	Zalesovo Beam	87.98	347	P	P	23 11 26.8	+1.3
ZALV	Zalesovo Beam	87.98	347	P	P	23 11 26.8	+1.3
	comp=Z,0.3nm,0.2s,baz=14,slow=6.5,SNR=3.2						
ZALV				LR	LR	23 52 19.9	
	comp=Z,52nm,21.8s,baz=150,slow=37						
AKASG	Malin Array Be	88.62	20	LR	LR	23 51 56.6	
	comp=Z,44nm,19.6s,baz=275,slow=36						
BVAR	Borovoye Array	90.73	355	P	P	23 11 37.9	-0.6
BVAR	Borovoye Array	90.73	355	P	P	23 11 37.8	-0.6
	comp=Z,0.7nm,0.7s,baz=5.7,slow=2.9,SNR=6.6						
HHC	Hu-ho-hao-te	90.81	325	eP	P	23 11 37.3	-1.9
HHC				SKS	SKSac	23 22 07.3	-4.3
HHC				pmax	pmax		
	comp=Z,28nm,1.5s						
HHC				pmax	pmax		
	comp=Z,120nm,10.7s						
HHC				LR	LR		
	comp=N,110nm,23.8s						
HHC				LR	LR		
	comp=E,170nm,22.6s						
HHC				LR	LR		
	comp=Z,100nm,19.0s						
KURK	Kurchatov	92.12	350	P	P	23 11 46.3	+1.4
KURBB	Kurchatov Arra	92.22	350	P	P	23 11 46.3	+0.9
	comp=Z,0.2nm,0.6s,baz=12,slow=4.1,SNR=4.1						
MKAR	Makanchi Array	95.30	346	LR	LR	23 57 28.4	
	comp=Z,40nm,18.3s,baz=6.4,slow=37						
WMQ	Urumqi	96.91	342	eP	P	23 12 06.4	-0.7
GTA	Gaotai	97.02	331	eP	P	23 12 07.3	-0.5
GTA				pP	pP	23 12 12.1	+1.9
GTA				sP	sP	23 12 14.4	+3.4
KBZ	Khabaz	98.42	14	LR	LR	00 01 19.5	
	comp=Z,71nm,19.9s,baz=264,slow=38						
BRTR	Keskin Array B	99.90	22	LR	LR	23 58 21.0	
	comp=Z,39nm,20.5s,baz=314,slow=36						
WRA	Warramunga Arr	115.60	263	PKP	PKPdf	23 17 20.2	+1.9
WRA	Warramunga Arr	115.60	263	PKP	PKPdf	23 17 20.2	+1.9
	comp=Z,0.5nm,0.9s,baz=58,slow=2.2,SNR=4.4						

*ISCJB **23** 23:12:41.3±0.8, 47°.3N±0°.1×153°.0E±0°.2, h66km, mb3.6/6, Error ellipse: s-maj=25.5km s-min=8.0km az=139.2*
*MOS **23** 23:12:41.9±1.6, 47°.22N×152°.92E, h71km, mb4.0/3, Error ellipse: s-maj=37.7km s-min=13.4km az=62.7*
*IDC **23** 23:12:45.8±3.5, 47°.20N×152°.72E, h90km±32km, mb3.2/7, mb1 3.4/9, mb1mx3.2/27, mbtmp3.2/9, Error ellipse: s-maj=31.3km s-min=18.4km az=123.0*
ISC 23 23:12:43.2±0.9, 47°.3N±0°.2×153°.0E±0°.2, h66km, n13, σ1§19/12, mb3.9/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	3.97	30	ePN	Pn	23 13 40.0	-1.5
SKR				e		23 14 24.4	
KUR	Kuril'sk	4.11	242	ePN	Pn	23 13 43.0	-0.5
KUR				eS	Sn	23 14 31.0	+0.7
KUR				pmax	pmax		
	comp=Z,110nm,0.9s						
KUR				smax	smax		
	comp=N,130nm,0.7s						
KUR				smax	smax		
	comp=E,50nm,0.7s						
PETK	Petropavlovsk-	6.56	26	PN	Pn	23 14 21.1	+4.1
PETK	Petropavlovsk-	6.56	26	P	Pn	23 14 21.1	+4.1
	comp=E,0.2nm,0.3s,baz=190,slow=14,SNR=6.4						
MJAR	Matsushiro Arr	15.35	231	P	Pn	23 16 15.8	0.0
	comp=E,0.3nm,0.3s,baz=45,slow=8.8,SNR=6.8						
KSRS	Korea Array	20.89	251	P	P	23 17 19.5	-0.4
	comp=E,0.7nm,0.6s,baz=61,slow=9.6,SNR=2.9						
ZALV	Zalesovo Beam	42.23	305	PcP	PcP	23 22 22.1	-0.2
	comp=E,0.4nm,0.5s,baz=90,slow=3.4,SNR=3.8						
YKA	Yellowknife Ar	50.54	37	P	P	23 21 36.3	+1.9
	comp=E,0.2nm,0.5s,baz=300,slow=7.0,SNR=4.0						
FINES	FINESS Array B	63.52	335	P	P	23 23 06.0	-0.1
	comp=E,0.4nm,0.3s,baz=30,slow=6.9,SNR=8.4						
HFS	Hagfors	67.92	339	P	P	23 23 34.3	-0.2
	comp=E,1.7nm,0.9s,baz=39,slow=5.7,SNR=7.9						
WRA	Warramunga Arr	69.00	199	P	P	23 23 39.8	-1.7
	comp=E,0.2nm,0.8s,baz=16,slow=7.4,SNR=2.9						
ASAR	Alice Springs	72.70	198	P	P	23 24 03.0	-0.9
	comp=E,1.5nm,1.1s,baz=28,slow=6.8,SNR=4.8						
TXAR	Lajitas Array	77.30	61	P	P	23 24 32.1	+1.4
	comp=E,0.8nm,0.5s,baz=298,slow=4.8,SNR=9.9						

*ISCJB **23** 23:15:35.3±1.0, 18°.91N±0°.09×64°.32W±0°.04, h10km, Error ellipse: s-maj=12.7km s-min=4.8km az=2.9*
*TRN **23** 23:15:38.0, 17°.93N×64°.54W, h3km*
*NEIC **23** 23:15:39.6, 18°.82N×64°.35W, h8km, MD3.8(RSPR), After RSPR.*
*RSPR **23** 23:15:39.6, 18°.82N×64°.35W, h8km±1km, MD3.8/7*
ISC 23 23:15:36.6±2.1, 18°.9N±0°.1×64°.33W±0°.06, h10km, n50, σ0§84/64, 30C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	Tortola	0.54	210	iP	Pg	23 15 48.7	+1.7
TBVI	Tortola	0.54	210	i Pu	Pg	23 15 48.7	+1.7
TBVI	Tortola	0.54	210	iP	Pg	23 15 48.7	+1.7
STVI	Saint Thomas	0.79	228	eP	Pg	23 15 52.7	+0.8
STVI	Saint Thomas	0.79	228	ePb	Pg	23 15 52.8	+0.8
STVI				eSb	Sg	23 16 03.3	+1.0
STVI	Saint Thomas	0.79	228	eP	Pg	23 15 52.7	+0.8
STVI				eS	Sb	23 16 03.6	+0.4
CDVI	St. Croix	1.20	200	ePn	Pb	23 15 59.5	+0.1
MTP	Monte Pirata	1.40	236	eP	Pn	23 16 01.6	-0.6
MTP	Monte Pirata	1.40	236	ePn	Pn	23 16 01.5	-0.6
MTP	Monte Pirata	1.40	236	eP	Pn	23 16 01.6	-0.6
MTP				eS	Sb	23 16 18.8	-1.9
CBYP	Canovanas	1.57	247	eP	Pn	23 16 04.0	-0.6
CBYP	Canovanas	1.57	247	ePn	Pn	23 16 03.9	-0.6
CBYP	Canovanas	1.57	247	eP	Pn	23 16 04.0	-0.6
HUMP	Col San Antoni	1.62	243	eP	Pn	23 16 04.6	-0.6
HUMP	Col San Antoni	1.62	243	ePn	Pn	23 16 04.9	-0.2
HUMP	Col San Antoni	1.62	243	eP	Pn	23 16 04.6	-0.6
HUMP				eS	Sn	23 16 24.3	-1.8
CPD	Cerro la Pandu	1.72	241	eP	Pn	23 16 06.3	-0.3
CPD	Cerro la Pandu	1.72	241	ePn	Pn	23 16 06.5	-0.1
CPD	Cerro la Pandu	1.72	241	eP	Pn	23 16 06.3	-0.3
SJG	San Juan	1.89	246	eP	Pn	23 16 08.7	-0.2
SJG	San Juan	1.89	246	eP	Pn	23 16 08.4	-0.5
SJG	San Juan	1.89	246	eP	Pn	23 16 08.7	-0.2
SJG	San Juan	1.89	246	eP	Pn	23 16 08.4	-0.5
SJG	San Juan	1.89	246	eP	Pn	23 16 08.7	-0.2
CELP	Cerrillos	2.28	250	eP	Pn	23 16 14.5	+0.2
CELP				eS	Sn	23 16 41.0	-1.4
CELP	Cerrillos	2.28	250	eP	Pn	23 16 14.5	+0.2
CELP				eS	Sn	23 16 41.0	-1.4
CELP	Cerrillos	2.28	250	eP	Pn	23 16 14.5	+0.2
CELP				eS	Sn	23 16 41.5	-0.9
OBIP	Obispado Ponce	2.31	249	eP	Pn	23 16 14.7	0.0
OBIP	Obispado Ponce	2.31	249	eS	Sn	23 16 42.0	-1.3
OBIP	Obispado Ponce	2.31	249	eP	Pn	23 16 14.7	0.0
OBIP				eS	Sn	23 16 42.0	-1.3
OBIP	Obispado Ponce	2.31	249	eP	Pn	23 16 14.7	0.0
OBIP				eS	Sn	23 16 42.0	-1.3
AOPR	Arecibo Observ	2.36	257	eP	Pn	23 16 15.5	+0.1
AOPR	Arecibo Observ	2.36	257	ePn	Pn	23 16 16.4	+1.1
AOPR	Arecibo Observ	2.36	257	eP	Pn	23 16 15.5	+0.1
AOPR				eS	Sn	23 16 43.7	-0.7
LRS	Lares	2.45	256	eP	Pn	23 16 16.7	0.0
LRS	Lares	2.45	256	eP	Pn	23 16 16.7	0.0
LRS	Lares	2.45	256	eP	Pn	23 16 16.7	0.0
AGP	Aguadilla	2.70	260	eSn	Sn	23 16 53.5	+0.5
LSP	Las Mesas	2.71	255	eP	Pn	23 16 20.5	+0.3
LSP				eS	Sn	23 16 52.1	-0.8
LSP	Las Mesas	2.71	255	eP	Pn	23 16 20.5	+0.3
LSP				eS	Sn	23 16 52.1	-0.8
LSP	Las Mesas	2.71	255	eP	Pn	23 16 20.5	+0.3
LSP				eS	Sn	23 16

VAY				*e*Lg	Lg	23 22 39.4			
	comp=N,65µm,0.3s								
VAY				*e*Lg	Lg	23 22 39.5			
	comp=E,43µm,0.3s								
VAY				*i* Sg	**Sg**	**23 22 39.5 +0.2**			
VAY	**Valandovo**	**0.11**	**282**	⇑*i*Pg	**Pg**	**23 22 37.4 -0.2**			
VAY				*e*Sg	**Sg**	**23 22 39.2 0.0**			
VAY	**Valandovo**	**0.11**	**282**	P	**Pg**	**23 22 37.1 -0.5**			
VAY	**Valandovo**	**0.11**	**282**	⇑*i*Pg	**Sg**	**23 22 37.4 -0.2**			
VAY				S	**Sg**	**23 22 39.4 +0.2**			
VAY				*e*Lg	Lg	23 22 39.9			
	comp=E,43µm,0.3s								
KNT	**Kendrikon**	**0.20**	**134**	P	**Pg**	**23 22 39.3 +0.2**			
KNT				S	**Sg**	**23 22 42.2 +0.4**			
KNT	**Kendrikon**	**0.20**	**134**	P	**Pg**	**23 22 39.3 +0.2**			
KNT				S	**Sg**	**23 22 42.2 +0.4**			
GRG	**Griva**	**0.41**	**214**	P	**Pg**	**23 22 43.1 -0.1**			
GRG				S	**Sg**	**23 22 49.5 +0.8**			
GRG	**Griva**	**0.41**	**214**	*e*PB	**Pg**	**23 22 43.1 -0.1**			
GRG				*e*SB	**Sg**	**23 22 49.3 +0.6**			
GRG	**Griva**	**0.41**	**214**	P	**Pg**	**23 22 43.1 -0.1**			
GRG				*e*Sb	**Sg**	**23 22 49.3 +0.6**			
KKB	**Krupnik**	**0.63**	**26**	*i* Pg	**Pg**	**23 22 47.3 -0.1**			
KKB	**Krupnik**	**0.63**	**26**	*i* Pg	**Pg**	**23 22 47.3 -0.1**			
SOH	**Sokhos**	**0.68**	**134**	P	**Pg**	**23 22 47.7 -0.6**			
SOH				S	**Sb**	**23 22 58.5 -0.6**			
SOH	**Sokhos**	**0.68**	**134**	*e*PN	**Pg**	**23 22 47.8 -0.6**			
SOH				*e*SN	**Sg**	**23 22 57.5 +0.3**			
SOH	**Sokhos**	**0.68**	**134**	P	**Pg**	**23 22 47.7 -0.6**			
SOH				*e*Sn	**Sg**	**23 22 57.5 +0.3**			
SOH				S	**Sb**	**23 22 58.5 -0.6**			
SRS	**Serrai**	**0.69**	**105**	P	**Pg**	**23 22 47.8 -0.7**			
SRS				S	**Sg**	**23 22 57.7 +0.3**			
SRS	**Serrai**	**0.69**	**105**	P	**Pg**	**23 22 47.8 -0.7**			
SRS				S	**Sg**	**23 22 57.7 +0.3**			
THE	**Thessaloniki**	**0.69**	**164**	P	**Pg**	**23 22 47.1 -1.4**			
THE	**Thessaloniki**	**0.69**	**164**	P	**Pg**	**23 22 47.1 -1.4**			
HORT	**Hortiatis**	**0.76**	**157**	P	**Pg**	**23 22 49.5 -0.3**			
HORT				S	**Sb**	**23 23 00.8 -0.6**			
HORT	**Hortiatis**	**0.76**	**157**	P	**Pg**	**23 22 49.5 -0.3**			
HORT				S	**Sb**	**23 23 00.8 -0.6**			
MMB	**Musomiste**	**0.82**	**69**	*i* Pg	**Pg**	**23 22 50.5 -0.4**			
MMB	**Musomiste**	**0.82**	**69**	*i* Pg	**Pg**	**23 22 50.5 -0.4**			
NVR	**Nevrokopi**	**0.87**	**86**	P	**Pg**	**23 22 51.3 -0.6**			
NVR				S	**Sg**	**23 23 03.6 +0.4**			
NVR	**Nevrokopi**	**0.87**	**86**	*e*PN	**Pg**	**23 22 51.5 -0.4**			
NVR				*e*SN	**Sg**	**23 23 03.5 +0.4**			
NVR	**Nevrokopi**	**0.87**	**86**	P	**Pg**	**23 22 51.3 -0.6**			
NVR				S	**Sg**	**23 23 03.6 +0.4**			
PLG	**Polygyros**	**1.08**	**149**	P	**Pg**	**23 22 54.4 -1.5**			
PLG				S	**Sb**	**23 23 10.8 +0.2**			
PLG	**Polygyros**	**1.08**	**149**	*e*PN	**Pg**	**23 22 54.9 -1.0**			
PLG				*e*SN	**Sg**	**23 23 08.7 -1.2**			
PLG	**Polygyros**	**1.08**	**149**	P	**Pg**	**23 22 54.4 -1.5**			
PLG	**Polygyros**	**1.08**	**149**	*e*Pn	**Pg**	**23 22 54.9 -1.0**			
PLG				*e*Sn	**Sg**	**23 23 08.7 -1.2**			
PLG				S	**Sb**	**23 23 10.8 +0.2**			
BIA	**Bitola**	**1.08**	**256**	P	**Pg**	**23 22 55.1 -0.9**			
BIA				S	**Sb**	**23 23 10.5 -0.2**			
BIA	**Bitola**	**1.08**	**256**	*i* Pg	**Pg**	**23 22 55.2 -0.9**			
BIA				*i* Sg	**Sg**	**23 23 10.1 0.0**			
BIA				*e*Lg	Lg	23 23 15.3			
	comp=N,326nm,0.5s								
BIA	**Bitola**	**1.08**	**256**	P	**Pg**	**23 22 55.1 -0.9**			
BIA				*i* Sg	**Sg**	**23 23 10.0 0.0**			
BIA				S	**Sb**	**23 23 10.5 -0.2**			
BIA				*e*Lg	Lg	23 23 15.2			
	comp=N,326nm,0.5s								
FNA	**Florina**	**1.13**	**243**	P	**Pg**	**23 22 56.1 -0.8**			
FNA				S	**Sb**	**23 23 12.6 +0.4**			
FNA	**Florina**	**1.13**	**243**	*e*PN	**Pg**	**23 22 56.3 -0.6**			
FNA	**Florina**	**1.13**	**243**	P	**Pg**	**23 22 56.1 -0.8**			
FNA				S	**Sb**	**23 23 12.6 +0.4**			
SKO	**Skopje**	**1.17**	**306**	P	**Pn**	**23 22 57.9 -0.1**			
SKO				S	**Sg**	**23 23 12.9 +0.2**			
SKO	**Skopje**	**1.17**	**306**	*e*Pg	**Pn**	**23 22 57.9 -0.1**			
SKO				*i* Sg	**Sn**	**23 23 14.3 +0.1**			
SKO				*e*Lg	Lg	23 23 15.2			
	comp=N,914nm,0.4s								
SKO				*e*Lg	Lg	23 23 15.5			
	comp=E,549nm,0.5s								
SKO	**Skopje**	**1.17**	**306**	*i* Pg	**Pg**	**23 22 57.4 -0.2**			
SKO	**Skopje**	**1.17**	**306**	*i* Pg	**Pg**	**23 22 57.4 -0.2**			
SKO	**Skopje**	**1.17**	**306**	P	**Pn**	**23 22 57.9 -0.1**			
SKO				S	**Sg**	**23 23 12.9 +0.2**			
SKO				*i* Sg	**Sn**	**23 23 14.8 +0.6**			
SKO				*e*Lg	Lg	23 23 15.9			
	comp=E,549nm,0.5s								
VTS	**Vitosha**	**1.34**	**16**	P	**Pn**	**23 23 00.1 -0.5**			
VTS				S	**Sg**	**23 23 18.8 +0.3**			
VTS	**Vitosha**	**1.34**	**16**	⇑*i*Pg	**Pn**	**23 23 00.1 -0.5**			
VTS				*e*Sg	**Sb**	**23 23 18.3 -0.1**			
VTS	**Vitosha**	**1.34**	**16**	⇑*i*P	**Pb**	**23 23 00.8 -0.1**			
VTS	**Vitosha**	**1.34**	**16**	*i* Pg	**Pn**	**23 23 00.4 -0.2**			
VTS	**Vitosha**	**1.34**	**16**	P	**Pn**	**23 23 00.1 -0.5**			
VTS	**Vitosha**	**1.34**	**16**	*i* Pg	**Pn**	**23 23 00.4 -0.2**			
VTS				*e*Sg	**Sb**	**23 23 18.3 -0.1**			
VTS				S	**Sg**	**23 23 18.8 +0.3**			
OUR	**Ouranopolis**	**1.36**	**135**	P	**Pn**	**23 22 59.9 -0.8**			
OUR	**Ouranopolis**	**1.36**	**135**	P	**Pn**	**23 22 59.9 -0.8**			
KAVA	**Kavala**	**1.40**	**102**	P	**Pn**	**23 23 00.5 -0.6**			
KAVA				S	**Sg**	**23 23 20.4 +0.4**			
KAVA	**Kavala**	**1.40**	**102**	P	**Pn**	**23 23 00.5 -0.6**			
KAVA				S	**Sg**	**23 23 20.4 +0.4**			
NEST	**Nestorio**	**1.54**	**236**	P	**Pn**	**23 23 00.2 0.0**			
NEST				S	**Sg**	**23 23 24.7 0.0**			
NEST	**Nestorio**	**1.54**	**236**	P	**Pn**	**23 23 03.2 0.0**			
NEST				S	**Sg**	**23 23 24.7 0.0**			
PAIG	**Paliouri**	**1.56**	**151**	P	**Pn**	**23 23 02.6 -0.7**			
PAIG				S	**Sb**	**23 23 24.3 0.0**			
PAIG	**Paliouri**	**1.56**	**151**	*e*PN	**Pn**	**23 23 02.7 -0.6**			
PAIG	**Paliouri**	**1.56**	**151**	*e*Pn	**Pn**	**23 23 02.7 -0.6**			
PAIG				S	**Sb**	**23 23 24.3 0.0**			
RZN	**Rozhen**	**1.56**	**75**	*i* Pg	**Pn**	**23 23 03.8 +0.3**			
RZN	**Rozhen**	**1.56**	**75**	*i* Pg	**Pn**	**23 23 03.8 +0.3**			
KBN	**Korca**	**1.60**	**246**	*i* PN	**Pn**	**23 23 04.5 +0.4**			
KBN				*i* SN	**Sg**	**23 23 30.9 +4.1**			
KBN	**Korca**	**1.60**	**246**	P	**Pn**	**23 23 04.0 -0.1**			
KBN	**Korca**	**1.60**	**246**	P	**Pn**	**23 23 04.0 -0.1**			
KBN	**Korca**	**1.60**	**246**	*i* Pn	**Pn**	**23 23 04.5 +0.4**			
KBN				*i* Sn	**Sg**	**23 23 30.9 +4.1**			
PGB	**Panagyurishte**	**1.66**	**41**	*i* P	**Pn**	**23 23 04.9 +0.1**			
PGB	**Panagyurishte**	**1.66**	**41**	*i* P	**Pn**	**23 23 04.9 +0.1**			
BARS	**Barje**	**1.66**	**337**	*e*Pg	**Pn**	**23 23 04.5 -0.3**			
PLD	**Plovdiv**	**1.70**	**61**	P	**Pb**	**23 23 06.3 -0.4**			
PLD				S	**Sn**	**23 23 27.5 +0.3**			
PLD	**Plovdiv**	**1.70**	**61**	*i* P	**Pb**	**23 23 06.8 +0.1**			
PLD	**Plovdiv**	**1.70**	**61**	P	**Pb**	**23 23 06.3 -0.4**			
PLD				S	**Sn**	**23 23 27.5 +0.3**			
PHP	**Peshkopia**	**1.75**	**283**	*i* PN	**Pn**	**23 23 05.9 -0.2**			
PHP				*i* SN	**Sb**	**23 23 29.9 0.0**			
PHP	**Peshkopia**	**1.75**	**283**	P	**Pn**	**23 23 05.8 -0.3**			
PHP	**Peshkopia**	**1.75**	**283**	*i* Pn	**Pn**	**23 23 05.9 -0.2**			
PHP				*i* Sn	**Sb**	**23 23 29.9 0.0**			
THL	**Klokotos Trika**	**1.81**	**197**	P	**Pn**	**23 23 06.7 -0.2**			
THL				S	**Sb**	**23 23 31.2 -0.4**			
THL	**Klokotos Trika**	**1.81**	**197**	P	**Pn**	**23 23 06.7 -0.2**			
THL				S	**Sb**	**23 23 31.2 -0.4**			
XOR	**Xorichti**	**1.96**	**169**	P	**Pn**	**23 23 08.0 -1.0**			
XOR	**Xorichti**	**1.96**	**169**	P	**Pn**	**23 23 08.0 -1.0**			
ZAPS	**Zavoj**	**1.98**	**358**	⇓*i*Pn	**Pn**	**23 23 09.7 -0.5**			
ZAPS				*e*Sg	**Sb**	**23 23 37.1 +0.7**			
KDZ	**Kurdzhali**	**2.06**	**79**	*i* P	**Pn**	**23 23 09.1 -1.3**			
KDZ	**Kurdzhali**	**2.06**	**79**	*i* P	**Pn**	**23 23 09.1 -1.3**			
KDZ	**Kurdzhali**	**2.06**	**79**	*i* Pg	**Pg**	**23 23 16.6 +1.8**			
TIR	**Tirane**	**2.14**	**272**	*i* PN	**Pb**	**23 23 13.7 -0.7**			
TIR				*i* SN	**Sg**	**23 23 48.4 +4.3**			
TIR	**Tirane**	**2.14**	**272**	*e*Pn	**Pn**	**23 23 12.4 +1.0**			
TIR				*e*Sg	**Sg**	**23 23 43.3 -0.8**			
TIR	**Tirane**	**2.14**	**272**	*e*Pn	**Pn**	**23 23 12.4 +1.0**			
TIR				*e*Sg	**Sg**	**23 23 43.3 -0.8**			
JAN	**Janina**	**2.17**	**221**	P	**Pn**	**23 23 12.7 +0.9**			
JAN	**Janina**	**2.17**	**221**	P	**Pn**	**23 23 12.7 +0.9**			
MPEP	**Malo Peshtene**	**2.19**	**20**	*i* P	**Pn**	**23 23 12.5 +0.4**			
MPEP				*i* Pg	**Pg**	**23 23 16.6 -0.6**			
SKIA	**Skiathos**	**2.21**	**165**	P	**Pn**	**23 23 11.9 -0.4**			
SKIA	**Skiathos**	**2.21**	**165**	P	**Pn**	**23 23 11.9 -0.4**			
PUK	**Puka**	**2.24**	**290**	*i* PN	**Pn**	**23 23 12.9 +0.1**			
PUK				*i* SN	**Sg**	**23 23 48.7 +1.6**			
PUK	**Puka**	**2.24**	**290**	*i* Pn	**Pn**	**23 23 12.9 +0.1**			
DIM	**Dimitrovgrad**	**2.24**	**70**	*i* P	**Pn**	**23 23 13.5 +0.7**			
DIM	**Dimitrovgrad**	**2.24**	**70**	*i* P	**Pn**	**23 23 13.5 +0.7**			
BCI	**Bajram Curri**	**2.25**	**299**	*i* PN	**Pn**	**23 23 13.5 +0.6**			
BCI				*i* SN	**Sg**	**23 23 49.6 +2.3**			
BCI	**Bajram Curri**	**2.25**	**299**	*i* Pn	**Pn**	**23 23 13.5 +0.6**			
SELS	**Selova**	**2.25**	**329**	⇑*i*Pn	**Pn**	**23 23 12.0 -1.0**			
SELS				*e*Sg	**Sb**	**23 23 45.4 +1.0**			
AGG	**Agios Georgios**	**2.29**	**187**	P	**Pn**	**23 23 12.9 -0.6**			
AGG				S	**Sb**	**23 23 44.2 -1.3**			
AGG	**Agios Georgios**	**2.29**	**187**	*e*PN	**Pn**	**23 23 13.3 -0.2**			
AGG	**Agios Georgios**	**2.29**	**187**	P	**Pn**	**23 23 12.9 -0.6**			
AGG	**Agios Georgios**	**2.29**	**187**	*e*Pn	**Pn**	**23 23 13.3 -0.2**			
AGG				S	**Sb**	**23 23 44.2 -1.3**			
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*PN	**Pn**	**23 23 12.9 -0.6**			
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*Pn	**Pn**	**23 23 12.9 -0.6**			
AOS	**Alonnisos**	**2.31**	**157**	P	**Pn**	**23 23 12.6 -1.1**			
AOS	**Alonnisos**	**2.31**	**157**	*e*PN	**Pn**	**23 23 12.5 -1.1**			
AOS	**Alonnisos**	**2.31**	**157**	P	**Pn**	**23 23 12.6 -1.1**			
MAKR	**Makrakomi, Fth**	**2.33**	**191**	P	**Pn**	**23 23 13.9 -0.1**			
MAKR	**Makrakomi, Fth**	**2.33**	**191**	P	**Pn**	**23 23 13.9 -0.1**			
PVY	**Plav**	**2.43**	**303**	*e*Pn	**Pn**	**23 23 16.1 +0.6**			
PVY				*e*Sn	**Sb**	**23 23 48.1 -1.4**			
PVY	**Plav**	**2.43**	**303**	*e*Pn	**Pn**	**23 23 16.1 +0.6**			
PVY				*e*Sn	**Sb**	**23 23 48.1 -1.4**			
SMIA	**Simia**	**2.45**	**171**	P	**Pn**	**23 23 15.3 -0.3**			
SMIA	**Simia**	**2.45**	**171**	P	**Pn**	**23 23 15.3 -0.3**			
AXAR	**Agios Charalam**	**2.53**	**181**	P	**Pn**	**23 23 16.8 0.0**			
AXAR	**Agios Charalam**	**2.53**	**181**	P	**Pn**	**23 23 16.8 0.0**			
IGT	**Igoumenitsa**	**2.53**	**227**	P	**Pn**	**23 23 18.2 +1.4**			
IGT	**Igoumenitsa**	**2.53**	**227**	P	**Pn**	**23 23 18.2 +1.4**			
ALN	**Alexandroupoli**	**2.55**	**98**	P	**Pn**	**23 23 16.9 -0.1**			
ALN	**Alexandroupoli**	**2.55**	**98**	*e*PN	**Pn**	**23 23 16.9 -0.1**			
ALN	**Alexandroupoli**	**2.55**	**98**	P	**Pn**	**23 23 16.9 -0.1**			
VLO	**Vlora**	**2.58**	**252**	*i* PN	**Pg**	**23 23 24.0 -0.5**			
BOLS	**Boljevac**	**2.59**	**348**	*e*Pn	**Pn**	**23 23 15.8 -1.8**			
BOLS	**Boljevac**	**2.59**	**348**	*e*Pn	**Pn**	**23 23 15.8 -1.8**			
ATAL	**Atalanti**	**2.61**	**175**	P	**Pn**	**23 23 17.7 -0.2**			
ATAL	**Atalanti**	**2.61**	**175**	P	**Pn**	**23 23 17.7 -0.2**			
BEY	**Berane**	**2.62**	**308**	⇓*i*Pn	**Pn**	**23 23 18.9 +0.8**			
BEY				*e*Sn	**Sb**	**23 23 52.8 -2.2**			
IVA	**Berane**	**2.62**	**308**	⇓*i*Pn	**Pn**	**23 23 18.9 +0.8**			
IVA				*e*Sn	**Sb**	**23 23 52.8 -2.2**			
ENEZ	**Enez**	**2.66**	**101**	*e*PN	**Pn**	**23 23 18.7 +0.2**			
ULC	**Ulcinj**	**2.68**	**285**	⇓*i*Pn	**Pn**	**23 23 20.7 +1.8**			
ULC				*e*Sn	**Sb**	**23 23 54.8 -1.9**			
ULC	**Ulcinj**	**2.68**	**285**	⇓*i*Pn	**Pn**	**23 23 20.7 +1.8**			
ULC				*e*Sn	**Sb**	**23 23 54.8 -1.9**			
KEK	**Kerkira**	**2.73**	**235**	P	**Pn**	**23 23 21.5 +2.0**			
KEK	**Kerkira**	**2.73**	**235**	P	**Pn**	**23 23 21.5 +2.0**			
PDG	**Podgorica**	**2.82**	**295**	*e*Pn	**Pn**	**23 23 22.0 +1.3**			
PDG	**Podgorica**	**2.82**	**295**	⇓*i*Pn	**Pn**	**23 23 21.6 +0.9**			
PDG				*e*Sn	**Sn**	**23 23 57.4 +2.5**			
TTG	**Podgorica**	**2.82**	**295**	⇓*i*Pn	**Pn**	**23 23 21.6 +0.9**			
TTG				*e*Sn	**Sn**	**23 23 57.4 +2.5**			
DSF	**Desfina**	**2.89**	**183**	P	**Pn**	**23 23 21.9 +0.2**			
DSF	**Desfina**	**2.89**	**183**	P	**Pn**	**23 23 21.9 +0.2**			
ERIK	**Erikli-Kesan**	**2.95**	**101**	*e*PN	**Pn**	**23 23 22.6 +0.2**			
LKD2	**Lefkada island**	**2.96**	**213**	P	**Pn**	**23 23 24.0 +1.3**			
LKD2				S	**Sn**	**23 24 00.9 +2.4**			
LKD2	**Lefkada island**	**2.96**	**213**	*e*PN	**Pn**	**23 23 23.8 +1.1**			
LKD2	**Lefkada island**	**2.96**	**213**	*e*Pn	**Pn**	**23 23 23.8 +1.1**			
LKD2				S	**Sn**	**23 24 00.9 +2.4**			
GRUS	**Gruza**	**2.98**	**331**	⇓*i*Pn	**Pn**	**23 23 22.4 -0.5**			
GRUS				*e*Sg	**Sg**	**23 24 09.0 -1.9**			
GRUS	**Gruza**	**2.98**	**331**	⇓*i*Pn	**Pn**	**23 23 22.4 -0.5**			
GRUS				*e*Sg	**Sg**	**23 24 09.0 -1.9**			
GELI	**Tayfur-Gelibol**	**2.99**	**106**	*e*PN	**Pn**	**23 23 23.0 +0.4**			
BUM	**Brajici-Budva**	**3.02**	**291**	*e*Pn	**Pn**	**23 23 25.2 +1.6**			
BUM				*e*Sn	**Sn**	**23 24 02.6 +2.5**			
BUM	**Brajici-Budva**	**3.02**	**291**	*e*Pn	**Pn**	**23 23 25.2 +1.6**			
BUM				*e*Sn	**Sn**	**23 24 02.6 +2.5**			
ZIMR		**3.07**	**39**	⇑*i*P	**Pn**	**23 23 25.9 +1.8**			
EDRB	**Edirne**	**3.08**	**78**	*e*PN	**Pn**	**23 23 22.7 -1.5**			
SZH	**Strazhica**	**3.10**	**49**	*i* P	**Pn**	**23 23 25.2 +0.7**			
SZH	**Strazhica**	**3.10**	**49**	*i* P	**Pn**	**23 23 25.2 +0.7**			
JMB	**Yambol**	**3.12**	**67**	P	**Pn**	**23 23 25.4 +0.6**			
JMB	**Yambol**	**3.12**	**67**	*i* P	**Pn**	**23 23 25.7 +0.9**			
JMB	**Yambol**	**3.12**	**67**	P	**Pn**	**23 23 25.4 +0.6**			
EZN	**Ezine**	**3.12**	**117**	*e*PN	**Pn**	**23 23 25.6 +0.8**			
NKY	**Niksic**	**3.15**	**300**	⇓*i*Pn	**Pn**	**23 23 27.0 +1.6**			
NKY				*e*Sn	**Sn**	**23 24 05.8 +2.4**			
NKY	**Niksic**	**3.15**	**300**	⇓*i*Pn	**Pn**	**23 23 27.0 +1.6**			
NKY				*e*Sn	**Sn**	**23 24 05.8 +2.4**			
SVIS	**Svilajnac**	**3.16**	**340**	*e*Pn	**Pn**	**23 23 27.3 +1.9**			
SVIS				*e*Sg	**Sb**	**23 23 52.9 -2.3**			
SIGR	**SIGRI**	**3.18**	**130**	P	**Pn**	**23 23 26.0 +0.3**			
SIGR	**SIGRI**	**3.18**	**130**	P	**Pn**	**23 23 26.0 +0.3**			
PLE	**Pljevlja**	**3.19**	**311**	⇓*i*Pn	**Pn**	**23 23 27.5 +1.5**			
PLE				*e*Sn	**Sn**	**23 24 06.8 +2.4**			
PLE	**Pljevlja**	**3.19**	**311**	⇓*i*Pn	**Pn**	**23 23 27.5 +1.5**			
PLE				*e*Sn	**Sn**	**23 24 06.8 +2.4**			
LPK	**Lapseki**	**3.21**	**105**	*e*PN	**Pn**	**23 23 26.9 +0.8**			
HCY	**Herceg Novi**	**3.35**	**291**	⇑*i*Pn	**Pn**	**23 23 28.8 +0.7**			
HCY				*e*Sn	**Sn**	**23 24 10.6 +2.5**			
HCY	**Herceg Novi**	**3.35**	**291**	⇑*i*Pn	**Pn**	**23 23 28.8 +0.7**			
HCY				*e*Sn	**Sn**	**23 24 10.6 +2.5**			
RMGR	**Halanga-Turnu**	**3.36**	**360**	⇑*i*P	**Pn**	**23 23 28.8 +0.6**			
RMGR	**Halanga-Turnu**	**3.36**	**360**	⇑*i*P	**Pn**	**23 23 28.8 +0.6**			
PTL	**Penteli**	**3.37**	**164**	P	**Pn**	**23 23 28.6 +0.3**			
PTL	**Penteli**	**3.37**	**164**	P	**Pn**	**23 23 28.6 +0.3**			
DJES	**Djerdap**	**3.37**	**358**	*e*Pn	**Pn**	**23 23 27.1 -1.2**			
GUR	**Goura**	**3.37**	**185**	P	**Pn**	**23 23 28.9 +0.5**			
GUR	**Goura**	**3.37**	**185**	P	**Pn**	**23 23 28.9 +0.5**			
RLS	**Riolos of Patr**	**3.38**	**197**	P	**Pn**	**23 23 30.8 +2.4**			
RLS	**Riolos of Patr**	**3.38**	**197**	P	**Pn**	**23 23 30.8 +2.4**			
UPM	**Unac-Piva**	**3.41**	**305**	⇓*i*Pn	**Pn**	**23 23 29.2 +0.2**			
UPM				*e*Sn	**Sn**	**23 24 11.3 +1.6**			
UPM	**Unac-Piva**	**3.41**	**305**	⇓*i*Pn	**Pn**	**23 23 29.2 +0.2**			
UPM				*e*Sn	**Sn**	**23 24 11.3 +1.6**			
PRK	**Paraskevi**	**3.41**	**126**	P	**Pn**	**23 23 29.9 +1.1**			
PRK	**Paraskevi**	**3.41**	**126**	P	**Pn**	**23 23 29.9 +1.1**			
ATH	**Athens Observa**	**3.41**	**167**	*e*PN	**Pn**	**23 23 29.9 +1.0**			
ATH	**Athens Observa**	**3.41**	**167**	*e*Pn	**Pn**	**23 23 29.9 +1.0**			
RKY	**Sarkoy-Tekirda**	**3.44**	**99**	*e*PN	**Pn**	**23 23 29.2 0.0**			
DIVS	**Divibare**	**3.44**	**325**	P	**Pn**	**23 23 29.1 -0.3**			
DIVS	**Divibare**	**3.44**	**325**	⇓*i*Pn	**Pn**	**23 23 28.7 -0.7**			
DIVS				*e*Sg	**Sg**	**23 24 23.7 -2.0**			
DIVS	**Divibare**	**3.44**	**325**	⇓*i*Pn	**Pn**	**23 23 28.7 -0.7**			
DIVS	**Divibare**	**3.44**	**325**	P	**Pn**	**23 23 29.1 -0.3**			
BRY	**Bratogost**	**3.49**	**299**	*e*Pn	**Pn**	**23 23 32.0 +1.9**			
BRY				*e*Sn	**Sn**	**23 24 14.5 +2.7**			
BRY	**Bratogost**	**3.49**	**299**	*e*Pn	**Pn**	**23 23 32.0 +1.9**			
BRY				*e*Sn	**Sn**	**23 24 14.5 +2.7**			
MFT	**Murefte**	**3.49**	**97**	*e*PN	**Pn**	**23 23 30.4 +0.3**			
BBLS	**Lazići**	**3.54**	**318**	*e*Sg	**Sb**	**23 24 24.4 +2.9**			
KRBG	**Karabiga-Canak**	**3.59**	**103**	*e*PN	**Pn**	**23 23 32.0 +0.6**			
HUMR	**Humele**	**3.63**	**27**	⇑*i*P	**Pn**	**23 23 32.2 +0.3**			
HUMR	**Humele**	**3.63**	**27**	⇑*i*P	**Pn**	**23 23 32.2 +0.3**			
TKR	**Tekirdag**	**3.66**	**93**	*e*PN	**Pn**	**23 23 32.3 0.0**			
MRMT	**Marmara Adasi**	**3.76**	**99**	*e*PN	**Pn**	**23 23 34.0 +0.2**			
CRLT	**Corlu**	**3.79**	**91**	*e*PN	**Pn**	**23 23 34.0 -0.1**			
DID	**Didima**	**3.81**	**174**	P	**Pn**	**23 23 34.4 0.0**			
DID	**Didima**	**3.81**	**174**	P	**Pn**	**23 23 34.4 0.0**			
CHOS	**Chios island**	**3.88**	**137**	*e*PN	**Pn**	**23 23 36.2 +0.8**			
CHOS	**Chios island**	**3.88**	**137**	*e*Pn	**Pn**	**23 23 36.2 +0.8**			
BUC1	**Bucharest**	**3.90**	**38**	⇑*i*P	**Pn**	**23 23 36.4 +0.8**			
BUC1	**Bucharest**	**3.90**	**38**	⇑*i*P	**Pn**	**23 23 36.4 +0.8**			
GOLR		**3.91**	**24**	⇑*i*P	**Pn**	**23 23 38.1 +2.4**			
GOLR		**3.91**	**24**	⇑*i*P	**Pn**	**23 23 38.1 +2.4**			
VLX	**Vlachokerasia**	**3.93**	**184**	P	**Pn**	**23 23 37.2 +1.1**			
VLX	**Vlachokerasia**	**3.93**	**184**	P	**Pn**	**23 23 37.2 +1.1**			
GONE	**Gonen-Balikesi**	**3.98**	**107**	*e*PN	**Pn**	**23 23 37.5 +0.8**			
TEKS	**Tekeris**	**4.00**	**325**	*e*Pn	**Pn**	**23 23 36.2 -0.8**			
TEKS	**Tekeris**	**4.00**	**325**	*e*Pn	**Pn**	**23 23 36.2 -0.8**			
PE1	**Pezze di Greco**	**4.03**	**265**	*e*Pn	**Pn**	**23 23 37.2 -0.1**			
BNT	**Bandirma**	**4.06**	**102**	*e*PN	**Pn**	**23 23 38.2 +0.4**			
SLVT	**Silivri**	**4.15**	**89**	*e*PN	**Pn**	**23 23 38.9 -0.1**			
CTYL	**Yal??k??y-??at**	**4.20**	**86**	*e*PN	**Pn**	**23 23 39.4 -0.3**			
LOT	**Lotru**	**4.22**	**10**	⇑*i*P	**Pn**	**23 23 40.7 +0.6**			
LOT	**Lotru**	**4.22**	**10**	⇑*i*P	**Pn**	**23 23 40.7 +0.6**			
BALB	**Balikesir**	**4.28**	**111**	*e*PN	**Pn**	**23 23 41.9 +1.1**			
MTUR	**Matau**	**4.29**	**23**	⇑*i*P	**Pn**	**23 23 42.1 +1.1**			
MTUR	**Matau**	**4.29**	**23**	⇑*i*P	**Pn**	**23 23 42.1 +1.1**			
ARR	**Arges**	**4.30**	**18**	⇑*i*P	**Pn**	**23 23 41.1 -0.1**			
ARR	**Arges**	**4.30**	**18**	⇑*i*P	**Pn**	**23 23 41.1 -0.1**			
CTKS	**Kestanelik-??a**	**4.37**	**89**	*e*PN	**Pn**	**23 23 41.5 -0.5**			
BZS	**Buzias**	**4.39**	**350**	*e*Pn	**Pn**	**23 23 41.1 -1.2**			
BZS				*e*Sg	**Sg**	**23 24 54.2 -1.9**			
BZS	**Buzias**	**4.39**	**350**	⇓*i*P	**Pn**	**23 23 41.1 -1.2**			
BZS	**Buzias**	**4.39**	**350**	⇓*i*P	**Pn**	**23 23 41.1 -1.2**			
BZS				*e*Sg	**Sg**	**23 24 54.2 -1.9**			
**K

NOA	**NORSAR Array B**	**20.98**	**344**	P		**P**	**23**	**27**	**18.0 -0.8**
	comp=Z,0.8nm,0.7s,baz=153,slow=11,SNR=6.4								
EKA	**Eskdalemuir Ar**	**22.03**	**318**	P		**P**	**23**	**27**	**31.3 +1.2**
	comp=Z,1.8nm,0.8s,baz=116,slow=9.7,SNR=4.6								
ARCES	**ARCESS Array B**	**28.34**	**2**	P		**P**	**23**	**28**	**28.0 -1.4**
	comp=Z,1.3nm,0.9s,baz=181,slow=12,SNR=4.1								
TORD	**Torodi Ar. Bea**	**33.51**	**219**	P		**P**	**23**	**29**	**14.1 -1.4**
	comp=Z,2.2nm,0.7s,baz=30,slow=9.0,SNR=16								
BVAR	**Borovoye Array**	**33.86**	**53**	P		**P**	**23**	**29**	**18.3 +0.1**
	comp=Z,0.5nm,0.8s,baz=270,slow=5.8,SNR=4.4								
MKAR	**Makanchi Array**	**42.28**	**62**	P		**P**	**23**	**30**	**29.4 +0.1**
	comp=Z,0.6nm,0.6s,baz=277,slow=5.7,SNR=5.5								
ZALV	**Zalesovo Beam**	**42.38**	**51**	P		**P**	**23**	**30**	**29.9 -0.1**
	comp=Z,2.5nm,0.7s,baz=281,slow=7.5,SNR=14								
LIC	**Lamto**	**42.79**	**223**	*eP*		**P**	**23**	**30**	**34.4 +0.7**
	comp=Z,4.7nm,0.6s								
YKA	**Yellowknife Ar**	**71.03**	**341**	P		**P**	**23**	**33**	**52.6 -0.8**
	comp=Z,0.4nm,0.7s,baz=40,slow=5.3,SNR=8.3								

IDC 23 23:33:45.7±6.4, 19.73N×120.33E, h139km±60km, mb3.3/8, mb1 3.5/9, mb1mx3.3/24, mbtmp3.3/9, MS2.9/1, Ms1 2.9/1, ms1mx2.1/26, Error ellipse: s-maj=43.5km s-min=13.9km az=70.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**13.58**	**157**	LR	LR	23 42 56.3	
	comp=Z,55nm,19.7s,baz=196,slow=40						
KSRS	**Korea Array**	**18.86**	**19**	P	Pn	23 37 56.5	-0.6
	0.2nm,0.3s,baz=198,slow=11,SNR=4.2						
SONM	**Songino Array**	**30.23**	**341**	P	P	23 39 44.3	+1.0
	0.2nm,0.7s,baz=169,slow=8.2,SNR=2.6						
MKAR	**Makanchi Array**	**41.10**	**320**	P	P	23 41 15.5	-0.3
	0.8nm,0.6s,baz=115,slow=9.3,SNR=5.9						
WRA	**Warramunga Arr**	**41.75**	**160**	P	P	23 41 20.5	-0.9
	1.0nm,0.4s,baz=343,slow=9.1,SNR=23						
WRA				PcP	PcP	23 43 16.6	+1.3
	0.3nm,0.7s,baz=340,slow=3.8,SNR=3.0						
ZALV	**Zalesovo Beam**	**43.62**	**330**	P	P	23 41 34.7	-1.3
	0.2nm,0.2s,baz=142,slow=7.3,SNR=2.3						
ASAR	**Alice Springs**	**45.12**	**162**	P	P	23 41 48.6	+0.2
	0.8nm,0.5s,baz=342,slow=6.7,SNR=22						
FINES	**FINESS Array B**	**74.88**	**330**	P	P	23 45 10.6	-0.3
	2.1nm,1.1s,baz=76,slow=7.3,SNR=4.1						
GERES	**GERESS Array B**	**85.76**	**321**	P	P	23 46 10.4	+0.9
	0.5nm,0.8s,baz=51,slow=6.4,SNR=6.3						
YKA	**Yellowknife Ar**	**87.36**	**22**	P	P	23 46 15.4	-1.4
	1.6nm,0.8s,baz=310,slow=4.6,SNR=25						

*ATH **23** 23:46:30.5, 36.53N×28.33E, h28km±1km, MD3.3/5*
*DDA **23** 23:46:30.4, 36.43N×28.41E, h37km, MD3.1*
*ISCJB **23** 23:46:31.7±0.5, 36.45N±0.03×28.39E±0.03, h24km±4km, Error ellipse: s-maj=4.7km s-min=3.2km az=141.2*
*ISK **23** 23:46:31.3, 36.47N×28.38E, h20km, MD3.0*
*CSEM **23** 23:46:31.8±0.1, 36.45N×28.41E, h20km, MD3.3, Error ellipse: s-maj=3.8km s-min=2.6km az=144.0*

ISC 23 23:46:31.5±0.9, 36.44N±0.02×28.44E±0.02, h22km±8km, n54, σ0.93/94, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.34**	**229**	*e*PB	**Pb**	**23 46 38.9**	**0.0**
ARG				*e*SB	**Sb**	**23 46 44.7**	**+0.7**
ARG	**Arkhangelos**	**0.34**	**229**	*e*Pb	**Pb**	**23 46 38.9**	**0.0**
ARG				*e*Sb	**Sb**	**23 46 44.7**	**+0.7**
TURN	**Turunc**	**0.45**	**17**	*i* P	**Pb**	**23 46 40.2**	**-0.6**
TURN				*i* S	**Sb**	**23 46 45.9**	**-1.1**
TURN	**Turunc**	**0.45**	**17**	*i* P	**Pb**	**23 46 40.2**	**-0.6**
TURN				*i* S	**Sb**	**23 46 45.9**	**-1.1**
YER	**Yerkesik**	**0.70**	**350**	*e*PG	**Pb**	**23 46 45.4**	**+0.2**
YER				*e*SG	**Sb**	**23 46 55.1**	**+0.6**
YER	**Yerkesik**	**0.70**	**350**	*e*Pg	**Pb**	**23 46 45.4**	**+0.2**
YER				*e*Sg	**Sb**	**23 46 55.1**	**+0.6**
AKAS	**Kas**	**0.96**	**102**	*i* P	**Pb**	**23 46 48.3**	**-1.2**
AKAS				*i* S	**Sb**	**23 46 59.8**	**-2.1**
AKAS	**Kas**	**0.96**	**102**	*i* P	**Pb**	**23 46 48.3**	**-1.2**
AKAS				*i* S	**Sb**	**23 46 59.8**	**-2.1**
MLSB	**Milas**	**1.01**	**328**	*e*PG	**Pb**	**23 46 50.1**	**-0.2**
MLSB				*e*SG	**Sb**	**23 47 03.0**	**-0.1**
MLSB	**Milas**	**1.01**	**328**	*e*Pg	**Pb**	**23 46 50.1**	**-0.2**
MLSB				*e*Sg	**Sb**	**23 47 03.0**	**-0.1**
BODT	**Bodrum**	**1.10**	**305**	*e*PG	**Pn**	**23 46 51.2**	**-0.4**
BODT				*e*SG	**Sn**	**23 47 06.3**	**+0.2**
BODT	**Bodrum**	**1.10**	**305**	*e*Pg	**Pn**	**23 46 51.2**	**-0.4**
BODT				*e*Sg	**Sn**	**23 47 06.3**	**+0.2**
GLHS	**Glhisar (BURDU**	**1.11**	**50**	*e*PN	**Pb**	**23 46 52.5**	**+0.4**
GLHS				*e*SN	**Sn**	**23 47 08.1**	**+1.7**
GLHS	**Glhisar (BURDU**	**1.11**	**50**	*e*Pn	**Pb**	**23 46 52.5**	**+0.4**
GLHS				*e*Sn	**Sn**	**23 47 08.1**	**+1.7**
GOLH	**Golhisar**	**1.20**	**48**	*i* P	**Pb**	**23 46 54.2**	**+0.6**
GOLH				*i* S	**Sb**	**23 47 11.5**	**+2.8**
GOLH	**Golhisar**	**1.20**	**48**	*i* P	**Pb**	**23 46 54.2**	**+0.6**
GOLH				*i* S	**Sb**	**23 47 11.5**	**+2.8**
ELL	**Elmali**	**1.22**	**75**	*e*PN	**Pb**	**23 46 54.5**	**+0.6**
ELL				*e*SN	**Sb**	**23 47 11.3**	**+2.0**
ELL	**Elmali**	**1.22**	**75**	*e*Pn	**Pb**	**23 46 54.5**	**+0.6**
ELL				*e*Sn	**Sb**	**23 47 11.3**	**+2.0**
AYDN	**Tasoluk**	**1.30**	**340**	*i* P	**Pb**	**23 46 55.4**	**+0.1**
AYDN				*i* S	**Sb**	**23 47 11.7**	**+0.2**
AYDN	**Tasoluk**	**1.30**	**340**	*i* P	**Pb**	**23 46 55.4**	**+0.1**
AYDN				*i* S	**Sb**	**23 47 11.7**	**+0.2**
DNZL	**Cakiroluk**	**1.34**	**21**	*i* P	**Pb**	**23 46 55.8**	**-0.2**
DNZL				*i* S	**Sb**	**23 47 13.0**	**+0.2**
DNZL	**Cakiroluk**	**1.34**	**21**	*i* P	**Pb**	**23 46 55.8**	**-0.2**
DNZL				*i* S	**Sb**	**23 47 13.0**	**+0.2**
KARP	**Karpathos**	**1.37**	**230**	*e*PN	**Pn**	**23 46 55.6**	**+0.3**
KARP				*e*SN	**Sb**	**23 47 13.6**	**+0.1**
KARP	**Karpathos**	**1.37**	**230**	*e*Pn	**Pn**	**23 46 55.6**	**+0.3**
KARP				*e*Sn	**Sb**	**23 47 13.6**	**+0.1**
DENT	**Denizli**	**1.39**	**20**	*e*PN	**Pn**	**23 46 56.2**	**+0.6**
DENT				*e*SN	**Sb**	**23 47 14.2**	**0.0**
DENT	**Denizli**	**1.39**	**20**	*e*Pn	**Pn**	**23 46 56.2**	**+0.6**
DENT				*e*Sn	**Sb**	**23 47 14.2**	**0.0**
GCAM	**G?zelcaml?**	**1.59**	**323**	*i* P	**Pn**	**23 46 58.7**	**+0.5**
GCAM				*i* S	**Sn**	**23 47 17.7**	**-0.4**
GCAM	**G?zelcaml?**	**1.59**	**323**	*i* P	**Pn**	**23 46 58.7**	**+0.5**
GCAM				*i* S	**Sn**	**23 47 17.7**	**-0.4**
KORT	**Korkueli**	**1.63**	**69**	*i* P	**Pb**	**23 47 00.0**	**-1.0**
KORT				*i* S	**Sb**	**23 47 22.3**	**+1.1**
KORT	**Korkueli**	**1.63**	**69**	*i* P	**Pb**	**23 47 00.0**	**-1.0**
KORT				*i* S	**Sb**	**23 47 22.3**	**+1.1**
ANTB	**Antalya**	**1.83**	**75**	*e*PN	**Pb**	**23 47 03.2**	**-1.1**
ANTB	**Antalya**	**1.83**	**75**	*e*Pn	**Pb**	**23 47 03.2**	**-1.1**
MANT	**Manisa**	**2.05**	**3**	*e*P	**Pn**	**23 47 03.7**	**-1.1**
MANT				*e*S	**Sn**	**23 47 29.7**	**-0.1**
MANT	**Manisa**	**2.05**	**3**	*e*P	**Pn**	**23 47 03.7**	**-1.1**
MANT				*e*S	**Sn**	**23 47 29.7**	**-0.1**
KHL	**Karahalli**	**2.07**	**24**	*e*PN	**Pn**	**23 47 05.7**	**+0.8**
KHL	**Karahalli**	**2.07**	**24**	*e*Pn	**Pn**	**23 47 05.7**	**+0.8**
KULA	**Kula-Manisa**	**2.08**	**5**	*e*PN	**Pn**	**23 47 05.5**	**+0.4**
KULA	**Kula-Manisa**	**2.08**	**5**	*e*Pn	**Pn**	**23 47 05.5**	**+0.4**
KHAL	**Karahalli**	**2.10**	**23**	*i* P	**Pn**	**23 47 05.2**	**-0.2**
KHAL				*e*S	**Sn**	**23 47 31.0**	**+0.1**
KHAL	**Karahalli**	**2.10**	**23**	*i* P	**Pn**	**23 47 05.2**	**-0.2**
KHAL				*e*S	**Sn**	**23 47 31.0**	**+0.1**
ISP	**Isparta**	**2.16**	**50**	*e*PN	**Pb**	**23 47 08.3**	**-1.7**
ISP	**Isparta**	**2.16**	**50**	*e*Pn	**Pb**	**23 47 08.3**	**-1.7**
BLCB	**Balcova**	**2.24**	**331**	*e*PN	**Pn**	**23 47 07.5**	**+0.3**
BLCB	**Balcova**	**2.24**	**331**	*e*Pn	**Pn**	**23 47 07.5**	**+0.3**
NPS	**Neapolis**	**2.58**	**244**	*e*PN	**Pn**	**23 47 12.1**	**+0.1**
NPS				*e*SN	**Sn**	**23 47 42.8**	**+0.1**
NPS	**Neapolis**	**2.58**	**244**	*e*Pn	**Pn**	**23 47 12.1**	**+0.1**
NPS				*e*Sn	**Sn**	**23 47 42.8**	**+0.1**
DEMI	**Demirci**	**2.61**	**5**	*i* P	**Pn**	**23 47 11.9**	**-0.5**
DEMI				*i* S	**Sn**	**23 47 41.2**	**-2.2**
DEMI	**Demirci**	**2.61**	**5**	*i* P	**Pn**	**23 47 11.9**	**-0.5**
DEMI				*i* S	**Sn**	**23 47 41.2**	**-2.2**
LAST	**Lasithi**	**2.73**	**243**	*e*PN	**Pn**	**23 47 14.8**	**+0.8**
LAST				*e*SN	**Sn**	**23 47 46.5**	**+0.1**
LAST	**Lasithi**	**2.73**	**243**	*e*Pn	**Pn**	**23 47 14.8**	**+0.8**
LAST				*e*Sn	**Sn**	**23 47 46.5**	**+0.1**
KYTH	**Kithira**	**4.37**	**269**	*e*PN	**Pn**	**23 47 36.6**	**+0.1**
KYTH	**Kithira**	**4.37**	**269**	*e*Pn	**Pn**	**23 47 36.6**	**+0.1**
VLI	**Veliai**	**4.44**	**275**	*e*PN	**Pn**	**23 47 37.4**	**-0.1**
VLI	**Veliai**	**4.44**	**275**	*e*Pn	**Pn**	**23 47 37.4**	**-0.1**

*ISK **23** 23:52:49.5, 39.03N×41.93E, h5km, MD3.2*
*DDA **23** 23:52:50.2, 39.14N×42.01E, h23km, MD3.1*

*CSEM **23** 23:52:50.6±0.3, 39.09N×41.98E, h2km, MD3.2, Error ellipse: s-maj=6.6km s-min=5.8km az=43.0*

ISC 23 23:52:50.4±1.1, 39.07N±0.02×42.00E±0.02, h4km±12km, n46, σ1.15/59, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRTB	**Varto-Mus**	**0.44**	**283**	*e*PG	**Pg**	**23 52 58.4**	**-0.5**
VRTB	**Varto-Mus**	**0.44**	**283**	*e*Pg	**Pg**	**23 52 58.4**	**-0.5**
TATV	**Tatvan**	**0.59**	**160**	*i* P	**Pg**	**23 53 02.0**	**+0.1**
TATV				*e*S	**Sb**	**23 53 12.3**	**0.0**
TATV	**Tatvan**	**0.59**	**160**	*i* P	**Pg**	**23 53 02.0**	**+0.1**
TATV				*e*S	**Sb**	**23 53 12.3**	**0.0**
BNGL	**BINGOL**	**0.67**	**261**	*i* P	**Pg**	**23 53 02.6**	**-0.7**
BNGL				*i* S	**Sg**	**23 53 14.1**	**+1.9**
TUTA	**Tutak**	**0.71**	**62**	*i* P	**Pg**	**23 53 02.3**	**-1.8**
TUTA				*e*S	**Sg**	**23 53 13.7**	**+0.3**
TUTA	**Tutak**	**0.71**	**62**	*i* P	**Pg**	**23 53 02.3**	**-1.8**
TUTA				*e*S	**Sg**	**23 53 13.7**	**+0.3**
BTMT	**Batman**	**0.96**	**205**	*e*PG	**Pn**	**23 53 10.6**	**-0.2**
BTMT	**Batman**	**0.96**	**205**	*e*Pg	**Pn**	**23 53 10.6**	**-0.2**
ERZM	**Erzurum**	**0.97**	**330**	*e*P	**Pg**	**23 53 07.8**	**-1.3**
ERZM				*i* S	**Sg**	**23 53 21.9**	**+0.1**
ERZM	**Erzurum**	**0.97**	**330**	*e*P	**Pg**	**23 53 07.8**	**-1.3**
ERZM				*i* S	**Sg**	**23 53 21.9**	**+0.1**
EZM	**Erzurum**	**0.97**	**330**	*e*PG	**Pg**	**23 53 09.1**	**0.0**
HOMI	**Horasan**	**0.98**	**356**	*i* P	**Pg**	**23 53 07.8**	**-1.5**
HOMI				*i* S	**Sn**	**23 53 26.1**	**+0.3**
BNGB	**Bing¨¶l**	**1.03**	**266**	*e*PG	**Pg**	**23 53 09.3**	**-1.0**
BNGB				*e*SG	**Sg**	**23 53 24.0**	**+0.3**
CLDR	**Caldiran**	**1.49**	**86**	*e*PN	**Pg**	**23 53 19.1**	**+0.1**
CLDR	**Caldiran**	**1.49**	**86**	*e*Pn	**Pg**	**23 53 19.1**	**+0.1**
KOPT	**Kop Dagi**	**1.50**	**310**	*i* P	**Pn**	**23 53 17.7**	**-0.8**
KOPT				*i* S	Sg	23 53 46.4	+7.6
KOPT	**Kop Dagi**	**1.50**	**310**	*i* P	**Pn**	**23 53 17.7**	**-0.8**
KARS	**Kars**	**1.77**	**28**	*e*PN	**Pb**	**23 53 23.5**	**0.0**
KARS	**Kars**	**1.77**	**28**	*e*Pn	**Pb**	**23 53 23.5**	**0.0**
DIY	**Diyarbakir**	**1.82**	**231**	*e*PN	**Pn**	**23 53 22.0**	**-0.6**
DIY	**Diyarbakir**	**1.82**	**231**	*e*Pn	**Pn**	**23 53 22.0**	**-0.6**
BAYT	**Ayd¨¹ntepe-Bay**	**1.95**	**313**	*e*PN	**Pn**	**23 53 25.0**	**+0.4**
BAYT	**Ayd¨¹ntepe-Bay**	**1.95**	**313**	*e*Pn	**Pn**	**23 53 25.0**	**+0.4**
DBAD	**Bademkaya**	**1.96**	**353**	*e*P	**Pn**	**23 53 24.1**	**-0.5**
DBAD				*e*S	**Sg**	**23 53 59.4**	**+5.9**
DBAD	**Bademkaya**	**1.96**	**353**	*e*P	**Pn**	**23 53 24.1**	**-0.5**
MARD	**Mardin**	**2.00**	**209**	*e*P	**Pb**	**23 53 26.6**	**-0.8**
MARD				*e*S	**Sb**	**23 53 52.5**	**-0.2**
DAGI	**Agillar**	**2.01**	**358**	*e*P	**Pn**	**23 53 25.4**	**+0.1**
DAGI				*e*S	**Sg**	**23 53 55.4**	**+0.4**
PTK	**Pertek**	**2.04**	**266**	*e*PN	**Pn**	**23 53 25.6**	**-0.2**
PTK	**Pertek**	**2.04**	**266**	*e*Pn	**Pn**	**23 53 25.6**	**-0.2**
CUKT	**Cukurca**	**2.21**	**145**	*e*PN	**Pn**	**23 53 28.7**	**+0.6**
CUKT	**Cukurca**	**2.21**	**145**	*e*Pn	**Pn**	**23 53 28.7**	**+0.6**
SVRC	**Sivrice-ELAZID**	**2.22**	**253**	*e*PN	**Pn**	**23 53 27.9**	**-0.2**
SVRC	**Sivrice-ELAZID**	**2.22**	**253**	*e*Pn	**Pn**	**23 53 28.0**	**-0.2**
GNI	**Garni**	**2.38**	**62**	*e*PN	**Pb**	**23 53 32.8**	**-1.1**
GNI	**Garni**	**2.38**	**62**	*e*Pn	**Pb**	**23 53 32.8**	**-1.1**
KELT	**Kelkit**	**2.38**	**298**	*e*P	**Pb**	**23 53 33.1**	**-0.9**
KELT				*e*S	**Sg**	**23 53 57.4**	**+1.3**
KELT	**Kelkit**	**2.38**	**298**	*e*P	**Pb**	**23 53 33.1**	**-0.9**
GUMT	**Gumushane**	**2.39**	**306**	*e*PN	**Pn**	**23 53 31.3**	**+0.8**
GUMT	**Gumushane**	**2.39**	**306**	*e*Pn	**Pn**	**23 53 31.3**	**+0.8**
BCA	**Borcka**	**2.39**	**353**	*e*PN	**Pn**	**23 53 32.0**	**+1.5**
BCA	**Borcka**	**2.39**	**353**	*e*Pn	**Pn**	**23 53 32.0**	**+1.5**
ILIC	**ilic-Erzincan**	**2.69**	**279**	*e*PN	**Pn**	**23 53 35.3**	**+0.6**
ILIC	**ilic-Erzincan**	**2.69**	**279**	*e*Pn	**Pn**	**23 53 35.3**	**+0.6**
ESPY	**Espiye-Giresun**	**3.12**	**307**	*e*PN	**Pn**	**23 53 41.6**	**+1.1**
ESPY	**Espiye-Giresun**	**3.12**	**307**	*e*Pn	**Pn**	**23 53 41.6**	**+1.1**

*CSEM **23** 23:55:48.2, 45.53N×14.33E, h0km, ML0.4, After LJU*

LJU 23 23:55:48.2, 45.53N×14.33E, h9km, ML0.4, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNDS	**Knezji Dol**	**0.03**	**99**	*i* Pg	Pg	23 55 50.1	+0.1
KNDS				*i* Sg	Sg	23 55 51.4	+0.1
KNDS							
	comp=Z,3.0nm,0.0s						
KNDS	**Knezji Dol**	**0.03**	**99**	*i* Pg	Pg	23 55 50.1	+0.1
KNDS				*i* Sg	Sg	23 55 51.4	+0.1
	comp=Z,3.0nm,0.0s						
CEY	**Cerknica**	**0.22**	**18**	*i* Pg	Pg	23 55 52.7	0.0
CEY	**Cerknica**	**0.22**	**18**	*i* Pg	Pg	23 55 52.7	0.0
SKDS	**Skadanscina**	**0.23**	**274**	*i* Pg	Pg	23 55 52.9	0.0
SKDS							
	comp=Z,1.0nm,0.0s						
SKDS	**Skadanscina**	**0.23**	**274**	*i* Pg	Pg	23 55 52.9	+0.1
	comp=Z,1.0nm,0.0s						
GBRS	**Gornja Briga**	**0.34**	**90**	*i* Pg	Pg	23 55 54.9	0.0

*CSEM **23** 23:56:34.1±0.6, 41.37N×22.81E, h9km±1km, MD2.8, Error ellipse: s-maj=18.2km s-min=7.7km az=10.0*
*SKO **23** 23:56:35.4, 41.30N×22.71E, h0km, M0.9, ML1.3*
*ATH **23** 23:56:36.3, 41.30N×22.82E, h16km±10km, MD2.8/4*

ISC 23 23:56:34.9±1.2, 41.32N±0.06×22.75E±0.04, h4km±17km, n10, σ1.95/18, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**272**	*i* Pg	**Pg**	**23 56 36.9**	**-0.6**
VAY				*i* Sg	**Sg**	**23 56 38.8**	**-0.6**
VAY				*e*Lg	Lg	23 56 38.8	
	comp=E,155nm,0.2s						
VAY				*e*Lg	Lg	23 56 38.9	
	comp=N,238nm,0.5s						
VAY	**Valandovo**	**0.13**	**272**	*i* Pg	**Pg**	**23 56 37.4**	**-0.1**
VAY				*i* Sg	**Sg**	**23 56 39.2**	**-0.1**
VAY				*e*Lg	Lg	23 56 39.3	
	comp=N,238nm,0.5s						
SOH	**Sokhos**	**0.67**	**137**	*e*PB	**Pg**	**23 56 48.2**	**+0.4**
SOH				*e*SN	**Sb**	**23 56 57.3**	**-1.7**
SOH	**Sokhos**	**0.67**	**137**	*e*Pb	**Pg**	**23 56 48.2**	**+0.4**
SOH				*e*Sn	**Sb**	**23 56 57.3**	**-1.7**
NVR	**Nevrokopi**	**0.84**	**87**	*e*PN	**Pg**	**23 56 51.3**	**+0.3**
NVR				*e*SN	**Sb**	**23 57 02.6**	**-1.2**
NVR	**Nevrokopi**	**0.84**	**87**	*e*Pn	**Pg**	**23 56 51.3**	**+0.3**
NVR				*e*Sn	**Sb**	**23 57 02.6**	**-1.2**
PLG	**Polygyros**	**1.08**	**150**	*e*PN	**Pg**	**23 56 55.5**	**-0.1**
PLG				*e*SN	**Sb**	**23 57 09.9**	**-0.8**
PLG	**Polygyros**	**1.08**	**150**	*e*Pn	**Pg**	**23 56 55.5**	**-0.1**
PLG				*e*Sn	**Sb**	**23 57 09.9**	**-0.8**
FNA	**Florina**	**1.17**	**243**	*e*PN	**Pb**	**23 56 59.1**	**+1.4**
FNA	**Florina**	**1.17**	**243**	*e*Pn	**Pb**	**23 56 59.1**	**+1.4**

*CASC **24** 00:23:15.4±1.7, 12.57N×87.59W, h208km±16km, MD4.1, ML4.3, mb4.7(NEIC)*
*ISCJB **24** 00:23:21.3±0.3, 13.14N±0.04×87.64W±0.04, h185km±2km, mb4.4/83, Error ellipse: s-maj=7.7km s-min=5.1km az=32.8*
*IDC **24** 00:23:23.2±0.6, 13.30N×87.41W, h192km±4km, mb3.7/22, mb1 3.9/23, mb1mx3.9/28, mbtmp3.7/23, Error ellipse: s-maj=14.8km s-min=8.1km az=63.0*
*NEIC **24** 00:23:24.2±0.3, 13.26N×87.64W, mb4.7/60, Error ellipse: s-maj=8.0km s-min=4.7km az=224.0*
NEIC Felt [III] at Tegucigalpa. Also felt at Rancho Grande and San Agustin. Felt at Puerto Morazan, Nicaragua.
*BJI **24** 00:23:24.5, 13.30N×87.70W, h189km, mB4.9/2*

ISC 24 00:23:23.1±0.4, 13.19N±0.05×87.62W±0.04, h188km±3km, h188km:pP-P, n366, σ1.18/472, mb4.5/83, 113C-113D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**0.23**	**292**	*i* P	**Pn**	**00 23 45.8**	**-2.4**
BLLM	**Bellamira**	**0.66**	**293**	*i* P	**Pn**	**00 23 47.2**	**-2.4**
VSM	**San Miguel**	**0.68**	**290**	*i* P	**Pn**	**00 23 47.5**	**-2.5**
CAHU	**Cacaouatique**	**0.82**	**315**	*i* P	**Pn**	**00 23 48.7**	**-2.0**
CAHU				*e*S	**Sn**	**00 24 08.8**	**-3.2**
TGUH	**Tegucigalpa,Un**	**0.93**	**21**	*e*Pn	**Pn**	**00 23 50.4**	**-0.7**
TGUH				*e*Sn	**Sn**	**00 24 10.6**	**-2.3**
TGUH	**Tegucigalpa,Un**	**0.93**	**21**	*i* P	**Pn**	**00 23 50.4**	**-0.7**
TGUH				*i* S	**Sn**	**00 24 10.6**	**-2.3**
CNGN	**Cerro Negro**	**1.13**	**127**	*i* P	**Pn**	**00 23 52.3**	**-0.3**
SNVI	**San Vicente**	**1.26**	**290**	*i* P	**Pn**	**00 23 51.4**	**-2.4**
LFRS	**El Faro**	**1.47**	**287**	*e*P	**Pn**	**00 23 52.8**	**-2.8**
LBRS	**Las Brisas**	**1.49**	**292**	*i* P	**Pn**	**00 23 53.5**	**-2.3**
LFU	**La Fuente**	**1.56**	**291**	*e*P	**Pn**	**00 23 54.0**	**-2.4**

SNET	**Serv Nac Est T**	**1.65**	**288**	*i*P		**Pn**	**00**	**23**	**54.5 -2.8**
SNET					AML	AML	00	23	54.9
	comp=Z,2µm,0.4s								
BOQS	**Boqueron**	**1.71**	**289**	*e*P		**Pn**	**00**	**23**	**55.3 -2.7**
SNJE	**San Jose**	**2.05**	**289**	*e*P		**Pn**	**00**	**23**	**59.0 -2.4**
SBLS	**San Blas**	**2.06**	**289**	*i*P		**Pn**	**00**	**23**	**59.1 -2.5**
MTO2	**Montecristo 2**	**2.08**	**306**	*i*P		**Pn**	**00**	**24**	**00.1 -1.7**
RTR	**El Retiro**	**2.10**	**290**	*i*P		**Pn**	**00**	**23**	**59.9 -2.1**
RBDL	**Robledal**	**2.21**	**295**	*e*P		**Pn**	**00**	**24**	**00.7 -2.5**
MRL	**Marmol**	**2.75**	**313**	*e*P		**Pn**	**00**	**24**	**09.4 +0.1**
MRL				*e*S		Sn	00	24	59.1 +14
IXG	**Ixpaco**	**2.93**	**290**	*e*P		**Pn**	**00**	**24**	**09.6 -1.8**
IXG				*e*S		**Sn**	**00**	**24**	**51.2 +2.1**
NBG	**Las Nubes**	**2.99**	**298**	*e*P		**Pn**	**00**	**24**	**11.8 -0.6**
PCG	**Pacaya**	**3.14**	**293**	*e*P		**Pn**	**00**	**24**	**13.1 -1.0**
PCG				*e*S		**Sn**	**00**	**24**	**58.3 +4.3**
FUG	**Fuego 3**	**3.37**	**292**	*e*P		**Pn**	**00**	**24**	**15.7 -1.1**
FUG				*e*S		**Sn**	**00**	**25**	**02.2 +3.4**
JTS	**JuntasAbangare**	**3.89**	**138**	*e*Pn		**Pn**	**00**	**24**	**23.4 +0.4**
JTS				*e*Sn		**Sn**	**00**	**25**	**07.5 -2.6**
JAT	**Jato**	**4.07**	**286**	*e*P		**Pn**	**00**	**24**	**24.3 -1.0**
JAT				*e*S		**Sn**	**00**	**25**	**13.4 -0.6**
TEIG	**Tepich**	**7.03**	**355**	*e*Pn		**Pn**	**00**	**25**	**03.8 +0.2**
TEIG	**Tepich**	**7.03**	**355**	P		**Pn**	**00**	**25**	**03.9 +0.3**
	comp=Z,6.0nm,0.3s,baz=169,slow=22,SNR=78								
TEIG				S		**Sn**	**00**	**26**	**22.8 -0.4**
	comp=Z,0.7nm,0.3s,baz=232,slow=22,SNR=3.5								
GTBY	**Guantanamo Bay**	**13.73**	**59**	*e*Pn		**P**	**00**	**26**	**35.6 +2.9**
ROSC	**El Rosal**	**15.51**	**121**	*e*P		**P**	**00**	**26**	**55.8 +2.9**
ROSC	**El Rosal**	**15.51**	**121**	P		**P**	**00**	**26**	**56.9 +4.0**
	comp=Z,1.8nm,0.3s,baz=267,slow=20,SNR=6.8								
OTAV	**Otavalo**	**15.75**	**144**	*e*Pn		**P**	**00**	**26**	**58.9 +3.2**
	comp=Z,2.4nm,0.9s								
HKT	**Hockley**	**18.33**	**337**	*e*P		**P**	**00**	**27**	**24.6 +1.3**
	comp=Z,28nm,1.2s								
TIGA	**Tifton**	**18.54**	**11**	⇑P		**P**	**00**	**27**	**27.1 +1.5**
	baz=19,SNR=11								
VBMS	**Vicksburg**	**19.13**	**352**	*e*P		**P**	**00**	**27**	**33.3 +1.4**
	comp=Z,37nm,0.7s								
732A	**Laxson Ranch,**	**19.27**	**325**	⇓P		**P**	**00**	**27**	**34.1 +0.6**
	baz=19,SNR=13								
LRAL	**Lakeview Retre**	**19.76**	**2**	*e*P		**P**	**00**	**27**	**40.0 +1.

TUL1	Tulsa	23.79	343	⇓P		P	00 28 18.5	-0.1	
	baz=24,SNR=26								
Y30A	Stafford Cattl	23.88	332	⇑P		P	00 28 20.2	+0.6	
	baz=24,SNR=5.8								
X31A	McDonald Ranch	24.11	334	P		P	00 28 22.0	+0.4	
	baz=24,SNR=12								
Z28A	Tucker Farm, M	24.12	328	⇓P		P	00 28 21.7	-0.1	
	baz=24								
325A	Bean Ranch, Si	24.13	321	⇓P		P	00 28 22.0	0.0	
	baz=24,SNR=10								
325A				⇓pP		pP	00 29 00.2	+2.0	
	baz=24								
127A	Arkansas Junct	24.16	326	⇓P		P	00 28 22.0	-0.2	
	baz=24,SNR=9.7								
226B	Tecolote Peak,	24.16	324	⇓P		P	00 28 22.9	+0.7	
	baz=24,SNR=23								
Y29A	Porterfield Fa	24.23	330	⇓P		P	00 28 23.1	+0.4	
	baz=24,SNR=21								
X30A	Coker Ranch, T	24.34	333	⇑P		P	00 28 24.3	+0.5	
	baz=24,SNR=20								
X30A				⇑pP		pP	00 29 02.1	+1.8	
	baz=24								
GDL2	Guadalupe Moun	24.37	324	eP		P	00 28 24.6	+0.5	
	comp=Z,2.9nm,0.6s								
SIUC	Southern Illin	24.47	357	eP		P	00 28 24.7	-0.1	
	comp=Z,34nm,0.8s								
SIUC				epP		pP	00 29 02.6	+1.0	
324A	Moseley Ranch,	24.50	321	P		P	00 28 25.2	-0.1	
	baz=24,SNR=10								
324A				⇓pP		pP	00 29 01.8	-0.3	
	baz=24,SNR=5.4								
Y28A	McKinney Farm,	24.55	330	⇓P		P	00 28 25.8	+0.1	
	baz=24,SNR=5.7								
225A	Deer Hill, Car	24.57	323	P		P	00 28 27.6	+1.6	
	baz=24,SNR=9.4								
Z27A	Tatum	24.57	327	⇓P		P	00 28 25.5	-0.4	
	baz=25,SNR=6.9								
MNTX	Cornudas Mount	24.61	321	eP		P	00 28 25.9	-0.3	
	comp=Z,1.9nm,0.6s								
MNTX				epP		pP	00 29 03.6	+0.4	
USIN	University of	24.68	360	eP		P	00 28 26.7	0.0	
	comp=Z,30nm,0.6s								
USIN				epP		pP	00 29 04.7	+1.0	
BLA	Blacksburg	24.77	14	eP		P	00 28 29.0	+1.4	
	comp=Z,22nm,0.8s								
MSTX	Muleshoe	24.86	329	⇑P		P	00 28 28.6	+0.1	
	baz=25,SNR=12								
125A	Gardner Draw,	24.87	324	P		P	00 28 29.1	+0.5	
	baz=25,SNR=20								
Z26A	Caprock	24.95	326	⇑P		P	00 28 29.5	+0.2	
	baz=25								
224A	Cornudas Mount	24.96	322	P		P	00 28 29.6	0.0	
	baz=25,SNR=12								
Y27A	Causey	24.99	328	P		P	00 28 29.7	0.0	
	baz=25,SNR=14								
X28A	Dimmitt	25.02	331	⇓P		P	00 28 29.8	-0.1	
	baz=25								
V31A	Spring Creek L	25.04	336	⇓P		P	00 28 31.2	+1.1	
	baz=25,SNR=16								
AMTX	Amarillo	25.07	332	eP		P	00 28 30.0	-0.4	
	comp=Z,21nm,0.9s								
124A	Stringfield Ra	25.36	323	⇓P		P	00 28 34.0	+0.8	
	baz=25,SNR=7.2								
124A				⇓pP		pP	00 29 11.1	+0.1	
	baz=25								
Z25A	Roswell	25.36	325	⇑P		P	00 28 33.7	+0.6	
	baz=25,SNR=9.1								
Z25A				⇑pP		pP	00 29 10.1	-0.8	
	baz=25								
Y26A	Elida	25.36	327	⇓P		P	00 28 33.8	+0.7	
	baz=25,SNR=7.1								
OLIL	Olney	25.45	359	eP		P	00 28 33.4	-0.2	
	comp=Z,26nm,0.8s								
Z24A	Sheeppen Canyo	25.77	324	⇑P		P	00 28 37.6	+0.8	
	baz=26,SNR=8.6								
Z24A				⇑pP		pP	00 29 14.9	+0.1	
	baz=26								
Y25A	Mesa, Roswell	25.83	326	⇓P		P	00 28 38.1	+0.8	
	baz=26								
X26A	CR and CF Fran	25.84	328	⇑P		P	00 28 37.6	+0.1	
	baz=26								
W27A	Bowe Ranch, En	25.87	330	⇓P		P	00 28 38.5	+0.8	
	baz=26,SNR=10								
URVA	University of	25.90	19	eP		P	00 28 38.9	+1.2	
BLO	Bloomington	25.90	2	eP		P	00 28 37.1	-0.6	
	comp=Z,16nm,1.0s								
JSRW	J. Sargeant Re	25.91	18	eP		P	00 28 39.2	+1.5	
U30A	WK&E Inc. Balk	26.02	336	⇑P		P	00 28 40.1	+1.2	
	baz=26								
V28A	Channing	26.04	332	⇓P		P	00 28 39.6	+0.5	
	baz=26								
T31A	Randall Ranch,	26.14	338	⇓P		P	00 28 40.8	+0.8	
	baz=26,SNR=5.6								
Z23A	Rita Site, Whi	26.22	323	⇑P		P	00 28 42.3	+1.4	
	baz=26								
Y24A	Capitan	26.24	325	P		P	00 28 42.0	+0.9	
	baz=26,SNR=6.6								
Y24A				⇑pP		pP	00 29 19.1	-0.1	
	baz=26								
CBN	Corbin	26.53	18	eP		P	00 28 44.8	+1.5	
	comp=Z,38nm,0.6s								
CBN				epP		pP	00 29 22.9	+1.4	
Y23A	Lovelace Mesa,	26.60	324	⇑P		P	00 28 45.0	+0.7	
	baz=27,SNR=5.5								
Y23A				⇑pP		pP	00 29 22.9	+0.4	
	baz=27,SNR=6.4								
Z22A	Elephant Butte	26.65	322	⇓P		P	00 28 45.2	+0.5	
	baz=27								
121A	Cookes Peak, D	26.67	320	⇑P		P	00 28 45.7	+0.8	
	baz=27								
121A				⇓pP		pP	00 29 24.2	+1.1	
	baz=27,SNR=6.1								
W25A	X Bar L Ranch,	26.70	328	⇑P		P	00 28 45.9	+0.9	
	baz=27,SNR=10								
W25A				⇑pP		pP	00 29 23.5	+0.3	
	baz=27								
X24A	Lazy VL Ranch,	26.71	326	⇓pP		pP	00 29 23.9	+0.4	
	baz=27								
220A	Playas Peak, P	26.74	318	⇑P		P	00 28 46.3	+0.8	
	baz=27								
V26A	Tequesquite Ra	26.81	330	P		P	00 28 46.6	+0.6	
	baz=27,SNR=8.3								
KSU1	Kansas State U	27.01	344	eP		P	00 28 46.9	-0.7	
	comp=Z,37nm,1.2s								
BNM	Barren Site	27.08	324	eP		P	00 28 49.6	+1.0	
BNM				epP		pP	00 29 27.8	+0.9	
Y22A	Socorro	27.13	323	⇑P		P	00 28 49.9	+1.0	
	baz=27,SNR=5.3								
Y22A				⇓pP		pP	00 29 28.4	+1.1	
	baz=27								
R31A	Burdett	27.15	339	⇓P		P	00 28 49.0	+0.1	
	baz=27								
W24A	Lazy 6 Ranch,	27.19	327	⇑P		P	00 28 50.3	+0.8	
	baz=27								
W24A				⇓pP		pP	00 29 29.0	+1.2	
	baz=27,SNR=5.5								
ACSO	Alum Creek Sta	27.25	8	eP		P	00 28 50.2	+0.5	
	comp=Z,29nm,1.0s								
V25A	Rancho No Teng	27.26	329	P		P	00 28 51.2	+1.1	
	baz=27,SNR=8.0								
V25A				⇓pP		pP	00 29 30.2	+1.8	
	baz=27,SNR=6.6								
R30A	Dighton	27.41	338	⇑P		P	00 28 51.9	+0.6	
	baz=27,SNR=11								
V24A	Rampart Ranch,	27.51	328	⇓P		P	00 28 53.1	+0.7	
	baz=28								
V24A				⇓pP		pP	00 29 32.0	+1.2	
	baz=28								
W23A	Werner Place,	27.55	326	⇑P		P	00 28 54.1	+1.3	
	baz=28,SNR=6.0								
W23A				⇑pP		pP	00 29 31.7	+0.6	
	baz=28								
ANMO	Albuquerque	27.56	325	P		P	00 28 54.0	+1.1	
	comp=Z,1.7nm,0.8s,baz=158,slow=7.9,SNR=8.5								
Z20A	Nine Sixteen R	27.56	320	⇑P		P	00 28 53.4	+0.6	
	baz=28								
U25A	Circle Dot Ran	27.60	330	⇑P		P	00 28 53.9	+0.7	
	baz=28								
Y21A	Point of Rocks	27.60	322	⇓P		P	00 28 54.4	+1.2	
	baz=28								
SDMD	Soldier's Deli	27.80	18	eP		P	00 28 55.9	+1.3	
	comp=Z,27nm,0.7s								
U23A	El Rito	28.45	327	⇑P		P	00 29 02.1	+1.4	
	baz=28,SNR=9.9								
U23A				⇓pP		pP	00 29 40.8	+1.6	
	baz=28,SNR=8.4								
MVL	Millersville	28.49	18	eP		P	00 29 02.6	+1.9	
	comp=Z,13nm,0.7s								
TUC	Tucson	28.50	316	epP		pP	00 29 42.6	+3.1	
SSPA	Standing Stone	28.64	16	eP		P	00 29 03.2	+1.1	
	comp=Z,12nm,0.6s								
P29A	Atwood	28.82	338	⇓P		P	00 29 04.8	+1.0	
	baz=29								
U22A	Llaves	28.84	327	⇓pP		pP	00 29 44.0	+1.3	
	baz=29								
V21A	Milan	28.85	325	⇓P		P	00 29 05.5	+1.3	
	baz=29								
ALLY	Alegheny Colle	29.09	12	eP		P	00 29 07.0	+0.9	
	comp=Z,17nm,0.7s								
SDCO	Great Sand Dun	29.19	330	eP		P	00 29 08.3	+0.9	
	comp=Z,3.2nm,0.9s								
U21A	Nageezi	29.31	326	⇑pP		pP	00 29 48.1	+1.1	
	baz=29								
LUPA	Lehigh Univers	29.34	19	eP		P	00 29 10.3	+2.0	
	comp=Z,170nm,0.7s								
ERPA	Erie	29.57	12	eP		P	00 29 11.0	+0.7	
	comp=Z,23nm,0.8s								
BGNE	Belgrade	29.58	344	⇑P		P	00 29 10.6	+0.1	
	baz=30,SNR=5.4								
W18A	Petrified Fore	29.60	321	⇑P		P	00 29 11.3	+0.4	
	baz=30								
R23A	Moffat	29.70	330	⇑P		P	00 29 12.4	+0.6	
	baz=30								
JFWS	Jewell Farm	29.71	356	eP		P	00 29 11.0	-0.4	
	comp=Z,8.3nm,0.6s								
S22A	4UR Ranch, Cre	29.86	328	⇑P		P	00 29 14.1	+0.9	
	baz=30,SNR=5.7								
N28A	Pribbeno Ranch	29.99	339	⇓P		P	00 29 14.8	+0.7	
	baz=30								
Q24A	Divide	30.00	332	⇓P		P	00 29 15.7	+1.2	
	baz=30								
X16A	Lo Mia Camp, P	30.22	318	⇑P		P	00 29 16.9	+0.5	
	baz=30								
Q23A	Hartsel	30.27	331	⇓P		P	00 29 17.7	+0.8	
	baz=30								
M29A	Burnside Ranch	30.37	340	⇓P		P	00 29 17.9	+0.4	
	baz=30								
BINY	Binghamton	30.62	17	eP		P	00 29 20.3	+0.7	
	comp=Z,13nm,0.7s								
SMCO	Snowmass	31.03	330	eP		P	00 29 24.8	+1.1	
	comp=Z,3.8nm,0.8s								
SMCO				epP		pP	00 30 04.1	+1.6	
ECSD	EROS Data Cent	31.41	347	eP		P	00 29 25.3	-1.2	
	comp=Z,26nm,1.1s								
ECSD				eS		S	00 34 16.1	-3.9	
PV10	Paradox Valley	31.48	327	eP		P	00 29 28.2	+0.7	
PV10				epP		pP	00 30 07.4	+1.1	
S18A	Hurst Farm, Bl	31.52	325	⇑P		P	00 29 28.6	+0.8	
	baz=32,SNR=7.0								
TRY	Troy	31.82	20	eP		P	00 29 31.6	+1.6	
M24A	Cheyenne	31.92	335	⇑P		P	00 29 32.1	+0.9	
	baz=32								
U15A	North Rim	32.02	321	⇑P		P	00 29 33.3	+1.0	
	baz=32								
SPMN	St. Paul	32.23	353	⇓P		P	00 29 32.7	-1.0	
	baz=32,SNR=11								
SADO	Sadowa	32.30	11	P		P	00 29 34.0	-0.1	
	comp=Z,20nm,0.5s,baz=218,slow=8.5,SNR=55								
SADO				pP		pP	00 30 13.1	0.0	
	comp=Z,2.4nm,0.6s,baz=221,slow=4.0,SNR=2.1								
O20A	White River Ci	32.39	330	⇑P		P	00 29 36.4	+1.1	
	baz=32,SNR=5.8								
O20A				⇓pP		pP	00 30 16.3	+2.1	
	baz=32								
N21A	Black Mountain	32.53	331	⇑pP		pP	00 30 16.9	+1.4	
	baz=32								
SAML	Samuel	32.75	131	eP		P	00 29 35.7	-2.8	
	comp=Z,3.5nm,0.7s								
SAML				ePcP		PcP	00 32 18.7	-0.8	
SRU	San Rafael	32.82	326	⇓P		P	00 29 39.7	+0.6	
	baz=33,SNR=6.0								
SRU				⇑pP		pP	00 30 18.2	+0.2	
	baz=33								
COWI	Conover	32.83	358	eP		P	00 29 37.6	-1.2	
	comp=Z,14nm,0.8s								
N20A	Spence Gulch,	32.94	331	⇓P		P	00 29 41.4	+1.2	
	baz=33,SNR=7.4								
N20A				⇑pP		pP	00 30 20.6	+1.5	
	baz=33,SNR=7.5								
O19A	Miners Draw (B	32.95	329	⇑P		P	00 29 41.1	+0.9	
	baz=33								
Q16A	Castle Valley	33.04	325	⇑P		P	00 29 41.8	+0.8	
	baz=33								
Q16A				⇓pP		pP	00 30 21.3	+1.3	
	baz=33								
P18A	Preston Nutter	33.04	327	⇑P		P	00 29 41.8	+0.7	
	baz=33,SNR=5.5								
P18A				⇓pP		pP	00 30 21.1	+1.0	
	baz=33								
LONY	Lake Ozonia	33.25	17	eP		P	00 29 42.9	+0.5	
	comp=Z,64nm,1.7s								
MSU	Marysvale	33.33	324	eP		P	00 29 44.9	+1.4	
MVU	Marysvale	33.34	324	eP		P	00 29 45.0	+1.4	
MVU				epP		pP	00 30 24.3	+1.6	
L21A	Rawlins	33.42	333	P		P	00 29 45.2	+0.9	
	baz=33,SNR=5.0								
FRNY	Flat Rock	33.73	18	eP		P	00 29 47.1	+0.4	
	comp=Z,32nm,1.6s								
LBNH	Lisbon	33.74	20	eP		P	00 29 47.2	+0.5	
I24A	Kuemmerle Ranc	33.88	338	⇓P		P	00 29 49.0	+0.9	
	baz=34,SNR=5.3								
RSSD	Black Hills	33.89	339	eP		P	00 29 49.0	+0.7	
	comp=Z,6.2nm,0.7s								
L20A	Wamsutter	33.89	332	⇑P		P	00 29 48.7	+0.3	
	baz=34								
DAU	Daniels Canyon	34.14	327	eP		P	00 29 51.8	+1.2	
DAU				epP		pP	00 30 31.4	+1.6	
J22A	Midwest	34.22	335	⇑P		P	00 29 51.7	+0.7	
	baz=34,SNR=7.3								
J22A				⇑pP		pP	00 30 31.6	+1.4	
	baz=34								
K20A	Yellowstone Ra	34.41	332	P		P	00 29 53.1	+0.4	
	baz=34,SNR=6.7								
J21A	Lysite	34.57	334	⇑P		P	00 29 55.4	+1.3	
	baz=35,SNR=20								
M17A	Scullys Gap (B	34.61	329	⇓P		P	00 29 54.9	+0.4	
	baz=35,SNR=15								
M17A				⇑pP		pP	00 30 34.8	+1.1	
	baz=35,SNR=5.1								
H24A	Dirks Ranch, A	34.62	339	⇓P		P	00 29 55.1	+0.7	
	baz=35,SNR=13								
H24A				⇓pP		pP	00 30 34.8	+1.3	
	baz=35								
I22A	9 Mile Ranch,	34.62	336	⇑P		P	00 29 55.0	+0.6	
	baz=35,SNR=7.6								
I22A				⇓pP		pP	00 30 34.8	+1.1	
	baz=35								
L18A	Fontenelle, Gr	34.63	330	P		P	00 29 55.5	+0.7	
	baz=35,SNR=6.5								
K19A	Absolon Red Bu	34.77	332	P		P	00 29 56.2	+0.4	
	baz=35,SNR=5.9								
EYMN	Ely	34.80	355	eP		P	00 29 54.3	-1.5	
	comp=Z,7.4nm,0.8s								
I21A	Big Trails, Te	34.88	335	P		P	00 29 57.4	+0.6	
	baz=35,SNR=5.7								
BW06	Boulder Array	35.05	331	eP		P	00 29 58.2	-0.1	
	comp=Z,4.1nm,0.9s								
BW06				epP		pP	00 30 38.3	+0.7	
PDAR	Pinedale Array	35.05	331	P		P	00 29 58.1	-0.1	
	comp=Z,3.4nm,0.7s,baz=129,slow=10,SNR=23								
PDAR				pP		pP	00 30 38.2	+0.6	
	comp=Z,1.9nm,1.0s,baz=140,slow=7.8,SNR=2.9								
PDAR				PcP		PcP	00 32 24.7	-1.2	
	comp=Z,0.5nm,0.7s,baz=134,slow=7.8,SNR=3.7								
LPAZ	La Paz	35.05	146	eP		P	00 29 59.6	+0.6	
	comp=Z,3.5nm,0.8s								
LPAZ	La Paz	35.05	146	P		P	00 29 59.4	+0.4	
	comp=Z,3.5nm,0.7s,baz=329,slow=6.9,SNR=18								
LPAZ				PcP		PcP	00 32 26.4	-0.3	
	comp=Z,0.8nm,0.6s,baz=331,slow=3.1,SNR=3.1								
LPAZ				ScP		ScP	00 35 55.8	+1.1	
	comp=Z,2.0nm,1.0s,baz=350,slow=5.5,SNR=4.3								
H22A	Clearmont	35.16	337	⇑P		P	00 29 59.7	+0.7	
	baz=35								
HWUT	Hardware Ranch	35.16	328	eP		P	00 29 59.8	+0.6	
	comp=Z,12nm,0.8s								
HWUT				epP		pP	00 30 39.4	+0.8	
MPMC	Manual Prospec	35.20	316	⇓P		P	00 30 00.2	+0.6	
	baz=35								
J19A	Crowheart	35.21	332	⇓P		P	00 30 00.0	+0.5	
	baz=35,SNR=9.1								
R11A	Troy Canyon, C	35.27	320	⇑pP		pP	00 30 40.3	+0.8	
	baz=35								
F24A	Ekalaka	35.53	340	P		P	00 30 02.8	+0.6	
	baz=36,SNR=9.6								
H20A	Greybull	35.73	335	P		P	00 30 04.2	+0.4	
	baz=36,SNR=8.0								
H20A				⇓pP		pP	00 30 43.8	+0.5	
	baz=36								
F23A	Volborg	35.76	339	⇑P		P	00 30 04.7	+0.6	
	baz=36,SNR=7.3								
AHID	Auburn Hatcher	35.79	330	eP		P	00 30 04.9	+0.3	
	comp=Z,11nm,0.6s								
I18A	Diamond G Ranc	35.90	332	P		P	00 30 06.3	+0.9	
	baz=36,SNR=7.2								
I18A				⇑pP		pP	00 30 46.1	+1.2	
	baz=36								
HVU	Hansel Valley	35.92	327	eP		P	00 30 07.0	+1.4	
	comp=Z,19nm,1.7s								
E24A	Baker	36.12	340	⇓P		P	00 30 07.7	+0.6	
	baz=36,SNR=9.4								
REDW	Red Top Meadow	36.12	331	eP		P	00 30 08.3	+1.0	
	comp=Z,0.5nm,0.7s								
SNOW	Snow King Moun	36.15	331	eP		P	00 30 08.8	+1.1	
	comp=Z,27nm,0.8s								
SNOW				epP		pP	00 30 48.0	+0.9	
LOHW	Long Hollow	36.19	331	eP		P	00 30 08.7	+0.8	
	comp=Z,16nm,1.4s								
LOHW				epP		pP	00 30 48.2	+0.8	
TPAW	Teton Pass	36.26	331	eP		P	00 30 08.8	+0.2	
	comp=Z,12nm,0.8s								
TPAW				epP		pP	00 30 48.6	+0.5	
RRI2	Red Ridge	36.33	330	eP		P	00 30 10.1	+0.9	
RRI2				epP		pP	00 30 51.7	+3.0	
MOOW	Moose Ponds	36.36	331	eP		P	00 30 10.0	+0.6	
	comp=Z,6.8nm,0.8s								
MOOW				epP		pP	00 30 48.3	-0.6	
E23A	Ismay	36.40	339	⇑P		P	00 30 09.7	+0.3	
	baz=36,SNR=9.9								
E23A				⇑pP		pP	00 30 49.5	+0.5	
	baz=36								
G20A	Bridger	36.41	335	P		P	00 30 09.5	-0.2	
	baz=36,SNR=5.9								
G20A				⇓pP		pP	00 30 49.5	+0.3	
	baz=36								
F21A	Absaloka Mine,	36.48	337	⇑P		P	00 30 10.3	+0.1	
	baz=36								
IMW	Indian Meadow	36.56	331	eP		P	00 30 11.9	+0.7	
	comp=Z,5.0nm,0.6s								
E22A	Miles City	36.57	339	⇓P		P	00 30 11.7	+0.8	
	baz=37								
ELK	Elko	36.58	324	P		P	00 30 12.2	+0.8	
	comp=Z,2.0nm,0.8s,baz=141,slow=6.8,SNR=9.8								
ELK				pP		pP	00 30 52.0	+1.1	
	comp=Z,0.4nm,0.3s,baz=185,slow=14,SNR=1.5								
D24A	Glendive	36.61	341	P		P	00 30 12.1	+0.8	
	baz=37,SNR=15								
RLMT	Red Lodge	36.77	334	eP		P	00 30 12.8	0.0	
	comp=Z,2.4nm,0.6s								
RLMT				epP		pP	00 30 52.8	+0.4	
F20A	Billings	36.86	336	⇓pP		pP	00 30 54.0	+1.0	
	baz=37								
D23A	Lindsay	36.95	340	P		P	00 30 14.9	+0.8	
	baz=37,SNR=7.4								
C24A	Savage	37.01	341	P		P	00 30 15.3	+0.7	
	baz=37,SNR=8.4								
NVAR	Mina Array Bea	37.05	318	P		P	00 30 16.4	+1.1	
	comp=Z,1.8nm,0.6s,baz=126,slow=7.3,SNR=16								
NVAR				pP		pP	00 30 54.8	-0.1	
	comp=Z,2.3nm,1.0s,baz=138,slow=8.3,SNR=5.2								
NVAR				PcP		PcP	00 32 31.6	-0.4	
	comp=Z,1.0nm,0.8s,baz=137,slow=3.1,SNR=5.9								
NVAR				ScP		ScP	00 36 00.6	-0.6	
	comp=Z,0.5nm,0.6s,baz=149,slow=3.3,SNR=4.3								
G18A	Lazy EL Ranch,	37.06	334	P		P	00 30 15.3	+0.2	
	baz=37,SNR=5.6								
G18A				⇓pP		pP	00 30 55.4	+0.6	
	baz=37								
F19A	Roth Farm, Mol	37.23	335	⇓P		P	00 30 16.8	+0.2	
	baz=37,SNR=5.8								
D22A	Cohagen	37.26	339	P		P	00 30 17.6	+0.8	
	baz=37,SNR=8.4								
H16A	Russell Place,	37.32	332	⇓P		P	00 30 18.6	+1.1	
	baz=37,SNR=7.6								
J14A	Carey	37.40	328	P		P	00 30 19.0	+0.8	
	baz=37,SNR=6.7								
E20A	Meyer Farm, Mu	37.44	337	⇑P		P	00 30 19.1	+0.9	
	baz=37,SNR=16								
E20A				⇑pP		pP	00 30 59.0	+1.1	
	baz=37,SNR=7.5								
GCMT	Greycliff	37.48	334	eP		P	00 30 18.9	+0.2	
C23A	Lambert	37.49	340	⇑P		P	00 30 19.5	+0.8	
	baz=38,SNR=12								
ULM	Lac du Bonnet	37.57	351	P		P	00 30 17.6	-1.7	
	comp=Z,9.0nm,0.5s,baz=167,slow=9.8,SNR=11								
F18A	Big Timber	37.59	334	⇑P		P	00 30 20.0	+0.4	
	baz=38,SNR=9.4								
F18A				⇑pP		pP	00 31 00.0	+0.7	
	baz=38								
E19A	Rath Farm, Rou	37.66	336	P		P	00 30 20.8	+0.7	
	baz=38,SNR=6.6								
E19A				⇑pP		pP	00 31 00.0	+0.2	
	baz=38								
C22A	Vida	37.67	340	P		P	00 30 21.1	+0.9	
	baz=38,SNR=15								
DGMT	Dagmar	37.77	342	eP		P	00 30 21.4	+0.4	
	comp=Z,58nm,0.6s								
DGMT	Dagmar	37.77	342	⇓P		P	00 30 21.6	+0.6	
	baz=38,SNR=8.9								
I14A	Mackay	37.80	329	⇓P		P	00 30 22.7	+1.2	
	baz=38,SNR=6.9								
I14A				⇓pP		pP	00 31 02.4	+1.2	
	baz=38								
H15A	Lima	37.91	331	⇑P		P	00 30 23.2	+0.8	
	baz=38,SNR=10								
F17A	Fitzpatrick Pl	37.99	334	P		P	00 30 23.9	+0.9	
	baz=38,SNR=7.7								
F17A				⇓pP		pP	00 31 04.0	+1.2	
	baz=38								
B23A	Brockton	38.01	341	⇓

D18A			⇑pP		**pP**	**00 31 09.3**	**+0.9**
	baz=39						
LRM	**Limekiln Ridge**	**38.73**	**332**	*e*P	**P**	**00 30 30.1**	**+0.8**
LRM				*e*pP	**pP**	**00 31 09.8**	**+0.7**
F15A	**Butte**	**38.76**	**332**	P	**P**	**00 30 30.3**	**+0.9**
	baz=39,SNR=10						
F15A				⇑pP	**pP**	**00 31 10.1**	**+0.7**
	baz=39,SNR=5.5						
A22A	**Carney Farms,**	**38.77**	**341**	⇓P	**P**	**00 30 30.3**	**+1.0**
	baz=39						
C19A	**Slack Wire Ran**	**38.81**	**337**	P	**P**	**00 30 30.3**	**+0.6**
	baz=39,SNR=8.9						
C19A				⇓pP	**pP**	**00 31 10.2**	**+0.6**
	baz=39						
E16A	**East Helena**	**38.92**	**333**	⇓P	**P**	**00 30 31.3**	**+0.5**
	baz=39,SNR=6.2						
E16A				⇓pP	**pP**	**00 31 11.3**	**+0.6**
	baz=39,SNR=6.8						
H12A	**Diamond D Ranc**	**38.95**	**329**	⇑P	**P**	**00 30 31.7**	**+0.6**
	baz=39						
D17A	**Six Diamond Ra**	**38.99**	**335**	⇑P	**P**	**00 30 31.8**	**+0.5**
	baz=39,SNR=10						
D17A				⇓pP	**pP**	**00 31 11.4**	**+0.2**
	baz=39,SNR=6.0						
D16A	**Dana Ranch, Ca**	**39.26**	**334**	⇑P	**P**	**00 30 34.3**	**+0.8**
	baz=39,SNR=6.9						
E15A	**Deer Lodge**	**39.27**	**332**	P	**P**	**00 30 34.2**	**+0.6**
	baz=39,SNR=5.2						
E15A				⇑pP	**pP**	**00 31 14.5**	**+0.9**
	baz=39,SNR=5.7						
EGMT	**Eagleton**	**39.32**	**336**	*e*P	**P**	**00 30 33.7**	**-0.3**
	comp=Z,9.4nm,1.0s						
EGMT				*e*pP	**pP**	**00 31 14.2**	**+0.2**
EGMT	**Eagleton**	**39.32**	**336**	⇓pP	pP	00 31 14.7	+0.8
	baz=39						
B19A	**Brinkman Farms**	**39.36**	**338**	P	**P**	**00 30 35.0**	**+0.8**
	baz=39,SNR=9.3						
F13A	**Darby**	**39.58**	**330**	P	**P**	**00 30 36.5**	**+0.3**
	baz=40,SNR=6.3						
WVOR	**Wild Horse Val**	**39.62**	**323**	*e*P	**P**	**00 30 36.8**	**+0.3**
	comp=Z,3.6nm,0.9s						
WVOR				*e*pP	**pP**	**00 31 17.1**	**+0.5**
B18A	**Beardsley Farm**	**39.63**	**337**	⇓P	**P**	**00 30 37.5**	**+1.0**
	baz=40						
B18A				⇓pP	**pP**	**00 31 17.5**	**+1.0**
	baz=40						
E14A	**Clinton**	**39.65**	**332**	⇓P	**P**	**00 30 37.4**	**+0.6**
	baz=40						
A19A	**Klindworth Far**	**39.68**	**338**	⇓P	**P**	**00 30 37.4**	**+0.5**
	baz=40						
D15A	**Lincoln**	**39.69**	**333**	⇓P	**P**	**00 30 37.8**	**+0.8**
	baz=40						
D15A				⇑pP	**pP**	**00 31 18.2**	**+1.1**
	baz=40						
CHMT	**Chamberlain Mo**	**39.91**	**332**	*e*P	**P**	**00 30 39.2**	**+0.2**
CHMT				*e*pP	**pP**	**00 31 16.1**	**-3.0**
E13A	**Victor**	**39.99**	**331**	P	**P**	**00 30 39.6**	**+0.1**
	baz=40,SNR=6.6						
F12A	**Elk City**	**40.01**	**330**	⇓P	**P**	**00 30 40.1**	**+0.4**
	baz=40,SNR=21						
LVC	**Limon Verde**	**40.02**	**153**	*e*P	**P**	**00 30 43.0**	**+2.8**
	comp=Z,9.7nm,1.0s						
A18A	**Metzger Ranch,**	**40.09**	**337**	P	**P**	**00 30 40.8**	**+0.6**
	baz=40,SNR=5.9						
D14A	**Greenough**	**40.15**	**332**	⇓P	**P**	**00 30 40.9**	**0.0**
	baz=40						
C15A	**Salmond Ranch,**	**40.29**	**334**	P	**P**	**00 30 42.5**	**+0.6**
	baz=40,SNR=5.8						
C15A				pP	**pP**	**00 31 23.1**	**+1.0**
	baz=40,SNR=7.5						
A17A	**Triple J Farms**	**40.43**	**337**	⇑P	**P**	**00 30 43.3**	**+0.3**
	baz=40,SNR=8.7						
A17A				pP	**pP**	**00 31 23.5**	**+0.2**
	baz=40,SNR=6.3						
B15A	**Bradely Ranch,**	**40.68**	**334**	⇑P	**P**	**00 30 45.3**	**+0.1**
	baz=41						
A16A	**West Butte Ran**	**40.79**	**336**	⇑P	**P**	**00 30 46.1**	**+0.1**
	baz=41						
B14A	**Marquette Ranc**	**41.02**	**334**	⇓P	**P**	**00 30 48.5**	**+0.5**
	baz=41						
C13A	**Hot Springs**	**41.08**	**332**	⇑P	**P**	**00 30 48.2**	**-0.2**
	baz=41						
C13A				⇓pP	**pP**	**00 31 29.6**	**+0.9**
	baz=41						
A15A	**Johnson Ranch,**	**41.27**	**335**	P	**P**	**00 30 50.5**	**+0.5**
	baz=41,SNR=7.6						
A15A				pP	**pP**	**00 31 30.7**	**+0.4**
	baz=41,SNR=6.9						
B13A	**Whitefish**	**41.55**	**333**	⇑pP	pP	00 31 33.1	+0.5
	baz=42						
A14A	**Double T Ranch**	**41.56**	**334**	⇑P	**P**	**00 30 52.8**	**+0.5**
	baz=42,SNR=11						
A14A				⇑pP	**pP**	**00 31 33.0**	**+0.3**
	baz=42,SNR=10						
NEW	**Newport**	**42.69**	**331**	P	**P**	**00 31 00.5**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=135,slow=7.1,SNR=3.3						
FFC	**Flin Flon**	**42.95**	**348**	*e*P	**P**	**00 31 03.0**	**-0.2**
	comp=Z,19nm,0.7s						
SCHQ	**Schefferville**	**44.62**	**17**	*e*P	**P**	**00 31 15.9**	**-0.8**
	comp=Z,25nm,0.8s						
SCHQ	**Schefferville**	**44.62**	**17**	P	**P**	**00 31 15.9**	**-0.8**
	comp=Z,17nm,0.6s,baz=217,slow=7.1,SNR=39						
CPUP	**Villa Florida**	**49.10**	**143**	P	**P**	**00 31 50.5**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=332,slow=8.9,SNR=8.7						
CPUP				PcP	**PcP**	**00 33 12.6**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=286,slow=7.4,SNR=5.0						
YKA	**Yellowknife Ar**	**52.86**	**345**	P	**P**	**00 32 18.3**	**-0.9**
	comp=Z,2.2nm,0.5s,baz=140,slow=7.5,SNR=63						
YKA				pP	**pP**	**00 32 60.0**	**-1.4**
	comp=Z,1.0nm,0.8s,baz=141,slow=7.4,SNR=2.8						
YKA				PcP	**PcP**	**00 33 24.7**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=143,slow=3.9,SNR=8.1						
YKA				ScP	**ScP**	**00 37 04.2**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=142,slow=4.1,SNR=8.5						
YKW3	**Yellowknife Ar**	**52.92**	**345**	*e*P	**P**	**00 32 18.5**	**-1.1**
	comp=Z,0.1nm,0.8s						
YKW3				*e*pP	**pP**	**00 33 03.3**	**+1.4**
DLBC	**Dease Lake**	**55.18**	**334**	P	**P**	**00 32 36.3**	**+0.2**
	comp=Z,4.4nm,0.8s,baz=155,slow=3.4,SNR=8.9						
DLBC				pP	**pP**	**00 33 19.1**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=116,slow=5.8,SNR=4.1						
PLCA	**Paso Flores**	**55.93**	**164**	P	**P**	**00 32 42.5**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=346,slow=6.8,SNR=9.0						
PLCA				PcP	**PcP**	**00 33 38.5**	**+0.5**
	comp=Z,3.5nm,0.8s,baz=321,slow=5.7,SNR=5.8						
INK	**Inuvik**	**62.46**	**342**	P	**P**	**00 33 25.0**	**-0.9**
	comp=Z,2.4nm,0.8s,baz=124,slow=9.7,SNR=10						
INK				pP	**pP**	**00 34 08.6**	**-1.0**
	comp=Z,3.1nm,0.9s,baz=136,slow=13,SNR=6.1						
ILAR	**Eielson Array**	**65.28**	**336**	P	**P**	**00 33 43.1**	**-1.4**
	comp=Z,1.0nm,0.6s,baz=161,slow=4.8,SNR=22						
ILAR				pP	**pP**	**00 34 26.4**	**-2.0**
	comp=Z,0.9nm,0.9s,baz=112,slow=5.6,SNR=3.9						
ILAR				PP	**PP**	**00 36 09.9**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=112,slow=8.2,SNR=6.0						
SUMG	**Summit**	**65.92**	**14**	*e*P	**P**	**00 33 48.9**	**0.0**
	comp=Z,13nm,1.0s						
PPLA	**Purkeypile**	**66.85**	**333**	*e*P	**P**	**00 33 53.4**	**-1.3**
BBTS	**Babate**	**68.74**	**79**	pP	pP	00 34 52.8	+1.2
	comp=Z,63nm,1.0s,baz=12,slow=1.8,SNR=4.0						
EKA	**Eskdalemuir Ar**	**76.12**	**36**	P	**P**	**00 34 47.8**	**-2.3**
	comp=Z,2.1nm,0.6s,baz=265,slow=5.8,SNR=10						
ESDC	**Sonseca Array**	**76.86**	**52**	P	**P**	**00 34 52.9**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=292,slow=5.5,SNR=8.3						
ESDC				pP	**pP**	**00 35 40.4**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=290,slow=5.6,SNR=4.3						
NB2	**NORSAR Subarra**	**82.80**	**29**	P	**P**	**00 35 24.7**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=284,slow=5.1						
NOA	**NORSAR Array B**	**82.80**	**29**	P	**P**	**00 35 24.7**	**-1.4**
	comp=Z,1.4nm,0.8s,baz=285,slow=5.1,SNR=6.3						
ARCES	**ARCESS Array B**	**85.54**	**19**	P	**P**	**00 35 37.6**	**-2.1**
	comp=Z,1.2nm,0.7s,baz=304,slow=2.6,SNR=6.4						
TORD	**Torodi Ar. Bea**	**86.41**	**77**	P	P	00 35 42.0	-3.0
	comp=Z,0.3nm,0.6s,baz=298,slow=4.7,SNR=6.7						
TORD				PKKPbc	**PKKPbc**	**00 53 41.7**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=74,slow=1.6,SNR=5.7						
GERES	**GERESS Array B**	**87.48**	**40**	P	**P**	**00 35 47.3**	**-2.4**
	comp=Z,0.3nm,0.7s,baz=222,slow=1.3,SNR=3.6						
GERES				PP	**PP**	**00 39 21.2**	**+4.4**
	comp=Z,0.2nm,0.5s,baz=322,slow=8.5,SNR=4.0						
KEST	**Kesra**	**87.95**	**54**	P	**P**	**00 35 52.0**	**-0.1**
	comp=Z,0.7nm,1.0s,baz=249,slow=7.4,SNR=3.9						
FINES	**FINESS Array B**	**89.38**	**26**	P	**P**	**00 36 01.3**	**+3.1**
	comp=Z,1.8nm,1.0s,baz=270,slow=7.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**112.82**	**5**	PP	PP	00 42 24.6	-2.5
	comp=Z,1.0nm,0.7s,baz=357,slow=8.9,SNR=6.9						
CN2	**Changchun**	**115.76**	**334**	*e*PKP	**PKPdf**	**00 41 42.6**	**-0.8**
SONM	**Songino Array**	**117.98**	**349**	PKKPbc	PKKPbc	00 52 07.0	-2.9
	comp=Z,0.5nm,0.8s,baz=188,slow=4.9,SNR=5.1						
KSRS	**Korea Array**	**119.56**	**328**	PKP	**PKPdf**	**00 41 48.3**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=36,slow=1.5,SNR=4.4						
MAW	**Mawson**	**122.29**	**167**	PKP	**PKPdf**	**00 41 54.5**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=248,slow=1.1,SNR=6.5						
WMQ	**Urumqi**	**123.11**	**4**	*e*PKP	**PKPdf**	**00 41 58.5**	**+0.9**
HHC	**Hu-ho-hao-te**	**123.38**	**343**	*e*PKP	**PKPdf**	**00 41 54.3**	**-4.0**
HHC				sPKP		00 43 08.3	
HHC				AMB	AMB		
	comp=Z,97nm,8.4s						
HHC				LR	LR		
	comp=Z,780nm,19.0s						
GTA	**Gaotai**	**127.22**	**353**	PKP	**PKPdf**	**00 42 06.6**	**+0.9**
GTA				sPKP		00 43 16.8	
CTA	**Charters Tower**	**128.11**	**255**	PKP	**PKPdf**	**00 42 08.1**	**+0.4**
	comp=Z,2.6nm,0.7s,baz=65,slow=5.3,SNR=3.9						
LZH	**Lanzhou**	**129.81**	**348**	*e*PKP	PKPdf	00 42 17.0	+6.2
LZH				sPKP		00 43 20.4	
STKA	**Stephens Creek**	**131.34**	**239**	PKP	**PKPdf**	**00 42 14.1**	**+0.6**
	comp=Z,4.4nm,0.6s,baz=39,slow=1.9,SNR=15						
CD2	**Chengdu**	**134.81**	**346**	PKP	**PKPdf**	**00 42 20.3**	**+0.1**
GYA	**Guiyang**	**138.22**	**341**	*e*Pdif	**Pdif**	**00 39 35.8**	**-1.7**
GYA				PKP	**PKPdf**	**00 42 26.0**	**-0.7**
GYA				sPKP		00 43 35.6	
GYA				PP	**PP**	**00 45 19.8**	**+3.7**
GYA				AMB	AMB		
	comp=Z,90nm,7.9s						
WRA	**Warramunga Arr**	**139.31**	**255**	PKhKP	PKPpre	00 42 21.1	
	comp=Z,0.7nm,0.5s,baz=87,slow=3.2,SNR=14						
WRA				PKP	**PKPdf**	**00 42 29.1**	**+0.4**
	comp=Z,6.8nm,0.6s,baz=89,slow=2.4,SNR=84						
ASAR	**Alice Springs**	**139.39**	**249**	PKhKP	PKPpre	00 42 20.4	
	comp=Z,0.6nm,0.6s,baz=106,slow=2.9,SNR=8.9						
ASAR				PKP	**PKPdf**	**00 42 29.2**	**+0.4**
	comp=Z,6.6nm,0.6s,baz=92,slow=1.7,SNR=73						
ASAR				SKPbc	**SKPbc**	**00 45 46.6**	**0.0**
	comp=Z,0.9nm,1.0s,baz=114,slow=2.2,SNR=4.3						
FITZ	**Fitzroy Crossi**	**147.64**	**257**	*e*PKPdf	**PKPdf**	**00 42 43.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**147.64**	**257**	PKPbc	**PKPdf**	**00 42 44.1**	**+0.8**
	comp=Z,9.7nm,0.8s,baz=147,slow=1.8,SNR=16						
CMAR	**Chiang Mai Arr**	**147.90**	**348**	PKPbc	**PKPdf**	**00 42 43.4**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=343,slow=5.8,SNR=5.3						
NWAO	**Narrogin (SRO)**	**149.99**	**225**	PKPbc	**PKPbc**	**00 42 50.6**	**-1.2**
	baz=138,slow=5.6						

*TRN **24** 00:29:45.2, 18.74N×64.54W, h26km*
*NEIC **24** 00:29:46.1, 18.80N×64.36W, h25km, MD3.0(RSPR),*
After RSPR.

RSPR 24 00:29:46.1, 18.80N×64.36W, h25km±7km, MD3.0/4, 10C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.45**	**213**	⇑*i*P		Pb		00 29 54.6	-0.9
TBVI				*e*S		Sb		00 30 01.1	-0.7
TBVI	**Tortola**	**0.45**	**213**	*i* Pu		Pb		00 29 54.6	-0.9
TBVI				*e*S		Sb		00 30 01.1	-0.7
TBVI	**Tortola**	**0.45**	**213**	⇑*i*P		Pb		00 29 54.6	-0.9
TBVI				*e*S		Sb		00 30 01.1	-0.7
STVI	**Saint Thomas**	**0.71**	**232**	⇑*e*P		Pb		00 29 58.3	-1.6
STVI	**Saint Thomas**	**0.71**	**232**	*e*S		Sb		00 30 07.8	-1.5
STVI	**Saint Thomas**	**0.71**	**232**	⇑*e*P		Pb		00 29 58.3	-1.6
STVI				*e*S		Sb		00 30 07.8	-1.5
STVI	**Saint Thomas**	**0.71**	**232**	⇑*e*P		Pb		00 29 58.3	-1.6
STVI				*e*S		Sb		00 30 07.8	-1.5
MTP	**Monte Pirata**	**1.32**	**239**	*e*S		Sn		00 30 22.9	-2.9
MTP	**Monte Pirata**	**1.32**	**239**	⇑*e*P		Pn		00 30 06.9	-2.2
MTP	**Monte Pirata**	**1.32**	**239**	⇑*e*P		Pn		00 30 06.9	-2.2
MTP				*e*S		Sn		00 30 22.9	-2.9
MTP	**Monte Pirata**	**1.32**	**239**	⇑*e*P		Pn		00 30 06.9	-2.2
MTP				*e*S		Sn		00 30 22.9	-2.9
CBYP	**Canovanas**	**1.51**	**250**	*e*S		Sn		00 30 27.6	-3.0
CBYP	**Canovanas**	**1.51**	**250**	⇑*e*P		Pn		00 30 09.8	-1.8
CBYP	**Canovanas**	**1.51**	**250**	⇑*e*P		Pn		00 30 09.8	-1.8
CBYP				*e*S		Sn		00 30 27.6	-3.0
CBYP	**Canovanas**	**1.51**	**250**	⇑*e*P		Pn		00 30 09.8	-1.8
CBYP				*e*S		Sn		00 30 27.6	-3.0
HUMP	**Col San Antoni**	**1.55**	**246**	*e*S		Sn		00 30 29.0	-2.5
HUMP	**Col San Antoni**	**1.55**	**246**	*e*S		Sn		00 30 29.0	-2.5
CPD	**Cerro la Pandu**	**1.66**	**243**	*e*S		Sn		00 30 31.9	-2.2
CPD	**Cerro la Pandu**	**1.66**	**243**	*e*S		Sn		00 30 31.9	-2.2

*SKHL **24** 00:30:46.2±1.7, 54.51N×129.20E, h10km±3km, mb4.7/6*
SKHL Felt (II) at Zeya.
*MOS **24** 00:30:46.3±1.3, 54.58N×129.22E, h16km, mb4.4/1, Error ellipse: s-maj=31.6km s-min=15.6km az=104.1*
MOS Felt (II) at Zeya.

ISC 24 00:30:45.3±0.8, 54.47N±0.05×129.20E±0.04, h10km, n17, σ2s31/26, 1C-2D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BMKR	**Bomnak**	**0.32**	**320**	*i* Pg		**Pg**		**00 30 51.2**	**-0.5**
KROS	**Kirovskiy**	**1.30**	**269**	⇓*i*Pg		**Pn**		**00 31 08.2**	**-1.3**
KROS				AMB		AMB	AMB	00 31 09.2	
	23nm,0.4s								
KROS				AMB		AMB		00 31 09.2	
	240nm,0.4s								
KROS				AMB		AMB		00 31 09.2	
	400nm,0.4s								
KROS				*i* Sg		**Sb**		**00 31 25.6**	**-1.0**
ZEA	**Zeya**	**1.36**	**238**	*i* P		**Pn**		**00 31 10.9**	**+0.6**
ZEA				*i*				00 31 28.6	
ZEA				pmax		pmax			
	comp=Z,1μm,0.4s								
ZEA				smax		smax			
	comp=N,4μm,0.5s								
ZEA	**Zeya**	**1.36**	**238**	⇓*i*Pg		**Pn**		**00 31 10.8**	**+0.5**
ZEA				AMB		AMB		00 31 11.4	
	comp=N,660nm,0.2s								
ZEA				*e*Sg		**Sb**		**00 31 28.7**	**+0.4**
ZEA				A		A		00 31 30.9	
	comp=N,1μm,0.5s								
ZEA				A		A		00 31 30.9	
	comp=N,2μm,0.5s								
ZEA				A		A		00 31 31.0	
	comp=N,3μm,0.5s								
EKMR	**Ekimchan**	**2.63**	**121**	*e*P		**Pn**		**00 31 27.5**	**-0.3**
EKMR				*e*S		Sn		00 31 53.5	-6.3
EKMR				pmax		pmax			
	comp=N,50nm,0.4s								
EKMR				pmax		pmax			
	comp=E,70nm,0.4s								
EKMR				pmax		pmax			
	comp=Z,100nm,0.4s								
EKMR				smax		smax			
	comp=N,500nm,0.5s								
EKMR				smax		smax			
	comp=E,380nm,0.5s								
EKMR	**Ekimchan**	**2.63**	**121**	*e*Pn		**Pn**		**00 31 27.5**	**-0.3**
EKMR				pPn		**pPn**		**00 31 30.5**	**+0.4**
EKMR				*e*Pg		**Pb**		**00 31 33.3**	**+0.8**
EKMR				AMB		AMB		00 31 36.5	
	comp=E,92nm,0.4s								
EKMR				*e*Sg		**Sb**		**00 32 06.5**	**+1.7**
EKMR				A		A		00 32 09.0	
	comp=E,500nm,0.5s								
EKMR				A		A		00 32 09.0	
	comp=E,600nm,0.5s								
CLNS	**Chul'man**	**3.40**	**316**	*e*P		**Pn**		**00 31 41.6**	**+3.1**
CLNS				*e*S		**Sn**		**00 32 20.4**	**+1.5**
CLNS				pmax		pmax			
	comp=Z,11nm,0.2s								
CLNS				pmax		pmax			
	comp=E,7.0nm,0.2s								
CLNS				pmax		pmax			
	comp=N,11nm,0.2s								
CLNS				smax		smax			
	comp=E,248nm,0.6s								
CLNS				smax		smax			
	comp=N,189nm,0.4s								
CLNS				smax		smax			
	comp=Z,51nm,0.3s								
CLNS	**Chul'man**	**3.40**	**316**	*e*Pn		**Pn**		**00 31 41.6**	**+3.1**
CLNS				*e*Pg		**Pg**		**00 31 49.5**	**-1.0**
CLNS				AMB		AMB		00 31 52.7	
	comp=Z,40nm,0.3s								
CLNS				AMB		AMB		00 31 52.7	
	comp=Z,50nm,0.3s								
CLNS				AMB		AMB		00 31 52.7	
	comp=Z,80nm,0.3s								
CLNS				*e*Sn		**Sn**		**00 32 20.4**	**+1.5**
CLNS				*e*Sg		**Sg**		**00 32 30.8**	**-3.7**
TUP	**Tupik**	**5.40**	**273**	*e*Pn		**Pn**		**00 32 08.9**	**+3.1**
TUP				*e*Pg		Pg		00 32 25.0	-3.6
TUP				AMB		AMB		00 32 29.4	
	comp=Z,30nm,0.5s								
TUP				*e*Sn		**Sn**		**00 33 11.2**	**+3.3**
TUP				*e*Sg		**Sg**		**00 33 35.7**	**-2.7**
KLR	**Kul'dur**	**5.48**	**162**	*e*P		**Pn**		**00 32 08.2**	**+1.3**
KLR	**Kul'dur**	**5.48**	**162**	*e*Pn		**Pn**		**00 32 08.2**	**+1.3**
KLR				pPn		**pPn**		**00 32 13.0**	**+3.8**
GRNR	**Gornyy**	**5.75**	**127**	*e*Sg		**Sg**		**00 33 46.2**	**-3.6**
GRNR				A		A		00 33 53.8	
	comp=Z,84nm,0.5s								
CRS	**Chara**	**6.64**	**296**	*e*Pn		Pn		00 32 26.5	+3.6
CRS				*e*Pg		Pg		00 32 48.4	-4.0
CRS				AMB		AMB		00 32 54.3	
	comp=Z,30nm,1.0s								
CRS				*e*Sg		**Sg**		**00 34 14.2**	**-4.2**
NKL	**Nikolayevsk**	**6.93**	**96**	*e*P		Pn		00 32 32.2	+5.5
NKL				*e*S		Sn		00 33 55.0	+9.5
NKL	**Nikolayevsk**	**6.93**	**96**	*e*Pg		Pb		00 32 50.0	+4.4
NKL				*e*Sg		Sg		00 34 22.0	-5.5
NKL				A		A		00 34 32.9	
	comp=Z,86nm,1.0s								
HABR	**Khabarovsk**	**7.03**	**146**	*e*P		Pn		00 32 35.9	+7.8
HABR				pmax		pmax			
	comp=E,14nm,0.6s								
HABR				pmax		pmax			
	comp=N,32nm,1.2s								
HABR				pmax		pmax			
	comp=Z,40nm,1.2s								
HABR				MLR		MLR			
	comp=Z,50nm,15.0s								
YAK	**Yakutsk**	**7.59**	**2**	*e*P		**Pn**		**00 32 35.0**	**-0.8**
YAK				*e*				00 33 58.6	
YAK				pmax		pmax			
	comp=Z,19nm,0.5s								
YAK				pmax		pmax			
	comp=E,3.0nm,0.6s								
YAK				pmax		pmax			
	comp=N,8.0nm,0.4s								
YAK				smax		smax			
	comp=N,16nm,0.7s								
YAK				smax		smax			
	comp=E,11nm,0.8s								
YAK				smax		smax			
	comp=Z,15nm,8.1s								

*SKO **24** 00:34:41.4, 41.37N×22.70E, h22km, M1.0, ML1.3*
*ISCJB **24** 00:34:42.1±0.9, 41.33N±0.07×22.71E±0.06, h18km±7km, Error ellipse: s-maj=12.7km s-min=7.3km az=163.6*
*ATH **24** 00:34:42.0, 41.31N×22.67E, h27km, MD2.9/5*
*CSEM **24** 00:34:42.2±0.4, 41.34N×22.71E, h18km±1km, MD2.9, Error ellipse: s-maj=9.5km s-min=5.6km az=175.0*

ISC 24 00:34:42.2±1.2, 41.35N±0.07×22.67E±0.03, h19km±3km, n16, σ0s48/28, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**247**	*i* Pg		**Pg**		**00 34 45.8**	**-0.1**
VAY				*e*Sg		**Sg**		**00 34 47.6**	**-0.8**
VAY				*e*Lg		Lg		00 34 47.7	
	comp=N,196nm,0.3s								
VAY				*e*Lg		Lg		00 34 47.7	
	comp=E,194nm,0.2s								
VAY	**Valandovo**	**0.08**	**247**	*i* Pg		**Pg**		**00 34 46.3**	**+0.4**
VAY				*e*Sg		**Sg**		**00 34 48.1**	**-0.3**
VAY				*e*Lg		Lg		00 34 48.2	
	comp=E,194nm,0.2s								
GRG	**Griva**	**0.45**	**207**	*e*PB		**Pb**		**00 34 51.3**	**-0.2**
GRG				*e*SB		**Sb**		**00 34 57.5**	**-0.3**
GRG	**Griva**	**0.45**	**207**	*e*Pb		**Pb**		**00 34 51.3**	**-0.2**
GRG				*e*Sb		**Sb**		**00 34 57.5**	**-0.3**
SOH	**Sokhos**	**0.74**	**136**	*e*PN		**Pb**		**00 34 56.1**	**-0.3**
SOH				*e*SN		**Sg**		**00 35 06.2**	**-0.4**
SOH	**Sokhos**	**0.74**	**136**	*e*Pn		**Pb**		**00 34 56.1**	**-0.3**
SOH				*e*Sn		**Sg**		**00 35 06.2**	**-0.4**
NVR	**Nevrokopi**	**0.90**	**90**	*e*PN		**Pn**		**00 34 59.8**	**+0.1**
NVR				*e*SN		**Sg**		**00 35 11.8**	**+0.3**
NVR	**Nevrokopi**	**0.90**	**90**	*e*Pn		**Pn**		**00 34 59.8**	**+0.1**
NVR				*e*Sn		**Sg**		**00 35 11.8**	**+0.3**
FNA	**Florina**	**1.13**	**240**	*e*PN		**Pn**		**00 35 03.1**	**+0.1**
FNA				*e*SN		**Sn**		**00 35 18.4**	**+0.3**
FNA	**Florina**	**1.13**	**240**	*e*Pn		**Pn**		**00 35 03.1**	**+0.1**
FNA				*e*Sn		**Sn**		**00 35 18.4**	**+0.3**
PLG	**Polygyros**	**1.14**	**149**	*e*PN		**Pn**		**00 35 03.0**	**-0.1**
PLG				*e*SN		**Sn**		**00 35 17.9**	**-0.3**
PLG	**Polygyros**	**1.14**	**149**	*e*Pn		**Pn**		**00 35 03.0**	**-0.1**
PLG				*e*Sn		**Sn**		**00 35 17

*ISCJB **24** 00:44:47.5±0.4, 67.71N±0.03×15.45E±0.07, h0km, Error ellipse: s-maj=4.6km s-min=2.9km az=37.2*
*UPP **24** 00:44:48.6, 67.81N×15.05E, h0km, ML1.8, Suspected Mining explosion.*
*HEL **24** 00:44:48.6±0.3, 67.89N×14.93E, h15km, ML2.0, ML1.8(UPP), ML2.0(BER)*
*IDC **24** 00:44:48.0±1.5, 67.93N×14.97E, h0km, mb1 2.9/4, mb1mx2.8/29, mbtmp2.8/4, ML2.4/4, Error ellipse: s-maj=19.3km s-min=7.5km az=127.0*
*NAO **24** 00:44:50.0±2.3, 67.91N×15.07E, h12km±15km, ML2.3*
*BER **24** 00:44:51.4, 67.83N×15.18E, h15km, MD2.5, ML2.0, ML2.3(NAO)*

ISC 24 00:44:47.6±0.8, 67.73N±0.03×15.13E±0.03, h0km, n85, σ1s71/140, 2C, Northern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STEI	**Steigen**	**0.20**	**11**	↑*i*	**Pg**	**00 44 51.1**	**-0.4**
STEI				*e*S	**Sg**	**00 44 52.6**	**-1.5**
STEI				AML	AML	00 44 53.6	
	comp=Z,174nm,0.2s						
STEI	**Steigen**	**0.20**	**11**	↑*i*P	**Pg**	**00 44 51.1**	**-0.4**
STEI				*i* S	**Sg**	**00 44 52.6**	**-1.5**
STEI				AML	AML	00 44 53.6	
	comp=Z,174nm,0.2s						
SALU	**Saltoluokta**	**1.34**	**104**	*e*P	**Pb**	**00 45 14.3**	**+0.8**
SALU				*e*S	**Sn**	**00 45 34.1**	**+2.0**
SALU	**Saltoluokta**	**1.34**	**104**	P	**Pb**	**00 45 14.4**	**+0.8**
SALU				S	**Sn**	**00 45 34.1**	**+2.0**
KONS	**Konsvik**	**1.47**	**213**	*e*P	Pn	00 45 07.9	-7.3
KONS				*e*S	Sg	00 45 28.4	-6.2
KONS				AML	AML	00 45 32.2	
	comp=Z,29nm,0.2s						
KONS	**Konsvik**	**1.47**	**213**	*e*P	Pn	00 45 07.9	-7.3
KONS				*e*S	Sg	00 45 28.4	-6.2
KONS				AML	AML	00 45 32.2	
	comp=Z,29nm,0.2s						
NIKU	**Nikkaluokta**	**1.49**	**83**	*e*P	**Pg**	**00 45 16.2**	**+0.2**
NIKU				*e*S	**Sn**	**00 45 37.7**	**+2.0**
NIKU	**Nikkaluokta**	**1.49**	**83**	P	**Pg**	**00 45 16.3**	**+0.2**
NIKU				S	**Sn**	**00 45 37.6**	**+2.0**
FLOS	**Flostrand**	**1.56**	**207**	*e*P	**Pn**	**00 45 16.9**	**+0.4**
FLOS				*e*S	**Sg**	**00 45 39.8**	**+2.1**
FLOS				AML	AML	00 45 41.6	
	comp=Z,39nm,0.4s						
FLOS	**Flostrand**	**1.56**	**207**	*e*P	**Pn**	**00 45 16.9**	**+0.4**
FLOS				*e*S	**Sg**	**00 45 39.8**	**+2.1**
FLOS				AML	AML	00 45 41.6	
	comp=Z,39nm,0.4s						
FLOS	**Flostrand**	**1.56**	**207**	P	**Pn**	**00 45 16.9**	**+0.4**
FLOS				S	**Sg**	**00 45 39.8**	**+2.1**
	comp=Z,39nm,0.4s						
MOR8	**Moi Rana**	**1.59**	**190**	*e*P	**Pn**	**00 45 15.7**	**-1.2**
MOR8				*e*S	**Sn**	**00 45 37.7**	**-0.5**
MOR8				AML	AML	00 45 39.4	
	comp=Z,22nm,0.1s						
MOR8	**Moi Rana**	**1.59**	**190**	*e*P	**Pn**	**00 45 15.7**	**-1.2**
MOR8				*e*S	**Sn**	**00 45 37.7**	**-0.5**
MOR8				AML	AML	00 45 39.4	
	comp=Z,22nm,0.1s						
MOR8	**Moi Rana**	**1.59**	**190**	*e*P	**Pn**	**00 45 15.7**	**-1.2**
	SNR=55						
MOR8				*e*S	**Sn**	**00 45 37.7**	**-0.5**
	comp=Z,36nm,0.5s,SNR=55						
STOK	**Stokkvaagen**	**1.63**	**212**	*e*P	**Pn**	**00 45 17.8**	**+0.3**
STOK				*e*S	**Sg**	**00 45 41.5**	**+1.6**
STOK				AML	AML	00 45 44.1	
	comp=N,36nm,0.5s						
STOK	**Stokkvaagen**	**1.63**	**212**	*e*P	**Pn**	**00 45 17.8**	**+0.3**
STOK				*e*S	**Sg**	**00 45 41.5**	**+1.6**
STOK				AML	AML	00 45 44.1	
	comp=N,36nm,0.5s						
STOK	**Stokkvaagen**	**1.63**	**212**	P	**Pn**	**00 45 17.8**	**+0.3**
STOK				S	**Sg**	**00 45 41.5**	**+1.6**
	comp=N,36nm,0.5s						
KUA	**Kurravaara**	**1.99**	**81**	*e*P	**Pb**	**00 45 24.5**	**-0.1**
KUA				*e*S	**Sg**	**00 45 52.1**	**+0.8**
KUA	**Kurravaara**	**1.99**	**81**	P	**Pb**	**00 45 24.5**	**-0.1**
KUA				S	**Sg**	**00 45 52.1**	**+0.8**
TRO	**Tromso**	**2.36**	**34**	*e*P	**Pn**	**00 45 29.1**	**+1.5**
TRO				*e*S	**Sn**	**00 45 57.0**	**-0.1**
LANU	**Lannavaara**	**2.61**	**80**	*e*P	**Pn**	**00 45 32.8**	**+1.7**
LANU				*e*PB	**Pb**	**00 45 34.5**	**-0.8**
LANU				*e*S	**Sn**	**00 46 02.6**	**-0.9**
LANU	**Lannavaara**	**2.61**	**80**	P	**Pn**	**00 45 32.7**	**+1.7**
LANU				S	**Sn**	**00 46 02.5**	**-0.9**
ERTU	**Ertsjaerv**	**3.00**	**110**	*e*P	**Pn**	**00 45 37.8**	**+1.5**
ERTU	**Ertsjaerv**	**3.00**	**110**	P	**Pn**	**00 45 37.8**	**+1.5**
LILU	**Lilltraesk**	**3.10**	**140**	*e*P	**Pn**	**00 45 39.5**	**+1.9**
LILU	**Lilltraesk**	**3.10**	**140**	P	**Pn**	**00 45 39.5**	**+1.9**
PAJU	**Pajala**	**3.17**	**99**	*e*P	**Pn**	**00 45 39.4**	**+0.8**
PAJU	**Pajala**	**3.17**	**99**	P	**Pn**	**00 45 39.4**	**+0.8**
KTK1	**Kautokeino**	**3.27**	**63**	*e*	**Sn**	**00 46 19.0**	**-0.5**
KTK1	**Kautokeino**	**3.27**	**63**	*e*P	**Pn**	**00 45 40.4**	**+0.4**
KTK1				*e*S	**Sn**	**00 46 16.1**	**-3.4**
KTK1	**Kautokeino**	**3.27**	**63**	P	**Pn**	**00 45 40.4**	**+0.4**
KTK1				S	**Sn**	**00 46 16.0**	**-3.4**
HEF	**Hetta**	**3.27**	**74**	*e*P	**Pn**	**00 45 40.4**	**+0.3**
HEF				*e*S	**Sn**	**00 46 19.6**	**-0.1**
HEF				MSG		00 46 39.9	
	comp=Z,2.8nm,0.3s						
HEF	**Hetta**	**3.27**	**74**	P	**Pn**	**00 45 40.3**	**+0.3**
HEF				S	**Sn**	**00 46 19.5**	**-0.1**
SJUU	**Sjulsmark**	**3.41**	**128**	*e*P	**Pn**	**00 45 43.3**	**+1.4**
SJUU	**Sjulsmark**	**3.41**	**128**	P	**Pn**	**00 45 43.5**	**+1.6**
SVAU	**Svanoeiden**	**3.72**	**149**	*e*P	**Pn**	**00 45 47.9**	**+1.8**
SVAU	**Svanoeiden**	**3.72**	**149**	P	**Pn**	**00 45 48.0**	**+1.8**
BURU	**Burvik**	**4.05**	**138**	*e*P	**Pn**	**00 45 52.9**	**+2.1**
BURU	**Burvik**	**4.05**	**138**	P	**Pn**	**00 45 52.8**	**+2.1**
BREU	**Bredtraesk**	**4.11**	**158**	*e*P	**Pn**	**00 45 52.9**	**+1.5**
BREU	**Bredtraesk**	**4.11**	**158**	P	**Pn**	**00 45 53.0**	**+1.5**
ARCES	**ARCESS Array B**	**4.20**	**60**	Pn	**Pn**	**00 45 52.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=247,slow=13,SNR=14						
ARCES				Pg	**Pb**	**00 46 03.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=243,slow=12,SNR=6.4						
ARCES				Sn	**Sn**	**00 46 39.2**	**-3.4**
	comp=Z,0.6nm,0.3s,baz=249,slow=17,SNR=6.1						
ARCES				Lg	Lg	00 46 58.0	
	comp=Z,1.7nm,0.3s,baz=255,slow=31,SNR=17						
ARA0	**ARCESS Array S**	**4.21**	**60**	Pn	**Pn**	**00 45 51.8**	**-1.1**
	baz=246,slow=14						
ARA0				Pg	**Pb**	**00 46 03.4**	**+1.1**
	baz=241,slow=14						
ARA0				Sn	**Sn**	**00 46 39.8**	**-2.8**
	baz=249,slow=18						
ARA0				Lg	Lg	00 46 57.4	
	baz=242,slow=28						
ARA0	**ARCESS Array S**	**4.21**	**60**	Pn	**Pn**	**00 45 51.8**	**-1.1**
	baz=246,slow=14						
ARA0				Pg	**Pb**	**00 46 03.4**	**+1.1**
	baz=241,slow=14						
ARA0				Sn	**Sn**	**00 46 39.8**	**-2.8**
	baz=249,slow=18						
ARA0				Lg	Lg	00 46 57.4	
	baz=242,slow=28						
ARA0	**ARCESS Array S**	**4.21**	**60**	*e*P	**Pn**	**00 45 51.8**	**-1.1**
ARA0				*e*PG	**Pb**	**00 46 03.4**	**+1.1**
ARA0				*e*S	**Sn**	**00 46 39.8**	**-2.8**
ARA0				*e*SG	**Sb**	**00 46 57.4**	**+3.8**
ARA0	**ARCESS Array S**	**4.21**	**60**	Pn	**Pn**	**00 45 51.8**	**-1.1**
	SNR=55						
ARA0	**ARCESS Array S**	**4.21**	**60**	Pg	**Pb**	**00 46 03.4**	**+1.1**
	SNR=90						
ARA0				Sn	**Sn**	**00 46 39.8**	**-2.8**
	SNR=55						
ARA0				Lg	Lg	00 46 57.4	
	baz=242,slow=25						
SGF	**Sodankyl**	**4.37**	**89**	*e*P	**Pn**	**00 45 56.4**	**+1.3**
SGF				*e*S	**Sn**	**00 46 45.4**	**-1.3**
SGF	**Sodankyl**	**4.37**	**89**	P	**Pn**	**00 45 56.4**	**+1.3**
SGF				S	**Sn**	**00 46 45.4**	**-1.3**
RNF	**Rovaniemi**	**4.39**	**100**	*e*P	**Pn**	**00 45 55.7**	**+0.4**
RNF				*e*S	**Sn**	**00 46 46.0**	**-1.1**
RNF	**Rovaniemi**	**4.39**	**100**	P	**Pn**	**00 45 55.7**	**+0.4**
RNF				S	**Sn**	**00 46 45.9**	**-1.1**
UMAU	**Umeaa**	**4.49**	**147**	*e*P	**Pn**	**00 45 58.4**	**+1.7**
UMAU	**Umeaa**	**4.49**	**147**	P	**Pn**	**00 45 58.5**	**+1.8**
SOLU	**Sollefteaa**	**4.59**	**168**	*e*P	**Pn**	**00 45 59.9**	**+1.8**
SOLU	**Sollefteaa**	**4.59**	**168**	P	**Pn**	**00 45 59.9**	**+1.8**
KEV	**Kevo**	**4.77**	**59**	*e*S	**Sn**	**00 46 54.2**	**-2.4**
KEV				MSG		00 47 21.6	
	comp=Z,1.8nm,0.3s						
KEV	**Kevo**	**4.77**	**59**	S	**Sn**	**00 46 54.2**	**-2.4**
OUL	**Oulu**	**5.07**	**117**	*e*S	**Sn**	**00 47 01.6**	**-2.3**
VRF	**Varrio**	**5.50**	**83**	*e*S	**Sn**	**00 47 11.1**	**-3.4**
VAF	**Ylistaro**	**5.66**	**143**	*e*P	**Pn**	**00 46 14.7**	**+1.9**
VAF				*e*S	**Sn**	**00 47 17.8**	**-0.6**
VAF				MSG		00 47 50.4	
	comp=Z,1.3nm,0.2s						
VAF	**Ylistaro**	**5.66**	**143**	P	**Pn**	**00 46 14.7**	**+1.9**
MSF	**Maaselka**	**5.79**	**102**	*e*S	**Sn**	**00 47 19.2**	**-2.3**
KJN	**Kajaani**	**6.31**	**119**	*e*P	**Pn**	**00 46 22.3**	**+0.6**
KJN				*e*S	**Sn**	**00 47 31.4**	**-3.1**
KJN				MSG		00 48 14.9	
	comp=Z,0.9nm,0.2s						
KJN	**Kajaani**	**6.31**	**119**	P	**Pn**	**00 46 22.3**	**+0.6**
SUF	**Sumiainen**	**6.83**	**132**	*e*P	**Pn**	**00 46 30.3**	**+1.5**
SUF				*e*S	**Sn**	**00 47 44.1**	**-3.0**
SUF	**Sumiainen**	**6.83**	**132**	P	**Pn**	**00 46 30.3**	**+1.5**
NB2	**NORSAR Subarra**	**6.93**	**196**	Pn	Pn	**00 46 31.3**	**+1.0**
	baz=11,slow=16						
NB2				Lg	Lg	00 48 24.9	
NB2	**NORSAR Subarra**	**6.93**	**196**	Pn	**Pn**	**00 46 31.3**	**+1.0**
	baz=11,slow=16						
NB2				Lg	Lg	00 48 24.9	
NB2	**NORSAR Subarra**	**6.93**	**196**	*e*P	**Pn**	**00 46 31.3**	**+1.0**
NB2				*e*SG	**Sg**	**00 48 24.9**	**-5.0**
NB2	**NORSAR Subarra**	**6.93**	**196**	Pn	**Pn**	**00 46 31.3**	**+1.0**
	SNR=55						
NB2				Lg	Lg	00 48 24.9	
	SNR=15						
NOA	**NORSAR Array B**	**6.93**	**196**	Pn	**Pn**	**00 46 31.5**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=7.9,slow=13,SNR=2.7						
NOA				Sn	**Sn**	**00 47 48.4**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=23,slow=13,SNR=2.5						
NOA				Lg	Lg	00 48 21.8	
	comp=Z,0.3nm,0.3s,baz=302,slow=19,SNR=4.1						
KEF	**Keuruu**	**6.94**	**139**	*e*P	**Pn**	**00 46 32.4**	**+1.9**
KEF				*e*S	**Sn**	**00 47 48.5**	**-1.4**
KEF	**Keuruu**	**6.94**	**139**	P	**Pn**	**00 46 32.3**	**+1.9**
KAF	**Kangasniemi**	**7.36**	**135**	*e*P	**Pn**	**00 46 37.4**	**+1.2**
KAF				*e*S	**Sn**	**00 47 57.6**	**-2.6**
KAF	**Kangasniemi**	**7.36**	**135**	P	**Pn**	**00 46 37.3**	**+1.2**
HFS	**Hagfors**	**7.65**	**185**	Pn	**Pn**	**00 46 40.4**	**+0.2**
	baz=13,slow=16						
HFS				Sn	**Sn**	**00 48 08.3**	**+0.9**
	baz=11,slow=22						
HFS				Lg	Lg	00 48 49.5	
	baz=353,slow=37						
HFS	**Hagfors**	**7.65**	**185**	Pn	**Pn**	**00 46 40.4**	**+0.2**
	baz=13,slow=16						
HFS				Sn	**Sn**	**00 48 08.3**	**+0.9**
	baz=11,slow=22						
HFS				Lg	Lg	00 48 49.5	
	baz=353,slow=37						
HFS	**Hagfors**	**7.65**	**185**	*e*P	**Pn**	**00 46 40.4**	**+0.2**
HFS				*e*S	**Sn**	**00 48 08.3**	**+0.9**
HFS				*e*SG	**Sg**	**00 48 49.5**	**-3.5**
HFS	**Hagfors**	**7.65**	**185**	Pn	**Pn**	**00 46 41.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=2.6,slow=13,SNR=10						
HFS				Sn	**Sn**	**00 48 09.1**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=7.0,slow=25,SNR=6.2						
HFS				Lg	Lg	00 48 55.3	
	comp=Z,0.3nm,0.3s,baz=359,slow=28,SNR=5.7						
HFS	**Hagfors**	**7.65**	**185**	Pn	**Pn**	**00 46 40.4**	**+0.2**
	SNR=55						
HFS				Sn	**Sn**	**00 48 08.3**	**+0.9**
	SNR=55						
HFS				Lg	Lg	00 48 49.5	
	baz=353,slow=33,SNR=22						
FIA0	**FINESS Array S**	**7.86**	**138**	Pn	**Pn**	**00 46 43.7**	**+0.7**
	baz=338,slow=14						
FIA0				Sn	**Sn**	**00 48 10.3**	**-2.2**
	baz=334,slow=28						
FIA0				Lg	Lg	00 48 54.0	
	baz=327,slow=28						
FIA0	**FINESS Array S**	**7.86**	**138**	Pn	**Pn**	**00 46 43.7**	**+0.7**
	baz=338,slow=14						
FIA0				Sn	**Sn**	**00 48 10.3**	**-2.2**
	baz=334,slow=28						
FIA0				Lg	Lg	00 48 54.0	
	baz=327,slow=28						
FIA0	**FINESS Array S**	**7.86**	**138**	*e*P	**Pn**	**00 46 43.7**	**+0.7**
FIA0				*e*S	**Sn**	**00 48 10.3**	**-2.2**
FIA0				*e*SG	**Sg**	**00 48 54.0**	**-5.6**
FIA0	**FINESS Array S**	**7.86**	**138**	Pn	**Pn**	**00 46 43.7**	**+0.7**
	SNR=55						
FIA0				Lg	Lg	00 48 54.0	
	baz=327,slow=23,SNR=55						
FINES	**FINESS Array B**	**7.86**	**138**	Pn	**Pn**	**00 46 44.3**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=333,slow=12,SNR=7.7						
FINES				Sn	**Sn**	**00 48 11.0**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=332,slow=22,SNR=5.7						
FINES				Lg	Lg	00 48 59.2	
	comp=Z,0.3nm,0.3s,baz=333,slow=29,SNR=7.7						

DDA 24 00:46:22.5, 39.06N×26.99E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.34**	**317**	*i* P	Pg	00 46 29.4	+0.3
AYVA				*i* S	Sg	00 46 34.6	+1.0
AKHS	**Akhisar**	**0.67**	**105**	*i* P	Pb	00 46 37.3	+0.7
AKHS				*i* S	Sb	00 46 45.4	-0.7
BALY	**Balya**	**0.84**	**36**	*i* P	Pg	00 46 38.8	+0.1
BALY				*i* S	Sb	00 46 50.7	-0.3

IDC 24 00:52:12.6±2.2, 30.30S×178.02W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/18, mbtmp3.6/3, Error ellipse: s-maj=63.4km s-min=36.1km az=43.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.09**	**267**	P	P	01 00 14.2	-0.5
	0.5nm,0.7s,baz=107,slow=7.7,SNR=3.8						
WRA	**Warramunga Arr**	**44.08**	**272**	P	P	01 00 22.8	+0.1
	0.3nm,0.3s,baz=111,slow=8.1,SNR=15						
QSPA	**South Pole Qui**	**59.81**	**180**	P	P	01 02 19.5	0.0
	1.3nm,1.0s,baz=325,slow=19						
FINES	**FINESS Array B**	**145.05**	**340**	PKPbc	PKPbc	01 11 49.6	-0.9
	1.6nm,0.9s,baz=19,slow=5.1,SNR=3.9						

IDC 24 00:55:05.3±5.8, 18.42S×170.33E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.4/18, mbtmp3.3/2, Error ellipse: s-maj=332.4km s-min=75.3km az=156.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.99**	**261**	P	P	01 01 50.9	-0.2
	0.1nm,0.6s,baz=95,slow=8.0,SNR=2.8						
ASAR	**Alice Springs**	**34.33**	**255**	P	P	01 01 54.0	0.0
	0.4nm,0.6s,baz=80,slow=8.8,SNR=8.1						
GERES	**GERESS Array B**	**144.24**	**333**	PKP	PKPdf	01 14 42.9	-0.6
	0.2nm,0.4s,baz=45,slow=1.5,SNR=4.5						

*BJI **24** 00:58:00.2, 31.08S×176.92W, h10km, mB6.1/33, mb5.6/32, Ms5.8/42, Ms7 5.6/42*
*IDC **24** 00:58:01.7±0.3, 31.26S×177.71W, h0km, mb5.0/30, mb1 5.1/31, mb1mx5.1/32, mbtmp5.0/31, MS5.6/25, Ms1 5.7/25, ms1mx5.6/33, Error ellipse: s-maj=12.8km s-min=12.5km az=51.0*
*NEIC **24** 00:58:02.1±0.1, 31.48S×177.68W, h4km, mb5.6/89, MS5.9/139, MW6.0, Error ellipse: s-maj=7.1km s-min=4.9km az=138.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^18 Nm; Mrr 0.00; Mθθ 0.00; Mφφ 0.00; Mrθ 0.00; Mrφ 0.00; Mθφ 0.00; Best double couple: M0 1.10000×10^18 NP1:φs10.00000°, δ78.00000°, λ83.00000°. NP2:φs220.00000°, δ14.00000°, λ120.00000°. Principal axes: T 1.0000, Plg56.0000°, Azm270.0000°; N 0.1200, Plg6.0000°, Azm11.0000°; P -1.1300, Plg32.0000°, Azm105.0000°;*
*ISCJB **24** 00:58:02.4±0.1, 31.62S±0.03×177.71W±0.03, h16km, mb5.5/128, MS5.8/197 Error ellipse: s-maj=4.9km s-min=3.0km az=43.3*
*MOS **24** 00:58:06.6±1.2, 31.17S×177.87W, h33km, mb5.7/45, MS5.7/49, Error ellipse: s-maj=10.2km s-min=7.6km az=78.8*
*SZGRF **24** 00:58:07.3, 30.69S×176.17W, h33km, mb6.1, Kermadec Islands region*
*GCMT **24** 00:58:07.9±0.1, 31.41S×177.30W, h14km, MW5.8, Moment Tensor Solution. s92,c192; s70,c80; Moment tensor: Scale 10^17 Nm; Mrr 3.62±.05; Mθθ 0.17±.04; Mφφ -3.45±.04; Mrθ 1.05±.09; Mrφ -1.20±.03; Mθφ 4.36±.14; Best double couple: M0 5.80000×10^17 NP1:φs202.00000°, δ20.00000°, λ97.00000°. NP2:φs15.00000°, δ70.00000°, λ87.00000°. Principal axes: T 5.7300, Plg65.0000°, Azm280.0000°; N 0.2100, Plg2.0000°, Azm15.0000°; P -5.9400, Plg25.0000°, Azm107.0000°; Data Used: II IU IC G CN. Surface waves: sta=113, comp=238, per= 50.*
*AUST **24** 00:58:08.0, 31.95S×177.62W, h35km*
*DJA **24** 00:58:17.9±2.7, 31.58S±8.1×17.78W±1.2, h135km±23km, M5.6/22, mB6.0/12, mb5.5/22, Mw(mB)5.7/12*

ISC 24 00:58:02.7±0.6, 31.45S±0.04×177.63W±0.04, h9km±3km, n1073, σ1s57/1050, mb5.5/126, MS5.8/197, 77C-71D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.21**	**353**	*e*Pn	**Pn**	**00 58 37.1**	**-2.5**
RAO				*e*Sn	**Sn**	**00 59 07.5**	**+0.5**
RAO	**Raoul Island**	**2.21**	**353**	Pn	**Pn**	**00 58 37.0**	**-2.5**
	510nm,0.3s,baz=161,slow=4.8,SNR=30						
RAO				Sn	**Sn**	**00 59 04.4**	**-2.6**
	990nm,0.3s,baz=210,slow=20,SNR=11						
RAO				LR	LR	00 59 14.9	
	comp=Z,51μm,20.3s,baz=174,slow=36						
MXZ	**Matakaoa Point**	**6.96**	**208**	PN	**Pn**	**00 59 42.9**	**-2.0**
MXZ				SN	**Sn**	**01 01 00.1**	**-4.0**
PUZ	**Puketiti**	**7.42**	**206**	PN	Pn	00 59 47.7	-3.5
PUZ				SN	**Sn**	**01 01 13.4**	**-2.2**
CNGZ	**Carnagh Statio**	**7.80**	**205**	PN	**Pn**	**00 59 54.0**	**-2.4**
MWZ	**Matawai**	**7.94**	**209**	PN	**Pn**	**00 59 55.5**	**-2.9**
MWZ				SN	**Sn**	**01 01 24.7**	**-3.6**
URZ	**Urewera**	**8.05**	**211**	*e*Pn	**Pn**	**00 59 57.8**	**-2.0**
URZ				*e*Sn	**Sn**	**01 01 29.1**	**-1.9**
URZ	**Urewera**	**8.05**	**211**	PN	Pn	00 59 56.1	-3.7
URZ				SN	**Sn**	**01 01 27.1**	**-4.0**
URZ	**Urewera**	**8.05**	**211**	Pn	**Pn**	**00 59 57.2**	**-2.7**
	3.1nm,0.3s,baz=344,slow=22,SNR=22						
URZ				Sn	**Sn**	**01 01 27.9**	**-3.1**
	25nm,0.3s,baz=4.4,slow=22,SNR=11						
OUZ	**Omahuta**	**8.25**	**241**	*e*Pn	Pn	01 00 08.4	+5.8
ANWZ	**Angora Road**	**10.18**	**206**	PN	**Pn**	**01 00 26.1**	**-3.0**
ANWZ				SN	**Sn**	**01 02 18.5**	**-4.8**
MRZ	**Mangatainoka R**	**10.71**	**209**	*e*PN	Pn	01 00 31.0	-5.3
SNZO	**South Karori**	**11.61**	**210**	*e*Pn	**Pn**	**01 00 48.8**	**+0.2**
SNZO				*e*Sn	Sn	01 02 49.4	-9.0
KHZ	**Kahutara**	**13.02**	**210**	*e*Pn	Pn	01 01 04.3	-3.5
KHZ				*e*Sn	Sn	01 03 25.7	-7.1
MSVF	**Nonsavu**	**14.21**	**343**	*e*P	**Pn**	**01 01 23.6**	**-0.7**
MSVF	**Nonsavu**	**14.21**	**343**	*e*Pn	**Pn**	**01 01 23.6**	**-0.7**
RPZ	**Rata Peaks**	**15.16**	**213**	*e*Pn	**Pn**	**01 01 32.5**	**-4.5**
	111nm,0.8s						
RPZ				*e*Sn	Sn	01 04 09.3	-16
RPZ	**Rata Peaks**	**15.16**	**213**	Pn	**Pn**	**01 01 33.0**	**-4.1**
	5.0nm,0.3s,baz=267,slow=1.4,SNR=9.2						
RPZ				Sn	Sn	01 04 10.1	-15
	2.0nm,0.3s,baz=42,slow=18,SNR=6.6						
ODZ	**Otahua Downs**	**16.38**	**211**	*e*Pn	**Pn**	**01 01 50.6**	**-2.2**
	303nm,2.3s						
ODZ				*e*Sn	Sn	01 04 37.9	-17
DZM	**Mont Dzumac**	**17.00**	**299**	*e*P	**P**	**01 02 05.3**	**+2.4**
	2μm,1.4s						
DZM				*e*LR	LR	01 06 00.0	
	46μm,22.6s						
DZM	**Mont Dzumac**	**17.00**	**299**	*e*Pn	**P**	**01 02 05.2**	**+2.4**
	596nm,1.2s						
NOUC	**Port Laguerre**	**17.09**	**299**	*e*P	sP	01 02 14.5	+7.2
WHZ	**Wether Hill Ro**	**18.26**	**214**	*e*Pn	**Pn**	**01 02 11.7**	**-4.6**
AFI	**Afiamalu**	**18.27**	**18**	*e*Pn	**Pn**	**01 02 15.3**	**-1.3**
	720nm,1.8s						
AFI	**Afiamalu**	**18.27**	**18**	P	Pn	01 02 09.3	-7.4
	3.5nm,0.3s,baz=232,slow=19,SNR=3.8						
RAR	**Rarotonga**	**18.95**	**62**	*e*Pn	**P**	**01 02 24.0**	**-0.2**
	498nm,1.6s						
RAR	**Rarotonga**	**18.95**	**62**	P	**P**	**01 02 20.3**	**-4.0**
	8.1nm,0.3s,baz=270,slow=5.3,SNR=9.9						
RAR				LR	LR	01 08 41.2	
	comp=Z,15μm,18.3s,baz=272,slow=34						
TBI	**Tubuai**	**26.22**	**79**	*e*P	**P**	**01 03 37.7**	**-0.4**
	238nm,1.2s						
TBI				*e*LQ	LQ	01 08 40.2	
	17μm,24.8s						
TBI				*e*LR	LR	01 10 03.8	
	17μm,22.2s,baz=244						
ARMA	**Armidale**	**26.35**	**264**	*e*P	**P**	**01 03 41.6**	**+2.2**
	314nm,1.6s						
ARMA	**Armidale**	**26.35**	**264**	P	P	01 03 44.5	+5.1
	baz=26,SNR=5.3						
MGCD	**Mangrove Creek**	**26.43**	**258**	P	**P**	**01 03 43.9**	**+3.9**
	baz=26,SNR=11						
CNB	**Canberra Magne**	**27.76**	**253**	P	**P**	**01 03 54.4**	**+2.5**
	baz=28,SNR=9.6						
MILA	**Mila**	**27.93**	**249**	P	**P**	**01 03 56.4**	**+2.9**
	baz=28,SNR=8.7						
CAN	**Canberra**	**28.06**	**253**	*e*P	**P**	**01 03 55.4**	**+0.8**
CAN				pmax	pmax		
	comp=Z,88nm,1.1s						
CAN				MLR	MLR		
	comp=Z,15μm,19.0s						
CAN	**Canberra**	**28.06**	**253**	*e*P	**P**	**01 03 55.4**	**+0.8**
	comp=Z,88nm,1.1s						
CAN				LR	LR

comp=Z,36nm,0.6s,baz=104,slow=10,SNR=28
CTA S **S** **01 10 17.0 -0.1**
comp=Z,10nm,0.8s,baz=52,slow=19,SNR=5.0
CTA ScP **ScP** **01 11 14.5 +3.2**
comp=Z,26nm,1.1s,baz=223,slow=2.2,SNR=4.6
CTA LR LR 01 18 00.2
comp=Z,26µm,18.0s,baz=115,slow=35
CTAO Charters Tower 34.29 280 *e*P **P** **01 04 50.7 +1.1**
CTAO pmax pmax
comp=Z,417nm,1.1s
CTAO MLR MLR
comp=Z,22µm,19.0s
CTAO Charters Tower 34.29 280 *e*P **P** **01 04 50.7 +1.1**
comp=Z,417nm,1.1s
CTAO *e*ScP **ScP** **01 11 13.7 +2.5**
CTAO LR LR
comp=Z,22µm,19.0s
STKA Stephens Creek 34.57 258 *e*P **P** **01 04 52.8 +0.9**
comp=Z,33nm,1.1s
STKA PcP **PcP** **01 07 26.4 -0.1**
STKA ScP **ScP** **01 11 15.0 +3.0**
STKA Stephens Creek 34.57 258 P **P** **01 04 52.6 +0.7**
comp=Z,40nm,0.9s,baz=94,slow=9.7,SNR=49
STKA PcP **PcP** **01 07 26.4 -0.1**
comp=Z,16nm,1.0s,baz=135,slow=4.3,SNR=2.9
STKA ScP **ScP** **01 11 15.0 +3.0**
comp=Z,7.3nm,1.0s,baz=310,slow=14,SNR=3.3
STKA LR LR 01 18 38.3
comp=Z,17µm,18.1s,baz=89,slow=36
STKA Stephens Creek 34.57 258 P **P** **01 04 52.9 +1.0**
baz=34,SNR=30
MTSU Mount Surprise 36.82 282 P **P** **01 05 12.4 +1.1**
baz=37,SNR=24
MTSU S **PcS** **01 11 22.8 +1.1**
baz=37,SNR=8.4
XMAS Kiritimati 38.44 34 PFAKE 01 05 40.0 +15
XMAS LR LR
comp=Z,14µm,19.0s
RKT Rikitea 38.61 88 *e*S **S** **01 11 20.0 -3.0**
comp=Z,3µm,25.5s
RKT *e*LR LR 01 15 51.7
comp=Z,13µm,21.2s,baz=252
BBOO Buckleboo 39.00 255 P **P** **01 05 29.1 -0.6**
baz=39,SNR=43
PMG Port Moresby 39.35 296 *e*P **P** **01 05 34.1 +1.5**
comp=Z,80nm,1.2s
PMG *e*PcP **PcP** **01 07 42.2 +0.9**
PMG Port Moresby 39.35 296 P **P** **01 05 33.4 +0.7**
comp=Z,55nm,1.4s,comp=Z,1µm
PMG Port Moresby 39.35 296 P **P** **01 05 33.8 +1.1**
comp=Z,7.7nm,0.7s,baz=148,slow=6.6,SNR=5.9
PMG PcP **PcP** **01 07 41.9 +0.7**
comp=Z,27nm,1.0s,baz=97,slow=6.1,SNR=3.9
PMG LR LR 01 18 43.9
comp=Z,3µm,20.4s,baz=301,slow=32
QIS Mount Isa 39.72 275 P **P** **01 05 36.1 +0.3**
baz=40,SNR=9.2
QIS S **S** **01 11 34.9 -4.9**
baz=40,SNR=7.2
COEN Coen 39.88 287 *e*P **P** **01 05 37.7 +0.6**
comp=Z,884nm,1.1s
COEN Coen 39.88 287 P **P** **01 05 37.6 +0.5**
baz=40,SNR=15
DRV Dumont d'Urvil 43.30 203 PP PP 01 07 49.0 +4.1
DRV L L 01 15 00.0
DRV R 01 17 00.0
AS31 Alice Springs 43.38 268 *e*P **P** **01 06 05.3 -0.6**
AS31 *es*P sP 01 06 19.6 +10
ASAR Alice Springs 43.38 268 P **P** **01 06 05.3 -0.5**
ASAR PcP **PcP** **01 07 54.8 +0.4**
ASAR ScP **ScP** **01 11 49.0 +3.0**
ASAR S **S** **01 12 32.8 -1.3**
ASAR Alice Springs 43.38 268 P **P** **01 06 05.3 -0.5**
comp=Z,36nm,0.8s,baz=104,slow=7.3,SNR=175
ASAR PcP **PcP** **01 07 54.8 +0.4**
comp=Z,4.2nm,0.5s,baz=122,slow=3.9,SNR=4.4
ASAR ScP **ScP** **01 11 49.0 +3.0**
comp=Z,11nm,0.9s,baz=117,slow=4.3,SNR=16
ASAR S **S** **01 12 32.8 -1.3**
comp=Z,2.6nm,0.8s,baz=107,slow=13,SNR=3.7
ASAR LR LR 01 24 42.1
comp=Z,11µm,18.2s,baz=272,slow=37
WRAB Tennant Creek 44.46 273 PFAKE 01 06 30.0 +16
WRAB LR LR
comp=Z,24µm,19.0s
WRAB Tennant Creek 44.46 273 P **P** **01 06 14.0 -0.5**
comp=Z,734nm,1.0s,SNR=42
WRA Warramunga Arr 44.47 273 P **P** **01 06 14.1 -0.5**
WRA ScP **ScP** **01 11 52.9 +2.4**
WRA S **S** **01 12 48.0 -2.0**
WRA Warramunga Arr 44.47 273 P **P** **01 06 14.1 -0.5**
comp=Z,68nm,0.8s,baz=112,slow=7.8,SNR=287
WRA ScP **ScP** **01 11 52.9 +2.4**
comp=Z,26nm,1.1s,baz=114,slow=4.1,SNR=14
WRA S **S** **01 12 48.0 -2.0**
comp=Z,5.7nm,1.0s,baz=118,slow=14,SNR=6.2
WRA LR LR 01 24 31.0
comp=Z,24µm,18.3s,baz=110,slow=36
PATS Pohnpei 44.48 325 S S 01 12 40.9 -9.1
baz=45,SNR=3.4
FORT Forrest 46.10 256 *e*P **P** **01 06 26.0 -1.3**
comp=Z,237nm,1.1s
FORT Forrest 46.10 256 P **P** **01 06 27.1 -0.2**
baz=46,SNR=6.9
SBA Scott Base 47.02 184 *e*P **P** **01 06 33.6 -0.3**
SBA pmax pmax
comp=Z,200nm,1.4s
SBA MLR MLR
comp=Z,7µm,19.0s
SBA Scott Base 47.02 184 *e*P **P** **01 06 33.6 -0.3**
comp=Z,200nm,1.4s
SBA LR LR
comp=Z,7µm,19.0s
VNDA Vanda 47.09 186 P **P** **01 06 37.2 +2.7**
VNDA Vanda 47.09 186 P **P** **01 06 37.2 +2.7**
comp=Z,5.2nm,0.9s,baz=15,slow=6.6,SNR=8.0
VNDA LR LR 01 23 21.5
comp=Z,7µm,18.4s,baz=21,slow=32
JAY Jayapura 48.67 298 P **P** **01 06 47.8 +0.3**
baz=49,SNR=4.7
KDU Kakadu 49.42 281 P **P** **01 06 54.8 +1.5**
baz=50,SNR=4.4
MTN Manton Dam 50.47 280 P **P** **01 07 00.5 -0.8**
baz=50,SNR=5.1
KMBL Kambalda 51.02 253 P **P** **01 07 04.5 -0.9**
baz=51,SNR=6.5
KNRA Kununurra 51.11 275 P **P** **01 07 06.4 +0.3**
baz=51,SNR=16
WAKE Wake Island 52.65 341 PFAKE 01 07 30.0 +13
WAKE LR LR
comp=Z,8µm,19.0s
FITZ Fitzroy Crossi 52.68 271 *e*P **P** **01 07 17.0 -0.8**
comp=Z,231nm,1.3s
FITZ *es*P sP 01 07 30.3 +8.8
FITZ *e*ScP **ScP** **01 12 25.6 +0.3**
FITZ Fitzroy Crossi 52.68 271 P **P** **01 07 17.3 -0.6**
baz=53,SNR=33
KLBR Kellerberrin 54.32 252 P **P** **01 07 28.9 -0.8**
baz=54,SNR=12
NWAO Narrogin (SRO) 54.33 250 P **P** **01 07 29.1 -0.7**
NWAO Narrogin (SRO) 54.33 250 P **P** **01 07 29.1 -0.7**
comp=Z,8.3nm,0.8s,baz=120,slow=4.2,SNR=3.8
NWAO LR LR 01 27 27.7
comp=Z,3µm,19.8s,baz=270,slow=32
CASY Casey 54.37 208 *e*P **P** **01 07 29.2 -0.2**
comp=Z,179nm,1.3s
CASY LR LR
comp=Z,4µm,20.0s
FAKI Fak Fak 55.01 291 P **P** **01 07 34.1 -0.8**
FAKI Fak Fak 55.01 291 P **P** **01 07 34.3 -0.5**
baz=55,SNR=4.5
FAKI S **S** **01 15 16.1 -1.4**
baz=55,SNR=3.1
MEEK Meekatharra 55.27 258 P **P** **01 07 35.4 -1.3**
baz=55,SNR=16
KIP Kipapa 55.84 22⇑ *i*P P 01 07 37.1 -3.5
KIP pmax pmax
comp=Z,35nm,1.3s
KIP MLR MLR
comp=Z,3µm,16.0s
KIP Kipapa 55.84 22 PFAKE 01 07 50.0 +9.4
KIP LR LR
comp=Z,3µm,19.0s
MBWA Marble Bar 56.43 264 *e*P P 01 07 41.7 -3.3
comp=Z,137nm,1.2s
MBWA *es*P sP 01 07 56.8 +8.0
MBWA LR LR
comp=Z,8µm,20.0s
MORW Morawa 56.54 254 P **P** **01 07 45.2 -0.6**
baz=56,SNR=7.2
SWI Sorong 57.03 292 P pP 01 07 54.7 +2.6
GUMO Guam 57.45 315 P **P** **01 07 51.6 -0.6**
GUMO LR LR
comp=Z,3µm,19.0s
GUMO Guam 57.45 315 P **P** **01 07 51.6 -0.6**
comp=Z,34nm,0.9s,baz=248,slow=12,SNR=3.9
QSPA South Pole Qui 58.66 180 *e*P **P** **01 08 01.9 +1.6**
comp=Z,262nm,1.1s
QSPA South Pole Qui 58.66 180 P **P** **01 08 02.3 +2.0**
comp=Z,38nm,1.0s,baz=34,slow=3.1,SNR=51
QSPA LR LR 01 30 49.1
comp=Z,8µm,18.9s,baz=230,slow=33
NLAI Namlea 58.99 287 P pP 01 08 08.5 +2.7
MIDW Midway 59.34 0 PFAKE 01 08 20.0 +15
MIDW LR LR
comp=Z,9µm,20.0s
MMRI Maumere 60.12 279 P **P** **01 08 09.9 -1.0**
comp=Z,117nm,1.4s,comp=Z,2µm
LBMI Labuha 60.17 289 P sP 01 08 25.8 +11
GIRL Giralia 60.48 260 P **P** **01 08 14.5 +1.2**
baz=60,SNR=3.1
MIR Mirnyy 61.34 207⇓ *i*P **P** **01 08 20.0 +1.6**
MIR *i* 01 08 33.0
MIR *e*S **S** **01 16 44.0 +5.3**
MIR *e* 01 18 13.0
MIR pmax pmax
comp=Z,105nm,2.0s
MIR MLR MLR
comp=N,3µm,17.0s
MIR MLR MLR
comp=E,6µm,17.0s
MIR MLR MLR
comp=Z,8µm,17.0s
LUWI Luwuk 63.78 286 P **P** **01 08 36.9 +1.3**
LUWI Luwuk 63.78 286 P **P** **01 08 36.1 +0.5**
comp=Z,88nm,1.2s,comp=Z,1µm
KAPI Kappang 64.11 280 *e*P **P** **01 08 37.9 +0.2**
comp=Z,39nm,1.5s
KAPI *es*P sP 01 08 50.1 +8.6
KAPI Kappang 64.11 280 P **P** **01 08 37.7 0.0**
comp=Z,5.0nm,0.7s,baz=144,slow=8.7,SNR=4.8
KAPI LR LR 01 36 36.0
comp=Z,6µm,18.4s,baz=52,slow=36
TTSI Tana Toraja 65.12 282 P P 01 08 49.5 +5.2
KHKI Kahang-Kahang 65.88 275 P **P** **01 08 47.3 -1.9**
comp=Z,109nm,1.4s
IGBI Denpasar 66.05 274 P **P** **01 08 49.1 -1.2**
comp=Z,40nm,1.3s,comp=Z,20µm
DAV Davao City (W) 66.36 295 PFAKE 01 09 00.0 +7.7
DAV LR LR
comp=Z,2µm,20.0s
DAV Davao City (W) 66.36 295⇓ *i*P **P** **01 08 49.9 -2.4**
JAGI Jajag, Banyuwa 67.07 274 P **P** **01 08 54.7 -2.2**
comp=Z,117nm,1.3s
KBKI Kotabaru 68.04 280 P **P** **01 09 05.3 +2.3**
BBKI Banjar Baru 69.07 279 P pP 01 09 16.2 +3.9
UGM Wanagama 70.44 273 P **P** **01 09 19.4 +1.5**
baz=70,SNR=3.9
PMSA Palmer Station 71.18 155 LR LR 01 35 05.3
comp=Z,3µm,18.6s,baz=239,slow=31
MAW Mawson 71.44 201 P **P** **01 09 23.7 +0.7**
MAW Mawson 71.44 201 P **P** **01 09 23.7 +0.7**
comp=Z,44nm,1.1s,baz=119,slow=8.3,SNR=35
MAW LR LR 01 41 17.1
comp=Z,12µm,18.4s,baz=116,slow=36
MAW Mawson 71.44 201 P **P** **01 09 24.2 +1.2**
baz=71,SNR=17
CISI Cisompet, Garu 72.94 272 P **P** **01 09 33.8 +0.8**
comp=Z,164nm,1.3s
KKM Kota Kinabalu 73.19 288 P P 01 09 42.5 +8.0
KKM Kota Kinabalu 73.19 288 P **P** **01 09 35.2 +0.7**
baz=73,SNR=3.7
TGY Tagaytay City 74.29 298 LR LR 01 43 04.5
comp=Z,5.1nm,18.6s,baz=293,slow=36
SBUM Sibu 74.47 283 P **P** **01 09 42.8 +0.9**
KSM Kuching 75.53 281 PFAKE 01 10 00.0 +12
KSM LR LR
comp=Z,2µm,19.0s
KSM Kuching 75.53 281 P **P** **01 09 48.8 +0.7**
KSM Kuching 75.53 281 P **P** **01 09 47.5 -0.6**
baz=76,SNR=6.6
TPI Tanjungpandan 75.54 276 P **P** **01 09 46.6 -1.5**
SYO Syowa Base 76.17 193⇑ *e*P **P** **01 09 49.5 -1.2**
SYO Syowa Base 76.17 193⇓ *i*P P 01 09 56.0 +5.3
SNAA Sanae 77.10 178 *e*P **P** **01 09 56.7 +0.6**
SNAA Sanae 77.10 178 *e*pP pP 01 10 00.5 +1.6
SNAA Sanae 77.10 178 *e*PcP **PcP** **01 10 05.3 -1.7**
SNAA Sanae 77.10 178 *e*PP PP 01 12 48.2 -0.8
SNAA Sanae 77.10 178 *e*P **P** **01 09 55.7 -0.4**
comp=Z,197nm,1.5s
SNAA Sanae 77.10 178 P **P** **01 09 56.0 -0.1**
comp=Z,13nm,1.1s,baz=198,slow=4.9,SNR=37
PPBI Pangkal Pinang 77.14 275 P **P** **01 09 55.8 -1.4**
JOD2 Odawara 2 77.84 325 P **PcP** **01 10 11.8 +1.3**
MAIT Maitri 77.84 183 *e*P P 01 09 51.3 -8.9
VNA1 Neumayer--Stat 77.90 176 *e*P **P** **01 10 01.6 +1.1**
VNA1 Neumayer--Stat 77.90 176 *e*pP pP 01 10 05.4 +2.1
VNA1 Neumayer--Stat 77.90 176 *e*PcP **PcP** **01 10 09.4 -0.9**
VNA1 Neumayer--Stat 77.90 176 *e*PP PP 01 12 49.6 -6.0
COYC Coyhaique 77.95 136 *i* P **P** **01 10 02.5 +1.2**
COYC Coyhaique 77.95 136 *i* P **P** **01 10 02.5 +1.2**
JRY Ryogami san 78.53 325 P **P** **01 10 06.7 +2.3**
MJAR Matsushiro Arr 79.29 325 P **P** **01 10 06.4 -2.2**
MJAR Matsushiro Arr 79.29 325 P **P** **01 10 06.4 -2.2**
comp=Z,8.7nm,1.0s,baz=167,slow=5.3,SNR=14
MJAR LR LR 01 43 27.0
comp=Z,2µm,19.4s,baz=125,slow=34
MAJO Matsushiro 79.29 325 *e*P **P** **01 10 06.8 -1.8**
MAJO pmax pmax
comp=Z,37nm,1.2s
MAJO MLR MLR
comp=Z,2µm,19.0s
MAJO Matsushiro 79.29 325 *e*P **P** **01 10 06.8 -1.8**
comp=Z,37nm,1.2s
MAJO LR LR
comp=Z,2µm,19.0s
MAT Matsushiro 79.29 325 P **P** **01 10 05.6 -3.0**
MAT S **S** **01 20 13.0 +4.0**
MAT Matsushiro 79.29 325 P **P** **01 10 09.5 +0.9**
PAF Port-aux-Franc 79.51 218 PFAKE 01 10 20.0 +10
PAF LR LR
comp=Z,11µm,19.0s
JWT Wachi 79.72 323 P **P** **01 10 09.4 -1.5**
COCO West Island 79.98 262 PFAKE 01 10 20.0 +7.1
COCO LR LR
comp=Z,7µm,20.0s
JAD Aida 80.10 322 P **P** **01 10 12.9 -0.1**
JOM Ohasama 80.22 329 P **P** **01 10 10.9 -2.6**
JNU Nakatsue 80.55 318 P **P** **01 10 14.1 -1.5**
JNU Nakatsue 80.55 318 P **P** **01 10 14.0 -1.5**
JNU Nakatsue 80.55 318 P **P** **01 10 14.1 -1.5**
comp=Z,15nm,1.0s,baz=91,slow=3.6,SNR=2.8
YHNB Yeheng 80.71 306 PFAKE 01 10 30.0 +13
YHNB LR LR
comp=Z,2µm,19.0s
TATO Taipei 80.83 307 PFAKE 01 10 30.0 +13
TATO LR LR
comp=Z,3µm,20.0s
MYKOM Kota Tinggi 81.15 278 P **P** **01 10 19.6 +0.5**
JTM Tenmabayashi 81.40 330 P **P** **01 10 19.2 -0.6**
ERM Erimo 81.54 332 PFAKE 01 10 30.0 +10
ERM LR LR
comp=Z,3µm,20.0s
PLCA Paso Flores 81.56 133 *e*P **P** **01 10 21.9 +0.9**
comp=Z,150nm,1.7s
PLCA Paso Flores 81.56 133 P **P** **01 10 22.1 +1.1**
comp=Z,7.9nm,1.0s,baz=248,slow=4.2,SNR=10
PLCA LR LR 01 39 26.4
comp=Z,4µm,18.9s,baz=235,slow=30
KGM Kluang 81.72 277 P **P** **01 10 22.8 +0.6**
EFI East Falkland 81.74 147 PFAKE 01 10 30.0 +8.4
EFI LR LR
comp=Z,2µm,19.0s
YUK Yuzh-Kuril'sk 82.20 334*c* *i*P P 01 10 18.7 -5.2
YUK *i* S **S** **01 20 35.7 -3.3**
YUK MLR MLR
comp=N,1µm,22.0s
YUK MLR MLR
comp=E,1µm,22.0s
YUK MLR MLR
comp=Z,3µm,22.0s
AMKA Amchitka 82.52 358 *e*P **P** **01 10 25.0 -0.3**
comp=Z,26nm,1.1s
AMKA *es*P sP 01 10 39.3 +10
QZH Quanzhou 82.82 305⇑ *i*P **P** **01 10 29.3 +1.7**
QZH S **S** **01 20 48.5 +2.3**
QZH LR LR
comp=N,2µm,14.2s
QZH LR LR
comp=E,4µm,17.8s
QZH LR LR
comp=Z,3µm,15.8s
JEW Eniwo 82.92 331 P **P** **01 10 28.0 +0.3**
JMP Maruseppu 83.13 333 P **P** **01 10 29.6 +0.8**
ASAJ Asahikawa 83.52 332 *e*P **P** **01 10 28.6 -2.2**
comp=Z,36nm,1.3s
ASAJ Asahikawa 83.52 332 P **P** **01 10 28.9 -1.9**
ASAJ Asahikawa 83.52 332 P **P** **01 10 28.6 -2.2**
comp=Z,28nm,1.1s,baz=231,slow=6.5,SNR=2.7
KTGM Kuala Trenggan 83.63 280 P **P** **01 10 34.0 +1.9**
FX1 Attu Island--F 84.36 354 *e*P **P** **01 10 34.9 0.0**
IPM Ipoh 84.96 278 *e*P **P** **01 10 38.2 -0.7**
comp=Z,64nm,1.1s
IPM Ipoh 84.96 278 P **P** **01 10 40.0 +1.1**
SKR Severo-Kuril's 85.01 344 *e*P P 01 10 30.0 -8.1
SKR *e* 01 13 50.0
SKR *e*PS **PKiKP** **01 15 52.0 +1.9**
SKR *e*S SKSac 01 20 50.0 -13
SKR pmax pmax
comp=Z,800nm,10.0s
SKR pmax pmax
comp=Z,70nm,0.9s
SKR smax smax
comp=N,3µm,12.0s
SKR smax smax
comp=E,3µm,14.0s
SKR MLR MLR
comp=N,1µm,18.0s
SKR MLR MLR
comp=E,2µm,18.0s
SKR MLR MLR
comp=Z,2µm,18.0s
SSE Sheshan 85.04 311 P **P** **01 10 38.8 0.0**
SSE pmax pmax
comp=Z,18nm,0.8s
SSE pmax pmax
comp=Z,640nm,6.2s
KSRS Korea Array 85.35 319 P **P** **01 10 40.5 +0.2**
comp=Z,5.1nm,0.9s,baz=142,slow=4.9,SNR=14
KSRS LR LR 01 44 47.6
comp=Z,1µm,19.6s,baz=129,slow=33
KSAR Wonju Array Be 85.37 319 P **P** **01 10 40.5 +0.2**
PKM Peak Mountain 85.49 44⇓ P **P** **01 10 43.2 +1.9**
baz=86,SNR=10.0
KULM Kulim 85.70 279 *e*P **P** **01 10 42.1 -0.5**
comp=Z,104nm,1.1s
KULM *es*P sP 01 10 55.7 +9.3
KULM LR LR
comp=Z,3µm,20.0s
KULM Kulim 85.70 279 P **P** **01 10 43.5 +0.9**
LMEL Las Melosas 85.70 127 *i* P **P** **01 10 43.7 +1.2**
LMEL Las Melosas 85.70 127 *i* P **P** **01 10 43.7 +1.2**
QIZ Qiongzhong 85.73 295 P **P** **01 10 42.6 0.0**
QIZ S **S** **01 21 18.9 +3.2**
QIZ sS **ScS** **01 21 25.5 +0.3**
QIZ Qiongzhong 85.73 295 PFAKE 01 10 50.0 +7.4
QIZ LR LR
comp=Z,915nm,20.0s
CLCH Cerro Calan 85.73 127 *i* P **P** **01 10 43.5 +0.9**
YSS Yuzh-Sakhalins 85.83 334⇓ *e*P **P** **01 10 44.0 +1.7**
YSS *e**SP sP 01 10 56.1 +10
YSS *e*S **SKSac** **01 21 08.0 +0.1**
YSS *e*PPS PPS 01 22 28.0
YSS MLR MLR
comp=N,2µm,19.0s
YSS MLR MLR
comp=Z,2µm,19.0s
SAO San Andreas Ge 85.84 42 *e*P **P** **01 10 41.5 -1.2**
SAO pmax pmax
comp=Z,60nm,1.4s
SAO San Andreas Ge 85.84 42 *e*P **P** **01 10 41.5 -1.2**
comp=Z,60nm,1.4s
PSI Prapat 85.86 276 P **P** **01 10 42.2 -1.3**
baz=86,SNR=3.8
BAR Barrett 85.93 48 *e*P **P** **01 10 44.4 +1.1**
comp=Z,81nm,1.8s
DECC Green Verdugo 85.95 46⇓ P **P** **01 10 44.1 +0.8**
baz=86
OSI Osito Adit 85.96 45⇑ P **P** **01 10 45.1 +1.7**
baz=86
PASC Pasadena Art C 85.99 46 *e*P **P** **01 10 43.3 -0.2**
comp=Z,40nm,1.2s
INCN Inchon 86.10 319 PFAKE 01 11 00.0 +16
INCN LR LR
comp=Z,1µm,19.0s
MWC Mount Wilson 86.10 46 *e*P **P** **01 10 45.6 +1.3**
MWC pmax pmax
comp=Z,86nm,1.6s
MWC Mount Wilson 86.10 46 *e*P **P** **01 10 45.6 +1.3**
comp=Z,86nm,1.6s
MURC Murrieta 86.21 47⇑ P **P** **01 10 46.2 +1.5**
baz=86
GSI Gunungsitoli 86.23 274 P sP 01 10 58.8 +10
baz=86,SNR=4.4
MONP Monument Peak 86.23 48⇑ P **P** **01 10 46.8 +1.8**
baz=86
ARVC Arvin 86.24 45⇑ P **P** **01 10 46.4 +1.7**
baz=86,SNR=6.4
BFSC Mount Baldy Ra 86.36 46⇓ P **P** **01 10 46.7 +1.2**
baz=87,SNR=13
HOPS Hopland 86.51 39 *e*P **P** **01 10 45.6 -0.3**
VES Vestal, Richgr 86.58 44⇑ P **P** **01 10 47.5 +1.1**
baz=87,SNR=14
EDW2 Edwards Air Fo 86.58 45⇓ P **P** **01 10 48.0 +1.5**
baz=87,SNR=14
PET Petropavlovsk 86.63 346*c* *i*P **P** **01 10 44.5 -1.6**
PET *e* 01 10 57.4
PET *e*S S 01 21 15.6 -7.3
PET *e*PS **PnS** **01 22 16.3 -5.6**
PET *e*PPS PPS 01 22 36.8
PET *e*SS **SS** **01 27 01.4 -3.4**
PET pmax pmax
comp=Z,800nm,6.6s
PET pmax pmax
comp=Z,700nm,11.6s
PET MLR MLR
comp=Z,4µm,18.0s
PET MLR MLR
comp=Z,3µm,20.0s
PFO Pinyon Flat Ob 86.68 47 P **P** **01 10 48.1 +1.0**
comp=Z,118nm,1.5s,SNR=7.4
PFO Pinyon Flat Ob 86.68 47 P **P** **01 10 48.1 +1.0**
PFO LR LR
comp=Z,7µm,19.0s
PFO Pinyon Flat Ob 86.68 47 P **P** **01 10 48.1 +1.0**
comp=Z,8.9nm,1.0s,baz=263,slow=4.1,SNR=13
PFO Pinyon Flat Ob 86.68 47⇑ P **P** **01 10 48.6 +1.5**
baz=87
ISA Isabella 86.82 44 *e*P **P** **01 10 48.5 +0.8**
ISA pmax pmax
comp=Z,200nm,1.6s
ISA Isabella 86.82 44 *e*P **P** **01 10 48.5 +0.8**
comp=Z,200nm,1.6s
ISA Isabella 86.82 44⇑ P **P** **01 10 48.8 +1.1**
baz=87,SNR=16
PEA0B Petropavlovsk- 86.91 345 *e*P **P** **01 10 47.5 0.0**
PEA0B *es*P sP 01 11 00.9 +9.5
PETK Petropavlovsk- 86.91 345 P **P** **01 10 46.6 -0.9**
PETK pmax pmax
comp=Z,26nm,1.0s
PETK Petropavlovsk- 86.91 345 P **P** **01 10 46.6 -0.9**
PETK Petropavlovsk- 86.91 345 P **P** **01 10 46.6 -0.9**
comp=Z,26nm,0.9s,baz=142,slow=7.4,SNR=15
NJ2 Nanjing 87.17 310 *e*P **P** **01 10 51.3 +2.0**
NJ2 pP **PcP** **01 10 56.4 +5.0**
NJ2 S **S** **01 21 29.0 -0.1**
NJ2 pmax pmax
comp=Z,300nm,1.3s
NJ2 pmax pmax
comp=Z,950nm,9.9s
NJ2 LR LR
comp=N,930nm,19.0s
NJ2 LR LR
comp=E,1µm,18.5s
NJ2 LR LR
comp=Z,1µm,17.4s
CMB Columbia Colle 87.33 42 *e*P **P** **01 10 50.1 +0.1**
CMB pmax pmax

comp=Z,114nm,1.6s
CMB Columbia Colle 87.33 42 eP P 01 10 50.1 +0.1
comp=Z,114nm,1.6s
BC3 Big Chuckawall 87.34 48 P P 01 10 52.8 +2.5
baz=88,SNR=13
GLA Glamis 87.35 48 eP P 01 10 52.4 +2.1
GLA e*SP sP 01 11 05.2 +11
GLA pmax pmax
comp=Z,108nm,1.6s
GLA Glamis 87.35 48 eP P 01 10 52.4 +2.1
comp=Z,108nm,1.6s
GLA esP sP 01 11 05.2 +11
GLA Glamis 87.35 48 ⇑P P 01 10 52.6 +2.3
baz=88
PAYG Puerto Ayora 87.38 89 PFAKE 01 11 00.0 +9.1
PAYG LR LR
comp=Z,5μm,19.0s
GSC Goldstone 87.59 46 eP P 01 10 52.5 +1.1
GSC pmax pmax
comp=Z,135nm,1.5s
GSC Goldstone 87.59 46 eP P 01 10 52.5 +1.1
comp=Z,135nm,1.5s
GSC Goldstone 87.59 46 P P 01 10 52.9 +1.5
baz=88,SNR=15
MPMC Manual Prospec 87.68 45 P P 01 10 52.8 +0.9
baz=88,SNR=32
IRM Iron Mountain 87.86 47 P P 01 10 54.2 +1.5
baz=88,SNR=34
WDC Whiskeytown Da 87.93 39 eP P 01 10 52.6 -0.2
WDC e*SP sP 01 11 07.2 +11
WDC pmax pmax
comp=Z,97nm,1.6s
WDC Whiskeytown Da 87.93 39 eP P 01 10 52.6 -0.2
comp=Z,96nm,1.6s
WDC esP sP 01 11 07.2 +11
214A Organ Pipe Nat 87.96 50 ⇑P P 01 10 54.8 +1.6
baz=88
Y12C Blythe 87.99 48 ⇓P P 01 10 55.6 +2.3
baz=88
LCO Las Campanas 88.13 123 eP P 01 10 54.8 +0.1
comp=Z,71nm,1.4s
LCO LR LR
comp=Z,5μm,19.0s
USRK Ussuriysk Arra 88.21 326 P P 01 10 53.6 -0.4
comp=Z,8.4nm,1.1s,baz=134,slow=3.2,SNR=15
USRK LR LR 01 47 27.3
comp=Z,2μm,19.9s,baz=77,slow=34
TUQ Turquoise Moun 88.22 46 ⇓P P 01 10 56.3 +1.9
baz=88
GRAC Grapevine Rang 88.38 44 P P 01 10 56.8 +1.8
baz=89,SNR=12
TRQA Tornquist 88.47 135 eP P 01 10 55.4 -0.3
comp=Z,107nm,2.0s
TRQA LR LR
comp=Z,3μm,19.0s
WCN Washoe City 88.56 41 eP P 01 10 55.5 -0.5
WCN pmax pmax
comp=Z,67nm,1.5s
WCN Washoe City 88.56 41 eP P 01 10 55.5 -0.5
comp=Z,67nm,1.5s
BEKR Beckworth 88.62 40 eP P 01 10 56.8 +0.5
comp=Z,40nm,1.6s
YBH Yreka Blue Hor 88.66 38 eP P 01 10 57.2 +0.8
comp=Z,65nm,1.6s
YBH Yreka Blue Hor 88.66 38 P P 01 10 57.2 +0.8
comp=Z,9.3nm,0.9s,baz=169,slow=3.0,SNR=7.1
Z14A Wintersburg 88.76 49 P P 01 10 59.0 +2.1
baz=89,SNR=13
NVAR Mina Array Bea 88.79 43 P P 01 10 57.1 -0.1
NVAR Mina Array Bea 88.79 43 P P 01 10 57.1 -0.1
comp=Z,6.1nm,0.7s,baz=220,slow=7.7,SNR=47
NVAR LR LR 01 46 10.6
comp=Z,7μm,18.8s,baz=127,slow=32
NV11 Mina Array Sit 88.88 43 eP P 01 10 57.5 0.0
CHGN Chignik 88.92 11 eP P 01 10 57.5 +0.5
Y14A Wickenburg 89.08 49 P P 01 11 00.2 +1.8
baz=89,SNR=19
HUMO Hull Mountain 89.16 37 eP P 01 10 59.5 +0.9
comp=Z,96nm,1.5s
TPH Tonopah 89.18 43 PFAKE 01 11 10.0 +11
TPH LR LR
comp=Z,6μm,19.0s
WHN Wuhan 89.23 307 eP P 01 11 04.5 +5.3
W13A Hualapai Mount 89.27 47 P P 01 11 01.3 +1.8
baz=90,SNR=23
TUC Tucson 89.52 51 eP P 01 11 01.5 +0.9
TUC pmax pmax
comp=Z,28nm,1.8s
TUC MLR MLR
comp=Z,2μm,19.0s
TUC Tucson 89.52 51 eP P 01 11 01.5 +0.9
comp=Z,28nm,1.8s
TUC LR LR
comp=Z,2μm,19.0s
MDJ Mudanjiang 89.67 325 P P 01 11 00.5 -0.4
MDJ pP **pP 01 11 04.0 +0.3**
MDJ PP **PP 01 14 31.1 -2.2**
MDJ pmax pmax
comp=Z,21nm,1.3s
MDJ pmax pmax
comp=Z,680nm,7.5s
MDJ LR LR
comp=N,980nm,20.6s
MDJ LR LR
comp=E,1μm,17.7s
MDJ LR LR
comp=Z,2μm,17.7s
MDJ Mudanjiang 89.67 325 eP P 01 11 01.1 +0.2
comp=Z,64nm,1.3s
MDJ LR LR
comp=Z,3μm,20.0s
DL2 Dalian 89.94 317 ⇑iP P 01 10 59.8 -2.4
DL2 SKS **SKSac 01 21 29.5 -3.7**
DL2 S **SKKSac 01 21 50.8 +4.5**
DL2 pmax pmax
comp=Z,39nm,1.2s
DL2 pmax pmax
comp=Z,570nm,9.2s
DL2 LR LR
comp=N,570nm,18.8s
DL2 LR LR
comp=E,530nm,18.9s
DL2 LR LR
comp=Z,1μm,19.7s
319A Douglas 89.96 53 ⇑P P 01 11 04.1 +1.3
baz=90
MOD Modoc 90.06 39 eP P 01 11 03.0 0.0
comp=Z,91nm,1.5s
HABR Khabarovsk 90.12 331 ceP P 01 11 01.9 -0.9
HABR e*PP pP 01 11 11.5 +5.8
HABR e*SP sP 01 11 15.4 +8.7
HABR eS **SKSac 01 21 28.8 -4.9**
HABR e 01 21 55.7
HABR SS **SS 01 27 54.7 -1.2**
HABR eSSS SSS 01 31 28.7
HABR MLR MLR
comp=Z,3μm,20.0s
R11A Troy Canyon, C 90.33 44 ⇑P P 01 11 05.7 +1.3
baz=91
X16A Lo Mia Camp, P 90.39 49 P P 01 11 06.9 +2.1
baz=91,SNR=18
320A Kipp Ranch, An 90.45 53 P P 01 11 07.0 +1.9
baz=91,SNR=13
BMN Battle Mountai 90.76 42 eP P 01 11 06.7 +0.4
BMN pmax pmax
comp=Z,104nm,1.6s
BMN Battle Mountai 90.76 42 eP P 01 11 06.7 +0.4
comp=Z,104nm,1.6s
220A Playas Peak, P 90.79 53 P P 01 11 08.3 +1.7
baz=91,SNR=17
SNY Shenyang 90.81 320 ⇓P P 01 11 06.3 +0.1
SNY pmax pmax
comp=Z,21nm,1.3s
SNY pmax pmax
comp=Z,710nm,12.0s
SNY LR LR
comp=N,2μm,13.5s
SNY LR LR
comp=E,2μm,12.9s
SNY LR LR
comp=Z,1μm,16.1s
TIA Tai'an 90.92 313 P P 01 11 02.8 -4.1
TIA LR LR
comp=N,2μm,22.6s
TIA LR LR
comp=E,1μm,23.8s
TIA LR LR
comp=Z,3μm,15.5s
120A U Bar Ranch, L 91.10 52 P P 01 11 09.9 +1.8
baz=91,SNR=12
U15A North Rim 91.11 47 P P 01 11 09.2 +1.0
baz=91,SNR=40
WUAZ Wupatki 91.12 48 eP P 01 11 08.7 +0.6
WUAZ comp=Z,103nm,1.6s LR LR
comp=Z,5μm,19.0s
WUAZ Wupatki 91.12 48 P P 01 11 09.9 +1.8
baz=91,SNR=16
CCUT Cedar City 91.16 46 eP P 01 11 09.4 +1.1
comp=Z,66nm,1.6s
CN2 Changchun 91.17 323 eP P 01 11 06.0 -1.9
CN2 PP **PP 01 14 46.8 +1.6**
CN2 eS **S 01 22 03.3 -2.8**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,1μm,17.0s
CN2 LR LR
comp=E,1μm,17.0s
CN2 LR LR
comp=Z,1μm,18.0s
ARUT Antelope Range 91.26 46 eP P 01 11 09.8 +1.1
ARUT pmax pmax
comp=Z,35nm,1.5s
ARUT Antelope Range 91.26 46 eP P 01 11 09.8 +1.1
comp=Z,34nm,1.5s
WVOR Wild Horse Val 91.32 39 eP P 01 11 09.2 +0.4
WVOR pmax pmax
comp=Z,79nm,1.6s
WVOR MLR MLR
comp=Z,12μm,19.0s
WVOR Wild Horse Val 91.32 39 eP P 01 11 09.2 +0.4
comp=Z,79nm,1.6s
WVOR LR LR
comp=Z,12μm,19.0s
KDAK Kodiak Island 91.36 13 PFAKE 01 11 20.0 +12
KDAK LR LR
comp=Z,4μm,20.0s
221A Mesquite Ranch 91.36 53 ⇑P P 01 11 10.7 +1.4
baz=92
X18A Snowflake 91.43 50 P P 01 11 11.4 +1.8
baz=92,SNR=10
Z20A Nine Sixteen R 91.47 52 P P 01 11 11.8 +2.0
baz=92,SNR=19
121A Cookes Peak, D 91.67 52 ⇓P P 01 11 12.6 +1.9
baz=92,SNR=7.8
VIPM Ingram Point 91.71 37 P P 01 11 11.3 +0.7
VIPM Ingram Point 91.71 37 P P 01 11 11.3 +0.7
BMW Boistfort Moun 91.80 34 P P 01 11 12.1 +1.3
BMW Boistfort Moun 91.80 34 P P 01 11 12.1 +1.3
222A Williams Famil 91.88 53 ⇑P P 01 11 13.2 +1.5
baz=92
W18A Petrified Fore 91.93 49 ⇑P P 01 11 12.6 +0.8
baz=92
FL2 Flat Top 2 92.03 35 P P 01 11 13.4 +1.4
Y20A Horse Springs, 92.09 51 ⇓P P 01 11 14.6 +1.8
baz=92,SNR=21
ELK Elko 92.10 42 eP P 01 11 13.2 +0.6
comp=Z,47nm,1.6s
ELK Elko 92.10 42 P P 01 11 12.4 -0.2
comp=Z,5.8nm,0.9s,baz=214,slow=5.2,SNR=17
KLR Kul'dur 92.10 330 eP P 01 11 08.2 -3.9
KLR eS **SKSac 01 21 39.5 -5.6**
KLR e 01 22 10.0
KLR pmax pmax
comp=Z,1μm,12.0s
NLWA Neilton Lookou 92.16 33 PFAKE 01 11 20.0 +7.6
NLWA LR LR
comp=Z,6μm,20.0s
Z21A St. Cloud Mine 92.21 52 ⇓P P 01 11 14.2 +0.9
baz=92,SNR=7.2
GYA Guiyang 92.35 300 ⇑iP P 01 11 16.0 +2.0
GYA PP PP 01 15 01.4 +6.4
GYA SKS **SKSac 01 21 46.5 -1.4**
GYA S **S 01 22 16.8 -1.1**
GYA SS **SS 01 28 32.1 +3.0**
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,180nm,5.4s
GYA LR LR
comp=N,6μm,20.6s
GYA LR LR
comp=E,5μm,21.1s
GYA LR LR
comp=Z,8μm,22.1s
X20A Quemado 92.39 51 P P 01 11 16.0 +1.9
baz=93,SNR=13
ENH Enshi 92.46 304 PFAKE 01 11 30.0 +16
ENH LR LR
comp=Z,1μm,19.0s
MVU Marysvale 92.46 46 eP P 01 11 15.5 +1.2
comp=Z,27nm,1.4s
MVU LR LR
comp=Z,6μm,19.0s
626A Big Bend Ranch 92.48 57 P P 01 11 15.5 +1.1
baz=93,SNR=6.8
MSU Marysvale 92.49 46 eP P 01 11 15.6 +1.1
MSU pmax pmax
comp=Z,38nm,1.6s
MSU Marysvale 92.49 46 eP P 01 11 15.6 +1.1
comp=Z,38nm,1.6s
425A Indio Mountain 92.58 55 P P 01 11 15.7 +0.7
baz=93,SNR=6.5
324A Moseley Ranch, 92.61 55 ⇓P P 01 11 15.7 +0.6
baz=93,SNR=6.5
Y21A Point of Rocks 92.62 51 ⇑P P 01 11 16.3 +1.1
baz=93,SNR=10
Z22A Elephant Butte 92.65 52 ⇓P P 01 11 16.1 +0.8
baz=93
LON Longmire 92.68 35 eP P 01 11 16.1 +1.2
LON pmax pmax
comp=Z,63nm,1.9s
LON Longmire 92.68 35 eP P 01 11 16.1 +1.2
comp=Z,63nm,1.9s
TXAR Lajitas Array 92.69 57 P P 01 11 16.0 +0.6
TXAR Lajitas Array 92.69 57 P P 01 11 16.0 +0.6
comp=Z,3.5nm,1.1s,baz=212,slow=4.4,SNR=20
TXAR LR LR 01 46 07.1
comp=Z,5μm,19.2s,baz=80,slow=31
W20A Ramah 92.74 50 ⇓P P 01 11 17.4 +1.7
baz=93,SNR=19
526A Mary Lane Ranc 92.80 56 ⇓P P 01 11 16.9 +0.9
baz=93,SNR=6.0
NNA Nana 92.83 106 PFAKE 01 11 30.0 +14
NNA LR LR
comp=Z,3μm,20.0s
MNTX Cornudas Mount 92.83 54 eP P 01 11 15.6 -0.3
comp=Z,29nm,1.9s
MNTX LR LR
comp=Z,2μm,20.0s
325A Bean Ranch, Si 92.93 55 ⇓P P 01 11 17.2 +0.6
baz=93
224A Cornudas Mount 92.95 54 ⇑P P 01 11 17.6 +0.9
baz=93,SNR=6.2
627A Terlingua Ranc 92.95 57 ⇓P P 01 11 17.3 +0.6
baz=93,SNR=13
TRW Toppenish Ridg 92.99 36 P P 01 11 17.3 +1.0
Y22A Socorro 93.05 52 ⇓P P 01 11 18.2 +1.1
baz=93,SNR=6.6
LVC Limon Verde 93.15 119 eP P 01 11 18.5 +0.4
comp=Z,72nm,1.5s
LVC LR LR
comp=Z,3μm,21.0s
DUG Dugway 93.16 44 eP P 01 11 18.2 +0.8
DUG pmax pmax
comp=Z,22nm,1.6s
DUG MLR MLR
comp=Z,4μm,19.0s
DUG Dugway 93.16 44 eP P 01 11 18.2 +0.8
comp=Z,22nm,1.6s
DUG LR LR
comp=Z,4μm,19.0s
DUG Dugway 93.16 44 ⇑P P 01 11 18.6 +1.1
baz=94,SNR=7.3
527A Woodward Ranch 93.19 57 ⇑P P 01 11 18.5 +0.7
baz=93
426A McDonald Obser 93.19 56 P P 01 11 18.5 +0.7
baz=93,SNR=7.6
LAZ Ladron 93.21 51 eP P 01 11 18.8 +1.0
comp=Z,17nm,1.7s
628A Black Gap, Mar 93.33 57 ⇑P P 01 11 19.1 +0.7
baz=94
Q16A Castle Valley 93.36 46 ⇓P P 01 11 20.5 +2.1
baz=94,SNR=6.3
124A Stringfield Ra 93.36 54 ⇑P P 01 11 19.7 +1.1
baz=94
BNM Barren Site 93.40 52 eP P 01 11 19.8 +1.0
comp=Z,28nm,1.7s
MFID Camas Ranch 93.51 40 eP P 01 11 18.8 -0.1
comp=Z,37nm,1.3s
MFID Camas Ranch 93.51 40 ⇑P P 01 11 19.2 +0.3
baz=94,SNR=14
HAWA Hanford 93.56 36 eP P 01 11 18.9 0.0
comp=Z,41nm,1.4s
HAWA LR LR
comp=Z,8μm,19.0s
326A Caldwell Ranch 93.59 55 ⇑P P 01 11 18.9 -0.6
baz=94
Y23A Lovelace Mesa, 93.66 52 ⇓P P 01 11 20.5 +0.5
baz=94
BMO Blue Mountains 93.67 38 eP P 01 11 19.3 -0.3
comp=Z,49nm,1.6s
BMO LR LR
comp=Z,9μm,19.0s
427A Hayter Ranch, 93.73 56 P P 01 11 21.1 +0.9
baz=94,SNR=11
MPU Maple Canyon 93.76 45 eP P 01 11 21.8 +1.5
Z24A Sheeppen Canyo 93.78 53 ⇑P P 01 11 21.8 +1.3
baz=94
SRU San Rafael 93.87 46 P P 01 11 21.7 +0.9
baz=94,SNR=7.5
BJT Baijiatuau 93.89 315 PFAKE 01 11 30.0 +9.5
BJT LR LR
comp=Z,2μm,20.0s
BJI Beijing 93.90 315 P P 01 11 18.4 -2.2
BJI PP **PP 01 15 09.0 +2.2**
BJI pmax pmax
comp=Z,12nm,1.3s
BJI pmax pmax
comp=Z,550nm,11.8s
BJI LR LR
comp=N,750nm,20.7s
BJI LR LR
comp=E,1μm,21.1s
BJI LR LR
comp=Z,1μm,20.6s
ANMO Albuquerque 93.98 51 eP P 01 11 21.9 +0.5
comp=Z,19nm,1.5s
ANMO LR LR
comp=Z,6μm,19.0s
ANMO Albuquerque 93.98 51 P P 01 11 21.7 +0.3
comp=Z,1.6nm,0.7s,baz=214,slow=4.5,SNR=11
MVCO Mesa Verde 93.99 48 eP P 01 11 22.3 +0.9
comp=Z,15nm,1.5s
MVCO LR LR
comp=Z,6μm,19.0s
U21A Nageezi 94.06 49 P P 01 11 22.9 +1.1
baz=94,SNR=14
Y24A Capitan 94.08 53 ⇓P P 01 11 23.3 +1.4
baz=94
I12A Atlanta 94.14 40 ⇑P P 01 11 23.3 +1.4
baz=94
428A Kincaid Ranch, 94.17 56 ⇓P P 01 11 23.3 +1.1
baz=94
HVU Hansel Valley 94.19 43 eP P 01 11 22.8 +0.7
HVU pmax pmax
comp=Z,84nm,1.6s
HVU Hansel Valley 94.19 43 eP P 01 11 22.8 +0.7
comp=Z,84nm,1.6s
Z25A Roswell 94.20 53 ⇓P P 01 11 23.2 +0.9
baz=94
DAU Daniels Canyon 94.23 45 eP P 01 11 23.9 +1.3
DAU pmax pmax
comp=Z,26nm,1.7s
DAU Daniels Canyon 94.23 45 eP P 01 11 23.9 +1.3
comp=Z,26nm,1.7s
JLU Jordanelle 94.23 44 eP P 01 11 23.7 +1.3
comp=Z,38nm,1.7s
CHTO Chiang Mai 94.23 289 PFAKE 01 11 30.0 +7.3
CHTO LR LR
comp=Z,2μm,21.0s
P18A Preston Nutter 94.36 46 ⇓P P 01 11 24.3 +1.1
baz=95
HLID Hailey 94.39 41 eP P 01 11 23.3 +0.3
comp=Z,36nm,1.5s
HLID ePP **PP 01 15 08.0 -2.8**
HLID LR LR
comp=Z,4μm,19.0s
HLID Hailey 94.39 41 P P 01 11 24.1 +1.1
baz=95,SNR=14
PV04 Paradox Valley 94.44 47 eP P 01 11 23.9 +0.6
PV01 Paradox Valley 94.50 48 eP P 01 11 24.2 +0.5
comp=Z,843nm,1.3s
KMI Kunming 94.58 297 P P 01 11 21.9 -2.5
KMI pmax pmax
comp=Z,16nm,1.6s
KMI LR LR
comp=N,1μm,18.0s
KMI LR LR
comp=E,990nm,18.0s
KMI LR LR
comp=Z,1μm,19.7s
429A Davenport Ranc 94.68 57 ⇑P P 01 11 24.4 -0.1
baz=95,SNR=13
J14A Carey 94.74 41 P P 01 11 26.2 +1.6
baz=95,SNR=19
I13A Wildhorse Cree 94.78 40 ⇑P P 01 11 26.0 +1.1
baz=95,SNR=6.5
H12A Diamond D Ranc 94.78 40 ⇑P P 01 11 25.8 +1.0
baz=95,SNR=13
HWUT Hardware Ranch 94.78 43 eP P 01 11 25.1 +0.2
comp=Z,25nm,1.6s
HWUT LR LR
comp=Z,6μm,19.0s
TIY Taiyuan 94.81 312 eP P 01 11 27.8 +2.9
TIY S **S 01 22 37.8 -1.1**
TIY pmax pmax
comp=Z,390nm,8.3s
TIY LR LR
comp=N,1μm,14.8s
TIY LR LR
comp=E,750nm,15.0s
TIY LR LR
comp=Z,1μm,17.8s
530A J-C Ranch, Com 94.82 58 ⇑P P 01 11 25.8 +0.7
baz=95
W24A Lazy 6 Ranch, 94.84 51 ⇓P P 01 11 25.6 +0.3
baz=95,SNR=5.8
X25A Clemmons Ranch 94.95 52 ⇓P P 01 11 26.4 +0.6
baz=95
631A Perdido Creek 94.97 59 ⇓P P 01 11 27.1 +1.3
baz=95
GAMB Gambell 95.02 3 eP P 01 11 25.4 +0.3
comp=Z,22nm,1.2s
I14A Mackay 95.16 41 P P 01 11 28.4 +1.8
baz=96,SNR=11
V24A Rampart Ranch, 95.22 51 ⇓P P 01 11 28.3 +1.2
baz=96,SNR=5.6
F12A Elk City 95.35 39 P P 01 11 27.6 +0.2
baz=96,SNR=15
128A Castleberry Fa 95.37 55 ⇑P P 01 11 28.1 +0.4
baz=96
S22A 4UR Ranch, Cre 95.38 49 P P 01 11 29.3 +1.5
baz=96,SNR=9.2
531A Rocksprings 95.40 58 ⇓P P 01 11 28.7 +0.9
baz=96,SNR=7.8
P20A De Beque 95.42 47 P P 01 11 24.2 -3.6
baz=96,SNR=6.2
G13A Cobalt 95.47 40 P P 01 11 29.1 +1.2
baz=96,SNR=8.2
W25A X Bar L Ranch, 95.48 52 ⇑P P 01 11 30.8 +2.6
baz=96
X26A CR and CF Fran 95.54 53 ⇓P P 01 11 29.1 +0.7
baz=96
WRAK Wrangell Islan 95.60 23 PFAKE 01 11 40.0 +12
WRAK LR LR
comp=Z,4μm,19.0s
330A Mertzon 95.63 57 ⇓P P 01 11 29.1 +0.3
baz=96
H14A Leadore 95.64 40 ⇓P P 01 11 29.6 +0.8
baz=96,SNR=7.0
V25A Rancho No Teng 95.72 51 ⇑P P 01 11 29.6 +0.2
baz=96,SNR=6.7
I15A Monteview 95.75 41 ⇑P P 01 11 31.1 +1.9
baz=96
AHID Auburn Hatcher 95.77 43 PFAKE 01 11 40.0 +11
AHID LR LR
comp=Z,6μm,19.0s
F13A Darby 95.87 39 P P 01 11 29.9 +0.3

baz=96,SNR=7.7
230A Sterling City 95.94 56 ⇓P P 01 11 30.8 +0.6
baz=96
RRI2 Red Ridge 96.00 42 eP P 01 11 31.9 +1.4
comp=Z,41nm,1.5s
NEW Newport 96.03 36 PFAKE 01 11 40.0 +10
NEW LR LR
comp=Z,8µm,19.0s
MCMT McKenzie Canyo 96.06 40 P P 01 11 31.6 +0.8
JCT Junction City 96.11 58 eP P 01 11 32.0 +0.9
JCT MLR MLR
comp=Z,8µm,19.0s
JCT Junction City 96.11 58 eP P 01 11 32.0 +0.9
JCT LR LR
comp=Z,8µm,19.0s
SMCO Snowmass 96.12 48 eP P 01 11 31.5 +0.1
comp=Z,15nm,1.5s
U25A Circle Dot Ran 96.18 51 ⇓P P 01 11 32.1 +0.7
baz=96
SDCO Great Sand Dun 96.23 49 eP P 01 11 31.1 -0.6
comp=Z,14nm,1.7s
SDCO LR LR
comp=Z,3µm,20.0s
R23A Moffat 96.28 49 ⇑P P 01 11 32.8 +0.9
baz=97
N20A Spence Gulch, 96.30 46 ⇑P P 01 11 32.5 +0.6
baz=97
TPAW Teton Pass 96.30 42 eP P 01 11 31.4 -0.5
comp=Z,27nm,1.7s
432A Menard 96.33 58 ⇓P P 01 11 32.0 -0.1
baz=97
E13A Victor 96.36 38 ⇓P P 01 11 33.2 +1.4
baz=97
L19A Farson 96.39 44 ⇑P P 01 11 33.2 +0.9
baz=97
F14A Wisdom 96.40 39 ⇑P P 01 11 33.6 +1.4
baz=97
SNOW Snow King Moun 96.40 42 eP P 01 11 32.7 +0.4
comp=Z,9.1nm,0.9s
130A Snyder 96.43 56 ⇑P P 01 11 33.1 +0.6
baz=97
G15A Dillon 96.48 40 P P 01 11 33.5 +0.9
baz=97,SNR=9.6
231A Bronte 96.53 57 ⇑P P 01 11 33.4 +0.5
baz=97
DLMT Dillon 96.54 40 eP P 01 11 32.0 -0.7
comp=Z,20nm,1.4s
IMW Indian Meadow 96.56 42 eP P 01 11 33.0 -0.1
comp=Z,31nm,1.6s
LOHW Long Hollow 96.58 42 eP P 01 11 32.9 -0.2
comp=Z,33nm,1.6s
MOOW Moose Ponds 96.58 42 eP P 01 11 34.5 +1.4
comp=Z,38nm,1.8s
T25A Trinidad 96.60 50 ⇑P P 01 11 33.9 +0.6
baz=97
U26A Atchley Ranch, 96.62 51 ⇑P P 01 11 34.3 +0.8
baz=97
D13A Huson 96.64 38 ⇓P P 01 11 34.7 +1.6
baz=97
332A Millersview 96.64 57 ⇓P P 01 11 33.7 +0.3
baz=97
BW06 Boulder Array 96.67 43 PFAKE 01 11 50.0 +16
BW06 LR LR
comp=Z,6µm,19.0s
PDAR Pinedale Array 96.67 43 P P 01 11 33.2 -0.3
PDAR PP PP 01 15 27.7 -0.9
PDAR PKKP PKKPbc 01 28 17.9 +0.4
PDAR Pinedale Array 96.67 43 P P 01 11 33.2 -0.3
comp=Z,1.6nm,0.9s,baz=204,slow=3.3,SNR=11
PDAR PP PP 01 15 27.7 -0.9
comp=Z,0.2nm,0.5s,baz=191,slow=6.9,SNR=4.5
PDAR PKKP PKKPbc 01 28 17.9 +0.4
comp=Z,0.7nm,0.8s,baz=133,slow=5.2,SNR=4.2
PDAR LR LR 01 50 54.4
comp=Z,5µm,18.8s,baz=241,slow=33
N21A Black Mountain 96.71 46 ⇓P P 01 11 34.8 +1.1
baz=97
MSO Missoula 96.74 38 PFAKE 01 11 50.0 +16
MSO LR LR
comp=Z,8µm,19.0s
MSO Missoula 96.74 38 P P 01 11 34.9 +1.4
baz=97
QLMT Earthquake Lak 96.86 41 eP P 01 11 36.0 +1.7
comp=Z,2.3nm,1.1s
131A Roby 96.88 56 ⇑P P 01 11 34.8 +0.3
baz=97
S25A Robets Cordova 96.88 50 ⇑P P 01 11 35.2 +0.6
baz=97
H16A Russell Place, 96.88 41 P P 01 11 37.1 +2.7
baz=97,SNR=6.8
F15A Butte 96.90 40 ⇑P P 01 11 35.8 +1.4
baz=97
LRM Limekiln Ridge 96.91 40 eP P 01 11 34.4 -0.1
comp=Z,108nm,1.3s
CD2 Chengdu 96.92 302 P P 01 11 35.0 +0.3
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,540nm,8.3s
L20A Wamsutter 96.94 45 ⇓P P 01 11 36.4 +1.6
baz=97
YMR Madison River 97.02 41 eP Pdif 01 11 36.4 +1.2
comp=Z,39nm,1.4s
D14A Greenough 97.13 38 ⇑P Pdif 01 11 36.2 +0.7
baz=97
CHMT Chamberlain Mo 97.16 39 eP P 01 11 35.9 +0.3
comp=Z,11nm,1.6s
AMTX Amarillo 97.18 53 PFAKE 01 11 50.0 +14
AMTX LR LR
comp=Z,5µm,19.0s
E15A Deer Lodge 97.18 39 ⇓P Pdif 01 11 36.8 +1.0
baz=98
HHC Hu-ho-hao-te 97.19 314 eP Pdif 01 11 39.0 +3.1
HHC pP pP 01 11 43.5 +4.9
HHC sP sP 01 11 45.9 +6.2
HHC SKS **SKSac** 01 22 14.9 +1.7
HHC S **ScS** 01 23 00.1 +0.3
HHC sS sS 01 23 07.3 +3.1
HHC pmax pmax
comp=Z,44nm,1.1s
HHC pmax pmax
comp=Z,670nm,4.8s
HHC LR LR
comp=N,2µm,19.0s
HHC LR LR
comp=E,2µm,17.8s
HHC LR LR
comp=Z,2µm,17.8s
BOZ Bozeman (W) 97.25 40 eP Pdif 01 11 36.4 +0.3
BOZ pmax pmax
comp=Z,30nm,1.5s
BOZ MLR MLR
comp=Z,4µm,19.0s
BOZ Bozeman (W) 97.25 40 eP Pdif 01 11 36.4 +0.3
comp=Z,30nm,1.5s
BOZ LR LR
comp=Z,4µm,19.0s
J19A Crowheart 97.27 43 ⇑P Pdif 01 11 36.9 +0.6
baz=98
LKWY Lake 97.28 42 eP Pdif 01 11 37.3 +0.9
LKWY pmax pmax
comp=Z,35nm,1.4s
LKWY MLR MLR
comp=Z,10µm,19.0s
LKWY Lake 97.28 42 eP Pdif 01 11 37.3 +0.9
comp=Z,34nm,1.4s
LKWY LR LR
comp=Z,10µm,19.0s
ISCO Idaho Springs 97.34 48 PFAKE 01 11 50.0 +13
ISCO LR LR
comp=Z,5µm,19.0s
ABTX Abilene, Hawle 97.38 56 ⇓P Pdif 01 11 37.2 +0.3
baz=98
LPAZ La Paz 97.42 114 eP Pdif 01 11 38.5 +0.2
comp=Z,76nm,2.2s
LPAZ La Paz 97.42 114 P Pdif 01 11 40.1 +1.9
comp=Z,1.4nm,0.6s,baz=212,slow=1.3,SNR=7.1
LPAZ LR LR 01 51 04.5
comp=Z,1µm,18.2s,baz=170,slow=33
TGUH Tegucigalpa,Un 97.50 78 PFAKE 01 11 50.0 +12
TGUH LR LR
comp=Z,4µm,20.0s
JTS JuntasAbangare 97.55 83 PFAKE 01 11 50.0 +12
JTS LR LR
comp=Z,6µm,19.0s
D15A Lincoln 97.63 39 ⇓P Pdif 01 11 39.1 +1.4
baz=98
HIA Hailar 97.76 324 PFAKE 01 11 50.0 +12
HIA LR LR
comp=Z,3µm,19.0s
E16A East Helena 97.77 40 ⇓P Pdif 01 11 39.1 +0.8
baz=98
R26A Arlington 97.88 50 ⇓P Pdif 01 11 39.6 +0.6
baz=98
OTAV Otavalo 97.96 95 PFAKE 01 11 50.0 +10
OTAV LR LR
comp=Z,3µm,19.0s
RLMT Red Lodge 98.25 42 PFAKE 01 11 50.0 +9.4
RLMT LR LR
comp=Z,6µm,20.0s
J21A Lysite 98.26 44 P Pdif 01 11 41.4 +0.7
baz=98,SNR=5.8
V30A Spur Ranch, Mi 98.34 53 ⇓P Pdif 01 11 41.4 +0.4
baz=99
COLA College 98.79 12 PFAKE 01 11 50.0 +7.8
COLA LR LR
comp=Z,5µm,20.0s
ILAR Eielson Array 98.88 13 P P 01 11 42.3 -0.3
ILAR PP PP 01 15 36.5 -8.2
ILAR Eielson Array 98.88 13 P P 01 11 42.3 -0.3
comp=Z,1.9nm,1.0s,baz=227,slow=4.1,SNR=12
ILAR PP PP 01 15 36.5 -8.2
comp=Z,0.7nm,1.0s,baz=222,slow=8.0,SNR=4.0
ILAR LR LR 01 52 41.3
comp=Z,2µm,19.5s,baz=222,slow=33
CPUP Villa Florida 99.08 128 P Pdif 01 11 45.8 +1.2
CPUP Villa Florida 99.08 128 P Pdif 01 11 45.8 +1.2
comp=Z,0.3nm,0.4s,baz=270,slow=20,SNR=3.0
CPUP LR LR 01 51 47.7
comp=Z,2µm,18.2s,baz=212,slow=32
WMOK Wichita Mounta 99.11 55 PFAKE 01 12 00.0 +16
WMOK LR LR
comp=Z,4µm,19.0s
I22A 9 Mile Ranch, 99.15 44 ⇓P Pdif 01 11 44.9 +0.3
baz=99
LZH Lanzhou 99.60 306 eP Pdif 01 11 47.5 +0.7
LZH sP sP 01 11 56.5 +5.8
LZH PP PP 01 15 56.5 +5.3
LZH eS S 01 23 19.4 -0.9
LZH sS sS 01 23 26.3 +1.3
LZH pmax pmax
comp=Z,23nm,1.2s
LZH pmax pmax
comp=Z,130nm,5.7s
LZH LR LR
comp=N,1µm,15.6s
LZH LR LR
comp=E,900nm,16.2s
LZH LR LR
comp=Z,1µm,17.4s
EGMT Eagleton 99.72 39 PFAKE 01 12 00.0 +13
EGMT LR LR
comp=Z,10µm,19.0s
TEIG Tepich 99.75 72 PFAKE 01 12 00.0 +12
TEIG LR LR
comp=Z,2µm,19.0s
BILL Bilibino 99.92 354 eP Pdif 01 11 46.1 -1.1
BILL e 01 15 56.1
BILL eSS SS 01 30 13.7 -0.9
BILL pmax pmax
comp=Z,4.0nm,1.6s
EGAK Eagle 100.06 15 PFAKE 01 12 00.0 +12
EGAK LR LR
comp=Z,5µm,19.0s
OGNE Ogallala 100.25 48 PFAKE 01 12 00.0 +11
OGNE LR LR
comp=Z,6µm,20.0s
RSSD Black Hills 100.74 45 eP Pdif 01 11 51.5 -0.2
RSSD pmax pmax
comp=Z,20nm,1.5s
RSSD Black Hills 100.74 45 ePdif Pdif 01 11 51.5 -0.2
comp=Z,20nm,1.5s
BCIP Isla Barro Col 101.33 86 PFAKE 01 12 10.0 +15
BCIP LR LR
comp=Z,4µm,19.0s
YAK Yakutsk 102.34 337 eP Pdif 01 12 10.5 +12
YAK e 01 22 33.8
YAK e 01 23 41.5
YAK pmax pmax
comp=Z,10.0nm,0.9s
YAK pmax pmax
comp=N,4.0nm,1.5s
YAK MLR MLR
comp=Z,1µm,18.0s
YAK MLR MLR
comp=N,1µm,19.0s
YAK MLR MLR
comp=E,804nm,19.0s
DGAR Diego Garcia 102.84 253 PFAKE 01 12 10.0 +8.5
DGAR LR LR
comp=Z,3µm,20.0s
KSU1 Kansas State U 102.84 52 PFAKE 01 12 10.0 +9.1
KSU1 LR LR
comp=Z,4µm,20.0s
DGMT Dagmar 103.02 41 PFAKE 01 12 10.0 +8.5
DGMT LR LR
comp=Z,3µm,19.0s
ULN Ulaanbaatar 103.77 318 PFAKE 01 12 20.0 +15
ULN LR LR
comp=Z,2µm,22.0s
VBMS Vicksburg 103.83 61 PFAKE 01 12 20.0 +15
VBMS LR LR
comp=Z,3µm,20.0s
GTA Gaotai 104.04 308 eP Pdif 01 12 11.3 +4.9
GTA pP 01 12 16.3
GTA sP 01 12 18.4
GTA PP PP 01 16 33.1 +8.6
GTA Gaotai 104.04 308 SS SS 01 31 20.5 +7.3
GTA pmax pmax
comp=Z,4.0nm,1.4s
GTA pmax pmax
comp=Z,230nm,6.9s
GTA LR LR
comp=N,610nm,19.9s
GTA LR LR
comp=E,970nm,19.5s
GTA LR LR
comp=Z,1µm,19.5s
SONM Songino Array 104.13 318 Pdif Pdif 01 12 14.4 +7.8
SONM Songino Array 104.13 318 Pdiff Pdif 01 12 14.4 +7.8
comp=Z,0.9nm,1.1s,baz=131,slow=4.0,SNR=4.9
ECSD EROS Data Cent 105.12 48 PFAKE 01 16 40.0
ECSD LR LR
comp=Z,5µm,19.0s
SAML Samuel 105.61 111 PFAKE 01 16 40.0
SAML LR LR
comp=Z,4µm,19.0s
OXF Oxford 105.72 59 PFAKE 01 16 40.0
OXF LR LR
comp=Z,5µm,19.0s
LSA Lhasa 105.77 295 PFAKE 01 16 40.0
LSA LR LR
comp=Z,1µm,19.0s
YKA Yellowknife Ar 106.25 26 Pdif Pdif 01 12 16.1 +0.7
YKA PKiKP PKiKP 01 16 26.6 -0.3
YKA PKKPbc PKKPbc 01 27 48.4 -1.4
YKA Yellowknife Ar 106.25 26 Pdiff Pdif 01 12 16.1 +0.7
comp=Z,0.1nm,0.7s,baz=237,slow=4.1,SNR=3.0
YKA PKiKP PKiKP 01 16 26.5 -0.3
comp=Z,0.4nm,0.7s,baz=260,slow=1.6,SNR=6.4
YKA PKKPbc PKKPbc 01 27 48.3 -1.4
comp=Z,0.6nm,0.7s,baz=38,slow=3.2,SNR=9.1
SCIA State Center 106.46 51 PFAKE 01 16 40.0
SCIA LR LR
comp=Z,5µm,19.0s
LRAL Lakeview Retre 106.83 61 PFAKE 01 16 40.0
LRAL LR LR
comp=Z,2µm,19.0s
ZAK Zakamensk 107.18 319 eP Pdif 01 12 22.2 +2.2
ZAK pmax pmax
comp=Z,2.0nm,1.3s
SPB Sao Paulo 107.42 133 PFAKE 01 16 40.0
SPB LR LR
comp=Z,3µm,19.0s
FFC Flin Flon 107.46 36 PFAKE 01 16 40.0
FFC LR LR
comp=Z,5µm,19.0s
TRD Trivandrum 107.52 269⇑ ePKP PP 01 16 59.5 +9.2
MTDJ Mount Denham 107.68 79 PFAKE 01 16 40.0
MTDJ LR LR
comp=Z,5µm,19.0s
HDIL Hopedale 108.50 53 PFAKE 01 16 40.0
HDIL LR LR
comp=Z,3µm,19.0s
JFWS Jewell Farm 108.88 51 PFAKE 01 16 40.0
JFWS LR LR
comp=Z,4µm,19.0s
EYMN Ely 110.22 46 PFAKE 01 16 50.0
EYMN LR LR
comp=Z,3µm,19.0s
GTBY Guantanamo Bay 110.50 79 PFAKE 01 16 50.0
GTBY LR LR
comp=Z,2µm,20.0s
COWI Conover 110.93 48 PFAKE 01 16 50.0
COWI LR LR
comp=Z,4µm,19.0s
NHSC New Hope 112.04 64 PFAKE 01 16 50.0
NHSC LR LR
comp=Z,2µm,19.0s
ACSO Alum Creek Sta 112.77 56 PFAKE 01 16 50.0
ACSO LR LR
comp=Z,8µm,20.0s
SDDR Presa de Saban 113.29 81 PFAKE 01 16 50.0
SDDR LR LR
comp=Z,2µm,19.0s
BLA Blacksburg 113.47 60 PFAKE 01 16 50.0
BLA LR LR
comp=Z,4µm,19.0s
ABPO Ambohimpanom 113.89 227 PFAKE 01 16 50.0
ABPO LR LR
comp=Z,3µm,19.0s
WMQ Urumqi 114.12 308 ePKP PKPdf 01 16 39.3 -3.1
WMQ PP **PP** 01 17 40.1 +2.5
WMQ PKS **PKSdf** 01 20 14.8 -4.2
WMQ SKS SKSdf 01 23 46.6 -8.1
WMQ SKKS SKKSac 01 24 29.1 -10
WMQ LR LR
comp=N,470nm,20.0s
WMQ LR LR
comp=E,540nm,20.2s
WMQ LR LR
comp=Z,670nm,18.8s
SUR Sutherland 114.16 197 PFAKE 01 16 50.0 +6.8
SUR LR LR
comp=Z,4µm,21.0s
GRTK Grand Turk 114.53 79 PFAKE 01 17 00.0 +16
GRTK LR LR
comp=Z,2µm,19.0s
CNNC Cliffs of the 114.62 63 PFAKE 01 17 00.0 +17
CNNC LR LR
comp=Z,2µm,19.0s
ERPA Erie 115.56 55 PFAKE 01 17 00.0 +15
ERPA LR LR
comp=Z,4µm,19.0s
CBN Corbin 116.08 60 PFAKE 01 17 00.0 +14
CBN LR LR
comp=Z,4µm,19.0s
SJG San Juan 117.26 85 PFAKE 01 17 00.0 +11
SJG LR LR
comp=Z,2µm,20.0s
MSEY Mahe Island 117.99 245 PFAKE 01 17 00.0 +9.2
MSEY LR LR
comp=Z,3µm,19.0s
GRGR Grenville 118.32 93 PFAKE 01 17 00.0 +8.8
GRGR LR LR
comp=Z,1µm,19.0s
BINY Binghamton 118.40 56 PFAKE 01 17 00.0 +9.4
BINY LR LR
comp=Z,7µm,20.0s
ZAA0 Zalesovo Array 119.03 318 epPKPdf pPKPdf 01 17 02.9 +8.6
FDF Fort de France 119.99 91 PFAKE 01 17 10.0 +16
FDF LR LR
comp=Z,923nm,19.0s
LONY Lake Ozonia 120.08 54 PFAKE 01 17 10.0 +16
LONY LR LR
comp=Z,4µm,19.0s
NCB Newcomb 120.15 54 PFAKE 01 17 10.0 +16
NCB LR LR
comp=Z,3µm,19.0s
BBGH Gun Hill 120.60 93 PFAKE 01 17 10.0 +14
BBGH LR LR
comp=Z,2µm,19.0s
ANWB Willy Bob 120.78 87 PFAKE 01 17 10.0 +14
ANWB LR LR
comp=Z,2µm,20.0s
KSH Kashi 121.05 300 ePKP PKPdf 01 16 56.3 +0.4
KSH ePP PP 01 18 25.8 -0.2
KSH ePKS PKSdf 01 20 31.4 -1.3
KSH eSKS SKSdf 01 24 04.0 -4.3
KSH AMB AMB
comp=Z,410nm,6.3s
KSH LR LR
comp=N,840nm,13.8s
KSH LR LR
comp=E,1µm,14.6s
KSH LR LR
comp=Z,2µm,21.8s
LBNH Lisbon 121.82 55 PFAKE 01 17 10.0 +13
LBNH LR LR
comp=Z,3µm,19.0s
KURK Kurchatov 122.00 313 i PKIKP PKPdf 01 16 55.8 -1.4
KURK Kurchatov 122.00 313 PFAKE 01 17 10.0 +13
KURK LR LR
comp=Z,1µm,19.0s
TKM2 Tokmak 2 122.24 304 ePKIKP PKPdf 01 16 57.3 -1.0
TKM2 MLR MLR
comp=Z,948nm,20.0s
TKM2 Tokmak 2 122.24 304 ePKPdf PKPdf 01 16 57.2 -1.0
TKM2 LR LR
comp=Z,948nm,20.0s
AAK Ala-Archa 122.96 303 ePKIKP PKPdf 01 16 59.5 -0.1
AAK MLR MLR
comp=Z,1µm,19.0s
AAK Ala-Archa 122.96 303 ePKPdf PKPdf 01 16 59.5 -0.1
AAK LR LR
comp=Z,1µm,19.0s
EKS2 Erkin-Say 123.48 303 ePKIKP PKPdf 01 17 00.6 +0.1
EKS2 MLR MLR
comp=Z,1µm,19.0s
EKS2 Erkin-Say 123.48 303 ePKPdf PKPdf 01 17 00.6 +0.1
EKS2 LR LR
comp=Z,1µm,19.0s
BBSR BB Station 123.95 70 PFAKE 01 17 10.0 +8.5
BBSR LR LR
comp=Z,2µm,20.0s
KBL Kabul 124.92 292 ePKIKP PKPdf 01 17 03.8 +0.2
KBL Kabul 124.92 292 ePKPdf PKPdf 01 17 03.8 +0.2
PQI Presque Isle 125.03 52 ePKPdf PKPdf 01 17 04.0 +0.9
SCHQ Schefferville 126.80 42 ePKPdf PKPdf 01 17 05.2 -1.1
SCHQ Schefferville 126.80 42 PKP PKPdf 01 17 05.2 -1.1
comp=Z,16nm,1.2s,baz=60,slow=3.3,SNR=6.6
LSZ Lusaka 127.34 212 ePKPdf PKPdf 01 17 09.4 +0.6
LSZ LR LR
comp=Z,3µm,20.0s
BRVK Borovoye 127.44 315 i PKIKP PKPdf 01 17 05.7 -1.9
BRVK Borovoye 127.44 315 PFAKE 01 17 20.0 +12
BRVK LR LR
comp=Z,2µm,19.0s
TSUM Tsumeb 127.56 198 PFAKE 01 17 20.0 +11
TSUM LR LR
comp=Z,5µm,19.0s
RCBR Riachuelo 127.96 129 PFAKE 01 17 20.0 +10
RCBR LR LR
comp=Z,5µm,19.0s
BSY Bisya 130.85 274 P SKPbc 01 20 39.8 +0.3
SNR=6.5
HOQ Hoqain 131.07 275 P SKPbc 01 20 41.8 +1.6
SNR=6.1
RBK Rabkut 131.24 266 P SKPbc 01 20 43.3 +2.3
SNR=6.2
ARQ Araqi 131.65 274 P SKPbc 01 20 44.0 +1.6
SNR=10
ABTO Aybut 131.95 265 P SKPbc 01 20 46.1 +2.6
SNR=9.5
SHEL Horse Pasture 132.22 169 PFAKE 01 17 30.0 +12
SHEL LR LR
comp=Z,2µm,20.0s
KBS Kingsbay 132.25 358 eP PKPdf 01 17 19.6 +3.5
KBS Kingsbay 132.25 358 PFAKE 01 17 30.0 +14
KBS LR LR
comp=Z,1µm,19.0s
HATD Hatta, Dubai 132.52 276 P SKPbc 01 20 47.3 +2.0
SNR=16
BANOM Banah 132.76 278 P SKPbc 01 20 48.9 +2.7
SNR=9.7
SPA0 Spitsbergen Ar 132.77 356 eP PKPdf 01 17 17.5 +0.4
SFJD Kangerlussuaq 132.81 25 PFAKE 01 17 30.0 +13

SFJD LR LR
comp=Z,4μm,19.0s
NAZ Nazwa, Dubai 132.98 276 P **SKPbc 01 20 49.2 +2.3**
SNR=14
ASUD Al Ashush, Dub 133.14 275 P **SKPbc 01 20 50.2 +2.8**
SNR=5.5
DAG Danmarks Havn 133.55 7 *e*PKIKP **PKPdf 01 17 21.5 +3.0**
DAG *i* 01 37 32.0
DAG MLR MLR
comp=Z,2μm,21.0s
DAG Danmarks Havn 133.55 7 *i* P **PKPdf 01 17 21.5 +3.0**
DAG *i* 01 18 57.6
DAG *i* 01 37 32.0
DAG
comp=Z,2μm,21.0s
SUMG Summit 133.62 16 *i* PKIKP **PKPdf 01 17 20.9 +1.6**
SUMG *i* 01 37 29.1
SUMG MLR MLR
comp=Z,3μm,18.0s
SUMG Summit 133.62 16 *i* P **PKPdf 01 17 20.9 +1.6**
SUMG *i* 01 19 38.2
SUMG *i* 01 37 29.1
SUMG
comp=Z,3μm,18.0s
KMBO Kilima Mbogo 133.70 232 PKP **PKPdf 01 17 22.3 +1.3**
KMBO LR LR
comp=Z,2μm,20.0s
KMBO Kilima Mbogo 133.70 232 PKP **PKPdf 01 17 22.3 +1.3**
comp=Z,0.9nm,0.8s,baz=114,slow=2.5,SNR=2.9
ARU Arti 134.10 320 *i* PKIKP **PKPdf 01 17 19.5 -0.6**
ARU 01 19 49.8
MBAR Mbarara 138.29 226 PFAKE **01 17 40.0 +11**
MBAR LR LR
comp=Z,895nm,22.0s
SCO Scoresbysund 138.66 12 *e*PKIKP **PKPdf 01 17 25.5 -2.6**
SCO MLR MLR
comp=Z,2μm,19.0s
SCO Scoresbysund 138.66 12 *i* P **PKPdf 01 17 25.5 -2.6**
SCO
comp=Z,1μm,18.0s
LVZ Lovozero 138.94 342 *i* PKIKP **PKPdf 01 17 29.8 +1.0**
KEV Kevo 139.22 347 PFAKE **01 17 40.0 +11**
KEV LR LR
comp=Z,1μm,20.0s
APA Apatity 139.51 342 ⇑*i* PKIKP **PKPdf 01 17 30.0 +0.2**
APA *i* 01 24 36.0
ARCES ARCESS Array B 139.68 348 PKPpre PKPpre 01 17 22.3
ARCES PKP **PKPdf 01 17 30.9 +0.8**
ARCES ARCESS Array B 139.68 348 PKhKP PKPpre 01 17 22.3
comp=Z,4.0nm,0.9s,baz=40,slow=3.2,SNR=8.1
ARCES PKP **PKPdf 01 17 30.9 +0.8**
comp=Z,6.2nm,0.7s,baz=48,slow=2.7,SNR=13
ARE0 ARCESS Array S 139.68 348 *e* PKPdf 01 17 21.4 -8.7
ARE0 *e*PP **PP 01 20 25.5 -0.1**
ARE0 *e*SS SS 01 38 47.6 +2.3
ARE0 ARCESS Array S 139.68 348 *e*PKPdf **PKPdf 01 17 27.9 -2.2**
JMIC Jan Mayen 139.96 6 *e* PKPdf 01 17 22.2 -8.3
JMIC *e*PP **PP 01 20 30.2 +3.1**
JMIC *e*SS SS 01 38 52.0 +3.6
KTK1 Kautokeino 140.54 348 *e* PKPdf 01 17 23.1 -8.5
KTK1 *e*PP **PP 01 20 31.5 +0.7**
KTK1 *e*SS SS 01 38 57.4 +2.1
TRO Tromso 140.64 351 *e* PKPdf 01 17 22.7 -9.1
TRO *e*PP **PP 01 20 31.5 +0.2**
TRO *e*SS SS 01 38 53.9 -2.4
KLMR Klimovskoe 141.84 331 *c i* PKHKP PKPpre 01 17 25.6
KLMR pmax pmax
comp=Z,25nm,1.2s
KLMR MLR MLR
comp=Z,2μm,20.0s
JOF Joensuu 143.51 338 *e*PKHKP PKPab 01 17 32.9 -0.5
JOF pmax pmax
comp=Z,15nm,0.8s
JOF Joensuu 143.51 338 *ep* PKPab 01 17 32.9 -0.5
comp=Z,15nm,0.8s
BORG Borgarnes 143.58 17 PFAKE **01 17 50.0 +13**
BORG LR LR
comp=Z,3μm,20.0s
DGRG David-gareji 144.32 298 P **PKPdf 01 17 38.7 -0.5**
TBLG Delisi 144.78 299 P **PKPab 01 17 36.9 -2.0**
GNI Garni 144.83 296 *e*P **PKPab 01 17 39.0 -0.4**
GNI Garni 144.83 296 *e*PKPdf PKPbc 01 17 39.4 0.0
GNI LR LR
comp=Z,1μm,19.0s
KZR Kazreti 145.04 298 P **PKPdf 01 17 40.9 +0.4**
GOR Gori 145.24 299 P **PKPbc 01 17 40.2 -0.3**
MOS Moscow 145.38 325 *ce*PKP2 **PKPbc 01 17 39.6 -0.8**
MOS *e* 01 33 35.8
MOS pmax pmax
comp=Z,600nm,1.4s
MOS pmax pmax
comp=N,200nm,1.1s
MOS pmax pmax
comp=E,100nm,1.1s
MOS pmax pmax
comp=Z,542nm,1.4s
MOS pmax pmax
comp=E,106nm,1.1s
MOS pmax pmax
comp=N,207nm,1.2s
CLDR Caldiran 145.47 295 *e*P **PKPbc 01 17 41.4 -0.3**
HAKT HAKKARI 145.60 292 *i* P **PKPdf 01 17 41.0 -0.8**
KAF Kangasniemi 145.64 340 *e*PKP2 **PKPdf 01 17 38.7 -2.1**
KAF pmax pmax
comp=Z,51nm,0.7s
KAF Kangasniemi 145.64 340 *ep* **PKPdf 01 17 38.7 -2.1**
comp=Z,51nm,0.7s
DYDN Diyadin 145.65 295 *i* P **PKPab 01 17 42.6 +0.1**
CUKT Cukurca 145.67 291 *e*P **PKPdf 01 17 41.6 -0.2**
ONI Oni 145.68 301 P **PKPdf 01 17 41.4 -0.2**
AKH Akhalkalaki 145.73 299 P **PKPab 01 17 42.6 0.0**
DIGO Kars 145.87 297 *i* P **PKPdf 01 17 40.9 -1.3**
KBZ Khabaz 145.96 303 P **PKPdf 01 17 41.9 0.0**
KBZ pmax pmax
comp=Z,67nm,1.2s
KBZ Khabaz 145.96 303 PKPbc **PKPdf 01 17 41.9 0.0**
KBZ Khabaz 145.96 303 PKPbc **PKPdf 01 17 41.9 0.0**
comp=Z,67nm,1.2s,baz=71,slow=4.8,SNR=34
KARS Kars 146.09 297 *e*P **PKPdf 01 17 42.2 -0.3**
GEVA Gevas 146.14 293 *i* P **PKPdf 01 17 41.9 -0.8**
OBN Obninsk 146.21 325 ⇑*i* PKIKP **PKPdf 01 17 40.7 -1.2**
OBN *e*SS SS 01 39 58.6 -3.0
OBN pmax pmax
comp=Z,456nm,1.3s
FINES FINESS Array B 146.24 340 PKPbc **PKPdf 01 17 41.4 -0.4**
FINES FINESS Array B 146.24 340 PKPbc **PKPdf 01 17 41.4 -0.4**
comp=Z,26nm,0.7s,baz=48,slow=3.8,SNR=103
VOR Voronezh 146.31 318 PKIKP **PKPdf 01 17 40.0 -2.2**
VOR pmax pmax
comp=Z,450nm,1.4s
TUTA Tutak 146.33 295 *i* P **PKPdf 01 17 43.0 0.0**
VSR Storozhevoye 146.53 317 *e*PKP2 **PKPdf 01 17 43.1 +0.5**
VSR pmax pmax
comp=Z,280nm,1.3s
VSR pmax pmax
comp=N,40nm,1.0s
VSR pmax pmax
comp=E,140nm,1.2s
VORD Divnogorie 146.54 316 *e*PKIKP **PKPdf 01 17 42.7 +0.1**
VORD *e*PP PKiKP 01 17 57.7 +11
VORD pmax pmax
comp=Z,180nm,1.5s
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,90nm,1.2s
TATV Tatvan 146.76 293 *i* P **PKPbc 01 17 45.9 +0.4**
HOMI Horasan 147.01 296 *i* P **PKPbc 01 17 45.8 -0.4**
MARD Mardin 147.93 291 *i* P **PKPdf 01 17 45.0 -0.6**
SOC Sochi 148.26 303 *c i* PKP2 **PKPbc 01 17 48.3 -0.8**
SOC pmax pmax
comp=Z,77nm,0.9s
DIY Diyarbakir 148.37 292 *e*P PKPdf 01 17 39.5 -6.8
DIYA Diyarbakir 148.45 292 *i* P **PKPdf 01 17 47.1 +0.7**
MACK Trabzon 148.57 298 *i* P **PKPdf 01 17 47.5 +1.1**
KELT Kelkit 149.03 297 *i* P **PKPdf 01 17 48.4 +0.9**
SVRC Sivrice-ELAZID 149.09 293 *e*P **PKPdf 01 17 48.9 +1.3**
ELZG Elazig 149.34 293 *i* P **PKPbc 01 17 52.7 +0.4**
ESPY Espiye-Giresun 149.36 298 *e*P **PKPbc 01 17 50.2 -1.9**
ILIC ilic-Erzincan 149.61 295 *e*P **PKPbc 01 17 52.2 -0.7**
ANN Anapa 149.62 306 *i* PKHKP **PKPbc 01 17 50.1 -2.4**
ANN *e* 01 21 27.1
ANN pmax pmax
comp=Z,188nm,1.2s

GRSN GIRESUNGRSN 149.71 298 *i* P **PKPbc 01 17 52.5 -0.4**
SUSE Susehri 149.83 297 *i* P **PKPdf 01 17 48.4 -0.3**
NB2 NORSAR Subarra1 149.84 351 PKP **PKPbc 01 17 51.5 -1.1**
comp=Z,81nm,1.2s,baz=17,slow=2.6
NB2 NORSAR Subarra1 149.84 351 PKP **PKPbc 01 17 51.5 -1.1**
baz=17,slow=2.6
NOA NORSAR Array B 149.84 351 PKP **PKPdf 01 17 47.4 -0.4**
NOA PKPbc **PKPbc 01 17 51.5 -1.1**
NOA NORSAR Array B 149.84 351 PKP **PKPdf 01 17 47.4 -0.4**
comp=Z,10nm,1.2s,baz=14,slow=4.2,SNR=4.1
NOA PKPbc **PKPbc 01 17 51.5 -1.1**
comp=Z,25nm,1.1s,baz=14,slow=4.1,SNR=21
ATAB Bozova 149.91 291 *i* P **PKPdf 01 17 49.4 +0.7**
NAO01 NORSAR Array S 150.07 352 *e*PKPdf **PKPdf 01 17 48.6 +0.5**
NC602 NORSAR Array S 150.09 351 *e*P **PKPdf 01 17 47.3 -0.9**
IZAR Zarasai 150.47 332 *e*P **PKPbc 01 17 53.4 -0.9**
IZAR AMB AMB 01 18 08.5
comp=Z,51nm,1.4s
RSDY Resadiye-TOKAT 150.48 297 *e*P **PKPbc 01 17 52.6 -2.3**
GZT Gaziantep 150.49 291 *i* P **PKPbc 01 17 55.2 0.0**
DARE Darende-Malaty 150.51 294 *e*P **PKPdf 01 17 49.0 -0.7**
IDID Didziasalis 150.58 331 *e*P **PKPbc 01 17 54.9 +0.4**
IDID AMB AMB 01 18 10.2
comp=Z,40nm,1.4s
ISAL Salakas 150.65 332 *e*P **PKPbc 01 17 54.1 -0.6**
ISAL AMB AMB 01 18 09.0
comp=Z,37nm,1.4s
MICGM Minsk 150.65 329 ⇓*e*PKP **PKPdf 01 17 52.0 +2.8**
MNK Minsk 150.67 329 ⇓*e*PKIKP **PKPdf 01 17 52.0 +2.7**
MNK *e* 01 21 26.0
MNK pmax pmax
comp=Z,280nm,1.0s
IIGN Ignalina 150.77 332 *e*P **PKPbc 01 17 55.3 +0.3**
IIGN AMB AMB 01 18 10.8
comp=Z,49nm,1.9s
GAZ Gaziantep 150.77 291 *e*P **PKPbc 01 17 59.2 +3.5**
NACGM Naroch 150.85 331 *e*P **PKPdf 01 17 50.0 +0.5**
ERBA Erbaa 150.88 298 *i* P **PKPdf 01 17 49.1 -1.0**
KMRS Kahramanmaras 151.01 292 *e*P **PKPbc 01 17 54.3 -1.9**
TOKA Tokat 151.13 297 *i* P **PKPdf 01 17 49.3 -1.2**
SACV Santiago Islan 151.14 119 PFAKE **01 18 00.0 +2.9**
SACV LR LR
comp=Z,1μm,19.0s
PINB Pinarbasi 151.35 294 *i* P **PKPdf 01 17 50.2 -0.9**
KVT Kavak 151.35 299 *e*P **PKPdf 01 17 51.8 +1.0**
SARI SarD1z-Kayseri 151.35 293 *e*P **PKPdf 01 17 53.0 +1.9**
KONO Kongsberg 151.38 352 *e*P **PKPdf 01 17 48.3 -1.9**
KONO Kongsberg 151.38 352 *e*PKIKP **PKPdf 01 17 50.8 +0.6**
KONO MLR MLR
comp=Z,1μm,20.0s
KONO Kongsberg 151.38 352 *e*PKPdf **PKPdf 01 17 50.8 +0.6**
KONO LR LR
comp=Z,1μm,20.0s
ODD1 Odda 151.39 356 *e*P **PKPbc 01 17 54.6 -1.7**
COBT Iskenderun 151.55 290 *i* P **PKPbc 01 17 58.0 +0.4**
HTY Hatay 151.64 289 *e*P **PKPbc 01 17 57.3 -0.3**
YAYL Yayladag 151.66 288 *i* P **PKPdf 01 17 53.7 +2.1**
HWQ Hawqa 151.73 285 *e*P **PKPdf 01 17 51.2 -0.6**
BNN Bunyan 151.77 294 *e*P **PKPdf 01 17 53.0 +1.3**
DIKM Dikmen 151.84 300 *e*P **PKPdf 01 17 51.4 -0.1**
SIM Simferopol' 151.85 308 *d i* PKIKP **PKPdf 01 17 53.0 +1.6**
SIM pmax pmax
comp=Z,42nm,1.1s
KOZT Kozan 151.87 292 *e*P **PKPbc 01 17 57.0 -1.2**
BHL Bhannes 151.95 284 *e*P **PKPbc 01 17 58.5 -0.1**
CEYT Ceyhan 151.95 291 *e*P **PKPbc 01 17 57.4 -0.9**
YOZ Yozgat 152.09 296 *e*P **PKPbc 01 17 56.0 -2.7**
BYBT Boyabat 152.24 300 *e*P **PKPbc 01 17 58.5 -0.3**
KRTS Karatas 152.25 290 *e*P **PKPdf 01 17 54.6 +2.4**
AKASG Malin Array Be 152.33 322 PKIKP **PKPdf 01 17 51.4 -0.5**
AKASG 01 17 58.3
AKASG pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 152.33 322 PKP **PKPdf 01 17 51.4 -0.5**
AKASG PKPbc **PKPbc 01 17 58.2 -0.4**
AKASG Malin Array Be 152.33 322 PKP **PKPdf 01 17 51.4 -0.5**
comp=Z,1.1nm,0.7s,baz=2.9,slow=1.9,SNR=6.0
AKASG PKPbc **PKPbc 01 17 58.2 -0.4**
comp=Z,7.0nm,0.6s,baz=48,slow=2.1,SNR=37
AK01 Malin Array Si 152.34 322 *e*PKPbc **PKPbc 01 17 58.3 -0.4**
KIEV Kiev 152.34 322 *e*PKIKP **PKPbc 01 17 58.3 -0.4**
KIEV MLR MLR
comp=Z,1μm,21.0s
KIEV Kiev 152.34 322 *e*PKPbc **PKPbc 01 17 58.3 -0.4**
KIEV LR LR
comp=Z,1μm,21.0s
AK02 Malin Array Si 152.36 322 *e*PKPbc **PKPbc 01 17 58.5 -0.2**
CTKT Corum 152.36 298 *i* P **PKPbc 01 17 58.3 -1.1**
AVNT Avonos 152.54 294 *i* P **PKPbc 01 17 58.9 -1.0**
CORM Corum 152.55 297 *e*P **PKPdf 01 17 53.1 +0.3**
GULE Gulek 152.71 291 *i* P **PKPbc 01 18 00.2 -0.1**
NIG Nigde 152.79 293 *e*P **PKPbc 01 17 58.1 -2.4**
CDAG Cicekdag 152.82 296 *e*P **PKPdf 01 17 50.8 -2.4**
TOS Tosya 152.87 300 *e*P **PKPbc 01 18 00.9 +0.5**
SUW Suwalki 152.96 333 *e*PKIKP **PKPbc 01 17 58.3 -1.7**
SUW Suwalki 152.96 333 *e*PKPbc **PKPbc 01 17 58.3 -1.7**
SUW Suwalki 152.96 333 *e*PKPdf **PKPbc 01 18 00.4 +0.4**
SUW *e*PKPab **PKPab 01 18 10.8 -0.4**
ILGA Ilgaz 153.09 300 *i* P **PKPbc 01 18 00.1 -0.9**
BALT Daday 153.24 301 *i* P **PKPbc 01 18 01.7 +0.4**
CANT Cankiri 153.25 299 *e*P **PKPdf 01 17 52.6 -1.1**
BR131 Keskin Array S 153.37 297 *e*PKPbc **PKPbc 01 18 01.3 -0.3**
BRTR Keskin Array B 153.37 297 PKP **PKPdf 01 17 53.2 -0.8**
BRTR PKPbc **PKPbc 01 18 01.6 0.0**
BRTR Keskin Array B 153.37 297 PKP **PKPdf 01 17 53.2 -0.8**
comp=Z,4.4nm,1.2s,baz=194,slow=2.5,SNR=11
BRTR PKPbc **PKPbc 01 18 01.6 0.0**
comp=Z,7.2nm,1.0s,baz=143,slow=2.5,SNR=23
ELDT Eldivan 153.41 298 *i* P **PKPdf 01 17 51.5 -2.6**
SULT Sultanhani-AKS 153.65 293 *e*P **PKPbc 01 18 01.8 -0.4**
LFK Lefkose 153.75 287 *e*P **PKPbc 01 17 59.4 -3.0**
BBAL Bala 153.79 296 *i* P **PKPdf 01 17 52.5 -2.1**
SAFT Safranbolu 153.82 300 *e*P **PKPbc 01 17 59.4 -2.9**
CSS Prodhromos 153.92 286 *e*P **PKPdf 01 17 56.1 +1.4**
CSS Prodhromos 153.92 286 *e*PKPbc **PKPbc 01 18 02.9 +0.1**
CSS LR LR
comp=Z,2μm,19.0s
LIC Lamto 153.96 163 *e*PKIKP **PKPdf 01 17 56.1 +0.7**
comp=Z,34nm,1.0s
LIC *e*R
comp=Z,4μm,19.2s
LIC Lamto 153.96 163 *e*PKPdf **PKPdf 01 17 56.1 +0.7**
ANTO Ankara 153.99 297 *e*P **PKPdf 01 17 53.1 -1.7**
ANTO Ankara 153.99 297 *e*PKIKP **PKPdf 01 17 54.9 +0.1**
ANTO *e* 01 18 03.0
ANTO MLR MLR
comp=Z,1μm,20.0s
ANTO Ankara 153.99 297 *e*PKPdf **PKPdf 01 17 54.9 +0.1**
ANTO *e*PKPbc **PKiKP 01 18 03.0 +0.1**
ANTO LR LR
comp=Z,1μm,20.0s
ERMK Ermenek 154.23 290 *i* P **PKPdf 01 17 56.2 +0.8**
LEF Lefka 154.28 286 *e*P **PKPdf 01 17 54.2 -1.0**
DBIC Dimbokro 154.43 163 *e*PKPdf **PKPdf 01 17 53.5 -2.6**
DBIC PKP **PKPdf 01 17 56.9 +0.8**
DBIC PKPbc **PKiKP 01 18 05.6 +1.2**
DBIC PKPab **PKPab 01 18 19.7 +1.2**
DBIC Dimbokro 154.43 163 PKP **PKPdf 01 17 56.9 +0.8**
comp=Z,6.5nm,0.9s,baz=182,slow=3.5,SNR=4.5
DBIC PKPbc **PKiKP**
comp=Z,11nm,1.1s,baz=31,slow=3.8,SNR=3.0
DBIC PKPab **PKPab 01 18 19.7 +1.2**
comp=Z,4.1nm,0.5s,baz=136,slow=5.1,SNR=5.6
KIS Kishinev 154.46 315 *e*PKIKP **PKPdf 01 17 52.0 -3.1**
KIS *e* 01 18 08.0
KIS *e* 01 18 15.0
KIS *e* 01 25 20.0
KIS Kishinev 154.46 315 *e*PKP **PKPdf 01 17 52.0 -3.1**
LADK Ladik-KONYA 154.55 294 *e*P **PKPbc 01 18 00.9 -3.3**
MUD Monsted U'grnd 154.56 351 *i* PKIKP **PKPdf 01 17 58.6 +3.7**
MUD MLR MLR
comp=Z,2μm,19.0s
MUD Monsted U'grnd 154.56 351 *i* P **PKPdf 01 17 58.6 +3.7**
MUD
comp=Z,2μm,19.0s
KDHN Kadinhani 154.71 294 *i* P **PKPdf 01 17 53.3 -2.6**
BSD Bornholm Skovb 154.73 343 *i* PKIKP **PKPdf 01 17 55.3 +0.1**
BSD MLR MLR
comp=Z,1μm,18.0s
BSD Bornholm Skovb 154.73 343 *i* P **PKPdf 01 17 55.3 +0.1**
BSD
comp=Z,1μm,17.0s
GAZI Gazipasa 154.73 289 *i* P **PKPdf 01 17 54.0 -1.9**

COP Copenhagen 154.76 347 *i* PKIKP **PKPdf 01 17 56.2 +1.0**
COP MLR MLR
comp=Z,970nm,19.0s
COP Copenhagen 154.76 347 *i* P **PKPdf 01 17 56.2 +1.0**
COP
comp=Z,970nm,18.0s
SVRH Sivrihisar-ESK 155.03 297 *e*P **PKPdf 01 17 52.2 -4.1**
MDUB Mudurnu 155.08 299 *e*P **PKPdf 01 17 54.6 -1.7**
LVV L'vov 155.52 325 *e*PKIKP **PKPdf 01 17 51.7 -4.8**
BEL Belsk 155.55 332 *e*PKPdf PKPdf 01 18 06.3 +10
BEL *e*PKPab **PKPab 01 18 18.7 -3.6**
BOLV Bolvadin 155.58 295 *i* P **PKPdf 01 17 54.4 -2.7**
GULT Gulveren 155.60 299 *e*P **PKPdf 01 17 55.8 -1.2**
GKP Gorka Klasztor 155.68 338 *e*PKP **PKPdf 01 17 56.4 -0.1**
CFR Carcaliu 155.71 312 ⇑PKP2 **PKPab 01 18 21.9 -1.3**
CFR Carcaliu 155.71 312 ⇑*i* P **PKPab 01 18 21.9 -1.3**
ESK Eskdalemuir 155.82 8 PFAKE **01 18 10.0 +13**
ESK LR LR
comp=Z,3μm,19.0s
TESR Tescani 156.00 316 ⇓*i* P **PKPab 01 18 25.0 +0.5**
PETR Petresti 156.03 314 ⇓*i* P **PKPab 01 18 25.3 +0.7**
ISP Isparta 156.04 293 ⇓PKIKP PKPab 01 18 14.6 -11
ISP Isparta 156.04 293 PFAKE **01 18 10.0 +12**
ISP LR LR
comp=Z,2μm,20.0s
ISP Isparta 156.04 293 ⇓*i* P PKPab 01 18 14.6 -11
HARR Harsova 156.04 311 ⇓PKIKP PKPab 01 18 13.8 -11
HARR Harsova 156.04 311 ⇓*i* P PKPab 01 18 13.8 -11
BUR08 Bucovina Ar. S 156.23 319 *e*PKPab **PKPab 01 18 26.0 +0.5**
CMLA Cha da Macela 156.24 67 PFAKE **01 18 10.0 +12**
CMLA LR LR
comp=Z,3μm,20.0s
VRI Vrincioaia 156.27 314 ⇓PKP2 **PKPab 01 18 24.6 -1.1**
VRI Vrincioaia 156.27 314 ⇓*i* P **PKPab 01 18 24.5 -1.1**
KWP Kalwaria Pacla 156.28 326 ⇑PKP2 **PKPab 01 18 23.1 -2.5**
KWP Kalwaria Pacla 156.28 326 PFAKE **01 18 10.0 +12**
KWP LR LR
comp=Z,2μm,19.0s
KWP Kalwaria Pacla 156.28 326 ⇑*i* P **PKPab 01 18 23.1 -2.5**
KWP Kalwaria Pacla 156.28 326 *e*PKP PKPab 01 18 19.3 -6.3
PGOR Pogoanele 156.56 312 ⇓*i* P **PKPab 01 18 28.3 +1.4**
KHAL Karahalli 156.77 295 *i* P **PKPdf 01 17 56.8 -1.8**
AKAS Kas 156.92 289 *e*P PKPdf 01 17 53.5 -5.4
MLR Muntele Rosu 156.94 314 PKP **PKPdf 01 17 59.0 +0.3**
MLR PKPab **PKPab 01 18 28.5 -0.2**
MLR Muntele Rosu 156.94 314 ⇓*i* P PKPab 01 18 21.0 -7.7
MLR Muntele Rosu 156.94 314 PKP **PKPdf 01 17 59.0 +0.3**
comp=Z,0.7nm,1.0s,baz=73,slow=5.8,SNR=3.1
MLR PKPab **PKPab 01 18 28.5 -0.2**
comp=Z,3.0nm,1.0s,baz=352,slow=5.7,SNR=7.1
KOLS Kolonicke sedl 156.97 325 *e*PKIKP **PKPdf 01 17 58.1 -0.3**
KOLS *e* 01 22 05.4
KOLS Kolonicke sedl 156.97 325 *e*PKP **PKPdf 01 17 58.1 -0.3**
KOLS *e* 01 18 28.6
KOLS *e*PP **PP 01 22 05.4 -1.5**
SECR 157.08 313 ⇑*i* P **PKPab 01 18 30.2 +1.0**
BMR Baia Mare 157.14 321 ⇓PKP2 **PKPab 01 18 28.0 -1.3**
BMR Baia Mare 157.14 321 ⇓*i* P **PKPab 01 18 28.0 -1.3**
UZH Uzhgorod 157.16 324 *i* PKIKP **PKPdf 01 18 00.9 +2.3**
UZH *e* 01 22 04.3
UZH *e*PPP PPP 01 25 46.7
OJC Ojcow 157.18 330 *e*PKPdf **PKPdf 01 17 57.4 -1.2**
OJC *ep*PKPdf pPKPdf 01 18 09.2 +7.6
OJC *e*PKPab **PKPab 01 18 27.5 -1.9**
OJC *e*PP **PP 01 22 08.3 +0.4**
OJC *e*SS SS 01 42 05.4 +3.0
OJC L L 02 37 29.6
comp=Z,2μm,19.9s
DNZL Cakiroluk 157.21 293 *i* P **PKPdf 01 17 58.2 -1.1**
DEMI Demirci 157.25 297 *i* P **PKPdf 01 17 57.1 -2.1**
DURS Dursunbey 157.31 298 *i* P **PKPdf 01 17 57.2 -2.1**
TRPA Tarpa 157.36 323 ⇑*i* P PKPab 01 18 20.6 -10
TRPA Tarpa 157.36 323 ⇓*e*PKPdf **PKPdf 01 17 56.1 -2.8**
CRVS Cervenica-Dubn 157.38 326 *e*PKIKP **PKPdf 01 17 56.9 -2.1**
CRVS *e* 01 22 07.4
CRVS Cervenica-Dubn 157.38 326 *e*PKP **PKPdf 01 17 56.9 -2.1**
CRVS *e* 01 18 30.9
CRVS *e*PP **PP 01 22 07.4 -1.8**
RUE Ruedersdorf 157.40 342 *e*PKPdf **PKPdf 01 17 57.9 -0.9**
VOIR 157.51 315 ⇑*i* P PKPab 01 18 16.5 -15
NIE Niedzica 157.55 328 *e*PKIKP **PKPdf 01 17 58.6 -0.6**
NIE *e* 01 18 10.2
NIE *e*SS SS 01 42 08.3 +1.8
NIE Niedzica 157.55 328 *e*PKPdf **PKPdf 01 17 58.6 -0.6**
NIE *ep*PKPdf pPKPdf 01 18 10.2 +8.1
NIE *e*SS SS 01 42 08.3 +1.8
BALY Balya 157.92 299 *i* P **PKPdf 01 17 57.1 -2.9**
SZH Strazhica 157.95 309 *e*P **PKPdf 01 17 58.0 -1.8**
AKHS Akhisar 157.97 297 *e*P **PKPdf 01 17 56.6 -3.4**
KSP Ksiaz 158.04 336 *e*PKIKP **PKPdf 01 17 59.7 0.0**
KSP *e* 01 18 32.1
KSP *e*SS SS 01 42 08.0 -3.3
KSP Ksiaz 158.04 336 *e*PKP **PKPdf 01 17 58.9 -0.8**
KSP *e*PKPab **PKPab 01 18 35.5 +2.4**
DRGR 158.10 320 ⇑*i* P PKPdf 01 18 15.5 +15
AYDN Tasoluk 158.13 293 *i* P **PKPdf 01 17 58.3 -2.1**
OKC Ostrava-Krasne 158.16 332 *e*PKIKP **PKPdf 01 17 59.5 -0.4**
OKC *e* 01 35 34.5
OKC MLR MLR
comp=Z,1μm,18.0s
OKC Ostrava-Krasne 158.16 332 *e*PKPDF **PKPdf 01 17 59.5 -0.4**
OKC *e*PKPAB **PKPab 01 18 35.9 +2.3**
OKC *ex* x 01 18 46.8
OKC *e*SKKS 01 29 03.1
OKC *ex* x 01 35 34.5
OKC *e*SS **SS 01 42 17.1 +4.4**
OKC AMS AMS 02 37 40.0
comp=Z,1μm,18.0s
NRDL Niedersach Rie 158.23 347 *e*PKPdf **PKPdf 01 17 58.9 -0.8**
NRDL *e*PP **PP 01 22 10.4 -2.8**
NRDL *e*SKKSac SKKSac 01 29 03.7 +1.1
NRDL *e*SS SS 01 42 04.7 -7.9
LOT Lotru 158.27 316 ⇓*i* P **PKPab 01 18 34.7 +0.3**
UPC Upice 158.42 336 *e*PKIKP **PKPdf 01 18 03.5 +3.3**
UPC Upice 158.42 336 *e*PKPDF **PKPdf 01 18 03.5 +3.3**
UPC *e*PKPAB **PKPab 01 18 36.4 +1.7**
UPC *ex* x 01 18 46.0
MORC Moravsky Berou 158.45 332 *e*PKIKP **PKPdf 01 17 59.8 -0.5**
MORC Moravsky Berou 158.45 332 *e*PKPdf **PKPdf 01 17 59.8 -0.5**
GCAM G?zelcaml? 158.63 294 *i* P **PKPdf 01 17 58.7 -2.1**
CLL Collm 158.66 341 *e*PKPdf **PKPdf 01 17 58.9 -1.5**
CLL *e*PKPab **PKPab 01 18 34.1 -1.6**
CLL *e*PP **PP 01 22 17.9 +2.2**
CLL *e*SKKSac SKKSac 01 29 05.5 +0.3
CLL *e*SS SS 01 42 09.0 -8.6
CLL Collm 158.66 341 *e*PKIKP **PKPdf 01 18 03.0 +2.6**
CLL *i* 01 18 35.7
CLL pmax pmax
comp=Z,46nm,1.4s
CLL MLR MLR
comp=Z,2μm,19.2s
CLL Collm 158.66 341 *e*PKPdf **PKPdf 01 18 03.0 +2.6**
CLL *i* PKPab **PKPab 01 18 35.7 0.0**
comp=Z,46nm,1.4s
CLL *i* 01 18 48.8
comp=Z,116nm,1.6s
CLL *i* 01 18 58.9
CLL *e*PP **PP 01 22 13.0 -2.7**
CLL *e*SKKSac SKKSac 01 29 02.0 -3.2
CLL *e* 01 29 51.0
CLL *e*PSKS 01 32 41.0
CLL *e* 01 33 37.0
CLL *e*PPS PPS 01 35 33.0
CLL *e* 01 37 30.0
CLL *e*SS **SS 01 42 14.0 -3.6**
CLL *e* 01 43 32.0
CLL LmH 02 36 00.0
comp=N,1μm,18.8s
CLL LmH 02 36 00.0
comp=E,700nm,20.6s
CLL LmV 02 44 00.0
comp=Z,2μm,19.2s
BRG Berggiesshubel 158.78 339 *e*PKP **PKPdf 01 18 00.7 +0.2**
comp=Z,9.2nm,1.7s
BRG *e* 01 18 13.0
comp=Z,11nm,1.4s
BRG *i* 01 18 35.4
comp=Z,44nm,1.4s
BRG *i* 01 18 49.6
comp=Z,84nm,1.3s
BRG *e* 01 25 11.1
comp=Z,4.9nm,1.2s

BRG *i* 01 29 06.0
BRG SS SS 01 42 04.0 -15
BRG
comp=N,2µm,18.7s
BRG
comp=E,899nm,18.6s
BRG
comp=Z,2µm,19.2s
BRG Berggiesshubel 158.78 339 *e*PKPdf **PKPdf 01 17 59.6 -1.0**
BRG *e*PKPab **PKPab 01 18 35.0 -1.2**
BRG *e*PP **PP 01 22 18.5 +2.1**
BRG *e*SKKSac SKKSac 01 29 07.4 +1.6
BRG *e*SS SS 01 42 09.0 -10
BRG Berggiesshubel 158.78 339 *e*PKIKP **PKPdf 01 18 00.7 +0.2**
BRG *e* 01 18 13.0
BRG *i* 01 18 35.4
BRG pmax pmax
comp=Z,9.0nm,1.7s
BRG MLR MLR
comp=N,2µm,18.7s
BRG MLR MLR
comp=E,899nm,18.6s
BRG MLR MLR
comp=Z,2µm,19.2s
IBBN Ibbenburen 158.79 351 *e*PKPdf **PKPdf 01 17 58.8 -1.7**
IBBN *e*PKPab **PKPab 01 18 34.9 -1.3**
IBBN *e*PP **PP 01 22 18.6 +2.3**
IBBN *e*SKKSac SKKSac 01 29 06.5 +0.8
IBBN *e*SS **SS 01 42 13.2 -5.5**
PSZ Piszkesteto 158.81 326 *e*PKIKP **PKPdf 01 18 00.7 -0.1**
PSZ *e* 01 18 36.5
PSZ MLR MLR
comp=Z,2µm,20.0s
PSZ Piszkesteto 158.81 326 *e*PKPdf **PKPdf 01 18 00.7 -0.1**
PSZ *e*PKPab **PKPab 01 18 36.5 -0.2**
PSZ LR LR
comp=Z,2µm,20.0s
PSZ Piszkesteto 158.81 326‖ *i*P **PKPab 01 18 37.1 +0.5**
PSZ Piszkesteto 158.81 326‖ *e*PKPdf **PKPdf 01 18 01.0 +0.2**
PVCC Panska Ves 158.89 338 *e*PKP2 **PKPab 01 18 37.1 +0.4**
PVCC *e* 01 35 37.9
PVCC MLR MLR
comp=Z,3µm,19.0s
PVCC Panska Ves 158.89 338 *e*PKPAB **PKPab 01 18 37.1 +0.4**
PVCC *ex* x 01 18 50.7
PVCC *ex* x 01 35 37.9
PVCC AMS AMS 02 37 50.0
comp=Z,3µm,19.0s
VYHS Vyhne 158.89 328 *e*PKIKP **PKPdf 01 18 01.3 +0.5**
VYHS *e* 01 18 35.7
VYHS *e* 01 22 18.7
VYHS Vyhne 158.89 328 *e*PKP **PKPdf 01 18 01.3 +0.5**
VYHS *e* 01 18 35.7
VYHS *e*PP **PP 01 22 18.7 +1.3**
PRK Paraskevi 159.05 298 *e*P PKPab 01 18 25.4 -13
VRAC Vranov 159.19 333 PKP **PKPdf 01 18 00.9 -0.2**
VRAC PKPab **PKPab 01 18 37.8 -0.4**
VRAC Vranov 159.19 333⇑ *i*P **PKPab 01 18 38.5 +0.4**
VRAC Vranov 159.19 333 PKP **PKPdf 01 18 00.9 -0.2**
comp=Z,1.0nm,0.2s,baz=71,slow=9.5,SNR=2.6
VRAC PKPab **PKPab 01 18 37.8 -0.4**
comp=Z,10nm,1.1s,baz=17,slow=7.9,SNR=9.7
WTSB Winterswijk 159.25 352 *e*PKP **PKPab 01 18 38.0 -0.1**
comp=Z,29nm,1.2s
PRA Prague 159.33 338 PKPDF **PKPdf 01 18 02.0 +0.8**
PRA PKPAB **PKPab 01 18 40.0 +1.4**
PRA *ex* x 01 18 53.0
PRA AMS AMS 02 40 00.0
MPEP Malo Peshtene 159.35 311 *e*P **PKPdf 01 18 01.9 +0.4**
PRU Pruhonice 159.36 337 *e*PKIKP **PKPdf 01 18 00.9 -0.4**
PRU *e* 01 35 42.1
PRU *e* 01 42 17.0
PRU MLR MLR
comp=Z,2µm,18.2s
PRU Pruhonice 159.36 337 *e*PKPDF **PKPdf 01 18 00.9 -0.4**
PRU *e*PKPAB **PKPab 01 18 39.9 +1.1**
PRU *ex* x 01 18 53.0
PRU *e*SKKS 01 29 08.3
PRU *ex* x 01 35 42.1
PRU *ex* x 01 42 17.0
PRU AMS AMS 02 40 10.0
comp=Z,2µm,18.2s
RZN Rozhen 159.41 306 *e*P **PKPab 01 18 37.8 -1.8**
SMOL Smolenice 159.49 330 *e*PKP2 **PKPab 01 18 40.3 +0.9**
SMOL Smolenice 159.49 330 *e*PKP **PKPab 01 18 40.3 +0.9**
TANN Tannenbergstha 159.62 341 *e*PKPdf **PKPdf 01 17 59.9 -1.8**
TANN *e*PKPab **PKPab 01 18 38.7 -1.3**
TANN *e*PP **PP 01 22 17.8 -3.2**
TANN *e*SS SS 01 42 23.7 -4.2
TREC Trest 159.62 335 *e*PKP2 **PKPab 01 18 38.8 -1.2**
TREC *e* 01 35 44.3
TREC *e* 01 42 30.9
TREC MLR MLR
comp=Z,2µm,18.1s
TREC Trest 159.62 335 *e*PKPAB **PKPab 01 18 38.8 -1.2**
TREC *e*SKKS 01 29 13.5
TREC *ex* x 01 35 44.3
TREC *e*SS **SS 01 42 30.9 +2.8**
TREC AMS AMS 02 37 50.0
comp=Z,2µm,18.1s
MOX Moxa 159.63 343 *e*PKPdf **PKPdf 01 18 00.0 -1.6**
MOX *e*PKPab **PKPab 01 18 38.5 -1.5**
MOX *e*PP **PP 01 22 17.8 -3.2**
MOX *e*SKKSac SKKSac 01 29 11.8 +1.5
MOX *e*SS **SS 01 42 21.6 -6.2**
MOX *e*L L 02 52 39.2
comp=Z,2µm,18.5s
MOX Moxa 159.63 343 *e*PKIKP **PKPdf 01 18 00.0 -1.6**
MOX *e* 01 18 38.5
MOX *e* 01 22 17.8
MOX *e*SS SS 01 42 21.6 -6.2
BUG Bochum--Univer 159.70 351 *e*PKPdf **PKPdf 01 18 00.4 -1.2**
BUG *e*PKPab **PKPab 01 18 38.5 -1.7**
BUG *e*PP **PP 01 22 23.5 +2.3**
BUG *e*SKKSac SKKSac 01 29 12.6 +2.1
BUG *e*SS SS 01 42 21.6 -6.7
NKC Novy Kostel 159.78 341 *e*PKP2 **PKPab 01 18 40.1 -0.6**
NKC *e* 01 35 46.9
NKC MLR MLR
comp=Z,2µm,18.3s
NKC Novy Kostel 159.78 341 *e*PKPAB **PKPab 01 18 40.1 -0.6**
NKC *ex* x 01 18 54.4
NKC *e*SKKS 01 29 15.0
NKC *ex* x 01 35 46.9
NKC *e*SS SS 01 42 40.6 +11
NKC AMS AMS 02 40 00.0
comp=Z,2µm,18.3s
ZST Bratislava 159.87 330 *e*PKIKP **PKPdf 01 18 01.5 -0.4**
ZST *e* 01 18 40.3
ZST Bratislava 159.87 330 *e*PKP **PKPdf 01 18 01.5 -0.4**
ZST *e* 01 18 40.2
VTS Vitosha 160.04 310 *e*P **PKPab 01 18 42.7 +0.4**
NPS Neapolis 160.23 287 *e*P **PKPab 01 18 40.7 -2.5**
ROTZ Rotzenmuhle 160.27 341 *e*PKPdf **PKPdf 01 18 01.5 -0.8**
ROTZ *e*PKPab **PKPab 01 18 42.2 -0.6**
ROTZ *e*PP **PP 01 22 26.6 +2.1**
ROTZ *e*SKKSac SKKSac 01 29 16.8 +3.1
ROTZ *e*SS **SS 01 42 32.2 -2.5**
LAST Lasithi 160.35 287 *e*P **PKPab 01 18 44.3 +0.5**
KHC Kasperske Hory 160.42 338 *e*PKIKP **PKPdf 01 18 01.5 -1.1**
KHC *e* 01 18 42.5
KHC Kasperske Hory 160.42 338 *e*PKPdf **PKPdf 01 18 01.5 -1.1**
KHC *e*PKPab **PKPab 01 18 42.7 -0.8**
KHC Kasperske Hory 160.42 338 *e*PKPDF **PKPdf 01 18 01.5 -1.1**
KHC *e*PKPAB **PKPab 01 18 42.5 -1.0**
KHC *ex* x 01 18 57.0
KKB Krupnik 160.45 308 *e*P **PKPab 01 18 47.1 +3.2**
SOP Sopron 160.50 330‖ *e*PKPdf **PKPdf 01 18 02.4 -0.2**
HGN Heimansgroeve 160.53 353 *e*PKP **PKPab 01 18 43.4 -0.3**
comp=Z,49nm,1.6s
CONA Conrad Observa 160.59 332⇑ *i*PKPab **PKPab 01 18 43.7 -0.7**
comp=Z,55nm,1.5s
GRF Grafenberg Arr 160.60 342 *e*PKPdf **PKPdf 01 18 01.5 -1.2**
GRF *e*PKPab **PKPab 01 18 43.3 -0.9**
GRF *e*PP **PP 01 22 24.0 -2.3**
GRF *e*SKKSac SKKSac 01 29 18.2 +2.8
GRF *e*SS **SS 01 42 36.4 -1.7**
GRF *e*L L 02 35 12.6
comp=Z,3µm,19.5s
GRF Grafenberg Arr 160.60 342 *e*PKIKP **PKPdf 01 18 01.5 -1.2**
GRF *e* 01 18 43.3
GRF *e* 01 22 24.0
GRF *e*SS SS 01 42 36.4 -1.8
PKSM Moragy 160.62 324⇑‖ *e*PKIKP **PKPdf 01 18 02.9 +0.1**
PKSM Moragy 160.62 324⇑ *i*P **PKPdf 01 18 02.9 +0.1**
PKSM Moragy 160.62 324‖ *e*PKPdf **PKPdf 01 18 02.7 -0.1**
GEC2 GERESS Array S 160.63 337 *e*PKPdf **PKPdf 01 18 01.6 -1.3**
GEC2 *e*PKPab **PKPab 01 18 43.2 -1.3**
GEC2 *e*PP **PP 01 22 28.5 +1.9**
GEC2 *e*SKKSac SKKSac 01 29 17.8 +2.0
GEC2 GERESS Array S 160.63 337 *e*PKIKP **PKPdf 01 18 01.6 -1.3**
GEC2 *e* 01 18 43.2
GEC2 *e* 01 22 28.5
GERES GERESS Array B 160.63 337 PKP **PKPdf 01 18 02.7 -0.2**
GERES PKPab **PKPab 01 18 44.1 -0.4**
GERES GERESS Array B 160.63 337 PKP **PKPdf 01 18 02.7 -0.2**
comp=Z,0.3nm,0.8s,baz=108,slow=4.3,SNR=6.6
GERES PKPab **PKPab 01 18 44.1 -0.4**
comp=Z,1.6nm,0.7s,baz=8.5,slow=2.7,SNR=4.5
WET Wettzell 160.63 339 *e*PKPdf **PKPdf 01 18 01.3 -1.5**
WET *e*PKPab **PKPab 01 18 43.4 -1.0**
WET *e*PP **PP 01 22 28.5 +2.0**
WET *e*SKKSac SKKSac 01 29 17.8 +2.2
WET *e*SS **SS 01 42 36.4 -2.2**
WET Wettzell 160.63 339 *e*PKIKP **PKPdf 01 18 01.3 -1.5**
WET *e* 01 18 43.4
WET *e* 01 22 28.5
WET *e*SS SS 01 42 36.4 -2.2
MEM Membach 160.67 353 PKPab **PKPab 01 18 46.1 +1.7**
SOH Sokhos 160.69 305 *e*P **PKPab 01 18 43.4 -1.6**
TNS Taunus Mts 160.71 348 *e*PKPdf **PKPdf 01 18 02.0 -0.9**
TNS *e*PKPab **PKPab 01 18 43.2 -1.5**
TNS *e*PP **PP 01 22 23.5 -3.3**
TNS *e*SKKSac SKKSac 01 29 19.7 +3.7
TNS *e*SS **SS 01 42 34.3 -4.8**
TNS Taunus Mts 160.71 348 *e*PKIKP **PKPdf 01 18 02.0 -0.9**
TNS *e* 01 18 43.2
TNS *e* 01 22 23.5
TNS *e*SS SS 01 42 34.3 -4.8
PAIG Paliouri 160.77 302 *e*P **PKPab 01 18 43.3 -2.1**
PLG Polygyros 160.78 303 *e*P **PKPab 01 18 44.8 -0.7**
IDI Anoyia 160.82 288 *e*PKPdf **PKPdf 01 18 04.3 +0.8**
IDI Anoyia 160.82 288 *e*P **PKPab 01 18 45.2 -0.7**
SIVA Sivas 160.91 287 *e*P PKPab 01 18 36.4 -10
BCLA Clavier 160.93 354 PKPab **PKPab 01 18 46.2 +0.6**
VAY Valandovo 161.03 307 *e*PKP **PKPab 01 18 45.8 -0.7**
MOA Molln 161.28 334⇑ *i*PKPab **PKPab 01 18 47.5 +0.3**
comp=Z,34nm,1.4s
GIVF Givet 161.28 355 *e*PKIKP **PKPdf 01 18 03.8 +0.4**
GIVF Givet 161.28 355 *e*PKIKP **PKPdf 01 18 03.8 +0.4**
GIVF Givet 161.28 355 *e*PKPdf **PKPdf 01 18 03.8 +0.4**
GRG Griva 161.30 306 *e*P PKPab 01 18 37.6 -10
DOU Dourbes 161.30 356 PKPab **PKPab 01 18 47.8 +0.6**
BAIF Baives 161.36 356 *e*PKIKP **PKPdf 01 18 03.6 +0.1**
comp=Z,26nm,1.3s
BAIF Baives 161.36 356 *e*PKIKP **PKPdf 01 18 03.6 +0.1**
BAIF Baives 161.36 356 *e*PKPdf **PKPdf 01 18 03.6 +0.1**
VAM Vamos 161.37 288 *e*P **PKPab 01 18 46.2 -2.0**
SKO Skopje 161.50 310 *e*PKP **PKPab 01 18 48.6 +0.1**
WLF Walferdange 161.59 352 PKPab **PKPab 01 18 48.0 -0.4**
WLF Walferdange 161.59 352 *e*PKPdf **PKPdf 01 18 02.9 -0.8**
WLF *e*SS SS 01 42 42.7 -5.4
WLF Walferdange 161.59 352 PFAKE 01 18 10.0 +6.3
WLF LR LR
comp=Z,3µm,20.0s
TOA0 Torodi Ar. Sit 161.77 178 *e*PKPdf **PKPdf 01 18 04.1 -0.9**
TOA0 *ep*PKPdf pPKPdf 01 18 16.9 +9.0
TOA0 *e*PKPab **PKPab 01 18 49.6 -0.4**
TORD Torodi Ar. Bea 161.77 178 PKP **PKPdf 01 18 04.1 -0.9**
TORD PKPab **PKPab 01 18 50.2 +0.2**
TORD PP PP 01 22 41.9 +10
TORD Torodi Ar. Bea 161.77 178 PKP **PKPdf 01 18 04.1 -0.9**
comp=Z,16nm,1.4s,baz=64,slow=0.2,SNR=20
TORD PKPab **PKPab 01 18 50.2 +0.2**
comp=Z,16nm,1.1s,baz=159,slow=1.0,SNR=8.9
TORD PP PP 01 22 41.9 +10
comp=Z,1.8nm,1.0s,baz=174,slow=4.6,SNR=2.4
RJOB Jochberg 161.89 337 *e*PKPdf **PKPdf 01 18 02.9 -1.3**
RJOB *e*PKPab **PKPab 01 18 49.1 -0.9**
RJOB *e*PP **PP 01 22 35.2 +1.8**
RJOB *e*SKKSac SKKSac 01 29 23.0 +0.7
RJOB *e*SS **SS 01 42 49.1 -2.8**
GROS Grobnik 161.91 330 *e*PKPdf **PKPdf 01 18 04.0 -0.3**
GROS Grobnik 161.91 330 *e*P **PKPab 01 18 51.2 +1.1**
SOKA Soboth 161.93 331⇑ *i*PKPab **PKPab 01 18 50.0 -0.2**
comp=Z,35nm,1.3s
STU Stuttgart 161.94 345 *e*PKPdf **PKPdf 01 18 02.8 -1.3**
STU *e*PKPab **PKPab 01 18 48.5 -1.6**
STU *e*PP **PP 01 22 35.5 +2.1**
STU *e*SKKSac SKKSac 01 29 25.3 +3.0
STU *e*SS SS 01 42 44.8 -7.2
BFO Black Forest 162.54 347 *e*PKPdf **PKPdf 01 18 03.4 -1.4**
BFO *e*PKPab **PKPab 01 18 51.1 -1.7**
BFO *e*PP **PP 01 22 38.7 +2.1**
BFO *e*SKKSac SKKSac 01 29 28.6 +3.2
BFO *e*SS SS 01 42 51.2 -7.1
BFO Black Forest 162.54 347 *e*PKIKP **PKPdf 01 18 03.4 -1.4**
BFO *e* 01 18 51.1
BFO *e* 01 22 38.7
BFO *e*SS SS 01 42 51.2 -7.1
BFO Black Forest 162.54 347 PFAKE 01 18 20.0 +15
BFO LR LR
comp=Z,2µm,20.0s
FLN La Foliniere 162.57 6 *e*PKIKP **PKPdf 01 18 05.3 +0.5**
comp=Z,87nm,1.7s
FLN *e*R
comp=Z,4µm,21.2s
FLN La Foliniere 162.57 6 *e*PKIKP **PKPdf 01 18 05.3 +0.5**
FLN La Foliniere 162.57 6 *e*PKPdf **PKPdf 01 18 05.3 +0.5**
ROSF Rostrenen 162.60 13 *e*PKIKP **PKPdf 01 18 04.6 -0.2**
comp=Z,50nm,1.4s
ROSF Rostrenen 162.60 13 *e*PKIKP **PKPdf 01 18 04.6 -0.2**
ROSF Rostrenen 162.60 13 *e*PKPdf **PKPdf 01 18 04.6 -0.2**
LJU Ljubljana 162.65 331 *e*PKPdf **PKPdf 01 18 05.0 0.0**
CDF Champ du Feu 162.66 349 *e*PKIKP **PKPdf 01 18 04.7 -0.3**
comp=Z,24nm,1.6s
CDF Champ du Feu 162.66 349 *e*PKIKP **PKPdf 01 18 04.7 -0.3**
CDF Champ du Feu 162.66 349 *e*PKPdf **PKPdf 01 18 04.7 -0.3**
VISS Visnje 162.71 329 *e*PKPdf **PKPdf 01 18 03.5 -1.5**
VISS Visnje 162.71 329 *e*P **PKPab 01 18 53.9 +0.3**
PAGF Fort de Pagny 162.73 352 *e*PKIKP **PKPdf 01 18 05.4 +0.5**
comp=Z,12nm,1.3s
PAGF Fort de Pagny 162.73 352 *e*PKPdf **PKPdf 01 18 05.4 +0.5**
RETA Reutte 162.75 341⇑ *i*PKPab **PKPab 01 18 54.1 +0.4**
comp=Z,77nm,1.2s
BOJS Bojanci 162.76 328 *e*PKPdf **PKPdf 01 18 03.4 -1.7**
BOJS Bojanci 162.76 328 *e*P **PKPab 01 18 54.4 +0.6**
LDF La Druitiere 162.77 6 *e*PKIKP **PKPdf 01 18 05.6 +0.6**
comp=Z,78nm,1.8s
LDF La Druitiere 162.77 6 *e*PKIKP **PKPdf 01 18 05.6 +0.6**
LDF La Druitiere 162.77 6 *e*PKPdf **PKPdf 01 18 05.6 +0.6**
MOTA Moosalm 162.77 340⇑ *i*PKPab **PKPab 01 18 53.9 -0.1**
comp=Z,75nm,1.2s
SGMF Saint Gilles 162.80 11 *e*PKIKP **PKPdf 01 18 05.4 +0.4**
comp=Z,75nm,1.6s
SGMF Saint Gilles 162.80 11 *e*PKIKP **PKPdf 01 18 05.4 +0.4**
SGMF Saint Gilles 162.80 11 *e*PKPdf **PKPdf 01 18 05.4 +0.4**
TIR Tirane 162.83 310 PFAKE 01 18 20.0 +15
TIR LR LR
comp=Z,2µm,20.0s
ABTA Abfaltersbach 162.84 336⇑ *i*PKPab **PKPab 01 18 53.5 -0.7**
comp=Z,42nm,1.2s
MEZF Maizieres J'vi 162.85 354 *e*PKIKP **PKPdf 01 18 05.7 +0.7**
comp=Z,76nm,1.5s
MEZF Maizieres J'vi 162.85 354 *e*PKPdf **PKPdf 01 18 05.7 +0.7**
ECH Echery 162.87 349 PFAKE 01 18 20.0 +15
ECH LR LR
comp=Z,3µm,19.0s
ITM Ithomi 162.88 295 *e*P PKPab 01 18 42.3 -12
JAN Janina 162.90 304 *e*P PKPab 01 18 42.2 -13
GRR Gorron 162.91 7 *e*PKIKP **PKPdf 01 18 05.8 +0.7**
comp=Z,129nm,1.9s
GRR Gorron 162.91 7 *e*PKIKP **PKPdf 01 18 05.8 +0.7**
GRR Gorron 162.91 7 *e*PKPdf **PKPdf 01 18 05.8 +0.7**
VOY Vojsko 162.92 332 *e*PKPdf **PKPdf 01 18 04.8 -0.5**
VOY Vojsko 162.92 332 *e*P **PKPab 01 18 54.2 -0.4**
VOY *e* 01 19 04.3
JAVS Javornik 162.96 331 *e*PKPdf **PKPdf 01 18 03.1 -2.3**
JAVS Javornik 162.96 331 *e*P **PKPab 01 18 54.0 -0.8**
RLS Riolos of Patr 163.00 298 *e*P **PKPab 01 18 51.3 -3.9**
SFTF Sexfontaines 163.15 354 *e*PKIKP **PKPdf 01 18 05.9 +0.5**
comp=Z,88nm,1.4s
SFTF Sexfontaines 163.15 354 *e*PKPdf **PKPdf 01 18 05.9 +0.5**
FETA Feichten 163.18 340⇑ *i*PKPab **PKPab 01 18 55.9 +0.2**
comp=Z,58nm,1.2s
HAU Haudompre 163.19 351 *e*PKIKP **PKPdf 01 18 05.6 +0.2**
comp=Z,34nm,1.4s
HAU *e*R
comp=Z,5µm,19.5s
HAU Haudompre 163.19 351 *e*PKIKP **PKPdf 01 18 05.6 +0.2**
HAU Haudompre 163.19 351 *e*PKPdf **PKPdf 01 18 05.6 +0.2**
HINF Hinteralfeld 163.30 349 *e*PKIKP **PKPdf 01 18 05.6 0.0**
HINF Hinteralfeld 163.30 349 *e*PKIKP **PKPdf 01 18 05.6 0.0**
HINF Hinteralfeld 163.30 349 *e*PKPdf **PKPdf 01 18 05.6 0.0**
DAVOX Davos/Dischmat 163.64 341 PKP **PKPdf 01 18 05.6 -0.5**
DAVOX PKPab **PKPab 01 18 57.5 -0.3**
DAVOX Davos/Dischmat 163.64 341 PKP **PKPdf 01 18 05.6 -0.5**
comp=Z,0.7nm,0.4s,baz=5.5,slow=24,SNR=3.5
DAVOX PKPab **PKPab 01 18 57.5 -0.3**
comp=Z,14nm,1.0s,baz=353,slow=7.0,SNR=9.7
TUE Stuetta 164.06 342 PFAKE 01 18 20.0 +13
TUE LR LR
comp=Z,4µm,20.0s
LOR Lormes 164.16 356 *e*PKIKP **PKPdf 01 18 06.8 +0.4**
comp=Z,53nm,1.4s
LOR *e*R
comp=Z,4µm,21.2s
LOR Lormes 164.16 356 *e*PKPdf **PKPdf 01 18 06.8 +0.4**
HYF Humbligny 164.20 359 *e*PKIKP **PKPdf 01 18 07.1 +0.7**
HYF Humbligny 164.20 359 *e*PKPdf **PKPdf 01 18 07.1 +0.7**
SSF Saint Saulge 164.39 357 *e*PKIKP **PKPdf 01 18 07.0 +0.5**
comp=Z,40nm,1.3s
SSF Saint Saulge 164.39 357 *e*PKIKP **PKPdf 01 18 07.0 +0.5**
SSF Saint Saulge 164.39 357 *e*PKPdf **PKPdf 01 18 07.0 +0.5**
CABF La Chapelle 164.59 350 *e*PKIKP **PKPdf 01 18 07.4 +0.5**
comp=Z,39nm,1.4s
CABF La Chapelle 164.59 350 *e*PKIKP **PKPdf 01 18 07.4 +0.5**
CABF La Chapelle 164.59 350 *e*PKPdf **PKPdf 01 18 07.4 +0.5**
AVF Avril sur Loir 164.66 357 *e*PKIKP **PKPdf 01 18 06.7 -0.1**
comp=Z,38nm,1.5s
AVF Avril sur Loir 164.66 357 *e*PKIKP **PKPdf 01 18 06.7 -0.1**
AVF Avril sur Loir 164.66 357 *e*PKPdf **PKPdf 01 18 06.7 -0.1**
MFF Saint Martin d 164.75 7 *e*PKIKP **PKPdf 01 18 07.4 +0.5**
comp=Z,57nm,1.5s
MFF Saint Martin d 164.75 7 *e*PKIKP **PKPdf 01 18 07.4 +0.5**
MFF Saint Martin d 164.75 7 *e*PKPdf **PKPdf 01 18 07.4 +0.5**
SMF Signal de Mont 164.79 356 *e*PKIKP **PKPdf 01 18 06.9 0.0**
comp=Z,35nm,1.4s
SMF Signal de Mont 164.79 356 *e*PKIKP **PKPdf 01 18 06.9 0.0**
SMF Signal de Mont 164.79 356 *e*PKPdf **PKPdf 01 18 06.9 0.0**
BGF Bois d'Agland 164.91 359 *e*PKIKP **PKPdf 01 18 07.6 +0.6**
comp=Z,50nm,1.3s
BGF Bois d'Agland 164.91 359 *e*PKIKP **PKPdf 01 18 07.6 +0.6**
BGF Bois d'Agland 164.91 359 *e*PKPdf **PKPdf 01 18 07.6 +0.6**
TCF Toulx Ste Croi 165.19 0 *e*PKIKP **PKPdf 01 18 07.7 +0.4**
comp=Z,37nm,1.5s
TCF Toulx Ste Croi 165.19 0 *e*PKIKP **PKPdf 01 18 07.7 +0.4**
TCF Toulx Ste Croi 165.19 0 *e*PKPdf **PKPdf 01 18 07.7 +0.4**
LPL La Plagne 165.55 348 *e*PKIKP **PKPdf 01 18 08.4 +0.5**
LPL La Plagne 165.55 348 *e*PKIKP **PKPdf 01 18 08.4 +0.5**
LPL La Plagne 165.55 348 *e*PKPdf **PKPdf 01 18 08.4 +0.5**
LPG La Plagne 165.57 348 *e*PKIKP **PKPdf 01 18 08.4 +0.4**
comp=Z,50nm,1.7s
LPG La Plagne 165.57 348 *e*PKIKP **PKPdf 01 18 08.4 +0.4**
LPG La Plagne 165.57 348 *e*PKPdf **PKPdf 01 18 08.4 +0.4**
VLC Villacollemand 165.83 336 PFAKE 01 18 20.0 +12
VLC LR LR
comp=Z,3µm,20.0s
TIP Timpagrande 165.96 307 *e*PKPdf **PKPdf 01 18 08.7 +0.4**
TIP *e*PKPab **PKPab 01 19 07.9 -0.3**
TIP LR LR
comp=Z,4µm,19.0s
AQU L'Aquila 166.01 324 PFAKE 01 18 20.0 +12
AQU LR LR
comp=Z,5µm,20.0s
SSB Saint Sauveur 166.09 354 PFAKE 01 18 20.0 +12
SSB LR LR
comp=Z,2µm,20.0s
RJF Les Rejaudoux 166.15 3 *e*PKIKP **PKPdf 01 18 08.8 +0.7**
comp=Z,45nm,1.4s
RJF *e*R
comp=Z,4µm,18.8s
RJF Les Rejaudoux 166.15 3 *e*PKIKP **PKPdf 01 18 08.8 +0.7**
RJF Les Rejaudoux 166.15 3 *e*PKPdf **PKPdf 01 18 08.8 +0.7**
CUC Castrocucco 166.16 312 PFAKE 01 18 20.0 +12
CUC LR LR
comp=Z,2µm,19.0s
ORIF Oris-en-Rattie 166.28 349 *e*PKIKP **PKPdf 01 18 08.7 +0.4**
comp=Z,44nm,1.6s
ORIF *e*R
comp=Z,5µm,18.8s
ORIF Oris-en-Rattie 166.28 349 *e*PKIKP **PKPdf 01 18 08.7 +0.4**
ORIF Oris-en-Rattie 166.28 349 *e*PKPdf **PKPdf 01 18 08.7 +0.4**
MBDF Montbardon 166.31 347 *e*PKIKP **PKPdf 01 18 08.5 +0.1**
MBDF Montbardon 166.31 347 *e*PKIKP **PKPdf 01 18 08.5 +0.1**
MBDF Montbardon 166.31 347 *e*PKPdf **PKPdf 01 18 08.5 +0.1**
LFF La Frestale 166.47 5 *e*PKIKP **PKPdf 01 18 09.2 +0.9**
comp=Z,52nm,1.5s
LFF La Frestale 166.47 5 *e*PKIKP **PKPdf 01 18 09.2 +0.9**
LFF La Frestale 166.47 5 *e*PKPdf **PKPdf 01 18 09.2 +0.9**
PGAV Gavieira, Arco 166.49 36 *e*PKPdf **PKPdf 01 18 10.3 +1.7**
PGAV Gavieira, Arco 166.49 36 *i*PKPab **PKPab 01 19 12.4 +1.9**
PGAV *e*SS SS 01 43 46.2 +6.3
VIVF Saint-Julien-l 166.50 353 *e*PKIKP **PKPdf 01 18 09.2 +0.8**
comp=Z,52nm,1.7s
VIVF Saint-Julien-l 166.50 353 *e*PKIKP **PKPdf 01 18 09.2 +0.8**
VIVF Saint-Julien-l 166.50 353 *e*PKPdf **PKPdf 01 18 09.2 +0.8**
CAF Calviac 166.54 1 *e*PKIKP **PKPdf 01 18 09.2 +0.7**
comp=Z,16nm,1.2s
CAF Calviac 166.54 1 *e*PKIKP **PKPdf 01 18 09.2 +0.7**
CAF Calviac 166.54 1 *e*PKPdf **PKPdf 01 18 09.2 +0.7**
PCAB Cabril 166.80 36 *e*PKPdf **PKPdf 01 18 11.8 +3.1**
PCAB Cabril 166.80 36 *i*PKPab **PKPab 01 19 13.2 +1.5**
SBF Sospel 166.98 344 *e*PKIKP **PKPdf 01 18 08.6 -0.3**
SBF Sospel 166.98 344 *e*PKIKP **PKPdf 01 18 08.6 -0.3**
SBF Sospel 166.98 344 *e*PKPdf **PKPdf 01 18 08.6 -0.3**
CEL Celeste 166.99 305 PFAKE 01 18 20.0 +11
CEL LR LR
comp=Z,2µm,19.0s
POLO Lamas de Olo 167.16 37 *e*PKPdf **PKPdf 01 18 09.9 +0.8**
SMRF Simiane la Rot 167.25 349 *e*PKIKP **PKPdf 01 18 09.7 +0.7**
comp=Z,58nm,1.5s
SMRF Simiane la Rot 167.25 349 *e*PKPdf **PKPdf 01 18 09.7 +0.7**
LASF Ste Croix 167.34 355 *e*PKIKP **PKPdf 01 18 10.0 +0.9**
comp=Z,39nm,1.5s
LASF Ste Croix 167.34 355 *e*PKPdf **PKPdf 01 18 10.0 +0.9**
PBRG Braganca 167.35 33 *e*PKPdf **PKPdf 01 18 10.8 +1.6**
PBRG Braganca 167.35 33 *e*PKPab **PKPab 01 19 16.7 +2.5**
FRF La Foret Royal 167.45 346 *e*PKIKP **PKPdf 01 18 09.4 +0.3**
comp=Z,72nm,1.7s
FRF La Foret Royal 167.45 346 *e*PKIKP **PKPdf 01 18 09.4 +0.3**
FRF La Foret Royal 167.45 346 *e*PKPdf **PKPdf 01 18 09.4 +0.3**
MVO Moncorvo 167.70 35 *e*PKPdf **PKPdf 01 18 12.2 +2.7**
MVO Moncorvo 167.70 35 *e*PKPab **PKPab 01 19 16.6 +0.8**
MVO *e*SS SS 01 43 58.1 +6.0
PGF Pioggiola 167.73 336 *e*PKIKP **PKPdf 01 18 09.3 -0.2**
comp=Z,60nm,1.5s
PGF Pioggiola 167.73 336 *e*PKIKP **PKPdf 01 18 09.3 -0.2**
PGF Pioggiola 167.73 336 *e*PKPdf **PKPdf 01 18 09.3 -0.2**
MTE Manteigas 168.00 39 *e*PKPdf **PKPdf 01 18 09.2 -0.5**
MTE Manteigas 168.00 39 *i*PKPab **PKPab 01 19 18.4 +1.3**
MTE *e*SS SS 01 44 01.3 +6.0
MTE Manteigas 168.00 39 PFAKE 01 18 20.0 +10
MTE LR LR
comp=Z,3µm,20.0s
SJPF Ste Jean 168.01 13 *e*PKIKP **PKPdf 01 18 11.1 +1.5**
comp=Z,42nm,1.4s
SJPF Ste Jean 168.01 13 *e*PKIKP **PKPdf 01 18 11.1 +1.5**
SJPF Ste Jean 168.01 13 *e*PKPdf **PKPdf 01 18 11.1 +1.5**
LIS Lisbon 168.11 49 *e*P **PKPdf 01 18 09.5 -0.2**
LIS *e*PP **PP 01 23 07.6 +1.1**
LIS *e*SS SS 01 43 58.4 +1.6
LIS AMS AMS 02 32 33.3
comp=Z,3µm,20.4s
LIS Lisbon 168.11 49 *e*P **PKPdf 01 18 09.5 -0.2**
LIS Lisbon 168.11 49 *e*PP PP 01 23 07.6 +1.1
LIS *e*SS SS 01 43 58.4 +1.6
LIS A A 02 32 33.3
comp=Z,3µm,20.4s
LIS Lisbon 168.11 49 *e*PKIKP **PKPdf 01 18 09.5 -0.2**
LIS *e* 01 23 07.6
MTLF Montolieu 168.13 1 *e*PKIKP **PKPdf 01 18 10.2 +0.6**
comp=Z,34nm,1.6s
MTLF Montolieu 168.13 1 *e*PKIKP **PKPdf 01 18 10.2 +0.6**
MTLF Montolieu 168.13 1 *e*PKPdf **PKPdf 01 18 10.2 +0.6**
EPF Esparros 168.33 7 *e*PKIKP **PKPdf 01 18 11.0 +1.2**
comp=Z,72nm,1.6s

EPF	**Esparros**	**168.33**	**7**	*e*PKIKP	**PKPdf**	**01 18 11.0**	**+1.2**
EPF	**Esparros**	**168.33**	**7**	*e*PKPdf	**PKPdf**	**01 18 11.0**	**+1.2**
PMTG	**Montargil**	**168.48**	**46**	*e*PKPdf	**PKPdf**	**01 18 11.7**	**+1.7**
PMRV	**Marv??o**	**168.75**	**42**	*e*PKPdf	**PKPdf**	**01 18 12.7**	**+2.5**
PMRV				*e*SS	SS	01 44 06.4	+3.5
EVOP	**Sao Brissos**	**168.87**	**48**	*e*PKIKP	**PKPdf**	**01 18 10.1**	**-0.1**
EVOP	**Sao Brissos**	**168.87**	**48**	*e*PKPdf	**PKPdf**	**01 18 10.1**	**-0.1**
EVO	**Evora**	**168.94**	**47**	*e*PKIKP	**PKPdf**	**01 18 10.1**	**-0.2**
	comp=Z,97nm,1.6s						
EVO				*e*R			
	comp=Z,4μm,19.5s						
WDD	**Wield Dalam**	**168.96**	**297**	PFAKE		01 18 20.0	+10
WDD				LR	LR		
	comp=Z,3μm,19.0s						
PESTR	**Estremoz**	**169.00**	**45**	*e*PKPdf	**PKPdf**	**01 18 13.0**	**+2.7**
PFVI	**Vila Bisbo**	**169.14**	**56**	*e*PKPdf	**PKPdf**	**01 18 12.4**	**+1.9**
MORF	**Marmelete**	**169.18**	**54**	*e*PKIKP	**PKPdf**	**01 18 11.8**	**+1.2**
MORF				*e*		01 23 13.9	
MESJ	**Messejana**	**169.20**	**51**	*e*P	**PKPdf**	**01 18 11.1**	**+0.6**
MESJ				*e*PP	**PP**	**01 23 13.2**	**+1.1**
MESJ				*e*SS	SS	01 44 10.2	+2.3
MESJ				AMS	AMS	02 36 47.4	
	comp=Z,3μm,19.4s						
MESJ	**Messejana**	**169.20**	**51**	*e*P	**PKPdf**	**01 18 11.1**	**+0.6**
MESJ				*e*		01 23 13.2	
PBEJ	**Beja**	**169.33**	**49**	*e*PKPdf	**PKPdf**	**01 18 15.0**	**+4.4**
PBDV	**Barranco-do-Ve**	**169.71**	**53**	*e*PKPdf	**PKPdf**	**01 18 12.7**	**+1.9**
PBAR	**Barrancos**	**169.76**	**47**	*i* PKPdf	**PKPdf**	**01 18 12.1**	**+1.3**
PVAQ	**Vaqueiros**	**169.77**	**52**	*e*PKPdf	**PKPdf**	**01 18 13.3**	**+2.5**
PVAQ				*e*SS	SS	01 44 16.6	+3.0
VSL	**Villasalto**	**170.15**	**327**	PFAKE		01 18 20.0	+9.0
VSL				LR	LR		
	comp=Z,3μm,20.0s						
PAB	**San Pablo**	**170.24**	**32**	*e*PKIKP	**PKPdf**	**01 18 11.0**	**-0.2**
PAB				*e*		01 18 25.7	
PAB				MLR	MLR		
	comp=Z,4μm,19.0s						
PAB	**San Pablo**	**170.24**	**32**	*e*PKPdf	**PKPdf**	**01 18 11.0**	**-0.2**
PAB				*es*PKPdf	sPKPdf	01 18 25.7	+11
PAB				LR	LR		
	comp=Z,4μm,19.0s						
ESDC	**Sonseca Array**	**170.31**	**30**	PKP	**PKPdf**	**01 18 11.7**	**+0.5**
ESDC				PKPab	**PKPab**	**01 19 26.7**	**-0.7**
ESDC				PP	**PP**	**01 23 14.9**	**-2.2**
ESDC	**Sonseca Array**	**170.31**	**30**	PKP	**PKPdf**	**01 18 11.7**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=2.5,slow=2.7,SNR=10						
ESDC				PKPab	**PKPab**	**01 19 26.7**	**-0.7**
	comp=Z,2.1nm,0.9s,baz=317,slow=4.0,SNR=4.6						
ESDC				PP	**PP**	**01 23 14.9**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=314,slow=4.2,SNR=3.9						
TAM	**Tamanrasset**	**170.93**	**199**	*e*PKIKP	**PKPdf**	**01 18 12.9**	**+0.8**
TAM				*e*		01 18 26.4	
TAM				*e*		01 19 30.7	
TAM				MLR	MLR		
	comp=Z,2μm,19.0s						
TAM	**Tamanrasset**	**170.93**	**199**	*e*PKPdf	**PKPdf**	**01 18 12.8**	**+0.8**
TAM				*es*PKPdf	sPKPdf	01 18 26.4	+10
TAM				*e*PKPab	**PKPab**	**01 19 30.7**	**+0.2**
TAM				LR	LR		
	comp=Z,2μm,19.0s						
RTC	**Rabat Centre**	**171.82**	**70**	PFAKE		01 18 20.0	+8.0
RTC				LR	LR		
	comp=Z,3μm,19.0s						
KEST	**Kesra**	**172.79**	**308**	PKP	**PKPdf**	**01 18 12.8**	**+0.3**
KEST				PKPab	**PKPab**	**01 19 37.9**	**-0.7**
KEST	**Kesra**	**172.79**	**308**	PKP	**PKPdf**	**01 18 12.8**	**+0.3**
	comp=Z,1.8nm,1.2s,baz=277,slow=11,SNR=3.1						
KEST				PKPab	**PKPab**	**01 19 37.9**	**-0.7**
	comp=Z,2.3nm,1.1s,baz=225,slow=3.6,SNR=2.7						
MDT	**Midelt**	**173.92**	**75**	PKP	**PKPdf**	**01 18 13.5**	**+0.4**
MDT	**Midelt**	**173.92**	**75**	PKP	**PKPdf**	**01 18 13.5**	**+0.4**
	comp=Z,7.3nm,1.1s,baz=273,slow=1.3,SNR=7.1						

*ISCJB **24** 00:58:48.6±1.0,41°.35N±0°.07×22°.72E±0°.06,h15km±7km, Error ellipse: s-maj=12.2km s-min=7.3km az=168.1*
*SKO **24** 00:58:48.6,41°.29N×22°.71E,h15km,M1.0,ML1.4*
*ATH **24** 00:58:48.9,41°.33N×22°.68E,h18km,MD2.8/7*
*CSEM **24** 00:58:48.8±0.5,41°.33N×22°.72E,h16km±2km, MD2.8, Error ellipse: s-maj=13.6km s-min=8.2km az=2.0*

ISC 24 00:58:48.6±1.3,41°.34N±0°.07×22°.71E±0°.03,h16km±8km, n16,σ0s55/29,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.11**	**262**	*i* Pg	**Pb**	**00 58 52.3**	**0.0**
VAY				*i* Sg	**Sg**	**00 58 54.3**	**-0.1**
VAY				*e*Lg	Lg	00 58 54.4	
	comp=E,216nm,0.2s						
VAY				*e*Lg	Lg	00 58 54.5	
	comp=N,294nm,0.5s						
VAY	**Valandovo**	**0.11**	**262**	*i* Pg	**Pb**	**00 58 52.8**	**+0.5**
VAY				*i* Sg	**Sb**	**00 58 54.8**	**0.0**
VAY				*e*Lg	Lg	00 58 54.9	
	comp=N,294nm,0.5s						
GRG	**Griva**	**0.45**	**212**	*e*PB	**Pg**	**00 58 57.7**	**+0.1**
GRG				*e*SB	**Sg**	**00 59 04.1**	**+0.4**
GRG	**Griva**	**0.45**	**212**	*e*Pb	**Pg**	**00 58 57.7**	**+0.1**
GRG				*e*Sb	**Sg**	**00 59 04.1**	**+0.4**
SOH	**Sokhos**	**0.71**	**136**	*e*PN	**Pb**	**00 59 03.1**	**+0.5**
SOH				*e*SN	**Sb**	**00 59 12.9**	**+0.8**
SOH	**Sokhos**	**0.71**	**136**	*e*Pn	**Pb**	**00 59 03.1**	**+0.5**
SOH				*e*Sn	**Sb**	**00 59 12.9**	**+0.8**
NVR	**Nevrokopi**	**0.87**	**89**	*e*PN	**Pn**	**00 59 06.1**	**-0.1**
NVR				*e*SN	**Sn**	**00 59 18.5**	**0.0**
NVR	**Nevrokopi**	**0.87**	**89**	*e*Pn	**Pn**	**00 59 06.1**	**-0.1**
NVR				*e*Sn	**Sn**	**00 59 18.5**	**0.0**
PLG	**Polygyros**	**1.11**	**150**	*e*PN	**Pb**	**00 59 09.9**	**+0.4**
PLG				*e*SN	**Sg**	**00 59 25.2**	**+0.5**
PLG	**Polygyros**	**1.11**	**150**	*e*Pn	**Pb**	**00 59 09.9**	**+0.4**
PLG				*e*Sn	**Sg**	**00 59 25.2**	**+0.5**
FNA	**Florina**	**1.15**	**242**	*e*PN	**Pn**	**00 59 10.0**	**-0.1**
FNA				*e*SN	**Sg**	**00 59 26.0**	**+0.1**
FNA	**Florina**	**1.15**	**242**	*e*Pn	**Pn**	**00 59 10.0**	**-0.1**
FNA				*e*Sn	**Sg**	**00 59 26.0**	**+0.1**
PAIG	**Paliouri**	**1.59**	**152**	*e*PN	**Pg**	**00 59 18.6**	**-0.6**
PAIG				*e*SN	**Sg**	**00 59 39.7**	**-0.2**
PAIG	**Paliouri**	**1.59**	**152**	*e*Pn	**Pg**	**00 59 18.6**	**-0.6**
AOS	**Alonnisos**	**2.34**	**157**	*e*PB	**Pb**	**00 59 29.1**	**-1.3**
AOS	**Alonnisos**	**2.34**	**157**	*e*Pb	**Pb**	**00 59 29.1**	**-1.3**

*CSEM **24** 01:00:02.1±0.3,37°.97N×21°.79E,h23km±1km,MD2.5, Error ellipse: s-maj=5.1km s-min=3.6km az=7.0*

ATH 24 01:00:01.3,37°.99N×21°.78E,h30km,MD2.5/7,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.26**	**285**	*e*PB	Pb	01 00 08.5	+0.3
RLS				*e*SB	Sn	01 00 13.7	-0.3
RLS	**Riolos of Patr**	**0.26**	**285**	*e*Pb	Pb	01 00 08.5	+0.3
RLS				*e*Sb	Sn	01 00 13.7	-0.3
LAKA	**Lakka**	**0.29**	**32**	*e*PB	Pb	01 00 08.9	+0.1
LAKA				*e*SB	Sb	01 00 14.0	+0.2
LAKA	**Lakka**	**0.29**	**32**	*e*Pb	Pb	01 00 08.9	+0.1
LAKA				*e*Sb	Sb	01 00 14.0	+0.2
KLV	**Kalavryta, Ach**	**0.30**	**80**	*e*PB	Pb	01 00 09.0	+0.2
KLV				*e*SB	Sb	01 00 14.3	+0.4
KLV	**Kalavryta, Ach**	**0.30**	**80**	*e*Pb	Pb	01 00 09.0	+0.2
KLV				*e*Sb	Sb	01 00 14.3	+0.4
TRIZ	**Trizonia**	**0.44**	**32**	*e*PB	Pb	01 00 10.9	+0.1
TRIZ				*e*SB	Sn	01 00 18.2	-0.4
TRIZ	**Trizonia**	**0.44**	**32**	*e*Pb	Pb	01 00 10.9	+0.1
TRIZ				*e*Sb	Sn	01 00 18.2	-0.4
EFP	**Efpalio**	**0.45**	**13**	*e*PB	Pb	01 00 11.2	+0.3
EFP				*e*SB	Sn	01 00 18.4	-0.4
EFP	**Efpalio**	**0.45**	**13**	*e*Pb	Pb	01 00 11.2	+0.3
EFP				*e*Sb	Sn	01 00 18.4	-0.4
GUR	**Goura**	**0.45**	**97**	*e*PB	Pb	01 00 11.2	+0.1
GUR				*e*SB	Sn	01 00 18.4	-0.6
GUR	**Goura**	**0.45**	**97**	*e*Pb	Pb	01 00 11.2	+0.1
GUR				*e*Sb	Sn	01 00 18.4	-0.6
KALE	**Kalithea**	**0.49**	**35**	*e*PB	Pb	01 00 11.9	+0.2
KALE				*e*SB	Sn	01 00 20.0	0.0
KALE	**Kalithea**	**0.49**	**35**	*e*Pb	Pb	01 00 11.9	+0.2
KALE				*e*Sb	Sn	01 00 20.0	0.0

*SKO **24** 01:00:40.3,41°.30N×22°.71E,h15km,M1.5,ML1.9*
*ISCJB **24** 01:00:40.7±0.4,41°.32N±0°.02×22°.71E±0°.03,h8km±3km, Error ellipse: s-maj=3.5km s-min=3.4km az=28.8*
*CSEM **24** 01:00:40.9±0.2,41°.31N×22°.71E,h8km±1km,ML1.7, Error ellipse: s-maj=3.9km s-min=3.5km az=56.0*
*ATH **24** 01:00:41.3,41°.25N×22°.73E,h20km,MD2.9/7*
*THE **24** 01:00:41.6,41°.29N×22°.72E,h4km±1km,ML1.9/6, Error ellipse: s-maj=1.7km s-min=0.6km az=208.0*
*BEO **24** 01:00:43.2±0.6,41°.37N×22°.53E,h1km±5km,ML1.7/4*

ISC 24 01:00:41.5±0.8,41°.28N±0°.02×22°.71E±0°.02,h8km±5km, n57,σ0s55/90,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.11**	**291**	P	**Pg**	**01 00 43.8**	**-0.3**
VAY				S	**Sg**	**01 00 45.6**	**-0.2**
VAY	**Valandovo**	**0.11**	**291**	*i* Pg	**Pg**	**01 00 43.6**	**-0.4**
VAY				*e*Sg	**Sg**	**01 00 45.7**	**-0.1**
VAY				*e*Lg	Lg	01 00 45.8	
	comp=N,1μm,0.6s						
VAY				*e*Lg	Lg	01 00 45.8	
	comp=E,704nm,0.2s						
VAY	**Valandovo**	**0.11**	**291**	*e*Pg	**Pg**	**01 00 43.7**	**-0.3**
VAY				*e*Sg	**Sg**	**01 00 45.6**	**-0.2**
VAY	**Valandovo**	**0.11**	**291**	*e*Pg	**Pg**	**01 00 43.7**	**-0.3**
VAY				*e*Sg	**Sg**	**01 00 45.6**	**-0.2**
VAY				*e*Lg	Lg	01 00 46.3	
	comp=E,704nm,0.2s						
KNT	**Kendrikon**	**0.19**	**130**	P	**Pg**	**01 00 45.6**	**+0.2**
KNT				S	**Sg**	**01 00 48.4**	**+0.4**
KNT	**Kendrikon**	**0.19**	**130**	P	**Pg**	**01 00 45.6**	**+0.2**
KNT				S	**Sg**	**01 00 48.4**	**+0.4**
GRG	**Griva**	**0.40**	**215**	P	**Pg**	**01 00 49.4**	**+0.1**
GRG				S	**Sg**	**01 00 55.5**	**+1.0**
GRG	**Griva**	**0.40**	**215**	*e*PB	**Pg**	**01 00 49.4**	**+0.1**
GRG				*e*SB	**Sg**	**01 00 55.5**	**+1.0**
GRG	**Griva**	**0.40**	**215**	P	**Pg**	**01 00 49.4**	**+0.1**
GRG	**Griva**	**0.40**	**215**	*e*Pb	**Pg**	**01 00 49.4**	**+0.1**
GRG				S	**Sg**	**01 00 55.5**	**+1.0**
SOH	**Sokhos**	**0.67**	**133**	P	**Pg**	**01 00 54.0**	**-0.4**
SOH				S	**Sg**	**01 01 03.3**	**+0.1**
SOH	**Sokhos**	**0.67**	**133**	*e*PN	**Pg**	**01 00 54.1**	**-0.4**
SOH				*e*SN	**Sg**	**01 01 03.0**	**-0.2**
SOH	**Sokhos**	**0.67**	**133**	P	**Pg**	**01 00 54.0**	**-0.4**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**01 00 54.4**	**-0.4**
SRS				S	**Sg**	**01 01 04.5**	**+0.7**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**01 00 54.4**	**-0.4**
HORT	**Hortiatis**	**0.75**	**156**	P	**Pg**	**01 00 55.6**	**-0.2**
HORT				S	**Sb**	**01 01 06.7**	**-0.4**
HORT	**Hortiatis**	**0.75**	**156**	P	**Pg**	**01 00 55.6**	**-0.2**
HORT				S	**Sb**	**01 01 06.7**	**-0.4**
NVR	**Nevrokopi**	**0.87**	**85**	P	**Pg**	**01 00 57.9**	**-0.4**
NVR				S	**Sg**	**01 01 09.8**	**+0.2**
NVR	**Nevrokopi**	**0.87**	**85**	*e*PN	**Pg**	**01 00 57.8**	**-0.5**
NVR				*e*SN	**Sg**	**01 01 09.5**	**-0.1**
NVR	**Nevrokopi**	**0.87**	**85**	P	**Pg**	**01 00 57.9**	**-0.4**
NVR	**Nevrokopi**	**0.87**	**85**	*e*Pn	**Pg**	**01 00 57.8**	**-0.5**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**01 01 01.6**	**-0.4**
PLG				S	**Sn**	**01 01 17.1**	**-0.6**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pg**	**01 01 00.8**	**-1.2**
PLG				*e*SN	**Sg**	**01 01 14.6**	**-1.2**
PLG	**Polygyros**	**1.07**	**148**	S	**Sn**	**01 01 17.1**	**-0.6**
PLG	**Polygyros**	**1.07**	**148**	*e*Pn	**Pg**	**01 01 00.8**	**-1.2**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**01 01 01.6**	**-0.4**
PLG				*e*Sn	**Sg**	**01 01 14.6**	**-1.2**
BIA	**Bitola**	**1.08**	**256**	*i* Pg	**Pg**	**01 01 01.7**	**-0.5**
BIA	**Bitola**	**1.08**	**256**	*i* Pg	**Pg**	**01 01 01.6**	**-0.5**
FNA	**Florina**	**1.12**	**244**	P	**Pn**	**01 01 03.4**	**-0.1**
FNA				S	**Sn**	**01 01 18.7**	**-0.4**
FNA	**Florina**	**1.12**	**244**	*e*PN	**Pg**	**01 01 02.6**	**-0.4**
FNA				*e*SN	**Sb**	**01 01 18.1**	**+0.2**
FNA	**Florina**	**1.12**	**244**	S	**Sn**	**01 01 18.7**	**-0.4**
FNA	**Florina**	**1.12**	**244**	*e*Pn	**Pg**	**01 01 02.6**	**-0.4**
FNA	**Florina**	**1.12**	**244**	P	**Pn**	**01 01 03.4**	**-0.1**
FNA				*e*Sn	**Sb**	**01 01 18.1**	**+0.2**
OUR	**Ouranopolis**	**1.35**	**134**	P	**Pb**	**01 01 06.8**	**-0.2**
OUR				S	**Sn**	**01 01 24.8**	**+0.1**
OUR	**Ouranopolis**	**1.35**	**134**	P	**Pb**	**01 01 06.8**	**-0.2**
OUR				S	**Sn**	**01 01 24.8**	**+0.1**
VTS	**Vitosha**	**1.36**	**16**	P	**Pb**	**01 01 07.4**	**+0.1**
VTS				S	**Sb**	**01 01 24.8**	**-0.1**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pb**	**01 01 07.3**	**0.0**
VTS				*e*Sg	**Sb**	**01 01 24.9**	**0.0**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pb**	**01 01 07.3**	**0.0**
VTS				*e*Sg	**Sb**	**01 01 24.9**	**0.0**
KAVA	**Kavala**	**1.40**	**101**	P	**Pb**	**01 01 07.8**	**+0.1**
KAVA				S	**Sg**	**01 01 26.8**	**+0.5**
KAVA	**Kavala**	**1.40**	**101**	P	**Pb**	**01 01 07.8**	**+0.1**
KAVA				S	**Sg**	**01 01 26.8**	**+0.5**
PAIG	**Paliouri**	**1.54**	**151**	*e*PN	**Pn**	**01 01 09.1**	**-0.1**
PAIG				*e*SN	**Sn**	**01 01 29.4**	**0.0**
PAIG	**Paliouri**	**1.54**	**151**	*e*Pn	**Pn**	**01 01 09.1**	**-0.1**
PAIG				*e*Sn	**Sn**	**01 01 29.4**	**0.0**
BARS	**Barje**	**1.67**	**337**	*e*Pn	**Pn**	**01 01 11.0**	**0.0**
BARS				*e*Sg	**Sn**	**01 01 32.4**	**-0.2**
BARS	**Barje**	**1.67**	**337**	*e*Pn	**Pn**	**01 01 11.0**	**0.0**
BARS				*e*Sg	**Sn**	**01 01 32.4**	**-0.2**
THL	**Klokotos Trika**	**1.79**	**197**	*e*PN	**Pn**	**01 01 13.2**	**+0.5**
THL	**Klokotos Trika**	**1.79**	**197**	*e*Pn	**Pn**	**01 01 13.2**	**+0.5**
ZAPS	**Zavoj**	**1.99**	**358**	*e*Sg	**Sb**	**01 01 43.4**	**+0.5**
NEO	**Neokhori**	**2.01**	**168**	*e*PN	**Pn**	**01 01 15.9**	**+0.2**
NEO	**Neokhori**	**2.01**	**168**	*e*Pn	**Pn**	**01 01 15.9**	**+0.2**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PN	**Pn**	**01 01 19.6**	**+0.3**
AGG	**Agios Georgios**	**2.28**	**187**	*e*Pn	**Pn**	**01 01 19.6**	**+0.3**
AOS	**Alonnisos**	**2.29**	**157**	*e*PN	**Pn**	**01 01 19.0**	**-0.5**
AOS	**Alonnisos**	**2.29**	**157**	*e*Pn	**Pn**	**01 01 19.0**	**-0.5**
EVR	**Evrytania**	**2.46**	**197**	*e*PB	**Pn**	**01 01 23.4**	**+1.5**
EVR	**Evrytania**	**2.46**	**197**	*e*Pb	**Pn**	**01 01 23.4**	**+1.5**
ALN	**Alexandroupoli**	**2.55**	**98**	*e*PB	**Pn**	**01 01 24.6**	**+1.5**
ALN	**Alexandroupoli**	**2.55**	**98**	*e*Pb	**Pn**	**01 01 24.6**	**+1.5**

*ISCJB **24** 01:02:33.4±0.9,31°.24S±0°.07×177°.7W±0°.2,h10km, mb4.4/8, Error ellipse: s-maj=20.0km s-min=10.1km az=8.4*
*IDC **24** 01:02:33.0±0.9,31°.29S×177°.60W,h0km,mb4.4/5, mb1 4.6/6,mb1mx4.3/21,mbtmp4.4/6,ML4.4/1, Error ellipse: s-maj=28.7km s-min=26.3km az=107.0*
*NEIC **24** 01:02:34.5±0.6,31°.30S×177°.62W,h10km,mb4.5/4, Error ellipse: s-maj=16.7km s-min=14.1km az=135.0*

ISC 24 01:02:34.8±0.9,31°.46S±0°.08×177°.8W±0°.2,h10km,n28, σ1s83/30,mb4.5/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.21**	**358**	Pn	**Pn**	**01 03 09.7**	**-1.8**
RAO				Sn	**Sn**	**01 03 38.2**	**-0.7**
RAO	**Raoul Island**	**2.21**	**358**	Pn	**Pn**	**01 03 09.7**	**-1.8**
	126nm,0.3s,baz=270,slow=20,SNR=5.7						
RAO				Sn	**Sn**	**01 03 38.2**	**-0.7**
	157nm,0.3s,baz=270,slow=20,SNR=2.7						
URZ	**Urewera**	**7.96**	**210**	Pn	Pn	01 04 27.5	-3.0
URZ				Sn	**Sn**	**01 05 57.2**	**-3.4**
URZ	**Urewera**	**7.96**	**210**	Pn	Pn	01 04 27.5	-3.0
	baz=72,slow=20,SNR=2.9						
URZ				Sn	**Sn**	**01 05 57.2**	**-3.4**
	1.9nm,0.3s,baz=0.0,slow=17,SNR=6.0						
CTA	**Charters Tower**	**34.13**	**281**	P	**P**	**01 09 22.8**	**+2.7**
CTA	**Charters Tower**	**34.13**	**281**	P	**P**	**01 09 22.8**	**+2.7**
	5.3nm,0.7s,baz=108,slow=13,SNR=3.1						
CTAO	**Charters Tower**	**34.13**	**281**	*e*P	**P**	**01 09 21.1**	**+0.9**
	2.5nm,0.6s						
ASAR	**Alice Springs**	**43.22**	**268**	P	**P**	**01 10 37.5**	**+1.0**
ASAR	**Alice Springs**	**43.22**	**268**	P	**P**	**01 10 37.5**	**+1.0**
	3.7nm,0.8s,baz=116,slow=7.4,SNR=4.9						
WRAB	**Tennant Creek**	**44.30**	**273**	*e*P	**P**	**01 10 45.2**	**+0.1**
	4.8nm,0.7s						
WRA	**Warramunga Arr**	**44.30**	**273**	P	**P**	**01 10 45.5**	**+0.4**
WRA	**Warramunga Arr**	**44.30**	**273**	P	**P**	**01 10 45.5**	**+0.4**
	4.3nm,0.5s,baz=111,slow=8.1,SNR=13						
QSPA	**South Pole Qui**	**58.65**	**180**	P	**P**	**01 12 33.5**	**+1.4**
QSPA	**South Pole Qui**	**58.65**	**180**	P	**P**	**01 12 33.5**	**+1.4**
	6.1nm,1.1s,baz=308,slow=2.3,SNR=2.7						
KKM	**Kota Kinabalu**	**73.04**	**288**	*e*P	**P**	**01 14 06.3**	**+0.8**
	3.8nm,0.6s						
CMB	**Columbia Colle**	**87.45**	**42**	*e*P	**P**	**01 15 21.5**	**-1.1**
	3.4nm,0.9s						
NVAR	**Mina Array Bea**	**88.91**	**43**	P	**P**	**01 15 28.9**	**-0.8**
NVAR	**Mina Array Bea**	**88.91**	**43**	P	**P**	**01 15 28.9**	**-0.8**
	1.4nm,0.9s,baz=228,slow=8.0,SNR=3.9						
FINES	**FINESS Array B**	**146.19**	**340**	PKPbc	**PKPdf**	**01 22 13.3**	**-0.3**
FINES	**FINESS Array B**	**146.19**	**340**	PKPbc	**PKPdf**	**01 22 13.3**	**-0.3**
	4.3nm,0.6s,baz=53,slow=5.2,SNR=12						
HFS	**Hagfors**	**150.31**	**348**	PKPbc	**PKPdf**	**01 22 24.2**	**+3.7**
HFS	**Hagfors**	**150.31**	**348**	PKPbc	**PKPdf**	**01 22 24.2**	**+3.7**
	3.2nm,0.8s,baz=69,slow=7.9,SNR=2.9						
EIL	**Elat**	**151.78**	**275**	PKPbc	**PKPbc**	**01 22 29.8**	**-0.3**
EIL	**Elat**	**151.78**	**275**	PKPbc	**PKPbc**	**01 22 29.8**	**-0.3**
	3.5nm,0.9s,baz=16,slow=7.6,SNR=2.9						
MMAI	**Mount Meron Ar**	**151.92**	**282**	PKPbc	**PKPbc**	**01 22 30.8**	**+0.4**
MMAI	**Mount Meron Ar**	**151.92**	**282**	PKPbc	**PKPbc**	**01 22 30.8**	**+0.4**
	0.5nm,0.4s,baz=101,slow=4.6,SNR=3.1						
AKASG	**Malin Array Be**	**152.23**	**322**	PKPab	**PKPab**	**01 22 38.3**	**-1.9**
AKASG	**Malin Array Be**	**152.23**	**322**	PKPab	**PKPab**	**01 22 38.3**	**-1.9**
	2.2nm,0.7s,baz=49,slow=4.2,SNR=4.3						

IDC 24 01:04:02.3±3.7,31°.38S×177°.74W,h0km,mb4.1/2, mb1 4.4/3,mb1mx3.9/19,mbtmp4.2/3,Error ellipse: s-maj=86.2km s-min=35.7km az=125.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.12**	**356**	Pn	Pn	01 04 39.7	+0.7
	baz=107,slow=19,SNR=1.8						
URZ	**Urewera**	**8.07**	**210**	Sn	Sn	01 07 27.3	-5.4
	2.2nm,0.3s,baz=285,slow=20,SNR=4.3						
ASAR	**Alice Springs**	**43.29**	**268**	P	P	01 12 06.0	-0.1
	2.1nm,0.9s,baz=104,slow=7.0,SNR=3.0						
WRA	**Warramunga Arr**	**44.37**	**273**	P	P	01 12 14.6	-0.2
	3.1nm,0.7s,baz=112,slow=7.9,SNR=3.0						
FINES	**FINESS Array B**	**146.13**	**340**	PKPbc	PKPdf	01 23 42.5	-0.2
	2.0nm,0.7s,baz=62,slow=3.3,SNR=3.6						

*DJA **24** 01:06:10.5±0.3,13°.N±4°.×12°.2E±°, h10km,M5.2/36, mB5.7/16,mb5.3/36,Mw(mB)5.2/16*
*IDC **24** 01:06:20.6±0.3,14°.88N×119°.82E,h0km,mb4.9/31, mb1 5.0/31,mb1mx5.0/36,mbtmp4.9/31,MS4.7/10, Ms1 4.7/10,ms1mx4.5/35,Error ellipse: s-maj=16.3km s-min=9.6km az=77.0*
*MAN **24** 01:06:24,15°.13N×119°.77E,h1km,mb5.7,ML4.8,MS5.2*
MAN INTENSITY III - IBA ZAMBALES; SUBIC OLONGAPO; INTENSITY II - QUEZON CITY; ORTIGAS.
*MOS **24** 01:06:25.8±1.3,14°.90N×119°.79E,h48km,mb5.2/30, MS5.0/10,Error ellipse: s-maj=10.1km s-min=5.6km az=111.4*
*BJI **24** 01:06:26.5,14°.94N×119°.62E,h43km,mB5.1/37,mb4.7/42, Ms5.1/52,Ms7 4.9/51*
*ISCJB **24** 01:06:27.9±0.4,14°.93N±0°.02×119°.82E±0°.03,h64km±3km, mb5.1/110,Error ellipse: s-maj=5.0km s-min=3.2km az=170.1*
*GCMT **24** 01:06:27.8±0.2,15°.13N×119°.63E,h22km,MW5.4, Moment Tensor Solution. s59,c92; s85,c130; Moment tensor: Scale 10^{17}Nm; M_{rr}1.04±.05; $M_{\theta\theta}$0.13±.03; $M_{\phi\phi}$-1.17±.03; $M_{r\theta}$-0.53±.06; $M_{\theta\phi}$-0.15±.02; $M_{\phi r}$-0.66±.05; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s347.00000°, δ32.00000°,λ56.00000°. NP2:ϕ_s205.00000°,δ64.00000°, λ109.00000°. Principal axes: T 1.4000, Plg66.0000°; Azm149.0000°; N 0.0100, Plg17.0000°, Azm17.0000°; P -1.4100, Plg17.0000°, Azm282.0000°; Data Used: II IU IC G CN.*
*NEIC **24** 01:06:28.6±0.6,14°.85N×119°.80E,h58km±5km,mb5.2/45 Error ellipse: s-maj=5.6km s-min=3.9km az=84.0*
NEIC Felt [III PIVS] at Iba, Olongapo and Subic; [II PIVS] at Makati, Pasig and Quezon City. Felt [III] at Manila. Also felt at Angeles and Batangas.

ISC 24 01:06:29.2±0.4,14°.91N±0°.03×119°.81E±0°.04,h60km±3km, h60km:pP-P,n399,σ1s55/417,mb5.2/111,20C-19D,Luzon

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

WHN S **Sn** **01 13 13.6 -1.8**
WHN LR LR
comp=N,4μm,12.0s
WHN LR LR
comp=E,6μm,12.3s
WHN LR LR
comp=Z,7μm,19.5s
GYA Guiyang 16.82 315 P **Pn** **01 10 21.0 +0.2**
GYA pP **pP** **01 10 32.8 -2.2**
GYA S **Sn** **01 13 26.5 -0.5**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.0s
GYA LR LR
comp=N,2μm,15.6s
GYA LR LR
comp=E,2μm,16.1s
GYA LR LR
comp=Z,2μm,15.1s
NJ2 Nanjing 17.09 357 *e*P **P** **01 10 25.3 +0.4**
NJ2 pP **pP** **01 10 34.9 -2.9**
NJ2 sP sP 01 10 37.8 -7.6
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 pmax pmax
comp=Z,1μm,9.2s
NJ2 LR LR
comp=N,3μm,15.3s
NJ2 LR LR
comp=E,2μm,12.4s
NJ2 LR LR
comp=Z,4μm,16.1s
CHBT CHBT 17.11 265 P **P** **01 10 27.1 +1.8**
comp=Z,35nm,1.6s
SKSI Soroako, Sulaw 17.39 175 P **P** **01 10 32.0 +3.5**
comp=Z,128nm,0.7s,comp=Z,5μm
ENH Enshi 18.00 330 *e*P **Pn** **01 10 35.2 0.0**
comp=Z,112nm,1.5s
PBKT Sadao Pong 18.21 278 P **P** **01 10 37.5 +0.1**
comp=Z,36nm,1.3s,comp=Z,1μm
SPSI Sidrap Palu 18.75 180 P **Pn** **01 10 47.0 +2.6**
comp=Z,59nm,1.2s,comp=Z,1μm
KMI Kunming 18.97 305 P **Pn** **01 10 47.5 +0.3**
KMI pmax pmax
comp=Z,870nm,7.1s
KMI LR LR
comp=N,2μm,14.6s
KMI LR LR
comp=E,3μm,14.3s
KMI LR LR
comp=Z,3μm,15.0s
PBKI Pangkalan Bun 19.27 205 P Pn 01 11 00.6 +10
comp=Z,392nm,1.2s,comp=Z,4μm
KAPI Kappang 19.80 180 P **P** **01 10 55.5 +0.8**
KAPI Kappang 19.80 180 Pn **Pn** **01 10 56.6 -0.2**
comp=Z,453nm,0.8s,SNR=9.6
KAPI Kappang 19.80 180 P **P** **01 10 55.5 +0.8**
comp=Z,3.1nm,0.3s,baz=2.1,slow=8.6,SNR=19
SRDT SRDT 20.03 271 P Pn 01 11 04.1 +4.6
BKSI Bulukumba 20.10 179 P Pn 01 10 59.2 -1.2
AAI Ambon 20.26 155 P Pn 01 11 02.1 -0.1
comp=Z,113nm,0.7s
MSAI Masohi 20.26 153 P Pn 01 11 02.2 -0.1
comp=Z,26nm,1.1s,comp=Z,1μm
CMAR Chiang Mai Arr 20.30 283 P **P** **01 11 00.0 -0.2**
CMAR PcP **PcP** **01 15 13.4 +1.5**
CMAR Chiang Mai Arr 20.30 283 P **P** **01 11 00.0 -0.2**
comp=Z,24nm,0.9s,baz=96,slow=9.2,SNR=81
CMAR PcP **PcP** **01 15 13.4 +1.5**
comp=Z,4.6nm,0.7s,baz=141,slow=0.4,SNR=9.9
CMAR LR LR 01 19 00.7
comp=Z,1μm,19.4s,baz=283,slow=37
CMMT Chiang Mai 20.34 284 P Pn 01 11 01.9 -1.3
comp=Z,46nm,1.1s,comp=Z,725nm
CHTO Chiang Mai 20.34 284 *e*P **P** **01 11 00.9 +0.2**
CHTO pmax pmax
comp=Z,37nm,1.1s
CHTO Chiang Mai 20.34 284 *e*P **P** **01 11 00.9 +0.2**
comp=Z,9.2nm,1.1s
CHTO Chiang Mai 20.34 284 P **P** **01 11 01.3 +0.6**
comp=Z,26nm,1.3s,comp=Z,708nm
BBSI Bau Bau 20.45 172 P Pn 01 11 04.1 -0.4
comp=Z,212nm,1.4s,comp=Z,3μm
JNU Nakatsue 20.73 27 P **P** **01 11 02.9 -1.9**
JNU Nakatsue 20.73 27 P **P** **01 11 02.9 -1.9**
comp=Z,29nm,1.0s,baz=233,slow=15,SNR=2.8
JNU LR LR 01 18 32.6
comp=Z,2μm,22.0s,baz=217,slow=35
BSSI Bau Bau, Buton 20.93 178 P Pn 01 11 11.9 +1.8
comp=Z,115nm,1.4s
KULM Kulim 21.13 245 *e*P **P** **01 11 07.9 -1.3**
comp=Z,127nm,1.2s
IPM Ipoh 21.20 243 *e*P **P** **01 11 07.2 -2.8**
comp=Z,56nm,0.8s
XAN Xi'an 21.44 335 P **P** **01 11 12.5 +0.1**
XAN pP **pP** **01 11 22.4 -3.3**
XAN S S **01 15 02.5 -4.7**
XAN sS Sn 01 15 18.8 +0.7
XAN SS **SnSn** **01 15 39.3 +4.9**
XAN pmax pmax
comp=Z,6.0nm,0.8s
XAN pmax pmax
comp=Z,66nm,6.3s
XAN LR LR
comp=N,2μm,15.3s
XAN LR LR
comp=E,710nm,18.4s
XAN LR LR
comp=Z,1μm,17.4s
RKPI Ransiki, Papua 21.64 138 P **P** **01 11 17.9 +3.2**
comp=Z,196nm,0.9s,comp=Z,18μm
CD2 Chengdu 21.69 320 P **P** **01 11 14.6 -0.5**
CD2 pP **pP** **01 11 30.4 +2.0**
CD2 PP **PnPn** **01 11 43.5 +5.1**
CD2 S **S** **01 15 08.3 -3.8**
CD2 PcS **PcS** **01 18 52.5 -0.4**
CD2 pmax pmax
comp=Z,60nm,0.5s
CD2 pmax pmax
comp=Z,740nm,4.1s
CD2 LR LR
comp=N,6μm,14.7s
CD2 LR LR
comp=E,4μm,15.2s
CD2 LR LR
comp=Z,7μm,15.7s
PPBI Pangkal Pinang 21.70 220 P P 01 11 25.6 +10
comp=Z,40nm,0.9s,comp=Z,6μm
BAKI Biak 22.71 133 P **P** **01 11 26.8 +0.6**
comp=Z,184nm,1.1s
SRBI Singaraja 23.30 192 P **P** **01 11 33.7 +1.8**
BLJI Banyuglugur 23.34 196 P sP 01 11 52.4 -1.1
MMRI Maumere 23.52 174 P **P** **01 11 36.4 +2.4**
comp=Z,229nm,0.8s,comp=Z,3μm
BKNI Bangkinang 23.54 234 P P 01 11 44.3 +10
comp=Z,302nm,1.0s,comp=Z,3μm
KSAR Wonju Array Be 23.56 16 P **P** **01 11 32.2 -2.0**
KSRS Korea Array 23.58 16 P **P** **01 11 32.2 -2.2**
comp=Z,15nm,0.8s,baz=201,slow=11,SNR=27
KSRS LR LR 01 21 18.5
comp=Z,1μm,19.6s,baz=204,slow=38
TSI Tuntungan 23.81 244 P P 01 11 44.3 +7.6
comp=Z,287nm,1.4s,comp=Z,5μm
DL2 Dalian 23.96 3 P P 01 11 42.5 +4.7
DL2 pmax pmax
comp=Z,35nm,1.1s
DL2 pmax pmax
comp=Z,330nm,6.8s
DL2 LR LR
comp=N,1μm,14.7s
DL2 LR LR
comp=E,980nm,15.3s
DL2 LR LR
comp=Z,1μm,14.6s
TGJI Tegal 24.09 207 P pP 01 11 52.7 -1.2
PWJI Pagerwojo 24.13 200 P pP 01 11 58.7 +4.4
BJII Banjamegara 24.26 205 P pP 01 11 57.0 +1.4
MNSI Mandailing Nat 24.42 237 P pP 01 11 52.5 -4.5
comp=Z,6μmcomp=Z,127nm,0.9s
KCSI Kotacane, Aceh 24.49 245 P pP 01 11 50.0 -7.7
comp=Z,75nm,1.2s
PCJI Pacitan 24.50 201 P pP 01 12 05.1 +7.4
PPI Padang Panjang 24.53 233 P pP 01 11 54.5 -3.6
comp=Z,175nm,1.4s
SBJI Serang 24.91 214 P pP 01 11 58.8 -2.6

DBJI Dramaga 24.95 212 P pP 01 11 59.1 -2.7
comp=Z,175nm,0.9s
MASI Maura Aman, Be 24.99 226 P pP 01 11 59.9 -2.3
comp=Z,386nm,0.9s
LWLI Liwa 25.21 219 P pP 01 11 59.9 -4.4
comp=Z,272nm,0.9s
BJT Baijiatuan 25.22 353 *e*P **P** **01 11 50.5 +1.2**
comp=Z,37nm,0.8s
BJI Beijing 25.24 353 P **P** **01 11 50.9 +1.4**
BJI S **S** **01 16 15.3 +4.5**
BJI pmax pmax
comp=Z,36nm,1.6s
BJI pmax pmax
comp=Z,590nm,8.0s
BJI LR LR
comp=N,3μm,11.6s
BJI LR LR
comp=E,1μm,16.8s
BJI LR LR
comp=Z,2μm,16.8s
CISI Cisompet, Garu 25.29 209 P pP 01 12 05.6 +0.7
KASI Kota Agung 25.35 218 P P 01 12 00.8 +10
comp=Z,84nm,0.8s
LZH Lanzhou 25.47 329 *e*P **P** **01 11 53.8 +1.9**
LZH pP **pP** **01 12 06.8 +0.2**
LZH PP **PnPn** **01 12 33.4 +3.3**
LZH SS 01 17 20.0
LZH pmax pmax
comp=Z,32nm,1.4s
LZH pmax pmax
comp=Z,140nm,4.2s
LZH LR LR
comp=N,5μm,13.8s
LZH LR LR
comp=E,5μm,11.5s
LZH LR LR
comp=Z,5μm,15.2s
CGJI Cibinong 25.56 214 P pP 01 12 02.7 -4.6
comp=Z,65nm,1.1s
GSI Gunungsitoli 25.79 240 P pP 01 12 06.0 -3.4
comp=Z,98nm,1.0s
BSI Banda Aceh 25.85 251 P pP 01 12 08.5 -1.5
HHC Hu-ho-hao-te 26.82 346 *e*P **P** **01 12 05.3 +1.3**
HHC PP **PnPn** **01 12 52.3 +3.8**
HHC PcP **PcP** **01 15 25.8 +0.3**
HHC S **S** **01 16 40.8 +4.7**
HHC SS **SnSn** **01 17 52.0 +6.1**
HHC ScP **ScP** **01 18 58.6 -2.0**
HHC pmax pmax
comp=Z,43nm,1.2s
HHC pmax pmax
comp=Z,670nm,8.3s
HHC LR LR
comp=N,5μm,16.7s
HHC LR LR
comp=E,4μm,15.5s
HHC LR LR
comp=Z,5μm,16.7s
BTO Baotou 26.99 343 *e*P **P** **01 12 03.5 -1.9**
MAJO Matsushiro 27.08 34 *e*P **P** **01 12 06.2 -0.1**
MAJO pmax pmax
comp=Z,6.0nm,0.6s
MAJO Matsushiro 27.08 34 *e*P **P** **01 12 06.2 -0.1**
comp=Z,1.1nm,0.6s
MAT Matsushiro 27.08 34 P **P** **01 12 07.2 +0.9**
MAT S S 01 16 57.6 +17
MJAR Matsushiro Arr 27.08 34 P **P** **01 12 05.5 -0.7**
MJAR PcP **PcP** **01 15 26.6 +0.6**
MJAR Matsushiro Arr 27.08 34 P **P** **01 12 05.5 -0.7**
comp=Z,1.1nm,0.4s,baz=262,slow=6.1,SNR=6.8
MJAR PcP **PcP** **01 15 26.6 +0.6**
comp=Z,1.9nm,0.7s,baz=197,slow=3.4,SNR=4.4
CN2 Changchun 29.20 8 *e*P P 01 12 28.5 +3.6
CN2 *e*S **S** **01 17 17.1 +4.0**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,1μm,15.0s
CN2 LR LR
comp=E,2μm,15.0s
CN2 LR LR
comp=Z,2μm,19.0s
GTA Gaotai 30.06 328 *e*P **P** **01 12 35.3 +2.4**
GTA PcP **PcP** **01 15 34.5 +0.9**
GTA S **S** **01 17 28.1 +0.9**
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,100nm,6.7s
GTA LR LR
comp=N,3μm,15.7s
GTA LR LR
comp=E,3μm,16.9s
GTA LR LR
comp=Z,5μm,16.4s
LSA Lhasa 30.22 304 P P 01 12 29.3 -5.4
LSA pmax pmax
comp=Z,20nm,1.0s
LSA Lhasa 30.22 304 *e*P **P** **01 12 35.3 +0.5**
LSA Lhasa 30.22 304 *e*P **P** **01 12 35.2 +0.5**
MDJ Mudanjiang 30.75 14 P **P** **01 12 38.5 -0.2**
MDJ pmax pmax
comp=Z,14nm,1.1s
MDJ pmax pmax
comp=Z,210nm,6.2s
USRK Ussuriysk Arra 30.98 17 P **P** **01 12 40.4 -0.3**
comp=Z,5.9nm,0.7s,baz=200,slow=7.0,SNR=9.8
USRK LR LR 01 27 09.0
comp=Z,698nm,18.2s,baz=23,slow=40
TAPN Taplejung 32.30 298 *e*P **P** **01 12 53.8 +0.9**
comp=Z,62nm,1.0s
ODAN Odare 32.44 297 *e*P **P** **01 12 53.6 -0.5**
comp=Z,68nm,0.8s
RAMN Ramite 33.15 297 *e*P **P** **01 13 00.6 +0.3**
comp=Z,37nm,0.8s
GUN Gumba 34.01 298 *e*P P 01 13 11.5 +3.6
comp=Z,77nm,0.9s
PKI Pulchoki 34.33 297 *e*P P 01 13 13.6 +3.0
comp=Z,44nm,1.0s
PKIN Phulchoki 34.34 297 *e*P **P** **01 13 12.6 +1.9**
comp=Z,10nm,0.6s
KKN Kakani 34.49 298 *e*P P 01 13 16.0 +4.1
comp=Z,40nm,0.9s
ULN Ulaanbaatar 34.52 345 *e*P **P** **01 13 10.7 -1.1**
comp=Z,7.4nm,0.9s
ULN Ulaanbaatar 34.52 345 P **P** **01 13 11.3 -0.5**
comp=Z,11nm,0.8s
SONM Songino Array 34.66 344 P **P** **01 13 11.6 -1.4**
SONM PcP **PcP** **01 15 46.5 +0.5**
SONM Songino Array 34.66 344 P **P** **01 13 11.6 -1.4**
comp=Z,8.0nm,0.8s,baz=160,slow=9.9,SNR=33
SONM PcP **PcP** **01 15 46.5 +0.5**
comp=Z,1.3nm,0.6s,baz=186,slow=2.8,SNR=4.5
SONM LR LR 01 27 05.0
comp=Z,973nm,21.4s,baz=170,slow=36
ASAJ Asahikawa 34.98 29 *e*P **P** **01 13 16.0 +0.4**
comp=Z,65nm,1.8s
ASAJ Asahikawa 34.98 29 P **P** **01 13 15.8 +0.2**
comp=Z,20nm,0.6s,baz=252,slow=14,SNR=18
ASAJ LR LR 01 26 52.0
comp=Z,701nm,19.8s,baz=325,slow=35
KLR Kul'dur 35.60 13 *e*P P 01 13 17.2 -3.7
KLR pmax pmax
comp=E,28nm,1.4s
KLR pmax pmax
comp=Z,76nm,1.4s
HABR Khabarovsk 35.75 17 *e*P **P** **01 13 19.9 -2.2**
HABR *e**PP **pP** **01 13 34.8 -2.4**
HABR *e**SP **sP** **01 13 41.8 -2.5**
HABR *e*S **S** **01 18 54.2 -0.7**
HABR *e**SS **sS** **01 19 20.3 -0.1**
HABR *e*SS **SnSn** **01 21 23.3 +1.2**
HABR pmax pmax
comp=Z,48nm,2.0s
HABR pmax pmax
comp=N,21nm,2.0s
HABR pmax pmax
comp=E,35nm,2.0s
HABR MLR MLR
comp=Z,788nm,19.0s
MBWA Marble Bar 35.84 180 *e*P **P** **01 13 22.5 -0.8**
comp=Z,27nm,0.8s
DANN Dangsing 35.93 298 *e*P P 01 13 29.2 +4.8
comp=Z,50nm,0.9s

KOLN Koldanda 35.93 297 *e*P P 01 13 28.5 +4.2
comp=Z,13nm,0.8s
PMG Port Moresby 36.31 130 *e*P **P** **01 13 25.7 -1.7**
comp=Z,39nm,0.8s
PMG Port Moresby 36.31 130 P **P** **01 13 26.9 -0.5**
comp=Z,54nm,1.0s
PMG Port Moresby 36.31 130 P **P** **01 13 26.2 -1.2**
comp=Z,29nm,0.7s,baz=346,slow=5.6,SNR=13
PYUN Piuthan 36.53 297 *e*P P 01 13 33.4 +4.0
comp=Z,107nm,0.9s
COEN Coen 36.84 140 *e*P **P** **01 13 29.4 -2.4**
comp=Z,184nm,0.9s
YSS Yuzh-Sakhalins 37.24 26‖ *e*P **P** **01 13 35.6 +0.8**
YSS *e* 01 13 47.0
YSS pmax pmax
comp=Z,40nm,1.0s
WRAB Tennant Creek 37.46 157 *e*P **P** **01 13 34.1 -2.9**
WRAB pmax pmax
comp=Z,68nm,1.0s
WRAB Tennant Creek 37.46 157 *e*P **P** **01 13 34.1 -2.9**
comp=Z,68nm,1.0s
WRAB Tennant Creek 37.46 157 P **P** **01 13 34.2 -2.9**
comp=Z,319nm,0.6s,SNR=18
WRA Warramunga Arr 37.47 157 P **P** **01 13 34.2 -2.9**
WRA Warramunga Arr 37.47 157 P **P** **01 13 34.2 -2.9**
comp=Z,36nm,0.7s,baz=334,slow=9.8,SNR=69
ZAK Zakamensk 37.84 343 *e*P **P** **01 13 39.0 -1.0**
TLY Talaya 38.91 344 *e*P **P** **01 13 49.2 +0.3**
TLY *e*S **S** **01 19 42.7 -0.1**
TLY MLR MLR
comp=Z,1μm,16.0s
MOY Mondy 39.65 342 *e*P **P** **01 13 55.1 -0.1**
HYB Hyderabad 39.65 279 *i* P **P** **01 13 54.0 -1.6**
WMQ Urumqi 39.73 323 *e*P **P** **01 13 56.8 +0.9**
WMQ pP **pP** **01 14 12.1 +1.0**
WMQ PP **PnPn** **01 15 33.4 +1.7**
WMQ PcP **PcP** **01 16 01.8 +0.3**
WMQ PcS **PcS** **01 19 51.6 0.0**
WMQ S **S** **01 19 56.5 +1.0**
WMQ SS **SS** **01 22 48.3 -4.7**
WMQ ScS **ScS** **01 23 56.4 -1.6**
WMQ pmax pmax
comp=Z,12nm,0.8s
WMQ pmax pmax
comp=Z,200nm,3.5s
WMQ LR LR
comp=N,4μm,19.0s
WMQ LR LR
comp=E,4μm,15.0s
WMQ LR LR
comp=Z,3μm,17.0s
AS31 Alice Springs 40.74 160 *e*P **P** **01 14 02.5 -1.9**
ASAR Alice Springs 40.74 160 P **P** **01 14 02.5 -2.0**
ASAR Alice Springs 40.74 160 P **P** **01 14 02.5 -2.0**
comp=Z,18nm,0.3s,baz=337,slow=8.1,SNR=236
CLNS Chul'man 42.03 4 *e*P **P** **01 14 13.3 -1.3**
CLNS *e**PP pP 01 14 22.9 -7.0
CLNS *e* 01 15 50.1
CLNS *e* 01 16 07.5
CLNS *e*S **S** **01 20 30.0 +0.8**
CLNS *e*SS SS 01 23 25.0 -13
CLNS *e*SSS SSS 01 24 10.7
CLNS pmax pmax
comp=Z,13nm,1.1s
CLNS pmax pmax
comp=N,8.0nm,1.0s
CLNS pmax pmax
comp=E,6.0nm,1.0s
CLNS pmax pmax
comp=Z,3.0nm,0.8s
CLNS pmax pmax
comp=N,6.0nm,0.9s
CLNS pmax pmax
comp=E,4.0nm,0.8s
CLNS smax smax
comp=E,120nm,10.1s
CLNS smax smax
comp=N,116nm,11.7s
CLNS MLR MLR
comp=N,611nm,13.0s
CLNS MLR MLR
comp=Z,844nm,17.0s
CLNS MLR MLR
comp=E,589nm,14.0s
CTA Charters Tower 43.42 142 P **P** **01 14 24.6 -1.8**
CTA Charters Tower 43.42 142 P **P** **01 14 24.6 -1.8**
comp=E,10nm,0.8s,baz=327,slow=12,SNR=9.5
CTAO Charters Tower 43.42 142 *e*P **P** **01 14 25.3 -1.0**
CTAO pmax pmax
comp=Z,18nm,1.0s
CTAO Charters Tower 43.42 142 *e*P **P** **01 14 25.3 -1.0**
comp=Z,18nm,1.0s
POO Poona 44.08 281 *e*PKP **P** **01 14 31.0 -0.7**
MK31 Makanchi Array 44.55 323 *e*P **P** **01 14 35.0 -0.1**
MK31 Makanchi Array 44.55 323 *e*P **P** **01 14 35.0 -0.1**
MKAR Makanchi Array 44.55 323 *i* P **P** **01 14 35.0 -0.1**
MKAR pmax pmax
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 44.55 323 *e*P **P** **01 14 35.3 +0.2**
MKAR PcP **PcP** **01 16 17.4 0.0**
MKAR Makanchi Array 44.55 323 P **P** **01 14 34.6 -0.5**
comp=Z,4.4nm,0.8s,baz=118,slow=9.0,SNR=15
MKAR PcP **PcP** **01 16 17.4 0.0**
comp=Z,5.2nm,0.7s,baz=108,slow=4.9,SNR=6.7
MKAR LR LR 01 34 08.8
comp=Z,653nm,19.5s,baz=337,slow=37
KSH Kashi 45.46 311 P **P** **01 14 45.0 +2.5**
KSH *e*pP **pP** **01 15 00.3 +2.3**
KSH *e*PcP **PcP** **01 16 23.1 +2.3**
KSH *e*PP **PP** **01 16 33.1 +3.3**
KSH *e*ScP **ScP** **01 20 09.3 +0.8**
KSH *e*PcS **PcS** **01 20 16.1 +1.2**
KSH *e*S **S** **01 21 22.5 +2.6**
KSH *e*ScS **ScS** **01 24 33.0 -0.8**
KSH *e*SS **SS** **01 24 38.5 -6.1**
KSH pmax pmax
comp=Z,8.0nm,0.8s
KSH pmax pmax
comp=Z,220nm,4.2s
KSH LR LR
comp=N,830nm,11.3s
KSH LR LR
comp=E,970nm,11.5s
KSH LR LR
comp=Z,1μm,13.7s
FORT Forrest 46.11 170 *e*P **P** **01 14 47.0 -0.5**
comp=Z,70nm,0.8s
HNR Honiara 46.56 119 LR LR 01 32 28.9
comp=Z,2μm,18.8s,baz=306,slow=34
TKM2 Tokmak 2 46.96 316 *e*P **P** **01 14 53.3 -1.1**
TKM2 pmax pmax
comp=Z,7.0nm,0.8s
TKM2 Tokmak 2 46.96 316 *e*P **P** **01 14 53.3 -1.1**
comp=Z,6.8nm,0.8s
YAK Yakutsk 47.58 6 *e*P **P** **01 14 57.1 -1.5**
YAK *e**PP pP 01 15 06.8 -7.4
YAK *e* 01 16 25.6
YAK *e* 01 16 45.9
YAK *e*S **S** **01 21 47.2 -2.1**
YAK *e* 01 24 44.6
YAK *e*SSS SSS 01 26 20.8
YAK pmax pmax
comp=Z,42nm,1.1s
YAK pmax pmax
comp=N,21nm,1.3s
YAK pmax pmax
comp=E,9.0nm,1.4s
YAK pmax pmax
comp=Z,29nm,1.6s
YAK pmax pmax
comp=N,23nm,2.3s
YAK smax smax
comp=N,76nm,2.5s
YAK smax smax
comp=E,81nm,3.3s
YAK MLR MLR
comp=Z,987nm,19.0s
YAK MLR MLR
comp=N,653nm,16.0s
YAK MLR MLR
comp=E,546nm,17.0s
ZAA0 Zalesovo Array 47.59 333 *e*P **P** **01 14 57.6 -1.3**
ZALV Zalesovo Beam 47.59 333 *i* P **P** **01 14 58.0 -0.8**
ZALV pmax pmax
comp=Z,5.0nm,0.7s

ZALV	Zalesovo Beam	47.59	333		P		P	01 14 57.0	-1.8
ZALV					PcP		PcP	01 16 27.2	-0.6
ZALV	Zalesovo Beam	47.59	333		P		P	01 14 57.0	-1.8
	comp=Z,4.9nm,0.7s,baz=127,slow=6.7,SNR=28								
ZALV					PcP		PcP	01 16 27.2	-0.6
	comp=Z,2.0nm,0.5s,baz=119,slow=4.8,SNR=2.6								
ZALV					LR		LR	01 35 53.1	
	comp=Z,2µm,19.1s,baz=306,slow=37								
FRU	Bishkek	47.60	315	*e*P			P	01 15 00.0	+0.9
FRU					MLR		MLR		
	comp=Z,2µm,18.0s								
AAK	Ala-Archa	47.61	315	*e*P			P	01 15 00.5	+1.1
AAK	Ala-Archa	47.61	315	*e*P			P	01 15 00.5	+1.1
	comp=Z,2.0nm,1.0s								
AAK	Ala-Archa	47.61	315	P			pP	01 15 11.4	-3.5
	SNR=5.8								
NWAO	Narrogin (SRO)	47.63	183	P			P	01 14 57.5	-1.8
NWAO	Narrogin (SRO)	47.63	183	P			P	01 14 57.5	-1.8
	comp=Z,16nm,0.7s,baz=7.9,slow=10,SNR=5.7								
EKS2	Erkin-Say	48.11	315	*e*P			P	01 15 03.9	+0.7
EKS2					pmax		pmax		
	comp=Z,46nm,1.8s								
EKS2	Erkin-Say	48.11	315	*e*P			P	01 15 03.9	+0.7
	comp=Z,46nm,1.8s								
PEA0B	Petropavlovsk-	48.40	30	*e*P			P	01 15 04.1	-1.0
PETK	Petropavlovsk-	48.40	30	P			P	01 15 04.5	-0.6
PETK	Petropavlovsk-	48.40	30	P			P	01 15 04.5	-0.6
PETK	Petropavlovsk-	48.40	30	P			P	01 15 04.5	-0.6
	comp=Z,28nm,0.7s,baz=203,slow=6.6,SNR=36								
KURK	Kurchatov	48.71	326	*c i*P			P	01 15 07.3	-0.2
KURK					pmax		pmax		
	comp=Z,21nm,1.2s								
KURK	Kurchatov	48.71	326	*e*P			P	01 15 06.8	-0.7
	comp=Z,34nm,1.0s								
KURK	Kurchatov	48.71	326	P			P	01 15 07.9	+0.4
	SNR=11								
KURK	Kurchatov	48.71	326	P			P	01 15 06.2	-1.3
	comp=Z,105nm,0.6s,SNR=9.2								
NVS	Novosibirsk	48.88	333	⇓ *i*P			P	01 15 06.9	-1.8
NVS				*e*				01 22 01.3	
NVS					pmax		pmax		
	comp=Z,16nm,1.1s								
NVS					pmax		pmax		
	comp=N,9.0nm,1.2s								
KBL	Kabul	49.53	303	*e*P			P	01 15 13.2	-1.1
KBL					pmax		pmax		
	comp=Z,12nm,0.8s								
KBL	Kabul	49.53	303	*e*P			P	01 15 13.2	-1.1
	comp=Z,12nm,0.8s								
BBOO	Buckleboo	49.93	162	*e*P			P	01 15 15.2	-1.8
	comp=Z,7µm,2.5s								
KKAR	Karatay Array	50.52	314	*e*P			P	01 15 20.9	-0.5
KKAR					pmax		pmax		
	comp=Z,7.0nm,0.6s								
KKAR	Karatay Array	50.52	314	*e*P			P	01 15 20.9	-0.5
	comp=Z,7.4nm,0.6s								
STKA	Stephens Creek	50.99	156	*e*P			P	01 15 23.8	-1.2
	comp=Z,9.0nm,1.5s								
STKA	Stephens Creek	50.99	156	P			P	01 15 23.2	-1.8
	comp=Z,4.7nm,0.4s,baz=348,slow=6.7,SNR=18								
SEY	Seymchan	53.13	18	⇑ *i*P			P	01 15 40.7	+0.2
BRVK	Borovoye	54.37	326	*c i*P			P	01 15 49.5	-0.2
BRVK					pmax		pmax		
	comp=Z,13nm,1.0s								
BRVK	Borovoye	54.37	326	*e*P			P	01 15 49.1	-0.6
	comp=Z,20nm,1.0s								
BRVK	Borovoye	54.37	326	P			P	01 15 49.3	-0.4
	comp=Z,96nm,1.3s,SNR=5.4								
ABKT	Ailbek	58.73	305	P			P	01 16 21.2	+0.1
	comp=Z,144nm,0.7s,SNR=5.2								
ABKAR	Akbulak array	59.26	319	*e*P			P	01 16 23.5	-1.0
BILL	Bilibino	60.83	18	⇓ *e*P			P	01 16 34.3	-0.5
BILL				*i*				01 16 45.6	
BILL					pmax		pmax		
	comp=Z,86nm,1.4s								
BILL	Bilibino	60.83	18	*e*P			P	01 16 34.4	-0.5
	comp=Z,8.4nm,0.7s								
SVE	Sverdlovsk	60.93	327	⇓ *e*P			P	01 16 35.6	-0.1
SVE					pmax		pmax		
	comp=Z,30nm,1.2s								
ARU	Arti	61.91	326	*c i*P			P	01 16 40.8	-1.5
ARU								01 18 55.7	
ARU					S		S	01 25 02.2	+0.6
ARU					SS		SS	01 29 03.7	-0.7
ARU					pmax		pmax		
	comp=Z,21nm,1.7s								
ARU					MLR		MLR		
	comp=Z,1µm,17.0s								
ARU	Arti	61.91	326	P			P	01 16 40.5	-1.8
	comp=Z,91nm,0.5s,SNR=6.2								
SOKR	Solikamsk	63.69	330	⇑ *i*PKHKP			P	01 16 53.7	-0.4
SOKR					pmax		pmax		
	comp=Z,10.0nm,0.8s								
SOKR	Solikamsk	63.69	330	⇑ *i*P			P	01 16 53.7	-0.4
SOKR					pmax		pmax		
	comp=Z,10.0nm,0.8s								
MAK	Makhachkala	67.09	311	*e*PKHKP			P	01 17 16.6	+0.2
MAK				*e*SSS			SSS	01 33 13.1	
MAK					pmax		pmax		
	comp=Z,26nm,0.4s								
MAK	Makhachkala	67.09	311	*e*P			P	01 17 16.6	+0.2
MAK				*e*				01 19 40.6	
MAK				*e*PPP			PPP	01 21 16.5	
MAK				S			S	01 26 12.7	+6.7
MAK					pmax		pmax		
	comp=Z,26nm,0.4s								
MAK					MLR		MLR		
	comp=Z,810nm,14.0s								
GAMB	Gambell	67.26	27	*e*P			P	01 17 17.0	-0.1
	comp=Z,10nm,1.0s								
RAYN	Ar Rayn	70.03	290	P			P	01 17 32.9	-2.3
	comp=Z,87nm,0.8s,SNR=5.1								
KBZ	Khabaz	70.44	311	PKHKP			P	01 17 36.9	-0.3
KBZ	Khabaz	70.44	311	P			P	01 17 36.9	-0.3
KBZ	Khabaz	70.44	311	P			P	01 17 36.9	-0.3
	comp=Z,6.9nm,1.1s,baz=70,slow=4.9,SNR=6.6								
KIV	Kislovodsk	70.58	312	*e*PKHKP			P	01 17 38.4	+0.1
KIV					pmax		pmax		
	comp=Z,1µm,6.9s								
KIV					pmax		pmax		
	comp=Z,59nm,1.0s								
KIV	Kislovodsk	70.58	312	*e*P			P	01 17 38.4	+0.1
KIV				*e*				01 17 58.3	
KIV				*e*S			S	01 26 48.5	+0.9
KIV				*e*SS			SS	01 31 24.9	+5.1
KIV				*e*SSS			SSS	01 34 33.2	
KIV					pmax		pmax		
	comp=Z,59nm,1.0s								
KIV					MLR		MLR		
	comp=Z,751nm,18.0s								
SIRN	S¨–rnak	71.17	305	*i*P			P	01 17 43.6	+1.7
ARTV	Artvin	71.28	309	*i*P			P	01 17 43.7	+1.0
DAGI	Agillar	71.30	309	*i*P			P	01 17 43.5	+0.8
DDEM	Demirkent	71.44	309	*e*P			P	01 17 43.2	-0.3
BCA	Borcka	71.50	309	*e*P			P	01 17 41.0	-2.8
ERZM	Erzurum	71.80	308	*i*P			P	01 17 47.9	+2.0
EZM	Erzurum	71.80	308	*e*P			P	01 17 48.2	+2.2
BNGL	BINGOL	72.04	307	*i*P			P	01 17 47.4	+0.1
KLMR	Klimovskoe	72.38	330	*e*P			P	01 17 47.4	-1.2
KLMR					pmax		pmax		
	comp=Z,59nm,1.6s								
KLMR					MLR		MLR		
	comp=Z,888nm,16.0s								
BNGB	Bing¨ll	72.41	307	*e*P			P	01 17 46.6	-2.8
KOPT	Kop Dagi	72.46	308	*i*P			P	01 17 47.0	-2.9
BAYT	Ayd¨–ntepe-Bay	72.69	308	*e*P			P	01 17 48.4	-2.7
ERZN	Erzincan	73.09	307	*e*P			P	01 17 51.0	-2.4
GUMT	Gumushane	73.19	308	*e*P			P	01 17 51.4	-2.6
OBN	Obninsk	74.06	324	⇓ *i*P			P	01 17 55.8	-2.8
OBN					MLR		MLR		
	comp=Z,1µm,16.0s								
OBN	Obninsk	74.06	324	*i*			P	01 17 55.9	-2.7
RPZ	Rata Peaks	74.77	144	P			P	01 18 02.0	-0.9
RPZ	Rata Peaks	74.77	144	P			P	01 18 02.0	-0.9
	comp=Z,14nm,0.7s,baz=315,slow=1.4,SNR=3.7								
APA	Apatity	74.97	337	⇓ *e*P			P	01 18 03.6	0.0
APA					MLR		MLR		
	comp=Z,3µm,16.0s								
URZ	Urewera	75.32	137	P			P	01 18 05.0	-1.1
URZ	Urewera	75.32	137	P			P	01 18 05.0	-1.1
	comp=Z,10.0nm,0.8s,baz=176,slow=5.1,SNR=3.9								
RSO	Redoubt South	75.91	31	*e*P			P	01 18 09.6	+0.1
OHAK	Old Harbor	75.94	34	*e*P			P	01 18 09.6	+0.3
	comp=Z,45nm,0.9s								
PPLA	Purkeypile	75.95	28	*e*P			P	01 18 09.5	-0.1
	comp=Z,62nm,1.5s								
SPU	Mount Spurr	76.18	30	*e*P			P	01 18 10.8	0.0
KDAK	Kodiak Island	76.26	33	P			P	01 18 11.2	0.0
KDAK	Kodiak Island	76.26	33	P			P	01 18 11.2	0.0
	comp=Z,38nm,0.9s,baz=219,slow=2.0,SNR=9.4								
COLD	Coldfoot	76.37	24	*e*P			P	01 18 12.3	+0.6
	comp=Z,60nm,2.1s								
TRF	Thorofare Moun	76.75	27	*e*P			P	01 18 13.3	-0.8
	comp=Z,43nm,1.4s								
MCK	McKinley	77.32	27	*e*P			P	01 18 16.8	-0.3
MCK					pmax		pmax		
	comp=Z,54nm,1.0s								
MCK	McKinley	77.32	27	*e*P			P	01 18 16.8	-0.3
	comp=Z,54nm,1.0s								
PMR	Palmer	77.53	29	*e*P			P	01 18 17.5	-0.7
PMR					pmax		pmax		
	comp=Z,34nm,0.9s								
PMR	Palmer	77.53	29	*e*P			P	01 18 17.5	-0.7
	comp=Z,34nm,0.9s								
SEW	Seward	77.58	31	*e*P			P	01 18 17.6	-1.0
	comp=Z,49nm,1.0s								
COLA	College	77.62	26	*e*P			P	01 18 18.7	0.0
COLA					pmax		pmax		
	comp=Z,12nm,0.9s								
COLA	College	77.62	26	*e*P			P	01 18 18.7	0.0
	comp=Z,3.1nm,0.9s								
ARCES	ARCESS Array B	77.65	339	P			P	01 18 18.4	-0.5
ARCES	ARCESS Array B	77.65	339	P			P	01 18 18.4	-0.5
	comp=Z,13nm,0.9s,baz=84,slow=6.9,SNR=16								
BR131	Keskin Array S	77.73	308	*e*P			P	01 18 20.2	+0.2
	comp=Z,26nm,1.0s								
SML	Sawmill	77.87	29	*e*P			P	01 18 21.3	+1.0
SML					pmax		pmax		
	comp=Z,26nm,1.2s								
SML	Sawmill	77.87	29	*e*P			P	01 18 21.3	+1.0
	comp=Z,26nm,1.2s								
ILAR	Eielson Array	78.05	26	P			P	01 18 20.1	-1.1
ILAR	Eielson Array	78.05	26	P			P	01 18 20.1	-1.1
	comp=Z,5.9nm,0.9s,baz=258,slow=5.1,SNR=27								
PAX	Paxson	78.98	28	*e*P			P	01 18 27.1	+0.7
PAX					pmax		pmax		
	comp=Z,25nm,0.9s								
PAX	Paxson	78.98	28	*e*P			P	01 18 27.1	+0.7
	comp=Z,25nm,0.9s								
DIV	Divide	79.20	30	*e*P			P	01 18 27.8	+0.2
	comp=Z,57nm,0.9s								
DOT	Dot Lake	79.47	27	*e*P			P	01 18 29.8	+0.8
	comp=Z,66nm,1.0s								
KIS	Kishinev	79.92	316	*e*PP			PP	01 21 30.0	-3.8
KIS				*e*SKKS			SKSac	01 28 42.0	-1.9
KIS					LRM		MLR	02 29 55.0	
	comp=Z,2µm,20.0s								
EGAK	Eagle	80.44	25	*e*P			P	01 18 34.2	0.0
	comp=Z,18nm,0.8s								
CASY	Casey	81.25	184	*e*P			P	01 18 37.9	-0.4
	comp=Z,29nm,1.0s								
BUR08	Bucovina Ar. S	82.19	317	*e*P			P	01 18 44.6	+0.6
KMBO	Kilima Mbogo	83.10	267	*e*P			P	01 18 49.9	+0.5
	comp=Z,19nm,1.1s								
KMBO	Kilima Mbogo	83.10	267	P			P	01 18 49.8	+0.3
	comp=Z,4.1nm,0.9s,baz=35,slow=4.7,SNR=5.7								
ALN	Alexandroupoli	83.19	310	*e*P			P	01 18 45.5	-3.6
ZKR	Zakros	84.45	305	*e*P			P	01 18 50.9	-4.8
SKAG	Skagway	84.65	30	*e*P			P	01 18 57.0	+0.9
	comp=Z,49nm,0.9s								
HFS	Hagfors	85.01	331	P			P	01 18 57.0	-1.0
HFS	Hagfors	85.01	331	P			P	01 18 57.0	-1.0
	baz=108,slow=4.7								
NB2	NORSAR Subarra	85.80	332	P			P	01 19 01.3	-0.6
	comp=Z,25nm,0.9s,baz=68,slow=5.3								
NB2	NORSAR Subarra	85.80	332	P			P	01 19 01.3	-0.6
	baz=68,slow=5.3								
NOA	NORSAR Array B	85.80	332	P			P	01 19 00.8	-1.1
NOA	NORSAR Array B	85.80	332	P			P	01 19 00.8	-1.1
	comp=Z,17nm,1.0s,baz=68,slow=4.9,SNR=6.7								
NAO01	NORSAR Array S	86.02	332	*e*P			P	01 19 02.5	-0.4
	comp=Z,48nm,1.1s								
WRAK	Wrangell Islan	87.25	32	*e*P			P	01 19 10.5	+1.5
	comp=Z,11nm,0.8s								
DLBC	Dease Lake	87.58	30	*e*P			P	01 19 12.2	+1.6
DLBC	Dease Lake	87.58	30	P			P	01 19 12.3	+1.6
	comp=Z,13nm,0.9s,baz=259,slow=4.8,SNR=16								
RUE	Ruedersdorf	87.77	324	*e*P			P	01 19 11.0	-0.6
	comp=Z,26nm,1.1s								
GERES	GERESS Array B	89.16	321	P			P	01 19 18.0	-0.4
GERES	GERESS Array B	89.16	321	P			P	01 19 18.0	-0.4
	comp=Z,1.6nm,0.7s,baz=60,slow=5.9,SNR=5.6								
CEL	Celeste	91.45	310	*e*P			P	01 19 27.0	-2.3
	comp=Z,78nm,1.3s								
STU	Stuttgart	91.92	322	*e*P			P	01 19 30.2	-1.0
STU	Stuttgart	91.92	322	*e*P			P	01 19 30.2	-1.0
YKW3	Yellowknife Ar	91.95	22	*e*P			P	01 19 30.5	-0.5
MAW	Mawson	91.95	199	P			P	01 19 31.6	+1.0
MAW	Mawson	91.95	199	P			P	01 19 31.6	+1.0
	comp=Z,4.8nm,0.8s,baz=101,slow=9.2,SNR=8.7								
YKA	Yellowknife Ar	91.99	22	P			P	01 19 31.4	+0.2
YKA				PKiKP		PKiKP		01 24 21.1	+0.1
YKA				PKKP		PKKPdf		01 36 47.0	+0.9
YKA	Yellowknife Ar	91.99	22	P			P	01 19 31.4	+0.2
	comp=Z,8.6nm,0.7s,baz=308,slow=4.3,SNR=109								
YKA				PKiKP		PKiKP		01 24 21.1	+0.1
	comp=Z,0.2nm,0.6s,baz=305,slow=9.5,SNR=4.2								
YKA				PKKP		PKKPdf		01 36 47.0	+0.9
	comp=Z,0.4nm,0.5s,baz=133,slow=2.8,SNR=12								
DOU	Dourbes	94.00	324	P			P	01 19 40.9	+0.2
EKA	Eskdalemuir Ar	95.21	331	P			P	01 19 45.6	-0.5
EKA				PKKPbc		PKKPdf		01 36 39.6	-0.7
EKA	Eskdalemuir Ar	95.21	331	P			P	01 19 45.6	-0.5
	comp=Z,5.3nm,1.1s,baz=51,slow=5.7,SNR=3.9								
EKA				PKKPbc		PKKPdf		01 36 39.6	-0.7
	comp=Z,1.1nm,0.8s,baz=215,slow=4.1,SNR=3.6								
ESK	Eskdalemuir	95.24	331	*e*P			P	01 19 45.5	-0.7
ESK					pmax		pmax		
	comp=Z,44nm,1.4s								
ESK	Eskdalemuir	95.24	331	*e*P			P	01 19 45.5	-0.7
	comp=Z,44nm,1.4s								
VNDA	Vanda	95.36	172	*e*P			P	01 19 45.9	-0.3
	comp=Z,3.3nm,1.1s								
VNDA	Vanda	95.36	172	P			P	01 19 47.6	+1.4
	comp=Z,2.0nm,1.0s,baz=298,slow=8.1,SNR=5.8								
NEW	Newport	99.34	35	P			Pdif	01 20 05.5	+0.5
NEW	Newport	99.34	35	P			Pdif	01 20 05.5	+0.5
	comp=Z,1.0nm,0.4s,baz=256,slow=4.2,SNR=3.2								
NVAR	Mina Array Bea	104.05	43	Pdif			Pdif	01 20 27.7	+1.3
NVAR	Mina Array Bea	104.05	43	Pdiff			Pdif	01 20 27.7	+1.3
	comp=Z,0.4nm,0.7s,baz=304,slow=6.4,SNR=2.8								
TPAW	Teton Pass	105.65	36	*e*PKP			PKiKP	01 24 45.8	-0.6
DUG	Dugway	106.57	39	*e*PKP			PKiKP	01 24 48.5	+0.5
SDCO	Great Sand Dun	112.53	38	*e*PKP			PKiKP	01 25 00.1	+0.7
TOA0	Torodi Ar. Sit	112.71	291	*e*PKP			PKiKP	01 24 59.4	-0.6
TORD	Torodi Ar. Bea	112.71	291	PKiKP			PKiKP	01 24 58.8	-1.2
TORD				PP			PP	01 25 49.2	+1.4
TORD				PKKPbc			PKKPbc	01 35 48.1	+0.2
TORD	Torodi Ar. Bea	112.71	291	PKiKP			PKiKP	01 24 58.8	-1.2
	comp=Z,1.8nm,0.8s,baz=76,slow=2.2,SNR=6.0								
TORD				PP			PP	01 25 49.2	+1.4
	comp=Z,1.8nm,0.9s,baz=64,slow=5.3,SNR=4.1								
TORD				PKKPbc			PKKPbc	01 35 48.1	+0.2
	comp=Z,0.4nm,0.8s,baz=264,slow=2.6,SNR=4.9								
ANMO	Albuquerque	113.78	40	*e*PKP			PKiKP	01 25 02.5	+0.7
ANMO	Albuquerque	113.78	40	PKiKP			PKiKP	01 25 04.2	+2.4
	comp=Z,1.7nm,0.9s,baz=257,slow=1.3,SNR=5.6								
V24A	Rampart Ranch,	114.00	39	P				01 25 02.8	
	baz=114								
T26A	Comanche Natio	114.03	37	P			PKPdf	01 25 02.5	+0.2
	baz=114								
SNAA	Sanae	114.05	197	*e*PKP			PKPdf	01 25 00.9	-0.1
U25A	Circle Dot Ran	114.08	38	P			PKPdf	01 25 03.1	+0.8
	baz=114								
Y22A	Socorro	114.10	42	P			PKPdf	01 25 03.1	+0.7
	baz=114								
W24A	Lazy 6 Ranch,	114.26	40	P			PKPdf	01 25 03.4	+0.6
	baz=114								
V25A	Rancho No Teng	114.33	39	P			PKPdf	01 25 04.0	+1.1
	baz=114								
121A	Keskes Peak, D	114.45	43	P			PKPdf	01 25 03.4	+0.3
	baz=114								
T27A	Campo	114.61	36	P			PKPdf	01 25 03.5	+0.2
	baz=114								
Y24A	Capitan	115.08	41	P			PKPdf	01 25 05.1	+0.8
	baz=115								
Z24A	Sheeppen Canyo	115.52	41	P			PKPdf	01 25 06.1	+0.9
	baz=115								
Y25A	Mesa, Roswell	115.55	40	P			PKPdf	01 25 05.2	+0.1
	baz=115								
125A	Gardner Draw,	116.40	41	P			PKPdf	01 25 06.8	0.0
	baz=116								
MNTX	Cornudas Mount	116.56	43	*e*PKPdf			PKPdf	01 25 08.3	+1.3
X28A	Dimmitt	116.67	38	P			PKPdf	01 25 08.1	+0.8
	baz=116								
325A	Bean Ranch, Si	117.03	43	P			PKPdf	01 25 08.7	+0.6
	baz=117								
226B	Tecolote Peak,	117.10	41	P			PKPdf	01 25 09.4	+1.3
	baz=117								
425A	Indio Mountain	117.40	43	P			PKPdf	01 25 09.8	+0.9
	baz=117								
426A	McDonald Obser	118.10	43	P			PKPdf	01 25 11.4	+1.1
	baz=118								
SADO	Sadowa	118.16	15	PKP			PKPdf	01 25 09.2	-0.5
SADO	Sadowa	118.16	15	PKP			PKPdf	01 25 09.2	-0.5
	comp=Z,1.2nm,0.6s,baz=315,slow=5.7,SNR=3.7								
427A	Hayter Ranch,	118.39	42	⇑P			PKPdf	01 25 11.5	+0.9
	baz=118,SNR=5.8								
328A	Wristen Ranch,	118.42	41	P			PKPdf	01 25 10.5	-0.2
	baz=118								
526A	Mary Lane Ranc	118.46	43	P			PKPdf	01 25 10.9	+0.1
	baz=118								
WMOK	Wichita Mounta	118.51	36	*e*PKIKP			PKPdf	01 25 10.1	-0.6
WMOK	Wichita Mounta	118.51	36	*e*PKPdf			PKPdf	01 25 10.1	-0.6
527A	Woodward Ranch	118.72	43	⇑P			PKPdf	01 25 11.1	-0.2
	baz=119,SNR=6.5								
Z31A	Sharp Cattle R	118.73	38	P			PKPdf	01 25 07.4	-3.8
	baz=119								
626A	Big Bend Ranch	118.75	44	⇑P			PKPdf	01 25 11.2	-0.2
	baz=119,SNR=7.1								
428A	Kincaid Ranch,	118.94	42	⇑P			PKPdf	01 25 11.6	-0.2
	baz=119,SNR=12								
Z32A	Haskell	119.14	37	⇑P			PKPdf	01 25 12.0	0.0
	baz=119,SNR=5.8								
230A	Sterling City	119.14	40	⇓P			PKPdf	01 25 12.0	0.0
	baz=119								
TXAR	Lajitas Array	119.21	43	PKP			PKPdf	01 25 12.6	+0.3
TXAR				PKKPab			PKKPab	01 35 33.2	+4.1
TXAR	Lajitas Array	119.21	43	PKP			PKPdf	01 25 12.6	+0.3
	comp=Z,2.3nm,0.6s,baz=229,slow=0.9,SNR=35								
TXAR				PKKPab			PKKPab	01 35 33.2	+4.1
	comp=Z,0.2nm,0.7s,baz=153,slow=8.4,SNR=3.6								
528A	Cox Ranch, San	119.24	42	⇓P			PKPdf	01 25 11.8	-0.5
	baz=119								
627A	Terlingua Ranc	119.31	43	⇓P			PKPdf	01 25 12.6	+0.1
	baz=119,SNR=21								
429A	Davenport Ranc	119.51	41	⇑P			PKPdf	01 25 12.3	-0.5
	baz=119								
ABTX	Abilene, Hawle	119.52	38	⇓P			PKPdf	01 25 11.7	-1.0
	baz=119								
628A	Black Gap, Mar	119.62	43	⇑P			PKPdf	01 25 13.5	+0.5
	baz=120,SNR=8.3								
529A	Stev Forest Ra	119.64	42	⇓P			PKPdf	01 25 12.6	-0.4
	baz=120								
430A	Baggett Ranch,	119.82	41	⇓P			PKPdf	01 25 13.2	-0.1
	baz=120								
331A	San Angelo	119.97	40	⇓P			PKPdf	01 25 13.0	-0.6
	baz=120,SNR=6.9								
530A	J-C Ranch, Com	120.19	41	⇑P			PKPdf	01 25 14.3	+0.2
	baz=120,SNR=12								
431A	Sonora	120.28	40	⇓P			PKPdf	01 25 14.8	+0.5
	baz=120								
332A	Millersview	120.33	39	⇓P			PKPdf	01 25 14.7	+0.4
	baz=120,SNR=6.9								
531A	Rocksprings	120.68	41	P			PKPdf	01 25 15.2	+0.2
	baz=121								
JCT	Junction City	120.92	40	*e*PKIKP			PKPdf	01 25 16.0	+0.5
JCT	Junction City	120.92	40	*e*PKPdf			PKPdf	01 25 16.0	+0.5
JCT	Junction City	120.92	40	P			PKPdf	01 25 15.6	+0.2
	baz=121								
532A	Rocksprings	121.10	40	P			PKPdf	01 25 16.2	+0.4
	baz=121								
DBIC	Dimbokro	121.11	287	PKP			PKPdf	01 25 15.7	-0.5
DBIC				*e*PKPdf			PKiKP	01 25 15.9	-0.3
DBIC	Dimbokro	121.11	287	PKP			PKPdf	01 25 15.7	-0.5
	comp=Z,5.1nm,0.9s,baz=18,slow=6.9,SNR=6.0								
632A	Uvalde	121.61	41	P			PKPdf	01 25 16.8	0.0
	baz=122								
WVT	Waverly	122.91	27	*e*PKIKP			PKPdf	01 25 18.8	-0.3

PARC				Sg	Sg	01 17 11.4	+1.3	
PARC	**Parchiule**	**0.19**	**294**	Pg	Pg	01 17 07.9	+0.4	
PARC				Sg	Sg	01 17 11.4	+1.3	
FSSB	**Fossombrone**	**0.25**	**61**	Pg	Pg	01 17 09.4	+0.8	
FSSB				Sg	Sb	01 17 13.8	-1.4	
FSSB	**Fossombrone**	**0.25**	**61**	Pg	Pg	01 17 09.4	+0.8	
FSSB				Sg	Sb	01 17 13.8	-1.4	

*CSEM **24** 01:17:12.9, 42°.39N×13°.34E, h17km, MD2.1/1, After ROM*
ROM 24 01:17:12.9±0.1, 42°.39N×13°.34E, h17km±1km, Md2.1/1, Ml1.0/6, 1D, Error ellipse: s-maj=1.2km s-min=1.0km az=118.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**127**	*i*P	Pg	01 17 15.8	-0.3
AQU	**L'Aquila**	**0.05**	**127**	Pg	Pg	01 17 16.1	0.0
AQU				Sg	Sg	01 17 18.5	+0.3
	129nm,0.3s						
AQU	**L'Aquila**	**0.05**	**127**	Pg	Pg	01 17 16.1	0.0
AQU				Sg	Sg	01 17 18.5	+0.3
	129nm,0.3s						
CAMP	**Campotosto**	**0.16**	**18**	Pg	Pg	01 17 17.4	+0.1
CAMP				Sg	Sb	01 17 21.0	+0.2
	44nm,0.8s						
CAMP	**Campotosto**	**0.16**	**18**	Pg	Pg	01 17 17.4	+0.1
CAMP				Sg	Sb	01 17 21.0	+0.2
	44nm,0.8s						
FIAM	**Fiamignano**	**0.20**	**235**	Pg	Pg	01 17 18.1	+0.1
FIAM				Sg	Sb	01 17 22.0	-0.1
	13nm,0.6s						
FIAM	**Fiamignano**	**0.20**	**235**	Pg	Pg	01 17 18.1	+0.1
FIAM				Sg	Sb	01 17 22.0	-0.1
	13nm,0.6s						
TERO	**Teramo**	**0.30**	**39**	Pg	Pg	01 17 19.4	-0.1
TERO				Sg	Sg	01 17 24.3	+0.2
	18nm,0.2s						
TERO	**Teramo**	**0.30**	**39**	Pg	Pg	01 17 19.4	-0.1
TERO				Sg	Sg	01 17 24.3	+0.2
	18nm,0.2s						
LNSS	**Leonessa**	**0.31**	**314**	Pg	Pg	01 17 19.8	+0.1
	13nm,0.4s						
LNSS	**Leonessa**	**0.31**	**314**	Pg	Pg	01 17 19.8	+0.1
	13nm,0.4s						
PTQR	**Pietraquaria**	**0.37**	**173**	Pg	Pg	01 17 20.3	-0.3
PTQR				Sg	Sb	01 17 26.3	-0.3
PTQR	**Pietraquaria**	**0.37**	**173**	Pg	Pg	01 17 20.3	-0.3
PTQR				Sg	Sb	01 17 26.3	-0.3
VCEL	**Villa Celiera**	**0.37**	**88**	Pg	Pg	01 17 20.9	+0.2
VCEL				Sg	Sb	01 17 27.0	+0.2
	34nm,0.5s						
VCEL	**Villa Celiera**	**0.37**	**88**	Pg	Pg	01 17 20.9	+0.2
VCEL				Sg	Sb	01 17 27.0	+0.2
	34nm,0.5s						
NRCA	**Norcia**	**0.48**	**339**	Pg	Pg	01 17 22.4	-0.3
	1.0nm,0.2s						
NRCA	**Norcia**	**0.48**	**339**	Pg	Pg	01 17 22.4	-0.3
	1.0nm,0.2s						
MNS	**Montasola**	**0.49**	**270**	Pg	Pb	01 17 23.1	-0.1
	8.0nm,0.5s						
MNS	**Montasola**	**0.49**	**270**	Pg	Pb	01 17 23.1	-0.1
	8.0nm,0.5s						
CERT	**Cerreto**	**0.51**	**212**	Pg	Pg	01 17 23.1	-0.2
CERT	**Cerreto**	**0.51**	**212**	Pg	Pg	01 17 23.1	-0.2
INTR	**Introdacqua**	**0.56**	**132**	Pg	Pg	01 17 24.1	-0.1
INTR	**Introdacqua**	**0.56**	**132**	Pg	Pg	01 17 24.1	-0.1
FDMO	**Fiordimonte**	**0.68**	**344**	Pg	Pg	01 17 25.8	-0.5
FDMO	**Fiordimonte**	**0.68**	**344**	Pg	Pg	01 17 25.8	-0.5

*DDA **24** 01:31:29.0, 39°.21N×25°.85E, h7km, MD3.1*
*ISCJB **24** 01:31:29.9±0.5, 39°.19N±0°.03×25°.87E±0°.04, h10km±3km, Error ellipse: s-maj=5.0km s-min=4.4km az=7.2*
*ISK **24** 01:31:29.3, 39°.18N×25°.86E, h13km, MD3.3*
*CSEM **24** 01:31:29.9±0.2, 39°.17N×25°.86E, h10km, ML2.6/4, Error ellipse: s-maj=4.3km s-min=3.3km az=89.0*
*THE **24** 01:31:30.5, 39°.16N×25°.89E, h8km±1km, ML2.6/4, Error ellipse: s-maj=2.0km s-min=1.4km az=80.0*
ISC 24 01:31:29.9±0.8, 39°.17N±0°.02×25°.85E±0°.03, h13km±5km, n66, σ0s60/88, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.04**	**2**	P	**Pg**	**01 31 32.4**	**+0.1**
SIGR				S	**Sg**	**01 31 33.9**	**-0.1**
SIGR	**SIGRI**	**0.04**	**2**	P	**Pg**	**01 31 32.4**	**+0.1**
SIGR				S	**Sg**	**01 31 33.9**	**-0.1**
PRK	**Paraskevi**	**0.33**	**76**	P	**Pg**	**01 31 35.9**	**-0.8**
PRK				S	**Sg**	**01 31 40.7**	**-0.6**
PRK	**Paraskevi**	**0.33**	**76**	P	**Pg**	**01 31 35.9**	**-0.8**
PRK				S	**Sg**	**01 31 40.7**	**-0.6**
AYVA	**Ayvalik**	**0.67**	**78**	*i* P	**Pg**	**01 31 42.9**	**0.0**
AYVA				*i* S	**Sg**	**01 31 51.4**	**-0.2**
AYVA	**Ayvalik**	**0.67**	**78**	*i* P	**Pg**	**01 31 42.9**	**0.0**
AYVA				*i* S	**Sg**	**01 31 51.4**	**-0.2**
EZN	**Ezine**	**0.75**	**29**	*e*PG	**Pg**	**01 31 43.9**	**-0.6**
EZN				*e*SG	**Sg**	**01 31 54.6**	**+0.2**
EZN	**Ezine**	**0.75**	**29**	*e*Pg	**Pg**	**01 31 43.9**	**-0.6**
EZN				*e*Sg	**Sg**	**01 31 54.6**	**+0.2**
CHOS	**Chios island**	**0.80**	**169**	P	**Pg**	**01 31 45.0**	**-0.3**
CHOS				S	**Sb**	**01 31 57.7**	**+1.3**
CHOS	**Chios island**	**0.80**	**169**	P	**Pg**	**01 31 45.0**	**-0.3**
CHOS				S	**Sb**	**01 31 57.7**	**+1.3**
URLA	**Izmir**	**0.99**	**144**	*i* P	**Pb**	**01 31 48.4**	**-0.6**
URLA				*i* S	**Sb**	**01 32 01.8**	**-0.2**
URLA	**Izmir**	**0.99**	**144**	*i* P	**Pb**	**01 31 48.4**	**-0.6**
URLA				*i* S	**Sb**	**01 32 01.8**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.32**	**21**	*e*PN	**Pn**	**01 31 54.0**	**-0.1**
GELI				*e*SN	**Sb**	**01 32 11.2**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.32**	**21**	*e*Pn	**Pn**	**01 31 54.0**	**-0.1**
GELI				*e*Sn	**Sb**	**01 32 11.3**	**-0.1**
IZM	**Izmir**	**1.34**	**124**	*e*PN	**Pn**	**01 31 53.9**	**-0.6**
IZM	**Izmir**	**1.34**	**124**	*e*Pn	**Pn**	**01 31 53.9**	**-0.6**
LPK	**Lapseki**	**1.39**	**30**	*e*PN	**Pn**	**01 31 55.1**	**0.0**
LPK				*e*SN	**Sb**	**01 32 13.5**	**0.0**
LPK	**Lapseki**	**1.39**	**30**	*e*Pn	**Pn**	**01 31 55.1**	**0.0**
LPK				*e*Sn	**Sb**	**01 32 13.5**	**0.0**
BALY	**Balya**	**1.48**	**67**	*i* P	**Pn**	**01 31 56.0**	**-0.4**
BALY				*i* S	**Sg**	**01 32 17.2**	**-0.4**
BALY	**Balya**	**1.48**	**67**	*i* P	**Pn**	**01 31 56.0**	**-0.4**
BALY				*i* S	**Sg**	**01 32 17.2**	**-0.4**
AOS	**Alonnisos**	**1.53**	**271**	P	**Pb**	**01 31 57.9**	**-0.3**
AOS				S	**Sb**	**01 32 17.8**	**+0.2**
AOS	**Alonnisos**	**1.53**	**271**	P	**Pb**	**01 31 57.9**	**-0.3**
AOS				S	**Sb**	**01 32 17.8**	**+0.2**
AKHS	**Akhisar**	**1.55**	**100**	*e*P	**Pb**	**01 31 59.1**	**+0.5**
AKHS				*i* S	**Sg**	**01 32 20.9**	**+0.9**
AKHS	**Akhisar**	**1.55**	**100**	*e*P	**Pb**	**01 31 59.1**	**+0.5**
AKHS				*i* S	**Sg**	**01 32 20.9**	**+0.9**
ENEZ	**Enez**	**1.58**	**8**	*e*PN	**Pn**	**01 31 57.6**	**-0.1**
ENEZ	**Enez**	**1.58**	**8**	*e*Pn	**Pn**	**01 31 57.6**	**-0.1**
ERIK	**Erikli-Kesan**	**1.58**	**18**	*e*PN	**Pn**	**01 31 57.7**	**0.0**
ERIK	**Erikli-Kesan**	**1.58**	**18**	*e*Pn	**Pn**	**01 31 57.7**	**0.0**
BALB	**Balikesir**	**1.64**	**73**	*e*PN	**Pn**	**01 31 58.9**	**+0.4**
BALB	**Balikesir**	**1.64**	**73**	*e*Pn	**Pn**	**01 31 58.9**	**+0.4**
KRBG	**Karabiga-Canak**	**1.65**	**42**	*e*PN	**Pn**	**01 31 58.0**	**-0.7**
KRBG	**Karabiga-Canak**	**1.65**	**42**	*e*Pn	**Pn**	**01 31 58.0**	**-0.7**
GONE	**Gonen-Balikesi**	**1.67**	**58**	*e*PN	**Pn**	**01 31 58.4**	**-0.5**
GONE	**Gonen-Balikesi**	**1.67**	**58**	*e*Pn	**Pn**	**01 31 58.4**	**-0.5**
ALN	**Alexandroupoli**	**1.73**	**5**	S	**Sb**	**01 32 24.0**	**+0.7**
ALN	**Alexandroupoli**	**1.73**	**5**	S	**Sb**	**01 32 24.0**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.83**	**33**	*e*PN	**Pn**	**01 32 01.4**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.83**	**33**	*e*Pn	**Pn**	**01 32 01.4**	**+0.2**
MRMT	**Marmara Adasi**	**1.96**	**43**	*e*PN	**Pn**	**01 32 02.3**	**-0.7**
MRMT	**Marmara Adasi**	**1.96**	**43**	*e*Pn	**Pn**	**01 32 02.3**	**-0.7**
DURS	**Dursunbey**	**2.08**	**77**	*i* P	**Pn**	**01 32 04.1**	**-0.5**
DURS	**Dursunbey**	**2.08**	**77**	*i* P	**Pn**	**01 32 04.1**	**-0.5**
KCTX	**Karacabey (Bur**	**2.22**	**60**	*e*PN	**Pn**	**01 32 06.5**	**0.0**
KCTX	**Karacabey (Bur**	**2.22**	**60**	*e*Pn	**Pn**	**01 32 06.5**	**0.0**
KULA	**Kula-Manisa**	**2.29**	**106**	*e*PN	**Pn**	**01 32 07.5**	**0.0**
KULA	**Kula-Manisa**	**2.29**	**106**	*e*Pn	**Pn**	**01 32 07.5**	**0.0**
MDNY	**Mudanya-Bursa**	**2.63**	**62**	*e*PN	**Pn**	**01 32 12.4**	**+0.4**
MDNY	**Mudanya-Bursa**	**2.63**	**62**	*e*Pn	**Pn**	**01 32 12.5**	**+0.4**
ARMT	**Armutlu**	**2.70**	**58**	*e*PN	**Pn**	**01 32 14.2**	**+1.1**
ARMT	**Armutlu**	**2.70**	**58**	*e*Pn	**Pn**	**01 32 14.3**	**+1.1**
EDRB	**Edirne**	**2.76**	**14**	*e*PN	**Pn**	**01 32 14.0**	**+0.1**
EDRB	**Edirne**	**2.76**	**14**	*e*Pn	**Pn**	**01 32 14.0**	**+0.1**
TVSB	**Tavsanli**	**2.81**	**83**	*e*PN	**Pn**	**01 32 15.0**	**+0.2**
TVSB	**Tavsanli**	**2.81**	**83**	*e*Pn	**Pn**	**01 32 15.0**	**+0.2**
CTKS	**Kestanelik-??a**	**2.90**	**44**	*e*PN	**Pn**	**01 32 16.6**	**+0.9**
CTKS	**Kestanelik-??a**	**2.90**	**44**	*e*Pn	**Pn**	**01 32 16.7**	**+0.9**
BGKT	**Bogazkoy**	**3.01**	**47**	*e*PN	**Pn**	**01 32 17.9**	**+0.6**
BGKT	**Bogazkoy**	**3.01**	**47**	*e*Pn	**Pn**	**01 32 17.9**	**+0.6**
BUY	**Buyukada**	**3.02**	**55**	*e*PN	**Pn**	**01 32 18.4**	**+1.0**
BUY	**Buyukada**	**3.02**	**55**	*e*Pn	**Pn**	**01 32 18.5**	**+1.0**
ISK	**Istanbul-Kandi**	**3.10**	**51**	*e*PN	**Pn**	**01 32 19.6**	**+1.1**
ISK	**Istanbul-Kandi**	**3.10**	**51**	*e*Pn	**Pn**	**01 32 19.7**	**+1.1**
KLYT	**Kilyos**	**3.21**	**49**	*e*PN	**Pn**	**01 32 21.4**	**+1.4**
KLYT	**Kilyos**	**3.21**	**49**	*e*Pn	**Pn**	**01 32 21.4**	**+1.4**
ADVT	**Abdulvahap**	**3.25**	**66**	*e*PN	**Pn**	**01 32 21.4**	**+0.8**
ADVT	**Abdulvahap**	**3.25**	**66**	*e*Pn	**Pn**	**01 32 21.4**	**+0.8**

*CSEM **24** 01:40:02.2, 35°.60N×22°.60E, h39km, MD3.5, After ATH*
ATH 24 01:40:02.2, 35°.60N×22°.60E, h39km±2km, MD3.5/13, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.63**	**65**	*e*PN	Pn	01 40 15.4	+0.7
ANKY				*e*SN	Sn	01 40 25.0	+1.4
ANKY	**Antikythira Is**	**0.63**	**65**	*e*Pn	Pn	01 40 15.4	+0.7
ANKY				*e*Sn	Sn	01 40 25.0	+1.4
KYTH	**Kithira**	**0.77**	**27**	*e*PN	Pn	01 40 17.7	+1.1
KYTH	**Kithira**	**0.77**	**27**	*e*Pn	Pn	01 40 17.7	+1.1
VLI	**Veliai**	**1.15**	**14**	*e*PN	Pn	01 40 23.6	+1.8
VLI				*e*SN	Sn	01 40 38.7	+2.4
VLI	**Veliai**	**1.15**	**14**	*e*Pn	Pn	01 40 23.6	+1.8
VLI				*e*Sn	Sn	01 40 38.7	+2.4
DYR	**Agios Nikonas**	**1.18**	**350**	*e*PN	Pn	01 40 23.8	+1.6
DYR				*e*SN	Sn	01 40 40.2	+3.1
DYR	**Agios Nikonas**	**1.18**	**350**	*e*Pn	Pn	01 40 23.8	+1.6
DYR				*e*Sn	Sn	01 40 40.2	+3.1
PYL	**PYLOS**	**1.47**	**332**	*e*PB	Pn	01 40 28.1	+1.9
PYL				*e*SN	Sn	01 40 45.8	+1.7
PYL	**PYLOS**	**1.47**	**332**	*e*Pb	Pn	01 40 28.1	+1.9
PYL				*e*Sn	Sn	01 40 45.8	+1.7
ITM	**Ithomi**	**1.67**	**341**	*e*PN	Pn	01 40 29.9	+1.0
ITM	**Ithomi**	**1.67**	**341**	*e*Pn	Pn	01 40 29.9	+1.0
VLX	**Vlachokerasia**	**1.78**	**354**	*e*PN	Pn	01 40 31.6	+1.1
VLX	**Vlachokerasia**	**1.78**	**354**	*e*Pn	Pn	01 40 31.6	+1.1
DID	**Didima**	**1.97**	**15**	*e*PN	Pn	01 40 34.7	+1.6
DID	**Didima**	**1.97**	**15**	*e*Pn	Pn	01 40 34.7	+1.6
GUR	**Goura**	**2.34**	**355**	*e*PN	Pn	01 40 40.2	+1.9
GUR	**Goura**	**2.34**	**355**	*e*Pn	Pn	01 40 40.2	+1.9
KLV	**Kalavryta, Ach**	**2.47**	**352**	*e*PN	Pn	01 40 42.0	+2.0
KLV	**Kalavryta, Ach**	**2.47**	**352**	*e*Pn	Pn	01 40 42.0	+2.0
LAKA	**Lakka**	**2.68**	**349**	*e*PN	Pn	01 40 45.2	+2.3
LAKA	**Lakka**	**2.68**	**349**	*e*Pn	Pn	01 40 45.2	+2.3
TRIZ	**Trizonia**	**2.79**	**351**	*e*PN	Pn	01 40 46.6	+2.3
TRIZ	**Trizonia**	**2.79**	**351**	*e*Pn	Pn	01 40 46.6	+2.3
KALE	**Kalithea**	**2.81**	**353**	*e*PN	Pn	01 40 46.0	+1.3
KALE	**Kalithea**	**2.81**	**353**	*e*Pn	Pn	01 40 46.0	+1.3
EFP	**Efpalio**	**2.88**	**349**	*e*PN	Pn	01 40 47.2	+1.7
EFP	**Efpalio**	**2.88**	**349**	*e*Pn	Pn	01 40 47.2	+1.7

IDC 24 01:41:35.0±3.3, 31°.88S×177°.47W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.6/19, mbtmp3.7/3, ML2.7/1, Error ellipse: s-maj=75.9km s-min=37.2km az=116.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.76**	**213**	Pn	Pn	01 43 27.8	-1.4
	0.1nm,0.3s,baz=284,slow=9.8,SNR=2.5						
URZ				Sn	Sn	01 45 00.1	+2.3
	0.4nm,0.3s,baz=171,slow=13,SNR=4.3						
ASAR	**Alice Springs**	**43.50**	**268**	P	P	01 49 41.0	+0.5
	0.4nm,0.7s,baz=102,slow=7.3,SNR=6.4						
WRA	**Warramunga Arr**	**44.63**	**273**	P	P	01 49 48.9	-0.5
	0.5nm,0.4s,baz=111,slow=8.1,SNR=15						
FINES	**FINESS Array B**	**146.69**	**340**	PKPbc	PKPbc	02 01 17.2	-0.7
	1.1nm,0.8s,baz=74,slow=5.9,SNR=4.4						

*ISCJB **24** 01:42:32.4±1.6, 37°.62N±0°.05×26°.91E±0°.06, h15km±17km, Error ellipse: s-maj=9.5km s-min=7.1km az=39.4*
*DDA **24** 01:42:33.1, 37°.66N×27°.06E, h14km, MD2.8*
*CSEM **24** 01:42:38.9, 38°.00N×25°.99E, h15km±7km, MD3.2/5*
ISC 24 01:42:35.2±1.4, 37°.65N±0°.04×26°.88E±0°.04, h31km±15km, n20, σ1s26/26, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	**Chios island**	**0.98**	**319**	*e*PB	Pn	01 42 46.4	-6.5
APE	**Apeiranthos**	**1.22**	**242**	*e*PN	**Pb**	**01 42 57.8**	**+0.1**
APE				*e*SN	**Sn**	**01 43 12.2**	**+0.5**
APE	**Apeiranthos**	**1.22**	**242**	*e*Pn	**Pb**	**01 42 57.8**	**+0.1**
APE				*e*Sn	**Sn**	**01 43 12.2**	**+0.5**
AKHS	**Akhisar**	**1.43**	**31**	*i* P	Pn	01 42 58.1	-0.9
AKHS				*i* S	**Sn**	**01 43 15.9**	**-0.8**
AKHS	**Akhisar**	**1.43**	**31**	*i* P	Pn	01 42 58.1	-0.9
AKHS				*i* S	**Sn**	**01 43 15.9**	**-0.8**
MANT	**Manisa**	**1.57**	**57**	*i* P	**Pn**	**01 43 00.4**	**-0.7**
MANT	**Manisa**	**1.57**	**57**	*i* P	**Pn**	**01 43 00.4**	**-0.7**
TURN	**Turunc**	**1.58**	**119**	*i* P	Pn	01 42 57.2	-3.9
TURN				*i* S	**Sn**	**01 43 19.5**	**-1.0**
TURN	**Turunc**	**1.58**	**119**	*i* P	Pn	01 42 57.2	-3.9
TURN				*i* S	**Sn**	**01 43 19.5**	**-1.0**
PRK	**Paraskevi**	**1.66**	**344**	*e*PN	**Pn**	**01 43 03.3**	**+1.1**
PRK				*e*SN	**Sn**	**01 43 20.4**	**-2.0**
PRK	**Paraskevi**	**1.66**	**344**	*e*Pn	**Pn**	**01 43 03.3**	**+1.1**
PRK				*e*Sn	**Sn**	**01 43 20.4**	**-2.0**
DNZL	**Cakiroluk**	**1.72**	**88**	*e*P	**Pn**	**01 43 03.2**	**0.0**
DNZL	**Cakiroluk**	**1.72**	**88**	*e*P	**Pn**	**01 43 03.2**	**0.0**
DEMI	**Demirci**	**2.00**	**46**	*i* P	**Pn**	**01 43 09.1**	**+2.1**
DEMI				*i* S	**Sn**	**01 43 32.1**	**+1.0**
DEMI	**Demirci**	**2.00**	**46**	*i* P	**Pn**	**01 43 09.1**	**+2.1**
DEMI				*i* S	**Sn**	**01 43 32.1**	**+1.0**
BALY	**Balya**	**2.16**	**15**	*i* P	**Pn**	**01 43 11.1**	**+1.9**
BALY				*i* S	**Sb**	**01 43 39.7**	**-0.5**
BALY	**Balya**	**2.16**	**15**	*i* P	**Pn**	**01 43 11.1**	**+1.9**
BALY				*i* S	**Sb**	**01 43 39.7**	**-0.5**
LIA	**Limnos Island**	**2.60**	**330**	*e*PN	**Pn**	**01 43 14.5**	**-0.6**
LIA	**Limnos Island**	**2.60**	**330**	*e*Pn	**Pn**	**01 43 14.5**	**-0.6**
AOS	**Alonnisos**	**2.80**	**304**	*e*PN	Pn	01 43 14.6	-3.2

IDC 24 01:50:11.6±2.2, 4°.86S×153°.09E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/20, mbtmp3.6/4, ML3.1/1, Error ellipse: s-maj=97.1km s-min=33.5km az=127.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.42**	**232**	Pn	Pn	01 52 03.2	+2.0
	1.9nm,0.3s,baz=38,slow=19,SNR=4.2						
PMG				Sn	Sn	01 53 23.5	-2.7
	1.0nm,0.3s,baz=343,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	**23.62**	**229**	P	P	01 55 24.0	-0.6
	0.3nm,0.5s,baz=55,slow=9.8,SNR=3.8						
WRA				PcP	PcP	01 59 10.6	+0.7
	0.3nm,0.5s,baz=51,slow=2.5,SNR=6.0						
ASAR	**Alice Springs**	**26.30**	**223**	P	P	01 55 49.6	+0.4
	0.2nm,0.7s,baz=57,slow=8.9,SNR=4.4						
FITZ	**Fitzroy Crossi**	**29.89**	**242**	P	P	01 56 19.9	-1.4
	1.4nm,0.7s,baz=44,slow=8.4,SNR=5.4						
TORD	**Torodi Ar. Bea**	**150.60**	**288**	PKPbc	PKPbc	02 10 05.5	-1.1
	0.8nm,0.5s,baz=54,slow=2.0,SNR=24						
TORD				PKPab	PKPab	02 10 13.8	+0.4
	0.8nm,0.9s,baz=71,slow=2.0,SNR=6.9						

GUC 24 01:52:30.0±0.6, 32°.23S×71°.67W, h30km±3km, MD3.6, ML2.7, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.38**	**23**	*i*P	Pb	01 52 38.4	-0.1
CHNG				*i* S	Sb	01 52 44.6	+0.3
CHNG				AML	AML	01 52 48.4	
	comp=E,449nm,0.3s						
IHA	**Instituto Hidr**	**0.79**	**178**	*i*P	Pn	01 52 44.3	-0.9
IHA				*i* S	Sb	01 52 55.5	-0.2
ROCH	**El Roble**	**0.93**	**143**	*i*P	Pn	01 52 46.7	-0.6
ROCH				*i* S	Sn	01 52 59.6	-0.3
ROCH				AML	AML	01 53 01.7	
	comp=N,376nm,0.2s						
JACH	**Jahuel**	**1.02**	**117**	*i*P	Pn	01 52 48.3	-0.1
CMCH	**Combarbala**	**1.20**	**29**	*i*P	Pn	01 52 50.8	-0.1
CMCH				*i* S	Sb	01 53 07.0	-0.4
CMCH				AML	AML	01 53 13.8	
	comp=E,680nm,0.6s						
PEL	**Peldehue**	**1.23**	**138**	*i*P	Pn	01 52 51.7	+0.4
PEL				*i* S	Sb	01 53 08.3	-0.1
PEL				AML	AML	01 53 10.5	
	comp=N,479nm,0.3s						
CLCH	**Cerro Calan**	**1.50**	**141**	*e*P	Pn	01 52 56.2	+1.1
CLCH				*i* S	Sb	01 53 15.4	-0.8
CLCH				AML	AML	01 53 26.2	
	comp=E,150nm,0.6s						
TACH	**Talagante**	**1.55**	**157**	*e*P	Pn	01 52 56.6	+1.0
PCH	**Pirque**	**1.69**	**145**	*e*P	Pn	01 52 59.1	+1.4
PCH				*e*S	Sb	01 53 20.8	-0.9
LMEL	**Las Melosas**	**2.03**	**143**	*e*P	Pn	01 53 04.1	+1.6
LMEL				*e*S	Sb	01 53 29.6	-1.9
LMEL				AML	AML	01 53 36.1	
	comp=N,111nm,0.4s						
CACH	**El Canelo**	**2.08**	**155**	*e*P	Pb	01 53 05.3	-2.1

IDC 24 01:52:34.1±5.9, 30°.94S×177°.85W, h0km, mb3.8/2, mb1 4.0/2, mb1mx3.6/18, mbtmp3.8/2, Error ellipse: s-maj=233.1km s-min=58.3km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.68**	**358**	Sn	Sg	01 53 33.9	+5.7
	78nm,0.3s,baz=90,slow=20,SNR=3.2						
URZ	**Urewera**	**8.40**	**208**	Sn	Sn	01 55 57.0	-16
	1.0nm,0.3s,baz=277,slow=19,SNR=6.7						
ASAR	**Alice Springs**	**43.21**	**267**	P	P	02 00 37.2	+0.1
	0.5nm,0.6s,baz=106,slow=7.3,SNR=12						
WRA	**Warramunga Arr**	**44.25**	**273**	P	P	02 00 45.1	-0.4
	1.2nm,0.6s,baz=114,slow=7.6,SNR=20						
FINES	**FINESS Array B**	**145.70**	**340**	PKPbc	PKPdf	02 12 13.2	-0.5
	2.5nm,0.9s,baz=57,slow=5.3,SNR=4.7						

IDC 24 01:57:24.7±18.0, 27°.24S×176°.46W, h0km, mb4.0/5, mb1 4.1/5, mb1mx3.8/19, mbtmp4.0/5, Error ellipse: s-maj=332.1km s-min=134.4km az=85.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.79**	**274**	P	P	02 04 17.9	+0.6
	2.4nm,0.5s,baz=91,slow=11,SNR=3.6						
STKA	**Stephens Creek**	**36.61**	**252**	P	P	02 04 30.8	-2.1
	2.0nm,0.7s,baz=102,slow=9.3,SNR=3.2						
ASAR	**Alice Springs**	**44.73**	**263**	P	P	02 05 40.8	+0.8
	0.7nm,0.4s,baz=103,slow=8.2,SNR=14						
WRA	**Warramunga Arr**	**45.44**	**268**	P	P	02 05 45.2	-0.4
	0.9nm,0.7s,baz=107,slow=7.8,SNR=23						
FITZ	**Fitzroy Crossi**	**53.80**	**267**	P	P	02 06 49.5	+0.1
	1.8nm,1.0s,baz=111,slow=14,SNR=4.4						

*IDC **24** 02:00:11.6±0.4, 31°.31S×177°.54W, h0km, mb4.9/23, mb1 5.0/26, mb1mx5.0/27, mbtmp4.9/26, ML3.7/1, MS5.0/23, Ms1 5.0/23, ms1mx4.8/39, Error ellipse: s-maj=13.8km s-min=12.7km az=22.0*
*ISCJB **24** 02:00:11.2±1.8, 31°.53S±0°.03×177°.68W±0°.05, h6km±11km, mb5.2/84, MS5.0/33, Error ellipse: s-maj=7.6km s-min=4.7km az=32.5*
*BJI **24** 02:00:11.1, 31°.24S×177°.44W, h8km, mB5.9/17, mb5.4/27, Ms5.4/19, Ms7 5.1/20*
*NEIC **24** 02:00:13.3±0.1, 31°.41S×177°.62W, h10km, mb5.2/54, Error ellipse: s-maj=6.0km s-min=4.6km az=148.0*
*MOS **24** 02:00:16.3±1.4, 31°.27S×177°.63W, h33km, mb5.4/23, Error ellipse: s-maj=10.8km s-min=8.5km az=80.5*
*GCMT **24** 02:00:17.9±0.2, 31°.32S×177°.30W, h13km, MW5.3, Moment Tensor Solution. s53,c75; s92,c166; Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: M₀1.20000×10^17 NP1:φs195.

112nm,1.3s
MEH Mehetia 29.89 70 *e*P **P 02 06 19.2 -2.0**
126nm,1.2s
HNR Honiara 30.26 311 LR LR 02 16 16.1
comp=Z,2µm,18.1s,baz=360,slow=32
PMOR Pomariorio Ree 31.64 66 *e*P **P 02 06 35.6 -1.0**
95nm,1.4s
CTA Charters Tower 34.35 280 P **P 02 07 01.5 +1.2**
CTA ScP **ScP 02 13 24.2 +3.7**
CTA Charters Tower 34.35 280 P **P 02 07 01.5 +1.2**
43nm,0.9s,baz=101,slow=10,SNR=41
CTA ScP **ScP 02 13 24.2 +3.7**
8.1nm,1.0s,baz=100,slow=2.2,SNR=6.1
CTA LR LR 02 19 26.9
comp=Z,2µm,19.3s,baz=111,slow=34
CTAO Charters Tower 34.35 280 *e*P **P 02 07 01.6 +1.2**
CTAO pmax pmax
comp=Z,91nm,1.1s
CTAO Charters Tower 34.35 280 *e*P **P 02 07 01.6 +1.2**
comp=Z,91nm,1.1s
STKA Stephens Creek 34.64 258 *e*P **P 02 07 04.0 +1.3**
comp=Z,11nm,1.0s
STKA Stephens Creek 34.64 258 P **P 02 07 03.2 +0.5**
comp=Z,30nm,0.9s,baz=99,slow=8.9,SNR=31
STKA LR LR 02 19 47.2
comp=Z,2µm,18.2s,baz=92,slow=34
RKT Rikitea 38.55 88 *e*LR LR 02 17 56.0
comp=Z,3µm,30.5s,baz=253
BBOO Buckleboo 39.07 255 *e*P **P 02 07 40.2 -0.2**
comp=Z,704nm,0.9s
PMG Port Moresby 39.40 296 *e*P **P 02 07 43.8 +0.5**
comp=Z,20nm,1.0s
PMG PcP **PcP 02 09 52.0 +0.5**
PMG Port Moresby 39.40 296 P **P 02 07 43.9 +0.5**
comp=Z,4.0nm,0.5s,baz=63,slow=6.4,SNR=3.5
PMG PcP **PcP 02 09 52.0 +0.5**
comp=Z,18nm,1.0s,baz=183,slow=2.2,SNR=4.0
COEN Coen 39.93 287 *e*P **P 02 07 49.3 +1.6**
comp=Z,963nm,2.1s
AS31 Alice Springs 43.45 268 *e*P **P 02 08 16.1 -0.4**
ASAR Alice Springs 43.45 268 P **P 02 08 15.6 -1.0**
ASAR PcP **PcP 02 10 04.6 -0.1**
ASAR ScP **ScP 02 13 57.8 +2.4**
ASAR S **S 02 14 42.0 -2.5**
ASAR Alice Springs 43.45 268 P **P 02 08 15.6 -1.0**
comp=Z,29nm,0.9s,baz=106,slow=7.2,SNR=168
ASAR PcP **PcP 02 10 04.6 -0.1**
comp=Z,3.9nm,0.6s,baz=118,slow=3.9,SNR=5.9
ASAR ScP **ScP 02 13 57.8 +2.4**
comp=Z,4.7nm,0.9s,baz=115,slow=4.4,SNR=11
ASAR S **S 02 14 42.0 -2.5**
comp=Z,2.9nm,1.1s,baz=106,slow=16,SNR=7.5
ASAR LR LR 02 26 53.7
comp=Z,2µm,18.1s,baz=147,slow=37
WRAB Tennant Creek 44.52 273 *e*P **P 02 08 24.6 -0.6**
WRAB pmax pmax
comp=Z,75nm,1.0s
WRAB Tennant Creek 44.52 273 *e*P **P 02 08 24.6 -0.6**
comp=Z,75nm,1.0s
WRAB *e*ScP **ScP 02 14 00.7 +0.9**
WRAB Tennant Creek 44.52 273 P **P 02 08 24.8 -0.4**
comp=Z,412nm,1.1s,SNR=34
WRA Warramunga Arr 44.53 273 P **P 02 08 24.9 -0.3**
WRA ScP **ScP 02 14 02.0 +2.2**
WRA S **S 02 14 57.8 -2.4**
WRA Warramunga Arr 44.53 273 P **P 02 08 24.9 -0.3**
comp=Z,51nm,0.8s,baz=114,slow=7.6,SNR=166
WRA ScP **ScP 02 14 02.0 +2.2**
comp=Z,8.3nm,1.1s,baz=114,slow=4.0,SNR=8.7
WRA S **S 02 14 57.8 -2.4**
comp=Z,3.8nm,1.2s,baz=113,slow=14,SNR=4.8
WRA LR LR 02 27 17.7
comp=Z,4µm,18.1s,baz=115,slow=36
FORT Forrest 46.16 256 *e*P **P 02 08 37.7 -0.4**
comp=Z,66nm,0.9s
SBA Scott Base 47.05 184 *e*P **P 02 08 47.4 +3.1**
SBA pmax pmax
comp=Z,39nm,1.1s
SBA Scott Base 47.05 184 *e*P **P 02 08 47.4 +3.1**
comp=Z,39nm,1.1s
VNDA Vanda 47.12 186 *e*P **P 02 08 47.0 +2.0**
comp=Z,17nm,1.4s
VNDA Vanda 47.12 186 P **P 02 08 46.8 +1.9**
comp=Z,3.1nm,1.0s,baz=3.9,slow=8.7,SNR=10
VNDA LR LR 02 25 21.5
comp=Z,1µm,18.4s,baz=24,slow=32
FITZ Fitzroy Crossi 52.75 270 *e*P **P 02 09 27.8 -0.7**
comp=Z,64nm,1.1s
FITZ ScP **ScP 02 14 37.7 +3.0**
FITZ Fitzroy Crossi 52.75 270 P **P 02 09 27.9 -0.6**
comp=Z,29nm,0.9s,baz=116,slow=7.3,SNR=38
FITZ ScP **ScP 02 14 37.7 +3.0**
comp=Z,13nm,1.2s,baz=136,slow=0.8,SNR=5.3
FITZ LR LR 02 30 56.7
comp=Z,2µm,18.7s,baz=130,slow=35
NWAO Narrogin (SRO) 54.40 250 LR LR 02 32 22.5
comp=Z,1µm,18.2s,baz=40,slow=36
CASY Casey 54.42 208 *e*P **P 02 09 40.3 +0.2**
comp=Z,46nm,1.1s
MBWA Marble Bar 56.50 264 *e*P **P 02 09 54.1 -1.6**
comp=Z,24nm,1.0s
QSPA South Pole Qui 58.69 180 *e*P **P 02 10 11.7 +1.1**
comp=Z,63nm,0.9s
QSPA South Pole Qui 58.69 180 P **P 02 10 11.9 +1.2**
comp=Z,56nm,1.0s,baz=39,slow=3.1,SNR=55
QSPA LR LR 02 32 57.9
comp=Z,2µm,18.4s,baz=233,slow=33
MIR Mirnyy 61.39 207 ⇓ *i*P **P 02 10 30.5 +1.6**
MIR *i* 02 10 39.0
MIR *i* 02 10 44.0
MIR pmax pmax
comp=Z,81nm,1.5s
MAW Mawson 71.49 201 P **P 02 11 34.3 +0.8**
MAW Mawson 71.49 201 P **P 02 11 34.3 +0.8**
comp=Z,20nm,1.1s,baz=114,slow=6.3,SNR=19
MAW LR LR 02 43 35.9
comp=Z,2µm,18.8s,baz=118,slow=36
KKM Kota Kinabalu 73.24 288 *e*P **P 02 11 44.6 -0.3**
comp=Z,25nm,1.1s
USHA Ushuaia 74.86 146 LR LR 02 37 30.1
comp=Z,636nm,19.2s,baz=183,slow=30
SYO Syowa Base 76.21 193 ⇓ *e*P **P 02 12 00.0 -1.1**
SYO Syowa Base 76.21 193 ⇑ *e*pP pP 02 12 04.0 -2.8
SNAA Sanae 77.12 178 *e*P **P 02 12 06.5 0.0**
SNAA Sanae 77.12 178 *e*P **P 02 12 06.4 0.0**
comp=Z,47nm,1.1s
VNA1 Neumayer--Stat 77.93 176 *e*P **P 02 12 11.3 +0.5**
VNA1 Neumayer--Stat 77.93 176 *es*P sP 02 12 17.1 -1.5
MJAR Matsushiro Arr 79.30 325 P **P 02 12 17.3 -1.4**
MJAR Matsushiro Arr 79.30 325 P **P 02 12 17.3 -1.4**
comp=Z,10.0nm,1.2s,baz=169,slow=6.0,SNR=12
MJAR LR LR 02 39 32.3
comp=Z,283nm,20.6s,baz=155,slow=30
MAJO Matsushiro 79.30 325 *e*P **P 02 12 17.9 -0.9**
MAJO pmax pmax
comp=Z,22nm,1.4s
MAJO Matsushiro 79.30 325 *e*P **P 02 12 17.9 -0.9**
comp=Z,22nm,1.4s
MAT Matsushiro 79.30 325 P **P 02 12 16.1 -2.7**
JNU Nakatsue 80.58 318 LR LR 02 42 19.7
comp=Z,520nm,20.5s,baz=311,slow=31
PLCA Paso Flores 81.53 133 *e*P **P 02 12 31.8 +0.7**
PLCA Paso Flores 81.53 133 P **P 02 12 31.6 +0.6**
comp=Z,12nm,0.3s,baz=224,slow=6.0,SNR=54
PLCA LR LR 02 41 06.7
comp=Z,933nm,18.7s,baz=188,slow=30
IPM Ipoh 85.02 278 *e*P **P 02 12 48.6 -0.7**
comp=Z,12nm,1.0s
KSRS Korea Array 85.37 319 P **P 02 12 50.2 -0.2**
comp=Z,3.6nm,0.9s,baz=141,slow=5.6,SNR=17
KSRS LR LR 02 45 17.6
comp=Z,302nm,18.7s,baz=125,slow=32
KSAR Wonju Array Be 85.39 319 P **P 02 12 50.2 -0.3**
PKM Peak Mountain 85.43 44 ⇓ P **P 02 12 52.7 +1.6**
baz=86
KULM Kulim 85.76 279 *e*P **P 02 12 52.6 -0.4**
comp=Z,54nm,1.6s
QIZ Qiongzhong 85.78 295 P **P 02 12 52.6 -0.3**
QIZ S **S 02 23 24.3 -1.0**
QIZ pmax pmax
comp=Z,13nm,2.1s
QIZ LR LR
comp=N,430nm,15.2s
QIZ LR LR
comp=Z,710nm,15.8s
YSS Yuzh-Sakhalins 85.83 334 ⇓ *e*P **P 02 12 54.6 +2.1**
MWC Mount Wilson 86.04 46 *e*P **P 02 12 55.0 +0.9**
MWC Mount Wilson 86.04 46 *e*P **P 02 12 55.0 +0.9**
MONP Monument Peak 86.17 48 ⇓ P **P 02 12 56.5 +1.6**
baz=86
ARVC Arvin 86.18 45 ⇑ P **P 02 12 56.2 +1.6**
baz=86
VES Vestal, Richgr 86.51 44 ⇓ P **P 02 12 57.2 +1.1**
baz=87,SNR=6.2
EDW2 Edwards Air Fo 86.52 45 ⇑ P **P 02 12 57.9 +1.6**
baz=87,SNR=5.6
PFO Pinyon Flat Ob 86.62 47 *e*P **P 02 12 58.0 +1.1**
comp=Z,19nm,1.5s
PFO Pinyon Flat Ob 86.62 47 ⇓ P **P 02 12 58.4 +1.5**
baz=87
ISA Isabella 86.75 44 *e*P **P 02 12 58.9 +1.4**
ISA pmax pmax
comp=Z,48nm,1.5s
ISA Isabella 86.75 44 *e*P **P 02 12 58.9 +1.4**
comp=Z,48nm,1.5s
ISA Isabella 86.75 44 ⇑ P **P 02 12 59.2 +1.7**
baz=87,SNR=9.1
PEA0B Petropavlovsk- 86.90 345 *e*P **P 02 12 57.1 -0.5**
PETK Petropavlovsk- 86.90 345 P **P 02 12 57.6 0.0**
PETK Petropavlovsk- 86.90 345 P **P 02 12 57.6 0.0**
PETK Petropavlovsk- 86.90 345 P **P 02 12 57.6 0.0**
comp=Z,13nm,1.0s,baz=126,slow=7.5,SNR=14
PETK LR LR 02 44 38.7
comp=Z,493nm,19.9s,baz=146,slow=31
NJ2 Nanjing 87.20 310 *e*P **P 02 13 00.6 +1.0**
NJ2 pP **pP 02 13 07.4 +2.0**
NJ2 S **S 02 23 44.0 +5.4**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,190nm,7.2s
NJ2 LR LR
comp=N,390nm,15.5s
NJ2 LR LR
comp=E,290nm,16.2s
NJ2 LR LR
comp=Z,430nm,19.2s
CMB Columbia Colle 87.27 42 *e*P **P 02 13 01.1 +1.2**
CMB pmax pmax
comp=Z,65nm,1.9s
CMB Columbia Colle 87.27 42 *e*P **P 02 13 01.1 +1.2**
comp=Z,66nm,1.9s
GLA Glamis 87.28 48 *e*P **P 02 13 02.4 +2.3**
GLA Glamis 87.28 48 *e*P **P 02 13 02.4 +2.3**
GLA Glamis 87.28 48 ⇑ P **P 02 13 02.1 +2.0**
baz=88
HEC Hector,Ludlow 87.50 46 ⇑ P **P 02 13 03.4 +2.3**
baz=88
GSC Goldstone 87.52 46 *e*P **P 02 13 02.0 +0.8**
GSC pmax pmax
comp=Z,34nm,1.4s
GSC Goldstone 87.52 46 *e*P **P 02 13 02.0 +0.8**
comp=Z,34nm,1.4s
MPMC Manual Prospec 87.61 45 ⇑ P **P 02 13 03.3 +1.5**
baz=88,SNR=14
113A Mohawk Valley, 87.78 49 ⇑ P **P 02 13 03.7 +1.3**
baz=88,SNR=8.0
IRM Iron Mountain 87.80 47 ⇑ P **P 02 13 04.7 +2.2**
baz=88,SNR=6.9
MTUM Tungsten Hills 87.85 43 *e*P **P 02 13 04.1 +1.2**
MLAC Mammoth Lakes 87.88 43 ⇑ P **P 02 13 05.0 +2.0**
baz=88
214A Organ Pipe Nat 87.89 50 ⇑ P **P 02 13 04.6 +1.7**
baz=88
Y12C Blythe 87.93 48 ⇑ P **P 02 13 05.2 +2.1**
baz=88
LCO Las Campanas 88.09 123 *e*P **P 02 13 04.2 -0.3**
comp=Z,18nm,1.1s
USRK Ussuriysk Arra 88.22 326 P **P 02 13 04.2 0.0**
comp=Z,5.9nm,0.8s,baz=116,slow=4.4,SNR=24
USRK LR LR 02 50 42.7
comp=Z,597nm,18.2s,baz=292,slow=34
CFAA Coronel Fontan 88.32 126 P **P 02 13 05.3 0.0**
CFAA Coronel Fontan 88.32 126 P **P 02 13 05.3 0.0**
comp=Z,1.7nm,1.1s,baz=233,slow=3.6,SNR=15
TRQA Tornquist 88.44 135 *e*P **P 02 13 06.1 +0.4**
comp=Z,37nm,1.7s
WCN Washoe City 88.50 41 *e*P **P 02 13 06.2 +0.3**
WCN pmax pmax
comp=Z,13nm,1.2s
WCN Washoe City 88.50 41 *e*P **P 02 13 06.2 +0.3**
comp=Z,13nm,1.2s
BEKR Beckworth 88.55 40 *e*P **P 02 13 06.6 +0.4**
comp=Z,9.3nm,1.5s
Z14A Wintersburg 88.69 49 ⇓ P **P 02 13 08.9 +2.1**
baz=89
NVAR Mina Array Bea 88.73 42 P **P 02 13 07.6 +0.5**
NVAR Mina Array Bea 88.73 42 P **P 02 13 07.6 +0.5**
comp=Z,6.4nm,1.0s,baz=221,slow=6.8,SNR=30
Y14A Wickenburg 89.02 49 ⇑ P **P 02 13 10.1 +1.8**
baz=89,SNR=14
HUMO Hull Mountain 89.10 37 *e*P **P 02 13 11.0 +2.6**
comp=Z,44nm,1.6s
TUC Tucson 89.45 51 *e*P **P 02 13 11.4 +1.0**
TUC pmax pmax
comp=Z,6.0nm,1.5s
TUC Tucson 89.45 51 *e*P **P 02 13 11.4 +1.0**
comp=Z,5.9nm,1.5s
MDJ Mudanjiang 89.69 325 P **P 02 13 11.9 +0.8**
MDJ pP **pP 02 13 15.0 -1.9**
MDJ sP **sP 02 13 16.4 -2.5**
MDJ PP **PP 02 16 41.9 -1.7**
MDJ S **ScS 02 24 05.3 -0.7**
MDJ sS **sS 02 24 13.8 +2.6**
MDJ pmax pmax
comp=Z,18nm,1.3s
MDJ pmax pmax
comp=Z,350nm,11.6s
MDJ LR LR
comp=N,130nm,14.2s
MDJ LR LR
comp=E,320nm,17.1s
MDJ LR LR
comp=Z,590nm,18.0s
MDJ Mudanjiang 89.69 325 *e*P **P 02 13 11.7 +0.6**
comp=Z,19nm,1.3s
319A Douglas 89.89 53 ⇑ P **P 02 13 13.8 +1.3**
baz=90
DL2 Dalian 89.96 317 P **P 02 13 13.3 +0.8**
DL2 SKS **SKSac 02 23 42.6 +0.2**
DL2 S **S 02 24 05.0 +0.6**
DL2 pmax pmax
comp=Z,21nm,1.3s
DL2 LR LR
comp=N,140nm,18.8s
DL2 LR LR
comp=E,200nm,17.5s
DL2 LR LR
comp=Z,200nm,19.2s
MOD Modoc 90.00 39 *e*P **P 02 13 13.6 +0.8**
comp=Z,20nm,1.4s
HABR Khabarovsk 90.12 331 *ce*P **P 02 13 11.9 -1.1**
HABR *e**PP **pP 02 13 22.5 +3.7**
HABR *e**SP sP 02 13 26.4 +5.6
HABR 02 16 45.4
HABR PPP PPP 02 18 42.0
HABR S **SKSac 02 23 39.4 -3.5**
HABR *e* 02 24 05.9
HABR *e*SS **SS 02 30 01.4 -3.9**
HABR *e*SSS SSS 02 33 38.0
HABR MLR MLR
comp=Z,670nm,19.0s
R11A Troy Canyon, C 90.27 44 ⇓ P **P 02 13 15.0 +0.8**
baz=90
X16A Lo Mia Camp, P 90.33 49 ⇑ P **P 02 13 16.6 +2.0**
baz=91,SNR=20
320A Kipp Ranch, An 90.38 53 ⇓ P **P 02 13 16.6 +1.8**
baz=91,SNR=5.3
BMN Battle Mountai 90.69 42 *e*P **P 02 13 16.6 +0.5**
BMN pmax pmax
comp=Z,30nm,1.4s
BMN Battle Mountai 90.69 42 *e*P **P 02 13 16.6 +0.5**
comp=Z,30nm,1.4s
220A Playas Peak, P 90.72 53 ⇑ P **P 02 13 18.4 +2.0**
baz=91
120A U Bar Ranch, L 91.03 52 ⇑ P **P 02 13 19.7 +1.8**
baz=91,SNR=8.2
U15A North Rim 91.04 47 ⇓ P **P 02 13 20.0 +2.0**
baz=91,SNR=19
WUAZ Wupatki 91.05 48 *e*P **P 02 13 19.1 +1.2**
comp=Z,32nm,1.4s
WUAZ Wupatki 91.05 48 ⇓ P **P 02 13 19.8 +1.9**
baz=91,SNR=11
CCUT Cedar City 91.09 46 *e*P **P 02 13 20.2 +2.1**
comp=Z,36nm,1.9s
CN2 Changchun 91.19 323 *e*P **P 02 13 17.9 -0.2**
CN2 *es*P **sP 02 13 24.9 -1.0**
CN2 *e*S **S 02 24 14.1 -1.4**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,400nm,15.0s
CN2 LR LR
comp=E,400nm,15.0s
CN2 LR LR
comp=Z,700nm,17.0s
WVOR Wild Horse Val 91.26 39 *e*P **P 02 13 19.0 +0.3**
WVOR pmax pmax
comp=Z,25nm,1.4s
WVOR Wild Horse Val 91.26 39 *e*P **P 02 13 19.0 +0.3**
comp=Z,25nm,1.4s
X18A Snowflake 91.36 50 ⇓ P **P 02 13 21.3 +1.9**
baz=92
Z20A Nine Sixteen R 91.40 52 ⇑ P **P 02 13 20.9 +1.3**
baz=92,SNR=11
PBKT Sadao Pong 91.47 288 P **P 02 13 33.1 +13**
121A Cookes Peak, D 91.60 52 ⇑ P **P 02 13 21.8 +1.3**
baz=92
W18A Petrified Fore 91.86 49 ⇑ P **P 02 13 23.5 +1.8**
baz=92
Y20A Horse Springs, 92.02 51 P **P 02 13 24.3 +1.7**
baz=92,SNR=11
ELK Elko 92.03 42 *e*P **P 02 13 23.2 +0.8**
comp=Z,13nm,1.5s
KLR Kul'dur 92.11 329 *e*P P 02 13 19.0 -3.2
KLR pmax pmax
comp=Z,28nm,1.4s
Z21A St. Cloud Mine 92.14 52 ⇓ P **P 02 13 24.2 +1.2**
baz=92
X20A Quemado 92.32 50 ⇑ P **P 02 13 24.9 +1.0**
baz=93,SNR=7.3
GYA Guiyang 92.39 300 ⇑ *i*P **P 02 13 25.0 +0.7**
GYA PP **PP 02 17 08.9 +3.3**
GYA SKS **SKSac 02 23 56.6 -0.6**
GYA S **S 02 24 25.4 -2.0**
GYA SS **SS 02 30 41.8 +2.7**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.4s
GYA LR LR
comp=N,800nm,19.6s
GYA LR LR
comp=E,670nm,20.1s
GYA LR LR
comp=Z,750nm,19.4s
626A Big Bend Ranch 92.41 57 ⇑ P **P 02 13 25.4 +1.2**
baz=93,SNR=6.3
MSU Marysvale 92.42 46 *e*P **P 02 13 26.4 +2.1**
MSU Marysvale 92.42 46 *e*P **P 02 13 26.4 +2.1**
ENH Enshi 92.50 304 *e*P **P 02 13 25.1 +0.5**
comp=Z,19nm,0.6s
TXAR Lajitas Array 92.62 57 P **P 02 13 25.5 +0.3**
TXAR Lajitas Array 92.62 57 P **P 02 13 25.5 +0.3**
comp=Z,4.0nm,1.1s,baz=193,slow=4.9,SNR=17
TXAR LR LR 02 48 34.1
comp=Z,955nm,18.3s,baz=10.0,slow=31
W20A Ramah 92.67 50 ⇓ P **P 02 13 26.8 +1.3**
baz=93,SNR=14
526A Mary Lane Ranc 92.73 56 ⇑ P **P 02 13 26.0 +0.2**
baz=93,SNR=6.9
MNTX Cornudas Mount 92.76 54 *e*P **P 02 13 25.4 -0.3**
comp=Z,18nm,2.1s
NNA Nana 92.77 106 *e*P **P 02 13 26.1 -0.1**
comp=Z,30nm,1.3s
NNA Nana 92.77 106 P **P 02 13 26.8 +0.5**
comp=Z,3.3nm,0.4s,baz=248,slow=11,SNR=3.6
627A Terlingua Ranc 92.88 57 ⇑ P **P 02 13 26.9 +0.5**
baz=93,SNR=8.7
Y22A Socorro 92.98 52 ⇑ P **P 02 13 28.3 +1.4**
baz=93
V20A Brimhall 93.10 50 ⇑ P **P 02 13 28.6 +1.1**
baz=93
DUG Dugway 93.10 44 *e*P **P 02 13 27.6 +0.3**
DUG pmax pmax
comp=Z,4.0nm,1.1s
DUG Dugway 93.10 44 *e*P **P 02 13 27.6 +0.3**
comp=Z,3.7nm,1.1s
LVC Limon Verde 93.10 119 *e*P **P 02 13 28.7 +0.7**
comp=Z,34nm,1.4s
426A McDonald Obser 93.12 56 ⇑ P **P 02 13 28.4 +0.7**
baz=93
527A Woodward Ranch 93.12 56 ⇑ P **P 02 13 27.7 +0.2**
baz=93
LAZ Ladron 93.14 51 *e*P **P 02 13 28.9 +1.2**
comp=Z,5.3nm,1.5s
628A Black Gap, Mar 93.26 57 ⇑ P **P 02 13 28.8 +0.7**
baz=94,SNR=7.6
S18A Hurst Farm, Bl 93.27 47 ⇓ P **P 02 13 29.3 +1.1**
baz=94
Q16A Castle Valley 93.29 46 ⇑ P **P 02 13 29.7 +1.5**
baz=94
MFID Camas Ranch 93.45 40 *e*P **P 02 13 29.1 +0.3**
comp=Z,13nm,1.3s
MFID Camas Ranch 93.45 40 ⇓ P **P 02 13 29.8 +1.0**
baz=94
326A Caldwell Ranch 93.52 55 ⇓ P **P 02 13 29.2 -0.1**
baz=94
Y23A Lovelace Mesa, 93.59 52 ⇑ P **P 02 13 30.0 +0.3**
baz=94
427A Hayter Ranch, 93.66 56 ⇓ P **P 02 13 30.1 +0.1**
baz=94,SNR=6.8
528A Cox Ranch, San 93.71 57 P **P 02 13 30.9 +0.6**
baz=94,SNR=6.1
SRU San Rafael 93.81 46 ⇑ P **P 02 13 31.6 +1.0**
baz=94
ANMO Albuquerque 93.92 51 *e*P **P 02 13 30.6 -0.6**
comp=Z,9.2nm,1.6s
BJI Beijing 93.92 315 P **P 02 13 31.6 +0.8**
BJI pmax pmax
comp=Z,9.0nm,0.6s
BJI LR LR
comp=Z,340nm,20.0s
U21A Nageezi 94.00 49 ⇑ P **P 02 13 32.9 +1.3**
baz=94
Y24A Capitan 94.01 52 ⇓ P **P 02 13 32.2 +0.5**
baz=94
I12A Atlanta 94.08 40 ⇑ P **P 02 13 32.8 +1.1**
baz=94
CMAR Chiang Mai Arr 94.10 289 P **P 02 13 32.6 +0.5**
CMAR PP **PP 02 17 19.4 +0.5**
CMAR Chiang Mai Arr 94.10 289 P **P 02 13 32.6 +0.5**
comp=Z,1.0nm,0.3s,baz=122,slow=4.4,SNR=4.0
CMAR PP **PP 02 17 19.4 +0.5**
comp=Z,1.2nm,0.3s,baz=129,slow=8.2,SNR=4.9
428A Kincaid Ranch, 94.10 56 ⇓ P **P 02 13 32.7 +0.6**
baz=94
Z25A Roswell 94.13 53 ⇓ P **P 02 13 33.4 +1.3**
baz=94
HLID Hailey 94.33 41 *e*P **P 02 13 33.5 +0.7**
comp=Z,6.6nm,1.3s
HLID Hailey 94.33 41 ⇓ P **P 02 13 34.5 +1.7**
baz=95
J13A Cove Ranch, Pi 94.36 41 ⇑ P **P 02 13 34.1 +1.1**
baz=95
429A Davenport Ranc 94.61 57 ⇑ P **P 02 13 35.1 +0.7**
baz=95,SNR=10
KMI Kunming 94.62 297 P **P 02 13 35.8 +1.1**
KMI pmax pmax
comp=Z,12nm,0.9s
J14A Carey 94.68 41 ⇑ P **P 02 13 36.0 +1.5**
baz=95
HWUT Hardware Ranch 94.72 43 *e*P **P 02 13 35.3 +0.6**
W24A Lazy 6 Ranch, 94.77 51 ⇓ P **P 02 13 36.0 +0.8**
baz=95
V24A Rampart Ranch, 95.16 51 ⇓ P **P 02 13 38.1 +1.2**
baz=95
531A Rocksprings 95.33 58 P **P 02 13 38.4 +0.8**
baz=96,SNR=6.9
W25A X Bar L Ranch, 95.41 52 ⇓ P **P 02 13 38.7 +0.7**
baz=96
V25A Rancho No Teng 95.66 51 ⇑ P **P 02 13 39.8 +0.6**
baz=96
MCMT McKenzie Canyo 96.00 40 *e*P **P 02 13 41.2 +0.6**
comp=Z,3.2nm,1.3s
U25A Circle Dot Ran 96.11 51 ⇓ P **P 02 13 42.1 +0.9**
baz=96
SDCO Great Sand Dun 96.17 49 *e*P **P 02 13 41.5 0.0**

TPAW **Teton Pass** 96.24 42 *e*P **P** 02 13 42.6 +0.9
comp=Z,3.5nm,1.0s
SNOW **Snow King Moun** 96.34 42 *e*P **P** 02 13 42.9 +0.8
LOHW **Long Hollow** 96.52 42 *e*P **P** 02 13 43.5 +0.6
comp=Z,10nm,1.5s
MOOW **Moose Ponds** 96.52 42 *e*P **P** 02 13 44.0 +1.0
comp=Z,9.5nm,1.6s
BW06 **Boulder Array** 96.61 43 *e*P **P** 02 13 43.6 +0.2
comp=Z,2.7nm,1.0s
PDAR **Pinedale Array** 96.61 43 P **P** 02 13 43.0 -0.3
PDAR **Pinedale Array** 96.61 43 P **P** 02 13 43.0 -0.3
comp=Z,1.2nm,1.0s,baz=222,slow=2.0,SNR=6.0
PDAR LR LR 02 52 52.5
comp=Z,928nm,18.7s,baz=161,slow=33
H16A **Russell Place,** 96.82 41 ⇑P **P** 02 13 46.1 +1.9
baz=97
CD2 **Chengdu** 96.96 302 P **P** 02 13 46.5 +1.5
CD2 pP **pP** 02 13 51.3 +0.5
CD2 sP **sP** 02 13 53.5 +0.6
CD2 PP **PP** 02 17 45.0 +4.0
CD2 SKS **SKSac** 02 24 22.4 +1.0
CD2 S **S** 02 25 06.1 -0.8
CD2 sS **sS** 02 25 13.8 -2.8
CD2 SS **SS** 02 31 46.6 +2.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,380nm,17.1s
CD2 LR LR
comp=Z,460nm,17.2s
SEY **Seymchan** 97.06 347 *e*P **P** 02 13 43.4 -1.2
BOZ **Bozeman (W)** 97.19 40 *e*P **P** 02 13 45.8 0.0
BOZ pmax pmax
comp=Z,6.0nm,1.3s
BOZ **Bozeman (W)** 97.19 40 *e*P **P** 02 13 45.8 0.0
comp=Z,6.5nm,1.3s
HHC **Hu-ho-hao-te** 97.22 314 *e*P Pdif 02 13 47.3 +1.2
HHC pP pP 02 13 51.0 -0.8
HHC sP sP 02 13 53.3 -0.6
HHC PP **PP** 02 17 47.6 +4.7
HHC SKS **SKSac** 02 24 22.5 +0.1
HHC S **S** 02 25 07.8 -1.1
HHC sS sS 02 25 14.8 -3.7
HHC SS **SS** 02 31 48.4 +1.0
HHC pmax pmax
comp=Z,23nm,1.1s
HHC pmax pmax
comp=Z,540nm,5.9s
HHC LR LR
comp=N,820nm,16.7s
HHC LR LR
comp=E,800nm,16.7s
HHC LR LR
comp=Z,980nm,19.0s
LPAZ **La Paz** 97.38 114 *e*P **P** 02 13 47.6 -0.4
comp=Z,8.7nm,1.3s
LPAZ **La Paz** 97.38 114 P **P** 02 13 48.3 +0.3
comp=Z,2.4nm,1.0s,baz=252,slow=2.7,SNR=6.5
E17A **Martinsdale** 98.11 40 ⇓P Pdif 02 13 51.4 +1.4
baz=98
I20A **Worland** 98.15 43 ⇑P Pdif 02 13 51.6 +1.4
baz=98
I21A **Big Trails, Te** 98.56 44 ⇓P Pdif 02 13 52.6 +0.5
baz=99
E18A **Harlowton** 98.69 40 ⇓P Pdif 02 13 54.6 +2.0
baz=99
J22A **Midwest** 98.81 44 ⇑P Pdif 02 13 54.1 +0.8
baz=99
ILAR **Eielson Array** 98.84 13 P **P** 02 13 52.0 -0.5
ILAR **Eielson Array** 98.84 13 P **P** 02 13 52.0 -0.5
comp=Z,0.6nm,0.8s,baz=236,slow=4.4,SNR=7.0
ILAR LR LR 02 55 08.5
comp=Z,480nm,19.5s,baz=38,slow=33
CPUP **Villa Florida** 99.05 128 LR LR 02 53 10.5
comp=Z,684nm,18.6s,baz=297,slow=32
LZH **Lanzhou** 99.64 306 *e*P **Pdif** 02 13 58.0 +0.9
LZH pP **pP** 02 14 02.0 -0.9
LZH sP **sP** 02 14 05.5 +0.6
LZH pmax pmax
comp=Z,14nm,1.1s
SONM **Songino Array** 104.16 318 PKKPbc PKKPbc 02 30 06.0 0.0
SONM **Songino Array** 104.16 318 PKKPbc PKKPbc 02 30 06.0 0.0
comp=Z,0.7nm,0.8s,baz=302,slow=2.8,SNR=4.3
YKA **Yellowknife Ar** 106.20 26 PKKPbc PKKPbc 02 29 58.4 -1.7
YKA PKKP **PKKPab** 02 30 10.8 -1.1
YKA **Yellowknife Ar** 106.20 26 PKKPbc PKKPbc 02 29 58.3 -1.7
comp=Z,0.2nm,0.5s,baz=41,slow=3.5,SNR=4.0
YKA PKKP **PKKPab** 02 30 10.8 -1.1
comp=Z,0.4nm,0.7s,baz=50,slow=3.9,SNR=3.6
MK31 **Makanchi Array** 118.72 310 *e*PKIKP **PKPdf** 02 19 00.8 -0.4
MK31 **Makanchi Array** 118.72 310 *e*PKPdf **PKPdf** 02 19 00.8 -0.4
MKAR **Makanchi Array** 118.72 310 *c i*PKIKP **PKPdf** 02 19 00.6 -0.6
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR **Makanchi Array** 118.72 310 PKP **PKPdf** 02 19 00.0 -1.2
MKAR **Makanchi Array** 118.72 310 PKP **PKPdf** 02 19 00.0 -1.2
comp=Z,2.0nm,0.9s,baz=106,slow=3.9,SNR=6.9
ZALV **Zalesovo Beam** 119.05 318 PKIKP **PKPdf** 02 19 00.6 -0.9
ZALV **Zalesovo Beam** 119.05 318 PKP **PKPdf** 02 19 00.6 -0.9
ZALV **Zalesovo Beam** 119.05 318 PKP **PKPdf** 02 19 00.6 -0.9
comp=Z,0.5nm,0.4s,baz=208,slow=5.0,SNR=4.1
LBTB **Lobatse** 119.67 204 *e*PKPdf **PKPdf** 02 19 04.8 +0.8
KSH **Kashi** 121.09 300 *e*PKP **PKPdf** 02 19 05.1 -1.0
KSH *e*PKS **PKSdf** 02 22 40.3 -2.5
KSH *e*SKS **SKSdf** 02 26 12.1 -5.3
KSH AMB AMB
comp=Z,570nm,8.0s
KSH LR LR
comp=N,320nm,8.0s
KSH LR LR
comp=E,260nm,7.8s
KSH LR LR
comp=Z,170nm,6.4s
KURK **Kurchatov** 122.03 313 *d i*PKIKP **PKPdf** 02 19 06.7 -0.7
KURK pmax pmax
comp=Z,13nm,1.7s
KURK **Kurchatov** 122.03 313 *e*PKPdf **PKPdf** 02 19 06.6 -0.7
TKM2 **Tokmak 2** 122.28 304 *e*PKIKP **PKPdf** 02 19 07.6 -0.8
TKM2 **Tokmak 2** 122.28 304 *e*PKPdf **PKPdf** 02 19 07.6 -0.8
AAK **Ala-Archa** 123.00 303 PKIKP **PKPdf** 02 19 09.0 -0.7
AAK **Ala-Archa** 123.00 303 PKP **PKPdf** 02 19 09.0 -0.7
AAK *e*PKPdf **PKiKP** 02 19 09.2 -0.8
AAK **Ala-Archa** 123.00 303 PKP **PKPdf** 02 19 09.0 -0.7
comp=Z,1.1nm,0.4s,baz=152,slow=4.2,SNR=4.8
EKS2 **Erkin-Say** 123.52 303 *e*PKIKP **PKPdf** 02 19 10.9 +0.2
EKS2 **Erkin-Say** 123.52 303 *e*PKPdf **PKPdf** 02 19 10.9 +0.2
KBL **Kabul** 124.97 292 *e*PKIKP **PKPdf** 02 19 14.5 +0.6
KBL **Kabul** 124.97 292 *e*PKPdf **PKPdf** 02 19 14.4 +0.6
KKAR **Karatay Array** 125.96 303 *e*PKIKP **PKPdf** 02 19 15.0 -0.2
KKAR **Karatay Array** 125.96 303 *e*PKPdf **PKPdf** 02 19 15.0 -0.2
LSZ **Lusaka** 127.40 212 *e*PKPdf **PKPdf** 02 19 20.0 +1.0
BRVK **Borovoye** 127.47 315 *c i*PKIKP **PKPdf** 02 19 17.3 -0.4
BRVK pmax pmax
comp=Z,12nm,1.7s
BRVK **Borovoye** 127.47 315 *e*PKPdf **PKPdf** 02 19 17.4 -0.4
TSUM **Tsumeb** 127.61 198 PKP **PKPdf** 02 19 20.0 +0.7
TSUM *e*PKPdf **PKiKP** 02 19 20.3 +0.5
TSUM **Tsumeb** 127.61 198 PKP **PKPdf** 02 19 20.0 +0.7
comp=Z,1.3nm,0.8s,baz=260,slow=2.6,SNR=3.3
KMBO **Kilima Mbogo** 133.76 232 SKPab **SKPab** 02 23 03.1 +1.3
KMBO **Kilima Mbogo** 133.76 232 SKPab **SKPab** 02 23 03.1 +1.3
comp=Z,4.3nm,1.1s,baz=63,slow=4.9,SNR=5.4
ABKAR **Akbulak array** 133.86 310 *e*PKPdf **PKPdf** 02 19 30.2 +0.2
ARU **Arti** 134.12 320 *i*PKIKP **PKPdf** 02 19 30.3 +0.1
ARCES **ARCESS Array B** 139.67 348 PKPpre PKPpre 02 19 34.5
ARCES PKP **PKPdf** 02 19 40.9 +0.8
ARCES **ARCESS Array B** 139.67 348 PKhKP PKPpre 02 19 34.5
comp=Z,2.3nm,0.9s,baz=68,slow=3.1,SNR=7.5
ARCES PKP **PKPdf** 02 19 40.9 +0.8
comp=Z,2.6nm,0.9s,baz=93,slow=2.4,SNR=4.7
KLMR **Klimovskoe** 141.84 331 *e*PKHKP PKPpre 02 19 35.5
KLMR pmax pmax
comp=Z,15nm,1.3s
JOF **Joensuu** 143.51 338 *e*PKIKP PKPbc 02 19 45.8 +1.3
JOF **Joensuu** 143.51 338 *e*pkp PKPbc 02 19 45.8 +1.3
DGRG **David-gareji** 144.36 299 P PKPbc 02 19 48.4 +0.6
TBLG **Delisi** 144.83 299 *i*PKIKP **PKPab** 02 19 48.9 -0.3
TBLG **Delisi** 144.83 299 P **PKPab** 02 19 49.0 -0.3
GNI **Garni** 144.88 296 *e*PKPdf **PKPdf** 02 19 50.3 -0.2
KZR **Kazreti** 145.09 298 P **PKPab** 02 19 50.4 +0.1
GOR **Gori** 145.28 300 P **PKPdf** 02 19 51.3 +0.3
MOS **Moscow** 145.39 325 *c i*PKIKP **PKPbc** 02 19 50.3 -0.3
MOS *e* 02 20 02.0
MOS pmax pmax
comp=Z,600nm,2.0s
MOS pmax pmax
comp=Z,308nm,1.4s
MOS pmax pmax
comp=N,116nm,1.1s
CLDR **Caldiran** 145.52 295 *e*P **PKPdf** 02 19 51.1 -0.6
KAF **Kangasniemi** 145.64 340 *e*PKP2 **PKPdf** 02 19 49.2 -1.7
KAF **Kangasniemi** 145.64 340 *e*pkp **PKPdf** 02 19 49.2 -1.7
ONI **Oni** 145.72 301 P **PKPab** 02 19 52.4 -0.2
CUKT **Cukurca** 145.72 291 *e*P **PKPdf** 02 19 51.8 -0.2
AKH **Akhalkalaki** 145.78 299 P **PKPab** 02 19 52.8 -0.1
VANB **Van** 145.93 294 *e*P **PKPab** 02 19 53.5 -0.1
KBZ **Khabaz** 145.99 303 PKP2 **PKPbc** 02 19 52.9 +0.1
KBZ **Khabaz** 145.99 303 PKPbc **PKPbc** 02 19 52.9 +0.1
KBZ **Khabaz** 145.99 303 PKPbc **PKPbc** 02 19 52.9 +0.1
comp=N,28nm,1.1s,baz=78,slow=2.7,SNR=41
KIV **Kislovodsk** 146.12 303 *i*PKP2 **PKPbc** 02 19 53.3 -0.1
KIV pmax pmax
comp=Z,36nm,1.1s
OBN **Obninsk** 146.23 325 ⇑*i*PKIKP **PKPdf** 02 19 51.7 -0.4
OBN *i* 02 20 03.9
OBN pmax pmax
comp=Z,267nm,1.4s
FIA1 **FINESS Array S** 146.24 340 *e*PKPbc **PKPdf** 02 19 52.5 +0.6
FINES **FINESS Array B** 146.24 340 PKPbc **PKPdf** 02 19 52.4 +0.5
FINES **FINESS Array B** 146.24 340 PKPbc **PKPdf** 02 19 52.4 +0.5
comp=Z,14nm,0.5s,baz=48,slow=3.5,SNR=68
VOR **Voronezh** 146.33 318 PKIKP **PKPdf** 02 19 51.0 -1.4
VOR pmax pmax
comp=Z,250nm,1.2s
VSR **Storozhevoye** 146.55 317 *e*PKP2 **PKPbc** 02 19 53.6 -0.7
VSR pmax pmax
comp=E,80nm,1.1s
VSR pmax pmax
comp=Z,160nm,1.1s
VSR pmax pmax
comp=N,20nm,0.9s
VORD **Divnogorie** 146.57 317 *e*PKP2 **PKPbc** 02 19 53.7 -0.6
VORD pmax pmax
comp=Z,100nm,1.2s
VORD pmax pmax
comp=N,30nm,1.5s
VORD pmax pmax
comp=E,70nm,1.1s
BCA **Borcka** 147.18 299 *e*P **PKPbc** 02 19 56.7 +0.3
EZM **Erzurum** 147.48 296 *e*P **PKPab** 02 19 58.8 -1.0
SOC **Sochi** 148.30 303 *d i*PKIKP **PKPdf** 02 19 55.9 0.0
SOC *i* 02 20 02.5
SOC *e* 02 23 23.6
SOC pmax pmax
comp=Z,26nm,1.0s
SOC pmax pmax
comp=Z,22nm,0.9s
SOC MLR MLR
comp=Z,325nm,17.0s
BAYT **Ayd¨–ntepe-Bay** 148.38 297 *e*P **PKPbc** 02 20 00.7 +0.8
GUMT **Gumushane** 148.88 297 *e*P **PKPbc** 02 19 59.9 -1.3
PTK **Pertek** 149.05 294 *e*P **PKPbc** 02 20 01.3 -0.4
SVRC **Sivrice-ELAZID** 149.14 293 *e*P **PKPdf** 02 19 55.8 -1.9
ANN **Anapa** 149.65 306 *i*PKHKP **PKPbc** 02 20 02.1 -0.6
ANN pmax pmax
comp=Z,101nm,1.4s
ILIC **ilic-Erzincan** 149.66 295 *e*P **PKPbc** 02 20 03.9 +0.7
NB2 **NORSAR Subarra** 149.82 352 PKP **PKPbc** 02 20 02.2 -0.5
comp=Z,0.5nm,0.7s,baz=31,slow=2.9
NOA **NORSAR Array B** 149.82 352 PKPbc **PKPbc** 02 20 02.0 -0.7
NOA **NORSAR Array B** 149.82 352 PKPbc **PKPbc** 02 20 02.0 -0.7
comp=Z,8.9nm,1.1s,baz=14,slow=4.2,SNR=12
NAO01 **NORSAR Array S** 150.05 352 *e*PKPbc **PKPbc** 02 20 03.2 0.0
NAO01 *e*PKPab **PKPab** 02 20 10.2 +1.2
IZAR **Zarasai** 150.48 332 *e*P **PKPbc** 02 20 03.7 -0.6
IZAR AMB AMB 02 20 12.1
comp=Z,19nm,1.4s
RSDY **Resadiye-TOKAT** 150.52 297 *e*P **PKPbc** 02 20 05.2 +0.1
DARE **Darende-Malaty** 150.56 294 *e*P PKPdf 02 19 53.3 -6.5
IDID **Didziasalis** 150.59 331 *e*P **PKPbc** 02 20 03.5 -1.2
IDID AMB AMB 02 20 12.3
comp=Z,14nm,1.0s
ISAL **Salakas** 150.66 332 *e*P **PKPbc** 02 20 03.9 -0.9
ISAL AMB AMB 02 20 13.8
comp=Z,20nm,1.7s
MICGM **Minsk** 150.66 329 ⇓*e*P **PKPbc** 02 20 03.0 -1.8
MNK **Minsk** 150.68 329 ⇓*e*PKIKP **PKPbc** 02 20 03.0 -1.9
MNK pmax pmax
comp=Z,60nm,1.0s
IIGN **Ignalina** 150.77 332 *e*P **PKPbc** 02 20 04.5 -0.5
IIGN AMB AMB 02 20 14.0
comp=Z,13nm,2.1s
NACGM **Naroch** 150.86 331 *e* **PKPbc** 02 20 04.0 -1.3
KVT **Kavak** 151.39 299 *e*P **PKPbc** 02 20 06.0 -1.0
HTY **Hatay** 151.69 289 *e*P **PKPbc** 02 20 08.5 +0.7
BNN **Bunyan** 151.81 295 *e*P **PKPbc** 02 20 06.0 -2.2
SIM **Simferopol'** 151.88 308 *de*PKIKP **PKPbc** 02 20 09.0 +1.0
SIM *e* 02 20 17.0
SIM pmax pmax
comp=Z,29nm,0.9s
KOZT **Kozan** 151.92 292 *e*P **PKPbc** 02 20 08.1 -0.2
BYBT **Boyabat** 152.28 300 *e*P **PKPbc** 02 20 09.4 +0.4
AKASG **Malin Array Be** 152.34 322 PKIKP **PKPdf** 02 20 01.0 -1.0
AKASG 02 20 08.4
AKASG 02 20 17.7
AKASG **Malin Array Be** 152.34 322 PKP **PKPdf** 02 20 01.0 -1.0
AKASG PKPbc **PKPbc** 02 20 08.4 -0.4
AKASG PKPab **PKPab** 02 20 17.7 -1.2
AKASG **Malin Array Be** 152.34 322 PKP **PKPdf** 02 20 01.0 -1.0
comp=Z,0.5nm,0.5s,baz=354,slow=4.2,SNR=4.0
AKASG PKPbc **PKPbc** 02 20 08.4 -0.4
comp=Z,14nm,1.1s,baz=46,slow=2.2,SNR=25
AKASG PKPab **PKPab** 02 20 17.7 -1.2
comp=Z,5.4nm,0.6s,baz=47,slow=3.7,SNR=16
AK01 **Malin Array Si** 152.35 322 *e*PKPbc **PKPbc** 02 20 08.6 -0.2
AK01 *e*PKPab **PKPab** 02 20 18.2 -0.7
KIEV **Kiev** 152.36 322 *e*PKIKP **PKPbc** 02 20 07.5 -1.3
KIEV *e* 02 20 18.2
KIEV **Kiev** 152.36 322 *e*PKPbc **PKPbc** 02 20 07.5 -1.3
KIEV *e*PKPab **PKPab** 02 20 18.2 -0.7
AK02 **Malin Array Si** 152.38 322 *e*PKPbc **PKPbc** 02 20 08.6 -0.3
AK02 *e*PKPab **PKPab** 02 20 18.3 -0.7
CORM **Corum** 152.59 298 *e*P **PKPbc** 02 20 08.6 -1.4
SUW **Suwalki** 152.96 333 *e*PKIKP **PKPbc** 02 20 10.3 +0.2
SUW *e* 02 20 21.0
SUW **Suwalki** 152.96 333 *e*PKPbc **PKPbc** 02 20 10.3 +0.2
SUW *e*PKPab **PKPab** 02 20 21.0 -0.3
SUW **Suwalki** 152.96 333 *e*PKP **PKPbc** 02 20 09.7 -0.4
CANT **Cankiri** 153.29 299 *e*P **PKPbc** 02 20 10.3 -1.1
BR131 **Keskin Array S** 153.41 297 *e*PKPbc **PKPbc** 02 20 11.5 -0.2
BR131 *e*PKPab **PKPab** 02 20 23.4 -0.6
BRTR **Keskin Array B** 153.41 297 PKP **PKPdf** 02 20 03.1 -1.1
BRTR PKPbc **PKPbc** 02 20 11.7 -0.1
BRTR PKPab **PKPab** 02 20 22.7 -1.3
BRTR **Keskin Array B** 153.41 297 PKP **PKPdf** 02 20 03.1 -1.1
comp=Z,0.5nm,1.0s,baz=157,slow=6.7,SNR=3.6
BRTR PKPbc **PKPbc** 02 20 11.7 -0.1
comp=Z,4.7nm,0.9s,baz=130,slow=3.2,SNR=22
BRTR PKPab **PKPab** 02 20 22.7 -1.3
comp=Z,4.1nm,0.9s,baz=129,slow=4.9,SNR=9.1
SAFT **Safranbolu** 153.86 300 *e*P **PKPbc** 02 20 12.1 -0.4
CSS **Prodhromos** 153.97 286 *e*PKPbc **PKPbc** 02 20 12.1 -0.9
ANTO **Ankara** 154.04 297 *e*P **PKPbc** 02 20 12.1 -0.9
ANTO **Ankara** 154.04 297 *e*PKIKP **PKPbc** 02 20 13.3 +0.3
ANTO **Ankara** 154.04 297 *e*PKPbc **PKPbc** 02 20 13.3 +0.3
DBIC **Dimbokro** 154.44 163 PKP **PKPdf** 02 20 06.8 +0.6
DBIC PKPbc **PKiKP** 02 20 14.8 +0.3
DBIC PKPab **PKPab** 02 20 27.9 -0.7
DBIC **Dimbokro** 154.44 163 PKP **PKPdf** 02 20 06.8 +0.6
comp=Z,7.0nm,1.2s,baz=317,slow=5.4,SNR=3.6
DBIC PKPbc **PKiKP** 02 20 14.8 +0.3
comp=Z,12nm,1.2s,baz=78,slow=3.1,SNR=3.8
DBIC PKPab **PKPab** 02 20 27.9 -0.7
comp=Z,4.3nm,0.9s,baz=178,slow=8.3,SNR=3.3
KIS **Kishinev** 154.49 315 *e*PKIKP **PKPbc** 02 20 15.0 +1.4
KIS *e* 02 20 26.0
KIS **Kishinev** 154.49 315 *e*P **PKPbc** 02 20 15.0 +1.4
SVRH **Sivrihisar-ESK** 155.07 297 *e*P **PKPab** 02 20 27.9 -3.1
TLCR 155.30 311 ⇑PKP2 **PKPab** 02 20 32.1 +0.5
TLCR 155.30 311 ⇑*i*P **PKPab** 02 20 32.1 +0.5
LVV **L'vov** 155.53 325 *e*PKP2 **PKPab** 02 20 31.4 -1.0
CFR **Carcaliu** 155.74 312 ⇑PKP2 **PKPab** 02 20 33.9 +0.4
CFR **Carcaliu** 155.74 312 ⇑P **PKPab** 02 20 33.9 +0.4
TESR **Tescani** 156.03 316 ⇓*i*P **PKPab** 02 20 34.7 0.0
HARR **Harsova** 156.08 311 ⇑PKP2 **PKPab** 02 20 35.3 +0.3
HARR **Harsova** 156.08 311 ⇑*i*P **PKPab** 02 20 35.3 +0.3
ISP **Isparta** 156.09 293 *e*PKP2 **PKPab** 02 20 34.1 -1.3
ISP **Isparta** 156.09 293 *e*PKPab **PKPab** 02 20 34.1 -1.3
ISP **Isparta** 156.09 293 ⇓*i*P **PKPab** 02 20 34.4 -1.0
BUR08 **Bucovina Ar. S** 156.25 320 *e*PKPab **PKPab** 02 20 35.8 0.0
BURAR **Bucovina Array** 156.26 319 ⇓*i*P **PKPab** 02 20 36.0 +0.2
KWP **Kalwaria Pacla** 156.30 326 *e*PKP2 **PKPab** 02 20 35.4 -0.4
KWP **Kalwaria Pacla** 156.30 326 *e*PKPab **PKPab** 02 20 35.4 -0.4
KWP **Kalwaria Pacla** 156.30 326 ⇑*i*P **PKPab** 02 20 35.8 0.0
KWP **Kalwaria Pacla** 156.30 326 *e*PKP **PKPab** 02 20 35.9 +0.1
VRI **Vrincioaia** 156.30 314 ⇓PKP2 **PKPab** 02 20 37.0 +1.1
VRI **Vrincioaia** 156.30 314 ⇓*i*P **PKPab** 02 20 37.0 +1.1
PSN **Preselentsi** 156.31 308 *e*P **PKPab** 02 20 39.0 +3.0
MLR **Muntele Rosu** 156.96 314 ⇓*i*P **PKPab** 02 20 39.0 +0.1
KOLS **Kolonicke sedl** 156.98 325 *e*PKIKP **PKPdf** 02 20 08.6 +0.1
KOLS **Kolonicke sedl** 156.98 325 *e*PKP **PKPdf** 02 20 08.6 +0.1
KOLS *e* 02 20 38.7
PRD **Provadia** 157.03 308 *e*P **PKPab** 02 20 36.0 -3.1
SECR 157.11 313 ⇓*i*P **PKPab** 02 20 40.2 +0.8
UZH **Uzhgorod** 157.17 325 *e*PKP2 **PKPab** 02 20 37.9 -1.6
OJC **Ojcow** 157.19 330 *e*PKP **PKPab** 02 20 39.2 -0.4
TRPA **Tarpa** 157.38 323 ⇑*i*P **PKPab** 02 20 40.3 -0.1
TRPA **Tarpa** 157.38 323 ⇓*e* **PKPab** 02 20 40.7 +0.3
RUE **Ruedersdorf** 157.39 342 *e*PKPdf **PKPdf** 02 20 08.8 -0.1
CRVS **Cervenica-Dubn** 157.39 326 *e*PKIKP **PKPdf** 02 20 07.2 -1.9
CRVS **Cervenica-Dubn** 157.39 326 *e*PKP **PKPdf** 02 20 07.2 -1.9
CRVS *e* 02 20 39.2
VOIR 157.53 315 ⇑PKP2 **PKPab** 02 20 42.6 +1.3
VOIR 157.53 315 ⇑*i*P **PKPab** 02 20 42.6 +1.3
NIE **Niedzica** 157.56 328 *e*PKP2 **PKPab** 02 20 41.5 +0.3
NIE **Niedzica** 157.56 328 *e*PKP **PKPab** 02 20 41.5 +0.3
ARR **Arges** 157.82 315 ⇓*i*P **PKPab** 02 20 43.0 +0.8
HUMR **Humele** 158.03 313 ⇑*i*P **PKPab** 02 20 43.1 -0.3
KSP **Ksiaz** 158.04 336 *e*PKP2 **PKPab** 02 20 43.3 +0.1
KSP **Ksiaz** 158.04 336 *e*PKP **PKPab** 02 20 42.9 -0.3
DRGR 158.12 320 ⇓PKP2 **PKPab** 02 20 43.7 -0.1
DRGR 158.12 320 ⇓*i*P **PKPab** 02 20 43.7 -0.1
OKC **Ostrava-Krasne** 158.16 332 *e*PKP2 **PKPab** 02 20 43.7 -0.1
OKC **Ostrava-Krasne** 158.16 332 *e*PKPAB **PKPab** 02 20 43.7 -0.1
OKC *ex* x 02 20 55.5
NRDL **Niedersach Rie** 158.21 347 *e*PKPab **PKPab** 02 20 43.1 -0.6
LOT **Lotru** 158.29 316 ⇓*i*P **PKPab** 02 20 40.6 -4.1
UPC **Upice** 158.42 336 *e*PKP2 **PKPab** 02 20 45.0 +0.1
UPC **Upice** 158.42 336 *e*PKPAB **PKPab** 02 20 45.0 +0.1
MORC **Moravsky Berou** 158.45 333 *e*PKIKP **PKPdf** 02 20 09.7 -0.7
MORC *e* 02 20 43.7
MORC **Moravsky Berou** 158.45 333 *e*PKPdf **PKPdf** 02 20 09.7 -0.7
MORC *e*PKPab **PKPab** 02 20 43.7 -1.4
CLL **Collm** 158.66 342 *e*PKPdiff PKPdf 02 20 28.0 +18
CLL ⇓*i*PKPab **PKPab** 02 20 45.4 -0.4
comp=Z,31nm,1.5s
CLL *e* 02 20 57.0
CLL Lm MLR 03 28 00.0
comp=Z,400nm,20.2s
IBBN **Ibbenburen** 158.77 351 *e*PKPab **PKPab** 02 20 45.8 -0.4
BRG **Berggiesshubel** 158.78 340 *e*PKP **PKPab** 02 20 45.9 -0.5
comp=Z,30nm,1.5s
BRG *e* 02 22 56.7
comp=Z,3.1nm,0.8s
BRG **Berggiesshubel** 158.78 340 *e*PKPab **PKPab** 02 20 46.1 -0.2
BRG **Berggiesshubel** 158.78 340 *e*PKP2 **PKPab** 02 20 45.8 -0.5
BRG pmax pmax
comp=Z,30nm,1.5s
PSZ **Piszkesteto** 158.83 326 *e*PKP2 **PKPab** 02 20 46.6 -0.2
PSZ **Piszkesteto** 158.83 326 *e*PKPab **PKPab** 02 20 46.6 -0.2
PSZ **Piszkesteto** 158.83 326 ⇓*i*P **PKPab** 02 20 46.7 -0.1
PSZ **Piszkesteto** 158.83 326 ⇓*e* **PKPab** 02 20 46.8 -0.1
PVCC **Panska Ves** 158.89 338 *e*PKP2 **PKPab** 02 20 47.1 +0.3
PVCC **Panska Ves** 158.89 338 *e*PKPAB **PKPab** 02 20 47.1 +0.3
PVCC *ex* x 02 20 58.4
VYHS **Vyhne** 158.90 329 *e*PKIKP **PKPdf** 02 20 10.4 -0.5
VYHS *e* 02 20 47.0
VYHS **Vyhne** 158.90 329 *e*PKP **PKPdf** 02 20 10.4 -0.5
VYHS *e* 02 20 47.0
VRAC **Vranov** 159.20 333 ⇑*i*P **PKPab** 02 20 48.8 +0.5
PRU **Pruhonice** 159.36 337 *e*PKP2 **PKPab** 02 20 49.1 +0.2
PRU **Pruhonice** 159.36 337 *e*PKPAB **PKPab** 02 20 49.1 +0.2
PRU *ex* x 02 21 00.8
MPEP **Malo Peshtene** 159.38 311 *e*P **PKPab** 02 20 49.0 -0.3
BZS **Buzias** 159.44 319 ⇑PKP2 **PKPab** 02 20 49.1 -0.4
BZS **Buzias** 159.44 319 ⇑*i*P **PKPab** 02 20 49.1 -0.4
SMOL **Smolenice** 159.49 331 *e*PKP2 **PKPab** 02 20 50.1 +0.5
SMOL **Smolenice** 159.49 331 *e*PKP **PKPab** 02 20 50.1 +0.5
BUD **Budapest** 159.55 326 ⇓*e* **PKPab** 02 20 50.2 +0.4
TANN **Tannenbergstha** 159.61 341 *e*PKPab **PKPab** 02 20 49.7 -0.4
MOX **Moxa** 159.62 343 *e*PKPab **PKPab** 02 20 49.6 -0.4
MOX **Moxa** 159.62 343 *e*PKP2 **PKPab** 02 20 49.6 -0.4
TREC **Trest** 159.62 335 *e*PKP2 **PKPab** 02 20 48.4 -1.7
TREC **Trest** 159.62 335 *e*PKPAB **PKPab** 02 20 48.4 -1.7
TREC *ex* x 02 21 01.5
NKC **Novy Kostel** 159.78 341 *e*PKP2 **PKPab** 02 20 50.8 0.0
NKC **Novy Kostel** 159.78 341 *e*PKPAB **PKPab** 02 20 50.8 0.0
NKC *ex* x 02 21 02.7
PKS7 **Kunszentmiklos** 159.79 325 *e*PKPab **PKPab** 02 20 51.3 +0.4
ZST **Bratislava** 159.88 331 *e*PKP2 **PKPab** 02 20 50.5 -0.7
ZST **Bratislava** 159.88 331 *e*PKP **PKPab** 02 20 50.5 -0.7
PKSG 159.91 327 ⇓*e*PKPab **PKPab** 02 20 51.3 -0.1
VTS **Vitosha** 160.08 310 ⇓PKP2 **PKPab** 02 20 53.0 +0.4
VTS **Vitosha** 160.08 310 ⇓*i*P **PKPab** 02 20 53.0 +0.4
VTS **Vitosha** 160.08 310 *e*P **PKPab** 02 20 51.0 -1.6
PKS2 **Kecel** 160.16 324 *e*PKPab **PKPab** 02 20 53.1 +0.6
MMB **Musomiste** 160.16 307 *e*P **PKPab** 02 20 52.0 -0.8
PKST T¨'s 160.18 327 ⇓*e*PKPab **PKPab** 02 20 51.6 -1.0
ROTZ **Rotzenmuhle** 160.27 341 *e*PKPab **PKPab** 02 20 53.3 +0.4
KHC **Kasperske Hory** 160.42 338 *e*PKP2 PKPab 02 20 44.5 -9.1
KHC **Kasperske Hory** 160.42 338 *e*PKPAB **PKPab** 02 20 53.5 -0.1
KHC *ex* x 02 21 06.5
SOP **Sopron** 160.51 330 ⇓*e*PKPab **PKPab** 02 20 54.4 +0.4
PKS9 **Tamasi** 160.55 326 ⇓*e*PKPab **PKPab** 02 20 53.6 -0.6
GRF **Grafenberg Arr** 160.60 343 *e*PKPab **PKPab** 02 20 54.4 +0.1
GRF **Grafenberg Arr** 160.60 343 *e*PKP2 **PKPab** 02 20 54.4 +0.1
GEC2 **GERESS Array S** 160.63 337 *e*PKPab **PKPab** 02 20 54.3 -0.3
GEC2 **GERESS Array S** 160.63 337 *e*PKP2 **PKPab** 02 20 54.3 -0.3
GERES **GERESS Array B** 160.63 337 PKP **PKPdf** 02 20 12.2 -0.8
GERES PKPab **PKPab** 02 20 54.0 -0.6
GERES **GERESS Array B** 160.63 337 PKP **PKPdf** 02 20 12.2 -0.8
comp=Z,0.2nm,0.7s,baz=151,slow=2.2,SNR=4.6
GERES PKPab **PKPab** 02 20 54.0 -0.6
comp=Z,3.1nm,1.0s,baz=49,slow=4.3,SNR=15
WET **Wettzell** 160.63 339 *e*PKPab **PKPab** 02 20 54.7 +0.2
WET **Wettzell** 160.63 339 *e*PKP2 **PKPab** 02 20 54.7 +0.2
PKSM **Moragy** 160.63 324 ⇓PKP2 **PKPab** 02 20 53.3 -1.3
PKSM **Moragy** 160.63 324 ⇓*i*P **PKPab** 02 20 53.3 -1.3
PKSM **Moragy** 160.63 324 ⇓*e*PKPab **PKPab** 02 20 54.1 -0.5
TNS **Taunus Mts** 160.69 348 *e*PKPab **PKPab** 02 20 53.9 -0.9
TNS **Taunus Mts** 160.69 348 *e*PKP2 **PKPab** 02 20 53.9 -0.9
BCLA **Clavier** 160.90 354 PKPab **PKPab** 02 20 55.4 -0.2
BEHE **Becsehely** 161.34 328 ⇓*e*PKPab **PKPab** 02 20 52.9 -4.8
WLF **Walferdange** 161.57 352 *e*PKIKP **PKPdf** 02 20 14.2 +0.4
WLF *e* 02 20 57.2
WLF **Walferdange** 161.57 352 *e*PKPdf **PKPdf** 02 20 14.2 +0.4
WLF *e*PKPab **PKPab** 02 20 57.2 -1.3
TOA0 **Torodi Ar. Sit** 161.80 178 *e*PKPdf **PKPdf** 02 20 15.1 0.0
TOA0 *e*PKPab **PKPab** 02 21 00.6 +0.2
TORD **Torodi Ar. Bea** 161.80 178 PKP **PKPdf** 02 20 14.9 -0.2
TORD PKPab **PKPab** 02 20 59.3 -1.1
TORD PP **PP** 02 24 42.3 -0.3
TORD **Torodi Ar. Bea** 161.80 178 PKP **PKPdf** 02 20 14.9 -0.2
comp=Z,3.9nm,1.2s,baz=200,slow=0.2,SNR=9.0
TORD PKPab **PKPab** 02 20 59.3 -1.1
comp=Z,11nm,1.1s,baz=172,slow=2.6,SNR=12
TORD PP **PP** 02 24 42.3 -0.3
comp=Z,2.9nm,1.1s,baz=178,slow=5.1,SNR=4.0
RJOB **Jochberg** 161.89 337 *e*PKPab **PKPab** 02 21 00.2 +0.1
STU **Stuttgart** 161.93 345 *e*PKPab **PKPab** 02 20 59.7 -0.5
BFO **Black Forest** 162.53 347 *e*PKP2 **PKPab** 02 21 02.0 -0.8
BFO **Black Forest** 162.53 347 *e*PKPab **PKPab** 02 21

TAM	**Tamanrasset**	**170.98 198**	*e*PKIKP	**PKPdf**	**02 20 23.3**	**+1.1**
TAM			*e*		02 21 41.4	
TAM	**Tamanrasset**	**170.98 198**	*e*PKPdf	**PKPdf**	**02 20 23.3**	**+1.1**
TAM			*e*PKPab	**PKPab**	**02 21 41.4**	**+0.5**
KEST	**Kesra**	**172.82 309**	*e*PKPab	**PKPab**	**02 21 47.9**	**-1.0**
KEST	**Kesra**	**172.82 309**	PKPab	**PKPab**	**02 21 48.4**	**-0.5**
	comp=Z,2.1nm,1.1s,baz=217,slow=3.9,SNR=3.4					

*AUST **24** 02:02:27.8, 18.°62S×169.°96W, h0km*
*IDC **24** 02:04:16.9±5.6, 19.°56S×178.°02W, h573km±63km, mb3.3/10, mb1 3.6/10, mb1mx3.3/21, mbtmp3.3/10, Error ellipse: s-maj=46.1km s-min=27.5km az=153.0*
*ISCJB **24** 02:04:17.8±1.1, 19.°7S±0.°3×178.°1W±0.°2, h600km, mb3.8/10, Error ellipse: s-maj=41.8km s-min=14.3km az=151.2*

ISC 24 02:04:18.4±1.7, 19.°6S±0.°3×178.°0W±0.°3, h600km, n22, σ0§97/18, mb3.8/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.60 263**		P	**P**	**02 10 10.9**	**+0.2**
	10nm,0.4s,baz=95,slow=9.7,SNR=10						
MTSU	**Mount Surprise**	**35.65 266**		P	**P**	**02 10 28.4**	**+0.5**
	baz=43,SNR=8.5						
COEN	**Coen**	**37.55 272**		P	**P**	**02 10 44.1**	**+0.7**
	baz=45,SNR=9.8						
STKA	**Stephens Creek**	**38.19 243**		P	**P**	**02 10 48.2**	**-0.1**
	1.6nm,0.5s,baz=67,slow=13,SNR=2.8						
BBOO	**Buckleboo**	**42.96 243**		P	**P**	**02 11 26.1**	**0.0**
	baz=50,SNR=7.6						
ASAR	**Alice Springs**	**44.74 256**		P	**P**	**02 11 40.0**	**0.0**
	8.2nm,0.9s,baz=87,slow=8.0,SNR=15						
WRA	**Warramunga Arr**	**44.74 261**		P	**P**	**02 11 39.5**	**-0.6**
	1.4nm,0.3s,baz=97,slow=7.5,SNR=25						
KDU	**Kakadu**	**47.95 270**		P	**P**	**02 12 04.4**	**+0.2**
	baz=56,SNR=3.9						
FITZ	**Fitzroy Crossi**	**53.16 262**		P	**P**	**02 12 42.4**	**+0.4**
	1.4nm,0.4s,baz=54,slow=6.9,SNR=8.3						
FITZ	**Fitzroy Crossi**	**53.16 262**		P	**P**	**02 12 42.6**	**+0.6**
	baz=61,SNR=3.9						
MEEK	**Meekatharra**	**58.22 250**		P	**P**	**02 13 16.4**	**-0.4**
	baz=66,SNR=5.8						
MJAR	**Matsushiro Arr**	**69.50 323**		P	**P**	**02 14 28.2**	**+0.2**
	1.4nm,0.5s,baz=157,slow=6.3,SNR=7.0						
TXAR	**Lajitas Array**	**86.57 57**		P	P	02 16 00.9	+1.5
	0.2nm,0.6s,baz=220,slow=6.9,SNR=2.4						
ILAR	**Eielson Array**	**87.44 13**		P	**P**	**02 16 02.2**	**-0.4**
	0.5nm,0.7s,baz=217,slow=5.8,SNR=5.8						
PDAR	**Pinedale Array**	**88.31 43**		P	P	02 16 08.5	+1.1
	0.3nm,0.5s,baz=222,slow=1.2,SNR=3.3						
CMAR	**Chiang Mai Arr**	**89.83 290**		P	P	02 16 17.3	+2.6
	0.9nm,0.3s,baz=106,slow=3.2,SNR=4.6						
MKAR	**Makanchi Array**	**110.59 314**		PKiKP	**PKiKP**	**02 21 42.9**	**-0.8**
	0.3nm,0.6s,baz=202,slow=0.8,SNR=2.9						
ARCES	**ARCESS Array B**	**128.05 350**		PKP	**PKPdf**	**02 22 16.6**	**+0.1**
	0.6nm,0.4s,baz=66,slow=1.5,SNR=6.5						
FINES	**FINESS Array B**	**134.92 344**		PKP	**PKPdf**	**02 22 32.3**	**+2.7**
	1.0nm,0.8s,baz=90,slow=2.8,SNR=4.5						
AKASG	**Malin Array Be**	**142.24 332**		PKhKP	PKPpre	02 22 39.8	
	1.1nm,0.4s,baz=37,slow=3.8,SNR=5.2						
BRTR	**Keskin Array B**	**146.24 313**		PKPbc	**PKPab**	**02 22 53.5**	**-2.0**
	1.1nm,0.6s,baz=144,slow=4.0,SNR=5.3						
GERES	**GERESS Array B**	**149.34 345**		PKPbc	**PKPbc**	**02 23 01.1**	**+0.6**
	1.8nm,0.8s,baz=31,slow=2.9,SNR=8.7						

ROM 24 02:04:45.6±0.1, 42.°96N×13.°17E, h10km, Ml0.8/3, Error ellipse: s-maj=0.6km s-min=0.3km az=73.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDMO	**Fiordimonte**	**0.10 320**		Pg	Pg	02 04 48.6	+0.3
FDMO				Sg	Sg	02 04 50.8	+0.6
	36nm,0.2s						
NRCA	**Norcia**	**0.14 198**		Pg	Pg	02 04 49.4	+0.5
NRCA				Sg	Sg	02 04 52.0	+0.8
	37nm,0.1s						
CESI	**CESI - Serrava**	**0.20 282**		Pg	Pg	02 04 50.5	+0.5
CESI				Sg	Sg	02 04 54.1	+1.2
	5.0nm,0.3s						

TRN 24 02:11:59.3, 15.°83N×61.°53W, h17km, MD3.5, M3.1 (FDF), 7C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	**Guadaloupe-3**	**0.11 279**		*e*P	Pg	02 12 02.9	0.0
TBG	**Guadaloupe-3**	**0.11 279**		*e*P	Pb	02 12 03.7	+0.7
DOG	**Dongo Capester**	**0.21 338**		*e*P	Pb	02 12 06.2	+1.3
HMG	**Houelmont**	**0.22 313**		*e*P	Pb	02 12 05.8	+0.8
MGG	**Marie-Galante**	**0.22 68**	⇑	*e*P	Pb	02 12 07.1	+2.1
MGG	**Marie-Galante**	**0.22 68**	⇑	*i*P	Pb	02 12 07.1	+2.2
SCG	**Saint Claude**	**0.24 324**		*e*P	Pb	02 12 05.8	+0.4
DVCT	**Vielle Casse P**	**0.25 151**		*e*P	Pb	02 12 06.6	+1.2
BCG	**Bois Riant Cap**	**0.26 342**		*e*P	Pb	02 12 06.7	+0.9
BCG	**Bois Riant Cap**	**0.26 342**	⇑	*i*P	Pb	02 12 06.8	+1.0
DWS	**Wesley**	**0.34 141**		*e*P	Pn	02 12 08.9	-0.6
DWS				*e*S	Sb	02 12 14.0	+1.9
LZG	**Guadaloupe-1**	**0.38 323**		*e*P	Pb	02 12 08.5	+0.8
SFG	**Saint Francois**	**0.53 38**		*e*P	Pn	02 12 11.8	-0.4
SFG	**Saint Francois**	**0.53 38**	⇓	*i*P	Pn	02 12 11.8	-0.3
SEG	**Port Louis**	**0.57 3**		*e*P	Pn	02 12 12.1	-0.6
SEG	**Port Louis**	**0.57 3**	⇑	*i*P	Pn	02 12 12.1	-0.6
DEG	**La Desirade**	**0.66 44**	⇑	*e*P	Pn	02 12 13.5	-0.6
DEG	**La Desirade**	**0.66 44**		*e*P	Pn	02 12 13.5	-0.5
FDF	**Fort de France**	**1.16 161**		*e*P	Pg	02 12 21.6	-0.1
FDF				*e*S	Sg	02 12 36.6	-0.3
BPA	**Boggy Peak**	**1.25 346**	⇑	*e*P	Pg	02 12 24.0	+0.6
BPA	**Boggy Peak**	**1.25 346**		*e*	Sg	02 12 40.2	+0.5
BPA				*e*S	Sn	02 12 41.6	+3.1
NEV	**Hard Times**	**1.63 323**	⇑	*e*P	Pb	02 12 29.4	+0.3
NEV				*e*S	Sg	02 12 51.8	-0.3

*DJA **24** 02:15:32.4±0.5, 0.°N±11.°×10.°1E±.°, h271km±10km, M4.6/6, mb5.1/3, mB6.1/1, MLv4.3/6, Mw(mB)5.8/1*
*ISCJB **24** 02:15:34.7±0.6, 0.°4N±0.°1×100.°58E±0.°10, h236km±7km, mb3.9/11, Error ellipse: s-maj=21.0km s-min=11.2km az=37.2*
*IDC **24** 02:15:42.3±8.8, 0.°25N×100.°42E, h316km±88km, mb3.3/9, mb1 3.4/9, mb1mx3.1/27, mbtmp3.3/9, Error ellipse: s-maj=46.1km s-min=15.5km az=74.0*

ISC 24 02:15:35.6±1.0, 0.°5N±0.°1×100.°6E±0.°1, h231km±11km, n20, σ1§38/19, mb3.8/11, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**0.92 191**		P	**Pn**	**02 16 07.5**	**-0.8**
MNSI	**Mandailing Nat**	**1.06 289**		P	**Pn**	**02 16 08.0**	**-1.0**
SISI	**Saibi**	**2.31 220**		P	**Pn**	**02 16 19.5**	**-0.2**
GSI	**Gunungsitoli**	**3.12 286**		P	**Pn**	**02 16 29.0**	**+0.6**
KCSI	**Kotacane, Aceh**	**4.14 317**		P	**Pn**	**02 16 40.2**	**-0.2**
PPBI	**Pangkal Pinang**	**6.13 115**		P	**Pn**	**02 17 05.9**	**+0.8**
	25nm,0.8s,0.1nm						
MTKI	**Muara Teweh, K**	**14.38 96**		P	Pn	02 18 41.8	-7.4
	287nm,0.2s,24μm						
KAPI	**Kappang**	**19.91 106**		P	**P**	**02 19 52.6**	**+2.6**
	5.6nm,0.5s,baz=290,slow=9.0,SNR=4.5						
FITZ	**Fitzroy Crossi**	**30.78 128**		P	**P**	**02 21 28.9**	**-1.0**
	2.7nm,1.1s,baz=286,slow=7.9,SNR=3.1						
WRA	**Warramunga Arr**	**38.79 123**		P	**P**	**02 22 37.8**	**-0.6**
	1.9nm,0.4s,baz=303,slow=9.0,SNR=39						
ASAR	**Alice Springs**	**40.27 129**		P	**P**	**02 22 49.8**	**-0.8**
	0.6nm,0.6s,baz=298,slow=7.3,SNR=13						
JNU	**Nakatsue**	**43.21 38**		P	**P**	**02 23 14.9**	**+0.7**
	10nm,0.9s,baz=206,slow=9.3,SNR=3.3						
KSRS	**Korea Array**	**44.63 31**		P	**P**	**02 23 25.8**	**+0.5**
	1.1nm,0.7s,baz=224,slow=8.9,SNR=5.4						
MKAR	**Makanchi Array**	**48.85 343**		P	**P**	**02 23 57.5**	**-0.3**
	0.2nm,0.3s,baz=160,slow=7.5,SNR=6.5						
MJAR	**Matsushiro Arr**	**50.03 40**		P	**P**	**02 24 07.1**	**+0.2**
	0.5nm,0.6s,baz=242,slow=8.1,SNR=3.1						
USRK	**Ussuriysk Arra**	**51.74 29**		P	**P**	**02 24 20.5**	**+1.0**
	0.9nm,0.5s,baz=239,slow=2.8,SNR=3.9						
NAY	**Al-Naaiem**	**58.29 305**		*e*P	**P**	**02 25 07.8**	**+1.2**
NAY				AMb	AMB	02 25 08.2	
	comp=Z,6.1nm,0.5s						
MIB	**Mutribah**	**58.40 305**		*e*P	**P**	**02 25 08.7**	**+1.4**
MIB				AMb	AMB	02 25 09.5	
	comp=Z,11nm,0.5s						
RST	**Umm Al-Ruwaisa**	**58.58 305**		*e*P	**P**	**02 25 09.6**	**+1.0**
RST				AMb	AMB	02 25 10.3	
	comp=Z,62nm,0.8s						
TXAR	**Lajitas Array**	**142.40 36**		PKP	**PKPdf**	**02 34 38.3**	**-3.3**
	comp=Z,0.1nm,0.3s,baz=250,slow=1.4,SNR=4.8						

*IDC **24** 02:15:32.7±0.6, 31.°38S×177.°71W, h0km, mb4.5/13, mb1 4.7/15, mb1mx4.5/23, mbtmp4.5/15, ML4.3/2, MS4.3/2, Ms1 4.3/2, ms1mx3.8/34, Error ellipse: s-maj=19.7km s-min=17.2km az=92.0*
*NEIC **24** 02:15:34.2±0.2, 31.°38S×177.°71W, h10km, mb4.8/13, Error ellipse: s-maj=9.2km s-min=7.3km az=128.0*
*ISCJB **24** 02:15:35.5±0.4, 31.°40S±0.°05×177.°75W±0.°08, h26km, mb4.5/23, MS5.0/1, Error ellipse: s-maj=9.8km s-min=7.0km az=27.3*
*AUST **24** 02:15:35.9±3.3, 31.°26S×176.°98W, h47km, Error ellipse: s-maj=4.1km s-min=1.6km az=282.0*

ISC 24 02:15:36.8±0.5, 31.°36S±0.°06×177.°7W±0.°1, h26km, n111, σ1§09/116, mb4.6/23, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.11 355**		Pn	**Pn**	**02 16 09.7**	**-0.7**
RAO				Sn	**Sn**	**02 16 35.5**	**-0.2**
RAO	**Raoul Island**	**2.11 355**		Pn	**Pn**	**02 16 09.7**	**-0.7**
	142nm,0.3s,baz=68,slow=22,SNR=6.5						
RAO				Sn	**Sn**	**02 16 35.5**	**-0.2**
	523nm,0.3s,baz=106,slow=22,SNR=6.3						
RAO				LR	LR	02 16 47.6	
	comp=Z,2μm,18.8s,baz=63,slow=35						
URZ	**Urewera**	**8.10 210**		Pn	Pn	02 17 26.9	-5.7
URZ				Sn	Sn	02 18 56.4	-6.9
URZ	**Urewera**	**8.10 210**		Pn	Pn	02 17 26.9	-5.7
	0.9nm,0.3s,baz=12,slow=6.8,SNR=12						
URZ				Sn	Sn	02 18 56.4	-6.9
	10nm,0.3s,baz=175,slow=17,SNR=13						
OUZ	**Omahuta**	**8.24 240**		*e*Pn	Pn	02 17 40.0	+5.4
	65nm,0.8s						
RPZ	**Rata Peaks**	**15.20 213**		Pn	**Pn**	**02 19 07.0**	**-2.7**
RPZ				Sn	Sn	02 21 38.2	-19
RPZ	**Rata Peaks**	**15.20 213**		Pn	**Pn**	**02 19 07.0**	**-2.7**
	1.0nm,0.3s,baz=29,slow=10,SNR=3.0						
RPZ				Sn	Sn	02 21 38.2	-19
	2.1nm,0.3s,baz=189,slow=11,SNR=7.8						
ARMA	**Armidale**	**26.30 264**		P	**P**	**02 21 14.2**	**+3.7**
	baz=27,SNR=4.3						
MGCD	**Mangrove Creek**	**26.39 258**		P	**P**	**02 21 14.2**	**+3.1**
	baz=27,SNR=5.6						
RMQ	**Roma**	**29.69 271**		P	**P**	**02 21 43.8**	**+3.2**
	baz=30,SNR=7.3						
CMSA	**Cobar Meteorol**	**31.14 260**		P	**P**	**02 21 55.1**	**+1.7**
	baz=32,SNR=9.3						
QLP	**Quilpie**	**33.53 268**		P	**P**	**02 22 15.5**	**+1.1**
	baz=34,SNR=11						
ARPS	**Mount Arapiles**	**33.77 250**		P	**P**	**02 22 17.5**	**+1.1**
	baz=34,SNR=5.7						
CTA	**Charters Tower**	**34.21 280**		P	**P**	**02 22 21.5**	**+1.1**
CTA	**Charters Tower**	**34.21 280**		P	**P**	**02 22 21.5**	**+1.1**
	21nm,0.9s,baz=103,slow=10,SNR=25						
CTAO	**Charters Tower**	**34.21 280**		*e*P	**P**	**02 22 21.8**	**+1.3**
	22nm,0.9s						
STKA	**Stephens Creek**	**34.52 258**		*e*P	**P**	**02 22 23.8**	**+0.7**
	5.4nm,1.4s						
STKA	**Stephens Creek**	**34.52 258**		P	**P**	**02 22 23.7**	**+0.7**
	9.1nm,0.8s,baz=89,slow=9.3,SNR=14						
STKA	**Stephens Creek**	**34.52 258**		P	**P**	**02 22 24.1**	**+1.1**
	baz=35,SNR=5.6						
MTSU	**Mount Surprise**	**36.73 282**		P	**P**	**02 22 43.9**	**+1.8**
	baz=37,SNR=10						
BBOO	**Buckleboo**	**38.96 255**		P	**P**	**02 23 00.2**	**-0.7**
	baz=40,SNR=8.8						
PMG	**Port Moresby**	**39.25 296**		PcP	**PcP**	**02 25 12.9**	**+0.8**
PMG	**Port Moresby**	**39.25 296**		PcP	**PcP**	**02 25 12.9**	**+0.8**
	9.0nm,0.8s,baz=165,slow=6.9,SNR=4.2						
COEN	**Coen**	**39.79 287**		*e*P	**P**	**02 23 08.5**	**+0.6**
	54nm,0.8s						
COEN	**Coen**	**39.79 287**		P	**P**	**02 23 09.1**	**+1.3**
	baz=40,SNR=4.9						
AS31	**Alice Springs**	**43.32 268**		*e*P	**P**	**02 23 36.8**	**0.0**
ASAR	**Alice Springs**	**43.32 268**		P	**P**	**02 23 36.5**	**-0.3**
ASAR				ScP	**ScP**	**02 29 17.0**	**+2.0**
ASAR	**Alice Springs**	**43.32 268**		P	**P**	**02 23 36.5**	**-0.3**
	13nm,0.8s,baz=106,slow=7.7,SNR=113						
ASAR				ScP	**ScP**	**02 29 17.0**	**+2.0**
	0.9nm,0.9s,baz=120,slow=3.7,SNR=4.9						
WRAB	**Tennant Creek**	**44.39 273**		*e*P	**P**	**02 23 44.8**	**-0.7**
	29nm,0.7s						
WRA	**Warramunga Arr**	**44.40 273**		P	**P**	**02 23 45.1**	**-0.4**
WRA				ScP	**ScP**	**02 29 21.2**	**+1.8**
WRA	**Warramunga Arr**	**44.40 273**		P	**P**	**02 23 45.1**	**-0.4**
	28nm,0.7s,baz=115,slow=7.5,SNR=241						
WRA				ScP	**ScP**	**02 29 21.2**	**+1.8**
	1.6nm,1.1s,baz=100,slow=4.3,SNR=5.5						
FORT	**Forrest**	**46.06 256**		*e*P	**P**	**02 23 57.3**	**-1.2**
	25nm,0.7s						
VNDA	**Vanda**	**47.17 186**		P	**P**	**02 24 08.7**	**+2.1**
VNDA	**Vanda**	**47.17 186**		P	**P**	**02 24 08.7**	**+2.1**
	0.7nm,0.8s,baz=26,slow=5.9,SNR=3.5						
KNRA	**Kununurra**	**51.04 275**		P	**P**	**02 24 37.1**	**+0.1**
	baz=52,SNR=4.3						
FITZ	**Fitzroy Crossi**	**52.62 270**		*e*P	**P**	**02 24 48.6**	**-0.1**
	9.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.62 270**		P	**P**	**02 24 48.4**	**-0.4**
	8.6nm,0.8s,baz=147,slow=6.9,SNR=21						
FITZ	**Fitzroy Crossi**	**52.62 270**		P	**P**	**02 24 48.6**	**-0.1**
	baz=53,SNR=12						
CASY	**Casey**	**54.42 208**		*e*P	**P**	**02 25 00.3**	**-1.0**
	8.7nm,0.8s						
FAKI	**Fak Fak**	**54.91 291**		P	**P**	**02 25 03.8**	**-1.8**
	baz=56,SNR=4.1						
QSPA	**South Pole Qui**	**58.75 180**		*e*P	**P**	**02 25 33.1**	**+0.7**
	27nm,0.7s						
QSPA	**South Pole Qui**	**58.75 180**		P	**P**	**02 25 32.8**	**+0.5**
	5.0nm,1.1s,baz=40,slow=3.0,SNR=7.2						
MAW	**Mawson**	**71.50 201**		P	**P**	**02 26 54.8**	**0.0**
MAW	**Mawson**	**71.50 201**		P	**P**	**02 26 54.8**	**0.0**
	5.3nm,0.9s,baz=106,slow=8.5,SNR=6.1						
SNAA	**Sanae**	**77.19 178**		*e*P	**P**	**02 27 26.6**	**-1.4**
	9.6nm,1.2s						
SNAA	**Sanae**	**77.19 178**		P	**P**	**02 27 27.9**	**-0.1**
	1.1nm,0.9s,baz=225,slow=16,SNR=3.3						
KSRS	**Seoul Korea Array**	**85.24 320**		P	**P**	**02 28 11.6**	**+0.6**
	1.0nm,0.8s,baz=142,slow=6.3,SNR=4.9						
KSAR	**Wonju Array Be**	**85.25 319**		P	**P**	**02 28 11.6**	**+0.6**
PFO	**Pinyon Flat Ob**	**86.67 47**		*e*P	**P**	**02 28 17.1**	**-1.2**
	2.8nm,1.0s						
ISA	**Isabella**	**86.80 44**		*e*P	**P**	**02 28 19.3**	**+0.4**
PETK	**Petropavlovsk-**	**86.80 345**		P	**P**	**02 28 18.6**	**+0.2**
PETK	**Petropavlovsk-**	**86.80 345**		P	**P**	**02 28 18.6**	**+0.2**
	6.2nm,0.8s,baz=146,slow=8.2,SNR=12						
CMB	**Columbia Colle**	**87.30 42**		*e*P	**P**	**02 28 21.5**	**+0.3**
	2.0nm,0.8s						
GSC	**Goldstone**	**87.57 46**		*e*P	**P**	**02 28 22.7**	**+0.1**
USRK	**Ussuriysk Arra**	**88.09 326**		P	**P**	**02 28 24.9**	**+0.2**
	1.5nm,0.7s,baz=135,slow=3.0,SNR=5.0						
NVAR	**Mina Array Bea**	**88.77 43**		P	**P**	**02 28 29.6**	**+1.3**
NVAR	**Mina Array Bea**	**88.77 43**		P	**P**	**02 28 29.6**	**+1.3**
	1.0nm,0.8s,baz=220,slow=7.4,SNR=7.8						
NV11	**Mina Array Sit**	**88.86 43**		*e*P	**P**	**02 28 28.9**	**+0.2**
TUC	**Tucson**	**89.51 51**		*e*P	**P**	**02 28 31.9**	**0.0**
	0.2nm,0.6s						
WUAZ	**Wupatki**	**91.11 48**		*e*P	**P**	**02 28 40.0**	**+0.6**
	3.6nm,1.1s						
TXAR	**Lajitas Array**	**92.69 57**		P	**P**	**02 28 48.5**	**+1.8**
TXAR	**Lajitas Array**	**92.69 57**		P	**P**	**02 28 48.5**	**+1.8**
	0.4nm,1.0s,baz=215,slow=8.8,SNR=3.4						
ANMO	**Albuquerque**	**93.97 51**		LR	LR	03 02 21.0	
	comp=Z,581nm,21.1s,baz=119,slow=30						
HLID	**Hailey**	**94.36 41**		*e*P	**P**	**02 28 55.4**	**+1.2**
	1.2nm,1.0s						
YKA	**Yellowknife Ar**	**106.20 26**		PKKPbc	PKKPbc	02 45 23.0	+1.8
YKA	**Yellowknife Ar**	**106.20 26**		PKKPbc	PKKPbc	02 45 23.0	+1.8
	0.3nm,0.8s,baz=52,slow=3.2,SNR=5.1						
MKAR	**Makanchi Array**	**118.58 310**		PKP	**PKPdf**	**02 34 21.1**	**-0.9**
MKAR	**Makanchi Array**	**118.58 310**		PKP	**PKPdf**	**02 34 21.1**	**-0.9**
	0.5nm,0.8s,baz=118,slow=0.5,SNR=2.9						
KURK	**Kurchatov**	**121.89 313**		PKP	**PKPdf**	**02 34 27.4**	**-0.8**
KURK				*e*PKPdf	**PKiKP**	**02 34 27.7**	**-0.6**
KURBB	**Kurchatov Arra**	**121.93 313**		PKP	**PKPdf**	**02 34 27.4**	**-0.9**
	1.0nm,0.7s,baz=112,slow=2.0,SNR=13						
TKM2	**Tokmak 2**	**122.14 304**		*e*PKPdf	**PKPdf**	**02 34 28.0**	**-1.2**
ARCES	**ARCESS Array B**	**139.58 348**		PKPpre	PKPpre	02 34 56.8	
ARCES				PKP	**PKiKP**	**02 35 02.8**	**-0.6**
ARCES	**ARCESS Array B**	**139.58 348**		PKhKP	PKPpre	02 34 56.8	
	1.0nm,0.9s,baz=57,slow=4.5,SNR=3.6						
ARCES				PKP	**PKiKP**	**02 35 02.8**	**-0.6**
	1.2nm,0.7s,baz=56,slow=3.1,SNR=4.9						
JOF	**Joensuu**	**143.40 338**		*e*pkp	PKPab	02 35 04.5	+0.3
DGRG	**David-gareji**	**144.22 299**		P	PKPbc	02 35 08.9	+0.4
TBLG	**Delisi**	**144.68 299**		P	PKPbc	02 35 10.0	0.0
GNI	**Garni**	**144.73 296**		*e*PKPdf	PKPbc	02 35 10.5	+0.2
KZR	**Kazreti**	**144.94 299**		P	**PKPdf**	**02 35 11.4**	**-0.2**
GOR	**Gori**	**145.13 300**		P	**PKPbc**	**02 35 10.7**	**-0.7**
KAF	**Kangasniemi**	**145.53 340**		*e*pkp	**PKPdf**	**02 35 10.8**	**-1.0**
ONI	**Oni**	**145.57 301**		P	**PKPab**	**02 35 13.7**	**+0.6**
AKH	**Akhalkalaki**	**145.63 299**		P	**PKPab**	**02 35 14.2**	**+0.6**
KBZ	**Khabaz**	**145.85 303**		PKPbc	**PKPab**	**02 35 13.5**	**0.0**
KBZ	**Khabaz**	**145.85 303**		PKPbc	**PKPbc**	**02 35 13.5**	**0.0**
	7.3nm,0.9s,baz=91,slow=4.1,SNR=13						
FIA1	**FINESS Array S**	**146.13 340**		*e*PKPbc	**PKPbc**	**02 35 13.5**	**-0.4**
FINES	**FINESS Array B**	**146.13 340**		PKPbc	**PKPdf**	**02 35 13.2**	**+0.4**
FINES	**FINESS Array B**	**146.13 340**		PKPbc	**PKPdf**	**02 35 13.2**	**+0.4**
	15nm,0.8s,baz=44,slow=3.4,SNR=38						
NB2	**NORSAR Subarra1**	**149.74 351**		PKP	**PKPbc**	**02 35 22.5**	**-1.1**
	comp=Z,4.4nm,1.2s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.74 351**		PKPbc	**PKPbc**	**02 35 23.1**	**-0.5**
NOA	**NORSAR Array B**	**149.74 351**		PKPbc	**PKPbc**	**02 35 23.1**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=13,slow=4.1,SNR=5.9						
NAO01	**NORSAR Array S**	**149.97 352**		*e*PKPbc	**PKPbc**	**02 35 23.0**	**-1.1**
AKASG	**Malin Array Be**	**152.21 322**		PKPbc	**PKPbc**	**02 35 29.0**	**-0.6**
AKASG				PKPab	**PKPbc**	**02 35 38.8**	**-0.7**
AKASG	**Malin Array Be**	**152.21 322**		PKPbc	**PKPbc**	**02 35 29.0**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=48,slow=2.9,SNR=4.5						
AKASG				PKPab	**PKPab**	**02 35 38.8**	**-0.7**
	comp=Z,4.1nm,0.7s,baz=49,slow=3.8,SNR=8.2						
AK01	**Malin Array Si**	**152.22 322**		*e*PKPbc	**PKPbc**	**02 35 29.1**	**-0.6**
AK01				*e*PKPab	**PKPab**	**02 35 38.7**	**-0.8**
KIEV	**Kiev**	**152.22 322**		*e*PKPbc	**PKPbc**	**02 35 29.5**	**-0.2**
KIEV				*e*PKPab	**PKPab**	**02 35 38.7**	**-0.8**
AK02	**Malin Array Si**	**152.25 322**		*e*PKPbc	**PKPbc**	**02 35 29.2**	**-0.5**
AK02				*e*PKPab	**PKPab**	**02 35 39.2**	**-0.5**
BR131	**Keskin Array S**	**153.27 297**		*e*PKPbc	**PKPbc**	**02 35 32.0**	**-0.5**
BR131				*e*PKPab	**PKPab**	**02 35 44.9**	**+0.3**
BRTR	**Keskin Array B**	**153.27 297**		PKPbc	**PKPbc**	**02 35 32.3**	**-0.3**
BRTR				PKPab	**PKPab**	**02 35 43.5**	**-1.0**
BRTR	**Keskin Array B**	**153.27 297**		PKPbc	**PKPbc**	**02 35 32.3**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=105,slow=4.1,SNR=9.0						
BRTR				PKPab	**PKPab**	**02 35 43.5**	**-1.0**
	comp=Z,2.4nm,1.0s,baz=141,slow=3.3,SNR=6.8						
DBIC	**Dimbokro**	**154.54 163**		PKPab	**PKPab**	**02 35 49.6**	**-0.5**
DBIC	**Dimbokro**	**154.54 163**		PKPab	**PKPab**	**02 35 49.6**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=154,slow=12,SNR=3.9						
BUR08	**Bucovina Ar. S**	**156.12 319**		*e*PKPab	**PKPab**	**02 35 56.7**	**+0.4**
KWP	**Kalwaria Pacla**	**156.17 326**		*e*PKPab	**PKPab**	**02 35 55.8**	**-0.6**
CLL	**Collm**	**158.55 341**		*i* PKPab	**PKPab**	**02 36 05.8**	**-0.7**
	comp=Z,5.0nm,0.9s						
BRG	**Berggiesshubel**	**158.67 339**		*i* P	**PKPab**	**02 36 07.2**	**+0.1**
	comp=Z,5.2nm,1.1s						
PSZ	**Piszkesteto**	**158.70 326**		*e*PKPab	**PKPab**	**02 36 06.7**	**-0.7**
GERES	**GERESS Array B**	**160.52

IDC 24 02:48:13.6±2.0, 30°35S×178°31W, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.6/18, mbtmp3.6/3, Error ellipse: s-maj=58.3km s-min=36.1km az=43.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.85**	**267**	P	P	02 56 13.4	-0.3
	0.3nm,0.6s,baz=109,slow=7.9,SNR=8.9						
WRA	**Warramunga Arr**	**43.83**	**272**	P	P	02 56 21.7	0.0
	0.6nm,0.5s,baz=111,slow=8.1,SNR=12						
QSPA	**South Pole Qui**	**59.76**	**180**	P	P	02 58 20.2	0.0
	0.5nm,0.5s,baz=90,slow=15,SNR=4.4						
FINES	**FINESS Array B**	**145.01**	**340**	PKPbc	PKPbc	03 07 50.5	-0.9
	0.9nm,0.7s,baz=44,slow=6.2,SNR=2.9						

ISK 24 03:11:45.6,39°.56N×28°.09E,h22km, MD2.5
DDA 24 03:11:45.9,39°.48N×28°.07E,h7km, MD2.8
CSEM 24 03:11:45.9±0.1,39°.53N×28°.09E,h20km, MD2.5, Error ellipse: s-maj=3.1km s-min=1.9km az=41.0
ISCJB 24 03:11:46.1±0.6,39°.54N±0°.04×28°.08E±0°.05,h24km±6km, Error ellipse: s-maj=7.9km s-min=4.7km az=37.1

ISC 24 03:11:46.0±1.0, 39°.53N±0°.03×28°.09E±0°.03, h19km±2km, n22, σ0°34/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.19**	**304**	*e*PG	**Pg**	**03 11 50.9**	**0.0**
BALB				*e*SG	**Sg**	**03 11 54.8**	**+0.5**
BALB	**Balikesir**	**0.19**	**304**	*e*Pg	**Pg**	**03 11 50.9**	**0.0**
BALB				*e*Sg	**Sg**	**03 11 54.8**	**+0.5**
DURS	**Dursunbey**	**0.31**	**77**	*i* P	**Pg**	**03 11 52.8**	**0.0**
DURS				*i* S	**Sb**	**03 11 58.0**	**+0.3**
DURS	**Dursunbey**	**0.31**	**77**	*i* P	**Pg**	**03 11 52.8**	**0.0**
BALY	**Balya**	**0.42**	**300**	*i* P	**Pg**	**03 11 54.5**	**-0.2**
BALY				*i* S	**Sb**	**03 12 01.2**	**+0.3**
DST	**Dursunbey**	**0.42**	**80**	*e*PG	**Pb**	**03 11 54.9**	**0.0**
DST				*e*SG	**Sb**	**03 12 01.3**	**+0.4**
DST	**Dursunbey**	**0.42**	**80**	*e*Pg	**Pb**	**03 11 54.9**	**0.0**
DST				*e*Sg	**Sb**	**03 12 01.3**	**+0.4**
GONE	**Gonen-Balikesi**	**0.60**	**329**	*e*PG	**Pb**	**03 11 57.8**	**-0.1**
GONE				*e*SG	**Sb**	**03 12 06.2**	**+0.3**
GONE	**Gonen-Balikesi**	**0.60**	**329**	*e*Pg	**Pb**	**03 11 57.8**	**-0.1**
GONE				*e*Sg	**Sb**	**03 12 06.2**	**+0.3**
DEMI	**Demirci**	**0.69**	**135**	*i* P	**Pb**	**03 11 59.4**	**-0.1**
DEMI				*i* S	**Sg**	**03 12 09.2**	**+0.4**
DEMI	**Demirci**	**0.69**	**135**	*i* P	**Pb**	**03 11 59.4**	**-0.1**
KCTX	**Karacabey (Bur**	**0.76**	**16**	*e*PG	**Pb**	**03 12 00.4**	**-0.3**
KCTX	**Karacabey (Bur**	**0.76**	**16**	*e*Pg	**Pb**	**03 12 00.4**	**-0.3**
TVSB	**Tavsanli**	**1.07**	**94**	*e*PG	**Pb**	**03 12 05.8**	**-0.1**
TVSB	**Tavsanli**	**1.07**	**94**	*e*Pg	**Pb**	**03 12 05.8**	**-0.1**
MANT	**Manisa**	**1.10**	**160**	*i* P	**Pn**	**03 12 06.8**	**+0.1**
MANT				*i* S	**Sb**	**03 12 20.7**	**0.0**
MANT	**Manisa**	**1.10**	**160**	*i* P	**Pn**	**03 12 06.8**	**+0.1**
MANT				*i* S	**Sb**	**03 12 20.7**	**0.0**
KULA	**Kula-Manisa**	**1.11**	**156**	*e*PN	**Pn**	**03 12 05.9**	**-0.7**
KULA	**Kula-Manisa**	**1.11**	**156**	*e*Pn	**Pn**	**03 12 05.9**	**-0.7**
ARMT	**Armutlu**	**1.19**	**30**	*e*PN	**Pn**	**03 12 07.2**	**-0.5**
ARMT	**Armutlu**	**1.19**	**30**	*e*Pn	**Pn**	**03 12 07.2**	**-0.5**

ISCJB 24 03:16:57.9±0.5,50°.08N±0°.04×19°.10E±0°.03,h0km, Error ellipse: s-maj=5.8km s-min=2.9km az=8.7
PRU 24 03:16:58.9,50°.12N×19°.10E,h0km
WAR 24 03:16:58.5,50°.07N×19°.17E
IPEC 24 03:16:58.6±0.2,50°.12N×19°.13E,h0km,ML1.8/3, Error ellipse: s-maj=10.4km s-min=1.1km az=161.0
CSEM 24 03:16:59.8±0.6,50°.17N×18°.99E,h2km,ML2.6/6, Error ellipse: s-maj=12.8km s-min=8.1km az=1.0

ISC 24 03:16:59.1±0.9, 50°00N±0°05×19°16E±0°02, h0km, n16, σ1§02/27, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.47**	**62**	*i* Pg	**Pg**	**03 17 07.1**	**-0.9**
OJC				*i* Sg	**Sg**	**03 17 13.5**	**-0.6**
OKC	**Ostrava-Krasne**	**0.67**	**256**	*e*PG	**Pg**	**03 17 11.8**	**-0.2**
OKC				*e*SG	**Sg**	**03 17 19.8**	**-0.9**
	comp=Z,25nm,0.4s						
OKC	**Ostrava-Krasne**	**0.67**	**256**	Pg	**Pg**	**03 17 11.8**	**-0.2**
OKC				Sg	**Sg**	**03 17 19.8**	**-0.9**
	25nm,0.4s						
NIE	**Niedzica**	**0.95**	**127**	*e*Pg	**Pg**	**03 17 17.8**	**+0.5**
NIE				*e*Sg	**Sb**	**03 17 32.4**	**+0.8**
MORC	**Moravsky Berou**	**1.07**	**258**	*e*Pg	**Pg**	**03 17 19.4**	**-0.2**
MORC				*e*Sg	**Sg**	**03 17 32.5**	**-0.9**
	15nm,0.4s						
VYHS	**Vyhne**	**1.52**	**188**	*e*PN	**Pn**	**03 17 27.3**	**-0.3**
VYHS				*e*SN	**Sn**	**03 17 47.9**	**-0.3**
VRAC	**Vranov**	**1.81**	**248**	*e*Pn	**Pn**	**03 17 31.4**	**-0.1**
VRAC				*e*Sg	**Sb**	**03 17 55.9**	**-0.3**
	4.7nm,0.3s						
CRVS	**Cervenica-Dubn**	**1.86**	**125**	*e*PN	**Pn**	**03 17 32.8**	**+0.5**
CRVS				*e*SN	**Sb**	**03 17 58.1**	**+0.2**
KSP	**Ksiaz**	**2.02**	**296**	*e*Pg	**Pg**	**03 17 39.0**	**+1.3**
KSP				*e*Sn	**Sn**	**03 17 58.0**	**-2.2**
KSP				*e*Sg	**Sb**	**03 18 01.1**	**-1.1**
KRUC	**Moravsky**	**2.03**	**243**	*e*Pn	**Pn**	**03 17 34.6**	**0.0**
KRUC				*e*Sn	**Sb**	**03 18 02.2**	**-0.5**
	7.8nm,0.6s						
KOLS	**Kolonicke sedl**	**2.30**	**117**	*e*SN	**Sn**	**03 18 07.8**	**+0.6**
PRU	**Pruhonice**	**2.98**	**271**	*e*SG	**Sb**	**03 18 31.3**	**+1.4**
	comp=Z,2.4nm,0.4s						
PRU	**Pruhonice**	**2.98**	**271**	Sg	**Sb**	**03 18 31.3**	**+1.4**
	2.4nm,0.4s						
PVCC	**Panska Ves**	**2.99**	**282**	*e*SG	**Sb**	**03 18 31.9**	**+1.6**
	comp=Z,8.7nm,0.5s						
PVCC	**Panska Ves**	**2.99**	**282**	Sg	**Sb**	**03 18 31.9**	**+1.6**
	8.7nm,0.5s						
CLL	**Collm**	**4.13**	**291**	*e*Sg	**Sg**	**03 19 13.0**	**+1.4**

BJI 24 03:21:48.6,31°.25S×177°.66W,h13km, mB5.7/19, mb5.2/22,Ms5.3/14,Ms7 4.9/17
ISCJB 24 03:21:48.7±2.2,31°.37S±0°.06×177°.76W±0°.05, h11km±13km, mb5.1/72,MS4.6/26, Error ellipse: s-maj=9.7km s-min=6.2km az=157.3
NEIC 24 03:21:49.5±0.2,31°.36S×177°.75W,h10km, mb5.1/48, Error ellipse: s-maj=8.0km s-min=5.5km az=150.0
IDC 24 03:21:49.9±2.5,31°.24S×177°.82W,h10km±14km,mb4.6/20, mb1 4.8/21,mb1mx4.8/24, mbtmp4.6/21,ML2.6/1,MS4.5/20, Ms1 4.5/20,ms1mx4.4/33, Error ellipse: s-maj=15.0km s-min=13.5km az=152.0
MOS 24 03:21:52.4±1.1,31°.30S×177°.81W,h33km,mb5.3/28, Error ellipse: s-maj=11.9km s-min=10.3km az=85.9
GCMT 24 03:21:53.8±0.3,31°.38S×177°.36W,h14km±1km,MW5.0, Moment Tensor Solution. s34,c42; s65,c97; Moment tensor: Scale 10^16 Nm; Mrr3.06±.22; Mθθ0.27±.15; Mϕϕ-3.33±.15; Mrθ-0.52±.39; Mrϕ-1.47±.10; Mθϕ2.16±.33; Best double couple: Mo4.20000×10^16 NP1:ϕ221.00000°, δ35.00000°, λ125.00000°. NP2:ϕ81.00000°, δ62.00000°, λ69.00000°. Principal axes: T 3.9700, Plg66.0000°, Azm232.0000°; N 0.3700, Plg19.0000°, Azm11.0000°; P -4.3400, Plg15.0000°, Azm106.0000°; Data Used: II IU G IC CN.
AUST 24 03:22:04.5,32°.00S×178°.20W,h100km
DJA 24 03:22:17.8±5.2,32°S±15°×17°W±2°2,h215km±46km, M5.0/11,mb5.0/11

ISC 24 03:21:50.0±0.5, 31°42S±0°05×177°65W±0°06, h14km±2km, n430, σ1§29/460, mb5.1/71, MS4.6/26, 9C-5D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.18**	**354**	*e*Pn	**Pn**	**03 22 24.5**	**-1.3**
RAO				Sn	**Sn**	**03 22 46.8**	**-5.7**
RAO	**Raoul Island**	**2.18**	**354**	Pn	**Pn**	**03 22 24.0**	**-1.8**
	215nm,0.3s,baz=41,slow=23,SNR=11						
RAO				Sn	**Sn**	**03 22 46.8**	**-5.7**
	274nm,0.3s,baz=236,slow=22,SNR=7.6						
URZ	**Urewera**	**8.06**	**211**	*e*Pn	**Pn**	**03 23 44.6**	**-2.0**
URZ				Sn	**Sn**	**03 25 12.7**	**-4.9**
URZ	**Urewera**	**8.06**	**211**	Pn	Pn	03 23 43.1	-3.5
	1.1nm,0.3s,baz=192,slow=18,SNR=14						
URZ				Sn	**Sn**	**03 25 12.7**	**-4.9**
	17nm,0.3s,baz=354,slow=13,SNR=12						
OUZ	**Omahuta**	**8.24**	**240**	*e*Pn	**Pn**	**03 23 49.8**	**+0.7**
RPZ	**Rata Peaks**	**15.17**	**213**	Pn	**Pn**	**03 25 20.0**	**-3.8**
RPZ				Sn	Sn	03 27 56.7	-15
RPZ	**Rata Peaks**	**15.17**	**213**	Pn	**Pn**	**03 25 20.0**	**-3.8**
	2.2nm,0.3s,baz=131,slow=0.5,SNR=8.2						
RPZ				Sn	Sn	03 27 56.7	-15
	1.9nm,0.3s,baz=211,slow=19,SNR=5.1						
ODZ	**Otahua Downs**	**16.39**	**211**	*e*Pn	**P**	**03 25 42.4**	**0.0**
	285nm,1.9s						
DZM	**Mont Dzumac**	**16.97**	**299**	*e*P	P	03 25 53.7	+4.7
	292nm,1.2s						
DZM				*e*LR	LR	03 29 47.6	
	4μm,24.8s						
AFI	**Afiamalu**	**18.25**	**19**	*e*P	P	03 26 08.2	+5.1
	94nm,1.0s						
AFI	**Afiamalu**	**18.25**	**19**	P	**Pn**	**03 26 00.6**	**-2.4**
	1.0nm,0.3s,baz=66,slow=24,SNR=3.3						
RAR	**Rarotonga**	**18.96**	**62**	LR	LR	03 32 25.3	
	comp=Z,1μm,19.0s,baz=128,slow=33						
TBI	**Tubuai**	**26.24**	**79**	*e*LQ	LQ	03 32 26.4	
	1μm,25.8s						
TBI				*e*LR	LR	03 33 32.0	
	1μm,22.2s,baz=247						
MGCD	**Mangrove Creek**	**26.41**	**258**	P	**P**	**03 27 29.2**	**+3.0**
	baz=26,SNR=4.9						
CAN	**Canberra**	**28.04**	**253**	*e*P	**P**	**03 27 41.4**	**+0.5**
CAN				pmax	pmax		
	comp=Z,77nm,1.5s						
CAN	**Canberra**	**28.04**	**253**	*e*P	**P**	**03 27 41.4**	**+0.5**
	comp=Z,77nm,1.5s						
EIDS	**Eidsvold**	**28.10**	**274**	*e*P	**P**	**03 27 43.6**	**+2.2**
	comp=Z,47nm,1.2s						
EIDS	**Eidsvold**	**28.10**	**274**	P	**P**	**03 27 44.3**	**+2.9**
	baz=28,SNR=4.3						
YNG	**Young**	**28.59**	**255**	P	**P**	**03 27 48.0**	**+2.3**
	baz=28,SNR=5.3						
PPT2	**Papeete2**	**28.92**	**68**	*e*LQ	LQ	03 33 27.7	
	comp=Z,965nm,24.0s						
PPT2				*e*LR	LR	03 34 58.5	
	comp=Z,790nm,21.0s,baz=234						
PPT	**Papeete**	**28.93**	**68**	LR	LR	03 37 43.5	
	comp=Z,1μm,18.1s,baz=186,slow=33						
RMQ	**Roma**	**29.73**	**271**	P	**P**	**03 27 58.8**	**+2.9**
	baz=29,SNR=13						
HNR	**Honiara**	**30.20**	**312**	LR	LR	03 38 22.0	
	comp=Z,430nm,19.6s,baz=8.7,slow=33						
TOO	**Toolangi**	**30.85**	**248**	P	**P**	**03 28 07.0**	**+1.3**
	baz=30,SNR=5.2						
CMSA	**Cobar Meteorol**	**31.17**	**260**	P	**P**	**03 28 10.2**	**+1.6**
	baz=31,SNR=19						
PMOR	**Pomariorio Ree**	**31.72**	**66**	*e*P	**P**	**03 28 13.8**	**+0.3**
	comp=Z,94nm,1.4s						
QLP	**Quilpie**	**33.57**	**268**	P	**P**	**03 28 30.7**	**+1.1**
	baz=33,SNR=14						
ARPS	**Mount Arapiles**	**33.78**	**250**	P	**P**	**03 28 32.5**	**+1.1**
	baz=33,SNR=5.7						
CTA	**Charters Tower**	**34.27**	**280**	P	**P**	**03 28 37.6**	**+1.8**
CTA	**Charters Tower**	**34.27**	**280**	P	**P**	**03 28 37.6**	**+1.8**
	comp=Z,32nm,0.8s,baz=105,slow=11,SNR=28						
CTA				LR	LR	03 41 35.9	
	comp=Z,1μm,18.1s,baz=50,slow=35						
CTAO	**Charters Tower**	**34.27**	**280**	*e*P	**P**	**03 28 37.4**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,41nm,0.8s						
CTAO	**Charters Tower**	**34.27**	**280**	*e*P	**P**	**03 28 37.4**	**+1.6**
	comp=Z,41nm,0.8s						
STKA	**Stephens Creek**	**34.55**	**258**	*e*P	**P**	**03 28 39.5**	**+1.4**
	comp=Z,33nm,1.9s						
STKA	**Stephens Creek**	**34.55**	**258**	P	**P**	**03 28 38.9**	**+0.7**
	comp=Z,17nm,0.8s,baz=94,slow=12,SNR=23						
STKA				LR	LR	03 42 23.1	
	comp=Z,1μm,18.0s,baz=63,slow=36						
STKA	**Stephens Creek**	**34.55**	**258**	P	**P**	**03 28 39.3**	**+1.2**
	baz=34,SNR=14						
MTSU	**Mount Surprise**	**36.79**	**282**	P	**P**	**03 28 59.2**	**+1.7**
	baz=36,SNR=13						
RKT	**Rikitea**	**38.63**	**88**	*e*LR	LR	03 39 33.6	
	comp=Z,867nm,31.8s						
BBOO	**Buckleboo**	**38.99**	**255**	P	**P**	**03 29 15.6**	**-0.4**
	baz=38,SNR=23						
PMG	**Port Moresby**	**39.32**	**296**	*e*P	**P**	**03 29 17.2**	**-1.6**
	comp=Z,12nm,1.0s						
QIS	**Mount Isa**	**39.69**	**275**	P	**P**	**03 29 22.4**	**+0.5**
	baz=39,SNR=4.9						
COEN	**Coen**	**39.84**	**287**	*e*P	**P**	**03 29 24.2**	**+0.9**
	comp=Z,87nm,0.9s						
COEN	**Coen**	**39.84**	**287**	P	**P**	**03 29 24.7**	**+1.5**
	baz=40,SNR=12						
AS31	**Alice Springs**	**43.36**	**268**	*e*P	**P**	**03 29 51.5**	**-0.6**
ASAR	**Alice Springs**	**43.36**	**268**	P	**P**	**03 29 51.9**	**-0.2**
ASAR				ScP	**ScP**	**03 35 31.2**	**-0.4**
ASAR				S	**S**	**03 36 19.1**	**-0.5**
ASAR	**Alice Springs**	**43.36**	**268**	P	**P**	**03 29 51.9**	**-0.2**
	comp=Z,15nm,0.7s,baz=105,slow=7.5,SNR=142						
ASAR				ScP	**ScP**	**03 35 31.2**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=119,slow=4.2,SNR=5.1						
ASAR				S	**S**	**03 36 19.1**	**-0.5**
	comp=Z,1.3nm,0.9s,baz=113,slow=14,SNR=4.9						
ASAR				LR	LR	03 48 26.7	
	comp=Z,860nm,18.2s,baz=172,slow=37						
WRAB	**Tennant Creek**	**44.44**	**273**	*e*P	**P**	**03 30 00.3**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,49nm,0.8s						
WRAB	**Tennant Creek**	**44.44**	**273**	*e*P	**P**	**03 30 00.3**	**-0.4**
	comp=Z,49nm,0.8s						
WRAB	**Tennant Creek**	**44.44**	**273**	P	**P**	**03 30 00.0**	**-0.7**
	comp=Z,386nm,0.7s,SNR=27						
WRA	**Warramunga Arr**	**44.44**	**273**	P	**P**	**03 29 59.6**	**-1.2**
WRA				ScP	**ScP**	**03 35 37.8**	**+1.8**
WRA				S	**S**	**03 36 34.5**	**-0.9**
WRA	**Warramunga Arr**	**44.44**	**273**	P	**P**	**03 29 59.6**	**-1.2**
	comp=Z,45nm,0.7s,baz=115,slow=7.5,SNR=218						
WRA				ScP	**ScP**	**03 35 37.8**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=128,slow=3.1,SNR=5.2						
WRA				S	**S**	**03 36 34.5**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=116,slow=13,SNR=3.6						
WRA				LR	LR	03 48 15.6	
	comp=Z,2μm,18.6s,baz=110,slow=36						
FORT	**Forrest**	**46.08**	**256**	*e*P	**P**	**03 30 12.6**	**-1.0**
	comp=Z,46nm,0.7s						
FORT	**Forrest**	**46.08**	**256**	P	**P**	**03 30 12.8**	**-0.8**
	baz=45,SNR=8.8						
SBA	**Scott Base**	**47.04**	**184**	*e*P	**P**	**03 30 23.0**	**+2.5**
SBA	**Scott Base**	**47.04**	**184**	*e*P	**P**	**03 30 23.0**	**+2.5**
VNDA	**Vanda**	**47.11**	**186**	*e*P	**P**	**03 30 22.8**	**+1.7**
	comp=Z,14nm,1.4s						
VNDA	**Vanda**	**47.11**	**186**	P	**P**	**03 30 23.7**	**+2.7**
	comp=Z,1.9nm,1.0s,baz=1.0,slow=6.6,SNR=6.9						
KDU	**Kakadu**	**49.39**	**281**	P	**P**	**03 30 40.1**	**+0.7**
	baz=49,SNR=3.2						
KNRA	**Kununurra**	**51.08**	**275**	P	**P**	**03 30 52.3**	**+0.1**
	baz=51,SNR=10						
FITZ	**Fitzroy Crossi**	**52.66**	**270**	*e*P	**P**	**03 31 02.8**	**-1.2**
	comp=Z,52nm,1.2s						
FITZ	**Fitzroy Crossi**	**52.66**	**270**	P	**P**	**03 31 03.5**	**-0.5**
	comp=Z,20nm,0.9s,baz=140,slow=6.9,SNR=36						
FITZ				LR	LR	03 53 06.7	
	comp=Z,772nm,18.8s,baz=169,slow=36						
FITZ	**Fitzroy Crossi**	**52.66**	**270**	P	**P**	**03 31 03.6**	**-0.5**
	baz=52,SNR=24						
KLBR	**Kellerberrin**	**54.30**	**252**	P	**P**	**03 31 14.2**	**-1.8**
	baz=54,SNR=5.8						
CASY	**Casey**	**54.38**	**208**	*e*P	**P**	**03 31 14.8**	**-1.1**
	comp=Z,152nm,1.9s						
FAKI	**Fak Fak**	**54.97**	**291**	P	**P**	**03 31 21.9**	**+0.9**
	comp=Z,21nm,1.3s						
FAKI	**Fak Fak**	**54.97**	**291**	P	**P**	**03 31 21.5**	**+0.5**
	baz=55,SNR=3.9						
MEEK	**Meekatharra**	**55.25**	**258**	P	**P**	**03 31 21.5**	**-1.4**
	baz=55,SNR=5.6						
MBWA	**Marble Bar**	**56.41**	**264**	*e*P	**P**	**03 31 30.5**	**-0.8**
	comp=Z,26nm,1.1s						
QSPA	**South Pole Qui**	**58.69**	**180**	*e*P	**P**	**03 31 47.9**	**+1.0**
QSPA	**South Pole Qui**	**58.69**	**180**	P	**P**	**03 31 48.3**	**+1.5**
	comp=Z,20nm,1.0s,baz=42,slow=4.0,SNR=31						
NLAI	**Namlea**	**58.96**	**287**	P	**P**	**03 31 49.9**	**+0.6**
	comp=Z,25nm,0.9s						
LUWI	**Luwuk**	**63.75**	**286**	P	**P**	**03 32 23.5**	**+1.8**
	comp=Z,29nm,1.0s						
KAPI	**Kappang**	**64.08**	**280**	*e*P	**P**	**03 32 21.8**	**-2.2**
	comp=Z,15nm,1.3s						
KAPI	**Kappang**	**64.08**	**280**	P	**P**	**03 32 23.7**	**-0.2**
KAPI	**Kappang**	**64.08**	**280**	P	**P**	**03 32 21.8**	**-2.2**
	comp=Z,2.4nm,0.3s,baz=87,slow=8.6,SNR=7.7						
DAV	**Davao City (W)**	**66.32**	**295**	LR	LR	03 55 10.0	
	comp=Z,303nm,21.2s,baz=105,slow=30						
PMSA	**Palmer Station**	**71.21**	**155**	LR	LR	04 00 13.0	
	comp=Z,330nm,19.7s,baz=134,slow=32						
MAW	**Mawson**	**71.46**	**201**	P	**P**	**03 33 10.6**	**+1.0**
MAW	**Mawson**	**71.46**	**201**	P	**P**	**03 33 10.6**	**+1.0**
	comp=Z,14nm,1.1s,baz=112,slow=8.0,SNR=16						
MAW				LR	LR	04 05 01.2	
	comp=Z,675nm,18.4s,baz=125,slow=36						
MAW	**Mawson**	**71.46**	**201**	P	**P**	**03 33 10.5**	**+1.0**
	baz=70,SNR=10						
KSM	**Kuching**	**75.50**	**281**	*e*P	**P**	**03 33 33.8**	**-0.5**
	comp=Z,15nm,1.2s						
KSM	**Kuching**	**75.50**	**281**	P	**P**	**03 33 34.5**	**+0.2**
	baz=75,SNR=3.4						
SYO	**Syowa Base**	**76.19**	**193**	*e*P	**P**	**03 33 36.0**	**-1.2**
SYO	**Syowa Base**	**76.19**	**193**	*e*pP	P	03 33 40.6	+3.4
SNAA	**Sanae**	**77.13**	**178**	*e*P	**P**	**03 33 42.7**	**+0.1**
SNAA	**Sanae**	**77.13**	**178**	*e*pP	**P**	**03 33 45.5**	**+2.9**
SNAA	**Sanae**	**77.13**	**178**	*e*PcP	**PcP**	**03 33 54.3**	**+0.9**
SNAA	**Sanae**	**77.13**	**178**	*e*P	**P**	**03 33 42.5**	**-0.2**
	comp=Z,37nm,1.2s						
SNAA	**Sanae**	**77.13**	**178**	LR	LR	04 05 16.9	
	comp=Z,134nm,18.9s,baz=196,slow=34						
VNA1	**Neumayer--Stat**	**77.93**	**176**	*e*P	**P**	**03 33 48.0**	**+1.0**
VNA1	**Neumayer--Stat**	**77.93**	**176**	*e*pP	P	03 33 50.5	+3.5
VNA1	**Neumayer--Stat**	**77.93**	**176**	*e*PcP	**PcP**	**03 33 55.8**	**-1.0**
MJAR	**Matsushiro Arr**	**79.25**	**325**	P	**P**	**03 33 53.1**	**-1.6**
MJAR	**Matsushiro Arr**	**79.25**	**325**	P	**P**	**03 33 53.1**	**-1.6**
	comp=Z,3.6nm,1.1s,baz=170,slow=5.7,SNR=6.6						
MAJO	**Matsushiro**	**79.25**	**325**	*e*P	**P**	**03 33 54.0**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,24nm,1.3s						
MAJO	**Matsushiro**	**79.25**	**325**	*e*P	**P**	**03 33 54.0**	**-0.7**
	comp=Z,24nm,1.3s						
MAT	**Matsushiro**	**79.25**	**325**	P	**P**	**03 33 53.1**	**-1.6**
PLCA	**Paso Flores**	**81.59**	**133**	*e*P	**P**	**03 34 08.2**	**+0.6**
	comp=Z,23nm,1.5s						
PLCA	**Paso Flores**	**81.59**	**133**	P	**P**	**03 34 08.5**	**+0.9**
	comp=Z,4.5nm,1.1s,baz=279,slow=9.0,SNR=3.4						
PLCA				LR	LR	04 02 40.8	
	comp=Z,304nm,18.1s,baz=172,slow=30						
FX1	**Attu Island--F**	**84.33**	**354**	*e*P	**P**	**03 34 20.8**	**-0.3**
IPM	**Ipoh**	**84.93**	**278**	*e*P	**P**	**03 34 24.9**	**-0.2**
	comp=Z,9.6nm,1.0s						
KSRS	**Korea Array**	**85.32**	**320**	P	**P**	**03 34 26.0**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=145,slow=5.3,SNR=11						
KSRS				LR	LR	04 07 39.0	
	comp=Z,132nm,18.3s,baz=24,slow=32						
KSAR	**Wonju Array Be**	**85.33**	**319**	P	**P**	**03 34 26.0**	**-0.5**
KULM	**Kulim**	**85.67**	**279**	*e*P	**P**	**03 34 28.3**	**-0.5**
	comp=Z,10.0nm,1.1s						
QIZ	**Qiongzhong**	**85.70**	**295**	P	**P**	**03 34 27.8**	**-1.0**
QIZ				S	**S**	**03 45 02.4**	**+1.3**
QIZ				pmax	pmax		
	comp=Z,16nm,2.3s						
QIZ				LR	LR		
	comp=Z,200nm,19.1s						
YSS	**Yuzh-Sakhalins**	**85.80**	**334**	*e*P	**P**	**03 34 31.0**	**+2.5**
YSS				*e*		03 34 43.6	
PSI	**Prapat**	**85.83**	**276**	P	**P**	**03 34 28.2**	**-1.6**
	baz=85,SNR=5.1						
MURC	**Murrieta**	**86.21**	**47**	P	**P**	**03 34 31.6**	**+0.6**
	baz=86						
MONP	**Monument Peak**	**86.23**	**48**	P	**P**	**03 34 31.3**	**0.0**
	baz=86						
DVTC	**Desert V Tower**	**86.28**	**48**	P	**P**	**03 34 32.4**	**+0.9**
	baz=86						
BFSC	**Mount Baldy Ra**	**86.35**	**46**	P	**P**	**03 34 32.2**	**+0.3**
	baz=87						
VES	**Vestal, Richgr**	**86.57**	**44**	P	**P**	**03 34 33.5**	**+0.8**
	baz=87						
EDW2	**Edwards Air Fo**	**86.58**	**45**	P	**P**	**03 34 33.6**	**+0.8**
	baz=87						
PFO	**Pinyon Flat Ob**	**86.68**	**47**	*e*P	**P**	**03 34 33.5**	**0.0**
	comp=Z,23nm,1.5s						
PFO	**Pinyon Flat Ob**	**86.68**	**47**	P	**P**	**03 34 34.8**	**+1.3**
	comp=Z,7.7nm,1.1s,baz=189,slow=1.9,SNR=6.8						
PFO	**Pinyon Flat Ob**	**86.68**	**47**	P	**P**	**03 34 34.0**	**+0.5**
	baz=87						
ISA	**Isabella**	**86.82**	**44**	*e*P	**P**	**03 34 34.9**	**+0.9**
ISA				pmax	pmax		
	comp=Z,28nm,1.2s						
ISA	**Isabella**	**86.82**	**44**	*e*P	**P**	**03 34 34.9**	**+0.9**
	comp=Z,28nm,1.2s						
ISA	**Isabella**	**86.82**	**44**	P	**P**	**03 34 34.9**	**+0.9**
	baz=87						
PETK	**Petropavlovsk-**	**86.88**	**345**	P	**P**	**03 34 33.6**	**-0.2**
PETK	**Petropavlovsk-**	**86.88**	**345**	P	**P**	**03 34 33.5**	**-0.2**
PETK	**Petropavlovsk-**	**86.88**	**345**	P	**P**	**03 34 33.5**	**-0.2**
	comp=Z,8.3nm,0.9s,baz=132,slow=8.4,SNR=14						
NJ2	**Nanjing**	**87.13**	**310**	*e*P	**P**	**03 34 36.3**

TUC **Tucson** 89.52 51 *e*P P **P** 03 34 48.2 +1.2
TUC **Tucson** 89.52 51 *e*P P **P** 03 34 48.2 +1.2
comp=Z,5,6nm,1.5s
MDJ **Mudanjiang** 89.64 325 P P **P** 03 34 48.0 +0.9
MDJ pP **pP** 03 34 51.3 -0.5
MDJ sP **sP** 03 34 52.3 -1.2
MDJ pmax pmax
comp=Z,10.0nm,1.2s
MDJ pmax pmax
comp=Z,100nm,6.9s
MDJ **Mudanjiang** 89.64 325 *e*P P **P** 03 34 47.4 +0.4
comp=Z,22nm,1.3s
MOD **Modoc** 90.05 39 *e*P P **P** 03 34 49.8 +0.5
comp=Z,23nm,1.5s
HABR **Khabarovsk** 90.08 331 *ce*P P **P** 03 34 49.1 +0.1
HABR *e**PP pP 03 34 59.9 +6.1
HABR *e**SP sP 03 35 03.8 +8.3
HABR *e*PPP PPP 03 40 21.4
HABR S **SKSac** **03 45 17.1 -2.1**
HABR SS **SKKSac** **03 45 36.2 +3.6**
HABR *e*SS **SS** **03 51 44.1 +2.9**
HABR SSS SSS 03 55 21.3
HABR MLR MLR
comp=Z,219nm,19.0s
R11A **Troy Canyon, C** 90.33 44 P P **P** 03 34 51.2 +0.5
baz=91
X16A **Lo Mia Camp, P** 90.39 49 P P **P** 03 34 53.0 +1.8
baz=91
320A **Kipp Ranch, An** 90.45 53 P P **P** 03 34 53.1 +1.6
baz=91
BMN **Battle Mountai** 90.75 42 *e*P P **P** 03 34 53.8 +1.2
BMN pmax pmax
comp=Z,30nm,1.5s
BMN **Battle Mountai** 90.75 42 *e*P P **P** 03 34 53.8 +1.2
comp=Z,30nm,1.5s
220A **Playas Peak, P** 90.79 53 P P **P** 03 34 54.7 +1.7
baz=91
120A **U Bar Ranch, L** 91.10 52 P P **P** 03 34 56.0 +1.5
baz=91
U15A **North Rim** 91.11 47 P P **P** 03 34 54.9 +0.4
baz=91
WUAZ **Wupatki** 91.12 48 *e*P P **P** 03 34 55.8 +1.4
comp=Z,31nm,1.4s
WUAZ **Wupatki** 91.12 48 P P **P** 03 34 56.0 +1.5
baz=91
CN2 **Changchun** 91.13 323 *e*P P **P** 03 34 53.9 -0.2
CN2 *ep*P **pP** 03 34 58.8 -0.1
CN2 *es*P **sP** 03 35 00.9 +0.4
CN2 *e*S **S** 03 45 50.3 -1.2
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,15.0s
CN2 LR LR
comp=E,300nm,15.0s
CN2 LR LR
comp=Z,400nm,17.0s
CCUT **Cedar City** 91.15 46 *e*P P **P** 03 34 55.6 +1.0
comp=Z,17nm,1.4s
WVOR **Wild Horse Val** 91.32 39 *e*P P **P** 03 34 56.2 +1.0
WVOR pmax pmax
comp=Z,23nm,1.4s
WVOR **Wild Horse Val** 91.32 39 *e*P P **P** 03 34 56.2 +1.0
comp=Z,23nm,1.4s
X18A **Snowflake** 91.43 50 P P **P** 03 34 57.5 +1.6
baz=92
Z20A **Nine Sixteen R** 91.47 52 P P **P** 03 34 57.7 +1.6
baz=92
KLR **Kul'dur** 92.07 330 *e*P P **P** 03 34 56.2 -2.1
KLR pmax pmax
comp=Z,30nm,1.6s
Y20A **Horse Springs,** 92.09 51 P P **P** 03 35 00.7 +1.6
baz=92
ELK **Elko** 92.09 42 *e*P P **P** 03 35 00.3 +1.3
comp=Z,14nm,1.5s
Z21A **St. Cloud Mine** 92.21 52 P P **P** 03 35 01.3 +1.7
baz=92
GYA **Guiyang** 92.31 300 P P **P** 03 35 01.4 +1.2
GYA SKS **SKSac** **03 45 32.1 -1.2**
GYA S **S** **03 46 01.8 -1.5**
GYA SS **SS** **03 52 16.0 +1.5**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.8s
GYA LR LR
comp=N,640nm,19.8s
GYA LR LR
comp=E,510nm,20.4s
GYA LR LR
comp=Z,650nm,19.6s
X20A **Quemado** 92.39 51 P P **P** 03 35 01.5 +1.0
baz=93
626A **Big Bend Ranch** 92.48 57 P P **P** 03 35 01.3 +0.4
baz=93
MSU **Marysvale** 92.48 46 *e*P P **P** 03 35 02.3 +1.5
MSU **Marysvale** 92.48 46 *e*P P **P** 03 35 02.3 +1.5
comp=Z,14nm,0.6s
Y21A **Point of Rocks** 92.62 51 P P **P** 03 35 02.8 +1.2
baz=93
TXAR **Lajitas Array** 92.69 57 P P **P** 03 35 01.8 0.0
TXAR **Lajitas Array** 92.69 57 P P **P** 03 35 01.8 0.0
comp=Z,2.4nm,1.1s,baz=193,slow=5.1,SNR=9.3
TXAR LR LR 04 09 52.6
comp=Z,303nm,18.6s,baz=265,slow=31
W20A **Ramah** 92.74 50 P P **P** 03 35 03.2 +1.2
baz=93
526A **Mary Lane Ranc** 92.80 56 P P **P** 03 35 02.7 +0.4
baz=93
X21A **Alamocita Cree** 92.81 51 P P **P** 03 35 02.9 +0.5
baz=93
NNA **Nana** 92.86 106 *e*P P **P** 03 35 02.5 -0.4
comp=Z,25nm,1.4s
NNA **Nana** 92.86 106 LR LR 04 09 00.6
comp=Z,178nm,18.3s,baz=102,slow=30
325A **Bean Ranch, Si** 92.93 55 P P **P** 03 35 03.6 +0.6
baz=93
627A **Terlingua Ranc** 92.96 57 P P **P** 03 35 03.2 +0.2
baz=93
DUG **Dugway** 93.16 44 *e*P P **P** 03 35 03.8 0.0
DUG pmax pmax
comp=Z,3.0nm,1.2s
DUG **Dugway** 93.16 44 *e*P P **P** 03 35 03.8 0.0
comp=Z,3.1nm,1.2s
LVC **Limon Verde** 93.18 119 *e*P P **P** 03 35 05.2 +0.7
comp=Z,28nm,1.6s
426A **McDonald Obser** 93.19 56 P P **P** 03 35 04.7 +0.5
baz=93
LAZ **Ladron** 93.21 51 *e*P P **P** 03 35 04.7 +0.5
comp=Z,3.1nm,1.3s
628A **Black Gap, Mar** 93.34 57 P P **P** 03 35 05.6 +0.9
baz=94
MFID **Camas Ranch** 93.51 40 *e*P P **P** 03 35 05.1 -0.2
comp=Z,14nm,1.2s
MFID **Camas Ranch** 93.51 40 P P **P** 03 35 06.1 +0.9
baz=94
427A **Hayter Ranch,** 93.74 56 P P **P** 03 35 06.3 -0.3
baz=94
BJI **Beijing** 93.86 315 P P **P** 03 35 08.1 +1.4
BJI pmax pmax
comp=Z,7.0nm,0.9s
BJI LR LR
comp=Z,91nm,18.8s
SRU **San Rafael** 93.87 46 P P **P** 03 35 07.4 +0.3
baz=94
X23A **Hourglass Bar** 93.95 52 P P **P** 03 35 08.2 +0.5
baz=94
ANMO **Albuquerque** 93.98 51 *e*P P **P** 03 35 08.4 +0.7
comp=Z,6.5nm,1.5s
U21A **Nageezi** 94.06 49 P P **P** 03 35 08.9 +0.8
baz=94
Y24A **Capitan** 94.08 53 P P **P** 03 35 08.2 0.0
baz=94
I12A **Atlanta** 94.14 40 P P **P** 03 35 08.8 +0.6
baz=94
ATAH **Atahualpa** 94.16 101 LR LR 04 05 53.2
comp=Z,133nm,20.9s,baz=183,slow=28
529A **Stev Forest Ra** 94.17 57 P P **P** 03 35 08.4 -0.1
baz=94
428A **Kincaid Ranch,** 94.18 56 P P **P** 03 35 08.9 +0.3
baz=94
Z25A **Roswell** 94.20 53 P P **P** 03 35 09.1 +0.4
baz=94
HLID **Hailey** 94.39 41 *e*P P **P** 03 35 09.5 +0.2
comp=Z,5.7nm,1.1s
HLID **Hailey** 94.39 41 P P **P** 03 35 10.5 +1.1
baz=95
J13A **Cove Ranch, Pi** 94.41 41 P P **P** 03 35 10.7 +1.3
baz=95
PV01 **Paradox Valley** 94.50 48 *e*P P **P** 03 35 11.8 +1.7
comp=Z,462nm,1.4s
Y25A **Mesa, Roswell** 94.58 53 P P **P** 03 35 10.7 +0.2
baz=95
429A **Davenport Ranc** 94.69 57 P P **P** 03 35 10.3 -0.6
baz=95
J14A **Carey** 94.73 41 P P **P** 03 35 11.7 +0.8
baz=95
H12A **Diamond D Ranc** 94.78 40 P P **P** 03 35 11.5 +0.3
baz=95
HWUT **Hardware Ranch** 94.78 43 *e*P P **P** 03 35 12.9 +1.7
comp=Z,7.1nm,1.4s
G12A **Big Creek, Yel** 94.90 39 P P **P** 03 35 12.3 +0.6
baz=95
631A **Perdido Creek** 94.97 59 P P **P** 03 35 13.9 +1.7
baz=95
I14A **Mackay** 95.16 41 P P **P** 03 35 13.8 +0.9
baz=95
Q20A **Ridgley Place,** 95.16 47 P P **P** 03 35 13.6 +0.6
baz=95
V24A **Rampart Ranch,** 95.22 51 P P **P** 03 35 14.5 +1.1
baz=96
F12A **Elk City** 95.34 39 P P **P** 03 35 14.0 +0.4
baz=96
S22A **4UR Ranch, Cre** 95.38 49 P P **P** 03 35 15.6 +1.4
baz=96
531A **Rocksprings** 95.41 58 P P **P** 03 35 14.6 +0.4
baz=96
O19A **Miners Draw (B** 95.45 46 P P **P** 03 35 17.4 +3.2
baz=96
G13A **Cobalt** 95.47 40 P P **P** 03 35 15.5 +1.3
baz=96
632A **Uvalde** 95.60 59 P P **P** 03 35 17.7 +2.6
baz=96
H14A **Leadore** 95.64 40 P P **P** 03 35 16.6 +1.5
baz=96
532A **Rocksprings** 95.85 58 P P **P** 03 35 17.1 +0.8
baz=96
F13A **Darby** 95.86 39 P P **P** 03 35 16.8 +0.8
baz=96
MCMT **McKenzie Canyo** 96.06 40 *e*P P **P** 03 35 17.1 0.0
comp=Z,4.0nm,1.4s
U25A **Circle Dot Ran** 96.18 51 P P **P** 03 35 18.3 +0.5
baz=96
SDCO **Great Sand Dun** 96.23 49 *e*P P **P** 03 35 18.5 +0.4
comp=Z,6.7nm,1.7s
432A **Menard** 96.33 58 P P **P** 03 35 18.8 +0.4
baz=97
S24A **Houchin Ranch,** 96.36 50 P P **P** 03 35 20.4 +1.7
baz=97
L19A **Farson** 96.39 44 P P **P** 03 35 20.4 +1.8
baz=97
G15A **Dillon** 96.47 40 P P **P** 03 35 19.7 +0.8
baz=97
332A **Millersview** 96.65 57 P P **P** 03 35 20.9 +1.1
baz=97
BW06 **Boulder Array** 96.67 43 *e*P P **P** 03 35 20.2 +0.3
comp=Z,2.6nm,1.0s
PDAR **Pinedale Array** 96.67 43 P P **P** 03 35 20.1 +0.2
PDAR **Pinedale Array** 96.67 43 P P **P** 03 35 20.1 +0.2
comp=Z,0.7nm,0.7s,baz=242,slow=3.2,SNR=4.9
CD2 **Chengdu** 96.88 302 P P **P** 03 35 22.0 +1.1
CD2 pP **pP** **03 35 26.8 +1.1**
CD2 sP **sP** **03 35 29.0 +1.6**
CD2 PP **PP** **03 39 20.1 +3.5**
CD2 SKS **SKSac** **03 45 57.8 +0.2**
CD2 S **S** **03 46 41.3 -1.5**
CD2 sS **sS** **03 46 48.8 -2.0**
CD2 SS **SS** **03 53 21.0 +1.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,80nm,5.6s
G16A **Moss Hill, Enn** 96.89 41 P P **P** 03 35 21.5 +0.8
baz=97
L20A **Wamsutter** 96.94 45 P P **P** 03 35 22.0 +0.9
baz=97
SEY **Seymchan** 97.04 347 *e*P P **P** 03 35 21.8 +1.1
HHC **Hu-ho-hao-te** 97.16 314 *e*P Pdif 03 35 24.4 +2.3
HHC pP pP 03 35 29.6 +2.8
HHC sP sP 03 35 30.8 +2.4
HHC PP PP 03 39 23.9 +5.3
HHC SKS **SKSac** **03 46 01.1 +2.4**
HHC S **S** **03 46 43.9 -1.0**
HHC sS sS 03 46 52.3 -0.5
HHC SS **SS** **03 53 25.9 +2.9**
HHC pmax pmax
comp=Z,36nm,1.3s
HHC pmax pmax
comp=Z,200nm,6.3s
HHC LR LR
comp=N,280nm,17.8s
HHC LR LR
comp=E,300nm,21.4s
HHC LR LR
comp=Z,370nm,21.4s
E15A **Deer Lodge** 97.17 39 P Pdif 03 35 22.6 +0.6
baz=97
BOZ **Bozeman (W)** 97.24 40 *e*P P **P** 03 35 22.3 0.0
BOZ pmax pmax
comp=Z,10.0nm,1.5s
BOZ **Bozeman (W)** 97.24 40 *e*P P **P** 03 35 22.3 0.0
comp=Z,9.8nm,1.5s
LPAZ **La Paz** 97.46 114 *e*P Pdif 03 35 26.1 +1.4
comp=Z,3.2nm,1.3s
LPAZ **La Paz** 97.46 114 P Pdif 03 35 25.5 +0.8
comp=Z,0.8nm,0.7s,baz=294,slow=1.1,SNR=4.1
LPAZ LR LR 04 13 58.7
comp=Z,108nm,18.1s,baz=171,slow=32
ILAR **Eielson Array** 98.86 13 P P **P** 03 35 27.9 -0.9
ILAR **Eielson Array** 98.86 13 P P **P** 03 35 27.9 -0.9
comp=Z,0.9nm,1.0s,baz=218,slow=5.6,SNR=5.3
CPUP **Villa Florida** 99.12 128 LR LR 04 15 50.7
comp=Z,188nm,18.1s,baz=87,slow=33
GTA **Gaotai** 104.00 308 *e*P **PKiKP** **03 40 08.9 -1.1**
GTA pP **PP** **03 40 13.4 +2.8**
GTA sP 03 40 15.9
GTA pmax pmax
comp=Z,3.0nm,1.3s
BOSA **Boshof** 116.43 202 *e*PKPdf **PKPdf** **03 40 34.2 +0.3**
MK31 **Makanchi Array** 118.65 310 *e*PKIKP **PKPdf** **03 40 37.0 -0.3**
MK31 **Makanchi Array** 118.65 310 *e*PKPdf **PKPdf** **03 40 37.0 -0.3**
MKAR **Makanchi Array** 118.65 310 *ci*PKIKP **PKPdf** **03 40 36.9 -0.4**
MKAR pmax pmax
comp=Z,2.0nm,1.0s
MKAR **Makanchi Array** 118.65 310 PKP **PKPdf** **03 40 36.2 -1.1**
MKAR **Makanchi Array** 118.65 310 PKP **PKPdf** **03 40 36.2 -1.1**
comp=Z,1.9nm,1.0s,baz=79,slow=0.6,SNR=6.8
ZALV **Zalesovo Beam** 118.99 318 PKIKP **PKPdf** **03 40 36.0 -1.6**
ZALV **Zalesovo Beam** 118.99 318 PKP **PKPdf** **03 40 36.0 -1.6**
ZALV **Zalesovo Beam** 118.99 318 PKP **PKPdf** **03 40 36.0 -1.6**
comp=Z,0.2nm,0.3s,baz=196,slow=2.6,SNR=4.3
NVS **Novosibirsk** 120.10 319 *e*PKIKP **PKPdf** **03 40 37.4 -2.3**
KSH **Kashi** 121.01 300 *e*PKP **PKPdf** **03 40 43.1 +0.9**
KSH *e*PP **PP** **03 42 12.3 +0.1**
KSH *e*PKS **PKSdf** **03 44 18.1 -0.8**
KSH *e*SKS **SKSdf** **03 47 50.4 -3.5**
KSH *e*SKKS SKKSac 03 49 01.1 -10
KSH AMB AMB
comp=Z,270nm,4.8s
KURK **Kurchatov** 121.97 313 *i* PKIKP **PKPdf** **03 40 42.2 -1.3**
KURK pmax pmax
comp=Z,9.0nm,1.7s
KURK **Kurchatov** 121.97 313 *e*PKPdf **PKPdf** **03 40 42.4 -1.1**
TKM2 **Tokmak 2** 122.21 304 *e*PKIKP **PKPdf** **03 40 43.9 -0.6**
TKM2 **Tokmak 2** 122.21 304 *e*PKPdf **PKPdf** **03 40 43.9 -0.6**
AAK **Ala-Archa** 122.92 303 *i* PKIKP **PKPdf** **03 40 45.0 -0.8**
AAK pmax pmax
comp=Z,19nm,1.7s
AAK **Ala-Archa** 122.92 303 *e*PKPdf **PKPdf** **03 40 46.6 +0.8**
EKS2 **Erkin-Say** 123.44 303 *e*PKIKP **PKPdf** **03 40 47.0 +0.2**
EKS2 **Erkin-Say** 123.44 303 *e*PKPdf **PKPdf** **03 40 47.0 +0.2**
LSZ **Lusaka** 127.35 212 *e*PKPdf **PKPdf** **03 40 56.0 +0.9**
BRVK **Borovoye** 127.41 315 PKIKP **PKPdf** **03 40 54.2 +0.4**
BRVK pmax pmax
comp=Z,10.0nm,1.7s
BRVK **Borovoye** 127.41 315 *e*PKPdf **PKPdf** **03 40 54.2 +0.4**
ABKAR **Akbulak array** 133.80 310 *e*PKPdf **PKPdf** **03 41 05.3 -0.8**
ARU **Arti** 134.07 320 *i* PKIKP **PKPdf** **03 41 07.6 +1.3**
ARU 03 43 38.8
ARCES **ARCESS Array B** 139.65 348 PKP **PKPdf** **03 41 14.1 -2.3**
comp=Z,1.1nm,0.9s,baz=61,slow=3.0,SNR=3.8
KLMR **Klimovskoe** 141.80 331 *e*PKHKP PKPpre 03 41 13.9
KLMR pmax pmax
comp=Z,11nm,1.5s
JOF **Joensuu** 143.48 338 *e*PKIKP PKPbc 03 41 20.9 +0.3
JOF **Joensuu** 143.48 338 *ep* PKPbc 03 41 20.9 +0.3
comp=Z,1.6nm,0.6s
DGRG **David-gareji** 144.29 299 P PKPbc 03 41 24.3 +0.5
TBLG **Delisi** 144.75 299 *e*PKIKP **PKPab** **03 41 25.0 -0.2**
TBLG **Delisi** 144.75 299 P **PKPab** **03 41 25.0 -0.2**
GNI **Garni** 144.80 296 *e*P PKPbc 03 41 26.2 +0.5
GNI **Garni** 144.80 296 *e*PKPdf PKPbc 03 41 26.1 +0.4
KZR **Kazreti** 145.01 298 P PKPbc 03 41 26.5 +0.3
GOR **Gori** 145.20 300 P **PKPdf** **03 41 27.6 +0.5**
MOS **Moscow** 145.34 325 *e*PKP2 **PKPbc** **03 41 24.4 -2.2**
MOS pmax pmax
comp=Z,300nm,1.4s
MOS pmax pmax
comp=Z,203nm,1.3s
CLDR **Caldiran** 145.44 295 *e*P **PKPbc** **03 41 27.8 -0.1**
KAF **Kangasniemi** 145.61 340 *e*PKP2 **PKPdf** **03 41 26.0 -1.1**
KAF pmax pmax
comp=Z,7.0nm,0.8s
KAF **Kangasniemi** 145.61 340 *ep* **PKPdf** **03 41 26.0 -1.1**
comp=Z,7.3nm,0.8s
KAF **Kangasniemi** 145.61 340 *ep* 03 44 46.4
comp=Z,1.7nm,0.5s
CUKT **Cukurca** 145.64 291 *e*P **PKPdf** **03 41 27.3 -0.8**
ONI **Oni** 145.64 301 P **PKPdf** **03 41 27.6 -0.3**
AKH **Akhalkalaki** 145.70 299 P **PKPab** **03 41 29.2 +0.3**
VANB **Van** 145.85 294 *e*P **PKPbc** **03 41 29.3 +0.3**
KBZ **Khabaz** 145.92 303 PKP2 **PKPab** **03 41 29.4 0.0**
KBZ **Khabaz** 145.92 303 PKPbc **PKPab** **03 41 29.4 0.0**
KBZ **Khabaz** 145.92 303 PKPbc **PKPab** **03 41 29.4 0.0**
comp=Z,22nm,1.1s,baz=81,slow=2.4,SNR=32
KIV **Kislovodsk** 146.04 303 *i* PKP2 **PKPdf** **03 41 29.1 +0.6**
KIV pmax pmax
comp=Z,26nm,1.1s
KARS **Kars** 146.05 297 *e*P **PKPdf** **03 41 29.3 +0.5**
OBN **Obninsk** 146.18 325 ǁ *i*PKIKP **PKPdf** **03 41 27.6 -0.6**
OBN *i* 03 41 41.3
OBN pmax pmax
comp=Z,173nm,1.3s
FIA1 **FINESS Array S** 146.20 340 *e*PKPbc **PKPdf** **03 41 28.8 +0.7**
FINES **FINESS Array B** 146.21 340 PKPbc **PKPdf** **03 41 28.4 +0.3**
FINES **FINESS Array B** 146.21 340 PKPbc **PKPdf** **03 41 28.4 +0.3**
comp=Z,19nm,0.8s,baz=49,slow=4.6,SNR=62
VSR **Storozhevoye** 146.49 317 *e*PKP2 **PKPdf** **03 41 29.6 +0.7**
VSR pmax pmax
comp=E,70nm,1.2s
VSR pmax pmax
comp=Z,110nm,1.2s
VSR pmax pmax
comp=N,20nm,1.4s
VORD **Divnogorie** 146.51 316 *e*PKP2 **PKPdf** **03 41 29.6 +0.7**
VORD pmax pmax
comp=Z,70nm,1.2s
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,30nm,1.0s
BCA **Borcka** 147.10 299 *e*P **PKPbc** **03 41 32.1 -0.3**
VRTB **Varto-Mus** 147.35 295 *e*P **PKPbc** **03 41 33.9 +0.5**
BNGB **Bing ¶ǁ** 147.96 294 *e*P **PKPbc** **03 41 35.2 +0.2**
BAYT **Ayd¨–ntepe-Bay** 148.30 297 *e*P **PKPbc** **03 41 36.5 +0.5**
PTK **Pertek** 148.97 294 *e*P **PKPbc** **03 41 38.5 +0.8**
SVRC **Sivrice-ELAZID** 149.06 293 *e*P **PKPbc** **03 41 38.0 0.0**
URFA **Urfa** 149.46 291 *e*P **PKPbc** **03 41 38.4 -0.5**
ANN **Anapa** 149.58 306 *i* PKP2 PKPab 03 41 49.5 +5.6
ANN pmax pmax
comp=Z,56nm,1.4s
NB2 **NORSAR Subarra** 149.81 351 PKP **PKPbc** **03 41 38.0 -0.9**
comp=Z,22nm,1.4s,baz=17,slow=2.6
NOA **NORSAR Array B** 149.81 351 PKPbc **PKPbc** **03 41 37.0 -1.8**
NOA **NORSAR Array B** 149.81 351 PKPbc **PKPbc** **03 41 37.0 -1.8**
comp=Z,5.5nm,1.0s,baz=14,slow=4.2,SNR=11
NAO01 **NORSAR Array S** 150.04 352 *e*PKPbc **PKPbc** **03 41 39.4 0.0**
IZAR **Zarasai** 150.44 332 *e*P **PKPbc** **03 41 40.0 -0.5**
IZAR AMB AMB 03 41 51.2
comp=Z,13nm,1.5s
IDID **Didziasalis** 150.55 331 *e*P **PKPbc** **03 41 41.4 +0.6**
IDID AMB AMB 03 41 44.4
comp=Z,9.6nm,1.4s
ISAL **Salakas** 150.61 332 AMB AMB 03 41 48.7
comp=Z,10.0nm,1.5s
MNK **Minsk** 150.64 329 ǁ *e*PKIKP **PKPbc** **03 41 39.0 -2.0**
MNK pmax pmax
comp=Z,80nm,1.0s
IIGN **Ignalina** 150.73 332 *e*P **PKPbc** **03 41 41.9 +0.7**
IIGN AMB AMB 03 41 49.1
comp=Z,9.1nm,1.2s
NACGM **Naroch** 150.82 331 *e* **PKPbc** **03 41 39.0 -2.4**
AKASG **Malin Array Be** 152.29 322 PKIKP **PKPbc** **03 41 44.6 -0.3**
AKASG 03 41 53.9
AKASG **Malin Array Be** 152.29 322 PKPbc **PKPbc** **03 41 44.6 -0.3**
AKASG PKPab **PKPab** **03 41 53.9 -1.0**
AKASG **Malin Array Be** 152.29 322 PKPbc **PKPbc** **03 41 44.6 -0.3**
comp=Z,5.6nm,0.8s,baz=51,slow=2.4,SNR=19
AKASG PKPab **PKPab** **03 41 53.9 -1.0**
comp=Z,4.1nm,0.6s,baz=45,slow=4.3,SNR=7.9
AK01 **Malin Array Si** 152.30 322 *e*PKPbc **PKPbc** **03 41 44.7 -0.2**
AK01 *e*PKPab **PKPab** **03 41 55.4 +0.5**
KIEV **Kiev** 152.30 322 *e*PKIKP **PKPbc** **03 41 44.5 -0.4**
KIEV *e* 03 41 55.2
KIEV **Kiev** 152.30 322 *e*PKPbc **PKPbc** **03 41 44.5 -0.4**
KIEV *e*PKPab **PKPab** **03 41 55.2 +0.3**
AK02 **Malin Array Si** 152.32 322 *e*PKPbc **PKPbc** **03 41 44.8 -0.2**
AK02 *e*PKPab **PKPab** **03 41 55.4 +0.4**
SUW **Suwalki** 152.92 333 *e*PKIKP **PKPbc** **03 41 46.3 +0.1**
SUW *e* 03 41 57.6
SUW **Suwalki** 152.92 333 *e*PKPbc **PKPbc** **03 41 46.3 +0.1**
SUW *e*PKPab **PKPab** **03 41 57.6 +0.2**
BR131 **Keskin Array S** 153.34 297 *e*PKPbc **PKPbc** **03 41 47.9 +0.1**
BR131 *e*PKPab **PKPab** **03 42 00.6 +0.7**
BRTR **Keskin Array B** 153.34 297 PKP **PKPdf** **03 41 40.5 +0.3**
BRTR PKPbc **PKPbc** **03 41 48.1 +0.3**
BRTR PKPab **PKPab** **03 42 00.3 +0.4**
BRTR **Keskin Array B** 153.34 297 PKP **PKPdf** **03 41 40.5 +0.3**
comp=Z,0.8nm,1.0s,baz=82,slow=2.7,SNR=3.7
BRTR PKPbc **PKPbc** **03 41 48.1 +0.3**
comp=Z,2.3nm,1.0s,baz=12,slow=3.4,SNR=11
BRTR PKPab **PKPab** **03 42 00.3 +0.4**
comp=Z,3.1nm,0.8s,baz=121,slow=4.8,SNR=7.9
CSS **Prodhromos** 153.88 286 *e*PKPbc **PKPbc** **03 41 49.3 +0.2**
LVV **L'vov** 155.48 325 *e*PKP2 **PKPab** **03 42 08.2 -0.3**
BUR08 **Bucovina Ar. S** 156.19 319 *e*PKPdf **PKPdf** **03 41 43.4 -0.6**
BUR08 *e*PKPab **PKPab** **03 42 13.2 +1.4**
KWP **Kalwaria Pacla** 156.25 326 *e*PKP2 **PKPab** **03 42 11.4 -0.4**
KWP **Kalwaria Pacla** 156.25 326 *e*PKPab **PKPab** **03 42 11.4 -0.4**
KWP **Kalwaria Pacla** 156.25 326 *e*PKP **PKPab** **03 42 11.8 0.0**
KOLS **Kolonicke sedl** 156.93 325 *e*PKIKP **PKPdf** **03 41 46.1 +1.4**
KOLS **Kolonicke sedl** 156.93 325 *e*PKP **PKPdf** **03 41 46.1 +1.4**
KOLS *e* 03 42 14.6
UZH **Uzhgorod** 157.12 324 *e*PKP2 **PKPab** **03 42 15.7 +0.2**
TRPA **Tarpa** 157.32 323 ǁ *e* **PKPab** **03 42 16.6 +0.2**
CRVS **Cervenica-Dubn** 157.34 326 *e*PKIKP **PKPdf** **03 41 42.8 -2.4**
CRVS **Cervenica-Dubn** 157.34 326 *e*PKP **PKPdf** **03 41 42.8 -2.4**
CRVS *e* 03 42 14.9
KSP **Ksiaz** 158.01 336 *e*PKP2 **PKPab** **03 42 19.3 0.0**
KSP **Ksiaz** 158.01 336 *e*PKP **PKPab** **03 42 19.4 +0.1**
OKC **Ostrava-Krasne** 158.12 332 *e*PKP2 **PKPab** **03 42 18.8 -1.0**
OKC **Ostrava-Krasne** 158.12 332 *e*PKPAB **PKPab** **03 42 18.8 -1.0**
NRDL **Niedersach Rie** 158.19 347 *e*PKPab **PKPab** **03 42 19.3 -0.6**
UPC **Upice** 158.39 336 *e*PKP2 **PKPab** **03 42 21.1 +0.2**
UPC **Upice** 158.39 336 *e*PKPAB **PKPab** **03 42 21.1 +0.2**
UPC *ex* x 03 42 34.0
MORC **Moravsky Berou** 158.41 332 *e*PKP2 **PKPab** **03 42 19.3 -1.8**
MORC **Moravsky Berou** 158.41 332 *e*PKPab **PKPab** **03 42 19.3 -1.8**
CLL **Collm** 158.63 341 *e*PKPab **PKPab** **03 42 21.3 -0.6**
CLL **Collm** 158.63 341 ǁ *i*PKP2 **PKPab** **03 42 21.6 -0.3**
CLL pmax pmax
comp=Z,22nm,1.5s
CLL **Collm** 158.63 341 ǁ *i*PKPab **PKPab** **03 42 21.6 -0.3**
comp=Z,22nm,1.5s
CLL *i* 03 42 33.6
CLL *e*PP PP 03 46 08.0 +6.1
BRG **Berggiesshubel** 158.75 339 *e*PKP **PKPab** **03 42 22.5 +0.1**
comp=Z,21nm,1.5s
BRG **Berggiesshubel** 158.75 339 *e*PKPab **PKPab** **03 42 22.3 -0.1**
BRG **Berggiesshubel** 158.75 339 *e*PKP2 **PKPab** **03 42 22.5 +0.1**
BRG pmax pmax
comp=Z,21nm,1.5s

IBBN	**Ibbenburen**	**158.76**	**351**	*e*PKPab	**PKPab**	**03 42 22.2**	**-0.2**
PSZ	**Piszkesteto**	**158.78**	**326**	*e*PKIKP	**PKPdf**	**03 41 45.0**	**-2.1**
PSZ				*e*		03 42 22.3	
PSZ	**Piszkesteto**	**158.78**	**326**	*e*PKPdf	**PKPdf**	**03 41 45.0**	**-2.1**
PSZ				*e*PKPab	**PKPab**	**03 42 22.3**	**-0.5**
PVCC	**Panska Ves**	**158.85**	**338**	*e*PKP2	**PKPab**	**03 42 23.4**	**+0.5**
PVCC	**Panska Ves**	**158.85**	**338**	*e*PKPAB	**PKPab**	**03 42 23.4**	**+0.5**
PVCC				*ex*	x	03 42 33.7	
VYHS	**Vyhne**	**158.85**	**328**	*e*PKIKP	**PKPdf**	**03 41 46.7**	**-0.4**
VYHS				*e*		03 42 23.1	
VYHS	**Vyhne**	**158.85**	**328**	*e*PKP	**PKPdf**	**03 41 46.7**	**-0.4**
VYHS				*e*		03 42 23.1	
WTSB	**Winterswijk**	**159.21**	**352**	*e*PKP	**PKPab**	**03 42 24.6**	**+0.2**
	comp=Z,31nm,1.7s						
PRU	**Pruhonice**	**159.33**	**337**	*e*PKP2	**PKPab**	**03 42 25.2**	**+0.2**
PRU	**Pruhonice**	**159.33**	**337**	*e*PKPAB	**PKPab**	**03 42 25.2**	**+0.2**
SMOL	**Smolenice**	**159.45**	**330**	*e*PKP2	**PKPab**	**03 42 27.0**	**+1.4**
SMOL	**Smolenice**	**159.45**	**330**	*e*PKP	**PKPab**	**03 42 27.0**	**+1.4**
BUD	**Budapest**	**159.50**	**326**⇑	*e*	**PKPab**	**03 42 26.4**	**+0.5**
TREC	**Trest**	**159.59**	**335**	*e*PKP2	**PKPab**	**03 42 26.5**	**+0.3**
TREC	**Trest**	**159.59**	**335**	*e*PKPAB	**PKPab**	**03 42 26.5**	**+0.3**
MOX	**Moxa**	**159.59**	**343**	*e*PKPab	**PKPab**	**03 42 25.9**	**-0.3**
MOX	**Moxa**	**159.59**	**343**	*e*PKP2	**PKPab**	**03 42 25.9**	**-0.3**
NKC	**Novy Kostel**	**159.75**	**341**	*e*PKP2	**PKPab**	**03 42 26.8**	**-0.1**
NKC	**Novy Kostel**	**159.75**	**341**	*e*PKPAB	**PKPab**	**03 42 26.8**	**-0.1**
ZST	**Bratislava**	**159.83**	**330**	*e*PKP2	**PKPab**	**03 42 24.8**	**-2.5**
ZST	**Bratislava**	**159.83**	**330**	*e*PKP	**PKPab**	**03 42 24.8**	**-2.5**
ROTZ	**Rotzenmuhle**	**160.24**	**341**	*e*PKPab	**PKPab**	**03 42 29.3**	**+0.3**
KHC	**Kasperske Hory**	**160.38**	**338**	*e*PKP2	**PKPab**	**03 42 29.5**	**-0.2**
KHC	**Kasperske Hory**	**160.38**	**338**	*e*PKPAB	**PKPab**	**03 42 29.5**	**-0.2**
SOP	**Sopron**	**160.46**	**330**⇓	*e*PKPab	**PKPab**	**03 42 30.6**	**+0.6**
HGN	**Heimansgroeve**	**160.49**	**353**	*e*PKP	**PKPab**	**03 42 29.4**	**-0.6**
	comp=Z,44nm,2.1s						
CONA	**Conrad Observa**	**160.56**	**332**	*i* PKPab	**PKPab**	**03 42 31.4**	**+0.9**
	SNR=7.5						
GRF	**Grafenberg Arr**	**160.57**	**342**	*e*PKPab	**PKPab**	**03 42 30.8**	**+0.4**
GRF	**Grafenberg Arr**	**160.57**	**342**	*e*PKP2	**PKPab**	**03 42 30.8**	**+0.4**
PKSM	**Moragy**	**160.58**	**324**⇓	*e*PKPdf	**PKPdf**	**03 41 48.6**	**-0.5**
GEC2	**GERESS Array S**	**160.59**	**337**	*e*PKPab	**PKPab**	**03 42 30.4**	**-0.3**
GEC2	**GERESS Array S**	**160.59**	**337**	*e*PKP2	**PKPab**	**03 42 30.4**	**-0.3**
GERES	**GERESS Array B**	**160.59**	**337**	PKP	**PKPdf**	**03 41 49.3**	**+0.1**
GERES				PKPab	**PKPab**	**03 42 29.8**	**-0.9**
GERES	**GERESS Array B**	**160.59**	**337**	PKP	**PKPdf**	**03 41 49.3**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=224,slow=3.7,SNR=3.9						
GERES				PKPab	**PKPab**	**03 42 29.8**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=46,slow=3.9,SNR=14						
WET	**Wettzell**	**160.60**	**339**	*e*PKPab	**PKPab**	**03 42 30.9**	**+0.3**
WET	**Wettzell**	**160.60**	**339**	*e*PKP2	**PKPab**	**03 42 30.9**	**+0.3**
TNS	**Taunus Mts**	**160.67**	**348**	*e*PKPab	**PKPab**	**03 42 30.6**	**-0.3**
TNS	**Taunus Mts**	**160.67**	**348**	*e*PKP2	**PKPab**	**03 42 30.6**	**-0.3**
BEHE	**Becsehely**	**161.29**	**328**⇑	*e*PKPab	**PKPab**	**03 42 34.3**	**+0.6**
TOA0	**Torodi Ar. Sit**	**161.80**	**178**	*e*PKPdf	**PKPdf**	**03 41 51.5**	**+0.1**
TOA0				*e*PKPab	**PKPab**	**03 42 36.0**	**-0.5**
TORD	**Torodi Ar. Bea**	**161.80**	**178**	PKP	**PKPdf**	**03 41 51.1**	**-0.2**
TORD				PKPab	**PKPab**	**03 42 36.6**	**+0.1**
TORD				PP	PP	03 46 26.1	+7.3
TORD	**Torodi Ar. Bea**	**161.80**	**178**	PKP	**PKPdf**	**03 41 51.1**	**-0.2**
	comp=Z,5.2nm,1.3s,baz=297,slow=1.6,SNR=7.5						
TORD				PKPab	**PKPab**	**03 42 36.6**	**+0.1**
	comp=Z,5.6nm,1.1s,baz=174,slow=2.7,SNR=8.9						
TORD				PP	PP	03 46 26.1	+7.3
	comp=Z,1.2nm,1.0s,baz=164,slow=3.7,SNR=3.5						
RJOB	**Jochberg**	**161.85**	**337**	*e*PKPab	**PKPab**	**03 42 36.4**	**+0.2**
BFO	**Black Forest**	**162.51**	**347**	*e*PKPab	**PKPab**	**03 42 38.3**	**-0.7**
BFO	**Black Forest**	**162.51**	**347**	*e*PKP2	**PKPab**	**03 42 38.3**	**-0.7**
VISS	**Visnje**	**162.67**	**329**	*i* PKPdf	**PKPab**	**03 42 39.8**	**0.0**
VISS				*i*		03 42 50.4	
BOJS	**Bojanci**	**162.72**	**328**	*i* PKPdf	**PKPab**	**03 42 40.1**	**+0.1**
BOJS				*i*		03 42 51.4	
MOTA	**Moosalm**	**162.74**	**340**	*i* PKPab	**PKPab**	**03 42 40.8**	**+0.6**
	SNR=7.9						
JAVS	**Javornik**	**162.93**	**331**	*i* PKPdf	**PKPab**	**03 42 41.0**	**0.0**
JAVS				*i*		03 42 52.2	
ESDC	**Sonseca Array**	**170.30**	**30**	PKP	**PKPdf**	**03 41 59.4**	**+1.9**
ESDC				PKPab	**PKPab**	**03 43 14.3**	**+0.6**
ESDC	**Sonseca Array**	**170.30**	**30**	PKP	**PKPdf**	**03 41 59.4**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=351,slow=3.8,SNR=4.8						
ESDC				PKPab	**PKPab**	**03 43 14.3**	**+0.6**
	comp=Z,1.0nm,0.9s,baz=318,slow=5.5,SNR=3.1						
TAM	**Tamanrasset**	**170.95**	**199**	*e*PKIKP	**PKPdf**	**03 41 59.4**	**+0.9**
TAM				*e*		03 43 17.1	
TAM	**Tamanrasset**	**170.95**	**199**	*e*PKPdf	**PKPdf**	**03 41 59.4**	**+0.9**
TAM				*e*PKPab	**PKPab**	**03 43 17.1**	**+0.1**
KEST	**Kesra**	**172.75**	**308**	PKPab	**PKPab**	**03 43 24.0**	**-0.8**
KEST	**Kesra**	**172.75**	**308**	PKPab	**PKPab**	**03 43 24.0**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=185,slow=4.2,SNR=2.7						

IDC 24 03:32:58.6±2.0, 21°69N×143°06E, h305km±19km, mb3.6/19, mb1 3.8/23, mb1mx3.7/32, mbtmp3.7/23, Error ellipse: s-maj=15.2km s-min=8.5km az=81.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**8.24**	**168**	P	Pn	03 34 56.7	+1.4
	9.5nm,0.3s,baz=178,slow=5.2,SNR=7.0						
JHJ	**Hachijo jima 2**	**11.75**	**346**	P	Pn	03 35 36.6	-1.4
	16nm,0.3s,baz=74,slow=17,SNR=30						
JHJ				S	S	03 37 48.5	-0.4
	4.7nm,0.3s,baz=64,slow=23,SNR=5.2						
MJAR	**Matsushiro Arr**	**15.39**	**345**	P	P	03 36 19.6	-0.1
	1.8nm,0.3s,baz=172,slow=11,SNR=24						
MJAR				S	S	03 39 05.1	-1.4
	0.4nm,0.3s,baz=242,slow=14,SNR=5.1						
MAT	**Matsushiro**	**15.39**	**345**	P	P	03 36 19.7	0.0
MAT				*e*S	S	03 38 38.5	-28
JNU	**Nakatsue**	**15.69**	**319**	P	Pn	03 36 24.6	-0.3
	0.5nm,0.3s,baz=120,slow=23,SNR=6.5						
KSRS	**Korea Array**	**20.45**	**324**	P	P	03 37 14.2	+0.6
	5.1nm,0.6s,baz=149,slow=8.9,SNR=37						
SONM	**Songino Array**	**39.27**	**321**	P	P	03 39 58.6	+0.1
	0.8nm,0.3s,baz=128,slow=8.0,SNR=5.8						
CMAR	**Chiang Mai Arr**	**41.46**	**274**	P	P	03 40 17.7	+1.1
	1.0nm,0.3s,baz=78,slow=6.5,SNR=4.5						
WRA	**Warramunga Arr**	**42.25**	**192**	P	P	03 40 21.8	-1.1
	3.7nm,0.8s,baz=9.9,slow=8.3,SNR=51						
FITZ	**Fitzroy Crossi**	**43.07**	**205**	P	P	03 40 29.1	-0.3
	1.1nm,0.6s,baz=18,slow=9.2,SNR=5.3						
ASAR	**Alice Springs**	**45.95**	**192**	P	P	03 40 51.4	-0.7
	0.5nm,0.3s,baz=14,slow=6.3,SNR=15						
STKA	**Stephens Creek**	**53.28**	**182**	P	P	03 41 46.1	-0.6
	2.0nm,0.4s,baz=325,slow=9.3,SNR=7.1						
ZALV	**Zalesovo Beam**	**54.14**	**322**	P	P	03 41 52.5	-0.2
	1.3nm,0.3s,baz=99,slow=6.6,SNR=12						
ZALV				PcP	PcP	03 42 52.5	-0.6
	2.3nm,0.4s,baz=118,slow=4.0,SNR=9.5						
MKAR	**Makanchi Array**	**54.62**	**313**	P	P	03 41 56.7	+0.4
	1.8nm,0.5s,baz=92,slow=8.6,SNR=19						
MKAR				PcP	PcP	03 42 55.0	-0.1
	0.9nm,0.4s,baz=76,slow=5.0,SNR=8.2						
KDAK	**Kodiak Island**	**58.27**	**35**	P	P	03 42 21.7	0.0
	8.3nm,0.8s,baz=333,slow=22,SNR=4.4						
ILAR	**Eielson Array**	**62.10**	**27**	P	P	03 42 46.4	-0.9
	1.3nm,0.6s,baz=262,slow=5.3,SNR=21						
YKA	**Yellowknife Ar**	**76.52**	**28**	P	P	03 44 15.1	-0.1
	2.5nm,0.5s,baz=292,slow=5.9,SNR=35						
KEV	**Kevo**	**78.33**	**341**	*ep*	P	03 44 24.3	-0.7
	5.4nm,0.5s						
ARCES	**ARCESS Array B**	**78.89**	**341**	P	P	03 44 28.3	+0.2
	7.1nm,0.6s,baz=78,slow=8.9,SNR=57						
JOF	**Joensuu**	**80.27**	**334**	*ep*	P	03 44 35.4	-0.1
	5.0nm,0.4s						
KBZ	**Khabaz**	**82.29**	**314**	P	P	03 44 47.2	+0.7
	5.9nm,0.8s,baz=192,slow=0.7,SNR=7.2						
FINES	**FINESS Array B**	**83.14**	**334**	P	P	03 44 49.5	-0.9
	4.9nm,0.5s,baz=66,slow=4.9,SNR=35						
AKASG	**Malin Array Be**	**87.44**	**324**	P	P	03 45 10.4	-1.4
	0.9nm,0.4s,baz=46,slow=5.8,SNR=5.5						
NOA	**NORSAR Array B**	**88.91**	**339**	P	P	03 45 17.4	-1.2
	0.6nm,0.7s,baz=46,slow=4.7,SNR=3.9						
BRTR	**Keskin Array B**	**90.26**	**313**	P	P	03 45 24.5	-1.0
	0.5nm,0.7s,baz=71,slow=2.6,SNR=4.3						
GERES	**GERESS Array B**	**96.53**	**329**	P	P	03 45 53.1	-0.8
	0.2nm,0.5s,baz=34,slow=7.1,SNR=2.7						
TORD	**Torodi Ar. Bea**	**128.65**	**309**	PKP	PKPdf	03 51 30.6	0.0
	0.3nm,0.4s,baz=24,slow=1.0,SNR=14						
PLCA	**Paso Flores**	**145.84**	**131**	PKPbc	PKPbc	03 52 03.0	+0.5
	2.7nm,0.6s,baz=304,slow=5.7,SNR=8.2						
LPAZ	**La Paz**	**150.06**	**85**	PKPbc	PKPbc	03 52 15.8	+0.9
	2.9nm,0.6s,baz=261,slow=2.7,SNR=18						
LPAZ				PKPab	PKPab	03 52 22.5	+0.6
	1.4nm,0.5s,baz=312,slow=2.9,SNR=6.1						
CFAA	**Coronel Fontan**	**150.43**	**116**	PKPbc	PKPbc	03 52 14.8	+0.1
	0.2nm,0.6s,baz=252,slow=4.4,SNR=6.6						

2009 MAY

*ISK **24** 03:49:05.7, 39°.15N×25°.75E, h5km, MD3.3*
*DDA **24** 03:49:06.0, 39°.21N×25°.85E, h7km, MD3.2*
*ISCJB **24** 03:49:06.4±0.9, 39°.14N±0°.02×25°.82E±0°.03, h3km±6km, Error ellipse: s-maj=4.6km s-min=3.9km az=158.6*
*CSEM **24** 03:49:06.8±0.1, 39°.15N×25°.80E, h2km, MD3.1, Error ellipse: s-maj=3.5km s-min=3.2km az=91.0*
*ATH **24** 03:49:07.1, 39°.16N×25°.95E, h26km±1km, MD3.1/10*

ISC 24 03:49:06.7±1.2, 39°16N±0°.02×25°82E±0°.02, h3km±10km, n111, σ0°79/129, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.36**	**76**	*e*PB	**Pg**	**03 49 14.1**	**+0.4**
PRK				*e*SB	**Sg**	**03 49 18.7**	**+0.2**
PRK	**Paraskevi**	**0.36**	**76**	*e*Pb	**Pg**	**03 49 14.1**	**+0.4**
PRK				*e*Sb	**Sg**	**03 49 18.7**	**+0.2**
AYVA	**Ayvalik**	**0.69**	**77**	*i* P	**Pg**	**03 49 19.8**	**-0.3**
AYVA				*i* S	**Sg**	**03 49 29.4**	**+0.3**
AYVA	**Ayvalik**	**0.69**	**77**	*i* P	**Pg**	**03 49 19.8**	**-0.3**
AYVA				*i* S	**Sg**	**03 49 29.4**	**+0.3**
EZN	**Ezine**	**0.77**	**30**	*e*PG	**Pg**	**03 49 21.3**	**-0.3**
EZN				*e*SG	**Sb**	**03 49 32.8**	**-0.9**
EZN	**Ezine**	**0.77**	**30**	*e*Pg	**Pg**	**03 49 21.3**	**-0.3**
EZN				*e*Sg	**Sb**	**03 49 32.8**	**-0.9**
CHOS	**Chios island**	**0.80**	**166**	*e*PN	**Pb**	**03 49 23.0**	**-0.2**
CHOS				*e*SN	**Sb**	**03 49 34.2**	**-0.2**
CHOS	**Chios island**	**0.80**	**166**	*e*Pn	**Pb**	**03 49 23.0**	**-0.2**
CHOS				*e*Sn	**Sb**	**03 49 34.2**	**-0.2**
LIA	**Limnos Island**	**0.89**	**327**	*e*PN	**Pn**	**03 49 25.8**	**-0.3**
LIA				*e*SN	**Sn**	**03 49 38.6**	**-0.8**
LIA	**Limnos Island**	**0.89**	**327**	*e*Pn	**Pn**	**03 49 25.8**	**-0.3**
LIA				*e*Sn	**Sn**	**03 49 38.6**	**-0.8**
URLA	**Izmir**	**1.00**	**142**	*i* P	**Pg**	**03 49 26.2**	**+0.2**
URLA				*i* S	**Sg**	**03 49 40.4**	**0.0**
URLA	**Izmir**	**1.00**	**142**	*i* P	**Pg**	**03 49 26.2**	**+0.2**
URLA				*i* S	**Sb**	**03 49 40.4**	**0.0**
BLCB	**Balcova**	**1.23**	**129**	*e*PN	**Pg**	**03 49 30.5**	**+0.2**
BLCB	**Balcova**	**1.23**	**129**	*e*Pn	**Pg**	**03 49 30.5**	**+0.2**
SMTH	**Samothraki Isl**	**1.33**	**351**	*e*PN	**Pg**	**03 49 32.1**	**-0.1**
SMTH				*e*SN	**Sn**	**03 49 51.0**	**+0.6**
SMTH	**Samothraki Isl**	**1.33**	**351**	*e*Pn	**Pg**	**03 49 32.1**	**-0.1**
SMTH				*e*Sn	**Sn**	**03 49 51.0**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.34**	**22**	*e*PN	**Pg**	**03 49 32.2**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.34**	**22**	*e*Pn	**Pg**	**03 49 32.2**	**-0.1**
IZM	**Izmir**	**1.36**	**124**	*e*PN	**Pg**	**03 49 32.4**	**-0.4**
IZM	**Izmir**	**1.36**	**124**	*e*Pn	**Pg**	**03 49 32.4**	**-0.4**
LPK	**Lapseki**	**1.41**	**31**	*e*PN	**Pn**	**03 49 32.5**	**-0.9**
LPK	**Lapseki**	**1.41**	**31**	*e*Pn	**Pn**	**03 49 32.5**	**-0.9**
AOS	**Alonnisos**	**1.51**	**271**	*e*PN	**Pg**	**03 49 35.7**	**+0.1**
AOS	**Alonnisos**	**1.51**	**271**	*e*Pn	**Pg**	**03 49 35.7**	**+0.1**
BALY	**Balya**	**1.51**	**67**	*i* P	**Pn**	**03 49 32.9**	**-1.9**
BALY				*i* S	**Sg**	**03 49 54.5**	**-0.8**
BALY	**Balya**	**1.51**	**67**	*i* P	**Pn**	**03 49 32.9**	**-1.9**
BALY				*i* S	**Sg**	**03 49 54.5**	**-0.8**
AKHS	**Akhisar**	**1.58**	**100**	*i* P	**Pn**	**03 49 34.7**	**-1.0**
AKHS				*i* S	**Sn**	**03 49 57.0**	**+0.4**
AKHS	**Akhisar**	**1.58**	**100**	*i* P	**Pn**	**03 49 34.7**	**-1.0**
AKHS				*i* S	**Sn**	**03 49 57.0**	**+0.4**
ENEZ	**Enez**	**1.59**	**9**	*e*PN	**Pn**	**03 49 35.6**	**-0.2**
ENEZ	**Enez**	**1.59**	**9**	*e*Pn	**Pn**	**03 49 35.6**	**-0.2**
ERIK	**Erikli-Kesan**	**1.60**	**19**	*e*PN	**Pn**	**03 49 36.0**	**+0.1**
ERIK	**Erikli-Kesan**	**1.60**	**19**	*e*Pn	**Pn**	**03 49 36.0**	**+0.1**
BALB	**Balikesir**	**1.67**	**73**	*e*PN	**Pn**	**03 49 37.1**	**+0.3**
BALB	**Balikesir**	**1.67**	**73**	*e*Pn	**Pn**	**03 49 37.1**	**+0.3**
KRBG	**Karabiga-Canak**	**1.68**	**42**	*e*PN	**Pn**	**03 49 36.6**	**-0.4**
KRBG	**Karabiga-Canak**	**1.68**	**42**	*e*Pn	**Pn**	**03 49 36.6**	**-0.4**
GONE	**Gonen-Balikesi**	**1.69**	**58**	*e*PN	**Pn**	**03 49 36.6**	**-0.6**
GONE	**Gonen-Balikesi**	**1.69**	**58**	*e*Pn	**Pn**	**03 49 36.6**	**-0.6**
ALN	**Alexandroupoli**	**1.74**	**6**	*e*PN	**Pn**	**03 49 37.6**	**-0.3**
ALN	**Alexandroupoli**	**1.74**	**6**	*e*Pn	**Pn**	**03 49 37.6**	**-0.3**
PAIG	**Paliouri**	**1.82**	**296**	*e*PN	**Pn**	**03 49 39.6**	**+0.6**
PAIG	**Paliouri**	**1.82**	**296**	*e*Pn	**Pn**	**03 49 39.6**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.85**	**34**	*e*PN	**Pn**	**03 49 39.8**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.85**	**34**	*e*Pn	**Pn**	**03 49 39.8**	**+0.4**
MFT	**Murefte**	**1.98**	**34**	*e*PN	**Pn**	**03 49 41.4**	**+0.2**
MFT	**Murefte**	**1.98**	**34**	*e*Pn	**Pn**	**03 49 41.4**	**+0.2**
MRMT	**Marmara Adasi**	**1.99**	**43**	*e*PN	**Pn**	**03 49 42.0**	**+0.7**
MRMT	**Marmara Adasi**	**1.99**	**43**	*e*Pn	**Pn**	**03 49 42.0**	**+0.7**
BNT	**Bandirma**	**2.01**	**53**	*e*PN	**Pn**	**03 49 40.9**	**-0.7**
BNT	**Bandirma**	**2.01**	**53**	*e*Pn	**Pn**	**03 49 40.9**	**-0.7**
APE	**Apeiranthos**	**2.10**	**186**	*e*PN	**Pn**	**03 49 41.6**	**-1.2**
APE	**Apeiranthos**	**2.10**	**186**	*e*Pn	**Pn**	**03 49 41.9**	**-1.0**
APE	**Apeiranthos**	**2.10**	**186**	*e*Pn	**Pn**	**03 49 41.9**	**-1.0**
DST	**Dursunbey**	**2.22**	**78**	*e*PN	**Pn**	**03 49 44.9**	**+0.4**
DST	**Dursunbey**	**2.22**	**78**	*e*Pn	**Pn**	**03 49 44.9**	**+0.4**
KCTX	**Karacabey (Bur**	**2.25**	**60**	*e*PN	**Pn**	**03 49 45.4**	**+0.5**
KCTX	**Karacabey (Bur**	**2.25**	**60**	*e*Pn	**Pn**	**03 49 45.4**	**+0.5**
TKR	**Tekirdag**	**2.25**	**35**	*e*PN	**Pn**	**03 49 45.1**	**+0.2**
TKR	**Tekirdag**	**2.25**	**35**	*e*Pn	**Pn**	**03 49 45.1**	**+0.2**
NAIG	**Nisos Aigina**	**2.30**	**233**	*e*PN	**Pn**	**03 49 45.6**	**0.0**
NAIG	**Nisos Aigina**	**2.30**	**233**	*e*Pn	**Pn**	**03 49 45.6**	**0.0**
KULA	**Kula-Manisa**	**2.31**	**105**	*e*PN	**Pn**	**03 49 45.2**	**-0.6**
KULA	**Kula-Manisa**	**2.31**	**105**	*e*Pn	**Pn**	**03 49 45.2**	**-0.6**
BODT	**Bodrum**	**2.40**	**150**	*e*PN	**Pn**	**03 49 46.8**	**-0.2**
BODT	**Bodrum**	**2.40**	**150**	*e*Pn	**Pn**	**03 49 46.8**	**-0.2**
MLSB	**Milas**	**2.42**	**140**	*e*PN	**Pn**	**03 49 47.5**	**+0.3**
MLSB	**Milas**	**2.42**	**140**	*e*Pn	**Pn**	**03 49 47.5**	**+0.3**
ORLT	**Orhaneli**	**2.54**	**69**	*e*PN	**Pn**	**03 49 49.7**	**+0.8**
ORLT	**Orhaneli**	**2.54**	**69**	*e*Pn	**Pn**	**03 49 49.7**	**+0.8**
MDNY	**Mudanya-Bursa**	**2.65**	**62**	*e*PN	**Pn**	**03 49 51.1**	**+0.7**
MDNY	**Mudanya-Bursa**	**2.65**	**62**	*e*Pn	**Pn**	**03 49 51.1**	**+0.7**
ARMT	**Armutlu**	**2.73**	**58**	*e*PN	**Pn**	**03 49 52.6**	**+1.1**
ARMT	**Armutlu**	**2.73**	**58**	*e*Pn	**Pn**	**03 49 52.6**	**+1.1**
SLVT	**Silivri**	**2.76**	**41**	*e*PN	**Pn**	**03 49 52.8**	**+0.9**
SLVT	**Silivri**	**2.76**	**41**	*e*Pn	**Pn**	**03 49 52.8**	**+0.9**
EDRB	**Edirne**	**2.77**	**14**	*e*PN	**Pn**	**03 49 52.4**	**+0.3**
EDRB	**Edirne**	**2.77**	**14**	*e*Pn	**Pn**	**03 49 52.4**	**+0.3**
YER	**Yerkesik**	**2.81**	**135**	*e*PN	**Pn**	**03 49 52.6**	**+0.1**
YER	**Yerkesik**	**2.81**	**135**	*e*Pn	**Pn**	**03 49 52.6**	**+0.1**
TVSB	**Tavsanli**	**2.84**	**83**	*e*PN	**Pn**	**03 49 53.9**	**+0.8**
TVSB	**Tavsanli**	**2.84**	**83**	*e*Pn	**Pn**	**03 49 53.9**	**+0.8**
GEMT	**Gemlik**	**2.89**	**63**	*e*PN	**Pn**	**03 49 54.7**	**+1.0**
GEMT	**Gemlik**	**2.89**	**63**	*e*Pn	**Pn**	**03 49 54.7**	**+1.0**
CTKS	**Kestanelik-??a**	**2.92**	**44**	*e*PN	**Pn**	**03 49 54.9**	**+0.8**
CTKS	**Kestanelik-??a**	**2.92**	**44**	*e*Pn	**Pn**	**03 49 54.9**	**+0.8**
CTYL	**Yal??k??y-??at**	**2.99**	**38**	*e*PN	**Pn**	**03 49 55.9**	**+0.9**
CTYL	**Yal??k??y-??at**	**2.99**	**38**	*e*Pn	**Pn**	**03 49 55.9**	**+0.9**
BUY	**Buyukada**	**3.05**	**55**	*e*PN	**Pn**	**03 49 56.9**	**+1.1**
BUY	**Buyukada**	**3.05**	**55**	*e*Pn	**Pn**	**03 49 56.9**	**+1.1**
YLV	**Yalova**	**3.08**	**62**	*e*PN	**Pn**	**03 49 57.7**	**+1.4**
YLV	**Yalova**	**3.08**	**62**	*e*Pn	**Pn**	**03 49 57.7**	**+1.4**
KLV	**Kalavryta, Ach**	**3.08**	**250**	*e*PN	**Pn**	**03 49 57.4**	**+1.0**
KLV	**Kalavryta, Ach**	**3.08**	**250**	*e*Pn	**Pn**	**03 49 57.4**	**+1.0**
ISK	**Istanbul-Kandi**	**3.13**	**52**	*e*PN	**Pn**	**03 49 58.1**	**+1.1**
ISK	**Istanbul-Kandi**	**3.13**	**52**	*e*Pn	**Pn**	**03 49 58.1**	**+1.1**
KLYT	**Kilyos**	**3.23**	**49**	*e*PN	**Pn**	**03 49 59.1**	**+0.7**
KLYT	**Kilyos**	**3.23**	**49**	*e*Pn	**Pn**	**03 49 59.1**	**+0.7**
CAVI	**Cavuskoy**	**3.28**	**70**	*e*PN	**Pn**	**03 50 00.1**	**+1.1**
CAVI	**Cavuskoy**	**3.28**	**70**	*e*Pn	**Pn**	**03 50 00.1**	**+1.1**
ADVT	**Abdulvahap**	**3.28**	**66**	*e*PN	**Pn**	**03 50 00.2**	**+1.3**
ADVT	**Abdulvahap**	**3.28**	**66**	*e*Pn	**Pn**	**03 50 00.3**	**+1.3**
ALT	**Altintas**	**3.34**	**90**	*e*PN	**Pn**	**03 50 00.1**	**+0.1**
ALT	**Altintas**	**3.34**	**90**	*e*Pn	**Pn**	**03 50 00.1**	**+0.1**
SILT	**Sile**	**3.54**	**55**	*e*PN	**Pn**	**03 50 03.8**	**+1.2**
SILT	**Sile**	**3.54**	**55**	*e*Pn	**Pn**	**03 50 03.8**	**+1.2**
GULT	**Gulveren**	**3.84**	**69**	*e*PN	**Pn**	**03 50 08.3**	**+1.5**
GULT	**Gulveren**	**3.84**	**69**	*e*Pn	**Pn**	**03 50 08.3**	**+1.5**
MDUB	**Mudurnu**	**4.34**	**71**	*e*PN	**Pn**	**03 50 15.7**	**+1.9**
MDUB	**Mudurnu**	**4.34**	**71**	*e*Pn	**Pn**	**03 50 15.7**	**+1.9**
SVRH	**Sivrihisar-ESK**	**4.44**	**85**	*e*PN	**Pn**	**03 50 16.8**	**+1.8**
SVRH	**Sivrihisar-ESK**	**4.44**	**85**	*e*Pn	**Pn**	**03 50 16.8**	**+1.8**

*ISCJB **24** 03:54:17.6±0.7, 28°.96S±0°.03×68°.32W±0°.07, h100km±9km, mb3.6/4, Error ellipse: s-maj=10.7km s-min=5.3km az=171.7*
*IDC **24** 03:54:18.8±1.9, 28°.97S×68°.33W, h95km±18km, mb3.5/4, mb1 3.7/7, mb1mx3.4/19, mbtmp3.4/7, Error ellipse: s-maj=26.3km s-min=17.2km az=93.0*
*GUC **24** 03:54:18.1±0.8, 28°.99S×68°.50W, h139km±28km, ML4.0*

ISC 24 03:54:18.9±0.7, 28°94S±0°.04×68°34W±0°.07, h98km±7km, n21, σ1°05/33, mb3.7/4, 4C-2D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**2.07**	**267**⇑	*i* P	**Pn**	**03 54 53.2**	**+0.7**
LCO				*i* S	**Sn**	**03 55 18.7**	**+0.5**
LCO				AML	AML	03 55 20.3	
	comp=E,431nm,0.5s						
VACH	**Vallenar**	**2.15**	**279**⇑	*i* P	Pn	03 54 41.1	-12
VACH				*i* S	Sn	03 55 07.9	-12
VACH				AML	AML	03 55 11.3	
	comp=E,1μm,0.1s						
CPCH	**Copiapo**	**2.37**	**311**	*i* P	**Pn**	**03 54 55.3**	**-1.0**
CPCH				*i* S	**Sn**	**03 55 24.4**	**-0.6**
CPCH				AML	AML	03 55 27.3	
	comp=N,2μm,0.1s						
TLL	**Tololo Astrono**	**2.47**	**240**

	comp=E,6μm,0.5s							
OKH				⇓*i*Sg		**Sb**	**04 46 18.2**	**+1.2**
OKH				A		A	04 46 18.4	
	comp=E,8μm,0.5s							
OKH				A		A	04 46 18.4	
	comp=E,9μm,0.5s							
NKL	**Nikolayevsk**	**1.30**	**274**	*i* Pg		**Pn**	**04 46 21.5**	**-2.4**
NKL				AMB		AMB	04 46 22.0	
	comp=E,370nm,0.5s							
NKL				AMB		AMB	04 46 22.0	
	comp=E,1μm,0.5s							
NKL				*i* Sg		**Sb**	**04 46 38.0**	**-2.9**
NKL				A		A	04 46 41.5	
	comp=E,8μm,0.5s							
NKL				A		A	04 46 41.5	
	comp=E,9μm,0.5s							
NKL				AMS		AMS	04 47 41.5	
	comp=E,600nm,4.0s							
NKL				AMS		AMS	04 47 41.5	
	comp=E,2μm,4.0s							
TYV	**Tymovskoe**	**2.23**	**183**	*e*P		**Pn**	**04 46 35.5**	**-1.0**
TYV				*e*Pg		**Pg**	**04 46 41.5**	**-0.9**
TYV				AMB		AMB	04 46 43.5	
	comp=E,57nm,0.8s							
TYV				AMB		AMB	04 46 43.5	
	comp=E,83nm,0.6s							
TYV				*e*Sg		**Sg**	**04 47 11.6**	**+0.4**
TYV				A		A	04 47 13.8	
	comp=E,308nm,0.8s							
TYV				A		A	04 47 36.0	
	comp=E,4μm,8.0s							
TYV				AMS		AMS	04 49 10.0	
	comp=E,1μm,6.0s							
TYV				AMS		AMS	04 49 10.0	
	comp=E,2μm,6.0s							
UGL	**Uglegorsk**	**4.04**	**187**	*e*Pg		**Pg**	**04 47 17.0**	**-0.1**
UGL				AMB		AMB	04 47 24.5	
	comp=E,86nm,0.7s							
UGL				*e*Sg		**Sg**	**04 48 12.0**	**+2.6**
UGL				A		A	04 48 44.5	
	comp=E,340nm,0.9s							
UGL				A		A	04 48 44.5	
	comp=E,330nm,0.9s							
UGL				A		A	04 48 44.5	
	comp=E,130nm,0.9s							
UGL				AMS		AMS	04 49 52.0	
	comp=E,500nm,11.0s							
UGL				AMS		AMS	04 49 52.0	
	comp=E,1μm,11.0s							
GRNR	**Gornyy**	**4.60**	**242**	*e*Pb		Pb	04 47 16.6	-3.8
GRNR				AMB		AMB	04 47 17.0	
	comp=E,10.0nm,0.4s							
GRNR				*e*Pg		**Pg**	**04 47 26.5**	**-1.3**
GRNR				AMB		AMB	04 47 27.6	
	comp=E,40nm,0.5s							
GRNR				*e*Sg		**Sg**	**04 48 28.5**	**+1.2**
GRNR				A		A	04 48 36.0	
	comp=E,168nm,0.6s							
EKMR	**Ekimchan**	**5.96**	**274**	*e*Pg		**Pg**	**04 47 53.5**	**-0.3**
EKMR				*e*S		**Sn**	**04 48 33.4**	**-2.7**
EKMR				*e*Sg		**Sg**	**04 49 13.8**	**+2.8**
EKMR				A		A	04 49 15.5	
	comp=E,400nm,0.7s							
EKMR				A		A	04 49 15.5	
	comp=E,350nm,0.7s							
EKMR				A		A	04 49 15.5	
	comp=E,220nm,0.7s							
YSS	**Yuzh-Sakhalins**	**6.14**	**181**	*e*PN		**Pn**	**04 47 32.4**	**+2.2**
YSS				MLR		MLR		
	comp=Z,500nm,12.0s							
YSS	**Yuzh-Sakhalins**	**6.14**	**181**⇓	*e*P		**Pn**	**04 47 28.1**	**-2.1**
YSS	**Yuzh-Sakhalins**	**6.14**	**181**	*e*P		**Pn**	**04 47 31.0**	**+0.8**
YSS				AMB		AMB	04 47 36.8	
	comp=Z,25nm,0.8s							
YSS				*e*S		**Sn**	**04 48 39.8**	**-0.6**
YSS				AMS		AMS	04 50 13.0	
	comp=Z,500nm,12.0s							
HABR	**Khabarovsk**	**6.76**	**230**	*e*PN		**Pn**	**04 47 37.8**	**-1.0**
HABR				pmax		pmax		
	comp=Z,8.0nm,0.7s							
HABR				pmax		pmax		
	comp=N,4.0nm,0.6s							
HABR				pmax		pmax		
	comp=E,10.0nm,0.7s							
HABR				MLR		MLR		
	comp=Z,219nm,16.0s							
KLR	**Kul'dur**	**7.97**	**245**	*e*PN		Pb	04 48 12.3	-5.4
KLR				MLR		MLR		
	comp=N,2μm,7.5s							
KLR				MLR		MLR		
	comp=E,900nm,7.5s							
KLR				MLR		MLR		
	comp=Z,2μm,7.5s							
KLR	**Kul'dur**	**7.97**	**245**	*e*P		Pb	04 48 12.3	-5.4
KLR				*e*S		**Sg**	**04 50 13.0**	**-2.2**
KLR				AMS		AMS	04 51 09.5	
	comp=Z,2μm,7.5s							
KLR				AMS		AMS	04 51 09.5	
	comp=Z,900nm,7.5s							
KLR				AMS		AMS	04 51 09.5	
	comp=Z,2μm,7.5s							
BMKR	**Bomnak**	**8.43**	**287**	*e*P		**Pn**	**04 48 00.5**	**-1.2**
BMKR				*e*Sg		**Sg**	**04 50 26.8**	**-3.2**
BMKR				A		A	04 50 34.5	
	comp=Z,54nm,0.7s							
PEA0B	**Petropavlovsk-**	**8.94**	**84**	*e*Pn		**Pn**	**04 48 10.0**	**+1.3**
PETK	**Petropavlovsk-**	**8.94**	**84**	*e*PN		**Pn**	**04 48 10.4**	**+1.6**
PETK	**Petropavlovsk-**	**8.94**	**84**	Pn		**Pn**	**04 48 07.7**	**-1.1**
PETK				Sn		**Sn**	**04 49 46.3**	**-3.1**
PETK	**Petropavlovsk-**	**8.94**	**84**	Pn		**Pn**	**04 48 07.7**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=316,slow=6.2,SNR=11							
PETK				Sn		**Sn**	**04 49 46.3**	**-3.1**
	baz=130,slow=42,SNR=2.1							
PETK				LR		LR	04 51 12.6	
	comp=Z,109nm,20.3s,baz=120,slow=35							
ASAJ	**Asahikawa**	**8.98**	**181**	LR		LR	04 52 21.4	
	comp=Z,270nm,18.8s,baz=360,slow=43							
TEY	**Ternei**	**9.03**	**209**	*e*Sg			04 51 01.5	
TEY				A		A	04 51 02.3	
	comp=Z,73nm,1.0s							
ZEA	**Zeya**	**9.34**	**280**	*e*Pg		Pn	04 48 32.4	+18
ZEA				AMB		AMB	04 48 33.2	
	comp=Z,10.0nm,0.7s							
ZEA				*e*Sg		Sn	04 50 38.2	+39
ZEA				A		A	04 50 39.5	
	comp=Z,47nm,1.2s							
ZEA				A		A	04 50 39.5	
	comp=Z,74nm,1.2s							
ZEA				A		A	04 50 44.0	
	comp=Z,300nm,4.0s							
ZEA				AMS		AMS	04 51 52.0	
	comp=Z,400nm,9.0s							
ZEA				AMS		AMS	04 51 52.0	
	comp=Z,600nm,9.0s							
ZEA				AMS		AMS	04 51 52.0	
	comp=Z,700nm,9.0s							
KROS	**Kirovskiy**	**9.50**	**285**	*e*Sg		Sn	04 51 02.3	+59
KROS				A		A	04 51 05.5	
	comp=Z,310nm,1.4s							
PET	**Petropavlovsk**	**9.53**	**84**	*e*PN		**Pn**	**04 48 15.7**	**-1.0**
CLNS	**Chul'man**	**10.97**	**297**	*e*PN		**Pn**	**04 48 38.6**	**+2.0**
CLNS				pmax		pmax		
	comp=Z,8.0nm,0.8s							
CLNS				pmax		pmax		
	comp=E,7.0nm,0.8s							
CLNS				pmax		pmax		
	comp=N,5.0nm,0.8s							
CLNS				MLR		MLR		
	comp=Z,194nm,12.0s							
CLNS				MLR		MLR		
	comp=E,188nm,12.0s							
CLNS				MLR		MLR		
	comp=N,101nm,17.0s							
SEY	**Seymchan**	**11.08**	**23**⇓	*e*PN		**Pn**	**04 48 37.8**	**-0.1**
SEY	**Seymchan**	**11.08**	**23**⇓	*e*P		**Pn**	**04 48 37.8**	**-0.1**
YAK	**Yakutsk**	**11.39**	**327**	*e*PN		**Pn**	**04 48 43.6**	**+1.4**
YAK				pmax		pmax		
	comp=Z,6.0nm,0.9s							
YAK				pmax		pmax		
	comp=E,3.0nm,1.1s							
YAK				pmax		pmax		
	comp=N,4.0nm,1.1s							
YAK				MLR		MLR		
	comp=Z,184nm,13.0s							
YAK				MLR		MLR		
	comp=N,145nm,12.0s							

YAK	**Yakutsk**	**11.39**	**327**⇑	*i*P		**Pn**	**04 48 43.6**	**+1.4**
USRK	**Ussuriysk Arra**	**11.41**	**223**	LR		LR	04 53 35.9	
	comp=N,140nm,19.9s,baz=29,slow=40							
FX1	**Attu Island--F**	**18.20**	**78**	LR		LR	04 56 11.6	
	comp=N,65nm,19.4s,baz=86,slow=34							
BILL	**Bilibino**	**18.70**	**28**⇓	*e*P		**P**	**04 50 16.8**	**-1.0**
BILL				pmax		pmax		
	comp=Z,4.0nm,0.8s							
BILL				MLR		MLR		
	comp=Z,100nm,12.0s							
KSRS	**Korea Array**	**18.77**	**220**	P		**Pn**	**04 50 20.5**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=33,slow=12,SNR=11							
KSRS				LR		LR	04 57 05.7	
	comp=Z,90nm,19.5s,baz=352,slow=36							
KSAR	**Wonju Array Be**	**18.79**	**220**	P		**Pn**	**04 50 20.5**	**+1.1**
JNU	**Nakatsue**	**21.72**	**208**	LR		LR	04 58 17.9	
	comp=Z,74nm,18.5s,baz=233,slow=34							
SONM	**Songino Array**	**23.61**	**272**	P		**P**	**04 51 11.7**	**+1.1**
SONM	**Songino Array**	**23.61**	**272**	P		**P**	**04 51 11.7**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=52,slow=7.5,SNR=3.3							
TLY	**Talaya**	**23.77**	**282**	*e*P		**P**	**04 51 13.9**	**+1.9**
ZAK	**Zakamensk**	**24.44**	**280**	*e*P		**P**	**04 51 19.8**	**+1.5**
ZALV	**Zalesovo Beam**	**33.68**	**295**	*e*P		P	04 52 44.5	+4.2
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**33.68**	**295**	P		**P**	**04 52 40.6**	**+0.3**
ZALV	**Zalesovo Beam**	**33.68**	**295**	P		**P**	**04 52 40.6**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=73,slow=6.0,SNR=5.0							
NVS	**Novosibirsk**	**34.20**	**297**	*e*P		**P**	**04 52 44.0**	**-0.8**
NVS				pmax		pmax		
	comp=Z,8.0nm,1.2s							
NVS				pmax		pmax		
	comp=E,7.0nm,0.9s							
COLD	**Coldfoot**	**34.25**	**40**	*e*P		**P**	**04 52 45.8**	**+0.6**
	comp=E,3.7nm,0.7s							
ILAR	**Eielson Array**	**36.11**	**43**	P		**P**	**04 53 01.1**	**-0.2**
ILAR	**Eielson Array**	**36.11**	**43**	P		**P**	**04 53 01.1**	**-0.2**
	comp=E,1.7nm,0.7s,baz=278,slow=8.4,SNR=23							
MK31	**Makanchi Array**	**38.44**	**286**	*e*P		**P**	**04 53 21.3**	**+0.1**
MK31	**Makanchi Array**	**38.44**	**286**	*e*P		**P**	**04 53 21.3**	**+0.1**
MKAR	**Makanchi Array**	**38.44**	**286**	*e*P		**P**	**04 53 21.8**	**+0.6**
MKAR				pmax		pmax		
	comp=Z,4.0nm,0.6s							
MKAR	**Makanchi Array**	**38.44**	**286**	*e*P		**P**	**04 53 21.9**	**+0.8**
MKAR	**Makanchi Array**	**38.44**	**286**	P		**P**	**04 53 21.8**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=62,slow=8.1,SNR=32							
EGAK	**Eagle**	**38.45**	**42**	*e*P		**P**	**04 53 20.9**	**-0.1**
	comp=Z,6.9nm,0.8s							
KURK	**Kurchatov**	**38.52**	**293**	*c*	*i*P	**P**	**04 53 22.0**	**+0.3**
KURK					*i* *PP	**pP**	**04 53 29.8**	**+4.7**
KURK					pmax	pmax		
	comp=Z,11nm,1.2s							
KURK					MLR	MLR		
	comp=Z,51nm,19.0s							
KURK	**Kurchatov**	**38.52**	**293**	*e*P		**P**	**04 53 22.1**	**+0.3**
	comp=Z,7.2nm,0.9s							
KURBB	**Kurchatov Arra**	**38.61**	**293**	P		**P**	**04 53 23.0**	**+0.5**
	comp=Z,4.1nm,0.6s,baz=67,slow=9.0,SNR=27							
BVAR	**Borovoye Array**	**41.80**	**300**	P		**P**	**04 53 48.8**	**-0.1**
BVAR							04 55 45.8	
BVAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
BVAR	**Borovoye Array**	**41.80**	**300**	P		**P**	**04 53 48.8**	**-0.1**
BVAR				PcP		**PcP**	**04 55 45.8**	**+1.0**
BVAR	**Borovoye Array**	**41.80**	**300**	P		**P**	**04 53 48.8**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=69,slow=8.1,SNR=9.2							
BVAR				PcP		**PcP**	**04 55 45.8**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=57,slow=5.5,SNR=3.7							
BRVK	**Borovoye**	**41.84**	**300**	*de*	P	**P**	**04 53 49.7**	**+0.5**
BRVK					*i* *PP	**pP**	**04 53 55.5**	**+2.8**
BRVK					pmax	pmax		
	comp=Z,3.0nm,1.0s							
BRVK					MLR	MLR		
	comp=Z,72nm,17.0s							
TKM2	**Tokmak 2**	**44.56**	**285**	*e*P		**P**	**04 54 11.3**	**-0.3**
TKM2					pmax	pmax		
	comp=Z,2.0nm,0.4s							
TKM2	**Tokmak 2**	**44.56**	**285**	*e*P		**P**	**04 54 11.3**	**-0.3**
	comp=Z,1.9nm,0.4s							
ARU	**Arti**	**45.85**	**310**	*d*	*i*P	**P**	**04 54 21.4**	**0.0**
ARU							04 56 06.4	
ARU					S	**S**	**05 01 07.5**	**+2.6**
ARU					SS	**ScS**	**05 04 14.7**	**-2.0**
ARU					pmax	pmax		
	comp=Z,5.0nm,1.2s							
KKAR	**Karatay Array**	**47.38**	**288**	*e*P		**P**	**04 54 34.5**	**+0.9**
KKAR	**Karatay Array**	**47.38**	**288**	*e*P		**P**	**04 54 34.5**	**+0.9**
ABKAR	**Akbulak array**	**49.35**	**301**	*e*P		**P**	**04 54 49.0**	**+0.3**
	comp=Z,2.8nm,0.7s							
YKA	**Yellowknife Ar**	**49.80**	**36**	P		**P**	**04 54 51.8**	**-0.1**
YKA	**Yellowknife Ar**	**49.80**	**36**	P		**P**	**04 54 51.7**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=308,slow=7.5,SNR=10							
FINES	**FINESS Array B**	**55.32**	**329**	P		**P**	**04 55 32.7**	**-0.2**
FINES	**FINESS Array B**	**55.32**	**329**	P		**P**	**04 55 32.7**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=69,slow=10,SNR=8.0							
BSMT	**Basson Peak**	**59.84**	**50**	*e*P		**P**	**04 56 05.5**	**+0.5**
	comp=Z,2.0nm,0.8s							
NB2	**NORSAR Subarra**	**59.89**	**335**	P		**P**	**04 56 04.4**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=32,slow=6.9							
NOA	**NORSAR Array B**	**59.89**	**335**	P		**P**	**04 56 04.2**	**-0.8**
NOA	**NORSAR Array B**	**59.89**	**335**	P		**P**	**04 56 04.2**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=32,slow=6.9,SNR=5.7							
KIV	**Kislovodsk**	**61.65**	**306**	*e*P		**P**	**04 56 18.0**	**+0.6**
KIV				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BORG	**Borgarnes**	**61.87**	**352**	LR		LR	05 26 19.0	
	comp=Z,86nm,18.4s,baz=98,slow=39							
EGMT	**Eagleton**	**61.96**	**47**	*e*P		**P**	**04 56 19.4**	**-0.1**
	comp=Z,7.7nm,0.9s							
AKASG	**Malin Array Be**	**62.49**	**319**	P		**P**	**04 56 21.9**	**-0.9**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**62.49**	**319**	P		**P**	**04 56 21.9**	**-0.9**
AKASG	**Malin Array Be**	**62.49**	**319**	P		**P**	**04 56 21.9**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=36,slow=6.5,SNR=3.8							
DLMT	**Dillon**	**62.70**	**50**	*e*P		**P**	**04 56 24.6**	**+0.2**
	comp=Z,4.9nm,1.0s							
ELK	**Elko**	**64.92**	**55**	P		**P**	**04 56 40.0**	**+0.8**
ELK	**Elko**	**64.92**	**55**	P		**P**	**04 56 40.0**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=316,slow=8.4,SNR=4.4							
NVAR	**Mina Array Bea**	**65.12**	**59**	P		**P**	**04 56 41.0**	**+0.4**
NVAR	**Mina Array Bea**	**65.12**	**59**	P		**P**	**04 56 41.0**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=304,slow=6.4,SNR=9.1							
ULM	**Lac du Bonnet**	**65.77**	**37**	P		**P**	**04 56 43.2**	**-1.1**
ULM	**Lac du Bonnet**	**65.77**	**37**	P		**P**	**04 56 43.2**	**-1.1**
	comp=Z,4.0nm,0.7s,baz=312,slow=4.7,SNR=3.2							
PDAR	**Pinedale Array**	**66.09**	**50**	P		**P**	**04 56 46.5**	**-0.4**
PDAR	**Pinedale Array**	**66.09**	**50**	P		**P**	**04 56 46.5**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=0.0,slow=1.5,SNR=6.3							
CLL	**Collm**	**67.77**	**329**⇓	*i*P		**P**	**04 56 56.8**	**-0.2**
CLL				*i* *SP		**sP**	**04 57 04.5**	**+2.6**
CLL				pmax		pmax		
	comp=Z,4.0nm,1.0s							
CLL	**Collm**	**67.77**	**329**⇓	*i*P		**P**	**04 56 56.8**	**-0.2**
	comp=Z,4.0nm,1.0s							
CLL				*i* pP		**sP**	**04 57 04.5**	**+2.6**
BRTR	**Keskin Array B**	**69.23**	**309**	P		**P**	**04 57 06.1**	**-0.4**
BRTR	**Keskin Array B**	**69.23**	**309**	P		**P**	**04 57 06.1**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=74,slow=5.3,SNR=7.2							
GERES	**GERESS Array B**	**69.68**	**327**	P		**P**	**04 57 08.4**	**-0.8**
GERES	**GERESS Array B**	**69.68**	**327**	P		**P**	**04 57 08.4**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=46,slow=7.6,SNR=4.6							
SMCO	**Snowmass**	**70.12**	**51**	*e*P		**P**	**04 57 12.8**	**+0.5**
ECSD	**EROS Data Cent**	**70.90**	**41**	*e*P		**P**	**04 57 15.9**	**-0.6**
	comp=Z,3.3nm,0.8s							
GLA	**Glamis**	**71.05**	**60**	*e*P		**P**	**04 57 14.6**	**-3.1**
GLA				pmax		pmax		
	comp=Z,4.0nm,0.7s							
GLA	**Glamis**	**71.05**	**60**	*e*P		**P**	**04 57 14.6**	**-3.1**
	comp=Z,3.7nm,0.7s							
WRA	**Warramunga Arr**	**73.09**	**188**	P		**P**	**04 57 29.1**	**-0.7**
WRA	**Warramunga Arr**	**73.09**	**188**	P		**P**	**04 57 29.0**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=11,slow=4.5,SNR=4.2							
ASAR	**Alice Springs**	**76.82**	**188**	P		**P**	**04 57 51.1**	**-0.2**
ASAR	**Alice Springs**	**76.82**	**188**	P		**P**	**04 57 51.1**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=358,slow=3.6,SNR=6.9							
TXAR	**Lajitas Array**	**79.70**	**54**	P		**P**	**04 58 08.1**	**+0.5**
TXAR	**Lajitas Array**	**79.70**	**54**	P		**P**	**04 58 08.1**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=290,slow=3.9,SNR=8.3							
ESDC	**Sonseca Array**	**83.25**	**335**	P		**P**	**04 58 25.8**	**-0.3**
ESDC	**Sonseca Array**	**83.25**	**335**	P		**P**	**04 58 25.8**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=9.8,slow=4.8,SNR=6.9							
CFAA	**Coronel Fontan**	**148.95**	**59**	PKPbc		**PKPbc**	**05 05 46.9**	**-0.4**
CFAA	**Coronel Fontan**	**148.95**	**59**	PKPbc		**PKPbc**	**05 05 46.9**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=266,slow=2.4,SNR=4.1							
CPUP	**Villa Florida**	**149.32**	**37**	PKPbc		**PKPbc**	**05 05 48.0**	**-0.2**
CPUP	**Villa Florida**	**149.32**	**37**	PKPbc		**PKPbc**	**05 05 48.0**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=319,slow=9.3,SNR=3.6							

*ISK **24** 04:47:43.2, 37.°08N×29.°07E, h7km, MD2.8*
*CSEM **24** 04:47:44.0±0.1, 37.°07N×29.°08E, h8km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.9km az=41.0*
*DDA **24** 04:47:45.1, 37.°13N×29.°12E, h7km, MD3.0*

ISC 24 04:47:44.0±1.0, **37.°08N**±0.°02×**29.°08E**±0.°02, **h7**km±9km, **n28**, σ**0°50/46**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GLHS	**Glhisar (BURDU**	**0.34**	**76**	*e*PG		**Pg**	**04 47 50.7**		**-0.1**
GLHS				*e*SG		**Sg**	**04 47 55.9**		**+0.5**
GLHS	**Glhisar (BURDU**	**0.34**	**76**	*e*Pg		**Pg**	**04 47 50.7**		**-0.1**
GLHS				*e*Sg		**Sg**	**04 47 55.9**		**+0.5**
GOLH	**Golhisar**	**0.42**	**67**	*i* P		**Pg**	**04 47 51.9**		**-0.3**
GOLH				*i* S		**Sg**	**04 47 58.6**		**+0.9**
GOLH	**Golhisar**	**0.42**	**67**	*i* P		**Pg**	**04 47 51.9**		**-0.3**
GOLH				*i* S		**Sg**	**04 47 58.6**		**+0.9**
FETY	**Fethiye**	**0.44**	**180**	*e*PG		**Pg**	**04 47 52.2**		**-0.3**
FETY				*e*SG		**Sg**	**04 47 58.7**		**+0.4**
FETY	**Fethiye**	**0.44**	**180**	*e*Pg		**Pg**	**04 47 52.3**		**-0.3**
FETY				*e*Sg		**Sg**	**04 47 58.7**		**+0.4**
DNZL	**Cakiroluk**	**0.61**	**357**	*i* P		**Pg**	**04 47 55.6**		**-0.4**
DNZL				*i* S		**Sg**	**04 48 05.8**		**-0.3**
DNZL	**Cakiroluk**	**0.61**	**357**	*i* P		**Pg**	**04 47 55.6**		**-0.4**
DNZL				*i* S		**Sb**	**04 48 05.8**		**-0.3**
YER	**Yerkesik**	**0.64**	**276**	*e*PG		**Pg**	**04 47 56.0**		**-0.4**
YER				*e*SG		**Sg**	**04 48 05.2**		**+0.4**
YER	**Yerkesik**	**0.64**	**276**	*e*Pg		**Pg**	**04 47 56.0**		**-0.4**
YER				*e*Sg		**Sg**	**04 48 05.2**		**+0.4**
DENT	**Denizli**	**0.68**	**357**	*e*PG		**Pg**	**04 47 56.6**		**-0.6**
DENT	**Denizli**	**0.68**	**357**	*e*Pg		**Pg**	**04 47 56.6**		**-0.6**
ELL	**Elmali**	**0.74**	**116**	*e*PG		**Pg**	**04 47 57.9**		**-0.4**
ELL				*e*SG		**Sb**	**04 48 08.9**		**-0.7**
ELL	**Elmali**	**0.74**	**116**	*e*Pg		**Pg**	**04 47 57.9**		**-0.4**
ELL				*e*Sg		**Sb**	**04 48 08.9**		**-0.7**
AKAS	**Kas**	**0.94**	**153**	*i* P		**Pb**	**04 48 02.5**		**-0.2**
AKAS				*i* S		**Sn**	**04 48 18.2**		**+0.8**
AKAS	**Kas**	**0.94**	**153**	*i* P		**Pb**	**04 48 02.5**		**-0.2**
AKAS				*i* S		**Sn**	**04 48 18.2**		**+0.8**
AYDN	**Tasoluk**	**1.12**	**302**	*i* P		**Pn**	**04 48 06.6**		**+0.4**
AYDN				*i* S		**Sn**	**04 48 22.7**		**+0.8**
AYDN	**Tasoluk**	**1.12**	**302**	*i* P		**Pn**	**04 48 06.6**		**+0.4**
AYDN				*i* S		**Sn**	**04 48 22.7**		**+0.8**
KHL	**Karahalli**	**1.29**	**16**	*e*PN		**Pn**	**04 48 08.1**		**-0.5**
KHL	**Karahalli**	**1.29**	**16**	*e*Pn		**Pn**	**04 48 08.1**		**-0.5**
KHAL	**Karahalli**	**1.33**	**14**	*i* P		**Pg**	**04 48 09.6**		**0.0**
KHAL				*i* S		**Sn**	**04 48 27.5**		**+0.3**
KHAL	**Karahalli**	**1.33**	**14**	*i* P		**Pg**	**04 48 09.6**		**0.0**
KHAL				*i* S		**Sn**	**04 48 27.5**		**+0.3**
ISP	**Isparta**	**1.37**	**56**	*e*PN		**Pb**	**04 48 10.1**		**+0.1**
ISP	**Isparta**	**1.37**	**56**	*e*Pn		**Pb**	**04 48 10.1**		**+0.1**
BODT	**Bodrum**	**1.42**	**270**	*e*PN		**Pb**	**04 48 10.7**		**-0.1**
BODT	**Bodrum**	**1.42**	**270**	*e*Pn		**Pb**	**04 48 10.7**		**-0.1**
KULA	**Kula-Manisa**	**1.48**	**347**	*e*PN		**Pn**	**04 48 10.4**		**-0.7**
KULA	**Kula-Manisa**	**1.48**	**347**	*e*Pn		**Pn**	**04 48 10.4**		**-0.7**

IDC 24 04:50:09.9±2.1, **7.°66S×120.°71E, h576**km±33km, **mb3.1**/2, **mb1 3.1**/5, **mb1mx2.7**/24, **mbtmp2.9**/5, **Error ellipse: s-maj=78.8km s-min=40.7km az=69.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**2.80**	**340**	P		P	P	04 51 25.9	-0.1
	11nm,0.3s,baz=172,slow=4.9,SNR=56								
KAPI				S		S	S	04 52 28.2	+0.3
	baz=2.0,slow=16,SNR=1.8								
FITZ	**Fitzroy Crossi**	**11.43**	**156**	P		P	P	04 52 43.1	+0.3
	0.3nm,0.3s,baz=342,slow=12,SNR=16								
FITZ				S		S	S	04 54 50.2	+1.7
	0.1nm,0.3s,baz=160,slow=8.9,SNR=2.8								
WRA	**Warramunga Arr**	**17.99**	**134**	P		P	P	04 53 46.9	+0.3
	0.3nm,0.3s,baz=309,slow=9.3,SNR=35								
WRA				S		S	S	04 56 42.8	+0.1
	0.0nm,0.3s,baz=303,slow=16,SNR=2.8								
ASAR	**Alice Springs**	**20.34**	**143**	P		P	P	04 54 07.8	-0.1
	0.9nm,0.3s,baz=318,slow=8.2,SNR=28								
STKA	**Stephens Creek

DVCT **Vielle Casse P** **3.37 311** *e* Sn 05 14 44.7 -8.4
DVCT eS **Sn** **05 14 50.9 -2.3**
MGG Marie-Galante **3.51 316** ⇓*i*P **Pn** **05 14 15.3 -0.6**
TBH Brigand Hill **3.65 218** ⇓*i*P **Pn** **05 14 19.4 +1.6**
TBH Brigand Hill **3.65 218** ⇓*i*P **Pn** **05 14 19.4 +1.6**
TBH eS **Sn** **05 14 59.5 -0.8**
TBG Guadaloupe-3 **3.69 312** ⇓*e*P **Pn** **05 14 17.8 -0.6**
TRN Trinidad (W) **3.74 223** ⇓*i*P **Pn** **05 14 20.4 +1.3**
TRN Trinidad (W) **3.74 223** ⇓*i*P **Pn** **05 14 20.4 +1.3**
TRN Trinidad (W) **3.74 223** *e* Pb 05 14 42.5 +14
DOG Dongo Capester **3.79 314** ⇓*e*P **Pn** **05 14 19.6 -0.2**
PHG Guadaloupe-2 **3.80 314** ⇓*e*P **Pn** **05 14 19.8 -0.2**
HMG Houelmont **3.82 313** ⇓*e*P **Pn** **05 14 19.9 -0.4**
BCG Bois Riant Cap **3.83 315** *e*P **Pn** **05 14 19.9 -0.5**
SCG Saint Claude **3.84 313** ⇓*e*P **Pn** **05 14 20.0 -0.5**
TPP Pointe-a-Pierr **4.02 221** *e*P **Pn** **05 14 24.8 +1.9**
TPP Pointe-a-Pierr **4.02 221** *e*P **Pn** **05 14 24.8 +1.9**
TPP eS **Sn** **05 15 08.2 -1.1**
SIPA Siparia **4.18 220** *e*P **Pn** **05 14 27.2 +1.9**
SIPA Siparia **4.18 220** *e*P **Pn** **05 14 27.2 +1.9**
SIPA eS **Sn** **05 15 12.6 -0.8**
ALNG Atlantic LNG **4.27 222** *e*P **Pn** **05 14 27.9 +1.5**
ALNG eS **Sn** **05 15 13.3 -2.2**
ALNG Atlantic LNG **4.27 222** *e*P **Pn** **05 14 27.9 +1.5**
ALNG eS **Sn** **05 15 13.3 -2.2**
BUAY Buenos Aires **4.33 221** *e*P **Pn** **05 14 29.4 +2.2**
BUAY eS **Sn** **05 15 14.8 -2.1**
BUAY Buenos Aires **4.33 221** *e*P **Pn** **05 14 28.7 +1.5**
BUAY eS **Sn** **05 15 14.8 -2.1**
GUIV Guiria **4.33 231** *e*P **Pn** **05 14 26.8 -0.4**
GUIV eS **Sn** **05 15 12.5 -4.5**
BPA Boggy Peak **4.69 321** *e*P **Pn** **05 14 32.5 +0.3**
BPA eS **Sn** **05 15 23.0 -2.9**
BPA Boggy Peak **4.69 321** *e*P **Pn** **05 14 32.5 +0.3**
BPA eS **Sn** **05 15 23.0 -2.9**
CRUV Carupano **5.12 239** *e*P **Pn** **05 14 38.0 -0.1**
CRUV eS **Sn** **05 15 31.2 -5.3**
ANWB Willy Bob **5.14 326** *e*Pn **Pn** **05 14 37.3 -1.1**
NEV Hard Times **5.21 316** *e*P **Pn** **05 14 40.2 +0.8**
NEV eS **Sn** **05 15 36.2 -2.6**
NEV Hard Times **5.21 316** *e*P **Pn** **05 14 40.2 +0.8**
NEV eS **Sn** **05 15 35.1 -3.8**
RIOV Rio Grande **6.07 210** *e*P **Pn** **05 14 49.8 -1.4**
RIOV eS Sn 05 15 50.4 -10
ORIV Oritupano **6.24 227** *e*P **Pn** **05 14 52.6 -1.0**
ORIV eS Sn 05 15 57.5 -6.7
PCRV Puerto La Cruz **6.56 241** *e*P **Pn** **05 14 56.8 -1.1**
GURV El Guri **7.01 217** *e*P **Pn** **05 15 02.4 -1.7**
PRGV PARIAGUAN **7.36 232** *e*P **Pn** **05 15 07.7 -1.3**
CUPV Cœpira **7.61 245** *e*P **Pn** **05 15 12.6 +0.2**
CUPV eS Sn 05 16 31.3 -6.8
STVI Saint Thomas **7.71 311** *e*Pn **Pn** **05 15 14.0 +0.3**
BIRV Birongo **7.87 249** *e*P **Pn** **05 15 15.7 -0.3**
LUEV Luepa **7.95 200** *e*P Pn 05 15 12.7 -4.5
MTP Monte Pirata **8.02 307** *e*Pn **Pn** **05 15 18.2 +0.3**
CPD Cerro la Pandu **8.27 305** *e*Pn **Pn** **05 15 21.4 -0.1**
HUMP Col San Antoni **8.28 306** *e*Pn **Pn** **05 15 21.6 +0.1**
CBYP Canovanas **8.36 306** *e*Pn **Pn** **05 15 23.1 +0.5**
MERV Las Mercedes **8.44 242** *e*P **Pn** **05 15 22.0 -1.7**
SJG San Juan **8.50 304** *e*Pn **Pn** **05 15 24.8 +0.3**
CELP Cerrillos **8.83 303** *e*Pn **Pn** **05 15 28.8 -0.3**
OBIP Obispado Ponce **8.84 303** *e*Pn **Pn** **05 15 28.8 -0.3**
AOPR Arecibo Observ **9.11 304** *e*Pn **Pn** **05 15 33.4 +0.5**
LRS Lares **9.16 303** *e*Pn **Pn** **05 15 33.9 +0.3**
CRPR Cabo Rojo, PR **9.23 301** *e*Pn **Pn** **05 15 34.5 -0.1**
LSP Las Mesas **9.30 302** *e*Pn **Pn** **05 15 35.9 +0.5**
MPR Mayaguez **9.36 302** *e*Pn **Pn** **05 15 36.4 +0.1**
AGPR Aguadilla, PR **9.46 303** *e*Pn **Pn** **05 15 37.1 -0.7**
184nm,1.0s
MAPV Macapo **10.11 251** *e*P **Pn** **05 15 46.7 0.0**
TEPV Terepaima **10.74 253** *e*P **Pn** **05 15 55.7 +0.4**
SIQV Siquisique **11.12 257** *e*P **Pn** **05 15 59.4 -1.1**
SANV Sanarito **11.22 251** *e*P **Pn** **05 16 02.1 +0.1**
CURV Curarigua **11.45 254** *e*P **Pn** **05 16 04.2 -0.8**
SDDR Presa de Saban **13.23 296** *e*Pn **Pn** **05 16 29.6 +0.2**
ROSC El Rosal **17.52 242** P **P** **05 17 26.6 -0.5**
ROSC S **Sn** **05 20 43.4 +2.5**
ROSC El Rosal **17.52 242** P **P** **05 17 26.6 -0.5**
0.7nm,0.3s,baz=112,slow=23,SNR=3.7
ROSC S **Sn** **05 20 43.4 +2.5**
0.4nm,0.3s,baz=86,slow=17,SNR=2.4
BCIP Isla Barro Col **21.06 261** *e*P **P** **05 18 05.8 +0.4**
217nm,2.3s
SAML Samuel **22.62 191** *e*P **P** **05 18 20.1 -2.1**
63nm,0.6s
SAML S **S** **05 22 24.5 -4.3**
OTAV Otavalo **23.46 238** *e*P **P** **05 18 32.8 +1.5**
6.9nm,1.0s
ATAH Atahualpa **28.20 225** P **P** **05 19 15.7 +1.4**
ATAH Atahualpa **28.20 225** P **P** **05 19 15.7 +1.4**
23nm,0.9s,baz=90,slow=3.5,SNR=14
RCBR Riachuelo **29.68 129** LR LR 05 33 45.3
comp=Z,54nm,18.3s,baz=243,slow=41
BDFB Brasilia **30.75 159** P **P** **05 19 36.5 -0.1**
BDFB Brasilia **30.75 159** P **P** **05 19 36.5 -0.1**
2.0nm,0.8s,baz=328,slow=11,SNR=4.9
LPAZ La Paz **30.90 198** *e*P **P** **05 19 38.1 -0.5**
6.6nm,0.9s
LPAZ La Paz **30.90 198** P **P** **05 19 38.3 -0.2**
5.5nm,0.8s,baz=9.8,slow=8.1,SNR=22
PLAL Pickwick Lake **34.08 314** *e*P **P** **05 20 06.4 +0.9**
11nm,1.1s
WVT Waverly **34.53 316** *e*P **P** **05 20 10.4 +1.0**
9.5nm,1.1s
OLIL Olney **36.19 320** *e*P **P** **05 20 25.8 +2.1**
18nm,0.8s
SIUC Southern Illin **36.33 317** *e*P **P** **05 20 26.4 +1.5**
21nm,0.8s
LVC Limon Verde **37.13 196** *e*P **P** **05 20 30.6 -1.5**
4.8nm,0.8s
HDIL Hopedale **38.01 321** *e*P **P** **05 20 38.7 -0.5**
11nm,0.8s
CPUP Villa Florida **39.51 178** P **P** **05 20 49.8 -2.0**
CPUP Villa Florida **39.51 178** P **P** **05 20 49.8 -2.0**
3.5nm,0.6s,baz=339,slow=7.4,SNR=20
WHTX Lake Whitney **39.92 304** ⇓P **P** **05 20 55.8 +0.5**
baz=40
BBTS Babate **40.97 83** LR LR 05 33 27.1
comp=Z,108nm,20.1s,baz=317,slow=30
532A Rocksprings **41.40 301** ⇓P **P** **05 21 07.4 -0.2**
baz=41,SNR=9.5
JCT Junction City **41.41 301** *e*P **P** **05 21 07.8 +0.1**
3.7nm,0.7s
JCT Junction City **41.41 301** ⇑P **P** **05 21 07.5 -0.1**
baz=41
432A Menard **41.50 302** ⇑P **P** **05 21 08.3 -0.1**
baz=42,SNR=9.4
631A Perdido Creek **41.80 299** ⇑P **P** **05 21 10.7 -0.1**
baz=42
SCHQ Schefferville **41.83 353** P **P** **05 21 13.2 +2.5**
SCHQ Schefferville **41.83 353** P **P** **05 21 13.2 +2.5**
3.5nm,0.9s,baz=148,slow=13,SNR=3.3
ABTX Abilene, Hawle **41.88 304** ⇑P **P** **05 21 11.6 +0.2**
baz=42
431A Sonora **42.13 301** ⇓P **P** **05 21 13.7 +0.1**
baz=42
331A San Angelo **42.14 302** ⇑P **P** **05 21 14.2 +0.5**
baz=42
530A J-C Ranch, Com **42.61 300** ⇑P **P** **05 21 17.5 0.0**
baz=43
X31A McDonald Ranch **42.77 307** ⇓P **P** **05 21 18.8 +0.1**
baz=43
330A Mertzon **42.78 302** ⇑P **P** **05 21 18.5 -0.4**
baz=43,SNR=6.3
230A Sterling City **42.86 303** ⇑P **P** **05 21 19.2 -0.3**
baz=43
Z30A Sanderson Ranc **43.26 305** ⇓P **P** **05 21 22.8 0.0**
baz=43
529A Stev Forest Ra **43.35 300** ⇓P **P** **05 21 23.4 -0.1**
baz=43
X30A Coker Ranch, T **43.41 306** ⇓P **P** **05 21 24.0 +0.1**
baz=43
Z29A Hungry Hill Ra **43.72 304** ⇑P **P** **05 21 26.6 +0.1**
baz=44
R31A Burdett **43.76 312** ⇑P **P** **05 21 27.5 +0.8**
baz=44
628A Black Gap, Mar **43.78 299** ⇑P **P** **05 21 27.5 +0.5**
baz=44
Y29A Porterfield Fa **43.86 305** ⇑P **P** **05 21 28.2 +0.6**
baz=44,SNR=6.0
428A Kincaid Ranch, **43.88 301** ⇑P **P** **05 21 28.5 +0.7**
baz=44
U30A WK&E Inc. Balk **43.94 309** ⇓P **P** **05 21 29.1 +1.0**
baz=44,SNR=5.2
Q31A Ellis **43.95 313** ⇓P **P** **05 21 29.1 +0.9**
baz=44
T30A Plains **44.03 310** ⇓P **P** **05 21 29.6 +0.8**
baz=44
328A Wristen Ranch, **44.13 301** ⇓P **P** **05 21 29.6 -0.2**
baz=44
BGNE Belgrade **44.14 317** ⇓P **P** **05 21 30.7 +1.0**
baz=44
P31A Stockton **44.16 314** ⇑P **P** **05 21 30.6 +0.8**
baz=44
S30A Montezuma **44.20 311** ⇑P **P** **05 21 31.6 +1.4**
baz=44
Z28A Tucker Farm, M **44.27 304** ⇑P **P** **05 21 32.0 +1.0**
baz=44
ECSD EROS Data Cent **44.30 320** *e*P **P** **05 21 31.8 +0.9**
46nm,2.5s
Y28A McKinney Farm, **44.34 305** ⇓P **P** **05 21 31.9 +0.4**
baz=44
TXAR Lajitas Array **44.42 298** P **P** **05 21 32.5 +0.4**
TXAR PcP **PP** **05 23 17.1 +1.2**
TXAR Lajitas Array **44.42 298** P **P** **05 21 32.5 +0.4**
1.2nm,0.7s,baz=110,slow=7.7,SNR=17
TXAR PcP **PP** **05 23 17.1 +1.2**
1.0nm,0.8s,baz=116,slow=6.2,SNR=6.1
TXAR LR LR 05 40 46.3
comp=Z,49nm,20.5s,baz=0.0,slow=37
427A Hayter Ranch, **44.51 300** ⇓P **P** **05 21 33.1 +0.3**
baz=44,SNR=6.4
527A Woodward Ranch **44.53 299** ⇓P **P** **05 21 33.4 +0.3**
baz=44
W28A Vega **44.71 307** ⇑P **P** **05 21 34.6 +0.2**
baz=45
MSTX Muleshoe **44.77 305** ⇓P **P** **05 21 35.4 +0.5**
baz=45,SNR=8.2
626A Big Bend Ranch **44.86 299** ⇓P **P** **05 21 35.8 +0.1**
baz=45
526A Mary Lane Ranc **44.92 299** ⇑P **P** **05 21 37.2 +1.0**
baz=45,SNR=5.9
R29A Marienthal **44.98 312** ⇑P **P** **05 21 37.2 +0.7**
baz=45
426A McDonald Obser **44.99 300** ⇑P **P** **05 21 37.6 +0.7**
baz=45
Q29A Oakley **45.04 312** ⇓P **P** **05 21 37.8 +0.8**
baz=45
Y27A Causey **45.06 305** ⇓P **P** **05 21 37.6 +0.4**
baz=45,SNR=8.0
U28A Mallet **45.08 308** ⇑P **P** **05 21 38.5 +1.1**
baz=45
X27A F and S Farms, **45.22 306** ⇓P **P** **05 21 39.0 +0.5**
baz=45,SNR=9.0
S28A Manter **45.24 310** ⇑P **P** **05 21 39.3 +0.8**
baz=45
T28A Walsh **45.24 309** ⇑P **P** **05 21 39.2 +0.6**
baz=45
V27A Dan Oppiter Fa **45.35 307** ⇑P **P** **05 21 39.9 +0.4**
baz=45
R28A Tribune **45.44 311** ⇓P **P** **05 21 40.8 +0.6**
baz=46,SNR=12
U27A Thompson Grove **45.55 308** ⇓P **P** **05 21 41.9 +0.8**
baz=46
N29A Votaw Ranch, W **45.56 315** ⇓P **P** **05 21 42.0 +1.0**
baz=46
CFAA Coronel Fontan **45.65 191** LR LR 05 42 52.1
comp=Z,13nm,18.8s,baz=3.0,slow=39
T27A Campo **45.68 309** ⇑P **P** **05 21 42.7 +0.6**
baz=46
Q28A Sharon Springs **45.72 312** ⇑P **P** **05 21 43.1 +0.7**
baz=46
425A Indio Mountain **45.82 300** ⇓P **P** **05 21 44.5 +1.2**
baz=46
P28A Saint Francis **45.86 313** ⇓P **P** **05 21 44.5 +1.1**
baz=46
M29A Burnside Ranch **45.87 316** ⇓P **P** **05 21 44.2 +0.7**
baz=46
W26A Owens Ranch, T **45.88 306** ⇑P **P** **05 21 44.5 +0.8**
baz=46
325A Bean Ranch, Si **45.93 301** ⇑P **P** **05 21 45.4 +1.2**
baz=46,SNR=6.8
225A Deer Hill, Car **45.97 302** ⇓P **P** **05 21 45.6 +1.1**
baz=46
V26A Tequesquite Ra **46.10 307** ⇑P **P** **05 21 46.1 +0.7**
baz=46,SNR=5.6
N28A Pribbeno Ranch **46.15 314** ⇓P **P** **05 21 46.4 +0.8**
baz=46
R27A Eads **46.15 311** ⇓P **P** **05 21 46.3 +0.5**
baz=46,SNR=9.6
Z25A Roswell **46.16 303** ⇓P **P** **05 21 46.9 +1.0**
baz=46
U26A Atchley Ranch, **46.24 308** ⇓P **P** **05 21 47.1 +0.4**
baz=46,SNR=9.2
KSCO Kaye Shedlock' **46.28 312** ⇑P **P** **05 21 47.7 +0.9**
baz=46,SNR=5.5
Y25A Mesa, Roswell **46.30 304** ⇓P **P** **05 21 48.2 +1.2**
baz=46,SNR=7.9
M28A Bar X Bar Ranc **46.32 315** ⇓P **P** **05 21 48.4 +1.4**
baz=46
MNTX Cornudas Mount **46.34 301** *e*P **P** **05 21 47.9 +0.6**
3.9nm,0.8s
MNTX *e*PcP **PcP** **05 23 22.7 +0.5**
324A Moseley Ranch, **46.37 301** ⇑P **P** **05 21 48.4 +0.7**
baz=46,SNR=8.3
S26A Kim **46.43 310** ⇓P **P** **05 21 47.8 -0.2**
baz=46
W25A X Bar L Ranch, **46.46 306** ⇑P **P** **05 21 48.9 +0.6**
baz=46
224A Cornudas Mount **46.54 302** ⇓P **P** **05 21 49.7 +0.7**
baz=46,SNR=14
124A Stringfield Ra **46.62 302** ⇓P **P** **05 21 50.8 +1.1**
baz=47
R26A Arlington **46.63 310** ⇓P **P** **05 21 50.3 +0.7**
baz=47
Z24A Sheeppen Canyo **46.70 303** ⇑P **P** **05 21 51.7 +1.4**
baz=47
V25A Rancho No Teng **46.76 307** ⇓P **P** **05 21 51.7 +1.0**
baz=47,SNR=18
U25A Circle Dot Ran **46.76 308** ⇓P **P** **05 21 51.4 +0.7**
baz=47,SNR=10
N27A Anderson Farm, **46.89 314** ⇓P **P** **05 21 52.5 +1.0**
baz=47
Y24A Capitan **46.90 304** ⇑P **P** **05 21 53.3 +1.5**
baz=47,SNR=7.1
Q26A Hugo **46.90 311** P **P** **05 21 53.2 +1.5**
baz=47,SNR=5.5
T25A Trinidad **46.98 309** ⇓P **P** **05 21 53.5 +1.0**
baz=47,SNR=6.9
P26A Davis Ranch, A **47.00 312** ⇑P **P** **05 21 53.6 +1.1**
baz=47,SNR=8.1
S25A Robets Cordova **47.16 309** P **P** **05 21 55.0 +1.1**
baz=47,SNR=13
W24A Lazy 6 Ranch, **47.20 306** ⇑P **P** **05 21 55.8 +1.6**
baz=47,SNR=5.7
O26A Horse Wrangler **47.22 313** ⇑P **P** **05 21 55.2 +1.0**
baz=47
V24A Rampart Ranch, **47.23 307** ⇑P **P** **05 21 55.7 +1.2**
baz=47,SNR=7.2
Y23A Lovelace Mesa, **47.40 304** P **P** **05 21 57.1 +1.4**
baz=47,SNR=11
ULM Lac du Bonnet **47.56 328** P **P** **05 21 56.3 -0.1**
ULM Lac du Bonnet **47.56 328** P **P** **05 21 56.3 -0.1**
3.3nm,0.6s,baz=16,slow=2.7,SNR=2.7
ULM LR LR 05 41 18.3
comp=Z,61nm,19.8s,baz=357,slow=35
R24A Sanders Place, **47.85 310** ⇓P **P** **05 22 00.7 +1.6**
baz=48,SNR=5.9
ANMO Albuquerque **47.97 305** *e*P **P** **05 22 00.8 +0.7**
2.2nm,1.1s
ANMO *e*pP **pP** **05 22 06.7 -0.7**
SDCO Great Sand Dun **47.99 309** *e*P **P** **05 22 01.2 +0.8**
5.6nm,1.1s
K26A Motz Farm, Whi **48.08 316** ⇓P **P** **05 22 01.5 +0.7**
baz=48
121A Cookes Peak, D **48.51 302** ⇑P **P** **05 22 04.9 +0.5**
baz=48
N24A Carr **48.55 313** ⇓P **P** **05 22 06.5 +2.0**
baz=49,SNR=6.0
V22A San Miguel Ran **48.57 306** P **P** **05 22 06.3 +1.5**
baz=49,SNR=7.9
Z21A St. Cloud Mine **48.57 303** P **P** **05 22 06.7 +1.8**
baz=49,SNR=6.9
ISCO Idaho Springs **48.72 312** *e*P **P** **05 22 07.6 +1.6**
6.1nm,1.0s
ISCO Idaho Springs **48.72 312** P **P** **05 22 07.7 +1.6**
baz=49,SNR=8.6
Y21A Point of Rocks **48.73 304** ⇑P **P** **05 22 08.0 +2.0**
baz=49,SNR=6.3
M24A Cheyenne **48.74 314** ⇓P **P** **05 22 06.4 +0.5**
baz=49
P23A Jefferson **48.75 311** ⇓P **P** **05 22 06.8 +0.5**
baz=49
T22A Edith **48.85 308** ⇑P **P** **05 22 08.1 +1.1**
baz=49,SNR=5.9
X21A Alamocita Cree **48.91 304** ⇓P **P** **05 22 08.9 +1.5**
baz=49
S22A 4UR Ranch, Cre **49.00 309** P **P** **05 22 09.6 +1.4**
baz=49,SNR=7.0
R22A Saguache, Gunn **49.08 309** P **P** **05 22 10.7 +1.9**
baz=49,SNR=11
120A U Bar Ranch, L **49.22 302** ⇓P **P** **05 22 11.4 +1.7**
baz=49
Y20A Horse Springs, **49.27 303** ⇓P **P** **05 22 12.1 +1.8**
baz=49
U21A Nageezi **49.28 307** ⇑P **P** **05 22 12.0 +1.7**
baz=49,SNR=9.8
M23A Laramie **49.37 314** ⇓P **P** **05 22 12.5 +1.6**
baz=49,SNR=6.1
SMCO Snowmass **49.53 310** *e*P **P** **05 22 12.8 +0.4**
7.3nm,1.4s
319A Douglas **49.55 300** ⇓P **P** **05 22 12.9 +0.6**
baz=50
L23A Garrett **49.58 314** ⇑P **P** **05 22 14.1 +1.6**
baz=50
N22A Wattenberg Ran **49.66 313** P **P** **05 22 15.3 +2.2**
baz=50,SNR=5.3
R21A Cimarron **49.72 309** ⇑P **P** **05 22 15.3 +1.7**
baz=50
H24A Dirks Ranch, A **49.82 318** ⇓P **P** **05 22 14.2 +0.1**
baz=50
Q21A Lamborn Mesa, **49.87 310** ⇓P **P** **05 22 15.5 +0.8**
baz=50
S20A Disappointment **50.19 308** ⇑P **P** **05 22 18.7 +1.5**
baz=50
R20A Redvale **50.30 309** ⇑P **P** **05 22 20.0 +2.0**
baz=50,SNR=6.6
K22A Casper **50.34 315** ⇓P **P** **05 22 19.9 +1.8**
baz=50
N21A Black Mountain **50.41 312** ⇑P **P** **05 22 20.6 +1.8**
baz=50
PV01 Paradox Valley **50.43 309** *e*P **P** **05 22 20.4 +1.4**
Q20A Ridgley Place, **50.45 310** ⇓P **P** **05 22 20.5 +1.4**
baz=50
M21A Separation Pea **50.57 313** ⇑P **P** **05 22 20.5 +0.5**
baz=51
J22A Midwest **50.58 316** ⇑P **P** **05 22 21.0 +1.1**
baz=51
P20A De Beque **50.67 310** ⇓P **P** **05 22 22.5 +1.8**
baz=51
X18A Snowflake **50.68 304** ⇑P **P** **05 22 22.8 +2.0**
baz=51
K21A Alcova **50.84 315** ⇑P **P** **05 22 23.4 +1.5**
baz=51
PV10 Paradox Valley **50.85 309** *e*P **P** **05 22 22.9 +0.8**
TUC Tucson **50.97 301** *e*P **P** **05 22 24.0 +1.1**
0.7nm,1.0s
N20A Spence Gulch, **50.97 312** ⇑P **P** **05 22 24.6 +1.6**
baz=51
M20A Sweetwater, Wa **51.12 313** ⇓P **P** **05 22 26.0 +1.8**
baz=51
I21A Big Trails, Te **51.28 316** ⇓P **P** **05 22 25.6 +0.4**
baz=51
L20A Wamsutter **51.39 313** ⇓P **P** **05 22 27.8 +1.7**
baz=51
E22A Miles City **51.41 320** ⇓P **P** **05 22 27.5 +1.6**
baz=51
S18A Hurst Farm, Bl **51.41 308** ⇑P **P** **05 22 27.7 +1.3**
baz=51,SNR=6.0
O19A Miners Draw (B **51.44 311** ⇑P **P** **05 22 27.5 +1.1**
baz=51,SNR=9.1
C23A Lambert **51.51 321** ⇓P **P** **05 22 28.5 +1.8**
baz=52
K20A Yellowstone Ra **51.61 314** P **P** **05 22 29.2 +1.6**
baz=52,SNR=8.8
J20A Shoshoni **51.66 315** P **P** **05 22 29.6 +1.6**
baz=52,SNR=8.9
H20A Greybull **51.99 317** ⇓P **P** **05 22 31.3 +0.9**
baz=52,SNR=5.8
WUAZ Wupatki **52.02 305** *e*P **P** **05 22 31.6 +0.8**
6.8nm,1.0s
WUAZ Wupatki **52.02 305** ⇓P **P** **05 22 32.7 +1.9**
baz=52,SNR=6.1
P18A Preston Nutter **52.09 310** P **P** **05 22 33.5 +2.0**
baz=52,SNR=7.7
L19A Farson **52.14 313** P **P** **05 22 33.6 +1.8**
baz=52,SNR=5.5
SRU San Rafael **52.16 309** P **P** **05 22 33.7 +1.8**
baz=52,SNR=10
J19A Crowheart **52.30 315** P **P** **05 22 34.4 +1.6**
baz=52,SNR=5.4
G20A Bridger **52.40 317** ⇓P **P** **05 22 34.6 +1.1**
baz=52
BW06 Boulder Array **52.49 314** *e*P **P** **05 22 35.2 +0.9**
4.1nm,0.8s
PDAR Pinedale Array **52.49 314** P **P** **05 22 35.0 +0.7**
PDAR Pinedale Array **52.49 314** P **P** **05 22 35.0 +0.7**
4.7nm,0.9s,baz=114,slow=9.9,SNR=24
PDAR LR LR 05 42 53.6
comp=Z,37nm,21.6s,baz=102,slow=34
F20A Billings **52.57 318** ⇓P **P** **05 22 36.5 +1.8**
baz=53
Q16A Castle Valley **52.60 309** ⇑P **P** **05 22 36.7 +1.5**
baz=53
E20A Meyer Farm, Mu **52.82 319** ⇑P **P** **05 22 38.5 +2.0**
baz=53,SNR=5.3
U15A North Rim **52.92 306** ⇑P **P** **05 22 39.7 +2.0**
baz=53
DAU Daniels Canyon **53.04 311** *e*P **P** **05 22 39.3 +0.8**
D20A Manuel Ranch, **53.04 320** ⇓P **P** **05 22 40.0 +1.9**
baz=53,SNR=5.6
RLMT Red Lodge **53.06 317** *e*P **P** **05 22 38.9 +0.4**
5.3nm,1.0s
JLU Jordanelle **53.23 311** *e*P **P** **05 22 40.5 +0.6**
10nm,1.1s
LIC Lamto **53.36 92** *e*P **P** **05 22 40.2 -0.7**
14nm,0.8s
LIC Lamto **53.36 92** *e*P **P** **05 22 40.2 -0.7**
14nm,0.8s
LOHW Long Hollow **53.48 315** *e*P **P** **05 22 42.4 +0.8**
ARUT Antelope Range **54.09 307** *e*P **P** **05 22 48.0 +1.9**
A19A Klindworth Far **54.13 321** ⇑P **P** **05 22 48.3 +2.2**
baz=54
D18A Linhart Farms, **54.14 319** ⇓P **P** **05 22 48.1 +1.9**
baz=54
DUG Dugway **54.14 310** *e*P **P** **05 22 47.9 +1.5**
7.1nm,1.0s
DUG Dugway **54.14 310** ⇑P **P** **05 22 48.2 +1.8**
baz=54
ESDC Sonseca Array **54.62 51** P **P** **05 22 52.1 +2.3**
ESDC Sonseca Array **54.62 51** P **P** **05 22 52.1 +2.3**
0.4nm,0.8s,baz=266,slow=8.3,SNR=4.1
PLCA Paso Flores **54.94 191** *e*P **P** **05 22 51.5 -0.5**
PLCA Paso Flores **54.94 191** P **P** **05 22 50.5 -1.5**
5.3nm,0.9s,baz=8.1,slow=9.0,SNR=2.9
PLCA LR LR 05 48 55.0
comp=Z,59nm,18.2s,baz=184,slow=39
E16A East Helena **55.12 318** ⇑P **P** **05 22 54.4 +1.0**
baz=55
MONP Monument Peak **55.76 301** ⇓P **P** **05 22 59.1 +0.8**
baz=56
D15A Lincoln **55.83 318** ⇑P **P** **05 23 00.1 +1.5**
baz=56
R11A Troy Canyon, C **55.86 307** ⇓P **P** **05 23 00.9 +1.9**
baz=56,SNR=8.2
J13A Cove Ranch, Pi **55.91 314** ⇓P **P** **05 23 01.3 +2.1**
baz=56
C15A Salmond Ranch, **56.12 319** P **P** **05 23 02.2 +1.6**
baz=56,SNR=5.7
SLMT Seeley Lake **56.53 318** *e*P **P** **05 23 05.3 +1.8**
YBMT Yellow Bay **57.05 319** *e*P **P** **05 23 08.1 +0.9**
3.2nm,0.9s
BSMT Bassoo Peak **57.55 319** *e*P **P** **05 23 11.8 +1.1**
2.6nm,1.2s
SGMF Saint Gilles **57.81 41** *e*P **P** **05 23 13.5 +1.2**
72nm,1.5s
SGMF Saint Gilles **57.81 41** *e*P **P** **05 23 13.5 +1.2**
72nm,1.5s
NV11 Mina Array Sit **57.87 307** *e*P **P** **05 23 13.8 +0.6**
NV11 *e*pP **pP** **05 23 20.0 -0.5**
NVAR Mina Array Bea **57.98 307** P **P** **05 23 15.7 +1.6**
NVAR Mina Array Bea **57.98 307** P **P** **05 23 15.7 +1.6**
2.2nm,0.8s,baz=103,slow=6.1,SNR=16
TOA0 Torodi Ar. Sit **58.73 83** P **P** **05 23 20.0 +0.7**
TORD Torodi Ar. Bea **58.73 83** P **P** **05 23 18.9 -0.4**
TORD Torodi Ar. Bea **58.73 83** P **P** **05 23 18.9 -0.4**
2.2nm,1.0s,baz=296,slow=6.7,SNR=6.7
TORD LR LR 05 45 08.3
comp=Z,95nm,19.6s,baz=295,slow=32
NEW Newport **59.17 319** *e*P **P** **05 23 22.7 +0.8**

	4.3nm,0.8s								
CAF	**Calviac**	**60.09**	**46**	*e*P		**P**		**05 23 29.0**	**+0.7**
	14nm,1.1s								
CAF	**Calviac**	**60.09**	**46**	*e*P		**P**		**05 23 29.0**	**+0.7**
	14nm,1.1s								
LOR	**Lormes**	**61.77**	**43**	*e*P		**P**		**05 23 40.2**	**+0.6**
	21nm,1.2s								
LOR	**Lormes**	**61.77**	**43**	*e*P		**P**		**05 23 40.2**	**+0.6**
	21nm,1.3s								
YKA	**Yellowknife Ar**	**62.76**	**334**	P		**P**		**05 23 45.9**	**-0.1**
YKA	**Yellowknife Ar**	**62.76**	**334**	P		**P**		**05 23 45.9**	**-0.1**
	0.5nm,0.5s,baz=110,slow=7.6,SNR=12								
CDF	**Champ du Feu**	**64.23**	**43**	*e*P		**P**		**05 23 56.5**	**+0.4**
	10nm,1.0s								
CDF	**Champ du Feu**	**64.23**	**43**	*e*P		**P**		**05 23 56.5**	**+0.4**
	10nm,1.0s								
KEST	**Kesra**	**64.61**	**57**	P		**P**		**05 23 59.8**	**+1.0**
KEST	**Kesra**	**64.61**	**57**	P		**P**		**05 23 59.8**	**+1.0**
	0.7nm,0.8s,baz=294,slow=9.1,SNR=3.9								
GERES	**GERESS Array B**	**68.52**	**43**	P		**P**		**05 24 23.9**	**+0.3**
GERES	**GERESS Array B**	**68.52**	**43**	P		**P**		**05 24 23.9**	**+0.3**
	0.3nm,0.7s,baz=246,slow=5.7,SNR=5.0								
ARCES	**ARCESS Array B**	**75.56**	**21**	P		**P**		**05 25 05.8**	**+0.6**
ARCES	**ARCESS Array B**	**75.56**	**21**	P		**P**		**05 25 05.8**	**+0.6**
	1.6nm,0.9s,baz=338,slow=2.9,SNR=4.0								
FINES	**FINESS Array B**	**75.90**	**30**	P		**P**		**05 25 08.1**	**+0.9**
FINES	**FINESS Array B**	**75.90**	**30**	P		**P**		**05 25 08.1**	**+0.9**
	1.5nm,0.8s,baz=224,slow=5.8,SNR=4.3								
BUR08	**Bucovina Ar. S**	**76.20**	**44**	*e*P		**P**		**05 25 10.6**	**+1.1**
ILAR	**Eielson Array**	**77.19**	**334**	P		**P**		**05 25 14.8**	**+0.3**
ILAR	**Eielson Array**	**77.19**	**334**	P		**P**		**05 25 14.8**	**+0.3**
	0.2nm,0.5s,baz=78,slow=4.9,SNR=4.9								
BRTR	**Keskin Array B**	**83.41**	**51**	P		**P**		**05 25 48.8**	**0.0**
BRTR	**Keskin Array B**	**83.41**	**51**	P		**P**		**05 25 48.8**	**0.0**
	0.9nm,0.8s,baz=226,slow=3.8,SNR=5.4								
GNI	**Garni**	**91.53**	**48**	LR		LR		06 07 30.0	
	comp=Z,27nm,18.2s,baz=254,slow=36								
KMBO	**Kilima Mbogo**	**96.13**	**90**	LR		LR		06 06 01.3	
	comp=Z,45nm,19.7s,baz=282,slow=33								
CN2	**Changchun**	**122.95**	**356**	*e*PKP		**PKPdf**		**05 32 14.8**	**-2.6**
GTA	**Gaotai**	**123.81**	**20**	*e*PKP		**PKPdf**		**05 32 19.1**	**-0.3**
GTA				sPKP				05 32 33.6	
HHC	**Hu-ho-hao-te**	**125.30**	**9**	*e*PKP		**PKPdf**		**05 32 18.9**	**-3.3**
HHC				sPKP				05 32 31.1	
HHC				PKS		**PKSdf**		**05 35 54.8**	**-4.1**
HHC				AMB		AMB			
	comp=Z,60nm,8.4s								
HHC				LR		LR			
	comp=N,200nm,27.5s								
HHC				LR		LR			
	comp=E,230nm,25.2s								
HHC				LR		LR			
	comp=Z,190nm,19.2s								
GYA	**Guiyang**	**137.94**	**20**	*e*Pdif		**Pdif**		**05 29 53.3**	**-2.3**
GYA				PKP		**PKPdf**		**05 32 45.4**	**-1.1**
GYA				PP		**PP**		**05 35 35.0**	**+2.4**
GYA				AMB		AMB			
	comp=Z,80nm,7.6s								
ASAR	**Alice Springs**	**164.22**	**228**	PKP		**PKPdf**		**05 33 24.4**	**-0.8**
ASAR	**Alice Springs**	**164.22**	**228**	PKP		**PKPdf**		**05 33 24.4**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=117,slow=1.1,SNR=8.1								
WRA	**Warramunga Arr**	**165.84**	**241**	PKP		**PKPdf**		**05 33 25.9**	**-0.8**
WRA	**Warramunga Arr**	**165.84**	**241**	PKP		**PKPdf**		**05 33 25.9**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=268,slow=0.1,SNR=12								

AUST ***24*** *05:14:33.7, 7.˚12S×151.˚17E, h20km*
BJI ***24*** *05:14:34.7, 7.˚10S×150.˚90E, h41km, mB5.0/16, mb4.8/19, Ms4.8/10, Ms7 4.5/10*
ISCJB ***24*** *05:14:35.5±0.3, 7.˚04S±0.˚04×150.˚85E±0.˚05, h40km, mb4.7/48, MS3.9/22, Error ellipse: s-maj=8.0km s-min=4.7km az=22.6*
NEIC ***24*** *05:14:36.4±1.1, 7.˚03S×150.˚90E, h36km±10km, mb4.9/22, Error ellipse: s-maj=9.2km s-min=6.3km az=95.0*
IDC ***24*** *05:14:37.4±2.0, 7.˚06S×150.˚79E, h41km±16km, mb4.3/20, mb1 4.5/22, mb1mx4.5/23, mbtmp4.3/22, ML3.8/2, MS3.8/21, Ms1 3.8/21, ms1mx3.7/38, Error ellipse: s-maj=19.0km s-min=8.4km az=121.0*
DJA ***24*** *05:14:54.2±2.5, 8˚S±14˚×15˚0E±1˚9, h106km±13km, M5.0/9, mB5.5/1, mb4.8/9, MLv5.2/1, Mw(mB)5.0/1*

ISC 24 05:14:37.5±0.4, **7.˚09S**±0.˚05×**150.˚90E**±0.˚06, **h40km, n139,**
σ**1s25**/154, **mb4.8**/48, **MS3.9**/22, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.36**	**238**	*e*Pn		**Pn**	**05 15 40.9**	**-0.4**
PMG				S		**Sn**	**05 16 29.2**	**-1.7**
PMG				*e*Sn		Sn	05 16 33.5	+2.7
PMG	**Port Moresby**	**4.36**	**238**	P		**Pn**	**05 15 41.1**	**-0.1**
PMG	**Port Moresby**	**4.36**	**238**	P		**Pn**	**05 15 41.6**	**+0.3**
	26nm,0.3s,baz=56,slow=5.8,SNR=48							
PMG				S		**Sn**	**05 16 29.2**	**-1.7**
	104nm,0.3s,baz=17,slow=22,SNR=19							
PMG				LR		LR	05 17 29.1	
	comp=Z,1μm,20.1s,baz=62,slow=40							
HNR	**Honiara**	**9.25**	**105**	LR		LR	05 19 22.3	
	comp=Z,280nm,18.8s,baz=95,slow=30							
COEN	**Coen**	**10.21**	**227**	*e*Pn		**Pn**	**05 17 01.0**	**-0.6**
COEN				*e*Sn		Sn	05 18 48.5	-6.3
COEN	**Coen**	**10.21**	**227**	P		**Pn**	**05 17 02.0**	**+0.4**
	baz=10,SNR=5.5							
MTSU	**Mount Surprise**	**12.71**	**210**	P		**Pn**	**05 17 36.1**	**+0.2**
	baz=13,SNR=15							
CTA	**Charters Tower**	**13.69**	**199**	P		**Pn**	**05 17 49.0**	**-0.1**
CTA	**Charters Tower**	**13.69**	**199**	P		**Pn**	**05 17 49.0**	**-0.1**
	0.4nm,0.3s,baz=26,slow=15,SNR=4.7							
CTA				LR		LR	05 22 24.0	
	comp=Z,586nm,21.4s,baz=20,slow=34							
CTAO	**Charters Tower**	**13.69**	**199**	*e*Pn		**Pn**	**05 17 48.6**	**-0.5**
QIS	**Mount Isa**	**17.29**	**218**	P		**Pn**	**05 18 35.4**	**-0.7**
	baz=18,SNR=18							
EIDS	**Eidsvold**	**18.18**	**179**	*e*P		**Pn**	**05 18 47.2**	**+0.3**
	16nm,0.8s							
EIDS	**Eidsvold**	**18.18**	**179**	P		**Pn**	**05 18 47.8**	**+0.9**
	baz=18,SNR=3.4							
KDU	**Kakadu**	**18.98**	**252**	P		**P**	**05 18 54.4**	**-1.3**
	baz=19,SNR=13							
FAKI	**Fak Fak**	**19.03**	**282**	P		**Pn**	**05 18 58.1**	**+0.7**
FAKI	**Fak Fak**	**19.03**	**282**	P		**Pn**	**05 18 57.2**	**-0.1**
	baz=19,SNR=6.8							
RMQ	**Roma**	**19.40**	**186**	P		**Pn**	**05 19 01.8**	**+0.1**
	baz=20,SNR=11							
MTN	**Manton Dam**	**20.28**	**252**	P		**P**	**05 19 08.5**	**-1.4**
	baz=20,SNR=18							
QLP	**Quilpie**	**20.40**	**197**	P		**P**	**05 19 11.4**	**+0.3**
	baz=20,SNR=19							
WRAB	**Tennant Creek**	**20.51**	**230**	*e*P		**P**	**05 19 11.5**	**-1.0**
	28nm,0.8s							
WRA	**Warramunga Arr**	**20.53**	**230**	P		**P**	**05 19 10.9**	**-1.7**
WRA				S		**S**	**05 22 58.6**	**-1.7**
WRA	**Warramunga Arr**	**20.53**	**230**	P		**P**	**05 19 10.9**	**-1.7**
	25nm,0.8s,baz=53,slow=11,SNR=152							
WRA				S		**S**	**05 22 58.6**	**-1.7**
	3.1nm,1.0s,baz=58,slow=19,SNR=5.4							
WRA				LR		LR	05 27 26.5	
	comp=Z,249nm,19.6s,baz=40,slow=38							
DZM	**Mont Dzumac**	**21.14**	**136**	*e*LR		LR	05 24 35.6	
	539nm,26.4s							
GUMO	**Guam**	**21.40**	**344**	P		**P**	**05 19 20.6**	**-1.3**
GUMO	**Guam**	**21.40**	**344**	P		**P**	**05 19 20.6**	**-1.3**
	24nm,0.5s,baz=197,slow=15,SNR=4.1							
GUMO				LR		LR	05 25 48.0	
	comp=Z,200nm,19.2s,baz=119,slow=31							
AS31	**Alice Springs**	**23.19**	**223**	*e*P		**P**	**05 19 40.0**	**-1.0**
ASAR	**Alice Springs**	**23.20**	**223**	P		**P**	**05 19 40.1**	**-0.9**
ASAR				S		**S**	**05 23 50.4**	**+0.2**
ASAR	**Alice Springs**	**23.20**	**223**	P		**P**	**05 19 40.1**	**-0.9**
	13nm,0.8s,baz=52,slow=7.6,SNR=95							
ASAR				S		**S**	**05 23 50.4**	**+0.2**
	6.6nm,1.1s,baz=44,slow=19,SNR=11							
ASAR				LR		LR	05 29 07.5	
	comp=Z,206nm,21.2s,baz=47,slow=38							
ARMA	**Armidale**	**23.22**	**178**	*e*P		**P**	**05 19 41.4**	**+0.1**
	55nm,1.5s							
ARMA	**Armidale**	**23.22**	**178**	S		S	05 23 40.6	-10
	baz=23,SNR=4.4							
KNRA	**Kununurra**	**23.30**	**247**	P		**P**	**05 19 41.9**	**-0.1**
	baz=24,SNR=16							
NLAI	**Namlea**	**24.00**	**278**	P		**P**	**05 19 50.8**	**+2.0**
	26nm,0.9s							
CMSA	**Cobar Meteorol**	**24.81**	**191**	P		**P**	**05 19 56.1**	**+0.2**
	baz=25,SNR=13							
STKA	**Stephens Creek**	**26.15**	**198**	P		**P**	**05 20 07.5**	**-0.6**
	68nm,1.1s							
STKA	**Stephens Creek**	**26.15**	**198**	P		**P**	**05 20 07.5**	**-0.6**
	33nm,0.8s,baz=7.7,slow=8.7,SNR=34							
STKA				LR		LR	05 30 46.0	
	comp=Z,309nm,20.3s,baz=17,slow=37							
STKA	**Stephens Creek**	**26.15**	**198**	P		**P**	**05 20 07.7**	**-0.3**
	baz=26,SNR=3.9							
FITZ	**Fitzroy Crossi**	**26.93**	**244**	*e*P		**P**	**05 20 14.3**	**-1.0**
	32nm,0.8s							
FITZ	**Fitzroy Crossi**	**26.93**	**244**	P		**P**	**05 20 14.3**	**-1.0**
	29nm,0.6s,baz=88,slow=7.2,SNR=48							
FITZ				LR		LR	05 31 29.0	
	comp=Z,232nm,18.1s,baz=68,slow=38							
FITZ	**Fitzroy Crossi**	**26.93**	**244**	P		**P**	**05 20 14.2**	**-1.1**
	baz=27,SNR=99							
YNG	**Young**	**27.18**	**185**	P		**P**	**05 20 20.2**	**+2.9**
	baz=27,SNR=5.7							
MMRI	**Maumere**	**28.43**	**265**	P		P	05 20 35.7	+6.9
LUWI	**Luwuk**	**28.68**	**281**	P		pP	05 20 36.2	-5.8
LUWI	**Luwuk**	**28.68**	**281**	P		sP	05 20 44.2	-2.6
	baz=29,SNR=3.9							
KAPI	**Kappang**	**31.04**	**272**	*e*P		**P**	**05 20 52.2**	**+0.3**
	17nm,0.9s							
KAPI	**Kappang**	**31.04**	**272**	LR		LR	05 35 00.2	
	comp=Z,88nm,20.1s,baz=101,slow=40							
FORT	**Forrest**	**31.83**	**219**	*e*P		**P**	**05 20 57.8**	**-0.8**
	28nm,0.7s							
MBWA	**Marble Bar**	**33.21**	**242**	P		**P**	**05 21 10.9**	**0.0**
	20nm,1.0s							
KMBL	**Kambalda**	**36.30**	**224**	P		**P**	**05 21 37.0**	**-0.5**
	baz=36,SNR=11							
MEEK	**Meekatharra**	**36.33**	**234**	P		**P**	**05 21 37.1**	**-0.6**
	baz=37,SNR=24							
JAGI	**Jajag, Banyuwa**	**36.43**	**265**	P		**P**	**05 21 38.3**	**-0.4**
	baz=37,SNR=4.0							
KLBR	**Kellerberrin**	**39.37**	**227**	P		**P**	**05 22 05.5**	**+2.2**
	baz=40,SNR=6.7							
MORW	**Morawa**	**39.45**	**232**	P		**P**	**05 22 06.3**	**+2.2**
	baz=40,SNR=6.2							
BLDU	**Ballidu**	**39.66**	**229**	P		**P**	**05 22 07.8**	**+2.0**
	baz=40,SNR=5.1							
KSM	**Kuching**	**41.39**	**280**	*e*P		**P**	**05 22 19.9**	**-0.4**
	4.0nm,0.3s							
JNU	**Nakatsue**	**44.29**	**336**	P		**P**	**05 22 43.4**	**-0.1**
JNU	**Nakatsue**	**44.29**	**336**	P		**P**	**05 22 43.4**	**-0.1**
	13nm,0.7s,baz=134,slow=5.8,SNR=8.7							
MJAR	**Matsushiro Arr**	**45.00**	**346**	P		**P**	**05 22 47.8**	**-1.3**
MJAR				PcP		**PcP**	**05 24 31.3**	**+1.5**
MJAR	**Matsushiro Arr**	**45.00**	**346**	P		**P**	**05 22 47.8**	**-1.3**
	1.4nm,0.8s,baz=175,slow=8.9,SNR=6.6							
MJAR				PcP		**PcP**	**05 24 31.3**	**+1.5**
	1.5nm,0.7s,baz=168,slow=4.2,SNR=4.4							
QIZ	**Qiongzhong**	**48.07**	**303**	P		**P**	**05 23 12.5**	**-0.9**
QIZ				S		**S**	**05 30 12.3**	**+2.9**
QIZ				pmax		pmax		
	comp=Z,22nm,2.1s							
KSRS	**Korea Array**	**49.24**	**336**	P		**P**	**05 23 20.6**	**-1.5**
	comp=Z,2.2nm,0.6s,baz=152,slow=8.4,SNR=10							
KSRS				LR		LR	05 42 00.1	
	comp=Z,65nm,20.2s,baz=45,slow=33							
KSAR	**Wonju Array Be**	**49.24**	**336**	P		**P**	**05 23 20.6**	**-1.6**
IPM	**Ipoh**	**51.08**	**282**	*e*P		**P**	**05 23 38.1**	**+1.6**
	comp=Z,15nm,1.0s							
USRK	**Ussuriysk Arra**	**53.83**	**343**	P		**P**	**05 23 56.0**	**-0.3**
	comp=Z,3.1nm,1.0s,baz=162,slow=7.6,SNR=6.1							
USRK				LR		LR	05 43 20.4	
	comp=Z,58nm,20.1s,baz=167,slow=32							
GYA	**Guiyang**	**54.33**	**310**	*e*P		**P**	**05 24 01.3**	**+0.8**
GYA				pP		**pP**	**05 24 13.3**	**+1.2**
GYA				sP		**sP**	**05 24 18.0**	**+1.2**
GYA				PP		**PP**	**05 26 06.0**	**+3.2**
GYA				ScP		**ScP**	**05 28 58.9**	**-0.6**
GYA				S		**S**	**05 31 37.4**	**+1.4**
GYA				sS		**sS**	**05 31 54.5**	**-0.8**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
GYA				pmax		pmax		
	comp=Z,90nm,5.0s							
GYA				LR		LR		
	comp=N,480nm,20.8s							
GYA				LR		LR		
	comp=E,310nm,21.4s							
GYA				LR		LR		
	comp=Z,450nm,20.6s							
CN2	**Changchun**	**55.65**	**338**	*e*P		P	05 24 14.6	+5.1
CN2				*e*pP		pP	05 24 24.6	+3.5
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
CN2				pmax		pmax		
	comp=Z,200nm,4.0s							
CN2				LR		LR		
	comp=N,200nm,10.0s							
CN2				LR		LR		
	comp=E,200nm,10.0s							
CN2				LR		LR		
	comp=Z,200nm,10.0s							
KMI	**Kunming**	**56.74**	**306**	P		**P**	**05 24 19.4**	**+1.4**
KMI				pmax		pmax		
	comp=Z,9.0nm,1.1s							
CMAR	**Chiang Mai Arr**	**57.18**	**297**	P		**P**	**05 24 20.9**	**-0.1**
CMAR	**Chiang Mai Arr**	**57.18**	**297**	P		**P**	**05 24 20.9**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=129,slow=9.6,SNR=3.8							
CD2	**Chengdu**	**58.83**	**313**	P		**P**	**05 24 33.4**	**+1.1**
CD2				pP		**pP**	**05 24 44.9**	**+0.8**
CD2				sP		**sP**	**05 24 49.6**	**+0.9**
CD2				PcP		**PcP**	**05 25 21.8**	**+0.2**
CD2				PP		**PP**	**05 26 45.8**	**+2.9**
CD2				PcS		**PcS**	**05 29 22.3**	**-1.2**
CD2				S		**S**	**05 32 35.3**	**0.0**
CD2				sS		**sS**	**05 32 54.6**	**-0.2**
CD2				pmax		pmax		
	comp=Z,20nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,5.6s							
PPT2	**Papeete2**	**58.87**	**106**	*e*LR		LR	05 41 51.7	
	comp=Z,55nm,25.2s							
TBI	**Tubuai**	**59.38**	**113**	*e*LR		LR	05 42 16.8	
	comp=Z,68nm,30.2s							
HHC	**Hu-ho-hao-te**	**59.84**	**326**	*e*P		**P**	**05 24 40.4**	**+1.2**
HHC				pP		**pP**	**05 24 50.5**	**-0.4**
HHC				sP		**sP**	**05 24 55.3**	**-0.3**
HHC				PcP		**PcP**	**05 25 26.5**	**+1.1**
HHC				PP		**PP**	**05 26 55.1**	**+3.4**
HHC				ScP		**ScP**	**05 29 22.4**	**-1.1**
HHC				S		**S**	**05 32 49.6**	**+1.5**
HHC				sS		**sS**	**05 33 06.4**	**-1.2**
HHC				ScS		**ScS**	**05 34 25.4**	**-1.2**
HHC				pmax		pmax		
	comp=Z,43nm,0.7s							
HHC				pmax		pmax		
	comp=Z,160nm,10.8s							
HHC				LR		LR		
	comp=N,270nm,18.0s							
HHC				LR		LR		
	comp=E,220nm,20.4s							
HHC				LR		LR		
	comp=Z,290nm,20.4s							
PETK	**Petropavlovsk-**	**60.24**	**5**	P		**P**	**05 24 41.5**	**-0.1**
PETK	**Petropavlovsk-**	**60.24**	**5**	P		**P**	**05 24 41.5**	**-0.1**
	comp=Z,4.2nm,0.9s,baz=163,slow=11,SNR=6.0							
PETK				LR		LR	05 46 57.2	
	comp=Z,39nm,20.3s,baz=98,slow=32							
PMOR	**Pomariorio Ree**	**60.43**	**103**	*e*P		**P**	**05 24 45.1**	**+1.5**
	comp=Z,24nm,1.0s							
FX1	**Attu Island--F**	**62.67**	**15**	*e*P		**P**	**05 24 56.8**	**-1.1**
GTA	**Gaotai**	**66.08**	**319**	*e*P		P	05 25 29.0	+8.3
GTA				pP		pP	05 25 39.4	+6.8
GTA				sP		sP	05 25 43.3	+6.1
GTA				S		S	05 34 22.3	+16
GTA				sS		sS	05 34 39.8	+14
GTA	**Gaotai**	**66.08**	**319**	SS		SS	05 38 44.8	+22
GTA				pmax		pmax		
	comp=Z,3.0nm,1.2s							
GTA				pmax		pmax		
	comp=Z,89nm,5.0s							
GTA				LR		LR		
	comp=N,45nm,15.4s							
GTA				LR		LR		
	comp=E,83nm,15.9s							
GTA				LR		LR		
	comp=Z,43nm,16.6s							
ULN	**Ulaanbaatar**	**66.96**	**330**	*e*P		**P**	**05 25 25.4**	**-0.8**
	comp=Z,2.6nm,0.8s							
SONM	**Songino Array**	**67.28**	**329**	P		**P**	**05 25 27.9**	**-0.3**
SONM	**Songino Array**	**67.28**	**329**	P		**P**	**05 25 27.9**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=157,slow=4.9,SNR=12							
VNDA	**Vanda**	**70.63**	**177**	P		**P**	**05 25 48.9**	**+0.5**
VNDA	**Vanda**	**70.63**	**177**	P		**P**	**05 25 48.9**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=332,slow=8.8,SNR=6.8							
VNDA				LR		LR	05 51 39.0	
	comp=Z,66nm,19.8s,baz=296,slow=31							
WMQ	**Urumqi**	**76.16**	**318**	*e*P		**P**	**05 26 21.9**	**+0.3**
WMQ				LR		LR		
	comp=N,110nm,5.4s							
WMQ				LR		LR		
	comp=E,110nm,6.4s							
MK31	**Makanchi Array**	**80.81**	**320**	*e*P		**P**	**05 26 45.7**	**-1.5**
MKAR	**Makanchi Array**	**80.81**	**320**	P		**P**	**05 26 46.0**	**-1.2**
MKAR	**Makanchi Array**	**80.81**	**320**	P		**P**	**05 26 46.0**	**-1.2**
	comp=E,2.5nm,1.1s,baz=121,slow=4.7,SNR=9.1							
MKAR				LR		LR	06 00 29.9	
	comp=E,42nm,19.1s,baz=246,slow=34							
ZAA0	**Zalesovo Array**	**82.01**	**327**	P		**P**	**05 26 52.5**	**-0.7**
ZALV	**Zalesovo Beam**	**82.01**	**327**	P		**P**	**05 26 52.2**	**-1.1**
ZALV	**Zalesovo Beam**	**82.01**	**327**	P		**P**	**05 26 52.2**	**-1.1**
	comp=E,2.3nm,0.6s,baz=105,slow=5.3,SNR=12							
ZALV				LR		LR	06 05 56.1	
	comp=E,31nm,18.6s,baz=184,slow=38							
MAW	**Mawson**	**82.74**	**203**	P		**P**	**05 26 59.4**	**+2.5**
MAW	**Mawson**	**82.74**	**203**	P		**P**	**05 26 59.4**	**+2.5**
	comp=E,8.4nm,1.1s,baz=27,slow=4.5,SNR=7.4							
MAW				LR		LR	06 00 30.9	
	comp=E,78nm,21.2s,baz=296,slow=33							
MAW	**Mawson**	**82.74**	**203**	P		P	05 27 00.5	+3.6
	baz=83,SNR=6.0							
QSPA	**South Pole Qui**	**82.89**	**180**	*e*P		**P**	**05 26 57.7**	**-0.2**
	comp=E,12nm,1.3s							
SML	**Sawmill**	**82.98**	**25**	*e*P		**P**	**05 26 57.8**	**-0.4**
	comp=E,5.8nm,0.8s							
KSH	**Kashi**	**82.99**	**311**	*e*P		**pP**	**05 27 10.0**	**-1.1**
KSH				*e*pP		pwP	05 27 23.3	+12
KSH				*e*sP		sP	05 27 28.6	+13
KSH				*e*PP		PP	05 29 29.3	-41
KSH	**Kashi**	**82.99**	**311**	*e*SKS		**ScS**	**05 37 27.3**	**-2.4**
KSH	**Kashi**	**82.99**	**311**	*e*S		sS	05 37 34.3	-1.5
KSH	**Kashi**	**82.99**	**311**	*e*sS		S	05 37 56.6	+41
KSH	**Kashi**	**82.99**	**311**	*e*SS		SS	05 43 11.0	+31
KSH				pmax		pmax		
	comp=Z,8.0nm,0.5s							
KSH				pmax		pmax		
	comp=Z,230nm,5.6s							
KSH				LR		LR		
	comp=N,72nm,3.7s							
KSH				LR		LR		
	comp=E,130nm,4.7s							
KSH				LR		LR		
	comp=Z,110nm,6.4s							
TRF	**Thorofare Moun**	**83.03**	**23**	*e*P		**P**	**05 26 56.3**	**-2.3**
	comp=Z,6.9nm,0.7s							
MCK	**McKinley**	**83.69**	**23**	*e*P		**P**	**05 27 00.1**	**-1.8**
	comp=Z,24nm,0.9s							
TKM2	**Tokmak 2**	**84.16**	**314**	*e*P		**P**	**05 27 03.1**	**-1.8**
	comp=Z,3.1nm,0.7s							
TKM2				*e*PcP		**PcP**	**05 27 07.8**	**-0.9**
KURK	**Kurchatov**	**84.41**	**323**	*e*P		**P**	**05 27 04.5**	**-1.2**
KURK				*e*PcP		**PcP**	**05 27 08.0**	**-1.3**
KURK				*e*PP		**PP**	**05 30 23.4**	**+2.2**
KURBB	**Kurchatov Arra**	**84.44**	**322**	P		**P**	**05 27 04.1**	**-1.8**
	comp=Z,2.7nm,0.9s,baz=109,slow=4.1,SNR=10							
COLA	**College**	**84.67**	**22**	*e*P		**P**	**05 27 05.2**	**-1.5**
	comp=Z,10.0nm,0.8s							
COLA				*e*PcP		**PcP**	**05 27 09.5**	**-0.6**
AAK	**Ala-Archa**	**84.87**	**314**	*e*P		**P**	**05 27 07.8**	**-0.7**
AAK	**Ala-Archa**	**84.87**	**314**	P		**P**	**05 27 07.0**	**-1.5**
	comp=Z,4.7nm,0.8s,baz=111,slow=5.2,SNR=12							
ILAR	**Eielson Array**	**84.98**	**22**	P		**P**	**05 27 06.2**	**-2.2**
ILAR	**Eielson Array**	**84.98**	**22**	P		**P**	**05 27 06.2**	**-2.2**
	comp=Z,5.6nm,0.8s,baz=253,slow=5.2,SNR=64							
COLD	**Coldfoot**	**85.03**	**20**	*e*P		**P**	**05 27 07.9**	**-0.6**
	comp=Z,12nm,1.0s							
EKS2	**Erkin-Say**	**85.39**	**314**	*e*P		**P**	**05 27 10.2**	**-0.8**
	comp=Z,16nm,0.9s							
MENT	**Mentasta**	**85.41**	**25**	*e*P		**P**	**05 27 09.5**	**-1.0**
DOT	**Dot Lake**	**85.57**	**24**	*e*P		**P**	**05 27 10.6**	**-0.8**
	comp=Z,21nm,1.1s							
EGAK	**Eagle**	**87.20**	**23**	*e*P		**P**	**05 27 18.7**	**-0.5**
	comp=Z,12nm,1.0s							
KKAR	**Karatay Array**	**87.83**	**314**	*e*P		**P**	**05 27 21.1**	**-1.7**
	comp=Z,6.1nm,1.0s							
BVAR	**Borovoye Array**	**89.94**	**323**	LR		LR	06 04 39.5	
	comp=Z,42nm,20.3s,baz=262,slow=33							
YBH	**Yreka Blue Hor**	**91.98**	**48**	LR		LR	06 03 34.8	
	comp=Z,80nm,18.4s,baz=176,slow=32							
NVAR	**Mina Array Bea**	**94.98**	**52**	P		**P**	**05 27 57.0**	**+0.5**
NVAR	**Mina Array Bea**	**94.98**	**52**	P		**P**	**05 27 57.0**	**+0.5**

RAHZ	**Arahi**	**1.14**	**147**	PN	Pn	05 29 59.4	+0.5
BKZ	**Black Stump Fm**	**1.22**	**173**	PN	Pn	05 29 59.5	-0.1
BKZ				SN	Sn	05 30 18.7	-0.8
WNVZ	**Wahianoa**	**1.47**	**201**	PN	Pn	05 30 02.6	+0.3
MOVZ	**Moawhango**	**1.50**	**196**	PN	Pn	05 30 02.3	-0.3
BHHZ	**Black Hill Sta**	**1.54**	**187**	⇑PN	Pn	05 30 02.6	-0.3
PUZ	**Puketiti**	**1.56**	**95**	PN	Pn	05 30 02.5	-0.6
MXZ	**Matakaoa Point**	**1.65**	**77**	PN	Pn	05 30 04.2	+0.1
PNHZ	**Pukenui**	**1.95**	**182**	PN	Pn	05 30 06.9	-0.7
PXZ	**Pawanui**	**2.12**	**168**	PN	Pn	05 30 08.4	-1.1
BFZ	**Birch Farm**	**2.72**	**181**	PN	Pn	05 30 14.9	-2.0
MRZ	**Mangatainoka R**	**2.75**	**191**	PN	Pn	05 30 15.4	-2.0
HOWZ	**Holdsworth Sta**	**2.99**	**191**	⇑PN	Pn	05 30 17.9	-2.6
KIW	**Kapiti Island**	**3.09**	**200**	PN	Pn	05 30 19.2	-2.6
CAW	**Cannon Point**	**3.28**	**196**	PN	Pn	05 30 21.3	-2.8
TUWZ	**Tuamarina**	**3.91**	**207**	PN	Pn	05 30 29.0	-3.3
NNZ	**Nelson**	**3.95**	**214**	PN	Pn	05 30 30.0	-2.8

IDC 24 05:45:41.5±2.4, 0°.51N×125°.56E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.4/22, mbtmp3.6/3, Error ellipse: s-maj=296.3km s-min=24.9km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.07**	**158**	P	P	05 50 37.9	-0.3
	1.4nm,0.4s,baz=336,slow=9.7,SNR=18						
ASAR	**Alice Springs**	**25.36**	**162**	P	P	05 51 10.7	+0.2
	0.4nm,0.3s,baz=341,slow=10.0,SNR=11						
MKAR	**Makanchi Array**	**59.56**	**327**	P	P	05 55 47.0	-0.1
	0.2nm,0.3s,baz=120,slow=7.5,SNR=6.6						

*CSEM **24** 06:06:29.7±0.5, 36°.49N×21°.74E, h2^{km}, MD3.5, Error ellipse: s-maj=9.3km s-min=5.0km az=56.0*
*ATH **24** 06:06:30.5, 36°.51N×21°.84E, h5^{km}±3^{km}, MD3.5/15*
*THE **24** 06:06:31.1, 36°.49N×21°.81E, h0^{km}±3^{km}, ML2.8/3, Error ellipse: s-maj=3.8km s-min=1.5km az=217.0*
ISC 24 06:06:29.9±1.7, 36°.47N±0°.04×21°.80E±0°.05, h4^{km}±10^{km}, n46, σ0^{s}.55/76, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYR	**Agios Nikonas**	**0.52**	**56**	P	**Pg**	**06 06 39.8**	**-0.2**
DYR				S	**Sb**	**06 06 48.7**	**-0.9**
DYR	**Agios Nikonas**	**0.52**	**56**	*e*PB	**Pg**	**06 06 40.0**	**0.0**
DYR				*e*SB	**Sg**	**06 06 46.7**	**-0.1**
DYR	**Agios Nikonas**	**0.52**	**56**	*e*Pb	**Pg**	**06 06 40.0**	**0.0**
DYR				*e*Sb	**Sg**	**06 06 46.7**	**-0.1**
DYR				S	**Sb**	**06 06 48.7**	**-0.9**
ITM	**Ithomi**	**0.72**	**8**	P	**Pg**	**06 06 43.8**	**+0.1**
ITM				S	**Sb**	**06 06 55.0**	**-0.2**
ITM	**Ithomi**	**0.72**	**8**	*e*PB	**Pg**	**06 06 43.3**	**-0.4**
ITM				*e*SB	**Sg**	**06 06 53.0**	**0.0**
ITM	**Ithomi**	**0.72**	**8**	*e*Pb	**Pg**	**06 06 43.8**	**-0.4**
ITM	**Ithomi**	**0.72**	**8**	P	**Pg**	**06 06 43.8**	**+0.1**
ITM				*e*Sb	**Sg**	**06 06 53.0**	**0.0**
ITM				S	**Sb**	**06 06 55.0**	**-0.2**
VLI	**Veliai**	**0.95**	**75**	P	**Pg**	**06 06 48.3**	**+0.1**
VLI				S	**Sb**	**06 07 02.8**	**+0.8**
VLI	**Veliai**	**0.95**	**75**	*e*PG	**Pg**	**06 06 47.7**	**-0.5**
VLI				*e*SB	**Sg**	**06 07 00.0**	**-0.6**
VLI	**Veliai**	**0.95**	**75**	*e*Pg	**Pg**	**06 06 47.7**	**-0.5**
VLI	**Veliai**	**0.95**	**75**	P	**Pg**	**06 06 48.3**	**+0.1**
VLI				*e*Sb	**Sg**	**06 07 00.0**	**-0.6**
VLI				S	**Sb**	**06 07 02.8**	**+0.8**
VLX	**Vlachokerasia**	**1.01**	**27**	P	**Pg**	**06 06 49.1**	**-0.3**
VLX				S	**Sn**	**06 07 05.0**	**-0.8**
VLX	**Vlachokerasia**	**1.01**	**27**	*e*PB	**Pg**	**06 06 49.1**	**-0.3**
VLX				*e*SB	**Sg**	**06 07 02.1**	**-0.4**
VLX	**Vlachokerasia**	**1.01**	**27**	P	**Pg**	**06 06 49.1**	**-0.3**
VLX				*e*Sb	**Sg**	**06 07 02.1**	**-0.4**
VLX				S	**Sn**	**06 07 05.0**	**-0.8**
KYTH	**Kithira**	**1.02**	**100**	P	**Pg**	**06 06 49.5**	**0.0**
KYTH	**Kithira**	**1.02**	**100**	*e*PB	**Pg**	**06 06 49.5**	**0.0**
KYTH	**Kithira**	**1.02**	**100**	P	**Pg**	**06 06 49.5**	**0.0**
ANKY	**Antikythira Is**	**1.36**	**116**	*e*PB	**Pn**	**06 06 55.9**	**+0.2**
ANKY				*e*SB	**Sb**	**06 07 14.5**	**+0.8**
ANKY	**Antikythira Is**	**1.36**	**116**	*e*Pb	**Pn**	**06 06 55.9**	**+0.2**
ANKY				*e*Sb	**Sb**	**06 07 14.5**	**+0.8**
DIDY	**Didyma**	**1.52**	**48**	P	**Pn**	**06 06 58.6**	**+0.6**
DIDY	**Didyma**	**1.52**	**48**	P	**Pn**	**06 06 58.6**	**+0.6**
GUR	**Goura**	**1.53**	**16**	P	**Pn**	**06 06 58.1**	**0.0**
GUR				S	**Sg**	**06 07 19.7**	**+0.7**
GUR	**Goura**	**1.53**	**16**	*e*PG	**Pn**	**06 06 57.9**	**-0.2**
GUR				*e*SB	**Sg**	**06 07 19.1**	**+0.1**
GUR	**Goura**	**1.53**	**16**	P	**Pn**	**06 06 58.1**	**0.0**
GUR				*e*Sb	**Sg**	**06 07 19.1**	**+0.1**
GUR				S	**Sg**	**06 07 19.7**	**+0.7**
DID	**Didima**	**1.55**	**48**	P	**Pn**	**06 06 58.9**	**+0.5**
DID				S	**Sg**	**06 07 21.0**	**+1.2**
DID	**Didima**	**1.55**	**48**	*e*PB	**Pn**	**06 06 59.2**	**+0.8**
DID				*e*SB	**Sn**	**06 07 18.9**	**-0.1**
DID	**Didima**	**1.55**	**48**	P	**Pn**	**06 06 58.9**	**+0.5**
DID	**Didima**	**1.55**	**48**	*e*Pb	**Pn**	**06 06 59.2**	**+0.8**
DID				*e*Sb	**Sn**	**06 07 18.9**	**-0.1**
DID				S	**Sg**	**06 07 21.0**	**+1.2**
KLV	**Kalavryta, Ach**	**1.60**	**10**	*e*PG	**Pn**	**06 06 59.0**	**0.0**
KLV				*e*SB	**Sb**	**06 07 20.8**	**+0.2**
KLV	**Kalavryta, Ach**	**1.60**	**10**	*e*Pg	**Pn**	**06 06 59.0**	**0.0**
KLV				*e*Sb	**Sb**	**06 07 20.8**	**+0.2**
RLS	**Riolos of Patr**	**1.61**	**351**	P	**Pn**	**06 06 59.9**	**+0.8**
RLS	**Riolos of Patr**	**1.61**	**351**	*e*PG	**Pn**	**06 06 59.4**	**+0.3**
RLS	**Riolos of Patr**	**1.61**	**351**	*e*Pg	**Pn**	**06 06 59.4**	**+0.3**
RLS	**Riolos of Patr**	**1.61**	**351**	P	**Pn**	**06 06 59.9**	**+0.8**
LAKA	**Lakka**	**1.77**	**5**	*e*PG	**Pb**	**06 07 02.8**	**-0.2**
LAKA	**Lakka**	**1.77**	**5**	*e*Pg	**Pb**	**06 07 02.8**	**-0.2**
LTK	**Loutraki**	**1.81**	**31**	P	**Pn**	**06 07 03.2**	**+1.3**
LTK				S	**Sb**	**06 07 26.3**	**-0.4**
LTK	**Loutraki**	**1.81**	**31**	*e*PN	**Pb**	**06 07 03.7**	**0.0**
LTK	**Loutraki**	**1.81**	**31**	P	**Pn**	**06 07 03.2**	**+1.3**
LTK	**Loutraki**	**1.81**	**31**	*e*Pn	**Pb**	**06 07 03.7**	**0.0**
LTK				S	**Sb**	**06 07 26.3**	**-0.4**
TRIZ	**Trizonia**	**1.91**	**7**	*e*PG	**Pb**	**06 07 05.2**	**-0.1**
TRIZ	**Trizonia**	**1.91**	**7**	*e*Pg	**Pb**	**06 07 05.2**	**-0.1**
KALE	**Kalithea**	**1.94**	**8**	*e*PN	**Pb**	**06 07 06.0**	**+0.1**
EFP	**Efpalio**	**1.96**	**3**	*e*PN	**Pb**	**06 07 06.6**	**+0.5**
VAM	**Vamos**	**2.22**	**118**	P	**Pb**	**06 07 09.9**	**-0.8**
VAM	**Vamos**	**2.22**	**118**	P	**Pb**	**06 07 09.9**	**-0.8**

CASC 24 06:14:30.3±1.9, 13°.59N×91°.01W, h25^{km}±6^{km}, MD3.7, ML3.9, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUG	**Fuego 3**	**0.87**	**11**	*e*P	Pb	06 14 46.2	-0.8
PCG	**Pacaya**	**0.89**	**26**	*e*P	Pb	06 14 46.9	-0.6
PCG				*e*S	Sn	06 15 01.9	+1.9
JAT	**Jato**	**0.94**	**320**	*e*P	Pb	06 14 47.3	-0.7
NBG	**Las Nubes**	**1.18**	**33**	*e*P	Pn	06 14 51.8	+0.1
NBG				*e*S	Sb	06 15 08.6	+0.9
RTR	**El Retiro**	**1.36**	**77**	*e*P	Pn	06 14 54.2	+0.2
RTR				*e*S	Sb	06 15 12.4	-0.2
SBLS	**San Blas**	**1.37**	**79**	*e*P	Pn	06 14 54.1	+0.2
SBLS				*e*S	Sn	06 15 12.2	+0.3
RBDL	**Robledal**	**1.39**	**68**	*e*P	Pn	06 14 54.1	-0.3
SNJE	**San Jose**	**1.40**	**78**	*e*P	Pn	06 14 54.6	0.0
BOQS	**Boqueron**	**1.69**	**85**	*e*P	Pn	06 14 59.0	+0.3
BOQS				*e*S	Sn	06 15 20.1	+0.4
SNET	**Serv Nac Est T**	**1.73**	**87**	*e*P	Pn	06 14 59.3	+0.3
SNET				*e*S	Sn	06 15 21.2	+0.7
SNET				AML	AML	06 15 22.9	
	comp=Z,2μm,0.3s						
LFRS	**El Faro**	**1.90**	**89**	*e*P	Pn	06 15 02.0	+0.7
LFRS				*e*S	Sn	06 15 25.1	+0.5
LBRS	**Las Brisas**	**1.92**	**85**	*e*P	Pn	06 15 01.9	+0.3
MRL	**Marmol**	**1.95**	**41**	*e*P	Pn	06 15 01.9	-0.2
MRL				*e*S	Sb	06 15 27.8	-1.6
SNVI	**San Vicente**	**2.12**	**89**	*e*P	Pn	06 15 05.0	+0.6
CAHU	**Cacacuatique**	**2.73**	**86**	*e*P	Pn	06 15 12.8	-0.1
CNCH	**Conchagua**	**3.11**	**95**	*e*P	Pn	06 15 18.5	+0.5

IDC 24 06:16:00.5±6.2, 31°.06S×177°.75W, h0^{km}, mb3.8/2, mb1 4.0/2, mb1mx3.6/17, mbtmp3.8/2, Error ellipse: s-maj=251.6km s-min=58.5km az=156.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.29**	**268**	P	P	06 24 03.9	-0.3
	0.4nm,0.5s,baz=106,slow=7.5,SNR=12						
WRA	**Warramunga Arr**	**44.34**	**273**	P	P	06 24 12.7	+0.1
	1.2nm,0.6s,baz=114,slow=7.7,SNR=16						
FINES	**FINESS Array B**	**145.84**	**340**	PKPbc	PKPdf	06 35 40.0	-0.4
	0.7nm,0.5s,baz=49,slow=4.6,SNR=4.6						

*NIED **24** 06:20:00, 25°.00N×122°.10E, h8^{km}, Mw3.7 Best double couple: M$_0$4.41000×10^{14} NP1:φ$_s$65.00000°, δ51.00000°, λ-109.00000°. NP2:φ$_s$274.00000°, δ43.00000°, λ-68.00000°.*
*JMA **24** 06:20:57.9±0.2, 24°.99N×122°.09E, h35^{km}, M3.5*
*TAP **24** 06:20:58.2, 24°.83N×122°.03E, h13^{km}, ML3.4, C*
ISC 24 06:20:57.5±1.0, 24°.84N±0°.02×122°.09E±0°.03, h13^{km}±7^{km}, n45, σ0^{s}.78/80, 4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.14**	**273**	⇓*i*P	**Pb**	**06 21 01.5**	**-0.5**
EGS	baz=275			*i*S	**Sg**	**06 21 03.7**	**+0.3**
TWB1	**Santiao Chiao**	**0.19**	**332**	⇓*i*P	**Pb**	**06 21 02.6**	**-0.3**
TWB1	baz=338			*e*S	**Sb**	**06 21 05.8**	**-0.7**
TWC	**Suao**	**0.31**	**224**	*i*P	**Pg**	**06 21 04.2**	**+0.3**
TWC	baz=223			S	**Sg**	**06 21 07.7**	**-0.6**
ILA	**Ilan**	**0.32**	**257**	*e*P	**Pg**	**06 21 02.2**	**-1.7**
NWF	**Wu-fen Shan**	**0.36**	**310**	⇓*i*P	**Pb**	**06 21 06.1**	**+0.2**
NWF	baz=309			S	**Sb**	**06 21 11.1**	**-0.4**
TWE	**Neicheng**	**0.40**	**253**	*i*P	**Pb**	**06 21 05.9**	**-0.5**
TWE	baz=251			S	**Sg**	**06 21 10.5**	**-0.3**
ENTT	**Nioudou**	**0.51**	**248**	*e*P	**Pb**	**06 21 08.2**	**-0.2**
ENTT	baz=247			*e*S	**Sg**	**06 21 14.9**	**+0.4**
ENA	**Nanau**	**0.52**	**218**	*e*P	**Pg**	**06 21 07.8**	**+0.2**
ENA	baz=220			*e*S	**Sg**	**06 21 14.7**	**+0.2**
TAP1	**Taipei**	**0.55**	**292**	P	**Pb**	**06 21 09.6**	**+0.6**
TAP1	baz=284			S	**Sb**	**06 21 17.2**	**+0.4**
TAP	**Taipei**	**0.56**	**291**	*e*P	**Pb**	**06 21 09.7**	**+0.4**
TAP	baz=284			*e*S	**Sb**	**06 21 17.1**	**-0.1**
TWY	**Chenhua**	**0.62**	**315**	P	**Pn**	**06 21 11.1**	**-0.9**
TWS1	**Kuangyinshan**	**0.66**	**294**	*e*P	**Pb**	**06 21 11.4**	**+0.5**
NSK	**Sanguang**	**0.68**	**257**	⇓*i*P	**Pb**	**06 21 11.1**	**-0.2**
NSK	baz=265			S	**Sg**	**06 21 19.0**	**-0.8**
NNS	**Nan Shan**	**0.76**	**239**	*e*P	**Pb**	**06 21 12.8**	**+0.1**
NNS	baz=243			*e*S	**Sg**	**06 21 21.6**	**-0.7**
PCYT	**Pengchaiyu**	**0.79**	**359**	P	**Pn**	**06 21 14.7**	**+0.4**
	baz=5.0						
NCU	**National Centr**	**0.83**	**279**	*e*P	**Pb**	**06 21 13.1**	**-0.5**
NCU	baz=279			*e*S	**Sn**	**06 21 26.1**	**-0.9**
TWD	**Chiawan**	**0.88**	**211**	P	**Pb**	**06 21 14.5**	**-0.1**
TWD	baz=212			S	**Sg**	**06 21 25.6**	**-0.3**
YOJ	**Yonaguni jima**	**0.92**	**114**	P	**Pb**	**06 21 15.5**	**+0.2**
YOJ				S	**Sb**	**06 21 28.3**	**+0.8**
HWA	**Hwalien**	**0.96**	**207**	*e*P	**Pn**	**06 21 16.6**	**-0.1**
HWA	baz=218			*e*S	**Sb**	**06 21 29.0**	**+0.3**
NSTT	**Nanjuang**	**1.01**	**258**	*e*P	**Pn**	**06 21 17.8**	**+0.5**
NSTT	baz=259			*e*S	**Sg**	**06 21 30.5**	**+0.3**
TWT	**Tachien**	**1.01**	**235**	*e*P	**Pn**	**06 21 17.6**	**0.0**
TWT	baz=230			*e*S	**Sg**	**06 21 31.1**	**+0.8**
WHF	**Hehuan Shan**	**1.02**	**228**	P	**Pb**	**06 21 17.2**	**0.0**
WHF	baz=229			S	**Sb**	**06 21 30.6**	**-0.1**
ESL	**Shilin**	**1.18**	**210**	*e*P	**Pn**	**06 21 19.7**	**0.0**
ESL	baz=221			*e*S	**Sn**	**06 21 35.9**	**+0.2**
NSY	**Sanyi**	**1.28**	**251**	*e*P	**Pg**	**06 21 23.2**	**+1.1**
NSY	baz=253			*e*S	**Sg**	**06 21 41.8**	**+3.1**
TWQ1	**Liyutan**	**1.29**	**248**	*e*P	**Pg**	**06 21 23.2**	**+0.8**
TWQ1	baz=263			*e*S	**Sg**	**06 21 39.8**	**+0.6**
SMLT	**Sun Moon Lake**	**1.44**	**229**	*e*P	**Pg**	**06 21 25.1**	**-0.1**
SMLT	baz=225			*e*S	**Sb**	**06 21 42.5**	**-0.1**
TYC	**Yuchr**	**1.46**	**231**	*e*P	**Pb**	**06 21 24.9**	**+0.4**
TYC	baz=227			*e*S	**Sb**	**06 21 42.7**	**-0.2**
TCU	**Taichung**	**1.46**	**242**	*e*P	**Pb**	**06 21 24.2**	**-0.3**
EHY	**Hungye**	**1.50**	**208**	*e*P	**Pb**	**06 21 25.1**	**-0.1**
EHY	baz=220			*e*S	**Sn**	**06 21 42.7**	**-0.9**
IRIF	**Iriomote-Funau**	**1.58**	**108**	P	**Pn**	**06 21 24.9**	**-0.3**
IRIF				*e*S	**Sn**	**06 21 45.2**	**-0.2**
WNT	**Mingjian**	**1.60**	**234**	*e*P	**Pg**	**06 21 28.6**	**+0.4**
	baz=234						
TWF1	**Yuli**	**1.65**	**206**	*e*P	**Pb**	**06 21 27.3**	**-0.4**
TWF1	baz=219			*e*S	**Sn**	**06 21 46.7**	**-0.5**
YUS	**Yu-Shan**	**1.69**	**218**	*e*P	**Pb**	**06 21 29.1**	**+0.3**
YUS	baz=230			*e*S	**Sg**	**06 21 52.4**	**+0.2**
HATJ	**Hateruma jima**	**1.75**	**116**	P	**Pn**	**06 21 27.8**	**+0.3**
HATJ				*e*S	**Sn**	**06 21 49.3**	**-0.4**
ALS	**Alishan**	**1.77**	**222**	*e*P	**Pb**	**06 21 30.9**	**+1.0**
	baz=208						
CHN5	**Tsauling**	**1.78**	**226**	*e*P	**Pg**	**06 21 31.8**	**0.0**
CHN5	baz=231			*e*S	**Sg**	**06 21 56.0**	**+1.1**
JKRS	**Kuro-shima**	**1.85**	**108**	P	**Pn**	**06 21 29.3**	**+0.4**
JKRS				*e*S	**Sn**	**06 21 51.2**	**-1.0**
ELDTW	**Lidau**	**1.91**	**211**	*e*P	**Pb**	**06 21 31.2**	**-1.1**
	baz=198						
JIJ	**Ishigaki jima**	**1.93**	**104**	P	**Pn**	**06 21 30.0**	**0.0**
CHN4	**Tsaushan**	**2.01**	**223**	*e*P	**Pb**	**06 21 33.3**	**-0.7**
CHN4	baz=230			*e*S	**Sg**	**06 22 01.0**	**-1.2**
CHN1	**Nanshi**	**2.18**	**221**	*e*P	**Pb**	**06 21 36.2**	**-0.6**
CHN1	baz=228			*e*S	**Sb**	**06 22 05.1**	**+1.4**
TWG	**Pinlang**	**2.21**	**205**	*e*P	**Pn**	**06 21 35.6**	**+1.6**
TWG	baz=212			*e*S	**Sn**	**06 22 02.4**	**+1.3**
SSD	**Sandimen**	**2.47**	**213**	*e*P	**Pb**	**06 21 40.4**	**-1.4**
SSD	baz=220			*e*S	**Sb**	**06 22 10.8**	**-1.4**
SCZT	**Fangliau**	**2.80**	**209**	*e*P	**Pb**	**06 21 46.5**	**-0.8**
	baz=217						
SCZT				*e*S	**Sb**	**06 22 22.1**	**+0.6**
	baz=217						
TWK1	**Hengchun**	**3.11**	**202**	*e*P	**Pb**	**06 21 51.2**	**-1.6**
	baz=188						

IDC 24 06:33:35.2±0.9, 42°.76S×72°.52W, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx4.0/18, mbtmp4.0/7, ML4.1/1, MS3.1/1, Ms1 3.1/1, ms1mx2.5/22, Error ellipse: s-maj=33.7km s-min=14.0km az=115.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.50**	**37**	Pn	Pn	06 34 18.3	+1.0
	8.9nm,0.3s,baz=220,slow=16,SNR=106						
PLCA				Pg	Pb	06 34 21.6	+0.4
	8.9nm,0.3s,baz=224,slow=17,SNR=133						
PLCA				Lg	Lg	06 34 55.5	
	37nm,0.3s,baz=320,slow=19,SNR=24						
PLCA				LR	LR	06 35 30.6	
	comp=Z,393nm,21.4s,baz=26,slow=46						
SNAA	**Sanae**	**43.73**	**155**	P	P	06 41 41.3	-0.4
	1.4nm,1.1s,baz=243,slow=11,SNR=5.3						
QSPA	**South Pole Qui**	**47.49**	**180**	P	P	06 42 11.9	+0.2
	8.0nm,1.1s,baz=157,slow=6.7,SNR=10						
VNDA	**Vanda**	**55.46**	**192**	P	P	06 43 12.5	+1.5
	3.4nm,1.2s,baz=139,slow=7.3,SNR=4.3						
TXAR	**Lajitas Array**	**77.25**	**332**	P	P	06 45 32.0	+0.9
	0.6nm,0.9s,baz=170,slow=6.4,SNR=5.2						
TORD	**Torodi Ar. Bea**	**87.58**	**70**	P	P	06 46 23.7	-1.7
	0.5nm,0.9s,baz=238,slow=4.4,SNR=2.4						
PDAR	**Pinedale Array**	**91.42**	**334**	P	P	06 46 41.9	-1.1
	0.6nm,0.8s,baz=157,slow=4.9,SNR=3.9						
GERES	**GERESS Array B**	**118.41**	**49**	PKP	PKPdf	06 52 22.8	-1.3
	0.2nm,0.7s,baz=92,slow=3.2,SNR=3.5						
ILAR	**Eielson Array**	**121.74**	**331**	PKP	PKPdf	06 52 28.9	-1.0
	0.5nm,1.0s,baz=90,slow=0.9,SNR=4.2						

MAN 24 06:39:01, 19°.04N×119°.51E, h38^{km}, mb4.7, ML3.6, MS3.6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**2.02**	**125**	*e*P	Pn	06 39 33.9	+1.4
APYP				*e*S	Sn	06 39 56.9	+0.4
CAUP	**Cauayan**	**3.03**	**133**	*e*P	Pn	06 39 51.8	+5.4
BALP	**Baler**	**3.83**	**149**	*e*P	Pn	06 39 59.0	+1.6

*BJI **24** 06:49:20.1, 42°.10S×88°.30E, h10^{km}, mB5.2/35, mb5.0/41, Ms5.6/39, Ms7 5.3/39*
*IDC **24** 06:49:21.6±0.4, 42°.11S×88°.37E, h0^{km}, mb4.5/23, mb1 4.5/23, mb1mx4.5/27, mbtmp4.4/23, MS5.1/26, Ms1 5.1/26, ms1mx5.1/30, Error ellipse: s-maj=15.7km s-min=13.5km az=152.0*
*MOS **24** 06:49:21.3±1.4, 42°.14S×88°.34E, h10^{km}, mb5.3/14, MS5.3/10, Error ellipse: s-maj=15.7km s-min=10.7km az=83.4*
*ISCJB **24** 06:49:22.0±0.3, 42°.10S±0°.05×88°.31E±0°.08, h14^{km}, mb4.8/52, MS5.2/134, Error ellipse: s-maj=8.6km s-min=7.6km az=14.2*
*NEIC **24** 06:49:23.4±0.3, 42°.08S×88°.35E, h10^{km}, mb5.2/14, MS5.2/88, MW5.5, Error ellipse: s-maj=9.3km s-min=8.7km az=171.0, Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.12; M$_{θθ}$2.30; M$_{φφ}$-2.18; M$_{rθ}$-0.50; M$_{θφ}$0.06; M$_{φr}$-0.13; Best double couple: M$_0$2.30000×10^{17} NP1:φ$_s$315.00000°, δ80.00000°, λ5.00000°. NP2: φ$_s$224.00000°, δ85.00000°, λ169.00000°. Principal axes: T 2.4000, Plg11.0000°, Azm178.0000°; N -0.2200, Plg78.0000°, Azm17.0000°; P -2.1900, Plg3.0000°, Azm269.0000°;*
*GCMT **24** 06:49:28.1±0.1, 41°.93S×88°.30E, h13^{km}, MW5.6, Moment Tensor Solution. s96,c173; s65,c75; Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.43±.03; M$_{θθ}$3.64±.04; M$_{φφ}$-3.21±.04; M$_{rθ}$0.27±.08; M$_{θφ}$-0.03±.03; M$_{φr}$0.03±.08: Best double couple: M$_0$3.40000×10^{17} NP1:φ$_s$135.00000°, δ87.00000°, λ2.00000°. NP2:φ$_s$45.00000°, δ88.00000°, λ177.00000°. Principal axes: T 3.6600, Plg4.0000°, Azm0.0000°; N -0.4500, Plg86.0000°, Azm190.0000°; P -3.2100, Plg1.0000°, Azm90.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=218, per= 50.*
*DJA **24** 06:49:33.0±5.3, 42°.57S±9°×8°.8E±°, h70^{km}±50^{km}, M5.0/10, mb5.0/10*
ISC 24 06:49:24.3±0.4, 42°.20S±0°.05×88°.21E±0°.06, h16^{km}±1^{km}, n331, σ1^{s}.54/242, mb5.0/59, MS5.2/134, 4C-1D, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**24.70**	**78**	P	**P**	**06 54 42.9**	**-1.8**
NWAO	**Narrogin (SRO)**	**24.70**	**78**	P	**P**	**06 54 42.9**	**-1.8**
	14nm,1.0s,baz=261,slow=10.0,SNR=2.6						
NWAO				LR	LR	07 02 05.9	
	comp=Z,8μm,21.0s,baz=238,slow=31						
CASY	**Casey**	**27.12**	**160**	*e*P	**P**	**06 55 07.2**	**+1.0**
	20nm,1.2s						
CASY				LR	LR		
	comp=Z,6μm,19.0s						
MAW	**Mawson**	**28.90**	**200**	*e*P	**P**	**06 55 22.2**	**+0.2**
MAW	**Mawson**	**28.90**	**200**	P	**P**	**06 55 21.8**	**-0.3**
	comp=Z,4.1nm,0.8s,baz=33,slow=12,SNR=6.8						
MAW				LR	LR	07 04 19.8	
	comp=Z,8μm,21.5s,baz=35,slow=31						
COCO	**West Island**	**30.83**	**17**	PFAKE		06 55 50.0	+10
COCO				LR	LR		
	comp=Z,4μm,20.0s						
MBWA	**Marble Bar**	**33.76**	**61**	PFAKE		06 56 20.0	+15
MBWA				LR	LR		
	comp=Z,4μm,21.0s						
SYO	**Syowa Base**	**36.75**	**207**	⇑*e*P	**P**	**06 56 32.0**	**+1.5**
SYO	**Syowa Base**	**36.75**	**207**	⇑*e*pP	pP	06 56 34.9	-0.5
DGAR	**Diego Garcia**	**37.34**	**334**	PFAKE		06 56 50.0	+14
DGAR				LR	LR		
	comp=Z,6μm,22.0s						
BBOO	**Buckleboo**	**38.66**	**92**	*e*P	**P**	**06 56 46.5**	**-0.7**
	comp=Z,375nm,1.3s						
FITZ	**Fitzroy Crossi**	**39.83**	**64**	P	**P**	**06 56 55.7**	**-1.3**
FITZ	**Fitzroy Crossi**	**39.83**	**64**	P	**P**	**06 56 55.7**	**-1.3**
	comp=Z,13nm,1.0s,baz=232,slow=8.9,SNR=8.7						
FITZ				LR	LR	07 11 13.2	
	comp=Z,3μm,20.1s,baz=236,slow=33						
ABPO	**Ambohimpanom**	**41.63**	**291**	PFAKE		06 57 20.0	+7.9
ABPO				LR	LR		
	comp=Z,3μm,19.0s						
ASAR	**Alice Springs**	**42.01**	**79**	P	**P**	**06 57 13.7**	**-1.3**
ASAR				PcP	**PcP**	**06 59 08.2**	**-1.8**
ASAR	**Alice Springs**	**42.01**	**79**	P	**P**	**06 57 13.7**	**-1.3**
	comp=Z,4.4nm,0.8s,baz=228,slow=7.9,SNR=54						
ASAR				PcP	**PcP**	**06 59 08.2**	**-1.8**
	comp=Z,4.4nm,0.7s,baz=225,slow=2.3,SNR=14						
ASAR

VNDA	**Vanda**	**45.68**	**163**	*e*P	**P**	**06 57 44.4**	**+0.6**	GYA			SKS	**SKSac**	**07 10 38.3**	**-0.4**	HHC			LR	LR		
	comp=Z,112nm,2.5s							GYA			pmax	pmax				comp=N,2μm,18.0s					
VNDA	**Vanda**	**45.68**	**163**	P	**P**	**06 57 44.1**	**+0.3**		comp=Z,20nm,1.0s						HHC			LR	LR		
	comp=Z,4.8nm,1.0s,baz=298,slow=7.1,SNR=10							GYA			pmax	pmax				comp=E,2μm,18.0s					
VNDA				LR	LR	07 14 33.9			comp=Z,120nm,5.5s						HHC			LR	LR		
	comp=Z,3μm,21.8s,baz=274,slow=33							GYA			LR	LR				comp=Z,1μm,19.2s					
KAPI	**Kappang**	**46.45**	**46**	PFAKE		06 58 00.0	+9.4		comp=N,640nm,19.9s						**AAK**	**Ala-Archa**	**85.35**	**350**	*e*P	**P**	**07 02 00.1**	**-0.4**
KAPI				LR	LR			GYA			LR	LR			**AAK**	**Ala-Archa**	**85.35**	**350**	*e*P	**P**	**07 02 00.1**	**-0.4**
	comp=Z,1μm,22.0s								comp=E,550nm,20.2s						**AAK**	**Ala-Archa**	**85.35**	**350**	LR	LR	07 37 44.4	
SBA	**Scott Base**	**46.74**	**163**	*e*P	**P**	**06 57 52.5**	**+0.3**	GYA			LR	LR				comp=Z,3μm,18.5s,baz=184,slow=34					
SBA				pmax	pmax				comp=Z,620nm,19.8s						**EKS2**	**Erkin-Say**	**85.47**	**349**	*e*P	**P**	**07 02 02.1**	**+1.1**
	comp=Z,32nm,1.4s							**PMSA**	**Palmer Station**	**71.17**	**192**	PFAKE		07 00 50.0	+8.3	EKS2				MLR	MLR		
SBA	**Scott Base**	**46.74**	**163**	*e*P	**P**	**06 57 52.5**	**+0.3**	PMSA				LR	LR				comp=Z,2μm,19.0s					
	comp=Z,32nm,1.4s								comp=Z,2μm,20.0s						**EKS2**	**Erkin-Say**	**85.47**	**349**	*e*P	**P**	**07 02 02.1**	**+1.1**
CAN	**Canberra**	**47.02**	**103**	PFAKE		06 58 10.0	+15	**LSA**	**Lhasa**	**71.59**	**3**	*e*P	**P**	**07 00 43.2**	**-2.0**	EKS2				LR	LR		
CAN				LR	LR			LSA				pmax	pmax				comp=Z,2μm,19.0s					
	comp=Z,3μm,20.0s								comp=Z,15nm,0.9s						**TKM2**	**Tokmak 2**	**85.49**	**351**	*e*P	**P**	**07 02 01.5**	**+0.3**
MSEY	**Mahe Island**	**47.38**	**313**	PFAKE		06 58 10.0	+12	LSA				MLR	MLR			TKM2				MLR	MLR		
MSEY				LR	LR				comp=Z,4μm,19.0s							comp=Z,2μm,19.0s					
	comp=Z,2μm,20.0s							**LSA**	**Lhasa**	**71.59**	**3**	*e*P	**P**	**07 00 43.2**	**-2.0**	**TKM2**	**Tokmak 2**	**85.49**	**351**	*e*P	**P**	**07 02 01.5**	**+0.3**
KSM	**Kuching**	**47.84**	**30**	PFAKE		06 58 10.0	+8.6		comp=Z,15nm,0.9s						TKM2				LR	LR		
KSM				LR	LR			LSA				LR	LR				comp=Z,2μm,19.0s					
	comp=Z,2μm,22.0s								comp=Z,4μm,19.0s						**WMQ**	**Urumqi**	**85.64**	**360**	P	**P**	**07 02 02.0**	**+0.3**
QSPA	**South Pole Qui**	**47.95**	**180**	*e*P	**P**	**06 58 02.1**	**+0.1**	**NACB**	**Ninganchiao**	**72.89**	**32**	*e*P	**P**	**07 00 49.7**	**-2.9**	WMQ				pP	**pP**	**07 02 06.8**	**-0.2**
	comp=Z,50nm,1.1s							**RAO**	**Raoul Island**	**73.65**	**115**	LR	LR	07 26 33.2		WMQ				sP	**sP**	**07 02 09.0**	**+0.2**
QSPA	**South Pole Qui**	**47.95**	**180**	P	**P**	**06 58 01.9**	**0.0**		comp=Z,925nm,21.6s,baz=193,slow=30						WMQ				PP	**PP**	**07 05 22.4**	**+1.1**
	comp=Z,16nm,1.1s,baz=301,slow=4.3,SNR=27							**CD2**	**Chengdu**	**74.14**	**14**	P	P	07 01 03.1	+3.3	WMQ				S	**S**	**07 12 32.0**	**-1.0**
QSPA				LR	LR	07 16 37.2		CD2				pP	pP	07 01 07.8	+2.8	WMQ				SS	**SS**	**07 18 11.3**	**+1.0**
	comp=Z,4μm,19.2s,baz=129,slow=34							CD2				sP	sP	07 01 10.1	+3.2	WMQ				pmax	pmax		
KULM	**Kulim**	**48.60**	**17**	PFAKE		06 58 20.0	+13	CD2				PcP	**PcP**	**07 01 18.1**	**+3.3**		comp=Z,29nm,1.2s						
KULM				LR	LR			CD2				S	**S**	**07 10 36.5**	**+4.2**	WMQ				pmax	pmax		
	comp=Z,3μm,22.0s							CD2				sS	sS	07 10 43.9	+3.1		comp=Z,180nm,3.8s						
PALK	**Pallekele**	**49.71**	**350**	P	**P**	**06 58 16.0**	**+0.3**	CD2				pmax	pmax			WMQ				LR	LR		
PALK	**Pallekele**	**49.71**	**350**	P	**P**	**06 58 16.0**	**+0.3**		comp=Z,10.0nm,0.5s							comp=N,2μm,17.2s					
	comp=Z,13nm,0.8s,baz=168,slow=7.4,SNR=4.3							CD2				pmax	pmax			WMQ				LR	LR		
PALK				LR	LR	07 16 02.2			comp=Z,120nm,5.2s							comp=E,2μm,19.0s					
	comp=Z,3μm,18.3s,baz=165,slow=32							**ENH**	**Enshi**	**74.73**	**19**	PFAKE		07 01 10.0	+6.8	WMQ				LR	LR		
SNAA	**Sanae**	**50.91**	**204**	*e*P	**P**	**06 58 25.1**	**+0.7**	ENH				LR	LR				comp=Z,2μm,28.4s					
SNAA	**Sanae**	**50.91**	**204**	*e*P	**P**	**06 58 25.0**	**+0.7**		comp=Z,2μm,19.0s						**BJT**	**Baijiatuau**	**85.67**	**21**	PFAKE		07 02 10.0	+8.1
	comp=Z,20nm,1.2s							**GUMO**	**Guam**	**76.06**	**57**	PFAKE		07 01 20.0	+8.8	BJT				LR	LR		
SNAA	**Sanae**	**50.91**	**204**	P	**P**	**06 58 24.8**	**+0.5**	GUMO				LR	LR				comp=Z,3μm,20.0s					
	comp=Z,2.2nm,1.0s,baz=135,slow=9.8,SNR=7.0								comp=Z,389nm,20.0s						**DL2**	**Dalian**	**86.25**	**26**	P	**P**	**07 02 05.1**	**+0.3**
SNAA				LR	LR	07 15 32.4		**WHN**	**Wuhan**	**76.28**	**23**	*e*P	**P**	**07 01 11.8**	**-0.3**	DL2				S	**S**	**07 12 39.8**	**+0.7**
	comp=Z,265nm,20.1s,baz=45,slow=31							WHN				S	**S**	**07 10 53.5**	**-2.4**	DL2				SS	**SS**	**07 18 22.8**	**+3.5**
BOSA	**Boshof**	**51.98**	**264**	LR	LR	07 15 51.5		WHN				LR	LR			DL2				pmax	pmax		
	comp=Z,3μm,21.1s,baz=125,slow=30								comp=N,3μm,17.4s							comp=Z,22nm,0.9s					
SUR	**Sutherland**	**53.25**	**257**	P	**P**	**06 58 43.5**	**+1.1**	WHN				LR	LR			DL2				pmax	pmax		
SUR	**Sutherland**	**53.25**	**257**	P	**P**	**06 58 43.5**	**+1.1**		comp=E,2μm,17.6s							comp=Z,74nm,3.6s					
	comp=Z,5.7nm,0.8s,baz=123,slow=12,SNR=2.5							WHN				LR	LR			DL2				LR	LR		
SUR				LR	LR	07 17 33.9			comp=Z,5μm,22.4s							comp=N,180nm,20.9s					
	comp=Z,406nm,18.0s,baz=304,slow=32							**MSVF**	**Nonsavu**	**78.19**	**103**	PFAKE		07 01 30.0	+6.6	DL2				LR	LR		
CTA	**Charters Tower**	**53.26**	**84**	P	**P**	**06 58 41.0**	**-1.4**	MSVF				LR	LR				comp=E,310nm,19.5s					
CTA	**Charters Tower**	**53.26**	**84**	P	**P**	**06 58 41.0**	**-1.4**		comp=Z,1μm,20.0s						DL2				LR	LR		
	comp=Z,8.4nm,0.8s,baz=234,slow=9.5,SNR=12							**XAN**	**Xi'an**	**78.21**	**17**	P	**P**	**07 01 20.9**	**-2.0**		comp=Z,390nm,20.6s						
CTAO	**Charters Tower**	**53.26**	**84**	*e*P	**P**	**06 58 41.5**	**-0.9**	XAN				pP	**pP**	**07 01 26.0**	**-2.1**	**KKAR**	**Karatay Array**	**86.40**	**347**	*e*P	**P**	**07 02 03.6**	**-1.9**
CTAO				pmax	pmax			XAN				S	**S**	**07 11 14.9**	**-2.0**	**KKAR**	**Karatay Array**	**86.40**	**347**	*e*P	**P**	**07 02 03.6**	**-1.9**
	comp=Z,159nm,2.6s							XAN				SS	**SS**	**07 16 21.6**	**+1.6**	**INCN**	**Inchon**	**86.70**	**30**	PFAKE		07 02 20.0	+13
CTAO				MLR	MLR			XAN				pmax	pmax			INCN				LR	LR		
	comp=Z,2μm,21.0s								comp=Z,3.0nm,0.9s							comp=Z,650nm,20.0s					
CTAO	**Charters Tower**	**53.26**	**84**	*e*P	**P**	**06 58 41.5**	**-0.9**	XAN				pmax	pmax			**KSAR**	**Wonju Array Be**	**87.13**	**31**	P	**P**	**07 02 08.7**	**-0.4**
	comp=Z,159nm,2.6s								comp=Z,36nm,6.1s						**KSRS**	**Korea Array**	**87.15**	**31**	P	**P**	**07 02 08.7**	**-0.5**
CTAO				LR	LR			XAN				LR	LR				comp=Z,0.8nm,0.6s,baz=195,slow=4.1,SNR=4.0						
	comp=Z,2μm,21.0s								comp=N,1μm,22.5s						**MK31**	**Makanchi Array**	**88.76**	**356**	*e*P	**P**	**07 02 16.1**	**-0.7**
LBTB	**Lobatse**	**53.73**	**268**	P	**P**	**06 58 44.8**	**-1.2**	XAN				LR	LR			**MK31**	**Makanchi Array**	**88.76**	**356**	*e*P	**P**	**07 02 16.1**	**-0.7**
LBTB	**Lobatse**	**53.73**	**268**	P	**P**	**06 58 44.8**	**-1.2**		comp=Z,630nm,22.5s						**MKAR**	**Makanchi Array**	**88.76**	**356**	P	**P**	**07 02 15.7**	**-1.0**
	comp=Z,3.7nm,0.9s,baz=170,slow=5.8,SNR=5.6							**SSE**	**Sheshan**	**79.00**	**28**	*e*P	**P**	**07 01 27.3**	**+0.1**	**MKAR**	**Makanchi Array**	**88.76**	**356**	P	**P**	**07 02 15.7**	**-1.0**
KKM	**Kota Kinabalu**	**54.38**	**35**	PFAKE		06 59 00.0	+9.4	SSE				S	**S**	**07 11 23.8**	**-1.5**	**MKAR**	**Makanchi Array**	**88.76**	**356**	P	**P**	**07 02 15.7**	**-1.0**
KKM				LR	LR			SSE				SS	**SS**	**07 16 28.9**	**-2.8**		comp=Z,1.1nm,0.8s,baz=179,slow=5.2,SNR=9.4						
	comp=Z,2μm,21.0s							SSE				pmax	pmax			MKAR				LR	LR	07 40 55.3	
LSZ	**Lusaka**	**57.76**	**279**	*e*P	**P**	**06 59 13.8**	**-1.2**		comp=Z,16nm,0.6s							comp=Z,1μm,18.5s,baz=177,slow=35					
	comp=Z,21nm,1.2s							SSE				pmax	pmax			**MAJO**	**Matsushiro**	**90.69**	**38**	PFAKE		07 02 40.0	+14
LSZ				LR	LR				comp=Z,41nm,6.3s						MAJO				LR	LR		
	comp=Z,1μm,22.0s							SSE				LR	LR				comp=Z,448nm,21.0s						
DAV	**Davao City (W)**	**59.71**	**44**	PFAKE		06 59 40.0	+12		comp=N,1μm,19.9s						**MJAR**	**Matsushiro Arr**	**90.69**	**38**	P	**P**	**07 02 25.5**	**-0.6**
DAV				LR	LR			SSE				LR	LR			**MJAR**	**Matsushiro Arr**	**90.69**	**38**	P	**P**	**07 02 25.5**	**-0.6**
	comp=Z,838nm,22.0s								comp=E,1μm,18.2s							comp=Z,1.5nm,0.8s,baz=208,slow=6.0,SNR=5.6						
HYB	**Hyderabad**	**59.98**	**349**	*i* P	**P**	**06 59 30.0**	**-0.1**	SSE				LR	LR			MJAR				LR	LR	07 38 23.5	
HYB				*e*S	**S**	**07 07 42.0**	**+0.1**		comp=Z,510nm,20.3s							comp=Z,230nm,22.0s,baz=225,slow=32					
PMG	**Port Moresby**	**60.87**	**75**	PFAKE		06 59 50.0	+14	**NJ2**	**Nanjing**	**79.08**	**26**	*e*P	**P**	**07 01 29.1**	**+1.5**	**GNI**	**Garni**	**90.94**	**328**	PFAKE		07 02 40.0	+13
PMG				LR	LR			NJ2				pP	**PcP**	**07 01 35.1**	**-0.9**	GNI				LR	LR		
	comp=Z,6μm,19.0s							NJ2				S	**S**	**07 11 26.5**	**+0.4**		comp=Z,1μm,22.0s						
CM31	**Chiang Mai Arr**	**61.16**	**12**	*e*P	**P**	**06 59 36.2**	**-1.9**	NJ2				SKS	**SKSac**	**07 11 39.5**	**-3.1**	**SONM**	**Songino Array**	**91.08**	**12**	P	**P**	**07 02 25.6**	**-2.1**
	comp=Z,28nm,1.4s							NJ2				pmax	pmax			**SONM**	**Songino Array**	**91.08**	**12**	P	**P**	**07 02 25.6**	**-2.1**
CMAR	**Chiang Mai Arr**	**61.16**	**12**	P	**P**	**06 59 36.4**	**-1.7**		comp=Z,10.0nm,0.6s							comp=Z,1.9nm,1.0s,baz=184,slow=5.5,SNR=12					
CMAR	**Chiang Mai Arr**	**61.16**	**12**	P	**P**	**06 59 36.4**	**-1.7**	NJ2				pmax	pmax			SONM				LR	LR	07 41 09.4	
	comp=Z,4.0nm,0.7s,baz=206,slow=6.5,SNR=13								comp=Z,80nm,6.9s							comp=Z,2μm,21.7s,baz=185,slow=34						
CMAR				LR	LR	07 20 53.8		NJ2				LR	LR			**ULN**	**Ulaanbaatar**	**91.22**	**13**	*e*P	**P**	**07 02 29.6**	**+1.2**
	comp=Z,2μm,21.1s,baz=204,slow=31								comp=N,560nm,19.6s						**ULN**	**Ulaanbaatar**	**91.22**	**13**	P	**P**	**07 02 29.1**	**+0.7**
KMBO	**Kilima Mbogo**	**61.25**	**298**	*e*P	**P**	**06 59 39.2**	**+0.1**	NJ2				LR	LR			**CSS**	**Prodhromos**	**91.76**	**318**	PFAKE		07 02 40.0	+9.0
	comp=Z,1.1nm,0.5s								comp=E,1μm,22.6s						CSS				LR	LR		
KMBO	**Kilima Mbogo**	**61.25**	**298**	P	**P**	**06 59 37.8**	**-1.4**	NJ2				LR	LR				comp=Z,720nm,21.0s						
	comp=Z,1.4nm,0.4s,baz=169,slow=5.2,SNR=3.0								comp=Z,800nm,22.6s						**CN2**	**Changchun**	**91.90**	**26**	*e*P	**P**	**07 02 33.8**	**+2.4**
KMBO				LR	LR	07 20 28.9		**LZH**	**Lanzhou**	**79.21**	**13**	*e*P	P	07 01 31.9	+3.4	CN2				*e*pP	**pP**	**07 02 38.5**	**+1.8**
	comp=Z,430nm,22.0s,baz=121,slow=30							LZH				pP	pP	07 01 35.0	+1.3	CN2				*e*sP	**sP**	**07 02 40.8**	**+2.3**
CHTO	**Chiang Mai**	**61.51**	**12**	PFAKE		06 59 50.0	+10	LZH				sP	sP	07 01 38.4	+2.8	CN2				*e*S	**S**	**07 13 33.0**	**+1.1**
CHTO				LR	LR			LZH				PP	**PP**	**07 04 30.3**	**+1.7**	CN2				pmax	pmax		
	comp=Z,1μm,20.0s							LZH				*e*S	**S**	**07 11 31.0**	**+3.2**		comp=Z,10.0nm,0.6s						
TSUM	**Tsumeb**	**63.15**	**268**	*e*P	**P**	**06 59 53.1**	**+1.3**	LZH				sS	sS	07 11 38.1	+1.8	CN2				pmax	pmax		
	comp=Z,1.4nm,1.3s							LZH				pmax	pmax				comp=Z,200nm,4.0s						
QIZ	**Qiongzhong**	**64.11**	**23**	P	**P**	**06 59 58.3**	**+0.5**		comp=Z,23nm,1.2s						CN2				LR	LR		
QIZ				pP	**pP**	**07 00 00.8**	**-2.0**	LZH				pmax	pmax				comp=N,700nm,16.0s						
QIZ				sP	**sP**	**07 00 02.9**	**-1.8**		comp=Z,95nm,6.1s						CN2				LR	LR		
QIZ				S	**S**	**07 08 36.8**	**+2.8**	LZH				LR	LR				comp=E,800nm,16.0s						
QIZ				sS	**sS**	**07 08 44.3**	**+1.9**		comp=N,2μm,17.2s						CN2				LR	LR		
QIZ				SS	**SS**	**07 12 45.8**	**+2.1**	LZH				LR	LR				comp=Z,700nm,18.0s						
QIZ				pmax	pmax				comp=E,1μm,18.8s						**KURK**	**Kurchatov**	**92.91**	**354**	⇑*i*P	**P**	**07 02 34.3**	**-1.6**
	comp=Z,15nm,2.1s							LZH				LR	LR			KURK				pmax	pmax		
QIZ				LR	LR				comp=Z,2μm,19.6s							comp=Z,6.0nm,2.1s						
	comp=N,1μm,23.9s							**GTA**	**Gaotai**	**81.91**	**9**	⇓P	**P**	**07 01 41.3**	**-1.6**	**KURK**	**Kurchatov**	**92.91**	**354**	PFAKE		07 02 50.0	+14
QIZ				LR	LR			GTA				pP	**pP**	**07 01 46.0**	**-2.1**	KURK				LR	LR		
	comp=E,570nm,22.1s							GTA				sP	**sP**	**07 01 48.4**	**-1.5**		comp=Z,2μm,20.0s						
QIZ				LR	LR			GTA				PP	**PP**	**07 04 51.9**	**+1.0**	**ZAK**	**Zakamensk**	**93.14**	**10**	*e*P	P	07 02 33.3	-3.8
	comp=Z,1μm,34.5s							GTA				S	**S**	**07 11 54.5**	**-1.3**	ZAK				pmax	pmax		
QIZ	**Qiongzhong**	**64.11**	**23**	PFAKE		07 00 10.0	+12	GTA				SKS	**SKSac**	**07 11 57.1**	**-5.1**		comp=Z,5.0nm,1.4s						
QIZ				LR	LR			GTA				sS	**sS**	**07 12 02.6**	**-1.8**	**MDJ**	**Mudanjiang**	**94.03**	**28**	P	**P**	**07 02 42.9**	**+1.7**
	comp=Z,1μm,22.0s							GTA				SS	**SS**	**07 17 18.0**	**+2.6**	MDJ				pP	**pP**	**07 02 46.3**	**-0.2**
URZ	**Urewera**	**64.92**	**120**	LR	LR	07 23 45.3		GTA				pmax	pmax			MDJ				sP	**sP**	**07 02 47.5**	**-0.8**
	comp=Z,836nm,19.0s,baz=18,slow=32								comp=Z,8.0nm,1.1s						MDJ				PP	**PP**	**07 06 30.3**	**+2.3**
MBAR	**Mbarara**	**66.02**	**293**	PFAKE		07 00 20.0	+9.4	GTA				pmax	pmax			MDJ				S	**ScS**	**07 13 53.6**	**+1.6**
MBAR				LR	LR				comp=Z,170nm,5.7s						MDJ				sS	**sS**	**07 14 00.8**	**+1.4**
	comp=Z,617nm,22.0s							GTA				LR	LR			MDJ				pmax	pmax		
DZM	**Mont Dzumac**	**67.01**	**99**	*e*S	**S**	**07 09 10.6**	**+0.7**		comp=N,910nm,20.9s							comp=Z,4.0nm,0.5s					
	comp=Z,520nm,26.9s							GTA				LR	LR			MDJ				pmax	pmax		
DZM				*e*SS	**SS**	**07 13 32.5**	**+4.1**		comp=E,1μm,18.5s							comp=Z,59nm,4.8s					
	comp=Z,415nm,33.7s							GTA				LR	LR			MDJ				LR	LR		
DZM				*e*LQ	LQ	07 17 42.2			comp=Z,1μm,19.5s							comp=N,110nm,21.1s					
	comp=Z,1μm,30.6s							**EFI**	**East Falkland**	**82.02**	**200**	⇑*e*P	**P**	**07 01 42.9**	**-0.5**	MDJ				LR	LR		
DZM				*e*LR	LR	07 20 36.9		EFI				pmax	pmax				comp=E,710nm,18.1s						
	comp=Z,3μm,23.0s								comp=Z,87nm,1.9s						MDJ				LR	LR		
KMI	**Kunming**	**68.32**	**14**	P	**P**	**07 00 26.5**	**+1.6**	**EFI**	**East Falkland**	**82.02**	**200**	PFAKE		07 02 00.0	+17		comp=Z,660nm,16.1s						
KMI				pP	**pP**	**07 00 31.5**	**+1.5**	EFI				LR	LR			**MDJ**	**Mudanjiang**	**94.03**	**28**	PFAKE		07 02 50.0	+8.8
KMI				S	**S**	**07 09 26.8**	**+1.4**		comp=Z,918nm,22.0s						MDJ				LR	LR		
KMI				SS	**SS**	**07 13 50.1**	**+0.7**	**KSH**	**Kashi**	**82.09**	**350**	*e*P	P	07 01 39.1	-4.7		comp=Z,664nm,20.0s						
KMI				pmax	pmax			KSH				*e*pP	pP	07 01 43.9	-5.1	**ABKAR**	**Akbulak array**	**94.40**	**342**	P	**P**	**07 02 40.5**	**-2.3**
	comp=Z,19nm,1.2s							KSH				*e*sP	sP	07 01 46.3	-4.6	**KBZ**	**Khabaz**	**94.71**	**329**	P	**P**	**07 02 45.6**	**+1.2**
KMI				pmax	pmax			KSH				*e*PP	PP	07 04 46.1	-6.3	**KBZ**	**Khabaz**	**94.71**	**329**	P	**P**	**07 02 45.5**	**+1.2**
	comp=Z,120nm,4.7s							KSH				*e*S	S	07 11 46.1	-12	**KBZ**	**Khabaz**	**94.71**	**329**	P	**P**	**07 02 45.5**	**+1.2**
KMI				LR	LR			KSH				*e*SKS	SKSac	07 11 52.6	-11		comp=Z,2.5nm,1.1s,baz=129,slow=6.5,SNR=2.4						
	comp=N,2μm,20.6s							KSH				pmax	pmax			KBZ				LR	LR	07 41 06.7	
KMI				LR	LR				comp=Z,5.0nm,0.6s							comp=Z,752nm,21.3s,baz=150,slow=33					
	comp=E,840nm,18.0s							KSH				pmax	pmax			**KIV**	**Kislovodsk**	**94.98**	**329**	*e*P	**P**	**07 02 46.9**	**+1.1**
KMI				LR	LR				comp=Z,74nm,4.0s						KIV				*e*		07 06 30.6	
	comp=Z,3μm,22.3s							KSH				LR	LR			KIV				*e*		07 13 22.8	
ODAN	**Odare**	**68.72**	**359**	*e*P	**P**	**07 00 25.0**	**-2.4**		comp=N,410nm,10.3s						KIV				*e*SS	SS	07 20 25.8	+0.1
	comp=Z,89nm,1.3s							KSH				LR	LR			KIV				*e*SSS	SSS	07 24 09.9	
TAPN	**Taplejung**	**69.20**	**360**	*e*P	**P**	**07 00 28.3**	**-2.2**		comp=E,610nm,11.6s						KIV				pmax	pmax		
	comp=Z,51nm,0.8s							KSH				LR	LR				comp=Z,4.0nm,0.7s						
PKI	**Pulchoki**	**69.47**	**357**	*e*P	P	07 00 28.5	-3.6		comp=Z,720nm,11.9s						**HIA**	**Hailar**	**95.21**	**20**	*e*P	**P**	**07 02 45.5**	**-1.0**
PKIN	**Phulchoki**	**69.47**	**357**	*e*P	P	07 00 28.5	-3.6	**SHEL**	**Horse Pasture**	**82.33**	**256**	PFAKE		07 02 00.0	+14		comp=Z,6.7nm,0.4s						
DMN	**Daman**	**69.52**	**357**	*e*P	**P**	**07 00 29.3**	**-3.1**	SHEL				LR	LR			HIA				LR	LR		
	comp=Z,52nm,0.9s								comp=Z,1μm,21.0s							comp=Z,2μm,20.0s					
KKN	**Kakani**	**69.69**	**357**	*e*P	P	07 00 30.1	-3.3	**FUNA**	**Funafuti**	**85.07**	**97**	PFAKE		07 02 10.0	+10	**PLCA**	**Paso Flores**	**95.24**	**196**	LR	LR	07 47 10.9	
KOLN	**Koldanda**	**69.75**	**356**	*e*P	P	07 00 29.8	-3.9	FUNA				LR	LR				comp=Z,2μm,18.1s,baz=173,slow=36						
	comp=Z,24nm,0.9s								comp=Z,9μm,19.0s						**BR131**	**Keskin Array S**	**95.38**	**321**	P	**P**	**07 02 48.1**	**+0.4**
GUN	**Gumba**	**69.79**	**358**	*e*P	P	07 00 30.8	-3.4	**HHC**	**Hu-ho-hao-te**	**85.33**	**18**	*e*P	**P**	**07 02 03.1**	**+2.8**		comp=Z,0.8nm,0.5s						
	comp=Z,274nm,1.6s							HHC				pP	**pP**	**07 02 06.6**	**+1.1**	**BRTR**	**Keskin Array B**	**95.38**	**321**	P	**P**	**07 02 49.5**	**+1.7**
PYUN	**Piuthan**	**70.11**	**355**	*e*P	P	07 00 31.1	-4.9	HHC				sP	**sP**	**07 02 10.1**	**+2.7**	**BRTR**	**Keskin Array B**	**95.38**	**321**	P	**P**	**07 02 49.5**	**+1.7**
	comp=Z,70nm,0.8s							HHC				PP	**PP**	**07 05 21.8**	**+2.9**		comp=Z,1.6nm,0.8s,baz=131,slow=6.3,SNR=6.7						
HNR	**Honiara**	**70.20**	**85**	PFAKE		07 00 50.0	+13	HHC				SKS	**SKSac**	**07 12 24.5**	**+0.1**	BRTR				LR	LR	07 42 29.3	
HNR				LR	LR			HHC				S	**SKSac**	**07 12 31.8**	**+0.8**		comp=Z,832nm,19.9s,baz=126,slow=33						
	comp=Z,1μm,20.0s							HHC				sS	**ScS**	**07 12 41.3**	**+1.1**	**ISP**	**Isparta**	**95.40**	**318**	PFAKE		07 03 00.0	+12
DANN	**Dangsing**	**70.32**	**356**	*e*P	P	07 00 31.8	-5.5	HHC				pmax	pmax			ISP				LR	LR		
	comp=Z,38nm,0.8s								comp=Z,43nm,1.2s							comp=Z,387nm,21.0s						
GYA	**Guiyang**	**70.41**	**18**	P	**P**	**07 00 39.8**	**+2.1**	HHC				pmax	pmax			**ZALV**	**Zalesovo Beam**	**95.81**	**358**	P	**P**	**07 02 47.2**	**-2.0**
GYA				PP	**PP**	**07 03 18.3**	**+4.3**		comp=Z,160nm,7.2s						**ZALV**	**Zalesovo Beam**	**95.81**	**358**	P	**P**	**07 02 47.2**	**-2.0**
GYA				S	**S**	**07 09 52.1**	**+2.3**																

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ZALV	Zalesovo Beam	95.81	358	P	P	07 02 47.2	-2.0
	comp=Z,0.9nm,0.7s,baz=172,slow=6.0,SNR=4.7						
ZALV				LR	LR	07 44 29.1	
	comp=Z,842nm,20.0s,baz=12,slow=34						
TBI	Tubuai	95.82	129	*e*SS	SS	07 20 41.1	+4.8
	comp=Z,362nm,32.8s						
TBI				*e*LR	LR	07 33 58.6	
	comp=Z,1µm,26.8s						
ANTO	Ankara	95.89	320	PFAKE		07 03 00.0	+10
ANTO				LR	LR		
	comp=Z,1µm,21.0s						
BRVK	Borovoye	96.13	349	PFAKE		07 03 00.0	+9.4
BRVK				LR	LR		
	comp=Z,1µm,21.0s						
TORD	Torodi Ar. Bea	96.16	282	P	P	07 02 53.2	+1.5
TORD	Torodi Ar. Bea	96.16	282	P	P	07 02 53.2	+1.5
	comp=Z,0.5nm,0.8s,baz=133,slow=6.1,SNR=3.4						
TORD				LR	LR	07 45 14.1	
	comp=Z,717nm,18.0s,baz=130,slow=35						
IDI	Anoyia	96.43	313	P	P	07 02 52.5	-0.1
	comp=Z,11nm,1.1s						
DBIC	Dimbokro	96.70	273	LR	LR	07 40 01.3	
	comp=Z,858nm,21.9s,baz=124,slow=31						
ERM	Erimo	97.37	38	PFAKE		07 03 10.0	+13
ERM				LR	LR		
	comp=Z,647nm,19.0s						
ANN	Anapa	97.78	326	*e*P	Pdif	07 03 04.6	+6.3
TAM	Tamanrasset	99.82	292	PFAKE		07 03 20.0	+12
TAM				LR	LR		
	comp=Z,640nm,20.0s						
YUK	Yuzh-Kuril'sk	100.18	38	*e*P	Pdif	07 03 06.8	-2.2
YUK				S	SKSac	07 13 43.1	-3.7
PPT2	Papeete2	100.18	125	*e*LQ	LQ	07 31 27.1	
	comp=Z,2µm,36.5s						
PPT2				*e*LR	LR	07 35 57.7	
	comp=Z,1µm,23.8s						
SPB	Sao Paulo	102.77	221	PFAKE		07 03 30.0	+8.7
SPB				LR	LR		
	comp=Z,395nm,20.0s						
TIR	Tirane	103.53	314	PFAKE		07 03 40.0	+16
TIR				LR	LR		
	comp=Z,504nm,20.0s						
CEL	Celeste	103.59	309	PFAKE		07 03 40.0	+16
CEL				LR	LR		
	comp=Z,358nm,20.0s						
TIP	Timpagrande	103.73	311	PFAKE		07 03 40.0	+15
TIP				LR	LR		
	comp=Z,511nm,21.0s						
RKT	Rikitea	103.74	140	*e*LR	LR	07 37 26.4	
	comp=Z,762nm,30.5s						
RKT				*e*T	T	08 59 16.0	
	comp=Z,4.8nm,0.2s						
CUC	Castrocucco	104.82	311	PFAKE		07 03 40.0	+10
CUC				LR	LR		
	comp=Z,466nm,20.0s						
KIEV	Kiev	105.84	325	PFAKE		07 08 00.0	
KIEV				LR	LR		
	comp=Z,829nm,21.0s						
LCO	Las Campanas	106.52	199	PFAKE		07 08 00.0	
LCO				LR	LR		
	comp=Z,960nm,20.0s						
AQU	L'Aquila	107.75	311	PFAKE		07 08 00.0	
AQU				LR	LR		
	comp=Z,561nm,19.0s						
KWP	Kalwaria Pacla	107.94	322	PFAKE		07 08 00.0	
KWP				LR	LR		
	comp=Z,421nm,19.0s						
PSZ	Piszkesteto	108.09	319	PFAKE		07 08 00.0	
PSZ				LR	LR		
	comp=Z,406nm,19.0s						
OKC	Ostrava-Krasne	110.24	320	AMS	AMS	07 52 10.0	
	comp=Z,300nm,19.0s						
RCBR	Riachuelo	110.31	241	PFAKE		07 08 10.0	
RCBR				LR	LR		
	comp=Z,460nm,20.0s						
TREC	Trest	111.19	318	AMS	AMS	07 55 40.0	
	comp=Z,500nm,21.9s						
MIDW	Midway	111.42	71	PFAKE		07 08 10.0	
MIDW				LR	LR		
	comp=Z,542nm,19.0s						
DPC	Dobruska-Polom	111.46	319	AMS	AMS	08 02 00.0	
	comp=Z,400nm,17.4s						
PRU	Pruhonice	112.10	318	AMS	AMS	07 53 20.0	
	comp=Z,400nm,21.4s						
LVC	Limon Verde	112.13	203	PFAKE		07 08 10.0	
LVC				LR	LR		
	comp=Z,760nm,21.0s						
PVCC	Panska Ves	112.43	319	AMS	AMS	08 03 20.0	
	comp=Z,500nm,16.9s						
TUE	Stuetta	112.61	313	PFAKE		07 08 10.0	
TUE				LR	LR		
	comp=Z,472nm,22.0s						
NKC	Novy Kostel	113.31	317	AMS	AMS	07 53 50.0	
	comp=Z,400nm,18.5s						
BFO	Black Forest	114.29	314	PFAKE		07 08 10.0	+7.5
BFO				LR	LR		
	comp=Z,352nm,21.0s						
SSB	Saint Sauveur	114.59	309	PFAKE		07 08 10.0	+6.8
SSB				LR	LR		
	comp=Z,332nm,20.0s						
ECH	Echery	114.85	313	PFAKE		07 08 20.0	+16
ECH				LR	LR		
	comp=Z,331nm,19.0s						
RTC	Rabat Centre	115.27	294	PFAKE		07 08 20.0	+15
RTC				LR	LR		
	comp=Z,586nm,21.0s						
SACV	Santiago Islan	116.02	267	PFAKE		07 08 20.0	+13
SACV				LR	LR		
	comp=Z,801nm,20.0s						
PAB	San Pablo	116.75	300	PFAKE		07 08 20.0	+12
PAB				LR	LR		
	comp=Z,370nm,21.0s						
MTE	Manteigas	119.27	299	PFAKE		07 08 20.0	+7.5
MTE				LR	LR		
	comp=Z,422nm,21.0s						
KONO	Kongsberg	120.13	325	PFAKE		07 08 20.0	+6.6
KONO				LR	LR		
	comp=Z,836nm,20.0s						
KEV	Kevo	120.18	339	PFAKE		07 08 20.0	+6.8
KEV				LR	LR		
	comp=Z,905nm,20.0s						
NOA	NORSAR Array B	120.21	327	PKP	PKPdf	07 08 14.2	+0.6
NOA	NORSAR Array B	120.21	327	PKP	PKPdf	07 08 14.2	+0.6
	comp=Z,0.6nm,0.9s,baz=141,slow=1.4,SNR=2.3						
ARCES	ARCESS Array B	120.44	339	PKP	PKPdf	07 08 15.0	+1.3
ARCES	ARCESS Array B	120.44	339	PKP	PKPdf	07 08 15.0	+1.3
	comp=Z,1.6nm,0.7s,baz=134,slow=2.6,SNR=4.5						
SAML	Samuel	122.76	214	PFAKE		07 08 30.0	+10
SAML				LR	LR		
	comp=Z,500nm,19.0s						
ESK	Eskdalemuir	124.03	316	PFAKE		07 08 30.0	+9.0
ESK				LR	LR		
	comp=Z,746nm,20.0s						
BILL	Bilibino	124.21	26	PFAKE		07 08 30.0	+9.0
BILL				LR	LR		
	comp=Z,435nm,19.0s						
NNA	Nana	124.36	198	PFAKE		07 08 30.0	+6.9
NNA				LR	LR		
	comp=Z,566nm,21.0s						
KBS	Kingsbay	128.50	346	PFAKE		07 08 40.0	+11
KBS				LR	LR		
	comp=Z,870nm,20.0s						
CMLA	Cha da Macela	130.18	288	PFAKE		07 08 50.0	+17
CMLA				LR	LR		
	comp=Z,656nm,21.0s						
OTAV	Otavalo	136.53	200	*e*PKPdf	PKPdf	07 08 47.8	+1.1
OTAV				LR	LR		
	comp=Z,560nm,22.0s						
PAYG	Puerto Ayora	137.30	182	PFAKE		07 09 00.0	+12
PAYG				LR	LR		
	comp=Z,1µm,21.0s						
KDAK	Kodiak Island	139.40	46	PFAKE		07 09 00.0	+10
KDAK				LR	LR		
	comp=Z,989nm,21.0s						
GRGR	Grenville	140.19	230	PFAKE		07 09 00.0	+7.3
GRGR				LR	LR		
	comp=Z,385nm,21.0s						
SUMG	Summit	140.52	338	*i* PKIKP	PKPdf	07 09 01.0	+9.0
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SUMG	Summit	140.52	338	*i* P	PKPdf	07 09 01.0	+9.0
	comp=Z,2.6nm,0.9s						
COLA	College	141.47	35	PFAKE		07 09 00.0	+6.6
COLA				LR	LR		
	comp=Z,513nm,20.0s						
ILAR	Eielson Array	141.89	35	PKPpre	PKPpre	07 08 49.2	
ILAR				PKP	PKPdf	07 08 54.6	+0.4
ILAR	Eielson Array	141.89	35	PKhKP	PKPpre	07 08 49.2	
	comp=Z,0.5nm,1.0s,baz=261,slow=3.6,SNR=3.5						
ILAR				PKP	PKPdf	07 08 54.6	+0.4
	comp=Z,0.5nm,0.7s,baz=284,slow=3.9,SNR=5.0						
FDF	Fort de France	141.97	233	PFAKE		07 09 10.0	+14
FDF				LR	LR		
	comp=Z,396nm,22.0s						
EGAK	Eagle	144.29	34	PFAKE		07 09 10.0	+12
EGAK				LR	LR		
	comp=Z,683nm,20.0s						
ANWB	Willy Bob	144.63	235	PFAKE		07 09 10.0	+10
ANWB				LR	LR		
	comp=Z,301nm,20.0s						
BCIP	Isla Barro Col	145.46	201	PFAKE		07 09 10.0	+7.8
BCIP				LR	LR		
	comp=Z,316nm,20.0s						
INK	Inuvik	145.83	26	PKPbc	PKPdf	07 08 59.8	-1.2
INK	Inuvik	145.83	26	PKPbc	PKPdf	07 08 59.8	-1.2
	baz=298,slow=4.3						
SFJD	Kangerlussuaq	146.64	332	PKPbc	PKPab	07 09 07.3	+2.2
SFJD	Kangerlussuaq	146.64	332	*i* P	PKPab	07 09 08.2	+3.1
	comp=Z,13nm,1.0s						
SFJD	Kangerlussuaq	146.64	332	PKPbc	PKPab	07 09 07.3	+2.2
	comp=Z,16nm,1.0s,baz=130,slow=1.0,SNR=4.1						
JTS	JuntasAbangare	147.66	193	PKPbc	PKPbc	07 09 08.3	-0.1
JTS				LR	LR		
	comp=Z,1µm,21.0s						
DLBC	Dease Lake	151.18	42	*e*PKPdf	PKPdf	07 09 08.1	-2.0
DLBC				*e*PKPbc	PKiKP	07 09 18.3	+1.7
TGUH	Tegucigalpa,Un	151.69	189	*e*PKPdf	PKPdf	07 09 12.0	0.0
GRTK	Grand Turk	153.05	226	PFAKE		07 09 30.0	-2.6
GRTK				LR	LR		
	comp=Z,470nm,21.0s						
MTDJ	Mount Denham	153.20	211	PFAKE		07 09 30.0	-3.4
MTDJ				LR	LR		
	comp=Z,406nm,20.0s						
GTBY	Guantanamo Bay	153.69	218	PFAKE		07 09 30.0	-5.4
GTBY				LR	LR		
	comp=Z,400nm,20.0s						
YKW3	Yellowknife Ar	155.55	26	*e*PKPbc	PKPdf	07 09 27.0	+11
YKA	Yellowknife Ar	155.60	26	PKP	PKPdf	07 09 17.4	+1.2
YKA	Yellowknife Ar	155.60	26	PKP	PKPdf	07 09 17.4	+1.2
	comp=Z,0.2nm,0.7s,baz=290,slow=1.8,SNR=3.8						
BBSR	BB Station	156.40	254	PFAKE		07 09 30.0	+12
BBSR				LR	LR		
	comp=Z,547nm,21.0s						
NLWA	Neilton Lookou	156.75	66	PFAKE		07 09 30.0	+12
NLWA				LR	LR		
	comp=Z,951nm,20.0s						
PFO	Pinyon Flat Ob	158.79	106	PFAKE		07 09 30.0	+8.6
PFO				LR	LR		
	comp=Z,744nm,21.0s						
NVAR	Mina Array Bea	159.47	92	PKP	PKPdf	07 09 21.4	-0.7
NVAR				PKPab	PKPab	07 09 59.6	-0.6
NVAR	Mina Array Bea	159.47	92	PKP	PKPdf	07 09 21.4	-0.7
	comp=Z,0.3nm,0.9s,baz=205,slow=4.0,SNR=2.8						
NVAR				PKPab	PKPab	07 09 59.6	-0.6
	comp=Z,1.2nm,0.7s,baz=231,slow=5.7,SNR=6.8						
HAWA	Hanford	159.75	69	PFAKE		07 09 30.0	+8.1
HAWA				LR	LR		
	comp=Z,813nm,21.0s						
TPH	Tonopah	160.15	93	PFAKE		07 09 30.0	+7.1
TPH				LR	LR		
	comp=Z,718nm,20.0s						
BMN	Battle Mountai	160.83	87	PFAKE		07 09 30.0	+6.5
BMN				LR	LR		
	comp=Z,622nm,19.0s						
NEW	Newport	161.20	63	PFAKE		07 09 30.0	+6.5
NEW				LR	LR		
	comp=Z,874nm,22.0s						
BMO	Blue Mountains	161.33	73	PFAKE		07 09 30.0	+6.2
BMO				LR	LR		
	comp=Z,750nm,20.0s						
R11A	Troy Canyon, C	161.46	94	P	PKPdf	07 09 24.4	+0.1
	baz=161						
D13A	Huson	163.16	65	P	PKPdf	07 09 26.6	+1.0
	baz=163						
220A	Playas Peak, P	163.17	122	P	PKPdf	07 09 26.0	-0.1
	baz=163						
HLID	Hailey	163.36	78	PFAKE		07 09 40.0	+14
HLID				LR	LR		
	comp=Z,784nm,20.0s						
HLID	Hailey	163.36	78	P	PKPdf	07 09 26.2	+0.2
	baz=163						
SWMT	Swartz Lake	163.40	64	*e*PKPdf	PKPdf	07 09 27.0	+1.2
MSO	Missoula	163.55	66	PFAKE		07 09 40.0	+14
MSO				LR	LR		
	comp=Z,512nm,21.0s						
SLMT	Seeley Lake	163.79	64	*e*PKPdf	PKPdf	07 09 24.5	-1.8
626A	Big Bend Ranch	163.92	138	P	PKPab	07 10 18.2	-1.4
	baz=164						
TXAR	Lajitas Array	163.97	139	PKP	PKPdf	07 09 28.0	+1.1
TXAR				PKPab	PKPab	07 10 19.8	-0.1
TXAR	Lajitas Array	163.97	139	PKP	PKPdf	07 09 28.0	+1.1
	comp=Z,0.2nm,0.9s,baz=57,slow=12,SNR=2.7						
TXAR				PKPab	PKPab	07 10 19.7	-0.1
	comp=Z,0.3nm,0.8s,baz=248,slow=4.8,SNR=3.7						
MVU	Marysvale	164.00	97	PFAKE		07 09 40.0	+13
MVU				LR	LR		
	comp=Z,867nm,20.0s						
CHMT	Chamberlain Mo	164.00	66	*e*PKPdf	PKPdf	07 09 27.8	+1.3
CHMT				*e*PKPab	PKPab	07 10 19.0	-0.8
DUG	Dugway	164.05	90	PFAKE		07 09 40.0	+13
DUG				LR	LR		
	comp=Z,707nm,21.0s						
425A	Indio Mountain	164.46	133	P	PKPab	07 10 22.4	+0.4
	baz=164						
628A	Black Gap, Mar	164.47	141	P	PKPab	07 10 21.2	-0.7
	baz=164						
E15A	Deer Lodge	164.50	67	P	PKPab	07 10 21.7	-0.2
	baz=164						
Y20A	Horse Springs,	164.55	117	P	PKPab	07 10 23.7	+1.2
	baz=164						
H15A	Lima	164.65	74	P	PKPab	07 10 23.9	+1.2
	baz=165						
F15A	Butte	164.67	69	P	PKPab	07 10 23.5	+0.7
	baz=165						
B16A	M & M Farms, S	164.69	59	P	PKPab	07 10 23.4	+0.8
	baz=165						
325A	Bean Ranch, Si	164.91	131	P	PKPab	07 10 23.4	-0.6
	baz=165						
MNTX	Cornudas Mount	164.92	130	PFAKE		07 09 40.0	+12
MNTX				LR	LR		
	comp=Z,686nm,20.0s						
Z22A	Elephant Butte	165.06	122	P	PKPab	07 10 24.7	0.0
	baz=165						
D16A	Dana Ranch, Ca	165.13	64	P	PKPab	07 10 23.7	-1.0
	baz=165						
G16A	Moss Hill, Enn	165.21	71	P	PKPab	07 10 25.1	0.0
	baz=165						
HWUT	Hardware Ranch	165.26	86	PFAKE		07 09 40.0	+12
HWUT				LR	LR		
	comp=Z,736nm,22.0s						
X21A	Alamocita Cree	165.26	116	P	PKPab	07 10 25.8	+0.1
	baz=165						
BOZ	Bozeman (W)	165.29	70	PFAKE		07 09 40.0	+12
BOZ				LR	LR		
	comp=Z,669nm,22.0s						
LBNH	Lisbon	165.37	285	PFAKE		07 09 40.0	+12
LBNH				LR	LR		
	comp=Z,800nm,21.0s						
326A	Caldwell Ranch	165.41	134	P	PKPab	07 10 26.1	0.0
	baz=165						
QLMT	Earthquake Lak	165.51	73	*e*PKPab	PKPab	07 10 28.6	+2.1
124A	Stringfield Ra	165.60	127	P	PKPdf	07 09 27.6	-0.8
	baz=166						
A18A	Metzger Ranch,	165.69	56	P	PKPab	07 10 26.1	-0.8
	baz=166						
530A	J-C Ranch, Com	165.73	144	P	PKPab	07 10 28.4	+0.9
	baz=166						
AHID	Auburn Hatcher	165.73	81	PFAKE		07 09 40.0	+12
AHID				LR	LR		
	comp=Z,704nm,22.0s						
FFC	Flin Flon	165.78	25	PFAKE		07 09 40.0	+13
FFC				LR	LR		
	comp=Z,1µm,21.0s						
P18A	Preston Nutter	165.81	94	P	PKPab	07 10 28.0	-0.1
	baz=166						
226B	Tecolote Peak,	165.89	132	P	PKPab	07 10 27.3	-1.0
	baz=166						
EGMT	Eagleton	166.05	59	PFAKE		07 09 40.0	+12
EGMT				LR	LR		
	comp=Z,913nm,19.0s						
MVCO	Mesa Verde	166.21	106	PFAKE		07 09 40.0	+11
MVCO				LR	LR		
	comp=Z,703nm,20.0s						
LKWY	Lake	166.26	74	PFAKE		07 09 40.0	+11
LKWY				LR	LR		
	comp=Z,2µm,21.0s						
U21A	Nageezi	166.44	110	P	PKPdf	07 09 28.7	-0.3
	baz=166						
ANMO	Albuquerque	166.44	117	PFAKE		07 09 40.0	+11
ANMO				LR	LR		
	comp=Z,691nm,21.0s						
Y24A	Capitan	166.46	123	P	PKPab	07 10 30.1	-0.8
	baz=166						
JCT	Junction City	166.65	149	PFAKE		07 09 40.0	+11
JCT				LR	LR		
	comp=Z,675nm,21.0s						
BW06	Boulder Array	166.87	82	PFAKE		07 09 40.0	+11
BW06				LR	LR		
	comp=Z,786nm,22.0s						
PDAR	Pinedale Array	166.87	82	PKP	PKPdf	07 09 30.3	+1.3
PDAR				PKPab	PKPab	07 10 31.0	-1.6
PDAR	Pinedale Array	166.87	82	PKP	PKPdf	07 09 30.3	+1.3
	comp=Z,0.4nm,0.4s,baz=223,slow=2.1,SNR=4.7						
PDAR				PKPab	PKPab	07 10 31.0	-1.6
	comp=Z,1.1nm,0.8s,baz=224,slow=4.7,SNR=4.4						
Z26A	Caprock	166.88	129	P	PKPab	07 10 31.3	-1.4
	baz=167						
Y25A	Mesa, Roswell	166.91	125	P	PKPab	07 10 33.2	+0.3
	baz=167						
RLMT	Red Lodge	167.01	71	PFAKE		07 09 40.0	+11
RLMT				LR	LR		
	comp=Z,921nm,21.0s						
NCB	Newcomb	167.03	284	PFAKE		07 09 40.0	+11
NCB				LR	LR		
	comp=Z,712nm,20.0s						
NHSC	New Hope	167.09	229	PFAKE		07 09 40.0	+11
NHSC				LR	LR		
	comp=Z,766nm,20.0s						
E19A	Rath Farm, Rou	167.11	65	P	PKPdf	07 09 28.8	-0.2
	baz=167						
CNNC	Cliffs of the	167.12	242	PFAKE		07 09 40.0	+11
CNNC				LR	LR		
	comp=Z,643nm,21.0s						
128A	Castleberry Fa	167.22	135	P	PKPab	07 10 34.5	+0.4
	baz=167						
LONY	Lake Ozonia	167.25	287	PFAKE		07 09 40.0	+11
LONY				LR	LR		
	comp=Z,789nm,20.0s						
C20A	Veseth Ranch,	167.27	59	P	PKPdf	07 09 29.4	+0.4
	baz=167						
S22A	4UR Ranch, Cre	167.64	106	P	PKPab	07 10 36.2	0.0
	baz=168						
Z28A	Tucker Farm, M	167.78	133	P	PKPab	07 10 36.7	+0.1
	baz=168						
W25A	X Bar L Ranch,	167.90	121	P	PKPab	07 10 37.9	+0.7
	baz=168						
232A	Coleman	167.95	146	P	PKPab	07 10 38.5	+1.3
	baz=168						
J20A	Shoshoni	167.97	79	P	PKPdf	07 09 30.4	+0.7
	baz=168						
MSTX	Muleshoe	168.08	130	P	PKPab	07 10 38.2	+0.3
	baz=168						
N21A	Black Mountain	168.11	92	P	PKPab	07 10 38.2	0.0
	baz=168						
Z29A	Hungry Hill Ra	168.12	135	P	PKPab	07 10 38.5	+0.5
	baz=168						
BINY	Binghamton	168.28	275	PFAKE		07 09 40.0	+10
BINY				LR	LR		
	comp=Z,720nm,21.0s						
CBN	Corbin	168.28	255	PFAKE		07 09 40.0	+10
CBN				LR	LR		
	comp=Z,937nm,21.0s						
L21A	Rawlins	168.41	86	P	PKPdf	07 09 32.6	+2.4
	baz=168						
K21A	Alcova	168.56	83	P	PKPdf	07 09 33.4	+3.2
	baz=168						
SDCO	Great Sand Dun	168.58	108	PFAKE		07 09 40.0	+9.5
SDCO				LR	LR		
	comp=Z,873nm,20.0s						
Y29A	Porterfield Fa	168.60	134	P	PKPab	07 10 40.5	+0.3
	baz=169						
DGMT	Dagmar	169.25	50	PFAKE		07 09 40.0	+10
DGMT				LR	LR		
	comp=Z,996nm,22.0s						
ISCO	Idaho Springs	169.28	98	PFAKE		07 09 40.0	+9.1
ISCO				LR	LR		
	comp=Z,764nm,20.0s						
AMTX	Amarillo	169.36	130	PFAKE		07 09 40.0	+9.2
AMTX				LR	LR		
	comp=Z,626nm,20.0s						
BLA	Blacksburg	169.93	244	PFAKE		07 09 40.0	+9.0
BLA				LR	LR		
	comp=Z,663nm,20.0s						
VBMS	Vicksburg	169.99	186	PFAKE		07 09 40.0	+8.9
VBMS				LR	LR		
	comp=Z,744nm,21.0s						
LRAL	Lakeview Retre	170.10	204	PFAKE		07 09 40.0	+8.8
LRAL				LR	LR		
	comp=Z,582nm,22.0s						
RSSD	Black Hills	170.84	74	*e*PKIKP	PKPdf	07 09 43.7	+12
RSSD	Black Hills	170.84	74	*e*PKPdf	PKPdf	07 09 43.7	+12
RSSD				*e*PKPab	PKPab	07 10 55.9	+5.7
ERPA	Erie	171.23	273	PFAKE		07 09 40.0	+8.5
ERPA				LR	LR		
	comp=Z,950nm,20.0s						
OXF	Oxford	172.10	194	PFAKE		07 09 40.0	+7.8
OXF				LR	LR		
	comp=Z,717nm,20.0s						
OGNE	Ogallala	172.22	96	PFAKE		07 09 40.0	+7.8
OGNE				LR	LR		
	comp=Z,1µm,22.0s						
ACSO	Alum Creek Sta	173.08	256	PFAKE		07 09 40.0	+7.6
ACSO				LR	LR		
	comp=Z,774nm,20.0s						
EYMN	Ely	174.25	358	PFAKE		07 09 40.0	+7.4
EYMN				LR	LR		
	comp=Z,885nm,22.0s						
KSU1	Kansas State U	175.20	129	PFAKE		07 09 40.0	+6.8
KSU1				LR	LR		
	comp=Z,1µm,22.0s						
COWI	Conover	175.66	335	PFAKE		07 09 40.0	+6.9
COWI				LR	LR		
	comp=Z,1µm,22.0s						
ECSD	EROS Data Cent	176.14	65	PFAKE		07 09 40.0	+6.7
ECSD				LR	LR		
	comp=Z,942nm,21.0s						
HDIL	Hopedale	177.51	230	PFAKE		07 09 40.0	+6.4
HDIL				LR	LR		
	comp=Z,857nm,20.0s						
JFWS	Jewell Farm	178.66	303	PFAKE		07 09 40.0	+6.3
JFWS				LR	LR		
	comp=Z,863nm,22.0s						
SCIA	State Center	178.90	105	PFAKE		07 09 40.0	+6.3
SCIA				LR	LR		
	comp=Z,940nm,21.0s						

IDC ***24*** *06:54:50.9±0.9, 41°.85S×88°.17E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.9/22, mbtmp3.9/10, Error ellipse: s-maj=31.0km s-min=20.8km az=112.0*

ISCJB ***24*** *06:54:51.8±0.6, 41°.9S±0°.1×88°.2E±0°.2, h15km, mb4.0/12, Error ellipse: s-maj=17.6km s-min=14.9km az=43.9*

NEIC ***24*** *06:54:52.6±0.5, 41°.85S×88°.23E, h10km, mb4.7/2, Error ellipse: s-maj=15.4km s-min=13.3km az=133.0*

ISC 24 06:54:53.4±0.6**, 41°.9S**±0°.1×**88°.3E**±0°.1**, h15km, n32, σ1s.02**/36**, mb3.9**/12**, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	39.63	65	P	P	07 02 26.1	+1.6
FITZ	Fitzroy Crossi	39.63	65	P	P	07 02 26.1	+1.6
	3.1nm,1.0s,baz=218,slow=12,SNR=2.9						
ASAR	Alice Springs	41.88	79	P	P	07 02 43.5	+0.4
ASAR				PcP	PcP	07 04 38.0	-0.8
ASAR	Alice Springs	41.88	79	P	P	07 02 43.6	+0.4
	2.5nm,1.1s,baz=229,slow=8.5,SNR=6.9						
ASAR				PcP	PcP	07 04 38.0	-0.8
	1.1nm,0.9s,baz=229,slow=2.7,SNR=5.1						
STKA	Stephens Creek	43.18	95	P	P	07 02 53.6	0.0
STKA	Stephens Creek	43.18	95	P	P	07 02 53.6	0.0
	1.7nm,0.8s,baz=264,slow=9.2,SNR=3.2						
WRA	Warramunga Arr	44.50	75	P	P	07 03 05.0	+0.6
WRA				PcP	PcP	07 04 45.5	-2.1
WRA	Warramunga Arr	44.50	75	P	P	07 03 05.0	+0.6
	3.9nm,1.0s,baz=232,slow=8.1,SNR=12						
WRA				PcP	PcP	07 04 45.5	-2.1
	0.3nm,0.9s,baz=233,slow=3.6,SNR=2.5						

WRAB	Tennant Creek	44.52	75	*e*P		P	07 03 05.3	+0.9
VNDA	Vanda	45.99	163	P		P	07 03 15.2	-0.2
VNDA	Vanda	45.99	163	P		P	07 03 15.2	-0.2
	0.4nm,0.6s,baz=278,slow=6.3,SNR=4.3							
QSPA	South Pole Qui	48.30	180	*e*P		P	07 03 33.4	-0.4
QSPA	South Pole Qui	48.30	180	P		P	07 03 33.3	-0.5
	2.2nm,0.8s,baz=294,slow=1.5,SNR=8.0							
SNAA	Sanae	51.26	204	P		P	07 03 56.3	+0.2
SNAA	Sanae	51.26	204	P		P	07 03 56.3	+0.2
	0.3nm,0.6s,baz=151,slow=7.9,SNR=3.2							
LSZ	Lusaka	57.76	278	*e*P		P	07 04 45.5	+1.4
	5.4nm,0.8s							
CMAR	Chiang Mai Arr	60.80	12	P		P	07 05 04.9	+0.1
CMAR	Chiang Mai Arr	60.80	12	P		P	07 05 04.9	+0.1
	0.8nm,0.3s,baz=193,slow=7.4,SNR=2.6							
KKAR	Karatay Array	86.07	347	P		P	07 07 32.6	-0.4
	6.1nm,1.1s							
MKAR	Makanchi Array	88.42	356	P		P	07 07 43.3	-1.0
MKAR	Makanchi Array	88.42	356	P		P	07 07 43.3	-1.0
	0.5nm,0.8s,baz=173,slow=5.7,SNR=3.1							
SONM	Songino Array	90.73	12	P		P	07 07 54.8	-0.4
SONM	Songino Array	90.73	12	P		P	07 07 54.8	-0.4
	0.2nm,0.3s,baz=191,slow=5.9,SNR=3.8							
INK	Inuvik	145.49	26	PKPbc		PKPbc	07 14 30.0	+0.4
INK	Inuvik	145.49	26	PKPbc		PKPbc	07 14 30.0	+0.4
	7.7nm,1.0s,baz=283,slow=1.1,SNR=6.4							
YKA	Yellowknife Ar	155.26	26	PKPab		PKPab	07 15 09.8	-0.2
YKA	Yellowknife Ar	155.26	26	PKPab		PKPab	07 15 09.8	-0.2
	0.1nm,0.4s,baz=317,slow=4.0,SNR=4.7							
NVAR	Mina Array Bea	159.41	91	PKPab		PKPab	07 15 30.2	+1.1
NVAR	Mina Array Bea	159.41	91	PKPab		PKPab	07 15 30.2	+1.1
	0.4nm,0.7s,baz=242,slow=3.9,SNR=3.5							
EGMT	Eagleton	165.82	58	*e*PKPdf		PKPdf	07 14 54.9	-2.1
PDAR	Pinedale Array	166.75	80	PKP		PKPdf	07 14 59.8	+1.6
PDAR	Pinedale Array	166.75	80	PKP		PKPdf	07 14 59.8	+1.6
	0.6nm,0.8s,baz=325,slow=1.1,SNR=4.2							

BJI ***24*** *07:03:33.0,42.°10S×88.°50E,h10km,mB5.2/4,mb4.5/6, Ms5.4/1,Ms7 5.1/2*

IDC ***24*** *07:03:36.0±0.5,42.°05S×88.°50E,h0km,mb4.3/19, mb1 4.4/19,mb1mx4.3/24,mbtmp4.3/19,MS5.1/3, Ms1 5.1/3,ms1mx4.3/22,Error ellipse: s-maj=17.6km s-min=14.1km az=151.0*

ISCJB ***24*** *07:03:36.8±0.3,42.°11S±0.°08×88.°49E±0.°09,h15km, mb4.5/29,MS5.0/3,Error ellipse: s-maj=11.4km s-min=9.0km az=161.7*

NEIC ***24*** *07:03:37.9±0.3,42.°05S×88.°50E,h10km,mb4.9/10,Error ellipse: s-maj=10.1km s-min=7.8km az=165.0*

GCMT ***24*** *07:03:40.8±0.2,41.°87S×88.°25E,h13km±1km,MW5.4, Moment Tensor Solution. s37,c44; s10,c10; Moment tensor: Scale 10^17^Nm; Mrr-0.09±.03; Mθθ1.48±.04; Mφφ-1.40±.04; Mrθ0.50±.09; Mθφ0.02±.02; Mφr0.11±.07; Best double couple: M0 1.50000×10^17^ NP1:φs136.00000°, δ75.00000°,λ8.00000°. NP2:φs44.00000°,δ82.00000°, λ165.00000°. Principal axes: T 1.6300, Plg16.0000°, Azm359.0000°; N -0.2200, Plg73.0000°, Azm196.0000°; P -1.4100, Plg5.0000°, Azm90.0000°; Data Used: II IU CN G IC. Surface waves: sta=104, comp=180, per= 50.*

ISC 24 07:03:38.5±0.4,42.°08S±0.°09×88.°47E±0.°09,h15km,n77, σ1§28/86,mb4.5/29,MS5.0/3,1C,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	Narrogin (SRO)	24.49	78	LR	LR	07 16 37.8	
	comp=Z,4μm,19.2s,baz=240,slow=32						
MAW	Mawson	29.07	200	P	P	07 09 37.8	-0.1
MAW	Mawson	29.07	200	P	P	07 09 37.8	-0.1
	7.4nm,0.9s,baz=24,slow=10.0,SNR=5.7						
MAW				LR	LR	07 19 32.7	
	comp=Z,6μm,19.4s,baz=34,slow=33						
FORT	Forrest	33.52	83	P	P	07 10 17.9	+0.4
	33nm,1.3s						
MBWA	Marble Bar	33.53	61	*e*P	P	07 10 17.9	+0.3
	18nm,1.0s						
SYO	Syowa Base	36.94	207	*e*X	P	07 10 44.3	-2.2
FITZ	Fitzroy Crossi	39.61	64	*e*P	P	07 11 09.4	-0.1
FITZ	Fitzroy Crossi	39.61	64	P	P	07 11 08.5	-1.0
	3.1nm,0.7s,baz=220,slow=9.4,SNR=8.9						
ASAR	Alice Springs	41.80	79	P	P	07 11 27.1	-0.5
ASAR				PcP	PcP	07 13 25.1	+1.4
ASAR	Alice Springs	41.80	79	P	P	07 11 27.1	-0.5
	3.0nm,0.8s,baz=223,slow=7.3,SNR=27						
ASAR				PcP	PcP	07 13 25.1	+1.4
	3.2nm,0.8s,baz=223,slow=2.7,SNR=6.4						
AS31	Alice Springs	41.80	79	*e*P	P	07 11 27.1	-0.5
STKA	Stephens Creek	43.03	94	P	P	07 11 37.5	-0.1
STKA	Stephens Creek	43.03	94	P	P	07 11 37.5	-0.1
	4.2nm,0.8s,baz=249,slow=8.5,SNR=6.3						
WRA	Warramunga Arr	44.44	75	P	P	07 11 48.2	-0.8
WRA	Warramunga Arr	44.44	75	P	P	07 11 48.2	-0.8
	6.1nm,0.9s,baz=231,slow=8.1,SNR=37						
WRAB	Tennant Creek	44.45	75	*e*P	P	07 11 48.8	-0.3
	80nm,1.6s						
VNDA	Vanda	45.73	163	*e*P	P	07 11 59.0	+0.4
VNDA	Vanda	45.73	163	P	P	07 11 58.0	-0.6
	2.6nm,0.7s,baz=283,slow=9.2,SNR=16						
SBA	Scott Base	46.80	163	*e*P	P	07 12 08.2	+1.3
	7.6nm,0.9s						
QSPA	South Pole Qui	48.07	180	*e*P	P	07 12 17.0	-0.2
QSPA				*e*PcP	PcP	07 13 44.8	+0.2
QSPA	South Pole Qui	48.07	180	P	P	07 12 16.7	-0.5
	5.5nm,0.7s,baz=305,slow=2.5,SNR=28						
SNAA	Sanae	51.09	204	P	P	07 12 40.0	0.0
	0.5nm,1.1s						
SNAA	Sanae	51.09	204	P	P	07 12 40.0	0.0
	3.1nm,1.1s,baz=146,slow=12,SNR=12						
BOSA	Boshof	52.19	263	P	P	07 12 49.6	+0.8
BOSA	Boshof	52.19	263	P	P	07 12 49.6	+0.8
	9.4nm,1.2s,baz=110,slow=8.8,SNR=4.6						
SUR	Sutherland	53.47	257	P	P	07 12 57.9	-0.5
SUR	Sutherland	53.47	257	P	P	07 12 57.9	-0.5
	6.3nm,0.9s,baz=107,slow=12,SNR=3.2						
LBTB	Lobatse	53.93	267	P	P	07 13 01.0	-0.7
LBTB	Lobatse	53.93	267	P	P	07 13 01.0	-0.7
	4.7nm,0.7s,baz=160,slow=5.4,SNR=4.5						
LSZ	Lusaka	57.93	278	*e*P	P	07 13 29.8	-0.7
	16nm,1.0s						
CMAR	Chiang Mai Arr	61.01	11	P	P	07 13 52.0	+0.6
CMAR	Chiang Mai Arr	61.01	11	P	P	07 13 52.0	+0.6
	3.4nm,1.0s,baz=195,slow=6.5,SNR=4.7						
CMAR				LR	LR	07 38 16.6	
	comp=Z,885nm,18.0s,baz=207,slow=34						
KMBO	Kilima Mbogo	61.37	297	P	P	07 13 53.6	-0.7
KMBO	Kilima Mbogo	61.37	297	P	P	07 13 53.6	-0.7
	0.6nm,0.2s,baz=276,slow=9.2,SNR=2.8						
TSUM	Tsumeb	63.34	268	*e*P	P	07 14 08.1	+0.7
	8.8nm,1.0s						
DZM	Mont Dzumac	66.84	99	*e*LR	LR	07 34 41.5	
	1μm,24.9s						
KBL	Kabul	78.31	344	*e*P	P	07 15 37.3	-0.6
	7.4nm,0.6s						
GTA	Gaotai	81.77	9	*e*P	P	07 15 57.8	+1.4
GTA				pP	PcP	07 16 02.6	+0.5
GTA				sP	sP	07 16 04.8	+1.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
EKS2	Erkin-Say	85.39	349	*e*P	P	07 16 16.0	+1.1
	comp=Z,4.7nm,0.9s						
WMQ	Urumqi	85.52	359	*e*P	P	07 16 15.0	-0.5
KKAR	Karatay Array	86.33	347	*e*P	P	07 16 21.1	+1.6
	comp=Z,5.2nm,0.9s						
MK31	Makanchi Array	88.66	356	*e*P	P	07 16 31.4	+0.8
MKAR	Makanchi Array	88.66	356	P	P	07 16 29.5	-1.1
MKAR	Makanchi Array	88.66	356	P	P	07 16 29.5	-1.1
	comp=Z,1.3nm,0.9s,baz=166,slow=5.5,SNR=10						
MJAR	Matsushiro Arr	90.48	38	P	P	07 16 37.3	-2.1
MJAR	Matsushiro Arr	90.48	38	P	P	07 16 37.3	-2.1
	comp=Z,0.8nm,0.6s,baz=213,slow=5.9,SNR=5.1						
SONM	Songino Array	90.93	12	P	P	07 16 39.4	-1.9
SONM	Songino Array	90.93	12	P	P	07 16 39.4	-1.9
	comp=Z,0.9nm,0.8s,baz=197,slow=6.2,SNR=5.0						
BRTR	Keskin Array B	95.42	321	P	P	07 17 03.3	+1.1
BRTR	Keskin Array B	95.42	321	P	P	07 17 03.3	+1.1
	comp=Z,0.4nm,0.7s,baz=159,slow=6.2,SNR=2.5						
ZALV	Zalesovo Beam	95.71	358	P	P	07 17 03.0	0.0
ZALV	Zalesovo Beam	95.71	358	P	P	07 17 03.0	0.0
	comp=Z,0.9nm,0.6s,baz=182,slow=4.3,SNR=5.7						
TBI	Tubuai	95.75	128	*e*LR	LR	07 48 05.8	
	comp=Z,891nm,24.2s						
TORD	Torodi Ar. Bea	96.32	282	P	P	07 17 06.3	-0.4
TORD	Torodi Ar. Bea	96.32	282	P	P	07 17 06.4	-0.4
	comp=Z,0.5nm,1.0s,baz=126,slow=3.7,SNR=2.5						

IDI	Anoyia	96.49	312	*e*P		P	07 17 08.7	+1.5
PPT2	Papeete2	100.09	125	*e*LR		LR	07 50 07.1	
	comp=Z,495nm,22.0s							
RKT	Rikitea	103.70	139	*e*LR		LR	07 51 47.4	
	comp=Z,305nm,26.8s							
RKT				*e*T		T	09 13 33.8	
	comp=Z,3.6nm,0.4s							
NOA	NORSAR Array B	120.22	327	PKP		PKPdf	07 22 28.4	+0.5
NOA	NORSAR Array B	120.22	327	PKP		PKPdf	07 22 28.4	+0.5
	comp=Z,0.3nm,0.6s,baz=125,slow=1.6,SNR=2.8							
ILAR	Eielson Array	141.69	35	PKP		PKPdf	07 23 07.8	-0.4
ILAR	Eielson Array	141.69	35	PKP		PKPdf	07 23 07.8	-0.4
	comp=Z,0.2nm,0.8s,baz=284,slow=2.6,SNR=2.9							
INK	Inuvik	145.64	26	PKPbc		PKPdf	07 23 13.4	-1.5
INK	Inuvik	145.64	26	PKPbc		PKPdf	07 23 13.4	-1.5
	comp=Z,9.0nm,0.8s,baz=300,slow=3.6,SNR=8.3							
SKAG	Skagway	148.04	42	*e*PKPab		PKPab	07 23 25.4	+0.1
WRAK	Wrangell Islan	150.25	47	*e*PKPdf		PKPdf	07 23 24.7	+1.8
WRAK				PKPab		PKPab	07 23 37.9	+3.6
DLBC	Dease Lake	150.97	42	PKPdf		PKPdf	07 23 23.8	-0.3
DLBC				*e*PKPbc		PKiKP	07 23 32.1	+1.7
DLBC				*e*PKPab		PKPab	07 23 39.1	+1.7
YKA	Yellowknife Ar	155.42	26	PKP		PKPdf	07 23 30.1	-0.2
YKA				PKPab		PKPab	07 23 51.7	-4.2
YKA	Yellowknife Ar	155.42	26	PKP		PKPdf	07 23 30.1	-0.2
	comp=Z,0.1nm,0.4s,baz=337,slow=1.8,SNR=2.9							
YKA				PKPab		PKPab	07 23 51.7	-4.2
	comp=Z,1.1nm,0.9s,baz=308,slow=2.5,SNR=9.3							
NVAR	Mina Array Bea	159.27	91	PKP		PKPdf	07 23 37.9	+1.6
NVAR				PKPab		PKPab	07 24 13.1	-0.6
NVAR	Mina Array Bea	159.27	91	PKP		PKPdf	07 23 37.9	+1.6
	comp=Z,0.1nm,0.4s,baz=240,slow=2.9,SNR=2.4							
NVAR				PKPab		PKPab	07 24 13.1	-0.6
	comp=Z,1.1nm,0.8s,baz=226,slow=4.8,SNR=7.2							
SCHQ	Schefferville	159.38	317	*e*PKPab		PKPab	07 24 14.5	+1.2
TXAR	Lajitas Array	163.93	138	PKP		PKPdf	07 23 43.0	+1.8
TXAR	Lajitas Array	163.93	138	PKP		PKPdf	07 23 43.0	+1.8
	comp=Z,0.5nm,1.1s,baz=134,slow=3.9,SNR=2.0							
SNOW	Snow King Moun	165.81	78	*e*PKPab		PKPab	07 24 41.8	-0.5
PDAR	Pinedale Array	166.66	81	PKP		PKPdf	07 23 44.4	+1.1
PDAR				PKPab		PKPab	07 24 44.6	-1.4
PDAR	Pinedale Array	166.66	81	PKP		PKPdf	07 23 44.4	+1.1
	comp=Z,0.7nm,0.6s,baz=123,slow=3.3,SNR=4.0							
PDAR				PKPab		PKPab	07 24 44.6	-1.4
	comp=Z,0.4nm,0.3s,baz=240,slow=1.8,SNR=2.3							

IDC ***24*** *07:04:57.8±1.0,42.°08S×88.°35E,h0km,mb4.2/7, mb1 4.3/7,mb1mx4.0/22,mbtmp4.2/7,MS5.3/2,Ms1 5.3/2, ms1mx4.2/22,Error ellipse: s-maj=37.4km s-min=22.2km az=126.0*

ISCJB ***24*** *07:04:58.6±0.9,42.°1S±0.°2×88.°5E±0.°3,h15km,mb4.2/8, MS5.3/2,Error ellipse: s-maj=31.8km s-min=18.0km az=41.0*

NEIC ***24*** *07:04:59.2±0.7,42.°10S×88.°44E,h10km,mb4.6/1,Error ellipse: s-maj=24.0km s-min=14.3km az=131.0*

ISC 24 07:05:00.1±0.9,42.°1S±0.°2×88.°4E±0.°2,h15km,n18, σ0§47/17,mb4.1/8,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	39.65	64	P	P	07 12 32.1	+0.7
FITZ	Fitzroy Crossi	39.65	64	P	P	07 12 32.1	+0.7
	6.2nm,1.2s,baz=204,slow=10.0,SNR=2.6						
ASAR	Alice Springs	41.84	79	P	P	07 12 49.3	-0.2
ASAR	Alice Springs	41.84	79	P	P	07 12 49.3	-0.2
	2.7nm,0.8s,baz=231,slow=7.7,SNR=3.2						
WRA	Warramunga Arr	44.47	75	P	P	07 13 11.1	+0.3
WRA	Warramunga Arr	44.47	75	P	P	07 13 11.1	+0.3
	5.2nm,0.9s,baz=230,slow=7.7,SNR=3.7						
WRAB	Tennant Creek	44.49	75	P	P	07 13 09.6	-1.3
	8.1nm,0.9s						
QSPA	South Pole Qui	48.05	180	P	P	07 13 38.5	0.0
QSPA	South Pole Qui	48.05	180	P	P	07 13 38.5	0.0
	3.4nm,0.9s,baz=352,slow=13,SNR=2.1						
SNAA	Sanae	51.06	204	P	P	07 14 01.4	+0.1
SNAA	Sanae	51.06	204	P	P	07 14 01.4	+0.1
	2.2nm,1.1s,baz=102,slow=10,SNR=2.2						
PMG	Port Moresby	60.69	75	LR	LR	07 39 03.5	
	comp=Z,4μm,18.4s,baz=28,slow=34						
MKAR	Makanchi Array	88.68	356	P	P	07 17 52.0	-0.2
MKAR	Makanchi Array	88.68	356	P	P	07 17 52.0	-0.2
	0.7nm,0.8s,baz=194,slow=5.5,SNR=2.7						
MKAR				LR	LR	07 53 47.5	
	comp=Z,666nm,19.2s,baz=166,slow=33						
SONM	Songino Array	90.95	12	P	P	07 18 03.1	+0.1
SONM	Songino Array	90.95	12	P	P	07 18 03.1	+0.1
	0.7nm,0.8s,baz=177,slow=5.2,SNR=2.1						
INK	Inuvik	145.68	26	PKPbc	PKPbc	07 24 37.0	0.0
INK	Inuvik	145.68	26	PKPbc	PKPbc	07 24 37.0	0.0
	3.9nm,0.8s,baz=293,slow=2.0,SNR=2.0						

IDC 24 07:39:04.2±1.9,2.°59S×127.°39E,h0km,mb3.4/2, mb1 3.5/3,mb1mx3.3/22,mbtmp3.3/3,ML3.3/1,Error ellipse: s-maj=144.4km s-min=25.6km az=66.0,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.54	159	P	Pn	07 43 22.9	+0.2
	0.1nm,0.3s,baz=338,slow=12,SNR=7.9						
ASAR	Alice Springs	21.89	164	P	P	07 43 58.5	-0.5
	0.3nm,0.4s,baz=345,slow=12,SNR=6.7						
MKAR	Makanchi Array	63.13	327	P	P	07 49 33.9	0.0
	0.7nm,0.7s,baz=137,slow=8.3,SNR=8.7						

IDC ***24*** *07:51:07.6±2.4,53.°86N×161.°37W,h0km,mb3.9/9, mb1 3.8/11,mb1mx3.6/32,mbtmp3.8/11,ML3.1/2,Error ellipse: s-maj=57.5km s-min=17.6km az=151.0*

NEIC ***24*** *07:51:16.6,54.°50N×161.°53W,h10km,ML3.4(AEIC),After AEIC.*

ISC 24 07:51:15.0±1.8,54.°44N±0.°08×161.°47W±0.°05, h16km±10km,n29,σ1§56/29,mb4.1/9,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRIA	Deer Island	0.70	319	P	Pb	07 51 29.4	+0.6
DRIA				S	Sb	07 51 38.4	+0.2
DOL	Dolgoi Island	0.74	342	P	Pb	07 51 30.1	+0.5
DT1	Dutton Round H	0.81	325	P	Pb	07 51 31.0	+0.2
PS4A	Pavlof South-4	0.93	346	P	Pb	07 51 33.5	+0.7
PVV	Pavlof Volcano	0.95	349	P	Pb	07 51 33.7	+0.6
PVV				S	Sn	07 51 47.5	+0.6
SDPT	Sand Point	1.07	32	P	Pg	07 51 35.5	-0.2
SDPT				S	Sb	07 51 50.3	+1.4
FALS	False Pass	1.21	291	P	Pb	07 51 37.8	+0.4
FALS				S	Sn	07 51 54.4	+1.2
SSLS	Shishaldin Sou	1.50	281	P	Pn	07 51 42.1	+0.9
SSLS				S	Sg	07 52 02.3	-1.0
SSLW	Shishaldin Wes	1.58	283	P	Pn	07 51 43.3	+1.0
VNWF	Veniaminof 8	2.03	32	P	Pn	07 51 51.0	+2.4
VNFG	Veniaminof 2	2.15	30	P	Pn	07 51 53.0	+2.8
AKSA	Akutan Strait	2.50	265	P	Pn	07 51 56.9	+1.9
CHGN	Chignik	2.55	42	*e*Pn	Pn	07 51 56.6	+1.0
CHGN				*e*Sn	Sn	07 52 27.1	+0.8
AHB	Akutan Harbor	2.57	264	P	Pn	07 51 57.6	+1.6
AKLV	Akutan Long Va	2.65	266	P	Pn	07 51 58.7	+1.7
UNV	Unalaska Valle	3.02	261	*e*Pn	Pn	07 52 04.8	+2.7
UNV				*e*Sn	Sn	07 52 40.2	+2.2
MTBL	Makushin Table	3.10	263	P	Pn	07 52 05.4	+2.2
KDAK	Kodiak Island	5.99	52	Pn	Pn	07 52 41.1	-1.7
KDAK	Kodiak Island	5.99	52	Pn	Pn	07 52 41.1	-1.7
	0.6nm,0.3s,baz=222,slow=12,SNR=5.0						
KDAK				Sn	Sn	07 53 45.9	-5.1
	0.5nm,0.3s,baz=336,slow=20,SNR=4.0						
ILAR	Eielson Array	12.67	29	Pn	Pn	07 54 13.6	-0.8
	0.0nm,0.3s,baz=225,slow=12,SNR=3.1						
ILAR				Sn	Sn	07 56 33.3	-1.6
	0.0nm,0.3s,baz=218,slow=22,SNR=2.7						
PETK	Petropavlovsk-	23.93	284	P	P	07 56 25.9	-2.1
	3.9nm,0.5s,baz=94,slow=11,SNR=25						
YKA	Yellowknife Ar	25.27	53	P	P	07 56 39.1	-0.9
	0.2nm,0.5s,baz=271,slow=8.9,SNR=5.6						
KSRS	Korea Array	49.77	281	P	P	08 00 04.9	-1.6
	1.0nm,0.5s,baz=49,slow=7.9,SNR=6.2						
SONM	Songino Array	54.19	304	P	P	08 00 37.6	-1.8
	0.4nm,0.8s,baz=48,slow=6.6,SNR=3.4						
FINES	FINESS Array B	64.30	356	P	P	08 01 46.2	-2.7
	1.1nm,0.6s,baz=20,slow=6.7,SNR=6.9						
BVAR	Borovoye Array	64.60	328	P	P	08 01 49.4	-1.7
	1.4nm,0.6s,baz=57,slow=5.3,SNR=6.0						

AKTO	Aktyubinsk	70.38	334	P		P	08 02 25.4	-2.3
	1.6nm,0.7s,baz=31,slow=4.1,SNR=5.4							
AKASG	Malin Array Be	74.84	353	P		P	08 02 51.8	-2.4
	0.4nm,0.4s,baz=3.4,slow=5.1,SNR=4.9							
GERES	GERESS Array B	77.00	3	P		P	08 03 05.0	-1.7
	0.4nm,0.6s,baz=344,slow=6.1,SNR=4.3							

IDC 24 08:23:35.8±3.4,24.°03S×179.°92W,h500km±35km, mb3.3/5,mb1 3.5/5,mb1mx3.0/19,mbtmp3.3/5,Error ellipse: s-maj=34.6km s-min=21.9km az=22.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	31.55	270	P	P	08 29 17.8	+1.0
	4.1nm,0.4s,baz=98,slow=10.0,SNR=10						
ASAR	Alice Springs	42.09	261	P	P	08 30 43.3	-0.3
	0.6nm,0.5s,baz=100,slow=7.2,SNR=14						
ASAR				ScP	ScP	08 35 29.6	0.0
	0.4nm,1.0s,baz=102,slow=4.7,SNR=4.2						
WRA	Warramunga Arr	42.48	266	P	P	08 30 45.9	-0.7
	1.7nm,0.3s,baz=97,slow=8.3,SNR=111						
QSPA	South Pole Qui	66.06	180	P	P	08 33 32.6	+0.2
	1.5nm,0.6s,baz=306,slow=0.6,SNR=14						
TXAR	Lajitas Array	90.43	58	P	P	08 35 44.0	+0.1
	0.4nm,0.7s,baz=220,slow=6.0,SNR=7.0						
TORD	Torodi Ar. Bea	169.07	188	PKPab	PKPab	08 43 59.8	-1.0
	0.4nm,0.6s,baz=167,slow=2.9,SNR=2.9						

IDC 24 08:27:45.5±4.2,30.°01S×177.°96W,h0km,mb4.0/3, mb1 4.2/3,mb1mx3.8/17,mbtmp4.0/3,Error ellipse: s-maj=161.4km s-min=66.1km az=159.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	34.60	256	P	P	08 34 35.7	-0.6
	2.5nm,0.7s,baz=88,slow=9.0,SNR=5.0						
ASAR	Alice Springs	43.16	267	P	P	08 35 48.0	-0.2
	1.4nm,0.6s,baz=108,slow=7.6,SNR=24						
WRA	Warramunga Arr	44.12	272	P	P	08 35 56.2	+0.3
	0.9nm,0.5s,baz=111,slow=8.0,SNR=15						
FINES	FINESS Array B	144.79	340	PKP	PKPbc	08 47 22.8	+0.1
	2.1nm,0.8s,baz=21,slow=1.9,SNR=5.2						

IDC 24 08:37:18.5±6.9,30.°37S×178.°02W,h0km,mb3.8/2, mb1 4.1/2,mb1mx3.6/17,mbtmp3.8/2,Error ellipse: s-maj=285.3km s-min=56.8km az=155.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	43.10	267	P	P	08 45 20.4	-0.3
	0.6nm,0.6s,baz=105,slow=7.4,SNR=11						
WRA	Warramunga Arr	44.08	272	P	P	08 45 28.6	0.0
	1.1nm,0.6s,baz=111,slow=8.1,SNR=21						
FINES	FINESS Array B	145.11	340	PKPbc	PKPbc	08 56 55.9	-0.8
	0.9nm,0.7s,baz=80,slow=2.1,SNR=6.0						

ISC 24 08:43:33.8±2.8,51.°55N±0.°05×7.°0E±0.°3,h9km,n6,σ0§09/8, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTSB	Winterswijk	0.43	343	*e*Pg	Pg	08 43 42.2	0.0
WTSB				*e*Sg	Sg	08 43 47.9	0.0
HGN	Heimansgroeve	1.04	221	*e*Pg	Pb	08 43 53.9	0.0
	16nm,0.2s						
HGN				*e*Sg	Sb	08 44 07.5	0.0
MEM	Membach	1.13	214	P	Pb	08 43 55.5	-0.1
BCLA	Clavier	1.56	224	P	Pn	08 44 01.6	-0.1
WLF	Walferdange	1.97	196	P	Pg	08 44 11.5	0.0
DOU	Dourbes	2.11	227	P	Pn	08 44 09.3	+0.1

BJI ***24*** *09:40:01.4,60.°15N×153.°53W,h117km,mB5.0/21, mb5.1/40*

MOS ***24*** *09:40:02.5±1.1,59.°94N×153.°38W,h130km,mb4.7/43, Error ellipse: s-maj=9.5km s-min=5.1km az=90.0*

ISCJB ***24*** *09:40:02.5±0.1,59.°86N±0.°02×153.°36W±0.°03, h131km±1km,mb4.6/119,Error ellipse: s-maj=3.5km s-min=2.4km az=149.3*

IDC ***24*** *09:40:02.4±0.6,59.°78N×153.°43W,h117km±5km,mb4.2/31, mb1 4.4/37,mb1mx4.4/39,mbtmp4.3/37,MS2.9/4, Ms1 2.9/4,ms1mx2.6/52,Error ell

ANNW Aniakchak Nort 3.88 224 P **Pn** 09 41 01.7 -0.2
TRF Thorofare Moun 3.89 20 P **Pn** 09 41 01.9 -0.2
DIV Divide 3.94 68 P **Pn** 09 41 02.6 -0.1
ANPK Aniakchak Peak 3.94 222 P **Pn** 09 41 02.0 -0.8
KLU Klutina 3.99 62 P **Pn** 09 41 02.5 -0.8
ANPB Aniakchak Plen 4.03 223 P **Pn** 09 41 03.2 -0.7
CHUM Lake Minchumin 4.08 6 P **Pn** 09 41 05.1 +0.7
SGAM Sherman Glacie 4.10 77 P **Pn** 09 41 04.0 -0.7
RND Reindeer 4.15 29 P **Pn** 09 41 05.0 -0.5
RND Reindeer 4.15 29 P **Pn** 09 41 05.0 -0.5
DHY Denali Highway 4.31 39 P **Pn** 09 41 07.1 -0.6
GOAT Goat Mountain 4.34 77 P **Pn** 09 41 07.8 -0.2
RAGM Ragged Mountai 4.35 79 P **Pn** 09 41 07.7 -0.5
MCK McKinley 4.42 26 P **Pn** 09 41 08.9 0.0
MCK McKinley 4.42 26 P **Pn** 09 41 08.9 0.0
CHGN Chignik 4.47 220 P **Pn** 09 41 08.6 -1.1
HARP HAARP 4.71 53 P **Pn** 09 41 12.5 -0.4
VNHG Veniaminof 1 4.79 223 P **Pn** 09 41 13.2 -0.8
VNFG Veniaminof 2 4.87 226 P **Pn** 09 41 14.3 -0.9
PAX Paxson 4.90 47 P **Pn** 09 41 15.1 -0.3
PAX Paxson 4.90 47 P **Pn** 09 41 15.1 -0.3
GLB Gilahina Butte 4.94 67 P **Pn** 09 41 15.4 -0.6
VNWF Veniaminof 8 4.98 225 P **Pn** 09 41 16.5 -0.1
VRDI Verde Repeater 5.06 70 P **Pn** 09 41 17.5 -0.2
NEA Nenana 5.14 21 P **Pn** 09 41 18.1 -0.5
WRH Wood River Hil 5.24 26 P **Pn** 09 41 19.3 -0.7
MCARA McCarthy VSAT 5.29 69 P **Pn** 09 41 20.9 +0.3
MLY Manley 5.34 12 P **Pn** 09 41 20.9 -0.4
CCB Clear Creek Bu 5.46 26 P **Pn** 09 41 21.9 -0.9
HDA Harding Lake 5.46 30 P **Pn** 09 41 23.0 +0.2
KIAG Kiagna River 5.53 74 P **Pn** 09 41 23.9 -0.1
MENT Mentasta 5.55 52 *e*Pn **Pn** 09 41 23.4 -0.7
BALM Baldy 5.55 73 P **Pn** 09 41 24.2 -0.1
BALM Baldy 5.55 73 P **Pn** 09 41 24.2 -0.1
COLA College 5.64 24 P **Pn** 09 41 24.6 -0.8
COLA College 5.64 24 P **Pn** 09 41 24.6 -0.8
MDM Murphy Dome 5.64 22 P **Pn** 09 41 24.4 -1.0
IL1 Eielson Array 5.77 28 P **Pn** 09 41 26.0 -1.1
ILAR Eielson Array 5.77 28 P **Pn** 09 41 25.8 -1.3
ILAR S **Sn** 09 42 28.9 -3.2
ILAR ScP **ScP** 09 51 36.8 -1.1
ILAR Eielson Array 5.77 28 P **Pn** 09 41 25.8 -1.3
56nm,0.3s,baz=218,slow=14,SNR=3277
ILAR S **Sn** 09 42 28.9 -3.2
19nm,0.3s,baz=199,slow=16,SNR=5.1
ILAR ScP **ScP** 09 51 36.8 -1.1
0.1nm,0.3s,baz=224,slow=2.5,SNR=5.0
DOT Dot Lake 5.81 45 P **Pn** 09 41 26.8 -0.8
GRNC Granite Creek 5.81 76 P **Pn** 09 41 27.4 -0.5
GLM Gilmore Dome 5.84 25 P **Pn** 09 41 27.6 -0.5
BARN Barnard Glacie 5.89 73 P **Pn** 09 41 29.0 +0.2
SDPT Sand Point 5.93 224 P **Pn** 09 41 27.3 -2.0
IM3 Indian Mountai 6.16 358 P **Pn** 09 41 32.9 +0.6
SAMH Samovar Hills 6.29 82 P **Pn** 09 41 34.7 +0.5
BCA3 Beaver Creek A 6.39 55 P **Pn** 09 41 35.1 -0.4
PRP Porcupine Dome 6.72 29 P **Pn** 09 41 39.7 -0.3
PNL Peninsula 7.03 85 P **Pn** 09 41 43.5 -0.5
FALS False Pass 7.41 232 P **Pn** 09 41 49.0 -0.1
EGAK Eagle 7.51 44 *e*Pn **Pn** 09 41 49.5 -0.9
COLD Coldfoot 7.54 9 P **Pn** 09 41 50.3 -0.5
SSLW Shishaldin Wes 7.75 234 P **Pn** 09 41 53.8 0.0
DAWY Dawson 7.79 51 P **Pn** 09 41 54.1 -0.2
HYT Haines Junctio 7.90 76 P **Pn** 09 41 55.8 -0.1
BM3 Burnt Mountain 8.52 23 P **Pn** 09 42 02.3 -1.7
TNA Tin City 8.81 317 P **Pn** 09 42 09.2 +1.2
AKUT Akutan 8.88 235 *e*Pn **Pn** 09 42 09.0 0.0
AKGG Akutan Green G 8.93 236 P **Pn** 09 42 08.8 -0.9
AKRB Akutan Reef Bi 9.01 236 P **Pn** 09 42 09.4 -1.3
SKAG Skagway 9.11 85 P **Pn** 09 42 11.6 -0.3
WHY Whitehorse 9.19 77 P **Pn** 09 42 12.2 -1.0
MTBL Makushin Table 9.38 237 P **Pn** 09 42 13.7 -2.0
UNV Unalaska Valle 9.39 236 P **Pn** 09 42 14.5 -1.4
BESE Bessie Mountai 9.54 90 P **Pn** 09 42 15.8 -2.1
GAMB Gambell 9.54 302 *e*Pn **Pn** 09 42 19.3 +1.6
37nm,1.2s
SIT Sitka 9.82 99 P **Pn** 09 42 19.8 -1.8
SIT Sitka 9.82 99 P **Pn** 09 42 19.8 -1.8
WRAK Wrangell Islan 11.58 98 *e*Pn **Pn** 09 42 45.0 +0.1
41nm,0.6s
CRAG Craig 11.64 103 *e*Pn **Pn** 09 42 46.1 +0.3
41nm,0.7s
DLBC Dease Lake 12.02 87 *e*Pn **Pn** 09 42 52.1 +1.3
DLBC Dease Lake 12.02 87 P **Pn** 09 42 51.6 +0.9
7.0nm,0.3s,baz=277,slow=12,SNR=68
DLBC S **Sn** 09 44 59.4 -3.6
1.2nm,0.3s,baz=145,slow=12,SNR=3.2
DLBC LR LR 09 47 41.7
comp=Z,47nm,19.3s,baz=303,slow=38
INK Inuvik 12.05 37 P **Pn** 09 42 50.0 -1.0
INK ScP **ScP** 09 51 44.7 0.0
INK Inuvik 12.05 37 P **Pn** 09 42 50.0 -1.0
1.4nm,0.3s,baz=241,slow=14,SNR=40
INK LR LR 09 48 24.4
comp=Z,26nm,18.2s,baz=124,slow=41
INK ScP **ScP** 09 51 44.7 0.0
0.2nm,0.3s,baz=167,slow=3.2,SNR=5.1
ATKA Atka Island 13.92 246 *e*Pn **P** 09 43 19.4 +0.2
BBB Bella Bella 15.96 108 P **Pn** 09 43 40.9 +0.1
BBB S **Sn** 09 46 35.0 -2.8
BBB Bella Bella 15.96 108 P **Pn** 09 43 40.9 +0.1
0.0nm,0.3s,baz=300,slow=12,SNR=1.6
BBB S **Sn** 09 46 35.0 -2.8
0.2nm,0.3s,baz=342,slow=20,SNR=5.8
BBB LR LR 09 48 46.3
comp=Z,57nm,21.3s,baz=250,slow=33
AMKA Amchitka 17.53 253 *e*Pn **P** 09 43 58.2 -0.9
42nm,0.6s
YKW3 Yellowknife Ar 18.64 65 *e*Pn **P** 09 44 11.9 +0.8
0.6nm,0.8s
YKA Yellowknife Ar 18.65 65 P **P** 09 44 12.0 +0.7
YKA PcP **PcP** 09 48 33.4 -0.3
YKA ScP **ScP** 09 51 57.1 +0.1
YKA PKiKP **PKiKP** 09 56 21.4 -2.3
YKA Yellowknife Ar 18.65 65 P **P** 09 44 12.0 +0.7
1.7nm,0.3s,baz=277,slow=10.0,SNR=321
YKA PcP **PcP** 09 48 33.4 -0.3
0.5nm,0.3s,baz=283,slow=1.5,SNR=18
YKA ScP **ScP** 09 51 57.1 +0.1
0.3nm,0.3s,baz=289,slow=2.3,SNR=22
YKA PKiKP **PKiKP** 09 56 21.4 -2.3
0.0nm,0.3s,baz=274,slow=1.0,SNR=4.2
BILL Bilibino 19.20 312⇑ *e*P **P** 09 44 16.5 -0.7
BILL pmax pmax
comp=Z,26nm,1.1s
FX1 Attu Island--F 19.67 264 *e*P **P** 09 44 21.8 -0.6
FX1 Attu Island--F 19.67 264 P **P** 09 44 21.5 -0.9
comp=Z,16nm,0.3s,baz=268,slow=2.6,SNR=42
NEW Newport 23.86 103 *e*P **P** 09 45 07.3 +2.2
comp=Z,4.6nm,1.1s
NEW *e* 09 45 32.1
NEW Newport 23.86 103 P **P** 09 45 06.7 +1.5
comp=Z,0.6nm,0.3s,baz=345,slow=9.5,SNR=3.4
NEW pP **pP** 09 45 30.8 -0.3
comp=Z,11nm,0.9s,baz=328,slow=6.8,SNR=10
NEW LR LR 09 53 46.1
comp=Z,62nm,19.2s,baz=332,slow=34
NEW Newport 23.86 103 ⇑pP pP 09 45 31.7 +0.6
baz=24
C11A Tepee Creek (N 24.58 103 ⇓pP pP 09 45 39.4 +0.9
baz=24
C12B Naegeli Ranch, 25.05 102 ⇓pP pP 09 45 42.2 -1.0
baz=25
B13A Whitefish 25.10 100 ⇑pP pP 09 45 42.7 -1.0
baz=25
A14A Double T Ranch 25.23 98 ⇑pP pP 09 45 43.5 -1.4
baz=25
C13A Hot Springs 25.52 101 ⇑pP pP 09 45 47.2 -0.3
baz=25
SEY Seymchan 25.54 300⇓ *e*P **P** 09 45 19.8 -0.2
A15A Johnson Ranch, 25.57 97 ⇓pP pP 09 45 48.0 0.0
baz=25
B14A Marquette Ranc 25.71 99 ⇓pP pP 09 45 48.8 -0.4
baz=26
C14A Swan Lake 25.87 100 P **P** 09 45 25.2 +1.9
baz=26
C14A ⇑pP **pP** 09 45 50.8 +0.2
baz=26
D13A Huson 25.98 102 ⇓pP pP 09 45 51.3 -0.3
baz=26
B15A Bradely Ranch, 26.09 98 ⇑pP pP 09 45 53.1 +0.5
baz=26,SNR=8.2
YBH Yreka Blue Hor 26.14 120 P **P** 09 45 27.3 +1.5
YBH Yreka Blue Hor 26.14 120 P **P** 09 45 27.3 +1.5
comp=Z,6.1nm,1.1s,baz=40,slow=11,SNR=5.6

A16A West Butte Ran 26.16 96 P **P** 09 45 26.7 +0.8
baz=26
A16A ⇑pP **pP** 09 45 53.7 +0.4
baz=26
C15A Salmond Ranch, 26.43 99 ⇓pP pP 09 45 56.4 +0.6
baz=26
B16A M & M Farms, S 26.46 97 ⇑pP pP 09 45 56.5 +0.6
baz=26
D14A Greenough 26.46 101 ⇑pP pP 09 45 55.8 -0.2
baz=26,SNR=5.7
E13A Victor 26.57 103 ⇑pP pP 09 45 57.0 0.0
baz=26
A17A Triple J Farms 26.62 95 ⇑pP pP 09 45 58.0 +0.6
baz=26
C16A Fuhringer Ranc 26.84 98 ⇑pP pP 09 45 59.3 -0.2
baz=27
E14A Clinton 26.93 102 ⇑pP pP 09 46 00.9 +0.6
baz=27
F13A Darby 26.96 104 ⇑pP pP 09 46 00.2 -0.4
baz=27
D15A Lincoln 26.97 100 ⇑pP pP 09 46 01.5 +0.7
baz=27
B17A L&G Farms, Che 26.99 96 P **P** 09 45 34.0 +0.7
baz=27
B17A ⇓pP **pP** 09 46 01.2 +0.5
baz=27,SNR=7.4
A18A Metzger Ranch, 27.06 94 ⇑pP pP 09 46 02.6 +1.2
baz=27
PEA0B Petropavlovsk- 27.33 278 *e*P **P** 09 45 35.3 -0.9
PETK Petropavlovsk- 27.33 278 P **P** 09 45 36.1 -0.2
PETK Petropavlovsk- 27.33 278 P **P** 09 45 36.1 -0.2
PETK Petropavlovsk- 27.33 278 P **P** 09 45 36.1 -0.2
comp=Z,14nm,0.6s,baz=84,slow=11,SNR=34
E15A Deer Lodge 27.34 101 ⇓pP pP 09 46 04.5 +0.5
baz=27
F14A Wisdom 27.41 103 ⇓pP pP 09 46 05.2 +0.4
baz=27
B18A Beardsley Farm 27.44 95 P **P** 09 45 38.3 +1.0
baz=27
B18A ⇑pP **pP** 09 46 05.9 +1.1
baz=27
D16A Dana Ranch, Ca 27.46 99 ⇓pP pP 09 46 06.3 +1.2
baz=27,SNR=5.5
G13A Cobalt 27.51 105 ⇓pP pP 09 46 06.1 +0.6
baz=27,SNR=5.5
A19A Klindworth Far 27.61 93 ⇓pP pP 09 46 08.4 +2.1
baz=28
E16A East Helena 27.75 100 ⇑pP pP 09 46 08.6 +0.9
baz=28
D17A Six Diamond Ra 27.81 98 ⇑pP pP 09 46 08.9 +0.7
baz=28
F15A Butte 27.83 102 ⇑pP pP 09 46 08.1 -0.4
baz=28
I12A Atlanta 28.03 108 ⇓pP pP 09 46 11.5 +1.2
baz=28
D18A Linhart Farms, 28.23 97 ⇑pP pP 09 46 13.1 +1.2
baz=28
C19A Slack Wire Ran 28.24 95 ⇓pP pP 09 46 13.6 +1.5
baz=28
H14A Leadore 28.28 105 P **P** 09 45 45.9 +0.9
baz=28
H14A ⇑pP **pP** 09 46 13.9 +1.4
baz=28,SNR=5.9
F16A Kennard Place, 28.29 101 ⇑pP pP 09 46 13.8 +1.2
baz=28
G15A Dillon 28.31 103 ⇓pP pP 09 46 14.0 +1.1
baz=28
I13A Wildhorse Cree 28.43 106 ⇑pP pP 09 46 14.7 +0.8
baz=28
HLID Hailey 28.55 107 ⇑pP pP 09 46 15.7 +0.8
baz=28
E18A Harlowton 28.60 98 P **P** 09 45 49.1 +1.4
baz=28
E18A ⇓pP **pP** 09 46 16.6 +1.2
baz=28
G16A Moss Hill, Enn 28.60 102 ⇓pP pP 09 46 15.9 +0.4
baz=28
H15A Lima 28.63 104 ⇓pP pP 09 46 16.1 +0.4
baz=28
F17A Fitzpatrick Pl 28.69 100 ⇑pP pP 09 46 16.8 +0.6
baz=28
I14A Mackay 28.74 106 ⇓pP pP 09 46 16.4 -0.3
baz=29
G17A Pierce Place, 29.06 101 ⇑pP pP 09 46 21.1 +1.6
baz=29
D20A Manuel Ranch, 29.13 96 ⇑P P 09 46 21.5 +29
baz=29
J14A Carey 29.16 107 ⇑pP pP 09 46 22.8 +2.4
baz=29
F18A Big Timber 29.16 99 ⇑pP pP 09 46 20.7 +0.4
baz=29
E19A Rath Farm, Rou 29.24 97 P **P** 09 45 53.8 +0.4
baz=29
H16A Russell Place, 29.25 102 ⇑pP pP 09 46 20.8 -0.5
baz=29,SNR=6.6
G18A Lazy EL Ranch, 29.65 100 ⇑pP pP 09 46 25.0 +0.3
baz=30
IMW Indian Meadow 29.99 103 *e*P **P** 09 46 03.1 +2.9
comp=Z,21nm,1.0s
IMW *e* **pP** 09 46 29.7 +1.8
TPAW Teton Pass 30.29 104 *e*P **P** 09 46 05.1 +2.3
comp=Z,17nm,1.1s
TPAW *e*pP **pP** 09 46 32.9 +2.4
NVAR Mina Array Bea 30.78 118 P **P** 09 46 08.9 +1.7
NVAR PcP **PcP** 09 49 01.8 +0.6
NVAR ScP **ScP** 09 52 30.6 -1.0
NVAR Mina Array Bea 30.78 118 P **P** 09 46 08.9 +1.7
comp=Z,2.1nm,0.7s,baz=312,slow=9.4,SNR=18
NVAR PcP **PcP** 09 49 01.8 +0.6
comp=Z,2.6nm,0.7s,baz=318,slow=2.8,SNR=12
NVAR ScP **ScP** 09 52 30.6 -1.0
comp=Z,1.2nm,0.7s,baz=316,slow=2.5,SNR=9.6
PDAR Pinedale Array 31.51 103 P **P** 09 46 16.6 +3.0
PDAR pP **pP** 09 46 42.6 +1.4
PDAR PcP **PcP** 09 49 02.6 -0.6
PDAR ScP **ScP** 09 52 33.3 -0.7
PDAR Pinedale Array 31.51 103 P **P** 09 46 16.6 +3.0
comp=Z,0.5nm,0.5s,baz=309,slow=4.3,SNR=5.1
PDAR pP **pP** 09 46 42.6 +1.4
comp=Z,7.2nm,1.1s,baz=305,slow=5.1,SNR=9.6
PDAR PcP **PcP** 09 49 02.6 -0.6
comp=Z,1.7nm,0.8s,baz=137,slow=2.0,SNR=5.5
PDAR ScP **ScP** 09 52 33.3 -0.7
comp=Z,0.4nm,0.5s,baz=220,slow=0.7,SNR=3.8
F24A Ekalaka 31.84 94 P **P** 09 46 16.9 +0.6
baz=32
R11A Troy Canyon, C 32.07 115 P **P** 09 46 21.2 +2.8
baz=32
J21A Lysite 32.12 100 P **P** 09 46 20.7 +1.9
baz=32
K21A Alcova 32.74 101 P **P** 09 46 25.1 +0.8
baz=33
MPMC Manual Prospec 33.11 120 P **P** 09 46 29.9 +2.4
baz=33
ULM Lac du Bonnet 33.24 81 P **P** 09 46 28.8 +0.4
ULM pP **pP** 09 46 56.1 -0.1
ULM ScP **ScP** 09 52 40.4 +0.9
ULM Lac du Bonnet 33.24 81 P **P** 09 46 28.8 +0.4
comp=Z,3.8nm,0.7s,baz=310,slow=9.1,SNR=3.9
ULM pP **pP** 09 46 56.1 -0.1
comp=Z,8.1nm,0.8s,baz=293,slow=7.7,SNR=4.4
ULM ScP **ScP** 09 52 40.4 +0.9
comp=Z,4.8nm,0.6s,baz=310,slow=5.4,SNR=3.6
RSSD Black Hills 33.27 96 *e*P **P** 09 46 31.3 +2.5
RSSD pmax pmax
comp=Z,5.0nm,0.9s
RSSD Black Hills 33.27 96 *e*P **P** 09 46 31.3 +2.5
comp=Z,4.8nm,0.9s
MVU Marysvale 33.52 111 *e*P P 09 46 35.9 +4.8
comp=Z,13nm,1.6s
ARUT Antelope Range 33.52 113 *e*P P 09 46 34.6 +3.6
ARUT *e*PP pP 09 47 02.0 +3.1
ARUT pmax pmax
comp=Z,2.0nm,0.8s
ARUT Antelope Range 33.52 113 *e*P P 09 46 34.6 +3.6
comp=Z,2.4nm,0.8s
ARUT epP pP 09 47 02.0 +3.1
MSU Marysvale 33.53 111 *e*P **P** 09 46 33.5 +2.3
MSU *e*PP **pP** 09 47 01.0 +1.9
MSU Marysvale 33.53 111 *e*P **P** 09 46 33.5 +2.3
MSU epP **pP** 09 47 01.0 +1.9
CCUT Cedar City 33.74 113 *e*P **P** 09 46 36.0 +2.9
comp=Z,26nm,1.8s
CCUT epP **pP** 09 47 02.1 +1.1
GSC Goldstone 34.05 120 *e*P **P** 09 46 37.7 +2.2
GSC pmax pmax
comp=Z,2.0nm,0.8s

GSC Goldstone 34.05 120 *e*P **P** 09 46 37.7 +2.2
comp=Z,2.3nm,0.8s
P20A De Beque 34.56 106 P **P** 09 46 41.0 +1.0
baz=34
BFSC Mount Baldy Ra 34.58 122 P **P** 09 46 42.5 +2.3
baz=34
U15A North Rim 35.16 113 P **P** 09 46 47.8 +2.5
baz=35
YAK Yakutsk 35.44 308 *e*P **P** 09 46 45.8 -1.2
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=E,11nm,1.4s
YAK pmax pmax
comp=N,2.0nm,1.2s
W13A Hualapai Mount 35.52 116 P **P** 09 46 49.1 +0.8
baz=35
PV01 Paradox Valley 35.55 107 *e*P **P** 09 46 49.9 +1.4
comp=N,520nm,1.0s
WUAZ Wupatki 36.33 113 *e*P P 09 46 58.6 +3.5
comp=N,9.6nm,0.9s
WUAZ epP pP 09 47 23.9 +0.5
WUAZ Wupatki 36.33 113 P **P** 09 46 56.7 +1.5
baz=36
EYMN Ely 36.93 80 *e*P **P** 09 47 01.7 +1.7
comp=N,24nm,0.8s
EYMN epP **pP** 09 47 29.1 +0.9
SDCO Great Sand Dun 37.34 105 *e*P **P** 09 47 05.8 +1.9
comp=N,6.1nm,1.2s
SDCO epP **pP** 09 47 32.4 +0.2
R25A Fountain Ranch 37.62 103 P **P** 09 47 08.2 +2.1
baz=38
KSCO Kaye Shedlock' 37.77 100 P **P** 09 47 09.2 +1.9
baz=38
X18A Snowflake 37.80 112 P P 09 47 10.8 +3.1
baz=38
R26A Arlington 37.92 102 P **P** 09 47 10.3 +1.8
baz=38
S25A Robets Cordova 37.93 104 P **P** 09 47 10.7 +2.0
baz=38
W20A Ramah 37.99 110 P **P** 09 47 11.5 +2.2
baz=38
V22A San Miguel Ran 38.12 108 P **P** 09 47 12.5 +2.1
baz=38
U23A El Rito 38.13 107 P **P** 09 47 13.0 +2.6
baz=38
BGNE Belgrade 38.21 94 P **P** 09 47 12.0 +1.2
baz=38
YSS Yuzh-Sakhalins 38.67 280 *e*P **P** 09 47 15.9 +1.4
Q29A Oakley 38.69 99 P **P** 09 47 16.7 +1.8
baz=38
T26A Comanche Natio 38.73 103 P **P** 09 47 16.7 +1.3
baz=39
X21A Alamocita Cree 38.89 110 P **P** 09 47 18.4 +1.6
baz=39
S28A Manter 39.24 101 P **P** 09 47 21.1 +1.6
baz=39
W24A Lazy 6 Ranch, 39.41 107 P **P** 09 47 22.6 +1.5
baz=39
R30A Dighton 39.51 99 P **P** 09 47 22.9 +1.2
baz=39
V26A Tequesquite Ra 39.72 105 P **P** 09 47 25.4 +1.8
baz=40
121A Cookes Peak, D 40.46 112 P **P** 09 47 31.7 +2.0
baz=40
CLNS Chul'man 40.47 303 *e*P **P** 09 47 28.8 -0.6
CLNS pmax pmax
comp=Z,19nm,1.0s
CLNS pmax pmax
comp=N,9.0nm,0.9s
CLNS pmax pmax
comp=E,13nm,0.9s
220A Playas Peak, P 40.64 113 P **P** 09 47 32.9 +1.7
baz=40
KSU1 Kansas State U 40.72 95 *e*P **P** 09 47 32.6 +1.1
comp=E,10nm,0.8s
T31A Randall Ranch, 40.73 99 P **P** 09 47 33.6 +1.9
baz=41
ASAJ Asahikawa 40.74 277 P **P** 09 47 31.6 0.0
ASAJ Asahikawa 40.74 277 P **P** 09 47 31.6 0.0
comp=E,20nm,0.6s,baz=321,slow=14,SNR=31
Y25A Mesa, Roswell 40.79 107 P **P** 09 47 34.2 +1.8
baz=41
Z24A Sheeppen Canyo 40.95 109 P **P** 09 47 35.9 +2.1
baz=41
JFWS Jewell Farm 41.09 85 *e*P **P** 09 47 35.1 +0.6
JFWS *e**PP **pP** 09 48 04.0 +0.7
JFWS pmax pmax
comp=Z,14nm,0.8s
JFWS Jewell Farm 41.09 85 *e*P **P** 09 47 35.1 +0.6
comp=Z,14nm,0.8s
JFWS epP **pP** 09 48 04.0 +0.7
320A Kipp Ranch, An 41.12 114 P **P** 09 47 37.5 +2.4
baz=41
KBS Kingsbay 41.19 4⇑ *e*P **P** 09 47 32.7 -2.2
KBS pmax pmax
comp=Z,57nm,2.4s
HABR Khabarovsk 41.40 287 *e*P **P** 09 47 35.6 -1.4
HABR 09 49 13.3
HABR *e* 09 49 32.0
HABR *e*PPP PPP 09 49 45.2
HABR *e*S **S** **09 53 43.0 +1.1**
HABR *e*SS **SS** **09 56 51.4 +1.0**
HABR *e* 09 57 29.0
HABR pmax pmax
comp=N,5.0nm,0.6s
HABR pmax pmax
comp=Z,46nm,1.5s
HABR pmax pmax
comp=E,22nm,1.2s
Y27A Causey 41.56 106 P **P** 09 47 40.5 +1.8
baz=41
Z26A Caprock 41.67 107 P **P** 09 47 41.1 +1.6
baz=42
125A Gardner Draw, 41.84 108 P **P** 09 47 43.0 +2.0
baz=42
ERM Erimo 41.99 274*d* *i*P **P** 09 47 43.0 +1.1
ERM pmax pmax
comp=Z,99nm,1.4s
SPITS Spitsbergen Ar 42.08 3 P **P** 09 47 42.6 +0.4
SPITS Spitsbergen Ar 42.08 3 P **P** 09 47 42.6 +0.4
comp=Z,8.9nm,0.9s,baz=1.4,slow=8.2,SNR=7.2
MNTX Cornudas Mount 42.29 110 *e*P **P** 09 47 46.7 +2.2
comp=Z,5.4nm,1.1s
Y29A Porterfield Fa 42.31 104 P **P** 09 47 46.1 +1.4
baz=42
324A Moseley Ranch, 42.45 110 P **P** 09 47 47.8 +1.8
baz=42
KLR Kul'dur 42.45 290 *e*P P 09 47 42.0 -3.6
KLR *e* 09 48 24.2
KLR pmax pmax
comp=E,34nm,1.6s
KLR pmax pmax
comp=Z,65nm,1.6s
X31A McDonald Ranch 42.52 102 P **P** 09 47 48.2 +1.9
baz=42
226B Tecolote Peak, 42.56 108 P **P** 09 47 48.8 +2.1
baz=42
325A Bean Ranch, Si 42.76 110 P **P** 09 47 49.2 +0.8
baz=43
128A Castleberry Fa 42.92 106 P **P** 09 47 51.1 +1.5
baz=43
WMOK Wichita Mounta 43.03 101 *e*P **P** 09 47 51.6 +1.2
WMOK *e**PP **pP** 09 48 21.1 +1.7
WMOK pmax pmax
comp=Z,15nm,1.1s
WMOK Wichita Mounta 43.03 101 *e*P **P** 09 47 51.6 +1.2
comp=Z,15nm,1.1s
WMOK epP **pP** 09 48 21.1 +1.7
Z30A Sanderson Ranc 43.04 104 P **P** 09 47 51.3 +0.8
baz=43
425A Indio Mountain 43.23 110 P **P** 09 47 53.8 +1.6
baz=43
326A Caldwell Ranch 43.27 109 P **P** 09 47 53.7 +1.3
baz=43
TUL1 Tulsa 43.60 97 P **P** 09 47 55.5 +0.6
baz=43
SCHQ Schefferville 43.77 57 P **P** 09 47 56.8 +0.7
SCHQ PcP **PP** 09 49 40.5 +0.4
SCHQ ScP **ScP** 09 53 20.4 +0.8
SCHQ Schefferville 43.77 57 P **P** 09 47 56.8 +0.7
comp=Z,4.4nm,0.5s,baz=308,slow=9.7,SNR=26
SCHQ PcP **PP** 09 49 40.5 +0.4
comp=Z,3.4nm,0.6s,baz=227,slow=1.5,SNR=5.1
SCHQ ScP **ScP** 09 53 20.4 +0.8
comp=Z,1.8nm,0.7s,baz=178,slow=0.2,SNR=3.7
426A McDonald Obser 43.79 109 P **P** 09 47 58.3 +1.6

baz=44
Z32A Haskell 43.84 103 P P 09 47 57.8 +0.9
baz=44
230A Sterling City 44.19 105 P P 09 48 00.8 +1.1
baz=44
526A Mary Lane Ranc 44.26 110 P P 09 48 02.7 +2.2
baz=44
ABTX Abilene, Hawle 44.31 103 P P 09 48 01.8 +1.1
baz=44
428A Kincaid Ranch, 44.38 108 P P 09 48 03.5 +2.2
baz=44
527A Woodward Ranch 44.42 109 P P 09 48 03.3 +1.6
baz=44
231A Bronte 44.54 105 P P 09 48 03.3 +0.8
baz=44
SFIN Scholer Farm 44.55 85 P P 09 48 03.4 +0.9
baz=44
330A Mertzon 44.55 106 P P 09 48 03.9 +1.2
baz=44
528A Cox Ranch, San 44.80 108 P P 09 48 06.6 +2.0
baz=45
429A Davenport Ranc 44.85 107 P P 09 48 06.2 +1.2
baz=45
232A Coleman 44.90 104 P P 09 48 06.6 +1.2
baz=45
430A Baggett Ranch, 45.03 106 P P 09 48 07.7 +1.3
baz=45
TXAR Lajitas Array 45.07 110 P P 09 48 08.0 +1.2
TXAR pP **pP 09 48 37.6 +1.6**
TXAR PcP **PcP 09 49 45.0 -0.3**
TXAR ScP **ScP 09 53 26.0 +0.6**
TXAR PKiKP **PKiKP 09 56 42.1 -1.1**
TXAR Lajitas Array 45.07 110 P P 09 48 08.0 +1.2
comp=Z,2.0nm,1.1s,baz=317,slow=6.3,SNR=20
TXAR pP **pP 09 48 37.6 +1.6**
comp=Z,3.8nm,0.9s,baz=327,slow=7.6,SNR=9.7
TXAR PcP **PcP 09 49 45.0 -0.3**
comp=Z,0.4nm,0.6s,baz=318,slow=1.2,SNR=3.5
TXAR ScP **ScP 09 53 26.0 +0.6**
comp=Z,1.2nm,0.9s,baz=260,slow=3.6,SNR=8.2
TXAR PKiKP **PKiKP 09 56 42.1 -1.1**
comp=Z,0.1nm,0.5s,baz=318,slow=1.2,SNR=5.3
529A Stev Forest Ra 45.10 108 P P 09 48 08.8 +1.8
baz=45
627A Terlingua Ranc 45.10 110 P P 09 48 08.8 +1.7
baz=45
OLIL Olney 45.29 87 eP P 09 48 08.6 +0.3
comp=Z,20nm,0.8s
OLIL epP **pP 09 48 38.1 +0.6**
628A Black Gap, Mar 45.31 109 P P 09 48 10.5 +1.8
baz=45
431A Sonora 45.42 106 P P 09 48 10.9 +1.4
baz=45
530A J-C Ranch, Com 45.51 107 P P 09 48 11.7 +1.5
baz=45
432A Menard 45.66 105 P P 09 48 12.7 +1.3
baz=46
BLO Bloomington 45.75 86 eP P 09 48 12.5 +0.5
BLO e*PP **pP 09 48 41.2 0.0**
BLO pmax pmax
comp=Z,12nm,0.7s
BLO Bloomington 45.75 86 eP P 09 48 12.5 +0.5
comp=Z,12nm,0.7s
BLO epP **pP 09 48 41.2 0.0**
531A Rocksprings 45.88 106 P P 09 48 14.8 +1.7
baz=46
WHTX Lake Whitney 45.90 102 P P 09 48 14.3 +1.1
baz=46
USRK Ussuriysk Arra 45.94 285 P P 09 48 12.0 -1.3
comp=Z,8.5nm,0.7s,baz=53,slow=7.8,SNR=27
USRK PcP **PcP 09 49 47.4 -0.5**
comp=Z,0.7nm,0.7s,baz=29,slow=4.9,SNR=4.3
JCT Junction City 45.98 105 eP P 09 48 15.6 +1.7
JCT pmax pmax
comp=Z,20nm,0.6s
JCT Junction City 45.98 105 eP P 09 48 15.6 +1.7
comp=Z,20nm,0.6s
JCT Junction City 45.98 105 P P 09 48 15.4 +1.5
baz=46
532A Rocksprings 46.22 106 P P 09 48 17.7 +1.9
baz=46
631A Perdido Creek 46.49 107 P P 09 48 18.7 +0.8
baz=46
VLA Vladivostok 46.78 284⇑ *iP* **P 09 48 19.4 -0.5**
VLA pmax pmax
comp=Z,7.0nm,0.4s
632A Uvalde 46.79 106 P P 09 48 21.1 +0.9
baz=47
MDJ Mudanjiang 46.79 287 P P 09 48 19.8 -0.2
MDJ pmax pmax
comp=Z,16nm,0.8s
MDJ pmax pmax
comp=Z,38nm,5.3s
MDJ LR LR
comp=N,200nm,12.6s
MDJ LR LR
comp=E,220nm,10.7s
MDJ LR LR
comp=Z,360nm,12.0s
MDJ Mudanjiang 46.79 287 *eP* **P 09 48 19.8 -0.2**
comp=Z,9.5nm,0.8s
ALLY Alegheny Colle 47.07 78 *eP* **P 09 48 23.2 +1.0**
comp=Z,3.5nm,0.5s
ALLY epP **pP 09 48 52.9 +1.3**
732A Laxson Ranch, 47.35 107 P P 09 48 25.7 +1.2
baz=47
OXF Oxford 47.91 92 eP P 09 48 29.9 +1.2
OXF pmax pmax
comp=Z,29nm,0.9s
OXF Oxford 47.91 92 eP P 09 48 29.9 +1.2
comp=Z,29nm,0.9s
HIA Hailar 47.95 298 eP P 09 48 29.0 +0.1
comp=Z,18nm,0.8s
PLAL Pickwick Lake 48.21 91 eP P 09 48 32.0 +0.9
comp=Z,31nm,0.9s
PLAL epP **pP 09 48 58.8 -1.8**
MAJO Matsushiro 48.64 273 eP P 09 48 34.7 +0.3
MAJO pmax pmax
comp=Z,38nm,0.9s
MAJO Matsushiro 48.64 273 *eP* **P 09 48 34.7 +0.3**
comp=Z,38nm,0.9s
MAT Matsushiro 48.64 273 P P 09 48 34.1 -0.3
MJAR Matsushiro Arr 48.64 273 P P 09 48 34.4 +0.1
MJAR Matsushiro Arr 48.64 273 P P 09 48 34.4 +0.1
comp=Z,20nm,1.0s,baz=13,slow=6.4,SNR=52
BINY Binghamton 48.70 75 *eP* **P 09 48 35.8 +1.1**
comp=Z,7.0nm,0.7s
SWET Sewanee 49.11 89 eP P 09 48 37.9 -0.1
SWET epP **pP 09 49 08.3 +0.7**
CN2 Changchun 49.38 289 eP P 09 48 39.9 0.0
CN2 epP **pP 09 49 09.1 -0.4**
CN2 esP **sP 09 49 23.5 -0.3**
CN2 eS **S 09 55 34.6 -2.0**
CN2 pmax pmax
comp=Z,20nm,0.7s
ARCES ARCESS Array B 50.91 1 P P 09 48 51.1 +0.1
ARCES ARCESS Array B 50.91 1 P P 09 48 51.1 +0.1
comp=Z,1.1nm,0.6s,baz=15,slow=6.3,SNR=14
KMSC Kings Mountain 51.49 85 P P 09 48 56.9 +1.1
baz=51
LVZ Lovozero 52.42 356⇑ *eP* **P 09 49 01.4 -1.0**
LVZ pmax pmax
comp=Z,9.0nm,1.0s
TLY Talaya 52.81 310 *eP* **P 09 49 06.6 +1.2**
TLY pmax pmax
comp=Z,20nm,1.0s
KSRS Korea Array 53.06 282 P P 09 49 08.2 +0.8
comp=Z,26nm,0.6s,baz=38,slow=7.0,SNR=158
KSAR Wonju Array Be 53.09 282 P P 09 49 08.2 +0.6
INCN Inchon 53.68 283 *eP* **P 09 49 12.2 +0.2**
comp=Z,46nm,0.7s
MOY Mondy 53.83 312 *eP* **P 09 49 14.3 +1.4**
MOY pmax pmax
comp=Z,30nm,1.8s
ZAK Zakamensk 53.98 310 *eP* **P 09 49 13.8 -0.2**
ZAK pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 54.46 305 *eP* **P 09 49 18.4 +0.8**
comp=Z,29nm,0.6s
SONM Songino Array 54.76 306 P P 09 49 20.9 +1.1
SONM Songino Array 54.76 306 P P 09 49 20.9 +1.1
comp=Z,51nm,0.7s,baz=46,slow=6.3,SNR=341
DL2 Dalian 54.99 288 P P 09 49 21.8 +0.5
DL2 pmax pmax
comp=Z,31nm,0.8s
JNU Nakatsue 55.02 277 P P 09 49 21.3 -0.4
JNU Nakatsue 55.02 277 P P 09 49 21.3 -0.4
comp=Z,7.5nm,0.7s,baz=8.1,slow=7.1,SNR=7.1
BJT Baijiatuan 56.68 293 *eP* **P 09 49 33.3 -0.1**
comp=Z,36nm,0.5s
NVS Novosibirsk 57.10 325⇑ *iP* **P 09 49 34.8 -1.3**
NVS pmax pmax
comp=Z,45nm,0.8s
NVS pmax pmax
comp=N,12nm,0.7s
NVS pmax pmax
comp=E,15nm,0.7s
ZAA0 Zalesovo Array 57.41 323 *eP* **P 09 49 38.9 +0.6**
ZALV Zalesovo Beam 57.41 323 P P 09 49 38.6 +0.3
ZALV Zalesovo Beam 57.41 323 P P 09 49 38.5 +0.3
ZALV Zalesovo Beam 57.41 323 P P 09 49 38.5 +0.3
comp=E,55nm,0.6s,baz=31,slow=7.1,SNR=180
HHC Hu-ho-hao-te 58.12 297 *eP* **P 09 49 44.3 +0.7**
HHC pP pP 09 50 08.3 -5.8
HHC sP sP 09 50 21.4 -6.8
HHC PcP **PcP 09 50 35.8 +2.0**
HHC PP **PP 09 51 53.6 +0.3**
HHC ScP **ScP 09 54 23.3 +1.7**
HHC S **S 09 57 36.1 +1.5**
HHC ScS **ScS 09 59 20.3 -0.1**
HHC SS **SS 10 01 28.5 +1.3**
HHC pmax pmax
comp=Z,130nm,0.7s
HHC pmax pmax
comp=Z,120nm,9.6s
HHC LR LR
comp=N,210nm,13.2s
HHC LR LR
comp=E,230nm,21.6s
HHC LR LR
comp=Z,240nm,19.2s
NB2 NORSAR Subarra 58.85 9 P P 09 49 47.1 -1.2
comp=Z,2.2nm,1.0s,baz=351,slow=7.4
NOA NORSAR Array B 58.85 9 P P 09 49 47.0 -1.3
NOA NORSAR Array B 58.85 9 P P 09 49 47.0 -1.3
comp=Z,0.3nm,0.6s,baz=348,slow=6.4,SNR=2.9
FINES FINESS Array B 59.04 0 P P 09 49 48.7 -0.8
FINES FINESS Array B 59.04 0 P P 09 49 48.7 -0.8
comp=Z,2.4nm,0.7s,baz=5.6,slow=7.9,SNR=7.1
KLMR Klimovskoe 59.22 353 *eP* **P 09 49 49.7 -1.1**
KLMR pmax pmax
comp=Z,8.0nm,1.0s
SVE Sverdlovsk 60.60 339⇓ *eP* **P 09 50 00.3 0.0**
SVE pmax pmax
comp=Z,16nm,0.9s
ARU Arti 61.34 340 *c iP* **P 09 50 05.1 -0.2**
ARU 09 50 43.1
ARU S **S 09 58 18.1 +2.9**
ARU pmax pmax
comp=Z,17nm,0.7s
JOW Kunigami 61.44 275 *eP* **P 09 50 06.7 +0.3**
comp=Z,33nm,0.8s
KURK Kurchatov 62.07 326 *c iP* **P 09 50 10.2 0.0**
KURK pmax pmax
comp=Z,22nm,0.6s
KURK Kurchatov 62.07 326 *eP* **P 09 50 09.5 -0.7**
comp=Z,23nm,0.7s
BRVK Borovoye 62.13 332 *ceP* **P 09 50 10.6 0.0**
BRVK pmax pmax
comp=Z,35nm,0.8s
BRVK Borovoye 62.13 332 *eP* **P 09 50 10.2 -0.3**
comp=Z,26nm,0.7s
BVA0 Borovoye Array 62.13 332 *i* P **P 09 50 10.6 0.0**
BVA0 pmax pmax
comp=Z,6.0nm,0.5s
BVAR Borovoye Array 62.13 332 P P 09 50 10.1 -0.5
BVAR Borovoye Array 62.13 332 P P 09 50 10.1 -0.5
BVAR Borovoye Array 62.13 332 P P 09 50 10.1 -0.5
comp=Z,36nm,0.6s,baz=31,slow=6.4,SNR=174
KURBB Kurchatov Arra 62.18 326 P P 09 50 10.7 -0.2
comp=Z,20nm,0.6s,baz=29,slow=6.5,SNR=110
ZRNK Zerenda 62.53 333 *i P* **P 09 50 12.9 -0.3**
ZRNK pmax pmax
comp=Z,67nm,0.9s
GTA Gaotai 64.39 305⇑ P **P 09 50 25.9 0.0**
GTA pP **pP 09 50 56.3 -0.6**
GTA sP **sP 09 51 10.3 -0.6**
GTA PP **PP 09 52 51.5 +3.0**
GTA S **S 09 58 53.8 -0.1**
GTA sS **sS 09 59 47.3 -0.1**
GTA SS **SS 10 03 08.6 +3.3**
GTA pmax pmax
comp=Z,44nm,1.1s
GTA pmax pmax
comp=Z,120nm,5.5s
GTA LR LR
comp=N,84nm,14.7s
GTA LR LR
comp=E,110nm,15.7s
GTA LR LR
comp=Z,140nm,14.7s
MK31 Makanchi Array 64.46 321 *ceP* **P 09 50 25.6 -0.5**
MK31 pmax pmax
comp=Z,5.0nm,0.5s
MK31 Makanchi Array 64.46 321 *eP* **P 09 50 25.7 -0.4**
MKAR Makanchi Array 64.46 321 *ceP* **P 09 50 25.7 -0.4**
MKAR pmax pmax
comp=Z,8.0nm,0.5s
MKAR Makanchi Array 64.46 321 *eP* **P 09 50 25.9 -0.2**
MKAR Makanchi Array 64.46 321 P **P 09 50 25.8 -0.2**
comp=Z,7.8nm,0.5s,baz=40,slow=6.8,SNR=100
XAN Xi'an 64.90 295 P P 09 50 29.3 +0.2
XAN pP pP 09 50 53.3 -6.9
XAN pmax pmax
comp=Z,9.0nm,0.9s
OBN Obninsk 65.12 354⇓ *eP* **P 09 50 32.2 +2.1**
OBN pmax pmax
comp=Z,9.0nm,1.0s
WHN Wuhan 65.25 288 P P 09 50 31.8 +0.4
WHN pmax pmax
comp=Z,64nm,0.6s
WMQ Urumqi 65.27 316 P P 09 50 32.4 +1.0
WMQ pP pP 09 50 56.8 -5.7
WMQ pmax pmax
comp=Z,28nm,0.9s
WMQ pmax pmax
comp=Z,120nm,5.4s
WMQ LR LR
comp=N,120nm,6.8s
WMQ LR LR
comp=E,120nm,11.0s
WMQ LR LR
comp=Z,17nm,20.6s
LZH Lanzhou 65.47 300 *eP* **P 09 50 33.8 +0.9**
LZH pP **PcP 09 51 05.3 +1.5**
LZH PP **PP 09 52 57.1 -0.9**
LZH *eS* **S 09 59 05.1 -2.1**
LZH sS **sS 10 00 00.0 -0.9**
LZH SS **SS 10 03 26.1 +3.9**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,91nm,4.0s
AKTO Aktyubinsk 67.18 339 *c iP* **P 09 50 43.0 -0.4**
AKTO pmax pmax
comp=Z,1.0nm,0.6s
AKTO Aktyubinsk 67.18 339 P **P 09 50 43.4 0.0**
AKTO Aktyubinsk 67.18 339 P **P 09 50 43.4 0.0**
comp=Z,9.5nm,0.7s,baz=24,slow=7.7,SNR=31
SSLB Suanglung 67.63 279 *eP* **P 09 50 46.1 -0.6**
comp=Z,18nm,0.7s
ENH Enshi 67.78 292 *eP* **P 09 50 47.3 -0.2**
comp=Z,15nm,0.8s
AB31 Akbulak array 67.95 337 *ceP* **P 09 50 48.1 -0.1**
AB31 pmax pmax
comp=Z,7.0nm,0.4s
ABKAR Akbulak array 67.95 337 *eP* **P 09 50 48.3 +0.1**
comp=Z,13nm,0.6s
BAIF Baives 68.94 15 *eP* **P 09 50 52.4 -2.0**
BAIF Baives 68.94 15 *eP* **P 09 50 52.4 -2.0**
BAIF Baives 68.94 15 *eP* **P 09 50 52.4 -2.0**
GIVF Givet 68.98 15 *eP* **P 09 50 52.6 -2.0**
GIVF Givet 68.98 15 *eP* **P 09 50 52.6 -2.0**
GIVF Givet 68.98 15 *eP* **P 09 50 52.6 -2.0**
AKASG Malin Array Be 69.79 358 *ceP* **P 09 51 00.3 +0.7**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 69.79 358 P **P 09 50 58.1 -1.5**
AKASG Malin Array Be 69.79 358 P **P 09 50 58.1 -1.5**
comp=Z,2.2nm,0.5s,baz=3.9,slow=6.0,SNR=5.9
DPC Dobruska-Polom 69.84 7 *eP* **P 09 51 00.4 +0.4**
DPC pmax pmax
comp=Z,7.0nm,0.8s
DPC Dobruska-Polom 69.84 7 *eP* **P 09 51 00.4 +0.4**
comp=Z,7.1nm,0.8s
CD2 Chengdu 69.88 297 P P 09 51 03.8 +3.3
CD2 PcP **PcP 09 51 26.1 +3.9**
CD2 pP pP 09 51 29.4 -2.6
CD2 sP sP 09 51 40.8 -5.1
CD2 PP PP 09 53 41.3 +5.1
CD2 S **S 10 00 03.1 +3.4**
CD2 sS **SKSac 10 00 47.3 -1.9**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,430nm,12.2s
CD2 LR LR
comp=Z,190nm,10.7s
TKM2 Tokmak 2 70.01 324 *i P* **P 09 51 02.1 +0.7**
TKM2 Tokmak 2 70.01 324 *eP* **P 09 51 02.0 +0.7**
comp=Z,8.6nm,0.8s
TKM2 Tokmak 2 70.01 324 P **P 09 51 02.1 +0.7**
SNR=16
USP Ospenovka 70.01 325 P **P 09 51 01.9 +0.7**
SNR=8.0
CHMS Chumysh 70.18 325 P **P 09 51 03.1 +0.9**
SNR=7.5
KBK Karagaybulak 70.44 324 P **P 09 51 05.2 +1.2**
SNR=8.3
MEZF Maizieres J'vi 70.58 15 *eP* **P 09 51 02.6 -1.8**
MEZF Maizieres J'vi 70.58 15 *eP* **P 09 51 02.6 -1.8**
AAK Ala-Archa 70.59 325 *eP* **P 09 51 05.6 +0.7**
AAK pmax pmax
comp=Z,2.0nm,0.8s
AAK Ala-Archa 70.59 325 *eP* **P 09 51 05.5 +0.7**
comp=Z,2.2nm,0.8s
AAK Ala-Archa 70.59 325 P **P 09 51 05.7 +0.9**
SNR=7.1
AAK Ala-Archa 70.59 325 P **P 09 51 05.7 +0.9**
comp=Z,8.2nm,0.7s,baz=104,slow=2.1,SNR=27
EKS2 Erkin-Say 70.78 325 *eP* **P 09 51 06.7 +0.8**
EKS2 pmax pmax
comp=Z,16nm,0.8s
EKS2 Erkin-Say 70.78 325 *eP* **P 09 51 06.7 +0.8**
comp=Z,16nm,0.8s
EKS2 Erkin-Say 70.78 325 P **P 09 51 06.8 +0.9**
SNR=12
KHC Kasperske Hory 70.86 9 *eP* **P 09 51 05.5 -0.7**
KHC *e* 09 51 39.0
KHC Kasperske Hory 70.86 9 *eP* **P 09 51 05.5 -0.7**
KHC epP **pP 09 51 39.0 +1.2**
SFTF Sexfontaines 70.87 15 *eP* **P 09 51 04.1 -2.1**
SFTF Sexfontaines 70.87 15 *eP* **P 09 51 04.1 -2.1**
KZA Kyzart 70.88 324 P **P 09 51 07.7 +0.8**
SNR=6.2
GERES GERESS Array B 71.15 9 P **P 09 51 07.9 -0.1**
GERES GERESS Array B 71.15 9 P **P 09 51 07.9 -0.1**
comp=Z,0.4nm,0.6s,baz=341,slow=5.2,SNR=3.7
KK31 Karatay Array 71.28 328 *ceP* **P 09 51 08.8 0.0**
KK31 pmax pmax
comp=Z,10.0nm,0.6s
KKAR Karatay Array 71.28 328 *eP* **P 09 51 08.9 +0.1**
KKAR pmax pmax
comp=Z,10.0nm,0.6s
KKAR Karatay Array 71.28 328 *eP* **P 09 51 08.9 +0.1**
comp=Z,9.7nm,0.6s
AML Almayashu 71.29 325 P **P 09 51 10.5 +1.2**
SNR=16
HINF Hinteralfeld 71.48 14 *eP* **P 09 51 07.9 -2.1**
HINF Hinteralfeld 71.48 14 *eP* **P 09 51 07.9 -2.1**
HINF Hinteralfeld 71.48 14 *eP* **P 09 51 07.9 -2.1**
LOR Lormes 71.62 16 *eP* **P 09 51 08.7 -2.1**
comp=Z,4.9nm,0.9s
LOR Lormes 71.62 16 *eP* **P 09 51 08.7 -2.1**
comp=Z,4.9nm,0.9s
SSF Saint Saulge 71.78 16 *eP* **P 09 51 09.7 -2.0**
comp=Z,12nm,0.9s
SSF Saint Saulge 71.78 16 *eP* **P 09 51 09.7 -2.0**
SSF pmax pmax
comp=Z,13nm,0.9s
SSF Saint Saulge 71.78 16 *eP* **P 09 51 09.7 -2.0**
comp=Z,12nm,0.9s
AVF Avril sur Loir 72.02 17 *eP* **P 09 51 10.8 -2.3**
comp=Z,13nm,1.0s
AVF Avril sur Loir 72.02 17 *eP* **P 09 51 10.8 -2.3**
AVF pmax pmax
comp=Z,13nm,1.0s
AVF Avril sur Loir 72.02 17 *eP* **P 09 51 10.8 -2.3**
comp=Z,13nm,1.0s
BGF Bois d'Agland 72.17 17 *eP* **P 09 51 11.8 -2.3**
comp=Z,9.2nm,0.7s
BGF Bois d'Agland 72.17 17 *eP* **P 09 51 11.8 -2.3**
BGF pmax pmax
comp=Z,9.0nm,0.7s
BGF Bois d'Agland 72.17 17 *eP* **P 09 51 11.8 -2.3**
comp=Z,9.2nm,0.7s
SMF Signal de Mont 72.23 16 *eP* **P 09 51 12.1 -2.3**
comp=Z,10nm,1.0s
SMF Signal de Mont 72.23 16 *eP* **P 09 51 12.1 -2.3**
SMF pmax pmax
comp=Z,11nm,1.0s
SMF Signal de Mont 72.23 16 *eP* **P 09 51 12.1 -2.3**
comp=Z,10nm,1.0s
GYA Guiyang 72.32 292 *eP* **P 09 51 15.6 +0.2**
GYA pP **pP 09 51 48.3 +1.2**
GYA sP **sP 09 52 01.8 +0.9**
GYA S **S 10 00 27.5 -0.7**
GYA SKS **SKSac 10 01 03.3 -4.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s
TCF Toulx Ste Croi 72.34 18 *eP* **P 09 51 13.1 -2.0**
comp=Z,6.3nm,0.9s
TCF Toulx Ste Croi 72.34 18 *eP* **P 09 51 13.1 -2.0**
TCF pmax pmax
comp=Z,6.0nm,0.9s
TCF Toulx Ste Croi 72.34 18 *eP* **P 09 51 13.1 -2.0**
comp=Z,6.3nm,0.9s
CABF La Chapelle 72.57 15 *eP* **P 09 51 14.6 -1.9**
comp=Z,13nm,1.1s
CABF La Chapelle 72.57 15 *eP* **P 09 51 14.6 -1.9**
CABF pmax pmax
comp=Z,13nm,1.1s
CABF La Chapelle 72.57 15 *eP* **P 09 51 14.6 -1.9**
comp=Z,13nm,1.1s
KSH Kashi 73.00 322 *i* P P 09 51 22.9 +3.6
KSH *e*PcP **PcP 09 51 40.0 +4.5**
KSH *e*pP pP 09 51 54.3 +3.3
KSH *e*sP sP 09 52 08.3 +3.5
KSH *e*PP PP 09 54 08.3 +5.6
KSH *e*S **S 10 00 36.3 +0.7**
KSH *e*SKS **SKSac 10 01 11.8 -0.9**
KSH ScS **ScS 10 01 14.8 -0.4**
KSH *e*sS sS 10 01 30.6 +0.3
KSH SS **SS 10 05 20.3 +2.6**
KSH pmax pmax
comp=Z,23nm,0.7s
KSH pmax pmax
comp=Z,210nm,3.5s
KSH LR LR
comp=N,97nm,5.0s
KSH LR LR
comp=E,93nm,8.4s
KSH LR LR
comp=Z,130nm,5.8s
LFF La Frestale 73.42 19 *eP* **P 09 51 19.5 -1.9**
LFF La Frestale 73.42 19 *eP* **P 09 51 19.5 -1.9**
LFF La Frestale 73.42 19 *eP* **P 09 51 19.5 -1.9**
VIVF Saint-Julien-l 74.10 16 *eP* **P 09 51 23.5 -2.0**
comp=Z,3.4nm,0.7s
VIVF Saint-Julien-l 74.10 16 *eP* **P 09 51 23.5 -2.0**
VIVF pmax pmax
comp=Z,3.0nm,0.7s
VIVF Saint-Julien-l 74.10 16 *eP* **P 09 51 23.5 -2.0**
comp=Z,3.4nm,0.7s
MTLF Montolieu 75.22 18 *eP* **P 09 51 30.0 -1.9**
comp=Z,8.0nm,0.8s
MTLF Montolieu 75.22 18 *eP* **P 09 51 30.0 -1.9**
MTLF pmax pmax
comp=Z,8.0nm,0.8s
MTLF Montolieu 75.22 18 *eP* **P 09 51 30.0 -1.9**
comp=Z,8.0nm,0.8s
KIV Kislovodsk 75.72 348 *eP* P 09 51 31.3 -3.6
KIV *e*S **S 10 01 04.4 -1.3**
KIV *e*SSS SSS 10 09 21.3
KIV pmax pmax

comp=Z,7.0nm,1.1s
KBZ Khabaz 75.93 348 P **P** **09 51 35.1 -0.8**
KBZ Khabaz 75.93 348 P **P** **09 51 35.1 -0.8**
KBZ Khabaz 75.93 348 P **P** **09 51 35.1 -0.8**
comp=Z,4.1nm,1.0s,baz=11,slow=5.2,SNR=4.9
LSA Lhasa 76.34 306 *e*P **P** **09 51 40.6 +1.5**
LSA pmax pmax
comp=Z,11nm,0.6s
LSA Lhasa 76.34 306 *e*P **P** **09 51 40.6 +1.5**
comp=Z,11nm,0.6s
QIZ Qiongzhong 77.13 286 P **P** **09 51 43.8 +0.8**
QIZ S **S** **10 01 22.8 +1.3**
ESDC Sonseca Array 77.66 24 P **P** **09 51 45.6 -0.2**
ESDC Sonseca Array 77.66 24 P **P** **09 51 45.6 -0.2**
comp=Z,1.9nm,0.7s,baz=345,slow=5.1,SNR=11
TAPN Taplejung 79.81 308 *e*P **P** **09 51 57.9 -0.1**
comp=Z,55nm,0.6s
GUN Gumba 80.03 309 *e*P **P** **09 51 59.8 +0.5**
comp=Z,58nm,1.1s
KKN Kakani 80.38 310 *e*P **P** **09 52 01.8 +0.8**
comp=Z,15nm,0.6s
ODAN Odare 80.38 308 *e*P **P** **09 52 01.0 0.0**
comp=Z,29nm,0.8s
DANN Dangsing 80.45 311 *e*P **P** **09 52 01.8 +0.3**
comp=Z,81nm,0.7s
PKIN Phulchoki 80.52 310 *e*P **P** **09 52 02.4 +0.6**
PKI Pulchoki 80.52 310 *e*P **P** **09 52 02.4 +0.5**
comp=Z,29nm,0.9s
DMN Daman 80.61 310 *e*P **P** **09 52 02.0 -0.2**
RAMN Ramite 80.61 308 *e*P **P** **09 52 02.2 -0.1**
BRTR Keskin Array B 80.62 355 P **P** **09 52 00.7 -1.3**
BRTR pP **pP** **09 52 31.2 -3.1**
BRTR Keskin Array B 80.62 355 P **P** **09 52 00.7 -1.3**
comp=Z,0.7nm,0.6s,baz=328,slow=5.1,SNR=4.2
BRTR pP **pP** **09 52 31.2 -3.1**
comp=Z,2.5nm,1.0s,baz=18,slow=5.0,SNR=3.9
PYUN Piuthan 80.97 312 *e*P **P** **09 52 03.8 -0.3**
comp=Z,68nm,0.9s
KOLN Koldanda 81.04 311 *e*P **P** **09 52 04.5 0.0**
comp=Z,20nm,0.8s
OTAV Otavalo 82.21 103 *e*P **P** **09 52 11.2 +0.2**
comp=Z,3.2nm,0.6s
CHTO Chiang Mai 82.48 295 *e*P **P** **09 52 11.8 -0.1**
CHTO pmax pmax
comp=Z,9.0nm,0.9s
CHTO Chiang Mai 82.48 295 *e*P **P** **09 52 11.8 -0.1**
comp=Z,8.7nm,0.9s
CM31 Chiang Mai Arr 82.79 294 *e*P **P** **09 52 13.8 +0.3**
comp=Z,7.0nm,0.5s
CMAR Chiang Mai Arr 82.79 294 P **P** **09 52 12.6 -0.9**
CMAR Chiang Mai Arr 82.79 294 P **P** **09 52 12.6 -0.9**
comp=Z,9.1nm,0.6s,baz=12,slow=5.4,SNR=16
KEST Kesra 83.69 14 P **P** **09 52 16.9 -1.0**
KEST Kesra 83.69 14 P **P** **09 52 16.9 -1.0**
comp=Z,0.7nm,0.7s,baz=8.7,slow=5.9,SNR=2.9
KKM Kota Kinabalu 85.06 273 *e*P **P** **09 52 26.2 +1.0**
comp=Z,13nm,1.0s
COEN Coen 89.33 240 *e*P **P** **09 52 44.2 -1.2**
comp=Z,45nm,0.7s
CTA Charters Tower 93.48 235 P **P** **09 53 03.5 -1.0**
CTA Charters Tower 93.48 235 P **P** **09 53 03.5 -1.0**
comp=Z,9.8nm,0.7s,baz=35,slow=3.9,SNR=14
CTAO Charters Tower 93.48 235 *e*P **P** **09 53 04.1 -0.5**
CTAO pmax pmax
comp=Z,9.0nm,0.7s
CTAO Charters Tower 93.48 235 *e*P **P** **09 53 04.1 -0.5**
comp=Z,9.4nm,0.7s
WRA Warramunga Arr 98.56 245 P **P** **09 53 25.2 -2.4**
WRA PKiKP **PKiKP** **09 57 57.6 -1.0**
WRA Warramunga Arr 98.56 245 P **P** **09 53 25.2 -2.4**
comp=Z,0.2nm,0.2s,baz=35,slow=5.7,SNR=6.3
WRA PKiKP **PKiKP** **09 57 57.6 -1.0**
comp=Z,0.2nm,0.5s,baz=20,slow=1.5,SNR=9.9
ASAR Alice Springs 101.98 244 P **Pdif** **09 53 43.2 +0.4**
ASAR Alice Springs 101.98 244 P **Pdif** **09 53 43.2 +0.4**
comp=Z,0.2nm,0.7s,baz=33,slow=3.9,SNR=6.7
TORD Torodi Ar. Bea 104.51 25 PKiKP **PKiKP** **09 58 08.7 -1.0**
TORD PKKPbc **PKKPbc** **10 09 36.6 +0.2**
TORD Torodi Ar. Bea 104.51 25 PKiKP **PKiKP** **09 58 08.7 -1.0**
comp=Z,0.5nm,1.0s,baz=340,slow=2.5,SNR=4.4
TORD PKKPbc **PKKPbc** **10 09 36.6 +0.2**
comp=Z,1.0nm,0.7s,baz=175,slow=1.9,SNR=5.6
CASY Casey 144.23 223 *e*PKPdf **PKPab** **09 59 20.3 -0.6**
LBTB Lobatse 145.18 2 *e*PKPdf **PKPbc** **09 59 25.4 -0.3**
BOSA Boshof 148.76 2 PKP **PKPdf** **09 59 30.4 -1.3**
BOSA *e*PKPbc **PKPbc** **09 59 35.0 -0.7**
BOSA Boshof 148.76 2 PKP **PKPdf** **09 59 30.4 -1.3**
comp=Z,13nm,0.6s,baz=49,slow=3.4,SNR=5.4
BOSA PKPbc **PKPbc** **09 59 34.9 -0.7**
comp=Z,13nm,0.6s,baz=354,slow=3.3,SNR=49
QSPA South Pole Qui 149.65 180 PKP **PKPdf** **09 59 28.5 -3.3**
QSPA *e*PKPdf PKPbc 09 59 30.3 -6.3
QSPA *e*PKPbc **PKiKP** **09 59 36.4 -1.1**
QSPA PKPbc **PKPbc** **09 59 36.5 -0.1**
QSPA South Pole Qui 149.65 180 PKP **PKPdf** **09 59 28.5 -3.3**
comp=Z,5.3nm,1.2s,baz=282,slow=0.9,SNR=4.4
QSPA PKPbc **PKPbc** **09 59 36.5 -0.1**
comp=Z,12nm,0.6s,baz=63,slow=0.7,SNR=74
MAW Mawson 162.46 229 PKPab **PKPab** **10 00 36.6 -0.5**
MAW Mawson 162.46 229 PKPab **PKPab** **10 00 36.6 -0.5**
comp=Z,11nm,0.9s,baz=105,slow=6.7,SNR=16

IDC 24 09:40:15.2±2.2, 14°27S×166°65E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.7/4, Error ellipse: s-maj=111.7km s-min=28.4km az=138.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**28.84**	**228**	P	P	09 46 15.0	-0.5
	1.7nm,0.9s,baz=52,slow=11,SNR=5.5						
WRA	**Warramunga Arr**	**31.36**	**255**	P	P	09 46 38.3	+0.4
	0.5nm,0.4s,baz=83,slow=8.5,SNR=17						
ASAR	**Alice Springs**	**32.28**	**248**	P	P	09 46 45.9	-0.1
	0.6nm,0.8s,baz=81,slow=8.6,SNR=8.2						
ILAR	**Eielson Array**	**86.28**	**18**	P	P	09 52 58.8	+0.3
	0.3nm,0.7s,baz=233,slow=5.5,SNR=4.2						
ARCES	**ARCESS Array B**	**119.66**	**345**	PKP	PKPdf	09 59 05.9	-0.7
	0.6nm,0.7s,baz=64,slow=2.1,SNR=3.7						

CASC 24 09:56:31.1±2.1, 13°87N×91°66W, h24km±16km, MD3.5, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.45**	**3**	*e*P	Pn	09 56 41.6	-0.5
JAT				*e*S	Sb	09 56 47.7	+0.9
FUG	**Fuego 3**	**0.98**	**54**	*e*P	Pn	09 56 48.8	-0.9
FUG				*e*S	Sn	09 57 03.1	+0.1
PCG	**Pacaya**	**1.15**	**63**	*e*P	Pn	09 56 52.0	-0.1
PCG				*e*S	Sb	09 57 08.9	+1.5
RBDL	**Robledal**	**1.94**	**82**	*e*P	Pn	09 57 03.2	+0.4
RBDL				*e*S	Sn	09 57 27.9	+1.5
RTR	**El Retiro**	**1.96**	**89**	*e*P	Pn	09 57 03.9	+0.8
RTR				*e*S	Sn	09 57 28.1	+1.0
SBLS	**San Blas**	**1.98**	**91↑**	*e*P	Pn	09 57 03.6	+0.1
SBLS				*e*S	Sn	09 57 27.8	0.0
SNJE	**San Jose**	**2.00**	**90**	*e*P	Pn	09 57 04.1	+0.5

*IDC **24** 09:57:09.8±0.5, 4.°00S×104.°04W, h0km, mb4.7/20, mb1 4.9/20, mb1mx4.8/23, mbtmp4.7/20, MS5.0/26, Ms1 5.0/26, ms1mx5.0/29, Error ellipse: s-maj=21.4km s-min=11.5km az=59.0*

*MOS **24** 09:57:10.6±1.1, 3.°96S×103.°88W, h10km, mb5.2/40, Error ellipse: s-maj=14.3km s-min=5.7km az=99.6*

*ISCJB **24** 09:57:11.6±0.2, 3.°98S±0.°04×103.°92W±0.°04, h18km, mb5.0/144, MS5. 1/189, Error ellipse: s-maj=6.6km s-min=4.6km az=152.3*

*NEIC **24** 09:57:11.1±0.2, 4.°05S×103.°97W, h6km, mb5.1/121, MS5.1/152, MW5.5, Error ellipse: s-maj=6.5km s-min=3.6km az=60.0, Moment Tensor Solution. s41 Moment tensor: Scale 10^{17}Nm; M_{rr}0.24; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-0.63; $M_{r\theta}$-0.09; $M_{\theta\phi}$2.15; $M_{r\phi}$0.17; Best double couple: M_o2.20000×10^{17} NP1:ϕ_s97.00000°, δ86.00000°, λ-2.00000°. NP2:ϕ_s187.00000°, δ88.00000°, λ-176.00000°. Principal axes: T 2.0900, Plg0.0000°, Azm321.0000°; N 0.2500, Plg85.0000°, Azm218.0000°; P -2.3400, Plg4.0000°, Azm51.0000°;*

*BJI **24** 09:57:12.0, 4.°00S×103.°90W, h10km, mB5.3/15, Ms5.6/17, Ms7 5.3/18*

*GCMT **24** 09:57:16.5±0.1, 4.°00S×103.°88W, h22km, MW5.6, Moment Tensor Solution. s91,c170; s57,c66; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.55±.04; $M_{\theta\theta}$1.34±.04; $M_{\phi\phi}$-0.79±.04; $M_{r\theta}$0.44±.08; $M_{\theta\phi}$3.16±.04; $M_{r\phi}$-0.03±.08; Best double couple: M_o3.40000×10^{17} NP1:ϕ_s9.00000°, δ82.00000°, λ-179.00000°. NP2:ϕ_s279.00000°, δ89.00000°, λ-8.00000°. Principal axes: T 3.6400, Plg5.0000°, Azm325.0000°; N -0.5500, Plg82.0000°, Azm91.0000°; P -3.0900, Plg6.0000°, Azm234.0000°; Data Used: II IU CN IC G. Surface waves: sta=106, comp=222, per= 50.*

ISC 24 09:57:13.0±0.3, 4.°06S±0.°06×103.°98W±0.°06, h18km, n784, σ0°96/709, mb5.1/145, MS5.1/189, 68C-68D, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAYG	**Puerto Ayora**	**14.09**	**77**	*e*Pn	**Pn**	**10 00 32.6**	**+0.8**
JTS	**JuntasAbangare**	**23.71**	**53**	*e*P	**P**	**10 02 24.1**	**-0.2**
	4μm,2.3s						
JTS				LR	LR		
	comp=Z,11μm,19.0s						
TGUH	**Tegucigalpa,Un**	**24.47**	**42**	*e*P	**P**	**10 02 30.1**	**-1.1**
	comp=Z,131nm,1.4s						
TGUH				LR	LR		
	comp=Z,2μm,19.0s						
ATAH	**Atahualpa**	**25.64**	**98**	P	**P**	**10 02 43.4**	**+1.0**
ATAH	**Atahualpa**	**25.64**	**98**	P	**P**	**10 02 43.4**	**+1.0**
	comp=Z,19nm,1.1s,baz=292,slow=11,SNR=18						
ATAH				LR	LR	10 10 18.9	
	comp=Z,3μm,20.6s,baz=107,slow=31						
OTAV	**Otavalo**	**25.86**	**81**	*e*P	**P**	**10 02 44.6**	**+0.1**
	comp=Z,50nm,1.6s						
OTAV				LR	LR		
	comp=Z,1μm,21.0s						
BCIP	**Isla Barro Col**	**27.42**	**61**	PFAKE		10 03 10.0	+12
BCIP				LR	LR		
	comp=Z,8μm,20.0s						
NNA	**Nana**	**27.98**	**108**	*e*P	**P**	**10 03 04.3**	**+1.3**
	comp=Z,41nm,1.1s						
NNA	**Nana**	**27.98**	**108**	P	**P**	**10 03 03.9**	**+0.8**
	comp=Z,16nm,0.9s,baz=280,slow=14,SNR=5.9						
NNA				LR	LR	10 11 06.9	
	comp=Z,5μm,20.7s,baz=289,slow=30						
TEIG	**Tepich**	**28.64**	**32**	LR	LR	10 13 00.9	
	comp=Z,6μm,18.4s,baz=90,slow=33						
LPIG	**La Paz**	**28.66**	**348**	LR	LR	10 11 38.6	
	comp=Z,436nm,21.4s,baz=167,slow=30						
ROSC	**El Rosal**	**30.92**	**74**	*e*P	**P**	**10 03 31.2**	**+1.7**
ROSC	**El Rosal**	**30.92**	**74**	P	**P**	**10 03 28.9**	**-0.6**
	comp=Z,3.4nm,0.4s,baz=101,slow=21,SNR=8.3						
ROSC				LR	LR	10 12 33.4	
	comp=Z,2μm,20.3s,baz=205,slow=30						
732A	**Laxson Ranch,**	**32.83**	**7**	↑P	**P**	**10 03 45.8**	**+0.2**
	baz=33						
TXAR	**Lajitas Array**	**33.20**	**1**	P	**P**	**10 03 48.8**	**-0.3**
TXAR				PcP	**PcP**	**10 06 31.8**	**+0.1**
TXAR	**Lajitas Array**	**33.20**	**1**	P	**P**	**10 03 48.8**	**-0.3**
	comp=Z,4.1nm,1.0s,baz=191,slow=9.2,SNR=25						
TXAR				PcP	**PcP**	**10 06 31.8**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=204,slow=5.9,SNR=2.5						
TXAR				LR	LR	10 15 45.6	
	comp=Z,2μm,18.4s,baz=0.0,slow=34						
627A	**Terlingua Ranc**	**33.32**	**1**	↑P	**P**	**10 03 50.5**	**+0.4**
	baz=34,SNR=16						
628A	**Black Gap, Mar**	**33.37**	**2**	P	**P**	**10 03 51.2**	**+0.8**
	baz=34,SNR=10						
626A	**Big Bend Ranch**	**33.42**	**360**	↓P	**P**	**10 03 51.3**	**+0.4**
	baz=34,SNR=21						
631A	**Perdo Creek**	**33.44**	**5**	↓P	**P**	**10 03 51.0**	**0.0**
	baz=34,SNR=12						
526A	**Mary Lane Ranc**	**33.92**	**360**	P	**P**	**10 03 56.0**	**+0.6**
	baz=34,SNR=16						
527A	**Woodward Ranch**	**34.01**	**1**	P	**P**	**10 03 56.5**	**+0.4**
	baz=34,SNR=36						
529A	**Stev Forest Ra**	**34.03**	**3**	↓P	**P**	**10 03 56.7**	**+0.5**
	baz=34,SNR=32						
528A	**Cox Ranch, San**	**34.04**	**2**	↓P	**P**	**10 03 56.7**	**+0.3**
	baz=34,SNR=12						
530A	**J-C Ranch, Com**	**34.11**	**4**	P	**P**	**10 03 57.2**	**+0.4**
	baz=34,SNR=29						
531A	**Rocksprings**	**34.19**	**5**	↑P	**P**	**10 03 58.0**	**+0.5**
	baz=34,SNR=19						
MTDJ	**Mount Denham**	**34.20**	**49**	PFAKE		10 04 10.0	+12
MTDJ				LR	LR		
	comp=Z,2μm,21.0s						
532A	**Rocksprings**	**34.22**	**6**	↓P	**P**	**10 03 58.0**	**+0.2**
	baz=34,SNR=10						
426A	**Mcdonald Obser**	**34.53**	**360**	↓P	**P**	**10 04 01.1**	**+0.4**
	baz=35,SNR=16						
429A	**Davenport Ranc**	**34.55**	**3**	P	**P**	**10 04 02.1**	**+1.5**
	baz=35,SNR=10.0						
JCT	**Junction City**	**34.57**	**6**	*e*P	**P**	**10 04 00.5**	**-0.4**
JCT				pmax	pmax		
	comp=Z,30nm,0.8s						
JCT				MLR	MLR		
	comp=Z,1μm,20.0s						
JCT	**Junction City**	**34.57**	**6**	*e*P	**P**	**10 04 00.5**	**-0.4**
	comp=Z,30nm,0.8s						
JCT				LR	LR		
	comp=Z,1μm,20.0s						
JCT	**Junction City**	**34.57**	**6**	P	**P**	**10 04 01.3**	**+0.4**
	baz=35,SNR=14						
428A	**Kincaid Ranch,**	**34.61**	**2**	↑P	**P**	**10 04 01.7**	**+0.4**
	baz=35,SNR=7.4						
425A	**Indio Mountain**	**34.66**	**358**	↓P	**P**	**10 04 02.0**	**+0.3**
	baz=35,SNR=22						
431A	**Sonora**	**34.69**	**5**	P	**P**	**10 04 02.5**	**+0.6**
	baz=35,SNR=13						
HKT	**Hockley**	**34.70**	**12**	*e*P	**P**	**10 04 03.5**	**+1.6**
HKT				pmax	pmax		
	comp=Z,45nm,1.7s						
HKT	**Hockley**	**34.70**	**12**	*e*P	**P**	**10 04 03.5**	**+1.6**
	comp=Z,45nm,1.7s						
427A	**Hayter Ranch,**	**34.72**	**1**	↑P	**P**	**10 04 02.9**	**+0.7**
	baz=35,SNR=26						
430A	**Bagget Ranch,**	**34.75**	**4**	↓P	**P**	**10 04 02.4**	**0.0**
	baz=35,SNR=7.6						
432A	**Menard**	**34.97**	**6**	P	**P**	**10 04 04.4**	**+0.2**
	baz=35,SNR=12						
326A	**Caldwell Ranch**	**35.18**	**0**	P	**P**	**10 04 05.8**	**-0.3**
	baz=35,SNR=6.7						
325A	**Bean Ranch, Si**	**35.24**	**359**	P	**P**	**10 04 07.0**	**+0.2**
	baz=35,SNR=29						
328A	**Wristen Ranch,**	**35.26**	**2**	↑P	**P**	**10 04 06.8**	**0.0**
	baz=35						
324A	**Moseley Ranch,**	**35.33**	**358**	P	**P**	**10 04 07.2**	**-0.3**
	baz=36,SNR=31						
331A	**San Angelo**	**35.33**	**5**	P	**P**	**10 04 07.4**	**0.0**
	baz=36,SNR=18						
330A	**Mertzon**	**35.37**	**4**	P	**P**	**10 04 07.7**	**-0.1**
	baz=36,SNR=12						
329A	**Wagon Wheel Ra**	**35.40**	**3**	↑P	**P**	**10 04 08.4**	**+0.4**
	baz=36						
RKT	**Rikitea**	**35.44**	**235**	*e*S	**S**	**10 09 41.6**	**-1.3**
	comp=Z,974nm,29.0s						
RKT				*e*LR	LR	10 13 41.4	
	comp=Z,8μm,27.2s,baz=54						
320A	**Kipp Ranch, An**	**35.46**	**353**	P	**P**	**10 04 09.3**	**+0.6**
	baz=36,SNR=8.1						
332A	**Millersview**	**35.47**	**6**	P	**P**	**10 04 08.2**	**-0.4**
	baz=36,SNR=19						
MNTX	**Cornudas Mount**	**35.58**	**358**	*e*P	**P**	**10 04 08.7**	**-0.9**
MNTX				LR	LR		
	comp=Z,2μm,19.0s						
319A	**Douglas**	**35.60**	**352**	↓P	**P**	**10 04 10.2**	**+0.4**
	baz=36,SNR=12						
230A	**Sterling City**	**35.85**	**4**	P	**P**	**10 04 11.8**	**-0.1**
	baz=36,SNR=16						
229A	**Bryant Ranch,**	**35.88**	**3**	↓P	**P**	**10 04 12.3**	**+0.2**
	baz=36						
226B	**Tecolote Peak,**	**35.94**	**360**	P	**P**	**10 04 12.9**	**+0.3**
	baz=36,SNR=52						
224A	**Cornudas Mount**	**35.96**	**358**	P	**P**	**10 04 12.6**	**-0.3**
	baz=36,SNR=29						
231A	**Bronte**	**35.96**	**5**	P	**P**	**10 04 12.6**	**-0.2**
	baz=36,SNR=32						
225A	**Deer Hill, Car**	**35.98**	**359**	P	**P**	**10 04 12.6**	**-0.5**
	baz=36,SNR=6.4						
232A	**Coleman**	**35.98**	**6**	P	**P**	**10 04 12.7**	**-0.3**
	baz=36,SNR=31						
220A	**Playas Peak, P**	**36.02**	**353**	↓P	**P**	**10 04 14.1**	**+0.6**
	baz=36,SNR=31						
221A	**Mesquite Ranch**	**36.05**	**355**	P	**P**	**10 04 14.9**	**+1.2**
	baz=36,SNR=6.2						
GDL2	**Guadalupe Moun**	**36.06**	**359**	*e*P	**P**	**10 04 13.6**	**-0.1**
222A	**Williams Famil**	**36.08**	**356**	↓P	**P**	**10 04 14.7**	**+0.7**
	baz=36						
WHTX	**Lake Whitney**	**36.38**	**9**	↑P	**P**	**10 04 16.4**	**0.0**
	baz=37						
126A	**Clayton Basin,**	**36.50**	**360**	↓P	**P**	**10 04 17.5**	**+0.1**
	baz=37						
128A	**Castleberry Fa**	**36.51**	**2**	↓P	**P**	**10 04 17.4**	**-0.1**
	baz=37						
125A	**Gardner Draw,**	**36.52**	**359**	↑P	**P**	**10 04 17.7**	**+0.1**
	baz=37,SNR=16						
127A	**Arkansas Junct**	**36.54**	**1**	P	**P**	**10 04 18.0**	**+0.2**
	baz=37,SNR=11						
129A	**Stewart Farms,**	**36.54**	**3**	P	**P**	**10 04 17.8**	**-0.1**
	baz=37,SNR=10						
123A	**Bell Site, Whi**	**36.55**	**357**	P	**P**	**10 04 18.5**	**+0.5**
	baz=37,SNR=5.5						
130A	**Snyder**	**36.56**	**4**	P	**P**	**10 04 17.8**	**-0.2**
	baz=37,SNR=12						
121A	**Cookes Peak, D**	**36.57**	**355**	P	**P**	**10 04 18.7**	**+0.5**
	baz=37,SNR=25						
124A	**Stringfield Ra**	**36.58**	**358**	P	**P**	**10 04 18.9**	**+0.6**
	baz=37,SNR=31						
122A	**Conniff Cattle**	**36.67**	**356**	P	**P**	**10 04 20.2**	**+1.3**
	baz=37,SNR=14						
120A	**U Bar Ranch, L**	**36.67**	**353**	P	**P**	**10 04 19.7**	**+0.7**
	baz=37,SNR=16						
131A	**Roby**	**36.69**	**5**	P	**P**	**10 04 18.4**	**-0.6**
	baz=37,SNR=21						
ABTX	**Abilene, Hawle**	**36.71**	**6**	P	**P**	**10 04 19.1**	**-0.1**
	baz=37,SNR=19						
TUC	**Tucson**	**36.74**	**350**	*e*P	**P**	**10 04 19.5**	**0.0**
TUC				MLR	MLR		
	comp=Z,2μm,20.0s						
TUC	**Tucson**	**36.74**	**350**	*e*P	**P**	**10 04 19.4**	**0.0**
	comp=Z,4.6nm,1.5s						
TUC				LR	LR		
	comp=Z,2μm,20.0s						
214A	**Organ Pipe Nat**	**36.79**	**347**	P	**P**	**10 04 20.1**	**+0.3**
	baz=37,SNR=9.7						
GTBY	**Guantanamo Bay**	**37.05**	**49**	PFAKE		10 04 30.0	+7.8
GTBY				LR	LR		
	comp=Z,2μm,20.0s						
Z26A	**Caprock**	**37.13**	**0**	P	**P**	**10 04 22.6**	**-0.2**
	baz=37,SNR=13						
Z25A	**Roswell**	**37.14**	**359**	P	**P**	**10 04 22.6**	**-0.3**
	baz=37,SNR=24						
Z28A	**Tucker Farm, M**	**37.17**	**2**	P	**P**	**10 04 23.4**	**+0.2**
	baz=37,SNR=15						
Z27A	**Tatum**	**37.18**	**1**	P	**P**	**10 04 22.9**	**-0.3**
	baz=37,SNR=66						
Z29A	**Hungry Hill Ra**	**37.18**	**3**	P	**P**	**10 04 22.9**	**-0.3**
	baz=37,SNR=14						
Z23A	**Rita Site, Whi**	**37.18**	**357**	P	**P**	**10 04 24.4**	**+1.1**
	baz=37,SNR=15						
Z24A	**Sheeppen Canyo**	**37.21**	**358**	P	**P**	**10 04 23.8**	**+0.2**
	baz=37,SNR=6.8						
Z22A	**Elephant Butte**	**37.22**	**356**	P	**P**	**10 04 24.7**	**+1.0**
	baz=37,SNR=29						
Z20A	**Nine Sixteen R**	**37.23**	**354**	P	**P**	**10 04 24.6**	**+0.8**
	baz=37,SNR=32						
Z30A	**Sanderson Ranc**	**37.24**	**4**	P	**P**	**10 04 23.2**	**-0.5**
	baz=37,SNR=38						
LPAZ	**La Paz**	**37.24**	**112**	*e*P	**P**	**10 04 24.8**	**+0.2**
	comp=Z,55nm,1.5s						
LPAZ	**La Paz**	**37.24**	**112**	P	**P**	**10 04 24.9**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=284,slow=9.8,SNR=24						
LPAZ				LR	LR	10 16 58.2	
	comp=Z,2μm,20.1s,baz=275,slow=32						
Z21A	**St. Cloud Mine**	**37.33**	**355**	↓P	**P**	**10 04 25.4**	**+0.7**
	baz=38,SNR=26						
Z31A	**Sharp Cattle R**	**37.35**	**5**	↑P	**P**	**10 04 24.4**	**-0.2**
	baz=38,SNR=10.0						
Z32A	**Haskell**	**37.41**	**6**	↑P	**P**	**10 04 25.3**	**+0.3**
	baz=38,SNR=12						
RFTA	**Plano**	**37.51**	**10**	*e*P	**P**	**10 04 26.8**	**+0.8**
Y27A	**Causey**	**37.74**	**1**	P	**P**	**10 04 28.1**	**+0.1**
	baz=38,SNR=18						
Y26A	**Elida**	**37.78**	**0**	P	**P**	**10 04 27.9**	**-0.4**
	baz=38,SNR=8.1						
Y29A	**Porterfield Fa**	**37.78**	**3**	↑P	**P**	**10 04 28.4**	**+0.1**
	baz=38,SNR=22						
Y25A	**Mesa, Roswell**	**37.78**	**359**	↓P	**P**	**10 04 28.4**	**0.0**
	baz=38,SNR=24						
113A	**Mohawk Valley,**	**37.78**	**346**	↑P	**P**	**10 04 28.8**	**+0.6**
	baz=38,SNR=13						
Y28A	**McKinney Farm,**	**37.80**	**2**	↑P	**P**	**10 04 28.5**	**0.0**
	baz=38,SNR=17						
Y24A	**Capitan**	**37.80**	**358**	P	**P**	**10 04 29.1**	**+0.5**
	baz=38,SNR=15						
Y23A	**Lovelace Mesa,**	**37.84**	**357**	P	**P**	**10 04 29.5**	**+0.6**
	baz=38,SNR=14						
MSTX	**Muleshoe**	**37.84**	**2**	P	**P**	**10 04 29.1**	**+0.3**
	baz=38,SNR=16						
Y22A	**Socorro**	**37.89**	**356**	P	**P**	**10 04 29.7**	**+0.3**
	baz=38,SNR=20						
Y31A	**Rekieta Farm,**	**37.98**	**5**	↑P	**P**	**10 04 30.2**	**+0.3**
	baz=38,SNR=5.2						
Y20A	**Horse Springs,**	**37.99**	**354**	P	**P**	**10 04 31.5**	**+1.2**
	baz=38,SNR=22						
Y21A	**Point of Rocks**	**38.02**	**355**	P	**P**	**10 04 31.4**	**+0.9**
	baz=38,SNR=31						
BNM	**Barren Site**	**38.08**	**356**	*e*P	**P**	**10 04 31.2**	**+0.1**
	comp=Z,11nm,1.0s						
Y32A	**R-V Farms, Ver**	**38.10**	**6**	↓P	**P**	**10 04 31.1**	**+0.2**
	baz=38						
LENM	**Lemitar**	**38.12**	**356**	*e*P	**P**	**10 04 32.0**	**+0.7**
Z14A	**Wintersburg**	**38.17**	**348**	↑P	**P**	**10 04 32.2**	**+0.7**
	baz=38,SNR=6.4						
LPM	**Los Pinos Moun**	**38.24**	**356**	*e*P	**P**	**10 04 32.5**	**+0.1**
	comp=Z,3.6nm,0.8s						
VBMS	**Vicksburg**	**38.28**	**19**	PFAKE		10 04 40.0	+7.6
VBMS				LR	LR		
	comp=Z,867nm,22.0s						
GLA	**Glamis**	**38.31**	**345**	*e*P	**P**	**10 04 33.4**	**+0.7**
GLA				pmax	pmax		
	comp=Z,45nm,1.2s						
GLA	**Glamis**	**38.31**	**345**	*e*P	**P**	**10 04 33.4**	**+0.7**
	comp=Z,45nm,1.2s						
GLA	**Glamis**	**38.31**	**345**	P	**P**	**10 04 33.5**	**+0.7**
	baz=38,SNR=6.5						
X29A	**Tulia**	**38.36**	**3**	P	**P**	**10 04 33.4**	**+0.2**
	baz=39,SNR=10.0						
LAZ	**Ladron**	**38.37**	**356**	*e*P	**P**	**10 04 34.0**	**+0.6**
	comp=Z,9.8nm,1.0s						
X25A	**Clemmons Ranch**	**38.38**	**359**	↑P	**P**	**10 04 33.1**	**-0.4**
	baz=39						
X26A	**CR and CF Fran**	**38.40**	**0**	↓P	**P**	**10 04 33.5**	**-0.1**

ANMO LR LR
comp=Z,897nm,20.0s
WMOK Wichita Mounta 38.90 7 *eP* **P 10 04 36.3 -1.4**
WMOK pmax pmax
comp=Z,6.0nm,0.8s
WMOK MLR MLR
comp=Z,1µm,19.0s
WMOK Wichita Mounta 38.90 7 *eP* **P 10 04 36.3 -1.4**
WMOK LR LR
comp=Z,1µm,19.0s
Y12C Blythe 38.90 346 P **P 10 04 38.7 +1.0**
baz=39,SNR=8.0
X16A Lo Mia Camp, P 38.91 350 P **P 10 04 39.0 +1.1**
baz=39,SNR=18
W27A Bowe Ranch, En 38.92 1 P **P 10 04 37.5 -0.4**
baz=39,SNR=9.6
W22A Albuquerque 39.02 356 ⇓P **P 10 04 40.0 +1.1**
baz=39
W29A Amraillo 39.03 3 P **P 10 04 39.0 +0.1**
baz=39,SNR=7.4
BC3 Big Chuckawall 39.05 345 P **P 10 04 39.9 +0.9**
baz=39,SNR=12
W23A Werner Place, 39.06 357 P **P 10 04 39.6 +0.4**
baz=39,SNR=11
W25A X Bar L Ranch, 39.07 359 P **P 10 04 39.1 -0.2**
baz=39,SNR=9.7
W24A Lazy 6 Ranch, 39.08 358 P **P 10 04 39.7 +0.3**
baz=39,SNR=26
W21A San Fidel 39.12 355 ⇑P **P 10 04 41.1 +1.4**
baz=39
W28A Vega 39.14 2 P **P 10 04 39.9 +0.1**
baz=39,SNR=8.1
W20A Ramah 39.21 354 P **P 10 04 41.0 +0.5**
baz=39,SNR=12
W31A Holland Ranch, 39.22 5 P **P 10 04 40.0 -0.3**
baz=39,SNR=14
PFO Pinyon Flat Ob 39.28 343 P **P 10 04 41.8 +0.8**
comp=Z,114nm,1.3s,SNR=12
PFO Pinyon Flat Ob 39.28 343 *eP* **P 10 04 40.4 -0.6**
comp=Z,24nm,1.2s
PFO LR LR
comp=Z,3µm,19.0s
PFO Pinyon Flat Ob 39.28 343 P **P 10 04 42.0 +1.0**
baz=40,SNR=12
W18A Petrified Fore 39.34 353 P **P 10 04 42.4 +0.8**
baz=40,SNR=7.2
IRM Iron Mountain 39.45 345 ⇑P **P 10 04 42.8 +0.6**
baz=40,SNR=22
MURC Murrieta 39.48 343 P **P 10 04 43.3 +0.7**
baz=40,SNR=6.7
SDDR Presa de Saban 39.49 53 PFAKE 10 04 50.0 +7.1
SDDR LR LR
comp=Z,1µm,19.0s
BELC Belle Mtn. Jos 39.52 344 P **P 10 04 43.7 +0.7**
baz=40,SNR=21
V24A Rampart Ranch, 39.59 358 P **P 10 04 44.1 +0.4**
baz=40,SNR=20
V27A Dan Oppiter Fa 39.62 1 ⇑P **P 10 04 43.7 -0.1**
baz=40
V28A Channing 39.63 2 ⇓P **P 10 04 43.9 0.0**
baz=40
V26A Tequesquite Ra 39.65 0 P **P 10 04 43.9 -0.1**
baz=40,SNR=14
V23A Ortiz Mt. (NFS 39.65 357 ⇑P **P 10 04 44.6 +0.4**
baz=40,SNR=7.0
V25A Rancho No Teng 39.69 359 P **P 10 04 44.4 -0.1**
baz=40,SNR=29
V21A Milan 39.80 355 P **P 10 04 46.6 +1.2**
baz=40,SNR=5.8
V22A San Miguel Ran 39.86 356 P **P 10 04 46.5 +0.6**
baz=40,SNR=18
V20A Brimhall 39.87 354 P **P 10 04 46.9 +0.9**
baz=40,SNR=9.8
WUAZ Wupatki 39.97 351 *eP* **P 10 04 47.2 +0.4**
comp=Z,19nm,1.0s
WUAZ LR LR
comp=Z,2µm,20.0s
WUAZ Wupatki 39.97 351 P **P 10 04 47.8 +1.0**
baz=40,SNR=13
W13A Hualapai Mount 40.05 347 P **P 10 04 48.8 +1.3**
baz=40,SNR=10
LCO Las Campanas 40.15 132 *eP* **P 10 04 49.1 +0.5**
comp=Z,143nm,1.5s
LCO LR LR
comp=Z,6µm,21.0s
BFSC Mount Baldy Ra 40.22 342 P **P 10 04 49.7 +0.9**
baz=40,SNR=13
U23A El Rito 40.23 357 P **P 10 04 49.1 +0.1**
baz=40,SNR=24
U26A Atchley Ranch, 40.24 0 P **P 10 04 49.0 0.0**
baz=40,SNR=12
LRAL Lakeview Retre 40.25 22 *eP* **P 10 04 48.9 0.0**
comp=Z,8.6nm,0.9s
LRAL LR LR
comp=Z,837nm,20.0s
U25A Circle Dot Ran 40.25 359 P **P 10 04 49.1 +0.1**
baz=40,SNR=34
U24A Moreno Valley 40.27 358 ⇓P **P 10 04 50.1 +0.7**
baz=40
LDFC Landfair 40.31 346 *eP* **P 10 04 51.5 +2.0**
comp=Z,130nm,1.5s
U22A Llaves 40.31 356 P **P 10 04 50.4 +0.7**
baz=40,SNR=36
PASC Pasadena Art C 40.32 342 *eP* **P 10 04 49.7 +0.2**
comp=Z,88nm,1.8s
MWC Mount Wilson 40.33 342 *eP* **P 10 04 50.6 +0.9**
MWC pmax pmax
comp=Z,58nm,1.4s
MWC Mount Wilson 40.33 342 *eP* **P 10 04 50.6 +0.9**
comp=Z,58nm,1.4s
HEC Hector,Ludlow 40.39 344 P **P 10 04 51.4 +1.2**
baz=41,SNR=11
U21A Nageezi 40.42 355 ⇓P **P 10 04 51.3 +0.8**
baz=41,SNR=26
DECC Green Verdugo 40.44 342 P **P 10 04 51.6 +1.2**
baz=41,SNR=11
U20A Newcomb 40.45 354 ⇑P **P 10 04 51.7 +1.0**
baz=41
TUL1 Tulsa 40.49 10 ⇑P **P 10 04 51.3 +0.4**
baz=41,SNR=5.9
OXF Oxford 40.75 19 PFAKE 10 05 00.0 +7.0
OXF LR LR
comp=Z,1µm,21.0s
SAML Samuel 40.80 99 *eP* **P 10 04 52.4 -1.4**
comp=Z,118nm,1.5s
SAML LR LR
comp=Z,3µm,20.0s
EDW2 Edwards Air Fo 40.91 342 P **P 10 04 55.2 +0.7**
baz=41,SNR=16
T27A Campo 40.92 2 P **P 10 04 54.6 0.0**
baz=41,SNR=8.4
T23A Casias Ranch, 40.93 357 P **P 10 04 56.0 +1.2**
baz=41,SNR=35
T24A Torres, Weston 40.93 359 P **P 10 04 55.2 +0.4**
baz=41,SNR=14
T22A Edith 40.95 356 P **P 10 04 55.7 +0.8**
baz=41,SNR=26
GSC Goldstone 40.96 344 *eP* **P 10 04 55.6 +0.7**
GSC pmax pmax
comp=Z,35nm,0.9s
GSC Goldstone 40.96 344 *eP* **P 10 04 55.6 +0.7**
comp=Z,35nm,0.9s
GSC Goldstone 40.96 344 P **P 10 04 55.7 +0.7**
baz=41,SNR=25
T21A Navajo Lake 40.97 356 P **P 10 04 56.0 +0.9**
baz=41,SNR=6.7
T25A Trinidad 40.99 359 P **P 10 04 55.5 +0.3**
baz=41,SNR=14
GRTK Grand Turk 41.00 50 PFAKE 10 05 10.0 +15
GRTK LR LR
comp=Z,3µm,22.0s
T28A Walsh 41.00 2 ⇑P **P 10 04 55.5 +0.2**
baz=41
U15A North Rim 41.02 350 P **P 10 04 56.2 +0.6**
baz=41,SNR=14
T26A Comanche Natio 41.02 0 P **P 10 04 55.5 +0.1**
baz=41,SNR=15
T30A Plains 41.02 4 ⇓P **P 10 04 55.7 +0.4**
baz=41
T29A Hugoton 41.08 3 ⇑P **P 10 04 56.0 +0.2**
baz=41,SNR=5.9
MVCO Mesa Verde 41.27 355 PFAKE
MVCO LR LR
comp=Z,2µm,19.0s
MVCO Mesa Verde 41.27 355 ⇑P **P 10 04 58.1 +0.5**
baz=42
LRMC Laurel Mountai 41.38 343 P **P 10 04 59.0 +0.7**
baz=42,SNR=18
SHOC Shoshone 41.38 345 P **P 10 04 59.5 +1.3**
baz=42,SNR=15
ARVC Arvin 41.40 341 ⇓P **P 10 05 00.1 +1.7**
baz=42
S26A Kim 41.47 1 P **P 10 04 59.7 +0.6**
baz=42,SNR=23
S28A Manter 41.48 2 P **P 10 04 59.2 +0.1**
baz=42,SNR=7.1
S24A Houchin Ranch, 41.50 359 P **P 10 05 00.5 +1.0**
baz=42,SNR=13
S25A Robets Cordova 41.51 359 P **P 10 04 59.7 +0.2**
baz=42,SNR=10
S23A Nye Farm, Mont 41.59 358 P **P 10 05 01.7 +1.4**
baz=42,SNR=13
S30A Montezuma 41.61 4 ⇓P **P 10 05 00.0 -0.2**
baz=42
SDCO Great Sand Dun 41.61 358 *eP* **P 10 05 00.5 0.0**
comp=Z,36nm,1.6s
SDCO LR LR
comp=Z,1µm,20.0s
PLAL Pickwick Lake 41.62 20 *eP* **P 10 04 59.6 -0.5**
comp=Z,41nm,0.9s
S21A Coal Bank Pass 41.66 355 ⇓P **P 10 05 01.6 +0.8**
baz=42
S22A 4UR Ranch, Cre 41.67 357 P **P 10 05 01.6 +0.6**
baz=42,SNR=24
ISA Isabella 41.78 342 *eP* **P 10 05 02.7 +1.1**
ISA pmax pmax
comp=Z,20nm,0.9s
ISA Isabella 41.78 342 *eP* **P 10 05 02.7 +1.1**
comp=Z,20nm,0.9s
ISA Isabella 41.78 342 P **P 10 05 02.4 +0.8**
baz=42,SNR=9.4
MPMC Manual Prospec 41.87 344 P **P 10 05 02.7 +0.3**
baz=42,SNR=34
S20A Disappointment 41.87 355 P **P 10 05 03.2 +0.6**
baz=42,SNR=18
GNAR Gosnell 41.91 17 *eP* **P 10 05 02.4 -0.1**
comp=Z,590nm,1.1s
S18A Hurst Farm, Bl 41.91 353 P **P 10 05 03.5 +0.6**
baz=42,SNR=42
SMMC Simmler 41.95 340 ⇓P **P 10 05 04.2 +1.2**
baz=42
R25A Fountain Ranch 41.99 360 P **P 10 05 03.9 +0.5**
baz=42,SNR=15
R23A Moffat 42.07 358 P **P 10 05 05.3 +1.1**
baz=42,SNR=33
FURC Furnace Creek, 42.08 344 P **P 10 05 05.2 +1.4**
baz=42,SNR=9.1
R24A Sanders Place, 42.09 359 ⇑P **P 10 05 05.0 +0.8**
baz=42,SNR=14
VES Vestal, Richgr 42.14 342 P **P 10 05 05.5 +1.1**
baz=42,SNR=12
R27A Eads 42.14 1 ⇑P **P 10 05 04.6 0.0**
baz=42,SNR=21
R26A Arlington 42.15 1 P **P 10 05 05.1 +0.5**
baz=42,SNR=15
R22A Saguache, Gunn 42.15 357 P **P 10 05 06.0 +1.2**
baz=42,SNR=24
PV01 Paradox Valley 42.19 355 *eP* **P 10 05 05.4 +0.3**
comp=Z,1µm,1.0s
R20A Redvale 42.23 355 ⇓P **P 10 05 06.2 +0.8**
baz=42,SNR=18
R28A Tribune 42.23 3 ⇓P **P 10 05 05.8 +0.5**
baz=42
R30A Dighton 42.27 4 P **P 10 05 05.8 +0.3**
baz=42,SNR=12
CCUT Cedar City 42.31 349 *eP* **P 10 05 06.9 +0.9**
comp=Z,14nm,1.2s
R31A Burdett 42.33 5 ⇑P **P 10 05 06.1 +0.1**
baz=42
R21A Cimarron 42.34 356 P **P 10 05 07.5 +1.1**
baz=42,SNR=9.9
R29A Marienthal 42.35 3 ⇑P **P 10 05 06.5 +0.3**
baz=43
PV10 Paradox Valley 42.48 354 *eP* **P 10 05 07.0 -0.4**
comp=Z,214nm,0.9s
PV04 Paradox Valley 42.48 354 *eP* **P 10 05 07.5 +0.1**
ARUT Antelope Range 42.55 349 *eP* **P 10 05 08.7 +0.7**
ARUT pmax pmax
comp=Z,59nm,1.3s
ARUT Antelope Range 42.55 349 *eP* **P 10 05 08.7 +0.7**
comp=Z,59nm,1.3s
SWET Sewanee 42.59 22 *eP* **P 10 05 08.3 +0.2**
comp=Z,81nm,1.7s
CLCH Cerro Calan 42.71 137 *eP* **P 10 05 08.7 -0.5**
GRAC Grapevine Rang 42.71 344 P **P 10 05 10.6 +1.4**
baz=43,SNR=14
WVT Waverly 42.74 19 *eP* **P 10 05 08.8 -0.5**
WVT pmax pmax
comp=Z,28nm,0.9s
WVT Waverly 42.74 19 *eP* **P 10 05 08.8 -0.5**
comp=Z,28nm,0.9s
Q25A Bedland, Calha 42.76 360 P **P 10 05 10.0 +0.4**
baz=43,SNR=10
Q26A Hugo 42.77 1 ⇑P **P 10 05 10.0 +0.3**
baz=43
Q23A Hartsel 42.78 358 P **P 10 05 10.7 +0.7**
baz=43,SNR=8.7
Q22A Crested Butte, 42.79 357 P **P 10 05 11.1 +1.0**
baz=43,SNR=18
Q21A Lamborn Mesa, 42.81 356 P **P 10 05 11.2 +1.1**
baz=43,SNR=14
Q24A Divide 42.82 359 P **P 10 05 10.8 +0.5**
baz=43,SNR=8.1
Q29A Oakley 42.82 3 ⇓P **P 10 05 10.0 0.0**
baz=43
KSCO Kaye Shedlock' 42.87 2 ⇑P **P 10 05 10.9 +0.5**
baz=43
Q28A Sharon Springs 42.95 2 ⇓P **P 10 05 11.3 +0.2**
baz=43
Q30A Quinter 42.96 4 ⇑P **P 10 05 11.2 +0.1**
baz=43
Q20A Ridgley Place, 42.98 355 ⇑P **P 10 05 12.2 +0.7**
baz=43,SNR=9.8
TIN Tinemaha 43.00 343 ⇑P **P 10 05 13.1 +1.5**
baz=43
MVU Marysvale 43.03 351 *eP* **P 10 05 12.7 +0.8**
comp=Z,25nm,1.4s
MVU LR LR
comp=Z,2µm,19.0s
MSU Marysvale 43.03 351 *eP* **P 10 05 12.6 +0.7**
MSU Marysvale 43.03 351 *eP* **P 10 05 12.6 +0.7**
Q31A Ellis 43.06 5 ⇓P **P 10 05 12.3 +0.4**
baz=43
SMCO Snowmass 43.11 357 *eP* **P 10 05 13.5 +0.7**
comp=Z,14nm,0.8s
LMEL Las Melosas 43.20 137 *eP* P 10 05 06.9 -6.4
P23A Jefferson 43.25 358 ⇓P **P 10 05 15.1 +1.3**
baz=44,SNR=27
Q16A Castle Valley 43.27 352 P **P 10 05 14.9 +1.1**
baz=44,SNR=18
NHSC New Hope 43.30 30 PFAKE 10 05 30.0 +16
NHSC LR LR
comp=Z,4µm,21.0s
SJG San Juan 43.31 58 *eP* **P 10 05 12.4 -1.9**
comp=Z,40nm,1.2s
SJG LR LR
comp=Z,1µm,20.0s
CFAA Coronel Fontan 43.33 133 P **P 10 05 14.2 0.0**
CFAA Coronel Fontan 43.33 133 P **P 10 05 14.2 0.0**
comp=Z,3.5nm,0.8s,baz=294,slow=8.0,SNR=46
CPCT Cooper Cave 43.34 23 *eP* **P 10 05 13.3 -0.9**
P25A Willow Gulch B 43.35 360 P **P 10 05 14.7 +0.3**
baz=44,SNR=7.0
P24A Kohler Place, 43.36 359 ⇑P **P 10 05 15.3 +0.7**
baz=44
SRU San Rafael 43.38 353 P **P 10 05 15.5 +0.9**
baz=44,SNR=18
MTUM Tungsten Hills 43.38 343 *eP* **P 10 05 15.5 +0.8**
P26A Davis Ranch, A 43.41 1 ⇓P **P 10 05 15.4 +0.5**
baz=44
P27A Ficken Ranch, 43.42 2 ⇑P **P 10 05 15.4 +0.5**
baz=44
P28A Saint Francis 43.46 3 P **P 10 05 15.5 +0.2**
baz=44,SNR=7.3
KSU1 Kansas State U 43.48 8 *eP* **P 10 05 15.1 -0.1**
comp=Z,24nm,1.0s
KSU1 LR LR
comp=Z,1µm,20.0s
P21A Newcastle 43.48 356 P **P 10 05 16.6 +1.1**
baz=44,SNR=17
P22A Eagle 43.51 357 P **P 10 05 16.7 +0.9**
baz=44,SNR=14
P30A Selden 43.52 4 ⇑P **P 10 05 15.9 +0.2**
baz=44
P20A De Beque 43.53 355 P **P 10 05 16.6 +0.7**
baz=44,SNR=16
P29A Atwood 43.53 3 ⇓P **P 10 05 16.1 +0.3**
baz=44
R11A Troy Canyon, C 43.54 347 P **P 10 05 16.8 +0.8**
baz=44,SNR=34
P31A Stockton 43.57 5 ⇑P **P 10 05 16.1 +0.1**
baz=44
ISCO Idaho Springs 43.67 358 *eP* **P 10 05 17.7 +0.6**
ISCO pmax pmax
comp=Z,17nm,0.9s
ISCO MLR MLR
comp=Z,2µm,21.0s
ISCO Idaho Springs 43.67 358 *eP* **P 10 05 17.7 +0.6**
comp=Z,17nm,0.9s
ISCO LR LR
comp=Z,2µm,21.0s
ISCO Idaho Springs 43.67 358 P **P 10 05 17.8 +0.6**
baz=44,SNR=24
CCHI Chillan 43.68 142 *eP* **P 10 05 17.1 +0.1**
TPH Tonopah 43.68 345 PFAKE 10 05 30.0 +13
TPH LR LR
comp=Z,3µm,21.0s
MLAC Mammoth Lakes 43.72 343 P **P 10 05 18.8 +1.3**
baz=44,SNR=19
P19A Cripple Cowboy 43.72 354 P **P 10 05 17.9 +0.5**
baz=44,SNR=9.9
SIUC Southern Illin 43.77 17 *eP* **P 10 05 17.7 +0.2**
comp=Z,21nm,0.8s
P18A Preston Nutter 43.85 353 P **P 10 05 19.5 +0.9**
baz=44,SNR=19
O25A Wiggins 43.95 360 ⇑P **P 10 05 20.2 +1.0**
baz=44
O24A Longmont 43.98 359 P **P 10 05 19.9 +0.5**
baz=44,SNR=8.5
O27A Beecher Island 44.05 2 P **P 10 05 20.6 +0.6**
baz=44,SNR=9.8
O22A Kremmling 44.07 357 P **P 10 05 20.4 +0.1**
baz=44,SNR=16
O26A Horse Wrangler 44.09 1 P **P 10 05 20.8 +0.5**
baz=44,SNR=9.7
O23A Lake Granby, G 44.09 358 P **P 10 05 20.7 +0.2**
baz=44,SNR=23
O20A White River Ci 44.15 355 P **P 10 05 21.4 +0.5**
baz=44,SNR=17
O21A Pagoda 44.17 356 ⇑P **P 10 05 21.9 +0.8**
baz=44
NV11 Mina Array Sit 44.27 344 *eP* **P 10 05 22.5 +0.7**
NVAR Mina Array Bea 44.31 344 P **P 10 05 22.7 +0.5**
NVAR PcP **PcP 10 07 06.3 0.0**
NVAR Mina Array Bea 44.31 344 P **P 10 05 22.7 +0.5**
comp=Z,5.7nm,0.9s,baz=166,slow=8.4,SNR=44
NVAR PcP **PcP 10 07 06.3 0.0**
comp=Z,1.3nm,1.0s,baz=140,slow=2.9,SNR=2.6
NVAR LR LR 10 19 59.8
comp=Z,2µm,18.4s,baz=200,slow=31
O19A Miners Draw (B 44.39 354 P **P 10 05 23.6 +0.9**
baz=45,SNR=24
MPU Maple Canyon 44.42 352 *eP* **P 10 05 23.9 +0.9**
comp=Z,37nm,0.9s
KMSC Kings Mountain 44.42 27 ⇓P **P 10 05 23.9 +1.0**
baz=45
USIN University of 44.47 18 *eP* **P 10 05 23.3 +0.1**
comp=Z,38nm,0.9s
PMOR Pomariorio Ree 44.56 253 *eP* **P 10 05 26.3 +2.0**
comp=Z,198nm,1.3s
CMB Columbia Colle 44.56 341 *eP* **P 10 05 24.8 +0.8**
CMB pmax pmax
comp=Z,26nm,1.0s
CMB Columbia Colle 44.56 341 *eP* **P 10 05 24.8 +0.8**
comp=Z,26nm,1.0s
N28A Pribbeno Ranch 44.58 3 ⇓P **P 10 05 24.7 +0.5**
baz=45
N27A Anderson Farm, 44.67 2 ⇓P **P 10 05 25.3 +0.5**
baz=45
N26A Koester Ranch, 44.67 1 ⇑P **P 10 05 25.7 +0.7**
baz=45
N24A Carr 44.67 359 ⇑P **P 10 05 25.7 +0.7**
baz=45,SNR=11
TZTN Tazewell 44.67 24 *eP* **P 10 05 25.0 +0.1**
comp=Z,22nm,0.8s
N22A Wattenberg Ran 44.70 357 ⇑P **P 10 05 26.1 +0.8**
baz=45,SNR=5.5
N21A Black Mountain 44.72 356 P **P 10 05 26.7 +1.2**
baz=45,SNR=17
DAU Daniels Canyon 44.75 352 *eP* **P 10 05 26.5 +0.7**
DAU Daniels Canyon 44.75 352 *eP* **P 10 05 26.5 +0.7**
N29A Votaw Ranch, W 44.77 4 ⇓P **P 10 05 26.1 +0.5**
baz=45
N23A Red Feather La 44.77 358 P **P 10 05 26.4 +0.5**
baz=45,SNR=11
DUG Dugway 44.78 350 *eP* **P 10 05 27.0 +1.2**
DUG pmax pmax
comp=Z,52nm,1.4s
DUG MLR MLR
comp=Z,1µm,22.0s
DUG Dugway 44.78 350 *eP* **P 10 05 27.0 +1.2**
comp=Z,52nm,1.4s
DUG LR LR
comp=Z,1µm,22.0s
DUG Dugway 44.78 350 P **P 10 05 26.6 +0.8**
baz=45,SNR=24
OGNE Ogallala 44.82 2 PFAKE 10 05 40.0 +14
OGNE LR LR
comp=Z,3µm,19.0s
OGNE Ogallala 44.82 2 ⇑P **P 10 05 26.6 +0.5**
baz=45
N20A Spence Gulch, 44.85 355 P **P 10 05 27.0 +0.6**
baz=45,SNR=37
JLU Jordanelle 44.97 352 *eP* **P 10 05 28.3 +0.8**
comp=Z,52nm,1.6s
OLIL Olney 45.04 18 *eP* **P 10 05 27.3 -0.5**
comp=Z,33nm,0.9s
GRGR Grenville 45.05 69 PFAKE 10 05 40.0 +12
GRGR LR LR
comp=Z,784nm,20.0s
CTU Camp Tracy 45.10 352 *eP* **P 10 05 29.2 +0.8**
comp=Z,24nm,1.0s
M28A Bar X Bar Ranc 45.30 3 ⇓P **P 10 05 30.3 +0.4**
baz=46
M24A Cheyenne 45.31 359 ⇑P **P 10 05 30.8 +0.6**
baz=46
M23A Laramie 45.34 358 ⇓P **P 10 05 30.9 +0.6**
baz=46
M29A Burnside Ranch 45.38 3 ⇑P **P 10 05 31.1 +0.5**
baz=46
M20A Sweetwater, Wa 45.49 356 ⇓P **P 10 05 32.4 +0.8**
baz=46
WCN Washoe City 45.53 343 *eP* **P 10 05 33.1 +1.2**
WCN pmax pmax
comp=Z,26nm,1.0s
WCN Washoe City 45.53 343 *eP* **P 10 05 33.1 +1.2**
comp=Z,26nm,1.0s
M21A Separation Plea 45.55 356 P **P 10 05 32.3 +0.2**
baz=46,SNR=11
M17A Scullys Gap (B 45.72 353 ⇑P **P 10 05 33.7 +0.3**
baz=46,SNR=13
ELK Elko 45.76 348 *eP* **P 10 05 34.8 +1.0**
comp=Z,7µm,3.0s
L24A Wheatland 45.89 359 ⇓P **P 10 05 34.9 +0.3**
baz=46,SNR=8.1
L21A Rawlins 45.91 356 ⇑P **P 10 05 34.5 -0.3**
baz=46,SNR=14
BMN Battle Mountai 45.91 346 *eP* **P 10 05 35.1 +0.3**
BMN pmax pmax
comp=Z,17nm,0.9s
BMN MLR MLR
comp=Z,3µm,20.0s
BMN Battle Mountai 45.91 346 *eP* **P 10 05 35.1 +0.3**
comp=Z,17nm,0.9s
BMN LR LR
comp=Z,3µm,20.0s
BLO Bloomington 45.94 19 *eP* **P 10 05 33.4 -1.4**
BLO pmax pmax
comp=Z,15nm,0.9s
BLO Bloomington 45.94 19 *eP* **P 10 05 33.4 -1.4**
comp=Z,15nm,0.9s
HWUT Hardware Ranch 45.97 352 *eP* **P 10 05 35.2 -0.1**
comp=Z,26nm,0.9s
HWUT LR LR
comp=Z,2µm,20.0s
L23A Garrett 45.98 358 P **P 10 05 35.2 -0.2**
baz=46,SNR=13
L20A Wamsutter 46.02 355 ⇓P **P 10 05 36.0 +0.3**
baz=46,SNR=6.0
L18A Fontenelle, Gr 46.09 354 P **P 10 05 36.0 -0.3**
baz=46,SNR=17
OHCM Honcut 46.10 341 *eP* **P 10 05 36.9 +0.8**
CNNC Cliffs of the 46.13 30 PFAKE 10 05 50.0 +14

CNNC LR LR
comp=Z,3µm,21.0s
L19A Farson 46.20 354 P **P** **10 05 37.6 +0.5**
baz=46,SNR=33
BEKR Beckworth 46.23 343 *eP* **P** **10 05 38.3 +0.9**
comp=Z,26nm,1.5s
HVU Hansel Valley 46.32 351 *eP* **P** **10 05 37.8 -0.2**
HVU pmax pmax
comp=Z,41nm,1.3s
HVU Hansel Valley 46.32 351 *eP* **P** **10 05 37.8 -0.2**
comp=Z,41nm,1.3s
FDF Fort de France 46.37 65 PFAKE 10 05 50.0 +11
FDF LR LR
comp=Z,542nm,20.0s
TIAR Tiarei 46.40 250 *eP* **P** **10 05 41.2 +2.3**
comp=Z,106nm,1.3s
K25A Mack Ranch, Ha 46.45 0 ⇑P **P** **10 05 39.5 +0.5**
baz=47
K26A Motz Farm, Whi 46.55 1 ⇓P **P** **10 05 39.9 +0.2**
baz=47
K22A Casper 46.55 357 P **P** **10 05 39.9 +0.1**
baz=47,SNR=12
BLA Blacksburg 46.55 26 PFAKE 10 05 50.0 +10
BLA LR LR
comp=Z,2µm,20.0s
K21A Alcova 46.57 357 ⇓P **P** **10 05 40.2 +0.2**
baz=47
K27A Flueckinger Fa 46.57 2 ⇑P **P** **10 05 40.1 +0.2**
baz=47
PPT Papeete 46.61 250 LR LR 10 19 41.7
comp=Z,2µm,20.6s,baz=77,slow=29
K23A Bowen Ranch, D 46.62 358 P **P** **10 05 40.5 +0.2**
baz=47,SNR=10
PPT2 Papeete2 46.62 250 *eP* **P** **10 05 42.4 +1.7**
comp=Z,56nm,1.3s
PPT2 *eS* **S** **10 12 27.1 -2.2**
comp=Z,799nm,25.2s
PPT2 *eLQ* LQ 10 16 38.6
comp=Z,5µm,32.2s
PPT2 *eLR* LR 10 18 47.1
comp=Z,5µm,27.0s,baz=70
K20A Yellowstone Ra 46.66 356 P **P** **10 05 40.6 -0.1**
baz=47,SNR=8.8
SCIA State Center 46.78 11 PFAKE 10 05 50.0 +8.5
SCIA LR LR
comp=Z,818nm,21.0s
SFIN Scholer Farm 46.86 18 ⇑P **P** **10 05 42.2 +0.2**
baz=47
K19A Absolon Red Bu 46.87 355 P **P** **10 05 42.3 -0.1**
baz=47,SNR=18
BW06 Boulder Array 46.88 354 *eP* **P** **10 05 41.9 -0.6**
comp=Z,22nm,0.9s
BW06 LR LR
comp=Z,1µm,19.0s
PDAR Pinedale Array 46.88 354 P **P** **10 05 41.3 -1.2**
PDAR Pinedale Array 46.88 354 P **P** **10 05 41.3 -1.2**
comp=Z,8.5nm,1.0s,baz=163,slow=6.4,SNR=49
PDAR LR LR 10 22 53.8
comp=Z,1µm,19.2s,baz=185,slow=33
ANWB Willy Bob 46.89 61 PFAKE 10 05 50.0 +7.3
ANWB LR LR
comp=Z,1µm,22.0s
AHID Auburn Hatcher 47.05 353 PFAKE 10 06 00.0 +16
AHID LR LR
comp=Z,2µm,20.0s
J24A Dixon Ranch, L 47.17 359 ⇑P **P** **10 05 45.4 +0.7**
baz=47
KIPM Iron Peak 47.20 339 *eP* **P** **10 05 46.1 +1.2**
comp=Z,103nm,1.4s
J23A Dilts Ranch, B 47.26 358 ⇑P **P** **10 05 46.2 +0.8**
baz=48
J21A Lysite 47.29 357 P **P** **10 05 46.0 +0.3**
baz=48,SNR=11
PLCA Paso Flores 47.29 145 *eP* **P** **10 05 46.0 +0.4**
comp=Z,97nm,1.5s
PLCA Paso Flores 47.29 145 P **P** **10 05 47.4 +1.8**
comp=Z,25nm,1.1s,baz=302,slow=8.1,SNR=3.7
PLCA LR LR 10 20 55.6
comp=Z,4µm,19.1s,baz=340,slow=30
BBGH Gun Hill 47.30 68 PFAKE 10 06 00.0 +14
BBGH LR LR
comp=Z,3µm,21.0s
J22A Midwest 47.30 358 P **P** **10 05 45.5 -0.2**
baz=48,SNR=22
J19A Crowheart 47.33 355 P **P** **10 05 45.5 -0.4**
baz=48,SNR=8.9
J20A Shoshoni 47.34 356 ⇓P **P** **10 05 46.6 +0.6**
baz=48,SNR=37
LBCM Butte Creek Ri 47.42 342 P **P** **10 05 47.1 +0.4**
WDC Whiskeytown Da 47.57 341 *eP* **P** **10 05 46.6 -1.0**
WDC pmax pmax
comp=Z,22nm,1.0s
WDC Whiskeytown Da 47.57 341 *eP* **P** **10 05 46.6 -1.0**
comp=Z,22nm,1.0s
RRI2 Red Ridge 47.65 353 *eP* **P** **10 05 47.9 -0.6**
comp=Z,31nm,0.9s
SNOW Snow King Moun 47.70 353 *eP* **P** **10 05 48.7 -0.1**
comp=Z,26nm,1.3s
I24A Kuemmerle Ranc 47.70 359 ⇑P **P** **10 05 49.2 +0.4**
baz=48
I21A Big Trails, Te 47.74 357 ⇓P **P** **10 05 48.9 -0.3**
baz=48,SNR=12
TPAW Teton Pass 47.74 353 *eP* **P** **10 05 48.6 -0.6**
comp=Z,16nm,0.8s
I22A 9 Mile Ranch, 47.78 358 P **P** **10 05 49.5 +0.1**
baz=48,SNR=9.1
LOHW Long Hollow 47.83 354 *eP* **P** **10 05 49.7 -0.2**
comp=Z,42nm,1.4s
I18A Diamond G Ranc 47.83 354 P **P** **10 05 49.5 -0.4**
baz=48,SNR=9.1
DCID1 Drake Creek 47.88 353 *eP* **P** **10 05 50.2 0.0**
comp=Z,20nm,0.9s
TBI Tubuai 47.89 242 *eS* **S** **10 12 48.0 +0.8**
TBI *eLQ* LQ 10 17 17.3
comp=Z,1µm,26.8s
comp=Z,2µm,36.5s
TBI *eLR* LR 10 19 25.6
comp=Z,4µm,28.2s,baz=73
I20A Worland 47.93 356 P **P** **10 05 50.5 0.0**
baz=48,SNR=14
J14A Carey 47.94 351 P **P** **10 05 50.8 +0.1**
baz=48,SNR=9.7
RSSD Black Hills 47.96 360 *eP* **P** **10 05 50.2 -0.7**
RSSD pmax pmax
comp=Z,14nm,1.0s
RSSD Black Hills 47.96 360 *eP* **P** **10 05 50.2 -0.7**
comp=Z,14nm,1.0s
MOOW Moose Ponds 47.98 353 *eP* **P** **10 05 50.4 -0.6**
comp=Z,29nm,1.3s
ECSD EROS Data Cent 48.03 7 *eP* **P** **10 05 50.0 -1.2**
comp=Z,28nm,1.5s
ECSD LR LR
comp=Z,1µm,19.0s
I19A Meeteetse 48.09 355 P **P** **10 05 51.9 +0.1**
baz=48,SNR=7.8
MOD Modoc 48.10 344 *eP* **P** **10 05 51.8 -0.1**
comp=Z,136nm,1.4s
JSRW J. Sargeant Re 48.10 28 *eP* **P** **10 05 51.8 0.0**
ACSO Alum Creek Sta 48.11 22 *eP* **P** **10 05 50.6 -1.1**
comp=Z,16nm,1.2s
ACSO LR LR
comp=Z,702nm,19.0s
J13A Cove Ranch, Pi 48.12 350 P **P** **10 05 52.6 +0.6**
baz=48,SNR=24
I17A Pilgrim Ck. 48.13 354 P **P** **10 05 52.7 +0.5**
baz=48,SNR=6.2
IMW Indian Meadow 48.15 353 *eP* **P** **10 05 52.0 -0.4**
comp=Z,34nm,0.9s
WVOR Wild Horse Val 48.15 345 *eP* **P** **10 05 52.3 +0.1**
WVOR pmax pmax
comp=Z,19nm,1.1s
WVOR MLR MLR
comp=Z,2µm,22.0s
WVOR Wild Horse Val 48.15 345 *eP* **P** **10 05 52.3 +0.1**
comp=Z,19nm,1.1s
WVOR LR LR
comp=Z,2µm,22.0s
I16A Newdale 48.19 353 P **P** **10 05 53.0 +0.4**
baz=48,SNR=23
KHMM Horse Mountain 48.23 340 *eP* **P** **10 05 54.0 +1.1**
comp=Z,92nm,1.4s
HLID Hailey 48.33 350 *eP* **P** **10 05 53.8 +0.1**
comp=Z,18nm,1.0s
HLID LR LR
comp=Z,1µm,20.0s
HLID Hailey 48.33 350 P **P** **10 05 54.4 +0.7**
baz=48,SNR=28
JFWS Jewell Farm 48.38 13 *eP* **P** **10 05 52.9 -0.9**
JFWS pmax pmax
comp=Z,11nm,0.8s
JFWS MLR MLR
comp=Z,611nm,21.0s
JFWS Jewell Farm 48.38 13 *eP* **P** **10 05 52.9 -0.9**
comp=Z,11nm,0.8s
JFWS LR LR
comp=Z,611nm,21.0s
I15A Monteview 48.45 352 P **P** **10 05 55.3 +0.8**
baz=49,SNR=22
MFID Camas Ranch 48.45 348 *eP* **P** **10 05 54.6 +0.1**
comp=Z,71nm,1.5s
MFID Camas Ranch 48.45 348 P **P** **10 05 54.5 -0.1**
baz=49,SNR=25
H20A Greybull 48.46 356 P **P** **10 05 54.1 -0.4**
baz=49,SNR=7.7
H22A Clearmont 48.48 358 P **P** **10 05 54.1 -0.6**
baz=49,SNR=6.6
I14A Mackay 48.52 351 P **P** **10 05 55.4 +0.2**
baz=49,SNR=22
H24A Dirks Ranch, A 48.59 359 P **P** **10 05 55.0 -0.5**
baz=49,SNR=13
H17A Grant Village 48.60 354 P **P** **10 05 58.1 +2.3**
baz=49,SNR=11
I13A Wildhorse Cree 48.62 350 P **P** **10 05 56.5 +0.5**
baz=49,SNR=34
YBH Yreka Blue Hor 48.66 341 *eP* **P** **10 05 55.6 -0.6**
comp=Z,32nm,1.0s
YBH Yreka Blue Hor 48.66 341 P **P** **10 05 55.4 -0.8**
comp=Z,10nm,0.9s,baz=158,slow=5.3,SNR=12
YBH LR LR 10 22 12.5
comp=Z,1µm,21.6s,baz=168,slow=31
I12A Atlanta 48.68 349 ⇓P **P** **10 05 56.6 +0.2**
baz=49
H19A Powell 48.72 355 P **P** **10 05 56.5 0.0**
baz=49,SNR=12
LKWY Lake 48.74 354 *eP* **P** **10 05 57.6 +0.6**
LKWY pmax pmax
comp=Z,23nm,1.0s
LKWY MLR MLR
comp=Z,2µm,22.0s
LKWY Lake 48.74 354 *eP* **P** **10 05 57.6 +0.6**
comp=Z,23nm,1.0s
LKWY LR LR
comp=Z,2µm,22.0s
CBN Corbin 48.75 28 PFAKE 10 06 10.0 +13
CBN LR LR
comp=Z,3µm,19.0s
H18A Shoshone NF, C 48.78 355 P **P** **10 05 57.0 -0.2**
baz=49,SNR=9.4
YMR Madison River 48.91 353 *eP* **P** **10 05 58.8 +0.6**
comp=Z,35nm,1.0s
H16A Russell Place, 48.98 353 P **P** **10 05 58.8 +0.1**
baz=49,SNR=41
H15A Lima 49.08 352 P **P** **10 05 60.0 +0.5**
baz=49,SNR=14
G22A Birney 49.10 358 P **P** **10 05 58.8 -0.7**
baz=49,SNR=6.8
QLMT Earthquake Lak 49.12 353 *eP* **P** **10 06 00.8 +1.0**
G21A Lodge Grass 49.15 357 ⇑P **P** **10 05 59.2 -0.6**
baz=49
G24A Alzada 49.17 360 ⇑P **P** **10 05 59.3 -0.7**
baz=49
H14A Leadore 49.18 351 P **P** **10 06 00.3 0.0**
baz=49,SNR=38
RLMT Red Lodge 49.19 355 *eP* **P** **10 05 59.9 -0.5**
comp=Z,30nm,0.9s
RLMT LR LR
comp=Z,970nm,19.0s
G20A Bridger 49.20 356 P **P** **10 05 59.3 -1.0**
baz=49,SNR=11
MCMT McKenzie Canyo 49.31 352 *eP* **P** **10 06 01.2 0.0**
comp=Z,12nm,0.9s
H12A Diand D Ranc 49.36 350 P **P** **10 06 01.5 -0.1**
baz=50,SNR=31
G18A Lazy EL Ranch, 49.41 355 P **P** **10 06 01.9 -0.1**
baz=50,SNR=25
G17A Pierce Place, 49.53 354 P **P** **10 06 03.8 +1.0**
baz=50,SNR=11
HUMO Hull Mountain 49.53 342 *eP* **P** **10 06 03.7 +1.0**
comp=Z,19nm,1.1s
G16A Moss Hill, Enn 49.56 353 P **P** **10 06 03.3 +0.2**
baz=50,SNR=9.3
G15A Dillon 49.59 352 P **P** **10 06 03.2 -0.1**
baz=50,SNR=11
F24A Ekalaka 49.69 360 P **P** **10 06 03.4 -0.6**
baz=50,SNR=9.2
F21A Absaloka Mine, 49.74 357 ⇓P **P** **10 06 03.9 -0.5**
baz=50
F20A Billings 49.78 356 ⇓P **P** **10 06 04.6 -0.1**
baz=50
G13A Cobalt 49.78 350 P **P** **10 06 05.0 +0.2**
baz=50,SNR=14
DLMT Dillon 49.80 352 *eP* **P** **10 06 04.4 -0.5**
comp=Z,19nm,1.3s
GCMT Greycliff 49.89 355 *eP* **P** **10 06 04.5 -1.0**
comp=Z,9.7nm,1.0s
F19A Roth Farm, Mol 49.89 355 P **P** **10 06 04.6 -0.9**
baz=50,SNR=20
BOZ Bozeman (W) 49.95 353 *eP* **P** **10 06 04.8 -1.3**
BOZ pmax pmax
comp=Z,21nm,1.7s
BOZ MLR MLR
comp=Z,921nm,19.0s
BOZ Bozeman (W) 49.95 353 *eP* **P** **10 06 04.8 -1.3**
comp=Z,21nm,1.7s
BOZ LR LR
comp=Z,921nm,19.0s
F18A Big Timber 50.00 355 P **P** **10 06 06.1 -0.3**
baz=50,SNR=16
G12A Big Creek, Yel 50.01 350 P **P** **10 06 05.8 -0.6**
baz=50,SNR=11
F16A Kennard Place, 50.09 353 P **P** **10 06 06.8 -0.2**
baz=50,SNR=10
F17A Fitzpatrick Pl 50.10 354 P **P** **10 06 07.2 +0.1**
baz=50,SNR=16
BMO Blue Mountains 50.13 348 *eP* **P** **10 06 06.5 -0.9**
comp=Z,4.8nm,1.1s
BMO LR LR
comp=Z,2µm,19.0s
LRM Limekiln Ridge 50.23 352 *eP* **P** **10 06 07.9 -0.4**
F15A Butte 50.25 352 P **P** **10 06 08.1 -0.3**
baz=50,SNR=8.8
E22A Miles City 50.31 358 ⇓P **P** **10 06 07.9 -0.7**
baz=50
F14A Wisdom 50.35 351 P **P** **10 06 09.2 +0.1**
baz=51,SNR=26
E23A Ismay 50.35 359 ⇓P **P** **10 06 08.3 -0.7**
baz=51
E24A Baker 50.40 360 ⇑P **P** **10 06 08.8 -0.5**
baz=51
ALLY Alegheny Colle 50.41 23 *eP* **P** **10 06 07.7 -1.7**
comp=Z,42nm,1.4s
E21A Keefer Ranch, 50.45 357 P **P** **10 06 09.4 -0.3**
baz=51,SNR=5.1
E20A Meyer Farm, Mu 50.48 356 P **P** **10 06 09.1 -0.8**
baz=51,SNR=31
F13A Darby 50.48 351 P **P** **10 06 09.6 -0.4**
baz=51,SNR=10
E19A Rath Farm, Rou 50.48 356 P **P** **10 06 08.9 -1.1**
baz=51,SNR=27
VIPM Ingram Point 50.60 345 P **P** **10 06 11.6 +0.6**
VIPM Ingram Point 50.60 345 P **P** **10 06 11.6 +0.6**
F12A Elk City 50.60 350 P **P** **10 06 10.4 -0.6**
baz=51,SNR=15
MVL Millersville 50.66 27 *eP* **P** **10 06 11.2 -0.1**
comp=Z,44nm,1.6s
E17A Martinsdale 50.67 354 P **P** **10 06 10.9 -0.5**
baz=51,SNR=14
E18A Harlowton 50.68 355 P **P** **10 06 10.6 -0.9**
baz=51,SNR=16
E16A East Helena 50.83 353 ⇓P **P** **10 06 11.1 -1.5**
baz=51
E15A Deer Lodge 50.85 352 P **P** **10 06 12.3 -0.5**
baz=51,SNR=16
ERPA Erie 50.87 23 PFAKE 10 06 20.0 +7.1
ERPA LR LR
comp=Z,1µm,20.0s
D24A Glendive 50.95 360 ⇓P **P** **10 06 13.6 +0.1**
baz=51
E14A Clinton 50.96 352 ⇑P **P** **10 06 13.3 -0.4**
baz=51
D21A La Casta Ranch 50.97 357 P **P** **10 06 13.3 -0.3**
baz=51,SNR=9.9
D23A Lindsay 51.02 359 ⇑P **P** **10 06 13.9 -0.1**
baz=51
D22A Cohagen 51.02 358 P **P** **10 06 13.8 -0.2**
baz=51,SNR=21
HRY Holter Researc 51.02 353 *eP* **P** **10 06 13.8 -0.3**
D20A Manuel Ranch, 51.06 356 P **P** **10 06 14.0 -0.3**
baz=51,SNR=30
TRQA Tornquist 51.07 137 *eP* **P** **10 06 14.5 -0.1**
comp=Z,44nm,1.4s
TRQA LR LR
comp=Z,3µm,19.0s
E13A Victor 51.09 351 P **P** **10 06 13.8 -0.8**
baz=51,SNR=5.9
D19A Cripps Ranch, 51.19 356 P **P** **10 06 14.6 -0.6**
baz=51,SNR=26
D18A Linhart Farms, 51.29 355 P **P** **10 06 15.6 -0.5**
baz=52,SNR=17
D16A Dana Ranch, Ca 51.31 353 P **P** **10 06 15.8 -0.4**
baz=52,SNR=10
D17A Six Diamond Ra 51.33 354 P **P** **10 06 15.7 -0.7**
baz=52,SNR=42
C24A Savage 51.37 360 ⇓P **P** **10 06 15.9 -0.6**
baz=52
CHMT Chamberlain Mo 51.41 352 *eP* **P** **10 06 16.6 -0.5**
MSO Missoula 51.43 351 *eP* **P** **10 06 15.4 -1.7**
MSO LR LR
comp=Z,665nm,20.0s
MSO Missoula 51.43 351 ⇓P **P** **10 06 16.8 -0.3**
baz=52
COR Corvallis 51.43 342 *eP* **P** **10 06 17.7 +0.7**
COR pmax pmax
comp=Z,75nm,0.9s
COR Corvallis 51.43 342 *eP* **P** **10 06 17.7 +0.7**
comp=Z,74nm,0.9s
MPOR Mary's Peak 51.43 342 P **P** **10 06 18.2 +1.0**
D15A Lincoln 51.44 353 P **P** **10 06 16.9 -0.3**
baz=52,SNR=16
D14A Greenough 51.61 352 P **P** **10 06 17.6 -0.9**
baz=52,SNR=9.7
C22A Vida 51.61 358 P **P** **10 06 18.6 +0.2**
baz=52,SNR=13
C20A Veseth Ranch, 51.67 357 P **P** **10 06 18.1 -0.7**
baz=52,SNR=20
C21A Desert Coulee 51.74 357 P **P** **10 06 18.7 -0.6**
baz=52,SNR=18
C19A Slack Wire Ran 51.77 356 P **P** **10 06 19.3 -0.3**
baz=52,SNR=23
SLMT Seeley Lake 51.77 352 *eP* **P** **10 06 19.1 -0.6**
D13A Huson 51.77 351 P **P** **10 06 18.9 -0.7**
baz=52,SNR=8.3
C17A Wharram Farm, 51.82 354 P **P** **10 06 19.2 -0.7**
baz=52,SNR=19
BBSR BB Station 51.98 43 PFAKE 10 06 30.0 +8.7
BBSR LR LR
comp=Z,683nm,21.0s
C16A Fuhringer Ranc 52.09 353 P **P** **10 06 21.8 -0.2**
baz=52,SNR=9.6
HAWA Hanford 52.09 346 *eP* **P** **10 06 22.3 +0.4**
comp=Z,24nm,0.9s
HAWA LR LR
comp=Z,1µm,20.0s
SWMT Swartz Lake 52.10 351 *eP* **P** **10 06 21.3 -0.8**
EGMT Eagleton 52.11 355 *eP* **P** **10 06 21.7 -0.4**
comp=Z,41nm,1.4s
EGMT LR LR
comp=Z,1µm,21.0s
EGMT Eagleton 52.11 355 P **P** **10 06 21.9 -0.3**
baz=52,SNR=10
C15A Salmond Ranch, 52.17 353 P **P** **10 06 22.6 -0.1**
baz=52,SNR=22
B22A Reddig Ranch S 52.17 358 ⇓P **P** **10 06 22.9 +0.3**
baz=52
DGMT Dagmar 52.31 360 *eP* **P** **10 06 23.2 -0.3**
comp=Z,39nm,0.9s
DGMT LR LR
comp=Z,2µm,20.0s
DGMT Dagmar 52.31 360 ⇓P **P** **10 06 23.7 +0.1**
baz=52
B23A Brockton 52.31 359 ⇓P **P** **10 06 24.0 +0.4**
baz=52
C14A Swan Lake 52.32 352 P **P** **10 06 23.6 -0.1**
baz=52,SNR=17
C13A Hot Springs 52.35 351 ⇓P **P** **10 06 23.7 -0.3**
baz=53
JTMT Jette 52.38 351 *eP* **P** **10 06 23.6 -0.5**
ASR Mount Adams--S 52.38 345 P **P** **10 06 24.9 +0.7**
WRD Warden 52.39 347 P **P** **10 06 25.4 +1.2**
B20A Solberg Farm, 52.40 357 ⇓P **P** **10 06 23.8 -0.4**
baz=53
YBMT Yellow Bay 52.45 351 *eP* **P** **10 06 23.5 -1.2**
comp=Z,11nm,0.9s
B17A L&G Farms, Che 52.47 354 P **P** **10 06 24.6 -0.3**
baz=53,SNR=11
B19A Brinkman Farms 52.48 356 ⇓P **P** **10 06 24.6 -0.2**
baz=53
B18A Beardsley Farm 52.48 355 P **P** **10 06 24.7 -0.1**
baz=53,SNR=9.9
C12B Naegeli Ranch, 52.53 350 P **P** **10 06 25.0 -0.3**
baz=53,SNR=9.2
BSMT Bassoo Peak 52.55 351 *eP* **P** **10 06 25.1 -0.5**
BINY Binghamton 52.59 26 *eP* **P** **10 06 25.2 -0.5**
comp=Z,64nm,1.8s
BINY LR LR
comp=Z,2µm,20.0s
FL2 Flat Top 2 52.63 344 P **P** **10 06 26.3 +0.2**
BLMT Blacktail Moun 52.65 351 *eP* **P** **10 06 26.1 -0.2**
B16A M & M Farms, S 52.69 354 ⇓P **P** **10 06 26.2 -0.3**
baz=53
B15A Bradely Ranch, 52.69 353 P **P** **10 06 25.8 -0.7**
baz=53,SNR=16
A24A Westby 52.76 360 P **P** **10 06 26.9 0.0**
baz=53,SNR=7.1
C11A Tepee Creek (N 52.79 350 ⇑P **P** **10 06 27.1 -0.1**
baz=53
B14A Marquette Ranc 52.83 352 P **P** **10 06 27.6 +0.1**
baz=53,SNR=17
A20A Cobblestone Ra 52.83 357 P **P** **10 06 27.3 -0.1**
baz=53,SNR=7.4
OD2 Odessa Site #2 52.85 347 P **P** **10 06 27.3 -0.3**
A22A Carney Farms, 52.86 358 P **P** **10 06 27.4 -0.2**
baz=53,SNR=14
A19A Klindworth Far 52.93 356 P **P** **10 06 27.9 -0.3**
baz=53,SNR=9.1
EYMN Ely 52.93 10 *eP* **P** **10 06 27.0 -1.2**
comp=Z,20nm,1.1s
EYMN LR LR
comp=Z,1µm,20.0s
LON Longmire 52.99 345 *eP* **P** **10 06 28.6 0.0**
LON pmax pmax
comp=Z,29nm,1.3s
LON Longmire 52.99 345 *eP* **P** **10 06 28.6 0.0**
comp=Z,29nm,1.3s
A18A Metzger Ranch, 53.01 355 P **P** **10 06 28.4 -0.3**
baz=53,SNR=8.4
B13A Whitefish 53.01 351 P **P** **10 06 28.7 -0.1**
baz=53,SNR=8.2
A17A Triple J Farms 53.11 354 P **P** **10 06 29.6 +0.1**
baz=53,SNR=28
A16A West Butte Ran 53.20 354 ⇑P **P** **10 06 30.5 +0.2**
baz=53
B12A Libby 53.28 350 ⇑P **P** **10 06 30.2 -0.5**
baz=54
NEW Newport 53.36 349 *eP* **P** **10 06 30.9 -0.4**
comp=Z,21nm,0.8s
NEW LR LR
comp=Z,2µm,20.0s
NEW Newport 53.36 349 P **P** **10 06 30.8 -0.5**
comp=Z,11nm,0.9s,baz=150,slow=11,SNR=20
NEW Newport 53.36 349 P **P** **10 06 31.0 -0.4**
baz=54,SNR=24
A15A Johnson Ranch, 53.37 353 P **P** **10 06 30.7 -0.7**
baz=54,SNR=23
ETW Entiat 53.42 346 P **P** **10 06 32.0 +0.1**
A14A Double T Ranch 53.45 352 P **P** **10 06 32.1 0.0**
baz=54,SNR=12
A13A Flathead Natio 53.55 351 ⇑P **P** **10 06 33.3 +0.5**
baz=54
WALA Waterton Lakes 53.60 352 *eP* **P** **10 06 32.1 -1.1**
comp=Z,0.6nm,0.9s
XMAS Kiritimati 53.77 275 PFAKE 10 06 50.0 +15
XMAS LR LR
comp=Z,2µm,19.0s
NLWA Neilton Lookou 54.14 343 *eP* **P** **10 06 37.6 +0.5**
comp=Z,25nm,1.0s
NLWA LR LR
comp=Z,2µm,20.0s
ULM Lac du Bonnet 54.54 6 *eP* **P** **10 06 38.9 -1.0**
comp=Z,14nm,1.0s
ULM Lac du Bonnet 54.54 6 P **P** **10 06 38.6 -1.3**
comp=Z,23nm,1.3s,baz=193,slow=6.3,SNR=7.1
ULM LR LR 10 28 46.8

comp=Z,2µm,19.3s,baz=341,slow=35
ACCN Adirondack Com 54.57 27 *e*P **P 10 06 38.6 -1.6**
comp=Z,43nm,1.6s
NCB Newcomb 54.79 26 PFAKE
NCB LR LR 10 06 50.0 +8.2
comp=Z,2µm,21.0s
LONY Lake Ozonia 55.15 25 PFAKE 10 07 00.0 +16
LONY LR LR
comp=Z,2µm,20.0s
PGC Sidney 55.17 344 *e*P **P 10 06 45.2 +0.7**
comp=Z,4.9nm,1.4s
FRNY Flat Rock 55.75 26 *e*P **P 10 06 47.7 -1.0**
comp=Z,7.6nm,1.1s
LBNH Lisbon 56.03 27 PFAKE 10 07 00.0 +9.3
LBNH LR LR
comp=Z,2µm,21.0s
BDFB Brasilia 56.17 106 P **P 10 06 51.8 -0.6**
BDFB Brasilia 56.17 106 P **P 10 06 51.8 -0.6**
comp=Z,20nm,1.1s,baz=279,slow=9.6,SNR=14
BDFB LR LR 10 29 06.0
comp=Z,2µm,19.2s,baz=144,slow=34
SPB Sao Paulo 57.83 115 *e*P **P 10 07 05.3 +1.4**
comp=Z,52nm,1.1s
SPB LR LR
comp=Z,2µm,20.0s
USHA Ushuaia 58.20 157 P **P 10 07 06.3 +0.3**
USHA Ushuaia 58.20 157 P **P 10 07 06.3 +0.3**
comp=Z,19nm,1.0s,baz=307,slow=5.1,SNR=3.2
FFC Flin Flon 58.60 1 PFAKE 10 07 20.0 +11
FFC LR LR
comp=Z,2µm,21.0s
FFC Flin Flon 58.60 1 P **P 10 07 07.3 -1.4**
comp=Z,79nm,0.8s,SNR=7.7
KIP Kipapa 58.64 298⇑ *i*P **P 10 07 07.9 -1.7**
KIP pmax pmax
comp=Z,256nm,5.0s
KIP Kipapa 58.64 298 PFAKE 10 07 20.0 +10
KIP LR LR
comp=Z,1µm,21.0s
BBB Bella Bella 59.66 343 LR LR 10 30 08.3
comp=Z,879nm,19.8s,baz=164,slow=33
EFI East Falkland 60.85 149 *e*P **P 10 07 23.7 -0.5**
EFI pmax pmax
comp=Z,216nm,1.5s
EFI MLR MLR
comp=Z,4µm,19.0s
EFI East Falkland 60.85 149 *c i*P **P 10 07 24.2 0.0**
EFI pmax pmax
comp=Z,140nm,1.2s
EFI East Falkland 60.85 149 *e*P **P 10 07 23.7 -0.5**
comp=Z,216nm,1.5s
EFI LR LR
comp=Z,4µm,19.0s
WRAK Wrangell Islan 64.58 343 *e*P **P 10 07 49.2 +0.3**
comp=Z,21nm,0.9s
WRAK LR LR
comp=Z,688nm,20.0s
DLBC Dease Lake 65.69 345 *e*P **P 10 07 56.5 +0.2**
DLBC Dease Lake 65.69 345 P **P 10 07 56.5 +0.2**
comp=Z,17nm,1.1s,baz=183,slow=5.2,SNR=17
DLBC LR LR 10 33 39.1
comp=Z,1µm,20.4s,baz=148,slow=33
SCHQ Schefferville 66.25 22 P **P 10 07 59.6 -0.3**
SCHQ Schefferville 66.25 22 P **P 10 07 59.6 -0.3**
comp=Z,3.3nm,0.8s,baz=264,slow=8.6,SNR=3.9
SCHQ LR LR 10 36 13.8
comp=Z,2µm,18.8s,baz=221,slow=35
YKA Yellowknife Ar 66.86 355 P **P 10 08 01.9 -1.7**
YKA Yellowknife Ar 66.86 355 P **P 10 08 01.9 -1.7**
comp=Z,2.6nm,0.8s,baz=163,slow=6.3,SNR=48
YKW3 Yellowknife Ar 66.93 355 *e*P **P 10 08 02.8 -1.2**
comp=Z,0.2nm,0.8s
PMSA Palmer Station 66.97 163 PFAKE 10 08 20.0 +16
PMSA LR LR
comp=Z,3µm,20.0s
RCBR Riachuelo 67.82 95 PFAKE 10 08 20.0 +9.3
RCBR LR LR
comp=Z,2µm,20.0s
SKAG Skagway 68.00 343 *e*P **P 10 08 11.4 +0.6**
comp=Z,14nm,1.0s
OHAK Old Harbor 72.85 334 *e*P **P 10 08 41.4 +0.8**
comp=Z,93nm,1.2s
KDAK Kodiak Island 72.90 335 LR LR 10 32 48.1
comp=Z,2µm,21.2s,baz=88,slow=29
MENT Mentasta 73.24 342 *e*P **P 10 08 41.9 -0.9**
DOT Dot Lake 73.88 343 *e*P **P 10 08 46.3 -0.3**
comp=Z,52nm,0.8s
EGAK Eagle 73.92 344 *e*P **P 10 08 46.7 0.0**
comp=Z,26nm,0.9s
EGAK LR LR
comp=Z,1µm,22.0s
SML Sawmill 73.93 340 *e*P **P 10 08 47.0 +0.1**
SML pmax pmax
comp=Z,13nm,1.3s
SML Sawmill 73.93 340 *e*P **P 10 08 47.0 +0.1**
comp=Z,13nm,1.3s
RAO Raoul Island 74.02 241 LR LR 10 32 42.4
comp=Z,968nm,21.3s,baz=86,slow=29
PMR Palmer 74.06 339 *e*P **P 10 08 47.3 -0.3**
PMR pmax pmax
comp=Z,33nm,0.9s
PMR Palmer 74.06 339 *e*P **P 10 08 47.3 -0.3**
comp=Z,33nm,0.9s
RSO Redoubt South 74.65 337 *e*P **P 10 08 50.9 -0.5**
SPU Mount Spurr 74.84 338 *e*P **P 10 08 51.8 -0.4**
INK Inuvik 75.08 349 LR LR 10 40 13.4
comp=Z,2µm,18.2s,baz=149,slow=34
MCK McKinley 75.45 341 *e*P **P 10 08 55.5 -0.2**
MCK pmax pmax
comp=Z,56nm,1.4s
MCK McKinley 75.45 341 *e*P **P 10 08 55.5 -0.2**
comp=Z,56nm,1.4s
ILAR Eielson Array 75.54 342 P **P 10 08 54.9 -1.3**
ILAR Eielson Array 75.54 342 P **P 10 08 54.9 -1.3**
comp=Z,14nm,1.0s,baz=159,slow=5.9,SNR=76
ILAR LR LR 10 39 31.1
comp=Z,650nm,19.5s,baz=136,slow=34
TRF Thorofare Moun 75.71 340 *e*P **P 10 08 56.1 -1.3**
comp=Z,32nm,1.1s
COLA College 75.91 342 *e*P **P 10 08 57.6 -0.6**
COLA pmax pmax
comp=Z,8.0nm,1.0s
COLA MLR MLR
comp=Z,703nm,21.0s
COLA College 75.91 342 *e*P **P 10 08 57.6 -0.6**
comp=Z,8.3nm,1.0s
COLA LR LR
comp=Z,703nm,21.0s
SVW2 Sparrevohn 76.14 337 *e*P **P 10 08 58.5 -1.2**
comp=Z,14nm,1.0s
MIDW Midway 77.37 300 PFAKE 10 09 20.0 +13
MIDW LR LR
comp=Z,1µm,21.0s
UNV Unalaska Valle 77.52 327 *e*P **P 10 09 07.6 +0.1**
comp=Z,53nm,1.0s
COLD Coldfoot 78.23 343 *e*P **P 10 09 12.0 +0.7**
comp=Z,40nm,1.1s
URZ Urewera 78.79 232 LR LR 10 35 24.5
comp=Z,1µm,21.5s,baz=105,slow=29
SFJD Kangerlussuaq 80.25 19 PFAKE 10 09 30.0 +7.8
SFJD LR LR
comp=Z,1µm,20.0s
SNZO South Karori 80.81 229 PFAKE 10 09 40.0 +14
SNZO LR LR
comp=Z,1µm,19.0s
SACV Santiago Islan 81.77 74 PFAKE
SACV LR LR 10 09 40.0 +8.5
comp=Z,681nm,22.0s
TNA Tin City 83.20 338 *e*P **P 10 09 38.4 +0.6**
comp=Z,14nm,1.0s
TARA Tarawa 83.21 272 PFAKE 10 09 50.0 +11
TARA LR LR
comp=Z,1µm,22.0s
SBA Scott Base 85.91 192 *e*P **P 10 09 53.2 +1.8**
SBA pmax pmax
comp=Z,19nm,1.3s
SBA MLR MLR
comp=Z,508nm,20.0s
SBA Scott Base 85.91 192 *e*P **P 10 09 53.1 +1.8**
comp=Z,19nm,1.3s
SBA LR LR
comp=Z,508nm,20.0s
QSPA South Pole Qui 86.00 180 *e*P **P 10 09 52.2 0.0**
comp=Z,39nm,1.2s
QSPA LR LR
comp=Z,1µm,19.0s
QSPA South Pole Qui 86.00 180 P **P 10 09 52.7 +0.5**
comp=Z,21nm,1.0s,baz=132,slow=4.7,SNR=15
SUMG Summit 86.70 16 *e*P **P 10 09 57.0 +1.1**
SUMG pmax pmax
comp=Z,7.0nm,0.9s
SUMG Summit 86.70 16 *e*P **P 10 09 57.0 +1.1**
comp=Z,6.8nm,0.9s
VNDA Vanda 86.97 193 *e*P **P 10 09 57.3 +0.7**
comp=Z,10nm,1.4s
VNDA Vanda 86.97 193 P **P 10 09 56.8 +0.1**
comp=Z,2.5nm,1.1s,baz=80,slow=5.9,SNR=4.7
VNDA LR LR 10 41 32.7
comp=Z,710nm,18.6s,baz=96,slow=31
DZM Mont Dzumac 88.10 248 *e*SS SS 10 26 33.4 -2.4
comp=Z,509nm,26.7s
DZM *e*LQ LQ 10 33 49.3
comp=Z,1µm,36.2s
DZM *e*LR LR 10 37 59.1
comp=Z,857nm,29.6s
FX1 Attu Island--F 88.89 323 LR LR 10 41 16.5
comp=Z,2µm,21.2s,baz=128,slow=30
SNAA Sanae 89.67 162 *e*P **P 10 10 11.3 +1.6**
comp=Z,88nm,2.5s
WAKE Wake Island 90.72 289 PFAKE
WAKE LR LR 10 10 30.0 +14
comp=Z,1µm,20.0s
BILL Bilibino 93.64 338⇑ *i*P **P 10 10 27.6 -0.4**
BILL *i* 10 10 34.3
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL Bilibino 93.64 338 PFAKE 10 10 40.0 +12
BILL LR LR
comp=Z,673nm,21.0s
HNR Honiara 95.32 260 PFAKE
HNR LR LR 10 10 50.0 +13
comp=Z,460nm,22.0s
SHEL Horse Pasture 96.79 107 PFAKE 10 10 50.0 +6.4
SHEL LR LR
comp=Z,959nm,22.0s
MTE Manteigas 97.52 50 PFAKE 10 11 00.0 +14
MTE LR LR
comp=Z,523nm,20.0s
PET Petropavlovsk 97.66 323 *e*P **P 10 10 45.6 -1.0**
PET *e*S S 10 22 03.4 -7.7
PET *e*PS **PS 10 23 33.2 -2.9**
PET *e*PPS PPS 10 24 12.3
RTC Rabat Centre 98.16 56 PFAKE 10 11 00.0 +11
RTC LR LR
comp=Z,492nm,21.0s
PETK Petropavlovsk- 98.23 323 LR LR 10 47 16.1
comp=Z,822nm,20.7s,baz=84,slow=31
KBS Kingsbay 98.82 10 PFAKE 10 11 00.0 +8.7
KBS LR LR
comp=Z,1µm,19.0s
ESK Eskdalemuir 99.46 35 PFAKE 10 11 10.0 +15
ESK LR LR
comp=Z,640nm,21.0s
DBIC Dimbokro 99.51 84 LR LR 10 55 06.9
comp=Z,419nm,18.1s,baz=245,slow=35
PAB San Pablo 100.00 51 PFAKE 10 11 10.0 +12
PAB LR LR
comp=Z,564nm,21.0s
TAU Tasmania Unive 100.79 225 PFAKE 10 11 10.0 +9.1
TAU LR LR
comp=Z,1µm,19.0s
CAN Canberra 101.44 233 PFAKE 10 11 20.0 +16
CAN LR LR
comp=Z,957nm,21.0s
KONO Kongsberg 105.26 29 PFAKE 10 15 50.0
KONO LR LR
comp=Z,333nm,21.0s
CASY Casey 105.56 194 PFAKE 10 15 50.0
CASY LR LR
comp=Z,485nm,20.0s
SSB Saint Sauveur 105.87 44 PFAKE 10 15 50.0
SSB LR LR
comp=Z,316nm,21.0s
WLF Walferdange 106.05 39 PFAKE 10 15 50.0
WLF LR LR
comp=Z,727nm,22.0s
ECH Echery 107.03 41 PFAKE 10 15 50.0
ECH LR LR
comp=Z,416nm,20.0s
CTAO Charters Tower 107.04 248 PFAKE 10 15 50.0
CTAO LR LR
comp=Z,198nm,19.0s
KEV Kevo 107.08 16 PFAKE 10 15 50.0
KEV LR LR
comp=Z,841nm,21.0s
BFO Black Forest 107.76 40 PFAKE 10 15 50.0
BFO LR LR
comp=Z,464nm,19.0s
PMG Port Moresby 107.86 259 PFAKE 10 15 50.0
PMG LR LR
comp=Z,484nm,21.0s
TUE Stuetta 108.89 42 PFAKE 10 15 50.0
TUE LR LR
comp=Z,450nm,19.0s
TAM Tamanrasset 109.54 67 PFAKE 10 16 00.0
TAM LR LR
comp=Z,285nm,20.0s
ERM Erimo 109.61 313 PFAKE 10 15 50.0
ERM LR LR
comp=Z,1µm,20.0s
CLL Collm 109.81 36 *e*SKSac SKSac 10 22 36.0 +16
CLL *e*Sdif **Sdif 10 23 54.0 +1.2**
CLL *e*PPS PPS 10 26 43.0
CLL *e* 10 35 12.0
CLL *e*SSS SSS 10 35 36.0
CLL LmV 11 00 00.0
comp=Z,300nm,20.6s
VLC Villacollemand 110.18 44 PFAKE 10 16 00.0
VLC LR LR
comp=Z,257nm,21.0s
VSL Villasalto 110.52 49 PFAKE 10 16 00.0
VSL LR LR
comp=Z,555nm,22.0s
GUMO Guam 111.49 283 PFAKE 10 16 00.0
GUMO LR LR
comp=Z,464nm,21.0s
AQU L'Aquila 112.78 46 PFAKE 10 16 00.0
AQU LR LR
comp=Z,598nm,22.0s
MAJO Matsushiro 114.61 308 PFAKE 10 16 00.0 +7.3
MAJO LR LR
comp=Z,1µm,20.0s
CUC Castrocucco 115.20 47 PFAKE 10 16 10.0 +16
CUC LR LR
comp=Z,207nm,19.0s
PSZ Piszkesteto 115.22 38 PFAKE 10 16 10.0 +16
PSZ LR LR
comp=Z,359nm,21.0s
WDD Wield Dalam 115.32 52 PFAKE 10 16 10.0 +16
WDD LR LR
comp=Z,192nm,21.0s
CEL Celeste 115.75 49 PFAKE 10 16 10.0 +15
CEL LR LR
comp=Z,239nm,20.0s
TIP Timpagrande 116.14 48 PFAKE 10 16 10.0 +14
TIP LR LR
comp=Z,416nm,22.0s
KWP Kalwaria Pacla 116.16 36 PFAKE 10 16 10.0 +15
KWP LR LR
comp=Z,281nm,22.0s
SUR Sutherland 116.37 129 PFAKE 10 16 10.0 +13
SUR LR LR
comp=Z,1µm,21.0s
ASAR Alice Springs 117.27 241 PKP **PKPdf 10 15 57.8 -0.5**
ASAR Alice Springs 117.27 241 PKP **PKPdf 10 15 57.8 -0.5**
comp=Z,0.8nm,0.8s,baz=104,slow=1.6,SNR=5.8
TIR Tirane 117.68 45 PFAKE 10 16 10.0 +12
TIR LR LR
comp=Z,252nm,19.0s
WRAB Tennant Creek 117.96 245 PFAKE 10 16 10.0 +10
WRAB LR LR
comp=Z,466nm,22.0s
WRA Warramunga Arr 117.97 245 PKP **PKPdf 10 15 58.7 -0.9**
WRA Warramunga Arr 117.97 245 PKP **PKPdf 10 15 58.7 -0.9**
comp=Z,1.3nm,0.8s,baz=102,slow=1.7,SNR=7.9
TSUM Tsumeb 118.07 114 PFAKE 10 16 10.0 +10
TSUM LR LR
comp=Z,774nm,20.0s
MDJ Mudanjiang 118.18 319 PFAKE 10 16 10.0 +11
MDJ LR LR
comp=Z,544nm,21.0s
KIEV Kiev 119.24 32 PFAKE 10 16 10.0 +8.9
KIEV LR LR
comp=Z,304nm,20.0s
CN2 Changchun 121.21 320 *e*PKP PKPdf 10 15 59.9 -5.3
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,500nm,19.0s
CN2 LR LR
comp=E,400nm,19.0s
CN2 LR LR
comp=Z,500nm,21.0s
HIA Hailar 121.69 328 PFAKE 10 16 20.0 +14
HIA LR LR
comp=Z,921nm,20.0s
KSRS Korea Array 122.16 312 PKP **PKPdf 10 16 06.1 -1.1**
comp=Z,0.8nm,0.8s,baz=120,slow=0.6,SNR=3.3
KSAR Wonju Array Be 122.20 312 PKP **PKPdf 10 16 06.1 -1.2**
INCN Inchon 123.10 313 PFAKE 10 16 20.0 +11
INCN LR LR
comp=Z,722nm,20.0s
FITZ Fitzroy Crossi 126.37 244 PKP **PKPdf 10 16 15.2 -0.6**
FITZ Fitzroy Crossi 126.37 244 PKP **PKPdf 10 16 15.2 -0.6**
comp=Z,2.6nm,0.7s,baz=198,slow=4.0,SNR=5.1
ISP Isparta 126.63 45 PFAKE 10 16 30.0 +14
ISP LR LR
comp=Z,202nm,20.0s
ANTO Ankara 127.18 41 PFAKE 10 16 30.0 +13
ANTO LR LR
comp=Z,177nm,21.0s
ANN Anapa 127.19 34 *e*PKIKP **PKPdf 10 16 16.7 +0.1**
ANN MLR MLR
comp=N,394nm,18.0s
ANN MLR MLR
comp=Z,381nm,18.0s
TLY Talaya 127.25 339 *i* PKIKP **PKPdf 10 16 20.2 +3.6**
TLY pmax pmax
comp=Z,2.0nm,0.8s
TLY MLR MLR
comp=Z,226nm,18.0s
BRTR Keskin Array B 127.81 41 PKP **PKPdf 10 16 16.3 -1.8**
BRTR Keskin Array B 127.81 41 PKP **PKPdf 10 16 16.3 -1.8**
comp=Z,1.3nm,0.9s,baz=120,slow=1.8,SNR=5.6
ULN Ulaanbaatar 128.87 334 PFAKE 10 16 30.0 +10
ULN LR LR
comp=Z,460nm,21.0s
LSZ Lusaka 128.90 113 PFAKE 10 16 30.0 +9.2
LSZ LR LR
comp=Z,988nm,20.0s
BJT Baijiatuan 129.09 320 PFAKE 10 16 30.0 +10
BJT LR LR
comp=Z,895nm,22.0s
SONM Songino Array 129.18 334 PKP **PKPdf 10 16 19.1 -1.4**
SONM PP **PP 10 18 29.9 +1.8**
SONM Songino Array 129.18 334 PKP **PKPdf 10 16 19.1 -1.4**
comp=Z,1.2nm,1.0s,baz=40,slow=2.5,SNR=6.6
SONM PP **PP 10 18 29.8 +1.8**
comp=Z,1.1nm,1.1s,baz=17,slow=6.0,SNR=3.9
ZALV Zalesovo Beam 129.75 353 PKIKP **PKPdf 10 16 20.6 -0.6**
ZALV 10 18 32.8
ZALV Zalesovo Beam 129.75 353 PKP **PKPdf 10 16 20.6 -0.6**
ZALV PP **PP 10 18 32.8 +1.6**
ZALV Zalesovo Beam 129.75 353 PKP **PKPdf 10 16 20.6 -0.6**
comp=Z,0.3nm,0.3s,baz=10,slow=3.2,SNR=3.5
ZALV PP **PP 10 18 32.8 +1.6**
comp=Z,0.2nm,0.3s,baz=350,slow=4.4,SNR=3.5
CSS Prodhromos 129.97 47 PFAKE 10 16 30.0 +7.8
CSS LR LR
comp=Z,198nm,19.0s
MBWA Marble Bar 130.38 238 PFAKE 10 16 40.0 +17
MBWA LR LR
comp=Z,837nm,21.0s
KIV Kislovodsk 130.58 32 *i* PKIKP **PKPdf 10 16 25.9 +2.7**
KIV *e* 10 23 34.4
KIV *e*SS SS 10 36 07.3 +2.5
KIV *e*SSS SSS 10 41 01.7
KIV pmax pmax
comp=Z,4.0nm,1.0s
KIV MLR MLR
comp=Z,178nm,21.0s
DAV Davao City (W) 130.60 276 PFAKE 10 16 40.0 +16
DAV LR LR
comp=Z,441nm,21.0s
BRVK Borovoye 130.93 5 PFAKE 10 16 40.0 +17
BRVK LR LR
comp=Z,581nm,20.0s
BVAR Borovoye Array 130.97 5 PKIKP **PKPdf 10 16 22.7 -0.9**
BVAR 10 18 39.0
BVAR Borovoye Array 130.97 5 PKP **PKPdf 10 16 22.7 -0.9**
BVAR PP **PP 10 18 39.0 -0.1**
BVAR Borovoye Array 130.97 5 PKP **PKPdf 10 16 22.7 -0.9**
comp=Z,1.3nm,0.7s,baz=318,slow=1.9,SNR=6.7
BVAR PP **PP 10 18 39.0 -0.1**
comp=Z,1.2nm,0.8s,baz=339,slow=3.6,SNR=3.8
NJ2 Nanjing 131.17 310 *e*PKP **PKPdf 10 16 23.0 -1.5**
NJ2 AMB AMB
comp=Z,100nm,8.2s
NJ2 LR LR
comp=N,400nm,23.4s
NJ2 LR LR
comp=E,490nm,23.5s
NJ2 LR LR
comp=Z,220nm,22.7s
AKTO Aktyubinsk 131.35 15 PKIKP **PKPdf 10 16 24.0 -0.4**
AKTO Aktyubinsk 131.35 15 PKP **PKPdf 10 16 24.0 -0.4**
AKTO Aktyubinsk 131.35 15 PKP **PKPdf 10 16 24.0 -0.4**
comp=Z,1.7nm,1.0s,baz=340,slow=2.0,SNR=3.9
HHC Hu-ho-hao-te 131.41 324 *e*PKP **PKPdf 10 16 27.3 +2.4**
HHC PP **PP 10 18 48.1 +5.2**
HHC PKS **PKSdf 10 20 02.3 +0.8**
HHC SKS **SKSdf 10 23 37.9 +2.0**
HHC SKKS **SKKSac 10 25 38.8 -0.6**
HHC SS **SS 10 36 19.6 +4.3**
HHC AMB AMB
comp=Z,260nm,9.6s
HHC LR LR
comp=N,370nm,18.0s
HHC LR LR
comp=E,380nm,18.0s
HHC LR LR
comp=Z,200nm,20.4s
TATO Taipei 131.64 300 PFAKE 10 16 40.0 +14
TATO LR LR
comp=Z,639nm,19.0s
YHNB Yeheng 131.83 300 PFAKE 10 16 40.0 +14
YHNB LR LR
comp=Z,624nm,20.0s
ABKAR Akbulak array 132.93 14 *e*PKPdf **PKPdf 10 16 27.8 +0.4**
KURK Kurchatov 133.45 358 PKIKP **PKPdf 10 16 27.1 -1.2**
KURK 10 18 56.9
KURK MLR MLR
comp=Z,792nm,21.0s
KURK Kurchatov 133.45 358 PKP **PKPdf 10 16 27.1 -1.2**
KURK PP **PP 10 18 56.9 +1.9**
KURK LR LR
comp=Z,792nm,21.0s
KURBB Kurchatov Arra 133.55 358 PKP **PKPdf 10 16 27.0 -1.4**
comp=Z,0.3nm,0.5s,baz=5.7,slow=2.7,SNR=3.6
KURBB PP **PP 10 18 56.9 +1.2**
comp=Z,0.9nm,0.9s,baz=2.2,slow=5.7,SNR=4.3
GNI Garni 134.32 34 PFAKE 10 16 40.0 +10
GNI LR LR
comp=Z,223nm,20.0s
MBAR Mbarara 134.52 95 PFAKE 10 16 40.0 +8.4
MBAR LR LR
comp=Z,655nm,22.0s
KAPI Kappang 135.39 259 PFAKE 10 16 40.0 +7.0
KAPI LR LR
comp=Z,300nm,21.0s
MKAR Makanchi Array 137.08 354 PKHKP PKPpre 10 16 27.0
MKAR 10 16 33.4
MKAR 10 19 21.3
MKAR Makanchi Array 137.08 354 PKPpre PKPpre 10 16 27.0
MKAR PKP **PKPdf 10 16 33.4 -1.9**
MKAR PP **PP 10 19 21.3 +3.3**
MKAR Makanchi Array 137.08 354 PKhKP PKPpre 10 16 27.0
comp=Z,0.8nm,0.9s,baz=29,slow=3.3,SNR=3.5
MKAR PKP **PKPdf 10 16 33.4 -1.9**
comp=Z,1.4nm,0.9s,baz=41,slow=2.7,SNR=5.9
MKAR PP **PP 10 19 21.3 +3.3**
comp=Z,1.7nm,1.1s,baz=13,slow=3.1,SNR=4.5
GTA Gaotai 138.72 332 *e*PKP **PKPdf 10 16 40.8 +2.1**
GTA PP PP 10 19 35.1 +6.2
GTA PKS **PKSdf 10 20 15.4 +0.5**
GTA SKS **SKSdf 10 23 49.8 +1.0**
GTA SKKS **SKKSac 10 26 25.3 +1.8**

GTA				SS	**SS**	**10 37 47.3**	**+4.7**	
GTA				AMB	AMB			
	comp=Z,35nm,7.4s							
GTA				LR	LR			
	comp=N,410nm,21.9s							
GTA				LR	LR			
	comp=E,520nm,19.9s							
GTA				LR	LR			
	comp=Z,800nm,20.9s							
ENH	**Enshi**	**139.04**	**313**	PFAKE		10 16 50.0	+11	
ENH				LR	LR			
	comp=Z,544nm,19.0s							
WMQ	**Urumqi**	**139.08**	**347**	*e*PKP	**PKPdf**	**10 16 39.1**	**0.0**	
WMQ				PP	PP	10 19 35.8	+5.3	
WMQ				PKS	**PKSdf**	**10 20 13.8**	**-1.4**	
WMQ				SKS	**SKSdf**	**10 23 44.1**	**-4.9**	
WMQ				SS	**SS**	**10 37 45.9**	**0.0**	
WMQ				LR	LR			
	comp=N,620nm,23.2s							
WMQ				LR	LR			
	comp=E,610nm,29.4s							
WMQ				LR	LR			
	comp=Z,730nm,24.4s							
KKM	**Kota Kinabalu**	**139.92**	**275**	PFAKE		10 16 50.0	+8.5	
KKM				LR	LR			
	comp=Z,409nm,21.0s							
KMBO	**Kilima Mbogo**	**140.92**	**97**	PFAKE		10 17 00.0	+16	
KMBO				LR	LR			
	comp=Z,699nm,20.0s							
TKM2	**Tokmak 2**	**141.30**	**0**	*e*PKIKP	**PKPdf**	**10 16 44.1**	**+0.8**	
TKM2				MLR	MLR			
	comp=Z,516nm,20.0s							
TKM2	**Tokmak 2**	**141.30**	**0**	*e*PKPdf	**PKPdf**	**10 16 44.1**	**+0.8**	
TKM2				LR	LR			
	comp=Z,516nm,20.0s							
EKS2	**Erkin-Say**	**141.51**	**3**	*e*PKIKP	**PKPdf**	**10 16 45.0**	**+1.4**	
EKS2				MLR	MLR			
	comp=Z,496nm,20.0s							
EKS2	**Erkin-Say**	**141.51**	**3**	*e*PKPdf	**PKPdf**	**10 16 45.0**	**+1.4**	
EKS2				LR	LR			
	comp=Z,496nm,20.0s							
AAK	**Ala-Archa**	**141.56**	**2**	PKIKP	**PKPdf**	**10 16 43.2**	**-0.6**	
AAK				MLR	MLR			
	comp=Z,495nm,19.0s							
AAK	**Ala-Archa**	**141.56**	**2**	PKP	**PKPdf**	**10 16 43.2**	**-0.6**	
AAK				LR	LR			
	comp=Z,495nm,19.0s							
AAK	**Ala-Archa**	**141.56**	**2**	PKP	**PKPdf**	**10 16 43.2**	**-0.6**	
	comp=Z,1.1nm,0.4s,baz=236,slow=3.6,SNR=2.3							
CD2	**Chengdu**	**142.63**	**319**	PKP	**PKPdf**	**10 16 44.3**	**-1.6**	
CD2				PP	**PP**	**10 19 54.3**	**+1.1**	
CD2				PKS	**PKSdf**	**10 20 17.6**	**-4.2**	
CD2				SKS	**SKSdf**	**10 23 50.4**	**-4.9**	
CD2				SKKS	**SKKSac**	**10 26 43.0**	**-3.5**	
CD2				SS	**SS**	**10 38 27.1**	**-2.0**	
CD2				AMB	AMB			
	comp=Z,160nm,6.4s							
CD2				LR	LR			
	comp=N,270nm,18.1s							
CD2				LR	LR			
	comp=E,690nm,19.1s							
CD2				LR	LR			
	comp=Z,510nm,19.6s							
GYA	**Guiyang**	**143.18**	**310**	PKP	**PKPdf**	**10 16 45.6**	**-1.4**	
GYA				PP	**PP**	**10 20 01.4**	**+4.4**	
GYA				PKS	**PKSdf**	**10 20 19.9**	**-3.1**	
GYA				SKKS		10 26 48.6		
GYA				SS	**SS**	**10 38 35.4**	**-0.8**	
GYA				AMB	AMB			
	comp=Z,120nm,7.9s							
GYA				LR	LR			
	comp=N,140nm,23.9s							
GYA				LR	LR			
	comp=E,130nm,24.2s							
GYA				LR	LR			
	comp=Z,150nm,25.8s							
ABPO	**Ambohimpanom**	**143.54**	**130**	PFAKE		10 17 00.0	+12	
ABPO				LR	LR			
	comp=Z,1μm,21.0s							
QIZ	**Qiongzhong**	**143.78**	**297**	PKP	PKPbc	10 16 45.4	-0.3	
QIZ				PP	**PP**	**10 19 59.0**	**-2.0**	
QIZ				SS	SS	10 38 45.9	+2.0	
QIZ				LR	LR			
	comp=E,160nm,17.9s							
QIZ				LR	LR			
	comp=Z,450nm,19.6s							
QIZ	**Qiongzhong**	**143.78**	**297**	PFAKE		10 17 00.0	+12	
QIZ				LR	LR			
	comp=Z,482nm,19.0s							
KSH	**Kashi**	**144.70**	**0**	*e*PKPbc	**PKPdf**	**10 16 49.0**	**-0.3**	
KSH				*e*SKS	**SKSdf**	**10 23 56.1**	**-2.1**	
KSH				AMB	AMB			
	comp=Z,190nm,9.0s							
KSM	**Kuching**	**145.66**	**267**	*e*PKPdf	**PKPdf**	**10 16 49.3**	**-2.2**	
KMI	**Kunming**	**146.86**	**312**	PKPbc	**PKPdf**	**10 16 53.9**	**+0.3**	
KMI				SS	SS	10 39 19.0	+0.5	
KMI				LR	LR			
	comp=N,310nm,22.5s							
KMI				LR	LR			
	comp=E,530nm,24.1s							
KMI				LR	LR			
	comp=Z,810nm,24.1s							
KBL	**Kabul**	**148.99**	**11**	*e*PKP2	**PKPbc**	**10 17 00.7**	**-0.1**	
KBL	**Kabul**	**148.99**	**11**	*e*PKPbc	**PKPbc**	**10 17 00.7**	**-0.1**	
LSA	**Lhasa**	**150.75**	**332**	PFAKE		10 17 10.0	-2.5	
LSA				LR	LR			
	comp=Z,668nm,21.0s							
CHTO	**Chiang Mai**	**153.22**	**305**	*e*PKIKP	**PKPdf**	**10 17 03.1**	**-0.3**	
CHTO				MLR	MLR			
	comp=Z,511nm,20.0s							
CHTO	**Chiang Mai**	**153.22**	**305**	*e*PKPdf	**PKPdf**	**10 17 03.1**	**-0.3**	
CHTO				LR	LR			
	comp=Z,511nm,20.0s							
CMAR	**Chiang Mai Arr**	**153.40**	**304**	PKP	**PKPdf**	**10 17 03.6**	**-0.1**	
CMAR				PKPbc	**PKPbc**	**10 17 10.8**	**-0.5**	
CMAR	**Chiang Mai Arr**	**153.40**	**304**	PKP	**PKPdf**	**10 17 03.6**	**-0.1**	
	comp=Z,1.3nm,0.7s,baz=321,slow=1.3,SNR=7.8							
CMAR				PKPbc	**PKPbc**	**10 17 10.8**	**-0.5**	
	comp=Z,5.9nm,1.0s,baz=301,slow=0.6,SNR=7.4							
MSEY	**Mahe Island**	**157.72**	**113**	PFAKE		10 17 20.0	+10	
MSEY				LR	LR			
	comp=Z,690nm,20.0s							
DGAR	**Diego Garcia**	**168.06**	**163**	PFAKE		10 17 30.0	+10	
DGAR				LR	LR			
	comp=Z,1μm,19.0s							

*NIED **24** 10:03:00,40.30N×143.80E,h11km,Mw4.2 Best double couple: M₀2.06000×10¹⁵ NP1:φ₀39.00000°,δ69.00000°, λ119.00000°. NP2:φ₀161.00000°,δ36.00000°,λ38.00000°.*

*IDC **24** 10:03:08.6±0.7,40.18N×143.92E,h0km,mb3.8/15, mb1 4.0/20,mb1mx3.9/30,mbtmp3.8/20,ML3.3/5,MS3.2/4, Ms1 3.2/4,ms1mx2.7/44,Error ellipse: s-maj=17.7km s-min=15.1km az=110.0*

*ISCJB **24** 10:03:09.9±1.2,40.31N±0.03×143.87E±0.05,h18km±9km, mb4.0/24,MS3.2/2,Error ellipse: s-maj=7.0km s-min=3.6km az=34.4*

*JMA **24** 10:03:10.8±0.1,40.32N×143.82E,h27km,M3.9*

*NEIC **24** 10:03:11.3±3.6,40.27N×143.90E,h16km±22km,mb4.6/3, MW4.1(NIED),Error ellipse: s-maj=12.1km s-min=7.6km az=111.0*

*MOS **24** 10:03:11.8±0.9,40.26N×143.86E,h33km,mb4.6/7,Error ellipse: s-maj=10.4km s-min=7.6km az=92.6*

*BJI **24** 10:03:11.4,40.52N×144.27E,h40km,mB4.7/6,mb4.5/10, Ms4.1/1,Ms7 4.0/1*

ISC 24 10:03:11.5±3.1,40.30N±0.05×143.89E±0.05,h17km±19km, n86,σ1°32/102,mb4.1/24,8C-3D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.59**	**258**	P	**Pn**	**10 03 37.2**	**-1.7**
JTH				S	**Sn**	**10 03 55.7**	**-3.4**
MIYJ	**Miyakonagasawa**	**1.75**	**246**	P	**Pn**	**10 03 40.0**	**-1.0**
MIYJ				*e*S	**Sn**	**10 04 01.2**	**-1.6**
ERM	**Erimo**	**1.80**	**342**	*ce*P	**Pn**	**10 03 39.4**	**-2.4**
ERM				pmax	pmax		
	comp=Z,82nm,0.7s						
ERM	**Erimo**	**1.80**	**342**	*e*Pn	**Pn**	**10 03 40.4**	**-1.4**
JEM	**Erimo**	**1.80**	**342**	P	**Pn**	**10 03 40.3**	**-1.5**
JANG	**Nango**	**1.81**	**273**	P	**Pn**	**10 03 40.5**	**-1.5**
JNBK	**Urakawa-nobuka**	**2.16**	**337**	P	**Pn**	**10 03 46.2**	**-0.5**
JNBK				*e*S	**Sn**	**10 04 13.2**	**+0.2**
JOM	**Ohasama**	**2.16**	**248**	P	**Pn**	**10 03 46.1**	**-0.6**
JOM				*e*S	**Sn**	**10 04 12.9**	**-0.2**
JCH	**Churui**	**2.35**	**351**	P	**Pn**	**10 03 48.3**	**-1.0**
JCH				*e*S	**Sn**	**10 04 16.0**	**-1.7**
JOT	**Ohata**	**2.41**	**298**	P	**Pn**	**10 03 49.4**	**-0.7**
JOT				*e*S	**Sn**	**10 04 17.8**	**-1.4**
JMK	**Ichinoseki**	**2.46**	**238**	P	**Pn**	**10 03 50.0**	**-0.8**
JMK				*e*S	**Sn**	**10 04 18.2**	**-2.2**
JKB	**Kayabe**	**2.68**	**307**	P	**Pn**	**10 03 53.4**	**-0.4**
JKB				*e*S	**Sn**	**10 04 25.1**	**-0.7**
JAK	**Akkeshi**	**2.76**	**12**	P	**Pn**	**10 03 53.9**	**-1.1**
JAK				*e*S	**Sn**	**10 04 25.6**	**-2.3**
JAR	**Ashorobuto**	**3.00**	**358**	P	**Pn**	**10 03 56.8**	**-1.4**
JAR				S	**Sn**	**10 04 30.9**	**-2.8**
JYK	**Kaneyama**	**3.05**	**244**	P	**Pn**	**10 03 58.7**	**-0.3**
NEM2	**Nemuro 2**	**3.36**	**24**	P	**Pn**	**10 04 01.9**	**-1.3**
NEM2				*e*S	**Sn**	**10 04 38.9**	**-3.8**
JTKR	**Abashiri--Toko**	**3.67**	**0**	P	**Pn**	**10 04 06.7**	**-0.7**
JTKR				S	**Sn**	**10 04 48.4**	**-1.9**
ASAJ	**Asahikawa**	**3.93**	**346**	*e*Pn	**Pn**	**10 04 12.1**	**+1.0**
ASAJ				Sn	**Sn**	**10 04 59.2**	**+2.4**
ASAJ	**Asahikawa**	**3.93**	**346**	Pn	**Pn**	**10 04 11.3**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=202,slow=11,SNR=12						
ASAJ				Sn	**Sn**	**10 04 59.2**	**+2.4**
	comp=Z,2.5nm,0.3s,baz=160,slow=27,SNR=5.7						
ASAJ				LR	LR	10 06 38.1		
	comp=Z,420nm,18.4s,baz=178,slow=52							
YUK	**Yuzh-Kuril'sk**	**4.01**	**21**	*c iP*	**Pn**	**10 04 13.0**	**+0.9**	
YUK				*i* S	**Sn**	**10 04 57.2**	**-1.5**	
YUK				pmax	pmax			
	comp=N,50nm,0.4s							
YUK				pmax	pmax			
	comp=Z,78nm,0.4s							
YUK				pmax	pmax			
	comp=E,42nm,0.4s							
YUK				smax	smax			
	comp=E,288nm,0.6s							
YUK				smax	smax			
	comp=N,204nm,0.6s							
KUR	**Kuril'sk**	**5.74**	**29**	P	**Pn**	**10 04 38.0**	**+2.2**	
KUR				*e*S	**Sn**	**10 05 38.0**	**-3.2**	
KUR				smax	smax			
	comp=N,110nm,0.5s							
KUR				smax	smax			
	comp=E,90nm,0.7s							
MAJO	**Matsushiro**	**5.83**	**232**	*e*P	**Pn**	**10 04 37.4**	**+0.2**	
MAJO				pmax	pmax			
	comp=Z,34nm,0.8s							
MAJO	**Matsushiro**	**5.83**	**232**	*e*Pn	**Pn**	**10 04 37.4**	**+0.2**	
	comp=Z,34nm,0.8s							
MAT	**Matsushiro**	**5.83**	**232**	P	**Pn**	**10 04 37.2**	**+0.1**	
MAT				*e*S	**Sn**	**10 05 41.4**	**-2.1**	
MJAR	**Matsushiro Arr**	**5.83**	**232**	Pn	**Pn**	**10 04 37.2**	**+0.1**	
MJAR	**Matsushiro Arr**	**5.83**	**232**	Pn	**Pn**	**10 04 37.2**	**+0.1**	
	comp=Z,1.1nm,0.3s,baz=39,slow=11,SNR=34							
JHJ	**Hachijo jima 2**	**7.88**	**206**	Pn	Pn	10 05 01.6	-3.8	
	comp=Z,4.4nm,0.3s,baz=36,slow=19,SNR=6.9							
JHJ				Sn	Sn	10 06 25.9	-8.3	
	comp=Z,13nm,0.3s,baz=66,slow=19,SNR=5.3							
VLA	**Vladivostok**	**9.40**	**291**	*e*P	**Pn**	**10 05 27.9**	**+1.8**	
USRK	**Ussuriysk Arra**	**9.64**	**298**	Pn	**Pn**	**10 05 30.9**	**+1.6**	
	comp=Z,0.8nm,0.3s,baz=100,slow=14,SNR=32							
USRK				LR	LR	10 08 30.2		
	comp=Z,66nm,21.8s,baz=46,slow=33							
HABR	**Khabarovsk**	**10.33**	**325**	*e*P	**Pn**	**10 05 37.8**	**-1.0**	
HABR				pmax	pmax			
	comp=E,19nm,1.7s							
HABR				pmax	pmax			
	comp=N,7.0nm,0.9s							
HABR				pmax	pmax			
	comp=Z,11nm,1.3s							
KLR	**Kul'dur**	**12.40**	**320**	*e*P	**Pn**	**10 06 04.0**	**-3.1**	
KSRS	**Korea Array**	**12.76**	**262**	Pn	**Pn**	**10 06 13.6**	**+1.4**	
	comp=Z,0.2nm,0.3s,baz=79,slow=13,SNR=4.9							
KSRS				LR	LR	10 11 19.6		
	comp=Z,104nm,18.5s,baz=344,slow=38							
KSAR	**Wonju Array Be**	**12.79**	**262**	Pn	**Pn**	**10 06 13.6**	**+1.0**	
SEY	**Seymchan**	**23.23**	**10**	*e*P	**P**	**10 08 17.2**	**-0.3**	
YAK	**Yakutsk**	**23.41**	**343**	*e*P	**P**	**10 08 17.1**	**-2.2**	
SONM	**Songino Array**	**27.76**	**298**	P	**P**	**10 08 59.5**	**+0.2**	
SONM	**Songino Array**	**27.76**	**298**	P	**P**	**10 08 59.5**	**+0.2**	
	comp=Z,1.5nm,0.7s,baz=98,slow=8.5,SNR=8.5							
SONM				LR	LR	10 20 19.5		
	comp=Z,55nm,20.2s,baz=82,slow=37							
TLY	**Talaya**	**29.82**	**306**	*e*P	P	10 09 22.2	+4.7	
TLY				pmax	pmax			
	comp=Z,5.0nm,0.9s							
TLY				MLR	MLR			
	comp=Z,47nm,13.0s							
BILL	**Bilibino**	**30.35**	**16**	*e*P	**P**	**10 09 22.9**	**+0.9**	
BILL				pmax	pmax			
	comp=Z,11nm,2.5s							
GTA	**Gaotai**	**33.59**	**283**	P	**P**	**10 09 51.3**	**+0.5**	
GTA				pmax	pmax			
	comp=Z,9.0nm,1.2s							
ZAA0	**Zalesovo Array**	**41.23**	**310**	*e*P	**P**	**10 10 55.1**	**-0.1**	
ZALV	**Zalesovo Beam**	**41.23**	**310**	P	**P**	**10 10 55.8**	**+0.5**	
ZALV	**Zalesovo Beam**	**41.23**	**310**	P	**P**	**10 10 55.8**	**+0.5**	
ZALV	**Zalesovo Beam**	**41.23**	**310**	P	**P**	**10 10 55.8**	**+0.5**	
	comp=Z,2.4nm,0.7s,baz=95,slow=7.4,SNR=10							
MK31	**Makanchi Array**	**44.10**	**300**	*e*P	**P**	**10 11 18.6**	**-0.1**	
MK31	**Makanchi Array**	**44.10**	**300**	*e*P	**P**	**10 11 18.6**	**-0.1**	
MKAR	**Makanchi Array**	**44.10**	**300**	P	**P**	**10 11 18.6**	**-0.1**	
MKAR	**Makanchi Array**	**44.10**	**300**	P	**P**	**10 11 18.6**	**-0.1**	
MKAR	**Makanchi Array**	**44.10**	**300**	P	**P**	**10 11 18.6**	**-0.1**	
	comp=Z,3.4nm,0.9s,baz=81,slow=8.7,SNR=18							
CMAR	**Chiang Mai Arr**	**44.23**	**254**	P	**P**	**10 11 20.4**	**+0.5**	
CMAR	**Chiang Mai Arr**	**44.23**	**254**	P	**P**	**10 11 20.4**	**+0.5**	
	comp=Z,0.7nm,0.3s,baz=36,slow=6.8,SNR=4.7							
KURK	**Kurchatov**	**45.51**	**306**	*c iP*	**P**	**10 11 29.6**	**-0.2**	
KURK				pmax	pmax			
	comp=Z,7.0nm,1.1s							
KURK	**Kurchatov**	**45.51**	**306**	*e*P	**P**	**10 11 29.7**	**-0.2**	
	comp=Z,6.5nm,0.9s							
ILAR	**Eielson Array**	**45.71**	**34**	P	**P**	**10 11 31.1**	**-0.1**	
ILAR	**Eielson Array**	**45.71**	**34**	P	**P**	**10 11 31.1**	**-0.1**	
	comp=Z,0.5nm,0.8s,baz=262,slow=6.1,SNR=5.9							
TKM2	**Tokmak 2**	**49.84**	**297**	*e*P	**P**	**10 12 03.9**	**+0.1**	
TKM2				pmax	pmax			
	comp=Z,5.0nm,0.8s							
TKM2	**Tokmak 2**	**49.84**	**297**	*e*P	**P**	**10 12 03.9**	**+0.1**	
	comp=Z,5.3nm,0.8s							
BVAR	**Borovoye Array**	**49.86**	**311**	P	**P**	**10 12 02.9**	**-0.7**	
BVAR	**Borovoye Array**	**49.86**	**311**	P	**P**	**10 12 02.9**	**-0.7**	
BVAR	**Borovoye Array**	**49.86**	**311**	P	**P**	**10 12 02.8**	**-0.7**	
	comp=Z,1.2nm,0.6s,baz=89,slow=8.8,SNR=2.4							
AAK	**Ala-Archa**	**50.70**	**297**	*e*P	**P**	**10 12 10.5**	**+0.2**	
AAK				pmax	pmax			
	comp=Z,7.0nm,1.5s							
ARU	**Arti**	**55.23**	**318**	*c iP*	**P**	**10 12 43.7**	**+0.5**	
ARU				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ARU	**Arti**	**55.23**	**318**	*c iP*	**P**	**10 12 43.7**	**+0.5**	
ARU				S	**S**	**10 20 25.4**	**-0.3**	
ARU				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ABKAR	**Akbulak array**	**57.35**	**309**	*e*P	**P**	**10 12 58.8**	**+0.4**	
	comp=Z,2.7nm,0.7s							
YKA	**Yellowknife Ar**	**60.02**	**32**	P	**P**	**10 13 17.1**	**+0.3**	
YKA	**Yellowknife Ar**	**60.02**	**32**	P	**P**	**10 13 17.1**	**+0.3**	
	comp=Z,0.2nm,0.6s,baz=305,slow=6.4,SNR=4.0							
WRA	**Warramunga Arr**	**60.59**	**190**	P	**P**	**10 13 19.6**	**-1.6**	
WRA	**Warramunga Arr**	**60.59**	**190**	P	**P**	**10 13 19.6**	**-1.6**	
	comp=Z,0.3nm,0.6s,baz=8.9,slow=6.9,SNR=11							
ASAR	**Alice Springs**	**64.31**	**190**	P	**P**	**10 13 44.5**	**-1.5**	
ASAR	**Alice Springs**	**64.31**	**190**	P	**P**	**10 13 44.5**	**-1.5**	
	comp=Z,0.2nm,0.7s,baz=8.9,slow=6.6,SNR=3.1							
FINES	**FINESS Array B**	**66.83**	**332**	P	**P**	**10 14 02.1**	**+0.3**	
FINES	**FINESS Array B**	**66.83**	**332**	P	**P**	**10 14 02.1**	**+0.3**	
	comp=Z,2.1nm,0.8s,baz=49,slow=5.8,SNR=5.9							
KIV	**Kislovodsk**	**70.23**	**311**	*e*P	**P**	**10 14 25.2**	**+1.6**	
KIV				pmax	pmax			
	comp=Z,8.0nm,1.1s							
KBZ	**Khabaz**	**70.24**	**311**	P	**P**	**10 14 25.1**	**+1.6**	
KBZ	**Khabaz**	**70.24**	**311**	P	**P**	**10 14 25.1**	**+1.6**	
KBZ	**Khabaz**	**70.24**	**311**	P	**P**	**10 14 25.1**	**+1.6**	
	comp=Z,1.0nm,0.6s,baz=102,slow=9.3,SNR=4.0							
NVAR	**Mina Array Bea**	**71.51**	**55**	P	**P**	**10 14 32.7**	**+1.1**	
NVAR	**Mina Array Bea**	**71.51**	**55**	P	**P**	**10 14 32.7**	**+1.1**	
	comp=Z,0.2nm,0.7s,baz=300,slow=7.2,SNR=2.5							
NB2	**NORSAR Subarra**	**71.91**	**338**	P	**P**	**10 14 33.3**	**-0.1**	
	comp=Z,2.1nm,1.0s,baz=37,slow=6.2							
NOA	**NORSAR Array B**	**71.91**	**338**	P	**P**	**10 14 33.6**	**+0.2**	
NOA	**NORSAR Array B**	**71.91**	**338**	P	**P**	**10 14 33.6**	**+0.2**	
	comp=Z,1.4nm,0.9s,baz=37,slow=6.1,SNR=5.1							
AKASG	**Malin Array Be**	**72.89**	**323**	*ce*P	**P**	**10 14 39.2**	**-0.1**	
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.6s							
AKASG	**Malin Array Be**	**72.89**	**323**	P	**P**	**10 14 39.5**	**+0.2**	
AKASG	**Malin Array Be**	**72.89**	**323**	P	**P**	**10 14 39.5**	**+0.2**	
	comp=Z,1.2nm,0.6s,baz=44,slow=6.0,SNR=5.7							
TXAR	**Lajitas Array**	**86.62**	**54**	P	**P**	**10 15 55.5**	**+1.2**	
TXAR	**Lajitas Array**	**86.62**	**54**	P	**P**	**10 15 55.5**	**+1.2**	
	comp=Z,0.1nm,0.5s,baz=329,slow=2.2,SNR=3.4							

IDC 24 10:04:22.3±2.5,22.68N×11.50W,h0km,mb3.6/3, mb1 3.7/5,mb1mx3.4/28,mbtmp3.6/5,ML3.6/2,Error ellipse: s-maj=78.2km s-min=32.0km az=79.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**15.72**	**125**	Pn	Pn	10 08 06.9	+1.7
	0.1nm,0.3s,baz=312,slow=13,SNR=9.9						
TORD				Sn	Sn	10 10 59.6	-0.6
	0.1nm,0.3s,baz=314,slow=21,SNR=4.6						
DBIC	**Dimbokro**	**17.15**	**157**	P	Pn	10 08 22.3	-1.2
	0.6nm,0.3s,baz=322,slow=12,SNR=5.6						
GERES	**GERESS Array B**	**32.88**	**31**	P	P	10 10 57.2	-0.8
	0.5nm,0.6s,baz=226,slow=9.4,SNR=4.0						
KURBB	**Kurchatov Arra**	**72.83**	**42**	P	P	10 15 53.0	+0.2
	0.2nm,0.3s,baz=285,slow=6.8,SNR=4.8						
MKAR	**Makanchi Array**	**76.31**	**45**	P	P	10 16 13.7	+0.5
	0.4nm,0.8s,baz=291,slow=6.0,SNR=3.4						
WRA	**Warramunga Arr**	**148.10**	**92**	PKPbc	PKPdf	10 24 09.1	+1.5
	0.4nm,0.7s,baz=291,slow=2.6,SNR=6.0						
ASAR	**Alice Springs**	**148.22**	**99**	PKPbc	PKPbc	10 24 11.2	+0.2
	0.5nm,0.6s,baz=291,slow=1.8,SNR=8.7						

*SKO **24** 10:05:23.4,41.34N×22.70E,h17km,M1.1,ML1.4*

SOF 24 10:05:24.3,41.31N×22.73E,h5km,MD2.5, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**275**	*i* Pg	Pg	10 05 26.9	+0.1
VAY				*e*Lg	Lg	10 05 28.9	
	comp=N,362nm,0.2s						
VAY				*e*Sg	Sg	10 05 28.9	+0.4
VAY				*e*Lg	Lg	10 05 29.0	
	comp=E,168nm,0.3s						
KKB	**Krupnik**	**0.62**	**25**	*i* Pg	Pg	10 05 36.7	+0.5
MMB	**Musomiste**	**0.80**	**69**	*i* Pg	Pb	10 05 40.3	-0.5
VTS	**Vitosha**	**1.33**	**15**	P	Pn	10 05 48.5	-1.3

IDC 24 10:12:25.5±4.2,5.26S×129.54E,h300km±42km,mb2.6/1, mb1 2.9/4,mb1mx2.7/21,mbtmp2.8/4,Error ellipse: s-maj=83.4km s-min=14.2km az=72.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.33**	**196**	P	Pn	10 15 22.2	-1.9
	0.1nm,0.3s,baz=17,slow=14,SNR=2.6						
FITZ				S	S	10 17 44.2	-7.3
	0.1nm,0.3s,baz=342,slow=20,SNR=2.7						
WRA	**Warramunga Arr**	**15.33**	**163**	P	P	10 15 45.6	-0.7
	0.3nm,0.3s,baz=347,slow=12,SNR=16						
WRA				S	S	10 18 32.4	-0.6
	0.1nm,0.3s,baz=342,slow=24,SNR=5.7						
ASAR	**Alice Springs**	**18.78**	**167**	P	P	10 16 24.8	+1.1
	0.3nm,0.3s,baz=350,slow=12,SNR=38						
ASAR				S	S	10 19 42.0	+0.7
	0.0nm,0.3s,baz=352,slow=20,SNR=4.4						
MKAR	**Makanchi Array**	**66.53**	**327**	P	P	10 22 43.6	0.0
	0.2nm,0.7s,baz=134,slow=8.3,SNR=2.3						

*IDC **24** 10:16:40.0±1.1,17.90S×174.49W,h0km,mb4.1/9, mb1 4.3/10,mb1mx4.0/24,mbtmp4.1/10,ML1.3/1,MS4.5/3, Ms1 4.5/3,ms1mx3.7/24,Error ellipse: s-maj=47.3km s-min=17.8km az=141.0*

*ISCJB **24** 10:16:45.1±0.8,17.9S±0.2×174.5W±0.2,h50km,mb4.2/10, MS4.6/3,Error ellipse: s-maj=31.8km s-min=11.4km az=137.6*

*NEIC **24** 10:16:48.0±1.4,17.99S×174.51W,h62km±14km,mb4.6/2, Error ellipse: s-maj=22.7km s-min=9.4km az=136.0*

ISC 24 10:16:46.6±0.9,17.9S±0.2×174.5W±0.2,h50km,n24, σ1°03/23,mb4.2/10,MS5.0/3,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.73**	**34**	*e*Pn	**Pn**	**10 17 58.3**	**+2.8**
AFI				*e*Sn	**Sn**	**10 18 46.9**	**-2.3**
AFI	**Afiamalu**	**4.73**	**34**	Pn	**Pn**	**10 17 54.3**	**-1.2**
	0.7nm,0.3s,baz=204,slow=19,SNR=4.3						
AFI				Sn	Sn	10 18 45.1	-4.1
	13nm,0.3s,baz=266,slow=21,SNR=10						
URZ	**Urewera**	**21.59**	**198**	P	**P**	**10 21 31.6**	**-0.5**
URZ	**Urewera**	**21.59**	**198**	P	**P**	**10 21 31.6**	**-0.5**
	0.2nm,0.6s,baz=333,slow=16,SNR=8.8						
CTA	**Charters Tower**	**37.13**	**260**	P	**P**	**10 23 53.0**	**+0.3**
CTA	**Charters Tower**	**37.13**	**260**	P	**P**	**10 23 53.0**	**+0.3**
	2.3nm,0.5s,baz=92,slow=9.8,SNR=6.1						
CTA				LR	LR	10 37 27.4	

ZRO	**Akutan Zero**	**1.82**	**63**	P		**Pn**	**10 26 41.2**	**+0.8**
AKGG	**Akutan Green G**	**1.86**	**60**	P		**Pn**	**10 26 42.1**	**+1.2**
AKUT	**Akutan**	**1.95**	**64**	P		**Pn**	**10 26 42.9**	**+1.0**
AKUT				S		**Sn**	**10 27 08.4**	**+1.1**
WESN	**West Dahl Nort**	**2.76**	**61**	P		**Pn**	**10 26 53.1**	**+0.9**
KOFP	**Korovin Flat P**	**3.41**	**254**	P		**Pn**	**10 27 02.3**	**+1.6**
KOWE	**Korovin West**	**3.47**	**256**	P		**Pn**	**10 27 02.3**	**+0.8**
SPIA	**Saint Paul Isl**	**3.97**	**348**	P		**Pn**	**10 27 09.3**	**+1.3**
SDPT	**Sand Point**	**5.25**	**64**	P		**Pn**	**10 27 25.2**	**+0.1**
SDPT				S		**Sn**	**10 28 23.6**	**-1.0**
AMKA	**Amchitka**	**7.57**	**260**	P		**Pn**	**10 27 55.4**	**-1.0**
KDAK	**Kodiak Island**	**10.19**	**57**	P		Pn	10 28 26.8	-4.6
KDAK				S		Sn	10 30 14.1	-10
KDAK	**Kodiak Island**	**10.19**	**57**	P		Pn	10 28 26.8	-4.6
	0.8nm,0.3s,baz=64,slow=19,SNR=9.3							
KDAK				S		Sn	10 30 14.1	-10
	0.2nm,0.3s,baz=229,slow=20,SNR=2.3							
ILAR	**Eielson Array**	**15.96**	**35**	P		**Pn**	**10 29 44.2**	**-1.6**
ILAR	**Eielson Array**	**15.96**	**35**	P		**Pn**	**10 29 44.2**	**-1.6**
	0.3nm,0.3s,baz=229,slow=9.8,SNR=22							
DLBC	**Dease Lake**	**22.09**	**61**	P		**P**	**10 30 56.6**	**+3.2**
DLBC	**Dease Lake**	**22.09**	**61**	P		**P**	**10 30 56.6**	**+3.2**
	3.6nm,0.8s,baz=281,slow=12,SNR=7.0							
INK	**Inuvik**	**22.35**	**34**	P		**P**	**10 30 55.2**	**-0.7**
INK	**Inuvik**	**22.35**	**34**	P		**P**	**10 30 55.2**	**-0.7**
	3.6nm,0.5s,baz=248,slow=8.5,SNR=24							
YKA	**Yellowknife Ar**	**29.34**	**50**	P		**P**	**10 31 59.5**	**+0.3**
YKA	**Yellowknife Ar**	**29.34**	**50**	P		**P**	**10 31 59.4**	**+0.3**
	0.1nm,0.6s,baz=269,slow=7.7,SNR=3.2							
TXAR	**Lajitas Array**	**52.36**	**90**	P		**P**	**10 35 08.4**	**+0.7**
TXAR	**Lajitas Array**	**52.36**	**90**	P		**P**	**10 35 08.4**	**+0.7**
	0.5nm,0.8s,baz=316,slow=5.2,SNR=5.9							
ARCES	**ARCESS Array B**	**57.02**	**354**	P		**P**	**10 35 40.4**	**-0.3**
ARCES				PcP		**PcP**	**10 36 34.3**	**+0.1**
ARCES	**ARCESS Array B**	**57.02**	**354**	P		**P**	**10 35 40.4**	**-0.3**
	0.9nm,0.8s,baz=12,slow=9.2,SNR=2.5							
ARCES				PcP		**PcP**	**10 36 34.3**	**+0.1**
	2.4nm,1.1s,baz=359,slow=4.5,SNR=3.6							
BVAR	**Borovoye Array**	**63.16**	**324**	P		**P**	**10 36 22.9**	**+0.2**
BVAR	**Borovoye Array**	**63.16**	**324**	P		**P**	**10 36 22.9**	**+0.2**
	1.1nm,0.6s,baz=64,slow=6.7,SNR=5.9							
MKAR	**Makanchi Array**	**63.43**	**313**	P		**P**	**10 36 23.7**	**-0.9**
MKAR	**Makanchi Array**	**63.43**	**313**	P		**P**	**10 36 23.7**	**-0.9**
	0.2nm,0.6s,baz=96,slow=5.3,SNR=3.3							
FINES	**FINESS Array B**	**64.99**	**352**	P		**P**	**10 36 34.4**	**-0.1**
FINES	**FINESS Array B**	**64.99**	**352**	P		**P**	**10 36 34.4**	**-0.1**
	1.2nm,0.7s,baz=2.7,slow=5.8,SNR=7.5							
HFS	**Hagfors**	**66.89**	**359**	P		**P**	**10 36 46.5**	**-0.2**
HFS	**Hagfors**	**66.89**	**359**	P		**P**	**10 36 46.5**	**-0.2**
	1.1nm,0.4s,baz=3.8,slow=4.5,SNR=17							
BRTR	**Keskin Array B**	**85.34**	**343**	P		**P**	**10 38 30.5**	**-1.1**
BRTR	**Keskin Array B**	**85.34**	**343**	P		**P**	**10 38 30.5**	**-1.1**
	0.3nm,0.4s,baz=349,slow=6.6,SNR=2.4							
ESDC	**Sonseca Array**	**86.46**	**12**	P		**P**	**10 38 37.5**	**+0.5**
ESDC	**Sonseca Array**	**86.46**	**12**	P		**P**	**10 38 37.5**	**+0.5**
	0.2nm,0.4s,baz=356,slow=4.2,SNR=3.4							
WRA	**Warramunga Arr**	**87.88**	**232**	P		**P**	**10 38 43.9**	**0.0**
WRA	**Warramunga Arr**	**87.88**	**232**	P		**P**	**10 38 43.9**	**0.0**
	0.1nm,0.6s,baz=34,slow=6.0,SNR=3.1							

*ISK **24** 11:11:13.3,36.98N×28.25E,h4km,MD2.6*
*DDA **24** 11:11:14.0,36.97N×28.19E,h8km,MD2.7*
*CSEM **24** 11:11:13.7±0.3,36.95N×28.25E,h2km,MD2.6,Error ellipse: s-maj=5.6km s-min=4.1km az=31.0*

ISC 24 11:11:13.1±1.1,36.96N±0.04×28.24E±0.03,h6km±8km, n22,σ0.80/36,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.18**	**12**	*e*PG	**Pg**	**11 11 17.0**	**+0.2**
YER				*e*SG	**Sg**	**11 11 20.2**	**+0.9**
YER	**Yerkesik**	**0.18**	**12**	*e*Pg	**Pg**	**11 11 17.0**	**+0.2**
YER				*e*Sg	**Sg**	**11 11 20.2**	**+0.9**
TURN	**Turunc**	**0.31**	**106**	*i* P	**Pg**	**11 11 18.2**	**-0.9**
TURN				*i* S	**Sg**	**11 11 21.9**	**-1.3**
TURN	**Turunc**	**0.31**	**106**	*i* P	**Pg**	**11 11 18.2**	**-0.9**
TURN				*i* S	**Sg**	**11 11 21.9**	**-1.3**
BODT	**Bodrum**	**0.75**	**278**	*e*PG	**Pb**	**11 11 28.4**	**-0.1**
BODT				*e*SG	**Sb**	**11 11 39.6**	**+0.6**
BODT	**Bodrum**	**0.75**	**278**	*e*Pg	**Pb**	**11 11 28.5**	**-0.1**
BODT				*e*Sg	**Sb**	**11 11 39.6**	**+0.6**
FETY	**Fethiye**	**0.75**	**115**	*e*PG	**Pb**	**11 11 28.5**	**-0.1**
FETY				*e*SG	**Sb**	**11 11 39.5**	**+0.4**
FETY	**Fethiye**	**0.75**	**115**	*e*Pg	**Pb**	**11 11 28.5**	**-0.1**
FETY				*e*Sg	**Sb**	**11 11 39.6**	**+0.4**
AYDN	**Tasoluk**	**0.76**	**338**	*i* P	**Pb**	**11 11 28.4**	**-0.4**
AYDN				*i* S	**Sb**	**11 11 38.4**	**-0.9**
AYDN	**Tasoluk**	**0.76**	**338**	*i* P	**Pb**	**11 11 28.4**	**-0.4**
AYDN				*i* S	**Sb**	**11 11 38.4**	**-0.9**
DNZL	**Cakiroluk**	**0.97**	**41**	*i* P	**Pb**	**11 11 32.9**	**+0.3**
DNZL				*i* S	**Sn**	**11 11 46.9**	**-0.9**
DNZL	**Cakiroluk**	**0.97**	**41**	*i* P	**Pb**	**11 11 32.9**	**+0.3**
DNZL				*i* S	**Sn**	**11 11 46.9**	**-0.9**
DENT	**Denizli**	**1.02**	**38**	*e*PG	**Pb**	**11 11 33.1**	**-0.1**
DENT				*e*SG	**Sn**	**11 11 47.4**	**-1.2**
DENT	**Denizli**	**1.02**	**38**	*e*Pg	**Pb**	**11 11 33.1**	**-0.1**
DENT				*e*Sg	**Sn**	**11 11 47.4**	**-1.2**
GOLH	**Golhisar**	**1.10**	**75**	*i* P	Pn	11 11 38.3	+3.2
GOLH				*i* S	**Sn**	**11 11 51.8**	**+1.2**
GOLH	**Golhisar**	**1.10**	**75**	*i* P	Pn	11 11 38.3	+3.2
GOLH				*i* S	**Sn**	**11 11 51.8**	**+1.2**
ELL	**Elmali**	**1.36**	**98**	*e*PN	**Pg**	**11 11 40.1**	**+0.9**
ELL	**Elmali**	**1.36**	**98**	*e*Pn	**Pg**	**11 11 40.1**	**+0.9**
KULA	**Kula-Manisa**	**1.59**	**12**	*e*PN	**Pg**	**11 11 43.0**	**-0.6**
KULA	**Kula-Manisa**	**1.59**	**12**	*e*Pn	**Pg**	**11 11 43.0**	**-0.6**
KHL	**Karahalli**	**1.70**	**36**	*e*PN	**Pn**	**11 11 44.0**	**+0.5**
KHL	**Karahalli**	**1.70**	**36**	*e*Pn	**Pn**	**11 11 44.0**	**+0.5**

MEX 24 11:16:50.9±0.4,16.95N×100.39W,h5km,MD3.6,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.16**	**50**	*i* P	Pg	11 16 53.6	-0.5
CAIG				*i* S	Sg	11 16 56.2	0.0
ACX	**Acapulco**	**0.52**	**98**	*i* P	Pg	11 16 59.5	-1.5
ACX				*e*S	Sg	11 17 06.3	-1.4
ZIIG	**Zihuatanejo**	**1.22**	**303**	*i* P	Pg	11 17 11.1	-3.2
ZIIG				*i* S	Sg	11 17 26.7	-3.4
ARIG	**Puente Sto Nin**	**1.33**	**2**	*i* P	Pn	11 17 12.2	-3.9
ARIG				*i* S	Sg	11 17 29.0	-4.8
PLIG	**Platanillo**	**1.67**	**30**	*i* P	Pn	11 17 17.7	-3.3
PLIG				*i* S	Sn	11 17 38.4	-4.5
YAIG	**Yautepec**	**2.29**	**33**	*i* P	Pn	11 17 27.1	-2.4
YAIG				*i* S	Sn	11 17 54.2	-4.0

KRSC 24 11:27:01.3±0.3,54.98N×162.90E,h39km±39km,ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.80**	**238**	*i* P	Pn	11 27 17.4	+1.4
MKZ				*i* S	Sn	11 27 28.5	+1.8
KBTR	**Krutoberegovo**	**1.23**	**358**	*e*P	Pn	11 27 22.6	+0.6
KBTR				*i* S	Sn	11 27 37.9	+0.5
KBG	**Krutoberegovo**	**1.28**	**355**	*e*P	Pn	11 27 23.1	+0.4
KBG				*i* S	Sn	11 27 39.6	+1.0
BZGR	**Bezymyannyi-Gr**	**1.58**	**308**	*e*P	Pn	11 27 29.1	+2.2
BZGR				*i* S	Sn	11 27 49.7	+3.4
ZLN	**Zelenaya**	**1.58**	**312**	*e*P	Pn	11 27 29.1	+2.2
ZLN				*i* S	Sn	11 27 48.9	+2.6
TUMR	**Tumrok**	**1.61**	**282**	*e*P	Pn	11 27 29.6	+2.3
TUMR				*i* S	Sn	11 27 50.3	+3.3
CIRR	**Tsirk**	**1.67**	**314**	*e*P	Pn	11 27 30.0	+1.8
CIRR				*i* S	Sn	11 27 51.0	+2.5
BZMR	**Bezymyannaya**	**1.67**	**306**	*e*P	Pn	11 27 30.0	+1.7
BZWR	**Bezymyannyi-We**	**1.69**	**307**	*e*P	Pn	11 27 30.3	+1.8
KMNR	**Kamenistaya**	**1.71**	**298**	*e*P	Pn	11 27 30.8	+2.1
KMNR				*i* S	Sn	11 27 52.8	+3.5
KIRR	**Kirishev**	**1.75**	**305**	*e*P	Pn	11 27 31.3	+2.0
KIRR				*i* S	Sn	11 27 53.2	+2.6
KPT	**Kopyto**	**1.82**	**304**	*e*P	Pn	11 27 32.6	+2.5
KPT				*i* S	Sn	11 27 55.3	+3.3
KLY	**Klyuchi**	**1.85**	**317**	*e*P	Pn	11 27 30.9	+0.5
KLY				*i* S	Sn	11 27 53.0	+0.5
BDR	**Baidarnaya**	**1.86**	**330**	*e*P	Pn	11 27 31.1	+0.4
KOZ	**Kozyrevsk**	**2.03**	**303**	*e*P	Pn	11 27 35.6	+2.6
KOZ				*i* S	Sn	11 28 00.6	+3.4
SRDR	**Sredinnyy**	**2.25**	**308**	*e*P	Pn	11 27 38.1	+2.1
SPN	**Mys Shipunski**	**2.54**	**223**	*e*P	Pn	11 27 40.6	+0.7
SPN				*i* S	Sn	11 28 09.0	-0.5
ESO	**Esso**	**2.57**	**293**	*e*P	Pn	11 27 42.1	+1.7
ESO				*i* S	Sn	11 28 10.9	+0.4
NLC	**Nalytchevo**	**2.77**	**231**	*e*P	Pn	11 27 44.9	+1.8
NLC				*i* S	Sn	11 28 16.3	+1.1
SDLR	**Sedlovina**	**2.91**	**236**	*e*P	Pn	11 27 48.0	+2.7
SDLR				*i* S	Sn	11 28 22.4	+3.3
KRER	**Koryakskii**	**2.96**	**237**	*e*P	Pn	11 27 49.1	+3.1
KRER				*i* S	Sn	11 28 23.8	+3.3
SMAR	**Somma**	**2.96**	**236**	*e*P	Pn	11 27 48.6	+2.6
SMAR				*i* S	Sn	11 28 23.0	+2.5
UGLR	**Uglovaya**	**2.98**	**235**	*e*P	Pn	11 27 48.9	+2.7
UGLR				*i* S	Sn	11 28 23.3	+2.5
AVH	**Avacha**	**2.99**	**237**	*e*P	Pn	11 27 49.3	+3.0
KOK	**Koryaka**	**3.02**	**238**	*e*P	Pn	11 27 49.8	+3.1
KOK				*i* S	Sn	11 28 24.1	+2.3
GNL	**Ganaly**	**3.17**	**248**	*e*P	Pn	11 27 51.9	+3.1
PET	**Petropavlovsk**	**3.18**	**234**	*e*P	Pn	11 27 50.9	+2.2
PET				*i* S	Sn	11 28 27.9	+2.5
RUS	**Russkaya**	**3.65**	**227**	*e*P	Pn	11 27 56.8	+1.7
RUS				*i* S	Sn	11 28 37.9	+1.0
MTVR	**Mutnovka**	**3.75**	**230**	*e*P	Pn	11 27 59.3	+2.5
MTVR				*i* S	Sn	11 28 40.6	+0.7

*ISCJB **24** 11:29:51.1±0.4,6.77S±0.05×125.06E±0.07,h511km, mb3.5/5,Error ellipse: s-maj=9.2km s-min=6.1km az=162.6*
*AUST **24** 11:29:53.3±0.0,6.89S×125.15E,h538km,Error ellipse: s-maj=1.5km s-min=1.3km az=326.0*
*IDC **24** 11:29:53.8±4.2,6.94S×124.97E,h542km±64km,mb3.1/5, mb1 3.3/8,mb1mx3.0/22,mbtmp3.1/8,Error ellipse: s-maj=58.7km s-min=22.6km az=56.0*

ISC 24 11:29:52.5±0.6,6.86S±0.06×125.20E±0.09,h511km,n28, σ1.56/29,mb3.6/5,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAI	**Ambon**	**4.34**	**44**	P	P	11 31 17.8	+3.3
	baz=4.4,SNR=3.1						
LUWI	**Luwuk**	**6.27**	**337**	S	**S**	**11 32 57.4**	**+4.2**
	baz=6.3,SNR=5.3						
FAKI	**Fak Fak**	**8.04**	**61**	P	**P**	**11 31 50.6**	**+0.8**
	baz=8.1,SNR=23						
FAKI				S	**S**	**11 33 22.9**	**-2.9**
	baz=8.1,SNR=6.5						
MTN	**Manton Dam**	**8.34**	**136**	P	**P**	**11 31 54.8**	**+2.1**
	baz=8.4,SNR=13						
SWI	**Sorong**	**8.49**	**46**	P	**P**	**11 31 56.6**	**+2.3**
	baz=8.6,SNR=3.1						
KDU	**Kakadu**	**9.21**	**129**	P	**P**	**11 32 03.2**	**+1.4**
	baz=9.3,SNR=3.6						
KNRA	**Kununurra**	**9.43**	**159**	P	**P**	**11 32 06.0**	**+2.0**
	baz=9.5,SNR=19						
FITZ	**Fitzroy Crossi**	**11.18**	**178**	P	**P**	**11 32 23.6**	**+1.2**
	1.2nm,0.3s,baz=358,slow=9.7,SNR=11						
FITZ				S	**S**	**11 34 24.6**	**-1.1**
	0.1nm,0.3s,baz=318,slow=9.0,SNR=4.3						
FITZ	**Fitzroy Crossi**	**11.18**	**178**	P	**P**	**11 32 23.6**	**+1.2**
	baz=11,SNR=12						
SMRI	**Semarang**	**14.65**	**268**	P	P	11 33 07.4	+8.3
	baz=15,SNR=3.9						
WRA	**Warramunga Arr**	**15.74**	**147**	P	**P**	**11 33 10.0**	**-0.4**
	1.1nm,0.3s,baz=336,slow=9.3,SNR=98						
WRA				S	**S**	**11 35 51.9**	**-1.4**
	0.1nm,0.3s,baz=331,slow=16,SNR=3.9						
ASAR	**Alice Springs**	**18.68**	**154**	P	**P**	**11 33 39.0**	**+0.4**
	1.1nm,0.3s,baz=346,slow=15,SNR=101						
MEEK	**Meekatharra**	**20.64**	**197**	P	**P**	**11 33 56.3**	**-0.1**
	baz=21,SNR=3.9						
MORW	**Morawa**	**23.72**	**200**	P	**P**	**11 34 23.8**	**-0.2**
	baz=24,SNR=3.7						
BLDU	**Ballidu**	**24.93**	**198**	P	**P**	**11 34 34.7**	**-0.1**
	baz=25,SNR=8.9						
BBOO	**Buckleboo**	**27.72**	**160**	P	**P**	**11 34 59.3**	**0.0**
	baz=28,SNR=4.8						
STKA	**Stephens Creek**	**29.22**	**151**	P	**P**	**11 35 12.5**	**+0.1**
	1.5nm,0.4s,baz=325,slow=6.1,SNR=7.0						
STKA	**Stephens Creek**	**29.22**	**151**	P	**P**	**11 35 12.9**	**+0.5**
	baz=29,SNR=7.3						
TAPN	**Taplejung**	**49.72**	**315**	*e*P	**P**	**11 37 57.0**	**-1.0**
	8.6nm,0.4s						
RAMN	**Ramite**	**50.27**	**314**	*e*P	**P**	**11 38 01.6**	**-0.4**
	16nm,0.5s						
GUN	**Gumba**	**51.35**	**314**	*e*P	**P**	**11 38 09.3**	**-0.7**
	11nm,0.4s						
PKI	**Pulchoki**	**51.49**	**313**	*e*P	**P**	**11 38 09.9**	**-1.1**
	9.3nm,0.5s						
PKIN	**Phulchoki**	**51.50**	**313**	*e*P	**P**	**11 38 09.5**	**-1.5**
KKN	**Kakani**	**51.71**	**314**	*e*P	**P**	**11 38 11.4**	**-1.0**
SONM	**Songino Array**	**56.94**	**345**	P	**P**	**11 38 47.9**	**-0.9**
	0.7nm,0.7s,baz=160,slow=7.4,SNR=3.8						
MKAR	**Makanchi Array**	**65.58**	**329**	P	**P**	**11 39 44.2**	**-1.2**
	1.0nm,0.6s,baz=119,slow=5.7,SNR=5.7						
PETK	**Petropavlovsk-**	**65.79**	**21**	P	**P**	**11 39 46.1**	**-0.4**
	0.8nm,0.5s,baz=220,slow=3.7,SNR=4.9						
ZALV	**Zalesovo Beam**	**69.43**	**336**	P	**P**	**11 40 06.7**	**-2.2**
	1.3nm,0.5s,baz=141,slow=5.2,SNR=6.7						

IDC 24 11:40:26.7±1.9,1.09N×97.30E,h0km,mb3.7/7,mb1 3.8/8, mb1mx3.6/26,mbtmp3.7/8,ML3.9/1,Error ellipse: s-maj=64.5km s-min=21.2km az=59.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**17.33**	**5**	P	Pn	11 44 30.0	-0.2
	0.2nm,0.3s,baz=190,slow=12,SNR=3.9						
WRA	**Warramunga Arr**	**41.89**	**122**	P	P	11 48 18.9	-0.3
	0.5nm,0.7s,baz=300,slow=9.1,SNR=7.0						
ASAR	**Alice Springs**	**43.25**	**127**	P	P	11 48 30.4	+0.1
	0.4nm,0.7s,baz=294,slow=7.5,SNR=5.0						
KSRS	**Korea Array**	**45.88**	**34**	P	P	11 48 50.5	-0.4
	1.5nm,0.8s,baz=221,slow=9.7,SNR=6.0						
SONM	**Songino Array**	**47.22**	**8**	P	P	11 49 01.4	-0.1
	0.5nm,0.5s,baz=184,slow=7.7,SNR=6.2						
MKAR	**Makanchi Array**	**47.37**	**346**	P	P	11 49 02.8	+0.2
	1.2nm,0.8s,baz=167,slow=7.5,SNR=8.1						
ZALV	**Zalesovo Beam**	**53.68**	**351**	P	P	11 49 50.1	0.0
	1.8nm,0.8s,baz=163,slow=5.5,SNR=4.1						
ARCES	**ARCESS Array B**	**82.67**	**340**	P	P	11 52 51.5	-0.3
	1.0nm,1.0s,baz=94,slow=5.4,SNR=2.9						

IDC 24 11:43:35.0±1.4,2.68S×151.26E,h0km,mb3.6/4, mb1 3.8/5,mb1mx3.5/19,mbtmp3.6/5,ML2.7/1,Error ellipse: s-maj=153.9km s-min=21.2km az=124.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.83**	**211**	P	Pn	11 45 30.8	+0.5
	0.6nm,0.3s,baz=41,slow=11,SNR=2.3						
WRA	**Warramunga Arr**	**23.82**	**223**	P	P	11 48 50.9	+0.9
	0.4nm,0.4s,baz=50,slow=10,SNR=8.1						
ASAR	**Alice Springs**	**26.78**	**217**	P	P	11 49 17.3	+0.3
	0.1nm,0.5s,baz=57,slow=8.9,SNR=2.9						
ILAR	**Eielson Array**	**80.80**	**23**	P	P	11 55 49.8	-0.5
	1.3nm,0.7s,baz=246,slow=5.7,SNR=26						
YKA	**Yellowknife Ar**	**94.28**	**28**	P	P	11 56 55.6	-0.5
	0.2nm,0.6s,baz=269,slow=5.0,SNR=6.0						

*SOF **24** 11:56:26.9,41.28N×22.71E,h12km,MD2.6*
*ISCJB **24** 11:56:27.1±1.4,41.37N±0.06×22.6E±0.1,h13km±8km, Error ellipse: s-maj=14.0km s-min=8.8km az=151.1*
*CSEM **24** 11:56:27.3±0.3,41.34N×22.63E,h10km,ML1.8,Error ellipse: s-maj=6.3km s-min=6.0km az=2.0*
*SKO **24** 11:56:28.4,41.31N×22.69E,h2km,M1.5,ML1.9*
*BEO **24** 11:56:29.5±1.2,41.35N×22.58E,h4km,ML1.8/4*

ISC 24 11:56:27.7±1.6,41.30N±0.10×22.70E±0.05,h9km±9km, n14,σ0.27/21,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**285**	*i* Pg	**Pg**	**11 56 30.1**	**0.0**
VAY				*i* Sg	**Sg**	**11 56 32.1**	**+0.2**
VAY				*e*Lg	Lg	11 56 32.1	
	comp=N,1μm,0.3s						
VAY				*e*Lg	Lg	11 56 32.2	
	comp=E,529nm,0.2s						
VAY	**Valandovo**	**0.10**	**285**	*e*Pg	**Pg**	**11 56 29.9**	**-0.2**
VAY				*e*Sg	**Sg**	**11 56 32.0**	**+0.1**
VAY	**Valandovo**	**0.10**	**285**	*e*Pg	**Pg**	**11 56 29.9**	**-0.2**
VAY				*e*Sg	**Sg**	**11 56 32.0**	**+0.1**
VAY				*e*Lg	Lg	11 56 32.6	
	comp=E,529nm,0.2s						
KKB	**Krupnik**	**0.64**	**27**	P	**Pg**	**11 56 40.0**	**0.0**
KKB	**Krupnik**	**0.64**	**27**	P	**Pg**	**11 56 40.0**	**0.0**
MMB	**Musomiste**	**0.83**	**69**	*i* Pg	**Pg**	**11 56 43.4**	**-0.2**
MMB	**Musomiste**	**0.83**	**69**	*i* Pg	**Pg**	**11 56 43.4**	**-0.2**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg	**Pb**	**11 56 53.3**	**0.0**
VTS				*e*Sg	**Sn**	**11 57 10.9**	**-0.1**
VTS	**Vitosha**	**1.35**	**16**	*i* P	**Pb**	**11 56 53.2**	**0.0**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg	**Pb**	**11 56 53.3**	**0.0**
VTS				*e*Sg	**Sn**	**11 57 10.9**	**-0.1**
BARS	**Barje**	**1.66**	**337**	*e*Pg	**Pn**	**11 56 57.3**	**+0.4**
BARS				*e*Sg	**Sb**	**11 57 18.8**	**-0.6**
BARS	**Barje**	**1.66**	**337**	*e*Pg	**Pn**	**11 56 57.3**	**+0.4**
BARS				*e*Sg	**Sb**	**11 57 18.8**	**-0.6**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Sg	**Sg**	**11 57 31.5**	**+0.3**
SELS	**Selova**	**2.25**	**329**	*e*Pg	**Pb**	**11 57 08.6**	**+0.1**

IDC 24 11:57:19.9±7.9,17.73S×178.43W,h659km±107km, mb2.8/6,mb1 3.1/6,mb1mx2.8/20,mbtmp2.8/6,Error ellipse: s-maj=119.7km s-min=40.1km az=160.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.46**	**260**	P	P	12 03 09.9	+1.8
	2.3nm,0.3s,baz=109,slow=9.0,SNR=5.5						
WRA	**Warramunga Arr**	**44.65**	**259**	P	P	12 04 36.7	-0.5
	1.1nm,0.6s,baz=99,slow=7.9,SNR=16						
ASAR	**Alice Springs**	**44.82**	**254**	P	P	12 04 37.9	-0.6
	1.3nm,0.4s,baz=94,slow=8.3,SNR=63						
ILAR	**Eielson Array**	**85.72**	**13**	P	P	12 08 50.1	-0.8
	0.2nm,0.7s,baz=224,slow=4.8,SNR=4.1						
TXAR	**Lajitas Array**	**85.91**	**58**	P	P	12 08 54.3	+1.4
	0.3nm,0.8s,baz=202,slow=4.4,SNR=4.5						
PDAR	**Pinedale Array**	**87.23**	**43**	P	P	12 08 57.7	-1.2
	0.2nm,0.5s,baz=193,slow=3.7,SNR=2.9						
GERES	**GERESS Array B**	**147.44**	**345**	PKPbc	PKPbc	12 15 52.3	+0.5
	0.3nm,0.4s,baz=41,slow=3.1,SNR=2.9						

MEX 24 12:22:59.5±0.5,15.61N×92.41W,h33km±7km,MD3.5, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**0.72**	**21**	*e*P	Pn	12 23 11.9	-1.8
CCIG				*i* S	Sn	12 23 20.6	-3.2
PCIG		**0.78**	**277**	*e*P	Pn	12 23 12.0	-2.3
PCIG				*i* S	Sn	12 23 22.3	-2.6
TGIG		**1.35**	**330**	*e*P	Pn	12 23 20.3	-1.8
TGIG				*i* S	Sn	12 23 36.4	-2.7
HUIG	**Huatulco**	**3.56**	**273**	*i* P	Pn	12 23 50.7	-1.9
HUIG				*i* S	Sn	12 24 30.9	-2.7

IDC 24 12:29:04.1±2.0,31.81S×179.16W,h0km,mb4.1/3, mb1 4.3/4,mb1mx3.8/20,mbtmp4.1/4,ML3.1/1,Error ellipse: s-maj=49.1km s-min=31.1km az=57.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.13**	**204**	Pn	Pn	12 30 47.6	-2.0
	0.3nm,0.3s,baz=45,slow=13,SNR=11						
URZ				Sn	Sn	12 32 00.3	-11
	1.2nm,0.3s,baz=336,slow=20,SNR=9.1						
ASAR	**Alice Springs**	**42.06**	**269**	P	P	12 36 57.7	-0.2
	1.2nm,0.7s,baz=106,slow=7.5,SNR=24						
WRA	**Warramunga Arr**	**43.18**	**274**	P	P	12 37 07.1	+0.1
	2.1nm,0.3s,baz=114,slow=8.0,SNR=105						
QSPA	**South Pole Qui**	**58.31**	**180**	P	P	12 39 00.9	+0.3
	1.2nm,0.6s,baz=44,slow=11,SNR=12						
FINES	**F

TXAR	Lajitas Array	77.36	332	P		P		13 04 07.5	+0.1	
TXAR	Lajitas Array	77.36	332	P		P		13 04 07.5	+0.1	
	0.6nm,0.9s,baz=159,slow=10,SNR=5.2									
ANMO	Albuquerque	83.43	332	*e*P		P		13 04 40.3	+0.3	
	9.7nm,1.8s									
TORD	Torodi Ar. Bea	87.45	70	P		P		13 04 59.7	-0.6	
TORD	Torodi Ar. Bea	87.45	70	P		P		13 04 59.7	-0.6	
	0.5nm,0.9s,baz=212,slow=5.1,SNR=2.4									
HWUT	Hardware Ranch	91.17	332	*e*P		P		13 05 17.1	-0.3	
	4.8nm,1.4s									
PDAR	Pinedale Array	91.52	334	P		P		13 05 18.6	-0.5	
PDAR	Pinedale Array	91.52	334	P		P		13 05 18.6	-0.5	
	0.4nm,0.6s,baz=152,slow=6.6,SNR=4.5									
ILAR	Eielson Array	121.85	331	PKP		PKPdf		13 11 05.1	-0.6	
ILAR	Eielson Array	121.85	331	PKP		PKPdf		13 11 05.1	-0.6	
	0.4nm,0.9s,baz=116,slow=1.9,SNR=4.9									
AKTO	Aktyubinsk	145.60	60	PKPbc		PKPdf		13 11 49.8	-0.5	
AKTO	Aktyubinsk	145.60	60	PKPbc		PKPdf		13 11 49.8	-0.5	
	1.6nm,0.8s,baz=273,slow=3.7,SNR=5.2									
ABKAR	Akbulak array	146.69	62	*e*PKPdf		PKPdf		13 11 52.2	+0.1	
MKAR	Makanchi Array	161.57	69	PKPab		PKPab		13 12 56.3	-1.6	
MKAR	Makanchi Array	161.57	69	PKPab		PKPab		13 12 56.3	-1.6	
	0.6nm,0.9s,baz=247,slow=2.5,SNR=3.8									
SONM	Songino Array	174.88	10	PKPab		PKPab		13 13 56.5	-0.2	
SONM	Songino Array	174.88	10	PKPab		PKPab		13 13 56.5	-0.2	
	0.4nm,0.9s,baz=349,slow=4.4,SNR=3.3									

MEX 24 12:59:29.7±0.4, 15.08N×93.01W, h81km±5km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.66	342	*i* P	Pn	12 59 43.6	-1.3
PCIG				*i* S	Sn	12 59 54.7	-1.6
THIG		0.74	103	*i* P	Pn	12 59 44.5	-1.4
THIG				*i* S	Sn	12 59 56.2	-1.6
CCIG	Comitan	1.46	35	*i* P	Pn	12 59 54.2	-0.7
CCIG				*i* S	Sn	13 00 11.8	-2.0
TGIG		1.69	356	*i* P	Pn	12 59 56.4	-1.3
TGIG				*e*S	Sn	13 00 17.1	-1.8
HUIG	Huatulco	3.06	283	*i* P	Pn	13 00 15.0	-0.9
HUIG				*i* S	Sn	13 00 49.7	-1.9

IDC 24 13:10:46.5±1.9, 13.09S×34.65E, h0km, mb3.5/2, mb1 3.6/3, mb1mx3.2/24, mbtmp3.6/3, ML3.8/1, Error ellipse: s-maj=54.5km s-min=40.3km az=125.0, Malawi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	Boshof	17.75	208	P	Pn	13 14 55.8	+0.4
	0.2nm,0.3s,baz=25,slow=14,SNR=4.3						
TORD	Torodi Ar. Bea	41.80	307	P	P	13 18 38.4	+0.2
	0.4nm,0.5s,baz=120,slow=7.8,SNR=3.3						
MKAR	Makanchi Array	73.29	32	P	P	13 22 20.2	+0.4
	0.3nm,0.6s,baz=230,slow=7.6,SNR=3.6						
NVAR	Mina Array Bea	145.17	321	PKPbc	PKPbc	13 30 24.5	-1.9
	0.5nm,0.7s,baz=38,slow=4.6,SNR=4.1						

JMA 24 13:12:27.1, 32.05N×130.96E, h8km±1km, M0.3, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTZ	Takazaki	0.18	144	P	Pg	13 12 30.9	0.0
JTZ				S	Sg	13 12 33.6	+0.1
JZO	Okuchi	0.32	286	P	Pg	13 12 33.5	0.0
JZO				*e*S	Sg	13 12 38.1	+0.3
JTSN	Tsuno	0.50	67	P	Pg	13 12 37.0	+0.2

NIED 24 13:13:00, 32.20N×138.70E, h280km, Mw3.7 Best double couple: M0 4.32000×10^14 NP1:φs=333.00000°, δ=74.00000°, λ=-119.00000°. NP2:φs=217.00000°, δ=33.00000°, λ=-30.00000°.
ISCJB 24 13:13:36.2±0.5, 32.05N±0.06×138.55E±0.09, h341km±4km, mb3.2/12, Error ellipse: s-maj=12.4km s-min=9.1km az=161.2
IDC 24 13:13:36.9±0.7, 31.94N×138.28E, h327km±7km, mb3.0/12, mb1 3.1/14, mb1mx3.0/28, mbtmp3.0/14, Error ellipse: s-maj=17.8km s-min=11.2km az=76.0
JMA 24 13:13:37.2±0.2, 32.21N×138.70E, h349km, M3.6
ISC 24 13:13:37.6±0.9, 32.11N±0.08×138.52E±0.08, h335km±7km, n29, σ1°54/40, mb3.2/12, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	1.44	48	P	Pn	13 14 24.5	+0.7
JHJ	Hachijo jima 2	1.47	46	P	Pn	13 14 24.7	+0.8
	41nm,0.3s,baz=49,slow=2.8,SNR=44						
JHJ				S	S	13 15 02.3	+1.2
	11nm,0.3s,baz=252,slow=19,SNR=2.8						
JHJ2	Mitsune	1.48	47	P	Pn	13 14 24.6	+0.6
JIE	Ise	2.74	327	P	Pn	13 14 34.1	+0.7
JIE				*e*S	S	13 15 18.3	+0.1
JWZ	Kozaga	2.76	302	P	Pn	13 14 32.8	-0.8
JOD2	Odawara 2	3.18	8	P	Pn	13 14 37.9	+0.5
JOD2				*e*S	S	13 15 22.1	-3.5
JWY	Kouya	3.24	311	P	Pn	13 14 38.3	+0.3
BSO1	Boso 1	3.27	38	P	Pn	13 14 37.0	-0.6
BSO1				*e*S	S	13 15 24.0	-2.0
JYN	Shimob	3.38	0	P	Pn	13 14 40.9	+1.5
JYN				*e*S	S	13 15 29.4	+0.3
JRY	Ryogami san	3.91	4	P	Pn	13 14 45.4	+0.7
JRY				*e*S	S	13 15 38.6	-0.2
JAG	Ashikaga	4.38	10	P	Pn	13 14 48.6	-1.0
JAG				*e*S	S	13 15 44.8	-2.8
MJAR	Matsushiro Arr	4.43	357	P	Pn	13 14 50.1	0.0
	2.2nm,0.3s,baz=201,slow=9.1,SNR=32						
MJAR				S	S	13 15 49.5	+0.8
	0.6nm,0.3s,baz=175,slow=17,SNR=4.5						
MAT	Matsushiro	4.43	357	P	Pn	13 14 50.5	+0.3
MAT				S	S	13 15 47.8	-1.0
MAT	Matsushiro	4.43	357	P	Pn	13 14 50.6	+0.4
MAT				S	S	13 15 49.1	+0.3
CBIJ	Chichi jima	5.92	147	P	Pn	13 15 04.9	-2.2
JMK	Ichinoseki	7.17	17	P	Pn	13 15 21.1	-0.4
JMK				S	S	13 16 40.9	-5.1
KSRS	Korea Array	10.22	304	P	Pn	13 15 58.4	+0.3
	0.1nm,0.3s,baz=120,slow=12,SNR=3.2						
PETK	Petropavlovsk-	25.14	28	P	P	13 18 36.1	+3.1
	1.2nm,0.9s,baz=233,slow=8.1,SNR=3.2						
SONM	Songino Array	28.95	312	P	P	13 19 06.6	-0.4
	0.3nm,0.4s,baz=117,slow=8.1,SNR=5.3						
ZALV	Zalesovo Beam	43.65	316	P	P	13 21 09.2	-0.7
	0.6nm,0.4s,baz=80,slow=8.8,SNR=3.9						
MKAR	Makanchi Array	44.90	306	P	P	13 21 19.1	-0.7
	0.5nm,0.5s,baz=84,slow=10,SNR=11						
WRA	Warramunga Arr	51.91	185	P	P	13 22 11.2	-1.8
	0.7nm,0.6s,baz=2.8,slow=7.8,SNR=14						
BVAR	Borovoye Array	52.23	315	P	P	13 22 14.7	-0.4
	0.6nm,0.5s,baz=100,slow=6.7,SNR=6.2						
ILAR	Eielson Array	54.93	30	P	P	13 22 35.6	+1.3
	0.2nm,0.5s,baz=254,slow=6.0,SNR=6.1						
ASAR	Alice Springs	55.63	185	P	P	13 22 38.6	-1.1
	0.2nm,0.3s,baz=10,slow=12,SNR=12						
YKA	Yellowknife Ar	69.26	28	P	P	13 24 10.2	+1.5
	0.2nm,0.5s,baz=308,slow=7.0,SNR=4.1						
FINES	FINESS Array B	72.05	332	P	P	13 24 25.6	+0.2
	1.7nm,0.8s,baz=101,slow=9.9,SNR=4.3						
KBZ	Khabaz	72.30	311	P	P	13 24 26.8	-0.4
	1.3nm,0.7s,baz=27,slow=4.5,SNR=2.9						
BRTR	Keskin Array B	80.30	311	P	P	13 25 12.6	+0.4
	0.8nm,0.8s,baz=99,slow=7.6,SNR=3.7						

IDC 24 13:27:07.6±1.4, 6.62S×121.37E, h388km±20km, mb2.7/3, mb1 2.7/5, mb1mx2.5/23, mbtmp2.5/5, Error ellipse: s-maj=151.3km s-min=16.0km az=55.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	Kappang	2.26	315	P	Pn	13 28 04.0	-0.3
	2.1nm,0.3s,baz=136,slow=6.8,SNR=7.8						
WRA	Warramunga Arr	18.28	138	P	P	13 30 56.9	+1.1
	0.1nm,0.3s,baz=316,slow=11,SNR=11						
ASAR	Alice Springs	20.80	146	P	P	13 31 20.0	-0.3
	0.3nm,0.5s,baz=340,slow=15,SNR=11						
STKA	Stephens Creek	31.44	146	P	P	13 32 53.8	-1.0
	1.0nm,0.6s,baz=315,slow=13,SNR=2.9						
MKAR	Makanchi Array	63.47	331	P	P	13 36 57.8	+0.2
	0.2nm,0.6s,baz=150,slow=6.0,SNR=2.6						

ISK 24 13:32:13.8, 36.59N×28.69E, h2km, MD3.6
DDA 24 13:32:13.4, 36.47N×28.59E, h32km, ML3.5
ATH 24 13:32:13.5, 36.51N×28.63E, h29km±1km, MD3.6/11
CSEM 24 13:32:14.4±0.1, 36.51N×28.69E, h20km, MD3.6, Error ellipse: s-maj=3.3km s-min=2.3km az=158.0
THE 24 13:32:14.6, 36.47N×28.68E, h5km±3km, ML3.6/3, Error ellipse: s-maj=3.3km s-min=1.1km az=134.0
ISCJB 24 13:32:14.1±0.4, 36.48N±0.02×28.67E±0.02, h26km±4km, mb3.4/3, Error ellipse: s-maj=3.7km s-min=2.8km az=154.9
IDC 24 13:32:16.3±3.5, 36.30N×28.79E, h56km±40km, mb3.4/3, mb1 3.5/6, mb1mx3.1/27, mbtmp3.5/6, ML3.5/3, MS2.7/2, Ms1 2.7/2, ms1mx2.2/30, Error ellipse: s-maj=28.5km s-min=17.3km az=103.0
ISC 24 13:32:14.3±0.9, 36.51N±0.02×28.67E±0.02, h25km±8km, n130, σ1°40/195, mb3.5/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.36	69	*e*PG	Pb	13 32 21.4	-0.8
FETY				*e*SG	Sb	13 32 27.8	+0.2
FETY	Fethiye	0.36	69	*e*Pg	Pb	13 32 21.4	-0.8
FETY				*e*Sg	Sb	13 32 27.8	+0.2
TURN	Turunc	0.37	352	*i* P	Pb	13 32 23.0	+0.6
TURN				*i* S	Sn	13 32 30.0	-0.5
TURN	Turunc	0.37	352	*i* P	Pb	13 32 23.0	+0.6
TURN				*i* S	Sn	13 32 30.0	-0.5
ARG	Arkhangelos	0.52	237	*e*PN	Pb	13 32 23.9	-1.0
ARG				*e*SN	Sb	13 32 32.4	+0.3
ARG	Arkhangelos	0.52	237	*e*Pn	Pb	13 32 23.9	-1.0
ARG				*e*Sn	Sb	13 32 32.4	+0.3
YER	Yerkesik	0.70	334	*e*PG	Pb	13 32 27.0	-0.9
YER				*e*SG	Sb	13 32 36.5	-0.7
YER	Yerkesik	0.70	334	*e*Pg	Pb	13 32 27.0	-0.9
YER				*e*Sg	Sb	13 32 36.5	-0.7
AKAS	Kas	0.80	109	*i* P	Pn	13 32 29.9	-0.2
AKAS				*i* S	Sn	13 32 42.0	+0.7
AKAS	Kas	0.80	109	*i* P	Pn	13 32 29.9	-0.2
AKAS				*i* S	Sn	13 32 42.0	+0.7
KSL	Kastellorizon	0.82	115	*e*PN	Pb	13 32 30.2	0.0
GLHS	Glhisar (BURDU	0.93	45	*e*PG	Pb	13 32 31.0	-0.8
GLHS				*e*SG	Sb	13 32 43.5	-0.3
GLHS	Glhisar (BURDU	0.93	45	*e*Pg	Pb	13 32 31.0	-0.8
GLHS				*e*Sg	Sb	13 32 43.5	-0.3
GOLH	Golhisar	1.02	44	*i* P	Pn	13 32 34.2	+1.1
GOLH				*i* S	Sn	13 32 46.3	+3.6
GOLH	Golhisar	1.02	44	*i* P	Pn	13 32 34.2	+1.1
GOLH				*i* S	Sn	13 32 50.3	+3.6
ELL	Elmali	1.03	76	*e*PG	Pb	13 32 32.9	-0.6
ELL	Elmali	1.03	76	*e*Pg	Pb	13 32 32.9	-0.6
MLSB	Milas	1.06	318	*e*PG	Pn	13 32 33.2	-0.4
MLSB	Milas	1.06	318	*e*Pg	Pn	13 32 33.2	-0.4
NIS1	Nisyros Isl.	1.20	275	P	Pn	13 32 35.8	+0.3
NIS1				S	Sb	13 32 53.9	+2.4
NIS1	Nisyros Isl.	1.20	275	*e*PN	Pn	13 32 35.8	+0.3
NIS1				*e*SN	Sb	13 32 51.7	+0.1
NIS1	Nisyros Isl.	1.20	275	P	Pn	13 32 35.8	+0.3
NIS1				*e*Sn	Sb	13 32 51.7	+0.1
NIS1				S	Sb	13 32 53.9	+2.4
DNZL	Cakiroluk	1.22	14	*i* P	Pb	13 32 37.0	+0.2
DNZL				*i* S	Sb	13 32 54.1	+1.9
DNZL	Cakiroluk	1.22	14	*i* P	Pb	13 32 37.0	+0.2
DNZL				*i* S	Sb	13 32 54.1	+1.9
BODT	Bodrum	1.22	297	*e*PN	Pn	13 32 36.1	+0.3
BODT	Bodrum	1.22	297	*e*Pn	Pn	13 32 36.1	+0.3
DENT	Denizli	1.28	13	*e*Pn	Pn	13 32 36.3	-0.3
DENT	Denizli	1.28	13	*e*Pn	Pn	13 32 36.3	-0.3
AYDN	Tasoluk	1.31	332	*i* P	Pb	13 32 38.4	+0.1
AYDN				*i* S	Sb	13 32 55.3	+0.5
AYDN	Tasoluk	1.31	332	*i* P	Pb	13 32 38.4	+0.1
AYDN				*i* S	Sb	13 32 55.3	+0.5
KORT	Korkueli	1.44	69	*i* P	Pb	13 32 41.3	+0.8
KORT				*i* S	Sb	13 33 02.7	+4.3
KORT	Korkueli	1.44	69	*i* P	Pb	13 32 41.3	+0.8
KARP	Karpathos	1.55	232	*e*PN	Pn	13 32 41.3	+1.0
KARP				*e*SN	Sb	13 33 01.0	-0.6
KARP	Karpathos	1.55	232	*e*Pn	Pn	13 32 41.3	+1.0
KARP				*e*Sn	Sb	13 33 01.0	-0.6
GCAM	G?zelcaml?	1.66	317	*i* P	Pn	13 32 42.8	+1.1
GCAM				*i* S	Sb	13 33 04.3	-0.2
GCAM	G?zelcaml?	1.66	317	*i* P	Pn	13 32 42.8	+1.1
GCAM				*i* S	Sb	13 33 04.3	-0.2
KHL	Karahalli	1.94	20	*e*PN	Pn	13 32 45.2	-0.4
KHL	Karahalli	1.94	20	*e*Pn	Pn	13 32 45.3	-0.4
KHAL	Karahalli	1.97	19	*i* P	Pn	13 32 44.0	-2.2
KHAL				*i* S	Sn	13 33 10.9	+0.7
KHAL	Karahalli	1.97	19	*i* P	Pn	13 32 44.0	-2.2
KHAL				*i* S	Sn	13 33 10.9	+0.7
ISP	Isparta	1.98	48	*e*PN	Pn	13 32 46.9	+0.6
ISP	Isparta	1.98	48	P	Pb	13 32 47.9	-1.8
ISP				S	Sb	13 33 13.6	-0.4
ISP	Isparta	1.98	48	*e*Pn	Pn	13 32 46.9	+0.6
ISP	Isparta	1.98	48	P	Pb	13 32 47.9	-1.8
ISP				S	Sb	13 33 13.6	-0.4
MANT	Manisa	1.98	357	*i* P	Pn	13 32 46.3	-0.1
MANT				*i* S	Sn	13 33 11.1	+0.5
MANT	Manisa	1.98	357	*i* P	Pn	13 32 46.3	-0.1
MANT				*i* S	Sn	13 33 11.1	+0.5
KULA	Kula-Manisa	2.01	360	*e*PN	Pn	13 32 47.4	+0.8
KULA	Kula-Manisa	2.01	360	P	Pn	13 32 47.4	+0.8
KULA				S	Sb	13 33 13.2	-1.5
KULA	Kula-Manisa	2.01	360	*e*Pn	Pn	13 32 46.1	-0.5
KULA	Kula-Manisa	2.01	360	P	Pn	13 32 47.4	+0.8
KULA				S	Sb	13 33 13.2	-1.5
IZM	Izmir	2.20	330	*e*PN	Pn	13 32 49.5	+0.3
IZM	Izmir	2.20	330	*e*Pn	Pn	13 32 49.5	+0.3
BLCB	Balcova	2.28	326	*e*PN	Pn	13 32 50.1	-0.2
BLCB	Balcova	2.28	326	*e*Pn	Pn	13 32 50.1	-0.2
ZKR	Zakros	2.43	236	P	Pn	13 32 53.1	+0.7
ZKR				S	Sn	13 33 23.4	+2.2
ZKR	Zakros	2.43	236	*e*PN	Pn	13 32 53.0	+0.7
ZKR				*e*SN	Sn	13 33 21.9	+0.7
ZKR	Zakros	2.43	236	*e*Pn	Pn	13 32 53.0	+0.7
ZKR				*e*Sn	Sn	13 33 21.9	+0.7
ZKR				S	Sn	13 33 23.4	+2.2
AKHS	Akhisar	2.46	344	*i* P	Pn	13 32 53.4	+0.5
AKHS				*i* S	Sn	13 33 19.2	-3.0
AKHS	Akhisar	2.46	344	*i* P	Pn	13 32 53.4	+0.5
AKHS				*i* S	Sn	13 33 19.2	-3.0
URLA	Izmir	2.48	319	*i* P	Pn	13 32 54.1	+1.0
URLA	Izmir	2.48	319	*i* P	Pn	13 32 54.1	+1.0
SHUT	Suhut-Afyon	2.53	36	*e*PN	Pn	13 32 53.5	-0.4
SHUT	Suhut-Afyon	2.53	36	*e*Pn	Pn	13 32 53.5	-0.4
DEMI	Demirci	2.53	1	*i* P	Pn	13 32 54.1	+0.3
DEMI				*i* S	Sn	13 33 26.0	+2.1
DEMI	Demirci	2.53	1	*i* P	Pn	13 32 54.1	+0.3
DEMI				*i* S	Sn	13 33 26.0	+2.1
APE	Apeiranthos	2.58	284	*e*PN	Pn	13 32 55.5	+1.0
APE	Apeiranthos	2.58	284	*e*Pn	Pn	13 32 55.5	+1.0
ALT	Altintas	2.79	24	*e*PN	Pn	13 32 57.1	-0.3
ALT	Altintas	2.79	24	*e*Pn	Pn	13 32 57.1	-0.3
CHOS	Chios island	2.80	313	P	Pn	13 32 58.5	+1.0
CHOS				S	Sn	13 33 32.4	+1.8
CHOS	Chios island	2.80	313	*e*PN	Pn	13 32 58.6	+1.0
CHOS				*e*SN	Sn	13 33 30.7	+0.1
CHOS	Chios island	2.80	313	P	Pn	13 32 58.5	+1.0
CHOS				*e*Sn	Sn	13 33 30.7	+0.1
CHOS				S	Sn	13 33 32.4	+1.8
XRY	Khrisi	2.92	237	*e*PN	Pn	13 33 00.0	+1.0
XRY	Khrisi	2.92	237	*e*Pn	Pn	13 33 00.0	+1.0
LAST	Lasithi	2.92	244	P	Pn	13 32 59.7	+0.6
LAST				S	Sn	13 33 36.0	+2.6
LAST	Lasithi	2.92	244	*e*PN	Pn	13 32 59.4	+0.3
LAST				*e*SN	Sn	13 33 33.2	-0.2
LAST	Lasithi	2.92	244	*e*Pn	Pn	13 32 59.4	+0.3
LAST	Lasithi	2.92	244	P	Pn	13 32 59.7	+0.6
LAST				*e*Sn	Sn	13 33 33.2	-0.2
LAST				S	Sn	13 33 36.0	+2.6
GAZI	Gazipasa	2.96	94	*i* P	Pn	13 32 58.0	-1.6
GAZI				*i* S	Sn	13 33 31.5	-2.8
GAZI	Gazipasa	2.96	94	*i* P	Pn	13 32 58.0	-1.6
GAZI				*i* S	Sn	13 33 31.5	-2.8
TVSB	Tavsanli	3.01	12	*e*PN	Pn	13 33 00.3	-0.1
TVSB	Tavsanli	3.01	12	*e*Pn	Pn	13 33 00.3	-0.1
DST	Dursunbey	3.09	359	*e*PN	Pn	13 33 01.9	+0.4
DST	Dursunbey	3.09	359	*e*Pn	Pn	13 33 01.9	+0.4
BALB	Balikesir	3.19	349	*e*PN	Pn	13 33 03.1	+0.3
BALB	Balikesir	3.19	349	*e*Pn	Pn	13 33 03.1	+0.3
IDI	Anoyia	3.30	250	P	Pn	13 33 05.0	+0.6
IDI				S	Sn	13 33 43.7	+0.9
IDI	Anoyia	3.30	250	*e*PN	Pn	13 33 05.0	+0.6
IDI				*e*SN	Sn	13 33 43.4	+0.6
IDI	Anoyia	3.30	250	P	Pn	13 33 05.0	+0.6
IDI				*e*Sn	Sn	13 33 43.4	+0.6
IDI				S	Sn	13 33 43.7	+0.9
PRK	Paraskevi	3.33	326	P	Pn	13 33 06.7	+2.0
PRK				S	Sn	13 33 47.0	+3.6
PRK	Paraskevi	3.33	326	*e*PN	Pn	13 33 05.6	+0.9
PRK				*e*SN	Sn	13 33 44.8	+1.4
PRK	Paraskevi	3.33	326	*e*Pn	Pn	13 33 05.6	+0.9
PRK	Paraskevi	3.33	326	P	Pn	13 33 06.7	+2.0
PRK				*e*Sn	Sn	13 33 44.8	+1.4
PRK				S	Sn	13 33 47.0	+3.6
LADK	Ladik-KONYA	3.40	59	*e*PN	Pn	13 33 06.4	+0.7
LADK	Ladik-KONYA	3.40	59	*e*Pn	Pn	13 33 06.4	+0.7
KDHN	Kadinhani	3.40	53	*i* P	Pn	13 33 07.3	+1.5
KDHN	Kadinhani	3.40	53	*i* P	Pn	13 33 07.3	+1.5
ERMK	Ermenek	3.42	86	*i* P	Pn	13 33 08.2	+2.1
ERMK				*i* S	Sn	13 33 49.6	+3.6
ERMK	Ermenek	3.42	86	*i* P	Pn	13 33 08.2	+2.1
ERMK				*i* S	Sn	13 33 49.6	+3.6
KIZT	Kizilcal	3.48	46	*e*PN	Pn	13 33 07.3	+0.4
KIZT	Kizilcal	3.48	46	*e*Pn	Pn	13 33 07.3	+0.4
GONE	Gonen-Balikesi	3.62	348	*e*PN	Pn	13 33 09.0	+0.3
GONE	Gonen-Balikesi	3.62	348	*e*Pn	Pn	13 33 09.0	+0.3
SVRH	Sivrihisar-ESK	3.70	37	*e*PN	Pn	13 33 10.4	+0.5
SVRH	Sivrihisar-ESK	3.70	37	*e*Pn	Pn	13 33 10.4	+0.5
VAM	Vamos	3.79	254	*e*PN	Pn	13 33 12.0	+1.0
VAM	Vamos	3.79	254	*e*Pn	Pn	13 33 12.0	+1.0
CSS	Prodhromos	4.09	111	P	Pn	13 33 15.3	+0.1
CSS	Prodhromos	4.09	111	P	Pn	13 33 15.3	+0.1
LFK	Lefkose	4.13	106	*e*PN	Pn	13 33 17.8	+2.0
LFK	Lefkose	4.13	106	*e*Pn	Pn	13 33 17.8	+2.0
SULT	Sultanhani-AKS	4.22	65	*e*PN	Pn	13 33 18.2	+1.2
SULT	Sultanhani-AKS	4.22	65	*e*Pn	Pn	13 33 18.2	+1.2
ANKY	Antikythira Is	4.39	263	*e*PN	Pn	13 33 20.7	+1.4
ANKY	Antikythira Is	4.39	263	*e*Pn	Pn	13 33 20.7	+1.4
KYTH	Kithira	4.55	269	P	Pn	13 33 23.5	+1.9
KYTH	Kithira	4.55	269	*e*PN	Pn	13 33 23.4	+1.9
KYTH	Kithira	4.55	269	*e*Pn	Pn	13 33 23.4	+1.9
VLI	Veliai	4.62	274	P	Pn	13 33 24.4	+2.0
VLI				S	Sn	13 34 17.5	+2.3
VLI	Veliai	4.62	274	*e*PN	Pn	13 33 23.9	+1.5
VLI	Veliai	4.62	274	*e*Pn	Pn	13 33 23.9	+1.5
VLI	Veliai	4.62	274	P	Pn	13 33 24.4	+2.0
VLI				S	Sn	13 34 17.5	+2.3
BRTR	Keskin Array B	5.07	49	P	Pn	13 33 30.5	+1.8
	0.5nm,0.3s,baz=216,slow=12,SNR=14						
BRTR				S	Sn	13 34 30.1	+3.6
	0.6nm,0.3s,baz=218,slow=26,SNR=5.6						
MMAI	Mount Meron Ar	6.54	120	P	Pn	13 33 47.2	-1.8
	3.7nm,0.3s,baz=307,slow=12,SNR=9.1						
MMAI				S	Sn	13 34 59.3	-3.6
	2.5nm,0.3s,baz=312,slow=28,SNR=3.0						
ASF	Jabal al Asfar	8.06	120	P	Pn	13 34 07.9	-1.9
	0.5nm,0.3s,baz=266,slow=15,SNR=2.6						
VRAC	Vranov	15.53	329	LR	LR	13 41 11.8	
	comp=Z,19nm,20.8s,baz=329,slow=34						
DAVOX	Davos/Dischmat	17.35	312	LR	LR	13 43 21.2	
	comp=Z,30nm,18.4s,baz=263,slow=38						
FINES	FINESS Array B	25.01	357	P	P	13 37 35.1	-0.7
	1.0nm,0.8s,baz=205,slow=8.4,SNR=3.9						
TORD	Torodi Ar. Bea	33.56	233	P	P	13 38 50.8	-1.4
	0.9nm,0.8s,baz=38,slow=8.5,SNR=9.8						
MKAR	Makanchi Array	40.65	58	P	P	13 39 51.7	-0.5
	0.4nm,0.7s,baz=274,slow=5.8,SNR=4.0						

IDC 24 13:41:34.0±1.0, 12.68N×57.91E, h0km, mb3.8/16, mb1 3.9/16, mb1mx3.8/31, mbtmp3.8/16, MS3.1/6, Ms1 3.2/6, ms1mx2.9/37, Error ellipse: s-maj=26.2km s-min=18.4km az=30.0, Owen Fracture Zone region

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

*SKO **24** 14:13:35.1,41°.28N×22°.70E,h15km,M2.2,ML2.7*
*ATH **24** 14:13:35.5,41°.28N×22°.72E,h20km,MD3.5/27*
*BEO **24** 14:13:36.4±0.7,41°.33N×22°.70E,h4km±3km,ML2.8/9*

ISC 24 14:13:36.1±0.8,**41°27N**±0°.02×**22°69E**±0°.01,**h8**km±5km,
n152,σ0$93/197,**16C-10D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**297**	P		**Pg**	**14 13 38.0 -0.5**
VAY				S		**Sg**	**14 13 40.1 -0.1**
VAY	**Valandovo**	**0.10**	**297**	*i* Pg		**Pg**	**14 13 38.0 -0.5**
VAY				*i* Sg		**Sg**	**14 13 40.1 -0.1**
VAY				*e*Lg		Lg	14 13 40.2
	comp=E,4μm,0.2s						
VAY				*e*Lg		Lg	14 13 40.2
	comp=N,3μm,0.3s						
VAY	**Valandovo**	**0.10**	**297**	⇓*i* Pg		**Pg**	**14 13 38.0 -0.5**
VAY	**Valandovo**	**0.10**	**297**	P		**Pg**	**14 13 38.0 -0.5**
VAY				S		**Sg**	**14 13 40.1 -0.1**
VAY				*i* Sg		Sg	14 13 40.6 +0.4
VAY				*e*Lg		Lg	14 13 40.7
	comp=N,3μm,0.3s						
KNT	**Kendrikon**	**0.19**	**126**	P		**Pg**	**14 13 39.9 -0.1**
KNT				S		**Sg**	**14 13 42.7 0.0**
KNT	**Kendrikon**	**0.19**	**126**	P		**Pg**	**14 13 39.9 -0.1**
KNT				S		**Sg**	**14 13 42.7 0.0**
GRG	**Griva**	**0.39**	**215**	P		**Pg**	**14 13 43.6 -0.1**
GRG				S		**Sb**	**14 13 49.8 -1.6**
GRG	**Griva**	**0.39**	**215**	*e*PB		**Pg**	**14 13 43.7 0.0**
GRG				*e*SB		**Sg**	**14 13 49.4 +0.7**
GRG	**Griva**	**0.39**	**215**	*e*Pb		**Pg**	**14 13 43.7 0.0**
GRG				*e*Sb		**Sg**	**14 13 49.4 +0.7**
GRG				S		**Sb**	**14 13 49.8 -1.6**
KKB	**Krupnik**	**0.66**	**26**	*i* Pg		**Pg**	**14 13 48.1 -0.8**
KKB	**Krupnik**	**0.66**	**26**	*i* Pg		**Pg**	**14 13 48.1 -0.8**
SOH	**Sokhos**	**0.67**	**132**	P		**Pg**	**14 13 48.5 -0.6**
SOH				S		**Sb**	**14 13 58.9 -0.8**
SOH	**Sokhos**	**0.67**	**132**	*e*PN		**Pg**	**14 13 48.3 -0.8**
SOH				*e*SN		**Sg**	**14 13 58.0 +0.1**
SOH	**Sokhos**	**0.67**	**132**	P		**Pg**	**14 13 48.5 -0.6**
SOH				*e*Sn		**Sg**	**14 13 58.0 +0.1**
SOH				S		**Sb**	**14 13 58.9 -0.8**
THE	**Thessaloniki**	**0.67**	**162**	P		**Pg**	**14 13 48.6 -0.5**
THE				S		**Sg**	**14 13 57.7 -0.2**
THE	**Thessaloniki**	**0.67**	**162**	P		**Pg**	**14 13 48.6 -0.5**
THE				S		**Sg**	**14 13 57.7 -0.2**
SRS	**Serrai**	**0.70**	**103**	P		**Pg**	**14 13 48.7 -0.9**
SRS	**Serrai**	**0.70**	**103**	P		**Pg**	**14 13 48.7 -0.9**
HORT	**Hortiatis**	**0.74**	**155**	P		**Pg**	**14 13 50.0 -0.4**
HORT				S		**Sg**	**14 14 00.0 -0.1**
HORT	**Hortiatis**	**0.74**	**155**	P		**Pg**	**14 13 50.0 -0.4**
HORT				S		**Sg**	**14 14 00.0 -0.1**
MMB	**Musomiste**	**0.84**	**68**	*i* Pg		**Pg**	**14 13 51.4 -0.9**
MMB	**Musomiste**	**0.84**	**68**	*i* Pg		**Pg**	**14 13 51.4 -0.9**
NVR	**Nevrokopi**	**0.89**	**85**	P		**Pg**	**14 13 52.1 -1.0**
NVR				S		**Sg**	**14 14 04.1 -0.6**
NVR	**Nevrokopi**	**0.89**	**85**	*e*PN		**Pg**	**14 13 52.1 -1.0**
NVR				*e*SN		**Sg**	**14 14 04.0 -0.6**
NVR	**Nevrokopi**	**0.89**	**85**	*e*Pn		**Pg**	**14 13 52.1 -1.0**
NVR				S		**Sg**	**14 14 04.1 -0.6**
BIA	**Bitola**	**1.06**	**257**	P		**Pg**	**14 13 55.5 -1.1**
BIA				S		**Sb**	**14 14 11.4 +0.5**
BIA	**Bitola**	**1.06**	**257**	*i* Pn		**Pg**	**14 13 55.5 -1.1**
BIA				*e*Sn		**Sb**	**14 14 11.0 0.0**
BIA	**Bitola**	**1.06**	**257**	P		**Pg**	**14 13 55.5 -1.1**
BIA				S		**Sb**	**14 14 11.4 +0.5**
PLG	**Polygyros**	**1.07**	**147**	P		**Pg**	**14 13 55.6 -1.0**
PLG	**Polygyros**	**1.07**	**147**	*e*PN		**Pg**	**14 13 55.7 -0.9**
PLG	**Polygyros**	**1.07**	**147**	P		**Pg**	**14 13 55.6 -1.0**
FNA	**Florina**	**1.11**	**244**	P		**Pg**	**14 13 56.6 -0.8**
FNA				S		**Sb**	**14 14 12.7 +0.5**
FNA	**Florina**	**1.11**	**244**	*e*PN		**Pg**	**14 13 56.7 -0.7**
FNA				*e*SN		**Sb**	**14 14 12.4 +0.2**
FNA	**Florina**	**1.11**	**244**	P		**Pg**	**14 13 56.6 -0.8**
FNA				S		**Sb**	**14 14 12.7 +0.5**
SKO	**Skopje**	**1.17**	**307**	P		**Pn**	**14 13 59.1 +0.3**
SKO	**Skopje**	**1.17**	**307**	*i* Pn		**Pn**	**14 13 59.2 +0.3**
SKO				*i* Sn		**Sn**	**14 14 15.4 +0.4**
SKO				*e*Lg		Lg	14 14 16.6
	comp=N,194nm,0.6s						
SKO				*e*Lg		Lg	14 14 17.9
	comp=E,141nm,0.7s						
SKO	**Skopje**	**1.17**	**307**	*e*Pg		**Pn**	**14 13 59.2 +0.3**
SKO				*e*Sg		**Sg**	**14 14 12.6 -1.2**
SKO	**Skopje**	**1.17**	**307**	P		**Pn**	**14 13 59.1 +0.3**
SKO	**Skopje**	**1.17**	**307**	*i* Pn		**Pn**	**14 13 59.6 +0.8**
SKO				*e*Sg		**Sg**	**14 14 12.6 -1.2**
SKO				*i* Sn		**Sn**	**14 14 15.9 +0.9**
SKO				*e*Lg		Lg	14 14 18.3
	comp=E,141nm,0.7s						
KZN	**Kozani**	**1.19**	**216**	*e*PN		**Pg**	**14 13 58.1 -0.9**
KZN				*e*SN		**Sn**	**14 14 16.0 +0.4**
KZN	**Kozani**	**1.19**	**216**	*e*Pn		**Pg**	**14 13 58.1 -0.9**
KZN				*e*Sn		**Sn**	**14 14 16.0 +0.4**
OUR	**Ouranopolis**	**1.36**	**133**	P		**Pn**	**14 14 01.3 0.0**
OUR	**Ouranopolis**	**1.36**	**133**	P		**Pn**	**14 14 01.3 0.0**
VTS	**Vitosha**	**1.37**	**16**	P		**Pn**	**14 14 00.9 -0.9**
VTS				S		**Sg**	**14 14 19.8 -0.5**
VTS	**Vitosha**	**1.37**	**16**	⇓*i* Pg		**Pn**	**14 14 01.2 -0.6**
VTS				*e*Sg		**Sg**	**14 14 17.8 -2.5**
VTS	**Vitosha**	**1.37**	**16**	⇑*i* P		**Pn**	**14 14 01.6 -0.2**
VTS	**Vitosha**	**1.37**	**16**	*i* Pg		**Pn**	**14 14 01.6 -0.2**
VTS	**Vitosha**	**1.37**	**16**	P		**Pn**	**14 14 00.9 -0.9**
VTS	**Vitosha**	**1.37**	**16**	*i* Pg		**Pn**	**14 14 01.6 -0.2**
VTS				*e*Sg		**Sg**	**14 14 17.8 -2.5**
VTS				S		**Sg**	**14 14 19.8 -0.5**
KAVA	**Kavala**	**1.40**	**101**	P		**Pn**	**14 14 01.5 -0.5**
KAVA	**Kavala**	**1.40**	**101**	P		**Pn**	**14 14 01.5 -0.5**
NEST	**Nestorio**	**1.51**	**236**	P		**Pn**	**14 14 03.7 +0.1**
NEST	**Nestorio**	**1.51**	**236**	P		**Pn**	**14 14 03.7 +0.1**
PAIG	**Paliouri**	**1.54**	**150**	P		**Pn**	**14 14 03.4 -0.5**
PAIG	**Paliouri**	**1.54**	**150**	*e*PN		**Pn**	**14 14 03.2 -0.7**
PAIG				*e*SN		**Sb**	**14 14 24.7 +0.1**
PAIG	**Paliouri**	**1.54**	**150**	P		**Pn**	**14 14 03.4 -0.5**
PAIG				*e*Sn		**Sb**	**14 14 24.7 +0.1**
RZN	**Rozhen**	**1.58**	**74**	*i* P		**Pb**	**14 14 05.5 -0.1**
RZN	**Rozhen**	**1.58**	**74**	*i* P		**Pb**	**14 14 05.5 -0.1**
BARS	**Barje**	**1.67**	**337**	⇑*i* Pg		**Pn**	**14 14 05.2 -0.6**
BARS				*e*Sg		**Sn**	**14 14 28.3 +0.9**
BARS	**Barje**	**1.67**	**337**	⇑*i* Pg		**Pn**	**14 14 05.2 -0.6**
BARS				*e*Sg		**Sn**	**14 14 28.3 +0.9**
PGB	**Panagyurishte**	**1.69**	**40**	*i* P		**Pn**	**14 14 06.0 0.0**
PGB	**Panagyurishte**	**1.69**	**40**	*i* P		**Pn**	**14 14 06.0 0.0**
PLD	**Plovdiv**	**1.72**	**60**	P		**Pb**	**14 14 07.8 -0.2**
PLD	**Plovdiv**	**1.72**	**60**	P		**Pn**	**14 14 06.8 +0.4**
PLD	**Plovdiv**	**1.72**	**60**	P		**Pn**	**14 14 06.8 +0.4**
PHP	**Peshkopia**	**1.74**	**284**	P		**Pn**	**14 14 06.7 0.0**
PHP	**Peshkopia**	**1.74**	**284**	P		**Pn**	**14 14 06.7 0.0**
THL	**Klokotos Trika**	**1.78**	**197**	P		**Pn**	**14 14 07.2 0.0**
THL	**Klokotos Trika**	**1.78**	**197**	*e*PN		**Pn**	**14 14 07.5 +0.3**
THL	**Klokotos Trika**	**1.78**	**197**	P		**Pn**	**14 14 07.2 0.0**
THL	**Klokotos Trika**	**1.78**	**197**	*e*Pn		**Pn**	**14 14 07.5 +0.3**
XOR	**Xorichti**	**1.94**	**168**	P		**Pn**	**14 14 09.5 0.0**
XOR	**Xorichti**	**1.94**	**168**	P		**Pn**	**14 14 09.5 0.0**
ZAPS	**Zavoj**	**2.00**	**359**	*e*Pn		**Pn**	**14 14 10.4 +0.1**
NEO	**Neokhori**	**2.01**	**168**	*e*PB		**Pn**	**14 14 09.6 -0.7**
NEO				*e*SN		**Sn**	**14 14 35.4 -0.2**
NEO	**Neokhori**	**2.01**	**168**	*e*Pb		**Pn**	**14 14 09.6 -0.7**
NEO				*e*Sn		**Sn**	**14 14 35.4 -0.2**
KDZ	**Kurdzhali**	**2.08**	**79**	*i* P		**Pn**	**14 14 10.6 -0.8**
KDZ	**Kurdzhali**	**2.08**	**79**	*i* P		**Pn**	**14 14 10.6 -0.8**
JAN	**Janina**	**2.14**	**222**	*e*PN		**Pn**	**14 14 13.2 +1.0**
JAN	**Janina**	**2.14**	**222**	*e*Pn		**Pn**	**14 14 13.2 +1.0**
MPEP	**Malo Peshtene**	**2.22**	**20**	P		**Pn**	**14 14 14.0 +0.7**
MPEP				*i* P		**Pb**	**14 14 16.7 +0.2**
AGG	**Agios Georgios**	**2.27**	**187**	P		**Pn**	**14 14 14.0 +0.1**
AGG	**Agios Georgios**	**2.27**	**187**	*e*PB		**Pn**	**14 14 14.0 +0.1**
AGG	**Agios Georgios**	**2.27**	**187**	P		**Pn**	**14 14 14.0 +0.1**
SELS	**Selova**	**2.27**	**330**	*e*Pn		**Pn**	**14 14 13.1 -0.8**
AOS	**Alonnisos**	**2.29**	**156**	P		**Pn**	**14 14 13.6 -0.6**
AOS	**Alonnisos**	**2.29**	**156**	*e*PN		**Pn**	**14 14 13.8 -0.4**
AOS	**Alonnisos**	**2.29**	**156**	*e*Pn		**Pn**	**14 14 13.8 -0.4**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*PN		**Pn**	**14 14 14.8 +0.5**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*Pn		**Pn**	**14 14 14.8 +0.5**
MAKR	**Makrakomi, Fth**	**2.30**	**191**	P		**Pn**	**14 14 15.0 +0.6**
MAKR	**Makrakomi, Fth**	**2.30**	**191**	P		**Pn**	**14 14 15.0 +0.6**
LIA	**Limnos Island**	**2.34**	**125**	*e*PN		**Pn**	**14 14 14.8 -0.1**
LIA	**Limnos Island**	**2.34**	**125**	*e*Pn		**Pn**	**14 14 14.8 -0.1**
EVR	**Evrytania**	**2.45**	**196**	*e*PB		**Pn**	**14 14 17.7 +1.2**
EVR	**Evrytania**	**2.45**	**196**	*e*Pb		**Pn**	**14 14 17.7 +1.2**
IGT	**Igoumenitsa**	**2.50**	**227**	P		**Pb**	**14 14 19.3 -2.1**
IGT	**Igoumenitsa**	**2.50**	**227**	P		**Pb**	**14 14 19.3 -2.1**
ALN	**Alexandroupoli**	**2.56**	**97**	P		**Pn**	**14 14 18.6 +0.7**
ALN				S		**Sn**	**14 14 49.0 -0.3**
ALN	**Alexandroupoli**	**2.56**	**97**	*e*PN		**Pn**	**14 14 18.2 +0.3**
ALN	**Alexandroupoli**	**2.56**	**97**	*e*Pn		**Pn**	**14 14 18.2 +0.3**
ALN	**Alexandroupoli**	**2.56**	**97**	P		**Pn**	**14 14 18.6 +0.7**
ALN				S		**Sn**	**14 14 49.0 -0.3**
BOLS	**Boljevac**	**2.61**	**348**	*e*Pn		**Pn**	**14 14 17.5 -1.1**
BOLS	**Boljevac**	**2.61**	**348**	*e*Pn		**Pn**	**14 14 17.5 -1.1**
KEK	**Kerkira**	**2.70**	**236**	*e*PB		**Pn**	**14 14 21.5 +1.6**
KEK	**Kerkira**	**2.70**	**236**	*e*Pb		**Pn**	**14 14 21.5 +1.6**
EFP	**Efpalio**	**2.91**	**192**	*e*PN		**Pn**	**14 14 23.5 +0.8**
EFP	**Efpalio**	**2.91**	**192**	*e*Pn		**Pn**	**14 14 23.5 +0.8**
KALE	**Kalithea**	**2.91**	**189**	*e*PN		**Pn**	**14 14 23.2 +0.4**
KALE	**Kalithea**	**2.91**	**189**	*e*Pn		**Pn**	**14 14 23.2 +0.4**
LKD2	**Lefkada island**	**2.93**	**213**	*e*PN		**Pn**	**14 14 24.1 +1.0**
LKD2	**Lefkada island**	**2.93**	**213**	*e*Pn		**Pn**	**14 14 24.1 +1.0**
TRIZ	**Trizonia**	**2.94**	**190**	*e*PN		**Pn**	**14 14 22.9 -0.3**
TRIZ	**Trizonia**	**2.94**	**190**	*e*Pn		**Pn**	**14 14 22.9 -0.3**
GRUS	**Gruza**	**2.99**	**331**	⇑*i* PN		**Pn**	**14 14 23.4 -0.5**
GRUS	**Gruza**	**2.99**	**331**	⇑*i* Pn		**Pn**	**14 14 23.4 -0.5**
LAKA	**Lakka**	**3.08**	**191**	*e*PN		**Pn**	**14 14 26.4 +1.3**
LAKA	**Lakka**	**3.08**	**191**	*e*Pn		**Pn**	**14 14 26.4 +1.3**
SVIS	**Svilajnac**	**3.18**	**341**	*e*Pn		**Pn**	**14 14 27.4 +0.9**
KLV	**Kalavryta, Ach**	**3.25**	**188**	*e*PN		**Pn**	**14 14 27.5 0.0**
KLV	**Kalavryta, Ach**	**3.25**	**188**	*e*Pn		**Pn**	**14 14 27.5 0.0**
LTK	**Loutraki**	**3.25**	**176**	*e*PN		**Pn**	**14 14 27.9 +0.4**
LTK	**Loutraki**	**3.25**	**176**	*e*Pn		**Pn**	**14 14 27.9 +0.4**
GUR	**Goura**	**3.34**	**185**	*e*PN		**Pn**	**14 14 29.5 +0.7**
GUR	**Goura**	**3.34**	**185**	*e*Pn		**Pn**	**14 14 29.5 +0.7**
DIVS	**Divibare**	**3.45**	**326**	*e*PN		**Pn**	**14 14 29.7 -0.6**
DIVS	**Divibare**	**3.45**	**326**	*e*Pn		**Pn**	**14 14 29.7 -0.6**
BBLS	**Lazići**	**3.55**	**318**	*e*Pn		**Pn**	**14 14 31.8 +0.2**
BBLS	**Lazići**	**3.55**	**318**	*e*Pn		**Pn**	**14 14 31.8 +0.2**
DID	**Didima**	**3.79**	**173**	*e*PN		**Pn**	**14 14 36.4 +1.6**
DID	**Didima**	**3.79**	**173**	*e*Pn		**Pn**	**14 14 36.4 +1.6**
TEKS	**Tekeris**	**4.01**	**326**	⇓*i* PN		**Pn**	**14 14 37.6 -0.3**
TEKS	**Tekeris**	**4.01**	**326**	⇓*i* Pn		**Pn**	**14 14 37.6 -0.3**
ITM	**Ithomi**	**4.13**	**189**	*e*PN		**Pn**	**14 14 42.4 +2.8**
ITM	**Ithomi**	**4.13**	**189**	*e*Pn		**Pn**	**14 14 42.4 +2.8**
LOT	**Lotru**	**4.25**	**10**	⇓*i* P		**Pn**	**14 14 41.7 +0.5**
LOT	**Lotru**	**4.25**	**10**	⇓*i* P		**Pn**	**14 14 41.7 +0.5**
BZS	**Buzias**	**4.41**	**350**	⇑*i* P		**Pn**	**14 14 42.7 -0.7**
BZS	**Buzias**	**4.41**	**350**	⇑*i* P		**Pn**	**14 14 42.7 -0.7**
VOIR		**4.50**	**22**	⇑*i* P		**Pn**	**14 14 46.9 +2.2**
VOIR		**4.50**	**22**	⇑*i* P		**Pn**	**14 14 46.9 +2.2**
ISR	**Istrita**	**4.76**	**35**	⇑*i* P		**Pn**	**14 14 50.5 +2.2**
ISR	**Istrita**	**4.76**	**35**	⇑*i* P		**Pn**	**14 14 50.5 +2.2**
MLR	**Muntele Rosu**	**4.84**	**28**	⇑*i* P		**Pn**	**14 14 51.3 +2.0**
MLR	**Muntele Rosu**	**4.84**	**28**	⇑*i* P		**Pn**	**14 14 51.3 +2.0**
PLOR	**Plostina**	**5.40**	**31**	⇑*i* P		**Pn**	**14 14 58.6 +1.6**
PLOR	**Plostina**	**5.40**	**31**	⇑*i* P		**Pn**	**14 14 58.6 +1.6**
VRI	**Vrincioaia**	**5.45**	**31**	⇓*i* P		**Pn**	**14 14 59.1 +1.5**
VRI	**Vrincioaia**	**5.45**	**31**	⇓*i* P		**Pn**	**14 14 59.1 +1.5**
DRGR		**5.52**	**0**	⇑*i* P		**Pb**	**14 15 15.0 +2.3**
CFR	**Carcaliu**	**5.57**	**44**	⇓*i* P		**Pn**	**14 15 01.5 +2.2**
CFR	**Carcaliu**	**5.57**	**44**	⇓*i* P		**Pn**	**14 15 01.5 +2.2**

SKO 24 14:28:53.4,41°31N×22°71E,h0km,M0.2,ML0.1,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**276**	*i* Pg		Pg	14 28 55.0 -0.5
VAY				*i* Sg		Sg	14 28 57.0 +0.1
VAY				*e*Lg		Lg	14 28 57.0
	comp=E,12nm,0.2s						
VAY				*e*Lg		Lg	14 28 57.6
	comp=N,13nm,0.2s						

*PRU **24** 14:29:12.9,41°.09N×23°.16E,h0km,M4.2*
*IDC **24** 14:29:14.7±0.7,41°.26N×22°.65E,h0km,mb3.9/19, mb1 4.0/27,mb1mx4.0/37,mbtmp3.9/27,ML3.5/8,MS3.2/11, Ms1 3.2/11,ms1mx2.9/43,Error ellipse: s-maj=13.7km s-min=10.7km az=152.0*
*SOF **24** 14:29:15.2,41°.35N×22°.71E,h8km,MD3.7*
*BEO **24** 14:29:15.3±0.7,41°.25N×22°.72E,h7km±2km,ML4.1/1*
*ATH **24** 14:29:15.2,41°.29N×22°.73E,h19km±1km,ML3.8*
*SKO **24** 14:29:15.1,41°.30N×22°.70E,h15km,M3.2,ML3.7*
*PDG **24** 14:29:16.0±0.5,41°.30N×22°.69E,h10km,ML3.7/9,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*ISCJB **24** 14:29:15.0±0.3,41°.319N±0°.010×22°.66E±0°.01, h10km±2km,mb4.0/21,MS3.2/8,Error ellipse: s-maj=1.8km s-min=1.5km az=141.2*
*CSEM **24** 14:29:15.9±0.1,41°.28N×22°.68E,h5km,mb4.2/6,Ms2.7, Error ellipse: s-maj=2.1km s-min=1.9km az=69.0*
*THE **24** 14:29:16.2,41°.27N×22°.72E,h2km±1km,ML4.2/7,Error ellipse: s-maj=1.5km s-min=0.7km az=210.0*
*NEIC **24** 14:29:16.2,41°.27N×22°.72E,h2km,mb4.2/9,ML4.2(THE), ML3.8(ATH),After THE.*
NEIC Felt at Kilkis, Greece.
*MOS **24** 14:29:16.9±1.2,41°.31N×22°.58E,h23km,mb4.4/5,Error ellipse: s-maj=0.1km s-min=0.0km az=113.9*

ISC 24 14:29:15.9±0.7,**41°29N**±0°.01×**22°70E**±0°.01,**h9**km±4km,
n675,σ1$**28**/777,**mb4.1**/21,**MS3.1**/8,**49C-52D,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**289**	P		**Pg**	**14 29 17.9 -0.5**
VAY				S		**Sg**	**14 29 20.1 -0.1**
VAY	**Valandovo**	**0.10**	**289**	P		**Pg**	**14 29 17.9 -0.5**
VAY				S		**Sg**	**14 29 20.1 -0.1**
VAY	**Valandovo**	**0.10**	**289**	P		**Pg**	**14 29 17.9 -0.5**
VAY				S		**Sg**	**14 29 20.1 -0.1**
VAY	**Valandovo**	**0.10**	**289**	*i* Pg		**Pg**	**14 29 18.2 -0.3**
VAY				*i* Sg		**Sg**	**14 29 20.2 -0.1**
VAY				*e*Lg		Lg	14 29 20.2
	comp=N,28μm,0.4s						
VAY				*e*Lg		Lg	14 29 20.6
	comp=E,29μm,0.5s						
VAY	**Valandovo**	**0.10**	**289**	P		**Pg**	**14 29 17.9 -0.5**
VAY	**Valandovo**	**0.10**	**289**	*i* Pg		**Pg**	**14 29 18.6 +0.2**
VAY				S		**Sg**	**14 29 20.1 -0.1**
VAY				*i* Sg		Sg	14 29 20.6 +0.3
VAY				*e*Lg		Lg	14 29 21.0
	comp=E,29μm,0.5s						
KNT	**Kendrikon**	**0.20**	**130**	P		**Pg**	**14 29 20.2 +0.3**
KNT				S		**Sg**	**14 29 23.0 +0.3**

PVY eSn Sb 14 30 28.2 -1.6
PVY Plav 2.43 303 ePn Pn 14 29 56.9 +1.1
PVY eSn Sb 14 30 28.2 -1.6
EVR Evrytania 2.46 196 ePn Pn 14 29 57.2 +0.9
EVR Evrytania 2.46 196 ePB Pn 14 29 57.2 +0.9
EVR Evrytania 2.46 196 ePn Pn 14 29 57.2 +0.9
ALN Alexandroupoli 2.56 98 eP Pn 14 29 58.1 +0.6
ALN Alexandroupoli 2.56 98 P Pn 14 29 57.9 +0.4
ALN S Sn 14 30 30.5 +1.8
ALN Alexandroupoli 2.56 98 ePn Pn 14 29 58.1 +0.6
ALN Alexandroupoli 2.56 98 ePB Pn 14 29 58.1 +0.6
ALN Alexandroupoli 2.56 98 P Pn 14 29 57.9 +0.4
ALN S Sn 14 30 30.5 +1.8
BOLS Boljevac 2.60 348⇓iPn Pn 14 29 56.9 -1.1
BOLS eSn Sn 14 30 30.4 +0.7
BOLS Boljevac 2.60 348⇓iPn Pn 14 29 56.9 -1.1
BOLS eSn Sn 14 30 30.4 +0.7
BEY Berane 2.62 308⇓iPn Pn 14 29 59.8 +1.4
BEY eSn Sn 14 30 32.8 +2.4
IVA Berane 2.62 308⇓iPn Pn 14 29 59.8 +1.4
IVA eSn Sn 14 30 32.8 +2.4
LKR Lokris 2.64 175 ePn Pn 14 29 58.7 0.0
LKR Lokris 2.64 175 ePN Pn 14 29 58.7 0.0
LKR Lokris 2.64 175 ePn Pn 14 29 58.7 0.0
ENEZ Enez 2.67 101 ePN Pn 14 30 00.8 +1.8
ULC Ulcinj 2.68 286⇓iPn Pn 14 30 01.0 +1.8
ULC eSn Sn 14 30 34.1 +2.4
ULC Ulcinj 2.68 286⇓iPn Pn 14 30 01.0 +1.8
ULC eSn Sn 14 30 34.1 +2.4
KEK Kerkira 2.71 236 P Pb 14 30 02.2 -2.4
KEK Kerkira 2.71 236 ePb Pn 14 30 01.6 +2.0
KEK Kerkira 2.71 236 ePB Pn 14 30 01.6 +2.0
KEK Kerkira 2.71 236 Pb Pb 14 30 02.2 -2.4
PVL Pavlikeni 2.75 45 iP Pn 14 29 58.7 -1.3
PVL Pavlikeni 2.75 45 iP Pn 14 29 58.7 -1.3
PDG Podgorica 2.81 295⇑iPn Pn 14 30 02.8 +1.8
PDG eSn Sn 14 30 37.6 +2.6
TTG Podgorica 2.81 295⇑iPn Pn 14 30 02.8 +1.8
TTG eSn Sn 14 30 37.6 +2.6
EFP Efpalio 2.92 192 ePn Pn 14 30 03.2 +0.7
EFP Efpalio 2.92 192 ePN Pn 14 30 03.2 +0.7
EFP Efpalio 2.92 192 ePn Pn 14 30 03.2 +0.7
KALE Kalithea 2.92 189 ePn Pn 14 30 03.2 +0.6
KALE Kalithea 2.92 189 ePN Pn 14 30 03.2 +0.6
KALE Kalithea 2.92 189 ePn Pn 14 30 03.2 +0.6
LKD2 Lefkada island 2.95 213 ePn Pn 14 30 04.7 +1.8
LKD2 Lefkada island 2.95 213 ePB Pn 14 30 04.7 +1.8
LKD2 Lefkada island 2.95 213 ePn Pn 14 30 04.7 +1.8
ERIK Erikli-Kesan 2.95 101 ePN Pn 14 30 03.7 +0.1
TRIZ Trizonia 2.96 190 P Pn 14 30 03.7 +0.7
TRIZ Trizonia 2.96 190 ePN Pn 14 30 03.5 +0.5
TRIZ Trizonia 2.96 190 ePn Pn 14 30 03.5 +0.5
GRUS Gruza 2.98 331⇑iPn Pn 14 30 03.5 +0.2
GRUS Gruza 2.98 331⇑iPn Pn 14 30 03.5 +0.2
GELI Tayfur-Gelibol 3.00 106 ePN Pn 14 30 03.8 +0.3
BUM Brajici-Budva 3.02 291⇓iPn Pn 14 30 06.2 +2.3
BUM eSn Sn 14 30 42.4 +2.2
BUM Brajici-Budva 3.02 291⇓iPn Pn 14 30 06.2 +2.3
BUM eSn Sn 14 30 42.4 +2.2
ZIMR 3.08 39⇓iP Pg 14 30 15.2 +0.3
EDRB Edirne 3.08 78 ePN Pn 14 30 04.6 -0.1
LAKA Lakka 3.09 191 ePn Pn 14 30 06.4 +1.5
LAKA Lakka 3.09 191 ePN Pn 14 30 06.4 +1.5
LAKA Lakka 3.09 191 ePn Pn 14 30 06.4 +1.5
SZH Strazhica 3.11 49 iP Pn 14 30 06.2 +1.1
SZH Strazhica 3.11 49 iP Pn 14 30 06.2 +1.1
EZN Ezine 3.12 117 ePN Pn 14 30 04.6 -0.6
JMB Yambol 3.13 67 iP Pn 14 30 06.8 +1.5
JMB Yambol 3.13 67 iP Pn 14 30 06.8 +1.5
NKY Niksic 3.15 300 ePn Pn 14 30 06.9 +1.1
NKY eSn Sn 14 30 45.5 +1.9
NKY Niksic 3.15 300 ePn Pn 14 30 06.9 +1.1
NKY eSn Sn 14 30 45.5 +1.9
SVIS Svilajnac 3.17 340⇑iPn Pn 14 30 04.8 -1.1
SVIS eSg Sg 14 30 56.4 -1.3
LPK Lapseki 3.21 105 ePN Pn 14 30 07.5 +1.0
LTK Loutraki 3.27 176 ePn Pn 14 30 07.8 +0.6
LTK Loutraki 3.27 176 ePN Pn 14 30 07.8 +0.6
LTK Loutraki 3.27 176 ePn Pn 14 30 07.8 +0.6
KLV Kalavryta, Ach 3.27 188 ePn Pn 14 30 07.9 +0.6
KLV Kalavryta, Ach 3.27 188 ePN Pn 14 30 07.9 +0.6
KLV Kalavryta, Ach 3.27 188 ePn Pn 14 30 07.9 +0.6
HCY Herceg Novi 3.35 292⇓iPn Pn 14 30 10.1 +1.7
HCY eSn Sn 14 30 50.5 +2.3
HCY Herceg Novi 3.35 292⇓iPn Pn 14 30 10.1 +1.7
HCY eSn Sn 14 30 50.5 +2.3
PTL Penteli 3.36 164 ePn Pn 14 30 08.3 -0.2
PTL Penteli 3.36 164 ePN Pn 14 30 08.3 -0.2
PTL Penteli 3.36 164 ePn Pn 14 30 08.3 -0.2
GUR Goura 3.36 185 ePn Pn 14 30 09.4 +0.8
GUR Goura 3.36 185 ePN Pn 14 30 09.4 +0.8
GUR Goura 3.36 185 ePn Pn 14 30 09.4 +0.8
RLS Riolos of Patr 3.36 197 ePb Pn 14 30 11.7 +3.2
RLS Riolos of Patr 3.36 197 ePB Pn 14 30 11.7 +3.2
RMGR Halanga-Turnu 3.37 360⇑iP Pn 14 30 09.1 +0.4
RMGR Halanga-Turnu 3.37 360⇑iP Pn 14 30 09.1 +0.4
ATH Athens Observa 3.40 166 eP Pn 14 30 08.5 -0.6
ATH Athens Observa 3.40 166 ePn Pn 14 30 08.5 -0.6
ATH Athens Observa 3.40 166 ePN Pn 14 30 08.5 -0.6
ATH Athens Observa 3.40 166 ePn Pn 14 30 08.5 -0.6
UPM Unac-Piva 3.41 305 ePn Pn 14 30 10.8 +1.5
UPM eSn Sn 14 30 51.6 +1.7
UPM Unac-Piva 3.41 305 ePn Pn 14 30 10.8 +1.5
UPM eSn Sn 14 30 51.6 +1.7
PRK Paraskevi 3.41 126 eP Pn 14 30 10.4 +1.2
PRK Paraskevi 3.41 126 ePn Pn 14 30 10.4 +1.2
PRK Paraskevi 3.41 126 ePN Pn 14 30 10.4 +1.2
PRK Paraskevi 3.41 126 ePn Pn 14 30 10.4 +1.2
RKY Sarkoy-Tekirda 3.44 99 ePN Pb 14 30 16.9 -0.1
DIVS Divibare 3.45 325 P Pn 14 30 10.0 +0.2
DIVS Divibare 3.45 325⇑iPn Pn 14 30 09.9 +0.2
DIVS Divibare 3.45 325 P Pn 14 30 10.0 +0.2
BRY Bratogost 3.49 299⇓iPn Pn 14 30 12.3 +1.8
BRY eSn Sn 14 30 54.2 +2.2
BRY Bratogost 3.49 299⇓iPn Pn 14 30 12.3 +1.8
BRY eSn Sn 14 30 54.2 +2.2
MFT Murefte 3.50 97 ePN Pn 14 30 11.7 +1.2
VLS Valsamata 3.51 208 eP Pn 14 30 11.1 +0.6
VLS Valsamata 3.51 208 ePn Pn 14 30 11.1 +0.6
VLS Valsamata 3.51 208 ePN Pn 14 30 11.1 +0.6
VLS Valsamata 3.51 208 ePn Pn 14 30 11.1 +0.6
BBLS Lazići 3.54 318 ePn Pn 14 30 12.0 +0.9
BBLS Lazići 3.54 318 ePn Pn 14 30 12.0 +0.9
KRBG Karabiga-Canak 3.60 103 ePN Pn 14 30 13.7 +1.9
HUMR Humele 3.65 27⇓iP Pn 14 30 12.9 +0.5
HUMR Humele 3.65 27⇓iP Pn 14 30 12.9 +0.5
TKR Tekirdag 3.66 93 ePN Pn 14 30 14.8 +2.2
MRMT Marmara Adasi 3.77 99 ePN Pn 14 30 14.1 -0.1
DID Didima 3.80 174 ePn Pn 14 30 15.2 +0.6
DID Didima 3.80 174 ePN Pn 14 30 15.2 +0.6
DID Didima 3.80 174 ePn Pn 14 30 15.2 +0.6
CHOS Chios island 3.88 137 ePn Pn 14 30 16.5 +0.8
CHOS Chios island 3.88 137 ePN Pn 14 30 16.5 +0.8
CHOS Chios island 3.88 137 ePn Pn 14 30 16.5 +0.8
VLX Vlachokerasia 3.92 184 ePn Pn 14 30 17.6 +1.3
VLX Vlachokerasia 3.92 184 ePN Pn 14 30 17.6 +1.3
VLX Vlachokerasia 3.92 184 ePn Pn 14 30 17.6 +1.3
CIOR Ciorogarla 3.93 35⇓iP Pg 14 30 10.4 -0.7
PRD Provadia 3.98 60 eP Pn 14 30 19.4 +2.4
PRD Provadia 3.98 60 eP Pn 14 30 19.4 +2.4
GONE Gonen-Balikesi 3.99 106 ePN Pn 14 30 19.1 +2.0
STON Ston 4.04 295 ePn Pn 14 30 18.7 +0.8
STON Ston 4.04 295 ePn Pn 14 30 18.7 +0.8
INCR INCERC-Sediu C 4.05 38⇓iP Pg 14 30 34.5 +1.1
BNT Bandirma 4.07 102 ePN Pn 14 30 19.1 +0.8
ITM Ithomi 4.15 189 ePn Pn 14 30 22.8 +3.5
ITM Ithomi 4.15 189 ePB Pn 14 30 22.8 +3.5
SLVT Silivri 4.15 89 ePN Pn 14 30 22.1 +2.8
LOT Lotru 4.23 10⇑iP Pn 14 30 20.7 +0.1
LOT Lotru 4.23 10⇑iP Pn 14 30 20.7 +0.1
BALB Balikesir 4.28 111 ePN Pn 14 30 22.4 +1.2
MTUR Matau 4.30 23 ⇓P Pn 14 30 22.4 +0.9
MTUR Matau 4.30 23⇓iP Pn 14 30 22.4 +0.9
MTUR Matau 4.30 23 P Pn 14 30 22.4 +0.9
ARR Arges 4.32 18⇑iP Pn 14 30 21.8 +0.1
ARR Arges 4.32 18⇑iP Pn 14 30 21.8 +0.1
CTKS Kestanelik-??a 4.38 89 ePN Pn 14 30 22.9 +0.4
BZS Buzias 4.40 350⇑P Pn 14 30 21.8 -1.0
BZS Buzias 4.40 350⇑iP Pn 14 30 21.8 -1.0
BZS Buzias 4.40 350 P Pn 14 30 21.8 -1.0
FGSL Fruska Gora 4.41 332 ePn Pn 14 30 22.2 -0.7
FRGS Fruska Gora 4.41 332 ePN Pn 14 30 22.2 -0.7
KCTX Karacabey (Bur 4.41 102 ePN Pn 14 30 22.6 -0.4
BLCB Balcova 4.42 130 ePN Pn 14 30 22.6 -0.5
PYL PYLOS 4.45 190 ePn Pn 14 30 25.1 +1.6
PYL PYLOS 4.45 190 ePN Pn 14 30 25.1 +1.6
PYL PYLOS 4.45 190 ePn Pn 14 30 25.1 +1.6
VOIR 4.49 22⇑iP Pn 14 30 25.1 +1.0
VOIR 4.49 22⇑iP Pn 14 30 25.1 +1.0
VOIR 4.49 22 P Pn 14 30 25.1 +1.0
DYR Agios Nikonas 4.53 184 ePN Pn 14 30 26.8 +2.2
DYR Agios Nikonas 4.53 184 ePn Pn 14 30 26.8 +2.2
IZM Izmir 4.54 128 ePN Pn 14 30 24.7 -0.1
VLI Veliai 4.57 178 ePn Pn 14 30 25.8 +0.7
VLI Veliai 4.57 178 ePN Pn 14 30 25.8 +0.7
VLI Veliai 4.57 178 ePn Pn 14 30 25.8 +0.7
BGKT Bogazkoy 4.58 89 ePN Pn 14 30 28.3 +3.0
PSN Preselentsi 4.71 58 iP Pn 14 30 28.9 +1.9
PSN Preselentsi 4.71 58 iP Pn 14 30 28.9 +1.9
ARMT Armutlu 4.72 97 ePN Pn 14 30 30.4 +3.1
ISR Istrita 4.75 35⇓P Pn 14 30 30.0 +2.4
ISR Istrita 4.75 35⇓iP Pn 14 30 30.0 +2.4
ISR Istrita 4.75 35 P Pn 14 30 30.0 +2.4
APE Apeiranthos 4.75 152⇑P Pn 14 30 28.5 +0.8
APE Apeiranthos 4.75 152⇑iP Pn 14 30 28.5 +0.8
APE Apeiranthos 4.75 152 P Pn 14 30 28.5 +0.8
AMRR Amara 4.75 44⇑P Pn 14 30 29.0 +1.4
AMRR Amara 4.75 44⇑iP Pn 14 30 29.0 +1.4
AMRR Amara 4.75 44 P Pn 14 30 29.0 +1.4
KLYT Kilyos 4.78 88 ePN Pn 14 30 31.3 +3.3
MDNY Mudanya-Bursa 4.78 99 ePN Pn 14 30 30.6 +2.6
PGOR Pogoanele 4.79 39⇑P Pn 14 30 30.6 +2.5
PGOR Pogoanele 4.79 39⇑iP Pn 14 30 30.6 +2.5
ISK Istanbul-Kandi 4.80 91 ePN Pn 14 30 29.2 +0.9
DST Dursunbey 4.82 108 ePN Pn 14 30 30.1 +1.5
MLR Muntele Rosu 4.82 28 Pn Pn 14 30 30.4 +1.7
MLR Lg Lg 14 31 50.4
MLR Muntele Rosu 4.82 28⇓iP Pn 14 30 30.7 +2.0
comp=N,1.5nm,0.3s,baz=206,slow=7.0,SNR=43
MLR Muntele Rosu 4.82 28 Pn Pn 14 30 30.4 +1.7
MLR Lg Lg 14 31 50.4
comp=N,1.8nm,0.3s,baz=300,slow=20,SNR=3.1
MLR Muntele Rosu 4.82 28 Pn Pn 14 30 30.4 +1.7
MLR Muntele Rosu 4.82 28 P Pn 14 30 30.7 +2.0
MLR Lg Lg 14 31 50.4
BUY Buyukada 4.87 93 ePN Pn 14 30 28.7 -0.5
CVD Cernavoda 4.95 51⇑P Pn 14 30 33.0 +2.6
CVD Cernavoda 4.95 51⇑iP Pn 14 30 33.0 +2.6
CVD Cernavoda 4.95 51 P Pn 14 30 33.0 +2.6
GEMT Gemlik 4.99 98 ePN Pn 14 30 33.9 +3.0
MDB Medias 5.00 14⇓P Pn 14 30 32.6 +1.5
MDB Medias 5.00 14⇓iP Pn 14 30 32.6 +1.5
MDB Medias 5.00 14 P Pn 14 30 32.6 +1.5
TIP Timpagrande 5.01 247 ePn Pn 14 30 30.4 -0.9
comp=N,24nm,0.8s
TIP Timpagrande 5.01 247 ePn Pn 14 30 30.4 -0.9
comp=N,24nm,0.8s
MANR Mangalia 5.03 58⇑iP Pn 14 30 34.6 +3.2
DOPR Dopca 5.07 22⇓iP Pn 14 30 34.0 +2.0
DOPR Dopca 5.07 22⇓iP Pn 14 30 34.0 +2.0
YLV Yalova 5.11 96 ePN Pn 14 30 36.3 +3.7
HARR Harsova 5.13 47⇓P Pn 14 30 34.2 +1.5
HARR Harsova 5.13 47⇓iP Pn 14 30 34.2 +1.5
HARR Harsova 5.13 47 P Pn 14 30 34.2 +1.5
GRER 5.14 36⇓iP Pn 14 30 35.7 +2.7
GRER 5.14 36⇓iP Pn 14 30 35.7 +2.7
TIRR Tirgusor 5.26 51 eP Pn 14 30 35.4 +0.8
TIRR Tirgusor 5.26 51 ePn Pn 14 30 35.4 +0.8
TIRR Tirgusor 5.26 51⇑iP Pn 14 30 37.5 +2.9
TIRR Tirgusor 5.26 51 eP Pn 14 30 35.4 +0.8
KULA Kula-Manisa 5.36 119 ePN Pn 14 30 37.0 +1.0
PLOR Plostina 5.39 31⇑P Pn 14 30 38.6 +2.2
PLOR Plostina 5.39 31⇑iP Pn 14 30 38.6 +2.2
PLOR Plostina 5.39 31 P Pn 14 30 38.6 +2.2
CUC Castrocucco 5.39 258 ePn Pn 14 30 36.8 +0.3
comp=N,102nm,0.6s
CUC Castrocucco 5.39 258 ePn Pn 14 30 36.8 +0.3
comp=N,102nm,0.6s
VRI Vrincioaia 5.43 31⇑P Pn 14 30 39.2 +2.2
VRI Vrincioaia 5.43 31⇑iP Pn 14 30 39.2 +2.2
VRI Vrincioaia 5.43 31 P Pn 14 30 39.2 +2.2
TVSB Tavsanli 5.48 107 ePN Pn 14 30 38.9 +1.1
DRGR 5.50 0⇑P Pn 14 30 38.0 0.0
DRGR 5.50 0⇑iP Pn 14 30 38.0 0.0
DRGR 5.50 0 P Pn 14 30 38.0 0.0
PETR Petresti 5.52 35⇓iP Pn 14 30 40.8 +2.6
PETR Petresti 5.52 35⇓iP Pn 14 30 40.8 +2.6
CAVI Cavuskoy 5.53 99 ePN Pn 14 30 39.3 +1.0
BODT Bodrum 5.53 138 ePN Pn 14 30 36.7 -1.7
CFR Carcaliu 5.56 44⇓P Pn 14 30 40.1 +1.4
CFR Carcaliu 5.56 44⇓iP Pn 14 30 40.0 +1.4
CFR Carcaliu 5.56 44 P Pn 14 30 40.0 +1.4
PKSM Moragy 5.73 331⇑P Pn 14 30 40.6 -0.5
PKSM Moragy 5.73 331⇑iP Pn 14 30 40.6 -0.5
PKSM Moragy 5.73 331⇓iPn Pn 14 30 41.4 +0.3
PKSM eSn Sn 14 31 43.9 -3.0
PKSM Moragy 5.73 331 P Pn 14 30 40.6 -0.5
PKS6 Bocsa 5.77 338⇓iPn Pn 14 30 39.6 -2.0
PKS6 eSn Sn 14 31 48.9 +1.0
PKS2 Kecel 5.78 335⇑iPn Pn 14 30 40.0 -1.7
PKS2 eSn Sn 14 31 49.6 +1.5
TLCR 5.93 47⇓P Pn 14 30 45.2 +1.5
TLCR 5.93 47⇓iP Pn 14 30 45.2 +1.5
TLCR 5.93 47 P Pn 14 30 45.2 +1.5
TESR Tescani 5.95 27⇓iP Pn 14 30 45.8 +1.7
TESR Tescani 5.95 27⇓iP Pn 14 30 45.8 +1.7
GULT Gulveren 5.99 96 ePN Pn 14 30 46.6 +2.0
VAM Vamos 5.99 168 eP Pn 14 30 47.0 +2.4
VAM Vamos 5.99 168 ePn Pn 14 30 47.0 +2.4
VAM Vamos 5.99 168 ePN Pn 14 30 47.0 +2.4
VAM Vamos 5.99 168 ePn Pn 14 30 47.0 +2.4
YER Yerkesik 6.00 132 ePN Pn 14 30 44.3 -0.5
KHL Karahalli 6.03 117 ePN Pn 14 30 46.1 +0.9
CEL Celeste 6.05 242 ePn Pn 14 30 44.1 -1.4
comp=N,61nm,0.6s
CEL Celeste 6.05 242 ePn Pn 14 30 44.1 -1.4
comp=N,61nm,0.6s
ALT Altintas 6.10 109 ePN Pn 14 30 47.8 +1.6
PKS9 Tamasi 6.18 330⇓iPn Pn 14 30 47.7 +0.4
PKS9 eSn Sn 14 32 04.6 +6.5
IDI Anoyia 6.23 163 ePn Pn 14 30 50.0 +2.0
IDI Anoyia 6.23 163 ePN Pn 14 30 50.0 +2.0
IDI Anoyia 6.23 163 ePn Pn 14 30 50.0 +2.0
ESKT Eskisehir 6.47 103 ePN Pn 14 30 51.3 0.0
MDUB Mudurnu 6.49 94 ePN Pn 14 30 51.8 +0.2
LAST Lasithi 6.50 159 ePn Pn 14 30 53.9 +2.2
LAST Lasithi 6.50 159 ePN Pn 14 30 53.9 +2.2
LAST Lasithi 6.50 159 ePn Pn 14 30 53.9 +2.2
GVD Gavdhos 6.53 170 ePn Pn 14 30 56.5 +4.4
GVD Gavdhos 6.53 170 ePN Pn 14 30 56.5 +4.4
BURAR Bucovina Array 6.58 15⇑iP Pn 14 30 54.5 +1.7
BURAR Bucovina Array 6.58 15⇑iP Pn 14 30 54.5 +1.7
PRAR RASCA 6.58 21⇑iP Pn 14 30 54.5 +1.8
PRAR RASCA 6.58 21⇑iP Pn 14 30 54.5 +1.8
BUR08 Bucovina Ar. S 6.60 15 ePn Pn 14 30 53.5 +0.4
BUR08 Bucovina Ar. S 6.60 15 ePn Pn 14 30 53.5 +0.4
NVLJ Novalja 6.61 302 iPn Pn 14 30 54.1 +1.0
NVLJ Sn Sn 14 32 06.4 -2.2
NVLJ Novalja 6.61 302 iPn Pn 14 30 54.1 +1.0
SHUT Suhut-Afyon 6.62 112 ePN Pn 14 30 53.0 -0.5
ZKR Zakros 6.75 155 ePn Pn 14 30 53.7 -1.5
ZKR Zakros 6.75 155 ePN Pn 14 30 53.7 -1.5
ZKR Zakros 6.75 155 ePn Pn 14 30 53.7 -1.5
PKSG 6.84 335 ePn Pn 14 30 56.7 +0.4
PKSG eSn Sn 14 32 13.4 -0.8
TRPA Tarpa 6.84 359⇓iP Pn 14 30 56.4 +0.1
TRPA Tarpa 6.84 359⇓iP Pn 14 30 56.4 +0.1
PKST T"s 6.84 332⇓ePn Pn 14 30 57.0 +0.6
PKST eSn Sn 14 32 16.5 +2.2
BOJS Bojanci 6.87 310 iPn Pn 14 30 58.3 +1.6
BOJS iSn Sn 14 32 12.5 -2.4
BOJS Bojanci 6.87 310 iPn Pn 14 30 58.3 +1.6
PSZ Piszkesteto 6.92 344 ⇑P Pn 14 30 57.3 -0.2
PSZ Piszkesteto 6.92 344 ePn Pn 14 30 56.2 -1.3
PSZ Piszkesteto 6.92 344 ⇑iP Pn 14 30 57.3 -0.2
PSZ Piszkesteto 6.92 344⇓ePn Pn 14 30 57.0 -0.5
PSZ Piszkesteto 6.92 344 ePn Pn 14 30 56.2 -1.3
PSZ Piszkesteto 6.92 344 P Pn 14 30 57.3 -0.2
ISP Isparta 6.96 117⇓P Pn 14 30 59.3 +1.2
ISP Isparta 6.96 117⇓iP Pn 14 30 59.3 +1.2
ISP Isparta 6.96 117 P Pn 14 30 59.3 +1.2
SVRH Sivrihisar-ESK 6.98 102 eP Pn 14 30 53.6 -4.8
KIS Kishinev 7.21 36 eP Pn 14 31 03.0 +1.7
KIS e 14 32 20.0
KIS MLR MLR
comp=Z,500nm,10.0s
KIS MLR MLR
comp=Z,900nm,12.0s
KIS Kishinev 7.21 36 eP Pn 14 31 03.0 +1.7
KIS LRM MLR 14 34 44.0
comp=Z,900nm,12.0s
KIS Kishinev 7.21 36 eP Pn 14 31 03.0 +1.7
VISS Visnje 7.28 311 iPn Pn 14 31 03.6 +1.3
VISS Visnje 7.28 311 iPn Pn 14 31 03.6 +1.3
GROS Grobnik 7.33 317 iPn Pn 14 31 03.5 +0.3
GROS iSn Sn 14 32 22.2 -4.3
GROS Grobnik 7.33 317 iPn Pn 14 31 03.5 +0.3
UZH Uzhgorod 7.35 358 eP Pn 14 31 02.3 -0.9
UZH eS Sn 14 32 25.0 -1.7
UZH MLR MLR
comp=N,500nm,5.0s
UZH MLR MLR
comp=E,700nm,5.0s
UZH MLR MLR
comp=Z,150nm,5.0s
UZH Uzhgorod 7.35 358 eP Pn 14 31 02.3 -0.9
UZH eS Sn 14 32 25.0 -1.7
LJU Ljubljana 7.59 311 ePn Pn 14 31 08.0 +1.3
SKDS Skadanscina 7.62 307 iPn Pn 14 31 07.9 +0.9
SKDS iSn Sn 14 32 31.7 -1.8
SKDS Skadanscina 7.62 307 iPn Pn 14 31 07.9 +0.9
SKDS iSn Sn 14 32 31.7 -1.8
KOLS Kolonicke sedl 7.65 358 eP Pn 14 31 08.3 +0.9
KOLS e 14 32 25.2
KOLS MLR MLR
comp=Z,100nm,1.2s
KOLS Kolonicke sedl 7.65 358 ePN Pn 14 31 08.3 +0.9
KOLS ePG Pg 14 31 46.9 +4.6
KOLS eSN Sn 14 32 25.2 -9.0
KOLS eSG Sg 14 33 25.6 +4.3
KOLS Kolonicke sedl 7.65 358 eP Pn 14 31 08.3 +0.9
CRVS Cervenica-Dubn 7.67 354 eP Pn 14 31 06.5 -1.1
CRVS Cervenica-Dubn 7.67 354 ePN Pn 14 31 06.5 -1.1
CRVS ePG Pg 14 31 44.9 +2.4
CRVS eSG Sg 14 33 29.1 +7.4
CRVS Cervenica-Dubn 7.67 354 eP Pn 14 31 06.5 -1.1
VYHS Vyhne 7.71 340 eP Pn 14 31 09.1 +0.9
VYHS MLR MLR
comp=Z,100nm,3.1s
VYHS Vyhne 7.71 340 ePN Pn 14 31 09.1 +0.9
VYHS ePG Pg 14 31 40.7 -2.7
VYHS eSG Sg 14 33 37.3 +14
VYHS Vyhne 7.71 340 eP Pn 14 31 09.1 +0.9
comp=Z,100nm,3.1s
SOKA Soboth 7.72 317⇑iPn Pn 14 31 09.9 +1.5
SOKA Soboth 7.72 317 Pn Pn 14 31 09.9 +1.5
SOP Sopron 7.75 328⇓ePn Pn 14 31 09.7 +0.9
SOP eSn Sn 14 32 34.9 -1.8
CRNS Crni Vrh 7.77 311 iPn Pn 14 31 10.3 +1.3
JAVS Javornik 7.78 309 iPn Pn 14 31 10.7 +1.5
JAVS iSn Sn 14 32 35.3 -2.1
JAVS Javornik 7.78 309 iPn Pn 14 31 10.7 +1.5
JAVS iSn Sn 14 32 35.3 -2.1
ARSA Arzberg 7.88 322⇑iPn Pn 14 31 11.2 +0.7
SNR=15
ARSA Arzberg 7.88 322 Pn Pn 14 31 11.2 +0.7
SNR=15
VOY Vojsko 7.95 310 ePn Pn 14 31 12.9 +1.3
VOY e 14 31 17.7
VOY e 14 31 35.9
VOY Vojsko 7.95 310 ePn Pn 14 31 12.9 +1.3
ZST Bratislava 7.97 332 eP Pn 14 31 11.9 +0.1
ZST e 14 32 40.2
ZST MLR MLR
comp=Z,100nm,2.5s
ZST Bratislava 7.97 332 ePN Pn 14 31 11.9 +0.1
ZST eSN Sn 14 32 40.2 -1.8
ZST eSG Sg 14 33 46.9 +15
ZST Bratislava 7.97 332 eP Pn 14 31 11.9 +0.1
ZST eS Sn 14 32 40.2 -1.8
comp=Z,100nm,2.5s
SMOL Smolenice 8.13 334 eP Pn 14 31 15.4 +1.3
SMOL e 14 32 44.1
SMOL Smolenice 8.13 334 ePN Pn 14 31 15.4 +1.3
SMOL eSN Sn 14 32 44.1 -2.0
SMOL Smolenice 8.13 334 eP Pn 14 31 15.4 +1.3
SMOL eS Sn 14 32 44.1 -2.0
CONA Conrad Observa 8.24 326 iPn Pn 14 31 16.5 +1.0
SNR=17
CONA Conrad Observa 8.24 326 Pn Pn 14 31 16.5 +1.0
SNR=17
BRTR Keskin Array B 8.48 97 Pn Pn 14 31 20.2 +1.3
BRTR Sn Sn 14 32 51.3 -3.5
BRTR Keskin Array B 8.48 97 Pn Pn 14 31 20.2 +1.3
comp=Z,0.2nm,0.3s,baz=274,slow=11,SNR=6.2
BRTR Sn Sn 14 32 51.3 -3.5
comp=Z,0.1nm,0.3s,baz=329,slow=16,SNR=2.9
BRTR Keskin Array B 8.48 97 P Pn 14 31 20.2 +1.3
MOA Molln 8.90 320⇑iPn Pn 14 31 24.7 +0.1
SNR=8.1
MOA Molln 8.90 320 Pn Pn 14 31 24.7 +0.1
SNR=8.1
VRAC Vranov 9.10 334 Pn Pn 14 31 29.1 +1.8
VRAC Vranov 9.10 334 Pn Pn 14 31 29.1 +1.8
comp=Z,0.3nm,0.3s,baz=136,slow=9.5,SNR=4.7
VRAC Vranov 9.10 334 P Pn 14 31 29.1 +1.8
ABTA Abfaltersbach 9.14 310 iPn Pn 14 31 29.1 +1.1
SNR=10
ABTA Abfaltersbach 9.14 310 Pn Pn 14 31 29.1 +1.1
SNR=10
MORC Moravsky Berou 9.23 339 P Pn 14 31 32.4 +3.3
MORC pmax pmax
comp=Z,2.0nm,0.6s
MORC Moravsky Berou 9.23 339 P Pn 14 31 32.4 +3.3
comp=Z,1.9nm,0.6s
MORC Moravsky Berou 9.23 339 ePn Pn 14 31 31.2 +2.1
GERES GERESS Array B 9.88 323 Pn Pn 14 31 39.6 +1.6
GERES Sn Sn 14 33 23.5 -5.4
GERES GERESS Array B 9.88 323 Pn Pn 14 31 39.6 +1.6
comp=Z,0.6nm,0.3s,baz=153,slow=13,SNR=13
GERES Sn Sn 14 33 23.5 -5.4
comp=Z,0.2nm,0.3s,baz=142,slow=21,SNR=2.4
GERES LR LR 14 34 49.5
comp=Z,51nm,20.6s,baz=289,slow=34
GERES GERESS Array B 9.88 323 P Pn 14 31 39.6 +1.6
WTTA Wattenberg 9.93 311⇓iPn Pn 14 31 40.7 +1.9
SNR=10
WTTA Wattenberg 9.93 311 Pn Pn 14 31 40.7 +1.9
SNR=10
WATA Walderalm 10.00 311⇓iPn Pn 14 31 41.7 +1.9
SNR=8.7
WATA Walderalm 10.00 311 Pn Pn 14 31 41.7 +1.9
SNR=8.7
KHC Kasperske Hory 10.14 324 eP Pn 14 31 43.0 +1.4
KHC e 14 33 37.6
KHC Kasperske Hory 10.14 324 ePn Pn 14 31 42.9 +1.4
KHC Kasperske Hory 10.14 324 ePN Pn 14 31 43.0 +1.4
KHC eSN Sn 14 33 37.6 +2.3
KHC Kasperske Hory 10.14 324 ePn Pn 14 31 42.9 +1.4
KHC Sn Sn 14 33 37.6 +2.3
PGF Pioggiola 10.29 282 eP Pn 14 31 43.3 -0.4
comp=Z,22nm,1.1s
PGF Pioggiola 10.29 282 eP Pn 14 31 43.3 -0.4
PGF pmax pmax
comp=Z,22nm,1.1s
PGF Pioggiola 10.29 282 eP Pn 14 31 43.3 -0.4
comp=Z,22nm,1.1s
PGF Pioggiola 10.29 282 eP Pn 14 31 43.3 -0.4
comp=Z,11nm,1.1s
PRU Pruhonice 10.40 330 eP Pn 14 31 46.8 +1.7
PRU e 14 33 42.2
PRU Pruhonice 10.40 330 ePN Pn 14 31 46.8 +1.7
PRU eSN Sn 14 33 42.2 +0.5
PRU Pruhonice 10.40 330 Pn Pn 14 31 46.8 +1.7
PRU Sn Sn 14 33 42.2 +0.5
AKASG Malin Array Be 10.45 23 P Pn 14 31 46.4 +0.7
AKASG Malin Array Be 10.45 23 Pn Pn 14 31 46.4 +0.7
AKASG Malin Array Be 10.45 23 Pn Pn 14 31 46.4 +0.7
comp=Z,0.6nm,0.3s,baz=210,slow=13,SNR=3.8
AKASG Malin Array Be 10.45 23 P Pn 14 31 46.4 +0.7
DAVOX Davos/Dischmat 10.74 305 Pn Pn 14 31 49.4 -0.5
DAVOX Sn Sn 14 33 36.5 -14

DAVOX	**Davos/Dischmat**	**10.74**	**305**	Pn	**Pn**	**14 31 49.4**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=155,slow=16,SNR=10.0						
DAVOX				Sn	Sn	14 33 36.5	-14
	comp=Z,0.2nm,0.3s,baz=23,slow=9.6,SNR=1.8						
DAVOX	**Davos/Dischmat**	**10.74**	**305**	P	**Pn**	**14 31 49.4**	**-0.5**
TUE	**Stuetta**	**10.94**	**303**	*e*Pn	**Pn**	**14 31 53.6**	**+0.9**
TUE	**Stuetta**	**10.94**	**303**	*e*Pn	**Pn**	**14 31 53.6**	**+0.9**
SBF	**Sospel**	**11.55**	**288**	*e*P	**Pn**	**14 32 00.2**	**-0.7**
SBF	**Sospel**	**11.55**	**288**	*e*P	**Pn**	**14 32 00.2**	**-0.7**
SBF	**Sospel**	**11.55**	**288**	*e*P	**Pn**	**14 32 00.2**	**-0.7**
SBF	**Sospel**	**11.55**	**288**	*e*P	**Pn**	**14 32 00.2**	**-0.7**
KEST	**Kesra**	**11.84**	**246**	Pn	**Pn**	**14 32 06.0**	**+1.1**
KEST	**Kesra**	**11.84**	**246**	Pn	**Pn**	**14 32 06.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=217,slow=12,SNR=5.0						
KEST	**Kesra**	**11.84**	**246**	Pn	**Pn**	**14 32 06.0**	**+1.1**
CLL	**Collm**	**12.05**	**330**	*e*P	Pn	14 32 13.0	+5.4
CLL	**Collm**	**12.05**	**330**	*e*(P)	Pn	14 32 13.0	+5.4
CLL				*e*SS	Sn	14 34 37.0	+15
CLL	**Collm**	**12.05**	**330**	*e*Pg	**Pn**	**14 32 09.0**	**+1.4**
CLL				*e*Sg	Px	14 32 35.0	
FRF	**La Foret Royal**	**12.08**	**286**	*e*P	**Pn**	**14 32 05.9**	**-2.2**
FRF	**La Foret Royal**	**12.08**	**286**	*e*P	**Pn**	**14 32 05.9**	**-2.2**
FRF	**La Foret Royal**	**12.08**	**286**	*e*P	**Pn**	**14 32 05.9**	**-2.2**
LMR	**La Mourre**	**12.16**	**285**	*e*P	**Pn**	**14 32 08.8**	**-0.4**
LMR	**La Mourre**	**12.16**	**285**	*e*P	**Pn**	**14 32 08.8**	**-0.4**
LMR	**La Mourre**	**12.16**	**285**	*e*P	**Pn**	**14 32 08.8**	**-0.4**
LMR	**La Mourre**	**12.16**	**285**	*e*P	**Pn**	**14 32 08.8**	**-0.4**
LPG	**La Plagne**	**12.34**	**295**	*e*P	**Pn**	**14 32 10.3**	**-1.6**
	comp=Z,9.3nm,0.5s						
LPG	**La Plagne**	**12.34**	**295**	*e*P	**Pn**	**14 32 10.3**	**-1.6**
LPG				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LPG	**La Plagne**	**12.34**	**295**	*e*P	**Pn**	**14 32 10.3**	**-1.6**
	comp=Z,9.3nm,0.5s						
LPG	**La Plagne**	**12.34**	**295**	*e*P	**Pn**	**14 32 10.3**	**-1.6**
	comp=Z,4.7nm,0.5s						
LPL	**La Plagne**	**12.36**	**295**	*e*P	**Pn**	**14 32 11.5**	**-0.6**
	comp=Z,8.2nm,0.5s						
LPL	**La Plagne**	**12.36**	**295**	*e*P	**Pn**	**14 32 11.5**	**-0.6**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.4s						
LPL	**La Plagne**	**12.36**	**295**	*e*P	**Pn**	**14 32 11.5**	**-0.6**
	comp=Z,8.2nm,0.4s						
LPL	**La Plagne**	**12.36**	**295**	*e*P	**Pn**	**14 32 11.5**	**-0.6**
	comp=Z,4.1nm,0.5s						
BFO	**Black Forest**	**12.39**	**309**	*e*P	**Pn**	**14 32 12.4**	**+0.1**
BFO	**Black Forest**	**12.39**	**309**	*e*Pn	**Pn**	**14 32 12.4**	**+0.1**
BFO	**Black Forest**	**12.39**	**309**	*e*P	**Pn**	**14 32 12.4**	**+0.1**
ORIF	**Oris-en-Rattie**	**12.82**	**292**	*e*P	**Pn**	**14 32 17.0**	**-1.2**
	comp=Z,4.3nm,0.4s						
ORIF				*e*R			
	comp=Z,72nm,21.2s						
ORIF	**Oris-en-Rattie**	**12.82**	**292**	*e*P	**Pn**	**14 32 17.0**	**-1.2**
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ORIF	**Oris-en-Rattie**	**12.82**	**292**	*e*P	**Pn**	**14 32 17.0**	**-1.2**
	comp=Z,4.3nm,0.4s						
ORIF	**Oris-en-Rattie**	**12.82**	**292**	*e*P	**Pn**	**14 32 17.0**	**-1.2**
	comp=Z,2.2nm,0.4s						
SMRF	**Simiane la Rot**	**12.90**	**288**	*e*P	**Pn**	**14 32 18.2**	**-1.1**
SMRF	**Simiane la Rot**	**12.90**	**288**	*e*P	**Pn**	**14 32 18.2**	**-1.1**
SMRF	**Simiane la Rot**	**12.90**	**288**	*e*P	**Pn**	**14 32 18.2**	**-1.1**
HINF	**Hinteralfeld**	**13.04**	**305**	*e*P	**Pn**	**14 32 19.6**	**-1.6**
HINF	**Hinteralfeld**	**13.04**	**305**	*e*P	**Pn**	**14 32 19.6**	**-1.6**
HINF	**Hinteralfeld**	**13.04**	**305**	*e*P	**Pn**	**14 32 19.6**	**-1.6**
HINF	**Hinteralfeld**	**13.04**	**305**	*e*P	**Pn**	**14 32 19.6**	**-1.6**
CDF	**Champ du Feu**	**13.04**	**308**	*e*P	**Pn**	**14 32 20.3**	**-1.0**
	comp=Z,11nm,0.9s						
CDF	**Champ du Feu**	**13.04**	**308**	*e*P	**Pn**	**14 32 20.3**	**-1.0**
CDF				pmax	pmax		
	comp=Z,11nm,0.9s						
CDF	**Champ du Feu**	**13.04**	**308**	*e*P	**Pn**	**14 32 20.3**	**-1.0**
	comp=Z,11nm,0.9s						
CDF	**Champ du Feu**	**13.04**	**308**	*e*P	**Pn**	**14 32 20.3**	**-1.0**
	comp=Z,5.4nm,0.9s						
MMAI	**Mount Meron Ar**	**13.06**	**125**	LR	LR	14 38 21.0	
	comp=Z,59nm,18.6s,baz=30,slow=42						
CABF	**La Chapelle**	**13.09**	**300**	*e*P	**Pn**	**14 32 21.0**	**-1.0**
	comp=Z,14nm,0.9s						
CABF	**La Chapelle**	**13.09**	**300**	*e*P	**Pn**	**14 32 21.0**	**-1.0**
CABF				pmax	pmax		
	comp=Z,15nm,0.9s						
CABF	**La Chapelle**	**13.09**	**300**	*e*P	**Pn**	**14 32 21.0**	**-1.0**
	comp=Z,14nm,0.9s						
CABF	**La Chapelle**	**13.09**	**300**	*e*P	**Pn**	**14 32 21.0**	**-1.0**
	comp=Z,7.2nm,0.9s						
HAU	**Haudompre**	**13.43**	**305**	*e*P	**Pn**	**14 32 24.2**	**-2.3**
HAU				*e*R			
	comp=Z,103nm,18.2s						
HAU	**Haudompre**	**13.43**	**305**	*e*P	**Pn**	**14 32 24.2**	**-2.3**
HAU	**Haudompre**	**13.43**	**305**	*e*P	**Pn**	**14 32 24.2**	**-2.3**
VIVF	**Saint-Julien-l**	**13.65**	**291**	*e*P	**Pn**	**14 32 27.3**	**-2.3**
VIVF	**Saint-Julien-l**	**13.65**	**291**	*e*P	**Pn**	**14 32 27.3**	**-2.3**
VIVF	**Saint-Julien-l**	**13.65**	**291**	*e*P	**Pn**	**14 32 27.3**	**-2.3**
PAGF	**Fort de Pagny**	**14.03**	**307**	*e*P	**Pn**	**14 32 34.6**	**-0.2**
	comp=Z,3.8nm,1.0s						
PAGF	**Fort de Pagny**	**14.03**	**307**	*e*P	**Pn**	**14 32 34.6**	**-0.2**
	comp=Z,3.8nm,1.0s						
PAGF	**Fort de Pagny**	**14.03**	**307**	*e*P	**Pn**	**14 32 34.6**	**-0.2**
	comp=Z,1.9nm,1.0s						
SFTF	**Sexfontaines**	**14.31**	**305**	*e*P	**Pn**	**14 32 38.0**	**-0.6**
	comp=Z,43nm,1.2s						
SFTF	**Sexfontaines**	**14.31**	**305**	*e*P	**Pn**	**14 32 38.0**	**-0.6**
	comp=Z,43nm,1.2s						
SMF	**Signal de Mont**	**14.59**	**298**	*e*P	**Pn**	**14 32 40.3**	**-2.1**
	comp=Z,3.6nm,0.4s						
SMF	**Signal de Mont**	**14.59**	**298**	*e*P	**Pn**	**14 32 40.3**	**-2.1**
SMF				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SMF	**Signal de Mont**	**14.59**	**298**	*e*P	**Pn**	**14 32 40.3**	**-2.1**
	comp=Z,3.6nm,0.4s						
LOR	**Lormes**	**14.75**	**300**	*e*P	**Pn**	**14 32 42.5**	**-2.0**
LOR				*e*R			
	comp=Z,84nm,20.2s						
LOR	**Lormes**	**14.75**	**300**	*e*P	**Pn**	**14 32 42.5**	**-2.0**
SSF	**Saint Saulge**	**14.92**	**299**	*e*P	**Pn**	**14 32 45.5**	**-1.3**
	comp=Z,12nm,0.8s						
SSF	**Saint Saulge**	**14.92**	**299**	*e*P	**Pn**	**14 32 45.5**	**-1.3**
SSF				pmax	pmax		
	comp=Z,12nm,0.8s						
SSF	**Saint Saulge**	**14.92**	**299**	*e*P	**Pn**	**14 32 45.5**	**-1.3**
	comp=Z,12nm,0.8s						
AVF	**Avril sur Loir**	**14.95**	**298**	*e*P	**Pn**	**14 32 45.0**	**-2.2**
	comp=Z,8.5nm,0.7s						
AVF	**Avril sur Loir**	**14.95**	**298**	*e*P	**Pn**	**14 32 45.0**	**-2.2**
AVF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AVF	**Avril sur Loir**	**14.95**	**298**	*e*P	**Pn**	**14 32 45.0**	**-2.2**
	comp=Z,8.5nm,0.7s						
BGF	**Bois d'Agland**	**15.23**	**297**	*e*P	**Pn**	**14 32 49.5**	**-1.5**
	comp=Z,5.8nm,0.5s						
BGF	**Bois d'Agland**	**15.23**	**297**	*e*P	**Pn**	**14 32 49.5**	**-1.5**
BGF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BGF	**Bois d'Agland**	**15.23**	**297**	*e*P	**Pn**	**14 32 49.5**	**-1.5**
	comp=Z,5.8nm,0.5s						
MTLF	**Montolieu**	**15.29**	**285**	*e*P	**Pn**	**14 32 52.5**	**+0.7**
	comp=Z,30nm,1.2s						
MTLF	**Montolieu**	**15.29**	**285**	*e*P	**Pn**	**14 32 52.5**	**+0.7**
MTLF				pmax	pmax		
	comp=Z,30nm,1.2s						
MTLF	**Montolieu**	**15.29**	**285**	*e*P	**Pn**	**14 32 52.5**	**+0.7**
	comp=Z,30nm,1.2s						
CAF	**Calviac**	**15.50**	**290**	*e*P	**Pn**	**14 32 55.0**	**+0.4**
	comp=Z,12nm,1.2s						
CAF	**Calviac**	**15.50**	**290**	*e*P	**Pn**	**14 32 55.0**	**+0.4**
CAF				pmax	pmax		
	comp=Z,12nm,1.2s						
CAF	**Calviac**	**15.50**	**290**	*e*P	**Pn**	**14 32 55.0**	**+0.4**
	comp=Z,12nm,1.2s						
BAIF	**Baives**	**15.59**	**310**	*e*P	**Pn**	**14 32 56.1**	**+0.5**
BAIF	**Baives**	**15.59**	**310**	*e*P	**Pn**	**14 32 56.1**	**+0.5**
BAIF	**Baives**	**15.59**	**310**	*e*P	**Pn**	**14 32 56.1**	**+0.5**
TCF	**Toulx Ste Croi**	**15.61**	**296**	*e*P	**Pn**	**14 32 53.6**	**-2.4**
	comp=Z,17nm,1.0s						
TCF	**Toulx Ste Croi**	**15.61**	**296**	*e*P	**Pn**	**14 32 53.6**	**-2.4**
TCF				pmax	pmax		
	comp=Z,17nm,1.0s						
TCF	**Toulx Ste Croi**	**15.61**	**296**	*e*P	**Pn**	**14 32 53.6**	**-2.4**
	comp=Z,17nm,1.0s						
RJF	**Les Rejaudoux**	**15.93**	**292**	*e*P	**Pn**	**14 33 01.2**	**+1.1**
RJF				*e*R			
	comp=Z,88nm,18.2s						
RJF	**Les Rejaudoux**	**15.93**	**292**	*e*P	**Pn**	**14 33 01.2**	**+1.1**
RJF	**Les Rejaudoux**	**15.93**	**292**	*e*P	**Pn**	**14 33 01.2**	**+1.1**

MFF	**Saint Martin d**	**17.27**	**296**	*e*P	**Pn**	**14 33 16.4**	**-0.6**
MFF	**Saint Martin d**	**17.27**	**296**	*e*P	**Pn**	**14 33 16.4**	**-0.6**
MFF	**Saint Martin d**	**17.27**	**296**	*e*P	**Pn**	**14 33 16.4**	**-0.6**
LDF	**La Druitiere**	**17.69**	**302**	*e*P	**Pn**	**14 33 21.8**	**-0.5**
	comp=Z,38nm,1.3s						
LDF	**La Druitiere**	**17.69**	**302**	*e*P	**Pn**	**14 33 21.8**	**-0.5**
LDF				pmax	pmax		
	comp=Z,38nm,1.3s						
LDF	**La Druitiere**	**17.69**	**302**	*e*P	**Pn**	**14 33 21.8**	**-0.5**
	comp=Z,38nm,1.3s						
LDF	**La Druitiere**	**17.69**	**302**	*e*P	**Pn**	**14 33 21.8**	**-0.5**
	comp=Z,19nm,1.3s						
HFS	**Hagfors**	**19.68**	**347**	P	**P**	**14 33 44.3**	**-0.6**
HFS	**Hagfors**	**19.68**	**347**	P	**P**	**14 33 44.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=126,slow=9.1,SNR=4.2						
HFS				LR	LR	14 42 38.4	
	comp=Z,94nm,19.5s,baz=165,slow=41						
HFS	**Hagfors**	**19.68**	**347**	P	**P**	**14 33 44.3**	**-0.6**
FINES	**FINESS Array B**	**20.29**	**5**	P	**P**	**14 33 50.4**	**-1.2**
FINES	**FINESS Array B**	**20.29**	**5**	P	**P**	**14 33 50.4**	**-1.2**
	comp=Z,2.3nm,0.7s,baz=145,slow=14,SNR=9.9						
FINES				LR	LR	14 42 49.7	
	comp=Z,78nm,18.3s,baz=90,slow=40						
FINES	**FINESS Array B**	**20.29**	**5**	P	**P**	**14 33 50.4**	**-1.2**
ESDC	**Sonseca Array**	**20.32**	**274**	P	**P**	**14 33 52.1**	**-0.1**
ESDC	**Sonseca Array**	**20.32**	**274**	P	**P**	**14 33 52.1**	**-0.1**
	comp=Z,2.7nm,0.7s,baz=72,slow=11,SNR=22						
ESDC	**Sonseca Array**	**20.32**	**274**	P	**P**	**14 33 52.1**	**-0.1**
NB2	**NORSAR Subarra**	**20.99**	**344**	P	**P**	**14 33 59.2**	**0.0**
	comp=Z,1.6nm,0.6s,baz=154,slow=11						
NB2	**NORSAR Subarra**	**20.99**	**344**	P	**P**	**14 33 59.2**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=154,slow=11,SNR=8.7						
NOA	**NORSAR Array B**	**20.99**	**344**	P	**P**	**14 33 59.3**	**+0.1**
NOA	**NORSAR Array B**	**20.99**	**344**	P	**P**	**14 33 59.3**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=158,slow=11,SNR=8.0						
NOA				LR	LR	14 42 42.3	
	comp=Z,41nm,18.4s,baz=165,slow=38						
NOA	**NORSAR Array B**	**20.99**	**344**	P	**P**	**14 33 59.3**	**+0.1**
EKA	**Eskdalemuir Ar**	**22.04**	**318**	P	**P**	**14 34 10.5**	**0.0**
EKA	**Eskdalemuir Ar**	**22.04**	**318**	P	**P**	**14 34 10.5**	**0.0**
	comp=Z,5.9nm,1.0s,baz=116,slow=9.5,SNR=5.5						
EKA	**Eskdalemuir Ar**	**22.04**	**318**	P	**P**	**14 34 10.5**	**0.0**
MDT	**Midelt**	**23.31**	**258**	P	**P**	**14 34 23.1**	**-1.1**
MDT	**Midelt**	**23.31**	**258**	P	**P**	**14 34 23.1**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=84,slow=14,SNR=4.5						
MDT	**Midelt**	**23.31**	**258**	P	**P**	**14 34 23.1**	**-1.1**
TAM	**Tamanrasset**	**23.42**	**223**	P	**P**	**14 34 24.1**	**-1.3**
TAM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TAM	**Tamanrasset**	**23.42**	**223**	P	**P**	**14 34 24.1**	**-1.3**
	comp=Z,7.1nm,1.0s						
TAM	**Tamanrasset**	**23.42**	**223**	P	**P**	**14 34 24.1**	**-1.3**
	comp=Z,7.1nm,1.0s						
AKTK	**Aktyubinsk**	**26.03**	**57**	P	**P**	**14 34 51.4**	**+2.3**
AKTO	**Aktyubinsk**	**26.03**	**57**	P	**P**	**14 34 51.4**	**+2.3**
AKTO	**Aktyubinsk**	**26.03**	**57**	P	**P**	**14 34 51.4**	**+2.3**
AKTO	**Aktyubinsk**	**26.03**	**57**	P	**P**	**14 34 51.4**	**+2.3**
	comp=Z,1.3nm,0.7s,baz=261,slow=11,SNR=6.1						
AKTO				LR	LR	14 47 30.4	
	comp=Z,29nm,20.7s,baz=166,slow=42						
AKTO	**Aktyubinsk**	**26.03**	**57**	P	**P**	**14 34 51.4**	**+2.3**
ARCES	**ARCESS Array B**	**28.35**	**2**	P	**P**	**14 35 08.8**	**-0.9**
ARCES	**ARCESS Array B**	**28.35**	**2**	P	**P**	**14 35 08.8**	**-0.9**
	comp=Z,2.1nm,0.9s,baz=166,slow=12,SNR=5.3						
ARCES	**ARCESS Array B**	**28.35**	**2**	P	**P**	**14 35 08.9**	**-0.9**
TOA0	**Torodi Ar. Sit**	**33.50**	**219**	*e*P	**P**	**14 35 55.4**	**-0.3**
TOA0	**Torodi Ar. Sit**	**33.50**	**219**	*e*P	**P**	**14 35 55.4**	**-0.3**
TORD	**Torodi Ar. Bea**	**33.50**	**219**	P	**P**	**14 35 55.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**33.50**	**219**	P	**P**	**14 35 55.8**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=32,slow=8.7,SNR=26						
TORD				LR	LR	14 51 10.3	
	comp=Z,38nm,20.1s,baz=60,slow=39						
TORD	**Torodi Ar. Bea**	**33.50**	**219**	P	**P**	**14 35 55.8**	**+0.1**
SPITS	**Spitsbergen Ar**	**37.09**	**358**	LR	LR	14 52 50.8	
	comp=Z,52nm,18.6s,baz=95,slow=38						
EKS2	**Erkin-Say**	**37.52**	**70**	*e*P	**P**	**14 36 29.6**	**-0.6**
EKS2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
EKS2	**Erkin-Say**	**37.52**	**70**	*e*P	**P**	**14 36 29.6**	**-0.6**
	comp=Z,4.4nm,1.0s						
EKS2	**Erkin-Say**	**37.52**	**70**	*e*P	**P**	**14 36 29.6**	**-0.6**
	comp=Z,4.4nm,1.0s						
NVS	**Novosibirsk**	**41.35**	**50**	*i* P	**P**	**14 37 03.0**	**+1.2**
NVS				pmax	pmax		
	comp=Z,20nm,1.9s						
NVS				pmax	pmax		
	comp=N,9.0nm,2.0s						
NVS				pmax	pmax		
	comp=E,7.0nm,2.0s						
NVS	**Novosibirsk**	**41.35**	**50**	*i* P	**P**	**14 37 03.0**	**+1.2**
	comp=E,20nm,1.9s						
MK31	**Makanchi Array**	**42.29**	**62**	*e*P	**P**	**14 37 10.1**	**+0.5**
MK31	**Makanchi Array**	**42.29**	**62**	*e*P	**P**	**14 37 10.1**	**+0.5**
MK31	**Makanchi Array**	**42.29**	**62**	*e*P	**P**	**14 37 10.1**	**+0.5**
MKAR	**Makanchi Array**	**42.29**	**62**	P	**P**	**14 37 10.2**	**+0.6**
MKAR	**Makanchi Array**	**42.29**	**62**	P	**P**	**14 37 10.2**	**+0.6**
MKAR	**Makanchi Array**	**42.29**	**62**	P	**P**	**14 37 10.2**	**+0.6**
	comp=E,1.1nm,0.6s,baz=277,slow=7.3,SNR=14						
MKAR				LR	LR	14 56 55.7	
	comp=E,28nm,18.0s,baz=45,slow=39						
MKAR	**Makanchi Array**	**42.29**	**62**	P	**P**	**14 37 10.2**	**+0.6**
DBIC	**Dimbokro**	**42.31**	**223**	*e*P	**P**	**14 37 09.9**	**-0.1**
	comp=E,9.9nm,0.9s						
DBIC	**Dimbokro**	**42.31**	**223**	LR	LR	14 56 18.4	
	comp=E,57nm,18.9s,baz=228,slow=38						
DBIC	**Dimbokro**	**42.31**	**223**	*e*P	**P**	**14 37 09.9**	**-0.1**
	comp=E,3.9nm,0.9s						
ZAA0	**Zalesovo Array**	**42.39**	**51**	*e*P	**P**	**14 37 09.6**	**-0.7**
ZAA0	**Zalesovo Array**	**42.39**	**51**	*e*P	**P**	**14 37 09.6**	**-0.7**
ZALV	**Zalesovo Beam**	**42.39**	**51**	P	**P**	**14 37 10.9**	**+0.6**
ZALV						14 39 03.5	
ZALV	**Zalesovo Beam**	**42.39**	**51**	P	**P**	**14 37 10.9**	**+0.6**
ZALV				PcP	**PcP**	**14 39 03.5**	**+0.1**
ZALV	**Zalesovo Beam**	**42.39**	**51**	P	**P**	**14 37 10.9**	**+0.6**
	comp=E,1.7nm,0.4s,baz=282,slow=9.4,SNR=13						
ZALV				PcP	**PcP**	**14 39 03.5**	**+0.1**
	comp=E,0.8nm,0.5s,baz=284,slow=6.0,SNR=3.0						
ZALV	**Zalesovo Beam**	**42.39**	**51**	P	**P**	**14 37 10.9**	**+0.6**
LIC	**Lamto**	**42.78**	**223**	*e*P	**P**	**14 37 13.3**	**-0.5**
	comp=E,9.3nm,0.8s						
LIC	**Lamto**	**42.78**	**223**	*e*P	**P**	**14 37 13.3**	**-0.5**
	comp=E,9.3nm,0.8s						
LIC	**Lamto**	**42.78**	**223**	*e*P	**P**	**14 37 13.3**	**-0.5**
	comp=E,4.7nm,0.8s						
SONM	**Songino Array**	**57.21**	**53**	P	**P**	**14 39 04.6**	**+1.3**
SONM	**Songino Array**	**57.21**	**53**	P	**P**	**14 39 04.6**	**+1.3**
	comp=E,0.6nm,0.8s,baz=292,slow=7.6,SNR=3.6						
SONM	**Songino Array**	**57.21**	**53**	P	**P**	**14 39 04.6**	**+1.3**
SCHQ	**Schefferville**	**57.34**	**317**	P	**P**	**14 39 04.0**	**0.0**
SCHQ	**Schefferville**	**57.34**	**317**	P	**P**	**14 39 04.0**	**0.0**
	comp=E,2.5nm,0.7s,baz=50,slow=9.6,SNR=4.9						
SCHQ	**Schefferville**	**57.34**	**317**	P	**P**	**14 39 04.0**	**0.0**
YKA	**Yellowknife Ar**	**71.03**	**341**	P	**P**	**14 40 32.5**	**-1.1**
YKA	**Yellowknife Ar**	**71.03**	**341**	P	**P**	**14 40 32.5**	**-1.1**
	comp=E,0.3nm,0.6s,baz=34,slow=5.2,SNR=4.9						
YKA	**Yellowknife Ar**	**71.03**	**341**	P	**P**	**14 40 32.5**	**-1.1**
ULM	**Lac du Bonnet**	**74.18**	**324**	P	**P**	**14 40 52.1**	**-0.5**
ULM	**Lac du Bonnet**	**74.18**	**324**	P	**P**	**14 40 52.1**	**-0.5**
	comp=E,3.7nm,0.7s,baz=26,slow=5.0,SNR=3.1						
ULM	**Lac du Bonnet**	**74.18**	**324**	P	**P**	**14 40 52.1**	**-0.5**
KSAR	**Wonju Array Be**	**76.06**	**52**	P	**P**	**14 41 02.6**	**-1.0**
KSAR	**Wonju Array Be**	**76.06**	**52**	P	**P**	**14 41 02.7**	**-1.0**
KSRS	**Korea Array**	**76.08**	**52**	P	**P**	**14 41 02.6**	**-1.1**
	comp=E,0.5nm,0.5s,baz=305,slow=4.3,SNR=4.7						
KSRS	**Korea Array**	**76.08**	**52**	P	**P**	**14 41 02.7**	**-1.1**
	comp=E,1.0nm,0.5s						
PETK	**Petropavlovsk-**	**78.28**	**26**	LR	LR	15 16 50.2	
	comp=E,43nm,19.6s,baz=187,slow=36						
MJAR	**Matsushiro Arr**	**82.63**	**47**	P	**P**	**14 41 39.5**	**0.0**
MJAR	**Matsushiro Arr**	**82.63**	**47**	P	**P**	**14 41 39.5**	**0.0**
	comp=E,1.4nm,0.9s,baz=302,slow=5.4,SNR=6.4						
MJAR	**Matsushiro Arr**	**82.63**	**47**	P	**P**	**14 41 39.6**	**0.0**
PDAR	**Pinedale Array**	**85.90**	**327**	P	**P**	**14 41 56.5**	**+0.2**
PDAR	**Pinedale Array**	**85.90**	**327**	P	**P**	**14 41 56.5**	**+0.2**
	comp=E,0.4nm,0.6s,baz=335,slow=3.4,SNR=3.5						
PDAR	**Pinedale Array**	**85.90**	**327**	P	**P**	**14 41 56.5**	**+0.2**
BDFB	**Brasilia**	**86.35**	**246**	P	**P**	**14 42 00.5**	**+1.8**
BDFB	**Brasilia**	**86.35**	**246**	P	**P**	**14 42 00.5**	**+1.8**
	comp=E,1.2nm,0.4s,baz=90,slow=6.1,SNR=3.2						
BDFB	**Brasilia**	**86.35**	**246**	P	**P**	**14 42 00.5**	**+1.8**
TXAR	**Lajitas Array**	**94.00**	**315**	P	**P**	**14 42 35.4**	**+0.9**
TXAR	**Lajitas Array**	**94.00**	**315**	P	**P**	**14 42 35.4**	**+0.9**
	comp=E,0.6nm,0.8s,baz=60,slow=3.3,SNR=6.3						
TXAR	**Lajitas Array**	**94.00**	**315**	P	**P**	**14 42 35.4**	**+0.9**

SKO 24 14:30:10.3, 41.33N×22.71E, h15km, M2.0, ML2.4, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.11**	**265**	*e*Pg	Pg		14 30 13.6	-0.1
VAY				*i* Sg	Sg		14 30 15.5	-0.3
VAY				*e*Lg	Lg		14 30 15.5	
	comp=N,3μm,0.3s							
VAY				*e*Lg	Lg		14 30 15.6	
	comp=E,2μm,0.3s							
VAY	**Valandovo**	**0.11**	**265**	*i* Pg	Pg		14 30 13.7	0.0
VAY				*e*Sg	Sg		14 30 15.4	-0.4
VAY				*e*Lg	Lg		14 30 15.6	
	comp=N,3μm,0.3s							
VAY				*e*Lg	Lg		14 30 16.6	
	comp=E,2μm,0.3s							

*SOF **24** 14:30:59.7, 41.30N×22.73E, h10km, MD3.2*
*ISCJB **24** 14:30:59.7±0.3, 41.31N±0.02×22.71E±0.02, h3km±3km, mb3.5/3, MS3.4/1, Error ellipse: s-maj=2.9km s-min=2.7km az=27.9*
*IDC **24** 14:30:59.3±1.4, 41.33N×22.54E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/27, mbtmp3.7/5, ML4.4/1, MS3.4/1, Ms1 3.4/1, ms1mx2.2/47, Error ellipse: s-maj=27.0km s-min=23.1km az=83.0*
*CSEM **24** 14:31:00.4±0.1, 41.29N×22.72E, h2km, ML3.2, Error ellipse: s-maj=2.6km s-min=2.3km az=11.0*
*SKO **24** 14:31:00.0, 41.30N×22.70E, h15km, M2.8, ML3.2*
*ATH **24** 14:31:00.5, 41.26N×22.73E, h9km±9km, MD3.3/7*
*THE **24** 14:31:01.5, 41.25N×22.70E, h1km±4km, ML3.5/5, Error ellipse: s-maj=4.0km s-min=0.8km az=358.0*
*BEO **24** 14:31:02.8±0.8, 41.33N×22.65E, h0km, ML3.2/6*

ISC 24 14:31:00.5±0.8, 41.29N±0.02×22.71E±0.01, h6km±6km, n76/s952/115, mb3.8/3, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.11**	**286**	P		**Pg**	**14 31 02.8**	**-0.1**
VAY				S		**Sg**	**14 31 04.8**	**+0.2**
VAY	**Valandovo**	**0.11**	**286**	*i* Pg		**Pg**	**14 31 02.7**	**-0.2**
VAY				*e*Lg	Lg		14 31 04.8	
	comp=E,8μm,0.3s							
VAY				*i* Sg		**Sg**	**14 31 04.8**	**+0.2**
VAY				*e*Lg	Lg		14 31 04.8	
	comp=N,22μm,0.5s							
VAY	**Valandovo**	**0.11**	**286**	*i* Pg		**Pg**	**14 31 01.1**	**-1.8**
VAY				*e*Lg	Lg		14 31 01.3	
	comp=N,22μm,0.5s							
VAY	**Valandovo**	**0.11**	**286

DIM Dimitrovgrad 2.25 69 *i* Pg Pg 14 31 42.8 -0.8
DIM Dimitrovgrad 2.25 69 *i* Pg Pg 14 31 42.8 -0.8
SELS Selova 2.26 329 *e*Sg Sg 14 32 13.2 0.0
VRAC Vranov 9.10 334 Pn Pn 14 33 11.2 -1.1
comp=N,1,1nm,0.3s,baz=114,slow=9.2,SNR=6.4
FINES FINESS Array B 20.29 5 P P 14 35 37.7 +1.1
comp=N,1,5nm,0.6s,baz=181,slow=5.6,SNR=4.1
TORD Torodi Ar. Bea 33.51 219 P P 14 37 40.1 -0.7
comp=N,0.9nm,0.8s,baz=31,slow=7.6,SNR=2.8
MKAR Makanchi Array 42.28 62 P P 14 38 54.9 +0.2
comp=N,0.4nm,0.7s,baz=297,slow=7.4,SNR=2.9
ZALV Zalesovo Beam 42.39 51 P P 14 38 55.2 -0.1
comp=N,1.3nm,0.7s,baz=282,slow=7.1,SNR=3.8
SFJD Kangerlussuaq 46.42 329 LR LR 14 58 05.4
comp=N,36nm,18.6s,baz=299,slow=35

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*IDC **24** 14:34:02.9±1.0,41°27.N×22°.61E,h0km,mb3.8/12,*
mb1 3.9/17,mb1mx3.8/32,mbtmp3.8/17,ML3.4/5,MS2.9/3,
Ms1 2.9/3,ms1mx2.4/48,Error ellipse: s-maj=17.4km
s-min=14.0km az=155.0
*SOF **24** 14:34:02.9,41°.33N×22°.73E,h2km,MD3.7*
*ISCJB **24** 14:34:02.6±0.3,41°.31N±0°.01×22°.72E±0°.01,h2km±2km,*
mb3.8/9,Error ellipse: s-maj=2.0km s-min=1.6km az=40.1
*ATH **24** 14:34:03.0,41°.31N×22°.72E,h16km±1km,MD3.7/35,*
ML3.7
*PDG **24** 14:34:03.9±0.8,41°.32N×22°.69E,h5km±1km,ML3.5/9,*
Error ellipse: s-maj=0.7km s-min=0.8km az=0.0
*BEO **24** 14:34:03.0±0.7,41°.24N×22°.73E,h8km±2km,ML3.8/1*
*SKO **24** 14:34:03.0,41°.29N×22°.69E,h15km,M3.1,ML3.4*
*CSEM **24** 14:34:04.0±0.1,41°.28N×22°.70E,h5km,ML3.6,Error*
ellipse: s-maj=2.5km s-min=2.2km az=70.0
*THE **24** 14:34:04.3,41°.25N×22°.70E,h2km±1km,ML4.1/9,Error*
ellipse: s-maj=1.3km s-min=0.6km az=271.0
*PRU **24** 14:34:08.0,41°.47N×22°.59E,h0km*

ISC 24 14:34:03.8±0.8,41°29N±0°.01×22°.71E±0°.01,h6km±5km,
n325,σ1§15/396,mb3.8/9,52C-27D,Northwestern Balkan
Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**287**	P	**Pg**	**14 34 05.8**	**-0.4**
VAY	**Valandovo**	**0.11**	**287**	⇓*i*Pg	**Pg**	**14 34 06.0**	**-0.3**
VAY				*i* Sg	**Sg**	**14 34 08.0**	**+0.2**
VAY				*e*Lg	Lg	14 34 08.0	
	comp=E,16μm,0.3s						
VAY				*e*Lg	Lg	14 34 08.1	
	comp=N,23μm,0.3s						
VAY	**Valandovo**	**0.11**	**287**	⇓*i*Pg	**Pg**	**14 34 05.9**	**-0.3**
VAY				*e*Sg	**Sg**	**14 34 07.9**	**+0.1**
VAY	**Valandovo**	**0.11**	**287**	*e*Lg	Lg	14 34 01.5	
	comp=N,23μm,0.3s						
VAY	**Valandovo**	**0.11**	**287**	⇓*i*Pg	**Pg**	**14 34 05.9**	**-0.3**
VAY				*e*Sg	**Sg**	**14 34 07.9**	**+0.1**
KNT	**Kendrikon**	**0.19**	**131**	P	**Pg**	**14 34 08.1**	**+0.4**
KNT				S	**Sg**	**14 34 11.1**	**+0.8**
KNT	**Kendrikon**	**0.19**	**131**	P	**Pg**	**14 34 08.1**	**+0.4**
KNT				S	**Sg**	**14 34 11.1**	**+0.8**
GRG	**Griva**	**0.40**	**215**	P	**Pg**	**14 34 11.7**	**0.0**
GRG				S	**Sg**	**14 34 17.7**	**+0.7**
GRG	**Griva**	**0.40**	**215**	*e*PB	**Pg**	**14 34 11.7**	**0.0**
GRG				*e*SB	**Sg**	**14 34 17.6**	**+0.6**
GRG	**Griva**	**0.40**	**215**	P	**Pg**	**14 34 11.7**	**0.0**
GRG				*e*Sg	**Sg**	**14 34 14.1**	**-2.9**
GRG				S	**Sg**	**14 34 17.7**	**+0.7**
KKB	**Krupnik**	**0.64**	**26**	*i* Pg	**Pg**	**14 34 15.9**	**-0.3**
KKB	**Krupnik**	**0.64**	**26**	*i* Pg	**Pg**	**14 34 15.9**	**-0.3**
SOH	**Sokhos**	**0.68**	**133**	P	**Pg**	**14 34 16.4**	**-0.5**
SOH				S	**Sg**	**14 34 25.7**	**+0.1**
SOH	**Sokhos**	**0.68**	**133**	*e*PN	**Pg**	**14 34 16.4**	**-0.5**
SOH				*e*SN	**Sg**	**14 34 25.6**	**0.0**
SOH	**Sokhos**	**0.68**	**133**	P	**Pg**	**14 34 16.4**	**-0.5**
SOH				*e*Sb	**Sg**	**14 34 25.6**	**0.0**
THE	**Thessaloniki**	**0.69**	**163**	P	**Pg**	**14 34 16.7**	**-0.3**
THE				S	**Sg**	**14 34 25.9**	**0.0**
THE	**Thessaloniki**	**0.69**	**163**	P	**Pg**	**14 34 16.7**	**-0.3**
THE				S	**Sg**	**14 34 25.9**	**0.0**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**14 34 16.8**	**-0.3**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**14 34 16.8**	**-0.3**
HORT	**Hortiatis**	**0.75**	**157**	P	**Pg**	**14 34 18.1**	**-0.2**
HORT				S	**Sg**	**14 34 28.2**	**+0.1**
HORT	**Hortiatis**	**0.75**	**157**	P	**Pg**	**14 34 18.1**	**-0.2**
HORT				S	**Sg**	**14 34 28.2**	**+0.1**
MMB	**Musomiste**	**0.82**	**68**	*i* P	**Pg**	**14 34 19.3**	**-0.4**
MMB	**Musomiste**	**0.82**	**68**	*i* P	**Pg**	**14 34 19.3**	**-0.4**
NVR	**Nevrokopi**	**0.87**	**86**	P	**Pg**	**14 34 20.2**	**-0.4**
NVR	**Nevrokopi**	**0.87**	**86**	*e*PN	**Pg**	**14 34 20.3**	**-0.4**
NVR				*e*SN	**Sg**	**14 34 31.3**	**-0.6**
NVR	**Nevrokopi**	**0.87**	**86**	P	**Pg**	**14 34 20.2**	**-0.4**
NVR				*e*Sb	**Sg**	**14 34 31.3**	**-0.6**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**14 34 23.2**	**-1.2**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pg**	**14 34 23.9**	**-0.5**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**14 34 23.2**	**-1.2**
PLG	**Polygyros**	**1.07**	**148**	*e*Pn	**Pg**	**14 34 23.9**	**-0.5**
BIA	**Bitola**	**1.08**	**256**	P	**Pg**	**14 34 23.5**	**-1.1**
BIA				S	**Sg**	**14 34 39.0**	**+0.5**
BIA	**Bitola**	**1.08**	**256**	*i* Pg	**Pg**	**14 34 23.4**	**-1.1**
BIA				*i* Sg	**Sg**	**14 34 38.8**	**+0.3**
BIA	**Bitola**	**1.08**	**256**	P	**Pg**	**14 34 23.5**	**-1.1**
BIA				S	**Sg**	**14 34 39.0**	**+0.5**
FNA	**Florina**	**1.13**	**244**	P	**Pg**	**14 34 24.7**	**-0.8**
FNA				S	**Sg**	**14 34 39.9**	**-0.2**
FNA	**Florina**	**1.13**	**244**	*e*PN	**Pg**	**14 34 24.7**	**-0.8**
FNA	**Florina**	**1.13**	**244**	P	**Pg**	**14 34 24.7**	**-0.8**
FNA				S	**Sg**	**14 34 39.9**	**-0.2**
SKO	**Skopje**	**1.17**	**306**	P	**Pn**	**14 34 26.6**	**-0.1**
SKO				S	**Sn**	**14 34 43.2**	**+0.2**
SKO	**Skopje**	**1.17**	**306**	*i* Pn	**Pb**	**14 34 26.4**	**-0.1**
SKO				*i* Sg	**Sn**	**14 34 43.3**	**+0.2**
SKO				*e*Lg	Lg	14 34 44.5	
	comp=E,708nm,0.4s						
SKO				*e*Lg	Lg	14 34 44.8	
	comp=N,1μm,0.7s						
SKO	**Skopje**	**1.17**	**306**	*e*Pg	**Pg**	**14 34 26.2**	**-0.1**
SKO				*e*Sg	**Sn**	**14 34 42.6**	**-0.4**
SKO	**Skopje**	**1.17**	**306**	*e*Pg	**Pg**	**14 34 26.2**	**-0.1**
SKO	**Skopje**	**1.17**	**306**	P	**Pn**	**14 34 26.6**	**-0.1**
SKO	**Skopje**	**1.17**	**306**	*i* Pn	**Pn**	**14 34 26.9**	**+0.2**
SKO				*e*Sg	**Sn**	**14 34 42.6**	**-0.4**
SKO				S	**Sn**	**14 34 43.2**	**+0.2**
SKO				*e*Lg	Lg	14 34 45.2	
	comp=N,1μm,0.7s						
KZN	**Kozani**	**1.21**	**216**	*e*PN	**Pg**	**14 34 26.5**	**-0.6**
KZN	**Kozani**	**1.21**	**216**	*e*Pb	**Pg**	**14 34 26.5**	**-0.6**
VTS	**Vitosha**	**1.35**	**16**	P	**Pn**	**14 34 29.2**	**-0.2**
VTS	**Vitosha**	**1.35**	**16**	⇑*i*Pg	**Pn**	**14 34 29.1**	**-0.3**
VTS				*e*Sg	**Sb**	**14 34 46.9**	**-0.4**
VTS	**Vitosha**	**1.35**	**16**	⇓*i*P	**Pn**	**14 34 29.3**	**-0.2**
VTS				S	**Sn**	**14 34 48.6**	**+0.8**
VTS	**Vitosha**	**1.35**	**16**	*i* P	**Pn**	**14 34 28.8**	**-0.6**
VTS	**Vitosha**	**1.35**	**16**	P	**Pn**	**14 34 29.2**	**-0.2**
VTS				*e*Sg	**Sb**	**14 34 46.9**	**-0.4**
VTS				*e*Sb	**Sg**	**14 34 47.2**	**-0.2**
VTS				S	**Sn**	**14 34 48.6**	**+0.8**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**14 34 28.7**	**-0.6**
OUR				S	**Sn**	**14 34 48.3**	**+0.7**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**14 34 28.7**	**-0.6**
OUR				S	**Sn**	**14 34 48.3**	**+0.7**
KAVA	**Kavala**	**1.40**	**101**	P	**Pn**	**14 34 29.5**	**-0.3**
KAVA				S	**Sg**	**14 34 49.7**	**+1.0**
KAVA	**Kavala**	**1.40**	**101**	P	**Pn**	**14 34 29.5**	**-0.3**
KAVA				S	**Sg**	**14 34 49.7**	**+1.0**
NEST	**Nestorio**	**1.53**	**236**	P	**Pn**	**14 34 31.7**	**-0.1**
NEST				S	**Sg**	**14 34 53.5**	**+0.4**
NEST	**Nestorio**	**1.53**	**236**	P	**Pn**	**14 34 31.7**	**-0.1**
NEST				S	**Sg**	**14 34 53.5**	**+0.4**
PAIG	**Paliouri**	**1.55**	**151**	P	**Pn**	**14 34 31.2**	**-0.7**
PAIG				S	**Sn**	**14 34 52.3**	**0.0**
PAIG	**Paliouri**	**1.55**	**151**	*e*PN	**Pn**	**14 34 32.0**	**+0.1**
PAIG				*e*SN	**Sg**	**14 34 54.7**	**+1.1**
PAIG	**Paliouri**	**1.55**	**151**	P	**Pn**	**14 34 31.2**	**-0.7**
PAIG	**Paliouri**	**1.55**	**151**	*e*Pg	**Pn**	**14 34 32.0**	**+0.1**
PAIG				S	**Sn**	**14 34 52.3**	**0.0**
PAIG				*e*Sb	**Sg**	**14 34 54.7**	**+1.1**
RZN	**Rozhen**	**1.56**	**75**	*i* P	**Pb**	**14 34 33.2**	**0.0**
RZN				*i* Pg	**Pg**	**14 34 33.9**	**+0.1**
RZN	**Rozhen**	**1.56**	**75**	*i* P	**Pb**	**14 34 33.2**	**0.0**
RZN	**Rozhen**	**1.56**	**75**	*i* Pg	**Pg**	**14 34 33.9**	**+0.1**
BARS	**Barje**	**1.67**	**337**	*e*Sn	**Sn**	**14 34 54.3**	**-0.9**
BARS	**Barje**	**1.67**	**337**	*e*Sn	**Sn**	**14 34 54.3**	**-0.9**
PGB	**Panagyurishte**	**1.67**	**40**	*i* P	**Pn**	**14 34 33.6**	**0.0**
PGB				*i* Pg	**Pb**	**14 34 35.0**	**+0.1**
PGB	**Panagyurishte**	**1.67**	**40**	*i* P	**Pn**	**14 34 33.6**	**0.0**
PLD	**Plovdiv**	**1.70**	**61**	P	**Pb**	**14 34 35.5**	**0.0**
PLD	**Plovdiv**	**1.70**	**61**	*i* P	**Pb**	**14 34 35.8**	**+0.3**
PLD	**Plovdiv**	**1.70**	**61**	P	**Pb**	**14 34 35.5**	**0.0**
PHP	**Peshkopia**	**1.75**	**284**	P	**Pn**	**14 34 34.6**	**-0.1**
PHP	**Peshkopia**	**1.75**	**284**	P	**Pn**	**14 34 34.6**	**-0.1**
THL	**Klokotos Trika**	**1.80**	**197**	P	**Pn**	**14 34 35.0**	**-0.4**
THL				S	**Sn**	**14 34 58.4**	**-0.1**
THL	**Klokotos Trika**	**1.80**	**197**	*e*PN	**Pb**	**14 34 36.8**	**-0.4**
THL				*e*SN	**Sg**	**14 35 01.5**	**-0.2**
THL	**Klokotos Trika**	**1.80**	**197**	P	**Pn**	**14 34 35.0**	**-0.4**
THL	**Klokotos Trika**	**1.80**	**197**	*e*Pg	**Pb**	**14 34 36.8**	**-0.4**
THL				S	**Sn**	**14 34 58.4**	**-0.1**
THL				*e*Sn	**Sg**	**14 35 01.5**	**-0.2**
XOR	**Xorichti**	**1.96**	**169**	P	**Pn**	**14 34 36.7**	**-0.9**
XOR	**Xorichti**	**1.96**	**169**	P	**Pn**	**14 34 36.7**	**-0.9**
ZAPS	**Zavoj**	**1.98**	**358**	⇑*i*Pn	**Pn**	**14 34 38.1**	**+0.1**
ZAPS				*e*Sg	**Sg**	**14 35 07.8**	**+0.2**
NEO	**Neokhori**	**2.02**	**169**	*e*PB	**Pn**	**14 34 37.8**	**-0.6**
NEO	**Neokhori**	**2.02**	**169**	*e*Pb	**Pn**	**14 34 37.8**	**-0.6**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* P	**Pn**	**14 34 39.1**	**0.0**
KDZ				*i* Pg	**Pb**	**14 34 41.5**	**-0.3**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* P	**Pn**	**14 34 39.1**	**0.0**
TIR	**Tirane**	**2.14**	**273**	*e*Pn	**Pn**	**14 34 41.4**	**+1.3**
SKIA	**Skiathos**	**2.20**	**164**	P	**Pn**	**14 34 40.2**	**-0.7**
SKIA	**Skiathos**	**2.20**	**164**	P	**Pn**	**14 34 40.2**	**-0.7**
MPEP	**Malo Peshtene**	**2.20**	**20**	*i* P	**Pn**	**14 34 41.3**	**+0.4**
MPEP				*i* Pg	**Pg**	**14 34 45.2**	**-0.9**
DIM	**Dimitrovgrad**	**2.25**	**69**	*i* P	**Pb**	**14 34 43.1**	**-1.7**
DIM	**Dimitrovgrad**	**2.25**	**69**	*i* P	**Pb**	**14 34 43.1**	**-1.7**
SELS	**Selova**	**2.26**	**329**	⇓*i*Pn	**Pn**	**14 34 40.7**	**-1.1**
SELS				*e*Sg	**Sg**	**14 35 16.7**	**+0.2**
AGG	**Agios Georgios**	**2.28**	**187**	P	**Pn**	**14 34 41.9**	**-0.1**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PB	**Pn**	**14 34 42.0**	**-0.1**
AGG	**Agios Georgios**	**2.28**	**187**	P	**Pn**	**14 34 41.9**	**-0.1**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*PN	**Pn**	**14 34 42.8**	**+0.6**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*Pn	**Pn**	**14 34 42.8**	**+0.6**
AOS	**Alonnisos**	**2.30**	**157**	P	**Pn**	**14 34 41.2**	**-1.0**
AOS	**Alonnisos**	**2.30**	**157**	*e*PB	**Pn**	**14 34 41.2**	**-1.0**
AOS	**Alonnisos**	**2.30**	**157**	P	**Pn**	**14 34 41.2**	**-1.0**
LIA	**Limnos Island**	**2.34**	**126**	*e*PB	**Pn**	**14 34 42.8**	**0.0**
LIA	**Limnos Island**	**2.34**	**126**	*e*Pb	**Pn**	**14 34 42.8**	**0.0**
PVY	**Plav**	**2.43**	**303**	⇑*i*Pn	**Pn**	**14 34 44.9**	**+0.7**
PVY				*e*Sn	**Sb**	**14 35 16.6**	**-1.7**
PVY	**Plav**	**2.43**	**303**	⇑*i*Pn	**Pn**	**14 34 44.9**	**+0.7**
PVY				*e*Sn	**Sb**	**14 35 16.6**	**-1.7**
EVR	**Evrytania**	**2.47**	**197**	*e*PB	**Pn**	**14 34 45.5**	**+0.8**
EVR	**Evrytania**	**2.47**	**197**	*e*Pn	**Pn**	**14 34 45.5**	**+0.8**
ALN	**Alexandroupoli**	**2.55**	**98**	P	**Pn**	**14 34 45.6**	**-0.1**
ALN				S	**Sn**	**14 35 19.0**	**+1.9**
ALN	**Alexandroupoli**	**2.55**	**98**	*e*PN	**Pn**	**14 34 45.7**	**0.0**
ALN	**Alexandroupoli**	**2.55**	**98**	P	**Pn**	**14 34 45.6**	**-0.1**
ALN				S	**Sn**	**14 35 19.0**	**+1.9**
BOLS	**Boljevac**	**2.60**	**348**	⇓*i*Pn	**Pn**	**14 34 44.5**	**-1.9**
BOLS	**Boljevac**	**2.60**	**348**	⇓*i*Pn	**Pn**	**14 34 44.5**	**-1.9**
ATAL	**Atalanti**	**2.60**	**175**	P	**Pn**	**14 34 46.4**	**-0.1**
ATAL	**Atalanti**	**2.60**	**175**	P	**Pn**	**14 34 46.4**	**-0.1**
BEY	**Berane**	**2.62**	**308**	*e*Pn	**Pn**	**14 34 47.5**	**+0.7**
BEY				*e*Sn	**Sb**	**14 35 21.7**	**-2.1**
IVA	**Berane**	**2.62**	**308**	*e*Pn	**Pn**	**14 34 47.5**	**+0.7**
IVA				*e*Sn	**Sb**	**14 35 21.7**	**-2.1**
LKR	**Lokris**	**2.65**	**175**	*e*PN	**Pn**	**14 34 46.8**	**-0.2**
LKR	**Lokris**	**2.65**	**175**	*e*Pn	**Pn**	**14 34 46.8**	**-0.2**
ENEZ	**Enez**	**2.67**	**101**	*e*PN	**Pn**	**14 34 46.5**	**-0.5**
ULC	**Ulcinj**	**2.68**	**286**	⇑*i*Pn	**Pn**	**14 34 49.1**	**+1.6**
ULC				*e*Sn	**Sn**	**14 35 22.7**	**+2.4**
ULC	**Ulcinj**	**2.68**	**286**	⇑*i*Pn	**Pn**	**14 34 49.1**	**+1.6**
ULC				*e*Sn	**Sn**	**14 35 22.7**	**+2.4**
PVL	**Pavlikeni**	**2.74**	**44**	*i* P	**Pn**	**14 34 47.8**	**-0.5**
PVL	**Pavlikeni**	**2.74**	**44**	*i* P	**Pn**	**14 34 47.8**	**-0.5**
PDG	**Podgorica**	**2.82**	**295**	⇓*i*Pn	**Pn**	**14 34 49.9**	**+0.5**
PDG				*e*Sn	**Sb**	**14 35 27.0**	**-2.3**
TTG	**Podgorica**	**2.82**	**295**	⇓*i*Pn	**Pn**	**14 34 49.9**	**+0.5**
TTG				*e*Sn	**Sb**	**14 35 27.0**	**-2.3**
DSF	**Desfina**	**2.88**	**183**	P	**Pn**	**14 34 49.5**	**-0.8**
DSF	**Desfina**	**2.88**	**183**	P	**Pn**	**14 34 49.5**	**-0.8**
EFP	**Efpalio**	**2.92**	**192**	*e*PN	**Pn**	**14 34 51.2**	**+0.4**
EFP	**Efpalio**	**2.92**	**192**	*e*Pn	**Pn**	**14 34 51.2**	**+0.4**
KALE	**Kalithea**	**2.93**	**189**	P	**Pn**	**14 34 51.2**	**+0.3**
KALE	**Kalithea**	**2.93**	**189**	*e*PN	**Pn**	**14 34 51.2**	**+0.3**
KALE	**Kalithea**	**2.93**	**189**	P	**Pn**	**14 34 51.2**	**+0.3**
ERIK	**Erikli-Kesan**	**2.95**	**101**	*e*PN	**Pn**	**14 34 58.3**	**+0.3**
TRIZ	**Trizonia**	**2.96**	**190**	P	**Pn**	**14 34 51.6**	**+0.3**
TRIZ	**Trizonia**	**2.96**	**190**	*e*PN	**Pn**	**14 34 52.0**	**+0.7**
TRIZ	**Trizonia**	**2.96**	**190**	P	**Pn**	**14 34 51.6**	**+0.3**
TRIZ	**Trizonia**	**2.96**	**190**	*e*Pn	**Pn**	**14 34 52.0**	**+0.7**
GRUS	**Gruza**	**2.98**	**331**	⇑*i*Pn	**Pn**	**14 34 51.2**	**-0.5**
GRUS	**Gruza**	**2.98**	**331**	⇑*i*Pn	**Pn**	**14 34 51.2**	**-0.5**
GELI	**Tayfur-Gelibol**	**2.99**	**106**	*e*PN	**Pn**	**14 34 51.2**	**-0.6**
BUM	**Brajici-Budva**	**3.02**	**291**	⇑*i*Pn	**Pn**	**14 34 53.9**	**+1.6**
BUM				*e*Sn	**Sn**	**14 35 31.9**	**+3.0**
BUM	**Brajici-Budva**	**3.02**	**291**	⇑*i*Pn	**Pn**	**14 34 53.9**	**+1.6**
BUM				*e*Sn	**Sn**	**14 35 31.9**	**+3.0**
ZIMR		**3.08**	**39**	⇓*i*P	**Pn**	**14 34 55.2**	**+2.3**
EDRB	**Edirne**	**3.08**	**78**	*e*PN	**Pn**	**14 34 53.4**	**+0.5**
LAKA	**Lakka**	**3.10**	**191**	*e*PN	**Pn**	**14 34 54.8**	**+1.6**
LAKA	**Lakka**	**3.10**	**191**	*e*Pn	**Pn**	**14 34 54.8**	**+1.6**
SZH	**Strazhica**	**3.10**	**49**	*i* P	**Pn**	**14 34 54.4**	**+1.1**
SZH				*i* Pg	**Pg**	**14 35 03.1**	**-0.2**
SZH	**Strazhica**	**3.10**	**49**	*i* P	**Pn**	**14 34 54.4**	**+1.1**
EZN	**Ezine**	**3.12**	**117**	*e*PN	**Pn**	**14 34 52.8**	**-0.7**
JMB	**Yambol**	**3.12**	**67**	*i* P	**Pn**	**14 34 54.5**	**+0.9**
JMB				*i* Pg	**Pg**	**14 35 04.1**	**+0.4**
JMB	**Yambol**	**3.12**	**67**	*i* P	**Pn**	**14 34 54.5**	**+0.9**
NKY	**Niksic**	**3.16**	**300**	⇑*i*Pn	**Pn**	**14 34 55.8**	**+1.6**
NKY				*e*Sn	**Sn**	**14 35 35.0**	**+2.8**
NKY	**Niksic**	**3.16**	**300**	⇑*i*Pn	**Pn**	**14 34 55.8**	**+1.6**
NKY				*e*Sn	**Sn**	**14 35 35.0**	**+2.8**
SVIS	**Svilajnac**	**3.17**	**340**	*e*Pn	**Pn**	**14 34 52.7**	**-1.5**
SVIS				*e*Sn	**Sn**	**14 35 31.6**	**-0.7**
LPK	**Lapseki**	**3.21**	**105**	*e*PN	**Pn**	**14 34 54.6**	**-0.1**
LTK	**Loutraki**	**3.27**	**176**	*e*PN	**Pn**	**14 34 56.2**	**+0.6**
LTK	**Loutraki**	**3.27**	**176**	*e*Pn	**Pn**	**14 34 56.2**	**+0.6**
KLV	**Kalavryta, Ach**	**3.27**	**188**	*e*PN	**Pn**	**14 34 56.3**	**+0.6**
KLV	**Kalavryta, Ach**	**3.27**	**188**	*e*Pn	**Pn**	**14 34 56.3**	**+0.6**
HCY	**Herceg Novi**	**3.35**	**292**	⇓*i*Pn	**Pn**	**14 34 57.4**	**+0.7**
HCY				*e*Sn	**Sn**	**14 35 39.9**	**+3.1**
HCY	**Herceg Novi**	**3.35**	**292**	⇓*i*Pn	**Pn**	**14 34 57.4**	**+0.7**
HCY				*e*Sn	**Sn**	**14 35 39.9**	**+3.1**
PTL	**Penteli**	**3.36**	**164**	*e*PN	**Pn**	**14 34 57.4**	**+0.6**
PTL	**Penteli**	**3.36**	**164**	*e*Pn	**Pn**	**14 34 57.4**	**+0.6**
GUR	**Goura**	**3.36**	**185**	*e*PN	**Pn**	**14 34 57.5**	**+0.6**
GUR	**Goura**	**3.36**	**185**	*e*Pn	**Pn**	**14 34 57.5**	**+0.6**
RLS	**Riolos of Patr**	**3.37**	**197**	*e*PB	**Pn**	**14 34 59.1**	**+2.2**
RLS	**Riolos of Patr**	**3.37**	**197**	*e*Pn	**Pn**	**14 34 59.1**	**+2.2**
RMGR	**Halanga-Turnu**	**3.37**	**360**	⇑*i*P	**Pn**	**14 34 55.9**	**-1.1**
RMGR	**Halanga-Turnu**	**3.37**	**360**	⇑*i*P	**Pn**	**14 34 55.9**	**-1.1**
DJES	**Djerdap**	**3.38**	**358**	*e*Pn	**Pn**	**14 34 59.4**	**+2.3**
ATH	**Athens Observa**	**3.40**	**166**	*e*PN	**Pn**	**14 34 57.6**	**+0.2**
ATH	**Athens Observa**	**3.40**	**166**	*e*Pn	**Pn**	**14 34 57.6**	**+0.2**
PRK	**Paraskevi**	**3.41**	**126**	*e*PN	**Pn**	**14 34 58.9**	**+1.5**
PRK	**Paraskevi**	**3.41**	**126**	*e*Pn	**Pn**	**14 34 58.9**	**+1.5**
UPM	**Unac-Piva**	**3.41**	**305**	⇓*i*Pn	**Pn**	**14 34 58.3**	**+0.6**
UPM				*e*Sn	**Sn**	**14 35 40.5**	**+2.0**
UPM	**Unac-Piva**	**3.41**	**305**	⇓*i*Pn	**Pn**	**14 34 58.3**	**+0.6**
UPM				*e*Sn	**Sn**	**14 35 40.5**	**+2.0**
RKY	**Sarkoy-Tekirda**	**3.44**	**99**	*e*PN	**Pn**	**14 34 58.1**	**+0.2**
DIVS	**Divibare**	**3.45**	**325**	*e*Pn	**Pn**	**14 34 57.7**	**-0.4**
DIVS	**Divibare**	**3.45**	**325**	*e*Pn	**Pn**	**14 34 57.7**	**-0.4**
BRY	**Bratogost**	**3.50**	**299**	*e*Pn	**Pn**	**14 35 00.7**	**+1.9**
BRY				*e*Sn	**Sn**	**14 35 43.0**	**+2.4**
BRY	**Bratogost**	**3.50**	**299**	*e*Pn	**Pn**	**14 35 00.7**	**+1.9**
BRY				*e*Sn	**Sn**	**14 35 43.0**	**+2.4**
MFT	**Murefte**	**3.50**	**97**	*e*PN	**Pn**	**14 34 58.0**	**-0.8**
VLS	**Valsamata**	**3.51**	**208**	*e*PN	**Pn**	**14 35 00.9**	**+2.0**
VLS	**Valsamata**	**3.51**	**208**	*e*Pn	**Pn**	**14 35 00.9**	**+2.0**
BBLS	**Lazići**	**3.55**	**318**	⇑*i*Pn	**Pn**	**14 34 59.6**	**+0.1**
BBLS	**Lazići**	**3.55**	**318**	⇑*i*Pn	**Pn**	**14 34 59.6**	**+0.1**
KRBG	**Karabiga-Canak**	**3.59**	**103**	*e*PN	**Pn**	**14 35 00.6**	**+0.5**
HUMR	**Humele**	**3.64**	**27**	⇑*i*P	**Pn**	**14 35 01.1**	**+0.4**
HUMR	**Humele**	**3.64**	**27**	⇑*i*P	**Pn**	**14 35 01.1**	**+0.4**
TKR	**Tekirdag**	**3.66**	**93**	*e*PN	**Pn**	**14 35 01.6**	**+0.7**
MRMT	**Marmara Adasi**	**3.77**	**99**	*e*PN	**Pn**	**14 35 02.6**	**+0.1**
DID	**Didima**	**3.80**	**174**	*e*PN	**Pn**	**14 35 03.5**	**+0.6**
DID	**Didima**	**3.80**	**174**	*e*Pn	**Pn**	**14 35 03.5**	**+0.6**
VLX	**Vlachokerasia**	**3.92**	**184**	*e*PN	**Pn**	**14 35 05.7**	**+1.0**
VLX	**Vlachokerasia**	**3.92**	**184**	*e*Pn	**Pn**	**14 35 05.7**	**+1.0**
CIOR	**Ciorogarla**	**3.92**	**35**	⇑*i*P	**Pn**	**14 35 07.7**	**+3.1**
CIOR	**Ciorogarla**	**3.92**	**35**	⇑*i*P	**Pn**	**14 35 07.7**	**+3.1**
GONE	**Gonen-Balikesi**	**3.98**	**107**	*e*PN	**Pn**	**14 35 05.6**	**+0.2**
STON	**Ston**	**4.05**	**295**	*e*PN	**Pn**	**14 35 06.6**	**+0.3**
STON	**Ston**	**4.05**	**295**	*e*Pn	**Pn**	**14 35 06.5**	**+0.3**
BNT	**Bandirma**	**4.06**	**102**	*e*PN	**Pn**	**14 35 06.6**	**+0.1**
ITM	**Ithomi**	**4.15**	**189**	*e*PN	**Pn**	**14 35 10.2**	**+2.5**
ITM	**Ithomi**	**4.15**	**189**	*e*Pn	**Pn**	**14 35 10.2**	**+2.5**
SLVT	**Silivri**	**4.15**	**89**	*e*PN	**Pn**	**14 35 09.0**	**+1.3**
CTYL	**Yal??k??y-??at**	**4.20**	**86**	*e*PN	**Pn**	**14 35 08.4**	**0.0**
LOT	**Lotru**	**4.23**	**10**	⇑*i*P	**Pn**	**14 35 08.5**	**-0.4**
LOT	**Lotru**	**4.23**	**10**	⇑*i*P	**Pn**	**14 35 08.5**	**-0.4**
BALB	**Balikesir**	**4.28**	**111**	*e*PN	**Pn**	**14 35 08.8**	**-0.6**
MTUR	**Matau**	**4.29**	**23**	⇑*i*P	**Pn**	**14 35 10.5**	**+0.7**
MTUR	**Matau**	**4.29**	**23**	⇑*i*P	**Pn**	**14 35 10.5**	**+0.7**
ARR	**Arges**	**4.31**	**18**	⇑*i*P	**Pn**	**14 35

comp=Z,2.1nm,0.7s,baz=268,slow=8.9,SNR=8.6
YKA Yellowknife Ar 71.03 341 P **P 14 45 21.6 -0.5**
comp=Z,0.3nm,0.6s,baz=37,slow=5.4,SNR=4.7
KSRS Korea Array 76.07 52 P **P 14 45 52.9 +0.7**
comp=Z,0.4nm,0.5s,baz=332,slow=4.0,SNR=3.7
NVAR Mina Array Bea 93.05 330 P **P 14 47 19.1 +0.5**
comp=Z,0.5nm,0.7s,baz=28,slow=4.7,SNR=4.4
TXAR Lajitas Array 94.00 315 P **P 14 47 23.2 +0.2**
comp=Z,0.4nm,0.9s,baz=55,slow=4.8,SNR=4.0

SKO 24 14:35:24.0,41°.31N×22°.73E, h0km, M1.0, ML1.6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**275**	*i* Pg		Pg		14 35 25.7	-0.6
VAY				*i* Sg		Sg		14 35 27.8	-0.1
VAY				*e*Lg		Lg		14 35 28.2	
	comp=N,466nm,0.7s								
VAY				*e*Lg		Lg		14 35 28.4	
	comp=E,700nm,1.1s								

IDC 24 14:39:57.0±4.7, 29°.77S×178°.29W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/17, mbtmp3.5/2, Error ellipse: s-maj=220.3km s-min=74.1km az=165.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.90**	**266**	P		P		14 47 56.9	-0.7
	0.3nm,0.5s,baz=102,slow=7.1,SNR=8.6								
WRA	**Warramunga Arr**	**43.83**	**272**	P		P		14 48 05.4	+0.4
	0.4nm,0.4s,baz=112,slow=7.9,SNR=15								
FINES	**FINESS Array B**	**144.47**	**340**	PKP		PKPdf		14 59 33.9	-0.7
	2.2nm,0.9s,baz=51,slow=2.7,SNR=4.1								

*ISCJB **24** 14:40:16.5±0.9, 41°.25N±0°.04×22°.74E±0°.07, h12km±7km, Error ellipse: s-maj=9.4km s-min=7.0km az=15.3*
*ATH **24** 14:40:16.1, 41°.32N×22°.67E, h19km, MD2.9/6*
*CSEM **24** 14:40:16.9±0.4, 41°.27N×22°.70E, h16km±2km, MD2.9, Error ellipse: s-maj=9.9km s-min=8.8km az=61.0*
*SKO **24** 14:40:17.1, 41°.29N×22°.71E, h15km, M1.4, ML1.7*
ISC 24 14:40:16.8±1.0, 41°.30N±0°.04×22°.67E±0°.05, h20km±3km, n15, σ0°.37/23, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**287**	*i* Pg		**Pg**		**14 40 20.3**	**-0.2**
VAY				*i* Sg		**Sg**		**14 40 22.3**	**-0.7**
VAY				*e*Lg		Lg		14 40 22.3	
	comp=E,445nm,0.3s								
VAY				*e*Lg		Lg		14 40 22.4	
	comp=N,576nm,0.3s								
VAY	**Valandovo**	**0.08**	**287**	*i* Pg		**Pb**		**14 40 20.8**	**+0.3**
VAY				*e*Lg		Lg		14 40 22.9	
	comp=N,576nm,0.3s								
GRG	**Griva**	**0.40**	**211**	*e*PB		**Pg**		**14 40 24.7**	**-0.4**
GRG				*e*SB		**Sg**		**14 40 30.9**	**+0.1**
GRG	**Griva**	**0.40**	**211**	*e*Pb		**Pg**		**14 40 24.7**	**-0.4**
GRG				*e*Sb		**Sg**		**14 40 30.9**	**+0.1**
SOH	**Sokhos**	**0.70**	**132**	*e*PN		**Pb**		**14 40 30.4**	**0.0**
SOH				*e*SN		**Sb**		**14 40 40.1**	**+0.4**
SOH	**Sokhos**	**0.70**	**132**	*e*Pn		**Pb**		**14 40 30.4**	**0.0**
SOH				*e*Sn		**Sb**		**14 40 40.1**	**+0.4**
NVR	**Nevrokopi**	**0.90**	**86**	*e*PN		**Pb**		**14 40 33.3**	**-0.5**
NVR	**Nevrokopi**	**0.90**	**86**	*e*Pn		**Pb**		**14 40 33.3**	**-0.5**
PLG	**Polygyros**	**1.10**	**147**	*e*PN		**Pb**		**14 40 36.8**	**-0.3**
PLG				*e*SN		**Sn**		**14 40 52.0**	**+0.3**
PLG	**Polygyros**	**1.10**	**147**	*e*Pn		**Pb**		**14 40 36.8**	**-0.3**
PLG				*e*Sn		**Sn**		**14 40 52.0**	**+0.3**
FNA	**Florina**	**1.10**	**243**	*e*PN		**Pb**		**14 40 37.1**	**-0.2**
FNA	**Florina**	**1.10**	**243**	*e*Pn		**Pb**		**14 40 37.1**	**-0.2**
VTS	**Vitosha**	**1.35**	**17**	*e*Pn		**Pb**		**14 40 42.0**	**+0.4**
VTS				*e*Sn		**Sg**		**14 41 00.6**	**-0.1**
PAIG	**Paliouri**	**1.57**	**150**	*e*PN		**Pb**		**14 40 45.5**	**+0.3**
PAIG	**Paliouri**	**1.57**	**150**	*e*Pn		**Pb**		**14 40 45.5**	**+0.3**

*ISCJB **24** 14:41:10.9±0.3, 53°.12N±0°.06×172°.91E±0°.06, h10km, mb4.1/20, MS3.0/2, Error ellipse: s-maj=9.0km s-min=3.7km az=27.7*
*IDC **24** 14:41:11.0±0.5, 53°.11N×172°.97E, h0km, mb4.0/15, mb1 4.1/17, mb1mx4.0/34, mbtmp4.0/17, ML3.8/2, MS3.1/2, Ms1 3.1/2, ms1mx2.6/46, Error ellipse: s-maj=16.6km s-min=5.0km az=61.0*
*NEIC **24** 14:41:12.8±0.3, 53°.08N×172°.92E, h10km, mb4.4/5, ML4.1(AEIC), Error ellipse: s-maj=10.0km s-min=3.8km az=200.0*
ISC 24 14:41:12.6±0.5, 53°.05N±0°.09×172°.92E±0°.05, h10km, n55, σ0°.98/59, mb4.2/20, Near Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**0.23**	**138**	*e*Pg		**Pg**		**14 41 16.7**	**-0.6**
FX1					Lg	Lg		14 41 19.5	
FX1				*e*Sg		**Sg**		**14 41 19.7**	**-0.7**
FX1	**Attu Island--F**	**0.23**	**138**	Pg		**Pg**		**14 41 16.5**	**-0.8**
	4μm,0.3s,baz=299,slow=5.3,SNR=9499								
FX1					Lg	Lg		14 41 19.5	
	6μm,0.3s,baz=82,slow=19,SNR=523								
SMY	**Shemya**	**0.79**	**114**	P		**Pg**		**14 41 26.7**	**-1.0**
SMY					S	**Sg**		**14 41 37.4**	**-0.6**
LSNW	**Little Sitkin**	**3.59**	**105**	P		**Pn**		**14 42 08.9**	**+0.7**
LSSA	**Little Sitkin**	**3.59**	**106**	P		**Pn**		**14 42 09.1**	**+0.8**
LSPA	**Little Sitkin**	**3.63**	**105**	P		**Pn**		**14 42 09.3**	**+0.5**
LSPA					S	**Sn**		**14 42 52.5**	**+0.9**
LSSE	**Little Sitkin**	**3.63**	**106**	P		**Pn**		**14 42 09.2**	**+0.4**
CETU	**Semis' Tuman**	**4.16**	**103**	P		**Pn**		**14 42 16.8**	**+0.7**
CEAP	**Semis' Anvil P**	**4.20**	**102**	P		**Pn**		**14 42 17.2**	**+0.6**
AMKA	**Amchitka**	**4.27**	**111**	P		**Pn**		**14 42 17.1**	**-0.4**
AMKA					S	**Sn**		**14 43 08.9**	**+1.5**
KOWE	**Korovin West**	**7.83**	**90**	P		**Pn**		**14 43 07.4**	**+1.0**
KOFP	**Korovin Flat P**	**7.94**	**90**	P		**Pn**		**14 43 09.6**	**+1.6**
PEA0B	**Petropavlovsk-**	**9.16**	**276**	*e*P		**Pn**		**14 43 26.2**	**+1.5**
PETK	**Petropavlovsk-**	**9.16**	**276**	Pn		**Pn**		**14 43 25.6**	**+0.9**
PETK					Sn	**Sn**		**14 45 05.2**	**-2.6**
PETK	**Petropavlovsk-**	**9.16**	**276**	Pn		**Pn**		**14 43 25.6**	**+0.9**
	0.7nm,0.3s,baz=98,slow=20,SNR=16								
PETK					Sn	**Sn**		**14 45 05.2**	**-2.6**
	0.7nm,0.3s,baz=86,slow=25,SNR=2.6								
OHAK	**Old Harbor**	**19.64**	**64**	*e*P		**Pn**		**14 45 41.6**	**-0.7**
KDAK	**Kodiak Island**	**20.00**	**63**	P		**Pn**		**14 45 45.2**	**-1.5**
KDAK	**Kodiak Island**	**20.00**	**63**	P		**Pn**		**14 45 45.2**	**-1.5**
	0.4nm,0.3s,baz=250,slow=15,SNR=3.2								
ASAJ	**Asahikawa**	**21.82**	**258**	LR		LR		14 53 39.8	
	comp=Z,36nm,19.3s,baz=82,slow=34								
KSRS	**Korea Array**	**34.66**	**262**	P		**P**		**14 48 03.4**	**+1.4**
	1.3nm,0.8s,baz=51,slow=8.0,SNR=8.6								
KSAR	**Wonju Array Be**	**34.69**	**262**	P		**P**		**14 48 03.4**	**+1.1**
SONM	**Songino Array**	**41.31**	**291**	P		**P**		**14 48 58.8**	**+0.7**
SONM	**Songino Array**	**41.31**	**291**	P		**P**		**14 48 58.8**	**+0.7**
	0.8nm,0.5s,baz=51,slow=7.7,SNR=5.8								
SPITS	**Spitsbergen Ar**	**48.25**	**354**	P		**P**		**14 49 52.9**	**0.0**
SPITS	**Spitsbergen Ar**	**48.25**	**354**	P		**P**		**14 49 52.9**	**0.0**
	4.8nm,0.8s,baz=46,slow=3.6,SNR=2.1								
NVAR	**Mina Array Bea**	**48.31**	**79**	P		**P**		**14 49 53.6**	**-0.5**
NVAR	**Mina Array Bea**	**48.31**	**79**	P		**P**		**14 49 53.6**	**-0.5**
	0.4nm,0.6s,baz=290,slow=8.1,SNR=3.6								
NVAR						LR	LR	15 08 37.9	
	comp=Z,28nm,20.9s,baz=56,slow=34								
ZALV	**Zalesovo Beam**	**49.09**	**309**	P		**P**		**14 49 58.6**	**-1.0**
ZALV	**Zalesovo Beam**	**49.09**	**309**	P		**P**		**14 49 58.6**	**-1.0**
	0.3nm,0.4s,baz=54,slow=7.3,SNR=2.8								
PDAR	**Pinedale Array**	**50.55**	**69**	P		**P**		**14 50 11.3**	**+0.1**
PDAR	**Pinedale Array**	**50.55**	**69**	P		**P**		**14 50 11.3**	**+0.1**
	1.0nm,0.7s,baz=323,slow=3.7,SNR=5.7								
KURK	**Kurchatov**	**54.08**	**308**	*e*P		**P**		**14 50 36.9**	**-0.1**
	9.9nm,0.9s								
MK31	**Makanchi Array**	**54.92**	**303**	*e*P		**P**		**14 50 41.9**	**-1.3**
MKAR	**Makanchi Array**	**54.92**	**303**	P		**P**		**14 50 42.1**	**-1.0**
MKAR	**Makanchi Array**	**54.92**	**303**	P		**P**		**14 50 42.1**	**-1.0**
	1.6nm,0.8s,baz=47,slow=4.8,SNR=12								
BVAR	**Borovoye Array**	**56.20**	**315**	P		**P**		**14 50 52.1**	**-0.2**
BVAR	**Borovoye Array**	**56.20**	**315**	P		**P**		**14 50 52.1**	**-0.2**
	1.5nm,0.6s,baz=54,slow=7.8,SNR=6.0								
MNTX	**Cornudas Mount**	**60.59**	**76**	*e*P		**P**		**14 51 23.3**	**+0.1**
	2.6nm,0.8s								
SCHQ	**Schefferville**	**61.69**	**35**	P		**P**		**14 51 29.7**	**-0.6**
SCHQ	**Schefferville**	**61.69**	**35**	P		**P**		**14 51 29.7**	**-0.6**
	1.5nm,0.6s,baz=356,slow=10,SNR=4.6								
AAK	**Ala-Archa**	**61.79**	**304**	*e*P		**P**		14 51 34.8	+3.4
	1.6nm,0.8s								
WMOK	**Wichita Mounta**	**62.16**	**69**	*e*P		**P**		**14 51 33.9**	**+0.1**
	3.0nm,1.2s								
FINES	**FINESS Array B**	**62.85**	**343**	P		**P**		**14 51 37.6**	**-0.3**
FINES	**FINESS Array B**	**62.85**	**343**	P		**P**		**14 51 37.6**	**-0.3**
	1.8nm,0.9s,baz=44,slow=8.5,SNR=5.7								
AKTO	**Aktyubinsk**	**63.23**	**319**	P		**P**		**14 51 40.6**	**-0.1**
AKTO	**Aktyubinsk**	**63.23**	**319**	P		**P**		**14 51 40.6**	**-0.1**
	1.7nm,0.6s,baz=44,slow=9.1,SNR=3.5								
TXAR	**Lajitas Array**	**63.32**	**76**	P		**P**		**14 51 41.6**	**-0.1**
TXAR	**Lajitas Array**	**63.32**	**76**	P		**P**		**14 51 41.6**	**-0.1**
	1.8nm,0.5s,baz=302,slow=5.3,SNR=44								
KKAR	**Karatay Array**	**63.40**	**307**	P		**P**		**14 51 43.8**	**+1.9**
	3.0nm,0.8s								
NOA	**NORSAR Array B**	**65.32**	**350**	P		**P**		**14 51 53.1**	**-1.2**
NOA	**NORSAR Array B**	**65.32**	**350**	P		**P**		**14 51 53.1**	**-1.2**
	0.3nm,0.5s,baz=13,slow=6.5,SNR=2.1								
HFS	**Hagfors**	**65.94**	**349**	P		**P**		**14 51 57.6**	**-0.6**
HFS	**Hagfors**	**65.94**	**349**	P		**P**		**14 51 57.6**	**-0.6**
	3.1nm,1.1s,baz=26,slow=3.8,SNR=7.4								
BRTR	**Keskin Array B**	**81.10**	**329**	P		**P**		**14 53 28.6**	**+0.7**
BRTR	**Keskin Array B**	**81.10**	**329**	P		**P**		**14 53 28.6**	**+0.7**
	1.2nm,0.8s,baz=68,slow=2.5,SNR=6.5								

*ISCJB **24** 14:42:08.8±0.2, 53°.11N±0°.05×172°.91E±0°.05, h10km, mb4.4/48, MS3.0/3, Error ellipse: s-maj=7.2km s-min=3.4km az=25.4*
*IDC **24** 14:42:08.9±0.4, 53°.07N×172°.88E, h0km, mb4.2/28, mb1 4.4/29, mb1mx4.3/38, mbtmp4.2/29, ML4.0/1, MS3.0/4, Ms1 3.1/4, ms1mx2.7/47, Error ellipse: s-maj=12.2km s-min=4.6km az=47.0*
*NEIC **24** 14:42:11.6±0.9, 52°.99N×172°.93E, h18km±6km, mb4.6/20, ML4.1(AEIC), Error ellipse: s-maj=8.6km s-min=4.3km az=186.0*
ISC 24 14:42:10.6±0.8, 53°.01N±0°.08×172°.90E±0°.04, h12km±5km, n226, σ0°.85/237, mb4.4/48, MS3.1/3, 36C-44D, Near Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**0.20**	**128**	*e*Pg		**Pb**		**14 42 14.8**	**-1.5**
FX1					Lg	Lg		14 42 17.4	
FX1					S	**Sb**		**14 42 18.0**	**-0.2**
FX1	**Attu Island--F**	**0.20**	**128**	Pg		**Pb**		**14 42 14.8**	**-1.5**
	8μm,0.3s,baz=250,slow=2.8,SNR=20								
FX1					Lg	Lg		14 42 17.4	
	10μm,0.3s,baz=63,slow=16,SNR=13								
SMY	**Shemya**	**0.78**	**111**	P		**Pb**		**14 42 24.7**	**-1.3**
SMY					S	**Sb**		**14 42 35.5**	**-1.0**
LSSA	**Little Sitkin**	**3.59**	**105**	P		**Pn**		**14 43 07.3**	**+1.2**
LSPA	**Little Sitkin**	**3.63**	**105**	P		**Pn**		**14 43 07.9**	**+1.4**
LSPA					S	**Sn**		**14 43 50.4**	**+1.2**
CESW	**Semis' Southwe**	**4.22**	**103**	P		**Pn**		**14 43 15.2**	**+0.4**
AMKA	**Amchitka**	**4.26**	**110**	P		**Pn**		**14 43 15.3**	**+0.1**
AMKA					S	**Sn**		**14 44 06.1**	**+1.2**
KOWE	**Korovin West**	**7.84**	**90**	P		**Pn**		**14 44 25.1**	**+0.7**
KOFP	**Korovin Flat P**	**7.95**	**90**	P		**Pn**		**14 44 08.1**	**+2.2**
PEA0B	**Petropavlovsk-**	**9.16**	**277**	*e*P		**Pn**		**14 44 25.1**	**+2.7**
PETK	**Petropavlovsk-**	**9.16**	**277**	Pn		**Pn**		**14 44 23.8**	**+1.4**
PETK					Sn	**Sn**		**14 46 02.3**	**-3.0**
PETK	**Petropavlovsk-**	**9.16**	**277**	Pn		**Pn**		**14 44 23.8**	**+1.4**
	1.6nm,0.3s,baz=93,slow=20,SNR=9.2								
PETK					Sn	**Sn**		**14 46 02.3**	**-3.0**
	0.9nm,0.3s,baz=104,slow=40,SNR=4.4								
PETK					LR	LR		14 47 57.6	
	comp=Z,58nm,19.8s,baz=260,slow=38								
BILL	**Bilibino**	**15.41**	**351**	*e*P		**P**		**14 45 50.4**	**-1.7**
	14nm,1.3s								
ASAJ	**Asahikawa**	**21.80**	**258**	P		**P**		**14 47 03.8**	**+1.5**
ASAJ	**Asahikawa**	**21.80**	**258**	P		**P**		**14 47 03.8**	**+1.5**
	6.7nm,0.8s,baz=66,slow=20,SNR=3.0								
ILAR	**Eielson Array**	**23.41**	**44**	LR		LR		14 56 58.4	
	comp=Z,31nm,18.9s,baz=26,slow=38								
INK	**Inuvik**	**29.19**	**38**	P		**P**		**14 48 11.5**	**+0.2**
INK					PcP	**PcP**		**14 51 17.2**	**-0.9**
INK	**Inuvik**	**29.19**	**38**	P		**P**		**14 48 11.5**	**+0.2**
	2.2nm,0.6s,baz=263,slow=8.5,SNR=4.0								
INK					PcP	**PcP**		**14 51 17.2**	**-0.9**
	1.8nm,0.9s,baz=258,slow=1.6,SNR=3.2								
MJAR	**Matsushiro Arr**	**29.25**	**250**	P		**P**		**14 48 14.1**	**+1.9**
MJAR	**Matsushiro Arr**	**29.25**	**250**	P		**P**		**14 48 14.1**	**+1.9**
	1.0nm,0.7s,baz=46,slow=7.9,SNR=6.0								
KSRS	**Korea Array**	**34.65**	**262**	P		**P**		**14 49 01.4**	**+1.9**
	2.9nm,0.8s,baz=52,slow=8.0,SNR=14								
KSAR	**Wonju Array Be**	**34.68**	**262**	P		**P**		**14 49 01.4**	**+1.6**
BBB	**Bella Bella**	**34.96**	**67**	LR		LR		15 01 54.4	
	comp=Z,35nm,19.8s,baz=262,slow=34								
YKA	**Yellowknife Ar**	**37.81**	**46**	P		**P**		**14 49 27.4**	**+1.1**
YKA					PcP	**PcP**		**14 51 42.8**	**+0.2**
YKA	**Yellowknife Ar**	**37.81**	**46**	P		**P**		**14 49 27.4**	**+1.1**
	1.4nm,0.8s,baz=289,slow=7.8,SNR=5.6								
YKA					PcP	**PcP**		**14 51 42.7**	**+0.2**
	0.6nm,0.6s,baz=294,slow=3.4,SNR=6.6								
ULN	**Ulaanbaatar**	**40.92**	**290**	*e*P		**P**		**14 49 52.7**	**0.0**
	5.7nm,1.2s								
SONM	**Songino Array**	**41.31**	**291**	P		**P**		**14 49 56.6**	**+0.7**
SONM					PcP	**PcP**		**14 51 53.8**	**-0.3**
SONM	**Songino Array**	**41.31**	**291**	P		**P**		**14 49 56.6**	**+0.7**
	2.2nm,0.6s,baz=59,slow=8.0,SNR=9.4								
SONM					PcP	**PcP**		**14 51 53.8**	**-0.3**
	1.0nm,0.8s,baz=81,slow=3.5,SNR=3.0								
YBH	**Yreka Blue Hor**	**43.62**	**78**	LR		LR		15 05 52.1	
	comp=Z,32nm,20.5s,baz=303,slow=33								
BSMT	**Bassoo Peak**	**44.55**	**66**	*e*P		**P**		**14 50 22.2**	**0.0**
	3.2nm,0.9s								
A14A	**Double T Ranch**	**44.66**	**64**	⇑P		**P**		**14 50 21.6**	**-1.4**
	baz=44								
A16A	**West Butte Ran**	**45.67**	**63**	⇑P		**P**		**14 50 30.4**	**-0.5**
	baz=46								
D14A	**Greenough**	**45.71**	**66**	⇓P		**P**		**14 50 30.9**	**-0.4**
	baz=46								
C15A	**Salmond Ranch,**	**45.80**	**65**	P		**P**		**14 50 32.6**	**+0.6**
	baz=46,SNR=5.7								
D15A	**Lincoln**	**46.28**	**66**	⇓P		**P**		**14 50 35.0**	**-0.9**
	baz=46								
E15A	**Deer Lodge**	**46.58**	**67**	⇓P		**P**		**14 50 37.9**	**-0.3**
	baz=46								
I12A	**Atlanta**	**46.77**	**71**	⇑P		**P**		**14 50 39.7**	**-0.1**
	baz=47								
B18A	**Beardsley Farm**	**46.97**	**63**	⇑P		**P**		**14 50 41.1**	**0.0**
	baz=47								
A19A	**Klindworth Far**	**47.21**	**62**	⇑P		**P**		**14 50 43.0**	**0.0**
	baz=47								
HLID	**Hailey**	**47.32**	**71**	*e*P		**P**		**14 50 43.9**	**-0.2**
	1.2nm,0.8s								
HLID	**Hailey**	**47.32**	**71**	⇑P		**P**		**14 50 44.2**	**+0.1**
	baz=47								
MCMT	**McKenzie Canyo**	**47.43**	**68**	*e*P		**P**		**14 50 44.6**	**-0.4**
	0.7nm,0.5s								
F16A	**Kennard Place,**	**47.53**	**67**	⇓P		**P**		**14 50 44.7**	**-0.9**
	baz=47								
E17A	**Martinsdale**	**47.54**	**66**	⇑P		**P**		**14 50 44.7**	**-1.0**
	baz=47								
J13A	**Cove Ranch, Pi**	**47.56**	**71**	⇓P		**P**		**14 50 46.1**	**+0.2**
	baz=47								
I14A	**Mackay**	**47.64**	**70**	⇑P		**P**		**14 50 47.0**	**+0.4**
	baz=48,SNR=8.1								
G16A	**Moss Hill, Enn**	**47.77**	**67**	⇓P		**P**		**14 50 47.5**	**0.0**
	baz=48								
SPITS	**Spitsbergen Ar**	**48.29**	**354**	P		**P**		**14 50 51.2**	**+0.2**
SPITS	**Spitsbergen Ar**	**48.29**	**354**	P		**P**		**14 50 51.2**	**+0.2**
	1.2nm,0.6s,baz=41,slow=7.0,SNR=9.1								
NVAR	**Mina Array Bea**	**48.33**	**79**	P		**P**		**14 50 51.7**	**-0.3**
NVAR	**Mina Array Bea**	**48.33**	**79**	P		**P**		**14 50 51.7**	**-0.3**
	1.2nm,0.8s,baz=286,slow=7.9,SNR=7.1								
H16A	**Russell Place,**	**48.40**	**68**	⇓P		**P**		**14 50 52.5**	**0.0**
	baz=48,SNR=5.6								
ZALV	**Zalesovo Beam**	**49.11**	**309**	P		**P**		**14 50 56.0**	**-1.5**
ZALV	**Zalesovo Beam**	**49.11**	**309**	P		**P**		**14 50 56.0**	**-1.5**
	0.9nm,0.5s,baz=58,slow=7.3,SNR=5.7								
G20A	**Bridger**	**49.76**	**65**	⇓P		**P**		**14 51 03.0**	**+0.2**
	baz=50								
R11A	**Troy Canyon, C**	**49.99**	**77**	⇓P		**P**		**14 51 04.6**	**0.0**
	baz=50								
DUG	**Dugway**	**50.39**	**73**	⇓P		**P**		**14 51 08.1**	**+0.4**
	baz=50								
F22A	**Rosebud**	**50.47**	**64**	⇓P		**P**		**14 51 08.3**	**+0.2**
	baz=50								
PDAR	**Pinedale Array**	**50.58**	**69**	P		**P**		**14 51 09.0**	**-0.1**
PDAR	**Pinedale Array**	**50.58**	**69**	P		**P**		**14 51 09.0**	**-0.1**
	2.4nm,0.7s,baz=291,slow=4.1,SNR=13								
I20A	**Worland**	**50.62**	**67**	⇑P		**P**		**14 51 09.5**	**+0.3**
	baz=50								
I22A	**9 Mile Ranch,**	**51.56**	**66**	⇓P		**P**		**14 51 14.5**	**-1.9**
	baz=51								
J22A	**Midwest**	**51.88**	**66**	⇑P		**P**		**14 51 19.2**	**+0.4**
	baz=52,SNR=8.4								
Q16A	**Castle Valley**	**52.19**	**73**	⇑P		**P**		**14 51 21.8**	**+0.6**
	baz=52								
L21A	**Rawlins**	**52.33**	**68**	⇓P		**P**		**14 51 21.0**	**-1.2**
	baz=52								
SRU	**San Rafael**	**52.43**	**73**	⇓P		**P**		**14 51 22.2**	**-0.8**
	baz=52								
O19A	**Miners Draw (B**	**52.44**	**71**	P		**P**		**14 51 23.5**	**+0.5**
	baz=52,SNR=6.2								
M21A	**Separation Pea**	**52.57**	**68**	⇑P		**P**		**14 51 24.0**	**-0.1**
	baz=52								
N20A	**Spence Gulch,**	**52.57**	**70**	⇓P		**P**		**14 51 21.7**	**-2.4**
	baz=52								
P19A	**Cripple Cowboy**	**52.97**	**71**	P		**P**		**14 51 27.1**	**+0.1**
	baz=53,SNR=6.8								
O20A	**White River Ci**	**53.05**	**70**	⇓P		**P**		**14 51 27.7**	**+0.1**
	baz=53								
L23A	**Garrett**	**53.16**	**67**	⇓P		**P**		**14 51 27.4**	**-1.0**
	baz=53								
U15A	**North Rim**	**53.22**	**76**	P		**P**		**14 51 29.4**	**+0.5**
	baz=53,SNR=5.2								
S18A	**Hurst Farm, Bl**	**53.70**	**74**	⇑P		**P**		**14 51 32.3**	**-0.1**
	baz=54,SNR=8.6								
KURK	**Kurchatov**	**54.10**	**308**	*e*P		**P**		**14 51 34.5**	**-0.3**
	18nm,0.9s								
O23A	**Lake Granby, G**	**54.32**	**69**	⇑P		**P**		**14 51 38.4**	**+1.4**
	baz=54								
MK31	**Makanchi Array**	**54.93**	**303**	*e*P		**P**		**14 51 40.2**	**-0.8**
MKAR	**Makanchi Array**	**54.93**	**303**	P		**P**		**14 51 40.2**	**-0.8**
MKAR	**Makanchi Array**	**54.93**	**303**	P		**P**		**14 51 40.2**	**-0.8**
	1.4nm,0.3s,baz=46,slow=6.5,SNR=27								
ARCES	**ARCESS Array B**	**55.47**	**347**	P		**P**		**14 51 44.0**	**-0.5**
ARCES	**ARCESS Array B**	**55.47**	**347**	P		**P**		**14 51 44.0**	**-0.5**
	1.5nm,0.8s,baz=32,slow=8.6,SNR=4.0								
S22A	**4UR Ranch, Cre**	**55.48**	**71**	P		**P**		**14 51 46.6**	**+1.2**
	baz=55,SNR=8.7								
R23A	**Moffat**	**55.75**	**70**	⇑P		**P**		**14 51 48.2**	**+0.8**
	baz=56,SNR=5.1								
P25A	**Willow Gulch B**	**55.78**	**68**	⇑P		**P**		**14 51 49.2**	**+1.9**
	baz=56,SNR=6.7								
X18A	**Snowflake**	**55.91**	**76**	⇓P		**P**		**14 51 48.7**	**+0.3**
	baz=56								
U21A	**Nageezi**	**55.92**	**73**	⇓P		**P**		**14 51 48.9**	**+0.4**
	baz=56								
R24A	**Sanders Place,**	**56.13**	**70**	P		**P**		**14 51 50.9**	**+0.9**
	baz=56,SNR=7.9								
Q25A	**Bedland, Calha**	**56.14**	**69**	P		**P**		**14 51 51.2**	**+1.1**
	baz=56,SNR=7.6								
P26A	**Davis Ranch, A**	**56.20**	**68**	⇑P		**P**		**14 51 51.8**	**+1.4**
	baz=56								
BVAR	**Borovoye Array**	**56.23**	**315**	P		**P**		**14 51 49.9**	**-0.3**
BVAR	**Borovoye Array**	**56.23**	**315**	P		**P**		**14 51 49.9**	**-0.3**
	2.8nm,0.4s,baz=56,slow=7.1,SNR=16								
U22A	**Llaves**	**56.42**	**73**	⇓P		**P**		**14 51 53.0**	**+0.9**
	baz=56,SNR=5.4								
S24A	**Houchin Ranch,**	**56.48**	**71**	P		**P**		**14 51 53.8**	**+1.2**
	baz=56,SNR=5.7								
R25A	**Fountain

X30A	**Coker Ranch, T**	**61.22**	**70**	⇓P		**P**	**14 52 25.6**	**+0.3**
	baz=61							
425A	**Indio Mountain**	**61.50**	**76**	P		**P**	**14 52 27.9**	**+0.6**
	baz=61,SNR=10							
Z29A	**Hungry Hill Ra**	**61.60**	**72**	P		**P**	**14 52 28.1**	**+0.2**
	baz=61,SNR=7.7							
128A	**Castleberry Fa**	**61.62**	**73**	P		**P**	**14 52 28.3**	**+0.3**
	baz=61,SNR=6.1							
326A	**Caldwell Ranch**	**61.70**	**75**	⇑P		**P**	**14 52 29.0**	**+0.4**
	baz=62,SNR=5.5							
SCHQ	**Schefferville**	**61.73**	**35**	P		**P**	**14 52 28.3**	**0.0**
SCHQ	**Schefferville**	**61.73**	**35**	P		**P**	**14 52 28.3**	**0.0**
	8.1nm,0.7s,baz=338,slow=7.5,SNR=15							
AAK	**Ala-Archa**	**61.80**	**304**	*eP*		**P**	**14 52 28.9**	**-0.3**
	4.5nm,0.8s							
Z30A	**Sanderson Ranc**	**61.91**	**71**	P		**P**	**14 52 30.2**	**+0.3**
	baz=62,SNR=11							
EKS2	**Erkin-Say**	**62.14**	**305**	*eP*		**P**	**14 52 31.8**	**+0.4**
	7.9nm,0.8s							
426A	**McDonald Obser**	**62.15**	**75**	P		**P**	**14 52 31.9**	**+0.1**
	baz=62,SNR=6.4							
WMOK	**Wichita Mounta**	**62.19**	**69**	*eP*		**P**	**14 52 31.8**	**+0.1**
	4.1nm,0.8s							
KAF	**Kangasniemi**	**62.22**	**343**	*ep*		**P**	**14 52 30.4**	**-1.1**
	2.0nm,0.5s							
Y32A	**R-V Farms, Ver**	**62.35**	**70**	P		**P**	**14 52 33.3**	**+0.5**
	baz=62,SNR=5.9							
427A	**Hayter Ranch,**	**62.38**	**75**	⇓P		**P**	**14 52 33.2**	**0.0**
	baz=62							
Z31A	**Sharp Cattle R**	**62.45**	**71**	⇑P		**P**	**14 52 33.5**	**0.0**
	baz=62,SNR=7.0							
130A	**Snyder**	**62.51**	**72**	⇓P		**P**	**14 52 34.4**	**+0.4**
	baz=62							
526A	**Mary Lane Ranc**	**62.56**	**76**	⇑P		**P**	**14 52 35.0**	**+0.5**
	baz=62,SNR=6.7							
527A	**Woodward Ranch**	**62.77**	**75**	⇓P		**P**	**14 52 36.0**	**+0.1**
	baz=63							
131A	**Roby**	**62.79**	**71**	⇑P		**P**	**14 52 36.3**	**+0.5**
	baz=63,SNR=6.0							
FINES	**FINESS Array B**	**62.89**	**343**	P		**P**	**14 52 35.9**	**0.0**
FINES	**FINESS Array B**	**62.89**	**343**	P		**P**	**14 52 35.9**	**0.0**
	1.5nm,0.6s,baz=26,slow=7.3,SNR=12							
428A	**Kincaid Ranch,**	**62.89**	**74**	P		**P**	**14 52 37.2**	**+0.7**
	baz=63,SNR=12							
626A	**Big Bend Ranch**	**62.91**	**76**	P		**P**	**14 52 36.9**	**+0.3**
	baz=63,SNR=8.4							
230A	**Sterling City**	**62.95**	**72**	⇓P		**P**	**14 52 37.2**	**+0.3**
	baz=63,SNR=9.4							
528A	**Cox Ranch, San**	**63.24**	**75**	P		**P**	**14 52 39.4**	**+0.4**
	baz=63,SNR=10							
ABTX	**Abilene, Hawle**	**63.25**	**71**	⇑P		**P**	**14 52 39.3**	**+0.5**
	baz=63,SNR=7.2							
AKTO	**Aktyubinsk**	**63.26**	**319**	P		**P**	**14 52 38.8**	**+0.2**
AKTO	**Aktyubinsk**	**63.26**	**319**	P		**P**	**14 52 38.8**	**+0.2**
	3.9nm,0.6s,baz=43,slow=8.4,SNR=12							
330A	**Mertzon**	**63.26**	**73**	⇓P		**P**	**14 52 38.9**	**-0.1**
	baz=63							
TXAR	**Lajitas Array**	**63.34**	**76**	P		**P**	**14 52 39.8**	**+0.2**
TXAR	**Lajitas Array**	**63.34**	**76**	P		**P**	**14 52 39.8**	**+0.2**
	7.0nm,0.6s,baz=304,slow=4.5,SNR=46							
KKAR	**Karatay Array**	**63.41**	**307**	*eP*		**P**	**14 52 39.8**	**+0.1**
	5.3nm,0.7s							
KKAR				*e*		**pP**	**14 52 43.2**	**-0.4**
ABKAR	**Akbulak array**	**63.41**	**318**	*eP*		**P**	**14 52 39.6**	**0.0**
	1.8nm,0.4s							
ABKAR				*e*		**pP**	**14 52 43.5**	**0.0**
627A	**Terlingua Ranc**	**63.42**	**76**	P		**P**	**14 52 40.4**	**+0.3**
	baz=63,SNR=8.6							
429A	**Davenport Ranc**	**63.42**	**74**	P		**P**	**14 52 40.0**	**-0.1**
	baz=63,SNR=6.1							
529A	**Stev Forest Ra**	**63.60**	**74**	⇑P		**P**	**14 52 41.6**	**+0.3**
	baz=63							
628A	**Black Gap, Mar**	**63.69**	**75**	P		**P**	**14 52 42.1**	**+0.3**
	baz=64,SNR=6.6							
430A	**Baggett Ranch,**	**63.69**	**73**	P		**P**	**14 52 42.0**	**+0.3**
	baz=64,SNR=7.4							
530A	**J-C Ranch, Com**	**64.10**	**74**	P		**P**	**14 52 44.8**	**+0.3**
	baz=64,SNR=11							
332A	**Millersview**	**64.11**	**72**	P		**P**	**14 52 44.8**	**+0.2**
	baz=64,SNR=11							
431A	**Sonora**	**64.13**	**73**	P		**P**	**14 52 44.7**	**0.0**
	baz=64,SNR=8.4							
531A	**Rocksprings**	**64.55**	**73**	⇓P		**P**	**14 52 47.2**	**-0.2**
	baz=64							
JCT	**Junction City**	**64.74**	**72**	*eP*		**P**	**14 52 48.6**	**-0.1**
	7.0nm,0.7s							
532A	**Rocksprings**	**64.94**	**73**	⇓P		**P**	**14 52 49.6**	**-0.4**
	baz=65							
NB2	**NORSAR Subarra**	**65.36**	**350**	P		**P**	**14 52 52.1**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=12,slow=6.5							
NOA	**NORSAR Array B**	**65.36**	**350**	P		**P**	**14 52 52.2**	**-0.1**
NOA	**NORSAR Array B**	**65.36**	**350**	P		**P**	**14 52 52.2**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=12,slow=6.5,SNR=5.9							
CM31	**Chiang Mai Arr**	**65.84**	**269**	*eP*		**P**	**14 52 57.1**	**+1.2**
	comp=Z,7.4nm,0.7s							
732A	**Laxson Ranch,**	**65.95**	**74**	P		**P**	**14 52 56.9**	**+0.4**
	baz=66,SNR=6.1							
HFS	**Hagfors**	**65.98**	**349**	P		**P**	**14 52 55.8**	**-0.4**
HFS	**Hagfors**	**65.98**	**349**	P		**P**	**14 52 55.8**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=28,slow=3.5,SNR=10							
ALLY	**Alegheny Colle**	**66.71**	**51**	*eP*		**P**	**14 53 00.7**	**-0.4**
	comp=Z,17nm,0.9s							
SWET	**Sewanee**	**68.80**	**59**	*eP*		**P**	**14 53 13.7**	**-0.8**
	comp=Z,3.8nm,0.6s							
EKA	**Eskdalemuir Ar**	**71.97**	**358**	P		**P**	**14 53 33.1**	**-0.4**
EKA	**Eskdalemuir Ar**	**71.97**	**358**	P		**P**	**14 53 33.1**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=10,slow=5.1,SNR=6.8							
AKASG	**Malin Array Be**	**72.22**	**337**	P		**P**	**14 53 35.1**	**+0.1**
AKASG	**Malin Array Be**	**72.22**	**337**	P		**P**	**14 53 35.1**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=24,slow=6.1,SNR=6.5							
AK02	**Malin Array Si**	**72.27**	**337**	*eP*		**P**	**14 53 34.5**	**-0.8**
KBZ	**Khabaz**	**74.50**	**325**	P		**P**	**14 53 49.9**	**+1.3**
KBZ	**Khabaz**	**74.50**	**325**	P		**P**	**14 53 49.9**	**+1.3**
	comp=Z,2.1nm,0.7s,baz=278,slow=2.5,SNR=4.4							
BUR08	**Bucovina Ar. S**	**76.02**	**338**	*eP*		**P**	**14 53 58.1**	**+0.7**
CTA	**Charters Tower**	**76.37**	**206**	P		**P**	**14 53 59.5**	**0.0**
CTA	**Charters Tower**	**76.37**	**206**	P		**P**	**14 53 59.5**	**0.0**
	comp=Z,3.4nm,0.6s,baz=9.1,slow=9.8,SNR=5.4							
GERES	**GERESS Array B**	**77.00**	**346**	P		**P**	**14 54 03.5**	**+0.5**
GERES	**GERESS Array B**	**77.00**	**346**	P		**P**	**14 54 03.5**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=28,slow=6.0,SNR=7.8							
WRA	**Warramunga Arr**	**79.96**	**217**	P		**P**	**14 54 18.3**	**-1.1**
WRA	**Warramunga Arr**	**79.96**	**217**	P		**P**	**14 54 18.3**	**-1.1**
	comp=Z,3.4nm,0.8s,baz=32,slow=6.2,SNR=7.6							
BR131	**Keskin Array S**	**81.14**	**329**	*eP*		**P**	**14 54 26.6**	**+0.8**
	comp=Z,1.0nm,0.6s							
BRTR	**Keskin Array B**	**81.14**	**329**	P		**P**	**14 54 25.9**	**+0.1**
BRTR	**Keskin Array B**	**81.14**	**329**	P		**P**	**14 54 25.9**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=55,slow=3.2,SNR=7.0							
FITZ	**Fitzroy Crossi**	**81.72**	**225**	P		**P**	**14 54 28.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**81.72**	**225**	P		**P**	**14 54 28.7**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=4.1,slow=6.9,SNR=7.0							
ASAR	**Alice Springs**	**83.54**	**215**	P		**P**	**14 54 38.0**	**-0.3**
ASAR	**Alice Springs**	**83.54**	**215**	P		**P**	**14 54 38.0**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=20,slow=5.4,SNR=7.3							
MAW	**Mawson**	**144.61**	**218**	PKP		**PKPab**	**15 01 43.4**	**-0.7**
MAW	**Mawson**	**144.61**	**218**	PKP		**PKPab**	**15 01 43.4**	**-0.7**
	comp=Z,6.1nm,0.6s,baz=94,slow=3.7,SNR=12							
BOSA	**Boshof**	**145.93**	**303**	PKPbc		**PKPdf**	**15 01 48.2**	**-0.9**
BOSA	**Boshof**	**145.93**	**303**	PKPbc		**PKPdf**	**15 01 48.2**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=31,slow=1.9,SNR=3.4							

*ISCJB **24** 14:43:14.0±1.2,41°.23N±0°.04×22°.78E±0°.07,h6km±10km, Error ellipse: s-maj=9.1km s-min=6.7km az=15.9*
*SKO **24** 14:43:14.3,41°.35N×22°.69E,h15km,M1.2,ML1.5*
*ATH **24** 14:43:14.6,41°.28N×22°.70E,h21km±3km,MD2.9/5*
*CSEM **24** 14:43:14.9±0.2,41°.27N×22°.77E,h9km±1km,MD2.9, Error ellipse: s-maj=5.6km s-min=4.9km az=27.0*

ISC 24 14:43:14.6±0.9,**41°29N**±0°.04×**22°.69E**±0°.04,**h14**km±8km, **n13,σ0s54/24,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**291**	*i* Pg	**Pg**	**14 43 17.6**	**-0.2**
VAY				*i* Sg	**Sg**	**14 43 19.5**	**-0.4**
VAY				*e*Lg	Lg	14 43 19.5	
	comp=E,289nm,0.3s						
VAY				*e*Lg	Lg	14 43 19.6	
	comp=N,338nm,0.2s						
VAY	**Valandovo**	**0.10**	**291**	*i* Pg	**Pg**	**14 43 18.0**	**+0.3**
VAY				*i* Sg	**Sg**	**14 43 20.0**	**+0.1**
VAY				*e*Lg	Lg	14 43 20.1	
	comp=N,338nm,0.2s						
GRG	**Griva**	**0.40**	**214**	*e*PB	**Pb**	**14 43 23.4**	**0.0**
GRG				*e*SB	**Sg**	**14 43 28.5**	**+0.6**
GRG	**Griva**	**0.40**	**214**	*e*Pb	**Pb**	**14 43 23.4**	**0.0**
GRG				*e*Sb	**Sg**	**14 43 28.5**	**+0.6**
SOH	**Sokhos**	**0.68**	**133**	*e*PN	**Pg**	**14 43 27.6**	**-0.3**
SOH				*e*SN	**Sg**	**14 43 37.3**	**+0.4**
SOH	**Sokhos**	**0.68**	**133**	*e*Pn	**Pg**	**14 43 27.6**	**-0.3**
SOH				*e*Sn	**Sg**	**14 43 37.3**	**+0.4**
NVR	**Nevrokopi**	**0.88**	**85**	*e*PN	**Pn**	**14 43 31.7**	**-0.9**
NVR				*e*SN	**Sg**	**14 43 43.7**	**+0.5**
NVR	**Nevrokopi**	**0.88**	**85**	*e*Pn	**Pn**	**14 43 31.7**	**-0.9**
NVR				*e*Sn	**Sg**	**14 43 43.7**	**+0.5**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pb**	**14 43 35.2**	**+0.2**
PLG				*e*SN	**Sb**	**14 43 49.7**	**+0.8**
PLG	**Polygyros**	**1.07**	**148**	*e*Pn	**Pb**	**14 43 35.2**	**+0.2**
PLG				*e*Sn	**Sb**	**14 43 49.7**	**+0.8**
VTS	**Vitosha**	**1.36**	**16**	*e*PN	**Pg**	**14 43 41.1**	**+0.3**
VTS				*e*Sn	**Sg**	**14 43 59.2**	**+0.7**
PAIG	**Paliouri**	**1.55**	**151**	*e*PN	**Pb**	**14 43 42.7**	**-0.4**
PAIG	**Paliouri**	**1.55**	**151**	*e*Pn	**Pb**	**14 43 42.7**	**-0.4**

*ISCJB **24** 14:44:37.5±0.8,63°.49N±0°.02×151°.24W±0°.06,h13km±6km, mb4.1/11,MS2.8/1,Error ellipse: s-maj=4.6km s-min=3.9km az=22.8*
*NEIC **24** 14:44:38.1,63°.45N×151°.18W,h10km,mb4.3/4, ML3.7(AEIC),After AEIC.*
*IDC **24** 14:44:42.4±2.2,63°.62N×151°.24W,h33km±19km,mb3.7/7, mb1 3.8/12,mb1mx3.6/30,mbtmpg3.7/12,ML3.4/5,MS2.8/2, Ms1 2.8/2,ms1mx2.4/40,Error ellipse: s-maj=19.1km s-min=12.1km az=111.0*

ISC 24 14:44:38.5±1.3,**63°.46N**±0°.03×**151°.23W**±0°.03,**h12**km±8km, **n85,σ1s02/93,mb4.0/11,Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRF	**Thorofare Moun**	**0.42**	**91**	P	**Pg**	**14 44 45.9**	**-1.0**
TRF				S	**Sg**	**14 44 51.8**	**-0.8**
CHUM	**Lake Minchumin**	**0.64**	**312**	P	**Pb**	**14 44 51.6**	**0.0**
CHUM				S	**Sn**	**14 45 01.4**	**-2.0**
PPLA	**Purkeypile**	**0.71**	**218**	P	**Pb**	**14 44 50.9**	**-2.0**
HUR	**Hurricane**	**0.87**	**123**	P	**Pb**	**14 44 53.8**	**-1.7**
MCK	**McKinley**	**1.06**	**74**	*e*P	**Pb**	**14 44 58.0**	**-0.8**
RND	**Reindeer**	**1.07**	**92**	P	**Pb**	**14 44 57.5**	**-1.4**
RND				S	**Sg**	**14 45 14.9**	**+1.9**
CUT	**Chulitna**	**1.15**	**157**	P	**Pn**	**14 44 58.7**	**-1.7**
NEA	**Nenana**	**1.47**	**39**	P	**Pn**	**14 45 04.0**	**-0.8**
SKT	**Skwentna**	**1.49**	**185**	P	**Pn**	**14 45 04.5**	**-0.6**
SKT				S	**Sn**	**14 45 23.8**	**-0.8**
MLY	**Manley**	**1.59**	**8**	P	**Pn**	**14 45 06.8**	**+0.4**
WRH	**Wood River Hil**	**1.72**	**52**	P	**Pn**	**14 45 07.4**	**-0.8**
DHY	**Denali Highway**	**1.79**	**101**	P	**Pn**	**14 45 09.1**	**-0.1**
DHY				S	**Sn**	**14 45 32.6**	**+0.6**
CCB	**Clear Creek Bu**	**1.92**	**50**	P	**Pn**	**14 45 10.2**	**-0.8**
STLK	**Strandline Lak**	**1.99**	**188**	P	**Pn**	**14 45 11.7**	**-0.3**
MDM	**Murphy Dome**	**2.00**	**40**	P	**Pn**	**14 45 11.5**	**-0.5**
MDM				S	**Sb**	**14 45 39.8**	**+0.3**
SUA	**Susitna One**	**2.02**	**173**	P	**Pn**	**14 45 12.0**	**-0.4**
COLA	**College**	**2.05**	**45**	P	**Pn**	**14 45 12.1**	**-0.6**
PMR	**Palmer**	**2.12**	**152**	P	**Pn**	**14 45 12.9**	**-0.7**
SML	**Sawmill**	**2.13**	**140**	*e*P	**Pn**	**14 45 13.4**	**-0.5**
TT01	**Tatalina**	**2.24**	**258**	P	**Pn**	**14 45 14.9**	**-0.5**
BGL	**Barrier Glacie**	**2.27**	**194**	P	**Pn**	**14 45 16.7**	**+0.8**
ILAR	**Eielson Array**	**2.31**	**53**	Pn	**Pn**	**14 45 15.7**	**-0.7**
ILAR				Pg	**Pg**	**14 45 23.1**	**+0.4**
ILAR				Lg	Lg	14 45 51.1	
ILAR	**Eielson Array**	**2.31**	**53**	Pn	**Pn**	**14 45 15.7**	**-0.7**
	2.2nm,0.3s,baz=233,slow=14,SNR=310						
ILAR				Pg	**Pg**	**14 45 23.1**	**+0.4**
	13nm,0.3s,baz=234,slow=17,SNR=89						
ILAR				Lg	Lg	14 45 51.1	
	51nm,0.3s,baz=231,slow=29,SNR=18						
IL1	**Eielson Array**	**2.32**	**53**	P	**Pn**	**14 45 15.6**	**-0.8**
SPU	**Mount Spurr**	**2.32**	**190**	P	**Pn**	**14 45 16.8**	**+0.3**
CKL	**Chakachamna La**	**2.33**	**193**	P	**Pn**	**14 45 17.0**	**+0.3**
PAX	**Paxson**	**2.66**	**98**	P	**Pn**	**14 45 21.5**	**+0.3**
IM3	**Indian Mountai**	**2.75**	**338**	P	**Pn**	**14 45 23.1**	**+0.7**
DFR	**Drift River**	**2.96**	**194**	P	**Pn**	**14 45 26.2**	**+0.9**
HARP	**HAARP**	**2.97**	**108**	P	**Pn**	**14 45 26.7**	**+1.2**
SLKM	**Skilak Lake**	**3.00**	**170**	P	**Pn**	**14 45 25.9**	**0.0**
RSO	**Redoubt South**	**3.10**	**194**	*e*P	**Pn**	**14 45 27.4**	**+0.1**
DOT	**Dot Lake**	**3.21**	**83**	*e*P	**Pn**	**14 45 27.9**	**-0.9**
PRP	**Porcupine Dome**	**3.22**	**48**	P	**Pn**	**14 45 28.8**	**-0.1**
VLZ	**Valdez**	**3.27**	**133**	P	**Pn**	**14 45 30.0**	**+0.5**
MENT	**Mentasta**	**3.44**	**95**	*e*P	**Pn**	**14 45 33.0**	**+1.0**
DIV	**Divide**	**3.46**	**130**	P	**Pn**	**14 45 32.8**	**+0.6**
SEW	**Seward**	**3.48**	**165**	*e*P	**Pn**	**14 45 34.3**	**+2.0**
BRLK	**Bradley Lake**	**3.72**	**177**	P	**Pn**	**14 45 36.3**	**+0.7**
COLD	**Coldfoot**	**3.81**	**6**	*e*P	**Pn**	**14 45 37.8**	**+0.9**
EYAK	**Cordova Ski Ar**	**3.90**	**136**	P	**Pn**	**14 45 39.2**	**+1.0**
VRDI	**Verde Repeater**	**4.26**	**118**	P	**Pn**	**14 45 44.6**	**+1.3**
BCA3	**Beaver Creek A**	**4.29**	**91**	P	**Pn**	**14 45 43.1**	**-0.4**
MCARA	**McCarthy VSAT**	**4.35**	**115**	P	**Pn**	**14 45 46.0**	**+1.7**
EGAK	**Eagle**	**4.61**	**69**	*e*P	**Pn**	**14 45 46.9**	**-0.9**
BALM	**Baldy**	**4.81**	**116**	P	**Pn**	**14 45 51.8**	**+1.0**
BM3	**Burnt Mountain**	**4.84**	**32**	P	**Pn**	**14 45 50.6**	**-0.4**
KIAG	**Kiagna River**	**4.87**	**118**	P	**Pn**	**14 45 52.6**	**+1.0**
BARN	**Barnard Glacie**	**5.08**	**114**	P	**Pn**	**14 45 56.2**	**+1.7**
GRNC	**Granite Creek**	**5.23**	**117**	P	**Pn**	**14 45 57.3**	**+0.7**
DAWY	**Dawson**	**5.29**	**78**	P	**Pn**	**14 45 56.9**	**-0.4**
KDAK	**Kodiak Island**	**5.74**	**187**	Pn	**Pn**	**14 46 03.9**	**+0.5**
KDAK				Sn	**Sn**	**14 47 06.6**	**-2.4**
KDAK	**Kodiak Island**	**5.74**	**187**	Pn	**Pn**	**14 46 03.9**	**+0.5**
	1.8nm,0.3s,baz=43,slow=7.5,SNR=7.9						
KDAK				Sn	**Sn**	**14 47 06.6**	**-2.4**
	1.3nm,0.3s,baz=162,slow=20,SNR=3.0						
SAMH	**Samovar Hills**	**5.97**	**119**	P	**Pn**	**14 46 08.8**	**+2.1**
HYT	**Haines Junctio**	**6.95**	**106**	P	**Pn**	**14 46 21.4**	**+1.3**
TNA	**Tin City**	**7.50**	**294**	P	**Pn**	**14 46 28.9**	**+1.4**
INK	**Inuvik**	**8.71**	**48**	Pn	**Pn**	**14 46 44.1**	**+0.1**
INK				Lg	Lg	14 49 14.8	
INK	**Inuvik**	**8.71**	**48**	Pn	**Pn**	**14 46 44.1**	**+0.1**
	0.5nm,0.3s,baz=244,slow=17,SNR=25						
INK				Lg	Lg	14 49 14.8	
	0.2nm,0.3s,baz=312,slow=14,SNR=2.1						
INK				LR	LR	14 50 46.3	
	comp=Z,53nm,20.3s,baz=290,slow=42						
DLBC	**Dease Lake**	**11.44**	**106**	Lg	Lg	14 50 32.2	
	0.1nm,0.3s,baz=75,slow=20,SNR=2.6						
YKW3	**Yellowknife Ar**	**16.50**	**77**	*e*P	**P**	**14 48 32.2**	**+0.2**
	0.1nm,0.7s						
YKA	**Yellowknife Ar**	**16.53**	**77**	Pn	**Pn**	**14 48 28.8**	**-1.0**
YKA	**Yellowknife Ar**	**16.53**	**77**	Pn	**Pn**	**14 48 28.8**	**-1.0**
	0.2nm,0.3s,baz=293,slow=11,SNR=19						
BBB	**Bella Bella**	**16.59**	**122**	Pn	**P**	**14 48 35.2**	**+2.1**
BBB	**Bella Bella**	**16.59**	**122**	Pn	**P**	**14 48 35.2**	**+2.1**
	0.1nm,0.3s,baz=305,slow=14,SNR=3.8						
NEW	**Newport**	**24.05**	**113**	LR	LR	15 01 08.4	
	comp=Z,30nm,18.4s,baz=59,slow=41						
PDAR	**Pinedale Array**	**31.62**	**111**	P	**P**	**14 51 02.1**	**+0.9**
PDAR	**Pinedale Array**	**31.62**	**111**	P	**P**	**14 51 02.1**	**+0.9**
	1.2nm,0.8s,baz=344,slow=4.8,SNR=5.6						
EYMN	**Ely**	**35.55**	**87**	*e*P	**P**	**14 51 35.5**	**+0.4**
	4.7nm,0.8s						
SMCO	**Snowmass**	**35.69**	**112**	*e*P	**P**	**14 51 37.9**	**+1.1**
	3.5nm,1.1s						
SDCO	**Great Sand Dun**	**37.52**	**111**	*e*P	**P**	**14 51 51.5**	**-0.8**
	3.0nm,0.8s						
TXAR	**Lajitas Array**	**45.56**	**116**	PcP	**PcP**	**14 54 36.6**	**+0.2**
TXAR	**Lajitas Array**	**45.56**	**116**	PcP	**PcP**	**14 54 36.6**	**+0.2**
	0.4nm,0.7s,baz=282,slow=4.5,SNR=3.0						
SSPA	**Standing Stone**	**47.34**	**82**	*e*P	**P**	**14 53 11.3**	**-0.5**
	5.9nm,0.7s						
KSRS	**Korea Array**	**53.28**	**281**	P	**P**	**14 53 57.1**	**+0.4**
	1.2nm,0.8s,baz=25,slow=7.5,SNR=7.8						
KSAR	**Wonju Array Be**	**53.31**	**281**	P	**P**	**14 53 57.1**	**+0.2**
ZALV	**Zalesovo Beam**	**55.09**	**323**	P	**P**	**14 54 09.7**	**0.0**
ZALV	**Zalesovo Beam**	**55.09**	**323**	P	**P**	**14 54 09.7**	**0.0**
	0.5nm,0.4s,baz=12,slow=7.4,SNR=3.8						
EKA	**Eskdalemuir Ar**	**58.98**	**21**	P	**P**	**14 54 37.7**	**+0.5**
EKA	**Eskdalemuir Ar**	**58.98**	**21**	P	**P**	**14 54 37.7**	**+0.5**
	1.1nm,0.4s,baz=332,slow=5.2,SNR=9.3						
BVAR	**Borovoye Array**	**59.39**	**332**	P	**P**	**14 54 39.5**	**-0.6**
BVAR	**Borovoye Array**	**59.39**	**332**	P	**P**	**14 54 39.5**	**-0.6**
	0.7nm,0.5s,baz=32,slow=5.6,SNR=3.8						
MKAR	**Makanchi Array**	**62.24**	**321**	P	**P**	**14 54 59.2**	**-0.5**
MKAR	**Makanchi Array**	**62.24**	**321**	P	**P**	**14 54 59.2**	**-0.5**
	0.5nm,0.9s,baz=26,slow=6.9,SNR=2.6						
ESDC	**Sonseca Array**	**73.95**	**26**	P	**P**	**14 56 12.4**	**-0.8**
ESDC	**Sonseca Array**	**73.95**	**26**	P	**P**	**14 56 12.4**	**-0.8**
	1.2nm,0.7s,baz=340,slow=6.6,SNR=7.3						

*IDC **24** 14:44:34.6±0.5,3°.08S×127°.99E,h0km,mb4.1/15, mb1 4.3/17,mb1mx4.2/25,mbtmp4.2/17,ML4.3/2,MS3.8/11, Ms1 3.8/11,ms1mx3.5/32,Error ellipse: s-maj=31.9km s-min=9.9km az=74.0*
*BJI **24** 14:44:37.1,3°.31S×128°.48E,h46km,mB4.9/14,mb4.7/24, Ms4.6/11,Ms7 4.3/11*
*ISCJB **24** 14:44:40.4±0.4,3°.03S±0°.03×128°.29E±0°.03,h57km±4km, mb4.3/31,MS3.9/13,Error ellipse: s-maj=5.1km s-min=4.4km az=153.4*
*NEIC **24** 14:44:40.5±1.4,3°.04S×128°.26E,h43km±13km,mb4.6/10, Error ellipse: s-maj=13.1km s-min=5.8km az=59.0*
*DJA **24** 14:44:40.4±0.7,3°.5S±2°×12°.8E±°,h13km±6km,M4.9/19, mB5.2/8,mb4.9/19,MLv5.2/9,Mw(mB)4.7/8*
*AUST **24** 14:44:41.2±0.3,3°.01S×128°.34E,h48km,Error ellipse: s-maj=0.7km s-min=0.7km az=3.0*

ISC 24 14:44:42.1±0.4,**3°.05S**±0°.03×**128°.26E**±0°.04,**h56**km±3km, **n121,σ1s57/143,mb4.3/31,MS4.0/13,1C,Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.64**	**186**	P	**Pn**	**14 44 52.2**	**-3.2**
AAI				S	**Sn**	**14 45 06.1**	**+1.1**
AAI	**Ambon**	**0.64**	**186**	P	**Pn**	**14 44 52.6**	**-2.7**
	baz=0.7,SNR=725						
MSAI	**Masohi**	**0.73**	**114**	P	**Pn**	**14 44 55.2**	**-1.3**
MSAI				S	**Sn**	**14 45 06.4**	**-0.6**
LBMI	**Labuha**	**2.51**	**342**	P	**Pn**	**14 45 20.8**	**+0.3**
LBMI				S	**Sn**	**14 45 47.1**	**-2.9**
SWI	**Sorong**	**3.70**	**54**	P	**Pn**	**14 45 35.9**	**-0.9**
SWI				S	**Sn**	**14 46 18.3**	**-0.9**
SWI	**Sorong**	**3.70**	**54**	P	**Pn**	**14 45 36.2**	**-0.6**
	baz=3.6,SNR=114						
SWI				S	**Sn**	**14 46 18.6**	**-0.7**
	baz=3.6,SNR=5.4						
TNTI	**Ternate**	**3.90**	**347**	P	**Pn**	**14 45 38.7**	**-0.8**
FAKI	**Fak Fak**	**3.99**	**88**	P	**Pn**	**14 45 40.3**	**-0.4**
FAKI	**Fak Fak**	**3.99**	**88**	P	**Pn**	**14 45 40.1**	**-0.7**
	baz=3.9,SNR=68						
KMSI	**Cibinong**	**5.59**	**310**	P	**Pn**	**14 46 00.8**	**-1.9**
KMSI				S	**Sn**	**14 47 01.6**	**-4.1**
MNI	**Manado**	**5.62**	**323**	P	**Pn**	**14 46 02.0**	**-1.2**
LUWI	**Luwuk**	**5.83**	**290**	P	**Pn**	**14 46 04.8**	**-1.3**
LUWI	**Luwuk**	**5.83**	**290**	P	**Pn**	**14 46 04.6**	**-1.5**
	baz=5.9,SNR=62						
RKPI	**Ransiki, Papua**	**6.11**	**76**	P	**Pn**	**14 46 09.7**	**-0.1**
BBSI	**Bau Bau**	**6.17**	**247**	P	Pn	14 46 14.2	+3.5
	245nm,2.0s,3µm0.8nm						

CHTO	**Chiang Mai**	**36.12**	**308**	*e*P	**P**	**14 51 39.1**	**+0.1**
	comp=Z,15nm,1.5s						
KMI	**Kunming**	**37.38**	**320**	P	**P**	**14 51 52.3**	**+2.3**
KMI				pmax	pmax		
	comp=Z,11nm,1.2s						
KSAR	**Wonju Array Be**	**40.29**	**360**	P	**P**	**14 52 14.1**	**+0.2**
KSRS	**Korea Array**	**40.30**	**360**	P	**P**	**14 52 14.1**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=176,slow=9.1,SNR=6.8						
KSRS				LR	LR	15 07 58.7	
	comp=Z,98nm,21.3s,baz=348,slow=35						
MJAR	**Matsushiro Arr**	**40.47**	**12**	P	**P**	**14 52 15.4**	**0.0**
MJAR	**Matsushiro Arr**	**40.47**	**12**	P	**P**	**14 52 15.4**	**0.0**
	comp=Z,1.1nm,0.9s,baz=193,slow=10,SNR=3.9						
MJAR				LR	LR	15 07 01.5	
	comp=Z,87nm,19.0s,baz=210,slow=33						
CD2	**Chengdu**	**41.06**	**327**	P	**P**	**14 52 20.9**	**+0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.2s						
LZH	**Lanzhou**	**45.12**	**332**	*e*P	**P**	**14 52 55.4**	**+2.0**
LZH				pP	**pP**	**14 53 05.5**	**-2.4**
LZH				sP	**sP**	**14 53 09.3**	**-5.1**
LZH				pmax	pmax		
	comp=Z,35nm,1.5s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
HHC	**Hu-ho-hao-te**	**46.28**	**342**	*e*P	**P**	**14 53 02.1**	**-0.2**
HHC				pP	**pP**	**14 53 15.4**	**-1.5**
HHC				sP	**sP**	**14 53 22.5**	**-0.8**
HHC				PcP	**PcP**	**14 54 35.6**	**-1.4**
HHC				PP	**PP**	**14 54 52.4**	**+0.6**
HHC				ScP	**ScP**	**14 58 21.9**	**-3.9**
HHC				S	**S**	**14 59 44.6**	**-0.7**
HHC				sS	**sS**	**15 00 10.9**	**+1.0**
HHC				ScS	**ScS**	**15 02 47.8**	**-5.0**
HHC				pmax	pmax		
	comp=Z,150nm,4.8s						
HHC				LR	LR		
	comp=N,230nm,16.8s						
HHC				LR	LR		
	comp=E,300nm,16.8s						
HHC				LR	LR		
	comp=Z,300nm,14.4s						
CN2	**Changchun**	**46.71**	**357**	*e*P	**P**	**14 53 06.8**	**+1.4**
CN2				*e*S	**S**	**14 59 52.6**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=N,200nm,14.0s						
CN2				LR	LR		
	comp=E,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
USRK	**Ussuriysk Arra**	**47.16**	**4**	P	**P**	**14 53 09.7**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=195,slow=9.5,SNR=9.5						
LSA	**Lhasa**	**48.18**	**315**	*e*P	**P**	**14 53 18.9**	**+1.2**
	comp=Z,10nm,0.8s						
GTA	**Gaotai**	**49.70**	**331**	⇑P	**P**	**14 53 29.6**	**+0.8**
GTA				pP	**pP**	**14 53 43.8**	**+0.3**
GTA				sP	**sP**	**14 53 50.0**	**+0.1**
GTA				PP	**PP**	**14 55 25.8**	**+1.9**
GTA				S	**S**	**15 00 36.0**	**+2.2**
GTA				sS	**sS**	**15 00 59.5**	**+0.8**
GTA				SS	**SS**	**15 04 05.8**	**-1.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,66nm,4.8s						
GTA				LR	LR		
	comp=N,78nm,14.7s						
GTA				LR	LR		
	comp=E,120nm,14.3s						
GTA				LR	LR		
	comp=Z,96nm,16.2s						
ULN	**Ulaanbaatar**	**54.00**	**342**	P	**P**	**14 53 57.7**	**-3.0**
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**54.17**	**342**	P	**P**	**14 53 59.9**	**-2.0**
SONM	**Songino Array**	**54.17**	**342**	P	**P**	**14 53 59.9**	**-2.0**
	comp=Z,1.5nm,0.8s,baz=30,slow=7.2,SNR=7.0						
RPZ	**Rata Peaks**	**55.41**	**143**	LR	LR	15 18 56.1	
	comp=Z,99nm,19.7s,baz=93,slow=37						
WMQ	**Urumqi**	**59.16**	**327**	*e*P	**P**	**14 54 38.4**	**+1.0**
WMQ				LR	LR		
	comp=N,200nm,6.2s						
WMQ				LR	LR		
	comp=E,110nm,4.8s						
PETK	**Petropavlovsk-**	**61.17**	**20**	P	**P**	**14 54 52.8**	**+1.9**
PETK	**Petropavlovsk-**	**61.17**	**20**	P	**P**	**14 54 52.8**	**+1.9**
	comp=E,3.4nm,0.7s,baz=189,slow=7.7,SNR=8.4						
MK31	**Makanchi Array**	**63.99**	**327**	*e*P	**P**	**14 55 08.9**	**-0.9**
MKAR	**Makanchi Array**	**63.99**	**327**	P	**P**	**14 55 10.2**	**+0.4**
MKAR	**Makanchi Array**	**63.99**	**327**	P	**P**	**14 55 10.2**	**+0.4**
	comp=E,3.5nm,0.8s,baz=127,slow=7.9,SNR=24						
CASY	**Casey**	**64.33**	**188**	*e*P	**P**	**14 55 12.4**	**+0.8**
	comp=E,13nm,0.9s						
EKS2	**Erkin-Say**	**66.91**	**319**	*e*P	**P**	**14 55 27.9**	**-1.0**
	comp=E,2.7nm,0.8s						
ZALV	**Zalesovo Beam**	**67.30**	**334**	P	**P**	**14 55 30.4**	**-0.5**
ZALV	**Zalesovo Beam**	**67.30**	**334**	P	**P**	**14 55 30.4**	**-0.5**
	comp=E,0.6nm,0.3s,baz=339,slow=12,SNR=4.3						
KURK	**Kurchatov**	**68.26**	**329**	*e*P	**P**	**14 55 36.1**	**-1.0**
	comp=E,6.5nm,0.8s						
BVAR	**Borovoye Array**	**73.82**	**328**	P	**P**	**14 56 10.9**	**+0.2**
BVAR	**Borovoye Array**	**73.82**	**328**	P	**P**	**14 56 10.9**	**+0.2**
	comp=E,1.3nm,0.8s,baz=144,slow=5.3,SNR=7.8						
BRVK	**Borovoye**	**73.89**	**328**	*e*P	**P**	**14 56 11.1**	**0.0**
VNDA	**Vanda**	**76.56**	**173**	P	**P**	**14 56 25.2**	**-0.8**
VNDA	**Vanda**	**76.56**	**173**	P	**P**	**14 56 25.2**	**-0.8**
	comp=E,1.1nm,0.7s,baz=324,slow=7.3,SNR=4.6						
VNDA				LR	LR	15 30 29.4	
	comp=E,68nm,18.8s,baz=337,slow=36						
SBA	**Scott Base**	**77.46**	**172**	*e*P	**P**	**14 56 30.2**	**-0.9**
	comp=E,2.4nm,1.1s						
MAW	**Mawson**	**77.98**	**201**	P	**P**	**14 56 33.2**	**-0.9**
MAW	**Mawson**	**77.98**	**201**	P	**P**	**14 56 33.2**	**-0.9**
	comp=E,0.8nm,0.4s,baz=72,slow=12,SNR=4.5						
MAW				LR	LR	15 27 15.1	
	comp=E,74nm,18.0s,baz=146,slow=33						
AKTO	**Aktyubinsk**	**79.91**	**322**	P	**P**	**14 56 43.8**	**-1.2**
AKTO	**Aktyubinsk**	**79.91**	**322**	P	**P**	**14 56 43.8**	**-1.2**
	comp=E,2.6nm,0.7s,baz=104,slow=6.3,SNR=8.8						
QSPA	**South Pole Qui**	**86.90**	**180**	*e*P	**P**	**14 57 20.3**	**-0.5**
ILAR	**Eielson Array**	**90.53**	**25**	P	**P**	**14 57 37.6**	**-0.2**
ILAR	**Eielson Array**	**90.53**	**25**	P	**P**	**14 57 37.6**	**-0.2**
	comp=E,0.3nm,0.7s,baz=244,slow=5.0,SNR=6.0						
KMBO	**Kilima Mbogo**	**90.95**	**269**	LR	LR	15 33 08.9	
	comp=E,89nm,21.7s,baz=96,slow=32						
BOSA	**Boshof**	**99.93**	**240**	LR	LR	15 41 52.4	
	comp=E,48nm,18.2s,baz=165,slow=34						
TXAR	**Lajitas Array**	**124.30**	**56**	PKP	**PKPdf**	**15 03 36.6**	**+1.0**
TXAR	**Lajitas Array**	**124.30**	**56**	PKP	**PKPdf**	**15 03 36.6**	**+1.0**
	comp=E,0.2nm,0.7s,baz=189,slow=5.4,SNR=2.5						
TORD	**Torodi Ar. Bea**	**126.26**	**284**	PKP	**PKPdf**	**15 03 40.4**	**+0.8**
TORD	**Torodi Ar. Bea**	**126.26**	**284**	PKP	**PKPdf**	**15 03 40.4**	**+0.8**
	comp=E,2.1nm,1.0s,baz=50,slow=0.5,SNR=7.0						
CPUP	**Villa Florida**	**150.30**	**170**	PKPbc	**PKPbc**	**15 04 28.4**	**+0.5**
CPUP	**Villa Florida**	**150.30**	**170**	PKPbc	**PKPbc**	**15 04 28.4**	**+0.5**
	baz=231,slow=3.8						

*CSEM **24** 14:50:37.5±0.1,41°.28N×22°.70E,h8km,ML2.1,Error ellipse: s-maj=2.4km s-min=2.2km az=59.0*
*ISCJB **24** 14:50:37.0±0.3,41°.29N±0°.02×22°.69E±0°.02,h6km±3km, Error ellipse: s-maj=3.1km s-min=2.7km az=138.8*
*THE **24** 14:50:37.8,41°.28N×22°.70E,h2km±1km,ML2.4/7,Error ellipse: s-maj=1.7km s-min=0.5km az=197.0*
*SKO **24** 14:50:37.1,41°.30N×22°.71E,h15km,M1.8,ML2.2*
*ATH **24** 14:50:37.2,41°.26N×22°.68E,h21km±1km,MD3.1/11*
*BEO **24** 14:50:37.0±1.0,41°.24N×22°.74E,h0km±3km,ML2.2/6*
*SOF **24** 14:50:37.0,41°.32N×22°.70E,h9km,MD2.5*

ISC 24 14:50:37.5±0.8,41°.29N±0°.02×22°.69E±0°.02,h11km±5km, n69,σ0°.58/113,3C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.09**	**289**	P		**Pg**	**14 50 39.8**	**-0.2**
VAY				S		**Sg**	**14 50 41.5**	**-0.4**
VAY	**Valandovo**	**0.09**	**289**	*e*Pg		**Pg**	**14 50 39.9**	**-0.1**
VAY				*e*Lg		Lg	14 50 41.7	
	comp=E,1μm,0.3s							
VAY				*i* Sg		**Sg**	**14 50 41.7**	**-0.2**
	comp=N,3μm,0.2s							
VAY				*e*Lg		Lg	14 50 41.8	
VAY	**Valandovo**	**0.09**	**289**	⇑*i*Pg		**Pg**	**14 50 39.5**	**-0.5**
VAY	**Valandovo**	**0.09**	**289**	P		**Pg**	**14 50 39.8**	**-0.2**
VAY	**Valandovo**	**0.09**	**289**	*e*Pg		**Pg**	**14 50 40.4**	**+0.4**
VAY				*i* Sg		**Sg**	**14 50 42.2**	**+0.3**
	comp=N,3μm,0.2s							
VAY				*e*Lg		Lg	14 50 42.3	
KNT	**Kendrikon**	**0.21**	**129**	P		**Pg**	**14 50 41.9**	**+0.1**
KNT				S		**Sg**	**14 50 45.0**	**+0.2**
KNT	**Kendrikon**	**0.21**	**129**	P		**Pg**	**14 50 41.9**	**+0.1**
KNT				S		**Sg**	**14 50 45.0**	**+0.2**
GRG	**Griva**	**0.40**	**213**	P		**Pg**	**14 50 45.7**	**+0.4**
GRG				S		**Sg**	**14 50 51.1**	**+0.5**
GRG	**Griva**	**0.40**	**213**	*e*PB		**Pg**	**14 50 45.4**	**+0.1**
GRG				*e*SB		**Sg**	**14 50 50.5**	**-0.1**
GRG	**Griva**	**0.40**	**213**	*e*Pb		**Pg**	**14 50 45.4**	**+0.1**
GRG	**Griva**	**0.40**	**213**	P		**Pg**	**14 50 45.7**	**+0.4**
GRG				*e*Sb		**Sg**	**14 50 50.5**	**-0.1**
GRG				S		**Sg**	**14 50 51.1**	**+0.5**
KKB	**Krupnik**	**0.65**	**27**	*i* P		**Pg**	**14 50 48.6**	**-1.5**
KKB				*i* Pg		**Pb**	**14 50 50.2**	**-0.7**
KKB	**Krupnik**	**0.65**	**27**	*i* P		**Pg**	**14 50 48.6**	**-1.5**
SOH	**Sokhos**	**0.69**	**133**	P		**Pg**	**14 50 50.4**	**-0.4**
SOH				S		**Sg**	**14 50 59.8**	**-0.1**
SOH	**Sokhos**	**0.69**	**133**	*e*PN		**Pg**	**14 50 50.3**	**-0.5**
SOH				*e*SN		**Sg**	**14 50 59.4**	**-0.5**
SOH	**Sokhos**	**0.69**	**133**	P		**Pg**	**14 50 50.4**	**-0.4**
THE	**Thessaloniki**	**0.69**	**162**	P		**Pg**	**14 50 50.7**	**-0.1**
THE				S		**Sg**	**14 50 59.8**	**-0.1**
THE	**Thessaloniki**	**0.69**	**162**	P		**Pg**	**14 50 50.7**	**-0.1**
THE				S		**Sg**	**14 50 59.8**	**-0.1**
SRS	**Serrai**	**0.71**	**104**	P		**Pg**	**14 50 51.1**	**0.0**
SRS				S		**Sg**	**14 51 00.6**	**+0.2**
SRS	**Serrai**	**0.71**	**104**	P		**Pg**	**14 50 51.1**	**0.0**
HORT	**Hortiatis**	**0.76**	**155**	P		**Pg**	**14 50 52.0**	**-0.2**
HORT				S		**Sb**	**14 51 02.6**	**-0.6**
HORT	**Hortiatis**	**0.76**	**155**	P		**Pg**	**14 50 52.0**	**-0.2**
HORT				S		**Sb**	**14 51 02.6**	**-0.6**
MMB	**Musomiste**	**0.84**	**69**	*i* Pg		**Pg**	**14 50 53.4**	**-0.3**
MMB	**Musomiste**	**0.84**	**69**	*i* Pg		**Pg**	**14 50 53.4**	**-0.3**
NVR	**Nevrokopi**	**0.89**	**86**	P		**Pg**	**14 50 54.3**	**-0.3**
NVR				S		**Sb**	**14 51 06.7**	**-0.2**
NVR	**Nevrokopi**	**0.89**	**86**	*e*PN		**Pg**	**14 50 54.4**	**-0.2**
NVR	**Nevrokopi**	**0.89**	**86**	P		**Pg**	**14 50 54.3**	**-0.3**
BIA	**Bitola**	**1.06**	**256**	*e*Pg		**Pn**	**14 50 58.4**	**-0.1**
BIA				*e*Sg		**Sb**	**14 51 12.4**	**+0.5**
BIA	**Bitola**	**1.06**	**256**	*e*Pg		**Pn**	**14 50 58.3**	**-0.1**
BIA				*e*Sg		**Sb**	**14 51 12.4**	**+0.5**
PLG	**Polygyros**	**1.08**	**148**	P		**Pg**	**14 50 57.8**	**-0.5**
PLG				S		**Sn**	**14 51 13.6**	**-0.1**
PLG	**Polygyros**	**1.08**	**148**	*e*PN		**Pg**	**14 50 57.5**	**-0.8**
PLG				*e*SN		**Sg**	**14 51 11.6**	**-0.8**
PLG	**Polygyros**	**1.08**	**148**	*e*Pn		**Pg**	**14 50 57.5**	**-0.8**
PLG	**Polygyros**	**1.08**	**148**	P		**Pg**	**14 50 57.8**	**-0.5**
PLG				*e*Sn		**Sg**	**14 51 11.6**	**-0.8**
PLG				S		**Sn**	**14 51 13.6**	**-0.1**
FNA	**Florina**	**1.11**	**243**	P		**Pg**	**14 50 58.6**	**-0.3**
FNA				S		**Sn**	**14 51 14.3**	**-0.2**
FNA	**Florina**	**1.11**	**243**	*e*PN		**Pg**	**14 50 57.9**	**-1.0**
FNA	**Florina**	**1.11**	**243**	*e*Pn		**Pg**	**14 50 57.9**	**-1.0**
FNA	**Florina**	**1.11**	**243**	P		**Pg**	**14 50 58.6**	**-0.3**
FNA				S		**Sn**	**14 51 14.3**	**-0.2**
SKO	**Skopje**	**1.16**	**307**	*e*Pn		**Pn**	**14 51 01.8**	**+2.1**
SKO				*e*Sg		**Sn**	**14 51 15.7**	**+0.3**
SKO				*e*Lg		Lg	14 51 16.8	
	comp=N,33nm,0.7s							
SKO				*e*Lg		Lg	14 51 17.2	
	comp=E,23nm,0.5s							
SKO	**Skopje**	**1.16**	**307**	*e*Pg		**Pn**	**14 51 00.3**	**+0.7**
SKO				*e*Sg		**Sn**	**14 51 16.9**	**+1.4**
SKO	**Skopje**	**1.16**	**307**	*e*Pg		**Pn**	**14 51 00.3**	**+0.7**
SKO	**Skopje**	**1.16**	**307**	*e*Pn		**Pn**	**14 51 01.2**	**+1.6**
SKO				*e*Sg		**Sn**	**14 51 16.2**	**+0.7**
SKO				*e*Lg		Lg	14 51 17.6	
	comp=E,23nm,0.5s							
KZN	**Kozani**	**1.20**	**216**	*e*PN		**Pg**	**14 51 00.7**	**+0.1**
KZN	**Kozani**	**1.20**	**216**	*e*Pn		**Pg**	**14 51 00.7**	**+0.1**
VTS	**Vitosha**	**1.36**	**17**	P		**Pg**	**14 51 03.0**	**-0.1**
VTS				S		**Sg**	**14 51 22.0**	**+0.8**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg		**Pg**	**14 51 03.3**	**-0.3**
VTS				*e*Sg		**Sn**	**14 51 20.9**	**+0.2**
VTS	**Vitosha**	**1.36**	**17**	*i* P		**Pg**	**14 51 03.4**	**-0.1**
VTS	**Vitosha**	**1.36**	**17**	*i* P		**Pg**	**14 51 03.4**	**-0.1**
VTS				*e*Sg		**Sn**	**14 51 20.9**	**+0.2**
VTS				S		**Sg**	**14 51 22.0**	**+0.8**
KAVA	**Kavala**	**1.41**	**101**	P		**Pb**	**14 51 03.8**	**0.0**
KAVA				S		**Sg**	**14 51 23.6**	**+0.7**
KAVA	**Kavala**	**1.41**	**101**	P		**Pb**	**14 51 03.8**	**0.0**
KAVA				S		**Sg**	**14 51 23.6**	**+0.7**
PAIG	**Paliouri**	**1.56**	**151**	*e*PN		**Pn**	**14 51 05.2**	**0.0**
PAIG				*e*SN		**Sg**	**14 51 26.7**	**-0.9**
PAIG	**Paliouri**	**1.56**	**151**	*e*Pn		**Pn**	**14 51 05.2**	**0.0**
PAIG				*e*Sn		**Sg**	**14 51 26.7**	**-0.9**
RZN	**Rozhen**	**1.58**	**75**	*i* Pg		**Pg**	**14 51 08.1**	**+0.4**
RZN	**Rozhen**	**1.58**	**75**	*i* Pg		**Pg**	**14 51 08.1**	**+0.4**
BARS	**Barje**	**1.66**	**337**	⇑*i*Pn		**Pn**	**14 51 07.0**	**+0.5**
BARS				*e*Sg		**Sg**	**14 51 30.4**	**-0.4**
BARS	**Barje**	**1.66**	**337**	⇑*i*Pn		**Pn**	**14 51 07.0**	**+0.5**
BARS				*e*Sg		**Sg**	**14 51 30.4**	**-0.4**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Pn		**Pb**	**14 51 12.8**	**-0.8**
ZAPS				*e*Sn		**Sg**	**14 51 40.0**	**-1.2**
NEO	**Neokhori**	**2.02**	**168**	*e*PB		**Pn**	**14 51 11.7**	**+0.1**
NEO				*e*SN		**Sn**	**14 51 37.4**	**+0.5**
NEO	**Neokhori**	**2.02**	**168**	*e*Pb		**Pn**	**14 51 11.7**	**+0.1**
NEO				*e*Sn		**Sn**	**14 51 37.4**	**+0.5**
KDZ	**Kurdzhali**	**2.08**	**79**	*i* P		**Pb**	**14 51 15.6**	**+0.3**
KDZ	**Kurdzhali**	**2.08**	**79**	*i* P		**Pb**	**14 51 15.6**	**+0.3**
MPEP	**Malo Peshtene**	**2.21**	**20**	*i* Pg		**Pg**	**14 51 19.3**	**-0.5**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PN		**Pn**	**14 51 15.0**	**-0.2**
AGG	**Agios Georgios**	**2.28**	**187**	*e*Pn		**Pn**	**14 51 15.0**	**-0.2**
AOS	**Alonnisos**	**2.31**	**156**	*e*PN		**Pn**	**14 51 15.3**	**-0.2**
AOS	**Alonnisos**	**2.31**	**156**	*e*Pn		**Pn**	**14 51 15.3**	**-0.2**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*PN		**Pn**	**14 51 16.0**	**+0.5**
SMTH				*e*SN		**Sn**	**14 51 45.1**	**+1.2**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*Pn		**Pn**	**14 51 16.0**	**+0.5**
SMTH				*e*Sn		**Sn**	**14 51 45.1**	**+1.2**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn		**Pn**	**14 51 30.8**	**-0.3**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn		**Pn**	**14 51 30.8**	**-0.3**

*ISCJB **24** 15:00:04.9±0.5,21°.1S±0°.1×178°.54W±0°.09,h500km, mb3.6/16,Error ellipse: s-maj=16.4km s-min=7.6km az=144.7*
*IDC **24** 15:00:07.3±1.5,21°.07S×178°.49W,h523km±16km, mb3.2/16,mb1 3.5/18,mb1mx3.4/24,mbtmp3.3/18,Error ellipse: s-maj=16.0km s-min=10.8km az=142.0*
*AUST **24** 15:00:08.1±0.0,21°.12S×178°.19W,h545km,Error ellipse: s-maj=2.2km s-min=1.8km az=298.0*

ISC 24 15:00:05.3±0.6,21°.1S±0°.1×178°.4W±0°.1,h500km,n33, σ1°31/33,mb3.7/16,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AFI	**Afiamalu**	**9.54**	**43**	P		**P**	**15 02 19.7**	**+1.6**
	7.3nm,0.3s,baz=59,slow=7.6,SNR=12							
AFI				S		**S**	**15 04 06.9**	**-0.2**
	2.1nm,0.3s,baz=17,slow=19,SNR=3.8							
URZ	**Urewera**	**17.55**	**192**	P		**P**	**15 03 40.5**	**-0.9**
	3.0nm,0.3s,baz=309,slow=3.4,SNR=16							
CTA	**Charters Tower**	**33.03**	**265**	P		**P**	**15 05 59.4**	**+0.5**
	3.7nm,0.4s,baz=92,slow=12,SNR=9.1							
CMSA	**Cobar Meteorol**	**33.67**	**244**	P		**P**	**15 06 05.0**	**+0.9**
	baz=34,SNR=6.7							
PMG	**Port Moresby**	**35.08**	**284**	P		**P**	**15 06 16.7**	**+0.5**
	19nm,0.8s,baz=78,slow=7.4,SNR=6.5							
MTSU	**Mount Surprise**	**35.16**	**268**	P		**P**	**15 06 17.4**	**+0.6**
	baz=35,SNR=5.3							
STKA	**Stephens Creek**	**37.17**	**245**	P		**P**	**15 06 34.1**	**+0.8**
	0.9nm,0.4s,baz=117,slow=6.8,SNR=5.8							
STKA	**Stephens Creek**	**37.17**	**245**	P		**P**	**15 06 34.3**	**+1.0**
	baz=37,SNR=4.6							
JAY	**Jayapura**	**43.85**	**289**	P		**P**	**15 07 27.5**	**+0.5**
	baz=44,SNR=16							
ASAR	**Alice Springs**	**43.99**	**257**	P		**P**	**15 07 27.9**	**-0.1**
	2.2nm,0.5s,baz=90,slow=8.3,SNR=88							
ASAR				S		S	15 13 17.4	-6.0
	1.2nm,0.7s,baz=92,slow=17,SNR=8.8							
WRA	**Warramunga Arr**	**44.12**	**263**	P		**P**	**15 07 28.4**	**-0.6**
	1.1nm,0.4s,baz=96,slow=7.1,SNR=129							
KDU	**Kakadu**	**47.56**	**272**	P		**P**	**15 07 54.7**	**-0.6**
	baz=48,SNR=5.0							
MTN	**Manton Dam**	**48.77**	**271**	P		**P**	**15 08 03.9**	**-0.5**
	baz=49,SNR=4.6							
KNRA	**Kununurra**	**50.22**	**267**	P		**P**	**15 08 14.8**	**-0.3**
	baz=50,SNR=8.9							
FITZ	**Fitzroy Crossi**	**52.55**	**263**	P		**P**	**15 08 31.4**	**-0.6**
	0.6nm,0.4s,baz=116,slow=7.2,SNR=11							
FITZ	**Fitzroy Crossi**	**52.55**	**263**	P		**P**	**15 08 31.9**	**-0.1**
	baz=53,SNR=7.0							
VNDA	**Vanda**	**57.30**	**185**	P		**P**	**15 09 05.5**	**+1.2**
	1.2nm,0.6s,baz=352,slow=6.3,SNR=8.6							
SMRI	**Semarang**	**69.91**	**270**	P		P	15 10 29.7	+3.4
	baz=70,SNR=3.1							
MJAR	**Matsushiro Arr**	**70.44**	**324**	P		**P**	**15 10 28.1**	**-0.7**
	0.9nm,0.5s,baz=158,slow=6.4,SNR=9.1							
PETK	**Petropavlovsk-**	**76.72**	**345**	P		**P**	**15 11 04.0**	**-0.3**
	3.4nm,0.6s,baz=144,slow=10,SNR=9.9							
KSRS	**Korea Array**	**77.05**	**319**	P		**P**	**15 11 07.0**	**+0.6**
	0.3nm,0.7s,baz=122,slow=6.7,SNR=3.0							
YBH	**Yreka Blue Hor**	**80.99**	**39**	P		**P**	**15 11 29.4**	**+1.9**
	1.6nm,0.7s,baz=278,slow=7.0,SNR=4.6							
NVAR	**Mina Array Bea**	**81.72**	**43**	P		**P**	**15 11 32.8**	**+1.3**
	0.7nm,0.6s,baz=226,slow=7.9,SNR=6.7							
TXAR	**Lajitas Array**	**87.71**	**57**	P		**P**	**15 11 59.9**	**-0.9**
	0.3nm,0.8s,baz=224,slow=6.2,SNR=4.3							
ILAR	**Eielson Array**	**88.97**	**13**	P		**P**	**15 12 05.0**	**-0.7**
	0.5nm,0.5s,baz=217,slow=5.2,SNR=18							
PDAR	**Pinedale Array**	**89.66**	**43**	P		**P**	**15 12 10.3**	**+0.6**
	0.4nm,0.4s,baz=172,slow=2.2,SNR=4.5							
CMAR	**Chiang Mai Arr**	**89.93**	**290**	P		**P**	**15 12 11.1**	**-0.2**
	0.8nm,0.6s,baz=99,slow=2.3,SNR=5.7							
ARCES	**ARCESS Array B**	**129.41**	**349**	PKP		**PKPdf**	**15 18 14.6**	**-1.4**
	1.6nm,0.9s,baz=101,slow=1.2,SNR=5.6							
FINES	**FINESS Array B**	**136.21**	**343**	PKP		**PKPdf**	**15 18 26.6**	**-2.3**
	1.1nm,0.6s,baz=97,slow=7.9,SNR=4.2							
FINES				SKPbc		**SKPbc**	**15 21 09.2**	**-4.7**
	1.4nm,0.7s,baz=79,slow=4.1,SNR=6.2							
AKASG	**Malin Array Be**	**143.32**	**330**	PKP		PKPab	15 18 38.6	-1.5
	3.2nm,0.4s,baz=45,slow=4.2,SNR=22							
BRTR	**Keskin Array B**	**146.92**	**311**	PKPbc		**PKPdf**	**15 18 50.1**	**+1.3**
	1.1nm,0.6s,baz=134,slow=4.9,SNR=5.8							
GERES	**GERESS Array B**	**150.64**	**344**	PKPbc		**PKPbc**	**15 18 59.6**	**-0.9**
	0.6nm,0.5s,baz=48,slow=2.0,SNR=7.3							
TORD	**Torodi Ar. Bea**	**172.11**	**181**	PKPab		**PKPab**	**15 20 42.7**	**-1.1**
	0.7nm,0.9s,baz=185,slow=6.3,SNR=2.8							

*SOF **24** 15:03:58.9,41°.30N×22°.70E,h15km,MD2.7*
*CSEM **24** 15:03:59.7±0.1,41°.29N×22°.70E,h8km,ML1.8,Error ellipse: s-maj=2.6km s-min=2.3km az=153.0*
*SKO **24** 15:03:59.7,41°.30N×22°.71E,h12km,M1.4,ML1.7*
*ATH **24** 15:03:59.8,41°.28N×22°.71E,h17km±4km,MD2.9/7*
*ISCJB **24** 15:03:59.3±0.4,41°.31N±0°.02×22°.71E±0°.03,h8km±3km, Error ellipse: s-maj=3.3km s-min=3.3km az=39.4*
*THE **24** 15:04:00.1,41°.30N×22°.73E,h3km±1km,ML2.2/6,Error ellipse: s-maj=1.9km s-min=0.6km az=198.0*
*BEO **24** 15:04:02.0±0.8,41°.33N×22°.64E,h1km±4km,ML1.8/4*

ISC 24 15:03:59.9±0.9,41°.30N±0°.02×22°.71E±0°.02,h6km±7km, n48,σ0°.45/83,2C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.10**	**283**	P		**Pg**	**15 04 02.3**	**+0.1**
VAY				S		**Sg**	**15 04 04.5**	**+0.7**
VAY	**Valandovo**	**0.10**	**283**	*i* Pg		**Pg**	**15 04 02.5**	**+0.3**
VAY				*i* Sg		**Sg**	**15 04 04.4**

URZ				S*	Sn	15 05 11.7	-1.7	
MKAZ	**Moumakai**	**1.88**	**247**	PN	Pn	15 04 50.0	+0.1	
MKAZ				SN	Sn	15 05 10.6	-2.9	
MWZ	**Matawai**	**1.95**	**175**	P*	Pn	15 04 50.7	-0.2	
MWZ				S*	Sn	15 05 12.6	-2.7	
TOZ	**Tahuroa Road**	**1.98**	**227**	P*	Pn	15 04 51.2	-0.1	
CNGZ	**Carnagh Statio**	**2.21**	**162**	PN	Pb	15 04 56.1	-1.6	
RVAZ	**Riverhead Bore**	**2.25**	**259**	PN	Pn	15 04 56.1	+1.2	
RVAZ				SN	Sn	15 05 22.9	+0.4	
HIZ	**Hauiti**	**2.90**	**222**	⇓PN	Pn	15 05 04.7	+0.8	
OUZ	**Omahuta**	**3.25**	**290**	PN	Pn	15 05 09.6	+0.9	

SKO ***24*** *15:11:32.6,41°.30N×22°.71E,h15km,M1.7,ML2.1*
THE ***24*** *15:11:33.6,41°.28N×22°.71E,h2km±1km,ML2.7/7,Error ellipse: s-maj=1.6km s-min=0.5km az=177.0*
ISCJB ***24*** *15:11:33.1±0.4,41°.29N±0°.02×22°.72E±0°.02,h6km±3km, Error ellipse: s-maj=3.2km s-min=2.7km az=26.1*
ATH ***24*** *15:11:33.4,41°.24N×22°.74E,h18km±1km,MD3.1/11*
CSEM ***24*** *15:11:33.3±0.2,41°.26N×22°.74E,h10km,ML2.1,Error ellipse: s-maj=3.8km s-min=3.0km az=33.0*
BEO ***24*** *15:11:34.1±0.9,41°.29N×22°.70E,h3km±3km,ML2.1/6*

ISC 24 15:11:33.4±0.8, 41°.28N±0°.02×22°.71E±0°.01, h9km±6km, n62,σ0ᵗ65/106, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**292**	*i* Pg	**Pg**	**15 11 35.6**	**-0.5**
VAY				*i* Sg	**Sg**	**15 11 37.5**	**-0.4**
VAY				*e*Lg	Lg	15 11 37.8	
	comp=E,722nm,0.2s						
VAY				*e*Lg	Lg	15 11 37.9	
	comp=N,1μm,0.2s						
VAY	**Valandovo**	**0.12**	**292**	*i* Pg	**Pg**	**15 11 36.0**	**-0.1**
VAY				*i* Sg	**Sg**	**15 11 38.0**	**0.0**
VAY				*e*Lg	Lg	15 11 38.4	
	comp=N,1μm,0.2s						
KNT	**Kendrikon**	**0.18**	**129**	P	**Pg**	**15 11 37.4**	**+0.2**
KNT				S	**Sg**	**15 11 40.3**	**+0.5**
KNT	**Kendrikon**	**0.18**	**129**	P	**Pg**	**15 11 37.4**	**+0.2**
KNT				S	**Sg**	**15 11 40.3**	**+0.5**
GRG	**Griva**	**0.40**	**216**	P	**Pg**	**15 11 41.2**	**0.0**
GRG				S	**Sg**	**15 11 47.4**	**+1.0**
GRG	**Griva**	**0.40**	**216**	*e*PB	**Pg**	**15 11 41.1**	**-0.1**
GRG				*e*SB	**Sg**	**15 11 47.2**	**+0.8**
GRG	**Griva**	**0.40**	**216**	P	**Pg**	**15 11 41.2**	**0.0**
GRG				S	**Sg**	**15 11 47.4**	**+1.0**
SOH	**Sokhos**	**0.67**	**133**	P	**Pg**	**15 11 46.0**	**-0.2**
SOH				S	**Sb**	**15 11 55.7**	**-0.8**
SOH	**Sokhos**	**0.67**	**133**	*e*PN	**Pg**	**15 11 46.0**	**-0.2**
SOH				*e*SN	**Sg**	**15 11 54.3**	**-0.6**
SOH	**Sokhos**	**0.67**	**133**	P	**Pg**	**15 11 46.0**	**-0.2**
SOH				*e*Sn	**Sg**	**15 11 54.3**	**-0.6**
SOH				S	**Sb**	**15 11 55.7**	**-0.8**
THE	**Thessaloniki**	**0.67**	**163**	P	**Pg**	**15 11 46.2**	**-0.1**
THE				S	**Sg**	**15 11 55.2**	**+0.1**
THE	**Thessaloniki**	**0.67**	**163**	P	**Pg**	**15 11 46.2**	**-0.1**
THE				S	**Sg**	**15 11 55.2**	**+0.1**
SRS	**Serrai**	**0.68**	**103**	P	**Pg**	**15 11 46.3**	**-0.2**
SRS	**Serrai**	**0.68**	**103**	P	**Pg**	**15 11 46.3**	**-0.2**
HORT	**Hortiatis**	**0.74**	**156**	P	**Pg**	**15 11 47.5**	**-0.1**
HORT				S	**Sb**	**15 11 58.4**	**-0.3**
HORT	**Hortiatis**	**0.74**	**156**	P	**Pg**	**15 11 47.5**	**-0.1**
HORT				S	**Sb**	**15 11 58.4**	**-0.3**
NVR	**Nevrokopi**	**0.87**	**85**	P	**Pg**	**15 11 49.7**	**-0.4**
NVR				S	**Sb**	**15 12 01.9**	**-0.5**
NVR	**Nevrokopi**	**0.87**	**85**	*e*PN	**Pg**	**15 11 49.6**	**-0.5**
NVR				*e*SN	**Sb**	**15 12 01.8**	**-0.6**
NVR	**Nevrokopi**	**0.87**	**85**	P	**Pg**	**15 11 49.7**	**-0.4**
NVR				S	**Sb**	**15 12 01.9**	**-0.5**
PLG	**Polygyros**	**1.06**	**148**	P	**Pg**	**15 11 53.5**	**-0.2**
PLG				S	**Sn**	**15 12 08.9**	**-0.4**
PLG	**Polygyros**	**1.06**	**148**	*e*PN	**Pg**	**15 11 53.5**	**-0.2**
PLG				*e*SN	**Sg**	**15 12 06.1**	**-1.4**
PLG	**Polygyros**	**1.06**	**148**	P	**Pg**	**15 11 53.5**	**-0.2**
PLG				*e*Sn	**Sg**	**15 12 06.1**	**-1.4**
PLG				S	**Sn**	**15 12 08.9**	**-0.4**
BIA	**Bitola**	**1.08**	**257**	P	**Pn**	**15 11 54.7**	**0.0**
BIA				S	**Sb**	**15 12 09.0**	**+0.5**
BIA	**Bitola**	**1.08**	**257**	*i* Pg	**Pb**	**15 11 54.1**	**-0.2**
BIA				*i* Sg	**Sg**	**15 12 08.1**	**-0.1**
BIA	**Bitola**	**1.08**	**257**	*i* Pg	**Pb**	**15 11 54.0**	**-0.2**
BIA	**Bitola**	**1.08**	**257**	P	**Pn**	**15 11 54.7**	**0.0**
BIA				*i* Sg	**Sg**	**15 12 08.0**	**-0.1**
BIA				S	**Sb**	**15 12 09.0**	**+0.5**
FNA	**Florina**	**1.12**	**244**	P	**Pg**	**15 11 54.4**	**-0.6**
FNA				S	**Sb**	**15 12 10.3**	**+0.5**
FNA	**Florina**	**1.12**	**244**	*e*PN	**Pg**	**15 11 54.4**	**-0.6**
FNA	**Florina**	**1.12**	**244**	P	**Pg**	**15 11 54.4**	**-0.6**
FNA				S	**Sb**	**15 12 10.3**	**+0.5**
SKO	**Skopje**	**1.18**	**306**	*i* Pn	**Pb**	**15 11 55.9**	**0.0**
SKO				*e*Lg	Lg	15 12 13.6	
	comp=E,27nm,0.5s						
SKO				*e*Lg	Lg	15 12 14.1	
	comp=N,46nm,0.6s						
SKO	**Skopje**	**1.18**	**306**	*e*Pg	**Pn**	**15 11 57.9**	**+1.8**
SKO				*e*Sg	**Sn**	**15 12 12.6**	**+0.3**
SKO	**Skopje**	**1.18**	**306**	*i* Pn	**Pn**	**15 11 56.3**	**+0.2**
SKO	**Skopje**	**1.18**	**306**	*e*Pg	**Pn**	**15 11 57.9**	**+1.8**
SKO				*e*Sg	**Sn**	**15 12 12.6**	**+0.3**
SKO				*e*Lg	Lg	15 12 14.5	
	comp=N,46nm,0.6s						
KZN	**Kozani**	**1.21**	**217**	*e*PN	**Pg**	**15 11 56.3**	**-0.2**
KZN				*e*SN	**Sn**	**15 12 12.6**	**-0.4**
KZN	**Kozani**	**1.21**	**217**	*e*Pn	**Pg**	**15 11 56.3**	**-0.2**
KZN				*e*Sn	**Sn**	**15 12 12.6**	**-0.4**
VTS	**Vitosha**	**1.36**	**16**	P	**Pb**	**15 11 59.0**	**-0.2**
VTS				S	**Sn**	**15 12 17.8**	**+0.8**
VTS	**Vitosha**	**1.36**	**16**	⇑*i* Pg	**Pb**	**15 11 59.0**	**-0.2**
VTS				*e*Sg	**Sn**	**15 12 17.2**	**+0.2**
VTS	**Vitosha**	**1.36**	**16**	P	**Pb**	**15 11 59.0**	**-0.2**
VTS				*e*Sg	**Sn**	**15 12 17.2**	**+0.2**
VTS				S	**Sn**	**15 12 17.8**	**+0.8**
KAVA	**Kavala**	**1.39**	**101**	P	**Pb**	**15 11 59.3**	**-0.2**
KAVA				S	**Sg**	**15 12 19.5**	**+1.5**
KAVA	**Kavala**	**1.39**	**101**	P	**Pb**	**15 11 59.3**	**-0.2**
KAVA				S	**Sg**	**15 12 19.5**	**+1.5**
NEST	**Nestorio**	**1.53**	**236**	P	**Pb**	**15 12 01.6**	**-0.3**
NEST				S	**Sg**	**15 12 22.5**	**0.0**
NEST	**Nestorio**	**1.53**	**236**	P	**Pb**	**15 12 01.6**	**-0.3**
NEST				S	**Sg**	**15 12 22.5**	**0.0**
PAIG	**Paliouri**	**1.54**	**151**	*e*PN	**Pn**	**15 12 01.3**	**+0.4**
PAIG				*e*SN	**Sb**	**15 12 21.6**	**0.0**
PAIG	**Paliouri**	**1.54**	**151**	*e*Pn	**Pn**	**15 12 01.3**	**+0.4**
PAIG				*e*Sn	**Sb**	**15 12 21.6**	**0.0**
BARS	**Barje**	**1.68**	**337**	*e*Pn	**Pn**	**15 12 02.7**	**-0.2**
BARS				*e*Sg	**Sb**	**15 12 25.7**	**+0.1**
BARS	**Barje**	**1.68**	**337**	*e*Pn	**Pn**	**15 12 02.7**	**-0.2**
BARS				*e*Sg	**Sb**	**15 12 25.7**	**+0.1**
ZAPS	**Zavoj**	**2.00**	**358**	*e*Pn	**Pb**	**15 12 08.8**	**-1.1**
SMTH	**Samothraki Isl**	**2.28**	**110**	*e*PN	**Pn**	**15 12 12.7**	**+1.5**
SMTH	**Samothraki Isl**	**2.28**	**110**	*e*Pn	**Pn**	**15 12 12.7**	**+1.5**
AOS	**Alonnisos**	**2.29**	**157**	*e*PB	**Pn**	**15 12 11.3**	**0.0**
AOS	**Alonnisos**	**2.29**	**157**	*e*Pb	**Pn**	**15 12 11.3**	**0.0**
LIA	**Limnos Island**	**2.33**	**125**	*e*PN	**Pn**	**15 12 13.3**	**+1.4**
LIA	**Limnos Island**	**2.33**	**125**	*e*Pn	**Pn**	**15 12 13.3**	**+1.4**
ALN	**Alexandroupoli**	**2.55**	**97**	P	**Pn**	**15 12 15.3**	**+0.5**
ALN	**Alexandroupoli**	**2.55**	**97**	*e*PB	**Pn**	**15 12 16.1**	**+1.3**
ALN	**Alexandroupoli**	**2.55**	**97**	P	**Pn**	**15 12 15.3**	**+0.5**
ALN	**Alexandroupoli**	**2.55**	**97**	*e*Pb	**Pn**	**15 12 16.1**	**+1.3**
BOLS	**Boljevac**	**2.61**	**348**	*e*PN	**Pb**	**15 12 19.0**	**-1.3**
GRUS	**Gruza**	**3.00**	**331**	*e*Pn	**Pn**	**15 12 21.3**	**+0.3**
GRUS	**Gruza**	**3.00**	**331**	*e*Pn	**Pn**	**15 12 21.3**	**+0.3**
DIVS	**Divibare**	**3.46**	**325**	*e*Pn	**Pn**	**15 12 27.3**	**-0.2**
DIVS	**Divibare**	**3.46**	**325**	*e*Pn	**Pn**	**15 12 27.3**	**-0.2**

IDC 24 15:13:52.1±5.6, 30°.70S×177°.81W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/18, mbtmp3.8/3, MS4.0/3, Ms1 4.0/3, ms1mx3.2/29, Error ellipse: s-maj=212.4km s-min=54.4km az=152.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPT2	**Papeete2**	**28.79**	**70**	*e*LR	LR	15 24 32.9	
	42nm,22.8s						
STKA	**Stephens Creek**	**34.57**	**257**	P	P	15 20 42.8	+0.1
	2.0nm,0.8s,baz=90,slow=8.1,SNR=3.1						
ASAR	**Alice Springs**	**43.26**	**267**	P	P	15 21 55.1	-0.4
	0.4nm,0.5s,baz=108,slow=7.6,SNR=12						

WRA	**Warramunga Arr**	**44.27**	**272**	P	P	15 22 03.8	0.0	
	0.7nm,0.3s,baz=111,slow=8.1,SNR=37							
BBB	**Bella Bella**	**93.29**	**28**	LR	LR	15 59 53.7		
	comp=Z,22nm,19.8s,slow=30							
LVC	**Limon Verde**	**93.64**	**119**	LR	LR	15 59 18.9		
	comp=Z,194nm,18.9s,slow=29							
JTS	**JuntasAbangare**	**97.61**	**83**	LR	LR	15 59 09.8		
	comp=Z,53nm,20.8s,slow=28							
FINES	**FINESS Array B**	**145.49**	**340**	PKPbc	PKPdf	15 33 30.7	-0.8	
	1.3nm,0.7s,baz=48,slow=2.8,SNR=4.6							

CASC 24 15:25:00.2±2.5, 13°.60N×90°.59W, h56km±21km, MD3.7, ML3.8, 2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.59**	**13**	*e*P	Pn	15 25 12.5	-0.6
IXG				*e*S	Sn	15 25 25.4	+3.0
PCG	**Pacaya**	**0.79**	**359**	*e*P	Pn	15 25 15.2	-0.6
PCG				*e*S	Sn	15 25 28.8	+1.7
FUG	**Fuego 3**	**0.88**	**344**	*e*P	Pn	15 25 16.1	-0.7
FUG				*e*S	Sn	15 25 31.7	+2.8
RTR	**El Retiro**	**0.96**	**72**	*e*P	Pn	15 25 17.7	-0.2
RTR				*e*S	Sn	15 25 31.4	+0.5
SBLS	**San Blas**	**0.97**	**76**	⇓*e*P	Pn	15 25 17.4	-0.6
SBLS				*e*S	Sn	15 25 31.0	-0.2
SNJE	**San Jose**	**0.99**	**74**	*e*P	Pn	15 25 17.8	-0.5
SNJE				*e*S	Sn	15 25 31.5	-0.2
NBG	**Las Nubes**	**1.01**	**14**	*e*P	Pn	15 25 19.3	+0.7
NBG				*e*S	Sn	15 25 32.6	+0.5
RBDL	**Robledal**	**1.02**	**60**	⇓*e*P	Pn	15 25 18.4	-0.2
RBDL				*e*S	Sn	15 25 33.1	+1.0
JAT	**Jato**	**1.24**	**305**	*e*P	Pn	15 25 20.8	-0.6
JAT				*e*S	Sn	15 25 37.8	+0.7
BOQS	**Boqueron**	**1.28**	**84**	*e*P	Pn	15 25 22.1	-0.1
BOQS				*e*S	Sn	15 25 39.7	+1.1
SNET	**Serv Nac Est T**	**1.32**	**86**	*e*P	Pn	15 25 22.6	0.0
SNET				*e*S	Sn	15 25 39.8	+0.5
SNET				AML	AML	15 25 42.6	
	comp=Z,2μm,0.2s						
MTO2	**Montecristo 2**	**1.43**	**56**	*e*P	Pn	15 25 25.3	+1.1
MTO2				*e*S	Sn	15 25 44.8	+2.5
LFU	**La Fuente**	**1.44**	**84**	*e*P	Pn	15 25 24.1	0.0
LFU				*e*S	Sn	15 25 43.9	+1.8
LFRS	**El Faro**	**1.49**	**89**	*e*P	Pn	15 25 24.9	+0.1
LFRS				*e*S	Sn	15 25 44.3	+1.0
LBRS	**Las Brisas**	**1.51**	**85**	*e*P	Pn	15 25 25.1	0.0
LBRS				*e*S	Sn	15 25 45.4	+1.6
MRL	**Marmol**	**1.70**	**31**	*e*P	Pn	15 25 28.6	+0.8
MRL				*e*S	Sn	15 25 46.5	-2.1
SNVI	**San Vicente**	**1.70**	**89**	*e*P	Pn	15 25 28.0	+0.2
SNVI				*e*S	Sn	15 25 49.8	+1.1
BLLM	**Bellamira**	**2.29**	**94**	*e*P	Pn	15 25 36.6	+0.9
BLLM				*e*S	Sn	15 26 05.1	+2.2
CAHU	**Cacacuatique**	**2.32**	**86**	*e*P	Pn	15 25 36.2	0.0
CNCH	**Conchagua**	**2.70**	**97**	*e*P	Pn	15 25 41.8	+0.4
CNCH				*e*S	Sn	15 26 15.5	+2.5

ISCJB ***24*** *15:48:20.5±0.6,8°.42S±0°.03×158°.86E±0°.03,h101km±6km, mb5.0/117, Error ellipse: s-maj=5.3km s-min=4.5km az=153.3*
NEIC ***24*** *15:48:21.8±0.1,8°.48S×158°.83E,mb5.1/81, Error ellipse: s-maj=4.8km s-min=4.4km az=137.0*
BJI ***24*** *15:48:21.8,8°.17S×159°.07E,h114km,mB4.9/29,mb5.0/38*
IDC ***24*** *15:48:21.9±0.3,8°.45S×158°.88E,h107km±2km,mb4.8/24, mb1 4.9/24,mb1mx4.9/24,mbtmp4.8/24,MS3.7/12, Ms1 3.7/12,ms1mx3.5/31, Error ellipse: s-maj=9.4km s-min=5.4km az=49.0*
MOS ***24*** *15:48:21.4±0.9,8°.44S×158°.82E,h109km,mb5.1/37, Error ellipse: s-maj=8.1km s-min=6.6km az=104.2*
GCMT ***24*** *15:48:23.6±0.2,8°.53S×158°.95E,h119km±2km,MW5.1, Moment Tensor Solution. s48,c58; s86,c135; Moment tensor: Scale 10^16 Nm; Mrr 1.92±.18; Mθθ -1.31±.21; Mϕϕ -0.61±.19; Mrθ -5.20±.13; Mθϕ 2.31±.20; Mrϕ 0.44±.12; Best double couple: M0 6.00000×10^16 NP1: ϕs 164.00000°, δ 23.00000°, λ 153.00000°. NP2: ϕs 279.00000°, δ 80.00000°, λ 69.00000°. Principal axes: T 5.9200, Plg 51.0000°, Azm 165.0000°; N 0.0700, Plg 21.0000°, Azm 283.0000°; P -5.9900, Plg 32.0000°, Azm 26.0000°; Data Used: II IU IC G CN.*
AUST ***24*** *15:48:28.8,8°.13S×159°.08E,h200km*
DJA ***24*** *15:48:30.3±1.0,8°.5S±4°×15°.9E±°,h201km±10km,M4.8/26, mB5.3/8,mb5.0/26,Mw(mB)4.7/8*

ISC 24 15:48:22.1±0.2, 8°.45S±0°.04×158°.97E±0°.04, h109km±1km, h109km: pP-P, n559, σ1ᵗ37/695, mb5.0/124, 13C-7D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.37**	**135**	*e*Pn	**Pn**	**15 48 47.8**	**+0.4**
HNR				S	**Sn**	**15 49 07.6**	**+1.0**
HNR				*e*Sn	Sn	15 49 09.1	+2.6
HNR	**Honiara**	**1.37**	**135**	P	**Pn**	**15 48 47.9**	**+0.4**
	948nm,0.3s,baz=248,slow=1.5,SNR=568						
HNR				S	**Sn**	**15 49 07.6**	**+1.0**
	4μm,0.3s,baz=174,slow=23,SNR=26						
PMG	**Port Moresby**	**11.70**	**264**	*e*Pn	**P**	**15 51 11.6**	**-2.8**
PMG	**Port Moresby**	**11.70**	**264**	P	**P**	**15 51 11.4**	**-3.1**
	44nm,1.0s						
PMG	**Port Moresby**	**11.70**	**264**	P	P	15 51 10.1	-4.4
	0.5nm,0.3s,baz=53,slow=7.1,SNR=6.2						
PATS	**Pohnpei**	**15.20**	**358**	P	**Pn**	**15 51 50.9**	**-0.2**
	baz=15,SNR=18						
PATS				S	Sn	15 54 29.3	-10
	baz=15,SNR=8.8						
NOUC	**Port Laguerre**	**15.30**	**153**	*e*P	**Pn**	**15 51 52.8**	**+0.5**
DZM	**Mont Dzumac**	**15.33**	**153**	*e*P	**P**	**15 51 53.9**	**-1.2**
	336nm,1.2s						
DZM				*e*LR	LR	15 55 25.9	
	1μm,34.8s						
DZM	**Mont Dzumac**	**15.33**	**153**	*e*P	**P**	**15 51 54.0**	**-1.1**
	139nm,1.0s						
COEN	**Coen**	**16.42**	**249**	*e*P	**P**	**15 52 10.4**	**+3.3**
	759nm,1.1s						
COEN	**Coen**	**16.42**	**249**	P	**P**	**15 52 10.4**	**+3.3**
	baz=17,SNR=27						
CTA	**Charters Tower**	**16.88**	**225**	P	**P**	**15 52 15.6**	**+3.4**
CTA	**Charters Tower**	**16.88**	**225**	P	**P**	**15 52 15.6**	**+3.4**
	3.9nm,0.3s,baz=48,slow=11,SNR=42						
CTAO	**Charters Tower**	**16.88**	**225**	*e*P	**P**	**15 52 15.4**	**+3.3**
CTAO				pmax	pmax		
	comp=Z,98nm,0.7s						
CTAO	**Charters Tower**	**16.88**	**225**	*e*P	**P**	**15 52 15.4**	**+3.3**
	comp=Z,98nm,0.7s						
TARA	**Tarawa**	**16.99**	**56**	*e*P	**Pn**	**15 52 13.1**	**-0.1**
	comp=Z,130nm,0.7s						
MTSU	**Mount Surprise**	**17.19**	**234**	P	**Pn**	**15 52 19.1**	**+3.5**
	baz=18,SNR=56						
EIDS	**Eidsvold**	**18.42**	**203**	*e*P	**Pn**	**15 52 31.9**	**+1.4**
	comp=Z,258nm,1.2s						
EIDS	**Eidsvold**	**18.42**	**203**	P	**Pn**	**15 52 32.1**	**+1.6**
	baz=19,SNR=35						
JAY	**Jayapura**	**19.10**	**287**	P	**P**	**15 52 36.6**	**0.0**
	comp=Z,73nm,1.1s,comp=Z,4μm						
JAY	**Jayapura**	**19.10**	**287**	P	**P**	**15 52 36.8**	**+0.1**
	baz=19,SNR=12						
JAY				S	**S**	**15 56 05.6**	**-2.1**
	baz=19,SNR=7.5						
KWAJ	**Kwajalein Atol**	**19.18**	**27**	*e*P	**P**	**15 52 38.6**	**+1.2**
KWAJ				pmax	pmax		
	comp=Z,235nm,0.8s						
KWAJ	**Kwajalein Atol**	**19.18**	**27**	P	**P**	**15 52 38.6**	**+1.2**
	comp=Z,235nm,0.8s						
FUNA	**Funafuti**	**20.01**	**92**	*e*P	**P**	**15 52 46.1**	**-0.3**
	comp=Z,124nm,1.0s						
RMQ	**Roma**	**20.39**	**207**	P	Pn	15 52 53.2	-0.2
	baz=21,SNR=117						
MSVF	**Nonsavu**	**20.73**	**118**	*e*P	**P**	**15 52 55.4**	**+1.2**
MSVF				pmax	pmax		
	comp=Z,203nm,1.4s						
MSVF	**Nonsavu**	**20.73**	**118**	*e*P	**P**	**15 52 55.4**	**+1.2**
	comp=Z,203nm,1.4s						
MSVF	**Nonsavu**	**20.73**	**118**	P	Pn	15 52 56.0	-1.7
	comp=Z,552nm,1.5s,SNR=13						
QIS	**Mount Isa**	**22.24**	**235**	P	**P**	**15 53 10.8**	**+0.7**
	baz=23,SNR=78						
QLP	**Quilpie**	**22.81**	**216**	P	**P**	**15 53 16.5**	**+0.7**
	baz=23,SNR=106						
ARMA	**Armidale**	**22.91**	**196**	*e*P	**P**	**15 53 17.4**	**+0.6**
	comp=Z,180nm,0.8s						
ARMA	**Armidale**	**22.91**	**196**	P	**P**	**15 53 18.1**	**+1.3**
	baz=23,SNR=66						
MGCD	**Mangrove Creek**	**25.68**	**195**	P	**P**	**15 53 43.9**	**+1.8**
	baz=26,SNR=8.3						
GUMO	**Guam**	**25.99**	**327**	P	**P**	**15 53 46.8**	**+1.9**
GUMO	**Guam**	**25.99**	**327**	P	**P**	**15 53 46.8**	**+1.9**
	comp=Z,43nm,0.7s,baz=161,slow=11,SNR=4.5						
GUMO				LR	LR	16 02 59.4	
	comp=Z,77nm,21.1s,baz=70,slow=34						
CMSA	**Cobar Meteorol**	**26.08**	**206**	P	**P**	**15 53 46.2**	**+0.6**
	baz=26,SNR=36						
KDU	**Kakadu**	**26.37**	**259**	P	P	15 53 48.1	-0.3
	baz=27,SNR=23						
WRAB	**Tennant Creek**	**26.41**	**242**	*e*P	**P**	**15 53 48.6**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,82nm,1.0s						
WRAB	**Tennant Creek**	**26.41**	**242**	*e*P	**P**	**15 53 48.6**	**-0.1**
	comp=Z,82nm,1.0s						
WRAB	**Tennant Creek**	**26.41**	**242**	P	**P**	**15 53 48.0**	**-0.7**
	comp=Z,521nm,0.8s,SNR=41						
WRA	**Warramunga Arr**	**26.42**	**242**	P	**P**	**15 53 48.9**	**0.0**
WRA				pP	**pP**	**15 54 11.0**	**-1.8**
WRA				PcP	**PcP**	**15 57 11.2**	**-0.6**
WRA				S	**S**	**15 58 13.4**	**-1.3**
WRA				PKiKP	**PKiKP**	**16 04 49.0**	**-1.7**
WRA	**Warramunga Arr**	**26.42**	**242**	P	**P**	**15 53 48.9**	**0.0**
	comp=Z,60nm,0.8s,baz=66,slow=9.2,SNR=318						
WRA				pP	**pP**	**15 54 11.0**	**-1.8**
	comp=Z,19nm,0.6s,baz=68,slow=8.9,SNR=4.0						
WRA				PcP	**PcP**	**15 57 11.2**	**-0.6**
	comp=Z,12nm,0.9s,baz=66,slow=2.6,SNR=8.2						
WRA				S	**S**	**15 58 13.4**	**-1.3**
	comp=Z,11nm,1.0s,baz=72,slow=15,SNR=5.5						
WRA				PKiKP	**PKiKP**	**16 04 49.0**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=348,slow=0.9,SNR=4.8						
YNG	**Young**	**27.50**	**199**	P	**P**	**15 53 59.4**	**+1.1**
	baz=28,SNR=8.6						
MTN	**Manton Dam**	**27.69**	**259**	P	P	15 54 00.1	-0.1
	baz=28,SNR=18						
CNB	**Canberra Magne**	**28.15**	**197**	P	P	15 54 05.9	+1.7
	baz=29,SNR=12						
CAN	**Canberra**	**28.26**	**197**	*e*P	**P**	**15 54 06.1**	**+1.0**
CAN				pmax	pmax		
	comp=Z,41nm,0.8s						
CAN	**Canberra**	**28.26**	**197**	*e*P	**P**	**15 54 06.1**	**+1.0**
	comp=Z,41nm,0.8s						
STKA	**Stephens Creek**	**28.36**	**212**	*e*P	**P**	**15 54 06.2**	**+0.2**
	comp=Z,8.4nm,0.5s						
STKA				pP	**pP**	**15 54 29.3**	**-0.8**
STKA	**Stephens Creek**	**28.36**	**212**	P	**P**	**15 54 06.4**	**+0.4**
	comp=Z,36nm,0.5s,baz=16,slow=8.0,SNR=142						
STKA				pP	**pP**	**15 54 29.3**	**-0.8**
	comp=Z,32nm,0.9s,baz=22,slow=14,SNR=3.1						
STKA				LR	LR	16 04 15.0	
	comp=Z,229nm,21.6s,baz=24,slow=34						
STKA	**Stephens Creek**	**28.36**	**212**	P	**P**	**15 54 06.3**	**+0.3**
	baz=29,SNR=100						
AS31	**Alice Springs**	**28.36**	**235**	*e*P	**P**	**15 54 05.5**	**-0.7**
ASAR	**Alice Springs**	**28.36**	**235**	P	**P**	**15 54 05.7**	**-0.5**
ASAR				PcP	**PcP**	**15 57 15.6**	**-0.9**
ASAR	**Alice Springs**	**28.36**	**235**	P	**P**	**15 54 05.7**	**-0.5**
	comp=Z,34nm,0.5s,baz=62,slow=9.8,SNR=1109						
ASAR				PcP	**PcP**	**15 57 15.6**	**-0.9**
	comp=Z,4.5nm,0.6s,baz=73,slow=1.8,SNR=5.2						
ASAR				LR	LR	16 04 36.1	
	comp=Z,107nm,20.9s,baz=79,slow=34						
PALU	**Palau**	**29.02**	**302**	P	**P**	**15 54 13.7**	**+1.6**
	baz=29,SNR=7.5						
AFI	**Afiamalu**	**29.19**	**103**	*e*P	**P**	**15 54 13.6**	**-0.1**
	comp=Z,155nm,1.2s						
AFI	**Afiamalu**	**29.19**	**103**	P	**P**	**15 54 14.1**	**+0.4**
	comp=Z,60nm,0.7s,baz=213,slow=2.3,SNR=14						
AFI				LR	LR	16 04 43.2	
	comp=Z,117nm,18.5s,baz=182,slow=34						
MILA	**Mila**	**29.83**	**196**	P	**P**	**15 54 21.0**	**+2.0**
	baz=30,SNR=12						
KNRA	**Kununurra**	**30.37**	**253**	P	**P**	**15 54 23.3**	**-0.6**
	baz=31,SNR=99						
TOO	**Toolangi**	**31.45**	**201**	P	**P**	**15 54 34.6**	**+1.3**
	baz=32,SNR=22						
ARPS	**Mount Arapiles**	**32.20**	**206**	P	**P**	**15 54 40.8**	**+1.0**
	baz=33,SNR=18						
BBOO	**Bu

KSM	Kuching	49.49 279	*e*P		P		15 57 00.6	-1.4
	comp=Z,37nm,1.0s							
KSM	Kuching	49.49 279	P		P		15 57 01.5	-0.4
KSM	Kuching	49.49 279	P		P		15 57 01.1	-0.9
	baz=50,SNR=9.2							
PPT	Papeete	50.82 106	P		P		15 57 13.5	+1.6
PPT	Papeete	50.82 106	P		P		15 57 13.5	+1.6
	comp=Z,48nm,0.9s,baz=347,slow=3.1,SNR=7.2							
PPT			LR		LR		16 15 27.4	
	comp=Z,177nm,18.2s,baz=5.5,slow=32							
PPT2	Papeete2	50.82 106	*e*P		P		15 57 12.8	+0.8
	comp=Z,65nm,1.3s							
PPT2			*e*LR		LR		16 11 45.2	
	comp=Z,149nm,28.2s							
PAE	Paea	50.82 106	*e*P		P		15 57 12.4	+0.5
	comp=Z,16nm,1.2s							
LEM	Lembang	50.89 268	P		P		15 57 13.3	+0.6
	baz=51,SNR=4.1							
TVO	Taravao	51.14 106	*e*P		P		15 57 15.2	+0.8
	comp=Z,99nm,0.8s							
TBI	Tubuai	51.49 113	*e*P		P		15 57 17.8	+0.9
	comp=Z,98nm,0.9s							
TBI			*e*LR		LR		16 12 05.4	
	comp=Z,233nm,39.2s							
PMOR	Pomariorio Ree	52.34 102	*e*P		P		15 57 24.2	+1.0
	comp=Z,250nm,1.1s							
POHA	Pohakuloa	52.84 57	*e*P		P		15 57 28.3	+1.1
	comp=Z,93nm,1.0s							
KSRS	Korea Array	54.12 330	P		P		15 57 36.1	+0.2
	comp=Z,12nm,1.0s,baz=147,slow=8.0,SNR=57							
KSRS			pP		pP		15 58 01.7	-0.4
	comp=Z,12nm,1.0s,baz=144,slow=8.6,SNR=7.0							
KSAR	Wonju Array Be	54.13 330	P		P		15 57 36.1	+0.1
KSAR			pP		pP		15 58 01.7	-0.5
INCN	Inchon	54.80 329	*e*P		P		15 57 41.1	+0.2
	comp=Z,83nm,1.4s							
QIZ	Qiongzhong	55.59 300	P		P		15 57 47.8	+1.0
QIZ			S		S		16 05 24.5	0.0
KGM	Kluang	56.44 278	P		P		15 57 53.3	+0.3
YSS	Yuzh-Sakhalins	57.02 347	*e*P		P		15 57 57.2	+0.8
KTGM	Kuala Trenggan	57.33 282	P		P		15 58 01.5	+2.1
WHN	Wuhan	57.74 314	P		P		15 58 03.1	+1.2
USRK	Ussuriysk Arra	57.81 337	P		P		15 58 02.4	+0.3
	comp=Z,14nm,0.9s,baz=142,slow=6.7,SNR=32							
USRK			pP		pP		15 58 27.8	-0.8
	comp=Z,18nm,0.8s,baz=138,slow=6.8,SNR=8.1							
USRK			LR		LR		16 19 45.5	
	comp=Z,21nm,21.0s,baz=301,slow=33							
FRIM	Kepong	58.34 279	P		P		15 58 07.6	+1.2
DL2	Dalian	58.51 326	P		P		15 58 07.3	+0.3
DL2			pP		pP		15 58 37.4	+3.8
DL2			sP		sP		15 58 48.5	+2.9
DL2			PcP		PcP		15 58 56.9	+0.5
DL2			S		S		16 06 04.9	+2.7
DL2			pmax		pmax			
	comp=Z,23nm,0.9s							
MDJ	Mudanjiang	59.10 336	P		P		15 58 11.5	+0.4
MDJ			pP		pP		15 58 36.8	-0.9
MDJ			sP		sP		15 58 47.5	-2.2
MDJ			PP		PP		16 00 29.1	+6.1
MDJ			ScP		ScP		16 02 50.0	+0.6
MDJ			PcS		PcS		16 03 00.5	0.0
MDJ			sS		sS		16 06 53.0	-2.4
MDJ			ScS		ScS		16 07 50.8	+0.2
MDJ			pmax		pmax			
	comp=Z,11nm,1.0s							
MDJ			pmax		pmax			
	comp=Z,36nm,5.0s							
MDJ			LR		LR			
	comp=N,55nm,9.6s							
MDJ			LR		LR			
	comp=E,33nm,11.0s							
MDJ			LR		LR			
	comp=Z,88nm,11.0s							
MDJ	Mudanjiang	59.10 336	*e*P		P		15 58 11.3	+0.3
	comp=Z,16nm,1.0s							
IPM	Ipoh	59.19 280	P		P		15 58 13.8	+1.5
DRV	Dumont d'Urvil	59.56 189	S		S		16 06 34.0	+19
DRV			L		L		16 13 00.0	
DRV			R				16 17 00.0	
KULM	Kulim	59.73 281	P		P		15 58 16.6	+0.6
CN2	Changchun	60.23 333	*e*P		P		15 58 19.4	+0.6
CN2			*e*pP		pP		15 58 46.3	+0.8
CN2			*e*sP		sP		15 58 59.0	+1.5
CN2			PcP		PcP		15 59 02.9	-0.3
CN2			*e*S		S		16 06 23.8	-0.5
CN2			pmax		pmax			
	comp=Z,20nm,0.8s							
HABR	Khabarovsk	60.47 342	*e*P		P		15 58 18.6	-1.7
HABR			*e**PP		pP		15 58 45.1	-1.9
HABR			*e**SP		sP		15 58 57.5	-1.5
HABR			*e*				15 59 02.2	
HABR			*e*				16 00 32.6	
HABR			*e*S		S		16 06 24.9	-2.2
HABR			*e*				16 07 57.6	
HABR			*e*SS		SS		16 10 25.3	-1.9
HABR			pmax		pmax			
	comp=N,18nm,1.1s							
HABR			pmax		pmax			
	comp=Z,33nm,1.1s							
HABR			pmax		pmax			
	comp=E,30nm,1.1s							
ENH	Enshi	61.13 311	*e*P		P		15 58 24.4	-0.8
	comp=E,9.8nm,0.5s							
PET	Petropavlovsk	61.24 360	*e*P		P		15 58 40.3	+15
PET			*e*S		S		16 06 38.0	+1.4
PEA0B	Petropavlovsk-	61.33 359	*e*P		P		15 58 26.2	+0.1
PETK	Petropavlovsk-	61.33 359	P		P		15 58 26.4	+0.3
PETK			*PP		pP		15 58 52.5	-0.3
PETK	Petropavlovsk-	61.33 359	P		P		15 58 26.4	+0.3
PETK			pP		pP		15 58 52.5	-0.3
PETK	Petropavlovsk-	61.33 359	P		P		15 58 26.4	+0.3
	comp=E,16nm,0.9s,baz=163,slow=8.7,SNR=31							
PETK			pP		pP		15 58 52.5	-0.3
	comp=E,19nm,0.8s,baz=160,slow=9.3,SNR=7.0							
PETK			LR		LR		16 21 04.6	
	comp=E,83nm,22.0s,baz=202,slow=32							
GYA	Guiyang	61.47 306	P		P		15 58 29.8	+2.1
GYA			pP		pP		15 58 57.3	+2.8
GYA			sP		sP		15 59 10.4	+3.9
GYA			PP		PP		16 00 48.6	+4.2
GYA			ScP		ScP		16 03 01.0	+0.5
GYA			S		S		16 06 40.6	-0.3
GYA			sS		sS		16 07 26.4	-0.5
GYA			ScS		SKKSac		16 08 05.1	-4.2
GYA			pmax		pmax			
	comp=Z,20nm,1.0s							
GYA			pmax		pmax			
	comp=Z,120nm,5.2s							
KLR	Kul'dur	62.20 340	*e*P		P		15 58 28.2	-3.8
KLR			*e*				15 58 56.7	
KLR			pmax		pmax			
	comp=Z,40nm,1.6s							
FX1	Attu Island--F	62.29 10	*e*P		P		15 58 32.5	0.0
FX1	Attu Island--F	62.29 10	LR		LR		16 21 15.1	
	comp=Z,64nm,21.2s,baz=212,slow=32							
XAN	Xi'an	63.50 315	P		P		15 58 41.0	0.0
XAN			pP		pP		15 59 06.1	-1.8
XAN			S		S		16 07 00.8	-5.2
XAN			sS		sS		16 07 47.9	-4.3
XAN			SS		SS		16 11 14.8	-0.5
XAN			pmax		pmax			
	comp=Z,7.0nm,0.8s							
KMI	Kunming	64.09 303	P		P		15 58 46.5	+1.2
KMI			pP		pP		15 59 14.6	+2.3
KMI			S		S		16 07 14.3	+0.3
KMI			SS		SS		16 11 26.9	+1.7
KMI			pmax		pmax			
	comp=Z,17nm,1.0s							
KMI			LR		LR			
	comp=N,170nm,7.3s							
KMI			LR		LR			
	comp=E,230nm,11.4s							
KMI			LR		LR			
	comp=Z,140nm,11.7s							
RKT	Rikitea	64.75 112	*e*LR		LR		16 18 14.7	
	comp=Z,187nm,33.0s							
CM31	Chiang Mai Arr	64.96 295	*e*P		P		15 58 51.3	+0.5
	comp=Z,8.8nm,0.9s							
CMAR	Chiang Mai Arr	64.96 295	P		P		15 58 51.0	+0.2
CMAR			pP		pP		15 59 17.6	-0.1
CMAR	Chiang Mai Arr	64.96 295	P		P		15 58 51.0	+0.2
	comp=Z,10nm,1.0s,baz=122,slow=4.8,SNR=40							
CMAR			pP		pP		15 59 17.6	-0.1
	comp=Z,9.4nm,0.9s,baz=116,slow=5.1,SNR=6.6							
CMMT	Chiang Mai	65.07 295	P		P		15 58 51.2	-0.3
	comp=Z,12nm,2.7s							
CHTO	Chiang Mai	65.08 295	*e*P		P		15 58 51.5	0.0
CHTO			pmax		pmax			
	comp=Z,48nm,1.6s							
CHTO	Chiang Mai	65.08 295	*e*P		P		15 58 51.5	0.0
	comp=Z,48nm,1.6s							
CHTO	Chiang Mai	65.08 295	P		P		15 58 50.4	-1.1
	comp=Z,13nm,2.7s							
HHC	Hu-ho-hao-te	65.62 322	*e*P		P		15 58 56.4	+1.7
HHC			pP		pP		15 59 20.4	-1.4
HHC			sP		sP		15 59 33.6	-0.1
HHC			PP		PP		16 01 24.9	+4.3
HHC			ScP				16 03 17.5	
HHC			S		S		16 07 32.6	+0.7
HHC			sS		sS		16 08 18.1	-0.3
HHC			ScS		SKSac		16 08 38.5	-1.7
HHC			pmax		pmax			
	comp=Z,42nm,0.6s							
HHC			pmax		pmax			
	comp=Z,170nm,6.0s							
HHC			LR		LR			
	comp=N,260nm,16.8s							
HHC			LR		LR			
	comp=E,210nm,15.6s							
HHC			LR		LR			
	comp=Z,220nm,16.8s							
CD2	Chengdu	65.76 309	P		P		15 58 57.4	+1.6
CD2			pP		PcP		15 59 24.6	-1.6
CD2			sP		sP		15 59 36.8	+2.0
CD2			PP		PP		16 01 25.8	+3.8
CD2			PcS				16 03 30.6	
CD2			S		S		16 07 33.4	-0.5
CD2			sS		sS		16 08 20.6	+0.2
CD2			ScS		SKSac		16 08 39.0	-2.6
CD2			SS		SS		16 11 51.3	+0.7
CD2			pmax		pmax			
	comp=Z,10.0nm,0.5s							
CD2			pmax		pmax			
	comp=Z,120nm,5.2s							
CASY	Casey	66.48 199	*e*P		P		15 58 59.3	-0.3
	comp=Z,25nm,0.9s							
HIA	Hailar	66.94 333	*e*P		P		15 59 03.6	+0.8
	comp=Z,26nm,0.8s							
LZH	Lanzhou	68.12 314	*e*P		P		15 59 12.3	+1.5
LZH			pP		pP		15 59 39.0	+1.0
LZH			sP		sP		15 59 50.3	+0.4
LZH			*e*S		S		16 08 04.4	+2.0
LZH			sS		sS		16 08 49.3	+0.2
LZH			SS		SS		16 12 30.0	+2.7
LZH			pmax		pmax			
	comp=Z,16nm,1.0s							
LZH			pmax		pmax			
	comp=Z,120nm,4.0s							
LZH			LR		LR			
	comp=N,240nm,8.8s							
LZH			LR		LR			
	comp=E,540nm,10.4s							
LZH			LR		LR			
	comp=Z,740nm,13.6s							
VNDA	Vanda	69.06 179	*e*P		P		15 59 15.9	+0.3
	comp=Z,24nm,0.8s							
VNDA			pP		pP		15 59 43.2	+0.3
VNDA	Vanda	69.06 179	P		P		15 59 16.3	+0.7
	comp=Z,21nm,0.7s,baz=338,slow=6.5,SNR=110							
VNDA			pP		pP		15 59 43.2	+0.3
	comp=Z,9.0nm,1.0s,baz=348,slow=5.1,SNR=2.5							
VNDA			LR		LR		16 23 16.1	
	comp=Z,94nm,20.0s,baz=7.1,slow=30							
SBA	Scott Base	69.49 178	*e*P		P		15 59 19.7	+1.4
SBA			pmax		pmax			
	comp=Z,18nm,0.9s							
SBA	Scott Base	69.49 178	*e*P		P		15 59 19.7	+1.4
	comp=Z,18nm,0.9s							
CLNS	Chul'man	70.83 341	*e*P		P		15 59 27.3	+0.5
CLNS			pmax		pmax			
	comp=Z,12nm,0.9s							
CLNS			pmax		pmax			
	comp=N,6.0nm,1.1s							
CLNS			pmax		pmax			
	comp=E,5.0nm,0.9s							
SEY	Seymchan	71.35 357	*c i*P		P		15 59 30.0	+0.2
CIT	Chita	71.68 332	*e*P		P		15 59 32.8	+0.7
CIT			*e*				15 59 58.6	
ULN	Ulaanbaatar	72.36 326	*e*P		P		15 59 37.3	+0.9
	comp=E,49nm,1.1s							
ULN	Ulaanbaatar	72.36 326	P		P		15 59 35.9	-0.5
	comp=E,29nm,1.2s,comp=E,561nm							
GTA	Gaotai	72.50 316	*e*P		pP		16 00 06.4	+1.5
GTA			pP		pwP		16 00 10.4	+5.5
GTA			sP		sP		16 00 12.4	-4.3
GTA			pmax		pmax			
	comp=Z,33nm,1.3s							
GTA	Gaotai	72.50 316	⇑P		P		15 59 38.1	+0.7
GTA			pP		pP		16 00 06.4	+1.5
GTA			sP		sP		16 00 18.4	+1.7
GTA			S		S		16 08 55.0	+1.9
GTA			SKS		SKSac		16 09 28.8	-3.7
GTA			sS		sS		16 09 43.8	+3.4
GTA			pmax		pmax			
	comp=Z,24nm,0.9s							
GTA			pmax		pmax			
	comp=Z,93nm,5.2s							
GTA			LR		LR			
	comp=N,63nm,14.0s							
GTA			LR		LR			
	comp=E,68nm,15.7s							
GTA			LR		LR			
	comp=Z,79nm,15.4s							
SONM	Songino Array	72.71 326	P		P		15 59 39.5	+1.1
SONM			pP		pP		16 00 05.9	-0.1
SONM	Songino Array	72.71 326	P		P		15 59 39.5	+1.1
	comp=Z,23nm,0.7s,baz=139,slow=5.7,SNR=192							
SONM			pP		pP		16 00 05.9	-0.1
	comp=Z,28nm,0.9s,baz=137,slow=5.8,SNR=5.1							
YAK	Yakutsk	73.86 346	*e*P		P		15 59 43.8	-0.8
YAK			*e*				15 59 56.2	
YAK			*e**PP		pP		16 00 10.3	-1.9
YAK			*e*S		S		16 09 06.6	-0.6
YAK			*e*				16 09 37.7	
YAK			*e**SS		sS		16 09 54.0	-0.7
YAK			*e*SS		SS		16 13 59.4	+5.6
YAK			pmax		pmax			
	comp=E,4.0nm,1.1s							
YAK			pmax		pmax			
	comp=Z,45nm,1.1s							
YAK			pmax		pmax			
	comp=N,8.0nm,0.9s							
YAK			smax		smax			
	comp=N,28nm,1.4s							
YAK			smax		smax			
	comp=E,54nm,2.8s							
LSA	Lhasa	75.34 304	*e*P		P		15 59 55.2	+0.6
LSA			pmax		pmax			
	comp=Z,7.0nm,0.8s							
LSA	Lhasa	75.34 304	*e*P		P		15 59 55.2	+0.6
	comp=Z,6.7nm,0.8s							
ZAK	Zakamensk	75.83 327	⇓*i*P		P		15 59 56.6	+0.2
ZAK			*e*				16 00 22.9	
ZAK			pmax		pmax			
	comp=Z,8.0nm,1.0s							
BILL	Bilibino	76.48 3	*d i*P		P		15 59 59.3	-0.3
TAPN	Taplejung	77.52 300	*e*P		P		16 00 06.6	-0.1
ODAN	Odare	77.66 300	*e*P		P		16 00 07.0	-0.4
	comp=Z,46nm,0.7s							
MOY	Mondy	77.73 327	*e*P		P		16 00 07.9	+0.8
MOY			*e*				16 00 35.5	
TNA	Tin City	77.76 13	*e*P		P		16 00 07.1	+0.3
	comp=Z,14nm,1.0s							
SVW2	Sparrevohn	77.91 21	*e*P		P		16 00 09.1	+1.3
GUN	Gumba	79.24 300	*e*P		P		16 00 16.1	-0.1
	comp=Z,31nm,0.7s							
SEW	Seward	79.54 24	*e*P		P		16 00 16.7	+0.1
	comp=Z,41nm,1.1s							
PKI	Pulchoki	79.55 300	*e*P		P		16 00 17.2	-0.7
	comp=Z,17nm,0.6s							
PKIN	Phulchoki	79.56 300	*e*P		P		16 00 17.9	0.0
KKN	Kakani	79.72 300	*e*P		P		16 00 18.2	-0.4
	comp=Z,13nm,0.5s							
DMN	Daman	79.82 300	*e*P		P		16 00 19.3	+0.1
PPLA	Purkeypile	80.31 20	*e*P		P		16 00 20.6	-0.4
	comp=Z,10nm,1.0s							
PMR	Palmer	80.58 22	*e*P		P		16 00 22.2	0.0
PMR			pmax		pmax			
	comp=Z,20nm,0.8s							
PMR	Palmer	80.58 22	*e*P		P		16 00 22.2	0.0
	comp=Z,20nm,0.8s							
SML	Sawmill	81.02 22	*e*P		P		16 00 25.6	+1.0
SML			pmax		pmax			
	comp=Z,7.0nm,0.8s							
SML	Sawmill	81.02 22	*e*P		P		16 00 25.6	+1.0
	comp=Z,6.8nm,0.8s							
KOLN	Koldanda	81.15 300	*e*P		P		16 00 25.6	-0.7
	comp=Z,26nm,0.7s							
DANN	Dangsing	81.16 300	*e*P		P		16 00 25.5	-0.9
	comp=Z,15nm,0.7s							
TRF	Thorofare Moun	81.33 21	*e*P		P		16 00 25.0	-1.4
	comp=Z,15nm,0.7s							
QSPA	South Pole Qui	81.53 180	P		P		16 00 27.1	-0.4
QSPA			PKKPbc		PKKPbc		16 18 58.5	-4.9
QSPA	South Pole Qui	81.53 180	P		P		16 00 27.1	-0.4
	comp=Z,11nm,0.7s,baz=310,slow=1.3							
QSPA			PKKPbc		PKKPbc		16 18 58.5	-4.9
	comp=Z,1.5nm,0.8s,baz=135,slow=1.1,SNR=7.0							
DIV	Divide	81.61 24	P		P		16 00 28.2	+0.4
PYUN	Piuthan	81.76 300	*e*P		P		16 00 28.4	-1.1
	comp=Z,49nm,1.0s							
MCK	McKinley	81.97 21	*e*P		P		16 00 29.2	-0.4
MCK	McKinley	81.97 21	*e*P		P		16 00 29.2	-0.4
WMQ	Urumqi	82.58 316	P		P		16 00 33.9	+0.6
WMQ			pP		pP		16 00 59.4	-2.0
WMQ			PP		PP		16 03 46.4	+2.1
WMQ			S		S		16 10 41.0	-0.6
WMQ			SKS		SKSac		16 10 42.0	-2.6
WMQ			sS		sS		16 11 26.3	-3.6
WMQ			SS		SS		16 16 09.0	+3.2
WMQ			pmax		pmax			
	comp=Z,25nm,1.1s							
WMQ			pmax		pmax			
	comp=Z,120nm,4.6s							
WMQ			LR		LR			
	comp=N,260nm,7.0s							
WMQ			LR		LR			
	comp=E,480nm,8.8s							
WMQ			LR		LR			
	comp=Z,74nm,14.8s							
PAX	Paxson	82.78 22	*e*P		P		16 00 36.0	+2.1
PAX			pmax		pmax			
	comp=Z,11nm,1.2s							
PAX	Paxson	82.78 22	*e*P		P		16 00 36.0	+2.1
	comp=Z,11nm,1.2s							
COLA	College	83.05 20	*e*P		P		16 00 34.4	-0.7
COLA	College	83.05 20	*e*P		P		16 00 34.4	-0.7
ILAR	Eielson Array	83.32 20	P		P		16 00 35.7	-0.8
ILAR			pP		pP		16 01 02.8	-1.9
ILAR	Eielson Array	83.32 20	P		P		16 00 35.7	-0.8
	comp=Z,19nm,1.1s,baz=250,slow=5.1,SNR=47							
ILAR			pP		pP		16 01 02.8	-1.9
	comp=Z,4.6nm,0.9s,baz=233,slow=6.6,SNR=2.8							
MENT	Mentasta	83.43 23	*e*P		P		16 00 37.8	+0.7
PNL	Peninsula	83.53 27	P		P		16 00 38.9	+1.2
	comp=Z,25nm,0.8s							
DOT	Dot Lake	83.69 22	*e*P		P		16 00 38.9	+0.5
	comp=Z,67nm,0.8s							
COLD	Coldfoot	83.76 18	P		P		16 00 39.4	+0.7
	comp=Z,7.7nm,1.0s							
DIB	Dawson Inlet,	84.21 34	T		T		17 33 29.7	
	SNR=32							
MAW	Mawson	84.57 203	P		P		16 00 42.7	-0.1
MAW	Mawson	84.57 203	P		P		16 00 42.7	-0.1
	comp=Z,16nm,0.7s,baz=97,slow=7.3,SNR=22							
MAW	Mawson	84.57 203	P		P		16 00 43.2	+0.4
	baz=85,SNR=12							
SKAG	Skagway	85.28 28	*e*P		P		16 00 46.9	+0.5
	comp=Z,43nm,1.4s							
SKAG			*e*pP		pP		16 01 16.5	+1.7
EGAK	Eagle	85.37 22	*e*P		P		16 00 47.6	+0.8
	comp=Z,14nm,0.7s							
HUMO	Hull Mountain	87.00 46	*e*P		P		16 00 57.7	+2.3
HUMO			*e*pP		pP		16 01 25.4	+1.6
MK31	Makanchi Array	87.10 318	*e*P		P		16 00 55.6	-0.2
MK31	Makanchi Array	87.10 318	*e*P		P		16 00 55.6	-0.2
MKAR	Makanchi Array	87.10 318	*ce*P		P		16 00 55.5	-0.3
MKAR			pmax		pmax			
	comp=Z,10.0nm,0.7s							
MKAR	Makanchi Array	87.10 318	P		P		16 00 55.6	-0.3
MKAR			pP		pP		16 01 21.9	-2.3
MKAR			PKKP		PKKPdf		16 18 44.3	+1.3
MKAR	Makanchi Array	87.10 318	P		P		16 00 55.6	-0.3
	comp=Z,10.0nm,0.7s,baz=99,slow=6.0,SNR=117							
MKAR			pP		pP		16 01 21.9	-2.3
	comp=Z,13nm,0.7s,baz=101,slow=6.0,SNR=12							
MKAR			PKKP		PKKPdf		16 18 44.3	+1.3
	comp=Z,0.5nm,0.9s,baz=256,slow=4.9,SNR=4.2							
DLBC	Dease Lake	87.41 30	*e*P		P		16 00 58.4	+1.3
ZAA0	Zalesovo Array	87.59 325	*e*P		P		16 00 56.0	-1.9
ZALV	Zalesovo Beam	87.59 325	*i*P		P		16 00 56.9	-1.0
ZALV			pmax		pmax			
	comp=Z,3.0nm,0.6s							
ZALV	Zalesovo Beam	87.59 325	P		P		16 00 56.7	-1.3
ZALV			pP		pP		16 01 22.9	-3.5
ZALV	Zalesovo Beam	87.59 325	P		P		16 00 56.7	-1.3
	comp=Z,3.0nm,0.6s,baz=105,slow=5.9,SNR=12							
ZALV			pP		pP		16 01 22.9	-3.5
	comp=Z,4.0nm,0.7s,baz=102,slow=6.2,SNR=3.7							
PKM	Peak Mountain	87.65 54	P		P		16 01 00.7	+1.8
	baz=88							
BEKR	Beckworth	88.27 49	*e*P		P		16 01 02.4	+0.7
	comp=Z,2.6nm,0.7s							
VES	Vestal, Richgr	88.43 54	P		P		16 01 03.6	+1.3
	baz=89							
CIS	Catalina Islan	88.50 56	⇓P		P		16 01 04.5	+1.7
	baz=89							
WCN	Washoe City	88.61 50	*e*P		P		16 01 04.4	+1.0
WCN			pmax		pmax			
	comp=Z,6.0nm,0.7s							
WCN	Washoe City	88.61 50	*e*P		P		16 01 04.4	+1.0
	comp=Z,6.3nm,0.7s							
NVS	Novosibirsk	88.74 326	*e*P		P		16 01 02.6	-0.7
MOD	Modoc	88.75 47	*e*P		P		16 01 05.8	+1.9
	comp=Z,20nm,1.2s							
MOD			*e*pP		pP		16 01 33.7	+1.3
PASC	Pasadena Art C	88.83 55	*e*P		P		16 01 05.9	+1.6
	comp=Z,14nm,0.9s							
ISA	Isabella	88.88 54	*e*P		P		16 01 06.7	+2.1
ISA			pmax		pmax			
	comp=Z,5.0nm,1.0s							
ISA	Isabella	88.88 54	*e*P		P		16 01 06.7	+2.1
	comp=Z,5.2nm,1.0s							
ISA	Isabella	88.88 54	P		P		16 01 05.9	+1.3
	baz=89							
MWC	Mount Wilson	88.94 55	*e*P		P		16 01 06.5	+1.5
MWC			*e**PP		pP		16 01 33.8	+0.3
MWC			pmax		pmax			
	comp=Z,25nm,1.0s							
MWC	Mount Wilson	88.94 55	*e*P		P		16 01 06.5	+1.5
	comp=Z,25nm,1.0s							
MWC			*e*pP		pP		16 01 33.8	+0.3
EDW2	Edwards Air Fo	89.12 55	⇓P		P		16 01 07.7	+2.0
	baz=89,SNR=10							
MTUM	Tungsten Hills	89.14 52	*e*P		P		16 01 07.8	+1.9
BFSC	Mount Baldy Ra	89.27 55	P		P		16 01 07.4	+0.9
	baz=90							
LRMC	Laurel Mountai	89.47 54	P		P		16 01 09.5	+2.1
	baz=90,SNR=17							
NVAR	Mina Array Bea	89.55 51	P		P		16 01 09.1	+1.3
NVAR			pP		pP		16 01 37.0	+0.7
NVAR	Mina Array Bea	89.55 51	P		P		16 01 09.1	+1.3
	comp=Z,10nm,0.9s,baz=242,slow=5.9,SNR=48							
NVAR			pP		pP		16 01 37.0	+0.7
	comp=Z,4.2nm,0.8s,baz=243,slow=7.1,SNR=3.7							
NV11

KSH LR LR
comp=Z,250nm,4.9s
GRAC Grapevine Rang 90.01 53 P **P** 16 01 11.5 +1.7
baz=90
MONP Monument Peak 90.05 57 P **P** 16 01 12.4 +2.2
baz=90,SNR=9.5
WVOR Wild Horse Val 90.07 47 *e*P **P** 16 01 11.4 +1.3
WVOR pmax pmax
comp=Z,5.0nm,0.9s
WVOR Wild Horse Val 90.07 47 *e*P **P** 16 01 11.3 +1.3
comp=Z,4.7nm,0.9s
PFO Pinyon Flat Ob 90.14 56 *e*P **P** 16 01 12.3 +1.7
comp=Z,7.0nm,1.1s
PFO Pinyon Flat Ob 90.14 56 P **P** 16 01 11.9 +1.3
baz=90
GSC Goldstone 90.15 54 *e*P **P** 16 01 12.2 +1.7
GSC pmax pmax
comp=Z,7.0nm,0.9s
GSC Goldstone 90.15 54 *e*P **P** 16 01 12.2 +1.7
comp=Z,7.0nm,0.9s
GSC Goldstone 90.15 54 P **P** 16 01 12.0 +1.4
baz=90
FURC Furnace Creek, 90.31 53 P **P** 16 01 12.9 +1.8
baz=90
KURK Kurchatov 90.42 321 *c i*P **P** 16 01 09.8 -1.4
KURK pmax pmax
comp=Z,17nm,1.7s
KURK Kurchatov 90.42 321 *e*P **P** 16 01 09.9 -1.3
comp=Z,30nm,1.3s
KURK *e*pP **pP** 16 01 38.9 -0.9
HEC Hector,Ludlow 90.45 55 P **P** 16 01 13.6 +1.7
baz=91,SNR=9.2
BELC Belle Mtn. Jos 90.58 56 P **P** 16 01 14.3 +1.7
baz=91,SNR=13
SHOC Shoshone 90.68 54 P **P** 16 01 14.6 +1.7
baz=91
BMN Battle Mountai 90.74 49 *e*P **P** 16 01 16.1 +2.8
BMN Battle Mountai 90.74 49 *e*P **P** 16 01 16.1 +2.8
TKM2 Tokmak 2 90.87 313 *e*P **P** 16 01 13.1 -0.8
TKM2 *e**PP **pP** 16 01 40.8 -1.6
TKM2 pmax pmax
comp=Z,7.0nm,0.7s
TKM2 Tokmak 2 90.87 313 *e*P **P** 16 01 13.1 -0.8
comp=Z,6.6nm,0.7s
TKM2 *e*pP **pP** 16 01 40.8 -1.6
TKM2 Tokmak 2 90.87 313 P **P** 16 01 13.9 0.0
SNR=11
BC3 Big Chuckawall 90.97 56 P **P** 16 01 15.9 +1.5
baz=91
IRM Iron Mountain 91.30 56 P **P** 16 01 18.0 +2.1
baz=92,SNR=12
GLA Glamis 91.39 57 *e*P P 16 01 23.3 +7.0
GLA pmax pmax
comp=Z,13nm,1.1s
GLA Glamis 91.39 57 *e*P P 16 01 23.3 +7.0
comp=Z,13nm,1.1s
BMO Blue Mountains 91.48 45 *e*P **P** 16 01 16.4 -0.1
BMO pmax pmax
comp=Z,7.0nm,0.8s
BMO Blue Mountains 91.48 45 *e*P **P** 16 01 16.4 -0.1
comp=Z,7.4nm,0.8s
CHMS Chumysh 91.49 313 P **P** 16 01 16.1 -0.4
SNR=5.9
FRU Bishkek 91.56 313 *e*P **P** 16 01 16.0 -0.9
FRU *e* 16 01 42.0
AAK Ala-Archa 91.62 313 *c i*P **P** 16 01 16.8 -0.5
AAK pmax pmax
comp=Z,21nm,1.2s
AAK Ala-Archa 91.62 313 *e*P **P** 16 01 16.9 -0.5
comp=Z,1.3nm,0.8s
AAK *e*pP **pP** 16 01 45.1 -0.7
AAK Ala-Archa 91.62 313 P **P** 16 01 17.4 +0.2
SNR=5.4
R11A Troy Canyon, C 91.63 52 P **P** 16 01 19.0 +1.5
baz=92,SNR=18
USP Ospenovka 91.72 313 P **P** 16 01 17.5 -0.1
SNR=7.3
AML Almayashu 92.12 312 P **P** 16 01 20.3 +0.4
SNR=13
EKS2 Erkin-Say 92.14 313 *e*P **P** 16 01 19.8 +0.1
EKS2 *e**PP **pP** 16 01 47.8 -0.4
EKS2 pmax pmax
comp=Z,2.0nm,0.7s
EKS2 Erkin-Say 92.14 313 *e*P **P** 16 01 19.8 +0.1
comp=Z,1.5nm,0.7s
EKS2 *e*pP **pP** 16 01 47.8 -0.4
SYO Syowa Base 92.21 198 ⇑ *i*P **P** 16 01 17.2 -2.1
MFID Camas Ranch 92.28 47 *e*P **P** 16 01 21.3 +1.0
comp=Z,8.0nm,1.0s
MFID *e*pP **pP** 16 01 49.5 +0.6
MFID Camas Ranch 92.28 47 P **P** 16 01 21.9 +1.7
baz=92
ELK Elko 92.28 49 *e*P **P** 16 01 21.9 +1.4
comp=Z,80nm,0.9s
W13A Hualapai Mount 92.48 55 P **P** 16 01 23.4 +1.9
baz=93
C11A Tepee Creek (N 92.71 42 P **P** 16 01 23.9 +1.8
baz=93
I12A Atlanta 92.84 46 ⇓P **P** 16 01 24.9 +1.9
baz=93
G12A Big Creek, Yel 92.91 45 P **P** 16 01 24.4 +1.2
baz=93
F12A Elk City 93.06 44 P **P** 16 01 24.8 +0.9
baz=93
H12A Diamond D Ranc 93.15 46 P **P** 16 01 25.5 +1.1
baz=93
ARUT Antelope Range 93.22 52 *e*P **P** 16 01 26.3 +1.5
ARUT pmax pmax
comp=Z,6.0nm,1.0s
ARUT Antelope Range 93.22 52 *e*P **P** 16 01 26.2 +1.5
comp=Z,6.0nm,1.0s
CCUT Cedar City 93.25 53 *e*P **P** 16 01 27.3 +2.3
comp=Z,7.8nm,0.9s
CCUT *e*pP **pP** 16 01 54.6 +1.0
HLID Hailey 93.32 47 *e*P **P** 16 01 26.4 +1.2
comp=Z,12nm,1.1s
HLID *e*pP **pP** 16 01 54.9 +1.2
HLID Hailey 93.32 47 ⇑P **P** 16 01 27.4 +2.3
baz=94,SNR=12
J13A Cove Ranch, Pi 93.47 47 ⇑P **P** 16 01 27.7 +1.9
baz=94
I13A Wildhorse Cree 93.58 46 ⇑P **P** 16 01 28.5 +2.1
baz=94,SNR=17
G13A Cobalt 93.67 45 P **P** 16 01 28.3 +1.6
baz=94
U15A North Rim 93.95 54 P **P** 16 01 30.0 +1.7
baz=94
DUG Dugway 94.03 50 *e*P **P** 16 01 29.8 +1.3
DUG pmax pmax
comp=Z,6.0nm,1.1s
DUG Dugway 94.03 50 *e*P **P** 16 01 29.8 +1.3
comp=Z,5.8nm,1.1s
DUG Dugway 94.03 50 P **P** 16 01 29.8 +1.3
baz=94
H14A Leadore 94.21 46 P **P** 16 01 30.9 +1.7
baz=94
HVU Hansel Valley 94.27 49 *e*P **P** 16 01 31.0 +1.5
HVU *e**PP **pP** 16 01 58.7 +0.6
HVU pmax pmax
comp=Z,11nm,0.9s
HVU Hansel Valley 94.27 49 *e*P **P** 16 01 31.0 +1.5
comp=Z,11nm,0.9s
HVU *e*pP **pP** 16 01 58.7 +0.6
MVU Marysvale 94.28 52 P **P** 16 01 31.6 +1.8
MVU *e*pP **pP** 16 01 60.0 +1.7
MSU Marysvale 94.31 52 *e*P **P** 16 01 32.1 +2.2
MSU *e**PP **pP** 16 02 00.1 +1.7
MSU Marysvale 94.31 52 *e*P **P** 16 01 32.1 +2.2
MSU *e*pP **pP** 16 02 00.1 +1.7
KKAR Karatay Array 94.58 313 *e*P **P** 16 01 30.0 -0.8
KKAR *e**PP **pP** 16 01 57.9 -1.4
KKAR Karatay Array 94.58 313 *e*P **P** 16 01 30.0 -0.8
KKAR *e*pP **pP** 16 01 57.9 -1.4
MCMT McKenzie Canyo 94.61 46 *e*P **P** 16 01 32.4 +1.3
comp=Z,1.1nm,0.8s
DLMT Dillon 94.85 45 *e*P **P** 16 01 34.3 +2.2
comp=Z,4.0nm,0.8s
G15A Dillon 94.90 45 P **P** 16 01 33.3 +0.9
baz=95
E15A Deer Lodge 94.95 44 P **P** 16 01 34.1 +1.6
baz=95
F15A Butte 94.98 45 P **P** 16 01 34.5 +1.8
baz=95
JLU Jordanelle 95.12 50 *e*P **P** 16 01 34.7 +1.2
comp=Z,5.5nm,0.9s
JLU *e*pP **pP** 16 02 02.6 +0.4

HWUT Hardware Ranch 95.15 49 *e*P **P** 16 01 34.8 +1.2
comp=Z,6.1nm,0.9s
DAU Daniels Canyon 95.24 50 *e*P **P** 16 01 36.0 +1.8
DAU Daniels Canyon 95.24 50 *e*P **P** 16 01 36.0 +1.8
G16A Moss Hill, Enn 95.39 45 P **P** 16 01 35.5 +0.9
baz=96
BOZ Bozeman (W) 95.56 45 *e*P **P** 16 01 36.4 +1.1
BOZ pmax pmax
comp=Z,2.0nm,0.8s
BOZ Bozeman (W) 95.56 45 *e*P **P** 16 01 36.4 +1.1
comp=Z,2.5nm,0.8s
H16A Russell Place, 95.72 46 P **P** 16 01 37.7 +1.6
baz=96
D16A Dana Ranch, Ca 95.77 43 P **P** 16 01 37.9 +1.7
baz=96
YKA Yellowknife Ar 95.78 28 P **P** 16 01 35.6 0.0
YKA pP **pP** 16 02 03.0 -1.2
YKA PKKP **PKKPbc** 16 18 23.2 -4.5
YKA Yellowknife Ar 95.78 28 P **P** 16 01 35.6 0.0
comp=Z,2.4nm,0.8s,baz=257,slow=4.5,SNR=25
YKA pP **pP** 16 02 03.0 -1.2
comp=Z,7.0nm,0.9s,baz=258,slow=4.5,SNR=8.3
YKA PKKP **PKKPbc** 16 18 23.2 -4.5
comp=Z,0.3nm,0.7s,baz=82,slow=2.8,SNR=7.1
YKW3 Yellowknife Ar 95.78 28 *e*P **P** 16 01 35.6 -0.1
comp=Z,0.1nm,0.9s
YKW3 *e*pP **pP** 16 02 03.7 -0.6
M17A Scullys Gap (B 95.80 49 P **P** 16 01 37.4 +0.7
baz=96
IMW Indian Meadow 95.86 47 P **P** 16 01 39.5 +2.6
BRVK Borovoye 95.89 323 *c i*P **P** 16 01 34.5 -1.9
BRVK pmax pmax
comp=Z,7.0nm,0.8s
BRVK Borovoye 95.89 323 *e*P **P** 16 01 35.1 -1.3
comp=Z,8.0nm,0.9s
P18A Preston Nutter 95.93 51 P **P** 16 01 38.8 +1.5
baz=96
MOOW Moose Ponds 95.98 47 P **P** 16 01 39.8 +2.4
F17A Fitzpatrick Pl 96.26 45 P **P** 16 01 39.7 +1.2
baz=96
Z20A Nine Sixteen R 96.59 58 P **P** 16 01 41.5 +1.2
baz=97
BW06 Boulder Array 96.75 48 *e*P **P** 16 01 41.6 +0.7
comp=Z,3.9nm,0.8s
PDAR Pinedale Array 96.75 48 P **P** 16 01 41.3 +0.4
PDAR Pinedale Array 96.75 48 P **P** 16 01 41.3 +0.4
comp=Z,4.5nm,0.9s,baz=261,slow=2.4,SNR=18
Y20A Horse Springs, 96.85 57 P **P** 16 01 42.8 +1.2
baz=97
F18A Big Timber 96.92 45 P **P** 16 01 42.8 +1.4
baz=97
GCMT Greycliff 96.94 45 *e*P **P** 16 01 42.6 +1.0
comp=Z,2.1nm,0.9s
I19A Meeteetse 97.27 47 P Pdif 16 01 44.1 +0.8
baz=97
K19A Absolon Red Bu 97.28 48 P Pdif 16 01 44.0 +0.7
baz=97
F19A Roth Farm, Mol 97.45 45 P Pdif 16 01 44.6 +0.7
baz=98
N20A Spence Gulch, 97.55 50 P Pdif 16 01 45.3 +0.7
baz=98
D19A Cripps Ranch, 97.59 43 P Pdif 16 01 46.4 +1.9
baz=98
K20A Yellowstone Ra 97.64 48 P Pdif 16 01 45.6 +0.7
baz=98
M20A Sweetwater, Wa 97.66 49 P Pdif 16 01 45.7 +0.6
baz=98
E20A Meyer Farm, Mu 98.06 44 P Pdif 16 01 48.0 +1.5
baz=98
C20A Veseth Ranch, 98.22 43 P Pdif 16 01 48.6 +1.4
baz=98
M21A Separation Pea 98.29 49 P Pdif 16 01 48.1 +0.3
baz=98
J21A Lysite 98.34 47 P Pdif 16 01 48.7 +0.6
baz=98
K21A Alcova 98.44 48 P Pdif 16 01 49.2 +0.8
baz=99
I21A Big Trails, Te 98.48 47 P Pdif 16 01 49.9 +1.3
baz=99
TXAR Lajitas Array 100.48 62 P **Pdif** 16 01 59.8 +2.1
TXAR PP **PP** 16 06 05.0 -0.9
TXAR PKKPbc **PKKPbc** 16 18 12.9 -0.6
TXAR Lajitas Array 100.48 62 P **Pdif** 16 01 59.8 +2.1
comp=Z,0.4nm,0.7s,baz=235,slow=4.4,SNR=7.0
TXAR PP **PP** 16 06 05.0 -0.9
comp=Z,1.2nm,0.9s,baz=282,slow=6.3,SNR=4.7
TXAR PKKPbc **PKKPbc** 16 18 12.9 -0.6
comp=Z,0.5nm,0.6s,baz=101,slow=4.7,SNR=7.7
ARU Arti 102.75 326 P **Pdif** 16 02 05.2 -1.8
ARU 16 06 19.6
ARU S **SKSac** 16 12 34.3 -2.2
ARCES ARCESS Array B 112.09 344 PKiKP **PKiKP** 16 06 43.2 -1.0
ARCES ARCESS Array B 112.09 344 PKiKP **PKiKP** 16 06 43.2 -1.0
comp=Z,1.8nm,0.6s,baz=106,slow=1.8,SNR=11
FINES FINESS Array B 116.84 337 PKP **PKPdf** 16 06 52.9 -0.6
FINES pPKP pPKPdf 16 07 22.4 -0.8
FINES FINESS Array B 116.84 337 PKP **PKPdf** 16 06 52.9 -0.6
comp=Z,2.5nm,0.7s,baz=0.0,slow=3.8,SNR=10.0
FINES pPKP pPKPdf 16 07 22.4 -0.8
comp=Z,1.1nm,0.6s,baz=24,slow=5.2,SNR=1.5
AKASG Malin Array Be 120.99 325 *c i*PKIKP **PKPdf** 16 07 01.1 -0.7
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 120.99 325 PKP **PKPdf** 16 07 00.9 -0.9
AKASG Malin Array Be 120.99 325 PKP **PKPdf** 16 07 00.9 -0.9
comp=Z,6.3nm,0.7s,baz=67,slow=2.3,SNR=19
AK01 Malin Array Si 121.00 325 *e*PKPdf **PKPdf** 16 07 00.9 -0.9
KIEV Kiev 121.00 325 *e*PKIKP **PKPdf** 16 07 01.1 -0.7
KIEV Kiev 121.00 325 *e*PKPdf **PKPdf** 16 07 01.1 -0.7
AK02 Malin Array Si 121.02 325 *e*PKPdf **PKPdf** 16 07 01.0 -0.8
KMBO Kilima Mbogo 121.14 264 PKP **PKPdf** 16 07 03.7 +0.1
KMBO Kilima Mbogo 121.14 264 PKP **PKPdf** 16 07 03.7 +0.1
comp=Z,2.4nm,0.8s,baz=37,slow=23,SNR=5.5
BOSA Boshof 122.10 229 PKP **PKPdf** 16 07 04.1 -0.7
BOSA Boshof 122.10 229 PKP **PKPdf** 16 07 04.1 -0.7
comp=Z,4.0nm,0.7s,baz=108,slow=3.8,SNR=9.8
HFS Hagfors 122.23 340 PKP **PKPdf** 16 07 03.0 -1.0
HFS Hagfors 122.23 340 PKP **PKPdf** 16 07 03.0 -1.0
comp=Z,3.3nm,0.6s,baz=108,slow=4.8,SNR=11
BRTR Keskin Array B 122.28 312 PKP **PKPdf** 16 07 03.6 -1.3
BRTR pPKP **pPKPdf** 16 07 32.9 -1.8
BRTR Keskin Array B 122.28 312 PKP **PKPdf** 16 07 03.6 -1.3
comp=Z,1.6nm,0.9s,baz=111,slow=5.4,SNR=5.6
BRTR pPKP **pPKPdf** 16 07 32.9 -1.8
comp=Z,1.0nm,0.7s,baz=15,slow=5.1,SNR=3.2
NB2 NORSAR Subarra 122.33 342 PKPdf **PKPdf** 16 07 02.7 -1.5
comp=Z,1.4nm,0.8s,baz=44,slow=1.9
NOA NORSAR Array B 122.33 342 PKP **PKPdf** 16 07 03.5 -0.7
NOA pPKP **pPKPdf** 16 07 33.3 -0.6
NOA NORSAR Array B 122.33 342 PKP **PKPdf** 16 07 03.5 -0.7
comp=Z,3.5nm,0.7s,baz=41,slow=1.9,SNR=19
NOA pPKP **pPKPdf** 16 07 33.3 -0.6
comp=Z,0.9nm,0.7s,baz=41,slow=1.9,SNR=2.8
EIL Elat 123.61 300 PKP **PKPdf** 16 07 06.9 -0.6
EIL Elat 123.61 300 PKP **PKPdf** 16 07 06.9 -0.6
comp=Z,3.3nm,0.7s,baz=38,slow=12,SNR=4.2
KOLS Kolonicke sedl 125.77 326 *i* PKIKP **PKPdf** 16 07 11.8 +0.7
KOLS Kolonicke sedl 125.77 326 *e*PKP **PKPdf** 16 07 11.8 +0.7
CRVS Cervenica-Dubn 126.23 326 *i* PKIKP **PKPdf** 16 07 10.5 -1.5
CRVS Cervenica-Dubn 126.23 326 *e*PKP **PKPdf** 16 07 10.5 -1.5
NIE Niedzica 126.55 328 *e*PKIKP **PKPdf** 16 07 13.1 +0.5
NIE Niedzica 126.55 328 *e*PKP **PKPdf** 16 07 13.1 +0.5
ROSC El Rosal 126.97 90 PKP **PKPdf** 16 07 13.9 -1.0
ROSC El Rosal 126.97 90 PKP **PKPdf** 16 07 13.9 -1.0
comp=Z,11nm,0.6s,baz=103,slow=13,SNR=7.5
LPAZ La Paz 127.31 118 *e*PKPdf **PKPdf** 16 07 15.5 -0.2
LPAZ La Paz 127.31 118 PKP **PKPdf** 16 07 15.6 -0.2
comp=Z,9.1nm,0.9s,baz=262,slow=1.5,SNR=32
KSP Ksiaz 127.71 331 *e*PKIKP **PKPdf** 16 07 15.2 +0.5
MORC Moravsky Berou 127.78 329 *e*PKIKP **PKPdf** 16 07 14.2 -0.7
MORC Moravsky Berou 127.78 329 *e*PKPdf **PKPdf** 16 07 14.2 -0.7
VYHS Vyhne 127.89 327 *i* PKIKP **PKPdf** 16 07 14.6 -0.6
VYHS Vyhne 127.89 327 *e*PKP **PKPdf** 16 07 14.6 -0.6
KRLC Kraliky 127.97 330 *e*PKIKP **PKPdf** 16 07 15.8 +0.5
KRLC Kraliky 127.97 330 *e*PKPdf **PKPdf** 16 07 15.8 +0.5
UPC Upice 128.06 331 *e*PKIKP **PKPdf** 16 07 16.2 +0.8
UPC Upice 128.06 331 *e*PKPdf **PKPdf** 16 07 16.2 +0.8
PVCC Panska Ves 128.74 332 *e*PKIKP **PKPdf** 16 07 17.8 +1.1
PVCC Panska Ves 128.74 332 *e*PKPdf **PKPdf** 16 07 17.8 +1.1
BRG Berggiesshubel 128.80 332 *i* PKP **PKPdf** 16 07 17.1 +0.3
comp=Z,8.5nm,0.9s
BRG *e* 16 07 47.1
comp=Z,2.7nm,0.7s
BRG Berggiesshubel 128.80 332 *i* PKIKP **PKPdf** 16 07 17.1 +0.3
BRG *e* 16 07 47.1

BRG pmax pmax
comp=Z,9.0nm,0.9s
CLL Collm 128.92 333 ⇓ *i*PKIKP **PKPdf** 16 07 17.3 +0.3
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL Collm 128.92 333 ⇓ *i*PKPdf **PKPdf** 16 07 17.3 +0.3
comp=Z,9.0nm,1.1s
ZST Bratislava 128.99 328 *i* PKIKP **PKPdf** 16 07 17.2 0.0
ZST Bratislava 128.99 328 *e*PKP **PKPdf** 16 07 17.2 0.0
TREC Trest 129.11 330 *e*PKIKP **PKPdf** 16 07 18.3 +0.8
TREC Trest 129.11 330 *e*PKPdf **PKPdf** 16 07 18.3 +0.8
PRU Pruhonice 129.12 331 *e*PKIKP **PKPdf** 16 07 18.0 +0.6
PRU Pruhonice 129.12 331 *e*PKPdf **PKPdf** 16 07 18.0 +0.6
NKC Novy Kostel 129.93 332 *e*PKIKP **PKPdf** 16 07 20.1 +1.1
NKC Novy Kostel 129.93 332 *e*PKPdf **PKPdf** 16 07 20.1 +1.1
KHC Kasperske Hory 130.16 331 *e*PKIKP **PKPdf** 16 07 19.7 +0.2
KHC Kasperske Hory 130.16 331 *e*PKPdf **PKPdf** 16 07 19.7 +0.2
KHC Kasperske Hory 130.16 331 *e*PKPdf **PKPdf** 16 07 19.7 +0.2
GERES GERESS Array B 130.29 330 PKP **PKPdf** 16 07 20.0 +0.2
GERES pPKP **pPKPdf** 16 07 48.9 -0.8
GERES GERESS Array B 130.29 330 PKP **PKPdf** 16 07 20.0 +0.2
comp=Z,2.9nm,0.6s,baz=52,slow=1.6,SNR=26
GERES pPKP **pPKPdf** 16 07 48.9 -0.8
comp=Z,1.2nm,0.6s,baz=57,slow=2.1,SNR=4.8
CPUP Villa Florida 130.63 136 PKP **PKPdf** 16 07 20.8 -0.2
CPUP SKPbc **SKPbc** 16 10 34.1 -0.9
CPUP Villa Florida 130.63 136 PKP **PKPdf** 16 07 20.8 -0.2
comp=Z,3.8nm,1.0s,baz=256,slow=3.9,SNR=7.5
CPUP SKPbc **SKPbc** 16 10 34.1 -0.9
comp=Z,0.3nm,0.4s,baz=194,slow=4.2,SNR=4.0
EKA Eskdalemuir Ar 131.13 347 PKP **PKPdf** 16 07 22.1 +1.0
EKA SKPbc **SKPbc** 16 10 35.3 -0.6
EKA Eskdalemuir Ar 131.13 347 PKP **PKPdf** 16 07 22.1 +1.0
comp=Z,1.9nm,0.7s,baz=36,slow=3.2,SNR=6.6
EKA SKPbc **SKPbc** 16 10 35.3 -0.6
comp=Z,4.9nm,1.0s,baz=354,slow=1.7,SNR=5.7
GIVF Givet 133.24 337 *e*PKIKP **PKPdf** 16 07 24.3 -0.9
comp=Z,10nm,0.8s
GIVF Givet 133.24 337 *e*PKIKP **PKPdf** 16 07 24.3 -0.9
GIVF Givet 133.24 337 *e*PKPdf **PKPdf** 16 07 24.3 -0.9
BAIF Baives 133.50 338 *e*PKIKP **PKPdf** 16 07 24.8 -0.9
comp=Z,11nm,1.0s
BAIF Baives 133.50 338 *e*PKIKP **PKPdf** 16 07 24.8 -0.9
BAIF Baives 133.50 338 *e*PKPdf **PKPdf** 16 07 24.8 -0.9
CDF Champ du Feu 133.56 334 *e*PKIKP **PKPdf** 16 07 24.5 -1.5
comp=Z,13nm,1.2s
CDF Champ du Feu 133.56 334 *e*PKIKP **PKPdf** 16 07 24.5 -1.5
CDF Champ du Feu 133.56 334 *e*PKPdf **PKPdf** 16 07 24.5 -1.5
DAVOX Davos/Dischmat 133.58 331 PKP **PKPdf** 16 07 26.1 -0.1
DAVOX Davos/Dischmat 133.58 331 PKP **PKPdf** 16 07 26.1 -0.1
comp=Z,5.5nm,0.6s,baz=205,slow=0.6,SNR=9.7
HINF Hinteralfeld 134.20 334 *e*PKIKP **PKPdf** 16 07 25.9 -1.3
comp=Z,6.3nm,0.6s
HINF Hinteralfeld 134.20 334 *e*PKIKP **PKPdf** 16 07 25.9 -1.3
HINF Hinteralfeld 134.20 334 *e*PKPdf **PKPdf** 16 07 25.9 -1.3
HAU Haudompre 134.28 334 *e*PKIKP **PKPdf** 16 07 26.2 -1.1
comp=Z,10.0nm,0.7s
HAU Haudompre 134.28 334 *e*PKIKP **PKPdf** 16 07 26.2 -1.1
HAU Haudompre 134.28 334 *e*PKPdf **PKPdf** 16 07 26.2 -1.1
MEZF Maizieres J'vi 134.43 336 *e*PKIKP **PKPdf** 16 07 27.0 -0.5
comp=Z,19nm,0.8s
MEZF Maizieres J'vi 134.43 336 *e*PKPdf **PKPdf** 16 07 27.0 -0.5
LRS Lares 134.48 73 *e*PKPdf **PKPdf** 16 07 28.2 -0.3
SAML Samuel 134.59 111 *e*PKPdf **PKPdf** 16 07 27.4 -1.4
CABF La Chapelle 135.46 333 *e*PKIKP **PKPdf** 16 07 29.2 -0.4
comp=Z,18nm,1.0s
CABF La Chapelle 135.46 333 *e*PKIKP **PKPdf** 16 07 29.2 -0.4
CABF La Chapelle 135.46 333 *e*PKPdf **PKPdf** 16 07 29.2 -0.4
LOR Lormes 135.90 336 *e*PKIKP **PKPdf** 16 07 29.8 -0.5
LOR Lormes 135.90 336 *e*PKPdf **PKPdf** 16 07 29.8 -0.5
LPL La Plagne 136.00 332 *e*PKIKP **PKPdf** 16 07 30.3 -0.5
LPL La Plagne 136.00 332 *e*PKIKP **PKPdf** 16 07 30.3 -0.5
LPL La Plagne 136.00 332 *e*PKPdf **PKPdf** 16 07 30.3 -0.5
LPG La Plagne 136.00 332 *e*PKIKP **PKPdf** 16 07 30.4 -0.5
comp=Z,7.5nm,0.7s
LPG La Plagne 136.00 332 *e*PKIKP **PKPdf** 16 07 30.4 -0.5
LPG La Plagne 136.00 332 *e*PKPdf **PKPdf** 16 07 30.4 -0.5
SSF Saint Saulge 136.20 336 *e*PKIKP **PKPdf** 16 07 30.6 -0.3
SSF Saint Saulge 136.20 336 *e*PKIKP **PKPdf** 16 07 30.6 -0.3
SSF Saint Saulge 136.20 336 *e*PKPdf **PKPdf** 16 07 30.6 -0.3
FLN La Foliniere 136.25 340 *e*PKIKP **PKPdf** 16 07 30.1 -0.8
comp=Z,8.3nm,0.7s
FLN La Foliniere 136.25 340 *e*PKIKP **PKPdf** 16 07 30.1 -0.8
FLN La Foliniere 136.25 340 *e*PKPdf **PKPdf** 16 07 30.1 -0.8
LDF La Druitiere 136.28 340 *e*PKIKP **PKPdf** 16 07 30.3 -0.7
LDF La Druitiere 136.28 340 *e*PKIKP **PKPdf** 16 07 30.3 -0.7
LDF La Druitiere 136.28 340 *e*PKPdf **PKPdf** 16 07 30.3 -0.7
SMF Signal de Mont 136.40 335 *e*PKIKP **PKPdf** 16 07 30.6 -0.7
SMF Signal de Mont 136.40 335 *e*PKIKP **PKPdf** 16 07 30.6 -0.7
SMF Signal de Mont 136.40 335 *e*PKPdf **PKPdf** 16 07 30.6 -0.7
AVF Avril sur Loir 136.49 336 *e*PKIKP **PKPdf** 16 07 30.6 -0.8
AVF Avril sur Loir 136.49 336 *e*PKIKP **PKPdf** 16 07 30.6 -0.8
AVF Avril sur Loir 136.49 336 *e*PKPdf **PKPdf** 16 07 30.6 -0.8
GRR Gorron 136.70 340 *e*PKIKP **PKPdf** 16 07 31.2 -0.5
comp=Z,6.2nm,0.7s
GRR Gorron 136.70 340 *e*PKIKP **PKPdf** 16 07 31.2 -0.5
GRR Gorron 136.70 340 *e*PKPdf **PKPdf** 16 07 31.2 -0.5
ORIF Oris-en-Rattie 136.84 332 *e*PKIKP **PKPdf** 16 07 31.6 -0.7
comp=Z,6.9nm,0.7s
ORIF Oris-en-Rattie 136.84 332 *e*PKIKP **PKPdf** 16 07 31.6 -0.7
ORIF Oris-en-Rattie 136.84 332 *e*PKPdf **PKPdf** 16 07 31.6 -0.7
SBF Sospel 136.88 330 *e*PKIKP **PKPdf** 16 07 31.4 -0.9
SBF Sospel 136.88 330 *e*PKIKP **PKPdf** 16 07 31.4 -0.9
SBF Sospel 136.88 330 *e*PKPdf **PKPdf** 16 07 31.4 -0.9
BGF Bois d'Agland 136.88 336 *e*PKIKP **PKPdf** 16 07 31.7 -0.5
BGF Bois d'Agland 136.88 336 *e*PKIKP **PKPdf** 16 07 31.7 -0.5
BGF Bois d'Agland 136.88 336 *e*PKPdf **PKPdf** 16 07 31.7 -0.5
PGF Pioggiola 136.99 327 *e*PKIKP **PKPdf** 16 07 31.8 -0.8
comp=Z,49nm,1.1s
PGF Pioggiola 136.99 327 *e*PKIKP **PKPdf** 16 07 31.8 -0.8
PGF Pioggiola 136.99 327 *e*PKPdf **PKPdf** 16 07 31.8 -0.8
TCF Toulx Ste Croi 137.35 336 *e*PKIKP **PKPdf** 16 07 32.7 -0.4
comp=Z,32nm,1.2s
TCF Toulx Ste Croi 137.35 336 *e*PKIKP **PKPdf** 16 07 32.7 -0.4
TCF Toulx Ste Croi 137.35 336 *e*PKPdf **PKPdf** 16 07 32.7 -0.4
SGMF Saint Gilles 137.37 342 *e*PKIKP **PKPdf** 16 07 32.2 -0.8
SGMF Saint Gilles 137.37 342 *e*PKIKP **PKPdf** 16 07 32.2 -0.8
SGMF Saint Gilles 137.37 342 *e*PKPdf **PKPdf** 16 07 32.2 -0.8
VIVF Saint-Julien-l 137.44 333 *e*PKIKP **PKPdf** 16 07 32.8 -0.5
comp=Z,10.0nm,0.9s
VIVF Saint-Julien-l 137.44 333 *e*PKIKP **PKPdf** 16 07 32.8 -0.5
VIVF Saint-Julien-l 137.44 333 *e*PKPdf **PKPdf** 16 07 32.8 -0.5
FRF La Foret Royal 137.49 330 *e*PKIKP **PKPdf** 16 07 33.3 -0.1
comp=Z,31nm,1.3s
FRF La Foret Royal 137.49 330 *e*PKIKP **PKPdf** 16 07 33.3 -0.1
FRF La Foret Royal 137.49 330 *e*PKPdf **PKPdf** 16 07 33.3 -0.1
ROSF Rostrenen 137.51 342 *e*PKIKP **PKPdf** 16 07 32.4 -0.8
ROSF Rostrenen 137.51 342 *e*PKIKP **PKPdf** 16 07 32.4 -0.8
ROSF Rostrenen 137.51 342 *e*PKPdf **PKPdf** 16 07 32.4 -0.8
MFF Saint Martin d 137.99 338 *e*PKIKP **PKPdf** 16 07 33.8 -0.4
MFF Saint Martin d 137.99 338 *e*PKIKP **PKPdf** 16 07 33.8 -0.4
MFF Saint Martin d 137.99 338 *e*PKPdf **PKPdf** 16 07 33.8 -0.4
LASF Ste Croix 138.42 333 *e*PKIKP **PKPdf** 16 07 34.8 -0.3
comp=Z,6.7nm,0.7s
LASF Ste Croix 138.42 333 *e*PKPdf **PKPdf** 16 07 34.8 -0.3
RJF Les Rejaudoux 138.44 336 *e*PKIKP **PKPdf** 16 07 34.7 -0.4
RJF Les Rejaudoux 138.44 336 *e*PKIKP **PKPdf** 16 07 34.7 -0.4
RJF Les Rejaudoux 138.44 336 *e*PKPdf **PKPdf** 16 07 34.7 -0.4
BDFB Brasilia 144.12 132 PKP **PKPab** 16 07 43.8 -0.2
BDFB Brasilia 144.12 132 PKP **PKPab** 16 07 43.8 -0.2
comp=Z,14nm,0.7s,baz=202,slow=2.1,SNR=21
PBRG Bragança 144.46 341 *e*PKP **PKPab** 16 07 44.4 -0.1
PGAV Gavieira, Arco 144.77 343 *e*PKP PKPbc 16 07 46.1 +0.3
PGAV *i* P pPKPdf 16 08 18.2 +1.8
EMHD Djebel Mahouad 144.78 325 P **PKPdf** 16 07 47.1 +0.2
PCAB Cabril 144.94 343 *e*PKP **PKPdf** 16 07 46.7 -0.1
MVO Moncorvo 145.13 341 *e*PKP **PKPdf** 16 07 47.4 +0.2
MVO *i* P **pPKPdf** 16 08 21.1 +4.1
POLO Lamas de Olo 145.18 342 *e*PKP **PKPdf** 16 07 47.4 +0.1
POLO *i* P **pPKPdf** 16 08 15.9 -1.3
PVRL Vila Real 145.24 342 *e*PKP **PKPab** 16 07 47.5 +0.1
ESDC Sonseca Array 145.36 337 PKPbc **PKPbc** 16 07 47.8 +0.1
ESDC pPKPbc pPKPbc 16 08 14.7 -2.4
ESDC Sonseca Array 145.36 337 PKPbc **PKPbc** 16 07 47.8 +0.1
comp=Z,11nm,0.9s,baz=19,slow=3.8,SNR=51
ESDC pPKPbc pPKPbc 16 08 14.7 -2.4
comp=Z,4.1nm,0.9s,baz=17,slow=3.4,SNR=3.1
ESLA Sonseca Array 145.36 337 *e*PKP **PKPab** 16 07 48.0 +0.1
EBNR Beni Rached 145.50 327 P **PKPab**

PVIS	**Viseu**	**145.81**	**342**	*e*PKP	**PKPab**	**16 07 49.6**	**0.0**
EANR	**'Ain N'Sour**	**145.99**	**327**	P	**PKPbc**	**16 07 50.0**	**+0.3**
MTE	**Manteigas**	**145.99**	**341**	*e*PKP	**PKPbc**	**16 07 50.0**	**+0.4**
MTE				*i* P	pPKPbc	16 08 19.4	+0.4
MTE	**Manteigas**	**145.99**	**341**	*e*PKPbc	**PKPab**	**16 07 50.3**	**0.0**
ETRT	**Tiaret**	**146.29**	**326**	P	**PKPab**	**16 07 51.5**	**-0.2**
PMRV	**Marv??o**	**146.82**	**340**	*e*PKP	**PKPbc**	**16 07 51.8**	**-0.2**
PMRV				*i* P	pPKPbc	16 08 21.4	-0.1
PTOM	**Tomar**	**146.97**	**342**	*e*PKP	**PKPdf**	**16 07 49.7**	**-0.6**
PESTR	**Estremoz**	**147.39**	**340**	*e*PKP	**PKPbc**	**16 07 53.4**	**-0.2**
PESTR				*i* P	**pKPbc**	**16 08 20.2**	**-2.9**
PMTG	**Montargil**	**147.42**	**341**	*e*PKP	**PKPbc**	**16 07 53.5**	**-0.1**
PBAR	**Barrancos**	**147.82**	**339**	*e*PKP	**PKPdf**	**16 07 52.9**	**+1.1**
EVO	**Evora**	**147.84**	**341**	*e*PKIKP	**PKPdf**	**16 07 52.2**	**+0.4**
	comp=Z,43nm,1.1s						
EVOP	**Sao Brissos**	**147.88**	**341**	*e*PKIKP	**PKPdf**	**16 07 52.2**	**+0.4**
EVOP	**Sao Brissos**	**147.88**	**341**	*e*PKPdf	**PKPdf**	**16 07 52.2**	**+0.4**
PBEJ	**Beja**	**148.25**	**340**	*e*PKP	**PKPbc**	**16 07 56.7**	**+0.8**
PNCL	**Nicolau / Gran**	**148.39**	**341**	*e*PKP	**PKPbc**	**16 07 56.7**	**+0.5**
PCVE	**Castro Verde**	**148.66**	**340**	*e*PKP	**PKPbc**	**16 07 57.3**	**+0.3**
PCVE				*i* P	**pPKPbc**	**16 08 27.0**	**+0.5**
PVAQ	**Vaqueiros**	**148.75**	**339**	*e*PKP	**PKPbc**	**16 07 57.7**	**+0.5**
PTEO	**Sao Teotonio**	**148.97**	**341**	*e*PKP	**PKPbc**	**16 07 58.4**	**+0.7**
MORF	**Marmelete**	**149.16**	**341**	*e*PKP	**PKPbc**	**16 07 58.8**	**+0.5**
TAM	**Tamanrasset**	**150.79**	**302**	*e*PKIKP	**PKPbc**	**16 08 03.0**	**+0.2**
TAM	**Tamanrasset**	**150.79**	**302**	*e*PKPbc	**PKPbc**	**16 08 03.0**	**+0.2**
MDT	**Midelt**	**151.38**	**330**	PKPbc	**PKPbc**	**16 08 04.7**	**+0.9**
MDT	**Midelt**	**151.38**	**330**	PKPbc	**PKPbc**	**16 08 04.7**	**+0.9**
	comp=Z,17nm,0.9s,baz=27,slow=3.2,SNR=27						
TORD	**Torodi Ar. Bea**	**157.20**	**284**	PKP	**PKPdf**	**16 08 04.9**	**-1.3**
TORD				PKPab	**PKPab**	**16 08 36.1**	**-1.4**
TORD				pPKPab	**pPKPab**	**16 09 05.4**	**-0.8**
TORD	**Torodi Ar. Bea**	**157.20**	**284**	PKP	**PKPdf**	**16 08 04.9**	**-1.3**
	comp=Z,2.5nm,1.0s,baz=8.8,slow=1.9,SNR=8.5						
TORD				PKPab	**PKPab**	**16 08 36.1**	**-1.4**
	comp=Z,2.8nm,1.1s,baz=92,slow=3.1,SNR=4.7						
TORD				pPKPab	**pPKPab**	**16 09 05.4**	**-0.8**
	comp=Z,3.9nm,0.9s,baz=76,slow=4.0,SNR=6.7						
DBIC	**Dimbokro**	**163.86**	**265**	*e*PKPab	**PKPab**	**16 09 06.8**	**+0.1**
DBIC	**Dimbokro**	**163.86**	**265**	PKPab	**PKPab**	**16 09 05.9**	**-0.8**
	comp=Z,3.9nm,0.7s,baz=134,slow=4.3,SNR=4.1						

IDC 24 15:57:27.1±7.6, **6°34.5**N×**152°39.9E**, **h98**km±53km, **mb3.3**/6, **mb1 3.5**/8, **mb1mx3.3**/21, **mbtmp3.4**/8, **Error ellipse: s-maj=83.5km s-min=28.6km az=101.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.54**	**242**	P	Pn	15 59 00.2	-0.5
	3.2nm,0.3s,baz=37,slow=10.0,SNR=11						
CTA	**Charters Tower**	**15.16**	**205**	P	Pn	16 00 57.2	+1.2
	0.3nm,0.3s,baz=20,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**22.61**	**232**	P	P	16 02 20.2	+0.3
	0.9nm,0.8s,baz=57,slow=10,SNR=5.4						
WRA				PcP	PcP	16 06 09.3	-0.4
	0.2nm,0.5s,baz=61,slow=2.3,SNR=6.2						
ASAR	**Alice Springs**	**25.18**	**225**	P	P	16 02 43.6	0.0
	0.3nm,0.4s,baz=59,slow=9.0,SNR=5.7						
FITZ	**Fitzroy Crossi**	**29.13**	**244**	P	P	16 03 18.9	-0.1
	0.7nm,0.5s,baz=99,slow=8.3,SNR=4.2						
SONM	**Songino Array**	**67.72**	**328**	P	P	16 08 15.2	+1.0
	0.3nm,0.5s,baz=162,slow=5.8,SNR=3.6						
MKAR	**Makanchi Array**	**81.60**	**319**	P	P	16 09 34.5	+0.2
	0.3nm,0.7s,baz=90,slow=8.1,SNR=3.4						
ZALV	**Zalesovo Beam**	**82.53**	**326**	P	P	16 09 38.3	-0.7
	0.5nm,0.6s,baz=112,slow=3.4,SNR=2.8						
TORD	**Torodi Ar. Bea**	**150.94**	**286**	PKPbc	PKPbc	16 17 08.9	-0.6
	1.2nm,0.7s,baz=68,slow=2.3,SNR=6.1						

*IDC **24** 16:03:54.2*±*7.8, 36°.32*N*×22°.41*E*, h0*km*, mb3.8/3, mb1 3.8/4, mb1mx3.4/28, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=164.7km s-min=40.6km az=35.0*

*ISCJB **24** 16:03:59.0*±*0.7, 36°.41*N*±*0°.03*×*22°.26*E*±*0°.04, h8*km*±3*km*, mb3.7/3, Error ellipse: s-maj=6.3km s-min=2.9km az=142.0*

*THE **24** 16:04:00.4, 36°.44*N*×*22°.31*E*, h4*km*±1*km*, ML3.5/4, Error ellipse: s-maj=1.5km s-min=0.8km az=43.0*

*ATH **24** 16:04:00.6, 36°.52*N*×22°.37*E*, h17*km*±1*km*, MD3.6/35, ML3.0*

*CSEM **24** 16:04:00.6*±*0.2, 36°.48*N*×22°.35*E*, h8*km*, MD3.6, Error ellipse: s-maj=6.4km s-min=2.9km az=49.0*

ISC 24 16:04:00.3±1.1, **36°.47N**±0°.03×**22°.32E**±0°.03, **h9**km±8km, **n106**, σ0°.**78**/143, **mb3.7**/3, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DYR	**Agios Nikonas**	**0.30**	**3**	P	**Pg**	**16 04 06.8**	**+0.6**
DYR				S	**Sg**	**16 04 11.1**	**+0.9**
DYR	**Agios Nikonas**	**0.30**	**3**	*e*PB	**Pg**	**16 04 06.4**	**+0.2**
DYR	**Agios Nikonas**	**0.30**	**3**	*e*Pb	**Pg**	**16 04 06.4**	**+0.2**
DYR	**Agios Nikonas**	**0.30**	**3**	P	**Pg**	**16 04 06.8**	**+0.6**
DYR				S	**Sg**	**16 04 11.1**	**+0.9**
VLI	**Veliai**	**0.56**	**63**	P	**Pg**	**16 04 11.0**	**-0.2**
VLI				S	**Sb**	**16 04 19.8**	**-0.5**
VLI	**Veliai**	**0.56**	**63**	*e*PN	**Pg**	**16 04 10.9**	**-0.2**
VLI				*e*SN	**Sg**	**16 04 18.7**	**+0.2**
VLI	**Veliai**	**0.56**	**63**	P	**Pg**	**16 04 11.0**	**-0.2**
VLI				*e*Sn	**Sg**	**16 04 18.7**	**+0.2**
VLI				S	**Sb**	**16 04 19.8**	**-0.5**
KYTH	**Kithira**	**0.61**	**107**	P	**Pg**	**16 04 11.8**	**-0.3**
KYTH	**Kithira**	**0.61**	**107**	*e*PN	**Pg**	**16 04 11.6**	**-0.5**
KYTH	**Kithira**	**0.61**	**107**	P	**Pg**	**16 04 11.8**	**-0.3**
PYL	**PYLOS**	**0.63**	**313**	P	**Pg**	**16 04 12.2**	**-0.3**
PYL				S	**Sb**	**16 04 22.8**	**+0.4**
PYL	**PYLOS**	**0.63**	**313**	*e*PB	**Pg**	**16 04 12.0**	**-0.5**
PYL				*e*SN	**Sb**	**16 04 22.5**	**+0.1**
PYL	**PYLOS**	**0.63**	**313**	P	**Pg**	**16 04 12.2**	**-0.3**
PYL				*e*Sn	**Sb**	**16 04 22.5**	**+0.1**
PYL				S	**Sb**	**16 04 22.8**	**+0.4**
ITM	**Ithomi**	**0.78**	**336**	P	**Pg**	**16 04 14.5**	**-0.7**
ITM				S	**Sb**	**16 04 27.4**	**+0.8**
ITM	**Ithomi**	**0.78**	**336**	*e*PN	**Pg**	**16 04 14.6**	**-0.7**
ITM				*e*SN	**Sb**	**16 04 26.4**	**-0.2**
ITM	**Ithomi**	**0.78**	**336**	P	**Pg**	**16 04 14.5**	**-0.7**
ITM				S	**Sb**	**16 04 27.4**	**+0.8**
VLX	**Vlachokerasia**	**0.91**	**3**	P	**Pg**	**16 04 17.3**	**-0.4**
VLX				S	**Sb**	**16 04 31.6**	**+1.2**
VLX	**Vlachokerasia**	**0.91**	**3**	*e*PN	**Pg**	**16 04 17.2**	**-0.4**
VLX				*e*SN	**Sg**	**16 04 30.0**	**+0.5**
VLX	**Vlachokerasia**	**0.91**	**3**	P	**Pg**	**16 04 17.3**	**-0.4**
VLX				*e*Sn	**Sg**	**16 04 30.0**	**+0.5**
VLX				S	**Sb**	**16 04 31.6**	**+1.2**
ANKY	**Antikythira Is**	**1.00**	**127**	*e*PB	**Pg**	**16 04 18.6**	**-0.8**
ANKY				*e*SN	**Sb**	**16 04 33.4**	**+0.6**
ANKY	**Antikythira Is**	**1.00**	**127**	*e*Pb	**Pg**	**16 04 18.6**	**-0.8**
ANKY				*e*Sn	**Sb**	**16 04 33.4**	**+0.6**
DIDY	**Didyma**	**1.24**	**35**	P	**Pn**	**16 04 23.2**	**-0.6**
DIDY	**Didyma**	**1.24**	**35**	P	**Pn**	**16 04 23.2**	**-0.6**
DID	**Didima**	**1.27**	**35**	P	**Pn**	**16 04 23.9**	**-0.4**
DID				S	**Sn**	**16 04 43.8**	**+2.3**
DID	**Didima**	**1.27**	**35**	*e*PN	**Pn**	**16 04 23.6**	**-0.4**
DID	**Didima**	**1.27**	**35**	*e*Pn	**Pn**	**16 04 23.6**	**-0.7**
DID	**Didima**	**1.27**	**35**	P	**Pn**	**16 04 23.9**	**-0.4**
DID				S	**Sn**	**16 04 43.8**	**+2.3**
GUR	**Goura**	**1.47**	**1**	P	**Pn**	**16 04 26.9**	**-0.1**
GUR				S	**Sg**	**16 04 47.7**	**+0.2**
GUR	**Goura**	**1.47**	**1**	*e*PN	**Pn**	**16 04 26.8**	**-0.2**
GUR				*e*SN	**Sn**	**16 04 46.5**	**+0.1**
GUR	**Goura**	**1.47**	**1**	P	**Pn**	**16 04 26.9**	**-0.1**
GUR				*e*Sn	**Sn**	**16 04 46.5**	**+0.1**
GUR				S	**Sg**	**16 04 47.7**	**+0.2**
KLV	**Kalavryta, Ach**	**1.58**	**355**	*e*PN	**Pn**	**16 04 28.3**	**-0.2**
KLV				*e*SN	**Sb**	**16 04 50.0**	**+0.2**
KLV	**Kalavryta, Ach**	**1.58**	**355**	*e*Pn	**Pn**	**16 04 28.3**	**-0.2**
KLV				*e*Sn	**Sb**	**16 04 50.0**	**+0.2**
LTK	**Loutraki**	**1.64**	**18**	P	**Pn**	**16 04 29.2**	**-0.1**
LTK				S	**Sg**	**16 04 52.8**	**-0.2**
LTK	**Loutraki**	**1.64**	**18**	*e*PN	**Pn**	**16 04 30.0**	**+0.7**
LTK	**Loutraki**	**1.64**	**18**	P	**Pn**	**16 04 29.2**	**-0.1**
LTK	**Loutraki**	**1.64**	**18**	*e*Pn	**Pn**	**16 04 30.0**	**+0.7**
LTK				S	**Sg**	**16 04 52.8**	**-0.2**
RLS	**Riolos of Patr**	**1.73**	**337**	P	**Pb**	**16 04 31.5**	**-0.6**
RLS				S	**Sb**	**16 04 53.5**	**-0.4**
RLS	**Riolos of Patr**	**1.73**	**337**	*e*PN	**Pn**	**16 04 31.0**	**+0.6**
RLS				*e*SN	**Sb**	**16 04 54.8**	**+0.9**
RLS	**Riolos of Patr**	**1.73**	**337**	*e*Pn	**Pn**	**16 04 31.0**	**+0.6**
RLS	**Riolos of Patr**	**1.73**	**337**	P	**Pb**	**16 04 31.5**	**-0.6**
RLS				S	**Sb**	**16 04 53.5**	**-0.4**
RLS				*e*Sn	**Sb**	**16 04 54.8**	**+0.9**
LAKA	**Lakka**	**1.79**	**351**	P	**Pn**	**16 04 31.5**	**+0.1**
LAKA				S	**Sn**	**16 04 54.9**	**+0.6**
LAKA	**Lakka**	**1.79**	**351**	*e*PN	**Pn**	**16 04 31.9**	**+0.5**
LAKA	**Lakka**	**1.79**	**351**	P	**Pn**	**16 04 31.5**	**+0.1**
LAKA	**Lakka**	**1.79**	**351**	*e*Pn	**Pn**	**16 04 31.9**	**+0.5**
LAKA				S	**Sn**	**16 04 54.9**	**+0.6**
VAM	**Vamos**	**1.86**	**124**	P	**Pn**	**16 04 33.0**	**+0.8**
VAM				S	**Sn**	**16 04 56.5**	**+0.7**
VAM	**Vamos**	**1.86**	**124**	*e*PB	**Pn**	**16 04 33.1**	**+0.8**
VAM	**Vamos**	**1.86**	**124**	P	**Pn**	**16 04 33.0**	**+0.8**
VAM				S	**Sn**	**16 04 56.5**	**+0.7**
ATH	**Athens Observa**	**1.87**	**36**	*e*PN	**Pn**	**16 04 33.0**	**+0.6**
ATH	**Athens Observa**	**1.87**	**36**	*e*Pn	**Pn**	**16 04 33.0**	**+0.6**
TRIZ	**Trizonia**	**1.91**	**354**	P	**Pn**	**16 04 33.8**	**+0.9**
TRIZ	**Trizonia**	**1.91**	**354**	*e*PN	**Pn**	**16 04 33.9**	**+1.0**
TRIZ	**Trizonia**	**1.91**	**354**	P	**Pn**	**16 04 33.8**	**+0.9**
KALE	**Kalithea**	**1.93**	**356**	*e*PN	**Pn**	**16 04 33.9**	**+0.6**
KALE	**Kalithea**	**1.93**	**356**	*e*Pn	**Pn**	**16 04 33.9**	**+0.6**
DSF	**Desfina**	**1.95**	**5**	P	**Pb**	**16 04 35.0**	**-1.0**
DSF	**Desfina**	**1.95**	**5**	P	**Pb**	**16 04 35.0**	**-1.0**
EFP	**Efpalio**	**1.98**	**351**	*e*PN	**Pn**	**16 04 35.4**	**+1.4**
EFP				*e*SN	**Sn**	**16 05 00.0**	**+1.1**
EFP	**Efpalio**	**1.98**	**351**	*e*Pn	**Pn**	**16 04 35.4**	**+1.4**
EFP				*e*Sn	**Sn**	**16 05 00.0**	**+1.1**
PTL	**Penteli**	**2.01**	**38**	P	**Pn**	**16 04 34.3**	**0.0**
PTL	**Penteli**	**2.01**	**38**	*e*PN	**Pn**	**16 04 34.3**	**0.0**
PTL	**Penteli**	**2.01**	**38**	P	**Pn**	**16 04 34.3**	**0.0**
GVD	**Gavdhos**	**2.17**	**138**	*e*PN	**Pb**	**16 04 38.9**	**-0.8**
GVD	**Gavdhos**	**2.17**	**138**	*e*Pn	**Pb**	**16 04 38.9**	**-0.8**
VLS	**Valsamata**	**2.19**	**322**	P	**Pn**	**16 04 36.7**	**-0.2**
VLS	**Valsamata**	**2.19**	**322**	*e*PB	**Pn**	**16 04 37.4**	**+0.5**
VLS	**Valsamata**	**2.19**	**322**	P	**Pn**	**16 04 36.7**	**-0.2**
VLS	**Valsamata**	**2.19**	**322**	*e*Pb	**Pn**	**16 04 37.4**	**+0.5**
LKR	**Lokris**	**2.25**	**14**	*e*PB	**Pn**	**16 04 37.8**	**+0.2**
LKR	**Lokris**	**2.25**	**14**	*e*Pb	**Pn**	**16 04 37.8**	**+0.2**
IDI	**Anoyia**	**2.40**	**119**	P	**Pn**	**16 04 39.6**	**-0.1**
IDI				S	**Sn**	**16 05 09.9**	**+0.7**
IDI	**Anoyia**	**2.40**	**119**	*e*PB	**Pn**	**16 04 40.4**	**+0.7**
IDI	**Anoyia**	**2.40**	**119**	P	**Pn**	**16 04 39.6**	**-0.1**
IDI	**Anoyia**	**2.40**	**119**	*e*Pb	**Pn**	**16 04 40.4**	**+0.7**
IDI				S	**Sn**	**16 05 09.9**	**+0.7**
EVR	**Evrytania**	**2.48**	**351**	*e*PN	**Pn**	**16 04 41.5**	**+0.6**
EVR	**Evrytania**	**2.48**	**351**	*e*Pn	**Pn**	**16 04 41.5**	**+0.6**
SIVA	**Sivas**	**2.49**	**125**	*e*PB	**Pn**	**16 04 42.9**	**+2.0**
SIVA	**Sivas**	**2.49**	**125**	*e*Pb	**Pn**	**16 04 42.9**	**+2.0**
AGG	**Agios Georgios**	**2.55**	**0**	*e*PB	**Pn**	**16 04 43.7**	**+1.9**
AGG	**Agios Georgios**	**2.55**	**0**	*e*Pb	**Pn**	**16 04 43.7**	**+1.9**
APE	**Apeiranthos**	**2.65**	**76**	*e*PN	**Pn**	**16 04 43.5**	**+0.3**
APE	**Apeiranthos**	**2.65**	**76**	*e*Pn	**Pn**	**16 04 43.5**	**+0.3**
LKD2	**Lefkada island**	**2.67**	**331**	P	**Pn**	**16 04 44.0**	**+0.6**
LKD2	**Lefkada island**	**2.67**	**331**	*e*PN	**Pn**	**16 04 44.5**	**+1.1**
LKD2	**Lefkada island**	**2.67**	**331**	P	**Pn**	**16 04 44.0**	**+0.6**
LKD2	**Lefkada island**	**2.67**	**331**	*e*Pn	**Pn**	**16 04 44.5**	**+1.1**
LAST	**Lasithi**	**2.88**	**116**	P	**Pn**	**16 04 46.7**	**+0.3**
LAST	**Lasithi**	**2.88**	**116**	*e*PN	**Pn**	**16 04 47.6**	**+1.2**
LAST	**Lasithi**	**2.88**	**116**	P	**Pn**	**16 04 46.7**	**+0.3**
LAST	**Lasithi**	**2.88**	**116**	*e*Pn	**Pn**	**16 04 47.6**	**+1.2**
NEO	**Neokhori**	**2.93**	**14**	*e*PN	**Pn**	**16 04 47.2**	**+0.2**
NEO	**Neokhori**	**2.93**	**14**	*e*Pn	**Pn**	**16 04 47.2**	**+0.2**
AOS	**Alonnisos**	**2.97**	**24**	*e*PN	**Pn**	**16 04 47.4**	**-0.1**
AOS	**Alonnisos**	**2.97**	**24**	*e*Pn	**Pn**	**16 04 47.4**	**-0.1**
THL	**Klokotos Trika**	**3.10**	**356**	*e*PN	**Pn**	**16 04 50.2**	**+0.9**
THL	**Klokotos Trika**	**3.10**	**356**	*e*Pn	**Pn**	**16 04 50.2**	**+0.9**
ZKR	**Zakros**	**3.45**	**112**	*e*PN	**Pn**	**16 04 55.9**	**+1.8**
ZKR	**Zakros**	**3.45**	**112**	*e*Pn	**Pn**	**16 04 55.9**	**+1.8**
CHOS	**Chios island**	**3.54**	**56**	*e*PN	**Pn**	**16 04 55.9**	**+0.5**
CHOS	**Chios island**	**3.54**	**56**	*e*Pn	**Pn**	**16 04 55.9**	**+0.5**
PAIG	**Paliouri**	**3.62**	**17**	*e*PN	**Pn**	**16 04 56.8**	**+0.4**
PAIG	**Paliouri**	**3.62**	**17**	*e*Pn	**Pn**	**16 04 56.8**	**+0.4**
BRTR	**Keskin Array B**	**9.50**	**67**	Pn	Pn	16 06 20.9	+3.6
	0.1nm,0.3s,baz=255,slow=11,SNR=2.7						
GERES	**GERESS Array B**	**13.89**	**336**	Pn	**Pn**	**16 07 15.6**	**-1.7**
	0.1nm,0.3s,baz=152,slow=15,SNR=4.3						
MKAR	**Makanchi Array**	**45.00**	**57**	P	P	16 12 11.6	-4.3
	0.4nm,0.5s,baz=269,slow=8.0,SNR=6.9						
ZALV	**Zalesovo Beam**	**45.79**	**47**	P	P	16 12 17.3	-4.7
	0.5nm,0.3s,baz=265,slow=10.0,SNR=3.8						
KSRS	**Korea Array**	**79.30**	**51**	P	P	16 16 01.7	-4.4
	0.5nm,0.6s,baz=312,slow=5.7,SNR=5.5						

*ISCJB **24** 16:06:57.9*±*0.4, 42°.75*N*±*0°.05*×*142°.26*E*±*0°.05, h36*km*±6*km*, mb3.5/4, Error ellipse: s-maj=7.8km s-min=5.7km az=167.1*

*JMA **24** 16:06:58.4*±*0.1, 42°.79*N*×142°.30*E, h28*km*±2*km*, M3.9 Broadband fault plane solution: P waves. NP1: ϕs105.00000°, δ85.00000°, λ-24.00000°. NP2: ϕs198.00000°, δ66.00000°, λ-174.00000°. Principal axes: T Plg13.0000°, Azm154.0000°; N Plg65.0000°, Azm274.0000°; P Plg21.0000°, Azm59.0000°;*

JMA Felt II J1.

*IDC **24** 16:06:59.9*±*2.1, 42°.74*N*×142°.40*E, h46*km*±22*km*, mb3.3/4, mb1 3.4/6, mb1mx3.2/27, mbtmp3.3/6, ML3.2/2 Error ellipse: s-maj=43.0km s-min=16.6km az=107.0*

*NIED **24** 16:07:00, 42°.80*N*×142°.30*E, h23*km*, Mw3.8 Best double couple: M0 5.88000×10^14 NP1: ϕs190.00000°, δ85.00000°, λ163.00000°. NP2: ϕs282.00000°, δ73.00000°, λ5.00000°.*

ISC 24 16:06:58.1±0.9, **42°.77N**±0°.04×**142°.26E**±0°.04, **h29**km±6km, **n19**, σ0°.**69**/23, **mb3.6**/4, **5C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JBT2	**Biratori 2**	**0.08**	**87**	⇓P	**Pb**	**16 07 02.8**	**-0.3**
JBT2				*e*S	**Sb**	**16 07 06.6**	**0.0**
JFR	**Furan**	**0.46**	**32**	⇓P	**Pb**	**16 07 07.6**	**-0.2**
JFR				*e*S	**Sb**	**16 07 15.3**	**+0.8**
JEW	**Eniwo**	**0.60**	**277**	⇓P	**Pb**	**16 07 10.2**	**+0.1**
JEW				*e*S	**Sn**	**16 07 19.0**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.61**	**143**	⇑P	**Pb**	**16 07 10.2**	**-0.1**
JAB	**Ashibetsu**	**0.73**	**358**	⇑P	**Pn**	**16 07 12.6**	**+0.1**
JCH	**Churui**	**0.83**	**101**	⇑P	**Pn**	**16 07 13.4**	**-0.4**
JCH				*e*S	**Sb**	**16 07 24.3**	**+0.4**
JNB	**Noboribetsu**	**0.95**	**252**	⇓P	**Pn**	**16 07 14.7**	**-0.8**
JNB				*e*S	**Sn**	**16 07 27.2**	**-0.9**
JEM	**Erimo**	**1.01**	**138**	⇑P	**Pb**	**16 07 16.9**	**0.0**
JHR	**Hokuryu**	**1.04**	**338**	⇑P	**Pb**	**16 07 17.4**	**-0.1**
JKK2	**Kamakawa 2**	**1.16**	**18**	⇓P	**Pn**	**16 07 18.4**	**+0.1**
JOB	**Onbets**	**1.17**	**83**	⇓P	**Pn**	**16 07 18.9**	**+0.5**
JAR	**Ashorobuto**	**1.22**	**64**	⇓P	**Pn**	**16 07 19.5**	**+0.3**
ASAJ	**Asahikawa**	**1.36**	**10**	P	**Pn**	**16 07 21.9**	**+0.7**
	53nm,0.3s,baz=222,slow=11,SNR=554						
MJAR	**Matsushiro Arr**	**6.96**	**208**	P	**Pn**	**16 08 40.3**	**+2.1**
	0.7nm,0.3s,baz=42,slow=15,SNR=10						
KSRS	**Korea Array**	**12.19**	**249**	P	Pn	16 09 53.4	+3.7
	0.1nm,0.3s,baz=55,slow=14,SNR=4.7						
ILAR	**Eielson Array**	**44.37**	**35**	P	**P**	**16 15 05.8**	**+0.4**
	0.3nm,0.8s,baz=278,slow=8.8,SNR=6.8						
WRA	**Warramunga Arr**	**62.83**	**188**	P	**P**	**16 17 20.4**	**-0.6**
	0.3nm,0.4s,baz=6.8,slow=6.8,SNR=19						
ASAR	**Alice Springs**	**66.56**	**188**	P	**P**	**16 17 44.8**	**-0.5**
	0.4nm,0.8s,baz=3.8,slow=7.4,SNR=6.9						
HFS	**Hagfors**	**69.14**	**335**	P	**P**	**16 18 01.2**	**0.0**
	0.6nm,0.6s,baz=60,slow=7.3,SNR=4.5						

IDC 24 16:12:48.0±1.8, **28°.80S**×**61°.86E**, **h0**km, **mb3.5**/3, **mb1 3.7**/3, **mb1mx3.4**/28, **mbtmp3.5**/3, **Error ellipse: s-maj=52.4km s-min=44.7km az=124.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**61.35**	**180**	P	P	16 23 05.4	0.0
	1.6nm,1.1s,baz=342,slow=9.6,SNR=7.1						
ASAR	**Alice Springs**	**63.93**	**104**	P	P	16 23 23.1	-0.1
	0.4nm,0.7s,baz=241,slow=6.4,SNR=6.8						
WRA	**Warramunga Arr**	**65.73**	**100**	P	P	16 23 35.0	+0.1
	0.3nm,0.6s,baz=247,slow=5.7,SNR=5.4						
YKA	**Yellowknife Ar**	**146.22**	**357**	PKPbc	PKPdf	16 32 28.8	+0.2
	0.6nm,0.8s,baz=351,slow=3.9,SNR=4.5						

*CSEM **24** 16:16:41.6, 36°.47*N*×22°.33*E*, h24*km*, MD3.0, After ATH*

ATH 24 16:16:41.6, 36°.47N×22°.33E, h24km±2km, **MD3.0**/7, **Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DYR	**Agios Nikonas**	**0.29**	**1**	*e*PB	Pb	16 16 48.5	0.0
DYR				*e*SB	Sb	16 16 53.3	+0.1
DYR	**Agios Nikonas**	**0.29**	**1**	*e*Pb	Pb	16 16 48.5	0.0
DYR				*e*Sb	Sb	16 16 53.3	+0.1
VLI	**Veliai**	**0.55**	**63**	*e*PN	Pb	16 16 53.2	+0.6
VLI				*e*SN	Sb	16 17 01.2	+1.1
VLI	**Veliai**	**0.55**	**63**	*e*Pn	Pb	16 16 53.2	+0.6
VLI				*e*Sn	Sb	16 17 01.2	+1.1
KYTH	**Kithira**	**0.60**	**108**	*e*PB	Pb	16 16 53.3	-0.2
KYTH	**Kithira**	**0.60**	**108**	*e*Pb	Pb	16 16 53.3	-0.2
PYL	**PYLOS**	**0.64**	**312**	*e*PB	Pb	16 16 53.7	-0.4
PYL				*e*SN	Sn	16 17 03.9	-0.6
PYL	**PYLOS**	**0.64**	**312**	*e*Pb	Pb	16 16 53.7	-0.4
PYL				*e*Sn	Sn	16 17 03.9	-0.6
ITM	**Ithomi**	**0.78**	**336**	*e*PN	Pb	16 16 56.3	-0.3
ITM				*e*SN	Sn	16 17 08.4	+0.3
ITM	**Ithomi**	**0.78**	**336**	*e*Pn	Pb	16 16 56.3	-0.3
ITM				*e*Sn	Sn	16 17 08.4	+0.3
ANKY	**Antikythira Is**	**0.99**	**127**	*e*PN	Pb	16 17 01.0	+0.9
ANKY	**Antikythira Is**	**0.99**	**127**	*e*Pn	Pb	16 17 01.0	+0.9
DID	**Didima**	**1.26**	**35**	*e*PN	Pb	16 17 05.5	+0.7
DID	**Didima**	**1.26**	**35**	*e*Pn	Pb	16 17 05.5	+0.7

IDC 24 16:16:42.4±3.5, **4°.32N**×**75°.91W, h182**km±41km, **mb3.1**/3, **mb1 3.5**/3, **mb1mx3.1**/21, **mbtmp3.1**/3, **Error ellipse: s-maj=76.3km s-min=32.6km az=81.0, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**1.66**	**71**	P	Pn	16 17 15.5	-1.1
	30nm,0.3s,baz=59,slow=2.7,SNR=34						
ROSC				S	Sn	16 17 43.2	+0.2
	27nm,0.3s,baz=70,slow=22,SNR=26						
NVAR	**Mina Array Bea**	**51.34**	**317**	P	P	16 25 29.1	+0.5
	0.5nm,0.7s,baz=140,slow=7.1,SNR=5.1						
YKA	**Yellowknife Ar**	**64.68**	**341**	P	P	16 27 00.1	-0.4
	0.6nm,0.5s,baz=134,slow=6.2,SNR=11						
ILAR	**Eielson Array**	**78.06**	**336**	P	P	16 28 20.8	+0.1
	0.3nm,0.6s,baz=117,slow=4.7,SNR=5

SOH				eSn	Sg	16 18 12.5	-1.4	JAN	Janina	2.16 221	ePn	Pn	16 18 27.4	+0.1	HCY			eSn	Sn	16 19 25.5	+2.4
SOH				S	Sg	16 18 13.2	-0.7	JAN	Janina	2.16 221	ePB	Pn	16 18 27.4	+0.1	HCY	Herceg Novi	3.35 292	⇓iPn	Pn	16 18 45.5	+1.9
THE	Thessaloniki	0.69 163	P	Pg	16 18 03.2	-1.8	JAN	Janina	2.16 221	ePn	Pn	16 18 27.4	+0.1	HCY			eSn	Sn	16 19 25.5	+2.4
THE			S	Sg	16 18 13.5	-0.6	MPEP	Malo Peshtene	2.20 20	iP	Pn	16 18 28.7	+0.9	PTL	Penteli	3.36 164	P	Pn	16 18 45.3	+1.5
THE	Thessaloniki	0.69 163	P	Pg	16 18 03.2	-1.8	MPEP			iPg	Pb	16 18 32.4	+1.2	PTL	Penteli	3.36 164	ePn	Pn	16 18 43.6	-0.2
THE			S	Sg	16 18 13.5	-0.6	SKIA	Skiathos	2.21 164	P	Pn	16 18 27.2	-0.7	PTL	Penteli	3.36 164	ePN	Pn	16 18 43.6	-0.2
SRS	Serrai	0.69 105	P	Pg	16 18 03.1	-2.0	SKIA	Skiathos	2.21 164	P	Pn	16 18 27.2	-0.7	PTL	Penteli	3.36 164	ePn	Pn	16 18 43.6	-0.2
SRS	Serrai	0.69 105	P	Pg	16 18 03.1	-2.0	DIM	Dimitrovgrad	2.25 69	iP	Pn	16 18 29.2	+0.7	PTL	Penteli	3.36 164	P	Pn	16 18 45.3	+1.5
HORT	Hortiatis	0.76 157	P	Pg	16 18 04.6	-1.7	DIM			iPg	Pg	16 18 33.6	-1.1	GUR	Goura	3.37 185	P	Pn	16 18 45.0	+1.1
HORT			S	Sg	16 18 15.6	-0.7	DIM	Dimitrovgrad	2.25 69	iP	Pn	16 18 29.2	+0.7	GUR	Goura	3.37 185	ePn	Pn	16 18 43.9	0.0
HORT	Hortiatis	0.76 157	P	Pg	16 18 04.6	-1.7	SELS	Selova	2.25 329	⇓iPn	Pn	16 18 27.2	-1.4	GUR	Goura	3.37 185	ePN	Pn	16 18 43.9	0.0
HORT			S	Sg	16 18 15.6	-0.7	AGG	Agios Georgios	2.29 187	eP	Pn	16 18 28.8	-0.2	GUR	Goura	3.37 185	ePn	Pn	16 18 43.9	0.0
MMB	Musomiste	0.82 69	iP	Pg	16 18 06.0	-1.6	AGG			e		16 18 56.5		GUR	Goura	3.37 185	P	Pn	16 18 45.0	+1.1
MMB			iPg	Pg	16 18 06.7	-0.9	AGG	Agios Georgios	2.29 187	P	Pn	16 18 29.0	0.0	RMGR	Halanga-Turnu	3.37 360	⇑iP	Pn	16 18 43.8	0.0
MMB	Musomiste	0.82 69	iP	Pg	16 18 06.0	-1.6	AGG	Agios Georgios	2.29 187	ePn	Sn	16 18 28.8	-0.2	RMGR	Halanga-Turnu	3.37 360	⇑iP	Pn	16 18 43.8	0.0
MMB	Musomiste	0.82 69	iPg	Pg	16 18 06.7	-0.9	AGG			eSn	Sn	16 18 56.5	-0.6	RLS	Riolos of Patr	3.37 197	P	Pn	16 18 45.3	+1.4
NVR	Nevrokopi	0.88 86	P	Pg	16 18 06.5	-2.0	AGG	Agios Georgios	2.29 187	ePN	Pn	16 18 28.8	-0.2	RLS	Riolos of Patr	3.37 197	ePn	Pn	16 18 45.5	+1.6
NVR			S	Sg	16 18 19.5	-0.5	AGG			eSN	Sn	16 18 56.5	-0.6	RLS	Riolos of Patr	3.37 197	ePN	Pn	16 18 45.5	+1.6
NVR	Nevrokopi	0.88 86	ePn	Pg	16 18 07.7	-0.8	AGG	Agios Georgios	2.29 187	P	Pn	16 18 29.0	0.0	RLS	Riolos of Patr	3.37 197	P	Pn	16 18 45.3	+1.4
NVR			eSn	Sg	16 18 18.9	-1.1	AGG			eSn	Sn	16 18 56.5	-0.6	DJES	Djerdap	3.37 358	ePn	Pn	16 18 41.6	-2.3
NVR	Nevrokopi	0.88 86	ePN	Pg	16 18 07.7	-0.8	SMTH	Samothraki Isl	2.30 110	ePn	Pn	16 18 28.4	-0.7	UPM	Unac-Piva	3.40 305	⇓iPn	Pn	16 18 45.2	+0.7
NVR			eSN	Sg	16 18 18.9	-1.1	SMTH			eSn	Sn	16 18 57.4	+0.2	UPM			eSn	Sn	16 19 27.1	+2.3
NVR	Nevrokopi	0.88 86	P	Pg	16 18 06.5	-2.0	SMTH	Samothraki Isl	2.30 110	ePN	Pn	16 18 28.4	-0.7	UPM	Unac-Piva	3.40 305	⇓iPn	Pn	16 18 45.2	+0.7
NVR	Nevrokopi	0.88 86	ePn	Pg	16 18 07.7	-0.8	SMTH			eSN	Sn	16 18 57.4	+0.2	UPM			eSn	Sn	16 19 27.1	+2.3
NVR			S	Sg	16 18 19.5	-0.5	SMTH	Samothraki Isl	2.30 110	ePn	Pn	16 18 28.4	-0.7	ATH	Athens Observa	3.41 166	eP	Pn	16 18 44.7	+0.3
BIA	Bitola	1.08 256	P	Pb	16 18 09.7	-2.4	SMTH			eSn	Sn	16 18 57.4	+0.2	ATH	Athens Observa	3.41 166	ePn	Pn	16 18 44.7	+0.3
BIA	Bitola	1.08 256	iPg	Pb	16 18 10.9	-1.1	AOS	Alonnisos	2.31 157	P	Pn	16 18 27.6	-1.6	ATH	Athens Observa	3.41 166	ePN	Pn	16 18 44.7	+0.3
BIA			iSg	Sg	16 18 26.8	+0.4	AOS	Alonnisos	2.31 157	ePn	Pn	16 18 28.0	-1.2	ATH	Athens Observa	3.41 166	ePn	Pn	16 18 44.7	+0.3
BIA	Bitola	1.08 256	P	Pb	16 18 09.7	-2.4	AOS	Alonnisos	2.31 157	ePN	Pn	16 18 28.0	-1.2	PRK	Paraskevi	3.41 126	eP	Pn	16 18 45.0	+0.6
BIA	Bitola	1.08 256	iPg	Pb	16 18 10.9	-1.1	AOS	Alonnisos	2.31 157	P	Pn	16 18 27.6	-1.6	PRK	Paraskevi	3.41 126	P	Pn	16 18 45.9	+1.5
PLG	Polygyros	1.08 148	eP	Pb	16 18 10.9	-1.2	AOS	Alonnisos	2.31 157	ePn	Pn	16 18 28.0	-1.2	PRK	Paraskevi	3.41 126	ePn	Pn	16 18 45.0	+0.6
PLG			e		16 18 25.3		MAKR	Makrakomi, Fth	2.32 191	P	Pn	16 18 29.7	+0.2	PRK	Paraskevi	3.41 126	ePN	Pn	16 18 45.0	+0.6
PLG	Polygyros	1.08 148	P	Pb	16 18 10.5	-1.6	MAKR	Makrakomi, Fth	2.32 191	P	Pn	16 18 29.7	+0.2	PRK	Paraskevi	3.41 126	ePn	Pn	16 18 45.0	+0.6
PLG	Polygyros	1.08 148	ePn	Pb	16 18 10.9	-1.2	LIA	Limnos Island	2.35 126	ePn	Pn	16 18 29.6	-0.2	PRK	Paraskevi	3.41 126	P	Pn	16 18 45.9	+1.5
PLG			eSn	Sb	16 18 25.3	-0.8	LIA			eSn	Sn	16 18 58.7	+0.2	DIVS	Divibare	3.44 325	P	Pn	16 18 44.6	-0.3
PLG	Polygyros	1.08 148	ePN	Pb	16 18 10.9	-1.2	LIA	Limnos Island	2.35 126	ePN	Pn	16 18 29.6	-0.2	DIVS	Divibare	3.44 325	⇓iPn	Pn	16 18 44.3	-0.6
PLG			eSN	Sb	16 18 25.3	-0.8	LIA			eSN	Sn	16 18 58.7	+0.2	DIVS			eSg	Sg	16 19 43.2	+1.1
PLG	Polygyros	1.08 148	P	Pb	16 18 10.5	-1.6	LIA	Limnos Island	2.35 126	ePn	Pn	16 18 29.6	-0.2	DIVS	Divibare	3.44 325	⇓iPn	Pn	16 18 44.3	-0.6
PLG	Polygyros	1.08 148	ePn	Pb	16 18 10.9	-1.2	LIA			eSn	Sn	16 18 58.7	+0.2	DIVS	Divibare	3.44 325	P	Pn	16 18 44.6	-0.3
PLG			eSn	Sb	16 18 25.3	-0.8	PVY	Plav	2.42 303	⇓iPn	Pn	16 18 31.7	+0.7	DIVS			eSg	Sg	16 19 43.2	+1.1
FNA	Florina	1.13 243	eP	Pb	16 18 12.3	-0.6	PVY			eSn	Sb	16 19 03.4	-1.5	RKY	Sarkoy-Tekirda	3.44 99	ePN	Pn	16 18 44.4	-0.5
FNA	Florina	1.13 243	P	Pb	16 18 10.9	-2.0	PVY	Plav	2.42 303	P	Pn	16 18 31.7	+0.7	SART	Tekirdag	3.44 99	iP	Pn	16 18 44.4	-0.5
FNA			S	Sn	16 18 28.4	0.0	PVY			S	Sg	16 19 08.3	-1.1	SART	Tekirdag	3.44 99	iP	Pn	16 18 44.4	-0.5
FNA	Florina	1.13 243	ePn	Pb	16 18 12.3	-0.6	PVY	Plav	2.42 303	⇓iPn	Pn	16 18 31.7	+0.7	MRMA	Marmari	3.48 158	P	Pn	16 18 46.6	+1.2
FNA	Florina	1.13 243	ePN	Pb	16 18 12.3	-0.6	PVY			eSn	Sb	16 19 03.4	-1.5	MRMA	Marmari	3.48 158	P	Pn	16 18 46.6	+1.2
FNA	Florina	1.13 243	P	Pb	16 18 10.9	-2.0	SMIA	Simia	2.44 171	P	Pn	16 18 31.6	+0.4	BRY	Bratogost	3.49 299	⇓iPn	Pn	16 18 47.2	+1.6
FNA	Florina	1.13 243	ePn	Pb	16 18 12.3	-0.6	SMIA	Simia	2.44 171	P	Pn	16 18 31.6	+0.4	BRY			eSn	Sn	16 19 29.0	+2.1
FNA			S	Sn	16 18 28.4	0.0	EVR	Evrytania	2.47 196	ePb	Pn	16 18 32.9	+1.3	BRY	Bratogost	3.49 299	⇓iPn	Pn	16 18 47.2	+1.6
SKO	Skopje	1.16 306	⇑iP	Pn	16 18 13.2	-0.3	EVR	Evrytania	2.47 196	ePB	Pn	16 18 32.9	+1.3	BRY			eSn	Sn	16 19 29.0	+2.1
SKO			e		16 18 30.4		EVR	Evrytania	2.47 196	ePb	Pn	16 18 32.9	+1.3	MFT	Murefte	3.50 97	ePN	Pn	16 18 46.3	-0.4
SKO	Skopje	1.16 306	P	Pn	16 18 12.8	-0.7	IGT	Igoumenitsa	2.52 227	P	Pn	16 18 33.7	+1.5	VLS	Valsamata	3.51 208	eP	Pn	16 18 46.3	+0.4
SKO	Skopje	1.16 306	⇑iPg	Pn	16 18 13.2	-0.3	IGT	Igoumenitsa	2.52 227	P	Pn	16 18 33.7	+1.5	VLS	Valsamata	3.51 208	P	Pn	16 18 47.8	+1.9
SKO			eSg	Sn	16 18 30.4	+1.1	AXAR	Agios Charalam	2.53 181	P	Pn	16 18 32.9	+0.6	VLS	Valsamata	3.51 208	ePn	Pn	16 18 46.3	+0.4
SKO	Skopje	1.16 306	iPg	Pn	16 18 13.2	-0.3	AXAR	Agios Charalam	2.53 181	P	Pn	16 18 32.9	+0.6	VLS	Valsamata	3.51 208	ePN	Pn	16 18 46.3	+0.4
SKO			eSg	Sn	16 18 29.4	+0.1	ALN	Alexandroupoli	2.56 98	eP	Pn	16 18 32.5	-0.2	VLS	Valsamata	3.51 208	ePn	Pn	16 18 46.3	+0.4
SKO			eLg	Lg	16 18 30.4		ALN	Alexandroupoli	2.56 98	P	Pn	16 18 32.7	0.0	VLS	Valsamata	3.51 208	P	Pn	16 18 47.8	+1.9
	comp=N,108µm,1.6s						ALN	Alexandroupoli	2.56 98	ePn	Pn	16 18 32.5	-0.2	BBLS	Lazići	3.54 318	⇓iPn	Pn	16 18 47.0	+0.7
SKO			eLg	Lg	16 18 31.2		ALN	Alexandroupoli	2.56 98	ePN	Pn	16 18 32.5	-0.2	BBLS			eSg	Sg	16 19 44.2	-1.0
	comp=E,150µm,2.1s						ALN	Alexandroupoli	2.56 98	P	Pn	16 18 32.7	0.0	BBLS	Lazići	3.54 318	⇓iPn	Pn	16 18 47.0	+0.7
SKO	Skopje	1.16 306	⇑iPg	Pn	16 18 13.2	-0.3	BOLS	Boljevac	2.59 348	⇓iPn	Pn	16 18 31.5	-1.7	BBLS			eSg	Sg	16 19 44.2	-1.0
SKO			eSg	Sn	16 18 30.4	+1.1	BOLS			eSg	Sg	16 19 14.4	-0.5	KRBG	Karabiga-Canak	3.60 103	ePN	Pn	16 18 46.6	-0.4
SKO	Skopje	1.16 306	P	Pn	16 18 12.8	-0.7	BOLS	Boljevac	2.59 348	⇓iPn	Pn	16 18 31.5	-1.7	AYVA	Ayvalik	3.64 122	iP	Pn	16 18 49.4	+1.9
SKO	Skopje	1.16 306	⇑iPg	Pn	16 18 13.2	-0.3	BOLS			eSg	Sg	16 19 14.4	-0.5	AYVA	Ayvalik	3.64 122	iP	Pn	16 18 49.4	+1.9
SKO			eSg	Sn	16 18 30.4	+1.1	ATAL	Atalanti	2.61 175	P	Pn	16 18 33.9	+0.5	HUMR	Humele	3.64 27	⇓iP	Pn	16 18 47.4	-0.1
SKO			eLg	Lg	16 18 31.7		ATAL	Atalanti	2.61 175	P	Pn	16 18 33.9	+0.5	HUMR	Humele	3.64 27	⇓iP	Pn	16 18 47.4	-0.1
	comp=E,50µm,2.1s						BEY	Berane	2.62 308	⇓iPn	Pn	16 18 34.1	+0.5	TKR	Tekirdag	3.66 93	ePN	Pn	16 18 47.5	-0.4
KZN	Kozani	1.22 216	eP	Pn	16 18 13.4	-0.9	BEY			eSn	Sb	16 19 08.6	-1.9	MRMT	Marmara Adasi	3.77 99	ePN	Pn	16 18 47.5	-0.4
KZN			e		16 18 32.4		IVA	Berane	2.62 308	⇓iPn	Pn	16 18 34.1	+0.5	CRLT	Corlu	3.80 91	ePN	Pn	16 18 48.9	-0.9
KZN	Kozani	1.22 216	ePn	Pn	16 18 13.4	-0.9	IVA			eSn	Sb	16 19 08.6	-1.9	DID	Didima	3.81 174	P	Pn	16 18 50.9	+1.0
KZN			eSn	Sg	16 18 32.4	+1.6	LKR	Lokris	2.65 175	ePn	Pn	16 18 33.7	-0.3	DID	Didima	3.81 174	ePn	Pn	16 18 49.8	-0.1
KZN	Kozani	1.22 216	ePN	Pn	16 18 13.4	-0.9	LKR	Lokris	2.65 175	ePN	Pn	16 18 33.7	-0.3	DID	Didima	3.81 174	ePN	Pn	16 18 49.8	-0.1
KZN			eSN	Sg	16 18 32.4	+1.6	LKR	Lokris	2.65 175	ePn	Pn	16 18 33.7	-0.3	DID	Didima	3.81 174	ePn	Pn	16 18 49.8	-0.1
KZN	Kozani	1.22 216	ePn	Pn	16 18 13.4	-0.9	ENEZ	Enez	2.67 101	ePN	Pn	16 18 33.4	-0.8	DID	Didima	3.81 174	P	Pn	16 18 50.9	+1.0
KZN			eSn	Sg	16 18 32.4	+1.6	MRKA	Markates	2.67 165	P	Pn	16 18 35.2	+0.9	DIDY	Didyma	3.83 174	P	Pn	16 18 51.5	+1.2
VTS	Vitosha	1.35 16	⇑iP	Pn	16 18 16.0	-0.3	MRKA	Markates	2.67 165	P	Pn	16 18 35.2	+0.9	DIDY	Didyma	3.83 174	P	Pn	16 18 51.5	+1.2
VTS			S	Sg	16 18 35.6	+0.5	ULC	Ulcinj	2.68 286	⇓iPn	Pn	16 18 35.6	+1.2	BEO	Beograd	3.87 336	ePn	Pn	16 18 50.4	-0.4
VTS	Vitosha	1.35 16	P	Pn	16 18 15.4	-0.8	ULC			eSn	Sb	16 19 10.9	-1.2	BEO			eSg	Sg	16 19 53.5	-2.4
VTS	Vitosha	1.35 16	ePn	Pn	16 18 16.4	+0.2	ULC	Ulcinj	2.68 286	P	Pn	16 18 35.8	+1.4	CHOS	Chios island	3.88 137	P	Pn	16 18 52.2	+1.2
VTS			eSn	Sb	16 18 34.6	+0.6	ULC	Ulcinj	2.68 286	P	Pn	16 18 35.8	+1.4	CHOS	Chios island	3.88 137	ePn	Pn	16 18 50.9	-0.1
VTS	Vitosha	1.35 16	ePg	Pn	16 18 16.3	+0.1	ULC			S	Sg	16 19 15.5	-2.1	CHOS	Chios island	3.88 137	ePN	Pn	16 18 50.9	-0.1
VTS			eSg	Sn	16 18 34.2	+0.1	ULC	Ulcinj	2.68 286	⇓iPn	Pn	16 18 35.6	+1.2	CHOS	Chios island	3.88 137	ePn	Pn	16 18 50.9	-0.1
VTS	Vitosha	1.35 16	⇑iP	Pn	16 18 16.0	-0.3	ULC			eSn	Sb	16 19 10.9	-1.2	CHOS	Chios island	3.88 137	P	Pn	16 18 52.2	+1.2
VTS			S	Sg	16 18 35.6	+0.5	KEK	Kerkira	2.72 235	P	Pn	16 18 36.6	+1.7	BUC1	Bucharest	3.91 38	⇓P	Pn	16 18 52.0	+0.7
VTS	Vitosha	1.35 16	iP	Pn	16 18 15.9	-0.3	KEK	Kerkira	2.72 235	ePb	Pn	16 18 36.4	+1.5	BUC1	Bucharest	3.91 38	⇓iP	Pn	16 18 52.0	+0.7
VTS			iPg	Pb	16 18 17.3	+0.5	KEK	Kerkira	2.72 235	ePB	Pn	16 18 36.4	+1.5	BUC1	Bucharest	3.91 38	⇑iP	Pg	16 19 07.1	+2.1
VTS	Vitosha	1.35 16	iP	Pn	16 18 15.9	-0.3	KEK	Kerkira	2.72 235	P	Pn	16 18 36.6	+1.7	BUC1	Bucharest	3.91 38	P	Pn	16 18 52.0	+0.7
VTS	Vitosha	1.35 16	ePg	Pn	16 18 16.3	+0.1	PVL	Pavlikeni	2.74 45	iP	Pn	16 18 33.6	-1.6	GOLR		3.91 24	⇓iP	Pn	16 18 52.5	+1.2
VTS			eSg	Sn	16 18 34.2	+0.1	PVL			iPg	Pb	16 18 40.9	+0.5	GOLR		3.91 24	⇓iP	Pn	16 18 52.5	+1.2
VTS			eSn	Sb	16 18 34.6	+0.6	PVL	Pavlikeni	2.74 45	iP	Pn	16 18 33.6	-1.6	CIOR	Ciorogarla	3.92 35	⇑iP	Pn	16 18 53.1	+1.7
VTS			S	Sg	16 18 35.6	+0.5	PDG	Podgorica	2.81 295	⇓iPn	Pn	16 18 37.4	+1.3	CIOR	Ciorogarla	3.92 35	⇑iP	Pn	16 18 53.1	+1.7
OUR	Ouranopolis	1.36 134	P	Pn	16 18 15.4	-0.9	PDG			eSn	Sb	16 19 13.3	-2.7	VLX	Vlachokerasia	3.93 184	P	Pn	16 18 52.3	+0.7
OUR	Ouranopolis	1.36 134	P	Pn	16 18 15.4	-0.9	TTG	Podgorica	2.81 295	⇓iPn	Pn	16 18 37.4	+1.3	VLX	Vlachokerasia	3.93 184	ePn	Pn	16 18 52.3	+0.7
KAVA	Kavala	1.40 102	P	Pn	16 18 15.8	-1.0	TTG			eSn	Sb	16 19 13.3	-2.7	VLX	Vlachokerasia	3.93 184	ePN	Pn	16 18 52.3	+0.7
KAVA			S	Sg	16 18 36.1	-0.6	TTG	Podgorica	2.81 295	P	Pn	16 18 37.5	+1.3	VLX	Vlachokerasia	3.93 184	P	Pn	16 18 52.3	+0.7
KAVA	Kavala	1.40 102	P	Pn	16 18 15.8	-1.0	TTG	Podgorica	2.81 295	P	Pn	16 18 37.5	+1.3	PRD	Provadia	3.97 60	iP	Pn	16 18 52.6	+0.5
KAVA			S	Sg	16 18 36.1	-0.6	TTG	Podgorica	2.81 295	P	Pn	16 18 37.5	+1.3	PRD	Provadia	3.97 60	iP	Pn	16 18 52.6	+0.5
SOF	Sofiya	1.47 19	iP	Pn	16 18 17.7	0.0	SJES	Sjenica	2.82 315	ePn	Pn	16 18 35.6	-0.8	GONE	Gonen-Balikesi	3.99 107	ePN	Pn	16 18 52.0	-0.4
SOF	Sofiya	1.47 19	iP	Pn	16 18 17.7	0.0	SJES			eSg	Sg	16 19 21.8	-0.4	BUC	Bucharest	3.99 38	⇑P	Pn	16 18 53.4	+1.0
NEST	Nestorio	1.53 236	P	Pn	16 18 18.0	-0.7	EFP	Efpalio	2.93 192	ePn	Pn	16 18 38.2	+0.4	BUC	Bucharest	3.99 38	P	Pn	16 18 53.4	+1.0
NEST	Nestorio	1.53 236	P	Pn	16 18 18.0	-0.7	EFP	Efpalio	2.93 192	ePN	Pn	16 18 38.2	+0.4	INCR	INCERC-Sediu C	4.04 38	⇑iP	Pg	16 19 07.1	-1.9
PAIG	Paliouri	1.56 151	eP	Pn	16 18 18.4	-0.5	EFP	Efpalio	2.93 192	ePn	Pn	16 18 38.2	+0.4	STON	Ston	4.04 295	iPn	Pn	16 18 54.3	+1.2
PAIG			e		16 18 38.4		KALE	Kalithea	2.93 189	P	Pn	16 18 38.4	+0.5	BALY	Balya	4.06 111	iP	Pn	16 18 54.5	+1.2
PAIG	Paliouri	1.56 151	P	Pn	16 18 17.6	-1.3	KALE	Kalithea	2.93 189	ePn	Pn	16 18 38.2	+0.3	BALY	Balya	4.06 111	iP	Pn	16 18 54.5	+1.2
PAIG	Paliouri	1.56 151	ePn	Pn	16 18 18.4	-0.5	KALE	Kalithea	2.93 189	ePN	Pn	16 18 38.2	+0.3	BNT	Bandirma	4.07 102	ePN	Pn	16 18 52.6	-0.9
PAIG			eSn	Sn	16 18 38.4	-0.5	KALE	Kalithea	2.93 189	P	Pn	16 18 38.4	+0.5	SLVT	Silivri	4.15 89	ePN	Pn	16 18 54.3	-0.3
PAIG	Paliouri	1.56 151	ePN	Pn	16 18 18.4	-0.5	ERIK	Erikli-Kesan	2.95 101	ePN	Pn	16 18 37.3	-0.8	ITM	Ithomi	4.15 189	ePn	Pn	16 18 56.3	+1.6
PAIG			eSN	Sn	16 18 38.4	-0.5	LKD2	Lefkada island	2.96 213	P	Pn	16 18 39.8	+1.6	ITM	Ithomi	4.15 189	ePN	Pn	16 18 56.3	+1.6
PAIG	Paliouri	1.56 151	P	Pn	16 18 17.6	-1.3	LKD2	Lefkada island	2.96 213	ePn	Pn	16 18 38.8	+0.6	ITM	Ithomi	4.15 189	ePN	Pn	16 18 56.3	+1.6
PAIG	Paliouri	1.56 151	ePn	Pn	16 18 18.4	-0.5	LKD2	Lefkada island	2.96 213	ePN	Pn	16 18 38.8	+0.6	TAR1	Taranto	4.18 261	ePn	Pn	16 18 56.0	+1.1
PAIG			eSn	Sn	16 18 38.4	-0.5	LKD2	Lefkada island	2.96 213	ePn	Pn	16 18 38.8	+0.6	URLA	Izmir	4.19 133	iP	Pn	16 18 55.5	+0.3
RZN	Rozhen	1.56 75	iP	Pn	16 18 19.6	+0.4	LKD2	Lefkada island	2.96 213	P	Pn	16 18 39.8	+1.6	URLA	Izmir	4.19 133	iP	Pn	16 18 55.5	+0.3
RZN			iPg	Pb	16 18 21.1	+0.7	TRIZ	Trizonia	2.97 190	P	Pn	16 18 39.5	+1.2	CTYL	Yal??k??y-??at	4.21 86	ePN	Pn	16 18 55.1	-0.2
RZN	Rozhen	1.56 75	iP	Pn	16 18 19.6	+0.4	TRIZ	Trizonia	2.97 190	ePN	Pn	16 18 38.5	+0.2	LOT	Lotru	4.22 10	⇑iP	Pn	16 18 54.9	-0.8
KBN	Korca	1.60 246	P	Pn	16 18 19.0	-0.6	TRIZ	Trizonia	2.97 190	ePn	Pn	16 18 38.5	+0.2	LOT	Lotru	4.22 10	⇑iP	Pn	16 18 54.9	-0.8
KBN	Korca	1.60 246	P	Pn	16 18 19.0	-0.6	TRIZ	Trizonia	2.97 190	P	Pn	16 18 39.5	+1.2	BALB	Balikesir	4.28 111	ePN	Pn	16 18 56.2	-0.1
BARS	Barje	1.66 337	ePn	Pn	16 18 19.9	-0.4	GRUS	Gruza	2.98 331	⇓iPn	Pn	16 18 37.8	-0.7	MTUR	Matau	4.29 23	⇑P	Pn	16 18 56.3	-0.3
BARS			eSn	Sg	16 18 56.1	+11	GRUS			eSg	Sg	16 19 27.6	+0.4	MTUR	Matau	4.29 23	⇑iP	Pn	16 18 56.3	-0.3
BARS	Barje	1.66 337	ePn	Pn	16 18 19.9	-0.4	GRUS	Gruza	2.98 331	⇓iPn	Pn	16 18 37.8	-0.7	MTUR	Matau	4.29 23	P	Pn	16 18 56.3	-0.3
BARS			eSn	Sn	16 18 41.6	+0.1	GRUS			eSg	Sg	16 19 27.6	+0.4	ARR	Arges	4.31 18	⇑iP	Pn	16 18 56.1	-0.7
BARS	Barje	1.66 337	ePn	Pn	16 18 19.9	-0.4	GEL1	Tayfur-Gelibol	3.00 106	ePN	Pn	16 18 37.7	-0.8	ARR	Arges	4.31 18	⇑iP	Pn	16 18 56.1	-0.7
BARS			eSn	Sn	16 18 41.6	+0.1	BUM	Brajici-Budva	3.02 291	⇑iPn	Pn	16 18 40.6	+1.5	CTKS	Kestanelik-??a	4.38 89	ePN	Pn	16 18 57.1	-0.6
PLD	Plovdiv	1.70 61	P	Pn	16 18 21.8	+0.9	BUM			eSn	Sn	16 19 18.1	+2.9	BZS	Buzias	4.39 350	⇑P	Pn	16 18 55.9	-2.0
PLD	Plovdiv	1.70 61	iP	Pb	16 18 22.5	-0.2	BUM	Brajici-Budva	3.02 291	⇑iPn	Pn	16 18 40.6	+1.5	BZS	Buzias	4.39 350	⇓iPn	Pn	16 18 56.2	-1.7
PLD			iPg	Pg	16 18 24.5	+0.2	BUM			eSn	Sn	16 19 18.1	+2.9	BZS			eSg	Sg	16 20 10.3	-2.2
PLD	Plovdiv	1.70 61	P	Pn	16 18 21.8	+0.9	ZIMR		3.07 39	⇑P	Pn	16 18 40.5	+0.7	BZS	Buzias	4.39 350	⇑iP	Pn	16 18 55.9	-2.0
PHP	Peshkopia	1.74 284	P	Pn	16 18 21.1	-0.5	ZIMR		3.07 39	⇑iP	Pn	16 18 40.5	+0.7	BZS	Buzias	4.39 350	P	Pn	16 18 55.9	-2.0
PHP	Peshkopia	1.74 284	P	Pn	16 18 21.1	-0.5	EDRB	Edirne	3.08 78	ePN	Pn	16 18 38.5	-1.4	BZS	Buzias	4.39 350	⇓iPn	Pn	16 18 56.2	-1.7
THL	Klokotos Trika	1.81 197	P	Pn	16 18 21.4	-0.9	LAKA	Lakka	3.10 191	ePn	Pn	16 18 41.6	+1.4	BZS			eSg	Sg	16 20 10.3	-2.2
THL			S	Sb	16 18 47.9	+0.9	LAKA	Lakka	3.10 191	ePB	Pn	16 18 41.6	+1.4	BAI	Bari	4.40 269	ePn	Pn	16 18 57.8	-0.2
THL	Klokotos Trika	1.81 197	ePb	Pn	16 18 22.1	-0.2	LAKA	Lakka	3.10 191	ePn	Pn	16 18 41.6	+1.4	FGSL	Fruska Gora	4.40 332	⇑iPn	Pn	16 18 57.0	-1.0
THL			eSn	Sn	16 18 46.0	+0.9	SZH	Strazhica	3.10 50	iP	Pn	16 18 41.5	+1.3	FGSL			eSn	Sn	16 19 46.0	-3.1
THL	Klokotos Trika	1.81 197	ePN	Pn	16 18 22.1	-0.2	SZH			iPg	Pg	16 18 51.1	+0.1	FRGS	Fruska Gora	4.40 332	⇑iPn	Pn	16 18 57.0	-1.1
THL			eSN	Sn	16 18 46.0	+0.9	SZH	Strazhica	3.10 50	iP	Pn	16 18 41.5	+1.3	FRGS			eSn	Sn	16 19 46.0	-3.2
THL	Klokotos Trika	1.81 197	P	Pn	16 18 21.4	-0.9

DURS Dursunbey 4.72 109 i P Pn 16 19 02.4 -0.1
DURS Dursunbey 4.72 109 i P Pn 16 19 02.4 -0.1
ARMT Armutlu 4.72 97 ePN Pn 16 19 02.5 0.0
ISR Istrita 4.74 35 ⇑P Pn 16 19 03.9 +1.1
ISR Istrita 4.74 35⇑iP Pn 16 19 03.9 +1.1
ISR Istrita 4.74 35 P Pn 16 19 03.9 +1.1
AMRR Amara 4.75 44 ⇑P Pn 16 19 03.8 +1.0
AMRR Amara 4.75 44⇑iP Pn 16 19 03.8 +1.0
AMRR Amara 4.75 44 P Pn 16 19 03.8 +1.0
APE Apeiranthos 4.76 152 ePN Pn 16 19 02.5 -0.5
APE Apeiranthos 4.76 152 eP Pn 16 19 02.8 -0.2
APE Apeiranthos 4.76 152 ePn Pn 16 19 02.8 -0.2
APE Apeiranthos 4.76 152 ePN Pn 16 19 02.8 -0.2
APE Apeiranthos 4.76 152⇓iP Pn 16 19 02.8 -0.2
APE Apeiranthos 4.76 152 ePn Pn 16 19 02.8 -0.2
KLYT Kilyos 4.78 88 ePn Pn 16 19 03.0 -0.1
MDNY Mudanya-Bursa 4.78 99 ePN Pn 16 19 03.6 +0.4
PGOR Pogoanele 4.78 40⇑iP Pn 16 19 04.8 +1.6
PGOR Pogoanele 4.78 40⇑iP Pn 16 19 04.8 +1.6
ISK Istanbul-Kandi 4.80 91 ePN Pn 16 19 03.6 +0.1
ISK Istanbul-Kandi 4.80 91 P Pn 16 19 05.2 +1.7
ISK Istanbul-Kandi 4.80 91 P Pn 16 19 05.2 +1.7
MLR Muntele Rosu 4.81 28 Pn Pn 16 19 04.3 +0.5
MLR Lg Lg 16 20 24.3
MLR Muntele Rosu 4.81 28⇑iP Pn 16 19 04.8 +1.0
MLR Muntele Rosu 4.81 28 Pn Pn 16 19 04.3 +0.5
comp=E,15nm,0.3s,baz=231,slow=6.1,SNR=111
MLR Lg Lg 16 20 24.3
comp=E,18nm,0.3s,baz=300,slow=16,SNR=3.8
MLR Muntele Rosu 4.81 28 P Pn 16 19 04.3 +0.5
MLR Lg Lg 16 20 24.3
DST Dursunbey 4.82 109 ePN Pn 16 19 03.6 -0.2
BUY Buyukada 4.87 93 ePN Pn 16 19 04.7 +0.3
ORLT Orhaneli 4.87 103 ePN Pn 16 19 04.7 +0.2
CVD Cernavoda 4.95 51 ⇑P Pn 16 19 08.6 +3.1
CVD Cernavoda 4.95 51⇑iP Pn 16 19 08.6 +3.1
CVD Cernavoda 4.95 51 P Pn 16 19 08.6 +3.1
GEMT Gemlik 4.99 98 ePN Pn 16 19 05.8 -0.3
MDB Medias 5.00 14 ⇑P Pn 16 19 06.5 +0.3
MDB Medias 5.00 14⇑iP Pn 16 19 06.5 +0.3
MDB Medias 5.00 14 P Pn 16 19 06.5 +0.3
KYTH Kithira 5.01 177 ePn Pn 16 19 07.4 +0.9
KYTH Kithira 5.01 177 ePn Pn 16 19 07.4 +0.9
KYTH Kithira 5.01 177 ePN Pn 16 19 07.4 +0.9
TIP Timpagrande 5.02 247 eP Pn 16 19 05.8 -0.8
TIP Timpagrande 5.02 247 eP Pn 16 19 05.8 -0.8
ULDT Uludag 5.02 101 i P Pn 16 19 07.1 +0.4
ULDT Uludag 5.02 101 i P Pn 16 19 07.1 +0.4
MANR Mangalia 5.02 58⇓iP Pn 16 19 07.5 +0.9
MANR Mangalia 5.02 58⇓iP Pn 16 19 07.5 +0.9
DOPR Dopca 5.06 22⇑iP Pn 16 19 07.5 +0.4
DOPR Dopca 5.06 22⇑iP Pn 16 19 07.5 +0.4
YLV Yalova 5.11 96 ePN Pn 16 19 07.9 +0.2
HARR Harsova 5.12 47 ⇓P Pn 16 19 08.5 +0.6
HARR Harsova 5.12 47⇓iP Pn 16 19 08.5 +0.6
HARR Harsova 5.12 47 P Pn 16 19 08.5 +0.6
DEMI Demirci 5.13 114 i P Pn 16 19 09.4 +1.3
DEMI Demirci 5.13 114 i P Pn 16 19 09.4 +1.3
EFOR EFORIE 5.18 56⇓iP Pn 16 19 08.4 -0.3
EFOR EFORIE 5.18 56⇓iP Pn 16 19 08.4 -0.3
SILT Sile 5.24 89 ePN Pn 16 19 09.2 -0.2
TIRR Tirgusor 5.25 51 eP Pn 16 19 10.0 +0.3
TIRR Tirgusor 5.25 51 ePn Pn 16 19 10.0 +0.3
TIRR Tirgusor 5.25 51⇓iP Pn 16 19 10.1 +0.3
TIRR Tirgusor 5.25 51 eP Pn 16 19 10.0 +0.3
MANT Manisa 5.30 120 i P Pn 16 19 12.0 +1.4
MANT Manisa 5.30 120 i P Pn 16 19 12.0 +1.4
KULA Kula-Manisa 5.36 119 ePN Pn 16 19 11.5 +0.2
PLOR Plostina 5.38 31 ⇑P Pn 16 19 13.0 +1.5
PLOR Plostina 5.38 31⇑iP Pn 16 19 13.0 +1.5
PLOR Plostina 5.38 31 P Pn 16 19 13.0 +1.5
CUC Castrocucco 5.40 258 ePn Pn 16 19 11.7 -0.1
CUC Castrocucco 5.40 258 ePn Pn 16 19 11.7 -0.1
ADVT Abdulvahap 5.40 97 ePN Pn 16 19 11.8 0.0
AYDN Tasoluk 5.40 131 i P Pn 16 19 13.1 +1.2
AYDN Tasoluk 5.40 131 i P Pn 16 19 13.1 +1.2
VRI Vrincioaia 5.42 31 ⇑P Pn 16 19 13.6 +1.5
VRI Vrincioaia 5.42 31⇑iP Pn 16 19 13.6 +1.5
VRI Vrincioaia 5.42 31 P Pn 16 19 13.6 +1.5
ANKY Antikythira Is 5.44 175 ePn Pn 16 19 13.6 +1.3
ANKY Antikythira Is 5.44 175 ePn Pn 16 19 13.6 +1.3
ANKY Antikythira Is 5.44 175 ePn Pn 16 19 13.6 +1.3
CJR Cluj-Napoca 5.46 6⇓iP Pn 16 19 12.9 +0.3
ODBI Odobesti 5.47 34⇓iP Pn 16 19 15.9 +3.2
TVSB Tavsanli 5.48 107 ePN Pn 16 19 13.2 +0.2
DRGR 5.50 0⇓P Pn 16 19 12.3 -0.8
DRGR 5.50 0⇓iP Pn 16 19 12.3 -0.8
DRGR 5.50 0 P Pn 16 19 12.3 -0.8
PETR Petresti 5.52 35⇑iP Pn 16 19 15.1 +1.8
PETR Petresti 5.52 35⇑iP Pn 16 19 15.1 +1.8
CAVI Cavuskoy 5.53 99 ePN Pn 16 19 13.8 +0.2
BODT Bodrum 5.54 138 ePN Pn 16 19 14.0 +0.4
CFR Carcaliu 5.55 44 ⇓P Pn 16 19 14.3 +0.5
CFR Carcaliu 5.55 44⇓iP Pn 16 19 14.3 +0.5
CFR Carcaliu 5.55 44 P Pn 16 19 14.3 +0.5
MLSB Milas 5.61 134 ePN Pn 16 19 14.6 0.0
PKSM Moragy 5.73 330 ⇓P Pn 16 19 14.4 -1.8
PKSM Moragy 5.73 330⇓iP Pn 16 19 14.4 -1.8
PKSM Moragy 5.73 330⇑ePn Pn 16 19 15.8 -0.4
PKSM Moragy 5.73 330 P Pn 16 19 14.4 -1.8
PKS6 Bocsa 5.77 338⇑ePn Pn 16 19 16.1 -0.7
PKS6 eSn Sn 16 20 24.5 +1.8
PKS2 Kecel 5.77 335⇑ePn Pn 16 19 16.4 -0.5
PKS2 eSn Sn 16 20 25.7 +2.8
SPNC Sapanca-Adapaz 5.79 94 ePN Pn 16 19 16.9 -0.2
GPA Golpazari 5.86 97 ePN Pn 16 19 18.0 -0.1
TLCR 5.92 47 ⇑P Pn 16 19 19.7 +0.8
TLCR 5.92 47⇑iP Pn 16 19 19.7 +0.8
TLCR 5.92 47 P Pn 16 19 19.7 +0.8
TESR Tescani 5.94 27⇑iP Pn 16 19 19.6 +0.4
TESR Tescani 5.94 27⇑iP Pn 16 19 19.6 +0.4
GULT Gulveren 5.99 96 ePN Pn 16 19 19.7 -0.2
KHAL Karahalli 5.99 117 i P Pn 16 19 21.3 +1.4
KHAL Karahalli 5.99 117 i P Pn 16 19 21.3 +1.4
VAM Vamos 6.00 168 eP Pn 16 19 22.0 +2.1
VAM Vamos 6.00 168 P Pn 16 19 22.1 +2.1
VAM Vamos 6.00 168 ePn Pn 16 19 22.0 +2.1
VAM Vamos 6.00 168 ePN Pn 16 19 22.0 +2.1
VAM Vamos 6.00 168 ePn Pn 16 19 22.0 +2.1
YER Yerkesik 6.00 132 ePN Pn 16 19 20.0 -0.1
KHL Karahalli 6.03 117 ePN Pn 16 19 20.5 0.0
DENT Denizli 6.04 124 ePN Pn 16 19 20.3 -0.3
CEL Celeste 6.06 242 ePn Pn 16 19 20.1 -0.8
CEL Celeste 6.06 242 ePn Pn 16 19 20.1 -0.8
DNZL Cakiroluk 6.08 124 i P Pn 16 19 22.9 +1.5
DNZL Cakiroluk 6.08 124 i P Pn 16 19 22.9 +1.5
ALT Altintas 6.10 109 ePN Pn 16 19 21.1 -0.3
PKS9 Tamasi 6.18 330⇑ePn Pn 16 19 22.0 -0.4
PKS9 eSn Sn 16 20 30.5 -2.4
IDI Anoyia 6.24 163 P Pn 16 19 24.4 +1.0
IDI Anoyia 6.24 163 ePn Pn 16 19 24.8 +1.4
IDI Anoyia 6.24 163 ePN Pn 16 19 24.8 +1.4
IDI Anoyia 6.24 163 P Pn 16 19 24.4 +1.0
IDI Anoyia 6.24 163 ePn Pn 16 19 24.8 +1.4
TURN Turunc 6.37 132 i P Pn 16 19 25.1 +0.1
TURN Turunc 6.37 132 i P Pn 16 19 25.1 +0.1
BMR Baia Mare 6.40 5 ⇓P Pn 16 19 26.0 +0.5
BMR Baia Mare 6.40 5⇓iP Pn 16 19 26.0 +0.5
BMR Baia Mare 6.40 5 P Pn 16 19 26.0 +0.5
NPS Neapolis 6.44 158 eP Pn 16 19 29.6 +3.5
NPS Neapolis 6.44 158 ePn Pn 16 19 29.6 +3.5
NPS Neapolis 6.44 158 ePN Pn 16 19 29.6 +3.5
ESKT Eskisehir 6.47 103 ePN Pn 16 19 26.5 -0.1
SEYT Eskypehyr 6.47 103 i P Pn 16 19 26.9 +0.4
SEYT Eskypehyr 6.47 103 i P Pn 16 19 26.9 +0.4
SIVA Sivas 6.48 164 ePn Pn 16 19 30.9 +4.3
SIVA Sivas 6.48 164 ePn Pn 16 19 30.9 +4.3
MDUB Mudurnu 6.49 94 ePN Pn 16 19 25.9 -0.9
LAST Lasithi 6.50 159 P Pn 16 19 27.7 +0.7
LAST Lasithi 6.50 159 ePn Pn 16 19 28.9 +1.9
LAST Lasithi 6.50 159 ePN Pn 16 19 28.9 +1.9
LAST Lasithi 6.50 159 P Pn 16 19 27.7 +0.7
LAST Lasithi 6.50 159 ePn Pn 16 19 28.9 +1.9
GVD Gavdhos 6.54 170 ePn Pn 16 19 30.3 +2.9
GVD Gavdhos 6.54 170 ePN Pn 16 19 30.3 +2.9
GVD Gavdhos 6.54 170 ePn Pn 16 19 30.3 +2.9
LEOM Leova 6.54 36 ⇓P Pn 16 19 28.0 +0.6
LEOM Leova 6.54 36⇓iP Pn 16 19 28.0 +0.6
LEOM Leova 6.54 36 P Pn 16 19 28.0 +0.6
BURAR Bucovina Array 6.57 15⇓iP Pn 16 19 27.9 0.0
BURAR Bucovina Array 6.57 15⇓iP Pn 16 19 27.9 0.0
KDZE Karadeniz Ereo 6.58 87 ePN Pn 16 19 27.6 -0.4
BUR08 Bucovina Ar. S 6.59 15 ePN Pn 16 19 28.4 +0.2
BUR08 Bucovina Ar. S 6.59 15 ePn Pn 16 19 28.4 +0.2
ARG Arkhangelos 6.61 138 eP Pn 16 19 29.7 +1.4
ARG Arkhangelos 6.61 138 ePn Pn 16 19 29.7 +1.4
ARG Arkhangelos 6.61 138 ePN Pn 16 19 29.7 +1.4
ARG Arkhangelos 6.61 138 ePn Pn 16 19 29.7 +1.4
NVLJ Novalja 6.61 302 ePn Pn 16 19 28.5 +0.1
NVLJ Sn Sn 16 20 42.6 -0.9
NVLJ Novalja 6.61 302 ePn Pn 16 19 28.4 +0.1
NVLJ Sn Sn 16 20 42.6 -0.9
SHUT Suhut-Afyon 6.62 112 ePN Pn 16 19 28.7 0.0
GOLH Golhisar 6.69 125 i P Pn 16 19 32.4 +2.8
GOLH Golhisar 6.69 125 i P Pn 16 19 32.4 +2.8
GLHS Glhisar (BURDU 6.70 126 ePN Pn 16 19 29.9 +0.1
BEHE Becsehely 6.71 322⇑ePn Pn 16 19 30.5 +0.7
BEHE eSn Sn 16 20 45.8 -0.3
KARP Karpathos 6.72 147 ePn Pn 16 19 30.8 +0.9
KARP Karpathos 6.72 147 ePN Pn 16 19 30.8 +0.9
KARP Karpathos 6.72 147 ePn Pn 16 19 30.8 +0.9
BUD Budapest 6.72 338⇑ePn Pn 16 19 29.6 -0.3
BUD eSn Sn 16 20 47.0 +0.7
ZKR Zakros 6.76 155 ePN Pn 16 19 32.2 +1.7
FETY Fethiye 6.81 131 ePN Pn 16 19 31.3 +0.1
PKSG 6.83 335⇑ePn Pn 16 19 30.9 -0.5
PKSG eSn Sn 16 20 51.7 +2.7
BOLV Bolvadin 6.83 109 i P Pn 16 19 34.2 +2.6
BOLV Bolvadin 6.83 109 i P Pn 16 19 34.2 +2.6
TRPA Tarpa 6.84 359⇑iP Pn 16 19 30.5 -0.9
TRPA Tarpa 6.84 359⇑ePn Pn 16 19 30.7 -0.7
TRPA Tarpa 6.84 359⇑iP Pn 16 19 30.5 -0.9
PKST T"s 6.84 332⇑ePn Pn 16 19 31.4 -0.1
PKST eSn Sn 16 20 50.9 +1.7
BOJS Bojanci 6.87 310 i Pn Pn 16 19 32.7 +0.9
BOJS i Sn Sn 16 20 47.0 -2.8
BOJS Bojanci 6.87 310 Pn Pn 16 19 32.7 +0.9
PSZ Piszkesteto 6.92 344 eP Pn 16 19 30.8 -1.9
PSZ Piszkesteto 6.92 344 ePn Pn 16 19 30.8 -1.9
PSZ Piszkesteto 6.92 344⇑iP Pn 16 19 30.7 -1.9
PSZ Piszkesteto 6.92 344⇓ePn Pn 16 19 31.1 -1.6
PSZ Piszkesteto 6.92 344 eP Pn 16 19 30.8 -1.9
ISP Isparta 6.96 117 ePN Pn 16 19 36.9 +3.6
ISP Isparta 6.96 117 ⇑P Pn 16 19 34.3 +0.9
ISP Isparta 6.96 117 P Pn 16 19 34.2 +0.9
ISP Isparta 6.96 117 ePn Pn 16 19 33.6 +0.3
ISP Isparta 6.96 117⇑iP Pn 16 19 34.3 +0.9
ISP Isparta 6.96 117 ePn Pn 16 19 33.6 +0.3
ISP Isparta 6.96 117 P Pn 16 19 34.2 +0.9
GOLS Golise 6.97 315 ePn Pn 16 19 33.5 +0.2
GOLS Golise 6.97 315 ePn Pn 16 19 33.5 +0.2
SVRH Sivrihisar-ESK 6.98 102 ePN Pn 16 19 33.0 -0.6
AQU L'Aquila 7.03 282 ePn Pn 16 19 33.7 -0.5
AQU L'Aquila 7.03 282⇓iP Pn 16 19 34.1 -0.1
AQU L'Aquila 7.03 282 eP Pn 16 19 33.7 -0.5
SGKT Sivrigoynuk 7.12 93 i P Pn 16 19 28.3 -7.3
KIS Kishinev 7.20 36⇓iP Pn 16 19 38.0 +1.6
KIS eS Sn 16 21 02.0 +4.0
KIS pmax pmax
comp=N,600nm,2.0s
KIS pmax pmax
comp=E,400nm,2.0s
KIS pmax pmax
comp=Z,500nm,2.0s
KIS pmax pmax
comp=N,600nm,2.0s
KIS pmax pmax
comp=E,400nm,2.0s
KIS pmax pmax
comp=Z,400nm,2.0s
KIS MLR MLR
comp=E,22µm,10.0s
KIS MLR MLR
comp=Z,25µm,10.0s
KIS MLR MLR
comp=N,17µm,12.0s
KIS MLR MLR
comp=Z,38µm,12.0s
KIS Kishinev 7.20 36⇓iP Pn 16 19 38.0 +1.6
comp=Z,500nm,2.0s
KIS eS Sn 16 21 02.0 +4.0
KIS i Li 16 21 12.0
KIS i LQ LQ 16 21 48.0
KIS i LR LR 16 22 14.0
comp=Z,17µm,12.0s
KIS Kishinev 7.20 36 e PcP 16 26 23.0 -0.2
KIS Kishinev 7.20 36 i P Pn 16 19 38.0 +1.6
ELL Elmali 7.21 127 ePN Pn 16 19 36.4 -0.5
KORT Korkueli 7.33 123 i P Pn 16 19 41.2 +2.9
KORT Korkueli 7.33 123 i P Pn 16 19 41.2 +2.9
GROS Grobnik 7.33 317 i Pn Pn 16 19 38.0 -0.3
GROS eSn Sn 16 20 56.9 -4.4
GROS Grobnik 7.33 317 i Pn Pn 16 19 38.0 -0.3
PDKS Podkum 7.34 313 i Pn Pn 16 19 39.0 +0.6
PDKS Podkum 7.34 313 i Pn Pn 16 19 39.0 +0.6
UZH Uzhgorod 7.34 358 eP Pn 16 19 37.7 -0.7
UZH eS Sn 16 21 00.7 -0.8
UZH MLR MLR
comp=N,18µm,5.0s
UZH MLR MLR
comp=E,14µm,5.0s
UZH MLR MLR
comp=Z,13µm,5.0s
UZH Uzhgorod 7.34 358 eP Pn 16 19 37.7 -0.7
UZH eS Sn 16 21 00.7 -0.8
AKAS Kas 7.39 131 i P Pn 16 19 42.9 +3.6
KIZT Kizilcal 7.44 106 ePN Pn 16 19 39.7 -0.1
SAFT Safranbolu 7.52 87 ePN Pn 16 19 40.0 -0.9
LJU Ljubljana 7.59 311 i Pn Pn 16 19 43.0 +1.2
LJU Ljubljana 7.59 311 i Pn Pn 16 19 43.0 +1.2
SKDS Skadanscina 7.62 307 i Pn Pn 16 19 42.7 +0.5
SKDS i Sn Sn 16 21 03.5 -4.9
SKDS Skadanscina 7.62 307 i Pn Pn 16 19 42.7 +0.5
KOLS Kolonicke sedl 7.64 358 eP Pn 16 19 42.9 +0.3
KOLS e 16 21 00.7
KOLS MLR MLR
comp=Z,6µm,2.2s
KOLS Kolonicke sedl 7.64 358 ePN Pn 16 19 42.8 +0.2
KOLS ePG Pg 16 20 20.6 +2.8
KOLS eSN Sn 16 21 00.7 -8.3
KOLS eSG Sg 16 21 56.6 -0.1
KOLS Kolonicke sedl 7.64 358 eP Pn 16 19 42.9 +0.3
KOLS eSg Sg 16 21 56.6 -0.1
CRVS Cervenica-Dubn 7.66 354 eP Pn 16 19 40.9 -1.8
CRVS e 16 21 06.0
CRVS MLR MLR
comp=Z,2µm,1.8s
CRVS Cervenica-Dubn 7.66 354 ePN Pn 16 19 40.9 -1.8
CRVS ePG Pg 16 20 24.6 +6.5
CRVS eSN Sn 16 21 06.0 -3.3
CRVS eSG Sg 16 22 01.4 +4.3
CRVS Cervenica-Dubn 7.66 354 eP Pn 16 19 40.9 -1.8
VYHS Vyhne 7.70 340 eP Pn 16 19 42.6 -0.8
VYHS MLR MLR
comp=Z,1µm,2.6s
VYHS Vyhne 7.70 340 ePN Pn 16 19 42.6 -0.8
VYHS Vyhne 7.70 340 eSG Sg 16 22 05.1 +6.5
VYHS Vyhne 7.70 340 eP Pn 16 19 42.6 -0.8
comp=Z,1µm,2.6s
SOKA Soboth 7.71 317⇓iPn Pn 16 19 43.7 +0.1
SOKA Soboth 7.71 317 Pn Pn 16 19 43.7 +0.1
KDHN Kadinhani 7.75 108 i P Pn 16 19 45.9 +1.8
KDHN Kadinhani 7.75 108 i P Pn 16 19 45.9 +1.8
SOP Sopron 7.75 328⇓ePn Pn 16 19 44.4 +0.4
SOP eSKKPdf Sn 16 21 08.6 -2.9
JAVS Javornik 7.77 309 i Pn Pn 16 19 45.7 +1.3
JAVS i Sn Sn 16 21 11.3 -1.0
JAVS Javornik 7.77 309 i Pn Pn 16 19 45.7 +1.3
JAVS i Sn Sn 16 21 11.3 -1.0
ANTO Ankara 7.81 97 ePn Pn 16 19 44.8 -0.2
ANTO Ankara 7.81 97 eP Pn 16 19 45.3 +0.4
ANTO Ankara 7.81 97 ePn Pn 16 19 45.3 +0.4
ANTO Ankara 7.81 97 P Pn 16 19 46.3 +1.3
SNR=8.4
ANTO Ankara 7.81 97 eP Pn 16 19 45.3 +0.4
OBKA Obir 7.86 314⇑iPn Pn 16 19 46.0 +0.4
SNR=73
OBKA Obir 7.86 314 Pn Pn 16 19 46.0 +0.4
SNR=73
ARSA Arzberg 7.87 322 i Pn Pn 16 19 46.3 +0.6
SNR=351
ARSA Arzberg 7.87 322 Pn Pn 16 19 46.3 +0.6
SNR=351
VOY Vojsko 7.95 310 ePn Pn 16 19 47.7 +0.9
VOY Vojsko 7.95 310 ePn Pn 16 19 47.7 +0.9
ZST Bratislava 7.97 332 eP Pn 16 19 46.1 -0.9
ZST e 16 21 11.6
ZST MLR MLR
comp=Z,4µm,2.9s
ZST Bratislava 7.97 332 ePN Pn 16 19 46.0 -0.9
ZST eSN Sn 16 21 11.6 -5.3
ZST eSG Sg 16 22 15.9 +8.9
ZST Bratislava 7.97 332 eP Pn 16 19 46.1 -0.9
LADK Ladik-KONYA 8.06 109 ePN Pn 16 19 47.4 -1.0
SMOL Smolenice 8.13 334 eP Pn 16 19 49.1 -0.1
SMOL e 16 21 12.2
SMOL Smolenice 8.13 334 ePN Pn 16 19 49.1 -0.1
SMOL eSN Sn 16 21 12.2 -8.7
SMOL eSG Sg 16 22 24.2 +12
SMOL Smolenice 8.13 334 eP Pn 16 19 49.1 -0.1
CONA Conrad Observa 8.23 326 i Pn Pn 16 19 50.8 +0.1
SNR=186
CONA Conrad Observa 8.23 326 Pn Pn 16 19 50.8 +0.1
SNR=186
CANT Cankiri 8.29 91 ePN Pn 16 19 50.5 -1.0
NIE Niedzica 8.30 349 eP Pn 16 19 52.2 +0.7
NIE Niedzica 8.30 349 eP Pn 16 19 52.2 +0.7
NIE e 16 19 55.8
NIE ePP PnPn 16 19 59.1 0.0
NIE eSS Sb 16 21 43.1 -11
NIE Niedzica 8.30 349 eP Pn 16 19 52.2 +0.7
ILGA Ilgaz 8.31 88 i P Pn 16 19 55.8 +3.9
KWP Kalwaria Pacla 8.34 0 eP Pn 16 19 54.4 +2.3
KWP e 16 19 57.8
WDD Wield Dalam 8.39 232 eP Pn 16 19 51.4 -1.4
comp=Z,305nm,0.9s
WDD Wield Dalam 8.39 232 eP Pn 16 19 51.4 -1.4
comp=Z,305nm,0.9s
MYKA Terra Mystica 8.43 312⇓iPn Pn 16 19 54.0 +0.6
MYKA Terra Mystica 8.43 312 Pn Pn 16 19 54.0 +0.6
BR131 Keskin Array S 8.48 97 eP Pn 16 19 54.0 -0.2
comp=Z,31nm,0.8s
BR131 Keskin Array S 8.48 97 eP Pn 16 19 54.0 -0.2
comp=Z,31nm,0.8s
BRTR Keskin Array B 8.48 97 Pn Pn 16 19 54.4 +0.2
BRTR Sn Sn 16 21 26.4 -3.3
BRTR Keskin Array B 8.48 97 Pn Pn 16 19 54.4 +0.2
comp=Z,0.8nm,0.3s,baz=278,slow=11,SNR=29
BRTR Sn Sn 16 21 26.4 -3.3
comp=Z,1.4nm,0.3s,baz=346,slow=9.8,SNR=5.3
BRTR Keskin Array B 8.48 97 eP Pn 16 19 54.4 +0.2
comp=Z,11nm,0.8s
TOS Tosya 8.54 88 ePN Pn 16 19 53.9 -1.1
LVV L'vov 8.57 6 eP Pn 16 19 57.0 +1.7
LVV eS Sn 16 21 35.0 +3.2
LVV MLR MLR
comp=Z,7µm,8.0s
LVV L'vov 8.57 6 eP Pn 16 19 57.0 +1.7
comp=Z,7µm,8.0s
SEV Sevastopol' 8.68 64 eP Pn 16 19 57.4 +0.7
SEV eS Sn 16 21 33.7 -0.6
SEV Sevastopol' 8.68 64 eP Pn 16 19 57.4 +0.7
SEV eS Sn 16 21 33.7 -0.6
KBA Koelnbreinsper 8.86 314 i Pn Pn 16 20 00.4 +1.0
SNR=85
KBA Koelnbreinsper 8.86 314 Pn Pn 16 20 00.4 +1.0
SNR=85
SULT Sultanhani-AKS 8.88 107 ePN Pn 16 19 58.7 -1.0
MOA Molln 8.89 320⇓iPn Pn 16 20 00.1 +0.4
SNR=92
MOA Molln 8.89 320 Pn Pn 16 20 00.1 +0.4
SNR=92
YAL Yalta 8.99 65 eP Pn 16 20 01.5 +0.5
YAL eS Sn 16 21 38.5 -3.5
YAL Yalta 8.99 65 eP Pn 16 20 01.5 +0.5
BYBT Boyabat 9.07 85 ePN Pn 16 20 01.5 -0.6
VRAC Vranov 9.09 334 Pn Pn 16 20 02.4 -0.1
VRAC Sn Sn 16 21 46.8 +2.2
VRAC Vranov 9.09 334⇓iP Pn 16 20 02.2 -0.2
VRAC Vranov 9.09 334 Pn Pn 16 20 02.4 -0.1
comp=Z,1.4nm,0.3s,baz=142,slow=12,SNR=50
VRAC Sn Sn 16 21 46.8 +2.2
comp=Z,2.2nm,0.3s,baz=47,slow=5.8,SNR=5.2
VRAC Vranov 9.09 334 ePn Pn 16 20 02.3 -0.1
VRAC eSn Sn 16 21 46.6 +2.0
SIM Simferopol' 9.11 63 eP Pn 16 20 03.5 +0.9
SIM eS Sn 16 21 45.2 +0.2
SIM Simferopol' 9.11 63 eP Pn 16 20 03.5 +0.9
SIM eS Sn 16 21 45.2 +0.2
OKC Ostrava-Krasne 9.12 341 eP Pn 16 20 02.1 -0.6
OKC MLR MLR
comp=Z,17µm,12.8s
OKC Ostrava-Krasne 9.12 341 ePN Pn 16 20 02.1 -0.6
OKC AMS AMS 16 24 20.0
comp=Z,17µm,12.8s
OKC Ostrava-Krasne 9.12 341 Pn Pn 16 20 02.1 -0.6
CORM Corum 9.12 93 ePN Pn 16 20 01.5 -1.5
ABTA Abfaltersbach 9.14 310⇓iPn Pn 16 20 03.5 +0.3
SNR=75
ABTA Abfaltersbach 9.14 310 Pn Pn 16 20 03.5 +0.3
SNR=75
OJC Ojcow 9.15 348 eP Pn 16 20 03.1 -0.1
OJC Ojcow 9.15 348 ePn Pn 16 20 03.1 -0.1
OJC Ojcow 9.15 348 eP Pn 16 20 03.6 +0.4
OJC e 16 20 09.2
OJC ePP PnPn 16 20 13.8 +3.0
OJC eSS Sn 16 22 04.3 +18
OJC Ojcow 9.15 348 eP Pn 16 20 03.1 -0.1
ALU Alushta 9.22 65 eP Pn 16 20 04.0 -0.1
ALU eS Sn 16 21 44.0 -3.6
ALU Alushta 9.22 65 eP Pn 16 20 04.0 -0.1
MORC Moravsky Berou 9.22 339 ⇑P Pn 16 20 02.7 -1.5
MORC Moravsky Berou 9.22 339 eP Pn 16 20 02.1 -2.1
MORC Moravsky Berou 9.22 339⇑iP Pn 16 20 02.7 -1.5
MORC Moravsky Berou 9.22 339 P Pn 16 20 02.7 -1.5
LTBQ Tobruq 9.27 174 i P Pn 16 20 00.3 -4.6
comp=Z,170nm,2.0s,SNR=22
LTBQ eS Sn 16 21 39.7 -9.4
SNR=22
RAC Raciborz 9.34 342 eP Pn 16 20 06.1 +0.4
RAC MLR MLR
comp=Z,15µm,10.0s
RAC Raciborz 9.34 342 eP Pn 16 20 06.1 +0.4
comp=Z,15µm,10.0s
DIKM Dikmen 9.43 84 ePN Pn 16 20 05.7 -1.4
TREC Trest 9.47 330 eP Pn 16 20 07.6 0.0
TREC e 16 21 50.2
TREC MLR MLR
comp=Z,9µm,10.0s
TREC Trest 9.47 330 ePN Pn 16 20 07.6 0.0
TREC eSN Sn 16 21 50.2 -3.7
TREC AMS AMS 16 24 00.0
comp=Z,9µm,10.0s
TREC Trest 9.47 330 Pn Pn 16 20 07.6 0.0
RJOB Jochberg 9.56 316 eP Pn 16 20 09.6 +0.7
SUDU Sudak 9.69 64 eP Pn 16 20 10.3 -0.2
SUDU eS Sn 16 21 54.0 -5.1
SUDU Sudak 9.69 64 eP Pn 16 20 10.3 -0.2
KRLC Kraliky 9.71 337 eP Pn 16 20 10.8 0.0
KRLC Kraliky 9.71 337 ePN Pn 16 20 10.8 0.0
KRLC Kraliky 9.71 337 Pn Pn 16 20 10.8 0.0
NIG Nigde 9.71 105 ePN Pn 16 20 07.7 -3.5
GEC2 GERESS Array S 9.87 323 eP Pn 16 20 14.6 +1.5
GEC2 GERESS Array S 9.87 323 eP Pn 16 20 14.6 +1.5
GEC2 GERESS Array S 9.87 323 eP Pn 16 20 14.6 +1.5
GERES GERESS Array B 9.87 323 Pn Pn 16 20 14.3 +1.2
GERES GERESS Array B 9.87 323 Pn Pn 16 20 14.3 +1.2
comp=Z,5.6nm,0.3s,baz=153,slow=7.9,SNR=139
GERES GERESS Array B 9.87 323 P Pn 16 20 14.3 +1.2
WTTA Wattenberg 9.92 311⇓iPn Pn 16 20 15.3 +1.3
SNR=97
WTTA Wattenberg 9.92 311 Pn Pn 16 20 15.3 +1.3
SNR=97
FEO Feodosiya 9.99 64 eP Pn 16 20 14.9 +0.2
FEO eS Sn 16 22 01.3 -5.2
FEO Feodosiya 9.99 64 eP Pn 16 20 14.9 +0.2
WATA Walderalm 10.00 311⇓iPn Pn 16 20 15.6 +0.7
SNR=100
WATA Walderalm 10.00 311 Pn Pn 16 20 15.6 +0.7
SNR=100
KHC Kasperske Hory 10.13 324 eP Pn 16 20 16.8 +0.1
KHC MLR MLR
comp=Z,14µm,9.2s
KHC Kasperske Hory 10.13 324 ePN Pn 16 20 16.8 +0.1

KHC ex x 16 22 24.0
KHC AMS AMS 16 24 30.0
comp=Z,14µm,9.2s
KHC Kasperske Hory 10.13 324 Pn **Pn 16 20 16.8 +0.1**
MOTA Moosalm 10.27 310 ⇑ *i* Pn **Pn 16 20 19.5 +0.8**
SNR=127
MOTA Moosalm 10.27 310 Pn **Pn 16 20 19.5 +0.8**
SNR=127
PGF Pioggiola 10.29 282 *e*P **Pn 16 20 18.6 -0.3**
comp=Z,267nm,1.2s
PGF Pioggiola 10.29 282 *e*P **Pn 16 20 18.6 -0.3**
PGF pmax pmax
comp=Z,267nm,1.2s
PGF Pioggiola 10.29 282 *e*P **Pn 16 20 18.6 -0.3**
comp=Z,267nm,1.2s
PGF Pioggiola 10.29 282 *e*P **Pn 16 20 18.6 -0.3**
comp=Z,134nm,1.2s
UPC Upice 10.32 335 *e*P **Pn 16 20 19.0 -0.2**
UPC Upice 10.32 335 *e*PN **Pn 16 20 19.0 -0.2**
UPC Upice 10.32 335 Pn **Pn 16 20 19.0 -0.2**
FETA Feichten 10.33 308 *i* Pn **Pn 16 20 20.5 +1.0**
SNR=46
FETA Feichten 10.33 308 Pn **Pn 16 20 20.5 +1.0**
SNR=46
AK02 Malin Array Si 10.39 24 *e*Pn **Pn 16 20 19.9 -0.3**
AK02 Malin Array Si 10.39 24 *e*Pn **Pn 16 20 19.9 -0.3**
PRU Pruhonice 10.40 329 *e*P **Pn 16 20 19.4 -0.8**
PRU *e* 16 22 11.8
PRU MLR MLR
comp=Z,10µm,9.6s
PRU Pruhonice 10.40 329 *e*PN **Pn 16 20 19.4 -0.8**
PRU *e*SN **Sn 16 22 11.8 -4.7**
PRU AMS AMS 16 24 30.0
comp=Z,10µm,9.6s
PRU Pruhonice 10.40 329 Pn **Pn 16 20 19.4 -0.8**
AK01 Malin Array Si 10.43 23 *e*Pn **Pn 16 20 20.0 -0.6**
AK01 Malin Array Be 10.43 23 *e*Pn **Pn 16 20 20.0 -0.6**
AKASG Malin Array Be 10.44 23 *c i*P **Pn 16 20 19.7 -1.1**
AKASG pmax pmax
comp=Z,10.0nm,0.6s
AKASG Malin Array Be 10.44 23 Pn **Pn 16 20 19.7 -1.1**
AKASG Malin Array Be 10.44 23 Pn **Pn 16 20 19.7 -1.1**
comp=Z,3.1nm,0.3s,baz=208,slow=13,SNR=17
AKASG LR LR 16 24 24.3
comp=Z,3µm,20.1s,baz=200,slow=38
AKASG Malin Array Be 10.44 23 *i*P **Pn 16 20 19.7 -1.1**
comp=Z,10.0nm,0.6s
WET Wettzell 10.46 322 *e*P **Pn 16 20 21.6 +0.4**
WET Wettzell 10.46 322 *e*P **Pn 16 20 21.6 +0.4**
WET Wettzell 10.46 322 *e*P **Pn 16 20 21.6 +0.4**
CSS Prodhromos 10.48 124 *e*P **Pn 16 20 20.5 -1.0**
KSP Ksiaz 10.53 337 *e*P **Pn 16 20 23.3 +1.2**
KSP *e*S Sn 16 22 30.3 +10
KSP Ksiaz 10.53 337 *e*P **Pn 16 20 23.2 +1.2**
KSP *e* 16 20 26.8
KSP *e*S Sn 16 22 32.2 +12
KSP Ksiaz 10.53 337 *e*P **Pn 16 20 23.3 +1.2**
RETA Reutte 10.54 310 *i* Pn **Pn 16 20 23.4 +1.0**
SNR=28
RETA Reutte 10.54 310 Pn **Pn 16 20 23.4 +1.0**
SNR=28
BEL Belsk 10.63 354 *e*P **Pn 16 20 26.0 +2.6**
BEL *e*S Sn 16 22 34.9 +13
DAVOX Davos/Dischmat 10.73 305 Pn **Pn 16 20 25.6 +0.5**
DAVOX Sn **Sn 16 22 22.8 -2.3**
DAVOX Davos/Dischmat 10.73 305 Pn **Pn 16 20 25.5 +0.5**
comp=Z,11nm,0.3s,baz=145,slow=17,SNR=54
DAVOX Sn **Sn 16 22 22.8 -2.3**
comp=Z,0.1nm,0.3s,baz=288,slow=19,SNR=2.3
DAVOX LR LR 16 24 42.1
comp=Z,8µm,18.3s,baz=113,slow=38
DAVOX Davos/Dischmat 10.73 305 Pn **Pn 16 20 25.5 +0.5**
DAVOX S **Sn 16 22 22.8 -2.3**
KERU Kerch 10.80 64 ‖ *e*P **Pn 16 20 25.0 -0.7**
KERU *e*S **Sn 16 22 28.0 +1.6**
KERU Kerch 10.80 64 *e*P **Pn 16 20 25.0 -0.7**
KERU *e*S **Sn 16 22 28.0 +1.6**
PVCC Panska Ves 10.83 331 *e*P **Pn 16 20 25.0 -1.1**
PVCC MLR MLR
comp=Z,8µm,10.0s
PVCC Panska Ves 10.83 331 *e*PN **Pn 16 20 25.0 -1.1**
PVCC AMS AMS 16 24 40.0
comp=Z,8µm,10.0s
PVCC Panska Ves 10.83 331 Pn **Pn 16 20 25.0 -1.1**
DAVA Damuels 10.96 307 *i* Pn **Pn 16 20 28.7 +0.5**
SNR=24
DAVA Damuels 10.96 307 Pn **Pn 16 20 28.7 +0.5**
SNR=24
ROTZ Rotzenmuhle 11.21 323 *e*P **Pn 16 20 31.1 -0.3**
ANN Anapa 11.33 67 *e*P **Pn 16 20 32.2 -0.9**
ANN *e*S **Sn 16 22 41.1 +1.6**
ANN pmax pmax
comp=Z,54nm,1.7s
ANN Anapa 11.33 67 *e*P **Pn 16 20 32.2 -0.9**
comp=Z,54nm,1.7s
ANN *e*S **Sn 16 22 41.1 +1.6**
BRG Berggiesshubel 11.34 331 *i*P **Pn 16 20 33.5 +0.4**
comp=Z,35nm,1.6s
BRG S **Sn 16 22 40.0 +0.4**
BRG
comp=N,5µm,9.6s
BRG
comp=E,10µm,9.1s
BRG
comp=Z,9µm,10.5s
BRG Berggiesshubel 11.34 331 *e*P **Pn 16 20 32.5 -0.6**
BRG Berggiesshubel 11.34 331 *i*P **Pn 16 20 33.5 +0.4**
BRG S **Sn 16 22 40.0 +0.4**
BRG pmax pmax
comp=Z,35nm,1.6s
BRG MLR MLR
comp=N,5µm,9.6s
BRG MLR MLR
comp=E,10µm,9.1s
BRG MLR MLR
comp=Z,9µm,10.5s
BRG Berggiesshubel 11.34 331 *i*P **Pn 16 20 33.5 +0.4**
comp=Z,35nm,1.6s
BRG S **Sn 16 22 40.0 +0.4**
comp=Z,9µm,10.5s
NKC Novy Kostel 11.44 325 *e*P **Pn 16 20 34.2 -0.4**
NKC MLR MLR
comp=Z,12µm,9.4s
NKC Novy Kostel 11.44 325 *e*PN **Pn 16 20 34.2 -0.4**
NKC AMS AMS 16 25 20.0
comp=Z,12µm,9.4s
NKC Novy Kostel 11.44 325 Pn **Pn 16 20 34.2 -0.4**
SAOF Saorge 11.48 289 *e*P **Pn 16 20 34.1 -1.0**
SAOF Saorge 11.48 289 *e*P **Pn 16 20 34.1 -1.0**
SAOF Saorge 11.48 289 *e*P **Pn 16 20 34.1 -1.0**
SAOF Saorge 11.48 289 *e*P **Pn 16 20 34.1 -1.0**
SBF Sospel 11.55 288 *e*P **Pn 16 20 34.8 -1.3**
comp=Z,76nm,0.7s
SBF Sospel 11.55 288 *e*P **Pn 16 20 34.8 -1.3**
SBF pmax pmax
comp=Z,76nm,0.7s
SBF Sospel 11.55 288 *e*P **Pn 16 20 34.8 -1.3**
comp=Z,76nm,0.7s
SBF Sospel 11.55 288 *e*P **Pn 16 20 34.8 -1.3**
comp=Z,38nm,0.7s
AUTN L'Aution 11.57 289 *e*P **Pn 16 20 35.2 -1.4**
AUTN L'Aution 11.57 289 *e*P **Pn 16 20 35.2 -1.4**
AUTN L'Aution 11.57 289 *e*P **Pn 16 20 35.2 -1.4**
AUTN L'Aution 11.57 289 *e*P **Pn 16 20 35.2 -1.4**
TANN Tannenbergstha 11.57 325 *e*P **Pn 16 20 36.3 -0.1**
GRA1 Grafenberg Arr 11.62 320 *e*P **Pn 16 20 37.9 +0.8**
GRF Grafenberg Arr 11.62 320 *e*P **Pn 16 20 37.9 +0.8**
GRF Grafenberg Arr 11.62 320 *e*P **Pn 16 20 37.9 +0.8**
GRFO Grafenberg 11.62 320 *e*P **Pn 16 20 36.9 -0.2**
GRFO pmax pmax
comp=Z,45nm,0.8s
GRFO Grafenberg 11.62 320 *e*Pn **Pn 16 20 36.9 -0.2**
comp=Z,44nm,0.8s
GRFO Grafenberg 11.62 320 *e*P **Pn 16 20 36.9 -0.2**
comp=Z,45nm,0.8s
TOUF Mont Tournerai 11.70 289 *e*P **Pn 16 20 39.3 +1.0**
TOUF Mont Tournerai 11.70 289 *e*P **Pn 16 20 39.3 +1.0**
TOUF Mont Tournerai 11.70 289 *e*P **Pn 16 20 39.3 +1.0**
TOUF Mont Tournerai 11.70 289 *e*P **Pn 16 20 39.3 +1.0**
MVIF Mont Vial 11.75 288 *e*P **Pn 16 20 39.7 +0.7**
MVIF Mont Vial 11.75 288 *e*P **Pn 16 20 39.7 +0.7**
MVIF Mont Vial 11.75 288 *e*P **Pn 16 20 39.7 +0.7**
MVIF Mont Vial 11.75 288 *e*P **Pn 16 20 39.7 +0.7**
KEST Kesra 11.84 246 Pn **Pn 16 20 41.6 +1.4**
comp=Z,0.5nm,0.3s,baz=45,slow=6.8,SNR=34
KEST Kesra 11.84 246 Pn **Pn 16 20 41.6 +1.4**
CALN Calern 11.93 287 *e*P **Pn 16 20 41.0 -0.3**
CALN Calern 11.93 287 *e*P **Pn 16 20 41.0 -0.3**
CALN Calern 11.93 287 *e*P **Pn 16 20 41.0 -0.3**
CALN Calern 11.93 287 *e*P **Pn 16 20 41.0 -0.3**
GHAR Gharyan 11.96 223 *i*P **Pn 16 20 39.0 -2.8**
comp=Z,63nm,0.8s,SNR=22
SPAK Spaichingen-Ko 12.01 309 *e*P **Pn 16 20 41.9 -0.5**
SPAK Spaichingen-Ko 12.01 309 *e*P **Pn 16 20 41.9 -0.5**
CLL Collm 12.04 330 *e*P **Pn 16 20 42.4 -0.3**
CLL Collm 12.04 330 *i*P **Pn 16 20 42.7 0.0**
CLL pmax pmax
comp=Z,31nm,1.3s
CLL Collm 12.04 330 *i*P **Pn 16 20 42.7 0.0**
comp=Z,31nm,1.3s
CLL *i* 16 20 46.6
CLL *e* 16 21 22.0
CLL *e* 16 22 31.0
CLL *e*SS Sn 16 23 13.0 +16
CLL *e* 16 23 46.0
CLL Lmax 16 25 00.0
CLL Collm 12.04 330 *i*P **Pn 16 20 42.7 0.0**
comp=Z,31nm,1.3s
FRF La Foret Royal 12.08 286 *e*P **Pn 16 20 41.2 -2.1**
comp=Z,95nm,1.0s
FRF La Foret Royal 12.08 286 *e*P **Pn 16 20 41.2 -2.1**
FRF pmax pmax
comp=Z,95nm,1.0s
FRF La Foret Royal 12.08 286 *e*P **Pn 16 20 41.2 -2.1**
comp=Z,95nm,1.0s
FRF La Foret Royal 12.08 286 *e*P **Pn 16 20 41.2 -2.1**
comp=Z,48nm,1.0s
MOX Moxa 12.11 324 *e*P **Pn 16 20 43.3 -0.4**
MOX Moxa 12.11 324 *e*P **Pn 16 20 43.3 -0.4**
MOX Moxa 12.11 324 *e*P **Pn 16 20 43.3 -0.4**
STU Stuttgart 12.12 313 *e*P **Pn 16 20 44.3 +0.5**
MBDF Montbardon 12.16 292 *e*P **Pn 16 20 42.9 -1.6**
comp=Z,90nm,0.7s
MBDF Montbardon 12.16 292 *e*P **Pn 16 20 42.9 -1.6**
MBDF pmax pmax
comp=Z,91nm,0.7s
MBDF Montbardon 12.16 292 *e*P **Pn 16 20 42.9 -1.6**
comp=Z,90nm,0.7s
MBDF Montbardon 12.16 292 *e*P **Pn 16 20 42.9 -1.6**
comp=Z,45nm,0.7s
LMR La Mourre 12.16 285 *e*P **Pn 16 20 44.0 -0.4**
comp=Z,80nm,1.1s
LMR La Mourre 12.16 285 *e*P **Pn 16 20 44.0 -0.4**
LMR pmax pmax
comp=Z,80nm,1.0s
LMR La Mourre 12.16 285 *e*P **Pn 16 20 44.0 -0.4**
comp=Z,80nm,1.0s
LMR La Mourre 12.16 285 *e*P **Pn 16 20 44.0 -0.4**
comp=Z,40nm,1.1s
ALAS Alassa 12.22 230 *i*P Pn 16 20 41.7 -3.6
SNR=22
LPG La Plagne 12.34 295 *e*P **Pn 16 20 45.9 -1.2**
comp=Z,137nm,0.6s
LPG La Plagne 12.34 295 *e*P **Pn 16 20 45.9 -1.2**
LPG pmax pmax
comp=Z,137nm,0.6s
LPG La Plagne 12.34 295 *e*P **Pn 16 20 45.9 -1.2**
comp=Z,137nm,0.6s
LPG La Plagne 12.34 295 *e*P **Pn 16 20 45.9 -1.2**
comp=Z,68nm,0.6s
LPL La Plagne 12.36 295 *e*P **Pn 16 20 46.7 -0.6**
comp=Z,133nm,0.5s
LPL La Plagne 12.36 295 *e*P **Pn 16 20 46.7 -0.6**
LPL pmax pmax
comp=Z,133nm,0.5s
LPL La Plagne 12.36 295 *e*P **Pn 16 20 46.7 -0.6**
comp=Z,133nm,0.5s
LPL La Plagne 12.36 295 *e*P **Pn 16 20 46.7 -0.6**
comp=Z,66nm,0.5s
FELD Feldberg im Sc 12.36 307 *e*P **Pn 16 20 46.4 -0.9**
FELD Feldberg im Sc 12.36 307 *e*P **Pn 16 20 46.4 -0.9**
FELD Feldberg im Sc 12.36 307 *e*P **Pn 16 20 46.4 -0.9**
BFO Black Forest 12.38 309 *e*P **Pn 16 20 46.5 -1.0**
BFO Black Forest 12.38 309 *e*P **Pn 16 20 46.5 -1.0**
BFO Black Forest 12.38 309 Pn **Pn 16 20 47.7 +0.2**
comp=Z,407nm,0.5s,SNR=38
BFO Black Forest 12.38 309 *e*P **Pn 16 20 46.5 -1.0**
BBS Basel-Blauen 12.49 305 *e*P **Pn 16 20 48.2 -0.7**
BBS Basel-Blauen 12.49 305 *e*P **Pn 16 20 48.2 -0.7**
BBS Basel-Blauen 12.49 305 *e*P **Pn 16 20 48.2 -0.7**
GKP Gorka Klasztor 12.54 345 *e*P **Pn 16 20 50.8 +1.3**
GKP *e*S Sn 16 23 24.9 +16
GKP Gorka Klasztor 12.54 345 *e*P **Pn 16 20 50.9 +1.4**
OG01 Vacheresse 12.61 299 *e*P **Pn 16 20 53.2 +2.5**
OG01 Vacheresse 12.61 299 *e*P **Pn 16 20 53.2 +2.5**
LIBD Limburg 12.73 308 *e*P **Pn 16 20 51.4 -0.7**
LIBD Limburg 12.73 308 *e*P **Pn 16 20 51.4 -0.7**
LIBD Limburg 12.73 308 *e*P **Pn 16 20 51.4 -0.7**
SUW Suwalki 12.73 1 *e*P **Pn 16 20 51.7 -0.3**
SUW *e* 16 20 53.4
SUW *e*S Sn 16 23 20.8 +7.3
SUW Suwalki 12.73 1 *e*P **Pn 16 20 51.8 -0.3**
RUE Ruedersdorf 12.73 335 *e*Pn **Pn 16 20 52.6 +0.5**
comp=Z,52nm,1.1s
RUE Ruedersdorf 12.73 335 *e*Pn **Pn 16 20 52.6 +0.5**
comp=Z,52nm,1.1s
CMAH Djebel Manchou 12.77 254 P **Pn 16 20 53.0 +0.1**
CMAH Djebel Manchou 12.77 254 P **Pn 16 20 53.0 +0.1**
SOC Sochi 12.78 74 *e*P **Pn 16 20 51.9 -0.9**
SOC *e* 16 23 16.0
SOC MLR MLR
comp=Z,2µm,15.0s
SOC Sochi 12.78 74 *e*P **Pn 16 20 51.9 -0.9**
ORIF Oris-en-Rattie 12.81 292 *e*P **Pn 16 20 52.2 -1.2**
comp=Z,96nm,0.9s
ORIF *e*R
comp=Z,3µm,20.0s
ORIF Oris-en-Rattie 12.81 292 *e*P **Pn 16 20 52.2 -1.2**
ORIF pmax pmax
comp=Z,96nm,0.9s
ORIF Oris-en-Rattie 12.81 292 *e*P **Pn 16 20 52.2 -1.2**
comp=Z,96nm,0.9s
ORIF Oris-en-Rattie 12.81 292 *e*P **Pn 16 20 52.2 -1.2**
comp=Z,48nm,0.9s
LOMF Lomont 12.87 303 *e*P **Pn 16 20 53.6 -0.6**
LOMF Lomont 12.87 303 *e*P **Pn 16 20 53.6 -0.6**
LOMF Lomont 12.87 303 *e*P **Pn 16 20 53.6 -0.6**
LOMF Lomont 12.87 303 *e*P **Pn 16 20 53.6 -0.6**
MOF Molkenrain 12.88 306 *e*P **Pn 16 20 53.4 -0.9**
MOF Molkenrain 12.88 306 *e*P **Pn 16 20 53.4 -0.9**
MOF Molkenrain 12.88 306 *e*P **Pn 16 20 53.4 -0.9**
SMRF Simiane la Rot 12.89 288 *e*P **Pn 16 20 53.6 -0.9**
comp=Z,72nm,1.1s
SMRF Simiane la Rot 12.89 288 *e*P **Pn 16 20 53.6 -0.9**
comp=Z,72nm,1.1s
SMRF Simiane la Rot 12.89 288 *e*P **Pn 16 20 53.6 -0.9**
comp=Z,36nm,1.1s
LANF Langenberg 13.01 311 *e*P **Pn 16 20 57.2 +1.2**
LANF Langenberg 13.01 311 *e*P **Pn 16 20 57.2 +1.2**
LANF Langenberg 13.01 311 *e*P **Pn 16 20 57.2 +1.2**
LANF Langenberg 13.01 311 *e*P **Pn 16 20 57.2 +1.2**
ECH Echery 13.02 307 *e*P **Pn 16 20 54.8 -1.4**
ECH pmax pmax
comp=Z,73nm,1.2s
ECH Echery 13.02 307 *e*PN **Pn 16 20 54.8 -1.4**
comp=Z,73nm,1.2s
ECH Echery 13.02 307 *e*P **Pn 16 20 55.1 -1.1**
ECH Echery 13.02 307 *e*PN **Pn 16 20 54.8 -1.4**
comp=Z,73nm,1.2s
ECH Echery 13.02 307 *e*P **Pn 16 20 55.1 -1.1**
HINF Hinteralfeld 13.04 305 *e*P **Pn 16 20 55.1 -1.3**
comp=Z,378nm,1.6s
HINF Hinteralfeld 13.04 305 *e*P **Pn 16 20 55.1 -1.3**
HINF pmax pmax
comp=Z,378nm,1.6s
HINF Hinteralfeld 13.04 305 *e*P **Pn 16 20 55.1 -1.3**
comp=Z,378nm,1.6s
HINF Hinteralfeld 13.04 305 *e*P **Pn 16 20 55.1 -1.3**
comp=Z,189nm,1.6s
CDF Champ du Feu 13.04 308 *e*P **Pn 16 20 55.3 -1.2**
comp=Z,305nm,1.3s
CDF Champ du Feu 13.04 308 *e*P **Pn 16 20 55.3 -1.2**
CDF pmax pmax
comp=Z,305nm,1.3s
CDF Champ du Feu 13.04 308 *e*P **Pn 16 20 55.3 -1.2**
comp=Z,305nm,1.3s
CDF Champ du Feu 13.04 308 *e*P **Pn 16 20 55.3 -1.2**
comp=Z,153nm,1.3s
MMAI Mount Meron Ar 13.06 125 Pn **Pn 16 20 58.2 +1.4**
MMAI Mount Meron Ar 13.06 125 Pn **Pn 16 20 58.2 +1.4**
comp=Z,1.7nm,0.3s,baz=320,slow=14,SNR=23
MMAI LR LR 16 26 56.1
comp=Z,3µm,19.0s,baz=330,slow=42
MMAI Mount Meron Ar 13.06 125 Pn **Pn 16 20 58.2 +1.4**
CABF La Chapelle 13.09 300 *e*P **Pn 16 20 55.9 -1.3**
comp=Z,283nm,1.1s
CABF La Chapelle 13.09 300 *e*P **Pn 16 20 55.9 -1.3**
CABF pmax pmax
comp=Z,283nm,1.1s
CABF La Chapelle 13.09 300 *e*P **Pn 16 20 55.9 -1.3**
comp=Z,283nm,1.1s
CABF La Chapelle 13.09 300 *e*P **Pn 16 20 55.9 -1.3**
comp=Z,141nm,1.1s
LSHF Shwairf 13.20 214 *i*P Pn 16 20 54.5 -4.2
comp=Z,161nm,1.1s,SNR=22
LJFR Jufra 13.40 207 *i*P Pn 16 20 57.0 -4.4
comp=Z,189nm,0.9s,SNR=22
HAU Haudompre 13.43 305 *e*P **Pn 16 21 00.1 -1.6**
comp=Z,105nm,0.8s
HAU *e*R
comp=Z,3µm,18.8s
HAU Haudompre 13.43 305 *e*P **Pn 16 21 00.1 -1.6**
HAU pmax pmax
comp=Z,105nm,0.8s
HAU Haudompre 13.43 305 *e*P **Pn 16 21 00.1 -1.6**
comp=Z,105nm,0.8s
HAU Haudompre 13.43 305 *e*P **Pn 16 21 00.1 -1.6**
comp=Z,53nm,0.8s
MNK Minsk 13.65 13 ‖ *e*P **Pn 16 21 02.0 -2.6**
MNK *e*S **Sn 16 23 34.0 -2.0**
MNK MLR MLR
comp=N,28µm,10.0s
MNK MLR MLR
comp=Z,33µm,10.0s
VIVF Saint-Julien-l 13.65 291 *e*P **Pn 16 21 02.2 -2.6**
comp=Z,33nm,0.5s
VIVF Saint-Julien-l 13.65 291 *e*P **Pn 16 21 02.2 -2.6**
VIVF pmax pmax
comp=Z,33nm,0.5s
VIVF Saint-Julien-l 13.65 291 *e*P **Pn 16 21 02.2 -2.6**
comp=Z,33nm,0.5s
VIVF Saint-Julien-l 13.65 291 *e*P **Pn 16 21 02.2 -2.6**
comp=Z,16nm,0.5s
MICGM Minsk 13.66 13 ‖ *e*P **Pn 16 21 02.0 -2.7**
THEF They Montfort 13.74 306 *e*P **Pn 16 21 04.8 -1.1**
THEF They Montfort 13.74 306 *e*P **Pn 16 21 04.8 -1.1**
THEF They Montfort 13.74 306 *e*P **Pn 16 21 04.8 -1.1**
THEF They Montfort 13.74 306 *e*P **Pn 16 21 04.8 -1.1**
RUP Ruppelstein 13.80 313 *e*P **Pn 16 21 09.8 +3.0**
RUP Ruppelstein 13.80 313 *e*P **Pn 16 21 09.8 +3.0**
SSB Saint Sauveur 13.81 293 *e*P **Pn 16 21 05.0 -2.0**
SSB pmax pmax
comp=Z,45nm,1.2s
SSB Saint Sauveur 13.81 293 *e*Pn **Pn 16 21 05.0 -2.0**
comp=Z,45nm,1.2s
SSB Saint Sauveur 13.81 293 *e*P **Pn 16 21 05.0 -2.0**
comp=Z,45nm,1.2s
NACGM Naroch 13.88 10 *e*P **Pn 16 21 05.0 -2.8**
NACGM Naroch 13.88 10 *e*S **Sn 16 23 41.0 -0.6**
DFRA Djebel Bou Aff 13.93 256 P P 16 21 13.0 -3.8
PAGF Fort de Pagny 14.03 307 *e*P **Pn 16 21 09.6 -0.3**
comp=Z,72nm,1.4s,baz=122
PAGF Fort de Pagny 14.03 307 *e*P **Pn 16 21 09.6 -0.3**
comp=Z,72nm,1.4s
PAGF Fort de Pagny 14.03 307 *e*P **Pn 16 21 09.6 -0.3**
comp=Z,36nm,1.4s,baz=122
MAHO Mahon 14.08 270 *i*P **Pn 16 21 10.0 -0.6**
NRDL Niedersach Rie 14.10 327 *e*P **Pn 16 21 12.2 +1.4**
LASF Ste Croix 14.14 288 *e*P **Pn 16 21 09.9 -1.5**
comp=Z,489nm,1.8s
LASF Ste Croix 14.14 288 *e*P **Pn 16 21 09.9 -1.5**
comp=Z,489nm,1.8s
IIGN Ignalina 14.26 8 *e*P **Pn 16 21 11.7 -1.2**
IIGN AMB AMB 16 21 14.0
comp=Z,52nm,1.1s
IIGN Ignalina 14.26 8 *e*P **Pn 16 21 11.7 -1.2**
comp=Z,52nm,1.1s,SNR=40
IDID Didziasalis 14.28 9 *e*P **Pn 16 21 11.9 -1.3**
IDID AMB AMB 16 21 14.1
comp=Z,26nm,1.2s
WLF Walferdange 14.29 311 P **Pn 16 21 11.4 -2.1**
comp=Z,63nm,1.4s
WLF Walferdange 14.29 311 *e*P **Pn 16 21 12.6 -0.8**
WLF Walferdange 14.29 311 *e*P **Pn 16 21 13.3 -0.2**
WLF pmax pmax
comp=Z,144nm,1.4s
WLF Walferdange 14.29 311 *e*Pn **Pn 16 21 13.3 -0.2**
comp=Z,144nm,1.4s
WLF Walferdange 14.29 311 *e*Pn **Pn 16 21 13.3 -0.2**
comp=Z,144nm,1.4s
SFTF Sexfontaines 14.31 305 *e*P **Pn 16 21 13.0 -0.8**
comp=Z,398nm,1.4s,baz=122
SFTF Sexfontaines 14.31 305 *e*P **Pn 16 21 13.0 -0.8**
comp=Z,398nm,1.4s
MEZF Maizieres J'vi 14.42 306 *e*P **Pn 16 21 14.5 -0.7**
comp=Z,342nm,1.3s,baz=125
MEZF Maizieres J'vi 14.42 306 *e*P **Pn 16 21 14.5 -0.7**
comp=Z,342nm,1.3s
CKHR Kef el Ahmar 14.42 254 P **P 16 21 23.0 +0.6**
CKHR Kef el Ahmar 14.42 254 P **P 16 21 23.0 +0.6**
SET Setif 14.42 255 P **P 16 21 23.0 +0.7**
SET Setif 14.42 255 P **P 16 21 23.0 +0.7**
ISAL Salakas 14.46 8 *e*P **Pn 16 21 14.0 -1.8**
ISAL AMB AMB 16 21 16.5
comp=Z,41nm,1.0s
ISAL Salakas 14.46 8 *e*P **Pn 16 21 14.0 -1.8**
comp=Z,41nm,1.0s,SNR=35
ASF Jabal al Asfar 14.56 124 Pn **P 16 21 21.6 -2.2**
ASF Jabal al Asfar 14.56 124 Pn **P 16 21 21.6 -2.2**
comp=Z,0.2nm,0.3s,baz=75,slow=1.2,SNR=6.0
ASF LR LR 16 27 18.3
comp=Z,900nm,19.9s,baz=10,slow=39
SMF Signal de Mont 14.59 298 *e*P **Pn 16 21 15.4 -2.2**
comp=Z,279nm,1.2s
SMF Signal de Mont 14.59 298 *e*P **Pn 16 21 15.4 -2.2**
SMF pmax pmax
comp=Z,279nm,1.2s
SMF Signal de Mont 14.59 298 *e*P **Pn 16 21 15.4 -2.2**
comp=Z,279nm,1.2s
IZAR Zarasai 14.65 8 *e*P **Pn 16 21 16.1 -2.3**
IZAR AMB AMB 16 21 18.8
comp=Z,48nm,1.0s
LBL Lubilhac 14.71 292 *e*P **Pn 16 21 17.9 -1.4**
LBL Lubilhac 14.71 292 *e*P **Pn 16 21 17.9 -1.4**
LBL Lubilhac 14.71 292 *e*P **Pn 16 21 17.9 -1.4**
LOR Lormes 14.74 300 *e*P **Pn 16 21 17.8 -1.9**
comp=Z,401nm,1.5s,baz=114
LOR *e*R
comp=Z,4µm,18.5s
LOR Lormes 14.74 300 *e*P **Pn 16 21 17.8 -1.9**
comp=Z,401nm,1.5s
BSD Bornholm Skovb 14.76 342 *e*P **Pn 16 21 19.8 0.0**
BSD pmax pmax
comp=Z,20nm,1.0s
BSD MLR MLR
comp=Z,9µm,11.0s
BSD Bornholm Skovb 14.76 342 *i*P **Pn 16 21 19.8 0.0**
comp=Z,20nm,1.0s
BSD
comp=Z,9µm,11.0s
MEM Membach 14.86 314 P Pn 16 21 16.9 -4.3
comp=Z,76nm,1.2s
SSF Saint Saulge 14.92 299 *e*P **Pn 16 21 19.6 -2.4**
comp=Z,125nm,0.9s
SSF Saint Saulge 14.92 299 *e*P **Pn 16 21 19.6 -2.4**
SSF pmax pmax
comp=Z,125nm,0.9s
SSF Saint Saulge 14.92 299 *e*P **Pn 16 21 19.6 -2.4**
comp=Z,125nm,0.9s
AGO Saint Agoulin 14.93 295 *e*P **Pn 16 21 20.5 -1.7**
AGO Saint Agoulin 14.93 295 *e*P **Pn 16 21 20.5 -1.7**
AVF Avril sur Loir 14.95 298 *e*P **Pn 16 21 20.5 -1.9**
comp=Z,346nm,1.2s
AVF Avril sur Loir 14.95 298 *e*P **Pn 16 21 20.5 -1.9**
AVF pmax pmax
comp=Z,346nm,1.2s
AVF Avril sur Loir 14.95 298 *e*P **Pn 16 21 20.5 -1.9**
comp=Z,346nm,1.2s
KIV Kislovodsk 14.95 73 *e*P **Pn 16 21 22.5 -0.1**
KIV *e*S **Sn 16 24 10.9 +3.0**
KIV pmax pmax
comp=Z,9.0nm,0.6s

KIV MLR MLR
comp=Z,543nm,12.0s
PYM Petit Puy Mans 14.96 294 *e*P **Pn 16 21 22.4 -0.3**
PYM Petit Puy Mans 14.96 294 *e*P **Pn 16 21 22.4 -0.3**
PYM Petit Puy Mans 14.96 294 *e*P **Pn 16 21 22.4 -0.3**
HGN Heimansgroeve 14.98 315 *e*P **P 16 21 26.8 -1.5**
comp=Z,138nm,1.3s
HGN *e*L L 16 28 13.8
comp=Z,2µm,18.5s
VORD Divnogorie 14.99 44 *e*P **Pn 16 21 21.6 -1.4**
VORD *e*S **Sn 16 24 06.6 -2.2**
VORD pmax pmax
comp=Z,80nm,1.5s
VORD pmax pmax
comp=N,80nm,1.7s
VORD pmax pmax
comp=E,140nm,1.3s
VORD smax smax
comp=N,260nm,9.9s
VORD smax smax
comp=Z,140nm,6.3s
VORD smax smax
comp=E,90nm,7.7s
VORD MLR MLR
comp=E,9µm,11.0s
VORD MLR MLR
comp=Z,12µm,11.0s
VORD MLR MLR
comp=N,7µm,12.0s
IBBN Ibbenburen 15.00 322 *e*P **Pn 16 21 21.5 -1.6**
LRDF Laroque-de-Fa 15.06 283 *e*P **Pn 16 21 25.4 +1.5**
LRDF Laroque-de-Fa 15.06 283 *e*P **Pn 16 21 25.4 +1.5**
VSR Storozhevoye 15.07 43 *e*P **Pn 16 21 22.6 -1.4**
VSR *e*S **Sn 16 24 07.5 -3.2**
VSR pmax pmax
comp=Z,100nm,1.3s
VSR pmax pmax
comp=N,110nm,0.9s
VSR pmax pmax
comp=E,130nm,0.9s
VSR smax smax
comp=N,50nm,5.3s
VSR smax smax
comp=Z,100nm,8.2s
VSR smax smax
comp=E,20nm,5.2s
VSR MLR MLR
comp=E,7µm,11.0s
VSR MLR MLR
comp=Z,11µm,11.0s
VSR MLR MLR
comp=N,5µm,10.0s
KBZ Khabaz 15.09 74 P **P 16 21 29.1 -0.4**
KBZ Khabaz 15.09 74 Pn **P 16 21 29.1 -0.4**
KBZ Khabaz 15.09 74 Pn **P 16 21 29.1 -0.4**
comp=N,0.2nm,0.3s,baz=278,slow=11,SNR=14
KBZ Khabaz 15.09 74 P **P 16 21 29.1 -0.4**
BCLA Clavier 15.14 313 P **P 16 21 27.9 -2.2**
comp=Z,79nm,1.5s
BCLA Clavier 15.14 313 P **P 16 21 27.9 -2.2**
comp=Z,79nm,1.5s
BGF Bois d'Agland 15.23 297 *e*P **Pn 16 21 24.7 -1.5**
comp=Z,463nm,1.5s
BGF Bois d'Agland 15.23 297 *e*P **Pn 16 21 24.7 -1.5**
BGF pmax pmax
comp=Z,463nm,1.5s
BGF Bois d'Agland 15.23 297 *e*P **Pn 16 21 24.7 -1.5**
comp=Z,463nm,1.5s
WTSB Winterswijk 15.24 320 *e*P **Pn 16 21 28.1 +1.9**
comp=Z,15nm,0.7s
GIVF Givet 15.25 311 *e*P **Pn 16 21 26.8 +0.3**
comp=Z,79nm,0.9s
GIVF Givet 15.25 311 *e*P **Pn 16 21 26.8 +0.3**
GIVF pmax pmax
comp=Z,79nm,0.9s
GIVF Givet 15.25 311 *e*P **Pn 16 21 26.8 +0.3**
comp=Z,79nm,0.9s
EIL Elat 15.28 136 Pn **Pn 16 21 28.4 +1.4**
EIL Elat 15.28 136 Pn **Pn 16 21 28.4 +1.4**
comp=Z,0.5nm,0.3s,baz=12,slow=4.5,SNR=14
EIL Elat 15.28 136 Pn **Pn 16 21 28.4 +1.4**
MTLF Montolieu 15.29 284 *e*P **Pn 16 21 26.9 -0.1**
comp=Z,724nm,1.6s
MTLF Montolieu 15.29 284 *e*P **Pn 16 21 26.9 -0.1**
MTLF pmax pmax
comp=Z,724nm,1.6s
MTLF Montolieu 15.29 284 *e*P **Pn 16 21 26.9 -0.1**
comp=Z,724nm,1.6s
DOU Dourbes 15.38 311 P **Pn 16 21 28.2 +0.1**
comp=Z,47nm,1.7s
VOR Voronezh 15.39 42 P **Pn 16 21 27.0 -1.2**
VOR pmax pmax
comp=Z,250nm,1.0s
ONI Oni 15.49 78 P P 16 21 41.7 +7.5
ONI S **S 16 24 41.0 +4.0**
CAF Calviac 15.50 290 *e*P **Pn 16 21 30.1 +0.4**
comp=Z,297nm,1.7s
CAF Calviac 15.50 290 *e*P **Pn 16 21 30.1 +0.4**
CAF pmax pmax
comp=Z,297nm,1.7s
CAF Calviac 15.50 290 *e*P **Pn 16 21 30.1 +0.4**
comp=Z,297nm,1.7s
HYF Humbligny 15.54 299 *e*P **Pn 16 21 29.9 -0.4**
HYF Humbligny 15.54 299 *e*P **Pn 16 21 29.9 -0.4**
LGHD Ghdames 15.56 228 *i*P **Pn 16 21 28.2 -2.5**
comp=Z,314nm,2.0s,SNR=43
BAIF Baives 15.58 310 *e*P **Pn 16 21 31.2 +0.4**
comp=Z,233nm,1.4s
BAIF Baives 15.58 310 *e*P **Pn 16 21 31.2 +0.4**
BAIF pmax pmax
comp=Z,233nm,1.4s
BAIF Baives 15.58 310 *e*P **Pn 16 21 31.2 +0.4**
comp=Z,233nm,1.4s
TCF Toulx Ste Croi 15.61 296 *e*P **Pn 16 21 29.1 -2.0**
comp=Z,814nm,1.7s
TCF Toulx Ste Croi 15.61 296 *e*P **Pn 16 21 29.1 -2.0**
TCF pmax pmax
comp=Z,814nm,1.7s
TCF Toulx Ste Croi 15.61 296 *e*P **Pn 16 21 29.1 -2.0**
comp=Z,814nm,1.7s
AKH Akhalkalaki 15.62 83 P **P 16 21 37.1 +1.5**
LLD Lille Linde 15.66 337 *i*P **P 16 21 35.3 -0.4**
LLD pmax pmax
comp=Z,38nm,0.8s
LLD Lille Linde 15.66 337 *i*P **P 16 21 35.3 -0.4**
comp=Z,38nm,0.8s
LLD Lille Linde 15.66 337 *i*P **P 16 21 35.3 -0.4**
comp=Z,38nm,0.8s
COP Copenhagen 15.90 338 *e*P **Pn 16 21 35.5 +0.7**
COP MLR MLR
comp=Z,2µm,11.0s
COP Copenhagen 15.90 338 *i*P **Pn 16 21 35.5 +0.7**
COP
comp=Z,2µm,10.0s
RJF Les Rejaudoux 15.93 292 *e*P **Pn 16 21 36.3 +1.0**
comp=Z,294nm,1.6s
RJF *e*R
comp=Z,4µm,19.0s
RJF Les Rejaudoux 15.93 292 *e*P **Pn 16 21 36.3 +1.0**
RJF pmax pmax
comp=Z,294nm,1.5s
RJF Les Rejaudoux 15.93 292 *e*P **Pn 16 21 36.3 +1.0**
comp=Z,294nm,1.5s
RJF Les Rejaudoux 15.93 292 *e*P **Pn 16 21 36.3 +1.0**
comp=Z,147nm,1.6s
MLS Moulis 16.11 283 *e*P **Pn 16 21 37.3 -0.4**
MLS Moulis 16.11 283 *e*P **Pn 16 21 37.3 -0.4**
EMHD Djebel Mahouad 16.22 258 P **Pn 16 21 40.0 +0.8**
EMHD Djebel Mahouad 16.22 258 P **Pn 16 21 40.0 +0.8**
HLG Helgoland 16.25 328 *e*P **Pn 16 21 39.4 +0.1**
LFF La Frestale 16.43 290 *e*P **Pn 16 21 41.6 -0.2**
comp=Z,148nm,1.4s
LFF La Frestale 16.43 290 *e*P **Pn 16 21 41.6 -0.2**
LFF pmax pmax
comp=Z,148nm,1.4s
LFF La Frestale 16.43 290 *e*P **Pn 16 21 41.6 -0.2**
comp=Z,148nm,1.4s
LUMB Murzuk 16.49 206 *i*P **Pn 16 21 40.6 -2.0**
comp=Z,568nm,2.0s,SNR=42
TBLG Delisi 16.51 81 *e*P P 16 21 50.7 +5.3
TBLG Delisi 16.51 81 P P 16 21 50.7 +5.3
TBLG S S 16 25 09.2 +12
OBN Obninsk 16.59 29⇑ *i*P **Pn 16 21 40.2 -3.4**
OBN *i*S **Sn 16 24 44.4 -3.0**
OBN pmax pmax
comp=Z,46nm,0.9s

OBN MLR MLR
comp=Z,8µm,17.0s
OBN Obninsk 16.59 29 Pn **Pn 16 21 40.2 -3.4**
comp=Z,362nm,1.4s,SNR=9.6
EPF Esparros 16.67 283 *e*P **Pn 16 21 43.5 -1.3**
comp=Z,101nm,1.4s
EPF Esparros 16.67 283 *e*P **Pn 16 21 43.5 -1.3**
EPF pmax pmax
comp=Z,101nm,1.4s
EPF Esparros 16.67 283 *e*P **Pn 16 21 43.5 -1.3**
comp=Z,101nm,1.4s
RESF Ens 16.68 283 *e*P **Pn 16 21 45.0 0.0**
RESF Ens 16.68 283 *e*P **Pn 16 21 45.0 0.0**
RESF Ens 16.68 283 *e*P **Pn 16 21 45.0 0.0**
GNI Garni 16.75 87 *e*Pn **P 16 21 49.1 +1.0**
comp=Z,487nm,1.8s
GNI Garni 16.75 87 P **P 16 21 52.4 +4.2**
SNR=23
GNI Garni 16.75 87 Pn **P 16 21 50.7 +2.6**
comp=Z,2.3nm,0.3s,baz=149,slow=12,SNR=22
GNI Garni 16.75 87 *i*P **Pn 16 21 46.9 +1.0**
comp=Z,1µm,19.0s
GNI Garni 16.75 87 *e*Pn **P 16 21 49.1 +1.0**
comp=Z,487nm,1.8s
LABF Labassere 16.86 283 *e*P **Pn 16 21 47.6 +0.4**
LABF Labassere 16.86 283 *e*P **Pn 16 21 47.6 +0.4**
LABF Labassere 16.86 283 *e*P **Pn 16 21 47.6 +0.4**
DGRG David-gareji 17.01 82 P P 16 21 56.0 +5.0
LKFR Kufra 17.09 178 *i*P **Pn 16 21 46.8 -3.4**
comp=Z,208nm,1.4s,SNR=41
REYF Montagne du Re 17.20 284 *e*P **Pn 16 21 51.5 -0.1**
REYF Montagne du Re 17.20 284 *e*P **Pn 16 21 51.5 -0.1**
REYF Montagne du Re 17.20 284 *e*P **Pn 16 21 51.5 -0.1**
EBNR Beni Rached 17.23 260 P **Pn 16 21 52.5 +0.6**
EBNR Beni Rached 17.23 260 P **Pn 16 21 52.5 +0.6**
MFF Saint Martin d 17.26 296 *e*P **Pn 16 21 52.1 -0.1**
comp=Z,401nm,1.6s
MFF Saint Martin d 17.26 296 *e*P **Pn 16 21 52.1 -0.1**
MFF pmax pmax
comp=Z,401nm,1.6s
MFF Saint Martin d 17.26 296 *e*P **Pn 16 21 52.1 -0.1**
comp=Z,401nm,1.6s
MFF Saint Martin d 17.26 296 *e*P **Pn 16 21 52.1 -0.1**
comp=Z,201nm,1.6s
ETSF Etsaut 17.33 283 *e*P **Pn 16 21 52.7 -0.5**
comp=Z,231nm,1.5s
ETSF Etsaut 17.33 283 *e*P **Pn 16 21 52.7 -0.5**
ETSF pmax pmax
comp=Z,231nm,1.5s
ETSF Etsaut 17.33 283 *e*P **Pn 16 21 52.7 -0.5**
comp=Z,231nm,1.5s
ETSF Etsaut 17.33 283 *e*P **Pn 16 21 52.7 -0.5**
comp=Z,116nm,1.5s
VSU Vasula 17.38 7*d i*P **Pn 16 21 51.7 -1.8**
VSU pmax pmax
comp=Z,436nm,1.6s
VSU MLR MLR
comp=Z,5µm,16.0s
ECHA Ech Chlef 17.41 260 P **P 16 21 55.2 -0.1**
ECHA Ech Chlef 17.41 260 P **P 16 21 55.2 -0.1**
MOS Moscow 17.45 29 *e*P **Pn 16 21 49.9 -4.5**
MOS *e*S **Sn 16 25 03.8 -4.6**
MOS pmax pmax
comp=Z,400nm,1.4s
MOS pmax pmax
comp=Z,262nm,1.4s
MOS MLR MLR
comp=E,6µm,12.0s
MOS MLR MLR
comp=Z,12µm,12.0s
MOS MLR MLR
comp=N,9µm,11.0s
MUD Monsted U'grnd 17.54 334 *i*P **P 16 21 58.2 +1.7**
MUD pmax pmax
comp=Z,20nm,0.9s
MUD MLR MLR
comp=Z,5µm,10.0s
MUD Monsted U'grnd 17.54 334 *i*P **P 16 21 58.2 +1.7**
comp=Z,20nm,0.9s
MUD
comp=Z,5µm,10.0s
MUD Monsted U'grnd 17.54 334 *i*P **P 16 21 58.2 +1.7**
comp=Z,5µm,10.0s
LDF La Druitiere 17.69 302 *e*P **Pn 16 21 56.7 -0.8**
comp=Z,102nm,0.8s
LDF La Druitiere 17.69 302 *e*P **Pn 16 21 56.7 -0.8**
LDF pmax pmax
comp=Z,102nm,0.8s
LDF La Druitiere 17.69 302 *e*P **Pn 16 21 56.7 -0.8**
comp=Z,102nm,0.8s
LDF La Druitiere 17.69 302 *e*P **Pn 16 21 56.7 -0.8**
comp=Z,102nm,0.8s
EANR 'Ain N'Sour 17.69 259 P **Pn 16 21 58.0 +0.4**
EANR 'Ain N'Sour 17.69 259 P **Pn 16 21 58.0 +0.4**
ETRT Tiaret 17.78 258 P **P 16 22 00.0 +0.5**
ETRT Tiaret 17.78 258 P **P 16 22 00.0 +0.5**
SJPF Ste Jean 17.81 284 *e*P **Pn 16 21 57.2 -1.8**
comp=Z,100nm,1.3s
SJPF Ste Jean 17.81 284 *e*P **Pn 16 21 57.2 -1.8**
SJPF pmax pmax
comp=Z,100nm,1.3s
SJPF Ste Jean 17.81 284 *e*P **Pn 16 21 57.2 -1.8**
comp=Z,100nm,1.3s
SJPF Ste Jean 17.81 284 *e*P **Pn 16 21 57.2 -1.8**
comp=Z,50nm,1.3s
ELSH Elham, Standar 17.82 311 AMS AMS 16 28 25.4
comp=Z,5µm,9.3s
ELSH Elham, Standar 17.82 311 AMS AMS 16 28 25.4
comp=Z,5µm,9.3s
FLN La Foliniere 17.96 302 *e*P **Pn 16 22 00.1 -0.7**
comp=Z,197nm,1.1s,baz=105
FLN *e*R
comp=Z,2µm,18.0s
FLN La Foliniere 17.96 302 *e*P **Pn 16 22 00.1 -0.7**
FLN pmax pmax
comp=Z,197nm,1.1s
FLN La Foliniere 17.96 302 *e*P **Pn 16 22 00.1 -0.7**
comp=Z,197nm,1.1s
FLN La Foliniere 17.96 302 *e*P **Pn 16 22 00.1 -0.7**
comp=Z,98nm,1.1s,baz=105
OKGL Djebel Kef Gue 17.99 260 P **P 16 22 02.0 +0.2**
OKGL Djebel Kef Gue 17.99 260 P **P 16 22 02.0 +0.2**
GRR Gorron 18.11 301 *e*P **Pn 16 22 01.7 -0.9**
comp=Z,325nm,1.2s
GRR Gorron 18.11 301 *e*P **Pn 16 22 01.7 -0.9**
GRR pmax pmax
comp=Z,325nm,1.3s
GRR Gorron 18.11 301 *e*P **Pn 16 22 01.7 -0.9**
comp=Z,325nm,1.3s
GRR Gorron 18.11 301 *e*P **Pn 16 22 01.7 -0.9**
comp=Z,163nm,1.2s
OJGS Djebel Guires 18.13 259 P **P 16 22 07.0 +3.6**
MAK Makhachkala 18.46 77 *e*P **P 16 22 05.8 -1.0**
MAK *e*S **S 16 25 36.1 -1.1**
MAK pmax pmax
comp=Z,359nm,1.3s
MAK MLR MLR
comp=Z,2µm,14.0s
MAK Makhachkala 18.46 77 *e*P **P 16 22 05.8 -1.0**
comp=Z,359nm,1.3s
MEF Metsahovi 18.98 3 *e*P **P 16 22 11.5 -0.9**
comp=Z,204nm,1.4s,SNR=140
BHD Baghdad 18.99 108 *ex* P 16 22 07.0 -5.7
BHD *ex* x 16 25 37.0
PUL Pulkovo 19.09 12⇓ *e*P **P 16 22 11.3 -2.3**
PUL pmax pmax
comp=Z,151nm,0.6s
PUL MLR MLR
comp=Z,7µm,19.0s
JSA Saint Aubin 19.15 303 AMS AMS 16 30 05.4
comp=Z,6µm,11.3s
JSA Saint Aubin 19.15 303 AMS AMS 16 30 05.4
comp=Z,6µm,11.3s
SKP1 Kophill 19.17 311⇑ *e*P **P 16 22 15.0 +0.4**
SKP1 Kophill 19.17 311 P **P 16 22 15.0 +0.4**
SKP1 Kophill 19.17 311⇑ *e*P **P 16 22 15.0 +0.4**
SGMF Saint Gilles 19.18 300 *e*P **P 16 22 13.4 -1.3**
comp=Z,118nm,1.0s
SGMF Saint Gilles 19.18 300 *e*P **P 16 22 13.4 -1.3**
SGMF pmax pmax
comp=Z,118nm,1.0s
SGMF Saint Gilles 19.18 300 *e*P **P 16 22 13.4 -1.3**
comp=Z,118nm,1.0s
SGMF Saint Gilles 19.18 300 *e*P **P 16 22 13.4 -1.3**
comp=Z,59nm,1.0s
HOMB Homborsund 19.23 337 *e*P **Pn 16 22 18.6 +2.4**

HOMB *e*S **S 16 25 55.0 +2.4**
HOMB AMS AMS 16 31 28.4
comp=Z,5µm,9.9s
QUIF Quistinic 19.52 299 *e*P **P 16 22 17.9 -0.5**
comp=Z,436nm,1.4s
QUIF Quistinic 19.52 299 *e*P **P 16 22 17.9 -0.5**
QUIF pmax pmax
comp=Z,436nm,1.4s
QUIF Quistinic 19.52 299 *e*P **P 16 22 17.9 -0.5**
comp=Z,436nm,1.4s
QUIF Quistinic 19.52 299 *e*P **P 16 22 17.9 -0.5**
comp=Z,218nm,1.4s
SWN1 Swindon 19.66 310⇑ *e*P **P 16 22 20.1 +0.1**
SWN1 AMB AMB 16 22 24.5
comp=Z,264nm,1.8s
SWN1 AMS AMS 16 30 50.3
comp=Z,8µm,11.2s
SWN1 Swindon 19.66 310 P **P 16 22 20.1 +0.1**
SWN1 AMB AMB 16 22 24.5
comp=Z,264nm,1.8s
SWN1 AMS AMS 16 30 50.3
comp=Z,8µm,11.2s
SWN1 Swindon 19.66 310⇑ *e*P **P 16 22 20.0 +0.1**
ROSF Rostrenen 19.67 300 *e*P **P 16 22 19.1 -1.0**
comp=Z,156nm,1.2s
ROSF Rostrenen 19.67 300 *e*P **P 16 22 19.1 -1.0**
ROSF pmax pmax
comp=Z,156nm,1.2s
ROSF Rostrenen 19.67 300 *e*P **P 16 22 19.1 -1.0**
comp=Z,156nm,1.2s
ROSF Rostrenen 19.67 300 *e*P **P 16 22 19.1 -1.0**
comp=Z,78nm,1.2s
HFS Hagfors 19.67 347 P **P 16 22 19.4 -0.6**
HFS Hagfors 19.67 347 P **P 16 22 19.4 -0.6**
comp=Z,1.3nm,0.3s,baz=152,slow=9.9,SNR=30
HFS LR LR 16 31 14.5
comp=Z,3µm,18.7s,baz=160,slow=41
HFS Hagfors 19.67 347 P **P 16 22 19.4 -0.6**
RAF Rauma 19.76 359 *e*P **P 16 22 20.1 -0.9**
comp=Z,422nm,1.5s,SNR=141
SSW Stow on the Wo 19.86 311⇑ *e*P **P 16 22 22.8 +0.7**
SSW Stow on the Wo 19.86 311 P **P 16 22 22.8 +0.7**
SSW Stow on the Wo 19.86 311⇑ *e*P **P 16 22 22.8 +0.7**
KONO Kongsberg 20.11 340 *e*P **P 16 22 23.9 -0.8**
KONO AMB AMB 16 22 28.4
comp=Z,141nm,2.1s
KONO AMS AMS 16 31 39.0
comp=Z,3µm,10.0s
KONO Kongsberg 20.11 340 *e*P **P 16 22 24.5 -0.3**
KONO pmax pmax
comp=Z,117nm,1.3s
KONO Kongsberg 20.11 340 *e*P **P 16 22 24.5 -0.3**
comp=Z,117nm,1.3s
KONO Kongsberg 20.11 340 *e*P **P 16 22 24.5 -0.3**
comp=Z,117nm,1.3s
KBI1 Birley Grange 20.22 314 *e*P **P 16 22 26.1 +0.1**
KBI1 Birley Grange 20.22 314 P **P 16 22 26.1 +0.1**
KBI1 Birley Grange 20.22 314 *e*P **P 16 22 26.1 +0.1**
FINES FINESS Array B 20.28 5 P **P 16 22 24.7 -1.9**
FINES PcP **PcP 16 26 39.5 -0.1**
FINES FINESS Array B 20.28 5 P **P 16 22 24.7 -1.9**
comp=Z,43nm,0.9s,baz=163,slow=13,SNR=34
FINES PcP **PcP 16 26 39.5 -0.1**
comp=Z,3.3nm,0.6s,baz=151,slow=4.4,SNR=4.5
FINES LR LR 16 31 25.3
comp=Z,3µm,18.4s,baz=270,slow=40
FINES FINESS Array B 20.28 5 P **P 16 22 24.7 -1.9**
ESDC Sonseca Array 20.32 274 P **P 16 22 26.3 -1.0**
ESDC PcP **PcP 16 26 39.6 -0.6**
ESDC Sonseca Array 20.32 274 P **P 16 22 26.3 -1.0**
comp=Z,5.5nm,0.5s,baz=72,slow=11,SNR=55
ESDC PcP **PcP 16 26 39.6 -0.6**
comp=Z,0.4nm,0.6s,baz=36,slow=2.7,SNR=4.3
ESDC Sonseca Array 20.32 274 P **P 16 22 26.3 -1.0**
ESLA Sonseca Array 20.32 274 *e*P **P 16 22 26.3 -1.1**
comp=Z,69nm,1.6s
ESLA Sonseca Array 20.32 274 *e*P **P 16 22 26.3 -1.1**
comp=Z,69nm,1.6s
STNC Stoke 20.51 314⇑ *e*P **P 16 22 29.9 +0.6**
STNC AMB AMB 16 22 35.5
comp=Z,312nm,1.8s
STNC AMS AMS 16 30 49.0
comp=Z,2µm,9.2s
STNC Stoke 20.51 314 P **P 16 22 29.9 +0.6**
STNC AMB AMB 16 22 35.5
comp=Z,312nm,1.8s
STNC AMS AMS 16 30 49.0
comp=Z,2µm,9.2s
STNC Stoke 20.51 314⇑ *e*P **P 16 22 29.9 +0.6**
MCH1 Michaelchurch 20.53 310⇑ *e*P **P 16 22 29.6 +0.2**
MCH1 AMB AMB 16 22 30.5
comp=Z,330nm,1.8s
MCH1 AMS AMS 16 31 21.5
comp=Z,6µm,9.5s
MCH1 Michaelchurch 20.53 310 P **P 16 22 29.6 +0.2**
MCH1 AMB AMB 16 22 30.5
comp=Z,330nm,1.8s
MCH1 AMS AMS 16 31 21.5
comp=Z,6µm,9.5s
MCH1 Michaelchurch 20.53 310⇑ *e*P **P 16 22 29.6 +0.2**
DYA Yadsworthy 20.58 305 *e*P **P 16 22 29.6 -0.4**
DYA AMB AMB 16 22 31.0
comp=Z,241nm,1.3s
DYA AMS AMS 16 31 18.0
comp=Z,3µm,13.4s
DYA Yadsworthy 20.58 305 P **P 16 22 29.6 -0.4**
DYA AMB AMB 16 22 31.0
comp=Z,241nm,1.3s
DYA AMS AMS 16 31 18.0
comp=Z,3µm,13.4s
DYA Yadsworthy 20.58 305 *e*P **P 16 22 29.6 -0.4**
NC602 NORSAR Array S 20.64 344 *e*P **P 16 22 31.5 +1.0**
NC602 *e* 16 26 15.7
NC602 NORSAR Array S 20.64 344 *e*P **P 16 22 31.5 +1.0**
SNR=39
HLM1 Long Mynd 20.66 312⇑ *e*P **P 16 22 30.5 -0.3**
HLM1 AMB AMB 16 22 31.8
comp=Z,133nm,1.2s
HLM1 Long Mynd 20.66 312 P **P 16 22 30.5 -0.3**
HLM1 AMB AMB 16 22 31.8
comp=Z,133nm,1.2s
HLM1 Long Mynd 20.66 312⇑ *e*P **P 16 22 30.5 -0.3**
HEX Exmoor 20.69 307⇑ *e*P **P 16 22 31.2 +0.1**
HEX Exmoor 20.69 307 P **P 16 22 31.2 +0.1**
HEX Exmoor 20.69 307⇑ *e*P **P 16 22 31.2 +0.1**
NAO01 NORSAR Array S 20.87 344 *e*P **P 16 22 31.6 -1.5**
comp=Z,75nm,0.9s
NAO01 NORSAR Array S 20.87 344 *e*P **P 16 22 31.6 -1.5**
comp=Z,75nm,0.9s
ZAI Zaio 20.95 261 *i*P **P 16 22 35.0 +0.8**
MELI Melilla 20.96 262 *i*P **P 16 22 33.5 -0.6**
KAF Kangasniemi 20.96 5 *e*P **P 16 22 31.6 -2.4**
KAF pmax pmax
comp=Z,50nm,0.8s
KAF Kangasniemi 20.96 5 *e*p **P 16 22 31.6 -2.4**
comp=Z,50nm,0.8s
FOEL Foel Wylfa 20.98 312⇑ *e*P **P 16 22 34.8 +0.5**
FOEL AMB AMB 16 22 35.7
comp=Z,236nm,1.1s
FOEL AMS AMS 16 31 51.9
comp=Z,3µm,9.3s
FOEL Foel Wylfa 20.98 312 P **P 16 22 34.8 +0.5**
FOEL AMB AMB 16 22 35.7
comp=Z,236nm,1.1s
FOEL AMS AMS 16 31 51.9
comp=Z,3µm,9.3s
FOEL Foel Wylfa 20.98 312⇑ *e*P **P 16 22 34.8 +0.5**
NB2 NORSAR Subarra 20.98 344 P **P 16 22 33.1 -1.1**
comp=Z,50nm,1.0s,baz=155,slow=11
NB2 NORSAR Subarra 20.98 344 P **P 16 22 33.1 -1.1**
baz=155,slow=11
NB2 NORSAR Subarra 20.98 344 P **P 16 22 33.1 -1.1**
comp=Z,50nm,1.0s,baz=155,slow=11,SNR=1.0
NOA NORSAR Array B 20.98 344 P **P 16 22 33.2 -1.1**
NOA PcP **PcP 16 26 41.0 -0.1**
NOA NORSAR Array B 20.98 344 P **P 16 22 33.2 -1.1**
comp=Z,27nm,0.8s,baz=159,slow=11,SNR=55
NOA PcP **PcP 16 26 41.0 -0.1**
comp=Z,2.3nm,0.8s,baz=133,slow=2.2,SNR=4.3
NOA LR LR 16 31 17.9
comp=Z,1µm,18.0s,baz=145,slow=39
NOA NORSAR Array B 20.98 344 P **P 16 22 33.2 -1.1**
HTL Hartland 21.08 307 AMS AMS 16 31 32.4
comp=Z,8µm,9.5s
ODD1 Odda 21.14 337 *e*S **S 16 26 29.4 -1.3**
ODD1 *e*ScP **ScP 16 30 13.2 -4.6**

ODD1 AMS AMS 16 32 25.6
comp=Z,7μm,12.1s
WPM1 Penmaenmawr 21.52 313⇑ *e*P **P 16 22 40.1 0.0**
WPM1 Penmaenmawr 21.52 313 P **P 16 22 40.1 0.0**
WPM1 Penmaenmawr 21.52 313⇓ *e*P **P 16 22 40.1 0.0**
EMAL Malaga-Limoner 21.52 267 *i* P **P 16 22 38.7 -1.5**
YLL Llanberis 21.62 312⇓ *e*P **P 16 22 40.5 -0.6**
YLL Llanberis 21.62 312 P **P 16 22 40.5 -0.6**
YLL Llanberis 21.62 312⇓ *e*P **P 16 22 40.5 -0.6**
KESW Keswick, Cumbr 21.65 317⇓ *e*P **P 16 22 40.9 -0.6**
KESW AMS AMS 16 32 11.4
comp=Z,3μm,14.3s
KESW Keswick, Cumbr 21.65 317 P **P 16 22 40.9 -0.6**
KESW AMS AMS 16 32 11.4
comp=Z,3μm,14.3s
KESW Keswick, Cumbr 21.65 317⇑ *e*P **P 16 22 40.9 -0.6**
YRE Yr Eifl 21.70 312⇑ *e*P **P 16 22 41.9 -0.1**
YRE Yr Eifl 21.70 312 P **P 16 22 41.9 -0.1**
YRE Yr Eifl 21.70 312⇓ *e*P **P 16 22 41.9 -0.1**
TOU Touzarine 21.70 262 *i* P **P 16 22 44.0 +1.7**
MPAL Palemas 21.74 262 *i* P **P 16 22 44.0 +1.4**
WME Myndd Eilian 21.79 313⇓ *e*P **P 16 22 42.5 -0.4**
WME Myndd Eilian 21.79 313 P **P 16 22 42.5 -0.4**
WME Myndd Eilian 21.79 313⇑ *e*P **P 16 22 42.5 -0.4**
BER Bergen 21.91 337 *e*P **P 16 22 42.7 -1.4**
BER AMB AMB 16 22 45.9
comp=Z,113nm,1.4s
BER *e*S **S 16 26 46.2 +0.7**
BER *e*ScP **ScP 16 30 13.9 -5.7**
BER AMS AMS 16 32 52.0
comp=Z,6μm,11.8s
BER Bergen 21.91 337 *e*P **P 16 22 42.7 -1.4**
comp=Z,113nm,1.4s,SNR=39
ECK Cauldkaine Hil 21.94 318⇑ *e*P **P 16 22 44.2 -0.4**
ECK Cauldkaine Hil 21.94 318 P **P 16 22 44.2 -0.4**
ECK Cauldkaine Hil 21.94 318⇓ *e*P **P 16 22 44.2 -0.4**
PBRG Braganca 22.00 281 *e*P **P 16 22 44.7 -0.7**
comp=Z,132nm,1.6s
PBRG Braganca 22.00 281 *e*P **P 16 22 44.7 -0.7**
comp=Z,132nm,1.6s
EKA Eskdalemuir Ar 22.03 318 P **P 16 22 45.2 -0.3**
EKA PcP **PcP 16 26 43.6 +0.5**
EKA Eskdalemuir Ar 22.03 318 P **P 16 22 45.2 -0.3**
comp=Z,30nm,0.8s,baz=116,slow=11,SNR=55
EKA PcP **PcP 16 26 43.6 +0.5**
comp=Z,4.3nm,0.7s,baz=88,slow=2.5,SNR=7.8
EKA Eskdalemuir Ar 22.03 318 P **P 16 22 45.2 -0.3**
ESK Eskdalemuir 22.05 318⇓ *e*P **P 16 22 45.1 -0.6**
ESK AMB AMB 16 22 51.1
comp=Z,119nm,1.7s
ESK AMS AMS 16 32 36.2
comp=Z,3μm,11.0s
ESK Eskdalemuir 22.05 318 P **P 16 22 45.1 -0.6**
ESK AMB AMB 16 22 51.1
comp=Z,119nm,1.7s
ESK AMS AMS 16 32 36.2
comp=Z,3μm,11.0s
ESK Eskdalemuir 22.05 318 *i* P **P 16 22 45.4 -0.3**
ESK Eskdalemuir 22.05 318 P **P 16 22 45.7 0.0**
comp=Z,552nm,1.1s,SNR=12
ESK Eskdalemuir 22.05 318 *i* P **P 16 22 45.4 -0.3**
ESY Stoneypath 22.06 320⇓ *e*P **P 16 22 46.2 +0.4**
ESY Stoneypath 22.06 320 P **P 16 22 46.2 +0.4**
ESY Stoneypath 22.06 320⇑ *e*P **P 16 22 46.2 +0.4**
KLMR Klimovskoe 22.12 22*d* *i*P **P 16 22 45.2 -1.3**
KLMR *i* *PP **pP 16 22 47.8 -2.5**
KLMR *e**SP **sP 16 22 49.7 -2.3**
KLMR 16 26 40.6
KLMR *i* S **S 16 26 51.0 +1.2**
KLMR *i* *SS **sS 16 26 56.7 +0.8**
KLMR pmax pmax
comp=Z,172nm,1.3s
KLMR MLR MLR
comp=Z,5μm,9.0s
KLMR Klimovskoe 22.12 22 *i* P **P 16 22 45.2 -1.3**
comp=Z,172nm,1.3s
LIJA Lijar 22.20 268 *i* P **P 16 22 47.0 -0.7**
JOF Joensuu 22.25 10 *e*P **P 16 22 45.5 -2.3**
JOF pmax pmax
comp=Z,17nm,0.6s
JOF Joensuu 22.25 10 *e*p **P 16 22 45.5 -2.3**
comp=Z,17nm,0.6s
HYA Hoyanger 22.30 339 *e*P **P 16 22 48.4 +0.1**
HYA AMB AMB 16 22 51.4
comp=Z,69nm,1.4s
MVO Moncorvo 22.32 280 *e*P **P 16 22 48.4 -0.4**
comp=Z,150nm,1.4s
MVO *e*S **S 16 26 56.9 +3.0**
MVO *e*LR LR 16 31 52.7
comp=Z,956nm,18.0s
EDI Edinburgh 22.34 320 AMB AMB 16 22 52.8
comp=Z,153nm,1.2s
EDI AMS AMS 16 32 54.1
comp=Z,4μm,14.5s
EDI Edinburgh 22.34 320 AMB AMB 16 22 52.8
comp=Z,153nm,1.2s
EDI AMS AMS 16 32 54.1
comp=Z,4μm,14.5s
PVRL Vila Real 22.81 280 *e*P **P 16 22 53.8 -0.2**
comp=Z,120nm,1.7s
POLO Lamas de Olo 22.85 280 *e*P **P 16 22 53.5 -1.0**
comp=Z,47nm,1.6s
MTE Manteigas 22.85 278 *e*P **P 16 22 53.4 -1.1**
comp=Z,78nm,1.6s
MTE *e*S **S 16 27 07.6 +4.0**
MTE *e*LR LR 16 31 14.6
comp=Z,1μm,22.0s
MTE Manteigas 22.85 278 *e*P **P 16 22 53.4 -1.1**
comp=Z,45nm,1.1s
ELO Logie Almond 22.87 321⇑ *e*P **P 16 22 53.6 -0.8**
ELO Logie Almond 22.87 321 P **P 16 22 53.6 -0.8**
PGBU Glenifferbraes 22.92 319⇓ *e*P **P 16 22 54.9 -0.1**
PGBU AMS AMS 16 33 38.2
comp=Z,2μm,14.5s
PGBU Glenifferbraes 22.92 319 P **P 16 22 54.9 -0.1**
PGBU AMS AMS 16 33 38.2
comp=Z,2μm,14.5s
PMRV Marv??o 22.96 275 *e*P **P 16 22 54.1 -1.5**
comp=Z,269nm,1.6s
PMRV *e*S **S 16 27 08.2 +2.8**
PMRV *e*LR LR 16 31 35.8
comp=Z,831nm,16.0s
PCAB Cabril 22.96 281 *e*P **P 16 22 55.9 +0.3**
comp=Z,238nm,1.6s
MME1 Meikle Cairn 22.96 323⇓ *e*P **P 16 22 54.0 -1.5**
MME1 Meikle Cairn 22.96 323 P **P 16 22 54.0 -1.5**
MIB Mutribah 23.01 112 *e*P **P 16 22 55.1 -1.1**
MIB AMb AMB 16 23 00.0
comp=Z,262nm,1.5s
MIB Mutribah 23.01 112 *e*P **P 16 22 55.1 -1.1**
comp=Z,262nm,1.5s
EAB Aberfoyle 23.03 319⇓ *e*P **P 16 22 55.4 -0.7**
EAB Aberfoyle 23.03 319 P **P 16 22 55.4 -0.7**
PBAR Barrancos 23.03 272 *e*P **P 16 22 55.2 -1.1**
comp=Z,355nm,1.7s
PVIS Viseu 23.04 279 *e*P **P 16 22 56.4 -0.1**
comp=Z,111nm,1.6s
TGT Taghat 23.06 261 *i* P **P 16 22 55.0 -1.7**
PGAV Gavieira, Arco 23.10 282 *e*P **P 16 22 56.6 -0.5**
comp=Z,352nm,1.6s
PGAV *e*S **S 16 27 11.7 +3.7**
PGAV *e*LR LR 16 31 32.3
comp=Z,1μm,18.0s
MOL Molde 23.15 342 *e*S **S 16 27 09.4 +1.3**
MOL AMS AMS 16 33 30.5
comp=Z,4μm,12.1s
MOL Molde 23.15 342 *e*S **S 16 27 09.4 +1.3**
SNR=33
TBLU Trondheim 23.19 346 *e*P **S 16 27 05.1 -3.7**
TBLU AMS AMS 16 33 21.2
comp=Z,6μm,10.8s
MCD Coleburn Disti 23.24 323⇑ *e*P **P 16 22 56.7 -1.6**
MCD Coleburn Disti 23.24 323 P **P 16 22 56.7 -1.6**
PESTR Estremoz 23.25 274 *e*P **P 16 22 57.4 -1.2**
comp=Z,246nm,1.7s
NAY Al-Naaiem 23.28 113 *e*P **P 16 22 57.3 -1.6**
NAY AMb AMB 16 23 01.7
comp=Z,69nm,1.1s
MDT Midelt 23.31 258 P **P 16 22 59.6 +0.2**
MDT Midelt 23.31 258 P **P 16 22 59.6 +0.2**
comp=Z,16nm,0.8s,baz=77,slow=12,SNR=21
TAM Tamanrasset 23.43 223 *e*P **P 16 23 01.0 +0.4**
TAM pmax pmax
comp=Z,112nm,1.1s
TAM Tamanrasset 23.43 223 *e*P **P 16 23 01.0 +0.4**
comp=Z,112nm,1.1s
MIF Mishlifen 23.49 259 *i* P **P 16 22 59.5 -1.7**
ZFT Errachidia 23.51 256 *i* P **P 16 23 03.0 +1.6**
CZD Col de Zad 23.53 258 *i* P **P 16 23 04.0 +2.3**
KBD Kabd 23.64 113 *e*P **P 16 23 00.8 -1.6**
KBD AMb AMB 16 23 06.2
comp=Z,69nm,1.2s
EVO Evora 23.66 273⇑ *i*P **P 16 23 01.9 -0.7**
comp=Z,220nm,1.6s
EVO *e*R
comp=Z,2μm,21.0s
PMTG Montargil 23.67 275 *e*P **P 16 23 01.5 -1.2**
comp=Z,217nm,1.7s
PTOM Tomar 23.67 276 *e*P **P 16 23 03.0 +0.3**
PBEJ Beja 23.70 272 *e*P **P 16 23 03.0 0.0**
comp=Z,144nm,1.7s
EVOP Sao Brissos 23.75 274⇑ *i*P **P 16 23 01.9 -1.5**
EVOP pmax pmax
comp=Z,220nm,1.6s
EVOP Sao Brissos 23.75 274⇑ *i*P **P 16 23 01.9 -1.5**
comp=Z,220nm,1.6s
PVAQ Vaqueiros 23.78 271 *e*P **P 16 23 02.7 -1.1**
comp=Z,124nm,1.7s
PVAQ *e*S **S 16 27 20.1 +1.2**
PVAQ *e*LR LR 16 32 02.0
comp=Z,1μm,18.0s
PCVE Castro Verde 23.95 271 *e*P **P 16 23 04.3 -1.1**
comp=Z,161nm,1.5s
PBDV Barranco-do-Ve 23.99 270 *e*P **P 16 23 05.0 -0.8**
comp=Z,286nm,1.6s
MESJ Messejana 24.02 272 *e*P **P 16 23 06.2 +0.2**
MESJ AMb AMB 16 23 09.4
comp=Z,124nm,1.8s
MESJ *e*S **S 16 27 24.7 +2.0**
MESJ Messejana 24.02 272 *e*P **P 16 23 06.2 +0.2**
comp=Z,124nm,1.8s
MESJ *e*S **S 16 27 24.7 +2.0**
MESJ Messejana 24.02 272 *e*P **P 16 23 06.2 +0.2**
MESJ *e*S **S 16 27 24.6 +2.0**
NSS Namsos 24.09 349 *e*S **S 16 27 23.6 +0.2**
NSS AMS AMS 16 34 05.2
comp=Z,1μm,8.7s
NSS Namsos 24.09 349 *e*S **S 16 27 23.5 +0.2**
SNR=33
KAC Achnashellach 24.14 322⇑ *e*P **P 16 23 05.2 -1.8**
KAC Achnashellach 24.14 322 P **P 16 23 05.2 -1.8**
PNCL Nicolau / Gran 24.17 273 *e*P **P 16 23 08.2 +0.8**
comp=Z,113nm,1.5s
LIS Lisbon 24.46 275 *e*P **P 16 23 10.2 +0.1**
LIS AMb AMB 16 23 12.8
comp=Z,259nm,1.5s
LIS *e*S **S 16 27 32.0 +2.2**
LIS Lisbon 24.46 275 *e*P **P 16 23 10.2 +0.1**
comp=Z,259nm,1.5s
LIS *e*S **S 16 27 32.0 +2.2**
LIS Lisbon 24.46 275 *e*P **P 16 23 10.2 +0.1**
LIS *e*S **S 16 27 32.0 +2.2**
KIB El Ksiba 24.48 258 *i* P **P 16 23 11.0 +0.6**
PTEO Sao Teotonio 24.49 272 *e*P **P 16 23 09.8 -0.6**
MORF Marmelete 24.52 271 *e*P **P 16 23 09.6 -1.1**
comp=Z,158nm,1.7s
MORF Marmelete 24.52 271 *e*P **P 16 23 10.7 0.0**
MORF *e*S **S 16 27 32.9 +2.1**
PFVI Vila Bisbo 24.71 271 *e*P **P 16 23 11.2 -1.1**
comp=Z,245nm,1.7s
VAL Valentia 24.80 307 *e*P **PnPn 16 23 40.5 -4.7**
VAL *e*S S 16 27 43.9 +8.9
TZC Tazercounte 25.02 258 *i* P **P 16 23 14.0 -1.4**
MOR8 Moi Rana 25.35 352 *e*P **P 16 23 17.3 -0.6**
MOR8 AMB AMB 16 23 24.1
comp=Z,68nm,2.0s
STOK Stokkvaagen 25.67 351 *e*P **P 16 23 19.9 -0.8**
STOK *e*S **S 16 27 50.3 +1.9**
AKTO Aktyubinsk 26.02 57*c* *i*P **P 16 23 23.5 -0.6**
AKTO Aktyubinsk 26.02 57 P **P 16 23 24.0 -0.1**
AKTO Aktyubinsk 26.02 57 P **P 16 23 24.0 -0.1**
comp=Z,8.5nm,0.9s,baz=271,slow=9.4,SNR=19
AKTO LR LR 16 36 03.9
comp=Z,925nm,18.1s,baz=91,slow=42
RAYN Ar Rayn 26.04 126 P **P 16 23 25.0 +0.4**
comp=Z,245nm,1.1s,SNR=21
APA Apatity 26.97 9⇑ *i*P **P 16 23 32.6 +0.1**
APA *i* S **S 16 28 06.0 -3.1**
APA pmax pmax
comp=Z,52nm,1.0s
APA MLR MLR
comp=Z,8μm,14.0s
CIA Chichaoua 26.99 259 *i* P **P 16 23 33.0 -0.1**
AB31 Akbulak array 27.16 60*ce*P **P 16 23 34.2 -0.2**
AB31 pmax pmax
comp=Z,48nm,1.4s
ABKAR Akbulak array 27.16 60 *e*P **P 16 23 34.5 +0.1**
comp=Z,14nm,0.8s
LOF Lofoten 27.35 353 *e*P P 16 23 30.1 -5.7
ABKT Ailbek 27.37 85 P **P 16 23 37.2 +0.7**
comp=Z,114nm,1.5s,SNR=10.0
LVZ Lovozero 27.44 10⇓ *e*P **P 16 23 37.2 +0.5**
LVZ pmax pmax
comp=Z,111nm,1.9s
LVZ Lovozero 27.44 10 P **P 16 23 37.2 +0.5**
comp=Z,232nm,1.3s,SNR=5.1
ARU Arti 27.64 45*d* *i*P **P 16 23 37.7 -0.9**
ARU PPP PPP 16 24 30.5
ARU S **S 16 28 21.2 +1.4**
ARU SS **SnSn 16 29 31.1 +0.1**
ARU SSS SSS 16 29 56.8
ARU pmax pmax
comp=Z,66nm,1.2s
ARU MLR MLR
comp=Z,3μm,13.0s
ARU Arti 27.64 45 P **P 16 23 38.1 -0.5**
comp=Z,235nm,0.8s,SNR=19
KTK1 Kautokeino 27.78 0 *e*P **P 16 23 37.4 -2.4**
KTK1 AMB AMB 16 23 43.1
comp=Z,282nm,1.2s
KTK1 *e*S **S 16 28 21.5 -0.4**
KTK1 AMS AMS 16 35 13.8
comp=Z,8μm,12.2s
SOKR Solikamsk 27.94 37*d* *i*P **P 16 23 41.1 -0.1**
SOKR S **S 16 28 23.9 -0.5**
SOKR pmax pmax
comp=Z,60nm,1.0s
SOKR MLR MLR
comp=Z,3μm,14.0s
ARCES ARCESS Array B 28.34 2 P **P 16 23 43.4 -1.4**
ARCES ARCESS Array B 28.34 2 P **P 16 23 43.4 -1.4**
comp=Z,14nm,0.9s,baz=187,slow=8.6,SNR=37
ARCES LR LR 16 36 05.9
comp=Z,2μm,19.2s,baz=180,slow=39
ARE0 ARCESS Array S 28.34 2 *e*P **P 16 23 43.3 -1.5**
ARE0 *e*S **S 16 28 32.1 +1.4**
ARE0 ARCESS Array S 28.34 2 *e*P **P 16 23 43.4 -1.4**
TRO Tromso 28.47 357 *e*P **P 16 23 47.6 +1.7**
TRO AMB AMB 16 23 51.5
comp=Z,68nm,1.6s
TRO *e*S **S 16 28 32.0 -0.7**
TRO AMS AMS 16 36 23.1
comp=Z,4μm,10.8s
KEV Kevo 28.61 3 *e*P P 16 23 43.2 -3.9
KEV Kevo 28.61 3 *e*p P 16 23 43.2 -3.9
comp=Z,8.7nm,0.8s
SVE Sverdlovsk 28.85 44*ce*P **P 16 23 49.7 +0.3**
SVE *e*S **S 16 28 34.5 -4.4**
SVE *e* 16 30 09.0
SVE *e* 16 34 30.1
SVE pmax pmax
comp=Z,105nm,1.6s
SVE MLR MLR
comp=Z,5μm,12.0s
SVE MLR MLR
comp=E,4μm,12.0s
HATD Hatta, Dubai 32.23 110 P **P 16 24 19.1 -0.5**
SNR=6.4
ASHO Ashiyiah 32.27 110 P **P 16 24 19.9 0.0**
SNR=7.0
ZRNK Zerenda 33.03 53 *i* P **P 16 24 24.8 -1.5**
ZRNK pmax pmax
comp=Z,225nm,2.3s
TOA0 Torodi Ar. Sit 33.51 219 *e*P **P 16 24 29.9 -0.9**
TORD Torodi Ar. Bea 33.51 219 P **P 16 24 30.1 -0.7**
TORD PcP **PcP 16 27 10.8 -0.8**
TORD Torodi Ar. Bea 33.51 219 P **P 16 24 30.1 -0.7**
comp=Z,55nm,0.9s,baz=30,slow=8.0,SNR=72
TORD PcP **PcP 16 27 10.8 -0.8**
comp=Z,2.6nm,0.6s,baz=88,slow=0.2,SNR=5.3
TORD LR LR 16 39 45.2
comp=Z,941nm,18.3s,baz=30,slow=39
JMIC Jan Mayen 33.66 342 *e*S **S 16 29 53.8 +0.1**
JMIC AMS AMS 16 40 16.0
comp=Z,1μm,15.9s
BRVK Borovoye 33.80 53*d* *i*P **P 16 24 33.5 +0.5**
BRVK pmax pmax
comp=Z,111nm,1.7s
BRVK Borovoye 33.80 53 P **P 16 24 34.3 +1.3**
SNR=37
BRVK Borovoye 33.80 53 P **P 16 24 34.5 +1.5**
comp=Z,347nm,0.7s,SNR=21
BVA0 Borovoye Array 33.87 53 *i* P **P 16 24 33.8 +0.2**
BVA0 pmax pmax
comp=Z,38nm,2.0s
BVAR Borovoye Array 33.87 53 P **P 16 24 34.3 +0.7**
BVAR 16 25 42.6
BVAR Borovoye Array 33.87 53 P **P 16 24 34.3 +0.7**
BVAR PP **PnPn 16 25 42.6 -3.5**
BVAR Borovoye Array 33.87 53 P **P 16 24 34.3 +0.7**
comp=Z,8.9nm,0.7s,baz=263,slow=5.8,SNR=48
BVAR PP **PnPn 16 25 42.6 -3.5**
comp=Z,8.5nm,0.9s,baz=264,slow=9.9,SNR=4.3
BVAR LR LR 16 39 31.1
comp=Z,1μm,19.6s,baz=273,slow=38
VOSK Vostochnaya 34.22 54 P **P 16 24 34.9 -1.8**
VOSK pmax pmax
comp=Z,213nm,2.1s
KK31 Karatay Array 35.09 71*ce*P **P 16 24 44.1 -0.2**
KK31 pmax pmax
comp=Z,26nm,0.8s
SCO Scoresbysund 36.93 337 *i* P **P 16 25 01.0 +1.3**
SCO pmax pmax
comp=Z,28nm,1.0s
SCO Scoresbysund 36.93 337 *i* P **P 16 25 01.0 +1.3**
comp=Z,28nm,1.0s
SCO Scoresbysund 36.93 337 *i* P **P 16 25 01.1 +1.3**
comp=Z,26nm,1.0s
SCO Scoresbysund 36.93 337 *i* P **P 16 25 01.0 +1.3**
comp=Z,28nm,1.0s
SPA0 Spitsbergen Ar 37.09 358 *e*P **P 16 25 03.0 +2.0**
SPA0 *e*S **S 16 30 48.6 +2.3**
SPITS Spitsbergen Ar 37.09 358 P **P 16 25 00.5 -0.5**
SPITS PcP **PcP 16 27 20.9 -0.2**
SPITS Spitsbergen Ar 37.09 358 P **P 16 25 00.5 -0.5**
comp=Z,13nm,0.9s,baz=138,slow=8.9,SNR=8.0
SPITS PcP **PcP 16 27 20.9 -0.2**
comp=Z,6.2nm,0.8s,baz=150,slow=8.4,SNR=2.0
EKS2 Erkin-Say 37.52 70 P **P 16 25 06.7 +1.5**
SNR=20
AML Almayashu 37.61 71 P **P 16 25 06.5 +0.2**
SNR=10
USP Ospenovka 37.87 69 P **P 16 25 08.8 +0.7**
SNR=13
KBS Kingsbay 37.99 357 *e* **P 16 25 09.5 +0.9**
KBS *e*PP **PnPn 16 26 36.5 0.0**
KBS Kingsbay 37.99 357*c* *i*P **P 16 25 09.1 +0.5**
KBS pmax pmax
comp=Z,43nm,1.0s
AAK Ala-Archa 38.04 70*d* *i*P **P 16 25 10.6 +0.9**
AAK Ala-Archa 38.04 70 P **P 16 25 11.4 +1.7**
AAK Ala-Archa 38.04 70 P **P 16 25 11.1 +1.4**
SNR=80
AAK Ala-Archa 38.04 70 P **P 16 25 10.9 +1.3**
SNR=17
AAK Ala-Archa 38.04 70 P **P 16 25 10.4 +0.7**
comp=Z,232nm,1.5s,SNR=21
AAK Ala-Archa 38.04 70 P **P 16 25 11.4 +1.7**
comp=Z,5.6nm,0.7s,baz=240,slow=6.7,SNR=29
FRU Bishkek 38.07 70 *e*P **P 16 25 10.0 +0.2**
FRU *e* 16 34 13.0
FRU MLR MLR
comp=Z,2μm,15.0s
CHMS Chumysh 38.12 70 P **P 16 25 11.4 +1.2**
SNR=13
KBK Karagaybulak 38.35 70 P **P 16 25 14.0 +1.7**
SNR=5.2
KZA Kyzart 38.73 71 P **P 16 25 17.9 +2.1**
SNR=16
TKM2 Tokmak 2 38.74 69 *i* P **P 16 25 16.5 +0.9**
TKM2 Tokmak 2 38.74 69 P **P 16 25 16.6 +0.9**
SNR=6.9
KURBB Kurchatov Arra 39.07 57 P **P 16 25 18.4 +0.4**
comp=Z,4.3nm,0.8s,baz=283,slow=8.6,SNR=40
KURBB PcP **PcP 16 27 27.1 -0.6**
comp=Z,1.4nm,0.8s,baz=273,slow=3.7,SNR=6.8
KURK Kurchatov 39.11 57*d* *i*P **P 16 25 18.2 -0.1**
KURK pmax pmax
comp=Z,64nm,1.7s
KURK Kurchatov 39.11 57 P **P 16 25 18.4 +0.1**
KURK PcP **PcP 16 27 27.1 -0.7**
KURK Kurchatov 39.11 57 P **P 16 25 18.9 +0.6**
SNR=29
KURK Kurchatov 39.11 57 P **P 16 25 18.6 +0.3**
comp=Z,143nm,1.4s,SNR=8.5
DAG Danmarks Havn 39.65 346 *i* P **P 16 25 22.3 -0.2**
DAG Danmarks Havn 39.65 346 *i* P **P 16 25 22.3 -0.2**
comp=Z,7.0nm,1.0s
DAG
comp=Z,510nm,14.0s
DAG Danmarks Havn 39.65 346 *i* P **PcP 16 27 28.4 -0.6**
comp=Z,19nm,0.8s
KSH Kashi 40.07 74 *i* P **P 16 25 26.0 -0.7**
KSH *ep*P **pP 16 25 30.6 -0.2**
KSH *es*P **sP 16 25 33.3 +0.9**
KSH PP **PnPn 16 27 02.3 +0.1**
KSH PcP **PcP 16 27 32.8 +1.5**
KSH *e*ScP **ScP 16 31 19.3 -0.6**
KSH *e*PcS **PcS 16 31 21.1 -0.6**
KSH S **S 16 31 29.9 -2.5**
KSH sS **sS 16 31 37.8 -1.4**
KSH *e*SS SS 16 34 21.5 -8.1
KSH *e*ScS **ScS 16 35 30.9 -2.5**
KSH pmax pmax
comp=Z,18nm,1.3s
KSH LR LR
comp=N,2μm,9.2s
KSH LR LR
comp=E,1μm,10.4s
KSH LR LR
comp=Z,1μm,11.1s
NVS Novosibirsk 41.35 50⇓ *i*P **P 16 25 38.0 +1.2**
NVS *i* 16 27 14.0
NVS *e* 16 27 42.7
NVS *e*S S 16 31 43.7 -7.0
NVS pmax pmax
comp=Z,248nm,1.9s
NVS pmax pmax
comp=N,62nm,2.0s
NVS pmax pmax
comp=E,129nm,2.0s
NVS pmax pmax
comp=E,67nm,2.5s
NVS pmax pmax
comp=Z,152nm,2.5s
NVS pmax pmax
comp=N,15nm,1.8s
NVS smax smax
comp=N,15nm,2.0s
NVS smax smax
comp=E,19nm,2.0s
MK31 Makanchi Array 42.29 62*ce*P **P 16 25 44.8 +0.1**
MK31 pmax pmax
comp=Z,29nm,0.8s
MK31 Makanchi Array 42.29 62 *e*P **P 16 25 44.7 0.0**
MKAR Makanchi Array 42.29 62*ce*P **P 16 25 44.7 0.0**
MKAR pmax pmax
comp=Z,11nm,0.6s
MKAR Makanchi Array 42.29 62 P **P 16 25 44.7 0.0**
MKAR PcP **PcP 16 27 37.6 -0.6**
MKAR Makanchi Array 42.29 62 P **P 16 25 44.7 0.0**
comp=Z,11nm,0.6s,baz=283,slow=6.2,SNR=142
MKAR PcP **PcP 16 27 37.6 -0.6**
comp=Z,5.2nm,0.8s,baz=305,slow=4.3,SNR=4.4
MKAR LR LR 16 45 58.2
comp=Z,540nm,20.3s,baz=285,slow=40
MKAR Makanchi Array 42.29 62 PcP **PcP 16 27 37.6 -0.6**
DBIC Dimbokro 42.32 223 P **P 16 25 45.1 -0.1**
DBIC Dimbokro 42.32 223 P **P 16 25 45.1 -0.1**
comp=Z,28nm,1.0s,baz=14,slow=8.9,SNR=12
DBIC LR LR 16 44 53.7
comp=Z,2μm,18.8s,baz=13,slow=38
ZAA0 Zalesovo Array 42.39 51 *e*P **P 16 25 45.7 +0.4**
ZALV Zalesovo Beam 42.39 51 *i* P **P 16 25 45.5 +0.1**
ZALV pmax pmax
comp=Z,29nm,0.7s

ZALV	**Zalesovo Beam**	**42.39**	**51**	P	**P**	**16 25 45.5**	**+0.1**
ZALV	**Zalesovo Beam**	**42.39**	**51**	P	**P**	**16 25 45.5**	**+0.1**
	comp=Z,29nm,0.7s,baz=278,slow=8.8,SNR=83						
ZALV				LR	LR	16 45 48.4	
	comp=Z,1µm,18.3s,baz=109,slow=40						
SUMG	**Summit**	**42.57**	**337**	*i* P	**P**	**16 25 47.6**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,19nm,1.0s						
SUMG	**Summit**	**42.57**	**337**	*i* P	**P**	**16 25 47.6**	**+0.5**
	comp=Z,19nm,1.0s						
SUMG	**Summit**	**42.57**	**337**	*i* P	**P**	**16 25 47.8**	**+0.7**
	comp=Z,19nm,1.0s						
SUMG	**Summit**	**42.57**	**337**	*i* P	**PcP**	**16 27 39.1**	**-0.1**
	comp=Z,20nm,0.7s						
LIC	**Lamto**	**42.79**	**223**	*e*P	**P**	**16 25 48.2**	**-0.8**
	comp=Z,76nm,0.9s,baz=31						
LIC				*e*R			
	comp=Z,2µm,19.0s						
LIC	**Lamto**	**42.79**	**223**	*e*P	**P**	**16 25 48.2**	**-0.8**
	comp=Z,76nm,0.9s						
BBTS	**Babate**	**43.09**	**244**	P	**P**	**16 25 53.5**	**+2.1**
BBTS	**Babate**	**43.09**	**244**	P	**P**	**16 25 53.5**	**+2.1**
	comp=Z,42nm,1.0s,baz=55,slow=3.8,SNR=4.7						
KMBO	**Kilima Mbogo**	**44.24**	**159**	P	**P**	**16 26 02.0**	**+1.0**
KMBO	**Kilima Mbogo**	**44.24**	**159**	P	**P**	**16 26 02.0**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=360,slow=13,SNR=5.0						
SFJD	**Kangerlussuaq**	**46.41**	**329**	*e*P	**P**	**16 26 16.9**	**-0.3**
	comp=Z,48nm,1.1s						
SFJD	**Kangerlussuaq**	**46.41**	**329**	*i* P	**P**	**16 26 16.7**	**-0.5**
	comp=Z,21nm,1.0s						
SFJD	**Kangerlussuaq**	**46.41**	**329**	*i* P	**P**	**16 26 16.8**	**-0.5**
	comp=Z,21nm,1.0s,SNR=24						
WMQ	**Urumqi**	**46.83**	**64**	P	**P**	**16 26 22.3**	**+1.3**
WMQ				pP	**pP**	**16 26 26.8**	**+1.6**
WMQ				sP	**sP**	**16 26 29.3**	**+2.5**
WMQ				PP	**PP**	**16 28 12.3**	**+1.3**
WMQ				PcS	**PcS**	**16 31 48.8**	**0.0**
WMQ				S	**S**	**16 33 11.8**	**+0.8**
WMQ				sS	**sS**	**16 33 19.4**	**+1.5**
WMQ				ScS	**ScS**	**16 36 13.8**	**-1.5**
WMQ				SS	**SS**	**16 36 31.3**	**-5.9**
WMQ				pmax	pmax		
	comp=Z,42nm,1.8s						
WMQ				LR	LR		
	comp=N,2µm,10.2s						
WMQ				LR	LR		
	comp=E,2µm,10.6s						
WMQ				LR	LR		
	comp=Z,650nm,19.8s						
ALE	**Alert**	**48.68**	**350**	P	**P**	**16 26 34.0**	**-0.8**
	comp=Z,88nm,0.8s,SNR=9.5						
POO	**Poona**	**48.99**	**102**	*ex*	**P**	**16 26 36.0**	**-2.0**
PYUN	**Piuthan**	**50.36**	**85**	*e*P	**P**	**16 26 47.7**	**-0.9**
	comp=Z,60nm,1.0s						
DANN	**Dangsing**	**50.80**	**84**	*e*P	**P**	**16 26 51.6**	**-0.4**
	comp=Z,52nm,0.8s						
KOLN	**Koldanda**	**50.99**	**85**	*e*P	**P**	**16 26 52.4**	**-0.9**
DMN	**Daman**	**52.21**	**84**	*e*P	**P**	**16 27 00.9**	**-1.6**
KKN	**Kakani**	**52.24**	**84**	*e*P	**P**	**16 27 01.5**	**-1.2**
MOY	**Mondy**	**52.44**	**50**	*e*P	**P**	**16 27 04.1**	**+0.4**
MOY				pmax	pmax		
	comp=Z,71nm,3.1s						
PKIN	**Phulchoki**	**52.44**	**84**	*e*P	**P**	**16 27 02.7**	**-1.5**
PKI	**Pulchoki**	**52.45**	**84**	*e*P	**P**	**16 27 02.5**	**-1.9**
GUN	**Gumba**	**52.62**	**84**	*e*P	**P**	**16 27 05.0**	**-0.7**
	comp=Z,93nm,1.1s						
HYB	**Hyderabad**	**53.17**	**99**	*i* P	**P**	**16 27 07.0**	**-2.4**
RAMN	**Ramite**	**53.68**	**84**	*e*P	**P**	**16 27 12.3**	**-1.1**
	comp=Z,72nm,0.9s						
TLY	**Talaya**	**53.96**	**49**	*d* iP	**P**	**16 27 15.9**	**+1.1**
TLY				*e*		16 29 12.9	
TLY				*e*PPP	PPP	16 30 32.9	
TLY				*e*S	**S**	**16 34 54.6**	**+4.7**
TLY				*e*SS	**SS**	**16 38 30.2**	**-0.4**
TLY				pmax	pmax		
	comp=Z,74nm,1.8s						
TLY				MLR	MLR		
	comp=Z,2µm,16.0s						
TLY	**Talaya**	**53.96**	**49**	P	**P**	**16 27 16.0**	**+1.1**
	comp=Z,134nm,1.4s,SNR=18						
TLY	**Talaya**	**53.96**	**49**	*i* P	**P**	**16 27 15.9**	**+1.1**
	comp=Z,74nm,1.8s						
IRK	**Irkutsk**	**54.10**	**49**	*e*P	**P**	**16 27 14.4**	**-1.4**
IRK				pmax	pmax		
	comp=Z,70nm,2.0s						
IRK	**Irkutsk**	**54.10**	**49**	*e*P	**P**	**16 27 14.4**	**-1.4**
	comp=Z,70nm,2.0s						
ZAK	**Zakamensk**	**54.27**	**51**	*e*P	**P**	**16 27 17.9**	**+0.7**
ZAK				pmax	pmax		
	comp=Z,14nm,1.9s						
ZAK	**Zakamensk**	**54.27**	**51**	*e*P	**P**	**16 27 17.9**	**+0.7**
	comp=Z,14nm,1.9s						
TAPN	**Taplejung**	**54.30**	**83**	*e*P	**P**	**16 27 17.2**	**-0.7**
	comp=Z,284nm,1.8s						
ODAN	**Odare**	**54.32**	**84**	*e*P	**P**	**16 27 16.9**	**-1.1**
LSA	**Lhasa**	**55.60**	**79**	*e*P	**P**	**16 27 27.1**	**-0.4**
LSA				pmax	pmax		
	comp=Z,38nm,1.4s						
LSA	**Lhasa**	**55.60**	**79**	*e*P	**P**	**16 27 27.1**	**-0.4**
	comp=Z,38nm,1.4s						
LSA	**Lhasa**	**55.60**	**79**	*e*P	**P**	**16 27 27.1**	**-0.4**
	comp=Z,38nm,1.4s						
LSZ	**Lusaka**	**56.51**	**174**	P	**P**	**16 27 35.0**	**+1.4**
	SNR=12						
LSZ	**Lusaka**	**56.51**	**174**	P	**P**	**16 27 35.0**	**+1.4**
	SNR=12						
GTA	**Gaotai**	**56.91**	**64**	P	**P**	**16 27 36.4**	**0.0**
GTA				pP	**pP**	**16 27 40.8**	**+0.2**
GTA				sP	**sP**	**16 27 43.5**	**+1.3**
GTA				PP	**PP**	**16 29 44.8**	**+2.2**
GTA				S	**S**	**16 35 30.3**	**+0.4**
GTA				sS	**sS**	**16 35 38.3**	**+1.4**
GTA				SS	**SS**	**16 39 19.5**	**+1.7**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,290nm,4.8s						
GTA				LR	LR		
	comp=N,920nm,19.0s						
GTA				LR	LR		
	comp=E,510nm,20.9s						
GTA				LR	LR		
	comp=Z,570nm,20.4s						
SONM	**Songino Array**	**57.21**	**53**	P	**P**	**16 27 39.0**	**+0.7**
SONM				PcP	**PcP**	**16 28 32.9**	**+0.1**
SONM	**Songino Array**	**57.21**	**53**	P	**P**	**16 27 39.0**	**+0.7**
	comp=Z,6.7nm,0.9s,baz=289,slow=9.6,SNR=50						
SONM				PcP	**PcP**	**16 28 32.9**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=283,slow=4.7,SNR=5.2						
SONM				LR	LR	16 54 53.6	
	comp=Z,820nm,18.4s,baz=304,slow=39						
SONM	**Songino Array**	**57.21**	**53**	P	**P**	**16 27 39.0**	**+0.7**
RES	**Resolute Bay**	**57.25**	**344**	P	**P**	**16 27 37.1**	**-0.9**
RES	**Resolute Bay**	**57.25**	**344**	P	**P**	**16 27 37.1**	**-0.9**
	comp=Z,12nn,0.8s,baz=3.9,slow=10						
RES	**Resolute Bay**	**57.25**	**344**	P	**P**	**16 27 37.1**	**-0.9**
SCHQ	**Schefferville**	**57.33**	**317**	P	**P**	**16 27 38.9**	**-0.1**
SCHQ	**Schefferville**	**57.33**	**317**	P	**P**	**16 27 38.9**	**-0.1**
	comp=Z,30nn,0.8s,baz=63,slow=6.1,SNR=52						
SCHQ				LR	LR	16 52 13.6	
	comp=Z,582nm,18.3s,baz=225,slow=36						
SCHQ	**Schefferville**	**57.33**	**317**	P	**P**	**16 27 38.9**	**-0.1**
ULN	**Ulaanbaatar**	**57.59**	**53**	P	**P**	**16 27 41.7**	**+0.6**
	SNR=15						
ULN	**Ulaanbaatar**	**57.59**	**53**	P	**P**	**16 27 42.0**	**+0.9**
	comp=Z,15nn,2.8s,comp=Z,591nm						
ULN	**Ulaanbaatar**	**57.59**	**53**	P	**P**	**16 27 41.7**	**+0.6**
	SNR=15						
TSUM	**Tsumeb**	**60.38**	**186**	*e*P	**P**	**16 27 59.9**	**-0.6**
	comp=Z,16nn,1.3s						
TSUM	**Tsumeb**	**60.38**	**186**	*e*P	**P**	**16 27 59.9**	**-0.6**
	comp=Z,16nn,1.3s						
LZH	**Lanzhou**	**61.34**	**66**	*e*P	**P**	**16 28 07.8**	**+0.6**
LZH				pP	**pP**	**16 28 11.6**	**+0.1**
LZH				sP	**sP**	**16 28 13.0**	**-0.1**
LZH				PcP	PcP	16 28 44.0	-5.5
LZH				PP	**PP**	**16 30 23.1**	**+1.1**
LZH				*e*S	**S**	**16 36 24.5**	**-3.0**
LZH				sS	**sS**	**16 36 34.6**	**0.0**
LZH				SS	**SS**	**16 40 24.5**	**-3.1**
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.8s						
LZH				LR	LR		
	comp=N,240nm,8.8s						
LZH				LR	LR		
	comp=E,540nn,10.4s						
LZH				LR	LR		
	comp=Z,740nm,13.6s						
YAK	**Yakutsk**	**61.57**	**31**	*d* iP	**P**	**16 28 07.1**	**-0.9**
YAK				*e*PP	**pP**	**16 28 17.2**	**+4.9**
YAK				*e*		16 28 47.7	
YAK				*e*		16 30 20.6	
YAK				*e*S	**S**	**16 36 29.2**	**0.0**
YAK				*e*SS	sS	16 36 46.1	+10
YAK				*e*		16 37 55.6	
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=E,10.0nm,2.1s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.9s						
YAK				pmax	pmax		
	comp=Z,91nm,3.5s						
YAK				pmax	pmax		
	comp=E,45nm,3.0s						
YAK				pmax	pmax		
	comp=N,30nm,3.0s						
YAK				smax	smax		
	comp=N,94nm,5.7s						
YAK				smax	smax		
	comp=E,247nm,8.0s						
YAK				MLR	MLR		
	comp=Z,1µm,16.0s						
YAK				MLR	MLR		
	comp=N,1µm,18.0s						
YAK				MLR	MLR		
	comp=E,1µm,19.0s						
YAK	**Yakutsk**	**61.57**	**31**	*i* P	**P**	**16 28 07.1**	**-0.9**
	comp=E,7.0nm,1.9s						
PQI	**Presque Isle**	**61.95**	**309**	*e*P	**P**	**16 28 11.1**	**+0.2**
	comp=E,32nn,1.1s						
PQI	**Presque Isle**	**61.95**	**309**	*e*P	**P**	**16 28 11.1**	**+0.2**
	comp=E,32nn,1.1s						
HHC	**Hu-ho-hao-te**	**63.91**	**58**	*e*P	**P**	**16 28 24.5**	**+0.3**
HHC				pP	**pP**	**16 28 28.4**	**-0.1**
HHC				sP	**sP**	**16 28 32.4**	**+2.3**
HHC				PcP	**PcP**	**16 29 01.1**	**+1.3**
HHC				PP	**PP**	**16 30 47.8**	**+3.4**
HHC				ScP		16 33 00.9	
HHC				S	**S**	**16 37 00.6**	**+1.0**
HHC				sS	**sS**	**16 37 05.4**	**-1.2**
HHC				ScS	**SKKSac**	**16 38 15.0**	**-2.7**
HHC				SS	**SS**	**16 41 07.6**	**+0.2**
HHC				pmax	pmax		
	comp=Z,41nm,0.7s						
HHC				pmax	pmax		
	comp=Z,360nm,6.0s						
HHC				LR	LR		
	comp=N,2µm,15.6s						
HHC				LR	LR		
	comp=E,2µm,13.2s						
HHC				LR	LR		
	comp=Z,3µm,12.0s						
CD2	**Chengdu**	**64.10**	**71**	P	**P**	**16 28 26.8**	**+1.3**
CD2				pP	**pP**	**16 28 31.5**	**+1.7**
CD2				sP	**sP**	**16 28 33.8**	**+2.4**
CD2				PcP	**PcP**	**16 29 02.1**	**+1.5**
CD2				PP	**PP**	**16 30 49.3**	**+3.1**
CD2				PcS		16 33 04.5	
CD2				S	**S**	**16 37 01.4**	**-0.6**
CD2				sS	**sS**	**16 37 08.6**	**-0.5**
CD2				SKS	**SKKSac**	**16 38 18.0**	**-1.3**
CD2				SS	**SS**	**16 41 11.3**	**+0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,240nm,6.0s						
CD2				LR	LR		
	comp=N,530nm,16.2s						
CD2				LR	LR		
	comp=E,620nn,13.2s						
CD2				LR	LR		
	comp=Z,730nm,11.0s						
HIA	**Hailar**	**64.14**	**46**	*e*P	**P**	**16 28 26.3**	**+0.9**
	comp=Z,140nm,1.9s						
XAN	**Xi'an**	**65.95**	**65**	P	**P**	**16 28 37.1**	**-0.4**
XAN				pP	**pP**	**16 28 42.3**	**+0.5**
XAN				PP	**PP**	**16 31 05.3**	**+3.0**
XAN				S	**S**	**16 37 25.1**	**+0.5**
XAN				ScS	**SKSac**	**16 38 28.5**	**-4.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.9s						
XAN				LR	LR		
	comp=N,340nm,19.5s						
XAN				LR	LR		
	comp=Z,120nm,16.4s						
KMI	**Kunming**	**66.69**	**76**	P	**P**	**16 28 43.0**	**+0.5**
KMI				pP	**pP**	**16 28 47.3**	**+0.5**
KMI				sP	**sP**	**16 28 49.0**	**+0.6**
KMI				PP	**PP**	**16 31 10.9**	**+1.7**
KMI				S	**S**	**16 37 35.5**	**+1.3**
KMI				SS	**SS**	**16 41 53.1**	**+1.7**
KMI				pmax	pmax		
	comp=Z,15nm,1.2s						
KMI				pmax	pmax		
	comp=Z,170nm,4.1s						
KMI				LR	LR		
	comp=N,280nm,16.2s						
KMI				LR	LR		
	comp=E,330nm,16.8s						
KMI				LR	LR		
	comp=Z,370nm,16.2s						
BJI	**Beijing**	**67.28**	**56**	P	**P**	**16 28 46.6**	**+0.8**
BJI				S	**S**	**16 37 38.8**	**-1.6**
BJI				SS	**SS**	**16 42 05.4**	**+6.0**
BJI				pmax	pmax		
	comp=Z,16nm,1.7s						
BJI				pmax	pmax		
	comp=Z,280nm,8.2s						
BJI				LR	LR		
	comp=N,1µm,15.2s						
BJI				LR	LR		
	comp=E,890nn,16.5s						
BJI				LR	LR		
	comp=Z,630nm,17.1s						
BILL	**Bilibino**	**67.60**	**14**	*d* iP	**P**	**16 28 47.1**	**-0.2**
BILL				*e*S	**S**	**16 37 48.3**	**+4.9**
BILL				*e*SS	**SS**	**16 42 07.2**	**+4.2**
BILL				pmax	pmax		
	comp=Z,25nn,1.3s						
CHTO	**Chiang Mai**	**67.64**	**84**	P	**P**	**16 28 47.4**	**-1.0**
	comp=Z,21nn,1.1s						
CMMT	**Chiang Mai**	**67.64**	**84**	P	**P**	**16 28 47.7**	**-0.7**
	comp=Z,18nn,1.0s						
CM31	**Chiang Mai Arr**	**67.85**	**85**	*e*P	**P**	**16 28 48.6**	**-1.1**
	comp=Z,2.4nn,0.5s						
CMAR	**Chiang Mai Arr**	**67.85**	**85**	P	**P**	**16 28 48.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**67.85**	**85**	P	**P**	**16 28 48.5**	**-1.3**
	comp=Z,6.7nm,0.8s,baz=304,slow=7.6,SNR=34						
CMAR				LR	LR	17 05 14.1	
	comp=Z,235nm,19.2s,baz=122,slow=42						
ENH	**Enshi**	**68.51**	**68**	*e*P	**P**	**16 28 52.9**	**-0.9**
	comp=Z,16nn,0.9s						
SEY	**Seymchan**	**68.62**	**22**	⇓*e*P	**P**	**16 28 54.7**	**+0.9**
GYA	**Guiyang**	**68.75**	**73**	P	**P**	**16 28 56.8**	**+1.4**
GYA				PP	**PP**	**16 31 29.0**	**+2.0**
GYA				ScP		16 33 24.3	
GYA				S	**S**	**16 37 58.4**	**-0.3**
GYA				SKS	**SKSac**	**16 38 51.9**	**-2.9**
GYA				SS	**SS**	**16 42 24.0**	**+0.9**
GYA				pmax	pmax		
	comp=Z,40nn,1.0s						
GYA				pmax	pmax		
	comp=Z,150nn,5.5s						
GYA				LR	LR		
	comp=N,740nn,19.7s						
GYA				LR	LR		
	comp=E,650nn,20.0s						
GYA				LR	LR		
	comp=Z,820nm,19.9s						
BINY	**Binghamton**	**69.18**	**308**	*e*P	**P**	**16 28 58.6**	**+0.9**
	comp=Z,54nn,1.5s						
BOSA	**Boshof**	**69.60**	**178**	P	**P**	**16 29 00.5**	**+0.2**
BOSA	**Boshof**	**69.60**	**178**	P	**P**	**16 29 00.5**	**+0.2**
	comp=Z,9.2nn,0.7s,baz=16,slow=6.5,SNR=19						
BOSA				LR	LR	17 01 58.2	
	comp=Z,1µm,19.2s,baz=0.0,slow=38						
KLR	**Kul'dur**	**70.41**	**41**	*e*P	P	16 29 01.7	-3.4
KLR				*e*S	**S**	**16 38 13.5**	**-3.8**
KLR				pmax	pmax		
	comp=E,54nn,2.0s						
KLR				pmax	pmax		
	comp=Z,120nn,2.0s						
KLR				MLR	MLR		
	comp=N,4µm,11.5s						
KLR				MLR	MLR		
	comp=Z,6µm,11.5s						
PBKT	**Sadao Pong**	**70.53**	**85**	P	**P**	**16 29 08.7**	**+2.4**
	comp=Z,14nm,2.0s						
CN2	**Changchun**	**70.54**	**49**	*e*P	**P**	**16 29 06.4**	**+0.4**
CN2				*e*pP	**pP**	**16 29 11.1**	**+0.7**
CN2				*e*sP	**sP**	**16 29 13.4**	**+1.4**
CN2				*e*S	**S**	**16 38 16.9**	**-2.1**
CN2				pmax	pmax		
	comp=Z,20nn,0.9s						
CN2				pmax	pmax		
	comp=Z,200nn,5.0s						
CN2				LR	LR		
	comp=N,1µm,16.0s						
CN2				LR	LR		
	comp=E,1µm,16.0s						
CN2				LR	LR		
	comp=Z,2µm,15.0s						
YKW3	**Yellowknife Ar**	**70.97**	**341**	*e*P	**P**	**16 29 08.3**	**0.0**
	comp=Z,0.7nm,1.1s						
YKA	**Yellowknife Ar**	**71.03**	**341**	P	**P**	**16 29 09.0**	**+0.4**
YKA	**Yellowknife Ar**	**71.03**	**341**	P	**P**	**16 29 09.0**	**+0.4**
	comp=Z,8.9nm,0.6s,baz=34,slow=5.4,SNR=141						
DL2	**Dalian**	**71.34**	**54**	⇑P	**P**	**16 29 11.8**	**+0.9**
DL2				S	**S**	**16 38 27.9**	**-0.5**
DL2				pmax	pmax		
	comp=Z,15nm,1.1s						
DL2				pmax	pmax		
	comp=Z,140nm,5.9s						
DL2				LR	LR		
	comp=N,560nm,17.6s						
DL2				LR	LR		
	comp=E,590nm,17.2s						
DL2				LR	LR		
	comp=Z,720nm,13.4s						
ALLY	**Alegheny Colle**	**71.96**	**310**	*e*P	**P**	**16 29 15.2**	**+0.5**
	comp=Z,73nm,1.5s						
MDJ	**Mudanjiang**	**72.31**	**46**	P	**P**	**16 29 16.3**	**-0.4**
MDJ				pP	**pP**	**16 29 19.4**	**-1.6**
MDJ				sP	**sP**	**16 29 20.6**	**-2.0**
MDJ				PcP	**PcP**	**16 29 34.8**	**+0.1**
MDJ				PP	**PP**	**16 31 56.0**	**-0.9**
MDJ				S	**S**	**16 38 38.9**	**-0.5**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,130nn,5.4s						
MDJ				LR	LR		
	comp=N,1µm,16.1s						
MDJ				LR	LR		
	comp=E,1µm,16.1s						
MDJ				LR	LR		
	comp=Z,1µm,13.8s						
CBN	**Corbin**	**72.48**	**306**	*e*P	**P**	**16 29 18.8**	**+1.0**
	comp=Z,17nm,0.6s						
HABR	**Khabarovsk**	**72.54**	**40**	*ce*P	**P**	**16 29 15.6**	**-2.4**
HABR				*e**SP	**sP**	**16 29 20.4**	**-3.5**
HABR				*e*		16 29 32.9	
HABR						16 31 57.0	
HABR				PPP	PPP	16 33 41.7	
HABR				*e*S	**S**	**16 38 40.8**	**-1.1**
HABR				*e*		16 39 22.7	
HABR				*e*SS	**SS**	**16 43 20.9**	**+1.1**
HABR				MLR	MLR		
	comp=N,770nm,11.0s						
HABR				MLR	MLR		
	comp=E,1µm,13.0s						
HABR				MLR	MLR		
	comp=Z,1µm,12.0s						
TNA	**Tin City**	**73.16**	**5**	*e*P	**P**	**16 29 21.7**	**+0.4**
	comp=Z,22nn,1.4s						
SUR	**Sutherland**	**73.33**	**182**	P	**P**	**16 29 23.9**	**+1.0**
	comp=Z,130nn,0.6s,SNR=5.9						
FFC	**Flin Flon**	**73.33**	**330**	*e*P	**P**	**16 29 23.0**	**+0.4**
FFC				pmax	pmax		
	comp=Z,16nn,0.7s						
FFC	**Flin Flon**	**73.33**	**330**	*e*P	**P**	**16 29 23.0**	**+0.4**
	comp=Z,16nn,0.7s						
FFC	**Flin Flon**	**73.33**	**330**	P	**P**	**16 29 23.6**	**+1.0**
	comp=Z,188nm,0.8s,SNR=18						
EGAK	**Eagle**	**73.51**	**353**	*e*P	**P**	**16 29 23.9**	**+0.5**
	comp=Z,6.2nn,0.9s						
USRK	**Ussuriysk Arra**	**73.87**	**45**	P	**P**	**16 29 25.9**	**0.0**
	comp=Z,3.2nn,0.7s,baz=292,slow=6.0,SNR=10						
USRK				LR	LR	17 05 11.1	
	comp=Z,1µm,18.8s,baz=112,slow=38						
COLA	**College**	**73.91**	**356**	*e*P	**P**	**16 29 26.0**	**+0.2**
COLA				pmax	pmax		
	comp=Z,12nn,1.3s						
COLA	**College**	**73.91**	**356**	*e*P	**P**	**16 29 26.0**	**+0.2**
	comp=Z,12nn,1.3s						
COWI	**Conover**	**73.91**	**318**	*e*P	**P**	**16 29 26.4**	**+0.2**
	comp=Z,34nn,0.8s						
ILAR	**Eielson Array**	**73.96**	**355**	P	**P**	**16 29 26.6**	**+0.5**
ILAR	**Eielson Array**	**73.96**	**355**	P	**P**	**16 29 26.6**	**+0.5**
	comp=Z,2.4nn,0.7s,baz=355,slow=5.1,SNR=43						
ILAR				LR	LR	17 03 33.6	
	comp=Z,283nn,21.5s,baz=197,slow=37						
ULM	**Lac du Bonnet**	**74.18**	**324**	P	**P**	**16 29 27.9**	**+0.3**
ULM	**Lac du Bonnet**	**74.18**	**324**	P	**P**	**16 29 27.9**	**+0.3**
	comp=Z,65nn,0.7s,baz=44,slow=5.7,SNR=54						
ULM				LR	LR	17 02 23.0	
	comp=Z,512nm,19.3s,baz=57,slow=36						
MENT	**Mentasta**	**75.55**	**354**	*e*P	**P**	**16 29 36.2**	**+0.8**
QIZ	**Qiongzhong**	**75.60**	**77**	P	**P**	**16 29 35.8**	**-0.6**
QIZ				S	**S**	**16 39 17.8**	**+0.6**
QIZ				pmax	pmax		
	comp=Z,35nn,2.2s						
QIZ				LR	LR		
	comp=N,360nm,21.3s						
QIZ				LR	LR		
	comp=Z,250nn,28.6s						
SSE	**Sheshan**	**75.97**	**61**	P	**P**	**16 29 37.5**	**-0.7**
SSE				S	**S**	**16 39 18.3**	**-2.6**
SSE				ScS	**SKSac**	**16 39 46.8**	**-1.9**
SSE				pmax	pmax		
	comp=Z,15nm,0.6s						
SSE				pmax	pmax		
	comp=Z,120nn,4.2s						
SSE				LR	LR		
	comp=N,400nm,21.5s						
SSE				LR	LR		
	comp=E,500nm,21.4s						
SSE				LR	LR		
	comp=Z,370nm,14.5s						
KSAR	**Wonju Array Be**	**76.06**	**52**	P	**P**	**16 29 38.5**	**-0.2**
KSRS	**Korea Array**	**76.07**	**52**	P	**P**	**16 29 38.5**	**-0.2**
	comp=Z,4.9nm,0.9s,baz=315,slow=5.1,SNR=29						
KSRS				LR	LR	17 06 07.0	
	comp=Z,392nm,20.1s,baz=313,slow=38						
PPLA	**Purkeypile**	**76.07**	**358**	*e*P	**P**	**16 29 37.3**	**-1.2**
	comp=Z,36nn,1.1s						
SPMN	**St. Paul**	**76.36**	**319**	⇑P	**P**	**16 29 40.9**	**+0.6**
	baz=76						
SFIN	**Scholer Farm**	**76.75**	**312**	⇓P	**P**	**16 29 42.7**	**+0.2**
	baz=76						
YSS	**Yuzh-Sakhalins**	**77.27**	**37**	*e*P	**P**	**16 29 46.7**	**+1.4**
YSS				*e*		16 32 46.0	
YSS				*e*S	**S**	**16 39 38.0**	**+3.4**
MDND	**Maddock**	**77.60**	**324**	⇓P	**P**	**16 29 47.7**	**+0.5**
	baz=77						
WCI	**Wyandotte Cave**	**77.76**	**310**	*e*P	**P**	**16 29 48.3**	**0.0**
WCI				pmax	pmax		
	comp=Z,20nn,0.8s						
WCI	**Wyandotte Cave**	**77.76**	**310**	*e*P	**P**	**16 29 48.3**	**0.0**
	comp=Z,20nn,0.8s						
DLBC	**Dease Lake**	**78.06**	**346**	*e*P	**P**	**16 29 51.7**	**+2.0**
PETK	**Petropavlovsk-**	**78.27**	**26**	P	**P**	**16 29 50.2**	**-0.6**
PETK	**Petropavlovsk-**	**78.27**	**26**	P	**P**	**16 29 50.2**	**-0.6**
PETK	**Petropavlovsk-**	**78.27**	**26**	P	**P**	**16 29 50.2**	**-0.6**
	comp=Z,5.9nm,0.7s,baz=245,slow=0.4,SNR=14						
PETK				LR	LR	17 06 52.0	
	comp=Z,570nn,19.8s,baz=314,slow=38

PET eSS SS 16 44 50.0 -1.9
PET MLR MLR
comp=Z,800nm,17.0s
DGMT Dagmar 79.07 327 P P 16 29 57.2 +1.9
DGMT Dagmar 79.07 327 ⇓P P 16 29 56.7 +1.3
baz=79
ASAJ Asahikawa 79.31 39 LR LR 17 08 13.3
comp=Z,828nm,18.4s,baz=292,slow=38
A22A Carney Farms, 79.34 328 ⇑P P 16 29 58.1 +1.2
baz=79
B23A Brockton 79.40 328 ⇑P P 16 29 58.2 +1.0
baz=79,SNR=10
BRSD Miller 79.89 322 ⇓P P 16 30 00.8 +0.9
baz=80
C24A Savage 79.91 327 ⇓P P 16 30 01.1 +1.1
baz=80
B22A Reddig Ranch S 79.93 328 ⇑P P 16 30 00.3 +0.2
baz=80,SNR=23
C23A Lambert 80.00 327 P P 16 30 01.7 +1.2
baz=80,SNR=16
WVT Waverly 80.10 310 eP P 16 30 00.3 -0.8
WVT pmax pmax
comp=Z,20nm,1.1s
WVT Waverly 80.10 310 eP P 16 30 00.3 -0.8
comp=Z,20nm,1.1s
D24A Glendive 80.19 326 ⇑P P 16 30 02.4 +0.8
baz=80
C22A Vida 80.33 328 P P 16 30 03.4 +1.1
baz=80,SNR=21
WRAK Wrangell Islan 80.39 346 eP P 16 30 04.0 +1.7
comp=Z,33nm,1.0s
A19A Klindworth Far 80.49 330 ⇑P P 16 30 04.3 +1.2
baz=80
D23A Lindsay 80.51 327 ⇑P P 16 30 04.0 +0.8
baz=80,SNR=44
B20A Solberg Farm, 80.61 329 P P 16 30 04.7 +0.9
baz=80,SNR=37
E24A Baker 80.63 326 ⇑P P 16 30 05.0 +1.2
baz=80,SNR=7.9
C21A Desert Coulee 80.75 328 P P 16 30 06.1 +1.6
baz=80,SNR=6.1
JNU Nakatsue 80.78 54 P P 16 30 04.2 -0.7
JNU Nakatsue 80.78 54 P P 16 30 04.2 -0.7
comp=Z,15nm,1.0s,baz=68,slow=4.8,SNR=4.9
YUK Yuzh-Kuril'sk 80.90 38 ci P P 16 30 04.4 -0.9
YUK eS S 16 40 15.2 +1.8
YUK MLR MLR
comp=N,532nm,18.0s
YUK MLR MLR
comp=E,797nm,18.0s
YUK MLR MLR
comp=Z,761nm,18.0s
A18A Metzger Ranch, 80.91 331 ⇑P P 16 30 05.2 -0.1
baz=81
D22A Cohagen 80.93 327 ⇓P P 16 30 06.3 +0.8
baz=81,SNR=36
B19A Brinkman Farms 80.95 330 P P 16 30 07.0 +1.5
baz=81,SNR=11
E23A Ismay 81.09 327 ⇓P P 16 30 07.3 +0.9
baz=81,SNR=20
ERM Erimo 81.15 41 ⇑i P P 16 30 08.0 +1.3
ERM pmax pmax
comp=Z,33nm,1.2s
C20A Veseth Ranch, 81.20 329 ⇓P P 16 30 06.9 0.0
baz=81,SNR=107
A17A Triple J Farms 81.20 331 ⇑P P 16 30 07.2 +0.3
baz=81,SNR=8.4
KDAK Kodiak Island 81.21 357 P P 16 30 09.0 +2.4
F24A Ekalaka 81.25 326 ⇓P P 16 30 08.3 +1.0
baz=81,SNR=23
B18A Beardsley Farm 81.32 330 ⇑P P 16 30 08.6 +1.1
baz=81,SNR=74
D21A La Casta Ranch 81.33 328 P P 16 30 09.5 +1.9
baz=81,SNR=26
E22A Miles City 81.41 327 P P 16 30 09.4 +1.4
baz=81,SNR=11
A16A West Butte Ran 81.52 332 ⇓P P 16 30 09.0 +0.3
baz=81,SNR=31
C19A Slack Wire Ran 81.59 329 P P 16 30 10.2 +1.2
baz=81,SNR=19
EGMT Eagleton 81.61 330 ⇑P P 16 30 10.7 +1.5
baz=81,SNR=17
G24A Alzada 81.65 325 P P 16 30 10.6 +1.1
baz=81,SNR=9.5
F23A Volborg 81.76 326 ⇑P P 16 30 10.6 +0.7
baz=81,SNR=39
D20A Manuel Ranch, 81.76 329 P P 16 30 10.9 +1.0
baz=81,SNR=42
LRAL Lakeview Retre 81.76 307 eP P 16 30 09.9 -0.2
comp=Z,146nm,1.4s
B17A L&G Farms, Che 81.78 331 ⇑P P 16 30 10.4 +0.4
baz=82,SNR=24
E21A Keefer Ranch, 81.78 328 ⇑P P 16 30 11.7 +1.6
baz=82,SNR=9.4
BGNE Belgrade 81.81 319 ⇑P P 16 30 10.9 +0.7
baz=82
A15A Johnson Ranch, 81.90 332 ⇑P P 16 30 11.0 +0.3
baz=82,SNR=14
B16A M & M Farms, S 82.01 331 P P 16 30 11.9 +0.7
baz=82,SNR=7.4
F22A Rosebud 82.06 327 ⇑P P 16 30 12.5 +1.0
baz=82,SNR=18
A14A Double T Ranch 82.15 333 P P 16 30 12.2 +0.2
baz=82,SNR=103
G23A Biddle 82.17 326 ⇑P P 16 30 12.9 +0.7
baz=82,SNR=33
H24A Dirks Ranch, A 82.17 325 ⇓P P 16 30 12.3 +0.1
baz=82,SNR=27
E20A Meyer Farm, Mu 82.24 328 ⇑P P 16 30 13.2 +0.8
baz=82,SNR=14
WALA Waterton Lakes 82.24 333 eP P 16 30 12.1 -0.4
comp=Z,1.4nm,0.8s
C17A Wharram Farm, 82.32 330 P P 16 30 13.2 +0.4
baz=82,SNR=14
D18A Linhart Farms, 82.32 330 ⇓P P 16 30 14.3 +1.4
baz=82,SNR=15
F21A Absaloka Mine, 82.39 327 ⇑P P 16 30 14.2 +1.0
baz=82
B15A Bradely Ranch, 82.40 332 P P 16 30 12.9 -0.4
baz=82,SNR=54
A13A Flathead Natio 82.52 333 ⇓P P 16 30 14.4 +0.5
baz=82
E19A Rath Farm, Rou 82.53 329 P P 16 30 14.5 +0.5
baz=82,SNR=44
G22A Birney 82.53 326 ⇓P P 16 30 14.9 +0.8
baz=82,SNR=10
C16A Fuhringer Ranc 82.54 331 ⇓P P 16 30 14.2 +0.2
baz=82,SNR=23
B14A Marquette Ranc 82.62 332 P P 16 30 14.3 -0.1
baz=82,SNR=37
MAT Matsushiro 82.62 47 P P 16 30 13.3 -1.2
MAT S S 16 40 23.2 -8.3
MJAR Matsushiro Arr 82.62 47 P P 16 30 14.6 0.0
MJAR Matsushiro Arr 82.62 47 P P 16 30 14.6 0.0
comp=Z,13nm,0.8s,baz=312,slow=5.0,SNR=52
MJAR LR LR 17 10 30.7
comp=Z,323nm,20.6s,baz=335,slow=38
H23A Clabaugh Cattl 82.68 325 ⇓P P 16 30 15.8 +0.9
baz=82
D17A Six Diamond Ra 82.69 330 ⇓P P 16 30 15.4 +0.5
baz=82,SNR=14
K27A Fleckinger Fa 82.75 322 ⇑P P 16 30 16.3 +1.1
baz=82
FX1 Attu Island--F 82.78 18 P P 16 30 15.7 +0.7
FX1 Attu Island--F 82.78 18 P P 16 30 15.7 +0.7
comp=Z,12nm,0.6s,baz=2.8,slow=22,SNR=6.4
F20A Billings 82.82 328 ⇑P P 16 30 16.6 +1.0
baz=82,SNR=18
C15A Salmond Ranch, 82.88 331 P P 16 30 16.1 +0.3
baz=82,SNR=22
E18A Harlowton 82.88 329 ⇓P P 16 30 16.9 +1.0
baz=83
G21A Lodge Grass 82.91 327 P P 16 30 17.1 +1.2
baz=83,SNR=19
I24A Kuemmerle Ranc 82.91 325 ⇑P P 16 30 15.5 -0.6
baz=83,SNR=9.6
A12A Yaak River Ran 82.94 334 ⇑P P 16 30 16.7 +0.6
baz=83,SNR=7.1
M29A Burnside Ranch 83.01 321 ⇓P P 16 30 17.6 +1.0
baz=83,SNR=6.0
B13A Whitefish 83.02 333 P P 16 30 17.2 +0.7
baz=83,SNR=40
H22A Clearmont 83.06 326 ⇑P P 16 30 17.3 +0.5
baz=83,SNR=39
F19A Roth Farm, Mol 83.09 328 ⇑P P 16 30 17.5 +0.6
baz=83,SNR=34
D16A Dana Ranch, Ca 83.11 330 P P 16 30 17.4 +0.4
baz=83,SNR=36
K26A Motz Farm, Whi 83.18 323 ⇑P P 16 30 18.3 +0.9
baz=83
N30A Hueftle Ranch, 83.22 320 ⇓P P 16 30 18.7 +1.0
baz=83,SNR=7.0
C14A Swan Lake 83.29 332 ⇓P P 16 30 18.4 +0.5
baz=83
YBMT Yellow Bay 83.30 332 eP P 16 30 18.0 0.0
comp=Z,25nm,0.8s
G20A Bridger 83.32 327 ⇓P P 16 30 18.4 +0.2
baz=83,SNR=42
H21A Big Horn, Sher 83.32 326 ⇑P P 16 30 18.7 +0.5
baz=83,SNR=20
E17A Martinsdale 83.33 330 ⇓P P 16 30 18.2 -0.1
baz=83
J24A Dixon Ranch, L 83.35 324 P P 16 30 19.7 +1.3
baz=83,SNR=12
F18A Big Timber 83.36 329 ⇓P P 16 30 18.9 +0.6
baz=83,SNR=36
M28A Bar X Bar Ranc 83.37 321 ⇓P P 16 30 19.8 +1.4
baz=83,SNR=13
GCMT Greycliff 83.43 329 eP P 16 30 18.8 +0.1
comp=Z,23nm,0.8s
N29A Votaw Ranch, W 83.46 320 ⇑P P 16 30 19.4 +0.5
baz=83,SNR=23
D15A Lincoln 83.46 331 ⇓P P 16 30 19.0 +0.1
baz=83,SNR=20
K25A Mack Ranch, Ha 83.57 323 ⇑P P 16 30 19.9 +0.5
baz=83,SNR=20
E16A East Helena 83.58 330 ⇑P P 16 30 20.3 +0.8
baz=83
C13A Hot Springs 83.65 333 ⇑P P 16 30 20.3 +0.5
baz=83,SNR=20
L26A Underwood Farm 83.66 323 ⇑P P 16 30 21.0 +1.0
baz=83
J23A Dilts Ranch, B 83.68 325 ⇑P P 16 30 20.7 +0.6
baz=83,SNR=5.1
I22A 9 Mile Ranch, 83.69 326 ⇑P P 16 30 20.6 +0.5
baz=83,SNR=46
F17A Fitzpatrick Pl 83.72 329 ⇑P P 16 30 20.8 +0.6
baz=83,SNR=34
G18A Lazy EL Ranch, 83.78 328 ⇓P P 16 30 20.7 +0.1
baz=84,SNR=9.2
D14A Greenough 83.79 332 P P 16 30 20.4 -0.1
baz=84,SNR=22
RLMT Red Lodge 83.83 328 eP P 16 30 22.1 +1.2
comp=Z,26nm,0.7s
H20A Greybull 83.83 327 P P 16 30 21.4 +0.7
baz=84,SNR=31
P31A Stockton 83.85 319 ⇑P P 16 30 21.1 +0.3
baz=84
PNT Penticton 83.86 336 P P 16 30 21.6 +0.9
PNT Penticton 83.86 336 P P 16 30 21.6 +0.9
K24A Anderson Ranch 83.90 324 ⇑P P 16 30 21.4 +0.2
baz=84,SNR=6.7
L25A Engebretsen Ra 83.97 323 ⇑P P 16 30 22.2 +0.7
baz=84
N28A Pribbeno Ranch 84.00 321 ⇓P P 16 30 22.9 +1.2
baz=84,SNR=5.4
NEW Newport 84.01 334 LR LR 17 07 25.1
comp=Z,203nm,21.0s,baz=34,slow=35
NEW Newport 84.01 334 P P 16 30 22.3 +0.8
baz=84,SNR=20
E15A Deer Lodge 84.03 331 P P 16 30 22.6 +0.8
baz=84,SNR=37
OGNE Ogallala 84.03 321 eP P 16 30 21.8 0.0
comp=Z,73nm,1.0s
OGNE Ogallala 84.03 321 ⇓P P 16 30 22.5 +0.6
baz=84
J22A Midwest 84.07 325 ⇑P P 16 30 22.0 -0.1
baz=84,SNR=43
H19A Powell 84.09 328 ⇑P P 16 30 23.1 +0.9
baz=84,SNR=68
C11A Tepee Creek (N 84.09 334 ⇓P P 16 30 22.0 +0.1
baz=84,SNR=12
I21A Big Trails, Te 84.09 326 ⇑P P 16 30 22.3 +0.1
baz=84,SNR=69
D13A Huson 84.11 332 P P 16 30 22.7 +0.6
baz=84,SNR=56
M26A McRoberts Ranc 84.14 322 ⇑P P 16 30 24.1 +1.6
baz=84,SNR=6.1
MSO Missoula 84.16 332 ⇑P P 16 30 23.1 +0.7
baz=84,SNR=30
F16A Kennard Place, 84.19 330 ⇓P P 16 30 23.8 +1.2
baz=84,SNR=17
K23A Bowen Ranch, D 84.23 324 ⇑P P 16 30 23.3 +0.4
baz=84,SNR=39
G17A Pierce Place, 84.24 329 ⇑P P 16 30 24.9 +2.0
baz=84,SNR=15
Q31A Ellis 84.25 318 ⇓P P 16 30 23.6 +0.7
baz=84
P30A Selden 84.26 319 ⇓P P 16 30 23.5 +0.5
baz=84
BOZ Bozeman (W) 84.31 330 eP P 16 30 24.1 +0.8
BOZ pmax pmax
comp=Z,34nm,1.2s
BOZ Bozeman (W) 84.31 330 eP P 16 30 24.1 +0.8
comp=Z,34nm,1.2s
I20A Worland 84.33 327 P P 16 30 24.1 +0.8
baz=84,SNR=33
E14A Clinton 84.35 331 ⇓P P 16 30 24.2 +0.7
baz=84
H18A Shoshone NF, C 84.35 328 ⇑P P 16 30 24.5 +0.9
baz=84,SNR=76
N27A Anderson Farm, 84.38 321 ⇑P P 16 30 24.5 +0.8
baz=84,SNR=5.4
D12A Red Ives Fores 84.46 333 ⇑P P 16 30 24.0 +0.1
baz=84
F15A Butte 84.47 330 ⇓P P 16 30 24.3 +0.2
baz=84,SNR=45
L24A Wheatland 84.50 324 ⇓P P 16 30 24.9 +0.7
baz=84
J21A Lysite 84.54 326 ⇑P P 16 30 24.6 +0.1
baz=84,SNR=54
P29A Atwood 84.55 320 ⇑P P 16 30 24.8 +0.3
baz=84
E13A Victor 84.58 332 ⇓P P 16 30 24.7 +0.2
baz=84,SNR=22
I19A Meeteetse 84.61 327 ⇑P P 16 30 26.0 +1.1
baz=84,SNR=70
N26A Koster Ranch, 84.68 322 ⇑P P 16 30 26.1 +0.9
baz=84
Q30A Quinter 84.69 319 ⇑P P 16 30 25.7 +0.5
baz=84
DPW Davenport 84.70 335 P P 16 30 26.4 +1.3
DPW Davenport 84.70 335 P P 16 30 26.4 +1.3
K22A Casper 84.71 325 ⇓P P 16 30 25.7 +0.4
baz=84,SNR=35
TUL1 Tulsa 84.72 314 ⇓P P 16 30 25.7 +0.5
baz=84,SNR=32
G16A Mcs Hill, Enn 84.73 330 P P 16 30 26.3 +0.9
baz=84,SNR=52
LKWY Lake 84.74 328 eP P 16 30 27.8 +2.2
LKWY pmax pmax
comp=Z,72nm,0.9s
LKWY Lake 84.74 328 eP P 16 30 27.8 +2.2
comp=Z,72nm,0.9s
L23A Garrett 84.78 324 ⇓P P 16 30 25.9 +0.1
baz=84
C09A Mirisman Ranch 84.78 335 P P 16 30 26.2 +0.8
J20A Shoshoni 84.80 326 ⇓P P 16 30 26.3 +0.5
baz=84,SNR=63
F14A Wisdom 84.82 331 P P 16 30 27.1 +1.2
baz=84,SNR=22
O27A Beecher Island 84.84 321 ⇓P P 16 30 26.7 +0.7
baz=84
R31A Burdett 84.87 318 ⇑P P 16 30 26.8 +0.7
baz=85
YMR Madison River 84.87 329 eP P 16 30 27.9 +1.7
M24A Cheyenne 84.91 323 P P 16 30 28.0 +1.6
baz=85,SNR=19
H17A Grant Village 84.95 328 ⇓P P 16 30 29.6 +2.9
baz=85,SNR=34
H16A Russell Place, 84.95 329 P P 16 30 27.9 +1.3
baz=85,SNR=59
P28A Saint Francis 84.97 320 P P 16 30 27.6 +0.9
baz=85,SNR=5.2
MBW Mount Baker 85.02 337 P P 16 30 26.5 -0.3
K21A Alcova 85.03 325 ⇓P P 16 30 27.0 -0.1
baz=85
G15A Dillon 85.04 330 ⇑P P 16 30 27.8 +0.8
baz=85,SNR=39
Q29A Oakley 85.13 319 ⇑P P 16 30 28.3 +0.9
baz=85
F13A Darby 85.19 331 P P 16 30 28.0 +0.4
baz=85,SNR=84
RPW Rockport 85.21 337 P P 16 30 27.6 0.0
I18A Diamond G Ranc 85.22 328 ⇑P P 16 30 29.2 +1.2
baz=85,SNR=27
R30A Dighton 85.25 319 P P 16 30 29.0 +1.0
baz=85,SNR=6.2
J19A Crowheart 85.27 327 P P 16 30 28.7 +0.5
baz=85,SNR=49
OD2 Odessa Site #2 85.29 335 P P 16 30 28.8 +0.8
M23A Laramie 85.31 324 ⇑P P 16 30 29.4 +0.9
baz=85,SNR=15
G14A Jackson 85.34 331 ⇓P P 16 30 29.6 +1.0
baz=85
I17A Pilgrim Ck. 85.34 328 P P 16 30 31.1 +2.5
baz=85,SNR=8.6
P27A Ficken Ranch, 85.38 321 ⇑P P 16 30 29.6 +0.8
baz=85
CMW Cultus Mountai 85.41 337 P P 16 30 28.5 -0.1
WTV Waterville 85.41 336 P P 16 30 29.5 +0.9
Q28A Sharon Springs 85.41 320 P P 16 30 29.8 +1.0
baz=85,SNR=5.2
N24A Carr 85.45 323 ⇑P P 16 30 29.9 +0.8
baz=85,SNR=12
MCMT McKenzie Canyo 85.46 330 eP P 16 30 29.7 +0.5
comp=Z,10nm,0.8s
K20A Yellowstone Ra 85.48 326 ⇑P P 16 30 29.1 -0.1
baz=85,SNR=19
F12A Elk City 85.55 332 P P 16 30 29.6 +0.2
baz=85,SNR=72
K19A Absolon Red Bu 85.55 326 P P 16 30 29.8 +0.2
baz=85,SNR=31
H15A Lima 85.56 330 P P 16 30 31.0 +1.3
baz=85,SNR=28
R29A Marienthal 85.57 319 ⇓P P 16 30 29.1 -0.5
baz=85
L21A Rawlins 85.63 325 P P 16 30 30.4 +0.3
baz=85,SNR=19
O25A Wiggins 85.67 322 ⇑P P 16 30 31.0 +0.9
baz=85
I16A Newdale 85.74 329 P P 16 30 33.0 +2.5
baz=85,SNR=30
P26A Davis Ranch, A 85.74 321 P P 16 30 31.6 +1.1
baz=85,SNR=9.0
G13A Cobalt 85.75 331 P P 16 30 30.8 +0.3
baz=85,SNR=42
M22A Cedar Creek Ra 85.75 324 P P 16 30 31.6 +0.9
baz=85,SNR=15
KSCO Kaye Shedlock' 85.83 320 ⇓P P 16 30 31.2 +0.2
baz=86,SNR=7.4
H14A Leadore 85.84 330 ⇑P P 16 30 31.8 +0.8
baz=86,SNR=20
S30A Montezuma 85.84 318 ⇑P P 16 30 32.1 +1.1
baz=86
T31A Randall Ranch, 85.86 317 ⇓P P 16 30 31.4 +0.4
baz=86,SNR=5.9
HTW Haystack Looko 85.86 337 P P 16 30 30.9 0.0
N23A Red Feather La 85.87 324 ⇓P P 16 30 32.2 +0.8
baz=86,SNR=24
BW06 Boulder Array 85.89 327 eP P 16 30 31.4 0.0
PDAR Pinedale Array 85.89 327 P P 16 30 31.6 +0.2
PDAR Pinedale Array 85.89 327 P P 16 30 31.6 +0.2
comp=Z,8.6nm,0.8s,baz=61,slow=4.9,SNR=43
PDAR LR LR 17 09 17.7
comp=Z,505nm,18.4s,baz=38,slow=36
M21A Separation Pea 85.92 325 P P 16 30 32.0 +0.5
baz=86,SNR=16
R28A Tribune 85.96 319 ⇑P P 16 30 31.8 +0.2
baz=86,SNR=5.9
L20A Wamsutter 86.01 326 ⇓P P 16 30 32.4 +0.5
baz=86,SNR=21
I15A Monteview 86.03 329 P P 16 30 34.4 +2.6
baz=86,SNR=11
O24A Longmont 86.10 323 ⇓P P 16 30 33.2 +0.9
baz=86
G12A Big Creek, Yel 86.11 332 ⇑P P 16 30 33.3 +1.0
baz=86
P25A Willow Gulch B 86.17 322 ⇑P P 16 30 33.5 +0.8
baz=86,SNR=11
N22A Wattenberg Ran 86.17 324 ⇓P P 16 30 33.7 +0.9
baz=86,SNR=8.6
S29A Ulysses 86.18 319 ⇓P P 16 30 33.3 +0.6
baz=86
T30A Plains 86.33 318 ⇓P P 16 30 34.4 +1.0
baz=86
BDFB Brasilia 86.35 246 P P 16 30 34.9 +1.2
BDFB Brasilia 86.35 246 P P 16 30 34.9 +1.2
comp=Z,13nm,0.6s,baz=69,slow=4.8,SNR=24
BDFB LR LR 17 11 43.1
comp=Z,269nm,20.6s,baz=30,slow=37
L19A Farson 86.36 326 P P 16 30 34.1 +0.5
baz=86,SNR=9.2
M20A Sweetwater, Wa 86.37 325 ⇓P P 16 30 34.4 +0.6
baz=86,SNR=13
O23A Lake Granby, G 86.41 323 P P 16 30 35.1 +1.1
baz=86,SNR=7.9
H12A Diamond D Ranc 86.44 331 P P 16 30 34.1 +0.2
baz=86,SNR=17
I14A Mackay 86.45 330 P P 16 30 35.5 +1.5
baz=86,SNR=63
R27A Eads 86.49 320 ⇑P P 16 30 34.4 +0.2
baz=86
S28A Manter 86.59 319 ⇑P P 16 30 35.3 +0.6
baz=86,SNR=8.8
ISCO Idaho Springs 86.60 323 P P 16 30 35.3 +0.3
baz=86,SNR=20
T29A Hugoton 86.63 318 ⇓P P 16 30 35.9 +1.0
baz=86
N21A Black Mountain 86.68 324 ⇓P P 16 30 35.6 +0.3
baz=86,SNR=22
I13A Wildhorse Cree 86.72 330 P P 16 30 36.4 +1.1
baz=86,SNR=66
O22A Kremmling 86.73 324 ⇓P P 16 30 36.0 +0.4
baz=86,SNR=12
M19A Rock Springs 86.77 326 ⇓P P 16 30 35.9 +0.2
baz=86,SNR=7.7
R26A Arlington 86.79 320 ⇑P P 16 30 36.1 +0.4
baz=86,SNR=9.1
L18A Fontenelle, Gr 86.79 327 ⇑P P 16 30 35.9 +0.2
baz=86,SNR=8.7
U30A WK&E Inc. Balk 86.79 318 ⇓P P 16 30 36.3 +0.7
baz=86
N20A Spence Gulch, 86.94 325 P P 16 30 37.3 +0.8
baz=87,SNR=32
J14A Carey 86.99 330 ⇓P P 16 30 37.9 +1.2
baz=87,SNR=12
BMO Blue Mountains 87.05 333 eP P 16 30 35.8 -1.0
comp=Z,17nm,0.8s
P23A Jefferson 87.05 323 ⇓P P 16 30 37.9 +0.7
baz=87,SNR=30
Q24A Divide 87.06 322 ⇓P P 16 30 36.0 -1.2
baz=87
T28A Walsh 87.07 319 ⇑P P 16 30 37.2 +0.1
baz=87,SNR=6.4
O21A Pagoda 87.10 324 P P 16 30 37.9 +0.6
baz=87,SNR=10
HLID Hailey 87.13 330 P P 16 30 38.4 +1.1
baz=87,SNR=17
J13A Cove Ranch, Pi 87.18 330 ⇑P P 16 30 38.2 +0.6
baz=87,SNR=14
I12A Atlanta 87.19 331 ⇓P P 16 30 38.2 +0.5
baz=87
WMOK Wichita Mounta 87.20 315 eP P 16 30 37.6 0.0
WMOK pmax pmax
comp=Z,15nm,0.7s
WMOK Wichita Mounta 87.20 315 eP P 16 30 37.6 0.0
comp=Z,15nm,0.7s
KSM Kuching 87.23 90 eP P 16 30 37.4 -0.7
comp=Z,8.0nm,0.8s
R25A Fountain Ranch 87.31 321 P P 16 30 38.5 +0.3
baz=87,SNR=8.1
V30A Spur Ranch, Mi 87.41 317 ⇑P P 16 30 39.4 +0.7
baz=87
T27A Campo 87.41 319 ⇓P P 16 30 38.8 +0.1
baz=87
M17A Scullys Gap (B 87.43 327 P P 16 30 39.0 +0.1
baz=87,SNR=13
W31A Holland Ranch, 87.47 316 ⇓P P 16 30 39.6 +0.6
baz=87
O20A White River Ci 87.50 325 P P 16 30 39.5 +0.3
baz=87,SNR=21
R24A Sanders Place, 87.63 321 P P 16 30 40.5 +0.6
baz=87,SNR=9.2
P21A Newcastle 87.66 324 ⇓P P 16 30 40.0 0.0
baz=87,SNR=11
HWUT Hardware Ranch 87.68 327 eP P 16 30 39.1 -0.9
comp=Z,29nm,0.8s
U28A Mallet 87.70 319 ⇑P P 16 30 39.3 -0.8
baz=87
O19A Miners Draw (B 87.75 325 ⇓P P 16 30 40.3 -0.1
baz=87
S25A Robets Cordova 87.77 321 P P 16 30 41.1 +0.6
baz=88,SNR=19

MFID	Camas Ranch	87.78	331	P		P		16 30 41.1	+0.8
	baz=87,SNR=37								
X31A	McDonald Ranch	87.91	316	P		P		16 30 41.8	+0.7
	baz=88,SNR=7.5								
Q22A	Crested Butte,	87.95	323	⇓P		P		16 30 41.8	+0.2
	baz=88,SNR=35								
U27A	Thompson Grove	87.97	319	P		P		16 30 41.2	-0.3
	baz=88,SNR=6.0								
R23A	Moffat	88.00	322	P		P		16 30 42.2	+0.5
	baz=88,SNR=10								
P20A	De Beque	88.09	324	⇑P		P		16 30 41.7	-0.3
	baz=88,SNR=8.0								
Y32A	R-V Farms, Ver	88.11	315	⇑P		P		16 30 42.9	+0.8
	baz=88,SNR=9.7								
S24A	Houchin Ranch,	88.15	321	⇑P		P		16 30 42.3	-0.2
	baz=88,SNR=8.7								
T25A	Trinidad	88.17	320	⇑P		P		16 30 42.6	+0.1
	baz=88,SNR=13								
V28A	Channing	88.19	318	⇓P		P		16 30 42.3	-0.2
	baz=88								
SDCO	Great Sand Dun	88.20	321	*e*P		P		16 30 42.6	-0.2
	comp=Z,12nm,1.0s								
P19A	Cripple Cowboy	88.24	325	P		P		16 30 43.1	+0.3
	baz=88,SNR=21								
Q21A	Lamborn Mesa,	88.27	323	⇑P		P		16 30 43.2	+0.2
	baz=88,SNR=7.8								
R22A	Saguache, Gunn	88.40	323	P		P		16 30 44.3	+0.6
	baz=88,SNR=30								
U26A	Atchley Ranch,	88.44	320	P		P		16 30 44.4	+0.6
	baz=88,SNR=19								
Q20A	Ridgley Place,	88.50	324	P		P		16 30 44.0	0.0
	baz=88,SNR=14								
X30A	Coker Ranch, T	88.52	316	P		P		16 30 44.1	+0.1
	baz=88,SNR=29								
WHTX	Lake Whitney	88.57	313	⇑P		P		16 30 45.2	+1.1
	baz=88,SNR=6.1								
W28A	Vega	88.57	318	⇑P		P		16 30 44.3	0.0
	baz=88								
Y31A	Rekieta Farm,	88.58	316	P		P		16 30 44.3	+0.1
	baz=88,SNR=12								
R21A	Cimarron	88.64	323	⇓P		P		16 30 44.9	+0.2
	baz=88,SNR=7.1								
Z32A	Haskell	88.67	315	⇓P		P		16 30 45.1	+0.4
	baz=88,SNR=45								
U25A	Circle Dot Ran	88.76	320	P		P		16 30 46.1	+0.8
	baz=88,SNR=16								
P18A	Preston Nutter	88.79	326	P		P		16 30 45.7	+0.2
	baz=88,SNR=22								
S22A	4UR Ranch, Cre	88.82	322	⇓P		P		16 30 45.9	+0.3
	baz=88,SNR=36								
V26A	Tequesquite Ra	88.94	319	⇓P		P		16 30 45.6	-0.4
	baz=89,SNR=7.1								
X29A	Tulia	88.95	317	⇓P		P		16 30 45.9	-0.1
	baz=89								
Y30A	Stafford Cattl	88.98	316	⇓P		P		16 30 46.3	+0.1
	baz=89								
Z31A	Sharp Cattle R	89.01	315	⇑P		P		16 30 46.4	+0.2
	baz=89,SNR=15								
T23A	Casias Ranch,	89.03	321	P		P		16 30 47.5	+0.9
	baz=89,SNR=8.2								
X28A	Dimmitt	89.15	317	⇑P		P		16 30 46.7	-0.3
	baz=89								
W27A	Bowe Ranch, En	89.16	318	⇑P		P		16 30 47.2	+0.2
	baz=89,SNR=5.5								
R20A	Redvale	89.16	324	⇓P		P		16 30 47.2	0.0
	baz=89,SNR=27								
ABTX	Abilene, Hawle	89.28	315	⇓P		P		16 30 48.3	+0.8
	baz=89,SNR=22								
PV01	Paradox Valley	89.29	324	*e*P		P		16 30 47.8	0.0
	comp=Z,5μm,1.2s								
S21A	Coal Bank Pass	89.33	323	P		P		16 30 48.3	+0.3
	baz=89,SNR=17								
SRU	San Rafael	89.34	325	P		P		16 30 47.5	-0.4
	baz=89,SNR=36								
DUG	Dugway	89.38	328	P		P		16 30 48.5	+0.5
	baz=89,SNR=40								
Y29A	Porterfield Fa	89.39	317	P		P		16 30 48.4	+0.3
	baz=89,SNR=7.2								
S20A	Disappointment	89.45	323	P		P		16 30 49.1	+0.5
	baz=89,SNR=29								
T22A	Edith	89.45	322	P		P		16 30 49.6	+1.1
	baz=89,SNR=36								
W26A	Owens Ranch, T	89.49	319	⇑P		P		16 30 48.9	+0.3
	baz=89								
Z30A	Sanderson Ranc	89.56	316	P		P		16 30 48.8	-0.1
	baz=89,SNR=7.6								
WVOR	Wild Horse Val	89.63	332	*e*P		P		16 30 49.7	+0.5
WVOR				pmax		pmax			
	comp=Z,11nm,1.1s								
WVOR	Wild Horse Val	89.63	332	*e*P		P		16 30 49.7	+0.5
	comp=Z,11nm,1.1s								
131A	Roby	89.64	315	⇓P		P		16 30 50.1	+0.8
	baz=89								
Y28A	McKinney Farm,	89.65	317	⇑P		P		16 30 49.4	+0.1
	baz=89,SNR=7.6								
U23A	El Rito	89.67	321	⇑P		P		16 30 50.3	+0.7
	baz=89,SNR=8.3								
V24A	Rampart Ranch,	89.72	320	⇓P		P		16 30 50.3	+0.5
	baz=89,SNR=12								
W25A	X Bar L Ranch,	89.73	319	P		P		16 30 50.2	+0.5
	baz=89,SNR=14								
Q16A	Castle Valley	89.78	326	P		P		16 30 50.3	+0.3
	baz=90,SNR=21								
232A	Coleman	89.85	314	P		P		16 30 51.0	+0.8
	baz=90,SNR=23								
ELK	Elko	89.86	329	*e*P		P		16 30 51.8	+1.4
	comp=Z,25nm,1.6s								
MSTX	Muleshoe	89.87	317	⇑P		P		16 30 50.4	0.0
	baz=90,SNR=5.3								
Z29A	Hungry Hill Ra	89.88	316	P		P		16 30 50.6	+0.2
	baz=90,SNR=6.7								
X26A	CR and CF Fran	89.94	318	⇓P		P		16 30 50.4	-0.3
	baz=90,SNR=9.3								
130A	Snyder	90.01	315	P		P		16 30 51.9	+0.9
	baz=90,SNR=5.8								
MVCO	Mesa Verde	90.02	323	*e*P		P		16 30 50.9	-0.3
	comp=Z,16nm,0.8s								
MVCO	Mesa Verde	90.02	323	⇑P		P		16 30 51.6	+0.4
	baz=90								
V23A	Ortiz Mt. (NFS	90.14	321	P		P		16 30 53.2	+1.4
	baz=90,SNR=5.0								
231A	Bronte	90.17	315	P		P		16 30 52.8	+1.1
	baz=90,SNR=12								
W24A	Lazy 6 Ranch,	90.20	320	⇑P		P		16 30 52.5	+0.5
	baz=90,SNR=15								
Z28A	Tucker Farm, M	90.21	317	P		P		16 30 52.0	0.0
	baz=90,SNR=6.0								
U21A	Nageezi	90.28	322	P		P		16 30 52.5	+0.1
	baz=90,SNR=34								
332A	Millersview	90.29	314	P		P		16 30 53.1	+0.8
	baz=90,SNR=27								
S18A	Hurst Farm, Bl	90.29	324	P		P		16 30 52.5	0.0
	baz=90,SNR=14								
V22A	San Miguel Ran	90.35	321	P		P		16 30 53.5	+0.7
	baz=90,SNR=18								
X25A	Clemmons Ranch	90.38	319	⇑P		P		16 30 53.3	+0.5
	baz=90								
Y26A	Elida	90.44	318	⇑P		P		16 30 53.3	+0.2
	baz=90								
MVU	Marysvale	90.56	326	*e*P		P		16 30 53.6	-0.1
	comp=Z,15nm,0.8s								
W23A	Werner Place,	90.60	320	P		P		16 30 54.7	+0.8
	baz=90,SNR=7.1								
Z27A	Tatum	90.61	317	P		P		16 30 54.1	+0.2
	baz=90,SNR=8.6								
230A	Sterling City	90.64	315	⇓P		P		16 30 54.4	+0.5
	baz=90								
MOD	Modoc	90.68	333	*e*P		P		16 30 55.4	+1.3
	comp=Z,19nm,1.2s								
432A	Menard	90.71	314	⇓P		P		16 30 54.5	+0.2
	baz=90,SNR=6.0								
331A	San Angelo	90.72	314	⇓P		P		16 30 54.7	+0.4
	baz=90,SNR=8.5								
U20A	Newcomb	90.72	323	⇓P		P		16 30 55.0	+0.6
	baz=90								
V21A	Milan	90.78	322	⇑P		P		16 30 55.2	+0.4
	baz=90								
128A	Castleberry Fa	90.78	316	P		P		16 30 55.0	+0.3
	baz=90,SNR=7.2								
Y25A	Mesa, Roswell	90.88	319	⇑P		P		16 30 55.1	0.0
	baz=91,SNR=12								
BMN	Battle Mountai	90.88	331	*e*P		P		16 30 55.9	+0.8
BMN				pmax		pmax			
	comp=Z,10.0nm,0.7s								
BMN	Battle Mountai	90.88	331	*e*P		P		16 30 55.9	+0.8
	comp=Z,10nm,0.7s								
ANMO	Albuquerque	90.92	320	*e*P		P		16 30 55.0	-0.4
	comp=Z,7.8nm,1.1s								
229A	Bryant Ranch,	90.94	316	⇑P		P		16 30 55.2	-0.2
	baz=91								
W22A	Albuquerque	91.01	321	⇓P		P		16 30 57.1	+1.3
	baz=91								
JCT	Junction City	91.02	313	P		P		16 30 56.8	+1.1
	baz=91,SNR=9.6								
Z26A	Caprock	91.04	318	P		P		16 30 55.9	0.0
	baz=91,SNR=26								
330A	Mertzon	91.04	315	P		P		16 30 56.5	+0.7
	baz=91,SNR=8.0								
V20A	Brimhall	91.17	322	P		P		16 30 56.9	+0.3
	baz=91,SNR=18								
Y24A	Capitan	91.24	319	⇑P		P		16 30 57.2	+0.3
	baz=91								
431A	Sonora	91.30	314	P		P		16 30 58.3	+1.3
	baz=91,SNR=24								
532A	Rocksprings	91.34	313	P		P		16 30 58.0	+0.7
	baz=91,SNR=20								
W21A	San Fidel	91.34	321	P		P		16 30 58.4	+1.1
	baz=91,SNR=6.7								
Z25A	Roswell	91.40	318	⇓P		P		16 30 58.0	+0.4
	baz=91,SNR=7.1								
329A	Wagon Wheel Ra	91.41	315	P		P		16 30 58.4	+0.8
	baz=91,SNR=11								
Y23A	Lovelace Mesa,	91.54	320	P		P		16 30 58.5	+0.2
	baz=91,SNR=8.3								
430A	Baggett Ranch,	91.56	314	P		P		16 30 59.0	+0.7
	baz=91,SNR=15								
BNM	Barren Site	91.64	320	*e*P		P		16 30 59.1	+0.3
	comp=Z,17nm,1.2s								
531A	Rocksprings	91.67	314	⇓P		P		16 30 58.8	0.0
	baz=91								
ARUT	Antelope Range	91.68	327	*e*P		P		16 30 59.6	+0.8
ARUT				pmax		pmax			
	comp=Z,14nm,1.2s								
ARUT	Antelope Range	91.68	327	*e*P		P		16 30 59.5	+0.8
	comp=Z,14nm,1.2s								
LAZ	Ladron	91.69	321	*e*P		P		16 30 59.4	+0.4
	comp=Z,11nm,1.3s								
Z24A	Sheeppen Canyo	91.69	319	P		P		16 30 59.5	+0.6
	baz=91,SNR=9.3								
W20A	Ramah	91.74	322	⇓P		P		16 30 59.5	+0.3
	baz=91,SNR=12								
632A	Uvalde	91.76	313	⇓P		P		16 30 59.1	0.0
	baz=92,SNR=7.0								
CCUT	Cedar City	91.85	327	*e*P		P		16 30 60.0	+0.3
	comp=Z,69nm,2.2s								
125A	Gardner Draw,	91.87	318	⇓P		P		16 30 59.0	-0.8
	baz=92,SNR=10								
328A	Wristen Ranch,	91.93	316	⇓P		P		16 30 59.5	-0.5
	baz=92,SNR=6.6								
X21A	Alamocita Cree	91.96	321	P		P		16 31 01.0	+0.7
	baz=92,SNR=38								
Y22A	Socorro	91.98	320	P		P		16 31 00.8	+0.5
	baz=92,SNR=10								
429A	Davenport Ranc	92.04	315	⇓P		P		16 30 58.7	-1.8
	baz=92								
R11A	Troy Canyon, C	92.07	328	⇑P		P		16 31 01.1	+0.4
	baz=92,SNR=13								
226B	Tecolote Peak,	92.08	317	P		P		16 31 01.1	+0.4
	baz=92,SNR=10								
ROSC	El Rosal	92.10	278	LR		LR		17 10 26.9	
	comp=Z,170nm,20.0s,baz=23,slow=34								
530A	J-C Ranch, Com	92.11	314	P		P		16 31 01.7	+0.9
	baz=92,SNR=35								
Z23A	Rita Site, Whi	92.17	319	⇑P		P		16 31 01.4	+0.3
	baz=92,SNR=8.4								
X20A	Quemado	92.22	322	⇓P		P		16 31 02.4	+0.9
	baz=92								
124A	Stringfield Ra	92.24	318	P		P		16 31 01.6	+0.1
	baz=92,SNR=5.7								
Y21A	Point of Rocks	92.26	321	P		P		16 31 02.5	+0.8
	baz=92,SNR=12								
631A	Perdido Creek	92.27	313	P		P		16 31 02.3	+0.9
	baz=92,SNR=19								
U15A	North Rim	92.35	325	P		P		16 31 02.5	+0.4
	baz=92,SNR=14								
428A	Kincaid Ranch,	92.38	315	P		P		16 31 02.7	+0.6
	baz=92,SNR=5.4								
732A	Laxson Ranch,	92.46	312	P		P		16 31 03.5	+1.1
	baz=92,SNR=5.6								
BEKR	Beckworth	92.51	332	*e*P		P		16 31 03.3	+0.7
	comp=Z,6.0nm,1.3s								
Z22A	Elephant Butte	92.53	320	⇑P		P		16 31 03.1	+0.3
	baz=92,SNR=9.7								
326A	Caldwell Ranch	92.59	317	⇓P		P		16 31 03.6	+0.5
	baz=92								
529A	Stev Forest Ra	92.60	315	P		P		16 31 04.0	+0.9
	baz=92,SNR=11								
427A	Hayter Ranch,	92.66	316	P		P		16 31 03.9	+0.5
	baz=92,SNR=6.1								
Y20A	Horse Springs,	92.68	321	P		P		16 31 04.6	+1.0
	baz=92,SNR=11								
WUAZ	Wupatki	92.72	324	*e*P		P		16 31 04.2	+0.5
	comp=Z,39nm,1.4s								
WUAZ	Wupatki	92.72	324	P		P		16 31 04.8	+1.1
	baz=92,SNR=12								
224A	Cornudas Mount	92.77	318	⇓P		P		16 31 03.3	-0.6
	baz=92								
WCN	Washoe City	92.80	332	*e*P		P		16 31 05.1	+1.1
WCN				pmax		pmax			
	comp=Z,92nm,2.1s								
WCN	Washoe City	92.80	332	*e*P		P		16 31 05.1	+1.1
	comp=Z,92nm,2.1s								
Z21A	St. Cloud Mine	92.83	320	⇓P		P		16 31 04.8	+0.5
	baz=92,SNR=10.0								
528A	Cox Ranch, San	92.88	315	P		P		16 31 05.2	+0.7
	baz=93,SNR=17								
X18A	Snowflake	92.90	323	⇓P		P		16 31 04.7	+0.2
	baz=93,SNR=5.9								
NV11	Mina Array Sit	92.98	330	*e*P		P		16 31 04.9	+0.1
MNTX	Cornudas Mount	93.00	318	*e*P		P		16 31 03.2	-1.6
	comp=Z,8.3nm,1.1s								
NVAR	Mina Array Bea	93.04	330	P		P		16 31 05.7	+0.5
NVAR				PKKP		PKKPbc		16 48 13.6	+0.4
NVAR	Mina Array Bea	93.04	330	P		P		16 31 05.7	+0.5
	comp=Z,6.6nm,0.7s,baz=40,slow=4.0,SNR=64								
NVAR				PKKP		PKKPbc		16 48 13.6	+0.4
	comp=Z,0.4nm,0.6s,baz=198,slow=5.1,SNR=3.8								
NVAR				LR		LR		17 16 58.7	
	comp=Z,322nm,18.3s,baz=212,slow=38								
325A	Bean Ranch, Si	93.06	317	⇑P		P		16 31 04.2	-1.1
	baz=93								
426A	McDonald Obser	93.13	316	⇑P		P		16 31 05.9	+0.1
	baz=93,SNR=27								
324A	Moseley Ranch,	93.26	318	P		P		16 31 06.2	0.0
	baz=93,SNR=17								
527A	Woodward Ranch	93.33	316	P		P		16 31 07.2	+0.6
	baz=93,SNR=11								
Z20A	Nine Sixteen R	93.43	321	P		P		16 31 07.8	+0.8
	baz=93,SNR=24								
628A	Black Gap, Mar	93.46	315	P		P		16 31 08.0	+1.0
	baz=93,SNR=16								
121A	Cookes Peak, D	93.52	320	P		P		16 31 08.2	+0.8
	baz=93,SNR=8.4								
526A	Mary Lane Ranc	93.64	316	P		P		16 31 08.9	+0.9
	baz=93,SNR=7.7								
X16A	Lo Mia Camp, P	93.67	324	P		P		16 31 09.6	+1.5
	baz=93,SNR=13								
627A	Terlingua Ranc	93.76	315	P		P		16 31 08.7	+0.2
	baz=94,SNR=22								
120A	U Bar Ranch, L	93.92	321	P		P		16 31 10.2	+0.9
	baz=94,SNR=6.1								
TXAR	Lajitas Array	94.00	315	P		P		16 31 10.2	+0.7
TXAR	Lajitas Array	94.00	315	P		P		16 31 10.2	+0.7
	comp=Z,7.6nm,0.8s,baz=67,slow=4.1,SNR=88								
TXAR				LR		LR		17 13 10.2	
	comp=Z,355nm,18.2s,baz=320,slow=35								
626A	Big Bend Ranch	94.07	316	P		P		16 31 10.2	+0.3
	baz=94,SNR=10								
CMB	Columbia Colle	94.15	332	*e*P		P		16 31 10.9	+0.8
CMB				pmax		pmax			
	comp=Z,17nm,1.5s								
CMB	Columbia Colle	94.15	332	*e*P		P		16 31 10.9	+0.8
	comp=Z,17nm,1.5s								
220A	Playas Peak, P	94.39	320	P		P		16 31 12.0	+0.6
	baz=94,SNR=5.5								
MPMC	Manual Prospec	94.80	329	⇑P		P		16 31 14.0	+0.8
	baz=94								
320A	Kipp Ranch, An	94.86	320	P		P		16 31 14.6	+1.0
	baz=95,SNR=6.4								
TUC	Tucson	95.13	322	*e*P		P		16 31 15.1	+0.4
TUC				pmax		pmax			
	comp=Z,6.0nm,1.4s								
TUC	Tucson	95.13	322	*e*P		P		16 31 15.1	+0.4
	comp=Z,6.3nm,1.4s								
319A	Douglas	95.19	320	⇓P		P		16 31 15.8	+0.7
	baz=95								
GSC	Goldstone	95.19	328	*e*P		P		16 31 15.8	+0.9
GSC				pmax		pmax			
	comp=Z,5.0nm,1.1s								
GSC	Goldstone	95.19	328	*e*P		P		16 31 15.8	+0.9
	comp=Z,5.1nm,1.1s								
GSC	Goldstone	95.19	328	⇓P		P		16 31 15.1	+0.1
	baz=95								
Z14A	Wintersburg	95.23	324	⇑P		P		16 31 15.1	+0.1
	baz=95								
IRM	Iron Mountain	95.50	326	⇑P		P		16 31 16.5	+0.2
	baz=95								
ISA	Isabella	95.53	329	*e*P		P		16 31 17.6	+1.1
ISA				pmax		pmax			
	comp=Z,14nm,1.1s								
ISA	Isabella	95.53	329	*e*P		P		16 31 17.6	+1.1
	comp=Z,14nm,1.1s								
BELC	Belle Mtn. Jos	95.99	327	⇑P		P		16 31 19.3	+0.6
	baz=96								
EDW2	Edwards Air Fo	96.03	328	⇓P		P		16 31 19.9	+1.2
	baz=96								
BC3	Big Chuckawall	96.06	326	⇓P		P		16 31 19.4	+0.5
	baz=96								
PFO	Pinyon Flat Ob	96.52	327	⇓P		P		16 31 21.0	0.0
	baz=96								
PKM	Peak Mountain	96.73	330	⇓P		P		16 31 22.0	0.0
	baz=96								
MONP	Monument Peak	97.13	326	⇓P		P		16 31 22.8	-1.1
	baz=97								
CPUP	Villa Florida	99.96	244	LR		LR		17 21 11.0	
	comp=Z,587nm,18.4s,baz=34,slow=38								
LPAZ	La Paz	101.17	258	P		Pdif		16 31 40.8	-1.8
LPAZ	La Paz	101.17	258	P		Pdif		16 31 40.8	-1.8
	comp=Z,0.9nm,0.9s,baz=35,slow=7.5,SNR=3.6								
PLCA	Paso Flores	117.38	239	PKP		PKPdf		16 36 37.0	+0.5
PLCA				*e*PKPdf		PKiKP		16 36 37.2	+0.6
PLCA	Paso Flores	117.38	239	PKP		PKPdf		16 36 37.0	+0.5
	comp=Z,0.5nm,0.6s,baz=72,slow=3.5,SNR=4.8								
WRA	Warramunga Arr	118.97	92	PKPpre		PKPpre		16 36 37.0	
WRA				PP		PP		16 38 02.3	+2.7
WRA				PKKPab		PKKPab		16 46 55.2	-1.1
WRA	Warramunga Arr	118.97	92	PKhKP		PKPpre		16 36 37.0	
	comp=Z,0.7nm,0.8s,baz=296,slow=2.2,SNR=6.2								
WRA				PP		PP		16 38 02.3	+2.7
	comp=Z,1.1nm,0.9s,baz=314,slow=7.2,SNR=4.9								
WRA				PKKPab		PKKPab		16 46 55.2	-1.1
	comp=Z,0.3nm,0.7s,baz=111,slow=3.8,SNR=5.1								
ASAR	Alice Springs	120.81	96	PKPpre		PKPpre		16 36 41.0	
ASAR				PP		PP		16 38 16.1	+3.6
ASAR	Alice Springs	120.81	96	PKhKP		PKPpre		16 36 41.0	
	comp=Z,2.6nm,0.7s,baz=319,slow=1.7,SNR=38								
ASAR				PP		PP		16 38 16.1	+3.6
	comp=Z,0.9nm,0.9s,baz=301,slow=5.7,SNR=4.8								
VNDA	Vanda	139.97	167	PKP		PKPdf		16 37 20.3	+2.1
VNDA	Vanda	139.97	167	PKP		PKPdf		16 37 20.3	+2.1
	comp=Z,0.4nm,0.3s,baz=284,slow=5.7,SNR=3.8								
DZM	Mont Dzumac	144.02	69	*e*LR		LR		17 24 26.8	
	comp=Z,244nm,21.6s								
PMOR	Pomariorio Ree	152.56	340	*e*PKPbc		PKPbc		16 37 47.7	-0.3
	comp=Z,143nm,1.8s								
RKT	Rikitea	153.95	307	*e*LR		LR		17 29 21.3	
	comp=Z,188nm,28.0s								
PPT2	Papeete2	155.46	342	*e*LR		LR		17 29 55.6	
	comp=Z,317nm,22.0s								
TBI	Tubuai	160.94	337	*e*LR		LR		17 32 16.2	
	comp=Z,201nm,30.2s								

ISCJB ***24*** *16:20:57.4±0.6,21°.29S±0'.05×68°.9W±0'.1, h135km±9km, mb3.5/2, Error ellipse: s-maj=20.9km s-min=7.0km az=167.2*

IDC ***24*** *16:20:57.8±2.4, 21°.50S×68°.57W, h118km±23km, mb3.5/3, mb1 3.5/5, mb1mx3.3/18, mbtmp3.4/5, Error ellipse: s-maj=38.1km s-min=21.0km az=92.0*

GUC ***24*** *16:20:58.5±0.8,21°.25S×68°.86W, h121km±5km, ML4.1*

ISC 24 16:20:57.4±0.9, 21°34S±0'.05×69°.0W±0'.1, h140km±10km, n14, σ1°53/20, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	Plate Boundary	0.51	207	⇑*i*P	Pn	16 21 18.7	+0.9
PB09				*i* S	Sn	16 21 33.2	-0.2
PB09				AML	AML	16 21 34.1	
	comp=N,9μm,0.4s						
PB01	Plate Boundary	0.54	302	*e*P	Pn	16 21 18.1	+0.2
PB01				*e*S	Sn	16 21 32.5	-0.9
PB01				AML	AML	16 21 33.4	
	comp=N,4μm,0.3s						
PB07	Plate Boundary	0.92	245	⇓*i*P	Pn	16 21 22.5	+1.8
PB07				*i* S	Sn	16 21 39.8	+1.4
PB04	Plate Boundary	1.03	206	*e*P	Pn	16 21 28.3	+6.8
PB04				*i* S	Sn	16 21 50.8	+11
LVC	Limon Verde	1.27	176	⇑*e*P	Pn	16 21 25.4	+1.3
LVC				*i* S	Sn	16 21 45.6	+1.1
HMBC	Humberstone	1.34	321	*i* P	Pn	16 21 25.1	+0.4
HMBC				*i* S	Sn	16 21 45.1	-0.4
HMBC				AML	AML	16 21 46.4	
	comp=E,4μm,0.3s						
PSGC	Pisagua	2.03	328	⇑*i*P	Pn	16 21 32.4	0.0
PSGC				*i* S	Sn	16 21 58.7	-0.5
MNMC	Minimini	2.27	346	*e*P	Pn	16 21 35.6	+0.1
MNMC				*i* S	Sn	16 22 04.6	-0.1
LPAZ	La Paz	5.09	9	P	Pn	16 22 13.6	+1.2
	comp=E,3.6nm,0.3s,baz=193,slow=4.8,SNR=102						
CFAA	Coronel

KNT	Kendrikon	0.19	132	P	Pg	16 23 13.8	-0.2
KNT	Kendrikon	0.19	132	P	Pg	16 23 13.8	-0.2
GRG	Griva	0.41	215	eP	Pg	16 23 17.6	-0.2
GRG				e		16 23 24.5	
GRG	Griva	0.41	215	P	Pg	16 23 17.4	-0.4
GRG				S	Sg	16 23 23.2	0.0
GRG	Griva	0.41	215	ePb	Pg	16 23 17.6	-0.2
GRG				eSb	Sb	16 23 24.5	-0.5
GRG	Griva	0.41	215	ePB	Pg	16 23 17.6	-0.2
GRG				eSB	Sb	16 23 24.5	-0.5
GRG	Griva	0.41	215	P	Pg	16 23 17.4	-0.4
GRG				S	Sg	16 23 23.2	0.0
GRG				eSb	Sb	16 23 24.5	-0.5
KKB	Krupnik	0.64	26	iP	Pg	16 23 21.6	-0.6
KKB	Krupnik	0.64	26	iP	Pg	16 23 21.6	-0.6
KKB	Krupnik	0.64	26	iP	Pg	16 23 21.6	-0.6
SOH	Sokhos	0.68	134	eP	Pg	16 23 22.3	-0.6
SOH				e		16 23 31.8	
SOH	Sokhos	0.68	134	P	Pg	16 23 22.3	-0.6
SOH				S	Sg	16 23 32.2	+0.4
SOH	Sokhos	0.68	134	ePn	Pg	16 23 22.3	-0.6
SOH				eSn	Sg	16 23 31.8	0.0
SOH	Sokhos	0.68	134	ePN	Pg	16 23 22.3	-0.6
SOH				eSN	Sg	16 23 31.8	0.0
SOH	Sokhos	0.68	134	P	Pg	16 23 22.3	-0.6
SOH				eSn	Sg	16 23 31.8	0.0
SOH				S	Sg	16 23 32.2	+0.4
THE	Thessaloniki	0.69	163	P	Pg	16 23 22.2	-0.8
THE				S	Sg	16 23 32.2	+0.2
THE	Thessaloniki	0.69	163	P	Pg	16 23 22.2	-0.8
THE				S	Sg	16 23 32.2	+0.2
SRS	Serrai	0.69	104	P	Pg	16 23 22.7	-0.4
SRS	Serrai	0.69	104	P	Pg	16 23 22.7	-0.4
HORT	Hortiatis	0.75	157	P	Pg	16 23 23.6	-0.7
HORT				S	Sb	16 23 34.8	-0.3
HORT	Hortiatis	0.75	157	P	Pg	16 23 23.6	-0.7
HORT				S	Sb	16 23 34.8	-0.3
MMB	Musomiste	0.82	68	iP	Pg	16 23 25.2	-0.5
MMB	Musomiste	0.82	68	iP	Pg	16 23 25.2	-0.5
MMB	Musomiste	0.82	68	iP	Pg	16 23 25.2	-0.5
NVR	Nevrokopi	0.87	86	P	Pg	16 23 26.1	-0.5
NVR				S	Sg	16 23 37.9	-0.1
NVR	Nevrokopi	0.87	86	ePn	Pg	16 23 26.0	-0.5
NVR				eSn	Sg	16 23 36.8	-1.2
NVR	Nevrokopi	0.87	86	ePN	Pg	16 23 26.0	-0.5
NVR				eSN	Sg	16 23 36.8	-1.2
NVR	Nevrokopi	0.87	86	P	Pg	16 23 26.1	-0.5
NVR				eSn	Sg	16 23 36.8	-1.2
NVR				S	Sg	16 23 37.9	-0.1
PLG	Polygyros	1.07	148	eP	Pb	16 23 29.0	-1.3
PLG				e		16 23 42.7	
PLG	Polygyros	1.07	148	P	Pb	16 23 29.7	-0.6
PLG				S	Sn	16 23 45.0	-0.5
PLG	Polygyros	1.07	148	ePn	Pb	16 23 29.0	-1.3
PLG				eSn	Sb	16 23 42.7	-1.5
PLG	Polygyros	1.07	148	ePN	Pb	16 23 29.0	-1.3
PLG				eSN	Sb	16 23 42.7	-1.5
PLG	Polygyros	1.07	148	ePn	Pb	16 23 29.0	-1.3
PLG	Polygyros	1.07	148	P	Pb	16 23 29.7	-0.6
PLG				eSn	Sb	16 23 42.7	-1.5
PLG				S	Sn	16 23 45.0	-0.5
BIA	Bitola	1.08	256	P	Pb	16 23 29.2	-1.2
BIA	Bitola	1.08	256	ePg	Pb	16 23 30.0	-0.5
BIA	Bitola	1.08	256	P	Pb	16 23 29.2	-1.2
BIA	Bitola	1.08	256	ePg	Pb	16 23 29.9	-0.5
FNA	Florina	1.13	244	eP	Pb	16 23 30.7	-0.5
FNA	Florina	1.13	244	P	Pb	16 23 30.7	-0.5
FNA	Florina	1.13	244	ePb	Pb	16 23 30.7	-0.5
FNA	Florina	1.13	244	ePB	Pb	16 23 30.7	-0.5
FNA	Florina	1.13	244	ePb	Pb	16 23 30.7	-0.5
SKO	Skopje	1.17	306	⇓iP	Pb	16 23 31.8	-0.1
SKO				e		16 23 47.1	
SKO	Skopje	1.17	306	P	Pb	16 23 31.4	-0.5
SKO	Skopje	1.17	306	⇓iPg	Pb	16 23 31.8	-0.1
SKO				eSg	Sb	16 23 47.1	+0.1
SKO	Skopje	1.17	306	ePg	Pb	16 23 31.4	-0.5
SKO				iSg	Sb	16 23 46.0	-1.0
SKO				eLg	Lg	16 23 47.4	
	comp=E,4μm,1.1s						
SKO				eLg	Lg	16 23 47.8	
	comp=N,5μm,1.0s						
SKO	Skopje	1.17	306	⇓iPg	Pb	16 23 31.8	-0.1
SKO				eSg	Sb	16 23 47.1	+0.1
SKO	Skopje	1.17	306	iP	Pb	16 23 31.8	-0.1
SKO				eSg	Sb	16 23 47.1	+0.1
SKO				eLg	Lg	16 23 48.3	
	comp=N,5μm,1.0s						
KZN	Kozani	1.21	216	eP	Pb	16 23 32.9	+0.2
KZN				e		16 23 50.5	
KZN	Kozani	1.21	216	ePn	Pb	16 23 32.9	+0.2
KZN				eSn	Sg	16 23 50.5	+1.7
KZN	Kozani	1.21	216	ePN	Pb	16 23 32.9	+0.2
KZN				eSN	Sg	16 23 50.5	+1.7
KZN	Kozani	1.21	216	ePn	Pb	16 23 32.9	+0.2
KZN				eSn	Sg	16 23 50.5	+1.7
VTS	Vitosha	1.35	16	⇑P	Pb	16 23 35.1	-0.1
VTS	Vitosha	1.35	16	P	Pb	16 23 35.0	-0.1
VTS	Vitosha	1.35	16	ePg	Pn	16 23 34.9	+0.3
VTS				eSg	Sb	16 23 52.0	-0.5
VTS	Vitosha	1.35	16	⇑iP	Pb	16 23 35.1	-0.1
VTS	Vitosha	1.35	16	iP	Pn	16 23 34.9	+0.3
VTS	Vitosha	1.35	16	iP	Pn	16 23 34.9	+0.3
VTS	Vitosha	1.35	16	iP	Pn	16 23 34.9	+0.3
VTS				eSg	Sb	16 23 52.0	-0.5
OUR	Ouranopolis	1.36	134	P	Pn	16 23 34.4	-0.1
OUR	Ouranopolis	1.36	134	P	Pn	16 23 34.4	-0.1
KAVA	Kavala	1.40	102	P	Pb	16 23 35.4	-0.3
KAVA	Kavala	1.40	102	P	Pb	16 23 35.4	-0.3
PAIG	Paliouri	1.55	151	eP	Pn	16 23 36.7	-0.4
PAIG				e		16 23 56.6	
PAIG	Paliouri	1.55	151	P	Pn	16 23 37.4	+0.3
PAIG	Paliouri	1.55	151	ePn	Pn	16 23 36.7	-0.4
PAIG				eSn	Sn	16 23 56.6	-0.5
PAIG	Paliouri	1.55	151	ePN	Pn	16 23 36.7	-0.4
PAIG				eSN	Sn	16 23 56.6	-0.5
PAIG	Paliouri	1.55	151	ePn	Pn	16 23 36.7	-0.4
PAIG	Paliouri	1.55	151	P	Pn	16 23 37.4	+0.3
PAIG				eSn	Sn	16 23 56.6	-0.5
RZN	Rozhen	1.56	75	iP	Pn	16 23 37.1	-0.4
RZN	Rozhen	1.56	75	iP	Pn	16 23 37.1	-0.4
RZN	Rozhen	1.56	75	iP	Pn	16 23 37.1	-0.4
BARS	Barje	1.66	337	⇑iPg	Pn	16 23 38.5	-0.2
BARS				eSg	Sn	16 24 00.3	+0.3
PGB	Panagyurishte	1.67	40	iP	Pn	16 23 38.8	0.0
PGB				iPg	Pb	16 23 40.7	+0.3
PGB	Panagyurishte	1.67	40	iP	Pn	16 23 38.8	0.0
PGB				iPg	Pb	16 23 40.7	+0.3
PGB	Panagyurishte	1.67	40	iP	Pn	16 23 38.8	0.0
PLD	Plovdiv	1.70	61	P	Pn	16 23 40.1	+0.9
PLD	Plovdiv	1.70	61	iP	Pb	16 23 40.6	-0.4
PLD				iPg	Pg	16 23 42.6	+0.2
PLD	Plovdiv	1.70	61	iP	Pb	16 23 40.7	-0.4
PLD				iPg	Pg	16 23 42.6	+0.2
PLD	Plovdiv	1.70	61	P	Pn	16 23 40.1	+0.9
THL	Klokotos Trika	1.80	197	ePn	Pn	16 23 41.2	+0.6
THL	Klokotos Trika	1.80	197	ePN	Pn	16 23 41.2	+0.6
THL	Klokotos Trika	1.80	197	ePn	Pn	16 23 41.2	+0.6
ZAPS	Zavoj	1.98	358	ePn	Pb	16 23 45.1	-0.7
NEO	Neokhori	2.02	169	ePb	Pn	16 23 43.2	-0.4
NEO	Neokhori	2.02	169	ePB	Pn	16 23 43.2	-0.4
NEO	Neokhori	2.02	169	ePb	Pn	16 23 43.2	-0.4
KDZ	Kurdzhali	2.07	79	iP	Pn	16 23 44.6	+0.3
KDZ				iPg	Pb	16 23 47.1	-0.1
KDZ	Kurdzhali	2.07	79	iP	Pn	16 23 44.6	+0.3
KDZ				iPg	Pb	16 23 47.1	-0.1
KDZ	Kurdzhali	2.07	79	iP	Pn	16 23 44.6	+0.3
KDZ	Kurdzhali	2.07	79	iPg	Pg	16 23 51.0	+1.6
RDO	Rodhopi	2.14	93	ePb	Pn	16 23 45.5	+0.3
RDO	Rodhopi	2.14	93	ePB	Pn	16 23 45.5	+0.3
RDO	Rodhopi	2.14	93	ePb	Pn	16 23 45.5	+0.3
TIR	Tirane	2.14	272	eP	Pn	16 23 46.7	+1.4
TIR	Tirane	2.14	272	ePn	Pn	16 23 46.7	+1.4
TIR	Tirane	2.14	272	ePn	Pn	16 23 46.7	+1.4
JAN	Janina	2.16	222	eP	Pn	16 23 46.2	+0.6
JAN	Janina	2.16	222	ePn	Pn	16 23 46.2	+0.6
JAN	Janina	2.16	222	ePN	Pn	16 23 46.2	+0.6
JAN	Janina	2.16	222	ePn	Pn	16 23 46.2	+0.6
MPEP	Malo Peshtene	2.20	20	iP	Pn	16 23 45.3	-0.8
MPEP				iPg	Pg	16 23 51.0	-1.0
MPEP	Malo Peshtene	2.20	20	iP	Pn	16 23 45.3	-0.8
MPEP				iPg	Pg	16 23 51.0	-1.0
DIM	Dimitrovgrad	2.25	69	iP	Pn	16 23 48.4	+1.6
DIM				iPg	Pg	16 23 52.9	0.0
DIM	Dimitrovgrad	2.25	69	iP	Pn	16 23 48.4	+1.6
DIM				iPg	Pg	16 23 52.9	0.0
DIM	Dimitrovgrad	2.25	69	iP	Pn	16 23 48.4	+1.6
SELS	Selova	2.26	329	⇑iPn	Pn	16 23 46.2	-0.8
AGG	Agios Georgios	2.28	187	eP	Pn	16 23 47.4	+0.1
AGG	Agios Georgios	2.28	187	ePn	Pn	16 23 47.4	+0.1
AGG	Agios Georgios	2.28	187	ePN	Pn	16 23 47.4	+0.1
AGG	Agios Georgios	2.28	187	ePn	Pn	16 23 47.4	+0.1
SMTH	Samothraki Isl	2.29	110	ePn	Pn	16 23 47.4	0.0
SMTH	Samothraki Isl	2.29	110	ePN	Pn	16 23 47.4	0.0
SMTH	Samothraki Isl	2.29	110	ePn	Pn	16 23 47.4	0.0
AOS	Alonnisos	2.30	157	ePn	Pn	16 23 47.1	-0.4
AOS	Alonnisos	2.30	157	ePN	Pn	16 23 47.1	-0.4
AOS	Alonnisos	2.30	157	ePn	Pn	16 23 47.1	-0.4
LIA	Limnos Island	2.34	126	ePn	Pn	16 23 48.2	+0.2
LIA				eSn	Sn	16 24 15.9	-0.8
LIA	Limnos Island	2.34	126	ePN	Pn	16 23 48.2	+0.2
LIA				eSN	Sn	16 24 15.9	-0.8
LIA	Limnos Island	2.34	126	ePn	Pn	16 23 48.2	+0.2
LIA				eSn	Sn	16 24 15.9	-0.8
PVY	Plav	2.43	303	⇓iPn	Pn	16 23 49.5	+0.1
PVY				eSn	Sn	16 24 21.1	+2.0
PVY	Plav	2.43	303	⇓iPn	Pn	16 23 49.5	+0.1
PVY				eSn	Sn	16 24 21.1	+2.0
EVR	Evrytania	2.47	197	ePb	Pn	16 23 51.0	+1.1
EVR	Evrytania	2.47	197	ePB	Pn	16 23 51.0	+1.1
EVR	Evrytania	2.47	197	ePb	Pn	16 23 51.0	+1.1
ALN	Alexandroupoli	2.55	98	eP	Pn	16 23 51.4	+0.5
ALN	Alexandroupoli	2.55	98	ePn	Pn	16 23 51.4	+0.5
ALN	Alexandroupoli	2.55	98	ePN	Pn	16 23 51.4	+0.5
ALN	Alexandroupoli	2.55	98	ePn	Pn	16 23 51.4	+0.5
BOLS	Boljevac	2.60	348	ePn	Pn	16 23 50.0	-1.6
BOLS				eSg	Sb	16 24 29.9	+1.8
BOLS	Boljevac	2.60	348	ePn	Pn	16 23 50.0	-1.6
BEY	Berane	2.62	308	⇑iPn	Pn	16 23 53.0	+1.0
BEY				eSn	Sn	16 24 26.4	+2.6
IVA	Berane	2.62	308	⇑iPn	Pn	16 23 53.0	+1.0
IVA				eSn	Sn	16 24 26.4	+2.6
LKR	Lokris	2.65	175	ePn	Pn	16 23 52.0	-0.2
LKR	Lokris	2.65	175	ePN	Pn	16 23 52.0	-0.2
LKR	Lokris	2.65	175	ePn	Pn	16 23 52.0	-0.2
ENEZ	Enez	2.67	101	ePN	Pn	16 23 52.9	+0.5
ULC	Ulcinj	2.68	286	⇑iPn	Pn	16 23 54.4	+1.6
ULC				eSn	Sb	16 24 28.0	-2.6
ULC	Ulcinj	2.68	286	⇑iPn	Pn	16 23 54.4	+1.6
ULC				eSn	Sb	16 24 28.0	-2.6
KEK	Kerkira	2.72	236	ePn	Pn	16 23 55.0	+1.7
KEK	Kerkira	2.72	236	ePN	Pn	16 23 55.0	+1.7
KEK	Kerkira	2.72	236	ePn	Pn	16 23 55.0	+1.7
PVL	Pavlikeni	2.74	44	iP	Pn	16 23 53.3	-0.2
PVL				iPg	Pb	16 23 58.8	+0.2
PVL	Pavlikeni	2.74	44	iP	Pn	16 23 53.3	-0.2
PVL				iPg	Pb	16 23 58.8	+0.2
PVL	Pavlikeni	2.74	44	iP	Pn	16 23 53.3	-0.2
PDG	Podgorica	2.82	295	⇑iPn	Pn	16 23 56.1	+1.5
PDG				eSn	Sb	16 24 31.9	-2.6
TTG	Podgorica	2.82	295	⇑iPn	Pn	16 23 56.1	+1.5
TTG				eSn	Sb	16 24 31.9	-2.6
EFP	Efpalio	2.92	192	ePn	Pn	16 23 56.7	+0.6
EFP	Efpalio	2.92	192	ePN	Pn	16 23 56.7	+0.6
EFP	Efpalio	2.92	192	ePn	Pn	16 23 56.7	+0.6
KALE	Kalithea	2.93	189	ePn	Pn	16 23 57.5	+1.3
KALE	Kalithea	2.93	189	ePN	Pn	16 23 57.5	+1.3
KALE	Kalithea	2.93	189	ePn	Pn	16 23 57.5	+1.3
ERIK	Erikli-Kesan	2.95	101	ePN	Pn	16 23 55.0	-1.4
LKD2	Lefkada island	2.95	213	ePn	Pn	16 23 58.1	+1.6
LKD2	Lefkada island	2.95	213	ePN	Pn	16 23 58.1	+1.6
LKD2	Lefkada island	2.95	213	ePn	Pn	16 23 58.1	+1.6
TRIZ	Trizonia	2.96	190	ePN	Pn	16 23 57.5	+1.0
TRIZ	Trizonia	2.96	190	ePn	Pn	16 23 57.5	+1.0
GRUS	Gruza	2.98	331	ePn	Pn	16 23 56.5	-0.4
GRUS	Gruza	2.98	331	ePn	Pn	16 23 56.5	-0.4
GELI	Tayfur-Gelibol	2.99	106	ePN	Pn	16 23 56.6	-0.4
BUM	Brajici-Budva	3.02	291	⇑iPn	Pn	16 23 58.4	+0.9
BUM				eSn	Sn	16 24 36.3	+2.6
BUM	Brajici-Budva	3.02	291	⇑iPn	Pn	16 23 58.4	+0.9
BUM				eSn	Sn	16 24 36.3	+2.6
ZIMR		3.08	39	⇓P	Pb	16 24 02.5	-1.9
ZIMR		3.08	39	⇓iP	Pb	16 24 02.5	-1.9
EDRB	Edirne	3.08	78	ePN	Pn	16 23 58.5	+0.3
LAKA	Lakka	3.10	191	ePn	Pn	16 23 59.9	+1.4
LAKA	Lakka	3.10	191	ePN	Pn	16 23 59.9	+1.4
LAKA	Lakka	3.10	191	ePn	Pn	16 23 59.9	+1.4
SZH	Strazhica	3.10	49	iP	Pn	16 24 00.7	+2.2
SZH				iPg	Pg	16 24 09.5	+0.3
SZH	Strazhica	3.10	49	iP	Pn	16 24 00.7	+2.2
SZH				iPg	Pg	16 24 09.5	+0.3
SZH	Strazhica	3.10	49	iP	Pn	16 24 00.7	+2.2
EZN	Ezine	3.12	117	ePN	Pn	16 23 58.0	-0.7
JMB	Yambol	3.12	67	iP	Pn	16 23 59.7	+0.9
JMB				iPg	Pg	16 24 10.2	+0.6
JMB	Yambol	3.12	67	iP	Pn	16 23 59.7	+0.9
JMB				iPg	Pg	16 24 10.2	+0.6
JMB	Yambol	3.12	67	iP	Pn	16 23 59.7	+0.9
NKY	Niksic	3.16	300	⇑iPn	Pn	16 24 00.9	+1.5
NKY				eSn	Sn	16 24 38.9	+1.9
NKY	Niksic	3.16	300	⇑iPn	Pn	16 24 00.9	+1.5
NKY				eSn	Sn	16 24 38.9	+1.9
SVIS	Svilajnac	3.17	340	ePn	Pn	16 23 59.4	0.0
LPK	Lapseki	3.21	105	ePN	Pn	16 23 59.6	-0.4
LTK	Loutraki	3.27	176	ePn	Pn	16 24 01.4	+0.6
LTK	Loutraki	3.27	176	ePN	Pn	16 24 01.4	+0.6
LTK	Loutraki	3.27	176	ePn	Pn	16 24 01.4	+0.6
KLV	Kalavryta, Ach	3.27	188	ePn	Pn	16 24 00.8	-0.1
KLV	Kalavryta, Ach	3.27	188	ePN	Pn	16 24 00.8	-0.1
KLV	Kalavryta, Ach	3.27	188	ePn	Pn	16 24 00.8	-0.1
HCY	Herceg Novi	3.35	292	ePn	Pn	16 24 03.3	+1.4
HCY				eSn	Sn	16 24 44.1	+2.4
HCY	Herceg Novi	3.35	292	ePn	Pn	16 24 03.3	+1.4
HCY				eSn	Sn	16 24 44.1	+2.4
PTL	Penteli	3.36	164	ePn	Pn	16 24 02.4	+0.4
PTL	Penteli	3.36	164	ePN	Pn	16 24 02.4	+0.4
PTL	Penteli	3.36	164	ePn	Pn	16 24 02.4	+0.4
GUR	Goura	3.36	185	ePn	Pn	16 24 03.1	+0.9
GUR	Goura	3.36	185	ePN	Pn	16 24 03.1	+0.9
GUR	Goura	3.36	185	ePn	Pn	16 24 03.1	+0.9
RLS	Riolos of Patr	3.37	197	ePn	Pn	16 24 03.5	+1.4
RLS	Riolos of Patr	3.37	197	ePN	Pn	16 24 03.5	+1.4
RLS	Riolos of Patr	3.37	197	ePn	Pn	16 24 03.5	+1.4
RMGR	Halanga-Turnu	3.37	360	⇑iP	Pn	16 24 02.7	+0.5
RMGR	Halanga-Turnu	3.37	360	⇑iP	Pn	16 24 02.7	+0.5
ATH	Athens Observa	3.40	166	eP	Pn	16 24 02.6	0.0
ATH	Athens Observa	3.40	166	ePn	Pn	16 24 02.6	0.0
ATH	Athens Observa	3.40	166	ePN	Pn	16 24 02.6	0.0
ATH	Athens Observa	3.40	166	ePn	Pn	16 24 02.6	0.0
PRK	Paraskevi	3.41	126	eP	Pn	16 24 04.0	+1.3
PRK	Paraskevi	3.41	126	ePn	Pn	16 24 04.0	+1.3
PRK	Paraskevi	3.41	126	ePN	Pn	16 24 04.0	+1.3
PRK	Paraskevi	3.41	126	ePn	Pn	16 24 04.0	+1.3
UPM	Unac-Piva	3.41	305	ePn	Pn	16 24 03.6	+0.7
UPM				eSn	Sn	16 24 45.8	+2.5
UPM	Unac-Piva	3.41	305	ePn	Pn	16 24 03.6	+0.7
UPM				eSn	Sn	16 24 45.8	+2.5
RKY	Sarkoy-Tekirda	3.44	99	ePN	Pn	16 24 03.0	-0.1
DIVS	Divibare	3.45	325	ePn	Pn	16 24 03.1	-0.2
DIVS	Divibare	3.45	325	ePn	Pn	16 24 03.1	-0.2
BRY	Bratogost	3.50	299	ePn	Pn	16 24 05.9	+1.9
BRY				eSn	Sn	16 24 46.9	+1.5
BRY	Bratogost	3.50	299	ePn	Pn	16 24 05.9	+1.9
BRY				eSn	Sn	16 24 46.9	+1.5
MFT	Murefte	3.50	97	ePN	Pn	16 24 04.1	+0.1
VLS	Valsamata	3.51	208	eP	Pn	16 24 05.5	+1.4
VLS	Valsamata	3.51	208	ePn	Pn	16 24 05.5	+1.4
VLS	Valsamata	3.51	208	ePN	Pn	16 24 05.5	+1.4
VLS	Valsamata	3.51	208	ePn	Pn	16 24 05.5	+1.4
NAIG	Nisos Aigina	3.58	170	ePn	Pn	16 24 05.6	+0.6
NAIG	Nisos Aigina	3.58	170	ePN	Pn	16 24 05.6	+0.6
NAIG	Nisos Aigina	3.58	170	ePn	Pn	16 24 05.6	+0.6
KRBG	Karabiga-Canak	3.59	103	ePn	Pn	16 24 04.5	-0.8
HUMR	Humele	3.64	27	⇑iP	Pn	16 24 06.2	+0.3
HUMR	Humele	3.64	27	⇑iP	Pn	16 24 06.2	+0.3
TKR	Tekirdag	3.66	93	ePN	Pn	16 24 06.5	+0.3
MRMT	Marmara Adasi	3.77	99	ePN	Pn	16 24 07.6	-0.1
CRLT	Corlu	3.80	91	ePN	Pn	16 24 08.3	+0.3
DID	Didima	3.80	174	ePn	Pn	16 24 08.5	+0.4
DID	Didima	3.80	174	ePn	Pn	16 24 08.5	+0.4
CHOS	Chios island	3.88	137	ePn	Pn	16 24 09.7	+0.5
CHOS	Chios island	3.88	137	ePN	Pn	16 24 09.7	+0.5
CHOS	Chios island	3.88	137	ePn	Pn	16 24 09.7	+0.5
BUC1	Bucharest	3.91	38	⇓iP	Pn	16 24 13.0	+3.4
BUC1	Bucharest	3.91	38	⇓iP	Pn	16 24 13.0	+3.4
GOLR		3.91	24	⇑iP	Pn	16 24 14.2	+4.5
GOLR		3.91	24	⇑iP	Pn	16 24 14.2	+4.5
VLX	Vlachokerasia	3.92	184	ePn	Pn	16 24 10.6	+0.7
VLX	Vlachokerasia	3.92	184	ePN	Pn	16 24 10.6	+0.7
VLX	Vlachokerasia	3.92	184	ePn	Pn	16 24 10.6	+0.7
CIOR	Ciorogarla	3.92	35	⇓iP	Pn	16 24 10.6	+0.8
CIOR	Ciorogarla	3.92	35	⇓iP	Pn	16 24 10.6	+0.8
GONE	Gonen-Balikesi	3.98	107	ePN	Pn	16 24 10.5	-0.1
TEKS	Tekeris	4.01	325	⇑iPn	Pn	16 24 10.3	-0.7
TEKS	Tekeris	4.01	325	⇑iPn	Pn	16 24 10.3	-0.7
STON	Ston	4.05	295	ePn	Pn	16 24 12.1	+0.7
STON	Ston	4.05	295	ePn	Pn	16 24 12.1	+0.7
BNT	Bandirma	4.06	102	ePN	Pn	16 24 11.6	-0.2
SLVT	Silivri	4.15	89	ePN	Pn	16 24 13.3	+0.4
ITM	Ithomi	4.15	189	ePn	Pn	16 24 14.9	+2.0
ITM	Ithomi	4.15	189	ePN	Pn	16 24 14.9	+2.0
ITM	Ithomi	4.15	189	ePn	Pn	16 24 14.9	+2.0
CTYL	Yal??k??y-??at	4.20	86	ePN	Pn	16 24 14.0	+0.3
LOT	Lotru	4.23	10	⇓iP	Pn	16 24 13.8	-0.3
LOT	Lotru	4.23	10	⇓iP	Pn	16 24 13.8	-0.3
BALB	Balikesir	4.28	111	ePN	Pn	16 24 14.9	+0.3
MTUR	Matau	4.29	23	⇑P	Pn	16 24 15.8	+0.8
MTUR	Matau	4.29	23	⇑iP	Pn	16 24 15.8	+0.8
MTUR	Matau	4.29	23	P	Pn	16 24 15.8	+0.8
ARR	Arges	4.31	18	⇑iP	Pn	16 24 15.0	-0.2
ARR	Arges	4.31	18	⇑iP	Pn	16 24 15.0	-0.2
PLAR	PLOIESTI	4.36	33	⇑iP	Pn	16 24 18.5	+2.7
PLAR	PLOIESTI	4.36	33	⇑iP	Pn	16 24 18.5	+2.7
CTKS	Kestanelik-??a	4.37	89	ePN	Pn	16 24 16.5	+0.6
BZS	Buzias	4.40	350	⇓P	Pn	16 24 15.2	-1.1
BZS	Buzias	4.40	350	⇓iP	Pn	16 24 15.2	-1.1
BZS	Buzias	4.40	350	P	Pn	16 24 15.2	-1.1
FGSL	Fruska Gora	4.41	332	ePn	Pn	16 24 15.7	-0.8
FRGS	Fruska Gora	4.41	332	ePn	Pn	16 24 15.7	-0.8
KCTX	Karacabey (Bur	4.41	102	ePN	Pn	16 24 17.1	+0.6
BLCB	Balcova	4.42	130	ePN	Pn	16 24 16.4	-0.3
PYL	PYLOS	4.45	190	ePn	Pn	16 24 18.4	+1.3
PYL	PYLOS	4.45	190	ePN	Pn	16 24 18.4	+1.3
PYL	PYLOS	4.45	190	ePn	Pn	16 24 18.4	+1.3
SECR		4.48	32	⇑iP	Pn	16 24 17.9	+0.5
SECR		4.48	32	⇑iP	Pn	16 24 17.9	+0.5
VOIR		4.48	22	⇑iP	Pn	16 24 18.1	+0.5
VOIR		4.48	22	⇑P	Pn	16 24 18.1	+0.5
VOIR		4.48	22	P	Pn	16 24 18.1	+0.5
DYR	Agios Nikonas	4.53	184	ePN	Pn	16 24 20.2	+2.0

LAST	Lasithi	6.50	160	ePn		Pn	16 24 47.6	+2.4
LEOM	Leova	6.55	36	⇑P		Pn	16 24 47.2	+1.4
LEOM	Leova	6.55	36	⇑iP		Pn	16 24 47.2	+1.4
LEOM	Leova	6.55	36	P		Pn	16 24 47.2	+1.4
NVLJ	Novalja	6.62	302	ePn		Pn	16 24 46.4	-0.3
NVLJ	Novalja	6.62	302	ePn		Pn	16 24 46.4	-0.3
SHUT	Suhut-Afyon	6.62	112	ePN		Pn	16 24 47.4	+0.4
BUD	Budapest	6.73	338	⇓ePn		Pn	16 24 48.8	+0.5
FETY	Fethiye	6.80	131	ePN		Pn	16 24 49.2	-0.2
PKSG		6.84	335	⇓ePn		Pn	16 24 49.6	-0.2
PKSG				eSn		Sn	16 26 10.6	+3.1
TRPA	Tarpa	6.84	359	⇑iP		Pn	16 24 49.9	+0.1
PKST	T"s	6.84	332	⇓ePn		Pn	16 24 50.1	+0.2
PKST				eSn		Sn	16 26 11.4	+3.7
BOJS	Bojanci	6.87	310	ePn		Pn	16 24 53.0	+2.7
PSZ	Piszkesteto	6.92	344	⇓P		Pn	16 24 51.5	+0.4
PSZ	Piszkesteto	6.92	344	⇓iP		Pn	16 24 51.5	+0.4
PSZ	Piszkesteto	6.92	344	P		Pn	16 24 51.5	+0.4
ISP	Isparta	6.96	117	ePN		Pn	16 24 52.0	+0.4
SVRH	Sivrihisar-ESK	6.98	102	ePN		Pn	16 24 52.0	+0.2
ELL	Elmali	7.21	127	ePN		Pn	16 24 54.7	-0.3
GROS	Grobnik	7.33	317	*i* Pn		Pn	16 24 57.0	+0.3
GROS				*i* Sn		Sn	16 26 15.7	-4.1
UZH	Uzhgorod	7.35	358	eP		Pn	16 25 02.5	+5.7
KIZT	Kizilcal	7.43	106	ePN		Pn	16 24 58.2	+0.1
SAFT	Safranbolu	7.52	87	ePN		Pn	16 24 59.9	+0.7
SKDS	Skadanscina	7.62	307	*i* Pn		Pn	16 25 01.1	+0.5
SKDS				*i* Sn		Sn	16 26 25.8	-1.1
SOKA	Soboth	7.72	317	⇑*i*Pn		Pn	16 25 02.4	+0.4
SOKA	Soboth	7.72	317	Pn		Pn	16 25 02.4	+0.4
SOP	Sopron	7.76	328	⇓ePn		Pn	16 25 02.9	+0.5
JAVS	Javornik	7.78	309	*i* Pn		Pn	16 25 04.5	+1.7
ARSA	Arzberg	7.88	322	⇑*i*Pn		Pn	16 25 04.7	+0.6
ARSA	Arzberg	7.88	322	Pn		Pn	16 25 04.7	+0.6
BRTR	Keskin Array B	8.47	97	Pn		Pn	16 25 13.4	+1.0
BRTR				Sn		Sn	16 26 44.9	-3.1
BRTR	Keskin Array B	8.47	97	Pn		Pn	16 25 13.4	+1.0
	comp=N,0.5nm,0.3s,baz=286,slow=10,SNR=10							
BRTR				Sn		Sn	16 26 44.9	-3.1
	comp=N,0.3nm,0.3s,baz=299,slow=13,SNR=3.0							
BRTR	Keskin Array B	8.47	97	P		Pn	16 25 13.4	+1.0
SEV	Sevastopol'	8.68	64	eP		Pn	16 25 14.5	-0.5
SEV				eS		Sn	16 26 51.1	-1.6
SEV	Sevastopol'	8.68	64	eP		Pn	16 25 14.5	-0.5
YAL	Yalta	8.99	65	eP		Pn	16 25 20.1	+0.8
YAL	Yalta	8.99	65	eP		Pn	16 25 20.1	+0.8
SIM	Simferopol'	9.11	63	eP		Pn	16 25 25.0	+4.1
SIM				S		Sn	16 27 11.0	+7.6
SIM				pmax		pmax		
	comp=Z,26nm,0.9s							
SIM				smax		smax		
	comp=E,83nm,1.1s							
SIM				smax		smax		
	comp=N,53nm,0.9s							
CORM	Corum	9.12	93	eP		Pn	16 25 21.2	0.0
ALU	Alushta	9.22	65	eP		Pn	16 25 19.5	-2.9
ALU				eS		Sn	16 27 02.5	-3.5
SUDU	Sudak	9.69	64	eP		Pn	16 25 30.2	+1.4
SUDU				eS		Sn	16 27 17.3	-0.2
SUDU	Sudak	9.69	64	eP		Pn	16 25 30.2	+1.4
SUDU				eS		Sn	16 27 17.3	-0.2
GERES	GERESS Array B	9.88	323	Pn		Pn	16 25 34.0	+2.5
GERES				Sn		Sn	16 27 25.9	+3.6
GERES	GERESS Array B	9.88	323	Pn		Pn	16 25 34.0	+2.5
	comp=N,0.7nm,0.3s,baz=152,slow=13,SNR=8.9							
GERES				Sn		Sn	16 27 25.9	+3.6
	comp=N,0.5nm,0.3s,baz=136,slow=23,SNR=3.6							
GERES	GERESS Array B	9.88	323	Pn		Pn	16 25 34.0	+2.5
PGF	Pioggiola	10.30	282	eP		Pn	16 25 37.2	-0.1
PGF	Pioggiola	10.30	282	eP		Pn	16 25 37.2	-0.1
PGF	Pioggiola	10.30	282	eP		Pn	16 25 37.2	-0.1
PGF	Pioggiola	10.30	282	eP		Pn	16 25 37.2	-0.1
AKASG	Malin Array Be	10.44	23	P		Pn	16 25 39.9	+0.7
AKASG	Malin Array Be	10.44	23	Pn		Pn	16 25 39.9	+0.7
AKASG	Malin Array Be	10.44	23	Pn		Pn	16 25 39.9	+0.7
	comp=N,1.0nm,0.3s,baz=203,slow=13,SNR=2.2							
AKASG	Malin Array Be	10.44	23	P		Pn	16 25 39.9	+0.7
DAVOX	Davos/Dischmat	10.74	305	Pn		Pn	16 25 44.0	+0.6
DAVOX	Davos/Dischmat	10.74	305	Pn		Pn	16 25 44.0	+0.6
	comp=N,1.5nm,0.3s,baz=141,slow=17,SNR=6.1							
DAVOX	Davos/Dischmat	10.74	305	P		Pn	16 25 44.0	+0.6
SBF	Sospel	11.55	288	eP		Pn	16 25 52.1	-2.4
SBF	Sospel	11.55	288	eP		Pn	16 25 52.1	-2.4
SBF	Sospel	11.55	288	eP		Pn	16 25 52.1	-2.4
FRF	La Foret Royal	12.09	286	eP		Pn	16 25 59.9	-1.8
FRF	La Foret Royal	12.09	286	eP		Pn	16 25 59.9	-1.8
FRF	La Foret Royal	12.09	286	eP		Pn	16 25 59.9	-1.8
FRF	La Foret Royal	12.09	286	eP		Pn	16 25 59.9	-1.8
MBDF	Montbardon	12.16	292	eP		Pn	16 26 01.3	-1.6
MBDF	Montbardon	12.16	292	eP		Pn	16 26 01.3	-1.6
MBDF	Montbardon	12.16	292	eP		Pn	16 26 01.3	-1.6
MBDF	Montbardon	12.16	292	eP		Pn	16 26 01.3	-1.6
LPG	La Plagne	12.34	295	eP		Pn	16 26 04.5	-1.0
	comp=N,13nm,0.5s							
LPG	La Plagne	12.34	295	eP		Pn	16 26 04.5	-1.0
LPG				pmax		pmax		
	comp=Z,13nm,0.5s							
LPG	La Plagne	12.34	295	eP		Pn	16 26 04.5	-1.0
	comp=Z,13nm,0.5s							
LPG	La Plagne	12.34	295	eP		Pn	16 26 04.5	-1.0
	comp=Z,6.4nm,0.5s							
LPL	La Plagne	12.36	295	eP		Pn	16 26 04.3	-1.4
	comp=Z,18nm,0.6s							
LPL	La Plagne	12.36	295	eP		Pn	16 26 04.3	-1.4
LPL				pmax		pmax		
	comp=Z,18nm,0.6s							
LPL	La Plagne	12.36	295	eP		Pn	16 26 04.3	-1.4
	comp=Z,18nm,0.6s							
LPL	La Plagne	12.36	295	eP		Pn	16 26 04.3	-1.4
	comp=Z,6.9nm,0.6s							
ORIF	Oris-en-Rattie	12.82	292	eP		Pn	16 26 10.8	-1.0
ORIF	Oris-en-Rattie	12.82	292	eP		Pn	16 26 10.8	-1.0
ORIF	Oris-en-Rattie	12.82	292	eP		Pn	16 26 10.8	-1.0
ORIF	Oris-en-Rattie	12.82	292	eP		Pn	16 26 10.8	-1.0
HINF	Hinteralfeld	13.04	305	eP		Pn	16 26 13.0	-1.8
HINF	Hinteralfeld	13.04	305	eP		Pn	16 26 13.0	-1.8
HINF	Hinteralfeld	13.04	305	eP		Pn	16 26 13.0	-1.8
HINF	Hinteralfeld	13.04	305	eP		Pn	16 26 13.0	-1.8
MMAI	Mount Meron Ar	13.06	125	Pn		Pn	16 26 18.0	+2.9
MMAI	Mount Meron Ar	13.06	125	Pn		Pn	16 26 18.0	+2.9
	comp=Z,0.6nm,0.3s,baz=335,slow=6.4,SNR=4.6							
MMAI	Mount Meron Ar	13.06	125	Pn		Pn	16 26 18.0	+2.9
HAU	Haudompre	13.43	305	eP		Pn	16 26 18.6	-1.5
HAU	Haudompre	13.43	305	eP		Pn	16 26 18.6	-1.5
HAU	Haudompre	13.43	305	eP		Pn	16 26 18.6	-1.5
HAU	Haudompre	13.43	305	eP		Pn	16 26 18.6	-1.5
VIVF	Saint-Julien-l	13.66	291	eP		Pn	16 26 20.5	-2.7
VIVF	Saint-Julien-l	13.66	291	eP		Pn	16 26 20.5	-2.7
VIVF	Saint-Julien-l	13.66	291	eP		Pn	16 26 20.5	-2.7
SMF	Signal de Mont	14.59	298	eP		Pn	16 26 34.0	-2.0
	comp=Z,28nm,0.9s							
SMF	Signal de Mont	14.59	298	eP		Pn	16 26 34.0	-2.0
SMF				pmax		pmax		
	comp=Z,28nm,0.9s							
SMF	Signal de Mont	14.59	298	eP		Pn	16 26 34.0	-2.0
	comp=Z,28nm,0.9s							
LOR	Lormes	14.75	300	eP		Pn	16 26 36.4	-1.7
LOR	Lormes	14.75	300	eP		Pn	16 26 36.4	-1.7
SSF	Saint Saulge	14.92	299	eP		Pn	16 26 38.1	-2.3
	comp=Z,23nm,0.9s							
SSF	Saint Saulge	14.92	299	eP		Pn	16 26 38.1	-2.3
SSF				pmax		pmax		
	comp=Z,23nm,0.9s							
SSF	Saint Saulge	14.92	299	eP		Pn	16 26 38.1	-2.3
	comp=Z,23nm,0.9s							
AVF	Avril sur Loir	14.95	298	eP		Pn	16 26 38.9	-1.9
	comp=Z,21nm,0.8s							
AVF	Avril sur Loir	14.95	298	eP		Pn	16 26 38.9	-1.9
AVF				pmax		pmax		
	comp=Z,21nm,0.8s							
AVF	Avril sur Loir	14.95	298	eP		Pn	16 26 38.9	-1.9
	comp=Z,21nm,0.8s							
BGF	Bois d'Agland	15.24	297	eP		Pn	16 26 41.5	-3.1
BGF	Bois d'Agland	15.24	297	eP		Pn	16 26 41.5	-3.1
BGF	Bois d'Agland	15.24	297	eP		Pn	16 26 41.5	-3.1
MTLF	Montolieu	15.30	285	eP		Pn	16 26 45.4	0.0
	comp=Z,23nm,1.2s							
MTLF	Montolieu	15.30	285	eP		Pn	16 26 45.4	0.0
MTLF				pmax		pmax		
	comp=Z,23nm,1.2s							
MTLF	Montolieu	15.30	285	eP		Pn	16 26 45.4	0.0
	comp=Z,23nm,1.2s							
CAF	Calviac	15.50	290	eP		Pn	16 26 48.2	+0.1
CAF	Calviac	15.50	290	eP		Pn	16 26 48.2	+0.1
CAF	Calviac	15.50	290	eP		Pn	16 26 48.2	+0.1
TCF	Toulx Ste Croi	15.61	296	eP		Pn	16 26 47.6	-1.9
TCF	Toulx Ste Croi	15.61	296	eP		Pn	16 26 47.6	-1.9
TCF	Toulx Ste Croi	15.61	296	eP		Pn	16 26 47.6	-1.9
GNI	Garni	16.74	87	eP		P	16 27 06.0	-0.4
	comp=Z,35nm,1.7s							
MOS	Moscow	17.45	29	eP		Pn	16 27 11.0	-1.8
MOS				pmax		pmax		
	comp=Z,157nm,1.4s							
LDF	La Druitiere	17.69	302	eP		Pn	16 27 15.4	-0.5
	comp=Z,22nm,1.0s							
LDF	La Druitiere	17.69	302	eP		Pn	16 27 15.4	-0.5
LDF				pmax		pmax		
	comp=Z,22nm,1.0s							
LDF	La Druitiere	17.69	302	eP		Pn	16 27 15.4	-0.5
	comp=Z,22nm,1.0s							
LDF	La Druitiere	17.69	302	eP		Pn	16 27 15.4	-0.5
	comp=Z,11nm,1.0s							
SJPF	Ste Jean	17.82	284	eP		Pn	16 27 16.0	-1.4
SJPF	Ste Jean	17.82	284	eP		Pn	16 27 16.0	-1.4
SJPF	Ste Jean	17.82	284	eP		Pn	16 27 16.0	-1.4
FLN	La Foliniere	17.97	302	eP		Pn	16 27 19.0	-0.3
FLN	La Foliniere	17.97	302	eP		Pn	16 27 19.0	-0.3
FLN	La Foliniere	17.97	302	eP		Pn	16 27 19.0	-0.3
FLN	La Foliniere	17.97	302	eP		Pn	16 27 19.0	-0.3
GRR	Gorron	18.11	301	eP		Pn	16 27 20.0	-1.0
GRR	Gorron	18.11	301	eP		Pn	16 27 20.0	-1.0
GRR	Gorron	18.11	301	eP		Pn	16 27 20.0	-1.0
GRR	Gorron	18.11	301	eP		Pn	16 27 20.0	-1.0
SGMF	Saint Gilles	19.19	300	eP		P	16 27 32.0	-1.2
SGMF	Saint Gilles	19.19	300	eP		P	16 27 32.0	-1.2
SGMF	Saint Gilles	19.19	300	eP		P	16 27 32.0	-1.2
SGMF	Saint Gilles	19.19	300	eP		P	16 27 32.0	-1.2
QUIF	Quistinic	19.52	299	eP		P	16 27 36.7	-0.1
QUIF	Quistinic	19.52	299	eP		P	16 27 36.7	-0.1
QUIF	Quistinic	19.52	299	eP		P	16 27 36.7	-0.1
QUIF	Quistinic	19.52	299	eP		P	16 27 36.7	-0.1
ROSF	Rostrenen	19.67	300	eP		P	16 27 37.4	-1.1
	comp=Z,21nm,1.1s							
ROSF	Rostrenen	19.67	300	eP		P	16 27 37.4	-1.1
ROSF				pmax		pmax		
	comp=Z,21nm,1.1s							
ROSF	Rostrenen	19.67	300	eP		P	16 27 37.4	-1.1
	comp=Z,21nm,1.1s							
ROSF	Rostrenen	19.67	300	eP		P	16 27 37.4	-1.1
	comp=Z,10nm,1.1s							
HFS	Hagfors	19.68	347	P		P	16 27 39.0	+0.6
HFS	Hagfors	19.68	347	P		P	16 27 39.0	+0.6
	comp=Z,0.2nm,0.3s,baz=168,slow=15,SNR=4.3							
HFS	Hagfors	19.68	347	P		P	16 27 39.0	+0.6
FINES	FINESS Array B	20.29	5	P		P	16 27 44.0	-0.9
FINES	FINESS Array B	20.29	5	P		P	16 27 44.0	-0.9
	comp=Z,5.2nm,0.6s,baz=200,slow=10,SNR=4.1							
FINES	FINESS Array B	20.29	5	P		P	16 27 44.1	-0.9
ESDC	Sonseca Array	20.33	274	P		P	16 27 45.4	-0.3
ESDC	Sonseca Array	20.33	274	P		P	16 27 45.4	-0.3
	comp=Z,1.8nm,0.6s,baz=74,slow=11,SNR=11							
ESDC	Sonseca Array	20.33	274	P		P	16 27 45.4	-0.3
NB2	NORSAR Subarra	20.99	344	P		P	16 27 51.0	-1.7
	comp=Z,9.3nm,1.0s,baz=155,slow=11							
NB2	NORSAR Subarra	20.99	344	P		P	16 27 51.0	-1.7
	comp=Z,9.3nm,1.0s,SNR=7.1							
NOA	NORSAR Array B	20.99	344	P		P	16 27 51.9	-0.8
NOA	NORSAR Array B	20.99	344	P		P	16 27 51.9	-0.8
	comp=Z,3.4nm,0.6s,baz=161,slow=11,SNR=7.9							
NOA	NORSAR Array B	20.99	344	P		P	16 27 51.9	-0.8
EKA	Eskdalemuir Ar	22.04	318	P		P	16 28 03.5	-0.5
EKA	Eskdalemuir Ar	22.04	318	P		P	16 28 03.5	-0.5
	comp=Z,2.7nm,0.7s,baz=115,slow=11,SNR=9.1							
EKA	Eskdalemuir Ar	22.04	318	P		P	16 28 03.5	-0.5
KLMR	Klimovskoe	22.13	22	eP		P	16 28 03.6	-1.3
KLMR				*SP		sP	16 28 08.4	-1.4
KLMR				pmax		pmax		
	comp=Z,22nm,0.9s							
KLMR				MLR		MLR		
	comp=Z,941nm,12.0s							
KLMR	Klimovskoe	22.13	22	eP		P	16 28 03.6	-1.3
	comp=Z,22nm,0.9s							
ARCES	ARCESS Array B	28.35	2	P		P	16 29 01.9	-1.2
ARCES	ARCESS Array B	28.35	2	P		P	16 29 01.9	-1.2
	comp=Z,9nm,0.9s,baz=186,slow=8.5,SNR=4.3							
TOA0	Torodi Ar. Sit	33.51	219	eP		P	16 29 48.3	-0.8
TORD	Torodi Ar. Bea	33.51	219	P		P	16 29 49.0	-0.1
TORD	Torodi Ar. Bea	33.51	219	P		P	16 29 49.0	-0.1
	comp=Z,3.8nm,0.7s,baz=30,slow=9.1,SNR=11							
BRVK	Borovoye	33.80	53	⇑eP		P	16 29 50.6	-0.8
BRVK				pmax		pmax		
	comp=Z,11nm,1.2s							
BVAR	Borovoye Array	33.87	53	P		P	16 29 53.3	+1.4
BVAR	Borovoye Array	33.87	53	P		P	16 29 53.3	+1.4
BVAR	Borovoye Array	33.87	53	P		P	16 29 53.3	+1.4
	comp=Z,3.3nm,1.0s,baz=280,slow=8.7,SNR=4.1							
EKS2	Erkin-Say	37.52	70	eP		P	16 30 24.4	+0.8
EKS2	Erkin-Say	37.52	70	eP		P	16 30 24.4	+0.8
AAK	Ala-Archa	38.04	70	P		P	16 30 30.0	+2.0
AAK				pmax		pmax		
	comp=Z,3.0nm,0.7s							
AAK	Ala-Archa	38.04	70	eP		P	16 30 27.5	-0.5
AAK	Ala-Archa	38.04	70	P		P	16 30 30.0	+2.0
	comp=Z,2.9nm,0.7s,baz=266,slow=5.4,SNR=4.9							
KURBB	Kurchatov Arra	39.07	57	P		P	16 30 36.8	+0.5
	comp=Z,1.8nm,0.9s,baz=285,slow=9.7,SNR=4.2							
KURK	Kurchatov	39.11	57	⇑eP		P	16 30 37.5	+0.8
KURK				pmax		pmax		
	comp=Z,7.0nm,1.7s							
KURK	Kurchatov	39.11	57	P		P	16 30 36.8	+0.1
KSH	Kashi	40.07	74	eP		P	16 30 45.8	+0.8
KSH				e*p*P		pP	16 30 50.1	+1.4
KSH				e*s*P		sP	16 30 52.6	+2.4
KSH				e*P*P		PnPn	16 32 22.1	+1.6
KSH				e*P*cP		PcP	16 32 49.6	0.0
KSH				e*S*cP		ScP	16 36 37.3	-1.1
KSH				e*P*cS		PcS	16 36 39.3	-0.7
KSH				e*S*		S	16 36 51.9	+1.0
KSH				e*s*S		sS	16 36 59.3	+2.3
KSH				e*S*S		SS	16 39 45.8	-2.2
KSH	Kashi	40.07	74	e*S*cS		ScS	16 40 49.3	-2.6
KSH				pmax		pmax		
	comp=Z,32nm,1.7s							
KSH				pmax		pmax		
	comp=Z,180nm,2.1s							
KSH				LR		LR		
	comp=N,410nm,10.7s							
KSH				LR		LR		
	comp=E,280nm,5.0s							
KSH				LR		LR		
	comp=Z,510nm,7.2s							
MK31	Makanchi Array	42.29	62	eP		P	16 31 03.4	+0.4
MK31	Makanchi Array	42.29	62	eP		P	16 31 03.4	+0.4
MKAR	Makanchi Array	42.29	62	P		P	16 31 03.8	+0.8
MKAR	Makanchi Array	42.29	62	P		P	16 31 03.8	+0.8
MKAR	Makanchi Array	42.29	62	P		P	16 31 03.8	+0.8
	comp=Z,1.9nm,0.6s,baz=286,slow=7.8,SNR=9.5							
ZAA0	Zalesovo Array	42.39	51	eP		P	16 31 03.7	0.0
ZALV	Zalesovo Beam	42.39	51	*i* P		P	16 31 06.4	+2.7
ZALV				pmax		pmax		
	comp=Z,7.0nm,0.7s							
ZALV	Zalesovo Beam	42.39	51	P		P	16 31 04.0	+0.3
ZALV	Zalesovo Beam	42.39	51	P		P	16 31 04.0	+0.3
	comp=Z,6.6nm,0.7s,baz=277,slow=8.9,SNR=7.8							
LIC	Lamto	42.78	223	eP		P	16 31 07.6	+0.3
	comp=Z,22nm,1.1s							
LIC	Lamto	42.78	223	eP		P	16 31 07.6	+0.3
	comp=Z,22nm,1.1s							
SONM	Songino Array	57.21	53	P		P	16 32 57.5	+0.8
SONM				PcP		PcP	16 33 51.4	+0.2
SONM	Songino Array	57.21	53	P		P	16 32 57.5	+0.8
	comp=Z,2.2nm,1.1s,baz=287,slow=8.6,SNR=4.4							
SONM				PcP		PcP	16 33 51.4	+0.2
	comp=Z,0.7nm,0.7s,baz=296,slow=4.6,SNR=2.5							
SCHQ	Schefferville	57.34	317	P		P	16 32 56.9	-0.5
SCHQ	Schefferville	57.34	317	P		P	16 32 56.9	-0.5
	comp=Z,3.7nm,0.7s,baz=31,slow=2.9,SNR=6.0							
CMAR	Chiang Mai Arr	67.85	85	P		P	16 34 06.3	-1.7
CMAR	Chiang Mai Arr	67.85	85	P		P	16 34 06.3	-1.7
	comp=Z,0.9nm,0.8s,baz=307,slow=8.0,SNR=5.4							
BOSA	Boshof	69.59	178	P		P	16 34 18.3	-0.3
BOSA	Boshof	69.59	178	P		P	16 34 18.3	-0.3
	comp=Z,4.8nm,1.0s,baz=2.0,slow=4.0,SNR=3.6							
YKA	Yellowknife Ar	71.03	341	P		P	16 34 26.7	-0.3
YKA	Yellowknife Ar	71.03	341	P		P	16 34 26.7	-0.3
	comp=Z,0.6nm,0.5s,baz=34,slow=5.3,SNR=10							
ILAR	Eielson Array	73.96	355	P		P	16 34 45.1	+0.6
ILAR	Eielson Array	73.96	355	P		P	16 34 45.1	+0.6
	comp=Z,0.2nm,0.6s,baz=353,slow=5.4,SNR=4.1							
ULM	Lac du Bonnet	74.18	324	P		P	16 34 45.9	-0.1
ULM	Lac du Bonnet	74.18	324	P		P	16 34 45.9	-0.1
	comp=Z,4.4nm,0.5s,baz=76,slow=2.5,SNR=4.1							
KSAR	Wonju Array Be	76.06	52	P		P	16 34 57.0	0.0
KSRS	Korea Array	76.07	52	P		P	16 34 57.0	-0.1
	comp=Z,0.9nm,0.9s,baz=318,slow=5.6,SNR=5.0							
A14A	Double T Ranch	82.15	333	P		P	16 35 31.2	+0.8
	baz=82,SNR=8.7							
MJAR	Matsushiro Arr	82.62	47	P		P	16 35 33.5	+0.6
MJAR	Matsushiro Arr	82.62	47	P		P	16 35 33.5	+0.6
	comp=Z,1.6nm,0.8s,baz=310,slow=5.5,SNR=6.2							
B14A	Marquette Ranc	82.62	332	⇑P		P	16 35 32.9	0.0
	baz=82							
C14A	Swan Lake	83.29	332	⇓P		P	16 35 37.1	+0.8
	baz=83							
F17A	Fitzpatrick Pl	83.73	329	⇑P		P	16 35 37.7	-0.9
	baz=83							
E15A	Deer Lodge	84.04	331	⇓P		P	16 35 41.6	+1.4
	baz=84							
J22A	Midwest	84.08	325	⇑P		P	16 35 40.0	-0.5
	baz=84							
H19A	Powell	84.09	328	⇓P		P	16 35 41.8	+1.3
	baz=84,SNR=5.2							
I21A	Big Trails, Te	84.10	326	⇓P		P	16 35 40.0	-0.6
	baz=84,SNR=5.9							
K23A	Bowen Ranch, D	84.24	325	⇑P		P	16 35 41.1	-0.2
	baz=84							
I20A	Worland	84.33	327	⇓P		P	16 35 42.7	+1.0
	baz=84							
H18A	Shoshone NF, C	84.36	328	⇑P		P	16 35 41.0	-1.0
	baz=84,SNR=5.5							
J21A	Lysite	84.54	326	P		P	16 35 43.5	+0.6
	baz=84,SNR=5.4							
I19A	Meeteetse	84.62	327	P		P	16 35 44.6	+1.3
	baz=84,SNR=6.6							
K22A	Casper	84.71	325	P		P	16 35 44.0	+0.2
	baz=84,SNR=5.2							
G16A	Moss Hill, Enn	84.73	330	P		P	16 35 45.1	+1.3
	baz=84,SNR=6.2							
J20A	Shoshoni	84.80	326	⇑P		P	16 35 45.3	+1.2
	baz=84,SNR=6.7							
H17A	Grant Village	84.95	328	⇑P		P	16 35 48.6	+3.6
	baz=85							
H16A	Russell Place,	84.96	329	⇑P		P	16 35 47.0	+1.9
	baz=85,SNR=5.4							
PDAR	Pinedale Array	85.90	327	P		P	16 35 49.6	-0.1
PDAR	Pinedale Array	85.90	327	P		P	16 35 49.6	-0.1
	comp=Z,0.6nm,0.4s,baz=76,slow=6.3,SNR=3.8							
BDFB	Brasilia	86.36	246	P		P	16 35 53.6	+1.5
BDFB	Brasilia	86.36	246	P		P	16 35 53.6	+1.5
	comp=Z,3.5nm,0.8s,baz=50,slow=11,SNR=4.5							
TXAR	Lajitas Array	94.00	315	P		P	16 36 27.9	0.0
TXAR	Lajitas Array	94.00	315	P		P	16 36 27.9	0.0
	comp=Z,0.8nm,0.8s,baz=78,slow=2.6,SNR=5.8							
ASAR	Alice Springs	120.81	96	PKP		PKPdf	16 41 59.5	-2.5
ASAR	Alice Springs	120.81	96	PKP		PKPdf	16 41 59.5	-2.5
	comp=Z,0.6nm,1.0s,baz=317,slow=2.5,SNR=4.3							

CSEM ***24*** *16:24:33.2,41.29N×22.68E,h2km,ML3.1/4, After THE*
**THE 24 16:24:33.2,41.29N×22.68E,h2km±28km,ML3.1/4,Error ellipse: s-maj=28.6km s-min=0.6km az=340.0, Northwestern Balkan

BIA				S	Sg	16 35 57.6	-0.3		
PLG	**Polygyros**	**1.07**	**146**	P	Pg	16 35 43.9	-0.7		
PLG				S	Sg	16 35 58.7	+0.3		
PLG	**Polygyros**	**1.07**	**146**	P	Pg	16 35 43.9	-0.7		
PLG				S	Sg	16 35 58.7	+0.3		
FNA	**Florina**	**1.09**	**244**	P	Pg	16 35 44.2	-0.9		
FNA				S	Sg	16 35 59.3	0.0		
FNA	**Florina**	**1.09**	**244**	P	Pg	16 35 44.2	-0.9		
FNA				S	Sg	16 35 59.3	0.0		
SKO	**Skopje**	**1.16**	**308**	P	Pg	16 35 46.3	-0.2		
SKO				S	Sn	16 36 03.0	-0.5		
SKO	**Skopje**	**1.16**	**308**	*e*Pg	Pg	16 35 46.0	-0.5		
SKO				*e*Sg	Sg	16 36 01.7	+0.1		
SKO				eLg	Lg	16 36 02.7			
	comp=E,251nm,0.5s								
SKO	**Skopje**	**1.16**	**308**	*e*Pg	Pg	16 35 46.2	-0.2		
SKO				*e*Sg	Sg	16 36 01.6	+0.1		
SKO	**Skopje**	**1.16**	**308**	*e*Pg	Pg	16 35 46.2	-0.2		
SKO				eLg	Lg	16 36 01.1			
	comp=E,251nm,0.5s								
SKO				*e*Sg	Sg	16 36 01.1	-0.4		
SKO				S	Sn	16 36 03.0	-0.5		
OUR	**Ouranopolis**	**1.36**	**133**	P	Pn	16 35 49.2	-0.7		
OUR				S	Sn	16 36 08.9	+0.6		
OUR	**Ouranopolis**	**1.36**	**133**	P	Pn	16 35 49.2	-0.7		
OUR				S	Sn	16 36 08.9	+0.6		
VTS	**Vitosha**	**1.38**	**17**	P	Pn	16 35 49.7	-0.6		
VTS	**Vitosha**	**1.38**	**17**	*i* P	Pn	16 35 49.7	-0.6		
VTS	**Vitosha**	**1.38**	**17**	*i* P	Pn	16 35 49.7	-0.6		
VTS	**Vitosha**	**1.38**	**17**	P	Pn	16 35 49.7	-0.6		
VTS				*e*Sg	Sn	16 36 12.1	+3.0		
KAVA	**Kavala**	**1.42**	**100**	P	Pb	16 35 50.7	-0.4		
KAVA				S	Sg	16 36 09.9	+0.3		
KAVA	**Kavala**	**1.42**	**100**	P	Pb	16 35 50.7	-0.4		
KAVA				S	Sg	16 36 09.9	+0.3		
NEST	**Nestorio**	**1.50**	**236**	P	Pn	16 35 51.7	-0.2		
NEST	**Nestorio**	**1.50**	**236**	P	Pn	16 35 51.7	-0.2		
PAIG	**Paliouri**	**1.54**	**150**	P	Pn	16 35 51.9	-0.4		
PAIG				S	Sb	16 36 13.2	+0.1		
PAIG	**Paliouri**	**1.54**	**150**	P	Pn	16 35 51.9	-0.4		
PAIG				S	Sb	16 36 13.2	+0.1		
KBN	**Korca**	**1.57**	**246**	P	Pn	16 35 52.5	-0.3		
KBN	**Korca**	**1.57**	**246**	P	Pn	16 35 52.5	-0.3		
RZN	**Rozhen**	**1.59**	**74**	*i* Pg	Pb	16 35 53.9	-0.3		
RZN	**Rozhen**	**1.59**	**74**	*i* Pg	Pb	16 35 53.9	-0.3		
RZN	**Rozhen**	**1.59**	**74**	*i* Pg	Pb	16 35 53.9	-0.3		
BARS	**Barje**	**1.68**	**338**	*e*Pn	Pn	16 35 52.9	-1.3		
BARS				*e*Sg	Sb	16 36 17.0	0.0		
BARS	**Barje**	**1.68**	**338**	*e*Pn	Pn	16 35 52.9	-1.3		
BARS				*e*Sg	Sb	16 36 17.0	0.0		
PHP	**Peshkopia**	**1.73**	**285**	P	Pn	16 35 54.9	-0.1		
PHP				S	Sb	16 36 18.2	-0.3		
PHP	**Peshkopia**	**1.73**	**285**	P	Pn	16 35 54.9	-0.1		
PHP				S	Sb	16 36 18.2	-0.3		
PLD	**Plovdiv**	**1.73**	**60**	*i* Pg	Pg	16 35 57.2	-0.2		
PLD	**Plovdiv**	**1.73**	**60**	*i* Pg	Pg	16 35 57.2	-0.2		
PLD	**Plovdiv**	**1.73**	**60**	*i* Pg	Pg	16 35 57.2	-0.2		
THL	**Klokotos Trika**	**1.77**	**197**	P	Pn	16 35 54.2	-1.3		
THL				S	Sn	16 36 18.0	-0.5		
THL	**Klokotos Trika**	**1.77**	**197**	P	Pn	16 35 54.2	-1.3		
THL				S	Sn	16 36 18.0	-0.5		
XOR	**Xorichti**	**1.94**	**168**	P	Pn	16 35 57.4	-0.5		
XOR				S	Sn	16 36 21.0	-1.6		
XOR	**Xorichti**	**1.94**	**168**	P	Pn	16 35 57.4	-0.5		
XOR				S	Sn	16 36 21.0	-1.6		
ZAPS	**Zavoj**	**2.01**	**359**	*e*Pn	Pn	16 35 55.4	-3.4		
KDZ	**Kurdzhali**	**2.10**	**79**	*i* Pg	Pb	16 36 01.7	-1.0		
KDZ	**Kurdzhali**	**2.10**	**79**	*i* Pg	Pb	16 36 01.7	-1.0		
KDZ	**Kurdzhali**	**2.10**	**79**	*i* Pg	Pb	16 36 01.7	-1.0		
MPEP	**Malo Peshtene**	**2.23**	**20**	*i* Pg	Pb	16 36 05.4	+0.4		
MPEP	**Malo Peshtene**	**2.23**	**20**	*i* Pg	Pb	16 36 05.4	+0.4		
AGG	**Agios Georgios**	**2.26**	**187**	P	Pn	16 36 02.4	+0.2		
AGG	**Agios Georgios**	**2.26**	**187**	P	Pn	16 36 02.4	+0.2		
SELS	**Selova**	**2.27**	**330**	⇑*i* Pn	Pn	16 36 00.7	-1.7		
SELS				*e*Sg	Sg	16 36 36.4	-0.6		
DIM	**Dimitrovgrad**	**2.28**	**69**	*i* Pg	Pb	16 36 06.4	+0.6		
DIM	**Dimitrovgrad**	**2.28**	**69**	*i* Pg	Pb	16 36 06.4	+0.6		
DIM	**Dimitrovgrad**	**2.28**	**69**	*i* Pg	Pb	16 36 06.4	+0.6		
AOS	**Alonnisos**	**2.29**	**156**	P	Pn	16 36 01.5	-1.1		
AOS				S	Sn	16 36 29.1	-2.1		
AOS	**Alonnisos**	**2.29**	**156**	P	Pn	16 36 01.5	-1.1		
AOS				S	Sn	16 36 29.1	-2.1		
MAKR	**Makrakomi, Fth**	**2.29**	**191**	P	Pn	16 36 02.8	+0.1		
MAKR	**Makrakomi, Fth**	**2.29**	**191**	P	Pn	16 36 02.8	+0.1		
PVY	**Plav**	**2.42**	**304**	⇑*i* Pn	Pn	16 36 05.3	+0.7		
PVY				*e*Sn	Sn	16 36 36.2	+1.5		
PVY	**Plav**	**2.42**	**304**	⇑*i* Pn	Pn	16 36 05.3	+0.7		
PVY				*e*Sn	Sn	16 36 36.2	+1.5		
IGT	**Igoumenitsa**	**2.49**	**227**	P	Pn	16 36 07.2	+1.8		
IGT				S	Sb	16 36 39.4	-1.0		
IGT	**Igoumenitsa**	**2.49**	**227**	P	Pn	16 36 07.2	+1.8		
IGT				S	Sb	16 36 39.4	-1.0		
ALN	**Alexandroupoli**	**2.58**	**97**	P	Pn	16 36 07.4	+0.8		
ALN	**Alexandroupoli**	**2.58**	**97**	P	Pn	16 36 07.4	+0.8		
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn	Pn	16 36 04.8	-2.3		
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn	Pn	16 36 04.8	-2.3		
BEY	**Berane**	**2.62**	**309**	*e*Pn	Pn	16 36 07.0	-0.3		
BEY				*e*Sn	Sn	16 36 41.1	+1.6		
IVA	**Berane**	**2.62**	**309**	*e*Pn	Pn	16 36 07.0	-0.3		
IVA				*e*Sn	Sn	16 36 41.1	+1.6		
ULC	**Ulcinj**	**2.66**	**286**	⇓*i* Pn	Pn	16 36 09.2	+1.4		
ULC				*e*Sn	Sb	16 36 43.3	-2.1		
ULC	**Ulcinj**	**2.66**	**286**	⇓*i* Pn	Pn	16 36 09.2	+1.4		
ULC				*e*Sn	Sb	16 36 43.3	-2.1		
ENEZ	**Enez**	**2.69**	**100**	*e*PN	Pg	16 36 14.2	-1.4		
PDG	**Podgorica**	**2.81**	**296**	⇓*i* Pn	Pn	16 36 10.2	+0.5		
PDG				*e*Sn	Sn	16 36 45.9	+1.9		
TTG	**Podgorica**	**2.81**	**296**	⇓*i* Pn	Pn	16 36 10.2	+0.5		
TTG				*e*Sn	Sn	16 36 45.9	+1.9		
EFP	**Efpalio**	**2.90**	**192**	P	Pn	16 36 11.4	+0.4		
EFP	**Efpalio**	**2.90**	**192**	P	Pn	16 36 11.4	+0.4		
ERIK	**Erikli-Kesan**	**2.97**	**100**	*e*PN	Pb	16 36 18.9	+1.4		
GRUS	**Gruza**	**2.99**	**332**	*e*Pn	Pn	16 36 10.8	-1.5		
GRUS	**Gruza**	**2.99**	**332**	*e*Pn	Pn	16 36 10.8	-1.5		
BUM	**Brajici-Budva**	**3.01**	**291**	⇓*i* Pn	Pn	16 36 13.1	+0.5		
BUM				*e*Sn	Sn	16 36 50.5	+1.4		
BUM	**Brajici-Budva**	**3.01**	**291**	⇓*i* Pn	Pn	16 36 13.1	+0.5		
BUM				*e*Sn	Sn	16 36 50.5	+1.4		
GELI	**Tayfur-Gelibol**	**3.01**	**106**	*e*PN	Pb	16 36 18.6	+0.4		
EDRB	**Edirne**	**3.11**	**78**	P	Pn	16 36 13.9	0.0		
EDRB	**Edirne**	**3.11**	**78**	P	Pn	16 36 13.9	0.0		
EZN	**Ezine**	**3.13**	**116**	*e*PN	Pb	16 36 21.7	+1.4		
NKY	**Niksic**	**3.15**	**301**	⇓*i* Pn	Pn	16 36 14.1	-0.4		
NKY				*e*Sn	Sn	16 36 54.1	+1.5		
NKY	**Niksic**	**3.15**	**301**	⇓*i* Pn	Pn	16 36 14.1	-0.4		
NKY				*e*Sn	Sn	16 36 54.1	+1.5		
LPK	**Lapseki**	**3.23**	**105**	*e*PN	Pb	16 36 22.7	+0.8		
HCY	**Herceg Novi**	**3.34**	**292**	*e*Pn	Pn	16 36 17.8	+0.7		
HCY				*e*Sn	Sn	16 36 59.1	+2.0		
HCY	**Herceg Novi**	**3.34**	**292**	*e*Pn	Pn	16 36 17.8	+0.7		
HCY				*e*Sn	Sn	16 36 59.1	+2.0		
UPM	**Unac-Piva**	**3.40**	**306**	⇑*i* Pn	Pn	16 36 18.0	-0.1		
UPM				*e*Sn	Sn	16 36 59.7	+0.7		
UPM	**Unac-Piva**	**3.40**	**306**	⇑*i* Pn	Pn	16 36 18.0	-0.1		
UPM				*e*Sn	Sn	16 36 59.7	+0.7		
DIVS	**Divibare**	**3.45**	**326**	*e*Pn	Pn	16 36 17.3	-1.4		
DIVS	**Divibare**	**3.45**	**326**	*e*Pn	Pn	16 36 17.3	-1.4		
RKY	**Sarkoy-Tekirda**	**3.46**	**98**	*e*PN	Pb	16 36 27.1	+1.2		
BRY	**Bratogost**	**3.48**	**299**	⇓*i* Pn	Pn	16 36 20.3	+1.1		
BRY				*e*Sn	Sn	16 37 03.1	+2.2		
BRY	**Bratogost**	**3.48**	**299**	⇓*i* Pn	Pn	16 36 20.3	+1.1		
BRY				*e*Sn	Sn	16 37 03.1	+2.2		
MFT	**Murefte**	**3.52**	**96**	*e*PN	Pg	16 36 30.1	-1.5		
BBLS	**Lazići**	**3.55**	**318**	*e*Pn	Pn	16 36 19.6	-0.4		
BBLS	**Lazići**	**3.55**	**318**	*e*Pn	Pn	16 36 19.6	-0.4		
KRBG	**Karabiga-Canak**	**3.62**	**102**	*e*PN	Pb	16 36 29.9	+1.3		
HUMR	**Humele**	**3.67**	**27**	⇓*i* P	Pg	16 36 35.5	+1.0		
TKR	**Tekirdag**	**3.68**	**93**	*e*PN	Pg	16 36 34.0	-0.7		
MRMT	**Marmara Adasi**	**3.79**	**98**	*e*PN	Pb	16 36 33.5	+1.9		
GONE	**Gonen-Balikesi**	**4.00**	**106**	*e*PN	Pb	16 36 35.2	+0.1		
TEKS	**Tekeris**	**4.01**	**326**	*e*Pn	Pn	16 36 24.6	-1.8		
TEKS	**Tekeris**	**4.01**	**326**	*e*Pn	Pn	16 36 24.6	-1.8		
SLVT	**Silivri**	**4.17**	**89**	*e*PN	Pb	16 36 41.8	-2.3		
LOT	**Lotru**	**4.26**	**10**	⇑*i* P	Pn	16 36 33.7	+3.9		
LOT	**Lotru**	**4.26**	**10**	⇑*i* P	Pn	16 36 33.7	+3.9		
ARR	**Arges**	**4.34**	**19**	⇓*i* P	Pn	16 36 32.3	+1.4		
ARR	**Arges**	**4.34**	**19**	⇓*i* P	Pn	16 36 32.3	+1.4		
CTKS	**Kestanelik-??a**	**4.40**	**88**	*e*PN	Pg	16 36 45.1	-3.3		
BZS	**Buzias**	**4.42**	**350**	*e*Pn	Pn	16 36 30.1	-1.8		
BZS	**Buzias**	**4.42**	**350**	⇓*i* P	Pn	16 36 30.0	-1.8		
BZS	**Buzias**	**4.42**	**350**	*e*Pn	Pn	16 36 30.1	-1.8		
KCTX	**Karacabey (Bur**	**4.43**	**101**	*e*PN	Pb	16 36 42.0	-0.5		
VOIR		**4.51**	**22**	⇓*i* P	Pn	16 36 32.9	-0.4		
VOIR		**4.51**	**22**	⇓*i* P	Pn	16 36 32.9	-0.4		
BGKT	**Bogazkoy**	**4.60**	**89**	*e*PN	Pb	16 36 47.5	+2.1		
ARMT	**Armutlu**	**4.74**	**96**	*e*PN	Pb	16 36 47.6	-0.2		
ISR	**Istrita**	**4.78**	**35**	⇑*i* P	Pn	16 36 39.3	+2.4		
ISR	**Istrita**	**4.78**	**35**	⇑*i* P	Pn	16 36 39.3	+2.4		
ISK	**Istanbul-Kandi**	**4.82**	**90**	*e*PN	Pb	16 36 50.2	+1.0		
MLR	**Muntele Rosu**	**4.85**	**28**	⇑*i* P	Pn	16 36 39.4	+1.5		
MLR	**Muntele Rosu**	**4.85**	**28**	⇑*i* P	Pn	16 36 39.4	+1.5		
YLV	**Yalova**	**5.12**	**96**	*e*P	Pb	16 36 53.3	-1.0		
PLOR	**Plostina**	**5.42**	**31**	⇑*i* P	Pn	16 36 46.7	+1.0		
PLOR	**Plostina**	**5.42**	**31**	⇑*i* P	Pn	16 36 46.7	+1.0		
VRI	**Vrincioaia**	**5.46**	**31**	⇓*i* P	Pn	16 36 46.8	+0.6		
VRI	**Vrincioaia**	**5.46**	**31**	⇓*i* P	Pn	16 36 46.8	+0.6		
DRGR		**5.52**	**0**	⇑*i* P	Pn	16 36 44.7	-2.5		
DRGR		**5.52**	**0**	⇑*i* P	Pn	16 36 44.7	-2.5		
CFR	**Carcaliu**	**5.59**	**44**	⇑*i* P	Pn	16 36 49.7	+1.8		
CFR	**Carcaliu**	**5.59**	**44**	⇑*i* P	Pn	16 36 49.7	+1.8		
PKSM	**Moragy**	**5.74**	**331**	⇑*i* P	Pn	16 36 49.2	-0.9		
PKSM	**Moragy**	**5.74**	**331**	⇓*e*Pg	Pn	16 36 48.9	-1.2		
PKSM				⇓*e*		16 36 54.9			
PKSM	**Moragy**	**5.74**	**331**	⇑*i* P	Pn	16 36 49.2	-0.9		
BOJS	**Bojanci**	**6.87**	**311**	*i* Pn	Pn	16 37 07.2	+1.7		
BOJS	**Bojanci**	**6.87**	**311**	*i* Pn	Pn	16 37 07.2	+1.7		
VISS	**Visnje**	**7.28**	**311**	*i* Pn	Pn	16 37 12.5	+1.3		
VISS				*i* Sn	Sn	16 38 30.9	-3.3		
VISS	**Visnje**	**7.28**	**311**	*i* Pn	Pn	16 37 12.5	+1.3		
CEY	**Cerknica**	**7.48**	**309**	*i* Pn	Pn	16 37 16.1	+2.2		
CEY				*i* Sn	Sn	16 38 56.6	+2.5		
CEY	**Cerknica**	**7.48**	**309**	*i* Pn	Pn	16 37 16.1	+2.2		
JAVS	**Javornik**	**7.77**	**309**	*i* Pn	Pn	16 37 18.9	+0.8		
JAVS				*i* Sn	Sn	16 38 46.2	-0.3		
JAVS	**Javornik**	**7.77**	**309**	*i* Pn	Pn	16 37 18.9	+0.8		
JAVS				*i* Sn	Sn	16 38 46.2	-0.3		
KHC	**Kasperske Hory**	**10.14**	**324**	*e*PN	Pn	16 37 49.2	-1.3		
KHC	**Kasperske Hory**	**10.14**	**324**	Pn	Pn	16 37 49.2	-1.3		
GRG				S	Sg	16 44 10.6	+0.4		
GRG				*e*Sb	Sg	16 44 11.0	+0.8		
KKB	**Krupnik**	**0.66**	**26**	*i* P	Pg	16 44 09.6	-0.6		
KKB	**Krupnik**	**0.66**	**26**	*i* P	Pg	16 44 09.6	-0.6		
KKB	**Krupnik**	**0.66**	**26**	*i* P	Pg	16 44 09.6	-0.6		
SOH	**Sokhos**	**0.68**	**132**	P	Pg	16 44 10.1	-0.4		
SOH				S	Sb	16 44 20.2	-1.1		
SOH	**Sokhos**	**0.68**	**132**	*e*PN	Pg	16 44 09.9	-0.6		
SOH				*e*SN	Sb	16 44 20.9	-0.4		
SOH	**Sokhos**	**0.68**	**132**	P	Pg	16 44 10.1	-0.4		
SOH				S	Sb	16 44 20.2	-1.1		
SOH				*e*Sn	Sb	16 44 20.9	-0.4		
THE	**Thessaloniki**	**0.68**	**162**	P	Pg	16 44 10.1	-0.4		
THE				S	Sb	16 44 20.4	-0.8		
THE	**Thessaloniki**	**0.68**	**162**	P	Pg	16 44 10.1	-0.4		
THE				S	Sb	16 44 20.4	-0.8		
SRS	**Serrai**	**0.70**	**103**	P	Pg	16 44 10.4	-0.5		
SRS				S	Sb	16 44 20.9	-1.0		
SRS	**Serrai**	**0.70**	**103**	P	Pg	16 44 10.4	-0.5		
SRS				S	Sb	16 44 20.9	-1.0		
HORT	**Hortiatis**	**0.74**	**156**	P	Pg	16 44 11.4	-0.4		
HORT				S	Sb	16 44 22.6	-0.7		
HORT	**Hortiatis**	**0.74**	**156**	P	Pg	16 44 11.4	-0.4		
HORT				S	Sb	16 44 22.6	-0.7		
MMB	**Musomiste**	**0.84**	**68**	*i* P	Pg	16 44 13.1	-0.5		
MMB	**Musomiste**	**0.84**	**68**	*i* P	Pg	16 44 13.1	-0.5		
NVR	**Nevrokopi**	**0.88**	**85**	P	Pg	16 44 13.9	-0.6		
NVR	**Nevrokopi**	**0.88**	**85**	*e*PN	Pg	16 44 14.1	-0.4		
NVR				*e*SN	Sb	16 44 26.3	-1.0		
NVR	**Nevrokopi**	**0.88**	**85**	P	Pg	16 44 13.9	-0.6		
NVR				*e*Sn	Sb	16 44 26.3	-1.0		
BIA	**Bitola**	**1.07**	**256**	*i* Pg	Pb	16 44 16.8	-0.1		
BIA				*i* Sg	Sb	16 44 32.4	-0.2		
BIA	**Bitola**	**1.07**	**256**	*i* Pg	Pb	16 44 18.3	-0.1		
BIA				*i* Sg	Sb	16 44 32.3	-0.2		
PLG	**Polygyros**	**1.07**	**147**	P	Pg	16 44 17.2	-0.8		
PLG	**Polygyros**	**1.07**	**147**	*e*PN	Pg	16 44 17.5	-0.5		
PLG				*e*SN	Sb	16 44 32.3	-0.3		
PLG	**Polygyros**	**1.07**	**147**	P	Pg	16 44 17.2	-0.8		
PLG				*e*Sn	Sb	16 44 32.3	-0.3		
FNA	**Florina**	**1.11**	**244**	P	Pg	16 44 18.0	-0.9		
FNA				S	Sb	16 44 34.4	+0.5		
FNA	**Florina**	**1.11**	**244**	*e*PN	Pg	16 44 18.0	-0.9		
FNA	**Florina**	**1.11**	**244**	P	Pg	16 44 18.0	-0.9		
FNA				S	Sb	16 44 34.4	+0.5		
SKO	**Skopje**	**1.17**	**307**	P	Pg	16 44 18.2	-1.8		
SKO	**Skopje**	**1.17**	**307**	*i* Pg	Pb	16 44 20.0	-0.1		
SKO				*i* Sg	Sb	16 44 35.6	+0.1		
SKO				eLg	Lg	16 44 36.6			
	comp=N,231nm,0.3s								
SKO				eLg	Lg	16 44 36.9			
	comp=E,210nm,0.5s								
SKO	**Skopje**	**1.17**	**307**	*e*Pg	Pn	16 44 20.5	+0.1		
SKO				*e*Sg	Sb	16 44 35.5	0.0		
SKO	**Skopje**	**1.17**	**307**	P	Pg	16 44 18.2	-1.8		
SKO	**Skopje**	**1.17**	**307**	*e*Pg	Pn	16 44 20.5	+0.1		
SKO				*e*Sg	Sb	16 44 35.5	0.0		
SKO				eLg	Lg	16 44 37.4			
	comp=E,210nm,0.5s								
KZN	**Kozani**	**1.20**	**216**	*e*PN	Pg	16 44 19.9	-0.6		
KZN	**Kozani**	**1.20**	**216**	*e*Pn	Pg	16 44 19.9	-0.6		
OUR	**Ouranopolis**	**1.36**	**134**	P	Pn	16 44 22.4	-0.5		
OUR	**Ouranopolis**	**1.36**	**134**	P	Pn	16 44 22.4	-0.5		
VTS	**Vitosha**	**1.37**	**16**	P	Pn	16 44 23.0	-0.3		
VTS	**Vitosha**	**1.37**	**16**	*e*Pg	Pn	16 44 23.1	-0.3		
VTS				*e*Sg	Sn	16 44 42.3	+0.5		
VTS	**Vitosha**	**1.37**	**16**	⇑*i* P	Pb	16 44 23.3	-0.3		
VTS	**Vitosha**	**1.37**	**16**	*i* P	Pn	16 44 23.0	-0.3		
VTS	**Vitosha**	**1.37**	**16**	*i* P	Pn	16 44 23.0	-0.3		
VTS	**Vitosha**	**1.37**	**16**	P	Pn	16 44 23.0	-0.3		
VTS				*e*Sg	Sn	16 44 42.3	+0.5		
KAVA	**Kavala**	**1.40**	**101**	P	Pn	16 44 23.1	-0.5		
KAVA				S	Sn	16 44 43.6	+1.3		
KAVA	**Kavala**	**1.40**	**101**	P	Pn	16 44 23.1	-0.5		
NEST	**Nestorio**	**1.52**	**236**	P	Pn	16 44 25.2	0.0		
NEST	**Nestorio**	**1.52**	**236**	P	Pn	16 44 25.2	0.0		
PAIG	**Paliouri**	**1.54**	**151**	P	Pn	16 44 25.0	-0.5		
PAIG	**Paliouri**	**1.54**	**151**	*e*PN	Pn	16 44 25.2	-0.3		
PAIG				*e*SN	Sg	16 44 46.3	-0.8		
PAIG	**Paliouri**	**1.54**	**151**	P	Pn	16 44 25.0	-0.5		
PAIG				*e*Sn	Sg	16 44 46.3	-0.8		
RZN	**Rozhen**	**1.57**	**74**	*i* P	Pb	16 44 26.6	-0.5		
RZN	**Rozhen**	**1.57**	**74**	*i* P	Pb	16 44 26.6	-0.5		
RZN	**Rozhen**	**1.57**	**74**	*i* P	Pb	16 44 26.6	-0.5		
BARS	**Barje**	**1.67**	**337**	*e*Pn	Pn	16 44 26.9	-0.4		
BARS	**Barje**	**1.67**	**337**	*e*Pn	Pn	16 44 26.9	-0.4		
PLD	**Plovdiv**	**1.72**	**61**	P	Pn	16 44 27.6	-0.3		
PLD	**Plovdiv**	**1.72**	**61**	*i* P	Pg	16 44 29.7	-0.7		
PLD	**Plovdiv**	**1.72**	**61**	*i* P	Pg	16 44 29.7	-0.7		
PLD	**Plovdiv**	**1.72**	**61**	P	Pn	16 44 27.6	-0.3		
THL	**Klokotos Trika**	**1.79**	**197**	*e*PN	Pn	16 44 28.5	-0.4		
THL				*e*SN	Sn	16 44 52.1	+0.3		
THL	**Klokotos Trika**	**1.79**	**197**	*e*Pn	Pn	16 44 28.5	-0.4		
THL				*e*Sn	Sn	16 44 52.1	+0.3		
XOR	**Xorichti**	**1.95**	**169**	P	Pn	16 44 30.3	-0.8		
XOR	**Xorichti**	**1.95**	**169**	P	Pn	16 44 30.3	-0.8		
ZAPS	**Zavoj**	**2.00**	**359**	⇓*i* Pn	Pn	16 44 32.1	+0.2		
NEO	**Neokhori**	**2.01**	**168**	*e*PB	Pn	16 44 31.1	-0.9		
NEO	**Neokhori**	**2.01**	**168**	*e*Pb	Pn	16 44 31.1	-0.9		
KDZ	**Kurdzhali**	**2.08**	**79**	*i* Pg	Pb	16 44 35.4	-0.2		
KDZ	**Kurdzhali**	**2.08**	**79**	*i* Pg	Pb	16 44 35.4	-0.2		
KDZ	**Kurdzhali**	**2.08**	**79**	*i* Pg	Pb	16 44 35.4	-0.2		
RDO	**Rodhopi**	**2.15**	**93**	*e*PN	Pn	16 44 33.2	-0.6		
RDO	**Rodhopi**	**2.15**	**93**	*e*Pn	Pn	16 44 33.2	-0.6		
MPEP	**Malo Peshtene**	**2.22**	**20**	*i* P	Pn	16 44 35.1	+0.3		
MPEP				*i* Pg	Pg	16 44 39.0	-1.0		
MPEP	**Malo Peshtene**	**2.22**	**20**	*i* P	Pn	16 44 35.1	+0.3		
MPEP				*i* Pg	Pg	16 44 39.0	-1.0		
DIM	**Dimitrovgrad**	**2.26**	**69**	*i* Pg	Pg	16 44 41.6	+0.7		
DIM	**Dimitrovgrad**	**2.26**	**69**	*i* Pg	Pg	16 44 41.6	+0.7		
DIM	**Dimitrovgrad**	**2.26**	**69**	*i* Pg	Pg	16 44 41.6	+0.7		
SELS	**Selova**	**2.27**	**329**	*e*Pn	Pn	16 44 34.7	-0.8		
AGG	**Agios Georgios**	**2.27**	**187**	*e*PB	Pn	16 44 35.5	0.0		
AGG	**Agios Georgios**	**2.27**	**187**	*e*Pb	Pn	16 44 35.5	0.0		
AOS	**Alonnisos**	**2.29**	**156**	*e*PN	Pn	16 44 35.6	-0.2		
AOS	**Alonnisos**	**2.29**	**156**	*e*Pn	Pn	16 44 35.6	-0.2		
LIA	**Limnos Island**	**2.34**	**125**	*e*PN	Pn	16 44 35.9	-0.6		
LIA	**Limnos Island**	**2.34**	**125**	*e*Pn	Pn	16 44 35.9	-0.6		
ALN	**Alexandroupoli**	**2.56**	**97**	*e*PN	Pn	16 44 39.7	+0.2		
ALN	**Alexandroupoli**	**2.56**	**97**	*e*Pn	Pn	16 44 39.7	+0.2		
BOLS	**Boljevac**	**2.61**	**348**	*e*Sg	Sg	16 45 19.6	-1.7		
BOLS	**Boljevac**	**2.61**	**348**	*e*Sg	Sg	16 45 19.6	-1.7		
LKR	**Lokris**	**2.63**	**175**	*e*PN	Pn	16 44 40.3	-0.2		
LKR	**Lokris**	**2.63**	**175**	*e*Pn	Pn	16 44 40.3	-0.2		
ENEZ	**Enez**	**2.67**	**101**	*e*PN	Pb	16 44 43.5	-2.2		
LKD2	**Lefkada island**	**2.94**	**213**	*e*PN	Pn	16 44 44.7	0.0		
LKD2	**Lefkada island**	**2.94**	**213**	*e*Pn	Pn	16 44 44.7	0.0		
ERIK	**Erikli-Kesan**	**2.95**	**101**	*e*PN	Pb	16 44 50.3	-0.2		
GRUS	**Gru

ISR	Istrita	4.76	35⇑	*i*P	Pn	16 45 12.1	+2.3	
ISR	Istrita	4.76	35⇑	*i*P	Pn	16 45 12.1	+2.3	
MLR	Muntele Rosu	4.83	28⇑	*i*P	Pn	16 45 13.7	+2.9	
MLR	Muntele Rosu	4.83	28⇑	*i*P	Pn	16 45 13.7	+2.9	
PLOR	Plostina	5.40	31⇑	*i*P	Pn	16 45 20.4	+1.8	
PLOR	Plostina	5.40	31⇑	*i*P	Pn	16 45 20.4	+1.8	
VRI	Vrincioaia	5.44	31⇓	*i*P	Pn	16 45 21.9	+2.8	
DRGR		5.51	0⇓	*i*P	Pb	16 45 36.5	+2.3	
CFR	Carcaliu	5.57	44⇑	*i*P	Pn	16 45 23.4	+2.6	
PKSM	Moragy	5.74	331⇓	*i*P	Pn	16 45 22.8	-0.4	
PKSM	Moragy	5.74	331⇓	*i*P	Pn	16 45 22.8	-0.4	
BOJS	Bojanci	6.87	310	*i* Pn	Pn	16 45 42.5	+3.8	
VISS	Visnje	7.28	311	*i* Pn	Pn	16 45 46.2	+1.8	
CEY	Cerknica	7.48	309	*i* Pn	Pn	16 45 49.5	+2.7	
JAVS	Javornik	7.78	309	*i* Pn	Pn	16 45 52.9	+1.6	
JAVS				*i* Sn	Sn	16 47 19.6	-0.1	
GERES	GERESS Array B	9.88	323	Pn	Pn	16 46 23.2	+3.1	
	comp=E,0.1nm,0.3s,baz=146,slow=11,SNR=6.2							
KHC	Kasperske Hory	10.14	324	*e*PN	Pn	16 46 23.0	-0.6	
TORD	Torodi Ar. Bea	33.49	219	P	P	16 50 37.0	-0.6	
	comp=E,0.7nm,0.8s,baz=12,slow=8.8,SNR=4.8							
MKAR	Makanchi Array	42.30	62	P	P	16 51 52.2	+0.4	
	comp=E,0.2nm,0.7s,baz=289,slow=8.8,SNR=3.2							

IDC 24 16:54:06.4±4.1, 4°55S×103°90E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/23, mbtmp3.4/4, Error ellipse: s-maj=179.4km s-min=23.5km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	33.35	120	P	P	17 00 46.0	-0.6
	0.3nm,1.1s,baz=310,slow=11,SNR=3.9						
ASAR	Alice Springs	34.61	126	P	P	17 00 57.9	+0.3
	0.2nm,0.6s,baz=298,slow=7.9,SNR=9.9						
SONM	Songino Array	52.21	2	P	P	17 03 19.9	+0.7
	0.4nm,0.6s,baz=178,slow=8.3,SNR=4.0						
MKAR	Makanchi Array	54.58	342	P	P	17 03 35.9	-0.6
	0.4nm,0.4s,baz=156,slow=8.3,SNR=9.3						

*ISCJB **24** 16:57:60.0±0.3, 41°29N±0.02×22°70E±0.02, h7km±3km, mb3.4/2, Error ellipse: s-maj=3.0km s-min=2.4km az=155.6*
*ATH **24** 16:57:59.4, 41°33N×22°66E, h20km±1km, MD3.2/14*
*SOF **24** 16:57:59.9, 41°32N×22°71E, h8km, MD3.0*
*BEO **24** 16:58:00.7±0.8, 41°28N×22°71E, h4km±3km, ML3.2/1*
*SKO **24** 16:58:00.0, 41°28N×22°70E, h11km, M2.8, ML3.2*
*CSEM **24** 16:58:00.2±0.1, 41°27N×22°68E, h2km, ML3.0, Error ellipse: s-maj=2.6km s-min=2.2km az=80.0*
*THE **24** 16:58:00.8, 41°28N×22°72E, h1km±2km, ML3.4/5, Error ellipse: s-maj=2.8km s-min=0.8km az=225.0*
*IDC **24** 16:58:00.3±1.5, 41°36N×22°72E, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.2/27, mbtmp3.3/4, ML3.2/2, Error ellipse: s-maj=24.5km s-min=17.4km az=134.0*
*PRU **24** 16:58:02.8, 41°37N×22°63E, h8km*
ISC 24 16:58:00.5±0.9, 41°30N±0.02×22°71E±0.02, h4km±7km, n154, σ0°84/187, 17C-10D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	282	P	Pg	16 58 02.5	-0.1
VAY				S	Sg	16 58 04.4	+0.3
VAY	Valandovo	0.11	282	*i* Pg	Pg	16 58 02.7	0.0
VAY				*i* Sg	Sg	16 58 04.6	+0.5
VAY				*e*Lg	Lg	16 58 04.7	
	comp=N,22μm,0.2s						
VAY				*e*Lg	Lg	16 58 04.8	
	comp=E,14μm,0.3s						
VAY	Valandovo	0.11	282⇑	*i*Pg	Pg	16 58 02.5	-0.1
VAY				*e*Sg	Sg	16 58 04.4	+0.3
VAY	Valandovo	0.11	282	*e*Lg	Lg	16 58 01.3	
	comp=E,14μm,0.3s						
VAY	Valandovo	0.11	282	P	Pg	16 58 02.5	-0.1
VAY				S	Sg	16 58 04.4	+0.3
KNT	Kendrikon	0.20	134	P	Pg	16 58 04.7	+0.4
KNT				S	Sg	16 58 07.5	+0.6
KNT	Kendrikon	0.20	134	P	Pg	16 58 04.7	+0.4
KNT				S	Sg	16 58 07.5	+0.6
GRG	Griva	0.41	214	P	Pg	16 58 08.4	0.0
GRG				S	Sg	16 58 14.1	+0.3
GRG	Griva	0.41	214	*e*PB	Pg	16 58 08.5	0.0
GRG				*e*SB	Sg	16 58 14.1	+0.3
GRG	Griva	0.41	214	P	Pg	16 58 08.4	0.0
GRG				S	Sg	16 58 14.1	+0.3
KKB	Krupnik	0.63	26	*i* P	Pg	16 58 12.8	+0.2
KKB	Krupnik	0.63	26	*i* P	Pg	16 58 12.8	+0.2
SOH	Sokhos	0.68	134	P	Pg	16 58 13.2	-0.3
SOH				S	Sg	16 58 22.9	+0.5
SOH	Sokhos	0.68	134	*e*PN	Pg	16 58 13.3	-0.3
SOH	Sokhos	0.68	134	*e*Pn	Pg	16 58 13.3	-0.3
SOH				S	Sg	16 58 22.9	+0.5
THE	Thessaloniki	0.69	164	P	Pg	16 58 13.4	-0.4
THE				S	Sg	16 58 22.4	-0.4
THE	Thessaloniki	0.69	164	P	Pg	16 58 13.4	-0.4
THE				S	Sg	16 58 22.4	-0.4
HORT	Hortiatis	0.76	157	P	Pg	16 58 14.5	-0.6
HORT				S	Sg	16 58 25.5	+0.6
HORT	Hortiatis	0.76	157	P	Pg	16 58 14.5	-0.6
HORT				S	Sg	16 58 25.5	+0.6
MMB	Musomiste	0.82	69	*i* P	Pg	16 58 16.3	+0.1
MMB	Musomiste	0.82	69	*i* P	Pg	16 58 16.3	+0.1
NVR	Nevrokopi	0.87	86	P	Pg	16 58 17.1	-0.1
NVR	Nevrokopi	0.87	86	*e*PN	Pg	16 58 17.0	-0.1
NVR				*e*SN	Sb	16 58 29.3	-0.9
NVR	Nevrokopi	0.87	86	P	Pg	16 58 17.1	-0.1
NVR				*e*Sn	Sb	16 58 29.3	-0.9
PLG	Polygyros	1.08	149	P	Pg	16 58 20.4	-0.8
PLG	Polygyros	1.08	149	*e*PN	Pg	16 58 20.0	-1.2
PLG				*e*SN	Sb	16 58 36.2	0.0
PLG	Polygyros	1.08	149	*e*Pn	Pg	16 58 20.0	-1.2
PLG	Polygyros	1.08	149	P	Pg	16 58 20.4	-0.8
PLG				*e*Sn	Sb	16 58 36.2	0.0
BIA	Bitola	1.08	255	*i* Pg	Pg	16 58 20.9	-0.4
BIA				*e*Sg	Sg	16 58 35.9	+0.7
BIA	Bitola	1.08	255	*i* Pg	Pg	16 58 20.8	-0.4
BIA				*e*Sg	Sg	16 58 35.9	+0.7
FNA	Florina	1.13	243	P	Pg	16 58 21.6	-0.6
FNA	Florina	1.13	243	*e*PN	Pg	16 58 20.4	-1.8
FNA	Florina	1.13	243	*e*Pn	Pg	16 58 20.4	-1.8
FNA	Florina	1.13	243	P	Pg	16 58 21.6	-0.6
SKO	Skopje	1.17	306	P	Pn	16 58 23.5	-0.1
SKO				S	Sg	16 58 37.7	-0.2
SKO	Skopje	1.17	306	*i* Pg	Pb	16 58 22.9	-0.2
SKO				*e*Sg	Sb	16 58 38.9	+0.3
SKO				*e*Lg	Lg	16 58 42.0	
	comp=E,205nm,0.5s						
SKO				*e*Lg	Lg	16 58 42.1	
	comp=N,238nm,0.3s						
SKO	Skopje	1.17	306	*e*Pg	Pn	16 58 23.8	+0.2
SKO				*e*Sg	Sn	16 58 40.1	+0.2
SKO	Skopje	1.17	306	*i* Pg	Pn	16 58 23.4	-0.1
SKO				S	Sg	16 58 37.7	-0.2
SKO				*e*Sg	Sn	16 58 39.4	-0.5
SKO				*e*Lg	Lg	16 58 42.6	
	comp=N,238nm,0.3s						
KZN	Kozani	1.22	216	*e*PN	Pg	16 58 23.1	-0.8
KZN	Kozani	1.22	216	*e*Pn	Pg	16 58 23.1	-0.8
VTS	Vitosha	1.34	16	P	Pb	16 58 26.4	+0.1
VTS				S	Sn	16 58 44.5	0.0
VTS	Vitosha	1.34	16⇑	*i*Pg	Pb	16 58 26.3	0.0
VTS				*e*Sg	Sn	16 58 44.6	0.0
VTS	Vitosha	1.34	16⇑	*i*P	Pb	16 58 26.4	+0.1
VTS				S	Sn	16 58 44.1	-0.5
VTS	Vitosha	1.34	16	*i* P	Pb	16 58 26.5	+0.1
VTS	Vitosha	1.34	16⇑	*i*Pg	Pb	16 58 26.3	0.0
VTS				*e*Sg	Sn	16 58 44.6	0.0
OUR	Ouranopolis	1.36	135	P	Pn	16 58 25.3	-1.0
OUR	Ouranopolis	1.36	135	P	Pn	16 58 25.3	-1.0
KAVA	Kavala	1.40	102	P	Pn	16 58 26.7	0.0
KAVA				S	Sn	16 58 46.2	+0.6
KAVA	Kavala	1.40	102	P	Pn	16 58 26.7	0.0
KAVA				S	Sn	16 58 46.2	+0.6
NEST	Nestorio	1.54	235	P	Pn	16 58 28.6	-0.2
NEST	Nestorio	1.54	235	P	Pn	16 58 28.6	-0.2
RZN	Rozhen	1.56	75	*i* P	Pn	16 58 28.4	-0.7
RZN				*i* Pg	Pg	16 58 30.5	+0.2
RZN	Rozhen	1.56	75	*i* P	Pn	16 58 28.4	-0.7
PAIG	Paliouri	1.56	151	P	Pn	16 58 28.1	-0.8
PAIG	Paliouri	1.56	151	*e*PN	Pn	16 58 28.1	-0.8
PAIG				*e*SN	Sn	16 58 50.2	+0.6
PAIG	Paliouri	1.56	151	P	Pn	16 58 28.1	-0.8
PAIG				*e*Sn	Sn	16 58 50.2	+0.6
BARS	Barje	1.66	337⇓	*i*Pn	Pn	16 58 30.0	-0.3
BARS	Barje	1.66	337⇓	*i*Pn	Pn	16 58 30.0	-0.3
PGB	Panagyurishte	1.66	41	*i* P	Pb	16 58 30.7	-0.9
PGB	Panagyurishte	1.66	41	*i* P	Pb	16 58 30.7	-0.9
PLD	Plovdiv	1.70	61	*i* P	Pg	16 58 32.3	-0.7
PLD	Plovdiv	1.70	61	*i* P	Pg	16 58 32.3	-0.7
PHP	Peshkopia	1.75	283	P	Pn	16 58 31.6	0.0
PHP	Peshkopia	1.75	283	P	Pn	16 58 31.6	0.0
THL	Klokotos Trika	1.81	197	P	Pn	16 58 32.1	-0.3
THL	Klokotos Trika	1.81	197	P	Pn	16 58 32.1	-0.3
XOR	Xorichti	1.97	169	P	Pn	16 58 34.0	-0.6
XOR	Xorichti	1.97	169	P	Pn	16 58 34.0	-0.6
ZAPS	Zavoj	1.97	358	*e*Pn	Pb	16 58 36.4	-0.6
NEO	Neokhori	2.03	169	*e*PB	Pn	16 58 34.6	-0.9
NEO	Neokhori	2.03	169	*e*Pb	Pn	16 58 34.6	-0.9
RDO	Rodhopi	2.14	93	*e*PN	Pn	16 58 36.9	0.0
RDO	Rodhopi	2.14	93	*e*Pn	Pn	16 58 36.9	0.0
JAN	Janina	2.17	221	*e*PN	Pn	16 58 36.9	-0.5
JAN	Janina	2.17	221	*e*Pn	Pn	16 58 36.9	-0.5
MPEP	Malo Peshtene	2.19	20	*i* Pg	Pg	16 58 42.2	-0.3
DIM	Dimitrovgrad	2.24	70	*i* P	Pb	16 58 41.3	-0.3
DIM	Dimitrovgrad	2.24	70	*i* P	Pb	16 58 41.3	-0.3
SELS	Selova	2.25	329	*e*Pn	Pn	16 58 38.0	-0.6
AGG	Agios Georgios	2.29	187	P	Pn	16 58 38.7	-0.4
AGG	Agios Georgios	2.29	187	*e*PN	Pn	16 58 38.7	-0.4
AGG	Agios Georgios	2.29	187	P	Pn	16 58 38.7	-0.4
AOS	Alonnisos	2.31	157	P	Pn	16 58 38.2	-1.1
AOS	Alonnisos	2.31	157	*e*PN	Pn	16 58 38.8	-0.5
AOS	Alonnisos	2.31	157	P	Pn	16 58 38.2	-1.1
AOS	Alonnisos	2.31	157	*e*Pn	Pn	16 58 38.8	-0.5
MAKR	Makrakomi, Fth	2.33	191	P	Pn	16 58 39.5	-0.1
MAKR	Makrakomi, Fth	2.33	191	P	Pn	16 58 39.5	-0.1
EVR	Evrytania	2.48	196	*e*PN	Pn	16 58 41.2	-0.5
EVR	Evrytania	2.48	196	*e*Pn	Pn	16 58 41.2	-0.5
IGT	Igoumenitsa	2.53	227	P	Pn	16 58 44.6	+2.2
IGT	Igoumenitsa	2.53	227	P	Pn	16 58 44.6	+2.2
ALN	Alexandroupoli	2.55	98	P	Pn	16 58 43.1	+0.5
ALN	Alexandroupoli	2.55	98	*e*PN	Pn	16 58 42.8	+0.2
ALN	Alexandroupoli	2.55	98	*e*Pn	Pn	16 58 42.8	+0.2
ALN	Alexandroupoli	2.55	98	P	Pn	16 58 43.1	+0.5
BOLS	Boljevac	2.59	348	*e*Pn	Pn	16 58 42.0	-1.1
BOLS				*e*Sg	Sg	16 59 21.3	-2.3
BOLS	Boljevac	2.59	348	*e*Pn	Pn	16 58 42.0	-1.1
BOLS				*e*Sg	Sg	16 59 21.3	-2.3
ENEZ	Enez	2.67	101	*e*PN	Pg	16 58 50.5	+1.0
ERIK	Erikli-Kesan	2.95	101	*e*PN	Pb	16 58 54.5	+1.0
GRUS	Gruza	2.98	331	*e*Pn	Pn	16 58 48.2	-0.3
GRUS	Gruza	2.98	331	*e*Pn	Pn	16 58 48.2	-0.3
GELI	Tayfur-Gelibol	3.00	106	*e*PN	Pb	16 58 54.7	+0.3
ZIMR		3.07	39⇑	*i*P	Pn	16 58 51.1	+1.4
ZIMR		3.07	39	S	Sn	16 59 27.3	+0.5
EDRB	Edirne	3.08	78	*e*PN	Pg	16 58 57.6	-1.8
EZN	Ezine	3.12	117	*e*PN	Pb	16 58 55.3	-1.2
LPK	Lapseki	3.21	105	*e*PN	Pb	16 58 57.7	-0.3
RKY	Sarkoy-Tekirda	3.44	99	*e*PN	Pb	16 59 02.3	+0.4
DIVS	Divibare	3.44	325	*e*Pn	Pn	16 58 54.7	-0.2
DIVS	Divibare	3.44	325	*e*Pn	Pn	16 58 54.7	-0.2
MFT	Murefte	3.50	97	*e*PN	Pb	16 59 03.6	+0.7
BBLS	Lazići	3.54	318	*e*Pn	Pn	16 58 56.5	+0.2
BBLS	Lazići	3.54	318	*e*Pn	Pn	16 58 56.5	+0.2
KRBG	Karabiga-Canak	3.60	103	*e*PN	Pb	16 59 03.5	-1.1
HUMR	Humele	3.63	27⇑	*i*P	Pn	16 58 57.8	+0.3
HUMR	Humele	3.63	27⇑	*i*P	Pn	16 58 57.8	+0.3
TKR	Tekirdag	3.66	93	*e*PN	Pb	16 59 05.3	-0.3
MRMT	Marmara Adasi	3.77	99	*e*PN	Pb	16 59 06.2	-1.3
GONE	Gonen-Balikesi	3.99	107	*e*PN	Pb	16 59 08.5	-2.8
SLVT	Silivri	4.15	89	*e*PN	Pb	16 59 12.5	-1.5
CTYL	Yal??k??y-??at	4.20	86	*e*PN	Pb	16 59 13.6	-1.3
BALB	Balikesir	4.28	111	*e*PN	Pb	16 59 12.2	-4.0
CTKS	Kestanelik-??a	4.37	89	*e*PN	Pb	16 59 15.9	-1.9
BZS	Buzias	4.39	350⇓	*i*P	Pn	16 59 07.3	-0.6
BZS	Buzias	4.39	350⇓	*i*P	Pn	16 59 07.3	-0.6
KCTX	Karacabey (Bur	4.41	102	*e*PN	Pb	16 59 15.0	-3.5
VOIR		4.47	22⇑	*i*P	Pn	16 59 09.8	+0.7
VOIR		4.47	22⇑	*i*P	Pn	16 59 09.8	+0.7
BGKT	Bogazkoy	4.57	89	*e*PN	Pb	16 59 18.9	-2.3
VLI	Velíai	4.58	178	*e*PN	Pn	16 59 11.2	+0.7
VLI	Velíai	4.58	178	*e*Pn	Pn	16 59 11.2	+0.7
ARMT	Armutlu	4.72	97	*e*P	Pb	16 59 19.9	-3.8
APE	Apeiranthos	4.76	152	*e*PN	Pn	16 59 14.2	+1.6
MLR	Muntele Rosu	4.81	28⇓	*i*P	Pn	16 59 14.8	+1.1
MLR	Muntele Rosu	4.81	28	Pn	Pn	16 59 14.6	+0.9
	comp=N,0.6nm,0.3s,baz=223,slow=6.5,SNR=20						
MLR				Lg	Lg	17 00 31.5	
	comp=N,0.1nm,0.3s,baz=240,slow=20,SNR=2.4						
MLR	Muntele Rosu	4.81	28⇓	*i*P	Pn	16 59 14.8	+1.1
DOPR	Dopca	5.05	22⇑	*i*P	Pn	16 59 18.7	+1.7
DOPR	Dopca	5.05	22⇑	*i*P	Pn	16 59 18.7	+1.7
HARR	Harsova	5.11	47⇓	*i*P	Pn	16 59 18.8	+1.0
HARR	Harsova	5.11	47⇓	*i*P	Pn	16 59 18.8	+1.0
PLOR	Plostina	5.37	31⇑	*i*P	Pn	16 59 23.2	+1.7
PLOR	Plostina	5.37	31⇑	*i*P	Pn	16 59 23.2	+1.7
VRI	Vrincioaia	5.42	31⇑	*i*P	Pn	16 59 23.9	+1.9
VRI	Vrincioaia	5.42	31⇑	*i*P	Pn	16 59 23.9	+1.9
DRGR		5.49	0⇑	*i*P	Pn	16 59 23.1	0.0
DRGR		5.49	0⇑	*i*P	Pn	16 59 23.1	0.0
PKSM	Moragy	5.72	330⇓	*i*P	Pn	16 59 25.9	-0.3
PKSM	Moragy	5.72	330⇓	*i*P	Pn	16 59 25.9	-0.3
GERES	GERESS Array B	9.87	323	Pn	Pn	17 00 24.0	+0.9
	comp=N,0.2nm,0.3s,baz=156,slow=10,SNR=7.1						
KHC	Kasperske Hory	10.13	324	*e*PN	Pn	17 00 25.6	-1.1
KHC	Kasperske Hory	10.13	324	Pn	Pn	17 00 25.6	-1.1
TORD	Torodi Ar. Bea	33.51	219	P	P	17 04 41.9	+0.7
	comp=N,0.6nm,0.6s,baz=29,slow=9.0,SNR=5.2						
MKAR	Makanchi Array	42.28	62	P	P	17 05 55.3	+0.3
	comp=N,0.3nm,0.7s,baz=279,slow=7.1,SNR=3.5						

*ISCJB **24** 17:01:43.6±0.4, 41°28N±0.02×22°72E±0.03, h7km±3km, mb3.3/2, Error ellipse: s-maj=3.4km s-min=3.1km az=143.1*
*SKO **24** 17:01:43.8, 41°31N×22°70E, h15km, M2.8, ML3.2*
*IDC **24** 17:01:43.2±1.6, 41°50N×22°40E, h0km, mb3.3/2, mb1 3.3/4, mb1mx3.1/28, mbtmp3.2/4, ML2.7/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/30, Error ellipse: s-maj=50.7km s-min=17.6km az=124.0*
*SOF **24** 17:01:43.9, 41°34N×22°71E, h5km, MD3.2*
*ATH **24** 17:01:44.3, 41°29N×22°71E, h23km±1km, MD3.2/11*
*CSEM **24** 17:01:44.8±0.2, 41°27N×22°69E, h10km, ML3.2, Error ellipse: s-maj=3.8km s-min=3.5km az=138.0*
*BEO **24** 17:01:44.8±0.8, 41°29N×22°66E, h9km±2km, ML3.2/8*
*PRU **24** 17:01:45.9, 41°36N×22°56E, h0km*
ISC 24 17:01:44.7±0.8, 41°28N±0.02×22°70E±0.02, h8km±6km, n124, σ0°99/144, 18C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	295	*e*Pg	Pg	17 01 46.9	-0.3
VAY				*i* Sg	Sg	17 01 49.2	+0.3
VAY				*i* Lg	Lg	17 01 49.3	
	comp=E,14μm,0.2s						
VAY				*i* Lg	Lg	17 01 49.3	
	comp=N,26μm,0.3s						
VAY	Valandovo	0.11	295	*e*Pg	Pg	17 01 47.3	+0.1
VAY				*e*Sg	Sg	17 01 49.1	+0.2
VAY				*i* Lg	Lg	17 01 49.8	
	comp=N,26μm,0.3s						
GRG	Griva	0.39	215	*e*PB	Pg	17 01 52.8	+0.4
GRG				*e*SB	Sb	17 01 59.4	-0.7
GRG	Griva	0.39	215	*e*Pb	Pg	17 01 52.8	+0.4
GRG				*e*Sb	Sb	17 01 59.4	-0.7
KKB	Krupnik	0.66	26	*i* P	Pg	17 01 56.8	-0.6
KKB	Krupnik	0.66	26	*i* P	Pg	17 01 56.8	-0.6
SOH	Sokhos	0.67	132	*e*PN	Pg	17 01 57.8	+0.1
SOH				*e*SN	Sg	17 02 06.9	+0.4
SOH	Sokhos	0.67	132	*e*Pn	Pg	17 01 57.8	+0.1
SOH				*e*Sn	Sg	17 02 06.9	+0.4
MMB	Musomiste	0.83	68	*i* P	Pg	17 02 00.4	-0.4
MMB	Musomiste	0.83	68	*i* P	Pg	17 02 00.4	-0.4
NVR	Nevrokopi	0.88	85	*e*PN	Pg	17 02 01.2	-0.4
NVR				*e*SN	Sg	17 02 13.6	+0.5
NVR	Nevrokopi	0.88	85	*e*Pn	Pg	17 02 01.2	-0.4
NVR				*e*Sn	Sg	17 02 13.6	+0.5
PLG	Polygyros	1.06	148	*e*PN	Pg	17 02 04.8	-0.4
PLG				*e*SN	Sb	17 02 19.5	-0.1
PLG	Polygyros	1.06	148	*e*Pn	Pg	17 02 04.8	-0.4
PLG				*e*Sn	Sb	17 02 19.5	-0.1
BIA	Bitola	1.07	257	*e*Pg	Pg	17 02 04.2	-1.1
BIA				*i* Sg	Sb	17 02 19.6	-0.1
BIA	Bitola	1.07	257	*e*Pg	Pg	17 02 04.2	-1.1
BIA				*i* Sg	Sb	17 02 19.6	-0.1
FNA	Florina	1.11	244	*e*PN	Pg	17 02 05.9	-0.2
FNA				*e*SN	Sb	17 02 21.3	+0.3
FNA	Florina	1.11	244	*e*Pn	Pg	17 02 05.9	-0.2
FNA				*e*Sn	Sb	17 02 21.3	+0.3
SKO	Skopje	1.17	307	*i* Pg	Pg	17 02 07.0	-0.3
SKO				*i* Sg	Sg	17 02 22.4	0.0
SKO				*i* Lg	Lg	17 02 24.1	
	comp=N,320nm,0.8s						
SKO				*i* Lg	Lg	17 02 25.6	
	comp=E,168nm,0.3s						
SKO	Skopje	1.17	307	*e*Pg	Pn	17 02 07.4	-0.1
SKO	Skopje	1.17	307	*e*Pg	Pn	17 02 07.4	-0.1
SKO				*i* Sg	Sb	17 02 22.9	+0.3
SKO				*i* Lg	Lg	17 02 26.0	
	comp=E,168nm,0.3s						
KZN	Kozani	1.20	216	*e*PN	Pb	17 02 07.7	0.0
KZN				*e*SN	Sn	17 02 24.8	+0.4
KZN	Kozani	1.20	216	*e*Pn	Pb	17 02 07.7	0.0
KZN				*e*Sn	Sn	17 02 24.8	+0.4
VTS	Vitosha	1.37	16⇑	*i*Pg	Pn	17 02 10.3	0.0
VTS				*e*Sg	Sn	17 02 28.8	+0.1
VTS	Vitosha	1.37	16⇓	*i*P	Pn	17 02 10.1	-0.2
VTS				S	Sb	17 02 28.0	-0.4
VTS	Vitosha	1.37	16	*i* P	Pn	17 02 10.1	-0.2
VTS	Vitosha	1.37	16	*i* P	Pn	17 02 10.1	-0.2
VTS				S	Sb	17 02 28.0	-0.4
VTS				*e*Sg	Sn	17 02 28.8	+0.1
PAIG	Paliouri	1.54	151	*e*PN	Pn	17 02 12.2	-0.3
PAIG	Paliouri	1.54	151	*e*Pn	Pn	17 02 12.2	-0.3
RZN	Rozhen	1.57	74	*i* Pg	Pg	17 02 14.9	0.0
RZN	Rozhen	1.57	74	*i* Pg	Pg	17 02 14.9	0.0
BARS	Barje	1.67	337	*e*Pn	Pn	17 02 14.0	-0.4
BARS				*e*Sn	Sb	17 02 36.7	-0.4
BARS	Barje	1.67	337	*e*Pn	Pn	17 02 14.0	-0.4
BARS				*e*Sn	Sb	17 02 36.7	-0.4
PGB	Panagyurishte	1.68	40	*i* Pg	Pb	17 02 16.3	+0.3
PGB	Panagyurishte	1.68	40	*i* Pg	Pb	17 02 16.3	+0.3
PLD	Plovdiv	1.71	60	*i* P	Pg	17 02 17.1	-0.5
PLD	Plovdiv	1.71	60	*i* P	Pg	17 02 17.1	-0.5
ZAPS	Zavoj	2.00	359⇑	*i*Pn	Pn	17 02 19.4	+0.5
KDZ	Kurdzhali	2.08	79	*i* Pg	Pb	17 02 22.1	-0.6
KDZ	Kurdzhali	2.08	79	*i* Pg	Pg	17 02 26.0	+1.5
RDO	Rodhopi	2.15	93	*e*PN	Pn	17 02 20.9	+0.1
RDO	Rodhopi	2.15	93	*e*Pn	Pn	17 02 20.9	+0.1
MPEP	Malo Peshtene	2.22	20	*i* P	Pn	17 02 21.7	-0.2
MPEP				*i* Pg	Pb	17 02 26.0	+0.9
DIM	Dimitrovgrad	2.26	69	*i* Pg	Pg	17 02 27.6	-0.4
DIM	Dimitrovgrad	2.26	69	*i* Pg	Pg	17 02 27.6	-0.4
SELS	Selova	2.27	329	*e*Pn	Pn	17 02 21.6	-1.0
AGG	Agios Georgios	2.27	187	*e*PB	Pn	17 02 23.3	+0.7
AGG	Agios Georgios	2.27	187	*e*Pb	Pn	17 02 23.3	+0.7
AOS	Alonnisos	2.29	156	*e*PN	Pn	17 02 22.4	-0.4
AOS	Alonnisos	2.29	156	*e*Pn	Pn	17 02 22.4	-0.4
LIA	Limnos Island	2.34	125	*e*PN	Pn	17 02 23.6	+0.1
LIA	Limnos Island	2.34	125	*e*Pn	Pn	17 02 23.6

KKM	Kota Kinabalu	6.80 280	P	P	17 04 51.9	0.0
FITZ	Fitzroy Crossi	23.00 173	P	P	17 07 23.4	-0.7
	1.0nm,1.0s,baz=0.0,slow=5.1,SNR=3.7					
WRA	Warramunga Arr	27.10 156	P	P	17 08 00.2	-0.1
	3.5nm,0.3s,baz=336,slow=9.7,SNR=110					
ASAR	Alice Springs	30.33 160	P	P	17 08 28.6	+0.4
	0.9nm,0.5s,baz=340,slow=7.6,SNR=47					
ASAR			ScP	ScP	17 13 52.2	-3.2
	0.8nm,0.5s,baz=341,slow=3.2,SNR=22					
STKA	Stephens Creek	40.65 155	P	P	17 09 54.1	+1.0
	1.8nm,0.5s,baz=324,slow=10,SNR=8.0					
GUN	Gumba	42.01 307	*e*P	P	17 10 04.2	-0.2
	9.9nm,0.4s					
KKN	Kakani	42.44 307	*e*P	P	17 10 07.1	-0.4
	4.8nm,0.4s					
KOLN	Koldanda	43.78 306	*e*P	P	17 10 18.0	+0.1
	12nm,0.4s					
DANN	Dangsing	43.89 307	*e*P	P	17 10 18.6	-0.3
	15nm,0.5s					
PYUN	Piuthan	44.40 306	*e*P	P	17 10 22.8	0.0
	16nm,0.5s					
SONM	Songino Array	45.08 344	P	P	17 10 28.3	+0.8
	0.5nm,0.7s,baz=160,slow=7.3,SNR=4.7					
MKAR	Makanchi Array	54.49 327	P	P	17 11 36.8	+0.8
	1.2nm,0.3s,baz=123,slow=7.5,SNR=30					
MKAR			PcP	PcP	17 12 28.8	-1.2
	0.5nm,0.6s,baz=104,slow=4.4,SNR=4.8					
BVAR	Borovoye Array	64.32 328	P	P	17 12 41.4	+0.2
	0.3nm,0.4s,baz=142,slow=9.4,SNR=3.5					
AKTO	Aktyubinsk	70.42 322	P	P	17 13 17.7	-0.8
	0.9nm,0.4s,baz=99,slow=7.1,SNR=4.8					
TORD	Torodi Ar. Bea	118.98 288	PKP	PKPdf	17 20 44.3	-1.7
	0.3nm,0.4s,baz=88,slow=3.1,SNR=4.3					

*ISCJB **24** 17:15:19.8±0.7,24.8N±0.1×95.1E±0.1,h104km,mb3.6/9, Error ellipse: s-maj=19.4km s-min=9.3km az=33.4*
*IDC **24** 17:15:24.3±3.4,24.7N×95.0E,h133km±34km,mb3.2/9, mb1 3.3/10,mb1mx3.1/30,mbtmp3.2/10,Error ellipse: s-maj=91.0km s-min=14.5km az=57.0*
ISC 24 17:15:21.8±0.8,24.8N±0.2×95.0E±0.1,h104km±9.1,n12, σ1.9°01/13,mb3.6/9,Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHL	Shillong	2.93	285	*e*PN		Pn	17 16 07.5	+0.7
SHL				*i* SN		Sn	17 16 40.5	-1.0
CMAR	Chiang Mai Arr	7.33	149	P		Pn	17 17 07.3	+1.1
	0.2nm,0.3s,baz=327,slow=13,SNR=12							
MKAR	Makanchi Array	24.15	338	P		P	17 20 29.1	+1.0
	2.0nm,0.5s,baz=152,slow=9.2,SNR=36							
KURBB	Kurchatov Arra	28.72	338	P		P	17 21 09.6	+0.6
	0.5nm,0.6s,baz=146,slow=9.7,SNR=5.8							
BVAR	Borovoye Array	33.71	333	P		P	17 21 53.4	+0.5
	0.4nm,0.4s,baz=133,slow=11,SNR=4.4							
FINES	FINESS Array B	58.45	328	P		P	17 25 06.3	0.0
	2.2nm,1.0s,baz=142,slow=7.2,SNR=3.9							
WRA	Warramunga Arr	58.70	136	P		P	17 25 07.3	-1.4
	0.6nm,1.1s,baz=320,slow=7.7,SNR=5.8							
ARCES	ARCESS Array B	59.80	338	P		P	17 25 15.8	+0.1
	1.3nm,0.9s,baz=106,slow=6.7,SNR=2.8							
ASAR	Alice Springs	61.21	139	P		P	17 25 24.8	-1.1
	0.2nm,0.7s,baz=321,slow=6.7,SNR=5.4							
NB2	NORSAR Subarra	65.62	328	P		P	17 25 53.6	-0.9
	comp=Z,0.5nm,0.5s,baz=83,slow=6.5							
NOA	NORSAR Array B	65.62	328	P		P	17 25 53.1	-1.3
	comp=Z,0.7nm,0.5s,baz=94,slow=5.4,SNR=4.4							
GERES	GERESS Array B	66.15	314	P		P	17 25 58.6	+0.4
	comp=Z,0.2nm,0.4s,baz=58,slow=7.5,SNR=3.8							

*SKO **24** 17:15:17.9,41.49N×22.86E,h0km,M2.4,ML2.5*
*CSEM **24** 17:15:30.4,41.34N×22.66E,h17km,MD2.9,After ATH*
ATH 24 17:15:30.4,41.34N×22.66E,h17km±3km,MD2.9/7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	Valandovo	0.07	254	*i* Pg		Pg	17 15 22.9	-11
VAY				*i* Sg		Sg	17 15 25.0	-11
VAY				*e*Lg		Lg	17 15 25.0	
	comp=N,658nm,0.2s							
VAY				*e*Lg		Lg	17 15 25.1	
	comp=E,755nm,0.2s							
GRG	Griva	0.43	207	*e*PB		Pg	17 15 38.9	-0.3
GRG				*e*SB		Sg	17 15 45.4	+0.2
GRG	Griva	0.43	207	*e*Pb		Pg	17 15 38.9	-0.3
GRG				*e*Sb		Sg	17 15 45.4	+0.2
SOH	Sokhos	0.74	134	*e*PN		Pb	17 15 44.5	-0.4
SOH				*e*SN		Sb	17 15 54.5	-0.2
SOH	Sokhos	0.74	134	*e*Pn		Pb	17 15 44.5	-0.4
SOH				*e*Sn		Sb	17 15 54.5	-0.2
NVR	Nevrokopi	0.91	89	*e*PN		Pn	17 15 49.0	+0.6
NVR				*e*SN		Sg	17 16 00.2	+0.1
NVR	Nevrokopi	0.91	89	*e*Pn		Pn	17 15 49.0	+0.6
NVR				*e*Sn		Sg	17 16 00.2	+0.1
FNA	Florina	1.12	241	*e*PN		Pn	17 15 51.1	-0.3
FNA	Florina	1.12	241	*e*Pn		Pn	17 15 51.1	-0.3
PLG	Polygyros	1.13	148	*e*PN		Pb	17 15 51.8	+0.2
PLG				*e*SN		Sn	17 16 06.9	+0.1
PLG	Polygyros	1.13	148	*e*Pn		Pb	17 15 51.8	+0.2
PLG				*e*Sn		Sn	17 16 06.9	+0.1
KZN	Kozani	1.23	213	*e*PN		Pg	17 15 54.3	-0.1
KZN	Kozani	1.23	213	*e*Pn		Pg	17 15 54.3	-0.1
PAIG	Paliouri	1.61	151	*e*PN		Pb	17 15 59.9	+0.2
PAIG	Paliouri	1.61	151	*e*Pn		Pb	17 15 59.9	+0.2

*ISCJB **24** 17:16:49.4±0.8,41.28N±0.1×22.71E±0.1,08,h10km±13km, Error ellipse: s-maj=18.1km s-min=7.6km az=154.0*
*SKO **24** 17:16:49.1,41.31N×22.67E,h15km,M1.2,ML1.6*
*ATH **24** 17:16:49.9,41.28N×22.74E,h5km±4km,MD2.6/4*
*CSEM **24** 17:16:49.4±0.2,41.29N×22.72E,h15km,MD2.6,Error ellipse: s-maj=5.4km s-min=3.2km az=164.0*
ISC 24 17:16:49.2±1.2,41.29N±0.06×22.71E±0.04,h12km±10km, n10,σ0.32/19,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	Valandovo	0.11	285	*i* Pg		Pg	17 16 52.0	-0.2
VAY				*i* Sg		Sg	17 16 54.3	-0.1
VAY				*e*Lg		Lg	17 16 54.4	
	comp=E,216nm,0.2s							
VAY				*e*Lg		Lg	17 16 54.5	
	comp=N,440nm,0.3s							
VAY	Valandovo	0.11	285	*i* Sg		Sg	17 16 54.7	+0.3
VAY				*e*Lg		Lg	17 16 55.0	
	comp=N,440nm,0.3s							
GRG	Griva	0.41	215	*e*PB		Pg	17 16 57.8	+0.5
GRG				*e*SB		Sb	17 17 03.9	-0.6
GRG	Griva	0.41	215	*e*Pb		Pg	17 16 57.8	+0.5
GRG				*e*Sb		Sb	17 17 03.9	-0.6
SOH	Sokhos	0.68	134	*e*PB		Pg	17 17 02.3	-0.1
SOH				*e*SB		Sg	17 17 11.1	-0.2
SOH	Sokhos	0.68	134	*e*Pb		Pg	17 17 02.3	-0.1
SOH				*e*Sb		Sg	17 17 11.1	-0.2
NVR	Nevrokopi	0.87	86	*e*PB		Pb	17 17 06.4	+0.1
NVR				*e*SB		Sg	17 17 17.6	+0.2
NVR	Nevrokopi	0.87	86	*e*Pb		Pb	17 17 06.4	+0.1
NVR				*e*Sb		Sg	17 17 17.6	+0.2
PLG	Polygyros	1.07	148	*e*PN		Pb	17 17 09.8	+0.1
PLG				*e*SB		Sb	17 17 23.8	+0.1
PLG	Polygyros	1.07	148	*e*Pn		Pb	17 17 09.8	+0.1
PLG				*e*Sb		Sb	17 17 23.8	+0.1

*ISCJB **24** 17:18:53.7±0.8,41.27N±0.07×22.72E±0.06,h8km±9km, Error ellipse: s-maj=11.3km s-min=7.1km az=168.6*
*SKO **24** 17:18:53.1,41.29N×22.71E,h15km,M1.6,ML2.0*
*ATH **24** 17:18:53.3,41.33N×22.70E,h6km,MD2.5/4*
*CSEM **24** 17:18:53.7±0.2,41.29N×22.77E,h8km,MD2.5,Error ellipse: s-maj=4.1km s-min=2.5km az=8.0*
ISC 24 17:18:53.9±1.2,41.29N±0.05×22.75E±0.05,h8km±17km, n10,σ0.36/20,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	Valandovo	0.14	285	*e*Pg		Pg	17 18 56.8	-0.1
VAY				*e*Lg		Lg	17 18 58.6	
	comp=N,1μm,0.3s							
VAY				*e*Sg		Sg	17 18 58.6	-0.3
VAY				*e*Lg		Lg	17 18 58.7	
	comp=E,470nm,0.2s							
VAY	Valandovo	0.14	285	*e*Pg		Pg	17 18 57.3	+0.4
VAY				*e*Sg		Sg	17 18 59.1	+0.1
VAY				*e*Lg		Lg	17 18 59.2	
	comp=E,470nm,0.2s							
GRG	Griva	0.42	219	*e*PB		Pg	17 19 01.7	-0.4
GRG				*e*SB		Sg	17 19 08.0	+0.3
GRG	Griva	0.42	219	*e*Pb		Pg	17 19 01.7	-0.4
GRG				*e*Sb		Sg	17 19 08.0	+0.3
SOH	Sokhos	0.65	135	*e*PG		Pg	17 19 06.4	0.0
SOH				*e*SB		Sb	17 19 16.4	-0.4
SOH	Sokhos	0.65	135	*e*Pg		Pg	17 19 06.4	0.0
SOH				*e*Sb		Sb	17 19 16.4	-0.4
NVR	Nevrokopi	0.84	85	*e*PB		Pg	17 19 10.0	0.0
NVR				*e*SB		Sb	17 19 22.1	-0.1
NVR	Nevrokopi	0.84	85	*e*Pb		Pg	17 19 10.0	0.0
NVR				*e*Sb		Sb	17 19 22.1	-0.1
PLG	Polygyros	1.05	150	*e*PG		Pg	17 19 14.0	-0.1
PLG				*e*SB		Sb	17 19 29.0	+0.6
PLG	Polygyros	1.05	150	*e*Pg		Pg	17 19 14.0	-0.1
PLG				*e*Sb		Sb	17 19 29.0	+0.6

*SKO **24** 17:24:40.7,41.30N×22.71E,h15km,M2.0,ML2.3*
*ISCJB **24** 17:24:41.0±0.4,41.30N±0.03×22.70E±0.03,h12km±3km, Error ellipse: s-maj=4.4km s-min=3.7km az=14.0*
*ATH **24** 17:24:41.3,41.27N×22.72E,h24km±1km,MD2.9/12*
*THE **24** 17:24:41.7,41.29N×22.72E,h2km±1km,ML2.8/5,Error ellipse: s-maj=1.7km s-min=0.6km az=269.0*
*CSEM **24** 17:24:41.1±0.3,41.27N×22.72E,h12km,ML2.2,Error ellipse: s-maj=5.7km s-min=4.8km az=8.0*
ISC 24 17:24:41.3±0.8,41.29N±0.02×22.70E±0.02,h11km±5km, n55,σ0.52/91,1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	Valandovo	0.10	288	P		Pg	17 24 43.9	-0.2
VAY				*e*Sg		Sg	17 24 46.1	0.0
VAY	Valandovo	0.10	288	*i* Pg		Pg	17 24 44.0	0.0
VAY				*e*Sg		Sg	17 24 46.1	0.0
VAY				*e*Lg		Lg	17 24 46.2	
	comp=E,2μm,0.2s							
VAY				*e*Lg		Lg	17 24 46.2	
	comp=N,3μm,0.2s							
VAY	Valandovo	0.10	288	*i* Pg		Pg	17 24 44.1	0.0
VAY				*i* Sg		Sg	17 24 46.2	0.0
VAY				*e*Lg		Lg	17 24 46.2	
	comp=N,3μm,0.2s							
VAY				*e*Lg		Lg	17 24 46.3	
	comp=E,2μm,0.2s							
VAY	Valandovo	0.10	288	P		Pg	17 24 43.9	-0.2
VAY	Valandovo	0.10	288	*i* Pg		Pg	17 24 44.5	+0.4
VAY				S		Sg	17 24 46.1	0.0
VAY				*e*Lg		Lg	17 24 46.7	
	comp=E,2μm,0.2s							
KNT	Kendrikon	0.20	130	P		Pb	17 24 46.2	-0.7
KNT				S		Sg	17 24 49.0	+0.6
KNT	Kendrikon	0.20	130	P		Pb	17 24 46.2	-0.7
KNT				S		Sg	17 24 49.0	+0.6
GRG	Griva	0.40	214	P		Pg	17 24 49.3	+0.1
GRG				S		Sg	17 24 55.8	+1.2
GRG	Griva	0.40	214	*e*PB		Pg	17 24 48.8	-0.4
GRG				*e*SB		Sb	17 24 56.0	-0.5
GRG	Griva	0.40	214	*e*Pb		Pg	17 24 48.8	-0.4
GRG	Griva	0.40	214	P		Pg	17 24 49.3	+0.1
GRG				*e*Sb		Sb	17 24 56.0	-0.5
SOH	Sokhos	0.68	133	P		Pg	17 24 54.4	-0.1
SOH				S		Sg	17 25 03.3	-0.1
SOH	Sokhos	0.68	133	*e*PN		Pg	17 24 54.0	-0.5
SOH				*e*SN		Sg	17 25 03.6	+0.2
SOH	Sokhos	0.68	133	*e*Pn		Pg	17 24 54.0	-0.5
SOH	Sokhos	0.68	133	P		Pg	17 24 54.4	-0.1
SOH				S		Sg	17 25 03.3	-0.1
SOH				*e*Sn		Sg	17 25 03.6	+0.2
THE	Thessaloniki	0.69	163	P		Pg	17 24 54.8	+0.2
THE				S		Sg	17 25 04.0	+0.5
THE	Thessaloniki	0.69	163	P		Pg	17 24 54.8	+0.2
THE				S		Sg	17 25 04.0	+0.5
SRS	Serrai	0.69	104	P		Pg	17 24 54.8	+0.1
SRS				S		Sb	17 25 04.4	-0.5
SRS	Serrai	0.69	104	P		Pg	17 24 54.8	+0.1
SRS				S		Sb	17 25 04.4	-0.5
HORT	Hortiatis	0.75	156	P		Pg	17 24 55.4	-0.5
HORT				S		Sb	17 25 07.0	+0.3
HORT	Hortiatis	0.75	156	P		Pg	17 24 55.4	-0.5
HORT				S		Sb	17 25 07.0	+0.3
NVR	Nevrokopi	0.88	86	P		Pg	17 24 58.1	-0.1
NVR				S		Sg	17 25 10.0	+0.4
NVR	Nevrokopi	0.88	86	*e*PN		Pg	17 24 58.1	-0.1
NVR				*e*SN		Sg	17 25 10.3	+0.7
NVR	Nevrokopi	0.88	86	P		Pg	17 24 58.1	-0.1
NVR				S		Sg	17 25 10.0	+0.4
NVR				*e*Sn		Sg	17 25 10.3	+0.7
PLG	Polygyros	1.07	148	P		Pb	17 25 01.7	-0.2
PLG				S		Sn	17 25 16.7	-0.5
PLG	Polygyros	1.07	148	*e*PN		Pb	17 25 01.7	-0.2
PLG				*e*SN		Sb	17 25 15.8	-0.1
PLG	Polygyros	1.07	148	P		Pb	17 25 01.7	-0.2
PLG				*e*Sn		Sb	17 25 15.8	-0.1
PLG				S		Sn	17 25 16.7	-0.5
FNA	Florina	1.12	244	P		Pb	17 25 02.7	0.0
FNA	Florina	1.12	244	*e*PN		Pn	17 25 02.9	-0.1
FNA				*e*SN		Sg	17 25 18.8	+1.3
FNA	Florina	1.12	244	*e*Pn		Pn	17 25 02.9	-0.1
FNA				*e*Sn		Sg	17 25 18.8	+1.3
SKO	Skopje	1.17	306	*e*Pg		Pn	17 25 02.7	-0.8
SKO				*e*Sg		Sn	17 25 19.1	-0.4
SKO				*e*Lg		Lg	17 25 20.4	
	comp=N,40nm,0.3s							
SKO				*e*Lg		Lg	17 25 20.6	
	comp=E,36nm,0.3s							
SKO	Skopje	1.17	306	*e*Sg		Sg	17 25 19.5	+0.6
SKO				*e*Lg		Lg	17 25 21.0	
	comp=E,36nm,0.3s							
KZN	Kozani	1.21	216	*e*PN		Pb	17 25 04.2	0.0
KZN	Kozani	1.21	216	*e*Pn		Pb	17 25 04.2	0.0
VTS	Vitosha	1.36	16	P		Pb	17 25 06.8	0.0
VTS				S		Sg	17 25 25.5	+0.5
VTS	Vitosha	1.36	16	P		Pb	17 25 06.8	0.0
VTS				S		Sg	17 25 25.5	+0.5
OUR	Ouranopolis	1.36	134	P		Pg	17 25 07.1	-0.3
OUR				S		Sg	17 25 26.4	+1.3
OUR	Ouranopolis	1.36	134	P		Pg	17 25 07.1	-0.3
OUR				S		Sg	17 25 26.4	+1.3
PAIG	Paliouri	1.55	151	P		Pb	17 25 09.5	-0.5
PAIG				S		Sg	17 25 31.0	-0.1
PAIG	Paliouri	1.55	151	*e*PN		Pb	17 25 09.5	-0.5
PAIG	Paliouri	1.55	151	P		Pb	17 25 09.5	-0.5
PAIG				S		Sg	17 25 31.0	-0.1
THL	Klokotos Trika	1.80	197	*e*PN		Pn	17 25 12.7	+0.5
THL	Klokotos Trika	1.80	197	*e*Pn		Pn	17 25 12.7	+0.5
NEO	Neokhori	2.02	168	*e*PB		Pn	17 25 15.0	-0.3
NEO	Neokhori	2.02	168	*e*Pb		Pn	17 25 15.0	-0.3
RDO	Rodhopi	2.14	93	*e*PN		Pn	17 25 17.5	+0.6
RDO	Rodhopi	2.14	93	*e*Pn		Pn	17 25 17.5	+0.6
AGG	Agios Georgios	2.28	187	*e*PB		Pn	17 25 19.7	+0.8
AGG	Agios Georgios	2.28	187	*e*Pb		Pn	17 25 19.7	+0.8
SMTH	Samothraki Isl	2.29	110	*e*PB		Pn	17 25 19.9	+0.9
SMTH	Samothraki Isl	2.29	110	*e*Pb		Pn	17 25 19.9	+0.9
AOS	Alonnisos	2.30	157	*e*PN		Pn	17 25 18.8	-0.3
AOS	Alonnisos	2.30	157	*e*Pn		Pn	17 25 18.8	-0.3
LIA	Limnos Island	2.34	126	*e*PB		Pn	17 25 20.6	+0.9
LIA	Limnos Island	2.34	126	*e*Pb		Pn	17 25 20.6	+0.9

*SKO **24** 17:25:10.3,41.28N×22.74E,h15km,M2.1,ML2.3*
*ISCJB **24** 17:25:11.1±0.5,41.27N±0.03×22.71E±0.04,h8km±5km, Error ellipse: s-maj=6.2km s-min=4.0km az=34.9*
*THE **24** 17:25:11.6,41.26N×22.71E,h2km±2km,ML2.8/4,Error ellipse: s-maj=2.1km s-min=0.6km az=190.0*
*CSEM **24** 17:25:11.3±0.1,41.27N×22.73E,h5km,ML2.8/4,Error ellipse: s-maj=2.4km s-min=1.6km az=29.0*
ISC 24 17:25:11.5±1.0,41.27N±0.03×22.71E±0.02,h7km±7km, n31,σ0.39/46,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	Valandovo	0.12	293	P		Pg	17 25 13.6	-0.5
VAY	Valandovo	0.12	293	*e*Pg		Pg	17 25 13.6	-0.5
VAY				*e*Lg		Lg	17 25 15.7	
	comp=E,1μm,0.4s							
VAY				*e*Sg		Sg	17 25 15.8	0.0
VAY				*e*Lg		Lg	17 25 15.9	
	comp=N,2μm,0.2s							
VAY	Valandovo	0.12	293	*i* Pg		Pg	17 25 13.7	-0.3
VAY				*i* Sg		Sg	17 25 15.8	0.0
VAY				*e*Lg		Lg	17 25 15.9	
	comp=N,2μm,0.2s							
VAY				*e*Lg		Lg	17 25 15.9	
	comp=E,973nm,0.2s							
VAY	Valandovo	0.12	293	P		Pg	17 25 13.6	-0.5
VAY	Valandovo	0.12	293	*i* Pg		Pg	17 25 14.2	+0.1
VAY				*i* Sg		Sg	17 25 16.3	+0.5
VAY				*e*Lg		Lg	17 25 16.4	
	comp=E,973nm,0.2s							
KNT	Kendrikon	0.18	129	P		Pg	17 25 15.2	+0.1
KNT				S		Sg	17 25 17.9	+0.3
KNT	Kendrikon	0.18	129	P		Pg	17 25 15.2	+0.1
KNT				S		Sg	17 25 17.9	+0.3
GRG	Griva	0.40	217	P		Pg	17 25 19.2	0.0
GRG				S		Sg	17 25 24.6	+0.2
GRG	Griva	0.40	217	P		Pg	17 25 19.2	0.0
GRG				S		Sg	17 25 24.6	+0.2
SOH	Sokhos	0.66	133	P		Pg	17 25 23.8	-0.5
SOH	Sokhos	0.66	133	P		Pg	17 25 23.8	-0.5
THE	Thessaloniki	0.67	163	P		Pg	17 25 23.9	-0.5
THE				S		Sg	17 25 33.4	+0.3
THE	Thessaloniki	0.67	163	P		Pg	17 25 23.9	-0.5
THE				S		Sg	17 25 33.4	+0.3
SRS	Serrai	0.68	103	P		Pg	17 25 24.8	+0.2
SRS	Serrai	0.68	103	P		Pg	17 25 24.8	+0.2
HORT	Hortiatis	0.74	156	P		Pg	17 25 25.3	-0.4
HORT				S		Sg	17 25 36.0	+0.8
HORT	Hortiatis	0.74	156	P		Pg	17 25 25.3	-0.4
HORT				S		Sg	17 25 36.0	+0.8
NVR	Nevrokopi	0.87	85	P		Pg	17 25 27.8	-0.4
NVR	Nevrokopi	0.87	85	P		Pg	17 25 27.8	-0.4
PLG	Polygyros	1.06	148	P		Pg	17 25 31.0	-0.8
PLG	Polygyros	1.06	148	P		Pg	17 25 31.0	-0.8
BIA	Bitola	1.08	257	*e*Pg		Pg	17 25 32.1	-0.1
BIA				*e*Sg		Sg	17 25 46.5	+0.3
BIA	Bitola	1.08	257	*e*Pg		Pg	17 25 32.1	-0.1
BIA				*e*Sg		Sg	17 25 46.5	+0.3
FNA	Florina	1.12	245	P		Pg	17 25 32.9	-0.2
FNA	Florina	1.12	245	P		Pg	17 25 32.9	-0.2
SKO	Skopje	1.18	307	*e*Pg		Pg	17 25 34.1	-0.1
SKO				*e*Sg		Sb	17 25 50.4	+0.5
SKO				*e*Lg		Lg	17 25 51.6	
	comp=E,50nm,0.5s							
SKO				*e*Lg		Lg	17 25 52.7	
	comp=N,80nm,0.4s							
SKO	Skopje	1.18	307	*e*Pg		Pn	17 25 34.6	+0.1
SKO				*e*Sg		Sn	17 25 50.9	0.0
SKO				*e*Lg		Lg	17 25 53.2	
	comp=N,80nm,0.4s							
OUR	Ouranopolis	1.34	134	P		Pn	17 25 36.4	-0.3
OUR	Ouranopolis	1.34	134	P		Pn	17 25 36.4	-0.3
VTS	Vitosha	1.37	15	P		Pn	17 25 37.0	-0.2
VTS	Vitosha	1.37	15	P		Pn	17 25 37.0	-0.2

*ISCJB **24** 17:26:08.4±0.8,41.32N±0.08×22.72E±0.06,h14km±6km, Error ellipse: s-maj=14.4km s-min=6.1km az=165.0*
*SKO **24** 17:26:08.8,41.31N×22.71E,h15km,M2.3,ML2.5*
*ATH **24** 17:26:08.8,41.30N×22.67E,h15km±1km,MD2.8/7*
*CSEM **24** 17:26:08.6±0.4,41.32N×22.72E,h15km,MD2.8,Error ellipse: s-maj=11.4km s-min=6.5km az=178.0*
ISC 24 17:26:09.0±1.0,41.30N±0.05×22.70E±0.03,h13km±7km, n16,σ0.40/31,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	Valandovo	0.10	285	*e*Pg		Pg	17 26 12.2	+0.3
VAY				*e*Lg		Lg	17 26 13.1	
	comp=N,5μm,0.2s							
VAY				*e*Sg		Sg	17 26 13.1	-1.0
VAY				*e*Lg		Lg	17 26 13.2	
	comp=E,2μm,0.2s							
VAY	Valandovo	0.10	285	*e*Pg		Pg	17 26 12.7	+0.7
VAY				*e*Sg		Sg	17 26 13.6	-0.5
VAY				*e*Lg		Lg	17 26 13.6	
	comp=E,2μm,0.2s							
GRG	Griva	0.41	214	*e*PB		Pg	17 26 16.7	-0.4
GRG				*e*SB		Sg	17 26 22.9	+0.4
GRG	Griva	0.41	214	*e*Pb		Pg	17 26 16.7	-0.4
GRG				*e*Sb		Sg	17 26 22.9	+0.4
SOH	Sokhos	0.69	133	*e*PN		Pg	17 26 22.2	-0.1
SOH				*e*SN		Sb	17 26 32.1	-0.2
SOH	Sokhos	0.69	133	*e*Pn		Pg	17 26 22.2	-0.1
SOH				*e*Sn		Sb	17 26 32.1	-0.2
NVR	Nevrokopi	0.88	86	*e*PN		Pb	17 26 26.0	-0.2
NVR				*e*SN		Sb	17 26 38.0	+0.2
NVR	Nevrokopi	0.88	86	*e*Pn		Pb	17 26 26.0	-0.2
NVR				*e*Sn		Sb	17 26 38.0	+0.2
PLG	Polygyros	1.08	148	*e*PN		Pb	17 26 29.0	-0.6
PLG				*e*SN		Sg	17 26 44.2	+0.3
PLG	Polygyros	1.08	148	*e*Pn		Pb	17 26 29.0	-0.6
PLG				*e*Sn		Sg	17 26 44.2	+0.3
FNA	Florina	1.12	243	*e*PN		Pb	17 26 30.3	0.0
FNA				*e*SN		Sb	17 26 44.6	-0.3
FNA	Florina	1.12	243	*e*Pn		P

*CSEM **24** 17:31:30.0,41˚.26N×22˚.79E,h4km,MD2.6,After ATH*
ATH 24 17:31:30.0,41˚.26N×22˚.79E,h4km,MD2.6/4,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.42**	**224**	*e*PG	Pg	17 31 38.3	+0.1
GRG				*e*SG	Sg	17 31 44.0	+0.2
GRG	**Griva**	**0.42**	**224**	*e*Pg	Pg	17 31 38.3	+0.1
GRG				*e*Sg	Sg	17 31 44.0	+0.2
SOH	**Sokhos**	**0.61**	**136**	*e*PB	Pg	17 31 42.2	+0.4
SOH				*e*SG	Sg	17 31 50.1	+0.3
SOH	**Sokhos**	**0.61**	**136**	*e*Pb	Pg	17 31 42.2	+0.4
SOH				*e*Sg	Sg	17 31 50.1	+0.3
NVR	**Nevrokopi**	**0.81**	**83**	*e*PG	Pg	17 31 44.8	-0.9
NVR				*e*SG	Sg	17 31 56.7	+0.4
NVR	**Nevrokopi**	**0.81**	**83**	*e*Pg	Pg	17 31 44.8	-0.9
NVR				*e*Sg	Sg	17 31 56.7	+0.4
PLG	**Polygyros**	**1.01**	**150**	*e*PG	Pg	17 31 48.7	-0.9
PLG	**Polygyros**	**1.01**	**150**	*e*Pg	Pg	17 31 48.7	-0.9

NNC 24 17:31:37.2±4.0,36˚.28N×70˚.69E,h90km±93km,mb3.2,
mpv3.5,4C-1D,Error ellipse: s-maj=30.7km
s-min=29.9km az=12.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.82**	**359**	P	Pn	17 33 15.4	+0.9
	2.1nm,0.4s,baz=179,slow=12,SNR=164						
KK31				⇑S	Sn	17 34 31.1	+0.4
	1.0nm,0.5s,baz=188,slow=22,SNR=4.3						
TKM2	**Tokmak 2**	**7.64**	**28**	⇓P	Pn	17 33 24.8	-1.2
	1.1nm,0.5s						
TKM2				⇑S	Sn	17 34 52.0	+0.8
	0.8nm,0.6s						
AB31	**Akbulak array**	**15.16**	**332**	⇑P	Pn	17 35 06.7	+0.4
	0.2nm,0.2s,baz=140,slow=13,SNR=21						
AB31				⇑S	Sn	17 37 52.9	-0.4
	0.2nm,0.3s						

SKO 24 17:31:56.7,41˚.31N×22˚.69E,h1km,M1.3,ML1.6,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.09**	**277**	*e*Pg	Pg	17 31 58.2	-0.3
VAY				*e*Sg	Sg	17 31 60.0	+0.3
VAY				*e*Lg	Lg	17 31 60.0	
	comp=N,520nm,0.2s						
VAY				*e*Lg	Lg	17 32 00.1	
	comp=E,338nm,0.2s						

*SKO **24** 17:34:49.3,41˚.34N×22˚.73E,h19km,M1.0,ML1.3*
*ISCJB **24** 17:34:50.5±0.8,41˚.29N±0˚.06×22˚.76E±0˚.04,h6km±11km,*
Error ellipse: s-maj=10.0km s-min=5.3km az=0.5
*CSEM **24** 17:34:50.6±0.1,41˚.29N×22˚.75E,h12km,MD2.6,Error*
ellipse: s-maj=3.8km s-min=2.1km az=2.0
*ATH **24** 17:34:51.1,41˚.27N×22˚.75E,h4km,MD2.6/5*
ISC 24 17:34:50.4±1.2,41˚.30N±0˚.06×22˚.74E±0˚.04,h11km±11km,
n12,σ0$34/20,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**279**	*e*Pg	**Pg**	**17 34 53.4**	**-0.1**
VAY				*e*Lg	Lg	17 34 55.5	
	comp=E,84nm,0.5s						
VAY				*e*Sg	**Sg**	**17 34 55.5**	**-0.3**
VAY				*e*Lg	Lg	17 34 55.6	
	comp=N,266nm,0.3s						
VAY	**Valandovo**	**0.13**	**279**	*e*Pg	**Pg**	**17 34 53.9**	**+0.4**
VAY				*e*Lg	Lg	17 34 56.0	
	comp=N,84nm,0.5s						
VAY				*e*Sg	**Sg**	**17 34 56.0**	**+0.2**
GRG	**Griva**	**0.43**	**217**	*e*PG	**Pg**	**17 34 58.8**	**-0.1**
GRG				*e*SG	**Sg**	**17 35 05.0**	**+0.4**
GRG	**Griva**	**0.43**	**217**	*e*Pg	**Pg**	**17 34 58.8**	**-0.1**
GRG				*e*Sg	**Sg**	**17 35 05.0**	**+0.4**
SOH	**Sokhos**	**0.67**	**136**	*e*PG	**Pg**	**17 35 03.5**	**+0.2**
SOH				*e*SG	**Sg**	**17 35 12.3**	**+0.2**
SOH	**Sokhos**	**0.67**	**136**	*e*Pg	**Pg**	**17 35 03.5**	**+0.2**
SOH				*e*Sg	**Sg**	**17 35 12.3**	**+0.2**
NVR	**Nevrokopi**	**0.85**	**86**	*e*PG	**Pg**	**17 35 07.0**	**+0.3**
NVR				*e*SG	**Sb**	**17 35 18.5**	**0.0**
NVR	**Nevrokopi**	**0.85**	**86**	*e*Pg	**Pg**	**17 35 07.0**	**+0.3**
NVR				*e*Sg	**Sb**	**17 35 18.5**	**0.0**
PLG	**Polygyros**	**1.07**	**150**	*e*PB	**Pb**	**17 35 10.4**	**-0.5**
PLG	**Polygyros**	**1.07**	**150**	*e*Pb	**Pb**	**17 35 10.4**	**-0.5**
FNA	**Florina**	**1.15**	**244**	*e*PB	**Pg**	**17 35 13.0**	**+0.4**
FNA	**Florina**	**1.15**	**244**	*e*Pb	**Pg**	**17 35 13.0**	**+0.4**

*CSEM **24** 17:38:59.5±0.9,41˚.45N×22˚.68E,h8km,MD2.7,Error*
ellipse: s-maj=21.7km s-min=10.3km az=154.0
*ISCJB **24** 17:39:01.7±1.5,41˚.34N±0˚.1×22˚.8E±0˚.1,h9km±20km,Error*
ellipse: s-maj=24.3km s-min=8.6km az=147.8
*SKO **24** 17:39:02.8,41˚.32N×22˚.73E,h15km,M1.2,ML1.5*
*ATH **24** 17:39:02.5,41˚.35N×22˚.72E,h16km±5km,MD2.7/4*
ISC 24 17:39:02.1±1.4,41˚.34N±0˚.07×22˚.68E±0˚.04,h11km±10km,
n11,σ1$43/19,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**257**	*e*Pg	**Pg**	**17 39 06.1**	**+1.6**
VAY				*e*Lg	Lg	17 39 07.8	
	comp=N,321nm,0.3s						
VAY				*e*Sg	**Sg**	**17 39 08.1**	**+1.7**
VAY				*e*Lg	Lg	17 39 08.1	
	comp=E,168nm,0.2s						
VAY	**Valandovo**	**0.08**	**257**	*e*Sg	**Sg**	**17 39 01.5**	**-4.8**
VAY				*e*Lg	Lg	17 39 01.6	
	comp=E,168nm,0.2s						
VAY	**Valandovo**	**0.08**	**257**	*e*Pg	Sg	17 39 01.6	-4.8
GRG	**Griva**	**0.43**	**208**	*e*PB	**Pb**	**17 39 11.7**	**-0.1**
GRG				*e*SB	**Sb**	**17 39 18.5**	**+0.1**
GRG	**Griva**	**0.43**	**208**	*e*Pb	**Pb**	**17 39 11.7**	**-0.1**
GRG				*e*Sb	**Sb**	**17 39 18.5**	**+0.1**
SOH	**Sokhos**	**0.73**	**135**	*e*PN	**Pg**	**17 39 16.3**	**+0.1**
SOH				*e*SN	**Sg**	**17 39 26.2**	**+0.5**
SOH	**Sokhos**	**0.73**	**135**	*e*Pn	**Pg**	**17 39 16.3**	**+0.1**
SOH				*e*Sn	**Sg**	**17 39 26.2**	**+0.5**
NVR	**Nevrokopi**	**0.89**	**89**	*e*PN	**Pg**	**17 39 19.0**	**-0.3**
NVR				*e*SN	**Sg**	**17 39 31.1**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**89**	*e*Pn	**Pg**	**17 39 19.0**	**-0.3**
NVR				*e*Sn	**Sg**	**17 39 31.1**	**+0.1**
PLG	**Polygyros**	**1.13**	**149**	*e*PN	**Pg**	**17 39 23.2**	**-0.6**
PLG				*e*SN	**Sb**	**17 39 38.9**	**+0.6**
PLG	**Polygyros**	**1.13**	**149**	*e*Pn	**Pg**	**17 39 23.2**	**-0.6**
PLG				*e*Sn	**Sb**	**17 39 38.9**	**+0.6**

*ISCJB **24** 17:42:49.1±0.8,59˚.5S±0˚.1×26˚.1W±0˚.3,h10km,mb3.9/7,*
MS3.4/5,Error ellipse: s-maj=27.0km s-min=10.6km
az=139.5
*IDC **24** 17:42:49.2±0.8,59˚.53S×26˚.20W,h0km,mb4.0/7,*
mb1 4.1/8,mb1mx3.9/20,mbtmp4.0/8,ML4.0/1,MS3.3/6,
Ms1 3.3/6,ms1mx3.1/25,Error ellipse: s-maj=27.1km
s-min=21.2km az=38.0
ISC 24 17:42:50.8±0.8,59˚.5S±0˚.1×26˚.2W±0˚.2,h10km,n19,
σ1$03/16,mb4.0/7,MS3.5/5,South Sandwich Islands
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.41**	**154**	*e*Pn	**Pn**	**17 46 01.8**	**+1.0**
VNA2	**Neumayer--Watz**	**13.81**	**154**	*e*Pn	**Pn**	**17 46 05.8**	**-0.5**
SNAA	**Sanae**	**15.39**	**152**	*e*Pn	**Pn**	**17 46 27.8**	**+0.1**
SNAA	**Sanae**	**15.39**	**152**	*e*Sn	Sn	17 49 05.2	-13
SNAA	**Sanae**	**15.39**	**152**	Pn	**Pn**	**17 46 27.4**	**-0.4**
	0.7nm,0.3s,baz=318,slow=17,SNR=14						
SNAA				Sn	Sn	17 49 05.0	-13
	0.3nm,0.3s,baz=357,slow=23,SNR=4.0						
SNAA				LR	LR	17 50 23.6	
	comp=Z,32nm,20.3s,baz=26,slow=30						
USHA	**Ushuaia**	**23.08**	**263**	P	**P**	**17 47 56.9**	**+0.7**
	8.0nm,0.8s,baz=74,slow=7.4,SNR=2.7						
QSPA	**South Pole Qui**	**30.74**	**180**	P	**P**	**17 49 06.6**	**+0.7**
	2.0nm,0.9s,baz=180,slow=7.0,SNR=9.8						
QSPA				LR	LR	18 00 41.8	
	comp=Z,104nm,19.1s,baz=239,slow=35						
PLCA	**Paso Flores**	**33.27**	**284**	P	**P**	**17 49 29.2**	**+1.0**
	0.8nm,0.4s,baz=228,slow=4.3,SNR=3.9						
PLCA				ScP	**ScP**	**17 55 55.4**	**+1.2**
	0.7nm,0.3s,baz=117,slow=3.7,SNR=6.3						
CFAA	**Coronel Fontan**	**39.50**	**296**	P	**P**	**17 50 19.9**	**-1.4**
	0.1nm,0.3s,baz=147,slow=10.0,SNR=3.6						
CFAA				LR	LR	18 04 02.6	
	comp=Z,10nm,18.6s,baz=85,slow=32						
CPUP	**Villa Florida**	**39.54**	**313**	LR	LR	18 06 15.3	
	comp=Z,48nm,19.0s,baz=4.1,slow=36						
BDFB	**Brasilia**	**46.64**	**330**	LR	LR	18 09 31.1	
	comp=Z,59nm,18.4s,baz=2.3,slow=34						
LPAZ	**La Paz**	**52.84**	**306**	P	**P**	**17 52 06.8**	**-0.4**
	1.1nm,0.3s,baz=85,slow=6.3,SNR=12						
ATAH	**Atahualpa**	**65.41**	**300**	LR	LR	18 21 38.2	
	comp=Z,39nm,19.3s,baz=323,slow=36						
TORD	**Torodi Ar. Bea**	**75.83**	**28**	P	**P**	**17 54 38.1**	**+1.2**
	0.7nm,0.4s,baz=197,slow=6.2,SNR=22						
ASAR	**Alice Springs**	**95.53**	**162**	P	**P**	**17 56 14.3**	**-1.7**
	0.3nm,0.6s,baz=180,slow=3.6,SNR=7.6						
ARCES	**ARCESS Array B**	**133.94**	**23**	PKP	**PKPdf**	**18 02 07.3**	**+1.0**
	1.3nm,0.8s,baz=132,slow=1.8,SNR=8.0						
YKA	**Yellowknife Ar**	**139.06**	**315**	PKP	**PKPdf**	**18 02 15.6**	**-0.4**
	0.2nm,0.3s,baz=135,slow=2.0,SNR=7.7						
SONM	**Songino Array**	**150.23**	**92**	PKPbc	**PKPbc**	**18 02 40.4**	**-0.7**
	1.5nm,0.7s,baz=230,slow=2.8,SNR=13						
ILAR	**Eielson Array**	**152.72**	**306**	PKPbc	**PKPbc**	**18 02 45.2**	**-0.9**
	0.4nm,0.4s,baz=148,slow=2.3,SNR=9.3						

IDC 24 17:46:05.4±4.8,29˚.77S×178˚.57W,h0km,mb3.4/2,
mb1 3.6/2,mb1mx3.4/17,mbtmp3.4/2,Error ellipse:
s-maj=216.9km s-min=76.3km az=165.0,Kermadec
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.65**	**267**	P	P	17 54 03.0	-1.0
	0.4nm,0.9s,baz=106,slow=7.2,SNR=9.2						
WRA	**Warramunga Arr**	**43.58**	**272**	P	P	17 54 12.2	+0.7
	0.2nm,0.3s,baz=112,slow=8.0,SNR=12						
FINES	**FINESS Array B**	**144.38**	**340**	PKP	PKPdf	18 05 42.1	-0.7
	0.4nm,0.4s,baz=12,slow=3.4,SNR=6.4						

*ISCJB **24** 17:46:26.6±0.6,41˚.26N±0˚.02×22˚.73E±0˚.04,h6km±5km,*
Error ellipse: s-maj=4.6km s-min=4.0km az=174.2
*SKO **24** 17:46:27.1,41˚.30N×22˚.69E,h15km,M2.4,ML2.8*
*ATH **24** 17:46:27.3,41˚.30N×22˚.69E,h22km±1km,MD3.2/14*
*SOF **24** 17:46:27.0,41˚.27N×22˚.70E,h10km,MD3.0*
*CSEM **24** 17:46:27.2±0.2,41˚.22N×22˚.70E,h5km,ML2.8,Error*
ellipse: s-maj=5.4km s-min=4.3km az=66.0
*BEO **24** 17:46:29.0±0.8,41˚.33N×22˚.64E,h4km±2km,ML2.8/8*
ISC 24 17:46:28.0±0.9,41˚.29N±0˚.02×22˚.67E±0˚.02,h10km±5km,
n69,σ1$05/85,7C-10D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**291**	*i* Pg	**Pg**	**17 46 29.8**	**-0.5**
VAY				*i* Sg	**Sg**	**17 46 31.7**	**-0.4**
VAY				*e*Lg	Lg	17 46 31.8	
	comp=E,12μm,0.2s						
VAY				*e*Lg	Lg	17 46 31.8	
	comp=N,11μm,0.5s						
VAY	**Valandovo**	**0.08**	**291**	*i* Pg	**Pg**	**17 46 30.3**	**-0.1**
VAY				*i* Sg	**Sg**	**17 46 32.2**	**+0.1**
VAY				*e*Lg	Lg	17 46 32.3	
	comp=N,11μm,0.5s						
GRG	**Griva**	**0.39**	**211**	*e*PB	**Pg**	**17 46 35.8**	**+0.1**
GRG				*e*SB	**Sg**	**17 46 42.2**	**+1.3**
GRG	**Griva**	**0.39**	**211**	*e*Pb	**Pg**	**17 46 35.8**	**+0.1**
GRG				*e*Sb	**Sg**	**17 46 42.2**	**+1.3**
KKB	**Krupnik**	**0.65**	**28**	*i* P	**Pg**	**17 46 40.3**	**-0.3**
KKB	**Krupnik**	**0.65**	**28**	*i* P	**Pg**	**17 46 40.3**	**-0.3**
SOH	**Sokhos**	**0.70**	**132**	*e*PN	**Pg**	**17 46 40.9**	**-0.6**
SOH				*e*SN	**Sg**	**17 46 50.8**	**+0.1**
SOH	**Sokhos**	**0.70**	**132**	*e*Pn	**Pg**	**17 46 40.9**	**-0.6**
SOH				*e*Sn	**Sg**	**17 46 50.8**	**+0.1**
MMB	**Musomiste**	**0.85**	**69**	*i* Pg	**Pg**	**17 46 43.7**	**-0.7**
MMB	**Musomiste**	**0.85**	**69**	*i* Pg	**Pg**	**17 46 43.7**	**-0.7**
NVR	**Nevrokopi**	**0.90**	**86**	*e*PN	**Pg**	**17 46 44.5**	**-0.8**
NVR				*e*SN	**Sg**	**17 46 56.4**	**-0.7**
NVR	**Nevrokopi**	**0.90**	**86**	*e*Pn	**Pg**	**17 46 44.5**	**-0.8**
NVR				*e*Sn	**Sg**	**17 46 56.4**	**-0.7**
BIA	**Bitola**	**1.05**	**255**	*e*Pg	**Pg**	**17 46 47.1**	**-1.1**
BIA	**Bitola**	**1.05**	**255**	*e*Pg	**Pg**	**17 46 47.1**	**-1.1**
PLG	**Polygyros**	**1.09**	**147**	*e*PN	**Pg**	**17 46 48.3**	**-0.7**
PLG				*e*SN	**Sg**	**17 47 02.4**	**-0.7**
PLG	**Polygyros**	**1.09**	**147**	*e*Pn	**Pg**	**17 46 48.3**	**-0.7**
PLG				*e*Sn	**Sg**	**17 47 02.4**	**-0.7**
FNA	**Florina**	**1.10**	**243**	*e*PN	**Pg**	**17 46 48.5**	**-0.7**
FNA	**Florina**	**1.10**	**243**	*e*Pn	**Pg**	**17 46 48.5**	**-0.7**
SKO	**Skopje**	**1.14**	**307**	*e*Pg	**Pn**	**17 46 50.1**	**+0.1**
SKO				*i* Sg	**Sb**	**17 47 05.5**	**+0.8**
SKO				*e*Lg	Lg	17 47 07.1	
	comp=N,174nm,0.6s						
SKO				*e*Lg	Lg	17 47 07.2	
	comp=E,99nm,0.5s						
SKO	**Skopje**	**1.14**	**307**	*e*Pg	**Pn**	**17 46 50.7**	**+0.7**
SKO	**Skopje**	**1.14**	**307**	*e*Pg	**Pn**	**17 46 50.6**	**+0.6**
SKO				*e*Lg	Lg	17 47 01.7	
	comp=E,99nm,0.5s						
SKO				*i* Sg	**Sg**	**17 47 01.9**	**-2.9**
VTS	**Vitosha**	**1.36**	**17**	*i* Pg	**Pg**	**17 46 53.5**	**-0.6**
VTS				*e*Sg	**Sn**	**17 47 11.2**	**0.0**
VTS	**Vitosha**	**1.36**	**17**	*i* P	**Pb**	**17 46 53.2**	**-0.4**
VTS	**Vitosha**	**1.36**	**17**	*i* P	**Pg**	**17 46 53.7**	**-0.4**
VTS	**Vitosha**	**1.36**	**17**	*i* P	**Pg**	**17 46 53.7**	**-0.4**
VTS				*e*Sg	**Sn**	**17 47 11.2**	**0.0**
PAIG	**Paliouri**	**1.57**	**150**	*e*PN	**Pn**	**17 46 55.7**	**-0.1**
PAIG	**Paliouri**	**1.57**	**150**	*e*Pn	**Pn**	**17 46 55.7**	**-0.1**
BARS	**Barje**	**1.65**	**338**	*e*Pn	**Pn**	**17 46 57.1**	**+0.1**
BARS				*e*Sn	**Sb**	**17 47 19.9**	**+0.6**
BARS	**Barje**	**1.65**	**338**	*e*Pn	**Pn**	**17 46 57.1**	**+0.1**
BARS				*e*Sn	**Sb**	**17 47 19.9**	**+0.6**
THL	**Klokotos Trika**	**1.80**	**196**	*e*PN	**Pn**	**17 46 59.8**	**+0.8**
THL	**Klokotos Trika**	**1.80**	**196**	*e*Pn	**Pn**	**17 46 59.8**	**+0.8**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Pn	**Pn**	**17 47 02.3**	**+0.8**
NEO	**Neokhori**	**2.03**	**168**	*e*PB	**Pn**	**17 47 01.7**	**-0.5**
NEO	**Neokhori**	**2.03**	**168**	*e*Pb	**Pn**	**17 47 01.7**	**-0.5**
RDO	**Rodhopi**	**2.17**	**93**	*e*PN	**Pn**	**17 47 04.3**	**+0.2**
RDO	**Rodhopi**	**2.17**	**93**	*e*Pn	**Pn**	**17 47 04.3**	**+0.2**
SELS	**Selova**	**2.24**	**330**	*e*Pn	**Pn**	**17 47 04.9**	**-0.2**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PB	**Pn**	**17 47 06.3**	**+0.6**
AGG	**Agios Georgios**	**2.28**	**187**	*e*Pb	**Pn**	**17 47 06.3**	**+0.6**
AOS	**Alonnisos**	**2.31**	**156**	*e*PN	**Pn**	**17 47 05.5**	**-0.6**
AOS	**Alonnisos**	**2.31**	**156**	*e*Pn	**Pn**	**17 47 05.5**	**-0.6**
SMTH	**Samothraki Isl**	**2.32**	**110**	*e*PN	**Pn**	**17 47 05.9**	**-0.3**
SMTH	**Samothraki Isl**	**2.32**	**110**	*e*Pn	**Pn**	**17 47 05.9**	**-0.3**
LIA	**Limnos Island**	**2.37**	**125**	*e*PB	**Pn**	**17 47 07.4**	**+0.6**
LIA	**Limnos Island**	**2.37**	**125**	*e*Pb	**Pn**	**17 47 07.4**	**+0.6**
ALN	**Alexandroupoli**	**2.58**	**98**	*e*PN	**Pn**	**17 47 10.0**	**+0.2**
ALN	**Alexandroupoli**	**2.58**	**98**	*e*Pn	**Pn**	**17 47 10.0**	**+0.2**
BOLS	**Boljevac**	**2.59**	**348**	*e*Sg	**Sg**	**17 47 49.6**	**-1.5**
GRUS	**Gruza**	**2.97**	**332**	*e*Pn	**Pn**	**17 47 15.0**	**-0.1**
GRUS	**Gruza**	**2.97**	**332**	*e*Pn	**Pn**	**17 47 15.0**	**-0.1**
DIVS	**Divibare**	**3.43**	**326**	*e*Pn	**Pn**	**17 47 21.9**	**+0.4**
DIVS	**Divibare**	**3.43**	**326**	*e*Pn	**Pn**	**17 47 21.9**	**+0.4**
BBLS	**Lazići**	**3.52**	**318**	*e*Pn	**Pn**	**17 47 25.0**	**+2.2**
BBLS	**Lazići**	**3.52**	**318**	*e*Pn	**Pn**	**17 47 25.0**	**+2.2**
LOT	**Lotru**	**4.23**	**11**	*i* P	**Pn**	**17 47 33.6**	**+1.1**
LOT	**Lotru**	**4.23**	**11**	*i* P	**Pn**	**17 47 33.6**	**+1.1**
ARR	**Arges**	**4.32**	**19**	*i* P	**Pn**	**17 47 35.8**	**+2.1**
ARR	**Arges**	**4.32**	**19**	*i* P	**Pn**	**17 47 35.8**	**+2.1**
BZS	**Buzias**	**4.39**	**350**	*i* P	**Pn**	**17 47 34.2**	**-0.4**
BZS	**Buzias**	**4.39**	**350**	*i* P	**Pn**	**17 47 34.2**	**-0.4**
VOIR		**4.49**	**22**	*i* P	**Pn**	**17 47 37.7**	**+1.6**
VOIR		**4.49**	**22**	*i* P	**Pn**	**17 47 37.7**	**+1.6**
MLR	**Muntele Rosu**	**4.83**	**29**	*i* P	**Pn**	**17 47 43.2**	**+2.5**
MLR	**Muntele Rosu**	**4.83**	**29**	*i* P	**Pn**	**17 47 43.2**	**+2.5**
VRI	**Vrincioaia**	**5.44**	**31**	*i* P	**Pn**	**17 47 51.2**	**+2.2**
VRI	**Vrincioaia**	**5.44**	**31**	*i* P	**Pn**	**17 47 51.2**	**+2.2**
CFR	**Carcaliu**	**5.57**	**44**	*i* P	**Pn**	**17 47 53.8**	**+3.0**
PKSM	**Moragy**	**5.72**	**331**	*i* P	**Pn**	**17 47 52.7**	**-0.1**
PKSM	**Moragy**	**5.72**	**331**	*i* P	**Pn**	**17 47 52.7**	**-0.1**

IDC 24 17:47:54.0±10.0,14˚.50N×144˚.15E,h0km,mb3.6/4,
mb1 3.7/4,mb1mx3.4/26,mbtmp3.6/4,Error ellipse:
s-maj=280.7km s-min=80.1km az=104.0,Mariana
Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**22.58**	**347**	P	P	17 52 55.9	-0.2
	0.6nm,0.6s,baz=167,slow=9.3,SNR=5.7						
KSRS	**Korea Array**	**27.03**	**331**	P	P	17 53 37.8	-0.2
	0.8nm,0.8s,baz=146,slow=11,SNR=5.8						
SONM	**Songino Array**	**45.59**	**325**	P	P	17 56 16.2	+0.2
	0.2nm,0.4s,baz=133,slow=6.1,SNR=4.0						
KURBB	**Kurchatov Arra**	**63.48**	**320**	P	P	17 58 25.9	0.0
	0.8nm,0.3s,baz=102,slow=7.3,SNR=8.8						
BVAR	**Borovoye Array**	**68.78**	**322**	P	P	17 58 59.9	-0.1
	0.8nm,0.5s,baz=108,slow=7.0,SNR=8.1						

*ISCJB **24** 18:03:07.8±0.9,41˚.27N±0˚.09×22˚.75E±0˚.08,h10km±12km,*
Error ellipse: s-maj=16.2km s-min=7.6km az=154.9
*SKO **24** 18:03:07.9,41˚.29N×22˚.65E,h15km,M1.4,ML1.8*
*CSEM **24** 18:03:08.3±0.3,41˚.28N×22˚.75E,h8km,MD2.8,Error*
ellipse: s-maj=8.0km s-min=4.8km az=11.0
*ATH **24** 18:03:09.2,41˚.22N×22˚.73E,h16km±2km,MD2.8/6*
ISC 24 18:03:08.1±1.1,41˚.27N±0˚.04×22˚.76E±0˚.04,h4km±13km,
n14,σ0$37/26,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.15**	**289**	*e*Pg	**Pg**	**18 03 10.9**	**-0.3**
VAY				*e*Lg	Lg	18 03 12.5	
	comp=E,244nm,0.3s						
VAY				*e*Sg	**Sg**	**18 03 12.7**	**-0.5**
VAY				*e*Lg	Lg	18 03 12.7	
	comp=N,942nm,0.2s						
VAY	**Valandovo**	**0.15**	**289**	*e*Pg	**Pg**	**18 03 11.3**	**+0.1**
VAY				*e*Sg	**Sg**	**18 03 13.1**	**-0.1**
VAY				*e*Lg	Lg	18 03 13.2	
	comp=N,942nm,0.2s						
GRG	**Griva**	**0.42**	**221**	*e*PB	**Pg**	**18 03 16.7**	**+0.6**
GRG				*e*SB	**Sg**	**18 03 21.8**	**+0.2**
GRG	**Griva**	**0.42**	**221**	*e*Pb	**Pg**	**18 03 16.7**	**+0.6**
GRG				*e*Sb	**Sg**	**18 03 21.8**	**+0.2**
SOH	**Sokhos**	**0.63**	**135**	*e*PN	**Pb**	**18 03 21.8**	**+0.1**
SOH				*e*SN	**Sb**	**18 03 30.5**	**-0.5**
SOH	**Sokhos**	**0.63**	**135**	*e*Pn	**Pb**	**18 03 21.8**	**+0.1**
SOH				*e*Sn	**Sb**	**18 03 30.5**	**-0.5**
NVR	**Nevrokopi**	**0.83**	**84**	*e*PB	**Pb**	**18 03 25.3**	**+0.2**
NVR				*e*SN	**Sb**	**18 03 37.3**	**+0.6**
NVR	**Nevrokopi**	**0.83**	**84**	*e*Pb	**Pb**	**18 03 25.3**	**+0.2**
NVR				*e*Sn	**Sb**	**18 03 37.3**	**+0.6**
PLG	**Polygyros**	**1.04**	**150**	*e*PB	**Pg**	**18 03 27.6**	**-0.4**
PLG				*e*SN	**Sb**	**18 03 42.2**	**-0.3**
PLG	**Polygyros**	**1.04**	**150**	*e*Pb	**Pg**	**18 03 27.6**	**-0.4**
PLG				*e*Sn	**Sb**	**18 03 42.2**	**-0.3**
FNA	**Florina**	**1.16**	**246**	*e*PN	**Pn**	**18 03 30.9**	**-0.2**
FNA	**Florina**	**1.16**	**246**	*e*Pn	**Pn**	**18 03 30.9**	**-0.2**
PAIG	**Paliouri**	**1.51**	**152**	*e*PN	**Pg**	**18 03 37.2**	**+0.1**
PAIG				*e*SN	**Sg**	**18 03 56.8**	**+0.1**
PAIG	**Paliouri**	**1.51**	**152**	*e*Pn	**Pg**	**18 03 37.2**	**+0.1**
PAIG				*e*Sn	**Sg**	**18 03 56.8**	**+0.1**

*ISCJB **24** 18:04:37.6±0.6,13˚.14N±0˚.06×89˚.21W±0˚.04,h70km±4km,*
mb3.8/8,Error ellipse: s-maj=11.0km s-min=5.0km
az=21.9
*IDC **24** 18:04:37.3±1.5,13˚.17N×88˚.69W,h70km±11km,mb3.5/5,*
mb1 3.8/5,mb1mx3.4/21,mbtmp3.5/5,MS3.2/3,Ms1 3.2/3,
ms1mx2.7/23,Error ellipse: s-maj=59.4km s-min=33.3km
az=54.0
*CASC **24** 18:04:37.3±2.7,13˚.02N×89˚.25W,h13km±11km,MD3.9,*
ML4.1,mb3.8(NEIC)
*NEIC **24** 18:04:38.0,13˚.13N×89˚.26W,h50km,mb3.8/4,*
MD4.4(SNET),After SNET.
NEIC Felt [III] at San Salvador.
ISC 24 18:04:38.4±0.7,13˚.17N±0˚.06×89˚.14W±0˚.04,h64km±5km,
n40,σ1$89/60,mb3.8/8,1C-10D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AIES	**Las Flores**	**0.30**	**16**	*e*P	**Pn**	**18 04 48.3**	**-0.6**
A

ASAR	**Alice Springs**	**137.99**	**249**	PKP		**PKPdf**	**18**	**23**	**57.5** **+0.8**
	comp=Z,0.2nm,0.6s,baz=91,slow=2.8,SNR=3.3								
ASAR				pPKP		**pPKPdf**	**18**	**24**	**14.7** **-0.6**
	comp=Z,0.4nm,0.8s,baz=95,slow=2.0,SNR=2.6								
CMAR	**Chiang Mai Arr**	**147.58**	**346**	PKPbc		**PKPdf**	**18**	**24**	**14.2** **+0.5**
	comp=Z,0.9nm,0.7s,baz=342,slow=3.2,SNR=6.8								

*ISCJB **24** 18:08:39.1±0.9, 41°.3N±0°.1×22°.82E±0°.08, h10km±13km, Error ellipse: s-maj=18.9km s-min=7.3km az=156.8*
*SKO **24** 18:08:39.8, 41°.32N×22°.76E, h15km, M2.0, ML2.3*
*CSEM **24** 18:08:39.3±0.4, 41°.33N×22°.82E, h10km, MD3.1, Error ellipse: s-maj=11.3km s-min=5.7km az=2.0*
*ATH **24** 18:08:40.0, 41°.28N×22°.76E, h19km±3km, MD3.1/7*
ISC 24 18:08:40.2±0.9, **41°.28N**±0°.05×**22°.78E**±0°.04, **h8**km±11km, **n15**, σ0°**37**/23, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.17**	**286**	*e*Pg		**Pg**	**18 08 43.7**	**0.0**
VAY				*e*Lg		Lg	18 08 44.8	
	comp=E,697nm,0.3s							
VAY				*e*Sg		**Sg**	**18 08 45.0**	**-1.1**
VAY				*e*Lg		Lg	18 08 45.1	
	comp=N,2μm,0.3s							
VAY	**Valandovo**	**0.17**	**286**	*e*Pg		**Pb**	**18 08 44.2**	**+0.5**
VAY				*e*Sg		**Sg**	**18 08 45.5**	**-0.6**
VAY				*e*Lg		Lg	18 08 45.6	
	comp=N,2μm,0.3s							
GRG	**Griva**	**0.43**	**222**	*e*PB		**Pg**	**18 08 48.4**	**-0.2**
GRG				*e*SB		**Sg**	**18 08 54.4**	**+0.2**
GRG	**Griva**	**0.43**	**222**	*e*Pb		**Pg**	**18 08 48.4**	**-0.2**
GRG				*e*Sb		**Sg**	**18 08 54.4**	**+0.2**
SOH	**Sokhos**	**0.62**	**136**	*e*PN		**Pg**	**18 08 52.5**	**+0.2**
SOH				*e*SN		**Sb**	**18 09 02.2**	**-0.1**
SOH	**Sokhos**	**0.62**	**136**	*e*Pn		**Pg**	**18 08 52.5**	**+0.2**
SOH				*e*Sn		**Sb**	**18 09 02.2**	**-0.1**
NVR	**Nevrokopi**	**0.82**	**84**	*e*PN		**Pg**	**18 08 55.8**	**-0.1**
NVR				*e*SN		**Sb**	**18 09 07.7**	**-0.1**
NVR	**Nevrokopi**	**0.82**	**84**	*e*Pn		**Pg**	**18 08 55.8**	**-0.1**
NVR				*e*Sn		**Sb**	**18 09 07.7**	**-0.1**
PLG	**Polygyros**	**1.03**	**151**	*e*PN		**Pg**	**18 08 59.9**	**-0.1**
PLG	**Polygyros**	**1.03**	**151**	*e*Pn		**Pg**	**18 08 59.9**	**-0.1**
FNA	**Florina**	**1.17**	**246**	*e*PN		**Pg**	**18 09 02.7**	**0.0**
FNA	**Florina**	**1.17**	**246**	*e*Pn		**Pg**	**18 09 02.7**	**0.0**
PAIG	**Paliouri**	**1.51**	**153**	*e*PN		**Pb**	**18 09 08.1**	**-0.3**
PAIG	**Paliouri**	**1.51**	**153**	*e*Pn		**Pb**	**18 09 08.1**	**-0.3**
RDO	**Rodhopi**	**2.08**	**93**	*e*PB		**Pn**	**18 09 15.9**	**+0.6**

NNC 24 18:12:09.1±11.0, **36°.99N×71°.38E, h157**km±220km, **mb2.7, mpv3.6, 3C-1D, Error ellipse: s-maj=109.0km s-min=61.3km az=11.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.15**	**354**	P		Pn	18 13 38.5	+0.7
	5.0nm,0.4s,baz=185,slow=14,SNR=80							
KK31				⇑S		Sn	18 14 47.7	+0.4
	0.7nm,0.4s,baz=185,slow=27,SNR=3.9							
TKM2	**Tokmak 2**	**6.75**	**27**	⇑P		Pn	18 13 45.4	-0.7
	2.8nm,1.4s							
TKM2				⇑S		Sn	18 15 02.6	+0.3
	0.6nm,0.5s							
AB31	**Akbulak array**	**14.81**	**329**	⇓P		Pn	18 15 30.7	0.0
	0.2nm,0.2s,baz=139,slow=14,SNR=20							

*TIR **24** 18:12:51.4, 41°.38N×22°.82E, h0km*
*IDC **24** 18:12:52.5±1.2, 41°.20N×22°.72E, h0km, mb3.4/6, mb1 3.5/9, mb1mx3.3/30, mbtmp3.4/9, ML3.1/3, MS2.7/1, Ms1 2.7/1, ms1mx1.9/29, Error ellipse: s-maj=21.1km s-min=15.8km az=142.0*
*CSEM **24** 18:12:53.9±0.1, 41°.28N×22°.71E, h8km, ML3.6/4, Error ellipse: s-maj=2.3km s-min=2.1km az=99.0*
*BEO **24** 18:12:53.6±0.8, 41°.30N×22°.76E, h6km±2km, ML3.3/1*
*SOF **24** 18:12:53.5, 41°.36N×22°.71E, h9km, MD3.5*
*ISCJB **24** 18:12:53.1±0.3, 41°.32N±0°.01×22°.69E±0°.02, h12km±2km, mb3.5/4, Error ellipse: s-maj=2.6km s-min=2.2km az=162.3*
*SKO **24** 18:12:53.3, 41°.30N×22°.71E, h15km, M2.8, ML3.3*
*ATH **24** 18:12:53.5, 41°.29N×22°.73E, h25km, MD3.6/21*
*THE **24** 18:12:54.1, 41°.29N×22°.68E, h7km, ML3.6/4, Error ellipse: s-maj=1.0km s-min=0.6km az=182.0*
*PRU **24** 18:12:56.2, 41°.42N×22°.49E, h0km*
ISC 24 18:12:54.0±0.6, **41°.28N**±0°.01×**22°.71E**±0°.01, **h8**km±5km, **n236**, σ0°**92**/261, **mb3.5**/4, **33C-16D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**293**	P		**Pg**	**18 12 56.4**	**-0.2**
VAY	**Valandovo**	**0.12**	**293**	*i* Pg		**Pg**	**18 12 56.5**	**-0.2**
VAY				*i* Sg		**Sg**	**18 12 58.6**	**+0.2**
VAY				*e*Lg		Lg	18 12 58.7	
	comp=N,32μm,0.5s							
VAY				*e*Lg		Lg	18 12 58.8	
	comp=E,17μm,0.2s							
VAY	**Valandovo**	**0.12**	**293**	⇓*i*Pg		**Pg**	**18 12 56.4**	**-0.2**
VAY				*e*Sg		**Sg**	**18 12 58.5**	**+0.1**
VAY	**Valandovo**	**0.12**	**293**	P		**Pg**	**18 12 56.4**	**-0.2**
VAY				*e*Sg		**Sg**	**18 12 58.5**	**+0.1**
VAY				*e*Lg		Lg	18 12 59.3	
	comp=E,17μm,0.2s							
KNT	**Kendrikon**	**0.18**	**129**	P		**Pg**	**18 12 58.6**	**+0.8**
KNT				S		**Sg**	**18 13 01.5**	**+1.2**
KNT	**Kendrikon**	**0.18**	**129**	P		**Pg**	**18 12 58.6**	**+0.8**
KNT				S		**Sg**	**18 13 01.5**	**+1.2**
GRG	**Griva**	**0.40**	**216**	P		**Pg**	**18 13 01.5**	**-0.3**
GRG				S		**Sg**	**18 13 07.1**	**+0.1**
GRG	**Griva**	**0.40**	**216**	*e*PB		**Pg**	**18 13 02.2**	**+0.4**
GRG				*e*SB		**Sg**	**18 13 08.4**	**+1.4**
GRG	**Griva**	**0.40**	**216**	P		**Pg**	**18 13 01.5**	**-0.3**
GRG	**Griva**	**0.40**	**216**	*e*Pb		**Pg**	**18 13 02.2**	**+0.4**
GRG				S		**Sg**	**18 13 07.1**	**+0.1**
GRG				*e*Sb		**Sg**	**18 13 08.4**	**+1.4**
KKB	**Krupnik**	**0.65**	**25**	*i* Pg		**Pg**	**18 13 06.1**	**-0.6**
KKB	**Krupnik**	**0.65**	**25**	*i* Pg		**Pg**	**18 13 06.1**	**-0.6**
SOH	**Sokhos**	**0.67**	**133**	P		**Pg**	**18 13 06.9**	**0.0**
SOH				S		**Sb**	**18 13 17.0**	**-0.3**
SOH	**Sokhos**	**0.67**	**133**	*e*PN		**Pg**	**18 13 06.8**	**-0.1**
SOH				*e*SN		**Sb**	**18 13 16.5**	**-0.8**
SOH	**Sokhos**	**0.67**	**133**	P		**Pg**	**18 13 06.9**	**0.0**
SOH				*e*Sn		**Sb**	**18 13 16.5**	**-0.8**
SOH				S		**Sb**	**18 13 17.0**	**-0.3**
THE	**Thessaloniki**	**0.67**	**163**	P		**Pg**	**18 13 07.0**	**0.0**
THE				S		**Sb**	**18 13 16.9**	**-0.5**
THE	**Thessaloniki**	**0.67**	**163**	P		**Pg**	**18 13 07.0**	**0.0**
THE				S		**Sb**	**18 13 16.9**	**-0.5**
SRS	**Serrai**	**0.69**	**103**	P		**Pg**	**18 13 07.2**	**0.0**
SRS	**Serrai**	**0.69**	**103**	P		**Pg**	**18 13 07.2**	**0.0**
HORT	**Hortiatis**	**0.74**	**156**	P		**Pg**	**18 13 08.2**	**-0.1**
HORT	**Hortiatis**	**0.74**	**156**	P		**Pg**	**18 13 08.2**	**-0.1**
MMB	**Musomiste**	**0.83**	**67**	*i* Pg		**Pg**	**18 13 09.7**	**-0.3**
MMB	**Musomiste**	**0.83**	**67**	*i* Pg		**Pg**	**18 13 09.7**	**-0.3**
NVR	**Nevrokopi**	**0.87**	**85**	P		**Pg**	**18 13 10.7**	**-0.1**
NVR	**Nevrokopi**	**0.87**	**85**	*e*PN		**Pg**	**18 13 10.7**	**-0.1**
NVR				*e*SN		**Sg**	**18 13 22.2**	**+0.1**
NVR	**Nevrokopi**	**0.87**	**85**	P		**Pg**	**18 13 10.7**	**-0.1**
NVR				*e*Sn		**Sg**	**18 13 22.2**	**+0.1**
PLG	**Polygyros**	**1.06**	**148**	P		**Pg**	**18 13 14.1**	**-0.3**
PLG	**Polygyros**	**1.06**	**148**	*e*PN		**Pg**	**18 13 14.1**	**-0.3**
PLG				*e*SN		**Sg**	**18 13 28.4**	**+0.2**
PLG	**Polygyros**	**1.06**	**148**	P		**Pg**	**18 13 14.1**	**-0.3**
PLG				*e*Sn		**Sg**	**18 13 28.4**	**+0.2**
BIA	**Bitola**	**1.08**	**257**	P		**Pg**	**18 13 13.7**	**-1.0**
BIA	**Bitola**	**1.08**	**257**	*e*Pg		**Pg**	**18 13 14.2**	**-0.6**
BIA	**Bitola**	**1.08**	**257**	P		**Pg**	**18 13 13.7**	**-1.0**
BIA	**Bitola**	**1.08**	**257**	*e*Pg		**Pg**	**18 13 14.1**	**-0.6**
FNA	**Florina**	**1.12**	**244**	P		**Pb**	**18 13 15.2**	**-0.5**
FNA	**Florina**	**1.12**	**244**	*e*PN		**Pg**	**18 13 15.8**	**+0.2**
FNA	**Florina**	**1.12**	**244**	P		**Pb**	**18 13 15.2**	**-0.5**
FNA	**Florina**	**1.12**	**244**	*e*Pn		**Pg**	**18 13 15.8**	**+0.2**
SKO	**Skopje**	**1.18**	**307**	*e*Pg		**Pg**	**18 13 17.1**	**+0.4**
SKO				*e*Sg		**Sn**	**18 13 33.4**	**+0.3**
SKO				*e*Lg		Lg	18 13 33.9	
	comp=E,327nm,0.5s							
SKO				*e*Lg		Lg	18 13 34.1	
	comp=N,310nm,0.4s							
SKO	**Skopje**	**1.18**	**307**	*e*Pg		**Pg**	**18 13 17.1**	**+0.4**
SKO				*e*Sg		**Sn**	**18 13 33.9**	**+0.8**
SKO	**Skopje**	**1.18**	**307**	*e*Pg		**Pg**	**18 13 17.1**	**+0.4**
SKO				*e*Sg		**Sn**	**18 13 33.9**	**+0.8**
SKO				*e*Lg		Lg	18 13 34.6	
	comp=N,310nm,0.4s							
KZN	**Kozani**	**1.20**	**217**	*e*PN		**Pn**	**18 13 16.2**	**-1.0**
KZN				*e*SN		**Sn**	**18 13 34.5**	**+0.7**
KZN	**Kozani**	**1.20**	**217**	*e*Pn		**Pn**	**18 13 16.2**	**-1.0**
KZN				*e*Sn		**Sn**	**18 13 34.5**	**+0.7**
OUR	**Ouranopolis**	**1.35**	**134**	P		**Pn**	**18 13 19.0**	**-0.1**
OUR	**Ouranopolis**	**1.35**	**134**	P		**Pn**	**18 13 19.0**	**-0.1**
VTS	**Vitosha**	**1.37**	**16**	P		**Pn**	**18 13 18.8**	**-0.8**
VTS				S		**Sb**	**18 13 37.0**	**-0.6**
VTS	**Vitosha**	**1.37**	**16**	⇑*i*Pg		**Pn**	**18 13 18.8**	**-0.8**
VTS	**Vitosha**	**1.37**	**16**	⇑*i*P		**Pn**	**18 13 19.0**	**-0.6**
VTS				S		**Sn**	**18 13 37.6**	**-0.3**
VTS	**Vitosha**	**1.37**	**16**	*i* Pg		**Pb**	**18 13 19.6**	**-0.4**
VTS	**Vitosha**	**1.37**	**16**	P		**Pn**	**18 13 18.8**	**-0.8**
VTS	**Vitosha**	**1.37**	**16**	*i* Pg		**Pb**	**18 13 19.6**	**-0.4**
VTS				S		**Sb**	**18 13 37.0**	**-0.6**
KAVA	**Kavala**	**1.39**	**101**	P		**Pn**	**18 13 19.4**	**-0.3**
KAVA	**Kavala**	**1.39**	**101**	P		**Pn**	**18 13 19.4**	**-0.3**
NEST	**Nestorio**	**1.53**	**236**	P		**Pn**	**18 13 21.2**	**-0.5**
NEST	**Nestorio**	**1.53**	**236**	P		**Pn**	**18 13 21.2**	**-0.5**
PAIG	**Paliouri**	**1.54**	**151**	P		**Pn**	**18 13 21.0**	**-0.7**
PAIG	**Paliouri**	**1.54**	**151**	*e*PB		**Pn**	**18 13 20.8**	**-0.9**
PAIG				*e*SN		**Sn**	**18 13 41.9**	**0.0**
PAIG	**Paliouri**	**1.54**	**151**	P		**Pn**	**18 13 21.0**	**-0.7**
PAIG				*e*Sn		**Sn**	**18 13 41.9**	**0.0**
RZN	**Rozhen**	**1.56**	**74**	*i* Pg		**Pg**	**18 13 24.0**	**0.0**
RZN	**Rozhen**	**1.56**	**74**	*i* Pg		**Pg**	**18 13 24.0**	**0.0**
KBN	**Korca**	**1.59**	**247**	*i* PG		**Pg**	**18 13 24.6**	**0.0**
KBN	**Korca**	**1.59**	**247**	*i* Pg		**Pg**	**18 13 24.6**	**0.0**
PGB	**Panagyurishte**	**1.67**	**40**	*i* Pg		**Pb**	**18 13 25.3**	**+0.2**
PGB	**Panagyurishte**	**1.67**	**40**	*i* Pg		**Pb**	**18 13 25.3**	**+0.2**
BARS	**Barje**	**1.68**	**337**	*e*Pn		**Pn**	**18 13 22.6**	**-1.1**
BARS				*e*Sn		**Sb**	**18 13 45.4**	**-1.1**
BARS	**Barje**	**1.68**	**337**	*e*Pn		**Pn**	**18 13 22.6**	**-1.1**
BARS				*e*Sn		**Sb**	**18 13 45.4**	**-1.1**
PLD	**Plovdiv**	**1.71**	**60**	P		**Pn**	**18 13 23.8**	**-0.3**
PLD	**Plovdiv**	**1.71**	**60**	P		**Pn**	**18 13 23.8**	**-0.3**
PHP	**Peshkopia**	**1.75**	**284**	*i* PG		**Pn**	**18 13 24.5**	**-0.3**
PHP	**Peshkopia**	**1.75**	**284**	*i* Pg		**Pn**	**18 13 24.5**	**-0.3**
THL	**Klokotos Trika**	**1.79**	**197**	P		**Pn**	**18 13 24.3**	**-0.9**
THL	**Klokotos Trika**	**1.79**	**197**	*e*PN		**Pn**	**18 13 25.4**	**+0.2**
THL	**Klokotos Trika**	**1.79**	**197**	P		**Pn**	**18 13 24.3**	**-0.9**
THL	**Klokotos Trika**	**1.79**	**197**	*e*Pn		**Pn**	**18 13 25.4**	**+0.2**
XOR	**Xorichti**	**1.94**	**169**	P		**Pn**	**18 13 26.8**	**-0.6**
XOR	**Xorichti**	**1.94**	**169**	P		**Pn**	**18 13 26.8**	**-0.6**
ZAPS	**Zavoj**	**2.00**	**358**	⇑*i*Pn		**Pn**	**18 13 28.2**	**+0.1**
NEO	**Neokhori**	**2.01**	**169**	*e*PB		**Pn**	**18 13 27.7**	**-0.5**
NEO	**Neokhori**	**2.01**	**169**	*e*Pb		**Pn**	**18 13 27.7**	**-0.5**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* Pg		**Pb**	**18 13 31.4**	**-0.4**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* Pg		**Pb**	**18 13 31.4**	**-0.4**
RDO	**Rodhopi**	**2.14**	**93**	P		**Pn**	**18 13 29.5**	**-0.5**
RDO	**Rodhopi**	**2.14**	**93**	*e*PN		**Pn**	**18 13 29.2**	**-0.8**
RDO	**Rodhopi**	**2.14**	**93**	*e*Pn		**Pn**	**18 13 29.2**	**-0.8**
RDO	**Rodhopi**	**2.14**	**93**	P		**Pn**	**18 13 29.5**	**-0.5**
TIR	**Tirane**	**2.14**	**273**	*i* PG		**Pg**	**18 13 36.7**	**+1.6**
TIR	**Tirane**	**2.14**	**273**	*i* Pg		**Pg**	**18 13 36.7**	**+1.6**
JAN	**Janina**	**2.15**	**222**	*e*PB		**Pn**	**18 13 30.7**	**+0.5**
JAN	**Janina**	**2.15**	**222**	*e*Pb		**Pn**	**18 13 30.7**	**+0.5**
SKIA	**Skiathos**	**2.19**	**164**	P		**Pn**	**18 13 30.0**	**-0.7**
SKIA	**Skiathos**	**2.19**	**164**	P		**Pn**	**18 13 30.0**	**-0.7**
MPEP	**Malo Peshtene**	**2.21**	**20**	*i* Pg		**Pg**	**18 13 35.2**	**+1.3**
PUK	**Puka**	**2.25**	**291**	*i* PG		**Pb**	**18 13 33.9**	**-1.0**
PUK	**Puka**	**2.25**	**291**	*i* Pg		**Pb**	**18 13 33.9**	**-1.0**
DIM	**Dimitrovgrad**	**2.25**	**69**	*i* P		**Pb**	**18 13 33.4**	**-1.6**
DIM	**Dimitrovgrad**	**2.25**	**69**	*i* P		**Pb**	**18 13 33.4**	**-1.6**
AGG	**Agios Georgios**	**2.27**	**187**	P		**Pn**	**18 13 31.8**	**-0.1**
AGG	**Agios Georgios**	**2.27**	**187**	*e*PN		**Pn**	**18 13 31.6**	**-0.3**
AGG	**Agios Georgios**	**2.27**	**187**	P		**Pn**	**18 13 31.8**	**-0.1**
SELS	**Selova**	**2.27**	**329**	⇑*i*Pn		**Pn**	**18 13 30.7**	**-1.2**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*PN		**Pn**	**18 13 32.0**	**-0.1**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*Pn		**Pn**	**18 13 32.0**	**-0.1**
AOS	**Alonnisos**	**2.29**	**157**	P		**Pn**	**18 13 31.2**	**-0.9**
AOS	**Alonnisos**	**2.29**	**157**	*e*PN		**Pn**	**18 13 31.5**	**-0.6**
AOS	**Alonnisos**	**2.29**	**157**	P		**Pn**	**18 13 31.2**	**-0.9**
AOS	**Alonnisos**	**2.29**	**157**	*e*Pn		**Pn**	**18 13 31.5**	**-0.6**
MAKR	**Makrakomi, Fth**	**2.30**	**191**	P		**Pn**	**18 13 32.4**	**+0.1**
MAKR	**Makrakomi, Fth**	**2.30**	**191**	P		**Pn**	**18 13 32.4**	**+0.1**
LIA	**Limnos Island**	**2.33**	**125**	*e*PN		**Pn**	**18 13 32.4**	**-0.3**
LIA	**Limnos Island**	**2.33**	**125**	*e*Pn		**Pn**	**18 13 32.4**	**-0.3**
EVR	**Evrytania**	**2.46**	**197**	*e*PN		**Pn**	**18 13 35.0**	**+0.5**
EVR	**Evrytania**	**2.46**	**197**	*e*Pn		**Pn**	**18 13 35.0**	**+0.5**
ALN	**Alexandroupoli**	**2.55**	**97**	P		**Pn**	**18 13 35.5**	**-0.2**
ALN	**Alexandroupoli**	**2.55**	**97**	*e*PN		**Pn**	**18 13 35.2**	**-0.5**
ALN	**Alexandroupoli**	**2.55**	**97**	*e*Pn		**Pn**	**18 13 35.2**	**-0.5**
ALN	**Alexandroupoli**	**2.55**	**97**	P		**Pn**	**18 13 35.5**	**-0.2**
VLO	**Vlora**	**2.57**	**253**	*i* PG		**Pg**	**18 13 45.2**	**+2.0**
VLO	**Vlora**	**2.57**	**253**	*i* Pg		**Pg**	**18 13 45.2**	**+2.0**
BOLS	**Boljevac**	**2.61**	**348**	*e*Pn		**Pn**	**18 13 34.5**	**-2.0**
BOLS				*e*Sg		**Sb**	**18 14 13.1**	**-0.2**
BOLS	**Boljevac**	**2.61**	**348**	*e*Pn		**Pn**	**18 13 34.5**	**-2.0**
BOLS				*e*Sg		**Sb**	**18 14 13.1**	**-0.2**
LKR	**Lokris**	**2.63**	**175**	*e*PN		**Pn**	**18 13 37.1**	**+0.3**
LKR	**Lokris**	**2.63**	**175**	*e*Pn		**Pn**	**18 13 37.1**	**+0.3**
ENEZ	**Enez**	**2.66**	**101**	*e*PN		**Pb**	**18 13 40.2**	**-1.8**
KALE	**Kalithea**	**2.92**	**189**	P		**Pn**	**18 13 40.9**	**+0.1**
KALE	**Kalithea**	**2.92**	**189**	P		**Pn**	**18 13 40.9**	**+0.1**
LKD2	**Lefkada island**	**2.94**	**213**	*e*PN		**Pn**	**18 13 41.8**	**+0.7**
LKD2	**Lefkada island**	**2.94**	**213**	*e*Pn		**Pn**	**18 13 41.8**	**+0.7**
ERIK	**Erikli-Kesan**	**2.94**	**101**	*e*PN		**Pn**	**18 13 40.8**	**-0.3**
GELI	**Tayfur-Gelibol**	**2.99**	**106**	*e*PN		**Pn**	**18 13 43.7**	**+2.0**
GRUS	**Gruza**	**3.00**	**331**	⇑*i*Pn		**Pn**	**18 13 40.9**	**-0.9**
GRUS	**Gruza**	**3.00**	**331**	⇑*i*Pn		**Pn**	**18 13 40.9**	**-0.9**
EDRB	**Edirne**	**3.08**	**78**	*e*PN		**Pn**	**18 13 42.7**	**-0.3**
ZIMR		**3.09**	**39**	⇑*i*P		**Pn**	**18 13 43.6**	**+0.6**
ZIMR		**3.09**	**39**	S		**Sn**	**18 14 20.9**	**+0.8**
EZN	**Ezine**	**3.11**	**117**	*e*PN		**Pn**	**18 13 44.1**	**+0.7**
JMB	**Yambol**	**3.13**	**66**	P		**Pn**	**18 13 44.1**	**+0.5**
JMB	**Yambol**	**3.13**	**66**	P		**Pn**	**18 13 44.1**	**+0.5**
SIGR	**SIGRI**	**3.17**	**130**	P		**Pn**	**18 13 44.9**	**+0.7**
SIGR	**SIGRI**	**3.17**	**130**	P		**Pn**	**18 13 44.9**	**+0.7**
SVIS	**Svilajnac**	**3.18**	**340**	*e*Pn		**Pn**	**18 13 44.2**	**-0.2**
LPK	**Lapseki**	**3.20**	**105**	*e*Pn		**Pn**	**18 13 47.0**	**+2.4**
KLV	**Kalavryta, Ach**	**3.26**	**187**	*e*PN		**Pn**	**18 13 46.0**	**+0.5**
KLV	**Kalavryta, Ach**	**3.26**	**188**	*e*Pn		**Pn**	**18 13 46.0**	**+0.5**
RKY	**Sarkoy-Tekirda**	**3.43**	**98**	*e*PN		**Pb**	**18 13 51.7**	**-3.4**
DIVS	**Divibare**	**3.46**	**326**	P		**Pn**	**18 13 47.3**	**-1.0**
DIVS	**Divibare**	**3.46**	**326**	P		**Pn**	**18 13 47.3**	**-1.0**
MFT	**Murefte**	**3.49**	**97**	*e*PN		**Pn**	**18 13 48.0**	**-0.7**
BBLS	**Lazići**	**3.56**	**318**	*e*Pn		**Pn**	**18 13 49.2**	**-0.4**
BBLS	**Lazići**	**3.56**	**318**	*e*Pn		**Pn**	**18 13 49.2**	**-0.4**
KRBG	**Karabiga-Canak**	**3.59**	**103**	*e*PN		**Pn**	**18 13 52.5**	**+2.5**
HUMR	**Humele**	**3.65**	**26**	⇑*i*P		**Pn**	**18 13 50.7**	**-0.1**
HUMR	**Humele**	**3.65**	**26**	⇑*i*P		**Pn**	**18 13 50.7**	**-0.1**
TKR	**Tekirdag**	**3.66**	**93**	*e*PN		**Pb**	**18 13 55.5**	**-3.4**
MRMT	**Marmara Adasi**	**3.76**	**99**	*e*PN		**Pn**	**18 13 52.0**	**-0.4**
CRLT	**Corlu**	**3.79**	**91**	*e*PN		**Pb**	**18 13 57.6**	**-3.6**
CHOS	**Chios island**	**3.87**	**137**	*e*PN		**Pn**	**18 13 54.8**	**+0.9**
CHOS	**Chios island**	**3.87**	**137**	*e*Pn		**Pn**	**18 13 54.8**	**+0.9**
GONE	**Gonen-Balikesi**	**3.98**	**106**	*e*Pn		**Pn**	**18 13 56.5**	**+1.2**
SLVT	**Silivri**	**4.15**	**89**	*e*PN		**Pb**	**18 14 03.1**	**-4.1**
CTYL	**Yal??k??y-??at**	**4.20**	**85**	*e*PN		**Pn**	**18 14 01.8**	**+3.4**
LOT	**Lotru**	**4.24**	**10**	⇑*i*P		**Pn**	**18 13 58.1**	**-0.9**
LOT	**Lotru**	**4.24**	**10**	⇑*i*P		**Pn**	**18 13 58.1**	**-0.9**
BALB	**Balikesir**	**4.27**	**111**	*e*PN		**Pn**	**18 14 01.0**	**+1.7**
MTUR	**Matau**	**4.31**	**23**	⇓*i*P		**Pn**	**18 14 01.5**	**+1.6**
MTUR	**Matau**	**4.31**	**23**	⇓*i*P		**Pn**	**18 14 01.5**	**+1.6**
ARR	**Arges**	**4.32**	**18**	⇑*i*P		**Pn**	**18 14 00.8**	**+0.7**
ARR	**Arges**	**4.32**	**18**	⇑*i*P		**Pn**	**18 14 00.8**	**+0.7**
CTKS	**Kestanelik-??a**	**4.37**	**89**	*e*PN		**Pn**	**18 14 00.0**	**-0.7**
KCTX	**Karacabey (Bur**	**4.41**	**101**	*e*PN		**Pn**	**18 14 01.3**	**+0.1**
BZS	**Buzias**	**4.41**	**350**	⇓*i*P		**Pn**	**18 13 59.8**	**-1.5**
BZS	**Buzias**	**4.41**	**350**	⇓*i*P		**Pn**	**18 13 59.8**	**-1.5**
VOIR		**4.50**	**22**	⇓*i*P		**Pn**	**18 14 02.9**	**+0.4**
VOIR		**4.50**	**22**	⇓*i*P		**Pn**	**18 14 02.9**	**+0.4**
IZM	**Izmir**	**4.53**	**128**	*e*PN		**Pb**	**18 14 02.0**	**-0.9**
BGKT	**Bogazkoy**	**4.57**	**89**	*e*PN		**Pb**	**18 14 09.0**	**-5.5**
ARMT	**Armutlu**	**4.71**	**97**	*e*PN		**Pn**	**18 14 10.5**	**+5.0**
ISR	**Istrita**	**4.75**	**35**	⇑*i*P		**Pn**	**18 14 06.2**	**+0.2**
ISR	**Istrita**	**4.75**	**35**	⇑*i*P		**Pn**	**18 14 06.2**	**+0.2**
AMRR	**Amara**	**4.76**	**44**	⇑*i*P		**Pn**	**18 14 06.6**	**+0.6**
AMRR	**Amara**	**4.76**	**44**	⇑*i*P		**Pn**	**18 14 06.6**	**+0.6**
KLYT	**Kilyos**	**4.77**	**88**	*e*PN		**Pb**	**18 14 12.3**	**-5.6**
ISK	**Istanbul-Kandi**	**4.80**	**90**	*e*PN		**Pn**	**18 14 11.9**	**+5.4**
MLR	**Muntele Rosu**	**4.83**	**28**	⇑*i*P		**Pn**	**18 14 09.0**	**+1.9**
MLR	**Muntele Rosu**	**4.83**	**28**	Pn		**Pn**	**18 14 09.1**	**+1.9**
	comp=N,0.6nm,0.3s,baz=2.2,slow=9.4,SNR=24							
MLR				Lg		Lg	18 15 29.3	
	comp=N,0.9nm,0.3s,baz=264,slow=22,SNR=5.9							
MLR	**Muntele Rosu**	**4.83**	**28**	⇑*i*P		**Pn**	**18 14 09.0**	**+1.9**
BUY	**Buyukada**	**4.86**	**93**	*e*PN		**Pn**	**18 14 07.2**	**-0.2**
YLV	**Yalova**	**5.10**	**96**	*e*PN		Pn	18 14 16.0	+5.2
HARR	**Harsova**	**5.13**	**47**	⇑*i*P		**Pn**	**18 14 11.0**	**-0.1**
HARR	**Harsova**	**5.13**	**47**	⇑*i*P		**Pn**	**18 14 11.0**	**-0.1**
TIRR	**Tirgusor**	**5.26**	**51**	⇓*i*P		**Pn**	**18 14 13.6**	**+0.7**
TIRR	**Tirgusor**	**5.26**	**51**	⇓*i*P		**Pn**	**18 14 13.6**	**+0.7**
PLOR	**Plostina**	**5.39**	**31**	⇑*i*P		**Pn**	**18 14 16.0**	**+1.2**
PLOR	**Plostina**	**5.39**	**31**	⇑*i*P		**Pn**	**18 14 16.0**	**+1.2**
ADVT	**Abdulvahap**	**5.

Error ellipse: s-maj=1.2km s-min=1.6km az=0.0
SOF ***24*** *18:50:17.1,41°.32N±22°.71E,h7km,MD3.5*
CSEM ***24*** *18:50:17.8±0.1,41°.28N±22°.72E,h5km,Ms3.0, Error ellipse: s-maj=2.0km s-min=1.6km az=67.0*
THE ***24*** *18:50:18.2,41°.27N±22°.73E,h2km±1km, ML3.9/11, Error ellipse: s-maj=1.3km s-min=0.6km az=218.0*
VIE ***24*** *18:50:20.0±0.7,41°.47N±22°.68E, h6km, mb3.3/4, Ms3.4/3, Error ellipse: s-maj=9.0km s-min=2.6km az=5.0 82 km WNW of Serres*
PRU ***24*** *18:50:21.6,41°.43N±22°.66E, h9km*

ISC 24 18:50:17.6±0.8, 41°.29N±0°.01×22°.70E±0°.01, h8km±4km, n453, σ1§34/543, mb3.8/16, 53C-32D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**286**	P		**Pg**	**Pn**	**18 50 19.7**	**-0.3**
VAY				S		**Sg**	**Sn**	**18 50 21.8**	**0.0**
VAY	**Valandovo**	**0.10**	**286**	*i* Pg		**Pg**	**Pn**	**18 50 19.9**	**-0.1**
VAY				*i* Sg		**Sg**	**Sn**	**18 50 21.8**	**0.0**
VAY				*e*Lg	Lg	Lg	Lg	18 50 22.0	
	comp=E,31μm,0.3s								
VAY				*e*Lg	Lg	Lg		18 50 22.0	
	comp=N,89μm,0.7s								
VAY	**Valandovo**	**0.10**	**286**	P		**Pg**	**Pn**	**18 50 19.7**	**-0.3**
VAY	**Valandovo**	**0.10**	**286**	*i* Pg		**Pg**	**Pn**	**18 50 20.4**	**+0.4**
VAY				S		**Sg**	**Sn**	**18 50 21.8**	**0.0**
VAY				*i* Sg		Sg	Sg	18 50 22.3	+0.5
VAY				*e*Lg	Lg	Lg	Lg	18 50 22.5	
	comp=N,89μm,0.7s								
KNT	**Kendrikon**	**0.20**	**131**	P		**Pg**	**Pn**	**18 50 21.9**	**+0.3**
KNT				S		**Sg**	**Sn**	**18 50 24.8**	**+0.5**
KNT	**Kendrikon**	**0.20**	**131**	P		**Pg**	**Pn**	**18 50 21.9**	**+0.3**
KNT				S		**Sg**	**Sn**	**18 50 24.8**	**+0.5**
GRG	**Griva**	**0.41**	**214**	P		**Pg**	**Pn**	**18 50 25.7**	**+0.2**
GRG				S		**Sg**	**Sn**	**18 50 31.5**	**+0.7**
GRG	**Griva**	**0.41**	**214**	*e*PB		**Pg**	**Pn**	**18 50 25.6**	**+0.1**
GRG				*e*SB		**Sg**	**Sn**	**18 50 31.5**	**+0.7**
GRG	**Griva**	**0.41**	**214**	P		**Pg**	**Pn**	**18 50 25.7**	**+0.2**
GRG				S		**Sg**	**Sn**	**18 50 31.5**	**+0.7**
KKB	**Krupnik**	**0.64**	**26**	*i* Pg		**Pg**	**Pn**	**18 50 30.1**	**+0.1**
KKB	**Krupnik**	**0.64**	**26**	*i* Pg		**Pg**	**Pn**	**18 50 30.1**	**+0.1**
SOH	**Sokhos**	**0.68**	**133**	P		**Pg**	**Pn**	**18 50 30.4**	**-0.3**
SOH				S		**Sg**	**Sn**	**18 50 39.6**	**0.0**
SOH	**Sokhos**	**0.68**	**133**	*e*PN		**Pg**	**Pn**	**18 50 30.4**	**-0.3**
SOH				*e*SN		**Sg**	**Sn**	**18 50 40.2**	**+0.6**
SOH	**Sokhos**	**0.68**	**133**	P		**Pg**	**Pn**	**18 50 30.4**	**-0.3**
SOH				S		**Sg**	**Sn**	**18 50 39.6**	**0.0**
SOH				*e*Sn		**Sg**	**Sn**	**18 50 40.2**	**+0.6**
THE	**Thessaloniki**	**0.69**	**163**	P		**Pg**	**Pn**	**18 50 30.4**	**-0.4**
THE				S		**Sg**	**Sn**	**18 50 40.3**	**+0.5**
THE	**Thessaloniki**	**0.69**	**163**	P		**Pg**	**Pn**	**18 50 30.4**	**-0.4**
THE				S		**Sg**	**Sn**	**18 50 40.3**	**+0.5**
SRS	**Serrai**	**0.69**	**104**	P		**Pg**	**Pn**	**18 50 30.6**	**-0.3**
SRS	**Serrai**	**0.69**	**104**	P		**Pg**	**Pn**	**18 50 30.6**	**-0.3**
HORT	**Hortiatis**	**0.76**	**156**	P		**Pg**	**Pn**	**18 50 31.9**	**-0.2**
HORT				S		**Sg**	**Sn**	**18 50 42.5**	**+0.5**
HORT	**Hortiatis**	**0.76**	**156**	P		**Pg**	**Pn**	**18 50 31.9**	**-0.2**
HORT				S		**Sg**	**Sn**	**18 50 42.5**	**+0.5**
MMB	**Musomiste**	**0.83**	**69**	*i* Pg		**Pg**	**Pn**	**18 50 33.6**	**+0.1**
MMB	**Musomiste**	**0.83**	**69**	*i* Pg		**Pg**	**Pn**	**18 50 33.6**	**+0.1**
NVR	**Nevrokopi**	**0.88**	**86**	P		**Pg**	**Pn**	**18 50 34.3**	**-0.1**
NVR				S		**Sb**	**Sn**	**18 50 46.4**	**-0.5**
NVR	**Nevrokopi**	**0.88**	**86**	*e*PN		**Pg**	**Pn**	**18 50 34.6**	**+0.2**
NVR				*e*SN		**Sb**	**Sn**	**18 50 46.5**	**-0.5**
NVR	**Nevrokopi**	**0.88**	**86**	P		**Pg**	**Pn**	**18 50 34.3**	**-0.1**
NVR	**Nevrokopi**	**0.88**	**86**	*e*Pn		**Pg**	**Pn**	**18 50 34.6**	**+0.2**
NVR				S		**Sb**	**Sn**	**18 50 46.4**	**-0.5**
BIA	**Bitola**	**1.08**	**256**	P		**Pg**	**Pn**	**18 50 37.6**	**-0.6**
BIA				S		**Sb**	**Sn**	**18 50 53.1**	**+0.4**
BIA	**Bitola**	**1.08**	**256**	*i* Pg		**Pg**	**Pn**	**18 50 37.9**	**-0.3**
BIA	**Bitola**	**1.08**	**256**	P		**Pg**	**Pn**	**18 50 37.6**	**-0.6**
BIA	**Bitola**	**1.08**	**256**	*i* Pg		**Pg**	**Pn**	**18 50 37.9**	**-0.3**
BIA				S		**Sb**	**Sn**	**18 50 53.1**	**+0.4**
PLG	**Polygyros**	**1.08**	**148**	P		**Pg**	**Pn**	**18 50 37.2**	**-1.0**
PLG				S		**Sg**	**Sn**	**18 50 52.3**	**+0.1**
PLG	**Polygyros**	**1.08**	**148**	*e*PN		**Pg**	**Pn**	**18 50 37.8**	**-0.4**
PLG				*e*SN		**Sg**	**Sn**	**18 50 52.4**	**+0.2**
PLG	**Polygyros**	**1.08**	**148**	P		**Pg**	**Pn**	**18 50 37.2**	**-1.0**
PLG	**Polygyros**	**1.08**	**148**	*e*Pn		**Pg**	**Pn**	**18 50 37.8**	**-0.4**
PLG				S		**Sg**	**Sn**	**18 50 52.3**	**+0.1**
FNA	**Florina**	**1.12**	**244**	P		**Pn**	**Pn**	**18 50 40.0**	**+0.3**
FNA				S		**Sn**	**Sn**	**18 50 55.5**	**+0.2**
FNA	**Florina**	**1.12**	**244**	*e*PN		**Pg**	**Pn**	**18 50 38.7**	**-0.5**
FNA				*e*SN		**Sb**	**Sn**	**18 50 54.8**	**+0.7**
FNA	**Florina**	**1.12**	**244**	*e*Pn		**Pg**	**Pn**	**18 50 38.7**	**-0.5**
FNA	**Florina**	**1.12**	**244**	P		**Sb**	**Sn**	**18 50 54.8**	**+0.7**
FNA				*e*Sn		**Sb**	**Sn**	**18 50 54.8**	**+0.7**
FNA				S		**Sn**	**Sn**	**18 50 55.5**	**+0.2**
SKO	**Skopje**	**1.17**	**306**	P		**Pn**	**Pn**	**18 50 40.4**	**+0.2**
SKO				S		**Sn**	**Sn**	**18 50 56.5**	**+0.2**
SKO	**Skopje**	**1.17**	**306**	*i* Pg		**Pn**	**Pn**	**18 50 40.5**	**+0.3**
SKO				*i* Sg		**Sn**	**Sn**	**18 50 56.4**	**+0.2**
SKO				*e*Lg	Lg	Lg		18 50 58.9	
	comp=N,1μm,0.6s								
SKO				*e*Lg	Lg	Lg		18 51 04.4	
	comp=E,1μm,0.7s								
SKO	**Skopje**	**1.17**	**306**	*e*Pg		**Pn**	**Pn**	**18 50 40.4**	**+0.2**
SKO				*e*Sg		**Sn**	**Sn**	**18 50 57.3**	**+1.0**
SKO	**Skopje**	**1.17**	**306**	P		**Pn**	**Pn**	**18 50 40.4**	**+0.2**
SKO	**Skopje**	**1.17**	**306**	*i* Pg		**Pn**	**Pn**	**18 50 41.0**	**+0.8**
SKO				S		**Sn**	**Sn**	**18 50 56.5**	**+0.2**
SKO				*i* Sg		**Sb**	**Sn**	**18 50 56.9**	**+1.7**
SKO				*e*Lg	Lg	Lg		18 51 01.8	
	comp=E,1μm,0.7s								
LIT	**Litokhoron**	**1.20**	**188**	P		**Pb**	**Pb**	**18 50 39.5**	**-1.1**
LIT	**Litokhoron**	**1.20**	**188**	P		**Pb**	**Pb**	**18 50 39.5**	**-1.1**
KZN	**Kozani**	**1.21**	**216**	*e*PN		**Pb**	**Pb**	**18 50 40.2**	**-0.6**
KZN				*e*SN		**Sn**	**Sn**	**18 50 57.6**	**+0.1**
KZN	**Kozani**	**1.21**	**216**	*e*Pn		**Pb**	**Pb**	**18 50 40.2**	**-0.6**
KZN				*e*Sn		**Sn**	**Sn**	**18 50 57.6**	**+0.1**
VTS	**Vitosha**	**1.35**	**16**	P		**Pg**	**Pn**	**18 50 43.7**	**+0.1**
VTS				S		**Sg**	**Sn**	**18 51 02.0**	**+0.9**
VTS	**Vitosha**	**1.35**	**16**	⇑*i* Pg		**Sg**	**Pn**	**18 50 43.6**	**0.0**
VTS				*e*Sg		**Sg**	**Sn**	**18 51 01.8**	**+0.7**
VTS	**Vitosha**	**1.35**	**16**	⇓*i* P		**Pg**	**Pn**	**18 50 43.4**	**+0.1**
VTS				S		**Sg**	**Sn**	**18 51 02.2**	**+1.1**
VTS	**Vitosha**	**1.35**	**16**	*i* P		**Pb**	**Pb**	**18 50 43.4**	**+0.1**
VTS	**Vitosha**	**1.35**	**16**	P		**Pg**	**Pn**	**18 50 43.7**	**+0.1**
VTS				*e*Sg		**Sg**	**Sn**	**18 51 01.8**	**+0.7**
OUR	**Ouranopolis**	**1.36**	**134**	P		**Pn**	**Pn**	**18 50 42.5**	**-0.3**
OUR				S		**Sg**	**Sn**	**18 51 02.1**	**+0.7**
OUR	**Ouranopolis**	**1.36**	**134**	P		**Pn**	**Pn**	**18 50 42.5**	**-0.3**
OUR				S		**Sg**	**Sn**	**18 51 02.1**	**+0.7**
KAVA	**Kavala**	**1.40**	**102**	P		**Pb**	**Pb**	**18 50 43.7**	**-0.2**
KAVA				S		**Sg**	**Sn**	**18 51 02.6**	**0.0**
KAVA	**Kavala**	**1.40**	**102**	P		**Pb**	**Pb**	**18 50 43.7**	**-0.2**
KAVA				S		**Sg**	**Sn**	**18 51 02.6**	**0.0**
SOF	**Sofiya**	**1.47**	**18**	*i* P		**Pb**	**Pb**	**18 50 45.3**	**+0.1**
SOF	**Sofiya**	**1.47**	**18**	*i* P		**Pb**	**Pb**	**18 50 45.3**	**+0.1**
NEST	**Nestorio**	**1.53**	**236**	P		**Pb**	**Pb**	**18 50 46.0**	**-0.2**
NEST	**Nestorio**	**1.53**	**236**	P		**Pb**	**Pb**	**18 50 46.0**	**-0.2**
PAIG	**Paliouri**	**1.55**	**151**	P		**Pn**	**Pb**	**18 50 45.2**	**-0.2**
PAIG				S		**Sb**	**Sb**	**18 51 06.5**	**+0.2**
PAIG	**Paliouri**	**1.55**	**151**	*e*PN		**Pn**	**Pb**	**18 50 45.3**	**-0.2**
PAIG				*e*SN		**Sb**	**Sb**	**18 51 06.5**	**+0.2**
PAIG	**Paliouri**	**1.55**	**151**	*e*Pn		**Pn**	**Pb**	**18 50 45.3**	**-0.2**
PAIG				S		**Sb**	**Sb**	**18 51 06.5**	**+0.2**
RZN	**Rozhen**	**1.56**	**75**	*i* P		**Pb**	**Pb**	**18 50 47.1**	**+0.2**
RZN	**Rozhen**	**1.56**	**75**	*i* P		**Pb**	**Pb**	**18 50 47.1**	**+0.2**
KBN	**Korca**	**1.60**	**246**	*i* PN		**Pn**	**Pn**	**18 50 45.3**	**-0.9**
KBN				*i* SN		**Sg**	**Sg**	**18 51 14.2**	**+5.3**
KBN	**Korca**	**1.60**	**246**	P		**Pn**	**Pn**	**18 50 46.7**	**+0.5**
KBN	**Korca**	**1.60**	**246**	*i* Pn		**Pn**	**Pn**	**18 50 45.3**	**-0.9**
KBN	**Korca**	**1.60**	**246**	P		**Pn**	**Pn**	**18 50 46.7**	**+0.5**
BARS	**Barje**	**1.66**	**337**	⇓*i* Pn		**Pn**	**Pn**	**18 50 47.3**	**+0.3**
BARS				*e*Sn		**Sg**	**Sg**	**18 51 10.8**	**-0.2**
BARS	**Barje**	**1.66**	**337**	⇓*i* Pn		**Pn**	**Pn**	**18 50 47.3**	**+0.3**
BARS				*e*Sn		**Sg**	**Sg**	**18 51 10.8**	**-0.2**
PGB	**Panagyurishte**	**1.67**	**40**	*i* P		**Pn**	**Pn**	**18 50 47.8**	**+0.7**
PGB	**Panagyurishte**	**1.67**	**40**	*i* P		**Pn**	**Pn**	**18 50 47.8**	**+0.7**
PLD	**Plovdiv**	**1.70**	**61**	P		**Pb**	**Pb**	**18 50 48.9**	**-0.2**
PLD				S		**Sg**	**Sg**	**18 51 12.1**	**-0.3**
PLD	**Plovdiv**	**1.70**	**61**	*i* P		**Pb**	**Pb**	**18 50 49.5**	**+0.4**
PLD	**Plovdiv**	**1.70**	**61**	P		**Pb**	**Pb**	**18 50 48.9**	**-0.2**
PLD				S		**Sg**	**Sg**	**18 51 12.1**	**-0.3**
PHP	**Peshkopia**	**1.74**	**284**	*i* PN		**Pn**	**Pn**	**18 50 48.4**	**+0.3**
PHP				*i* SN		**Sg**	**Sg**	**18 51 13.7**	**+0.1**
PHP	**Peshkopia**	**1.74**	**284**	P		**Pn**	**Pn**	**18 50 48.5**	**+0.3**
PHP	**Peshkopia**	**1.74**	**284**	P		**Pn**	**Pn**	**18 50 48.5**	**+0.3**
PHP				*i* Sn		**Sg**	**Sg**	**18 51 13.7**	**+0.1**
THL	**Klokotos Trika**	**1.80**	**197**	P		**Pn**	**Pn**	**18 50 48.7**	**-0.2**
THL	**Klokotos Trika**	**1.80**	**197**	*e*PB		**Pn**	**Pn**	**18 50 48.7**	**-0.2**
THL				*e*SN		**Sb**	**Sb**	**18 51 13.6**	**+0.1**
THL	**Klokotos Trika**	**1.80**	**197**	P		**Pn**	**Pn**	**18 50 48.7**	**-0.2**
THL				*e*Sn		**Sb**	**Sb**	**18 51 13.6**	**+0.1**
XOR	**Xorichti**	**1.96**	**169**	P		**Pn**	**Pn**	**18 50 50.7**	**-0.4**
XOR				S		**Sn**	**Sn**	**18 51 15.2**	**-0.7**
XOR	**Xorichti**	**1.96**	**169**	P		**Pn**	**Pn**	**18 50 50.7**	**-0.4**
XOR				S		**Sn**	**Sn**	**18 51 15.2**	**-0.7**
ZAPS	**Zavoj**	**1.98**	**359**	⇑*i* Pn		**Pn**	**Pn**	**18 50 52.6**	**+1.2**
NEO	**Neokhori**	**2.02**	**168**	*e*PB		**Pn**	**Pn**	**18 50 51.5**	**-0.5**
NEO	**Neokhori**	**2.02**	**168**	*e*Pb		**Pn**	**Pn**	**18 50 51.5**	**-0.5**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* Pg		**Pb**	**Pb**	**18 50 55.9**	**+0.5**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* Pg		**Pb**	**Pb**	**18 50 55.9**	**+0.5**
TIR	**Tirane**	**2.14**	**272**	*i* SN		**Pb**	**Pb**	**18 50 55.1**	**-1.5**
TIR	**Tirane**	**2.14**	**272**	P		**Pb**	**Pb**	**18 50 55.0**	**-1.5**
TIR	**Tirane**	**2.14**	**272**	P		**Pb**	**Pb**	**18 50 55.0**	**-1.5**
RDO	**Rodhopi**	**2.14**	**93**	P		**Pn**	**Pn**	**18 50 54.0**	**+0.4**
RDO	**Rodhopi**	**2.14**	**93**	*e*PB		**Pn**	**Pn**	**18 50 54.0**	**+0.4**
RDO	**Rodhopi**	**2.14**	**93**	P		**Pn**	**Pn**	**18 50 54.0**	**+0.4**
JAN	**Janina**	**2.16**	**221**	P		**Pb**	**Pb**	**18 50 55.7**	**-1.2**
JAN	**Janina**	**2.16**	**221**	*e*PB		**Pn**	**Pn**	**18 50 55.3**	**+1.4**
JAN	**Janina**	**2.16**	**221**	*e*Pb		**Pn**	**Pn**	**18 50 55.3**	**+1.4**
JAN	**Janina**	**2.16**	**221**	P		**Pb**	**Pb**	**18 50 55.7**	**-1.2**
MPEP	**Malo Peshtene**	**2.20**	**20**	*i* P		**Pn**	**Pn**	**18 50 55.4**	**+1.0**
MPEP				*i* Pg		**Pg**	**Pn**	**18 50 59.6**	**-0.2**
SKIA	**Skiathos**	**2.20**	**164**	P		**Pn**	**Pn**	**18 50 53.9**	**-0.5**
SKIA	**Skiathos**	**2.20**	**164**	P		**Pn**	**Pn**	**18 50 53.9**	**-0.5**
DIM	**Dimitrovgrad**	**2.25**	**69**	*i* P		**Pn**	**Pn**	**18 50 56.1**	**+1.0**
DIM	**Dimitrovgrad**	**2.25**	**69**	*i* P		**Pn**	**Pn**	**18 50 56.1**	**+1.0**
AGG	**Agios Georgios**	**2.29**	**187**	P		**Pn**	**Pn**	**18 50 55.9**	**+0.3**
AGG	**Agios Georgios**	**2.29**	**187**	*e*PN		**Pn**	**Pn**	**18 50 55.9**	**+0.3**
AGG	**Agios Georgios**	**2.29**	**187**	P		**Pn**	**Pn**	**18 50 55.9**	**+0.3**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*PN		**Pn**	**Pn**	**18 50 55.9**	**+0.2**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*Pn		**Pn**	**Pn**	**18 50 55.9**	**+0.2**
AOS	**Alonnisos**	**2.30**	**157**	P		**Pn**	**Pn**	**18 50 55.1**	**-0.7**
AOS	**Alonnisos**	**2.30**	**157**	*e*PN		**Pn**	**Pn**	**18 50 55.3**	**-0.5**
AOS	**Alonnisos**	**2.30**	**157**	*e*Pn		**Pn**	**Pn**	**18 50 55.3**	**-0.5**
MAKR	**Makrakomi, Fth**	**2.32**	**191**	P		**Pn**	**Pn**	**18 50 57.3**	**+1.3**
MAKR	**Makrakomi, Fth**	**2.32**	**191**	P		**Pn**	**Pn**	**18 50 57.3**	**+1.3**
LIA	**Limnos Island**	**2.35**	**126**	*e*PN		**Pn**	**Pn**	**18 50 56.1**	**-0.3**
LIA	**Limnos Island**	**2.35**	**126**	*e*Pn		**Pn**	**Pn**	**18 50 56.1**	**-0.3**
PVY	**Plav**	**2.43**	**303**	⇑*i* Pn		**Pn**	**Pn**	**18 50 58.9**	**+1.3**
PVY				*e*Sn		**Sb**	**Sb**	**18 51 31.4**	**-0.2**
SMIA	**Simia**	**2.44**	**171**	P		**Pn**	**Pn**	**18 50 57.6**	**-0.1**
SMIA	**Simia**	**2.44**	**171**	P		**Pn**	**Pn**	**18 50 57.6**	**-0.1**
EVR	**Evrytania**	**2.47**	**196**	*e*PB		**Pn**	**Pn**	**18 50 59.8**	**+1.6**
EVR	**Evrytania**	**2.47**	**196**	*e*Pb		**Pn**	**Pn**	**18 50 59.8**	**+1.6**
AXAR	**Agios Charalam**	**2.52**	**181**	P		**Pn**	**Pn**	**18 50 59.3**	**+0.5**
AXAR	**Agios Charalam**	**2.52**	**181**	P		**Pn**	**Pn**	**18 50 59.3**	**+0.5**
IGT	**Igoumenitsa**	**2.52**	**227**	P		**Pb**	**Pb**	**18 51 01.5**	**-1.6**
IGT				S		**Sb**	**Sb**	**18 51 32.7**	**-1.6**
IGT	**Igoumenitsa**	**2.52**	**227**	P		**Pb**	**Pb**	**18 51 01.5**	**-1.6**
IGT				S		**Sb**	**Sb**	**18 51 32.7**	**-1.6**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*PN		**Pn**	**Pn**	**18 51 00.0**	**+0.7**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*Pn		**Pn**	**Pn**	**18 51 00.0**	**+0.7**
VLO	**Vlora**	**2.57**	**252**	*i* PN		Pg	Pg	18 51 15.0	+8.2
BOLS	**Boljevac**	**2.60**	**348**	⇑*i* Pn		**Pn**	**Pn**	**18 50 58.8**	**-1.0**
BOLS				*e*Sg		**Sg**	**Sg**	**18 51 38.9**	**-2.1**
BOLS	**Boljevac**	**2.60**	**348**	⇑*i* Pn		**Pn**	**Pn**	**18 50 58.8**	**-1.0**
BOLS				*e*Sg		**Sg**	**Sg**	**18 51 38.9**	**-2.1**
ATAL	**Atalanti**	**2.61**	**175**	P		**Pn**	**Pn**	**18 51 01.4**	**+1.4**
ATAL	**Atalanti**	**2.61**	**175**	P		**Pn**	**Pn**	**18 51 01.4**	**+1.4**
BEY	**Berane**	**2.62**	**308**	⇑*i* Pn		**Pn**	**Pn**	**18 51 01.6**	**+1.3**
BEY				*e*Sn		**Sb**	**Sb**	**18 51 36.2**	**-1.0**
IVA	**Berane**	**2.62**	**308**	⇑*i* Pn		**Pn**	**Pn**	**18 51 01.6**	**+1.3**
IVA				*e*Sn		**Sb**	**Sb**	**18 51 36.2**	**-1.0**
LKR	**Lokris**	**2.65**	**175**	*e*PN		**Pn**	**Pn**	**18 51 00.4**	**-0.1**
LKR	**Lokris**	**2.65**	**175**	*e*Pn		**Pn**	**Pn**	**18 51 00.4**	**-0.1**
ENEZ	**Enez**	**2.67**	**101**	*e*PN		**Pn**	**Pn**	**18 51 01.6**	**+0.8**
MRKA	**Markates**	**2.67**	**165**	P		**Pn**	**Pn**	**18 51 00.8**	**-0.1**
MRKA	**Markates**	**2.67**	**165**	P		**Pn**	**Pn**	**18 51 00.8**	**-0.1**
ULC	**Ulcinj**	**2.68**	**286**	⇓*i* Pn		**Pn**	**Pn**	**18 51 03.1**	**+2.1**
ULC				*e*Sn		**Sb**	**Sb**	**18 51 38.1**	**-0.7**
ULC	**Ulcinj**	**2.68**	**286**	⇓*i* Pn		**Pn**	**Pn**	**18 51 03.1**	**+2.1**
ULC				*e*Sn		**Sb**	**Sb**	**18 51 38.1**	**-0.7**
KEK	**Kerkira**	**2.72**	**235**	P		**Pn**	**Pn**	**18 51 03.5**	**+2.0**
KEK	**Kerkira**	**2.72**	**235**	*e*PB		**Pn**	**Pn**	**18 51 03.6**	**+2.0**
KEK	**Kerkira**	**2.72**	**235**	P		**Pn**	**Pn**	**18 51 03.5**	**+2.0**
PDG	**Podgorica**	**2.81**	**295**	⇓*i* Pn		**Pn**	**Pn**	**18 51 04.7**	**+1.9**
PDG				*e*Sn		**Sb**	**Sb**	**18 51 41.0**	**-1.7**
TTG	**Podgorica**	**2.81**	**295**	⇓*i* Pn		**Pn**	**Pn**	**18 51 04.7**	**+1.9**
TTG				*e*Sn		**Sb**	**Sb**	**18 51 41.0**	**-1.7**
DSF	**Desfina**	**2.88**	**183**	P		**Pn**	**Pn**	**18 51 04.1**	**+0.3**
DSF	**Desfina**	**2.88**	**183**	P		**Pn**	**Pn**	**18 51 04.1**	**+0.3**
EFP	**Efpalio**	**2.93**	**192**	P		**Pn**	**Pn**	**18 51 05.3**	**+0.9**
EFP	**Efpalio**	**2.93**	**192**	*e*PN		**Pn**	**Pn**	**18 51 05.8**	**+1.4**
EFP	**Efpalio**	**2.93**	**192**	P		**Pn**	**Pn**	**18 51 05.3**	**+0.9**
EFP	**Efpalio**	**2.93**	**192**	*e*Pn		**Pn**	**Pn**	**18 51 05.8**	**+1.4**
KALE	**Kalithea**	**2.93**	**189**	P		**Pn**	**Pn**	**18 51 04.8**	**+0.3**
KALE	**Kalithea**	**2.93**	**189**	*e*PN		**Pn**	**Pn**	**18 51 05.2**	**+0.7**
KALE	**Kalithea**	**2.93**	**189**	P		**Pn**	**Pn**	**18 51 04.8**	**+0.3**
KALE	**Kalithea**	**2.93**	**189**	*e*Pn		**Pn**	**Pn**	**18 51 05.2**	**+0.7**
ERIK	**Erikli-Kesan**	**2.95**	**101**	*e*PN		**Pn**	**Pn**	**18 51 06.8**	**+2.2**
LKD2	**Lefkada island**	**2.95**	**213**	P		**Pn**	**Pn**	**18 51 06.7**	**+1.9**
LKD2	**Lefkada island**	**2.95**	**213**	*e*PB		**Pn**	**Pn**	**18 51 06.7**	**+1.9**
LKD2	**Lefkada island**	**2.95**	**213**	*e*Pb		**Pn**	**Pn**	**18 51 06.7**	**+1.9**
TRIZ	**Trizonia**	**2.96**	**190**	P		**Pn**	**Pn**	**18 51 05.2**	**+0.3**
TRIZ	**Trizonia**	**2.96**	**190**	*e*PN		**Pn**	**Pn**	**18 51 05.7**	**+0.8**
TRIZ	**Trizonia**	**2.96**	**190**	P		**Pn**	**Pn**	**18 51 05.2**	**+0.3**
TRIZ	**Trizonia**	**2.96**	**190**	*e*Pn		**Pn**	**Pn**	**18 51 05.7**	**+0.8**
GRUS	**Gruza**	**2.98**	**331**	⇓*i* Pn		**Pn**	**Pn**	**18 51 05.3**	**+0.2**
GRUS	**Gruza**	**2.98**	**331**	⇓*i* Pn		**Pn**	**Pn**	**18 51 05.3**	**+0.2**
GELI	**Tayfur-Gelibol**	**3.00**	**106**	*e*PN		**Pn**	**Pn**	**18 51 07.2**	**+1.9**
BUM	**Brajici-Budva**	**3.02**	**291**	⇑*i* Pn		**Pn**	**Pn**	**18 51 08.0**	**+2.3**
BUM				*e*Sn		**Sb**	**Sb**	**18 51 46.1**	**-2.6**
BUM	**Brajici-Budva**	**3.02**	**291**	⇑*i* Pn		**Pn**	**Pn**	**18 51 08.0**	**+2.3**
BUM				*e*Sn		**Sb**	**Sb**	**18 51 46.1**	**-2.6**
ZIMR		**3.08**	**39**	⇓*i* P		**Pn**	**Pn**	**18 51 07.8**	**+1.4**
EDRB	**Edirne**	**3.08**	**78**	*e*PN		**Pn**	**Pn**	**18 51 07.7**	**+1.2**
EDRB	**Edirne**	**3.08**	**78**	P		**Pn**	**Pn**	**18 51 07.0**	**+0.5**
EDRB	**Edirne**	**3.08**	**78**	P		**Pn**	**Pn**	**18 51 07.0**	**+0.5**
LAKA	**Lakka**	**3.10**	**191**	P		**Pn**	**Pn**	**18 51 08.7**	**+1.9**
LAKA	**Lakka**	**3.10**	**191**	*e*PB		**Pn**	**Pn**	**18 51 08.7**	**+1.9**
LAKA	**Lakka**	**3.10**	**191**	*e*Pb		**Pn**	**Pn**	**18 51 08.7**	**+1.9**
SZH	**Strazhica**	**3.10**	**49**	*i* P		**Pn**	**Pn**	**18 51 08.0**	**+1.2**
SZH	**Strazhica**	**3.10**	**49**	*i* P		**Pn**	**Pn**	**18 51 08.0**	**+1.2**
EZH	**Ezine**	**3.12**	**117**	*e*PN		**Pn**	**Pn**	**18 51 07.4**	**+0.4**
JMB	**Yambol**	**3.13**	**67**	P		**Pn**	**Pn**	**18 51 08.4**	**+1.3**
JMB	**Yambol**	**3.13**	**67**	*i* P		**Pn**	**Pn**	**18 51 08.4**	**+1.3**
JMB	**Yambol**	**3.13**	**67**	P		**Pn**	**Pn**	**18 51 08.4**	**+1.3**
NKY	**Niksic**	**3.15**	**300**	⇑*i* Pn		**Pn**	**Pn**	**18 51 10.0**	**+2.4**
NKY				*e*Sn		**Sb**	**Sb**	**18 51 49.5**	**-3.0**
NKY	**Niksic**	**3.15**	**300**	⇑*i* Pn		**Pn**	**Pn**	**18 51 10.0**	**+2.4**
NKY				*e*Sn		**Sb**	**Sb**	**18 51 49.5**	**-3.0**
SVIS	**Svilajnac**	**3.17**	**340**	*e*Pn		**Pn**	**Pn**	**18 51 07.0**	**-0.7**
SIGR	**SIGRI**	**3.18**	**130**	P		**Pn**	**Pn**	**18 51 08.9**	**+1.0**
SIGR	**SIGRI**	**3.18**	**130**	P		**Pn**	**Pn**	**18 51 08.9**	**+1.0**
LPK	**Lapseki**	**3.21**	**105**	*e*PN		**Pn**	**Pn**	**18 51 10.2**	**+1.9**
LTK	**Loutraki**	**3.27**	**176**	P		**Pn**	**Pn**	**18 51 09.4**	**+0.3**
LTK	**Loutraki**	**3.27**	**176**	*e*PN		**Pn**	**Pn**	**18 51 09.7**	**+0.6**
LTK	**Loutraki**	**3.27**	**176**	P		**Pn**	**Pn**	**18 51 09.4**	**+0.3**
LTK	**Loutraki**	**3.27**	**176**	*e*Pn		**Pn**	**Pn**	**18 51 09.7**	**+0.6**
KLV	**Kalavryta, Ach**	**3.27**	**188**	*e*PN		**Pn**	**Pn**	**18 51 09.9**	**+0.7**
KLV	**Kalavryta, Ach**	**3.27**	**188**	*e*Pn	

NVLJ Sn **Sn** 18 53 09.6 -0.9
SHUT Suhut-Afyon 6.62 112 *e*PN **Pn** 18 51 56.0 +0.8
BEHE Becsehely 6.72 322 ⇓*e*Pn **Pn** 18 51 57.9 +1.5
BEHE *e*Sn **Sn** 18 53 11.3 -1.8
PKSG 6.84 335 ⇓*e*Pn **Pn** 18 51 58.6 +0.5
PKSG *e*Sn **Sn** 18 53 16.8 +0.8
PKST T''s 6.84 332 ⇑*e*Pn **Pn** 18 51 59.0 +0.8
PKST *e*Sn **Sn** 18 53 14.5 -1.7
BOJS Bojanci 6.87 310 *i* Pn **Pn** 18 52 00.1 +1.6
BOJS Bojanci 6.87 310 Pn **Pn** 18 52 00.1 +1.6
PSZ Piszkesteto 6.92 344 ⇑*i*P **Pn** 18 51 58.7 -0.6
PSZ Piszkesteto 6.92 344 ⇓*e* **Pn** 18 51 59.2 -0.1
PSZ Piszkesteto 6.92 344 ⇑*i*P **Pn** 18 51 58.7 -0.6
GROS Grobnik 7.33 317 *i* Pn **Pn** 18 52 08.8 +0.9
GROS *i* Sn **Sn** 18 53 23.4 -4.9
GROS Grobnik 7.33 317 *i* Pn **Pn** 18 52 05.8 +0.9
SKDS Skadanscina 7.62 307 *i* Pn **Pn** 18 52 09.6 +0.7
SKDS *i* Sn **Sn** 18 53 33.7 -1.6
SKDS Skadanscina 7.62 307 *i* Pn **Pn** 18 52 09.6 +0.7
KOLS Kolonicke sedl 7.65 358 *e*PN **Pn** 18 52 08.5 -0.7
KOLS Kolonicke sedl 7.65 358 *e*Pn **Pn** 18 52 08.5 -0.7
KOLS *e*Sg **Sg** 18 54 24.4 +1.5
CRVS Cervenica-Dubn 7.66 354 *e*PN **Pn** 18 52 08.2 -1.2
CRVS Cervenica-Dubn 7.66 354 *e*Pn **Pn** 18 52 08.2 -1.2
VYHS Vyhne 7.71 340 *e*PN **Pn** 18 52 10.5 +0.5
VYHS Vyhne 7.71 340 *e*SG Sg 18 54 33.4 +8.6
VYHS Vyhne 7.71 340 *e*Pn **Pn** 18 52 10.5 +0.5
SOKA Soboth 7.72 317 ⇑*i*Pn **Pn** 18 52 11.1 +0.9
SOKA Soboth 7.72 317 Pn **Pn** 18 52 11.1 +0.9
SOP Sopron 7.75 328 ⇓*e*Pn **Pn** 18 52 11.7 +1.1
SOP *e*Sn **Sn** 18 53 40.0 +1.5
JAVS Javornik 7.77 309 *i* Pn **Pn** 18 52 13.0 +1.9
JAVS *i* Sn **Sn** 18 53 39.5 +0.2
JAVS Javornik 7.77 309 *i* Pn **Pn** 18 52 13.0 +1.9
JAVS *i* Sn **Sn** 18 53 39.5 +0.2
ARSA Arzberg 7.87 322 ⇑*i*Pn **Pn** 18 52 13.3 +1.0
SNR=38
ARSA Arzberg 7.87 322 Pn **Pn** 18 52 13.3 +1.0
SNR=38
VOY Vojsko 7.95 310 *e*Pn **Pn** 18 52 15.1 +1.6
VOY *e* 18 52 18.3
VOY *e*Sn **Sn** 18 53 44.2 +0.6
VOY Vojsko 7.95 310 *e*Pn **Pn** 18 52 15.1 +1.6
ZST Bratislava 7.97 332 *e*PN **Pn** 18 52 13.8 +0.2
ZST *e*SN Sn 18 53 37.4 -6.5
ZST *e*SG Sg 18 54 53.3 +20
ZST Bratislava 7.97 332 *e*Pn **Pn** 18 52 13.8 +0.2
SMOL Smolenice 8.13 334 *e*PN **Pn** 18 52 17.1 +1.2
SMOL Smolenice 8.13 334 *e*Pn **Pn** 18 52 17.1 +1.2
CONA Conrad Observa 8.23 326 *i* Pn **Pn** 18 52 18.7 +1.4
SNR=12
CONA ⇓*i*Sn **Sn** 18 53 50.2 -0.3
CONA Conrad Observa 8.23 326 Pn **Pn** 18 52 18.7 +1.4
SNR=12
CONA Sn **Sn** 18 53 50.2 -0.3
BRTR Keskin Array B 8.48 97 Pn **Pn** 18 52 21.3 +0.6
comp=E,0.1nm,0.3s,baz=284,slow=9.2,SNR=4.9
BRTR Sn **Sn** 18 53 53.8 -2.9
comp=E,0.2nm,0.3s,baz=276,slow=20,SNR=3.5
VRAC Vranov 9.10 334 Pn Pn 18 52 36.6 +7.5
comp=E,0.3nm,0.3s,baz=172,slow=14,SNR=3.0
VRAC LR LR 18 55 55.4
comp=E,53nm,20.8s,baz=326,slow=37
ABTA Abfaltersbach 9.14 310 ⇓*i*Pn **Pn** 18 52 30.4 +0.6
SNR=11
ABTA Abfaltersbach 9.14 310 Pn **Pn** 18 52 30.4 +0.6
SNR=11
GERES GERESS Array B 9.87 323 Pn **Pn** 18 52 40.6 +0.8
comp=E,0.2nm,0.3s,baz=149,slow=14,SNR=17
GERES Sn **Sn** 18 54 30.1 -0.7
comp=E,0.2nm,0.3s,baz=153,slow=20,SNR=4.1
KHC Kasperske Hory 10.14 324 *e*PN **Pn** 18 52 44.3 +0.9
KHC *e*x x 18 53 16.0
KHC Kasperske Hory 10.14 324 Pn **Pn** 18 52 44.3 +0.9
PGF Pioggiola 10.29 282 *e*P **Pn** 18 52 44.4 -1.2
comp=E,18nm,1.1s
PGF Pioggiola 10.29 282 *e*P **Pn** 18 52 44.4 -1.2
comp=E,8.8nm,1.1s
AKASG Malin Array Be 10.44 23 Pn **Pn** 18 52 47.5 0.0
comp=E,0.7nm,0.3s,baz=209,slow=13,SNR=3.4
DAVOX Davos/Dischmat 10.73 305 Pn **Pn** 18 52 50.1 -1.6
comp=E,0.4nm,0.3s,baz=321,slow=8.4,SNR=3.4
DAVOX Sn **Sn** 18 54 50.5 -1.6
comp=E,0.2nm,0.3s,baz=328,slow=1.4,SNR=2.0
DAVOX LR LR 18 57 36.4
comp=E,84nm,19.5s,baz=94,slow=41
SBF Sospel 11.55 288 *e*P **Pn** 18 53 01.1 -1.6
FRF La Foret Royal 12.08 286 *e*P **Pn** 18 53 06.9 -3.1
LMR La Mourre 12.16 285 *e*P **Pn** 18 53 09.9 -1.2
LMR La Mourre 12.16 285 *e*P **Pn** 18 53 09.9 -1.2
LPG La Plagne 12.34 295 *e*P **Pn** 18 53 12.1 -1.6
comp=E,4.8nm,0.5s
LPL La Plagne 12.36 295 *e*P **Pn** 18 53 13.1 -0.8
comp=E,6.0nm,0.4s
LPL La Plagne 12.36 295 *e*P **Pn** 18 53 13.1 -0.8
comp=E,3.0nm,0.6s
ORIF Oris-en-Rattie 12.82 292 *e*P **Pn** 18 53 18.4 -1.7
ORIF *e*R
comp=E,43nm,18.0s
HINF Hinteralfeld 13.04 305 *e*P **Pn** 18 53 21.3 -1.8
comp=E,5.6nm,0.8s
CDF Champ du Feu 13.04 308 *e*P **Pn** 18 53 21.5 -1.6
CABF La Chapelle 13.09 300 *e*P **Pn** 18 53 22.4 -1.4
VIVF Saint-Julien-l 13.65 291 *e*P **Pn** 18 53 28.8 -2.6
LASF Ste Croix 14.14 288 *e*P **Pn** 18 53 36.0 -2.1
comp=E,19nm,1.2s
SMF Signal de Mont 14.59 298 *e*P **Pn** 18 53 41.7 -2.5
LOR Lormes 14.75 300 *e*P **Pn** 18 53 43.9 -2.5
LOR *e*R
comp=E,58nm,21.2s
SSF Saint Saulge 14.92 299 *e*P **Pn** 18 53 46.2 -2.5
comp=E,7.7nm,0.8s
AVF Avril sur Loir 14.95 298 *e*P **Pn** 18 53 46.6 -2.5
comp=E,11nm,0.9s
MTLF Montolieu 15.29 285 *e*P **Pn** 18 53 53.3 -0.4
comp=E,40nm,1.7s
BAIF Baives 15.59 310 *e*P **Pn** 18 53 57.5 +0.1
TCF Toulx Ste Croi 15.61 296 *e*P **Pn** 18 53 55.2 -2.6
comp=E,9.0nm,1.0s
EPF Esparros 16.67 283 *e*P **Pn** 18 54 10.0 -1.5
MFF Saint Martin d 17.27 296 *e*P **Pn** 18 54 18.4 -0.5
comp=E,12nm,1.0s
LDF La Druitiere 17.69 302 *e*P **Pn** 18 54 22.4 -1.8
comp=E,25nm,1.1s
SJPF Ste Jean 17.81 284 *e*P **Pn** 18 54 23.4 -2.3
comp=E,25nm,1.2s
FLN La Foliniere 17.96 302 *e*P **Pn** 18 54 26.5 -1.0
FLN *e*R
comp=E,54nm,20.4s
GRR Gorron 18.11 301 *e*P **Pn** 18 54 27.9 -1.4
ROSF Rostrenen 19.67 300 *e*P **P** 18 54 45.0 -1.8
HFS Hagfors 19.67 347 P **P** 18 54 46.2 -0.5
comp=E,0.1nm,0.3s,baz=161,slow=14,SNR=4.5
FINES FINESS Array B 20.29 5 P **P** 18 54 52.3 -1.1
comp=E,3.0nm,0.7s,baz=162,slow=10,SNR=8.9
FINES LR LR 19 03 35.3
comp=E,31nm,18.3s,baz=270,slow=39
ESDC Sonseca Array 20.32 274 P **P** 18 54 52.6 -1.5
comp=E,1.2nm,0.6s,baz=71,slow=11,SNR=10
NB2 NORSAR Subarra 20.98 344 P **P** 18 55 00.6 -0.4
comp=Z,2.0nm,0.9s,baz=155,slow=11
NB2 NORSAR Subarra 20.98 344 P **P** 18 55 00.6 -0.4
comp=Z,2.0nm,0.9s,baz=155,slow=11,SNR=6.2
NOA NORSAR Array B 20.98 344 P **P** 18 55 00.7 -0.4
comp=Z,1.8nm,0.8s,baz=163,slow=11,SNR=6.4
NOA LR LR 19 03 17.8
comp=Z,17nm,20.4s,baz=190,slow=37
EKA Eskdalemuir Ar 22.04 318 P **P** 18 55 11.7 -0.6
comp=Z,2.9nm,0.9s,baz=108,slow=12,SNR=4.7
ARCES ARCESS Array B 28.35 2 P **P** 18 56 10.8 -0.8
comp=Z,0.5nm,0.5s,baz=185,slow=10.0,SNR=9.8
TORD Torodi Ar. Bea 33.51 219 P **P** 18 56 57.6 +0.1
comp=Z,3.4nm,0.8s,baz=33,slow=8.0,SNR=17
MKAR Makanchi Array 42.29 62 P **P** 18 58 11.6 +0.1
comp=Z,1.0nm,0.7s,baz=282,slow=6.4,SNR=9.8
DBIC Dimbokro 42.32 223 P **P** 18 58 13.9 +2.0
comp=Z,2.8nm,0.8s,baz=61,slow=5.7,SNR=3.6
ZALV Zalesovo Beam 42.39 51 P **P** 18 58 12.8 +0.7
comp=Z,2.7nm,0.8s,baz=282,slow=7.8,SNR=10
SONM Songino Array 57.21 53 P **P** 19 00 06.5 +1.3
comp=Z,0.2nm,0.5s,baz=275,slow=7.1,SNR=3.7
SCHQ Schefferville 57.34 317 P **P** 19 00 07.9 +2.1
comp=Z,2.8nm,0.9s,baz=74,slow=7.4,SNR=2.8
YKA Yellowknife Ar 71.03 341 P **P** 19 01 35.9 +0.4

comp=Z,0.8nm,0.7s,baz=36,slow=5.6,SNR=11
ILAR Eielson Array 73.96 355 P **P** 19 01 54.2 +1.3
comp=Z,0.2nm,0.7s,baz=341,slow=5.0,SNR=3.9
ULM Lac du Bonnet 74.18 324 P **P** 19 01 54.4 0.0
comp=Z,2.4nm,0.5s,baz=19,slow=7.9,SNR=2.3
KSRS Korea Array 76.08 52 P **P** 19 02 06.2 +0.6
comp=Z,0.4nm,0.3s,baz=328,slow=4.3,SNR=4.3
MJAR Matsushiro Arr 82.62 47 P **P** 19 02 41.5 +0.1
comp=Z,0.6nm,0.8s,baz=329,slow=4.1,SNR=4.1
PDAR Pinedale Array 85.89 327 P **P** 19 02 58.7 +0.4
comp=Z,0.3nm,0.5s,baz=24,slow=5.1,SNR=2.7
NVAR Mina Array Bea 93.04 330 P **P** 19 03 31.6 -0.4
comp=Z,0.2nm,0.6s,baz=70,slow=5.2,SNR=3.0
TXAR Lajitas Array 94.00 315 P **P** 19 03 36.6 +0.1
comp=Z,0.3nm,0.8s,baz=21,slow=5.2,SNR=3.2
ASAR Alice Springs 120.81 96 PKP **PKPdf** 19 09 09.1 -1.4
comp=Z,0.3nm,0.8s,baz=338,slow=2.0,SNR=4.2

*ISCJB **24** 18:53:13.6±0.3,41°.26N±0°.01×22°.71E±0°.02,h2km±2km, mb3.5/4,Error ellipse: s-maj=2.3km s-min=2.1km az=141.9*
*IDC **24** 18:53:13.7±1.3,41°.15N×22°.65E,h0km,mb3.5/6, mb1 3.7/8,mb1mx3.5/28,mbtmp3.5/8,ML2.9/2,Error ellipse: s-maj=22.7km s-min=16.0km az=140.0*
*SKO **24** 18:53:13.5,41°.28N×22°.71E,h15km, M2.8,ML3.2*
*SOF **24** 18:53:13.8,41°.28N×22°.72E,h5km,MD3.3*
*CSEM **24** 18:53:14.3±0.1,41°.26N×22°.72E,h2km,ML3.2,Error ellipse: s-maj=2.5km s-min=2.4km az=69.0*
*ATH **24** 18:53:14.1,41°.28N×22°.72E,h19km, MD3.7/30*
*BEO **24** 18:53:15.0±1.0,41°.26N×22°.69E,h5km±2km,ML3.2/1*
*THE **24** 18:53:15.0,41°.25N×22°.71E,h2km±1km,ML3.3/11, Error ellipse: s-maj=1.5km s-min=0.7km az=217.0*
ISC 24 18:53:14.7±0.8,41°.26N±0°.01×22°.70E±0°.01,h6km±6km, n206,σ0s91/263,mb3.6/4,3C-4D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
VAY	**Valandovo**	**0.11**	**300**	P		**Pg**	**18 53 16.6**	**-0.5**
VAY				S		**Sg**	**18 53 18.6**	**-0.1**
VAY	**Valandovo**	**0.11**	**300**	*e*Pg		**Pg**	**18 53 16.6**	**-0.5**
VAY				*i* Sg		**Sg**	**18 53 18.6**	**-0.1**
VAY				*e*Lg		Lg	18 53 18.8	
	comp=E,5μm,0.2s							
VAY				*e*Lg		Lg	18 53 18.8	
	comp=N,16μm,0.2s							
VAY	**Valandovo**	**0.11**	**300**	P		**Pg**	**18 53 16.6**	**-0.5**
VAY	**Valandovo**	**0.11**	**300**	*e*Pg		**Pg**	**18 53 17.1**	**0.0**
VAY				*i* Sg		**Sg**	**18 53 19.1**	**+0.4**
VAY				*e*Lg		Lg	18 53 19.3	
	comp=N,16μm,0.2s							
KNT	**Kendrikon**	**0.18**	**124**	P		**Pg**	**18 53 18.4**	**+0.1**
KNT				S		**Sg**	**18 53 21.1**	**+0.4**
KNT	**Kendrikon**	**0.18**	**124**	P		**Pg**	**18 53 18.4**	**+0.1**
KNT				S		**Sg**	**18 53 21.1**	**+0.4**
GRG	**Griva**	**0.38**	**216**	P		**Pb**	**18 53 22.4**	**-1.5**
GRG				S		**Sg**	**18 53 27.7**	**+0.6**
GRG	**Griva**	**0.38**	**216**	*e*PB		**Pb**	**18 53 22.3**	**-1.6**
GRG				*e*SB		**Sb**	**18 53 28.4**	**-1.6**
GRG	**Griva**	**0.38**	**216**	P		**Pb**	**18 53 22.4**	**-1.5**
GRG				S		**Sg**	**18 53 27.7**	**+0.6**
GRG				*e*Sb		**Sb**	**18 53 28.4**	**-1.6**
THE	**Thessaloniki**	**0.66**	**162**	P		**Pb**	**18 53 27.3**	**-1.3**
THE				S		**Sg**	**18 53 35.8**	**-0.2**
THE	**Thessaloniki**	**0.66**	**162**	P		**Pb**	**18 53 27.3**	**-1.3**
THE				S		**Sg**	**18 53 35.8**	**-0.2**
SOH	**Sokhos**	**0.66**	**132**	P		**Pg**	**18 53 27.0**	**-0.4**
SOH				S		**Sg**	**18 53 35.5**	**-0.5**
SOH	**Sokhos**	**0.66**	**132**	*e*PN		**Pg**	**18 53 27.1**	**-0.4**
SOH				*e*SN		**Sb**	**18 53 36.5**	**-1.7**
SOH	**Sokhos**	**0.66**	**132**	P		**Pg**	**18 53 27.0**	**-0.4**
SOH				S		**Sg**	**18 53 35.5**	**-0.5**
SOH				*e*Sn		**Sb**	**18 53 36.5**	**-1.7**
KKB	**Krupnik**	**0.67**	**25**	*i* Pg		**Pg**	**18 53 26.9**	**-0.6**
KKB	**Krupnik**	**0.67**	**25**	*i* Pg		**Pg**	**18 53 26.9**	**-0.6**
SRS	**Serrai**	**0.69**	**102**	P		**Pg**	**18 53 27.4**	**-0.5**
SRS	**Serrai**	**0.69**	**102**	P		**Pg**	**18 53 27.4**	**-0.5**
HORT	**Hortiatis**	**0.73**	**155**	P		**Pg**	**18 53 28.4**	**-0.3**
HORT				S		**Sg**	**18 53 38.2**	**0.0**
HORT	**Hortiatis**	**0.73**	**155**	P		**Pg**	**18 53 28.4**	**-0.3**
HORT				S		**Sg**	**18 53 38.2**	**0.0**
MMB	**Musomiste**	**0.84**	**67**	*i* Pg		**Pb**	**18 53 30.2**	**-1.5**
MMB	**Musomiste**	**0.84**	**67**	*i* Pg		**Pb**	**18 53 30.2**	**-1.5**
NVR	**Nevrokopi**	**0.88**	**84**	P		**Pb**	**18 53 31.2**	**-1.2**
NVR	**Nevrokopi**	**0.88**	**84**	*e*PN		**Pb**	**18 53 31.1**	**-1.3**
NVR	**Nevrokopi**	**0.88**	**84**	P		**Pb**	**18 53 31.2**	**-1.2**
PLG	**Polygyros**	**1.05**	**147**	P		**Pg**	**18 53 34.2**	**-0.7**
PLG				S		**Sb**	**18 53 49.5**	**+0.1**
PLG	**Polygyros**	**1.05**	**147**	*e*PN		**Pg**	**18 53 34.1**	**-0.8**
PLG	**Polygyros**	**1.05**	**147**	P		**Pg**	**18 53 34.2**	**-0.7**
PLG				S		**Sb**	**18 53 49.5**	**+0.1**
BIA	**Bitola**	**1.07**	**257**	P		**Pg**	**18 53 34.3**	**-0.9**
BIA				S		**Sg**	**18 53 48.6**	**-0.4**
BIA	**Bitola**	**1.07**	**257**	*e*Pg		**Pg**	**18 53 34.2**	**-0.9**
BIA				*e*Sg		**Sg**	**18 53 48.4**	**-0.6**
BIA	**Bitola**	**1.07**	**257**	P		**Pg**	**18 53 34.3**	**-0.9**
BIA				S		**Sg**	**18 53 48.6**	**-0.4**
FNA	**Florina**	**1.11**	**245**	P		**Pg**	**18 53 35.4**	**-0.5**
FNA				S		**Sb**	**18 53 50.6**	**-0.5**
FNA	**Florina**	**1.11**	**245**	*e*PN		**Pg**	**18 53 35.5**	**-0.5**
FNA				*e*SN		**Sb**	**18 53 50.7**	**-0.4**
FNA	**Florina**	**1.11**	**245**	P		**Pg**	**18 53 35.4**	**-0.5**
FNA				S		**Sb**	**18 53 50.6**	**-0.5**
LIT	**Litokhoron**	**1.17**	**188**	P		**Pb**	**18 53 36.8**	**-0.6**
LIT				S		**Sb**	**18 53 52.9**	**+0.1**
LIT	**Litokhoron**	**1.17**	**188**	P		**Pb**	**18 53 36.8**	**-0.6**
LIT				S		**Sb**	**18 53 52.9**	**+0.1**
SKO	**Skopje**	**1.18**	**307**	P		**Pb**	**18 53 36.9**	**-0.6**
SKO				S		**Sb**	**18 53 52.8**	**-0.2**
SKO	**Skopje**	**1.18**	**307**	*e*Pg		**Pn**	**18 53 37.7**	**-0.1**
SKO				*e*Sg		**Sb**	**18 53 53.1**	**0.0**
SKO				*e*Lg		Lg	18 53 54.5	
	comp=E,189nm,0.4s							
SKO				*e*Lg		Lg	18 53 55.2	
	comp=N,362nm,0.5s							
SKO	**Skopje**	**1.18**	**307**	⇑*i*Pg		**Pn**	**18 53 38.0**	**+0.2**
SKO				*e*Sg		**Sn**	**18 53 53.9**	**-0.3**
SKO	**Skopje**	**1.18**	**307**	P		**Pb**	**18 53 36.9**	**-0.6**
SKO	**Skopje**	**1.18**	**307**	⇑*i*Pg		**Pn**	**18 53 38.0**	**+0.2**
SKO				S		**Sb**	**18 53 52.8**	**-0.2**
SKO				*e*Sg		**Sn**	**18 53 53.5**	**-0.7**
SKO				*e*Lg		Lg	18 53 55.7	
	comp=N,362nm,0.5s							
KZN	**Kozani**	**1.19**	**217**	*e*PN		**Pg**	**18 53 36.8**	**-0.7**
KZN				*e*SN		**Sn**	**18 53 54.9**	**+0.5**
KZN	**Kozani**	**1.19**	**217**	*e*Pn		**Pg**	**18 53 36.8**	**-0.7**
KZN				*e*Sn		**Sn**	**18 53 54.9**	**+0.5**
OUR	**Ouranopolis**	**1.34**	**133**	P		**Pn**	**18 53 39.5**	**-0.5**
OUR				S		**Sn**	**18 53 58.3**	**+0.1**
OUR	**Ouranopolis**	**1.34**	**133**	P		**Pn**	**18 53 39.5**	**-0.5**
OUR				S		**Sn**	**18 53 58.3**	**+0.1**
VTS	**Vitosha**	**1.38**	**16**	P		**Pg**	**18 53 39.9**	**-1.2**
VTS				S		**Sn**	**18 53 59.8**	**+0.5**
VTS	**Vitosha**	**1.38**	**16**	⇑*i*Pg		**Pb**	**18 53 40.4**	**-0.5**
VTS				*e*Sg		**Sn**	**18 53 59.6**	**+0.3**
VTS	**Vitosha**	**1.38**	**16**	*i* P		**Pb**	**18 53 40.5**	**-0.5**
VTS	**Vitosha**	**1.38**	**16**	*i* P		**Pb**	**18 53 40.5**	**-0.5**
VTS				*e*Sg		**Sn**	**18 53 59.6**	**+0.3**
KAVA	**Kavala**	**1.40**	**100**	P		**Pb**	**18 53 40.7**	**-0.4**
KAVA				S		**Sn**	**18 53 59.6**	**+0.2**
KAVA	**Kavala**	**1.40**	**100**	P		**Pb**	**18 53 40.7**	**-0.4**
KAVA				S		**Sn**	**18 53 59.6**	**+0.2**
NEST	**Nestorio**	**1.51**	**236**	P		**Pn**	**18 53 42.3**	**-0.1**
NEST	**Nestorio**	**1.51**	**236**	P		**Pn**	**18 53 42.3**	**-0.1**
PAIG	**Paliouri**	**1.53**	**150**	P		**Pn**	**18 53 42.4**	**-0.1**
PAIG				S		**Sn**	**18 54 02.7**	**0.0**
PAIG	**Paliouri**	**1.53**	**150**	*e*PN		**Pb**	**18 53 42.6**	**-0.8**
PAIG				*e*SN		**Sg**	**18 54 03.8**	**0.0**
PAIG	**Paliouri**	**1.53**	**150**	*e*Pn		**Pb**	**18 53 42.6**	**-0.8**
PAIG				S		**Sn**	**18 54 02.7**	**0.0**
PAIG				*e*Sn		**Sg**	**18 54 03.8**	**0.0**
RZN	**Rozhen**	**1.57**	**74**	*i* P		**Pg**	**18 53 44.2**	**-0.6**
RZN	**Rozhen**	**1.57**	**74**	*i* P		**Pg**	**18 53 44.2**	**-0.6**
KBN	**Korca**	**1.58**	**247**	P		**Pn**	**18 53 41.9**	**-1.5**
KBN	**Korca**	**1.58**	**247**	P		**Pn**	**18 53 41.9**	**-1.5**
BARS	**Barje**	**1.69**	**337**	*e*Pn		**Pn**	**18 53 44.5**	**-0.2**
BARS				*e*Sn		**Sn**	**18 54 05.7**	**-0.9**
BARS	**Barje**	**1.69**	**337**	*e*Pn		**Pn**	**18 53 44.5**	**-0.2**
BARS				*e*Sn		**Sn**	**18 54 05.7**	**-0.9**

PGB Panagyurishte 1.69 40 *i* P **Pn** 18 53 44.8 0.0
PGB *i* Pg **Pg** 18 53 46.1 -0.9
PGB Panagyurishte 1.69 40 *i* P **Pn** 18 53 44.8 0.0
PLD Plovdiv 1.72 60 P **Pb** 18 53 45.9 -0.8
PLD S **Sg** 18 54 09.8 -0.1
PLD Plovdiv 1.72 60 *i* P **Pg** 18 53 46.5 -1.1
PLD Plovdiv 1.72 60 P **Pb** 18 53 45.9 -0.8
PLD S **Sg** 18 54 09.8 -0.1
PHP Peshkopia 1.75 285 P **Pn** 18 53 45.5 -0.1
PHP S **Sb** 18 54 09.4 0.0
PHP Peshkopia 1.75 285 P **Pn** 18 53 45.5 -0.1
PHP S **Sb** 18 54 09.4 0.0
THL Klokotos Trika 1.78 197 P **Pn** 18 53 46.0 +0.1
THL S **Sn** 18 54 08.9 +0.1
THL Klokotos Trika 1.78 197 *e*PN **Pn** 18 53 46.0 +0.1
THL Klokotos Trika 1.78 197 P **Pn** 18 53 46.0 +0.1
THL S **Sn** 18 54 08.9 +0.1
XOR Xorichti 1.93 169 P **Pn** 18 53 47.4 -0.7
XOR S **Sn** 18 54 10.2 -2.5
XOR Xorichti 1.93 169 P **Pn** 18 53 47.4 -0.7
XOR S **Sn** 18 54 10.2 -2.5
NEO Neokhori 2.00 168 *e*PB **Pn** 18 53 48.3 -0.7
NEO Neokhori 2.00 168 *e*Pb **Pn** 18 53 48.3 -0.7
KDZ Kurdzhali 2.08 78 *i* P **Pn** 18 53 50.7 +0.6
KDZ *i* Pg **Pb** 18 53 52.4 -0.4
KDZ Kurdzhali 2.08 78 *i* P **Pn** 18 53 50.7 +0.6
JAN Janina 2.14 222 P **Pn** 18 53 51.1 +0.2
JAN Janina 2.14 222 *e*PN **Pn** 18 53 51.9 +1.0
JAN Janina 2.14 222 P **Pn** 18 53 51.1 +0.2
JAN Janina 2.14 222 *e*Pn **Pn** 18 53 51.9 +1.0
RDO Rodhopi 2.14 92 P **Pn** 18 53 50.4 -0.6
RDO Rodhopi 2.14 92 *e*PN **Pn** 18 53 50.8 -0.2
RDO Rodhopi 2.14 92 P **Pn** 18 53 50.4 -0.6
RDO Rodhopi 2.14 92 *e*Pn **Pn** 18 53 50.8 -0.2
SKIA Skiathos 2.18 164 P **Pn** 18 53 51.0 -0.4
SKIA Skiathos 2.18 164 P **Pn** 18 53 51.0 -0.4
MPEP Malo Peshtene 2.23 20 *i* P **Pn** 18 53 52.9 +0.7
MPEP *i* Pg **Pg** 18 53 56.3 -1.1
AGG Agios Georgios 2.26 187 P **Pn** 18 53 52.4 -0.2
AGG Agios Georgios 2.26 187 *e*PB **Pn** 18 53 52.6 0.0
AGG Agios Georgios 2.26 187 P **Pn** 18 53 52.4 -0.2
DIM Dimitrovgrad 2.26 69 *i* P **Pn** 18 53 53.6 +1.0
DIM Dimitrovgrad 2.26 69 *i* P **Pn** 18 53 53.6 +1.0
AOS Alonnisos 2.28 156 P **Pn** 18 53 51.5 -1.3
AOS Alonnisos 2.28 156 *e*PB **Pn** 18 53 52.9 +0.1
AOS Alonnisos 2.28 156 P **Pn** 18 53 51.5 -1.3
AOS Alonnisos 2.28 156 *e*Pb **Pn** 18 53 52.9 +0.1
SELS Selova 2.28 330 *e*Pn **Pn** 18 53 52.1 -0.8
SMTH Samothraki Isl 2.29 109 *e*PN **Pn** 18 53 53.2 +0.2
SMTH Samothraki Isl 2.29 109 *e*Pn **Pn** 18 53 53.2 +0.2
MAKR Makrakomi, Fth 2.29 191 P **Pn** 18 53 53.2 +0.2
MAKR Makrakomi, Fth 2.29 191 P **Pn** 18 53 53.2 +0.2
LIA Limnos Island 2.33 125 *e*PB **Pn** 18 53 53.0 -0.5
LIA Limnos Island 2.33 125 *e*Pb **Pn** 18 53 53.0 -0.5
SMIA Simia 2.41 171 P **Pn** 18 53 53.9 -0.8
SMIA Simia 2.41 171 P **Pn** 18 53 53.9 -0.8
EVR Evrytania 2.44 197 *e*PB **Pn** 18 53 56.2 +1.0
EVR Evrytania 2.44 197 *e*Pb **Pn** 18 53 56.2 +1.0
AXAR Agios Charalam 2.50 181 P **Pn** 18 53 55.2 -0.6
AXAR Agios Charalam 2.50 181 P **Pn** 18 53 55.2 -0.6
IGT Igoumenitsa 2.50 227 P **Pb** 18 53 58.1 -1.9
IGT S **Sn** 18 54 28.9 +2.1
IGT Igoumenitsa 2.50 227 P **Pb** 18 53 58.1 -1.9
IGT S **Sn** 18 54 28.9 +2.1
ALN Alexandroupoli 2.56 97 P **Pn** 18 53 56.3 -0.3
ALN Alexandroupoli 2.56 97 *e*PB **Pn** 18 53 57.1 +0.5
ALN Alexandroupoli 2.56 97 P **Pn** 18 53 56.3 -0.3
ALN Alexandroupoli 2.56 97 *e*Pb **Pn** 18 53 57.1 +0.5
ATAL Atalanti 2.58 174 P **Pn** 18 53 57.1 +0.1
ATAL Atalanti 2.58 174 P **Pn** 18 53 57.1 +0.1
LKR Lokris 2.62 175 *e*PB **Pn** 18 53 58.9 +1.4
LKR Lokris 2.62 175 *e*Pb **Pn** 18 53 58.9 +1.4
BOLS Boljevac 2.62 348 *e*Pn **Pn** 18 53 57.5 -0.1
BOLS Boljevac 2.62 348 *e*Pn **Pn** 18 53 57.5 -0.1
MRKA Markates 2.65 165 P **Pn** 18 53 57.6 -0.3
MRKA Markates 2.65 165 P **Pn** 18 53 57.6 -0.3
ENEZ Enez 2.67 100 *e*PN **Pn** 18 53 56.7 -1.5
KEK Kerkira 2.70 236 P **Pn** 18 54 00.6 +1.9
KEK Kerkira 2.70 236 *e*PB **Pn** 18 54 00.5 +1.9
KEK Kerkira 2.70 236 *e*Pb **Pn** 18 54 00.5 +1.9
EFP Efpalio 2.90 192 P **Pn** 18 54 02.5 +1.1
EFP Efpalio 2.90 192 *e*PN **Pn** 18 54 02.1 +0.7
EFP Efpalio 2.90 192 *e*Pn **Pn** 18 54 02.1 +0.7
EFP Efpalio 2.90 192 P **Pn** 18 54 02.5 +1.1
KALE Kalithea 2.90 189 P **Pn** 18 54 02.1 +0.7
KALE Kalithea 2.90 189 *e*PN **Pn** 18 54 02.4 +0.9
KALE Kalithea 2.90 189 P **Pn** 18 54 02.2 +0.7
LKD2 Lefkada island 2.93 213 P **Pn** 18 54 03.3 +1.5
LKD2 Lefkada island 2.93 213 *e*PN **Pn** 18 54 02.7 +0.9
LKD2 Lefkada island 2.93 213 *e*Pn **Pn** 18 54 02.7 +0.9
LKD2 Lefkada island 2.93 213 P **Pn** 18 54 03.3 +1.5
TRIZ Trizonia 2.94 190 *e*PN **Pn** 18 54 02.7 +0.9
TRIZ Trizonia 2.94 190 *e*Pn **Pn** 18 54 02.7 +0.9
ERIK Erikli-Kesan 2.95 100 *e*PN **Pn** 18 54 00.2 -1.8
GELI Tayfur-Gelibol 2.99 106 *e*PN **Pg** 18 54 09.8 -2.2
GRUS Gruza 3.00 331 ⇓*i*Pn **Pn** 18 54 02.2 -0.6
GRUS Gruza 3.00 331 ⇓*i*Pn **Pn** 18 54 02.2 -0.6
**LAKA Lakka

comp=N,0.9nm,0.9s,baz=24,slow=9.2,SNR=5.1
MKAR Makanchi Array 42.30 62 P **P** 19 01 09.4 **+0.4**
comp=N,0.2nm,0.7s,baz=280,slow=10.0,SNR=3.4
ZALV Zalesovo Beam 42.41 51 P **P** 19 01 09.8 **0.0**
comp=N,0.5nm,0.4s,baz=269,slow=9.6,SNR=3.6
TXAR Lajitas Array 94.02 315 P **P** 19 06 34.7 **+0.7**
comp=N,0.5nm,0.9s,baz=138,slow=5.6,SNR=5.0

IDC 24 18:57:03.3±3.7, 2°46'N×128°14'E, h244km±31km, mb2.9/5, mb1 3.0/5, mb1mx2.8/22, mbtmp2.9/5, Error ellipse: s-maj=76.4km s-min=19.4km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.58**	**187**	P	P	19 01 24.8	+0.7
	0.8nm,0.7s,baz=0.0,slow=13,SNR=3.5						
WRA	**Warramunga Arr**	**23.08**	**165**	P	P	19 01 47.3	-0.5
	0.4nm,0.4s,baz=342,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.57**	**168**	P	P	19 02 19.3	0.0
	0.3nm,0.4s,baz=359,slow=7.7,SNR=11						
ASAR				ScP	ScP	19 08 53.5	-0.3
	0.2nm,0.5s,baz=349,slow=3.0,SNR=6.0						
STKA	**Stephens Creek**	**36.46**	**161**	P	P	19 03 45.1	-0.2
	0.6nm,0.3s,baz=339,slow=10.0,SNR=3.7						
MKAR	**Makanchi Array**	**59.40**	**325**	P	P	19 06 40.3	-0.1
	0.3nm,0.5s,baz=116,slow=8.5,SNR=5.5						

*DDA **24** 18:58:26.1, 39°07'N×29°03'E, h7km, MD2.8*
*ISCJB **24** 18:58:26.3±0.5, 39°07'N±0°04×29°03'E±0°04, h7km±10km, Error ellipse: s-maj=7.1km s-min=4.4km az=160.3*
*ISK **24** 18:58:26.0, 39°06'N×29°03'E, h10km, MD2.6*
*CSEM **24** 18:58:26.4±0.1, 39°09'N×29°02'E, h5km, MD2.8, Error ellipse: s-maj=2.7km s-min=2.1km az=127.0*
ISC 24 18:58:26.5±0.9, 39°08'N±0°03×29°03'E±0°03, h11km±10km, n20, σ0°30/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.24**	**261**	*i* P	**Pg**	**18 58 31.4**	**-0.2**
DEMI				*i* S	**Sg**	**18 58 35.1**	**+0.1**
DEMI	**Demirci**	**0.24**	**261**	*i* P	**Pg**	**18 58 31.4**	**-0.2**
DEMI				*i* S	**Sg**	**18 58 35.1**	**+0.1**
GDZ	**Gediz**	**0.35**	**89**	*i* P	**Pg**	**18 58 33.5**	**-0.1**
GDZ				*i* S	**Sg**	**18 58 38.6**	**+0.2**
GDZ	**Gediz**	**0.35**	**89**	*i* P	**Pg**	**18 58 33.5**	**-0.1**
GDZ				*i* S	**Sg**	**18 58 38.6**	**+0.2**
TVSB	**Tavsanli**	**0.50**	**42**	*e*PG	**Pg**	**18 58 35.8**	**-0.5**
TVSB	**Tavsanli**	**0.50**	**42**	*e*Pg	**Pg**	**18 58 35.8**	**-0.5**
KULA	**Kula-Manisa**	**0.63**	**207**	*e*PG	**Pg**	**18 58 38.6**	**-0.3**
KULA				*e*SG	**Sg**	**18 58 47.3**	**+0.1**
KULA	**Kula-Manisa**	**0.63**	**207**	*e*Pg	**Pg**	**18 58 38.6**	**-0.3**
KULA				*e*Sg	**Sg**	**18 58 47.3**	**+0.1**
MANT	**Manisa**	**0.69**	**212**	*i* P	**Pg**	**18 58 40.1**	**+0.1**
MANT				*i* S	**Sg**	**18 58 49.4**	**+0.3**
MANT	**Manisa**	**0.69**	**212**	*i* P	**Pg**	**18 58 40.1**	**+0.1**
MANT				*i* S	**Sg**	**18 58 49.4**	**+0.3**
ALT	**Altintas**	**0.84**	**91**	*e*PG	**Pg**	**18 58 42.9**	**+0.1**
ALT				*e*SG	**Sb**	**18 58 54.9**	**+0.2**
ALT	**Altintas**	**0.84**	**91**	*e*Pg	**Pg**	**18 58 42.9**	**+0.1**
ALT				*e*Sg	**Sb**	**18 58 54.9**	**+0.2**
KHL	**Karahalli**	**0.85**	**153**	*e*PG	**Pg**	**18 58 42.6**	**-0.4**
KHL				*e*SG	**Sb**	**18 58 54.3**	**-0.6**
KHL	**Karahalli**	**0.85**	**153**	*e*Pg	**Pg**	**18 58 42.6**	**-0.4**
KHL				*e*Sg	**Sb**	**18 58 54.3**	**-0.6**
KCTX	**Karacabey (Bur**	**1.29**	**337**	*e*PN	**Pb**	**18 58 51.2**	**+0.3**
KCTX	**Karacabey (Bur**	**1.29**	**337**	*e*Pn	**Pb**	**18 58 51.2**	**+0.3**
ARMT	**Armutlu**	**1.49**	**355**	*e*PN	**Pb**	**18 58 54.5**	**+0.3**
ARMT	**Armutlu**	**1.49**	**355**	*e*Pn	**Pb**	**18 58 54.5**	**+0.3**
YLV	**Yalova**	**1.51**	**10**	*e*PN	**Pn**	**18 58 53.5**	**-0.1**
YLV	**Yalova**	**1.51**	**10**	*e*Pn	**Pn**	**18 58 53.5**	**-0.1**

SKO 24 19:06:27.8, 41°36'N×22°68'E, h15km, M0.6, ML1.1, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.09**	**245**	*i* Pg	Pg	19 06 31.0	+0.1
VAY				*i* Sg	Sg	19 06 32.6	-0.4
VAY				*e*Lg	Lg	19 06 32.7	
	comp=E,150nm,0.3s						
VAY				*e*Lg	Lg	19 06 32.7	
	comp=N,152nm,0.4s						

SKO 24 19:06:57.2, 41°42'N×22°67'E, h24km, M1.1, ML1.7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**217**	*i* Pg	Pb	19 07 02.2	+0.2
VAY				*e*Lg	Lg	19 07 04.0	
	comp=E,473nm,0.3s						
VAY				*i* Sg	Sg	19 07 04.0	-1.3
VAY				*e*Lg	Lg	19 07 04.0	
	comp=N,596nm,0.5s						

*NNC **24** 19:12:28.1±3.4, 37°63'N×71°40'E, h131km±53km, mb2.4, mpv3.1, Error ellipse: s-maj=28.9km s-min=16.5km az=13.0*
*IDC **24** 19:12:31.0±8.6, 37°67'N×71°95'E, h149km±62km, mb3.2/1, mb1 3.0/4, mb1mx2.7/30, mbtmp2.9/4, Error ellipse: s-maj=74.3km s-min=70.2km az=149.0*
ISC 24 19:12:26.3±2.3, 37°6'N±0°2×71°4'E±0°1, h109km, n9, σ1°39/14, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**5.59**	**24**	P	**Pn**	**19 13 48.9**	**+1.7**
	2.2nm,0.3s,baz=155,slow=5.9,SNR=24						
AAK				S	**Sn**	**19 14 50.2**	**-0.1**
	0.9nm,0.3s,baz=124,slow=22,SNR=14						
KK31	**Karatay Array**	**5.59**	**353**	P	**Pn**	**19 13 48.3**	**+1.2**
	0.6nm,0.3s,baz=175,slow=13,SNR=15						
KK31				⇓S	**Sn**	**19 14 51.4**	**+1.4**
	1.1nm,0.2s,baz=174,slow=23,SNR=12						
TKM2	**Tokmak 2**	**6.24**	**29**	⇑P	**Pn**	**19 13 56.9**	**+0.9**
	0.9nm,0.4s						
TKM2				⇑S	**Sn**	**19 15 06.8**	**+0.8**
	1.5nm,0.7s						
MKAR	**Makanchi Array**	**12.24**	**38**	P	**Pn**	**19 15 15.8**	**-1.1**
	0.0nm,0.3s,baz=223,slow=17,SNR=2.2						
KURBB	**Kurchatov Arra**	**14.02**	**19**	P	**P**	**19 15 43.1**	**-1.2**
	0.0nm,0.3s,baz=204,slow=11,SNR=5.4						
AB31	**Akbulak array**	**14.36**	**328**	⇑P	**Pn**	**19 15 45.3**	**+1.0**
	0.1nm,0.3s,baz=133,slow=15,SNR=6.5						
AB31				⇓S	**Sn**	**19 18 19.7**	**-2.7**
	0.4nm,0.6s,baz=162,slow=21,SNR=3.5						
AKTO	**Aktyubinsk**	**16.07**	**328**	⇑P	**Pn**	**19 16 05.2**	**-0.5**
	0.4nm,1.2s						
AKTO				⇓S	**Sn**	**19 19 03.8**	**+0.1**
	0.3nm,1.1s						
ZALV	**Zalesovo Beam**	**18.82**	**25**	P	**P**	**19 16 36.0**	**-1.2**
	0.2nm,0.3s,baz=217,slow=10,SNR=4.4						
ARCES	**ARCESS Array B**	**40.31**	**337**	P	**P**	**19 19 53.5**	**+1.0**
	1.0nm,0.9s,baz=110,slow=7.8,SNR=4.3						

*CSEM **24** 19:14:03.5, 42°49'N×13°27'E, h7km, After ROM*
ROM 24 19:14:03.5±0.1, 42°49'N×13°27'E, h7km±1km, Ml1.5/4, Error ellipse: s-maj=1.5km s-min=1.1km az=133.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.11**	**65**	Pg	Pg	19 14 06.8	+0.6
CAMP				Sg	Sg	19 14 09.0	+1.0
	72nm,0.3s						
CAMP	**Campotosto**	**0.11**	**65**	Pg	Pg	19 14 06.8	+0.6
CAMP				Sg	Sg	19 14 09.0	+1.0
	72nm,0.3s						
AQU	**L'Aquila**	**0.17**	**144**	Pg	Pg	19 14 07.4	+0.4
AQU				Sg	Sg	19 14 10.3	+1.0
	179nm,0.3s						
AQU	**L'Aquila**	**0.17**	**144**	Pg	Pg	19 14 07.4	+0.4
AQU				Sg	Sg	19 14 10.3	+1.0
	179nm,0.3s						
FIAM	**Fiamignano**	**0.25**	**207**	Pg	Pg	19 14 09.3	+0.8
FIAM				Sg	Sg	19 14 13.2	+1.3
	14nm,0.8s						
FIAM	**Fiamignano**	**0.25**	**207**	Pg	Pg	19 14 09.3	+0.8
FIAM				Sg	Sg	19 14 13.2	+1.3
	14nm,0.8s						
TERO	**Teramo**	**0.28**	**61**	Pg	Pg	19 14 09.5	+0.4
TERO				Sg	Sg	19 14 14.0	+1.0
TERO	**Teramo**	**0.28**	**61**	Pg	Pg	19 14 09.5	+0.4
TERO				Sg	Sg	19 14 14.0	+1.0
NRCA	**Norcia**	**0.36**	**342**	Pg	Pb	19 14 11.7	-0.8
NRCA				Sg	Sb	19 14 17.9	-0.6
	5.0nm,0.1s						
NRCA	**Norcia**	**0.36**	**342**	Pg	Pb	19 14 11.7	-0.8
NRCA				Sg	Sb	19 14 17.9	-0.6
	5.0nm,0.1s						
VCEL	**Villa Celiera**	**0.43**	**102**	Pg	Pb	19 14 13.1	-0.6
VCEL				Sg	Sb	19 14 19.9	-0.6
VCEL	**Villa Celiera**	**0.43**	**102**	Pg	Pb	19 14 13.1	-0.6
VCEL				Sg	Sb	19 14 19.9	-0.6

*SKO **24** 19:15:03.1, 41°35'N×22°69'E, h16km, M2.2, ML2.6*
*ISCJB **24** 19:15:03.8±0.4, 41°29'N±0°02×22°70'E±0°02, h1km±4km, Error ellipse: s-maj=3.2km s-min=2.6km az=152.9*
*BEO **24** 19:15:03.9±0.9, 41°22'N×22°76'E, h0km±2km, ML2.6/8*
*CSEM **24** 19:15:04.4±0.1, 41°28'N×22°70'E, h5km, ML2.6/7, Error ellipse: s-maj=2.8km s-min=2.4km az=57.0*
*ATH **24** 19:15:04.3, 41°26'N×22°72'E, h21km±1km, MD3.4/9*
*THE **24** 19:15:04.7, 41°28'N×22°71'E, h2km±1km, ML2.6/7, Error ellipse: s-maj=1.8km s-min=0.6km az=178.0*
ISC 24 19:15:04.2±0.8, 41°29'N±0°02×22°70'E±0°02, h7km±6km, n67, σ0°63/99, 3C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**289**	P	**Pg**	**19 15 06.3**	**-0.2**
VAY				S	**Sg**	**19 15 08.2**	**+0.2**
VAY	**Valandovo**	**0.10**	**289**	*e*Pg	**Pg**	**19 15 06.5**	**-0.1**
VAY				*e*Lg	Lg	19 15 08.3	
	comp=E,3μm,0.5s						
VAY				*e*Sg	**Sg**	**19 15 08.4**	**+0.2**
VAY				*e*Lg	Lg	19 15 08.5	
	comp=N,5μm,0.2s						
VAY	**Valandovo**	**0.10**	**289**	⇓*i*Pg	**Pg**	**19 15 06.4**	**-0.1**
VAY				*e*Sg	**Sg**	**19 15 08.2**	**+0.2**
VAY	**Valandovo**	**0.10**	**289**	*e*Sg	Sg	19 15 01.8	-6.3
VAY	**Valandovo**	**0.10**	**289**	*e*Pg	Pg	19 15 01.9	-4.6
VAY				*e*Lg	Lg	19 15 01.9	
	comp=N,5μm,0.2s						
VAY				S	**Sg**	**19 15 08.3**	**+0.2**
KNT	**Kendrikon**	**0.20**	**130**	P	**Pg**	**19 15 08.6**	**+0.5**
KNT				S	**Sg**	**19 15 11.6**	**+0.8**
KNT	**Kendrikon**	**0.20**	**130**	P	**Pg**	**19 15 08.6**	**+0.5**
KNT				S	**Sg**	**19 15 11.6**	**+0.8**
GRG	**Griva**	**0.40**	**214**	P	**Pg**	**19 15 12.3**	**+0.3**
GRG				S	**Sg**	**19 15 18.3**	**+1.0**
GRG	**Griva**	**0.40**	**214**	*e*PB	**Pg**	**19 15 12.5**	**+0.5**
GRG				*e*SB	**Sg**	**19 15 18.2**	**+1.0**
GRG	**Griva**	**0.40**	**214**	P	**Pg**	**19 15 12.3**	**+0.3**
GRG				*e*Sb	**Sg**	**19 15 18.2**	**+1.0**
SOH	**Sokhos**	**0.68**	**133**	P	**Pg**	**19 15 17.1**	**-0.2**
SOH				S	**Sg**	**19 15 26.5**	**+0.4**
SOH	**Sokhos**	**0.68**	**133**	*e*PN	**Pg**	**19 15 17.1**	**-0.2**
SOH				*e*SN	**Sg**	**19 15 26.7**	**+0.6**
SOH	**Sokhos**	**0.68**	**133**	P	**Pg**	**19 15 17.1**	**-0.2**
SOH				S	**Sg**	**19 15 26.5**	**+0.4**
THE	**Thessaloniki**	**0.68**	**163**	P	**Pg**	**19 15 17.3**	**-0.1**
THE	**Thessaloniki**	**0.68**	**163**	P	**Pg**	**19 15 17.3**	**-0.1**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**19 15 17.4**	**-0.2**
SRS				S	**Sg**	**19 15 26.9**	**+0.3**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**19 15 17.4**	**-0.2**
SRS				S	**Sg**	**19 15 26.9**	**+0.3**
HORT	**Hortiatis**	**0.75**	**156**	P	**Pg**	**19 15 18.8**	**+0.1**
HORT				S	**Sb**	**19 15 29.4**	**-0.8**
HORT	**Hortiatis**	**0.75**	**156**	P	**Pg**	**19 15 18.8**	**+0.1**
HORT				S	**Sb**	**19 15 29.4**	**-0.8**
NVR	**Nevrokopi**	**0.88**	**86**	P	**Pg**	**19 15 21.4**	**+0.3**
NVR				S	**Sg**	**19 15 32.9**	**+0.4**
NVR	**Nevrokopi**	**0.88**	**86**	*e*PN	**Pg**	**19 15 21.0**	**-0.1**
NVR				*e*SN	**Sg**	**19 15 32.9**	**+0.4**
NVR	**Nevrokopi**	**0.88**	**86**	*e*Pn	**Pg**	**19 15 21.0**	**-0.1**
NVR	**Nevrokopi**	**0.88**	**86**	P	**Pg**	**19 15 21.4**	**+0.3**
NVR				S	**Sg**	**19 15 32.9**	**+0.4**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**19 15 24.4**	**-0.4**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pg**	**19 15 24.4**	**-0.4**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**19 15 24.4**	**-0.4**
FNA	**Florina**	**1.12**	**244**	P	**Pg**	**19 15 25.6**	**-0.1**
FNA				S	**Sb**	**19 15 40.9**	**+0.1**
FNA	**Florina**	**1.12**	**244**	*e*PN	**Pn**	**19 15 26.0**	**-0.4**
FNA				*e*SN	**Sn**	**19 15 41.9**	**-0.2**
FNA	**Florina**	**1.12**	**244**	P	**Pg**	**19 15 25.6**	**-0.1**
FNA	**Florina**	**1.12**	**244**	*e*Pn	**Pn**	**19 15 26.0**	**-0.4**
FNA				S	**Sb**	**19 15 40.9**	**+0.1**
FNA				*e*Sn	**Sn**	**19 15 41.9**	**-0.2**
SKO	**Skopje**	**1.17**	**306**	*e*Sg	**Sn**	**19 15 43.9**	**+0.7**
SKO	**Skopje**	**1.17**	**306**	*e*Sg	**Sn**	**19 15 43.9**	**+0.7**
KZN	**Kozani**	**1.21**	**216**	*e*PN	**Pb**	**19 15 26.5**	**-1.0**
KZN	**Kozani**	**1.21**	**216**	*e*Pn	**Pb**	**19 15 26.5**	**-1.0**
VTS	**Vitosha**	**1.36**	**16**	P	**Pg**	**19 15 30.5**	**+0.3**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pg**	**19 15 30.6**	**+0.3**
VTS				*e*Sg	**Sg**	**19 15 48.4**	**+0.5**
VTS	**Vitosha**	**1.36**	**16**	⇑*i*P	**Pg**	**19 15 30.6**	**+0.3**
VTS				S	**Sg**	**19 15 48.5**	**+0.5**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pg**	**19 15 30.6**	**+0.3**
VTS				*e*Sg	**Sg**	**19 15 48.4**	**+0.5**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pg**	**19 15 30.1**	**-0.2**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pg**	**19 15 30.1**	**-0.2**
KAVA	**Kavala**	**1.40**	**101**	P	**Pb**	**19 15 30.8**	**+0.1**
KAVA				S	**Sg**	**19 15 50.0**	**+0.7**
KAVA	**Kavala**	**1.40**	**101**	P	**Pb**	**19 15 30.8**	**+0.1**
KAVA				S	**Sg**	**19 15 50.0**	**+0.7**
NEST	**Nestorio**	**1.52**	**236**	P	**Pb**	**19 15 33.0**	**+0.1**
NEST				S	**Sg**	**19 15 53.2**	**0.0**
NEST	**Nestorio**	**1.52**	**236**	P	**Pb**	**19 15 33.0**	**+0.1**
NEST				S	**Sg**	**19 15 53.2**	**0.0**
PAIG	**Paliouri**	**1.55**	**151**	*e*PN	**Pn**	**19 15 32.4**	**+0.1**
PAIG	**Paliouri**	**1.55**	**151**	*e*Pn	**Pn**	**19 15 32.4**	**+0.1**
BARS	**Barje**	**1.66**	**337**	*e*Pn	**Pn**	**19 15 34.2**	**+0.3**
BARS				*e*Sn	**Sg**	**19 15 57.5**	**-0.1**
BARS	**Barje**	**1.66**	**337**	*e*Pn	**Pn**	**19 15 34.2**	**+0.3**
BARS				*e*Sn	**Sg**	**19 15 57.6**	**-0.1**
ZAPS	**Zavoj**	**1.99**	**359**	*e*Pn	**Pn**	**19 15 39.3**	**+1.0**
ZAPS				*e*Sg	**Sg**	**19 16 08.1**	**+0.1**
NEO	**Neokhori**	**2.02**	**168**	*e*PN	**Pn**	**19 15 39.0**	**+0.2**
NEO	**Neokhori**	**2.02**	**168**	*e*Pn	**Pn**	**19 15 39.0**	**+0.2**
SELS	**Selova**	**2.26**	**329**	*e*Pn	**Pb**	**19 15 44.1**	**-1.3**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PN	**Pn**	**19 15 42.6**	**+0.2**
AGG	**Agios Georgios**	**2.28**	**187**	*e*Pn	**Pn**	**19 15 42.6**	**+0.2**
AOS	**Alonnisos**	**2.30**	**156**	*e*PN	**Pn**	**19 15 42.1**	**-0.5**
AOS	**Alonnisos**	**2.30**	**156**	*e*Pn	**Pn**	**19 15 42.1**	**-0.5**
BOLS	**Boljevac**	**2.60**	**348**	*e*Sn	**Sb**	**19 16 21.9**	**-1.4**
LKD2	**Lefkada island**	**2.95**	**213**	*e*PN	**Pn**	**19 15 52.7**	**+1.2**
LKD2	**Lefkada island**	**2.95**	**213**	*e*Pn	**Pn**	**19 15 52.7**	**+1.2**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn	**Pn**	**19 15 52.0**	**0.0**
GRUS				*e*Sg	**Sg**	**19 16 41.9**	**+1.8**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn	**Pn**	**19 15 52.0**	**0.0**
GRUS				*e*Sg	**Sg**	**19 16 41.9**	**+1.8**
DIVS	**Divibare**	**3.45**	**326**	*e*Pn	**Pn**	**19 15 58.1**	**-0.3**
DIVS				*e*Sg	**Sg**	**19 16 57.5**	**+2.6**
DIVS	**Divibare**	**3.45**	**326**	*e*Pn	**Pn**	**19 15 58.1**	**-0.3**
BZS	**Buzias**	**4.40**	**350**	⇑*i*P	**Pn**	**19 16 10.9**	**-0.6**
BZS	**Buzias**	**4.40**	**350**	⇑*i*P	**Pn**	**19 16 10.9**	**-0.6**
MLR	**Muntele Rosu**	**4.82**	**28**	⇓*i*P	Pn	19 16 22.0	+4.6
MLR	**Muntele Rosu**	**4.82**	**28**	⇓*i*P	Pn	19 16 22.0	+4.6

*SKO **24** 19:20:31.4, 41°34'N×22°68'E, h15km, M1.5, ML1.9*
*THE **24** 19:20:32.7, 41°30'N×22°71'E, h2km±2km, ML1.9/3, Error ellipse: s-maj=2.3km s-min=0.6km az=198.0*
*ISCJB **24** 19:20:32.0±0.5, 41°30'N±0°02×22°70'E±0°03, h3km±5km, Error ellipse: s-maj=4.4km s-min=3.8km az=151.2*
*CSEM **24** 19:20:32.5±0.2, 41°30'N×22°71'E, h2km, ML1.7, Error ellipse: s-maj=4.6km s-min=4.0km az=25.0*
*ATH **24** 19:20:33.0, 41°27'N×22°71'E, h7km±5km, MD3.2/7*
*BEO **24** 19:20:33.2±0.9, 41°32'N×22°61'E, h7km±4km, ML1.7/4*
ISC 24 19:20:32.3±0.9, 41°30'N±0°02×22°70'E±0°02, h8km±7km, n29, σ0°55/49, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**281**	P	**Pg**	**19 20 34.5**	**-0.2**
VAY				S	**Sg**	**19 20 36.5**	**+0.1**
VAY	**Valandovo**	**0.10**	**281**	⇑*i*Pg	**Pg**	**19 20 34.6**	**-0.1**
VAY				*i* Sg	**Sg**	**19 20 36.6**	**+0.1**
VAY				*e*Lg	Lg	19 20 36.6	
	comp=E,458nm,0.3s						
VAY				*e*Lg	Lg	19 20 36.6	
	comp=N,804nm,0.2s						
VAY	**Valandovo**	**0.10**	**281**	P	**Pg**	**19 20 34.5**	**-0.2**
VAY	**Valandovo**	**0.10**	**281**	⇑*i*Pg	**Pg**	**19 20 35.1**	**+0.4**
VAY				S	**Sg**	**19 20 36.5**	**+0.1**
VAY				*e*Lg	Lg	19 20 37.1	
	comp=N,804nm,0.2s						
KNT	**Kendrikon**	**0.20**	**133**	P	**Pg**	**19 20 36.8**	**+0.3**
KNT				S	**Sg**	**19 20 39.6**	**+0.3**
KNT	**Kendrikon**	**0.20**	**133**	P	**Pg**	**19 20 36.8**	**+0.3**
KNT				S	**Sg**	**19 20 39.6**	**+0.3**
GRG	**Griva**	**0.41**	**213**	P	**Pg**	**19 20 40.5**	**+0.1**
GRG				S	**Sg**	**19 20 46.4**	**+0.6**
GRG	**Griva**	**0.41**	**213**	*e*PG	**Pg**	**19 20 40.5**	**+0.1**
GRG				*e*SB	**Sg**	**19 20 46.3**	**+0.5**
GRG	**Griva**	**0.41**	**213**	P	**Pg**	**19 20 40.5**	**+0.1**
GRG				*e*Sb	**Sg**	**19 20 46.3**	**+0.5**
SOH	**Sokhos**	**0.69**	**134**	P	**Pg**	**19 20 45.2**	**-0.4**
SOH				S	**Sg**	**19 20 55.6**	**+1.0**
SOH	**Sokhos**	**0.69**	**134**	*e*PG	**Pg**	**19 20 45.3**	**-0.4**
SOH				*e*SB	**Sg**	**19 20 55.6**	**+1.0**
SOH	**Sokhos**	**0.69**	**134**	*e*Pg	**Pg**	**19 20 45.3**	**-0.4**
SOH				S	**Sg**	**19 20 55.6**	**+1.0**
SRS	**Serrai**	**0.70**	**105**	P	**Pg**	**19 20 45.5**	**-0.3**
SRS				S	**Sg**	**19 20 55.8**	**+0.9**
SRS	**Serrai**	**0.70**	**105**	P	**Pg**	**19 20 45.5**	**-0.3**
SRS				S	**Sg**	**19 20 55.8**	**+0.9**
NVR	**Nevrokopi**	**0.88**	**86**	P	**Pg**	**19 20 49.0**	**-0.2**
NVR				S	**Sg**	**19 21 01.2**	**+0.6**
NVR	**Nevrokopi**	**0.88**	**86**	*e*PB	**Pg**	**19 20 49.3**	**+0.1**
NVR	**Nevrokopi**	**0.88**	**86**	*e*Pb	**Pg**	**19 20 49.3**	**+0.1**
NVR				S	**Sg**	**19 21 01.2**	**+0.6**
PLG	**Polygyros**	**1.09**	**148**	*e*PG	**Pg**	**19 20 52.8**	**-0.4**
FNA	**Florina**	**1.13**	**243**	*e*PB	**Pb**	**19 20 54.5**	**+0.4**
FNA	**Florina**	**1.13**	**243**	*e*Pb	**Pb**	**19 20 54.5**	**+0.4**
VTS	**Vitosha**	**1.34**	**16**	P	**Pg**	**19 20 58.6**	**+0.5**
VTS				S	**Sg**	**19 21 16.4**	**+0.8**
VTS	**Vitosha**	**1.34**	**16**	*e*Pg	**Pn**	**19 20 57.7**	**+0.2**
VTS				*e*Sg	**Sg**	**19 21 16.2**	**+0.6**
VTS	**Vitosha**	**1.34**	**16**	*e*Pg	**Pn**	**19 20 57.7**	**+0.2**
VTS				*e*Sg	**Sg**	**19 21 16.2**	**+0.6**
PAIG	**Paliouri**	**1.56**	**151**	*e*PG	**Pb**	**19 21 01.3**	**-0.2**
PAIG	**Paliouri**	**1.56**	**151**	*e*Pg	**Pb**	**19 21 01.3**	**-0.2**
BARS	**Barje**	**1.65**	**337**	*e*Pn	**Pn**	**19 21 00.0**	**-1.6**
BARS				*e*Sg	**Sg**	**19 21 25.5**	**+0.1**
ZAPS	**Zavoj**	**1.97**	**359**	*e*Pn	**Pb**	**19 21 08.4**	**-0.1**
ZAPS				*e*Sg	**Sb**	**19 21 33.4**	**+0.2**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*PN	**Pb**	**19 21 13.2**	**-0.9**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*Pn	**Pb**	**19 21 13.2**	**-0.9**

*IDC **24** 19:29:22.2±2.4, 6°00S×130°24E, h0km, mb3.4/1, mb1 4.0/4, mb1mx3.6/19, mbtmp3.8/4, ML4.0/3, Error ellipse: s-maj=91.0km s-min=29.4km az=77.0*
*AUST **24** 19:29:33.2, 6°48S×130°03E, h60km*
ISC 24 19:29:31.7±1.1, 6°47S±0°06×129°9E±0°1, h146km, n11, σ2°71/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.25**	**34**	P	**Pn**	**19 30 37.0**	**+1.8**
	baz=4.2,SNR=16						
FAKI				S	**Sn**	**19 31 22.6**	**-1.9**
	baz=4.2,SNR=24						
SWI	**Sorong**	**5.74**	**14**	P	**Pn**	**19 30 57.8**	**+2.9**
	baz=5.7,SNR=9.9						
SWI				S	**Sn**	**19 31 55.1**	**-4.8**
	baz=5.7,SNR=15						
MTN	**Manton Dam**	**6.46**	**169**	P	Pn	19 31 09.2	+4.7
	baz=6.5,SNR=119						
MTN				S	**Sn**	**19 32 17.3**	**0.0**
	baz=6.5,SNR=5.5						
KDU	**Kakadu**	**6.69**	**158**	P	Pn	19 31 11.7	+4.0
	baz=6.7,SNR=269						
KDU				S	**Sn**	**19 32 19.6**	**-3.2**
	baz=6.7,SNR=4.6						
KNRA	**Kununurra**	**9.22**	**187**	P	Pn	19 31 45.9	+4.5
	baz=9.3,SNR=54						
KNRA				S	**Sn**	**19 33 22.3**	**-1.4**
	baz=9.3,SNR=14						
FITZ	**Fitzroy Crossi**	**12.28**	**199**	Pn	Pn	19 32 26.3	+4.5

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**28.75**	**341**	P	P	19 40 30.9	-0.2
	0.3nm,0.8s,baz=166,slow=9.3,SNR=3.0						
PDAR	**Pinedale Array**	**42.94**	**342**	P	P	19 42 32.8	+0.1
	0.7nm,0.8s,baz=140,slow=8.9,SNR=3.1						
ILAR	**Eielson Array**	**73.24**	**339**	P	P	19 46 04.3	-0.1
	0.7nm,0.9s,baz=170,slow=5.2,SNR=6.2						

IDC 24 19:35:51.5±16.0, 1°.84N×95°.43W, h0km, mb3.5/3, mb1 3.9/3, mb1mx3.5/20, mbtmp3.5/3, Error ellipse: s-maj=1195.0km s-min=149.6km az=87.0, Galapagos Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**28.45**	**345**	P	P	19 41 48.8	+0.4
	0.4nm,0.8s,baz=159,slow=11,SNR=3.0						
PDAR	**Pinedale Array**	**42.67**	**345**	P	P	19 43 49.8	-0.5
	0.4nm,0.5s,baz=127,slow=5.9,SNR=2.9						
ILAR	**Eielson Array**	**72.80**	**339**	P	P	19 47 21.7	0.0
	0.6nm,0.9s,baz=145,slow=6.5,SNR=3.5						

*TIR **24** 19:36:55.9, 41°.48N×23°.22E, h1km, ML4.3*
*BJI **24** 19:36:57.9, 41°.02N×21°.72E, h10km, mB5.0/28, mb4.7/37, Ms4.9/23, Ms7 4.6/22*
*ISCJB **24** 19:37:03.8±0.3, 41°.331N±0°.009×22°.71E±0°.01, h6km±1km, mb4.7/139, MS4.1/45, Error ellipse: s-maj=1.6km s-min=1.2km az=39.8*
*IDC **24** 19:37:03.9±0.4, 41°.27N×22°.71E, h0km, mb4.4/32, mb1 4.6/40, mb1mx4.6/43, mbtmp4.4/40, ML4.1/8, MS3.9/37, Ms1 3.9/37, ms1mx3.7/61, Error ellipse: s-maj=9.1km s-min=8.6km az=48.0*
*BEO **24** 19:37:04.4±0.7, 41°.22N×22°.78E, h11km±2km, ML4.7/1*
*ATH **24** 19:37:04.4, 41°.31N×22°.75E, h19km, MD4.3/49, ML4.5*
*SKO **24** 19:37:04.6, 41°.25N×22°.69E, h15km, M3.8, ML4.2*
*MOS **24** 19:37:04.7±1.1, 41°.32N×22°.63E, h19km, mb5.1/41, MS4.1/23, Error ellipse: s-maj=3.4km s-min=2.3km az=106.1*
*PDG **24** 19:37:05.1±0.6, 41°.28N×22°.70E, h13km, MD4.3/2, ML4.2/8, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*CSEM **24** 19:37:05.6±0.1, 41°.29N×22°.68E, h10km, mb4.9/86, Ms3.5, Mw4.8, Error ellipse: s-maj=2.2km s-min=1.8km az=56.0*
*PRU **24** 19:37:05.9, 41°.28N×22°.74E, h0km, M4.9*
*THE **24** 19:37:05.4, 41°.28N×22°.73E, h2km±1km, ML4.8/7, Error ellipse: s-maj=1.1km s-min=0.5km az=192.0*
*NEIC **24** 19:37:05.5, 41°.27N×22°.73E, h2km, mb4.9/84, ML4.8(THE), ML4.5(ATH), ML4.8(BEO), After THE.*
NEIC Felt [V] at Strumica and Valandovo and [IV] at Gevgelija. Also felt at Bogdanci, Bosilovo, Kriva Palanka, Skopje and Vasilevo. Felt [III] at Plovdiv and Sofia, Bulgaria. Also felt at Bansko, Dospat, Khaskovo, Kyustendil, Melnik, Samokov and Sandanski. Felt at Thessaloniki, Greece.
*GCMT **24** 19:37:06.7±0.4, 41°.16N×22°.87E, h17km±1km, MW4.8, Moment Tensor Solution. s15,c17; s56,c86; Moment tensor: Scale 10^16 Nm; Mrr-1.73±.16; Mθθ1.79±.10; Mφφ-0.06±.09; Mrθ0.19±.18; Mrφ-0.31±.05; Mθφ-0.90±.29; Best double couple: M0 2.00000×10^16 NP1:φ78.00000°, δ44.00000°, λ-124.00000°. NP2:φ301.00000°, δ55.00000°, λ-62.00000°. Principal axes: T 1.8800, Plg6.0000°, Azm12.0000°; N 0.2500, Plg23.0000°, Azm104.0000°; P -2.1200, Plg66.0000°, Azm268.0000°; Data Used: ll IC IU G CN.*

ISC 24 19:37:06.3±0.3, 41°.28N±0°.01×22°.73E±0°.01, h15km±1km, h15km:pP-P, n1470, σ1°.936/1626, mb4.8/140, MS4.1/45, 143C-119D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**291**	*i* P	**Pg**	**19 37 07.9**	**-2.0**
VAY	**Valandovo**	**0.12**	**291**	P	**Pg**	**19 37 07.8**	**-2.1**
VAY	**Valandovo**	**0.12**	**291**	*i* Pg	**Pg**	**19 37 07.9**	**-2.0**
VAY				*e*Sg	**Sg**	**19 37 10.6**	**-1.7**
VAY	**Valandovo**	**0.12**	**291**	*i* Pg	**Pg**	**19 37 07.9**	**-2.0**
VAY				*e*Sg	**Sg**	**19 37 10.6**	**-1.7**
VAY				*e*Lg	Lg	19 37 13.2	
	comp=N,78μm,0.4s						
VAY				*e*Lg	Lg	19 37 13.7	
	comp=E,66μm,0.6s						
VAY	**Valandovo**	**0.12**	**291**	⇑*i*Pg	**Pg**	**19 37 07.8**	**-2.1**
VAY	**Valandovo**	**0.12**	**291**	*i* Pg	**Pg**	**19 37 07.9**	**-2.0**
VAY				*e*Sg	**Sg**	**19 37 10.6**	**-1.7**
VAY				*e*Lg	Lg	19 37 14.2	
	comp=E,66μm,0.6s						
KNT	**Kendrikon**	**0.17**	**131**	P	**Pg**	**19 37 09.4**	**-1.2**
KNT	**Kendrikon**	**0.17**	**131**	P	**Pg**	**19 37 09.4**	**-1.2**
KNT				S	**Sg**	**19 37 12.2**	**-1.3**
KNT	**Kendrikon**	**0.17**	**131**	P	**Pg**	**19 37 09.4**	**-1.2**
KNT	**Kendrikon**	**0.17**	**131**	P	**Pg**	**19 37 09.4**	**-1.2**
KNT				S	**Sg**	**19 37 12.2**	**-1.3**
GRG	**Griva**	**0.40**	**218**	*e*P	**Pg**	**19 37 13.0**	**-1.5**
GRG				*e*		19 37 20.1	
GRG	**Griva**	**0.40**	**218**	P	**Pg**	**19 37 13.4**	**-1.1**
GRG				S	**Sg**	**19 37 19.7**	**-0.3**
GRG	**Griva**	**0.40**	**218**	*e*Pb	**Pg**	**19 37 13.0**	**-1.5**
GRG				*e*Sb	**Sg**	**19 37 20.1**	**+0.1**
GRG	**Griva**	**0.40**	**218**	*e*PB	**Pg**	**19 37 13.0**	**-1.5**
GRG				*e*SB	**Sg**	**19 37 20.1**	**+0.1**
GRG	**Griva**	**0.40**	**218**	*e*Pb	**Pg**	**19 37 13.0**	**-1.5**
GRG	**Griva**	**0.40**	**218**	P	**Pg**	**19 37 13.4**	**-1.1**
GRG				S	**Sg**	**19 37 19.7**	**-0.3**
GRG				*e*Sb	**Sg**	**19 37 20.1**	**+0.1**
SOH	**Sokhos**	**0.66**	**134**	*e*P	**Pg**	**19 37 17.6**	**-1.6**
SOH				*e*		19 37 26.8	
SOH	**Sokhos**	**0.66**	**134**	P	**Pg**	**19 37 17.8**	**-1.4**
SOH				S	**Sg**	**19 37 27.4**	**-0.6**
SOH	**Sokhos**	**0.66**	**134**	*e*Pn	**Pg**	**19 37 17.6**	**-1.6**
SOH				*e*Sn	**Sg**	**19 37 26.8**	**-1.2**
SOH	**Sokhos**	**0.66**	**134**	*e*PN	**Pg**	**19 37 17.6**	**-1.6**
SOH				*e*SN	**Sg**	**19 37 26.8**	**-1.2**
SOH	**Sokhos**	**0.66**	**134**	*e*Pn	**Pg**	**19 37 17.6**	**-1.6**
SOH				*e*Sn	**Sg**	**19 37 26.8**	**-1.2**
SOH				S	**Sg**	**19 37 27.4**	**-0.6**
THE	**Thessaloniki**	**0.67**	**164**	P	**Pg**	**19 37 17.7**	**-1.7**
THE	**Thessaloniki**	**0.67**	**164**	P	**Pg**	**19 37 17.7**	**-1.7**
SRS	**Serrai**	**0.67**	**103**	P	**Pg**	**19 37 17.9**	**-1.6**
SRS	**Serrai**	**0.67**	**103**	P	**Pg**	**19 37 17.9**	**-1.6**
HORT	**Hortiatis**	**0.74**	**157**	P	**Pg**	**19 37 19.4**	**-1.3**
HORT				S	**Sg**	**19 37 29.4**	**-1.0**
HORT	**Hortiatis**	**0.74**	**157**	P	**Pg**	**19 37 19.4**	**-1.3**
HORT				S	**Sg**	**19 37 29.4**	**-1.0**
NVR	**Nevrokopi**	**0.86**	**85**	P	**Pb**	**19 37 21.5**	**-1.5**
NVR				S	**Sb**	**19 37 33.5**	**-0.8**
NVR	**Nevrokopi**	**0.86**	**85**	*e*Pn	**Pb**	**19 37 21.3**	**-1.7**
NVR				*e*Sn	**Sb**	**19 37 31.8**	**-2.5**
NVR	**Nevrokopi**	**0.86**	**85**	*e*PN	**Pb**	**19 37 21.3**	**-1.7**
NVR				*e*SN	**Sb**	**19 37 31.8**	**-2.5**
NVR	**Nevrokopi**	**0.86**	**85**	P	**Pb**	**19 37 21.5**	**-1.5**
NVR				*e*Sn	**Sb**	**19 37 31.8**	**-2.5**
NVR				S	**Sb**	**19 37 33.5**	**-0.8**
PLG	**Polygyros**	**1.05**	**149**	*e*P	**Pb**	**19 37 25.0**	**-1.3**
PLG				*e*		19 37 39.1	
PLG	**Polygyros**	**1.05**	**149**	P	**Pb**	**19 37 24.6**	**-1.7**
PLG				S	**Sb**	**19 37 40.7**	**+0.8**
PLG	**Polygyros**	**1.05**	**149**	*e*Pn	**Pb**	**19 37 25.0**	**-1.3**
PLG				*e*Sn	**Sb**	**19 37 39.1**	**-0.8**
PLG	**Polygyros**	**1.05**	**149**	*e*PN	**Pb**	**19 37 25.0**	**-1.3**
PLG				*e*SN	**Sb**	**19 37 39.1**	**-0.8**
PLG	**Polygyros**	**1.05**	**149**	P	**Pb**	**19 37 24.6**	**-1.7**
PLG	**Polygyros**	**1.05**	**149**	*e*Pn	**Pb**	**19 37 25.0**	**-1.3**
PLG				*e*Sn	**Sb**	**19 37 39.1**	**-0.8**
PLG				S	**Sb**	**19 37 40.7**	**+0.8**
BIA	**Bitola**	**1.09**	**257**	P	**Pb**	**19 37 25.3**	**-1.6**
BIA				S	**Sn**	**19 37 41.6**	**-0.3**
BIA	**Bitola**	**1.09**	**257**	*i* Pg	**Pb**	**19 37 25.4**	**-1.6**
BIA	**Bitola**	**1.09**	**257**	P	**Pb**	**19 37 25.3**	**-1.6**
BIA				S	**Sn**	**19 37 41.6**	**-0.3**
FNA	**Florina**	**1.13**	**245**	*e*P	**Pb**	**19 37 26.4**	**-1.2**
FNA				*e*		19 37 42.2	
FNA	**Florina**	**1.13**	**245**	P	**Pb**	**19 37 26.3**	**-1.3**
FNA				S	**Sg**	**19 37 43.1**	**+0.1**
FNA	**Florina**	**1.13**	**245**	*e*Pn	**Pb**	**19 37 26.4**	**-1.2**
FNA				*e*Sn	**Sb**	**19 37 42.2**	**0.0**
FNA	**Florina**	**1.13**	**245**	*e*PN	**Pb**	**19 37 26.4**	**-1.2**
FNA				*e*SN	**Sb**	**19 37 42.2**	**0.0**
FNA				S	**Sg**	**19 37 43.1**	**+0.1**
SKO	**Skopje**	**1.19**	**306**	*i* P	**Pn**	**19 37 27.6**	**-0.8**
SKO				*i*		19 37 46.0	
SKO	**Skopje**	**1.19**	**306**	P	**Pn**	**19 37 27.5**	**-0.8**
SKO	**Skopje**	**1.19**	**306**	*i* Pg	**Pn**	**19 37 27.6**	**-0.8**
SKO				*i* Sg	**Sg**	**19 37 46.0**	**+1.2**
SKO	**Skopje**	**1.19**	**306**	*i* Pg	**Pn**	**19 37 27.7**	**-0.8**
SKO				*i* Sg	**Sg**	**19 37 46.0**	**+1.2**
SKO				*e*Lg	Lg	19 37 46.3	
	comp=N,23μm,1.4s						
SKO				*e*Lg	Lg	19 37 47.4	
	comp=E,8μm,0.9s						
SKO	**Skopje**	**1.19**	**306**	⇑*i*Pg	**Pn**	**19 37 27.5**	**-0.8**
SKO				*e*Sg	**Sg**	**19 37 44.7**	**-0.1**
SKO	**Skopje**	**1.19**	**306**	P	**Pn**	**19 37 27.5**	**-0.8**
SKO				*i* Sg	**Sg**	**19 37 46.0**	**+1.2**
SKO				*e*Lg	Lg	19 37 47.8	
	comp=E,8μm,0.9s						
LIT	**Litokhoron**	**1.19**	**189**	P	**Pn**	**19 37 26.9**	**-1.5**
LIT	**Litokhoron**	**1.19**	**189**	P	**Pn**	**19 37 26.9**	**-1.5**
KZN	**Kozani**	**1.21**	**217**	*e*P	**Pn**	**19 37 28.2**	**-0.6**
KZN				*e*		19 37 46.1	
KZN	**Kozani**	**1.21**	**217**	*e*Pn	**Pn**	**19 37 28.2**	**-0.6**
KZN				*e*Sn	**Sg**	**19 37 46.1**	**+0.6**
KZN	**Kozani**	**1.21**	**217**	*e*PN	**Pn**	**19 37 28.2**	**-0.6**
KZN				*e*SN	**Sg**	**19 37 46.1**	**+0.6**
KZN	**Kozani**	**1.21**	**217**	*e*Pn	**Pn**	**19 37 28.2**	**-0.6**
KZN				*e*Sn	**Sg**	**19 37 46.1**	**+0.6**
OUR	**Ouranopolis**	**1.34**	**134**	P	**Pn**	**19 37 29.9**	**-0.5**
OUR	**Ouranopolis**	**1.34**	**134**	P	**Pn**	**19 37 29.9**	**-0.5**
VTS	**Vitosha**	**1.36**	**15**	*e*P	**Pn**	**19 37 30.8**	**-0.2**
VTS				*e*		19 37 48.8	
VTS	**Vitosha**	**1.36**	**15**	P	**Pn**	**19 37 30.5**	**-0.4**
VTS				S	**Sg**	**19 37 50.1**	**-0.2**
VTS	**Vitosha**	**1.36**	**15**	*e*Pn	**Pn**	**19 37 30.8**	**-0.2**
VTS				*e*Sn	**Sn**	**19 37 48.8**	**0.0**
VTS	**Vitosha**	**1.36**	**15**	⇑*i*Pg	**Pn**	**19 37 30.7**	**-0.2**
VTS				*e*Sg	**Sb**	**19 37 49.5**	**+0.6**
VTS	**Vitosha**	**1.36**	**15**	⇑*i*P	**Pn**	**19 37 30.6**	**-0.4**
VTS				S	**Sb**	**19 37 49.5**	**+0.6**
VTS	**Vitosha**	**1.36**	**15**	*e*Pn	**Pn**	**19 37 30.8**	**-0.2**
VTS				*e*Sn	**Sn**	**19 37 48.8**	**0.0**
VTS				*e*Sg	**Sb**	**19 37 49.5**	**+0.6**
VTS				S	**Sg**	**19 37 50.1**	**-0.2**
KAVA	**Kavala**	**1.38**	**101**	P	**Pn**	**19 37 30.5**	**-0.5**
KAVA				S	**Sg**	**19 37 50.6**	**-0.2**
KAVA	**Kavala**	**1.38**	**101**	P	**Pn**	**19 37 30.5**	**-0.5**
KAVA				S	**Sg**	**19 37 50.6**	**-0.2**
PAIG	**Paliouri**	**1.53**	**151**	*e*P	**Pn**	**19 37 32.8**	**-0.3**
PAIG				*e*		19 37 54.4	
PAIG	**Paliouri**	**1.53**	**151**	P	**Pn**	**19 37 32.7**	**-0.3**
PAIG				S	**Sb**	**19 37 54.2**	**+0.6**
PAIG	**Paliouri**	**1.53**	**151**	*e*Pn	**Pn**	**19 37 32.8**	**-0.3**
PAIG				*e*Sn	**Sb**	**19 37 54.4**	**+0.8**
PAIG	**Paliouri**	**1.53**	**151**	*e*PN	**Pn**	**19 37 32.8**	**-0.3**
PAIG				*e*SN	**Sb**	**19 37 54.4**	**+0.8**
PAIG	**Paliouri**	**1.53**	**151**	*e*Pn	**Pn**	**19 37 32.8**	**-0.3**
PAIG				*e*Sn	**Sb**	**19 37 54.4**	**+0.8**
NEST	**Nestorio**	**1.54**	**236**	P	**Pn**	**19 37 33.4**	**+0.1**
NEST				S	**Sb**	**19 37 54.6**	**+0.8**
NEST	**Nestorio**	**1.54**	**236**	P	**Pn**	**19 37 33.4**	**+0.1**
NEST				S	**Sb**	**19 37 54.6**	**+0.8**
KBN	**Korca**	**1.61**	**247**	*i* PG	**Pn**	**19 37 34.6**	**+0.4**
KBN	**Korca**	**1.61**	**247**	P	**Pn**	**19 37 34.4**	**+0.2**
KBN	**Korca**	**1.61**	**247**	P	**Pn**	**19 37 34.4**	**+0.2**
BARS	**Barje**	**1.68**	**337**	⇑*i*Pn	**Pn**	**19 37 34.8**	**-0.4**
BARS	**Barje**	**1.68**	**337**	⇑*i*Pn	**Pn**	**19 37 34.8**	**-0.4**
PLD	**Plovdiv**	**1.70**	**60**	P	**Pn**	**19 37 36.0**	**+0.6**
PLD	**Plovdiv**	**1.70**	**60**	P	**Pn**	**19 37 36.0**	**+0.6**
PHP	**Peshkopia**	**1.76**	**284**	*i* PG	**Pn**	**19 37 35.5**	**-0.9**
PHP	**Peshkopia**	**1.76**	**284**	P	**Pn**	**19 37 36.2**	**-0.2**
PHP	**Peshkopia**	**1.76**	**284**	*i* Pg	**Pn**	**19 37 35.5**	**-0.9**
PHP	**Peshkopia**	**1.76**	**284**	P	**Pn**	**19 37 36.2**	**-0.2**
THL	**Klokotos Trika**	**1.79**	**198**	P	**Pn**	**19 37 36.4**	**-0.3**
THL	**Klokotos Trika**	**1.79**	**198**	*e*Pb	**Pn**	**19 37 36.7**	**0.0**
THL	**Klokotos Trika**	**1.79**	**198**	*e*PN	**Pn**	**19 37 36.4**	**-0.3**
THL	**Klokotos Trika**	**1.79**	**198**	P	**Pn**	**19 37 36.4**	**-0.3**
THL	**Klokotos Trika**	**1.79**	**198**	*e*Pb	**Pn**	**19 37 36.7**	**0.0**
XOR	**Xorichti**	**1.94**	**169**	P	**Pn**	**19 37 38.3**	**-0.5**
XOR	**Xorichti**	**1.94**	**169**	P	**Pn**	**19 37 38.3**	**-0.5**
ZAPS	**Zavoj**	**2.00**	**358**	⇑*i*Pn	**Pn**	**19 37 40.0**	**+0.5**
ZAPS				*e*Sn	**Sn**	**19 38 05.5**	**+1.2**
NEO	**Neokhori**	**2.00**	**169**	*e*Pb	**Pn**	**19 37 39.2**	**-0.4**
NEO				*e*Sn	**Sb**	**19 38 06.2**	**-1.0**
NEO	**Neokhori**	**2.00**	**169**	*e*PB	**Pn**	**19 37 39.2**	**-0.4**
NEO				*e*SN	**Sb**	**19 38 06.2**	**-1.0**
NEO	**Neokhori**	**2.00**	**169**	*e*Pb	**Pn**	**19 37 39.2**	**-0.4**
NEO				*e*Sn	**Sb**	**19 38 06.2**	**-1.0**
RDO	**Rodhopi**	**2.12**	**93**	P	**Pn**	**19 37 41.0**	**-0.2**
RDO	**Rodhopi**	**2.12**	**93**	*e*Pn	**Pn**	**19 37 41.4**	**+0.1**
RDO	**Rodhopi**	**2.12**	**93**	*e*PN	**Pn**	**19 37 41.4**	**+0.1**
RDO	**Rodhopi**	**2.12**	**93**	P	**Pn**	**19 37 41.0**	**-0.2**
RDO	**Rodhopi**	**2.12**	**93**	*e*Pn	**Pn**	**19 37 41.4**	**+0.1**
TIR	**Tirane**	**2.16**	**273**	*i* SN	**Pb**	**19 37 44.1**	**-0.9**
TIR	**Tirane**	**2.16**	**273**	*e*P	**Pn**	**19 37 42.5**	**+0.8**
TIR				*e*		19 38 11.1	
TIR	**Tirane**	**2.16**	**273**	*e*Pn	**Pn**	**19 37 42.5**	**+0.8**
TIR				*e*Sn	**Sb**	**19 38 11.1**	**-0.5**
TIR	**Tirane**	**2.16**	**273**	*e*Pn	**Pn**	**19 37 42.5**	**+0.8**
TIR				*e*Sn	**Sb**	**19 38 11.1**	**-0.5**
JAN	**Janina**	**2.16**	**222**	*e*P	**Pn**	**19 37 42.3**	**+0.5**
JAN				*e*		19 38 10.2	
JAN	**Janina**	**2.16**	**222**	*e*Pn	**Pn**	**19 37 42.3**	**+0.5**
JAN				*e*Sn	**Sb**	**19 38 10.2**	**-1.5**
JAN	**Janina**	**2.16**	**222**	*e*PN	**Pn**	**19 37 42.3**	**+0.5**
JAN				*e*SN	**Sb**	**19 38 10.2**	**-1.5**
JAN	**Janina**	**2.16**	**222**	*e*Pn	**Pn**	**19 37 42.3**	**+0.5**
JAN				*e*Sn	**Sb**	**19 38 10.2**	**-1.5**
PUK	**Puka**	**2.26**	**291**	*i* PN	**Pn**	**19 37 42.9**	**-0.2**
PUK	**Puka**	**2.26**	**291**	*i* Pn	**Pn**	**19 37 42.9**	**-0.2**
BCI	**Bajram Curri**	**2.27**	**300**	*i* PN	**Pn**	**19 37 44.1**	**+0.9**
BCI	**Bajram Curri**	**2.27**	**300**	*i* Pn	**Pn**	**19 37 44.1**	**+0.9**
AGG	**Agios Georgios**	**2.27**	**188**	*e*P	**Pn**	**19 37 43.2**	**-0.1**
AGG	**Agios Georgios**	**2.27**	**188**	P	**Pn**	**19 37 43.2**	**-0.1**
AGG	**Agios Georgios**	**2.27**	**188**	*e*Pb	**Pn**	**19 37 43.2**	**-0.1**
AGG	**Agios Georgios**	**2.27**	**188**	*e*PB	**Pn**	**19 37 43.2**	**-0.1**
AGG	**Agios Georgios**	**2.27**	**188**	P	**Pn**	**19 37 43.2**	**-0.1**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*Pb	**Pn**	**19 37 42.9**	**-0.4**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*PB	**Pn**	**19 37 42.9**	**-0.4**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*Pb	**Pn**	**19 37 42.9**	**-0.4**
SELS	**Selova**	**2.28**	**329**	⇓*i*Pn	**Pn**	**19 37 42.8**	**-0.6**
AOS	**Alonnisos**	**2.28**	**157**	P	**Pn**	**19 37 42.7**	**-0.7**
AOS	**Alonnisos**	**2.28**	**157**	*e*Pb	**Pn**	**19 37 43.0**	**-0.4**
AOS	**Alonnisos**	**2.28**	**157**	*e*PB	**Pn**	**19 37 43.0**	**-0.4**
AOS	**Alonnisos**	**2.28**	**157**	P	**Pn**	**19 37 42.7**	**-0.7**
AOS	**Alonnisos**	**2.28**	**157**	*e*Pb	**Pn**	**19 37 43.0**	**-0.4**
LIA	**Limnos Island**	**2.32**	**126**	*e*Pb	**Pn**	**19 37 43.7**	**-0.3**
LIA	**Limnos Island**	**2.32**	**126**	*e*PN	**Pn**	**19 37 43.7**	**-0.3**
LIA	**Limnos Island**	**2.32**	**126**	*e*Pb	**Pn**	**19 37 43.7**	**-0.3**
PVY	**Plav**	**2.45**	**303**	*e*Pn	**Pn**	**19 37 46.1**	**+0.3**
PVY				*e*Sn	**Sn**	**19 38 17.5**	**+2.0**
PVY	**Plav**	**2.45**	**303**	*e*Pn	**Pn**	**19 37 46.1**	**+0.3**
PVY				*e*Sn	**Sn**	**19 38 17.5**	**+2.0**
EVR	**Evrytania**	**2.46**	**197**	*e*PN	**Pn**	**19 37 46.6**	**+0.6**
EVR	**Evrytania**	**2.46**	**197**	*e*PN	**Pn**	**19 37 46.6**	**+0.6**
EVR	**Evrytania**	**2.46**	**197**	*e*Pn	**Pn**	**19 37 46.6**	**+0.6**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*P	**Pn**	**19 37 46.9**	**0.0**
ALN				*e*		19 38 18.3	
ALN	**Alexandroupoli**	**2.54**	**98**	P	**Pn**	**19 37 46.8**	**-0.1**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*Pn	**Pn**	**19 37 46.9**	**0.0**
ALN				*e*Sn	**Sn**	**19 38 18.3**	**+0.8**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*PN	**Pn**	**19 37 46.9**	**0.0**
ALN				*e*SN	**Sn**	**19 38 18.3**	**+0.8**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*Pn	**Pn**	**19 37 46.9**	**0.0**
ALN				*e*Sn	**Sn**	**19 38 18.3**	**+0.8**
VLO	**Vlora**	**2.58**	**253**	*i* PN	**Pn**	**19 37 48.5**	**+1.0**
VLO	**Vlora**	**2.58**	**253**	*i* Pn	**Pn**	**19 37 48.5**	**+1.0**
BOLS	**Boljevac**	**2.61**	**348**	*e*Pn	**Pn**	**19 37 46.5**	**-1.5**
BOLS				*e*Sg	**Sg**	**19 38 27.5**	**-2.8**
BOLS	**Boljevac**	**2.61**	**348**	*e*Pn	**Pn**	**19 37 46.5**	**-1.5**
BOLS				*e*Sg	**Sg**	**19 38 27.5**	**-2.8**
LKR	**Lokris**	**2.63**	**175**	*e*Pn	**Pn**	**19 37 48.0**	**-0.2**
LKR	**Lokris**	**2.63**	**175**	*e*PN	**Pn**	**19 37 48.0**	**-0.2**
LKR	**Lokris**	**2.63**	**175**	*e*Pn	**Pn**	**19 37 48.0**	**-0.2**
BEY	**Berane**	**2.64**	**308**	⇑*i*Pn	**Pn**	**19 37 49.1**	**+0.6**
BEY				*e*Sn	**Sn**	**19 38 21.7**	**+1.4**
IVA	**Berane**	**2.64**	**308**	⇑*i*Pn	**Pn**	**19 37 49.1**	**+0.6**
IVA				*e*Sn	**Sn**	**19 38 21.7**	**+1.4**
ENEZ	**Enez**	**2.65**	**101**	*e*PN	**Pn**	**19 37 48.3**	**-0.1**
ULC	**Ulcinj**	**2.70**	**286**	⇓*i*Pn	**Pn**	**19 37 50.5**	**+1.3**
ULC				*e*Sn	**Sn**	**19 38 23.9**	**+2.3**
ULC	**Ulcinj**	**2.70**	**286**	⇓*i*Pn	**Pn**	**19 37 50.5**	**+1.3**
ULC				*e*Sn	**Sn**	**19 38 23.9**	**+2.3**
KEK	**Kerkira**	**2.72**	**236**	*e*Pb	**Pn**	**19 37 51.1**	**+1.6**
KEK	**Kerkira**	**2.72**	**236**	*e*PB	**Pn**	**19 37 51.1**	**+1.6**
KEK	**Kerkira**	**2.72**	**236**	*e*Pb	**Pn**	**19 37 51.1**	**+1.6**
PDG	**Podgorica**	**2.84**	**295**	⇑*i*Pn	**Pn**	**19 37 52.0**	**+1.0**
PDG				*e*Sn	**Sn**	**19 38 26.3**	**+1.4**
TTG	**Podgorica**	**2.84**	**295**	⇑*i*Pn	**Pn**	**19 37 52.0**	**+1.0**
TTG				*e*Sn	**Sn**	**19 38 26.3**	**+1.4**
SJES	**Sjenica**	**2.85**	**315**	*e*Pn	**Pn**	**19 37 50.9**	**-0.4**
EFP	**Efpalio**	**2.92**	**193**	*e*Pn	**Pn**	**19 37 52.6**	**+0.5**
EFP	**Efpalio**	**2.92**	**193**	*e*PN	**Pn**	**19 37 52.6**	**+0.5**
EFP	**Efpalio**	**2.92**	**193**	*e*Pn	**Pn**	**19 37 52.6**	**+0.5**
KALE	**Kalithea**	**2.92**	**189**	*e*Pn	**Pn**	**19 37 52.5**	**+0.3**
KALE	**Kalithea**	**2.92**	**189**	*e*PN	**Pn**	**19 37 52.5**	**+0.3**
KALE	**Kalithea**	**2.92**	**189**	*e*Pn	**Pn**	**19 37 52.5**	**+0.3**
ERIK	**Erikli-Kesan**	**2.93**	**101**	*e*PN	**Pn**	**19 37 52.2**	**-0.1**
LKD2	**Lefkada island**	**2.95**	**213**	*e*Pn	**Pn**	**19 37 53.8**	**+1.2**
LKD2	**Lefkada island**	**2.95**	**213**	*e*PN	**Pn**	**19 37 53.8**	**+1.2**
LKD2	**Lefkada island**	**2.95**	**213**	*e*Pn	**Pn**	**19 37 53.8**	**+1.2**
TRIZ	**Trizonia**	**2.95**	**190**	P	**Pn**	**19 37 53.0**	**+0.4**
TRIZ	**Trizonia**	**2.95**	**190**	*e*PN	**Pn**	**19 37 53.2**	**+0.6**
TRIZ	**Trizonia**	**2.95**	**190**	*e*Pn	**Pn**	**19 37 53.2**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.98**	**106**	*e*PN	**Pn**	**19 37 52.8**	**-0.2**
GRUS	**Gruza**	**3.00**	**331**	⇑*i*Pn	**Pn**	**19 37 53.1**	**-0.2**
GRUS	**Gruza**	**3.00**	**331**	⇑*i*Pn	**Pn**	**19 37 53.1**	**-0.2**
BUM	**Brajici-Budva**	**3.04**	**291**	⇓*i*Pn	**Pn**	**19 37 55.6**	**+1.7**
BUM				*e*Sn	**Sn**	**19 38 31.6**	**+1.5**
BUM	**Brajici-Budva**	**3.04**	**291**	⇓*i*Pn	**Pn**	**19 37 55.6**	**+1.7**
BUM				*e*Sn	**Sn**	**19 38 31.6**	**+1.5**
EDRB	**Edirne**	**3.07**	**78**	*e*PN	**Pn**	**19 37 54.8**	**+0.6**
ZIMR		**3.08**	**39**	⇓P	**Pn**	**19 37 55.6**	**+1.3**
ZIMR				S	**Sn**	**19 38 33.2**	**+2.4**
ZIMR		**3.08**	**39**	⇓*i*P	**Pn**	**19 37 55.6**	**+1.3**
LAKA	**Lakka**	**3.09**	**191**	P	**Pn**	**19 37 55.6**	**+1.1**
LAKA	**Lakka**	**3.09**	**191**	*e*Pn	**Pn**	**19 37 55.9**	**+1.4**
LAKA	**Lakka**	**3.09**	**191**	*e*PN	**Pn**	**19 37 55.9**	**+1

MTUR	Matau	4.30	23	⇓P	Pn	19 38 12.4	+1.2	GVD	Gavdhos	6.52 170	ePn	Pn	19 38 45.3	+3.7
MTUR	Matau	4.30	23	⇓iP	Pn	19 38 12.4	+1.2	GVD	Gavdhos	6.52 170	ePN	Pn	19 38 45.3	+3.7
MTUR	Matau	4.30	23	⇓iP	Pn	19 38 12.4	+1.2	GVD	Gavdhos	6.52 170	ePn	Pn	19 38 45.3	+3.7
ARR	Arges	4.32	18	⇓iP	Pn	19 38 11.2	-0.3	LEOM	Leova	6.55 36	⇑P	Pn	19 38 42.7	+0.7
ARR	Arges	4.32	18	⇓iP	Pn	19 38 11.2	-0.3	LEOM	Leova	6.55 36	⇑iP	Pn	19 38 42.7	+0.7
CTKS	Kestanelik-??a	4.36	89	ePN	Pn	19 38 12.4	+0.5	LEOM	Leova	6.55 36	⇑iP	Pn	19 38 42.7	+0.7
PLAR	PLOIESTI	4.37	33	⇑iP	Pn	19 38 13.9	+1.9	KDZE	Karadeniz Ereo	6.57 87	ePN	Pn	19 38 42.9	+0.6
PLAR	PLOIESTI	4.37	33	⇑iP	Pn	19 38 13.9	+1.9	PRAR	RASCA	6.58 21	⇓iP	Pn	19 38 44.3	+1.8
KCTX	Karacabey (Bur	4.39	101	ePN	Pn	19 38 12.7	+0.2	PRAR	RASCA	6.58 21	⇓iP	Pn	19 38 44.3	+1.8
BLCB	Balcova	4.40	130	ePN	Pn	19 38 13.2	+0.7	BURAR	Bucovina Array	6.58 15	⇓iP	Pn	19 38 43.2	+0.6
BZS	Buzias	4.41	350	⇑P	Pn	19 38 11.3	-1.4	BURAR	Bucovina Array	6.58 15	⇓iP	Pn	19 38 43.2	+0.6
BZS				S	Sn	19 39 04.4	+0.6	ARG	Arkhangelos	6.58 138	eP	Pn	19 38 44.2	+1.7
BZS	Buzias	4.41	350	⇑iP	Pn	19 38 11.3	-1.4	ARG	Arkhangelos	6.58 138	ePn	Pn	19 38 44.2	+1.7
BZS	Buzias	4.41	350	⇑iP	Pn	19 38 11.3	-1.4	ARG	Arkhangelos	6.58 138	ePN	Pn	19 38 44.2	+1.7
BZS				S	Sn	19 39 04.4	+0.6	ARG	Arkhangelos	6.58 138	ePn	Pn	19 38 44.2	+1.7
FGSL	Fruska Gora	4.42	332	ePn	Pn	19 38 11.9	-1.0	SHUT	Suhut-Afyon	6.60 112	ePN	Pn	19 38 44.2	+1.3
FRGS	Fruska Gora	4.42	332	ePn	Pn	19 38 11.9	-1.0	BUR08	Bucovina Ar. S	6.61 15	ePn	Pn	19 38 39.8	-3.1
PYL	PYLOS	4.44	190	ePn	Pn	19 38 14.1	+1.0	BUR08	Bucovina Ar. S	6.61 15	ePn	Pn	19 38 39.8	-3.1
PYL	PYLOS	4.44	190	ePN	Pn	19 38 14.1	+1.0	NVLJ	Novalja	6.63 302	*i* Pn	Pn	19 38 43.8	+0.6
PYL	PYLOS	4.44	190	ePn	Pn	19 38 14.1	+1.0	NVLJ			Sn	Sn	19 39 57.6	-0.9
SECR		4.48	32	⇑iP	Pn	19 38 15.4	+1.7	NVLJ	Novalja	6.63 302	*i* Pn	Pn	19 38 43.8	+0.6
SECR		4.48	32	⇑iP	Pn	19 38 15.4	+1.7	NVLJ			Sn	Sn	19 39 57.6	-0.9
VOIR		4.49	21	⇑P	Pn	19 38 14.2	+0.4	KARP	Karpathos	6.70 147	ePn	Pn	19 38 45.2	+1.1
VOIR		4.49	21	⇑iP	Pn	19 38 14.2	+0.4	KARP	Karpathos	6.70 147	ePN	Pn	19 38 45.2	+1.1
VOIR		4.49	21	⇑iP	Pn	19 38 14.2	+0.4	KARP	Karpathos	6.70 147	ePn	Pn	19 38 45.2	+1.1
DYR	Agios Nikonas	4.52	184	ePN	Pn	19 38 16.7	+2.5	ZKR	Zakros	6.74 155	ePn	Pn	19 38 46.1	+1.4
DYR	Agios Nikonas	4.52	184	ePn	Pn	19 38 16.7	+2.5	ZKR	Zakros	6.74 155	ePN	Pn	19 38 46.1	+1.4
IZM	Izmir	4.52	128	ePN	Pn	19 38 15.0	+0.7	ZKR	Zakros	6.74 155	ePn	Pn	19 38 46.1	+1.4
VLI	Veliai	4.56	178	ePn	Pn	19 38 15.4	+0.7	BEHE	Becsehely	6.74 322	⇑ePn	Pn	19 38 45.9	+1.3
VLI	Veliai	4.56	178	ePN	Pn	19 38 15.4	+0.7	BEHE			eSn	Sn	19 40 03.9	+2.8
VLI	Veliai	4.56	178	ePn	Pn	19 38 15.4	+0.7	BUD	Budapest	6.75 338	⇓ePn	Pn	19 38 45.1	+0.4
BGKT	Bogazkoy	4.58	49	ePN	Pn	19 38 15.8	+0.7	FETY	Fethiye	6.78 131	ePN	Pn	19 38 46.5	+1.2
TIM	Timisoara	4.59	347	⇓iP	Pn	19 38 16.8	+1.7	TRPA	Tarpa	6.85 359	⇑iP	Pn	19 38 45.6	-0.6
TIM	Timisoara	4.59	347	⇓iP	Pn	19 38 16.8	+1.7	TRPA	Tarpa	6.85 359	⇓ePn	Pn	19 38 45.9	-0.3
DEV	Deva	4.61	2	⇓P	Pn	19 38 16.9	+1.5	TRPA	Tarpa	6.85 359	⇑iP	Pn	19 38 45.6	-0.6
DEV	Deva	4.61	2	⇓iP	Pn	19 38 16.9	+1.5	PKSG		6.86 335	⇑ePn	Pn	19 38 46.4	+0.2
DEV	Deva	4.61	2	⇓iP	Pn	19 38 16.9	+1.5	PKSG			eSn	Sn	19 40 04.8	+0.8
ARMT	Armutlu	4.70	97	ePN	Pn	19 38 17.1	+0.4	PKST	T"s	6.86 332	⇓ePn	Pn	19 38 46.5	+0.2
APE	Apeiranthos	4.73	152	ePN	Pn	19 38 17.5	+0.4	PKST			eSn	Sn	19 40 07.2	+3.1
APE	Apeiranthos	4.73	152	eP	Pn	19 38 17.7	+0.5	BOJS	Bojanci	6.89 310	*i* Pn	Pn	19 38 47.2	+0.5
APE	Apeiranthos	4.73	152	ePn	Pn	19 38 17.7	+0.5	BOJS	Bojanci	6.89 310	Pn	Pn	19 38 47.2	+0.5
APE	Apeiranthos	4.73	152	ePN	Pn	19 38 17.7	+0.5	PSZ	Piszkesteto	6.94 344	⇓P	Pn	19 38 46.0	-1.4
APE	Apeiranthos	4.73	152	⇓iP	Pn	19 38 17.8	+0.5	PSZ	Piszkesteto	6.94 344	ePn	Pn	19 38 45.8	-1.7
APE	Apeiranthos	4.73	152	ePn	Pn	19 38 17.7	+0.5	PSZ	Piszkesteto	6.94 344	⇓iP	Pn	19 38 46.0	-1.4
ISR	Istrita	4.75	35	⇑P	Pn	19 38 19.0	+1.7	PSZ	Piszkesteto	6.94 344	ePn	Pn	19 38 46.1	-1.4
ISR	Istrita	4.75	35	⇑iP	Pn	19 38 19.0	+1.7	PSZ			eSn	Sn	19 40 03.6	-2.5
ISR	Istrita	4.75	35	⇑iP	Pn	19 38 19.0	+1.7	PSZ	Piszkesteto	6.94 344	⇓iP	Pn	19 38 46.0	-1.4
AMRR	Amara	4.75	44	⇑P	Pn	19 38 18.2	+0.9	ISP	Isparta	6.94 117	ePN	Pn	19 38 49.4	+1.8
AMRR	Amara	4.75	44	⇑iP	Pn	19 38 18.2	+0.9	ISP	Isparta	6.94 117	eP	Pn	19 38 48.8	+1.3
AMRR	Amara	4.75	44	⇑iP	Pn	19 38 18.2	+0.9	ISP	Isparta	6.94 117	ePn	Pn	19 38 48.8	+1.3
MDNY	Mudanya-Bursa	4.76	99	ePN	Pn	19 38 18.2	+0.7	ISP	Isparta	6.94 117	ePn	Pn	19 38 48.8	+1.3
KLYT	Kilyos	4.76	88	ePN	Pn	19 38 18.0	+0.6	SVRH	Sivrihisar-ESK	6.96 102	ePN	Pn	19 38 47.9	0.0
PGOR	Pogoanele	4.78	39	⇓iP	Pn	19 38 19.8	+2.0	AQU	L'Aquila	7.05 282	ePn	Pn	19 38 46.9	-2.1
PGOR	Pogoanele	4.78	39	S	Sg	19 39 36.5	-3.4	AQU	L'Aquila	7.05 282	⇑iP	Pn	19 38 48.3	-0.7
PGOR	Pogoanele	4.78	39	⇓iP	Pn	19 38 19.8	+2.0	AQU	L'Aquila	7.05 282	ePn	Pn	19 38 46.9	-2.1
ISK	Istanbul-Kandi	4.79	90	ePN	Pn	19 38 18.5	+0.7	AQU	L'Aquila	7.05 282	⇑iP	Pn	19 38 48.3	-0.7
DST	Dursunbey	4.80	108	ePN	Pn	19 38 18.7	+0.7	ELL	Elmali	7.19 127	ePN	Pn	19 38 52.1	+1.1
MLR	Muntele Rosu	4.82	28	Pn	Pn	19 38 19.6	+1.1	KIS	Kishinev	7.20 35	eP	Pn	19 38 51.0	0.0
MLR				Lg	Lg	19 39 41.2		KIS			eS	Sn	19 40 16.0	+3.5
MLR	Muntele Rosu	4.82	28	⇑iP	Pn	19 38 19.5	+1.1	KIS			MLR	MLR		
MLR	Muntele Rosu	4.82	28	S	Sb	19 39 33.6	+5.2		comp=E,2µm,10.0s					
MLR	Muntele Rosu	4.82	28	Pn	Pn	19 38 19.6	+1.1	KIS			MLR	MLR		
	comp=E,5.2nm,0.3s,baz=213,slow=5.6,SNR=97								comp=Z,3µm,10.0s					
MLR				LR	LR	19 39 33.1		KIS			MLR	MLR		
	comp=E,162nm,19.1s,baz=196,slow=31								comp=Z,4µm,12.0s					
MLR				Lg	Lg	19 39 41.2		KIS	Kishinev	7.20 35	eP	Pn	19 38 51.0	0.0
	comp=E,9.1nm,0.3s,baz=254,slow=19,SNR=3.3							KIS			eS	Sn	19 40 16.0	+3.5
MLR	Muntele Rosu	4.82	28	Pn	Pn	19 38 19.6	+1.1	KIS			eLi		19 41 00.0	
MLR				Lg	Lg	19 39 41.2		KIS			*i* LQ	LQ	19 41 08.0	
BUY	Buyukada	4.85	93	ePN	Pn	19 38 19.2	+0.5	KIS			*i* LR	LR	19 42 00.0	
CVD	Cernavoda	4.95	50	⇓P	Pn	19 38 22.2	+2.2		comp=Z,4µm,12.0s					
CVD	Cernavoda	4.95	50	⇓iP	Pn	19 38 22.2	+2.2	KIS	Kishinev	7.20 35	eP	Pn	19 38 51.0	0.0
CVD	Cernavoda	4.95	50	⇓iP	Pn	19 38 22.2	+2.2	VISS	Visnje	7.30 311	*i* Pn	Pn	19 38 52.8	+0.4
GEMT	Gemlik	4.97	98	ePN	Pn	19 38 21.1	+0.7	VISS	Visnje	7.30 311	*i* Pn	Pn	19 38 52.8	+0.4
MANR	Mangalia	5.02	58	⇓iP	Pn	19 38 21.6	+0.6	GROS	Grobnik	7.35 317	*i* Pn	Pn	19 38 52.7	-0.4
MANR	Mangalia	5.02	58	⇓iP	Pn	19 38 21.6	+0.6	GROS	Grobnik	7.35 317	*i* Pn	Pn	19 38 52.7	-0.4
TIP	Timpagrande	5.03	247	ePn	Pn	19 38 21.1	-0.1	UZH	Uzhgorod	7.36 358	eP	Pn	19 38 54.3	+1.2
TIP	Timpagrande	5.03	247	ePn	Pn	19 38 21.1	-0.1	UZH			eS	Sn	19 40 17.3	+1.0
YLV	Yalova	5.09	96	ePN	Pn	19 38 23.1	+1.1	UZH			MLR	MLR		
HARR	Harsova	5.12	46	⇑P	Pn	19 38 23.2	+0.8		comp=N,1µm,5.0s					
HARR	Harsova	5.12	46	⇑iP	Pn	19 38 23.2	+0.8	UZH			MLR	MLR		
HARR	Harsova	5.12	46	⇑iP	Pn	19 38 23.2	+0.8		comp=E,1µm,5.0s					
GRER		5.14	36	⇓iP	Pn	19 38 25.5	+2.8	UZH			MLR	MLR		
GRER		5.14	36	⇓iP	Pn	19 38 25.5	+2.8		comp=Z,2µm,5.0s					
EFOR	EFORIE	5.18	55	⇓iP	Pn	19 38 24.3	+1.1	KIZT	Kizilcal	7.42 106	ePN	Pn	19 38 54.4	+0.3
EFOR	EFORIE	5.18	55	⇓iP	Pn	19 38 24.3	+1.1	SAFT	Safranbolu	7.51 87	ePN	Pn	19 38 55.5	+0.3
SILT	Sile	5.22	89	ePN	Pn	19 38 24.7	+0.9	SKDS	Skadanscina	7.64 307	*i* Pn	Pn	19 38 57.1	0.0
TIRR	Tirgusor	5.25	51	eP	Pn	19 38 24.5	+0.4	SKDS	Skadanscina	7.64 307	*i* Pn	Pn	19 38 57.1	0.0
TIRR	Tirgusor	5.25	51	ePn	Pn	19 38 24.4	+0.4	KOLS	Kolonicke sedl	7.66 358	eP	Pn	19 38 57.7	+0.4
TIRR	Tirgusor	5.25	51	⇑iP	Pn	19 38 24.6	+0.4	KOLS			MLR	MLR		
TIRR	Tirgusor	5.25	51	⇑iP	Pn	19 38 24.6	+0.4		comp=Z,600nm,1.5s					
KULA	Kula-Manisa	5.33	119	ePN	Pn	19 38 26.5	+1.0	KOLS	Kolonicke sedl	7.66 358	ePN	Pn	19 38 57.7	+0.4
ADVT	Abdulvahap	5.38	97	ePN	Pn	19 38 27.1	+1.0	KOLS			ePG		19 39 33.5	
PLOR	Plostina	5.39	31	⇑P	Pn	19 38 27.4	+1.3	KOLS			eSN	Sn	19 40 12.9	-11
PLOR	Plostina	5.39	31	⇑iP	Pn	19 38 27.4	+1.3	KOLS			eSG		19 41 11.4	
PLOR	Plostina	5.39	31	⇑iP	Pn	19 38 27.4	+1.3	KOLS	Kolonicke sedl	7.66 358	ePn	Pn	19 38 57.7	+0.4
CUC	Castrocucco	5.41	259	ePn	Pn	19 38 28.6	+0.1	CRVS	Cervenica-Dubn	7.68 354	eP	Pn	19 38 55.4	-2.1
CUC	Castrocucco	5.41	259	ePN	Pn	19 38 28.6	+0.1	CRVS			MLR	MLR		
ANKY	Antikythira Is	5.42	175	ePN	Pn	19 38 28.8	+2.2		comp=Z,300nm,1.8s					
ANKY	Antikythira Is	5.42	175	ePN	Pn	19 38 28.8	+2.2	CRVS	Cervenica-Dubn	7.68 354	ePN	Pn	19 38 55.4	-2.1
ANKY	Antikythira Is	5.42	175	ePn	Pn	19 38 28.8	+2.2	CRVS			ePG		19 39 31.9	
VRI	Vrincioaia	5.43	31	⇑P	Pn	19 38 28.3	+1.6	CRVS			eSG		19 41 12.8	
VRI	Vrincioaia	5.43	31	⇑iP	Pn	19 38 28.3	+1.6	VYHS	Vyhne	7.72 340	eP	Pn	19 38 58.6	+0.4
VRI	Vrincioaia	5.43	31	S	Sn	19 39 22.1	-6.8	VYHS			MLR	MLR		
VRI	Vrincioaia	5.43	31	⇑iP	Pn	19 38 28.3	+1.6		comp=Z,200nm,2.4s					
TVSB	Tavsanli	5.46	107	ePN	Pn	19 38 28.3	+1.1	VYHS	Vyhne	7.72 340	ePN	Pn	19 38 58.6	+0.4
CJR	Cluj-Napoca	5.47	6	⇑iP	Pn	19 38 27.5	+0.2	VYHS	Vyhne	7.72 340	eSG		19 41 14.4	
CAVI	Cavuskoy	5.51	99	ePN	Pn	19 38 28.7	+0.9	VYHS	Vyhne	7.72 340	ePn	Pn	19 38 58.6	+0.4
DRGR		5.51	360	⇓P	Pn	19 38 27.3	-0.6	SOKA	Soboth	7.74 317	⇑iPn	Pn	19 38 58.1	-0.3
DRGR		5.51	360	⇓iP	Pn	19 38 27.3	-0.6	SOKA	Soboth	7.74 317	Pn	Pn	19 38 58.1	-0.3
DRGR		5.51	360	⇓iP	Pn	19 38 27.3	-0.6	SOP	Sopron	7.77 328	⇓ePn	Pn	19 38 59.3	+0.5
BODT	Bodrum	5.51	138	ePN	Pn	19 38 28.9	+1.1	SOP			eSn	Sn	19 40 27.4	+0.9
PETR	Petresti	5.52	35	⇑iP	Pn	19 38 29.8	+1.9	ANTO	Ankara	7.79 97	ePN	Pn	19 38 59.4	+0.2
PETR	Petresti	5.52	35	⇑iP	Pn	19 38 29.8	+1.9	ANTO	Ankara	7.79 97	eP	Pn	19 39 00.5	+1.3
CFR	Carcaliu	5.55	44	⇑P	Pn	19 38 28.7	+0.4	ANTO	Ankara	7.79 97	ePn	Pn	19 39 00.5	+1.3
CFR	Carcaliu	5.55	44	⇑iP	Pn	19 38 28.7	+0.4	ANTO	Ankara	7.79 97	ePn	Pn	19 39 00.5	+1.3
CFR	Carcaliu	5.55	44	⇑iP	Pn	19 38 28.7	+0.4	JAVS	Javornik	7.80 309	*i* Pn	Pn	19 39 00.2	+1.0
MLSB	Milas	5.58	134	ePN	Pn	19 38 29.9	+1.1	JAVS	Javornik	7.80 309	*i* Pn	Pn	19 39 00.2	+1.0
PKSM	Moragy	5.75	330	⇑P	Pn	19 38 30.0	-1.1	OBKA	Obir	7.88 314	⇓*i*Pn	Pn	19 39 00.0	-0.5
PKSM	Moragy	5.75	330	⇑iP	Pn	19 38 30.0	-1.1		comp=N,800nm,9.0s					
PKSM	Moragy	5.75	330	⇓ePn	Pn	19 38 31.0	-0.1	LVV			MLR	MLR		
PKSM	Moragy	5.75	330	⇑iP	Pn	19 38 30.0	-1.1		comp=E,500nm,9.0s					
SPNC	Sapanca-Adapaz	5.77	93	ePN	Pn	19 38 32.7	+1.3	LVV			MLR	MLR		
PKS6	Bocsa	5.79	338	⇑ePn	Pn	19 38 31.4	-0.2		comp=Z,600nm,9.0s					
PKS2	Kecel	5.80	335	⇑ePn	Pn	19 38 31.7	0.0	SEV	Sevastopol'	8.67 64	eP	Pn	19 39 09.8	-1.3
PKS2				eSn	Sn	19 39 40.3	+2.4	SEV			eS	Sn	19 40 42.7	-5.8
GPA	Golpazari	5.84	97	ePN	Pn	19 38 33.6	+1.2	SULT	Sultanhani-AKS	8.86 107	ePN	Pn	19 39 14.4	+0.5
TLCR		5.92	47	⇑P	Pn	19 38 34.4	+1.0	KBA	Koelnbreinsper	8.89 314	⇑iPn	Pn	19 39 14.5	+0.2
TLCR		5.92	47	⇑iP	Pn	19 38 34.4	+1.0		SNR=25					
TLCR		5.92	47	⇑iP	Pn	19 38 34.4	+1.0	KBA	Koelnbreinsper	8.89 314	Pn	Pn	19 39 14.5	+0.2
TESR	Tescani	5.95	27	⇓iP	Pn	19 38 34.8	+1.0		SNR=25					
TESR	Tescani	5.95	27	⇓iP	Pn	19 38 34.8	+1.0	MOA	Molln	8.92 320	⇑*i*Pn	Pn	19 39 16.1	+1.5
GULT	Gulveren	5.97	96	ePN	Pn	19 38 35.4	+1.2		SNR=13					
VAM	Vamos	5.97	168	eP	Pn	19 38 36.5	+2.3	MOA	Molln	8.92 320	Pn	Pn	19 39 16.1	+1.5
VAM	Vamos	5.97	168	ePn	Pn	19 38 36.5	+2.3		SNR=13					
VAM	Vamos	5.97	168	ePN	Pn	19 38 36.5	+2.3	YAL	Yalta	8.98 65	eP	Pn	19 39 17.0	+1.6
VAM	Vamos	5.97	168	ePn	Pn	19 38 36.5	+2.3	YAL			eS	Sn	19 40 52.3	-3.9
YER	Yerkesik	5.98	132	ePN	Pn	19 38 35.6	+1.4	BYBT	Boyabat	9.06 85	ePN	Pn	19 39 17.1	+0.6
KHL	Karahalli	6.01	117	ePN	Pn	19 38 36.2	+1.5	SIM	Simferopol'	9.10 62	*de*P	Pn	19 39 16.0	-1.1
CEL	Celeste	6.06	242	ePn	Pn	19 38 34.5	-1.0	SIM			eS	Sn	19 40 58.0	-1.2
CEL	Celeste	6.06	242	ePn	Pn	19 38 34.5	-1.0	SIM			pmax	pmax		
ALT	Altintas	6.08	109	ePN	Pn	19 38 36.7	+1.0		comp=Z,45nm,0.7s					
PKS9	Tamasi	6.20	330	⇑ePn	Pn	19 38 37.5	+0.2	SIM			smax	smax		
PKS9				eSn	Sn	19 39 49.9	+2.0		comp=N,172nm,0.9s					
IDI	Anoyia	6.22	163	ePn	Pn	19 38 34.7	-2.9	SIM			smax	smax		
IDI	Anoyia	6.22	163	ePN	Pn	19 38 39.9	+2.3		comp=E,150nm,0.8s					
IDI	Anoyia	6.22	163	ePn	Pn	19 38 39.9	+2.3	SIM			MLR	MLR		
BMR	Baia Mare	6.42	5	⇓P	Pn	19 38 41.3	+1.1		comp=Z,250nm,14.4s					
BMR	Baia Mare	6.42	5	⇓iP	Pn	19 38 41.3	+1.1	CORM	Corum	9.11 93	ePN	Pn	19 39 17.6	+0.4
BMR	Baia Mare	6.42	5	⇓iP	Pn	19 38 41.3	+1.1	VRAC	Vranov	9.12 334	Pn	Pn	19 39 18.3	+1.0
NPS	Neapolis	6.42	158	eP	Pn	19 38 43.5	+3.2	VRAC			Sn	Sn	19 40 59.0	-0.5
NPS	Neapolis	6.42	158	ePn	Pn	19 38 43.5	+3.2	VRAC	Vranov	9.12 334	⇓iP	Pn	19 39 17.2	-0.1
NPS	Neapolis	6.42	158	ePn	Pn	19 38 43.5	+3.2	VRAC	Vranov	9.12 334	Pn	Pn	19 39 18.3	+1.0
NPS	Neapolis	6.42	158	ePn	Pn	19 38 43.5	+3.2		comp=Z,0.5nm,0.3s,baz=152,slow=13,SNR=14					
ESKT	Eskisehir	6.45	103	ePN	Pn	19 38 41.6	+0.9	VRAC			Sn	Sn	19 40 59.0	-0.5
MDUB	Mudurnu	6.47	94	ePN	Pn	19 38 42.2	+1.1		comp=Z,1.7nm,0.3s,baz=111,slow=6.9,SNR=6.6					
LAST	Lasithi	6.48	160	ePn	Pn	19 38 43.9	+2.7	VRAC			LR	LR	19 42 47.2	
LAST	Lasithi	6.48	160	ePN	Pn	19 38 43.9	+2.7		comp=Z,368nm,21.3s,baz=152,slow=38					
LAST	Lasithi	6.48	160	ePn	Pn	19 38 43.9	+2.7	VRAC	Vranov	9.12 334	⇓iP	Pn	19 39 17.2	-0.1
KWP	Kalwaria Pacla	8.36	360	⇑P	Pn	19 39 08.4	+1.6	VRAC	Vranov	9.12 334	Pn	Pn	19 39 18.3	+1.0
KWP	Kalwaria Pacla	8.36	360	⇑iP	Pn	19 39 07.3	+0.5	VRAC			Sn	Sn	19 40 59.0	-0.5
MYKA	Terra Mystica	8.46	312	⇑iPn	Pn	19 39 09.0	+0.7	OKC	Ostrava-Krasne	9.14 341	eP	Pn	19 39 17.4	-0.2
MYKA	Terra Mystica	8.46	312	Pn	Pn	19 39 09.0	+0.7	OKC			MLR	MLR		
BR131	Keskin Array S	8.46	97	ePn	Pn	19 39 05.5	-2.8		comp=Z,2µm,11.9s					
	comp=Z,6.4nm,0.4s							OKC	Ostrava-Krasne	9.14 341	ePN	Pn	19 39 17.4	-0.2
BR131	Keskin Array S	8.46	97	ePn	Pn	19 39 05.6	-2.8	OKC			AMS	AMS	19 43 40.0	
	comp=Z,6.4nm,0.4s								comp=Z,2µm,11.9s					
BRTR	Keskin Array B	8.46	97	Pn	Pn	19 39 09.0	+0.6	OKC	Ostrava-Krasne	9.14 341	Pn	Pn	19 39 17.4	-0.2
BRTR				Sn	Sn	19 40 41.6	-2.0	ABTA	Abfaltersbach	9.16 310	*i* Pn	Pn	19 39 18.6	+0.6
BRTR				Lg	Lg	19 41 29.8			SNR=33					
BRTR	Keskin Array B	8.46	97	Pn	Pn	19 39 09.0	+0.6	ABTA	Abfaltersbach	9.16 310	Pn	Pn	19 39 18.6	+0.6
	comp=Z,1.3nm,0.3s,baz=278,slow=32,SNR=28								SNR=33					
BRTR				Sn	Sn	19 40 41.7	-2.0	OJC	Ojcow	9.17 348	eP	Pn	19 39 18.0	0.0
	comp=Z,1.0nm,0.3s,baz=317,slow=14,SNR=4.6							OJC	Ojcow	9.17 348	ePn	Pn	19 39 18.0	0.0
BRTR				Lg	Lg	19 41 29.8		OJC	Ojcow	9.17 348	eP	Pn	19 39 19.3	+1.3
	baz=297,slow=16,SNR=3.1							OJC			*e*		19 39 22.5	
BRTR	Keskin Array B	8.46	97	Pn	Pn	19 39 09.0	+0.6	OJC			eSS	Sn	19 41 23.4	+22
BRTR				Sn	Sn	19 40 41.7	-2.0	OJC	Ojcow	9.17 348	ePn	Pn	19 39 18.0	0.0
LVV	L'vov	8.59	6	eP	Pn	19 39 14.0	+4.0	ALU	Alushta	9.21 64	eP	Pn	19 39 17.4	-1.1
LVV				eS	Sn	19 40 51.2	+4.6	MORC	Moravsky Berou	9.24 339	⇓P	Pn	19 39 18.0	-1.0
LVV				MLR	MLR			MORC	Moravsky Berou	9.24 339	ePn	Pn	19 39 17.9	-1.1
	comp=N,800nm,9.0s							MORC	Moravsky Berou	9.24 339	⇓iP	Pn	19 39 18.0	-1.0
LVV				MLR	MLR			MORC	Moravsky Berou	9.24 339	⇓iP	Pn	19 39 18.0	-1.0
	comp=E,500nm,9.0s							DIKM	Dikmen	9.42 84	ePN	Pn	19 39 21.9	+0.5
LVV				MLR	MLR			TREC	Trest	9.50 330	eP	Pn	19 39 22.8	+0.3
	comp=Z,600nm,9.0s							TREC			*e*		19 41 05.1	
SEV	Sevastopol'	8.67	64	eP	Pn	19 39 09.8	-1.3	TREC			MLR	MLR		
SEV				eS	Sn	19 40 42.7	-5.8		comp=Z,1µm,9.3s					
SULT	Sultanhani-AKS	8.86	107	ePN	Pn	19 39 14.4	+0.5	TREC	Trest	9.50 330	ePN	Pn	19 39 22.8	+0.3
KBA	Koelnbreinsper	8.89	314	⇑iPn	Pn	19 39 14.5	+0.2	TREC			eSN	Sn	19 41 05.1	-3.8
	SNR=25							TREC			AMS	AMS	19 43 20.0	
KBA	Koelnbreinsper	8.89	314	Pn	Pn	19 39 14.5	+0.2		comp=Z,1µm,9.3s					
	SNR=25							TREC	Trest	9.50 330	Pn	Pn	19 39 22.8	+0.3
MOA	Molln	8.92	320	⇑*i*Pn	Pn	19 39 16.1	+1.5	RJOB	Jochberg	9.59 316	ePn	Pn	19 39 25.5	+1.7
	SNR=13							SUDU	Sudak	9.68 64	⇓iP	Pn	19 39 25.3	+0.4
MOA	Molln	8.92	320	Pn	Pn	19 39 16.1	+1.5	SUDU			eS	Sn	19 41 08.7	-4.6
	SNR=13							GEC2	GERESS Array S	9.89 323	ePn	Pn	19 39 28.7	+0.7
YAL	Yalta	8.98	65	eP	Pn	19 39 17.0	+1.6	GEC2	GERESS Array S	9.89 323	eP	Pn	19 39 28.7	+0.7
YAL				eS	Sn	19 40 52.3	-3

KIEV	Kiev	10.44	23	eP		Pn	19 39 34.6	-0.7	
KIEV	Kiev	10.44	23	ePn		Pn	19 39 34.6	-0.7	
KIEV	Kiev	10.44	23	eP		Pn	19 39 34.6	-0.7	
AKASG	Malin Array Be	10.45	23	c i P		Pn	19 39 36.4	+0.9	
AKASG				pmax	pmax				
	comp=Z,11nm,0.8s								
AKASG	Malin Array Be	10.45	23	Pn		Pn	19 39 34.0	-1.5	
AKASG				Sn	Sn		19 41 40.3	+8.1	
AKASG				Lg	Lg		19 42 38.4		
AKASG	Malin Array Be	10.45	23	Pn		Pn	19 39 34.0	-1.5	
	comp=Z,2.3nm,0.3s,baz=203,slow=12,SNR=9.8								
AKASG				Sn	Sn		19 41 40.3	+8.1	
	comp=Z,2.4nm,0.3s,baz=203,slow=22,SNR=4.2								
AKASG				Lg	Lg		19 42 38.4		
	baz=195,slow=25,SNR=2.3								
AKASG	Malin Array Be	10.45	23	Pn		Pn	19 39 34.0	-1.5	
AKASG	Malin Array Be	10.45	23	i P		Pn	19 39 36.4	+0.9	
	comp=Z,11nm,0.8s								
AKASG				Sn	Sn		19 41 40.3	+8.1	
FUORN	Ofenpass-Fuorn	10.45	305	ePn		Pn	19 39 35.5	-0.2	
FUORN	Ofenpass-Fuorn	10.45	305	ePn		Pn	19 39 35.5	-0.2	
WET	Wettzell	10.49	322	ePn		Pn	19 39 38.0	+2.0	
WET	Wettzell	10.49	322	eP		Pn	19 39 38.0	+2.0	
WET	Wettzell	10.49	322	eP		Pn	19 39 38.0	+2.0	
KSP	Ksiaz	10.55	337	eP		Pn	19 39 39.1	+2.2	
KSP	Ksiaz	10.55	337	eP		Pn	19 39 44.3	+7.4	
KSP	Ksiaz	10.55	337	eP		Pn	19 39 39.1	+2.2	
RETA	Reutte	10.57	310	i Pn		Pn	19 39 37.7	+0.5	
	SNR=8.0								
RETA	Reutte	10.57	310	Pn		Pn	19 39 37.7	+0.5	
	SNR=8.0								
BEL	Belsk	10.65	353	eP		Pn	19 39 42.6	+4.4	
DAVOX	Davos/Dischmat	10.76	305	Pn		Pn	19 39 40.5	+0.5	
DAVOX				Sn		Sn	19 41 42.4	+2.3	
DAVOX				Lg	Lg		19 43 09.6		
DAVOX	Davos/Dischmat	10.76	305	Pn		Pn	19 39 40.4	+0.5	
	comp=Z,2.6nm,0.3s,baz=128,slow=12,SNR=38								
DAVOX				Sn		Sn	19 41 42.4	+2.3	
	comp=Z,0.4nm,0.3s,baz=50,slow=23,SNR=4.0								
DAVOX				Lg	Lg		19 43 09.6		
	comp=Z,0.3nm,0.3s,baz=325,slow=19,SNR=2.0								
DAVOX				LR	LR		19 43 57.0		
	comp=Z,857nm,18.8s,baz=111,slow=38								
DAVOX	Davos/Dischmat	10.76	305	P		Pn	19 39 40.4	+0.5	
	comp=Z,3.0nm,0.3s								
DAVOX				S		Sn	19 41 42.4	+2.3	
	comp=Z,857nm,18.8s								
PVCC	Panska Ves	10.85	331	eP		Pn	19 39 41.1	+0.1	
PVCC				MLR	MLR				
	comp=Z,1μm,10.2s								
PVCC	Panska Ves	10.85	331	ePN		Pn	19 39 41.1	+0.1	
PVCC				AMS	AMS		19 44 00.0		
	comp=Z,1μm,10.2s								
PVCC	Panska Ves	10.85	331	Pn		Pn	19 39 41.1	+0.1	
TUE	Stuetta	10.96	303	ePn		Pn	19 39 42.6	0.0	
TUE	Stuetta	10.96	303	ePn		Pn	19 39 42.7	0.0	
DAVA	Damuels	10.99	307	‖ i Pn		Pn	19 39 42.2	-0.8	
	SNR=12								
DAVA	Damuels	10.99	307	Pn		Pn	19 39 42.2	-0.8	
	SNR=12								
ROTZ	Rotzenmuhle	11.24	323	ePn		Pn	19 39 46.9	+0.6	
ANN	Anapa	11.32	67	eP		Pn	19 39 47.7	+0.2	
ANN				eS		Sn	19 41 53.7	+0.1	
ANN				pmax	pmax				
	comp=Z,16nm,1.0s								
ANN	Anapa	11.32	67	eP		Pn	19 39 47.7	+0.2	
	comp=Z,16nm,1.0s								
ANN				eS		Sn	19 41 53.7	+0.1	
BRG	Berggiesshubel	11.36	331	eP		Pn	19 39 51.6	+3.7	
	comp=Z,17nm,1.9s								
BRG				i			19 40 35.8		
	comp=Z,5.2nm,0.7s								
BRG				S		Sn	19 42 00.0	+5.4	
BRG									
	comp=N,1μm,7.5s								
BRG									
	comp=E,1μm,8.5s								
BRG									
	comp=Z,1μm,10.2s								
BRG	Berggiesshubel	11.36	331	eP		Pn	19 39 51.6	+3.7	
BRG				S		Sn	19 42 00.0	+5.4	
BRG				pmax	pmax				
	comp=Z,17nm,1.9s								
BRG				MLR	MLR				
	comp=N,1μm,7.5s								
BRG				MLR	MLR				
	comp=E,1μm,8.5s								
BRG				MLR	MLR				
	comp=Z,1μm,10.2s								
NKC	Novy Kostel	11.47	325	eP		Pn	19 39 49.4	0.0	
NKC				MLR	MLR				
	comp=Z,1μm,11.1s								
NKC	Novy Kostel	11.47	325	ePN		Pn	19 39 49.4	0.0	
NKC				AMS	AMS		19 44 10.0		
	comp=Z,1μm,11.1s								
NKC	Novy Kostel	11.47	325	Pn		Pn	19 39 49.4	0.0	
SAOF	Saorge	11.50	289	eP		Pn	19 39 49.5	-0.4	
SAOF	Saorge	11.50	289	eP		Pn	19 39 49.5	-0.4	
SAOF	Saorge	11.50	289	eP		Pn	19 39 49.5	-0.4	
SAOF	Saorge	11.50	289	eP		Pn	19 39 49.5	-0.4	
SBF	Sospel	11.57	288	eP		Pn	19 39 48.7	-2.2	
	comp=Z,15nm,0.4s								
SBF	Sospel	11.57	288	eP		Pn	19 39 48.7	-2.2	
SBF				pmax	pmax				
	comp=Z,15nm,0.4s								
SBF	Sospel	11.57	288	eP		Pn	19 39 48.7	-2.2	
	comp=Z,15nm,0.4s								
SBF	Sospel	11.57	288	eP		Pn	19 39 48.7	-2.2	
	comp=Z,7.5nm,0.4s								
AUTN	L'Aution	11.59	289	eP		Pn	19 39 54.1	+2.7	
AUTN	L'Aution	11.59	289	eP		Pn	19 39 54.1	+2.7	
AUTN	L'Aution	11.59	289	eP		Pn	19 39 54.1	+2.7	
AUTN	L'Aution	11.59	289	eP		Pn	19 39 54.1	+2.7	
TANN	Tannenbergstha	11.60	325	ePn		Pn	19 39 52.0	+0.8	
TOUF	Mont Tournerai	11.72	289	eP		Pn	19 39 53.8	+0.7	
TOUF	Mont Tournerai	11.72	289	eP		Pn	19 39 53.8	+0.7	
TOUF	Mont Tournerai	11.72	289	eP		Pn	19 39 53.8	+0.7	
TOUF	Mont Tournerai	11.72	289	eP		Pn	19 39 53.8	+0.7	
KEST	Kesra	11.85	246	ePn		Pn	19 39 55.2	+0.4	
KEST	Kesra	11.85	246	Pn		Pn	19 39 57.9	+3.1	
	comp=Z,0.1nm,0.3s,baz=44,slow=2.0,SNR=10								
KEST	Kesra	11.85	246	ePn		Pn	19 39 55.2	+0.4	
SPAK	Spaichingen-Ko	12.03	309	eP		Pn	19 39 56.4	-0.8	
SPAK	Spaichingen-Ko	12.03	309	eP		Pn	19 39 56.4	-0.8	
CLL	Collm	12.06	330	ePn		Pn	19 39 56.7	-0.9	
CLL	Collm	12.06	330	eP		Pn	19 40 00.0	+2.4	
CLL	Collm	12.06	330	eP		Pn	19 40 00.0	+2.4	
FRF	La Foret Royal	12.10	286	eP		Pn	19 39 55.0	-3.1	
	comp=Z,20nm,0.7s								
FRF	La Foret Royal	12.10	286	eP		Pn	19 39 55.0	-3.1	
FRF				pmax	pmax				
	comp=Z,20nm,0.7s								
FRF	La Foret Royal	12.10	286	eP		Pn	19 39 55.0	-3.1	
	comp=Z,20nm,0.7s								
FRF	La Foret Royal	12.10	286	eP		Pn	19 39 55.0	-3.1	
	comp=Z,10.0nm,0.7s								
MOX	Moxa	12.13	324	ePn		Pn	19 40 00.2	+1.7	
MOX	Moxa	12.13	324	eP		Pn	19 40 00.2	+1.7	
MOX	Moxa	12.13	324	eP		Pn	19 40 00.2	+1.7	
STU	Stuttgart	12.14	313	ePn		Pn	19 39 57.9	-0.8	
STU	Stuttgart	12.14	313	eP		Pn	19 39 58.7	0.0	
STU	Stuttgart	12.14	313	ePn		Pn	19 39 58.7	0.0	
STU	Stuttgart	12.14	313	eP		Pn	19 39 58.7	0.0	
MBDF	Montbardon	12.18	292	eP		Pn	19 39 57.1	-2.2	
	comp=Z,38nm,0.8s								
MBDF	Montbardon	12.18	292	eP		Pn	19 39 57.1	-2.2	
MBDF				pmax	pmax				
	comp=Z,38nm,0.8s								
MBDF	Montbardon	12.18	292	eP		Pn	19 39 57.1	-2.2	
	comp=Z,38nm,0.8s								
MBDF	Montbardon	12.18	292	eP		Pn	19 39 57.1	-2.2	
	comp=Z,19nm,0.8s								
LMR	La Mourre	12.18	285	eP		Pn	19 39 58.2	-1.0	
	comp=Z,16nm,0.9s								
LMR	La Mourre	12.18	285	eP		Pn	19 39 58.2	-1.0	
LMR				pmax	pmax				
	comp=Z,16nm,0.9s								
LMR	La Mourre	12.18	285	eP		Pn	19 39 58.2	-1.0	
	comp=Z,16nm,0.9s								
LMR	La Mourre	12.18	285	eP		Pn	19 39 58.2	-1.0	
	comp=Z,7.9nm,0.9s								
SENIN	Lac Senin/Sane	12.24	300	ePn		Pn	19 40 00.6	+0.4	
SENIN	Lac Senin/Sane	12.24	300	ePn		Pn	19 40 00.6	+0.4	
LPG	La Plagne	12.36	295	eP		Pn	19 40 00.1	-1.8	
	comp=Z,54nm,0.8s								
LPG	La Plagne	12.36	295	eP		Pn	19 40 00.1	-1.8	
LPG				pmax	pmax				
	comp=Z,54nm,0.8s								
LPG	La Plagne	12.36	295	eP		Pn	19 40 00.1	-1.8	
	comp=Z,54nm,0.8s								
LPG	La Plagne	12.36	295	eP		Pn	19 40 00.1	-1.8	
	comp=Z,27nm,0.8s								
LPL	La Plagne	12.38	295	eP		Pn	19 40 00.6	-1.5	
	comp=Z,26nm,0.6s								
LPL	La Plagne	12.38	295	eP		Pn	19 40 00.6	-1.5	
LPL				pmax	pmax				
	comp=Z,26nm,0.6s								
LPL	La Plagne	12.38	295	eP		Pn	19 40 00.6	-1.5	
	comp=Z,26nm,0.6s								
LPL	La Plagne	12.38	295	eP		Pn	19 40 00.6	-1.5	
	comp=Z,13nm,0.6s								
FELD	Feldberg im Sc	12.39	307	eP		Pn	19 40 00.7	-1.4	
FELD	Feldberg im Sc	12.39	307	eP		Pn	19 40 00.7	-1.4	
FELD	Feldberg im Sc	12.39	307	eP		Pn	19 40 00.7	-1.4	
BFO	Black Forest	12.41	309	ePn		Pn	19 40 01.1	-1.2	
BFO	Black Forest	12.41	309	eP		Pn	19 40 01.2	-1.1	
BFO	Black Forest	12.41	309	ePn		Pn	19 40 01.2	-1.1	
BFO	Black Forest	12.41	309	Pn		Pn	19 40 01.2	-1.1	
	comp=Z,107nm,0.6s,SNR=5.8								
BFO	Black Forest	12.41	309	eP		Pn	19 40 01.2	-1.1	
RSL	Roselend	12.49	296	eP		Pn	19 40 04.0	+0.4	
RSL	Roselend	12.49	296	eP		Pn	19 40 04.0	+0.4	
RSL	Roselend	12.49	296	eP		Pn	19 40 04.0	+0.4	
RSL	Roselend	12.49	296	eP		Pn	19 40 04.0	+0.4	
BBS	Basel-Blauen	12.51	305	eP		Pn	19 40 02.7	-1.1	
BBS	Basel-Blauen	12.51	305	eP		Pn	19 40 02.7	-1.1	
BBS	Basel-Blauen	12.51	305	eP		Pn	19 40 02.7	-1.1	
GKP	Gorka Lasztor	12.56	345	eP		Pn	19 40 08.6	+4.3	
OG01	Vacheresse	12.64	299	eP		Pn	19 40 05.9	+0.4	
OG01	Vacheresse	12.64	299	eP		Pn	19 40 05.9	+0.4	
OG01	Vacheresse	12.64	299	eP		Pn	19 40 05.9	+0.4	
SUW	Suwalki	12.75	1	eP		Pn	19 40 10.1	+3.2	
SUW	Suwalki	12.75	1	ePn		Pn	19 40 10.1	+3.2	
SUW	Suwalki	12.75	1	eP		Pn	19 40 07.7	+0.9	
SUW	Suwalki	12.75	1	eP		Pn	19 40 07.8	+0.9	
SUW	Suwalki	12.75	1	ePn		Pn	19 40 10.1	+3.2	
ORIF	Oris-en-Rattie	12.84	292	eP		Pn	19 40 06.6	-1.7	
	comp=Z,24nm,0.7s								
ORIF				eR					
	comp=Z,430nm,20.0s								
ORIF	Oris-en-Rattie	12.84	292	eP		Pn	19 40 06.6	-1.7	
ORIF				pmax	pmax				
	comp=Z,24nm,0.7s								
ORIF	Oris-en-Rattie	12.84	292	eP		Pn	19 40 06.6	-1.7	
	comp=Z,24nm,0.7s								
ORIF	Oris-en-Rattie	12.84	292	eP		Pn	19 40 06.6	-1.7	
	comp=Z,12nm,0.7s								
LOMF	Lomont	12.89	303	eP		Pn	19 40 07.9	-1.1	
LOMF	Lomont	12.89	303	eP		Pn	19 40 07.9	-1.1	
LOMF	Lomont	12.89	303	eP		Pn	19 40 07.9	-1.1	
LOMF	Lomont	12.89	303	eP		Pn	19 40 07.9	-1.1	
MOF	Molkenrain	12.90	306	eP		Pn	19 40 07.6	-1.6	
MOF	Molkenrain	12.90	306	eP		Pn	19 40 07.6	-1.6	
MOF	Molkenrain	12.90	306	eP		Pn	19 40 07.6	-1.6	
MOF	Molkenrain	12.90	306	eP		Pn	19 40 07.6	-1.6	
SMRF	Simiane la Rot	12.92	288	eP		Pn	19 40 07.2	-2.1	
	comp=Z,28nm,1.1s								
SMRF	Simiane la Rot	12.92	288	eP		Pn	19 40 07.2	-2.1	
	comp=Z,28nm,1.1s								
SMRF	Simiane la Rot	12.92	288	eP		Pn	19 40 07.2	-2.1	
	comp=Z,14nm,1.1s								
LANF	Langenberg	13.04	311	eP		Pn	19 40 12.6	+1.7	
LANF	Langenberg	13.04	311	eP		Pn	19 40 12.6	+1.7	
LANF	Langenberg	13.04	311	eP		Pn	19 40 12.6	+1.7	
LANF	Langenberg	13.04	311	eP		Pn	19 40 12.6	+1.7	
MMAI	Mount Meron Ar	13.04	125	Pn		Pn	19 40 11.6	+0.5	
MMAI				Sn		Sn	19 42 37.5	+1.7	
MMAI	Mount Meron Ar	13.04	125	Pn		Pn	19 40 11.6	+0.5	
	comp=Z,0.9nm,0.3s,baz=325,slow=12,SNR=12								
MMAI				Sn		Sn	19 42 37.5	+1.7	
	comp=Z,0.3nm,0.3s,baz=326,slow=22,SNR=2.7								
MMAI				LR	LR		19 46 10.8		
	comp=Z,372nm,19.1s,baz=315,slow=42								
MMAI	Mount Meron Ar	13.04	125	Pn		Pn	19 40 11.6	+0.5	
MMAI				Sn		Sn	19 42 37.5	+1.7	
ECH	Echery	13.05	307	eP		Pn	19 40 09.6	-1.4	
ECH				pmax	pmax				
	comp=Z,3.0nm,0.8s								
ECH	Echery	13.05	307	eP		Pn	19 40 09.6	-1.4	
	comp=Z,3.0nm,0.8s								
ECH	Echery	13.05	307	eP		Pn	19 40 09.6	-1.4	
ECH	Echery	13.05	307	eP		Pn	19 40 09.6	-1.4	
	comp=Z,3.0nm,0.8s								
HINF	Hinteralfeld	13.06	305	eP		Pn	19 40 09.9	-1.4	
	comp=Z,15nm,0.6s								
HINF	Hinteralfeld	13.06	305	eP		Pn	19 40 09.9	-1.4	
HINF				pmax	pmax				
	comp=Z,15nm,0.6s								
HINF	Hinteralfeld	13.06	305	eP		Pn	19 40 09.9	-1.4	
	comp=Z,15nm,0.6s								
HINF	Hinteralfeld	13.06	305	eP		Pn	19 40 09.9	-1.4	
	comp=Z,7.6nm,0.6s								
CDF	Champ du Feu	13.07	308	eP		Pn	19 40 10.0	-1.3	
	comp=Z,46nm,1.0s								
CDF	Champ du Feu	13.07	308	eP		Pn	19 40 10.0	-1.3	
CDF				pmax	pmax				
	comp=Z,46nm,1.0s								
CDF	Champ du Feu	13.07	308	eP		Pn	19 40 10.0	-1.3	
	comp=Z,46nm,1.0s								
CDF	Champ du Feu	13.07	308	eP		Pn	19 40 10.0	-1.3	
	comp=Z,23nm,1.0s								
CABF	La Chapelle	13.12	300	eP		Pn	19 40 10.3	-1.7	
	comp=Z,42nm,0.9s								
CABF	La Chapelle	13.12	300	eP		Pn	19 40 10.3	-1.7	
CABF				pmax	pmax				
	comp=Z,42nm,0.9s								
CABF	La Chapelle	13.12	300	eP		Pn	19 40 10.3	-1.7	
	comp=Z,42nm,0.9s								
CABF	La Chapelle	13.12	300	eP		Pn	19 40 10.3	-1.7	
	comp=Z,21nm,0.9s								
TNS	Taunus Mts	13.38	317	ePn		Pn	19 40 16.5	+1.0	
TNS	Taunus Mts	13.38	317	eP		Pn	19 40 16.5	+1.0	
TNS	Taunus Mts	13.38	317	eP		Pn	19 40 16.5	+1.0	
HAU	Haudompre	13.45	305	eP		Pn	19 40 14.7	-1.8	
HAU				eR					
	comp=Z,273nm,19.3s								
HAU	Haudompre	13.45	305	eP		Pn	19 40 14.7	-1.8	
HAU	Haudompre	13.45	305	eP		Pn	19 40 14.7	-1.8	
HAU	Haudompre	13.45	305	eP		Pn	19 40 14.7	-1.8	
MNK	Minsk	13.66	13	eP		Pn	19 40 18.0	-1.3	
MNK	Minsk	13.66	13	eP		Pn	19 40 18.0	-1.3	
MICGM	Minsk	13.67	13	e		Pn	19 40 18.0	-1.4	
VIVF	Saint-Julien-l	13.67	291	eP		Pn	19 40 15.7	-3.9	
	comp=Z,9.0nm,0.5s								
VIVF	Saint-Julien-l	13.67	291	eP		Pn	19 40 15.7	-3.9	
VIVF				pmax	pmax				
	comp=Z,9.0nm,0.5s								
VIVF	Saint-Julien-l	13.67	291	eP		Pn	19 40 15.7	-3.9	
	comp=Z,9.0nm,0.5s								
VIVF	Saint-Julien-l	13.67	291	eP		Pn	19 40 15.7	-3.9	
	comp=Z,5.5nm,0.5s								
THEF	They Montfort	13.76	306	eP		Pn	19 40 19.5	-1.3	
THEF	They Montfort	13.76	306	eP		Pn	19 40 19.5	-1.3	
THEF	They Montfort	13.76	306	eP		Pn	19 40 19.5	-1.3	
THEF	They Montfort	13.76	306	eP		Pn	19 40 19.5	-1.3	
RUP	Ruppelstein	13.83	313	eP		Pn	19 40 22.4	+0.7	
RUP	Ruppelstein	13.83	313	eP		Pn	19 40 22.4	+0.7	
RUP	Ruppelstein	13.83	313	eP		Pn	19 40 22.4	+0.7	
SSB	Saint Sauveur	13.84	293	eP		Pn	19 40 19.7	-2.1	
SSB				pmax	pmax				
	comp=Z,6.0nm,0.6s								
SSB	Saint Sauveur	13.84	293	ePn		Pn	19 40 19.7	-2.1	
	comp=Z,5.5nm,0.6s								
SSB	Saint Sauveur	13.84	293	ePn		Pn	19 40 19.7	-2.1	
	comp=Z,5.5nm,0.6s								
NACGM	Naroch	13.89	10	eP		Pn	19 40 22.0	-0.5	
NACGM	Naroch	13.89	10	eP		Pn	19 40 22.0	-0.5	
PAGF	Fort de Pagny	14.05	307	eP		Pn	19 40 24.0	-0.8	
	comp=Z,12nm,1.0s								
PAGF	Fort de Pagny	14.05	307	eP		Pn	19 40 24.0	-0.8	
	comp=Z,12nm,1.0s								
PAGF	Fort de Pagny	14.05	307	eP		Pn	19 40 24.0	-0.8	
	comp=Z,6.1nm,1.0s								
LASF	Ste Croix	14.16	288	eP		Pn	19 40 23.7	-2.6	
	comp=Z,81nm,1.5s								
LASF	Ste Croix	14.16	288	eP		Pn	19 40 23.7	-2.6	
	comp=Z,81nm,1.5s								
LASF	Ste Croix	14.16	288	eP		Pn	19 40 23.7	-2.6	
	comp=Z,40nm,1.5s								
IIGN	Ignalina	14.27	8	eP		Pn	19 40 26.9	-0.8	
IIGN				AMB	AMB		19 40 31.7		
	comp=Z,16nm,1.0s								
IIGN	Ignalina	14.27	8	eP		Pn	19 40 26.9	-0.8	
	comp=Z,16nm,1.0s,SNR=40								
IDID	Didziasalis	14.29	9	eP		Pn	19 40 27.2	-0.8	
IDID				AMB	AMB		19 40 31.8		
	comp=Z,8.6nm,0.9s								
WLF	Walferdange	14.31	311	P		Pn	19 40 29.9	+1.6	
	comp=Z,16nm,1.3s								
WLF	Walferdange	14.31	311	ePn		Pn	19 40 29.9	+1.6	
WLF	Walferdange	14.31	311	eP		Pn	19 40 25.3	-3.0	
WLF				pmax	pmax				
	comp=Z,23nm,1.1s								
WLF	Walferdange	14.31	311	ePn		Pn	19 40 25.3	-3.0	
	comp=Z,23nm,1.1s								
WLF	Walferdange	14.31	311	ePn		Pn	19 40 25.3	-3.0	
	comp=Z,23nm,1.1s								
SFTF	Sexfontaines	14.34	305	eP		Pn	19 40 27.4	-1.2	
	comp=Z,55nm,1.1s								
SFTF	Sexfontaines	14.34	305	eP		Pn	19 40 27.4	-1.2	
	comp=Z,55nm,1.0s								
SFTF	Sexfontaines	14.34	305	eP		Pn	19 40 27.4	-1.2	
	comp=Z,27nm,1.1s								
MEZF	Maizieres J'vi	14.44	306	eP		Pn	19 40 28.8	-1.3	
	comp=Z,47nm,1.1s								
MEZF	Maizieres J'vi	14.44	306	eP		Pn	19 40 28.8	-1.3	
	comp=Z,47nm,1.1s								
MEZF	Maizieres J'vi	14.44	306	eP		Pn	19 40 28.8	-1.3	
	comp=Z,24nm,1.1s								
ISAL	Salakas	14.48	8	eP		Pn	19 40 29.2	-1.3	
ISAL				AMB	AMB		19 40 34.1		
	comp=Z,19nm,1.0s								
ISAL	Salakas	14.48	8	eP		Pn	19 40 29.2	-1.3	
	comp=Z,19nm,1.0s,SNR=40								
ASF	Jabal al Asfar	14.54	124	Pn		P	19 40 36.8	-1.2	
ASF	Jabal al Asfar	14.54	124	Pn		P	19 40 36.8	-1.2	
	comp=Z,0.1nm,0.3s,baz=199,slow=6.4,SNR=4.3								
SMF	Signal de Mont	14.61	298	eP		Pn	19 40 29.6	-2.8	
	comp=Z,52nm,0.8s								
SMF	Signal de Mont	14.61	298	eP		Pn	19 40 29.6	-2.8	
SMF				pmax	pmax				
	comp=Z,52nm,0.8s								
SMF	Signal de Mont	14.61	298	eP		Pn	19 40 29.6	-2.8	
	comp=Z,52nm,0.8s								
SMF	Signal de Mont	14.61	298	eP		Pn	19 40 29.6	-2.8	
	comp=Z,26nm,0.8s								
IZAR	Zarasai	14.67	8	eP		Pn	19 40 31.7	-1.4	
IZAR				AMB	AMB		19 40 36.4		
	comp=Z,11nm,1.1s								
LOR	Lormes	14.77	300	eP		Pn	19 40 31.6	-3.0	
	comp=Z,61nm,1.1s								
LOR				eR					
	comp=Z,331nm,17.2s								
LOR	Lormes	14.77	300	eP		Pn	19 40 31.6	-3.0	
	comp=Z,61nm,1.1s								
LOR	Lormes	14.77	300	eP		Pn	19 40 31.6	-3.0	
	comp=Z,30nm,1.1s								
BSD	Bornholm Skovb	14.78	342	eP		P	19 40 44.1	+3.6	
BSD				pmax	pmax				
	comp=Z,10.0nm,0.9s								
BSD	Bornholm Skovb	14.78	342	i P		P	19 40 44.1	+3.6	
	comp=Z,9.5nm,0.8s								
MEM	Membach	14.88	314	P		P	19 40 39.1	-2.6	
	comp=Z,24nm,1.1s								
KIV	Kislovodsk	14.94	73	eP		Pn	19 40 36.2	-0.7	
KIV				eS		Sn	19 43 22.7	+0.6	
KIV				pmax	pmax				
	comp=Z,22nm,1.0s								
KIV				MLR	MLR				
	comp=Z,60nm,11.0s								
SSF	Saint Saulge	14.94	299	eP		Pn	19 40 34.4	-2.5	
	comp=Z,72nm,1.2s								
SSF	Saint Saulge	14.94	299	eP		Pn	19 40 34.4	-2.5	
SSF				pmax	pmax				
	comp=Z,72nm,1.2s								
SSF	Saint Saulge	14.94	299	eP		Pn	19 40 34.4	-2.5	
	comp=Z,72nm,1.2s								
SSF	Saint Saulge	14.94	299	eP		Pn	19 40 34.4	-2.5	
	comp=Z,36nm,1.2s								
AVF	Avril sur Loir	14.97	298	eP		Pn	19 40 35.0	-2.3	
	comp=Z,55nm,0.9s								
AVF	Av

TCF Toulx Ste Croi 15.63 296 eP Pn 19 40 42.9 -3.0
comp=Z,69nm,1.0s
TCF Toulx Ste Croi 15.63 296 eP Pn 19 40 42.9 -3.0
comp=Z,34nm,1.0s
RJF Les Rejaudoux 15.95 292 eP Pn 19 40 50.8 +0.7
comp=Z,56nm,1.3s
RJF eR
comp=Z,466nm,19.0s
RJF Les Rejaudoux 15.95 292 eP Pn 19 40 50.8 +0.7
RJF pmax pmax
comp=Z,56nm,1.3s
RJF Les Rejaudoux 15.95 292 eP Pn 19 40 50.8 +0.7
comp=Z,56nm,1.3s
RJF Les Rejaudoux 15.95 292 eP Pn 19 40 50.8 +0.7
comp=Z,28nm,1.3s
SLIT Slitere, Latvi 16.37 359 eP P 19 40 56.9 -1.2
comp=Z,458nm,1.6s,SNR=135
LFF La Frestale 16.46 290 eP Pn 19 40 55.5 -1.0
comp=Z,60nm,1.3s
LFF La Frestale 16.46 290 eP Pn 19 40 55.5 -1.0
LFF pmax pmax
comp=Z,60nm,1.3s
LFF La Frestale 16.46 290 eP Pn 19 40 55.5 -1.0
comp=Z,60nm,1.3s
LFF La Frestale 16.46 290 eP Pn 19 40 55.5 -1.0
comp=Z,30nm,1.3s
OBN Obninsk 16.59 29⇑ eP Pn 19 40 55.3 -2.8
OBN i S Sn 19 44 02.3 +0.4
OBN pmax pmax
comp=Z,43nm,1.0s
OBN MLR MLR
comp=Z,700nm,16.0s
EPF Esparros 16.69 283 eP Pn 19 40 57.1 -2.5
comp=Z,16nm,1.0s
EPF Esparros 16.69 283 eP Pn 19 40 57.1 -2.5
EPF pmax pmax
comp=Z,16nm,1.0s
EPF Esparros 16.69 283 eP Pn 19 40 57.1 -2.5
comp=Z,16nm,1.0s
EPF Esparros 16.69 283 eP Pn 19 40 57.1 -2.5
comp=Z,7.9nm,1.0s
GNI Garni 16.73 87 ePn Pn 19 40 55.8 -4.4
comp=Z,14nm,0.8s
GNI Garni 16.73 87 Pn P 19 41 04.6 +2.2
comp=Z,0.9nm,0.3s,baz=184,slow=10,SNR=6.0
GNI Garni 16.73 87 ePn Pn 19 40 55.8 -4.4
comp=Z,14nm,0.8s
MFF Saint Martin d 17.29 296 eP Pn 19 41 06.0 -1.0
comp=Z,56nm,1.2s
MFF Saint Martin d 17.29 296 eP Pn 19 41 06.0 -1.0
MFF pmax pmax
comp=Z,56nm,1.2s
MFF Saint Martin d 17.29 296 eP Pn 19 41 06.0 -1.0
comp=Z,56nm,1.2s
MFF Saint Martin d 17.29 296 eP Pn 19 41 06.0 -1.0
comp=Z,28nm,1.2s
ETSF Etsaut 17.35 283 eP Pn 19 41 07.2 -0.7
comp=Z,23nm,0.9s
ETSF Etsaut 17.35 283 eP Pn 19 41 07.2 -0.7
ETSF pmax pmax
comp=Z,23nm,0.9s
ETSF Etsaut 17.35 283 eP Pn 19 41 07.2 -0.7
comp=Z,23nm,0.9s
ETSF Etsaut 17.35 283 eP Pn 19 41 07.2 -0.7
comp=Z,12nm,0.9s
VSU Vasula 17.39 7⇓ eP P 19 41 08.9 -0.5
VSU pmax pmax
comp=Z,98nm,1.7s
VSU Vasula 17.39 7 eP P 19 41 10.3 +0.9
comp=Z,124nm,1.5s,SNR=135
MOS Moscow 17.46 29 eP Pn 19 41 01.8 -7.2
MOS eS Sn 19 44 12.2 -11
MOS MLR MLR
comp=Z,1μm,12.0s
MOS MLR MLR
comp=N,1μm,11.0s
LDF La Druitiere 17.71 302 eP Pn 19 41 11.3 -0.9
LDF La Druitiere 17.71 302 eP Pn 19 41 11.3 -0.9
LDF La Druitiere 17.71 302 eP Pn 19 41 11.3 -0.9
LDF La Druitiere 17.71 302 eP Pn 19 41 11.3 -0.9
SJPF Ste Jean 17.83 284 eP Pn 19 41 11.6 -2.2
comp=N,28nm,1.1s
SJPF Ste Jean 17.83 284 eP Pn 19 41 11.6 -2.2
SJPF pmax pmax
comp=Z,29nm,1.1s
SJPF Ste Jean 17.83 284 eP Pn 19 41 11.6 -2.2
comp=Z,28nm,1.1s
SJPF Ste Jean 17.83 284 eP Pn 19 41 11.6 -2.2
comp=Z,14nm,1.1s
FLN La Foliniere 17.99 302 eP Pn 19 41 14.6 -1.0
comp=Z,50nm,1.1s
FLN eR
comp=Z,565nm,17.2s
FLN La Foliniere 17.99 302 eP Pn 19 41 14.6 -1.0
FLN pmax pmax
comp=Z,50nm,1.1s
FLN La Foliniere 17.99 302 eP Pn 19 41 14.6 -1.0
comp=Z,50nm,1.1s
FLN La Foliniere 17.99 302 eP Pn 19 41 14.6 -1.0
comp=Z,25nm,1.1s
GRR Gorron 18.13 301 eP Pn 19 41 16.1 -1.3
comp=Z,57nm,1.1s
GRR Gorron 18.13 301 eP Pn 19 41 16.1 -1.3
GRR pmax pmax
comp=Z,57nm,1.1s
GRR Gorron 18.13 301 eP Pn 19 41 16.1 -1.3
comp=Z,57nm,1.1s
GRR Gorron 18.13 301 eP Pn 19 41 16.1 -1.3
comp=Z,28nm,1.1s
MEF Metsahovi 18.99 3 eP P 19 41 27.1 +0.1
comp=Z,47nm,1.6s,SNR=145
SGMF Saint Gilles 19.20 300 eP P 19 41 27.6 -1.9
comp=Z,82nm,1.2s
SGMF Saint Gilles 19.20 300 eP P 19 41 27.6 -1.9
SGMF pmax pmax
comp=Z,82nm,1.2s
SGMF Saint Gilles 19.20 300 eP P 19 41 27.6 -1.9
comp=Z,82nm,1.2s
SGMF Saint Gilles 19.20 300 eP P 19 41 27.6 -1.9
comp=Z,41nm,1.2s
QUIF Quistinic 19.54 299 eP P 19 41 32.3 -0.8
comp=Z,95nm,1.2s
QUIF Quistinic 19.54 299 eP P 19 41 32.3 -0.8
QUIF pmax pmax
comp=Z,95nm,1.2s
QUIF Quistinic 19.54 299 eP P 19 41 32.3 -0.8
comp=Z,95nm,1.2s
QUIF Quistinic 19.54 299 eP P 19 41 32.3 -0.8
comp=Z,48nm,1.2s
ROSF Rostrenen 19.69 300 eP P 19 41 33.5 -1.3
comp=Z,47nm,1.1s
ROSF Rostrenen 19.69 300 eP P 19 41 33.5 -1.3
ROSF pmax pmax
comp=Z,47nm,1.1s
ROSF Rostrenen 19.69 300 eP P 19 41 33.5 -1.3
comp=Z,47nm,1.1s
ROSF Rostrenen 19.69 300 eP P 19 41 33.5 -1.3
comp=Z,24nm,1.1s
HFS Hagfors 19.69 347 P P 19 41 34.3 -0.4
HFS Hagfors 19.69 347 P P 19 41 34.3 -0.4
comp=Z,0.6nm,0.3s,baz=156,slow=11,SNR=18
HFS LR LR 19 49 46.4
comp=Z,262nm,18.1s,baz=162,slow=39
HFS Hagfors 19.69 347 P P 19 41 34.3 -0.4
RAF Rauma 19.78 359 eP Pn 19 41 37.1 -0.1
comp=Z,93nm,1.3s,SNR=145
FINES FINESS Array B 20.30 5 P P 19 41 39.7 -1.6
FINES FINESS Array B 20.30 5 P P 19 41 39.7 -1.6
comp=Z,12nm,0.6s,baz=162,slow=13,SNR=29
FINES LR LR 19 49 46.7
comp=Z,267nm,19.7s,baz=90,slow=38
FINES FINESS Array B 20.30 5 P P 19 41 39.7 -1.6
ESDC Sonseca Array 20.34 274 P P 19 41 41.7 -0.4
ESDC Sonseca Array 20.34 274 P P 19 41 41.7 -0.4
comp=Z,11nm,0.8s,baz=73,slow=11,SNR=55
ESDC Sonseca Array 20.34 274 P P 19 41 41.7 -0.4
ESLA Sonseca Array 20.34 274 eP P 19 41 39.6 -2.5
comp=Z,5.7nm,1.1s
ESLA Sonseca Array 20.34 274 eP P 19 41 39.6 -2.5
comp=Z,5.7nm,1.1s
PAB San Pablo 20.66 274 eP P 19 41 45.2 -0.3
PAB San Pablo 20.66 274 eP P 19 41 45.2 -0.3
comp=Z,16nm,1.0s
PAB San Pablo 20.66 274 eP P 19 41 45.2 -0.3
NAO01 NORSAR Array S 20.89 344 eP P 19 41 44.4 -3.4
comp=Z,37nm,0.9s

KAF Kangasniemi 20.98 5 eP P 19 41 46.7 -1.9
KAF pmax pmax
comp=Z,25nm,0.6s
KAF Kangasniemi 20.98 5 ep P 19 41 46.7 -1.9
comp=Z,25nm,0.6s
KAF Kangasniemi 20.98 5 eP P 19 41 46.7 -1.9
comp=Z,25nm,0.6s
NB2 NORSAR Subarra 21.00 344 P P 19 41 48.1 -0.9
comp=Z,21nm,0.9s,baz=155,slow=11
NB2 NORSAR Subarra 21.00 344 P P 19 41 48.1 -0.9
comp=Z,21nm,0.9s,SNR=4.8
NOA NORSAR Array B 21.00 344 P P 19 41 47.9 -1.1
NOA NORSAR Array B 21.00 344 P P 19 41 47.9 -1.1
comp=Z,6.9nm,0.8s,baz=160,slow=11,SNR=22
NOA LR LR 19 50 49.4
comp=Z,190nm,18.1s,baz=155,slow=39
NOA NORSAR Array B 21.00 344 P P 19 41 47.9 -1.1
PBRG Braganca 22.02 281 eP P 19 42 00.1 0.0
comp=Z,30nm,1.3s
PBRG Braganca 22.02 281 eP P 19 42 00.1 0.0
comp=Z,30nm,1.3s
EKA Eskdalemuir Ar 22.06 318 P P 19 41 59.5 -0.8
EKA PcP PcP 19 45 55.9 -1.7
EKA Eskdalemuir Ar 22.06 318 P P 19 41 59.5 -0.8
comp=Z,6.8nm,0.6s,baz=113,slow=9.9,SNR=25
EKA PcP PcP 19 45 55.9 -1.7
comp=Z,2.1nm,0.8s,baz=76,slow=3.0,SNR=3.9
EKA Eskdalemuir Ar 22.06 318 P P 19 41 59.5 -0.8
EKA Eskdalemuir Ar 22.06 318 PcP PcP 19 45 55.9 -1.7
ESK Eskdalemuir 22.07 318 i P P 19 42 00.7 +0.2
ESK Eskdalemuir 22.07 318 eP P 19 42 00.1 -0.3
comp=Z,39nm,1.2s
ESK Eskdalemuir 22.07 318 i P P 19 42 00.7 +0.2
KLMR Klimovskoe 22.13 22 ci P P 19 42 00.6 -0.5
KLMR *SP sP 19 42 04.9 -2.5
KLMR e 19 45 55.1
KLMR i S S 19 46 07.5 +3.3
KLMR e*SS sS 19 46 12.1 +0.8
KLMR pmax pmax
comp=Z,58nm,1.1s
KLMR MLR MLR
comp=Z,885nm,12.0s
KLMR Klimovskoe 22.13 22 i P P 19 42 00.6 -0.5
comp=Z,58nm,1.1s
JOF Joensuu 22.27 10 eP P 19 42 00.7 -1.8
JOF pmax pmax
comp=Z,14nm,0.6s
JOF Joensuu 22.27 10 ep P 19 42 00.7 -1.8
comp=Z,14nm,0.6s
JOF Joensuu 22.27 10 eP P 19 42 00.7 -1.8
comp=Z,14nm,0.6s
MVO Moncorvo 22.34 280 eP P 19 42 03.2 -0.3
comp=Z,44nm,1.4s
MVO A A 19 54 20.5
comp=Z,119nm,18.0s
MVO Moncorvo 22.34 280 eP P 19 42 03.2 -0.3
comp=Z,119nm,18.0s
MTE Manteigas 22.87 278 eP P 19 42 08.6 -0.6
comp=Z,27nm,1.2s
MTE A A 19 53 13.8
comp=Z,160nm,16.0s
MTE Manteigas 22.87 278 eP P 19 42 05.9 -3.2
comp=Z,10.0nm,0.9s
MTE Manteigas 22.87 278 eP P 19 42 08.6 -0.6
comp=Z,160nm,16.0s
RST Umm Al-Ruwaisa 22.93 113 eP P 19 42 08.9 -0.9
RST AMb AMB 19 42 12.9
comp=Z,476nm,0.9s
RST Umm Al-Ruwaisa 22.93 113 eP P 19 42 08.9 -0.9
comp=Z,476nm,0.9s
PMRV Marv??o 22.98 275 eP P 19 42 09.1 -1.1
comp=Z,68nm,1.6s
PMRV Marv??o 22.98 275 eP P 19 42 09.1 -1.1
comp=Z,68nm,1.6s
PCAB Cabril 22.98 281 eP P 19 42 11.1 +0.8
comp=Z,56nm,1.4s
PCAB Cabril 22.98 281 eP P 19 42 11.1 +0.8
comp=Z,56nm,1.4s
MIB Mutribah 22.99 112 eP P 19 42 09.1 -1.3
MIB AMb AMB 19 42 13.2
comp=Z,113nm,1.0s
MIB Mutribah 22.99 112 eP P 19 42 09.1 -1.3
comp=Z,113nm,1.0s
PBAR Barrancos 23.05 272 eP P 19 42 09.5 -1.5
comp=Z,74nm,1.6s
PBAR Barrancos 23.05 272 eP P 19 42 09.5 -1.5
comp=Z,74nm,1.6s
PVIS Viseu 23.06 279 eP P 19 42 10.4 -0.8
comp=Z,36nm,1.8s
PVIS Viseu 23.06 279 eP P 19 42 10.4 -0.8
comp=Z,36nm,1.8s
PGAV Gavieira, Arco 23.12 282 eP P 19 42 12.9 +1.1
comp=Z,66nm,1.7s
PGAV A A 19 53 10.5
comp=Z,152nm,18.0s
PGAV Gavieira, Arco 23.12 282 eP P 19 42 12.9 +1.1
comp=Z,152nm,18.0s
NAY Al-Naaiem 23.25 113 eP P 19 42 11.6 -1.5
NAY AMb AMB 19 42 14.2
comp=Z,17nm,1.0s
NAY Al-Naaiem 23.25 113 eP P 19 42 11.6 -1.5
comp=Z,17nm,1.0s
PESTR Estremoz 23.27 274 eP P 19 42 13.1 -0.1
comp=Z,62nm,1.4s
PESTR Estremoz 23.27 274 eP P 19 42 13.1 -0.1
comp=Z,62nm,1.4s
MDT Midelt 23.33 258 P P 19 42 12.7 -1.3
MDT Midelt 23.33 258 P P 19 42 12.7 -1.3
comp=Z,6.9nm,0.9s,baz=78,slow=12,SNR=9.9
MDT Midelt 23.33 258 P P 19 42 12.7 -1.3
TAM Tamanrasset 23.42 223 eP P 19 42 12.7 -2.3
TAM pmax pmax
comp=Z,23nm,1.4s
TAM Tamanrasset 23.42 223 eP P 19 42 12.7 -2.3
comp=Z,23nm,1.4s
TAM Tamanrasset 23.42 223 eP P 19 42 12.7 -2.3
comp=Z,23nm,1.4s
PTO Porto 23.51 280 eP P 19 42 15.3 -0.2
PTO Porto 23.51 280 eP P 19 42 15.3 -0.2
EVO Evora 23.68 274 eP P 19 42 16.0 -1.3
comp=Z,60nm,1.4s
EVO eR
comp=Z,262nm,19.2s
EVO Evora 23.68 274 eP P 19 42 16.9 -0.4
comp=Z,32nm,1.1s
EVO Evora 23.68 274 eP P 19 42 16.9 -0.4
comp=Z,32nm,1.1s
PMTG Montargil 23.69 275 eP P 19 42 15.8 -1.6
comp=Z,77nm,1.5s
PMTG Montargil 23.69 275 eP P 19 42 15.8 -1.6
comp=Z,77nm,1.5s
PTOM Tomar 23.69 276 eP P 19 42 17.3 -0.1
comp=Z,58nm,1.7s
PTOM Tomar 23.69 276 eP P 19 42 17.3 -0.1
comp=Z,58nm,1.7s
PBEJ Beja 23.72 272 eP P 19 42 17.5 -0.1
comp=Z,36nm,1.2s
PBEJ Beja 23.72 272 eP P 19 42 17.5 -0.1
comp=Z,36nm,1.2s
EVOP Sao Brissos 23.76 274 eP P 19 42 16.0 -2.0
EVOP pmax pmax
comp=Z,60nm,1.4s
EVOP Sao Brissos 23.76 274 eP P 19 42 16.0 -2.0
comp=Z,60nm,1.4s
EVOP Sao Brissos 23.76 274 eP P 19 42 16.0 -2.0
comp=Z,30nm,1.4s
PVAQ Vaqueiros 23.80 271 eP P 19 42 18.6 +0.2
comp=Z,41nm,2.0s
PVAQ A A 19 53 52.8
comp=Z,150nm,18.0s
PVAQ Vaqueiros 23.80 271 eP P 19 42 18.6 +0.2
comp=Z,150nm,18.0s
PCVE Castro Verde 23.97 271 eP P 19 42 19.6 -0.4
comp=Z,51nm,1.4s
PCVE Castro Verde 23.97 271 eP P 19 42 19.6 -0.4
comp=Z,51nm,1.4s
PBDV Barranco-do-Ve 24.01 270 eP P 19 42 21.1 +0.6
comp=Z,88nm,1.3s
PBDV Barranco-do-Ve 24.01 270 eP P 19 42 21.1 +0.6
comp=Z,88nm,1.3s
PNCL Nicolau / Gran 24.19 273 eP P 19 42 22.0 -0.1
comp=Z,38nm,1.5s
PNCL Nicolau / Gran 24.19 273 eP P 19 42 22.0 -0.1
comp=Z,38nm,1.5s
PTEO Sao Teotonio 24.51 272 eP P 19 42 26.0 +1.0
PTEO Sao Teotonio 24.51 272 eP P 19 42 26.0 +1.0
RAYN Ar Rayn 26.01 126 eP P 19 42 40.0 +1.2
comp=Z,15nm,1.1s
RAYN Ar Rayn 26.01 126 eP P 19 42 40.0 +1.2
comp=Z,15nm,1.1s
AKTO Aktyubinsk 26.02 57 P P 19 42 38.5 0.0
AKTO Aktyubinsk 26.02 57 P P 19 42 38.5 0.0
AKTO Aktyubinsk 26.02 57 P P 19 42 38.5 0.0
comp=Z,4.7nm,1.0s,baz=272,slow=11,SNR=11
AKTO LR LR 19 53 41.7
comp=Z,136nm,18.5s,baz=286,slow=38
AKTO Aktyubinsk 26.02 57 P P 19 42 38.5 0.0
ABKAR Akbulak array 27.16 60 eP P 19 42 50.0 +1.2
ABKAR Akbulak array 27.16 60 eP P 19 42 50.0 +1.2
LVZ Lovozero 27.45 10⇑ eP P 19 42 51.8 +0.5
LVZ pmax pmax
comp=Z,40nm,1.6s
ARU Arti 27.64 45 di P P 19 42 52.6 -0.4
ARU PPP PPP 19 43 45.0
ARU S S 19 47 35.0 +0.9
ARU SSS SSS 19 49 07.3
ARU pmax pmax
comp=Z,20nm,1.7s
ARU MLR MLR
comp=Z,325nm,13.0s
SOKR Solikamsk 27.94 37 ci P P 19 43 06.1 +10
SOKR pmax pmax
comp=Z,10.0nm,0.8s
SOKR MLR MLR
comp=Z,320nm,15.0s
ARCES ARCESS Array B 28.36 2 P P 19 42 57.7 -1.7
ARCES ARCESS Array B 28.36 2 P P 19 42 57.7 -1.7
comp=Z,2.8nm,0.6s,baz=179,slow=9.7,SNR=33
ARCES LR LR 19 55 26.7
comp=Z,292nm,19.3s,baz=47,slow=39
ARCES ARCESS Array B 28.36 2 P P 19 42 57.7 -1.7
KEV Kevo 28.63 3 eP P 19 43 00.1 -1.6
KEV pmax pmax
comp=Z,4.0nm,0.7s
KEV Kevo 28.63 3 ep P 19 43 00.1 -1.6
comp=Z,4.0nm,0.7s
KEV Kevo 28.63 3 eP P 19 43 00.1 -1.6
comp=Z,4.0nm,0.7s
SVE Sverdlovsk 28.85 44⇓ iP P 19 43 04.5 +0.6
SVE eS S 19 47 58.9 +5.8
SVE e 19 53 39.3
SVE pmax pmax
comp=Z,27nm,1.4s
SVE MLR MLR
comp=Z,544nm,11.0s
TOA0 Torodi Ar. Sit 33.50 219 eP P 19 43 42.4 -2.8
TOA0 Torodi Ar. Sit 33.50 219 eP P 19 43 42.4 -2.8
TORD Torodi Ar. Bea 33.50 219 P P 19 43 45.1 -0.1
TORD PcP PcP 19 46 25.6 -0.4
TORD Torodi Ar. Bea 33.50 219 P P 19 43 45.1 -0.1
comp=Z,10nm,0.8s,baz=32,slow=9.0,SNR=85
TORD PcP PcP 19 46 25.6 -0.4
comp=Z,1.6nm,0.8s,baz=6.4,slow=1.3,SNR=4.5
TORD LR LR 20 00 14.9
comp=Z,94nm,18.8s,baz=20,slow=42
TORD Torodi Ar. Bea 33.50 219 P P 19 43 45.1 -0.1
BRVK Borovoye 33.80 53 di P P 19 43 48.2 +0.8
BRVK pmax pmax
comp=Z,27nm,1.7s
BRVK Borovoye 33.80 53 eP P 19 43 48.0 +0.5
comp=Z,16nm,1.0s
BRVK Borovoye 33.80 53 P P 19 43 48.4 +0.9
comp=Z,93nm,0.9s,SNR=9.6
BRVK Borovoye 33.80 53 eP P 19 43 48.0 +0.5
comp=Z,16nm,1.0s
BVAR Borovoye Array 33.86 53 P P 19 43 48.7 +0.7
BVAR Borovoye Array 33.86 53 P P 19 43 48.6 +0.7
BVAR Borovoye Array 33.86 53 P P 19 43 48.6 +0.7
comp=Z,5.8nm,0.9s,baz=268,slow=6.6,SNR=24
BVAR LR LR 19 58 36.6
comp=Z,121nm,19.8s,baz=276,slow=38
BVAR Borovoye Array 33.86 53 P P 19 43 48.7 +0.7
KKAR Karatay Array 35.08 71 eP P 19 43 59.8 +1.1
KKAR Karatay Array 35.08 71 eP P 19 43 59.8 +1.1
KKAR Karatay Array 35.08 71 eP P 19 43 59.8 +1.1
KBL Kabul 36.81 85 eP P 19 44 14.8 +1.0
KBL pmax pmax
comp=Z,6.0nm,1.0s
KBL Kabul 36.81 85 eP P 19 44 14.8 +1.0
comp=Z,5.8nm,1.0s
KBL Kabul 36.81 85 eP P 19 44 14.8 +1.0
comp=Z,5.8nm,1.0s
SCO Scoresbysund 36.96 337 i P P 19 44 15.8 +1.4
SCO pmax pmax
comp=Z,10.0nm,0.8s
SCO Scoresbysund 36.96 337 i P P 19 44 15.8 +1.4
comp=Z,10nm,0.8s
SCO Scoresbysund 36.96 337 i P P 19 44 15.8 +1.4
comp=Z,10nm,0.8s
SPITS Spitsbergen Ar 37.10 358 LR LR 20 00 48.7
comp=Z,193nm,18.8s,baz=145,slow=38
EKS2 Erkin-Say 37.51 70 eP P 19 44 20.9 +1.3
EKS2 pmax pmax
comp=Z,20nm,1.1s
EKS2 Erkin-Say 37.51 70 eP P 19 44 20.9 +1.3
comp=Z,20nm,1.1s
EKS2 Erkin-Say 37.51 70 eP P 19 44 20.9 +1.3
comp=Z,20nm,1.1s
AAK Ala-Archa 38.03 70 di P P 19 44 25.3 +1.3
AAK pmax pmax
comp=Z,62nm,1.7s
AAK Ala-Archa 38.03 70 eP P 19 44 24.8 +0.8
comp=Z,4.6nm,1.3s
AAK Ala-Archa 38.03 70 P P 19 44 25.0 +1.0
comp=Z,67nm,1.6s,SNR=7.3
AAK Ala-Archa 38.03 70 P P 19 44 25.6 +1.6
comp=Z,2.9nm,0.6s,baz=236,slow=6.3,SNR=11
AAK Ala-Archa 38.03 70 eP P 19 44 24.8 +0.8
comp=Z,4.6nm,1.3s
FRU Bishkek 38.06 70 i P P 19 44 25.0 +0.9
FRU pmax pmax
comp=Z,70nm,1.8s
TKM2 Tokmak 2 38.73 69 eP P 19 44 31.0 +1.0
TKM2 pmax pmax
comp=Z,69nm,2.9s
TKM2 Tokmak 2 38.73 69 eP P 19 44 31.0 +1.0
comp=Z,69nm,2.9s
TKM2 Tokmak 2 38.73 69 eP P 19 44 31.0 +1.0
comp=Z,69nm,2.9s
KURBB Kurchatov Arra 39.06 57 P P 19 44 32.7 +0.3
comp=Z,1.9nm,0.7s,baz=286,slow=9.7,SNR=17
KURBB PP PnPn 19 46 09.0 +4.7
comp=Z,4.1nm,1.1s,baz=280,slow=12,SNR=8.1
KURBB PcP PcP 19 46 40.1 -1.9
comp=Z,1.4nm,1.0s,baz=272,slow=3.2,SNR=5.6
KURK Kurchatov 39.11 57 eP P 19 44 32.7 0.0
KURK 19 46 09.0
KURK 19 46 40.1
KURK pmax pmax
comp=Z,15nm,1.4s
KURK Kurchatov 39.11 57 eP P 19 44 32.7 0.0
comp=Z,15nm,1.4s
KURK PP PnPn 19 46 09.0 +4.2
KURK PcP PcP 19 46 40.1 -2.1
KURK Kurchatov 39.11 57 P P 19 44 33.1 +0.4
comp=Z,39nm,1.3s,SNR=6.2
KURK Kurchatov 39.11 57 eP P 19 44 32.7 0.0
comp=Z,15nm,1.4s
DAG Danmarks Havn 39.67 346⇑ iP PcP 19 46 43.5 0.0
comp=Z,7.3nm,0.9s
KSH Kashi 40.06 74 P P 19 44 41.3 +0.3
KSH epP pP 19 44 45.8 +0.1
KSH esP sP 19 44 48.9 +1.3
KSH ePP PnPn 19 46 17.4 +0.9
KSH PcP PcP 19 46 46.8 +1.2
KSH eScP ScP 19 50 34.1 0.0
KSH PcS PcS 19 50 36.3 +0.3
KSH S S 19 50 45.3 -1.2
KSH eScS ScS 19 54 46.0 -1.5
KSH pmax pmax
comp=Z,5.0nm,0.8s
KSH pmax pmax
comp=Z,260nm,3.9s
KSH LR LR
comp=N,250nm,5.8s
KSH LR LR
comp=E,310nm,5.1s
KSH LR LR
comp=Z,300nm,5.7s
NVS Novosibirsk 41.35 50⇓ iP P 19 44 52.2 +1.0
NVS e 19 46 30.4
NVS e 19 54 08.0

NVS pmax pmax
comp=Z,54nm,2.0s
NVS pmax pmax
comp=N,7.0nm,1.8s
NVS pmax pmax
comp=E,12nm,1.6s
MK31 Makanchi Array 42.28 62 *e*P P 19 44 55.0 -4.1
MK31 Makanchi Array 42.28 62 *e*P P 19 44 55.0 -4.1
MKAR Makanchi Array 42.28 62 *i* P **P 19 44 59.7 +0.6**
MKAR pmax pmax
comp=Z,6.0nm,0.7s
MKAR Makanchi Array 42.28 62 P **P 19 44 59.5 +0.4**
MKAR Makanchi Array 42.28 62 P **P 19 44 59.5 +0.4**
comp=Z,6.0nm,0.7s,baz=280,slow=6.6,SNR=63
MKAR LR LR 20 03 53.6
comp=Z,88nm,20.1s,baz=285,slow=38
MKAR Makanchi Array 42.28 62 P **P 19 44 59.5 +0.4**
MBAR Mbarara 42.31 168 P **P 19 45 00.2 +0.4**
MBAR Mbarara 42.31 168 P **P 19 45 00.2 +0.4**
comp=Z,0.7nm,0.3s,baz=348,slow=21,SNR=4.0
MBAR Mbarara 42.31 168 P **P 19 45 00.2 +0.4**
DBIC Dimbokro 42.32 223 P **P 19 44 58.9 -0.7**
DBIC Dimbokro 42.32 223 P **P 19 44 58.9 -0.7**
comp=Z,6.1nm,0.8s,baz=358,slow=8.6,SNR=6.2
DBIC LR LR 20 03 59.1
comp=Z,218nm,18.2s,baz=10.0,slow=38
DBIC Dimbokro 42.32 223 P **P 19 44 58.9 -0.7**
ZAA0 Zalesovo Array 42.39 51 *e*P **P 19 44 56.7 -3.1**
ZALV Zalesovo Beam 42.39 51 *i* P **P 19 45 00.2 +0.4**
ZALV pmax pmax
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 42.39 51 P **P 19 45 00.1 +0.3**
ZALV Zalesovo Beam 42.39 51 P **P 19 45 00.1 +0.3**
comp=Z,12nm,0.7s,baz=278,slow=8.7,SNR=49
ZALV LR LR 20 05 01.8
comp=Z,140nm,18.4s,baz=233,slow=40
ZALV Zalesovo Beam 42.39 51 P **P 19 45 00.1 +0.3**
SUMG Summit 42.60 337 *i* P **P 19 45 01.0 -0.7**
SUMG pmax pmax
comp=Z,7.0nm,0.8s
SUMG Summit 42.60 337 *e*P **P 19 45 01.7 0.0**
comp=Z,248nm,2.9s
SUMG Summit 42.60 337 *i* P **P 19 45 01.0 -0.7**
comp=Z,6.9nm,0.8s
SUMG Summit 42.60 337 *i* P **PcP 19 46 53.0 -0.7**
comp=Z,6.7nm,0.8s
SUMG Summit 42.60 337 *e*P **P 19 45 01.7 0.0**
comp=Z,248nm,2.9s
LIC Lamto 42.78 223 *e*P **P 19 45 03.1 -0.3**
comp=Z,35nm,1.1s
LIC *e*R
comp=Z,262nm,20.2s
LIC Lamto 42.78 223 *e*P **P 19 45 03.1 -0.3**
comp=Z,35nm,1.1s
LIC Lamto 42.78 223 *e*P **P 19 45 03.1 -0.3**
comp=Z,17nm,1.1s
KMBO Kilima Mbogo 44.22 159 LR LR 20 05 50.0
comp=Z,53nm,18.4s,baz=73,slow=39
WMQ Urumqi 46.82 64 P **P 19 45 36.5 +1.1**
WMQ pP **pP 19 45 41.0 +0.8**
WMQ sP **sP 19 45 43.5 +1.4**
WMQ PP **PP 19 47 26.3 +0.9**
WMQ S **S 19 52 25.5 +0.3**
WMQ ScS **ScS 19 55 28.3 -1.2**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,90nm,4.2s
WMQ LR LR
comp=N,180nm,9.8s
WMQ LR LR
comp=E,200nm,8.2s
WMQ LR LR
comp=Z,96nm,21.2s
TLY Talaya 53.96 49 *e*P **P 19 46 31.1 +1.9**
TLY pmax pmax
comp=Z,17nm,1.8s
TLY MLR MLR
comp=Z,263nm,14.0s
TAPN Taplejung 54.28 83 *e*P PcP 19 47 41.7 +5.3
FRB Frobisher Bay 54.47 327 LR LR 20 08 51.9
comp=Z,7µm,20.7s,baz=268,slow=35
LSZ Lusaka 56.49 174 *e*P **P 19 46 49.0 +1.1**
comp=Z,7.6nm,0.9s
LSZ Lusaka 56.49 174 *e*P **P 19 46 49.0 +1.1**
comp=Z,7.6nm,0.9s
GTA Gaotai 56.91 64 *e*P **P 19 46 50.8 0.0**
GTA pP **pP 19 46 55.4 -0.2**
GTA sP **sP 19 46 57.9 +0.4**
GTA S **S 19 54 44.5 +0.4**
GTA SS **SS 19 58 34.5 +2.6**
GTA pmax pmax
comp=Z,3.0nm,1.7s
GTA pmax pmax
comp=Z,87nm,4.7s
GTA LR LR
comp=N,170nm,17.6s
GTA LR LR
comp=E,120nm,16.6s
GTA LR LR
comp=Z,120nm,17.1s
SONM Songino Array 57.20 53 P **P 19 46 53.1 +0.3**
SONM Songino Array 57.20 53 P **P 19 46 53.1 +0.3**
comp=Z,3.1nm,0.9s,baz=290,slow=8.6,SNR=19
SONM LR LR 20 12 23.7
comp=Z,101nm,19.1s,baz=273,slow=37
SONM Songino Array 57.20 53 P **P 19 46 53.1 +0.3**
SCHQ Schefferville 57.36 317 *e*P **P 19 46 52.6 -1.0**
comp=Z,11nm,0.8s
SCHQ Schefferville 57.36 317 P **P 19 46 53.0 -0.6**
comp=Z,11nm,0.8s,baz=65,slow=7.6,SNR=17
SCHQ LR LR 20 10 42.4
comp=Z,77nm,18.0s,baz=83,slow=35
SCHQ Schefferville 57.36 317 *e*P **P 19 46 52.6 -1.0**
comp=Z,11nm,0.8s
ULN Ulaanbaatar 57.59 53 *e*P **P 19 46 55.4 -0.1**
comp=Z,40nm,2.4s
ULN Ulaanbaatar 57.59 53 *e*P **P 19 46 55.4 -0.1**
comp=Z,40nm,2.4s
LZH Lanzhou 61.34 66 *e*P **P 19 47 23.3 +1.7**
LZH pP **pP 19 47 27.8 +1.3**
LZH sP **sP 19 47 30.9 +2.6**
LZH PcP **PcP 19 48 05.8 +1.9**
LZH *e*S **S 19 55 41.1 -0.6**
LZH pmax pmax
comp=Z,11nm,1.0s
LZH pmax pmax
comp=Z,67nm,5.2s
YAK Yakutsk 61.58 31 *e*P **P 19 47 22.4 -0.1**
YAK pmax pmax
comp=Z,3.0nm,0.8s
YAK MLR MLR
comp=Z,198nm,17.0s
YAK MLR MLR
comp=E,67nm,13.0s
YAK MLR MLR
comp=N,136nm,16.0s
HHC Hu-ho-hao-te 63.91 58 *e*P **P 19 47 41.5 +2.9**
HHC sP **sP 19 47 47.6 +2.2**
HHC PP **PP 19 50 03.6 +4.8**
HHC S **S 19 56 14.8 +1.1**
HHC sS **sS 19 56 20.4 -1.4**
HHC ScS **SKKSac 19 57 30.6 -1.2**
HHC Hu-ho-hao-te 63.91 58 SS SS 20 00 24.3 +2.7
HHC pmax pmax
comp=Z,50nm,0.6s
HHC pmax pmax
comp=Z,190nm,6.0s
HHC LR LR
comp=N,360nm,14.3s
HHC LR LR
comp=E,390nm,13.1s
HHC LR LR
comp=Z,290nm,15.5s
HHC Hu-ho-hao-te 63.91 58 *e*P **P 19 47 38.3 -0.3**
HHC pP **pP 19 47 42.3 -1.2**
HHC sP **sP 19 47 45.9 +0.5**
HHC PcP **PcP 19 48 13.5 -0.7**
HHC PP **PP 19 50 00.3 +1.5**
HHC ScP 19 52 14.4
HHC S **S 19 56 11.8 -1.9**
HHC ScS **SKKSac 19 57 27.3 -4.5**
HHC pmax pmax
comp=Z,42nm,1.0s
HHC pmax pmax
comp=Z,160nm,6.0s

HHC LR LR
comp=N,320nm,13.2s
HHC LR LR
comp=E,290nm,13.2s
HHC LR LR
comp=Z,290nm,14.4s
CD2 Chengdu 64.09 71 P **P 19 47 41.8 +1.9**
CD2 pP **pP 19 47 46.4 +1.6**
CD2 sP **sP 19 47 48.8 +2.2**
CD2 PcP **PcP 19 48 17.0 +2.0**
CD2 PP **PP 19 50 04.1 +3.5**
CD2 PcS 19 52 19.4
CD2 S **S 19 56 16.1 0.0**
CD2 SKS **SKKSac 19 57 32.9 -0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
XAN Xi'an 65.94 65 P **P 19 47 51.9 +0.1**
XAN pP **pP 19 47 57.5 +0.7**
XAN pmax pmax
comp=Z,1.0nm,1.1s
XAN pmax pmax
comp=Z,12nm,4.6s
LBTB Lobatse 66.01 177 *e*P **P 19 47 52.9 +0.7**
comp=Z,8.7nm,0.9s
LBTB Lobatse 66.01 177 *e*P **P 19 47 52.9 +0.7**
comp=Z,8.7nm,0.9s
KMI Kunming 66.67 76 P **P 19 47 57.5 +0.6**
KMI pmax pmax
comp=Z,7.0nm,0.9s
BJI Beijing 67.28 56 P **P 19 47 59.4 -0.8**
BJI PP **PP 19 50 27.0 -1.1**
BJI S **S 19 56 54.0 -0.6**
BJI pmax pmax
comp=Z,8.0nm,0.5s
BJI LR LR
comp=N,190nm,14.2s
BJI LR LR
comp=E,130nm,16.1s
BJI LR LR
comp=Z,84nm,18.7s
BILL Bilibino 67.61 14⇓ *i* P **P 19 48 02.6 +0.7**
BILL pmax pmax
comp=Z,33nm,1.5s
CHTO Chiang Mai 67.62 84 *e*P **P 19 48 03.3 +0.6**
CHTO pmax pmax
comp=Z,89nm,2.8s
CHTO Chiang Mai 67.62 84 *e*P **P 19 48 03.3 +0.6**
comp=Z,89nm,2.8s
CHTO Chiang Mai 67.62 84 *e*P **P 19 48 03.3 +0.6**
comp=Z,89nm,2.8s
CMAR Chiang Mai Arr 67.84 85 P **P 19 48 03.0 -1.0**
CMAR Chiang Mai Arr 67.84 85 P **P 19 48 03.0 -1.0**
comp=Z,2.8nm,0.9s,baz=306,slow=7.2,SNR=15
CMAR LR LR 20 21 35.4
comp=Z,36nm,19.1s,baz=5.0,slow=39
CMAR Chiang Mai Arr 67.84 85 P **P 19 48 03.0 -1.0**
SEY Seymchan 68.63 22 *c i* P **P 19 48 09.7 +1.4**
GYA Guiyang 68.74 73 P **P 19 48 11.0 +1.2**
GYA PP **PP 19 50 43.3 +2.0**
GYA S **S 19 57 11.6 -1.2**
GYA SKS **SKSac 19 58 05.4 -3.5**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.4s
GYA LR LR
comp=N,540nm,20.7s
GYA LR LR
comp=E,450nm,21.0s
GYA LR LR
comp=Z,520nm,20.9s
SADO Sadowa 69.46 312 LR LR 20 17 39.4
comp=Z,107nm,20.5s,baz=152,slow=35
BOSA Boshof 69.58 178 P **P 19 48 15.2 +0.5**
BOSA Boshof 69.58 178 P **P 19 48 15.2 +0.5**
comp=Z,3.8nm,0.8s,baz=8.7,slow=9.0,SNR=6.0
BOSA LR LR 20 21 03.6
comp=Z,190nm,19.2s,baz=354,slow=38
BOSA Boshof 69.58 178 P **P 19 48 15.2 +0.5**
KLR Kul'dur 70.41 41 *e*P **P 19 48 16.6 -3.0**
CN2 Changchun 70.54 49 *e*P **P 19 48 20.5 0.0**
CN2 *e*pP **pP 19 48 25.3 -0.1**
CN2 *e*sP **sP 19 48 27.4 +0.1**
CN2 *e*S **S 19 57 30.8 -2.4**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,15.0s
CN2 LR LR
comp=E,200nm,15.0s
CN2 LR LR
comp=Z,300nm,15.0s
YKW3 Yellowknife Ar 71.00 341 *e*P P 19 48 18.9 -3.9
comp=Z,0.4nm,1.5s
YKA Yellowknife Ar 71.05 341 P **P 19 48 23.4 +0.2**
YKA Yellowknife Ar 71.05 341 P **P 19 48 23.4 +0.2**
comp=Z,3.6nm,0.7s,baz=35,slow=5.4,SNR=61
YKA Yellowknife Ar 71.05 341 P **P 19 48 23.4 +0.2**
RCBR Riachuelo 71.09 244 LR LR 20 18 52.0
comp=Z,69nm,20.1s,baz=39,slow=35
SSPA Standing Stone 71.30 308 *e*P **P 19 48 24.8 -0.3**
comp=Z,11nm,1.1s
SSPA Standing Stone 71.30 308 *e*P **P 19 48 24.8 -0.3**
comp=Z,11nm,1.1s
ERPA Erie 71.60 310 *e*P **P 19 48 26.5 -0.4**
comp=Z,26nm,1.0s
ERPA Erie 71.60 310 *e*P **P 19 48 26.5 -0.4**
comp=Z,26nm,1.0s
COLD Coldfoot 71.69 357 *e*P **P 19 48 27.6 +0.6**
comp=Z,3.9nm,1.0s
COLD Coldfoot 71.69 357 *e*P **P 19 48 27.6 +0.6**
comp=Z,3.9nm,1.0s
MDJ Mudanjiang 72.31 46 P **P 19 48 30.8 -0.3**
MDJ pmax pmax
comp=Z,2.0nm,0.8s
MDJ pmax pmax
comp=Z,54nm,5.3s
FFC Flin Flon 73.36 330 *e*P **P 19 48 34.8 -2.4**
FFC pmax pmax
comp=Z,5.0nm,0.8s
FFC Flin Flon 73.36 330 *e*P **P 19 48 34.8 -2.4**
comp=Z,5.4nm,0.8s
FFC Flin Flon 73.36 330 P **P 19 48 37.0 -0.2**
comp=Z,64nm,0.8s,SNR=5.0
FFC Flin Flon 73.36 330 *e*P **P 19 48 34.8 -2.4**
comp=Z,5.4nm,0.8s
EYMN Ely 73.82 320 *e*P **P 19 48 39.8 -0.2**
comp=Z,7.8nm,0.8s
EYMN Ely 73.82 320 *e*P **P 19 48 39.8 -0.2**
comp=Z,7.8nm,0.8s
USRK Ussuriysk Arra 73.87 45 P **P 19 48 40.7 +0.3**
comp=Z,1.2nm,0.7s,baz=282,slow=1.8,SNR=5.2
USRK LR LR 20 24 24.5
comp=Z,117nm,19.6s,baz=107,slow=38
COWI Conover 73.94 318 *e*P **P 19 48 38.5 -2.3**
comp=Z,16nm,0.9s
COWI Conover 73.94 318 *e*P **P 19 48 38.5 -2.3**
comp=Z,16nm,0.9s
ILAR Eielson Array 73.97 355 P **P 19 48 41.8 +1.2**
ILAR Eielson Array 73.97 355 P **P 19 48 41.8 +1.2**
comp=Z,1.0nm,0.7s,baz=353,slow=5.1,SNR=13
ILAR LR LR 20 22 48.5
comp=Z,51nm,20.1s,baz=338,slow=37
ILAR Eielson Array 73.97 355 P **P 19 48 41.8 +1.2**
ULM Lac du Bonnet 74.20 324 *e*P **P 19 48 41.5 -0.7**
comp=Z,23nm,0.8s
ULM Lac du Bonnet 74.20 324 P **P 19 48 42.4 +0.2**
comp=Z,24nm,0.7s,baz=40,slow=5.9,SNR=20
ULM LR LR 20 20 54.5
comp=Z,99nm,18.5s,baz=8.3,slow=36
ULM Lac du Bonnet 74.20 324 *e*P **P 19 48 41.5 -0.7**
comp=Z,23nm,0.8s
VLA Vladivostok 74.55 46⇑ *e*P **P 19 48 43.5 -0.8**
VLA pmax pmax
comp=Z,37nm,1.7s
QIZ Qiongzhong 75.59 77 P **P 19 48 50.5 -0.2**
KSAR Wonju Array Be 76.06 52 P **P 19 48 53.0 -0.1**
KSAR Wonju Array Be 76.06 52 P **P 19 48 53.0 -0.1**
KSRS Korea Array 76.07 52 P **P 19 48 53.0 -0.2**
comp=Z,1.3nm,0.6s,baz=306,slow=4.0,SNR=13
KSRS LR LR 20 25 29.1
comp=Z,72nm,18.4s,baz=148,slow=38

JFWS Jewell Farm 76.72 316 *e*P **P 19 48 56.7 -0.1**
JFWS pmax pmax
comp=Z,14nm,0.7s
JFWS Jewell Farm 76.72 316 *e*P **P 19 48 56.7 -0.1**
comp=Z,14nm,0.7s
JFWS Jewell Farm 76.72 316 *e*P **P 19 48 56.7 -0.1**
comp=Z,14nm,0.7s
YSS Yuzh-Sakhalins 77.27 37 *e*P **P 19 49 01.9 +2.1**
BLO Bloomington 77.27 311 *e*P **P 19 49 00.5 +0.6**
BLO pmax pmax
comp=Z,21nm,0.9s
BLO Bloomington 77.27 311 *e*P **P 19 49 00.5 +0.6**
comp=Z,21nm,0.9s
BLO Bloomington 77.27 311 *e*P **P 19 49 00.5 +0.6**
comp=Z,21nm,0.9s
TZTN Tazewell 77.32 308 *e*P **P 19 48 58.1 -2.2**
comp=Z,14nm,0.7s
TZTN Tazewell 77.32 308 *e*P **P 19 48 58.1 -2.2**
comp=Z,14nm,0.7s
WCI Wyandotte Cave 77.79 310 *e*P **P 19 48 59.9 -3.0**
WCI pmax pmax
comp=Z,11nm,1.0s
WCI Wyandotte Cave 77.79 310 *e*P **P 19 48 59.9 -3.0**
comp=Z,11nm,1.0s
WCI Wyandotte Cave 77.79 310 *e*P **P 19 48 59.9 -3.0**
comp=Z,11nm,1.0s
TKL Tuckaleechee C 78.05 307 P **P 19 49 05.0 +0.6**
TKL Tuckaleechee C 78.05 307 P **P 19 49 05.0 +0.6**
comp=Z,5.7nm,0.9s,baz=63,slow=10,SNR=5.4
TKL LR LR 20 21 27.9
comp=Z,82nm,21.9s,baz=20,slow=34
TKL Tuckaleechee C 78.05 307 P **P 19 49 04.9 +0.6**
DLBC Dease Lake 78.08 346 P **P 19 49 04.9 +0.7**
DLBC Dease Lake 78.08 346 P **P 19 49 04.9 +0.7**
comp=Z,2.0nm,0.7s,baz=346,slow=9.1,SNR=5.4
DLBC LR LR 20 21 54.1
comp=Z,86nm,19.9s,baz=129,slow=34
DLBC Dease Lake 78.08 346 P **P 19 49 04.9 +0.7**
PETK Petropavlovsk- 78.28 26 P **P 19 49 05.0 -0.3**
PETK Petropavlovsk- 78.28 26 P **P 19 49 05.0 -0.3**
PETK Petropavlovsk- 78.28 26 P **P 19 49 05.0 -0.3**
comp=Z,2.9nm,0.8s,baz=247,slow=3.0,SNR=4.6
PETK LR LR 20 26 51.5
comp=Z,51nm,20.6s,baz=144,slow=38
PETK Petropavlovsk- 78.28 26 P **P 19 49 05.0 -0.3**
OLIL Olney 78.47 312 *e*P **P 19 49 07.0 +0.4**
comp=Z,15nm,0.8s
OLIL Olney 78.47 312 *e*P **P 19 49 07.0 +0.4**
comp=Z,15nm,0.8s
CPCT Cooper Cave 78.64 307 *e*P **P 19 49 08.8 +1.2**
CPCT Cooper Cave 78.64 307 *e*P **P 19 49 08.8 +1.2**
ECSD EROS Data Cent 79.34 320 *e*P **P 19 49 11.7 +0.4**
comp=Z,16nm,0.9s
ECSD EROS Data Cent 79.34 320 *e*P **P 19 49 11.7 +0.4**
comp=Z,16nm,0.9s
C24A Savage 79.93 327 P **P 19 49 15.9 +1.4**
baz=80,SNR=8.6
B22A Reddig Ranch S 79.95 328 P **P 19 49 15.9 +1.2**
baz=80,SNR=6.6
C23A Lambert 80.03 327 P **P 19 49 16.6 +1.5**
baz=80,SNR=5.3
C22A Vida 80.36 328⇓ P **P 19 49 17.8 +1.0**
baz=80,SNR=7.9
D23A Lindsay 80.54 327 P **P 19 49 19.4 +1.6**
baz=80,SNR=10
D22A Cohagen 80.95 327 P **P 19 49 21.6 +1.6**
baz=81,SNR=12
B19A Brinkman Farms 80.98 330⇓ P **P 19 49 20.6 +0.4**
baz=81,SNR=6.3
PLAL Pickwick Lake 81.07 309 *e*P **P 19 49 20.3 -0.5**
comp=Z,11nm,0.9s
PLAL Pickwick Lake 81.07 309 *e*P **P 19 49 20.3 -0.5**
comp=Z,11nm,0.9s
E23A Ismay 81.12 327⇓ P **P 19 49 20.9 0.0**
baz=81,SNR=8.7
C20A Veseth Ranch, 81.22 329 P **P 19 49 22.8 +1.3**
baz=81,SNR=39
KDAK Kodiak Island 81.23 357 LR LR 20 27 44.3
comp=Z,82nm,19.2s,baz=283,slow=37
F24A Ekalaka 81.28 326⇑ P **P 19 49 20.7 -1.1**
baz=81,SNR=7.3
B18A Beardsley Farm 81.34 330⇑ P **P 19 49 22.7 +0.6**
baz=81,SNR=15
D21A La Casta Ranch 81.35 328 P **P 19 49 23.9 +1.7**
baz=81,SNR=6.0
E22A Miles City 81.43 327⇑ P **P 19 49 22.4 -0.2**
baz=81,SNR=7.1
EGMT Eagleton 81.64 330 *e*P **P 19 49 24.9 +1.2**
comp=Z,53nm,0.8s
EGMT Eagleton 81.64 330 *e*P **P 19 49 24.9 +1.2**
comp=Z,53nm,0.8s
EGMT Eagleton 81.64 330 P **P 19 49 24.8 +1.1**
baz=81,SNR=19
F23A Volborg 81.78 326 P **P 19 49 25.4 +1.0**
baz=82,SNR=20
D20A Manuel Ranch, 81.78 329 P **P 19 49 25.6 +1.1**
baz=82,SNR=17
LRAL Lakeview Retre 81.78 307 *e*P P 19 49 21.4 -3.2
comp=Z,23nm,1.0s
LRAL Lakeview Retre 81.78 307 *e*P P 19 49 21.4 -3.2
comp=Z,23nm,1.0s
B17A L&G Farms, Che 81.81 331 P **P 19 49 25.0 +0.5**
baz=82,SNR=10.0
E21A Keefer Ranch, 81.81 328⇑ P **P 19 49 26.2 +1.6**
baz=82,SNR=5.1
A15A Johnson Ranch, 81.93 332 P **P 19 49 25.6 +0.3**
baz=82,SNR=32
D19A Cripps Ranch, 82.01 329⇓ P **P 19 49 26.1 +0.4**
baz=82,SNR=8.4
B16A M & M Farms, S 82.04 331⇑ P **P 19 49 26.2 +0.5**
baz=82,SNR=8.4
F22A Rosebud 82.09 327 P **P 19 49 27.2 +1.1**
baz=82,SNR=6.1
A14A Double T Ranch 82.17 333⇑ P **P 19 49 27.2 +0.7**
baz=82,SNR=33
H24A Dirks Ranch, A 82.20 325⇓ P **P 19 49 26.6 -0.1**
baz=82,SNR=8.9
E20A Meyer Farm, Mu 82.26 328⇑ P **P 19 49 27.5 +0.6**
baz=82,SNR=5.6
WALA Waterton Lakes 82.27 333 *e*P P 19 49 22.3 -4.8
comp=Z,0.7nm,1.0s
C17A Wharram Farm, 82.34 330 P **P 19 49 27.8 +0.4**
baz=82,SNR=10.0
B15A Bradely Ranch, 82.43 332 P **P 19 49 27.9 0.0**
baz=82,SNR=21
RSSD Black Hills 82.47 324 *e*P **P 19 49 29.4 +1.1**
RSSD pmax pmax
comp=Z,11nm,0.9s
RSSD Black Hills 82.47 324 *e*P **P 19 49 29.4 +1.1**
comp=Z,11nm,0.9s
RSSD Black Hills 82.47 324 *e*P **P 19 49 29.4 +1.1**
comp=Z,11nm,0.9s
E19A Rath Farm, Rou 82.56 329 P **P 19 49 29.6 +1.0**
baz=82,SNR=15
C16A Fuhringer Ranc 82.56 331 P **P 19 49 28.9 +0.3**
baz=82,SNR=6.7
MAJO Matsushiro 82.62 47 *e*P **P 19 49 29.9 +0.9**
MAJO pmax pmax
comp=Z,12nm,1.1s
MAJO Matsushiro 82.62 47 *e*P **P 19 49 29.9 +0.9**
comp=Z,12nm,1.1s
MAJO Matsushiro 82.62 47 *e*P **P 19 49 29.9 +0.9**
comp=Z,12nm,1.1s
MAT Matsushiro 82.62 47 P **P 19 49 28.4 -0.6**
MJAR Matsushiro Arr 82.62 47 P **P 19 49 29.4 +0.4**
MJAR Matsushiro Arr 82.62 47 P **P 19 49 29.4 +0.4**
comp=Z,5.1nm,0.9s,baz=308,slow=5.6,SNR=15
MJAR LR LR 20 28 12.3
comp=Z,99nm,18.2s,baz=330,slow=37
MJAR Matsushiro Arr 82.62 47 P **P 19 49 29.4 +0.4**
B14A Marquette Ranc 82.64 332 P **P 19 49 29.2 +0.2**
baz=82,SNR=12
D17A Six Diamond Ra 82.72 330⇓ P **P 19 49 30.2 +0.7**
baz=82,SNR=5.9
KSU1 Kansas State U 82.79 317 *e*P **P 19 49 30.0 +0.2**
comp=Z,43nm,1.0s
KSU1 Kansas State U 82.79 317 *e*P **P 19 49 30.0 +0.2**
comp=Z,43nm,1.0s
F20A Billings 82.84 328 P **P 19 49 31.2 +1.1**
baz=82,SNR=7.9
C15A Salmond Ranch, 82.90 331 P **P 19 49 30.4 0.0**
baz=83,SNR=8.1
G21A Lodge Grass 82.93 327⇓ P **P 19 49 31.3 +0.8**
baz=83,SNR=8.0
I24A Kuemmerle Ranc 82.94 325 P **P 19 49 31.6 +1.0**
baz=83,SNR=7.0
B13A Whitefish 83.04 333 P **P 19 49 32.0 +1.0**

	baz=83,SNR=15								
H22A	**Clearmont**	83.09	326	⇑P		P	19 49 32.0	+0.6	
	baz=83,SNR=15								
F19A	**Roth Farm, Mol**	83.12	328	⇑P		P	19 49 32.5	+1.0	
	baz=83,SNR=10								
D16A	**Dana Ranch, Ca**	83.14	330	⇑P		P	19 49 32.0	+0.3	
	baz=83,SNR=14								
BLMT	**Blacktail Moun**	83.32	333	*e*P		P	19 49 33.8	+1.2	
BLMT	**Blacktail Moun**	83.32	333	*e*P		P	19 49 33.8	+1.2	
G20A	**Bridger**	83.35	327	⇑P		P	19 49 33.6	+0.9	
	baz=83,SNR=14								
H21A	**Big Horn, Sher**	83.35	326	⇓P		P	19 49 33.7	+1.0	
	baz=83,SNR=9.0								
E17A	**Martinsdale**	83.36	330	⇑P		P	19 49 33.8	+1.0	
	baz=83,SNR=8.1								
F18A	**Big Timber**	83.38	329	⇑P		P	19 49 34.0	+1.2	
	baz=83,SNR=8.6								
N29A	**Votaw Ranch, W**	83.49	320	⇑P		P	19 49 34.1	+0.6	
	baz=83,SNR=7.1								
D15A	**Lincoln**	83.49	331	P		P	19 49 33.6	+0.2	
	baz=83,SNR=6.4								
JTMT	**Jette**	83.52	332	*e*P		P	19 49 34.6	+1.0	
JTMT	**Jette**	83.52	332	*e*P		P	19 49 34.6	+1.0	
BBB	**Bella Bella**	83.53	342	LR		LR	20 29 28.7		
	comp=Z,54nm,20.4s,baz=132,slow=38								
K25A	**Mack Ranch, Ha**	83.59	323	⇑P		P	19 49 35.1	+1.1	
	baz=83,SNR=5.7								
BSMT	**Bassoo Peak**	83.60	333	*e*P		P	19 49 34.9	+0.8	
BSMT	**Bassoo Peak**	83.60	333	*e*P		P	19 49 34.9	+0.8	
SWMT	**Swartz Lake**	83.62	332	*e*P		P	19 49 34.9	+0.8	
SWMT	**Swartz Lake**	83.62	332	*e*P		P	19 49 34.9	+0.8	
SLMT	**Seeley Lake**	83.67	332	*e*P		P	19 49 35.0	+0.6	
SLMT	**Seeley Lake**	83.67	332	*e*P		P	19 49 35.0	+0.6	
C13A	**Hot Springs**	83.68	333	⇓P		P	19 49 34.8	+0.5	
	baz=83,SNR=8.0								
F17A	**Fitzpatrick Pl**	83.75	329	⇓P		P	19 49 36.0	+1.2	
	baz=83,SNR=10.0								
M27A	**Reverse DX Ran**	83.77	322	⇓P		P	19 49 36.3	+1.4	
	baz=84,SNR=5.2								
D14A	**Greenough**	83.81	332	⇑P		P	19 49 35.0	-0.1	
	baz=84,SNR=7.8								
RLMT	**Red Lodge**	83.85	328	*e*P		P	19 49 32.8	-2.6	
	comp=Z,8.2nm,0.8s								
RLMT	**Red Lodge**	83.85	328	*e*P		P	19 49 32.8	-2.6	
	comp=Z,8.2nm,0.8s								
H20A	**Greybull**	83.86	327	P		P	19 49 36.2	+0.8	
	baz=84,SNR=10								
CHMT	**Chamberlain Mo**	83.86	331	*e*P		P	19 49 35.9	+0.5	
CHMT	**Chamberlain Mo**	83.86	331	*e*P		P	19 49 35.9	+0.5	
NEW	**Newport**	84.03	334	*e*P		P	19 49 36.8	+0.8	
	comp=Z,11nm,1.1s								
NEW	**Newport**	84.03	334	LR		LR	20 27 28.3		
	comp=Z,78nm,19.6s,baz=46,slow=36								
NEW	**Newport**	84.03	334	*e*P		P	19 49 36.8	+0.8	
	comp=Z,11nm,1.1s								
NEW	**Newport**	84.03	334	P		P	19 49 36.9	+0.8	
	baz=84,SNR=6.1								
E15A	**Deer Lodge**	84.06	331	⇑P		P	19 49 37.0	+0.6	
	baz=84,SNR=11								
J22A	**Midwest**	84.09	325	P		P	19 49 36.6	0.0	
	baz=84,SNR=14								
H19A	**Powell**	84.11	328	⇓P		P	19 49 38.1	+1.5	
	baz=84,SNR=23								
I21A	**Big Trails, Te**	84.11	326	P		P	19 49 37.0	+0.3	
	baz=84,SNR=25								
D13A	**Huson**	84.14	332	⇑P		P	19 49 37.4	+0.7	
	baz=84,SNR=18								
K23A	**Bowen Ranch, D**	84.26	325	P		P	19 49 38.0	+0.5	
	baz=84,SNR=14								
G17A	**Pierce Place,**	84.26	329	⇓P		P	19 49 39.1	+1.6	
	baz=84,SNR=5.1								
BOZ	**Bozeman (W)**	84.33	330	*e*P		P	19 49 35.4	-2.4	
BOZ				pmax		pmax			
	comp=Z,11nm,1.1s								
BOZ	**Bozeman (W)**	84.33	330	*e*P		P	19 49 35.4	-2.4	
	comp=Z,11nm,1.1s								
BOZ	**Bozeman (W)**	84.33	330	*e*P		P	19 49 35.3	-2.5	
	comp=Z,11nm,1.1s								
I20A	**Worland**	84.35	327	⇑P		P	19 49 38.7	+0.8	
	baz=84,SNR=38								
H18A	**Shoshone NF, C**	84.38	328	P		P	19 49 39.3	+1.1	
	baz=84,SNR=19								
F15A	**Butte**	84.49	330	⇑P		P	19 49 39.3	+0.6	
	baz=84,SNR=16								
LRM	**Limekiln Ridge**	84.49	330	*e*P		P	19 49 39.5	+0.8	
LRM	**Limekiln Ridge**	84.49	330	*e*P		P	19 49 39.5	+0.8	
J21A	**Lysite**	84.56	326	P		P	19 49 39.6	+0.6	
	baz=84,SNR=17								
E13A	**Victor**	84.60	332	⇑P		P	19 49 39.8	+0.8	
	baz=84,SNR=6.3								
I19A	**Meeteetse**	84.64	327	⇑P		P	19 49 40.9	+1.5	
	baz=84,SNR=33								
Q30A	**Quinter**	84.71	319	⇓P		P	19 49 40.2	+0.5	
	baz=84								
K22A	**Casper**	84.73	325	P		P	19 49 40.1	+0.2	
	baz=84,SNR=19								
TUL1	**Tulsa**	84.74	314	⇑P		P	19 49 40.4	+0.6	
	baz=84,SNR=9.6								
G16A	**Moss Hill, Enn**	84.75	330	P		P	19 49 41.5	+1.6	
	baz=84,SNR=8.9								
L23A	**Garrett**	84.81	324	⇓P		P	19 49 40.5	+0.2	
	baz=84								
J20A	**Shoshoni**	84.82	326	⇓P		P	19 49 41.0	+0.7	
	baz=84,SNR=24								
F14A	**Wisdom**	84.84	331	⇓P		P	19 49 41.5	+1.1	
	baz=84,SNR=8.5								
R31A	**Burdett**	84.89	318	⇑P		P	19 49 41.3	+0.7	
	baz=85								
M24A	**Cheyenne**	84.93	323	⇓P		P	19 49 42.4	+1.5	
	baz=85								
DLMT	**Dillon**	84.94	330	*e*P		P	19 49 42.3	+1.5	
	comp=Z,22nm,1.0s								
DLMT	**Dillon**	84.94	330	*e*P		P	19 49 42.3	+1.5	
	comp=Z,22nm,1.0s								
QLMT	**Earthquake Lak**	84.94	329	*e*P		P	19 49 43.0	+2.0	
QLMT	**Earthquake Lak**	84.94	329	*e*P		P	19 49 43.0	+2.0	
H16A	**Russell Place,**	84.98	329	⇑P		P	19 49 42.8	+1.6	
	baz=85,SNR=15								
G15A	**Dillon**	85.06	330	⇑P		P	19 49 42.8	+1.3	
	baz=85,SNR=11								
F13A	**Darby**	85.21	331	⇑P		P	19 49 43.0	+0.8	
	baz=85,SNR=28								
I18A	**Diamond G Ranc**	85.25	328	⇓P		P	19 49 43.6	+1.0	
	baz=85,SNR=7.4								
J19A	**Crowheart**	85.30	327	P		P	19 49 43.5	+0.7	
	baz=85,SNR=18								
PHWY	**Pilot Hill**	85.35	324	*e*P		P	19 49 43.9	+0.7	
	comp=Z,19nm,0.8s								
PHWY	**Pilot Hill**	85.35	324	*e*P		P	19 49 43.9	+0.7	
	comp=Z,19nm,0.8s								
MCMT	**McKenzie Canyo**	85.49	330	*e*P		P	19 49 41.2	-2.5	
	comp=Z,6.7nm,1.2s								
MCMT	**McKenzie Canyo**	85.49	330	*e*P		P	19 49 41.2	-2.5	
	comp=Z,6.7nm,1.2s								
K20A	**Yellowstone Ra**	85.50	326	⇑P		P	19 49 44.0	+0.2	
	baz=85,SNR=6.7								
IMW	**Indian Meadow**	85.53	328	*e*P		P	19 49 45.4	+1.4	
	comp=Z,17nm,0.9s								
IMW	**Indian Meadow**	85.53	328	*e*P		P	19 49 45.4	+1.4	
	comp=Z,17nm,0.9s								
F12A	**Elk City**	85.57	332	P		P	19 49 44.4	+0.4	
	baz=85,SNR=27								
K19A	**Absolon Red Bu**	85.57	326	⇓P		P	19 49 44.1	0.0	
	baz=85,SNR=15								
H15A	**Lima**	85.59	330	⇓P		P	19 49 45.8	+1.6	
	baz=85,SNR=12								
LOHW	**Long Hollow**	85.64	328	*e*P		P	19 49 46.0	+1.6	
	comp=Z,6.0nm,1.0s								
LOHW	**Long Hollow**	85.64	328	*e*P		P	19 49 46.0	+1.6	
	comp=Z,6.0nm,1.0s								
L21A	**Rawlins**	85.65	325	⇓P		P	19 49 44.7	+0.1	
	baz=85,SNR=6.4								
I16A	**Newdale**	85.77	329	⇓P		P	19 49 46.5	+1.5	
	baz=85,SNR=13								
G13A	**Cobalt**	85.77	331	P		P	19 49 45.8	+0.8	
	baz=85,SNR=15								
H14A	**Leadore**	85.86	330	⇑P		P	19 49 46.7	+1.2	
	baz=86,SNR=11								
TPAW	**Teton Pass**	85.88	328	*e*P		P	19 49 47.5	+1.8	
	comp=Z,10.0nm,1.2s								
TPAW	**Teton Pass**	85.88	328	*e*P		P	19 49 47.5	+1.8	
	comp=Z,10.0nm,1.2s								
DCID1	**Drake Creek**	85.88	328	*e*P		P	19 49 48.4	+2.7	
	comp=Z,19nm,0.9s								
DCID1	**Drake Creek**	85.88	328	*e*P		P	19 49 48.4	+2.7	
	comp=Z,18nm,0.9s								
N23A	**Red Feather La**	85.89	324	P		P	19 49 46.8	+0.9	
	baz=86,SNR=7.1								
BW06	**Boulder Array**	85.92	327	*e*P		P	19 49 43.7	-2.2	
	comp=Z,5.9nm,1.0s								
BW06	**Boulder Array**	85.92	327	*e*P		P	19 49 43.7	-2.2	
	comp=Z,5.8nm,1.0s								
PDAR	**Pinedale Array**	85.92	327	P		P	19 49 45.9	0.0	
PDAR	**Pinedale Array**	85.92	327	P		P	19 49 45.9	0.0	
	comp=Z,2.3nm,0.7s,baz=65,slow=4.5,SNR=12								
PDAR				LR		LR	20 26 51.6		
	comp=Z,79nm,18.5s,baz=324,slow=35								
PDAR	**Pinedale Array**	85.92	327	P		P	19 49 45.9	0.0	
M21A	**Separation Pea**	85.94	325	⇑P		P	19 49 46.3	+0.3	
	baz=86,SNR=7.5								
L20A	**Wamsutter**	86.03	326	⇑P		P	19 49 47.2	+0.8	
	baz=86,SNR=7.7								
I15A	**Monteview**	86.05	329	⇓P		P	19 49 45.8	-0.6	
	baz=86,SNR=10								
RRI2	**Red Ridge**	86.14	328	*e*P		P	19 49 48.8	+1.7	
	comp=Z,20nm,1.3s								
RRI2	**Red Ridge**	86.14	328	*e*P		P	19 49 48.8	+1.7	
	comp=Z,20nm,1.3s								
BDFB	**Brasilia**	86.36	246	P		P	19 49 49.8	+1.7	
BDFB	**Brasilia**	86.36	246	P		P	19 49 49.8	+1.7	
	comp=Z,12nm,0.9s,baz=51,slow=4.5,SNR=17								
BDFB				LR		LR	20 31 08.0		
	comp=Z,80nm,18.8s,baz=308,slow=38								
BDFB	**Brasilia**	86.36	246	P		P	19 49 49.8	+1.7	
HAWA	**Hanford**	86.46	335	*e*P		P	19 49 49.8	+1.6	
	comp=Z,15nm,0.9s								
HAWA	**Hanford**	86.46	335	*e*P		P	19 49 49.8	+1.6	
	comp=Z,15nm,0.9s								
H12A	**Diamond D Ranc**	86.47	331	P		P	19 49 49.1	+0.6	
	baz=86,SNR=6.3								
I14A	**Mackay**	86.48	330	P		P	19 49 50.2	+1.7	
	baz=86,SNR=22								
ISCO	**Idaho Springs**	86.63	323	*e*P		P	19 49 49.5	-0.1	
ISCO				pmax		pmax			
	comp=Z,5.0nm,0.8s								
ISCO	**Idaho Springs**	86.63	323	*e*P		P	19 49 49.5	-0.1	
	comp=Z,4.7nm,0.8s								
ISCO	**Idaho Springs**	86.63	323	*e*P		P	19 49 49.5	-0.1	
	comp=Z,4.7nm,0.8s								
ISCO	**Idaho Springs**	86.63	323	⇑P		P	19 49 50.0	+0.5	
	baz=86,SNR=8.2								
SDV	**Santo Domingo**	86.72	279	*e*P		P	19 49 51.2	+1.0	
	comp=Z,13nm,1.0s								
SDV	**Santo Domingo**	86.72	279	*e*P		P	19 49 51.2	+1.0	
	comp=Z,13nm,1.0s								
I13A	**Wihorse Cree**	86.74	330	⇓P		P	19 49 51.1	+1.1	
	baz=86,SNR=22								
N20A	**Spence Gulch,**	86.97	325	P		P	19 49 51.5	+0.4	
	baz=87,SNR=9.4								
BMO	**Blue Mountains**	87.07	333	*e*P		P	19 49 48.4	-2.9	
	comp=Z,7.3nm,0.8s								
BMO	**Blue Mountains**	87.07	333	*e*P		P	19 49 48.4	-2.9	
	comp=Z,7.3nm,0.8s								
P23A	**Jefferson**	87.07	323	P		P	19 49 52.5	+0.7	
	baz=87,SNR=10								
HLID	**Hailey**	87.15	330	*e*P		P	19 49 52.9	+1.0	
	comp=Z,4.9nm,1.3s								
HLID	**Hailey**	87.15	330	*e*P		P	19 49 52.9	+1.0	
	comp=Z,4.9nm,1.3s								
WMOK	**Wichita Mounta**	87.23	315	*e*P		P	19 49 49.6	-2.6	
WMOK				pmax		pmax			
	comp=Z,2.0nm,0.6s								
WMOK	**Wichita Mounta**	87.23	315	*e*P		P	19 49 49.6	-2.6	
	comp=Z,2.0nm,0.6s								
WMOK	**Wichita Mounta**	87.23	315	*e*P		P	19 49 49.6	-2.6	
	comp=Z,1.7nm,0.6s								
M17A	**Scullys Gap (B**	87.45	327	P		P	19 49 53.7	+0.3	
	baz=87,SNR=6.8								
O20A	**White River Ci**	87.53	325	⇑P		P	19 49 54.0	+0.3	
	baz=87,SNR=5.8								
HWUT	**Hardware Ranch**	87.70	328	*e*P		P	19 49 51.9	-2.7	
	comp=Z,11nm,0.8s								
HWUT	**Hardware Ranch**	87.70	328	*e*P		P	19 49 51.9	-2.7	
	comp=Z,11nm,0.8s								
SMCO	**Snowmass**	87.75	323	*e*P		P	19 49 55.5	+0.4	
	comp=Z,4.7nm,1.0s								
SMCO	**Snowmass**	87.75	323	*e*P		P	19 49 55.5	+0.4	
	comp=Z,4.7nm,1.0s								
O19A	**Miners Draw (B**	87.78	325	P		P	19 49 55.4	+0.4	
	baz=88,SNR=6.5								
S25A	**Robets Cordova**	87.79	321	⇑P		P	19 49 55.4	+0.3	
	baz=88,SNR=5.4								
MFID	**Camas Ranch**	87.80	331	*e*P		P	19 49 55.9	+0.9	
	comp=Z,18nm,0.9s								
MFID	**Camas Ranch**	87.80	331	*e*P		P	19 49 55.9	+0.9	
	comp=Z,18nm,0.9s								
MFID	**Camas Ranch**	87.80	331	⇑P		P	19 49 55.8	+0.9	
	baz=88,SNR=11								
Q22A	**Crested Butte,**	87.98	323	P		P	19 49 56.5	+0.5	
	baz=88,SNR=13								
P20A	**De Beque**	88.12	324	⇑P		P	19 49 56.8	+0.2	
	baz=88,SNR=7.3								
SDCO	**Great Sand Dun**	88.23	321	*e*P		P	19 49 54.8	-2.5	
	comp=Z,3.5nm,1.0s								
SDCO	**Great Sand Dun**	88.23	321	*e*P		P	19 49 54.8	-2.5	
	comp=Z,3.5nm,1.0s								
R22A	**Saguache, Gunn**	88.42	323	⇓P		P	19 49 59.1	+0.9	
	baz=88,SNR=9.7								
U26A	**Atchley Ranch,**	88.47	320	⇑P		P	19 49 58.7	+0.4	
	baz=88,SNR=9.3								
JLU	**Jordanelle**	88.50	327	*e*P		P	19 49 59.2	+0.8	
	comp=Z,9.7nm,0.8s								
JLU	**Jordanelle**	88.50	327	*e*P		P	19 49 59.2	+0.8	
	comp=Z,9.7nm,0.8s								
Q20A	**Ridgley Place,**	88.52	324	P		P	19 49 58.6	+0.1	
	baz=88,SNR=6.5								
X30A	**Coker Ranch, T**	88.55	316	⇓P		P	19 49 59.0	+0.5	
	baz=88,SNR=11								
T24A	**Torres, Weston**	88.56	321	⇑P		P	19 49 59.8	+1.0	
	baz=88,SNR=5.8								
Z32A	**Haskell**	88.69	315	P		P	19 50 00.0	+0.8	
	baz=88,SNR=15								
U25A	**Circle Dot Ran**	88.78	320	⇓P		P	19 50 00.5	+0.7	
	baz=88,SNR=8.0								
S22A	**4UR Ranch, Cre**	88.85	322	P		P	19 50 00.6	+0.4	
	baz=88,SNR=13								
R20A	**Redvale**	89.19	324	P		P	19 50 02.0	+0.3	
	baz=89,SNR=14								
PV04	**Paradox Valley**	89.25	324	*e*P		P	19 50 02.6	+0.6	
PV04	**Paradox Valley**	89.25	324	*e*P		P	19 50 02.6	+0.6	
ABTX	**Abilene, Hawle**	89.31	315	⇑P		P	19 50 03.0	+1.0	
	baz=89,SNR=7.4								
S21A	**Coal Bank Pass**	89.36	323	P		P	19 50 03.0	+0.4	
	baz=89,SNR=8.1								
SRU	**San Rafael**	89.36	325	P		P	19 50 02.2	-0.2	
	baz=89,SNR=7.1								
DUG	**Dugway**	89.40	328	⇑P		P	19 50 03.3	+0.7	
	baz=89,SNR=14								
S20A	**Disappointment**	89.47	323	⇓P		P	19 50 03.5	+0.4	
	baz=89,SNR=6.9								
T22A	**Edith**	89.47	322	P		P	19 50 03.8	+0.7	
	baz=89,SNR=10.0								
ELK	**Elko**	89.89	329	*e*P		P	19 50 06.2	+1.3	
	comp=Z,139nm,1.4s								
ELK	**Elko**	89.89	329	*e*P		P	19 50 06.2	+1.3	
	comp=Z,139nm,1.4s								
U22A	**Llaves**	89.97	322	P		P	19 50 06.5	+1.1	
	baz=90,SNR=23								
U21A	**Nageezi**	90.30	322	⇓P		P	19 50 07.0	0.0	
	baz=90,SNR=13								
V22A	**San Miguel Ran**	90.37	321	⇑P		P	19 50 08.2	+0.9	
	baz=90,SNR=5.8								
MSU	**Marysvale**	90.56	326	*e*P		P	19 50 09.1	+1.0	
MSU	**Marysvale**	90.56	326	*e*P		P	19 50 09.1	+1.0	
MSU	**Marysvale**	90.56	326	*e*P		P	19 50 09.1	+1.0	
MVU	**Marysvale**	90.59	326	*e*P		P	19 50 06.9	-1.3	
	comp=Z,7.3nm,0.8s								
MVU	**Marysvale**	90.59	326	*e*P		P	19 50 06.9	-1.3	
	comp=Z,7.3nm,0.8s								
ANMO	**Albuquerque**	90.94	320	*e*P		P	19 50 09.6	-0.3	
	comp=Z,3.8nm,1.1s								
ANMO	**Albuquerque**	90.94	320	*e*P		P	19 50 09.6	-0.3	
	comp=Z,3.8nm,1.1s								
JCT	**Junction City**	91.04	313	*e*P		P	19 50 11.4	+1.1	
JCT				pmax		pmax			
	comp=Z,9.0nm,1.0s								
JCT	**Junction City**	91.04	313	*e*P		P	19 50 11.3	+1.1	
	comp=Z,8.9nm,1.0s								
JCT	**Junction City**	91.04	313	*e*P		P	19 50 11.4	+1.1	
	comp=Z,8.9nm,1.0s								
Z26A	**Caprock**	91.06	318	⇑P		P	19 50 10.3	-0.1	
	baz=91,SNR=7.8								
V20A	**Brimhall**	91.19	322	⇓P		P	19 50 11.7	+0.6	
	baz=91,SNR=6.5								
431A	**Sonora**	91.33	314	⇓P		P	19 50 12.5	+0.9	
	baz=91,SNR=9.0								
532A	**Rocksprings**	91.37	313	P		P	19 50 12.5	+0.7	
	baz=91,SNR=9.0								
430A	**Baggett Ranch,**	91.58	314	P		P	19 50 13.7	+0.9	
	baz=91,SNR=7.1								
X21A	**Alamocita Cree**	91.98	321	⇑P		P	19 50 15.8	+1.0	
	baz=92,SNR=12								
R11A	**Troy Canyon, C**	92.09	328	⇑P		P	19 50 16.0	+0.9	
	baz=92,SNR=5.7								
530A	**J-C Ranch, Com**	92.14	314	⇓P		P	19 50 16.0	+0.7	
	baz=92,SNR=9.8								
631A	**Perdido Creek**	92.29	313	⇑P		P	19 50 16.7	+0.7	
	baz=92,SNR=12								
NV11	**Mina Array Sit**	93.01	330	*e*P		P	19 50 16.4	-2.9	
NV11	**Mina Array Sit**	93.01	330	*e*P		P	19 50 16.5	-2.9	
MNTX	**Cornudas Mount**	93.03	318	*e*P		P	19 50 17.7	-1.7	
	comp=Z,15nm,1.9s								
MNTX	**Cornudas Mount**	93.03	318	*e*P		P	19 50 17.7	-1.7	
	comp=Z,15nm,1.9s								
NVAR	**Mina Array Bea**	93.06	330	P		P	19 50 20.1	+0.4	
NVAR	**Mina Array Bea**	93.06	330	P		P	19 50 20.1	+0.4	
	comp=Z,3.0nm,0.7s,baz=46,slow=3.9,SNR=21								
NVAR	**Mina Array Bea**	93.06	330	P		P	19 50 20.1	+0.4	
426A	**McDonald Obser**	93.16	316	P		P	19 50 20.6	+0.4	
	baz=93,SNR=9.0								
324A	**Moseley Ranch,**	93.29	318	⇓P		P	19 50 20.6	-0.1	
	baz=93,SNR=6.3								
Z20A	**Nine Sixteen R**	93.46	321	⇓P		P	19 50 22.3	+0.7	
	baz=93,SNR=10								
628A	**Black Gap, Mar**	93.49	315	⇓P		P	19 50 22.4	+0.8	
	baz=93,SNR=8.9								
627A	**Terlingua Ranc**	93.78	315	⇑P		P	19 50 23.6	+0.6	
	baz=94,SNR=11								
TXAR	**Lajitas Array**	94.02	315	P		P	19 50 24.4	+0.3	
TXAR	**Lajitas Array**	94.02	315	P		P	19 50 24.4	+0.3	
	comp=Z,3.8nm,0.9s,baz=66,slow=3.9,SNR=35								
TXAR				LR		LR	20 30 33.6		
	comp=Z,59nm,18.1s,baz=5.0,slow=34								
TXAR	**Lajitas Array**	94.02	315	P		P	19 50 24.4	+0.3	
626A	**Big Bend Ranch**	94.09	316	⇑P		P	19 50 24.7	+0.3	
	baz=94,SNR=6.4								
TUC	**Tucson**	95.15	322	*e*P		P	19 50 30.3	+1.1	
TUC				pmax		pmax			
	comp=Z,1.0nm,1.0s								
TUC	**Tucson**	95.15	322	*e*P		P	19 50 30.3	+1.1	
	comp=Z,1.4nm,1.0s								
TUC	**Tucson**	95.15	322	*e*P		P	19 50 30.3	+1.1	
	comp=Z,1.4nm,1.0s								
CPUP	**Villa Florida**	99.97	244	LR		LR	20 37 59.9		
	comp=Z,92nm,18.7s,baz=163,slow=37								
WRA	**Warramunga Arr**	118.95	92	PKP		PKPdf	19 55 52.4	-2.1	
WRA	**Warramunga Arr**	118.95	92	PKP		PKPdf	19 55 52.4	-2.1	
	comp=Z,0.8nm,1.2s,baz=309,slow=2.2,SNR=4.5								
WRA	**Warramunga Arr**	118.95	92	PKIKP		PKPdf	19 55 52.4	-2.1	
ASAR	**Alice Springs**	120.80	96	PKP		PKPdf	19 55 56.1	-1.9	
ASAR	**Alice Springs**	120.80	96	PKP		PKPdf	19 55 56.1	-1.9	
	comp=Z,1.1nm,0.8s,baz=290,slow=2.1,SNR=11								
ASAR	**Alice Springs**	120.80	96	PKIKP		PKPdf	19 55 56.1	-1.9	
PMOR	**Pomariorio Ree**	152.58	340	*e*PKPbc		PKiKP	19 57 03.7	+1.0	
	comp=Z,16nm,1.2s								

NIED ***24*** *19:39:00,42°.50N×141°.80E,h107km,Mw4.1 Best double couple: M0 1.71000×10^15 NP1:φs272.00000°, δ81.00000°,λ-13.00000°. NP2:φs4.40000°,δ77.00000°, λ-170.00000°.*

ISCJB ***24*** *19:39:28.2±0.2,42°.51N±0°.03×141°.81E±0°.04, h126km±2km,mb4.1/27,Error ellipse: s-maj=5.6km s-min=3.5km az=43.7*

MOS ***24*** *19:39:28.2±1.2,42°.60N×141°.72E,h126km,mb4.1/13, Error ellipse: s-maj=12.3km s-min=8.1km az=98.5*

JMA ***24*** *19:39:29.2±0.1,42°.56N×141°.74E,h123km±1km,M4.1 Broadband fault plane solution: P waves. NP1: φs276.00000°,δ84.00000°,λ-25.00000°. NP2:φs9.00000°, δ65.00000°,λ-173.00000°. Principal axes: T Plg13.0000°, Azm325.0000°; N Plg64.0000°, Azm83.0000°; P Plg22.0000°, Azm230.0000°;*

*JMA Felt I

KSRS	**Korea Array**	**11.79 249**	P	**Pn**	19 42 14.1	+0.5		
	comp=Z,0.2nm,0.3s,baz=61,slow=12,SNR=60							
JNU	**Nakatsue**	**12.74 226**	P	**Pn**	19 42 25.2	-0.9		
	comp=Z,0.5nm,0.3s,baz=111,slow=13,SNR=5.3							
CLNS	**Chul'man**	**17.96 329**	*e*P	**P**	19 43 29.1	-0.8		
CLNS			pmax	pmax				
	comp=Z,5.0nm,0.8s							
CLNS			pmax	pmax				
	comp=E,5.0nm,0.9s							
CLNS			pmax	pmax				
	comp=N,12nm,0.9s							
YAK	**Yakutsk**	**20.84 344**	*e*P	**P**	19 43 57.6	-3.4		
YAK			pmax	pmax				
	comp=Z,15nm,0.9s							
YAK			pmax	pmax				
	comp=E,2.0nm,0.9s							
YAK			pmax	pmax				
	comp=N,6.0nm,1.0s							
SONM	**Songino Array**	**25.37 294**	P	**P**	19 44 45.3	+0.1		
	comp=N,1.5nm,0.5s,baz=80,slow=8.9,SNR=23							
SONM			ScP	**ScP**	19 51 42.1	0.0		
	comp=N,0.5nm,0.9s,baz=14,slow=3.0,SNR=3.0							
ZAK	**Zakamensk**	**27.43 300**	*e*P	**P**	19 45 03.2	-0.4		
ZAK			pmax	pmax				
	comp=Z,3.0nm,1.0s							
MOY	**Mondy**	**28.92 303**	*e*P	**P**	19 45 18.1	+1.3		
MOY			pmax	pmax				
	comp=Z,16nm,1.3s							
ZALV	**Zalesovo Beam**	**38.63 307**	P	**P**	19 46 40.4	0.0		
ZALV					19 52 27.0			
ZALV			pmax	pmax				
	comp=Z,6.0nm,0.4s							
ZALV			pmax	pmax				
	comp=N,1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**38.63 307**	P	**P**	19 46 40.4	0.0		
	comp=N,6.2nm,0.4s,baz=98,slow=9.4,SNR=29							
ZALV			ScP	**ScP**	19 52 27.0	+0.3		
	comp=N,1.3nm,0.6s,baz=87,slow=2.5,SNR=8.1							
MKAR	**Makanchi Array**	**41.68 297**	P	**P**	19 47 05.9	+0.2		
MKAR			pmax	pmax				
	comp=Z,2.0nm,0.6s							
MKAR	**Makanchi Array**	**41.68 297**	P	**P**	19 47 05.9	+0.2		
	comp=Z,2.0nm,0.6s,baz=81,slow=9.5,SNR=12							
MKAR			ScP	**ScP**	19 52 37.2	-1.6		
	comp=Z,0.3nm,0.8s,baz=66,slow=7.0,SNR=2.5							
KURK	**Kurchatov**	**42.97 304**	P	**P**	19 47 16.6	+0.6		
KURBB	**Kurchatov Arra**	**43.05 304**	P	**P**	19 47 16.6	-0.1		
	comp=Z,56nm,0.6s,baz=75,slow=9.0,SNR=86							
CMAR	**Chiang Mai Arr**	**43.42 250**	P	**P**	19 47 21.1	+1.0		
	comp=Z,0.6nm,0.7s,baz=38,slow=7.3,SNR=5.0							
ILAR	**Eielson Array**	**44.77 35**	P	**P**	19 47 30.8	+0.5		
	comp=Z,0.2nm,0.6s,baz=277,slow=7.2,SNR=4.3							
ILAR			pP	**pP**	19 47 57.8	-0.4		
	comp=Z,0.8nm,1.0s,baz=270,slow=6.1,SNR=3.7							
RAMN	**Ramite**	**47.15 269**	*e*P	**P**	19 47 49.8	+0.1		
GUN	**Gumba**	**47.15 271**	*e*P	**P**	19 47 50.4	+0.6		
	comp=Z,42nm,0.4s							
BVAR	**Borovoye Array**	**47.24 309**	P	**P**	19 47 49.9	+0.1		
BVAR			pmax	pmax				
	comp=Z,4.0nm,0.4s							
BVAR	**Borovoye Array**	**47.24 309**	P	**P**	19 47 49.9	+0.1		
	comp=Z,4.2nm,0.4s,baz=74,slow=9.2,SNR=28							
BVAR			ScP	**ScP**	19 53 01.6	+0.1		
	comp=Z,0.6nm,0.8s,baz=132,slow=2.1,SNR=3.0							
KKN	**Kakani**	**47.66 271**	*e*P	**P**	19 47 54.3	+0.7		
	comp=Z,14nm,0.7s							
DMN	**Daman**	**47.89 271**	*e*P	**P**	19 47 56.0	+0.6		
DANN	**Dangsing**	**48.48 273**	*e*P	**P**	19 48 00.8	+0.8		
	comp=Z,30nm,0.7s							
KOLN	**Koldanda**	**48.91 272**	*e*P	**P**	19 48 03.4	+0.2		
	comp=Z,5.1nm,0.3s							
PYUN	**Piuthan**	**49.18 273**	*e*P	**P**	19 48 05.5	+0.2		
INK	**Inuvik**	**49.42 29**	P	**P**	19 48 06.3	+0.1		
	comp=Z,1.6nm,0.6s							
SPITS	**Spitsbergen Ar**	**55.22 348**	P	**P**	19 48 48.7	-0.2		
	comp=Z,9.3nm,1.0s,baz=78,slow=7.8,SNR=8.4							
KEV	**Kevo**	**58.45 338**	*e*P	**P**	19 49 10.2	-1.6		
KEV			pmax	pmax				
	comp=Z,3.0nm,0.6s							
KEV	**Kevo**	**58.45 338**	*e*p	**P**	19 49 10.2	-1.6		
	comp=Z,2.5nm,0.6s							
YKA	**Yellowknife Ar**	**58.96 32**	P	**P**	19 49 15.9	+0.5		
	comp=Z,0.3nm,0.6s,baz=308,slow=7.0,SNR=2.8							
ARCES	**ARCESS Array B**	**59.00 338**	P	**P**	19 49 15.4	-0.2		
	comp=Z,0.8nm,0.4s,baz=52,slow=5.8,SNR=14							
JOF	**Joensuu**	**61.30 331**	*e*P	**P**	19 49 30.0	-1.4		
JOF			pmax	pmax				
	comp=Z,8.0nm,0.5s							
JOF	**Joensuu**	**61.30 331**	*e*p	**P**	19 49 30.0	-1.4		
	comp=Z,8.3nm,0.5s							
WRA	**Warramunga Arr**	**62.52 188**	P	**P**	19 49 39.4	-0.6		
	comp=Z,0.7nm,0.5s,baz=5.4,slow=6.9,SNR=11							
WRA			pP	**pP**	19 50 10.6	+1.0		
	comp=Z,0.3nm,0.5s,baz=0.6,slow=7.5,SNR=2.2							
KAF	**Kangasniemi**	**63.60 332**	*e*P	**P**	19 49 45.0	-1.7		
KAF			pmax	pmax				
	comp=Z,4.0nm,0.4s							
KAF	**Kangasniemi**	**63.60 332**	*e*p	**P**	19 49 45.0	-1.7		
	comp=Z,4.2nm,0.4s							
FINES	**FINESS Array B**	**64.14 331**	P	**P**	19 49 49.7	-0.5		
	comp=Z,8.3nm,0.5s,baz=47,slow=8.4,SNR=36							
ASAR	**Alice Springs**	**66.25 188**	P	**P**	19 50 04.7	+0.5		
	comp=Z,0.6nm,0.8s,baz=5.4,slow=6.2,SNR=12							
ASAR			pP	**pP**	19 50 36.6	+2.5		
	comp=Z,0.3nm,0.8s,baz=6.2,slow=6.6,SNR=2.5							
HFS	**Hagfors**	**69.24 335**	P	**P**	19 50 22.4	-0.2		
	comp=Z,5.8nm,0.4s,baz=40,slow=5.8,SNR=33							
NB2	**NORSAR Subarra**	**69.27 337**	P	**P**	19 50 22.4	-0.4		
	comp=Z,2.1nm,0.4s,baz=36,slow=6.5							
NOA	**NORSAR Array B**	**69.27 337**	P	**P**	19 50 22.5	-0.3		
	comp=Z,2.5nm,0.6s,baz=37,slow=6.3,SNR=14							
AKASG	**Malin Array Be**	**70.18 321**	P	**P**	19 50 27.7	-0.8		
AKASG			pmax	pmax				
	comp=Z,3.0nm,0.4s							
AKASG	**Malin Array Be**	**70.18 321**	P	**P**	19 50 27.7	-0.8		
	comp=Z,2.5nm,0.4s,baz=42,slow=6.4,SNR=5.8							
BRTR	**Keskin Array B**	**75.48 311**	P	**P**	19 51 00.5	+0.3		
	comp=Z,0.3nm,0.5s,baz=48,slow=2.1,SNR=2.5							
VRAC	**Vranov**	**76.70 327**	P	**P**	19 51 07.7	+1.0		
	comp=Z,0.7nm,0.3s,baz=20,slow=7.1,SNR=3.6							
EKA	**Eskdalemuir Ar**	**78.07 340**	P	**P**	19 51 13.8	-0.5		
	comp=Z,0.3nm,0.4s,baz=30,slow=4.9,SNR=4.2							
GERES	**GERESS Array B**	**78.23 328**	P	**P**	19 51 16.1	+0.7		
	comp=Z,0.2nm,0.5s,baz=38,slow=5.5,SNR=3.4							
MMAI	**Mount Meron Ar**	**79.07 305**	P	**P**	19 51 21.3	+1.1		
	comp=Z,0.4nm,0.3s,baz=1.4,slow=6.1,SNR=4.4							

ATH **24** *19:42:57.5, 41°.33N×22°.71E, h21km±1km, MD3.7/25, ML3.4*
IDC **24** *19:42:57.1±1.2, 41°.20N×22°.85E, h0km, mb3.5/5, mb1 3.6/8, mb1mx3.4/28, mbtmp3.4/8, ML3.1/3, MS3.3/1, Ms1 3.3/1, ms1mx2.5/49, Error ellipse: s-maj=21.6km s-min=17.7km az=135.0*
SKO **24** *19:42:57.5, 41°.28N×22°.72E, h15km, M3.0, ML3.3*
BEO **24** *19:42:58.1±0.9, 41°.28N×22°.73E, h4km±3km, ML3.4/1*
SOF **24** *19:42:58.0, 41°.36N×22°.72E, h4km, MD3.4*
CSEM **24** *19:42:58.4±0.1, 41°.27N×22°.72E, h2km, ML3.3, Error ellipse: s-maj=2.1km s-min=1.9km az=86.0*
PDG **24** *19:42:58.4±0.4, 41°.29N×22°.70E, h2km, ML3.2/9, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
THE **24** *19:42:58.5, 41°.27N×22°.73E, h2km±1km, ML3.7/13, Error ellipse: s-maj=1.5km s-min=0.7km az=191.0*
ISC 24 19:42:58.4±0.8, 41°.27N±0°.01×22°.71E±0°.01, h6km±6km, n320, σ1°.08/401, mb3.2/4, 21C-32D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**297**	P		**Pg**	**19 43 00.6**	**-0.2**
VAY				S		**Sg**	**19 43 02.7**	**+0.3**
VAY	**Valandovo**	**0.12**	**297**	*i* Pg		**Pg**	**19 43 00.7**	**-0.2**
VAY				*i* Sg		**Sg**	**19 43 02.7**	**+0.3**
VAY				*e*Lg		Lg	19 43 02.8	
	comp=N,26μm,0.3s							
VAY				*e*Lg		Lg	19 43 02.9	
	comp=E,12μm,0.3s							
VAY	**Valandovo**	**0.12**	**297**	⇓*i* Pg		**Pg**	**19 43 00.4**	**-0.4**
VAY				*e*Sg		**Sg**	**19 43 02.5**	**+0.1**
VAY	**Valandovo**	**0.12**	**297**	P		**Pg**	**19 43 00.6**	**-0.2**
VAY				*e*Lg		Lg	19 43 01.4	
	comp=E,12μm,0.3s							
VAY				*e*Sg		**Sg**	**19 43 02.5**	**+0.1**
KNT	**Kendrikon**	**0.18**	**126**	P		**Pg**	**19 43 02.4**	**+0.4**
KNT				S		**Sg**	**19 43 04.7**	**+0.3**
KNT	**Kendrikon**	**0.18**	**126**	P		**Pg**	**19 43 02.4**	**+0.4**
KNT				S		**Sg**	**19 43 04.7**	**+0.3**
GRG	**Griva**	**0.39**	**217**	P		**Pg**	**19 43 06.2**	**+0.3**
GRG				S		**Sg**	**19 43 12.0**	**+1.0**
GRG	**Griva**	**0.39**	**217**	*e*PB		**Pg**	**19 43 06.2**	**+0.3**
GRG	**Griva**	**0.39**	**217**	P		**Pg**	**19 43 06.2**	**+0.3**
GRG				S		**Sg**	**19 43 12.0**	**+1.0**
KKB	**Krupnik**	**0.66**	**25**	*i* Pg		**Pg**	**19 43 10.4**	**-0.7**
KKB	**Krupnik**	**0.66**	**25**	*i* Pg		**Pg**	**19 43 10.4**	**-0.7**
SOH	**Sokhos**	**0.66**	**132**	P		**Pg**	**19 43 10.7**	**-0.4**
SOH				S		**Sg**	**19 43 19.3**	**-0.4**
SOH	**Sokhos**	**0.66**	**132**	*e*PB		**Pg**	**19 43 10.7**	**-0.4**
SOH	**Sokhos**	**0.66**	**132**	P		**Pg**	**19 43 10.7**	**-0.4**
SOH				S		**Sg**	**19 43 19.3**	**-0.4**
THE	**Thessaloniki**	**0.67**	**163**	P		**Pg**	**19 43 10.9**	**-0.2**
THE				S		**Sg**	**19 43 19.5**	**-0.3**
THE	**Thessaloniki**	**0.67**	**163**	P		**Pg**	**19 43 10.9**	**-0.2**
THE				S		**Sg**	**19 43 19.5**	**-0.3**
SRS	**Serrai**	**0.69**	**102**	P		**Pg**	**19 43 11.0**	**-0.5**
SRS				S		**Sg**	**19 43 20.7**	**+0.2**
SRS	**Serrai**	**0.69**	**102**	P		**Pg**	**19 43 11.0**	**-0.5**
SRS				S		**Sg**	**19 43 20.7**	**+0.2**
HORT	**Hortiatis**	**0.73**	**156**	P		**Pg**	**19 43 12.4**	**-0.1**
HORT				S		**Sg**	**19 43 22.4**	**+0.4**
HORT	**Hortiatis**	**0.73**	**156**	P		**Pg**	**19 43 12.4**	**-0.1**
HORT				S		**Sg**	**19 43 22.4**	**+0.4**
MMB	**Musomiste**	**0.83**	**67**	*i* Pg		**Pg**	**19 43 13.8**	**-0.6**
MMB	**Musomiste**	**0.83**	**67**	*i* Pg		**Pg**	**19 43 13.8**	**-0.6**
NVR	**Nevrokopi**	**0.88**	**84**	P		**Pg**	**19 43 14.6**	**-0.6**
NVR				S		**Sg**	**19 43 25.6**	**-0.9**
NVR	**Nevrokopi**	**0.88**	**84**	*e*PN		**Pg**	**19 43 14.6**	**-0.6**
NVR				*e*SN		**Sg**	**19 43 26.5**	**0.0**
NVR	**Nevrokopi**	**0.88**	**84**	P		**Pg**	**19 43 14.6**	**-0.6**
NVR				S		**Sg**	**19 43 25.6**	**-0.9**
NVR				*e*Sn		**Sg**	**19 43 26.5**	**0.0**
PLG	**Polygyros**	**1.06**	**148**	P		**Pg**	**19 43 18.1**	**-0.5**
PLG				S		**Sg**	**19 43 32.7**	**+0.4**
PLG	**Polygyros**	**1.06**	**148**	*e*PN		**Pg**	**19 43 18.0**	**-0.5**
PLG				*e*SB		**Sb**	**19 43 33.8**	**+0.6**
PLG	**Polygyros**	**1.06**	**148**	P		**Pg**	**19 43 18.1**	**-0.5**
PLG				S		**Sg**	**19 43 32.7**	**+0.4**
PLG				*e*Sb		**Sb**	**19 43 33.8**	**+0.6**
BIA	**Bitola**	**1.07**	**257**	P		**Pg**	**19 43 18.1**	**-0.8**
BIA				S		**Sg**	**19 43 32.9**	**0.0**
BIA	**Bitola**	**1.07**	**257**	*i* Pg		**Pg**	**19 43 18.1**	**-0.8**
BIA	**Bitola**	**1.07**	**257**	P		**Pg**	**19 43 18.1**	**-0.8**
BIA				S		**Sg**	**19 43 32.9**	**0.0**
FNA	**Florina**	**1.12**	**245**	P		**Pg**	**19 43 19.3**	**-0.5**
FNA				S		**Sg**	**19 43 34.1**	**-0.2**
FNA	**Florina**	**1.12**	**245**	*e*PN		**Pg**	**19 43 19.7**	**-0.1**
FNA	**Florina**	**1.12**	**245**	P		**Pg**	**19 43 19.3**	**-0.5**
FNA	**Florina**	**1.12**	**245**	*e*Pn		**Pg**	**19 43 19.7**	**-0.1**
FNA				S		**Sg**	**19 43 34.1**	**-0.2**
LIT	**Litokhoron**	**1.18**	**188**	P		**Pg**	**19 43 19.9**	**-1.0**
LIT				S		**Sg**	**19 43 36.2**	**0.0**
LIT	**Litokhoron**	**1.18**	**188**	P		**Pg**	**19 43 19.9**	**-1.0**
LIT				S		**Sg**	**19 43 36.2**	**0.0**
SKO	**Skopje**	**1.18**	**307**	P		**Pg**	**19 43 20.7**	**-0.3**
SKO				S		**Sb**	**19 43 37.0**	**+0.2**
SKO	**Skopje**	**1.18**	**307**	*i* Pg		**Pg**	**19 43 21.0**	**-0.1**
SKO				*i* Sg		**Sb**	**19 43 36.6**	**-0.2**
SKO				*e*Lg		Lg	19 43 38.2	
	comp=E,385nm,0.4s							
SKO				*e*Lg		Lg	19 43 38.4	
	comp=N,463nm,0.4s							
SKO	**Skopje**	**1.18**	**307**	⇑*i* Pg		**Pg**	**19 43 20.8**	**-0.3**
SKO				*e*Sg		**Sn**	**19 43 37.5**	**-0.4**
SKO	**Skopje**	**1.18**	**307**	⇑*i* Pg		**Pg**	**19 43 20.8**	**-0.3**
SKO				S		**Sb**	**19 43 37.0**	**+0.2**
SKO				*e*Lg		Lg	19 43 38.8	
	comp=N,463nm,0.4s							
KZN	**Kozani**	**1.20**	**217**	*e*PN		**Pg**	**19 43 20.9**	**-0.4**
KZN				*e*SN		**Sn**	**19 43 39.7**	**+1.4**
KZN	**Kozani**	**1.20**	**217**	*e*Pn		**Pg**	**19 43 20.9**	**-0.4**
KZN				*e*Sn		**Sn**	**19 43 39.7**	**+1.4**
OUR	**Ouranopolis**	**1.34**	**134**	P		**Pn**	**19 43 23.0**	**-0.7**
OUR				S		**Sn**	**19 43 42.5**	**+0.6**
OUR	**Ouranopolis**	**1.34**	**134**	P		**Pn**	**19 43 23.0**	**-0.7**
OUR				S		**Sn**	**19 43 42.5**	**+0.6**
VTS	**Vitosha**	**1.37**	**16**	P		**Pn**	**19 43 23.6**	**-0.7**
VTS				S		**Sb**	**19 43 41.8**	**-0.7**
VTS	**Vitosha**	**1.37**	**16**	⇓*i* Pg		**Pn**	**19 43 23.8**	**-0.5**
VTS	**Vitosha**	**1.37**	**16**	⇓*i* P		**Pn**	**19 43 23.7**	**-0.5**
VTS				S		**Sg**	**19 43 43.5**	**+0.9**
VTS	**Vitosha**	**1.37**	**16**	*i* P		**Pn**	**19 43 23.8**	**-0.5**
VTS	**Vitosha**	**1.37**	**16**	*i* P		**Pn**	**19 43 23.8**	**-0.5**
VTS				S		**Sb**	**19 43 41.8**	**-0.7**
KAVA	**Kavala**	**1.39**	**101**	P		**Pn**	**19 43 23.9**	**-0.5**
KAVA				S		**Sb**	**19 43 42.5**	**-0.3**
KAVA	**Kavala**	**1.39**	**101**	P		**Pn**	**19 43 23.9**	**-0.5**
KAVA				S		**Sb**	**19 43 42.5**	**-0.3**
NEST	**Nestorio**	**1.52**	**236**	P		**Pn**	**19 43 26.1**	**-0.1**
NEST				S		**Sg**	**19 43 49.0**	**+1.8**
NEST	**Nestorio**	**1.52**	**236**	P		**Pn**	**19 43 26.1**	**-0.1**
NEST				S		**Sg**	**19 43 49.0**	**+1.8**
PAIG	**Paliouri**	**1.53**	**151**	P		**Pn**	**19 43 25.7**	**-0.6**
PAIG				S		**Sg**	**19 43 47.3**	**-0.3**
PAIG	**Paliouri**	**1.53**	**151**	*e*PN		**Pn**	**19 43 26.2**	**-0.1**
PAIG	**Paliouri**	**1.53**	**151**	P		**Pn**	**19 43 25.7**	**-0.6**
PAIG	**Paliouri**	**1.53**	**151**	*e*Pn		**Pn**	**19 43 26.2**	**-0.1**
PAIG				S		**Sg**	**19 43 47.3**	**-0.3**
RZN	**Rozhen**	**1.57**	**74**	*i* P		**Pb**	**19 43 27.6**	**-0.3**
RZN	**Rozhen**	**1.57**	**74**	*i* P		**Pb**	**19 43 27.6**	**-0.3**
KBN	**Korca**	**1.59**	**247**	P		**Pn**	**19 43 26.8**	**-0.4**
KBN				S		**Sg**	**19 43 50.1**	**+0.7**
KBN	**Korca**	**1.59**	**247**	P		**Pn**	**19 43 26.8**	**-0.4**
KBN				S		**Sg**	**19 43 50.1**	**+0.7**
PGB	**Panagyurishte**	**1.68**	**40**	*i* Pg		**Pb**	**19 43 29.5**	**-0.3**
PGB	**Panagyurishte**	**1.68**	**40**	*i* Pg		**Pb**	**19 43 29.5**	**-0.3**
BARS	**Barje**	**1.68**	**337**	⇓*i* Pn		**Pn**	**19 43 27.8**	**-0.6**
BARS				*e*Sn		**Sb**	**19 43 50.9**	**-0.3**
BARS	**Barje**	**1.68**	**337**	⇓*i* Pn		**Pn**	**19 43 27.8**	**-0.6**
BARS				*e*Sn		**Sb**	**19 43 50.9**	**-0.3**
PLD	**Plovdiv**	**1.71**	**60**	P		**Pn**	**19 43 29.3**	**+0.5**
PLD				S		**Sg**	**19 43 53.2**	**-0.2**
PLD	**Plovdiv**	**1.71**	**60**	*i* P		**Pb**	**19 43 30.1**	**-0.2**
PLD	**Plovdiv**	**1.71**	**60**	P		**Pn**	**19 43 29.3**	**+0.5**
PLD				S		**Sg**	**19 43 53.2**	**-0.2**
PHP	**Peshkopia**	**1.75**	**284**	P		**Pn**	**19 43 29.1**	**-0.3**
PHP				S		**Sb**	**19 43 52.6**	**-0.7**
PHP	**Peshkopia**	**1.75**	**284**	P		**Pn**	**19 43 29.1**	**-0.3**
PHP				S		**Sb**	**19 43 52.6**	**-0.7**
THL	**Klokotos Trika**	**1.78**	**197**	P		**Pn**	**19 43 29.5**	**-0.2**
THL	**Klokotos Trika**	**1.78**	**197**	*e*PN		**Pb**	**19 43 31.0**	**-0.4**
THL	**Klokotos Trika**	**1.78**	**197**	P		**Pn**	**19 43 29.5**	**-0.2**
THL	**Klokotos Trika**	**1.78**	**197**	*e*Pn		**Pb**	**19 43 31.0**	**-0.4**
XOR	**Xorichti**	**1.94**	**169**	P		**Pn**	**19 43 31.2**	**-0.7**
XOR	**Xorichti**	**1.94**	**169**	P		**Pn**	**19 43 31.2**	**-0.7**
NEO	**Neokhori**	**2.00**	**168**	*e*PB		**Pn**	**19 43 32.4**	**-0.4**
NEO				*e*SN		**Sb**	**19 43 59.8**	**-0.5**
NEO	**Neokhori**	**2.00**	**168**	*e*Pb		**Pn**	**19 43 32.4**	**-0.4**
NEO				*e*Sn		**Sb**	**19 43 59.8**	**-0.5**
ZAPS	**Zavoj**	**2.00**	**358**	*e*Pn		**Pn**	**19 43 33.0**	**+0.2**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* P		**Pn**	**19 43 34.7**	**+0.9**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* P		**Pn**	**19 43 34.7**	**+0.9**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* Pg		**Pg**	**19 43 39.7**	**+1.6**
RDO	**Rodhopi**	**2.14**	**92**	P		**Pn**	**19 43 34.2**	**-0.4**
RDO	**Rodhopi**	**2.14**	**92**	*e*PB		**Pn**	**19 43 34.1**	**-0.5**
RDO	**Rodhopi**	**2.14**	**92**	P		**Pn**	**19 43 34.2**	**-0.4**
TIR	**Tirane**	**2.14**	**273**	P		**Pn**	**19 43 35.2**	**+0.5**
TIR	**Tirane**	**2.14**	**273**	P		**Pn**	**19 43 35.2**	**+0.5**
JAN	**Janina**	**2.14**	**222**	P		**Pn**	**19 43 35.1**	**+0.4**
JAN	**Janina**	**2.14**	**222**	*e*PB		**Pn**	**19 43 35.5**	**+0.8**
JAN				*e*SN		**Sn**	**19 44 02.6**	**+0.9**
JAN	**Janina**	**2.14**	**222**	P		**Pn**	**19 43 35.1**	**+0.4**
JAN	**Janina**	**2.14**	**222**	*e*Pb		**Pn**	**19 43 35.5**	**+0.8**
JAN				*e*Sn		**Sn**	**19 44 02.6**	**+0.9**
MPEP	**Malo Peshtene**	**2.22**	**20**	*i* P		**Pn**	**19 43 35.9**	**+0.1**
MPEP				*i* Pg		**Pb**	**19 43 39.7**	**+0.7**
DIM	**Dimitrovgrad**	**2.26**	**69**	*i* P		**Pb**	**19 43 38.8**	**-0.8**
DIM	**Dimitrovgrad**	**2.26**	**69**	*i* P		**Pb**	**19 43 38.8**	**-0.8**
AGG	**Agios Georgios**	**2.26**	**187**	P		**Pn**	**19 43 36.0**	**-0.4**
AGG	**Agios Georgios**	**2.26**	**187**	*e*PN		**Pn**	**19 43 36.6**	**+0.2**
AGG	**Agios Georgios**	**2.26**	**187**	P		**Pn**	**19 43 36.0**	**-0.4**
AGG	**Agios Georgios**	**2.26**	**187**	*e*Pn		**Pn**	**19 43 36.6**	**+0.2**
SELS	**Selova**	**2.28**	**329**	⇓*i* Pn		**Pn**	**19 43 35.6**	**-1.0**
AOS	**Alonnisos**	**2.28**	**156**	P		**Pn**	**19 43 35.2**	**-1.4**
AOS	**Alonnisos**	**2.28**	**156**	*e*PN		**Pn**	**19 43 35.4**	**-1.2**
AOS	**Alonnisos**	**2.28**	**156**	*e*Pn		**Pn**	**19 43 35.4**	**-1.2**
SMTH	**Samothraki Isl**	**2.29**	**109**	*e*PB		**Pn**	**19 43 36.8**	**+0.1**
SMTH				*e*SN		**Sn**	**19 44 05.6**	**+0.4**
SMTH	**Samothraki Isl**	**2.29**	**109**	*e*Pb		**Pn**	**19 43 36.8**	**+0.1**
SMTH				*e*Sn		**Sn**	**19 44 05.6**	**+0.4**
MAKR	**Makrakomi, Fth**	**2.30**	**191**	P		**Pn**	**19 43 37.3**	**+0.5**
MAKR	**Makrakomi, Fth**	**2.30**	**191**	P		**Pn**	**19 43 37.3**	**+0.5**
LIA	**Limnos Island**	**2.33**	**125**	*e*PN		**Pn**	**19 43 37.0**	**-0.3**
LIA	**Limnos Island**	**2.33**	**125**	*e*Pn		**Pn**	**19 43 37.0**	**-0.3**
SMIA	**Simia**	**2.42**	**171**	P		**Pn**	**19 43 38.1**	**-0.4**
SMIA	**Simia**	**2.42**	**171**	P		**Pn**	**19 43 38.1**	**-0.4**
PVY	**Plav**	**2.44**	**304**	⇑*i* Pn		**Pn**	**19 43 39.9**	**+1.0**
PVY				*e*Sn		**Sb**	**19 44 13.0**	**-0.2**
PVY	**Plav**	**2.44**	**304**	⇑*i* Pn		**Pn**	**19 43 39.9**	**+1.0**
PVY				*e*Sn		**Sb**	**19 44 13.0**	**-0.2**
EVR	**Evrytania**	**2.45**	**197**	*e*PB		**Pn**	**19 43 39.9**	**+0.9**
EVR	**Evrytania**	**2.45**	**197**	*e*Pb		**Pn**	**19 43 39.9**	**+0.9**
AXAR	**Agios Charalam**	**2.50**	**181**	P		**Pn**	**19 43 39.5**	**-0.1**
AXAR	**Agios Charalam**	**2.50**	**181**	P		**Pn**	**19 43 39.5**	**-0.1**
IGT	**Igoumenitsa**	**2.51**	**227**	P		**Pb**	**19 43 41.7**	**-2.1**
IGT	**Igoumenitsa**	**2.51**	**227**	P		**Pb**	**19 43 41.7**	**-2.1**
ALN	**Alexandroupoli**	**2.55**	**97**	P		**Pn**	**19 43 39.8**	**-0.5**
ALN	**Alexandroupoli**	**2.55**	**97**	*e*PB		**Pn**	**19 43 40.9**	**+0.6**
ALN	**Alexandroupoli**	**2.55**	**97**	P		**Pn**	**19 43 39.8**	**-0.5**
ALN	**Alexandroupoli**	**2.55**	**97**	*e*Pb		**Pn**	**19 43 40.9**	**+0.6**
ATAL	**Atalanti**	**2.58**	**175**	P		**Pn**	**19 43 39.8**	**-1.0**
ATAL	**Atalanti**	**2.58**	**175**	P		**Pn**	**19 43 39.8**	**-1.0**
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn		**Pn**	**19 43 39.1**	**-2.1**
BOLS				*e*Sg		**Sb**	**19 44 19.3**	**+1.2**
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn		**Pn**	**19 43 39.1**	**-2.1**
BOLS				*e*Sg		**Sb**	**19 44 19.3**	**+1.2**
LKR	**Lokris**	**2.62**	**175**	*e*PN		**Pn**	**19 43 41.3**	**0.0**
LKR	**Lokris**	**2.62**	**175**	*e*Pn		**Pn**	**19 43 41.3**	**0.0**
BEY	**Berane**	**2.64**	**308**	*e*Pn		**Pn**	**19 43 43.0**	**+1.4**
BEY				*e*Sn		**Sb**	**19 44 18.1**	**-0.7**
IVA	**Berane**	**2.64**	**308**	*e*Pn		**Pn**	**19 43 43.0**	**+1.4**
IVA				*e*Sn		**Sb**	**19 44 18.1**	**-0.7**
MRKA	**Markates**	**2.65**	**165**	P		**Pn**	**19 43 40.9**	**-0.8**
MRKA

VLX	Vlachokerasia	3.90	184	*e*Pn	Pn	19 43 59.8	+0.8
GONE	Gonen-Balikesi	3.98	106	*e*PN	Pn	19 44 01.2	+1.3
STON	Ston	4.06	295	*e*Pn	Pn	19 44 01.6	+0.6
STON	Ston	4.06	295	*e*Pn	Pn	19 44 01.5	+0.6
ITM	Ithomi	4.13	189	P	Pn	19 44 03.6	+1.6
ITM	Ithomi	4.13	189	*e*PN	Pn	19 44 02.8	+0.8
ITM	Ithomi	4.13	189	*e*Pn	Pn	19 44 02.8	+0.8
ITM	Ithomi	4.13	189	P	Pn	19 44 03.6	+1.6
SLVT	Silivri	4.15	89	*e*PN	Pn	19 44 03.8	+1.5
CTYL	Yal??k??y-??at	4.21	85	*e*PN	Pn	19 44 04.6	+1.5
LOT	Lotru	4.25	10	*i*P	Pn	19 44 02.8	-1.0
LOT	Lotru	4.25	10	*i*P	Pn	19 44 02.8	-1.0
BALB	Balikesir	4.27	111	*e*PN	Pn	19 44 04.8	+0.8
CTKS	Kestanelik-??a	4.37	89	*e*PN	Pn	19 44 06.8	+1.4
KCTX	Karacabey (Bur	4.41	101	*e*PN	Pn	19 44 06.7	+0.9
BZS	Buzias	4.42	350	*i*P	Pn	19 44 05.0	-1.0
BZS	Buzias	4.42	350	*i*P	Pn	19 44 05.0	-1.0
PYL	PYLOS	4.43	190	*e*PN	Pn	19 44 07.6	+1.4
PYL	PYLOS	4.43	190	*e*Pn	Pn	19 44 07.6	+1.4
VOIR		4.50	22	*i*P	Pn	19 44 07.2	0.0
VOIR		4.50	22	*i*P	Pn	19 44 07.2	0.0
DYR	Agios Nikonas	4.51	184	*e*PN	Pn	19 44 09.6	+2.3
DYR	Agios Nikonas	4.51	184	*e*Pn	Pn	19 44 09.6	+2.3
VLI	Veliai	4.55	178	P	Pn	19 44 08.1	+0.3
VLI	Veliai	4.55	178	*e*PN	Pn	19 44 08.6	+0.8
VLI	Veliai	4.55	178	P	Pn	19 44 08.1	+0.3
VLI	Veliai	4.55	178	*e*Pn	Pn	19 44 08.6	+0.8
BGKT	Bogazkoy	4.58	89	*e*PN	Pn	19 44 09.7	+1.6
ARMT	Armutlu	4.72	97	*e*PN	Pn	19 44 11.6	+1.5
APE	Apeiranthos	4.73	151	*e*PN	Pn	19 44 08.8	-1.5
APE	Apeiranthos	4.73	151	*e*PN	Pn	19 44 11.5	+1.1
APE	Apeiranthos	4.73	151	*e*Pn	Pn	19 44 11.5	+1.1
ISR	Istrita	4.76	35	*i*P	Pn	19 44 12.0	+1.3
ISR	Istrita	4.76	35	*i*P	Pn	19 44 12.0	+1.3
AMRR	Amara	4.76	44	*i*P	Pn	19 44 12.6	+1.9
AMRR	Amara	4.76	44	*i*P	Pn	19 44 12.6	+1.9
KLYT	Kilyos	4.78	88	*e*PN	Pn	19 44 12.6	+1.8
ISK	Istanbul-Kandi	4.80	90	*e*PN	Pn	19 44 12.9	+1.7
PGOR	Pogoanele	4.80	39	*i*P	Pn	19 44 12.9	+1.7
PGOR	Pogoanele	4.80	39	*i*P	Pn	19 44 12.9	+1.7
MLR	Muntele Rosu	4.83	28	*i*P	Pn	19 44 12.8	+1.0
MLR	Muntele Rosu	4.83	28	Pn	Pn	19 44 12.6	+0.8
	comp=N,0.6nm,0.3s,baz=155,slow=17,SNR=15						
MLR				Lg	Lg	19 45 32.6	
	baz=324,slow=18,SNR=2.3						
MLR	Muntele Rosu	4.83	28	*i*P	Pn	19 44 12.8	+1.0
KYTH	Kithira	4.99	177	*e*PN	Pn	19 44 15.3	+1.5
KYTH	Kithira	4.99	177	*e*Pn	Pn	19 44 15.3	+1.5
HARR	Harsova	5.14	47	*i*P	Pn	19 44 16.3	+0.5
HARR	Harsova	5.14	47	*i*P	Pn	19 44 16.3	+0.5
GRER		5.16	36	*i*P	Pn	19 44 18.6	+2.5
GRER		5.16	36	*i*P	Pn	19 44 18.6	+2.5
KULA	Kula-Manisa	5.34	119	*e*PN	Pn	19 44 19.0	+0.2
PLOR	Plostina	5.40	31	*i*P	Pn	19 44 21.1	+1.6
PLOR	Plostina	5.40	31	*i*P	Pn	19 44 21.1	+1.6
ANKY	Antikythira Is	5.41	175	*e*PN	Pn	19 44 21.8	+2.1
ANKY	Antikythira Is	5.41	175	*e*Pn	Pn	19 44 21.8	+2.1
VRI	Vrincioaia	5.45	31	*i*P	Pn	19 44 21.6	+1.5
VRI	Vrincioaia	5.45	31	*i*P	Pn	19 44 21.6	+1.5
TVSB	Tavsanli	5.47	107	*e*PN	Pn	19 44 22.4	+1.9
CFR	Carcaliu	5.57	44	*i*P	Pn	19 44 22.4	+0.7
CFR	Carcaliu	5.57	44	*i*P	Pn	19 44 22.4	+0.7
PKSM	Moragy	5.75	331	*i*P	Pn	19 44 23.5	-0.8
PKSM	Moragy	5.75	331	*i*P	Pn	19 44 23.5	-0.8
TLCR		5.94	47	*i*P	Pn	19 44 28.1	+1.3
TLCR		5.94	47	*i*P	Pn	19 44 28.1	+1.3
VAM	Vamos	5.97	168	*e*PN	Pn	19 44 29.6	+2.3
VAM	Vamos	5.97	168	*e*Pn	Pn	19 44 29.6	+2.3
GULT	Gulveren	5.98	95	*e*P	Pn	19 44 29.3	+1.8
IDI	Anoyia	6.21	163	*e*PN	Pn	19 44 32.6	+1.9
IDI	Anoyia	6.21	163	*e*Pn	Pn	19 44 32.6	+1.9
LAST	Lasithi	6.48	159	*e*PN	Pn	19 44 36.7	+2.4
LAST	Lasithi	6.48	159	*e*Pn	Pn	19 44 36.7	+2.4
NVLJ	Novalja	6.63	302	*e*Pn	Pn	19 44 36.1	-0.2
NVLJ	Novalja	6.63	302	*e*Pn	Pn	19 44 36.1	-0.2
PKST	T˜˜s	6.86	332	*e*Pn	Pn	19 44 39.4	-0.1
BRTR	Keskin Array B	8.47	97	Pn	Pn	19 45 01.7	-0.1
	comp=N,0.1nm,0.3s,baz=276,slow=13,SNR=3.3						
GERES	GERESS Array B	9.89	323	Pn	Pn	19 45 24.2	+3.1
	comp=N,0.1nm,0.3s,baz=148,slow=13,SNR=4.0						
GERES				Sn	Sn	19 47 09.3	-3.3
	comp=N,0.1nm,0.3s,baz=142,slow=26,SNR=2.5						
ASF	Jabal al Asfar	14.54	124	LR	LR	19 53 23.1	
	comp=N,111nm,19.7s,baz=324,slow=43						
FINES	FINESS Array B	20.31	5	P	P	19 47 33.5	-1.3
	comp=N,2.0nm,0.8s,baz=174,slow=16,SNR=3.0						
TORD	Torodi Ar. Bea	33.49	219	P	P	19 49 38.2	-0.4
	comp=N,0.8nm,0.7s,baz=24,slow=9.5,SNR=4.8						
MKAR	Makanchi Array	42.30	62	P	P	19 50 51.5	-1.3
	comp=N,0.4nm,0.7s,baz=268,slow=5.2,SNR=2.9						
ZALV	Zalesovo Beam	42.40	51	P	P	19 50 52.9	-0.6
	comp=N,0.1nm,0.6s,baz=280,slow=8.6,SNR=3.2						
YKA	Yellowknife Ar	71.05	341	P	P	19 54 16.6	-0.3
	comp=N,0.1nm,0.5s,baz=30,slow=5.0,SNR=3.0						

NEIC ***24*** *19:51:54.5, 18.96N×65.90W, h59km, MD3.5(RSPR), After RSPR.*

RSPR 24 19:51:54.5, 18.96N×65.90W, h59km±3km, MD3.5/4, 17C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBYP	Canovanas	0.69	177	*e*P	Pn	19 52 07.9	-0.8
CBYP	Canovanas	0.69	177	*e*P	Pn	19 52 07.9	-0.8
CBYP	Canovanas	0.69	177	*e*P	Pn	19 52 07.9	-0.8
HUMP	Col San Antoni	0.82	177	*e*S	Sn	19 52 21.0	-0.6
HUMP	Col San Antoni	0.82	177	*e*P	Pn	19 52 09.3	-0.9
HUMP	Col San Antoni	0.82	177	*e*P	Pn	19 52 09.3	-0.9
HUMP				*e*S	Sn	19 52 21.0	-0.6
HUMP	Col San Antoni	0.82	177	*e*P	Pn	19 52 09.3	-0.9
HUMP				*e*S	Sn	19 52 21.2	-0.4
SJG	San Juan	0.88	196	*e*P	Pn	19 52 10.1	-0.8
SJG	San Juan	0.88	196	*e*P	Pn	19 52 10.2	-0.7
SJG				*e*S	Sn	19 52 22.3	-0.7
SJG	San Juan	0.88	196	*e*P	Pn	19 52 10.1	-0.8
SJG				*e*S	Sn	19 52 22.3	-0.7
SJG	San Juan	0.88	196	*e*P	Pn	19 52 10.2	-0.7
SJG	San Juan	0.88	196	*e*P	Pn	19 52 10.8	-0.1
SJG				*e*S	Sn	19 52 22.3	-0.7
SJG				*e*S	Sn	19 52 22.4	-0.6
MTP	Monte Pirata	0.92	159	*e*P	Pn	19 52 10.7	-0.7
MTP	Monte Pirata	0.92	159	*e*P	Pn	19 52 10.7	-0.7
MTP	Monte Pirata	0.92	159	*e*P	Pn	19 52 10.7	-0.7
AOPR	Arecibo Observ	1.02	233	*e*S	Sn	19 52 25.4	-0.8
AOPR	Arecibo Observ	1.02	233	*e*S	Sn	19 52 25.4	-0.8
CELP	Cerrillos	1.09	216	*e*Pn	Pn	19 52 12.7	-1.1
AGPR	Aguadilla, PR	1.25	247	*e*Pn	Pn	19 52 15.7	-0.1
AGPR				*e*Sn	Sn	19 52 31.5	-0.2
CRPR	Cabo Rojo, PR	1.49	231	*e*P	Pn	19 52 18.2	-0.8
CRPR	Cabo Rojo, PR	1.49	231	*e*S	Sn	19 52 36.8	-0.7
CRPR	Cabo Rojo, PR	1.49	231	*e*P	Pn	19 52 18.2	-0.8
CRPR				*e*Pn	Pn	19 52 19.0	-0.1
CRPR				*e*S	Sn	19 52 36.8	-0.7
CRPR				*e*Sn	Sn	19 52 37.8	+0.3
CRPR	Cabo Rojo, PR	1.49	231	*e*P	Pn	19 52 18.2	-0.8
CRPR				*e*S	Sn	19 52 36.8	-0.7

IDC 24 19:52:57.4±29.0, 18.00S×178.00W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/20, mbtmp3.9/4, Error ellipse: s-maj=548.4km s-min=140.3km az=85.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.93	241	P	P	20 00 25.4	+0.3
	1.1nm,0.6s,baz=110,slow=12,SNR=4.6						
WRA	Warramunga Arr	45.00	260	P	P	20 01 15.4	+0.5
	0.8nm,0.5s,baz=97,slow=7.9,SNR=37						
ASAR	Alice Springs	45.14	254	P	P	20 01 16.2	+0.1
	0.9nm,0.4s,baz=88,slow=8.8,SNR=40						
FITZ	Fitzroy Crossi	53.40	261	P	P	20 02 17.9	-1.4
	1.0nm,0.8s,baz=140,slow=7.9						

IDC 24 19:55:22.3±3.1, 16.71S×174.76W, h153km±27km, mb3.4/5, mb1 3.7/6, mb1mx3.4/20, mbtmp3.4/6, Error ellipse: s-maj=115.2km s-min=18.2km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.00	46	P	Pn	19 56 22.8	0.0
	7.0nm,0.3s,baz=153,slow=1.7,SNR=12						
AFI				S	Sn	19 57 06.4	-3.4
	56nm,0.3s,baz=243,slow=23,SNR=18						
STKA	Stephens Creek	42.26	241	P	P	20 03 01.1	+0.4
	0.5nm,0.4s,baz=102,slow=9.3,SNR=4.3						
WRA	Warramunga Arr	48.28	258	P	P	20 03 47.6	-0.8
	0.3nm,0.4s,baz=95,slow=7.3,SNR=13						
ASAR	Alice Springs	48.47	253	P	P	20 03 49.9	+0.1
	2.0nm,0.6s,baz=88,slow=8.7,SNR=42						
ILAR	Eielson Array	83.98	12	P	P	20 07 35.4	+0.5
	0.3nm,0.5s,baz=218,slow=5.9,SNR=7.4						
PDAR	Pinedale Array	84.11	42	P	P	20 07 35.9	-0.5
	1.0nm,0.8s,baz=225,slow=2.0,SNR=2.8						

ISK ***24*** *19:56:27.8, 38.70N×39.54E, h2km, MD3.3*
ISCJB ***24*** *19:56:28.9±0.5, 38.72N±0.02×39.50E±0.03, h2km±5km, Error ellipse: s-maj=4.5km s-min=3.6km az=7.4*
DDA ***24*** *19:56:28.7, 38.70N×39.50E, h7km, MD3.3, ML3.5*
CSEM ***24*** *19:56:29.0±0.2, 38.70N×39.51E, h2km, MD3.3, Error ellipse: s-maj=5.4km s-min=4.6km az=108.0*

ISC 24 19:56:28.9±1.1, 38.69N±0.02×39.56E±0.02, h3km±11km, n47, σ0°89/63, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTK	Pertek	0.24	326	*e*PG	Pg	19 56 33.5	-0.1
PTK				*e*SG	Sg	19 56 36.7	-0.1
PTK	Pertek	0.24	326	*e*Pg	Pg	19 56 33.5	-0.1
PTK				*e*Sg	Sg	19 56 36.7	-0.1
SVRC	Sivrice-ELAZID	0.37	213	*e*PG	Pg	19 56 35.7	-0.4
SVRC				*e*SG	Sg	19 56 41.8	+0.7
SVRC	Sivrice-ELAZID	0.37	213	*e*Pg	Pg	19 56 35.7	-0.4
SVRC				*e*Sg	Sg	19 56 41.8	+0.7
ELZG	Elazig	0.49	247	*i*P	Pg	19 56 37.4	-1.1
ELZG				*i*S	Sg	19 56 45.4	+0.6
ELZG	Elazig	0.49	247	*i*P	Pg	19 56 37.4	-1.1
ELZG				*i*S	Sg	19 56 45.4	+0.6
BINT	Bingol	0.75	76	*e*Pg	Pn	19 56 46.6	+0.1
DIYA	Diyarbakir	0.88	150	*i*P	Pn	19 56 48.0	-0.4
DIYA				*i*S	Sn	19 57 01.8	0.0
DIYA	Diyarbakir	0.88	150	*i*P	Pn	19 56 48.0	-0.4
DIYA				*i*S	Sn	19 57 01.8	0.0
ERZN	Erzincan	0.90	8	*e*PG	Pg	19 56 45.8	-0.4
ERZN				*e*SG	Sb	19 56 59.3	-0.5
BNGB	Bing¨¶l	0.92	71	*e*PG	Pg	19 56 46.6	0.0
DIY	Diyarbakir	0.95	147	*e*PG	Pg	19 56 46.7	-0.5
DIY	Diyarbakir	0.95	147	*e*Pg	Pg	19 56 46.7	-0.5
MYA	Malataya	0.96	248	*e*PG	Pg	19 56 46.7	-0.8
MYA	Malataya	0.96	248	*e*Pg	Pg	19 56 46.7	-0.8
EZC	Erzincan	1.07	351	*e*PG	Pg	19 56 48.6	-0.9
EZC	Erzincan	1.07	351	*e*Pg	Pg	19 56 48.6	-0.9
ILIC	ilic-Erzincan	1.08	315	*e*PG	Pg	19 56 49.0	-0.7
ILIC	ilic-Erzincan	1.08	315	*e*Pg	Pg	19 56 49.0	-0.7
AKCD	Akcadag	1.35	253	*i*P	Pn	19 56 52.5	-2.3
AKCD				*i*S	Sg	19 57 11.1	-1.1
AKCD	Akcadag	1.35	253	*i*P	Pn	19 56 52.5	-2.3
AKCD				*i*S	Sg	19 57 11.1	-1.1
URFA	Urfa	1.38	205	*e*PN	Pn	19 56 54.6	-0.6
URFA	Urfa	1.38	205	*e*Pn	Pn	19 56 54.6	-0.6
DARE	Darende-Malaty	1.40	281	*e*PN	Pb	19 56 58.2	+2.4
KELT	Kelkit	1.47	351	*i*P	Pn	19 56 56.3	-0.3
KELT				*i*S	Sg	19 57 15.0	-1.3
KELT	Kelkit	1.47	351	*i*P	Pn	19 56 56.3	-0.3
KELT				*i*S	Sg	19 57 15.0	-1.3
BTMT	Batman	1.59	108	*e*PN	Pn	19 56 56.4	-1.7
BTMT	Batman	1.59	108	*e*Pn	Pn	19 56 56.4	-1.7
MARD	Mardin	1.68	145	*i*P	Pb	19 57 00.8	+0.3
MARD				*i*S	Sg	19 57 24.6	+1.8
BAYT	Ayd˜˜ntepe-Bay	1.76	15	*e*PN	Pn	19 57 00.3	-0.2
BAYT	Ayd˜˜ntepe-Bay	1.76	15	*e*Pn	Pn	19 57 00.3	-0.2
GUMT	Gumushane	1.77	358	*e*PN	Pn	19 57 00.5	-0.1
GUMT	Gumushane	1.77	358	*e*Pn	Pn	19 57 00.5	-0.1
SUSE	Susehri	1.84	326	*i*P	Pn	19 57 02.1	+0.4
SUSE				*i*S	Sg	19 57 29.1	+0.9
SUSE	Susehri	1.84	326	*i*P	Pn	19 57 02.1	+0.4
SUSE				*i*S	Sg	19 57 29.1	+0.9
EZM	Erzurum	1.85	48	*e*PN	Pn	19 57 01.4	-0.4
SARI	SarD1z-Kayseri	2.24	271	*e*PN	Pb	19 57 10.6	+0.4
KMRS	Kahramanmaras	2.41	241	*e*PN	Pn	19 57 09.2	-0.2
KMRS	Kahramanmaras	2.41	241	*e*Pn	Pn	19 57 09.2	-0.2
RSDY	Resadiye-TOKAT	2.43	315	*e*PN	Pn	19 57 09.6	+0.1
RSDY	Resadiye-TOKAT	2.43	315	*e*Pn	Pn	19 57 09.6	+0.1
BNN	Bunyan	2.91	274	*e*PN	Pn	19 57 16.4	+0.1
BNN	Bunyan	2.91	274	*e*Pn	Pn	19 57 16.4	+0.1
KOZT	Kozan	3.19	249	*e*PN	Pn	19 57 20.5	+0.5
KOZT	Kozan	3.19	249	*e*Pn	Pn	19 57 20.5	+0.5
KRTS	Karatas	3.94	239	*e*PN	Pn	19 57 31.3	+1.0
KRTS	Karatas	3.94	239	*e*Pn	Pn	19 57 31.3	+1.0

ISCJB ***24*** *20:01:03.8±0.2, 43.76N±0.02×105.33W±0.02, h0km, mb3.9/4, Error ellipse: s-maj=2.5km s-min=2.4km az=38.6*
NEIC ***24*** *20:01:03.5±0.4, 43.74N×105.24W, h0km, ML3.4, Error ellipse: s-maj=5.9km s-min=5.3km az=162.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
IDC ***24*** *20:01:05.3±0.9, 44.05N×105.71W, h0km, mb3.9/4, mb1 3.8/10, mb1mx3.5/32, mbtmp3.6/10, ML3.1/5, MS2.8/1, Ms1 2.7/1, ms1mx2.0/47, Error ellipse: s-maj=24.4km s-min=9.8km az=141.0*

ISC 24 20:01:04.0±0.6, 43.74N±0.02×105.32W±0.02, h0km, n176, σ1°09/199, mb3.9/4, 56C-44D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I23A	Meade Ranch, G	0.24	335	P	Pg	20 01 10.3	+1.7
	baz=0.3,SNR=386						
I23A	Meade Ranch, G	0.24	335	P	Pg	20 01 10.3	+1.7
	baz=0.3,SNR=386						
J23A	Dilts Ranch, B	0.38	207	P	Pg	20 01 12.5	+1.4
	baz=0.4						
J23A	Dilts Ranch, B	0.38	207	P	Pg	20 01 12.5	+1.4
	baz=0.4						
I24A	Kuemmerle Ranc	0.52	76	P	Pg	20 01 14.9	+1.0
	baz=0.5,SNR=238						
I24A				S	Sg	20 01 22.0	+1.5
	baz=0.5						
I24A	Kuemmerle Ranc	0.52	76	P	Pg	20 01 14.9	+1.0
	baz=0.5,SNR=238						
I24A				S	Sg	20 01 22.0	+1.5
	baz=0.5						
J24A	Dixon Ranch, L	0.63	130	P	Pg	20 01 16.9	+0.9
	baz=0.6						
J24A	Dixon Ranch, L	0.63	130	P	Pg	20 01 16.9	+0.9
	baz=0.6						
H23A	Clabaugh Cattl	0.82	356	P	Pg	20 01 20.3	+0.5
	baz=0.8,SNR=8.8						
H23A	Clabaugh Cattl	0.82	356	P	Pg	20 01 20.3	+0.5
	baz=0.8,SNR=8.8						
I22A	9 Mile Ranch,	0.86	281	P	Pg	20 01 21.2	+0.8
	baz=0.9,SNR=1000						
I22A				S	Sg	20 01 32.5	+1.1
	baz=0.9						
I22A	9 Mile Ranch,	0.86	281	P	Pg	20 01 21.2	+0.8
	baz=0.9,SNR=1000						
I22A				S	Sg	20 01 32.5	+1.1
	baz=0.9						
J22A	Midwest	0.90	249	P	Pg	20 01 21.5	+0.3
	baz=1.0						
J22A	Midwest	0.90	249	P	Pg	20 01 21.5	+0.3
	baz=1.0						
RSSD	Black Hills	1.00	67	*e*Pg	Pg	20 01 23.4	+0.2
H22A	Clearmont	1.13	319	P	Pg	20 01 26.1	+0.4
	baz=1.2,SNR=23						
H22A	Clearmont	1.13	319	P	Pg	20 01 26.1	+0.4
	baz=1.2,SNR=23						
H24A	Dirks Ranch, A	1.15	28	P	Pg	20 01 25.8	-0.2
	baz=1.1,SNR=298						
H24A	Dirks Ranch, A	1.15	28	P	Pg	20 01 25.8	-0.2
	baz=1.1,SNR=298						
K22A	Casper	1.40	219	P	Pn	20 01 30.4	-0.5
	baz=1.4						
K22A				S	Sg	20 01 49.2	+0.3
	baz=1.4						
K22A	Casper	1.40	219	P	Pn	20 01 30.4	-0.5
	baz=1.4						
K22A				S	Sg	20 01 49.2	+0.3
	baz=1.4						
I21A	Big Trails, Te	1.43	274	P	Pn	20 01 30.2	-1.1
	baz=1.5						
I21A	Big Trails, Te	1.43	274	P	Pn	20 01 30.2	-1.1
	baz=1.5						
G23A	Biddle	1.46	358	P	Pn	20 01 31.4	-0.3
	baz=1.5,SNR=46						
G23A	Biddle	1.46	358	P	Pn	20 01 31.4	-0.3
	baz=1.5,SNR=46						
H21A	Big Horn, Sher	1.52	306	Pb	Pb	20 01 33.1	-0.1
	baz=1.6,SNR=164						
H21A	Big Horn, Sher	1.52	306	Pb	Pb	20 01 33.1	-0.1
	baz=1.6,SNR=164						
K25A	Mack Ranch, Ha	1.55	136	Pb	Pb	20 01 33.9	+0.3
	baz=1.5,SNR=55						
K25A	Mack Ranch, Ha	1.55	136	Pb	Pb	20 01 33.9	+0.3
	baz=1.5,SNR=55						
J21A	Lysite	1.59	256	P	Pn	20 01 33.4	-0.3
	baz=1.6						
J21A				S	Sn	20 01 55.0	0.0
	baz=1.6						
J21A	Lysite	1.59	256	P	Pn	20 01 33.4	-0.3
	baz=1.6						
J21A				S	Sn	20 01 55.0	0.0
	baz=1.6						
G22A	Birney	1.64	335	Pb	Pb	20 01 35.0	-0.1
	baz=1.7,SNR=80						
G22A	Birney	1.64	335	Pb	Pb	20 01 35.0	-0.1
	baz=1.7,SNR=80						
L23A	Garrett	1.65	190	P	Pn	20 01 34.6	+0.2
	baz=1.7						
L23A				S	Sb	20 01 57.1	+0.4
	baz=1.7						
L23A	Garrett	1.65	190	P	Pn	20 01 34.6	+0.2
	baz=1.7						
L23A				S	Sb	20 01 57.1	+0.4
	baz=1.7						
G24A	Alzada	1.71	22	P	Pb	20 01 36.1	-0.3
	baz=1.7,SNR=43						
G24A				S	Sg	20 01 59.6	+0.5
	baz=1.7						
G24A	Alzada	1.71	22	P	Pb	20 01 36.1	-0.3
	baz=1.7,SNR=43						
G24A				S	Sg	20 01 59.6	+0.5
	baz=1.7						
L24A	Wheatland	1.72	170	Pb	Pn	20 01 36.1	+0.8
	baz=1.7						
L24A	Wheatland	1.72	170	Pb	Pn	20 01 36.1	+0.8
	baz=1.7						
K21A	Alcova	1.79	233	Pb	Pn	20 01 37.3	+1.0
	baz=1.8						
K21A				S	Sn	20 02 00.4	+0.5
	baz=1.8						
K21A	Alcova	1.79	233	Pb	Pn	20 01 37.3	+1.0
	baz=1.8						
K21A				S	Sn	20 02 00.4	+0.5
	baz=1.8						
L25A	Engebretsen Ra	1.87	147	Pb	Pb	20 01 39.1	+0.1
	baz=1.8						
L25A	Engebretsen Ra	1.87	147	Pb	Pb	20 01 39.1	+0.1
	baz=1.8						
K26A	Motz Farm, Whi	1.88	123	Pb	Pb	20 01 39.0	-0.2
	baz=1.8,SNR=16						
K26A	Motz Farm, Whi	1.88	123	Pb	Pb	20 01 39.0	-0.2
	baz=1.8,SNR=16						
F23A	Volborg	1.98	358	P	Pn	20 01 39.7	+0.8
	baz=2.0,SNR=108						
F23A	Volborg	1.98	358	P	Pn	20 01 39.7	+0.8
	baz=2.0,SNR=108						
G21A	Lodge Grass	2.01	318	P	Pn	20 01 40.1	+0.9
	baz=2.0,SNR=66						
G21A	Lodge Grass	2.01	318	P	Pn	20 01 40.1	+0.9
	baz=2.0,SNR=66						
I20A	Worland	2.04	277	P	Pn	20 01 41.0	+1.3
	baz=2.1,SNR=546						
I20A				Sb	Sb	20 02 08.6	+0.6
	baz=2.1						
I20A	Worland	2.04	277	P	Pn	20 01 41.0	+1.3
	baz=2.1,SNR=546						
I20A				Sb	Sb	20 02 08.6	+0.6
	baz=2.1						
J20A	Shoshoni	2.05	260	Pb	Pb	20 01 42.0	0.0
	baz=2.1,SNR=369						
J20A				Sb	Sg	20 02 09.2	-0.4
	baz=2.1						
J20A	Shoshoni	2.05	260	Pb	Pb	20 01 42.0	0.0
	baz=2.1,SNR=369						
J20A				Sb	Sg	20 02 09.2	-0.4
	baz=2.1						
H20A	Greybull	2.07	292	P	Pn	20 01 40.7	+0.6
	baz=2.1,SNR=58						
H20A				Sn	Sn	20 02 07.7	+1.1
	baz=2.1						
H20A	Greybull	2.07	292	P	Pn	20 01 40.7	+0.6
	baz=2.1,SNR=58						
H20A				Sn	Sn	20 02 07.7	+1.1
	baz=2.1						
F22A	Rosebud	2.15	342	P	Pn	20 01 41.5	+0.5
	baz=2.2,SNR=75						
F22A	Rosebud	2.15	342

	baz=2.8,SNR=26						
N23A	**Red Feather La**	**2.88**	**189**	P	**Pn**	**20 01 53.2**	**+1.9**
	baz=2.9,SNR=25						
N23A	**Red Feather La**	**2.88**	**189**	P	**Pn**	**20 01 53.2**	**+1.9**
	baz=2.9,SNR=25						
F20A	**Billings**	**2.88**	**317**	P	**Pn**	**20 01 51.5**	**+0.3**
	baz=2.9,SNR=75						
F20A	**Billings**	**2.88**	**317**	P	**Pn**	**20 01 51.5**	**+0.3**
	baz=2.9,SNR=75						
E24A	**Baker**	**2.91**	**14**	P	**Pn**	**20 01 52.9**	**+1.3**
	baz=2.9,SNR=34						
E24A	**Baker**	**2.91**	**14**	P	**Pn**	**20 01 52.9**	**+1.3**
	baz=2.9,SNR=34						
N22A	**Wattenberg Ran**	**3.05**	**196**	Pb	**Pb**	**20 01 58.9**	**-0.4**
	baz=3.1						
N22A	**Wattenberg Ran**	**3.05**	**196**	Pb	**Pb**	**20 01 58.9**	**-0.4**
	baz=3.1						
M20A	**Sweetwater, Wa**	**3.09**	**224**	⇓Pb	**Pb**	**20 01 59.9**	**0.0**
	baz=3.1,SNR=12						
M20A	**Sweetwater, Wa**	**3.09**	**224**	⇓Pb	**Pb**	**20 01 59.9**	**0.0**
	baz=3.1,SNR=12						
RLMT	**Red Lodge**	**3.15**	**297**	*e*Pn	**Pn**	**20 01 56.0**	**+1.0**
PDAR	**Pinedale Array**	**3.24**	**254**	Pn	**Pn**	**20 01 58.2**	**+1.9**
PDAR				Sn	**Sn**	**20 02 37.4**	**+1.6**
PDAR	**Pinedale Array**	**3.24**	**254**	Pn	**Pn**	**20 01 58.2**	**+1.9**
	5.4nm,0.3s,baz=68,slow=15,SNR=52						
PDAR				Sn	**Sn**	**20 02 37.4**	**+1.6**
	2.5nm,0.3s,baz=65,slow=28,SNR=3.9						
BW06	**Boulder Array**	**3.25**	**254**	*e*Pn	**Pn**	**20 01 57.0**	**+0.7**
BW06				*e*S	**Sn**	**20 02 37.8**	**+2.0**
F19A	**Roth Farm, Mol**	**3.33**	**311**	⇑P	**Pn**	**20 01 58.4**	**+0.9**
	baz=3.4,SNR=53						
F19A	**Roth Farm, Mol**	**3.33**	**311**	⇑P	**Pn**	**20 01 58.4**	**+0.9**
	baz=3.4,SNR=53						
N21A	**Black Mountain**	**3.40**	**209**	⇑P	**Pn**	**20 02 00.6**	**+2.1**
	baz=3.4,SNR=15						
N21A	**Black Mountain**	**3.40**	**209**	⇑P	**Pn**	**20 02 00.6**	**+2.1**
	baz=3.4,SNR=15						
G18A	**Lazy EL Ranch,**	**3.42**	**299**	⇓P	**Pn**	**20 01 59.7**	**+1.0**
	baz=3.5,SNR=31						
G18A	**Lazy EL Ranch,**	**3.42**	**299**	⇓P	**Pn**	**20 01 59.7**	**+1.0**
	baz=3.5,SNR=31						
E19A	**Rath Farm, Rou**	**3.66**	**319**	⇑P	**Pn**	**20 02 02.1**	**+0.2**
	baz=3.7,SNR=28						
E19A	**Rath Farm, Rou**	**3.66**	**319**	⇑P	**Pn**	**20 02 02.1**	**+0.2**
	baz=3.7,SNR=28						
OGNE	**Ogallala**	**3.71**	**138**	*e*Pn	**Pn**	**20 02 00.6**	**-2.0**
GCMT	**Greycliff**	**3.71**	**305**	*e*Pn	**Pn**	**20 02 01.3**	**-1.4**
LKWY	**Lake**	**3.75**	**284**	*e*Pn	**Pn**	**20 02 04.5**	**+1.3**
LOHW	**Long Hollow**	**3.83**	**270**	*e*Pn	**Pn**	**20 02 05.8**	**+1.4**
D20A	**Manuel Ranch,**	**3.89**	**330**	⇑P	**Pn**	**20 02 05.1**	**0.0**
	baz=3.9,SNR=29						
D20A	**Manuel Ranch,**	**3.89**	**330**	⇑P	**Pn**	**20 02 05.1**	**0.0**
	baz=3.9,SNR=29						
MOOW	**Moose Ponds**	**3.93**	**272**	*e*Pn	**Pn**	**20 02 06.8**	**+1.1**
ISCO	**Idaho Springs**	**3.94**	**183**	*e*Pn	**Pn**	**20 02 05.2**	**-0.9**
SNOW	**Snow King Moun**	**3.96**	**268**	*e*Pn	**Pn**	**20 02 07.1**	**+0.9**
C22A	**Vida**	**4.03**	**355**	⇓P	**Pn**	**20 02 08.5**	**+1.6**
	baz=4.0						
C22A	**Vida**	**4.03**	**355**	⇓P	**Pn**	**20 02 08.5**	**+1.6**
	baz=4.0						
REDW	**Red Top Meadow**	**4.04**	**267**	*e*Pn	**Pn**	**20 02 08.1**	**+0.9**
C23A	**Lambert**	**4.07**	**1**	⇓P	**Pn**	**20 02 09.1**	**+1.6**
	baz=4.1						
C23A	**Lambert**	**4.07**	**1**	⇓P	**Pn**	**20 02 09.1**	**+1.6**
	baz=4.1						
IMW	**Indian Meadow**	**4.07**	**274**	*e*Pn	**Pn**	**20 02 08.7**	**+1.0**
TPAW	**Teton Pass**	**4.10**	**268**	*e*Pn	**Pn**	**20 02 08.0**	**-0.1**
DCID1	**Drake Creek**	**4.26**	**270**	*e*Pn	**Pn**	**20 02 07.9**	**-2.3**
RRI2	**Red Ridge**	**4.38**	**267**	*e*P	**Pn**	**20 02 09.2**	**-2.8**
DGMT	**Dagmar**	**4.80**	**9**	*e*Pn	**Pn**	**20 02 16.9**	**-0.5**
BOZ	**Bozeman (W)**	**4.89**	**295**	*e*Pn	**Pn**	**20 02 19.4**	**+0.6**
HWUT	**Hardware Ranch**	**5.07**	**247**	*e*Pn	**Pn**	**20 02 20.0**	**-1.4**
EGMT	**Eagleton**	**5.29**	**326**	*e*Pn	**Pn**	**20 02 21.8**	**-2.5**
DLMT	**Dillon**	**5.45**	**290**	*e*Pn	**Pn**	**20 02 26.9**	**+0.3**
LRM	**Limekiln Ridge**	**5.49**	**295**	*e*Pn	**Pn**	**20 02 27.9**	**+0.7**
MCMT	**McKenzie Canyo**	**5.51**	**284**	*e*Pn	**Pn**	**20 02 27.9**	**+0.4**
DAU	**Daniels Canyon**	**5.53**	**235**	*e*Pn	**Pn**	**20 02 28.1**	**+0.3**
JLU	**Jordanelle**	**5.53**	**238**	*e*Pn	**Pn**	**20 02 25.5**	**-2.2**
HVU	**Hansel Valley**	**5.83**	**253**	*e*Pn	**Pn**	**20 02 31.1**	**-0.7**
PV04	**Paradox Valley**	**5.99**	**208**	*e*Pn	**Pn**	**20 02 32.9**	**-1.1**
SDCO	**Great Sand Dun**	**5.99**	**181**	*e*Pn	**Pn**	**20 02 33.7**	**-0.4**
PV01	**Paradox Valley**	**6.12**	**205**	*e*Pn	**Pn**	**20 02 36.0**	**+0.2**
ECSD	**EROS Data Cent**	**6.31**	**87**	*e*Pn	**Pn**	**20 02 36.6**	**-1.6**
	106nm,4.6s						
CHMT	**Chamberlain Mo**	**6.43**	**302**	*e*Pn	**Pn**	**20 02 40.3**	**+0.3**
B16A	**M & M Farms, S**	**6.45**	**319**	⇑P	**Pn**	**20 02 40.4**	**+0.2**
	baz=6.5,SNR=22						
B16A	**M & M Farms, S**	**6.45**	**319**	⇑P	**Pn**	**20 02 40.4**	**+0.2**
	baz=6.5,SNR=22						
HLID	**Hailey**	**6.60**	**272**	*e*Pn	**Pn**	**20 02 43.2**	**+0.9**
DUG	**Dugway**	**6.61**	**240**	*e*Pn	**Pn**	**20 02 41.1**	**-1.4**
B15A	**Bradely Ranch,**	**6.80**	**315**	⇑P	**Pn**	**20 02 45.1**	**0.0**
	baz=6.8,SNR=6.8						
B15A	**Bradely Ranch,**	**6.80**	**315**	⇑P	**Pn**	**20 02 45.1**	**0.0**
	baz=6.8,SNR=6.8						
SWMT	**Swartz Lake**	**7.16**	**305**	*e*Pn	**Pn**	**20 02 49.1**	**-0.8**
YBMT	**Yellow Bay**	**7.34**	**307**	*e*Pn	**Pn**	**20 02 53.6**	**+1.2**
JTMT	**Jette**	**7.44**	**306**	*e*Pn	**Pn**	**20 02 54.2**	**+0.3**
A14A	**Double T Ranch**	**7.67**	**316**	⇓P	**Pn**	**20 02 56.2**	**-0.7**
	baz=7.7,SNR=6.0						
A14A	**Double T Ranch**	**7.67**	**316**	⇓P	**Pn**	**20 02 56.2**	**-0.7**
	baz=7.7,SNR=6.0						
ELK	**Elko**	**7.94**	**251**	Pn	**Pn**	**20 03 02.9**	**+2.0**
ELK	**Elko**	**7.94**	**251**	Pn	**Pn**	**20 03 02.9**	**+2.0**
	0.5nm,0.3s,baz=66,slow=12,SNR=7.2						
WALA	**Waterton Lakes**	**7.97**	**315**	*e*Pn	**Pn**	**20 02 59.8**	**-1.3**
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**20 03 16.1**	**-1.3**
ULM				Lg	Lg	20 05 42.2	
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**20 03 16.1**	**-1.3**
	1.0nm,0.3s,baz=235,slow=10,SNR=4.2						
ULM				Lg	Lg	20 05 42.2	
	0.4nm,0.3s,baz=307,slow=15,SNR=2.0						
ULM				LR	LR	20 07 12.8	
	comp=Z,56nm,19.2s,baz=21,slow=40						
NVAR	**Mina Array Bea**	**11.14**	**246**	Pn	**Pn**	**20 03 47.3**	**+2.6**
NVAR	**Mina Array Bea**	**11.14**	**246**	Pn	**Pn**	**20 03 47.3**	**+2.6**
	0.1nm,0.3s,baz=58,slow=12,SNR=5.7						
TXAR	**Lajitas Array**	**14.44**	**174**	Pn	**P**	**20 04 37.0**	**+0.2**
	0.0nm,0.3s,baz=351,slow=11,SNR=4.9						
YKA	**Yellowknife Ar**	**19.56**	**347**	P	**P**	**20 05 31.5**	**-1.5**
YKA	**Yellowknife Ar**	**19.56**	**347**	P	**P**	**20 05 31.5**	**-1.5**
	0.1nm,0.3s,baz=169,slow=12,SNR=7.2						
ARCES	**ARCESS Array B**	**61.43**	**18**	P	**P**	**20 11 21.0**	**-0.5**
ARCES	**ARCESS Array B**	**61.43**	**18**	P	**P**	**20 11 21.0**	**-0.5**
	2.1nm,1.0s,baz=317,slow=6.1,SNR=5.3						
ZALV	**Zalesovo Beam**	**82.30**	**354**	P	**P**	**20 13 26.1**	**-0.9**
ZALV	**Zalesovo Beam**	**82.30**	**354**	P	**P**	**20 13 26.1**	**-0.9**
	0.7nm,0.6s,baz=345,slow=4.9,SNR=4.3						
SONM	**Songino Array**	**84.62**	**339**	P	**P**	**20 13 39.8**	**+0.5**
SONM	**Songino Array**	**84.62**	**339**	P	**P**	**20 13 39.8**	**+0.5**
	0.3nm,0.7s,baz=356,slow=5.9,SNR=3.4						
MKAR	**Makanchi Array**	**89.60**	**355**	P	**P**	**20 14 02.2**	**-1.1**
MKAR	**Makanchi Array**	**89.60**	**355**	P	**P**	**20 14 02.2**	**-1.1**
	0.5nm,0.7s,baz=15,slow=5.0,SNR=6.0						

IDC 24 20:03:07.5±1.6,3°.81S×144°.21E,h0km,mb3.4/3, mb1 3.8/5,mb1mx3.4/19,mbtmp3.6/5,ML3.3/2,Error ellipse: s-maj=46.0km s-min=26.5km az=119.0,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.29**	**152**	Pn	Pn	20 04 42.5	+0.9
	0.7nm,0.3s,baz=324,slow=17,SNR=2.9						
PMG				Sn	Sn	20 05 42.4	-12
	2.1nm,0.3s,baz=139,slow=20,SNR=4.7						
WRA	**Warramunga Arr**	**18.70**	**210**	P	P	20 07 27.6	-0.1
	0.3nm,0.3s,baz=33,slow=12,SNR=27						
ASAR	**Alice Springs**	**22.11**	**206**	P	P	20 08 04.3	-0.4
	0.4nm,0.5s,baz=30,slow=11,SNR=11						
FITZ	**Fitzroy Crossi**	**23.07**	**231**	P	P	20 08 15.2	+0.3
	1.0nm,0.3s,baz=54,slow=11,SNR=22						
ILAR	**Eielson Array**	**84.59**	**24**	P	P	20 15 42.2	-0.3
	0.3nm,0.6s,baz=259,slow=4.9,SNR=5.7						

*SKO **24** 20:08:11.8, 41°.32N×22°.71E, h15km, M1.3, ML1.7*
*ATH **24** 20:08:13.2, 41°.27N×22°.74E, h4km±2km, MD2.7/5*
*CSEM **24** 20:08:13.1±0.4, 41°.26N×22°.72E, h5km, MD2.7, Error ellipse: s-maj=9.5km s-min=6.0km az=9.0*
ISC 24 20:08:12.9±1.1, 41°.28N±0°.04×22°.73E±0°.03, h6km±17km, n14, σ0°.35/24, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**289**	⇓*i*Pg	**Pg**	**20 08 15.2**	**-0.5**
VAY				*i* Sg	**Sg**	**20 08 17.4**	**-0.1**
VAY				*e*Lg	Lg	20 08 17.5	
	comp=E,204nm,0.5s						
VAY				*e*Lg	Lg	20 08 17.5	
	comp=N,670nm,0.3s						
VAY	**Valandovo**	**0.13**	**289**	⇓*i*Pg	**Pg**	**20 08 15.6**	**-0.1**
VAY				*i* Sg	**Sg**	**20 08 17.9**	**+0.4**
VAY				*e*Lg	Lg	20 08 17.9	
	comp=N,670nm,0.3s						
GRG	**Griva**	**0.41**	**218**	*e*PG	**Pg**	**20 08 20.9**	**+0.1**
GRG				*e*SG	**Sg**	**20 08 26.8**	**+0.6**
GRG	**Griva**	**0.41**	**218**	*e*Pg	**Pg**	**20 08 20.9**	**+0.1**
GRG				*e*Sg	**Sg**	**20 08 26.8**	**+0.6**
SOH	**Sokhos**	**0.66**	**134**	*e*PG	**Pg**	**20 08 25.5**	**0.0**
SOH				*e*SG	**Sg**	**20 08 34.4**	**+0.4**
SOH	**Sokhos**	**0.66**	**134**	*e*Pg	**Pg**	**20 08 25.5**	**0.0**
SOH				*e*Sg	**Sg**	**20 08 34.4**	**+0.4**
NVR	**Nevrokopi**	**0.85**	**85**	*e*PB	**Pg**	**20 08 29.4**	**+0.1**
NVR				*e*SG	**Sg**	**20 08 40.8**	**+0.4**
NVR	**Nevrokopi**	**0.85**	**85**	*e*Pb	**Pg**	**20 08 29.4**	**+0.1**
NVR				*e*Sg	**Sg**	**20 08 40.8**	**+0.4**
PLG	**Polygyros**	**1.05**	**149**	*e*PB	**Pg**	**20 08 32.6**	**-0.5**
PLG				*e*SG	**Sg**	**20 08 46.7**	**-0.1**
PLG	**Polygyros**	**1.05**	**149**	*e*Pb	**Pg**	**20 08 32.6**	**-0.5**
PLG				*e*Sg	**Sg**	**20 08 46.7**	**-0.1**
FNA	**Florina**	**1.14**	**245**	*e*PB	**Pg**	**20 08 34.8**	**0.0**
FNA	**Florina**	**1.14**	**245**	*e*Pb	**Pg**	**20 08 34.8**	**0.0**
RDO	**Rodhopi**	**2.12**	**93**	*e*PN	**Pb**	**20 08 51.5**	**-0.2**
RDO	**Rodhopi**	**2.12**	**93**	*e*Pn	**Pb**	**20 08 51.5**	**-0.2**

*DDA **24** 20:11:17.7, 39°.20N×25°.81E, h7km, MD3.3*
*ISK **24** 20:11:17.0, 39°.13N×25°.77E, h5km, MD3.3*
*ATH **24** 20:11:18.0, 39°.19N×25°.97E, h17km±2km, MD3.3/6*
*ISCJB **24** 20:11:18.6±0.5, 39°.16N±0°.02×25°.81E±0°.03, h9km±3km, Error ellipse: s-maj=3.9km s-min=3.2km az=45.0*
*CSEM **24** 20:11:18.6±0.1, 39°.16N×25°.81E, h5km, ML2.8/5, Error ellipse: s-maj=3.3km s-min=3.0km az=27.0*
*THE **24** 20:11:19.1, 39°.13N×25°.87E, h5km±1km, ML2.8/5, Error ellipse: s-maj=1.5km s-min=0.7km az=84.0*
ISC 24 20:11:18.8±0.8, 39°.15N±0°.02×25°.82E±0°.02, h11km±5km, n114, σ0°.79/148, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.07**	**25**	P	**Pg**	**20 11 21.1**	**0.0**
SIGR				S	**Sg**	**20 11 22.6**	**-0.2**
SIGR	**SIGRI**	**0.07**	**25**	P	**Pg**	**20 11 21.1**	**0.0**
SIGR				S	**Sg**	**20 11 22.6**	**-0.2**
PRK	**Paraskevi**	**0.36**	**75**	P	**Pg**	**20 11 25.5**	**-0.5**
PRK				S	**Sg**	**20 11 30.6**	**-0.3**
PRK	**Paraskevi**	**0.36**	**75**	P	**Pg**	**20 11 25.5**	**-0.5**
PRK				S	**Sg**	**20 11 30.6**	**-0.3**
AYVA	**Ayvalik**	**0.69**	**77**	*i* P	**Pg**	**20 11 31.8**	**-0.4**
AYVA				*i* S	**Sg**	**20 11 41.2**	**-0.1**
AYVA	**Ayvalik**	**0.69**	**77**	*i* P	**Pg**	**20 11 31.8**	**-0.4**
AYVA				*i* S	**Sg**	**20 11 41.2**	**-0.1**
EZN	**Ezine**	**0.78**	**30**	*e*PG	**Pg**	**20 11 33.3**	**-0.6**
EZN				*e*SG	**Sg**	**20 11 44.5**	**+0.4**
EZN	**Ezine**	**0.78**	**30**	*e*Pg	**Pg**	**20 11 33.3**	**-0.6**
EZN				*e*Sg	**Sg**	**20 11 44.5**	**+0.4**
CHOS	**Chios island**	**0.79**	**166**	P	**Pg**	**20 11 34.0**	**0.0**
CHOS				S	**Sg**	**20 11 44.6**	**+0.4**
CHOS	**Chios island**	**0.79**	**166**	P	**Pg**	**20 11 34.0**	**0.0**
CHOS				S	**Sg**	**20 11 44.6**	**+0.4**
LIA	**Limnos Island**	**0.89**	**327**	*e*PN	**Pg**	**20 11 36.1**	**+0.1**
LIA				*e*SN	**Sb**	**20 11 48.9**	**+0.6**
LIA	**Limnos Island**	**0.89**	**327**	*e*Pn	**Pg**	**20 11 36.1**	**+0.1**
LIA				*e*Sn	**Sb**	**20 11 48.9**	**+0.6**
URLA	**Izmir**	**1.00**	**142**	*i* P	**Pg**	**20 11 37.8**	**-0.1**
URLA				*i* S	**Sb**	**20 11 51.8**	**+0.6**
URLA	**Izmir**	**1.00**	**142**	*i* P	**Pg**	**20 11 37.8**	**-0.1**
URLA				*i* S	**Sb**	**20 11 51.8**	**+0.6**
BLCB	**Balcova**	**1.22**	**128**	*e*PN	**Pn**	**20 11 41.3**	**-0.6**
BLCB				*e*SN	**Sb**	**20 11 57.8**	**+0.1**
BLCB	**Balcova**	**1.22**	**128**	*e*Pn	**Pn**	**20 11 41.3**	**-0.6**
BLCB				*e*Sn	**Sb**	**20 11 57.8**	**+0.1**
SMTH	**Samothraki Isl**	**1.34**	**350**	*e*PN	**Pn**	**20 11 42.9**	**-0.5**
SMTH				*e*SN	**Sb**	**20 12 00.8**	**-0.3**
SMTH	**Samothraki Isl**	**1.34**	**350**	*e*Pn	**Pn**	**20 11 42.9**	**-0.5**
SMTH				*e*Sn	**Sb**	**20 12 00.8**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.34**	**22**	*e*PN	**Pn**	**20 11 43.0**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.34**	**22**	*e*Pn	**Pn**	**20 11 43.0**	**-0.5**
IZM	**Izmir**	**1.36**	**123**	*e*PN	**Pn**	**20 11 43.8**	**+0.1**
IZM	**Izmir**	**1.36**	**123**	*e*Pn	**Pn**	**20 11 43.8**	**+0.1**
LPK	**Lapseki**	**1.42**	**30**	*e*PN	**Pn**	**20 11 44.6**	**+0.1**
LPK	**Lapseki**	**1.42**	**30**	*e*Pn	**Pn**	**20 11 44.6**	**+0.1**
AOS	**Alonnisos**	**1.51**	**271**	P	**Pb**	**20 11 46.4**	**-0.4**
AOS				S	**Sg**	**20 12 08.3**	**+1.0**
AOS	**Alonnisos**	**1.51**	**271**	*e*PN	**Pg**	**20 11 47.4**	**-0.3**
AOS	**Alonnisos**	**1.51**	**271**	P	**Pb**	**20 11 46.4**	**-0.4**
AOS	**Alonnisos**	**1.51**	**271**	*e*Pn	**Pg**	**20 11 47.4**	**-0.3**
BALY	**Balya**	**1.51**	**67**	*i* P	**Pn**	**20 11 45.4**	**-0.5**
BALY				*i* S	**Sg**	**20 12 07.7**	**+0.2**
BALY	**Balya**	**1.51**	**67**	*i* P	**Pn**	**20 11 45.4**	**-0.5**
BALY				*i* S	**Sg**	**20 12 07.7**	**+0.2**
MRMA	**Marmari**	**1.57**	**226**	P	**Pn**	**20 11 46.2**	**-0.4**
MRMA	**Marmari**	**1.57**	**226**	P	**Pn**	**20 11 46.2**	**-0.4**
AKHS	**Akhisar**	**1.58**	**99**	*i* P	**Pg**	**20 11 48.5**	**-0.5**
AKHS				*i* S	**Sg**	**20 12 09.2**	**-0.3**
AKHS	**Akhisar**	**1.58**	**99**	*i* P	**Pg**	**20 11 48.5**	**-0.5**
AKHS				*i* S	**Sg**	**20 12 09.2**	**-0.3**
ENEZ	**Enez**	**1.60**	**9**	*e*PN	**Pn**	**20 11 46.9**	**-0.2**
ENEZ	**Enez**	**1.60**	**9**	*e*Pn	**Pn**	**20 11 46.9**	**-0.2**
ERIK	**Erikli-Kesan**	**1.61**	**19**	*e*PN	**Pn**	**20 11 47.1**	**0.0**
ERIK	**Erikli-Kesan**	**1.61**	**19**	*e*Pn	**Pn**	**20 11 47.1**	**0.0**
BALB	**Balikesir**	**1.67**	**72**	*e*PN	**Pn**	**20 11 48.7**	**+0.7**
BALB	**Balikesir**	**1.67**	**72**	*e*Pn	**Pn**	**20 11 48.7**	**+0.7**
KRBG	**Karabiga-Canak**	**1.68**	**42**	*e*PN	**Pn**	**20 11 47.7**	**-0.5**
KRBG	**Karabiga-Canak**	**1.68**	**42**	*e*Pn	**Pn**	**20 11 47.7**	**-0.5**
GONE	**Gonen-Balikesi**	**1.70**	**58**	*e*PN	**Pn**	**20 11 48.0**	**-0.3**
GONE	**Gonen-Balikesi**	**1.70**	**58**	*e*Pn	**Pn**	**20 11 48.1**	**-0.3**
ALN	**Alexandroupoli**	**1.75**	**6**	P	**Pn**	**20 11 49.1**	**0.0**
ALN				S	**Sb**	**20 12 12.9**	**-0.1**
ALN	**Alexandroupoli**	**1.75**	**6**	*e*PN	**Pn**	**20 11 49.3**	**+0.2**
ALN				*e*SN	**Sn**	**20 12 11.4**	**-0.1**
ALN	**Alexandroupoli**	**1.75**	**6**	P	**Pn**	**20 11 49.1**	**0.0**
ALN	**Alexandroupoli**	**1.75**	**6**	*e*Pn	**Pn**	**20 11 49.3**	**+0.2**
ALN				*e*Sn	**Sn**	**20 11 11.4**	**-0.1**
ALN				S	**Sb**	**20 12 12.9**	**-0.1**
MRKA	**Markates**	**1.80**	**256**	P	**Pn**	**20 11 49.8**	**0.0**
MRKA	**Markates**	**1.80**	**256**	P	**Pn**	**20 11 49.8**	**0.0**
GCAM	**G?zelcaml?**	**1.82**	**142**	*i* P	**Pb**	**20 11 52.7**	**+0.5**
GCAM				*i* S	**Sn**	**20 12 12.4**	**-0.8**
GCAM	**G?zelcaml?**	**1.82**	**142**	*i* P	**Pb**	**20 11 52.7**	**+0.5**
GCAM				*i* S	**Sn**	**20 12 12.4**	**-0.8**
PAIG	**Paliouri**	**1.83**	**296**	P	**Pn**	**20 11 50.8**	**+0.6**
PAIG	**Paliouri**	**1.83**	**296**	*e*PN	**Pb**	**20 11 52.0**	**-0.2**
PAIG	**Paliouri**	**1.83**	**296**	P	**Pn**	**20 11 50.8**	**+0.6**
PAIG	**Paliouri**	**1.83**	**296**	*e*Pn	**Pb**	**20 11 52.0**	**-0.2**
OUR	**Ouranopolis**	**1.84**	**310**	P	**Pn**	**20 11 50.2**	**-0.2**
OUR	**Ouranopolis**	**1.84**	**310**	P	**Pn**	**20 11 50.2**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.86**	**34**	*e*PN	**Pn**	**20 11 50.9**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.86**	**34**	*e*Pn	**Pn**	**20 11 50.9**	**+0.3**
SART	**Tekirdag**	**1.86**	**34**	*i* P	**Pn**	**20 11 51.1**	**+0.5**
SART				*i* S	**Sb**	**20 12 16.3**	**+0.2**
SART	**Tekirdag**	**1.86**	**34**	*i* P	**Pn**	**20 11 51.1**	**+0.5**
SART				*i* S	**Sb**	**20 12 16.3**	**+0.2**
MFT	**Murefte**	**1.98**	**34**	*e*PN	**Pn**	**20 11 53.3**	**+0.9**
MFT	**Murefte**	**1.98**	**34**	*e*Pn	**Pn**	**20 11 53.3**	**+0.9**
MRMT	**Marmara Adasi**	**1.99**	**43**	*e*PN	**Pn**	**20 11 53.1**	**+0.6**
MRMT	**Marmara Adasi**	**1.99**	**43**	*e*Pn	**Pn**	**20 11 53.1**	**+0.6**
RDO	**Rodhopi**	**2.00**	**354**	*e*PN	**Pn**	**20 11 52.6**	**0.0**
RDO	**Rodhopi**	**2.00**	**354**	*e*Pn	**Pn**	**20 11 52.6**	**0.0**
BNT	**Bandirma**	**2.02**	**53**	*e*PN	**Pn**	**20 11 52.3**	**-0.5**
BNT	**Bandirma**	**2.02**	**53**	*e*Pn	**Pn**	**20 11 52.3**	**-0.5**
APE	**Apeiranthos**	**2.09**	**186**	*e*PN	**Pn**	**20 11 52.6**	**-1.2**
APE	**Apeiranthos**	**2.09**	**186**	*e*Pn	**Pn**	**20 11 52.6**	**-1.2**
KAVA	**Kavala**	**2.10**	**332**	P	**Pn**	**20 11 54.4**	**+0.5**
KAVA	**Kavala**	**2.10**	**332**	P	**Pn**	**20 11 54.4**	**+0.5**
DURS	**Dursunbey**	**2.11**	**77**	*i* P	**Pn**	**20 11 53.9**	**-0.2**
DURS				*i* S	**Sn**	**20 12 20.2**	**-0.1**
DURS	**Dursunbey**	**2.11**	**77**	*i* P	**Pn**	**20 11 53.9**	**-0.2**
DURS				*i* S	**Sn**	**20 12 20.2**	**-0.1**
PLG	**Polygyros**	**2.20**	**304**	*e*PN	**Pn**	**20 11 56.6**	**+1.3**
PLG	**Polygyros**	**2.20**	**304**	*e*Pn	**Pn**	**20 11 56.6**	**+1.3**
DST	**Dursunbey**	**2.22**	**77**	*e*PN	**Pn**	**20 11 56.4**	**+0.8**
DST	**Dursunbey**	**2.22**	**77**	*e*Pn	**Pn**	**20 11 56.4**	**+0.8**
KCTX	**Karacabey (Bur**	**2.25**	**60**	*e*PN	**Pn**	**20 11 55.5**	**-0.5**
KCTX	**Karacabey (Bur**	**2.25**	**60**	*e*Pn	**Pn**	**20 11 55.5**	**-0.5**
DEMI	**Demirci**	**2.26**	**92**	*i* P	**Pb**	**20 11 60.0**	**+0.4**
DEMI				*i* S	**Sg**	**20 12 30.7**	**-0.6**
DEMI	**Demirci**	**2.26**	**92**	*i* P	**Pb**	**20 12 00.0**	**+0.4**
TKR	**Tekirdag**	**2.26**	**35**	*e*PN	**Pn**	**20 11 56.7**	**+0.6**
TKR	**Tekirdag**	**2.26**	**35**	*e*Pn	**Pn**	**20 11 56.7**	**+0.6**
KULA	**Kula-Manisa**	**2.31**	**105**	*e*PN	**Pn**	**20 11 57.7**	**+0.9**
KULA	**Kula-Manisa**	**2.31**	**105**	*e*Pn	**Pn**	**20 11 57.7**	**+0.9**
CRLT	**Corlu**	**2.46**	**36**	*e*PN	**Pn**	**20 11 59.7**	**+0.8**
CRLT	**Corlu**	**2.46**	**36**	*e*Pn	**Pn**	**20 11 59.7**	**+0.8**
SOH	**Sokhos**	**2.52**	**312**	*e*PB	**Pb**	**20 12 02.0**	**-2.2**
SOH	**Sokhos**	**2.52**	**312**	*e*Pb	**Pb**	**20 12 02.0**	**-2.2**
MDNY	**Mudanya-Bursa**	**2.66**	**62**	*e*PN	**Pn**	**20 12 03.1**	**+1.6**
MDNY	**Mudanya-Bursa**	**2.66**	**62**	*e*Pn	**Pn**	**20 12 03.2**	**+1.6**
NVR	**Nevrokopi**	**2.66**	**326**	*e*PN	**Pn**	**20 12 02.7**	**+1.1**
NVR	**Nevrokopi**	**2.66**	**326**	*e*Pn	**Pn**	**20 12 02.7**	**+1.1**
ARMT	**Armutlu**	**2.73**	**58**	*e*PN	**Pn**	**20 12 04.1**	**+1.5**
ARMT	**Armutlu**	**2.73**	**58**	*e*Pn	**Pn**	**20 12 04.1**	**+1.5**
SLVT	**Silivri**	**2.77**	**41**	*e*PN	**Pn**	**20 12 04.3**	**+1.2**
SLVT	**Silivri**	**2.77**	**41**	*e*Pn	**Pn**	**20 12 04.3**	**+1.2**
EDRB	**Edirne**	**2.78**	**14**	*e*PN	**Pn**	**20 12 03.8**	**+0.5**
EDRB	**Edirne**	**2.78**	**14**	*e*Pn	**Pn**	**20 12 03.8**	**+0.5**

FNA	**Florina**	**1.14**	**242**	*e*PG	**Pb**	**20 32 58.3**	**-0.3**
FNA				*e*SB	**Sg**	**20 33 14.0**	**+0.2**
FNA	**Florina**	**1.14**	**242**	*e*Pg	**Pb**	**20 32 58.3**	**-0.3**
FNA				*e*Sb	**Sg**	**20 33 14.0**	**+0.2**
KZN	**Kozani**	**1.24**	**215**	*e*PB	**Pg**	**20 33 01.0**	**+0.1**
KZN	**Kozani**	**1.24**	**215**	*e*Pb	**Pg**	**20 33 01.0**	**+0.1**
PAIG	**Paliouri**	**1.59**	**152**	*e*PG	**Pb**	**20 33 06.7**	**+0.3**
PAIG	**Paliouri**	**1.59**	**152**	*e*Pg	**Pb**	**20 33 06.7**	**+0.3**
SMTH	**Samothraki Isl**	**2.32**	**111**	*e*PN	**Pb**	**20 33 18.7**	**0.0**
SMTH	**Samothraki Isl**	**2.32**	**111**	*e*Pn	**Pb**	**20 33 18.7**	**0.0**

IDC 24 20:32:42.0±8.0, **2°.61N**×**91°.60W, h0**km, **mb3.5**/3, **mb1 3.9**/3, **mb1mx3.5**/20, **mbtmp3.5**/3, **Error ellipse: s-maj=801.3km s-min=155.8km az=69.0, Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**28.95**	**338**	P	P	20 38 42.7	-0.6
	0.3nm,0.8s,baz=161,slow=8.6,SNR=4.5						
PDAR	**Pinedale Array**	**43.08**	**341**	P	P	20 40 44.8	+0.6
	0.7nm,0.9s,baz=142,slow=9.0,SNR=3.8						
ILAR	**Eielson Array**	**73.46**	**338**	P	P	20 44 15.9	-0.1
	0.5nm,0.9s,baz=134,slow=3.9,SNR=6.0						

*IDC **24** 20:33:35.0±14.0, 0°.81N×125°.94E, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.6/23, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=233.0km s-min=106.5km az=148.0*
*ISCJB **24** 20:33:40.7±0.5, 0°.84N±0°.05×126°.10E±0°.04, h44km, mb4.0/3, Error ellipse: s-maj=7.4km s-min=5.2km az=13.3*
*DJA **24** 20:33:41.2±0.8, 1°.N±3°×12°.6E±°, h26km±12km, M4.2/8, mb4.3/1, MLv4.2/8*

ISC 24 20:33:41.5±1.0, **0°.90N**±0°.06×**126°.11E**±0°.04, **h44**km, **n13, s13**9**34/17, mb3.9/3, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.26**	**96**	P	**Pn**	**20 34 02.5**	**-0.1**
TNTI				S	**Sn**	**20 34 20.6**	**+2.2**
MNI	**Manado**	**1.38**	**293**	P	**Pn**	**20 34 04.0**	**-0.3**
MNI				S	**Sn**	**20 34 21.7**	**+0.3**
GAMI	**Galela, Maluku**	**1.91**	**61**	P	**Pn**	**20 34 13.4**	**+1.8**
LBMI	**Labuha**	**2.07**	**138**	P	**Pn**	**20 34 14.3**	**+0.6**
KMSI	**Cibinong**	**2.16**	**261**	P	**Pn**	**20 34 15.6**	**+0.6**
KMSI				S	**Sn**	**20 34 41.7**	**+1.2**
SGSI	**Sangihe**	**2.83**	**348**	P	**Pn**	**20 34 24.3**	**+0.2**
SGSI				S	**Sn**	**20 34 58.5**	**+1.5**
LUWI	**Luwuk**	**3.86**	**240**	P	**Pn**	**20 34 40.6**	**+2.2**
MRSI	**Marisa**	**4.20**	**264**	P	**Pn**	**20 34 43.6**	**+0.6**
TTSI	**Tana Toraja**	**7.42**	**238**	P	**Pn**	**20 35 27.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**18.89**	**181**	P	**P**	**20 37 57.0**	**-1.4**
	0.1nm,0.3s,baz=359,slow=13,SNR=5.9						
WRA	**Warramunga Arr**	**22.23**	**159**	P	**P**	**20 38 32.9**	**-1.7**
	2.8nm,0.6s,baz=336,slow=11,SNR=42						
ASAR	**Alice Springs**	**25.57**	**163**	P	**P**	**20 39 05.7**	**-0.9**
	2.0nm,0.6s,baz=339,slow=9.7,SNR=29						
STKA	**Stephens Creek**	**35.75**	**157**	P	**P**	**20 40 35.4**	**-0.9**
	2.5nm,0.9s,baz=326,slow=12,SNR=4.2						

*SKO **24** 20:36:54.7, 41°.35N×22°.73E, h15km, M1.6, ML1.9*
*SOF **24** 20:36:54.0, 41°.32N×22°.70E, h20km, MD2.7*
*CSEM **24** 20:36:55.1±0.1, 41°.31N×22°.73E, h15km, ML1.9, Error ellipse: s-maj=4.7km s-min=2.2km az=157.0*

ISC 24 20:36:54.9±2.3, **41°.3N**±0°.1×**22°.7E**±0°.2, **h16**km±24km, **n9, s**0**18/11, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**277**	*i* Pg	**Pg**	**20 36 58.2**	**-0.1**
VAY				*i* Sg	**Sg**	**20 37 00.3**	**-0.3**
VAY				*e*Lg	Lg	20 37 00.4	
	comp=N,901nm,0.3s						
VAY				*e*Lg	Lg	20 37 00.5	
	comp=E,351nm,0.2s						
VAY	**Valandovo**	**0.10**	**277**	*i* Pg	**Pg**	**20 36 58.6**	**+0.3**
VAY				*i* Sg	**Sg**	**20 37 00.7**	**+0.1**
VAY				*e*Lg	Lg	20 37 00.9	
	comp=E,901nm,0.3s						
KKB	**Krupnik**	**0.63**	**27**	*i* Pg	**Pb**	**20 37 07.4**	**0.0**
KKB	**Krupnik**	**0.63**	**27**	*i* Pg	**Pb**	**20 37 07.4**	**0.0**
MMB	**Musomiste**	**0.82**	**70**	*i* Pg	**Pb**	**20 37 10.7**	**0.0**
MMB	**Musomiste**	**0.82**	**70**	*i* Pg	**Pb**	**20 37 10.7**	**0.0**
VTS	**Vitosha**	**1.34**	**16**	*i* Pg	**Pg**	**20 37 20.7**	**+0.1**
VTS	**Vitosha**	**1.34**	**16**	*i* Pg	**Pg**	**20 37 20.7**	**+0.1**
MPEP	**Malo Peshtene**	**2.19**	**20**	*i* Pg	**Pg**	**20 37 36.9**	**+0.1**

*ISCJB **24** 20:39:37.1±0.5, 17°.49S±0°.03×27°.44E±0°.07, h12km, mb3.6/6, Error ellipse: s-maj=10.2km s-min=4.3km az=4.0*
*IDC **24** 20:39:37.4±1.0, 17°.31S×27°.48E, h0km, mb3.7/6, mb1 4.0/11, mb1mx3.7/29, mbtmp3.9/11, ML4.2/4, MS2.6/1, Ms1 2.6/1, ms1mx2.4/36, Error ellipse: s-maj=27.6km s-min=14.6km az=116.0*
*PRE **24** 20:39:37.8±3.5, 17°.36S×27°.52E, h10km, ML5.5*
*NEIC **24** 20:39:38.7±0.4, 17°.33S×27°.41E, h10km, ML4.1(PRE), Error ellipse: s-maj=12.9km s-min=5.6km az=96.0*

ISC 24 20:39:38.4±0.6, **17°.44S**±0°.04×**27°.38E**±0°.07, **h12**km, **n54, s**2°**19/71, mb3.4/5, Zimbabwe**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**2.29**	**20**	*e*P	**Pn**	**20 40 14.9**	**-1.1**
LSZ				*e*S	**Sn**	**20 40 41.9**	**-2.3**
LSZ	**Lusaka**	**2.29**	**20**	*e*Pn	**Pn**	**20 40 13.5**	**-2.6**
LSZ				Lg	Lg	20 40 43.7	
LSZ	**Lusaka**	**2.29**	**20**	Pn	**Pn**	**20 40 15.0**	**-1.1**
	17nm,0.3s,baz=196,slow=17,SNR=89						
LSZ				Lg	Lg	20 40 43.7	
	439nm,0.3s,baz=274,slow=20,SNR=19						
MSNA	**Messina**	**5.48**	**153**	*e*P	**Pn**	**20 41 01.7**	**+1.8**
MSNA				*e*S	**Sn**	**20 42 02.5**	**-0.3**
MSNA				AML	AML	20 42 37.8	
	comp=Z,337nm,0.7s						
MSNA	**Messina**	**5.48**	**153**	*e*P	**Pn**	**20 41 01.7**	**+1.8**
MSNA				*e*S	**Sn**	**20 42 02.5**	**-0.3**
LBTB	**Lobatse**	**7.72**	**192**	*e*P	**Pn**	**20 41 33.3**	**+2.6**
LBTB				*e*S	**Sn**	**20 42 58.5**	**+0.3**
LBTB				AML	AML	20 43 48.4	
	comp=Z,128nm,0.8s						
LBTB	**Lobatse**	**7.72**	**192**	*e*Pn	**Pn**	**20 41 31.8**	**+1.0**
	comp=Z,22nm,0.5s						
SLR	**Silverton**	**8.30**	**174**	*e*P	Pn	20 41 42.7	+4.0
SLR				*e*S	**Sn**	**20 43 10.6**	**-1.9**
SLR				AML	AML	20 44 10.2	
	comp=Z,129nm,0.5s						
KSR	**Koster**	**8.38**	**183**	*e*P	Pn	20 41 44.0	+4.1
KSR				*e*S	**Sn**	**20 43 13.2**	**-1.5**
KSR				AML	AML	20 44 07.9	
	comp=Z,109nm,0.7s						
KSR	**Koster**	**8.38**	**183**	*e*P	Pn	20 41 44.0	+4.1
KSR				*e*S	**Sn**	**20 43 13.2**	**-1.5**
KLOF	**Kloof**	**8.87**	**179**	*e*P	**Pn**	**20 41 48.8**	**+2.2**
KLOF				*e*S	**Sn**	**20 43 25.3**	**-1.3**
KLOF				AML	AML	20 44 29.7	
	comp=Z,84nm,0.7s						
KLOF	**Kloof**	**8.87**	**179**	*e*P	**Pn**	**20 41 48.8**	**+2.2**
KLOF				*e*S	**Sn**	**20 43 25.3**	**-1.3**
ERPM	**east rand prop**	**8.90**	**175**	*e*P	**Pn**	**20 41 49.0**	**+2.0**
ERPM				*e*S	Sn	20 43 19.4	-7.8
ERPM				AML	AML	20 44 19.1	
	comp=Z,63nm,0.6s						
ERPM	**east rand prop**	**8.90**	**175**	*e*P	**Pn**	**20 41 49.0**	**+2.0**
ERPM				*e*S	Sn	20 43 19.4	-7.8
PRYS	**Parys**	**9.44**	**180**	*e*P	**Pn**	**20 41 56.3**	**+1.9**
PRYS				*e*S	**Sn**	**20 43 36.8**	**-3.8**
PRYS				AML	AML	20 44 45.9	
	comp=Z,53nm,0.5s						
PRYS	**Parys**	**9.44**	**180**	*e*P	**Pn**	**20 41 56.3**	**+1.9**
PRYS				*e*S	**Sn**	**20 43 36.8**	**-3.8**
TSUM	**Tsumeb**	**9.47**	**258**	*e*P	**Pn**	**20 41 57.1**	**+2.4**
TSUM				*e*S	**Sn**	**20 43 39.1**	**-2.2**
TSUM				AML	AML	20 45 02.3	
	comp=Z,1μm,0.7s						
TSUM	**Tsumeb**	**9.47**	**258**	*e*Pn	**Pn**	**20 41 55.9**	**+1.2**
	comp=Z,8.5nm,0.7s						
TSUM				Lg	Lg	20 44 39.5	
TSUM	**Tsumeb**	**9.47**	**258**	Pn	**Pn**	**20 41 57.2**	**+2.4**
	comp=Z,1.7nm,0.3s,baz=82,slow=14,SNR=53						
TSUM				Sn	**Sn**	**20 43 39.5**	**-1.8**
	comp=Z,1.5nm,0.3s,baz=106,slow=20,SNR=3.6						
TSUM				Lg	Lg	20 44 39.5	
	comp=Z,3.1nm,0.3s,baz=131,slow=8.6,SNR=7.2						
TSUM				LR	LR	20 46 12.4	
	comp=Z,37nm,19.6s,baz=74,slow=41						
POGA	**Pongola**	**10.63**	**159**	*e*P	**Pn**	**20 42 11.3**	**+0.8**
POGA				*e*S	Sn	20 44 02.4	-7.2
POGA				AML	AML	20 45 18.6	
	comp=Z,102nm,0.6s						
BOSA	**Boshof**	**11.29**	**190**	*e*P	**Pn**	**20 42 21.0**	**+1.2**
BOSA				*e*S	**Sn**	**20 44 20.4**	**-5.5**
BOSA				AML	AML	20 45 45.1	
	comp=Z,38nm,0.7s						
BOSA	**Boshof**	**11.29**	**190**	*e*Pn	**Pn**	**20 42 20.8**	**+1.1**
	comp=Z,14nm,0.4s						
BOSA				Lg	Lg	20 45 30.8	
BOSA	**Boshof**	**11.29**	**190**	Pn	**Pn**	**20 42 20.8**	**+1.1**
	comp=Z,1.3nm,0.3s,baz=9.6,slow=13,SNR=31						
BOSA				Sn	**Sn**	**20 44 21.3**	**-4.7**
	comp=Z,2.8nm,0.3s,baz=111,slow=11,SNR=5.4						
BOSA				Lg	Lg	20 45 30.8	
	comp=Z,3.0nm,0.3s,baz=102,slow=21,SNR=5.7						
UPI	**Upington**	**12.25**	**206**	*e*P	**Pn**	**20 42 34.9**	**+2.2**
UPI				*e*S	**Sn**	**20 44 45.1**	**-4.2**
UPI				AML	AML	20 46 15.6	
	comp=Z,23nm,0.7s						
KSD	**Kokstad**	**13.17**	**172**	*e*P	**Pn**	**20 42 45.9**	**+0.4**
KSD				*e*S	**Sn**	**20 45 06.1**	**-6.0**
KSD				AML	AML	20 46 33.2	
	comp=Z,51nm,0.9s						
HVD	**Gariep Dam**	**13.22**	**187**	*e*P	**Pn**	**20 42 47.4**	**+1.3**
HVD				*e*S	**Sn**	**20 45 10.5**	**-2.7**
HVD				AML	AML	20 46 46.0	
	comp=Z,65nm,0.7s						
KOMG	**Komaggas**	**15.27**	**215**	*e*S	**Sn**	**20 45 59.7**	**-3.3**
KOMG				AML	AML	20 48 04.7	
	comp=Z,10.0nm,0.7s						
SOE	**Somerset East**	**15.29**	**186**	*e*P	**Pn**	**20 43 15.2**	**+1.0**
SOE				*e*S	**Sn**	**20 45 59.5**	**-4.1**
SOE				AML	AML	20 48 06.7	
	comp=Z,24nm,0.7s						
SOE	**Somerset East**	**15.29**	**186**	*e*P	**Pn**	**20 43 15.2**	**+1.0**
SOE				*e*S	**Sn**	**20 45 59.5**	**-4.1**
CVNA	**Calvinia**	**15.60**	**205**	*e*P	**P**	**20 43 20.6**	**-1.9**
CVNA				AML	AML	20 48 09.5	
	comp=Z,19nm,0.7s						
CVNA	**Calvinia**	**15.60**	**205**	*e*P	**P**	**20 43 20.6**	**-1.9**
GRM	**Grahamstown**	**15.83**	**183**	*e*P	**P**	**20 43 27.8**	**+2.9**
GRM				AML	AML	20 48 28.2	
	comp=Z,12nm,0.6s						
GRM	**Grahamstown**	**15.83**	**183**	*e*P	**P**	**20 43 27.8**	**+2.9**
SUR	**Sutherland**	**16.02**	**201**	*e*P	**P**	**20 43 28.0**	**+0.7**
SUR				AML	AML	20 48 06.7	
	comp=Z,14nm,0.6s						
SUR	**Sutherland**	**16.02**	**201**	Pn	**Pn**	**20 43 24.7**	**+1.0**
SUR				Sn	**Sn**	**20 46 20.7**	**-0.7**
SUR				Lg	Lg	20 47 59.5	
SUR	**Sutherland**	**16.02**	**201**	Pn	**Pn**	**20 43 24.7**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=10.0,slow=17,SNR=14						
SUR				Sn	**Sn**	**20 46 20.7**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=22,slow=19,SNR=3.4						
SUR				Lg	Lg	20 47 59.5	
	comp=Z,1.0nm,0.3s,baz=309,slow=23,SNR=5.1						
MBAR	**Mbarara**	**17.05**	**12**	Pn	**Pn**	**20 43 35.9**	**-1.1**
MBAR	**Mbarara**	**17.05**	**12**	Pn	**Pn**	**20 43 35.9**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=180,slow=20,SNR=2.4						
TORD	**Torodi Ar. Bea**	**39.58**	**319**	P	**P**	**20 47 10.7**	**+0.9**
TORD	**Torodi Ar. Bea**	**39.58**	**319**	P	**P**	**20 47 10.7**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=138,slow=9.0,SNR=6.0						
ESDC	**Sonseca Array**	**63.91**	**333**	P	**P**	**20 50 12.5**	**+1.3**
ESDC	**Sonseca Array**	**63.91**	**333**	P	**P**	**20 50 12.5**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=156,slow=6.1,SNR=3.2						
BVAR	**Borovoye Array**	**79.38**	**25**	P	**P**	**20 51 44.9**	**+0.9**
BVAR	**Borovoye Array**	**79.38**	**25**	P	**P**	**20 51 44.9**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=215,slow=4.3,SNR=3.6						
MKAR	**Makanchi Array**	**80.76**	**35**	P	**P**	**20 51 51.4**	**-0.3**
MKAR	**Makanchi Array**	**80.76**	**35**	P	**P**	**20 51 51.4**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=220,slow=6.0,SNR=2.8						
ARCES	**ARCESS Array B**	**86.75**	**359**	P	**P**	**20 52 22.2**	**+0.4**
ARCES	**ARCESS Array B**	**86.75**	**359**	P	**P**	**20 52 22.3**	**+0.4**
	comp=Z,2.4nm,1.0s,baz=10,slow=7.4,SNR=4.3						
ASAR	**Alice Springs**	**97.47**	**118**	P	Pdif	20 53 14.0	+1.1
ASAR	**Alice Springs**	**97.47**	**118**	P	Pdif	20 53 14.0	+1.1
	comp=Z,0.5nm,1.0s,baz=277,slow=3.6,SNR=3.0						
TXAR	**Lajitas Array**	**133.83**	**294**	PKP	**PKPdf**	**20 58 57.1**	**+1.1**
TXAR	**Lajitas Array**	**133.83**	**294**	PKP	**PKPdf**	**20 58 57.1**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=94,slow=3.9,SNR=2.9						
NVAR	**Mina Array Bea**	**143.48**	**312**	PKP	**PKPdf**	**20 59 13.2**	**-0.4**
NVAR	**Mina Array Bea**	**143.48**	**312**	PKP	**PKPdf**	**20 59 13.2**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=62,slow=4.3,SNR=3.6						

IDC 24 20:56:07.5±6.1, **30°.78S**×**177°.79W, h0**km, **mb3.7**/2, **mb1 4.0**/2, **mb1mx3.6**/18, **mbtmp3.7**/2, **Error ellipse: s-maj=246.7km s-min=55.9km az=155.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.27**	**267**	P	P	21 04 11.1	-0.1
	0.4nm,0.5s,baz=107,slow=7.5,SNR=9.0						
WRA	**Warramunga Arr**	**44.30**	**272**	P	P	21 04 19.1	-0.2
	1.0nm,0.6s,baz=113,slow=7.6,SNR=15						
FINES	**FINESS Array B**	**145.56**	**340**	PKPbc	PKPdf	21 15 46.3	-0.7
	2.3nm,1.1s,baz=57,slow=5.1,SNR=7.2						

MEX 24 21:12:06.8±0.4, **16°.81N**×**100°.00W, h30**km±4km, **MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.14**	**66**	*i* P	Pb	21 12 11.0	-1.6
ACX				*e*S	Sb	21 12 14.3	-2.2
CAIG	**El Cayaco**	**0.35**	**312**	*i* P	Pb	21 12 13.5	-1.5
CAIG				*i* S	Sb	21 12 18.9	-1.7
ARIG	**Puente Sto Nin**	**1.50**	**347**	*i* P	Pn	21 12 29.7	-2.0
ARIG				*i* S	Sn	21 12 47.7	-2.6
PLIG	**Platanillo**	**1.64**	**17**	*i* P	Pn	21 12 31.6	-2.1
PLIG				*i* S	Sn	21 12 50.5	-3.4
PNIG	**Pinotepa**	**1.84**	**103**	*i* P	Pn	21 12 35.1	-1.3
PNIG				*i* S	Sn	21 12 56.3	-2.4
YAIG	**Yautepec**	**2.22**	**23**	*i* P	Pn	21 12 40.6	-1.2
YAIG				*i* S	Sn	21 13 05.2	-3.2

*SKO **24** 21:13:19.4, 41°.31N×22°.73E, h15km, M1.5, ML1.7*
*ATH **24** 21:13:20.7, 41°.28N×22°.74E, h4km, MD3.0/6*
*CSEM **24** 21:13:20.3±0.2, 41°.28N×22°.75E, h8km, MD3.0, Error ellipse: s-maj=3.7km s-min=2.1km az=10.0*

ISC 24 21:13:20.3±1.0, **41°.28N**±0°.05×**22°.75E**±0°.03, **h7**km±10km, **n14, s**0**28/26, 2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.14**	**286**	*i* Pg	**Pg**	**21 13 22.9**	**-0.4**
VAY				*i* Sg	**Sg**	**21 13 25.2**	**-0.1**
VAY				*e*Lg	Lg	21 13 25.4	
	comp=N,456nm,0.2s						
VAY				*e*Lg	Lg	21 13 25.5	
	comp=E,275nm,0.2s						
VAY	**Valandovo**	**0.14**	**286**	*i* Pg	**Pg**	**21 13 23.4**	**+0.1**
VAY				*i* Sg	**Sg**	**21 13 25.7**	**+0.3**
VAY				*e*Lg	Lg	21 13 25.9	
	comp=E,275nm,0.2s						
GRG	**Griva**	**0.42**	**219**	*e*PG	**Pg**	**21 13 28.5**	**0.0**
GRG				*e*SG	**Sg**	**21 13 34.2**	**+0.2**
GRG	**Griva**	**0.42**	**219**	*e*Pg	**Pg**	**21 13 28.5**	**0.0**
GRG				*e*Sg	**Sg**	**21 13 34.2**	**+0.2**
SOH	**Sokhos**	**0.65**	**135**	*e*PG	**Pg**	**21 13 32.7**	**-0.1**
SOH				*e*SG	**Sb**	**21 13 42.7**	**-0.5**
SOH	**Sokhos**	**0.65**	**135**	*e*Pg	**Pg**	**21 13 32.7**	**-0.1**
SOH				*e*Sg	**Sb**	**21 13 42.7**	**-0.5**
NVR	**Nevrokopi**	**0.84**	**85**	*e*PB	**Pb**	**21 13 37.2**	**0.0**
NVR				*e*SG	**Sg**	**21 13 47.9**	**+0.6**
NVR	**Nevrokopi**	**0.84**	**85**	*e*Pb	**Pb**	**21 13 37.2**	**0.0**
NVR				*e*Sg	**Sg**	**21 13 47.9**	**+0.6**
PLG	**Polygyros**	**1.05**	**150**	*e*PG	**Pg**	**21 13 40.2**	**-0.3**
PLG				*e*SG	**Sb**	**21 13 54.8**	**+0.1**
PLG	**Polygyros**	**1.05**	**150**	*e*Pg	**Pg**	**21 13 40.2**	**-0.3**
PLG				*e*Sg	**Sb**	**21 13 54.8**	**+0.1**
FNA	**Florina**	**1.16**	**245**	*e*PB	**Pn**	**21 13 42.8**	**-0.1**
FNA				*e*SB	**Sb**	**21 13 58.0**	**+0.2**
FNA	**Florina**	**1.16**	**245**	*e*Pb	**Pn**	**21 13 42.8**	**-0.1**
FNA				*e*Sb	**Sb**	**21 13 58.0**	**+0.2**
PAIG	**Paliouri**	**1.53**	**152**	*e*PG	**Pb**	**21 13 49.0**	**+0.1**
PAIG	**Paliouri**	**1.53**	**152**	*e*Pg	**Pb**	**21 13 49.0**	**+0.1**

*NEIC **24** 21:22:28.9, 18°.92N×66°.44W, h58km, MD3.5(RSPR), After RSPR.*

RSPR 24 21:22:28.9, 18°.92N×66°.44W, h58km±4km, **MD3.5**/4, **11C-10D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AOPR	**Arecibo Observ**	**0.64**	**208**	*e*P	Pn	21 22 41.0	-1.4
AOPR	**Arecibo Observ**	**0.64**	**208**	*e*S	Sn	21 22 51.6	-0.7
AOPR	**Arecibo Observ**	**0.64**	**208**	*e*P	Pn	21 22 41.0	-1.4
AOPR				*e*S	Sn	21 22 51.6	-0.7
CBYP	**Canovanas**	**0.85**	**139**	*e*P	Pn	21 22 43.8	-1.2
CBYP	**Canovanas**	**0.85**	**139**	*e*S	Sn	21 22 56.3	-0.5
CBYP	**Canovanas**	**0.85**	**139**	*e*P	Pn	21 22 43.8	-1.2
CBYP				*e*S	Sn	21 22 56.3	-0.5
SJG	**San Juan**	**0.85**	**161**	*e*P	Pn	21 22 44.0	-0.9
SJG	**San Juan**	**0.85**	**161**	*e*S	Sn	21 22 56.2	-0.5
SJG	**San Juan**	**0.85**	**161**	*e*P	Pn	21 22 44.5	-0.5
SJG				*e*S	Sn	21 22 55.8	-0.8
SJG	**San Juan**	**0.85**	**161**	*e*P	Pn	21 22 44.5	-0.5
SJG				*e*S	Sn	21 22 56.2	-0.5
CELP	**Cerrillos**	**0.85**	**189**	*e*P	Pn	21 22 44.4	-0.6
CELP				*e*S	Sn	21 22 55.8	-1.0
CELP	**Cerrillos**	**0.85**	**189**	*e*P	Pn	21 22 44.4	-0.6
CELP				*e*S	Sn	21 22 55.8	-1.0
OBIP	**Obispado Ponce**	**0.89**	**190**	*e*P	Pn	21 22 44.7	-0.7
OBIP	**Obispado Ponce**	**0.89**	**190**	*e*P	Pn	21 22 44.7	-0.7
HUMP	**Col San Antoni**	**0.95**	**144**	*e*P	Pn	21 22 45.5	-0.8
HUMP	**Col San Antoni**	**0.95**	**144**	*e*S	Sn	21 22 58.3	-0.7
HUMP	**Col San Antoni**	**0.95**	**144**	*e*P	Pn	21 22 45.5	-0.8
HUMP				*e*S	Sn	21 22 58.3	-0.7
LSP	**Las Mesas**	**0.96**	**220**	*e*P	Pn	21 22 45.5	-0.9
LSP				*e*S	Sn	21 22 58.9	-0.5
LSP	**Las Mesas**	**0.96**	**220**	*e*P	Pn	21 22 45.5	-0.9
LSP				*e*S	Sn	21 22 58.9	-0.5
CPD	**Cerro la Pandu**	**1.01**	**150**	*e*P	Pn	21 22 46.4	-0.7
CPD	**Cerro la Pandu**	**1.01**	**150**	*e*S	Sn	21 22 59.7	-0.7
CPD	**Cerro la Pandu**	**1.01**	**150**	*e*P	Pn	21 22 46.4	-0.7
CPD				*e*S	Sn	21 22 59.7	-0.7
CRPR	**Cabo Rojo, PR**	**1.11**	**215**	*e*P	Pn	21 22 47.6	-0.7
CRPR	**Cabo Rojo, PR**	**1.11**	**215**	*e*S	Sn	21 23 01.9	-0.9
CRPR	**Cabo Rojo, PR**	**1.11**	**215**	*e*P	Pn	21 22 47.6	-0.7
CRPR				*e*S	Sn	21 23 01.9	-0.9
MTP	**Monte Pirata**	**1.17**	**134**	*e*P	Pn	21 22 48.0	-1.1
MTP	**Monte Pirata**	**1.17**	**134**	*e*S	Sn	21 23 03.5	-0.8
MTP	**Monte Pirata**	**1.17**	**134**	*e*P	Pn	21 22 48.0	-1.1
MTP				*e*S	Sn	21 23 03.5	-0.8

*SKO **24** 21:22:57.9, 41°.34N×22°.71E, h15km, M1.8, ML2.1*
*BEO **24** 21:22:58.5±0.9, 41°.24N×22°.68E, h6km±2km, ML2.3/7*
*CSEM **24** 21:22:58.7±0.1, 41°.30N×22°.70E, h5km, ML2.3, Error ellipse: s-maj=2.9km s-min=2.4km az=50.0*
*SOF **24** 21:22:58.5, 41°.33N×22°.72E, h7km, MD2.5*
*ISCJB **24** 21:22:58.3±0.4, 41°.31N±0°.02×22°.71E±0°.02, h5km±3km, Error ellipse: s-maj=3.3km s-min=2.8km az=42.4*
*ATH **24** 21:22:58.4, 41°.32N×22°.70E, h10km±1km, MD3.1/9*
*THE **24** 21:22:59.1, 41°.30N×22°.72E, h3km±1km, ML2.5/6, Error ellipse: s-maj=1.3km s-min=0.5km az=182.0*

ISC 24 21:22:58.8±0.8, **41°.32N**±0°.02×**22°.69E**±0°.02, **h10**km±5km, **n83, s**0**58/121, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.09**	**274**	P	**Pg**	**21 23 01.2**	**-0.2**
VAY				S	**Sg**	**21 23 03.3**	**+0.1**
VAY	**Valandovo**	**0.09**	**274**	*i* Pg	**Pg**	**21 23 01.2**	**-0.2**
VAY				*i* Sg	**Sg**	**21 23 03.3**	**+0.1**
VAY				*e*Lg	Lg	21 23 03.4	
	comp=E,1μm,0.3s						
VAY				*e*Lg	Lg	21 23 03.5	
	comp=N,1μm,0.3s						
VAY	**Valandovo**	**0.09**	**274**	*e*Pg	**Pg**	**21 23 01.2**	**-0.2**
VAY				*i* Sg	**Sg**	**21 23 03.3**	**+0.1**
VAY				*e*Lg	Lg	21 23 03.4	
	comp=N

KAVA					S		**Sg**	**21 23 43.9**	**-0.3**
KAVA	**Kavala**	**1.41**	**102**		P		**Pn**	**21 23 24.6**	**+0.1**
KAVA					S		**Sg**	**21 23 43.9**	**-0.3**
NEST	**Nestorio**	**1.54**	**235**		P		**Pn**	**21 23 26.7**	**+0.3**
NEST					S		**Sg**	**21 23 48.2**	**-0.1**
NEST	**Nestorio**	**1.54**	**235**		P		**Pn**	**21 23 26.7**	**+0.3**
NEST					S		**Sg**	**21 23 48.2**	**-0.1**
RZN	**Rozhen**	**1.56**	**76**	*i*	Pg		**Pg**	**21 23 28.9**	**+0.1**
PAIG	**Paliouri**	**1.58**	**151**	*e*	PN		**Pb**	**21 23 27.6**	**-0.4**
PAIG				*e*	SN		**Sg**	**21 23 49.8**	**+0.3**
PAIG	**Paliouri**	**1.58**	**151**	*e*	Pn		**Pb**	**21 23 27.6**	**-0.4**
PAIG				*e*	Sn		**Sg**	**21 23 49.8**	**+0.3**
BARS	**Barje**	**1.64**	**337**	*e*	Pn		**Pn**	**21 23 27.8**	**+0.1**
BARS				*e*	Sn		**Sb**	**21 23 50.4**	**+0.6**
BARS	**Barje**	**1.64**	**337**	*e*	Pn		**Pn**	**21 23 27.8**	**+0.1**
BARS				*e*	Sn		**Sb**	**21 23 50.4**	**+0.6**
PGB	**Panagyurishte**	**1.65**	**41**	*i*	Pg		**Pg**	**21 23 30.4**	**-0.1**
PGB	**Panagyurishte**	**1.65**	**41**	*i*	Pg		**Pg**	**21 23 30.4**	**-0.1**
PGB	**Panagyurishte**	**1.65**	**41**	*i*	Pg		**Pg**	**21 23 30.4**	**-0.1**
PLD	**Plovdiv**	**1.70**	**62**	*i*	P		**Pg**	**21 23 30.8**	**-0.6**
ZAPS	**Zavoj**	**1.96**	**359**	*e*	Pn		**Pb**	**21 23 34.4**	**-0.2**
ZAPS				*e*	Sn		**Sb**	**21 24 00.0**	**+1.0**
KDZ	**Kurdzhali**	**2.07**	**80**	*i*	P		**Pb**	**21 23 35.8**	**-0.7**
MPEP	**Malo Peshtene**	**2.18**	**20**	*i*	Pg		**Pg**	**21 23 40.3**	**-0.3**
SELS	**Selova**	**2.23**	**329**	*e*	Pn		**Pn**	**21 23 35.8**	**-0.1**
AGG	**Agios Georgios**	**2.31**	**187**	*e*	PB		**Pn**	**21 23 37.5**	**+0.6**
AGG	**Agios Georgios**	**2.31**	**187**	*e*	Pb		**Pn**	**21 23 37.5**	**+0.6**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*	PN		**Pn**	**21 23 38.0**	**+1.1**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*	Pn		**Pn**	**21 23 38.0**	**+1.1**
AOS	**Alonnisos**	**2.33**	**157**	*e*	PB		**Pn**	**21 23 37.8**	**+0.7**
AOS	**Alonnisos**	**2.33**	**157**	*e*	Pb		**Pn**	**21 23 37.8**	**+0.7**
LIA	**Limnos Island**	**2.37**	**126**	*e*	PB		**Pn**	**21 23 38.8**	**+1.2**
LIA	**Limnos Island**	**2.37**	**126**	*e*	Pb		**Pn**	**21 23 38.8**	**+1.2**
ALN	**Alexandroupoli**	**2.57**	**98**	*e*	PN		**Pn**	**21 23 41.0**	**+0.6**
ALN	**Alexandroupoli**	**2.57**	**98**	*e*	Pn		**Pn**	**21 23 41.0**	**+0.6**
BOLS	**Boljevac**	**2.57**	**348**	*e*	Pn		**Pb**	**21 23 43.4**	**-1.6**
BOLS	**Boljevac**	**2.57**	**348**	*e*	Pn		**Pb**	**21 23 43.4**	**-1.6**
GRUS	**Gruza**	**2.96**	**331**	*e*	Pn		**Pn**	**21 23 45.5**	**-0.3**
GRUS	**Gruza**	**2.96**	**331**	*e*	Pn		**Pn**	**21 23 45.5**	**-0.3**
SZH	**Strazhica**	**3.10**	**50**	*i*	P		**Pn**	**21 23 50.4**	**+2.7**
BBLS	**Lazići**	**3.52**	**317**	*e*	PN		**Pn**	**21 23 52.4**	**-1.2**
BBLS	**Lazići**	**3.52**	**317**	*e*	Pn		**Pn**	**21 23 52.4**	**-1.2**

GUC 24 21:24:18.5±0.5, 35°75'S × 71°38'W, h115km±3km, ML3.5, 2C-3D, Central Chile

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.41**	**330**	⇑ *i*	P	Pn	21 24 35.8	+0.4
TALC				*i*	S	Sn	21 24 48.6	+0.6
CCHI	**Chillan**	**1.02**	**213**	⇑ *i*	P	Pn	21 24 39.7	-0.6
CCHI				*i*	S	Sn	21 24 56.9	+0.2
COCH	**Cobquecura**	**1.20**	**251**	*i*	P	Pn	21 24 42.8	+0.6
COCH				*i*	S	Sn	21 25 01.0	+0.8
CACH	**El Canelo**	**1.75**	**22**	⇓ *i*	P	Pn	21 24 49.7	+0.8
CACH				*i*	S	Sn	21 25 13.4	+1.4
LNV	**Longovilo**	**1.79**	**359**	*e*	P	Pn	21 24 50.0	+0.8
LNV				*e*	S	Sn	21 25 15.8	+1.2
CHCH	**Chadas Angostu**	**1.91**	**18**	*i*	P	Pn	21 24 51.7	+1.0
CHCH				*i*	S	Sn	21 25 16.5	+1.2
LMEL	**Las Melosas**	**2.13**	**27**	⇓ *i*	P	Pn	21 24 54.4	+0.7
LMEL				*i*	S	Sn	21 25 21.6	+1.1
ANTU	**Antumapu** comp=E,195nm,0.4s	**2.27**	**16**		AML	AML	21 25 25.1	
CLCH	**Cerro Calan**	**2.45**	**17**	*i*	P	Pn	21 24 58.3	+0.7
CLCH				*i*	S	Sn	21 25 28.6	+0.9
CLCH	comp=E,178nm,0.3s				AML	AML	21 25 29.9	
CLCH	comp=E,230nm,0.6s				AML	AML	21 25 32.7	
FCH	**Farellones** comp=N,247nm,0.3s	**2.58**	**21**		AML	AML	21 25 28.2	
PEL	**Peldehue**	**2.67**	**13**	⇓ *i*	P	Pn	21 25 01.1	+0.7
PEL				*i*	S	Sn	21 25 33.5	+1.0
ROCH	**El Roble**	**2.79**	**6**	*e*	P	Pn	21 25 02.9	+0.6
ROCH				*i*	S	Sn	21 25 37.1	+1.3

*SFS **24** 21:33:25.0, 35°.36N × 6°.35W, h35km, ML4.1*
*IGIL **24** 21:33:25.4, 35°.37N × 6°.36W, h55km, ML3.1*
*LDG **24** 21:33:25.7±0.6, 35°.80N × 6°.12W, h2km, Ml3.5/3, Error ellipse: s-maj=11.7km s-min=5.6km az=7.0*
*INMG **24** 21:33:26.0±1.3, 35°.37N × 6°.40W, h31km±6km, ML2.7, Error ellipse: s-maj=2.7km s-min=2.3km az=73.0*
*MDD **24** 21:33:28.7±0.4, 35°.65N × 6°.34W, h30km±9km, mbLg2.8/41, Error ellipse: s-maj=5.0km s-min=3.5km az=37.0, PRXIMO*
*CSEM **24** 21:33:28.1±0.2, 35°.70N × 6°.32W, h30km, ML3.8/7, Error ellipse: s-maj=3.7km s-min=2.6km az=36.0*
*CNRM **24** 21:33:32.5, 35°.48N × 6°.22W, h30km, MD2.9*

ISC 24 21:33:27.9±1.0, 35°.68N±0°.03 × 6°.33W±0°.03, h32km±10km, n159, σ0°84/222, 4C-7D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°		Phase ID Op	ISC	Time h m s	Res ISC
TSY	**Tnine Yamani**	**0.42**	**136**		P	**Pn**	**21 33 38.0**	**+0.3**
TSY					S	**Sb**	**21 33 44.0**	**+0.5**
TSY	**Tnine Yamani**	**0.42**	**136**	*i*	P	**Pn**	**21 33 38.0**	**+0.3**
TSY				*i*	S	**Sb**	**21 33 44.0**	**+0.5**
ECEU	**Ceuta** 18nm,0.1s,SNR=4.0	**0.80**	**74**		P	**Pb**	**21 33 42.6**	**-0.8**
ECEU					S	**Sb**	**21 33 53.5**	**-0.5**
ECEU	**Ceuta** 18nm,0.1s,SNR=4.0	**0.80**	**74**		P	**Pb**	**21 33 42.6**	**-0.8**
ECEU					S	**Sb**	**21 33 53.5**	**-0.5**
EJIF	**Jimena Fronter** 1.9nm,0.2s,SNR=7.9	**1.04**	**42**		P	**Pb**	**21 33 47.8**	**+0.5**
EJIF					S	**Sb**	**21 33 59.7**	**-0.9**
EJIF	**Jimena Fronter** 1.9nm,0.2s,SNR=7.9	**1.04**	**42**		P	**Pb**	**21 33 47.8**	**+0.5**
EJIF					S	**Sb**	**21 33 59.7**	**-0.9**
ESPR	**Espera** 1.0nm,0.1s,SNR=18	**1.25**	**18**	⇑	P	**Pb**	**21 33 50.0**	**-0.8**
ESPR					S	**Sb**	**21 34 06.0**	**-0.5**
ESPR	**Espera** 1.0nm,0.1s,SNR=18	**1.25**	**18**		P	**Pb**	**21 33 50.0**	**-0.8**
ESPR					S	**Sb**	**21 34 06.0**	**-0.5**
LIJA	**Lijar**	**1.43**	**31**		P	**Pn**	**21 33 52.2**	**+0.5**
LIJA					S	**Sn**	**21 34 08.2**	**-1.3**
LIJA	**Lijar**	**1.43**	**31**		P	**Pn**	**21 33 52.2**	**+0.5**
LIJA					S	**Sn**	**21 34 08.2**	**-1.3**
EMIJ	**Mijas** 2.6nm,0.2s,SNR=18	**1.54**	**55**	⇑	P	Pn	21 33 51.9	-1.2
EMIJ					S	**Sn**	**21 34 12.3**	**+0.3**
EMIJ	**Mijas** 2.6nm,0.2s,SNR=18	**1.54**	**55**		P	Pn	21 33 51.9	-1.2
EMIJ					S	**Sn**	**21 34 12.3**	**+0.3**
TGT	**Taghat**	**1.92**	**147**		P	**Pn**	**21 33 59.0**	**+0.6**
TGT					S	**Sn**	**21 34 19.0**	**-2.4**
TGT	**Taghat**	**1.92**	**147**	*i*	P	**Pn**	**21 33 59.0**	**+0.6**
TGT				*i*	S	**Sn**	**21 34 19.0**	**-2.4**
PBDV	**Barranco-do-Ve**	**2.03**	**321**	*e*	Pn	**Pn**	**21 33 59.3**	**-0.5**
PBDV				*e*	Sn	**Sn**	**21 34 24.6**	**+0.5**
PBDV					A	A	21 34 26.2	
PBDV	**Barranco-do-Ve** 26nm,0.2s	**2.03**	**321**	⇓	P	**Pn**	**21 33 59.3**	**-0.5**
PBDV					S	**Sn**	**21 34 24.6**	**+0.5**
PBDV	**Barranco-do-Ve** 26nm,0.2s	**2.03**	**321**		P	**Pn**	**21 33 59.3**	**-0.5**
PBDV					S	**Sn**	**21 34 24.6**	**+0.5**
PVAQ	**Vaqueiros**	**2.05**	**327**	*i*	Pn	**Pn**	**21 34 00.0**	**-0.2**
PVAQ				*e*	Sn	**Sn**	**21 34 25.7**	**+1.0**
PVAQ					A	A	21 34 26.6	
PVAQ	**Vaqueiros** 49nm,0.6s	**2.05**	**327**	⇓	P	**Pn**	**21 34 00.0**	**-0.2**
PVAQ					S	**Sn**	**21 34 25.7**	**+1.0**
PVAQ	**Vaqueiros** 49nm,0.6s	**2.05**	**327**		P	**Pn**	**21 34 00.0**	**-0.2**
PVAQ					S	**Sn**	**21 34 25.7**	**+1.0**
EGRO	**El Granado** 17nm,0.1s,SNR=18	**2.07**	**334**	⇓	P	**Pn**	**21 34 00.6**	**+0.2**
EGRO					S	**Sn**	**21 34 26.1**	**+1.0**
EGRO	**El Granado** 17nm,0.1s,SNR=18	**2.07**	**334**		P	**Pn**	**21 34 00.6**	**+0.2**
EGRO					S	**Sn**	**21 34 26.1**	**+1.0**
EMIN	**Mina Concepcio** 9.0nm,0.1s,SNR=18	**2.10**	**353**	⇓	P	**Pn**	**21 34 01.2**	**+0.3**
EMIN					S	**Sn**	**21 34 26.9**	**+1.0**
EMIN	**Mina Concepcio** 9.0nm,0.1s,SNR=18	**2.10**	**353**		P	**Pn**	**21 34 01.2**	**+0.3**
EMIN					S	**Sn**	**21 34 26.9**	**+1.0**
ELOJ	**Sierra Loja** 1.1nm,0.2s,SNR=12	**2.29**	**50**		P	**Pn**	**21 34 04.1**	**+0.6**
ELOJ					S	**Sn**	**21 34 30.7**	**+0.1**
ELOJ	**Sierra Loja** 1.1nm,0.2s,SNR=12	**2.29**	**50**		P	**Pn**	**21 34 04.1**	**+0.6**
ELOJ					S	**Sn**	**21 34 30.7**	**+0.1**
ERON	**Agron** 1.7nm,0.2s,SNR=7.9	**2.44**	**56**		P	**Pn**	**21 34 05.3**	**-0.3**
ERON					S	**Sn**	**21 34 33.3**	**-1.0**
ERON	**Agron** 1.7nm,0.2s,SNR=7.9	**2.44**	**56**		P	**Pn**	**21 34 05.3**	**-0.3**
ERON					S	**Sn**	**21 34 33.3**	**-1.0**
MIF	**Mishlifen**	**2.44**	**158**		P	**Pn**	**21 34 07.0**	**+1.3**
MIF					S	Sn	21 34 31.0	-3.6
MIF	**Mishlifen**	**2.44**	**158**	*i*	P	**Pn**	**21 34 07.0**	**+1.3**
MIF					S	Sn	21 34 31.0	-3.6
MORF	**Marmelete**	**2.48**	**312**	*e*	Pn	Pn	21 34 04.8	-1.3
MORF				*e*	Sn	**Sn**	**21 34 34.5**	**-0.7**
MORF					A	A	21 34 38.9	
MORF	**Marmelete** 45nm,0.2s	**2.48**	**312**		P	Pn	21 34 04.8	-1.3
MORF					S	**Sn**	**21 34 34.5**	**-0.7**
MORF	**Marmelete** 45nm,0.2s	**2.48**	**312**		P	Pn	21 34 04.8	-1.3
MORF					S	**Sn**	**21 34 34.5**	**-0.7**
PFVI	**Vila Bisbo**	**2.48**	**306**	*e*	Pn	Pn	21 34 04.5	-1.6
PFVI				*e*	Sn	**Sn**	**21 34 34.2**	**-1.0**
PFVI					A	A	21 34 38.1	
PFVI	**Vila Bisbo** 24nm,0.1s,SNR=16	**2.48**	**306**		P	Pn	21 34 04.5	-1.6
PFVI					S	**Sn**	**21 34 34.3**	**-1.0**
PFVI	**Vila Bisbo** 39nm,0.2s,SNR=12	**2.48**	**306**		P	Pn	21 34 04.5	-1.6
PFVI					S	**Sn**	**21 34 34.3**	**-1.0**
EGUA	**Guajares** 6.2nm,0.2s,SNR=7.9	**2.51**	**62**		P	Pn	21 34 04.3	-2.2
EGUA					S	**Sn**	**21 34 34.5**	**-1.6**
EGUA	**Guajares** 10nm,0.2s,SNR=7.9	**2.51**	**62**		P	Pn	21 34 04.3	-2.2
EGUA					S	**Sn**	**21 34 34.5**	**-1.6**
PBAR	**Barrancos**	**2.56**	**347**	*e*	Pn	**Pn**	**21 34 07.4**	**+0.3**
PBAR				*e*	Sn	**Sn**	**21 34 37.8**	**+0.7**
PBAR					A	A	21 34 39.1	
PBAR	**Barrancos** 13nm,0.1s	**2.56**	**347**		P	**Pn**	**21 34 07.4**	**+0.3**
PBAR					S	**Sn**	**21 34 37.8**	**+0.7**
PBAR	**Barrancos** 13nm,0.1s	**2.56**	**347**		P	**Pn**	**21 34 07.4**	**+0.3**
PBAR					S	**Sn**	**21 34 37.8**	**+0.7**
MESJ	**Messejana**	**2.64**	**325**	*e*	P	**Pn**	**21 34 07.8**	**-0.4**
MESJ				*e*	S	**Sn**	**21 34 38.6**	**-0.5**
MESJ					AML	AML	21 34 42.1	
MESJ	**Messejana** comp=N,75nm,0.2s	**2.64**	**325**	*e*	P	**Pn**	**21 34 07.8**	**-0.4**
MESJ				*e*	S	**Sn**	**21 34 38.6**	**-0.5**
MESJ	**Messejana**	**2.64**	**325**		P	**Pn**	**21 34 07.8**	**-0.4**
MESJ					S	**Sn**	**21 34 38.6**	**-0.5**
MESJ	**Messejana**	**2.64**	**325**		P	**Pn**	**21 34 07.8**	**-0.4**
MESJ					S	**Sn**	**21 34 38.6**	**-0.5**
PBEJ	**Beja**	**2.65**	**333**	*e*	Pn	**Pn**	**21 34 08.4**	**+0.1**
PBEJ				*e*	Sn	**Sn**	**21 34 39.8**	**+0.4**
PBEJ					A	A	21 34 43.0	
PBEJ	**Beja** comp=N,16nm,0.1s	**2.65**	**333**		P	**Pn**	**21 34 08.4**	**+0.1**
PBEJ					S	**Sn**	**21 34 39.8**	**+0.4**
PBEJ	**Beja** comp=N,8.1nm,0.1s	**2.65**	**333**		P	**Pn**	**21 34 08.4**	**+0.1**
PBEJ					S	**Sn**	**21 34 39.8**	**+0.4**
PTEO	**Sao Teotonio**	**2.68**	**315**	*e*	Pn	Pn	21 34 08.0	-0.8
PTEO				*e*	Sn	**Sn**	**21 34 39.6**	**-0.5**
PTEO					A	A	21 34 44.5	
PTEO	**Sao Teotonio** comp=N,18nm,0.2s	**2.68**	**315**		P	Pn	21 34 08.0	-0.8
PTEO					S	**Sn**	**21 34 39.6**	**-0.5**
PTEO	**Sao Teotonio** comp=N,8.8nm,0.2s	**2.68**	**315**		P	Pn	21 34 08.0	-0.8
PTEO					S	**Sn**	**21 34 39.6**	**-0.5**
ECOG	**Cogollos-Vega** comp=N,1.2nm,0.1s,SNR=7.9	**2.74**	**54**		P	Pn	21 34 08.6	-1.1
ECOG					S	**Sn**	**21 34 42.3**	**+0.5**
ECOG	**Cogollos-Vega** comp=N,19nm,0.2s,SNR=12	**2.74**	**54**		P	Pn	21 34 08.6	-1.1
ECOG					S	**Sn**	**21 34 42.3**	**+0.5**
EMEL	**Melilla** comp=N,29nm,0.1s,SNR=4.0	**2.78**	**97**		P	**Pn**	**21 34 11.5**	**+1.4**
EQUE	**Quentar** comp=N,1.4nm,0.1s,SNR=7.9	**2.78**	**56**		S	**Sn**	**21 34 43.2**	**+0.3**
EQUE	**Quentar** comp=N,1.4nm,0.1s,SNR=7.9	**2.78**	**56**		S	**Sn**	**21 34 43.2**	**+0.3**
EMLI	**Melilla** comp=N,29nm,0.1s,SNR=4.0	**2.78**	**97**		P	**Pn**	**21 34 11.5**	**+1.3**
CZD	**Col de Zad**	**2.85**	**158**		P	**Pn**	**21 34 12.0**	**+0.7**
CZD					S	Sn	21 34 41.5	-3.2
CZD	**Col de Zad**	**2.85**	**158**	*i*	P	**Pn**	**21 34 12.0**	**+0.7**
CZD					S	Sn	21 34 41.5	-3.2
EADA	**Adamuz** comp=N,1.5nm,0.1s,SNR=18	**2.85**	**29**	⇑	P	**Pn**	**21 34 11.5**	**+0.3**
EADA					S	**Sn**	**21 34 43.8**	**-0.7**
EADA	**Adamuz** comp=N,16nm,0.1s,SNR=11	**2.85**	**29**		P	**Pn**	**21 34 11.5**	**+0.3**
EADA					S	**Sn**	**21 34 43.8**	**-0.7**
PNCL	**Nicolau / Gran**	**3.00**	**325**	*e*	Pn	**Pn**	**21 34 12.8**	**-0.4**
PNCL				*e*	Sn	**Sn**	**21 34 47.7**	**-0.3**
PNCL					A	A	21 34 51.0	
PNCL	**Nicolau / Gran** comp=N,12nm,0.1s	**3.00**	**325**	*e*	Pn	**Pn**	**21 34 12.8**	**-0.4**
PNCL				*e*	Sn	**Sn**	**21 34 47.7**	**-0.3**
EBER	**Berja** comp=N,1.0nm,0.1s,SNR=18	**3.03**	**65**	⇓	P	Pn	21 34 11.2	-2.6
EBER					S	Sn	21 34 47.0	-2.1
EBER	**Berja** comp=N,2.5nm,0.2s	**3.03**	**65**		P	Pn	21 34 11.2	-2.6
EBER	comp=N,1.0nm,0.1s,SNR=18				S	Sn	21 34 47.0	-2.1
EBAD	**Badajoz** comp=N,2.5nm,0.2s	**3.12**	**350**	⇓	P	**Pn**	**21 34 15.3**	**+0.5**
EBAD	comp=N,3.8nm,0.1s,SNR=18				S	**Sn**	**21 34 51.3**	**+0.3**
EBAD	**Badajoz** comp=N,4.0nm,0.0s,SNR=5.8	**3.12**	**350**		P	**Pn**	**21 34 15.3**	**+0.5**
EBAD	comp=N,3.8nm,0.1s,SNR=18				S	**Sn**	**21 34 51.3**	**+0.3**
EVO	**Evora** comp=N,4.0nm,0.0s,SNR=5.8	**3.15**	**335**	*e*	Pn	**Pn**	**21 34 15.8**	**+0.6**
EVO				*e*	Sn	**Sn**	**21 34 49.9**	**-1.8**
EVOP	**Sao Brissos** comp=N,26nm,0.3s	**3.19**	**334**	*e*	Pn	**Pn**	**21 34 15.8**	**+0.1**
EVOP	comp=N,13nm,0.3s			*e*	Sn	Sn	21 34 49.9	-2.7
MOE	**Montemor**	**3.27**	**331**	*e*	Pn	**Pn**	**21 34 17.2**	**+0.4**
MOE				*e*	Sn	**Sn**	**21 34 55.0**	**+0.4**
MOE	**Montemor**	**3.27**	**331**		P	**Pn**	**21 34 17.2**	**+0.4**
MOE					S	**Sn**	**21 34 55.0**	**+0.4**
MOE	**Montemor**	**3.27**	**331**		P	**Pn**	**21 34 17.2**	**+0.4**
MOE					S	**Sn**	**21 34 55.0**	**+0.4**
PESTR	**Estremoz**	**3.34**	**343**	*e*	Pn	**Pn**	**21 34 18.1**	**+0.3**
PESTR				*e*	Sn	**Sn**	**21 34 56.3**	**-0.1**
PESTR					A	A	21 35 00.0	
PESTR	**Estremoz** comp=N,7.2nm,0.4s	**3.34**	**343**		P	**Pn**	**21 34 18.1**	**+0.3**
PESTR					S	**Sn**	**21 34 56.3**	**-0.1**
PESTR	**Estremoz** comp=N,3.6nm,0.4s	**3.34**	**343**		P	**Pn**	**21 34 18.1**	**+0.3**
PESTR					S	**Sn**	**21 34 56.3**	**-0.1**
EQES	**Quesada** comp=N,0.5nm,0.1s,SNR=18	**3.37**	**50**	⇑	P	Pn	21 34 17.8	-0.6
EQES					S	**Sn**	**21 34 55.5**	**-1.8**
EQES	**Quesada** comp=N,6.2nm,0.1s,SNR=16	**3.37**	**50**		P	Pn	21 34 17.8	-0.6
EQES	comp=N,0.5nm,0.1s,SNR=18				S	**Sn**	**21 34 55.5**	**-1.8**
ENIJ	**Nijar** comp=N,0.9nm,0.1s,SNR=4.0	**3.57**	**68**		P	Pn	21 34 19.4	-1.6
ENIJ	**Nijar** comp=N,0.9nm,0.1s,SNR=4.0	**3.57**	**68**		P	Pn	21 34 19.4	-1.6
EHUE	**Huescar** comp=N,0.8nm,0.1s,SNR=7.9	**3.68**	**54**		P	Pn	21 34 22.0	-0.6
EHUE					S	**Sn**	**21 35 04.2**	**-0.7**
EHUE	**Huescar** comp=N,5.0nm,0.2s,SNR=7.9	**3.68**	**54**		P	Pn	21 34 22.0	-0.6
EHUE	comp=N,0.8nm,0.1s,SNR=7.9				S	**Sn**	**21 35 04.2**	**-0.7**
PMTG	**Montargil**	**3.71**	**337**	*e*	Pn	**Pn**	**21 34 22.9**	**0.0**
PMTG				*e*	Sn	**Sn**	**21 35 06.0**	**+0.6**
PMTG					A	A	21 35 08.7	
PMTG	**Montargil** comp=N,13nm,0.3s	**3.71**	**337**	*e*	Pn	**Pn**	**21 34 22.9**	**0.0**
PMTG				*e*	Sn	**Sn**	**21 35 06.0**	**+0.6**
PMRV	**Marv??o**	**3.84**	**348**	*e*	Pn	**Pn**	**21 34 25.2**	**+0.5**
PMRV				*e*	Sn	**Sn**	**21 35 09.6**	**+0.9**
PMRV					A	A	21 35 10.5	
PMRV	**Marv??o** comp=N,14nm,0.1s	**3.84**	**348**		P	**Pn**	**21 34 25.2**	**+0.5**
PMRV					S	**Sn**	**21 35 09.6**	**+0.9**
PMRV	**Marv??o** comp=N,14nm,0.1s	**3.84**	**348**		P	**Pn**	**21 34 25.2**	**+0.5**
PMRV				*e*	Sn	**Sn**	**21 35 09.6**	**+0.9**
ZFT	**Errachidia**	**3.99**	**155**		P	**Pn**	**21 34 28.0**	**+1.0**
ZFT					S	Sn	21 35 08.0	-4.8
ZFT	**Errachidia**	**3.99**	**155**	*i*	P	**Pn**	**21 34 28.0**	**+1.0**
ZFT				*i*	S	Sn	21 35 08.0	-4.8
EVIA	**Vianos** comp=N,2.4nm,0.1s,SNR=8.1	**4.25**	**45**		P	Pn	21 34 29.5	-1.0
EVIA					S	Sn	21 35 15.5	-3.6
EVIA	**Vianos** comp=N,8.6nm,0.1s,SNR=13	**4.25**	**45**		P	Pn	21 34 29.5	-1.0
EVIA	comp=N,2.4nm,0.1s,SNR=8.1				S	Sn	21 35 15.5	-3.6
EVIA	**Vianos** comp=N,8.6nm,0.1s,SNR=13	**4.25**	**45**		P	Pn	21 34 29.5	-1.0
EVIA					S	Sn	21 35 15.5	-3.6
PTOM	**Tomar**	**4.26**	**338**	*e*	Pn	**Pn**	**21 34 30.9**	**+0.3**
PTOM				*e*	Sn	**Sn**	**21 35 18.7**	**-0.5**
PTOM					A	A	21 35 22.0	
PTOM	**Tomar** comp=N,13nm,0.1s	**4.26**	**338**		P	**Pn**	**21 34 30.9**	**+0.3**
PTOM					S	**Sn**	**21 35 18.7**	**-0.5**
PTOM	**Tomar** comp=N,6.5nm,0.1s	**4.26**	**338**		P	**Pn**	**21 34 30.9**	**+0.3**
PTOM					S	**Sn**	**21 35 18.7**	**-0.5**
EPLA	**Plasencia** comp=N,9.5nm,0.1s,SNR=72	**4.38**	**2**		P	**Pn**	**21 34 33.3**	**+1.1**
EPLA					S	**Sn**	**21 35 21.5**	**-0.7**
EPLA	**Plasencia** comp=N,11nm,0.2s,SNR=7.8	**4.38**	**2**		P	**Pn**	**21 34 33.3**	**+1.1**
EPLA	comp=N,9.5nm,0.1s,SNR=72				S	**Sn**	**21 35 21.5**	**-0.7**
ESDC	**Sonseca Array** comp=N,1.2nm,0.1s,baz=206,slow=13,SNR=15	**4.41**	**24**		P	**Pn**	**21 34 32.6**	**0.0**
ESDC					S	Sn	21 35 20.4	-2.4
ESDC	**Sonseca Array** comp=N,1.5nm,0.1s,baz=208,slow=24,SNR=5.2	**4.41**	**24**		P	**Pn**	**21 34 32.6**	**0.0**
ESDC	comp=N,1.2nm,0.1s,baz=206,slow=13,SNR=15				S	Sn	21 35 20.4	-2.4
MTE	**Manteigas** comp=N,1.5nm,0.1s,baz=208,slow=24,SNR=5.2	**4.81**	**349**	*e*	Pn	**Pn**	**21 34 38.7**	**+0.6**
MTE				*e*	Sn	**Sn**	**21 35 32.8**	**0.0**
MTE					A	A	21 35 34.5	
MTE	**Manteigas** comp=N,6.5nm,0.1s	**4.81**	**349**		P	**Pn**	**21 34 38.7**	**+0.6**
MTE					S	**Sn**	**21 35 32.8**	**0.0**
MTE	**Manteigas** comp=N,3.2nm,0.1s	**4.81**	**349**		P	**Pn**	**21 34 38.7**	**+0.6**
MTE				*e*	Sn	**Sn**	**21 35 32.8**	**0.0**
ETOB	**Tobarra** comp=N,1.5nm,0.1s,SNR=18	**4.83**	**51**	⇓	P	Pn	21 34 37.2	-1.2
ETOB					S	Sn	21 35 29.0	-4.3
ETOB	**Tobarra** comp=N,2.7nm,0.2s	**4.83**	**51**		P	Pn	21 34 37.2	-1.2
ETOB	comp=N,1.5nm,0.1s,SNR=18				S	Sn	21 35 29.0	-4.3
PVIS	**Viseu** comp=N,2.7nm,0.2s	**5.18**	**347**	*e*	Pn	**Pn**	**21 34 43.4**	**+0.2**
PVIS				*e*	Sn	**Sn**	**21 35 41.3**	**-0.5**
PVIS					A	A	21 35 44.2	
PVIS	**Viseu** comp=N,6.3nm,0.1s	**5.18**	**347**		P	**Pn**	**21 34 43.4**	**+0.2**
PVIS					S	**Sn**	**21 35 41.3**	**-0.5**
PVIS	**Viseu** comp=N,3.2nm,0.1s	**5.18**	**347**		P	**Pn**	**21 34 43.4**	**+0.2**
PVIS				*e*	Sn	**Sn**	**21 35 41.3**	**-0.5**
GUD	**Guadarrama** comp=N,0.9nm,0.1s,SNR=16	**5.24**	**18**		P	**Pn**	**21 34 44.5**	**+0.4**
GUD					S	Sn	21 35 41.2	-2.3
GUD	**Guadarrama** comp=N,1.0nm,0.1s	**5.24**	**18**		P	**Pn**	**21 34 44.5**	**+0.4**
GUD	comp=N,0.9nm,0.1s,SNR=16				S	Sn	21 35 41.2	-2.3
MVO	**Moncorvo** comp=N,3.3nm,0.1s	**5.50**	**354**	*e*	Pn	**Pn**	**21 34 48.3**	**+0.6**
MVO				*e*	Sn	**Sn**	**21 35 49.3**	**-0.6**
MVO					A	A	21 35 52.6	
MVO	**Moncorvo** comp=N,5.1nm,0.1s,SNR=61	**5.50**	**354**		P	**Pn**	**21 34 48.2**	**+0.6**

	comp=N,1.4nm,0.1s								
ECAL	**Calabor**	**6.26**	**357**	P		**Pn**	**21 34 58.9**	**+0.8**	
	comp=N,1.9nm,0.1s,SNR=18								
ECAL				S		**Sn**	**21 36 07.8**	**-0.7**	
	comp=N,1.7nm,0.1s,SNR=5.5								
ECAL	**Calabor**	**6.26**	**357**	P		**Pn**	**21 34 58.9**	**+0.8**	
	comp=N,1.9nm,0.1s,SNR=18								
ECAL				S		**Sn**	**21 36 07.8**	**-0.7**	
	comp=N,1.7nm,0.1s,SNR=5.5								
ELOB	**Lobios**	**6.33**	**348**	P		**Pn**	**21 34 59.3**	**+0.4**	
	comp=N,1.2nm,0.1s,SNR=7.9								
ELOB				S		Sn	21 36 07.7	-2.4	
	comp=N,1.3nm,0.1s,SNR=7.9								
ELOB	**Lobios**	**6.33**	**348**	P		**Pn**	**21 34 59.3**	**+0.4**	
	comp=N,1.2nm,0.1s,SNR=7.9								
ELOB				S		Sn	21 36 07.7	-2.4	
	comp=N,1.3nm,0.1s,SNR=7.9								
PGAV	**Gavieira, Arco**	**6.46**	**347**	*e*Pn		**Pn**	**21 35 01.1**	**+0.3**	
PGAV				*e*Sn		**Sn**	**21 36 12.6**	**-0.8**	
PGAV				A		A	21 36 15.2		
	comp=N,2.5nm,0.1s								
PGAV	**Gavieira, Arco**	**6.46**	**347**	*e*Pn		**Pn**	**21 35 01.1**	**+0.3**	
PGAV				*e*Sn		**Sn**	**21 36 12.6**	**-0.8**	
	comp=N,2.5nm,0.1s								
EMOS	**Mosqueruela**	**6.57**	**43**	P		**Pn**	**21 35 02.1**	**-0.3**	
	comp=N,0.4nm,0.2s,SNR=7.9								
EMOS				S		Sn	21 36 12.9	-3.5	
	comp=N,0.9nm,0.1s,SNR=7.9								
EMOS	**Mosqueruela**	**6.57**	**43**	P		**Pn**	**21 35 02.1**	**-0.3**	
	comp=N,0.4nm,0.2s,SNR=7.9								
ERUA	**La Rua**	**6.73**	**355**	P		**Pn**	**21 35 05.4**	**+0.9**	
	comp=N,4.8nm,0.1s,SNR=7.9								
ERUA	**La Rua**	**6.73**	**355**	P		**Pn**	**21 35 05.4**	**+0.9**	
	comp=N,4.8nm,0.1s,SNR=7.9								
ERTA	**Horta de San J**	**7.43**	**43**	P		Pn	21 35 13.5	-0.5	
	comp=N,0.3nm,0.2s,SNR=7.9								
ERTA				S		Sn	21 36 33.0	-4.2	
	comp=N,0.6nm,0.2s,SNR=7.9								
ERTA	**Horta de San J**	**7.43**	**43**	P		Pn	21 35 13.5	-0.5	
	comp=N,0.3nm,0.2s,SNR=7.9								
EMAZ	**Mazaricos**	**7.54**	**345**	P		**Pn**	**21 35 16.1**	**+0.5**	
	comp=N,1.3nm,0.2s,SNR=7.9								
EMAZ	**Mazaricos**	**7.54**	**345**	P		**Pn**	**21 35 16.1**	**+0.5**	
	comp=N,1.3nm,0.2s,SNR=7.9								
ESAC	**San Caprasio**	**7.57**	**35**	P		**Pn**	**21 35 16.6**	**+0.6**	
	comp=N,1.3nm,0.2s,SNR=7.9								
ESAC				S		**Sn**	**21 36 39.4**	**-1.4**	
	comp=N,3.0nm,0.1s,SNR=7.9								
ESAC	**San Caprasio**	**7.57**	**35**	P		**Pn**	**21 35 16.6**	**+0.6**	
	comp=N,1.3nm,0.2s,SNR=7.9								
ESAC				S		**Sn**	**21 36 39.4**	**-1.4**	
	comp=N,3.0nm,0.1s,SNR=7.9								
EARI	**Arriondas**	**7.66**	**6**	P		**Pn**	**21 35 18.4**	**+1.2**	
	comp=N,0.6nm,0.1s,SNR=11								
EARI				S		Sn	21 36 39.9	-3.0	
	comp=N,0.8nm,0.3s,SNR=4.7								
EARI	**Arriondas**	**7.66**	**6**	P		**Pn**	**21 35 18.4**	**+1.2**	
	comp=N,0.6nm,0.1s,SNR=11								
IUNC	**Unciti**	**8.00**	**26**	P		**Pn**	**21 35 23.3**	**+1.5**	
	comp=N,0.3nm,0.1s,SNR=7.9								
IUNC	**Unciti**	**8.00**	**26**	P		**Pn**	**21 35 23.3**	**+1.5**	
	comp=N,0.3nm,0.1s,SNR=7.9								
IEPA	**Eparoz**	**8.10**	**27**	P		**Pn**	**21 35 25.7**	**+2.4**	
	comp=N,0.8nm,0.1s,SNR=7.9								
IEPA				S		Sn	21 36 52.1	-1.7	
	SNR=7.9								
IEPA	**Eparoz**	**8.10**	**27**	P		**Pn**	**21 35 25.7**	**+2.4**	
	comp=N,0.8nm,0.1s,SNR=7.9								
IEPA				S		Sn	21 36 52.1	-1.7	
	SNR=7.9								
EPOB	**Poblet**	**8.11**	**43**	P		**Pn**	**21 35 23.0**	**-0.4**	
	comp=N,0.3nm,0.2s,SNR=4.0								
EPOB	**Poblet**	**8.11**	**43**	P		**Pn**	**21 35 23.0**	**-0.4**	
	comp=N,0.3nm,0.2s,SNR=4.0								
IELO	**Elcoad**	**8.17**	**27**	P		**Pn**	**21 35 25.0**	**+0.8**	
	comp=N,0.7nm,0.1s,SNR=7.9								
IELO				S		Sn	21 36 53.0	-2.5	
	comp=N,1.2nm,0.2s,SNR=7.9								
IELO	**Elcoad**	**8.17**	**27**	P		**Pn**	**21 35 25.0**	**+0.8**	
	comp=N,0.7nm,0.1s,SNR=7.9								
IELO				S		Sn	21 36 53.0	-2.5	
	comp=N,1.2nm,0.2s,SNR=7.9								
EALK	**Alkurruntz**	**8.40**	**25**	P		**Pn**	**21 35 29.0**	**+1.7**	
	comp=N,0.6nm,0.1s,SNR=7.9								
EALK				S		Sn	21 36 58.9	-2.1	
	comp=N,10nm,0.4s,SNR=7.9								
EALK	**Alkurruntz**	**8.40**	**25**	P		**Pn**	**21 35 29.0**	**+1.7**	
	comp=N,0.6nm,0.1s,SNR=7.9								
EALK				S		Sn	21 36 58.9	-2.1	
	comp=N,10nm,0.4s,SNR=7.9								
SJPF	**Ste Jean**	**8.41**	**26**	*e*Pn		Pn	21 35 23.8	-3.6	
SJPF	**Ste Jean**	**8.41**	**26**	*e*P		**Pn**	**21 35 29.1**	**+1.7**	
SJPF				*e*Sn		Sn	21 36 51.6	-10	
	comp=N,3.8nm,0.4s								
SJPF	**Ste Jean**	**8.41**	**26**	P		**Pn**	**21 35 29.1**	**+1.7**	
ETSF	**Etsaut**	**8.48**	**30**	*e*Pn		Pn	21 35 25.1	-3.4	
ETSF	**Etsaut**	**8.48**	**30**	*e*P		**Pn**	**21 35 29.8**	**+1.3**	
ETSF	**Etsaut**	**8.48**	**30**	P		**Pn**	**21 35 29.8**	**+1.3**	
EMIR	**Miracle**	**8.73**	**42**	P		Pn	21 35 31.5	-0.5	
	comp=N,0.8nm,0.3s,SNR=7.9								
EMIR	**Miracle**	**8.73**	**42**	P		**Pn**	**21 35 31.5**	**-0.5**	
	comp=N,0.8nm,0.3s,SNR=7.9								
EPF	**Esparros**	**8.97**	**33**	*e*Pn		Pn	21 35 31.6	-3.6	
EPF	**Esparros**	**8.97**	**33**	*e*P		**Pn**	**21 35 36.8**	**+1.6**	
EPF				*e*Sn		Sn	21 37 05.1	-10	
	comp=N,3.0nm,0.2s								
EPF	**Esparros**	**8.97**	**33**	P		**Pn**	**21 35 36.8**	**+1.6**	

SKO ***24*** *21:48:47.1,41˚29N×22˚73E,h15km,M1.5,ML1.8*
ATH ***24*** *21:48:47.7,41˚30N×22˚72E,h12km±1km,MD2.9/6*
SOF ***24*** *21:48:47.1,41˚31N×22˚73E,h10km,MD2.5*
CSEM ***24*** *21:48:47.6±0.2,41˚29N×22˚74E,h5km,ML1.6,Error ellipse: s-maj=3.4km s-min=3.1km az=177.0*
BEO ***24*** *21:48:49.0±0.8,41˚33N×22˚65E,h5km±4km,ML1.6/4*
ISC 24 21:48:47.6±0.9,**41˚30N**±0˚02×**22˚73E**±0˚02,**h8**km±6km,
n38,σ0°44/60,Northestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**279**	*i* Pg	**Pg**	**21 48 50.4**	**+0.1**
VAY				*i* Sg	**Sg**	**21 48 52.4**	**+0.2**
VAY				*e*Lg	Lg	21 48 52.5	
	comp=E,600nm,0.2s						
VAY				*e*Lg	Lg	21 48 52.6	
	comp=N,577nm,0.3s						
VAY	**Valandovo**	**0.12**	**279**	*i* Pg	**Pg**	**21 48 50.4**	**+0.1**
VAY				*i* Sg	**Sg**	**21 48 52.4**	**+0.2**
	comp=E,600nm,0.2s						
VAY				*i* Sg	Sg	21 48 52.4	+0.2
	comp=N,577nm,0.3s						
VAY	**Valandovo**	**0.12**	**279**	*e*Pg	**Pg**	**21 48 50.2**	**-0.1**
VAY				*e*Sg	**Sg**	**21 48 52.4**	**+0.2**
VAY	**Valandovo**	**0.12**	**279**	*e*Pg	**Pg**	**21 48 50.2**	**-0.1**
VAY				*e*Sg	**Sg**	**21 48 52.4**	**+0.2**
VAY				*e*Lg	Lg	21 48 53.1	
	comp=N,577nm,0.3s						
GRG	**Griva**	**0.42**	**216**	*e*PB	**Pg**	**21 48 56.0**	**+0.1**
GRG				*e*SB	**Sg**	**21 49 02.0**	**+0.5**
GRG	**Griva**	**0.42**	**216**	*e*Pb	**Pg**	**21 48 56.0**	**+0.1**
GRG				*e*Sb	**Sg**	**21 49 02.0**	**+0.5**
KKB	**Krupnik**	**0.62**	**25**	*i* Pg	**Pg**	**21 49 00.1**	**+0.4**
KKB	**Krupnik**	**0.62**	**25**	*i* Pg	**Pg**	**21 49 00.1**	**+0.4**
SOH	**Sokhos**	**0.68**	**135**	*e*PB	**Pg**	**21 49 00.6**	**0.0**
SOH				*e*SB	**Sg**	**21 49 09.8**	**+0.4**
SOH	**Sokhos**	**0.68**	**135**	*e*Pb	**Pg**	**21 49 00.6**	**0.0**
SOH				*e*Sb	**Sg**	**21 49 09.8**	**+0.4**
MMB	**Musomiste**	**0.81**	**69**	*i* Pg	**Pg**	**21 49 03.0**	**-0.1**
MMB	**Musomiste**	**0.81**	**69**	*i* Pg	**Pg**	**21 49 03.0**	**-0.1**
NVR	**Nevrokopi**	**0.86**	**86**	*e*PB	**Pg**	**21 49 04.1**	**0.0**
NVR				*e*SB	**Sb**	**21 49 16.0**	**-0.4**
NVR	**Nevrokopi**	**0.86**	**86**	*e*Pb	**Pg**	**21 49 04.1**	**0.0**
NVR				*e*Sb	**Sb**	**21 49 16.0**	**-0.4**
PLG	**Polygyros**	**1.07**	**149**	*e*PN	**Pg**	**21 49 08.1**	**-0.2**
PLG				*e*SB	**Sg**	**21 49 22.4**	**+0.2**
PLG	**Polygyros**	**1.07**	**149**	*e*Pn	**Pg**	**21 49 08.1**	**-0.2**
PLG				*e*Sb	**Sg**	**21 49 22.4**	**+0.2**
BIA	**Bitola**	**1.10**	**256**	*e*Pg	**Pg**	**21 49 08.8**	**+0.1**
BIA				*e*Sg	**Sg**	**21 49 23.0**	**0.0**
BIA				*e*Lg	Lg	21 49 24.0	
	comp=E,14nm,0.3s						
BIA				*e*Lg	Lg	21 49 24.6	
	comp=N,10.0nm,0.2s						
BIA	**Bitola**	**1.10**	**256**	*e*Pg	**Pg**	**21 49 08.8**	**+0.1**
BIA				*e*Sg	**Sg**	**21 49 22.9**	**0.0**

BIA				*e*Lg	Lg		21 49 24.6		
	comp=N,10.0nm,0.2s								
FNA	**Florina**	**1.15**	**244**	*e*PN	**Pg**		**21 49 09.1**	**-0.5**	
FNA				*e*SB	**Sb**		**21 49 24.9**	**+0.2**	
FNA	**Florina**	**1.15**	**244**	*e*Pn	**Pg**		**21 49 09.1**	**-0.5**	
FNA				*e*Sb	**Sb**		**21 49 24.9**	**+0.2**	
SKO	**Skopje**	**1.17**	**305**	*e*Pg	**Pg**		**21 49 09.9**	**-0.2**	
SKO				*e*Sg	**Sn**		**21 49 27.0**	**+0.5**	
SKO				*e*Lg	Lg		21 49 27.6		
	comp=E,9.9nm,0.3s								
SKO				*e*Lg	Lg		21 49 28.4		
	comp=N,12nm,0.3s								
SKO	**Skopje**	**1.17**	**305**	*e*Pg	**Pn**		**21 49 10.4**	**+0.1**	
SKO				*e*Sg	**Sn**		**21 49 27.5**	**+1.0**	
SKO				*e*Lg	Lg		21 49 28.8		
	comp=N,12nm,0.3s								
VTS	**Vitosha**	**1.34**	**15**	*i* Pg	**Pg**		**21 49 13.5**	**+0.2**	
VTS	**Vitosha**	**1.34**	**15**	*i* Pg	**Pg**		**21 49 13.5**	**+0.2**	
VTS				*e*Sg	**Sg**		**21 49 31.1**	**+0.4**	
RZN	**Rozhen**	**1.54**	**75**	*i* P	**Pb**		**21 49 16.9**	**+0.3**	
RZN	**Rozhen**	**1.54**	**75**	*i* P	**Pb**		**21 49 16.9**	**+0.3**	
PAIG	**Paliouri**	**1.55**	**152**	*e*PG	**Pb**		**21 49 16.3**	**-0.3**	
PAIG	**Paliouri**	**1.55**	**152**	*e*Pg	**Pb**		**21 49 16.3**	**-0.3**	
BARS	**Barje**	**1.66**	**336**	*e*Pn	**Pn**		**21 49 17.3**	**+0.3**	
BARS				*e*Sg	**Sg**		**21 49 40.5**	**-0.5**	
BARS	**Barje**	**1.66**	**336**	*e*Pn	**Pn**		**21 49 17.3**	**+0.3**	
BARS				*e*Sg	**Sg**		**21 49 40.5**	**-0.5**	
PLD	**Plovdiv**	**1.68**	**61**	*i* Pg	**Pg**		**21 49 20.3**	**+0.4**	
PLD	**Plovdiv**	**1.68**	**61**	*i* Pg	**Pg**		**21 49 20.3**	**+0.4**	
THL	**Klokotos Trika**	**1.82**	**198**	*e*PN	**Pb**		**21 49 20.7**	**-0.4**	
THL	**Klokotos Trika**	**1.82**	**198**	*e*Pn	**Pb**		**21 49 20.7**	**-0.4**	
ZAPS	**Zavoj**	**1.97**	**358**	*e*Pn	**Pb**		**21 49 23.1**	**-0.7**	
ZAPS				*e*Sg	**Sg**		**21 49 50.0**	**-1.0**	
MPEP	**Malo Peshtene**	**2.19**	**20**	*i* Pg	**Pg**		**21 49 29.5**	**0.0**	
SMTH	**Samothraki Isl**	**2.28**	**110**	*e*PN	**Pb**		**21 49 27.7**	**-1.3**	
SMTH	**Samothraki Isl**	**2.28**	**110**	*e*Pn	**Pb**		**21 49 27.7**	**-1.3**	

ISCJB ***24*** *22:09:09.1±0.9,41˚27N×0˚09×22˚80E±0˚05,h9km±9km,*
Error ellipse: s-maj=15.1km s-min=6.2km az=166.9
SKO ***24*** *22:09:09.5,41˚32N×22˚73E,h15km,M1.7,ML2.0*
CSEM ***24*** *22:09:09.6±0.4,41˚31N×22˚77E,h8km,MD3.1,Error ellipse: s-maj=11.4km s-min=5.8km az=179.0*
ATH ***24*** *22:09:10.0,41˚28N×22˚75E,h20km±3km,MD3.1/7*
ISC 24 22:09:10.3±1.0,**41˚29N**×0˚05×**22˚75E**±0˚03,**h7**km±10km,
n16,σ0°60/26,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**282**	*i* Pg	**Pg**	**22 09 12.8**	**-0.3**
VAY				*e*Lg	Lg	22 09 14.8	
	comp=E,454nm,0.2s						
VAY				*i* Sg	**Sg**	**22 09 14.9**	**-0.1**
VAY				*e*Lg	Lg	22 09 15.0	
	comp=N,1μm,0.3s						
VAY	**Valandovo**	**0.13**	**282**	*i* Pg	**Pg**	**22 09 13.3**	**+0.2**
VAY				*i* Sg	**Sg**	**22 09 15.4**	**+0.4**
VAY				*e*Lg	Lg	22 09 15.4	
	comp=N,1μm,0.3s						
GRG	**Griva**	**0.42**	**218**	*e*PB	**Pg**	**22 09 18.4**	**-0.1**
GRG				*e*SB	**Sg**	**22 09 24.4**	**+0.3**
GRG	**Griva**	**0.42**	**218**	*e*Pb	**Pg**	**22 09 18.4**	**-0.1**
GRG				*e*Sb	**Sg**	**22 09 24.4**	**+0.3**
SOH	**Sokhos**	**0.66**	**135**	*e*PN	**Pg**	**22 09 22.7**	**-0.3**
SOH				*e*SN	**Sg**	**22 09 32.7**	**+1.2**
SOH	**Sokhos**	**0.66**	**135**	*e*Pn	**Pg**	**22 09 22.7**	**-0.3**
SOH				*e*Sn	**Sg**	**22 09 32.7**	**+1.2**
NVR	**Nevrokopi**	**0.84**	**86**	*e*PN	**Pg**	**22 09 26.2**	**-0.3**
NVR				*e*SN	**Sg**	**22 09 37.9**	**+0.5**
NVR	**Nevrokopi**	**0.84**	**86**	*e*Pn	**Pg**	**22 09 26.2**	**-0.3**
NVR				*e*Sn	**Sg**	**22 09 37.9**	**+0.5**
PLG	**Polygyros**	**1.06**	**150**	*e*PN	**Pb**	**22 09 30.0**	**-1.0**
PLG	**Polygyros**	**1.06**	**150**	*e*Pn	**Pb**	**22 09 30.0**	**-1.0**
FNA	**Florina**	**1.15**	**244**	*e*PN	**Pb**	**22 09 32.0**	**-0.6**
FNA				*e*SN	**Sb**	**22 09 48.5**	**+0.7**
FNA	**Florina**	**1.15**	**244**	*e*Pn	**Pb**	**22 09 32.0**	**-0.6**
FNA				*e*Sn	**Sb**	**22 09 48.5**	**+0.7**
PAIG	**Paliouri**	**1.54**	**152**	*e*PN	**Pn**	**22 09 37.9**	**-0.2**
PAIG	**Paliouri**	**1.54**	**152**	*e*Pn	**Pn**	**22 09 37.9**	**-0.2**
ALN	**Alexandroupoli**	**2.53**	**98**	*e*PN	**Pn**	**22 09 52.1**	**+0.4**
ALN	**Alexandroupoli**	**2.53**	**98**	*e*Pn	**Pn**	**22 09 52.1**	**+0.4**

TIR ***24*** *22:20:05.7,41˚39N×22˚87E,h0km,ML3.3*
ISCJB ***24*** *22:20:08.8±0.3,41˚31N±0˚01×22˚69E±0˚01,h7km±2km, mb3.5/6,MS3.0/3,Error ellipse: s-maj=2.1km s-min=1.5km az=43.7.*
IDC ***24*** *22:20:08.8±1.1,41˚30N×22˚66E,h0km,mb3.5/9, mb1 3.6/13,mb1mx3.6/31,mbtmp3.5/13,ML3.3/4,MS2.9/5, Ms1 3.0/5,ms1mx2.5/35,Error ellipse: s-maj=18.1km s-min=14.3km az=155.0*
SOF ***24*** *22:20:08.8,41˚32N×22˚71E,h8km,MD3.5*
ATH ***24*** *22:20:09.2,41˚29N×22˚70E,h22km,MD3.7/38,ML3.3*
BEO ***24*** *22:20:09.9±0.6,41˚28N×22˚67E,h7km±2km,ML3.4/1*
CSEM ***24*** *22:20:09.6±0.1,41˚28N×22˚70E,h2km,ML3.4,Error ellipse: s-maj=2.4km s-min=1.9km az=46.0*
PDG ***24*** *22:20:09.6±0.6,41˚30N×22˚70E,h6km,ML3.2/8,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
THE ***24*** *22:20:09.9,41˚27N×22˚72E,h1km±1km,ML3.6/9,Error ellipse: s-maj=1.8km s-min=0.6km az=244.0*
SKO ***24*** *22:20:09.1,41˚24N×22˚70E,h15km,M3.0,ML3.5*
PRU ***24*** *22:20:13.4,41˚43N×22˚66E,h7km*
ISC 24 22:20:09.7±0.8,**41˚30N**±0˚01×**22˚70E**±0˚01,**h8**km±5km,
n381,σ1°23/462,mb3.6/6,MS3.0/3,40C-23D,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**280**	P	**Pg**	**22 20 11.8**	**-0.4**
VAY				S	**Sg**	**22 20 13.7**	**-0.2**
VAY	**Valandovo**	**0.10**	**280**	*i* Pg	**Pg**	**22 20 11.9**	**-0.3**
VAY				*i* Sg	**Sg**	**22 20 13.9**	**0.0**
VAY				*e*Lg	Lg	22 20 14.1	
	comp=E,15μm,0.2s						
VAY				*e*Lg	Lg	22 20 14.1	
	comp=N,26μm,0.2s						
VAY	**Valandovo**	**0.10**	**280**	P	**Pg**	**22 20 11.8**	**-0.4**
VAY	**Valandovo**	**0.10**	**280**	*i* Pg	**Pg**	**22 20 12.4**	**+0.2**
VAY				S	**Sg**	**22 20 13.7**	**-0.2**
VAY				*i* Sg	Sg	22 20 14.4	+0.5
VAY				*e*Lg	Lg	22 20 14.5	
	comp=N,15μm,0.2s						
KNT	**Kendrikon**	**0.20**	**134**	P	**Pg**	**22 20 13.8**	**-0.1**
KNT				S	**Sg**	**22 20 16.8**	**+0.1**
KNT	**Kendrikon**	**0.20**	**134**	P	**Pg**	**22 20 13.8**	**-0.1**
KNT				S	**Sg**	**22 20 16.8**	**+0.1**
GRG	**Griva**	**0.41**	**214**	P	**Pg**	**22 20 17.6**	**-0.3**
GRG				S	**Sg**	**22 20 23.4**	**+0.1**
GRG	**Griva**	**0.41**	**214**	*e*PB	**Pg**	**22 20 17.5**	**-0.3**
GRG				*e*SB	**Sg**	**22 20 23.4**	**+0.1**
GRG	**Griva**	**0.41**	**214**	*e*Pb	**Pg**	**22 20 17.5**	**-0.3**
GRG				*e*Sb	**Sg**	**22 20 23.4**	**+0.1**
KKB	**Krupnik**	**0.63**	**27**	*i* Pg	**Pg**	**22 20 21.9**	**0.0**
KKB	**Krupnik**	**0.63**	**27**	*i* Pg	**Pg**	**22 20 21.9**	**0.0**
SOH	**Sokhos**	**0.69**	**134**	P	**Pg**	**22 20 22.2**	**-0.8**
SOH				S	**Sg**	**22 20 32.6**	**+0.6**
SOH	**Sokhos**	**0.69**	**134**	*e*PN	**Pg**	**22 20 22.4**	**-0.6**
SOH				*e*SN	**Sg**	**22 20 32.6**	**+0.6**
SOH	**Sokhos**	**0.69**	**134**	*e*Pn	**Pg**	**22 20 22.4**	**-0.6**
SOH				S	**Sg**	**22 20 32.6**	**+0.6**
SRS	**Serrai**	**0.69**	**105**	P	**Pg**	**22 20 22.4**	**-0.7**
SRS				S	**Sg**	**22 20 31.9**	**-0.3**
SRS	**Serrai**	**0.69**	**105**	P	**Pg**	**22 20 22.4**	**-0.7**
SRS				S	**Sg**	**22 20 31.9**	**-0.3**
THE	**Thessaloniki**	**0.70**	**164**	P	**Pg**	**22 20 22.4**	**-0.8**
THE				S	**Sg**	**22 20 32.1**	**-0.2**
THE	**Thessaloniki**	**0.70**	**164**	P	**Pg**	**22 20 22.4**	**-0.8**
HORT	**Hortiatis**	**0.77**	**157**	P	**Pg**	**22 20 23.8**	**-0.7**
HORT				S	**Sg**	**22 20 34.5**	**+0.1**
HORT	**Hortiatis**	**0.77**	**157**	P	**Pg**	**22 20 23.8**	**-0.7**
MMB	**Musomiste**	**0.82**	**69**	*i* Pg	**Pg**	**22 20 25.0**	**-0.5**
MMB				*i* Pg	**Pg**	**22 20 25.0**	**-0.5**
MMB	**Musomiste**	**0.82**	**69**	*i* Pg	**Pg**	**22 20 25.0**	**-0.5**
NVR	**Nevrokopi**	**0.87**	**87**	P	**Pg**	**22 20 26.2**	**-0.3**
NVR				S	**Sg**	**22 20 38.4**	**+0.6**
NVR	**Nevrokopi**	**0.87**	**87**	*e*PN	**Pg**	**22 20 26.3**	**-0.3**
NVR				*e*SN	**Sg**	**22 20 38.5**	**+0.6**
BIA	**Bitola**	**1.08**	**255**	P	**Pg**	**22 20 29.3**	**-1.2**

BIA	**Bitola**	**1.08**	**255**	*e*Pg	**Pg**		**22 20 29.6**	**-0.9**	
BIA				*i* Sg	**Sg**		**22 20 44.0**	**-0.5**	
BIA	**Bitola**	**1.08**	**255**	*e*Pg	**Pg**		**22 20 29.5**	**-0.9**	
BIA				*i* Sg	**Sg**		**22 20 44.0**	**-0.5**	
PLG	**Polygyros**	**1.08**	**149**	P	**Pg**		**22 20 29.1**	**-1.5**	
PLG				S	**Sg**		**22 20 44.3**	**-0.4**	
PLG	**Polygyros**	**1.08**	**149**	*e*PN	**Pg**		**22 20 29.7**	**-0.9**	
PLG				*e*SN	**Sg**		**22 20 44.4**	**-0.3**	
PLG	**Polygyros**	**1.08**	**149**	P	**Pg**		**22 20 29.1**	**-1.5**	
PLG	**Polygyros**	**1.08**	**149**	*e*Pn	**Pg**		**22 20 29.7**	**-0.9**	
FNA	**Florina**	**1.13**	**243**	P	**Pg**		**22 20 30.5**	**-0.9**	
FNA	**Florina**	**1.13**	**243**	*e*PN	**Pg**		**22 20 30.5**	**-0.9**	
FNA				*e*SN	**Sg**		**22 20 46.2**	**+0.1**	
FNA	**Florina**	**1.13**	**243**	P	**Pg**		**22 20 30.5**	**-0.9**	
FNA				*e*Sn	**Sg**		**22 20 46.2**	**+0.1**	
SKO	**Skopje**	**1.16**	**306**	P	**Pn**		**22 20 32.8**	**+0.6**	
SKO				S	**Sn**		**22 20 48.7**	**+0.4**	
SKO	**Skopje**	**1.16**	**306**	*e*Pg	**Pn**		**22 20 32.4**	**+0.1**	
SKO				*i* Sg	**Sn**		**22 20 48.6**	**+0.4**	
SKO				*e*Lg	Lg		22 20 49.8		
	comp=E,566nm,0.7s								
SKO				*e*Lg	Lg		22 20 50.9		
	comp=N,620nm,0.6s								
SKO	**Skopje**	**1.16**	**306**	*e*Pg	**Pg**		**22 20 31.4**	**-0.6**	
SKO				*e*Sg	**Sn**		**22 20 48.3**	**0.0**	
SKO	**Skopje**	**1.16**	**306**	*e*Pg	**Pg**		**22 20 31.4**	**-0.6**	
SKO	**Skopje**	**1.16**	**306**	P	**Pn**		**22 20 32.8**	**+0.6**	
SKO				S	**Sn**		**22 20 48.7**	**+0.4**	
SKO				*i* Sg	**Sb**		**22 20 49.1**	**+1.9**	
SKO				*e*Lg	Lg		22 20 51.3		
	comp=N,620nm,0.6s								
LIT	**Litokhoron**	**1.21**	**188**	P	**Pg**		**22 20 31.3**	**-1.7**	
LIT	**Litokhoron**	**1.21**	**188**	P	**Pg**		**22 20 31.3**	**-1.7**	
KZN	**Kozani**	**1.22**	**216**	*e*PN	**Pb**		**22 20 31.5**	**-1.6**	
VTS	**Vitosha**	**1.34**	**16**	P	**Pn**		**22 20 35.1**	**+0.2**	
VTS				S	**Sn**		**22 20 53.9**	**+0.9**	
VTS	**Vitosha**	**1.34**	**16**	⇑*i* Pg	**Pg**		**22 20 35.6**	**+0.1**	
VTS				*e*Sg	**Sn**		**22 20 53.9**	**+0.9**	
VTS	**Vitosha**	**1.34**	**16**	⇑*i* P	**Pg**		**22 20 35.7**	**+0.2**	
VTS	**Vitosha**	**1.34**	**16**	*i* Pg	**Pb**		**22 20 35.4**	**+0.2**	
VTS				*i* Pg	**Pb**		**22 20 35.4**	**+0.2**	
VTS	**Vitosha**	**1.34**	**16**	*i* Pg	**Pb**		**22 20 35.4**	**+0.2**	
VTS	**Vitosha**	**1.34**	**16**	⇑*i* P	**Pg**		**22 20 35.7**	**+0.2**	
VTS				S	**Sn**		**22 20 53.9**	**+0.9**	
OUR	**Ouranopolis**	**1.37**	**135**	P	**Pn**		**22 20 34.4**	**-0.7**	
OUR				S	**Sg**		**22 20 54.5**	**+0.7**	
OUR	**Ouranopolis**	**1.37**	**135**	P	**Pn**		**22 20 34.4**	**-0.7**	
OUR				S	**Sg**		**22 20 54.5**	**+0.7**	
KAVA	**Kavala**	**1.40**	**102**	P	**Pb**		**22 20 36.1**	**0.0**	
KAVA				S	**Sg**		**22 20 55.2**	**+0.5**	
NEST	**Nestorio**	**1.54**	**235**	P	**Pb**		**22 20 38.0**	**-0.5**	
NEST	**Nestorio**	**1.54**	**235**	P	**Pb**		**22 20 38.0**	**-0.5**	
RZN

PDG	Podgorica	2.81	295	⇓	iPn	Pn	22 20 56.6	+1.7
PDG					eSn	Sb	22 21 32.6	-2.1
DSF	Desfina	2.89	183		P	Pn	22 20 56.3	+0.2
EFP	Efpalio	2.94	192		P	Pn	22 20 57.5	+0.8
EFP	Efpalio	2.94	192		ePN	Pn	22 20 57.4	+0.8
KALE	Kalithea	2.94	189		P	Pn	22 20 57.4	+0.7
KALE	Kalithea	2.94	189		ePN	Pn	22 20 57.5	+0.7
ERIK	Erikli-Kesan	2.95	101		ePN	Pn	22 20 57.5	+0.7
LKD2	Lefkada island	2.96	213		P	Pn	22 20 58.6	+1.6
LKD2	Lefkada island	2.96	213		ePB	Pn	22 20 58.6	+1.6
LKD2	Lefkada island	2.96	213		P	Pn	22 20 58.6	+1.6
GRUS	Gruza	2.97	331	⇓	iPn	Pn	22 20 57.4	+0.3
GRUS					eSg	Sg	22 21 45.3	+0.1
GRUS	Gruza	2.97	331	⇓	iPn	Pn	22 20 57.4	+0.3
GRUS					eSg	Sg	22 21 45.3	+0.1
TRIZ	Trizonia	2.97	190		ePN	Pn	22 20 58.8	-0.3
GELI	Tayfur-Gelibol	3.00	106		ePN	Pn	22 20 57.9	+0.4
BUM	Brajici-Budva	3.02	291		ePn	Pn	22 20 59.8	+2.0
BUM					eSn	Sb	22 21 37.7	-3.0
BUM	Brajici-Budva	3.02	291		ePn	Pn	22 20 59.8	+2.0
BUM					eSn	Sb	22 21 37.7	-3.0
EDRB	Edirne	3.08	78		ePN	Pn	22 20 59.2	+0.6
EDRB	Edirne	3.08	78		P	Pn	22 20 59.2	+0.6
EDRB	Edirne	3.08	78		P	Pn	22 20 59.2	+0.6
SZH	Strazhica	3.10	50		iP	Pn	22 21 00.0	+1.1
SZH	Strazhica	3.10	50		iP	Pn	22 21 00.0	+1.1
LAKA	Lakka	3.11	191		ePB	Pn	22 21 00.7	+1.6
LAKA	Lakka	3.11	191		ePb	Pn	22 21 00.7	+1.6
JMB	Yambol	3.12	67		P	Pn	22 21 00.1	+0.9
JMB	Yambol	3.12	67		P	Pn	22 21 00.1	+0.9
EZN	Ezine	3.13	117		ePN	Pn	22 20 59.6	+0.4
NKY	Niksic	3.15	300	⇓	iPn	Pn	22 21 01.6	+1.9
NKY					eSn	Sn	22 21 41.1	+3.6
NKY	Niksic	3.15	300	⇓	iPn	Pn	22 21 01.6	+1.9
NKY					eSn	Sn	22 21 41.1	+3.6
SIGR	SIGRI	3.19	130		P	Pn	22 21 00.9	+0.8
LPK	Lapseki	3.21	105		ePN	Pn	22 21 01.2	+0.7
LTK	Loutraki	3.28	176		ePN	Pn	22 21 01.9	+0.5
KLV	Kalavryta, Ach	3.28	188		ePN	Pn	22 21 02.0	+0.5
HCY	Herceg Novi	3.35	291	⇑	iPn	Pn	22 21 04.2	+1.9
HCY					eSn	Sn	22 21 45.5	+3.3
HCY	Herceg Novi	3.35	291	⇑	iPn	Pn	22 21 04.2	+1.9
HCY					eSn	Sn	22 21 45.5	+3.3
DJES	Djerdap	3.36	358		ePn	Pn	22 21 02.4	-0.1
PTL	Penteli	3.37	164		P	Pn	22 21 03.1	+0.4
PTL	Penteli	3.37	164		ePN	Pn	22 21 03.0	+0.4
PTL	Penteli	3.37	164		ePn	Pn	22 21 03.0	+0.4
GUR	Goura	3.37	185		P	Pn	22 21 03.0	+0.2
GUR	Goura	3.37	185		ePN	Pn	22 21 03.3	+0.5
RLS	Riolos of Patr	3.38	197		ePN	Pn	22 21 03.9	+1.2
RLS	Riolos of Patr	3.38	197		ePn	Pn	22 21 03.9	+1.2
UPM	Unac-Piva	3.40	305		ePn	Pn	22 21 04.5	+1.3
UPM					eSn	Sn	22 21 45.9	+2.1
UPM	Unac-Piva	3.40	305		ePn	Pn	22 21 04.5	+1.3
UPM					eSn	Sn	22 21 45.9	+2.1
PRK	Paraskevi	3.42	126		P	Pn	22 21 04.0	+0.8
PRK	Paraskevi	3.42	126		ePN	Pn	22 21 04.1	+0.8
ATH	Athens Observa	3.42	166		ePN	Pn	22 21 03.2	0.0
ATH	Athens Observa	3.42	166		ePn	Pn	22 21 03.2	0.0
DIVS	Divibare	3.44	325		P	Pn	22 21 03.8	+0.2
DIVS	Divibare	3.44	325		iPn	Pn	22 21 03.8	+0.2
DIVS	Divibare	3.44	325		P	Pn	22 21 03.8	+0.2
RKY	Sarkoy-Tekirda	3.44	99		ePN	Pn	22 21 04.5	+0.8
SART	Tekirdag	3.44	99		iP	Pn	22 21 05.2	+1.5
SART	Tekirdag	3.44	99		iP	Pn	22 21 05.2	+1.5
BRY	Bratogost	3.49	299	⇑	iPn	Pn	22 21 06.1	+1.7
BRY					eSn	Sn	22 21 48.4	+2.5
BRY	Bratogost	3.49	299	⇑	iPn	Pn	22 21 06.1	+1.7
BRY					eSn	Sn	22 21 48.4	+2.5
MFT	Murefte	3.50	97		ePN	Pn	22 21 05.7	+1.3
BBLS	Lazići	3.54	318		ePn	Pn	22 21 05.6	+0.6
BBLS	Lazići	3.54	318		ePn	Pn	22 21 05.6	+0.6
NAIG	Nisos Aigina	3.59	170		ePN	Pn	22 21 06.1	+0.4
NAIG	Nisos Aigina	3.59	170		ePn	Pn	22 21 06.1	+0.4
KRBG	Karabiga-Canak	3.60	103		ePN	Pn	22 21 06.2	+0.5
HUMR	Humele	3.63	27	⇓	iP	Pn	22 21 06.9	+0.7
HUMR	Humele	3.63	27	⇓	iP	Pn	22 21 06.9	+0.7
AYVA	Ayvalik	3.64	122		iP	Pn	22 21 07.1	+0.8
AYVA	Ayvalik	3.64	122		iP	Pn	22 21 07.1	+0.8
TKR	Tekirdag	3.66	93		ePN	Pn	22 21 07.5	+0.9
MRMT	Marmara Adasi	3.77	99		ePN	Pn	22 21 08.8	+0.6
CRLT	Corlu	3.80	91		ePN	Pn	22 21 09.8	+1.3
DID	Didima	3.81	174		P	Pn	22 21 08.8	0.0
DID	Didima	3.81	174		ePN	Pn	22 21 09.1	+0.3
DID	Didima	3.81	174		P	Pn	22 21 08.8	0.0
CHOS	Chios island	3.89	137		P	Pn	22 21 10.7	+0.9
CHOS	Chios island	3.89	137		ePN	Pn	22 21 10.7	+0.9
CHOS	Chios island	3.89	137		P	Pn	22 21 10.7	+0.9
VLX	Vlachokerasia	3.94	184		P	Pn	22 21 11.4	+0.9
VLX	Vlachokerasia	3.94	184		ePN	Pn	22 21 11.4	+0.9
VLX	Vlachokerasia	3.94	184		P	Pn	22 21 11.4	+0.9
GONE	Gonen-Balikesi	3.99	107		ePN	Pn	22 21 12.1	+1.0
TEKS	Tekeris	4.00	325	⇑	iPn	Pn	22 21 11.1	-0.1
TEKS	Tekeris	4.00	325	⇑	iPn	Pn	22 21 11.1	-0.1
BALY	Balya	4.06	111		iP	Pn	22 21 14.0	+1.9
BALY	Balya	4.06	111		iP	Pn	22 21 14.0	+1.9
SLVT	Silivri	4.15	89		ePN	Pn	22 21 14.7	+1.4
ITM	Ithomi	4.16	189		P	Pn	22 21 16.0	+2.5
ITM	Ithomi	4.16	189		ePN	Pn	22 21 14.7	+1.2
ITM	Ithomi	4.16	189		ePn	Pn	22 21 14.7	+1.2
URLA	Izmir	4.20	133		iP	Pn	22 21 15.0	+1.0
URLA	Izmir	4.20	133		iP	Pn	22 21 15.0	+1.0
LOT	Lotru	4.22	10	⇑	iP	Pn	22 21 14.6	+0.3
LOT	Lotru	4.22	10	⇑	iP	Pn	22 21 14.6	+0.3
BALB	Balikesir	4.28	111		ePN	Pn	22 21 16.2	+1.1
ELBA	Catalca	4.32	90		iP	Pn	22 21 15.0	-0.7
ELBA	Catalca	4.32	90		iP	Pn	22 21 15.0	-0.7
CTKS	Kestanelik-??a	4.37	89		ePN	Pn	22 21 16.7	+0.3
BZS	Buzias	4.38	350	⇑	iP	Pn	22 21 15.9	-0.6
BZS	Buzias	4.38	350	⇑	iP	Pn	22 21 15.9	-0.6
FGSL	Fruska Gora	4.39	332		ePn	Pn	22 21 16.5	-0.2
FRGS	Fruska Gora	4.39	332		ePn	Pn	22 21 16.5	-0.2
KCTX	Karacabey (Bur	4.41	102		ePN	Pn	22 21 18.1	+1.1
BLCB	Balcova	4.43	130		ePN	Pn	22 21 17.9	+0.7
PYL	PYLOS	4.46	190		ePN	Pn	22 21 18.8	+1.1
PYL	PYLOS	4.46	190		ePn	Pn	22 21 18.8	+1.1
VOIR		4.47	22	⇓	iP	Pn	22 21 18.8	+1.0
VOIR		4.47	22	⇓	iP	Pn	22 21 18.8	+1.0
DYR	Agios Nikonas	4.54	184		ePN	Pn	22 21 20.6	+1.8
DYR	Agios Nikonas	4.54	184		ePn	Pn	22 21 20.6	+1.8
IZM	Izmir	4.55	128		ePN	Pn	22 21 20.3	+1.4
BGKT	Bogazkoy	4.58	90		ePN	Pn	22 21 20.7	+1.5
DEV	Deva	4.58	2	⇑	iP	Pn	22 21 22.1	+2.9
DEV	Deva	4.58	2	⇑	iP	Pn	22 21 22.1	+2.9
VLI	Veliai	4.58	178		ePN	Pn	22 21 20.0	+0.7
AKHS	Akhisar	4.61	120		iP	Pn	22 21 19.1	-0.5
AKHS	Akhisar	4.61	120		iP	Pn	22 21 19.1	-0.5
DURS	Dursunbey	4.72	109		iP	Pn	22 21 23.2	+2.0
DURS	Dursunbey	4.72	109		iP	Pn	22 21 23.2	+2.0
ARMT	Armutlu	4.72	97		ePN	Pn	22 21 22.7	+1.5
ISR	Istrita	4.73	35	⇑	iP	Pn	22 21 23.8	+2.4
ISR	Istrita	4.73	35	⇑	iP	Pn	22 21 23.8	+2.4
APE	Apeiranthos	4.76	152		ePN	Pn	22 21 22.5	+0.7
APE	Apeiranthos	4.76	152		ePN	Pn	22 21 22.2	+0.4
APE	Apeiranthos	4.76	152		ePn	Pn	22 21 22.2	+0.4
KLYT	Kilyos	4.78	89		ePN	Pn	22 21 23.2	+1.3
ISK	Istanbul-Kandi	4.80	91		ePN	Pn	22 21 23.7	+1.4
MLR	Muntele Rosu	4.81	28	⇑	iP	Pn	22 21 23.7	+1.2
MLR	Muntele Rosu	4.81	28		Pn	Pn	22 21 24.1	+1.6
	comp=N,0.7nm,0.3s,baz=219,slow=6.5,SNR=32							
MLR					Lg	Lg	22 22 42.7	
	comp=N,0.5nm,0.3s,baz=255,slow=20,SNR=2.4							
MLR	Muntele Rosu	4.81	28	⇑	iP	Pn	22 21 23.7	+1.2
BUY	Buyukada	4.87	93		ePN	Pn	22 21 23.4	+0.2
DOPR	Dopca	5.05	22	⇓	iP	Pn	22 21 28.0	+2.2
DOPR	Dopca	5.05	22	⇓	iP	Pn	22 21 28.0	+2.2
YLV	Yalova	5.10	96		ePN	Pn	22 21 28.7	+2.2
GRER		5.13	36	⇑	iP	Pn	22 21 30.2	+3.4
GRER		5.13	36	⇑	iP	Pn	22 21 30.2	+3.4
KULA	Kula-Manisa	5.36	119		ePN	Pn	22 21 31.4	+1.4
PLOR	Plostina	5.37	31	⇑	iP	Pn	22 21 32.5	+2.3
PLOR	Plostina	5.37	31	⇑	iP	Pn	22 21 32.5	+2.3
ADVT	Abdulvahap	5.40	97		ePN	Pn	22 21 32.2	+1.7
AYDN	Tasoluk	5.41	131		iP	Pn	22 21 32.4	+1.7
AYDN	Tasoluk	5.41	131		iP	Pn	22 21 32.4	+1.7
VRI	Vrincioaia	5.42	31	⇑	iP	Pn	22 21 33.1	+2.3
VRI	Vrincioaia	5.42	31	⇑	iP	Pn	22 21 33.1	+2.3
ANKY	Antikythira Is	5.45	175		ePN	Pn	22 21 31.2	0.0
TVSB	Tavsanli	5.48	108		ePN	Pn	22 21 33.3	+1.6
DRGR		5.49	0	⇓	iP	Pn	22 21 32.8	+1.0
DRGR		5.49	0	⇓	iP	Pn	22 21 32.8	+1.0
PETR	Petresti	5.51	35	⇑	iP	Pn	22 21 34.8	+2.8
PETR	Petresti	5.51	35	⇑	iP	Pn	22 21 34.8	+2.8
GDZ	Gediz	5.64	111		iP	Pn	22 21 35.6	+1.6
GDZ	Gediz	5.64	111		iP	Pn	22 21 35.6	+1.6
PKSM	Moragy	5.72	330	⇑	iP	Pn	22 21 35.2	+0.3
PKSM	Moragy	5.72	330	⇑	ePn	Pn	22 21 35.0	+0.1
PKSM					eSn	Sn	22 22 37.7	-3.0
PKSM	Moragy	5.72	330	⇑	iP	Pn	22 21 35.2	+0.3
PKS2	Kecel	5.77	335	⇓	ePn	Pn	22 21 36.1	+0.6
TLCR		5.91	47	⇓	iP	Pn	22 21 39.0	+1.5
TLCR		5.91	47	⇓	iP	Pn	22 21 39.0	+1.5
TESR	Tescani	5.94	27	⇑	iP	Pn	22 21 39.0	+1.1
TESR	Tescani	5.94	27	⇑	iP	Pn	22 21 39.0	+1.1
GULT	Gulveren	5.99	96		ePN	Pn	22 21 41.1	+2.5
KHAL	Karahalli	5.99	117		iP	Pn	22 21 41.0	+2.3
KHAL	Karahalli	5.99	117		iP	Pn	22 21 41.0	+2.3
KHL	Karahalli	6.03	117		ePN	Pn	22 21 41.1	+1.8
DNZL	Cakiroluk	6.09	124		iP	Pn	22 21 41.2	+1.1
DNZL	Cakiroluk	6.09	124		iP	Pn	22 21 41.2	+1.1
ALT	Altintas	6.10	109		ePN	Pn	22 21 42.1	+1.9
PKS9	Tamasi	6.17	330	⇑	ePn	Pn	22 21 41.6	+0.5
HENT	Hendek	6.21	92		iP	Pn	22 21 41.7	0.0
HENT	Hendek	6.21	92		iP	Pn	22 21 41.7	0.0
SEYT	Eskypehyr	6.47	103		iP	Pn	22 21 47.0	+1.7
SEYT	Eskypehyr	6.47	103		iP	Pn	22 21 47.0	+1.7
BURAR	Bucovina Array	6.56	15	⇓	iP	Pn	22 21 47.8	+1.3
BURAR	Bucovina Array	6.56	15	⇓	iP	Pn	22 21 47.8	+1.3
NVLJ	Novalja	6.61	302		iPn	Pn	22 21 48.2	+1.1
NVLJ					Sn	Sn	22 23 02.5	0.0
SHUT	Suhut-Afyon	6.63	112		ePN	Pn	22 21 49.2	+1.8
PKSG		6.83	335		ePN	Pn	22 21 50.0	-0.1
PKST	T˜˜s	6.83	332	⇑	ePn	Pn	22 21 50.8	+0.6
PKST					eSn	Sn	22 23 06.7	-1.4
BOJS	Bojanci	6.86	310		iPn	Pn	22 21 52.7	+2.2
BOJS	Bojanci	6.86	310		Pn	Pn	22 21 52.7	+2.2
PSZ	Piszkesteto	6.91	344		ePn	Pn	22 21 51.3	0.0
PSZ					eSn	Sn	22 23 09.3	-0.8
GROS	Grobnik	7.32	317		iPn	Pn	22 21 57.8	+0.8
GROS	Grobnik	7.32	317		iPn	Pn	22 21 57.8	+0.8
KIZT	Kizilcal	7.44	106		eP	Pn	22 22 00.4	+1.7
SKDS	Skadanscina	7.61	307		iPn	Pn	22 22 01.8	+0.8
SKDS					iSn	Sn	22 23 21.0	-6.3
SKDS	Skadanscina	7.61	307		iPn	Pn	22 22 01.8	+0.8
KOLS	Kolonicke sedl	7.64	358		ePN	Pn	22 22 02.1	+0.9
KOLS					ePG	Pg	22 22 40.7	+4.8
KOLS					eSN	Sn	22 23 13.9	-14
KOLS					eSG	Sg	22 24 12.6	-2.1
CRVS	Cervenica-Dubn	7.65	354		ePN	Pn	22 22 03.7	+2.3
CRVS	Cervenica-Dubn	7.65	354		ePn	Pn	22 22 03.7	+2.3
CRVS					eSg	Sg	22 24 13.8	-1.3
VYHS	Vyhne	7.70	340		ePN	Pn	22 22 03.2	+1.2
VYHS					eSN	Sn	22 23 20.0	-9.3
VYHS					eSG	Sg	22 24 15.1	-1.5
VYHS	Vyhne	7.70	340		ePn	Pn	22 22 03.2	+1.2
SOKA	Soboth	7.71	317	⇓	iPn	Pn	22 22 03.4	+1.1
SOKA	Soboth	7.71	317		Pn	Pn	22 22 03.4	+1.1
SOP	Sopron	7.74	328		ePn	Pn	22 22 03.0	+0.3
SOP					eSn	Sn	22 23 32.3	+1.8
JAVS	Javornik	7.77	309		iPn	Pn	22 22 05.0	+1.9
JAVS	Javornik	7.77	309		iPn	Pn	22 22 05.0	+1.9
JAVS					iSn	Sn	22 23 35.3	+4.1
ARSA	Arzberg	7.87	322	⇑	iPn	Pn	22 22 05.6	+1.2
ARSA	Arzberg	7.87	322		Pn	Pn	22 22 05.6	+1.2
VOY	Vojsko	7.94	309		ePn	Pn	22 22 07.1	+1.6
VOY					e		22 22 30.3	
VOY	Vojsko	7.94	309		ePn	Pn	22 22 07.1	+1.6
ZST	Bratislava	7.96	332		ePN	Pn	22 22 05.8	+0.2
ZST	Bratislava	7.96	332		ePn	Pn	22 22 05.8	+0.2
SMOL	Smolenice	8.12	334		ePN	Pn	22 22 08.9	+1.0
SMOL	Smolenice	8.12	334		ePn	Pn	22 22 08.9	+1.0
BRTR	Keskin Array B	8.48	97		Pn	Pn	22 22 14.4	+1.5
	comp=N,0.1nm,0.3s,baz=266,slow=13,SNR=3.2							
BRTR					Sn	Sn	22 23 46.7	-2.1
	comp=N,0.1nm,0.3s,baz=279,slow=23,SNR=2.6							
VRAC	Vranov	9.09	334		LR	LR	22 26 12.7	
	comp=N,31nm,19.2s,baz=34,slow=40							
TREC	Trest	9.47	330		ePN	Pn	22 22 26.8	+0.5
TREC					eSN	Sn	22 24 07.9	-5.0
TREC	Trest	9.47	330		Pn	Pn	22 22 26.8	+0.5
GERES	GERESS Array B	9.86	323		Pn	Pn	22 22 33.2	+1.4
	comp=N,0.3nm,0.3s,baz=154,slow=13,SNR=15							
KHC	Kasperske Hory	10.13	324		ePN	Pn	22 22 36.4	+1.0
KHC					eSN	Sn	22 24 40.0	+11
KHC	Kasperske Hory	10.13	324		Pn	Pn	22 22 36.4	+1.0
PGF	Pioggiola	10.29	281		eP	Pn	22 22 38.6	+0.9
	comp=N,12nm,1.1s							
DAVOX	Davos/Dischmat	10.73	305		Pn	Pn	22 22 43.7	-0.1
	comp=N,0.5nm,0.3s,baz=134,slow=16,SNR=5.0							
DAVOX					LR	LR	22 27 29.6	
	comp=N,53nm,18.4s,baz=88,slow=41							
FRF	La Foret Royal	12.08	286		eP	Pn	22 23 01.1	-1.0
FRF	La Foret Royal	12.08	286		eP	Pn	22 23 01.1	-1.0
LPG	La Plagne	12.34	295		eP	Pn	22 23 05.6	-0.2
LPG	La Plagne	12.34	295		eP	Pn	22 23 05.6	-0.2
ORIF	Oris-en-Rattie	12.81	292		eP	Pn	22 23 12.4	+0.2
ORIF	Oris-en-Rattie	12.81	292		eP	Pn	22 23 12.4	+0.2
HINF	Hinteralfeld	13.03	305		eP	Pn	22 23 14.9	-0.2
	comp=N,1.7nm,0.5s							
HINF	Hinteralfeld	13.03	305		eP	Pn	22 23 14.9	-0.2
	comp=N,1.0nm,0.5s							
CDF	Champ du Feu	13.04	308		eP	Pn	22 23 15.2	0.0
CDF	Champ du Feu	13.04	308		eP	Pn	22 23 15.2	0.0
CABF	La Chapelle	13.09	299		eP	Pn	22 23 15.6	-0.3
CABF	La Chapelle	13.09	299		eP	Pn	22 23 15.6	-0.3
HAU	Haudompre	13.42	305		eP	Pn	22 23 19.8	-0.6
HAU	Haudompre	13.42	305		eP	Pn	22 23 19.8	-0.6
VIVF	Saint-Julien-l	13.65	291		eP	Pn	22 23 22.3	-1.2
	comp=N,35nm,1.6s							
VIVF	Saint-Julien-l	13.65	291		eP	Pn	22 23 22.3	-1.2
	comp=N,35nm,1.6s							
SFTF	Sexfontaines	14.31	305		eP	Pn	22 23 33.4	+0.9
	comp=N,6.0nm,0.6s							
SMF	Signal de Mont	14.58	298		eP	Pn	22 23 34.2	-2.1
LOR	Lormes	14.74	300		eP	Pn	22 23 37.9	-0.5
SSF	Saint Saulge	14.91	299		eP	Pn	22 23 39.7	-1.1
	comp=N,5.2nm,0.8s							
AVF	Avril sur Loir	14.95	298		eP	Pn	22 23 40.7	-0.4
MTLF	Montolieu	15.29	284		eP	Pn	22 23 46.2	+0.4
RJF	Les Rejaudoux	15.93	292		eP	P	22 23 56.3	-1.4
RJF	Les Rejaudoux	15.93	292		eP	P	22 23 56.3	-1.4
LFF	La Frestale	16.43	290		eP	Pn	22 24 01.8	+1.3
FINES	FINESS Array B	20.27	5		P	P	22 24 44.6	-0.8
	comp=N,0.9nm,0.8s,baz=158,slow=12,SNR=5.3							
ESDC	Sonseca Array	20.32	274		P	P	22 24 45.5	-0.7
	comp=N,0.5nm,0.7s,baz=79,slow=11,SNR=4.8							
NB2	NORSAR Subarra	20.97	344		P	P	22 24 52.8	-0.3
	comp=Z,2.4nm,1.2s,baz=155,slow=11							
NB2	NORSAR Subarra	20.97	344		P	P	22 24 52.8	-0.3
	comp=Z,2.4nm,1.2s,baz=155,slow=11,SNR=3.9							
NOA	NORSAR Array B	20.97	344		P	P	22 24 53.4	+0.3
	comp=Z,1.0nm,0.7s,baz=157,slow=9.0,SNR=4.2							
NOA					LR	LR	22 32 09.1	
	comp=Z,12nm,18.3s,baz=185,slow=34							
EKA	Eskdalemuir Ar	22.03	318		P	P	22 25 04.9	+0.5
	comp=Z,1.3nm,0.8s,baz=120,slow=9.4,SNR=3.6							
ARCES	ARCESS Array B	28.34	2		P	P	22 26 02.9	-0.7
	comp=Z,1.9nm,1.0s,baz=185,slow=9.7,SNR=4.4							
ARCES					LR	LR	22 38 18.9	
	comp=Z,33nm,18.0s,baz=257,slow=38							
TORD	Torodi Ar. Bea	33.51	219		P	P	22 26 49.8	0.0
	comp=Z,1.0nm,0.7s,baz=27,slow=9.5,SNR=11							
MKAR	Makanchi Array	42.28	62		P	P	22 28 04.5	+0.9
	comp=Z,0.4nm,0.5s,baz=287,slow=7.0,SNR=6.1							
ZALV	Zalesovo Beam	42.38	51		P	P	22 28 04.9	+0.7
	comp=Z,1.1nm,0.5s,baz=263,slow=10,SNR=6.0							
PALK	Pallekele	61.39	107		LR	LR	22 59 49.0	
	comp=Z,61nm,18.8s,baz=94,slow=39							
YKA	Yellowknife Ar	71.02	341		P	P	22 31 28.0	+0.5
	comp=Z,0.2nm,0.5s,baz=33,slow=5.8,SNR=4.2							

*SKO **24** 22:24:39.1, 41°.37N×22°.72E, h15km, M1.5, ML2.0*
*CSEM **24** 22:24:40.5±0.8, 41°.27N×22°.75E, h2km, ML2.0, Error ellipse: s-maj=22.6km s-min=9.2km az=1.0*

SOF 24 22:24:39.9, 41°.28N×22°.78E, h2km, MD2.6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY				*i* Sg	Sg	22 24 44.7	-0.5
VAY				*e* Lg	Lg	22 24 44.8	
	comp=E,851nm,0.4s						
VAY				*e* Lg	Lg	22 24 44.9	
	comp=N,1μm,0.5s						
VAY	**Valandovo**	**0.16**	**285**	*e* Pg	Pg	22 24 43.1	0.0
VAY				*i* Sg	Sg	22 24 45.2	0.0
VAY				*e* Lg	Lg	22 24 45.3	
	comp=N,1μm,0.5s						
KKB	**Krupnik**	**0.63**	**21**	*i* Pg	Pg	22 24 52.2	+0.2
KKB	**Krupnik**	**0.63**	**21**	*i* Pg	Pg	22 24 52.2	+0.2
MMB	**Musomiste**	**0.78**	**66**	*i* Pg	Pg	22 24 55.3	+0.4
MMB	**Musomiste**	**0.78**	**66**	*i* Pg	Pg	22 24 55.3	+0.4
VTS	**Vitosha**	**1.35**	**14**	*i* Pg	Pb	22 25 08.0	+1.9
VTS	**Vitosha**	**1.35**	**14**	*i* Pg	Pb	22 25 08.0	+1.9
RZN	**Rozhen**	**1.51**	**74**	*i* P	Pg	22 25 09.9	+0.8
RZN	**Rozhen**	**1.51**	**74**	*i* P	Pg	22 25 09.9	+0.8

SKO 24 22:31:25.6, 41°.31N×22°.71E, h0km, M0.2, ML0.6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**276**	*e* Pg	Pg	22 31 27.4	-0.3
VAY				*e* Sg	Sg	22 31 29.2	+0.1
VAY				*e* Lg	Lg	22 31 29.3	
	comp=E,28nm,0.4s						
VAY				*e* Lg	Lg	22 31 29.4	
	comp=N,37nm,0.2s						

IDC 24 22:45:33.6±2.3, 0.73N×96.98E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.6/24, mbtmp3.8/7, Error ellipse: s-maj=74.1km s-min=21.5km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.98**	**121**	P	P	22 53 26.6	-0.2
	0.4nm,0.4s,baz=302,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**43.29**	**127**	P	P	22 53 37.5	0.0
	0.3nm,0.5s,baz=300,slow=8.2,SNR=5.1						
KSRS	**Korea Array**	**46.35**	**34**	P	P	22 54 01.3	-0.3
	0.4nm,0.3s,baz=219,slow=9.4

SKO				*e*Lg	Lg	22 47 34.0			
	comp=E,326nm,1.0s								
SKO	**Skopje**	**1.17**	**307**	*e*Pg	**Pg**	**22 47 16.4**	**0.0**		
SKO	**Skopje**	**1.17**	**307**	P	**Pn**	**22 47 17.0**	**-0.1**		
SKO				*e*Sg	**Sg**	**22 47 31.8**	**+0.3**		
SKO				*e*Lg	Lg	22 47 34.5			
	comp=E,326nm,1.0s								
LIT	**Litokhoron**	**1.18**	**187**	P	**Pg**	**22 47 15.3**	**-1.4**		
LIT	**Litokhoron**	**1.18**	**187**	P	**Pg**	**22 47 15.3**	**-1.4**		
KZN	**Kozani**	**1.19**	**216**	*e*PN	**Pg**	**22 47 15.9**	**-0.9**		
KZN	**Kozani**	**1.19**	**216**	*e*Pn	**Pg**	**22 47 15.9**	**-0.9**		
OUR	**Ouranopolis**	**1.36**	**133**	P	**Pn**	**22 47 19.4**	**-0.3**		
OUR				S	**Sn**	**22 47 38.4**	**+0.3**		
OUR	**Ouranopolis**	**1.36**	**133**	P	**Pn**	**22 47 19.4**	**-0.3**		
OUR				S	**Sn**	**22 47 38.4**	**+0.3**		
VTS	**Vitosha**	**1.37**	**16**	P	**Pn**	**22 47 19.4**	**-0.6**		
VTS				S	**Sb**	**22 47 37.6**	**-0.6**		
VTS	**Vitosha**	**1.37**	**16**	⇓*i*Pg	**Pn**	**22 47 19.4**	**-0.6**		
VTS				*e*Sg	**Sb**	**22 47 37.3**	**-0.9**		
VTS	**Vitosha**	**1.37**	**16**	⇓*i*P	**Pn**	**22 47 19.6**	**-0.4**		
VTS	**Vitosha**	**1.37**	**16**	*i* P	**Pn**	**22 47 19.2**	**-0.8**		
VTS	**Vitosha**	**1.37**	**16**	P	**Pn**	**22 47 19.4**	**-0.6**		
VTS				*e*Sg	**Sb**	**22 47 37.3**	**-0.9**		
VTS				S	**Sb**	**22 47 37.6**	**-0.6**		
KAVA	**Kavala**	**1.41**	**101**	P	**Pn**	**22 47 19.4**	**-0.9**		
KAVA				S	**Sg**	**22 47 39.4**	**+0.2**		
KAVA	**Kavala**	**1.41**	**101**	P	**Pn**	**22 47 19.4**	**-0.9**		
KAVA				S	**Sg**	**22 47 39.4**	**+0.2**		
NEST	**Nestorio**	**1.51**	**236**	P	**Pn**	**22 47 21.5**	**-0.4**		
NEST	**Nestorio**	**1.51**	**236**	P	**Pn**	**22 47 21.5**	**-0.4**		
PAIG	**Paliouri**	**1.54**	**150**	P	**Pn**	**22 47 21.6**	**-0.6**		
PAIG				S	**Sn**	**22 47 42.5**	**-0.1**		
PAIG	**Paliouri**	**1.54**	**150**	*e*PN	**Pn**	**22 47 21.4**	**-0.8**		
PAIG	**Paliouri**	**1.54**	**150**	P	**Pn**	**22 47 21.6**	**-0.6**		
PAIG				S	**Sn**	**22 47 42.5**	**-0.1**		
KBN	**Korca**	**1.58**	**246**	*i* PN	**Pn**	**22 47 22.3**	**-0.5**		
KBN				*i* SN	**Sg**	**22 47 48.5**	**+3.8**		
KBN	**Korca**	**1.58**	**246**	P	**Pn**	**22 47 22.3**	**-0.5**		
KBN				S	**Sn**	**22 47 43.1**	**-0.6**		
KBN	**Korca**	**1.58**	**246**	P	**Pn**	**22 47 22.3**	**-0.5**		
KBN				S	**Sn**	**22 47 43.1**	**-0.6**		
KBN				*i* Sn	**Sg**	**22 47 48.5**	**+3.8**		
RZN	**Rozhen**	**1.58**	**74**	*i* P	**Pn**	**22 47 22.8**	**-0.1**		
RZN	**Rozhen**	**1.58**	**74**	*i* P	**Pn**	**22 47 22.8**	**-0.1**		
BARS	**Barje**	**1.67**	**337**	⇓*i*Pn	**Pn**	**22 47 23.3**	**-0.7**		
BARS				*e*Sn	**Sb**	**22 47 46.8**	**+0.1**		
BARS	**Barje**	**1.67**	**337**	⇓*i*Pn	**Pn**	**22 47 23.3**	**-0.7**		
BARS				*e*Sn	**Sb**	**22 47 46.8**	**+0.1**		
PGB	**Panagyurishte**	**1.69**	**40**	*e*P	**Pn**	**22 47 24.7**	**+0.4**		
PGB	**Panagyurishte**	**1.69**	**40**	*e*P	**Pn**	**22 47 24.7**	**+0.4**		
PLD	**Plovdiv**	**1.72**	**61**	P	**Pn**	**22 47 24.6**	**-0.1**		
PLD	**Plovdiv**	**1.72**	**61**	⇓*i*Pn	**Pn**	**22 47 24.7**	**0.0**		
PLD	**Plovdiv**	**1.72**	**61**	*i* P	**Pb**	**22 47 25.5**	**-0.7**		
PLD	**Plovdiv**	**1.72**	**61**	⇓*i*Pn	**Pn**	**22 47 24.7**	**0.0**		
PHP	**Peshkopia**	**1.74**	**284**	*i* SN	**Pn**	**22 47 25.2**	**+0.2**		
PHP				*i* SN	**Sb**	**22 47 48.2**	**-0.4**		
PHP	**Peshkopia**	**1.74**	**284**	P	**Pn**	**22 47 24.6**	**-0.4**		
PHP				S	**Sn**	**22 47 47.6**	**+0.1**		
PHP	**Peshkopia**	**1.74**	**284**	P	**Pn**	**22 47 24.6**	**-0.4**		
PHP				S	**Sn**	**22 47 47.6**	**+0.1**		
PHP				*i* Sn	**Sb**	**22 47 48.2**	**-0.4**		
THL	**Klokotos Trika**	**1.78**	**197**	P	**Pn**	**22 47 24.7**	**-0.8**		
THL	**Klokotos Trika**	**1.78**	**197**	*e*PN	**Pn**	**22 47 24.9**	**-0.6**		
THL	**Klokotos Trika**	**1.78**	**197**	*e*Pn	**Pn**	**22 47 24.9**	**-0.6**		
XOR	**Xorichti**	**1.94**	**168**	P	**Pn**	**22 47 26.8**	**-1.0**		
XOR	**Xorichti**	**1.94**	**168**	P	**Pn**	**22 47 26.8**	**-1.0**		
ZAPS	**Zavoj**	**2.00**	**359**	⇓*i*Pn	**Pn**	**22 47 29.3**	**+0.8**		
NEO	**Neokhori**	**2.01**	**168**	*e*PB	**Pn**	**22 47 27.5**	**-1.1**		
NEO	**Neokhori**	**2.01**	**168**	*e*Pb	**Pn**	**22 47 27.5**	**-1.1**		
KDZ	**Kurdzhali**	**2.09**	**79**	*i* P	**Pn**	**22 47 28.7**	**-1.0**		
KDZ	**Kurdzhali**	**2.09**	**79**	*i* P	**Pn**	**22 47 28.7**	**-1.0**		
TIR	**Tirane**	**2.13**	**273**	*i* PN	**Pb**	**22 47 33.1**	**0.0**		
TIR				*i* SN	**Sg**	**22 48 03.2**	**+0.9**		
TIR	**Tirane**	**2.13**	**273**	*i* Pn	**Pb**	**22 47 33.1**	**0.0**		
JAN	**Janina**	**2.14**	**222**	P	**Pn**	**22 47 30.7**	**+0.3**		
JAN	**Janina**	**2.14**	**222**	*e*PB	**Pn**	**22 47 30.6**	**+0.2**		
JAN	**Janina**	**2.14**	**222**	P	**Pn**	**22 47 30.7**	**+0.3**		
PUK	**Puka**	**2.23**	**291**	*i* PN	**Pn**	**22 47 32.2**	**+0.4**		
PUK				*i* SN	**Sg**	**22 48 07.7**	**+2.0**		
PUK	**Puka**	**2.23**	**291**	*i* Pn	**Pn**	**22 47 32.2**	**+0.4**		
BCI	**Bajram Curri**	**2.24**	**300**	*i* PN	**Pn**	**22 47 31.8**	**-0.1**		
BCI				*i* SN	**Sg**	**22 48 08.5**	**+2.5**		
BCI	**Bajram Curri**	**2.24**	**300**	*i* Pn	**Pn**	**22 47 31.8**	**-0.1**		
AGG	**Agios Georgios**	**2.27**	**187**	P	**Pn**	**22 47 31.9**	**-0.3**		
AGG	**Agios Georgios**	**2.27**	**187**	*e*PN	**Pn**	**22 47 31.1**	**-1.1**		
AGG	**Agios Georgios**	**2.27**	**187**	*e*Pn	**Pn**	**22 47 31.1**	**-1.1**		
AGG	**Agios Georgios**	**2.27**	**187**	P	**Pn**	**22 47 31.9**	**-0.3**		
SELS	**Selova**	**2.27**	**330**	*e*Pn	**Pn**	**22 47 31.1**	**-1.1**		
DIM	**Dimitrovgrad**	**2.27**	**69**	*i* P	**Pn**	**22 47 32.6**	**+0.4**		
DIM	**Dimitrovgrad**	**2.27**	**69**	*i* P	**Pn**	**22 47 32.6**	**+0.4**		
AOS	**Alonnisos**	**2.29**	**156**	P	**Pn**	**22 47 31.1**	**-1.4**		
AOS	**Alonnisos**	**2.29**	**156**	*e*PN	**Pn**	**22 47 31.2**	**-1.3**		
AOS	**Alonnisos**	**2.29**	**156**	*e*Pn	**Pn**	**22 47 31.2**	**-1.3**		
MAKR	**Makrakomi, Fth**	**2.30**	**191**	P	**Pn**	**22 47 32.7**	**+0.1**		
MAKR	**Makrakomi, Fth**	**2.30**	**191**	P	**Pn**	**22 47 32.7**	**+0.1**		
SMTH	**Samothraki Isl**	**2.30**	**109**	*e*PN	**Pn**	**22 47 31.5**	**-1.2**		
SMTH	**Samothraki Isl**	**2.30**	**109**	*e*Pn	**Pn**	**22 47 31.5**	**-1.2**		
LIA	**Limnos Island**	**2.35**	**125**	*e*PN	**Pn**	**22 47 32.5**	**-0.7**		
LIA	**Limnos Island**	**2.35**	**125**	*e*Pn	**Pn**	**22 47 32.5**	**-0.7**		
PVY	**Plav**	**2.43**	**304**	⇑*i*Pn	**Pn**	**22 47 35.3**	**+0.8**		
PVY				*e*Sn	**Sb**	**22 48 08.8**	**+0.3**		
SMIA	**Simia**	**2.43**	**170**	P	**Pn**	**22 47 34.3**	**-0.1**		
SMIA	**Simia**	**2.43**	**170**	P	**Pn**	**22 47 34.3**	**-0.1**		
EVR	**Evrytania**	**2.45**	**196**	*e*PB	**Pn**	**22 47 34.9**	**+0.1**		
EVR	**Evrytania**	**2.45**	**196**	*e*Pb	**Pn**	**22 47 34.9**	**+0.1**		
IGT	**Igoumenitsa**	**2.50**	**227**	P	**Pn**	**22 47 36.9**	**+1.5**		
IGT	**Igoumenitsa**	**2.50**	**227**	P	**Pn**	**22 47 36.9**	**+1.5**		
ALN	**Alexandroupoli**	**2.57**	**97**	P	**Pn**	**22 47 35.7**	**-0.6**		
ALN	**Alexandroupoli**	**2.57**	**97**	*e*PN	**Pn**	**22 47 35.5**	**-0.8**		
ALN	**Alexandroupoli**	**2.57**	**97**	P	**Pn**	**22 47 35.7**	**-0.6**		
BOLS	**Boljevac**	**2.61**	**348**	*e*Sg	**Sb**	**22 48 15.5**	**+1.8**		
BOLS	**Boljevac**	**2.61**	**348**	*e*Sg	**Sb**	**22 48 15.5**	**+1.8**		
BEY	**Berane**	**2.62**	**308**	⇓*i*Pn	**Pn**	**22 47 38.3**	**+1.1**		
BEY				*e*Sn	**Sb**	**22 48 14.2**	**+0.1**		
IVA	**Berane**	**2.62**	**308**	⇓*i*Pn	**Pn**	**22 47 38.3**	**+1.1**		
IVA				*e*Sn	**Sb**	**22 48 14.2**	**+0.1**		
ULC	**Ulcinj**	**2.67**	**286**	⇑*i*Pn	**Pn**	**22 47 39.7**	**+1.9**		
ULC				*e*Sn	**Sb**	**22 48 14.8**	**-0.7**		
ULC	**Ulcinj**	**2.67**	**286**	⇑*i*Pn	**Pn**	**22 47 39.7**	**+1.9**		
ULC				*e*Sn	**Sb**	**22 48 14.8**	**-0.7**		
ENEZ	**Enez**	**2.68**	**100**	*e*PN	**Pn**	**22 47 37.6**	**-0.2**		
KEK	**Kerkira**	**2.70**	**236**	P	**Pn**	**22 47 39.3**	**+1.2**		
KEK	**Kerkira**	**2.70**	**236**	*e*PB	**Pn**	**22 47 39.1**	**+1.0**		
KEK	**Kerkira**	**2.70**	**236**	P	**Pn**	**22 47 39.3**	**+1.2**		
PDG	**Podgorica**	**2.81**	**295**	⇓*i*Pn	**Pn**	**22 47 41.6**	**+1.9**		
PDG				*e*Sn	**Sb**	**22 48 18.4**	**-1.1**		
TTG	**Podgorica**	**2.81**	**295**	⇓*i*Pn	**Pn**	**22 47 41.6**	**+1.9**		
TTG				*e*Sn	**Sb**	**22 48 18.4**	**-1.1**		
EFP	**Efpalio**	**2.91**	**192**	*e*PN	**Pn**	**22 47 41.1**	**+0.1**		
EFP	**Efpalio**	**2.91**	**192**	*e*Pn	**Pn**	**22 47 41.1**	**+0.1**		
KALE	**Kalithea**	**2.91**	**189**	P	**Pn**	**22 47 41.0**	**-0.1**		
KALE	**Kalithea**	**2.91**	**189**	*e*PN	**Pn**	**22 47 40.6**	**-0.5**		
KALE	**Kalithea**	**2.91**	**189**	*e*Pn	**Pn**	**22 47 40.6**	**-0.5**		
KALE	**Kalithea**	**2.91**	**189**	P	**Pn**	**22 47 41.0**	**-0.1**		
LKD2	**Lefkada island**	**2.93**	**213**	P	**Pn**	**22 47 42.4**	**+1.1**		
LKD2	**Lefkada island**	**2.93**	**213**	*e*PB	**Pn**	**22 47 42.0**	**+0.7**		
LKD2	**Lefkada island**	**2.93**	**213**	*e*Pb	**Pn**	**22 47 42.0**	**+0.7**		
LKD2	**Lefkada island**	**2.93**	**213**	P	**Pn**	**22 47 42.4**	**+1.1**		
TRIZ	**Trizonia**	**2.94**	**189**	P	**Pn**	**22 47 42.0**	**+0.5**		
TRIZ	**Trizonia**	**2.94**	**189**	*e*PN	**Pn**	**22 47 41.3**	**-0.2**		
TRIZ	**Trizonia**	**2.94**	**189**	*e*Pn	**Pn**	**22 47 41.3**	**-0.2**		
TRIZ	**Trizonia**	**2.94**	**189**	P	**Pn**	**22 47 42.0**	**+0.5**		
ERIK	**Erikli-Kesan**	**2.96**	**100**	*e*PN	**Pn**	**22 47 41.8**	**+0.2**		
GRUS	**Gruza**	**2.99**	**332**	*e*Pn	**Pn**	**22 47 41.1**	**-1.0**		
GRUS	**Gruza**	**2.99**	**332**	*e*Pn	**Pn**	**22 47 41.1**	**-1.0**		
GELI	**Tayfur-Gelibol**	**3.00**	**106**	*e*PN	**Pn**	**22 47 41.8**	**-0.5**		
BUM	**Brajici-Budva**	**3.02**	**291**	⇑*i*Pn	**Pn**	**22 47 45.0**	**+2.4**		
BUM				*e*Sn	**Sb**	**22 48 22.8**	**-2.6**		
BUM	**Brajici-Budva**	**3.02**	**291**	⇑*i*Pn	**Pn**	**22 47 45.0**	**+2.4**		
BUM				*e*Sn	**Sb**	**22 48 22.8**	**-2.6**		
LAKA	**Lakka**	**3.08**	**190**	P	**Pn**	**22 47 44.0**	**+0.6**		
LAKA	**Lakka**	**3.08**	**190**	*e*PN	**Pn**	**22 47 43.9**	**+0.6**		
LAKA	**Lakka**	**3.08**	**190**	*e*Pn	**Pn**	**22 47 43.9**	**+0.6**		
EDRB	**Edirne**	**3.10**	**78**	*e*PN	**Pn**	**22 47 44.2**	**+0.6**		
SZH	**Strazhica**	**3.12**	**49**	*i* P	**Pn**	**22 47 44.6**	**+0.6**		
SZH	**Strazhica**	**3.12**	**49**	*i* P	**Pn**	**22 47 44.6**	**+0.6**		
EZN	**Ezine**	**3.13**	**116**	*e*PN	**Pn**	**22 47 43.3**	**-0.7**		
JMB	**Yambol**	**3.14**	**66**	P	**Pn**	**22 47 44.5**	**+0.3**		
JMB	**Yambol**	**3.14**	**66**	P	**Pn**	**22 47 44.5**	**+0.3**		
NKY	**Niksic**	**3.15**	**300**	⇑*i*Pn	**Pn**	**22 47 46.6**	**+2.2**		
NKY				*e*Sn	**Sb**	**22 48 26.6**	**-2.8**		
NKY	**Niksic**	**3.15**	**300**	⇑*i*Pn	**Pn**	**22 47 46.6**	**+2.2**		
NKY				*e*Sn	**Sb**	**22 48 26.6**	**-2.8**		
SVIS	**Svilajnac**	**3.18**	**341**	*e*Pn	**Pn**	**22 47 43.4**	**-1.3**		
SIGR	**SIGRI**	**3.18**	**129**	P	**Pn**	**22 47 45.2**	**+0.5**		
SIGR	**SIGRI**	**3.18**	**129**	P	**Pn**	**22 47 45.2**	**+0.5**		
LPK	**Lapseki**	**3.22**	**105**	*e*PN	**Pn**	**22 47 45.1**	**-0.2**		
KLV	**Kalavryta, Ach**	**3.25**	**187**	*e*PN	**Pn**	**22 47 45.8**	**0.0**		
KLV	**Kalavryta, Ach**	**3.25**	**187**	*e*Pn	**Pn**	**22 47 45.8**	**0.0**		
GUR	**Goura**	**3.34**	**185**	*e*PN	**Pn**	**22 47 47.2**	**+0.1**		
GUR	**Goura**	**3.34**	**185**	*e*Pn	**Pn**	**22 47 47.2**	**+0.1**		
HCY	**Herceg Novi**	**3.34**	**292**	*e*Pn	**Pn**	**22 47 48.8**	**+1.8**		
HCY				*e*Sn	**Sn**	**22 48 30.8**	**+3.7**		
HCY	**Herceg Novi**	**3.34**	**292**	*e*Pn	**Pn**	**22 47 48.8**	**+1.8**		
HCY				*e*Sn	**Sn**	**22 48 30.8**	**+3.7**		
PTL	**Penteli**	**3.35**	**164**	*e*PN	**Pn**	**22 47 46.5**	**-0.6**		
PTL	**Penteli**	**3.35**	**164**	*e*Pn	**Pn**	**22 47 46.5**	**-0.6**		
RLS	**Riolos of Patr**	**3.35**	**197**	*e*PB	**Pn**	**22 47 48.7**	**+1.7**		
ATH	**Athens Observa**	**3.39**	**166**	*e*PN	**Pn**	**22 47 47.6**	**0.0**		
ATH	**Athens Observa**	**3.39**	**166**	*e*Pn	**Pn**	**22 47 47.6**	**0.0**		
UPM	**Unac-Piva**	**3.41**	**306**	⇓*i*Pn	**Pn**	**22 47 49.4**	**+1.4**		
UPM				*e*Sn	**Sb**	**22 48 33.0**	**-3.8**		
UPM	**Unac-Piva**	**3.41**	**306**	⇓*i*Pn	**Pn**	**22 47 49.4**	**+1.4**		
UPM				*e*Sn	**Sb**	**22 48 33.0**	**-3.8**		
PRK	**Paraskevi**	**3.41**	**125**	P	**Pn**	**22 47 48.7**	**+0.8**		
PRK	**Paraskevi**	**3.41**	**125**	*e*PN	**Pn**	**22 47 48.5**	**+0.6**		
PRK	**Paraskevi**	**3.41**	**125**	*e*Pn	**Pn**	**22 47 48.5**	**+0.6**		
RKY	**Sarkoy-Tekirda**	**3.45**	**98**	*e*PN	**Pn**	**22 47 49.0**	**+0.5**		
DIVS	**Divibare**	**3.45**	**326**	P	**Pn**	**22 47 47.9**	**-0.7**		
DIVS	**Divibare**	**3.45**	**326**	⇓*i*Pn	**Pn**	**22 47 47.7**	**-0.9**		
DIVS	**Divibare**	**3.45**	**326**	P	**Pn**	**22 47 47.9**	**-0.7**		
BRY	**Bratogost**	**3.49**	**299**	*e*Pn	**Pn**	**22 47 50.9**	**+1.8**		
BRY				*e*Sn	**Sn**	**22 48 34.5**	**+3.6**		
BRY	**Bratogost**	**3.49**	**299**	*e*Pn	**Pn**	**22 47 50.9**	**+1.8**		
BRY				*e*Sn	**Sn**	**22 48 34.5**	**+3.6**		
VLS	**Valsamata**	**3.49**	**208**	*e*PN	**Pn**	**22 47 50.2**	**+1.2**		
VLS	**Valsamata**	**3.49**	**208**	*e*Pn	**Pn**	**22 47 50.2**	**+1.2**		
MFT	**Murefte**	**3.51**	**96**	*e*PN	**Pn**	**22 47 50.1**	**+0.7**		
BBLS	**Lazići**	**3.55**	**318**	*e*Pn	**Pn**	**22 47 50.3**	**+0.4**		
BBLS	**Lazići**	**3.55**	**318**	*e*Pn	**Pn**	**22 47 50.3**	**+0.4**		
NAIG	**Nisos Aigina**	**3.56**	**170**	*e*PN	**Pn**	**22 47 50.2**	**+0.2**		
NAIG	**Nisos Aigina**	**3.56**	**170**	*e*Pn	**Pn**	**22 47 50.2**	**+0.2**		
KRBG	**Karabiga-Canak**	**3.61**	**103**	*e*PN	**Pn**	**22 47 50.8**	**+0.2**		
HUMR	**Humele**	**3.66**	**27**	⇓*i*P	**Pn**	**22 47 50.8**	**-0.6**		
HUMR	**Humele**	**3.66**	**27**	⇓*i*P	**Pn**	**22 47 50.8**	**-0.6**		
TKR	**Tekirdag**	**3.67**	**93**	*e*PN	**Pn**	**22 47 52.3**	**+0.8**		
MRMT	**Marmara Adasi**	**3.78**	**99**	*e*PN	**Pn**	**22 47 53.3**	**+0.3**		
DID	**Didima**	**3.79**	**173**	P	**Pn**	**22 47 53.0**	**-0.1**		
DID	**Didima**	**3.79**	**173**	P	**Pn**	**22 47 52.8**	**-0.3**		
DID	**Didima**	**3.79**	**173**	P	**Pn**	**22 47 53.0**	**-0.1**		
CRLT	**Corlu**	**3.81**	**91**	*e*PN	**Pn**	**22 47 54.4**	**+0.9**		
CHOS	**Chios island**	**3.88**	**137**	*e*PN	**Pn**	**22 47 53.7**	**-0.7**		
CHOS	**Chios island**	**3.88**	**137**	*e*Pn	**Pn**	**22 47 53.7**	**-0.7**		
VLX	**Vlachokerasia**	**3.91**	**184**	P	**Pn**	**22 47 56.2**	**+1.4**		
VLX	**Vlachokerasia**	**3.91**	**184**	*e*PN	**Pn**	**22 47 55.6**	**+0.8**		
VLX	**Vlachokerasia**	**3.91**	**184**	*e*Pn	**Pn**	**22 47 55.6**	**+0.8**		
VLX	**Vlachokerasia**	**3.91**	**184**	P	**Pn**	**22 47 56.2**	**+1.4**		
GONE	**Gonen-Balikesi**	**4.00**	**106**	*e*PN	**Pn**	**22 47 56.1**	**+0.2**		
PE1	**Pezze di Greco**	**4.01**	**265**	*e*Pn	**Pn**	**22 47 57.3**	**+1.2**		
BNT	**Bandirma**	**4.08**	**101**	*e*PN	**Pn**	**22 47 57.3**	**+0.3**		
ITM	**Ithomi**	**4.13**	**188**	*e*PN	**Pn**	**22 48 00.2**	**+2.4**		
ITM	**Ithomi**	**4.13**	**188**	*e*Pn	**Pn**	**22 48 00.2**	**+2.4**		
SLVT	**Silivri**	**4.16**	**89**	*e*PN	**Pn**	**22 47 59.4**	**+1.2**		
BALB	**Balikesir**	**4.29**	**111**	*e*PN	**Pn**	**22 47 59.7**	**-0.2**		
MTUR	**Matau**	**4.31**	**23**	⇑*i*P	Pn	22 47 56.0	-4.4		
MTUR	**Matau**	**4.31**	**23**	⇑*i*P	Pn	22 47 56.0	-4.4		
CTKS	**Kestanelik-??a**	**4.39**	**89**	*e*PN	**Pn**	**22 48 02.4**	**+1.1**		
BZS	**Buzias**	**4.41**	**350**	⇑*i*P	**Pn**	**22 48 00.2**	**-1.4**		
BZS	**Buzias**	**4.41**	**350**	⇑*i*P	**Pn**	**22 48 00.2**	**-1.4**		
KCTX	**Karacabey (Bur**	**4.42**	**101**	*e*PN	**Pn**	**22 48 01.8**	**0.0**		
BLCB	**Balcova**	**4.42**	**129**	*e*PN	**Pn**	**22 48 01.2**	**-0.6**		
PYL	**PYLOS**	**4.43**	**190**	*e*PN	**Pn**	**22 48 02.8**	**+0.8**		
PYL	**PYLOS**	**4.43**	**190**	*e*Pn	**Pn**	**22 48 02.8**	**+0.8**		
SECR		**4.50**	**32**	⇓*i*P	**Pg**	**22 48 21.2**	**+1.0**		
VOIR		**4.50**	**22**	⇑*i*P	**Pn**	**22 48 02.9**	**-0.1**		
VOIR		**4.50**	**22**	⇑*i*P	**Pn**	**22 48 02.9**	**-0.1**		
DYR	**Agios Nikonas**	**4.51**	**184**	*e*PN	**Pn**	**22 48 04.4**	**+1.3**		
DYR	**Agios Nikonas**	**4.51**	**184**	*e*Pn	**Pn**	**22 48 04.4**	**+1.3**		
IZM	**Izmir**	**4.54**	**128**	*e*PN	**Pn**	**22 48 02.4**	**-1.1**		
VLI	**Veliai**	**4.55**	**177**	P	**Pn**	**22 48 03.5**	**-0.2**		
VLI	**Veliai**	**4.55**	**177**	*e*PN	**Pn**	**22 48 03.4**	**-0.2**		
VLI	**Veliai**	**4.55**	**177**	P	**Pn**	**22 48 03.5**	**-0.2**		
BGKT	**Bogazkoy**	**4.59**	**89**	*e*PN	**Pn**	**22 48 05.4**	**+1.3**		
DEV	**Deva**	**4.61**	**2**	⇑*i*P	Pn	22 48 08.5	+4.1		
DEV	**Deva**	**4.61**	**2**	⇑*i*P	Pn	22 48 08.5	+4.1		
ARMT	**Armutlu**	**4.73**	**97**	*e*PN	**Pn**	**22 48 07.2**	**+1.1**		
APE	**Apeiranthos**	**4.75**	**151**	*e*PN	**Pn**	**22 48 05.3**	**-1.0**		
APE	**Apeiranthos**	**4.75**	**151**	*e*PN	**Pn**	**22 48 05.7**	**-0.6**		
APE	**Apeiranthos**	**4.75**	**151**	*e*Pn	**Pn**	**22 48 05.7**	**-0.6**		
KLYT	**Kilyos**	**4.79**	**88**	*e*PN	**Pn**	**22 48 08.1**	**+1.3**		
ISK	**Istanbul-Kandi**	**4.81**	**90**	*e*PN	**Pn**	**22 48 08.4**	**+1.2**		
DST	**Dursunbey**	**4.82**	**108**	*e*PN	**Pn**	**22 48 07.8**	**+0.4**		
MLR	**Muntele Rosu**	**4.84**	**28**	⇑*i*P	**Pn**	**22 48 08.1**	**+0.5**		
MLR	**Muntele Rosu**	**4.84**	**28**	Pn	**Pn**	**22 48 08.0**	**+0.3**		
	comp=E,0.6nm,0.3s,baz=167,slow=5.4,SNR=28								
MLR				Lg	Lg	22 49 29.7			
	comp=E,1.0nm,0.3s,baz=266,slow=18,SNR=7.5								
MLR	**Muntele Rosu**	**4.84**	**28**	⇑*i*P	**Pn**	**22 48 08.1**	**+0.5**		
BUY	**Buyukada**	**4.88**	**93**	*e*PN	**Pn**	**22 48 07.7**	**-0.4**		
KYTH	**Kithira**	**4.99**	**177**	*e*PN	**Pn**	**22 48 10.7**	**+1.0**		
KYTH	**Kithira**	**4.99**	**177**	*e*Pn	**Pn**	**22 48 10.7**	**+1.0**		
GEMT	**Gemlik**	**5.00**	**98**	*e*PN	**Pn**	**22 48 10.9**	**+1.1**		
HARR	**Harsova**	**5.14**	**47**	⇑*i*P	**Pn**	**22 48 11.9**	**+0.2**		
HARR	**Harsova**	**5.14**	**47**	⇑*i*P	**Pn**	**22 48 11.9**	**+0.2**		
GRER		**5.16**	**36**	⇓*i*P	**Pn**	**22 48 14.2**	**+2.3**		
GRER		**5.16**	**36**	⇓*i*P	**Pn**	**22 48 14.2**	**+2.3**		
SILT	**Sile**	**5.25**	**89**	*e*PN	**Pn**	**22 48 14.6**	**+1.4**		
KULA	**Kula-Manisa**	**5.36**	**119**	*e*PN	**Pn**	**22 48 14.9**	**+0.1**		
PLOR	**Plostina**	**5.41**	**31**	⇓*i*P	**Pn**	**22 48 16.4**	**+1.1**		
PLOR	**Plostina**	**5.41**	**31**	⇓*i*P	**Pn**	**22 48 16.4**	**+1.1**		
VRI	**Vrincioaia**	**5.45**	**31**	⇑*i*P	**Pn**	**22 48 17.1**	**+1.2**		
VRI	**Vrincioaia**	**5.45**	**31**	⇑*i*P	**Pn**	**22 48 17.1**	**+1.2**		
TVSB	**Tavsanli**	**5.49**	**107**	*e*PN	**Pn**	**22 48 16.9**	**+0.3**		
DRGR		**5.52**	**0**	⇑*i*P	**Pn**	**22 48 17.4**	**+0.5**		
DRGR		**5.52**	**0**	⇑*i*P	**Pn**	**22 48 17.4**	**+0.5**		
PKSM	**Moragy**	**5.74**	**331**	⇓*i*P	**Pn**	**22 48 19.0**	**-0.8**		
PKSM	**Moragy**	**5.74**	**331**	⇓*e*Pn	**Pn**	**22 48 19.1**	**-0.8**		
PKSM	**Moragy**	**5.74**	**331**	⇓*i*P	**Pn**	**22 48 19.0**	**-0.8**		
PKS6	**Bocsa**	**5.78**	**338**	*e*Pn	**Pn**	**22 48 22.3**	**+1.9**		
PKS2	**Kecel**	**5.79**	**335**	⇓*e*Pn	**Pn**	**22 48 19.6**	**-0.9**		
TLCR		**5.94**	**47**	⇓*i*P	**Pn**	**22 48 22.8**	**+0.1**		
TLCR		**5.94**	**47**	⇓*i*P	**Pn**	**22 48 22.8**	**+0.1**		
TESR	**Tescani**	**5.97**	**27**	⇑*i*P	**Pn**	**22 48 23.8**	**+0.8**		
TESR	**Tescani**	**5.97**	**27**	⇑*i*P	**Pn**	**22 48 23.8**	**+0.8**		
GULT	**Gulveren**	**6.00**	**95**	*e*PN	**Pn**	**22 48 24.3**	**+0.8**		
YER	**Yerkesik**	**6.00**	**132**	*e*PN	**Pn**	**22 48 23.1**	**-0.4**		
KHL	**Karahalli**	**6.03**	**117**	*e*PN	**Pn**	**22 48 23.9**	**-0.1**		
ALT	**Altintas**	**6.10**	**109**	*e*PN	**Pn**	**22 48 25.1**	**+0.1**		
PKS9	**Tamasi**	**6.19**	**331**	*e*Pn	**Pn**	**22 48 28.7**	**+2.6**		
ESKT	**Eskisehir**	**6.47**	**103**	*e*PN	**Pn**	**22 48 29.7**	**-0.4**		
MDUB	**Mudurnu**	**6.50**	**94**	*e*PN	**Pn**	**22 48 31.1**	**+0.7**		
NVLJ	**Novalja**	**6.61**	**302**	*e*Pn	**Pn**	**22 48 31.8**	**-0.1**		
NVLJ	**Novalja**	**6.61**	**302**	*e*

KDZ	Kurdzhali	2.06	79	*i* P	Pn	22 54 20.7	+0.9
AGG	Agios Georgios	2.28	188	*e*PN	Pn	22 54 22.4	-0.5
AGG	Agios Georgios	2.28	188	*e*Pn	Pn	22 54 22.4	-0.5
SMTH	Samothraki Isl	2.28	110	*e*PN	Pn	22 54 22.5	-0.4
SMTH	Samothraki Isl	2.28	110	*e*Pn	Pn	22 54 22.5	-0.4
AOS	Alonnisos	2.29	157	*e*PN	Pn	22 54 22.2	-0.9
AOS	Alonnisos	2.29	157	*e*Pn	Pn	22 54 22.2	-0.9
LIA	Limnos Island	2.33	126	*e*PN	Pn	22 54 23.2	-0.4
LIA	Limnos Island	2.33	126	*e*Pn	Pn	22 54 23.2	-0.4
EVR	Evrytania	2.47	197	*e*PB	Pn	22 54 26.3	+0.7
EVR	Evrytania	2.47	197	*e*Pb	Pn	22 54 26.3	+0.7
ALN	Alexandroupoli	2.54	98	P	Pn	22 54 26.7	+0.2
ALN	Alexandroupoli	2.54	98	*e*PN	Pn	22 54 26.4	-0.1
ALN	Alexandroupoli	2.54	98	*e*Pn	Pn	22 54 26.4	-0.1
ALN	Alexandroupoli	2.54	98	P	Pn	22 54 26.7	+0.2
BOLS	Boljevac	2.60	348	*e*Pn	Pn	22 54 28.0	+0.7
BOLS				*e*Sg	Sb	22 55 05.8	+1.9
BOLS	Boljevac	2.60	348	*e*Pn	Pn	22 54 28.0	+0.7
BOLS				*e*Sg	Sb	22 55 05.8	+1.9
PVL	Pavlikeni	2.73	44	*i* P	Pg	22 54 36.8	-0.6
EFP	Efpalio	2.93	193	*e*PN	Pn	22 54 31.7	0.0
EFP	Efpalio	2.93	193	*e*Pn	Pn	22 54 31.7	0.0
KALE	Kalithea	2.93	189	*e*PN	Pn	22 54 32.5	+0.7
KALE	Kalithea	2.93	189	*e*Pn	Pn	22 54 32.5	+0.7
LKD2	Lefkada island	2.96	213	*e*PB	Pn	22 54 34.0	+1.8
LKD2	Lefkada island	2.96	213	*e*Pb	Pn	22 54 34.0	+1.8
GRUS	Gruza	2.99	331	*e*Pn	Pn	22 54 32.1	-0.5
GRUS	Gruza	2.99	331	*e*Pn	Pn	22 54 32.1	-0.5
SVIS	Svilajnac	3.17	340	*e*Sg	Sg	22 55 26.8	-0.1
DIVS	Divibare	3.45	325	*e*Pn	Pn	22 54 38.7	-0.4
DIVS	Divibare	3.45	325	*e*Pn	Pn	22 54 38.7	-0.4
BBLS	Lazići	3.55	318	*e*Pn	Pn	22 54 41.4	+1.0
BBLS	Lazići	3.55	318	*e*Pn	Pn	22 54 41.4	+1.0
BZS	Buzias	4.40	350	⇑*i*P	Pn	22 54 51.4	-0.6
BZS	Buzias	4.40	350	⇑*i*P	Pn	22 54 51.4	-0.6
MLR	Muntele Rosu	4.81	28	⇓*i*P	Pn	22 55 01.5	+3.7
MLR	Muntele Rosu	4.81	28	⇓*i*P	Pn	22 55 01.5	+3.7
PLOR	Plostina	5.38	31	⇑*i*P	Pn	22 55 07.3	+1.8
PLOR	Plostina	5.38	31	⇑*i*P	Pn	22 55 07.3	+1.8
VRI	Vrincioaia	5.42	31	⇑*i*P	Pn	22 55 07.9	+1.8
VRI	Vrincioaia	5.42	31	⇑*i*P	Pn	22 55 07.9	+1.8

*ISCJB **24** 22:57:21.7±0.6, 41°.25N±0°.04×22°.74E±0°.04, h1km±8km, Error ellipse: s-maj=6.4km s-min=4.6km az=172.0*
*SKO **24** 22:57:21.7, 41°.29N×22°.73E, h15km, M1.4, ML1.8*
*SOF **24** 22:57:21.1, 41°.25N×22°.75E, h14km, MD2.6*
*ATH **24** 22:57:22.3, 41°.31N×22°.73E, h6km±1km, MD3.4/7*
*CSEM **24** 22:57:22.4±0.2, 41°.29N×22°.76E, h2km, ML1.7, Error ellipse: s-maj=4.1km s-min=3.1km az=176.0*

ISC 24 22:57:22.2±0.9, **41°.27N**±0°.03×**22°.74E**±0°.02, **h9**km±7km, **n28,σ0°39/40, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**291**	*i* Pg	**Pg**	**22 57 25.0**	**-0.2**
VAY				*i* Sg	**Sg**	**22 57 27.1**	**-0.2**
VAY				*e*Lg	Lg	22 57 27.2	
	comp=E,455nm,0.2s						
VAY				*e*Lg	Lg	22 57 27.4	
	comp=N,403nm,0.2s						
VAY	**Valandovo**	**0.13**	**291**	*i* Pg	**Pg**	**22 57 25.5**	**+0.2**
VAY				*i* Sg	**Sg**	**22 57 27.6**	**+0.2**
VAY				*e*Lg	Lg	22 57 27.8	
	comp=N,403nm,0.2s						
GRG	**Griva**	**0.41**	**219**	*e*PB	**Pg**	**22 57 30.6**	**+0.4**
GRG				*e*SB	**Sb**	**22 57 36.9**	**-0.9**
GRG	**Griva**	**0.41**	**219**	*e*Pb	**Pg**	**22 57 30.6**	**+0.4**
GRG				*e*Sb	**Sb**	**22 57 36.9**	**-0.9**
KKB	**Krupnik**	**0.65**	**24**	*i* Pg	**Pg**	**22 57 34.6**	**-0.2**
KKB	**Krupnik**	**0.65**	**24**	*i* Pg	**Pg**	**22 57 34.6**	**-0.2**
SOH	**Sokhos**	**0.65**	**134**	*e*PG	**Pg**	**22 57 35.1**	**+0.3**
SOH				*e*SB	**Sb**	**22 57 44.5**	**-0.4**
SOH	**Sokhos**	**0.65**	**134**	*e*Pg	**Pg**	**22 57 35.1**	**+0.3**
SOH				*e*Sb	**Sb**	**22 57 44.5**	**-0.4**
MMB	**Musomiste**	**0.81**	**67**	*i* Pg	**Pg**	**22 57 37.4**	**-0.4**
MMB	**Musomiste**	**0.81**	**67**	*i* Pg	**Pg**	**22 57 37.4**	**-0.4**
NVR	**Nevrokopi**	**0.85**	**84**	*e*PB	**Pg**	**22 57 38.7**	**+0.1**
NVR				*e*SB	**Sb**	**22 57 50.4**	**-0.3**
NVR	**Nevrokopi**	**0.85**	**84**	*e*Pb	**Pg**	**22 57 38.7**	**+0.1**
NVR				*e*Sb	**Sb**	**22 57 50.4**	**-0.3**
PLG	**Polygyros**	**1.05**	**149**	*e*PG	**Pb**	**22 57 42.5**	**0.0**
PLG	**Polygyros**	**1.05**	**149**	*e*Pg	**Pg**	**22 57 42.5**	**0.0**
BIA	**Bitola**	**1.10**	**257**	*e*Pg	**Pg**	**22 57 43.4**	**+0.1**
BIA				*e*Sg	**Sg**	**22 57 57.3**	**-0.2**
BIA	**Bitola**	**1.10**	**257**	*e*Pg	**Pg**	**22 57 43.3**	**+0.1**
BIA				*e*Sg	**Sg**	**22 57 57.3**	**-0.2**
FNA	**Florina**	**1.14**	**245**	*e*PG	**Pg**	**22 57 43.7**	**-0.4**
FNA	**Florina**	**1.14**	**245**	*e*Pg	**Pg**	**22 57 43.7**	**-0.4**
SKO	**Skopje**	**1.20**	**306**	*e*Pg	**Pn**	**22 57 45.3**	**+0.2**
SKO				*e*Sg	**Sn**	**22 58 02.3**	**+0.9**
SKO				*e*Lg	Lg	22 58 02.7	
	comp=N,13nm,0.6s						
SKO				*e*Lg	Lg	22 58 04.2	
	comp=E,14nm,0.7s						
SKO	**Skopje**	**1.20**	**306**	*e*Pg	**Pn**	**22 57 45.7**	**+0.6**
SKO				*e*Lg	Lg	22 58 01.6	
	comp=E,14nm,0.7s						
SKO				*e*Sg	**Sn**	**22 58 01.8**	**+0.3**
VTS	**Vitosha**	**1.36**	**15**	*i* P	**Pn**	**22 57 47.8**	**+0.3**
VTS	**Vitosha**	**1.36**	**15**	*i* P	**Pn**	**22 57 47.8**	**+0.3**
RZN	**Rozhen**	**1.54**	**74**	*i* P	**Pg**	**22 57 51.8**	**0.0**
RZN	**Rozhen**	**1.54**	**74**	*i* P	**Pg**	**22 57 51.8**	**0.0**
THL	**Klokotos Trika**	**1.79**	**198**	*e*PN	**Pg**	**22 57 56.3**	**-0.3**
THL	**Klokotos Trika**	**1.79**	**198**	*e*Pn	**Pg**	**22 57 56.3**	**-0.3**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*PN	**Pn**	**22 57 59.9**	**+0.1**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*Pn	**Pn**	**22 57 59.9**	**+0.1**

NDI 24 22:59:42.3±2.1, **34°.19N**×**73°.33E, h10**km, **ML2.8, 2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLH	**Dalhousie**	**2.75**	**126**	*e*PKP	Pn	23 00 27.0	+0.2
DLH				*e*S	Sn	23 01 00.0	-0.3
SMLA	**Simla**	**4.45**	**132**	*i* P	Pn	23 00 49.5	-0.4
SMLA				*i* S	Sn	23 01 37.6	-4.1
AYAN	**Aya Nagar**	**6.55**	**149**	*e*S	Sn	23 02 29.4	-4.0
AYAN				AML	AML	23 02 45.9	
	comp=Z,19nm,0.1s						
KUDL	**Kundal**	**6.61**	**155**	*e*S	Sn	23 02 29.3	-5.5
KUDL				AML	AML	23 02 34.0	
	comp=N,6.8nm,0.1s						
KUDL				AML	AML	23 02 38.7	
	comp=E,6.3nm,0.2s						
TKM2	**Tokmak 2**	**8.90**	**11**	⇑P	Pn	23 02 04.8	+14
	comp=E,1.4nm,0.7s						
KK31	**Karatay Array**	**9.17**	**347**	P	Pn	23 01 59.4	+4.7
	comp=E,0.2nm,0.2s,baz=173,slow=12,SNR=22						
KK31				⇑S	Sn	23 03 39.0	+1.1
	comp=E,0.4nm,0.4s,baz=174,slow=22,SNR=5.5						

*SKO **24** 23:00:52.6, 41°.36N×22°.70E, h19km, M1.7, ML2.0*
*ISCJB **24** 23:00:53.1±1.0, 41°.26N±0°.04×22°.76E±0°.04, h3km±9km, Error ellipse: s-maj=6.9km s-min=5.3km az=157.5*
*ATH **24** 23:00:54.5, 41°.27N×22°.70E, h17km±3km, MD3.1/6*
*BEO **24** 23:00:54.1±0.7, 41°.26N×22°.69E, h1km±3km, ML1.9/5*
*CSEM **24** 23:00:54.0±0.2, 41°.27N×22°.74E, h5km, ML1.9, Error ellipse: s-maj=5.8km s-min=4.8km az=61.0*

ISC 24 23:00:54.0±0.9, **41°.27N**±0°.03×**22°.71E**±0°.03, **h8**km±7km, **n25,σ0°51/39, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**299**	*i* Pg	**Pg**	**23 00 56.4**	**-0.3**
VAY				*e*Lg	Lg	23 00 58.2	
	comp=E,515nm,0.5s						
VAY				*i* Sg	**Sg**	**23 00 58.2**	**-0.3**
VAY				*e*Lg	Lg	23 00 58.3	
	comp=N,2μm,0.2s						
VAY	**Valandovo**	**0.12**	**299**	*i* Pg	**Pg**	**23 00 56.8**	**+0.1**
VAY				*i* Sg	**Sg**	**23 00 58.7**	**+0.2**
VAY				*e*Lg	Lg	23 00 58.7	
	comp=N,2μm,0.2s						
GRG	**Griva**	**0.39**	**217**	*e*PB	**Pg**	**23 01 02.1**	**+0.6**
GRG				*e*SB	**Sb**	**23 01 08.2**	**-1.0**
GRG	**Griva**	**0.39**	**217**	*e*Pb	**Pg**	**23 01 02.1**	**+0.6**
GRG				*e*Sb	**Sb**	**23 01 08.2**	**-1.0**
SOH	**Sokhos**	**0.66**	**132**	*e*PB	**Pg**	**23 01 07.2**	**+0.5**
SOH				*e*SN	**Sb**	**23 01 16.9**	**-0.2**
SOH	**Sokhos**	**0.66**	**132**	*e*Pb	**Pg**	**23 01 07.2**	**+0.5**
SOH				*e*Sn	**Sb**	**23 01 16.9**	**-0.2**
NVR	**Nevrokopi**	**0.87**	**84**	*e*PN	**Pb**	**23 01 11.4**	**0.0**
NVR	**Nevrokopi**	**0.87**	**84**	*e*Pn	**Pb**	**23 01 11.4**	**0.0**
PLG	**Polygyros**	**1.05**	**148**	*e*PN	**Pg**	**23 01 14.5**	**+0.3**
PLG				*e*SN	**Sn**	**23 01 29.5**	**-0.4**
PLG	**Polygyros**	**1.05**	**148**	*e*Pn	**Pg**	**23 01 14.5**	**+0.3**
PLG				*e*Sn	**Sn**	**23 01 29.5**	**-0.4**
FNA	**Florina**	**1.11**	**245**	*e*PN	**Pn**	**23 01 15.8**	**-0.2**
FNA	**Florina**	**1.11**	**245**	*e*Pn	**Pn**	**23 01 15.8**	**-0.2**
VTS	**Vitosha**	**1.38**	**16**	*e*Pn	**Pb**	**23 01 20.2**	**+0.1**
VTS				*e*Sg	**Sn**	**23 01 38.0**	**-0.2**
VTS	**Vitosha**	**1.38**	**16**	*e*Pn	**Pb**	**23 01 20.2**	**+0.1**
VTS				*e*Sg	**Sn**	**23 01 38.0**	**-0.2**
PAIG	**Paliouri**	**1.53**	**151**	*e*PN	**Pb**	**23 01 23.0**	**+0.5**
PAIG	**Paliouri**	**1.53**	**151**	*e*Pn	**Pb**	**23 01 23.0**	**+0.5**
BARS	**Barje**	**1.69**	**337**	*e*Pn	**Pn**	**23 01 24.2**	**+0.4**
BARS				*e*Sg	**Sn**	**23 01 45.7**	**+0.1**
BARS	**Barje**	**1.69**	**337**	*e*Pn	**Pn**	**23 01 24.2**	**+0.4**
BARS				*e*Sg	**Sn**	**23 01 45.7**	**+0.1**
PLD	**Plovdiv**	**1.71**	**60**	*e*Pn	**Pn**	**23 01 24.1**	**0.0**
PLD				*e*Sg	**Sg**	**23 01 48.6**	**-0.5**
PLD	**Plovdiv**	**1.71**	**60**	*e*Pn	**Pn**	**23 01 24.1**	**0.0**
PLD				*e*Sg	**Sg**	**23 01 48.6**	**-0.5**
ZAPS	**Zavoj**	**2.01**	**358**	*e*Pn	**Pb**	**23 01 30.9**	**+0.1**
GRUS	**Gruza**	**3.01**	**331**	*e*Pn	**Pn**	**23 01 43.3**	**+1.4**
GRUS	**Gruza**	**3.01**	**331**	*e*Pn	**Pn**	**23 01 43.3**	**+1.4**
DIVS	**Divibare**	**3.47**	**326**	*e*Pn	**Pn**	**23 01 48.2**	**-0.1**
DIVS	**Divibare**	**3.47**	**326**	*e*Pn	**Pn**	**23 01 48.2**	**-0.1**

*IDC **24** 23:08:41.3±2.9, 29°.33N×140°.66E, h0km, mb3.6/3, mb1 3.6/5, mb1mx3.3/26, mbtmp3.6/5, ML3.2/2, Error ellipse: s-maj=131.9km s-min=25.1km az=81.0*
*JMA **24** 23:08:41.7±0.1, 29°.66N×141°.77E, h19km, M3.9*
*ISCJB **24** 23:08:43.3±0.7, 29°.68N±0°.06×141°.7E±0°.2, h46km, mb3.6/4, Error ellipse: s-maj=30.6km s-min=4.7km az=167.5*

ISC 24 23:08:45.2±1.1, **29°.61N**±0°.08×**141°.6E**±0°.3, **h46**km, **n13,σ0°70/20, mb3.6/4, 1C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.56**	**168**	P	**Pn**	**23 09 23.7**	**-0.5**
CBIJ				*e*S	**Sn**	**23 09 55.0**	**+0.9**
JHJ2	**Mitsune**	**3.81**	**337**	P	**Pn**	**23 09 41.4**	**+0.1**
JHJ2				S	**Sn**	**23 10 25.9**	**+1.1**
JHJ	**Hachijo jima 2**	**3.83**	**336**	P	**Pn**	**23 09 41.5**	**-0.1**
	4.2nm,0.3s,baz=228,slow=18,SNR=2.4						
JHJ				Sn	**Sn**	**23 10 25.1**	**-0.2**
	7.2nm,0.3s,baz=252,slow=20,SNR=2.9						
BSO1	**Boso 1**	**5.05**	**354**	P	**Pn**	**23 09 58.1**	**+0.2**
BSO1				*e*S	**Sn**	**23 10 53.9**	**-0.8**
BSO3	**Boso 3**	**5.26**	**350**	P	**Pn**	**23 10 02.0**	**+1.1**
BSO4	**Boso 4**	**5.47**	**349**	P	**Pn**	**23 10 04.5**	**+0.5**
BSO4				*e*S	**Sn**	**23 11 06.3**	**+0.8**
JRY	**Ryogami san**	**6.78**	**341**	P	**Pn**	**23 10 22.7**	**+0.6**
JRY				*e*S	**Sn**	**23 11 37.2**	**-0.8**
JAG	**Ashikaga**	**7.03**	**346**	P	**Pn**	**23 10 25.5**	**0.0**
JAG				*e*S	**Sn**	**23 11 43.0**	**-1.1**
MJAR	**Matsushiro Arr**	**7.47**	**338**	Pn	**Pn**	**23 10 32.2**	**+0.6**
	0.4nm,0.3s,baz=166,slow=12,SNR=4.5						
WRA	**Warramunga Arr**	**49.76**	**189**	P	**P**	**23 17 32.6**	**-0.6**
	0.1nm,0.3s,baz=6.8,slow=7.9,SNR=8.2						
BVAR	**Borovoye Array**	**55.86**	**316**	P	**P**	**23 18 17.8**	**-0.1**
	0.4nm,0.6s,baz=88,slow=7.6,SNR=3.7						
AB31	**Akbulak array**	**62.99**	**313**	⇑P	**P**	**23 19 06.7**	**-0.5**
	0.3nm,0.5s,baz=82,slow=6.4,SNR=4.2						
BRTR	**Keskin Array B**	**83.93**	**312**	P	**P**	**23 21 11.2**	**+0.6**
	0.5nm,0.8s,baz=42,slow=4.5,SNR=3.8						

*ISK **24** 23:21:18.6, 40°.65N×36°.79E, h5km, MD3.3*
*DDA **24** 23:21:18.7, 40°.60N×36°.81E, h2km, MD3.3*
*ISCJB **24** 23:21:19.3±0.5, 40°.63N±0°.04×36°.79E±0°.03, h5km±4km, Error ellipse: s-maj=6.6km s-min=4.0km az=19.9*
*CSEM **24** 23:21:19.2±0.1, 40°.64N×36°.78E, h5km, MD3.3, Error ellipse: s-maj=4.9km s-min=2.7km az=21.0*

ISC 24 23:21:19.6±0.9, **40°.63N**±0°.03×**36°.78E**±0°.02, **h8**km±6km, **n33,σ0°57/47, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERBA	**Erbaa**	**0.06**	**342**	*i* P	**Pg**	**23 21 21.1**	**-0.3**
ERBA				*i* S	**Sg**	**23 21 22.7**	**0.0**
ERBA	**Erbaa**	**0.06**	**342**	*i* P	**Pg**	**23 21 21.1**	**-0.3**
ERBA				*i* S	**Sg**	**23 21 22.7**	**0.0**
TOKA	**Tokat**	**0.38**	**217**	*i* P	**Pg**	**23 21 26.3**	**-0.7**
TOKA				*i* S	**Sg**	**23 21 32.6**	**+0.6**
TOKA	**Tokat**	**0.38**	**217**	*i* P	**Pg**	**23 21 26.3**	**-0.7**
TOKA				*i* S	**Sg**	**23 21 32.6**	**+0.6**
RSDY	**Resadiye-TOKAT**	**0.48**	**119**	*e*PG	**Pg**	**23 21 28.2**	**-0.7**
RSDY				*e*SG	**Sg**	**23 21 35.0**	**-0.1**
RSDY	**Resadiye-TOKAT**	**0.48**	**119**	*e*Pg	**Pg**	**23 21 28.2**	**-0.7**
RSDY				*e*Sg	**Sg**	**23 21 35.0**	**-0.1**
KVT	**Kavak**	**0.71**	**309**	*e*PG	**Pg**	**23 21 32.9**	**-0.4**
KVT				*e*SG	**Sg**	**23 21 43.0**	**+0.3**
KVT	**Kavak**	**0.71**	**309**	*e*Pg	**Pg**	**23 21 32.9**	**-0.4**
KVT				*e*Sg	**Sg**	**23 21 43.0**	**+0.3**
SUSE	**Susehri**	**1.17**	**111**	*e*P	**Pg**	**23 21 40.8**	**-1.1**
SUSE				*e*S	**Sg**	**23 21 56.9**	**-0.2**
SUSE	**Susehri**	**1.17**	**111**	*e*P	**Pg**	**23 21 40.8**	**-1.1**
SUSE				*e*S	**Sg**	**23 21 56.9**	**-0.2**
YOZ	**Yozgat**	**1.49**	**229**	*e*PN	**Pn**	**23 21 47.2**	**+0.4**
YOZ	**Yozgat**	**1.49**	**229**	*e*Pn	**Pn**	**23 21 47.2**	**+0.4**
ESPY	**Espiye-Giresun**	**1.51**	**78**	*e*PN	**Pn**	**23 21 46.9**	**-0.1**
CTKT	**Corum**	**1.51**	**270**	*i* P	**Pn**	**23 21 46.1**	**-1.0**
CTKT				*i* S	**Sb**	**23 22 07.8**	**+0.4**
CTKT	**Corum**	**1.51**	**270**	*i* P	**Pn**	**23 21 46.1**	**-1.0**
CTKT				*i* S	**Sb**	**23 22 07.8**	**+0.4**
DIKM	**Dikmen**	**1.54**	**312**	*e*PN	**Pn**	**23 21 47.2**	**-0.1**
DIKM	**Dikmen**	**1.54**	**312**	*e*Pn	**Pn**	**23 21 47.2**	**-0.1**
CORM	**Corum**	**1.70**	**255**	*e*PN	**Pn**	**23 21 50.0**	**+0.4**
CORM	**Corum**	**1.70**	**255**	*e*Pn	**Pn**	**23 21 50.0**	**+0.4**
BYBT	**Boyabat**	**1.74**	**300**	*e*PN	**Pn**	**23 21 50.1**	**+0.1**
BYBT	**Boyabat**	**1.74**	**300**	*e*Pn	**Pn**	**23 21 50.1**	**+0.1**
ILIC	**ilic-Erzincan**	**1.81**	**130**	*e*PN	**Pn**	**23 21 51.3**	**+0.2**
BNN	**Bunyan**	**1.91**	**202**	*e*PN	**Pn**	**23 21 53.0**	**+0.4**
BNN	**Bunyan**	**1.91**	**202**	*e*Pn	**Pn**	**23 21 53.0**	**+0.4**
KELT	**Kelkit**	**1.95**	**103**	*e*P	**Pn**	**23 21 54.0**	**+0.8**
KELT				*i* S	**Sg**	**23 22 23.5**	**+1.1**
KELT	**Kelkit**	**1.95**	**103**	*e*P	**Pn**	**23 21 54.0**	**+0.8**
GUMT	**Gumushane**	**2.07**	**94**	*e*PN	**Pn**	**23 21 55.3**	**+0.6**
DARE	**Darende-Malaty**	**2.13**	**165**	*e*PN	**Pn**	**23 21 56.0**	**+0.5**
DARE	**Darende-Malaty**	**2.13**	**165**	*e*Pn	**Pn**	**23 21 56.0**	**+0.5**
AVNT	**Avonos**	**2.37**	**219**	*e*P	**Pb**	**23 22 02.6**	**0.0**
AVNT				*i* S	**Sg**	**23 22 35.4**	**-0.3**
BAYT	**Ayd¨–ntepe-Bay**	**2.58**	**94**	*e*PN	**Pn**	**23 22 02.5**	**+0.8**
PTK	**Pertek**	**2.66**	**130**	*e*PN	**Pn**	**23 22 03.5**	**+0.6**
PTK	**Pertek**	**2.66**	**130**	*e*Pn	**Pn**	**23 22 03.5**	**+0.6**

IDC 24 23:29:56.2±2.0, **30°.33S**×**178°.25W, h0**km, **mb4.0**/4, **mb1 4.2**/4, **mb1mx3.9**/19, **mbtmp4.0**/4, **Error ellipse: s-maj=56.7km s-min=34.2km az=41.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.89**	**267**	P	P	23 37 56.9	+0.1
	1.1nm,0.7s,baz=110,slow=7.9,SNR=9.9						
WRA	**Warramunga Arr**	**43.88**	**272**	P	P	23 38 05.0	+0.4
	2.8nm,0.7s,baz=114,slow=7.7,SNR=19						
FITZ	**Fitzroy Crossi**	**52.14**	**270**	P	P	23 39 07.8	-0.9
	1.3nm,0.7s,baz=108,slow=3.2,SNR=2.9						
QSPA	**South Pole Qui**	**59.78**	**180**	P	P	23 40 02.9	+0.1
	2.3nm,1.0s,baz=53,slow=15,SNR=5.0						
FINES	**FINESS Array B**	**145.01**	**340**	PKPbc	PKPbc	23 49 32.8	-1.2
	1.2nm,0.7s,baz=25,slow=3.7,SNR=8.3						

IDC 24 23:37:34.1±1.0, **5°.83S**×**143°.57E, h0**km, **mb4.0**/6, **mb1 4.2**/7, **mb1mx3.9**/18, **mbtmp4.1**/7, **ML2.5**/1, **MS3.3**/1, **Ms1 3.3**/1, **ms1mx2.3**/24, **Error ellipse: s-maj=31.8km s-min=21.4km az=81.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.03**	**135**	Pn	Pn	23 38 50.7	-0.2
	1.1nm,0.3s,baz=289,slow=18,SNR=5.7						
PMG				Sn	Sn	23 39 49.9	+0.2
	1.4nm,0.3s,baz=258,slow=13,SNR=4.4						
WRA	**Warramunga Arr**	**16.66**	**212**	Pn	Pn	23 41 25.4	-3.7
	0.4nm,0.3s,baz=35,slow=13,SNR=27						
ASAR	**Alice Springs**	**20.03**	**207**	P	P	23 42 08.8	-0.1
	12nm,0.8s,baz=30,slow=10,SNR=77						
FITZ	**Fitzroy Crossi**	**21.34**	**234**	P	P	23 42 23.4	+0.4
	5.7nm,0.9s,baz=70,slow=9.1,SNR=10						
FITZ				LR	LR	23 51 08.5	
	comp=Z,76nm,18.5s,baz=130,slow=38						
KSRS	**Korea Array**	**45.47**	**342**	P	P	23 45 55.5	+0.4
	0.3nm,0.3s,baz=156,slow=9.6,SNR=7.3						
MKAR	**Makanchi Array**	**75.22**	**321**	P	P	23 49 18.7	-0.1
	1.1nm,0.8s,baz=97,slow=7.4,SNR=6.7						
QSPA	**South Pole Qui**	**84.14**	**180**	P	P	23 50 06.9	-0.2
	2.9nm,1.0s,baz=357,slow=2.8,SNR=4.9						
ILAR	**Eielson Array**	**86.68**	**24**	P	P	23 50 19.2	-0.3
	0.7nm,0.9s,baz=252,slow=6.0,SNR=5.8						

*SKO **24** 23:48:29.6, 41°.40N×22°.69E, h21km, M1.7, ML2.1*
*ATH **24** 23:48:31.6, 41°.31N×22°.69E, h19km±1km, MD3.0/6*
*CSEM **24** 23:48:31.5±0.5, 41°.26N×22°.74E, h5km, MD3.0, Error ellipse: s-maj=11.8km s-min=8.4km az=175.0*

ISC 24 23:48:29.9±1.5, **41°.42N**±0°.09×**22°.65E**±0°.09, **h19**km±4km, **n22,σ0°87/36, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**209**	*i* Pg	**Pg**	**23 48 34.0**	**+0.1**
VAY				*e*Lg	Lg	23 48 35.6	
	comp=E,489nm,0.3s						
VAY				*i* Sg	**Sg**	**23 48 35.7**	**-0.9**
VAY				*e*Lg	Lg	23 48 35.7	
	comp=N,2μm,0.2s						
VAY	**Valandovo**	**0.12**	**209**	*i* Pg	**Pg**	**23 48 34.4**	**+0.5**
VAY				*i* Sg	**Sg**	**23 48 36.1**	**-0.5**
VAY				*e*Lg	Lg	23 48 36.2	
	comp=N,2μm,0.2s						
GRG	**Griva**	**0.50**	**202**	*e*PB	**Pg**	**23 48 40.0**	**0.0**
GRG				*e*SB	**Sg**	**23 48 45.3**	**-1.5**
GRG	**Griva**	**0.50**	**202**	*e*Pb	**Pg**	**23 48 40.0**	**0.0**
GRG				*e*Sb	**Sg**	**23 48 45.3**	**-1.5**
SOH	**Sokhos**	**0.80**	**138**	*e*PN	**Pb**	**23 48 44.9**	**-0.3**
SOH				*e*SN	**Sb**	**23 48 54.8**	**-0.9**
SOH	**Sokhos**	**0.80**	**138**	*e*Pn	**Pb**	**23 48 44.9**	**-0.3**
SOH				*e*Sn	**Sb**	**23 48 54.8**	**-0.9**
NVR	**Nevrokopi**	**0.92**	**94**	*e*PN	**Pn**	**23 48 48.8**	**+1.0**
NVR				*e*SN	**Sn**	**23 49 00.7**	**+0.3**
NVR	**Nevrokopi**	**0.92**	**94**	*e*Pn	**Pn**	**23 48 48.8**	**+1.0**
NVR				*e*Sn	**Sn**	**23 49 00.7**	**+0.3**
PLG	**Polygyros**	**1.21**	**150**	*e*PN	**Pb**	**23 48 52.2**	**+0.1**
PLG				*e*SN	**Sn**	**23 49 07.5**	**-0.1**
PLG	**Polygyros**	**1.21**	**150**	*e*Pn	**Pb**	**23 48 52.2**	**+0.1**
PLG				*e*Sn	**Sn**	**23 49 07.5**	**-0.1**
KZN	**Kozani**	**1.30**	**211**	*e*PN	**Pg**	**23 48 55.4**	**+0.5**
KZN				*e*SN	**Sg**	**23 49 12.3**	**+0.4**
KZN	**Kozani**	**1.30**	**211**	*e*Pn	**Pg**	**23 48

	baz=33							
TUC	**Tucson**	**33.02**	**337**	*e*P		**P**	**23 56 25.0**	**+1.4**
	3.2nm,0.9s							
LPAZ	**La Paz**	**33.11**	**125**	*e*P		**P**	**23 56 25.6**	**+0.5**
	8.4nm,1.6s							
LPAZ	**La Paz**	**33.11**	**125**	P		**P**	**23 56 27.1**	**+1.9**
	2.4nm,1.1s,baz=289,slow=8.1,SNR=5.1							
LPAZ				LR		LR	00 06 56.0	
	comp=Z,54nm,21.7s,baz=82,slow=31							
BNM	**Barren Site**	**33.30**	**344**	*e*P		**P**	**23 56 27.2**	**+1.0**
	7.0nm,1.3s							
LAZ	**Ladron**	**33.68**	**343**	*e*P		**P**	**23 56 30.4**	**+1.0**
	3.3nm,1.3s							
W25A	**X Bar L Ranch,**	**33.78**	**348**	P		**P**	**23 56 31.1**	**+0.8**
	baz=34,SNR=5.6							
X21A	**Alamocita Cree**	**33.91**	**342**	⇓P		**P**	**23 56 33.3**	**+1.8**
	baz=34,SNR=6.9							
W24A	**Lazy 6 Ranch,**	**33.99**	**346**	⇑P		**P**	**23 56 33.7**	**+1.5**
	baz=34							
ANMO	**Albuquerque**	**34.00**	**345**	*e*P		**P**	**23 56 32.9**	**+0.6**
	5.4nm,1.4s							
SAML	**Samuel**	**34.54**	**109**	*e*P		**P**	**23 56 37.4**	**+0.4**
	1.4nm,0.6s							
WVT	**Waverly**	**34.60**	**12**	*e*P		**P**	**23 56 36.5**	**-0.7**
	8.3nm,1.1s							
T22A	**Edith**	**36.07**	**345**	⇑P		**P**	**23 56 51.8**	**+1.7**
	baz=36,SNR=6.6							
SDCO	**Great Sand Dun**	**36.43**	**347**	*e*P		**P**	**23 56 54.3**	**+1.0**
	12nm,1.8s							
PV01	**Paradox Valley**	**37.57**	**344**	*e*P		**P**	**23 57 03.9**	**+1.0**
	550nm,1.2s							
SMCO	**Snowmass**	**38.14**	**346**	*e*P		**P**	**23 57 09.8**	**+2.0**
	4.6nm,1.1s							
ISCO	**Idaho Springs**	**38.43**	**348**	*e*P		**P**	**23 57 12.8**	**+2.5**
	5.8nm,1.3s							
SIV	**San Ignacio**	**38.98**	**119**	LR		LR	00 13 30.7	
	comp=Z,45nm,20.2s,slow=36							
PHWY	**Pilot Hill**	**39.85**	**349**	*e*P		**P**	**23 57 23.0**	**+0.9**
	6.9nm,1.4s							
M24A	**Cheyenne**	**39.89**	**350**	⇓P		**P**	**23 57 24.0**	**+1.7**
	baz=40							
L24A	**Wheatland**	**40.47**	**350**	⇑P		**P**	**23 57 28.7**	**+1.7**
	baz=41,SNR=6.1							
DUG	**Dugway**	**40.78**	**340**	*e*P		**P**	**23 57 32.5**	**+2.9**
	4.8nm,0.9s							
DUG	**Dugway**	**40.78**	**340**	⇑P		**P**	**23 57 31.3**	**+1.7**
	baz=41							
L21A	**Rawlins**	**40.88**	**347**	⇓P		**P**	**23 57 32.1**	**+1.6**
	baz=41,SNR=6.3							
NVAR	**Mina Array Bea**	**41.43**	**333**	P		**P**	**23 57 35.0**	**-0.1**
NVAR	**Mina Array Bea**	**41.43**	**333**	P		**P**	**23 57 35.0**	**-0.1**
	0.7nm,0.5s,baz=159,slow=8.3,SNR=5.6							
NVAR				LR		LR	00 14 40.2	
	comp=Z,105nm,21.2s,baz=174,slow=36							
HWUT	**Hardware Ranch**	**41.65**	**342**	*e*P		**P**	**23 57 37.1**	**+0.3**
	9.2nm,1.2s							
J22A	**Midwest**	**42.08**	**349**	P		**P**	**23 57 41.0**	**+0.8**
	baz=42,SNR=7.8							
BW06	**Boulder Array**	**42.17**	**345**	*e*P		**P**	**23 57 41.2**	**+0.1**
	4.7nm,1.0s							
PDAR	**Pinedale Array**	**42.17**	**345**	P		**P**	**23 57 41.6**	**+0.6**
PDAR	**Pinedale Array**	**42.17**	**345**	P		**P**	**23 57 41.6**	**+0.6**
	2.3nm,0.8s,baz=159,slow=6.3,SNR=13							
PDAR				LR		LR	00 14 42.9	
	comp=Z,300nm,19.2s,baz=186,slow=36							
HVU	**Hansel Valley**	**42.19**	**341**	*e*P		**P**	**23 57 42.8**	**+1.6**
	9.9nm,0.9s							
I21A	**Big Trails, Te**	**42.63**	**348**	⇑P		**P**	**23 57 45.5**	**+0.8**
	baz=43,SNR=6.2							
CFAA	**Coronel Fontan**	**42.73**	**144**	P		**P**	**23 57 46.7**	**+1.1**
CFAA	**Coronel Fontan**	**42.73**	**144**	P		**P**	**23 57 46.7**	**+1.1**
	0.2nm,0.7s,baz=278,slow=4.6,SNR=5.5							
CFAA				LR		LR	00 11 43.9	
	comp=Z,14nm,19.5s,baz=300,slow=31							
I20A	**Worland**	**42.94**	**347**	⇓P		**P**	**23 57 48.2**	**+1.0**
	baz=43,SNR=6.9							
TPAW	**Teton Pass**	**43.21**	**344**	*e*P		**P**	**23 57 50.0**	**+0.4**
	11nm,1.4s							
LOHW	**Long Hollow**	**43.23**	**345**	*e*P		**P**	**23 57 50.4**	**+0.7**
	6.0nm,1.0s							
MOOW	**Moose Ponds**	**43.40**	**344**	*e*P		**P**	**23 57 51.5**	**+0.5**
	4.3nm,1.0s							
IMW	**Indian Meadow**	**43.59**	**344**	*e*P		**P**	**23 57 53.4**	**+0.7**
	4.2nm,0.8s							
HLID	**Hailey**	**44.32**	**341**	*e*P		P	23 58 03.4	+5.0
	4.4nm,1.3s							
G18A	**Lazy EL Ranch,**	**44.57**	**346**	⇑P		**P**	**23 58 02.1**	**+1.8**
	baz=45							
I12A	**Atlanta**	**44.77**	**340**	⇓P		**P**	**23 58 03.5**	**+1.5**
	baz=45							
E24A	**Baker**	**44.77**	**352**	⇑P		**P**	**23 58 03.3**	**+1.5**
	baz=45							
G17A	**Pierce Place,**	**44.86**	**345**	⇓P		**P**	**23 58 04.3**	**+1.7**
	baz=45							
MOD	**Modoc**	**45.15**	**334**	*e*P		**P**	**23 58 07.5**	**+2.5**
	23nm,2.0s							
F18A	**Big Timber**	**45.16**	**347**	P		**P**	**23 58 05.7**	**+0.8**
	baz=45,SNR=9.3							
F17A	**Fitzpatrick Pl**	**45.38**	**346**	⇓P		**P**	**23 58 08.5**	**+1.7**
	baz=46,SNR=5.3							
DLMT	**Dillon**	**45.39**	**344**	*e*P		**P**	**23 58 09.0**	**+2.1**
	5.2nm,1.0s							
E19A	**Rath Farm, Rou**	**45.47**	**348**	P		**P**	**23 58 08.0**	**+0.5**
	baz=46,SNR=7.7							
EYMN	**Ely**	**45.74**	**4**	*e*P		**P**	**23 58 09.0**	**-0.4**
	5.2nm,1.1s							
D19A	**Cripps Ranch,**	**46.16**	**348**	P		**P**	**23 58 13.4**	**+0.5**
	baz=46,SNR=6.5							
D18A	**Linhart Farms,**	**46.39**	**347**	⇑P		**P**	**23 58 15.9**	**+1.2**
	baz=47							
C21A	**Desert Coulee**	**46.45**	**350**	⇓P		**P**	**23 58 16.3**	**+1.3**
	baz=47							
D17A	**Six Diamond Ra**	**46.56**	**346**	⇓P		**P**	**23 58 16.4**	**+0.3**
	baz=47,SNR=9.8							
CPUP	**Villa Florida**	**46.91**	**130**	P		**P**	**23 58 19.2**	**+0.3**
CPUP	**Villa Florida**	**46.91**	**130**	P		**P**	**23 58 19.2**	**+0.3**
	2.0nm,1.0s,baz=270,slow=20,SNR=3.9							
CPUP				LR		LR	00 14 51.4	
	comp=Z,54nm,21.6s,baz=148,slow=32							
MSO	**Missoula**	**47.12**	**343**	*e*P		**P**	**23 58 22.6**	**+2.2**
	3.2nm,1.0s							
SLMT	**Seeley Lake**	**47.37**	**344**	*e*P		**P**	**23 58 23.4**	**+1.0**
SWMT	**Swartz Lake**	**47.75**	**344**	*e*P		**P**	**23 58 26.2**	**+0.9**
ULM	**Lac du Bonnet**	**47.88**	**0**	LR		LR	00 21 11.4	
	comp=Z,40nm,18.1s,baz=345,slow=39							
JTMT	**Jette**	**48.05**	**343**	*e*P		**P**	**23 58 28.7**	**+1.1**
PLCA	**Paso Flores**	**48.64**	**154**	P		**P**	**23 58 31.8**	**-0.4**
PLCA	**Paso Flores**	**48.64**	**154**	P		**P**	**23 58 31.8**	**-0.4**
	2.7nm,1.0s,baz=273,slow=7.0,SNR=3.0							
PLCA				LR		LR	00 14 34.8	
	baz=127,slow=31							
SCHQ	**Schefferville**	**57.60**	**20**	LR		LR	00 23 26.9	
	comp=Z,59nm,18.3s,baz=288,slow=35							
YKA	**Yellowknife Ar**	**61.74**	**350**	P		**P**	**00 00 05.7**	**-0.6**
YKA	**Yellowknife Ar**	**61.74**	**350**	P		**P**	**00 00 05.7**	**-0.6**
	1.2nm,0.9s,baz=154,slow=6.6,SNR=15							
ILAR	**Eielson Array**	**72.26**	**340**	P		**P**	**00 01 12.8**	**-0.5**
ILAR	**Eielson Array**	**72.26**	**340**	P		**P**	**00 01 12.8**	**-0.5**
	2.7nm,1.0s,baz=146,slow=5.0,SNR=23							
ILAR				LR		LR	00 33 50.8	
	comp=Z,70nm,18.5s,baz=228,slow=37							
VNDA	**Vanda**	**94.76**	**192**	LR		LR	00 39 49.4	
	comp=Z,39nm,19.8s,baz=161,slow=32							
ARCES	**ARCESS Array B**	**98.51**	**18**	LR		LR	00 44 33.2	
	comp=Z,41nm,20.9s,baz=118,slow=33							
ZALV	**Zalesovo Beam**	**124.05**	**359**	PKP		**PKPdf**	**00 08 45.6**	**-1.0**
ZALV	**Zalesovo Beam**	**124.05**	**359**	PKP		**PKPdf**	**00 08 45.6**	**-1.0**
	0.2nm,0.3s,baz=242,slow=3.1,SNR=2.4							
SONM	**Songino Array**	**126.46**	**341**	PKP		**PKPdf**	**00 08 50.4**	**-1.3**
SONM	**Songino Array**	**126.46**	**341**	PKP		**PKPdf**	**00 08 50.4**	**-1.3**
	0.4nm,0.6s,baz=346,slow=3.0,SNR=2.9							
KURK	**Kurchatov**	**127.09**	**4**	PKP		**PKPdf**	**00 08 52.4**	**-0.2**
KURBB	**Kurchatov Arra**	**127.17**	**4**	PKP		**PKPdf**	**00 08 52.4**	**-0.4**
	0.3nm,0.3s,baz=6.7,slow=3.2,SNR=2.9							
ASAR	**Alice Springs**	**127.24**	**242**	PKP		**PKPdf**	**00 08 52.4**	**-1.3**
ASAR	**Alice Springs**	**127.24**	**242**	PKP		**PKPdf**	**00 08 52.4**	**-1.3**
	0.3nm,0.7s,baz=119,slow=1.1,SNR=4.4							
WRA	**Warramunga Arr**	**127.79**	**246**	PKP		**PKPdf**	**00 08 53.6**	**-1.2**
WRA	**Warramunga Arr**	**127.79**	**246**	PKP		**PKPdf**	**00 08 53.6**	**-1.2**
	0.4nm,0.7s,baz=100,slow=1.8,SNR=8.6							

SKO 24 23:53:04.9, 41°29N×22°67E, h0km, ML0.4, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**292**	*e*Pg	Pg	23 53 06.0	-0.4
VAY				*e*Lg	Lg	23 53 07.7	
	comp=N,31nm,0.2s						
VAY				*e*Sg	Sg	23 53 07.7	+0.1
VAY				*e*Lg	Lg	23 53 07.7	
	comp=E,29nm,0.2s						

ISK 24 23:54:44.0, 36°39N×28°64E, h5km, MD2.9
CSEM 24 23:54:45.7±0.7, 36°39N×28°64E, h12km, MD2.9, Error ellipse: s-maj=14.6km s-min=8.6km az=21.0
DDA 24 23:54:46.1, 36°42N×28°52E, h5km, MD3.2
ISC 24 23:54:44.8±1.5, 36°39N±0°05×28°61E±0°03, h3km±11km, n34,σ1§06/50, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.45**	**58**	*e*PG	**Pg**	**23 54 52.3**	**-1.3**
FETY	**Fethiye**	**0.45**	**58**	*e*Pg	**Pg**	23 54 52.3	-1.3
TURN	**Turunc**	**0.48**	**360**	*e*P	**Pb**	**23 54 57.0**	**+1.0**
TURN				*i* S	**Sb**	**23 55 04.0**	**+0.6**
TURN	**Turunc**	**0.48**	**360**	*e*P	**Pb**	23 54 57.0	+1.0
TURN				*i* S	**Sb**	23 55 04.0	+0.6
YER	**Yerkesik**	**0.79**	**341**	*e*PG	**Pg**	**23 54 59.7**	**-0.2**
YER				*e*SG	**Sb**	**23 55 11.6**	**-0.7**
YER	**Yerkesik**	**0.79**	**341**	*e*Pg	**Pg**	23 54 59.7	-0.2
YER				*e*Sg	**Sb**	23 55 11.6	-0.7
AKAS	**Kas**	**0.82**	**101**	*e*P	**Pn**	**23 55 03.2**	**+0.3**
AKAS				*i* S	**Sn**	**23 55 16.8**	**+0.6**
AKAS	**Kas**	**0.82**	**101**	*e*P	**Pn**	23 55 03.2	-0.3
AKAS				*i* S	**Sn**	23 55 16.8	+0.6
GLHS	**Glhisar (BURDU**	**1.04**	**43**	*e*PG	**Pg**	**23 55 04.9**	**0.0**
GLHS				*e*SG	**Sg**	**23 55 18.3**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.04**	**43**	*e*Pg	**Pg**	23 55 04.9	0.0
GLHS				*e*Sg	**Sg**	23 55 18.3	-0.2
ELL	**Elmali**	**1.11**	**71**	*e*PN	**Pg**	**23 55 06.0**	**-0.1**
ELL	**Elmali**	**1.11**	**71**	*e*Pn	**Pg**	23 55 06.0	-0.1
MLSB	**Milas**	**1.12**	**324**	*e*PN	**Pg**	**23 55 06.0**	**-0.4**
MLSB	**Milas**	**1.12**	**324**	*e*Pn	**Pg**	23 55 06.0	-0.4
GOLH	**Golhisar**	**1.14**	**42**	*e*P	**Pn**	**23 55 08.0**	**+0.1**
GOLH				*e*S	**Sn**	**23 55 25.8**	**+1.7**
GOLH	**Golhisar**	**1.14**	**42**	*e*P	**Pn**	23 55 08.0	+0.1
GOLH				*e*S	**Sn**	23 55 25.8	+1.7
BODT	**Bodrum**	**1.24**	**303**	*e*PN	**Pg**	**23 55 08.1**	**-0.5**
BODT	**Bodrum**	**1.24**	**303**	*e*Pn	**Pg**	23 55 08.1	-0.5
DNZL	**Cakiroluk**	**1.34**	**15**	*e*P	**Pn**	**23 55 10.7**	**0.0**
DNZL				*i* S	**Sn**	**23 55 30.0**	**+0.8**
DNZL	**Cakiroluk**	**1.34**	**15**	*e*P	**Pn**	23 55 10.7	0.0
DNZL				*i* S	**Sn**	23 55 30.0	+0.8
AYDN	**Tasoluk**	**1.39**	**336**	*e*P	**Pg**	**23 55 12.3**	**+0.8**
AYDN				*e*S	**Sn**	**23 55 30.6**	**+0.4**
AYDN	**Tasoluk**	**1.39**	**336**	*e*P	**Pg**	23 55 12.3	+0.8
AYDN				*e*S	**Sn**	23 55 30.7	+0.4
DENT	**Denizli**	**1.40**	**14**	*e*PN	**Pn**	**23 55 10.9**	**-0.5**
DENT	**Denizli**	**1.40**	**14**	*e*Pn	**Pn**	23 55 10.9	-0.5
GCAM	**G?zelcaml?**	**1.71**	**320**	*e*P	**Pb**	**23 55 16.7**	**-0.2**
GCAM				*e*S	**Sg**	**23 55 40.6**	**+0.9**
GCAM	**G?zelcaml?**	**1.71**	**320**	*e*P	**Pb**	23 55 16.7	-0.2
GCAM				*e*S	**Sg**	23 55 40.6	+0.9
KHL	**Karahalli**	**2.06**	**20**	*e*PN	**Pn**	**23 55 20.3**	**-0.2**
KHL	**Karahalli**	**2.06**	**20**	*e*Pn	**Pn**	23 55 20.3	-0.2
ISP	**Isparta**	**2.09**	**46**	*e*PN	**Pn**	**23 55 21.2**	**+0.3**
ISP	**Isparta**	**2.09**	**46**	*e*Pn	**Pn**	23 55 21.2	+0.3
KHAL	**Karahalli**	**2.10**	**19**	*i* P	Pn	23 55 15.7	-5.3
KHAL				*i* S	**Sn**	**23 55 43.9**	**-3.8**
KHAL	**Karahalli**	**2.10**	**19**	*i* P	Pn	23 55 15.7	-5.3
KHAL				*i* S	**Sn**	**23 55 43.9**	**-3.8**
KULA	**Kula-Manisa**	**2.12**	**1**	*e*PN	**Pn**	**23 55 20.0**	**-1.3**
KULA	**Kula-Manisa**	**2.12**	**1**	*e*Pn	**Pn**	**23 55 20.0**	**-1.3**

TIR 24 23:56:43.0, 41°38N×22°82E, h0km
ISCJB 24 23:56:46.6±0.3, 41°26N±0°01×22°68E±0°02, h2km±3km, mb3.6/1, Error ellipse: s-maj=2.5km s-min=2.2km az=37.2
IDC 24 23:56:46.2±1.6, 41°25N×22°67E, h0km, mb3.5/1, mb1 3.4/5, mb1mx3.2/30, mbtmp3.3/5, ML3.1/3, Error ellipse: s-maj=23.4km s-min=16.7km az=135.0
SKO 24 23:56:46.3, 41°26N×22°71E, h15km, M2.4, ML2.8
BEO 24 23:56:46.6±0.8, 41°22N×22°68E, h5km±2km, ML3.0/1
SOF 24 23:56:46.4, 41°26N×22°71E, h8km, MD3.2
ATH 24 23:56:47.7, 41°22N×22°76E, h22km, MD3.5/9
CSEM 24 23:56:47.1±0.1, 41°27N×22°71E, h5km, ML3.3/9, Error ellipse: s-maj=2.4km s-min=1.9km az=41.0
THE 24 23:56:47.3, 41°26N×22°70E, h1km±1km, ML3.3/9, Error ellipse: s-maj=1.7km s-min=0.6km az=258.0
PRU 24 23:56:51.0, 41°38N×22°76E, h0km
DDA 24 23:57:25.9, 40°17N×26°16E, h7km, MD3.4
ISC 24 23:56:46.9±0.9, 41°27N±0°01×22°73E±0°01, h6km±6km, n156,σ1§04/212, 5C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**293**	P	**Pg**	**23 56 48.8**	**-0.8**
VAY				S	**Sg**	**23 56 51.0**	**-0.4**
VAY	**Valandovo**	**0.13**	**293**	*i* Pg	**Pg**	**23 56 49.3**	**-0.4**
VAY				*e*Lg	Lg	23 56 51.1	
	comp=E,4μm,0.3s						
VAY				*i* Sg	**Sg**	**23 56 51.2**	**-0.2**
VAY				*e*Lg	Lg	23 56 51.3	
	comp=N,6μm,0.2s						
VAY	**Valandovo**	**0.13**	**293**	P	**Pg**	**23 56 48.8**	**-0.8**
VAY	**Valandovo**	**0.13**	**293**	*i* Pg	**Pg**	**23 56 49.7**	**+0.1**
VAY				*e*Sg	**Sg**	**23 56 51.1**	**-0.4**
VAY				*e*Lg	Lg	23 56 51.8	
	comp=N,6μm,0.2s						
KNT	**Kendrikon**	**0.17**	**130**	P	**Pg**	**23 56 51.2**	**+0.9**
KNT				S	**Sg**	**23 56 53.9**	**+1.3**
KNT	**Kendrikon**	**0.17**	**130**	P	**Pg**	23 56 51.2	+0.9
KNT				S	**Sg**	23 56 53.9	+1.3
GRG	**Griva**	**0.40**	**218**	P	**Pg**	**23 56 54.9**	**+0.2**
GRG				S	**Sg**	**23 57 00.8**	**+0.9**
GRG	**Griva**	**0.40**	**218**	*e*PB	**Pg**	23 56 54.9	+0.2
GRG				*e*SB	**Sg**	23 57 00.9	+1.0
GRG	**Griva**	**0.40**	**218**	P	**Pg**	23 56 54.9	+0.2
GRG				S	**Sg**	23 57 00.8	+0.9
SOH	**Sokhos**	**0.65**	**133**	P	**Pg**	**23 56 59.7**	**+0.2**
SOH				S	**Sg**	**23 57 09.0**	**+1.1**
SOH	**Sokhos**	**0.65**	**133**	*e*PN	**Pg**	23 56 59.7	+0.2
SOH				*e*SN	**Sg**	23 57 08.6	+0.7
SOH	**Sokhos**	**0.65**	**133**	P	**Pg**	23 56 59.7	+0.2
SOH				*e*Sn	**Sg**	23 57 08.6	+0.7
SOH				S	**Sg**	23 57 09.0	+1.1
KKB	**Krupnik**	**0.65**	**24**	*i* Pg	**Pg**	23 56 59.9	+0.4
THE	**Thessaloniki**	**0.66**	**164**	P	**Pg**	23 56 59.9	+0.2
THE				S	**Sg**	23 57 08.8	+0.5
THE	**Thessaloniki**	**0.66**	**164**	P	**Pg**	23 56 59.9	+0.2
THE				S	**Sg**	23 57 08.8	+0.5
SRS	**Serrai**	**0.67**	**103**	P	**Pg**	23 57 00.2	+0.4
SRS				S	**Sb**	23 57 09.9	-0.7
SRS	**Serrai**	**0.67**	**103**	P	**Pg**	23 57 00.2	+0.4
SRS				S	**Sb**	23 57 09.9	-0.7
HORT	**Hortiatis**	**0.73**	**157**	P	**Pg**	**23 57 01.2**	**+0.3**
HORT				S	**Sb**	**23 57 11.7**	**-0.6**
HORT	**Hortiatis**	**0.73**	**157**	P	**Pg**	23 57 01.2	+0.3
HORT				S	**Sb**	23 57 11.7	-0.6
MMB	**Musomiste**	**0.82**	**67**	*i* Pg	**Pg**	23 57 03.0	+0.4
MMB	**Musomiste**	**0.82**	**67**	*i* Pg	**Pg**	23 57 03.0	+0.4
NVR	**Nevrokopi**	**0.86**	**84**	P	**Pg**	23 57 03.7	+0.3
NVR				S	**Sb**	23 57 16.2	+0.2
NVR	**Nevrokopi**	**0.86**	**84**	*e*PN	**Pb**	23 57 04.0	-0.2
NVR				*e*SN	**Sb**	23 57 16.0	0.0
NVR	**Nevrokopi**	**0.86**	**84**	P	**Pg**	23 57 03.7	+0.3
NVR	**Nevrokopi**	**0.86**	**84**	*e*Pn	**Pb**	23 57 04.0	-0.2
NVR				S	**Sb**	23 57 16.2	+0.2
PLG	**Polygyros**	**1.05**	**148**	P	**Pg**	23 57 06.8	-0.2
PLG	**Polygyros**	**1.05**	**148**	*e*PN	**Pg**	**23 57 07.1**	**+0.1**
PLG				*e*SN	**Sg**	**23 57 20.0**	**-0.6**
PLG	**Polygyros**	**1.05**	**148**	P	**Pg**	23 57 07.1	+0.1
PLG	**Polygyros**	**1.05**	**148**	*e*Pn	**Pg**	23 57 07.1	+0.1
PLG				*e*Sn	**Sg**	23 57 20.0	-0.6
BIA	**Bitola**	**1.09**	**257**	P	**Pg**	23 57 06.8	-1.0
BIA				S	**Sg**	23 57 22.0	0.0
BIA	**Bitola**	**1.09**	**257**	*i* Pg	**Pg**	23 57 06.8	-1.0
BIA	**Bitola**	**1.09**	**257**	P	**Pg**	23 57 06.8	-1.0
BIA				S	**Sg**	23 57 22.0	0.0
FNA	**Florina**	**1.13**	**245**	P	**Pg**	23 57 08.0	-0.7
FNA				S	**Sb**	23 57 23.9	0.0
FNA	**Florina**	**1.13**	**245**	*e*PB	**Pg**	23 57 08.5	-0.2
FNA				*e*SN	**Sn**	**23 57 25.6**	**+0.3**
FNA	**Florina**	**1.13**	**245**	P	**Pg**	**23 57 08.0**	**-0.7**
FNA				S	**Sb**	23 57 23.9	0.0
FNA				*e*SN	**Sn**	23 57 25.6	+0.3
LIT	**Litokhoron**	**1.18**	**189**	P	**Pg**	**23 57 08.9**	**-0.7**
LIT	**Litokhoron**	**1.18**	**189**	P	**Pg**	23 57 08.9	-0.7
SKO	**Skopje**	**1.19**	**306**	P	**Pn**	**23 57 11.0**	**+0.8**
SKO	**Skopje**	**1.19**	**306**	*e*Pg	**Pn**	23 57 10.0	-0.2
SKO				*e*Sg	**Sg**	23 57 25.2	-0.1
SKO				*e*Lg	Lg	23 57 26.8	
	comp=E,147nm,0.7s						
SKO				*e*Lg	Lg	23 57 27.3	
	comp=N,196nm,0.6s						
SKO	**Skopje**	**1.19**	**306**	*e*Pg	**Pn**	**23 57 10.5**	**+0.3**
SKO				*e*Sg	**Sb**	23 57 25.9	+0.2
SKO	**Skopje**	**1.19**	**306**	*e*Pg	**Pn**	23 57 10.5	+0.3
SKO	**Skopje**	**1.19**	**306**	P	**Pn**	23 57 11.0	+0.8
SKO				*e*Sg	**Sb**	23 57 25.6	-0.1
SKO				*e*Lg	Lg	23 57 27.7	
	comp=N,196nm,0.6s						
KZN	**Kozani**	**1.21**	**217**	*e*PN	**Pn**	**23 57 10.7**	**+0.3**
KZN				*e*SN	**Sn**	**23 57 27.2**	**+0.1**
KZN	**Kozani**	**1.21**	**217**	*e*Pn	**Pn**	23 57 10.7	+0.3
KZN				*e*Sn	**Sn**	23 57 27.2	+0.1
OUR	**Ouranopolis**	**1.33**	**134**	P	**Pb**	**23 57 12.3**	**0.0**
OUR				S	**Sn**	**23 57 30.8**	**+0.7**
OUR	**Ouranopolis**	**1.33**	**134**	P	**Pb**	23 57 12.3	0.0
OUR				S	**Sn**	23 57 30.8	+0.7
VTS	**Vitosha**	**1.37**	**15**	P	**Pn**	**23 57 12.8**	**+0.1**
VTS				S	**Sg**	**23 57 32.0**	**+1.1**
VTS	**Vitosha**	**1.37**	**15**	⇑*i*Pg	**Pb**	**23 57 13.1**	**+0.1**
VTS				*e*Sg	**Sg**	**23 57 31.6**	**+0.7**
VTS	**Vitosha**	**1.37**	**15**	*i* P	**Pb**	23 57 13.2	+0.2
VTS	**Vitosha**	**1.37**	**15**	*i* P	**Pb**	23 57 13.2	+0.2
VTS				*e*Sg	**Sg**	23 57 31.6	+0.7
VTS				S	**Sg**	23 57 32.0	+1.1
KAVA	**Kavala**	**1.38**	**101**	P	**Pn**	**23 57 12.8**	**+0.2**
KAVA				S	**Sg**	**23 57 33.0**	**+1.9**
KAVA	**Kavala**	**1.38**	**101**	P	**Pn**	23 57 12.8	+0.2
KAVA				S	**Sg**	23 57 33.0	+1.9
PAIG	**Paliouri**	**1.52**	**151**	P	**Pb**	**23 57 15.1**	**-0.5**
PAIG				S	**Sg**	**23 57 36.1**	**+0.2**
PAIG	**Paliouri**	**1.52**	**151**	*e*PN	**Pb**	23 57 15.3	-0.3
PAIG				*e*SN	**Sn**	23 57 34.6	-0.2
PAIG	**Paliouri**	**1.52**	**151**	*e*Pn	**Pb**	23 57 15.3	-0.3
PAIG				*e*Sn	**Sn**	23 57 34.6	-0.2
PAIG				S	**Sg**	23 57 36.1	+0.2
NEST	**Nestorio**	**1.53**	**237**	P	**Pb**	**23 57 15.3**	**-0.5**
NEST	**Nestorio**	**1.53**	**237**	P	**Pb**	23 57 15.3	-0.5
KBN	**Korca**	**1.61**	**247**	*i* PN	**Pn**	**23 57 16.0**	**+0.1**
KBN				*i* SN	**Sg**	**23 57 42.6**	**+4.1**
KBN	**Korca**	**1.61**	**247**	P	**Pn**	23 57 16.2	+0.3
KBN	**Korca**	**1.61**	**247**	P	**Pn**	23 57 16.2	+0.3
PGB	**Panagyurishte**	**1.67**	**40**	*i* P	**Pb**	**23 57 18.1**	**0.0**
PGB	**Panagyurishte**	**1.67**	**40**	*i* P	**Pb**	23 57 18.1	0.0
BARS	**Barje**	**1.69**	**337**	⇑*i*Pn	**Pn**	**23 57 16.8**	**-0.2**
BARS				*e*Sn	**Sb**	**23 57 40.6**	**+0.7**
BARS	**Barje**	**1.69**	**337**	⇑*i*Pn	**Pn**	23 57 16.8	-0.2
BARS				*e*Sn	**Sb**	23 57 40.6	+0.7
PLD	**Plovdiv**	**1.70**	**60**	P	**Pg**	**23 57 19.3**	**-0.2**
PLD				S	**Sg**	**23 57 42.6**	**+1.1**
PLD	**Plovdiv**	**1.70**	**60**	⇓*

BUY	**Buyukada**	**4.85**	**93**	*e*P		Pb	23 58 08.4	-3.9	
KHAL	**Karahalli**	**5.96**	**117**	*i* P		**Pn**	**23 58 15.5**	**-0.2**	
SEYT	**Eskypehyr**	**6.44**	**103**	*i* P		**Pn**	**23 58 25.3**	**+2.9**	
NVLJ	**Novalja**	**6.64**	**302**	*e*Pn		**Pn**	**23 58 25.6**	**+0.7**	
NVLJ	**Novalja**	**6.64**	**302**	*e*Pn		**Pn**	**23 58 25.6**	**+0.7**	
BRTR	**Keskin Array B**	**8.46**	**97**	Pn		**Pn**	**23 58 50.6**	**+0.6**	
	comp=N,0.0nm,0.3s,baz=285,slow=10,SNR=2.3								
GERES	**GERESS Array B**	**9.90**	**323**	Pn		**Pn**	**23 59 10.8**	**+1.0**	
	comp=N,0.1nm,0.3s,baz=138,slow=12,SNR=9.3								
KHC	**Kasperske Hory**	**10.16**	**324**	*e*PN		Pn	23 59 16.6	+3.2	
KHC	**Kasperske Hory**	**10.16**	**324**	Pn		Pn	23 59 16.6	+3.2	
AKASG	**Malin Array Be**	**10.45**	**23**	Pn		**Pn**	**23 59 15.0**	**-2.2**	
	comp=N,0.2nm,0.3s,baz=209,slow=10,SNR=4.7								
TORD	**Torodi Ar. Bea**	**33.50**	**219**	P		**P**	**00 03 27.2**	**0.0**	
	comp=N,0.5nm,0.7s,baz=34,slow=9.8,SNR=5.1								

ISCJB ***25*** *00:02:10.2±0.5,21°.45S±0°.04×68°.8W±0°.1,h119km±9km, mb4.1/3,Error ellipse: s-maj=16.1km s-min=6.8km az=169.6*

IDC ***25*** *00:02:10.9±2.4,21°.57S×68°.67W,h103km±20km,mb3.9/3, mb1 3.5/8,mb1mx3.3/21,mbtmp3.5/8,Error ellipse: s-maj=35.2km s-min=20.0km az=108.0*

GUC ***25*** *00:02:11.7±0.8,21°.53S×69°.03W,h116km±5km,ML4.2*

NEIC ***25*** *00:02:11.7,21°.53S×69°.03W,h116km,mb4.1/4,After GUC.*

ISC 25 00:02:10.6±0.7**,21°.38S**±0°.03×**68°.66W**±0°.07**,h113**km±7km**, n38,σ1°50/46,mb4.1/3,10C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**Plate Boundary**	**0.68**	**233**	*i*P	**Pn**	**00 02 29.5**	**+0.2**
PB09				*e*S	**Sn**	**00 02 42.5**	**-0.9**
PB09	**Plate Boundary**	**0.68**	**233**	*i*P	**Pn**	**00 02 29.5**	**+0.2**
PB09				*e*S	**Sn**	**00 02 42.5**	**-0.9**
PB09				AML	AML	00 02 44.4	
	comp=E,19μm,0.7s						
PB01	**Plate Boundary**	**0.84**	**293**	*i*P	**Pn**	**00 02 30.9**	**+0.3**
PB01				*i* S	**Sn**	**00 02 45.0**	**-0.6**
PB01	**Plate Boundary**	**0.84**	**293**	*i*P	**Pn**	**00 02 30.9**	**+0.3**
PB01				*i* S	**Sn**	**00 02 45.0**	**-0.6**
PB01				AML	AML	00 02 46.4	
	comp=E,16μm,0.2s						
PB04	**Plate Boundary**	**1.17**	**221**	*i*P	Pn	00 02 38.6	+4.8
PB04				*i* S	Sn	00 02 58.2	+6.9
PB04				AML	AML	00 03 02.4	
	comp=N,1μm,0.2s						
LVC	**Limon Verde**	**1.25**	**191**	*e*Pn	**Pn**	**00 02 35.0**	**0.0**
LVC				*e*Sn	**Sn**	**00 02 56.7**	**+3.3**
LVC	**Limon Verde**	**1.25**	**191**	*i*P	**Pn**	**00 02 35.2**	**+0.3**
LVC				*i* S	**Sn**	**00 02 52.7**	**-0.7**
HMBC	**Humberstone**	**1.59**	**314**	*i*P	**Pn**	**00 02 39.2**	**+0.5**
HMBC				*i* S	**Sn**	**00 03 00.2**	**0.0**
HMBC	**Humberstone**	**1.59**	**314**	*i*P	**Pn**	**00 02 39.2**	**+0.5**
HMBC				*i* S	**Sn**	**00 03 00.2**	**0.0**
HMBC				AML	AML	00 03 02.3	
	comp=E,5μm,0.5s						
PSGC	**Pisagua**	**2.24**	**322**	*i*P	**Pn**	**00 02 46.9**	**0.0**
PSGC				*i* S	**Sn**	**00 03 14.6**	**-0.2**
PSGC	**Pisagua**	**2.24**	**322**	*i*P	**Pn**	**00 02 46.9**	**0.0**
PSGC				*i* S	**Sn**	**00 03 14.6**	**-0.2**
PSGC				AML	AML	00 03 18.6	
	comp=N,866nm,0.4s						
MNMC	**Minimini**	**2.41**	**338**	*e*P	**Pn**	**00 02 51.1**	**+1.9**
MNMC				*i* S	**Sn**	**00 03 22.2**	**+3.4**
MNMC	**Minimini**	**2.41**	**338**	*e*P	**Pn**	**00 02 51.1**	**+1.9**
MNMC				*i* S	**Sn**	**00 03 22.2**	**+3.4**
MNMC				AML	AML	00 03 23.9	
	comp=N,2μm,0.1s						
ANCH	**Antofagasta**	**2.80**	**215**	*e*P	**Pn**	**00 02 52.2**	**-1.8**
ANCH	**Antofagasta**	**2.80**	**215**	*e*P	**Pn**	**00 02 52.2**	**-1.8**
LPAZ	**La Paz**	**5.09**	**6**	P	Pn	00 03 29.0	+3.7
LPAZ				S	**Sn**	**00 04 21.2**	**-2.1**
LPAZ	**La Paz**	**5.09**	**6**	P	Pn	00 03 29.0	+3.7
	comp=N,0.9nm,0.3s,baz=203,slow=7.5,SNR=28						
LPAZ				S	**Sn**	**00 04 21.2**	**-2.1**
	comp=N,0.7nm,0.3s,baz=199,slow=13,SNR=4.2						
SIV	**San Ignacio**	**8.97**	**55**	P	**Pn**	**00 04 17.3**	**+0.1**
SIV				S	**Sn**	**00 05 54.3**	**-2.3**
SIV	**San Ignacio**	**8.97**	**55**	P	**Pn**	**00 04 17.3**	**+0.1**
	comp=N,1.0nm,0.3s,baz=249,slow=13,SNR=28						
SIV				S	**Sn**	**00 05 54.3**	**-2.3**
	baz=180,slow=20,SNR=3.6						
CFAA	**Coronel Fontan**	**10.19**	**178**	P	Pn	00 04 30.2	-3.5
CFAA				S	Sn	00 06 15.7	-10
CFAA	**Coronel Fontan**	**10.19**	**178**	P	Pn	00 04 30.2	-3.5
	comp=N,0.1nm,0.3s,baz=354,slow=14,SNR=9.9						
CFAA				S	Sn	00 06 15.7	-10
	comp=N,0.1nm,0.3s,baz=243,slow=22,SNR=4.3						
CPUP	**Villa Florida**	**11.48**	**118**	P	**Pn**	**00 04 51.6**	**+0.6**
CPUP	**Villa Florida**	**11.48**	**118**	P	**Pn**	**00 04 51.6**	**+0.6**
	comp=N,0.4nm,0.3s,baz=279,slow=15,SNR=5.6						
SAML	**Samuel**	**13.44**	**24**	*e*Pn	**P**	**00 05 20.9**	**-1.2**
TRQA	**Tornquist**	**17.59**	**162**	*e*P	**Pn**	**00 06 09.1**	**+0.6**
	comp=N,4.3nm,0.9s						
PLCA	**Paso Flores**	**19.36**	**184**	*e*P	**P**	**00 06 25.5**	**-1.8**
	comp=N,17nm,1.8s						
PLCA	**Paso Flores**	**19.36**	**184**	P	**Pn**	**00 06 27.3**	**-2.2**
	comp=N,0.2nm,0.3s,baz=355,slow=11,SNR=5.0						
BDFB	**Brasilia**	**20.39**	**77**	P	Pn	00 06 41.3	-0.5
BDFB	**Brasilia**	**20.39**	**77**	P	Pn	00 06 41.3	-0.5
	comp=N,5.0nm,0.5s,baz=241,slow=8.3,SNR=16						
RCBR	**Riachuelo**	**35.28**	**69**	*e*P	P	00 08 59.3	+4.4
	comp=N,3.5nm,1.0s						
DBIC	**Dimbokro**	**68.48**	**73**	*e*P	**P**	**00 13 01.1**	**+0.1**
	comp=N,1.8nm,0.7s						
DBIC	**Dimbokro**	**68.48**	**73**	P	**P**	**00 13 02.4**	**+1.4**
	comp=N,3.3nm,1.0s,baz=228,slow=8.9,SNR=3.9						
TORD	**Torodi Ar. Bea**	**77.10**	**70**	P	**P**	**00 13 53.9**	**+1.9**
TORD	**Torodi Ar. Bea**	**77.10**	**70**	P	**P**	**00 13 53.9**	**+1.9**
	comp=N,1.2nm,0.4s,baz=254,slow=5.4,SNR=52						
WRA	**Warramunga Arr**	**133.17**	**210**	PKP	**PKPdf**	**00 21 14.4**	**+0.6**
WRA	**Warramunga Arr**	**133.17**	**210**	PKP	**PKPdf**	**00 21 14.4**	**+0.6**
	comp=N,0.4nm,0.9s,baz=137,slow=1.6,SNR=5.0						
MKAR	**Makanchi Array**	**145.40**	**36**	PKPbc	**PKPab**	**00 21 36.7**	**+1.1**
MKAR	**Makanchi Array**	**145.40**	**36**	PKPbc	**PKPab**	**00 21 36.7**	**+1.1**
	comp=N,0.7nm,0.8s,baz=320,slow=3.8,SNR=3.3						

SOF ***25*** *00:03:25.7,41°.26N×22°.68E,h11km,MD2.6*

SKO ***25*** *00:03:25.5,41°.30N×22°.67E,h15km,M1.4,ML1.9*

ATH ***25*** *00:03:26.4,41°.31N×22°.70E,h18km±1km,MD3.0/7*

ISCJB ***25*** *00:03:26.2±0.5,41°.30N±0°.03×22°.70E±0°.03,h9km±3km, Error ellipse: s-maj=5.0km s-min=3.5km az=169.4*

THE ***25*** *00:03:26.9,41°.28N×22°.69E,h2km±2km,ML2.2/6,Error ellipse: s-maj=2.0km s-min=0.5km az=354.0*

CSEM ***25*** *00:03:26.3±0.1,41°.31N×22°.68E,h8km,ML2.2/6,Error ellipse: s-maj=3.2km s-min=2.9km az=179.0*

ISC 25 00:03:26.9±0.8**,41°.30N**±0°.02×**22°.67E**±0°.02**,h9**km±5km**, n45,σ0°65/80,2C,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.08**	**283**	P	**Pg**	**00 03 28.6**	**-0.4**
VAY				S	**Sg**	**00 03 30.4**	**-0.2**
VAY	**Valandovo**	**0.08**	**283**	*i* Pg	**Pg**	**00 03 28.7**	**-0.4**
VAY				*i* Sg	**Sg**	**00 03 30.3**	**-0.3**
VAY				*e*Lg	Lg	00 03 30.4	
	comp=N,1μm,0.2s						
VAY				*e*Lg	Lg	00 03 30.5	
	comp=E,602nm,0.2s						
VAY	**Valandovo**	**0.08**	**283**	P	**Pg**	**00 03 28.6**	**-0.4**
VAY	**Valandovo**	**0.08**	**283**	*i* Pg	**Pg**	**00 03 29.1**	**+0.1**
VAY				S	**Sg**	**00 03 30.4**	**-0.2**
VAY				*i* Sg	Sg	00 03 30.7	+0.1
VAY				*e*Lg	Lg	00 03 31.0	
	comp=E,602nm,0.2s						
KNT	**Kendrikon**	**0.22**	**129**	P	**Pg**	**00 03 31.1**	**-0.3**
KNT				S	**Sg**	**00 03 33.9**	**-0.6**
KNT	**Kendrikon**	**0.22**	**129**	P	**Pg**	**00 03 31.1**	**-0.3**
KNT				S	**Sg**	**00 03 33.9**	**-0.6**
GRG	**Griva**	**0.40**	**211**	P	**Pg**	**00 03 34.5**	**-0.3**
GRG				S	**Sg**	**00 03 40.0**	**0.0**
GRG	**Griva**	**0.40**	**211**	*i*PB	**Pg**	**00 03 34.5**	**-0.3**
GRG				*e*SB	**Sg**	**00 03 40.3**	**+0.3**
GRG	**Griva**	**0.40**	**211**	P	**Pg**	**00 03 34.5**	**-0.3**
GRG				S	**Sg**	**00 03 40.0**	**0.0**
GRG				*e*Sb	**Sg**	**00 03 40.3**	**+0.3**
KKB	**Krupnik**	**0.64**	**29**	*i* Pg	**Pg**	**00 03 39.4**	**+0.1**
KKB	**Krupnik**	**0.64**	**29**	*i* Pg	**Pg**	**00 03 39.4**	**+0.1**
SOH	**Sokhos**	**0.71**	**133**	P	**Pg**	**00 03 39.6**	**-0.9**
SOH				S	**Sg**	**00 03 49.4**	**-0.3**
SOH	**Sokhos**	**0.71**	**133**	*i*PN	**Pg**	**00 03 39.6**	**-0.9**
SOH				*e*SN	**Sg**	**00 03 49.9**	**+0.2**
SOH	**Sokhos**	**0.71**	**133**	P	**Pg**	**00 03 39.6**	**-0.9**
SOH				S	**Sg**	**00 03 49.4**	**-0.3**
SOH				*e*Sn	**Sg**	**00 03 49.9**	**+0.2**
THE	**Thessaloniki**	**0.71**	**161**	P	**Pg**	**00 03 39.6**	**-0.9**
THE				S	**Sg**	**00 03 49.2**	**-0.5**
THE	**Thessaloniki**	**0.71**	**161**	P	**Pg**	**00 03 39.6**	**-0.9**
THE				S	**Sg**	**00 03 49.2**	**-0.5**
SRS	**Serrai**	**0.72**	**105**	P	**Pg**	**00 03 40.2**	**-0.6**
SRS				S	**Sg**	**00 03 50.0**	**-0.2**
SRS	**Serrai**	**0.72**	**105**	P	**Pg**	**00 03 40.2**	**-0.6**
SRS				S	**Sg**	**00 03 50.0**	**-0.2**
HORT	**Hortiatis**	**0.78**	**155**	P	**Pg**	**00 03 40.9**	**-0.9**
HORT				S	**Sg**	**00 03 52.0**	**0.0**
HORT	**Hortiatis**	**0.78**	**155**	P	**Pg**	**00 03 40.9**	**-0.9**
HORT				S	**Sg**	**00 03 52.0**	**0.0**
MMB	**Musomiste**	**0.84**	**70**	*i* Pg	**Pg**	**00 03 42.9**	**-0.3**
MMB	**Musomiste**	**0.84**	**70**	*i* Pg	**Pg**	**00 03 42.9**	**-0.3**
NVR	**Nevrokopi**	**0.90**	**87**	P	**Pg**	**00 03 43.9**	**-0.3**
NVR				S	**Sg**	**00 03 55.7**	**-0.2**
NVR	**Nevrokopi**	**0.90**	**87**	*e*PN	**Pg**	**00 03 43.5**	**-0.7**
NVR				*e*SN	**Sg**	**00 03 55.3**	**-0.6**
NVR	**Nevrokopi**	**0.90**	**87**	*e*Pn	**Pg**	**00 03 43.5**	**-0.7**
NVR	**Nevrokopi**	**0.90**	**87**	P	**Pg**	**00 03 43.9**	**-0.3**
NVR				*e*Sn	**Sg**	**00 03 55.3**	**-0.6**
NVR				S	**Sg**	**00 03 55.7**	**-0.2**
PLG	**Polygyros**	**1.10**	**147**	P	**Pg**	**00 03 46.8**	**-1.2**
PLG				S	**Sg**	**00 04 02.0**	**-0.3**
PLG	**Polygyros**	**1.10**	**147**	*e*PN	**Pg**	**00 03 47.0**	**-1.0**
PLG				*e*SN	**Sg**	**00 04 01.6**	**-0.7**
PLG	**Polygyros**	**1.10**	**147**	P	**Pg**	**00 03 46.8**	**-1.2**
PLG				*e*Sn	**Sg**	**00 04 01.6**	**-0.7**
PLG				S	**Sg**	**00 04 02.0**	**-0.3**
FNA	**Florina**	**1.11**	**242**	P	**Pg**	**00 03 47.4**	**-0.7**
FNA				S	**Sb**	**00 04 03.1**	**+0.2**
FNA	**Florina**	**1.11**	**242**	*e*PN	**Pg**	**00 03 47.5**	**-0.7**
FNA				*e*SN	**Sb**	**00 04 03.6**	**+0.7**
FNA	**Florina**	**1.11**	**242**	P	**Pg**	**00 03 47.4**	**-0.7**
FNA				S	**Sb**	**00 04 03.1**	**+0.2**
FNA				*e*Sn	**Sb**	**00 04 03.6**	**+0.7**
SKO	**Skopje**	**1.14**	**306**	*e*Pg	**Pg**	**00 03 46.4**	**-2.4**
SKO	**Skopje**	**1.14**	**306**	*e*Pg	**Pg**	**00 03 46.8**	**-2.0**
KZN	**Kozani**	**1.21**	**215**	*e*PN	**Pb**	**00 03 50.0**	**0.0**
KZN				*e*SN	**Sn**	**00 04 07.2**	**+0.6**
KZN	**Kozani**	**1.21**	**215**	*e*Pn	**Pb**	**00 03 50.0**	**0.0**
KZN				*e*Sn	**Sn**	**00 04 07.2**	**+0.6**
VTS	**Vitosha**	**1.35**	**17**	P	**Pn**	**00 03 52.5**	**+0.4**
VTS	**Vitosha**	**1.35**	**17**	*i* P	**Pn**	**00 03 52.6**	**+0.4**
VTS	**Vitosha**	**1.35**	**17**	P	**Pn**	**00 03 52.5**	**+0.4**
PAIG	**Paliouri**	**1.57**	**150**	*e*PN	**Pn**	**00 03 55.4**	**+0.4**
PAIG				*e*SN	**Sb**	**00 04 16.5**	**+0.3**
PAIG	**Paliouri**	**1.57**	**150**	*e*Pn	**Pn**	**00 03 55.4**	**+0.4**
PAIG				*e*Sn	**Sb**	**00 04 16.5**	**+0.3**
THL	**Klokotos Trika**	**1.81**	**196**	*e*PN	**Pn**	**00 03 59.0**	**+0.8**
THL	**Klokotos Trika**	**1.81**	**196**	*e*Pn	**Pn**	**00 03 59.0**	**+0.8**
NEO	**Neokhori**	**2.04**	**168**	*e*PB	**Pn**	**00 04 01.6**	**+0.1**
NEO	**Neokhori**	**2.04**	**168**	*e*Pb	**Pn**	**00 04 01.6**	**+0.1**

SKO ***25*** *00:07:54.2,41°.28N×22°.70E,h15km,M1.0,ML1.4*

ATH ***25*** *00:07:55.7,41°.30N×22°.71E,h5km,MD2.9/3*

CSEM ***25*** *00:07:55.4±0.1,41°.29N×22°.74E,h5km,MD2.9,Error ellipse: s-maj=2.8km s-min=1.6km az=1.0*

ISC 25 00:07:55.7±1.2**,41°.29N**±0°.05×**22°.73E**±0°.03**,h3**km±15km**, n10,σ0°40/20,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**285**	*i* Pg	**Pg**	**00 07 57.8**	**-0.4**
VAY				*i* Sg	**Sg**	**00 07 59.6**	**-0.2**
VAY				*e*Lg	Lg	00 07 59.7	
	comp=E,168nm,0.6s						
VAY				*e*Lg	Lg	00 07 59.8	
	comp=N,243nm,0.2s						
VAY	**Valandovo**	**0.12**	**285**	*i* Pg	**Pg**	**00 07 58.2**	**0.0**
VAY				*i* Sg	**Sg**	**00 08 00.0**	**+0.2**
VAY				*e*Lg	Lg	00 08 00.3	
	comp=N,243nm,0.2s						
GRG	**Griva**	**0.41**	**217**	*e*PG	**Pg**	**00 08 03.5**	**-0.2**
GRG				*e*SB	**Sg**	**00 08 09.5**	**+0.5**
GRG	**Griva**	**0.41**	**217**	*e*Pg	**Pg**	**00 08 03.5**	**-0.2**
GRG				*e*Sb	**Sg**	**00 08 09.5**	**+0.5**
NVR	**Nevrokopi**	**0.86**	**86**	*e*PB	**Pg**	**00 08 12.6**	**+0.4**
NVR				*e*SB	**Sb**	**00 08 24.6**	**-0.6**
NVR	**Nevrokopi**	**0.86**	**86**	*e*Pb	**Pg**	**00 08 12.6**	**+0.4**
NVR				*e*Sb	**Sb**	**00 08 24.6**	**-0.6**
PLG	**Polygyros**	**1.06**	**149**	*e*PG	**Pg**	**00 08 15.6**	**-0.5**
PLG				*e*SB	**Sb**	**00 08 31.4**	**+0.3**
PLG	**Polygyros**	**1.06**	**149**	*e*Pg	**Pg**	**00 08 15.6**	**-0.5**
PLG				*e*Sb	**Sb**	**00 08 31.4**	**+0.3**
FNA	**Florina**	**1.14**	**244**	*e*PB	**Pg**	**00 08 17.7**	**+0.1**
FNA				*e*SB	**Sb**	**00 08 33.2**	**-0.1**
FNA	**Florina**	**1.14**	**244**	*e*Pb	**Pg**	**00 08 17.7**	**+0.1**
FNA				*e*Sb	**Sb**	**00 08 33.2**	**-0.1**

SKO ***25*** *00:09:39.2,41°.36N×22°.71E,h15km,M1.7,ML1.9*

ISCJB ***25*** *00:09:40.8±0.8,41°.34N±0°.05×22°.72E±0°.03,h2km±6km, Error ellipse: s-maj=8.2km s-min=4.0km az=176.0*

CSEM ***25*** *00:09:40.9±0.3,41°.35N×22°.71E,h2km,ML2.0/2,Error ellipse: s-maj=6.5km s-min=3.0km az=171.0*

THE ***25*** *00:09:41.6,41°.31N×22°.72E,h2km±3km,ML2.0/2,Error ellipse: s-maj=3.6km s-min=1.3km az=283.0*

ATH ***25*** *00:09:41.0,41°.34N×22°.71E,h4km,MD3.1/6*

ISC 25 00:09:41.2±1.0**,41°.33N**±0°.04×**22°.70E**±0°.02**,h7**km±8km**, n32,σ0°43/53,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**264**	P	**Pg**	**00 09 43.4**	**-0.1**
VAY	**Valandovo**	**0.10**	**264**	*i* Pg	**Pg**	**00 09 43.0**	**-0.5**
VAY				*i* Sg	**Sg**	**00 09 45.0**	**-0.2**
VAY				*e*Lg	Lg	00 09 45.0	
	comp=E,776nm,0.3s						
VAY				*e*Lg	Lg	00 09 45.1	
	comp=N,792nm,0.2s						
VAY	**Valandovo**	**0.10**	**264**	*i* Pg	**Pg**	**00 09 43.5**	**-0.1**
VAY				*i* Sg	**Sg**	**00 09 45.4**	**+0.2**
VAY				*e*Lg	Lg	00 09 45.6	
	comp=N,792nm,0.2s						
KNT	**Kendrikon**	**0.23**	**139**	P	**Pg**	**00 09 45.8**	**+0.1**
KNT				S	**Sg**	**00 09 49.0**	**+0.3**
KNT	**Kendrikon**	**0.23**	**139**	P	**Pg**	**00 09 45.8**	**+0.1**
KNT				S	**Sg**	**00 09 49.0**	**+0.3**
GRG	**Griva**	**0.44**	**211**	*e*PG	**Pg**	**00 09 49.7**	**0.0**
GRG				*e*SG	**Sg**	**00 09 56.1**	**+0.6**
GRG	**Griva**	**0.44**	**211**	*e*Pg	**Pg**	**00 09 49.7**	**0.0**
GRG				*e*Sg	**Sg**	**00 09 56.1**	**+0.6**
SRS	**Serrai**	**0.70**	**107**	P	**Pg**	**00 09 54.6**	**-0.2**
SRS	**Serrai**	**0.70**	**107**	P	**Pg**	**00 09 54.6**	**-0.2**
SOH	**Sokhos**	**0.71**	**136**	P	**Pg**	**00 09 54.5**	**-0.4**
SOH				S	**Sg**	**00 10 03.8**	**-0.3**
SOH	**Sokhos**	**0.71**	**136**	*e*PG	**Pg**	**00 09 54.4**	**-0.4**
SOH				*e*SG	**Sg**	**00 10 04.3**	**+0.2**
SOH	**Sokhos**	**0.71**	**136**	P	**Pg**	**00 09 54.5**	**-0.4**
SOH				S	**Sg**	**00 10 03.8**	**-0.3**
SOH				*e*Sg	**Sg**	**00 10 04.3**	**+0.2**
NVR	**Nevrokopi**	**0.87**	**88**	P	**Pg**	**00 09 57.8**	**-0.2**
NVR				S	**Sg**	**00 10 09.7**	**+0.3**
NVR	**Nevrokopi**	**0.87**	**88**	*e*PB	**Pg**	**00 09 57.5**	**-0.5**
NVR				*e*SG	**Sg**	**00 10 09.4**	**0.0**
NVR	**Nevrokopi**	**0.87**	**88**	*e*Pb	**Pg**	**00 09 57.5**	**-0.5**
NVR	**Nevrokopi**	**0.87**	**88**	P	**Pg**	**00 09 57.8**	**-0.2**
NVR				*e*Sg	**Sg**	**00 10 09.4**	**0.0**
NVR				S	**Sg**	**00 10 09.7**	**+0.3**
PLG	**Polygyros**	**1.11**	**149**	P	**Pg**	**00 10 02.6**	**+0.1**
PLG				S	**Sg**	**00 10 16.5**	**-0.4**
PLG	**Polygyros**	**1.11**	**149**	*e*PG	**Pg**	**00 10 01.7**	**-0.8**
PLG				*e*SB	**Sg**	**00 10 16.5**	**-0.4**
PLG	**Polygyros**	**1.11**	**149**	*e*Pg	**Pg**	**00 10 01.7**	**-0.8**
PLG	**Polygyros**	**1.11**	**149**	P	**Pg**	**00 10 02.6**	**+0.1**
PLG				S	**Sg**	**00 10 16.5**	**-0.4**
FNA	**Florina**	**1.14**	**242**	*e*PB	**Pg**	**00 10 02.6**	**-0.6**
FNA				*e*SB	**Sg**	**00 10 18.3**	**+0.3**
FNA	**Florina**	**1.14**	**242**	*e*Pb	**Pg**	**00 10 02.6**	**-0.6**
FNA				*e*Sb	**Sg**	**00 10 18.3**	**+0.3**
KAVA	**Kavala**	**1.41**	**103**	P	**Pn**	**00 10 07.4**	**+0.2**
KAVA				S	**Sg**	**00 10 26.8**	**+0.3**
KAVA	**Kavala**	**1.41**	**103**	P	**Pn**	**00 10 07.4**	**+0.2**
KAVA				S	**Sg**	**00 10 26.8**	**+0.3**
PAIG	**Paliouri**	**1.59**	**152**	*e*PB	**Pb**	**00 10 11.1**	**+0.3**
PAIG	**Paliouri**	**1.59**	**152**	*e*Pb	**Pb**	**00 10 11.1**	**+0.3**
THL	**Klokotos Trika**	**1.84**	**197**	*e*PB	**Pb**	**00 10 15.6**	**+0.4**
THL	**Klokotos Trika**	**1.84**	**197**	*e*Pb	**Pb**	**00 10 15.6**	**+0.4**
AGG	**Agios Georgios**	**2.32**	**187**	*e*PN	**Pb**	**00 10 22.4**	**-1.0**
AGG	**Agios Georgios**	**2.32**	**187**	*e*Pn	**Pb**	**00 10 22.4**	**-1.0**
THR6	**Thira Island,**	**5.39**	**156**	P	**Pn**	**00 11 02.5**	**+0.5**
THR6	**Thira Island,**	**5.39**	**156**	P	**Pn**	**00 11 02.5**	**+0.5**

DDA 25 00:13:36.3,37.77N×29.14E,h7km,MD2.8,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNZL	**Cakiroluk**	**0.11**	**221**	*i* P	Pg	00 13 39.2	+0.2
DNZL				*i* S	Sg	00 13 40.9	+0.1
GOLH	**Golhisar**	**0.63**	**148**	*e*P	Pg	00 13 48.8	+0.2
GOLH				*e*S	Sg	00 13 57.8	+0.8
KHAL	**Karahalli**	**0.66**	**25**	*e*P	Pg	00 13 49.2	+0.1
KHAL				*e*S	Sg	00 13 58.6	+0.8

ISCJB ***25*** *00:23:10.7±0.5,41°.26N±0°.04×22°.73E±0°.03,h5km±4km, Error ellipse: s-maj=6.0km s-min=3.7km az=9.4*

THE ***25*** *00:23:10.9,41°.29N×22°.73E,h2km±4km,ML1.9/3,Error ellipse: s-maj=4.0km s-min=0.9km az=343.0*

SKO ***25*** *00:23:10.3,41°.18N×22°.73E,h15km,M1.3,ML1.5*

ATH ***25*** *00:23:10.5,41°.30N×22°.73E,h8km±1km,MD3.0/8*

CSEM ***25*** *00:23:11.0±0.2,41°.25N×22°.72E,h5km,ML1.9/3,Error ellipse: s-maj=4.5km s-min=3.2km az=178.0*

ISC 25 00:23:10.3±0.9**,41°.31N**±0°.03×**22°.74E**±0°.02**,h14**km±5km**, n30,σ0°44/55,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**277**	*i* Pg	**Pg**	**00 23 13.6**	**-0.2**
VAY				*i* Sg	**Sg**	**00 23 15.8**	**-0.4**
VAY				*e*Lg	Lg	00 23 15.9	
	comp=E,255nm,0.3s						
VAY				*e*Lg	Lg	00 23 15.9	
	comp=N,271nm,0.2s						
VAY	**Valandovo**	**0.13**	**277**	*i* Pg	**Pg**	**00 23 14.1**	**+0.3**
VAY				*i* Sg	**Sg**	**00 23 16.3**	**+0.1**
VAY				*e*Lg	Lg	00 23 16.4	
	comp=N,271nm,0.2s						
KNT	**Kendrikon**	**0.19**	**140**	P	**Pg**	**00 23 15.0**	**+0.3**
KNT				S	**Sg**	**00 23 17.6**	**0.0**
KNT	**Kendrikon**	**0.19**	**140**	P	**Pg**	**00 23 15.0**	**+0.3**
KNT				S	**Sg**	**00 23 17.6**	**0.0**
GRG	**Griva**	**0.43**	**216**	P	**Pg**	**00 23 19.0**	**+0.1**
GRG				S	**Sg**	**00 23 24.9**	**+0.1**
GRG	**Griva**	**0.43**	**216**	*e*PB	**Pg**	**00 23 19.0**	**+0.1**
GRG				*e*SB	**Sg**	**00 23 24.9**	**+0.1**
GRG	**Griva**	**0.43**	**216**	P	**Pg**	**00 23 19.0**	**+0.1**
GRG				S	**Sg**	**00 23 24.9**	**+0.1**
SOH	**Sokhos**	**0.67**	**136**	P	**Pg**	**00 23 23.6**	**+0.2**
SOH				S	**Sg**	**00 23 32.5**	**+0.2**
SOH	**Sokhos**	**0.67**	**136**	*e*PB	**Pg**	**00 23 23.4**	**0.0**
SOH				*e*SB	**Sg**	**00 23 32.6**	**+0.2**
SOH	**Sokhos**	**0.67**	**136**	*e*Pb	**Pg**	**00 23 23.4**	**0.0**
SOH				S	**Sg**	**00 23 32.5**	**+0.2**
SRS	**Serrai**	**0.67**	**106**	P	**Pg**	**00 23 23.4**	**0.0**
SRS				S	**Sg**	**00 23 32.9**	**+0.6**
**S

CN2 smax smax
comp=N,2μm,0.7s
CN2 smax smax
comp=E,840nm,0.7s
KS01 Wonju Array Si 3.92 194 *e*Pn **Pn 00 55 43.7 -0.6**
KS01 *e*Sn **Sn 00 56 29.1 -1.9**
KSRS Korea Array 3.94 193 Pn **Pn 00 55 44.6 +0.1**
comp=E,80nm,0.3s,baz=11,slow=13,SNR=446
KSRS Pg **Pg 00 55 57.0 -1.4**
comp=E,59nm,0.3s,baz=10,slow=18,SNR=18
KSRS Sn **Sn 00 56 31.9 +0.5**
comp=E,42nm,0.3s,baz=16,slow=23,SNR=15
KSRS LR LR 00 57 17.8
comp=E,510nm,20.8s,baz=15,slow=39
KSAR Wonju Array Be 3.96 194 Pn **Pn 00 55 44.6 -0.2**
KSAR Pg **Pg 00 55 57.0 -1.7**
KSAR Sn **Sn 00 56 31.9 0.0**
SNY Shenyang 4.16 279 ⇑Pn **Pn 00 55 47.4 -0.1**
SNY Pg **Pb 00 55 58.3 +1.4**
SNY Sg **Sg 00 56 54.9 -1.5**
SNY smax smax
comp=N,780nm,0.8s
SNY smax smax
comp=E,720nm,0.9s
INCN Inchon 4.25 207 *e*Pn **Pn 00 55 49.1 +0.2**
INCN Sn **Sn 00 56 35.7 -3.4**
TJN Taejon 5.09 196 ⇑*i*P **Pn 00 56 00.5 +0.2**
TJN Taejon 5.09 196 ⇑*i*P **Pn 00 56 00.5 +0.2**
DL2 Dalian 6.18 250 ⇓*i*Pn **Pn 00 56 15.9 +0.5**
DL2 Pg Pb 00 56 36.1 +4.7
DL2 Sn **Sn 00 57 28.3 +1.5**
DL2 Sg Sb 00 57 52.6 +6.7
DL2 smax smax
comp=N,780nm,0.8s
DL2 smax smax
comp=E,500nm,0.8s
TEY Ternei 6.66 53 *i* PN **Pn 00 56 22.1 +0.2**
JNU Nakatsue 8.28 169 *e*Pn **Pn 00 56 44.7 +0.4**
JNU Nakatsue 8.28 169 Pn **Pn 00 56 44.8 +0.5**
comp=E,7.0nm,0.3s,baz=292,slow=2.2,SNR=40
JNU LR LR 00 59 50.0
comp=E,238nm,19.7s,baz=208,slow=37
HABR Khabarovsk 8.34 29 P **Pn 00 56 43.1 -1.8**
HABR *e* 00 58 19.2
HABR pmax pmax
comp=E,24nm,0.8s
HABR pmax pmax
comp=E,25nm,1.2s
HABR pmax pmax
comp=N,13nm,0.8s
HABR MLR MLR
comp=Z,359nm,16.0s
MAJO Matsushiro 8.55 121 *e*Pn **Pn 00 56 48.8 +0.8**
MAJO Matsushiro 8.55 121 *e*P **Pn 00 56 48.8 +0.8**
MAT Matsushiro 8.55 121 P **Pn 00 56 48.5 +0.5**
MAT S **Sn 00 58 29.6 +4.4**
MJAR Matsushiro Arr 8.56 121 Pn **Pn 00 56 49.0 +1.0**
MJAR Matsushiro Arr 8.56 121 Pn **Pn 00 56 49.0 +1.0**
comp=Z,6.9nm,0.3s,baz=302,slow=13,SNR=30
MJAR LR LR 00 59 52.6
comp=Z,340nm,18.1s,baz=310,slow=36
BJI Beijing 9.88 267 P **Pn 00 57 07.1 +1.0**
BJI pmax pmax
comp=Z,32nm,0.5s
BJI LR LR
comp=N,630nm,8.3s
BJI LR LR
comp=E,920nm,12.4s
BJI LR LR
comp=Z,340nm,15.1s
BJT Baijiatuau 9.89 267 *e*Pn **Pn 00 57 06.3 +0.1**
comp=Z,34nm,0.3s
HIA Hailar 10.32 324 *e*Pn **Pn 00 57 12.0 -0.2**
comp=Z,41nm,0.4s
HIA *e*Sn **Sn 00 59 03.0 -5.6**
ASAJ Asahikawa 10.35 70 Pn **Pn 00 57 12.8 +0.2**
ASAJ Asahikawa 10.35 70 Pn **Pn 00 57 12.8 +0.2**
comp=Z,0.9nm,0.3s,baz=265,slow=11,SNR=2.3
ASAJ LR LR 01 00 35.8
comp=Z,154nm,21.3s,baz=59,slow=34
ERM Erimo 10.57 81 ⇑*e*P **Pn 00 57 16.8 +1.3**
TIA Tai'an 10.62 245 P **Pn 00 57 17.3 +1.1**
TIA pmax pmax
comp=Z,80nm,0.7s
YSS Yuzh-Sakhalins 11.34 55 *e*P Pn 00 57 30.0 +3.9
YSS MLR MLR
comp=Z,400nm,11.0s
NJ2 Nanjing 12.33 225 *e*P Pn 00 57 43.4 +3.7
NJ2 S **Sn 00 59 57.5 -0.3**
NJ2 LR LR
comp=N,420nm,12.0s
NJ2 LR LR
comp=E,330nm,12.1s
NJ2 LR LR
comp=Z,530nm,12.5s
HHC Hu-ho-hao-te 13.22 274 ⇓*e*P **Pn 00 57 52.3 +0.4**
HHC pP P 00 57 55.6 -6.5
HHC sP 00 57 58.9
HHC PP **PnPn 00 58 02.9 +3.3**
HHC S **Sn 01 00 19.0 -0.7**
HHC sS **Sn 01 00 24.3 +4.6**
HHC SS **SnSn 01 00 34.1 +2.5**
HHC pmax pmax
comp=Z,26nm,1.1s
HHC pmax pmax
comp=Z,160nm,5.2s
HHC LR LR
comp=N,360nm,8.9s
HHC LR LR
comp=E,2μm,8.3s
HHC LR LR
comp=Z,2μm,8.5s
KPC Khapcheranga 14.39 311 *e*Pn **Pn 00 58 06.1 -1.7**
KPC *e*Lg Lg 01 02 15.6
TUP Tupik 14.47 338 ⇑*i*Pn **Pn 00 58 07.2 -1.7**
TUP *i* Lg Lg 01 02 20.3
CLNS Chul'man 15.79 352 *e*P **P 00 58 31.4 +0.9**
CLNS *e*S **Sn 01 01 18.1 -3.9**
CLNS pmax pmax
comp=N,3.0nm,1.1s
CLNS pmax pmax
comp=E,5.0nm,0.8s
CLNS pmax pmax
comp=E,2.0nm,0.8s
CLNS smax smax
comp=N,5.0nm,0.9s
CLNS smax smax
comp=E,3.0nm,0.9s
CLNS MLR MLR
comp=E,247nm,12.0s
CLNS MLR MLR
comp=E,270nm,11.0s
CLNS MLR MLR
comp=N,280nm,11.0s
ULN Ulaanbaatar 16.98 300 *e*Pn **Pn 00 58 41.4 -0.4**
comp=N,7.2nm,0.8s
CRS Chara 17.11 340 ⇑*e*Pn **P 00 58 45.7 +0.6**
CRS *i* Lg Lg 01 03 43.2
SONM Songino Array 17.40 300 Pn **P 00 58 48.3 -0.2**
SONM Lg Lg 01 03 51.3
SONM Songino Array 17.40 300 Pn **P 00 58 48.3 -0.2**
comp=N,0.6nm,0.3s,baz=108,slow=12,SNR=11
SONM Lg Lg 01 03 51.3
comp=N,0.1nm,0.3s,baz=102,slow=28,SNR=2.5
SONM LR LR 01 06 00.9
comp=N,384nm,18.3s,baz=84,slow=39
UKT Uakit 17.46 330 ⇑*i*Pn **Pn 00 58 48.3 +0.6**
UKT *i* Lg Lg 01 03 50.8
XAN Xi'an 17.50 252 P **P 00 58 50.9 +1.3**
XAN pmax pmax
comp=Z,2.0nm,0.5s
XAN LR LR
comp=N,270nm,15.3s
XAN LR LR
comp=E,110nm,17.3s
XAN LR LR
comp=Z,120nm,12.2s
NLYR Nelyaty 17.51 335 *e*Pn **P 00 58 49.9 +0.3**
NLYR *e*Lg Lg 01 03 54.8
YHNB Yeheng 17.78 204 *e*Pn **P 00 58 53.0 +0.3**
YLYR Ulyunkhan 18.03 325 ⇑*e*Pn **P 00 58 56.3 +1.0**
YLYR *e*Lg Lg 01 04 12.4
KMO Kumora 18.70 327 ⇓*e*Pn **Pn 00 59 04.4 +1.5**
KMO *e*Lg Lg 01 04 41.0
BOD Bodaibo 19.14 335 ⇑*e*Pn **Pn 00 59 08.6 +0.5**
BOD *i* Lg Lg 01 04 48.4
ENH Enshi 19.28 241 *e*P **Pn 00 59 11.1 +1.0**
comp=Z,38nm,0.9s
NIZ Nizh Angarsk 19.32 325 ⇑*e*P **Pn 00 59 11.2 +0.8**
ZAK Zakamensk 20.05 306 ⇑*e*P **P 00 59 18.7 +1.1**
ZAK *e*Lg Lg 01 05 21.4
ZAK Zakamensk 20.05 306 *e*P **P 00 59 18.5 +1.0**
ZAK pmax pmax
comp=Z,3.0nm,0.8s
TLY Talaya 20.25 309 *e*P Pn 00 59 22.2 +0.6
TLY *e*S Sn 01 03 09.3 -0.8
TLY *e*SS PcP 01 03 46.6 +13
TLY pmax pmax
comp=Z,9.0nm,1.0s
TLY MLR MLR
comp=Z,267nm,14.0s
LZH Lanzhou 20.34 263 *e*P Pn 00 59 23.0 +0.2
LZH *e*S **S 01 03 03.0 -6.6**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH LR LR
comp=N,370nm,11.0s
LZH LR LR
comp=E,360nm,12.5s
LZH LR LR
comp=Z,550nm,11.1s
YAK Yakutsk 20.77 1 *e*P **P 00 59 24.6 -0.5**
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=N,12nm,1.2s
YAK MLR MLR
comp=Z,160nm,12.0s
YAK MLR MLR
comp=N,93nm,10.0s
YAK MLR MLR
comp=E,21nm,8.0s
MOY Mondy 21.81 308 *i* P **P 00 59 38.0 +1.4**
MOY *i* Lg Lg 01 06 18.4
GTA Gaotai 22.33 275 P **P 00 59 43.8 +1.5**
GTA pP 00 59 47.8
GTA sP 00 59 49.8
GTA S **S 01 03 49.3 +0.5**
GTA sS Sn 01 03 55.8 -4.6
GTA pmax pmax
comp=Z,9.0nm,1.1s
GTA pmax pmax
comp=Z,100nm,5.0s
GTA LR LR
comp=N,170nm,14.7s
GTA LR LR
comp=E,560nm,13.8s
GTA LR LR
comp=Z,670nm,13.5s
PETK Petropavlovsk- 22.59 49 P **P 00 59 46.0 +1.1**
PETK Petropavlovsk- 22.59 49 *e*P **P 00 59 45.9 +1.1**
PETK pmax pmax
comp=Z,4.0nm,0.5s
PETK Petropavlovsk- 22.59 49 P **P 00 59 46.0 +1.1**
comp=Z,3.9nm,0.5s,baz=203,slow=7.2,SNR=6.5
PETK LR LR 01 08 04.5
comp=Z,59nm,21.5s,baz=248,slow=36
ORL Orlik 22.77 310 ⇑*e*P **P 00 59 48.8 +1.9**
ORL eLg Lg 01 06 47.3
CD2 Chengdu 22.85 251 P **P 00 59 47.8 0.0**
CD2 pP 00 59 52.0
CD2 sP 00 59 54.8
CD2 PP **PnPn 01 00 16.6 +4.8**
CD2 PcP **PcP 01 03 40.9 +2.0**
CD2 S **S 01 03 53.0 -5.3**
CD2 sS **S 01 03 58.5 +0.2**
CD2 SS **SnSn 01 04 35.4 +7.0**
CD2 PcS **PcS 01 07 18.5 +0.5**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,220nm,5.2s
CD2 LR LR
comp=N,570nm,21.1s
CD2 LR LR
comp=E,600nm,13.2s
CD2 LR LR
comp=Z,600nm,12.7s
GYA Guiyang 23.68 238 *e*P **P 00 59 56.6 +0.3**
GYA S **S 01 04 08.8 -3.4**
GYA ScP **ScP 01 07 21.3 +1.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
SEY Seymchan 25.69 25*c e*P **P 01 00 16.1 +1.8**
KMI Kunming 27.15 242 P **P 01 00 28.5 +0.4**
KMI S **S 01 05 05.4 -2.4**
KMI pmax pmax
comp=Z,15nm,0.6s
KMI LR LR
comp=N,190nm,9.5s
KMI LR LR
comp=E,200nm,6.6s
KMI LR LR
comp=Z,230nm,10.1s
QIZ Qiongzhong 27.61 222 P **P 01 00 30.3 -1.7**
QIZ S **S 01 05 16.1 +1.6**
QIZ pmax pmax
comp=Z,22nm,1.8s
QIZ pmax pmax
comp=Z,100nm,5.3s
QIZ LR LR
comp=N,260nm,19.9s
QIZ LR LR
comp=E,180nm,23.5s
QIZ LR LR
comp=Z,440nm,18.1s
WMQ Urumqi 30.36 289 *e*P **P 01 00 58.3 +2.0**
WMQ PP **PnPn 01 01 56.8 +2.8**
WMQ S **S 01 05 58.0 +0.3**
WMQ PcS **PcS 01 07 41.3 +1.4**
WMQ ScS **ScS 01 11 35.5 -0.2**
WMQ pmax pmax
comp=Z,7.0nm,0.5s
WMQ pmax pmax
comp=Z,110nm,4.6s
WMQ LR LR
comp=N,220nm,5.2s
WMQ LR LR
comp=E,220nm,7.6s
WMQ LR LR
comp=Z,79nm,21.2s
TIXI Tiksi 30.43 360*c e*P **P 01 00 56.0 -0.6**
TIXI pmax pmax
comp=Z,18nm,0.8s
FX1 Attu Island--F 31.69 53 LR LR 01 14 25.6
comp=Z,37nm,20.1s,baz=292,slow=37
ZAA0 Zalesovo Array 31.86 309 *e*P **P 01 01 08.8 -0.5**
ZALV Zalesovo Beam 31.86 309 P **P 01 01 09.9 +0.5**
ZALV PcP **PcP 01 03 59.1 -0.9**
ZALV Zalesovo Beam 31.86 309 *e*P **P 01 01 09.9 +0.5**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 31.86 309 P **P 01 01 09.9 +0.5**
comp=Z,2.1nm,0.6s,baz=97,slow=9.0,SNR=14
ZALV PcP **PcP 01 03 59.1 -0.9**
comp=Z,2.4nm,0.5s,baz=108,slow=1.2,SNR=13
ZALV LR LR 01 14 47.2
comp=Z,220nm,18.3s,baz=74,slow=38
NVS Novosibirsk 32.87 310 *e*P **P 01 01 17.9 -0.3**
NVS pmax pmax
comp=Z,9.0nm,1.4s
NVS pmax pmax
comp=N,3.0nm,1.1s
NVS pmax pmax
comp=E,3.0nm,1.0s
BILL Bilibino 33.40 24*d i*P **P 01 01 22.8 +0.1**
BILL *e* 01 02 33.0
BILL *i* 01 04 03.7
BILL pmax pmax
comp=Z,11nm,1.0s
MK31 Makanchi Array 33.67 295*c e*P **P 01 01 25.5 +0.1**
MK31 pmax pmax
comp=Z,2.0nm,0.5s
MKAR Makanchi Array 33.67 295 *e*P **P 01 01 26.1 +0.7**
MKAR PcP **PcP 01 04 04.4 -0.9**
MKAR Makanchi Array 33.67 295 *e*P **P 01 01 26.1 +0.7**
MKAR 01 04 04.4
MKAR Makanchi Array 33.67 295 P **P 01 01 26.0 +0.7**
comp=Z,3.0nm,0.6s,baz=88,slow=9.5,SNR=27
MKAR PcP **PcP 01 04 04.4 -0.9**
comp=Z,0.5nm,0.5s,baz=64,slow=2.6,SNR=5.5
MKAR LR LR 01 16 24.8
comp=Z,48nm,19.5s,baz=263,slow=39
CHTO Chiang Mai 34.10 238 *e*P **P 01 01 28.9 -0.4**
comp=Z,10.0nm,0.7s
CHTO Chiang Mai 34.10 238 *e*P **P 01 01 28.9 -0.4**
CHTO pmax pmax
comp=Z,10.0nm,0.7s
CM31 Chiang Mai Arr 34.36 238 *e*P **P 01 01 31.6 +0.1**
comp=Z,5.6nm,0.4s
CMAR Chiang Mai Arr 34.36 238 P **P 01 01 31.6 +0.1**
CMAR Chiang Mai Arr 34.36 238 P **P 01 01 31.6 +0.1**
comp=Z,8.4nm,0.8s,baz=30,slow=9.0,SNR=20
KURK Kurchatov 35.66 303 *e*P **P 01 01 42.8 +0.4**
comp=Z,8.0nm,0.8s
KURK *e*PcP **PcP 01 04 09.6 -1.2**
KURK Kurchatov 35.66 303*c e*P **P 01 01 43.1 +0.7**
KURK pmax pmax
comp=Z,11nm,1.0s
KURBB Kurchatov Arra 35.72 303 P **P 01 01 43.5 +0.5**
comp=Z,5.1nm,0.8s,baz=87,slow=9.2,SNR=37
KURBB PcP **PcP 01 04 10.1 -0.9**
comp=Z,1.7nm,0.7s,baz=87,slow=3.0,SNR=12
TAPN Taplejung 36.53 261 *e*P **P 01 01 50.4 -0.2**
ODAN Odare 37.04 260 *e*P **P 01 01 54.3 -0.5**
GUN Gumba 37.60 263 *e*P **P 01 01 58.7 -1.0**
KKN Kakani 38.11 263 *e*P **P 01 02 02.7 -1.1**
PKI Pulchoki 38.13 263 *e*P **P 01 02 03.1 -1.0**
DANN Dangsing 38.95 265 *e*P **P 01 02 10.5 -0.5**
comp=Z,16nm,0.6s
TKM2 Tokmak 2 39.15 291 *e*P **P 01 02 13.1 +0.7**
comp=Z,7.0nm,1.0s
TKM2 Tokmak 2 39.15 291 *e*P **P 01 02 13.1 +0.7**
TKM2 pmax pmax
comp=Z,7.0nm,1.0s
PYUN Piuthan 39.66 266 *e*P **P 01 02 16.0 -0.9**
comp=Z,49nm,1.1s
KSH Kashi 39.95 286 P P 01 02 25.0 +6.0
KSH *e*pP 01 02 29.6
KSH *e*SP 01 02 32.3
KSH *e*PP PnPn 01 04 02.1 +8.3
KSH *e*PcP **PcP 01 04 27.8 +3.4**
KSH *e*ScP **ScP 01 08 15.4 +0.9**
KSH *e*PcS **PcS 01 08 17.4 +2.7**
KSH *e*S S 01 08 34.4 +9.2
KSH *es*S 01 08 41.0
KSH *e*ScS **ScS 01 12 28.3 +0.6**
KSH pmax pmax
comp=Z,6.0nm,1.0s
KSH pmax pmax
comp=Z,110nm,3.9s
KSH LR LR
comp=N,150nm,5.1s
KSH LR LR
comp=E,140nm,4.8s
KSH LR LR
comp=Z,200nm,5.2s
AAK Ala-Archa 40.01 291 *e*P **P 01 02 20.4 +0.9**
comp=Z,1.0nm,0.6s
AAK Ala-Archa 40.01 291*c e*P **P 01 02 21.1 +1.6**
AAK pmax pmax
comp=Z,10.0nm,0.8s
AAK Ala-Archa 40.01 291 P **P 01 02 19.9 +0.4**
comp=Z,4.5nm,0.7s,baz=117,slow=5.4,SNR=10
AAK LR LR 01 20 19.8
comp=Z,172nm,20.2s,baz=13,slow=38
VOSK Vostochnaya 40.17 307 P **P 01 02 20.3 -0.3**
VOSK pmax pmax
comp=Z,7.0nm,0.5s
BVA0 Borovoye Array 40.49 307 *i* P **P 01 02 23.3 +0.1**
BVAR Borovoye Array 40.49 307 P **P 01 02 23.2 0.0**
BVAR PcP **PcP 01 04 25.1 -0.7**
BVAR Borovoye Array 40.49 307 P **P 01 02 23.2 0.0**
BVAR 01 04 25.1
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR MLR MLR
comp=Z,132nm,19.4s
BVAR Borovoye Array 40.49 307 P **P 01 02 23.2 0.0**
comp=Z,1.8nm,0.6s,baz=88,slow=8.8,SNR=17
BVAR PcP **PcP 01 04 25.1 -0.7**
comp=Z,2.0nm,0.6s,baz=90,slow=2.1,SNR=9.7
BVAR LR LR 01 20 22.9
comp=Z,132nm,19.4s,baz=5.3,slow=38
BRVK Borovoye 40.55 307 *e*P **P 01 02 23.3 -0.4**
comp=Z,3.3nm,0.9s
BRVK *e*PcP **PcP 01 04 25.3 -0.6**
BRVK Borovoye 40.55 307*c e*P **P 01 02 24.8 +1.1**
BRVK pmax pmax
comp=Z,4.0nm,1.0s
ZRNK Zerenda 41.33 307 *i* P **P 01 02 30.6 +0.5**
ZRNK pmax pmax
comp=Z,8.0nm,0.5s
ARU Arti 46.66 314*c i*P **P 01 03 12.7 -0.1**
ARU 01 04 59.3
ARU S **S 01 10 06.2 +3.3**
ARU SS **SS 01 13 24.3 -4.3**
ARU pmax pmax
comp=Z,5.0nm,0.6s
AB31 Akbulak array 47.73 304*c e*P **P 01 03 21.7 +0.4**
AB31 pmax pmax
comp=Z,3.0nm,0.4s
AKTO Aktyubinsk 48.56 306 P **P 01 03 27.9 +0.2**
AKTO Aktyubinsk 48.56 306 P **P 01 03 27.9 +0.2**
AKTO pmax pmax
comp=Z,3.0nm,0.7s
AKTO Aktyubinsk 48.56 306 P **P 01 03 27.9 +0.2**
comp=Z,2.6nm,0.7s,baz=68,slow=11,SNR=9.1
COLD Coldfoot 49.25 30 *e*P **P 01 03 33.1 +0.3**
comp=Z,3.3nm,0.8s
COLD *e*PcP **PcP 01 04 56.6 +1.0**
PPLA Purkeypile 49.32 36 *e*P **P 01 03 34.3 +0.8**
comp=Z,4.9nm,0.9s
TRF Thorofare Moun 50.03 35 *e*P **P 01 03 39.2 +0.2**
comp=Z,4.8nm,0.7s
KDAK Kodiak Island 50.46 43 P **P 01 03 42.0 0.0**
KDAK Kodiak Island 50.46 43 P **P 01 03 42.0 0.0**
comp=Z,7.4nm,0.7s,baz=194,slow=15,SNR=5.5
MCK McKinley 50.55 35 *e*P **P 01 03 43.7 +1.0**
comp=Z,5.5nm,0.8s
MCK McKinley 50.55 35 *e*P **P 01 03 43.7 +1.0**
MCK pmax pmax
comp=Z,6.0nm,0.8s
COLA College 50.71 33 *e*P **P 01 03 44.4 +0.6**
comp=Z,17nm,0.8s
COLA College 50.71 33 *e*P **P 01 03 44.4 +0.6**
COLA pmax pmax
comp=Z,17nm,0.8s
ILAR Eielson Array 51.13 33 P **P 01 03 47.0 -0.1**
ILAR PcP **PcP 01 05 01.1 -1.5**
ILAR Eielson Array 51.13 33 P **P 01 03 47.0 -0.1**
comp=Z,6.6nm,0.7s,baz=284,slow=7.4,SNR=80
ILAR PcP **PcP 01 05 01.1 -1.5**
comp=Z,1.2nm,0.7s,baz=264,slow=4.3,SNR=3.3
SML Sawmill 51.34 37 *e*P **P 01 03 47.7 -1.0**
comp=Z,8.5nm,1.5s
SML Sawmill 51.34 37 *e*P **P 01 03 47.7 -1.0**
SML pmax pmax
comp=Z,9.0nm,1.5s
DOT Dot Lake 52.65 34 *e*P **P 01 03 58.0 -0.4**
comp=Z,28nm,0.6s
EGAK Eagle 53.47 32 *e*P **P 01 04 04.7 +0.3**
comp=Z,15nm,0.6s
SPITS Spitsbergen Ar 54.31 346 P **P 01 04 10.2 -0.2**
SPITS Spitsbergen Ar 54.31 346 P **P 01 04 10.2 -0.2**
comp=Z,3.2nm,0.8s,baz=72,slow=11,SNR=5.4
SPITS LR LR 01 30 03.3
comp=Z,63nm,18.5s,baz=150,slow=39
APA Apatity 54.65 332 *e*P **P 01 04 15.0 +2.0**
APA MLR MLR
comp=Z,100nm,20.0s
INK Inuvik 54.96 27 P **P 01 04 14.8 -0.3**
INK Inuvik 54.96 27 P **P 01 04 14.8 -0.3**
comp=Z,3.8nm,0.5s,baz=86,slow=19
KEV Kevo 55.84 336 *ep* **P 01 04 19.7 -1.8**
comp=Z,3.2nm,0.7s
ARCES ARCESS Array B 56.41 336 P **P 01 04 24.1 -1.5**
ARCES ARCESS Array B 56.41 336 P **P 01 04 24.1 -1.5**
comp=Z,2.7nm,0.6s,baz=70,slow=9.7,SNR=17
JOF Joensuu 57.45 327 *ep* **P 01 04 31.7 -1.4**
comp=Z,4.0nm,0.6s
VRHR Novokhopersk 57.90 312 *e*P **P 01 04 35.5 -0.9**
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=N,10.0nm,0.5s

VRHR pmax pmax
comp=E,10.0nm,0.6s
OBN Obninsk 58.72 318 *eP* **P 01 04 40.7 -1.4**
OBN *e* 01 05 29.4
OBN pmax pmax
comp=Z,6.0nm,0.8s
OBN MLR MLR
comp=Z,100nm,17.0s
FITZ Fitzroy Crossi 59.18 184 P **P 01 04 45.5 0.0**
FITZ Fitzroy Crossi 59.18 184 P **P 01 04 45.5 0.0**
comp=Z,7.8nm,0.8s,baz=7.0,slow=5.6,SNR=14
VSR Storozhevoye 59.21 313 *eP* **P 01 04 45.1 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=N,8.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.9s
PUL Pulkovo 59.40 324⇓ *eP* **P 01 04 46.8 +0.1**
PUL pmax pmax
comp=Z,26nm,0.7s
KAF Kangasniemi 59.87 328 *ep* **P 01 04 48.1 -1.8**
comp=Z,6.0nm,0.6s
FIA1 FINESS Array S 60.32 327 *eP* **P 01 04 52.3 -0.7**
FINES FINESS Array B 60.32 327 P **P 01 04 52.5 -0.6**
FINES FINESS Array B 60.32 327 P **P 01 04 52.5 -0.6**
comp=Z,11nm,0.6s,baz=76,slow=5.8,SNR=73
DAG Danmarks Havn 60.46 352 *iP* **P 01 04 53.1 -0.7**
comp=Z,6.2nm,0.7s
DAG Danmarks Havn 60.46 352 *iP* **P 01 04 53.1 -0.7**
DAG pmax pmax
comp=Z,4.0nm,0.7s
KIV Kislovodsk 60.72 304 *eP* **P 01 04 56.0 -0.2**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,46nm,17.0s
DLBC Dease Lake 61.04 36 P **P 01 04 57.7 -0.4**
DLBC Dease Lake 61.04 36 P **P 01 04 57.7 -0.4**
comp=Z,3.7nm,0.9s,baz=300,slow=8.1,SNR=5.6
WRAB Tennant Creek 61.11 174 *eP* **P 01 04 58.1 -0.6**
comp=Z,5.5nm,0.7s
WRAB Tennant Creek 61.11 174 *eP* **P 01 04 58.2 -0.6**
WRAB pmax pmax
comp=Z,6.0nm,0.7s
WRA Warramunga Arr 61.12 174 P **P 01 04 58.2 -0.7**
WRA Warramunga Arr 61.12 174 P **P 01 04 58.2 -0.7**
comp=Z,8.5nm,0.5s,baz=354,slow=7.5,SNR=75
GNI Garni 61.36 300 LR LR 01 34 13.4
comp=Z,105nm,18.2s,baz=88,slow=39
VSU Vasula 61.66 324 *dP* **P 01 05 01.4 -0.8**
VSU pmax pmax
comp=Z,16nm,0.7s
CTA Charters Tower 63.12 162 P **P 01 05 12.0 -0.3**
CTA Charters Tower 63.12 162 P **P 01 05 12.0 -0.3**
comp=Z,7.5nm,0.8s,baz=352,slow=5.8,SNR=4.7
IZAR Zarasai 63.41 322 *eP* **P 01 05 14.2 +0.3**
IZAR AMB AMB 01 05 15.4
comp=Z,7.9nm,0.8s
IDID Didziasalis 63.42 321 *eP* **P 01 05 14.2 +0.2**
IDID AMB AMB 01 05 15.6
comp=Z,6.6nm,0.8s
ANN Anapa 63.49 307⇑ *iP* P 01 05 08.0 -6.6
ANN *eS* S 01 13 42.4 -6.3
ANN pmax pmax
comp=Z,79nm,1.5s
ISAL Salakas 63.56 322 *eP* **P 01 05 15.2 +0.3**
ISAL AMB AMB 01 05 16.6
comp=Z,14nm,0.9s
NACGM Naroch 63.64 321 *e* **P 01 05 13.0 -2.4**
IIGN Ignalina 63.64 322 *eP* **P 01 05 15.8 +0.3**
IIGN AMB AMB 01 05 17.1
comp=Z,9.4nm,0.7s
YKA Yellowknife Ar 64.72 27 P **P 01 05 21.8 -0.5**
YKA PcP **PcP 01 05 55.8 -0.2**
YKA Yellowknife Ar 64.72 27 P **P 01 05 21.8 -0.5**
comp=Z,1.6nm,0.5s,baz=313,slow=6.2,SNR=53
YKA PcP **PcP 01 05 55.8 -0.2**
comp=Z,0.7nm,0.7s,baz=317,slow=3.9,SNR=6.2
AS31 Alice Springs 64.78 175 *eP* **P 01 05 22.7 -0.6**
ASAR Alice Springs 64.78 175 P **P 01 05 22.8 -0.5**
ASAR Alice Springs 64.78 175 P **P 01 05 22.8 -0.5**
comp=Z,4.4nm,0.8s,baz=0.7,slow=6.6,SNR=38
AKASG Malin Array Be 64.82 316 P **P 01 05 22.6 -0.7**
AKASG Malin Array Be 64.82 316 *eP* **P 01 05 23.0 -0.3**
AKASG pmax pmax
comp=Z,10.0nm,0.6s
AKASG Malin Array Be 64.82 316 P **P 01 05 22.6 -0.7**
comp=Z,9.9nm,0.7s,baz=52,slow=6.6,SNR=28
AK01 Malin Array Si 64.83 316 *eP* **P 01 05 22.9 -0.4**
KIEV Kiev 64.83 316 *eP* **P 01 05 23.1 -0.2**
comp=Z,10.0nm,0.8s
KIEV Kiev 64.83 316 *eP* **P 01 05 23.1 -0.2**
KIEV pmax pmax
comp=Z,10.0nm,0.8s
AK02 Malin Array Si 64.86 316 *eP* **P 01 05 22.9 -0.5**
MIB Mutribah 65.21 289 *eP* **P 01 05 25.9 -0.3**
MIB AMb AMB 01 05 26.8
comp=Z,51nm,0.6s
SIM Simferopol' 65.38 309 P **P 01 05 26.6 -0.4**
SIM S **S 01 14 10.0 -2.1**
SIM pmax pmax
comp=Z,12nm,0.9s
RDF Al-Radifah 65.56 288 *eP* **P 01 05 28.1 -0.3**
RDF AMb AMB 01 05 31.3
comp=Z,28nm,1.3s
NAY Al-Naaiem 65.59 288 *eP* **P 01 05 28.3 -0.3**
NAY AMb AMB 01 05 29.2
comp=Z,12nm,0.8s
RST Umm Al-Ruwaisa 65.63 289 *eP* **P 01 05 28.0 -0.8**
RST AMb AMB 01 05 31.5
comp=Z,187nm,0.9s
SUW Suwalki 65.86 322 *eP* **P 01 05 29.6 -0.3**
comp=Z,18nm,0.5s
SUW Suwalki 65.86 322 *eP* **P 01 05 30.5 +0.6**
SUW Suwalki 65.86 322 *eP* **P 01 05 29.6 -0.3**
SUW pmax pmax
comp=Z,18nm,0.5s
HFS Hagfors 65.95 330 P **P 01 05 29.2 -1.3**
HFS Hagfors 65.95 330 P **P 01 05 29.2 -1.3**
comp=Z,5.7nm,0.6s,baz=64,slow=6.9,SNR=39
SUMG Summit 66.09 356 *eP* **P 01 05 31.3 -0.4**
comp=Z,53nm,1.7s
SUMG Summit 66.09 356 *iP* **P 01 05 31.7 0.0**
comp=Z,6.7nm,0.6s
SUMG Summit 66.09 356 *iP* **P 01 05 31.7 0.0**
SUMG pmax pmax
comp=Z,7.0nm,0.6s
NB2 NORSAR Subarra 66.24 332 P **P 01 05 31.1 -1.2**
comp=Z,7.3nm,0.8s,baz=44,slow=6.2
NB2 NORSAR Subarra 66.24 332 P **P 01 05 31.2 -1.1**
comp=Z,8.3nm,0.8s,baz=47,slow=6.5
NOA NORSAR Array B 66.24 332 P **P 01 05 31.2 -1.1**
NOA NORSAR Array B 66.24 332 P **P 01 05 31.2 -1.1**
comp=Z,6.5nm,0.8s,baz=44,slow=6.3,SNR=23
BEL Belsk 68.35 321 *eP* **P 01 05 46.2 +0.4**
TESR Tescani 68.68 314⇓ *iP* **P 01 05 48.1 +0.1**
BR131 Keskin Array S 68.69 304 *eP* **P 01 05 47.8 -0.6**
comp=Z,1.2nm,0.6s
BRTR Keskin Array B 68.69 304 P **P 01 05 48.0 -0.4**
BRTR Keskin Array B 68.69 304 P **P 01 05 48.0 -0.4**
comp=Z,1.2nm,0.5s,baz=84,slow=3.1,SNR=16
BUR08 Bucovina Ar. S 68.77 315 *eP* **P 01 05 48.6 0.0**
BURAR Bucovina Array 68.78 315⇑ *iP* **P 01 05 49.0 +0.3**
KWP Kalwaria Pacla 68.81 318 *eP* **P 01 05 49.2 +0.4**
comp=Z,21nm,0.6s
KWP Kalwaria Pacla 68.81 318⇑ *iP* **P 01 05 49.2 +0.4**
KWP Kalwaria Pacla 68.81 318 *eP* **P 01 05 49.1 +0.4**
KWP Kalwaria Pacla 68.81 318 *eP* **P 01 05 49.2 +0.4**
KWP pmax pmax
comp=Z,21nm,0.6s
BSD Bornholm Skovb 68.84 326⇑ *iP* **P 01 05 47.8 -1.0**
comp=Z,20nm,0.7s
BSD Bornholm Skovb 68.84 326⇑ *iP* **P 01 05 47.8 -1.0**
BSD pmax pmax
comp=Z,20nm,0.7s
GKP Gorka Klasztor 69.07 323 *eP* **P 01 05 50.0 -0.2**
KOLS Kolonicke sedl 69.47 318 *eP* **P 01 05 53.0 +0.1**
COP Copenhagen 69.48 327 *iP* **P 01 05 52.4 -0.3**
comp=Z,8.2nm,0.6s
COP Copenhagen 69.48 327 *eP* **P 01 05 52.4 -0.3**
COP pmax pmax
comp=Z,8.0nm,0.6s
BMR Baia Mare 69.64 316⇓ *iP* **P 01 05 54.7 +0.8**
TRPA Tarpa 69.85 317⇓ *iP* **P 01 05 56.0 +0.8**

OJC Ojcow 69.88 320 *eP* **P 01 05 55.6 +0.2**
comp=Z,29nm,0.6s
OJC Ojcow 69.88 320 *iP* **P 01 05 55.5 +0.2**
OJC Ojcow 69.88 320 *eP* **P 01 05 55.6 +0.2**
OJC pmax pmax
comp=Z,29nm,0.6s
CRVS Cervenica-Dubn 69.91 318 *eP* **P 01 05 54.0 -1.6**
NIE Niedzica 70.14 319 *iP* **P 01 05 57.8 +0.8**
RAYN Ar Rayn 70.22 284 *eP* **P 01 05 57.8 -0.1**
comp=Z,4.1nm,0.7s
MUD Monsted U'grnd 70.23 329 *iP* **P 01 05 57.1 -0.2**
MUD Monsted U'grnd 70.23 329 *eP* **P 01 05 57.1 -0.2**
ARR Arges 70.50 314⇓ *iP* **P 01 05 59.3 0.0**
OKC Ostrava-Krasne 70.93 320⇑ *iP* **P 01 06 01.9 +0.2**
OKC AMS AMS 01 40 20.0
comp=Z,200nm,18.0s
OKC Ostrava-Krasne 70.93 320⇑ *iP* **P 01 06 01.9 +0.2**
OKC MLR MLR
comp=Z,200nm,18.0s
ASF Jabal al Asfar 71.09 296 P **P 01 06 03.6 +0.5**
ASF Jabal al Asfar 71.09 296 P **P 01 06 03.6 +0.5**
comp=Z,3.2nm,0.7s,baz=320,slow=4.9,SNR=7.0
KSP Ksiaz 71.13 322 *eP* **P 01 06 03.1 +0.1**
MORC Moravsky Berou 71.26 320 *eP* **P 01 06 03.6 -0.2**
comp=Z,16nm,0.6s
MORC Moravsky Berou 71.26 320⇑ *iP* **P 01 06 04.0 +0.2**
MORC Moravsky Berou 71.26 320 *eP* **P 01 06 03.6 -0.2**
MORC pmax pmax
comp=Z,16nm,0.6s
PSZ Piszkesteto 71.34 318 *eP* **P 01 06 05.0 +0.6**
comp=Z,8.8nm,0.8s
PSZ Piszkesteto 71.34 318 *eP* **P 01 06 05.0 +0.6**
PSZ pmax pmax
comp=Z,9.0nm,0.8s
VYHS Vyhne 71.49 319 *eP* **P 01 06 05.6 +0.4**
MMAI Mount Meron Ar 71.58 298 P **P 01 06 06.4 +0.3**
MMAI Mount Meron Ar 71.58 298 P **P 01 06 06.4 +0.3**
comp=Z,1.7nm,0.5s,baz=38,slow=7.3,SNR=3.9
VRAC Vranov 72.03 321 P **P 01 06 08.9 +0.4**
VRAC Vranov 72.03 321⇑ *iP* **P 01 06 09.4 +0.9**
VRAC Vranov 72.03 321 P **P 01 06 08.9 +0.4**
comp=Z,10nm,0.7s,baz=52,slow=6.7,SNR=21
LON Longmire 72.08 43 *eP* **P 01 06 09.4 +0.5**
comp=Z,3.4nm,0.8s
LON Longmire 72.08 43 *eP* **P 01 06 09.4 +0.5**
LON pmax pmax
comp=Z,3.0nm,0.8s
PVCC Panska Ves 72.14 322⇑ *iP* **P 01 06 09.5 +0.4**
PVCC Panska Ves 72.14 322⇑ *iP* **P 01 06 09.5 +0.4**
SMOL Smolenice 72.17 320 *eP* **P 01 06 10.1 +0.8**
BRG Berggiesshubel 72.19 323 *eP* **P 01 06 09.2 -0.1**
comp=Z,7.6nm,0.7s
BRG
comp=N,146nm,16.9s
BRG
comp=E,112nm,18.0s
BRG
comp=Z,170nm,23.6s
PRA Prague 72.52 322⇑ **P P 01 06 12.0 +0.7**
PRU Pruhonice 72.53 322⇑ *iP* **P 01 06 11.6 +0.2**
PRU AMS AMS 01 41 40.0
comp=Z,100nm,15.3s
PRU Pruhonice 72.53 322⇑ *iP* **P 01 06 11.6 +0.2**
PRU MLR MLR
comp=Z,100nm,15.3s
ZST Bratislava 72.54 319 *eP* **P 01 06 11.2 -0.3**
TREC Trest 72.57 321⇑ *iP* **P 01 06 11.9 +0.2**
TREC Trest 72.57 321⇑ *iP* **P 01 06 11.9 +0.2**
NKC Novy Kostel 73.32 323⇑ *iP* **P 01 06 16.0 -0.1**
NKC Novy Kostel 73.32 323⇑ *iP* **P 01 06 16.0 -0.1**
CONA Conrad Observa 73.33 320⇑ *iP* **P 01 06 17.0 +0.6**
comp=Z,6.4nm,0.6s
NEW Newport 73.39 40 P **P 01 06 17.1 +0.5**
NEW Newport 73.39 40 P **P 01 06 17.1 +0.5**
comp=Z,2.7nm,0.8s,baz=342,slow=6.4,SNR=3.4
NEW Newport 73.39 40⇑ **P P 01 06 17.4 +0.9**
baz=73
HAWA Hanford 73.49 42 *eP* **P 01 06 18.3 +1.2**
comp=Z,9.4nm,0.9s
KHC Kasperske Hory 73.58 322 *eP* **P 01 06 17.8 +0.1**
comp=Z,11nm,0.7s
KHC Kasperske Hory 73.58 322⇑ *iP* **P 01 06 17.8 +0.1**
KHC Kasperske Hory 73.58 322 *eP* **P 01 06 17.8 +0.1**
KHC pmax pmax
comp=Z,11nm,0.7s
STKA Stephens Creek 73.72 169 P **P 01 06 18.9 +0.4**
STKA Stephens Creek 73.72 169 P **P 01 06 18.9 +0.4**
comp=Z,1.9nm,0.5s,baz=331,slow=7.0,SNR=10
GEC2 GERESS Array S 73.72 322 *eP* **P 01 06 18.6 0.0**
GEC2 GERESS Array S 73.72 322 *eP* **P 01 06 18.6 0.0**
GERES GERESS Array B 73.72 322 P **P 01 06 18.5 0.0**
GERES GERESS Array B 73.72 322 P **P 01 06 18.5 0.0**
comp=Z,4.5nm,0.7s,baz=40,slow=5.7,SNR=55
WET Wettzell 73.89 322 *eP* **P 01 06 19.6 +0.1**
WET pmax pmax
comp=Z,6.0nm,0.7s
EIL Elat 73.94 295 P **P 01 06 20.1 +0.1**
EIL Elat 73.94 295 P **P 01 06 20.1 +0.1**
comp=Z,2.9nm,0.8s,baz=18,slow=10.0,SNR=3.7
ARSA Arzberg 73.97 319⇑ *iP* **P 01 06 20.1 +0.1**
comp=Z,3.9nm,0.6s
B12A Libby 73.98 39⇓ **P P 01 06 21.0 +0.9**
baz=74
C11A Tepee Creek (N 74.10 40⇓ **P P 01 06 22.1 +1.3**
baz=74
MOA Molln 74.16 321⇑ *iP* **P 01 06 21.7 +0.6**
comp=Z,2.1nm,0.6s
A13A Flathead Natio 74.19 38⇓ **P P 01 06 22.0 +0.6**
baz=74
MSVF Nonsavu 74.20 132 *eP* **P 01 06 23.6 +2.0**
GRFO Grafenberg 74.26 323 *eP* **P 01 06 21.8 +0.2**
comp=Z,23nm,0.8s
GRFO Grafenberg 74.26 323 *eP* **P 01 06 21.8 +0.2**
GRFO pmax pmax
comp=Z,23nm,0.8s
GROS Grobnik 74.53 319 *iP* **P 01 06 23.1 -0.3**
C12B Naegeli Ranch, 74.57 39⇓ **P P 01 06 24.1 +0.6**
baz=74
B13A Whitefish 74.57 38⇑ **P P 01 06 23.9 +0.4**
baz=74
SOKA Soboth 74.61 319⇑ *iP* **P 01 06 23.7 -0.1**
comp=Z,12nm,0.8s
A14A Double T Ranch 74.62 37⇑ **P P 01 06 24.4 +0.5**
baz=74,SNR=6.6
NWAO Narrogin (SRO) 74.66 190 P **P 01 06 23.6 -0.2**
NWAO Narrogin (SRO) 74.66 190 P **P 01 06 23.6 -0.2**
comp=Z,4.3nm,0.7s,baz=0.0,slow=6.1,SNR=3.4
GOLS Golise 74.78 318 *iP* **P 01 06 24.1 -0.6**
BSMT Bassoo Peak 74.79 39 *eP* **P 01 06 25.4 +0.4**
comp=Z,2.9nm,1.0s
A15A Jolson Ranch, 74.93 37⇓ **P P 01 06 25.9 +0.2**
baz=75
YBH Yreka Blue Hor 74.95 47 P **P 01 06 26.8 +0.9**
YBH Yreka Blue Hor 74.95 47 P **P 01 06 26.8 +0.9**
comp=Z,1.9nm,0.6s,baz=346,slow=3.7,SNR=8.0
C13A Hot Springs 75.02 39⇑ **P P 01 06 27.1 +0.9**
baz=75,SNR=7.4
PDKS Podkum 75.06 319 *iP* **P 01 06 26.3 0.0**
D12A Red Ives Fores 75.09 40⇓ **P P 01 06 27.1 +0.5**
baz=75
JTMT Jette 75.11 39 *eP* **P 01 06 27.2 +0.5**
B14A Marquette Ranc 75.13 38⇓ **P P 01 06 27.6 +0.7**
baz=75,SNR=6.0
KBA Koelnbreinsper 75.14 320⇓ *iP* **P 01 06 27.1 +0.1**
comp=Z,12nm,0.7s
YBMT Yellow Bay 75.15 38 *eP* **P 01 06 26.9 -0.1**
comp=Z,2.2nm,0.7s
LJU Ljubljana 75.30 319 *iP* **P 01 06 27.6 -0.2**
VISS Visnje 75.32 319 *iP* **P 01 06 27.2 -0.6**
MYKA Terra Mystica 75.32 320⇑ *iP* **P 01 06 27.4 -0.5**
comp=Z,4.7nm,0.6s
BOJS Bojanci 75.32 318 *iP* **P 01 06 27.6 -0.3**
C14A Swan Lake 75.34 38⇑ **P P 01 06 28.7 +0.6**
baz=75
SWMT Swartz Lake 75.41 39 *eP* **P 01 06 29.0 +0.5**
comp=Z,4.1nm,1.1s
A16A West Butte Ran 75.47 36⇑ **P P 01 06 29.1 +0.3**
baz=75
D13A Huson 75.49 39⇑ **P P 01 06 29.3 +0.4**
baz=75
B15A Bradely Ranch, 75.49 37⇑ **P P 01 06 29.1 +0.2**
baz=75,SNR=8.5
EKA Eskdalemuir Ar 75.51 334 P **P 01 06 28.4 -0.4**
EKA Eskdalemuir Ar 75.51 334 P **P 01 06 28.4 -0.4**
comp=Z,5.4nm,0.7s,baz=42,slow=5.1,SNR=20

CEY Cerknica 75.57 319 *iP* **P 01 06 28.6 -0.7**
JAVS Javornik 75.64 319 *iP* **P 01 06 28.9 -0.8**
BMO Blue Mountains 75.68 42 *eP* **P 01 06 30.5 +0.4**
comp=Z,4.2nm,0.7s
B16A M & M Farms, S 75.81 37⇓ **P P 01 06 31.2 +0.5**
baz=76
WTTA Wattenberg 75.82 321⇑ *iP* **P 01 06 30.6 -0.3**
comp=Z,7.9nm,0.7s
MEM Membach 75.83 327 P **P 01 06 30.2 -0.4**
comp=Z,2.2nm,2.6s
C15A Salmond Ranch, 75.86 38⇑ **P P 01 06 31.9 +0.8**
baz=76,SNR=15
A17A Triple J Farms 75.87 36⇑ **P P 01 06 31.2 +0.3**
baz=76,SNR=6.1
SKDS Skadanscina 75.91 319 *iP* **P 01 06 30.4 -0.8**
MSO Missoula 75.93 39⇑ **P P 01 06 31.9 +0.5**
baz=76
D14A Greenough 75.95 39⇑ **P P 01 06 31.8 +0.2**
baz=76,SNR=10
MOTA Moosalm 76.01 322⇑ *iP* **P 01 06 31.0 -0.9**
comp=Z,4.8nm,0.7s
F12A Elk City 76.06 41⇑ **P P 01 06 32.7 +0.4**
baz=76,SNR=9.3
RETA Reutte 76.07 322⇑ *iP* **P 01 06 32.2 0.0**
comp=Z,13nm,0.7s
E13A Victor 76.09 40⇓ **P P 01 06 32.6 +0.3**
baz=76
MOD Modoc 76.16 46 *eP* **P 01 06 34.0 +1.1**
comp=Z,4.4nm,0.6s
C16A Fuhringer Ranc 76.24 37⇑ **P P 01 06 33.4 +0.2**
baz=76,SNR=6.1
A18A Metzger Ranch, 76.26 36⇑ **P P 01 06 33.4 +0.2**
baz=76
BCLA Clavier 76.27 327 P **P 01 06 34.2 +1.1**
B17A L&G Farms, Che 76.31 36⇑ **P P 01 06 33.9 +0.4**
baz=76,SNR=5.6
E14A Clinton 76.44 39⇑ **P P 01 06 34.6 +0.2**
baz=76,SNR=9.0
D15A Lincoln 76.44 38⇓ **P P 01 06 34.7 +0.3**
baz=76
G12A Big Creek, Yel 76.48 41⇑ **P P 01 06 34.8 +0.1**
baz=76,SNR=7.1
BFO Black Forest 76.55 324 *eP* **P 01 06 34.1 -0.7**
comp=Z,11nm,0.7s
BFO Black Forest 76.55 324 *eP* **P 01 06 34.1 -0.7**
BFO pmax pmax
comp=Z,11nm,0.7s
DAVA Damuels 76.62 322⇑ *iP* **P 01 06 35.2 -0.3**
comp=Z,20nm,0.7s
WVOR Wild Horse Val 76.68 45 *eP* **P 01 06 36.5 +0.7**
comp=Z,5.5nm,0.9s
WVOR Wild Horse Val 76.68 45 *eP* **P 01 06 36.5 +0.7**
WVOR pmax pmax
comp=Z,5.0nm,0.9s
B18A Beardsley Farm 76.69 36⇓ **P P 01 06 35.8 +0.1**
baz=76,SNR=6.1
A19A Klindworth Far 76.73 35⇓ **P P 01 06 36.2 +0.3**
baz=76
DOU Dourbes 76.81 327 P **P 01 06 35.7 -0.5**
C17A Wharram Farm, 76.81 37⇑ **P P 01 06 36.7 +0.2**
baz=76
E15A Deer Lodge 76.84 39⇑ **P P 01 06 37.0 +0.3**
baz=77,SNR=8.3
D16A Dana Ranch, Ca 76.90 38⇑ **P P 01 06 37.4 +0.4**
baz=77,SNR=5.9
FUORN Ofenpass-Fuorn 76.94 322⇓ *iP* **P 01 06 37.5 +0.1**
comp=Z,15nm,0.7s
FUORN Ofenpass-Fuorn 76.94 322 *eP* **P 01 06 37.4 +0.1**
comp=Z,11nm,0.7s
F14A Wisdom 76.94 40⇓ **P P 01 06 37.6 +0.3**
baz=77
EGMT Eagleton 76.97 36 *eP* **P 01 06 37.7 +0.5**
comp=Z,5.3nm,0.8s
EGMT Eagleton 76.97 36⇓ **P P 01 06 37.8 +0.5**
baz=77
DAVOX Davos/Dischmat 77.00 322 *eP* **P 01 06 37.6 0.0**
comp=Z,12nm,0.7s
DAVOX Davos/Dischmat 77.00 322 P **P 01 06 37.6 0.0**
DAVOX Davos/Dischmat 77.00 322 P **P 01 06 37.6 0.0**
comp=Z,10nm,0.6s,baz=21,slow=3.9,SNR=19
DAVOX LR LR 01 47 04.7
comp=Z,50nm,18.3s,baz=260,slow=41
B19A Brinkman Farms 77.00 35⇓ **P P 01 06 37.7 +0.3**
baz=77
G13A Cobalt 77.04 40⇑ **P P 01 06 37.9 +0.1**
baz=77
H12A Diamond D Ranc 77.13 41⇓ **P P 01 06 39.0 +0.6**
baz=77
D17A Six Diamond Ra 77.20 37⇓ **P P 01 06 38.5 -0.2**
baz=77
E16A East Helena 77.21 38⇓ **P P 01 06 39.2 +0.5**
baz=77
G14A Jackson 77.31 40⇓ **P P 01 06 40.2 +0.7**
baz=77
F15A Butte 77.33 39⇑ **P P 01 06 40.1 +0.6**
baz=77,SNR=14
LLS Linth-Limmern 77.35 322⇓ *iP* **P 01 06 39.4 -0.2**
comp=Z,4.3nm,0.4s
MFID Camas Ranch 77.45 43 *eP* **P 01 06 40.8 +0.7**
comp=Z,14nm,0.8s
MFID Camas Ranch 77.45 43⇑ **P P 01 06 40.9 +0.7**
baz=77,SNR=18
TUE Stuetta 77.47 322 *eP* **P 01 06 39.5 -0.8**
comp=Z,9.4nm,0.7s
C19A Slack Wire Ran 77.50 36⇓ **P P 01 06 41.0 +0.8**
baz=77
I12A Atlanta 77.53 42⇓ **P P 01 06 41.3 +0.6**
baz=77,SNR=7.5
D18A Linhart Farms, 77.57 37⇓ **P P 01 06 41.6 +0.9**
baz=77
E17A Martinsdale 77.64 38⇓ **P P 01 06 41.7 +0.5**
baz=77
F16A Kennard Place, 77.79 39⇑ **P P 01 06 42.3 +0.4**
baz=78,SNR=6.9
FUSIO Fusio 77.80 322 *eP* **P 01 06 41.8 -0.2**
comp=Z,9.1nm,0.8s
H14A Leadore 77.81 40⇑ **P P 01 06 42.4 +0.2**
baz=78
G15A Dillon 77.83 40⇓ **P P 01 06 42.9 +0.6**
baz=78,SNR=19
B21A Ellsworth Farm 77.86 34⇑ **P P 01 06 43.0 +0.8**
baz=78
A22A Carney Farms, 77.89 33⇓ **P P 01 06 43.0 +0.6**
baz=78
BOZ Bozeman (W) 77.89 39 *eP* **P 01 06 43.1 +0.6**
comp=Z,3.3nm,0.8s
BOZ Bozeman (W) 77.89 39 *eP* **P 01 06 43.1 +0.6**
BOZ pmax pmax
comp=Z,3.0nm,0.8s
MCMT McKenzie Canyo 77.91 40 *eP* **P 01 06 43.1 +0.3**
comp=Z,1.1nm,0.6s
I13A Wildhorse Cree 77.95 41⇑ **P P 01 06 43.9 +0.8**
baz=78,SNR=15
E18A Harlowton 78.00 37⇓ **P P 01 06 43.6 +0.4**
baz=78
D19A Cripps Ranch, 78.01 36⇓ **P P 01 06 43.8 +0.6**
baz=78
HLID Hailey 78.06 42 *eP* **P 01 06 44.4 +0.8**
comp=Z,5.0nm,0.9s
HLID Hailey 78.06 42⇑ **P P 01 06 44.4 +0.8**
baz=78
G16A Moss Hill, Enn 78.11 39⇑ **P P 01 06 44.4 +0.5**
baz=78,SNR=9.3
F17A Fitzpatrick Pl 78.15 38⇓ **P P 01 06 44.7 +0.7**
baz=78,SNR=5.2
H15A Lima 78.16 40⇑ **P P 01 06 45.0 +0.8**
baz=78
J13A Cove Ranch, Pi 78.30 42⇑ **P P 01 06 46.2 +1.3**
baz=78,SNR=19
B22A Reddig Ranch S 78.39 34⇑ **P P 01 06 46.0 +0.8**
baz=78
D20A Manuel Ranch, 78.40 36⇓ **P P 01 06 45.8 +0.5**
baz=78
AQU L'Aquila 78.50 317 *eP* **P 01 06 46.3 +0.4**
comp=Z,58nm,1.2s
AQU L'Aquila 78.50 317⇑ *iP* **P 01 06 46.2 +0.4**
G17A Pierce Place, 78.55 38⇑ **P P 01 06 46.9 +0.7**
baz=78
F18A Big Timber 78.58 38⇓ **P P 01 06 46.7 +0.4**
baz=78
E19A Rath Farm, Rou 78.59 37⇓ **P P 01 06 47.0 +0.7**
baz=78,SNR=6.5
B23A Brockton 78.68 33⇑ **P P 01 06 47.5 +0.7**
baz=78
J14A Carey 78.68 41⇑ **P P 01 06 48.0 +1.0**
baz=78
H16A Russell Place, 78.77 39⇓ **P P 01 06 48.3 +0.8**
baz=78,SNR=6.3

CMB	**Columbia Colle**	78.78	49	*e*P		P	01 06 47.8 +0.3
	comp=Z,3.8nm,0.8s						
CMB	**Columbia Colle**	78.78	49	*e*P		P	01 06 47.8 +0.3
CMB				pmax		pmax	
	comp=Z,4.0nm,0.8s						
E20A	**Meyer Farm, Mu**	78.85	36	⇓P		P	01 06 48.7 +0.9
	baz=79						
F19A	**Roth Farm, Mol**	78.98	37	⇑P		P	01 06 49.3 +0.7
	baz=79						
DGMT	**Dagmar**	79.00	33	⇓P		P	01 06 49.2 +0.7
	baz=79						
C23A	**Lambert**	79.12	34	⇓P		P	01 06 49.7 +0.6
	baz=79						
D22A	**Cohagen**	79.20	35	⇑P		P	01 06 50.2 +0.5
	baz=79						
I16A	**Newdale**	79.27	40	⇑P		P	01 06 51.9 +1.7
	baz=79						
H17A	**Grant Village**	79.32	39	⇑P		P	01 06 53.0 +2.4
	baz=79						
F20A	**Billings**	79.38	37	⇑P		P	01 06 51.0 +0.3
	baz=79						
H18A	**Shoshone NF, C**	79.53	38	⇓P		P	01 06 52.0 +0.2
	baz=79						
D23A	**Lindsay**	79.60	34	⇑P		P	01 06 52.3 +0.4
	baz=79						
NVAR	**Mina Array Bea**	79.67	47	P		P	01 06 53.2 +0.6
NVAR	**Mina Array Bea**	79.67	47	P		P	01 06 53.2 +0.6
	comp=Z,8.4nm,0.6s,baz=298,slow=5.1,SNR=42						
ELK	**Elko**	79.67	44	P		P	01 06 53.8 +1.2
ELK	**Elko**	79.67	44	P		P	01 06 53.8 +1.2
	comp=Z,1.8nm,0.5s,baz=293,slow=6.2,SNR=4.7						
H19A	**Powell**	79.86	38	⇓P		P	01 06 53.6 +0.2
	baz=80						
LOHW	**Long Hollow**	79.89	40	*e*P		P	01 06 54.5 +0.8
D24A	**Glendive**	80.02	34	⇓P		P	01 06 54.8 +0.7
	baz=80						
E23A	**Ismay**	80.09	35	⇑P		P	01 06 55.1 +0.6
	baz=80						
I18A	**Diamond G Ranc**	80.20	39	⇑P		P	01 06 55.8 +0.4
	baz=80						
G21A	**Lodge Grass**	80.24	37	⇓P		P	01 06 55.5 +0.1
	baz=80						
I19A	**Meeteetse**	80.33	38	⇓P		P	01 06 57.4 +1.4
	baz=80						
H20A	**Greybull**	80.45	38	⇓P		P	01 06 57.2 +0.6
	baz=80						
F23A	**Volborg**	80.65	35	⇓P		P	01 06 58.0 +0.4
	baz=80						
G22A	**Birney**	80.66	36	⇓P		P	01 06 58.1 +0.5
	baz=80						
TIN	**Tinemaha**	80.69	48	⇓P		P	01 06 58.7 +0.7
	baz=80						
ULM	**Lac du Bonnet**	80.70	27	P		P	01 06 57.7 +0.1
ULM	**Lac du Bonnet**	80.70	27	P		P	01 06 57.7 +0.1
	comp=Z,1.6nm,0.4s,baz=274,slow=4.2,SNR=3.2						
H21A	**Big Horn, Sher**	80.78	37	⇑P		P	01 06 58.7 +0.4
	baz=80						
I20A	**Worland**	80.80	38	⇑P		P	01 06 59.2 +0.7
	baz=80						
J19A	**Crowheart**	80.89	39	⇑P		P	01 06 59.8 +0.7
	baz=81						
SMMC	**Simmler**	80.90	51	⇓P		P	01 06 59.5 +0.5
	baz=81						
HWUT	**Hardware Ranch**	80.92	41	*e*P		P	01 06 59.8 +0.5
	comp=Z,7.1nm,0.7s						
F24A	**Ekalaka**	80.97	35	⇑P		P	01 06 59.7 +0.4
	baz=81						
PDAR	**Pinedale Array**	81.03	40	P		P	01 06 59.7 -0.2
PDAR	**Pinedale Array**	81.03	40	P		P	01 06 59.7 -0.2
	comp=Z,4.4nm,0.7s,baz=346,slow=1.5,SNR=29						
VES	**Vestal, Richgr**	81.06	50	⇓P		P	01 07 00.0 +0.2
	baz=81						
G23A	**Biddle**	81.07	36	⇓P		P	01 06 59.9 +0.1
	baz=81						
H22A	**Clearmont**	81.11	37	⇑P		P	01 07 00.5 +0.4
	baz=81						
CWC	**Cottonwood Cre**	81.21	49	⇓P		P	01 07 01.2 +0.4
	baz=81						
GRAC	**Grapevine Rang**	81.21	48	⇑P		P	01 07 01.6 +0.9
	baz=81						
R11A	**Troy Canyon, C**	81.22	46	⇑P		P	01 07 01.4 +0.5
	baz=81						
J20A	**Shoshoni**	81.28	38	⇑P		P	01 07 01.3 +0.3
	baz=81						
I21A	**Big Trails, Te**	81.30	38	⇓P		P	01 07 01.5 +0.4
	baz=81						
K19A	**Absolon Red Bu**	81.33	39	⇓P		P	01 07 00.9 -0.5
	baz=81						
DUG	**Dugway**	81.34	43	⇑P		P	01 07 01.9 +0.5
	baz=81						
L18A	**Fontenelle, Gr**	81.44	40	⇑P		P	01 07 02.5 +0.5
	baz=81						
M17A	**Scullys Gap (B**	81.47	41	⇓P		P	01 07 02.9 +0.7
	baz=81						
ISA	**Isabella**	81.53	50	⇓P		P	01 07 02.8 +0.3
	baz=81						
J21A	**Lysite**	81.58	38	⇓P		P	01 07 02.9 +0.2
	baz=81						
I22A	**9 Mile Ranch,**	81.60	37	⇑P		P	01 07 02.8 +0.1
	baz=81						
L19A	**Farson**	81.63	40	⇓P		P	01 07 03.6 +0.6
	baz=81						
K20A	**Yellowstone Ra**	81.69	39	⇓P		P	01 07 03.0 -0.3
	baz=81						
H24A	**Dirks Ranch, A**	81.79	35	⇑P		P	01 07 03.8 +0.1
	baz=82						
MPMC	**Manual Prospec**	81.81	49	⇑P		P	01 07 04.9 +0.9
	baz=82						
FURC	**Furnace Creek,**	81.88	48	⇑P		P	01 07 05.4 +1.3
	baz=82						
J22A	**Midwest**	81.98	37	⇓P		P	01 07 04.8 +0.1
	baz=82						
K21A	**Alcova**	82.22	38	⇓P		P	01 07 06.0 -0.2
	baz=82						
BLG	**Laguna Peak**	82.29	51	⇓P		P	01 07 07.8 +1.4
	baz=82						
EDW2	**Edwards Air Fo**	82.37	50	⇓P		P	01 07 07.5 +0.6
	baz=82						
I24A	**Kuemmerle Ranc**	82.46	36	⇑P		P	01 07 07.7 +0.5
	baz=82						
RSSD	**Black Hills**	82.51	36	*e*P		P	01 07 08.2 +0.6
	comp=Z,3.4nm,0.9s						
RSSD	**Black Hills**	82.51	36	*e*P		P	01 07 08.2 +0.6
RSSD				pmax		pmax	
	comp=Z,3.0nm,0.9s						
K22A	**Casper**	82.55	38	⇓P		P	01 07 08.0 +0.3
	baz=82						
SHOC	**Shoshone**	82.61	48	⇓P		P	01 07 09.0 +1.0
	baz=82						
DECC	**Green Verdugo**	82.62	50	⇑P		P	01 07 08.8 +0.7
	baz=82						
M20A	**Sweetwater, Wa**	82.66	40	⇓P		P	01 07 09.2 +0.7
	baz=82						
GSC	**Goldstone**	82.74	49	*e*P		P	01 07 09.8 +0.9
	comp=Z,3.9nm,0.8s						
GSC	**Goldstone**	82.74	49	*e*P		P	01 07 09.8 +0.9
GSC				pmax		pmax	
	comp=Z,4.0nm,0.8s						
GSC	**Goldstone**	82.74	49	⇓P		P	01 07 09.7 +0.9
	baz=82						
J24A	**Dixon Ranch, L**	82.86	36	⇓P		P	01 07 09.5 +0.2
	baz=83						
MSU	**Marysvale**	82.92	44	*e*P		P	01 07 10.8 +1.0
MSU	**Marysvale**	82.92	44	*e*P		P	01 07 10.8 +1.0
BFSC	**Mount Baldy Ra**	83.02	50	⇑P		P	01 07 11.0 +0.7
	baz=83						
FMP	**Fort Macarthur**	83.03	51	⇑P		P	01 07 11.8 +1.6
	baz=83						
P18A	**Preston Nutter**	83.07	42	⇑P		P	01 07 11.5 +0.8
	baz=83						
O19A	**Miners Draw (B**	83.12	41	⇑P		P	01 07 11.2 +0.4
	baz=83						
N20A	**Spence Gulch,**	83.13	40	⇑P		P	01 07 11.8 +0.8
	baz=83						
Q16A	**Castle Valley**	83.13	43	⇓P		P	01 07 11.6 +0.6
	baz=83						
TUQ	**Turquoise Moun**	83.14	48	⇑P		P	01 07 11.8 +0.8
	baz=83						
SCHQ	**Schefferville**	83.28	9	P		P	01 07 10.6 -0.6
SCHQ	**Schefferville**	83.28	9	P		P	01 07 10.6 -0.6
	comp=Z,2.3nm,0.6s,baz=360,slow=8.7,SNR=7.6						
SRU	**San Rafael**	83.32	42	⇑P		P	01 07 12.6 +0.7
	baz=83						
L23A	**Garrett**	83.35	38	⇑P		P	01 07 12.0 0.0
	baz=83						
M22A	**Cedar Creek Ra**	83.49	39	⇑P		P	01 07 14.0 +1.3
	baz=83						
N21A	**Black Mountain**	83.55	40	⇓P		P	01 07 13.5 +0.4
	baz=83						
O20A	**White River Ci**	83.68	40	⇓P		P	01 07 14.3 +0.5
	baz=83						
P19A	**Cripple Cowboy**	83.70	41	⇓P		P	01 07 14.5 +0.6
	baz=83						
O21A	**Pagoda**	83.99	40	⇑P		P	01 07 16.1 +0.7
	baz=84						
N22A	**Wattenberg Ran**	84.02	39	⇑P		P	01 07 16.5 +0.9
	baz=84						
BELC	**Belle Mtn. Jos**	84.14	49	⇑P		P	01 07 16.9 +0.8
	baz=84						
EYMN	**Ely**	84.16	26	*e*P		P	01 07 15.1 -0.7
	comp=Z,3.6nm,0.8s						
PFO	**Pinyon Flat Ob**	84.17	50	P		P	01 07 16.8 +0.6
PFO	**Pinyon Flat Ob**	84.17	50	P		P	01 07 16.8 +0.6
	comp=Z,3.7nm,0.8s,baz=322,slow=4.5,SNR=6.4						
PFO	**Pinyon Flat Ob**	84.17	50	⇑P		P	01 07 17.2 +0.9
	baz=84						
N23A	**Red Feather La**	84.19	39	⇓P		P	01 07 17.3 +0.9
	baz=84						
M24A	**Cheyenne**	84.26	38	⇓P		P	01 07 17.7 +1.1
	baz=84						
109C	**Camp Elliot, M**	84.31	51	⇓P		P	01 07 17.4 +0.7
	baz=84						
NEE2	**Needles Airpor**	84.36	48	⇓P		P	01 07 17.9 +0.9
	baz=84						
U15A	**North Rim**	84.41	45	⇑P		P	01 07 18.9 +1.3
	baz=84						
O22A	**Kremmling**	84.48	39	⇓P		P	01 07 18.5 +0.6
	baz=84						
IRM	**Iron Mountain**	84.51	49	⇑P		P	01 07 19.0 +1.1
	baz=84						
W13A	**Hualapai Mount**	84.53	47	⇑P		P	01 07 18.8 +0.7
	baz=84						
P21A	**Newcastle**	84.54	40	⇓P		P	01 07 19.1 +0.9
	baz=84						
Q20A	**Ridgley Place,**	84.56	41	⇓P		P	01 07 18.5 +0.4
	baz=84						
M25A	**Palm-Egli Farm**	84.64	37	⇓P		P	01 07 18.9 +0.4
	baz=84						
S18A	**Hurst Farm, Bl**	84.67	43	⇑P		P	01 07 19.6 +0.8
	baz=84						
BC3	**Big Chuckawall**	84.70	49	⇑P		P	01 07 19.7 +0.7
	baz=84						
O23A	**Lake Granby, G**	84.74	39	⇓P		P	01 07 20.4 +1.2
	baz=84						
N24A	**Carr**	84.74	38	⇑P		P	01 07 19.9 +0.9
	baz=84						
P22A	**Eagle**	84.82	40	⇓P		P	01 07 20.1 +0.6
	baz=84						
PDMCI	**Parker Dam,Lak**	84.97	48	⇑P		P	01 07 21.2 +1.1
	baz=85						
Q21A	**Lamborn Mesa,**	85.01	41	⇑P		P	01 07 21.3 +0.8
	baz=85						
SMCO	**Snowmass**	85.04	40	*e*P		P	01 07 21.6 +0.8
	comp=Z,4.6nm,0.6s						
PV01	**Paradox Valley**	85.05	42	*e*P		P	01 07 21.4 +0.6
	comp=Z,162nm,0.7s						
R20A	**Redvale**	85.11	42	⇓P		P	01 07 22.0 +1.0
	baz=85						
N25A	**Grover**	85.12	38	⇑P		P	01 07 22.1 +1.1
	baz=85						
Y12C	**Blythe**	85.16	48	⇑P		P	01 07 22.1 +1.0
	baz=85						
ISCO	**Idaho Springs**	85.21	39	⇑P		P	01 07 22.5 +0.9
	baz=85						
O24A	**Longmont**	85.21	39	⇓P		P	01 07 22.2 +0.8
	baz=85						
M27A	**Reverse DX Ran**	85.31	36	⇑P		P	01 07 22.4 +0.6
	baz=85						
Q22A	**Crested Butte,**	85.31	40	⇓P		P	01 07 23.0 +0.9
	baz=85						
R21A	**Cimarron**	85.38	41	⇑P		P	01 07 23.4 +1.0
	baz=85						
S20A	**Disappointment**	85.39	42	⇑P		P	01 07 23.7 +1.2
	baz=85						
P23A	**Jefferson**	85.43	40	⇓P		P	01 07 23.8 +1.0
	baz=85						
GLA	**Glamis**	85.50	49	⇑P		P	01 07 24.1 +1.3
	baz=85						
KEST	**Kesra**	85.51	315	P		P	01 07 22.2 -0.7
KEST	**Kesra**	85.51	315	P		P	01 07 22.2 -0.7
	comp=Z,1.6nm,1.0s,baz=245,slow=24,SNR=4.2						
WUAZ	**Wupatki**	85.58	45	⇑P		P	01 07 24.7 +1.3
	baz=85						
O25A	**Wiggins**	85.66	38	⇑P		P	01 07 23.9 +0.3
	baz=85						
P24A	**Kohler Place,**	85.77	39	⇓P		P	01 07 24.4 +0.1
	baz=86						
MVCO	**Mesa Verde**	85.80	43	P		P	01 07 25.4 +0.8
	baz=86						
Q23A	**Hartsel**	85.81	40	⇑P		P	01 07 24.9 +0.3
	baz=86						
S21A	**Coal Bank Pass**	85.81	42	⇑P		P	01 07 26.3 +1.7
	baz=86						
N27A	**Anderson Farm,**	85.83	37	⇑P		P	01 07 24.9 +0.5
	baz=86						
Y14A	**Wickenburg**	85.87	47	⇓P		P	01 07 25.4 +0.7
	baz=86						
ECSD	**EROS Data Cent**	85.91	31	⇑*e*P		P	01 07 24.0 -0.7
	comp=Z,6.2nm,0.9s						
OGNE	**Ogallala**	85.94	36	⇑P		P	01 07 25.0 +0.1
	baz=86						
SPMN	**St. Paul**	86.07	28	⇑P		P	01 07 25.0 -0.4
	baz=86						
Q24A	**Divide**	86.09	39	⇓P		P	01 07 26.4 +0.4
	baz=86						
P25A	**Willow Gulch B**	86.12	38	⇓P		P	01 07 26.5 +0.5
	baz=86						
S22A	**4UR Ranch, Cre**	86.22	41	⇓P		P	01 07 27.7 +1.1
	baz=86						
113A	**Mohawk Valley,**	86.31	49	⇓P		P	01 07 27.7 +0.9
	baz=86						
Z14A	**Wintersburg**	86.33	48	⇑P		P	01 07 27.9 +1.0
	baz=86						
R23A	**Moffat**	86.37	40	⇓P		P	01 07 28.1 +0.7
	baz=86						
X16A	**Lo Mia Camp, P**	86.37	46	⇓P		P	01 07 28.8 +1.5
	baz=86						
U20A	**Newcomb**	86.43	43	⇑P		P	01 07 28.5 +1.0
	baz=86						
T21A	**Navajo Lake**	86.46	42	⇑P		P	01 07 28.8 +1.1
	baz=86						
P26A	**Davis Ranch, A**	86.46	38	⇑P		P	01 07 28.3 +0.7
	baz=86						
N29A	**Votaw Ranch, W**	86.67	35	⇓P		P	01 07 29.3 +0.8
	baz=86						
R24A	**Sanders Place,**	86.69	40	⇓P		P	01 07 29.7 +0.9
	baz=86						
T22A	**Edith**	86.76	42	⇓P		P	01 07 30.6 +1.4
	baz=86						
U21A	**Nageezi**	86.83	42	⇓P		P	01 07 30.5 +0.9
	baz=87						
SDCO	**Great Sand Dun**	86.88	40	*e*P		P	01 07 29.9 0.0
	comp=Z,0.9nm,0.8s						
Q26A	**Hugo**	86.89	38	⇑P		P	01 07 30.9 +1.2
	baz=87						
V20A	**Brimhall**	86.90	43	⇑P		P	01 07 30.7 +0.7
	baz=87						
S24A	**Houchin Ranch,**	87.10	40	⇓P		P	01 07 31.6 +0.6
	baz=87						
R25A	**Fountain Ranch**	87.15	39	⇓P		P	01 07 31.6 +0.6
	baz=87						
T23A	**Casias Ranch,**	87.17	41	⇑P		P	01 07 32.2 +0.9
	baz=87						
P28A	**Saint Francis**	87.18	37	⇑P		P	01 07 31.1 +0.1
	baz=87						
BGNE	**Belgrade**	87.24	34	⇓P		P	01 07 31.6 +0.4
	baz=87						
U22A	**Llaves**	87.28	42	⇓P		P	01 07 32.9 +1.1
	baz=87						
W20A	**Ramah**	87.40	44	⇑P		P	01 07 33.2 +0.8
	baz=87						
R26A	**Arlington**	87.42	39	⇓P		P	01 07 32.8 +0.5
	baz=87						
Q28A	**Sharon Springs**	87.56	37	⇑P		P	01 07 33.5 +0.5
	baz=87						
T24A	**Torres, Weston**	87.63	40	⇑P		P	01 07 34.4 +0.9
	baz=87						
U23A	**El Rito**	87.65	42	⇑P		P	01 07 34.7 +1.1
	baz=87						
R27A	**Eads**	87.74	38	⇓P		P	01 07 34.2 +0.4
	baz=87						
W21A	**San Fidel**	87.85	43	⇓P		P	01 07 35.0 +0.5
	baz=88						
X20A	**Quemado**	87.85	44	⇓P		P	01 07 36.5 +1.9
	baz=88						
T25A	**Trinidad**	87.89	40	⇓P		P	01 07 35.2 +0.5
	baz=88						
S26A	**Kim**	87.95	39	⇑P		P	01 07 35.2 +0.3
	baz=88						
U24A	**Moreno Valley**	88.04	41	⇓P		P	01 07 35.9 +0.4
	baz=88						
R28A	**Tribune**	88.15	38	⇑P		P	01 07 36.5 +0.7
	baz=88						
T26A	**Comanche Natio**	88.25	39	⇑P		P	01 07 36.5 +0.2
	baz=88						
X21A	**Alamocita Cree**	88.30	44	⇑P		P	01 07 38.0 +1.3
	baz=88						
Y20A	**Horse Springs,**	88.40	45	⇑P		P	01 07 38.7 +1.4
	baz=88						
U25A	**Circle Dot Ran**	88.47	40	⇓P		P	01 07 38.1 +0.7
	baz=88						
V24A	**Rampart Ranch,**	88.58	41	⇓P		P	01 07 39.3 +1.3
	baz=88						
S28A	**Manter**	88.72	38	⇓P		P	01 07 39.3 +0.9
	baz=88						
ESDC	**Sonseca Array**	88.79	326	P		P	01 07 37.6 -1.1
ESDC	**Sonseca Array**	88.79	326	P		P	01 07 37.6 -1.1
	comp=Z,0.3nm,0.6s,baz=25,slow=4.7,SNR=8.9						
U26A	**Atchley Ranch,**	88.80	40	⇑P		P	01 07 40.1 +1.1
	baz=88						
V25A	**Rancho No Teng**	88.82	41	⇓P		P	01 07 39.8 +0.7
	baz=88						
Z20A	**Nine Sixteen R**	88.90	45	⇓P		P	01 07 40.6 +1.1
	baz=89						
U27A	**Thompson Grove**	89.22	39	⇓P		P	01 07 41.7 +0.8
	baz=89						
V26A	**Tequesquite Ra**	89.26	40	⇓P		P	01 07 41.8 +0.7
	baz=89						
S30A	**Montezuma**	89.34	37	⇑P		P	01 07 42.1 +0.8
	baz=89						
W25A	**X Bar L Ranch,**	89.39	41	⇑P		P	01 07 42.9 +1.2
	baz=89						
U28A	**Mallet**	89.54	39	⇑P		P	01 07 42.8 +0.4
	baz=89						
Y23A	**Lovelace Mesa,**	89.60	43	⇓P		P	01 07 44.1 +1.3
	baz=89						
V27A	**Dan Oppiter Fa**	89.75	40	⇓P		P	01 07 43.8 +0.4
	baz=90						
T30A	**Plains**	89.79	38	⇓P		P	01 07 44.4 +1.0
	baz=90						
319A	**Douglas**	89.86	47	⇓P		P	01 07 45.2 +1.3
	baz=90						
Y25A	**Mesa, Roswell**	90.30	42	⇑P		P	01 07 46.7 +0.8
	baz=90						
Z24A	**Sheeppen Canyo**	90.42	43	⇓P		P	01 07 47.9 +1.2
	baz=90						
222A	**Williams Famil**	90.48	45	⇑P		P	01 07 47.7 +0.9
	baz=90						
Y26A	**Elida**	90.73	42	⇑P		P	01 07 48.7 +0.7
	baz=90						
Z25A	**Roswell**	90.80	43	⇓P		P	01 07 49.8 +1.6
	baz=90						
124A	**Stringfield Ra**	90.87	43	⇓P		P	01 07 49.9 +1.1
	baz=91						
223A	**Chaparral, Ant**	90.91	44	⇑P		P	01 07 49.7 +0.9
	baz=91						
V31A	**Spring Creek L**	91.15	38	⇓P		P	01 07 50.8 +1.0
	baz=91						
125A	**Gardner Draw,**	91.32	43	⇓P		P	01 07 51.8 +1.1
	baz=91						
224A	**Cornudas Mount**	91.33	44	⇑P		P	01 07 52.3 +1.5
	baz=91						
Z27A	**Tatum**	91.53	42	⇓P		P	01 07 52.1 +0.5
	baz=91						
126A	**Clayton Basin,**	91.65	42	⇑P		P	01 07 52.8 +0.6
	baz=91						
Y29A	**Porterfield Fa**	91.85	40	⇑P		P	01 07 53.6 +0.5
	baz=92						
324A	**Moseley Ranch,**	91.85	44	⇑P		P	01 07 54.1 +0.8
	baz=92						
X31A	**McDonald Ranch**	92.03	39	⇑P		P	01 07 54.8 +1.0
	baz=92						
226B	**Tecolote Peak,**	92.03	43	⇓P		P	01 07 54.9 +0.9
	baz=92						
325A	**Bean Ranch, Si**	92.17	44	⇓P		P	01 07 55.6 +0.8
	baz=92						
Y30A	**Stafford Cattl**	92.21	40	⇓P		P	01 07 55.2 +0.5
	baz=92						
Z29A	**Hungry Hill Ra**	92.31	41	⇓P		P	01 07 56.3 +1.1
	baz=92						
WMOK	**Wichita Mounta**	92.50	38	*e*P		P	01 07 56.1 +0.1
	comp=Z,2.1nm,0.9s						
WMOK	**Wichita Mounta**	92.50	38	*e*P		P	01 07 56.1 +0.1
WMOK				pmax		pmax	
	comp=Z,2.0nm,0.9s						
Z30A	**Sanderson Ranc**	92.58	40	⇓P		P	01 07 56.9 +0.5
	baz=92						
425A	**Indio Mountain**	92.63	44	⇑P		P	01 07 57.8 +1.0
	baz=92						
326A	**Caldwell Ranch**	92.73	43	⇓P		P	01 07 58.1 +0.9
	baz=92						
130A	**Snyder**	93.22	40	⇓P		P	01 07 59.5 +0.1
	baz=93						
426A	**McDonald Obser**	93.22	44	⇓P		P	01 08 00.4 +0.7
	baz=93						
328A	**Wristen Ranch,**	93.28	42	⇓P		P	01 08 01.1 +1.4
	baz=93						
229A	**Bryant Ranch,**	93.31	41	⇓P		P	01 08 00.8 +1.0
	baz=93						
Z32A	**Haskell**	93.35	39	⇑P		P	01 08 00.9 +1.0
	baz=93						
329A	**Wagon Wheel Ra**	93.61	42	⇓P		P	01 08 01.9 +0.6
	baz=93						
526A	**Mary Lane Ranc**	93.67	44	⇓P		P	01 08 02.8 +1.1
	baz=93						
230A	**Sterling City**	93.72	41	⇑P		P	01 08 02.3 +0.6
	baz=93						
ABTX	**Abilene, Hawle**	93.83	39	⇓P		P	01 08 03.0 +0.8
	baz=94						
428A	**Kincaid Ranch,**	93.87	43	⇑P		P	01 08 03.8 +1.4
	baz=94						
626A	**Big Bend Ranch**	94.05	44	⇑P		P	01 08 03.9 +0.6
	baz=94						
231A	**Bronte**	94.07	40	⇑P		P	01 08 03.9 +0.6
	baz=94						
330A	**Mertzon**	94.08	41	⇓P		P	01 08 04.0 +0.6
	baz=94						
528A	**Cox Ranch, San**	94.27	43	⇓P		P	01 08 05.5 +1.1
	baz=94						
429A	**Davenport Ranc**	94.35	42	⇑P		P	01 08 05.3 +0.6
	baz=94						
232A	**Coleman**	94.43	40	⇓P		P	01 08 05.8 +0.8
	baz=94						
TXAR	**Lajitas Array**	94.47	44	P		P	01 08 06.2 +0.9
TXAR	**Lajitas Array**	94.47	44	P		P	01 08 06.2 +0.9
	comp=Z,0.8nm,0.6s,baz=282,slow=3.2,SNR=18						
627A	**Terlingua Ranc**	94.52	44	⇓P		P	01 08 06.4 +0.9
	baz=94						
430A	**Baggett Ranch,**	94.55	42	⇑P		P	01 08 06.2 +0.6
	baz=94						
529A	**Stev Forest Ra**	94.59	43	⇑P		P	01 08 06.3 +0.5
	baz=94						
628A	**Black Gap, Mar**	94.76	44	⇑P		P	01 08 07.2 +0.7
	baz=94						
MDT	**Midelt**

SIV				PKPab	**PKPab**	**01 14 54.9**	**-0.1**
SIV	**San Ignacio**	**153.30**	**22**	PKPbc	**PKPbc**	**01 14 43.0**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=317,slow=1.9,SNR=5.9						
SIV				PKPab	**PKPab**	**01 14 54.9**	**-0.1**
	comp=Z,4.5nm,0.6s,baz=348,slow=3.0,SNR=14						
BDFB	**Brasilia**	**154.31**	**354**	PKPab	**PKPab**	**01 14 58.5**	**-0.9**
BDFB	**Brasilia**	**154.31**	**354**	PKPab	**PKPab**	**01 14 58.5**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=20,slow=5.8,SNR=3.8						
CFAA	**Coronel Fontan**	**163.07**	**61**	PKPab	**PKPab**	**01 15 37.2**	**+0.2**
CFAA	**Coronel Fontan**	**163.07**	**61**	PKPab	**PKPab**	**01 15 37.2**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=230,slow=3.8,SNR=3.8						
CPUP	**Villa Florida**	**164.16**	**22**	PKPab	**PKPab**	**01 15 41.1**	**-0.6**
CPUP	**Villa Florida**	**164.16**	**22**	PKPab	**PKPab**	**01 15 41.1**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=89,slow=20,SNR=6.4						
PLCA	**Paso Flores**	**165.17**	**94**	PKPab	**PKPab**	**01 15 45.6**	**-0.6**
PLCA	**Paso Flores**	**165.17**	**94**	PKPab	**PKPab**	**01 15 45.6**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=265,slow=3.0,SNR=5.9						

IDC 25 00:56:14.0±6.4, 30°75S×178°01W, h0 km, mb3.5/2, mb1 3.8/2, mb1mx3.5/18, mbtmp3.5/2, Error ellipse: s-maj=251.0km s-min=62.4km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**43.08**	**267**	P	P	01 04 15.9	-0.2
	0.2nm,0.4s,baz=109,slow=7.4,SNR=3.8						
WRA	**Warramunga Arr**	**44.10**	**273**	P	P	01 04 24.2	-0.1
	0.5nm,0.5s,baz=113,slow=7.8,SNR=4.8						
FINES	**FINESS Array B**	**145.47**	**340**	PKPbc	PKPdf	01 15 52.4	-0.9
	1.6nm,0.8s,baz=66,slow=1.7,SNR=3.4						

*SKO **25** 01:02:38.8, 41°.28N×22°.69E, h15 km, M2.1, ML2.4*
*ISCJB **25** 01:06:39.9±0.6, 41°.22N±0°.02×22°.68E±0°.03, h2 km±5km, Error ellipse: s-maj=4.3km s-min=3.6km az=42.8*
*ATH **25** 01:02:40.3, 41°.26N×22°.72E, h18 km±1km*
*CSEM **25** 01:02:40.4±0.2, 41°.24N×22°.70E, h8 km, ML2.5/2, Error ellipse: s-maj=5.1km s-min=4.4km az=60.0*
*THE **25** 01:02:41.1, 41°.25N×22°.73E, h3 km±1km, ML2.5/2, Error ellipse: s-maj=1.7km s-min=0.8km az=159.0*
ISC 25 01:02:40.2±1.0, 41°27N±0°.02×22°70E±0°.02, h4 km±9km, n52, σ0s65/67, 6C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.11**	**299**	*i* Pg	**Pg**	**01 02 42.4**	**-0.2**
VAY				*i* Sg	**Sg**	**01 02 43.9**	**-0.1**
VAY				*e*Lg	Lg	01 02 44.0	
	comp=E,1μm,0.2s						
VAY				*e*Lg	Lg	01 02 44.2	
	comp=N,4μm,0.2s						
VAY	**Valandovo**	**0.11**	**299**	*e*Pg	**Pg**	**01 02 42.3**	**-0.2**
VAY				*e*Sg	**Sg**	**01 02 44.2**	**+0.2**
VAY				*e*Lg	Lg	01 02 44.7	
	comp=N,4μm,0.2s						
GRG	**Griva**	**0.38**	**216**	*e*PB	**Pg**	**01 02 48.1**	**+0.5**
GRG				*e*SB	**Sg**	**01 02 53.5**	**+0.9**
GRG	**Griva**	**0.38**	**216**	*e*Pb	**Pg**	**01 02 48.1**	**+0.5**
GRG				*e*Sb	**Sg**	**01 02 53.5**	**+0.9**
SOH	**Sokhos**	**0.67**	**132**	P	**Pg**	**01 02 53.1**	**+0.1**
SOH				S	**Sg**	**01 03 01.7**	**+0.1**
SOH	**Sokhos**	**0.67**	**132**	*e*PN	**Pg**	**01 02 53.0**	**+0.1**
SOH				*e*SN	**Sg**	**01 03 01.8**	**+0.1**
SOH	**Sokhos**	**0.67**	**132**	P	**Pg**	**01 02 53.1**	**+0.1**
SOH				S	**Sg**	**01 03 01.7**	**+0.1**
THE	**Thessaloniki**	**0.67**	**162**	P	**Pg**	**01 02 53.2**	**+0.2**
THE	**Thessaloniki**	**0.67**	**162**	P	**Pg**	**01 02 53.2**	**+0.2**
SRS	**Serrai**	**0.69**	**102**	P	**Pg**	**01 02 53.8**	**+0.4**
SRS	**Serrai**	**0.69**	**102**	P	**Pg**	**01 02 53.8**	**+0.4**
HORT	**Hortiatis**	**0.73**	**156**	P	**Pg**	**01 02 54.5**	**+0.2**
HORT	**Hortiatis**	**0.73**	**156**	P	**Pg**	**01 02 54.5**	**+0.2**
NVR	**Nevrokopi**	**0.88**	**84**	P	**Pg**	**01 02 57.2**	**+0.2**
NVR	**Nevrokopi**	**0.88**	**84**	*e*PN	**Pg**	**01 02 57.3**	**+0.2**
NVR				*e*SN	**Sg**	**01 03 08.7**	**+0.2**
NVR	**Nevrokopi**	**0.88**	**84**	P	**Pg**	**01 02 57.2**	**+0.2**
NVR				*e*Sn	**Sg**	**01 03 08.7**	**+0.2**
PLG	**Polygyros**	**1.06**	**147**	P	**Pg**	**01 03 00.6**	**+0.1**
PLG				S	**Sb**	**01 03 14.9**	**-0.3**
PLG	**Polygyros**	**1.06**	**147**	*e*PN	**Pg**	**01 03 00.6**	**+0.1**
PLG				*e*SN	**Sb**	**01 03 14.7**	**-0.5**
PLG	**Polygyros**	**1.06**	**147**	P	**Pg**	**01 03 00.6**	**+0.1**
PLG				*e*Sn	**Sb**	**01 03 14.7**	**-0.5**
FNA	**Florina**	**1.11**	**245**	P	**Pg**	**01 03 01.4**	**-0.1**
FNA	**Florina**	**1.11**	**245**	*e*PN	**Pg**	**01 03 01.2**	**-0.3**
FNA				*e*SN	**Sb**	**01 03 17.2**	**+0.4**
FNA	**Florina**	**1.11**	**245**	P	**Pg**	**01 03 01.4**	**-0.1**
FNA				*e*Sn	**Sb**	**01 03 17.2**	**+0.4**
KZN	**Kozani**	**1.19**	**217**	*e*PN	**Pn**	**01 03 03.8**	**+0.1**
KZN				*e*SN	**Sn**	**01 03 20.1**	**-0.2**
KZN	**Kozani**	**1.19**	**217**	*e*Pn	**Pn**	**01 03 03.8**	**+0.1**
KZN				*e*Sn	**Sn**	**01 03 20.1**	**-0.2**
VTS	**Vitosha**	**1.38**	**16**	P	**Pb**	**01 03 06.1**	**-0.5**
VTS	**Vitosha**	**1.38**	**16**	⇑*i* P	**Pb**	**01 03 06.3**	**-0.3**
VTS	**Vitosha**	**1.38**	**16**	*e*Pg	**Pb**	**01 03 06.3**	**-0.3**
KAVA	**Kavala**	**1.40**	**101**	P	**Pg**	**01 03 06.8**	**-0.2**
KAVA				S	**Sg**	**01 03 25.3**	**+0.2**
KAVA	**Kavala**	**1.40**	**101**	P	**Pg**	**01 03 06.8**	**-0.2**
KAVA				S	**Sg**	**01 03 25.3**	**+0.2**
NEST	**Nestorio**	**1.52**	**236**	P	**Pn**	**01 03 08.2**	**+0.1**
NEST				S	**Sg**	**01 03 29.8**	**+0.9**
NEST	**Nestorio**	**1.52**	**236**	P	**Pn**	**01 03 08.2**	**+0.1**
NEST				S	**Sg**	**01 03 29.8**	**+0.9**
PAIG	**Paliouri**	**1.53**	**151**	*e*PN	**Pb**	**01 03 08.8**	**-0.3**
PAIG				*e*SN	**Sg**	**01 03 29.2**	**-0.2**
PAIG	**Paliouri**	**1.53**	**151**	*e*Pn	**Pb**	**01 03 08.8**	**-0.3**
BARS	**Barje**	**1.68**	**337**	*e*Pn	**Pn**	**01 03 10.1**	**-0.3**
AGG	**Agios Georgios**	**2.26**	**187**	*e*PB	**Pn**	**01 03 18.6**	**+0.3**
AGG	**Agios Georgios**	**2.26**	**187**	*e*Pb	**Pn**	**01 03 18.6**	**+0.3**
AOS	**Alonnisos**	**2.28**	**156**	*e*PB	**Pn**	**01 03 18.7**	**+0.1**
AOS	**Alonnisos**	**2.28**	**156**	*e*Pb	**Pn**	**01 03 18.7**	**+0.1**
SMTH	**Samothraki Isl**	**2.29**	**109**	*e*PN	**Pb**	**01 03 20.2**	**-1.8**
ALN	**Alexandroupoli**	**2.56**	**97**	*e*PB	**Pn**	**01 03 23.5**	**+1.1**
ALN	**Alexandroupoli**	**2.56**	**97**	*e*Pb	**Pn**	**01 03 23.5**	**+1.1**
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn	**Pn**	**01 03 24.3**	**+1.1**
ZIMR		**3.10**	**39**	⇓*i* P	**Pb**	**01 03 33.9**	**-1.9**
DIVS	**Divibare**	**3.46**	**326**	*e*Pn	**Pn**	**01 03 34.5**	**-0.4**
LOT	**Lotru**	**4.25**	**10**	⇓*i* P	Pn	01 03 49.4	+3.6
LOT	**Lotru**	**4.25**	**10**	⇓*i* P	Pn	01 03 49.4	+3.6
MLR	**Muntele Rosu**	**4.84**	**28**	⇑*i* P	**Pn**	**01 03 56.0**	**+2.1**
MLR	**Muntele Rosu**	**4.84**	**28**	⇑*i* P	**Pn**	**01 03 56.0**	**+2.1**
PLOR	**Plostina**	**5.41**	**31**	⇓*i* P	Pn	01 04 05.7	+4.1
VRI	**Vrincioaia**	**5.45**	**31**	⇑*i* P	Pn	01 04 05.4	+3.3
DRGR		**5.52**	**0**	⇑*i* P	Pn	01 04 06.7	+3.5
PKSM	**Moragy**	**5.75**	**331**	⇑*i* P	Pn	01 04 09.2	+3.0

*CSEM **25** 01:04:50.4±0.6, 36°.37N×21°.70E, h2 km, MD3.0, Error ellipse: s-maj=9.5km s-min=5.1km az=55.0*
ATH 25 01:04:51.6, 36°41N×21°70E, h11 km±2km, MD3.0/9, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.49**	**4**	*e*PB	Pg	01 05 00.6	-0.6
PYL				*e*SB	Sg	01 05 08.1	+0.5
PYL	**PYLOS**	**0.49**	**4**	*e*Pb	Pg	01 05 00.6	-0.6
PYL				*e*Sb	Sg	01 05 08.1	+0.5
DYR	**Agios Nikonas**	**0.62**	**55**	*e*PB	Pg	01 05 03.6	-0.1
DYR				*e*SB	Sb	01 05 12.9	-0.4
DYR	**Agios Nikonas**	**0.62**	**55**	*e*Pb	Pg	01 05 03.6	-0.1
DYR				*e*Sb	Sb	01 05 12.9	-0.4
ITM	**Ithomi**	**0.79**	**13**	*e*PB	Pg	01 05 06.9	0.0
ITM				*e*SB	Sb	01 05 18.2	0.0
ITM	**Ithomi**	**0.79**	**13**	*e*Pb	Pg	01 05 06.9	0.0
ITM				*e*Sb	Sb	01 05 18.2	0.0
VLI	**Veliai**	**1.04**	**72**	*e*PN	Pg	01 05 11.8	+0.1
VLI				*e*SN	Sb	01 05 25.6	+0.2
VLI	**Veliai**	**1.04**	**72**	*e*Pn	Pg	01 05 11.8	+0.1
VLI				*e*Sn	Sb	01 05 25.6	+0.2
KYTH	**Kithira**	**1.09**	**96**	*e*PB	Pb	01 05 12.3	-0.2
KYTH	**Kithira**	**1.09**	**96**	*e*Pb	Pb	01 05 12.3	-0.2
VLX	**Vlachokerasia**	**1.10**	**29**	*e*PG	Pb	01 05 11.9	-1.0
VLX				*e*SB	Sb	01 05 27.4	+0.1
VLX	**Vlachokerasia**	**1.10**	**29**	*e*Pg	Pb	01 05 11.9	-1.0
VLX				*e*Sb	Sb	01 05 27.4	+0.1
GUR	**Goura**	**1.61**	**18**	*e*PB	Pb	01 05 21.9	+0.4
GUR				*e*SB	Sg	01 05 43.7	+0.1
GUR	**Goura**	**1.61**	**18**	*e*Pb	Pb	01 05 21.9	+0.4
GUR				*e*Sb	Sg	01 05 43.7	+0.1
DID	**Didima**	**1.65**	**48**	*e*PG	Pb	01 05 22.4	+0.4
DID				*e*SB	Sg	01 05 45.1	+0.4
DID	**Didima**	**1.65**	**48**	*e*Pg	Pb	01 05 22.4	+0.4
DID				*e*Sb	Sg	01 05 45.1	+0.4
KLV	**Kalavryta, Ach**	**1.67**	**12**	*e*PB	Pg	01 05 23.8	0.0
KLV	**Kalavryta, Ach**	**1.67**	**12**	*e*Pb	Pg	01 05 23.8	0.0

*IDC **25** 01:06:08.8±0.6, 29°.50N×130°.56E, h0 km, mb4.0/25, mb1 4.1/29, mb1mx4.1/37, mbtmp4.0/29, ML3.3/4, MS3.9/26, Ms1 3.9/26, ms1mx3.7/56, Error ellipse: s-maj=18.6km s-min=15.1km az=70.0*
*ISCJB **25** 01:06:12.8±0.4, 29°.54N±0°.05×130°.60E±0°.06, h34 km, mb4.2/46, MS4.1/30, Error ellipse: s-maj=8.8km s-min=5.9km az=135.7*
*MOS **25** 01:06:12.5±1.1, 29°.57N×130°.61E, h33 km, mb4.7/15, Error ellipse: s-maj=13.0km s-min=6.5km az=111.9*
*NEIC **25** 01:06:14.7±0.9, 29°.51N×130°.61E, h37 km±8km, mb4.5/8, Error ellipse: s-maj=9.5km s-min=8.0km az=130.0*
ISC 25 01:06:14.2±0.5, 29°56N±0°.07×130°69E±0°.07, h34 km, n126, σ1s04/115, mb4.2/46, MS4.1/30, 6C-3D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOW	**Kunigami**	**3.45**	**219**	*e*Pn	**Pn**	**01 07 04.7**	**-0.9**
JNU	**Nakatsue**	**3.56**	**3**	*e*Pn	**Pn**	**01 07 09.4**	**+2.3**
JNU	**Nakatsue**	**3.56**	**3**	Pn	**Pn**	**01 07 07.8**	**+0.8**
	6.1nm,0.3s,baz=201,slow=6.1,SNR=26						
JNU				LR	LR	01 08 24.7	
	comp=Z,378nm,18.2s,baz=183,slow=38						
KSAR	**Wonju Array Be**	**8.20**	**344**	Pn	**Pn**	**01 08 10.4**	**-0.4**
KSRS	**Korea Array**	**8.21**	**344**	Pn	**Pn**	**01 08 10.4**	**-0.4**
	0.3nm,0.3s,baz=150,slow=13,SNR=2.6						
KSRS				LR	LR	01 11 40.7	
	comp=Z,775nm,19.0s,baz=166,slow=40						
JHJ	**Hachijo jima 2**	**8.55**	**63**	LR		01 11 20.2	
	comp=Z,394nm,18.5s,baz=275,slow=36						
MAJO	**Matsushiro**	**9.39**	**40**	*e*P	**Pn**	**01 08 29.5**	**+2.3**
MAJO	**Matsushiro**	**9.39**	**40**	*e*Pn	**Pn**	**01 08 29.5**	**+2.3**
MJAR	**Matsushiro Arr**	**9.39**	**40**	Pn	**Pn**	**01 08 27.2**	**+0.1**
MJAR	**Matsushiro Arr**	**9.39**	**40**	Pn	**Pn**	**01 08 27.2**	**+0.1**
	0.8nm,0.3s,baz=202,slow=12,SNR=3.5						
USRK	**Ussuriysk Arra**	**14.65**	**4**	Pn	**Pn**	**01 09 39.8**	**+0.9**
	0.1nm,0.3s,baz=180,slow=16,SNR=2.8						
ASAJ	**Asahikawa**	**17.35**	**30**	LR	LR	01 17 21.1	
	comp=Z,307nm,18.8s,baz=194,slow=38						
ENH	**Enshi**	**18.39**	**277**	*e*Pn	**Pn**	**01 10 28.7**	**+2.0**
	13nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**18.83**	**36**	*c* iP	**P**	**01 10 27.7**	**-3.3**
YUK				*e*S	**Sn**	**01 13 59.6**	**-1.8**
YUK				MLR	MLR		
	comp=N,245nm,17.0s						
YUK				MLR	MLR		
	comp=E,173nm,17.0s						
YUK				MLR	MLR		
	comp=Z,481nm,17.0s						
HABR	**Khabarovsk**	**19.18**	**9**	P	Pn	01 10 42.8	+6.9
HABR				*e*S	**Sn**	**01 14 10.2**	**+0.4**
HABR				pmax	pmax		
	comp=E,30nm,0.7s						
HABR				pmax	pmax		
	comp=Z,53nm,1.1s						
HABR				pmax	pmax		
	comp=N,23nm,0.7s						
HABR				MLR	MLR		
	comp=Z,240nm,17.0s						
KLR	**Kul'dur**	**19.66**	**2**	*e*P	**P**	**01 10 36.8**	**-3.3**
KLR				MLR	MLR		
	comp=Z,800nm,12.0s						
GUMO	**Guam**	**20.61**	**137**	LR	LR	01 17 21.7	
	comp=Z,184nm,19.1s,baz=297,slow=33						
ULN	**Ulaanbaatar**	**25.80**	**322**	*e*P	**P**	**01 11 43.2**	**+1.0**
	comp=Z,6.9nm,1.0s						
SONM	**Songino Array**	**26.14**	**321**	P	**P**	**01 11 44.8**	**-0.4**
SONM	**Songino Array**	**26.14**	**321**	P	**P**	**01 11 44.8**	**-0.4**
	comp=Z,2.3nm,0.9s,baz=126,slow=8.1,SNR=11						
SONM				LR	LR	01 23 19.3	
	comp=Z,401nm,21.4s,baz=95,slow=40						
ZAK	**Zakamensk**	**29.28**	**323**	*e*P	**P**	**01 12 12.7**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
TLY	**Talaya**	**29.86**	**325**	*e*P	**P**	**01 12 19.5**	**+1.2**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.5s						
TLY				MLR	MLR		
	comp=Z,209nm,15.0s						
PETK	**Petropavlovsk-**	**30.73**	**32**	LR	LR	01 25 16.5	
	comp=Z,103nm,19.6s,baz=223,slow=37						
CMAR	**Chiang Mai Arr**	**30.94**	**256**	LR	LR	01 25 18.0	
	comp=Z,206nm,19.4s,baz=74,slow=37						
KAPI	**Kappang**	**35.94**	**199**	LR	LR	01 27 07.4	
	comp=Z,113nm,18.4s,baz=198,slow=35						
SEY	**Seymchan**	**36.22**	**17**	⇓*e*P	**P**	**01 13 15.0**	**+1.5**
TAPN	**Taplejung**	**37.70**	**277**	*e*P	**P**	**01 13 27.5**	**+0.6**
ODAN	**Odare**	**38.09**	**277**	*e*P	**P**	**01 13 29.7**	**-0.5**
GUN	**Gumba**	**39.14**	**279**	*e*P	**P**	**01 13 39.1**	**-0.1**
PKI	**Pulchoki**	**39.63**	**279**	*e*P	**P**	**01 13 42.9**	**-0.3**
PKIN	**Phulchoki**	**39.64**	**279**	*e*P	**P**	**01 13 42.9**	**-0.3**
PKIN	**Phulchoki**	**39.64**	**279**	*e*P	**P**	**01 13 43.3**	**+0.1**
KKN	**Kakani**	**39.69**	**279**	*e*P	**P**	**01 13 43.2**	**-0.3**
DMN	**Daman**	**39.88**	**279**	*e*P	**P**	**01 13 44.9**	**-0.3**
DANN	**Dangsing**	**40.86**	**280**	*e*P	**P**	**01 13 53.0**	**-0.4**
	comp=Z,39nm,0.8s						
ZALV	**Zalesovo Beam**	**41.02**	**320**	*i* P	**P**	**01 13 54.0**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**41.02**	**320**	P	**P**	**01 13 52.1**	**-1.8**
ZALV				PcP	**PcP**	**01 15 52.5**	**-0.9**
ZALV	**Zalesovo Beam**	**41.02**	**320**	P	**P**	**01 13 52.1**	**-1.8**
	comp=Z,1.4nm,0.7s,baz=102,slow=6.2,SNR=8.9						
ZALV				PcP	**PcP**	**01 15 52.5**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=99,slow=4.7,SNR=4.3						
ZALV				LR	LR	01 32 49.4	
	comp=Z,352nm,18.4s,baz=74,slow=39						
MK31	**Makanchi Array**	**41.06**	**309**	*ce*P	**P**	**01 13 54.0**	**-0.4**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR	**Makanchi Array**	**41.06**	**309**	P	**P**	**01 13 53.3**	**-1.1**
MKAR	**Makanchi Array**	**41.06**	**309**	P	**P**	**01 13 53.2**	**-1.1**
MKAR	**Makanchi Array**	**41.06**	**309**	P	**P**	**01 13 53.2**	**-1.1**
	comp=Z,1.7nm,0.7s,baz=90,slow=11,SNR=18						
MKAR				LR	LR	01 32 56.6	
	comp=Z,101nm,18.7s,baz=218,slow=39						
KOLN	**Koldanda**	**41.14**	**279**	*e*P	**P**	**01 13 55.3**	**-0.2**
	comp=Z,24nm,1.0s						
PYUN	**Piuthan**	**41.58**	**280**	*e*P	**P**	**01 13 58.2**	**-1.0**
	comp=Z,70nm,0.9s						
TIXI	**Tiksi**	**42.15**	**359**	⇑*e*P	**P**	**01 14 03.8**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.7s						
BILL	**Bilibino**	**43.84**	**18**	*e*P	**P**	**01 14 17.3**	**+0.6**
BILL				pmax	pmax		
	comp=Z,12nm,1.2s						
KURK	**Kurchatov**	**44.00**	**314**	⇑*e*P	**P**	**01 14 18.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,22nm,1.7s						
KURK	**Kurchatov**	**44.00**	**314**	P	**P**	**01 14 18.1**	**0.0**
KURBB	**Kurchatov Arra**	**44.04**	**314**	P	**P**	**01 14 18.1**	**-0.4**
	comp=Z,7.3nm,1.0s,baz=100,slow=8.7,SNR=25						
KURBB				LR	LR	01 34 20.1	
	comp=Z,382nm,19.5s,baz=105,slow=38						
AAK	**Ala-Archa**	**46.45**	**302**	LR	LR	01 35 54.2	
	comp=Z,120nm,18.3s,baz=77,slow=38						
FITZ	**Fitzroy Crossi**	**47.63**	**187**	P	**P**	**01 14 46.0**	**-1.1**
FITZ	**Fitzroy Crossi**	**47.63**	**187**	P	**P**	**01 14 46.0**	**-1.1**
	comp=Z,2.1nm,0.8s,baz=6.2,slow=9.7,SNR=3.5						
VOSK	**Vostochnaya**	**48.94**	**316**	P	**P**	**01 14 56.1**	**-0.8**
VOSK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BVA0	**Borovoye Array**	**49.31**	**316**	*i* P	**P**	**01 14 59.8**	**0.0**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**49.31**	**316**	P	**P**	**01 15 00.0**	**+0.2**
BVAR	**Borovoye Array**	**49.31**	**316**	P	**P**	**01 15 00.0**	**+0.2**
BVAR	**Borovoye Array**	**49.31**	**316**	P	**P**	**01 15 00.0**	**+0.2**
	comp=Z,3.6nm,0.6s,baz=93,slow=8.9,SNR=36						
BVAR				LR	LR	01 39 40.5	
	comp=Z,83nm,18.3s,baz=302,slow=41						
WRA	**Warramunga Arr**	**49.34**	**175**	P	**P**	**01 14 59.9**	**-0.4**
WRA	**Warramunga Arr**	**49.34**	**175**	P	**P**	**01 14 59.9**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=354,slow=8.3,SNR=7.6						
KKAR	**Karatay Array**	**49.34**	**303**	*e*P	**P**	**01 15 01.3**	**+1.1**
KKAR	**Karatay Array**	**49.34**	**303**	*e*P	**P**	**01 15 01.2**	**+1.1**
BRVK	**Borovoye**	**49.38**	**316**	*d* iP	**P**	**01 15 00.6**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,12nm,1.0s						
BRVK	**Borovoye**	**49.38**	**316**	*e*P	**P**	**01 15 00.5**	**+0.3**
	comp=Z,10nm,0.9s						
ZRNK	**Zerenda**	**50.15**	**316**	*i* P	**P**	**01 15 05.5**	**-0.6**
ZRNK				pmax	pmax		
	comp=Z,11nm,1.0s						
CTA	**Charters Tower**	**51.59**	**161**	LR	LR	01 36 07.3	
	comp=Z,79nm,18.2s,baz=230,slow=35						
PALK	**Pallekele**	**51.87**	**255**	LR	LR	01 38 16.3	
	comp=Z,138nm,18.3s,baz=100,slow=37						
ASAR	**Alice Springs**	**53.01**	**176**	P	**P**	**01 15 27.2**	**-0.6**
ASAR	**Alice Springs**	**53.01**	**176**	P	**P**	**01 15 27.2**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=7.3,slow=12,SNR=5.6						
SVE	**Sverdlovsk**	**55.01**	**321**	⇑*e*P	**P**	**01 15 42.7**	**+0.6**
SVE				*e*PPP	PPP	01 18 57.0	
SVE				pmax	pmax		
	comp=Z,27nm,1.3s						
SVE				MLR	MLR		
	comp=Z,644nm,17.0s						
AB31	**Akbulak array**	**56.01**	**312**	*ce*P	**P**	**01 15 49.3**	**-0.1**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	**Akbulak array**	**56.01**	**312**	*e*P	**P**	**01 15 49.6**	**+0.2**
	comp=Z,1.5nm,0.4s						
ARU	**Arti**	**56.17**	**320**	*d* iP	**P**	**01 15 50.5**	**+0.1**
ARU						01 17 53.9	
ARU				S	**S**	**01 23 38.9**	**+1.6**
ARU				pmax	pmax		
	comp=Z,18nm,1.0s						
ARU				MLR	MLR		
	comp=Z,500nm,17.0s						
AKTO	**Aktyubinsk**	**57.09**	**313**	*i* P	**P**	**01 15 56.7**	**-0.3**
AKTO	**Aktyubinsk**	**57.09**	**313**	P	**P**	**01 15 56.8**	**-0.3**
AKTO	**Aktyubinsk**	**57.09**	**313**	P	**P**	**01 15 56.8**	**-0.3**
	comp=Z,3.3nm,1.0s,baz=73,slow=10,SNR=4.9						
AKTO				LR	LR	01 42 34.6	
	comp=Z,513nm,18.3s,baz=87,slow=38						
ILAR	**Eielson Array**	**60.48**	**29**	P	**P**	**01 16 20.5**	**+0.1**
ILAR	**Eielson Array**	**60.48**	**29**	P	**P**	**01 16 20.5**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=283,slow=6.6,SNR=10						
ILAR				LR	LR	01 42 27.8	
	comp=Z,41nm,19.6s,baz=321,slow=36						
STKA	**Stephens Creek**	**61.97**	**169**	LR	LR	01 42 07.8	
	comp=Z,85nm,21.6s,baz=207,slow=35						
KLMR	**Klimovskoe**	**65.21**	**327**	P	**P**	**01 16 51.3**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,13nm,1.5s						
SPITS	**Spitsbergen Ar**	**66.03**	**348**	LR	LR	01 48 36.9	
	comp=Z,77nm,19.4s,baz=55,slow=39						
ARCES	**ARCESS Array B**	**67.72**	**338**	P	**P**	**01 17 08.4**	**+0.7**
ARCES	**ARCESS Array B**	**67.72**	**338**	P	**P**	**01 17 08.4**	**+0.7**
	comp=Z,2.0nm,1.0s,baz=62,slow=9.6,SNR=3.1						
ARCES				LR	LR	01 52 03.9	
	comp=Z,171nm,18.2s,baz=59,slow=41						
OBN	**Obninsk**	**68.55**	**322**	*e*P	**P**	**01 17 11.6**	**-1.6**
OBN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s						
KBZ	**Khabaz**	**68.75**	**309**	P	**P**	**01 17 14.7**	**0.0**
KBZ	**Khabaz**	**68.75**	**309**	P	**P**	**01 17 14.7**	**0.0**
KBZ	**Khabaz**	**68.75**	**309**	P	**P**	**01 17 14.7**	**0.0**
	comp=Z,3.9nm,0.9s,baz=96,slow=6.7,SNR=5.1						
KIV	**Kislovodsk**	**68.81**	**309**	*e*P	**P**	**01 17 14.8**	**-0.4**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,78nm,18.0s						
DLBC	**Dease Lake**	**69.91**	**34**	P	**P**	**01 17 20.8**	**-0.9**
DLBC	**Dease Lake**	**69.91**	**34**	P	**P**	**01 17 20.8**	**-0.9**
	comp=Z,3.9nm,0.9s,baz=242,slow=8.6,SNR=

KNT	**Kendrikon**	**0.22**	**126**	P	**Pg**	**01 07 30.6**	**+0.4**
GRG	**Griva**	**0.39**	**211**	P	**Pb**	**01 07 33.7**	**-0.6**
GRG				S	**Sb**	**01 07 39.4**	**-0.8**
GRG	**Griva**	**0.39**	**211**	*e*PB	**Pb**	**01 07 33.7**	**-0.6**
GRG				*e*SB	**Sg**	**01 07 39.2**	**+0.7**
GRG	**Griva**	**0.39**	**211**	P	**Pb**	**01 07 33.7**	**-0.6**
GRG				S	**Sb**	**01 07 39.4**	**-0.8**
THE	**Thessaloniki**	**0.70**	**161**	P	**Pg**	**01 07 38.9**	**-0.1**
THE	**Thessaloniki**	**0.70**	**161**	P	**Pg**	**01 07 38.9**	**-0.1**
SOH	**Sokhos**	**0.70**	**132**	P	**Pg**	**01 07 38.9**	**-0.2**
SOH				S	**Sg**	**01 07 48.3**	**0.0**
SOH	**Sokhos**	**0.70**	**132**	*e*PN	**Pg**	**01 07 39.0**	**-0.2**
SOH				*e*SN	**Sb**	**01 07 48.8**	**-0.5**
SOH	**Sokhos**	**0.70**	**132**	P	**Pg**	**01 07 38.9**	**-0.2**
SOH				S	**Sg**	**01 07 48.3**	**0.0**
SOH				*e*Sn	**Sb**	**01 07 48.8**	**-0.5**
SRS	**Serrai**	**0.72**	**104**	P	**Pg**	**01 07 39.5**	**0.0**
SRS				S	**Sg**	**01 07 48.4**	**-0.6**
SRS	**Serrai**	**0.72**	**104**	P	**Pg**	**01 07 39.5**	**0.0**
SRS				S	**Sg**	**01 07 48.4**	**-0.6**
HORT	**Hortiatis**	**0.77**	**154**	P	**Pb**	**01 07 40.5**	**-0.3**
HORT				S	**Sb**	**01 07 51.2**	**0.0**
HORT	**Hortiatis**	**0.77**	**154**	P	**Pb**	**01 07 40.5**	**-0.3**
HORT				S	**Sb**	**01 07 51.2**	**0.0**
NVR	**Nevrokopi**	**0.90**	**86**	P	**Pg**	**01 07 42.8**	**-0.1**
NVR				S	**Sg**	**01 07 55.0**	**+0.2**
NVR	**Nevrokopi**	**0.90**	**86**	*e*PN	**Pg**	**01 07 42.8**	**-0.1**
NVR				*e*SN	**Sg**	**01 07 54.9**	**+0.2**
NVR	**Nevrokopi**	**0.90**	**86**	P	**Pg**	**01 07 42.8**	**-0.1**
NVR				S	**Sg**	**01 07 55.0**	**+0.2**
PLG	**Polygyros**	**1.09**	**147**	P	**Pb**	**01 07 46.1**	**-0.2**
PLG	**Polygyros**	**1.09**	**147**	*e*PN	**Pg**	**01 07 46.3**	**-0.2**
PLG				*e*SN	**Sg**	**01 08 01.0**	**+0.3**
PLG	**Polygyros**	**1.09**	**147**	*e*Pn	**Pg**	**01 07 46.3**	**-0.2**
PLG				*e*Sn	**Sg**	**01 08 01.0**	**+0.3**
FNA	**Florina**	**1.10**	**243**	*e*PN	**Pn**	**01 07 46.8**	**+0.1**
FNA				*e*SN	**Sg**	**01 08 01.1**	**+0.2**
FNA	**Florina**	**1.10**	**243**	*e*Pn	**Pn**	**01 07 46.8**	**+0.1**
FNA				*e*Sn	**Sg**	**01 08 01.1**	**+0.2**
VTS	**Vitosha**	**1.36**	**17**	P	**Pg**	**01 07 52.0**	**+0.3**
VTS				S	**Sg**	**01 08 09.7**	**+0.3**
VTS	**Vitosha**	**1.36**	**17**	P	**Pg**	**01 07 52.0**	**+0.3**
VTS				S	**Sg**	**01 08 09.7**	**+0.3**
KAVA	**Kavala**	**1.43**	**101**	P	**Pb**	**01 07 52.1**	**+0.1**
KAVA				S	**Sg**	**01 08 11.2**	**-0.2**
KAVA	**Kavala**	**1.43**	**101**	P	**Pb**	**01 07 52.1**	**+0.1**
KAVA				S	**Sg**	**01 08 11.2**	**-0.2**
PAIG	**Paliouri**	**1.57**	**150**	*e*PN	**Pb**	**01 07 53.8**	**-0.6**
PAIG				*e*SN	**Sb**	**01 08 14.1**	**0.0**
PAIG	**Paliouri**	**1.57**	**150**	*e*Pn	**Pb**	**01 07 53.8**	**-0.6**
PAIG				*e*Sn	**Sb**	**01 08 14.1**	**0.0**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PB	**Pn**	**01 08 04.1**	**+1.2**
AGG	**Agios Georgios**	**2.28**	**187**	*e*Pb	**Pn**	**01 08 04.1**	**+1.2**
AOS	**Alonnisos**	**2.31**	**156**	*e*PB	**Pn**	**01 08 05.0**	**+1.6**
AOS	**Alonnisos**	**2.31**	**156**	*e*Pb	**Pn**	**01 08 05.0**	**+1.6**
SMTH	**Samothraki Isl**	**2.32**	**110**	*e*PB	**Pb**	**01 08 05.4**	**-1.9**
SMTH	**Samothraki Isl**	**2.32**	**110**	*e*Pb	**Pb**	**01 08 05.4**	**-1.9**
ALN	**Alexandroupoli**	**2.59**	**98**	*e*PN	**Pn**	**01 08 07.6**	**+0.5**
ALN	**Alexandroupoli**	**2.59**	**98**	*e*Pn	**Pn**	**01 08 07.6**	**+0.5**

*KNET **25** 01:22:57.4±0.5, 41.77N×72.94E, h14km±2km, ml3.0, Error ellipse: s-maj=4.4km s-min=2.8km az=153.0*
ISC 25 01:22:57.4±2.7, **41.8N**±0.1×**72.93E**±0.07, **h8**km±16km, **n11, σ0 91**/19, **10C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**0.68**	**58**	⇑P	**Pg**	**01 23 10.4**	**-0.2**
	66nm,0.1s,SNR=450						
AML				⇑S	**Sb**	**01 23 21.3**	**-0.1**
	786nm,0.3s						
EKS2	**Erkin-Say**	**1.09**	**35**	⇓P	**Pb**	**01 23 17.6**	**-1.0**
	17nm,0.1s,SNR=52						
UCH	**Uchtor**	**1.27**	**68**	⇑P	**Pn**	**01 23 21.2**	**-0.6**
	10nm,0.1s,SNR=12						
UCH				⇓S	**Sg**	**01 23 39.5**	**+1.2**
	58nm,0.2s						
AAK	**Ala-Archa**	**1.45**	**53**	⇓P	**Pb**	**01 23 24.5**	**-0.2**
	22nm,0.2s,SNR=12						
AAK				⇓S	**Sg**	**01 23 45.2**	**+1.2**
	65nm,0.2s						
KBK	**Karagaybulak**	**1.74**	**59**	⇑P	**Pb**	**01 23 30.1**	**+0.3**
	25nm,0.2s,SNR=25						
KBK				⇑S	**Sg**	**01 23 54.2**	**+0.7**
	173nm,0.3s						
KZA	**Kyzart**	**1.76**	**79**	⇑P	**Pb**	**01 23 29.8**	**-0.4**
	24nm,0.2s,SNR=60						
KZA				⇑S	**Sg**	**01 23 55.3**	**+1.2**
	62nm,0.2s						
CHMS	**Chumysh**	**1.82**	**47**	⇓P	**Pb**	**01 23 31.0**	**0.0**
	17nm,0.2s,SNR=15						
CHMS				⇑S	**Sg**	**01 23 56.4**	**+0.3**
	96nm,0.3s						
USP	**Ospenovka**	**1.89**	**37**	⇓P	**Pb**	**01 23 31.7**	**-0.5**
	13nm,0.1s,SNR=25						
KK31	**Karatay Array**	**2.23**	**307**	⇑Pn	**Pn**	**01 23 33.9**	**-0.7**
	11nm,0.4s,baz=126,slow=15,SNR=122						
KK31				Sn	**Sn**	**01 24 04.1**	**+1.8**
	16nm,0.3s,baz=138,slow=26,SNR=13						
TKM2	**Tokmak 2**	**2.29**	**59**	⇓Pn	**Pb**	**01 23 38.3**	**-0.8**
	29nm,0.4s						
TKM2				⇑Sn	**Sg**	**01 24 10.5**	**-0.5**
	102nm,0.6s						
TKM2	**Tokmak 2**	**2.29**	**59**	⇓P	**Pb**	**01 23 38.3**	**-0.8**
	48nm,0.3s,SNR=83						

*SKO **25** 01:24:11.5, 41.30N×22.69E, h15km, M1.2, ML1.4*
*ATH **25** 01:24:12.9, 41.30N×22.70E, h5km±2km, MD2.9/6*
*CSEM **25** 01:24:13.0±0.5, 41.27N×22.71E, h1km±1km, MD2.9, Error ellipse: s-maj=11.4km s-min=7.2km az=8.0*
ISC 25 01:24:12.4±1.0, **41.32N**±0.05×**22.70E**±0.03, **h13**km±7km, **n20, σ0 39**/34, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**270**	*i* Pg	**Pg**	**01 24 15.3**	**-0.1**
VAY				*i* Sg	**Sg**	**01 24 17.2**	**-0.3**
VAY				*e*Lg	Lg	01 24 17.2	
	comp=E,240nm,0.2s						
VAY				*e*Lg	Lg	01 24 17.3	
	comp=N,319nm,0.2s						
VAY	**Valandovo**	**0.10**	**270**	*i* Pg	**Pg**	**01 24 15.7**	**+0.3**
VAY				*i* Sg	**Sg**	**01 24 17.6**	**+0.1**
VAY				*e*Lg	Lg	01 24 17.7	
	comp=N,319nm,0.2s						
GRG	**Griva**	**0.43**	**212**	*e*PG	**Pg**	**01 24 20.4**	**-0.5**
GRG				*e*SB	**Sg**	**01 24 27.0**	**+0.3**
GRG	**Griva**	**0.43**	**212**	*e*Pg	**Pg**	**01 24 20.4**	**-0.5**
GRG				*e*Sb	**Sg**	**01 24 27.0**	**+0.3**
SOH	**Sokhos**	**0.70**	**135**	*e*PB	**Pg**	**01 24 26.2**	**+0.1**
SOH				*e*SB	**Sg**	**01 24 35.0**	**-0.4**
SOH	**Sokhos**	**0.70**	**135**	*e*Pb	**Pg**	**01 24 26.2**	**+0.1**
SOH				*e*Sb	**Sg**	**01 24 35.0**	**-0.4**
NVR	**Nevrokopi**	**0.88**	**88**	*e*PB	**Pb**	**01 24 29.5**	**0.0**
NVR				*e*SB	**Sb**	**01 24 41.5**	**+0.4**
NVR	**Nevrokopi**	**0.88**	**88**	*e*Pb	**Pb**	**01 24 29.5**	**0.0**
NVR				*e*Sb	**Sb**	**01 24 41.5**	**+0.4**
PLG	**Polygyros**	**1.10**	**149**	*e*PN	**Pb**	**01 24 33.4**	**+0.1**
PLG				*e*SB	**Sg**	**01 24 48.1**	**0.0**
PLG	**Polygyros**	**1.10**	**149**	*e*Pn	**Pb**	**01 24 33.4**	**+0.1**
PLG				*e*Sb	**Sg**	**01 24 48.1**	**0.0**
FNA	**Florina**	**1.14**	**242**	*e*PN	**Pg**	**01 24 34.4**	**+0.1**
FNA				*e*SB	**Sn**	**01 24 49.5**	**+0.1**
FNA	**Florina**	**1.14**	**242**	*e*Pn	**Pg**	**01 24 34.4**	**+0.1**
FNA				*e*Sb	**Sn**	**01 24 49.5**	**+0.1**
PAIG	**Paliouri**	**1.58**	**151**	*e*PG	**Pb**	**01 24 42.0**	**+0.6**
PAIG				*e*SB	**Sg**	**01 25 03.3**	**0.0**
PAIG	**Paliouri**	**1.58**	**151**	*e*Pg	**Pb**	**01 24 42.0**	**+0.6**
PAIG				*e*Sb	**Sg**	**01 25 03.3**	**0.0**
SMTH	**Samothraki Isl**	**2.31**	**111**	*e*PN	**Pb**	**01 24 53.8**	**-0.1**
SMTH	**Samothraki Isl**	**2.31**	**111**	*e*Pn	**Pb**	**01 24 53.8**	**-0.1**
AGG	**Agios Georgios**	**2.31**	**187**	*e*PN	**Pb**	**01 24 53.4**	**-0.6**
AGG	**Agios Georgios**	**2.31**	**187**	*e*Pn	**Pb**	**01 24 53.4**	**-0.6**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*PN	**Pb**	**01 24 57.3**	**-0.9**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*Pn	**Pb**	**01 24 57.3**	**-0.9**

*ISCJB **25** 01:26:52.8±0.5, 41.26N±0.03×22.74E±0.03, h10km±4km, Error ellipse: s-maj=5.0km s-min=4.3km az=171.1*

*SKO **25** 01:26:52.2, 41.21N×22.72E, h15km, M1.2, ML1.7*
*CSEM **25** 01:26:52.8±0.3, 41.26N×22.75E, h12km, ML1.9/2, Error ellipse: s-maj=6.5km s-min=5.1km az=178.0*
*THE **25** 01:26:53.8, 41.24N×22.77E, h12km±1km, ML1.9/2, Error ellipse: s-maj=1.7km s-min=0.8km az=163.0*
*ATH **25** 01:26:53.2, 41.25N×22.75E, h16km±1km, MD2.9/6*
ISC 25 01:26:53.2±0.9, **41.27N**±0.02×**22.73E**±0.02, **h9**km±7km, **n35, σ0 45**/59, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**295**	*i* Pg	**Pg**	**01 26 55.5**	**-0.6**
VAY				*i* Sg	**Sg**	**01 26 57.6**	**-0.4**
VAY				*e*Lg	Lg	01 26 57.7	
	comp=E,334nm,0.3s						
VAY				*e*Lg	Lg	01 26 57.8	
	comp=N,718nm,0.7s						
VAY	**Valandovo**	**0.13**	**295**	*i* Pg	**Pg**	**01 26 55.9**	**-0.1**
VAY				*i* Sg	**Sg**	**01 26 58.1**	**+0.1**
VAY				*e*Lg	Lg	01 26 58.2	
	comp=N,718nm,0.7s						
KNT	**Kendrikon**	**0.17**	**129**	P	**Pg**	**01 26 57.1**	**+0.4**
KNT	**Kendrikon**	**0.17**	**129**	P	**Pg**	**01 26 57.1**	**+0.4**
GRG	**Griva**	**0.40**	**218**	P	**Pb**	**01 27 01.7**	**-0.7**
GRG				S	**Sg**	**01 27 07.0**	**+0.9**
GRG	**Griva**	**0.40**	**218**	*e*PB	**Pg**	**01 27 01.1**	**+0.2**
GRG				*e*SB	**Sg**	**01 27 06.8**	**+0.7**
GRG	**Griva**	**0.40**	**218**	*e*Pb	**Pg**	**01 27 01.1**	**+0.2**
GRG	**Griva**	**0.40**	**218**	P	**Pb**	**01 27 01.7**	**-0.7**
GRG				S	**Sg**	**01 27 07.0**	**+0.9**
SOH	**Sokhos**	**0.65**	**133**	P	**Pg**	**01 27 05.7**	**-0.1**
SOH				S	**Sg**	**01 27 14.6**	**+0.3**
SOH	**Sokhos**	**0.65**	**133**	*e*PN	**Pg**	**01 27 05.5**	**-0.3**
SOH				*e*SN	**Sg**	**01 27 14.1**	**-0.2**
SOH	**Sokhos**	**0.65**	**133**	P	**Pg**	**01 27 05.7**	**-0.1**
SOH				*e*Sn	**Sg**	**01 27 14.1**	**-0.2**
SOH				S	**Sg**	**01 27 14.6**	**+0.3**
THE	**Thessaloniki**	**0.66**	**164**	P	**Pg**	**01 27 06.0**	**+0.1**
THE	**Thessaloniki**	**0.66**	**164**	P	**Pg**	**01 27 06.0**	**+0.1**
SRS	**Serrai**	**0.67**	**103**	P	**Pg**	**01 27 05.9**	**-0.2**
SRS				S	**Sg**	**01 27 14.9**	**0.0**
SRS	**Serrai**	**0.67**	**103**	P	**Pg**	**01 27 05.9**	**-0.2**
SRS				S	**Sg**	**01 27 14.9**	**0.0**
HORT	**Hortiatis**	**0.73**	**157**	P	**Pg**	**01 27 07.2**	**0.0**
HORT	**Hortiatis**	**0.73**	**157**	P	**Pg**	**01 27 07.2**	**0.0**
NVR	**Nevrokopi**	**0.86**	**84**	P	**Pg**	**01 27 09.8**	**+0.1**
NVR				S	**Sg**	**01 27 20.9**	**0.0**
NVR	**Nevrokopi**	**0.86**	**84**	*e*PN	**Pg**	**01 27 09.8**	**+0.1**
NVR				*e*SN	**Sg**	**01 27 20.9**	**0.0**
NVR	**Nevrokopi**	**0.86**	**84**	P	**Pg**	**01 27 09.8**	**+0.1**
NVR				S	**Sg**	**01 27 20.9**	**0.0**
PLG	**Polygyros**	**1.05**	**148**	P	**Pg**	**01 27 12.7**	**-0.5**
PLG				S	**Sb**	**01 27 27.2**	**-0.2**
PLG	**Polygyros**	**1.05**	**148**	*e*PN	**Pg**	**01 27 12.8**	**-0.5**
PLG				*e*SN	**Sg**	**01 27 26.6**	**-0.3**
PLG	**Polygyros**	**1.05**	**148**	*e*Pn	**Pg**	**01 27 12.8**	**-0.5**
PLG				*e*Sn	**Sg**	**01 27 26.6**	**-0.3**
PLG				S	**Sb**	**01 27 27.2**	**-0.2**
FNA	**Florina**	**1.13**	**245**	*e*PN	**Pb**	**01 27 14.6**	**-0.3**
FNA				*e*SN	**Sn**	**01 27 30.7**	**-0.3**
FNA	**Florina**	**1.13**	**245**	*e*Pn	**Pb**	**01 27 14.6**	**-0.3**
FNA				*e*Sn	**Sn**	**01 27 30.7**	**-0.3**
VTS	**Vitosha**	**1.37**	**15**	P	**Pb**	**01 27 19.0**	**-0.1**
VTS				S	**Sb**	**01 27 36.7**	**-0.2**
VTS	**Vitosha**	**1.37**	**15**	P	**Pb**	**01 27 19.0**	**-0.1**
VTS				S	**Sb**	**01 27 36.7**	**-0.2**
PAIG	**Paliouri**	**1.52**	**151**	*e*PN	**Pg**	**01 27 21.7**	**-0.7**
PAIG				*e*SN	**Sg**	**01 27 41.8**	**-0.3**
PAIG	**Paliouri**	**1.52**	**151**	*e*Pn	**Pg**	**01 27 21.7**	**-0.7**
PAIG				*e*Sn	**Sg**	**01 27 41.8**	**-0.3**
AGG	**Agios Georgios**	**2.26**	**188**	*e*PB	**Pn**	**01 27 31.6**	**+0.8**
AGG	**Agios Georgios**	**2.26**	**188**	*e*Pb	**Pn**	**01 27 31.6**	**+0.8**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*PB	**Pn**	**01 27 31.1**	**+0.2**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*Pb	**Pn**	**01 27 31.1**	**+0.2**
ALN	**Alexandroupoli**	**2.54**	**97**	*e*PB	**Pn**	**01 27 35.8**	**+1.2**
ALN	**Alexandroupoli**	**2.54**	**97**	*e*Pb	**Pn**	**01 27 35.8**	**+1.2**

IDC 25 01:36:59.5±1.2, **55.78S**×**28.54W**, **h0**km, **mb4.0**/2, **mb1 4.0**/2, **mb1mx3.6**/17, **mbtmp4.0**/2, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx2.7**/25, **Error ellipse: s-maj=81.7km s-min=32.4km az=101.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QSPA	**South Pole Qui**	**34.47**	**180**	P	P	01 43 49.5	+0.7
	0.6nm,0.6s,baz=180,slow=1.5,SNR=5.3						
SUR	**Sutherland**	**41.31**	**77**	LR	LR	01 57 42.5	
	comp=Z,65nm,21.1s,baz=70,slow=30						
TORD	**Torodi Ar. Bea**	**73.20**	**31**	P	P	01 48 32.8	+0.8
	0.9nm,0.4s,baz=200,slow=6.4,SNR=34						
YKA	**Yellowknife Ar**	**135.47**	**319**	PKP	PKPdf	01 56 19.0	-0.9
	0.1nm,0.4s,baz=130,slow=1.8,SNR=3.1						
ILAR	**Eielson Array**	**149.37**	**312**	PKPbc	PKPbc	01 56 48.2	-0.6
	0.5nm,0.8s,baz=145,slow=2.3,SNR=6.9						
SONM	**Songino Array**	**151.47**	**87**	PKPbc	PKPbc	01 56 52.7	-1.8
	0.6nm,0.5s,baz=216,slow=3.8,SNR=2.5						

*SKO **25** 01:45:56.9, 41.37N×22.71E, h21km, M0.2, ML0.7*
*ISCJB **25** 01:45:57.9±1.1, 41.24N±0.09×22.76E±0.05, h5km±12km, Error ellipse: s-maj=14.8km s-min=6.0km az=169.9*
*CSEM **25** 01:45:58.0±0.5, 41.33N×22.75E, h10km, MD2.8, Error ellipse: s-maj=12.4km s-min=6.5km az=1.0*
*ATH **25** 01:45:59.0, 41.28N×22.73E, h17km±2km, MD2.8/6*
ISC 25 01:45:58.0±1.1, **41.33N**±0.06×**22.77E**±0.04, **h12**km±8km, **n15, σ0 33**/26, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.15**	**267**	*e*Pg	**Pg**	**01 46 01.3**	**-0.3**
VAY				*e*Sg	**Sg**	**01 46 03.9**	**-0.2**
VAY				*e*Lg	Lg	01 46 04.8	
	comp=E,51nm,0.6s						
VAY				*e*Lg	Lg	01 46 05.1	
	comp=N,138nm,1.1s						
VAY	**Valandovo**	**0.15**	**267**	*e*Sg	**Pg**	**01 46 01.3**	**-0.3**
VAY				*e*Lg	Lg	01 46 01.6	
	comp=N,138nm,1.1s						
VAY	**Valandovo**	**0.15**	**267**	*e*Pg	**Pg**	**01 46 01.8**	**+0.2**
GRG	**Griva**	**0.46**	**217**	*e*PB	**Pg**	**01 46 07.1**	**-0.1**
GRG				*e*SB	**Sg**	**01 46 13.3**	**0.0**
GRG	**Griva**	**0.46**	**217**	*e*Pb	**Pg**	**01 46 07.1**	**-0.1**
GRG				*e*Sb	**Sg**	**01 46 13.3**	**0.0**
SOH	**Sokhos**	**0.67**	**139**	*e*PN	**Pb**	**01 46 11.7**	**0.0**
SOH				*e*SN	**Sb**	**01 46 21.4**	**+0.4**
SOH	**Sokhos**	**0.67**	**139**	*e*Pn	**Pb**	**01 46 11.7**	**0.0**
SOH				*e*Sn	**Sb**	**01 46 21.4**	**+0.4**
NVR	**Nevrokopi**	**0.82**	**88**	*e*PN	**Pn**	**01 46 15.9**	**+0.4**
NVR				*e*SB	**Sn**	**01 46 27.0**	**-0.6**
NVR	**Nevrokopi**	**0.82**	**88**	*e*Pn	**Pn**	**01 46 15.9**	**+0.4**
NVR				*e*Sb	**Sn**	**01 46 27.0**	**-0.6**
PLG	**Polygyros**	**1.08**	**151**	*e*PN	**Pg**	**01 46 18.9**	**0.0**
PLG				*e*SN	**Sg**	**01 46 33.2**	**+0.2**
PLG	**Polygyros**	**1.08**	**151**	*e*Pn	**Pg**	**01 46 18.9**	**0.0**
PLG				*e*Sn	**Sg**	**01 46 33.2**	**+0.2**
FNA	**Florina**	**1.18**	**243**	*e*PN	**Pn**	**01 46 20.5**	**+0.1**
FNA				*e*SN	**Sg**	**01 46 36.5**	**+0.3**
FNA	**Florina**	**1.18**	**243**	*e*Pn	**Pn**	**01 46 20.5**	**+0.1**
FNA				*e*Sn	**Sg**	**01 46 36.5**	**+0.3**
PAIG	**Paliouri**	**1.56**	**153**	*e*PN	**Pg**	**01 46 27.5**	**-0.5**
PAIG	**Paliouri**	**1.56**	**153**	*e*Pn	**Pg**	**01 46 27.5**	**-0.5**

*ISCJB **25** 01:48:44.8±0.6, 24.23N±0.02×122.26E±0.03, h19km±4km, mb3.2/4, Error ellipse: s-maj=5.2km s-min=3.5km az=24.9*
*TAP **25** 01:48:46.3, 24.30N×122.12E, h26km, ML4.0, B*
*IDC **25** 01:48:49.1±8.3, 24.21N×121.76E, h64km±80km, mb3.2/4, mb1 3.3/5, mb1mx3.1/26, mbtmp3.2/5, ML3.3/1, Error ellipse: s-maj=66.7km s-min=27.5km az=70.0*
ISC 25 01:48:45.3±1.2, **24.24N**±0.03×**122.18E**±0.04, **h26**km±9km, **n58, σ0 94**/91, **mb3.3**/4, **9C-7D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.40**	**279**	*e*P	**Pn**	**01 48 54.7**	**-0.8**
	baz=276						
EHP				*e*S	**Sb**	**01 49 00.1**	**+0.3**
	baz=276						
ENA	**Nanau**	**0.44**	**295**	⇑*i*P	**Pb**	**01 48 54.5**	**-0.1**
	baz=295						
ENA				*e*S	**Sb**	**01 49 00.4**	**-0.4**
	baz=295						
TWC	**Suao**	**0.47**	**321**	⇑*i*P	**Pb**	**01 48 54.9**	**-0.1**
	baz=323						
TWC				*i* S	**Sb**	**01 49 00.5**	**-1.2**
	baz=323						
TWD	**Chiawan**	**0.56**	**253**	⇓P	**Pn**	**01 48 57.6**	**0.0**
	baz=230						
TWD				S	**Sn**	**01 49 05.8**	**-0.1**
	baz=230						
HWA	**Hwalien**	**0.59**	**243**	*e*P	**Pn**	**01 48 58.4**	**+0.4**
	baz=235						
EGS		**0.64**	**340**	⇑*i*P	**Pn**	**01 48 58.4**	**-0.4**
	baz=344						
EGS				*i* S	**Sb**	**01 49 06.1**	**-0.4**
	baz=344						
ILA	**Ilan**	**0.65**	**323**	*e*P	**Pn**	**01 48 58.4**	**-0.5**
	baz=325						
ILA				*e*S	**Sb**	**01 49 06.7**	**0.0**
	baz=325						
TWE	**Neicheng**	**0.67**	**316**	⇑*i*P	**Pb**	**01 48 58.3**	**0.0**
	baz=320						
TWE				S	**Sb**	**01 49 06.4**	**-0.8**
	baz=320						
ENTT	**Nioudou**	**0.68**	**305**	*e*P	**Pb**	**01 48 58.6**	**0.0**
	baz=305						
NNS	**Nan Shan**	**0.76**	**285**	⇓P	**Pn**	**01 49 00.4**	**-0.1**
	baz=289						
NNS				S	**Sn**	**01 49 10.4**	**-0.8**
	baz=289						
TWB1	**Santiao Chiao**	**0.78**	**347**	P	**Pn**	**01 49 00.8**	**+0.2**
	baz=341						
TWB1				*e*S	**Sn**	**01 49 10.4**	**-1.1**
	baz=341						
YOJ	**Yonaguni jima**	**0.79**	**74**	⇑*i*P	**Pn**	**01 49 02.2**	**+1.4**
	baz=71						
YOJ				*i* S	**Sn**	**01 49 13.8**	**+2.0**
	baz=71						
ESL	**Shilin**	**0.80**	**238**	*e*P	**Pb**	**01 49 00.6**	**0.0**
	baz=232						
ESL				*e*S	**Sn**	**01 49 12.9**	**+0.7**
	baz=232						
WHF	**Hehuan Shan**	**0.84**	**263**	⇓*i*P	**Pn**	**01 49 01.9**	**+0.1**
	baz=259						
WHF				S	**Sn**	**01 49 13.5**	**-0.1**
	baz=259						
NSK	**Sanguang**	**0.86**	**300**	⇓*i*P	**Pn**	**01 49 02.0**	**+0.1**
	baz=307						
NSK				S	**Sn**	**01 49 13.5**	**-0.2**
	baz=307						
NWF	**Wu-fen Shan**	**0.90**	**336**	⇑*e*P	**Pn**	**01 49 02.8**	**+0.4**
	baz=352						
NWF				S	**Sn**	**01 49 14.6**	**0.0**
	baz=352						
TWT	**Tachien**	**0.91**	**271**	P	**Pn**	**01 49 03.4**	**+0.7**
	baz=267						
TWT				S	**Sn**	**01 49 15.8**	**+0.7**
	baz=267						
TAP1	**Taipei**	**0.99**	**323**	*e*P	**Pn**	**01 49 04.4**	**+0.9**
	baz=337						
TAP1				S	**Sn**	**01 49 17.2**	**+0.5**
	baz=337						
TAP	**Taipei**	**1.00**	**322**	P	**Pn**	**01 49 04.7**	**+1.0**
	baz=337						
TAP				S	**Sn**	**01 49 17.4**	**+0.4**
	baz=337						
EHY	**Hungye**	**1.07**	**227**	⇑P	**Pn**	**01 49 04.4**	**-0.4**
	baz=222						
TWS1	**Kuangyinshan**	**1.10**	**321**	P	**Pb**	**01 49 06.3**	**+0.7**
	baz=333						
TWS1				*e*S	**Sn**	**01 49 21.5**	**+2.1**
	baz=333						
NSTT	**Nanjuang**	**1.14**	**290**	⇓*i*P	**Pb**	**01 49 07.0**	**+0.7**
	baz=288						
NSTT				S	**Sn**	**01 49 22.3**	**+1.9**
	baz=288						
TWY	**Chenhua**	**1.15**	**333**	⇑P	**Pb**	**01 49 07.5**	**+0.9**
	baz=334						
TWY				*e*S	**Sn**	**01 49 22.1**	**+1.3**
	baz=334						
NCU	**National Centr**	**1.16**	**309**	*e*P	**Pb**	**01 49 06.5**	**-0.1**
	baz=308						
NCU				*e*S	**Sn**	**01 49 23.5**	**+2.7**
	baz=308						
TWF1	**Yuli**	**1.20**	**222**	*e*P	**Pn**	**01 49 06.0**	**-0.4**
	baz=233						
SMLT	**Sun Moon Lake**	**1.22**	**253**	*e*P	**Pb**	**01 49 07.8**	**0.0**
	baz=237						
SMLT				*e*S	**Sb**	**01 49 23.2**	**0.0**
	baz=237						
HSN	**Hsinchu**	**1.23**	**297**	*e*P	**Pb**	**01 49 07.9**	**0.0**
	baz=298						
HSN				*e*S	**Sb**	**01 49 25.1**	**+

KSRS	**Korea Array**	**14.06**	**19**	P		P	01 52 07.0	-3.3	
	0.1nm,0.3s,baz=204,slow=14,SNR=3.2								
SONM	**Songino Array**	**26.67**	**336**	P		**P**	**01 54 21.4**	**-0.9**	
	0.7nm,0.6s,baz=151,slow=9.4,SNR=3.9								
ZALV	**Zalesovo Beam**	**40.69**	**327**	P		**P**	**01 56 21.2**	**-2.3**	
	0.4nm,0.3s,baz=123,slow=10,SNR=3.6								
WRA	**Warramunga Arr**	**45.49**	**164**	P		**P**	**01 57 02.7**	**+0.1**	
	0.2nm,0.6s,baz=346,slow=8.9,SNR=3.6								
YKA	**Yellowknife Ar**	**82.56**	**23**	P		**P**	**02 01 05.7**	**0.0**	
	0.1nm,0.7s,baz=310,slow=5.0,SNR=3.3								

ISCJB ***25*** *01:57:35.8±0.4, 1°.22S×0°.05×100°.21E±0°.07, h86km, mb4.1/20, Error ellipse: s-maj=10.6km s-min=5.4km az=152.0*
IDC ***25*** *01:57:35.4±0.6, 1°.16S×100°.40E, h65km±5km, mb3.8/15, mb1 3.9/16, mb1mx3.8/24, mbtmp3.8/16, Error ellipse: s-maj=21.4km s-min=12.2km az=56.0*
AUST ***25*** *01:57:36.6±2.8, 1°.25S×100°.22E, h85km, Error ellipse: s-maj=3.6km s-min=1.0km az=241.0*
DJA ***25*** *01:57:36.1±1.1, 1°.5S×10°.0E±°, h25km±12km, M4.6/8, mb4.6/1, mB5.6/2, MLv4.6/8, Mw(mB)5.1/2*
NEIC ***25*** *01:57:38.6±1.2, 1°.18S×100°.44E, h96km±10km, mb4.4/5, Error ellipse: s-maj=14.4km s-min=6.2km az=55.0*
NEIC Felt [III] at Padang and Pariaman.

ISC 25 01:57:37.1±0.5, 1°.21S±0°.06×100°.19E±0°.08, h86km, n61, σ1s45/70, mb4.2/20, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PPI	**Padang Panjang**	**0.78**	**15**	P		**Pn**	**01 57 52.3**	**-1.7**
PPI	**Padang Panjang**	**0.78**	**15**	P		**Pn**	**01 57 53.0**	**-1.1**
	baz=0.8,SNR=175							
PPI				S		**Sn**	**01 58 05.2**	**-1.5**
	baz=0.8,SNR=11							
BKNI	**Bangkinang**	**1.74**	**29**	P		**Pn**	**01 58 06.4**	**+0.6**
BKNI	**Bangkinang**	**1.74**	**29**	P		**Pn**	**01 58 06.4**	**+0.6**
	baz=1.8,SNR=5.3							
RGRI	**Rengat**	**2.31**	**68**	P		**Pn**	**01 58 14.0**	**+0.8**
MASI	**Maura Aman, Be**	**2.81**	**133**	P		**Pn**	**01 58 21.3**	**+1.4**
KSI	**Kapahiang**	**3.41**	**135**	P		**Pn**	**01 58 28.2**	**0.0**
MNAI	**Manna**	**4.17**	**139**	P		**Pn**	**01 58 38.1**	**-0.3**
	baz=4.1,SNR=11							
PSI	**Prapat**	**4.18**	**342**	P		**Pn**	**01 58 37.3**	**-1.4**
	baz=4.2,SNR=8.0							
EGSI	**Enggano, Bengk**	**4.61**	**153**	P		**Pn**	**01 58 42.6**	**-1.8**
KCSI	**Kotacane, Aceh**	**5.29**	**333**	P		**Pn**	**01 58 54.4**	**+0.8**
	37nm,0.6s,1µm0.3nm							
IPM	**Ipoh**	**5.71**	**8**	*e*Pn		**Pn**	**01 59 01.6**	**+2.2**
	18nm,0.4s							
PPBI	**Pangkal Pinang**	**6.02**	**99**	P		**Pn**	**01 59 04.8**	**+1.3**
KULM	**Kulim**	**6.47**	**4**	*e*Pn		**Pn**	**01 59 10.7**	**+0.9**
	20nm,0.7s							
CMAR	**Chiang Mai Arr**	**19.58**	**356**	P		**P**	**02 01 58.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**19.58**	**356**	P		**P**	**02 01 58.6**	**+0.2**
	0.4nm,0.3s,baz=190,slow=10,SNR=5.1							
WRA	**Warramunga Arr**	**38.23**	**121**	P		**P**	**02 04 48.0**	**-1.1**
WRA				pP		pP	02 05 03.7	-5.6
WRA				pPcP			02 07 20.1	
WRA	**Warramunga Arr**	**38.23**	**121**	P		**P**	**02 04 48.0**	**-1.1**
	0.6nm,0.3s,baz=312,slow=9.5,SNR=38							
WRA				pP		pP	02 05 03.7	-5.6
	0.7nm,0.6s,baz=302,slow=9.1,SNR=3.4							
WRA				pPcP			02 07 20.1	
	0.3nm,0.4s,baz=313,slow=2.5,SNR=7.4							
WRAB	**Tennant Creek**	**38.24**	**121**	*e*P		**P**	**02 04 47.8**	**-1.3**
	1.3nm,0.6s							
ASAR	**Alice Springs**	**39.56**	**127**	P		**P**	**02 04 59.1**	**-1.0**
ASAR				pP		pP	02 05 15.0	-5.5
ASAR				PcP		**PcP**	**02 07 07.3**	**+1.2**
ASAR				pPcP			02 07 25.4	
ASAR	**Alice Springs**	**39.56**	**127**	P		**P**	**02 04 59.1**	**-1.0**
	0.6nm,0.5s,baz=301,slow=8.0,SNR=8.2							
ASAR				pP		pP	02 05 15.0	-5.5
	0.7nm,0.5s,baz=301,slow=7.8,SNR=4.2							
ASAR				PcP		**PcP**	**02 07 07.3**	**+1.2**
	0.9nm,0.8s,baz=291,slow=2.4,SNR=6.7							
ASAR				pPcP			02 07 25.4	
	0.8nm,0.5s,baz=316,slow=2.8,SNR=6.4							
KSAR	**Wonju Array Be**	**46.22**	**31**	P		**P**	**02 05 52.3**	**-1.3**
KSRS	**Korea Array**	**46.25**	**31**	P		**P**	**02 05 52.3**	**-1.5**
	1.0nm,0.5s,baz=230,slow=7.7,SNR=6.7							
SONM	**Songino Array**	**49.14**	**6**	P		**P**	**02 06 17.0**	**+0.8**
SONM				PcP		**PcP**	**02 07 39.2**	**+0.7**
SONM	**Songino Array**	**49.14**	**6**	P		**P**	**02 06 17.0**	**+0.8**
	1.2nm,0.5s,baz=186,slow=9.3,SNR=6.3							
SONM				PcP		**PcP**	**02 07 39.2**	**+0.7**
	1.1nm,0.5s,baz=197,slow=4.5,SNR=3.4							
TKM2	**Tokmak 2**	**49.19**	**336**	*e*P		**P**	**02 06 18.4**	**+1.6**
	1.7nm,0.6s							
STKA	**Stephens Creek**	**49.53**	**132**	P		**P**	**02 06 19.0**	**-0.4**
STKA	**Stephens Creek**	**49.53**	**132**	P		**P**	**02 06 19.0**	**-0.4**
	1.7nm,0.4s,baz=312,slow=8.2,SNR=11							
STKA	**Stephens Creek**	**49.53**	**132**	P		**P**	**02 06 20.0**	**+0.6**
	baz=50,SNR=10							
EKS2	**Erkin-Say**	**49.73**	**335**	*e*P		**P**	**02 06 22.4**	**+1.6**
	3.5nm,0.7s							
MK31	**Makanchi Array**	**50.33**	**344**	*e*P		**P**	**02 06 26.0**	**+0.9**
MKAR	**Makanchi Array**	**50.33**	**344**	P		**P**	**02 06 26.2**	**+1.1**
MKAR	**Makanchi Array**	**50.33**	**344**	P		**P**	**02 06 26.2**	**+1.1**
	2.1nm,0.3s,baz=159,slow=8.7,SNR=45							
CMSA	**Cobar Meteorol**	**52.46**	**130**	P		**P**	**02 06 42.2**	**+0.9**
	baz=52,SNR=9.4							
USRK	**Ussuriysk Arra**	**53.38**	**28**	P		**P**	**02 06 47.2**	**-0.6**
	2.4nm,0.6s,baz=250,slow=5.2,SNR=8.8							
KURK	**Kurchatov**	**54.91**	**343**	*e*P		**P**	**02 06 59.3**	**+0.5**
	4.1nm,0.8s							
ZAA0	**Zalesovo Array**	**56.43**	**349**	*e*P		**P**	**02 07 10.1**	**+0.4**
ZALV	**Zalesovo Beam**	**56.43**	**349**	P		**P**	**02 07 10.2**	**+0.5**
ZALV				pP		**pP**	**02 07 26.1**	**-5.0**
ZALV	**Zalesovo Beam**	**56.43**	**349**	P		**P**	**02 07 10.2**	**+0.5**
	1.0nm,0.3s,baz=167,slow=7.3,SNR=9.7							
ZALV				pP		**pP**	**02 07 26.1**	**-5.0**
	0.9nm,0.5s,baz=162,slow=7.7,SNR=3.1							
ABKAR	**Akbulak array**	**61.05**	**331**	*e*P		**P**	**02 07 41.9**	**+0.1**
	2.9nm,0.6s							
KBZ	**Khabaz**	**67.84**	**319**	P		**P**	**02 08 26.7**	**+0.5**
KBZ	**Khabaz**	**67.84**	**319**	P		**P**	**02 08 26.7**	**+0.5**
	2.9nm,0.8s,baz=103,slow=11,SNR=3.7							
BRTR	**Keskin Array B**	**72.94**	**312**	P		**P**	**02 08 57.8**	**+0.3**
BRTR	**Keskin Array B**	**72.94**	**312**	P		**P**	**02 08 57.8**	**+0.3**
	1.0nm,0.8s,baz=140,slow=7.0,SNR=6.3							
BOSA	**Boshof**	**76.21**	**241**	P		**P**	**02 09 18.1**	**+1.4**
BOSA	**Boshof**	**76.21**	**241**	P		**P**	**02 09 18.1**	**+1.4**
	2.6nm,0.9s,baz=42,slow=4.0,SNR=3.2							
FINES	**FINESS Array B**	**83.51**	**332**	P		**P**	**02 09 56.0**	**+0.9**
FINES				pP		**pP**	**02 10 14.7**	**-3.3**
FINES	**FINESS Array B**	**83.51**	**332**	P		**P**	**02 09 56.0**	**+0.9**
	1.4nm,0.6s,baz=108,slow=4.7,SNR=10.0							
FINES				pP		**pP**	**02 10 14.7**	**-3.3**
	0.6nm,0.5s,baz=144,slow=6.8,SNR=1.2							
ARCES	**ARCESS Array B**	**85.80**	**340**	P		**P**	**02 10 07.4**	**+0.8**
ARCES	**ARCESS Array B**	**85.80**	**340**	P		**P**	**02 10 07.4**	**+0.8**
	0.8nm,0.4s,baz=102,slow=5.1,SNR=28							
GERES	**GERESS Array B**	**88.59**	**319**	P		**P**	**02 10 22.0**	**+1.4**
GERES	**GERESS Array B**	**88.59**	**319**	P		**P**	**02 10 22.0**	**+1.4**
	0.6nm,0.7s,baz=66,slow=3.3,SNR=5.8							
KEST	**Kesra**	**91.39**	**306**	P		**P**	**02 10 36.0**	**+2.0**
KEST	**Kesra**	**91.39**	**306**	P		**P**	**02 10 36.0**	**+2.0**
	1.1nm,0.8s,baz=65,slow=24,SNR=5.3							
TXAR	**Lajitas Array**	**143.96**	**37**	PKP		**PKPdf**	**02 17 02.7**	**-0.8**
TXAR	**Lajitas Array**	**143.96**	**37**	PKP		**PKPdf**	**02 17 02.7**	**-0.8**
	0.9nm,0.4s,baz=240,slow=0.7,SNR=31							
BDFB	**Brasilia**	**144.40**	**241**	PKP		**PKPdf**	**02 17 04.9**	**+0.4**
BDFB	**Brasilia**	**144.40**	**241**	PKP		**PKPdf**	**02 17 04.9**	**+0.4**
	1.3nm,0.4s,baz=132,slow=5.8,SNR=4.1							
CPUP	**Villa Florida**	**145.07**	**217**	PKPbc		**PKPdf**	**02 17 06.1**	**+0.8**
CPUP				pPKPbc		pPKPbc	02 17 24.8	-4.0
CPUP	**Villa Florida**	**145.07**	**217**	PKPbc		**PKPdf**	**02 17 06.1**	**+0.8**
	3.0nm,0.7s,baz=70,slow=3.4,SNR=13							
CPUP				pPKPbc		pPKPbc	02 17 24.8	-3.9
	2.6nm,0.7s,baz=102,slow=3.3,SNR=7.1							
SWET	**Sewanee**	**145.69**	**9**	*e*PKPdf		**PKPbc**	**02 17 06.5**	**-0.1**

ISCJB ***25*** *02:04:46.2±0.7, 41°.32N±0°.06×22°.73E±0°.04, h16km±6km, Error ellipse: s-maj=10.4km s-min=5.1km az=171.0*
SKO ***25*** *02:04:46.1, 41°.33N×22°.70E, h15km, M1.4, ML1.6*
ATH ***25*** *02:04:46.5, 41°.28N×22°.73E, h18km±1km, MD2.9/6*
CSEM ***25*** *02:04:46.3±0.3, 41°.31N×22°.72E, h15km, ML2.0/2, Error ellipse: s-maj=6.8km s-min=3.7km az=176.0*
THE ***25*** *02:04:47.0, 41°.25N×22°.70E, h16km±2km, ML2.0/2, Error ellipse: s-maj=6.2km s-min=1.6km az=161.0*

ISC 25 02:04:46.3±0.9, 41°.31N±0°.04×22°.72E±0°.02, h14km±6km, n24, σ0s43/41, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**278**	*i* Pg		**Pg**	**02 04 49.4**	**-0.2**
VAY				*e*Lg		Lg	02 04 51.5	
	comp=N,338nm,0.2s							
VAY				*i* Sg		**Sg**	**02 04 51.5**	**-0.2**
VAY				*e*Lg		Lg	02 04 51.6	
	comp=E,400nm,0.3s							
VAY	**Valandovo**	**0.11**	**278**	*i* Pg		**Pg**	**02 04 49.8**	**+0.3**
VAY				*i* Sg		**Sg**	**02 04 52.0**	**+0.2**
VAY				*e*Lg		Lg	02 04 52.1	
	comp=E,400nm,0.3s							
KNT	**Kendrikon**	**0.20**	**137**	P		**Pb**	**02 04 51.2**	**-0.5**
KNT	**Kendrikon**	**0.20**	**137**	P		**Pb**	**02 04 51.2**	**-0.5**
GRG	**Griva**	**0.42**	**215**	P		**Pg**	**02 04 55.0**	**+0.3**
GRG				S		**Sg**	**02 04 59.4**	**-1.1**
GRG	**Griva**	**0.42**	**215**	*e*PB		**Pg**	**02 04 55.0**	**+0.3**
GRG				*e*SB		**Sg**	**02 05 00.9**	**+0.4**
GRG	**Griva**	**0.42**	**215**	P		**Pg**	**02 04 55.0**	**+0.3**
GRG				S		**Sg**	**02 04 59.4**	**-1.1**
GRG				*e*Sb		**Sg**	**02 05 00.9**	**+0.4**
SOH	**Sokhos**	**0.68**	**135**	P		**Pb**	**02 04 59.8**	**-0.2**
SOH	**Sokhos**	**0.68**	**135**	*e*PN		**Pg**	**02 04 59.6**	**0.0**
SOH				*e*SN		**Sg**	**02 05 08.8**	**+0.3**
SOH	**Sokhos**	**0.68**	**135**	P		**Pb**	**02 04 59.8**	**-0.2**
SOH				*e*Sn		**Sg**	**02 05 08.8**	**+0.3**
SRS	**Serrai**	**0.69**	**106**	P		**Pg**	**02 04 59.5**	**-0.1**
SRS	**Serrai**	**0.69**	**106**	P		**Pg**	**02 04 59.5**	**-0.1**
HORT	**Hortiatis**	**0.76**	**158**	P		**Pg**	**02 05 01.3**	**+0.2**
HORT	**Hortiatis**	**0.76**	**158**	P		**Pg**	**02 05 01.3**	**+0.2**
NVR	**Nevrokopi**	**0.86**	**87**	P		**Pb**	**02 05 03.0**	**-0.1**
NVR	**Nevrokopi**	**0.86**	**87**	*e*PN		**Pg**	**02 05 02.8**	**-0.2**
NVR				*e*SN		**Sb**	**02 05 14.8**	**+0.3**
NVR	**Nevrokopi**	**0.86**	**87**	P		**Pb**	**02 05 03.0**	**-0.1**
NVR				*e*Sn		**Sb**	**02 05 14.8**	**+0.3**
PLG	**Polygyros**	**1.08**	**149**	*e*PN		**Pb**	**02 05 06.9**	**+0.1**
PLG				*e*SN		**Sb**	**02 05 20.7**	**-0.1**
PLG	**Polygyros**	**1.08**	**149**	*e*Pn		**Pb**	**02 05 06.9**	**+0.1**
PLG				*e*Sn		**Sb**	**02 05 20.7**	**-0.1**
FNA	**Florina**	**1.14**	**243**	P		**Pb**	**02 05 08.1**	**+0.2**
FNA				S		**Sb**	**02 05 21.7**	**-0.9**
FNA	**Florina**	**1.14**	**243**	*e*PN		**Pn**	**02 05 08.2**	**+0.3**
FNA				*e*SN		**Sn**	**02 05 23.6**	**+0.2**
FNA	**Florina**	**1.14**	**243**	*e*Pn		**Pn**	**02 05 08.2**	**+0.3**
FNA				S		**Sb**	**02 05 21.7**	**-0.9**
FNA				*e*Sn		**Sn**	**02 05 23.6**	**+0.2**
PAIG	**Paliouri**	**1.56**	**152**	*e*PN		**Pb**	**02 05 15.4**	**+0.5**
PAIG				*e*SN		**Sg**	**02 05 35.7**	**-0.8**
PAIG	**Paliouri**	**1.56**	**152**	*e*Pn		**Pb**	**02 05 15.4**	**+0.5**

NNC ***25*** *02:12:26.8±5.5, 37°.78N×72°.05E, h206km±63km, mb2.4, mpv3.5, Error ellipse: s-maj=76.6km s-min=26.5km az=37.0*

ISC 25 02:12:17.7±3.7, 37°.2N±0°.2×71°.5E±0°.1, h50km, n14, σ2s14/13, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**5.24**	**18**	P		**Pn**	**02 13 35.6**	**+1.8**
	SNR=95							
UCH	**Uchtor**	**5.56**	**24**	P		**Pn**	**02 13 39.9**	**+1.5**
	SNR=5.5							
KZA	**Kyzart**	**5.70**	**30**	P		**Pn**	**02 13 40.4**	**+0.2**
	SNR=7.1							
EKS2	**Erkin-Say**	**5.76**	**17**	P		**Pn**	**02 13 43.2**	**+2.5**
	SNR=8.5							
THN	**Thein Dam**	**5.88**	**142**	*e*PKP		Pn	02 13 35.6	-6.7
THN				*e*S		Sn	02 14 38.5	-10
DLH	**Dalhousie**	**5.92**	**140**	*ex*		Pn	02 13 41.0	-2.1
DLH				*ex*		Sn	02 14 43.0	-6.7
AAK	**Ala-Archa**	**5.93**	**22**	P		**Pn**	**02 13 44.6**	**+1.5**
	SNR=13							
KK31	**Karatay Array**	**5.97**	**353**	⇓P		**Pn**	**02 13 46.6**	**+3.2**
	2.9nm,0.3s,baz=174,slow=13,SNR=82							
KK31				S		**Sn**	**02 14 51.4**	**+1.0**
	5.3nm,0.3s,baz=167,slow=22,SNR=17							
ULHL	**Ulahol**	**6.26**	**35**	P		**Pn**	**02 13 47.3**	**-0.4**
	SNR=6.2							
CHMS	**Chumysh**	**6.34**	**22**	P		**Pn**	**02 13 49.7**	**+1.2**
	SNR=5.3							
TKM2	**Tokmak 2**	**6.55**	**28**	⇑P		**Pn**	**02 13 51.4**	**-0.3**
	2.3nm,0.5s							
KHET	**Khetri**	**9.78**	**157**	*ex*		Sn	02 16 05.1	-19
AB31	**Akbulak array**	**14.69**	**329**	⇓P		**Pn**	**02 15 41.9**	**-0.3**
	0.9nm,0.5s,baz=132,slow=11,SNR=43							
AB31				S		**Sn**	**02 18 19.4**	**-4.3**
	0.9nm,0.5s,baz=155,slow=22,SNR=8.3							
AKTO	**Aktyubinsk**	**16.39**	**328**	⇑P		**Pn**	**02 16 03.6**	**-0.6**
	0.2nm,0.7s							

ISCJB ***25*** *02:23:15.8±0.8, 41°.30N±0°.08×22°.75E±0°.06, h11km±7km, Error ellipse: s-maj=13.8km s-min=6.6km az=166.7*
SKO ***25*** *02:23:15.9, 41°.33N×22°.69E, h15km, M1.1, ML1.5*
CSEM ***25*** *02:23:15.9±0.5, 41°.33N×22°.75E, h9km±1km, MD2.8, Error ellipse: s-maj=12.0km s-min=6.2km az=3.0*
ATH ***25*** *02:23:17.1, 41°.26N×22°.72E, h17km±1km, MD2.8/6*

ISC 25 02:23:15.8±1.0, 41°.34N±0°.06×22°.74E±0°.04, h13km±7km, n14, σ0s43/28, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**264**	*e*Pg		**Pg**	**02 23 19.1**	**0.0**
VAY				*e*Lg		Lg	02 23 20.7	
	comp=E,154nm,0.5s							
VAY				*i* Sg		**Sg**	**02 23 20.9**	**-0.6**
VAY				*e*Lg		Lg	02 23 20.9	
	comp=N,432nm,0.2s							
VAY	**Valandovo**	**0.13**	**264**	*e*Pg		**Pg**	**02 23 19.5**	**+0.4**
VAY				*i* Sg		**Sg**	**02 23 21.3**	**-0.2**
VAY				*e*Lg		Lg	02 23 21.4	
	comp=N,432nm,0.2s							
GRG	**Griva**	**0.46**	**214**	*e*PB		**Pg**	**02 23 24.8**	**0.0**
GRG				*e*SB		**Sg**	**02 23 30.6**	**-0.3**
GRG	**Griva**	**0.46**	**214**	*e*Pb		**Pg**	**02 23 24.8**	**0.0**
GRG				*e*Sb		**Sg**	**02 23 30.6**	**-0.3**
SOH	**Sokhos**	**0.69**	**138**	*e*PN		**Pb**	**02 23 30.0**	**+0.2**
SOH				*e*SN		**Sg**	**02 23 38.9**	**+0.5**
SOH	**Sokhos**	**0.69**	**138**	*e*Pn		**Pb**	**02 23 30.0**	**+0.2**
SOH				*e*Sn		**Sg**	**02 23 38.9**	**+0.5**
NVR	**Nevrokopi**	**0.85**	**89**	*e*PN		**Pb**	**02 23 33.7**	**+0.2**
NVR				*e*SN		**Sn**	**02 23 45.2**	**-0.6**
NVR	**Nevrokopi**	**0.85**	**89**	*e*Pn		**Pn**	**02 23 33.7**	**+0.2**
NVR				*e*Sn		**Sn**	**02 23 45.2**	**-0.6**
PLG	**Polygyros**	**1.10**	**151**	*e*PN		**Pn**	**02 23 37.0**	**0.0**
PLG				*e*SN		**Sb**	**02 23 50.6**	**-0.4**
PLG	**Polygyros**	**1.10**	**151**	*e*Pn		**Pn**	**02 23 37.0**	**0.0**
PLG				*e*Sn		**Sb**	**02 23 50.6**	**-0.4**
FNA	**Florina**	**1.17**	**242**	*e*PN		**Pg**	**02 23 38.4**	**+0.1**
FNA				*e*SN		**Sg**	**02 23 53.7**	**+0.2**
FNA	**Florina**	**1.17**	**242**	*e*Pn		**Pg**	**02 23 38.4**	**+0.1**
FNA				*e*Sn		**Sg**	**02 23 53.7**	**+0.2**
PAIG	**Paliouri**	**1.58**	**153**	*e*PN		**Pg**	**02 23 45.8**	**-0.3**
PAIG				*e*SN		**Sb**	**02 24 05.6**	**+0.9**
PAIG	**Paliouri**	**1.58**	**153**	*e*Pn		**Pg**	**02 23 45.8**	**-0.3**
PAIG				*e*Sn		**Sb**	**02 24 05.6**	**+0.9**

ISCJB ***25*** *02:24:47.8±0.7, 41°.26N±0°.06×22°.69E±0°.04, h4km±8km, Error ellipse: s-maj=9.5km s-min=5.2km az=3.8*
SKO ***25*** *02:24:47.0, 41°.33N×22°.67E, h15km, M1.4, ML1.7*
CSEM ***25*** *02:24:47.7±0.3, 41°.30N×22°.72E, h5km, MD2.9, Error ellipse: s-maj=6.6km s-min=3.8km az=11.0*
ATH ***25*** *02:24:48.2, 41°.27N×22°.70E, h11km±1km, MD2.9/6*

ISC 25 02:24:47.6±0.9, 41°.28N±0°.04×22°.69E±0°.03, h10km±8km, n16, σ0s52/30, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**295**	*i* Pg		**Pg**	**02 24 50.1**	**-0.1**
VAY				*e*Lg		Lg	02 24 51.7	
	comp=E,242nm,0.2s							
VAY				*i* Sg		**Sg**	**02 24 51.8**	**-0.3**
VAY				*e*Lg		Lg	02 24 51.9	
	comp=N,768nm,0.2s							
VAY	**Valandovo**	**0.10**	**295**	*i* Pg		**Pg**	**02 24 50.6**	**+0.4**
VAY				*i* Sg		**Sg**	**02 24 52.3**	**+0.1**
VAY				*e*Lg		Lg	02 24 52.3	
	comp=N,768nm,0.2s							
GRG	**Griva**	**0.39**	**215**	*e*PB		**Pg**	**02 24 55.7**	**+0.4**
GRG				*e*SB		**Sg**	**02 25 01.1**	**+0.7**
GRG	**Griva**	**0.39**	**215**	*e*Pb		**Pg**	**02 24 55.7**	**+0.4**
GRG				*e*Sb		**Sg**	**02 25 01.1**	**+0.7**
SOH	**Sokhos**	**0.68**	**132**	*e*PG		**Pg**	**02 25 00.8**	**+0.1**
SOH				*e*SB		**Sb**	**02 25 10.3**	**-0.6**
SOH	**Sokhos**	**0.68**	**132**	*e*Pg		**Pg**	**02 25 00.8**	**+0.1**
SOH				*e*Sb		**Sb**	**02 25 10.3**	**-0.6**
NVR	**Nevrokopi**	**0.88**	**85**	*e*PB		**Pb**	**02 25 04.9**	**-0.1**
NVR				*e*SB		**Sb**	**02 25 16.9**	**0.0**
NVR	**Nevrokopi**	**0.88**	**85**	*e*Pb		**Pb**	**02 25 04.9**	**-0.1**
NVR				*e*Sb		**Sb**	**02 25 16.9**	**0.0**
PLG	**Polygyros**	**1.07**	**147**	*e*PG		**Pg**	**02 25 08.2**	**+0.1**
PLG				*e*SB		**Sb**	**02 25 22.0**	**-0.2**
PLG	**Polygyros**	**1.07**	**147**	*e*Pg		**Pg**	**02 25 08.2**	**+0.1**
PLG				*e*Sb		**Sb**	**02 25 22.0**	**-0.2**
FNA	**Florina**	**1.11**	**244**	*e*PN		**Pn**	**02 25 09.4**	**+0.2**
FNA				*e*SB		**Sg**	**02 25 24.2**	**+0.8**
FNA	**Florina**	**1.11**	**244**	*e*Pn		**Pn**	**02 25 09.4**	**+0.2**
FNA				*e*Sb		**Sg**	**02 25 24.2**	**+0.8**
PAIG	**Paliouri**	**1.54**	**151**	*e*PB		**Pg**	**02 25 17.1**	**-0.1**
PAIG				*e*SB		**Sg**	**02 25 38.0**	**+0.8**
PAIG	**Paliouri**	**1.54**	**151**	*e*Pb		**Pg**	**02 25 17.1**	**-0.1**
PAIG				*e*Sb		**Sg**	**02 25 38.0**	**+0.8**
AGG	**Agios Georgios**	**2.27**	**187**	*e*PN		**Pb**	**02 25 27.6**	**-1.0**
AGG	**Agios Georgios**	**2.27**	**187**	*e*Pn		**Pb**	**02 25 27.6**	**-1.0**

GUC 25 02:42:16.6±0.5, 23°.99S×67°.49W, h211km±12km, ML3.6, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**1.90**	**316**	⇑*i*P		Pn	02 42 56.5	+1.2
LVC				*i*S		S	02 43 27.1	+2.0
PBO4	**Plate Boundary**	**2.52**	**313**	⇑*i*P		Pn	02 43 08.0	+6.6
PB04				*i*S		S	02 43 47.6	+12
PB04				AML		AML	02 43 53.2	
	comp=N,72nm,0.4s							
CEN1	**Los Morros**	**2.56**	**283**	⇓*i*P		Pn	02 43 04.6	+2.6
CEN1				AML		AML	02 43 43.2	
	comp=N,55nm,0.8s							
PB09	**Plate Boundary**	**2.72**	**323**	⇑*i*P		Pn	02 43 05.8	+1.9
PB09				*e*S		S	02 43 43.1	+2.6
PB09				AML		AML	02 43 44.4	
	comp=E,207nm,0.3s							
HMBC	**Humberstone**	**4.32**	**328**	*e*P		Pn	02 43 22.9	0.0
HMBC				*i*S		S	02 44 15.3	+0.6
PSGC	**Pisagua**	**5.01**	**330**	*e*P		Pn	02 43 31.2	-0.5
PSGC				*e*S		S	02 44 30.0	-0.6
MNMC	**Minimini**	**5.22**	**338**	*e*P		Pn	02 43 35.2	+0.7
MNMC				*i*S		S	02 44 36.7	+0.9

IDC 25 02:46:12.0±2.0, 4°.85N×123°.85E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.7/4, Error ellipse: s-maj=150.5km s-min=26.1km az=66.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.88**	**176**	P		P	02 51 17.3	-0.1
	1.6nm,0.8s,baz=6.0,slow=12,SNR=3.6							
WRA	**Warramunga Arr**	**26.71**	**158**	P		P	02 51 53.6	+0.3
	0.8nm,0.3s,baz=337,slow=9.6,SNR=28				

	comp=N,52nm,0.7s								
SKO					*e*Lg		Lg	02 56 47.8	
	comp=E,30nm,0.7s								
SKO	**Skopje**	**1.16**	**307**		*e*Pg		**Pn**	**02 56 30.9**	**+0.1**
SKO					*e*Sg		**Sn**	**02 56 47.7**	**+0.9**
SKO	**Skopje**	**1.16**	**307**		*e*Pg		**Pg**	**02 56 29.9**	**-0.5**
SKO					*e*Sg		**Sb**	**02 56 46.0**	**+0.3**
SKO					*e*Lg		Lg	02 56 48.3	
	comp=E,30nm,0.7s								
KZN	**Kozani**	**1.20**	**216**		*e*PB		**Pg**	**02 56 31.3**	**0.0**
KZN					*e*SB		**Sn**	**02 56 48.0**	**0.0**
KZN	**Kozani**	**1.20**	**216**		*e*Pb		**Pg**	**02 56 31.3**	**0.0**
KZN					*e*Sb		**Sn**	**02 56 48.0**	**0.0**
VTS	**Vitosha**	**1.36**	**17**	P			**Pn**	**02 56 34.0**	**+0.3**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg			**Pn**	**02 56 33.7**	**0.0**
VTS					*e*Sg		**Sg**	**02 56 52.3**	**+0.4**
VTS	**Vitosha**	**1.36**	**17**	P			**Pn**	**02 56 34.0**	**+0.3**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg			**Pn**	**02 56 33.7**	**0.0**
VTS	**Vitosha**	**1.36**	**17**	P			**Pn**	**02 56 34.0**	**+0.3**
VTS					*e*Sg		**Sg**	**02 56 52.3**	**+0.4**
OUR	**Ouranopolis**	**1.37**	**134**		P		**Pn**	**02 56 33.3**	**-0.4**
OUR					S		**Sb**	**02 56 51.6**	**-0.3**
OUR	**Ouranopolis**	**1.37**	**134**		P		**Pn**	**02 56 33.3**	**-0.4**
OUR					S		**Sb**	**02 56 51.6**	**-0.3**
KAVA	**Kavala**	**1.41**	**101**		P		**Pn**	**02 56 34.2**	**-0.1**
KAVA					S		**Sb**	**02 56 52.5**	**-0.6**
KAVA	**Kavala**	**1.41**	**101**		P		**Pn**	**02 56 34.2**	**-0.1**
KAVA					S		**Sb**	**02 56 52.5**	**-0.6**
PAIG	**Paliouri**	**1.56**	**151**	*e*PB			**Pb**	**02 56 37.0**	**-0.3**
PAIG					*e*SB		**Sg**	**02 56 57.9**	**-0.4**
PAIG	**Paliouri**	**1.56**	**151**	*e*Pb			**Pb**	**02 56 37.0**	**-0.3**
PAIG					*e*Sb		**Sg**	**02 56 57.9**	**-0.4**
RZN	**Rozhen**	**1.58**	**75**	P			**Pb**	**02 56 38.2**	**+0.4**
RZN	**Rozhen**	**1.58**	**75**	P			**Pb**	**02 56 38.2**	**+0.4**
BARS	**Barje**	**1.66**	**337**	*e*Sn			**Sn**	**02 56 59.5**	**+0.3**
BARS	**Barje**	**1.66**	**337**	*e*Sn			**Sn**	**02 56 59.5**	**+0.3**
PGB	**Panagyurishte**	**1.68**	**41**	P			**Pb**	**02 56 39.6**	**+0.2**
PGB	**Panagyurishte**	**1.68**	**41**	P			**Pb**	**02 56 39.6**	**+0.2**
PLD	**Plovdiv**	**1.72**	**61**	*e*Pn			**Pg**	**02 56 41.4**	**+0.2**
PLD					*e*Sg		**Sg**	**02 57 03.7**	**+0.3**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Pn			**Pb**	**02 56 43.9**	**-0.7**
MPEP	**Malo Peshtene**	**2.21**	**20**	P			**Pg**	**02 56 49.9**	**-0.7**
SELS	**Selova**	**2.25**	**329**	*e*Pn			**Pn**	**02 56 45.8**	**-0.1**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PB			**Pn**	**02 56 47.0**	**+0.7**
AGG	**Agios Georgios**	**2.28**	**187**	*e*Pb			**Pn**	**02 56 47.0**	**+0.7**
AOS	**Alonnisos**	**2.31**	**156**	*e*PB			**Pn**	**02 56 47.1**	**+0.5**
AOS	**Alonnisos**	**2.31**	**156**	*e*Pb			**Pn**	**02 56 47.1**	**+0.5**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*PN			**Pn**	**02 56 48.2**	**+1.6**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*Pn			**Pn**	**02 56 48.2**	**+1.6**
ALN	**Alexandroupoli**	**2.57**	**98**	*e*PN			**Pn**	**02 56 52.3**	**+2.1**
ALN	**Alexandroupoli**	**2.57**	**98**	*e*Pn			**Pn**	**02 56 52.3**	**+2.1**
BOLS	**Boljevac**	**2.59**	**348**	*e*Pn			**Pn**	**02 56 50.3**	**-0.3**
BOLS	**Boljevac**	**2.59**	**348**	*e*Pn			**Pn**	**02 56 50.3**	**-0.3**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn			**Pn**	**02 56 55.8**	**0.0**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn			**Pn**	**02 56 55.8**	**0.0**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn			**Pn**	**02 57 02.2**	**0.0**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn			**Pn**	**02 57 02.2**	**0.0**

IDC 25 03:01:16.1±9.7, **21°.04S**×**178°.75W**, **h614**km±97km, **mb3.0**/6, **mb1 3.2**/6, **mb1mx2.9**/20, **mbtmp3.0**/6, **Error ellipse: s-maj=113.2km s-min=49.4km az=137.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
CTA	**Charters Tower**	**32.75**	**265**	P		P	03	07	00.8	+0.2
	3.5nm,0.4s,baz=70,slow=10,SNR=3.6									
STKA	**Stephens Creek**	**36.93**	**245**	P		P	03	07	35.4	+0.3
	1.2nm,0.6s,baz=83,slow=13,SNR=5.1									
ASAR	**Alice Springs**	**43.72**	**257**	P		P	03	08	28.8	-0.2
	2.2nm,0.5s,baz=98,slow=7.7,SNR=28									
WRA	**Warramunga Arr**	**43.84**	**263**	P		P	03	08	29.2	-0.7
	1.4nm,0.7s,baz=97,slow=7.5,SNR=32									
FITZ	**Fitzroy Crossi**	**52.27**	**263**	P		P	03	09	32.7	+0.4
	0.7nm,0.5s,baz=150,slow=8.1,SNR=8.4									
ILAR	**Eielson Array**	**89.00**	**13**	P		P	03	13	06.3	0.0
	0.2nm,0.6s,baz=219,slow=5.1,SNR=3.5									
AKASG	**Malin Array Be**	**143.14**	**330**	PKP		PKPab	03	19	39.0	-0.3
	1.1nm,0.4s,baz=44,slow=3.8,SNR=7.3									
BRTR	**Keskin Array B**	**146.68**	**311**	PKPbc		PKPbc	03	19	50.6	0.0
	0.5nm,0.6s,baz=100,slow=3.4,SNR=3.1									
GERES	**GERESS Array B**	**150.53**	**343**	PKPbc		PKPbc	03	19	59.6	-0.1
	0.3nm,0.6s,baz=73,slow=3.4,SNR=4.3									

*NOU **25** 03:07:08.2±0.9, 20°.52S×168°.62E, h30km, MD2.8, ML2.5*
*VIE **25** 03:07:08.7, 20°.855×168°.58E, h0km, mb4.0 346 km S of Port Vila*
*IDC **25** 03:07:13.7±1.6, 21°.18S×168°.62E, h38km±6km, mb3.8/5, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, ML3.8/1, MS3.6/4, Ms1 3.5/4, ms1mx3.0/27, Error ellipse: s-maj=57.1km s-min=18.4km az=146.0*
ISC 25 03:07:13.0±1.3, **21°.2S**±0°.3×**168°.7E**±0°.2, **h38**km±4km, **n21, σ0s99/24, mb3.9**/6, **MS3.4**/4, **1C, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
BAYA	**Yate Dam**	**1.95**	**240**	*e*P		**Pn**	**03**	**07**	**42.4**	**-1.2**
BAYA				*e*S		**Sn**	**03**	**08**	**08.8**	**+2.0**
BAYA				AMP			03	08	10.1	
	comp=Z,51nm,0.0s									
DZM	**Mont Dzumac**	**2.28**	**246**	*e*P		**Pn**	**03**	**07**	**46.5**	**-1.7**
DZM				*e*S		**Sn**	**03**	**08**	**14.6**	**-0.5**
DZM				AMP			03	08	24.6	
	comp=Z,3μm,7.0s									
DZM	**Mont Dzumac**	**2.28**	**246**	Pn		**Pn**	**03**	**07**	**46.9**	**-1.3**
	comp=Z,25nm,0.3s,baz=61,slow=16,SNR=516									
DZM				Sn		**Sn**	**03**	**08**	**15.2**	**+0.1**
	comp=Z,37nm,0.3s,baz=82,slow=22,SNR=10									
MVNO	**Noumea**	**2.37**	**242**	*e*P		**Pn**	**03**	**07**	**48.8**	**-0.4**
MVNO				*e*S		**Sn**	**03**	**08**	**17.3**	**+0.3**
NOUC	**Port Laguerre**	**2.41**	**247**	*e*P		**Pn**	**03**	**07**	**48.7**	**-1.2**
NOUC				*e*S		**Sn**	**03**	**08**	**19.5**	**+1.3**
NOUC				AMP			03	08	32.9	
	comp=Z,266nm,5.1s									
CTA	**Charters Tower**	**21.03**	**269**	LR		LR	03	19	06.2	
	comp=Z,64nm,21.6s,baz=231,slow=34									
STKA	**Stephens Creek**	**26.42**	**241**	P		**P**	**03**	**12**	**47.8**	**+1.6**
	comp=Z,2.4nm,0.8s,baz=114,slow=5.6,SNR=5.3									
STKA				LR		LR	03	21	46.4	
	comp=Z,66nm,19.2s,baz=24,slow=33									
WRA	**Warramunga Arr**	**32.16**	**266**	P		**P**	**03**	**13**	**36.9**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=89,slow=6.0,SNR=5.8									
WRA				pP		**pP**	**03**	**13**	**46.9**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=95,slow=8.4,SNR=8.1									
ASAR	**Alice Springs**	**32.22**	**259**	P		**P**	**03**	**13**	**37.8**	**0.0**
	comp=Z,1.3nm,0.8s,baz=85,slow=8.9,SNR=14									
ASAR				pP		**pP**	**03**	**13**	**48.3**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=86,slow=8.9,SNR=14									
PPT	**Papeete**	**39.45**	**92**	LR		LR	03	26	03.8	
	comp=Z,108nm,21.9s,baz=336,slow=29									
FITZ	**Fitzroy Crossi**	**40.58**	**267**	P		**P**	**03**	**14**	**49.0**	**-0.1**
	baz=144,slow=10									
USRK	**Ussuriysk Arra**	**73.22**	**333**	P		**P**	**03**	**18**	**40.7**	**+0.8**
	comp=Z,2.3nm,0.8s,baz=103,slow=4.1,SNR=4.8									
USRK				pP		**pP**	**03**	**18**	**52.1**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=165,slow=9.1,SNR=2.6									
NVAR	**Mina Array Bea**	**90.45**	**49**	P		**P**	**03**	**20**	**10.7**	**-0.3**
	comp=Z,2.1nm,1.1s,baz=224,slow=7.6,SNR=4.4									
LPIG	**La Paz**	**90.70**	**65**	LR		LR	03	51	43.7	
	comp=Z,91nm,21.0s,baz=313,slow=29									
ILAR	**Eielson Array**	**92.22**	**17**	P		P	03	20	14.9	-3.3
	comp=Z,0.3nm,0.6s,baz=242,slow=3.9,SNR=6.2									
BRG	**Berggiesshubel**	**144.36**	**332**	*e*P		PKPbc	03	26	43.5	+0.3
	comp=Z,3.2nm,0.9s									
BRG				*e*			03	26	55.6	
	comp=Z,4.7nm,1.0s									
CLL	**Collm**	**144.43**	**334**	*i* PKPbc		PKPbc	03	26	43.3	-0.2
	comp=Z,3.0nm,0.7s									
CLL				*i* PKPab		PKiKP	03	26	55.4	+6.8
	comp=Z,5.0nm,1.1s									
CONA	**Conrad Observa**	**145.51**	**327**	*i* PKPdf		**PKPab**	**03**	**26**	**48.1**	**+0.7**
	comp=Z,6.9nm,0.9s									
KHC	**Kasperske Hory**	**145.78**	**331**	*e*P		**PKPdf**	**03**	**26**	**47.5**	**+0.1**
KHC				*ex*		x	03	27	00.0	
GERES	**GERESS Array B**	**145.93**	**330**	PKPbc		**PKPab**	**03**	**26**	**48.7**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=31,slow=3.1,SNR=25									
GERES				pPKPbc		pPKPbc	03	27	01.0	+0.4
	comp=Z,3.8nm,0.8s,baz=46,slow=3.9,SNR=15									
TORD	**Torodi Ar. Bea**	**165.25**	**239**	PKPab		**PKPab**	**03**	**28**	**11.0**	**-0.6**
	comp=Z,0.6nm,1.1s,baz=108,slow=4.5,SNR=2.8									
TORD				pPKPab		**pPKPab**	**03**	**28**	**22.9**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=138,slow=4.7,SNR=3.1									

*ISCJB **25** 03:16:13.4±1.0, 24°.89N±0°.04×122°.50E±0°.05, h8km±5km, mb3.4/2, Error ellipse: s-maj=7.4km s-min=6.9km az=21.7*
*IDC **25** 03:16:13.3±1.7, 24°.26N×121°.46E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/25, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=71.8km s-min=29.9km az=69.0*
*TAP **25** 03:16:14.6, 24°.92N×122°.44E, h21km, ML3.6, C*
ISC 25 03:16:14.3±1.3, **24°.91N**±0°.05×**122°.48E**±0°.07, **h19**km±3km, **n33, σ0s83/49, 1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
TWB1	**Santiao Chiao**	**0.46**	**283**	⇓*i* P		**Pg**	**03**	**16**	**23.5**	**-0.2**
	baz=282									
TWB1				*i* S		**Sg**	**03**	**16**	**29.6**	**-0.4**
	baz=282									
EGS		**0.50**	**263**	P		**Pg**	**03**	**16**	**24.3**	**-0.2**
	baz=251									
EGS				*e*S		**Sg**	**03**	**16**	**29.8**	**-1.5**
	baz=251									
TWC	**Suao**	**0.65**	**243**	P		**Pb**	**03**	**16**	**26.5**	**-0.5**
	baz=239									
TWC				*e*S		**Sb**	**03**	**16**	**34.5**	**-1.0**
	baz=239									
NWF	**Wu-fen Shan**	**0.66**	**285**	⇑*i* P		**Pb**	**03**	**16**	**27.3**	**+0.2**
	baz=284									
NWF				S		**Sb**	**03**	**16**	**36.1**	**+0.2**
	baz=284									
TWE	**Neicheng**	**0.76**	**256**	P		**Pb**	**03**	**16**	**28.5**	**-0.4**
	baz=253									
TWE				S		**Sb**	**03**	**16**	**38.2**	**-0.8**
	baz=253									
ENA	**Nanau**	**0.82**	**235**	*e*P		**Pb**	**03**	**16**	**29.7**	**-0.3**
	baz=232									
ENA				S		**Sb**	**03**	**16**	**40.4**	**-0.4**
	baz=232									
ENTT	**Nioudou**	**0.87**	**253**	*e*P		**Pb**	**03**	**16**	**30.7**	**-0.2**
	baz=238									
ENTT				*e*S		**Sb**	**03**	**16**	**42.0**	**-0.2**
	baz=238									
TAP1	**Taipei**	**0.88**	**279**	*e*P		**Pb**	**03**	**16**	**30.8**	**-0.2**
	baz=278									
TWY	**Chenhua**	**0.88**	**295**	*e*P		**Pb**	**03**	**16**	**30.6**	**-0.4**
	baz=295									
TWY				*e*S		**Sb**	**03**	**16**	**42.9**	**+0.5**
	baz=295									
TWS1	**Kuangyinshan**	**0.98**	**282**	*e*P		**Pb**	**03**	**16**	**31.8**	**-1.0**
	baz=281									
NSK	**Sanguang**	**1.04**	**258**	P		**Pb**	**03**	**16**	**33.7**	**-0.2**
	baz=268									
NSK				*e*S		**Sb**	**03**	**16**	**47.4**	**+0.2**
	baz=268									
NNS	**Nan Shan**	**1.11**	**246**	P		**Pn**	**03**	**16**	**34.6**	**-0.3**
	baz=233									
NNS				*e*S		**Sb**	**03**	**16**	**48.6**	**-0.5**
	baz=233									
TWD	**Chiawan**	**1.15**	**225**	*e*P		**Pn**	**03**	**16**	**35.6**	**+0.2**
	baz=230									
TWD				*e*S		**Sb**	**03**	**16**	**49.6**	**-0.6**
	baz=230									
WHF	**Hehuan Shan**	**1.34**	**236**	P		**Pn**	**03**	**16**	**38.3**	**-0.2**
	baz=234									
WHF				S		**Sn**	**03**	**16**	**55.8**	**-0.2**
	baz=234									
TWT	**Tachien**	**1.35**	**242**	*e*P		**Pn**	**03**	**16**	**38.9**	**+0.5**
	baz=240									
TWT				*e*S		**Sn**	**03**	**16**	**56.5**	**+0.6**
	baz=240									
NSTT	**Nanjuang**	**1.37**	**259**	*e*P		**Pn**	**03**	**16**	**38.5**	**+0.1**
	baz=257									
ESL	**Shilin**	**1.45**	**222**	*e*P		**Pn**	**03**	**16**	**39.0**	**-0.5**
	baz=220									
NSY	**Sanyi**	**1.64**	**253**	*e*P		**Pb**	**03**	**16**	**45.1**	**+1.1**
	baz=264									
TWQ1	**Liyutan**	**1.65**	**251**	*e*P		**Pb**	**03**	**16**	**44.8**	**+0.7**
	baz=250									
EHY	**Hungye**	**1.75**	**217**	*e*P		**Pn**	**03**	**16**	**43.1**	**-0.6**
	baz=217									
SMLT	**Sun Moon Lake**	**1.76**	**235**	*e*P		**Pn**	**03**	**16**	**44.6**	**+0.6**
	baz=218									
TYC	**Yuchr**	**1.78**	**236**	*e*P		**Pn**	**03**	**16**	**45.2**	**+1.1**
	baz=235									
TYC				*e*S		**Sb**	**03**	**17**	**09.6**	**+1.2**
	baz=235									
TWF1	**Yuli**	**1.89**	**215**	*e*P		**Pn**	**03**	**16**	**44.2**	**-1.4**
	baz=214									
YUS	**Yu-Shan**	**1.98**	**225**	*e*P		**Pn**	**03**	**16**	**48.3**	**+0.9**
	baz=210									
YUS				*e*S		**Sn**	**03**	**17**	**12.1**	**+0.2**
	baz=210									
ALS	**Alishan**	**2.06**	**228**	*e*P		**Pn**	**03**	**16**	**49.2**	**+0.9**
	baz=212									
CHN5	**Tsauling**	**2.10**	**232**	*e*P		**Pn**	**03**	**16**	**50.4**	**+1.8**
	baz=217									
CHN5				*e*S		**Sb**	**03**	**17**	**17.2**	**-0.4**
	baz=217									
CHN4	**Tsaushan**	**2.32**	**228**	*e*P		**Pn**	**03**	**16**	**52.4**	**+0.9**
	baz=213									
CHN1	**Nanshi**	**2.47**	**227**	*e*P		**Pn**	**03**	**16**	**55.9**	**+2.3**
	baz=213									
CHN1				*e*S		**Sn**	**03**	**17**	**24.8**	**+1.5**
	baz=213									
EAST	**Anshuo**	**2.92**	**211**	*e*P		**Pn**	**03**	**17**	**00.9**	**+1.0**
	baz=211									
KSRS	**Korea Array**	**13.35**	**19**	Pn		P	03	19	36.5	+4.3
	0.3nm,0.3s,baz=194,slow=11,SNR=8.6									
MKAR	**Makanchi Array**	**38.66**	**315**	P		**P**	**03**	**23**	**36.8**	**+0.1**
	0.3nm,0.6s,baz=106,slow=10,SNR=4.0									
WRA	**Warramunga Arr**	**46.05**	**164**	P		**P**	**03**	**24**	**36.0**	**-1.0**
	0.8nm,1.2s,baz=346,slow=8.6,SNR=2.4									
WRA				pP		**pP**	**03**	**24**	**44.0**	**+1.1**
	0.5nm,0.7s,baz=346,slow=8.4,SNR=5.6									
ASAR	**Alice Springs**	**49.54**	**166**	pP		pP	03	25	10.2	+0.2
	0.5nm,0.7s,baz=350,slow=8.8,SNR=5.3									

*BJI **25** 03:18:47.2, 18°.70S×177°.80W, h623km, mB4.7/1, mb4.1/2*
*IDC **25** 03:18:47.2±1.5, 18°.82S×177°.71W, h619km±20km, mb3.6/12, mb1 3.8/15, mb1mx3.6/24, mbtmp3.6/15, Error ellipse: s-maj=21.8km s-min=10.4km az=152.0*
*NEIC **25** 03:18:48.3±1.1, 18°.69S×177°.84W, h623km±14km, mb4.4/12, Error ellipse: s-maj=20.2km s-min=12.8km az=138.0*
ISC 25 03:18:46.4±0.6, **18°.7S**±0°.1×**177°.66W**±0°.09, **h600**km, **n39, σ1s99/46, mb4.0**/22, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
				Op		ISC	h	m	s	ISC
MSVF	**Nonsavu**	**4.19**	**283**	*e*P		**P**	**03**	**20**	**15.7**	**+2.4**
AFI	**Afiamalu**	**7.39**	**51**	P		**P**	**03**	**20**	**40.8**	**+0.7**
	3.3nm,0.3s,baz=198,slow=3.1,SNR=4.0									
AFI				S		**S**	**03**	**22**	**11.8**	**-1.3**
	1.9nm,0.3s,baz=57,slow=23,SNR=5.6									
DZM	**Mont Dzumac**	**15.28**	**255**	P		**P**	**03**	**21**	**57.8**	**+0.6**
	0.9nm,0.3s,baz=84,slow=19,SNR=6.2									
OUZ	**Omahuta**	**18.20**	**203**	*e*P		**P**	**03**	**22**	**26.2**	**+2.6**
	37nm,0.6s									
URZ	**Urewera**	**20.02**	**192**	*e*P		**P**	**03**	**22**	**37.8**	**-2.4**
	7.9nm,0.4s									
URZ	**Urewera**	**20.02**	**192**	P		**P**	**03**	**22**	**37.7**	**-2.4**
	2.6nm,0.3s,baz=283,slow=2.7,SNR=8.3									
CTA	**Charters Tower**	**34.03**	**262**	P		**P**	**03**	**24**	**41.9**	**-0.6**
	19nm,0.6s,baz=94,slow=10,SNR=28									
CTAO	**Charters Tower**	**34.03**	**262**	*e*P		**P**	**03**	**24**	**41.8**	**-0.6**
	20nm,0.8s									
PMG	**Port Moresby**	**35.29**	**280**	*e*P		**P**	**03**	**24**	**52.7**	**-0.2**
	44nm,0.8s									
PMG	**Port Moresby**	**35.29**	**280**	P		**P**	**03**	**24**	**53.3**	**+0.4**
	44nm,0.8s,baz=91,slow=6.3,SNR=13									
COEN	**Coen**	**37.83**	**271**	*e*P		**P**	**03**	**25**	**13.3**	**-0.3**
	240nm,0.7s									
STKA	**Stephens Creek**	**38.88**	**242**	*e*P		**P**	**03**	**25**	**21.9**	**0.0**
	0.7nm,0.6s									
STKA	**Stephens Creek**	**38.88**	**242**	P		**P**	**03**	**25**	**22.0**	**0.0**
	2.5nm,0.4s,baz=87,slow=8.8,SNR=11									
STKA				S		**S**	**03**	**30**	**43.8**	**+5.3**
	1.3nm,0.5s,baz=75,slow=12,SNR=3.1									
WRAB	**Tennant Creek**	**45.18**	**260**	*e*P		**P**	**03**	**26**	**09.9**	**-1.5**
	7.7nm,0.3s									
WRA	**Warramunga Arr**	**45.19**	**260**	P		**P**	**03**	**26**	**10.1**	**-1.5**
	9.1nm,0.4s,baz=97,slow=7.5,SNR=398									
WRA				S		**S**	**03**	**32**	**04.4**	**-4.6**
	1.2nm,0.9s,baz=94,slow=15,SNR=7.5									
AS31	**Alice Springs**	**45.27**	**255**	*e*P		**P**	**03**	**26**	**11.1**	**-1.0**
ASAR	**Alice Springs**	**45.27**	**255**	P		**P**	**03**	**26**	**11.2**	**-0.9**
	11nm,0.5s,baz=88,slow=8.0,SNR=190									
ASAR				S		**S**	**03**	**32**	**06.5**	**-3.4**

	5.0nm,0.8s,baz=91,slow=16,SNR=32								
MBWA	**Marble Bar**	**58.58**	**256**	*e*P		**P**	**03**	**27**	**45.7**	**-1.6**
	26nm,1.2s								
MJAR	**Matsushiro Arr**	**68.96**	**323**	P		**P**	**03**	**28**	**51.4**	**-1.4**
	1.2nm,0.7s,baz=156,slow=6.7,SNR=4.7								
QSPA	**South Pole Qui**	**71.36**	**180**	*e*P		**P**	**03**	**29**	**07.2**	**+0.5**
	2.5nm,0.8s								
PETK	**Petropavlovsk-**	**74.62**	**345**	P		**P**	**03**	**29**	**24.7**	**-0.4**
	2.2nm,0.9s,baz=184,slow=7.1,SNR=3.1								
ISA	**Isabella**	**77.85**	**46**	*e*P		**P**	**03**	**29**	**44.3**	**+1.0**
	4.7nm,0.9s								
CMB	**Columbia Colle**	**77.93**	**43**	*e*P		**P**	**03**	**29**	**44.3**	**+0.6**
NVAR	**Mina Array Bea**	**79.50**	**43**	P		**P**	**03**	**29**	**52.9**	**+0.7**
	2.1nm,0.6s,baz=226,slow=8.0,SNR=10								
MOD	**Modoc**	**80.23**	**40**	*e*P		**P**	**03**	**29**	**56.9**	**+1.0**
	3.3nm,0.8s								
CN2	**Changchun**	**81.08**	**322**	*e*P		**P**	**03**	**30**	**00.0**	**0.0**
WVOR	**Wild Horse Val**	**81.55**	**40**	*e*P		**P**	**03**	**30**	**03.2**	**+0.6**
	4.8nm,0.9s								
TUC	**Tucson**	**81.62**	**52**	*e*P		**P**	**03**	**30**	**04.4**	**+1.3**
TRF	**Thorofare Moun**	**84.63**	**12**	*e*P		P	03	30	15.7	-1.8
HLID	**Hailey**	**84.76**	**41**	*e*P		**P**	**03**	**30**	**19.5**	**+0.9**
TXAR	**Lajitas Array**	**85.82**	**57**	P		**P**	**03**	**30**	**25.2**	**+1.3**
	2.5nm,0.7s,baz=219,slow=6.4,SNR=39								
ANMO	**Albuquerque**	**86.03**	**51**	*e*P		**P**	**03**	**30**	**25.7**	**+0.7**
	10.0nm,2.0s								
GYA	**Guiyang**	**86.04**	**299**	*e*P		**P**	**03**	**30**	**24.8**	**-0.3**
GYA				pP		**pP**	**03**	**32**	**37.4**	**+4.0**
GYA				sP		**sP**	**03**	**33**	**37.8**	**+3.5**
GYA				PP		**PP**	**03**	**33**	**58.8**	**+1.8**
GYA				SKS		**SKSac**	**03**	**39**	**50.1**	**-4.7**
GYA				S		**SKKSac**	**03**	**40**	**06.8**	**+2.1**
GYA				pmax		pmax				
	comp=Z,10.0nm,1.0s									
COLA	**College**	**86.39**	**12**	*e*P		**P**	**03**	**30**	**24.5**	**-1.1**
	comp=Z,3.8nm,0.5s									
ILAR	**Eielson Array**	**86.49**	**13**	P		P	03	30	24.3	-1.8
	comp=Z,0.8nm,0.4s,baz=225,slow=5.0,SNR=29									
PDAR	**Pinedale Array**	**87.44**	**43**	P		**P**	**03**	**30**	**31.2**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=220,slow=3.7,SNR=9.7									
YKA	**Yellowknife Ar**	**94.75**	**25**	P		**P**	**03**	**31**	**03.2**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=242,slow=4.5,SNR=8.6									
ARCES	**ARCESS Array B**	**127.21**	**350**	PKP		**PKPdf**	**03**	**36**	**41.2**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=27,slow=3.0,SNR=5.2									
GERES	**GERESS Array B**	**148.55**	**346**	PKPbc		**PKPbc**	**03**	**37**	**26.1**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=18,slow=2.1,SNR=6.5									

AYDN	**Tasoluk**	**1.62**	**182**	*i*	P	**Pg**	**04 04 56.4**	**-0.1**
AYDN				*i*	S	**Sn**	**04 05 14.1**	**-0.9**
AYDN	**Tasoluk**	**1.62**	**182**	*i*	P	**Pg**	**04 04 56.4**	**-0.1**
AYDN				*i*	S	**Sn**	**04 05 14.1**	**-0.9**
CAVI	**Cavuskoy**	**1.73**	**57**	*e*	PN	**Pb**	**04 04 56.8**	**-0.4**
CAVI	**Cavuskoy**	**1.73**	**57**	*e*	Pn	**Pb**	**04 04 56.8**	**-0.4**
ERIK	**Erikli-Kesan**	**1.77**	**322**	*e*	PN	**Pn**	**04 04 56.6**	**+0.7**
ERIK	**Erikli-Kesan**	**1.77**	**322**	*e*	Pn	**Pn**	**04 04 56.6**	**+0.7**
ADVT	**Abdulvahap**	**1.80**	**50**	*e*	PN	**Pb**	**04 04 58.3**	**-0.1**
ADVT	**Abdulvahap**	**1.80**	**50**	*e*	Pn	**Pb**	**04 04 58.3**	**-0.1**
CTKS	**Kestanelik-??a**	**2.00**	**12**	*e*	PN	**Pb**	**04 05 00.9**	**-0.8**
CTKS	**Kestanelik-??a**	**2.00**	**12**	*e*	Pn	**Pb**	**04 05 00.9**	**-0.8**
GULT	**Gulveren**	**2.29**	**59**	*e*	PN	**Pn**	**04 05 04.4**	**+1.2**
GULT	**Gulveren**	**2.29**	**59**	*e*	Pn	**Pn**	**04 05 04.4**	**+1.2**
EDRB	**Edirne**	**2.72**	**341**	*e*	PN	**Pn**	**04 05 10.7**	**+1.7**
EDRB	**Edirne**	**2.72**	**341**	*e*	Pn	**Pn**	**04 05 10.7**	**+1.7**
SVRH	**Sivrihisar-ESK**	**2.78**	**86**	*e*	PN	**Pn**	**04 05 11.3**	**+1.2**
SVRH	**Sivrihisar-ESK**	**2.78**	**86**	*e*	Pn	**Pn**	**04 05 11.3**	**+1.2**

IDC 25 04:06:02.8±2.4,**31°40S**×**177°93W**,**h0**km,**mb3.8**/3, **mb1 4.0**/3,**mb1mx3.7**/18,**mbtmp3.8**/3,**MS3.5**/1,**Ms1 3.5**/1, **ms1mx2.7**/30,**Error ellipse: s-maj=66.8km s-min=41.0km az=39.0**,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.14**	**0**	LR	LR	04 07 09.8	
	comp=Z,1μm,20.8s,baz=360,slow=31						
ASAR	**Alice Springs**	**43.13**	**268**	P	P	04 14 06.3	+1.1
	0.7nm,0.6s,baz=105,slow=7.9,SNR=8.1						
WRA	**Warramunga Arr**	**44.21**	**273**	P	P	04 14 12.8	-1.2
	0.7nm,0.3s,baz=115,slow=7.8,SNR=24						
QSPA	**South Pole Qui**	**58.71**	**180**	P	P	04 16 02.0	-0.1
	0.9nm,0.8s,baz=0.0,slow=8.1,SNR=3.1						
FINES	**FINESS Array B**	**146.10**	**339**	PKPbc	PKPdf	04 25 43.3	+0.1
	1.8nm,0.8s,baz=48,slow=2.1,SNR=3.3						

*ISCJB **25** 04:06:46.5±0.6,41°.27N±0°.04×22°.69E±0°.04,h13km±4km, Error ellipse: s-maj=7.7km s-min=4.3km az=165.7*
*SKO **25** 04:06:46.1,41°.30N×22°.69E,h15km,M1.8,ML2.1*
*ATH **25** 04:06:46.6,41°.26N×22°.67E,h24km±1km,MD3.0/7*
*CSEM **25** 04:06:46.7±0.2,41°.28N×22°.70E,h12km,ML1.9/3,Error ellipse: s-maj=5.6km s-min=3.7km az=170.0*
*THE **25** 04:06:48.0,41°.25N×22°.76E,h9km±2km,ML1.9/3,Error ellipse: s-maj=2.6km s-min=0.6km az=157.0*

ISC 25 04:06:46.7±0.9,**41°29N**±0°.03×**22°.68E**±0°.02,**h10**km±6km, **n34**,σ0**942**/55,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.09**	**290**	*i* Pg	**Pg**	**04 06 48.8**	**-0.4**
VAY				*e*Lg	Lg	04 06 50.5	
	comp=N,1μm,0.2s						
VAY				*i* Sg	**Sg**	**04 06 50.5**	**-0.4**
VAY				*e*Lg	Lg	04 06 50.5	
	comp=E,2μm,0.2s						
VAY	**Valandovo**	**0.09**	**290**	*i* Sg	**Sg**	**04 06 50.9**	**0.0**
VAY				*e*Lg	Lg	04 06 51.0	
	comp=E,2μm,0.2s						
VAY	**Valandovo**	**0.09**	**290**	*i* Pg	**Pg**	**04 06 49.2**	**+0.1**
KNT	**Kendrikon**	**0.21**	**128**	P	**Pg**	**04 06 51.4**	**+0.4**
KNT	**Kendrikon**	**0.21**	**128**	P	**Pg**	**04 06 51.4**	**+0.4**
GRG	**Griva**	**0.40**	**213**	P	**Pb**	**04 06 55.4**	**-0.4**
GRG	**Griva**	**0.40**	**213**	*e*PB	**Pg**	**04 06 54.7**	**+0.2**
GRG				*e*SB	**Sg**	**04 07 00.3**	**+0.6**
GRG	**Griva**	**0.40**	**213**	*e*Pb	**Pg**	**04 06 54.7**	**+0.2**
GRG	**Griva**	**0.40**	**213**	P	**Pb**	**04 06 55.4**	**-0.4**
GRG				*e*Sb	**Sg**	**04 07 00.3**	**+0.6**
SOH	**Sokhos**	**0.69**	**133**	P	**Pg**	**04 06 59.8**	**-0.2**
SOH				S	**Sg**	**04 07 08.8**	**-0.3**
SOH	**Sokhos**	**0.69**	**133**	*e*PN	**Pg**	**04 06 59.9**	**-0.1**
SOH				*e*SN	**Sb**	**04 07 10.0**	**-0.4**
SOH	**Sokhos**	**0.69**	**133**	P	**Pg**	**04 06 59.8**	**-0.2**
SOH				S	**Sg**	**04 07 08.8**	**-0.3**
SOH				*e*Sn	**Sb**	**04 07 10.0**	**-0.4**
SRS	**Serrai**	**0.71**	**104**	P	**Pg**	**04 07 00.3**	**0.0**
SRS				S	**Sg**	**04 07 09.8**	**+0.2**
SRS	**Serrai**	**0.71**	**104**	P	**Pg**	**04 07 00.3**	**0.0**
SRS				S	**Sg**	**04 07 09.8**	**+0.2**
HORT	**Hortiatis**	**0.76**	**155**	P	**Pg**	**04 07 01.4**	**0.0**
HORT	**Hortiatis**	**0.76**	**155**	P	**Pg**	**04 07 01.4**	**0.0**
NVR	**Nevrokopi**	**0.89**	**86**	P	**Pg**	**04 07 03.4**	**-0.4**
NVR				S	**Sb**	**04 07 15.9**	**-0.3**
NVR	**Nevrokopi**	**0.89**	**86**	*e*PB	**Pg**	**04 07 03.5**	**-0.4**
NVR				*e*SN	**Sb**	**04 07 16.2**	**0.0**
NVR	**Nevrokopi**	**0.89**	**86**	P	**Pg**	**04 07 03.4**	**-0.4**
NVR				S	**Sb**	**04 07 15.9**	**-0.3**
NVR				*e*Sn	**Sb**	**04 07 16.2**	**0.0**
PLG	**Polygyros**	**1.08**	**147**	P	**Pg**	**04 07 07.2**	**-0.3**
PLG	**Polygyros**	**1.08**	**147**	*e*PN	**Pg**	**04 07 07.1**	**-0.4**
PLG				*e*SN	**Sg**	**04 07 21.5**	**-0.1**
PLG	**Polygyros**	**1.08**	**147**	*e*Pn	**Pg**	**04 07 07.1**	**-0.4**
PLG				*e*Sn	**Sg**	**04 07 21.5**	**-0.1**
FNA	**Florina**	**1.11**	**243**	*e*PN	**Pb**	**04 07 07.8**	**-0.2**
FNA				*e*SN	**Sg**	**04 07 22.3**	**-0.2**
FNA	**Florina**	**1.11**	**243**	*e*Pn	**Pb**	**04 07 07.8**	**-0.2**
FNA				*e*Sn	**Sg**	**04 07 22.3**	**-0.2**
KZN	**Kozani**	**1.20**	**215**	*e*PN	**Pb**	**04 07 09.4**	**-0.2**
KZN				*e*SN	**Sb**	**04 07 25.3**	**+0.1**
KZN	**Kozani**	**1.20**	**215**	*e*Pn	**Pb**	**04 07 09.4**	**-0.2**
KZN				*e*Sn	**Sb**	**04 07 25.3**	**+0.1**
VTS	**Vitosha**	**1.36**	**17**	P	**Pg**	**04 07 12.7**	**-0.1**
VTS	**Vitosha**	**1.36**	**17**	P	**Pg**	**04 07 12.7**	**-0.1**
PAIG	**Paliouri**	**1.56**	**151**	*e*PN	**Pn**	**04 07 14.3**	**-0.1**
PAIG				*e*SN	**Sn**	**04 07 34.3**	**-0.4**
PAIG	**Paliouri**	**1.56**	**151**	*e*Pn	**Pn**	**04 07 14.3**	**-0.1**
PAIG				*e*Sn	**Sn**	**04 07 34.3**	**-0.4**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*PB	**Pn**	**04 07 25.9**	**+1.1**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*Pb	**Pn**	**04 07 25.9**	**+1.1**
ALN	**Alexandroupoli**	**2.57**	**98**	*e*PN	**Pn**	**04 07 29.5**	**+1.1**
ALN	**Alexandroupoli**	**2.57**	**98**	*e*Pn	**Pn**	**04 07 29.5**	**+1.1**

*CSEM **25** 04:10:00.6±1.4,41°.37N×22°.69E,h1km±8km,MD2.9,Error ellipse: s-maj=22.5km s-min=10.2km az=170.0*
*ISCJB **25** 04:10:01.8±0.9,41°.32N±0°.08×22°.73E±0°.06,h13km±7km, Error ellipse: s-maj=13.9km s-min=6.3km az=163.2*
*SKO **25** 04:10:01.6,41°.32N×22°.70E,h15km,M1.1,ML1.5*
*ATH **25** 04:10:02.3,41°.29N×22°.73E,h17km,MD2.9/6*

ISC 25 04:10:00.9±1.1,**41°35N**±0°.05×**22°.71E**±0°.03,**h10**km±7km, **n18**,σ1**917**/31,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.11**	**255**	*e*Pg	**Pg**	**04 10 05.0**	**+1.4**
VAY				*e*Lg	Lg	04 10 07.1	
	comp=E,205nm,0.4s						
VAY				*e*Sg	**Sg**	**04 10 07.2**	**+1.7**
VAY				*e*Lg	Lg	04 10 07.2	
	comp=N,311nm,0.3s						
VAY	**Valandovo**	**0.11**	**255**	*e*Sg	**Sg**	**04 10 01.6**	**-3.9**
VAY				*e*Lg	Lg	04 10 01.7	
	comp=N,311nm,0.3s						
GRG	**Griva**	**0.45**	**211**	*e*PB	**Pg**	**04 10 10.6**	**+0.8**
GRG				*e*SB	**Sb**	**04 10 16.9**	**-1.0**
GRG	**Griva**	**0.45**	**211**	*e*Pb	**Pg**	**04 10 10.6**	**+0.8**
GRG				*e*Sb	**Sb**	**04 10 16.9**	**-1.0**
SOH	**Sokhos**	**0.72**	**137**	*e*PN	**Pg**	**04 10 15.1**	**+0.3**
SOH				*e*SN	**Sg**	**04 10 24.2**	**0.0**
SOH	**Sokhos**	**0.72**	**137**	*e*Pn	**Pg**	**04 10 15.1**	**+0.3**
SOH				*e*Sn	**Sg**	**04 10 24.2**	**0.0**
NVR	**Nevrokopi**	**0.87**	**89**	*e*PN	**Pg**	**04 10 18.8**	**+1.1**
NVR				*e*SN	**Sb**	**04 10 30.5**	**+0.6**
NVR	**Nevrokopi**	**0.87**	**89**	*e*Pn	**Pg**	**04 10 18.8**	**+1.1**
NVR				*e*Sn	**Sb**	**04 10 30.5**	**+0.6**
PLG	**Polygyros**	**1.12**	**150**	*e*PN	**Pb**	**04 10 22.3**	**-0.2**
PLG				*e*SN	**Sb**	**04 10 36.9**	**-0.2**
PLG	**Polygyros**	**1.12**	**150**	*e*Pn	**Pb**	**04 10 22.3**	**-0.2**
PLG				*e*Sn	**Sb**	**04 10 36.9**	**-0.2**
FNA	**Florina**	**1.15**	**241**	*e*PN	**Pg**	**04 10 24.0**	**+0.9**
FNA				*e*SN	**Sn**	**04 10 39.5**	**+0.4**
FNA	**Florina**	**1.15**	**241**	*e*Pn	**Pg**	**04 10 24.0**	**+0.9**
FNA				*e*Sn	**Sn**	**04 10 39.5**	**+0.4**
PAIG	**Paliouri**	**1.60**	**152**	*e*PN	**Pb**	**04 10 31.1**	**+0.5**
PAIG				*e*SN	**Sg**	**04 10 52.0**	**-0.4**
PAIG	**Paliouri**	**1.60**	**152**	*e*Pn	**Pb**	**04 10 31.1**	**+0.5**
PAIG				*e*Sn	**Sg**	**04 10 52.0**	**-0.4**
SMTH	**Samothraki Isl**	**2.31**	**111**	*e*PN	**Pb**	**04 10 41.8**	**-0.9**
SMTH	**Samothraki Isl**	**2.31**	**111**	*e*Pn	**Pb**	**04 10 41.8**	**-0.9**
ALN	**Alexandroupoli**	**2.56**	**99**	*e*PN	**Pb**	**04 10 45.3**	**-1.7**
ALN	**Alexandroupoli**	**2.56**	**99**	*e*Pn	**Pb**	**04 10 45.3**	**-1.7**

*NSSP **25** 04:12:12.7,41°.60N×46°.30E,h13km,Ms3.4*
*AZER **25** 04:12:14.3,41°.65N×46°.57E,h5km*
*TIF **25** 04:12:14.3,41°.72N×46°.42E,h15km±1km*
*CSEM **25** 04:12:15.2±1.6,41°.78N×46°.49E,h10km,ML3.4,Error ellipse: s-maj=31.6km s-min=15.8km az=37.0*

ISC 25 04:12:15.7±1.1,**41°68N**±0°.04×**46°43E**±0°.02,**h14**km±9km, **n34**,σ0**99**/62,**19C-18D**,**Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEKA	**Sheki**	**0.74**	**129**	⇑P	**Pg**	**04 12 29.4**	**-0.8**
	SNR=96						
SEKA				⇓S	**Sb**	**04 12 40.7**	**+0.2**
DGRG	**David-gareji**	**0.82**	**254**	P	**Pg**	**04 12 32.1**	**+0.5**
DGRG				S	**Sn**	**04 12 45.7**	**+0.8**
GANJ	**Ganja**	**1.04**	**185**	⇑P	**Pb**	**04 12 34.0**	**-1.4**
	SNR=9.6						
GANJ				⇑S	**Sb**	**04 12 48.7**	**-0.1**
TBLG	**Delisi**	**1.27**	**273**	P	**Pn**	**04 12 38.1**	**-0.9**
TBLG				S	**Sg**	**04 12 56.6**	**0.0**
TBLG	**Delisi**	**1.27**	**273**	P	**Pn**	**04 12 38.1**	**-0.9**
TBLG				S	**Sg**	**04 12 56.6**	**0.0**
DUS	**Dusheti**	**1.35**	**288**	P	**Pb**	**04 12 40.2**	**-0.6**
DUS				S	Pb	04 12 45.7	+4.9
MTKZ	**Martakert**	**1.51**	**169**	⇑*i*P	Pg	04 12 55.3	+11
MTKZ				⇓*i*S	Sg	04 13 16.3	+12
MTKZ	**Martakert**	**1.51**	**169**	⇑P	Pg	04 12 55.3	+11
MTKZ				S	Sg	04 13 16.3	+12
BRDA	**Brd**	**1.52**	**158**	⇑P	**Pb**	**04 12 43.6**	**-0.1**
	SNR=6.7						
CKLZ	**Chkalov**	**1.53**	**242**	⇑*i*P	**Pg**	**04 12 45.9**	**+0.8**
CKLZ				⇓*i*S	**Sg**	**04 13 06.0**	**+1.0**
CKLZ	**Chkalov**	**1.53**	**242**	⇑P	**Pg**	**04 12 45.9**	**+0.8**
CKLZ				S	**Sg**	**04 13 06.1**	**+1.0**
KZR	**Kazreti**	**1.54**	**260**	P	**Pn**	**04 12 42.0**	**-0.8**
KZR				S	**Sn**	**04 13 02.6**	**0.0**
QUBA	**Quba, Azerbaij**	**1.58**	**101**	⇓P	**Pb**	**04 12 44.4**	**-0.3**
	SNR=5.3						
QUBA				⇑S	**Sg**	**04 13 08.6**	**+2.0**
IML	**Ismayilli**	**1.59**	**123**	⇑P	**Pg**	**04 12 45.1**	**-1.1**
	SNR=3.3						
IML				⇑S	**Sg**	**04 13 06.6**	**-0.3**
VADZ	**Vardenis**	**1.59**	**199**	*e*P	**Pn**	**04 12 43.0**	**-0.6**
VADZ				*e*S	**Sb**	**04 13 06.0**	**+0.9**
VADZ	**Vardenis**	**1.59**	**199**	P	**Pn**	**04 12 43.0**	**-0.6**
VADZ				S	**Sb**	**04 13 06.0**	**+0.9**
STEZ	**Stepenevan**	**1.67**	**247**	⇑*i*P	**Pg**	**04 12 48.1**	**+0.3**
STEZ				⇑*i*S	**Sg**	**04 13 10.5**	**+0.9**
STEZ	**Stepenevan**	**1.67**	**247**	⇑*i*P	**Pn**	**04 12 43.0**	**-1.6**
STEZ				⇑*i*S	**Sn**	**04 13 06.0**	**0.0**
STE	**Stepanavan**	**1.69**	**247**	⇑P	**Pn**	**04 12 43.0**	**-1.9**
STE				S	**Sn**	**04 13 06.0**	**-0.5**
GOR	**Gori**	**1.76**	**281**	P	**Pb**	**04 12 45.3**	**-0.4**
GOR				S	**Sb**	**04 13 09.1**	**-0.6**
SPIZ	**Spitak**	**1.84**	**243**	⇓*i*P	**Pb**	**04 12 49.8**	**+0.7**
SPIZ				⇓*i*S	**Sb**	**04 13 12.5**	**+0.4**
SPIZ	**Spitak**	**1.84**	**243**	⇓P	**Pb**	**04 12 49.8**	**+0.7**
SPIZ				S	**Sb**	**04 13 12.5**	**+0.4**
PQL	**Pirkuli**	**1.86**	**118**	⇑P	**Pn**	**04 12 47.6**	**+0.4**
	SNR=5.2						
PQL				⇓S	**Sg**	**04 13 16.3**	**+0.8**
STKZ		**1.88**	**172**	⇓*i*P	**Pb**	**04 12 49.5**	**-0.3**
STKZ				⇑*i*S	**Sb**	**04 13 14.5**	**+1.3**
STKZ		**1.88**	**172**	⇓P	**Pb**	**04 12 49.5**	**-0.3**
STKZ				S	**Sb**	**04 13 14.5**	**+1.3**
SIZA	**Siyzn**	**1.95**	**107**	⇓P	**Pb**	**04 12 51.4**	**+0.4**
	SNR=2.9						
SIZA				⇓S	**Sg**	**04 13 18.7**	**+0.2**
GNI	**Garni**	**1.99**	**220**	⇓*i*P	**Pb**	**04 12 50.9**	**-0.9**
GNI				⇓*i*S	**Sg**	**04 13 19.4**	**-0.4**
GNI	**Garni**	**1.99**	**220**	⇓P	**Pb**	**04 12 50.9**	**-0.9**
GNI				S	**Sg**	**04 13 19.4**	**-0.4**
GRS	**Goris**	**2.18**	**182**	*e*P	**Pn**	**04 12 50.0**	**-1.6**
GRS				*e*S	**Sn**	**04 13 20.0**	**+1.6**
GRS	**Goris**	**2.18**	**182**	P	**Pn**	**04 12 50.0**	**-1.6**
GRS				S	**Sn**	**04 13 20.0**	**+1.6**
AKH	**Akhalkalaki**	**2.22**	**264**	P	**Pn**	**04 12 53.0**	**+0.8**
AKH				S	**Sb**	**04 13 22.7**	**-0.4**
ONI	**Oni**	**2.39**	**293**	P	**Pb**	**04 12 57.3**	**-1.3**
ONI				S	**Sb**	**04 13 28.7**	**+0.7**
NAX	**Nakhchivan**	**2.60**	**196**	⇑P	**Pb**	**04 13 00.8**	**-1.4**
	SNR=3.6						
NAX				⇓S	**Sb**	**04 13 34.4**	**+0.4**
GLBA	**Clilabad**	**2.86**	**148**	⇓P	**Pn**	**04 13 01.9**	**+1.1**
	SNR=4.2						
GLBA				⇓S	**Sb**	**04 13 38.5**	**-2.8**

*IGQ **25** 04:12:36.6,2°.05S×81°.27W,h6km±165km,Mb4.9,Ms4.8, Error ellipse: s-maj=7.9km s-min=3.8km az=5.1*
*IDC **25** 04:12:39.5±0.5,1°.83S×80°.83W,h0km,mb4.3/24, mb1 4.4/27,mb1mx4.4/33,mbtmp4.3/27,ML4.2/3,MS3.9/10, Ms1 3.9/10,ms1mx3.5/33,Error ellipse: s-maj=22.7km s-min=10.0km az=60.0*
*ISCJB **25** 04:12:42.1±0.2,2°.00S±0°.03×81°.15W±0°.02,h30km, mb4.6/94,MS4.0/10,Error ellipse: s-maj=4.8km s-min=2.9km az=10.7*
*NEIC **25** 04:12:46.5±0.7,1°.95S×80°.87W,h52km±6km,mb4.8/72, MD4.9(IGQ),Error ellipse: s-maj=7.0km s-min=4.2km az=52.0*
NEIC Felt at Salinas.
*BJI **25** 04:12:47.4,2°.00S×80°.80W,h68km,mB5.1/3,Ms5.2/2, Ms7 5.0/2*

ISC 25 04:12:43.9±0.4,**1°93S**±0°.04×**80°97W**±0°.05,**h30**km,**n528**, σ1**943**/527,**mb4.6**/94,**MS3.9**/10,**158C-139D**,**Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**0.91**	**16**	⇑P	Pn	04 12 58.4	-2.3
PECV	**Mancha de Ca P**	**1.47**	**39**	⇑P	Pn	04 13 05.7	-2.7
RIOE	**Riobamba**	**2.35**	**86**	⇑S	**Sb**	**04 13 54.1**	**-0.3**
RIOE	**Riobamba**	**2.35**	**86**	⇑P	**Pn**	**04 13 21.3**	**+0.6**
IGUA	**Igualata**	**2.37**	**79**	⇑P	**Pn**	**04 13 22.7**	**+1.4**
BIL2	**Estacion Bilba**	**2.51**	**79**	P	**Pn**	**04 13 25.0**	**+2.0**
BMAS	**Trigal station**	**2.53**	**80**	⇓P	**Pn**	**04 13 24.7**	**+1.5**
BBIL	**Ulba Tungurahu**	**2.53**	**79**	⇑S	**Sb**	**04 13 59.7**	**0.0**
BBIL	**Ulba Tungurahu**	**2.53**	**79**	⇑P	**Pn**	**04 13 25.3**	**+2.1**
ARRY	**Arrayan**	**2.55**	**81**	⇑P	**Pn**	**04 13 25.0**	**+1.4**
JUI6	**Juive**	**2.55**	**79**	⇑P	**Pn**	**04 13 25.6**	**+2.1**
PAT1	**Patacocha**	**2.57**	**81**	⇑P	**Pn**	**04 13 25.6**	**+1.8**
RETU	**Refugio**	**2.57**	**79**	⇑P	**Pn**	**04 13 26.0**	**+2.1**
CATE	**Catamayo**	**2.57**	**142**	⇑P	**Pn**	**04 13 24.6**	**+0.9**
RUN5	**Runtun**	**2.60**	**79**	P	**Pn**	**04 13 26.3**	**+2.2**
RUN5	**Runtun**	**2.60**	**79**	S	**Sb**	**04 13 59.9**	**-1.7**
BULB	**Ulba Tungurahu**	**2.61**	**79**	⇑S	**Sb**	**04 14 00.6**	**-1.3**
BULB	**Ulba Tungurahu**	**2.61**	**79**	⇑P	**Pn**	**04 13 26.5**	**+2.2**
ULBA	**Ulba**	**2.61**	**79**	P	**Pn**	**04 13 26.5**	**+2.2**
BRUN	**Tungurahua Vol**	**2.61**	**79**	⇑S	**Sb**	**04 13 59.8**	**-2.2**
BRUN	**Tungurahua Vol**	**2.61**	**79**	⇑P	**Pn**	**04 13 26.2**	**+1.9**
PISA	**Pisayambo**	**2.73**	**72**	⇓P	**Pn**	**04 13 28.3**	**+2.3**
BMOR	**Cotopaxi Volca**	**2.78**	**65**	⇑S	**Sb**	**04 14 12.8**	**+5.7**
BMOR	**Cotopaxi Volca**	**2.78**	**65**	⇑P	**Pn**	**04 13 28.8**	**+1.9**
BNAS	**Cotopaxi Volca**	**2.79**	**63**	P	**Pn**	**04 13 28.9**	**+1.9**
MACE	**Macas**	**2.79**	**97**	P	**Pn**	**04 13 28.2**	**+1.5**
MOV1	**Cotopaxi Vol s**	**2.81**	**64**	P	**Pn**	**04 13 29.1**	**+1.8**
GOLV	**Golondrinas**	**2.81**	**41**	P	**Pn**	**04 13 27.1**	**+0.3**
NAS2	**Nasa**	**2.81**	**63**	P	**Pn**	**04 13 29.9**	**+2.7**
BREF	**Cotopaxi Volca**	**2.82**	**64**	P	**Pn**	**04 13 29.8**	**+2.2**
BVC2	**Cotopaxi Volca**	**2.85**	**64**	⇑P	**Pn**	**04 13 30.1**	**+2.2**
BVC2	**Cotopaxi Volca**	**2.85**	**64**	⇑S	**Sb**	**04 14 11.4**	**+2.1**
BTAM	**Cotopaxi Volca**	**2.86**	**64**	⇑P	**Pn**	**04 13 30.0**	**+2.0**
VC1	**Cotopaxi 1**	**2.87**	**64**	P	**Pn**	**04 13 30.3**	**+2.2**
PITA	**Cotopaxi Volc**	**2.88**	**62**	P	**Pn**	**04 13 30.2**	**+2.1**
COV1	**Cotopaxi Volc**	**2.91**	**64**	P	**Pn**	**04 13 30.1**	**+1.3**
JUA2	**San Juan 2**	**2.92**	**54**	P	**Pn**	**04 13 29.5**	**+0.8**
TERV	**Terraza Guagua**	**2.94**	**54**	⇓P	**Pn**	**04 13 30.2**	**+1.2**
PINO	**Pino**	**2.95**	**53**	P	**Pn**	**04 13 29.7**	**+0.5**
GGP	**Refugio Guagua**	**2.95**	**54**	P	**Pn**	**04 13 29.8**	**+0.6**
YANA	**Yana**	**3.00**	**53**	P	**Pn**	**04 13 30.7**	**+0.9**
ANTI	**Antisana**	**3.17**	**62**	⇓P	**Pn**	**04 13 35.0**	**+2.7**
OTAV	**Otavalo**	**3.31**	**50**	⇑S	**Sb**	**04 14 20.2**	**-2.2**
OTAV	**Otavalo**	**3.31**	**50**	⇑P	**Pn**	**04 13 34.5**	**+0.4**
OTAV	**Otavalo**	**3.31**	**50**	*e*Pn	**Pn**	**04 13 34.6**	**+0.5**
OTAV				*e*S	**Sn**	**04 14 15.4**	**+2.7**
CAYR	**Refugio Cayamb**	**3.54**	**57**	P	**Pn**	**04 13 40.1**	**+2.8**
LITE	**Lita**	**3.77**	**44**	S	**Sb**	**04 14 32.5**	**-2.6**
LITE	**Lita**	**3.77**	**44**	P	**Pn**	**04 13 39.9**	**-0.2**
CHAR	**Charly**	**3.77**	**61**	P	Pn	04 13 45.4	+5.0
CONE	**Cono NE Rev Vo**	**3.81**	**61**	P	Pn	04 13 45.9	+5.1
ATAH	**Atahualpa**	**5.77**	**154**	P	**Pn**	**04 14 09.3**	**+1.4**
ATAH					Sn	**Sn**	**04 15 16.9**	**+3.5**
ATAH					Lg	Lg	04 15 47.4	
ATAH	**Atahualpa**	**5.77**	**154**		Pn	**Pn**	**04 14 09.3**	**+1.4**
	3.7nm,0.3s,baz=360,slow=7.9,SNR=25							
ATAH					Sn	**Sn**	**04 15 16.9**	**+3.5**
	11nm,0.3s,baz=124,slow=19,SNR=7.2							
ATAH					Lg	Lg	04 15 47.4	
	6.9nm,0.3s,baz=151,slow=20,SNR=4.0							
ATAH					LR	LR	04 16 12.9	
	comp=Z,600nm,20.5s,baz=157,slow=37							
ROSC	**El Rosal**	**9.46**	**45**	*e*Pn		**Pn**	**04 15 00.1**	**+1.6**
ROSC				*e*S		**Sn**	**04 16 42.2**	**-1.9**
ROSC	**El Rosal**	**9.46**	**45**	Pn		**Pn**	**04 15 00.3**	**+1.8**
	2.0nm,0.3s,baz=241,slow=6.7,SNR=7.7							
ROSC				Sn		**Sn**	**04 16 46.9**	**+2.8**
	baz=90,slow=20,SNR=1.5							
NNA	**Nana**	**10.80**	**158**	*e*Pn		**Pn**	**04 15 16.1**	**-0.4**
NNA				*e*S		**Sn**	**04 17 15.4**	**-1.1**
NNA	**Nana**	**10.80**	**158**	Pn		**Pn**	**04 15 15.9**	**-0.7**
	5.0nm,0.3s,baz=316,slow=12,SNR=11							
NNA				Sn		**Sn**	**04 17 13.2**	**-3.3**
	8.0nm,0.3s,baz=214,slow=19,SNR=11							
BCIP	**Isla Barro Col**	**11.08**	**6**	*e*Pn		Pn	04 15 24.5	+4.1
JTS	**JuntasAbangare**	**12.77**	**342**	*e*Pn		P	04 15 50.8	-3.4
	41nm,0.9s							
TGUH	**Tegucigalpa,Un**	**17.07**	**339**	*e*Pn		**P**	**04 16 44.1**	**+2.2**
	22nm,0.8s							
SAML	**Samuel**	**19.02**	**112**	*e*P		**P**	**04 17 00.5**	**-3.0**
	9.5nm,1.0s							
LPAZ	**La Paz**	**19.07**	**139**	P		**P**	**04 17 04.0**	**-0.6**
LPAZ				*e*Pn		**Pn**	**04 17 04.6**	**-0.9**
LPAZ	**La Paz**	**19.07**	**139**	P		**P**	**04 17 04.0**	**-0.6**
	0.2nm,0.3s,baz=319,slow=12,SNR=16							
GTBY	**Guantanamo Bay**	**22.47**	**15**	*e*P		**P**	**04 17 42.5**	**+1.7**
TEIG	**Tepich**	**23.16**	**342**	P		**P**	**04 17 48.0**	**+0.1**
TEIG	**Tepich**	**23.16**	**342**	P		**P**	**04 17 48.0**	**+0.1**
	4.6nm,0.9s,baz=187,slow=8.1,SNR=2.5							
SIV	**San Ignacio**	**24.07**	**127**	P		**P**	**04 17 56.8**	**-0.1**
SIV	**San Ignacio**	**24.07**	**127**	P		**P**	**04 17 56.8**	**-0.1**
	4.3nm,0.8s,baz=309,slow=12,SNR=10							
SIV					LR	LR	04 28 17.2	
	comp=Z,406nm,18.2s,slow=39							
MPR	**Mayaguez**	**24.21**	**34**	*e*P		**P**	**04 17 59.1**	**+1.1**
	339nm,2

Y31A	Rekieta Farm, baz=40	40.05 335	⇑P	P	04 20 18.3 +1.7
Z29A	Hungry Hill Ra baz=40,SNR=5.7	40.10 333	⇑P	P	04 20 18.4 +1.4
TUL1	Tulsa baz=40	40.11 341	⇑P	P	04 20 17.6 +0.7
SIUC	Southern Illin 16nm,1.3s	40.18 350	eP	P	04 20 16.9 -0.5
325A	Bean Ranch, Si baz=40,SNR=6.0	40.21 327	⇓P	P	04 20 19.6 +1.5
Y30A	Stafford Cattl baz=40,SNR=5.6	40.26 334	⇓P	P	04 20 19.8 +1.5
226B	Tecolote Peak, baz=41	40.34 329	⇓P	P	04 20 21.0 +2.0
127A	Arkansas Junct baz=41	40.41 330	⇓P	P	04 20 21.2 +1.6
Z28A	Tucker Farm, M baz=41	40.44 332	⇑P	P	04 20 21.1 +1.3
X31A	McDonald Ranch baz=41	40.51 336	⇓P	P	04 20 22.3 +1.9
324A	Moseley Ranch, baz=41	40.55 327	⇑P	P	04 20 22.4 +1.6
Y29A	Porterfield Fa baz=41	40.59 333	⇑P	P	04 20 22.8 +1.8
MNTX	Cornudas Mount 6.6nm,1.4s	40.69 327	eP	P	04 20 23.3 +1.4
225A	Deer Hill, Car baz=41	40.71 328	⇓P	P	04 20 24.1 +1.9
126A	Clayton Basin, baz=41	40.72 330	⇓P	P	04 20 24.3 +2.1
X30A	Coker Ranch, T baz=41	40.73 334	⇑P	P	04 20 24.1 +1.9
Z27A	Tatum baz=41,SNR=6.1	40.86 331	⇑P	P	04 20 24.8 +1.5
Y28A	McKinney Farm, baz=41	40.89 333	⇑P	P	04 20 25.2 +1.6
125A	Gardner Draw, baz=41	41.05 329	⇓P	P	04 20 26.5 +1.6
224A	Cornudas Mount baz=41	41.05 328	⇑P	P	04 20 26.8 +1.8
MSTX	Muleshoe baz=41,SNR=10	41.19 332	⇓P	P	04 20 27.1 +1.1
Z26A	Caprock baz=41,SNR=15	41.20 330	⇑P	P	04 20 27.5 +1.3
Y27A	Causey baz=42,SNR=7.1	41.30 332	⇓P	P	04 20 27.9 +1.0
X28A	Dimmitt baz=42	41.38 333	⇓P	P	04 20 28.9 +1.3
V31A	Spring Creek L baz=42	41.45 337	⇓P	P	04 20 30.0 +2.0
AMTX	Amarillo 6.3nm,0.8s	41.45 334	eP	P	04 20 28.9 +0.8
124A	Stringfield Ra baz=42,SNR=12	41.50 328	⇑P	P	04 20 29.8 +1.1
Z25A	Roswell baz=42	41.58 329	⇑P	P	04 20 30.6 +1.3
Y26A	Elida baz=42,SNR=11	41.65 331	⇓P	P	04 20 31.0 +1.2
X27A	F and S Farms, baz=42	41.89 332	⇑P	P	04 20 33.6 +1.8
222A	Williams Famil baz=42	41.94 326	⇓P	P	04 20 34.8 +2.5
Z24A	Sheeppen Canyo baz=42,SNR=11	41.95 329	⇑P	P	04 20 33.7 +1.3
U31A	Nine Bar Ranch baz=42	41.97 337	⇓P	P	04 20 34.1 +1.7
Y25A	Mesa, Roswell baz=42	42.08 330	⇓P	P	04 20 35.1 +1.8
X26A	CR and CF Fran baz=42	42.15 331	⇑P	P	04 20 36.6 +2.6
320A	Kipp Ranch, An baz=42	42.20 324	⇓P	P	04 20 37.0 +2.6
W27A	Bowe Ranch, En baz=42,SNR=6.2	42.22 333	⇓P	P	04 20 35.8 +1.3
Z23A	Rita Site, Whi baz=43	42.35 328	⇑P	P	04 20 37.7 +2.2
V28A	Channing baz=43	42.42 334	⇑P	P	04 20 37.7 +1.7
U30A	WK&E Inc. Balk baz=43	42.43 336	⇑P	P	04 20 38.1 +2.1
Y24A	Capitan baz=43	42.45 329	⇓P	P	04 20 38.5 +2.1
SSPA	Standing Stone 8.2nm,1.0s	42.46 3	eP	P	04 20 35.7 -0.5
SFIN	Scholer Farm baz=43	42.48 353	⇓P	P	04 20 38.3 +2.0
T31A	Randall Ranch, baz=43	42.54 338	⇑P	P	04 20 38.7 +1.7
X25A	Clemmons Ranch baz=43	42.54 331	⇑P	P	04 20 39.4 +2.2
220A	Playas Peak, P baz=43,SNR=7.6	42.61 324	⇑P	P	04 20 39.1 +1.4
121A	Cookes Peak, D baz=43,SNR=17	42.65 326	⇓P	P	04 20 40.0 +2.0
319A	Douglas baz=43	42.67 323	⇓P	P	04 20 39.8 +1.6
Z22A	Elephant Butte baz=43,SNR=14	42.74 327	⇑P	P	04 20 40.4 +1.6
Y23A	Lovelace Mesa, baz=43,SNR=6.4	42.78 329	⇑P	P	04 20 40.8 +1.7
W25A	X Bar L Ranch, baz=43	43.00 331	⇑P	P	04 20 41.7 +0.9
120A	U Bar Ranch, L baz=43	43.14 325	⇑P	P	04 20 42.8 +0.8
V26A	Tequesquite Ra baz=43,SNR=14	43.16 333	⇓P	P	04 20 43.5 +1.4
Z21A	St. Cloud Mine baz=43	43.16 327	⇑P	P	04 20 43.2 +0.9
T29A	Hugoton baz=44,SNR=6.0	43.23 336	⇑P	P	04 20 43.6 +1.1
U27A	Thompson Grove baz=44	43.25 334	⇓P	P	04 20 43.8 +1.0
Y22A	Socorro baz=44	43.26 328	⇑P	P	04 20 44.8 +1.8
KSU1	Kansas State U 19nm,0.8s	43.29 342	eP	P	04 20 43.3 +0.4
S30A	Montezuma baz=44	43.32 337	⇑P	P	04 20 44.9 +1.7
W24A	Lazy 6 Ranch, baz=44	43.46 330	⇑P	P	04 20 45.8 +1.2
Z20A	Nine Sixteen R baz=44	43.53 326	⇓P	P	04 20 46.5 +1.3
T28A	Walsh baz=44	43.53 335	⇓P	P	04 20 46.2 +1.2
S29A	Ulysses baz=44	43.55 337	⇓P	P	04 20 46.9 +1.7
V25A	Rancho No Teng baz=44,SNR=11	43.58 332	⇓P	P	04 20 46.6 +1.0
U26A	Atchley Ranch, baz=44,SNR=8.5	43.63 333	⇓P	P	04 20 47.2 +1.2
Y21A	Point of Rocks baz=44	43.69 327	⇓P	P	04 20 48.4 +1.9
X22A	Bernardo baz=44	43.72 328	⇑P	P	04 20 48.5 +1.8
T27A	Campo baz=44	43.74 335	⇑P	P	04 20 48.2 +1.5
ANMO	Albuquerque 8.0nm,1.0s	43.77 329	eP	P	04 20 48.4 +1.3
ANMO	Albuquerque 5.5nm,0.8s,baz=157,slow=9.9,SNR=27	43.77 329 P		P	04 20 48.3 +1.1
W23A	Werner Place, baz=44,SNR=8.8	43.79 330	⇓P	P	04 20 48.4 +1.1
V24A	Rampart Ranch, baz=44,SNR=9.3	43.80 331	⇑P	P	04 20 48.5 +1.1
R30A	Dighton baz=44,SNR=6.8	43.81 338	⇓P	P	04 20 48.3 +1.1
S28A	Manter baz=44	43.84 336	⇑P	P	04 20 49.2 +1.7
U25A	Circle Dot Ran baz=44	43.94 332	⇓P	P	04 20 50.0 +1.5
Y20A	Horse Springs, baz=44	44.00 327	⇓P	P	04 20 51.1 +2.1
X21A	Alamocita Cree baz=44	44.08 328	⇑P	P	04 20 51.8 +2.1
BINY	Binghamton 17nm,0.9s	44.16 5	eP	P	04 20 49.8 0.0
T26A	Comanche Natio baz=44	44.21 334	⇓P	P	04 20 52.2 +1.5
TUC	Tucson 6.4nm,2.5s	44.23 323	eP	P	04 20 52.0 +1.3
V23A	Ortiz Mt. (NFS baz=44	44.27 330	⇑P	P	04 20 52.6 +1.5
U24A	Moreno Valley baz=45	44.36 332	⇑P	P	04 20 53.4 +1.5
R28A	Tribune baz=45	44.45 336	⇑P	P	04 20 53.7 +1.3
S26A	Kim baz=45	44.53 334	⇓P	P	04 20 54.2 +1.1
X20A	Quemado baz=45	44.54 327	⇑P	P	04 20 54.8 +1.5
T25A	Trinidad baz=45,SNR=11	44.55 333	⇑P	P	04 20 54.8 +1.5
U23A	El Rito baz=45,SNR=17	44.73 331	⇓P	P	04 20 56.4 +1.6
V22A	San Miguel Ran baz=45	44.76 330	⇑P	P	04 20 56.4 +1.3
T24A	Torres, Weston baz=45	44.79 332	⇑P	P	04 20 56.8 +1.4
R27A	Eads baz=45,SNR=8.5	44.81 335	⇓P	P	04 20 56.1 +0.9
W20A	Ramah baz=45	44.98 328	⇓P	P	04 20 58.3 +1.5
S25A	Robets Cordova baz=45	44.99 333	⇑P	P	04 20 58.3 +1.5
V21A	Milan baz=45	45.05 329	⇑P	P	04 20 59.4 +2.1
Q28A	Sharon Springs baz=45	45.08 337	⇑P	P	04 20 59.1 +1.7
R26A	Arlington baz=45	45.09 335	⇓P	P	04 20 59.3 +1.7
U22A	Llaves baz=45	45.10 330	⇑P	P	04 20 59.5 +1.7
T23A	Casias Ranch, baz=45	45.22 331	⇓P	P	04 21 00.6 +1.8
214A	Organ Pipe Nat baz=45	45.24 321	⇓P	P	04 21 00.4 +1.6
R25A	Fountain Ranch baz=46	45.33 334	⇑P	P	04 21 01.2 +1.8
S24A	Houchin Ranch, baz=46,SNR=5.9	45.33 333	⇓P	P	04 21 01.1 +1.5
X18A	Snowflake baz=46	45.34 326	⇓P	P	04 21 01.5 +1.9
KSCO	Kaye Shedlock' baz=46	45.35 336	⇑P	P	04 21 01.6 +1.9
V20A	Brimhall baz=46	45.47 328	⇓P	P	04 21 02.6 +1.9
U21A	Nageezi baz=46	45.54 330	⇓P	P	04 21 02.8 +1.6
SDCO	Great Sand Dun 5.9nm,0.9s	45.54 333	eP	P	04 21 01.9 +0.6
ACCN	Adirondack Com 7.2nm,0.8s	45.59 7	eP	P	04 21 01.1 -0.2
T22A	Edith baz=46	45.62 331	⇓P	P	04 21 03.8 +1.9
Q26A	Hugo baz=46	45.65 335	⇓P	P	04 21 03.9 +1.9
W18A	Petrified Fore baz=46	45.65 327	⇑P	P	04 21 03.9 +1.9
P27A	Ficken Ranch, baz=46	45.80 337	⇑P	P	04 21 04.8 +1.7
BGNE	Belgrade baz=46	45.88 342	⇓P	P	04 21 05.2 +1.6
T21A	Navajo Lake baz=46	45.92 330	⇓P	P	04 21 05.7 +1.5
U20A	Newcomb baz=46	45.94 329	⇓P	P	04 21 06.1 +1.7
Q25A	Bedland, Calha baz=46	45.95 335	⇓P	P	04 21 05.6 +1.2
R23A	Moffat baz=46	46.05 333	⇓P	P	04 21 06.8 +1.5
X16A	Lo Mia Camp, P baz=46,SNR=7.2	46.11 324	⇑P	P	04 21 07.7 +2.0
P26A	Davis Ranch, A baz=46	46.11 336	⇑P	P	04 21 07.3 +1.6
S22A	4UR Ranch, Cre baz=46	46.17 331	⇓P	P	04 21 07.7 +1.5
N28A	Pribbeno Ranch baz=47	46.38 338	⇑P	P	04 21 09.6 +2.0
113A	Mohawk Valley, baz=47	46.38 321	⇓P	P	04 21 09.6 +1.9
P25A	Willow Gulch B baz=47	46.41 335	⇑P	P	04 21 09.9 +1.9
R22A	Saguache, Gunn baz=47	46.52 332	⇓P	P	04 21 10.6 +1.6
SADO	Sadowa	46.52 2	P	P	04 21 06.7 -1.9
SADO	Sadowa 3.8nm,0.7s,baz=225,slow=6.9,SNR=5.0	46.52 2	P	P	04 21 06.7 -1.9
Q23A	Hartsel baz=47	46.64 333	⇓P	P	04 21 11.2 +1.2
Y14A	Wickenburg baz=47	46.70 323	⇑P	P	04 21 12.3 +2.1
M29A	Burnside Ranch baz=47	46.74 340	⇑P	P	04 21 12.4 +1.9
WUAZ	Wupatki 16nm,1.3s	46.85 326	eP	P	04 21 13.7 +2.1
WUAZ	Wupatki baz=47	46.85 326	⇓P	P	04 21 13.6 +2.1
S20A	Disappointment baz=47	46.98 330	⇓P	P	04 21 14.4 +1.7
P23A	Jefferson baz=47,SNR=18	47.02 334	⇓P	P	04 21 15.0 +2.0
MSNY	Massena	47.04 6	eP	P	04 21 11.9 -0.7
Q22A	Crested Butte, baz=47	47.10 332	⇓P	P	04 21 15.2 +1.7
R20A	Redvale baz=48	47.27 330	⇓P	P	04 21 16.6 +1.8
ISCO	Idaho Springs 3.7nm,0.8s	47.27 334	eP	P	04 21 16.1 +1.2
ISCO	Idaho Springs baz=48	47.27 334	⇓P	P	04 21 16.3 +1.4
O24A	Longmont baz=48	47.31 335	⇑P	P	04 21 16.7 +1.7
PV01	Paradox Valley	47.32 330	eP	P	04 21 17.1 +1.9
ECSD	EROS Data Cent 8.4nm,1.0s	47.58 345	eP	P	04 21 16.3 -0.5
S18A	Hurst Farm, Bl baz=48	47.71 329	⇑P	P	04 21 20.0 +1.7
PV10	Paradox Valley	47.74 330	eP	P	04 21 19.2 +0.7
O23A	Lake Granby, G baz=48	47.74 334	⇓P	P	04 21 19.9 +1.3
N24A	Carr baz=48	47.81 335	⇑P	P	04 21 20.8 +1.8
P21A	Newcastle baz=48,SNR=9.2	47.88 332	⇓P	P	04 21 21.1 +1.6
O22A	Kremmling baz=48	47.98 334	⇓P	P	04 21 20.9 +0.5
U15A	North Rim baz=48	48.02 326	⇑P	P	04 21 22.6 +1.8
W13A	Hualapai Mount baz=48,SNR=5.9	48.02 323	⇓P	P	04 21 22.6 +1.8
BC3	Big Chuckawall baz=48	48.03 321	⇑P	P	04 21 22.1 +1.5
L26A	Underwood Farm baz=48	48.13 338	⇓P	P	04 21 22.2 +0.9
IRM	Iron Mountain baz=48	48.17 321	⇓P	P	04 21 23.3 +1.6
N23A	Red Feather La baz=48	48.32 335	⇓P	P	04 21 24.4 +1.4
N22A	Wattenberg Ran baz=49	48.46 334	⇓P	P	04 21 26.1 +2.1
L25A	Engebretsen Ra baz=49	48.57 337	⇓P	P	04 21 26.8 +2.1
PFO	Pinyon Flat Ob	48.64 320	P	P	04 21 26.2 +0.8
PFO	Pinyon Flat Ob 3.6nm,1.0s,baz=85,slow=7.1,SNR=2.7	48.64 320 P		P	04 21 26.2 +0.8
PFO			LR	LR	04 40 23.0
PFO	Pinyon Flat Ob baz=49	48.64 320	⇑P	P	04 21 27.4 +1.9
P19A	Cripple Cowboy baz=49	48.69 331	⇑P	P	04 21 27.4 +1.6
M23A	Laramie baz=49	48.70 335	⇓P	P	04 21 27.7 +1.9
O20A	White River Ci baz=49	48.73 332	⇑P	P	04 21 27.7 +1.6
N21A	Black Mountain baz=49	48.90 333	⇑P	P	04 21 28.7 +1.3
SRU	San Rafael baz=49	49.05 329	⇓P	P	04 21 30.4 +1.9
L23A	Garrett baz=50	49.23 336	⇓P	P	04 21 31.7 +1.8
Q16A	Castle Valley baz=50	49.24 329	⇑P	P	04 21 31.8 +1.9
O19A	Miners Draw (B baz=50	49.28 332	⇑P	P	04 21 32.1 +1.9
N20A	Spence Gulch, baz=50,SNR=11	49.30 333	⇓P	P	04 21 31.5 +1.1
P18A	Preston Nutter baz=50	49.30 330	⇓P	P	04 21 32.2 +1.6
HEC	Hector,Ludlow baz=50	49.34 321	⇑P	P	04 21 32.8 +2.1
CCUT	Cedar City 7.7nm,1.0s	49.42 326	eP	P	04 21 32.4 +1.0
MSU	Marysvale	49.47 328	eP	P	04 21 33.6 +1.8
MVU	Marysvale 3.4nm,0.9s	49.48 328	eP	P	04 21 33.0 +1.1
M21A	Separation Pea baz=50	49.51 334	⇓P	P	04 21 33.8 +1.7
ARUT	Antelope Range	49.64 326	eP	P	04 21 34.9 +1.9
M20A	Sweetwater, Wa baz=50	49.79 333	⇑P	P	04 21 35.3 +1.2
L21A	Rawlins baz=50	49.81 334	⇑P	P	04 21 35.7 +1.5
GSC	Goldstone 7.2nm,1.0s	49.95 321	eP	P	04 21 41.4 +6.1
K22A	Casper baz=50	50.01 335	⇑P	P	04 21 37.3 +1.5
RSSD	Black Hills 4.6nm,1.0s	50.28 338	eP	P	04 21 38.9 +1.0
DAU	Daniels Canyon	50.40 330	eP	P	04 21 40.9 +1.9
EDW2	Edwards Air Fo baz=51	50.43 320	⇓P	P	04 21 40.6 +1.7
EYMN	Ely 3.6nm,1.0s	50.52 351	eP	P	04 21 37.9 -1.4
J22A	Midwest baz=51	50.62 336	⇓P	P	04 21 41.3 +0.9
K20A	Yellowstone Ra baz=51	50.79 334	⇑P	P	04 21 42.3 +0.6
M17A	Scullys Gap (B baz=51	50.92 331	⇑P	P	04 21 43.6 +0.8
L18A	Fontenelle, Gr baz=51	50.98 332	⇑P	P	04 21 44.8 +1.7
I22A	9 Mile Ranch, baz=51	51.02 336	⇓P	P	04 21 44.5 +1.2
K19A	Absolon Red Bu baz=51	51.15 334	⇑P	P	04 21 45.5 +1.1
R11A	Troy Canyon, C baz=52	51.24 325	⇓P	P	04 21 46.7 +1.6
J20A	Shoshoni baz=52	51.24 335	⇓P	P	04 21 46.8 +1.8
PDAR	Pinedale Array	51.42 333	P	P	04 21 46.0 -0.4
PDAR	Pinedale Array 1.9nm,0.9s,baz=128,slow=9.6,SNR=8.9	51.42 333	P	P	04 21 46.0 -0.4
BW06	Boulder Array 4.4nm,1.1s	51.42 333	eP	P	04 21 45.6 -0.9
HWUT	Hardware Ranch	51.46 331	eP	P	04 21 47.4 +0.6
H22A	Clearmont baz=52	51.56 337	⇑P	P	04 21 47.7 +0.4
J19A	Crowheart baz=52	51.59 334	⇑P	P	04 21 48.9 +1.2
PKM	Peak Mountain baz=52	51.63 319	⇑P	P	04 21 49.4 +1.3
G23A	Biddle baz=52	51.70 338	⇓P	P	04 21 49.2 +0.8
VES	Vestal, Richgr baz=52	51.73 320	⇑P	P	04 21 49.4 +0.9
I20A	Worland baz=52	51.75 335	⇑P	P	04 21 49.4 +0.7
F24A	Ekalaka baz=52	51.91 339	⇑P	P	04 21 50.6 +0.7
F23A	Volborg baz=52	52.15 338	⇓P	P	04 21 52.4 +0.7
MDND	Maddock baz=52	52.18 344	⇓P	P	04 21 52.5 +0.7
HVU	Hansel Valley 7.6nm,1.0s	52.19 330	eP	P	04 21 56.6 +4.5
G21A	Lodge Grass baz=53	52.42 337	⇑P	P	04 21 55.2 +1.5
LOHW	Long Hollow 5.0nm,1.2s	52.56 333	eP	P	04 21 57.9 +3.0
TPAW	Teton Pass 5.7nm,1.0s	52.62 333	eP	P	04 21 53.8 -1.6
RRI2	Red Ridge 6.6nm,0.8s	52.68 332	eP	P	04 21 56.5 +0.7
ELK	Elko 66nm,1.0s	52.71 327	eP	P	04 21 57.3 +1.2
ELK	Elko 3.3nm,1.0s,baz=145,slow=5.8,SNR=7.6	52.71 327 P		P	04 21 57.1 +1.0
MOOW	Moose Ponds 4.7nm,1.1s	52.73 333	eP	P	04 21 56.3 +0.1
NV11	Mina Array Sit	52.80 323	eP	P	04 21 57.6 +0.9
G20A	Bridger baz=53	52.82 336	⇓P	P	04 21 57.1 +0.4
NVAR	Mina Array Bea	52.88 323	P	P	04 21 59.0 +1.5
NVAR	Mina Array Bea 4.3nm,0.9s,baz=139,slow=7.1,SNR=12	52.88 323	P	P	04 21 59.0 +1.5
D24A	Glendive baz=53	52.97 340	⇓P	P	04 21 58.2 +0.6
H18A	Shoshone NF, C baz=53	52.98 335	⇑P	P	04 21 58.5 +0.5
F20A	Billings baz=54	53.27 337	⇓P	P	04 22 01.1 +1.1
ULM	Lac du Bonnet 21nm,0.8s	53.53 348	eP	P	04 22 01.3 -0.4
ULM	Lac du Bonnet 24nm,0.7s,baz=160,slow=8.1,SNR=19	53.53 348 P		P	04 22 01.2 -0.4
BMN	Battle Mountai 12nm,1.2s	53.59 326	eP	P	04 22 04.1 +1.6
F19A	Roth Farm, Mol baz=54	53.63 336	⇑P	P	04 22 03.5 +0.9
J14A	Carey baz=54,SNR=10	53.70 331	⇑P	P	04 22 04.4 +1.2
USHA	Ushuaia	53.72 171	P	P	04 22 03.5 +0.5
USHA	Ushuaia 9.2nm,0.9s,baz=321,slow=6.5,SNR=3.8	53.72 171	P	P	04 22 03.5 +0.5
E20A	Meyer Farm, Mu baz=54	53.84 337	⇓P	P	04 22 05.1 +1.0
G17A	Pierce Place, baz=54	53.96 334	⇑P	P	04 22 06.5 +1.4
F18A	Big Timber baz=54,SNR=13	53.99 335	⇓P	P	04 22 06.1 +0.8
C22A	Vida baz=54	54.05 339	⇓P	P	04 22 06.1 +0.6
E19A	Rath Farm, Rou baz=54,SNR=6.8	54.06 337	⇓P	P	04 22 06.3 +0.5
J13A	Cove Ranch, Pi baz=54	54.08 330	⇑P	P	04 22 06.4 +0.4
I14A	Mackay baz=54	54.12 331	⇓P	P	04 22 07.5 +1.1
H15A	Lima baz=54	54.26 332	⇑P	P	04 22 08.6 +1.2
WCN	Washoe City 7.5nm,1.2s	54.31 323	eP	P	04 22 13.3 +5.4
HLID	Hailey 4.3nm,0.9s	54.32 330	eP	P	04 22 08.6 +0.8
HLID	Hailey baz=54,SNR=11	54.32 330	⇓P	P	04 22 08.9 +1.1
D20A	Manuel Ranch, baz=55	54.33 337	⇑P	P	04 22 08.4 +0.8
G16A	Moss Hill, Enn baz=55	54.35 334	⇑P	P	04 22 08.7 +0.6
B23A	Brockton baz=55	54.36 341	⇓P	P	04 22 08.9 +1.0
F17A	Fitzpatrick Pl baz=55	54.39 335	⇓P	P	04 22 08.9 +0.7
I13A	Wildhorse Cree baz=55,SNR=7.3	54.43 331	⇑P	P	04 22 09.7 +1.1
A24A	Westby baz=55	54.44 342	⇑P	P	04 22 09.2 +0.8
C21A	Desert Coulee baz=55,SNR=5.7	54.55 339	⇓P	P	04 22 10.2 +0.9
H14A	Leadore baz=55	54.60 332	⇑P	P	04 22 10.6 +0.7
BOZ	Bozeman (W) 4.7nm,1.1s	54.60 334	eP	P	04 22 09.9 +0.1
G15A	Dillon baz=55	54.61 333	⇑P	P	04 22 10.5 +0.6
D19A	Cripps Ranch, baz=55	54.68 337	⇑P	P	04 22 10.8 +0.6
F16A	Kennard Place, baz=55	54.71 334	⇑P	P	04 22 11.6 +1.1
C20A	Veseth Ranch, baz=55	54.79 338	⇑P	P	04 22 11.3 +0.3
I12A	Atlanta baz=55	54.84 330	⇓P	P	04 22 12.2 +0.6
E17A	Martinsdale baz=55	54.91 335	⇓P	P	04 22 11.8 -0.3
MFID	Camas Ranch 9.4nm,1.2s	54.92 329	eP	P	04 22 13.4 +1.4
MFID	Camas Ranch baz=55	54.92 329	⇓P	P	04 22 13.0 +0.9
BEKR	Beckworth 3.7nm,1.0s	55.03 323	eP	P	04 22 14.1 +1.1
D18A	Linhart Farms, baz=55	55.07 336	⇑P	P	04 22 14.1 +1.1
A22A	Carney Farms, baz=55	55.13 340	⇓P	P	04 22 14.3 +0.9
F15A	Butte baz=55	55.13 334	⇑P	P	04 22 14.1 +0.5
C19A	Slack Wire Ran baz=55	55.21 337	⇑P	P	04 22 15.0 +1.0
E16A	East Helena baz=56	55.32 335	⇑P	P	04 22 16.1 +1.2
D17A	Six Diamond Ra	55.39 336	⇑P	P	04 22 16.1 +0.6

baz=56
E15A **Deer Lodge** 55.65 334 ⇓P P 04 22 18.0 +0.6
baz=56
D16A **Dana Ranch, Ca** 55.65 335 ⇑P P 04 22 18.0 +0.7
baz=56
EGMT **Eagleton** 55.72 337 *eP* P 04 22 17.6 -0.1
10nm,1.1s
EGMT **Eagleton** 55.72 337 ⇓P P 04 22 18.3 +0.6
baz=56
WVOR **Wild Horse Val** 55.72 327 *eP* P 04 22 18.6 +0.7
11nm,1.4s
C17A **Wharram Farm,** 55.81 336 ⇑P P 04 22 19.1 +0.7
baz=56
G12A **Big Creek, Yel** 55.91 331 ⇑P P 04 22 20.0 +0.7
baz=56
B18A **Beardsley Farm** 56.03 337 ⇑P P 04 22 20.5 +0.6
baz=56,SNR=5.0
D15A **Lincoln** 56.08 334 ⇑P P 04 22 20.6 +0.2
baz=56
A19A **Klindworth Far** 56.08 338 ⇓P P 04 22 20.7 +0.5
baz=56
MOD **Modoc** 56.30 325 *eP* P 04 22 22.6 +0.5
2.9nm,0.8s
F12A **Elk City** 56.34 332 ⇓P P 04 22 22.5 +0.3
baz=57
C16A **Fuhringer Ranc** 56.34 336 ⇓P P 04 22 22.5 +0.3
baz=57
B17A **L&G Farms, Che** 56.35 336 ⇑P P 04 22 22.5 +0.3
baz=57
RKT **Rikitea** 56.37 243 *e*LR LR 04 38 52.3
225nm,24.2s
RKT *eT* T 05 22 58.3
14nm,0.3s
MSO **Missoula** 56.54 333 *eP* P 04 22 24.6 +1.0
2.5nm,1.1s
MSO **Missoula** 56.54 333 ⇓P P 04 22 24.0 +0.4
baz=57
C15A **Salmond Ranch,** 56.68 335 ⇓P P 04 22 25.3 +0.6
baz=57
BMO **Blue Mountains** 56.69 330 *eP* P 04 22 24.1 -0.7
2.9nm,1.1s
A17A **Triple J Farms** 56.84 337 ⇓P P 04 22 26.2 +0.6
baz=57
D13A **Huson** 56.97 333 ⇑P P 04 22 26.9 +0.3
baz=57
B15A **Bradely Ranch,** 57.08 335 ⇓P P 04 22 27.6 +0.1
baz=57
A16A **West Butte Ran** 57.19 336 ⇓P P 04 22 28.4 +0.1
baz=57
D12A **Red Ives Fores** 57.34 333 ⇑P P 04 22 29.2 -0.1
baz=58
YBMT **Yellow Bay** 57.35 334 *eP* P 04 22 35.1 +5.7
B14A **Marquette Ranc** 57.42 335 ⇓P P 04 22 30.0 +0.1
baz=58
C13A **Hot Springs** 57.46 334 ⇑P P 04 22 30.2 +0.1
baz=58
YBH **Yreka Blue Hor** 57.59 324 P P 04 22 30.2 -0.9
YBH **Yreka Blue Hor** 57.59 324 P P 04 22 30.2 -0.9
5.5nm,0.9s,baz=108,slow=16,SNR=2.7
BSMT **Bassoo Peak** 57.69 334 *eP* P 04 22 32.8 +0.9
2.1nm,0.9s
SCHQ **Schefferville** 57.76 10 P P 04 22 30.8 -1.2
SCHQ **Schefferville** 57.76 10 P P 04 22 30.8 -1.2
1.8nm,0.8s,baz=242,slow=11,SNR=3.6
B13A **Whitefish** 57.94 334 ⇓P P 04 22 33.9 +0.4
baz=58
A14A **Double T Ranch** 57.96 335 ⇓P P 04 22 33.8 +0.2
baz=58
WALA **Waterton Lakes** 58.23 335 *eP* P 04 22 36.0 +0.4
NEW **Newport** 59.05 333 P P 04 22 44.2 +3.0
NEW **Newport** 59.05 333 P P 04 22 44.2 +3.0
2.4nm,0.8s,baz=135,slow=5.7,SNR=3.0
PPT **Papeete** 69.03 252 LR LR 04 47 43.0
comp=Z,43nm,18.6s,baz=104,slow=30
PPT2 **Papeete2** 69.03 252 *e*LR LR 04 44 47.6
136nm,26.5s
YKA **Yellowknife Ar** 69.10 344 P P 04 23 45.8 -1.0
YKA **Yellowknife Ar** 69.10 344 P P 04 23 45.8 -1.0
1.8nm,0.8s,baz=138,slow=5.5,SNR=36
YKW3 **Yellowknife Ar** 69.16 344 *eP* P 04 23 46.5 -0.7
0.1nm,1.1s
TBI **Tubuai** 69.51 246 *e*LR LR 04 44 59.5
106nm,27.2s
DLBC **Dease Lake** 71.58 335 P P 04 24 02.7 +0.6
DLBC **Dease Lake** 71.58 335 P P 04 24 02.7 +0.6
2.8nm,0.8s,baz=161,slow=9.6,SNR=6.2
LIC **Lamto** 76.25 83⇑ *i*P P 04 24 30.2 -0.1
31nm,1.0s,baz=261
LIC *e*R
139nm,22.2s
LIC **Lamto** 76.25 83⇑ *i*P P 04 24 30.2 -0.1
31nm,1.0s
DBIC **Dimbokro** 76.45 83 *eP* P 04 24 31.4 -0.1
14nm,0.8s
DBIC **Dimbokro** 76.45 83 P P 04 24 31.2 -0.1
12nm,0.9s,baz=240,slow=4.2,SNR=8.4
DBIC LR LR 04 56 10.6
comp=Z,120nm,19.0s,baz=215,slow=34
SUMG **Summit** 79.05 12 *i* P P 04 24 56.8 +12
4.6nm,0.8s
MDT **Midelt** 79.60 56 LR LR 04 57 07.4
comp=Z,51nm,18.4s,baz=54,slow=34
PAB **San Pablo** 80.94 50 *eP* P 04 24 54.9 -0.9
19nm,1.6s
ESDC **Sonseca Array** 81.25 50 P P 04 24 56.9 -0.5
ESDC **Sonseca Array** 81.25 50 P P 04 24 56.9 -0.5
3.5nm,0.8s,baz=266,slow=5.4,SNR=14
ILAR **Eielson Array** 81.69 337 P P 04 24 58.2 -0.9
ILAR **Eielson Array** 81.69 337 P P 04 24 58.2 -0.9
0.9nm,1.0s,baz=132,slow=4.1,SNR=8.9
ILAR LR LR 05 02 07.7
comp=Z,45nm,19.1s,baz=268,slow=36
QUIF **Quistinic** 83.27 41 *eP* P 04 25 07.9 +0.2
QUIF **Quistinic** 83.27 41 *eP* P 04 25 07.9 +0.2
ROSF **Rostrenen** 83.27 41 *eP* P 04 25 07.9 +0.2
ROSF **Rostrenen** 83.27 41 *eP* P 04 25 07.9 +0.2
TORD **Torodi Ar. Bea** 83.30 77 P P 04 25 07.8 -0.8
TORD **Torodi Ar. Bea** 83.30 77 P P 04 25 07.8 -0.8
1.0nm,0.6s,baz=282,slow=5.0,SNR=26
TORD LR LR 04 59 44.5
comp=Z,128nm,18.4s,baz=220,slow=34
SGMF **Saint Gilles** 83.73 41 *eP* P 04 25 09.9 -0.1
SGMF **Saint Gilles** 83.73 41 *eP* P 04 25 09.9 -0.1
SJPF **Ste Jean** 83.83 46 *eP* P 04 25 11.5 +0.8
24nm,0.7s
SJPF **Ste Jean** 83.83 46 *eP* P 04 25 11.5 +0.8
24nm,0.7s
ETSF **Etsaut** 84.28 47 *eP* P 04 25 13.7 +0.6
13nm,1.0s
ETSF **Etsaut** 84.28 47 *eP* P 04 25 13.7 +0.6
13nm,1.0s
GRR **Gorron** 84.87 41 *eP* P 04 25 15.8 0.0
18nm,0.9s
GRR **Gorron** 84.87 41 *eP* P 04 25 15.8 0.0
18nm,0.9s
EPF **Esparros** 84.95 47 *eP* P 04 25 17.0 +0.5
17nm,1.0s
EPF **Esparros** 84.95 47 *eP* P 04 25 17.0 +0.5
17nm,1.0s
MFF **Saint Martin d** 85.09 43 *eP* P 04 25 17.1 +0.1
24nm,0.7s
MFF **Saint Martin d** 85.09 43 *eP* P 04 25 17.1 +0.1
24nm,0.7s
FLN **La Foliniere** 85.17 41 *eP* P 04 25 17.6 +0.3
22nm,0.9s
FLN *e*R
51nm,17.0s
FLN **La Foliniere** 85.17 41 *eP* P 04 25 17.6 +0.3
22nm,0.9s
LDF **La Druitiere** 85.38 41 *eP* P 04 25 18.5 +0.1
12nm,0.8s
LDF **La Druitiere** 85.38 41 *eP* P 04 25 18.5 +0.1
12nm,0.8s
LFF **La Frestale** 85.48 45 *eP* P 04 25 19.1 +0.1
26nm,0.9s
LFF **La Frestale** 85.48 45 *eP* P 04 25 19.1 +0.1
26nm,0.9s
RJF **Les Rejaudoux** 86.07 45 *eP* P 04 25 21.9 0.0
20nm,1.1s
RJF *e*R
72nm,17.8s
RJF **Les Rejaudoux** 86.07 45 *eP* P 04 25 21.9 0.0
20nm,1.1s
MTLF **Montolieu** 86.35 47 *eP* P 04 25 23.5 +0.1
11nm,0.9s
MTLF **Montolieu** 86.35 47 *eP* P 04 25 23.5 +0.1
11nm,0.9s
CAF **Calviac** 86.42 45 *eP* P 04 25 23.6 -0.1
CAF **Calviac** 86.42 45 *eP* P 04 25 23.6 -0.1
TCF **Toulx Ste Croi** 86.67 44 *eP* P 04 25 24.7 -0.2
13nm,1.1s
TCF **Toulx Ste Croi** 86.67 44 *eP* P 04 25 24.7 -0.2
13nm,1.1s
BGF **Bois d'Agland** 87.13 43 *eP* P 04 25 27.1 0.0
22nm,0.9s
BGF **Bois d'Agland** 87.13 43 *eP* P 04 25 27.1 0.0
22nm,0.9s
AVF **Avril sur Loir** 87.50 43 *eP* P 04 25 28.5 -0.3
29nm,1.4s
AVF **Avril sur Loir** 87.50 43 *eP* P 04 25 28.5 -0.3
29nm,1.4s
LASF **Ste Croix** 87.61 46 *eP* P 04 25 29.7 +0.2
LASF **Ste Croix** 87.61 46 *eP* P 04 25 29.7 +0.2
SSF **Saint Saulge** 87.63 43 *eP* P 04 25 29.2 -0.3
SSF **Saint Saulge** 87.63 43 *eP* P 04 25 29.2 -0.3
SMF **Signal de Mont** 87.82 43 *eP* P 04 25 30.2 -0.2
57nm,1.6s
SMF **Signal de Mont** 87.82 43 *eP* P 04 25 30.2 -0.2
57nm,1.6s
LOR **Lormes** 87.89 43 *eP* P 04 25 30.3 -0.4
LOR *e*R
55nm,20.5s
LOR **Lormes** 87.89 43 *eP* P 04 25 30.3 -0.4
QSPA **South Pole Qui** 88.13 180 *eP* P 04 25 32.6 +0.9
QSPA **South Pole Qui** 88.13 180 P P 04 25 32.0 +0.4
3.0nm,0.9s,baz=122,slow=2.6,SNR=11
VIVF **Saint-Julien-l** 88.25 45 *eP* P 04 25 32.1 -0.5
2.3nm,0.6s
VIVF **Saint-Julien-l** 88.25 45 *eP* P 04 25 32.1 -0.5
2.3nm,0.6s
SFTF **Sexfontaines** 88.76 42 *eP* P 04 25 34.6 -0.2
SFTF **Sexfontaines** 88.76 42 *eP* P 04 25 34.6 -0.2
GIVF **Givet** 88.76 40 *eP* P 04 25 35.0 +0.2
GIVF **Givet** 88.76 40 *eP* P 04 25 35.0 +0.2
MEZF **Maizieres J'vi** 88.79 42 *eP* P 04 25 35.0 +0.1
MEZF **Maizieres J'vi** 88.79 42 *eP* P 04 25 35.0 +0.1
ORIF **Oris-en-Rattie** 89.11 45 *eP* P 04 25 37.1 +0.4
8.2nm,0.8s
ORIF *e*R
52nm,20.5s
ORIF **Oris-en-Rattie** 89.11 45 *eP* P 04 25 37.1 +0.4
8.2nm,0.8s
PAGF **Fort de Pagny** 89.24 42 *eP* P 04 25 37.4 +0.3
PAGF **Fort de Pagny** 89.24 42 *eP* P 04 25 37.4 +0.3
CABF **La Chapelle** 89.36 44 *eP* P 04 25 37.9 +0.1
6.8nm,0.7s
CABF **La Chapelle** 89.36 44 *eP* P 04 25 37.9 +0.1
6.8nm,0.7s
LMR **La Mourre** 89.47 47 *eP* P 04 25 38.0 -0.3
8.8nm,0.8s
LMR **La Mourre** 89.47 47 *eP* P 04 25 38.0 -0.3
8.8nm,0.8s
FRF **La Foret Royal** 89.59 47 *eP* P 04 25 38.6 -0.2
15nm,0.7s
FRF **La Foret Royal** 89.59 47 *eP* P 04 25 38.6 -0.2
15nm,0.7s
HAU **Haudompre** 89.62 42 *eP* P 04 25 38.9 0.0
HAU *e*R
66nm,17.8s
HAU **Haudompre** 89.62 42 *eP* P 04 25 38.9 0.0
SBF **Sospel** 90.17 46 *eP* P 04 25 41.2 -0.4
SBF **Sospel** 90.17 46 *eP* P 04 25 41.2 -0.4
CDF **Champ du Feu** 90.26 42 *eP* P 04 25 41.8 -0.2
11nm,1.1s
CDF **Champ du Feu** 90.26 42 *eP* P 04 25 41.8 -0.2
11nm,1.1s
KEST **Kesra** 91.37 54 P P 04 25 47.4 0.0
KEST **Kesra** 91.37 54 P P 04 25 47.4 0.0
1.1nm,0.7s,baz=252,slow=20,SNR=4.7
GERES **GERESS Array B** 94.53 41 P P 04 26 01.6 -0.1
GERES **GERESS Array B** 94.53 41 P P 04 26 01.6 -0.1
0.4nm,0.7s,baz=262,slow=2.7,SNR=5.9
CRVS **Cervenica-Dubn** 99.62 41 PDIF **Pdif** 04 26 25.0 +0.4
ZALV **Zalesovo Beam** 126.85 10 PKP **PKPdf** 04 31 43.9 -0.8
ZALV **Zalesovo Beam** 126.85 10 PKP **PKPdf** 04 31 43.9 -0.8
0.6nm,0.3s,baz=285,slow=2.2,SNR=3.9
STKA **Stephens Creek** 127.49 226 PKP **PKPdf** 04 31 46.7 +0.1
STKA **Stephens Creek** 127.49 226 PKP **PKPdf** 04 31 46.7 +0.1
1.6nm,0.9s,baz=256,slow=4.2,SNR=3.2
WMQ **Urumqi** 137.09 12 *e*PKP **PKPdf** 04 32 07.9 +3.5
ASAR **Alice Springs** 137.60 231 PKPpre PKPpre 04 32 00.2
ASAR PKP **PKPdf** 04 32 05.0 -1.0
ASAR **Alice Springs** 137.60 231 PKhKP PKPpre 04 32 00.2
0.3nm,0.6s,baz=127,slow=2.3,SNR=3.2
ASAR PKP **PKPdf** 04 32 05.0 -1.0
0.9nm,0.6s,baz=116,slow=2.3,SNR=8.1
WRA **Warramunga Arr** 139.11 236 PKPpre PKPpre 04 32 03.8
WRA PKP **PKPdf** 04 32 08.3 -0.4
WRA **Warramunga Arr** 139.11 236 PKhKP PKPpre 04 32 03.8
1.0nm,0.8s,baz=109,slow=2.0,SNR=5.1
WRA PKP **PKPdf** 04 32 08.3 -0.4
1.9nm,0.9s,baz=112,slow=2.1,SNR=12
HHC **Hu-ho-hao-te** 139.63 345⇑ *i*PKP **PKPdf** 04 32 08.4 -0.8
HHC PP **PP** 04 35 08.1 +5.0
HHC PKS **PKSdf** 04 35 42.9 -2.5
HHC SKS SKSdf 04 39 10.3 -7.6
HHC SKKS **SKKSac** 04 41 50.6 -5.8
HHC SS **SS** 04 53 19.3 -1.2
HHC AMB AMB
comp=Z,180nm,5.3s
HHC LR LR
comp=N,170nm,21.4s
HHC LR LR
comp=E,170nm,21.4s
HHC LR LR
comp=Z,230nm,21.4s
LZH **Lanzhou** 145.72 353 *e*PKPbc **PKPdf** 04 32 21.0 +0.8
FITZ **Fitzroy Crossi** 147.09 232 PKPbc **PKPbc** 04 32 24.7 -0.2
FITZ **Fitzroy Crossi** 147.09 232 PKPbc **PKPbc** 04 32 24.7 -0.2
comp=Z,3.8nm,0.8s,baz=309,slow=2.8,SNR=8.5
GYA **Guiyang** 154.53 344 *e*PKPbc **PKPdf** 04 32 31.3 -2.9
GYA pPKP PKPab 04 32 51.0 -6.0
GYA sPKP 04 32 59.6
GYA PP **PP** 04 36 32.0 +1.2
GYA AMB AMB
comp=Z,80nm,7.8s

IDC ***25*** *04:18:42.8±0.6,31°.37S×177°.66W,h0km,mb4.5/16, mb1 4.7/18,mb1mx4.6/24,mbtmp4.5/18,ML3.4/2,MS3.6/6, Ms1 3.6/6,ms1mx3.3/29,Error ellipse: s-maj=20.3km s-min=16.3km az=129.0*

ISCJB ***25*** *04:18:45.4±0.5,31°.50S±0°.06×177°.67W±0°.09,h26km, mb4.5/18,MS3.6/4,Error ellipse: s-maj=11.5km s-min=7.8km az=25.6*

NEIC ***25*** *04:18:48.2±4.0,31°.36S×177°.72W,h34km±26km,mb4.8/5, Error ellipse: s-maj=14.4km s-min=9.0km az=140.0*

AUST ***25*** *04:19:25.9±20.0,32°.30S×179°.58E,h208km±2km,Error ellipse: s-maj=9.4km s-min=2.9km az=247.0*

ISC 25 04:18:46.9±0.5,31°.40S±0°.06×177°.7W±0°.1,h26km,n94, σ1s14/93,mb4.6/18,MS3.6/4,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	2.15	355	*e*Pn		**Pn**		04 19 20.3	-0.8
RAO				Sn		**Sb**		04 19 49.7	-1.6
RAO	**Raoul Island**	2.15	355	Pn		**Pn**		04 19 20.1	-0.9
	77nm,0.3s,baz=111,slow=19,SNR=4.1								
RAO				Sn		**Sb**		04 19 49.7	-1.6
	106nm,0.3s,baz=100,slow=23,SNR=5.7								
RAO				LR		LR		04 19 53.1	
	comp=Z,600nm,19.3s,baz=150,slow=33								
URZ	**Urewera**	8.06	210	*e*Pn		Pn		04 20 38.8	-3.4
URZ				*e*S		**Sn**		04 22 09.6	-2.8
URZ	**Urewera**	8.06	210	Pn		Pn		04 20 38.6	-3.6
	0.5nm,0.3s,baz=1.4,slow=15,SNR=3.4								
URZ				Sn		**Sn**		04 22 07.8	-4.6
	4.3nm,0.3s,baz=167,slow=19,SNR=8.9								
DZM	**Mont Dzumac**	16.91	299	*e*P		**P**		04 22 45.1	+1.4
	89nm,1.3s								
DZM				*e*LR		LR		04 26 41.3	
	355nm,24.2s								
DZM	**Mont Dzumac**	16.91	299	LR		LR		04 27 44.1	
	comp=Z,308nm,19.7s,baz=198,slow=32								
AFI	**Afiamalu**	18.24	19	*e*Pn		**Pn**		04 22 56.8	-1.6
AFI	**Afiamalu**	18.24	19	P		**Pn**		04 22 56.7	-1.6
	1.0nm,0.3s,baz=198,slow=3.2,SNR=4.7								
TBI	**Tubuai**	26.29	79	*e*LR		LR		04 30 30.1	
	163nm,21.8s								
PPT2	**Papeete2**	28.96	68	*e*LR		LR		04 31 53.8	
	136nm,21.0s								
RMQ	**Roma**	29.67	271	P		P		04 24 54.0	+3.4
	baz=27,SNR=4.8								
HNR	**Honiara**	30.14	312	LR		LR		04 35 05.4	
	comp=Z,80nm,18.2s,baz=104,slow=33								
CMSA	**Cobar Meteorol**	31.12	260	P		**P**		04 25 05.3	+1.9
	baz=29,SNR=8.6								
QLP	**Quilpie**	33.51	268	P		**P**		04 25 26.6	+2.2
	baz=31,SNR=3.8								
CTA	**Charters Tower**	34.21	280	P		P		04 25 32.4	+1.9
CTA	**Charters Tower**	34.21	280	P		P		04 25 32.4	+1.9
	14nm,1.0s,baz=96,slow=11,SNR=7.0								
CTA				LR		LR		04 36 12.4	
	comp=Z,112nm,20.7s,baz=50,slow=31								
CTAO	**Charters Tower**	34.21	280	*e*P		**P**		04 25 32.5	+2.0
	8.2nm,0.8s								
STKA	**Stephens Creek**	34.50	258	*e*P		**P**		04 25 33.2	+0.3
	4.4nm,1.5s								
STKA	**Stephens Creek**	34.50	258	P		**P**		04 25 33.6	+0.7
	4.3nm,0.9s,baz=86,slow=8.7,SNR=7.2								
STKA				LR		LR		04 39 25.9	
	comp=Z,180nm,18.9s,baz=24,slow=36								
STKA	**Stephens Creek**	34.50	258	P		**P**		04 25 34.0	+1.0
	baz=32,SNR=6.7								
MTSU	**Mount Surprise**	36.73	282	P		P		04 25 55.8	+3.5
	baz=35,SNR=5.1								
BBOO	**Buckleboo**	38.94	255	P		**P**		04 26 10.2	-0.5
	baz=36,SNR=6.4								
AS31	**Alice Springs**	43.31	268	*e*P		**P**		04 26 46.6	-0.2
ASAR	**Alice Springs**	43.31	268	P		**P**		04 26 46.3	-0.5
ASAR	**Alice Springs**	43.31	268	P		**P**		04 26 46.3	-0.5
	5.2nm,0.8s,baz=114,slow=7.8,SNR=34								
WRAB	**Tennant Creek**	44.38	273	*e*P		**P**		04 26 55.2	-0.2
	18nm,0.8s								
WRA	**Warramunga Arr**	44.38	273	P		**P**		04 26 55.2	-0.2
WRA	**Warramunga Arr**	44.38	273	P		**P**		04 26 55.2	-0.2
	19nm,0.9s,baz=111,slow=8.1,SNR=103								
VNDA	**Vanda**	47.13	186	LR		LR		04 43 50.6	
	comp=Z,72nm,18.6s,baz=280,slow=32								
FITZ	**Fitzroy Crossi**	52.61	271	*e*P		**P**		04 27 58.2	-0.5
	19nm,1.3s								
FITZ	**Fitzroy Crossi**	52.61	271	P		**P**		04 27 58.8	0.0
	9.8nm,1.0s,baz=135,slow=5.6,SNR=12								
FITZ	**Fitzroy Crossi**	52.61	271	P		**P**		04 27 58.9	+0.1
	baz=50,SNR=6.6								
FITZ	**Fitzroy Crossi**	52.61	271	P		**P**		04 27 59.0	+0.2
	baz=1.1,SNR=7.4								
MEEK	**Meekatharra**	55.20	258	P		**P**		04 28 17.0	-0.8
	baz=53,SNR=4.4								
QSPA	**South Pole Qui**	58.71	180	*e*P		**P**		04 28 42.7	+0.6
QSPA	**South Pole Qui**	58.71	180	P		**P**		04 28 42.7	+0.6
	9.3nm,0.9s,baz=45,slow=4.1,SNR=15								
WSI	**Waingapu**	61.15	276	P		**PcP**		04 29 46.2	+4.0
	baz=8.8,SNR=3.3								
LUWI	**Luwuk**	63.70	286	P		P		04 29 22.7	+6.2
	baz=62,SNR=7.2								
MAW	**Mawson**	71.46	201	P		**P**		04 30 05.5	+0.8
MAW	**Mawson**	71.46	201	P		**P**		04 30 05.5	+0.8
	6.1nm,1.1s,baz=61,slow=4.9,SNR=6.1								
MJAR	**Matsushiro Arr**	79.20	325	P		**P**		04 30 49.0	-0.5
MJAR	**Matsushiro Arr**	79.20	325	P		**P**		04 30 49.0	-0.5
	0.6nm,0.3s,baz=161,slow=7.7,SNR=4.3								
KSRS	**Korea Array**	85.26	320	P		**P**		04 31 22.0	+0.8
	0.6nm,0.4s,baz=145,slow=6.5,SNR=9.3								
KSAR	**Wonju Array Be**	85.28	320	P		**P**		04 31 22.0	+0.8
PETK	**Petropavlovsk-**	86.84	345	P		**P**		04 31 29.3	+0.7
PETK	**Petropavlovsk-**	86.84	345	P		**P**		04 31 29.3	+0.7
	6.5nm,0.9s,baz=136,slow=9.2,SNR=6.2								
USRK	**Ussuriysk Arra**	88.12	326	P		**P**		04 31 35.4	+0.4
	1.3nm,0.6s,baz=151,slow=4.4,SNR=6.4								
LDFC	**Landfair**	88.51	47	*e*P		P		04 31 38.5	+1.3
YBH	**Yreka Blue Hor**	88.67	38	P		P		04 31 37.2	-0.5
YBH	**Yreka Blue Hor**	88.67	38	P		P		04 31 37.2	-0.5
	2.5nm,0.9s,baz=225,slow=7.1,SNR=3.3								
NVAR	**Mina Array Bea**	88.81	43	P		P		04 31 39.0	+0.4
NVAR	**Mina Array Bea**	88.81	43	P		P		04 31 39.0	+0.4
	2.9nm,0.9s,baz=221,slow=7.7,SNR=9.6								
CN2	**Changchun**	91.08	323	*e*PKP		P		04 31 47.6	-1.3
CN2				sPKP				04 32 25.0	
CN2				AMB	AMB				
	comp=Z,200nm,5.0s								
ELK	**Elko**	92.11	42	P		P		04 31 54.1	+0.1
ELK	**Elko**	92.11	42	P		P		04 31 54.1	+0.1
	comp=Z,0.2nm,0.3s,baz=195,slow=11,SNR=3.5								
TXAR	**Lajitas Array**	92.72	57	P		P		04 31 57.7	+0.7
TXAR	**Lajitas Array**	92.72	57	P		P		04 31 57.7	+0.7
	comp=Z,1.5nm,1.1s,baz=198,slow=7.4,SNR=6.7								
MFID	**Camas Ranch**	93.52	40	*e*P		P		04 32 00.7	+0.3
	comp=Z,3.5nm,1.1s								
ILAR	**Eielson Array**	98.84	13	P		P		04 32 23.4	-0.4
ILAR	**Eielson Array**	98.84	13	P		P		04 32 23.4	-0.4
	comp=Z,0.5nm,1.0s,baz=233,slow=5.0,SNR=4.1								
AKTO	**Aktyubinsk**	134.95	312	PKP		**PKPdf**		04 38 03.1	0.0
AKTO	**Aktyubinsk**	134.95	312	PKP		**PKPdf**		04 38 03.1	0.0
	comp=Z,1.3nm,0.7s,baz=74,slow=7.4,SNR=3.8								
GNI	**Garni**	144.74	296	PKP		**PKPdf**		04 38 21.7	+0.2
GNI	**Garni**	144.74	296	PKP		**PKPdf**		04 38 21.7	+0.2
	comp=Z,2.8nm,0.4s,baz=190,slow=15,SNR=4.0								
KBZ	**Khabaz**	145.86	303	PKPbc		**PKPab**		04 38 24.1	0.0
KBZ	**Khabaz**	145.86	303	PKPbc		**PKPab**		04 38 24.1	0.0
	comp=Z,12nm,1.0s,baz=293,slow=1.7,SNR=8.0								
FIA1	**FINESS Array S**	146.16	340	*e*PKPbc		**PKPdf**		04 38 23.3	+0.3
FINES	**FINESS Array B**	146.16	340	PKPbc		**PKPdf**		04 38 23.4	+0.4
FINES	**FINESS Array B**	146.16	340	PKPbc		**PKPdf**		04 38 23.4	+0.4
	comp=Z,16nm,0.9s,baz=56,slow=4.8,SNR=16								
NB2	**NORSAR Subarra**	149.77	351	PKP		**PKPbc**		04 38 32.8	-1.0
	comp=Z,8.0nm,1.4s,baz=17,slow=2.6								
NOA	**NORSAR Array B**	149.77	351	PKPbc		**PKPbc**		04 38 33.5	-0.3
NOA	**NORSAR Array B**	149.77	351	PKPbc		**PKPbc**		04 38 33.5	-0.3
	comp=Z,4.6nm,1.1s,baz=14,slow=4.4,SNR=4.6								
HFS	**Hagfors**	150.27	348	PKPbc		**PKPbc**		04 38 34.2	-0.7
HFS	**Hagfors**	150.27	348	PKPbc		**PKPbc**		04 38 34.2	-0.7
	comp=Z,4.4nm,0.9s,baz=214,slow=4.9,SNR=4.7								
ASF	**Jabal al Asfar**	150.64	281	PKPbc		**PKPbc**		04 38 37.4	+0.5
ASF	**Jabal al Asfar**	150.64	281	PKPbc		**PKPbc**		04 38 37.4	+0.5
	comp=Z,2.5nm,0.8s,baz=214,slow=2.2,SNR=3.9								
EIL	**Elat**	151.86	275	PKPbc		**PKPbc**		04 38 39.1	-0.6
EIL	**Elat**	151.86	275	PKPbc		**PKPbc**		04 38 39.1	-0.6
	comp=Z,3.6nm,0.5s,baz=152,slow=5.2,SNR=3.5								
AKASG	**Malin Array Be**	152.24	322	PKPbc		**PKPbc**		04 38 39.6	-0.1
AKASG				PKPab		**PKPab**		04 38 48.6	-1.1
AKASG	**Malin Array Be**	152.24	322	PKPbc		**PKPbc**		04 38 39.6	-0.1
	comp=Z,5.3nm,1.0s,baz=49,slow=2.0,SNR=12								
AKASG				PKPab		**PKPab**		04 38 48.6	-1.1
	comp=Z,4.1nm,0.8s,baz=49,slow=4.0,SNR=10								
KIEV	**Kiev**	152.25	322	*e*PKPbc		**PKPbc**		04 38 39.6	-0.2
KIEV				*e*PKPab		**PKPab**		04 38 49.0	-0.7
BRTR	**Keskin Array B**	153.28	297	PKPbc		**PKPbc**		04 38 42.5	-0.2
BRTR				PKPab		**PKPab**		04 38 55.3	+0.6
BRTR	**Keskin Array B**	153.28	297	PKPbc		**PKPbc**		04 38 42.5	-0.2
	comp=Z,2.0nm,1.0s,baz=177,slow=2.5,SNR=8.4								
BRTR				PKPab		**PKPab**		04 38 55.3	+0.6
	comp=Z,3.2nm,1.0s,baz=116,slow=3.4,SNR=8.9								
MLR	**Muntele Rosu**	156.84	314	PKPab		**PKPab**		04 39 07.4	-2.3
MLR	**Muntele Rosu**	156.84	314	PKPab		**PKPab**		04 39 07.4	-2.3
	comp=Z,0.5nm,0.8s,baz=212,slow=13,SNR=3.7								
VRAC	**Vranov**	159.11	333	PKPab		**PKPab**		04 39 19.5	+0.3
VRAC	**Vranov**	159.11	333	PKPab		**PKPab**		04 39 19.5	+0.3
	comp=Z,2.2nm,0.5s,baz=94,slow=4.6,SNR=5.0								
KHC	**Kasperske Hory**	160.34	338	*e*PKPAB		**PKPab**		04 39 24.5	0.0
KHC				*ex*		x		04 40 19.0	
GERES	**GERESS Array B**	160.55	337	PKPab		**PKPab**		04 39 24.4	-1.1
GERES	**GERESS Array B**	160.55	337	PKPab		**PKPab**		04 39 24.4	-1.1
	comp=Z,0.6nm,0.6s,baz=40,slow=4.4,SNR=8.2								
TORD	**Torodi Ar. Bea**	161.83	178	PKPab		**PKPab**		04 39 30.6	-1.1
TORD	**Torodi Ar. Bea**	161.83	178	PKPab		**PKPab**		04 39 30.6	-1.1
	comp=Z,2.9nm,1.1s,baz=179,slow=2.7,SNR=6.2								
DAVOX	**Davos/Dischmat**	163.56	341	PKPab		**PKPab**		04 39 39.0	+0.2
DAVOX	**Davos/Dischmat**	163.56	341

EGS				*e*S		**Sn**	**04 25 58.3**	**+0.4**
	baz=207							
PCYT	**Pengchaiyu**	**0.53**	**330**	*e*P		**Pn**	**04 25 39.5**	**+0.2**
	baz=337							
PCYT				*e*S		**Sn**	**04 25 57.5**	**-0.8**
	baz=337							
NWF	**Wu-fen Shan**	**0.54**	**260**	P		**Pn**	**04 25 39.6**	**+0.2**
	baz=247							
NWF				*e*S		**Sn**	**04 25 58.0**	**-0.3**
	baz=247							
TWY	**Chenhua**	**0.70**	**279**	*e*P		**Pn**	**04 25 40.5**	**+0.4**
	baz=271							
TWC	**Suao**	**0.72**	**220**	P		**Pn**	**04 25 40.5**	**+0.1**
	baz=203							
TWC				*e*S		**Sn**	**04 26 00.5**	**+0.5**
	baz=203							
TWE	**Neicheng**	**0.77**	**235**	P		**Pn**	**04 25 40.8**	**+0.2**
	baz=227							
TWE				*e*S		**Sn**	**04 26 00.5**	**+0.1**
	baz=227							
ENTT	**Nioudou**	**0.89**	**234**	P		**Pn**	**04 25 41.6**	**+0.2**
	baz=226							
ENTT				*e*S		**Sn**	**04 26 01.9**	**0.0**
	baz=226							
YOJ	**Yonaguni jima**	**0.92**	**140**	P		**Pn**	**04 25 41.5**	**-0.1**
YOJ				*e*S		**Sn**	**04 26 01.5**	**-0.7**
ENA	**Nanau**	**0.93**	**218**	P		**Pn**	**04 25 42.0**	**+0.3**
	baz=204							
ENA				S		**Sn**	**04 26 02.8**	**+0.5**
	baz=204							
NSK	**Sanguang**	**1.03**	**242**	*e*P		**Pn**	**04 25 42.8**	**+0.2**
	baz=235							
NSK				S		**Sn**	**04 26 02.7**	**-1.1**
	baz=235							
NNS	**Nan Shan**	**1.15**	**231**	*e*P		**Pn**	**04 25 43.9**	**+0.3**
	baz=219							
NNS				*e*S		**Sn**	**04 26 05.8**	**+0.1**
	baz=219							
TWD	**Chiawan**	**1.29**	**213**	*e*P		**Pn**	**04 25 44.3**	**-0.2**
	baz=207							
TWD				*e*S		**Sn**	**04 26 07.0**	**-0.4**
	baz=207							
NSTT	**Nanjuang**	**1.35**	**247**	*e*P		**Pn**	**04 25 45.2**	**+0.1**
	baz=237							
NSTT				*e*S		**Sn**	**04 26 07.6**	**-0.8**
	baz=237							
TWT	**Tachien**	**1.41**	**230**	*e*P		**Pn**	**04 25 46.3**	**+0.4**
	baz=220							
TWT				*e*S		**Sn**	**04 26 09.5**	**-0.3**
	baz=220							
WHF	**Hehuan Shan**	**1.43**	**225**	*e*P		**Pn**	**04 25 46.8**	**+0.5**
	baz=222							
WHF				*e*S		**Sn**	**04 26 09.8**	**-0.7**
	baz=222							
IRIF	**Iriomote-Funau**	**1.49**	**123**	P		**Pn**	**04 25 46.8**	**+0.4**
IRIF				*e*S		**Sn**	**04 26 10.6**	**-0.2**
ESL	**Shilin**	**1.59**	**212**	*e*P		**Pn**	**04 25 47.7**	**+0.3**
	baz=211							
HATJ	**Hateruma jima**	**1.72**	**130**	P		**Pn**	**04 25 49.1**	**+0.5**
HATJ				*e*S		**Sn**	**04 26 14.8**	**0.0**
JKRS	**Kuro-shima**	**1.76**	**121**	P		**Pn**	**04 25 49.7**	**+0.6**
JKRS				*e*S		**Sn**	**04 26 15.1**	**-0.5**
JIJ	**Ishigaki jima**	**1.81**	**116**	P		**Pn**	**04 25 49.6**	**0.0**
JIJ				*e*S		**Sn**	**04 26 14.9**	**-1.5**
SMLT	**Sun Moon Lake**	**1.85**	**226**	*e*P		**Pn**	**04 25 50.5**	**+0.4**
	baz=229							
SMLT				*e*S		**Sn**	**04 26 16.9**	**-0.5**
	baz=229							
TYC	**Yuchr**	**1.86**	**228**	*e*P		**Pn**	**04 25 49.9**	**-0.2**
	baz=231							
TYC				*e*S		**Sn**	**04 26 17.0**	**-0.5**
	baz=231							
YUS	**Yu-Shan**	**2.11**	**218**	*e*P		**Pn**	**04 25 53.9**	**+0.5**
	baz=208							
YUS				*e*S		**Sn**	**04 26 23.0**	**-0.2**
	baz=208							
ALS	**Alishan**	**2.18**	**221**	*e*P		**Pn**	**04 25 54.2**	**+0.2**
	baz=223							
ALS				*e*S		**Sn**	**04 26 24.4**	**+0.2**
	baz=223							
JTJ	**Tarama**	**2.19**	**103**	P		**Pn**	**04 25 54.5**	**+0.8**
JTJ				*e*S		**Sn**	**04 26 23.5**	**-0.4**
CHN5	**Tsauling**	**2.19**	**225**	*e*P		**Pn**	**04 25 54.3**	**+0.5**
	baz=221							
CHN5				*e*S		**Sn**	**04 26 23.7**	**-0.5**
	baz=221							
CHN4	**Tsaushan**	**2.42**	**222**	*e*P		**Pn**	**04 25 56.4**	**0.0**
	baz=220							

*ISCJB **25** 04:28:34.4±0.6,41°.26N±0°.04×22°.72E±0°.03,h4km±6km, Error ellipse: s-maj=6.9km s-min=4.4km az=1.9*
*THE **25** 04:28:34.7,41°.28N×22°.72E,h2km±31km, ML2.2/2, Error ellipse: s-maj=31.5km s-min=1.0km az=349.0*
*SKO **25** 04:28:34.2,41°.29N×22°.71E,h10km, M1.2, ML1.5*
*ATH **25** 04:28:34.8,41°.26N×22°.73E,h9km±1km, MD3.0/6*
*CSEM **25** 04:28:34.7±0.2,41°.26N×22°.72E,h2km, ML2.2/2, Error ellipse: s-maj=6.6km s-min=4.0km az=10.0*

ISC 25 04:28:33.7±0.9,**41°.32N**±0°.05×**22°.74E**±0°.02,**h12**km±7km, **n26,σ0°.45/42, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**273**	P	**Pg**	**04 28 36.7**	**-0.2**
VAY	**Valandovo**	**0.13**	**273**	*i* Pg	**Pg**	**04 28 36.8**	**-0.1**
VAY				*i* Sg	**Sg**	**04 28 38.8**	**-0.5**
VAY				*e*Lg	Lg	04 28 38.9	
	comp=N,311nm,0.2s						
VAY				*e*Lg	Lg	04 28 39.1	
	comp=E,209nm,0.2s						
VAY	**Valandovo**	**0.13**	**273**	P	**Pg**	**04 28 36.7**	**-0.2**
VAY	**Valandovo**	**0.13**	**273**	*i* Pg	**Pg**	**04 28 37.3**	**+0.4**
VAY				*i* Sg	**Sg**	**04 28 39.2**	**0.0**
VAY				*e*Lg	Lg	04 28 39.5	
	comp=E,209nm,0.2s						
KNT	**Kendrikon**	**0.20**	**142**	P	**Pg**	**04 28 38.6**	**+0.6**
KNT	**Kendrikon**	**0.20**	**142**	P	**Pg**	**04 28 38.6**	**+0.6**
GRG	**Griva**	**0.44**	**216**	P	**Pg**	**04 28 42.5**	**+0.1**
GRG				S	**Sg**	**04 28 48.3**	**0.0**
GRG	**Griva**	**0.44**	**216**	*e*PB	**Pg**	**04 28 42.5**	**+0.1**
GRG				*e*SB	**Sg**	**04 28 48.1**	**-0.2**
GRG	**Griva**	**0.44**	**216**	P	**Pg**	**04 28 42.5**	**+0.1**
GRG				*e*Sb	**Sg**	**04 28 48.1**	**-0.2**
SRS	**Serrai**	**0.67**	**107**	P	**Pb**	**04 28 47.8**	**+0.4**
SRS	**Serrai**	**0.67**	**107**	P	**Pb**	**04 28 47.8**	**+0.4**
SOH	**Sokhos**	**0.68**	**136**	P	**Pg**	**04 28 47.1**	**+0.2**
SOH				S	**Sg**	**04 28 56.1**	**+0.3**
SOH	**Sokhos**	**0.68**	**136**	*e*PB	**Pb**	**04 28 47.2**	**-0.3**
SOH				*e*SB	**Sg**	**04 28 56.1**	**+0.3**
SOH	**Sokhos**	**0.68**	**136**	*e*Pb	**Pb**	**04 28 47.2**	**-0.3**
SOH				S	**Sg**	**04 28 56.1**	**+0.3**
NVR	**Nevrokopi**	**0.85**	**87**	*e*PB	**Pn**	**04 28 51.3**	**-0.2**
NVR				*e*SB	**Sb**	**04 29 02.5**	**+0.7**
NVR	**Nevrokopi**	**0.85**	**87**	*e*Pb	**Pn**	**04 28 51.3**	**-0.2**
NVR				*e*Sb	**Sb**	**04 29 02.5**	**+0.7**
PLG	**Polygyros**	**1.08**	**150**	*e*PG	**Pg**	**04 28 54.4**	**-0.2**
PLG				*e*SB	**Sg**	**04 29 07.9**	**-0.8**
PLG	**Polygyros**	**1.08**	**150**	*e*Pg	**Pg**	**04 28 54.4**	**-0.2**
PLG				*e*Sb	**Sg**	**04 29 07.9**	**-0.8**
FNA	**Florina**	**1.16**	**243**	*e*PG	**Pb**	**04 28 55.8**	**0.0**
FNA				*e*SB	**Sb**	**04 29 11.7**	**+0.9**
FNA	**Florina**	**1.16**	**243**	*e*Pg	**Pb**	**04 28 55.8**	**0.0**
FNA				*e*Sb	**Sb**	**04 29 11.7**	**+0.9**
PAIG	**Paliouri**	**1.56**	**152**	*e*PB	**Pg**	**04 29 03.3**	**-0.4**
PAIG				*e*SB	**Sg**	**04 29 23.6**	**-0.3**
PAIG	**Paliouri**	**1.56**	**152**	*e*Pb	**Pg**	**04 29 03.3**	**-0.4**
PAIG				*e*Sb	**Sg**	**04 29 23.6**	**-0.3**
SMTH	**Samothraki Isl**	**2.28**	**111**	*e*PN	**Pb**	**04 29 14.5**	**-0.3**
SMTH	**Samothraki Isl**	**2.28**	**111**	*e*Pn	**Pb**	**04 29 14.5**	**-0.3**
ALN	**Alexandroupoli**	**2.53**	**98**	*e*PN	**Pb**	**04 29 18.5**	**-0.6**
ALN	**Alexandroupoli**	**2.53**	**98**	*e*Pn	**Pb**	**04 29 18.5**	**-0.6**

SKO 25 04:34:50.5,41°.30N×22°.69E,h1km,M0.2,ML0.5, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.09**	**283**	*i* Pg	Pg	04 34 52.1	-0.2
VAY				*i* Sg	Sg	04 34 53.9	+0.4
VAY				*e*Lg	Lg	04 34 53.9	
	comp=N,50nm,0.2s						
VAY				*e*Lg	Lg	04 34 54.3	
	comp=E,16nm,0.2s						

*IDC **25** 04:36:21.6±1.5,34°.64N×23°.63E,h0km,mb3.5/4, mb1 3.6/5,mb1mx3.4/27,mbtmp3.4/5,ML3.7/1, Error ellipse: s-maj=42.0km s-min=27.6km az=121.0*
*CSEM **25** 04:36:27.4,34°.88N×23°.56E,h15km,MD3.8, After ATH*
*ATH **25** 04:36:27.4,34°.88N×23°.56E,h15km±1km, MD3.8/25*

ISC 25 04:36:28.6±1.5,**34°.93N**±0°.06×**23°.63E**±0°.04,**h9**km±10km, **n57,σ1°.04/68,mb3.4/4,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.38**	**104**	*e*PB	**Pg**	**04 36 35.8**	**-0.3**
GVD				*e*SB	**Sb**	**04 36 43.3**	**-0.3**
GVD	**Gavdhos**	**0.38**	**104**	*e*Pb	**Pg**	**04 36 35.8**	**-0.3**
GVD				*e*Sb	**Sb**	**04 36 43.3**	**-0.3**
VAM	**Vamos**	**0.66**	**44**	*e*PB	**Pg**	**04 36 41.1**	**-0.3**
VAM				*e*SN	**Sb**	**04 36 52.1**	**+0.4**
VAM	**Vamos**	**0.66**	**44**	*e*Pb	**Pg**	**04 36 41.1**	**-0.3**
VAM				*e*Sn	**Sb**	**04 36 52.1**	**+0.4**
SIVA	**Sivas**	**0.97**	**85**	*e*PN	**Pg**	**04 36 46.7**	**-0.5**
SIVA				*e*SN	**Sb**	**04 37 01.2**	**+0.8**
SIVA	**Sivas**	**0.97**	**85**	*e*Pn	**Pg**	**04 36 46.7**	**-0.5**
SIVA				*e*Sn	**Sb**	**04 37 01.2**	**+0.8**
ANKY	**Antikythira Is**	**0.97**	**344**	*e*PN	**Pg**	**04 36 46.9**	**-0.4**
ANKY				*e*SN	**Sb**	**04 37 01.0**	**+0.4**
ANKY	**Antikythira Is**	**0.97**	**344**	*e*Pn	**Pg**	**04 36 46.9**	**-0.4**
ANKY				*e*Sn	**Sb**	**04 37 01.0**	**+0.4**
IDI	**Anoyia**	**1.09**	**71**	*e*PN	**Pb**	**04 36 48.8**	**-0.8**
IDI				*e*SN	**Sn**	**04 37 06.2**	**+0.9**
IDI	**Anoyia**	**1.09**	**71**	*e*Pn	**Pb**	**04 36 48.8**	**-0.8**
IDI				*e*Sn	**Sn**	**04 37 06.2**	**+0.9**
KYTH	**Kithira**	**1.43**	**340**	*e*PN	**Pn**	**04 36 54.9**	**+0.1**
KYTH	**Kithira**	**1.43**	**340**	*e*Pn	**Pn**	**04 36 54.9**	**+0.1**
LAST	**Lasithi**	**1.53**	**81**	*e*PN	**Pn**	**04 36 56.4**	**+0.2**
LAST				*e*SN	**Sg**	**04 37 19.0**	**+1.2**
LAST	**Lasithi**	**1.53**	**81**	*e*Pn	**Pn**	**04 36 56.4**	**+0.2**
LAST				*e*Sn	**Sg**	**04 37 19.0**	**+1.2**
NPS	**Neapolis**	**1.66**	**78**	*e*PN	**Pb**	**04 36 58.8**	**-0.5**
NPS				*e*SN	**Sg**	**04 37 22.1**	**+0.3**
NPS	**Neapolis**	**1.66**	**78**	*e*Pn	**Pb**	**04 36 58.8**	**-0.5**
NPS				*e*Sn	**Sg**	**04 37 22.1**	**+0.3**
VLI	**Veliai**	**1.87**	**343**	*e*PN	**Pb**	**04 37 02.1**	**-0.8**
VLI	**Veliai**	**1.87**	**343**	*e*Pn	**Pb**	**04 37 02.1**	**-0.8**
DYR	**Agios Nikonas**	**2.11**	**330**	*e*PN	**Pn**	**04 37 05.0**	**+0.9**
DYR	**Agios Nikonas**	**2.11**	**330**	*e*Pn	**Pn**	**04 37 05.0**	**+0.9**
PYL	**PYLOS**	**2.49**	**322**	*e*PN	**Pn**	**04 37 10.6**	**+1.3**
PYL	**PYLOS**	**2.49**	**322**	*e*Pn	**Pn**	**04 37 10.6**	**+1.3**
DID	**Didima**	**2.59**	**353**	*e*PN	**Pn**	**04 37 10.7**	**0.0**
DID	**Didima**	**2.59**	**353**	*e*Pn	**Pn**	**04 37 10.7**	**0.0**
APE	**Apeiranthos**	**2.63**	**35**	*e*PN	**Pn**	**04 37 11.3**	**+0.1**
APE	**Apeiranthos**	**2.63**	**35**	*e*Pn	**Pn**	**04 37 11.3**	**+0.1**
ITM	**Ithomi**	**2.64**	**329**	*e*PN	**Pn**	**04 37 11.8**	**+0.5**
ITM	**Ithomi**	**2.64**	**329**	*e*Pn	**Pn**	**04 37 11.8**	**+0.5**
VLX	**Vlachokerasia**	**2.64**	**338**	*e*PB	**Pn**	**04 37 12.8**	**+1.4**
VLX	**Vlachokerasia**	**2.64**	**338**	*e*Pb	**Pn**	**04 37 12.8**	**+1.4**
NAIG	**Nisos Aigina**	**2.83**	**358**	*e*PN	**Pn**	**04 37 14.3**	**+0.4**
NAIG	**Nisos Aigina**	**2.83**	**358**	*e*Pn	**Pn**	**04 37 14.3**	**+0.4**
KARP	**Karpathos**	**2.95**	**77**	*e*PN	**Pn**	**04 37 17.1**	**+1.4**
KARP	**Karpathos**	**2.95**	**77**	*e*Pn	**Pn**	**04 37 17.1**	**+1.4**
LTK	**Loutraki**	**3.13**	**350**	*e*PN	**Pn**	**04 37 19.1**	**+1.0**
LTK	**Loutraki**	**3.13**	**350**	*e*Pn	**Pn**	**04 37 19.1**	**+1.0**
GUR	**Goura**	**3.18**	**341**	*e*PN	**Pn**	**04 37 20.4**	**+1.6**
GUR	**Goura**	**3.18**	**341**	*e*Pn	**Pn**	**04 37 20.4**	**+1.6**
KLV	**Kalavryta, Ach**	**3.33**	**339**	*e*PN	**Pn**	**04 37 22.2**	**+1.3**
KLV	**Kalavryta, Ach**	**3.33**	**339**	*e*Pn	**Pn**	**04 37 22.2**	**+1.3**
LAKA	**Lakka**	**3.56**	**339**	*e*PN	**Pn**	**04 37 24.7**	**+0.7**
LAKA	**Lakka**	**3.56**	**339**	*e*Pn	**Pn**	**04 37 24.7**	**+0.7**
KALE	**Kalithea**	**3.66**	**341**	*e*PN	**Pn**	**04 37 26.0**	**+0.6**
KALE	**Kalithea**	**3.66**	**341**	*e*Pn	**Pn**	**04 37 26.0**	**+0.6**
EFP	**Efpalio**	**3.76**	**339**	*e*PN	**Pn**	**04 37 28.4**	**+1.7**
EFP	**Efpalio**	**3.76**	**339**	*e*Pn	**Pn**	**04 37 28.4**	**+1.7**
VLS	**Valsamata**	**4.06**	**324**	*e*PN	**Pn**	**04 37 32.5**	**+1.6**
VLS	**Valsamata**	**4.06**	**324**	*e*Pn	**Pn**	**04 37 32.5**	**+1.6**
AGG	**Agios Georgios**	**4.21**	**346**	*e*PN	**Pn**	**04 37 33.8**	**+0.8**
AGG	**Agios Georgios**	**4.21**	**346**	*e*Pn	**Pn**	**04 37 33.8**	**+0.8**
EVR	**Evrytania**	**4.24**	**340**	*e*PN	**Pn**	**04 37 34.5**	**+1.1**
EVR	**Evrytania**	**4.24**	**340**	*e*Pn	**Pn**	**04 37 34.5**	**+1.1**
GERES	**GERESS Array B**	**15.73**	**335**	Pn	**Pn**	**04 40 11.7**	**+1.4**
	0.1nm,0.3s,baz=155,slow=12,SNR=3.7						
HFS	**Hagfors**		**26.04**	**349**	P	**P**	**04 41 57.9**	**-3.9**
	1.3nm,0.9s,baz=143,slow=13,SNR=4.7						
TORD	**Torodi Ar. Bea**		**29.40**	**228**	P	P	04 42 25.1	-7.1
	0.4nm,0.9s,baz=31,slow=8.7,SNR=3.7							
MKAR	**Makanchi Array**	**44.94**		**56**	P	P	04 44 40.0	-3.8
	0.5nm,0.7s,baz=270,slow=7.9,SNR=5.4							
YKA	**Yellowknife Ar**		**77.28**	**342**	P	P	04 48 18.6	-4.3
	0.1nm,0.7s,baz=40,slow=5.1,SNR=3.7							

*JMA **25** 04:40:13.3±0.3,24°.76N×122°.48E,h14km,M2.6*
*ISCJB **25** 04:40:14.4±0.6,24°.63N±0°.03×122°.53E±0°.02,h8km±4km, Error ellipse: s-maj=5.8km s-min=2.8km az=11.5*
*TAP **25** 04:40:14.4,24°.66N×122°.52E,h15km±1km,ML3.0,C*

ISC 25 04:40:14.8±1.1,**24°.63N**±0°.04×**122°.53E**±0°.03,**h20**km±4km, **n21,σ0°.46/37,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.47**	**111**	P	**Pg**	**04 40 24.2**	**-0.2**
YOJ				*e*S	**Sb**	**04 40 32.0**	**+1.0**
EGS		**0.58**	**292**	*i* P	**Pb**	**04 40 25.8**	**-0.4**
	baz=288						
EGS				*e*S	**Sb**	**04 40 33.9**	**-0.2**
	baz=288						
TWB1	**Santiao Chiao**	**0.62**	**308**	P	**Pb**	**04 40 26.7**	**-0.2**
	baz=305						
TWB1				S	**Sb**	**04 40 34.7**	**-0.4**
	baz=305						
TWC	**Suao**	**0.62**	**268**	P	**Pb**	**04 40 25.9**	**-1.0**
	baz=265						
TWC				S	**Sb**	**04 40 35.2**	**+0.1**
	baz=265						
ENA	**Nanau**	**0.74**	**254**	*e*P	**Pb**	**04 40 28.9**	**-0.2**
	baz=261						
ENA				*e*S	**Sb**	**04 40 39.0**	**+0.2**
	baz=261						
TWE	**Neicheng**	**0.79**	**277**	P	**Pb**	**04 40 29.2**	**-0.6**
	baz=266						
TWE				S	**Sg**	**04 40 40.6**	**-0.2**
	baz=266						
NWF	**Wu-fen Shan**	**0.81**	**303**	P	**Pg**	**04 40 30.5**	**-0.1**
	baz=301						
NWF				*e*S	**Sg**	**04 40 41.5**	**+0.2**
	baz=301						
ENTT	**Nioudou**	**0.88**	**271**	P	**Pb**	**04 40 31.6**	**+0.3**
	baz=261						
ENTT				*e*S	**Sg**	**04 40 43.3**	**-0.2**
	baz=261						
TWD	**Chiawan**	**1.01**	**237**	*e*P	**Pn**	**04 40 34.0**	**+0.1**
	baz=244						
TWD				*e*S	**Sg**	**04 40 47.8**	**0.0**
	baz=244						
TWY	**Chenhua**	**1.06**	**307**	*e*P	**Pn**	**04 40 34.6**	**+0.1**
	baz=305						
HWA	**Hwalien**	**1.06**	**232**	*e*P	**Pn**	**04 40 34.7**	**+0.1**
	baz=230						
HWA				*e*S	**Sg**	**04 40 49.4**	**-0.1**
	baz=230						
NSK	**Sanguang**	**1.06**	**273**	P	**Pb**	**04 40 34.6**	**0.0**
	baz=266						
NSK				*e*S	**Sb**	**04 40 47.5**	**-0.7**
	baz=266						
NNS	**Nan Shan**	**1.07**	**260**	*e*P	**Pb**	**04 40 34.8**	**+0.1**
	baz=257						
PCYT	**Pengchaiyu**	**1.08**	**337**	*e*P	**Pn**	**04 40 35.2**	**+0.4**
	baz=336						
PCYT				*e*S	**Sg**	**04 40 49.9**	**0.0**
	baz=336						
TWS1	**Kuangyinshan**	**1.11**	**295**	*e*P	**Pg**	**04 40 37.2**	**+0.9**
	baz=293						
IRIF	**Iriomote-Funau**	**1.14**	**105**	P	**Pn**	**04 40 35.9**	**+0.3**
IRIF				*e*S	**Sn**	**04 40 51.2**	**+0.6**
WHF	**Hehuan Shan**	**1.25**	**247**	*e*P	**Pb**	**04 40 38.1**	**+0.2**
	baz=254						
WHF				*e*S	**Sb**	**04 40 53.8**	**0.0**
	baz=254						
HATJ	**Hateruma jima**	**1.30**	**116**	P	**Pn**	**04 40 38.3**	**+0.5**
HATJ				*e*S	**Sg**	**04 40 56.4**	**-0.5**
NSTT	**Nanjuang**	**1.39**	**270**	*e*P	**Pg**	**04 40 41.9**	**+0.3**
	baz=285						
JKRS	**Kuro-shima**	**1.41**	**106**	*e*S	**Sn**	**04 40 56.3**	**-1.0**
JIJ	**Ishigaki jima**	**1.50**	**100**	P	**Pn**	**04 40 40.6**	**+0.1**
JIJ				*e*S	**Sn**	**04 40 58.8**	**-0.7**

*ISCJB **25** 04:46:06.4±0.4,37°.14N±0°.03×71°.99E±0°.06,h142km, mb3.7/15, Error ellipse: s-maj=7.2km s-min=3.3km az=158.0*
*IDC **25** 04:46:08.3±3.6,37°.16N×71°.87E,h143km±31km,mb3.5/14, mb1 3.6/18,mb1mx3.5/32,mbtmp3.5/18,MS2.8/1, Ms1 2.8/1,ms1mx2.2/43,Error ellipse: s-maj=26.5km s-min=12.4km az=10.0*
*NNC **25** 04:46:12.5±3.9,37°.60N×71°.61E,h134km±41km,mb3.3, mpv4.2,Error ellipse: s-maj=32.8km s-min=19.1km az=11.0*

ISC 25 04:46:08.0±0.5,**37°.25N**±0°.05×**72°.03E**±0°.07,**h142**km,**n60,** σ**1°.95/63,mb3.8/15,6C-4D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.42**	**182**	P	**Pn**	**04 47 02.1**	**+1.5**
CEP				S	**Sn**	**04 47 44.0**	**+2.6**
CHCP	**Chirah Chowk**	**3.73**	**164**	P	Pn	04 47 07.6	+3.1
THW	**Thamme Wali**	**4.46**	**183**	P	**Pn**	**04 47 14.8**	**+0.7**
AML	**Almayashu**	**5.04**	**14**	P	**Pn**	**04 47 23.1**	**+1.0**
	SNR=317						
UCH	**Uchtor**	**5.32**	**20**	P	**Pn**	**04 47 27.7**	**+1.8**
	SNR=7.3						
KZA	**Kyzart**	**5.42**	**26**	P	**Pn**	**04 47 27.6**	**+0.4**
	SNR=7.2						
EKS2	**Erkin-Say**	**5.57**	**13**	P	**Pn**	**04 47 30.3**	**+1.5**
	SNR=7.5						
THN	**Thein Dam**	**5.69**	**147**	*e*PKP	Pn	04 47 26.4	-3.9
THN				*e*S	**Sn**	**04 48 29.0**	**-5.7**
AAK	**Ala-Archa**	**5.70**	**19**	P	**Pn**	**04 47 32.2**	**+1.6**
	SNR=27						
AAK	**Ala-Archa**	**5.70**	**19**	P	**Pn**	**04 47 32.3**	**+1.6**
	10.0nm,0.3s,baz=173,slow=5.8,SNR=52						
AAK				S	**Sn**	**04 48 34.1**	**-1.1**
	1.5nm,0.3s,baz=199,slow=13,SNR=4.2						
DLH	**Dalhousie**	**5.71**	**144**	*e*PKP	**Pn**	**04 47 31.0**	**+0.1**
DLH				*e*S	**Sn**	**04 48 34.0**	**-1.6**
KBK	**Karagaybulak**	**5.84**	**22**	P	**Pn**	**04 47 34.6**	**+2.1**
	SNR=14						
ULHL	**Ulahol**	**5.95**	**32**	P	**Pn**	**04 47 35.0**	**+0.9**
	SNR=36						
KK31	**Karatay Array**	**5.96**	**349**	⇓P	**Pn**	**04 47 33.5**	**-0.5**
	15nm,0.5s,baz=172,slow=9.2,SNR=134						
KK31				⇑S	**Sn**	**04 48 37.7**	**-3.4**
	164nm,0.6s,baz=170,slow=20,SNR=30						
CHMS	**Chumysh**	**6.11**	**19**	P	**Pn**	**04 47 37.4**	**+1.4**
	SNR=21						
TKM2	**Tokmak 2**	**6.29**	**25**	⇑P	**Pn**	**04 47 39.8**	**+1.3**
	12nm,0.6s						
TKM2				⇑S	**Sn**	**04 48 50.3**	**+1.0**
	29nm,0.8s						
TKM2	**Tokmak 2**	**6.29**	**25**	P	**Pn**	**04 47 37.6**	**-0.9**
	SNR=6.0						
USP	**Ospenovka**	**6.30**	**17**	P	**Pn**	**04 47 39.2**	**+0.7**
	SNR=14						
KKR	**Kurukshetra**	**8.30**	**150**	*e*S	**Sn**	**04 49 35.1**	**-2.5**
BHGR	**Bahadurgarh**	**9.48**	**153**	*ex*	x	04 50 14.1	
KHET	**Khetri**	**9.69**	**160**	*e*PKP	**Pn**	**04 48 21.7**	**-2.3**
KHET				*e*S	Sn	04 50 02.5	-8.8
KHET				AML	AML	04 50 08.0	
	comp=N,137nm,0.0s						
KHET				AML	AML	04 50 08.1	
	comp=E,107nm,0.2s						
AYAN	**Aya Nagar**	**9.74**	**152**	*e*S	Sn	04 50 04.5	-7.9
AYAN				AML	AML	04 50 12.0	
	comp=Z,24nm,0.5s						
KUDL	**Kundal**	**9.83**	**156**	*e*PKP	**Pn**	**04 48 24.0**	**-1.8**
KUDL				*e*S	Sn	04 50 06.0	-8.6
KUDL				AML	AML	04 50 08.4	
	comp=N,5.6nm,0.3s						
KUDL				AML	AML	04 50 08.8	
	comp=E,12nm,0.5s						
MKAR	**Makanchi Array**	**12.20**	**35**	P	**Pn**	**04 48 58.2**	**+1.3**
	comp=E,0.1nm,0.3s,baz=219,slow=14,SNR=5.8						
PYUN	**Piuthan**	**12.97**	**132**	*e*P	Pn	04 49 04.5	-2.8
	comp=E,64nm,0.5s						
DANN	**Dangsing**	**13.26**	**129**	*e*P	**Pn**	**04 49 08.5**	**-2.6**
	comp=E,44nm,0.6s						
KOLN	**Koldanda**	**13.58**	**131**	*e*P	**Pn**	**04 49 12.7**	**-2.4**
	comp=E,18nm,0.3s						
KUR16	**Kurchatov Arra**	**14.15**	**17**	⇑P	**Pn**	**04 49 24.8**	**+2.9**
	comp=E,0.3nm,0.7s						
KURBB	**Kurchatov Arra**	**14.15**	**17**	P	Pn	04 49 19.2	-2.6
	comp=E,0.1nm,0.3s,baz=209,slow=10,SNR=4.9						
KURK	**Kurchatov**	**14.26**	**17**	⇓P	**P**	**04 49 26.4**	**+0.1**
	comp=E,6.5nm,0.8s						
KKN	**Kakani**	**14.62**	**126**	*e*P	**Pn**	**04 49 26.2**	**-1.9**
	comp=E,35nm,0.6s						
DMN	**Daman**	**14.63**	**127**	*e*P	**Pn**	**

Ms1 2.8/3,ms1mx2.3/37,Error ellipse: s-maj=22.3km s-min=14.4km az=5.0
SKO ***25*** *04:50:02.7,41°.24N×22°.70E,h15km,MS3.2,ML3.6*
ATH ***25*** *04:50:02.3,41°.34N×22°.68E,h20km±1km,MD3.3/27, ML3.5*
ISCJB ***25*** *04:50:02.5±0.3,41°.29N±0°.01×22°.78E±0°.02,h8km±2km, mb3.5/5,Error ellipse: s-maj=2.4km s-min=1.8km az=31.5*
SOF ***25*** *04:50:02.8,41°.35N×22°.67E,h10km,MD3.6*
CSEM ***25*** *04:50:03.2±0.1,41°.29N×22°.72E,h2km,ML3.6,Error ellipse: s-maj=2.3km s-min=1.9km az=53.0*
PDG ***25*** *04:50:03.2±0.6,41°.29N×22°.73E,h8km,ML3.4/9,Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
THE ***25*** *04:50:03.8,41°.26N×22°.69E,h4km±1km,ML3.8/2,Error ellipse: s-maj=1.7km s-min=0.8km az=212.0*
BEO ***25*** *04:50:03.6±0.6,41°.30N×22°.69E,h6km±2km,ML3.6/1*
ISC 25 04:50:03.2±0.8,41°29N±0°.02×22°70E±0°.01,h8km±5km, n283,σ1§19/339,mb3.6/5,30C-26D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**290**	P	**Pg**	**04 50 05.6**	**0.0**
VAY	**Valandovo**	**0.10**	**290**	*e*Pg	**Pg**	**04 50 05.8**	**+0.2**
VAY				*e*Sg	**Sg**	**04 50 07.7**	**+0.5**
VAY				*e*Lg	Lg	04 50 07.8	
	comp=N,68μm,0.3s						
VAY				*e*Lg	Lg	04 50 07.8	
	comp=E,31μm,0.5s						
VAY	**Valandovo**	**0.10**	**290**	*e*Pg	**Pg**	**04 50 05.8**	**+0.2**
VAY				*e*Sg	**Sg**	**04 50 07.7**	**+0.5**
VAY				*e*Lg	Lg	04 50 07.8	
	comp=N,68μm,0.3s						
VAY				*e*Lg	Lg	04 50 07.8	
	comp=E,31μm,0.5s						
VAY	**Valandovo**	**0.10**	**290**	*i* Pg	**Pg**	**04 50 05.8**	**+0.2**
VAY				*e*Lg	Lg	04 50 07.7	
	comp=N,68μm,0.3s						
VAY				*i* Sg	**Sg**	**04 50 07.7**	**+0.5**
VAY				*e*Lg	Lg	04 50 07.9	
	comp=E,31μm,0.5s						
VAY	**Valandovo**	**0.10**	**290**	P	**Pg**	**04 50 05.6**	**0.0**
VAY				*e*Sg	**Sg**	**04 50 07.7**	**+0.5**
KNT	**Kendrikon**	**0.19**	**129**	P	**Pg**	**04 50 07.7**	**+0.6**
KNT				S	**Sg**	**04 50 10.6**	**+0.8**
KNT	**Kendrikon**	**0.19**	**129**	P	**Pg**	**04 50 07.7**	**+0.6**
KNT				S	**Sg**	**04 50 10.6**	**+0.8**
GRG	**Griva**	**0.40**	**214**	P	**Pg**	**04 50 11.6**	**+0.6**
GRG				S	**Sg**	**04 50 17.4**	**+1.2**
GRG	**Griva**	**0.40**	**214**	*e*PB	**Pb**	**04 50 11.9**	**-0.7**
GRG				*e*SB	**Sg**	**04 50 17.4**	**+1.2**
GRG	**Griva**	**0.40**	**214**	P	**Pg**	**04 50 11.6**	**+0.6**
GRG	**Griva**	**0.40**	**214**	*e*Pb	**Pb**	**04 50 11.9**	**-0.7**
KKB	**Krupnik**	**0.65**	**26**	*i* Pg	**Pg**	**04 50 15.6**	**-0.1**
KKB	**Krupnik**	**0.65**	**26**	*i* Pg	**Pg**	**04 50 15.6**	**-0.1**
SOH	**Sokhos**	**0.68**	**133**	P	**Pg**	**04 50 16.2**	**-0.1**
SOH	**Sokhos**	**0.68**	**133**	*e*PN	**Pg**	**04 50 16.2**	**-0.1**
SOH				*e*SN	**Sb**	**04 50 26.8**	**-0.1**
SOH	**Sokhos**	**0.68**	**133**	P	**Pg**	**04 50 16.2**	**-0.1**
SOH				*e*Sn	**Sb**	**04 50 26.8**	**-0.1**
THE	**Thessaloniki**	**0.68**	**163**	P	**Pg**	**04 50 16.4**	**+0.1**
THE	**Thessaloniki**	**0.68**	**163**	P	**Pg**	**04 50 16.4**	**+0.1**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**04 50 16.3**	**-0.3**
SRS	**Serrai**	**0.69**	**104**	P	**Pg**	**04 50 16.3**	**-0.3**
HORT	**Hortiatis**	**0.75**	**156**	P	**Pg**	**04 50 17.8**	**+0.2**
HORT	**Hortiatis**	**0.75**	**156**	P	**Pg**	**04 50 17.8**	**+0.2**
MMB	**Musomiste**	**0.83**	**68**	Pg	**Pg**	**04 50 19.1**	**-0.1**
MMB	**Musomiste**	**0.83**	**68**	Pg	**Pg**	**04 50 19.1**	**-0.1**
NVR	**Nevrokopi**	**0.88**	**85**	P	**Pg**	**04 50 19.9**	**-0.2**
NVR	**Nevrokopi**	**0.88**	**85**	*e*PN	**Pg**	**04 50 19.9**	**-0.2**
NVR				*e*SN	**Sg**	**04 50 31.9**	**+0.4**
NVR	**Nevrokopi**	**0.88**	**85**	P	**Pg**	**04 50 19.9**	**-0.2**
NVR				*e*Sn	**Sg**	**04 50 31.9**	**+0.4**
BIA	**Bitola**	**1.07**	**256**	P	**Pg**	**04 50 23.4**	**-0.4**
BIA				S	**Sg**	**04 50 37.8**	**+0.1**
BIA	**Bitola**	**1.07**	**256**	*e*Pg	**Pn**	**04 50 24.5**	**-0.2**
BIA	**Bitola**	**1.07**	**256**	*e*Pg	**Pn**	**04 50 24.5**	**-0.2**
BIA	**Bitola**	**1.07**	**256**	*e*Pg	**Pg**	**04 50 23.4**	**-0.4**
BIA	**Bitola**	**1.07**	**256**	P	**Pg**	**04 50 23.4**	**-0.4**
BIA	**Bitola**	**1.07**	**256**	*e*Pg	**Pn**	**04 50 24.4**	**-0.2**
BIA				S	**Sg**	**04 50 37.8**	**+0.1**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**04 50 23.6**	**-0.2**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pg**	**04 50 23.5**	**-0.2**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**04 50 23.6**	**-0.2**
FNA	**Florina**	**1.12**	**244**	P	**Pg**	**04 50 24.6**	**-0.1**
FNA				S	**Sb**	**04 50 39.6**	**0.0**
FNA	**Florina**	**1.12**	**244**	P	**Pg**	**04 50 24.6**	**-0.1**
FNA				S	**Sb**	**04 50 39.6**	**0.0**
SKO	**Skopje**	**1.17**	**306**	P	**Pn**	**04 50 25.7**	**-0.2**
SKO	**Skopje**	**1.17**	**306**	*e*Pn	**Pn**	**04 50 26.5**	**+0.6**
SKO				*e*Sn	**Sn**	**04 50 42.8**	**+0.8**
SKO				*e*Lg	Lg	04 50 43.0	
	comp=E,663nm,0.6s						
SKO				*e*Lg	Lg	04 50 44.0	
	comp=N,867nm,0.5s						
SKO	**Skopje**	**1.17**	**306**	*e*Pn	**Pn**	**04 50 26.5**	**+0.6**
SKO				*e*Sn	**Sn**	**04 50 42.8**	**+0.8**
SKO				*e*Lg	Lg	04 50 43.0	
	comp=E,663nm,0.6s						
SKO				*e*Lg	Lg	04 50 44.0	
	comp=N,867nm,0.5s						
SKO	**Skopje**	**1.17**	**306**	*e*Pn	**Pn**	**04 50 26.1**	**+0.2**
SKO				*e*Sg	**Sn**	**04 50 43.0**	**+0.9**
SKO	**Skopje**	**1.17**	**306**	*e*Pg	**Pb**	**04 50 25.5**	**-0.2**
SKO				*e*Sg	**Sn**	**04 50 41.8**	**-0.3**
SKO	**Skopje**	**1.17**	**306**	P	**Pn**	**04 50 25.7**	**-0.2**
SKO	**Skopje**	**1.17**	**306**	*e*Pn	**Pn**	**04 50 27.0**	**+1.1**
SKO				*e*Sg	**Sn**	**04 50 41.8**	**-0.3**
SKO				*e*Sn	**Sb**	**04 50 43.3**	**+2.3**
SKO				*e*Lg	Lg	04 50 44.5	
	comp=N,867nm,0.5s						
LIT	**Litokhoron**	**1.19**	**188**	P	**Pb**	**04 50 25.2**	**-0.9**
LIT	**Litokhoron**	**1.19**	**188**	P	**Pb**	**04 50 25.2**	**-0.9**
KZN	**Kozani**	**1.21**	**216**	*e*PN	**Pb**	**04 50 25.7**	**-0.6**
KZN	**Kozani**	**1.21**	**216**	*e*Pn	**Pb**	**04 50 25.7**	**-0.6**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**04 50 28.2**	**-0.3**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**04 50 28.2**	**-0.3**
VTS	**Vitosha**	**1.36**	**16**	P	**Pn**	**04 50 28.9**	**+0.2**
VTS	**Vitosha**	**1.36**	**16**	*i*Pg	**Pb**	**04 50 29.2**	**+0.1**
VTS				*e*Sg	**Sn**	**04 50 47.1**	**+0.1**
VTS	**Vitosha**	**1.36**	**16**	*i*P	**Pn**	**04 50 29.0**	**+0.2**
VTS	**Vitosha**	**1.36**	**16**	Pg	**Pn**	**04 50 28.8**	**+0.1**
VTS	**Vitosha**	**1.36**	**16**	P	**Pn**	**04 50 28.9**	**+0.2**
VTS	**Vitosha**	**1.36**	**16**	*i*Pg	**Pb**	**04 50 29.2**	**+0.1**
VTS				*e*Sg	**Sn**	**04 50 47.1**	**+0.1**
KAVA	**Kavala**	**1.40**	**101**	P	**Pn**	**04 50 29.1**	**0.0**
KAVA				S	**Sb**	**04 50 47.4**	**-0.3**
KAVA	**Kavala**	**1.40**	**101**	P	**Pn**	**04 50 29.1**	**0.0**
KAVA				S	**Sb**	**04 50 47.4**	**-0.3**
NEST	**Nestorio**	**1.52**	**236**	P	**Pb**	**04 50 31.5**	**-0.3**
NEST	**Nestorio**	**1.52**	**236**	P	**Pb**	**04 50 31.5**	**-0.3**
PAIG	**Paliouri**	**1.55**	**151**	P	**Pn**	**04 50 30.9**	**-0.2**
PAIG	**Paliouri**	**1.55**	**151**	*e*PN	**Pn**	**04 50 31.1**	**0.0**
PAIG				*e*SN	**Sg**	**04 50 53.8**	**+0.8**
PAIG	**Paliouri**	**1.55**	**151**	*e*Pn	**Pn**	**04 50 31.1**	**0.0**
PAIG				*e*Sn	**Sg**	**04 50 53.8**	**+0.8**
RZN	**Rozhen**	**1.57**	**74**	P	**Pb**	**04 50 32.5**	**-0.1**
RZN	**Rozhen**	**1.57**	**74**	P	**Pb**	**04 50 32.5**	**-0.1**
KBN	**Korca**	**1.59**	**246**	*i* PN	**Pn**	**04 50 31.1**	**-0.7**
KBN				*i* SN	Sg	04 51 00.3	+6.0
KBN	**Korca**	**1.59**	**246**	*i* Pn	**Pn**	**04 50 31.1**	**-0.7**
BARS	**Barje**	**1.67**	**337**	*i*Pn	**Pn**	**04 50 32.7**	**-0.1**
BARS				*e*Sn	**Sb**	**04 50 55.9**	**+0.6**
BARS	**Barje**	**1.67**	**337**	*i*Pn	**Pn**	**04 50 32.7**	**-0.1**
BARS				*e*Sn	**Sb**	**04 50 55.9**	**+0.6**
PGB	**Panagyurishte**	**1.67**	**40**	Pg	**Pn**	**04 50 33.3**	**+0.4**
PGB	**Panagyurishte**	**1.67**	**40**	Pg	**Pn**	**04 50 33.3**	**+0.4**
PLD	**Plovdiv**	**1.71**	**61**	P	**Pb**	**04 50 34.4**	**-0.5**
PLD	**Plovdiv**	**1.71**	**61**	*e*Pn	**Pb**	**04 50 34.4**	**-0.5**
PLD	**Plovdiv**	**1.71**	**61**	P	**Pb**	**04 50 35.2**	**+0.3**
PLD				Pg	**Pg**	**04 50 37.2**	**+1.2**
PLD	**Plovdiv**	**1.71**	**61**	P	**Pn**	**04 50 34.4**	**-0.5**
PHP	**Peshkopia**	**1.74**	**284**	*i* PN	**Pn**	**04 50 34.4**	**+0.5**
PHP				*i* SN	**Sg**	**04 50 58.9**	**-0.3**
PHP	**Peshkopia**	**1.74**	**284**	P	**Pn**	**04 50 34.3**	**+0.4**
PHP	**Peshkopia**	**1.74**	**284**	*i* Pn	**Pn**	**04 50 34.4**	**+0.5**
PHP				*i* Sn	**Sg**	**04 50 58.9**	**-0.3**
THL	**Klokotos Trika**	**1.80**	**197**	*e*PN	**Pn**	**04 50 34.8**	**+0.3**
THL	**Klokotos Trika**	**1.80**	**197**	*e*Pn	**Pn**	**04 50 34.8**	**+0.3**
XOR	**Xorichti**	**1.95**	**169**	P	**Pn**	**04 50 36.4**	**-0.3**
XOR	**Xorichti**	**1.95**	**169**	P	**Pn**	**04 50 36.4**	**-0.3**
ZAPS	**Zavoj**	**1.99**	**359**	*i*Pn	**Pn**	**04 50 38.3**	**+1.1**
KDZ	**Kurdzhali**	**2.08**	**79**	P	**Pn**	**04 50 38.8**	**+0.4**
KDZ	**Kurdzhali**	**2.08**	**79**	P	**Pn**	**04 50 38.8**	**+0.4**
KDZ	**Kurdzhali**	**2.08**	**79**	Pg	**Pg**	**04 50 45.0**	**+2.0**
TIR	**Tirane**	**2.13**	**273**	*i* PN	**Pb**	**04 50 42.2**	**0.0**
TIR				*i* SN	**Sg**	**04 51 13.3**	**+1.5**
TIR	**Tirane**	**2.13**	**273**	*i* Pn	**Pb**	**04 50 42.2**	**0.0**
SKIA	**Skiathos**	**2.20**	**164**	P	**Pn**	**04 50 39.8**	**-0.2**
SKIA	**Skiathos**	**2.20**	**164**	P	**Pn**	**04 50 39.8**	**-0.2**
MPEP	**Malo Peshtene**	**2.21**	**20**	P	**Pn**	**04 50 40.7**	**+0.5**
MPEP				Pg	**Pg**	**04 50 45.0**	**-0.5**
PUK	**Puka**	**2.23**	**291**	*i* PN	**Pn**	**04 50 41.7**	**+1.1**
PUK				*i* SN	**Sg**	**04 51 16.9**	**+1.9**
PUK	**Puka**	**2.23**	**291**	*i* Pn	**Pn**	**04 50 41.7**	**+1.1**
BCI	**Bajram Curri**	**2.24**	**300**	*i* PN	**Pn**	**04 50 41.4**	**+0.7**
BCI				*i* SN	**Sg**	**04 51 20.1**	**+4.8**
BCI	**Bajram Curri**	**2.24**	**300**	*i* Pn	**Pn**	**04 50 41.4**	**+0.7**
DIM	**Dimitrovgrad**	**2.26**	**69**	P	**Pg**	**04 50 46.2**	**-0.3**
DIM	**Dimitrovgrad**	**2.26**	**69**	P	**Pg**	**04 50 46.2**	**-0.3**
SELS	**Selova**	**2.26**	**329**	*i*Pn	**Pn**	**04 50 40.6**	**-0.4**
AGG	**Agios Georgios**	**2.28**	**187**	P	**Pn**	**04 50 41.4**	**+0.2**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PN	**Pn**	**04 50 41.7**	**+0.5**
AGG	**Agios Georgios**	**2.28**	**187**	P	**Pn**	**04 50 41.4**	**+0.2**
AGG	**Agios Georgios**	**2.28**	**187**	*e*Pn	**Pn**	**04 50 41.7**	**+0.5**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*PN	**Pn**	**04 50 41.7**	**+0.3**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*Pn	**Pn**	**04 50 41.7**	**+0.3**
AOS	**Alonnisos**	**2.30**	**156**	*e*PN	**Pn**	**04 50 41.2**	**-0.2**
AOS	**Alonnisos**	**2.30**	**156**	*e*Pn	**Pn**	**04 50 41.2**	**-0.2**
LIA	**Limnos Island**	**2.34**	**125**	*e*PN	**Pn**	**04 50 42.1**	**0.0**
LIA	**Limnos Island**	**2.34**	**125**	*e*Pn	**Pn**	**04 50 42.1**	**0.0**
PVY	**Plav**	**2.43**	**304**	*i*Pn	**Pn**	**04 50 44.2**	**+0.9**
PVY				*e*Sn	**Sb**	**04 51 16.6**	**-0.8**
PVY	**Plav**	**2.43**	**304**	*i*Pn	**Pn**	**04 50 44.2**	**+0.9**
PVY				*e*Sn	**Sb**	**04 51 16.6**	**-0.8**
SMIA	**Simia**	**2.44**	**171**	P	**Pn**	**04 50 43.4**	**+0.1**
SMIA	**Simia**	**2.44**	**171**	P	**Pn**	**04 50 43.4**	**+0.1**
EVR	**Evrytania**	**2.46**	**196**	*e*PB	**Pn**	**04 50 44.8**	**+1.0**
EVR	**Evrytania**	**2.46**	**196**	*e*Pb	**Pn**	**04 50 44.8**	**+1.0**
ALN	**Alexandroupoli**	**2.56**	**98**	P	**Pn**	**04 50 45.2**	**+0.2**
ALN				S	**Sb**	**04 51 19.2**	**-1.8**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*PN	**Pn**	**04 50 45.4**	**+0.4**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*Pn	**Pn**	**04 50 45.4**	**+0.4**
ALN				S	**Sb**	**04 51 19.2**	**-1.8**
ATAL	**Atalanti**	**2.60**	**174**	P	**Pn**	**04 50 45.5**	**-0.1**
ATAL	**Atalanti**	**2.60**	**174**	P	**Pn**	**04 50 45.5**	**-0.1**
BOLS	**Boljevac**	**2.60**	**348**	*i*Pn	**Pn**	**04 50 44.6**	**-1.0**
BOLS				*e*Sg	**Sb**	**04 51 23.5**	**+1.3**
BOLS	**Boljevac**	**2.60**	**348**	*i*Pn	**Pn**	**04 50 44.6**	**-1.0**
BEY	**Berane**	**2.62**	**308**	*e*Pn	**Pn**	**04 50 47.0**	**+1.0**
BEY				*e*Sn	**Sb**	**04 51 21.4**	**-1.5**
IVA	**Berane**	**2.62**	**308**	*e*Pn	**Pn**	**04 50 47.0**	**+1.0**
IVA				*e*Sn	**Sb**	**04 51 21.4**	**-1.5**
ENEZ	**Enez**	**2.67**	**101**	*e*PN	Pn	04 50 37.2	-9.3
ULC	**Ulcinj**	**2.68**	**286**	*i*Pn	**Pn**	**04 50 48.8**	**+2.1**
ULC				*e*Sn	**Sb**	**04 51 23.3**	**-1.1**
ULC	**Ulcinj**	**2.68**	**286**	*i*Pn	**Pn**	**04 50 48.8**	**+2.1**
ULC				*e*Sn	**Sb**	**04 51 23.3**	**-1.1**
KEK	**Kerkira**	**2.71**	**236**	*e*PB	**Pn**	**04 50 49.0**	**+1.9**
KEK	**Kerkira**	**2.71**	**236**	*e*Pb	**Pn**	**04 50 49.0**	**+1.9**
PVL	**Pavlikeni**	**2.75**	**45**	P	**Pb**	**04 50 53.5**	**+0.9**
PDG	**Podgorica**	**2.81**	**295**	*i*Pn	**Pn**	**04 50 50.2**	**+1.7**
PDG				*e*Sn	**Sb**	**04 51 25.6**	**-2.8**
TTG	**Podgorica**	**2.81**	**295**	*i*Pn	**Pn**	**04 50 50.2**	**+1.7**
TTG				*e*Sn	**Sb**	**04 51 25.6**	**-2.8**
EFP	**Efpalio**	**2.92**	**192**	*e*PN	**Pn**	**04 50 50.8**	**+0.8**
EFP				*e*SB	**Sn**	**04 51 27.4**	**+2.2**
EFP	**Efpalio**	**2.92**	**192**	*e*Pn	**Pn**	**04 50 50.8**	**+0.8**
EFP				*e*Sb	**Sn**	**04 51 27.4**	**+2.2**
KALE	**Kalithea**	**2.92**	**189**	*e*PN	**Pn**	**04 50 50.9**	**+0.8**
KALE	**Kalithea**	**2.92**	**189**	*e*Pn	**Pn**	**04 50 50.9**	**+0.8**
LKD2	**Lefkada island**	**2.94**	**213**	*e*PB	**Pn**	**04 50 52.6**	**+2.2**
LKD2	**Lefkada island**	**2.94**	**213**	*e*Pb	**Pn**	**04 50 52.6**	**+2.2**
ERIK	**Erikli-Kesan**	**2.95**	**101**	*e*PN	**Pn**	**04 50 49.2**	**-1.2**
TRIZ	**Trizonia**	**2.96**	**190**	*e*PN	**Pn**	**04 50 51.6**	**+1.1**
TRIZ	**Trizonia**	**2.96**	**190**	*e*Pn	**Pn**	**04 50 51.6**	**+1.1**
GRUS	**Gruza**	**2.99**	**331**	*i*Pn	**Pn**	**04 50 50.9**	**0.0**
GRUS	**Gruza**	**2.99**	**331**	*i*Pn	**Pn**	**04 50 50.9**	**0.0**
GELI	**Tayfur-Gelibol**	**3.00**	**106**	*e*PN	**Pn**	**04 50 50.2**	**-0.8**
BUM	**Brajici-Budva**	**3.02**	**291**	*i*Pn	**Pn**	**04 50 53.5**	**+2.1**
BUM				*e*Sn	**Sb**	**04 51 31.2**	**-3.2**
BUM	**Brajici-Budva**	**3.02**	**291**	*i*Pn	**Pn**	**04 50 53.5**	**+2.1**
BUM				*e*Sn	**Sb**	**04 51 31.2**	**-3.2**
EDRB	**Edirne**	**3.09**	**78**	*e*PN	**Pn**	**04 50 53.4**	**+1.1**
LAKA	**Lakka**	**3.09**	**191**	*e*PN	**Pn**	**04 50 52.9**	**+0.5**
LAKA	**Lakka**	**3.09**	**191**	*e*Pn	**Pn**	**04 50 52.9**	**+0.5**
SZH	**Strazhica**	**3.11**	**49**	P	**Pn**	**04 50 53.4**	**+0.8**
SZH	**Strazhica**	**3.11**	**49**	P	**Pn**	**04 50 53.4**	**+0.8**
EZN	**Ezine**	**3.12**	**117**	*e*PN	**Pn**	**04 50 50.8**	**-2.0**
NKY	**Niksic**	**3.15**	**300**	*i*Pn	**Pn**	**04 50 55.0**	**+1.7**
NKY				*e*Sn	**Sn**	**04 51 34.4**	**+3.2**
NKY	**Niksic**	**3.15**	**300**	*i*Pn	**Pn**	**04 50 55.0**	**+1.7**
NKY				*e*Sn	**Sn**	**04 51 34.4**	**+3.2**
SVIS	**Svilajnac**	**3.17**	**340**	*e*Pn	**Pn**	**04 50 52.1**	**-1.3**
LPK	**Lapseki**	**3.21**	**105**	*e*PN	**Pn**	**04 50 52.4**	**-1.7**
LTK	**Loutraki**	**3.26**	**176**	*e*PN	**Pn**	**04 50 55.3**	**+0.5**
LTK	**Loutraki**	**3.26**	**176**	*e*Pn	**Pn**	**04 50 55.3**	**+0.5**
KLV	**Kalavryta, Ach**	**3.27**	**188**	*e*PN	**Pn**	**04 50 54.3**	**-0.5**
KLV	**Kalavryta, Ach**	**3.27**	**188**	*e*Pn	**Pn**	**04 50 54.3**	**-0.5**
HCY	**Herceg Novi**	**3.35**	**292**	*e*Pn	**Pn**	**04 50 57.2**	**+1.3**
HCY				*e*Sn	**Sn**	**04 51 38.8**	**+2.9**
HCY	**Herceg Novi**	**3.35**	**292**	*e*Pn	**Pn**	**04 50 57.2**	**+1.3**
HCY				*e*Sn	**Sn**	**04 51 38.8**	**+2.9**
GUR	**Goura**	**3.36**	**185**	*e*PN	**Pn**	**04 50 57.2**	**+1.1**
GUR	**Goura**	**3.36**	**185**	*e*Pn	**Pn**	**04 50 57.2**	**+1.1**
ATH	**Athens Observa**	**3.40**	**166**	*e*PN	**Pn**	**04 50 56.1**	**-0.5**
ATH	**Athens Observa**	**3.40**	**166**	*e*Pn	**Pn**	**04 50 56.1**	**-0.5**
UPM	**Unac-Piva**	**3.41**	**305**	*i*Pn	**Pn**	**04 50 58.0**	**+1.1**
UPM				*e*Sn	**Sn**	**04 51 40.3**	**+2.7**
UPM	**Unac-Piva**	**3.41**	**305**	*i*Pn	**Pn**	**04 50 58.0**	**+1.1**
UPM				*e*Sn	**Sn**	**04 51 40.3**	**+2.7**
RKY	**Sarkoy-Tekirda**	**3.44**	**99**	*e*PN	**Pn**	**04 50 55.8**	**-1.4**
SART	**Tekirdag**	**3.44**	**98**	*i* P	**Pn**	**04 50 56.1**	**-1.2**
SART	**Tekirdag**	**3.44**	**98**	*i* P	**Pn**	**04 50 56.1**	**-1.2**
DIVS	**Divibare**	**3.45**	**326**	*i*Pn	**Pn**	**04 50 57.2**	**-0.1**
DIVS	**Divibare**	**3.45**	**326**	*i*Pn	**Pn**	**04 50 57.2**	**-0.1**
BRY	**Bratogost**	**3.49**	**299**	*i*Pn	**Pn**	**04 50 59.9**	**+1.9**
BRY				*e*Sn	**Sn**	**04 51 42.7**	**+3.1**
BRY	**Bratogost**	**3.49**	**299**	*i*Pn	**Pn**	**04 50 59.9**	**+1.9**
BRY				*e*Sn	**Sn**	**04 51 42.7**	**+3.1**
MFT	**Murefte**	**3.50**	**97**	*e*PN	**Pn**	**04 50 57.8**	**-0.2**
KRBG	**Karabiga-Canak**	**3.60**	**103**	*e*PN	Pn	04 50 54.6	-4.7
TKR	**Tekirdag**	**3.67**	**93**	*e*PN	**Pn**	**04 51 00.0**	**-0.2**
CRLT	**Corlu**	**3.80**	**91**	*e*PN	**Pn**	**04 51 01.8**	**-0.3**
CHOS	**Chios island**	**3.88**	**137**	P	**Pn**	**04 51 04.1**	**+0.8**
CHOS	**Chios island**	**3.88**	**137**	*e*PN	**Pn**	**04 51 04.2**	**+0.9**
CHOS	**Chios island**	**3.88**	**137**	P	**Pn**	**04 51 04.1**	**+0.8**
GONE	**Gonen-Balikesi**	**3.99**	**106**	*e*PN	Pn	04 51 01.4	-3.3
TEKS	**Tekeris**	**4.01**	**326**	*i*Pn	**Pn**	**04 51 04.6**	**-0.4**
TEKS	**Tekeris**	**4.01**	**326**	*i*Pn	**Pn**	**04 51 04.6**	**-0.4**
STON	**Ston**	**4.04**	**295**	*e*Pn	**Pn**	**04 51 06.4**	**+1.0**
STON	**Ston**	**4.04**	**295**	*e*Pn	**Pn**	**04 51 06.4**	**+1.0**
BNT	**Bandirma**	**4.07**	**101**	*e*PN	**Pn**	**04 51 04.3**	**-1.5**
ITM	**Ithomi**	**4.14**	**189**	*e*PN	**Pn**	**04 51 09.9**	**+3.1**
ITM	**Ithomi**	**4.14**	**189**	*e*Pn	**Pn**	**04 51 09.9**	**+3.1**
SLVT	**Silivri**	**4.16**	**89**	*e*PN	**Pn**	**04 51 06.8**	**-0.1**
URLA	**Izmir**	**4.19**	**133**	*i* P	**Pn**	**04 51 07.8**	**+0.3**
URLA	**Izmir**	**4.19**	**133**	*i* P	**Pn**	**04 51 07.8**	**+0.3**
CTYL	**Yal??k??y-??at**	**4.21**	**86**	*e*PN	**Pn**	**04 51 08.4**	**+0.7**
BALB	**Balikesir**	**4.28**	**111**	*e*PN	**Pn**	**04 51 07.6**	**-1.1**
ARR	**Arges**	**4.32**	**18**	*i*P	**Pn**	**04 51 09.2**	**-0.1**
ARR	**Arges**	**4.32**	**18**	*i*P	**Pn**	**04 51 09.2**	**-0.1**
BZS	**Buzias**	**4.40**	**350**	*i*P	**Pn**	**04 51 10.0**	**-0.3**
BZS	**Buzias**	**4.40**	**350**	*i*P	**Pn**	**04 51 10.0**	**-0.3**
FGSL	**Fruska Gora**	**4.41**	**332**	*e*Pn	**Pn**	**04 51 09.8**	**-0.7**
FRGS	**Fruska Gora**	**4.41**	**332**	*e*Pn	**Pn**	**04 51 09.8**	**-0.7**
KCTX	**Karacabey (Bur**	**4.42**	**101**	*e*PN	**Pn**	**04 51 09.4**	**-1.1**
SECR		**4.49**	**32**	*i*P	**Pn**	**04 51 13.3**	**+1.8**
SECR		**4.49**	**32**	*i*P	**Pn**	**04 51 13.3**	**+1.8**
VOIR		**4.49**	**22**	*i*P	**Pn**	**04 51 11.9**	**+0.3**
VOIR		**4.49**	**22**	*i*P	**Pn**	**04 51 11.9**	**+0.3**
DYR	**Agios Nikonas**	**4.53**	**184**	*e*PN	**Pn**	**04 51 14.5**	**+2.4**
DYR	**Agios Nikonas**	**4.53**	**184**	*e*Pn	**Pn**	**04 51 14.5**	**+2.4**
IZM	**Izmir**	**4.54**	**128**	*e*PN	**Pn**	**04 51 11.2**	**-1.1**
VLI	**Veliai**	**4.56**	**178**	*e*PN	**Pn**	**04 51 13.8**	**+1.2**
VLI	**Veliai**	**4.56**	**178**	*e*Pn	**Pn**	**04 51 13.8**	**+1.2**
BGKT	**Bogazkoy**	**4.58**	**89**	*e*PN	**Pn**	**04 51 13.3**	**+0.5**
APE	**Apeiranthos**	**4.75**	**151**	*i*P	**Pn**	**04 51 14.6**	**-0.6**
APE	**Apeiranthos**	**4.75**	**151**	*i*P	**Pn**	**04 51 16.1**	**+0.9**
APE	**Apeiranthos**	**4.75**	**151**	*i*P	**Pn**	**04 51 16.1**	**+0.9**
KLYT	**Kilyos**	**4.78**	**88**	*e*PN	Pn	04 51 08.4	-7.1
ISK	**Istanbul-Kandi**	**4.80**	**91**	*e*PN	**Pn**	**04 51 14.1**	**-1.8**
MLR	**Muntele Rosu**	**4.82**	**28**	*i*P	**Pn**	**04 51 17.7**	**+1.4**
MLR	**Muntele Rosu**	**4.82**	**28**	Pn	**Pn**	**04 51 18.0**	**+1.7**
	comp=N,1.1nm,0.3s,baz=215,slow=6.0,SNR=38						
MLR				Sn	**Sn**	**04 52 17.4**	**+5.0**
	comp=N,0.5nm,0.3s,baz=158,slow=15,SNR=3.6						
MLR				Lg	Lg	04 52 37.6	
	comp=N,0.8nm,0.3s,baz=131,slow=23,SNR=5.0						
MLR	**Muntele Rosu**	**4.82**	**28**	*i*P	**Pn**	**04 51 17.7**	**+1.4**
BUY	**Buyukada**	**4.87**	**93**	*e*PN	Pn	04 51 07.5	-9.3
GEMT	**Gemlik**	**4.99**	**98**	*e*PN	**Pn**	**04 51 17.9**	**-0.6**
SILT	**Sile**	**5.24**	**89**	*e*PN

comp=E,12nm,1.0s,baz=243,slow=2.3,SNR=3.3
QSPA South Pole Qui 68.37 180 P **P** **05 05 44.0 +1.8**
comp=E,1.5nm,0.9s,baz=287,slow=1.7,SNR=5.4
DBIC Dimbokro 68.60 73 P **P** **05 05 43.8 -0.5**
comp=E,3.4nm,0.8s,baz=164,slow=6.4,SNR=4.5
TORD Torodi Ar. Bea 77.24 70 P **P** **05 06 34.7 -0.5**
comp=E,0.9nm,0.4s,baz=258,slow=5.6,SNR=16
YKA Yellowknife Ar 91.57 340 P **P** **05 07 47.9 +1.5**
comp=E,0.5nm,0.6s,baz=133,slow=4.3,SNR=20
YKA pP **pP** **05 08 20.6 +0.7**
comp=E,0.4nm,0.9s,baz=136,slow=4.7,SNR=4.7

SKO 25 04:55:11.9, 41°40N×22°67E, h23km, ML0.6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**224**	*i* Pg	Pb	04 55 16.4	+0.2
VAY				*i* Sg	Sb	04 55 18.4	-0.8

*ISK **25** 04:56:12.9, 39°59N×29°25E, h15km, MD2.7*
*CSEM **25** 04:56:12.8±0.3, 39°59N×29°29E, h1km, MD2.7, Error ellipse: s-maj=8.7km s-min=5.1km az=57.0*
*ISCJB **25** 04:56:14.1±0.4, 39°67N±0°02×29°42E±0°04, h0km, Error ellipse: s-maj=5.0km s-min=3.0km az=153.4*
*DDA **25** 04:56:14.5, 39°68N×29°45E, h7km, MD2.6*
ISC 25 04:56:13.1±0.8, 39°63N±0°02×29°28E±0°03, h0km, n32, σ0s82/47, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVSB	**Tavsanli**	**0.23**	**142**	*e*PG	**Pg**	**04 56 17.9**	**+0.5**
TVSB				*e*SG	**Sg**	**04 56 22.6**	**+2.3**
TVSB	**Tavsanli**	**0.23**	**142**	*e*Pg	**Pg**	**04 56 17.9**	**+0.5**
TVSB				*e*Sg	**Sg**	**04 56 22.6**	**+2.3**
ULDT	**Uludag**	**0.53**	**348**	*i* P	**Pg**	**04 56 23.6**	**+0.4**
ULDT				*i* S	**Sb**	**04 56 32.6**	**-0.9**
ULDT	**Uludag**	**0.53**	**348**	*i* P	**Pg**	**04 56 23.6**	**+0.4**
ULDT				*i* S	**Sb**	**04 56 32.6**	**-0.9**
GDZ	**Gediz**	**0.56**	**164**	*i* P	**Pb**	**04 56 25.4**	**-0.5**
GDZ				*i* S	**Sb**	**04 56 35.0**	**+0.5**
GDZ	**Gediz**	**0.56**	**164**	*i* P	**Pb**	**04 56 25.4**	**-0.5**
GDZ				*i* S	**Sb**	**04 56 35.0**	**+0.5**
DURS	**Dursunbey**	**0.62**	**268**	*i* P	**Pn**	**04 56 29.1**	**-0.1**
DURS				*i* S	**Sn**	**04 56 40.6**	**+0.6**
DURS	**Dursunbey**	**0.62**	**268**	*i* P	**Pn**	**04 56 29.1**	**-0.1**
GEMT	**Gemlik**	**0.81**	**355**	*e*PG	**Pb**	**04 56 29.5**	**-0.5**
GEMT				*e*SG	**Sb**	**04 56 41.8**	**+0.3**
GEMT	**Gemlik**	**0.81**	**355**	*e*Pg	**Pb**	**04 56 29.5**	**-0.5**
GEMT				*e*Sg	**Sb**	**04 56 41.8**	**+0.3**
ALT	**Altintas**	**0.86**	**131**	*e*PG	**Pg**	**04 56 29.6**	**+0.1**
ALT	**Altintas**	**0.86**	**131**	*e*Pg	**Pg**	**04 56 29.6**	**+0.1**
YLV	**Yalova**	**0.94**	**4**	*e*PG	**Pb**	**04 56 32.8**	**+0.5**
YLV				*e*SG	**Sb**	**04 56 45.9**	**+0.5**
YLV	**Yalova**	**0.94**	**4**	*e*Pg	**Pb**	**04 56 32.8**	**+0.5**
YLV				*e*Sg	**Sb**	**04 56 45.9**	**+0.5**
KCTX	**Karacabey (Bur**	**0.95**	**312**	*e*PG	**Pg**	**04 56 31.7**	**+0.4**
KCTX				*e*SG	**Sb**	**04 56 46.3**	**+0.6**
KCTX	**Karacabey (Bur**	**0.95**	**312**	*e*Pg	**Pg**	**04 56 31.7**	**+0.3**
KCTX				*e*Sg	**Sb**	**04 56 46.3**	**+0.6**
KULA	**Kula-Manisa**	**1.21**	**204**	*e*PN	**Pg**	**04 56 35.3**	**-1.0**
KULA	**Kula-Manisa**	**1.21**	**204**	*e*Pn	**Pg**	**04 56 35.3**	**-1.0**
ESKT	**Eskisehir**	**1.22**	**95**	*e*PN	**Pg**	**04 56 36.6**	**+0.2**
ESKT	**Eskisehir**	**1.22**	**95**	*e*Pn	**Pg**	**04 56 36.6**	**+0.2**
SEYT	**Eskypehyr**	**1.22**	**95**	*i* P	**Pg**	**04 56 35.0**	**-1.4**
SEYT				*i* S	**Sg**	**04 56 51.8**	**-0.4**
SEYT	**Eskypehyr**	**1.22**	**95**	*i* P	**Pg**	**04 56 35.0**	**-1.4**
SEYT				*i* S	**Sg**	**04 56 51.8**	**-0.4**
BUY	**Buyukada**	**1.23**	**354**	*e*PN	**Pg**	**04 56 36.9**	**+0.2**
BUY	**Buyukada**	**1.23**	**354**	*e*Pn	**Pg**	**04 56 36.9**	**+0.2**
GULT	**Gulveren**	**1.24**	**49**	*e*PN	**Pg**	**04 56 37.0**	**+0.1**
GULT	**Gulveren**	**1.24**	**49**	*e*Pn	**Pg**	**04 56 37.0**	**+0.1**
GONE	**Gonen-Balikesi**	**1.30**	**289**	*e*PN	**Pg**	**04 56 36.9**	**-1.0**
GONE	**Gonen-Balikesi**	**1.30**	**289**	*e*Pn	**Pg**	**04 56 36.9**	**-1.0**
MDUB	**Mudurnu**	**1.70**	**60**	*e*PN	**Pn**	**04 56 42.9**	**-1.2**
MDUB	**Mudurnu**	**1.70**	**60**	*e*Pn	**Pn**	**04 56 42.9**	**-1.2**
SVRH	**Sivrihisar-ESK**	**1.74**	**95**	*e*PN	**Pn**	**04 56 44.0**	**-0.7**
SVRH	**Sivrihisar-ESK**	**1.74**	**95**	*e*Pn	**Pn**	**04 56 44.0**	**-0.7**

IDC 25 04:59:35.5±0.9, 42°86S×72°39W, h0km, mb3.9/7, mb1 4.1/8, mb1mx4.0/19, mbtmp3.9/8, ML3.7/1, MS3.3/1, Ms1 3.2/1, ms1mx2.7/28, Error ellipse: s-maj=33.0km s-min=14.6km az=112.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.53**	**34**	Pn	Pn	05 00 19.6	+1.6
	4.0nm,0.3s,baz=211,slow=14,SNR=75						
PLCA				Pg	Pb	05 00 21.9	0.0
	7.6nm,0.3s,baz=222,slow=17,SNR=118						
PLCA				Lg	Lg	05 00 56.5	
	50nm,0.3s,baz=109,slow=19,SNR=26						
PLCA				LR	LR	05 01 29.5	
	comp=Z,507nm,18.4s,baz=296,slow=45						
LPAZ	**La Paz**	**26.73**	**9**	P	P	05 05 19.0	+1.5
	0.9nm,0.8s,baz=226,slow=13,SNR=4.7						
SIV	**San Ignacio**	**28.47**	**23**	P	P	05 05 31.8	-0.6
	1.5nm,0.8s,baz=220,slow=10,SNR=4.7						
SNAA	**Sanae**	**43.60**	**155**	P	P	05 07 41.8	+0.8
	0.7nm,0.5s,baz=263,slow=8.1,SNR=3.3						
QSPA	**South Pole Qui**	**47.40**	**180**	P	P	05 08 12.3	+1.0
	6.8nm,1.1s,baz=136,slow=2.8,SNR=7.6						
TXAR	**Lajitas Array**	**77.38**	**332**	P	P	05 11 32.6	+0.4
	0.6nm,0.9s,baz=145,slow=9.7,SNR=7.6						
TORD	**Torodi Ar. Bea**	**87.52**	**70**	P	P	05 12 23.8	-1.7
	0.4nm,0.8s,baz=237,slow=7.3,SNR=3.1						
PDAR	**Pinedale Array**	**91.55**	**334**	P	P	05 12 43.2	-0.7
	0.9nm,1.0s,baz=168,slow=4.6,SNR=5.0						
ILAR	**Eielson Array**	**121.87**	**331**	PKP	PKPdf	05 18 29.8	-0.7
	0.4nm,0.8s,baz=153,slow=2.6,SNR=4.8						
AKTO	**Aktyubinsk**	**145.67**	**60**	PKPbc	PKPdf	05 19 13.2	-1.9
	0.7nm,0.2s,baz=249,slow=3.3,SNR=6.1						

*ISCJB **25** 05:05:53.7±0.6, 26°34S±0°02×27°41E±0°03, h8km±4km, mb3.9/4, Error ellipse: s-maj=4.5km s-min=4.0km az=37.8*
*IDC **25** 05:05:54.5±1.2, 26°40S×27°48E, h0km, mb3.9/4, mb1 3.9/5, mb1mx3.7/25, mbtmp3.9/5, ML3.7/1, Error ellipse: s-maj=39.0km s-min=21.1km az=104.0*
*PRE **25** 05:05:54.1±3.3, 26°38S×27°42E, h2km, ML3.8*
ISC 25 05:05:54.2±1.0, 26°36S±0°03×27°44E±0°03, h9km±7km, n28, σ1s83/48, mb4.0/4, 2C-3D, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLOF	**Kloof**	**0.16**	**86**	*e*P	**Pg**	**05 05 57.5**	**-0.2**
KLOF				*e*S	**Sg**	**05 05 58.9**	**-1.3**
KLOF				AML	AML	05 05 59.1	
	comp=Z,9μm,0.2s						
PRYS	**Parys**	**0.57**	**187**	*e*P	**Pb**	**05 06 05.8**	**-0.6**
PRYS				*e*S	**Sb**	**05 06 13.3**	**-1.4**
PRYS				AML	AML	05 06 18.2	
	comp=Z,3μm,0.7s						
KSR	**Koster**	**0.70**	**316**	⇑ *i*P	**Pg**	**05 06 08.4**	**+0.6**
KSR				*e*S	**Sg**	**05 06 17.5**	**+0.5**
KSR				AML	AML	05 06 25.0	
	comp=Z,1μm,0.5s						
ERPM	**east rand prop**	**0.72**	**89**	⇓ *i*P	**Pg**	**05 06 07.8**	**-0.4**
ERPM				*e*S	**Sn**	**05 06 20.7**	**-1.4**
ERPM				AML	AML	05 06 24.2	
	comp=Z,523nm,0.5s						
SLR	**Silverton**	**0.98**	**51**	⇓ *i*P	**Pg**	**05 06 12.4**	**-0.8**
SLR				*e*S	**Sg**	**05 06 25.2**	**-0.8**
SLR				AML	AML	05 06 33.6	
	comp=Z,495nm,0.7s						
SEK	**Senekal**	**1.96**	**175**	*e*P	**Pb**	**05 06 29.9**	**-0.4**
SEK				*e*S	**Sb**	**05 06 54.2**	**-0.6**
SEK				AML	AML	05 06 56.2	
	comp=Z,435nm,0.5s						
LBTB	**Lobatse**	**2.13**	**309**	⇓ *i*P	**Pb**	**05 06 32.8**	**-0.4**
LBTB				*e*S	**Sb**	**05 06 59.9**	**+0.2**
LBTB				AML	AML	05 07 03.0	
	comp=Z,424nm,0.4s						
BOSA	**Boshof**	**2.96**	**220**	⇑ *i*P	**Pn**	**05 06 42.8**	**+1.2**
BOSA				*e*S	**Sn**	**05 07 17.7**	**+0.4**
BOSA				AML	AML	05 07 31.8	
	comp=Z,84nm,0.6s						
BOSA	**Boshof**	**2.96**	**220**	Pn	**Pn**	**05 06 42.7**	**+1.2**
	comp=Z,7.6nm,0.3s,baz=46,slow=13,SNR=140						
BOSA				Pg	**Pb**	**05 06 48.3**	**+1.0**
	comp=Z,8.8nm,0.3s,baz=46,slow=17,SNR=25						
BOSA				Lg	Lg	05 07 25.4	
	comp=Z,21nm,0.3s,baz=315,slow=22,SNR=22						
POGA	**Pongola**	**3.86**	**106**	*e*P	**Pn**	**05 06 55.6**	**+1.8**
POGA				*e*S	**Sn**	**05 07 41.1**	**+1.7**
POGA				AML	AML	05 07 56.4	
	comp=Z,84nm,0.5s						
KSD	**Kokstad**	**4.51**	**158**	*e*P	**Pn**	**05 07 05.4**	**+2.5**
KSD				*e*S	**Sn**	**05 07 58.6**	**+2.9**
KSD				AML	AML	05 08 17.7	
	comp=Z,89nm,0.4s						
HVD	**Gariep Dam**	**4.56**	**202**	*e*P	**Pn**	**05 07 04.2**	**+0.7**
HVD				*e*S	**Sn**	**05 07 54.1**	**-2.6**
HVD				AML	AML	05 08 29.8	
	comp=Z,44nm,0.7s						
MSNA	**Messina**	**4.64**	**31**	*e*P	**Pn**	**05 07 05.6**	**+1.0**
MSNA				*e*S	**Sn**	**05 08 00.3**	**+1.6**
MSNA				AML	AML	05 08 28.7	
	comp=Z,56nm,0.5s						
UPI	**Upington**	**5.85**	**249**	*e*P	**Pn**	**05 07 21.9**	**+0.7**
UPI				*e*S	**Sn**	**05 08 25.6**	**-2.9**
UPI				AML	AML	05 09 04.1	
	comp=Z,49nm,0.6s						
SOE	**Somerset East**	**6.54**	**194**	*e*P	**Pn**	**05 07 32.0**	**+1.4**
SOE				*e*S	**Sn**	**05 08 43.5**	**-1.8**
SOE				AML	AML	05 08 46.2	
	comp=Z,25nm,0.8s						
GRM	**Grahamstown**	**6.97**	**186**	*e*P	**Pn**	**05 07 37.2**	**+0.5**
GRM				*e*S	**Sn**	**05 08 52.7**	**-3.5**
GRM				AML	AML	05 09 41.1	
	comp=Z,32nm,0.6s						
BUFB	**Buffelsbos**	**8.11**	**196**	*e*P	**Pn**	**05 07 51.9**	**-0.2**
BUFB				*e*S	**Sn**	**05 09 20.5**	**-3.3**
BUFB				AML	AML	05 10 09.3	
	comp=Z,24nm,0.6s						
SUR	**Sutherland**	**8.33**	**222**	*e*P	**Pn**	**05 07 57.6**	**+2.2**
SUR				*e*S	**Sn**	**05 09 26.7**	**-2.9**
SUR				AML	AML	05 10 31.4	
	comp=Z,23nm,0.6s						
CVNA	**Calvinia**	**8.44**	**231**	*e*P	**Pn**	**05 07 59.1**	**+2.3**
CVNA				*e*S	**Sn**	**05 09 29.1**	**-3.2**
CVNA				AML	AML	05 10 20.1	
	comp=Z,62nm,0.6s						
KOMG	**Komaggas**	**9.43**	**246**	*e*P	**Pn**	**05 08 10.9**	**+0.6**
KOMG				*e*S	Sn	05 09 50.7	-5.8
KOMG				AML	AML	05 11 00.5	
	comp=Z,17nm,0.6s						
ELIM	**Elim**	**10.55**	**217**	AML	AML	05 11 25.2	
	comp=Z,21nm,0.8s						
LSZ	**Lusaka**	**11.05**	**4**	*e*P	**Pn**	**05 08 32.4**	**-0.3**
LSZ				*e*S	**Sn**	**05 10 33.1**	**-3.4**
TSUM	**Tsumeb**	**11.54**	**306**	*e*P	**Pn**	**05 08 40.3**	**+0.9**
TSUM				*e*S	**Sn**	**05 10 44.5**	**-4.1**
TORD	**Torodi Ar. Bea**	**46.57**	**324**	P	**P**	**05 14 23.5**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=130,slow=6.3,SNR=31						
QSPA	**South Pole Qui**	**63.83**	**180**	P	**P**	**05 16 27.8**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=304,slow=7.3,SNR=6.4						
ESDC	**Sonseca Array**	**71.93**	**335**	P	**P**	**05 17 19.8**	**+1.9**
	comp=Z,0.6nm,0.5s,baz=150,slow=6.9,SNR=4.7						
MKAR	**Makanchi Array**	**88.05**	**34**	P	**P**	**05 18 46.4**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=230,slow=4.2,SNR=4.4						
NVAR	**Mina Array Bea**	**148.84**	**301**	PKPbc	**PKPab**	**05 25 46.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=52,slow=5.8,SNR=2.2						

*ISCJB **25** 05:05:56.5±1.1, 33°47N±0°04×141°15E±0°09, h55km±12km, mb3.9/2, Error ellipse: s-maj=13.1km s-min=6.1km az=17.3*
*JMA **25** 05:05:56.6±0.2, 33°51N×141°12E, h63km, M2.9*
*IDC **25** 05:05:58.6±4.3, 33°39N×141°08E, h49km±45km, mb3.5/2, mb1 3.7/3, mb1mx3.2/25, mbtmp3.5/3, ML3.2/1, Error ellipse: s-maj=46.9km s-min=14.2km az=102.0*
ISC 25 05:05:57.1±2.1, 33°45N±0°07×141°2E±0°1, h45km±25km, n15, σ0s86/22, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.17**	**254**	P	**Pn**	**05 06 17.3**	**+0.2**
JHJ2				S	**Sn**	**05 06 32.5**	**+0.6**
JHJ	**Hachijo jima 2**	**1.20**	**255**	P	**Pn**	**05 06 17.5**	**+0.1**
	124nm,0.3s,baz=83,slow=3.1,SNR=77						
JHJ				S	**Sn**	**05 06 31.9**	**-0.6**
	312nm,0.3s,baz=75,slow=22,SNR=48						
JHCJ	**Hachijojimakas**	**1.20**	**252**	P	**Pn**	**05 06 17.7**	**+0.3**
JHCJ				S	**Sn**	**05 06 32.5**	**-0.1**
BSO1	**Boso 1**	**1.21**	**353**	P	**Pn**	**05 06 16.9**	**-0.2**
BSO1				*e*S	**Sn**	**05 06 32.0**	**-0.1**
BSO2	**Boso 2**	**1.34**	**346**	*e*S	**Sn**	**05 06 36.3**	**+0.6**
BSO3	**Boso 3**	**1.45**	**338**	P	**Pn**	**05 06 20.4**	**-0.3**
BSO3				*e*S	**Sn**	**05 06 38.1**	**-0.3**
BSO4	**Boso 4**	**1.68**	**336**	P	**Pn**	**05 06 24.3**	**+0.3**
JKO	**Kozu shima**	**1.84**	**294**	P	**Pn**	**05 06 26.2**	**0.0**
JIM2	**Oshima 2**	**1.91**	**312**	P	**Pn**	**05 06 26.7**	**-0.5**
JIM2				*e*S	**Sn**	**05 06 48.1**	**-2.0**
JIZS	**Izushimoda**	**2.28**	**304**	P	**Pn**	**05 06 32.3**	**+0.1**
JOD2	**Odawara 2**	**2.49**	**317**	P	**Pn**	**05 06 34.4**	**-0.8**
JOD2				*e*S	**Sn**	**05 07 03.9**	**-0.5**
MJAR	**Matsushiro Arr**	**3.92**	**323**	P	**Pn**	**05 06 55.4**	**+0.6**
	1.8nm,0.3s,baz=160,slow=11,SNR=7.0						
MJAR				S	**Sn**	**05 07 41.2**	**+1.6**
	0.7nm,0.3s,baz=141,slow=23,SNR=4.3						
MAT	**Matsushiro**	**3.92**	**323**	P	Pn	05 06 56.8	+1.9
MAT				S	**Sn**	**05 07 41.5**	**+1.8**
WRA	**Warramunga Arr**	**53.49**	**188**	P	**P**	**05 15 12.8**	**-0.2**
	0.9nm,0.3s,baz=5.4,slow=7.5,SNR=27						
ASAR	**Alice Springs**	**57.22**	**188**	P	P	05 15 41.2	+1.5
	0.5nm,0.7s,baz=19,slow=13,SNR=5.2						

*NEIC **25** 05:07:46.9, 18°79N×65°72W, h16km, MD3.1(RSPR), After RSPR.*
RSPR 25 05:07:46.9, 18°79N×65°72W, h16km±1km, MD3.1/5, 12C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBYP	**Canovanas**	**0.53**	**194**	⇓ *e*P	Pg	05 07 56.5	-1.0
CBYP	**Canovanas**	**0.53**	**194**	*e*S	Sg	05 08 04.3	-0.4
CBYP	**Canovanas**	**0.53**	**194**	⇓ *e*P	Pg	05 07 56.5	-1.0
CBYP				*e*S	Sg	05 08 04.3	-0.4
CBYP	**Canovanas**	**0.53**	**194**	⇓ *e*P	Pg	05 07 56.5	-1.0
CBYP				*e*S	Sg	05 08 04.3	-0.4
HUMP	**Col San Antoni**	**0.66**	**191**	⇓ *e*P	Pg	05 07 58.3	-1.5
HUMP	**Col San Antoni**	**0.66**	**191**	*e*S	Sg	05 08 07.2	-1.3
HUMP	**Col San Antoni**	**0.66**	**191**	⇓ *e*P	Pg	05 07 58.3	-1.5
HUMP				*e*S	Sg	05 08 07.2	-1.3
HUMP	**Col San Antoni**	**0.66**	**191**	⇓ *e*P	Pg	05 07 58.3	-1.5
HUMP				*e*S	Sg	05 08 07.2	-1.3
MTP	**Monte Pirata**	**0.71**	**167**	⇓ *e*P	Pg	05 07 59.2	-1.5
MTP	**Monte Pirata**	**0.71**	**167**	⇓ *e*P	Pg	05 07 59.2	-1.5
MTP	**Monte Pirata**	**0.71**	**167**	⇓ *e*P	Pg	05 07 59.2	-1.5
CPD	**Cerro la Pandu**	**0.77**	**194**	⇓ *e*P	Pb	05 07 60.0	-2.0
CPD	**Cerro la Pandu**	**0.77**	**194**	*e*S	Sg	05 08 10.4	-1.8
CPD	**Cerro la Pandu**	**0.77**	**194**	⇓ *e*P	Pb	05 07 60.0	-2.0
CPD				*e*S	Sg	05 08 10.4	-1.8
CPD	**Cerro la Pandu**	**0.77**	**194**	⇓ *e*P	Pb	05 07 60.0	-2.0
CPD				*e*S	Sg	05 08 10.4	-1.8
STVI	**Saint Thomas**	**0.85**	**121**	⇓ *e*P	Pb	05 08 01.2	-2.0
STVI	**Saint Thomas**	**0.85**	**121**	*e*S	Sb	05 08 12.2	-2.1
STVI	**Saint Thomas**	**0.85**	**121**	⇓ *e*P	Pb	05 08 01.2	-2.0
STVI				*e*S	Sb	05 08 12.2	-2.1
STVI	**Saint Thomas**	**0.85**	**121**	⇑ *e*P	Pb	05 08 01.2	-2.0
STVI				*e*S	Sb	05 08 12.2	-2.1
AOPR	**Arecibo Observ**	**1.07**	**246**	*e*S	Sb	05 08 17.8	-3.2
AOPR	**Arecibo Observ**	**1.07**	**246**	*e*S	Sb	05 08 17.8	-3.2
CELP	**Cerrillos**	**1.08**	**229**	*e*Pn	Pn	05 08 07.5	+0.1
CELP				*e*Sn	Sb	05 08 18.6	-2.6
OBIP	**Obispado Ponce**	**1.12**	**229**	*e*S	Sb	05 08 19.4	-2.9
OBIP	**Obispado Ponce**	**1.12**	**229**	*e*S	Sb	05 08 19.4	-2.9

*ISCJB **25** 05:10:11.5±0.6, 28°50S±0°02×71°29W±0°05, h45km±5km, mb5.4/164, MS4.6/26, Error ellipse: s-maj=7.5km s-min=3.7km az=178.4*
*MOS **25** 05:10:11.1±1.0, 28°32S×71°36W, h33km, mb5.5/47, MS4.6/4, Error ellipse: s-maj=15.0km s-min=5.9km az=104.3*
*GUC **25** 05:10:12.5±0.8, 28°55S×71°46W, h50km±56km, ML5.4*
*BJI **25** 05:10:13.5, 28°50S×71°30W, h45km, mB5.1/18, Ms5.3/19, Ms7 5.2/21*
*NEIC **25** 05:10:13.5±0.1, 28°52S×71°32W, mb5.4/139, Error ellipse: s-maj=5.1km s-min=3.0km az=74.0*
NEIC Felt [II] at Copiapo, Coquimbo, Freirina, Huasco, La Serena and Vallenar. Also felt at Maquina Atacama and Ovalle.
*IDC **25** 05:10:13.5±0.6, 28°52S×71°30W, h49km±4km, mb4.9/17, mb1 4.9/19, mb1mx4.8/20, mbtmp4.8/19, MS4.5/23, Ms1 4.5/23, ms1mx4.4/28, Error ellipse: s-maj=15.5km s-min=11.0km az=71.0*
*GCMT **25** 05:10:14.5±0.2, 28°69S×71°65W, h56km±1km, MW5.3, Moment Tensor Solution. s71,c104; s86,c138; Moment tensor: Scale 10^17 Nm; Mrr 0.00; Mθθ 0.00; Mφφ 0.00; Mrθ 0.00; Mrφ 0.00; Mθφ 0.00; Best double couple: M0 1.00000×10^17 NP1: φs192.00000°, δ20.00000°, λ-84.00000°. NP2: φs 5.00000°, δ70.00000°, λ-92.00000°. Principal axes: T 0.9600, Plg25.0000°, Azm97.0000°; N 0.1000, Plg2.0000°, Azm6.0000°; P -1.0600, Plg65.0000°, Azm271.0000°; Data Used: II IU IC G CN.*
ISC 25 05:10:13.1±0.4, 28°55S±0°03×71°44W±0°05, h47km±3km, h47km:pP-P, n883, σ1s03/967, mb5.4/164, MS4.6/27, 231C-219D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.80**	**126**	*e*Pn	**Pn**	**05 10 30.0**	**+1.7**
LCO				*e*Sn	**Sn**	**05 10 41.0**	**+1.6**
LCO	**Las Campanas**	**0.80**	**126**	*e*P	**Pn**	**05 10 29.7**	**+1.3**
LCO				*i* S	**Sn**	**05 10 41.6**	**+2.3**
LCO				AML	AML	05 10 42.7	
	comp=N,310μm,0.4s						
CPCH	**Copiapo**	**1.53**	**39**	*e*P	**Pn**	**05 10 39.0**	**+1.0**
CPCH				*i* S	**Sn**	**05 10 58.1**	**+1.4**
CPCH	**Copiapo**	**1.53**	**39**	*e*P	**Pn**	**05 10 39.0**	**+1.0**
CPCH				*i* S	**Sn**	**05 10 58.1**	**+1.4**
CPCH				AML	AML	05 11 00.8	
	comp=N,168μm,0.6s						
CDCH	**Caldera**	**1.57**	**21**	*e*P	**Pn**	**05 10 38.0**	**-0.6**
CDCH	**Caldera**	**1.57**	**21**	*e*P	**Pn**	**05 10 38.0**	**-0.6**
CDCH				AML	AML	05 10 57.8	
	comp=N,35μm,0.5s						
TLL	**Tololo Astrono**	**1.71**	**161**	⇑ *i*P	**Pn**	**05 10 41.4**	**+0.7**
TLL				*i* S	**Sn**	**05 11 02.7**	**+1.2**
TLL	**Tololo Astrono**	**1.71**	**161**	⇑ *i*P	**Pn**	**05 10 41.4**	**+0.7**
TLL				*i* S	**Sn**	**05 11 02.7**	**+1.2**
TLL	**Tololo Astrono**	**1.71**	**161**	⇑ *i*P	**Pn**	**05 10 41.4**	**+0.7**
TLL				*i* S	**Sn**	**05 11 02.7**	**+1.2**
TLL				AML	AML	05 11 04.3	
	comp=E,56μm,0.6s						
CMCH	**Combarbala**	**2.65**	**172**	⇓ *i*P	**Pn**	**05 10 53.4**	**0.0**
CMCH				*i* S	**Sn**	**05 11 24.3**	**0.0**
CMCH	**Combarbala**	**2.65**	**172**	⇓ *i*P	**Pn**	**05 10 53.4**	**0.0**
CMCH				*i* S	**Sn**	**05 11 24.3**	**0.0**
CHNG	**Los Chungos**	**3.33**	**181**	⇑ *i*P	**Pn**	**05 11 02.5**	**-0.1**
CHNG				*i* S	**Sn**	**05 11 40.1**	**-0.8**
CHNG	**Los Chungos**	**3.33**	**181**	⇑ *i*P	**Pn**	**05 11 02.5**	**-0.1**
CHNG				*i* S	**Sn**	**05 11 40.1**	**-0.8**
CFAA	**Coronel Fontan**	**4.12**	**138**	P	Pn	05 11 16.8	+3.1
CFAA				S	**Sn**	**05 12 03.4**	**+2.7**
CFAA				Lg	Lg	05 12 24.3	
CFAA	**Coronel Fontan**	**4.12**	**138**	P	Pn	05 11 16.8	+3.1
	comp=E,37nm,0.3s,baz=320,slow=12,SNR=2136						
CFAA				S	**Sn**	**05 12 03.4**	**+2.7**
	comp=E,24nm,0.3s,baz=96,slow=18,SNR=6.9						
CFAA				Lg	Lg	05 12 24.3	
	comp=E,110nm,0.3s,baz=32,slow=4.4,SNR=26						
PEL	**Peldehue**	**4.63**	**172**	*e*P	**Pn**	**05 11 20.8**	**+0.2**
PEL				*i* S	**Sn**	**05 12 12.4**	**-0.7**
CLCH	**Cerro Calan**	**4.90**	**171**	⇑ *i*P	**Pn**	**05 11 25.2**	**+0.9**
SPCH	**San Pedro de A**	**6.33**	**28**	*e*P	**Pn**	**05 11 44.7**	**+0.6**
SPCH				*i* S	**Sn**	**05 12 54.8**	**-0.5**
LVC	**Limon Verde**	**6.33**	**22**	*e*Pn	**Pn**	**05 11 42.6**	**-1.6**
	comp=E,449nm,0.6s						
LVC				*e*Sn	**Sn**	**05 12 53.7**	**-1.7**
ARE	**Arequipa**	**12.03**	**360**	*e*P	Pn	05 12 59.0	-3.2
ARE				*e*		05 15 11.0	
ARE	**Arequipa**	**12.03**	**360**	*e*P	Pn	05 12 59.0	-3.2
ARE				*e*		05 15 11.0	
PLCA	**Paso Flores**	**12.18**	**177**	*e*Pn	**Pn**	**05 13 03.0**	**-0.9**
PLCA	**Paso Flores**	**12.18**	**177**	P	**Pn**	**05 13 02.9**	**-1.1**
	comp=E,0.7nm,0.3s,baz=342,slow=11,SNR=12						
PLCA				LR	LR	05 18 23.3	
	comp=E,2μm,19.2s,baz=357,slow=40						
TRQA	**Tornquist**	**12.34**	**143**	*e

TIGA Tifton 60.77 348 ⇓P P 05 20 19.2 -0.8
baz=61,SNR=8.0
QSPA South Pole Qui 61.67 180 eP P 05 20 26.6 +0.6
comp=Z,27nm,1.0s
QSPA South Pole Qui 61.67 180 LR LR 05 46 58.7
comp=Z,177nm,19.4s,baz=162,slow=36
HKT Hockley 62.66 336 eP P 05 20 33.3 +0.6
HKT pmax pmax
comp=Z,49nm,1.2s
HKT Hockley 62.66 336 eP P 05 20 33.3 +0.6
comp=Z,49nm,1.2s
GOGA Godfrey 62.67 349 eP P 05 20 31.4 -1.4
GOGA pmax pmax
comp=Z,17nm,0.9s
GOGA Godfrey 62.67 349 eP P 05 20 31.4 -1.4
comp=Z,17nm,0.9s
LRAL Lakeview Retre 63.00 345 eP P 05 20 33.8 -1.2
comp=Z,70nm,1.8s
VBMS Vicksburg 63.09 342 eP P 05 20 36.5 +0.8
comp=Z,203nm,1.2s
732A Laxson Ranch, 63.16 332 ⇓P P 05 20 37.0 +0.8
baz=64,SNR=153
CNNC Cliffs of the 63.73 354 eP P 05 20 39.6 -0.2
comp=Z,47nm,0.9s
632A Uvalde 63.77 333 ⇑P P 05 20 41.1 +0.9
baz=64,SNR=51
631A Perdido Creek 64.01 332 ⇑P P 05 20 42.1 +0.3
baz=64,SNR=42
KMSC Kings Mountain 64.03 351 ⇑P P 05 20 41.1 -0.7
baz=64,SNR=12
532A Rocksprings 64.36 333 ⇓P P 05 20 45.1 +0.9
baz=65,SNR=109
JCT Junction City 64.63 333 eP P 05 20 46.5 +0.6
JCT Junction City 64.63 333 eP P 05 20 46.5 +0.6
JCT Junction City 64.63 333 ⇓P P 05 20 46.5 +0.6
baz=65,SNR=79
CPCT Cooper Cave 64.84 348 eP P 05 20 46.5 -0.6
SWET Sewanee 64.88 347 eP P 05 20 46.8 -0.6
comp=Z,50nm,0.7s
TKL Tuckaleechee C 64.91 349 eP P 05 20 46.6 -0.9
530A J-C Ranch, Com 64.97 332 ⇑P P 05 20 49.0 +0.8
baz=65,SNR=66
OXF Oxford 64.98 344 eP P 05 20 47.0 -1.0
OXF pmax pmax
comp=Z,104nm,1.2s
OXF Oxford 64.98 344 eP P 05 20 47.0 -1.0
comp=Z,104nm,1.2s
432A Menard 64.98 333 ⇓P P 05 20 48.5 +0.3
baz=65,SNR=80
628A Black Gap, Mar 65.06 330 ⇑P P 05 20 49.8 +1.0
baz=65,SNR=92
WHTX Lake Whitney 65.09 336 ⇓P P 05 20 49.1 +0.3
baz=65,SNR=15
PLAL Pickwick Lake 65.11 345 eP P 05 20 47.9 -0.9
comp=Z,26nm,0.8s
431A Sonora 65.14 332 ⇑P P 05 20 49.7 +0.5
baz=66,SNR=66
627A Terlingua Ranc 65.26 329 ⇑P P 05 20 50.6 +0.5
baz=66,SNR=32
TXAR Lajitas Array 65.28 329 P P 05 20 50.8 +0.5
TXAR sP sP 05 21 10.7 +1.7
TXAR ⇑e 05 49 39.9
TXAR Lajitas Array 65.28 329 P P 05 20 50.8 +0.5
comp=Z,21nm,0.8s,baz=152,slow=8.3,SNR=242
TXAR sP sP 05 21 10.7 +1.7
comp=Z,2.4nm,0.8s,baz=140,slow=4.7,SNR=4.4
TXAR LR LR 05 45 16.1
comp=Z,163nm,19.9s,baz=5.0,slow=32
TXAR PKP2bc 05 49 39.9
comp=Z,1.3nm,1.2s,baz=14,slow=4.2,SNR=4.0
529A Stev Forest Ra 65.33 331 ⇑P P 05 20 51.4 +0.9
baz=66,SNR=76
332A Millersview 65.41 334 ⇓P P 05 20 51.2 +0.3
baz=66,SNR=61
430A Baggett Ranch, 65.49 332 ⇑P P 05 20 52.1 +0.6
baz=66,SNR=107
528A Cox Ranch, San 65.60 330 ⇑P P 05 20 52.9 +0.5
baz=66,SNR=100
331A San Angelo 65.61 333 ⇓P P 05 20 52.6 +0.3
baz=66,SNR=84
429A Davenport Ranc 65.62 331 ⇑P P 05 20 53.2 +0.9
baz=66,SNR=89
626A Big Bend Ranch 65.68 329 ⇑P P 05 20 54.0 +1.2
baz=66,SNR=107
TZTN Tazewell 65.74 349 eP P 05 20 52.3 -0.6
comp=Z,66nm,1.5s
RFTA Plano 65.75 337 eP P 05 20 53.3 +0.3
232A Coleman 65.82 334 ⇓P P 05 20 54.0 +0.4
baz=66,SNR=21
527A Woodward Ranch 65.95 330 ⇓P P 05 20 55.2 +0.6
baz=66,SNR=74
BLA Blacksburg 65.95 352 eP P 05 20 53.8 -0.5
BLA pmax pmax
comp=Z,12nm,0.9s
BLA Blacksburg 65.95 352 eP P 05 20 53.8 -0.5
comp=Z,12nm,0.9s
330A Mertzon 66.00 332 ⇓P P 05 20 55.1 +0.3
baz=66,SNR=89
UALR University of 66.01 341 eP P 05 20 54.5 -0.2
comp=Z,75nm,1.4s
428A Kincaid Ranch, 66.05 331 ⇓P P 05 20 55.8 +0.7
baz=66,SNR=45
526A Mary Lane Ranc 66.09 329 ⇑P P 05 20 56.6 +1.1
baz=66,SNR=129
231A Bronte 66.12 333 ⇑P P 05 20 55.6 +0.1
baz=66,SNR=62
WVT Waverly 66.16 346 eP P 05 20 54.2 -1.4
WVT pmax pmax
comp=Z,51nm,1.0s
WVT Waverly 66.16 346 eP P 05 20 54.2 -1.4
comp=Z,51nm,1.0s
JSRW J. Sargeant Re 66.17 354 eP P 05 20 55.8 +0.2
HBAR Harrisburg 66.28 343 eP P 05 20 56.5 +0.1
230A Sterling City 66.40 333 ⇑P P 05 20 57.4 0.0
baz=67,SNR=35
329A Wagon Wheel Ra 66.41 332 ⇑P P 05 20 58.0 +0.6
baz=67,SNR=61
427A Hayter Ranch, 66.46 330 ⇓P P 05 20 58.5 +0.7
baz=67,SNR=42
ABTX Abilene, Hawle 66.47 334 ⇓P P 05 20 58.1 +0.4
baz=67,SNR=95
GNAR Gosnell 66.51 344 eP P 05 20 57.6 -0.2
comp=Z,2µm,1.1s
426A McDonald Obser 66.58 330 ⇑P P 05 20 59.6 +0.9
baz=67,SNR=99
UTMT University of 66.59 345 eP P 05 20 58.2 -0.2
comp=Z,226nm,1.4s
CBN Corbin 66.64 355 eP P 05 20 58.9 +0.3
comp=Z,76nm,1.6s
328A Wristen Ranch, 66.66 331 ⇑P P 05 20 59.6 +0.6
baz=67,SNR=47
229A Bryant Ranch, 66.75 332 ⇓P P 05 20 59.8 +0.2
baz=67,SNR=19
131A Roby 66.80 334 ⇑P P 05 21 00.3 +0.4
baz=67,SNR=103
327A Balmorhea Ranc 66.95 330 ⇓P P 05 21 01.7 +0.8
baz=67
130A Snyder 66.96 333 ⇓P P 05 21 01.2 +0.3
baz=67,SNR=71
Z32A Haskell 67.02 335 ⇓P P 05 21 01.5 +0.3
baz=67,SNR=43
PARMO Parma 67.11 344 eP P 05 21 01.9 +0.3
425A Indio Mountain 67.11 329 ⇓P P 05 21 02.4 +0.4
baz=67
326A Caldwell Ranch 67.11 330 ⇓P P 05 21 02.6 +0.7
baz=67,SNR=56
228A UT Block 9, Go 67.21 332 ⇑P P 05 21 02.9 +0.3
baz=68,SNR=38
Z31A Sharp Cattle R 67.28 334 ⇓P P 05 21 03.3 +0.4
baz=68,SNR=103
129A Stewart Farms, 67.36 332 ⇓P P 05 21 03.5 +0.1
baz=68,SNR=28
227A Bennet, Jal 67.41 331 ⇓P P 05 21 04.7 +0.9
baz=68,SNR=30
128A Castleberry Fa 67.60 332 ⇑P P 05 21 05.2 +0.2
baz=68,SNR=35
325A Bean Ranch, Si 67.60 329 ⇑P P 05 21 05.2 +0.1
baz=68,SNR=87
Y32A R-V Farms, Ver 67.62 335 ⇓P P 05 21 05.3 +0.3
baz=68,SNR=24
Z30A Sanderson Ranc 67.63 333 ⇓P P 05 21 05.2 0.0
baz=68,SNR=68
SDMD Soldier's Deli 67.79 355 eP P 05 21 05.2 -0.8
comp=Z,24nm,1.0s
Z29A Hungry Hill Ra 67.84 333 ⇓P P 05 21 06.3 -0.2
baz=68,SNR=52
226B Tecolote Peak, 67.85 330 ⇓P P 05 21 07.6 +1.0
baz=68,SNR=40

WCI Wyandotte Cave 67.87 347 eP P 05 21 05.2 -1.2
WCI pmax pmax
comp=Z,56nm,1.4s
WCI Wyandotte Cave 67.87 347 eP P 05 21 05.2 -1.2
comp=Z,56nm,1.4s
USIN University of 67.89 346 eP P 05 21 05.5 -1.0
comp=Z,80nm,1.1s
324A Moseley Ranch, 67.89 329 ⇓P P 05 21 06.4 -0.5
baz=68,SNR=51
Y31A Rekieta Farm, 67.90 334 ⇓P P 05 21 07.1 +0.3
baz=68,SNR=54
SIUC Southern Illin 67.99 345 eP P 05 21 06.9 -0.3
comp=Z,146nm,1.2s
127A Arkansas Junct 68.02 331 ⇑P P 05 21 08.0 +0.4
baz=68,SNR=18
GDL2 Guadalupe Moun 68.04 330 eP P 05 21 08.5 +0.7
WMOK Wichita Mounta 68.04 336 eP P 05 21 06.7 -0.9
WMOK e 05 21 34.3
WMOK pmax pmax
comp=Z,19nm,0.9s
WMOK Wichita Mounta 68.04 336 eP P 05 21 06.7 -0.9
comp=Z,19nm,0.9s
WMOK ePcP PcP 05 21 34.3 +0.8
MNTX Cornudas Mount 68.06 329 eP P 05 21 07.0 -0.9
comp=Z,25nm,0.8s
Y30A Stafford Cattl 68.06 334 ⇑P P 05 21 07.8 -0.1
baz=68,SNR=19
TUL1 Tulsa 68.10 339 ⇓P P 05 21 07.7 -0.2
baz=68,SNR=31
Z28A Tucker Farm, M 68.14 332 ⇑P P 05 21 08.4 0.0
baz=68,SNR=39
225A Deer Hill, Car 68.16 330 ⇑P P 05 21 08.8 +0.1
baz=68,SNR=5.5
126A Clayton Basin, 68.27 331 ⇓P P 05 21 09.8 +0.5
baz=69,SNR=28
MVL Millersville 68.35 356 eP P 05 21 10.2 +0.8
comp=Z,28nm,1.0s
Y29A Porterfield Fa 68.35 333 ⇓P P 05 21 09.9 +0.2
baz=69,SNR=74
X31A McDonald Ranch 68.38 335 ⇑P P 05 21 09.9 +0.1
baz=69,SNR=42
224A Cornudas Mount 68.45 329 ⇓P P 05 21 10.3 -0.1
baz=69,SNR=38
SBA Scott Base 68.51 191 eP P 05 21 12.1 +2.1
SBA pmax pmax
comp=Z,30nm,1.5s
SBA Scott Base 68.51 191 eP P 05 21 12.1 +2.1
comp=Z,30nm,1.5s
Z27A Tatum 68.51 332 ⇓P P 05 21 10.7 0.0
baz=69,SNR=33
X30A Coker Ranch, T 68.56 334 ⇑P P 05 21 10.9 0.0
baz=69,SNR=22
125A Gardner Draw, 68.56 330 ⇑P P 05 21 10.9 -0.2
baz=69,SNR=51
Y28A McKinney Farm, 68.63 333 ⇓P P 05 21 11.3 -0.1
baz=69,SNR=34
OLIL Olney 68.72 346 eP P 05 21 11.0 -0.7
comp=Z,97nm,1.4s
Z26A Caprock 68.79 331 ⇑P P 05 21 12.9 +0.5
baz=69,SNR=192
223A Chaparral, Ant 68.80 328 ⇑P P 05 21 13.2 +0.7
baz=69
BLO Bloomington 68.82 347 eP P 05 21 11.3 -1.1
BLO pmax pmax
comp=Z,30nm,0.8s
BLO Bloomington 68.82 347 eP P 05 21 11.3 -1.1
comp=Z,30nm,0.8s
W31A Holland Ranch, 68.86 335 ⇑P P 05 21 12.6 -0.2
baz=69,SNR=14
X29A Tulia 68.88 333 ⇓P P 05 21 13.1 +0.1
baz=69,SNR=38
MSTX Muleshoe 68.89 332 ⇑P P 05 21 13.2 +0.1
baz=69,SNR=108
124A Stringfield Ra 68.94 330 ⇑P P 05 21 14.0 +0.4
baz=69,SNR=56
Y27A Causey 68.98 332 ⇑P P 05 21 13.4 -0.2
baz=69,SNR=33
SSPA Standing Stone 69.09 355 eP P 05 21 14.2 +0.2
comp=Z,57nm,1.5s
W30A Crocket Farms 69.10 335 ⇓P P 05 21 14.4 +0.1
baz=69
SLM Saint Louis 69.11 344 eP P 05 21 13.8 -0.3
SLM pmax pmax
comp=Z,89nm,0.9s
SLM Saint Louis 69.11 344 eP P 05 21 13.8 -0.3
comp=Z,89nm,0.9s
Z25A Roswell 69.11 331 ⇑P P 05 21 14.5 0.0
baz=69,SNR=52
X28A Dimmitt 69.14 333 ⇓P P 05 21 14.7 +0.1
baz=70,SNR=16
222A Williams Famil 69.19 328 ⇑P P 05 21 16.0 +1.0
baz=70,SNR=25
TBI Tubuai 69.19 254 eP P 05 21 16.4 +1.2
comp=Z,170nm,1.1s
TBI eLR LR 05 42 15.1
comp=Z,685nm,30.2s,baz=108
TBI eT T 06 36 42.7
comp=Z,12nm,0.2s
320A Kipp Ranch, An 69.24 327 ⇑P P 05 21 16.4 +1.1
baz=70,SNR=23
123A Bell Site, Whi 69.25 329 ⇓P P 05 21 16.2 +0.9
baz=70
AMTX Amarillo 69.26 334 eP P 05 21 15.2 0.0
comp=Z,63nm,1.0s
ACSO Alum Creek Sta 69.26 351 eP P 05 21 14.3 -0.7
comp=Z,73nm,1.1s
Y26A Elida 69.29 332 ⇑P P 05 21 15.7 +0.1
baz=70,SNR=18
V31A Spring Creek L 69.35 336 ⇓P P 05 21 16.6 +0.8
baz=70,SNR=16
221A Mesquite Ranch 69.43 327 ⇓P P 05 21 17.6 +1.2
baz=70
Z24A Sheppen Canyo 69.44 330 ⇓P P 05 21 17.1 +0.5
baz=70,SNR=65
W29A Amraillo 69.45 334 ⇓P P 05 21 16.6 +0.1
baz=70,SNR=24
YLE Yale 69.52 359 eP P 05 21 17.6 +0.9
comp=Z,225nm,1.3s
VNDA Vanda 69.54 191 eP P 05 21 18.0 +1.6
comp=Z,21nm,1.4s
VNDA Vanda 69.54 191 P P 05 21 17.7 +1.3
comp=Z,6.3nm,1.1s,baz=147,slow=5.6,SNR=9.4
X27A F and S Farms, 69.61 333 ⇓P P 05 21 17.4 -0.1
baz=70,SNR=5.9
319A Douglas 69.64 326 ⇓P P 05 21 19.0 +1.2
baz=70,SNR=30
122A Conniff Cattle 69.64 328 ⇓P P 05 21 19.1 +1.3
baz=70,SNR=6.9
V30A Spur Ranch, Mi 69.65 335 ⇑P P 05 21 18.6 +0.9
baz=70
Y25A Mesa, Roswell 69.65 331 ⇓P P 05 21 17.7 -0.1
baz=70,SNR=6.7
220A Playas Peak, P 69.70 327 ⇓P P 05 21 19.2 +1.0
baz=70,SNR=38
Z23A Rita Site, Whi 69.77 329 ⇓P P 05 21 19.8 +1.2
baz=70,SNR=27
W28A Vega 69.79 334 ⇑P P 05 21 19.1 +0.5
baz=70,SNR=5.4
X26A CR and CF Fran 69.82 332 ⇑P P 05 21 19.3 +0.5
baz=70,SNR=17
121A Cookes Peak, D 69.87 328 ⇓P P 05 21 20.6 +1.4
baz=70,SNR=23
U31A Nine Bar Ranch 69.89 336 ⇑P P 05 21 19.5 +0.4
baz=70,SNR=6.2
W27A Bowe Ranch, En 69.96 333 ⇑P P 05 21 19.8 +0.1
baz=70,SNR=20
Y24A Capitan 69.98 330 ⇑P P 05 21 20.2 +0.4
baz=70,SNR=24
V29A Stinnett 70.06 334 ⇑P P 05 21 20.4 +0.2
baz=70
Z22A Elephant Butte 70.09 329 ⇓P P 05 21 21.9 +1.3
baz=70,SNR=50
SFIN Scholer Farm 70.10 347 ⇓P P 05 21 18.8 -1.4
baz=70,SNR=9.2
BRYW Bryant College 70.11 360 eP P 05 21 21.2 +0.9
comp=Z,137nm,1.2s
X25A Clemmons Ranch 70.16 331 ⇑P P 05 21 21.0 0.0
baz=70,SNR=13
MEH Mehetia 70.19 260 eT T 06 37 58.9
comp=Z,86nm,0.2s
V28A Channing 70.23 334 ⇑P P 05 21 22.0 +0.7
baz=71,SNR=25
Y23A Lovelace Mesa, 70.25 330 ⇓P P 05 21 22.7 +1.1
baz=71,SNR=46
W26A Owens Ranch, T 70.27 332 ⇓P P 05 21 22.3 +0.7
baz=71,SNR=53
120A U Bar Ranch, L 70.28 327 ⇑P P 05 21 22.9 +1.2
baz=71,SNR=28

ALLY Alegheny Colle 70.31 353 eP P 05 21 20.9 -0.6
comp=Z,70nm,1.3s
U30A WK&E Inc. Balk 70.32 335 ⇑P P 05 21 22.3 +0.5
baz=71,SNR=16
Z21A St. Cloud Mine 70.46 328 ⇑P P 05 21 24.3 +1.4
baz=71,SNR=32
V27A Dan Oppiter Fa 70.47 333 ⇓P P 05 21 23.3 +0.6
baz=71,SNR=22
T31A Randall Ranch, 70.48 336 ⇑P P 05 21 23.0 +0.3
baz=71,SNR=14
U29A Oasis Ranch, S 70.48 335 ⇓P P 05 21 23.0 +0.3
baz=71
BINY Binghamton 70.52 356 eP P 05 21 22.9 +0.1
comp=Z,45nm,1.4s
X24A Lazy VL Ranch, 70.52 331 ⇓P P 05 21 23.9 +0.7
baz=71,SNR=8.7
WES Weston 70.58 0 eP P 05 21 23.8 +0.7
WES Weston 70.58 0 eP P 05 21 23.8 +0.7
comp=Z,262nm,1.6s
Y22A Socorro 70.66 329 ⇓P P 05 21 25.1 +1.1
baz=71,SNR=13
W25A X Bar L Ranch, 70.67 332 ⇑P P 05 21 24.2 +0.2
baz=71,SNR=32
BNM Barren Site 70.69 330 eP P 05 21 25.3 +1.0
comp=Z,17nm,1.1s
HDIL Hopedale 70.72 346 eP P 05 21 23.1 -0.9
comp=Z,69nm,0.9s
Z20A Nine Sixteen R 70.73 328 ⇓P P 05 21 25.8 +1.4
baz=71,SNR=46
T30A Plains 70.74 336 ⇑P P 05 21 24.8 +0.5
baz=71,SNR=6.3
SYO Syowa Base 70.75 159⇑eP P 05 21 22.0 -1.9
ERPA Erie 70.75 353 eP P 05 21 23.6 -0.5
comp=Z,25nm,1.1s
U28A Mallet 70.78 334 ⇓P P 05 21 25.0 +0.3
baz=71,SNR=5.1
LPM Los Pinos Moun 70.83 330 eP P 05 21 26.1 +1.1
LENM Lemitar 70.86 329 eP P 05 21 26.3 +1.0
X23A Hourglass Bar 70.86 330 ⇓P P 05 21 26.5 +1.2
baz=71,SNR=31
S31A Mullinville 70.88 337 ⇑P P 05 21 25.3 +0.2
baz=71
V26A Tequesquite Ra 70.89 333 ⇑P P 05 21 25.5 +0.2
baz=71,SNR=50
TRY Troy 70.95 358 eP P 05 21 26.1 +0.8
comp=Z,162nm,1.3s
Y21A Point of Rocks 71.05 329 ⇑P P 05 21 28.0 +1.5
baz=71,SNR=36
U27A Thompson Grove 71.05 334 ⇑P P 05 21 26.6 +0.3
baz=71,SNR=19
W24A Lazy 6 Ranch, 71.06 331 ⇓P P 05 21 27.0 +0.5
baz=71,SNR=34
T29A Hugoton 71.11 335 ⇓P P 05 21 26.8 +0.3
baz=71,SNR=6.4
LAZ Ladron 71.13 329 eP P 05 21 28.2 +1.3
comp=Z,17nm,1.1s
TUC Tucson 71.14 325 eP P 05 21 27.6 +0.7
TUC pmax pmax
comp=Z,8.0nm,1.4s
TUC Tucson 71.14 325 eP P 05 21 27.6 +0.7
comp=Z,7.8nm,1.4s
X22A Bernardo 71.16 329 ⇓P P 05 21 28.5 +1.5
baz=72
S30A Montezuma 71.24 336 ⇑P P 05 21 27.7 +0.3
baz=72,SNR=16
PMOR Pomariorio Ree 71.25 263 eP P 05 21 28.9 +1.0
comp=Z,69nm,1.1s
TVO Taravao 71.26 260 eP P 05 21 29.3 +1.3
comp=Z,160nm,1.3s
V25A Rancho No Teng 71.26 332 ⇓P P 05 21 28.2 +0.5
baz=72,SNR=78
KSU1 Kansas State U 71.28 340 eP P 05 21 26.8 -0.6
comp=Z,62nm,1.3s
Y20A Horse Springs, 71.29 328 ⇓P P 05 21 29.2 +1.3
baz=72,SNR=47
ANMO Albuquerque 71.29 330 eP P 05 21 27.9 +0.1
comp=Z,45nm,1.4s
W23A Werner Place, 71.33 330 ⇑P P 05 21 29.3 +1.1
baz=72,SNR=26
T28A Walsh 71.39 335 ⇑P P 05 21 28.4 +0.1
baz=72
U26A Atchley Ranch, 71.39 333 ⇑P P 05 21 28.9 +0.4
baz=72,SNR=33
TIAR Tiarei 71.43 260 eT T 06 39 31.9
comp=Z,24nm,0.2s
V24A Rampart Ranch, 71.44 331 ⇑P P 05 21 29.2 +0.4
baz=72,SNR=10
S29A Ulysses 71.46 336 ⇑P P 05 21 29.3 +0.6
baz=72,SNR=19
X21A Alamocita Cree 71.46 329 ⇓P P 05 21 30.4 +1.4
baz=72,SNR=41
T27A Campo 71.57 334 ⇑P P 05 21 29.9 +0.5
baz=72,SNR=44
W22A Albuquerque 71.57 330 ⇓P P 05 21 31.0 +1.4
baz=72,SNR=10
PAE Paea 71.59 260 eP P 05 21 31.0 +1.1
comp=Z,22nm,1.1s
ACCN Adirondack Com 71.61 358 eP P 05 21 29.8 +0.4
comp=Z,78nm,1.6s
PPT2 Papeete2 71.62 260 eP P 05 21 31.4 +1.2
comp=Z,108nm,1.1s
PPT2 eS S 05 30 46.5 0.0
comp=Z,155nm,27.5s
PPT2 eLR LR 05 43 18.2
comp=Z,1µm,23.2s,baz=105
PPT Papeete 71.63 260 P P 05 21 31.7 +1.6
PPT Papeete 71.63 260 P P 05 21 31.7 +1.6
comp=Z,90nm,0.9s,baz=81,slow=3.5,SNR=9.3
PPT LR LR 05 44 29.9
comp=Z,680nm,20.2s,baz=167,slow=29
U25A Circle Dot Ran 71.66 332 ⇓P P 05 21 30.7 +0.7
baz=72,SNR=46
FFD Franklin Falls 71.66 360 eP P 05 21 31.0 +1.4
comp=Z,300nm,1.6s
S28A Manter 71.72 335 ⇑P P 05 21 30.7 +0.4
baz=72,SNR=62
R30A Dighton 71.75 336 ⇑P P 05 21 30.6 +0.2
baz=72,SNR=7.8
V23A Ortiz Mt. (NFS 71.84 331 ⇓P P 05 21 32.5 +1.3
baz=72,SNR=13
X20A Quemado 71.87 328 ⇑P P 05 21 32.6 +1.2
baz=72,SNR=26
214A Organ Pipe Nat 71.89 324 ⇓P P 05 21 32.6 +1.3
baz=72,SNR=44
HNH Hanover 71.90 359 eP P 05 21 32.5 +1.4
W21A San Fidel 71.96 329 ⇑P P 05 21 33.3 +1.4
baz=72
T26A Comanche Natio 72.01 333 ⇓P P 05 21 32.8 +0.7
baz=72,SNR=28
U24A Moreno Valley 72.03 332 ⇑P P 05 21 33.6 +1.2
baz=72
R29A Marienthal 72.18 336 ⇓P P 05 21 33.3 +0.3
baz=72,SNR=11
S27A Las Animas 72.18 334 ⇓P P 05 21 33.5 +0.4
baz=72
T25A Trinidad 72.30 333 ⇑P P 05 21 35.1 +1.2
baz=73,SNR=69
V22A San Miguel Ran 72.30 330 ⇑P P 05 21 35.5 +1.5
baz=73,SNR=41
U23A El Rito 72.34 331 ⇑P P 05 21 35.5 +1.3
baz=73,SNR=19
S26A Kim 72.35 334 ⇑P P 05 21 35.0 +0.9
baz=73,SNR=67
R28A Tribune 72.35 335 ⇑P P 05 21 34.4 +0.3
baz=73,SNR=32
W20A Ramah 72.35 329 ⇓P P 05 21 35.5 +1.2
baz=73,SNR=40
LBNH Lisbon 72.43 360 eP P 05 21 35.2 +1.0
LBNH pmax pmax
comp=Z,27nm,1.4s
LBNH Lisbon 72.43 360 eP P 05 21 35.2 +1.0
comp=Z,27nm,1.4s
T24A Torres, Weston 72.50 332 ⇑P P 05 21 36.5 +1.3
baz=73,SNR=40
V21A Milan 72.53 330 ⇑P P 05 21 36.7 +1.4
baz=73
X18A Snowflake 72.53 327 ⇓P P 05 21 36.6 +1.3
baz=73,SNR=19
U22A Llaves 72.67 331 ⇓P P 05 21 37.8 +1.6
baz=73,SNR=40
R27A Eads 72.67 335 ⇓P P 05 21 36.3 +0.4
baz=73,SNR=19
S25A Robets Cordova 72.76 333 ⇓P P 05 21 37.6 +1.0
baz=73,SNR=54
LONY Lake Ozonia 72.87 358 eP P 05 21 37.1 +0.2
comp=Z,28nm,1.1s
T23A Casias Ranch, 72.88 332 ⇑P P 05 21 38.4 +1.0
baz=73,SNR=24

V20A **Brimhall** 72.89 329 ⇑P P 05 21 38.4 +1.0
baz=73,SNR=11
W18A **Petrified Fore** 72.92 328 ⇓P P 05 21 38.7 +1.1
baz=73,SNR=6.7
R26A **Arlington** 72.93 334 ⇓P P 05 21 38.4 +0.9
baz=73,SNR=38
SCIA **State Center** 72.93 343 eP P 05 21 37.4 +0.1
comp=Z,126nm,1.4s
Q28A **Sharon Springs** 73.00 336 ⇓P P 05 21 38.5 +0.6
baz=73,SNR=22
DBIC **Dimbokro** 73.00 72 eP P 05 21 36.9 -1.4
DBIC **Dimbokro** 73.00 72 eP P 05 21 38.3 0.0
comp=Z,37nm,0.7s
DBIC **Dimbokro** 73.00 72 P P 05 21 38.1 -0.2
comp=Z,33nm,0.7s,baz=214,slow=6.5,SNR=48
DBIC LR LR 05 54 15.2
comp=Z,261nm,19.8s,baz=233,slow=36
113A **Mohawk Valley,** 73.03 324 ⇓P P 05 21 39.0 +1.0
baz=73,SNR=14
FRNY **Flat Rock** 73.05 358 eP P 05 21 38.1 +0.2
comp=Z,42nm,1.2s
S24A **Houchin Ranch,** 73.06 333 ⇑P P 05 21 40.0 +1.5
baz=73,SNR=106
U21A **Nageezi** 73.06 330 ⇓P P 05 21 39.7 +1.2
baz=73,SNR=52
Z14A **Wintersburg** 73.07 325 ⇑P P 05 21 39.3 +1.0
baz=73,SNR=5.2
R25A **Fountain Ranch** 73.12 333 ⇓P P 05 21 39.4 +0.7
baz=74,SNR=25
X16A **Lo Mia Camp, P** 73.16 326 ⇑P P 05 21 40.3 +1.2
baz=74,SNR=71
JFWS **Jewell Farm** 73.19 346 eP P 05 21 38.5 -0.2
JFWS pmax pmax
comp=Z,100nm,1.3s
JFWS **Jewell Farm** 73.19 346 eP P 05 21 38.5 -0.2
comp=Z,100nm,1.3s
T22A **Edith** 73.23 331 ⇑P P 05 21 40.9 +1.5
baz=74,SNR=53
KSCO **Kaye Shedlock'** 73.24 335 ⇓P P 05 21 40.3 +1.0
baz=74,SNR=26
MSNY **Massena** 73.26 357 eP P 05 21 39.5 +0.4
comp=Z,332nm,1.1s
SDCO **Great Sand Dun** 73.26 332 eP P 05 21 40.5 +0.8
comp=Z,45nm,1.2s
U20A **Newcomb** 73.40 329 ⇓P P 05 21 41.3 +1.0
baz=74,SNR=13
P28A **Saint Francis** 73.42 336 ⇑P P 05 21 41.1 +0.7
baz=74,SNR=17
S23A **Nye Farm, Mont** 73.44 332 ⇓P P 05 21 41.8 +1.2
baz=74,SNR=16
T21A **Navajo Lake** 73.48 331 ⇑P P 05 21 42.0 +1.1
baz=74,SNR=18
Q26A **Hugo** 73.50 334 ⇑P P 05 21 41.8 +0.9
baz=74,SNR=18
Y14A **Wickenburg** 73.56 325 ⇑P P 05 21 42.3 +1.0
baz=74,SNR=30
P27A **Ficken Ranch,** 73.70 335 ⇓P P 05 21 42.8 +0.8
baz=74,SNR=9.6
Q25A **Bedland, Calha** 73.77 334 ⇑P P 05 21 43.1 +0.5
baz=74,SNR=8.9
R23A **Moffat** 73.78 332 ⇑P P 05 21 43.8 +1.1
baz=74,SNR=42
GLA **Glamis** 73.80 323 eP P 05 21 43.8 +1.1
GLA pmax pmax
comp=Z,96nm,1.8s
GLA **Glamis** 73.80 323 eP P 05 21 43.8 +1.1
comp=Z,96nm,1.8s
GLA **Glamis** 73.80 323 ⇓P P 05 21 43.8 +1.1
baz=74,SNR=7.5
S22A **4UR Ranch, Cre** 73.81 331 ⇑P P 05 21 44.0 +1.0
baz=74,SNR=24
BGNE **Belgrade** 73.86 339 ⇓P P 05 21 43.0 +0.2
baz=74,SNR=11
N30A **Hueftle Ranch,** 73.94 338 ⇓P P 05 21 43.6 +0.3
baz=74
P26A **Davis Ranch, A** 73.99 335 ⇓P P 05 21 44.6 +0.8
baz=74,SNR=30
WUAZ **Wupatki** 74.02 327 eP P 05 21 45.2 +1.2
comp=Z,66nm,1.1s
WUAZ **Wupatki** 74.02 327 ⇑P P 05 21 45.4 +1.3
baz=74,SNR=28
N29A **Votaw Ranch, W** 74.13 337 ⇑P P 05 21 45.0 +0.6
baz=74,SNR=15
S21A **Coal Bank Pass** 74.15 331 ⇑P P 05 21 46.0 +1.1
baz=74,SNR=22
Q24A **Divide** 74.17 333 ⇑P P 05 21 46.0 +1.0
baz=74,SNR=36
DVTC **Desert V Tower** 74.18 322 ⇓P P 05 21 46.2 +1.3
baz=74
Y12C **Blythe** 74.19 324 ⇑P P 05 21 46.1 +1.3
baz=74,SNR=13
R22A **Saguache, Gunn** 74.19 332 ⇓P P 05 21 46.3 +1.1
baz=74,SNR=19
O27A **Beecher Island** 74.22 336 ⇓P P 05 21 46.1 +1.0
baz=75,SNR=36
SWSC **Sam W. Stewart** 74.23 322 ⇑P P 05 21 46.3 +1.2
baz=74
P25A **Willow Gulch B** 74.26 334 ⇓P P 05 21 46.6 +1.3
baz=75,SNR=65
N28A **Pribbeno Ranch** 74.33 337 ⇑P P 05 21 46.2 +0.6
baz=75,SNR=12
Q23A **Hartsel** 74.39 333 ⇓P P 05 21 47.0 +0.8
baz=75,SNR=7.8
PDMCI **Parker Dam,Lak** 74.42 324 ⇑P P 05 21 47.1 +0.9
baz=75
BAR **Barrett** 74.51 322 eP P 05 21 47.8 +1.0
comp=Z,25nm,1.0s
MONP **Monument Peak** 74.53 322 ⇑P P 05 21 48.3 +1.2
baz=75,SNR=9.4
S20A **Disappointment** 74.54 330 ⇑P P 05 21 48.6 +1.5
baz=75,SNR=41
P24A **Kohler Place,** 74.55 334 ⇓P P 05 21 48.2 +1.2
baz=75,SNR=11
O26A **Horse Wrangler** 74.57 335 ⇑P P 05 21 48.1 +1.0
baz=75
BC3 **Big Chuckawall** 74.60 323 ⇓P P 05 21 48.6 +1.2
baz=75,SNR=22
R21A **Cimarron** 74.64 331 ⇑P P 05 21 49.0 +1.3
baz=75,SNR=22
M29A **Burnside Ranch** 74.72 338 ⇑P P 05 21 48.4 +0.6
baz=75,SNR=14
OGNE **Ogallala** 74.73 336 eP P 05 21 48.6 +0.6
comp=Z,107nm,1.6s
OGNE **Ogallala** 74.73 336 ⇓P P 05 21 48.6 +0.6
baz=75,SNR=8.6
O25A **Wiggins** 74.76 335 ⇓P P 05 21 49.5 +1.3
baz=75,SNR=21
N27A **Anderson Farm,** 74.79 336 ⇓P P 05 21 49.2 +0.9
baz=75,SNR=12
Q22A **Crested Butte,** 74.79 332 ⇑P P 05 21 49.8 +1.2
baz=75,SNR=24
P23A **Jefferson** 74.79 333 ⇓P P 05 21 49.9 +1.2
baz=75,SNR=20
IRM **Iron Mountain** 74.83 324 ⇑P P 05 21 49.7 +1.1
baz=75,SNR=10
R20A **Redvale** 74.85 331 ⇑P P 05 21 50.4 +1.5
baz=75,SNR=66
PV01 **Paradox Valley** 74.88 330 eP P 05 21 50.3 +1.2
comp=Z,5µm,1.3s
M28A **Bar X Bar Ranc** 74.90 337 ⇓P P 05 21 49.9 +0.9
baz=75,SNR=8.3
109C **Camp Elliot, M** 74.91 321 ⇑P P 05 21 49.9 +0.9
baz=75
W13A **Hualapai Mount** 74.92 325 ⇑P P 05 21 50.5 +1.2
baz=75,SNR=33
PQI **Presque Isle** 74.93 2 eP P 05 21 49.1 +0.3
comp=Z,34nm,1.1s
NEE2 **Needles Airpor** 75.03 324 ⇑P P 05 21 50.7 +0.9
baz=75
Q21A **Lamborn Mesa,** 75.05 332 ⇓P P 05 21 51.1 +1.1
baz=75,SNR=11
N26A **Koester Ranch,** 75.06 336 ⇓P P 05 21 51.0 +1.1
baz=75,SNR=6.8
ISCO **Idaho Springs** 75.07 333 eP P 05 21 51.1 +0.9
ISCO pmax pmax
comp=Z,27nm,0.9s
ISCO **Idaho Springs** 75.07 333 eP P 05 21 51.1 +0.9
comp=Z,27nm,0.9s
ISCO **Idaho Springs** 75.07 333 ⇑P P 05 21 51.0 +0.9
baz=75,SNR=42
SMCO **Snowmass** 75.09 332 eP P 05 21 51.7 +1.3
comp=Z,79nm,1.0s
PFO **Pinyon Flat Ob** 75.10 322 P P 05 21 51.0 +0.7
comp=Z,130nm,1.4s,SNR=9.5
PFO **Pinyon Flat Ob** 75.10 322 eP P 05 21 51.6 +1.3
comp=Z,38nm,1.4s
PFO **Pinyon Flat Ob** 75.10 322 ⇑P P 05 21 51.6 +1.3
baz=75,SNR=10

O24A **Longmont** 75.14 334 ⇑P P 05 21 51.3 +0.9
baz=76,SNR=8.6
S18A **Hurst Farm, Bl** 75.14 329 ⇓P P 05 21 51.9 +1.3
baz=76,SNR=132
BELC **Belle Mtn. Jos** 75.16 323 ⇓P P 05 21 51.7 +1.0
baz=76,SNR=10
U15A **North Rim** 75.19 327 ⇓P P 05 21 52.5 +1.6
baz=76,SNR=55
PV04 **Paradox Valley** 75.24 330 eP P 05 21 52.3 +1.2
P22A **Eagle** 75.35 333 ⇑P P 05 21 52.9 +1.2
baz=76,SNR=26
N25A **Grover** 75.36 335 ⇓P P 05 21 52.9 +1.2
baz=76
M27A **Reverse DX Ran** 75.37 336 ⇓P P 05 21 52.6 +1.0
baz=76,SNR=7.2
Q20A **Ridgley Place,** 75.45 331 ⇑P P 05 21 53.0 +0.7
baz=76,SNR=13
MURC **Murrieta** 75.50 322 ⇓P P 05 21 53.7 +1.2
baz=76,SNR=12
LDFC **Landfair** 75.52 324 eP P 05 21 54.8 +2.1
comp=Z,109nm,1.6s
O23A **Lake Granby, G** 75.54 333 ⇑P P 05 21 54.1 +1.2
baz=76,SNR=29
ECSD **EROS Data Cent** 75.54 341 eP P 05 21 52.5 0.0
comp=Z,115nm,0.9s
KOMG **Komaggas** 75.56 116 eP P 05 21 52.9 -0.2
KOMG AMB AMB 05 22 08.3
comp=Z,28nm,1.8s
P21A **Newcastle** 75.58 332 ⇓P P 05 21 54.4 +1.4
baz=76,SNR=41
M26A **McRoberts Ranc** 75.58 336 ⇑P P 05 21 53.8 +0.9
baz=76
N24A **Carr** 75.67 334 ⇑P P 05 21 54.7 +1.2
baz=76,SNR=19
O22A **Kremmling** 75.75 333 ⇑P P 05 21 54.9 +0.8
baz=76,SNR=27
SCI **San Clemente I** 75.77 321 ⇓P P 05 21 55.1 +1.1
baz=76
L27A **T5 Ranch, Ells** 75.84 337 ⇓P P 05 21 55.5 +1.2
baz=76
BBRC **Big Bear Solar** 75.85 322 ⇓P P 05 21 56.1 +1.4
baz=76
M25A **Palm-Egli Farm** 75.89 335 ⇑P P 05 21 55.4 +0.7
baz=76
P20A **De Beque** 75.95 331 ⇑P P 05 21 56.3 +1.2
baz=76
SPMN **St. Paul** 75.95 345 ⇓P P 05 21 54.1 -0.6
baz=76,SNR=27
HEC **Hector,Ludlow** 75.97 323 ⇑P P 05 21 56.7 +1.5
baz=76,SNR=13
COWI **Conover** 76.01 347 eP P 05 21 54.8 -0.3
comp=Z,43nm,1.1s
CIS **Catalina Islan** 76.01 321 ⇓P P 05 21 56.5 +1.1
baz=76
L26A **Timberwood Farm** 76.06 336 ⇑P P 05 21 56.5 +0.9
baz=76
N23A **Red Feather La** 76.14 334 ⇑P P 05 21 57.2 +0.9
baz=76,SNR=27
O21A **Pagoda** 76.17 332 ⇓P P 05 21 57.8 +1.3
baz=76,SNR=13
M24A **Cheyenne** 76.20 335 ⇑P P 05 21 57.7 +1.2
baz=76,SNR=18
TUQ **Turquoise Moun** 76.22 324 ⇓P P 05 21 58.0 +1.3
baz=76,SNR=5.9
BFSC **Mount Baldy Ra** 76.23 322 ⇑P P 05 21 57.8 +1.0
baz=76,SNR=10.0
N22A **Wattenberg Ran** 76.26 333 ⇑P P 05 21 58.2 +1.3
baz=77,SNR=33
PHWY **Pilot Hill** 76.30 334 eP P 05 21 58.0 +0.8
comp=Z,128nm,1.7s
P19A **Cripple Cowboy** 76.31 331 ⇑P P 05 21 58.5 +1.3
baz=77,SNR=95
K27A **Flueckinger Fa** 76.36 337 ⇓P P 05 21 58.2 +1.0
baz=77,SNR=12
RRX **Edison Barstow** 76.36 323 ⇑P P 05 21 58.8 +1.5
baz=77
O20A **White River Ci** 76.42 332 ⇑P P 05 21 58.9 +1.1
baz=77,SNR=62
MWC **Mount Wilson** 76.43 322 eP P 05 21 59.5 +1.5
MWC pmax pmax
comp=Z,109nm,1.8s
MWC **Mount Wilson** 76.43 322 eP P 05 21 59.5 +1.5
comp=Z,109nm,1.8s
PASC **Pasadena Art C** 76.46 322 eP P 05 21 59.3 +1.3
comp=Z,110nm,1.6s
L25A **Engebretsen Ra** 76.48 336 ⇑P P 05 21 59.2 +1.2
baz=77
M23A **Laramie** 76.54 334 ⇑P P 05 21 59.3 +0.8
baz=77,SNR=35
SRU **San Rafael** 76.55 330 ⇑P P 05 21 59.3 +0.8
baz=77,SNR=42
GSC **Goldstone** 76.58 323 eP P 05 22 00.5 +1.8
GSC pmax pmax
comp=Z,25nm,1.0s
GSC **Goldstone** 76.58 323 eP P 05 22 00.5 +1.8
comp=Z,25nm,1.0s
GSC **Goldstone** 76.58 323 ⇑P P 05 21 59.8 +1.2
baz=77,SNR=12
CCUT **Cedar City** 76.60 327 eP P 05 22 00.6 +1.7
comp=Z,56nm,1.1s
DECC **Green Verdugo** 76.60 322 ⇓P P 05 21 59.9 +1.2
baz=77,SNR=5.6
CVNA **Calvinia** 76.63 119 eP P 05 22 00.1 +0.8
CVNA AMB AMB 05 22 16.9
comp=Z,50nm,3.8s
N21A **Black Mountain** 76.65 333 ⇓P P 05 22 00.4 +1.3
baz=77,SNR=46
Q16A **Castle Valley** 76.68 329 ⇑P P 05 22 00.4 +1.1
baz=77,SNR=48
K26A **Motz Farm, Whi** 76.68 337 ⇑P P 05 21 60.0 +0.9
baz=77
SHOC **Shoshone** 76.76 324 ⇓P P 05 22 00.9 +1.3
baz=77
MSU **Marysvale** 76.81 328 eP P 05 22 01.5 +1.4
MSU **Marysvale** 76.81 328 eP P 05 22 01.5 +1.4
MVU **Marysvale** 76.82 328 eP P 05 22 01.4 +1.2
comp=Z,55nm,1.2s
ARUT **Antelope Range** 76.83 327 eP P 05 22 01.4 +1.3
ARUT pmax pmax
comp=Z,127nm,1.7s
ARUT **Antelope Range** 76.83 327 eP P 05 22 01.4 +1.3
comp=Z,127nm,1.7s
M22A **Cedar Creek Ra** 76.83 334 ⇑P P 05 22 01.2 +1.1
baz=77,SNR=9.6
K25A **Mack Ranch, Ha** 76.85 336 ⇑P P 05 22 01.4 +1.4
baz=77
P18A **Preston Nutter** 76.85 330 ⇑P P 05 22 01.6 +1.2
baz=77,SNR=49
BRSD **Miller** 76.87 340 ⇓P P 05 21 59.8 -0.2
baz=77
EDW2 **Edwards Air Fo** 76.89 322 ⇓P P 05 22 01.2 +0.8
baz=77,SNR=11
BLG **Laguna Peak** 76.90 321 ⇑P P 05 22 01.5 +1.1
baz=77
O19A **Miners Draw (B** 76.92 331 ⇓P P 05 22 01.5 +0.9
baz=77,SNR=50
N20A **Spence Gulch,** 77.01 332 ⇑P P 05 22 02.0 +0.8
baz=77,SNR=50
SUR **Sutherland** 77.05 120 LR LR 05 52 37.8
comp=Z,414nm,19.4s,baz=136,slow=33
OSI **Osito Adit** 77.09 322 ⇓P P 05 22 02.4 +0.9
baz=77
L23A **Garrett** 77.09 335 ⇑P P 05 22 02.1 +0.5
baz=77,SNR=16
BSC **Santa Cruz Isl** 77.13 321 ⇑P P 05 22 02.8 +1.0
baz=77
LRMC **Laurel Mountai** 77.18 323 ⇓P P 05 22 03.1 +1.0
baz=78
K24A **Anderson Ranch** 77.29 335 ⇓P P 05 22 03.8 +1.2
baz=78
M21A **Separation Pea** 77.30 333 ⇓P P 05 22 03.6 +0.8
baz=78,SNR=53
FURC **Furnace Creek,** 77.50 324 ⇑P P 05 22 04.8 +1.1
baz=78,SNR=21
SBC **Santa Barbara** 77.51 321 ⇓P P 05 22 04.8 +1.1
baz=78
MPMC **Manual Prospec** 77.52 323 ⇑P P 05 22 04.8 +0.7
baz=78,SNR=14
ARVC **Arvin** 77.53 322 ⇓P P 05 22 05.1 +1.2
baz=78
M20A **Sweetwater, Wa** 77.53 333 ⇑P P 05 22 04.9 +0.9
baz=78,SNR=15
L21A **Rawlins** 77.61 333 ⇑P P 05 22 05.2 +0.8
baz=78,SNR=116
K23A **Bowen Ranch, D** 77.61 335 ⇑P P 05 22 05.3 +0.9
baz=78,SNR=36
ISA **Isabella** 77.74 322 eP P 05 22 06.5 +1.3
ISA pmax pmax
comp=Z,32nm,1.0s
ISA **Isabella** 77.74 322 eP P 05 22 06.5 +1.3
comp=Z,32nm,1.0s
ISA **Isabella** 77.74 322 ⇓P P 05 22 06.4 +1.3
baz=78,SNR=21
J24A **Dixon Ranch, L** 77.76 336 ⇑P P 05 22 06.5 +1.3
baz=78,SNR=40
MPU **Maple Canyon** 77.78 330 eP P 05 22 06.5 +1.1
comp=Z,84nm,1.1s
K22A **Casper** 77.86 334 ⇑P P 05 22 06.8 +1.0
baz=78,SNR=57
PKM **Peak Mountain** 77.90 321 ⇑P P 05 22 07.5 +1.3
baz=78,SNR=13
DAU **Daniels Canyon** 77.94 330 eP P 05 22 07.4 +1.0
DAU **Daniels Canyon** 77.94 330 eP P 05 22 07.4 +1.0
M19A **Rock Springs** 77.94 332 ⇑P P 05 22 06.9 +0.6
baz=78,SNR=12
L20A **Wamsutter** 78.03 333 ⇑P P 05 22 07.6 +0.8
baz=78,SNR=26
CWC **Cottonwood Cre** 78.11 323 ⇑P P 05 22 08.5 +1.2
baz=78
K21A **Alcova** 78.13 334 ⇑P P 05 22 08.3 +1.0
baz=78
J23A **Dilts Ranch, B** 78.15 335 ⇑P P 05 22 08.2 +0.9
baz=78
GRAC **Grapevine Rang** 78.17 324 ⇓P P 05 22 08.8 +1.3
baz=78,SNR=8.2
JLU **Jordanelle** 78.18 330 eP P 05 22 08.5 +0.9
comp=Z,43nm,0.9s
VES **Vestal, Richgr** 78.20 322 ⇓P P 05 22 08.7 +1.1
baz=78,SNR=24
I24A **Kuemmerle Ranc** 78.21 336 ⇓P P 05 22 08.6 +1.0
baz=78,SNR=20
RSSD **Black Hills** 78.23 337 eP P 05 22 07.8 0.0
RSSD pmax pmax
comp=Z,44nm,1.0s
RSSD **Black Hills** 78.23 337 eP P 05 22 07.8 0.0
comp=Z,44nm,1.0s
EYMN **Ely** 78.25 346 eP P 05 22 07.0 -0.6
comp=Z,39nm,1.0s
MAW **Mawson** 78.25 164 P P 05 22 07.9 +0.4
MAW pP pP 05 22 21.9 +0.7
MAW **Mawson** 78.25 164 P P 05 22 07.9 +0.4
comp=Z,5.2nm,0.6s,baz=222,slow=6.4,SNR=8.2
MAW pP pP 05 22 21.9 +0.7
comp=Z,10nm,0.6s,baz=223,slow=6.0,SNR=7.5
MAW LR LR 06 00 09.8
comp=Z,241nm,18.2s,baz=226,slow=38
SMMC **Simmler** 78.31 321 ⇑P P 05 22 09.8 +1.6
baz=79,SNR=8.9
R11A **Troy Canyon, C** 78.31 326 ⇓P P 05 22 09.6 +1.3
baz=79,SNR=48
DUG **Dugway** 78.46 329 eP P 05 22 10.2 +1.1
DUG pmax pmax
comp=Z,83nm,1.3s
DUG **Dugway** 78.46 329 eP P 05 22 10.2 +1.1
comp=Z,83nm,1.3s
DUG **Dugway** 78.46 329 ⇑P P 05 22 10.2 +1.1
baz=79,SNR=37
J22A **Midwest** 78.50 335 ⇓P P 05 22 09.6 +0.3
baz=79,SNR=73
L19A **Farson** 78.52 332 ⇓P P 05 22 10.6 +1.1
baz=79,SNR=69
M17A **Scullys Gap (B** 78.55 331 ⇓P P 05 22 09.8 +0.1
baz=79,SNR=19
K20A **Yellowstone Ra** 78.58 333 ⇑P P 05 22 10.1 +0.3
baz=79,SNR=22
I23A **Meade Ranch, G** 78.60 336 ⇓P P 05 22 10.1 +0.4
baz=79
RCTC **Rector, Farmer** 78.64 322 ⇑P P 05 22 10.0 0.0
baz=79
L18A **Fontenelle, Gr** 78.66 332 ⇓P P 05 22 10.9 +0.6
baz=79,SNR=76
TIN **Tinemaha** 78.66 324 ⇑P P 05 22 11.5 +1.2
baz=79
RAR **Rarotonga** 78.76 252 LR LR 05 48 29.6
comp=Z,610nm,20.2s,baz=315,slow=29
J21A **Lysite** 78.81 334 ⇓P P 05 22 11.6 +0.6
baz=79,SNR=28
I22A **9 Mile Ranch,** 78.91 335 ⇑P P 05 22 11.9 +0.4
baz=79,SNR=70
K19A **Absolon Red Bu** 78.92 333 ⇓P P 05 22 11.9 +0.2
baz=79,SNR=38
H24A **Dirks Ranch, A** 78.95 337 ⇓P P 05 22 11.9 +0.3
baz=79,SNR=42
HWUT **Hardware Ranch** 79.05 331 eP P 05 22 12.8 +0.4
comp=Z,92nm,0.8s
MTUM **Tungsten Hills** 79.06 324 eP P 05 22 13.9 +1.3
J20A **Shoshoni** 79.06 334 ⇑P P 05 22 13.5 +1.1
baz=79,SNR=30
H23A **Clabaugh Cattl** 79.09 336 ⇑P P 05 22 12.8 +0.4
baz=79
I21A **Big Trails, Te** 79.15 334 ⇑P P 05 22 13.1 +0.2
baz=80,SNR=70
UPI **Upington** 79.15 116 eP P 05 22 12.3 -1.0
PDAR **Pinedale Array** 79.16 332 P P 05 22 13.2 +0.1
PDAR pP pP 05 22 27.4 +0.7
PDAR **Pinedale Array** 79.16 332 P P 05 22 13.2 +0.1
comp=Z,24nm,0.9s,baz=141,slow=5.4,SNR=78
PDAR pP pP 05 22 27.4 +0.7
comp=Z,4.3nm,0.5s,baz=139,slow=4.9,SNR=4.3
PDAR LR LR 05 53 18.3
comp=Z,150nm,21.9s,baz=149,slow=33
BW06 **Boulder Array** 79.16 332 eP P 05 22 13.1 +0.1
comp=Z,58nm,1.2s
J19A **Crowheart** 79.37 333 ⇑P P 05 22 14.6 +0.5
baz=80,SNR=141
MLAC **Mammoth Lakes** 79.41 324 ⇓P P 05 22 15.6 +1.1
baz=80,SNR=7.5
G24A **Alzada** 79.42 337 ⇓P P 05 22 14.6 +0.4
baz=80,SNR=25
H22A **Clearmont** 79.47 335 ⇓P P 05 22 14.7 +0.2
baz=80,SNR=26
I20A **Worland** 79.58 334 ⇓P P 05 22 15.8 +0.7
baz=80,SNR=69
G23A **Biddle** 79.64 336 ⇑P P 05 22 15.7 +0.3
baz=80,SNR=43
NV11 **Mina Array Sit** 79.66 324 eP P 05 22 16.5 +0.8
HVU **Hansel Valley** 79.72 330 eP P 05 22 16.4 +0.4
HVU pmax pmax
comp=Z,69nm,1.1s
HVU **Hansel Valley** 79.72 330 eP P 05 22 16.4 +0.4
comp=Z,69nm,1.1s
NVAR **Mina Array Bea** 79.73 324 P P 05 22 17.1 +0.8
NVAR **Mina Array Bea** 79.73 324 P P 05 22 17.1 +0.8
comp=Z,8.4nm,0.8s,baz=156,slow=6.3,SNR=45
NVAR LR LR 05 50 59.8
comp=Z,119nm,19.0s,baz=207,slow=31
H21A **Big Horn, Sher** 79.75 335 ⇓P P 05 22 16.1 0.0
baz=80,SNR=14
AHID **Auburn Hatcher** 79.80 331 eP P 05 22 17.2 +0.7
comp=Z,93nm,1.2s
F24A **Ekalaka** 79.88 337 ⇑P P 05 22 17.0 +0.3
baz=80,SNR=48
G22A **Birney** 79.98 336 ⇑P P 05 22 17.3 +0.1
baz=80,SNR=18
H20A **Greybull** 79.99 334 ⇓P P 05 22 17.6 +0.2
baz=80,SNR=99
I19A **Meeteetse** 80.00 333 ⇓P P 05 22 18.2 +0.7
baz=80,SNR=37
ELK **Elko** 80.02 328 eP P 05 22 18.3 +0.6
comp=Z,679nm,1.1s
I18A **Diamond G Ranc** 80.04 333 ⇓P P 05 22 18.7 +0.9
baz=80,SNR=52
F23A **Volborg** 80.10 337 ⇓P P 05 22 18.1 +0.3
baz=80,SNR=46
MDND **Maddock** 80.15 341 ⇓P P 05 22 18.4 +0.4
baz=80,SNR=23
REDW **Red Top Meadow** 80.18 332 eP P 05 22 19.6 +1.0
comp=Z,0.8nm,1.2s
SNOW **Snow King Moun** 80.23 332 eP P 05 22 19.3 +0.5
comp=Z,50nm,1.0s
TSUM **Tsumeb** 80.24 107 eP P 05 22 20.1 +0.7
TSUM **Tsumeb** 80.24 107 eP P 05 22 20.1 +0.7
comp=Z,21nm,1.1s
LOHW **Long Hollow** 80.29 332 eP P 05 22 19.7 +0.6
comp=Z,79nm,1.4s
G21A **Lodge Grass** 80.32 335 ⇓P P 05 22 19.5 +0.4
baz=81,SNR=32
TPAW **Teton Pass** 80.33 332 eP P 05 22 19.9 +0.5
comp=Z,55nm,1.0s
RRI2 **Red Ridge** 80.37 332 eP P 05 22 20.1 +0.5
comp=Z,65nm,1.1s
F22A **Rosebud** 80.45 336 ⇑P P 05 22 20.0 +0.3
baz=81,SNR=50
E24A **Baker** 80.46 338 ⇓P P 05 22 20.6 +0.9
baz=81,SNR=39
MOOW **Moose Ponds** 80.46 332 eP P 05 22 20.3 +0.3

DCID1 **Drake Creek** 80.51 332 *e*P P 05 22 21.4 +1.2
comp=Z,55nm,1.0s
H19A **Powell** 80.52 334 ⇑P P 05 22 20.8 +0.6
baz=81,SNR=24
CMB **Columbia Colle** 80.53 323 *e*P P 05 22 21.2 +0.9
CMB pmax pmax
comp=Z,18nm,1.4s
CMB **Columbia Colle** 80.53 323 *e*P P 05 22 21.2 +0.9
comp=Z,18nm,1.4s
I17A **Pilgrim Ck.** 80.53 332 ⇓P P 05 22 21.5 +1.1
baz=81,SNR=14
IMW **Indian Meadow** 80.66 332 *e*P P 05 22 21.7 +0.6
comp=Z,68nm,1.3s
G20A **Bridger** 80.69 335 ⇓P P 05 22 21.3 +0.2
baz=81,SNR=122
E23A **Ismay** 80.74 337 ⇑P P 05 22 21.3 +0.1
baz=81,SNR=51
H18A **Shoshone NF, C** 80.79 333 ⇓P P 05 22 22.3 +0.5
baz=81,SNR=65
F21A **Absaloka Mine,** 80.80 336 ⇓P P 05 22 22.1 +0.5
baz=81,SNR=8.2
I16A **Newdale** 80.87 332 ⇑P P 05 22 22.8 +0.7
baz=81,SNR=36
E22A **Miles City** 80.91 337 ⇑P P 05 22 22.2 +0.1
baz=81,SNR=39
H17A **Grant Village** 80.92 333 ⇑P P 05 22 24.0 +1.5
baz=81,SNR=10
D24A **Glendive** 80.95 338 ⇓P P 05 22 23.2 +0.9
baz=81,SNR=39
LKWY **Lake** 80.99 333 *e*P P 05 22 24.3 +1.4
LKWY pmax pmax
comp=Z,11nm,0.8s
LKWY **Lake** 80.99 333 *e*P P 05 22 24.3 +1.4
comp=Z,11nm,0.8s
RLMT **Red Lodge** 81.01 334 *e*P P 05 22 23.5 +0.6
comp=Z,114nm,1.4s
WCN **Washoe City** 81.14 324 *e*P P 05 22 24.5 +0.8
WCN pmax pmax
comp=Z,30nm,1.8s
WCN **Washoe City** 81.14 324 *e*P P 05 22 24.5 +0.8
comp=Z,30nm,1.8s
F20A **Billings** 81.16 335 ⇑P P 05 22 23.8 +0.3
baz=82,SNR=20
J14A **Carey** 81.28 330 ⇑P P 05 22 25.3 +0.9
baz=82,SNR=22
G18A **Lazy EL Ranch,** 81.29 334 ⇓P P 05 22 24.7 +0.4
baz=82,SNR=41
D23A **Lindsay** 81.29 337 ⇑P P 05 22 25.1 +0.9
baz=82,SNR=109
YMR **Madison River** 81.31 333 *e*P P 05 22 25.7 +1.2
comp=Z,103nm,1.0s
C24A **Savage** 81.34 338 ⇓P P 05 22 25.2 +0.8
baz=82,SNR=70
I15A **Monteview** 81.39 331 ⇓P P 05 22 26.0 +1.1
baz=82,SNR=29
ULM **Lac du Bonnet** 81.39 344 *e*P P 05 22 24.2 -0.3
comp=Z,84nm,1.0s
ULM **Lac du Bonnet** 81.39 344 P P 05 22 23.9 -0.6
comp=Z,68nm,0.9s,baz=156,slow=5.2,SNR=52
E21A **Keefer Ranch,** 81.40 336 ⇓P P 05 22 25.2 +0.5
baz=82,SNR=25
HVD **Gariep Dam** 81.42 120 *e*P P 05 22 28.4 +2.8
HVD AMB AMB 05 22 41.4
comp=Z,34nm,1.2s
H16A **Russell Place,** 81.45 333 ⇑P P 05 22 26.2 +0.9
baz=82,SNR=18
F19A **Roth Farm, Mol** 81.50 335 ⇑P P 05 22 25.7 +0.3
baz=82,SNR=62
D22A **Cohagen** 81.60 337 ⇓P P 05 22 26.4 +0.6
baz=82,SNR=44
QLMT **Earthquake Lak** 81.63 332 *e*P P 05 22 27.6 +1.4
J13A **Cove Ranch, Pi** 81.63 330 ⇓P P 05 22 27.1 +1.0
baz=82,SNR=76
GCMT **Greycliff** 81.72 334 *e*P P 05 22 26.8 +0.2
comp=Z,55nm,1.4s
I14A **Mackay** 81.74 331 ⇑P P 05 22 27.9 +1.1
baz=82,SNR=48
E20A **Meyer Farm, Mu** 81.75 335 ⇓P P 05 22 27.2 +0.6
baz=82,SNR=103
G17A **Pierce Place,** 81.75 333 ⇑P P 05 22 27.6 +0.8
baz=82,SNR=13
D21A **La Casta Ranch** 81.82 336 ⇑P P 05 22 27.5 +0.6
baz=82,SNR=32
C23A **Lambert** 81.83 338 ⇑P P 05 22 27.6 +0.6
baz=82,SNR=36
F18A **Big Timber** 81.84 334 ⇑P P 05 22 27.5 +0.4
baz=82,SNR=53
HLID **Hailey** 81.87 330 *e*P P 05 22 28.6 +1.2
comp=Z,64nm,1.1s
HLID **Hailey** 81.87 330 ⇓P P 05 22 28.5 +1.1
baz=82,SNR=99
BEKR **Beckworth** 81.87 324 *e*P P 05 22 28.3 +0.8
comp=Z,21nm,1.2s
TOA0 **Torodi Ar. Sit** 81.89 70 *e*P P 05 22 28.0 0.0
TORD **Torodi Ar. Bea** 81.89 70 P P 05 22 27.6 -0.4
TORD pP pP 05 22 41.6 -0.2
TORD **Torodi Ar. Bea** 81.89 70 P P 05 22 27.6 -0.4
comp=Z,16nm,0.8s,baz=253,slow=5.6,SNR=83
TORD pP pP 05 22 41.6 -0.2
comp=Z,15nm,0.5s,baz=263,slow=5.0,SNR=14
TORD LR LR 05 56 02.4
comp=Z,443nm,21.8s,baz=230,slow=34
E19A **Rath Farm, Rou** 81.95 335 ⇓P P 05 22 28.1 +0.4
baz=82,SNR=117
H15A **Lima** 81.95 332 ⇑P P 05 22 28.9 +1.0
baz=82,SNR=14
I13A **Wildhorse Cree** 82.02 330 ⇑P P 05 22 29.3 +1.0
baz=82,SNR=76
C22A **Vida** 82.02 337 ⇓P P 05 22 28.2 +0.3
baz=82,SNR=21
OHCM **Honcut** 82.06 323 *e*P P 05 22 29.0 +0.7
DGMT **Dagmar** 82.09 339 *e*P P 05 22 29.1 +0.8
comp=Z,134nm,0.9s
DGMT **Dagmar** 82.09 339 ⇓P P 05 22 29.1 +0.8
baz=82,SNR=44
G16A **Moss Hill, Enn** 82.11 332 ⇓P P 05 22 29.0 +0.4
baz=82,SNR=16
BOSA **Boshof** 82.17 118 *e*P P 05 22 28.4 -1.1
BOSA AMB AMB 05 22 44.7
comp=Z,30nm,4.8s
BOSA **Boshof** 82.17 118 P P 05 22 29.8 +0.2
BOSA **Boshof** 82.17 118 P P 05 22 29.8 +0.2
comp=Z,7.5nm,0.9s,baz=206,slow=6.7,SNR=7.2
BOSA LR LR 05 53 57.5
comp=Z,514nm,20.1s,baz=236,slow=32
F17A **Fitzpatrick Pl** 82.21 334 ⇑P P 05 22 29.7 +0.6
baz=82,SNR=42
MCMT **McKenzie Canyo** 82.21 332 P P 05 22 30.3 +1.0
D20A **Manuel Ranch,** 82.25 336 ⇓P P 05 22 29.5 +0.3
baz=83,SNR=45
H14A **Leadore** 82.26 331 ⇓P P 05 22 30.4 +0.9
baz=83,SNR=38
G15A **Dillon** 82.33 332 ⇑P P 05 22 30.4 +0.5
baz=83,SNR=35
B23A **Brockton** 82.34 338 ⇑P P 05 22 30.0 +0.4
baz=83,SNR=22
I12A **Atlanta** 82.37 330 ⇑P P 05 22 30.8 +0.7
baz=83,SNR=25
BOZ **Bozeman (W)** 82.38 333 *e*P P 05 22 30.0 0.0
BOZ pmax pmax
comp=Z,15nm,1.1s
BOZ **Bozeman (W)** 82.38 333 *e*P P 05 22 30.0 0.0
comp=Z,15nm,1.1s
MFID **Camas Ranch** 82.38 329 *e*P P 05 22 30.2 +0.1
MFID **Camas Ranch** 82.38 329 ⇓P P 05 22 30.6 +0.6
baz=83,SNR=52
A24A **Westby** 82.43 339 ⇓P P 05 22 30.7 +0.6
baz=83,SNR=26
E18A **Harlowton** 82.47 334 ⇑P P 05 22 30.8 +0.3
baz=83
F16A **Kennard Place,** 82.49 333 ⇓P P 05 22 30.9 +0.3
baz=83,SNR=9.7
C21A **Desert Coulee** 82.50 337 ⇓P P 05 22 30.7 +0.2
baz=83,SNR=73
B22A **Reddig Ranch S** 82.54 338 ⇑P P 05 22 31.1 +0.4
baz=83,SNR=70
DLMT **Dillon** 82.54 332 *e*P P 05 22 31.6 +0.7
comp=Z,50nm,1.3s
D19A **Cripps Ranch,** 82.58 335 ⇑P P 05 22 31.1 +0.2
baz=83,SNR=82
C20A **Veseth Ranch,** 82.73 336 ⇑P P 05 22 31.6 0.0
baz=83,SNR=23
A23A **Redstone** 82.74 339 ⇓P P 05 22 32.1 +0.4
baz=83
E17A **Martinsdale** 82.74 334 ⇓P P 05 22 32.4 +0.5
baz=83
G14A **Jackson** 82.80 332 ⇑P P 05 22 33.0 +0.7
baz=83
H12A **Diamond D Ranc** 82.84 330 ⇓P P 05 22 33.0 +0.5
baz=83,SNR=14
LRM **Limekiln Ridge** 82.85 332 *e*P P 05 22 33.1 +0.5
F15A **Butte** 82.89 332 ⇑P P 05 22 33.2 +0.5
baz=83,SNR=32
WVOR **Wild Horse Val** 82.94 327 P P 05 22 33.2 +0.2
WVOR **Wild Horse Val** 82.94 327 P P 05 22 33.2 +0.2
D18A **Linhart Farms,** 82.95 335 ⇑P P 05 22 33.3 +0.4
baz=83,SNR=67
B21A **Ellsworth Farm** 82.99 337 ⇓P P 05 22 33.5 +0.5
baz=83,SNR=44
G13A **Cobalt** 83.01 331 ⇓P P 05 22 34.1 +0.8
baz=83,SNR=37
A22A **Carney Farms,** 83.11 338 ⇑P P 05 22 34.0 +0.4
baz=83,SNR=70
C19A **Slack Wire Ran** 83.12 335 ⇓P P 05 22 33.9 +0.2
baz=84,SNR=33
E16A **East Helena** 83.12 333 ⇓P P 05 22 34.3 +0.5
baz=83,SNR=17
SCHQ **Schefferville** 83.13 3 *e*P P 05 22 33.4 -0.1
comp=Z,34nm,1.3s
SCHQ **Schefferville** 83.13 3 P P 05 22 33.0 -0.5
comp=Z,12nm,1.0s,baz=168,slow=5.0,SNR=12
F14A **Wisdom** 83.22 332 ⇑P P 05 22 35.4 +0.9
baz=84,SNR=39
D17A **Six Diamond Ra** 83.25 334 ⇓P P 05 22 34.9 +0.4
baz=84,SNR=99
HRY **Holter Researc** 83.33 333 *e*P P 05 22 35.6 +0.7
comp=Z,11nm,0.9s
MOD **Modoc** 83.35 326 *e*P P 05 22 35.9 +0.7
comp=Z,60nm,0.9s
E15A **Deer Lodge** 83.42 333 ⇑P P 05 22 35.8 +0.4
baz=84,SNR=17
D16A **Dana Ranch, Ca** 83.48 334 ⇑P P 05 22 36.4 +0.8
baz=84,SNR=48
G12A **Big Creek, Yel** 83.51 330 ⇑P P 05 22 36.1 +0.2
baz=84
WDC **Whiskeytown Da** 83.53 323 *e*P P 05 22 35.2 -0.7
WDC pmax pmax
comp=Z,32nm,1.4s
WDC **Whiskeytown Da** 83.53 323 *e*P P 05 22 35.1 -0.7
comp=Z,32nm,1.4s
F13A **Darby** 83.61 331 ⇑P P 05 22 36.8 +0.4
baz=84,SNR=25
EGMT **Eagleton** 83.62 335 *e*P P 05 22 36.2 -0.2
comp=Z,36nm,1.0s
EGMT **Eagleton** 83.62 335 ⇓P P 05 22 36.1 -0.2
baz=84,SNR=31
C17A **Wharram Farm,** 83.68 334 ⇑P P 05 22 36.7 +0.1
baz=84,SNR=32
A20A **Cobblestone Ra** 83.69 337 ⇑P P 05 22 36.8 +0.1
baz=84,SNR=52
B19A **Brinkman Farms** 83.69 336 ⇓P P 05 22 36.8 +0.1
baz=84,SNR=78
E14A **Clinton** 83.76 332 ⇓P P 05 22 37.8 +0.7
baz=84,SNR=18
D15A **Lincoln** 83.87 333 ⇑P P 05 22 38.2 +0.5
baz=84,SNR=25
B18A **Beardsley Farm** 83.94 335 ⇓P P 05 22 38.1 +0.1
baz=84,SNR=108
F12A **Elk City** 83.97 331 ⇓P P 05 22 38.4 +0.2
baz=84,SNR=30
A19A **Klindworth Far** 84.02 336 ⇓P P 05 22 38.3 -0.1
baz=84,SNR=40
CHMT **Chamberlain Mo** 84.06 333 *e*P P 05 22 39.1 +0.3
E13A **Victor** 84.07 332 ⇓P P 05 22 39.2 +0.5
baz=84,SNR=23
SEK **Senekal** 84.14 119 *e*P P 05 22 37.4 -2.3
SEK AMB AMB 05 22 40.6
comp=Z,34nm,3.5s
LBTB **Lobatse** 84.14 115 *e*P P 05 22 40.4 +0.7
LBTB AMB AMB 05 22 46.8
comp=Z,24nm,2.5s
LBTB **Lobatse** 84.14 115 *e*P P 05 22 40.4 +0.7
comp=Z,22nm,1.0s
BMO **Blue Mountains** 84.17 329 *e*P P 05 22 38.9 -0.3
comp=Z,34nm,1.4s
C16A **Fuhringer Ranc** 84.19 334 ⇓P P 05 22 39.5 +0.2
baz=84,SNR=42
B17A **L&G Farms, Che** 84.24 335 ⇓P P 05 22 39.3 -0.1
baz=85,SNR=14
MSO **Missoula** 84.28 332 *e*P P 05 22 40.2 +0.5
comp=Z,16nm,1.3s
D14A **Greenough** 84.30 333 ⇓P P 05 22 40.1 +0.3
baz=85,SNR=22
KHMM **Horse Mountain** 84.37 323 *e*P P 05 22 42.0 +1.6
comp=Z,41nm,1.1s
A18A **Metzger Ranch,** 84.41 336 ⇓P P 05 22 39.9 -0.3
baz=85,SNR=46
SLMT **Seeley Lake** 84.42 333 *e*P P 05 22 40.8 +0.2
YBH **Yreka Blue Hor** 84.45 324 *e*P P 05 22 40.3 -0.4
comp=Z,12nm,1.0s
C15A **Salmond Ranch,** 84.50 334 ⇓P P 05 22 41.4 +0.5
baz=85,SNR=48
PRYS **Parys** 84.61 118 *e*P P 05 22 39.2 -2.9
PRYS AMB AMB 05 22 57.0
comp=Z,19nm,1.3s
B16A **M & M Farms, S** 84.68 334 ⇓P P 05 22 41.4 -0.2
baz=85,SNR=30
D13A **Huson** 84.70 332 ⇓P P 05 22 42.2 +0.4
baz=85,SNR=34
A17A **Triple J Farms** 84.74 335 ⇑P P 05 22 42.0 0.0
baz=85,SNR=95
SWMT **Swartz Lake** 84.84 333 *e*P P 05 22 42.8 +0.3
B15A **Bradely Ranch,** 84.92 334 ⇓P P 05 22 42.6 -0.4
baz=85,SNR=48
C14A **Swan Lake** 84.95 333 ⇑P P 05 22 43.5 +0.4
baz=85
D12A **Red Ives Fores** 85.04 332 ⇓P P 05 22 43.8 +0.2
baz=85
A16A **West Butte Ran** 85.08 335 ⇓P P 05 22 43.8 +0.1
baz=85,SNR=123
YBMT **Yellow Bay** 85.13 333 *e*P P 05 22 44.7 +0.7
comp=Z,14nm,1.0s
JTMT **Jette** 85.15 333 *e*P P 05 22 44.4 +0.3
HUMO **Hull Mountain** 85.21 325 *e*P P 05 22 44.6 +0.2
comp=Z,36nm,1.7s
C13A **Hot Springs** 85.21 332 ⇓P P 05 22 44.8 +0.4
baz=86,SNR=35
B14A **Marquette Ranc** 85.24 333 ⇓P P 05 22 44.3 -0.3
baz=86,SNR=27
BLMT **Blacktail Moun** 85.39 333 *e*P P 05 22 45.8 +0.3
BSMT **Bassoo Peak** 85.44 332 *e*P P 05 22 45.8 +0.2
VIPM **Ingram Point** 85.45 327 P P 05 22 46.6 +0.8
VIPM **Ingram Point** 85.45 327 P P 05 22 46.6 +0.8
CASY **Casey** 85.47 181 *e*P P 05 22 46.2 +0.8
comp=Z,52nm,0.9s
A15A **Johnson Ranch,** 85.53 334 ⇓P P 05 22 45.3 -0.7
baz=86,SNR=35
C12B **Naegeli Ranch,** 85.61 332 ⇓P P 05 22 46.6 +0.3
baz=86,SNR=26
B13A **Whitefish** 85.73 333 ⇑P P 05 22 47.0 +0.1
baz=86,SNR=23
A14A **Double T Ranch** 85.79 334 ⇑P P 05 22 47.1 -0.2
baz=86,SNR=35
C11A **Tepee Creek (N** 86.04 332 ⇑P P 05 22 48.2 -0.2
baz=86,SNR=35
WALA **Waterton Lakes** 86.06 334 *e*P P 05 22 48.6 +0.1
comp=Z,2.4nm,1.1s
KEBM **Edson Butte** 86.11 324 *e*P P 05 22 50.2 +1.3
comp=Z,83nm,1.0s
A13A **Flathead Natio** 86.15 333 ⇓P P 05 22 49.5 +0.5
BROR **Big Rock Looko** 86.16 326 P P 05 22 49.0 0.0
B12A **Libby** 86.26 332 ⇑P P 05 22 49.6 +0.1
baz=87,SNR=20
HAWA **Hanford** 86.35 329 *e*P P 05 22 50.6 +0.7
comp=Z,50nm,1.0s
A12A **Yaak River Ran** 86.65 333 ⇑P P 05 22 51.5 +0.1
baz=87,SNR=5.7
NEW **Newport** 86.73 331 *e*P P 05 22 51.1 -0.7
comp=Z,48nm,1.6s
NEW **Newport** 86.73 331 ⇓P P 05 22 51.1 -0.7
baz=87,SNR=11
TRW **Toppenish Ridg** 86.74 328 P P 05 22 52.5 +0.6
COR **Corvallis** 86.81 326 *e*P P 05 22 53.4 +1.2
COR pmax pmax
comp=Z,161nm,1.3s
COR **Corvallis** 86.81 326 *e*P P 05 22 53.4 +1.2
comp=Z,160nm,1.3s
C09A **Chrisman Ranch** 86.87 330 P P 05 22 52.5 +0.1
MPOR **Mary's Peak** 86.87 326 P P 05 22 53.6 +0.9
FFC **Flin Flon** 87.00 343 *e*P P 05 22 52.0 -0.9
FFC pmax pmax
comp=Z,17nm,1.0s
FFC **Flin Flon** 87.00 343 *e*P P 05 22 52.0 -0.9
comp=Z,16nm,1.0s
ODZ **Otahua Downs** 87.52 219 *e*P P 05 22 55.6 -0.4
comp=Z,226nm,1.9s
WTV **Waterville** 87.53 330 P P 05 22 55.8 +0.1
ETW **Entiat** 87.62 329 P P 05 22 56.3 0.0
LON **Longmire** 87.67 328 *e*P P 05 22 56.3 -0.1
LON pmax pmax
comp=Z,28nm,1.3s
LON **Longmire** 87.67 328 *e*P P 05 22 56.3 -0.1
comp=Z,28nm,1.3s
URZ **Urewera** 87.71 227 LR LR 05 52 00.8
comp=Z,605nm,19.8s,baz=94,slow=29
RPZ **Rata Peaks** 88.12 220 LR LR 05 52 42.8
comp=Z,365nm,21.1s,baz=309,slow=29
JCW **Jim Creek** 88.78 329 P P 05 23 01.0 -0.6
CMW **Cultus Mountai** 89.04 329 P P 05 23 02.5 -0.4
NLWA **Neilton Lookou** 89.10 327 *e*P P 05 23 04.0 +0.9
comp=Z,62nm,1.4s
PGC **Sidney** 89.81 328 *e*P P 05 23 07.0 +0.7
comp=Z,3.2nm,1.3s
TAM **Tamanrasset** 90.00 64 *e*P P 05 23 07.1 -1.0
TAM pmax pmax
comp=Z,5.0nm,1.0s
TAM **Tamanrasset** 90.00 64 *e*P P 05 23 07.1 -1.0
comp=Z,4.5nm,1.0s
LSZ **Lusaka** 91.01 108 *e*P P 05 23 15.4 +2.4
LSZ **Lusaka** 91.01 108 *e*P P 05 23 15.2 +2.2
comp=Z,22nm,1.4s
AFI **Afiamalu** 92.28 253 LR LR 05 53 42.0
comp=Z,530nm,22.0s,baz=85,slow=28
ESDC **Sonseca Array** 92.42 46 P P 05 23 18.7 -0.1
ESDC **Sonseca Array** 92.42 46 P P 05 23 18.7 -0.1
comp=Z,0.2nm,0.3s,baz=197,slow=4.0,SNR=3.1
ESDC LR LR 06 02 05.7
comp=Z,283nm,20.3s,baz=210,slow=34
YKA **Yellowknife Ar** 97.07 341 P P 05 23 38.6 -0.8
YKA PKKPbc **PKKPbc** 05 40 18.6 -3.2
YKA **Yellowknife Ar** 97.07 341 P P 05 23 38.6 -0.8
comp=Z,6.2nm,0.7s,baz=144,slow=4.1,SNR=158
YKA PKKPbc **PKKPbc** 05 40 18.6 -3.2
comp=Z,0.3nm,0.6s,baz=329,slow=3.2,SNR=10
KIP **Kipapa** 97.10 290⇑*e*P P 05 23 40.4 -0.2
KEST **Kesra** 99.31 54 LR LR 06 09 55.4
comp=Z,313nm,20.5s,baz=154,slow=36
DLBC **Dease Lake** 99.39 333 *e*P **Pdif** 05 23 50.3 +0.3
DZM **Mont Dzumac** 104.85 234 *e*LR LR 05 58 37.1
comp=Z,446nm,28.7s
EGAK **Eagle** 107.39 335 *e*Pdif **Pdif** 05 24 25.6 +0.2
GERES **GERESS Array B** 107.92 44 PKiKP **PKiKP** 05 28 34.7 -0.5
GERES **GERESS Array B** 107.92 44 PKiKP **PKiKP** 05 28 34.7 -0.5
comp=Z,0.9nm,0.8s,baz=242,slow=2.9,SNR=4.6
CLL **Collm** 108.46 41 *e*SKSac **SKSac** 05 35 10.0 +3.9
CLL *e*Sdif Sdif 05 36 48.0 +14
CLL *e* 05 37 31.0
CLL *e*PS **PS** 05 38 22.0 -4.8
CLL *e*SS SS 05 44 00.0 -14
CLL *e*SSS SSS 05 48 18.0
CLL Lm MLR 06 13 00.0
comp=N,100nm,21.9s
CLL Lm MLR 06 13 00.0
comp=E,100nm,19.9s
CLL Lm MLR 06 13 00.0
comp=Z,200nm,19.8s
ILAR **Eielson Array** 109.56 334 Pdif **Pdif** 05 24 34.4 -0.6
ILAR PKiKP **PKiKP** 05 28 37.2 -0.5
ILAR PP **PP** 05 29 06.7 -2.8
ILAR PKKPbc **PKKPbc** 05 39 41.5 -2.9
ILAR **Eielson Array** 109.56 334 Pdiff **Pdif** 05 24 34.4 -0.6
comp=Z,1.0nm,0.8s,baz=149,slow=3.5,SNR=16
ILAR PKiKP **PKiKP** 05 28 37.2 -0.5
comp=Z,0.7nm,0.9s,baz=200,slow=0.8,SNR=6.5
ILAR PP **PP** 05 29 06.7 -2.8
comp=Z,0.9nm,1.0s,baz=107,slow=8.0,SNR=4.1
ILAR PKPbc **PKKPbc** 05 39 41.5 -2.9
comp=Z,0.5nm,0.8s,baz=301,slow=3.5,SNR=6.5
KWP **Kalwaria Pacla** 113.74 45 *e*PKiKP **PKiKP** 05 28 46.4 +0.2
KWP **Kalwaria Pacla** 113.74 45 *e*PKPdf **PKiKP** 05 28 46.4 +0.2
MLR **Muntele Rosu** 114.67 50 PKP PKPdf 05 28 47.3 -0.9
MLR **Muntele Rosu** 114.67 50 PKP PKPdf 05 28 47.3 -0.9
comp=Z,0.6nm,0.8s,baz=260,slow=6.1,SNR=3.7
AK02 **Malin Array Si** 118.04 45 *e*PKPdf **PKPdf** 05 28 53.1 -1.2
VSU **Vasula** 118.05 36⇑*i*PKiKP **PKPdf** 05 28 53.7 -0.4
KIEV **Kiev** 118.05 45 *e*PKiKP **PKPdf** 05 28 53.3 -1.0
KIEV **Kiev** 118.05 45 *e*PKPdf **PKPdf** 05 28 53.3 -1.0
AK01 **Malin Array Si** 118.05 45 *e*PKPdf **PKPdf** 05 28 53.2 -1.1
AKASG **Malin Array Be** 118.06 45 PKiKP **PKPdf** 05 28 53.1 -1.3
AKASG **Malin Array Be** 118.06 45 PKP **PKPdf** 05 28 53.1 -1.3
AKASG **Malin Array Be** 118.06 45 PKP **PKPdf** 05 28 53.1 -1.3
comp=Z,3.3nm,0.7s,baz=268,slow=2.8,SNR=14
BR131 **Keskin Array S** 118.63 58 *e*PKPdf **PKPdf** 05 28 55.8 -0.3
BRTR **Keskin Array B** 118.63 58 PKP **PKPdf** 05 28 55.5 -0.5
BRTR **Keskin Array B** 118.63 58 PKP **PKPdf** 05 28 55.5 -0.5
comp=Z,2.1nm,0.8s,baz=161,slow=1.8,SNR=11
ARCES **ARCESS Array B** 118.84 23 PKKPbc PKKPbc 05 39 11.0 -1.5
ARCES **ARCESS Array B** 118.84 23 PKKPbc PKKPbc 05 39 11.0 -1.5
comp=Z,1.5nm,0.9s,baz=76,slow=5.1,SNR=7.9
APA **Apatity** 121.70 26 *e*PKiKP PKPdf 05 29 07.0 +6.1
APA MLR MLR
comp=Z,200nm,16.0s
ANN **Anapa** 122.44 53 *i* PKiKP **PKPdf** 05 29 02.8 -0.2
ANN *e* 05 36 00.9
AS31 **Alice Springs** 122.63 208 *e*PKPdf **PKPdf** 05 29 03.2 -1.1
ASAR **Alice Springs** 122.63 208 PKPpre PKPpre 05 28 57.3
ASAR PKP **PKPdf** 05 29 03.2 -1.0
ASAR PP **PP** 05 30 39.6 -1.0
ASAR PKKPbc **PKKPbc** 05 38 57.5 -0.1
ASAR **Alice Springs** 122.63 208 PKhKP PKPpre 05 28 57.3
comp=Z,0.2nm,0.7s,baz=138,slow=1.8,SNR=2.7
ASAR PKP **PKPdf** 05 29 03.2 -1.0
comp=Z,8.2nm,0.8s,baz=147,slow=2.1,SNR=75
ASAR PP **PP** 05 30 39.6 -1.0
comp=Z,1.5nm,1.1s,baz=144,slow=5.4,SNR=4.5
ASAR PKKPbc **PKKPbc** 05 38 57.5 -0.1
comp=Z,0.6nm,0.6s,baz=334,slow=3.3,SNR=4.5
OBN **Obninsk** 123.05 41⇑*i*PKiKP **PKPdf** 05 29 02.3 -1.5
OBN pmax pmax
comp=Z,18nm,1.1s
OBN MLR MLR
comp=Z,100nm,20.0s
KLMR **Klimovskoe** 124.65 34 *e*PKiKP **PKPdf** 05 29 05.1 -1.6
KLMR pmax pmax
comp=Z,41nm,1.2s
KLMR MLR MLR
comp=Z,226nm,21.0s
WRA **Warramunga Arr** 125.74 210 PKPpre PKPpre 05 29 00.8
WRA PKP **PKPdf** 05 29 09.5 -0.7
WRA **Warramunga Arr** 125.74 210 PKhKP PKPpre 05 29 00.8
comp=Z,0.7nm,0.6s,baz=241,slow=1.4,SNR=12
WRA PKP **PKPdf** 05 29 09.5 -0.7
comp=Z,21nm,0.7s,baz=162,slow=1.6,SNR=203
WRAB **Tennant Creek** 125.74 210 *e*PKiKP **PKPdf** 05 29 10.0 -0.2
WRAB **Tennant Creek** 125.74 210 *e*PKPdf **PKPdf** 05 29 10.0 -0.2
KIV **Kislovodsk** 126.05 55 *i* PKiKP **PKPdf** 05 29 10.5 +0.4
KIV pmax pmax
comp=Z,8.0nm,0.9s
KIV MLR MLR
comp=Z,118nm,21.0s
KBZ **Khabaz** 126.18 55 PKiKP **PKPdf** 05 29 10.3 +0.1
KBZ **Khabaz** 126.18 55 PKP **PKPdf** 05 29 10.2 +0.1
KBZ **Khabaz** 126.18 55 PKP **PKPdf** 05 29 10.2 +0.1
comp=Z,6.0nm,0.9s,baz=280,slow=2.9,SNR=5.9
BILL **Bilibino** 128.12 336⇓*i*PKiKP **PKPdf** 05 29 13.0 -0.2
BILL *i* 05 31 16.3
BILL pmax pmax
comp=Z,62nm,1.1s
MBWA **Marble Bar** 129.42 194 *e*PKPdf **PKPdf** 05 29 16.8 -0.4
FITZ **Fitzroy Crossi** 130.77 202 PKP **PKPdf** 05 29 19.8 0.0
FITZ SKPbc **SKPbc** 05 32 37.9 -2.0
FITZ **Fitzroy Crossi** 130.77 202 PKP **PKPdf** 05 29 19.8 0.0
comp=Z,9.5nm,0.8s,baz=186,slow=2.3,SNR=18
FITZ SKPbc **SKPbc** 05 32 37.9 -2.0
comp=Z,5.0nm,1.0s,baz=170,slow=0.0,SNR=4.3
ARU **Arti** 135.19 37 *i* PKiKP **PKPdf** 05 29 27.2 +0.3
ARU 05 32 01.7
TIXI **Tiksi** 135.42 351⇑*e*PKiKP **PKPdf** 05 29 26.6 -0.3
SEY **Seymchan** 135.49 333⇓*e*PKiKP **PKPdf** 05 29 27.9 +0.7
SVE **Sverdlovsk** 136.16 36 *e*PKiKP **PKPdf** 05 29 29.6 +0.9
SVE pmax pmax
comp=Z,11nm,0.9s
AKTO **Aktyubinsk** 136.31 46 PKiKP **PKPdf** 05 29 29.5 +0.3
AKTO **Aktyubinsk** 136.31 46 PKP **PKPdf** 05 29 29.5 +0.3
AKTO **Aktyubinsk** 136.31 46 PKP **PKPdf** 05 29 29.5 +0.3
comp=Z,3.6nm,0.7s,baz=249,slow=1.6,SNR=8.1
PETK **Petropavlovsk-** 136.57 318 PKiKP **PKPdf** 05 29 29.9 +0.3
PETK **Petropavlovsk-** 136.57 318 PKP **PKPdf** 05 29 29.9 +0.3

PETK	**Petropavlovsk-**	**136.57**	**318**	PKP		**PKPdf**	**05 29 29.9**	**+0.3**
	comp=Z,8.4nm,0.8s,baz=119,slow=5.2,SNR=9.7							
AB31	**Akbulak array**	**137.75**	**47**	*i* PKIKP		**PKPdf**	**05 29 31.8**	**0.0**
ABKAR	**Akbulak array**	**137.75**	**47**	*e*PKPdf		**PKPdf**	**05 29 32.5**	**+0.6**
ZRNK	**Zerenda**	**142.09**	**39**	PKIKP		**PKPdf**	**05 29 39.6**	**0.0**
ZRNK				pmax	pmax			
	comp=Z,17nm,0.8s							
BRVK	**Borovoye**	**142.74**	**38**	*e*PKIKP		**PKPdf**	**05 29 41.6**	**+0.8**
BRVK	**Borovoye**	**142.74**	**38**	*e*PKPdf		**PKPdf**	**05 29 41.6**	**+0.8**
BVAR	**Borovoye Array**	**142.81**	**38**	PKIKP		**PKPdf**	**05 29 37.1**	**-3.8**
BVAR							05 29 41.4	
BVAR	**Borovoye Array**	**142.81**	**38**	PKPpre	PKPpre		05 29 37.1	
BVAR				PKP		**PKPdf**	**05 29 41.4**	**+0.5**
BVAR				SKPbc		**SKPbc**	**05 33 15.0**	**-0.1**
BVAR	**Borovoye Array**	**142.81**	**38**	PKhKP	PKPpre		05 29 37.1	
	comp=Z,2.2nm,0.6s,baz=172,slow=1.0,SNR=7.3							
BVAR				PKP		**PKPdf**	**05 29 41.4**	**+0.5**
	comp=Z,2.5nm,0.6s,baz=254,slow=4.3,SNR=7.2							
BVAR				SKPbc		**SKPbc**	**05 33 15.0**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=253,slow=1.5,SNR=3.5							
VOSK	**Vostochnaya**	**143.27**	**38**	PKIKP	PKPbc		05 29 38.6	-0.3
VOSK				pmax	pmax			
	comp=Z,11nm,0.9s							
YAK	**Yakutsk**	**143.72**	**343**	*e*PKHKP	PKPab		05 29 38.5	-0.6
YAK				pmax	pmax			
	comp=Z,87nm,0.9s							
YAK				pmax	pmax			
	comp=E,7.0nm,1.1s							
YAK				pmax	pmax			
	comp=N,11nm,1.3s							
KAPI	**Kappang**	**144.94**	**200**	*e*PKPbc		**PKPab**	**05 29 44.5**	**-0.5**
KAPI	**Kappang**	**144.94**	**200**	PKP		**PKPab**	**05 29 44.6**	**-0.5**
	comp=N,206nm,0.9s,baz=224,slow=1.9,SNR=112							
KBL	**Kabul**	**145.95**	**70**	*e*PKP2		**PKPdf**	**05 29 47.4**	**+0.1**
KBL	**Kabul**	**145.95**	**70**	*e*PKPbc		**PKPdf**	**05 29 47.4**	**+0.1**
KK31	**Karatay Array**	**146.21**	**54**	*i* PKP2		**PKPbc**	**05 29 47.8**	**-0.5**
KK31				pmax	pmax			
	comp=Z,18nm,0.6s							
KKAR	**Karatay Array**	**146.21**	**54**	*e*PKP2		**PKPbc**	**05 29 48.2**	**-0.1**
KKAR	**Karatay Array**	**146.21**	**54**	*e*PKPdf		**PKPbc**	**05 29 48.2**	**-0.1**
POO	**Poona**	**146.76**	**100**	*e*PKP		**PKPdf**	**05 29 47.0**	**-1.8**
YSS	**Yuzh-Sakhalins**	**147.65**	**314**	⇓*i* PKP2		**PKPbc**	**05 29 53.0**	**+0.8**
YSS				pmax	pmax			
	comp=Z,60nm,1.0s							
NVS	**Novosibirsk**	**147.97**	**28**	*i* PKIKP		**PKPdf**	**05 29 50.1**	**+0.4**
NVS				*e*			05 30 06.6	
NVS				pmax	pmax			
	comp=Z,73nm,1.2s							
NVS				pmax	pmax			
	comp=N,7.0nm,0.9s							
NVS				pmax	pmax			
	comp=E,25nm,1.3s							
KURK	**Kurchatov**	**148.39**	**37**	*de*PKIKP		**PKPdf**	**05 29 50.3**	**-0.2**
KURK	**Kurchatov**	**148.39**	**37**	PKPbc		**PKPdf**	**05 29 51.1**	**+0.7**
KURK				*e*PKPdf		**PKPbc**	**05 29 51.6**	**-2.5**
KURBB	**Kurchatov Arra**	**148.39**	**37**	PKPbc		**PKPdf**	**05 29 51.1**	**+0.7**
	comp=E,23nm,0.7s,baz=301,slow=3.2,SNR=86							
EKS2	**Erkin-Say**	**148.65**	**54**	*e*PKIKP		**PKPdf**	**05 29 52.9**	**+1.5**
EKS2	**Erkin-Say**	**148.65**	**54**	*e*PKPdf		**PKPdf**	**05 29 52.9**	**+1.5**
EKS2	**Erkin-Say**	**148.65**	**54**	P		**PKPdf**	**05 29 52.6**	**+1.2**
	SNR=11							
AML	**Almayashu**	**148.72**	**55**	P		**PKPbc**	**05 29 56.8**	**+1.1**
	SNR=5.2							
ASAJ	**Asahikawa**	**148.75**	**309**	*e*PKPdf		**PKPdf**	**05 29 51.4**	**+0.1**
ASAJ				*e*PKPbc		**PKPbc**	**05 29 54.9**	**-0.3**
ASAJ				PKPbc		**PKPbc**	**05 29 55.4**	**+0.2**
ASAJ				*e*PKPab		**PKPab**	**05 30 00.3**	**+1.3**
ASAJ	**Asahikawa**	**148.75**	**309**	PKPbc		**PKPbc**	**05 29 55.4**	**+0.2**
	comp=E,30nm,0.9s,baz=253,slow=8.1,SNR=7.5							
ERM	**Erimo**	**148.94**	**305**	⇑*e*PKIKP		**PKPdf**	**05 29 53.1**	**+1.4**
USP	**Ospenovka**	**148.99**	**53**	P		**PKPdf**	**05 29 53.1**	**+1.3**
	SNR=11							
AAK	**Ala-Archa**	**149.17**	**54**	*ce*PKIKP		**PKPdf**	**05 29 53.3**	**+1.1**
AAK	**Ala-Archa**	**149.17**	**54**	PKP		**PKPdf**	**05 29 53.4**	**+1.1**
AAK				PKPbc		**PKiKP**	**05 29 57.2**	**-0.5**
AAK	**Ala-Archa**	**149.17**	**54**	P		**PKPdf**	**05 29 53.3**	**+1.1**
	SNR=21							
AAK	**Ala-Archa**	**149.17**	**54**	PKP		**PKPdf**	**05 29 53.4**	**+1.1**
	comp=E,27nm,0.6s,baz=198,slow=3.8,SNR=9.3							
AAK				PKPbc		**PKiKP**	**05 29 57.2**	**-0.5**
	comp=E,27nm,0.6s,baz=198,slow=3.0,SNR=48							
CHMS	**Chumysh**	**149.24**	**53**	P		**PKPbc**	**05 29 57.2**	**+0.7**
	SNR=11							
ZAA0	**Zalesovo Array**	**149.26**	**28**	*e*PKPdf		**PKPdf**	**05 29 51.8**	**0.0**
ZAA0				*e*PKPbc		**PKPbc**	**05 29 56.2**	**+0.1**
ZALV	**Zalesovo Beam**	**149.26**	**28**	PKIKP		**PKPdf**	**05 29 51.9**	**+0.1**
ZALV							05 29 56.5	
ZALV	**Zalesovo Beam**	**149.26**	**28**	PKP		**PKPdf**	**05 29 51.9**	**+0.1**
ZALV				PKPbc		**PKPbc**	**05 29 56.5**	**+0.4**
ZALV	**Zalesovo Beam**	**149.26**	**28**	PKP		**PKPdf**	**05 29 51.9**	**+0.1**
	comp=E,89nm,0.7s,baz=302,slow=2.8,SNR=69							
ZALV				PKPbc		**PKPbc**	**05 29 56.5**	**+0.4**
	comp=E,89nm,0.7s,baz=306,slow=3.4,SNR=99							
CLNS	**Chul'man**	**149.45**	**342**	*e*PKP2		**PKPbc**	**05 29 56.7**	**+0.1**
CLNS				pmax	pmax			
	comp=Z,65nm,1.1s							
CLNS				pmax	pmax			
	comp=E,7.0nm,1.1s							
CLNS				pmax	pmax			
	comp=N,19nm,1.0s							
KBK	**Karagaybulak**	**149.48**	**54**	P		**PKPbc**	**05 29 58.2**	**+0.9**
	SNR=8.4							
KZA	**Kyzart**	**149.86**	**54**	P		**PKPbc**	**05 29 59.9**	**+1.4**
	SNR=6.0							
TKM2	**Tokmak 2**	**149.86**	**53**	*e*PKHKP		**PKPdf**	**05 29 54.2**	**+0.8**
TKM2	**Tokmak 2**	**149.86**	**53**	*e*PKPdf		**PKPdf**	**05 29 54.2**	**+0.8**
TKM2	**Tokmak 2**	**149.86**	**53**	P		**PKPbc**	**05 29 59.1**	**+0.9**
	SNR=7.8							
HYB	**Hyderabad**	**150.32**	**105**	*i* PKP		**PKPbc**	**05 29 58.5**	**-1.4**
KSH	**Kashi**	**151.01**	**59**	*e*PKPbc		**PKPdf**	**05 29 56.0**	**+0.8**
KSH				*ep*PKP		**PKPab**	**05 30 06.4**	**-2.3**
KSH				*e*PKS		**PKSdf**	**05 33 29.8**	**-0.2**
KSH				*e*SKS		**SKSdf**	**05 36 59.5**	**+0.4**
KSH				AMB	AMB			
	comp=Z,300nm,5.8s							
KSH				LR	LR			
	comp=E,170nm,3.2s							
KSH				LR	LR			
	comp=Z,140nm,6.5s							
HABR	**Khabarovsk**	**151.50**	**322**	*e*PKIKP		**PKPdf**	**05 29 53.5**	**-2.0**
HABR				*i*			05 30 01.0	
HABR				*e*			05 30 08.1	
HABR				*e*			05 36 58.6	
HABR				*e*PPP	PPP		05 37 04.0	
HABR				*e*SS	SS		05 53 03.1	+0.8
HABR				*e*SSS	SSS		05 58 47.6	
MK31	**Makanchi Array**	**152.56**	**41**	*e*PKIKP		**PKPdf**	**05 29 56.8**	**-0.4**
MK31				*e*			05 30 04.2	
MK31	**Makanchi Array**	**152.56**	**41**	*e*PKPdf		**PKPdf**	**05 29 56.8**	**-0.4**
MK31				*e*PKPbc		**PKPbc**	**05 30 04.2**	**0.0**
MKAR	**Makanchi Array**	**152.56**	**41**	PKIKP		**PKPdf**	**05 29 57.0**	**-0.2**
MKAR							05 30 03.9	
MKAR							05 30 13.1	
MKAR	**Makanchi Array**	**152.56**	**41**	PKP		**PKPdf**	**05 29 57.0**	**-0.2**
MKAR				PKPbc		**PKPbc**	**05 30 03.9**	**-0.3**
MKAR				PKPab		**PKPab**	**05 30 13.1**	**-1.7**
MKAR	**Makanchi Array**	**152.56**	**41**	PKP		**PKPdf**	**05 29 57.0**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=318,slow=1.6,SNR=13							
MKAR				PKPbc		**PKPbc**	**05 30 03.9**	**-0.3**
	comp=Z,26nm,0.8s,baz=328,slow=1.9,SNR=80							
MKAR				PKPab		**PKPab**	**05 30 13.1**	**-1.7**
	comp=Z,7.9nm,0.7s,baz=296,slow=2.1,SNR=18							
KLR	**Kul'dur**	**152.76**	**326**	*e*PKIKP		**PKPdf**	**05 29 54.0**	**-3.3**
KLR				pmax	pmax			
	comp=Z,38nm,1.4s							
KSM	**Kuching**	**153.03**	**184**	*e*PKPdf		**PKPbc**	**05 30 06.2**	**0.0**
KSM				*e*PKPab		**PKPab**	**05 30 18.4**	**+1.0**
MJAR	**Matsushiro Arr**	**153.84**	**295**	PKP		**PKPdf**	**05 29 58.5**	**-0.9**
MJAR				PKPbc		**PKPbc**	**05 30 06.7**	**-0.6**
MJAR				PKPab		**PKPab**	**05 30 20.8**	**+0.2**
MJAR	**Matsushiro Arr**	**153.84**	**295**	PKP		**PKPdf**	**05 29 58.5**	**-0.9**
	comp=Z,2.9nm,0.8s,baz=236,slow=0.8,SNR=7.9							
MJAR				PKPbc		**PKPbc**	**05 30 06.7**	**-0.6**
	comp=Z,2.2nm,0.3s,baz=139,slow=2.2,SNR=11							
MJAR				PKPab		**PKPab**	**05 30 20.8**	**+0.2**
	comp=Z,24nm,0.8s,baz=127,slow=2.1,SNR=24							
MAJO	**Matsushiro**	**153.84**	**295**	*e*PKIKP		**PKPdf**	**05 29 59.6**	**+0.2**
MAJO				*e*			05 30 21.2	
MAJO	**Matsushiro**	**153.84**	**295**	*e*PKPdf		**PKPdf**	**05 29 59.6**	**+0.2**
MAJO				*e*PKPab		**PKPab**	**05 30 21.2**	**+0.7**
MAT	**Matsushiro**	**153.84**	**295**	PKP		**PKPbc**	**05 30 07.0**	**-0.3**
HVS	**Khovu-Aksy**	**154.81**	**22**	⇑*i* PKIKP		**PKPdf**	**05 29 59.7**	**-0.6**
IPM	**Ipoh**	**155.02**	**162**	*e*PKPdf		**PKPdf**	**05 30 02.2**	**+0.5**
IPM				*e*PKPbc			05 30 10.1	
USRK	**Ussuriysk Arra**	**155.63**	**316**	PKP		**PKPdf**	**05 30 00.5**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=247,slow=3.9,SNR=5.6							
USRK				PKPbc	PKPab		05 30 10.8	-17
	comp=Z,4.0nm,0.8s,baz=221,slow=2.1,SNR=8.9							
USRK				PKPab	PKPab		05 30 28.3	+0.5
	comp=Z,16nm,0.8s,baz=60,slow=4.1,SNR=17							
TLY	**Talaya**	**156.60**	**8**	*i* PKIKP		**PKPdf**	**05 30 03.6**	**+1.0**
TLY				pmax	pmax			
	comp=Z,20nm,1.5s							
MDJ	**Mudanjiang**	**156.81**	**319**	PKP		**PKPdf**	**05 30 02.8**	**-0.2**
MDJ				pPKP		**pPKPdf**	**05 30 17.0**	**-0.6**
MDJ				sPKP			05 30 21.8	
MDJ				PP		**PP**	**05 34 13.3**	**+2.1**
MDJ				LR	LR			
	comp=N,66nm,24.2s							
MDJ				LR	LR			
	comp=E,88nm,27.3s							
MDJ				LR	LR			
	comp=Z,100nm,27.3s							
MDJ	**Mudanjiang**	**156.81**	**319**	*e*PKPdf		**PKPdf**	**05 30 02.8**	**-0.2**
WMQ	**Urumqi**	**157.38**	**42**	*e*PKP		**PKPdf**	**05 30 05.3**	**+1.4**
WMQ				pPKP		**pPKPdf**	**05 30 16.0**	**-2.4**
WMQ				PKS		**PKSdf**	**05 33 37.6**	**-0.1**
WMQ				PP		**PP**	**05 34 18.8**	**+4.3**
WMQ				SKS		**SKSdf**	**05 37 05.8**	**-0.2**
WMQ				SKKS		**SKKSac**	**05 41 02.4**	**+2.5**
WMQ				SS		**SS**	**05 54 08.3**	**+1.7**
WMQ				LR	LR			
	comp=N,150nm,27.2s							
WMQ				LR	LR			
	comp=E,340nm,27.0s							
WMQ				LR	LR			
	comp=Z,170nm,30.0s							
ZAK	**Zakamensk**	**157.83**	**9**	*e*PKIKP		**PKPdf**	**05 30 04.5**	**+0.2**
ZAK				pmax	pmax			
	comp=Z,6.0nm,1.2s							
CN2	**Changchun**	**159.62**	**323**	*e*P		PKPdf	05 29 58.4	-8.1
JNU	**Nakatsue**	**160.31**	**289**	PKPab		**PKPab**	**05 30 48.7**	**+0.2**
JNU	**Nakatsue**	**160.31**	**289**	PKPab		**PKPab**	**05 30 48.7**	**+0.2**
	comp=Z,15nm,0.9s,baz=186,slow=1.9,SNR=5.9							
SONM	**Songino Array**	**160.67**	**4**	PKP		**PKPdf**	**05 30 06.6**	**-1.1**
SONM				PKPab		**PKPab**	**05 30 50.0**	**+0.4**
SONM	**Songino Array**	**160.67**	**4**	PKP		**PKPdf**	**05 30 06.6**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=307,slow=1.1,SNR=5.4							
SONM				PKPab		**PKPab**	**05 30 50.0**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=336,slow=1.8,SNR=5.2							
ULN	**Ulaanbaatar**	**160.68**	**3**	*e*PKPdf		**PKPdf**	**05 30 08.2**	**+0.4**
ULN				*e*PKPab		**PKPab**	**05 30 50.5**	**+0.8**
KSRS	**Korea Array**	**161.51**	**304**	PKP		**PKPdf**	**05 30 08.6**	**-0.1**
	comp=Z,5.1nm,1.0s,baz=112,slow=0.6,SNR=32							
KSRS				PKPab		**PKPab**	**05 30 54.2**	**+0.7**
	comp=Z,5.4nm,1.0s,baz=68,slow=3.8,SNR=13							
KSAR	**Wonju Array Be**	**161.55**	**304**	PKP		**PKPdf**	**05 30 08.6**	**-0.2**
KSAR				PKPab		**PKPab**	**05 30 54.2**	**+0.5**
SNY	**Shenyang**	**161.97**	**321**	⇑PKP		**PKPab**	**05 30 56.9**	**+1.5**
SNY				PP		**PP**	**05 34 43.0**	**+3.9**
CMAR	**Chiang Mai Arr**	**166.64**	**137**	PKP		**PKPdf**	**05 30 14.3**	**+0.3**
CMAR	**Chiang Mai Arr**	**166.64**	**137**	PKP		**PKPdf**	**05 30 14.3**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=248,slow=2.6,SNR=12							
BJI	**Beijing**	**166.93**	**333**	PKP		**PKPdf**	**05 30 14.8**	**+1.3**
BJI				PP		**PP**	**05 35 06.8**	**+2.1**
BJI				LR	LR			
	comp=N,180nm,22.3s							
BJI				LR	LR			
	comp=E,140nm,21.4s							
BJI				LR	LR			
	comp=Z,130nm,28.0s							
GTA	**Gaotai**	**166.97**	**31**	PKP		**PKPdf**	**05 30 14.3**	**+0.5**
GTA				pPKP		**pPKPdf**	**05 30 31.3**	**+2.9**
GTA				PKPab		**PKPab**	**05 31 18.4**	**+0.8**
GTA				SKS		**SKSdf**	**05 37 12.8**	**-1.2**
GTA				SKKS		**SKKSac**	**05 41 50.3**	**+1.1**
GTA				SS		**SS**	**05 55 46.4**	**+0.6**
GTA				AMB	AMB			
	comp=Z,64nm,4.8s							
GTA				LR	LR			
	comp=N,160nm,19.9s							
GTA				LR	LR			
	comp=E,230nm,22.8s							
GTA				LR	LR			
	comp=Z,250nm,21.4s							
HHC	**Hu-ho-hao-te**	**167.48**	**349**	⇑*i* PKP		**PKPdf**	**05 30 15.3**	**+1.2**
HHC				pPKP		**pPKPdf**	**05 30 26.0**	**-2.6**
HHC				PKS		**PKSdf**	**05 33 46.4**	**-0.4**
HHC				SKS		**SKSdf**	**05 37 13.8**	**-0.4**
HHC				AMB	AMB			
	comp=Z,230nm,5.0s							
HHC				LR	LR			
	comp=N,330nm,21.4s							
HHC				LR	LR			
	comp=E,280nm,21.4s							
HHC				LR	LR			
	comp=Z,140nm,21.4s							
LZH	**Lanzhou**	**171.49**	**27**	*e*PKP		**PKPdf**	**05 30 17.5**	**+0.8**
LZH				pPKP		**pPKPdf**	**05 30 27.0**	**-4.3**
LZH				PKS		**PKSdf**	**05 33 49.1**	**-0.1**
LZH				PP		**PP**	**05 35 31.6**	**+3.7**
LZH				SKS		**SKSdf**	**05 37 15.5**	**-0.9**
LZH				SKKS		**SKKSac**	**05 42 13.0**	**+1.5**
LZH				AMB	AMB			
	comp=Z,91nm,4.2s							
LZH				LR	LR			
	comp=N,530nm,14.6s							
LZH				LR	LR			
	comp=E,580nm,16.4s							
LZH				LR	LR			
	comp=Z,740nm,16.5s							
XAN	**Xi'an**	**174.51**	**357**	PKP		**PKPdf**	**05 30 17.3**	**-0.6**
XAN				pPKP		**pPKPdf**	**05 30 28.8**	**-3.6**
WHN	**Wuhan**	**174.58**	**293**	PKP		**PKPdf**	**05 30 19.0**	**+1.1**
WHN				LR	LR			
	comp=Z,660nm,18.6s							
CD2	**Chengdu**	**175.21**	**59**	PKP		**PKPdf**	**05 30 17.5**	**-0.7**
CD2				pPKP		**pPKPdf**	**05 30 31.6**	**-1.1**
CD2				sPKP			05 30 36.6	
CD2				PKPab		**PKPab**	**05 31 55.1**	**+0.7**
CD2				PKS		**PKSdf**	**05 33 48.3**	**-2.1**
CD2				PP		**PP**	**05 35 48.8**	**+1.7**
CD2				SKS		**SKSdf**	**05 37 14.0**	**-3.5**
CD2				SKKS		**SKKSac**	**05 42 28.4**	**-1.2**
CD2				SS		**SS**	**05 57 05.0**	**-3.5**
CD2				AMB	AMB			
	comp=Z,220nm,6.2s							
CD2				LR	LR			
	comp=E,310nm,25.4s							
CD2				LR	LR			
	comp=Z,200nm,18.6s							
GYA	**Guiyang**	**177.32**	**141**	PKP		**PKPdf**	**05 30 18.9**	**0.0**
GYA				pPKP		**pPKPdf**	**05 30 33.8**	**+0.4**
GYA				sPKP			05 30 37.5	
GYA				PKPab	PKPab		05 32 05.0	+1.2
GYA				PP		**PP**	**05 35 58.3**	**+1.8**
GYA				SKKS			05 42 38.4	
GYA				AMB	AMB			
	comp=Z,150nm,8.0s							
GYA				LR	LR			
	comp=N,180nm,24.7s							
GYA				LR	LR			
	comp=E,150nm,25.0s							
GYA				LR	LR			
	comp=Z,120nm,23.9s							
ENH	**Enshi**	**178.10**	**335**	*e*PKPdf		**PKPdf**	**05 30 18.8**	**+0.1**

IDC ***25*** *05:34:46.8±1.5, 40.82N×48.57E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.4/28, mbtmp3.5/8, Error ellipse: s-maj=31.5km s-min=11.4km az=160.0*

ISCJB ***25*** *05:34:47.4±0.9, 40.4N±0.1×48.82E±0.07, h28km, mb3.5/6, Error ellipse: s-maj=16.2km s-min=6.6km az=161.6*

TIF ***25*** *05:34:49.1, 40.58N×48.50E, h17km±2km*

NSSP ***25*** *05:35:49.3, 41.55N×46.92E, h10km, Ms2.8*

ISC 25 05:34:48.6±1.1, 40.46N±0.09×48.55E±0.08, h28km, n14, σ1ŝ19/15, mb3.6/6, 2C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
MTKZ	**Martakert**	**1.35**	**259**	⇑*i*P		**Pb**	**05 35**	**12.2**	**-1.1**
MTKZ				⇓*i*S		**Sb**	**05 35**	**32.1**	**+2.1**
GRS	**Goris**	**1.95**	**241**	*e*P		**Pn**	**05 35**	**21.0**	**+0.9**
GRS				*e*S		**Sb**	**05 35**	**48.0**	**+0.4**
DGRG	**David-gareji**	**2.60**	**293**	P		**Pb**	**05 35**	**32.6**	**-2.0**
DGRG				S		**Sb**	**05 36**	**06.6**	**+0.4**
GNI	**Garni**	**2.93**	**265**	⇑*i*P		Pb	05 35	46.5	+6.3
GNI				⇓*i*S		Sb	05 36	21.8	+6.1
GNI	**Garni**	**2.93**	**265**	P		**Pn**	**05 35**	**38.3**	**-1.9**
	0.4nm,0.3s,baz=22,slow=5.4,SNR=2.8								
GNI				Pg		Pn	05 35	46.1	+13
	4.3nm,0.3s,baz=348,slow=11,SNR=5.3								
GNI				Lg		Lg	05 36	21.3	
	2.0nm,0.3s,baz=221,slow=7.4,SNR=3.7								
TBLG	**Delisi**	**3.15**	**295**	P		Pb	05 36	22.1	+38
KBZ	**Khabaz**	**5.32**	**310**	Pg		**Pb**	**05 36**	**21.2**	**+0.4**
	0.2nm,0.3s,baz=69,slow=8.6,SNR=3.1								
KBZ				Lg		Lg	05 37	38.2	
	0.1nm,0.3s,baz=197,slow=14,SNR=3.1								
BVAR	**Borovoye Array**	**19.45**	**42**	P		**P**	**05 39**	**12.3**	**-0.5**
	0.0nm,0.3s,baz=202,slow=11,SNR=3.9								
KURBB	**Kurchatov Arra**	**23.18**	**54**	P		**P**	**05 39**	**52.5**	**-0.3**
	0.9nm,0.7s,baz=261,slow=10,SNR=7.4								
FINES	**FINESS Array B**	**25.09**	**334**	P		**P**	**05 40**	**10.6**	**+0.1**
	1.6nm,0.5s,baz=137,slow=9.0,SNR=6.9								
MKAR	**Makanchi Array**	**25.10**	**64**	P		**P**	**05 40**	**11.4**	**+0.6**
	0.8nm,0.6s,baz=263,slow=8.6,SNR=5.7								
HFS	**Hagfors**	**29.19**	**324**	P		**P**	**05 40**	**47.2**	**-0.2**
	0.5nm,0.3s,baz=140,slow=11,SNR=4.2								
NOA	**NORSAR Array B**	**30.69**	**325**	P		**P**	**05 40**	**59.5**	**-1.2**
	0.8nm,0.8s,baz=126,slow=9.0,SNR=2.7								
YKA	**Yellowknife Ar**	**76.50**	**352**	P		**P**	**05 46**	**36.1**	**+0.6**
	0.2nm,0.6s,baz=13,slow=5.2,SNR=5.2								

ISCJB ***25*** *05:37:41.5±0.3, 23.13S±0.05×179.15E±0.06, h550km, mb4.5/4, Error ellipse: s-maj=7.9km s-min=5.2km az=43.1*

IDC ***25*** *05:37:42.0±1.4, 23.09S×179.19E, h545km±14km, mb3.8/20, mb1 3.9/22, mb1mx3.9/26, mbtmp3.8/22, Error ellipse: s-maj=13.0km s-min=11.5km az=103.0*

BJI ***25*** *05:37:41.9, 23.00S×179.20E, h554km, mB4.8/6, mb4.5/10*

AUST ***25*** *05:37:42.2±0.0, 23.03S×179.45E, h568km, Error ellipse: s-maj=1.4km s-min=1.2km az=270.0*

NEIC ***25*** *05:37:43.9±0.6, 23.03S×179.10E, h568km±7km, mb4.6/20, Error ellipse: s-maj=8.8km s-min=6.1km az=137.0*

ISC 25 05:37:42.4±0.4, 23.18S±0.06×179.19E±0.06, h550km, n154, σ1ŝ38/176, mb4.4/41, 11C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
MSVF	**Nonsavu**	**5.52**	**349**	*e*P		**P**	**05 39**	**16.9**	**-0.1**
MSVF				*e*S		**S**	**05 40**	**36.5**	**+2.4**
NIUE	**Niue**	**10.94**	**70**	P		**P**	**05 40**	**09.5**	**-0.6**
	baz=11,SNR=16								
DZM	**Mont Dzumac**	**11.83**	**273**	P		**P**	**05 40**	**19.8**	**+0.4**
DZM	**Mont Dzumac**	**11.83**	**273**	P		**P**	**05 40**	**19.8**	**+0.4**
	1.7nm,0.3s,baz=87,slow=18,SNR=11								
AFI	**Afiamalu**	**12.58**	**44**	*e*P		P	05 40	22.0	-5.2
AFI				*e*S		**S**	**05 42**	**42.5**	**-0.2**
AFI	**Afiamalu**	**12.58**	**44**	P		P	05 40	23.4	-3.8
	5.7nm,0.3s,baz=270,slow=6.1,SNR=11								
AFI				S		S	05 42	33.6	-9.0
	1.2nm,0.3s,baz=51,slow=20,SNR=3.3								
OUZ	**Omahuta**	**12.96**	**201**	*e*P		**P**	**05 40**	**33.7**	**+3.1**
	90nm,1.1s								
OUZ				*e*S		**S**	**05 42**	**47.8**	**-1.4**
URZ	**Urewera**	**15.14**	**186**	P		**P**	**05 40**	**51.4**	**-1.7**
URZ				S		S	05 43	24.0	-6.0
URZ	**Urewera**	**15.14**	**186**	P		**P**	**05 40**	**51.4**	**-1.7**
	1.8nm,0.3s,baz=358,slow=7.0,SNR=13								
URZ				S		S	05 43	24.0	-6.0
	3.6nm,0.3s,baz=172,slow=22,SNR=15								
LHI	**Lord Howe Isla**	**19.70**	**241**	P		**P**	**05 41**	**38.2**	**+2.5**
	baz=20,SNR=3.2								
KHZ	**Kahutara**	**19.76**	**192**	*e*P		**P**	**05 41**	**37.1**	**+1.1**
RPZ	**Rata Peaks**	**21.56**	**196**	P		**P**	**05 41**	**53.5**	**+1.1**
RPZ	**Rata Peaks**	**21.56**	**196**	P		**P**	**05 41**	**53.5**	**+1.1**
	11nm,0.6s,baz=7.4,slow=5.1,SNR=8.7								
ARMA	**Armidale**	**25.60**	**248**	*e*P		**P**	**05 42**	**30.0**	**+1.4**
	31nm,0

KMBL	**Kambalda**	**51.11**	**248**	P		**P**	**05 45 54.0**	**-0.8**	
	baz=51,SNR=5.4								
KLBR	**Kellerberrin**	**54.59**	**247**	P		**P**	**05 46 18.9**	**-0.7**	
	baz=55,SNR=11								
MEEK	**Meekatharra**	**54.61**	**253**	P		**P**	**05 46 18.5**	**-1.4**	
	baz=55,SNR=12								
NWAO	**Narrogin (SRO)**	**54.86**	**245**	P		**P**	**05 46 20.6**	**-0.9**	
NWAO	**Narrogin (SRO)**	**54.86**	**245**	P		**P**	**05 46 20.6**	**-0.9**	
	5.1nm,0.3s,baz=114,slow=9.0,SNR=15								
RKGY	**Rocky Gully**	**54.89**	**243**	P		**P**	**05 46 21.4**	**-0.2**	
	baz=55,SNR=4.9								
BLDU	**Ballidu**	**55.61**	**248**	P		**P**	**05 46 25.8**	**-0.9**	
	baz=56,SNR=15								
MORW	**Morawa**	**56.43**	**250**	P		**P**	**05 46 31.6**	**-0.8**	
	baz=57,SNR=5.6								
GIRL	**Giralia**	**59.36**	**257**	P		**P**	**05 46 52.9**	**+0.6**	
	baz=60,SNR=4.2								
QSPA	**South Pole Qui**	**66.90**	**180**	*e*P		**P**	**05 47 41.0**	**+0.9**	
	6.6nm,0.9s								
QSPA	**South Pole Qui**	**66.90**	**180**	P		**P**	**05 47 40.7**	**+0.6**	
	5.4nm,0.7s,baz=21,slow=2.5,SNR=26								
MJAR	**Matsushiro Arr**	**70.89**	**326**	P		**P**	**05 48 03.5**	**-0.8**	
MJAR	**Matsushiro Arr**	**70.89**	**326**	P		**P**	**05 48 03.5**	**-0.8**	
	2.9nm,0.7s,baz=168,slow=6.3,SNR=7.3								
FX1	**Attu Island--F**	**75.92**	**356**	P		**P**	**05 48 31.4**	**-1.2**	
FX1	**Attu Island--F**	**75.92**	**356**	P		**P**	**05 48 31.4**	**-1.2**	
	5.9nm,0.6s,baz=238,slow=20,SNR=4.6								
KSRS	**Korea Array**	**77.22**	**320**	P		**P**	**05 48 40.5**	**+0.5**	
	1.4nm,0.7s,baz=141,slow=5.5,SNR=7.8								
KSAR	**Wonju Array Be**	**77.23**	**320**	P		**P**	**05 48 40.5**	**+0.4**	
MAW	**Mawson**	**78.16**	**201**	P		**P**	**05 48 45.6**	**+0.9**	
MAW	**Mawson**	**78.16**	**201**	P		**P**	**05 48 45.6**	**+0.9**	
	1.2nm,0.7s,baz=41,slow=11,SNR=2.9								
PETK	**Petropavlovsk-**	**78.23**	**347**	P		**P**	**05 48 45.1**	**-0.1**	
PETK	**Petropavlovsk-**	**78.23**	**347**	P		**P**	**05 48 45.1**	**-0.1**	
	5.9nm,0.6s,baz=145,slow=8.2,SNR=9.9								
QIZ	**Qiongzhong**	**79.62**	**296**	P		**P**	**05 48 52.5**	**-0.8**	
QIZ				S		**S**	**05 58 09.6**	**-1.3**	
NJ2	**Nanjing**	**79.63**	**311**	*e*P		**P**	**05 48 53.0**	**-0.1**	
NJ2				pmax	pmax				
	comp=Z,20nm,0.5s								
USRK	**Ussuriysk Arra**	**79.75**	**328**	P		**P**	**05 48 53.7**	**+0.3**	
	comp=Z,2.0nm,0.8s,baz=111,slow=2.5,SNR=5.8								
CN2	**Changchun**	**82.87**	**324**	*e*P		**P**	**05 49 09.9**	**+0.5**	
CN2				*es*P		**sP**	**05 52 01.3**	**-2.3**	
CN2				*e*PP		**PP**	**05 52 31.8**	**+1.4**	
CN2				pmax	pmax				
	comp=Z,10.0nm,1.0s								
ISA	**Isabella**	**83.06**	**47**	*e*P		**P**	**05 49 11.1**	**+0.4**	
	comp=Z,7.1nm,1.0s								
CMB	**Columbia Colle**	**83.19**	**44**	*e*P		**P**	**05 49 11.6**	**+0.4**	
	comp=Z,7.0nm,0.9s								
SYO	**Syowa Base**	**83.54**	**194**⇑	*e*P		**P**	**05 49 10.6**	**-1.8**	
SYO	**Syowa Base**	**83.54**	**194**⇑	*e*PcP		**P**	**05 49 14.6**	**+2.2**	
GSC	**Goldstone**	**83.98**	**48**	*e*P		**P**	**05 49 16.0**	**+0.7**	
	comp=Z,5.4nm,1.0s								
NVAR	**Mina Array Bea**	**84.75**	**44**	P		**P**	**05 49 19.5**	**+0.3**	
NVAR	**Mina Array Bea**	**84.75**	**44**	P		**P**	**05 49 19.5**	**+0.3**	
	comp=Z,1.4nm,0.6s,baz=222,slow=9.2,SNR=7.9								
GYA	**Guiyang**	**85.74**	**301**	*e*P		**P**	**05 49 23.4**	**-0.7**	
GYA				pP		**pP**	**05 51 27.3**	**+3.8**	
GYA				sP		**sP**	**05 52 22.8**	**+3.7**	
GYA				PP		**PP**	**05 52 55.0**	**+1.1**	
GYA				SKS		**SKSac**	**05 58 53.1**	**-4.5**	
GYA				S		**S**	**05 59 09.5**	**-2.0**	
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
WVOR	**Wild Horse Val**	**86.85**	**41**	*e*P		**P**	**05 49 29.4**	**+0.5**	
	comp=Z,5.6nm,1.0s								
MSU	**Marysvale**	**88.83**	**47**	*e*P		**P**	**05 49 39.6**	**+1.2**	
	comp=Z,19nm,1.5s								
BMO	**Blue Mountains**	**89.03**	**40**	*e*P		**P**	**05 49 37.2**	**-1.9**	
PLCA	**Paso Flores**	**89.30**	**135**	P		**P**	**05 49 41.3**	**+0.7**	
PLCA	**Paso Flores**	**89.30**	**135**	P		**P**	**05 49 41.3**	**+0.7**	
	comp=Z,12nm,0.8s,baz=146,slow=7.0,SNR=3.5								
HHC	**Hu-ho-hao-te**	**89.39**	**315**⇑	*e*P		**P**	**05 49 42.9**	**+2.1**	
HHC				pP		**pP**	**05 51 42.4**	**+1.0**	
HHC				sP		**sP**	**05 52 35.8**	**-0.8**	
HHC				PP		**PP**	**05 53 26.3**	**+3.9**	
HHC				SKS		**SKSac**	**05 59 20.9**	**+2.3**	
HHC				S		**ScS**	**05 59 45.8**	**-1.7**	
HHC				sS		**sS**	**06 03 17.3**	**-2.5**	
HHC				SS		**SS**	**06 06 01.1**	**+3.9**	
HHC				pmax	pmax				
	comp=Z,26nm,1.3s								
HHC				pmax	pmax				
	comp=Z,100nm,5.4s								
TRF	**Thorofare Moun**	**89.62**	**13**	*e*P		**P**	**05 49 39.3**	**-2.1**	
	comp=Z,3.3nm,0.7s								
CD2	**Chengdu**	**90.06**	**304**	P		**P**	**05 49 43.9**	**-0.2**	
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
CD2				pmax	pmax				
	comp=Z,120nm,5.2s								
MCK	**McKinley**	**90.16**	**14**	*e*P		**P**	**05 49 43.1**	**-0.6**	
	comp=Z,7.2nm,1.0s								
TXAR	**Lajitas Array**	**90.68**	**58**	P		**P**	**05 49 48.0**	**+0.9**	
TXAR	**Lajitas Array**	**90.68**	**58**	P		**P**	**05 49 48.0**	**+0.9**	
	comp=Z,2.0nm,0.8s,baz=210,slow=6.9,SNR=22								
ILAR	**Eielson Array**	**91.51**	**14**	P		**P**	**05 49 48.4**	**-1.6**	
ILAR	**Eielson Array**	**91.51**	**14**	P		**P**	**05 49 48.4**	**-1.6**	
	comp=Z,0.9nm,0.6s,baz=233,slow=5.4,SNR=28								
MCMT	**McKenzie Canyo**	**91.67**	**41**	*e*P		**P**	**05 49 51.0**	**-0.4**	
	comp=Z,0.9nm,1.0s								
PDAR	**Pinedale Array**	**92.69**	**44**	P		**P**	**05 49 55.9**	**-0.3**	
PDAR	**Pinedale Array**	**92.69**	**44**	P		**P**	**05 49 55.9**	**-0.3**	
	comp=Z,1.1nm,0.7s,baz=214,slow=4.0,SNR=6.0								
SMCO	**Snowmass**	**92.70**	**48**	*e*P		**P**	**05 49 56.4**	**-0.2**	
	comp=Z,1.4nm,0.6s								
YKA	**Yellowknife Ar**	**100.03**	**26**	P		**Pdif**	**05 50 27.6**	**-0.8**	
YKA	**Yellowknife Ar**	**100.03**	**26**	P		**Pdif**	**05 50 27.5**	**-0.8**	
	comp=Z,0.2nm,0.8s,baz=233,slow=4.4,SNR=5.4								
MKAR	**Makanchi Array**	**111.12**	**313**	PKiKP		**PKiKP**	**05 55 12.4**	**-1.2**	
MKAR	**Makanchi Array**	**111.12**	**313**	PKiKP		**PKiKP**	**05 55 12.4**	**-1.2**	
	comp=Z,0.6nm,0.8s,baz=310,slow=0.8,SNR=4.3								
KURK	**Kurchatov**	**114.17**	**317**	PKiKP	PKPdf		05 55 17.7	-1.6	
KURBB	**Kurchatov Arra**	**114.21**	**317**	PKiKP	PKPdf		05 55 17.7	-1.7	
	comp=Z,0.9nm,0.7s,baz=90,slow=1.9,SNR=7.7								
ARCES	**ARCESS Array B**	**131.03**	**348**	PKP		**PKPdf**	**05 55 49.0**	**-2.0**	
ARCES	**ARCESS Array B**	**131.03**	**348**	PKP		**PKPdf**	**05 55 49.0**	**-2.0**	
	comp=Z,3.4nm,0.8s,baz=107,slow=1.6,SNR=15								
FINES	**FINESS Array B**	**137.53**	**341**	PKPpre	PKPpre		05 55 51.7		
FINES				PKP		**PKPdf**	**05 56 02.4**	**-1.0**	
FINES				SKPbc		**SKPbc**	**05 58 43.8**	**-1.7**	
FINES	**FINESS Array B**	**137.53**	**341**	PKhKP	PKPpre		05 55 51.7		
	comp=Z,1.5nm,0.9s,baz=49,slow=4.2,SNR=3.1								
FINES				PKP		**PKPdf**	**05 56 02.4**	**-1.0**	
	comp=Z,1.4nm,0.7s,baz=64,slow=4.4,SNR=4.9								
FINES				SKPbc		**SKPbc**	**05 58 43.8**	**-1.7**	
	comp=Z,2.1nm,0.8s,baz=61,slow=6.8,SNR=4.9								
NB2	**NORSAR Subarra**	**141.25**	**351**	PKP	PKPdf		05 56 04.4	-5.8	
	comp=Z,1.5nm,0.6s,baz=14,slow=3.0								
NOA	**NORSAR Array B**	**141.25**	**351**	PKPpre	PKPpre		05 56 04.5		
NOA	**NORSAR Array B**	**141.25**	**351**	PKhKP	PKPpre		05 56 04.5		
	comp=Z,1.7nm,0.6s,baz=16,slow=4.7,SNR=7.9								
HFS	**Hagfors**	**141.69**	**348**	PKPpre	PKPpre		05 56 05.2		
HFS	**Hagfors**	**141.69**	**348**	PKhKP	PKPpre		05 56 05.2		
	comp=Z,2.7nm,0.4s,baz=66,slow=3.6,SNR=24								
AKASG	**Malin Array Be**	**143.97**	**327**	PKP	PKPbc		05 56 13.2	-1.5	
AKASG	**Malin Array Be**	**143.97**	**327**	PKP	PKPbc		05 56 13.2	-1.5	
	comp=Z,6.9nm,0.5s,baz=43,slow=3.9,SNR=23								
AK01	**Malin Array Si**	**143.98**	**327**	*e*PKPbc	PKPbc		05 56 13.2	-1.4	
KIEV	**Kiev**	**143.98**	**327**	*e*PKPbc	PKPbc		05 56 13.3	-1.4	
AK02	**Malin Array Si**	**144.00**	**327**	*e*PKPbc	PKPbc		05 56 13.6	-1.1	
ASF	**Jabal al Asfar**	**145.57**	**293**	PKPbc	**PKPdf**		**05 56 19.2**	**+0.4**	
ASF	**Jabal al Asfar**	**145.57**	**293**	PKPbc	**PKPdf**		**05 56 19.2**	**+0.4**	
	comp=Z,1.1nm,0.3s,baz=351,slow=11,SNR=3.7								
BSD	**Bornholm Skovb**	**146.02**	**344**	*i* P		**PKPdf**	**05 56 19.6**	**+1.0**	
	comp=Z,9.9nm,0.8s								
LLD	**Lille Linde**	**146.46**	**347**	*i* P		PKPab	05 56 33.1	+8.8	
	comp=Z,5.5nm,0.7s								
BRTR	**Keskin Array B**	**146.55**	**308**	PKPbc		**PKPbc**	**05 56 21.9**	**-0.9**	
BRTR	**Keskin Array B**	**146.55**	**308**	PKPbc		**PKPbc**	**05 56 21.9**	**-0.9**	
	comp=Z,2.4nm,0.7s,baz=119,slow=4.0,SNR=6.5								
MMAI	**Mount Meron Ar**	**146.73**	**295**	PKPbc		**PKPbc**	**05 56 23.1**	**-0.2**	
MMAI	**Mount Meron Ar**	**146.73**	**295**	PKPbc		**PKPbc**	**05 56 23.1**	**-0.2**	
	comp=Z,4.9nm,0.6s,baz=96,slow=4.3,SNR=7.4								
BUR08	**Bucovina Ar. S**	**147.95**	**326**	*e*PKPbc		**PKPbc**	**05 56 24.9**	**-1.3**	
KOLS	**Kolonicke sedl**	**148.48**	**330**	*e*PKP		**PKPbc**	**05 56 27.6**	**+0.3**	
OJC	**Ojcow**	**148.57**	**334**	*e*PKP		**PKPbc**	**05 56 26.9**	**-0.5**	
CRVS	**Cervenica-Dubn**	**148.87**	**331**	*e*PKP		**PKPbc**	**05 56 26.7**	**-1.5**	
MLR	**Muntele Rosu**	**148.89**	**322**	PKPbc		**PKPbc**	**05 56 27.8**	**-0.8**	
MLR	**Muntele Rosu**	**148.89**	**322**	PKPbc		**PKPbc**	**05 56 27.8**	**-0.8**	
	comp=Z,0.5nm,0.5s,baz=281,slow=3.6,SNR=4.5								
NIE	**Niedzica**	**148.98**	**333**	*e*PKP		**PKPbc**	**05 56 28.7**	**+0.2**	

UPC	**Upice**	**149.73**	**338**⇑	*e*PKP		**PKPbc**	**05 56 30.1**	**-0.1**	
DPC	**Dobruska-Polom**	**149.75**	**338**⇑	*e*PKP		**PKPbc**	**05 56 30.2**	**-0.2**	
DPC				*e*PKPAB		**PKPab**	**05 56 38.3**	**+0.2**	
KRLC	**Kraliky**	**149.82**	**337**⇑	*e*PKP		**PKPbc**	**05 56 30.6**	**+0.1**	
CLL	**Collm**	**149.95**	**343**⇓	*i* PKPbc		**PKPbc**	**05 56 30.3**	**-0.4**	
	comp=Z,19nm,0.8s								
CLL				*e*PKPab		**PKPab**	**05 56 38.0**	**-0.8**	
	comp=Z,5.0nm,0.8s								
BRG	**Berggiesshubel**	**150.07**	**341**	*i* PKP		**PKPbc**	**05 56 30.6**	**-0.4**	
	comp=Z,13nm,0.6s								
PVCC	**Panska Ves**	**150.18**	**340**⇑	*e*PKP		**PKPbc**	**05 56 31.2**	**-0.1**	
VYHS	**Vyhne**	**150.31**	**333**	*e*PKP		**PKPbc**	**05 56 31.4**	**-0.3**	
PRU	**Pruhonice**	**150.66**	**340**⇑	*e*PKP		**PKPbc**	**05 56 32.1**	**-0.3**	
TREC	**Trest**	**150.94**	**338**⇑	*e*PKP		**PKPbc**	**05 56 32.6**	**-0.5**	
NKC	**Novy Kostel**	**151.07**	**342**⇑	*e*PKP		**PKPbc**	**05 56 33.3**	**-0.1**	
KHC	**Kasperske Hory**	**151.71**	**340**⇑	*e*PKP		**PKPbc**	**05 56 33.8**	**-1.1**	
KHC				*e*PKPAB		**PKPab**	**05 56 46.8**	**+0.5**	
GERES	**GERESS Array B**	**151.92**	**339**	PKPbc		**PKPbc**	**05 56 34.5**	**-0.9**	
GERES				PKPab		**PKPab**	**05 56 46.6**	**-0.7**	
GERES	**GERESS Array B**	**151.92**	**339**	PKPbc		**PKPbc**	**05 56 34.5**	**-0.9**	
	comp=Z,1.3nm,0.5s,baz=17,slow=1.4,SNR=13								
GERES				PKPab		**PKPab**	**05 56 46.6**	**-0.7**	
	comp=Z,1.0nm,0.5s,baz=70,slow=5.8,SNR=7.5								
TORD	**Torodi Ar. Bea**	**169.75**	**194**	PKP		**PKPdf**	**05 56 46.6**	**-1.3**	
TORD				PKPab		**PKPab**	**05 58 05.1**	**-0.6**	
TORD	**Torodi Ar. Bea**	**169.75**	**194**	PKP		**PKPdf**	**05 56 46.6**	**-1.3**	
	comp=Z,0.8nm,0.8s,baz=207,slow=0.8,SNR=4.5								
TORD				PKPab		**PKPab**	**05 58 05.1**	**-0.6**	
	comp=Z,0.9nm,0.8s,baz=167,slow=5.1,SNR=4.6								

MEX 25 05:55:32.8±0.4, 18°.10N×103°.52W, h7km±4km, MD3.5, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MMIG	**Aquila**	**0.25**	**42**	*i* P		Pg	05 55 37.7	0.0
MMIG				*i* S		Sg	05 55 40.8	-0.2
R15V		**1.15**	**338**	*i* P		Pg	05 55 51.4	-3.5
R15V				*i* S		Sg	05 56 06.3	-3.7
EZ5V		**1.37**	**357**	*i* P		Pn	05 55 54.8	-3.9
EZ5V				*i* S		Sb	05 56 12.2	-4.9
ZIIG	**Zihuatanejo**	**2.02**	**104**	*i* P		Pn	05 56 03.9	-3.4
ZIIG				*i* S		Sn	05 56 28.3	-4.4

*THE **25** 05:55:45.6, 41°.26N×22°.73E, h3km±5km, ML2.3/3, Error ellipse: s-maj=5.1km s-min=1.1km az=193.0*
*ATH **25** 05:55:45.0, 41°.30N×22°.73E, h7km, MD3.1/7*
*CSEM **25** 05:55:45.2±0.2, 41°.28N×22°.74E, h2km, ML1.9, Error ellipse: s-maj=4.5km s-min=4.1km az=71.0*
*BEO **25** 05:55:46.2±0.6, 41°.31N×22°.67E, h4km±3km, ML1.9/5*

ISC 25 05:55:45.4±0.9, 41°.29N±0°.02×22°.72E±0°.02, h7km±8km, n35, σ0°66/64, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.12**	**287**	P		**Pg**	**05 55 47.7**	**-0.3**
VAY	**Valandovo**	**0.12**	**287**⇑	*i* Pg		**Pg**	**05 55 47.6**	**-0.4**
VAY				*e*Sg		**Sg**	**05 55 49.8**	**0.0**
VAY	**Valandovo**	**0.12**	**287**⇑	*i* Pg		**Pg**	**05 55 47.6**	**-0.4**
VAY				*e*Sg		**Sg**	**05 55 49.8**	**0.0**
KNT	**Kendrikon**	**0.18**	**133**	P		**Pg**	**05 55 49.5**	**+0.4**
KNT	**Kendrikon**	**0.18**	**133**	P		**Pg**	**05 55 49.5**	**+0.4**
GRG	**Griva**	**0.41**	**217**	P		**Pg**	**05 55 53.4**	**0.0**
GRG				S		**Sg**	**05 55 59.0**	**+0.2**
GRG	**Griva**	**0.41**	**217**	*e*PB		**Pg**	**05 55 53.3**	**-0.1**
GRG				*e*SB		**Sg**	**05 55 59.3**	**+0.6**
GRG	**Griva**	**0.41**	**217**	*e*Pb		**Pg**	**05 55 53.3**	**-0.1**
GRG				S		**Sg**	**05 55 59.0**	**+0.2**
GRG				*e*Sb		**Sg**	**05 55 59.3**	**+0.6**
SOH	**Sokhos**	**0.67**	**134**	P		**Pg**	**05 55 58.0**	**-0.2**
SOH				S		**Sg**	**05 56 06.9**	**0.0**
SOH	**Sokhos**	**0.67**	**134**	*e*PB		**Pg**	**05 55 57.8**	**-0.5**
SOH				*e*SB		**Sg**	**05 56 07.1**	**+0.2**
SOH	**Sokhos**	**0.67**	**134**	P		**Pg**	**05 55 58.0**	**-0.2**
SOH				S		**Sg**	**05 56 06.9**	**0.0**
SRS	**Serrai**	**0.68**	**104**	P		**Pg**	**05 55 58.2**	**-0.3**
SRS	**Serrai**	**0.68**	**104**	P		**Pg**	**05 55 58.2**	**-0.3**
HORT	**Hortiatis**	**0.74**	**157**	P		**Pg**	**05 55 59.5**	**-0.3**
HORT				S		**Sg**	**05 56 08.9**	**-0.5**
HORT	**Hortiatis**	**0.74**	**157**	P		**Pg**	**05 55 59.5**	**-0.3**
HORT				S		**Sg**	**05 56 08.9**	**-0.5**
NVR	**Nevrokopi**	**0.86**	**85**	*e*PB		**Pg**	**05 56 01.3**	**-0.7**
NVR				*e*SB		**Sg**	**05 56 12.7**	**-0.4**
NVR	**Nevrokopi**	**0.86**	**85**	*e*Pb		**Pg**	**05 56 01.3**	**-0.7**
NVR				*e*Sb		**Sg**	**05 56 12.7**	**-0.4**
PLG	**Polygyros**	**1.06**	**149**	*e*PB		**Pg**	**05 56 04.6**	**-1.2**
PLG				*e*SB		**Sg**	**05 56 19.4**	**-0.2**
PLG	**Polygyros**	**1.06**	**149**	*e*Pb		**Pg**	**05 56 04.6**	**-1.2**
PLG				*e*Sb		**Sg**	**05 56 19.4**	**-0.2**
FNA	**Florina**	**1.14**	**244**	*e*PB		**Pg**	**05 56 06.7**	**-0.5**
FNA				*e*SB		**Sg**	**05 56 22.0**	**0.0**
FNA	**Florina**	**1.14**	**244**	*e*Pb		**Pg**	**05 56 06.7**	**-0.5**
FNA				*e*Sb		**Sg**	**05 56 22.0**	**0.0**
VTS	**Vitosha**	**1.35**	**15**	P		**Pn**	**05 56 10.8**	**-0.1**
VTS	**Vitosha**	**1.35**	**15**	*e*Sg		**Sb**	**05 56 28.9**	**+0.1**
VTS	**Vitosha**	**1.35**	**15**	P		**Pn**	**05 56 10.8**	**-0.1**
VTS				*e*Sb		**Sg**	**05 56 28.7**	**-0.3**
PAIG	**Paliouri**	**1.54**	**151**	*e*PG		**Pn**	**05 56 13.6**	**+0.3**
PAIG				*e*SB		**Sg**	**05 56 35.2**	**+0.3**
PAIG	**Paliouri**	**1.54**	**151**	*e*Pg		**Pn**	**05 56 13.6**	**+0.3**
PAIG				*e*Sb		**Sg**	**05 56 35.2**	**+0.3**
BARS	**Barje**	**1.67**	**336**	*e*Pn		**Pn**	**05 56 15.1**	**-0.1**
BARS				*e*Sg		**Sb**	**05 56 38.6**	**+0.7**
BARS	**Barje**	**1.67**	**336**	*e*Pn		**Pn**	**05 56 15.1**	**-0.1**
BARS				*e*Sg		**Sb**	**05 56 38.6**	**+0.7**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pn		**Pb**	**05 56 16.9**	**0.0**
PLD				*e*Sg		**Sg**	**05 56 41.1**	**+1.2**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pn		**Pb**	**05 56 16.9**	**0.0**
PLD				*e*Sg		**Sg**	**05 56 41.1**	**+1.2**
THL	**Klokotos Trika**	**1.80**	**198**	*e*PG		**Pb**	**05 56 18.9**	**+0.1**
THL				*e*SN		**Sg**	**05 56 43.2**	**-0.1**
THL	**Klokotos Trika**	**1.80**	**198**	*e*Pn		**Pb**	**05 56 18.9**	**+0.1**
THL				*e*Sn		**Sg**	**05 56 43.2**	**-0.1**
ZAPS	**Zavoj**	**1.99**	**358**	*e*Pn		**Pb**	**05 56 21.3**	**-0.7**
ZAPS				*e*Sg		**Sb**	**05 56 48.1**	**+1.1**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*PN		**Pn**	**05 56 29.0**	**+1.9**
ALN				*e*SN		**Sb**	**05 57 01.3**	**-1.5**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*Pn		**Pn**	**05 56 29.0**	**+1.9**
ALN				*e*Sn		**Sb**	**05 57 01.3**	**-1.5**

SKO 25 05:57:11.7, 41°.36N×22°.73E, h15km, M0.3, ML0.6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.13**	**252**	*e*Pg		Pg	05 57 15.4	0.0
VAY				*i* Sg		Sg	05 57 17.4	-0.3
VAY				*e*Lg		Lg	05 57 17.4	
	comp=E,40nm,0.2s							
VAY				*e*Lg		Lg	05 57 17.6	
	comp=N,18nm,0.2s							

*ISCJB **25** 06:37:34.7±0.7, 41°.26N±0°.03×22°.73E±0°.04, h10km±6km, Error ellipse: s-maj=6.2km s-min=4.5km az=141.8*
*SKO **25** 06:37:34.4, 41°.32N×22°.72E, h15km, M1.6, ML1.9*
*ATH **25** 06:37:35.1, 41°.26N×22°.72E, h18km±1km, MD3.0/6*
*BEO **25** 06:37:35.7±1.1, 41°.23N×22°.63E, h3km±3km, ML2.0/5*
*CSEM **25** 06:37:35.0±0.2, 41°.23N×22°.73E, h8km, ML2.0, Error ellipse: s-maj=5.1km s-min=4.7km az=70.0*

ISC 25 06:37:35.1±0.9, 41°.25N±0°.02×22°.69E±0°.03, h11km±6km, n25, σ0°61/44, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.12**	**307**	*i* Pg		**Pg**	**06 37 37.8**	**-0.3**
VAY				*i* Sg		**Sg**	**06 37 39.9**	**-0.3**
VAY				*e*Lg		Lg	06 37 39.9	
	comp=E,333nm,0.2s							
VAY				*e*Lg		Lg	06 37 40.0	
	comp=N,768nm,0.2s							
VAY	**Valandovo**	**0.12**	**307**	*i* Pg		**Pg**	**06 37 38.3**	**+0.2**
VAY				*i* Sg		**Sg**	**06 37 40.4**	**+0.2**
VAY				*e*Lg		Lg	06 37 40.5	
	comp=N,768nm,0.2s							
GRG	**Griva**	**0.37**	**217**	*e*PB		**Pb**	**06 37 43.3**	**-0.4**
GRG				*e*SB		**Sg**	**06 37 48.7**	**+1.4**
GRG	**Griva**	**0.37**	**217**	*e*Pb		**Pb**	**06 37 43.3**	**-0.4**
GRG				*e*Sb		**Sg**	**06 37 48.7**	**+1.4**
SOH	**Sokhos**	**0.66**	**130**	*e*PB		**Pg**	**06 37 47.6**	**-0.3**
SOH				*e*SN		**Sg**	**06 37 56.8**	**+0.2**
SOH	**Sokhos**	**0.66**	**130**	*e*Pb		**Pg**	**06 37 47.6**	**-0.3**
SOH				*e*Sn		**Sg**	**06 37 56.8**	**+0.2**
NVR	**Nevrokopi**	**0.89**	**83**	*e*PN		**Pg**	**06 37 51.9**	**-0.3**
NVR				*e*SN		**Sb**	**06 38 03.9**	**-0.5**
NVR	**Nevrokopi**	**0.89**	**83**	*e*Pn		**Pg**	**06 37 51.9**	**-0.3**
NVR				*e*Sn		**Sb**	**06 38 03.9**	**-0.5**
PLG	**Polygyros**	**1.05**	**147**	*e*PN		**Pb**	**06 37 54.9**	**-0.3**
PLG				*e*SN		**Sg**	**06 38 08.9**	**0.0**
PLG	**Polygyros**	**1.05**	**147**	*e*Pn		**Pb**	**06 37 54.9**	**-0.3**
PLG				*e*Sn		**Sg**	**06 38 08.9**	**0.0**
BIA	**Bitola**	**1.06**	**258**	*e*Pg		**Pn**	**06 37 55.9**	**0.0**
BIA	**Bitola**	**1.06**	**258**	*e*Pg		**Pn**	**06 37 55.9**	**0.0**
FNA	**Florina**	**1.10**	**245**	*e*PN		**Pb**	**06 37 55.9**	**-0.3**
FNA				*e*SN		**Sn**	**06 38 12.2**	**+0.5**
FNA	**Florina**	**1.10**	**245**	*e*Pn		**Pb**	**06 37 55.9**	**-0.3**
FNA				*e*Sn		**Sn**	**06 38 12.2**	**+0.5**
KZN	**Kozani**	**1.18**	**217**	*e*PN		**Pn**	**06 37 57.3**	**-0.2**
KZN	**Kozani**	**1.18**	**217**	*e*Pn		**Pn**	**06 37 57.3**	**-0.2**
VTS	**Vitosha**	**1.39**	**16**	*e*Pn		**Pg**	**06 38 02.0**	**+0.1**
VTS				*e*Sg		**Sg**	**06 38 20.3**	**+0.3**
VTS	**Vitosha**	**1.39**	**16**	*e*Pn		**Pb**	**06 38 01.3**	**+0.1**
VTS				*e*Sg		**Sg**	**06 38 20.3**	**+0.3**
PAIG	**Paliouri**	**1.52**	**150**	*e*PN		**Pb**	**06 38 03.3**	**0.0**
PAIG				*e*SN		**Sg**	**06 38 24.4**	**+0.4**
PAIG	**Paliouri**	**1.52**	**150**	*e*Pn		**Pb**	**06 38 03.3**	**0.0**
PAIG				*e*Sn		**Sg**	**06 38 24.4**	**+0.4**
BARS	**Barje**	**1.69**	**338**	*e*Pn		**Pb**	**06 38 05.7**	**-0.6**
BARS				*e*Sg		**Sg**	**06 38 29.4**	**-0.2**
BARS	**Barje**	**1.69**	**338**	*e*Pn		**Pb**	**06 38 05.7**	**-0.6**
BARS				*e*Sg		**Sg**	**06 38 29.4**	**-0.2**
PLD	**Plovdiv**	**1.73**	**60**	*e*Sg		**Sg**	**06

TBI Tubuai 49.69 60 *e*S **S 06 56 12.4 -1.1**
comp=Z,728nm,28.5s
TBI *e*LQ LQ 07 00 27.9
comp=Z,2µm,27.0s
TBI *e*LR LR 07 02 56.1
comp=Z,2µm,23.8s,baz=211
TBI *e*T T 07 41 44.8
comp=Z,124nm,0.3s
AFI Afiamalu 51.13 30 PFAKE 06 49 30.0 +14
AFI LR LR
comp=Z,837nm,20.0s
FITZ Fitzroy Crossi 51.67 311 LR LR 07 08 36.2
comp=Z,541nm,18.3s,baz=358,slow=33
HNR Honiara 52.78 354 LR LR 07 09 55.0
comp=Z,764nm,18.4s,baz=172,slow=34
PMG Port Moresby 54.20 339 PFAKE 06 49 50.0 +11
PMG LR LR
comp=Z,1µm,19.0s
FUNA Funafuti 54.66 18 PFAKE 06 50 00.0 +18
FUNA LR LR
comp=Z,4µm,20.0s
PAE Paea 54.76 57 *e*T T 07 48 05.5
comp=Z,16nm,0.4s
TVO Taravao 54.78 57 *e*T T 07 48 07.3
comp=Z,33nm,0.4s
PPT2 Papeete2 54.83 57 *e*S **S 06 57 21.0 -3.1**
comp=Z,836nm,26.8s
PPT2 *e*LQ LQ 07 02 38.2
comp=Z,3µm,24.2s
PPT2 *e*LR LR 07 05 33.3
comp=Z,1µm,22.2s,baz=205
PPT2 *e*T T 07 48 11.2
comp=Z,23nm,0.3s
PPT Papeete 54.84 57 LR LR 07 06 44.1
comp=Z,979nm,20.1s,baz=204,slow=29
TIAR Tiarei 54.95 57 *e*T T 07 48 19.5
comp=Z,26nm,0.3s
MEH Mehetia 55.17 59 *e*T T 07 48 35.8
comp=Z,102nm,0.3s
RKT Rikitea 56.16 75 *e*S **S 06 57 39.6 -2.1**
comp=Z,1µm,28.2s
RKT *e*LQ LQ 07 03 24.6
comp=Z,1µm,27.8s
RKT *e*LR LR 07 05 53.2
comp=Z,1µm,29.2s,baz=205
RKT *e*T T 07 49 46.9
comp=Z,33nm,0.3s
PMOR Pomariorio Ree 57.83 58 *e*T T 07 51 55.9
comp=Z,6.1nm,0.3s
EFI East Falkland 61.57 151 *e*P **P 06 50 29.4 -0.5**
comp=Z,41nm,1.0s
TARA Tarawa 63.72 9 PFAKE 06 51 00.0 +15
TARA LR LR
comp=Z,838nm,21.0s
KAPI Kappang 65.89 310 PFAKE 06 51 10.0 +11
KAPI LR LR
comp=Z,454nm,20.0s
PLCA Paso Flores 68.29 138 *e*P **P 06 51 15.0 +1.0**
comp=Z,17nm,1.5s
PLCA Paso Flores 68.29 138 P **P 06 51 12.8 -1.1**
comp=Z,3.9nm,1.1s,baz=176,slow=12,SNR=3.4
XMAS Kiritimati 70.29 41 PFAKE 06 51 40.0 +14
XMAS LR LR
comp=Z,1µm,22.0s
TRQA Tornquist 73.30 143 *e*P **P 06 51 43.7 -0.8**
comp=Z,36nm,1.6s
TRQA LR LR
comp=Z,792nm,20.0s
DAV Davao City (W) 75.28 320 PFAKE 06 52 10.0 +14
DAV LR LR
comp=Z,456nm,20.0s
KSM Kuching 75.41 303 PFAKE 06 52 10.0 +13
KSM LR LR
comp=Z,284nm,19.0s
GUMO Guam 77.11 340 PFAKE 06 52 20.0 +14
GUMO LR LR
comp=Z,298nm,20.0s
KKM Kota Kinabalu 77.41 311 PFAKE 06 52 20.0 +12
KKM LR LR
comp=Z,228nm,22.0s
LCO Las Campanas 78.95 133 PFAKE 06 52 30.0 +13
LCO LR LR
comp=Z,660nm,19.0s
WAKE Wake Island 81.23 2 PFAKE 06 52 40.0 +11
WAKE LR LR
comp=Z,847nm,20.0s
SUR Sutherland 81.29 210 P **P 06 52 30.9 +1.4**
SUR LR LR
comp=Z,2µm,20.0s
KULM Kulim 82.81 296 PFAKE 06 52 50.0 +13
KULM LR LR
comp=Z,159nm,21.0s
BOSA Boshof 83.75 215 LR LR 07 27 09.9
comp=Z,601nm,20.6s,baz=164,slow=34
ABPO Ambohimpanom 85.23 238 PFAKE 06 53 00.0 +10
ABPO LR LR
comp=Z,423nm,19.0s
LVC Limon Verde 85.45 132 PFAKE 06 53 00.0 +8.8
LVC LR LR
comp=Z,709nm,21.0s
KIP Kipapa 88.54 35 PFAKE 06 53 20.0 +14
KIP LR LR
comp=Z,1µm,20.0s
SPB Sao Paulo 90.78 151 PFAKE 06 53 30.0 +14
SPB LR LR
comp=Z,484nm,20.0s
MIDW Midway 91.29 16 PFAKE 06 53 30.0 +12
MIDW LR LR
comp=Z,850nm,21.0s
LPAZ La Paz 91.56 130 *e*P **P 06 53 21.2 +0.5**
comp=Z,7.8nm,1.0s
LPAZ La Paz 91.56 130 P **P 06 53 20.7 -0.1**
comp=Z,3.3nm,1.0s,baz=161,slow=5.7,SNR=8.5
LPAZ LR LR 07 25 03.0
comp=Z,385nm,20.8s,baz=90,slow=29
QIZ Qiongzhong 91.69 310 PFAKE 06 53 30.0 +10
QIZ LR LR
comp=Z,242nm,20.0s
NNA Nana 92.17 121 PFAKE 06 53 30.0 +7.1
NNA LR LR
comp=Z,740nm,20.0s
YHNB Yeheng 93.17 322 PFAKE 06 53 40.0 +13
YHNB LR LR
comp=Z,403nm,21.0s
TATO Taipei 93.42 322 PFAKE 06 53 40.0 +12
TATO LR LR
comp=Z,380nm,22.0s
MSEY Mahe Island 94.61 251 PFAKE 06 53 50.0 +16
MSEY LR LR
comp=Z,246nm,20.0s
TSUM Tsumeb 94.71 211 PFAKE 06 53 50.0 +15
TSUM LR LR
comp=Z,2µm,22.0s
CMAR Chiang Mai Arr 95.37 300 LR LR 07 31 46.0
comp=Z,345nm,20.1s,baz=161,slow=32
LSZ Lusaka 95.48 222 PFAKE 06 53 50.0 +12
LSZ LR LR
comp=Z,442nm,20.0s
CHTO Chiang Mai 95.69 300 PFAKE 06 53 50.0 +11
CHTO LR LR
comp=Z,347nm,21.0s
PAYG Puerto Ayora 96.49 104 PFAKE 06 53 50.0 +7.4
PAYG LR LR
comp=Z,878nm,20.0s
JHJ Hachijo jima 2 97.06 339 LR LR 07 35 24.5
comp=Z,225nm,19.9s,baz=236,slow=34
BDFB Brasilia 98.30 148 LR LR 07 37 20.2
comp=Z,390nm,19.2s,baz=85,slow=35
SAML Samuel 100.11 132 PFAKE 06 54 10.0 +11
SAML LR LR
comp=Z,314nm,20.0s
MAJO Matsushiro 100.67 339 PFAKE 06 54 10.0 +9.3
MAJO LR LR
comp=Z,391nm,21.0s
ENH Enshi 102.14 314 PFAKE 06 54 20.0 +13
ENH LR LR
comp=Z,223nm,21.0s
OTAV Otavalo 102.54 114 PFAKE 06 54 20.0 +10
OTAV LR LR
comp=Z,349nm,21.0s
INCN Inchon 103.93 330 PFAKE 06 54 30.0 +15
INCN LR LR
comp=Z,127nm,20.0s
ERM Erimo 105.29 344 PFAKE 06 58 50.0
ERM LR LR
comp=Z,291nm,19.0s

KMBO Kilima Mbogo 105.43 236 PFAKE 06 58 50.0
KMBO LR LR
comp=Z,324nm,20.0s
MBAR Mbarara 108.34 230 PFAKE 06 58 50.0
MBAR LR LR
comp=Z,698nm,21.0s
LSA Lhasa 108.56 298 PFAKE 06 59 00.0
LSA LR LR
comp=Z,270nm,20.0s
JTS JuntasAbangare 108.60 104 *e*PKPdf 06 58 43.5
JTS LR LR
comp=Z,821nm,19.0s
BJT Baijiatuau 109.05 323 PFAKE 06 59 00.0
BJT LR LR
comp=Z,323nm,22.0s
BCIP Isla Barro Col 109.91 109 PFAKE 06 59 00.0
BCIP LR LR
comp=Z,537nm,22.0s
MDJ Mudanjiang 110.10 334 PFAKE 06 59 00.0
MDJ LR LR
comp=Z,162nm,21.0s
RCBR Riachuelo 110.37 158 PFAKE 06 59 00.0
RCBR LR LR
comp=Z,487nm,19.0s
TGUH Tegucigalpa,Un 110.84 100 PFAKE 06 59 00.0
TGUH LR LR
comp=Z,232nm,21.0s
PFO Pinyon Flat Ob 114.37 64 PFAKE 06 59 00.0 +7.6
PFO LR LR
comp=Z,611nm,21.0s
TUC Tucson 115.70 69 PFAKE 06 59 10.0 +15
TUC LR LR
comp=Z,357nm,19.0s
TEIG Tepich 115.74 95 PFAKE 06 59 10.0 +15
TEIG LR LR
comp=Z,263nm,20.0s
TXAR Lajitas Array 116.36 77 PKP **PKPdf 06 58 53.5 -2.9**
TXAR Lajitas Array 116.36 77 PKP **PKPdf 06 58 53.5 -2.9**
comp=Z,0.2nm,0.8s,baz=207,slow=5.3,SNR=3.8
HIA Hailar 116.70 329 PFAKE 06 59 10.0 +14
HIA LR LR
comp=Z,219nm,22.0s
MNTX Cornudas Mount 117.58 74 PFAKE 06 59 10.0 +11
MNTX LR LR
comp=Z,392nm,21.0s
TPH Tonopah 117.88 61 PFAKE 06 59 10.0 +11
TPH LR LR
comp=Z,351nm,20.0s
WUAZ Wupatki 118.17 67 PFAKE 06 59 10.0 +10
WUAZ LR LR
comp=Z,273nm,20.0s
ULN Ulaanbaatar 118.89 320 PFAKE 06 59 10.0 +9.3
ULN LR LR
comp=Z,233nm,21.0s
MTDJ Mount Denham 118.93 106 PFAKE 06 59 10.0 +8.4
MTDJ LR LR
comp=Z,440nm,20.0s
JCT Junction City 119.10 79 PFAKE 06 59 10.0 +8.5
JCT LR LR
comp=Z,216nm,19.0s
ANMO Albuquerque 119.84 71 PFAKE 06 59 20.0 +17
ANMO LR LR
comp=Z,461nm,19.0s
BMN Battle Mountai 119.88 60 PFAKE 06 59 20.0 +17
BMN LR LR
comp=Z,487nm,20.0s
GRGR Grenville 120.15 125 PFAKE 06 59 20.0 +16
GRGR LR LR
comp=Z,433nm,19.0s
MVU Marysvale 120.33 65 PFAKE 06 59 20.0 +16
MVU LR LR
comp=Z,378nm,20.0s
WVOR Wild Horse Val 121.01 57 PFAKE 06 59 20.0 +15
WVOR LR LR
comp=Z,436nm,21.0s
DUG Dugway 121.50 63 PFAKE 06 59 20.0 +14
DUG LR LR
comp=Z,288nm,20.0s
GTBY Guantanamo Bay 121.51 108 PFAKE 06 59 20.0 +14
GTBY LR LR
comp=Z,177nm,19.0s
AMTX Amarillo 121.93 75 PFAKE 06 59 20.0 +13
AMTX LR LR
comp=Z,405nm,19.0s
SDDR Presa de Saban 122.36 112 PFAKE 06 59 20.0 +12
SDDR LR LR
comp=Z,202nm,19.0s
SDCO Great Sand Dun 122.60 70 PFAKE 06 59 20.0 +12
SDCO LR LR
comp=Z,218nm,20.0s
FDF Fort de France 122.72 125 PFAKE 06 59 20.0 +11
FDF LR LR
comp=Z,284nm,21.0s
WMOK Wichita Mounta 123.13 78 PFAKE 06 59 20.0 +11
WMOK LR LR
comp=Z,334nm,20.0s
HWUT Hardware Ranch 123.19 63 PFAKE 06 59 20.0 +11
HWUT LR LR
comp=Z,463nm,22.0s
NLWA Neilton Lookou 123.23 50 PFAKE 06 59 20.0 +11
NLWA LR LR
comp=Z,607nm,20.0s
BMO Blue Mountains 123.57 57 PFAKE 06 59 20.0 +10
BMO LR LR
comp=Z,402nm,19.0s
HLID Hailey 123.65 60 PFAKE 06 59 20.0 +10
HLID LR LR
comp=Z,394nm,19.0s
SJG San Juan 123.77 118 PFAKE 06 59 20.0 +9.2
SJG LR LR
comp=Z,235nm,20.0s
HAWA Hanford 124.00 54 PFAKE 06 59 20.0 +10
HAWA LR LR
comp=Z,364nm,20.0s
DBIC Dimbokro 124.02 193 PKPdf **PKPdf 06 59 10.9 -0.5**
KDAK Kodiak Island 124.21 26 PFAKE 06 59 20.0 +10
KDAK LR LR
comp=Z,534nm,20.0s
ISCO Idaho Springs 124.25 69 PFAKE 06 59 20.0 +8.5
ISCO LR LR
comp=Z,346nm,19.0s
AHID Auburn Hatcher 124.35 63 PFAKE 06 59 20.0 +8.6
AHID LR LR
comp=Z,314nm,20.0s
VBMS Vicksburg 124.87 86 PFAKE 06 59 20.0 +7.5
VBMS LR LR
comp=Z,197nm,19.0s
BW06 Boulder Array 124.99 64 PFAKE 06 59 30.0 +17
BW06 LR LR
comp=Z,284nm,20.0s
PDAR Pinedale Array 124.99 64 PKP **PKPdf 06 59 14.1 +1.4**
PDAR Pinedale Array 124.99 64 PKP **PKPdf 06 59 14.1 +1.4**
comp=Z,0.2nm,0.3s,baz=260,slow=5.1,SNR=2.2
ANWB Willy Bob 125.14 123 PFAKE 06 59 30.0 +17
ANWB LR LR
comp=Z,341nm,19.0s
LKWY Lake 126.11 62 PFAKE 06 59 30.0 +15
LKWY LR LR
comp=Z,668nm,20.0s
TKM2 Tokmak 2 126.34 294 PFAKE 06 59 30.0 +15
TKM2 LR LR
comp=Z,233nm,21.0s
NEW Newport 126.47 54 PFAKE 06 59 30.0 +15
NEW LR LR
comp=Z,356nm,19.0s
BOZ Bozeman (W) 126.49 60 PFAKE 06 59 30.0 +15
BOZ LR LR
comp=Z,408nm,22.0s
MSO Missoula 126.53 58 PFAKE 06 59 30.0 +15
MSO LR LR
comp=Z,274nm,20.0s
AAK Ala-Archa 126.58 293 PFAKE 06 59 30.0 +14
AAK LR LR
comp=Z,218nm,21.0s
OGNE Ogallala 126.75 71 PFAKE 06 59 30.0 +14
OGNE LR LR
comp=Z,414nm,21.0s
EKS2 Erkin-Say 126.91 293 PFAKE 06 59 30.0 +14
EKS2 LR LR
comp=Z,195nm,21.0s
RLMT Red Lodge 127.03 62 PFAKE 06 59 30.0 +13
RLMT LR LR
comp=Z,436nm,21.0s
LRAL Lakeview Retre 127.19 89 PFAKE 06 59 30.0 +13
LRAL LR LR

comp=Z,164nm,19.0s
OXF Oxford 127.28 86 PFAKE 06 59 30.0 +13
OXF LR LR
comp=Z,233nm,21.0s
KSU1 Kansas State U 127.70 76 PFAKE 06 59 30.0 +12
KSU1 LR LR
comp=Z,547nm,21.0s
WRAK Wrangell Islan 128.09 39 PFAKE 06 59 30.0 +12
WRAK LR LR
comp=Z,779nm,20.0s
EGMT Eagleton 129.17 60 PFAKE 06 59 30.0 +10
EGMT LR LR
comp=Z,383nm,21.0s
TORD Torodi Ar. Bea 129.47 202 PKP **PKPdf 06 59 23.5 +1.7**
TORD Torodi Ar. Bea 129.47 202 PKP **PKPdf 06 59 23.5 +1.7**
comp=Z,0.9nm,0.9s,baz=189,slow=8.6,SNR=4.1
BILL Bilibino 129.96 1 PFAKE 06 59 30.0 +8.9
BILL LR LR
comp=Z,166nm,20.0s
NHSC New Hope 130.45 95 PFAKE 06 59 40.0 +17
NHSC LR LR
comp=Z,307nm,20.0s
KURK Kurchatov 131.32 302 PFAKE 06 59 40.0 +16
KURK LR LR
comp=Z,199nm,20.0s
ECSD EROS Data Cent 131.40 73 PFAKE 06 59 40.0 +15
ECSD LR LR
comp=Z,356nm,20.0s
SCIA State Center 131.49 77 PFAKE 06 59 40.0 +15
SCIA LR LR
comp=Z,450nm,20.0s
COLA College 131.61 25 PFAKE 06 59 40.0 +16
COLA LR LR
comp=Z,350nm,22.0s
ILAR Eielson Array 131.72 26 PKP **PKPdf 06 59 25.1 +0.6**
ILAR Eielson Array 131.72 26 PKP **PKPdf 06 59 25.1 +0.6**
comp=Z,0.6nm,1.0s,baz=250,slow=1.5,SNR=4.5
DGMT Dagmar 131.81 63 PFAKE 06 59 40.0 +15
DGMT LR LR
comp=Z,379nm,20.0s
HDIL Hopedale 132.22 81 PFAKE 06 59 40.0 +14
HDIL LR LR
comp=Z,298nm,22.0s
SACV Santiago Islan 132.47 169 PFAKE 06 59 40.0 +13
SACV LR LR
comp=Z,419nm,20.0s
EGAK Eagle 132.94 28 PFAKE 06 59 40.0 +13
EGAK LR LR
comp=Z,250nm,19.0s
CNNC Cliffs of the 133.27 95 PFAKE 06 59 40.0 +12
CNNC LR LR
comp=Z,231nm,19.0s
JFWS Jewell Farm 133.64 78 PFAKE 06 59 40.0 +11
JFWS LR LR
comp=Z,245nm,19.0s
BLA Blacksburg 133.69 91 PFAKE 06 59 40.0 +11
BLA LR LR
comp=Z,197nm,21.0s
ACSO Alum Creek Sta 134.91 87 PFAKE 06 59 40.0 +8.7
ACSO LR LR
comp=Z,250nm,19.0s
CBN Corbin 135.92 93 PFAKE 06 59 50.0 +17
CBN LR LR
comp=Z,275nm,22.0s
BRVK Borovoye 136.46 299 PFAKE 06 59 50.0 +16
BRVK LR LR
comp=Z,254nm,21.0s
COWI Conover 136.60 76 PFAKE 06 59 50.0 +16
COWI LR LR
comp=Z,440nm,20.0s
BBSR BB Station 136.89 110 PFAKE 06 59 50.0 +15
BBSR LR LR
comp=Z,221nm,21.0s
EYMN Ely 136.92 73 PFAKE 06 59 50.0 +15
EYMN LR LR
comp=Z,460nm,20.0s
FFC Flin Flon 137.43 59 PFAKE 06 59 50.0 +15
FFC LR LR
comp=Z,435nm,21.0s
ERPA Erie 137.79 87 PFAKE 06 59 50.0 +13
ERPA LR LR
comp=Z,282nm,20.0s
TAM Tamanrasset 138.06 210 PFAKE 06 59 50.0 +12
TAM LR LR
comp=Z,702nm,20.0s
GNI Garni 138.20 267 PFAKE 06 59 50.0 +12
GNI LR LR
comp=Z,305nm,20.0s
YKA Yellowknife Ar 138.43 44 PKPpre PKPpre 06 59 30.2
YKA PKP **PKPdf 06 59 35.5 -1.6**
YKA Yellowknife Ar 138.43 44 PKhKP PKPpre 06 59 30.2
comp=Z,0.2nm,0.9s,baz=238,slow=2.2,SNR=3.6
YKA PKP **PKPdf 06 59 35.4 -1.6**
comp=Z,0.2nm,0.7s,baz=221,slow=2.8,SNR=4.1
CSS Prodhromos 139.21 251 PFAKE 06 59 50.0 +11
CSS LR LR
comp=Z,304nm,21.0s
BINY Binghamton 139.73 91 PFAKE 06 59 50.0 +10
BINY LR LR
comp=Z,254nm,20.0s
NCB Newcomb 141.91 91 PFAKE 07 00 00.0 +16
NCB LR LR
comp=Z,230nm,20.0s
LONY Lake Ozonia 142.24 90 PFAKE 07 00 00.0 +15
LONY LR LR
comp=Z,207nm,20.0s
ISP Isparta 142.84 251 PFAKE 07 00 00.0 +14
ISP LR LR
comp=Z,352nm,20.0s
BRTR Keskin Array B 143.00 256 PKP **PKPdf 06 59 46.2 0.0**
BRTR Keskin Array B 143.00 256 PKP **PKPdf 06 59 46.2 0.0**
comp=Z,0.4nm,0.6s,baz=171,slow=8.4,SNR=4.2
LBNH Lisbon 143.19 92 PFAKE 07 00 00.0 +14
LBNH LR LR
comp=Z,283nm,22.0s
ANTO Ankara 143.50 255 PFAKE 07 00 00.0 +13
ANTO LR LR
comp=Z,319nm,19.0s
SANT Santorini 143.81 244 PFAKE 07 00 00.0 +12
SANT LR LR
comp=Z,330nm,19.0s
WDD Wield Dalam 147.65 229 PFAKE 07 00 10.0 +11
WDD LR LR
comp=Z,802nm,19.0s
CEL Celeste 149.27 233 PFAKE 07 00 10.0 +4.2
CEL LR LR
comp=Z,408nm,21.0s
TIP Timpagrande 149.74 235 PFAKE 07 00 10.0 +2.3
TIP LR LR
comp=Z,478nm,21.0s
TIR Tirane 150.34 242 PFAKE 07 00 10.0 0.0
TIR LR LR
comp=Z,366nm,20.0s
CUC Castrocucco 150.81 235 PFAKE 07 00 10.0 -2.0
CUC LR LR
comp=Z,331nm,20.0s
RTC Rabat Centre 151.22 195 PFAKE 07 00 10.0 -3.8
RTC LR LR
comp=Z,2µm,20.0s
VSL Villasalto 152.68 225 PFAKE 07 00 10.0 +0.9
VSL LR LR
comp=Z,423nm,22.0s
AKASG Malin Array Be 153.30 265 PKPab **PKPab 07 00 21.9 -0.2**
AKASG Malin Array Be 153.30 265 PKPab **PKPab 07 00 21.9 -0.2**
comp=Z,0.2nm,0.3s,baz=136,slow=2.3,SNR=3.0
KIEV Kiev 153.30 265 PFAKE 07 00 20.0 -2.1
KIEV LR LR
comp=Z,323nm,22.0s
AQU L'Aquila 153.76 234 PFAKE 07 00 20.0 -4.4
AQU LR LR
comp=Z,761nm,21.0s
KWP Kalwaria Pacla 155.57 257 PFAKE 07 00 20.0 -12
KWP LR LR
comp=Z,438nm,20.0s
PSZ Piszkesteto 155.58 251 PFAKE 07 00 20.0 -12
PSZ LR LR
comp=Z,224nm,21.0s
PAB San Pablo 156.30 202 PFAKE 07 00 20.0 +13
PAB LR LR
comp=Z,674nm,20.0s
VLC Villacollemand 156.44 232 PFAKE 07 00 20.0 +13
VLC LR LR
comp=Z,330nm,21.0s
MTE Manteigas 157.63 196 PFAKE 07 00 20.0 +11
MTE LR LR

comp=Z,690nm,19.0s
TUE Stuetta 158.79 234 PFAKE 07 00 00 20.0 +10
TUE LR LR
comp=Z,518nm,21.0s
SSB Saint Sauveur 159.45 224 PFAKE 07 00 00 20.0 +9.2
SSB LR LR
comp=Z,518nm,19.0s
BFO Black Forest 160.72 235 PFAKE 07 00 00 20.0 +7.9
BFO LR LR
comp=Z,514nm,20.0s
ECH Echery 161.07 233 PFAKE 07 00 00 20.0 +7.6
ECH LR LR
comp=Z,405nm,20.0s
KBS Kingsbay 161.28 344 PFAKE 07 00 00 20.0 +8.3
KBS LR LR
comp=Z,319nm,19.0s
KEV Kevo 161.50 312 PFAKE 07 00 00 20.0 +7.9
KEV LR LR
comp=Z,527nm,22.0s
WLF Walferdange 162.64 234 PFAKE 07 00 00 30.0 +16
WLF LR LR
comp=Z,640nm,20.0s
SFJD Kangerlussuaq 164.37 57 PFAKE 07 00 00 30.0 +15
SFJD LR LR
comp=Z,960nm,19.0s
KONO Kongsberg 167.54 269 PFAKE 07 00 00 30.0 +12
KONO LR LR
comp=Z,640nm,20.0s
ESK Eskdalemuir 170.59 228 PFAKE 07 00 00 30.0 +10
ESK LR LR
comp=Z,648nm,20.0s

IDC 25 06:49:33.8±0.8, 17°29S×173°78W, h0km, mb4.0/8, mb1 4.3/9, mb1mx4.1/22, mbtmp4.0/9, ML1.9/1, MS4.3/1, Ms1 4.3/1, ms1mx3.3/34, Error ellipse: s-maj=40.0km s-min=18.3km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.88**	**30**	Pn	Pn	06 50 34.3	-0.4
	5.2nm,0.3s,baz=204,slow=15,SNR=10						
AFI				Sn	Sn	06 51 11.5	-10
	18nm,0.3s,baz=41,slow=22,SNR=11						
STKA	**Stephens Creek**	**42.80**	**242**	P	P	06 57 34.0	+0.5
	1.5nm,0.7s,baz=107,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**49.08**	**258**	P	P	06 58 22.6	-0.7
	1.3nm,0.4s,baz=98,slow=6.7,SNR=26						
WRA				PcP	PcP	06 59 47.1	0.0
	0.3nm,0.6s,baz=92,slow=3.2,SNR=2.4						
ASAR	**Alice Springs**	**49.20**	**253**	P	P	06 58 23.8	-0.4
	12nm,0.6s,baz=89,slow=8.4,SNR=179						
ASAR				PcP	PcP	06 59 47.4	-0.2
	0.7nm,0.6s,baz=111,slow=3.7,SNR=4.9						
FITZ	**Fitzroy Crossi**	**57.48**	**259**	LR	LR	07 19 54.8	
	comp=Z,228nm,19.5s,baz=33,slow=32						
QSPA	**South Pole Qui**	**72.77**	**180**	P	P	07 01 04.1	+0.2
	0.7nm,0.6s,baz=285,slow=1.6,SNR=8.4						
NVAR	**Mina Array Bea**	**75.97**	**42**	P	P	07 01 22.8	-0.3
	1.0nm,0.7s,baz=225,slow=8.5,SNR=5.9						
TXAR	**Lajitas Array**	**81.96**	**56**	P	P	07 01 56.0	0.0
	0.5nm,1.0s,baz=233,slow=10,SNR=4.9						
PDAR	**Pinedale Array**	**83.91**	**42**	P	P	07 02 05.5	-0.5
	0.3nm,0.4s,baz=147,slow=1.8,SNR=2.7						
ILAR	**Eielson Array**	**84.36**	**11**	P	P	07 02 07.9	+0.5
	0.3nm,0.8s,baz=216,slow=4.5,SNR=4.2						
BVAR	**Borovoye Array**	**119.13**	**322**	PKP	PKPdf	07 08 23.8	-0.8
	0.6nm,0.5s,baz=116,slow=3.4,SNR=4.1						
KMBO	**Kilima Mbogo**	**144.36**	**242**	PKP	PKPab	07 09 11.4	+0.1
	2.4nm,0.7s,baz=237,slow=23,SNR=6.0						
BRTR	**Keskin Array B**	**147.36**	**319**	PKPbc	PKPbc	07 09 20.1	+0.2
	1.3nm,0.9s,baz=17,slow=1.3,SNR=4.7						
GERES	**GERESS Array B**	**147.94**	**351**	PKPbc	PKPbc	07 09 21.1	-0.1
	0.3nm,0.4s,baz=103,slow=2.9,SNR=4.4						

IGQ 25 07:11:53.0, 2.29S×79.78W, h16km±57km, Mb4.0, Ms3.8, 7C-4D, Error ellipse: s-maj=2.2km s-min=1.4km az=1.9, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIOE	**Riobamba**	**1.27**	**65**	⇑S	Sb	07 12 33.3	0.0
RIOE	**Riobamba**	**1.27**	**65**	⇑P	Pb	07 12 17.4	+0.4
IGUA	**Igualata**	**1.39**	**55**	S	Sb	07 12 38.1	+0.8
IGUA	**Igualata**	**1.39**	**55**	P	Pb	07 12 19.7	+0.4
BMAS	**Trigal station**	**1.52**	**59**	P	Pb	07 12 21.4	+0.2
BMAS	**Trigal station**	**1.52**	**59**	S	Sb	07 12 40.7	+0.2
BIL2	**Estacion Bilba**	**1.52**	**57**	P	Pb	07 12 21.8	+0.6
ARRY	**Arrayan**	**1.53**	**60**	⇓S	Sn	07 12 40.6	+0.4
ARRY	**Arrayan**	**1.53**	**60**	⇓P	Pb	07 12 21.5	0.0
BBIL	**Ulba Tungurahu**	**1.54**	**57**	S	Sb	07 12 42.1	+1.0
BBIL	**Ulba Tungurahu**	**1.54**	**57**	P	Pg	07 12 22.3	-0.7
CHIS	**Cerro-Chispas-**	**1.55**	**322**	P	Pb	07 12 20.7	-0.6
PAT1	**Patacocha**	**1.55**	**60**	⇑P	Pb	07 12 22.0	+0.1
PAT1	**Patacocha**	**1.55**	**60**	⇑S	Sb	07 12 42.5	+0.7
JUI6	**Juive**	**1.56**	**57**	S	Sb	07 12 42.3	+0.5
JUI6	**Juive**	**1.56**	**57**	P	Pb	07 12 22.2	+0.2
MACE	**Macas**	**1.58**	**89**	S	Sg	07 12 43.4	-1.1
MACE	**Macas**	**1.58**	**89**	P	Pb	07 12 22.6	+0.5
ULBA	**Ulba**	**1.60**	**59**	P	Pb	07 12 22.9	+0.2
BULB	**Ulba Tungurahu**	**1.61**	**58**	S	Sb	07 12 44.2	+0.9
BULB	**Ulba Tungurahu**	**1.61**	**58**	P	Pb	07 12 23.3	+0.5
RUN5	**Runtun**	**1.61**	**58**	P	Pb	07 12 22.8	+0.1
RUN5	**Runtun**	**1.61**	**58**	S	Sb	07 12 42.9	-0.2
BRUN	**Tungurahua Vol**	**1.61**	**58**	S	Sb	07 12 42.8	-0.6
BRUN	**Tungurahua Vol**	**1.61**	**58**	P	Pb	07 12 22.6	-0.3
CATE	**Catamayo**	**1.71**	**166**	⇓P	Pb	07 12 23.5	-0.9
CATE	**Catamayo**	**1.71**	**166**	⇓S	Sn	07 12 43.8	-0.4
PISA	**Pisayambo**	**1.85**	**49**	S	Sb	07 12 51.3	+0.8
PISA	**Pisayambo**	**1.85**	**49**	P	Pb	07 12 27.2	+0.1
BMOR	**Cotopaxi Volca**	**2.03**	**41**	P	Pn	07 12 27.2	-0.1
MOV1	**Cotopaxi Vol s**	**2.06**	**41**	P	Pb	07 12 30.0	-0.8
MOV1	**Cotopaxi Vol s**	**2.06**	**41**	S	Sb	07 12 57.1	+0.4
BNAS	**Cotopaxi Volca**	**2.06**	**39**	P	Pb	07 12 30.0	-0.7
BREF	**Cotopaxi Volca**	**2.09**	**40**	S	Sb	07 12 58.1	+0.4
BREF	**Cotopaxi Volca**	**2.09**	**40**	P	Pb	07 12 30.5	-0.9
NAS2	**Nasa**	**2.09**	**39**	P	Pb	07 12 31.1	-0.1
BTAM	**Cotopaxi Volca**	**2.11**	**41**	P	Pb	07 12 30.2	-1.5
BVC2	**Cotopaxi Volca**	**2.12**	**40**	S	Sb	07 12 58.1	-0.2
BVC2	**Cotopaxi Volca**	**2.12**	**40**	P	Pb	07 12 30.5	-1.2
TAMB	**Tambo**	**2.12**	**42**	P	Pb	07 12 31.3	-0.4
VC1	**Cotopaxi 1**	**2.13**	**40**	S	Sb	07 12 58.3	-0.4
VC1	**Cotopaxi 1**	**2.13**	**40**	P	Pb	07 12 30.8	-1.2
COV1	**Cotopaxi Volc**	**2.16**	**42**	P	Pb	07 12 32.1	-0.5
PITA	**Cotopaxi Volc**	**2.18**	**38**	⇑P	Pb	07 12 32.4	-0.3
JUA2	**San Juan 2**	**2.37**	**30**	S	Sb	07 13 04.0	-1.4
JUA2	**San Juan 2**	**2.37**	**30**	P	Pb	07 12 34.2	-1.7
TERV	**Terraza Guagua**	**2.40**	**29**	S	Sn	07 13 04.0	+2.0
TERV	**Terraza Guagua**	**2.40**	**29**	P	Pb	07 12 34.5	-2.1
GGP	**Refugio Guagua**	**2.41**	**30**	⇑S	Sn	07 13 04.0	+1.9
GGP	**Refugio Guagua**	**2.41**	**30**	⇑P	Pn	07 12 34.5	+2.0
PINO	**Pino**	**2.42**	**29**	S	Sn	07 13 04.0	+1.6
PINO	**Pino**	**2.42**	**29**	P	Pn	07 12 34.3	+1.7
ANTI	**Antisana**	**2.44**	**42**	P	Pb	07 12 35.3	-1.9
GOLV	**Golondrinas**	**2.56**	**15**	P	Pn	07 12 33.0	-0.9
GOLV	**Golondrinas**	**2.56**	**15**	S	Sn	07 13 02.5	-2.2
OTAV	**Otavalo**	**2.84**	**28**	P	Pn	07 12 39.6	+1.4

*IDC **25** 07:30:59.5±2.7, 33°32N×141°25E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.3/25, mbtmp3.5/3, ML3.0/1, Error ellipse: s-maj=54.0km s-min=28.1km az=43.0*
*ISCJB **25** 07:31:05.2±1.0, 33°51N±0°05×140°9E±0°1, h70km±11km, mb3.8/2, Error ellipse: s-maj=15.1km s-min=6.9km az=14.9*
*JMA **25** 07:31:05.7±0.2, 33°55N×140°91E, h53km, M2.8*
ISC 25 07:31:06.3±1.3, 33°54N±0°06×140°86E±0°08, h62km±16km, n16, σ0°45/18, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**0.97**	**245**	P	**Pn**	**07 31 24.0**	**0.0**
JHJ2				*e*S	**Sn**	**07 31 37.1**	**0.0**
JHJ	**Hachijo jima 2**	**0.99**	**246**	Pn	**Pn**	**07 31 23.9**	**-0.4**
	122nm,0.3s,baz=60,slow=20,SNR=65						
JHJ				Sn	**Sn**	**07 31 37.2**	**-0.5**
	98nm,0.3s,baz=76,slow=23,SNR=26						
JHCJ	**Hachijojimakas**	**1.00**	**243**	P	**Pn**	**07 31 24.3**	**-0.1**
JHCJ				*e*S	**Sn**	**07 31 37.6**	**-0.3**
BSO1	**Boso 1**	**1.12**	**5**	P	**Pn**	**07 31 24.9**	**-0.5**
BSO2	**Boso 2**	**1.22**	**356**	*e*S	**Sn**	**07 31 43.7**	**+1.3**
JMY	**Miyakejima3**	**1.25**	**296**	*e*S	**Sn**	**07 31 43.6**	**0.0**
BSO3	**Boso 3**	**1.30**	**347**	P	**Pn**	**07 31 28.3**	**+0.3**
BSO4	**Boso 4**	**1.52**	**343**	P	**Pn**	**07 31 31.4**	**+0.3**
JKO	**Kozu shima**	**1.58**	**295**	P	Pn	07 31 32.6	+0.6
JIM2	**Oshima 3**	**1.67**	**315**	P	**Pn**	**07 31 33.1**	**-0.3**
JIM2				*e*S	**Sn**	**07 31 54.1**	**+0.2**
JIZS	**Izushimoda**	**2.03**	**306**	P	Pn	07 31 38.9	+0.8
KTJJ	**Kamata 2**	**2.04**	**313**	P	**Pn**	**07 31 38.3**	**+0.1**
JOD2	**Odawara 2**	**2.26**	**320**	P	**Pn**	**07 31 41.3**	**-0.1**
JOD2				*e*S	**Sn**	**07 32 07.9**	**-0.3**
MJAR	**Matsushiro Arr**	**3.71**	**325**	Pn	Pn	07 32 02.5	+1.4
	1.0nm,0.3s,baz=148,slow=9.0,SNR=6.5						
WRA	**Warramunga Arr**	**53.54**	**188**	P	**P**	**07 40 20.7**	**0.0**
	0.6nm,0.4s,baz=5.9,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**57.27**	**188**	P	**P**	**07 40 47.7**	**+0.2**
	0.3nm,0.5s,baz=4.3,slow=6.3,SNR=6.6						

IDC 25 07:31:13.8±3.5, 33°18N×140°58E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.3/25, mbtmp3.4/3, ML2.8/1, Error ellipse: s-maj=144.1km s-min=34.4km az=74.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**0.67**	**265**	Sn	Sn	07 31 50.6	+8.9
	63nm,0.3s,baz=77,slow=22,SNR=8.8						
MJAR	**Matsushiro Arr**	**3.88**	**331**	Pn	Pn	07 32 14.2	-0.5
	0.8nm,0.3s,baz=151,slow=18,SNR=4.2						
WRA	**Warramunga Arr**	**53.16**	**187**	P	P	07 40 33.2	-0.3
	0.6nm,0.4s,baz=6.4,slow=7.7,SNR=7.2						
ASAR	**Alice Springs**	**56.88**	**187**	P	P	07 41 00.7	+0.2
	0.2nm,0.4s,baz=5.8,slow=7.1,SNR=4.3						

IDC 25 07:38:31.4±7.9, 21°05N×108°87W, h0km, mb3.2/3, mb1 3.5/6, mb1mx3.4/23, mbtmp3.1/6, ML2.6/2, Error ellipse: s-maj=110.9km s-min=60.6km az=169.0, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**3.32**	**337**	Pn	Pn	07 39 22.4	-2.2
	0.1nm,0.3s,baz=346,slow=7.6,SNR=3.6						
LPIG				Sn	Sn	07 39 55.6	-9.2
	0.7nm,0.3s,baz=340,slow=2.1,SNR=7.7						
TXAR	**Lajitas Array**	**9.50**	**29**	Pn	Pn	07 40 50.6	+1.0
	0.1nm,0.3s,baz=201,slow=13,SNR=7.8						
NVAR	**Mina Array Bea**	**19.14**	**337**	P	Pn	07 42 57.3	0.0
	baz=161,slow=12,SNR=2.5						
ELK	**Elko**	**20.37**	**346**	P	Pn	07 43 11.2	-0.7
	0.9nm,0.8s,baz=154,slow=8.6,SNR=4.5						
PDAR	**Pinedale Array**	**21.66**	**359**	P	P	07 43 24.4	+0.5
	0.9nm,0.8s,baz=181,slow=11,SNR=5.3						
ILAR	**Eielson Array**	**50.36**	**340**	P	P	07 47 29.3	-0.6
	0.3nm,0.9s,baz=143,slow=6.3,SNR=3.3						

MEX 25 07:40:32.7±0.3, 16°45N×98°39W, h36km±9km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.26**	**103**	*i* P	Pn	07 40 38.8	-2.0
PNIG				*e*S	Sn	07 40 44.0	-4.0
ACX	**Acapulco**	**1.46**	**287**	*i* P	Pn	07 40 55.5	-1.1
ACX				*e*S	Sn	07 41 13.7	-0.9
UTMO	**Huajuapan**	**1.48**	**22**	*i* P	Pn	07 40 55.9	-1.2
UTMO				*e*S	Sn	07 41 13.2	-2.2
VHO	**Vista Hermosa**	**1.71**	**69**	*i* P	Pn	07 40 58.2	-1.9
CAIG	**El Cayaco**	**1.89**	**288**	*i* P	Pn	07 41 01.6	-0.8
HUIG	**Huatulco**	**2.30**	**107**	*i* P	Pn	07 41 06.5	-1.5
YAIG	**Yautepec**	**2.48**	**345**	*i* P	Pn	07 41 09.3	-1.5
YAIG				*i* S	Sn	07 41 37.7	-2.3
ARIG	**Puente Sto Nin**	**2.60**	**315**	*e*P	Pn	07 41 11.1	-1.2
ARIG				*i* S	Sn	07 41 40.2	-2.5

*ISCJB **25** 07:44:59.3±0.5, 41°27N±0°03×22°72E±0°03, h11km±4km, Error ellipse: s-maj=5.6km s-min=4.1km az=168.0*
*THE **25** 07:44:59.5, 41°31N×22°68E, h1km±7km, ML2.7/3, Error ellipse: s-maj=7.2km s-min=1.5km az=140.0*
*SKO **25** 07:44:59.2, 41°29N×22°72E, h15km, M2.2, ML2.5*
*ATH **25** 07:44:59.5, 41°26N×22°72E, h19km±1km, MD3.3/13*
*CSEM **25** 07:44:59.8±0.3, 41°25N×22°75E, h15km, ML2.3, Error ellipse: s-maj=6.5km s-min=4.6km az=3.0*
ISC 25 07:44:59.6±0.9, 41°28N±0°03×22°70E±0°02, h9km±7km, n51, σ0°66/70, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**292**	*i* Pg	**Pg**	**07 45 01.9**	**-0.3**
VAY				*i* Sg	**Sg**	**07 45 03.9**	**-0.1**
VAY				*e*Lg	Lg	07 45 04.0	
	comp=E,3μm,0.2s						
VAY				*e*Lg	Lg	07 45 04.0	
	comp=N,7μm,0.3s						
VAY	**Valandovo**	**0.11**	**292**	*e*Lg	Lg	07 45 01.4	
	comp=N,7μm,0.3s						
KNT	**Kendrikon**	**0.19**	**129**	P	**Pg**	**07 45 03.9**	**+0.4**
KNT	**Kendrikon**	**0.19**	**129**	P	**Pg**	**07 45 03.9**	**+0.4**
GRG	**Griva**	**0.40**	**215**	P	**Pg**	**07 45 07.7**	**+0.3**
GRG				S	**Sg**	**07 45 13.7**	**+1.1**
GRG	**Griva**	**0.40**	**215**	*e*PB	**Pg**	**07 45 07.5**	**+0.1**
GRG				*e*SB	**Sg**	**07 45 13.1**	**+0.5**
GRG	**Griva**	**0.40**	**215**	P	**Pg**	**07 45 07.7**	**+0.3**
GRG				*e*Sb	**Sg**	**07 45 13.1**	**+0.5**
GRG				S	**Sg**	**07 45 13.7**	**+1.1**
SOH	**Sokhos**	**0.67**	**133**	P	**Pg**	**07 45 12.3**	**-0.3**
SOH	**Sokhos**	**0.67**	**133**	*e*PN	**Pg**	**07 45 12.2**	**-0.4**
SOH				*e*SN	**Sg**	**07 45 21.7**	**+0.3**
SOH	**Sokhos**	**0.67**	**133**	P	**Pg**	**07 45 12.3**	**-0.3**
SOH				*e*Sn	**Sg**	**07 45 21.7**	**+0.3**
THE	**Thessaloniki**	**0.68**	**163**	P	**Pg**	**07 45 12.7**	**0.0**
THE	**Thessaloniki**	**0.68**	**163**	P	**Pg**	**07 45 12.7**	**0.0**
SRS	**Serrai**	**0.69**	**103**	P	**Pg**	**07 45 12.7**	**-0.2**
SRS	**Serrai**	**0.69**	**103**	P	**Pg**	**07 45 12.7**	**-0.2**
HORT	**Hortiatis**	**0.74**	**156**	P	**Pg**	**07 45 14.0**	**0.0**
HORT	**Hortiatis**	**0.74**	**156**	P	**Pg**	**07 45 14.0**	**0.0**
NVR	**Nevrokopi**	**0.88**	**85**	P	**Pg**	**07 45 16.2**	**-0.3**
NVR				S	**Sg**	**07 45 27.5**	**-0.3**
NVR	**Nevrokopi**	**0.88**	**85**	*e*PN	**Pg**	**07 45 16.1**	**-0.4**
NVR				*e*SB	**Sg**	**07 45 27.6**	**-0.3**
NVR	**Nevrokopi**	**0.88**	**85**	P	**Pg**	**07 45 16.2**	**-0.3**
NVR				S	**Sg**	**07 45 27.5**	**-0.3**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pg**	**07 45 19.7**	**-0.4**
PLG				*e*SN	**Sg**	**07 45 33.5**	**-0.4**
PLG	**Polygyros**	**1.07**	**148**	*e*Pn	**Pg**	**07 45 19.7**	**-0.4**
PLG				*e*Sn	**Sg**	**07 45 33.5**	**-0.4**
BIA	**Bitola**	**1.07**	**256**	*i* Pg	**Pn**	**07 45 21.6**	**+0.6**
BIA				*i* Sg	**Sg**	**07 45 33.9**	**-0.4**
BIA	**Bitola**	**1.07**	**256**	*i* Pg	**Pn**	**07 45 21.5**	**+0.6**
BIA				*i* Sg	**Sg**	**07 45 33.8**	**-0.4**
FNA	**Florina**	**1.12**	**244**	P	**Pb**	**07 45 20.6**	**-0.6**
FNA				S	**Sb**	**07 45 33.9**	**-2.1**
FNA	**Florina**	**1.12**	**244**	*e*PN	**Pb**	**07 45 21.0**	**-0.2**
FNA	**Florina**	**1.12**	**244**	P	**Pb**	**07 45 20.6**	**-0.6**
FNA	**Florina**	**1.12**	**244**	*e*Pn	**Pb**	**07 45 21.0**	**-0.2**
FNA				S	**Sb**	**07 45 33.9**	**-2.1**
SKO	**Skopje**	**1.17**	**307**	*i* Pg	**Pg**	**07 45 22.7**	**+0.5**
SKO				*i* Sg	**Sn**	**07 45 39.1**	**+0.7**
SKO				*e*Lg	Lg	07 45 41.0	
	comp=E,28nm,0.4s						
SKO				*e*Lg	Lg	07 45 41.7	
	comp=N,51nm,0.3s						
SKO	**Skopje**	**1.17**	**307**	*i* Pg	**Pg**	**07 45 23.1**	**+0.9**
SKO				*i* Sg	**Sn**	**07 45 39.6**	**+1.1**
SKO				*e*Lg	Lg	07 45 42.2	
	comp=N,51nm,0.3s						
LIT	**Litokhoron**	**1.19**	**188**	P	**Pn**	**07 45 22.2**	**-0.3**
LIT	**Litokhoron**	**1.19**	**188**	P	**Pn**	**07 45 22.2**	**-0.3**
KZN	**Kozani**	**1.20**	**216**	*e*PN	**Pn**	**07 45 22.6**	**-0.2**
KZN	**Kozani**	**1.20**	**216**	*e*Pn	**Pn**	**07 45 22.6**	**-0.2**
VTS	**Vitosha**	**1.36**	**16**	P	**Pg**	**07 45 25.3**	**-0.5**
VTS	**Vitosha**	**1.36**	**16**	P	**Pg**	**07 45 25.3**	**-0.5**
KAVA	**Kavala**	**1.40**	**101**	P	**Pb**	**07 45 25.7**	**-0.2**
KAVA	**Kavala**	**1.40**	**101**	P	**Pb**	**07 45 25.7**	**-0.2**
PAIG	**Paliouri**	**1.54**	**151**	*e*PN	**Pn**	**07 45 27.4**	**+0.1**
PAIG				*e*SN	**Sb**	**07 45 48.2**	**+0.2**
PAIG	**Paliouri**	**1.54**	**151**	*e*Pn	**Pn**	**07 45 27.4**	**+0.1**
PAIG				*e*Sn	**Sb**	**07 45 48.2**	**+0.2**
THL	**Klokotos Trika**	**1.79**	**197**	*e*PN	**Pn**	**07 45 31.6**	**+0.8**
THL	**Klokotos Trika**	**1.79**	**197**	*e*Pn	**Pn**	**07 45 31.6**	**+0.8**
NEO	**Neokhori**	**2.01**	**168**	*e*PB	**Pn**	**07 45 33.7**	**-0.1**
NEO	**Neokhori**	**2.01**	**168**	*e*Pb	**Pn**	**07 45 33.7**	**-0.1**
AGG	**Agios Georgios**	**2.27**	**187**	*e*PN	**Pn**	**07 45 38.2**	**+0.7**
AGG	**Agios Georgios**	**2.27**	**187**	*e*Pn	**Pn**	**07 45 38.2**	**+0.7**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*PN	**Pn**	**07 45 39.0**	**+1.3**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*Pn	**Pn**	**07 45 39.0**	**+1.3**
AOS	**Alonnisos**	**2.29**	**156**	*e*PB	**Pn**	**07 45 37.6**	**-0.1**
AOS	**Alonnisos**	**2.29**	**156**	*e*Pb	**Pn**	**07 45 37.6**	**-0.1**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*PB	**Pn**	**07 45 42.5**	**+1.2**
ALN	**Alexandroupoli**	**2.56**	**98**	*e*Pb	**Pn**	**07 45 42.5**	**+1.2**

*IDC **25** 07:59:39.8±1.1, 41°24N×22°46E, h0km, mb3.6/7, mb1 3.8/11, mb1mx3.7/30, mbtmp3.6/11, ML3.5/4, MS3.2/1, Ms1 3.2/1, ms1mx2.7/38, Error ellipse: s-maj=18.7km s-min=12.8km az=143.0*
*SKO **25** 07:59:39.2, 41°28N×22°66E, h15km, M2.9, ML3.7*
*CSEM **25** 07:59:40.9±0.1, 41°28N×22°67E, h2km, ML3.7, Error ellipse: s-maj=2.4km s-min=1.9km az=63.0*
*BEO **25** 07:59:41.9±0.3, 41°35N×22°63E, h2km±2km, ML3.7/1*
*THE **25** 07:59:41.3, 41°27N×22°68E, h1km±2km, ML4.0/9, Error ellipse: s-maj=2.6km s-min=0.8km az=318.0*
*PDG **25** 07:59:41.1±0.9, 41°28N×22°66E, h11km±1km, ML3.4/9, Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
*TIR **25** 07:59:43.8, 41°43N×22°61E, h6km, ML3.5*
*ATH **25** 08:00:00.8, 39°86N×22°62E, h25km±2km, MD3.5/15*
ISC 25 07:59:41.0±0.8, 41°29N±0°02×22°67E±0°01, h5km±5km, n261, σ1°17/328, mb3.5/5, 20C-36D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.08**	**297**	P	**Pg**	**07 59 42.5**	**-0.3**
VAY	**Valandovo**	**0.08**	**297**	⇑*e*Pg	**Pg**	**07 59 42.5**	**-0.3**
VAY				*e*Lg	Lg	07 59 44.1	
	comp=N,60μm,0.6s						
VAY				*i* Sg	**Sg**	**07 59 44.2**	**+0.2**
VAY				*e*Lg	Lg	07 59 44.2	
	comp=E,48μm,0.5s						
VAY	**Valandovo**	**0.08**	**297**	P	**Pg**	**07 59 42.5**	**-0.3**
VAY	**Valandovo**	**0.08**	**297**	⇑*e*Pg	**Pg**	**07 59 43.0**	**+0.2**
VAY				*e*Sg	**Sg**	**07 59 44.2**	**+0.2**
VAY				*e*Lg	Lg	07 59 44.7	
	comp=E,48μm,0.5s						
KNT	**Kendrikon**	**0.21**	**125**	P	**Pg**	**07 59 45.4**	**+0.2**
KNT				S	**Sg**	**07 59 48.6**	**+0.6**
KNT	**Kendrikon**	**0.21**	**125**	P	**Pg**	**07 59 45.4**	**+0.2**
KNT				S	**Sg**	**07 59 48.6**	**+0.6**
GRG	**Griva**	**0.38**	**211**	P	**Pg**	**07 59 48.4**	**0.0**
GRG				S	**Sg**	**07 59 54.1**	**+0.7**
GRG	**Griva**	**0.38**	**211**	P	**Pg**	**07 59 48.4**	**0.0**
GRG				S	**Sg**	**07 59 54.1**	**+0.7**
THE	**Thessaloniki**	**0.69**	**161**	P	**Pg**	**07 59 53.7**	**-0.5**
THE				S	**Sg**	**08 00 02.7**	**-0.5**
THE	**Thessaloniki**	**0.69**	**161**	P	**Pg**	**07 59 53.7**	**-0.5**
THE				S	**Sg**	**08 00 02.7**	**-0.5**
SOH	**Sokhos**	**0.70**	**131**	P	**Pg**	**07 59 53.9**	**-0.4**
SOH				S	**Sg**	**08 00 03.4**	**0.0**
SOH	**Sokhos**	**0.70**	**131**	P	**Pg**	**07 59 53.9**	**-0.4**
SOH				S	**Sg**	**08 00 03.4**	**0.0**
SRS	**Serrai**	**0.72**	**103**	P	**Pg**	**07 59 54.2**	**-0.6**
SRS				S	**Sg**	**08 00 04.1**	**0.0**
SRS	**Serrai**	**0.72**	**103**	P	**Pg**	**07 59 54.2**	**-0.6**
SRS				S	**Sg**	**08 00 04.1**	**0.0**
HORT	**Hortiatis**	**0.76**	**154**	P	**Pg**	**07 59 55.2**	**-0.4**
HORT				S	**Sg**	**08 00 05.5**	**+0.1**
HORT	**Hortiatis**	**0.76**	**154**	P	**Pg**	**07 59 55.2**	**-0.4**
HORT				S	**Sg**	**08 00 05.5**	**+0.1**
BIA	**Bitola**	**1.05**	**256**	P	**Pg**	**08 00 00.0**	**-1.0**
BIA	**Bitola**	**1.05**	**256**	*e*Pg	**Pg**	**08 00 00.1**	**-1.0**
BIA	**Bitola**	**1.05**	**256**	P	**Pg**	**08 00 00.0**	**-1.0**
FNA	**Florina**	**1.10**	**243**	P	**Pg**	**08 00 01.2**	**-0.8**
FNA				S	**Sb**	**08 00 17.1**	**+0.1**
FNA	**Florina**	**1.10**	**243**	P	**Pg**	**08 00 01.2**	**-0.8**
FNA				S	**Sb**	**08 00 17.1**	**+0.1**
SKO	**Skopje**	**1.15**	**307**	P	**Pg**	**08 00 02.9**	**-0.1**
SKO	**Skopje**	**1.15**	**307**	*e*Pn	**Pn**	**08 00 04.2**	**+0.5**
SKO	**Skopje**	**1.15**	**307**	*e

SMIA	Simia	2.44	170	P	Pn	08	00	21.3	-0.1
SMIA	Simia	2.44	170	P	Pn	08	00	21.3	-0.1
EVR	Evrytania	2.46	196	ePN	Pn	08	00	21.9	+0.2
EVR	Evrytania	2.46	196	ePn	Pn	08	00	21.9	+0.2
ALN	Alexandroupoli	2.58	98	P	Pn	08	00	23.5	+0.1
ALN	Alexandroupoli	2.58	98	P	Pn	08	00	23.5	+0.1
BOLS	Boljevac	2.60	349	ePn	Pn	08	00	23.1	-0.5
BOLS	Boljevac	2.60	349	ePn	Pn	08	00	23.1	-0.5
BEY	Berane	2.60	308	⇑iPn	Pn	08	00	24.4	+0.6
BEY				eSn	Sn	08	00	57.5	+1.7
IVA	Berane	2.60	308	⇑iPn	Pn	08	00	24.4	+0.6
IVA				eSn	Sn	08	00	57.5	+1.7
LKR	Lokris	2.64	174	ePn	Pn	08	00	24.3	+0.1
LKR	Lokris	2.64	174	ePn	Pn	08	00	24.3	+0.1
ULC	Ulcinj	2.65	286	⇓iPn	Pn	08	00	25.9	+1.5
ULC				eSn	Sn	08	00	59.4	+2.5
ULC	Ulcinj	2.65	286	⇓iPn	Pn	08	00	25.9	+1.5
ULC				eSn	Sn	08	00	59.4	+2.5
ENEZ	Enez	2.69	101	ePN	Pn	08	00	24.7	-0.2
PDG	Podgorica	2.79	295	ePn	Pn	08	00	27.7	+1.4
PDG				eSg	Sg	08	01	08.5	-2.2
PDG	Podgorica	2.79	295	⇓iPn	Pn	08	00	27.2	+0.9
PDG				eSn	Sn	08	01	02.8	+2.5
PDG				eSg	Sg	08	01	08.5	-2.2
TTG	Podgorica	2.79	295	⇓iPn	Pn	08	00	27.2	+0.9
TTG				eSn	Sn	08	01	02.8	+2.5
DSF	Desfina	2.87	182	P	Pn	08	00	27.6	+0.2
DSF	Desfina	2.87	182	P	Pn	08	00	27.6	+0.2
EFP	Efpalio	2.91	192	P	Pn	08	00	29.0	+1.1
EFP	Efpalio	2.91	192	P	Pn	08	00	29.0	+1.1
KALE	Kalithea	2.92	188	P	Pn	08	00	28.6	+0.5
KALE	Kalithea	2.92	188	ePN	Pn	08	00	28.3	+0.2
KALE	Kalithea	2.92	188	ePn	Pn	08	00	28.3	+0.2
KALE	Kalithea	2.92	188	P	Pn	08	00	28.6	+0.5
LKD2	Lefkada island	2.93	212	P	Pn	08	00	29.5	+1.3
LKD2	Lefkada island	2.93	212	P	Pn	08	00	29.5	+1.3
TRIZ	Trizonia	2.95	189	P	Pn	08	00	28.9	+0.5
TRIZ	Trizonia	2.95	189	ePN	Pn	08	00	28.7	+0.3
TRIZ	Trizonia	2.95	189	ePn	Pn	08	00	28.7	+0.3
GRUS	Gruza	2.97	332	ePn	Pn	08	00	28.7	-0.1
GRUS	Gruza	2.97	332	ePn	Pn	08	00	28.7	-0.1
ERIK	Erikli-Kesan	2.98	101	ePN	Pn	08	00	28.6	-0.1
BUM	Brajici-Budva	3.00	291	⇓iPn	Pn	08	00	30.5	+1.3
BUM				eSn	Sn	08	01	07.7	+2.2
BUM	Brajici-Budva	3.00	291	⇓iPn	Pn	08	00	30.5	+1.3
BUM				eSn	Sn	08	01	07.7	+2.2
GELI	Tayfur-Gelibol	3.02	106	ePN	Pn	08	00	29.1	-0.3
LAKA	Lakka	3.09	190	P	Pn	08	00	32.3	+1.9
LAKA	Lakka	3.09	190	ePN	Pn	08	00	31.6	+1.2
LAKA	Lakka	3.09	190	ePn	Pn	08	00	31.6	+1.2
LAKA	Lakka	3.09	190	P	Pn	08	00	32.3	+1.9
ZIMR		3.10	39	⇓iP	Pn	08	00	30.6	+0.1
EDRB	Edirne	3.11	78	ePN	Pn	08	00	31.5	+0.9
EDRB	Edirne	3.11	78	P	Pn	08	00	30.9	+0.3
EDRB	Edirne	3.11	78	P	Pn	08	00	30.9	+0.3
NKY	Niksic	3.13	300	⇓iPn	Pn	08	00	32.5	+1.4
NKY				eSn	Sn	08	01	10.9	+2.0
NKY	Niksic	3.13	300	⇓iPn	Pn	08	00	32.5	+1.4
NKY				eSn	Sn	08	01	10.9	+2.0
EZN	Ezine	3.15	116	ePN	Pn	08	00	31.1	0.0
JMB	Yambol	3.15	67	P	Pn	08	00	31.7	+0.5
JMB	Yambol	3.15	67	ePn	Pn	08	00	32.0	+0.8
JMB				eSg	Sg	08	01	20.9	-1.4
SVIS	Svilajnac	3.17	341	ePn	Pn	08	00	30.9	-0.5
SVIS				eSg	Sg	08	01	19.9	-2.7
SIGR	SIGRI	3.20	129	P	Pn	08	00	32.4	+0.5
SIGR	SIGRI	3.20	129	P	Pn	08	00	32.4	+0.5
LPK	Lapseki	3.24	105	ePN	Pn	08	00	32.4	0.0
KLV	Kalavryta, Ach	3.26	187	ePB	Pn	08	00	32.6	-0.2
LTK	Loutraki	3.27	176	P	Pn	08	00	33.0	+0.2
LTK	Loutraki	3.27	176	P	Pn	08	00	33.0	+0.2
HCY	Herceg Novi	3.33	292	⇓iPn	Pn	08	00	35.0	+1.4
HCY				eSn	Sn	08	01	14.4	+0.9
HCY	Herceg Novi	3.33	292	⇓iPn	Pn	08	00	35.0	+1.4
HCY				eSn	Sn	08	01	14.4	+0.9
RLS	Riolos of Patr	3.35	196	ePN	Pn	08	00	35.9	+1.9
RLS	Riolos of Patr	3.35	196	ePn	Pn	08	00	35.9	+1.9
UPM	Unac-Piva	3.39	306	⇑iPn	Pn	08	00	35.8	+1.2
UPM				eSn	Sn	08	01	16.9	+1.6
UPM	Unac-Piva	3.39	306	⇑iPn	Pn	08	00	35.8	+1.2
UPM				eSn	Sn	08	01	16.9	+1.6
DIVS	Divibare	3.43	326	P	Pn	08	00	34.9	-0.3
DIVS	Divibare	3.43	326	ePn	Pn	08	00	35.1	-0.1
DIVS	Divibare	3.43	326	ePn	Pn	08	00	35.1	-0.1
RKY	Sarkoy-Tekirda	3.47	98	ePN	Pn	08	00	35.5	-0.1
BRY	Bratogost	3.47	299	ePn	Pn	08	00	37.4	+1.7
BRY				eSn	Sn	08	01	18.8	+1.6
BRY	Bratogost	3.47	299	ePn	Pn	08	00	37.4	+1.7
BRY				eSn	Sn	08	01	18.8	+1.6
VLS	Valsamata	3.49	208	ePN	Pn	08	00	38.5	+2.6
VLS	Valsamata	3.49	208	ePn	Pn	08	00	38.5	+2.6
MFT	Murefte	3.53	97	ePN	Pn	08	00	36.7	+0.3
BBLS	Lazići	3.53	318	ePn	Pn	08	00	36.7	+0.2
BBLS	Lazići	3.53	318	ePn	Pn	08	00	36.7	+0.2
NAIG	Nisos Aigina	3.58	169	ePN	Pn	08	00	37.5	+0.4
NAIG	Nisos Aigina	3.58	169	ePn	Pn	08	00	37.5	+0.4
KRBG	Karabiga-Canak	3.62	103	ePN	Pn	08	00	37.8	+0.1
HUMR	Humele	3.66	27	⇓iP	Pn	08	00	38.3	+0.1
HUMR	Humele	3.66	27	⇓iP	Pn	08	00	38.3	+0.1
TKD	Tekirdag	3.69	93	ePN	Pn	08	00	39.4	+0.8
MRMT	Marmara Adasi	3.79	99	ePN	Pn	08	00	40.2	+0.1
VLX	Vlachokerasia	3.92	183	P	Pn	08	00	43.6	+1.8
VLX	Vlachokerasia	3.92	183	P	Pn	08	00	43.6	+1.8
GONE	Gonen-Balikesi	4.01	106	ePN	Pn	08	00	43.3	+0.2
STON	Ston	4.02	295	ePn	Pn	08	00	44.0	+0.9
STON	Ston	4.02	295	ePn	Pn	08	00	44.0	+0.9
ITM	Ithomi	4.14	188	ePB	Pn	08	00	47.2	+2.4
SLVT	Silivri	4.18	89	ePN	Pn	08	00	46.4	+1.1
CTYL	Yal??k??y-??at	4.24	86	ePN	Pn	08	00	46.5	+0.4
BALB	Balikesir	4.30	111	ePN	Pn	08	00	47.5	+0.4
ARR	Arges	4.33	19	⇑iP	Pn	08	00	47.4	0.0
ARR	Arges	4.33	19	⇑iP	Pn	08	00	47.4	0.0
BZS	Buzias	4.40	350	⇑iP	Pn	08	00	47.3	-1.0
BZS	Buzias	4.40	350	⇑iP	Pn	08	00	47.3	-1.0
FGSL	Fruska Gora	4.40	333	ePn	Pn	08	00	47.9	-0.4
FRGS	Fruska Gora	4.40	333	ePn	Pn	08	00	47.9	-0.5
CTS	Kestanelik-??a	4.40	94	ePN	Pn	08	00	49.2	+0.9
KCTX	Karacabey (Bur	4.44	101	ePN	Pn	08	00	49.6	+0.6
BLCB	Balcova	4.44	129	ePN	Pn	08	00	50.8	+1.9
SECR		4.50	32	⇓iP	Pn	08	00	51.0	+1.3
SECR		4.50	32	⇓iP	Pn	08	00	51.0	+1.3
VOIR		4.50	22	⇓iP	Pn	08	00	50.3	+0.5
VOIR		4.50	22	⇓iP	Pn	08	00	50.3	+0.5
IZM	Izmir	4.56	128	ePN	Pn	08	00	50.5	-0.1
VLI	Veliai	4.56	177	ePN	Pn	08	00	51.1	+0.5
VLI	Veliai	4.56	177	ePn	Pn	08	00	51.1	+0.5
BGKT	Bogazkoy	4.61	89	ePN	Pn	08	00	52.2	+1.0
ARMT	Armutlu	4.75	97	ePN	Pn	08	00	54.1	+1.0
APE	Apeiranthos	4.76	151	⇑iP	Pn	08	00	53.6	+0.2
APE	Apeiranthos	4.76	151	⇑iP	Pn	08	00	53.6	+0.2
ISR	Istrita	4.77	35	⇓iP	Pn	08	00	55.2	+1.8
ISR	Istrita	4.77	35	⇓iP	Pn	08	00	55.2	+1.8
KLYT	Kilyos	4.80	88	ePN	Pn	08	00	55.0	+1.1
ISK	Istanbul-Kandi	4.83	90	ePN	Pn	08	00	55.4	+1.2
MLR	Muntele Rosu	4.83	29	⇓iP	Pn	08	00	55.3	+0.8
MLR	Muntele Rosu	4.83	29	Pn	Pn	08	00	56.7	+2.2
	comp=E,1.8nm,0.3s,baz=197,slow=4.1,SNR=33								
MLR				Sn	Sn	08	01	55.5	+4.7
	baz=201,slow=3.8,SNR=2.2								
MLR				Lg	Lg	08	02	17.8	
	comp=E,0.6nm,0.3s,baz=278,slow=22,SNR=3.8								
MLR	Muntele Rosu	4.83	29	⇓iP	Pn	08	00	55.3	+0.8
DST	Dursunbey	4.84	108	ePN	Pn	08	00	54.8	+0.3
BUY	Buyukada	4.90	93	ePN	Pn	08	00	56.2	+1.0
ORLT	Orhaneli	4.90	103	ePN	Pn	08	00	55.6	+0.3
KYTH	Kithira	5.00	177	ePN	Pn	08	00	57.8	+1.1
KYTH	Kithira	5.00	177	ePn	Pn	08	00	57.8	+1.1
SILT	Sile	5.26	89	ePN	Pn	08	01	01.5	+1.3
TIRR	Tirgusor	5.28	51	⇓iP	Pn	08	01	01.0	+0.6
TIRR	Tirgusor	5.28	51	⇓iP	Pn	08	01	01.0	+0.6
KULA	Kula-Manisa	5.38	119	ePN	Pn	08	01	03.0	+1.2
PLOR	Plostina	5.40	31	⇓iP	Pn	08	01	03.9	+1.7
PLOR	Plostina	5.40	31	⇓iP	Pn	08	01	03.9	+1.7
ANKY	Antikythira Is	5.43	175	ePN	Pn	08	01	03.9	+1.3
VRI	Vrincioaia	5.45	31	⇓iP	Pn	08	01	04.4	+1.6
VRI	Vrincioaia	5.45	31	⇓iP	Pn	08	01	04.4	+1.6
TVSB	Tavsanli	5.50	107	ePN	Pn	08	01	04.7	+1.1
DRGR		5.50	0	⇑iP	Pn	08	01	04.1	+0.5
DRGR		5.50	0	⇑iPN	Pn	08	01	04.1	+0.5
CFR	Carcaliu	5.58	44	⇓iP	Pn	08	01	04.8	+0.3
CFR	Carcaliu	5.58	44	⇓iP	Pn	08	01	04.8	+0.3
PKSM	Moragy	5.72	331	⇓iP	Pn	08	01	06.3	-0.2
PKSM	Moragy	5.72	331	⇓ie	Pn	08	01	06.3	-0.2
PKSM	Moragy	5.72	331	⇓iP	Pn	08	01	06.3	-0.2
TESR	Tescani	5.96	27	⇑iP	Pn	08	01	10.9	+1.0
TESR	Tescani	5.96	27	⇑iP	Pn	08	01	10.9	+1.0
GULT	Gulveren	6.01	96	ePN	Pn	08	01	12.2	+1.6
KHL	Karahalli	6.05	117	eP	Pn	08	01	12.9	+1.8
ALT	Altintas	6.12	109	ePN	Pn	08	01	12.2	0.0
PKST	Tamasi	6.17	331	⇓iPn	Pn	08	01	07.0	-5.7
PKST	T``s	6.83	332	ePn	Pn	08	01	22.1	+0.3
TRPA	Tarpa	6.84	359	⇑iP	Pn	08	01	21.5	-0.4
TRPA	Tarpa	6.84	359	⇑iP	Pn	08	01	21.5	-0.4
KIS	Kishinev	7.22	36	e	Sb	08	03	13.0	-0.2
KOLS	Kolonicke sedl	7.65	358	ePN	Pn	08	01	33.5	+0.5
KOLS	Kolonicke sedl	7.65	358	ePn	Pn	08	01	33.5	+0.5
KOLS				eSn	Sn	08	03	00.9	-0.4
KOLS				eSg	Sg	08	03	53.0	+4.9
VYHS	Vyhne	7.70	341	ePn	Pn	08	01	33.5	-0.2
VYHS				eSn	Sn	08	03	00.9	-0.4
ARSA	Arzberg	7.86	322	⇑iPn	Pn	08	01	36.2	+0.3
ARSA	Arzberg	7.86	322	⇑iPn	Pn	08	01	36.2	+0.3
VOJV	Vojsko	7.93	310	ePn	Pn	08	01	38.1	+1.1
ZST	Bratislava	7.96	332	e	Pn	08	01	39.0	+1.8
ZST	Bratislava	7.96	332	eSN	Sn	08	03	01.4	-6.2
BRTR	Keskin Array B	8.51	97	Pn	Pn	08	01	46.1	+1.2
	comp=E,0.1nm,0.3s,baz=278,slow=15,SNR=2.9								
GERES	GERESS Array B	9.86	323	Pn	Pn	08	02	02.8	-0.6
	comp=E,0.2nm,0.3s,baz=146,slow=13,SNR=3.3								
GERES				LR	LR	08	06	05.9	
	comp=E,149nm,21.7s,baz=121,slow=39								
PGF	Pioggiola	10.27	282	eP	Pn	08	02	08.7	-0.3
	comp=E,5.7nm,0.7s								
DAVOX	Davos/Dischmat	10.72	305	Pn	Pn	08	02	12.8	-2.4
	comp=E,0.8nm,0.3s,baz=133,slow=19,SNR=3.2								
LMR	La Mourre	12.14	285	eP	Pn	08	02	34.1	-0.4
LPG	La Plagne	12.32	295	eP	Pn	08	02	36.0	-1.2
	comp=E,5.3nm,0.4s								
LPL	La Plagne	12.33	295	eP	Pn	08	02	37.1	-0.2
	comp=E,7.9nm,0.4s								
ORIF	Oris-en-Rattie	12.79	292	eP	Pn	08	02	42.6	-0.9
	comp=E,3.4nm,0.4s								
VIVF	Saint-Julien-l	13.63	291	eP	Pn	08	02	52.7	-2.1
	comp=E,4.0nm,0.5s								
PAGF	Fort de Pagny	14.02	307	eP	Pn	08	03	00.2	+0.1
	comp=E,3.4nm,0.6s								
LOR	Lormes	14.73	300	eP	Pn	08	03	08.0	-1.8
	comp=E,4.5nm,0.5s								
SSF	Saint Saulge	14.90	299	eP	Pn	08	03	09.7	-2.4
CAF	Calviac	15.47	290	eP	Pn	08	03	20.8	+1.0
	comp=E,2.1nm,0.4s								
MFF	Saint Martin d	17.24	296	eP	Pn	08	03	41.2	-1.2
ESDC	Sonseca Array	20.30	274	P	P	08	04	13.7	-3.9
	comp=E,0.4nm,0.3s,baz=89,slow=12,SNR=3.9								
NOA	NORSAR Array B	20.98	344	P	P	08	04	26.0	+1.2
	comp=E,1.5nm,0.9s,baz=126,slow=14,SNR=3.1								
EKA	Eskdalemuir Ar	22.02	318	P	P	08	04	35.6	-0.4
	comp=E,0.8nm,0.7s,baz=114,slow=8.6,SNR=3.3								
TORD	Torodi Ar. Bea	33.48	219	P	P	08	06	20.9	-0.2
	comp=E,2.0nm,0.7s,baz=32,slow=8.8,SNR=14								
MKAR	Makanchi Array	42.32	62	P	P	08	07	34.9	-0.6
	comp=E,0.6nm,0.7s,baz=290,slow=6.8,SNR=4.1								
ZALV	Zalesovo Beam	42.42	51	P	P	08	07	37.2	+1.0
	comp=E,1.2nm,0.5s,baz=272,slow=8.5,SNR=6.0								
YKA	Yellowknife Ar	71.03	341	P	P	08	10	59.1	-0.2
	comp=E,0.1nm,0.6s,baz=31,slow=5.4,SNR=4.3								

*IDC **25** 08:01:16.7±3.6,41°.46N×22°.39E,h0km,mb3.7/3,*
mb1 3.7/3,mb1mx3.4/25,mbtmp3.7/3,Error ellipse:
s-maj=359.1km s-min=28.5km az=137.0
*SOF **25** 08:01:17.4,41°.28N×22°.68E,h0km,MD3.4*
*SKO **25** 08:01:17.5,41°.25N×22°.62E,h15km,M2.3,ML3.4*
*CSEM **25** 08:01:17.3±0.2,41°.21N×22°.62E,h2km,ML3.3,Error*
ellipse: s-maj=5.3km s-min=4.3km az=96.0
*BEO **25** 08:01:19.3±0.5,41°.32N×22°.62E,h2km×3km,ML3.3/8*
*ATH **25** 08:01:20.2,41°.15N×22°.64E,h33km×3km,MD3.1/5*

ISC 25 08:01:17.8±0.8,41°.27N±0°.02×22°.53E±0°.02,h8km±5km,
n48,σ0°.61/66,mb3.6/3,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time			Res ISC
					Op		h	m	s	
VAY	Valandovo	0.07	321	iPg	Pg		08	01	19.5	-0.2
VAY				eLg	Lg		08	01	21.1	
	comp=E,30μm,0.4s									
VAY				eSg	Sg		08	01	21.1	0.0
VAY				eLg	Lg		08	01	21.4	
	comp=N,73μm,1.0s									
VAY	Valandovo	0.07	321	ePg	Pg		08	01	19.4	-0.3
VAY				eSg	Sg		08	01	21.1	0.0
VAY	Valandovo	0.07	321	ePg	Pg		08	01	19.4	-0.3
VAY				eSg	Sg		08	01	21.6	+0.5
VAY				eLg	Lg		08	01	21.8	
	comp=N,73μm,1.0s									
KKB	Krupnik	0.69	30	Pg	Pg		08	01	30.6	-0.5
KKB	Krupnik	0.69	30	Pg	Pg		08	01	30.6	-0.5
MMB	Musomiste	0.89	68	iPg	Pg		08	01	34.1	-0.7
MMB	Musomiste	0.89	68	iPg	Pg		08	01	34.1	-0.7
BIA	Bitola	1.02	256	iPg	Pg		08	01	37.0	-0.3
BIA	Bitola	1.02	256	iPg	Pg		08	01	36.9	-0.3
PLG	Polygyros	1.09	145	ePN	Pg		08	01	38.7	+0.1
PLG				eSN	Sg		08	01	51.8	-0.9
PLG	Polygyros	1.09	145	ePn	Pg		08	01	38.7	+0.1
PLG				eSn	Sg		08	01	51.8	-0.9
SKO	Skopje	1.14	309	iPn	Pn		08	01	40.4	+0.4
SKO				eSg	Sn		08	01	56.7	+1.0
SKO				eLg	Lg		08	01	59.9	
	comp=N,549nm,0.4s									
SKO	Skopje	1.14	309	ePg	Pn		08	01	40.3	+0.3
SKO				eSg	Sb		08	01	54.9	+0.3
SKO	Skopje	1.14	309	ePg	Pn		08	01	40.3	+0.3
SKO	Skopje	1.14	309	iPn	Pn		08	01	40.9	+0.9
SKO				eSg	Sb		08	01	54.9	+0.3
SKO				eLg	Lg		08	02	00.4	
	comp=N,549nm,0.4s									
KZN	Kozani	1.16	214	ePN	Pb		08	01	40.1	0.0
KZN				eSN	Sb		08	01	55.6	+0.3
KZN	Kozani	1.16	214	ePn	Pb		08	01	40.1	0.0
KZN				eSn	Sb		08	01	55.6	+0.3
VTS	Vitosha	1.39	18	ePg	Pn		08	01	43.9	+0.3
VTS	Vitosha	1.39	18	P	Pb		08	01	44.2	+0.1
VTS	Vitosha	1.39	18	ePg	Pn		08	01	43.9	+0.3
VTS	Vitosha	1.39	18	P	Pb		08	01	44.2	+0.1
RZN	Rozhen	1.62	74	P	Pb		08	01	48.5	+0.4
RZN	Rozhen	1.62	74	P	Pb		08	01	48.5	+0.4
BARS	Barje	1.66	339	ePn	Pn		08	01	47.6	+0.4
BARS				eSg	Sb		08	02	10.4	+0.7
BARS	Barje	1.66	339	ePn	Pn		08	01	47.6	+0.4
BARS				eSg	Sb		08	02	10.4	+0.7
PGB	Panagyurishte	1.72	41	P	Pb		08	01	49.7	0.0
PGB	Panagyurishte	1.72	41	P	Pb		08	01	49.7	0.0
THL	Klokotos Trika	1.76	196	ePB	Pn		08	01	48.2	-0.4
THL				eSN	Sn		08	02	09.7	-1.5
THL	Klokotos Trika	1.76	196	ePb	Pn		08	01	48.2	-0.4
THL				eSn	Sn		08	02	09.7	-1.5
PLD	Plovdiv	1.77	61	ePn	Pb		08	01	50.5	+0.1
PLD				eSg	Sg		08	02	14.9	+0.4
PLD	Plovdiv	1.77	61	P	Pg		08	01	51.5	-0.1
PLD	Plovdiv	1.77	61	ePn	Pb		08	01	50.5	+0.1
PLD	Plovdiv	1.77	61	P	Pg		08	01	51.5	-0.1
PLD				eSg	Sg		08	02	14.9	+0.4
ZAPS	Zavoj	2.00	0	ePn	Pb		08	01	53.9	-0.6
ZAPS				eSg	Sg		08	02	21.5	-0.7
NEO	Neokhori	2.01	167	ePB	Pn		08	01	52.6	+0.6
NEO	Neokhori	2.01	167	ePb	Pn		08	01	52.6	+0.6
JAN	Janina	2.10	221	ePN	Pn		08	01	54.0	+0.7
JAN	Janina	2.10	221	ePn	Pn		08	01	54.0	+0.7
KDZ	Kurdzhali	2.13	79	eP	Pb		08	01	55.9	-0.7
KDZ	Kurdzhali	2.13	79	eP	Pb		08	01	55.9	-0.7
MPEP	Malo Peshtene	2.24	21	P	Pg		08	01	59.7	-1.1
SELS	Selova	2.25	331	ePn	Pn		08	01	55.0	-0.3
BOLS	Boljevac	2.61	349	ePn	Pb		08	02	03.5	-1.2
BOLS				eSg	Sg		08	02	40.9	-0.6
BOLS	Boljevac	2.61	349	ePn	Pb		08	02	03.5	-1.2
BOLS				eSg	Sg		08	02	40.9	-0.6
MLR	Muntele Rosu	4.86	29	Lg	Lg		08	03	51.7	
	comp=N,0.0nm,0.3s,baz=261,slow=19,SNR=2.0									
TORD	Torodi Ar. Bea	33.45	219	P	P		08	07	57.8	+0.5
	comp=N,1.0nm,0.7s,baz=28,slow=9.1,SNR=5.0									
MKAR	Makanchi Array	42.35	62	P	P		08	09	12.8	+0.7
	comp=N,0.3nm,0.6s,baz=274,slow=7.6,SNR=3.0									
ZALV	Zalesovo Beam	42.45	51	P	P		08	09	13.1	+0.2
	comp=N,0.4nm,0.3s,baz=289,slow=9.2,SNR=3.5									

*ISCJB **25** 08:05:48.8±0.5,67°.66N±0°.03×34°.02E±0°.06,h0km,*
mb3.5/6,Error ellipse: s-maj=4.7km s-min=3.2km az=1.1
*HEL **25** 08:05:50.8±0.1,67°.65N×33°.99E,h1km,ML3.4,*
ML3.5(BER),ML3.6(NAO),Suspected explosion
*IDC **25** 08:05:51.2±0.7,67°.68N×33°.88E,h0km,mb3.6/7,*
mb1 3.7/13,mb1mx3.5/34,mbtmp3.7/13,ML3.8/6,Error
ellipse: s-maj=9.4km s-min=8.0km az=43.0
*NAO **25** 08:05:53.9±1.6,67°.59N×33°.49E,h9km±5km,ML3.6*
*CSEM **25** 08:05:55.5±0.2,67°.53N×32°.88E,h1km,ML3.6,Error*
ellipse: s-maj=5.0km s-min=3.4km az=149.0,Suspected
Mining explosion.

ISC 25 08:05:50.3±0.8,67°.63N±0°.03×33°.85E±0°.05,h0km,n100,
σ1.973/159,mb3.5/7,Baltic States - Belarus -
Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time			Res ISC
					Op		h	m	s	
APZ9	Apatity	0.18	250	iP	Pg		08	05	55.2	+1.4
APZ9				iS	Sg		08	05	57.9	+1.8
APZ9	Apatity	0.18	250	P	Pg		08	05	55.1	+1.4
APZ9				S	Sg		08	05	57.8	+1.8
APB1

LANU				S	Sn	08 07 50.6	-2.2
KIF	**Kilpisjarvi**	**5.03 292**	*e*P		**Pn**	**08 07 07.7**	**+0.8**
KIF			*e*S		**Sn**	**08 08 02.8**	**-2.7**
KIF			MSG		**Sg**	**08 08 26.9**	**-4.7**
	comp=Z,84nm,0.3s						
KIF	**Kilpisjarvi**	**5.03 292**	P		**Pn**	**08 07 07.6**	**+0.8**
KIF			S		**Sn**	**08 08 02.8**	**-2.7**
TRO	**Tromso**	**5.81 297**	*e*P		**Pn**	**08 07 18.8**	**+1.3**
TRO			*e*S		**Sn**	**08 08 22.5**	**-2.1**
TRO			AML		AML	08 08 55.3	
	comp=Z,64nm,0.7s						
TRO	**Tromso**	**5.81 297**	*e*P		**Pn**	**08 07 18.8**	**+1.3**
TRO			*e*S		**Sn**	**08 08 22.5**	**-2.1**
TRO			AML		AML	08 08 55.3	
	comp=Z,64nm,0.7s						
TRO	**Tromso**	**5.81 297**	P		**Pn**	**08 07 18.8**	**+1.3**
TRO			S		**Sn**	**08 08 22.5**	**-2.1**
	comp=Z,64nm,0.7s						
SUF	**Sumiainen**	**5.90 217**	*e*P		**Pn**	**08 07 20.4**	**+1.6**
SUF			*e*S		**Sn**	**08 08 25.9**	**-1.0**
SUF			MSG		**Sg**	**08 08 57.1**	**-2.3**
	comp=Z,60nm,0.3s						
SUF	**Sumiainen**	**5.90 217**	P		**Pn**	**08 07 20.3**	**+1.6**
SUF			S		**Sn**	**08 08 25.9**	**-1.0**
KAF	**Kangasniemi**	**6.40 214**	MSG			08 09 14.6	
	comp=Z,33nm,0.3s						
VAF	**Ylistaro**	**6.56 231**	*e*S		**Sn**	**08 08 42.4**	**-0.7**
VAF			MSG			08 09 18.6	
	comp=Z,42nm,0.4s						
KEF	**Keuruu**	**6.68 219**	*e*P		**Pn**	**08 07 30.1**	**+0.7**
KEF			*e*S		**Sn**	**08 08 43.3**	**-2.8**
KEF			MSG		**Sg**	**08 09 25.5**	**+1.1**
	comp=Z,36nm,0.3s						
KEF	**Keuruu**	**6.68 219**	P		**Pn**	**08 07 30.1**	**+0.7**
KEF			S		**Sn**	**08 08 43.3**	**-2.8**
FIA0	**FINESS Array S**	**7.05 212**	Pn		**Pn**	**08 07 35.4**	**+0.8**
	baz=27,slow=16						
FIA0			Sn		Sn	08 08 48.9	-6.4
	baz=20,slow=18						
FIA0			Lg		Lg	08 09 26.1	
	baz=25,slow=28						
FIA0	**FINESS Array S**	**7.05 212**	Pn		**Pn**	**08 07 35.4**	**+0.8**
	baz=27,slow=16						
FIA0			Sn		Sn	08 08 48.9	-6.4
	baz=20,slow=18						
FIA0			Lg		Lg	08 09 26.1	
	baz=25,slow=28						
FIA0	**FINESS Array S**	**7.05 212**	MSG		Sg	08 09 44.7	+8.3
	comp=Z,20nm,0.3s						
FIA0	**FINESS Array S**	**7.05 212**	Sn		Sn	08 08 48.9	-6.4
	baz=20,slow=16,SNR=211						
FIA0			Lg		Lg	08 09 26.1	
	baz=25,slow=27,SNR=8.0						
FINES	**FINESS Array B**	**7.05 212**	Pn		**Pn**	**08 07 35.2**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=26,slow=15,SNR=9.3						
FINES			Sn		**Sn**	**08 08 50.7**	**-4.6**
	comp=Z,2.1nm,0.3s,baz=30,slow=23,SNR=4.0						
FINES			Lg		Lg	08 09 26.1	
	comp=Z,8.3nm,0.3s,baz=25,slow=34,SNR=15						
STEI	**Steigen**	**7.05 281**	*e*S		**Sn**	**08 08 53.5**	**-1.9**
STEI	**Steigen**	**7.05 281**	*e*S		**Sn**	**08 08 53.5**	**-1.9**
STEI	**Steigen**	**7.05 281**	S		**Sn**	**08 08 53.4**	**-1.9**
VJF	**Virojoki**	**7.63 204**	MSG		**Sg**	**08 09 58.2**	**+3.2**
	comp=Z,20nm,0.3s						
MOR8	**Moi Rana**	**7.76 268**	*e*S		Sn	08 09 04.9	-7.9
MOR8			AML		AML	08 09 55.5	
	comp=Z,54nm,0.7s						
MOR8	**Moi Rana**	**7.76 268**	*e*S		Sn	08 09 04.9	-7.9
MOR8			AML		AML	08 09 55.5	
	comp=Z,54nm,0.7s						
MOR8	**Moi Rana**	**7.76 268**	S		Sn	08 09 04.9	-7.9
	comp=Z,54nm,0.7s						
PVF	**Pernaja**	**7.92 210**	MSG		**Sg**	**08 10 02.6**	**-1.6**
	comp=Z,21nm,0.4s						
FLOS	**Flostrand**	**8.12 270**	*e*P		**Pn**	**08 07 49.2**	**0.0**
FLOS			*e*S		**Sn**	**08 09 18.0**	**-3.5**
FLOS	**Flostrand**	**8.12 270**	*e*P		**Pn**	**08 07 49.2**	**0.0**
FLOS			*e*S		**Sn**	**08 09 18.0**	**-3.5**
FLOS	**Flostrand**	**8.12 270**	P		**Pn**	**08 07 49.2**	**0.0**
FLOS			S		**Sn**	**08 09 18.0**	**-3.5**
STOK	**Stokkvaagen**	**8.25 271**	*e*S		**Sn**	**08 09 20.5**	**-4.3**
STOK	**Stokkvaagen**	**8.25 271**	*e*S		**Sn**	**08 09 20.5**	**-4.3**
STOK	**Stokkvaagen**	**8.25 271**	S		**Sn**	**08 09 20.4**	**-4.3**
RAF	**Rauma**	**8.44 224**	MSG		Sg	08 10 15.9	-4.9
	comp=Z,14nm,0.3s						
MEF	**Metsahovi**	**8.51 214**	MSG		**Sg**	**08 10 22.3**	**-1.0**
	comp=Z,21nm,0.3s						
HFS	**Hagfors**	**11.58 239**	Pn		**Pn**	**08 08 34.3**	**-2.2**
	baz=48,slow=11						
HFS			Sn		Sn	08 10 35.0	-11
	baz=45,slow=22						
HFS	**Hagfors**	**11.58 239**	P		**Pn**	**08 08 34.3**	**-2.2**
	baz=48,slow=11						
HFS			S		Sn	08 10 35.0	-11
	baz=45,slow=22						
HFS	**Hagfors**	**11.58 239**	*e*P		**Pn**	**08 08 34.3**	**-2.2**
HFS			*e*S		Sn	08 10 35.0	-11
HFS	**Hagfors**	**11.58 239**	Pn		**Pn**	**08 08 34.2**	**-2.2**
	comp=Z,0.6nm,0.3s,baz=46,slow=11,SNR=12						
HFS			Sn		Sn	08 10 37.7	-8.7
	comp=Z,0.9nm,0.3s,baz=40,slow=23,SNR=5.4						
HFS			Lg		Lg	08 11 45.0	
	comp=Z,1.0nm,0.3s,baz=65,slow=29,SNR=3.1						
SPA0	**Spitsbergen Ar**	**11.69 342**	Pn		**Pn**	**08 08 35.7**	**-2.2**
	baz=141,slow=16						
SPITS	**Spitsbergen Ar**	**11.69 342**	Pn		**Pn**	**08 08 35.1**	**-2.8**
	baz=143,slow=17,SNR=31						
NB2	**NORSAR Subarra**	**11.77 247**	Pn		**Pn**	**08 08 37.9**	**-1.2**
	baz=45,slow=12						
NB2			Sn		Sn	08 10 45.3	-5.7
	baz=45,slow=28						
NB2	**NORSAR Subarra**	**11.77 247**	P		**Pn**	**08 08 37.9**	**-1.2**
	baz=45,slow=12						
NB2			Sn		Sn	08 10 45.3	-5.7
	baz=45,slow=28						
NB2	**NORSAR Subarra**	**11.77 247**	*e*P		**Pn**	**08 08 37.9**	**-1.2**
NB2			*e*S		Sn	08 10 45.3	-5.7
NOA	**NORSAR Array B**	**11.77 247**	Pn		**Pn**	**08 08 37.2**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=45,slow=11,SNR=12						
NOA			Sn		Sn	08 10 41.9	-9.2
	comp=Z,0.7nm,0.3s,baz=48,slow=21,SNR=3.9						
NOA			Lg		Lg	08 11 48.3	
	comp=Z,0.8nm,0.3s,baz=204,slow=20,SNR=1.4						
AKASG	**Malin Array Be**	**17.14 190**	Pn		Pn	08 09 44.0	-6.8
	comp=Z,1.5nm,0.3s,baz=8.1,slow=12,SNR=4.1						
AKTO	**Aktyubinsk**	**21.00 133**	P		**P**	**08 10 34.9**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=342,slow=9.3,SNR=8.9						
BVAR	**Borovoye Array**	**22.78 112**	P		**P**	**08 10 55.2**	**+1.2**
	comp=Z,1.4nm,0.4s,baz=316,slow=10,SNR=7.3						
ZALV	**Zalesovo Beam**	**27.42 94**	P		**P**	**08 11 37.7**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=327,slow=9.1,SNR=2.7						
KURBB	**Kurchatov Arra**	**27.68 105**	P		**P**	**08 11 40.0**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=320,slow=8.5,SNR=4.4						
MKAR	**Makanchi Array**	**32.25 106**	P		**P**	**08 12 20.8**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=337,slow=7.6,SNR=7.7						
YKA	**Yellowknife Ar**	**48.18 341**	P		**P**	**08 14 31.9**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=7.4,slow=7.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**58.37 218**	P		**P**	**08 15 46.6**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=4.2,slow=6.3,SNR=6.1						

IDC 25 08:30:59.6±48.0, 17°41'S×177°24'W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/19, mbtmp4.0/3, Error ellipse: s-maj=883.9km s-min=157.9km az=79.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.85**	**241**	P	P	08 38 35.9	+0.8
	1.2nm,0.8s,baz=72,slow=3.2,SNR=4.5						
WRA	**Warramunga Arr**	**45.82**	**259**	P	P	08 39 23.1	-0.6
	0.7nm,0.5s,baz=97,slow=7.0,SNR=37						
ASAR	**Alice Springs**	**46.00**	**254**	P	P	08 39 24.7	-0.4
	2.8nm,0.6s,baz=88,slow=8.9,SNR=52						

*ISCJB **25** 08:40:26.4±0.6, 41°.28N±0°.04×22°.71E±0°.05, h10km±7km, Error ellipse: s-maj=7.1km s-min=4.8km az=139.1*
*SKO **25** 08:40:27.8, 41°.28N×22°.67E, h4km, M1.8, ML2.0*
*ATH **25** 08:40:27.8, 41°.20N×22°.69E, h25km±1km, MD3.0/8*
*CSEM **25** 08:40:27.1±0.2, 41°.24N×22°.72E, h10km, ML1.8, Error ellipse: s-maj=5.6km s-min=4.3km az=89.0*
*BEO **25** 08:40:29.4±0.6, 41°.34N×22°.62E, h1km±4km, ML1.8/5*
ISC 25 08:40:27.2±0.9, 41°24'N±0°.02×22°.67E±0°.03, h9km±7km, n25, σ0839/44, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**318**	*i* Pg	**Pg**	**08 40 29.7**	**-0.2**
VAY				*i* Sg	**Sg**	**08 40 31.4**	**-0.2**
VAY				*e*Lg	Lg	08 40 31.5	
	comp=N,2μm,0.2s						
VAY	**Valandovo**	**0.12**	**318**	*i* Pg	**Pg**	**08 40 30.1**	**+0.3**
VAY				*e*Sg	**Sg**	**08 40 31.5**	**-0.2**
VAY				*e*Lg	Lg	08 40 31.9	
	comp=N,2μm,0.2s						
GRG	**Griva**	**0.34**	**216**	*e*PB	**Pb**	**08 40 35.4**	**-0.1**
GRG				*e*SB	**Sb**	**08 40 40.9**	**-0.2**
GRG	**Griva**	**0.34**	**216**	*e*Pb	**Pb**	**08 40 35.4**	**-0.1**
GRG				*e*Sb	**Sb**	**08 40 40.9**	**-0.2**
SOH	**Sokhos**	**0.66**	**128**	*e*PN	**Pg**	**08 40 40.1**	**+0.2**
SOH				*e*SN	**Sg**	**08 40 49.0**	**+0.4**
SOH	**Sokhos**	**0.66**	**128**	*e*Pn	**Pg**	**08 40 40.1**	**+0.2**
SOH				*e*Sn	**Sg**	**08 40 49.0**	**+0.4**
NVR	**Nevrokopi**	**0.91**	**82**	*e*PN	**Pb**	**08 40 44.9**	**-0.2**
NVR				*e*SN	**Sn**	**08 40 58.7**	**-0.7**
NVR	**Nevrokopi**	**0.91**	**82**	*e*Pn	**Pb**	**08 40 44.9**	**-0.2**
NVR				*e*Sn	**Sn**	**08 40 58.7**	**-0.7**
PLG	**Polygyros**	**1.04**	**145**	*e*PN	**Pg**	**08 40 46.8**	**-0.4**
PLG				*e*SN	**Sb**	**08 41 01.3**	**+0.1**
PLG	**Polygyros**	**1.04**	**145**	*e*Pn	**Pg**	**08 40 46.8**	**-0.4**
PLG				*e*Sn	**Sb**	**08 41 01.3**	**+0.1**
FNA	**Florina**	**1.08**	**246**	*e*PN	**Pn**	**08 40 48.7**	**+0.2**
FNA	**Florina**	**1.08**	**246**	*e*Pn	**Pn**	**08 40 48.7**	**+0.2**
LIT	**Litokhoron**	**1.14**	**187**	*e*PN	**Pb**	**08 40 49.3**	**+0.2**
LIT	**Litokhoron**	**1.14**	**187**	*e*Pn	**Pb**	**08 40 49.3**	**+0.2**
VTS	**Vitosha**	**1.41**	**16**	*e*Pg	**Pn**	**08 40 53.3**	**0.0**
VTS				*e*Sg	**Sb**	**08 41 11.4**	**-0.6**
VTS	**Vitosha**	**1.41**	**16**	*e*Pg	**Pn**	**08 40 53.3**	**0.0**
VTS				*e*Sg	**Sb**	**08 41 11.4**	**-0.6**
PAIG	**Paliouri**	**1.52**	**149**	*e*PB	**Pn**	**08 40 54.0**	**-0.5**
PAIG				*e*SN	**Sb**	**08 41 15.0**	**+0.2**
PAIG	**Paliouri**	**1.52**	**149**	*e*Pb	**Pn**	**08 40 54.0**	**-0.5**
PAIG				*e*Sn	**Sb**	**08 41 15.0**	**+0.2**
BARS	**Barje**	**1.70**	**338**	*e*Pn	**Pn**	**08 40 57.4**	**+0.3**
BARS				*e*Sg	**Sb**	**08 41 20.5**	**+0.2**
BARS	**Barje**	**1.70**	**338**	*e*Pn	**Pn**	**08 40 57.4**	**+0.3**
BARS				*e*Sg	**Sb**	**08 41 20.5**	**+0.2**
THL	**Klokotos Trika**	**1.74**	**197**	*e*PN	**Pn**	**08 40 58.0**	**+0.4**
THL	**Klokotos Trika**	**1.74**	**197**	*e*Pn	**Pn**	**08 40 58.0**	**+0.4**
PLD	**Plovdiv**	**1.75**	**60**	*e*Pg	**Pg**	**08 41 00.8**	**0.0**
PLD				*e*Sg	**Sg**	**08 41 24.4**	**+0.9**
PLD	**Plovdiv**	**1.75**	**60**	*e*Pg	**Pg**	**08 41 00.8**	**0.0**
PLD				*e*Sg	**Sg**	**08 41 24.4**	**+0.9**
ZAPS	**Zavoj**	**2.04**	**359**	*e*Pn	**Pb**	**08 41 04.3**	**-0.1**
ZAPS				*e*Sg	**Sb**	**08 41 30.4**	**+0.5**

ATH 25 08:41:45.2±35.98N×23.43E, h20km, MD2.8/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANKY	**Antikythira Is**	**0.15**	**223**	*e*PB	Pb	08 41 50.0	+0.2
KYTH	**Kithira**	**0.44**	**313**	*e*PB	Pb	08 41 53.8	-0.5
KYTH	**Kithira**	**0.44**	**313**	*e*Pb	Pb	08 41 53.8	-0.5
VAM	**Vamos**	**0.85**	**132**	*e*PN	Pn	08 42 04.6	+2.6
VAM				*e*SN	Sb	08 42 12.1	-0.1

MEX 25 08:54:53.3±0.7, 18°.15N×101°.55W, h32km±19km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.55**	**171**	*i* P	Pb	08 55 02.2	-2.4
ZIIG				*i* S	Sb	08 55 10.5	-1.8
ARIG	**Puente Sto Nin**	**1.15**	**83**	*i* P	Pn	08 55 11.0	-2.3
ARIG				*i* S	Sn	08 55 25.7	-2.3
CAIG	**El Cayaco**	**1.64**	**132**	*i* P	Pn	08 55 17.5	-2.4
CAIG				*e*S	Sn	08 55 37.6	-2.4
MMIG	**Aquila**	**1.71**	**275**	*i* P	Pn	08 55 19.4	-1.5
MMIG				*e*S	Sn	08 55 39.3	-2.3
PLIG	**Platanillo**	**1.96**	**83**	*i* P	Pn	08 55 21.9	-2.5
PLIG				*i* S	Sn	08 55 46.0	-2.1
YAIG	**Yautepec**	**2.46**	**73**	*e*P	Pn	08 55 29.9	-1.5
YAIG				*i* S	Sn	08 55 57.4	-3.2

*NEIC **25** 09:17:19.5, 14°.88N×93°.39W, h29km, MD4.1(MEX), After MEX.*
MEX 25 09:17:19.5±0.4, 14°.88N×93°.39W, h29km±6km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.84**	**12**	*i* P	Pn	09 17 33.0	-2.4
PCIG				*i* S	Sb	09 17 43.3	-3.2
PCIG		**0.84**	**12**	*i* P	Pn	09 17 33.0	-2.4
PCIG				*i* S	Sb	09 17 43.3	-3.2
THIG		**1.09**	**88**	*i* P	Pn	09 17 36.2	-2.6
THIG				*i* S	Sn	09 17 49.8	-3.1
THIG		**1.09**	**88**	*i* P	Pn	09 17 36.2	-2.6
THIG				*i* S	Sn	09 17 49.8	-3.1
CCIG	**Comitan**	**1.85**	**41**	*i* P	Pn	09 17 47.8	-1.7
CCIG				*i* S	Sn	09 18 09.2	-2.9
CCIG	**Comitan**	**1.85**	**41**	*i* P	Pn	09 17 47.8	-1.7
CCIG				*i* S	Sn	09 18 09.2	-2.9
TGIG		**1.91**	**8**	*i* P	Pn	09 17 48.0	-2.2
TGIG				*i* S	Sn	09 18 10.2	-3.1
TGIG		**1.91**	**8**	*i* P	Pn	09 17 48.0	-2.2
TGIG				*i* S	Sn	09 18 10.2	-3.1
HUIG	**Huatulco**	**2.76**	**289**	*i* P	Pn	09 18 00.7	-1.1
HUIG				*i* S	Sn	09 18 31.4	-2.9
HUIG	**Huatulco**	**2.76**	**289**	*i* P	Pn	09 18 00.7	-1.1
HUIG				*i* S	Sn	09 18 31.4	-2.9

*ISCJB **25** 09:18:38.8±0.3, 35°.67N±0°.02×6°.84W±0°.02, h10km, Error ellipse: s-maj=3.3km s-min=2.0km az=34.6*
*CSEM **25** 09:18:40.7±0.1, 35°.55N×6°.94W, h20km, MD3.7, Error ellipse: s-maj=3.8km s-min=2.3km az=46.0*
*CNRM **25** 09:18:42.8, 35°.41N×6°.89W, h11km, MD3.7*
*LDG **25** 09:18:42.4±0.4, 35°.92N×6°.74W, h10km, Ml4.0/5, Error ellipse: s-maj=8.0km s-min=3.5km az=19.0*
*SFS **25** 09:18:42.0, 35°.70N×6°.80W, h11km, ML3.1*
*MDD **25** 09:18:42.8±0.3, 35°.55N×6°.93W, h47km±17km, mb4.7/32, Error ellipse: s-maj=4.3km s-min=2.8km az=57.0, PRXIMO*
*IGIL **25** 09:18:43.4, 35°.64N×6°.83W, h30km, ML3.4*
*INMG **25** 09:18:44.3±1.4, 35°.61N×6°.90W, h31km±10km, MD3.4, ML3.5, Error ellipse: s-maj=6.2km s-min=2.8km az=24.0*
ISC 25 09:18:38.9±0.8, 35°.57N±0°.03×6°.94W±0°.02, h10km, n216, σ1990/325, 13C-16D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSY	**Tnine Yamani**	**0.81**	**104**	P	**Pn**	**09 18 58.0**	**+1.6**
TSY				S	**Sb**	**09 19 07.0**	**+0.9**
TSY	**Tnine Yamani**	**0.81**	**104**	*i* P	**Pn**	**09 18 58.0**	**+1.6**
TSY				*i* S	**Sb**	**09 19 07.0**	**+0.9**
CNIL	**Conil**	**1.07**	**42**	⇑P	**Pn**	**09 19 02.5**	**+2.6**
CNIL				S	**Sg**	**09 19 11.1**	**-2.4**
CNIL	**Conil**	**1.07**	**42**	P	**Pn**	**09 19 02.5**	**+2.6**
CNIL				S	**Sg**	**09 19 11.1**	**-2.4**
SFS	**San Fernando**	**1.07**	**33**	P	Pn	09 19 07.4	+7.5
SFS				S	**Sn**	**09 19 16.8**	**+1.9**
SFS	**San Fernando**	**1.07**	**33**	P	Pn	09 19 07.4	+7.5
SFS				S	**Sn**	**09 19 16.8**	**+1.9**
DKH	**Dar Kharkhour**	**1.29**	**93**	P	**Pg**	**09 19 06.0**	**+2.4**
DKH				S	**Sg**	**09 19 22.0**	**+1.6**
DKH	**Dar Kharkhour**	**1.29**	**93**	P	**Pg**	**09 19 06.0**	**+2.4**
DKH				S	**Sg**	**09 19 22.0**	**+1.6**
ECEU	**Ceuta**	**1.31**	**75**	⇑P	**Pb**	**09 19 04.9**	**+1.3**
	56nm,0.2s,SNR=18						
ECEU				S	**Sb**	**09 19 18.7**	**-1.8**
	43nm,0.5s,SNR=4.0						
ECEU	**Ceuta**	**1.31**	**75**	P	**Pb**	**09 19 04.9**	**+1.3**
	56nm,0.2s,SNR=18						
ECEU				S	**Sb**	**09 19 18.7**	**-1.8**
	43nm,0.5s,SNR=4.0						
EJIF	**Jimena Fronter**	**1.48**	**53**	⇑P	**Pb**	**09 19 07.4**	**+0.9**
	75nm,0.2s,SNR=18						
EJIF				S	**Sn**	**09 19 22.9**	**-2.1**
	117nm,0.5s,SNR=7.9						
EJIF	**Jimena Fronter**	**1.48**	**53**	P	**Pb**	**09 19 07.4**	**+0.9**
	75nm,0.2s,SNR=18						
EJIF				S	**Sn**	**09 19 22.9**	**-2.1**
	117nm,0.5s,SNR=7.9						
ESPR	**Espera**	**1.56**	**34**	⇑P	**Pn**	**09 19 07.7**	**+1.0**
	20nm,0.4s,SNR=18						
ESPR				S	**Sn**	**09 19 23.5**	**-3.5**
	700nm,0.3s,SNR=16						
ESPR	**Espera**	**1.56**	**34**	P	**Pn**	**09 19 07.7**	**+1.0**
	20nm,0.4s,SNR=18						
ESPR				S	**Sn**	**09 19 23.5**	**-3.5**
	700nm,0.3s,SNR=16						
RTC	**Rabat Centre**	**1.58**	**178**	P	**Pn**	**09 19 07.5**	**+0.6**
RTC				S	**Sn**	**09 19 25.5**	**-1.9**
RTC	**Rabat Centre**	**1.58**	**178**	*i* P	**Pn**	**09 19 07.5**	**+0.6**
RTC				*i* S	**Sn**	**09 19 25.5**	**-1.9**
REAL	**Reales**	**1.67**	**56**	⇓P	**Pn**	**09 19 10.5**	**+2.1**
REAL				S	Sn	09 19 24.3	-5.7
REAL	**Reales**	**1.67**	**56**	P	**Pn**	**09 19 10.5**	**+2.1**
REAL				S	Sn	09 19 24.3	-5.7
LIJA	**Lijar**	**1.82**	**42**	⇓P	**Pn**	**09 19 12.0**	**+1.7**
LIJA				S	Sn	09 19 26.1	-7.4
LIJA	**Lijar**	**1.82**	**42**	P	**Pn**	**09 19 12.0**	**+1.7**
LIJA				S	Sn	09 19 26.1	-7.4
PBDV	**Barranco-do-Ve**	**1.85**	**335**	*i* P	**Pn**	**09 19 11.8**	**+1.1**
PBDV				*e*S	**Sn**	**09 19 32.9**	**-1.3**
PBDV				A	A	09 19 33.9	
	193nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.85**	**335**	⇓P	**Pn**	**09 19 11.8**	**+1.1**
PBDV				S	**Sn**	**09 19 32.9**	**-1.3**
	193nm,0.2s						
PBDV	**Barranco-do-Ve**	**1.85**	**335**	P	**Pn**	**09 19 11.8**	**+1.1**
PBDV				S	**Sn**	**09 19 32.9**	**-1.3**
	193nm,0.2s						
PVAQ	**Vaqueiros**	**1.94**	**341**	*i* P	**Pn**	**09 19 12.9**	**+1.1**
PVAQ				*e*S	**Sn**	**09 19 34.7**	**-1.5**
PVAQ				A	A	09 19 35.9	
	290nm,0.4s						
PVAQ	**Vaqueiros**	**1.94**	**341**	⇓P	**Pn**	**09 19 12.9**	**+1.1**
PVAQ				S	**Sn**	**09 19 34.7**	**-1.5**
	290nm,0.4s						
PVAQ	**Vaqueiros**	**1.94**	**341**	P	**Pn**	**09 19 12.9**	**+1.1**
PVAQ				S	**Sn**	**09 19 34.7**	**-1.5**
	290nm,0.4s						
EGRO	**El Granado**	**2.01**	**348**	⇓P	**Pn**	**09 19 14.0**	**+1.2**
	48nm,0.2s,SNR=18						
EGRO				S	**Sn**	**09 19 36.4**	**-1.6**
	246nm,0.1s,SNR=31						
EGRO	**El Granado**	**2.01**	**348**	P	**Pn**	**09 19 14.0**	**+1.2**
	48nm,0.2s,SNR=18						
EGRO				S	**Sn**	**09 19 36.4**	**-1.6**
	246nm,0.1s,SNR=31						
EMIJ	**Mijas**	**2.02**	**60**	⇑P	**Pn**	**09 19 13.3**	**+0.4**
	74nm,0.3s,SNR=18						
EMIJ				S	**Sn**	**09 19 35.5**	**-2.7**
	43nm,0.3s,SNR=6.9						
EMIJ	**Mijas**	**2.02**	**60**	P	**Pn**	**09 19 13.3**	**+0.4**
	74nm,0.3s,SNR=18						
EMIJ				S	**Sn**	**09 19 35.5**	**-2.7**
	43nm,0.3s,SNR=6.9						
TGT	**Taghat**	**2.15**	**133**	P	**Pn**	**09 19 15.0**	**+0.1**
TGT				S	**Sn**	**09 19 40.0**	**-1.7**
TGT	**Taghat**	**2.15**	**133**	*i* P	**Pn**	**09 19 15.0**	**+0.1**
TGT				*i* S	**Sn**	**09 19 40.0**	**-1.7**
PFVI	**Vila Bisbo**	**2.18**	**316**	*i* P	**Pn**	**09 19 16.2**	**+1.0**
PFVI				*e*S	**Sn**	**09 19 41.9**	**-0.4**
PFVI				A	A	09 19 46.4	
	178nm,0.1s						
PFVI	**Vila Bisbo**	**2.18**	**316**	⇓P	**Pn**	**09 19 16.2**	**+1.0**
	56nm,0.2s,SNR=18						
PFVI				S	**Sn**	**09 19 41.3**	**-0.9**
	179nm,0.1s,SNR=8.1						
PFVI	**Vila Bisbo**	**2.18**	**316**	P	**Pn**	**09 19 16.2**	**+1.0**
	56nm,0.2s,SNR=18						
PFVI				*e*S	**Sn**	**09 19 41.9**	**-0.4**
	178nm,0.1s						
EMIN	**Mina Concepcio**	**2.20**	**5**	⇓P	**Pn**	**09 19 16.4**	**+0.9**
	16nm,0.2s,SNR=18						
EMIN				S	**Sn**	**09 19 39.8**	**-3.0**
	190nm,0.1s,SNR=26						
EMIN	**Mina Concepcio**	**2.20**	**5**	P	**Pn**	**09 19 16.4**	**+0.9**
	16nm,0.2s,SNR=18						
EMIN				S	**Sn**	**09 19 39.8**	**-3.0**
	190nm,0.1s,SNR=26						
MORF	**Marmelete**	**2.22**	**322**	*i* P	**Pn**	**09 19 16.5**	**+0.8**
MORF				*e*S	**Sn**	**09 19 42.5**	**-0.7**
MORF				A	A	09 19 47.4	
	343nm,0.1s						
MORF	**Marmelete**	**2.22**	**322**	P	**Pn**	**09 19 16.5**	**+0.8**
MORF				S	**Sn**	**09 19 41.3**	**-1.9**
MORF	**Marmelete**	**2.22**	**322**	P	**Pn**	**09 19 16.5**	**+0.8**
MORF				S	**Sn**	**09 19 41.3**	**-1.9**
PCVE	**Castro Verde**	**2.24**	**337**	*i* P	**Pn**	**09 19 17.1**	**+1.1**
PCVE				*e*S	**Sn**	**09 19 42.2**	**-1.5**
PCVE				A	A	09 19 43.7

PNCL eS Sn 09 19 56.9 -1.6
PNCL A A 09 19 59.2
comp=N,56nm,0.2s
ERON Agron 2.91 59 P Pn 09 19 25.7 +0.3
comp=N,66nm,0.4s,SNR=7.9
ERON S Sn 09 19 59.7 -0.9
comp=N,20nm,0.8s,SNR=7.9
ERON Agron 2.91 59 P Pn 09 19 25.7 +0.3
comp=N,66nm,0.4s,SNR=7.9
ERON S Sn 09 19 59.7 -0.9
comp=N,20nm,0.8s,SNR=7.9
CZD Col de Zad 2.98 148 P Pn 09 19 26.0 -0.4
CZD S Sn 09 19 58.0 -4.3
CZD Col de Zad 2.98 148 *i* P Pn 09 19 26.0 -0.4
CZD *i* S Sn 09 19 58.0 -4.3
EGUA Guajares 3.00 64 P Pn 09 19 26.0 -0.6
comp=N,40nm,0.4s,SNR=7.9
EGUA S Sn 09 20 00.9 -1.7
comp=N,112nm,0.4s,SNR=7.9
EGUA Guajares 3.00 64 P Pn 09 19 26.0 -0.6
comp=N,40nm,0.4s,SNR=7.9
EGUA S Sn 09 20 00.9 -1.7
comp=N,112nm,0.4s,SNR=7.9
KIB El Ksiba 3.08 166 P Pn 09 19 27.5 -0.1
KIB S Sn 09 20 01.0 -3.6
KIB El Ksiba 3.08 166 *i* P Pn 09 19 27.5 -0.1
KIB *i* S Sn 09 20 01.0 -3.6
EVO Evora 3.08 344 *eP* Pn 09 19 28.8 +1.2
EVO *eSn* Sn 09 19 58.1 -6.3
comp=N,102nm,0.2s
EVO Evora 3.08 344 *i* P Pn 09 19 28.7 +1.2
EVO *eS* Sn 09 20 02.4 -2.0
EVO A A 09 20 04.0
comp=N,143nm,0.1s
EVO Evora 3.08 344 ⇓P Pn 09 19 28.7 +1.2
EVO S Sn 09 20 02.4 -2.0
comp=N,143nm,0.1s
EVO Evora 3.08 344 P Pn 09 19 28.7 +1.2
EVO S Sn 09 20 02.4 -2.0
comp=N,143nm,0.1s
EVOP Sao Brissos 3.10 343 *eP* Pn 09 19 28.8 +1.0
MOE Montemor 3.16 339 *eP* Pn 09 19 30.0 +1.4
MOE *eS* Sn 09 20 04.3 -2.0
MOE Montemor 3.16 339 P Pn 09 19 30.0 +1.4
MOE S Sn 09 20 04.3 -2.0
MOE Montemor 3.16 339 *eP* Pn 09 19 30.0 +1.4
MOE *eS* Sn 09 20 04.3 -2.0
EBAD Badajoz 3.18 359 ⇓P Pn 09 19 29.9 +1.0
comp=N,20nm,0.2s,SNR=18
EBAD S Sn 09 20 03.3 -3.6
comp=N,185nm,0.2s,SNR=11
EBAD Badajoz 3.18 359 P Pn 09 19 29.9 +1.0
comp=N,20nm,0.2s,SNR=18
EBAD S Sn 09 20 03.3 -3.6
comp=N,185nm,0.2s,SNR=11
ECOG Cogollos-Vega 3.21 57 P Pn 09 19 30.9 +1.5
comp=N,31nm,0.2s,SNR=22
ECOG S Sn 09 20 05.5 -2.3
comp=N,90nm,0.3s,SNR=12
ECOG Cogollos-Vega 3.21 57 P Pn 09 19 30.9 +1.5
comp=N,31nm,0.2s,SNR=22
ECOG S Sn 09 20 05.5 -2.3
comp=N,90nm,0.3s,SNR=12
EADA Adamuz 3.21 35 ⇑P Pn 09 19 30.2 +0.8
comp=N,24nm,0.3s,SNR=18
EADA S Sn 09 20 02.9 -4.8
comp=N,45nm,0.3s,SNR=11
EADA Adamuz 3.21 35 P Pn 09 19 30.2 +0.8
comp=N,24nm,0.3s,SNR=18
EADA S Sn 09 20 02.9 -4.8
comp=N,45nm,0.3s,SNR=11
EQUE Quentar 3.26 59 P Pn 09 19 31.4 +1.3
comp=N,14nm,0.3s,SNR=12
EQUE S Sn 09 20 06.6 -2.5
comp=N,31nm,0.2s
EQUE Quentar 3.26 59 P Pn 09 19 31.4 +1.3
comp=N,14nm,0.3s,SNR=12
EQUE S Sn 09 20 06.6 -2.5
comp=N,31nm,0.2s
EMEL Melilla 3.26 94 P Pn 09 19 30.3 +0.2
comp=N,72nm,0.1s,SNR=7.9
EMEL S Sn 09 20 06.4 -2.6
comp=N,98nm,0.4s,SNR=7.9
EMLI Melilla 3.27 94 P Pn 09 19 30.3 +0.2
comp=N,72nm,0.1s,SNR=7.9
EMLI S Sn 09 20 06.4 -2.6
comp=N,98nm,0.4s,SNR=7.9
MELI Melilla 3.28 94 S Sn 09 20 06.0 -3.3
comp=N,74nm,0.6s,SNR=7.9
MELI Melilla 3.28 94 S Sn 09 20 06.0 -3.3
comp=N,74nm,0.6s,SNR=7.9
PESTR Estremoz 3.33 351 *i* P Pn 09 19 31.9 +0.8
PESTR *eS* Sn 09 20 08.0 -2.7
PESTR A A 09 20 09.4
comp=N,48nm,0.5s
PESTR Estremoz 3.33 351 ⇓P Pn 09 19 31.9 +0.8
PESTR S Sn 09 20 08.0 -2.7
comp=N,24nm,0.5s
PESTR Estremoz 3.33 351 P Pn 09 19 31.9 +0.8
PESTR *eS* Sn 09 20 08.0 -2.7
comp=N,48nm,0.5s
TZC Tazercounte 3.43 174 P Pn 09 19 32.5 -0.1
TZC S Sn 09 20 10.0 -3.5
TZC Tazercounte 3.43 174 *i* P Pn 09 19 32.5 -0.1
TZC *i* S Sn 09 20 10.0 -3.5
ZAI Zaio 3.48 99 P Pn 09 19 33.5 +0.3
ZAI S Sn 09 20 14.0 -0.5
ZAI Zaio 3.48 99 *i* P Pn 09 19 33.5 +0.3
ZAI *i* S Sn 09 20 14.0 -0.5
EBER Berja 3.53 67 P Pn 09 19 33.7 -0.3
comp=N,6.8nm,0.3s,SNR=28
EBER S Sn 09 20 11.3 -4.5
comp=N,23nm,0.3s
EBER Berja 3.53 67 P Pn 09 19 33.7 -0.3
comp=N,6.8nm,0.3s,SNR=28
EBER S Sn 09 20 11.3 -4.5
comp=N,23nm,0.3s
EBAN Banos Encina 3.62 43 ⇑P Pn 09 19 35.6 +0.6
comp=N,28nm,0.2s,SNR=18
EBAN S Sn 09 20 12.5 -5.3
comp=N,76nm,0.1s,SNR=18
EBAN Banos Encina 3.62 43 P Pn 09 19 35.6 +0.6
comp=N,28nm,0.2s,SNR=18
EBAN S Sn 09 20 12.5 -5.3
comp=N,76nm,0.1s,SNR=18
PMTG Montargil 3.64 344 *eP* Pn 09 19 36.3 +1.0
PMTG *eS* Sn 09 20 16.4 -1.9
PMTG A A 09 20 19.7
comp=N,50nm,0.2s
ALMR Almeirim 3.81 340 *eP* Pn 09 19 38.5 +0.9
ALMR *eS* Sn 09 20 18.3 -4.1
ALMR AML AML 09 20 20.5
comp=N,38nm,0.3s
ALMR Almeirim 3.81 340 *eP* Pn 09 19 38.4 +0.9
ALMR *eS* Sn 09 20 18.3 -4.1
ALMR Almeirim 3.81 340 P Pn 09 19 38.5 +0.9
ALMR S Sn 09 20 18.3 -4.1
ALMR Almeirim 3.81 340 P Pn 09 19 38.5 +0.9
ALMR *eS* Sn 09 20 18.3 -4.1
EQES Quesada 3.82 53 P Pn 09 19 38.5 +0.6
comp=N,12nm,0.4s,SNR=19
EQES S Sn 09 20 18.0 -5.0
comp=N,39nm,0.2s
EQES Quesada 3.82 53 P Pn 09 19 38.5 +0.6
comp=N,12nm,0.4s,SNR=19
EQES S Sn 09 20 18.0 -5.0
comp=N,39nm,0.2s
PMRV Marv??o 3.87 355 *i* P Pn 09 19 39.5 +1.1
PMRV *eS* Sn 09 20 20.8 -3.1
PMRV A A 09 20 22.4
comp=N,151nm,0.2s
PMRV Marv??o 3.87 355 ⇓P Pn 09 19 39.5 +1.1
PMRV S Sn 09 20 20.8 -3.1
comp=N,151nm,0.2s
PMRV Marv??o 3.87 355 P Pn 09 19 39.5 +1.1
PMRV *eS* Sn 09 20 20.8 -3.1
comp=N,151nm,0.2s
ENIJ Nijar 4.07 69 P Pn 09 19 42.1 +0.9
comp=N,6.1nm,0.6s,SNR=7.9
ENIJ Nijar 4.07 69 P Pn 09 19 42.1 +0.9
comp=N,6.1nm,0.6s,SNR=7.9
ZFT Errachidia 4.13 148 P Pn 09 19 43.0 +0.8
ZFT S Sn 09 20 27.0 -3.7
ZFT Errachidia 4.13 148 *i* P Pn 09 19 43.0 +0.8
ZFT *i* S Sn 09 20 27.0 -3.7

EHUE Huescar 4.15 56 P Pn 09 19 42.9 +0.6
comp=N,6.1nm,0.3s,SNR=7.9
EHUE S Sn 09 20 27.2 -3.8
comp=N,6.3nm,0.2s,SNR=7.9
EHUE Huescar 4.15 56 P Pn 09 19 42.9 +0.6
comp=N,6.1nm,0.3s,SNR=7.9
EHUE S Sn 09 20 27.2 -3.8
comp=N,6.3nm,0.2s,SNR=7.9
PTOM Tomar 4.21 344 *eP* Pn 09 19 44.3 +1.3
PTOM *eS* Sn 09 20 30.1 -2.1
PTOM A A 09 20 42.4
comp=N,56nm,0.3s
PTOM Tomar 4.21 344 P Pn 09 19 44.3 +1.3
PTOM S Sn 09 20 30.1 -2.1
comp=N,28nm,0.3s
PTOM Tomar 4.21 344 *eP* Pn 09 19 44.3 +1.3
PTOM S Sn 09 20 30.1 -2.1
comp=N,28nm,0.3s
EPLA Plasencia 4.54 8 P Pn 09 19 48.9 +1.2
comp=N,6.2nm,0.0s,SNR=44
EPLA S Sn 09 20 36.1 -4.3
comp=N,21nm,0.1s,SNR=21
EPLA Plasencia 4.54 8 P Pn 09 19 48.9 +1.2
comp=N,6.2nm,0.0s,SNR=44
EPLA S Sn 09 20 36.1 -4.3
comp=N,21nm,0.1s,SNR=21
EVIA Vianos 4.68 48 ⇑P Pn 09 19 49.9 +0.2
comp=N,21nm,0.1s,SNR=18
EVIA S Sn 09 20 37.8 -6.4
comp=N,44nm,0.2s
EVIA Vianos 4.68 48 P Pn 09 19 49.9 +0.2
comp=N,21nm,0.1s,SNR=18
EVIA S Sn 09 20 37.8 -6.4
comp=N,44nm,0.2s
ESDC Sonseca Array 4.73 29 P Pn 09 19 50.7 +0.4
comp=N,1.1nm,0.2s,baz=213,slow=12,SNR=13
ESDC S Sn 09 20 39.7 -5.5
comp=N,6.9nm,0.2s,baz=212,slow=23,SNR=19
ESDC Sonseca Array 4.73 29 P Pn 09 19 50.7 +0.4
comp=N,1.1nm,0.2s,baz=213,slow=12,SNR=13
ESDC S Sn 09 20 39.7 -5.5
comp=N,6.9nm,0.2s,SNR=19
MTE Manteigas 4.84 355 *eP* Pn 09 19 52.9 +1.0
MTE *eS* Sn 09 20 43.9 -4.2
MTE A A 09 20 46.8
comp=N,142nm,0.2s
MTE Manteigas 4.84 355 P Pn 09 19 52.9 +1.0
MTE S Sn 09 20 43.9 -4.2
comp=N,71nm,0.2s
MTE Manteigas 4.84 355 *eP* Pn 09 19 52.9 +1.0
MTE *eS* Sn 09 20 43.9 -4.2
comp=N,142nm,0.2s
EMUR La Murta 5.11 62 P Pn 09 19 56.0 +0.5
comp=N,7.0nm,0.4s,SNR=8.0
EMUR S Sn 09 20 52.3 -2.2
comp=N,9.7nm,0.4s,SNR=7.9
EMUR La Murta 5.11 62 P Pn 09 19 56.0 +0.5
comp=N,7.0nm,0.4s,SNR=8.0
EMUR S Sn 09 20 52.3 -2.2
comp=N,9.7nm,0.4s,SNR=7.9
PVIS Viseu 5.19 352 *eP* Pn 09 19 57.7 +1.1
PVIS *eS* Sn 09 20 52.4 -4.2
PVIS A A 09 20 54.8
comp=N,55nm,0.3s
PVIS Viseu 5.19 352 P Pn 09 19 57.7 +1.1
PVIS S Sn 09 20 52.4 -4.2
comp=N,28nm,0.3s
PVIS Viseu 5.19 352 *eP* Pn 09 19 57.7 +1.1
PVIS *eS* Sn 09 20 52.4 -4.2
comp=N,55nm,0.3s
ETOB Tobarra 5.29 53 ⇑P Pn 09 19 58.1 +0.1
comp=N,44nm,0.2s,SNR=18
ETOB S Sn 09 20 53.4 -5.6
comp=N,44nm,0.2s,SNR=7.0
ETOB Tobarra 5.29 53 P Pn 09 19 58.1 +0.1
comp=N,44nm,0.2s,SNR=18
ETOB S Sn 09 20 53.4 -5.6
comp=N,44nm,0.2s,SNR=7.0
GUD Guadarrama 5.52 23 P Pn 09 20 02.3 +1.1
comp=N,1.7nm,0.3s,SNR=14
GUD S Sn 09 20 58.8 -6.0
comp=N,26nm,0.3s,SNR=6.6
GUD Guadarrama 5.52 23 P Pn 09 20 02.3 +1.1
comp=N,1.7nm,0.3s,SNR=14
GUD S Sn 09 20 58.8 -6.0
comp=N,26nm,0.3s,SNR=6.6
MVO Moncorvo 5.59 359 *eP* Pn 09 20 03.2 +1.1
MVO *eS* Sn 09 21 01.0 -5.3
MVO A A 09 21 03.8
comp=N,86nm,0.4s
MVO Moncorvo 5.59 359 P Pn 09 20 03.1 +1.0
comp=N,22nm,0.3s,SNR=60
MVO S Sn 09 21 00.8 -5.6
comp=N,72nm,0.2s,SNR=8.3
MVO Moncorvo 5.59 359 P Pn 09 20 03.1 +1.0
comp=N,22nm,0.3s,SNR=60
MVO S Sn 09 21 00.8 -5.6
comp=N,72nm,0.2s,SNR=8.3
YBT Youssef Ben Ta 6.10 201 S Sn 09 21 15.0 -4.0
YBT Youssef Ben Ta 6.10 201 S Sn 09 21 15.0 -4.0
PCAB Cabril 6.19 352 *i* P Pn 09 20 11.2 +0.9
PCAB *eS* Sn 09 21 15.1 -6.1
PCAB A A 09 21 29.1
comp=N,26nm,0.5s
PCAB Cabril 6.19 352 ⇑P Pn 09 20 11.2 +0.9
PCAB S Sn 09 21 15.1 -6.1
comp=N,13nm,0.5s
PCAB Cabril 6.19 352 P Pn 09 20 11.2 +0.9
PCAB S Sn 09 21 15.1 -6.1
comp=N,13nm,0.5s
EBEN Beniarda 6.21 58 P Pn 09 20 10.5 -0.1
comp=N,1.6nm,0.1s,SNR=22
EBEN S Sn 09 21 14.2 -7.4
comp=N,4.3nm,0.2s,SNR=7.9
EBEN Beniarda 6.21 58 P Pn 09 20 10.5 -0.1
comp=N,1.6nm,0.1s,SNR=22
EBEN S Sn 09 21 14.2 -7.4
comp=N,4.3nm,0.2s,SNR=7.9
ECHE Chera 6.21 48 P Pn 09 20 10.7 +0.1
comp=N,19nm,0.3s,SNR=7.2
ECHE S Sn 09 21 16.5 -5.2
comp=N,8.9nm,0.2s,SNR=7.9
ECHE Chera 6.21 48 P Pn 09 20 10.7 +0.1
comp=N,19nm,0.3s,SNR=7.2
ECHE S Sn 09 21 16.5 -5.2
comp=N,8.9nm,0.2s,SNR=7.9
PBRG Braganca 6.23 1 *eP* Pn 09 20 11.8 +0.9
PBRG *eS* Sn 09 21 16.1 -6.0
PBRG A A 09 21 18.2
comp=N,31nm,0.3s
PBRG Braganca 6.23 1 P Pn 09 20 11.8 +0.9
PBRG S Sn 09 21 16.1 -6.0
comp=N,15nm,0.3s
PBRG Braganca 6.23 1 *eP* Pn 09 20 11.8 +0.9
PBRG S Sn 09 21 16.1 -6.0
comp=N,15nm,0.3s
ELOB Lobios 6.35 352 ⇑P Pn 09 20 13.4 +0.8
comp=N,3.3nm,0.1s,SNR=18
ELOB S Sn 09 21 19.0 -6.2
comp=N,19nm,0.1s,SNR=7.9
ELOB Lobios 6.35 352 P Pn 09 20 13.4 +0.8
comp=N,3.3nm,0.1s,SNR=18
ELOB S Sn 09 21 19.0 -6.2
comp=N,19nm,0.1s,SNR=7.9
ECAL Calabor 6.36 1 P Pn 09 20 13.8 +1.0
comp=N,16nm,0.2s,SNR=73
ECAL S Sn 09 21 20.2 -5.3
comp=N,82nm,0.3s,SNR=6.8
ECAL Calabor 6.36 1 P Pn 09 20 13.8 +1.0
comp=N,16nm,0.2s,SNR=73
ECAL S Sn 09 21 20.2 -5.3
comp=N,82nm,0.3s,SNR=6.8
PGAV Gavieira, Arco 6.47 351 *eP* Pn 09 20 15.2 +1.0
PGAV *eS* Sn 09 21 21.9 -6.3
PGAV A A 09 21 27.0
comp=N,20nm,0.4s
PGAV Gavieira, Arco 6.47 351 *eP* Pn 09 20 15.2 +1.0
ETOR Torete 6.50 35 ⇑P Pn 09 20 15.5 +0.9
comp=N,30nm,0.3s,SNR=18
ETOR S Sn 09 21 21.6 -7.2
comp=N,129nm,0.3s,SNR=5.9
ETOR Torete 6.50 35 P Pn 09 20 15.5 +0.9
comp=N,30nm,0.3s,SNR=18
ETOR S Sn 09 21 21.6 -7.2
comp=N,129nm,0.3s,SNR=5.9
ERUA La Rua 6.81 359 P Pn 09 20 19.9 +1.0
comp=N,11nm,0.2s,SNR=7.9
ERUA S Sn 09 21 31.6 -4.9
comp=N,13nm,0.2s,SNR=7.9
ERUA La Rua 6.81 359 P Pn 09 20 19.9 +1.0
comp=N,11nm,0.2s,SNR=7.9
ERUA S Sn 09 21 31.6 -4.9
comp=N,13nm,0.2s,SNR=7.9
EMOS Mosqueruela 7.00 45 ⇓P Pn 09 20 22.4 +0.8
comp=N,24nm,0.5s,SNR=18
EMOS S Sn 09 21 33.2 -8.1
comp=N,8.3nm,0.2s,SNR=6.2
EMOS Mosqueruela 7.00 45 P Pn 09 20 22.4 +0.8
comp=N,24nm,0.5s,SNR=18
EMOS S Sn 09 21 33.2 -8.1
comp=N,8.3nm,0.2s,SNR=6.2
STS Santiago 7.41 351 P Pn 09 20 27.9 +0.8
comp=N,7.8nm,0.1s,SNR=7.9
STS S Sn 09 21 45.5 -5.7
comp=N,0.3nm,0.2s,SNR=7.9
STS Santiago 7.41 351 P Pn 09 20 27.9 +0.8
comp=N,7.8nm,0.1s,SNR=7.9
STS S Sn 09 21 45.5 -5.7
comp=N,0.3nm,0.2s,SNR=7.9
EIBI Ibiza 7.45 60 P Pn 09 20 27.1 -0.4
comp=N,1.6nm,0.1s,SNR=7.9
EIBI Ibiza 7.45 60 P Pn 09 20 27.1 -0.4
comp=N,1.6nm,0.1s,SNR=7.9
EMAZ Mazaricos 7.54 349 P Pn 09 20 30.0 +1.2
comp=N,3.9nm,0.3s,SNR=6.3
EMAZ S Sn 09 21 48.2 -6.1
comp=N,6.7nm,0.2s,SNR=7.9
EMAZ Mazaricos 7.54 349 P Pn 09 20 30.0 +1.2
comp=N,3.9nm,0.3s,SNR=6.3
EMAZ S Sn 09 21 48.2 -6.1
comp=N,6.7nm,0.2s,SNR=7.9
EPON Pontenova 7.75 359 P Pn 09 20 32.8 +1.1
comp=N,0.9nm,0.2s,SNR=7.9
EPON S Sn 09 21 55.5 -4.0
comp=N,6.4nm,0.2s,SNR=7.9
EPON Pontenova 7.75 359 P Pn 09 20 32.8 +1.1
comp=N,0.9nm,0.2s,SNR=7.9
EPON S Sn 09 21 55.5 -4.0
comp=N,6.4nm,0.2s,SNR=7.9
EARI Arriondas 7.83 9 P Pn 09 20 34.5 +1.6
comp=N,1.8nm,0.2s,SNR=15
EARI S Sn 09 21 55.0 -6.7
comp=N,6.5nm,0.5s,SNR=7.9
EARI Arriondas 7.83 9 P Pn 09 20 34.5 +1.6
comp=N,1.8nm,0.2s,SNR=15
EARI S Sn 09 21 55.0 -6.7
comp=N,6.5nm,0.5s,SNR=7.9
ESAC San Caprasio 7.96 38 P Pn 09 20 36.3 +1.7
comp=N,11nm,0.2s,SNR=6.2
ESAC S Sn 09 21 58.8 -5.9
comp=N,17nm,0.5s,SNR=6.0
ESAC San Caprasio 7.96 38 P Pn 09 20 36.3 +1.7
comp=N,11nm,0.2s,SNR=6.2
ESAC S Sn 09 21 58.8 -5.9
comp=N,17nm,0.5s,SNR=6.0
IUNC Unciti 8.32 29 S Sn 09 22 07.1 -6.6
comp=N,12nm,0.3s,SNR=4.0
IUNC Unciti 8.32 29 S Sn 09 22 07.1 -6.6
comp=N,12nm,0.3s,SNR=4.0
IEPA Eparoz 8.44 30 P Pn 09 20 43.8 +2.6
comp=N,2.5nm,0.5s,SNR=7.9
IEPA S Sn 09 22 08.9 -7.6
comp=N,9.3nm,0.3s,SNR=7.9
IEPA Eparoz 8.44 30 P Pn 09 20 43.8 +2.6
comp=N,2.5nm,0.5s,SNR=7.9
IEPA S Sn 09 22 08.9 -7.6
comp=N,9.3nm,0.3s,SNR=7.9
IUSE Utxeti 8.47 28 P Pn 09 20 43.1 +1.5
comp=N,0.6nm,0.2s,SNR=4.0
IUSE S Sn 09 22 09.5 -7.8
comp=N,7.2nm,0.3s,SNR=7.9
IUSE Utxeti 8.47 28 P Pn 09 20 43.1 +1.5
comp=N,0.6nm,0.2s,SNR=4.0
IUSE S Sn 09 22 09.5 -7.8
comp=N,7.2nm,0.3s,SNR=7.9
IELO Elcoad 8.50 30 P Pn 09 20 43.5 +1.4
comp=N,6.9nm,0.3s,SNR=7.9
IELO S Sn 09 22 11.2 -6.9
comp=N,11nm,0.3s,SNR=7.9
IELO Elcoad 8.50 30 P Pn 09 20 43.5 +1.4
comp=N,6.9nm,0.3s,SNR=7.9
IELO S Sn 09 22 11.2 -6.9
comp=N,11nm,0.3s,SNR=7.9
EFAM Famara 8.50 223 S Sn 09 22 09.3 -8.8
comp=N,12nm,0.4s,SNR=7.9
EFAM Famara 8.50 223 S Sn 09 22 09.3 -8.8
comp=N,12nm,0.4s,SNR=7.9
EPOB Poblet 8.53 45 P Pn 09 20 42.8 +0.2
comp=N,2.5nm,0.2s,SNR=9.2
EPOB S Sn 09 22 11.5 -7.4
comp=N,1.6nm,0.2s,SNR=7.9
EPOB Poblet 8.53 45 P Pn 09 20 42.8 +0.2
comp=N,2.5nm,0.2s,SNR=9.2
EPOB S Sn 09 22 11.5 -7.4
comp=N,1.6nm,0.2s,SNR=7.9
ELIZ Elizondo 8.66 27 P Pn 09 20 45.5 +1.3
comp=N,2.6nm,0.2s,SNR=7.9
ELIZ S Sn 09 22 11.5 -11
comp=N,10nm,0.2s,SNR=8.8
ELIZ Elizondo 8.66 27 P Pn 09 20 45.5 +1.3
comp=N,2.6nm,0.2s,SNR=7.9
ELIZ S Sn 09 22 11.5 -10
comp=N,10nm,0.2s,SNR=8.8
EALK Alkurruntz 8.72 27 P Pn 09 20 46.4 +1.4
comp=N,7.6nm,0.4s,SNR=9.7
EALK S Sn 09 22 15.6 -7.6
comp=N,64nm,0.3s,SNR=18
EALK Alkurruntz 8.72 27 P Pn 09 20 46.4 +1.4
comp=N,7.6nm,0.4s,SNR=9.7
EALK S Sn 09 22 15.6 -7.6
comp=N,64nm,0.3s,SNR=18
SJPF Ste Jean 8.73 29 *ePn* Pn 09 20 41.0 -4.2
SJPF Ste Jean 8.73 29 *eP* Pn 09 20 46.7 +1.5
SJPF *eSn* Sn 09 22 10.7 -13
comp=N,16nm,0.4s
SJPF Ste Jean 8.73 29 P Pn 09 20 46.7 +1.5
SJPF S Sn 09 22 10.7 -13
comp=N,4.1nm,0.4s
ETSF Etsaut 8.83 32 *ePn* Pn 09 20 42.2 -4.4
ETSF Etsaut 8.83 32 *eP* Pn 09 20 47.7 +1.1
ETSF *eSn* Sn 09 22 12.5 -14
comp=N,7.4nm,0.3s
ETSF Etsaut 8.83 32 P Pn 09 20 47.7 +1.1
ETSF S Sn 09 22 12.5 -14
comp=N,1.9nm,0.3s
OSSF Osses 8.84 28 P Pn 09 20 48.2 +1.5
OSSF Osses 8.84 28 P Pn 09 20 48.2 +1.5
REYF Montagne du Re 9.04 32 P Pn 09 21 51.5 +2.0
REYF Montagne du Re 9.04 32 P Pn 09 20 51.5 +2.0
CSOR Sort 9.25 40 P Pn 09 20 52.8 +0.4
comp=N,3.4nm,0.2s,SNR=4.0
CSOR S Sn 09 22 28.2 -8.5
comp=N,5.0nm,0.3s,SNR=7.8
CSOR Sort 9.25 40 P Pn 09 20 52.8 +0.4
comp=N,3.4nm,0.2s,SNR=4.0
CSOR S Sn 09 22 28.2 -8.5
comp=N,5.0nm,0.3s,SNR=7.8
EPF Esparros 9.34 35 *ePn* Pn 09 20 49.6 -4.0
EPF Esparros 9.34 35 *eP* Pn 09 20 54.7 +1.1
EPF *eSn* Sn 09 22 24.9 -14
comp=N,10nm,0.2s
EPF Esparros 9.34 35 P Pn 09 20 54.7 +1.1
EPF S Sn 09 22 24.9 -14
comp=N,2.6nm,0.2s
CFTV Fuerteventura 9.36 222 S Sn 09 22 29.3 -10
comp=N,3.9nm,0.2s,SNR=7.9
CFTV Fuerteventura 9.36 222 S Sn 09 22 29.3 -10
comp=N,3.9nm,0.2s,SNR=7.9
MTLF Montolieu 10.50 40 *ePn* Pn 09 21 05.2 -4.2
MTLF *eSn* Sn 09 22 52.7 -14
comp=N,2.5nm,0.4s

SKO ***25*** *09:31:16.4,41.34N×22.74E,h21km,M2.7,ML3.0*
BEO ***25*** *09:31:16.0±0.7,41.12N±22.71E,h0km±2km,ML3.2/8*
CSEM ***25*** *09:31:17.9±0.1,41.26N±22.72E,h2km,ML3.0,Error ellipse: s-maj=2.4km s-min=2.2km az=103.0*
SOF ***25*** *09:31:17.6,41.29N×22.76E,h8km,MD3.2*
ISCJB ***25*** *09:31:17.2±0.4,41.26N±0.02×22.74E±0.02,h3km±3km, Error ellipse: s-maj=2.7km s-min=2.5km az=159.4*
ATH ***25*** *09:31:17.5,41.28N×22.75E,h19km±1km,MD3.3/18*
THE ***25*** *09:31:18.3,41.26N×22.77E,h2km±1km,ML3.3/3,Error ellipse: s-maj=1.5km s-min=0.9km az=159.0*

ISC 25 09:31:18.5±0.9, 41°27N±0°02×22°73E±0°01, h7^{km}±6^{km}, n132, σ0^{s}81/173, 11C-5D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**292**	*i*Pg	**Pg**	**09 31 20.8**	**-0.5**
VAY				*i* Sg	**Sg**	**09 31 23.3**	**+0.1**
VAY				*e*Lg	Lg	09 31 23.5	
	comp=N,9μm,0.3s						
VAY				*e*Lg	Lg	09 31 23.5	
	comp=E,8μm,0.4s						
VAY	**Valandovo**	**0.13**	**292**	*e*Pg	**Pg**	**09 31 20.8**	**-0.5**
VAY				*e*Sg	**Sg**	**09 31 23.3**	**+0.1**
VAY	**Valandovo**	**0.13**	**292**	*e*Pg	**Pg**	**09 31 20.8**	**-0.5**
VAY				*e*Sg	**Sg**	**09 31 23.3**	**+0.1**
VAY				*e*Lg	Lg	09 31 24.0	
	comp=E,8μm,0.4s						
KNT	**Kendrikon**	**0.17**	**131**	P	**Pg**	**09 31 21.9**	**0.0**
KNT	**Kendrikon**	**0.17**	**131**	P	**Pg**	**09 31 21.9**	**0.0**
GRG	**Griva**	**0.40**	**218**	P	**Pg**	**09 31 26.2**	**-0.1**
GRG	**Griva**	**0.40**	**218**	*e*PB	**Pg**	**09 31 26.2**	**-0.1**
GRG				*e*SB	**Sg**	**09 31 31.9**	**+0.3**
GRG	**Griva**	**0.40**	**218**	P	**Pg**	**09 31 26.2**	**-0.1**
GRG				*e*Sb	**Sg**	**09 31 31.9**	**+0.3**
KKB	**Krupnik**	**0.65**	**24**	*i* Pg	**Pg**	**09 31 30.3**	**-0.7**
KKB	**Krupnik**	**0.65**	**24**	*i* Pg	**Pg**	**09 31 30.3**	**-0.7**
SOH	**Sokhos**	**0.65**	**134**	P	**Pg**	**09 31 30.4**	**-0.6**
SOH	**Sokhos**	**0.65**	**134**	*e*PN	**Pg**	**09 31 30.5**	**-0.6**
SOH				*e*SN	**Sg**	**09 31 39.5**	**0.0**
SOH	**Sokhos**	**0.65**	**134**	P	**Pg**	**09 31 30.4**	**-0.6**
SOH				*e*Sn	**Sg**	**09 31 39.5**	**0.0**
THE	**Thessaloniki**	**0.66**	**164**	P	**Pg**	**09 31 38.8**	**-0.7**
THE				S	**Sg**	**09 31 39.8**	**-0.1**
THE	**Thessaloniki**	**0.66**	**164**	P	**Pg**	**09 31 30.6**	**-0.7**
THE				S	**Sg**	**09 31 39.8**	**-0.1**
SRS	**Serrai**	**0.67**	**103**	P	**Pg**	**09 31 30.5**	**-0.9**
SRS				S	**Sg**	**09 31 38.8**	**-1.3**
SRS	**Serrai**	**0.67**	**103**	P	**Pg**	**09 31 30.5**	**-0.9**
SRS				S	**Sg**	**09 31 38.8**	**-1.3**
HORT	**Hortiatis**	**0.73**	**157**	P	**Pg**	**09 31 32.0**	**-0.5**
HORT	**Hortiatis**	**0.73**	**157**	P	**Pg**	**09 31 32.0**	**-0.5**
MMB	**Musomiste**	**0.81**	**67**	*i* Pg	**Pg**	**09 31 33.9**	**-0.2**
MMB	**Musomiste**	**0.81**	**67**	*i* Pg	**Pg**	**09 31 33.9**	**-0.2**
NVR	**Nevrokopi**	**0.85**	**84**	P	**Pg**	**09 31 34.0**	**-0.9**
NVR	**Nevrokopi**	**0.85**	**84**	*e*PN	**Pg**	**09 31 34.0**	**-0.9**
NVR				*e*SN	**Sg**	**09 31 45.1**	**-0.9**
NVR	**Nevrokopi**	**0.85**	**84**	P	**Pg**	**09 31 34.0**	**-0.9**
NVR				*e*Sn	**Sg**	**09 31 45.1**	**-0.9**
PLG	**Polygyros**	**1.05**	**149**	P	**Pg**	**09 31 37.5**	**-1.1**
PLG	**Polygyros**	**1.05**	**149**	*e*PN	**Pg**	**09 31 37.8**	**-0.8**
PLG				*e*SN	**Sg**	**09 31 51.5**	**-0.7**
PLG	**Polygyros**	**1.05**	**149**	P	**Pg**	**09 31 37.5**	**-1.1**
PLG	**Polygyros**	**1.05**	**149**	*e*Pn	**Pg**	**09 31 37.8**	**-0.8**
PLG				*e*Sn	**Sg**	**09 31 51.5**	**-0.7**
BIA	**Bitola**	**1.09**	**257**	*i* Pg	**Pg**	**09 31 38.1**	**-1.4**
BIA				*i* Sg	**Sb**	**09 31 54.2**	**-0.1**
BIA	**Bitola**	**1.09**	**257**	*i* Pg	**Pg**	**09 31 38.0**	**-1.4**
BIA				*i* Sg	**Sb**	**09 31 54.1**	**-0.1**
FNA	**Florina**	**1.14**	**245**	P	**Pg**	**09 31 39.2**	**-1.1**
FNA	**Florina**	**1.14**	**245**	*e*PN	**Pg**	**09 31 39.2**	**-1.1**
FNA				*e*SN	**Sg**	**09 31 55.1**	**+0.1**
FNA	**Florina**	**1.14**	**245**	P	**Pg**	**09 31 39.2**	**-1.1**
FNA				*e*Sn	**Sg**	**09 31 55.1**	**+0.1**
LIT	**Litokhoron**	**1.19**	**189**	*e*PN	**Pg**	**09 31 39.8**	**-1.4**
LIT	**Litokhoron**	**1.19**	**189**	*e*Pn	**Pg**	**09 31 39.8**	**-1.4**
SKO	**Skopje**	**1.19**	**306**	*e*Pg	**Pg**	**09 31 39.1**	**-2.3**
SKO	**Skopje**	**1.19**	**306**	*e*Pg	**Pg**	**09 31 39.2**	**-2.1**
SKO				*e*Sg	**Sb**	**09 31 57.4**	**+0.3**
SKO	**Skopje**	**1.19**	**306**	*e*Pg	**Pg**	**09 31 39.6**	**-1.8**
SKO				*e*Sg	**Sb**	**09 31 57.4**	**+0.3**
KZN	**Kozani**	**1.21**	**217**	*e*PN	**Pg**	**09 31 41.7**	**0.0**
KZN				*e*SN	**Sg**	**09 31 57.5**	**+0.1**
KZN	**Kozani**	**1.21**	**217**	*e*Pn	**Pg**	**09 31 41.7**	**0.0**
KZN				*e*Sn	**Sg**	**09 31 57.5**	**+0.1**
OUR	**Ouranopolis**	**1.33**	**134**	P	**Pn**	**09 31 42.8**	**-0.7**
OUR	**Ouranopolis**	**1.33**	**134**	P	**Pn**	**09 31 42.8**	**-0.7**
VTS	**Vitosha**	**1.36**	**15**	*i*P	**Pn**	**09 31 43.7**	**-0.4**
VTS	**Vitosha**	**1.36**	**15**	P	**Pn**	**09 31 43.9**	**-0.2**
VTS				Pg	**Pb**	**09 31 44.8**	**+0.3**
VTS	**Vitosha**	**1.36**	**15**	P	**Pn**	**09 31 43.9**	**-0.2**
VTS	**Vitosha**	**1.36**	**15**	Pg	**Pb**	**09 31 44.8**	**+0.3**
VTS				*e*Sg	**Sg**	**09 32 03.0**	**+0.6**
KAVA	**Kavala**	**1.37**	**101**	P	**Pn**	**09 31 43.5**	**-0.6**
KAVA	**Kavala**	**1.37**	**101**	P	**Pn**	**09 31 43.5**	**-0.6**
PAIG	**Paliouri**	**1.53**	**151**	P	**Pn**	**09 31 46.2**	**-0.7**
PAIG				S	**Sn**	**09 32 06.2**	**0.0**
PAIG	**Paliouri**	**1.53**	**151**	*e*PN	**Pn**	**09 31 45.6**	**-0.5**
PAIG				*e*SN	**Sb**	**09 32 06.7**	**+0.1**
PAIG	**Paliouri**	**1.53**	**151**	*e*Pn	**Pn**	**09 31 45.6**	**-0.5**
PAIG				S	**Sn**	**09 32 06.2**	**0.0**
PAIG				*e*Sn	**Sb**	**09 32 06.7**	**+0.1**
NEST	**Nestorio**	**1.54**	**237**	P	**Pn**	**09 31 46.2**	**-0.2**
NEST	**Nestorio**	**1.54**	**237**	P	**Pn**	**09 31 46.2**	**-0.2**
RZN	**Rozhen**	**1.55**	**74**	P	**Pn**	**09 31 47.1**	**+0.5**
RZN				Pg	**Pb**	**09 31 47.7**	**+0.1**
RZN	**Rozhen**	**1.55**	**74**	P	**Pn**	**09 31 47.1**	**+0.5**
RZN	**Rozhen**	**1.55**	**74**	Pg	**Pb**	**09 31 47.7**	**+0.1**
PGB	**Panagyurishte**	**1.67**	**40**	P	**Pn**	**09 31 48.1**	**-0.1**
PGB				Pg	**Pb**	**09 31 49.4**	**-0.1**
PGB	**Panagyurishte**	**1.67**	**40**	P	**Pn**	**09 31 48.1**	**-0.1**
BARS	**Barje**	**1.69**	**336**	*e*Pn	**Pn**	**09 31 47.9**	**-0.5**
BARS				*e*Sn	**Sb**	**09 32 11.1**	**-0.2**
BARS	**Barje**	**1.69**	**336**	*e*Pn	**Pn**	**09 31 47.9**	**-0.5**
BARS				*e*Sn	**Sb**	**09 32 11.1**	**-0.2**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pn	**Pb**	**09 31 49.6**	**-0.4**
PLD				*e*Sn	**Sb**	**09 32 12.0**	**+0.5**
PLD	**Plovdiv**	**1.69**	**60**	Pg	**Pg**	**09 31 51.4**	**+0.4**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pn	**Pb**	**09 31 49.6**	**-0.4**
PLD	**Plovdiv**	**1.69**	**60**	Pg	**Pg**	**09 31 51.4**	**+0.4**
PLD				*e*Sn	**Sb**	**09 32 12.0**	**+0.5**
ZAPS	**Zavoj**	**2.00**	**358**	*e*Pn	**Pn**	**09 31 53.7**	**+1.0**
ZAPS				*e*Sn	**Sb**	**09 32 21.4**	**+1.1**
MPEP	**Malo Peshtene**	**2.21**	**19**	P	**Pn**	**09 31 55.7**	**+0.1**
MPEP				Pg	**Pb**	**09 31 59.5**	**+0.7**
DIM	**Dimitrovgrad**	**2.24**	**69**	P	**Pb**	**09 31 59.7**	**+0.5**
DIM	**Dimitrovgrad**	**2.24**	**69**	P	**Pb**	**09 31 59.7**	**+0.5**
AGG	**Agios Georgios**	**2.27**	**188**	P	**Pn**	**09 31 56.2**	**-0.2**
AGG	**Agios Georgios**	**2.27**	**188**	P	**Pn**	**09 31 56.2**	**-0.2**
AOS	**Alonnisos**	**2.28**	**157**	*e*PB	**Pn**	**09 31 56.0**	**-0.5**
AOS	**Alonnisos**	**2.28**	**157**	*e*Pn	**Pn**	**09 31 56.0**	**-0.5**
SELS	**Selova**	**2.28**	**329**	*e*Sn	**Sb**	**09 32 28.9**	**+0.4**
EVR	**Evrytania**	**2.46**	**197**	*e*PB	**Pn**	**09 31 59.8**	**+0.7**
EVR	**Evrytania**	**2.46**	**197**	*e*Pb	**Pn**	**09 31 59.8**	**+0.7**
ALN	**Alexandroupoli**	**2.53**	**97**	P	**Pn**	**09 31 59.7**	**-0.3**
ALN	**Alexandroupoli**	**2.53**	**97**	*e*PN	**Pn**	**09 31 59.6**	**-0.4**
ALN	**Alexandroupoli**	**2.53**	**97**	P	**Pn**	**09 31 59.7**	**-0.3**
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn	**Pn**	**09 32 01.1**	**-0.1**
BOLS				*e*Sn	**Sb**	**09 32 37.1**	**-1.0**
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn	**Pn**	**09 32 01.1**	**-0.1**
BOLS				*e*Sn	**Sb**	**09 32 37.1**	**-1.0**
ENEZ	**Enez**	**2.65**	**101**	*e*PN	**Pn**	**09 32 00.6**	**-0.9**
KEK	**Kerkira**	**2.73**	**236**	*e*PN	**Pn**	**09 32 03.0**	**+0.4**
KEK				*e*SN	**Sn**	**09 32 37.1**	**+1.3**
KEK	**Kerkira**	**2.73**	**236**	*e*Pn	**Pn**	**09 32 03.0**	**+0.4**
KEK				*e*Sn	**Sn**	**09 32 37.1**	**+1.3**
EFP	**Efpalio**	**2.91**	**193**	*e*PN	**Pn**	**09 32 04.9**	**-0.3**
EFP	**Efpalio**	**2.91**	**193**	*e*Pn	**Pn**	**09 32 04.9**	**-0.3**
ERIK	**Erikli-Kesan**	**2.93**	**101**	*e*PN	**Pn**	**09 32 32.9**	**-2.4**
LKD2	**Lefkada island**	**2.95**	**213**	*e*PN	**Pn**	**09 32 05.6**	**-0.1**
LKD2	**Lefkada island**	**2.95**	**213**	*e*Pn	**Pn**	**09 32 05.6**	**-0.1**
TRIZ	**Trizonia**	**2.95**	**190**	*e*PN	**Pn**	**09 32 06.7**	**+1.0**
TRIZ	**Trizonia**	**2.95**	**190**	*e*Pn	**Pn**	**09 32 06.7**	**+1.0**
GELI	**Tayfur-Gelibol**	**2.97**	**106**	*e*PN	**Pn**	**09 32 06.1**	**+0.1**
GRUS	**Gruza**	**3.01**	**331**	*e*Pn	**Pn**	**09 32 06.0**	**-0.5**
GRUS				*e*Sn	**Sn**	**09 32 43.7**	**+0.9**
GRUS	**Gruza**	**3.01**	**331**	*e*Pn	**Pn**	**09 32 06.0**	**-0.5**
GRUS				*e*Sn	**Sn**	**09 32 43.7**	**+0.9**
EDRB	**Edirne**	**3.06**	**78**	*e*PN	**Pn**	**09 32 06.1**	**-1.3**
LAKA	**Lakka**	**3.08**	**191**	*e*PN	**Pn**	**09 32 08.6**	**+1.0**
LAKA	**Lakka**	**3.08**	**191**	*e*Pn	**Pn**	**09 32 08.6**	**+1.0**
EZN	**Ezine**	**3.10**	**117**	*e*PN	Pn	09 32 03.8	-4.0
JMB	**Yambol**	**3.11**	**66**	*e*Pn	**Pn**	**09 32 07.8**	**-0.2**
JMB				*e*Sn	**Sn**	**09 32 45.1**	**-0.3**
JMB	**Yambol**	**3.11**	**66**	*e*Pn	**Pn**	**09 32 07.8**	**-0.2**
JMB				*e*Sn	**Sn**	**09 32 45.1**	**-0.3**
LPK	**Lapseki**	**3.19**	**105**	*e*PN	**Pn**	**09 32 08.5**	**-0.5**
RKY	**Sarkoy-Tekirda**	**3.42**	**98**	*e*PN	**Pn**	**09 32 13.3**	**+1.1**
DIVS	**Divibare**	**3.47**	**325**	*e*Pn	**Pn**	**09 32 12.4**	**-0.6**
DIVS	**Divibare**	**3.47**	**325**	*e*Pn	**Pn**	**09 32 12.4**	**-0.6**
MFT	**Murefte**	**3.48**	**97**	*e*PN	**Pn**	**09 32 14.5**	**+1.5**
KRBG	**Karabiga-Canak**	**3.57**	**103**	*e*PN	**Pn**	**09 32 14.5**	**+0.2**
MRMT	**Marmara Adasi**	**3.75**	**99**	*e*PN	**Pn**	**09 32 15.7**	**-1.0**
DID	**Didima**	**3.78**	**174**	*e*PN	**Pn**	**09 32 18.0**	**+0.8**
DID	**Didima**	**3.78**	**174**	*e*Pn	**Pn**	**09 32 18.0**	**+0.8**
CHOS	**Chios island**	**3.85**	**137**	*e*PN	**Pn**	**09 32 18.5**	**+0.3**
CHOS	**Chios island**	**3.85**	**137**	*e*Pn	**Pn**	**09 32 18.5**	**+0.3**
GONE	**Gonen-Balikesi**	**3.96**	**106**	*e*PN	**Pn**	**09 32 19.0**	**-0.7**
TEKS	**Tekeris**	**4.03**	**325**	*e*PN	**Pn**	**09 32 19.9**	**-0.7**
TEKS	**Tekeris**	**4.03**	**325**	*e*Pn	**Pn**	**09 32 19.9**	**-0.7**
CTYL	**Yal??k??y-??at**	**4.19**	**85**	*e*PN	Pn	09 32 26.8	+4.1
CTKS	**Kestanelik-??a**	**4.35**	**89**	*e*PN	Pn	09 32 28.6	+3.6
BZS	**Buzias**	**4.42**	**350**	*i*P	**Pn**	**09 32 25.1**	**-0.8**
BZS	**Buzias**	**4.42**	**350**	*i*P	**Pn**	**09 32 25.1**	**-0.8**
VOIR		**4.49**	**21**	*i*P	**Pn**	**09 32 28.8**	**+1.8**
VOIR		**4.49**	**21**	*i*P	**Pn**	**09 32 28.8**	**+1.8**
BGKT	**Bogazkoy**	**4.56**	**89**	*e*PN	**Pn**	**09 32 29.2**	**+1.4**
ARMT	**Armutlu**	**4.70**	**97**	*e*PN	**Pn**	**09 32 31.5**	**+1.7**
ISR	**Istrita**	**4.75**	**35**	*i*P	**Pn**	**09 32 31.7**	**+1.2**
ISR	**Istrita**	**4.75**	**35**	*i*P	**Pn**	**09 32 31.7**	**+1.2**
KLYT	**Kilyos**	**4.76**	**88**	*e*P	Pn	09 32 34.4	+3.9
MLR	**Muntele Rosu**	**4.82**	**28**	*i*P	**Pn**	**09 32 32.6**	**+1.0**
MLR	**Muntele Rosu**	**4.82**	**28**	*i*P	**Pn**	**09 32 32.6**	**+1.0**
PLOR	**Plostina**	**5.39**	**31**	*i*P	**Pn**	**09 32 40.9**	**+1.6**
PLOR	**Plostina**	**5.39**	**31**	*i*P	**Pn**	**09 32 40.9**	**+1.6**
VRI	**Vrincioaia**	**5.43**	**31**	*i*P	**Pn**	**09 32 41.6**	**+1.7**
VRI	**Vrincioaia**	**5.43**	**31**	*i*P	**Pn**	**09 32 41.6**	**+1.7**
DRGR		**5.52**	**360**	*i*P	**Pn**	**09 32 41.1**	**0.0**
DRGR		**5.52**	**360**	*i*P	**Pn**	**09 32 41.1**	**0.0**

*ISCJB **25** 09:46:16.1±0.9, 41°24N×0°03×22°76E±0°05, h7^{km}±6^{km}, Error ellipse: s-maj=6.6km s-min=4.9km az=170.3*
*SKO **25** 09:46:16.7, 41°32N×22°71E, h11^{km}, ML2.0*
*ATH **25** 09:46:16.9, 41°29N×22°71E, h15^{km}±1^{km}, MD2.8/7*
*CSEM **25** 09:46:16.8±0.2, 41°24N×22°75E, h12^{km}, ML2.0, Error ellipse: s-maj=4.8km s-min=4.0km az=69.0*
*BEO **25** 09:46:17.8±1.2, 41°32N×22°69E, h3^{km}±8^{km}, ML2.0/4*

ISC 25 09:46:17.0±0.9, 41°29N±0°03×22°72E±0°03, h8^{km}±7^{km}, n22, σ0^{s}52/39, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**284**	*i*Pg	**Pg**	**09 46 19.5**	**-0.1**
VAY				*i* Sg	**Sg**	**09 46 21.4**	**0.0**
VAY				*e*Lg	Lg	09 46 21.8	
	comp=E,761nm,0.2s						
VAY	**Valandovo**	**0.12**	**284**	*e*Pg	**Pg**	**09 46 19.5**	**-0.1**
VAY				*e*Sg	**Sg**	**09 46 21.3**	**-0.2**
VAY	**Valandovo**	**0.12**	**284**	*i*Pg	**Pg**	**09 46 19.9**	**+0.3**
VAY				*i* Sg	**Sg**	**09 46 21.9**	**+0.4**
VAY				*e*Lg	Lg	09 46 22.3	
	comp=E,761nm,0.2s						
GRG	**Griva**	**0.41**	**216**	*e*PB	**Pg**	**09 46 25.2**	**+0.2**
GRG				*e*SB	**Sg**	**09 46 30.8**	**+0.3**
GRG	**Griva**	**0.41**	**216**	*e*Pb	**Pg**	**09 46 25.2**	**+0.2**
GRG				*e*Sb	**Sg**	**09 46 30.8**	**+0.3**
SOH	**Sokhos**	**0.67**	**134**	*e*PN	**Pg**	**09 46 29.9**	**0.0**
SOH				*e*SN	**Sg**	**09 46 39.2**	**+0.5**
SOH	**Sokhos**	**0.67**	**134**	*e*Pn	**Pg**	**09 46 29.9**	**0.0**
SOH				*e*Sn	**Sg**	**09 46 39.2**	**+0.5**
NVR	**Nevrokopi**	**0.86**	**86**	*e*PN	**Pg**	**09 46 33.4**	**-0.2**
NVR	**Nevrokopi**	**0.86**	**86**	*e*Pn	**Pg**	**09 46 33.4**	**-0.2**
PLG	**Polygyros**	**1.07**	**149**	*e*PB	**Pg**	**09 46 36.0**	**-1.5**
PLG				*e*SN	**Sg**	**09 46 51.7**	**+0.3**
PLG	**Polygyros**	**1.07**	**149**	*e*Pb	**Pg**	**09 46 36.0**	**-1.5**
PLG				*e*Sn	**Sg**	**09 46 51.7**	**+0.3**
FNA	**Florina**	**1.14**	**244**	*e*PN	**Pg**	**09 46 38.3**	**-0.5**
FNA				*e*SN	**Sb**	**09 46 53.9**	**+0.1**
FNA	**Florina**	**1.14**	**244**	*e*Pn	**Pg**	**09 46 38.3**	**-0.5**
FNA				*e*Sn	**Sb**	**09 46 53.9**	**+0.1**
VTS	**Vitosha**	**1.35**	**16**	*e*Pn	**Pg**	**09 46 42.9**	**0.0**
VTS				*e*Sn	**Sn**	**09 47 01.0**	**+0.6**
VTS	**Vitosha**	**1.35**	**16**	*e*Pn	**Pg**	**09 46 42.9**	**0.0**
VTS				*e*Sn	**Sn**	**09 47 01.0**	**+0.6**
PAIG	**Paliouri**	**1.55**	**152**	*e*PN	**Pg**	**09 46 46.6**	**0.0**
PAIG				*e*SN	**Sg**	**09 47 07.3**	**+0.6**
PAIG	**Paliouri**	**1.55**	**152**	*e*Pn	**Pg**	**09 46 46.6**	**0.0**
PAIG				*e*Sn	**Sg**	**09 47 07.3**	**+0.6**
BARS	**Barje**	**1.67**	**336**	*e*Pn	**Pb**	**09 46 47.2**	**-0.7**
BARS				*e*Sn	**Sb**	**09 47 08.6**	**-0.4**
BARS	**Barje**	**1.67**	**336**	*e*Pn	**Pb**	**09 46 47.2**	**-0.7**
BARS				*e*Sn	**Sb**	**09 47 08.6**	**-0.4**
THL	**Klokotos Trika**	**1.81**	**198**	*e*PB	**Pn**	**09 46 48.7**	**+0.3**
THL	**Klokotos Trika**	**1.81**	**198**	*e*Pb	**Pn**	**09 46 48.7**	**+0.3**
ZAPS	**Zavoj**	**1.98**	**358**	*e*Sn	**Sb**	**09 47 17.9**	**-0.2**

PRE 25 09:48:32.9±3.0, 17°40S×27°61E, h10^{km}, ML4.4, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**2.19**	**15**	*e*P	Pn	09 49 10.8	+1.3
LSZ				*e*S	Sn	09 49 36.2	-0.6
LSZ				AML	AML	09 49 47.2	
	comp=Z,4μm,0.3s						
MSNA	**Messina**	**5.42**	**156**	*e*P	Pn	09 49 56.9	+3.1
MSNA				*e*S	Sn	09 50 57.5	+1.2
MSNA				AML	AML	09 51 29.8	
	comp=Z,57nm,0.5s						
LBTB	**Lobatse**	**7.80**	**194**	*e*P	Pn	09 50 27.1	+0.4
LBTB				*e*S	Sn	09 51 52.1	-3.2
LBTB				AML	AML	09 52 42.6	
	comp=Z,20nm,0.6s						
SLR	**Silverton**	**8.31**	**176**	*e*P	Pn	09 50 34.9	+1.1
SLR				*e*S	Sn	09 52 00.3	-7.6
SLR				AML	AML	09 53 07.5	
	comp=Z,19nm,0.5s						
KSR	**Koster**	**8.43**	**184**	*e*P	Pn	09 50 35.9	+0.4
KSR				*e*S	Sn	09 52 04.9	-6.1
KSR				AML	AML	09 53 03.3	
	comp=Z,22nm,0.6s						
ERPM	**east rand prop**	**8.92**	**176**	*e*P	Pn	09 50 42.4	+0.3
ERPM				*e*S	Sn	09 52 15.7	-7.1
ERPM				AML	AML	09 53 10.2	
	comp=Z,11nm,0.6s						
PRYS	**Parys**	**9.48**	**181**	*e*P	Pn	09 50 52.5	+2.8
PRYS				*e*S	Sn	09 52 32.5	-4.2
PRYS				AML	AML	09 53 31.8	
	comp=Z,7.8nm,0.7s						
TSUM	**Tsumeb**	**9.69**	**258**	*e*P	Pn	09 50 53.2	+0.5
TSUM				*e*S	Sn	09 52 36.5	-5.3
POGA	**Pongola**	**10.59**	**160**	*e*S	Sn	09 52 57.5	-5.9
POGA				AML	AML	09 54 18.0	
	comp=Z,20nm,0.5s						
BOSA	**Boshof**	**11.37**	**191**	*e*P	Pn	09 51 14.8	-0.8
BOSA				*e*S	Sn	09 53 16.4	-6.5
BOSA				AML	AML	09 54 41.0	
	comp=Z,6.8nm,0.6s						
UPI	**Upington**	**12.38**	**207**	*e*S	Sn	09 53 42.7	-4.8
UPI				AML	AML	09 55 09.9	
	comp=Z,3.5nm,0.7s						
HVD	**Gariep Dam**	**13.28**	**188**	*e*S	Sn	09 54 04.0	-5.8
HVD				AML	AML	09 55 41.1	
	comp=Z,9.1nm,0.7s						

IDC 25 10:12:40.8±1.7, 17°11S×177°45W, h0^{km}, mb4.1/5, mb1 4.4/5, mb1mx4.0/19, mbtmp4.1/5, Error ellipse: s-maj=100.6km s-min=24.4km az=148.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.82**	**241**	P	P	10 20 16.2	+0.2
	1.9nm,0.5s,baz=85,slow=6.9,SNR=8.0						
WRA	**Warramunga Arr**	**45.68**	**259**	P	P	10 21 04.0	+0.1
	2.9nm,0.4s,baz=97,slow=7.4,SNR=112						
ASAR	**Alice Springs**	**45.89**	**253**	P	P	10 21 04.9	-0.6
	4.2nm,0.7s,baz=87,slow=8.1,SNR=76						
TXAR	**Lajitas Array**	**84.80**	**57**	P	P	10 25 18.1	+0.4
	0.3nm,0.7s,baz=228,slow=7.4,SNR=6.1						
ILAR	**Eielson Array**	**84.91**	**13**	P	P	10 25 16.8	-0.5
	0.2nm,0.5s,baz=223,slow=4.7,SNR=8.8						

JMA 25 10:13:11.6±0.3, 26°08N×124°32E, h153^{km}, M3.5, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTJ	**Tarama**	**1.47**	**166**	P	Pn	10 13 41.5	+0.4
JTJ				S	Sn	10 14 03.8	0.0
JMJ	**Miyako jima 2**	**1.54**	**145**	P	Pn	10 13 42.2	+0.4
JMJ				S	Sn	10 14 04.9	0.0
JOGS	**Gusukube**	**1.64**	**143**	P	Pn	10 13 43.5	+0.6
JOGS				S	Sn	10 14 07.0	+0.1
JIJ	**Ishigaki jima**	**1.72**	**185**	P	Pn	10 13 43.2	-0.5
JIJ				S	Sn	10 14 06.8	-1.6
IRIF	**Iriomote-Funau**	**1.82**	**197**	P	Pn	10 13 44.9	0.0
IRIF				*e*S	Sn	10 14 10.7	+0.3
JKRS	**Kuro-shima**	**1.86**	**189**	P	Pn	10 13 45.3	0.0
JKRS				S	Sn	10 14 10.4	-0.7
YOJ	**Yonaguni jima**	**2.00**	**217**	P	Pn	10 13 48.0	+1.1
HATJ	**Hateruma jima**	**2.07**	**193**	P	Pn	10 13 47.5	-0.2
HATJ				*e*S	Sn	10 14 14.7	-0.8
JKE	**Kume jima 2**	**2.23**	**83**	P	Pn	10 13 49.6	0.0
JKE				*e*S	Sn	10 14 18.7	-0.1
JAGN	**Aguni-jima**	**2.67**	**78**	P	Pn	10 13 54.5	-0.4
JAGN				*e*S	Sn	10 14 26.9	-1.5
JJT2	**Tamagusuku 2**	**3.08**	**88**	P	Pn	10 13 59.3	-0.8
JJT2				*e*S	Sn	10 14 35.5	-2.2
JIH	**Iheya**	**3.40**	**73**	P	Pn	10 14 03.1	-1.1
JIH				*e*S	Sn	10 14 42.0	-2.9
JOW	**Kunigami**	**3.62**	**77**	P	Pn	10 14 05.2	-1.8
JOW				S	Sn	10 14 45.0	-5.1
JTK	**Tokunoshima**	**4.47**	**67**	P	Pn	10 14 15.8	-2.3
JTK				S	Sn	10 15 04.3	-5.5
JAMN	**Amaminishikomi**	**4.83**	**62**	P	Pn	10 14 20.0	-2.8
JAMN				*e*S	Sn	10 15 12.8	-5.6

*RSPR **25** 10:18:49.2, 19°24N×64°88W, h25^{km}±23^{km}, MD3.5/6*
*NEIC **25** 10:18:49.2, 19°24N×64°87W, h25^{km}, MD3.5(RSPR), After RSPR.*

ISC 25 10:18:47.5±3.0, 19°2N±0°2×64°92W±0°09, h25^{km}, n23, σ0^{s}34/36, 15C-3D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.85**	**160**	*i*P	**Pb**	**10 19 03.1**	**-0.5**
TBVI				*e*S	**Sb**	**10 19 14.7**	**+0.1**
TBVI	**Tortola**	**0.85**	**160**	*i*P	**Pb**	**10 19 03.1**	**-0.5**
TBVI				*e*S	**Sb**	**10 19 14.7**	**+0.1**
TBVI	**Tortola**	**0.85**	**160**	*i*P	**Pb**	**10 19 03.6**	**0.0**
TBVI				*e*S	**Sb**	**10 19 14.7**	**+0.1**
STVI	**Saint Thomas**	**0.87**	**182**	*e*S	**Sb**	**10 19 15.0**	**0.0**
STVI	**Saint Thomas**	**0.87**	**182**	*i*P	**Pb**	**10 19 03.6**	**-0.3**
STVI	**Saint Thomas**	**0.87**	**182**	*i*P	**Pb**	**10 19 03.6**	**-0.3**
STVI				*e*S	**Sb**	**10 19

0.7nm,0.8s,baz=356,slow=8.6,SNR=3.1

*AUST **25** 10:25:10.1,6˚48S×129˚03E,h100km*
*IDC **25** 10:25:12.5±6.1,6˚46S×129˚55E,h147km±64km,mb3.5/6, mb1 3.8/9,mb1mx3.5/22,mbtmp3.7/9,Error ellipse: s-maj=38.0km s-min=24.5km az=54.0*
*ISCJB **25** 10:25:16.8±0.4,6˚67S±0˚03×129˚72E±0˚05,h200km, mb3.5/5,Error ellipse: s-maj=7.3km s-min=4.4km az=159.0*
*DJA **25** 10:25:18.8±0.4,7˚S±4˚×13˚0E±˚,h159km±19km,M4.6/9, mB5.0/4,mb4.5/9,MLv4.7/5,Mw(mB)4.3/4*

ISC 25 10:25:17.2±0.6,**6˚66S**±0˚06×**129˚62E**±0˚07,**h200**km,**n27, σ1§82/29,mb3.8/5,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**3.36**	**348**	P			**Pn**	**10 26 12.4**	**+1.2**
NLAI	**Namlea**	**4.22**	**323**	P			**Pn**	**10 26 24.1**	**+2.3**
FAKI	**Fak Fak**	**4.55**	**35**	P			**Pn**	**10 26 24.3**	**-1.6**
FAKI	**Fak Fak** baz=4.8,SNR=19	**4.55**	**35**	S			**Sn**	**10 27 17.0**	**-3.1**
MTN	**Manton Dam** baz=6.7,SNR=46	**6.32**	**166**	P			**Pn**	**10 26 50.0**	**+1.4**
MTN	baz=6.7,SNR=7.3			S			**Sn**	**10 27 58.7**	**-2.5**
KDU	**Kakadu** baz=7.1,SNR=47	**6.62**	**155**	P			**Pn**	**10 26 53.5**	**+1.1**
KDU	baz=7.1,SNR=5.7			S			**Sn**	**10 28 04.6**	**-3.4**
BBSI	**Bau Bau** 70nm,1.0s,0.2nm	**7.10**	**279**	P			**Pn**	**10 27 00.7**	**+1.9**
BAKI	**Biak** 244nm,0.8s,3µm	**8.45**	**50**	P			**Pn**	**10 27 18.1**	**+1.7**
KNRA	**Kununurra** baz=9.2,SNR=111	**9.00**	**185**	P			**Pn**	**10 27 23.2**	**-0.2**
KNRA	baz=9.2,SNR=9.4			S			Sn	10 28 58.2	-6.2
SKSI	**Soroako, Sulaw** 32nm,1.0s,340nm	**9.22**	**296**	P			**Pn**	**10 27 28.6**	**+2.2**
SPSI	**Sidrap Palu** 22nm,0.6s	**10.16**	**285**	P			Pn	10 27 42.8	+4.2
MRSI	**Marisa** 40nm,1.1s,746nm	**10.44**	**313**	P			**Pn**	**10 27 42.9**	**+0.7**
FITZ	**Fitzroy Crossi** 4.8nm,0.3s,baz=33,slow=12,SNR=120	**12.02**	**198**	P			**Pn**	**10 28 00.6**	**-1.7**
FITZ	0.6nm,0.3s,baz=236,slow=23,SNR=1.8			S			Sn	10 30 06.3	-10
FITZ	**Fitzroy Crossi** baz=12,SNR=114	**12.02**	**198**	P			**Pn**	**10 28 00.6**	**-1.7**
WRA	**Warramunga Arr** 1.0nm,0.3s,baz=341,slow=13,SNR=51	**13.98**	**161**	P			**Pn**	**10 28 25.9**	**-1.0**
WRA	1.2nm,0.3s,baz=330,slow=23,SNR=7.4			S			S	10 30 55.8	-6.8
COEN	**Coen** baz=16,SNR=39	**15.18**	**120**	P			**P**	**10 28 44.0**	**+1.9**
QIS	**Mount Isa** baz=17,SNR=30	**16.87**	**146**	P			**Pn**	**10 29 03.4**	**+1.4**
ASAR	**Alice Springs** 0.8nm,0.3s,baz=346,slow=9.9,SNR=97	**17.40**	**167**	P			**Pn**	**10 29 08.9**	**+0.6**
ASAR	0.2nm,0.3s,baz=344,slow=19,SNR=16			S			**S**	**10 32 15.4**	**-1.9**
MTSU	**Mount Surprise** baz=19,SNR=27	**18.32**	**130**	P			**Pn**	**10 29 19.5**	**+0.5**
SMRI	**Semarang** baz=18,SNR=3.0	**19.04**	**268**	S			**S**	**10 32 48.6**	**-1.5**
CTA	**Charters Tower** 5.7nm,0.8s,baz=307,slow=14,SNR=5.0	**20.95**	**131**	P			**P**	**10 29 47.5**	**+2.7**
STKA	**Stephens Creek** 1.6nm,0.7s,baz=337,slow=11,SNR=3.6	**27.47**	**157**	P			**P**	**10 30 45.9**	**+1.1**
CMSA	**Cobar Meteorol** baz=30,SNR=9.4	**28.96**	**151**	P			**P**	**10 31 00.1**	**+2.1**
MJAR	**Matsushiro Arr** 1.9nm,0.5s,baz=189,slow=9.9,SNR=6.9	**43.73**	**10**	P			**P**	**10 33 01.3**	**-1.4**
MKAR	**Makanchi Array** 0.9nm,0.4s,baz=117,slow=8.2,SNR=14	**67.74**	**327**	P			**P**	**10 35 53.6**	**+0.4**
KURBB	**Kurchatov Arra** 0.3nm,0.5s,baz=125,slow=5.0,SNR=4.0	**72.03**	**329**	P			**P**	**10 36 19.2**	**+0.1**
ILAR	**Eielson Array** 0.1nm,0.5s,baz=233,slow=5.5,SNR=4.6	**93.20**	**25**	P			**P**	**10 38 07.3**	**-1.2**

MEX 25 10:25:42.7±1.2,**21˚57N**×**101˚25W**,**h11**km±27km,**MD4.0, Jalisco**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ZAIG	**Zacatecas**	**1.71**	**315**	*eP*			Pn	10 26 08.3	-4.5
ZAIG				*eS*			Sn	10 26 30.0	-4.9
SFJM	**Santa Fe**	**1.99**	**238**	*i P*			Pn	10 26 14.0	-2.6
SFJM				*i S*			Sn	10 26 35.7	-6.0
EZ5V		**3.03**	**227**	*i P*			Pn	10 26 29.6	-1.4
EZ5V				*i S*			Sn	10 27 04.6	-3.0
ANIG	**Ahuacatlan**	**3.10**	**261**	*i P*			Pn	10 26 28.4	-3.2
ANIG				*i S*			Sn	10 27 05.2	-3.6
LNIG	**Linares**	**3.70**	**26**	*i P*			Pn	10 26 37.4	-2.5
LNIG				*i S*			Sn	10 27 20.9	-2.5

*CSEM **25** 10:33:42.1,36˚42N×21˚67E,h17km,MD3.1,After ATH*
ATH 25 10:33:42.1,36˚42N×21˚67E,h17km±2km,**MD3.1/8, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.48**	**7**	*e*PB			Pg	10 33 51.5	-0.3
PYL				*e*SB			Sb	10 33 58.7	-0.2
PYL	**PYLOS**	**0.48**	**7**	*e*Pb			Pg	10 33 51.5	-0.3
PYL				*e*Sb			Sb	10 33 58.7	-0.2
DYR	**Agios Nikonas**	**0.63**	**57**	*e*PB			Pg	10 33 53.4	-1.3
DYR				*e*SN			Sb	10 34 03.6	+0.2
DYR	**Agios Nikonas**	**0.63**	**57**	*e*Pb			Pg	10 33 53.4	-1.3
DYR				*e*Sn			Sb	10 34 03.6	+0.2
ITM	**Ithomi**	**0.79**	**15**	*e*PN			Pb	10 33 57.3	-0.1
ITM				*e*SN			Sg	10 34 08.5	+0.5
ITM	**Ithomi**	**0.79**	**15**	*e*Pn			Pb	10 33 57.3	-0.1
ITM				*e*Sn			Sg	10 34 08.5	+0.5
VLI	**Veliai**	**1.06**	**73**	*e*PN			Pb	10 34 02.1	0.0
VLI	**Veliai**	**1.06**	**73**	*e*Pn			Pb	10 34 02.1	0.0
VLX	**Vlachokerasia**	**1.11**	**31**	*e*PB			Pb	10 34 02.3	-0.6
VLX				*e*SN			Sn	10 34 18.1	+0.1
VLX	**Vlachokerasia**	**1.11**	**31**	*e*Pb			Pb	10 34 02.3	-0.6
VLX				*e*Sn			Sn	10 34 18.1	+0.1
KYTH	**Kithira**	**1.11**	**97**	*e*PN			Pg	10 34 03.4	-0.3
KYTH	**Kithira**	**1.11**	**97**	*e*Pn			Pg	10 34 03.4	-0.3
ANKY	**Antikythira Is**	**1.43**	**112**	*e*PN			Pb	10 34 09.0	+0.7
ANKY	**Antikythira Is**	**1.43**	**112**	*e*Pn			Pb	10 34 09.0	+0.7
KLV	**Kalavryta, Ach**	**1.67**	**13**	*e*PN			Pg	10 34 13.6	-0.7
KLV				*e*SN			Sg	10 34 34.8	-1.2
KLV	**Kalavryta, Ach**	**1.67**	**13**	*e*Pn			Pg	10 34 13.6	-0.7
KLV				*e*Sn			Sg	10 34 34.8	-1.2

*ISK **25** 10:35:43.6,34˚61N×32˚96E,h6km,MD2.4*
*ISCJB **25** 10:35:45.0±1.3,34˚64N±0˚07×33˚02E±0˚05,h14km,Error ellipse: s-maj=10.8km s-min=5.2km az=171.5*
*CSEM **25** 10:35:44.7±0.5,34˚63N×33˚02E,h15km,Mw2.7,Error ellipse: s-maj=9.1km s-min=3.8km az=166.0*
*NIC **25** 10:35:45.1±0.3,34˚68N×33˚05E,h18km,ML2.9,MW2.7*

ISC 25 10:35:46.6±1.4,**34˚71N**±0˚09×**33˚00E**±0˚03,**h14**km,**n20, σ1§09/30,1C-4D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SZAC	**Souni-Zanaja**	**0.11**	**296**	P			**Pb**	**10 35 49.6**	**-0.9**
SZAC	**Souni-Zanaja**	**0.11**	**296**	P			**Pb**	**10 35 49.6**	**-0.9**
CSS	**Prodhromos** 10nm,0.2s	**0.37**	**46**	P			**Pg**	**10 35 53.2**	**-0.9**
CSS				S			**Sg**	**10 35 58.4**	**-0.8**
CSS	**Prodhromos**	**0.37**	**46**	*e*PG			**Pg**	**10 35 53.2**	**-0.9**
CSS				*e*SG			**Sb**	**10 36 00.2**	**-0.4**
CSS	**Prodhromos** 10nm,0.2s	**0.37**	**46**	P			**Pg**	**10 35 53.2**	**-0.9**
CSS				S			**Sg**	**10 35 58.4**	**-0.8**
CSS				*e*Sg			**Sb**	**10 36 00.2**	**-0.4**
LEF	**Lefka**	**0.42**	**347**	*e*PG			**Pg**	**10 35 54.0**	**-1.0**
LEF				*e*SG			**Sg**	**10 36 01.5**	**+0.8**
LEF	**Lefka**	**0.42**	**347**	*e*Sg			**Sg**	**10 36 01.5**	**+0.8**
AKIN	**Ak¨–nc¨–lar- K**	**0.49**	**51**	*e*PG			**Pg**	**10 35 55.1**	**-1.1**
AKIN				*e*SG			**Sb**	**10 36 03.8**	**-0.2**
AKIN	**Ak¨–nc¨–lar- K**	**0.49**	**51**	*e*Pg			**Pg**	**10 35 55.1**	**-1.1**
AKIN				*e*Sg			**Sb**	**10 36 03.8**	**-0.2**
MAMC	**Mammari**	**0.49**	**21**	P			**Pg**	**10 35 55.6**	**-0.8**
MAMC	**Mammari**	**0.49**	**21**	P			**Pg**	**10 35 55.6**	**-0.8**
ALFC	**Alevga** 8.0nm,0.2s	**0.56**	**324**	P			**Pg**	**10 35 56.6**	**-1.0**
ALFC				S			**Sg**	**10 36 05.8**	**+0.7**
ALFC	**Alevga** 8.0nm,0.2s	**0.56**	**324**	P			**Pg**	**10 35 56.6**	**-1.0**
ALFC				S			**Sg**	**10 36 05.8**	**+0.7**
PPCY	**Paphos**	**0.57**	**288**	⇓P			**Pb**	**10 35 57.4**	**-0.9**
PPCY	**Paphos**	**0.57**	**288**	⇓P			**Pb**	**10 35 57.4**	**-0.9**
AKMC	**Akamas**	**0.64**	**300**	⇓P			**Pg**	**10 35 58.3**	**-0.8**
AKMC	**Akamas**	**0.64**	**300**	⇓P			**Pg**	**10 35 58.3**	**-0.8**
LFK	**Lefkose**	**0.72**	**37**	*e*PG			**Pg**	**10 35 59.8**	**-0.8**
PHNC	**Paralimni**	**0.90**	**70**	⇑P			**Pg**	**10 36 06.0**	**+1.2**
PHNC				S			**Sn**	**10 36 20.8**	**+3.3**
EREN	**Erenkoy**	**1.26**	**49**	*e*PN			**Pb**	**10 36 09.1**	**-1.0**

*CSEM **25** 10:38:37.4±0.1,41˚26N×22˚64E,h2km,ML2.8,Error ellipse: s-maj=2.2km s-min=2.1km az=148.0*
*TIR **25** 10:38:37.2,41˚22N×22˚61E,h6km*
*THE **25** 10:38:37.9,41˚28N×22˚66E,h2km±1km,ML3.0/4,Error ellipse: s-maj=1.9km s-min=1.0km az=338.0*
*SKO **25** 10:38:37.1,41˚28N×22˚67E,h15km,M2.3,ML2.8*
*ATH **25** 10:38:37.4,41˚26N×22˚68E,h21km±1km,MD3.1/9*
*SOF **25** 10:38:37.0,41˚28N×22˚68E,h9km,MD3.0*
*BEO **25** 10:38:38.1±0.7,41˚26N×22˚58E,h3km±2km,ML2.8/8*

ISC 25 10:38:38.0±0.9,**41˚27N**±0˚02×**22˚65E**±0˚01,**h4**km±7km, **n102,σ0§85/140,3C-9D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**313**	*i* Pg			**Pg**	**10 38 39.6**	**-0.2**
VAY				*e*Lg			Lg	10 38 41.2	
	comp=N,10µm,0.3s								
VAY				*i* Sg			**Sg**	**10 38 41.2**	**+0.3**
VAY				*e*Lg			Lg	10 38 41.3	
	comp=E,6µm,0.6s								
VAY	**Valandovo**	**0.08**	**313**	⇓*i*Pg			**Pg**	**10 38 39.3**	**-0.4**
VAY				*e*Sg			**Sg**	**10 38 41.0**	**+0.1**
VAY	**Valandovo**	**0.08**	**313**	⇓*i*Pg			**Pg**	**10 38 39.3**	**-0.4**
VAY				*e*Sg			**Sg**	**10 38 41.0**	**+0.1**
VAY				*e*Lg			Lg	10 38 41.7	
	comp=E,6µm,0.6s								
GRG	**Griva**	**0.36**	**211**	*e*PB			**Pg**	**10 38 45.4**	**+0.4**
GRG				*e*SB			**Sg**	**10 38 51.1**	**+1.4**
GRG	**Griva**	**0.36**	**211**	*e*Pb			**Pg**	**10 38 45.4**	**+0.4**
GRG				*e*Sb			**Sg**	**10 38 51.1**	**+1.4**
THE	**Thessaloniki**	**0.68**	**159**	P			**Pg**	**10 38 50.9**	**-0.1**
THE	**Thessaloniki**	**0.68**	**159**	P			**Pg**	**10 38 50.9**	**-0.1**
KKB	**Krupnik**	**0.68**	**28**	Pg			**Pg**	**10 38 50.5**	**-0.6**
KKB	**Krupnik**	**0.68**	**28**	Pg			**Pg**	**10 38 50.5**	**-0.6**
SOH	**Sokhos**	**0.69**	**130**	P			**Pg**	**10 38 50.8**	**-0.5**
SOH	**Sokhos**	**0.69**	**130**	*e*PN			**Pg**	**10 38 50.8**	**-0.5**
SOH				*e*SN			**Sg**	**10 39 00.0**	**-0.3**
SOH	**Sokhos**	**0.69**	**130**	P			**Pg**	**10 38 50.8**	**-0.5**
SOH				*e*Sn			**Sg**	**10 39 00.0**	**-0.3**
SRS	**Serrai**	**0.73**	**101**	P			**Pg**	**10 38 51.2**	**-0.7**
SRS	**Serrai**	**0.73**	**101**	P			**Pg**	**10 38 51.2**	**-0.7**
HORT	**Hortiatis**	**0.75**	**153**	P			**Pg**	**10 38 52.4**	**0.0**
HORT	**Hortiatis**	**0.75**	**153**	P			**Pg**	**10 38 52.4**	**0.0**
MMB	**Musomiste**	**0.87**	**68**	Pg			**Pg**	**10 38 53.9**	**-0.8**
MMB	**Musomiste**	**0.87**	**68**	Pg			**Pg**	**10 38 53.9**	**-0.8**
NVR	**Nevrokopi**	**0.92**	**84**	P			**Pg**	**10 38 54.7**	**-0.9**
NVR				S			**Sg**	**10 39 07.1**	**-0.4**
NVR	**Nevrokopi**	**0.92**	**84**	*e*PN			**Pg**	**10 38 54.7**	**-0.9**
NVR				*e*SN			**Sg**	**10 38 56.9**	**-0.6**
NVR	**Nevrokopi**	**0.92**	**84**	P			**Pg**	**10 38 54.7**	**-0.9**
NVR				S			**Sg**	**10 39 07.1**	**-0.4**
BIA	**Bitola**	**1.03**	**257**	*i* Pg			**Pg**	**10 38 57.0**	**-0.8**
BIA				*i* Sg			**Sg**	**10 39 11.5**	**+0.3**
BIA	**Bitola**	**1.03**	**257**	*i* Pg			**Pg**	**10 38 56.9**	**-0.8**
BIA				*i* Sg			**Sg**	**10 39 11.4**	**+0.3**
PLG	**Polygyros**	**1.07**	**146**	P			**Pg**	**10 38 58.2**	**-0.4**
PLG	**Polygyros**	**1.07**	**146**	*e*PN			**Pg**	**10 38 58.1**	**-0.5**
PLG				*e*SN			**Sg**	**10 39 12.0**	**-0.5**
PLG	**Polygyros**	**1.07**	**146**	P			**Pg**	**10 38 58.2**	**-0.4**
PLG				*e*Sn			**Sg**	**10 39 12.0**	**-0.5**
FNA	**Florina**	**1.08**	**244**	P			**Pg**	**10 38 58.1**	**-0.5**
FNA				S			**Sg**	**10 39 12.6**	**0.0**
FNA	**Florina**	**1.08**	**244**	*e*PN			**Pg**	**10 38 58.1**	**-0.5**
FNA	**Florina**	**1.08**	**244**	P			**Pg**	**10 38 58.1**	**-0.5**
FNA				S			**Sg**	**10 39 12.6**	**0.0**
SKO	**Skopje**	**1.15**	**308**	*i* Pg			**Pg**	**10 39 00.1**	**-0.4**
SKO				*i* Sg			**Sb**	**10 39 16.0**	**+0.3**
SKO	**Skopje**	**1.15**	**308**	*e*Pg			**Pg**	**10 38 58.9**	**-1.2**
SKO				*e*Sg			**Sg**	**10 39 14.4**	**-0.6**
SKO	**Skopje**	**1.15**	**308**	*e*Pg			**Pg**	**10 38 58.9**	**-1.2**
SKO				*e*Sg			**Sg**	**10 39 14.4**	**-0.6**
KZN	**Kozani**	**1.17**	**215**	*e*PN			**Pg**	**10 38 59.3**	**-1.1**
KZN	**Kozani**	**1.17**	**215**	*e*Pn			**Pg**	**10 38 59.3**	**-1.1**
LIT	**Litokhoron**	**1.17**	**186**	*e*PN			**Pg**	**10 38 59.7**	**-0.7**
LIT				*e*SN			**Sg**	**10 39 15.6**	**0.0**
LIT	**Litokhoron**	**1.17**	**186**	*e*Pn			**Pg**	**10 38 59.7**	**-0.7**
LIT				*e*Sn			**Sg**	**10 39 15.6**	**0.0**
OUR	**Ouranopolis**	**1.37**	**132**	P			**Pn**	**10 39 03.4**	**-0.5**
OUR	**Ouranopolis**	**1.37**	**132**	P			**Pn**	**10 39 03.4**	**-0.5**
VTS	**Vitosha**	**1.39**	**17**	P			**Pn**	**10 39 03.5**	**-0.8**
VTS	**Vitosha**	**1.39**	**17**	*e*Pg			**Pn**	**10 39 04.0**	**-0.4**
VTS				*e*Sg			**Sb**	**10 39 21.9**	**-0.9**
VTS	**Vitosha**	**1.39**	**17**	⇓*i*P			**Pn**	**10 39 03.5**	**-0.8**
VTS				S			**Sb**	**10 39 22.1**	**-0.7**
VTS	**Vitosha**	**1.39**	**17**	P			**Pn**	**10 39 03.9**	**-0.4**
VTS	**Vitosha**	**1.39**	**17**	P			**Pn**	**10 39 03.5**	**-0.8**
VTS	**Vitosha**	**1.39**	**17**	*e*Pg			**Pn**	**10 39 04.0**	**-0.4**
VTS				*e*Sg			**Sb**	**10 39 21.9**	**-0.9**
KAVA	**Kavala**	**1.43**	**100**	P			**Pn**	**10 39 04.2**	**-0.6**
KAVA				S			**Sb**	**10 39 23.6**	**-0.2**
KAVA	**Kavala**	**1.43**	**100**	P			**Pn**	**10 39 04.2**	**-0.6**
KAVA				S			**Sb**	**10 39 23.6**	**-0.2**
NEST	**Nestorio**	**1.48**	**236**	P			**Pn**	**10 39 05.6**	**+0.1**
NEST	**Nestorio**	**1.48**	**236**	P			**Pn**	**10 39 05.6**	**+0.1**
PAIG	**Paliouri**	**1.55**	**149**	P			**Pn**	**10 39 05.7**	**-0.6**
PAIG				S			**Sn**	**10 39 26.7**	**-0.2**
PAIG	**Paliouri**	**1.55**	**149**	*e*PN			**Pn**	**10 39 05.7**	**-0.6**
PAIG	**Paliouri**	**1.55**	**149**	P			**Pn**	**10 39 05.7**	**-0.6**
PAIG				S			**Sn**	**10 39 26.7**	**-0.2**
KBN	**Korca**	**1.55**	**246**	*i* PN			**Pn**	**10 39 05.8**	**-0.6**
KBN				*i* SN			**Sg**	**10 39 28.1**	**+0.3**
KBN	**Korca**	**1.55**	**246**	*i* Pn			**Pn**	**10 39 05.8**	**-0.6**
KBN				*i* Sn			**Sg**	**10 39 28.1**	**+0.3**
RZN	**Rozhen**	**1.61**	**74**	P			**Pn**	**10 39 07.5**	**+0.1**
RZN				Pg			**Pb**	**10 39 08.4**	**0.0**
RZN	**Rozhen**	**1.61**	**74**	P			**Pn**	**10 39 07.5**	**+0.1**
BARS	**Barje**	**1.67**	**338**	*e*Sn			**Sn**	**10 39 29.4**	**-0.5**
BARS	**Barje**	**1.67**	**338**	*e*Sn			**Sn**	**10 39 29.4**	**-0.5**
PGB	**Panagyurishte**	**1.71**	**41**	P			**Pb**	**10 39 09.8**	**-0.3**
PGB	**Panagyurishte**	**1.71**	**41**	P			**Pb**	**10 39 09.8**	**-0.3**
PHP	**Peshkopia**	**1.71**	**285**	*i* PN			**Pn**	**10 39 08.5**	**-0.2**
PHP				*i* SN			**Sn**	**10 39 30.1**	**-0.9**
PHP	**Peshkopia**	**1.71**	**285**	*i* Pn			**Pn**	**10 39 08.5**	**-0.2**
PHP				*i* Sn			**Sn**	**10 39 30.1**	**-0.9**
PLD	**Plovdiv**	**1.75**	**61**	*e*Pn			**Pb**	**10 39 09.9**	**-0.8**
PLD				*e*Sn			**Sg**	**10 39 34.1**	**-0.2**
PLD	**Plovdiv**	**1.75**	**61**	P			**Pg**	**10 39 12.1**	**+0.5**
PLD	**Plovdiv**	**1.75**	**61**	*e*Pn			**Pb**	**10 39 09.9**	**-0.8**
PLD	**Plovdiv**	**1.75**	**61**	P			**Pg**	**10 39 12.1**	**+0.5**
PLD				*e*Sn			**Sg**	**10 39 34.1**	**-0.2**
THL	**Klokotos Trika**	**1.77**	**196**	P			**Pn**	**10 39 09.4**	**+0.1**
THL	**Klokotos Trika**	**1.77**	**196**	*e*PN			**Pn**	**10 39 09.4**	**+0.1**
THL	**Klokotos Trika**	**1.77**	**196**	P			**Pn**	**10 39 09.4**	**+0.1**
XOR	**Xorichti**	**1.94**	**168**	P			**Pn**	**10 39 11.0**	**-0.8**
XOR	**Xorichti**	**1.94**	**168**	P			**Pn**	**10 39 11.0**	**-0.8**
ZAPS	**Zavoj**	**2.01**	**360**	*e*Pn			**Pn**	**10 39 12.6**	**-0.1**
ZAPS				*e*Sn			**Sn**	**10 39 38.7**	**+0.4**
PUK	**Puka**	**2.21**	**292**	*i* PN			**Pb**	**10 39 18.5**	**0.0**
PUK	**Puka**	**2.21**	**292**	*i* Pn			**Pb**	**10 39 18.5**	**0.0**
MPEP	**Malo Peshtene**	**2.24**	**21**	P			**Pn**	**10 39 15.6**	**-0.3**
MPEP				Pg			**Pb**	**10 39 19.8**	**+0.8**
SELS	**Selova**	**2.26**	**330**	*e*Pn			**Pn**	**10 39 15.1**	**-1.1**
AOS	**Alonnisos**	**2.29**	**155**	*e*PN			**Pn**	**10 39 15.3**	**-1.3**
AOS	**Alonnisos**	**2.29**	**155**	*e*Pn			**Pn**	**10 39 15.3**	**-1.3**
DIM	**Dimitrovgrad**	**2.30**	**69**	P			**Pb**	**10 39 20.5**	**+0.5**
DIM	**Dimitrovgrad**	**2.30**	**69**	P			**Pb**	**10 39 20.5**	**+0.5**
SMTH	**Samothraki Isl**	**2.32**	**109**	*e*PN			**Pn**	**10 39 16.1**	**-0.9**
SMTH	**Samothraki Isl**	**2.32**	**109**	*e*Pn			**Pn**	**10 39 16.1**	**-0.9**
ALN	**Alexandroupoli**	**2.59**	**97**	*e*PN			**Pn**	**10 39 20.3**	**-0.4**
ALN	**Alexandroupoli**	**2.59**	**97**	*e*Pn			**Pn**	**10 39 20.3**	**-0.4**
GRUS	**Gruza**	**2.99**	**332**	*e*Pn			**Pn**	**10 39 25.3**	**-0.8**
GRUS	**Gruza**	**2.99**	**332**	*e*Pn			**Pn**	**10 39 25.3**	**-0.8**
JMB	**Yambol**	**3.17**	**66**	*e*Pn			**Pn**	**10 39 28.7**	**0.0**
JMB				*e*Sn			**Sn**	**10 40 08.9**	**+1.9**
JMB	**Yambol**	**3.17**	**66**	*e*Pn			**Pn**	**10 39 28.7**	**0.0**
JMB				*e*Sn			**Sn**	**10 40 08.9**	**+1.9**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn			**Pn**	**10 39 31.6**	**-0.9**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn			**Pn**	**10 39 31.6**	**-0.9**
LOT	**Lotru**	**4.26**	**11**	⇓*i*P			**Pn**	**10 39 42.8**	**-0.9**
LOT	**Lotru**	**4.26**	**11**	⇓*i*P			**Pn**	**10 39 42.8**	**-0.9**
BZS	**Buzias**	**4.42**	**351**	*e*Pn			**Pn**	**10 39 45.7**	**0.0**
BZS	**Buzias**	**4.42**	**351**	⇑*i*P			Pn	10 39 40.2	-5.5
BZS	**Buzias**	**4.42**	**351**	*e*Pn			**Pn**	**10 39 45.7**	**0.0**
MLR	**Muntele Rosu**	**4.86**	**29**	⇓*i*P			**Pn**	**10 39 52.2**	**+0.2**
MLR	**Muntele Rosu**	**4.86**	**29**	⇓*i*P			**Pn**	**10 39 52.2**	**+0.2**
PLOR	**Plostina**	**5.43**	**31**	⇑*i*P			**Pn**	**10 40 01.1**	**+1.4**
PLOR	**Plostina**	**5.43**	**31**	⇑*i*P			**Pn**	**10 40 01.1**	**+1.4**
VRI	**Vrincioaia**	**5.47**	**31**	⇓*i*P			**Pn**	**10 40 01.0**	**+0.7**
VRI	**Vrincioaia**	**5.47**	**31**	⇓*i*P			**Pn**	**10 40 01.0**	**+0.7**
KOLS	**Kolonicke sedl**	**7.67**	**358**	*e*SG			**Sg**	**10 42 49.8**	**+5.6**
CRVS	**Cervenica-Dubn**	**7.68**	**354**	*e*PN			**Pn**	**10 40 33.1**	**+2.5**

*ISCJB **25** 10:44:15.4±0.7,6˚89N±0˚07×73˚00W±0˚07,h163km±8km, mb2.8/2,Error ellipse: s-maj=15.5km s-min=7.3km az=44.9*
*IDC **25** 10:44:17.7±4.6,6˚71N×73˚18W,h173km±30km,mb2.6/2, mb1 3.1/3,mb1mx2.8/23,mbtmp2.8/3,Error ellipse: s-maj=80.2km s-min=29.3km az=81.0*
*FUNV **25** 10:44:18.0,6˚99N×73˚08W,h163km,MW3.6*

ISC 25 10:44:16.0±1.0,**6˚93N**±0˚07×**73˚04W**±0˚08,**h160**km±9km, **n14,σ1§80/22,1C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.17**	**38**	⇑*e*P			**Pn**	**10 44 44.9**	**+1.4**
CAPV				*e*S			**Sn**	**10 45 04.6**	**0.0**
ROSC	**El Rosal** 41nm,0.3s,baz=100,slow=23,SNR=208	**2.43**	**212**	P			**Pn**	**10 44 56.6**	**-0.6**
ROSC	51nm,0.3s,baz=100,slow=21,SNR=12			S			**Sn**	**10 45 27.3**	**-1.7**
VIGV	**El Vigia**	**2.52**	**41**	*e*P			**Pn**	**10 44 59.4**	**+1.5**
VIGV				*e*S			**Sn**	**10 45 29.5**	**-0.8**
SOCV	**Socops**	**2.55**	**58**	*e*P			**Pn**	**10 44 59.3**	**+1.1**
SOCV				*e*S			**Sn**	**10 45 30.5**	**-0.4**
ELOV	**Elorza**	**3.53**	**89**	*e*P			**Pn**	**10 45 11.2**	**+0.8**
ELOV				*e*S			**Sn**	**10 45 51.9**	**-0.9**
QARV	**Quebrada Arrib**	**4.10**	**37**	*e*P			**Pn**	**10 45 18.2**	**+0.4**
QARV				*e*S			**Sn**	**10 46 02.6**	**-3.4**
SANV	**Sanarito**	**4.30**	**53**	*e*P			**Pn**	**10 45 21.3**	**+0.7**
SANV				*e*S			**Sn**	**10 46 08.1**	**-2.9**
DABV	**Dabajuro**	**4.62**	**31**	*e*P			**Pn**	**10 45 24.8**	**+0.2**
DABV				*e*S			**Sn**	**10 46 13.5**	**-4.7**
MAPV	**Macap

KAHZ	Kahuranaki	1.86 168	⇑Pn	Pn	10 51 50.5	-0.2		
PNHZ	Pukenui	1.94 184	PN	Pn	10 51 50.5	-1.0		
PNHZ	Pukenui	1.94 184	Pn	Pn	10 51 50.5	-1.0		
WAZ	Wanganui	2.08 211	⇑PN	Pn	10 51 52.8	-0.3		
WAZ	Wanganui	2.08 211	⇑Pn	Pn	10 51 52.8	-0.3		
WPHZ	Waipukurau	2.08 178	PN	Pn	10 51 52.3	-0.9		
WPHZ	Waipukurau	2.08 178	Pn	Pn	10 51 52.3	-0.9		
PXZ	Pawanui	2.08 169	⇑PN	Pn	10 51 52.5	-0.7		
PXZ	Pawanui	2.08 169	⇑Pn	Pn	10 51 52.5	-0.7		
PRHZ	Porangahau	2.29 175	PN	Pn	10 51 54.7	-1.0		
PRHZ	Porangahau	2.29 175	Pn	Pn	10 51 54.7	-1.0		
DVHZ	Dannevirke	2.32 184	⇑PN	Pn	10 51 54.6	-1.5		
DVHZ	Dannevirke	2.32 184	⇑Pn	Pn	10 51 54.6	-1.5		
POWZ	Post Office Ro	2.45 191	PN	Pn	10 51 56.1	-1.5		
POWZ	Post Office Ro	2.45 191	Pn	Pn	10 51 56.1	-1.5		
BFZ	Birch Farm	2.70 182	⇓PN	Pn	10 51 59.0	-1.7		
BFZ	Birch Farm	2.70 182	⇓Pn	Pn	10 51 59.0	-1.7		
MRZ	Mangatainoka R	2.75 193	PN	Pn	10 51 59.2	-2.0		
MRZ	Mangatainoka R	2.75 193	Pn	Pn	10 51 59.2	-2.0		
TIWZ	Tintock	2.82 187	PN	Pn	10 52 00.4	-1.8		
TIWZ	Tintock	2.82 187	Pn	Pn	10 52 00.4	-1.8		
OGWZ	Otaki Gorge	2.98 198	⇑PN	Pn	10 52 02.1	-2.1		
OGWZ	Otaki Gorge	2.98 198	⇑Pn	Pn	10 52 02.1	-2.1		
HOWZ	Holdsworth Sta	2.99 192	⇑PN	Pn	10 52 01.9	-2.4		
HOWZ	Holdsworth Sta	2.99 192	⇑Pn	Pn	10 52 01.9	-2.4		
KIW	Kapiti Island	3.09 201	PN	Pn	10 52 03.1	-2.5		
KIW	Kapiti Island	3.09 201	Pn	Pn	10 52 03.1	-2.5		
TMWZ	Te Maipa	3.15 187	PN	Pn	10 52 03.9	-2.4		
TMWZ	Te Maipa	3.15 187	Pn	Pn	10 52 03.9	-2.4		
TRWZ	Traveller	3.46 189	PN	Pn	10 52 07.6	-2.6		
TRWZ	Traveller	3.46 189	Pn	Pn	10 52 07.6	-2.6		
WEL	Wellington	3.52 200	⇓PN	Pn	10 52 08.4	-2.7		
WEL	Wellington	3.52 200	⇓Pn	Pn	10 52 08.4	-2.7		
SNZO	South Karori	3.56 201	PN	Pn	10 52 08.4	-3.2		
SNZO	South Karori	3.56 201	Pn	Pn	10 52 08.4	-3.2		
BHW	Baring Head	3.61 198	PN	Pn	10 52 09.0	-3.2		
BHW	Baring Head	3.61 198	Pn	Pn	10 52 09.0	-3.2		
PLWZ	Palliser	3.69 193	PN	Pn	10 52 10.0	-3.3		
PLWZ	Palliser	3.69 193	Pn	Pn	10 52 10.0	-3.3		
TUWZ	Tuamarina	3.92 208	PN	Pn	10 52 13.0	-3.1		
TUWZ	Tuamarina	3.92 208	Pn	Pn	10 52 13.0	-3.1		
QRZ	Quartz Range	4.11 225	⇓PN	Pn	10 52 15.6	-3.1		
QRZ	Quartz Range	4.11 225	⇓Pn	Pn	10 52 15.6	-3.1		
BSWZ	Blackbirch Sta	4.19 206	PN	Pn	10 52 16.7	-3.1		
BSWZ	Blackbirch Sta	4.19 206	Pn	Pn	10 52 16.7	-3.1		
THZ	Tophouse	4.62 214	PN	Pn	10 52 22.1	-3.4		
THZ	Tophouse	4.62 214	Pn	Pn	10 52 22.1	-3.4		
KHZ	Kahutara	4.93 205	PN	Pn	10 52 25.9	-3.5		
KHZ	Kahutara	4.93 205	Pn	Pn	10 52 25.9	-3.5		
LTZ	Lake Taylor	5.73 212	PN	Pn	10 52 35.3	-4.7		
LTZ	Lake Taylor	5.73 212	Pn	Pn	10 52 35.3	-4.7		
CRLZ	Canterbury Las	6.27 206	PN	Pn	10 52 42.2	-5.0		
CRLZ	Canterbury Las	6.27 206	Pn	Pn	10 52 42.2	-4.9		
FOZ	Fox Glacier	7.53 220	PN	Pn	10 52 58.6	-5.4		
FOZ	Fox Glacier	7.53 220	Pn	Pn	10 52 58.6	-5.4		
ODZ	Otahua Downs	8.26 209	PN	Pn	10 53 09.0	-4.7		
ODZ	Otahua Downs	8.26 209	Pn	Pn	10 53 09.0	-4.7		
JCZ	Jackson Bay	8.37 221	PN	Pn	10 53 10.6	-4.7		
JCZ	Jackson Bay	8.37 221	Pn	Pn	10 53 10.6	-4.7		
TUZ	Tuapeka	9.41 210	PN	Pn	10 53 24.9	-4.1		
TUZ	Tuapeka	9.41 210	Pn	Pn	10 53 24.9	-4.1		

*VIE **25** 10:59:59.5±0.4, 50.25N×12.76E, h0km, mb1.9/2, ML2.5/1, Error ellipse: s-maj=4.4km s-min=1.2km az=41.0 22 km E of Klingenthal Suspected Mining explosion.*
ISC 25 10:59:58.8±6.1, 50.3N±0.1×12.6E±0.3, h10km, n3, σ1s 41/4, 2C, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	2.42	76	*e*Pg	Pg	11 00 44.8	-0.3
KSP				*e*Sg	Sg	11 01 17.2	+0.7
MOA	Molln	2.69	155	⇑*i*Sg	Sg	11 01 26.1	+0.9
	5.7nm,0.5s						
CONA	Conrad Observa	3.20	137	⇑*i*Sg	Sg	11 01 40.9	-0.7
	6.2nm,0.6s						

*DDA **25** 11:00:12.8, 37.62N×35.75E, h7km, MD3.1*
*ISCJB **25** 11:00:14.9±0.6, 37.57N±0.04×35.67E±0.04, h5km±13km, Error ellipse: s-maj=7.4km s-min=5.5km az=162.7*
*ISK **25** 11:00:14.8, 37.55N×35.68E, h8km, MD2.7*
*CSEM **25** 11:00:15.1±0.2, 37.56N×35.67E, h5km, MD2.7, Error ellipse: s-maj=4.5km s-min=3.9km az=43.0*
ISC 25 11:00:15.3±1.0, 37.53N±0.03×35.68E±0.03, h9km±8km, n17, σ0s 45/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	Kozan	0.13	113	*e*PG	Pg	11 00 17.9	-0.5
KOZT				*e*SG	Sg	11 00 20.9	+0.5
KOZT	Kozan	0.13	113	*e*Pg	Pg	11 00 17.9	-0.5
KOZT				*e*Sg	Sg	11 00 20.9	+0.5
CEYT	Ceyhan	0.52	174	*e*PG	Pg	11 00 25.7	+0.2
CEYT				*e*SG	Sb	11 00 34.0	-0.3
CEYT	Ceyhan	0.52	174	*e*Pg	Pg	11 00 25.7	+0.2
CEYT				*e*Sg	Sb	11 00 34.0	-0.3
YURE	YUREGIR	0.70	183	*i* P	Pg	11 00 28.1	-0.8
YURE				*i* S	Sb	11 00 40.0	+0.4
YURE	YUREGIR	0.70	183	*i* P	Pg	11 00 28.1	-0.8
YURE				*i* S	Sb	11 00 40.0	+0.4
GULE	Gulek	0.76	251	*i* P	Pg	11 00 30.2	+0.2
GULE				*i* S	Sb	11 00 41.2	0.0
GULE	Gulek	0.76	251	*i* P	Pg	11 00 30.2	+0.2
GULE				*i* S	Sb	11 00 41.2	0.0
KMRS	Kahramanmaras	0.97	91	*e*PG	Pg	11 00 34.1	0.0
KMRS				*e*SG	Sb	11 00 47.9	+0.5
KMRS	Kahramanmaras	0.97	91	*e*Pg	Pg	11 00 34.1	0.0
KMRS				*e*Sg	Sb	11 00 47.9	+0.5
NIG	Nigde	1.02	305	*e*PG	Pg	11 00 34.8	-0.2
NIG	Nigde	1.02	305	*e*Pg	Pg	11 00 34.8	-0.2
SARI	SarD1z-Kayseri	1.05	34	*e*PG	Pg	11 00 35.2	-0.4
BNN	Bunyan	1.33	6	*e*PN	Pn	11 00 39.6	-0.6
BNN	Bunyan	1.33	6	*e*Pn	Pn	11 00 39.6	-0.6
YOZ	Yozgat	2.12	353	*e*PN	Pn	11 00 51.4	+0.2
YOZ	Yozgat	2.12	353	*e*Pn	Pn	11 00 51.4	+0.2

IDC 25 11:03:20.6±2.0, 3.82N×126.88E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/23, mbtmp3.4/3, Error ellipse: s-maj=154.1km s-min=25.6km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.72	163	P	P	11 08 43.4	-0.5
	1.1nm,0.4s,baz=343,slow=10,SNR=19						
ASAR	Alice Springs	28.16	166	P	P	11 09 15.6	+0.7
	0.1nm,0.3s,baz=346,slow=11,SNR=5.0						
MKAR	Makanchi Array	57.57	325	P	P	11 13 12.2	-0.1
	0.2nm,0.6s,baz=135,slow=7.9,SNR=3.2						

IDC 25 11:17:52.3±0.6, 13.77N×144.91E, h90km±4km, mb3.2/7, mb1 3.5/7, mb1mx3.3/25, mbtmp3.2/7, MS4.0/2, Ms1 4.0/2, ms1mx3.0/13, Error ellipse: s-maj=37.0km s-min=14.8km az=104.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.19	193	P	Pn	11 18 06.2	+0.9
	2µm,0.3s,baz=116,slow=0.7,SNR=1447						
GUMO				S	Sn	11 18 16.4	+1.5
	1µm,0.3s,baz=23,slow=21,SNR=10						
JHJ	Hachijo jima 2	19.82	347	LR	LR	11 28 02.5	
	comp=Z,360nm,21.9s,baz=252,slow=31						
JNU	Nakatsue	23.12	329	LR	LR	11 30 41.3	
	comp=Z,564nm,19.2s,baz=81,slow=33						
WRA	Warramunga Arr	35.08	197	P	P	11 24 36.3	-0.6
	0.6nm,0.7s,baz=18,slow=9.3,SNR=9.3						
WRA				pP	pP	11 24 58.2	+0.4
	0.4nm,0.5s,baz=19,slow=9.4,SNR=2.9						
ASAR	Alice Springs	38.73	196	P	P	11 25 08.2	+0.2
	0.1nm,0.4s,baz=19,slow=9.5,SNR=6.3						
ASAR				pP	pP	11 25 29.5	+0.5
	0.3nm,0.7s,baz=23,slow=12,SNR=2.4						
STKA	Stephens Creek	45.50	184	P	P	11 26 02.1	-0.6
	1.0nm,0.6s,baz=346,slow=12,SNR=2.7						
MKAR	Makanchi Array	61.39	316	P	P	11 27 59.2	+0.3
	0.4nm,0.4s,baz=94,slow=8.6,SNR=9.9						
ILAR	Eielson Array	68.39	25	P	P	11 28 42.0	-2.0
	0.1nm,0.4s,baz=267,slow=6.0,SNR=3.9						
ILAR				pP	PcP	11 29 08.0	-0.9
	0.2nm,0.6s,baz=249,slow=5.6,SNR=2.9						
YKA	Yellowknife Ar	82.68	27	P	P	11 30 05.8	+0.2
	0.3nm,0.6s,baz=286,slow=5.1,SNR=6.0						
NVAR	Mina Array Bea	86.77	51	P	P	11 30 27.4	+0.3
	0.4nm,0.6s,baz=267,slow=6.0,SNR=3.9						
LPAZ	La Paz	148.01	99	PKPbc	PKPbc	11 37 30.4	+1.4
	0.9nm,0.4s,baz=264,slow=7.9,SNR=5.5						

*NIED **25** 11:26:00, 34.70N×137.80E, h29km, Mw4.4 Best double couple: M0 4.90000×10^15 NP1:φs 319.00000°, δ85.00000°, λ168.00000°. NP2:φs 50.00000°, δ78.00000°, λ6.00000°.*
*ISCJB **25** 11:26:20.8±0.3, 34.67N±0.03×137.83E±0.04, h37km±3km, mb3.8/17, MS3.5/10, Error ellipse: s-maj=5.0km s-min=4.7km az=23.0*
*JMA **25** 11:26:22.1±0.1, 34.72N×137.80E, h26km±1km, M4.7 Broadband fault plane solution: P waves. NP1: φs 49.00000°, δ84.00000°, λ16.00000°. NP2: φs 317.00000°, δ74.00000°, λ174.00000°. Principal axes: T Plg15.0000°, Azm274.0000°; N Plg73.0000°, Azm68.0000°; P Plg7.0000°, Azm182.0000°;*
JMA Felt III J1.
*IDC **25** 11:26:22.2±2.3, 34.64N×137.86E, h36km±20km, mb3.7/17, mb1 3.9/21, mb1mx3.8/31, mbtmp3.7/21, ML3.6/4, MS3.5/12, Ms1 3.5/12, ms1mx3.2/45 Error ellipse: s-maj=14.5km s-min=13.3km az=68.0*
ISC 25 11:26:21.5±0.7, 34.68N±0.03×137.85E±0.03, h30km±5km, n44, σ0s 99/50, mb3.9/17, MS3.5/10, 4C-4D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKKG	Kakegawa	0.15	45	P	Pb	11 26 27.0	0.0
JKKG				S	Sb	11 26 30.9	+0.1
JHMK	Hamakita	0.15	331	P	Pb	11 26 26.6	-0.5
JHMK				S	Sb	11 26 30.2	-0.7
HMMJ	Hamamatsu 2	0.20	329	⇓P	Pb	11 26 27.3	-0.4
HMMJ				S	Sb	11 26 31.4	-0.5
JSG	Sagara	0.28	91	⇑P	Pb	11 26 29.3	+0.7
JSG				S	Sn	11 26 35.7	+0.9
TK04	Tokai 4	0.30	176	P	Pb	11 26 29.6	+0.8
TK04				*e*S	Sn	11 26 36.3	+1.2
TTO5	TONANKAI O.B.S	0.44	194	⇓P	Pb	11 26 31.3	+0.4
SHZ3	Shizuoka 3	0.48	38	⇓P	Pb	11 26 31.4	-0.3
SHZ3				S	Sb	11 26 38.4	-0.3
TK03	Tokai 3	0.53	169	P	Pb	11 26 32.6	+0.4
JAA	Atsumi	0.58	265	⇑P	Pb	11 26 32.7	-0.6
JAA				S	Sb	11 26 41.0	-0.3
TK02	Tokai 2	0.74	186	P	Pb	11 26 34.8	-0.9
JIZS	Izushimoda	0.85	87	⇑P	Pn	11 26 35.7	-1.7
JIE	Ise	0.99	253	P	Pn	11 26 37.9	-1.4
JYN	Shimob	0.99	35	⇓P	Pn	11 26 39.2	-0.3
TTO2	TONANKAI O.B.S	1.16	216	P	Pn	11 26 40.6	-0.9
TSUJ	Tsu 2	1.18	272	⇑P	Pn	11 26 40.9	-1.0
MJAR	Matsushiro Arr	1.88	9	Pn	Pn	11 26 52.1	+0.4
	669nm,0.3s,baz=191,slow=14,SNR=1819						
MJAR				Sn	Sn	11 27 16.1	+1.7
	171nm,0.3s,baz=100,slow=34,SNR=3.0						
MAT	Matsushiro	1.88	9	P	Pn	11 26 52.3	+0.7
MAT				S	Sb	11 27 16.3	-2.0
JHJ	Hachijo jima 2	2.24	134	Pn	Pn	11 26 56.9	+0.3
	68nm,0.3s,baz=13,slow=4.4,SNR=22						
JHJ				Sn	Sn	11 27 21.6	-1.7
	135nm,0.3s,baz=79,slow=19,SNR=13						
JNU	Nakatsue	6.00	257	Pn	Pn	11 27 48.7	+0.4
	1.3nm,0.3s,baz=53,slow=8.4,SNR=15						
KSRS	Korea Array	8.50	292	Pn	Pn	11 28 22.9	+0.4
	0.5nm,0.3s,baz=116,slow=15,SNR=33						
KSRS				Sn	Sn	11 30 01.3	+3.9
	0.3nm,0.3s,baz=318,slow=21,SNR=1.8						
KSRS				LR	LR	11 31 42.2	
	comp=Z,271nm,20.2s,baz=248,slow=37						
ASAJ	Asahikawa	10.11	20	Pn	Pn	11 28 45.6	+1.1
	0.9nm,0.3s,baz=252,slow=6.0,SNR=4.4						
ASAJ				LR	LR	11 33 11.3	
	comp=Z,282nm,20.3s,baz=176,slow=40						
USRK	Ussuriysk Arra	10.52	336	Pn	Pn	11 28 54.2	+4.1
	0.2nm,0.3s,baz=155,slow=13,SNR=3.3						
GUMO	Guam	21.94	161	LR	LR	11 38 41.2	
	comp=Z,106nm,21.4s,baz=84,slow=34						
PETK	Petropavlovsk-	23.18	31	P	P	11 31 25.8	+0.2
	9.3nm,0.9s,baz=214,slow=6.8,SNR=10						
PETK				LR	LR	11 39 38.0	
	comp=Z,69nm,20.4s,baz=315,slow=34						
SONM	Songino Array	26.84	309	P	P	11 31 59.0	-0.5
	1.9nm,0.9s,baz=113,slow=6.4,SNR=9.9						
SONM				LR	LR	11 42 37.3	
	comp=Z,60nm,19.1s,baz=60,slow=36						
CMAR	Chiang Mai Arr	38.10	255	P	P	11 33 38.3	+0.4
	0.4nm,0.4s,baz=41,slow=7.2,SNR=3.5						
CMAR				LR	LR	11 51 35.2	
	comp=Z,81nm,18.4s,baz=35,slow=40						
ZALV	Zalesovo Beam	41.42	314	P	P	11 34 05.1	+0.1
	0.3nm,0.4s,baz=106,slow=3.1,SNR=3.0						
ZALV				PcP	PcP	11 36 01.8	-0.8
	0.4nm,0.3s,baz=108,slow=3.3,SNR=3.9						
MKAR	Makanchi Array	42.96	304	P	P	11 34 17.8	0.0
	1.2nm,0.6s,baz=93,slow=9.9,SNR=9.6						
MKAR				LR	LR	11 52 51.5	
	comp=Z,58nm,20.9s,baz=177,slow=37						
KURBB	Kurchatov Arra	45.21	309	P	P	11 34 34.9	-0.8
	2.2nm,0.9s,baz=89,slow=8.3,SNR=19						
KURBB				LR	LR	11 52 17.6	
	comp=Z,33nm,18.1s,baz=110,slow=34						
BVAR	Borovoye Array	50.04	313	P	P	11 35 13.1	0.0
	0.8nm,0.5s,baz=85,slow=7.9,SNR=4.0						
ILAR	Eielson Array	53.02	31	P	P	11 35 35.2	0.0
	2.8nm,1.0s,baz=277,slow=6.1,SNR=25						
WRA	Warramunga Arr	54.42	184	P	P	11 35 44.9	-1.1
	1.0nm,0.9s,baz=360,slow=7.5,SNR=7.7						
AKTO	Aktyubinsk	58.09	312	LR	LR	12 03 20.2	
	comp=Z,31nm,18.4s,baz=255,slow=38						
ASAR	Alice Springs	58.15	184	P	P	11 36 12.4	-0.1
	0.3nm,0.6s,baz=11,slow=12,SNR=9.5						
ARCES	ARCESS Array B	65.16	339	P	P	11 36 59.4	+0.1
	2.0nm,0.9s,baz=84,slow=11,SNR=4.4						
YKA	Yellowknife Ar	67.27	29	P	P	11 37 13.0	+0.1
	1.6nm,1.0s,baz=295,slow=6.7,SNR=14						
AFI	Afiamalu	67.97	126	LR	LR	11 59 45.9	
	comp=Z,73nm,21.4s,baz=210,slow=30						
FINES	FINESS Array B	69.52	332	P	P	11 37 27.1	+0.2
	1.1nm,0.6s,baz=31,slow=15,SNR=2.3						
NOA	NORSAR Array B	75.20	336	P	P	11 38 00.9	0.0
	1.0nm,0.9s,baz=54,slow=5.3,SNR=2.9						
BRTR	Keskin Array B	78.20	310	P	P	11 38 18.8	+0.4
	0.5nm,0.7s,baz=126,slow=7.3,SNR=3.1						
NVAR	Mina Array Bea	78.72	51	P	P	11 38 20.4	-0.9
	0.3nm,0.5s,baz=270,slow=5.4,SNR=3.5						
GERES	GERESS Array B	83.13	327	LR	LR	12 16 19.5	
	comp=Z,35nm,18.1s,baz=260,slow=36						
SCHQ	Schefferville	88.35	14	LR	LR	12 19 13.7	
	comp=Z,63nm,21.8s,baz=304,slow=36						
TXAR	Lajitas Array	93.85	50	P	P	11 39 36.9	+0.5
	0.3nm,0.6s,baz=295,slow=3.4,SNR=5.6						

IDC 25 11:35:15.1±2.3, 16.87S×178.08W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.7/19, mbtmp3.6/4, Error ellipse: s-maj=127.2km s-min=28.0km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.13	258	P	P	11 43 33.7	0.0
	0.5nm,0.5s,baz=96,slow=7.2,SNR=22						
ASAR	Alice Springs	45.38	253	P	P	11 43 35.5	-0.2
	2.5nm,0.7s,baz=87,slow=8.7,SNR=46						
ILAR	Eielson Array	84.81	13	P	P	11 47 50.5	-0.5
	0.2nm,0.8s,baz=181,slow=5.3,SNR=3.4						
TXAR	Lajitas Array	85.18	58	P	P	11 47 54.3	+0.5
	0.2nm,0.7s,baz=213,slow=6.5,SNR=3.2						

*AUST **25** 11:42:17.0±9.9, 5.20S×148.87E, h175km, Error ellipse: s-maj=7.2km s-min=1.5km az=244.0*
*ISCJB **25** 11:42:20.4±0.4, 5.64S±0.04×148.46E±0.07, h163km, mb4.0/15, Error ellipse: s-maj=9.5km s-min=5.7km az=18.3*
*NEIC **25** 11:42:21.5±1.2, 5.64S×148.49E, h161km±12km, mb4.5/2, Error ellipse: s-maj=11.0km s-min=9.1km az=123.0*
*IDC **25** 11:42:22.5±1.4, 5.71S×148.43E, h170km±13km, mb3.8/13, mb1 4.0/16, mb1mx3.9/22, mbtmp3.9/16, Error ellipse: s-maj=15.4km s-min=9.0km az=111.0*
ISC 25 11:42:21.8±0.5, 5.69S±0.06×148.48E±0.07, h163km, n52, σ0s 99/55, mb4.1/14, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.92	199	*e*Pn	Pn	11 43 21.3	-0.1
PMG				S	Sn	11 44 07.4	-0.5
PMG	Port Moresby	3.92	199	P	Pn	11 43 21.6	+0.2
	25nm,0.3s,baz=24,slow=5.8,SNR=35						
PMG				S	Sn	11 44 07.4	-0.5
	29nm,0.3s,baz=176,slow=23,SNR=7.2						
JAY	Jayapura	8.37	292	P	Pn	11 44 20.1	-0.1
	baz=8.6,SNR=6.2						
COEN	Coen	9.74	212	*e*Pn	Pn	11 44 38.3	0.0
COEN	Coen	9.74	212	P	Pn	11 44 40.4	+2.2
	baz=10,SNR=13						
COEN				S	Sn	11 46 24.3	-2.1
	baz=10,SNR=3.8						
HNR	Honiara	11.96	109	P	Pn	11 45 06.8	-0.5
HNR	Honiara	11.96	109	P	Pn	11 45 06.8	-0.5
	4.7nm,0.3s,baz=222,slow=15,SNR=3.1						
MTSU	Mount Surprise	13.02	198	P	P	11 45 28.6	+3.3
	baz=14,SNR=5.2						
CTAO	Charters Tower	14.48	188	Pn	Pn	11 45 39.0	-0.3
QIS	Mount Isa	17.11	209	P	Pn	11 46 12.6	+1.1
	baz=18,SNR=24						
KDU	Kakadu	17.26	245	P	P	11 46 11.8	-0.4
	baz=18,SNR=50						
SWI	Sorong	17.84	285	S	S	11 49 37.2	+1.8
	baz=18,SNR=37						
MTN	Manton Dam	18.53	246	P	P	11 46 26.3	+0.3
	baz=19,SNR=68						
WRAB	Tennant Creek	19.73	223	*e*P	P	11 46 39.2	+0.2
	33nm,0.6s						
WRA	Warramunga Arr	19.75	223	P	P	11 46 39.7	+0.5
WRA				S	S	11 50 12.6	-0.5
WRA	Warramunga Arr	19.75	223	P	P	11 46 39.7	+0.5
	5.4nm,0.3s,baz=49,slow=10,SNR=328						
WRA				S	S	11 50 12.6	-0.5
	0.1nm,0.3s,baz=48,slow=19,SNR=4.7						
KNRA	Kununurra	21.75	241	P	P	11 46 59.4	-1.2
	baz=22,SNR=31						
AS31	Alice Springs	22.73	217	*e*P	P	11 47 10.9	+0.8
ASAR	Alice Springs	22.73	217	P	P	11 47 11.0	+0.9
ASAR				S	S	11 51 04.3	-2.0
ASAR	Alice Springs	22.73	217	P	P	11 47 11.0	+0.9
	12nm,0.6s,baz=51,slow=8.9,SNR=285						
ASAR				S	S	11 51 04.3	-2.0
	0.5nm,0.7s,baz=41,slow=12,SNR=2.8						
DZM	Mont Dzumac	23.81	135	P	P	11 47 20.8	+0.8
DZM	Mont Dzumac	23.81	135	P	P	11 47 20.8	+0.8
	17nm,0.6s,baz=315,slow=23,SNR=16						
FITZ	Fitzroy Crossi	25.49	239	P	P	11 47 35.1	0.0
FITZ	Fitzroy Crossi	25.49	239	P	P	11 47 35.1	0.0
	23nm,0.4s,baz=58,slow=8.9,SNR=99						
FITZ	Fitzroy Crossi	25.49	239	P	P	11 47 35.1	0.0
	baz=26,SNR=144						
MEEK	Meekatharra	35.28	231	P	P	11 49 01.6	+0.3
	baz=36,SNR=21						
JNU	Nakatsue	42.06	338	P	P	11 49 57.7	+0.1
JNU	Nakatsue	42.06	338	P	P	11 49 57.7	+0.1
	5.0nm,0.7s,baz=230,slow=6.7,SNR=5.2						
RPZ	Rata Peaks	42.77	156	P	P	11 50 03.8	+0.6
RPZ	Rata Peaks	42.77	156	P	P	11 50 03.8	+0.6
	3.5nm,0.4s,baz=51,slow=21,SNR=5.6						
MJAR	Matsushiro Arr	43.09	348	P	P	11 50 06.3	+0.5
MJAR	Matsushiro Arr	43.09	348	P	P	11 50 06.3	+0.5
	1.3nm,0.9s,baz=185,slow=11,SNR=5.1						
MNAI	Manna	45.36	269	P	P	11 50 17.6	-6.6
	baz=46,SNR=5.6						
KSRS	Korea Array	47.01	338	P	P	11 50 37.4	+0.7
	0.9nm,0.6s,baz=153,slow=8.2,SNR=14						
KSAR	Wonju Array Be	47.01	337	P	P	11 50 37.4	+0.7
PETK	Petropavlovsk-	59.09	6	P	P	11 52 05.1	+0.3
PETK	Petropavlovsk-	59.09	6	P	P	11 52 05.1	+0.3
	3.3nm,0.5s,baz=160,slow=8.3,SNR=5.2						
SONM	Songino Array	64.86	330	P	P	11 52 44.2	+0.7
SONM	Songino Array	64.86	330	P	P	11 52 44.2	+0.7
	0.3nm,0.4s,baz=153,slow=6.0,SNR=3.0						
VNDA	Vanda	72.14	177	P	P	11 53 29.1	+1.0
VNDA	Vanda	72.14	177	P	P	11 53 29.1	+1.0
	1.4nm,0.7s,baz=322,slow=6.3,SNR=3.2						
MKAR	Makanchi Array	78.20	320	P	P	11 54 02.5	-0.8
MKAR	Makanchi Array	78.20	320	P	P	11 54 02.5	-0.8
	0.3nm,0.4s,baz=112,slow=6.1,SNR=2.4						
ZALV	Zalesovo Beam	79.54	327	P	P	11 54 08.3	-2.1
ZALV	Zalesovo Beam	79.54	327	P	P	11 54 08.3	-2.1
	0.0nm,0.5s,baz=120,slow=6.2,SNR=3.5						

IRIF				*e*S		**Sn**	11 51 50.2	+0.6
NNS	**Nan Shan**	**1.11**	**264**	P		**Pn**	11 51 34.6	+0.3
	baz=265							
NNS				*e*S		**Sn**	11 51 50.8	+0.2
	baz=265							
NSK	**Sanguang**	**1.12**	**276**	⇓*i*P		**Pn**	11 51 34.6	+0.3
	baz=276							
NSK				*i* S		**Sn**	11 51 50.8	+0.1
	baz=276							
TWS1	**Kuangyinshan**	**1.19**	**297**	*e*P		**Pn**	11 51 34.4	-0.6
	baz=296							
HATJ	**Hateruma jima**	**1.22**	**114**	*e*S		**Sn**	11 51 54.9	+2.2
WHF	**Hehuan Shan**	**1.27**	**251**	⇓P		**Pn**	11 51 36.6	+0.2
	baz=252							
WHF				S		**Sn**	11 51 54.3	-0.2
	baz=252							
ESL	**Shilin**	**1.29**	**235**	*e*P		**Pn**	11 51 35.8	-0.4
	baz=236							
ESL				*e*S		**Sn**	11 51 53.7	-0.3
	baz=236							
TWT	**Tachien**	**1.32**	**257**	*e*P		**Pn**	11 51 37.7	+0.9
	baz=258							
JKRS	**Kuro-shima**	**1.34**	**104**	P		**Pn**	11 51 37.1	+0.3
JKRS				*e*S		**Sn**	11 51 55.7	+0.6
JIJ	**Ishigaki jima**	**1.44**	**97**	P		**Pn**	11 51 37.7	-0.3
JIJ				*e*S		**Sn**	11 51 56.4	-0.8
NSTT	**Nanjuang**	**1.44**	**273**	*e*P		**Pn**	11 51 37.9	-0.2
	baz=273							
NSTT				*e*S		**Sn**	11 51 57.4	0.0
	baz=273							
EHY	**Hungye**	**1.56**	**228**	*e*P		**Pn**	11 51 39.0	-0.6
	baz=229							
EHY				*e*S		**Sn**	11 51 59.9	-0.1
	baz=229							
SMLT	**Sun Moon Lake**	**1.68**	**247**	*e*P		**Pn**	11 51 42.7	+1.6
	baz=247							
SMLT				*e*S		**Sn**	11 52 03.4	+0.6
	baz=247							
TWF1	**Yuli**	**1.68**	**225**	*e*P		**Pn**	11 51 41.0	-0.1
	baz=226							
TWF1				*e*S		**Sn**	11 52 02.1	-0.6
	baz=226							
TYC	**Yuchr**	**1.71**	**248**	*e*P		**Pn**	11 51 42.1	+0.8
	baz=248							
TYC				*e*S		**Sn**	11 52 02.8	-0.4
	baz=248							
CHKT	**Chengkung**	**1.83**	**218**	*e*P		**Pn**	11 51 42.3	-0.6
	baz=219							
CHKT				*e*S		**Sn**	11 52 04.8	-1.3
	baz=219							
YUS	**Yu-Shan**	**1.83**	**235**	*e*P		**Pn**	11 51 43.6	+0.1
	baz=236							
YUS				*e*S		**Sn**	11 52 06.6	-0.3
	baz=236							
JTJ	**Tarama**	**1.93**	**87**	P		**Pn**	11 51 43.9	-0.3
JTJ				*e*S		**Sn**	11 52 07.2	-1.1
ALS	**Alishan**	**1.93**	**238**	P		**Pn**	11 51 45.1	+0.6
	baz=238							
ALS				*e*S		**Sn**	11 52 09.1	+0.2
	baz=238							
ELDTW	**Lidau**	**1.98**	**227**	*e*P		**Pn**	11 51 45.0	0.0
	baz=227							
ELDTW				*e*S		**Sn**	11 52 08.8	-0.8
	baz=227							
CHN5	**Tsauling**	**1.99**	**242**	P		**Pn**	11 51 45.4	+0.4
	baz=242							
CHN5				S		**Sn**	11 52 10.9	+1.1
	baz=242							
CHN4	**Tsaushan**	**2.18**	**237**	*e*P		**Pn**	11 51 48.5	+1.0
	baz=237							
CHN4				*e*S		**Sn**	11 52 16.2	+2.0
	baz=237							
LAY	**Lan-yu**	**2.68**	**201**	*e*P		**Pn**	11 51 54.5	+0.3
	baz=202							
LAY				*e*S		**Sn**	11 52 23.9	-2.1
	baz=202							

*IDC **25** 11:57:11.4±4.6, 0.°69S×132.°79E, h0km, mb3.9/2,*
mb1 4.0/4, mb1mx3.6/22, mbtmp3.9/4, ML4.0/2, Error
ellipse: s-maj=96.6km s-min=52.5km az=89.0
*AUST **25** 11:57:18.1, 0.°98S×133.°00E, h15km*
*ISCJB **25** 11:57:20.4±1.0, 1.°25S±0.°07×132.°92E±0.°06, h33km,*
mb3.8/2, Error ellipse: s-maj=11.4km s-min=6.7km
az=37.5

ISC 25 11:57:21.4±1.3, **1.°14S**±0.°10×**132.°84E**±0.°09, **h35**km, **n13,**
σ2§20/15, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SWI	**Sorong**	**1.61**	**280**	P		**Pn**	**11 57 45.2**	**-2.0**
	baz=1.7,SNR=98							
SWI				S		**Sn**	**11 58 08.3**	**+1.5**
	baz=1.7,SNR=6.9							
FAKI	**Fak Fak**	**1.87**	**199**	P		Pn	11 57 54.3	+3.4
	baz=2.1,SNR=350							
FAKI				S		Sn	11 58 21.4	+8.1
	baz=2.1,SNR=9.7							
AAI	**Ambon**	**5.29**	**241**	P		**Pn**	**11 58 40.6**	**+2.6**
	baz=5.5,SNR=7.0							
JAY	**Jayapura**	**7.97**	**100**	P		**Pn**	**11 59 16.5**	**+1.6**
	baz=7.8,SNR=3.7							
LUWI	**Luwuk**	**10.07**	**270**	S		Sn	12 01 43.0	+7.5
	baz=10,SNR=5.4							
KDU	**Kakadu**	**11.48**	**182**	P		**Pn**	**12 00 04.6**	**+1.7**
	baz=12,SNR=17							
KDU				S		**Sn**	**12 02 08.1**	**-1.9**
	baz=12,SNR=5.9							
MTN	**Manton Dam**	**11.75**	**188**	P		**Pn**	**12 00 07.7**	**+1.0**
	baz=12,SNR=54							
MTN				S		**Sn**	**12 02 18.5**	**+1.7**
	baz=12,SNR=8.2							
KNRA	**Kununurra**	**15.00**	**195**	P		**Pn**	**12 00 50.0**	**-0.8**
	baz=15,SNR=26							
FITZ	**Fitzroy Crossi**	**18.29**	**202**	P		**P**	**12 01 31.0**	**-1.3**
	0.5nm,0.3s,baz=26,slow=12,SNR=21							
FITZ				S		Sn	12 04 48.7	-7.0
	0.3nm,0.3s,baz=114,slow=19,SNR=4.8							
FITZ	**Fitzroy Crossi**	**18.29**	**202**	P		**P**	**12 01 32.6**	**+0.2**
	baz=19,SNR=4.1							
WRA	**Warramunga Arr**	**18.75**	**176**	P		**P**	**12 01 37.5**	**0.0**
	0.3nm,0.3s,baz=352,slow=11,SNR=16							
WRA				S		**Sn**	**12 05 01.7**	**-5.2**
	0.3nm,0.3s,baz=355,slow=24,SNR=6.1							
ASAR	**Alice Springs**	**22.42**	**177**	P		**P**	**12 02 16.8**	**-0.5**
	1.7nm,0.6s,baz=1.5,slow=11,SNR=32							
ASAR				S		Sn	12 06 28.6	-6.6
	0.6nm,0.4s,baz=2.4,slow=24,SNR=5.3							
STKA	**Stephens Creek**	**31.67**	**166**	P		**P**	**12 03 40.3**	**-1.3**
	1.5nm,0.7s,baz=334,slow=10,SNR=2.9							

IDC 25 12:03:20.0±2.3, **6.°68S×129.°94E, h0**km, **mb3.6/1,**
mb1 4.0/4, mb1mx3.6/20, mbtmp3.8/4, ML4.0/3, MS2.8/1,
Ms1 2.8/1, ms1mx2.1/29, Error ellipse: s-maj=87.6km
s-min=28.9km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	**Fitzroy Crossi**	**12.10**	**200**	Pn		Pn	12 06 14.0	+0.2
	1.4nm,0.3s,baz=30,slow=14,SNR=24							
FITZ				Sn		Sn	12 08 17.8	-12
	0.8nm,0.3s,baz=150,slow=19,SNR=3.5							
WRA	**Warramunga Arr**	**13.86**	**162**	Pn		Pn	12 06 37.9	0.0
	0.7nm,0.3s,baz=346,slow=14,SNR=11							
WRA				Sn		Sn	12 09 00.4	-12
	1.4nm,0.3s,baz=330,slow=23,SNR=12							
ASAR	**Alice Springs**	**17.31**	**168**	P		Pn	12 07 23.2	-0.2
	0.4nm,0.3s,baz=336,slow=9.3,SNR=14							
ASAR				S		Sn	12 10 24.5	-12
	0.4nm,0.3s,baz=347,slow=27,SNR=7.7							
KSRS	**Korea Array**	**43.95**	**358**	LR		LR	12 29 52.1	
	comp=Z,14nm,21.5s,baz=215,slow=36							
MKAR	**Makanchi Array**	**67.93**	**327**	P		P	12 14 20.7	0.0
	0.4nm,0.5s,baz=119,slow=6.9,SNR=4.5							

*CSEM **25** 12:10:46.3±0.4, 39.°85N×41.°39E, h15km, MD2.7, Error*
ellipse: s-maj=10.3km s-min=5.5km az=131.0
*ISCJB **25** 12:10:47.8±0.6, 39.°94N±0.°03×41.°30E±0.°04, h11km±5km,*
Error ellipse: s-maj=6.3km s-min=4.4km az=40.4
*ISK **25** 12:10:47.7, 39.°97N×41.°33E, h12km, MD2.7*
*DDA **25** 12:10:48.2, 39.°99N×41.°38E, h6km, MD3.1*

ISC 25 12:10:47.8±1.1, **39.°97N**±0.°03×**41.°33E**±0.°03, **h9**km±8km,
n21, σ1§40/35, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EZM	**Erzurum**	**0.06**	**160**	PG		**Pg**	**12 10 50.4**	**+0.3**
HOMI	**Horasan**	**0.45**	**80**	*i* P		**Pg**	**12 10 56.3**	**-0.3**
HOMI				*i* S		**Sb**	**12 11 05.1**	**+0.2**
KOPT	**Kop Dagi**	**0.64**	**275**	*i* P		**Pb**	**12 11 01.7**	**+0.2**
KOPT				*i* S		**Sn**	**12 11 16.1**	**+2.1**
KOPT	**Kop Dagi**	**0.64**	**275**	*i* P		**Pb**	**12 11 01.7**	**+0.2**
KOPT				*i* S		**Sn**	**12 11 16.1**	**+2.1**
DDEM	**Demirkent**	**0.98**	**19**	*i* P		**Pg**	**12 11 05.9**	**-0.8**
DDEM				*i* S		**Sb**	**12 11 20.1**	**-0.1**
DDEM	**Demirkent**	**0.98**	**19**	*i* P		**Pg**	**12 11 05.9**	**-0.8**
DDEM				*i* S		**Sb**	**12 11 20.1**	**-0.1**
BAYT	**Ayd¨¬ntepe-Bay**	**1.01**	**295**	*e*PG		**Pg**	**12 11 07.6**	**+0.4**
BAYT				*e*SG		**Sb**	**12 11 21.7**	**+0.6**
BAYT	**Ayd¨¬ntepe-Bay**	**1.01**	**295**	*e*Pg		**Pg**	**12 11 07.6**	**+0.4**
BAYT				*e*Sg		**Sb**	**12 11 21.7**	**+0.6**
DBAD	**Bademkaya**	**1.09**	**15**	*i* P		**Pg**	**12 11 08.2**	**-0.5**
DBAD				*i* S		**Sn**	**12 11 24.0**	**-0.7**
DBAD	**Bademkaya**	**1.09**	**15**	*i* P		**Pg**	**12 11 08.2**	**-0.5**
DBAD				*i* S		**Sn**	**12 11 24.0**	**-0.7**
BNGB	**Bing¨¶l**	**1.10**	**208**	*e*PN		**Pg**	**12 11 09.1**	**+0.2**
BNGB				*e*SN		**Sn**	**12 11 24.9**	**0.0**
DAGI	**Agillar**	**1.20**	**22**	*i* S		**Sg**	**12 11 26.6**	**+0.3**
BINT	**Bingol**	**1.27**	**211**	*e*Pn		**Pn**	**12 11 09.1**	**-2.8**
BINT				*e*Sn		**Sb**	**12 11 24.9**	**-3.6**
TUTA	**Tutak**	**1.27**	**116**	*i* P		**Pg**	**12 11 12.4**	**+0.1**
TUTA				*i* S		**Sn**	**12 11 32.9**	**+3.5**
TUTA	**Tutak**	**1.27**	**116**	*i* P		**Pg**	**12 11 12.4**	**+0.1**
TUTA				*i* S		**Sn**	**12 11 32.9**	**+3.5**
ERZN	**Erzincan**	**1.30**	**254**	*e*PN		**Pn**	**12 11 12.2**	**-0.1**
ARTV	**Artvin**	**1.30**	**20**	*i* P		**Pn**	**12 11 11.5**	**-1.0**
ARTV				*i* S		**Sn**	**12 11 30.3**	**+0.2**
ARTV	**Artvin**	**1.30**	**20**	*i* P		**Pn**	**12 11 11.5**	**-1.0**
ARTV				*i* S		**Sn**	**12 11 30.3**	**+0.2**
BCA	**Borcka**	**1.49**	**8**	*e*PN		**Pn**	**12 11 14.9**	**0.0**
BCA	**Borcka**	**1.49**	**8**	*e*Pn		**Pn**	**12 11 14.9**	**0.0**
EZC	**Erzincan**	**1.54**	**263**	*e*Pn		Pn	12 11 12.3	-3.3

*TIR **25** 12:55:26.9, 41.°33N×22.°71E, h80km*
*ISCJB **25** 12:55:27.6±0.6, 41.°23N±0.°02×22.°75E±0.°03, h0km±5km,*
Error ellipse: s-maj=4.1km s-min=3.6km az=176.8
*ATH **25** 12:55:28.6, 41.°27N×22.°71E, h20km±1km, MD2.9/8*
*CSEM **25** 12:55:28.8±0.1, 41.°25N×22.°71E, h2km, ML2.5, Error*
ellipse: s-maj=3.4km s-min=3.1km az=80.0
*SKO **25** 12:55:28.6, 41.°24N×22.°72E, h15km, M2.0, ML2.3*
*SOF **25** 12:55:28.3, 41.°27N×22.°71E, h9km, MD2.8*
*BEO **25** 12:55:29.9±0.6, 41.°29N×22.°66E, h3km±2km, ML2.5/7*

ISC 25 12:55:29.0±0.9, **41.°27N**±0.°02×**22.°72E**±0.°02, **h6**km±8km,
n56, σ0§64/89, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.12**	**293**	⇑*i*Pg		**Pg**	**12 55 31.2**	**-0.3**
VAY				*e*Lg		Lg	12 55 33.1	
	comp=E,985nm,0.3s							
VAY				*i* Sg		**Sg**	**12 55 33.2**	**0.0**
VAY				*e*Lg		Lg	12 55 33.2	
	comp=N,2μm,0.3s							
VAY	**Valandovo**	**0.12**	**293**	⇑*i*Pg		**Pg**	**12 55 31.7**	**+0.2**
VAY				*e*Sg		**Sg**	**12 55 33.1**	**0.0**
VAY				*e*Lg		Lg	12 55 33.7	
	comp=N,2μm,0.3s							
GRG	**Griva**	**0.40**	**217**	*e*PB		**Pg**	**12 55 36.8**	**+0.2**
GRG				*e*SB		**Sg**	**12 55 42.0**	**+0.2**
GRG	**Griva**	**0.40**	**217**	*e*Pb		**Pg**	**12 55 36.8**	**+0.2**
GRG				*e*Sb		**Sg**	**12 55 42.0**	**+0.2**
KKB	**Krupnik**	**0.65**	**25**	*i* Pg		**Pg**	**12 55 41.5**	**0.0**
KKB	**Krupnik**	**0.65**	**25**	*i* Pg		**Pg**	**12 55 41.5**	**0.0**
SOH	**Sokhos**	**0.66**	**133**	*e*PN		**Pg**	**12 55 41.6**	**0.0**
SOH				*e*SN		**Sg**	**12 55 50.8**	**+0.6**
SOH	**Sokhos**	**0.66**	**133**	*e*Pn		**Pg**	**12 55 41.6**	**0.0**
SOH				*e*Sn		**Sg**	**12 55 50.8**	**+0.6**
MMB	**Musomiste**	**0.82**	**67**	*i* Pg		**Pg**	**12 55 44.9**	**+0.1**
MMB	**Musomiste**	**0.82**	**67**	*i* Pg		**Pg**	**12 55 44.9**	**+0.1**
NVR	**Nevrokopi**	**0.86**	**85**	*e*PN		**Pg**	**12 55 45.5**	**-0.1**
NVR				*e*SN		**Sg**	**12 55 57.1**	**+0.3**
NVR	**Nevrokopi**	**0.86**	**85**	*e*Pn		**Pg**	**12 55 45.5**	**-0.1**
NVR				*e*Sn		**Sg**	**12 55 57.1**	**+0.3**
PLG	**Polygyros**	**1.05**	**148**	*e*PN		**Pg**	**12 55 48.9**	**-0.3**
PLG				*e*SN		**Sb**	**12 56 03.3**	**-0.5**
PLG	**Polygyros**	**1.05**	**148**	*e*Pn		**Pg**	**12 55 48.9**	**-0.3**
PLG				*e*Sn		**Sb**	**12 56 03.3**	**-0.5**
BIA	**Bitola**	**1.08**	**257**	*i* Pg		**Pn**	**12 55 50.4**	**-0.4**
BIA				*i* Sg		**Sb**	**12 56 04.2**	**-0.5**
BIA	**Bitola**	**1.08**	**257**	*i* Pg		**Pn**	**12 55 50.4**	**-0.4**
BIA				*i* Sg		**Sb**	**12 56 04.1**	**-0.5**
FNA	**Florina**	**1.13**	**245**	*e*PN		**Pg**	**12 55 50.1**	**-0.5**
FNA	**Florina**	**1.13**	**245**	*e*Pn		**Pg**	**12 55 50.1**	**-0.5**
LIT	**Litokhoron**	**1.18**	**188**	*e*PN		**Pg**	**12 55 51.0**	**-0.7**
LIT				*e*SN		**Sb**	**12 56 07.2**	**-0.3**
LIT	**Litokhoron**	**1.18**	**188**	*e*Pn		**Pg**	**12 55 51.0**	**-0.7**
LIT				*e*Sn		**Sb**	**12 56 07.2**	**-0.3**
SKO	**Skopje**	**1.19**	**307**	*i* Pn		**Pn**	**12 55 53.1**	**+0.9**
SKO				*i* Sn		**Sn**	**12 56 09.1**	**+0.4**
SKO				*e*Lg		Lg	12 56 10.7	
	comp=N,63nm,0.5s							
SKO				*e*Lg		Lg	12 56 13.7	
	comp=E,49nm,0.6s							
SKO	**Skopje**	**1.19**	**307**	*i* Pn		**Pn**	**12 55 53.5**	**+1.3**
SKO				*e*Lg		Lg	12 56 14.2	
	comp=E,49nm,0.6s							
KZN	**Kozani**	**1.20**	**217**	*e*PN		**Pg**	**12 55 51.8**	**-0.2**
KZN				*e*SN		**Sb**	**12 56 08.3**	**+0.2**
KZN	**Kozani**	**1.20**	**217**	*e*Pn		**Pg**	**12 55 51.8**	**-0.2**
KZN				*e*Sn		**Sb**	**12 56 08.3**	**+0.2**
VTS	**Vitosha**	**1.37**	**15**	*e*Pg		**Pg**	**12 55 55.2**	**0.0**
VTS				*e*Sg		**Sn**	**12 56 13.1**	**-0.3**
VTS	**Vitosha**	**1.37**	**15**	P		**Pb**	**12 55 55.1**	**0.0**
VTS				Pg		**Pg**	**12 55 56.1**	**+0.9**
VTS	**Vitosha**	**1.37**	**15**	*e*Pg		**Pg**	**12 55 55.2**	**0.0**
VTS				*e*Sg		**Sn**	**12 56 13.1**	**-0.3**
PAIG	**Paliouri**	**1.53**	**151**	*e*PN		**Pn**	**12 55 56.9**	**0.0**
PAIG				*e*SN		**Sb**	**12 56 17.6**	**+0.2**
PAIG	**Paliouri**	**1.53**	**151**	*e*Pn		**Pn**	**12 55 56.9**	**0.0**
PAIG				*e*Sn		**Sb**	**12 56 17.6**	**+0.2**
RZN	**Rozhen**	**1.56**	**74**	P		**Pb**	**12 55 58.5**	**+0.1**
RZN	**Rozhen**	**1.56**	**74**	P		**Pb**	**12 55 58.5**	**+0.1**
KBN	**Korca**	**1.60**	**247**	*i* PN		**Pg**	**12 56 01.4**	**+1.8**
KBN	**Korca**	**1.60**	**247**	*i* Pn		**Pg**	**12 56 01.4**	**+1.8**
PGB	**Panagyurishte**	**1.67**	**40**	P		**Pg**	**12 56 00.7**	**-0.3**
PGB	**Panagyurishte**	**1.67**	**40**	P		**Pg**	**12 56 00.7**	**-0.3**
BARS	**Barje**	**1.68**	**337**	*e*Pn		**Pn**	**12 55 59.1**	**+0.1**
BARS				*e*Sg		**Sg**	**12 56 23.3**	**+0.3**
BARS	**Barje**	**1.68**	**337**	*e*Pn		**Pn**	**12 55 59.1**	**+0.1**
BARS				*e*Sg		**Sg**	**12 56 23.3**	**+0.3**
PLD	**Plovdiv**	**1.70**	**60**	*e*Pn		**Pg**	**12 56 01.2**	**-0.4**
PLD				*e*Sg		**Sg**	**12 56 24.7**	**+1.0**
PLD	**Plovdiv**	**1.70**	**60**	*e*P		**Pg**	**12 56 02.4**	**+0.8**
PLD	**Plovdiv**	**1.70**	**60**	*e*Pn		**Pg**	**12 56 01.2**	**-0.4**
PLD	**Plovdiv**	**1.70**	**60**	*e*P		**Pg**	**12 56 02.4**	**+0.8**
PLD				*e*Sg		**Sg**	**12 56 24.7**	**+1.0**
PHP	**Peshkopia**	**1.76**	**284**	*i* PN		**Pg**	**12 56 00.3**	**+0.2**
PHP				*i* SN		**Sb**	**12 56 24.3**	**+0.2**
PHP	**Peshkopia**	**1.76**	**284**	*i* Pn		**Pn**	**12 56 00.3**	**+0.2**
PHP				*i* Sn		**Sb**	**12 56 24.3**	**+0.2**
ZAPS	**Zavoj**	**2.00**	**358**	*e*Pn		**Pb**	**12 56 04.9**	**-0.9**
MPEP	**Malo Peshtene**	**2.21**	**20**	Pg		**Pg**	**12 56 10.9**	**-0.5**
PUK	**Puka**	**2.25**	**291**	*i* PN		**Pn**	**12 56 08.2**	**+1.3**
PUK	**Puka**	**2.25**	**291**	*i* Pn		**Pn**	**12 56 08.2**	**+1.3**
SELS	**Selova**	**2.28**	**329**	*e*Pn		**Pn**	**12 56 07.9**	**+0.7**
SELS				*e*Sg		**Sg**	**12 56 40.7**	**-1.5**
AOS	**Alonnisos**	**2.28**	**157**	*e*PB		**Pn**	**12 56 06.8**	**-0.4**
AOS	**Alonnisos**	**2.28**	**157**	*e*Pb		**Pn**	**12 56 06.8**	**-0.4**
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn		**Pn**	**12 56 12.6**	**+0.8**
BOLS				*e*Sg		**Sg**	**12 56 51.0**	**-2.0**
BOLS	**Boljevac**	**2.62**	**348**	*e*Pn		**Pn**	**12 56 12.6**	**+0.8**
BOLS				*e*Sg		**Sg**	**12 56 51.0**	**-2.0**
GRUS	**Gruza**	**3.00**	**331**	*e*Pn		**Pn**	**12 56 17.3**	**+0.2**
GRUS				*e*Sg		**Sg**	**12 57 05.4**	**0.0**
GRUS	**Gruza**	**3.00**	**331**	*e*Pn		**Pn**	**12 56 17.3**	**+0.2**
GRUS				*e*Sg		**Sg**	**12 57 05.4**	**0.0**
DIVS	**Divibare**	**3.46**	**325**	*e*Pn		**Pn**	**12 56 23.8**	**+0.2**
DIVS	**Divibare**	**3.46**	**325**	*e*Pn		**Pn**	**12 56 23.8**	**+0.2**

ATH 25 12:57:12.9, 38.°08N×23.°61E, h11km±2km, **MD2.4/5, ML1.4,**
Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ATH	**Athens Observa**	**0.14**	**142**	*e*PG		Pg	12 57 16.1	0.0
ATH				*e*SG		Sg	12 57 18.3	-0.1
ATH	**Athens Observa**	**0.14**	**142**	*e*Sg		Sg	12 57 18.3	-0.1
PTL	**Penteli**	**0.20**	**99**	*e*PG		Pg	12 57 16.8	-0.5
PTL				*e*SG		Sg	12 57 20.2	-0.1
PTL	**Penteli**	**0.20**	**99**	*e*Sg		Sg	12 57 20.2	-0.1
NAIG	**Nisos Aigina**	**0.34**	**197**	*e*PG		Pg	12 57 19.5	-0.1
LTK	**Loutraki**	**0.51**	**264**	*e*PB		Pg	12 57 22.9	0.0
LTK				*e*SB		Sg	12 57 30.2	+0.5
DID	**Didima**	**0.65**	**207**	*e*PB		Pg	12 57 25.3	-0.2
DID				*e*SB		Sb	12 57 34.8	-0.5
KLV	**Kalavryta, Ach**	**1.15**	**269**	*e*PN		Pb	12 57 34.6	-0.3

*ATH **25** 12:57:14.9, 38.°84N×22.°70E, h33km, MD2.6/3*
*ISCJB **25** 12:57:16.4±0.6, 38.°86N±0.°03×22.°59E±0.°04, h23km±5km,*
Error ellipse: s-maj=5.7km s-min=5.6km az=140.0
*THE **25** 12:57:16.7, 38.°87N×22.°60E, h16km±1km, ML2.2/4, Error*
ellipse: s-maj=1.5km s-min=0.7km az=77.0
*CSEM **25** 12:57:17.1±0.2, 38.°86N×22.°59E, h2km, MD2.6, Error*
ellipse: s-maj=4.6km s-min=3.5km az=137.0

ISC 25 12:57:16.7±1.0, **38.°87N**±0.°03×**22.°60E**±0.°03, **h14**km±6km,
n22, σ0§46/44, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AXAR	**Agios Charalam**	**0.11**	**155**	P		**Pg**	**12 57 19.7**	**-0.3**
AXAR				S		**Sg**	**12 57 22.4**	**+0.2**
AXAR	**Agios Charalam**	**0.11**	**155**	P		**Pg**	**12 57 19.7**	**-0.3**
AXAR				S		**Sg**	**12 57 22.4**	**+0.2**
AGG	**Agios Georgios**	**0.26**	**307**	P		**Pg**	**12 57 21.9**	**-0.5**
AGG				S		**Sg**	**12 57 26.5**	**+0.3**
AGG	**Agios Georgios**	**0.26**	**307**	P		**Pg**	**12 57 21.9**	**-0.5**
AGG				S		**Sg**	**12 57 26.5**	**+0.3**
ATAL	**Atalanti**	**0.37**	**118**	P		**Pg**	**12 57 24.1**	**-0.2**
ATAL				S		**Sb**	**12 57 30.3**	**-0.4**
ATAL	**Atalanti**	**0.37**	**118**	P		**Pg**	**12 57 24.1**	**-0.2**
ATAL				S		**Sb**	**12 57 30.3**	**-0.4**
MAKR	**Makrakomi, Fth**	**0.39**	**292**	P		**Pg**	**12 57 24.4**	**-0.3**
MAKR				S		**Sb**	**12 57 31.3**	**-0.1**
MAKR	**Makrakomi, Fth**	**0.39**	**292**	P		**Pg**	**12 57 24.4**	**-0.3**
MAKR				S		**Sb**	**12 57 31.3**	**-0.1**
DSF	**Desfina**	**0.46**	**187**	P		**Pg**	**12 57 25.6**	**-0.2**
DSF				S		**Sb**	**12 57 33.4**	**+0.2**
DSF	**Desfina**	**0.46**	**187**	P		**Pg**	**12 57 25.6**	**-0.2**
DSF				S		**Sb**	**12 57 33.4**	**+0.2**
KALE	**Kalithea**	**0.59**	**217**	P		**Pg**	**12 57 28.0**	**-0.4**
KALE				S		**Sb**	**12 57 37.5**	**+0.3**
KALE	**Kalithea**	**0.59**	**217**	*e*PN		**Pg**	**12 57 28.0**	**-0.4**
KALE				*e*SN		**Sb**	**12 57 37.2**	**0.0**
KALE	**Kalithea**	**0.59**	**217**	*e*Pn		**Pg**	**12 57 28.0**	**-0.4**
KALE				*e*Sn		**Sb**	**12 57 37.2**	**0.0**
KALE				S		**Sb**	**12 57 37.5**	**+0.3**
TRIZ	**Trizonia**	**0.65**	**220**	P		**Pg**	**12 57 28.9**	**-0.5**
TRIZ				S		**Sb**	**12 57 39.2**	**+0.6**
TRIZ	**Trizonia**	**0.65**	**220**	*e*PN		**Pg**	**12 57 28.8**	**-0.6**
TRIZ				*e*SN		**Sb**	**12 57 39.2**	**+0.6**
TRIZ	**Trizonia**	**0.65**	**220**	P		**Pg**	**12 57 28.9**	**-0.5**
TRIZ				*e*Sn		**Sb**	**12 57 39.2**	**+0.6**
XOR	**Xorichti**	**0.68**	**43**	P		**Pb**	**12 57 30.5**	**+0.1**
XOR				S		**Sb**	**12 57 39.9**	**+0.2**
XOR	**Xorichti**	**0.68**	**43**	P		**Pb**	**12 57 30.5**	**+0.1**
XOR				S		**Sb**	**12 57 39.9**	**+0.2**
EFP	**Efpalio**	**0.70**	**231**	P		**Pg**	**12 57 29.2**	**-1.1**
EFP				S		**Sb**	**12 57 40.7**	**+0.6**
EFP	**Efpalio**	**0.70**	**231**	*e*PN		**Pg**	**12 57 29.8**	**-0.5**
EFP				*e*SN		**Sb**	**12 57 40.7**	**+0.6**
EFP	**Efpalio**	**0.70**	**231**	P		**Pg**	**12 57 29.2**	**-1.1**
EFP	**Efpalio**	**0.70**	**231**

	128nm,29.8s					
PPT	**Papeete**	**72.02 266**	LR	LR	14 03 36.2	
	comp=Z,131nm,19.0s,baz=163,slow=28					
DBIC	**Dimbokro**	**80.75 62**	LR	LR	14 12 24.5	
	comp=Z,51nm,20.9s,baz=78,slow=31					
AFI	**Afiamalu**	**86.63 249**	LR	LR	14 14 13.1	
	comp=Z,66nm,18.6s,baz=113,slow=30					
DZM	**Mont Dzumac**	**89.33 227**	eLR	LR	14 11 48.1	
	178nm,32.0s					
TORD	**Torodi Ar. Bea**	**89.51 64**	LR	LR	14 17 55.4	
	comp=Z,51nm,18.6s,baz=155,slow=32					
TXAR	**Lajitas Array**	**92.46 328**	P	**P**	**13 43 34.8**	**+1.1**
TXAR	**Lajitas Array**	**92.46 328**	P	**P**	**13 43 34.8**	**+1.1**
	1.0nm,0.9s,baz=148,slow=7.2,SNR=7.7					
TXAR			LR	LR	14 19 27.3	
	comp=Z,75nm,18.0s,baz=0.0,slow=32					
KMBO	**Kilima Mbogo**	**95.99 102**	LR	LR	14 20 58.3	
	comp=Z,79nm,20.9s,baz=95,slow=32					
YKA	**Yellowknife Ar**	**125.78 334**	PKP	**PKPdf**	**13 49 22.4**	**-0.7**
YKA	**Yellowknife Ar**	**125.78 334**	PKP	**PKPdf**	**13 49 22.4**	**-0.7**
	0.4nm,0.7s,baz=148,slow=2.1,SNR=8.5					
ILAR	**Eielson Array**	**136.70 322**	PKP	**PKPdf**	**13 49 44.3**	**+0.5**
ILAR	**Eielson Array**	**136.70 322**	PKP	**PKPdf**	**13 49 44.3**	**+0.5**
	0.7nm,0.7s,baz=170,slow=2.0,SNR=7.7					

IDC ***25*** *13:44:18.2±1.5, 11°.50S×161°.82E, h0km, mb3.8/6, mb1 4.0/8, mb1mx3.8/22, mbtmp3.9/8, ML3.9/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/29, Error ellipse: s-maj=34.0km s-min=24.6km az=101.0*

ISCJB ***25*** *13:44:21.5±1.0, 11°.47S±0°.08×161°.9E±0°.1, h39km, mb3.6/6, MS2.7/1, Error ellipse: s-maj=19.3km s-min=9.7km az=153.5*

AUST ***25*** *13:44:24.8, 11°.26S×161°.44E, h5km*

ISC 25 13:44:22.6±1.1, 11°.47S±0°.09×162°.0E±0°.1, h39km, n16, σ2ˢ03°17, mb3.6/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.88**	**315**	Pn	**Pn**	**13 45 04.7**	**-1.2**
	12nm,0.3s,baz=135,slow=4.4,SNR=12						
HNR				Sn	**Sn**	**13 45 36.0**	**-3.2**
	38nm,0.3s,baz=195,slow=14,SNR=5.6						
DZM	**Mont Dzumac**	**11.36**	**159**	Pn	**Pn**	**13 47 03.0**	**+0.6**
	1.2nm,0.3s,baz=331,slow=20,SNR=36						
DZM				Sn	**Sn**	**13 49 03.9**	**-4.3**
	0.2nm,0.3s,baz=60,slow=20,SNR=2.3						
DZM				LR	LR	13 50 19.3	
	comp=Z,115nm,20.8s,baz=58,slow=32						
MTSU	**Mount Surprise**	**18.34**	**247**	P	**Pn**	**13 48 37.1**	**+3.0**
	baz=18,SNR=5.5						
COEN	**Coen**	**18.55**	**260**	P	**Pn**	**13 48 39.4**	**+2.8**
	baz=18,SNR=18						
RMQ	**Roma**	**19.48**	**218**	P	**Pn**	**13 48 49.1**	**+1.4**
	baz=19,SNR=4.3						
JAY	**Jayapura**	**22.93**	**291**	P	**P**	**13 49 22.7**	**-0.9**
	baz=22,SNR=5.8						
STKA	**Stephens Creek**	**27.70**	**220**	P	**P**	**13 50 07.2**	**0.0**
	1.4nm,0.9s,baz=63,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**27.91**	**249**	P	**P**	**13 50 08.4**	**-0.9**
	1.1nm,0.7s,baz=78,slow=9.6,SNR=10						
ASAR	**Alice Springs**	**29.35**	**242**	P	**P**	**13 50 21.1**	**-1.0**
	1.3nm,0.8s,baz=71,slow=9.5,SNR=20						
KNRA	**Kununurra**	**32.58**	**259**	P	**P**	**13 50 50.2**	**-0.3**
	baz=32,SNR=4.9						
FITZ	**Fitzroy Crossi**	**35.74**	**255**	P	**P**	**13 51 17.0**	**-1.0**
	1.1nm,0.7s,baz=69,slow=6.9						
FITZ	**Fitzroy Crossi**	**35.74**	**255**	P	**P**	**13 51 17.3**	**-0.7**
	baz=35,SNR=3.2						
MEEK	**Meekatharra**	**43.48**	**243**	P	**P**	**13 52 22.8**	**+0.4**
	baz=43,SNR=6.1						
KSRS	**Korea Array**	**58.24**	**328**	LR	LR	14 17 30.8	
	comp=Z,6.9nm,21.2s,baz=145,slow=34						
SONM	**Songino Array**	**76.89**	**325**	P	**P**	**13 56 12.2**	**+1.3**
	0.5nm,0.7s,baz=131,slow=5.9,SNR=2.9						
ILAR	**Eielson Array**	**85.11**	**20**	P	**P**	**13 56 55.7**	**+1.6**
	0.1nm,0.5s,baz=250,slow=5.4,SNR=3.9						

ISCJB ***25*** *13:52:36.0±0.5, 2°.35N±0°.05×128°.42E±0°.06, h250km, mb3.8/9, Error ellipse: s-maj=8.6km s-min=7.5km az=165.5*

IDC ***25*** *13:52:36.2±1.8, 2°.34N×128°.65E, h233km±17km, mb3.5/10, mb1 3.7/10, mb1mx3.5/23, mbtmp3.5/10, Error ellipse: s-maj=24.4km s-min=8.8km az=82.0*

DJA ***25*** *13:52:36.6±0.9, 3°.N±9'×12°.8E±', h220km±4km, M4.3/7, mb4.4/5, mB4.6/2, MLv4.2/7, Mw(mB)3.8/2*

ISC 25 13:52:37.5±0.7, 2°.31N±0°.07×128°.40E±0°.09, h250km, n22, σ1ˢ75°26, mb3.9/9, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**0.77**	**233**	P	**Pn**	**13 53 09.0**	**-2.4**
GAMI				S	**S**	**13 53 32.6**	**-5.4**
TNTI	**Ternate**	**1.84**	**214**	P	**Pn**	**13 53 17.2**	**-1.4**
TNTI				S	**S**	**13 53 48.9**	**-2.1**
LBMI	**Labuha**	**3.06**	**197**	P	**Pn**	**13 53 30.8**	**+0.1**
MNI	**Manado**	**3.66**	**257**	P	Pn	13 53 35.2	-2.2
MNI				S	**S**	**13 54 23.8**	**-1.1**
SWI	**Sorong**	**4.25**	**138**	P	**Pn**	**13 53 43.6**	**-0.7**
KMSI	**Cibinong**	**4.75**	**249**	P	Pn	13 53 43.0	-7.2
MSAI	**Masohi**	**5.64**	**175**	P	Pn	13 54 03.2	+2.0
	27nm,0.9s,1μm0.1nm						
CTBH	**Cotabato--PC H**	**6.40**	**320**	⇑*i*P	**Pn**	**13 54 08.8**	**-1.8**
FAKI	**Fak Fak**	**6.46**	**143**	P	**Pn**	**13 54 10.8**	**-0.6**
	85nm,0.9s,0.3nm						
TTSI	**Tana Toraja**	**10.10**	**238**	P	**Pn**	**13 54 57.7**	**+0.4**
	41nm,0.6s						
SPSI	**Sidrap Palu**	**10.64**	**234**	P	**Pn**	**13 55 04.8**	**+0.6**
	24nm,0.8s,350nm						
FITZ	**Fitzroy Crossi**	**20.46**	**188**	P	**P**	**13 56 56.5**	**-0.1**
	2.7nm,0.5s,baz=16,slow=7.3,SNR=18						
WRA	**Warramunga Arr**	**22.87**	**166**	P	**P**	**13 57 19.0**	**-0.5**
	9.2nm,0.6s,baz=345,slow=10,SNR=48						
WRA				S	**S**	**14 01 13.1**	**+2.9**
	1.5nm,0.9s,baz=346,slow=16,SNR=3.4						
WRA				ScP	**ScP**	**14 04 17.4**	**+1.2**
	0.4nm,0.7s,baz=347,slow=3.0,SNR=4.6						
ASAR	**Alice Springs**	**26.37**	**169**	P	**P**	**13 57 51.1**	**0.0**
	4.5nm,0.6s,baz=355,slow=8.2,SNR=122						
ASAR				S	**S**	**14 02 04.5**	**-1.1**
	1.1nm,1.0s,baz=354,slow=21,SNR=5.0						
ASAR				ScP	**ScP**	**14 04 26.9**	**+0.9**
	0.6nm,0.7s,baz=353,slow=2.6,SNR=6.2						
CMAR	**Chiang Mai Arr**	**33.03**	**301**	P	**P**	**13 58 52.3**	**+2.5**
	1.2nm,0.8s,baz=118,slow=6.3,SNR=6.7						
KSRS	**Korea Array**	**34.98**	**359**	P	**P**	**13 59 06.4**	**+0.2**
	1.0nm,0.5s,baz=173,slow=9.9,SNR=8.3						
MJAR	**Matsushiro Arr**	**35.25**	**14**	P	**P**	**13 59 07.0**	**-1.5**
	3.0nm,0.8s,baz=189,slow=9.6,SNR=11						
STKA	**Stephens Creek**	**36.23**	**161**	P	**P**	**13 59 17.0**	**+0.1**
	4.6nm,0.5s,baz=340,slow=7.6,SNR=28						
PETK	**Petropavlovsk-**	**56.13**	**21**	P	**P**	**14 01 51.0**	**0.0**
	3.0nm,0.8s,baz=181,slow=3.7,SNR=5.6						
MKAR	**Makanchi Array**	**59.67**	**325**	P	**P**	**14 02 16.9**	**+1.2**
	0.4nm,0.4s,baz=113,slow=7.8,SNR=8.8						
ILAR	**Eielson Array**	**85.66**	**25**	P	**P**	**14 04 48.2**	**+0.4**
	0.2nm,0.5s,baz=243,slow=4.7,SNR=10						
TORD	**Torodi Ar. Bea**	**124.94**	**288**	PKP	**PKPdf**	**14 11 08.7**	**-0.2**
	0.5nm,1.0s,baz=42,slow=1.7,SNR=2.7						

ISK ***25*** *13:54:06.2, 41°.37N×35°.88E, h5km, MD2.6*

DDA ***25*** *13:54:06.1, 41°.43N×35°.92E, h13km, MD2.9*

CSEM ***25*** *13:54:07.2±0.3, 41°.40N×35°.92E, h2km, MD2.6, Error ellipse: s-maj=8.4km s-min=4.0km az=26.0*

ISC 25 13:54:05.4±1.2, 41°.42N±0°.04×35°.93E±0°.02, h13km±10km, n28, σ0ˢ84°45, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KVT	**Kavak**	**0.35**	**165**	*e*PG	**Pb**	**13 54 13.8**	**+0.3**
KVT				*e*SG	**Sb**	**13 54 19.1**	**+0.2**
KVT	**Kavak**	**0.35**	**165**	*e*Pg	**Pb**	**13 54 13.8**	**+0.3**
KVT				*e*Sg	**Sb**	**13 54 19.1**	**+0.2**
DIKM	**Dikmen**	**0.55**	**295**	*e*PG	**Pn**	**13 54 18.2**	**-0.7**
DIKM				*e*SG	**Sn**	**13 54 26.8**	**-1.2**
DIKM	**Dikmen**	**0.55**	**295**	*e*Pg	**Pn**	**13 54 18.2**	**-0.7**
DIKM				*e*Sg	**Sn**	**13 54 26.8**	**-1.2**
BYBT	**Boyabat**	**0.87**	**274**	*e*PG	**Pn**	**13 54 22.8**	**-0.5**
BYBT				*e*SG	**Sn**	**13 54 36.3**	**+0.4**
BYBT	**Boyabat**	**0.87**	**274**	*e*Pg	**Pn**	**13 54 22.8**	**-0.5**
BYBT				*e*Sg	**Sn**	**13 54 36.3**	**+0.4**
ERBA	**Erbaa**	**0.97**	**139**	*i* P	**Pn**	**13 54 25.5**	**+0.8**
ERBA				*i* S	**Sn**	**13 54 38.9**	**+0.6**
ERBA	**Erbaa**	**0.97**	**139**	*i* P	**Pn**	**13 54 25.5**	**+0.8**
ERBA				*i* S	**Sn**	**13 54 38.9**	**+0.6**
CTKT	**Corum**	**1.17**	**228**	*i* P	**Pg**	**13 54 27.9**	**-0.1**
CTKT	**Corum**	**1.17**	**228**	*i* P	**Pg**	**13 54 27.9**	**-0.1**
RSDY	**Resadiye-TOKAT**	**1.47**	**133**	*e*PN	**Pg**	**13 54 35.0**	**+1.3**
RSDY	**Resadiye-TOKAT**	**1.47**	**133**	*e*Pn	**Pg**	**13 54 35.0**	**+1.3**
TOS	**Tosya**	**1.49**	**256**	*e*PN	**Pg**	**13 54 34.6**	**+0.6**
TOS	**Tosya**	**1.49**	**256**	*e*Pn	**Pg**	**13 54 34.6**	**+0.6**
BZK	**Bozkurt**	**1.54**	**291**	*e*PN	**Pg**	**13 54 36.4**	**+1.5**
BZK	**Bozkurt**	**1.54**	**291**	*e*Pn	**Pg**	**13 54 36.4**	**+1.5**
CORM	**Corum**	**1.58**	**219**	*e*PN	**Pg**	**13 54 35.7**	**-0.1**
CORM	**Corum**	**1.58**	**219**	*e*Pn	**Pg**	**13 54 35.7**	**-0.1**
ILGA	**Ilgaz**	**1.71**	**258**	*i* P	**Pg**	**13 54 38.7**	**+0.5**
ILGA				*i* S	**Sg**	**13 55 00.9**	**+0.5**
ILGA	**Ilgaz**	**1.71**	**258**	*i* P	**Pg**	**13 54 38.7**	**+0.5**
ILGA				*i* S	**Sg**	**13 55 00.9**	**+0.5**
GRSN	**GIRESUNGRSN**	**1.83**	**105**	*i* P	**Pg**	**13 54 39.6**	**-1.0**
GRSN				*i* S	**Sb**	**13 55 02.7**	**+1.1**
GRSN	**GIRESUNGRSN**	**1.83**	**105**	*i* P	**Pg**	**13 54 39.6**	**-1.0**
GRSN				*i* S	**Sb**	**13 55 02.7**	**+1.1**
ELDT	**Eldivan**	**2.11**	**245**	*i* P	**Pb**	**13 54 43.6**	**0.0**
ELDT				*i* S	**Sg**	**13 55 12.7**	**-0.5**
ELDT	**Eldivan**	**2.11**	**245**	*i* P	**Pb**	**13 54 43.6**	**0.0**
ELDT				*i* S	**Sg**	**13 55 12.7**	**-0.5**
CDAG	**Cicekdag**	**2.15**	**214**	*i* P	**Pb**	**13 54 43.7**	**-0.5**
CDAG				*i* S	**Sg**	**13 55 13.3**	**-1.2**
CDAG	**Cicekdag**	**2.15**	**214**	*i* P	**Pb**	**13 54 43.7**	**-0.5**
CDAG				*i* S	**Sg**	**13 55 13.3**	**-1.2**
KELT	**Kelkit**	**2.83**	**116**	*i* P	**Pg**	**13 54 58.2**	**-1.4**
KELT				*i* S	**Sg**	**13 55 35.9**	**-0.4**
KELT	**Kelkit**	**2.83**	**116**	*i* P	**Pg**	**13 54 58.2**	**-1.4**

IGQ 25 14:03:55.5, 3°.33S×79°.02W, h120km±19km, Mb4.0, Ms3.8, 6C-7D, Error ellipse: s-maj=20.9km s-min=2.9km az=7.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CATE	**Catamayo**	**0.72**	**209**	⇑S	Sn	14 04 29.6	-0.5
CATE	**Catamayo**	**0.72**	**209**	⇑P	Pn	14 04 15.4	+0.2
RIOE	**Riobamba**	**1.61**	**14**	⇓P	Pn	14 04 23.3	-1.4
IGUA	**Igualata**	**1.87**	**12**	P	Pn	14 04 26.1	-2.0
BMAS	**Trigal station**	**1.89**	**17**	⇑P	Pn	14 04 28.2	0.0
ARRY	**Arrayan**	**1.90**	**17**	S	Sn	14 04 52.3	-0.8
ARRY	**Arrayan**	**1.90**	**17**	P	Pn	14 04 27.3	-0.9
PAT1	**Patacocha**	**1.90**	**18**	P	Pn	14 04 28.8	+0.4
BBIL	**Ulba Tungurahu**	**1.94**	**16**	⇑S	Sn	14 04 53.6	-0.4
BBIL	**Ulba Tungurahu**	**1.94**	**16**	⇑P	Pn	14 04 28.6	-0.1
RETU	**Refugio**	**1.95**	**17**	⇓P	Pn	14 04 29.7	+0.7
ULBA	**Ulba**	**1.96**	**18**	⇓P	Pn	14 04 30.1	+1.1
JUI6	**Juive**	**1.97**	**16**	S	Sn	14 04 54.4	-0.2
JUI6	**Juive**	**1.97**	**16**	P	Pn	14 04 29.7	+0.6
BULB	**Ulba Tungurahu**	**1.98**	**18**	P	Pn	14 04 30.0	+0.8
BULB	**Ulba Tungurahu**	**1.98**	**18**	S	Sn	14 04 55.2	+0.3
BRUN	**Tungurahua Vol**	**1.99**	**18**	⇓P	Pn	14 04 30.2	+0.9
RUN5	**Runtun**	**1.99**	**17**	P	Pn	14 04 30.4	+1.1
PISA	**Pisayambo**	**2.34**	**15**	P	Pn	14 04 32.5	+0.5
MOV1	**Cotopaxi Vol s**	**2.66**	**13**	P	Pn	14 04 39.4	+1.2
BNAS	**Cotopaxi Volca**	**2.69**	**12**	⇓P	Pn	14 04 40.0	+1.5
TAMB	**Tambo**	**2.70**	**14**	P	Pn	14 04 41.0	+2.4
BREF	**Cotopaxi Volca**	**2.70**	**12**	⇓P	Pn	14 04 40.8	+2.0
BTAM	**Cotopaxi Volca**	**2.71**	**13**	P	Pn	14 04 40.5	+1.7
BVC2	**Cotopaxi Volca**	**2.72**	**13**	⇓P	Pn	14 04 40.7	+1.7
COV1	**Cotopaxi Volc**	**2.73**	**14**	P	Pn	14 04 43.3	+4.1
VC1	**Cotopaxi 1**	**2.74**	**13**	P	Pn	14 04 40.9	+1.8
PITA	**Cotopaxi Volc**	**2.81**	**12**	P	Pn	14 04 41.9	+1.9
ANTI	**Antisana**	**2.99**	**17**	P	Pn	14 04 45.9	+3.5
JUA2	**San Juan 2**	**3.12**	**8**	P	Pn	14 04 46.6	+2.6
TERV	**Terraza Guagua**	**3.16**	**8**	S	Sn	14 05 22.9	+0.4
TERV	**Terraza Guagua**	**3.16**	**8**	P	Pn	14 04 46.8	+2.2
GGP	**Refugio Guagua**	**3.16**	**8**	S	Sn	14 05 20.8	-1.8
GGP	**Refugio Guagua**	**3.16**	**8**	P	Pn	14 04 44.9	+0.2
PINO	**Pino**	**3.18**	**8**	⇑P	Pn	14 04 46.1	+1.2
OTAV	**Otavalo**	**3.59**	**9**	P	Pn	14 04 50.4	+0.2

ATH ***25*** *14:05:40.3, 41°.34N×22°.72E, h4km, MD2.6/4*

SKO ***25*** *14:05:40.7, 41°.31N×22°.70E, h7km, M1.2, ML1.6*

CSEM ***25*** *14:05:40.6±0.1, 41°.30N×22°.75E, h5km, ML1.5, Error ellipse: s-maj=3.3km s-min=2.5km az=56.0*

BEO ***25*** *14:05:41.9±0.7, 41°.36N×22°.47E, h0km, ML1.5/5*

ISC 25 14:05:40.8±1.1, 41°.32N±0°.03×22°.73E±0°.03, h3km±13km, n15, σ0ˢ34°28, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**272**	*i* Pg	**Pg**	**14 05 42.8**	**-0.4**
VAY				*e*Lg	Lg	14 05 44.9	
	comp=N,343nm,0.3s						
VAY				*i* Sg	**Sg**	**14 05 44.9**	**+0.1**
VAY				*e*Lg	Lg	14 05 45.0	
	comp=E,337nm,0.2s						
VAY	**Valandovo**	**0.12**	**272**	*e*Pg	**Pg**	**14 05 42.8**	**-0.4**
VAY				*e*Sg	**Sg**	**14 05 44.9**	**+0.1**
VAY	**Valandovo**	**0.12**	**272**	*i* Pg	**Pg**	**14 05 43.3**	**+0.1**
VAY				*e*Sg	**Sg**	**14 05 44.9**	**+0.1**
VAY				*e*Lg	Lg	14 05 45.4	
	comp=E,337nm,0.2s						
GRG	**Griva**	**0.44**	**215**	*e*PG	**Pg**	**14 05 49.0**	**-0.2**
GRG				*e*SG	**Sg**	**14 05 55.2**	**+0.3**
SOH	**Sokhos**	**0.68**	**136**	*e*PB	**Pg**	**14 05 54.1**	**+0.2**
SOH				*e*SG	**Sg**	**14 06 03.2**	**+0.4**
SOH	**Sokhos**	**0.68**	**136**	*e*Pb	**Pg**	**14 05 54.1**	**+0.2**
SOH				*e*Sg	**Sg**	**14 06 03.2**	**+0.4**
NVR	**Nevrokopi**	**0.85**	**87**	*e*PB	**Pg**	**14 05 56.8**	**-0.4**
NVR				*e*SG	**Sg**	**14 06 08.2**	**-0.1**
NVR	**Nevrokopi**	**0.85**	**87**	*e*Pb	**Pg**	**14 05 56.8**	**-0.4**
NVR				*e*Sg	**Sg**	**14 06 08.2**	**-0.1**
PLG	**Polygyros**	**1.09**	**150**	*e*PG	**Pg**	**14 06 01.1**	**-0.6**
PLG				*e*SB	**Sb**	**14 06 16.6**	**-0.3**
PLG	**Polygyros**	**1.09**	**150**	*e*Pg	**Pg**	**14 06 01.1**	**-0.6**
PLG				*e*Sb	**Sb**	**14 06 16.6**	**-0.3**
VTS	**Vitosha**	**1.32**	**16**	*e*Pg	**Pb**	**14 06 06.7**	**+0.3**
VTS				*e*Sg	**Sb**	**14 06 24.0**	**+0.2**
VTS	**Vitosha**	**1.32**	**16**	*e*Pg	**Pb**	**14 06 06.7**	**+0.3**
VTS				*e*Sg	**Sb**	**14 06 24.0**	**+0.2**
BARS	**Barje**	**1.65**	**336**	*e*Pn	**Pn**	**14 06 10.5**	**-0.1**
BARS	**Barje**	**1.65**	**336**	*e*Pn	**Pn**	**14 06 10.5**	**-0.1**
ZAPS	**Zavoj**	**1.96**	**358**	*e*Pn	**Pn**	**14 06 15.2**	**+0.3**
ZAPS				*e*Sn	**Sb**	**14 06 41.3**	**-0.6**

VIE 25 14:08:47.5±0.6, 45°.25N×14°.76E, h6km±20km, ML1.9/1, 2C, Error ellipse: s-maj=4.3km s-min=2.0km az=0.0 30 km ESE of Rijeka, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVLJ	**Novalja**	**0.69**	**173**	Sg	Sn	14 09 16.8	+2.1
OBKA	**Obir**	**1.27**	**353**	⇑*i*Pg	Pg	14 09 12.4	+0.2
OBKA				⇑*i*Sg	Sn	14 09 29.9	+0.5
	4.5nm,0.3s						

IDC 25 15:04:08.8±17.0, 11°.60S×166°.75E, h222km±167km, mb3.3/6, mb1 3.6/6, mb1mx3.3/19, mbtmp3.3/6, Error ellipse: s-maj=77.1km s-min=51.5km az=139.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.74**	**225**	P	P	15 10 03.5	+0.1
	1.0nm,0.6s,baz=55,slow=11,SNR=6.9						
WRA	**Warramunga Arr**	**32.23**	**251**	P	P	15 10 16.8	+0.1
	0.9nm,0.6s,baz=85,slow=9.2,SNR=14						
ASAR	**Alice Springs**	**33.44**	**244**	P	P	15 10 26.8	-0.4
	0.9nm,0.5s,baz=70,slow=10,SNR=21						
ASAR				pP	pP	15 11 14.8	+2.6
	0.4nm,0.6s,baz=68,slow=9.6,SNR=3.2						
ILAR	**Eielson Array**	**83.72**	**18**	P	P	15 16 12.6	+0.1
	1.0nm,0.6s,baz=239,slow=5.2,SNR=21						
MKAR	**Makanchi Array**	**94.60**	**317**	P	P	15 17 04.4	-0.1
	0.4nm,0.7s,baz=86,slow=8.0,SNR=4.1						
YKA	**Yellowknife Ar**	**95.01**	**27**	P	P	15 17 05.4	-0.5
	0.1nm,0.4s,baz=242,slow=6.2,SNR=2.9						
ARCES	**ARCESS Array B**	**117.11**	**346**	PKP	PKPdf	15 22 26.7	-0.2
	1.8nm,0.9s,baz=48,slow=1.3,SNR=5.7						

SKO 25 15:09:18.9, 41°.32N×22°.74E, h2km, M0.4, ML0.6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**271**	*e*Pg	Pg	15 09 21.1	-0.3
VAY				*e*Lg	Lg	15 09 23.4	
	comp=N,47nm,0.3s						
VAY				*i* Sg	Sg	15 09 23.5	+0.3
VAY				*e*Lg	Lg	15 09 23.5	
	comp=E,20nm,0.2s						

NNC ***25*** *15:18:50.9±1.4, 38°.65N×70°.22E, h0km, mb4.8, mpv5.0, Error ellipse: s-maj=10.9km s-min=8.4km az=15.0*

IDC ***25*** *15:18:51.0±0.5, 38°.68N×70°.63E, h0km, mb4.2/26, mb1 4.4/32, mb1mx4.3/36, mbtmp4.3/32, ML4.3/6, MS3.7/22, Ms1 3.7/22, ms1mx3.6/43, Error ellipse: s-maj=11.8km s-min=9.2km az=160.0*

TEH ***25*** *15:18:53.9, 38°.99N×70°.72E, h10km, ML4.6*

BJI ***25*** *15:18:54.9, 39°.01N×70°.52E, h39km, mB4.8/22, mb4.6/28, ML4.5/3, Ms4.2/25, Ms7 4.1/26*

ISCJB ***25*** *15:18:55.6±0.5, 38°.75N±0°.02×70°.59E±0°.03, h42km±5km, mb4.4/79, MS3.9/35, Error ellipse: s-maj=3.9km s-min=3.6km az=26.8*

MOS ***25*** *15:18:58.0±1.0, 38°.86N×70°.64E, h63km, mb4.9/39, Error ellipse: s-maj=5.7km s-min=4.5km az=85.1*

NEIC ***25*** *15:18:58.9±0.7, 38°.86N×70°.65E, h56km±6km, mb4.7/27, Error ellipse: s-maj=6.4km s-min=4.9km az=182.0*

ISC 25 15:18:57.4±0.4, 38°.86N±0°.04×70°.62E±0°.03, h41km±4km, h41km:pP-P, n317, σ1ˢ62°319, mb4.5/79, MS3.9/35, 21C-20D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.02**	**35**	P	**Pn**	**15 19 59.0**	**+2.2**
	SNR=72						
KSH	**Kashi**	**4.21**	**79**	P	**Pn**	**15 19 56.8**	**-2.4**
KSH				S	**Sn**	**15 20 43.0**	**-4.2**
KSH				smax	smax		
	comp=N,2μm,1.0s						
KSH				smax	smax		
	comp=E,840nm,0.9s						
KK31	**Karatay Array**	**4.24**	**359**	⇑Pn	**Pn**	**15 20 01.1**	**+1.7**
	comp=E,36nm,0.3s,baz=194,slow=17,SNR=590						
KK31				⇑Pg		15 20 12.4	
	comp=E,195nm,0.8s,baz=202,slow=97,SNR=4.0						
KK31				⇑Sn	Sn	15 20 54.2	+6.5
	comp=E,126nm,0.4s						
KK31				⇓Lg	Lg	15 21 10.7	
	comp=E,538nm,0.7s,baz=189,slow=27,SNR=7.5						
KK31	**Karatay Array**	**4.24**	**359**	*i* PN	**Pn**	**15 20 01.2**	**+1.7**
KK31				pmax	pmax		
	comp=Z,75nm,0.3s						
KKAR	**Karatay Array**	**4.24**	**359**	*e*PN	**Pn**	**15 20 01.3**	**+1.8**
KKAR	**Karatay Array**	**4.24**	**359**	*e*Pn	**Pn**	**15 20 01.3**	**+1.8**
UCH	**Uchtor**	**4.49**	**40**	*i* PN	Pn	15 20 06.4	+3.1
UCH	**Uchtor**	**4.49**	**40**	P	Pn	15 20 06.4	+3.1
	SNR=53						
EKS2	**Erkin-Say**	**4.49**	**31**	*e*PN	**Pn**	**15 20 05.3**	**+2.2**
EKS2	**Erkin-Say**	**4.49**	**31**	*e*P	**Pn**	**15 20 05.3**	**+2.2**
EKS2	**Erkin-Say**	**4.49**	**31**	P	**Pn**	**15 20 05.6**	**+2.6**
	SNR=47						
KBL	**Kabul**	**4.49**	**197**	*e*PN	**Pn**	**15 20 05.3**	**+2.1**
KBL	**Kabul**	**4.49**	**197**	*e*P	**Pn**	**15 20 05.3**	**+2.1**
KZA	**Kyzart**	**4.78**	**46**	*i* PN	**Pn**	**15 20 09.3**	**+2.1**
KZA	**Kyzart**	**4.78**	**46**	P	**Pn**	**15 20 09.3**	**+2.1**
	SNR=227						
AAK	**Ala-Archa**	**4.78**	**37**	*i* PN	Pn	15 20 10.2	+3.1
AAK	**Ala-Archa**	**4.78**	**37**	*e*P	**Pn**	**15 20 09.5**	**+2.4**
AAK				Sn	Sn	15 21 11.4	+10
AAK	**Ala-Archa**	**4.78**	**37**	P	Pn	15 20 10.3	+3.1
	SNR=326						
AAK	**Ala-Archa**	**4.78**	**37**	Pn	**Pn**	**15 20 09.6**	**+2.6**
	comp=Z,87nm,0.3s,baz=222,slow=9.5,SNR=187						
AAK				Sn	S

MKAR Makanchi Array 11.66 43 Pn **Pn** **15 21 42.0 +0.8**
comp=Z,0.6nm,0.3s,baz=229,slow=12,SNR=119
MKAR Lg Lg 15 25 10.2
comp=Z,0.3nm,0.3s,baz=234,slow=27,SNR=3.5
MKAR LR LR 15 26 35.5
comp=Z,228nm,19.7s,baz=69,slow=39
AB31 Akbulak array 12.91 327 ⇓Pn **Pn** **15 21 55.6 -2.5**
comp=Z,36nm,0.5s
AB31 Sn **Sn** **15 24 19.2 -1.1**
comp=Z,57nm,0.8s,baz=151,slow=21,SNR=8.5
AB31 Akbulak array 12.91 327 *i*P **Pn** **15 21 55.6 -2.5**
AB31 pmax pmax
comp=Z,58nm,0.5s
ABKAR Akbulak array 12.91 327 *e*P **Pn** **15 21 55.2 -2.9**
KUR16 Kurchatov Arra 13.02 23 ⇑Pn **Pn** **15 22 01.3 +1.7**
comp=Z,0.7nm,0.8s
KUR16 ⇑Lg Lg 15 25 54.9
comp=Z,4.0nm,1.0s
KURBB Kurchatov Arra 13.03 23 Pn **Pn** **15 21 56.6 -3.1**
comp=Z,0.2nm,0.3s,baz=217,slow=13,SNR=18
KURBB Sn Sn 15 24 30.2 +7.0
comp=Z,0.1nm,0.3s,baz=222,slow=14,SNR=4.6
KURBB Lg Lg 15 25 54.4
comp=Z,0.2nm,0.3s,baz=218,slow=26,SNR=5.4
KURBB LR LR 15 27 32.7
comp=Z,140nm,18.4s,baz=220,slow=40
KURK Kurchatov 13.13 23 ⇓Pn **Pn** **15 22 03.7 +2.4**
comp=Z,16nm,1.1s
KURK ⇓Lg Lg 15 25 57.7
comp=Z,94nm,0.9s
KURK Kurchatov 13.13 23 *e*P **Pn** **15 21 58.9 -2.3**
KURK 15 24 30.2
KURK Kurchatov 13.13 23 *e*P **Pn** **15 21 58.9 -2.3**
KURK Sn **Sn** **15 24 30.2 +4.3**
KURK Lg Lg 15 25 54.4
WMQ Urumqi 13.75 63 P **P** **15 22 17.3 -0.2**
WMQ pP P 15 22 25.8 +8.3
WMQ PP PnPn 15 22 29.0 +11
WMQ sP 15 22 32.3
WMQ S Sn 15 24 50.0 +9.0
WMQ sS **S** **15 25 03.0 +0.8**
WMQ PcP PcP 15 27 38.5 +7.0
WMQ PcS PcS 15 31 12.0 +5.8
WMQ pmax pmax
comp=Z,51nm,0.8s
WMQ pmax pmax
comp=Z,230nm,4.8s
WMQ LR LR
comp=N,730nm,11.4s
WMQ LR LR
comp=E,700nm,9.0s
WMQ LR LR
comp=Z,300nm,20.6s
VOSK Vostochnaya 13.87 1 ⇑Pn **Pn** **15 22 11.8 +0.5**
comp=Z,13nm,0.7s
VOSK ⇑Lg Lg 15 26 17.4
comp=Z,185nm,1.2s
ZRNK Zerenda 14.14 356 ⇓Pn **Pn** **15 22 14.1 -0.8**
comp=Z,22nm,1.2s
ZRNK ⇑Lg Lg 15 26 24.1
comp=Z,144nm,1.4s
BVA0 Borovoye Array 14.17 359 ⇓Pn **Pn** **15 22 14.1 -1.3**
comp=Z,2.1nm,0.7s
BVA0 ⇓Lg Lg 15 26 26.1
comp=Z,17nm,1.6s,baz=171,slow=28,SNR=4.4
BVA0 Borovoye Array 14.17 359 P **Pn** **15 22 14.0 -1.3**
BVA0 pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 14.17 359 P **Pn** **15 22 13.6 -1.7**
BVAR 15 24 48.4
BVAR Borovoye Array 14.17 359 Pn **Pn** **15 22 13.6 -1.7**
BVAR Sn **Sn** **15 24 48.4 -2.6**
BVAR Lg Lg 15 26 23.5
BVAR Borovoye Array 14.17 359 Pn **Pn** **15 22 13.6 -1.7**
comp=Z,1.3nm,0.3s,baz=172,slow=12,SNR=12
BVAR Sn **Sn** **15 24 48.4 -2.6**
comp=Z,1.0nm,0.3s,baz=172,slow=23,SNR=3.6
BVAR Lg Lg 15 26 23.5
comp=Z,0.3nm,0.3s,baz=176,slow=26,SNR=2.7
BVAR LR LR 15 28 11.4
comp=Z,245nm,18.2s,baz=183,slow=39
BRVK Borovoye 14.20 359 ⇑Lg Lg 15 26 28.0
comp=Z,77nm,1.1s
BRVK Borovoye 14.20 359*ce*P **Pn** **15 22 14.0 -1.7**
BRVK pmax pmax
comp=Z,14nm,0.9s
BRVK Borovoye 14.20 359 *e*Pn **Pn** **15 22 14.1 -1.7**
AKTO Aktyubinsk 14.62 326 ⇓Pn **Pn** **15 22 18.9 -2.5**
comp=Z,9.4nm,0.7s
AKTO ⇓Sn **Sn** **15 25 00.2 -1.8**
comp=Z,13nm,0.9s
AKTO Aktyubinsk 14.62 326 P **Pn** **15 22 19.1 -2.3**
AKTO Aktyubinsk 14.62 326 Pn **Pn** **15 22 19.1 -2.3**
AKTO Aktyubinsk 14.62 326 Pn **Pn** **15 22 19.1 -2.3**
comp=Z,2.3nm,0.3s,baz=139,slow=11,SNR=49
AKTO LR LR 15 28 50.0
comp=Z,87nm,20.8s,baz=141,slow=41
PYUN Piuthan 14.87 132 *e*P Pn 15 22 19.5 -5.6
comp=Z,110nm,0.5s
DANN Dangsing 15.14 130 *e*P Pn 15 22 23.6 -5.1
comp=Z,43nm,0.4s
IDMV Damavand 15.17 263 *e*P **Pn** **15 22 25.2 -3.8**
KOLN Koldanda 15.47 132 *e*P Pn 15 22 28.1 -4.9
comp=Z,56nm,0.6s
IGZV Ghazvin 16.35 268 *e*P **Pn** **15 22 42.1 -2.1**
KKN Kakani 16.47 128 *e*P Pn 15 22 40.8 -4.9
comp=Z,50nm,0.6s
DMN Daman 16.49 129 *e*P **Pn** **15 22 41.4 -4.6**
comp=Z,66nm,0.6s
PKIN Phulchoki 16.69 128 *e*P **Pn** **15 22 44.0 -4.6**
comp=Z,43nm,0.9s
PKI Pulchoki 16.71 128 *e*P **Pn** **15 22 44.6 -4.2**
comp=Z,69nm,0.8s
GUN Gumba 16.76 126 *e*P **Pn** **15 22 45.2 -4.3**
comp=Z,52nm,0.4s
IRAZ Razeghan 16.85 265 *e*P **Pn** **15 22 50.8 +0.3**
RAMN Ramite 17.89 127 *e*P **Pn** **15 22 58.8 -4.6**
comp=Z,105nm,0.6s
MAK Makhachkala 17.93 291 *e*P Pn 15 22 56.1 -7.4
MAK pmax pmax
comp=Z,95nm,1.6s
MAK MLR MLR
comp=Z,1µm,12.0s
ZAA0 Zalesovo Array 17.94 28 *e*P **Pn** **15 23 01.7 -1.8**
ZALV Zalesovo Beam 17.94 28 P **Pn** **15 23 01.8 -1.7**
ZALV Zalesovo Beam 17.94 28 P **Pn** **15 23 01.8 -1.7**
ZALV Zalesovo Beam 17.94 28 P **Pn** **15 23 01.8 -1.7**
comp=Z,0.8nm,0.3s,baz=219,slow=11,SNR=66
ZALV LR LR 15 29 55.4
comp=Z,57nm,19.5s,baz=246,slow=37
NVS Novosibirsk 18.12 24 ⇑*i*P **Pn** **15 23 05.0 -0.7**
NVS *e*S **Sn** **15 26 21.3 -5.4**
NVS pmax pmax
comp=Z,21nm,0.8s
NVS pmax pmax
comp=N,10.0nm,0.7s
NVS pmax pmax
comp=E,4.0nm,0.6s
NVS smax smax
comp=N,6.0nm,0.8s
NVS smax smax
comp=E,19nm,1.3s
TAPN Taplejung 18.32 124 *e*P **P** **15 23 05.0 -3.5**
comp=E,37nm,0.5s
ODAN Odare 18.45 125 *e*P **P** **15 23 05.3 -4.5**
comp=E,97nm,0.7s
NGP Nagpur 19.08 155 *e*PKP **P** **15 23 14.8 -1.7**
SVE Sverdlovsk 19.15 343 *e*P **P** **15 23 16.8 -0.2**
SVE *e*S Sn 15 26 40.7 -11
SVE pmax pmax
comp=Z,35nm,1.1s
SVE MLR MLR
comp=Z,596nm,11.0s
LSA Lhasa 19.24 112 *e*P **P** **15 23 18.8 +0.1**
LSA pmax pmax
comp=Z,19nm,0.8s
LSA Lhasa 19.24 112 *e*P **P** **15 23 18.8 +0.1**
comp=Z,19nm,0.8s
ARU Arti 19.31 339*d i*P **P** **15 23 19.3 +0.5**
ARU S **S** **15 26 53.5 -1.6**
ARU pmax pmax
comp=Z,34nm,1.2s
ARU MLR MLR
comp=Z,577nm,14.0s
TBLG Delisi 19.93 287 *e*P **Pn** **15 23 26.7 -0.8**
TBLG Delisi 19.93 287 P **Pn** **15 23 26.8 -0.8**

DUS Dusheti 19.95 288 P **Pn** **15 23 29.0 +1.0**
GNI Garni 19.99 282 *e*P **P** **15 23 25.0 -1.6**
comp=Z,61nm,1.0s
GNI Garni 19.99 282 P **P** **15 23 26.2 -0.4**
comp=Z,16nm,0.6s,baz=324,slow=5.9,SNR=8.3
GNI LR LR 15 32 41.2
comp=Z,269nm,18.8s,baz=282,slow=41
HVS Khovu-Aksy 20.32 45 ⇓*i*P **P** **15 23 29.2 -0.8**
HVS pmax pmax
comp=Z,65nm,1.2s
POO Poona 20.45 171 *e*PKP **P** **15 23 32.0 +0.5**
AKH Akhalkalaki 20.87 286 P **P** **15 23 36.0 -0.1**
ONI Oni 20.89 289 P Pn 15 23 37.5 -1.4
MUB Mutribah 21.20 252 *e*P **P** **15 23 39.3 -0.1**
MIB AMb AMB 15 23 43.8
comp=Z,186nm,0.9s
KBD Kabd 21.27 250 *e*P **P** **15 23 39.7 -0.5**
KBZ Khabaz 21.34 292 P **P** **15 23 39.6 -1.3**
KBZ Khabaz 21.34 292 P **P** **15 23 39.5 -1.3**
KBZ Khabaz 21.34 292 P **P** **15 23 39.5 -1.3**
comp=Z,6.8nm,0.7s,baz=90,slow=7.1,SNR=12
KBZ LR LR 15 33 59.7
comp=Z,470nm,18.7s,baz=88,slow=42
RDF Al-Radifah 21.51 250 *e*P **P** **15 23 42.5 -0.3**
RDF AMb AMB 15 23 48.0
comp=Z,108nm,1.0s
NAY Al-Naaiem 21.56 251 *e*P **P** **15 23 42.8 -0.5**
NAY AMb AMB 15 23 48.2
comp=Z,48nm,1.2s
RST Umm Al-Ruwaisa 21.61 252 *e*P **P** **15 23 43.3 -0.5**
RST AMb AMB 15 23 51.0
comp=Z,813nm,0.9s
SHL Shillong 22.28 120 *e*PKP **P** **15 23 51.2 -0.1**
HYB Hyderabad 22.46 160 *i* P **P** **15 23 53.0 -0.1**
HYB Hyderabad 22.46 160 *e*PKP **P** **15 23 53.0 -0.1**
HYB AMB AMB 15 23 58.1
comp=Z,30nm,0.0s
SOKR Solikamsk 22.52 341*c i*P **P** **15 23 57.7 +4.4**
SOKR pmax pmax
comp=Z,30nm,1.1s
SOKR MLR MLR
comp=Z,330nm,14.0s
GTA Gaotai 22.61 79 P **P** **15 23 55.0 +0.2**
GTA pP **pP** **15 24 00.5 -4.4**
GTA pmax pmax
comp=Z,12nm,1.8s
GTA pmax pmax
comp=Z,75nm,4.8s
GTA LR LR
comp=N,380nm,14.0s
GTA LR LR
comp=E,310nm,15.7s
GTA LR LR
comp=Z,390nm,15.2s
VRHR Novokhopersk 23.71 311 *e*P **P** **15 24 08.0 +2.6**
VRHR pmax pmax
comp=Z,80nm,1.1s
VRHR pmax pmax
comp=N,50nm,0.9s
VRHR pmax pmax
comp=E,60nm,1.0s
VRHR MLR MLR
comp=Z,120nm,10.0s
VRHR MLR MLR
comp=N,320nm,19.0s
VRHR MLR MLR
comp=E,250nm,17.0s
MOY Mondy 24.72 49 *e*P **P** **15 24 16.4 +1.6**
MOY pmax pmax
comp=Z,17nm,1.4s
VORD Divnogorie 25.07 309 *e*P **P** **15 24 16.5 -1.3**
VORD *e**PP **pP** **15 24 28.6 -0.2**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,10.0nm,1.0s
VORD MLR MLR
comp=Z,360nm,15.0s
VORD MLR MLR
comp=N,300nm,16.0s
VORD MLR MLR
comp=E,360nm,17.0s
VSR Storozhevoye 25.22 310 *e*P **P** **15 24 18.4 -0.7**
VSR *e**PP **pP** **15 24 30.1 -0.1**
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=Z,9.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR MLR MLR
comp=Z,390nm,12.0s
VSR MLR MLR
comp=N,130nm,10.0s
VSR MLR MLR
comp=E,320nm,16.0s
ANN Anapa 25.31 294 *e*P **P** **15 24 20.1 0.0**
ANN pmax pmax
comp=Z,59nm,0.9s
ZAK Zakamensk 25.73 53 *e*P **P** **15 24 24.1 +0.1**
ZAK pmax pmax
comp=Z,10.0nm,1.1s
RAYN Ar Rayn 26.25 242 *e*P **P** **15 24 27.2 -1.6**
comp=Z,19nm,0.8s
TLY Talaya 26.30 50 *e*P **P** **15 24 31.2 +2.2**
TLY *e* 15 30 05.3
TLY pmax pmax
comp=Z,5.0nm,0.7s
TLY MLR MLR
comp=Z,125nm,21.0s
LZH Lanzhou 26.43 86 *e*P **P** **15 24 34.5 +4.0**
LZH pP **pP** **15 24 46.0 +4.4**
LZH PP **PnPn** **15 25 14.0 +2.5**
LZH *e*S **S** **15 29 02.3 +0.8**
LZH sS **sS** **15 29 22.3 +2.2**
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,110nm,3.9s
LZH LR LR
comp=N,510nm,12.8s
LZH LR LR
comp=E,350nm,14.0s
LZH LR LR
comp=Z,440nm,10.3s
IRK Irkutsk 26.83 49 *e*P **P** **15 24 34.9 +1.2**
IRK *e* 15 27 49.2
IRK pmax pmax
comp=Z,17nm,2.5s
SONM Songino Array 27.31 59 P **P** **15 24 38.3 0.0**
SONM Songino Array 27.31 59 P **P** **15 24 38.3 0.0**
comp=Z,2.8nm,0.7s,baz=252,slow=9.4,SNR=7.3
SONM LR LR 15 36 34.2
comp=Z,339nm,18.5s,baz=269,slow=39
SIM Simferopol' 27.67 295 P **P** **15 24 42.3 +0.9**
SIM pmax pmax
comp=Z,16nm,0.6s
SIM MLR MLR
comp=Z,270nm,22.0s
ULN Ulaanbaatar 27.76 59 *e*P **P** **15 24 42.4 +0.1**
comp=Z,4.6nm,0.9s
OBN Obninsk 27.98 317 ⇓*i*P **P** **15 24 44.5 +0.5**
OBN *i* 15 25 30.4
OBN pmax pmax
comp=Z,16nm,0.9s
OBN MLR MLR
comp=Z,200nm,16.0s
ASF Jabal al Asfar 28.14 267 LR LR 15 38 29.1
comp=Z,154nm,18.3s,baz=179,slow=42
BR131 Keskin Array S 28.51 284 *e*P **P** **15 24 49.1 +0.1**
comp=Z,2.6nm,0.6s
BRTR Keskin Array B 28.51 284 P **P** **15 24 48.9 -0.1**
BRTR Keskin Array B 28.51 284 P **P** **15 24 48.9 -0.1**
comp=Z,2.5nm,0.8s,baz=84,slow=8.8,SNR=14
MMAI Mount Meron Ar 28.98 269 LR LR 15 39 33.6
comp=Z,144nm,18.3s,baz=30,slow=43
KLMR Klimovskoe 29.29 329 *e*P **P** **15 24 58.2 +2.6**
KLMR pmax pmax
comp=Z,10.0nm,1.0s
KLMR MLR MLR
comp=Z,239nm,13.0s
XAN Xi'an 31.03 87 P **P** **15 25 11.0 -0.3**
XAN pP **pP** **15 25 19.0 -3.5**
XAN pmax pmax
comp=Z,2.0nm,0.8s
XAN LR LR
comp=N,170nm,14.3s
XAN LR LR
comp=E,96nm,16.4s
XAN LR LR
comp=Z,95nm,14.3s
AKASG Malin Array Be 31.27 306 P **P** **15 25 12.6 -0.6**
AKASG Malin Array Be 31.27 306 P **P** **15 25 12.6 -0.6**
AKASG Malin Array Be 31.27 306 P **P** **15 25 12.6 -0.6**
comp=Z,1.1nm,0.5s,baz=82,slow=7.5,SNR=5.8
KIEV Kiev 31.28 306 *e*P **P** **15 25 12.5 -0.8**
KIEV pmax pmax
comp=Z,8.0nm,0.7s
KIEV Kiev 31.28 306 *e*P **P** **15 25 12.5 -0.8**
comp=Z,7.6nm,0.7s
CMAR Chiang Mai Arr 31.90 122 P **P** **15 25 17.7 -1.3**
CMAR Chiang Mai Arr 31.90 122 P **P** **15 25 17.7 -1.3**
comp=Z,1.6nm,0.8s,baz=317,slow=9.2,SNR=12
CMAR LR LR 15 40 20.7
comp=Z,108nm,18.3s,baz=310,slow=41
VRI Vrincioaia 32.84 297 ⇓P **P** **15 25 28.9 +1.8**
VRI Vrincioaia 32.84 297 ⇓*i*P **P** **15 25 28.9 +1.8**
TESR Tescani 32.86 298 ⇑*i*P **P** **15 25 28.3 +1.1**
MLR Muntele Rosu 33.42 296 ⇑*i*P **P** **15 25 33.3 +1.1**
VSU Vasula 34.17 320*c i*P **P** **15 25 38.4 0.0**
VSU pmax pmax
comp=Z,15nm,0.9s
LOT Lotru 34.95 296 ⇑*i*P **P** **15 25 46.7 +1.2**
FINES FINESS Array B 35.38 324 P **P** **15 25 48.6 -0.1**
FINES FINESS Array B 35.38 324 P **P** **15 25 48.6 -0.1**
comp=Z,3.7nm,0.7s,baz=111,slow=11,SNR=10
FINES LR LR 15 41 20.5
comp=Z,98nm,18.4s,baz=22,slow=38
DRGR 35.55 299 ⇑P **P** **15 25 51.3 +0.7**
DRGR 35.55 299 ⇑*i*P **P** **15 25 51.3 +0.7**
UZH Uzhgorod 35.71 302 *e*P P 15 25 48.0 -3.8
KOLS Kolonicke sedl 35.72 302 *e*P **P** **15 25 53.5 +1.6**
KOLS pmax pmax
comp=Z,7.0nm,1.5s
KOLS Kolonicke sedl 35.72 302 *e*P **P** **15 25 53.5 +1.6**
KOLS *e*PP **PnPn** **15 27 09.8 -2.5**
CRVS Cervenica-Dubn 36.25 302 *e*P **P** **15 25 58.0 +1.5**
CRVS pmax pmax
comp=Z,6.0nm,1.7s
CRVS Cervenica-Dubn 36.25 302 *e*P **P** **15 25 58.0 +1.5**
CRVS *e*PP **PP** **15 27 19.3 0.0**
WHN Wuhan 36.61 89 P **P** **15 26 01.0 +1.3**
WHN S **S** **15 31 40.8 +1.0**
WHN LR LR
comp=Z,620nm,19.7s
NIE Niedzica 36.98 303 *e*P **P** **15 26 03.8 +1.1**
VYHS Vyhne 38.02 302 *e*P **P** **15 26 12.7 +1.3**
VYHS *e* 15 27 40.8
VYHS Vyhne 38.02 302 *e*P **P** **15 26 12.7 +1.3**
VYHS *e*PP **PnPn** **15 27 40.8 +0.5**
ARCES ARCESS Array B 38.86 337 P **P** **15 26 18.4 +0.2**
ARCES ARCESS Array B 38.86 337 P **P** **15 26 18.4 +0.2**
comp=Z,4.4nm,0.8s,baz=119,slow=9.4,SNR=16
ARCES LR LR 15 43 38.8
comp=Z,254nm,19.6s,baz=249,slow=38
QIZ Qiongzhong 39.22 109 P **P** **15 26 21.3 -0.6**
QIZ S **S** **15 32 20.5 +0.9**
QIZ pmax pmax
comp=Z,13nm,2.0s
QIZ LR LR
comp=Z,270nm,18.4s
DPC Dobruska-Polom 39.49 305 *e*P **P** **15 26 25.0 +1.1**
DPC pmax pmax
comp=Z,6.0nm,0.9s
DPC Dobruska-Polom 39.49 305 *e*P **P** **15 26 25.0 +1.1**
comp=Z,5.9nm,0.9s
DPC Dobruska-Polom 39.49 305 *e*P **P** **15 26 24.8 +0.9**
DPC *ex* x 15 26 29.6
DPC AMS AMS 15 44 50.0
comp=Z,200nm,15.6s
UPC Upice 39.68 305 *e*P P 15 26 29.8 +4.5
UPC Upice 39.68 305 *e*P P 15 26 29.8 +4.5
PRU Pruhonice 40.67 305 *e*P **P** **15 26 34.5 +1.0**
PRU MLR MLR
comp=Z,100nm,15.2s
PRU Pruhonice 40.67 305 *e*P **P** **15 26 34.5 +1.0**
PRU *ex* x 15 26 39.2
PRU AMS AMS 15 45 30.0
comp=Z,100nm,15.2s
BRG Berggiesshubel 40.96 306 *e*P **P** **15 26 36.7 +0.8**
comp=Z,4.5nm,1.1s
BRG *e* 15 26 42.2
comp=Z,9.2nm,1.0s
BRG
comp=N,146nm,17.8s
BRG
comp=E,142nm,15.1s
BRG
comp=Z,232nm,16.3s
BRG Berggiesshubel 40.96 306 *e*P **P** **15 26 36.7 +0.8**
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG MLR MLR
comp=N,146nm,17.8s
BRG MLR MLR
comp=E,142nm,15.1s
BRG MLR MLR
comp=Z,232nm,16.3s
GERES GERESS Array B 41.35 303 P **P** **15 26 39.6 +0.3**
GERES GERESS Array B 41.35 303 P **P** **15 26 39.6 +0.3**
comp=Z,0.9nm,0.6s,baz=71,slow=7.4,SNR=7.5
GERES LR LR 15 46 44.9
comp=Z,105nm,18.3s,baz=88,slow=40
KHC Kasperske Hory 41.40 304 *e*P **P** **15 26 40.0 +0.4**
KHC MLR MLR
comp=Z,200nm,18.4s
KHC Kasperske Hory 41.40 304 *e*P **P** **15 26 39.9 +0.4**
comp=Z,4.6nm,0.9s
KHC Kasperske Hory 41.40 304 *e*P **P** **15 26 40.0 +0.4**
KHC *ex* x 15 26 44.3
KHC AMS AMS 15 47 10.0
comp=Z,200nm,18.4s
CLL Collm 41.51 307 *e*P **P** **15 26 39.0 -1.4**
CLL Collm 41.51 307 *e*P **P** **15 26 39.0 -1.4**
CLL *e* 15 26 46.0
comp=Z,7.0nm,1.0s
CLL *e*PP **PP** **15 28 17.0 +0.4**
CUC Castrocucco 41.78 290 P **P** **15 26 44.5 +1.7**
comp=Z,6.7nm,0.8s
YAK Yakutsk 42.24 37 *e*P **P** **15 26 45.2 -1.0**
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK MLR MLR
comp=E,62nm,14.0s
YAK MLR MLR
comp=Z,80nm,13.0s
NB2 NORSAR Subarra 42.33 322 P **P** **15 26 46.7 -0.4**
comp=Z,3.7nm,0.6s,baz=95,slow=8.6
NOA NORSAR Array B 42.33 322 P **P** **15 26 46.6 -0.5**
NOA NORSAR Array B 42.33 322 P **P** **15 26 46.6 -0.5**
comp=Z,3.5nm,0.6s,baz=94,slow=8.1,SNR=11
NOA LR LR 15 45 10.1
comp=Z,149nm,18.5s,baz=90,slow=37
GRF Grafenberg Arr 42.84 305 *e*P **P** **15 26 52.2 +0.9**
GRF pmax pmax
comp=Z,10.0nm,1.0s
KULM Kulim 43.09 133 *e*P **P** **15 26 55.4 +1.8**
comp=Z,17nm,1.4s
MDJ Mudanjiang 43.55 63 P **P** **15 26 56.8 -0.3**
MDJ pP **pP** **15 27 08.0 -0.6**
MDJ sP **sP** **15 27 13.3 -0.1**
MDJ PP **PP** **15 28 38.0 -0.7**
MDJ S **S** **15 33 23.0 -0.2**
MDJ sS **sS** **15 33 43.5 +1.2**
MDJ pmax pmax
comp=Z,4.0nm,0.9s
MDJ pmax pmax
comp=Z,36nm,7.0s
MDJ LR LR
comp=N,91nm,14.5s
MDJ LR LR
comp=E,120nm,14.5s
MDJ LR LR
comp=Z,170nm,13.2s
TIXI Tiksi 43.71 23 ⇓*i*P **P** **15 26 57.2 -0.8**
TIXI pmax pmax
comp=Z,8.0nm,0.8s

KLR	**Kul'dur**	**44.03**	**56**	*eP*		**P**		**15 26 58.2**	**-2.7**
KLR					MLR	MLR			
	comp=Z,700nm,13.5s								
KSAR	**Wonju Array Be**	**44.41**	**73**	P		**P**		**15 27 03.5**	**-0.6**
KSRS	**Korea Array**	**44.44**	**73**	P		**P**		**15 27 03.5**	**-0.8**
	comp=Z,3.8nm,0.9s,baz=284,slow=6.7,SNR=24								
KSRS					LR	LR		15 46 57.0	
	comp=Z,95nm,19.1s,baz=161,slow=38								
SPITS	**Spitsbergen Ar**	**45.13**	**346**	P		**P**		**15 27 10.3**	**+1.0**
SPITS	**Spitsbergen Ar**	**45.13**	**346**	P		**P**		**15 27 10.3**	**+1.0**
	comp=Z,6.5nm,0.9s,baz=139,slow=9.2,SNR=3.4								
USRK	**Ussuriysk Arra**	**45.33**	**63**	P		**P**		**15 27 11.3**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=258,slow=9.7,SNR=4.2								
USRK					LR	LR		15 48 00.6	
	comp=Z,168nm,18.6s,baz=158,slow=38								
CDF	**Champ du Feu**	**45.62**	**304**	*eP*		**P**		**15 27 13.9**	**+0.2**
CDF	**Champ du Feu**	**45.62**	**304**	*eP*		**P**		**15 27 13.9**	**+0.2**
CDF	**Champ du Feu**	**45.62**	**304**	*eP*		**P**		**15 27 13.9**	**+0.2**
HINF	**Hinteralfeld**	**46.03**	**303**	*eP*		**P**		**15 27 16.8**	**-0.1**
	comp=Z,4.7nm,0.5s								
HINF	**Hinteralfeld**	**46.03**	**303**	*eP*		**P**		**15 27 16.8**	**-0.1**
HINF					pmax	pmax			
	comp=Z,5.0nm,0.5s								
HINF	**Hinteralfeld**	**46.03**	**303**	*eP*		**P**		**15 27 16.8**	**-0.1**
	comp=Z,4.7nm,0.5s								
HAU	**Haudompre**	**46.32**	**303**	*eP*		**P**		**15 27 19.6**	**+0.5**
HAU				*eR*					
	comp=Z,87nm,19.2s								
HAU	**Haudompre**	**46.32**	**303**	*eP*		**P**		**15 27 19.6**	**+0.5**
HAU	**Haudompre**	**46.32**	**303**	*eP*		**P**		**15 27 19.6**	**+0.5**
PAGF	**Fort de Pagny**	**46.60**	**304**	*eP*		**P**		**15 27 21.9**	**+0.7**
	comp=Z,3.3nm,0.8s								
PAGF	**Fort de Pagny**	**46.60**	**304**	*eP*		**P**		**15 27 21.9**	**+0.7**
	comp=Z,3.3nm,0.8s								
LPG	**La Plagne**	**46.68**	**300**	*eP*		**P**		**15 27 22.9**	**+0.6**
	comp=Z,9.3nm,0.7s								
LPG	**La Plagne**	**46.68**	**300**	*eP*		**P**		**15 27 22.9**	**+0.6**
LPG					pmax	pmax			
	comp=Z,9.0nm,0.7s								
LPG	**La Plagne**	**46.68**	**300**	*eP*		**P**		**15 27 22.9**	**+0.6**
	comp=Z,9.3nm,0.7s								
LPL	**La Plagne**	**46.69**	**300**	*eP*		**P**		**15 27 22.9**	**+0.6**
	comp=Z,7.4nm,0.5s								
LPL	**La Plagne**	**46.69**	**300**	*eP*		**P**		**15 27 22.9**	**+0.6**
LPL					pmax	pmax			
	comp=Z,7.0nm,0.5s								
LPL	**La Plagne**	**46.69**	**300**	*eP*		**P**		**15 27 22.9**	**+0.6**
	comp=Z,7.4nm,0.5s								
GIVF	**Givet**	**46.83**	**306**	*eP*		**P**		**15 27 23.9**	**+0.9**
GIVF	**Givet**	**46.83**	**306**	*eP*		**P**		**15 27 23.9**	**+0.9**
GIVF	**Givet**	**46.83**	**306**	*eP*		**P**		**15 27 23.9**	**+0.9**
SFTF	**Sexfontaines**	**47.13**	**304**	*eP*		**P**		**15 27 25.6**	**+0.2**
SFTF	**Sexfontaines**	**47.13**	**304**	*eP*		**P**		**15 27 25.6**	**+0.2**
BAIF	**Baives**	**47.23**	**306**	*eP*		**P**		**15 27 27.0**	**+0.9**
	comp=Z,14nm,0.8s								
BAIF	**Baives**	**47.23**	**306**	*eP*		**P**		**15 27 27.0**	**+0.9**
BAIF					pmax	pmax			
	comp=Z,15nm,0.8s								
BAIF	**Baives**	**47.23**	**306**	*eP*		**P**		**15 27 27.0**	**+0.9**
	comp=Z,14nm,0.8s								
FRF	**La Foret Royal**	**47.30**	**297**	*eP*		**P**		**15 27 27.1**	**+0.3**
	comp=Z,18nm,1.0s								
FRF	**La Foret Royal**	**47.30**	**297**	*eP*		**P**		**15 27 27.1**	**+0.3**
FRF					pmax	pmax			
	comp=Z,18nm,1.0s								
FRF	**La Foret Royal**	**47.30**	**297**	*eP*		**P**		**15 27 27.1**	**+0.3**
	comp=Z,18nm,1.0s								
SMRF	**Simiane la Rot**	**47.92**	**298**	*eP*		**P**		**15 27 32.7**	**+1.1**
SMRF	**Simiane la Rot**	**47.92**	**298**	*eP*		**P**		**15 27 32.7**	**+1.1**
KEST	**Kesra**	**48.04**	**286**	P		**P**		**15 27 33.5**	**+0.8**
KEST	**Kesra**	**48.04**	**286**	P		**P**		**15 27 33.5**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=66,slow=12,SNR=4.5								
LOR	**Lormes**	**48.14**	**303**	*eP*		**P**		**15 27 33.0**	**-0.2**
LOR				*eR*					
	comp=Z,114nm,22.5s								
LOR	**Lormes**	**48.14**	**303**	*eP*		**P**		**15 27 33.0**	**-0.2**
VIVF	**Saint-Julien-l**	**48.27**	**300**	*eP*		**P**		**15 27 34.6**	**+0.2**
	comp=Z,34nm,1.3s								
VIVF	**Saint-Julien-l**	**48.27**	**300**	*eP*		**P**		**15 27 34.6**	**+0.2**
VIVF					pmax	pmax			
	comp=Z,35nm,1.3s								
VIVF	**Saint-Julien-l**	**48.27**	**300**	*eP*		**P**		**15 27 34.6**	**+0.2**
	comp=Z,34nm,1.3s								
SMF	**Signal de Mont**	**48.32**	**302**	*eP*		**P**		**15 27 34.6**	**0.0**
	comp=Z,6.3nm,0.6s								
SMF	**Signal de Mont**	**48.32**	**302**	*eP*		**P**		**15 27 34.6**	**0.0**
SMF					pmax	pmax			
	comp=Z,6.0nm,0.6s								
SMF	**Signal de Mont**	**48.32**	**302**	*eP*		**P**		**15 27 34.6**	**0.0**
	comp=Z,6.3nm,0.6s								
JNU	**Nakatsue**	**48.33**	**77**	P		**P**		**15 27 34.8**	**-0.2**
JNU	**Nakatsue**	**48.33**	**77**	P		**P**		**15 27 34.8**	**-0.2**
	comp=Z,6.8nm,0.8s,baz=221,slow=17,SNR=4.1								
AVF	**Avril sur Loir**	**48.60**	**302**	*eP*		**P**		**15 27 36.8**	**0.0**
AVF	**Avril sur Loir**	**48.60**	**302**	*eP*		**P**		**15 27 36.8**	**0.0**
AVF	**Avril sur Loir**	**48.60**	**302**	*eP*		**P**		**15 27 36.8**	**0.0**
LASF	**Ste Croix**	**49.07**	**299**	*eP*		**P**		**15 27 41.1**	**+0.7**
LASF	**Ste Croix**	**49.07**	**299**	*eP*		**P**		**15 27 41.1**	**+0.7**
TCF	**Toulx Ste Croi**	**49.50**	**302**	*eP*		**P**		**15 27 44.1**	**+0.4**
	comp=Z,9.0nm,0.7s								
TCF	**Toulx Ste Croi**	**49.50**	**302**	*eP*		**P**		**15 27 44.1**	**+0.4**
TCF					pmax	pmax			
	comp=Z,9.0nm,0.7s								
TCF	**Toulx Ste Croi**	**49.50**	**302**	*eP*		**P**		**15 27 44.1**	**+0.4**
	comp=Z,9.0nm,0.7s								
CAF	**Calviac**	**50.02**	**300**	*eP*		**P**		**15 27 48.3**	**+0.6**
	comp=Z,12nm,1.0s								
CAF	**Calviac**	**50.02**	**300**	*eP*		**P**		**15 27 48.3**	**+0.6**
CAF					pmax	pmax			
	comp=Z,13nm,1.0s								
CAF	**Calviac**	**50.02**	**300**	*eP*		**P**		**15 27 48.3**	**+0.6**
	comp=Z,12nm,1.0s								
KMBO	**Kilima Mbogo**	**50.23**	**226**	P		**P**		**15 27 51.4**	**+1.6**
	comp=Z,6.5nm,1.1s								
KMBO	**Kilima Mbogo**	**50.23**	**226**	P		**P**		**15 27 48.1**	**-1.7**
	comp=Z,0.7nm,0.4s,baz=42,slow=12,SNR=1.8								
LDF	**La Druitiere**	**50.34**	**305**	*eP*		**P**		**15 27 49.9**	**-0.1**
	comp=Z,10nm,0.6s								
LDF	**La Druitiere**	**50.34**	**305**	*eP*		**P**		**15 27 49.9**	**-0.1**
LDF					pmax	pmax			
	comp=Z,11nm,0.6s								
LDF	**La Druitiere**	**50.34**	**305**	*eP*		**P**		**15 27 49.9**	**-0.1**
	comp=Z,10nm,0.6s								
MTLF	**Montolieu**	**50.43**	**298**	*eP*		**P**		**15 27 51.3**	**+0.5**
	comp=Z,5.5nm,0.7s								
MTLF	**Montolieu**	**50.43**	**298**	*eP*		**P**		**15 27 51.3**	**+0.5**
MTLF					pmax	pmax			
	comp=Z,6.0nm,0.7s								
MTLF	**Montolieu**	**50.43**	**298**	*eP*		**P**		**15 27 51.3**	**+0.5**
	comp=Z,5.5nm,0.7s								
SGMF	**Saint Gilles**	**51.99**	**306**	*eP*		**P**		**15 28 02.4**	**0.0**
SGMF	**Saint Gilles**	**51.99**	**306**	*eP*		**P**		**15 28 02.4**	**0.0**
SGMF	**Saint Gilles**	**51.99**	**306**	*eP*		**P**		**15 28 02.4**	**0.0**
DAG	**Danmarks Havn**	**52.39**	**343**	*i* P		**P**		**15 28 06.3**	**+1.4**
DAG					pmax	pmax			
	comp=Z,4.0nm,0.8s								
DAG	**Danmarks Havn**	**52.39**	**343**	*i* P		**P**		**15 28 06.3**	**+1.4**
	comp=Z,4.8nm,0.8s								
MAT	**Matsushiro**	**52.40**	**70**	P		**P**		**15 28 04.9**	**-0.7**
MJAR	**Matsushiro Arr**	**52.40**	**70**	P		**P**		**15 28 05.2**	**-0.4**
MJAR	**Matsushiro Arr**	**52.40**	**70**	P		**P**		**15 28 05.2**	**-0.4**
	comp=Z,5.4nm,0.9s,baz=283,slow=8.0,SNR=16								
MJAR					LR	LR		15 53 15.3	
	comp=Z,59nm,20.3s,baz=240,slow=39								
ROSF	**Rostrenen**	**52.41**	**306**	*eP*		**P**		**15 28 05.5**	**0.0**
ROSF	**Rostrenen**	**52.41**	**306**	*eP*		**P**		**15 28 05.5**	**0.0**
ROSF	**Rostrenen**	**52.41**	**306**	*eP*		**P**		**15 28 05.5**	**0.0**
ETSF	**Etsaut**	**52.49**	**299**	*eP*		**P**		**15 28 06.7**	**+0.4**
ETSF	**Etsaut**	**52.49**	**299**	*eP*		**P**		**15 28 06.7**	**+0.4**
ETSF	**Etsaut**	**52.49**	**299**	*eP*		**P**		**15 28 06.7**	**+0.4**
ESDC	**Sonseca Array**	**56.11**	**296**	P		**P**		**15 28 32.2**	**-0.5**
ESDC	**Sonseca Array**	**56.11**	**296**	P		**P**		**15 28 32.2**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=57,slow=7.5,SNR=6.2								
BILL	**Bilibino**	**56.63**	**27**	*i* P		**P**		**15 28 36.7**	**+0.9**
BILL				*i*				15 30 52.4	
BILL					pmax	pmax			
	comp=Z,5.0nm,1.5s								
SUMG	**Summit**	**58.74**	**341**	*eP*		**P**		**15 28 53.3**	**+2.2**
SUMG					pmax	pmax			
	comp=Z,12nm,0.8s								
SUMG	**Summit**	**58.74**	**341**	*eP*		**P**		**15 28 52.1**	**+1.1**
	comp=Z,9.3nm,0.7s								
SUMG	**Summit**	**58.74**	**341**	*i* P		**P**		**15 28 53.3**	**+2.2**
	comp=Z,12nm,0.8s								
TOA0	**Torodi Ar. Sit**	**65.50**	**267**	*eP*		**P**		**15 29 35.8**	**-0.9**
TORD	**Torodi Ar. Bea**	**65.50**	**267**	P		**P**		**15 29 35.1**	**-1.6**
TORD	**Torodi Ar. Bea**	**65.50**	**267**	P		**P**		**15 29 35.1**	**-1.6**
	comp=Z,5.0nm,0.7s,baz=50,slow=5.5,SNR=12								
TORD					LR	LR		16 03 07.1	
	comp=Z,57nm,20.0s,baz=165,slow=41								
COLD	**Coldfoot**	**69.78**	**16**	*eP*		**P**		**15 30 03.2**	**+0.2**
	comp=Z,3.1nm,0.6s								
COLA	**College**	**72.30**	**16**	*eP*		**P**		**15 30 18.4**	**+0.2**
COLA					pmax	pmax			
	comp=Z,6.0nm,1.0s								
COLA	**College**	**72.30**	**16**	*eP*		**P**		**15 30 18.4**	**+0.2**
	comp=Z,6.3nm,1.0s								
ILAR	**Eielson Array**	**72.59**	**16**	P		**P**		**15 30 18.8**	**-1.3**
ILAR	**Eielson Array**	**72.59**	**16**	P		**P**		**15 30 18.8**	**-1.3**
	comp=Z,1.0nm,0.9s,baz=324,slow=5.2,SNR=16								
DBIC	**Dimbokro**	**74.54**	**266**	P		**P**		**15 30 33.0**	**+0.8**
DBIC	**Dimbokro**	**74.54**	**266**	P		**P**		**15 30 33.0**	**+0.8**
	comp=Z,3.2nm,0.8s,baz=14,slow=4.2,SNR=3.1								
DBIC					LR	LR		16 08 17.7	
	comp=Z,74nm,19.9s,baz=230,slow=40								
YKW3	**Yellowknife Ar**	**78.84**	**2**	*eP*		**P**		**15 30 55.8**	**+0.1**
	comp=Z,0.1nm,0.8s								
YKA	**Yellowknife Ar**	**78.91**	**2**	P		**P**		**15 30 56.0**	**0.0**
YKA	**Yellowknife Ar**	**78.91**	**2**	P		**P**		**15 30 56.0**	**0.0**
	comp=Z,1.4nm,0.7s,baz=350,slow=5.6,SNR=25								
BOSA	**Boshof**	**79.36**	**220**	P		**P**		**15 30 58.3**	**-0.8**
BOSA	**Boshof**	**79.36**	**220**	P		**P**		**15 30 58.3**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=39,slow=6.5,SNR=1.9								
SCHQ	**Schefferville**	**79.81**	**337**	P		**P**		**15 31 02.7**	**+1.5**
SCHQ	**Schefferville**	**79.81**	**337**	P		**P**		**15 31 02.7**	**+1.5**
	comp=Z,2.1nm,0.8s,baz=25,slow=7.8,SNR=2.0								
WRA	**Warramunga Arr**	**83.49**	**122**	P		**P**		**15 31 20.5**	**-0.6**
WRA	**Warramunga Arr**	**83.49**	**122**	P		**P**		**15 31 20.5**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=325,slow=4.9,SNR=34								
WRAB	**Tennant Creek**	**83.49**	**122**	*eP*		**P**		**15 31 20.0**	**-1.0**
WRAB					pmax	pmax			
	comp=Z,4.0nm,0.6s								
WRAB	**Tennant Creek**	**83.49**	**122**	*eP*		**P**		**15 31 20.0**	**-1.0**
	comp=Z,4.0nm,0.6s								
NWAO	**Narrogin (SRO)**	**83.51**	**142**	LR		LR		16 09 03.0	
	comp=Z,55nm,19.9s,baz=66,slow=36								
ASAR	**Alice Springs**	**85.85**	**125**	P		**P**		**15 31 31.9**	**-0.9**
ASAR	**Alice Springs**	**85.85**	**125**	P		**P**		**15 31 31.9**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=318,slow=4.9,SNR=15								
CPUP	**Villa Florida**	**134.95**	**270**	PKP		**PKPdf**		**15 38 11.2**	**-1.0**
CPUP	**Villa Florida**	**134.95**	**270**	PKP		**PKPdf**		**15 38 11.2**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=30,slow=2.5,SNR=3.2								
PLCA	**Paso Flores**	**150.27**	**254**	PKPbc		**PKPbc**		**15 38 45.5**	**+1.6**
PLCA	**Paso Flores**	**150.27**	**254**	PKPbc		**PKPbc**		**15 38 45.5**	**+1.6**
	comp=Z,4.2nm,0.9s,baz=132,slow=2.9,SNR=5.7								

*SKO **25** 15:31:36.8,41°.31N×22°.73E,h15km,M1.3,ML1.6*
*THE **25** 15:31:37.9,41°.28N×22°.74E,h1km±2km,ML2.4/4,Error ellipse: s-maj=2.3km s-min=0.7km az=199.0*
*ISCJB **25** 15:31:37.7±0.4,41°.26N±0°.02×22°.75E±0°.03,h7km±3km,Error ellipse: s-maj=4.1km s-min=3.5km az=163.2*
*ATH **25** 15:31:37.7,41°.25N×22°.74E,h17km±1km,MD2.8/6*
*CSEM **25** 15:31:38.1±0.2,41°.25N×22°.73E,h2km,ML1.8,Error ellipse: s-maj=4.1km s-min=3.7km az=75.0*
*BEO **25** 15:31:39.5±0.7,41°.31N×22°.69E,h0km,ML1.8/5*

ISC 25 15:31:38.0±0.9,**41°.28N**±0°.02×**22°.73E**±0°.02,**h5**km±8km,
n36,σ0°50/67,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**290**	P		**P**	**Pg**	**15 31 40.2**	**-0.4**
VAY				S			**Sg**	**15 31 42.2**	**-0.2**
VAY	**Valandovo**	**0.13**	**290**	*i* Pg		**P**	**Pg**	**15 31 40.2**	**-0.4**
VAY				*e*Sg		**Sg**	**Sg**	**15 31 42.4**	**0.0**
VAY				*e*Lg		Lg	Lg	15 31 42.4	
	comp=N,445nm,0.3s								
VAY				*e*Lg		Lg	Lg	15 31 42.4	
	comp=E,221nm,0.2s								
VAY	**Valandovo**	**0.13**	**290**	P		**P**	**Pg**	**15 31 40.2**	**-0.4**
VAY	**Valandovo**	**0.13**	**290**	*i* Pg		**P**	**Pg**	**15 31 40.7**	**0.0**
VAY				*e*Sg		**Sg**	**Sg**	**15 31 42.3**	**-0.2**
VAY				*e*Lg		Lg	Lg	15 31 42.9	
	comp=E,221nm,0.2s								
KNT	**Kendrikon**	**0.17**	**132**	P		**P**	**Pg**	**15 31 41.7**	**+0.2**
KNT				S			**Sg**	**15 31 44.4**	**+0.7**
KNT	**Kendrikon**	**0.17**	**132**	P		**P**	**Pg**	**15 31 41.7**	**+0.2**
KNT				S			**Sg**	**15 31 44.4**	**+0.7**
GRG	**Griva**	**0.41**	**218**	P		**P**	**Pg**	**15 31 45.8**	**-0.1**
GRG				S			**Sg**	**15 31 51.8**	**+0.6**
GRG	**Griva**	**0.41**	**218**	*e*PB		**P**	**Pg**	**15 31 45.8**	**-0.1**
GRG				*e*SB		**S**	**Sg**	**15 31 51.3**	**+0.1**
GRG	**Griva**	**0.41**	**218**	P		**P**	**Pg**	**15 31 45.8**	**-0.1**
GRG				*e*Sb		**S**	**Sg**	**15 31 51.3**	**+0.1**
GRG				S		**S**	**Sg**	**15 31 51.8**	**+0.6**
SOH	**Sokhos**	**0.66**	**134**	P		**P**	**Pg**	**15 31 50.2**	**-0.4**
SOH				S			**Sg**	**15 31 59.0**	**-0.2**
SOH	**Sokhos**	**0.66**	**134**	*e*PN		**P**	**Pg**	**15 31 50.2**	**-0.4**
SOH				*e*SN		**S**	**Sg**	**15 31 58.9**	**-0.2**
SOH	**Sokhos**	**0.66**	**134**	P		**P**	**Pg**	**15 31 50.2**	**-0.4**
SOH				*e*Sn		**S**	**Sg**	**15 31 58.9**	**-0.2**
SRS	**Serrai**	**0.67**	**104**	P		**P**	**Pg**	**15 31 50.5**	**-0.4**
SRS	**Serrai**	**0.67**	**104**	P		**P**	**Pg**	**15 31 50.5**	**-0.4**
HORT	**Hortiatis**	**0.73**	**157**	P		**P**	**Pg**	**15 31 51.8**	**-0.3**
HORT				S			**Sg**	**15 32 02.2**	**+0.5**
HORT	**Hortiatis**	**0.73**	**157**	P		**P**	**Pg**	**15 31 51.8**	**-0.3**
HORT				S			**Sg**	**15 32 02.2**	**+0.5**
NVR	**Nevrokopi**	**0.86**	**85**	P		**P**	**Pg**	**15 31 54.3**	**-0.2**
NVR				S			**Sg**	**15 32 05.6**	**0.0**
NVR	**Nevrokopi**	**0.86**	**85**	*e*PN		**P**	**Pg**	**15 31 53.9**	**-0.6**
NVR				*e*SN		**S**	**Sg**	**15 32 05.1**	**-0.5**
NVR	**Nevrokopi**	**0.86**	**85**	*e*Pn		**P**	**Pg**	**15 31 53.9**	**-0.6**
NVR	**Nevrokopi**	**0.86**	**85**	P		**P**	**Pg**	**15 31 54.3**	**-0.2**
NVR				*e*Sn		**S**	**Sg**	**15 32 05.1**	**-0.5**
NVR				S			**Sg**	**15 32 05.6**	**0.0**
PLG	**Polygyros**	**1.05**	**149**	*e*PN		**P**	**Pg**	**15 31 56.8**	**-1.4**
PLG				*e*SN		**S**	**Sg**	**15 32 11.2**	**-0.7**
PLG	**Polygyros**	**1.05**	**149**	*e*Pn		**P**	**Pg**	**15 31 56.8**	**-1.4**
PLG				*e*Sn		**S**	**Sg**	**15 32 11.2**	**-0.7**
FNA	**Florina**	**1.14**	**245**	*e*PN		**P**	**Pg**	**15 31 59.3**	**-0.5**
FNA	**Florina**	**1.14**	**245**	*e*Pn		**P**	**Pg**	**15 31 59.3**	**-0.5**
LIT	**Litokhoron**	**1.19**	**189**	P		**P**	**Pg**	**15 31 59.9**	**-0.9**
LIT	**Litokhoron**	**1.19**	**189**	P		**P**	**Pg**	**15 31 59.9**	**-0.9**
VTS	**Vitosha**	**1.36**	**15**	P		**P**	**Pg**	**15 32 03.6**	**-0.5**
VTS				S			**Sb**	**15 32 22.3**	**+0.5**
VTS	**Vitosha**	**1.36**	**15**	*e*Pg		**P**	**Pg**	**15 32 03.6**	**-0.5**
VTS				*e*Sg		**S**	**Sg**	**15 32 21.6**	**-0.2**
VTS	**Vitosha**	**1.36**	**15**	P		**P**	**Pg**	**15 32 03.6**	**-0.5**
VTS				*e*Sg		**S**	**Sg**	**15 32 21.6**	**-0.2**
VTS				S		**S**	**Sb**	**15 32 22.3**	**+0.5**
PAIG	**Paliouri**	**1.53**	**151**	*e*PN		**P**	**Pn**	**15 32 06.0**	**0.0**
PAIG				*e*SN		**S**	**Sn**	**15 32 26.4**	**+0.2**
PAIG	**Paliouri**	**1.53**	**151**	*e*Pn		**P**	**Pn**	**15 32 06.0**	**0.0**
PAIG				*e*Sn		**S**	**Sn**	**15 32 26.4**	**+0.2**
BARS	**Barje**	**1.68**	**336**	*e*Pn		**P**	**Pb**	**15 32 09.4**	**0.0**
BARS				*e*Sn		**S**	**Sn**	**15 32 30.6**	**+0.6**
BARS	**Barje**	**1.68**	**336**	*e*Pn		**P**	**Pb**	**15 32 09.4**	**0.0**
BARS				*e*Sn		**S**	**Sn**	**15 32 30.6**	**+0.6**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pn		**P**	**Pg**	**15 32 10.5**	**0.0**
PLD				*e*Sg		**S**	**Sg**	**15 32 32.7**	**+0.2**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pn		**P**	**Pg**	**15 32 10.5**	**0.0**
PLD				*e*Sg		**S**	**Sg**	**15 32 32.7**	**+0.2**
ZAPS	**Zavoj**	**2.00**	**358**	*e*Pn		**P**	**Pg**	**15 32 15.7**	**-0.6**
ZAPS				*e*Sn		**S**	**Sb**	**15 32 40.1**	**+0.1**

*TAP **25** 15:35:27.8,23°.95N×121°.63E,h44km,ML2.8,C*
*JMA **25** 15:35:27.7±0.6,24°.11N×121°.70E,h82km,M2.2*
*ISCJB **25** 15:35:28.1±0.3,23°.94N±0°.02×121°.70E±0°.02,h39km±5km,Error ellipse: s-maj=3.8km s-min=2.5km az=39.3*

ISC 25 15:35:28.3±1.0,**23°.95N**±0°.02×**121°.68E**±0°.02,**h34**km±2km,
n42,σ0°76/77,1C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.07**	**292**	P		**P**	**Pb**	**15 35 34.9**	**+0.8**
	baz=299								
HWA				*e*S		**Sb**	**Sb**	**15 35 40.5**	**+2.5**
	baz=299								
TWD	**Chiawan**	**0.15**	**330**	P		**P**	**Pb**	**15 35 35.0**	**+0.4**
	baz=335								
TWD				S		**Sb**	**Sb**	**15 35 40.3**	**+1.5**
	baz=335								
ESF	**Shoufeng Towns**	**0.17**	**243**	*e*P		**Pn**	**Pn**	**15 35 34.0**	**+1.0**
	baz=246								
ESL	**Shilin**	**0.26**	**239**	*i* P		**Pn**	**Pn**	**15 35 35.5**	**0.0**
	baz=237								
ESL				*e*S		**Sb**	**Sb**	**15 35 40.7**	**0.0**
	baz=237								
WHF	**Hehuan Shan**	**0.42**	**297**	*i*P		**Pb**	**Pb**	**15 35 37.8**	**-0.4**
	baz=295								
WHF				S		**Sb**	**Sb**	**15 35 44.8**	**-0.2**
	baz=295								
ENA	**Nanau**	**0.48**	**7**	P		**Pb**	**Pb**	**15 35 38.5**	**-0.2**
	baz=4.0								
ENA				*e*S		**Sn**	**Sn**	**15 35 46.5**	**+0.5**
	baz=4.0								
TWT	**Tachien**	**0.55**	**304**	P		**Pb**	**Pb**	**15 35 39.5**	**-0.3**
	baz=307								
TWT				S		**Sb**	**Sb**	**15 35 47.8**	**-0.1**
	baz=307								
EHY	**Hungye**	**0.55**	**216**	*e*P		**Pb**	**Pb**	**15 35 38.4**	**-1.4**
	baz=212								
EHY				*e*S		**Sb**	**Sb**	**15 35 46.0**	**-1.6**
	baz=212								
NNS	**Nan Shan**	**0.56**	**330**	P		**Pb**	**Pb**	**15 35 39.4**	**-0.6**
	baz=337								
NNS				*e*S		**Sb**	**Sb**	**15 35 47.6**	**-0.5**
	baz=337								
TWC	**Suao**	**0.68**	**13**	P		**Pn**	**Pn**	**15 35 41.6**	**+0.1**
	baz=8.0								
TWC				*e*S		**Sb**	**Sb**	**15 35 51.7**	**+0.7**
	baz=8.0								
TWF1	**Yuli**	**0.69**	**210**	*e*P		**Pn**	**Pn**	**15 35 40.0**	**-1.7**
	baz=216								
TWF1				*e*S		**Sb**	**Sb**	**15 35 52.1**	**+0.7**
	baz=216								
ENTT	**Nioudou**	**0.69**	**352**	*i*P		**Pn**	**Pn**	**15 35 41.3**	**-0.5**
	baz=353								
ENTT				*e*S		**Sn**	**Sn**	**15 35 50.3**	**-1.0**
	baz=353								
SMLT	**Sun Moon Lake**	**0.71**	**265**	*e*P		**Pn**	**Pn**	**15 35 41.7**	**-0.4**
	baz=264								
SMLT				*e*S		**Sn**	**Sn**	**15 35 52.2**	**+0.2**
	baz=264								
TYC	**Yuchr**	**0.75**	**267**	*e*P		**Pn**	**Pn**	**15 35 42.2**	**-0.3**
	baz=266								
TYC				*e*S		**Sn**	**Sn**	**15 35 52.9**	**+0.1**
	baz=266								
TWE	**Neicheng**	**0.77**	**359**	P		**Pn**	**Pn**	**15 35 42.4**	**-0.4**
	baz=357								
TWE				*e*S		**Sn**	**Sn**	**15 35 52.8**	**-0.4**
	baz=357								
NSK	**Sanguang**	**0.78**	**338**	P		**Pn**	**Pn**	**15 35 42.6**	**-0.4**
	baz=345								
NSK				*e*S		**Sn**	**Sn**	**15 35 52.4**	**-1.1**
	baz=345								
YUS	**Yu-Shan**

KNZ	Kokohu	9.97 195	PN	Pn	15 39 01.5	+0.3
RAHZ	Arahi	10.01 197	PN	Pn	15 39 02.3	+0.6
MHGZ	Mahia Peninsul	10.05 193	PN	Pn	15 39 01.3	-0.8
NMHZ	Naumai	10.26 198	PN	Pn	15 39 04.0	-0.7
BKZ	Black Stump Fm	10.41 199	PN	Pn	15 39 05.0	-1.5
BKZ			SN	S	15 40 58.1	-5.5
MCHZ	McNeill Hill	10.61 198	PN	Pn	15 39 08.5	-0.4
WHVZ	Whangaehu Hut	10.80 203	PN	Pn	15 39 09.5	-1.9
BHHZ	Black Hill Sta	10.83 200	PN	Pn	15 39 09.4	-2.3
WNVZ	Wahianoa	10.84 202	PN	Pn	15 39 10.9	-0.9
MOVZ	Moawhango	10.86 202	PN	Pn	15 39 10.6	-1.4
KAHZ	Kahuranaki	10.89 197	PN	Pn	15 39 11.0	-1.5
PXZ	Pawanui	11.12 196	*e*PN	Pn	15 39 12.7	-2.4
PNHZ	Pukenui	11.19 199	PN	Pn	15 39 12.0	-3.9
WPHZ	Waipukurau	11.26 198	*e*PN	Pn	15 39 16.0	-0.9
DVHZ	Dannevirke	11.55 198	PN	Pn	15 39 17.5	-2.9
MRZ	Mangatainoka R	12.06 200	PN	Pn	15 39 22.5	-4.0
DZM	Mont Dzumac 1.1nm,0.3s,baz=124,slow=18,SNR=12	14.91 296	P	Pn	15 40 03.6	+2.9
ARMA	Armidale baz=31,SNR=6.3	25.36 260	P	P	15 41 46.1	+3.1
RMQ	Roma baz=34,SNR=4.4	28.49 268	P	P	15 42 13.3	+2.7
QLP	Quilpie baz=38,SNR=4.5	32.41 266	P	P	15 42 46.1	+1.2
CTA	Charters Tower 4.0nm,0.5s,baz=93,slow=10,SNR=6.6	32.69 278	P	P	15 42 47.5	+0.1
STKA	Stephens Creek 5.8nm,0.4s,baz=99,slow=10.0,SNR=44	33.78 256	P	P	15 42 57.2	+0.6
STKA	Stephens Creek baz=39,SNR=34	33.78 256	P	P	15 42 57.2	+0.6
MTSU	Mount Surprise baz=40,SNR=12	35.16 280	P	P	15 43 03.0	-5.6
MTSU			S	PcS	15 49 13.9	-5.9
	baz=40,SNR=22					
BBOO	Buckleboo baz=44,SNR=12	38.33 253	P	P	15 43 34.1	-0.9
ASAR	Alice Springs 5.5nm,0.5s,baz=101,slow=6.8,SNR=166	42.21 266	P	P	15 44 06.0	-0.6
ASAR			PcP	PP	15 45 52.8	+0.9
	0.5nm,0.8s,baz=124,slow=4.4,SNR=3.5					
WRA	Warramunga Arr 4.2nm,0.5s,baz=111,slow=7.1,SNR=43	43.10 272	P	P	15 44 13.2	-0.6
WRA			PcP	PcP	15 45 56.0	-1.4
	1.2nm,0.8s,baz=111,slow=3.1,SNR=5.0					
MMPI	Merauke baz=48,SNR=4.1	43.30 290	S	S	15 50 57.2	+38
FORT	Forrest baz=51,SNR=12	45.38 254	P	P	15 44 30.2	-1.4
FITZ	Fitzroy Crossi 2.8nm,0.8s,baz=109,slow=8.6,SNR=4.9	51.40 270	P	P	15 45 16.7	-0.6
MEEK	Meekatharra baz=60,SNR=4.0	54.47 257	P	P	15 45 37.6	-2.0
MORW	Morawa baz=62,SNR=3.8	55.90 253	P	P	15 45 48.1	-1.5
QSPA	South Pole Qui 3.6nm,0.7s,baz=47,slow=1.9,SNR=35	60.72 180	P	P	15 46 23.4	+1.1
MJAR	Matsushiro Arr 2.3nm,0.8s,baz=160,slow=5.1,SNR=6.1	76.87 326	P	P	15 48 00.3	-1.0
KSRS	Korea Array 1.3nm,0.9s,baz=139,slow=5.9,SNR=8.8	82.96 320	P	P	15 48 33.4	-0.2
PETK	Petropavlovsk- 4.0nm,0.8s,baz=132,slow=7.3,SNR=8.0	84.60 346	P	P	15 48 41.3	-0.2
CMAR	Chiang Mai Arr 0.3nm,0.5s,baz=105,slow=4.4,SNR=3.7	92.16 290	P	P	15 49 19.1	+1.0
MKAR	Makanchi Array 0.2nm,0.4s,baz=166,slow=2.2,SNR=5.3	116.39 311	PKP	PKPdf	15 54 47.7	-2.0
KBZ	Khabaz 1.9nm,0.8s,baz=117,slow=2.3,SNR=4.1	143.75 305	PKP	PKPab	15 55 39.0	+0.1
FINES	FINESS Array B 3.2nm,0.6s,baz=32,slow=3.4,SNR=22	143.87 340	PKP	PKPab	15 55 38.0	-0.9
NB2	NORSAR Subarra comp=Z,1.5nm,0.6s,baz=15,slow=2.8	147.60 351	PKPbc	PKPbc	15 55 49.0	-1.4
NOA	NORSAR Array B comp=Z,1.9nm,0.6s,baz=16,slow=4.3,SNR=8.4	147.60 351	PKPbc	PKPbc	15 55 49.4	-1.0
AKASG	Malin Array Be comp=Z,3.6nm,0.6s,baz=46,slow=2.9,SNR=9.1	149.91 323	PKPbc	PKPbc	15 55 55.2	-1.2
BRTR	Keskin Array B comp=Z,0.7nm,0.3s,baz=159,slow=4.3,SNR=5.9	151.27 300	PKPbc	PKPbc	15 55 58.8	-1.4
TORD	Torodi Ar. Bea comp=Z,1.1nm,0.5s,baz=181,slow=3.8,SNR=17	163.82 183	PKPab	PKPab	15 57 03.0	-0.9

IDC 25 15:39:54.2±1.9,5°16S×142°93E,h0km,mb3.4/3, mb1 3.6/5,mb1mx3.5/17,mbtmp3.5/5,ML3.1/2,MS4.2/1, Ms1 4.2/1,ms1mx2.7/20,Error ellipse: s-maj=41.3km s-min=30.5km az=77.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby 1.0nm,0.3s,baz=311,slow=11,SNR=4.1	5.95	135	Pn		Pn	Pn	15 41 23.3	-0.4
WRA	Warramunga Arr 0.1nm,0.3s,baz=30,slow=12,SNR=12	16.91	209	Pn		Pn	Pn	15 43 53.1	+0.7
ASAR	Alice Springs 0.4nm,0.5s,baz=38,slow=9.4,SNR=4.7	20.36	204	P		Pn	Pn	15 44 33.7	-0.7
FITZ	Fitzroy Crossi 1.9nm,0.9s,baz=52,slow=9.5,SNR=4.3	21.24	231	P		P	P	15 44 40.6	-1.4
JHJ	Hachijo jima 2 comp=Z,387nm,20.7s,slow=8.0	38.18	356	LR		LR	LR	15 59 19.6	
MKAR	Makanchi Array 0.6nm,0.7s,baz=127,slow=6.3,SNR=4.9	74.30	322	P		P	P	15 51 33.7	+0.2

*SKO **25** 15:41:08.8,41°32N×22°67E,h15km,M1.6,ML2.0*
*ATH **25** 15:41:09.7,41°30N×22°69E,h4km,MD2.7/4*
*CSEM **25** 15:41:10.5±0.2,41°25N×22°72E,h2km,MD2.7,Error ellipse: s-maj=5.3km s-min=4.0km az=59.0*
*BEO **25** 15:41:12.2±1.2,41°29N×22°59E,h0km*
ISC 25 15:41:09.1±0.8,41°25N±0°03×22°67E±0°03,h11km±6km, n16,σ0961/32,1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.10	313	*i* Pg		Pg	Pg	15 41 11.8	+0.1
VAY				*i* Sg		Sg	Sg	15 41 13.6	-0.1
VAY				eLg		Lg	Lg	15 41 13.7	
	comp=N,2μm,0.2s								
VAY				eLg		Lg	Lg	15 41 13.8	
	comp=E,444nm,0.4s								
VAY	Valandovo	0.10	313	⇓*i* Pg		Pg	Pg	15 41 11.7	-0.1
VAY				*e*Sg		Sg	Sg	15 41 13.6	-0.1
VAY	Valandovo	0.10	313	*i* Pg		Pg	Pg	15 41 12.3	+0.5
VAY				*i* Sg		Sg	Sg	15 41 14.1	+0.4
VAY				eLg		Lg	Lg	15 41 14.2	
	comp=E,444nm,0.4s								
GRG	Griva	0.36	215	*e*PG		Pb	Pb	15 41 17.7	+0.2
GRG				*e*SG		Sb	Sb	15 41 23.4	+0.3
GRG	Griva	0.36	215	*e*Pg		Pb	Pb	15 41 17.7	+0.2
GRG				*e*Sg		Sb	Sb	15 41 23.4	+0.3
SOH	Sokhos	0.67	129	*e*PG		Pb	Pb	15 41 22.9	0.0
SOH				*e*SG		Sb	Sb	15 41 32.5	+0.3
SOH	Sokhos	0.67	129	*e*Pg		Pb	Pb	15 41 22.9	0.0
SOH				*e*Sg		Sb	Sb	15 41 32.5	+0.3
NVR	Nevrokopi	0.90	83	*e*PG		Pn	Pn	15 41 26.5	-1.3
NVR				*e*SG		Sg	Sg	15 41 37.9	-0.4
NVR	Nevrokopi	0.90	83	*e*Pg		Pn	Pn	15 41 26.5	-1.3
NVR				*e*Sg		Sg	Sg	15 41 37.9	-0.4
PLG	Polygyros	1.06	146	*e*PG		Pg	Pg	15 41 30.0	+0.6
PLG				*e*SG		Sn	Sn	15 41 44.8	+0.2
PLG	Polygyros	1.06	146	*e*Pg		Pg	Pg	15 41 30.0	+0.6
PLG				*e*Sg		Sn	Sn	15 41 44.8	+0.2
VTS	Vitosha	1.40	17	*e*Pg		Pg	Pg	15 41 36.8	+0.9
VTS				*e*Sg		Sg	Sg	15 41 55.3	+1.2
VTS	Vitosha	1.40	17	*e*Pg		Pg	Pg	15 41 36.8	+0.9
VTS				*e*Sg		Sg	Sg	15 41 55.3	+1.2
BARS	Barje	1.69	338	*e*Pn		Pg	Pg	15 41 41.5	+0.1
BARS				*e*Sn		Sg	Sg	15 42 03.7	+0.3
BARS	Barje	1.69	338	*e*Pn		Pg	Pg	15 41 41.5	+0.1
BARS				*e*Sn		Sg	Sg	15 42 03.7	+0.3
ZAPS	Zavoj	2.02	359	*e*Pn		Pg	Pg	15 41 48.0	+0.2
ZAPS				*e*Sn		Sg	Sg	15 42 13.4	-0.6

SKO 25 15:46:40.9,41°32N×22°70E,h15km,M0.9,ML1.3, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.10	271	*e*Pg		Pg	Pg	15 46 44.0	-0.1
VAY				eLg		Lg	Lg	15 46 46.1	
	comp=E,157nm,0.2s								
VAY				*i* Sg		Sg	Sg	15 46 46.1	-0.2
VAY				eLg		Lg	Lg	15 46 46.1	
	comp=N,228nm,0.3s								

*ISK **25** 15:48:18.4,38°68N×35°74E,h5km,MD2.6*
*CSEM **25** 15:48:18.6±0.3,38°67N×35°83E,h2km,MD2.6,Error ellipse: s-maj=7.9km s-min=5.4km az=22.0*
*ISCJB **25** 15:48:19.4±0.8,38°67N±0°04×35°73E±0°04,h0km±8km, Error ellipse: s-maj=7.4km s-min=4.5km az=29.1*
*DDA **25** 15:48:19.3,38°75N×35°77E,h7km,MD2.8*
ISC 25 15:48:19.5±0.9,38°71N±0°03×35°78E±0°03,h12km±8km, n18,σ0974/30,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNN	Bunyan	0.15	20	PG		Pg	Pg	15 48 22.7	-0.6
BNN				eSG		Sg	Sg	15 48 36.8	+0.9
BNN	Bunyan	0.15	20	*i* Pg		Pg	Pg	15 48 22.7	-0.6
BNN				eSg		Sg	Sg	15 48 36.8	+0.9
PINB	Pinarbasi	0.49	93	*i* P		Pb	Pb	15 48 28.9	-1.3
PINB				*i* S		Sb	Sb	15 48 36.8	-0.6
PINB	Pinarbasi	0.49	93	*i* P		Pb	Pb	15 48 28.9	-1.3
PINB				*i* S		Sb	Sb	15 48 36.8	-0.6
SARI	SarD1z-Kayseri	0.58	121	*e*PG		Pb	Pb	15 48 31.3	-0.5
SARI				*e*SG		Sb	Sb	15 48 40.6	+0.5
SARI	SarD1z-Kayseri	0.58	121	*e*Pg		Pb	Pb	15 48 31.3	-0.5
SARI				*e*Sg		Sb	Sb	15 48 40.6	+0.5
AVNT	Avonos	0.73	276	*i* P		Pg	Pg	15 48 33.0	-0.7
AVNT				*i* S		Sg	Sg	15 48 43.4	+0.2
AVNT	Avonos	0.73	276	*i* P		Pg	Pg	15 48 33.0	-0.7
AVNT				*i* S		Sg	Sg	15 48 43.4	+0.2
YOZ	Yozgat	1.00	339	*e*PG		Pg	Pg	15 48 38.6	-0.2
YOZ	Yozgat	1.00	339	*e*Pg		Pg	Pg	15 48 38.6	-0.2
KOZT	Kozan	1.23	178	*e*PN		Pg	Pg	15 48 42.7	-0.4
KOZT				*e*SN		Sg	Sg	15 49 00.2	+1.2
KOZT	Kozan	1.23	178	*e*Pn		Pg	Pg	15 48 42.7	-0.4
KOZT				*e*Sn		Sg	Sg	15 49 00.3	+1.2
DARE	Darende-Malaty	1.34	95	*e*PN		Pg	Pg	15 48 45.9	+0.6
DARE	Darende-Malaty	1.34	95	*e*Pn		Pg	Pg	15 48 45.9	+0.6
CDAG	Cicekdag	1.43	310	*i* P		Pg	Pg	15 48 46.6	-0.3
CDAG				*i* S		Sb	Sb	15 49 05.2	+0.9
CDAG	Cicekdag	1.43	310	*i* P		Pg	Pg	15 48 46.6	-0.3
CDAG				*i* S		Sb	Sb	15 49 05.2	+0.9
CORM	Corum	1.72	329	*e*PN		Pb	Pb	15 48 51.1	0.0
CORM	Corum	1.72	329	*e*Pn		Pb	Pb	15 48 51.1	0.0

*SKO **25** 15:59:27.4,41°41N×22°68E,h24km,M1.4,ML1.7*
*THE **25** 15:59:30.5,41°27N×22°70E,h2km,2km,ML2.1/6,Error ellipse: s-maj=2.1km s-min=0.6km az=205.0*
*CSEM **25** 15:59:30.7±0.2,41°26N×22°70E,h2km,ML1.7,Error ellipse: s-maj=3.7km s-min=3.1km az=42.0*
*ATH **25** 15:59:31.0,41°26N×22°74E,h4km,MD2.7/4*
*BEO **25** 15:59:32.0±1.3,41°29N×22°63E,h0km,ML1.7/4*
ISC 25 15:59:30.6±1.0,41°29N±0°02×22°70E±0°02,h3km±10km, n30,σ0938/53,1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.10	290	P		Pg	Pg	15 59 32.2	-0.4
VAY				S		Sg	Sg	15 59 34.0	0.0
VAY	Valandovo	0.10	290	*i* Pg		Pg	Pg	15 59 32.4	-0.3
VAY				eLg		Lg	Lg	15 59 34.0	
	comp=E,231nm,0.2s								
VAY				*i* Sg		Sg	Sg	15 59 34.1	+0.1
VAY				eLg		Lg	Lg	15 59 34.2	
	comp=N,775nm,0.2s								
VAY	Valandovo	0.10	290	⇓*i* Pg		Pg	Pg	15 59 32.2	-0.4
VAY				*e*Sg		Sg	Sg	15 59 34.0	0.0
VAY	Valandovo	0.10	290	P		Pg	Pg	15 59 32.2	-0.4
VAY	Valandovo	0.10	290	*i* Pg		Pg	Pg	15 59 32.8	+0.2
VAY				S		Sg	Sg	15 59 34.0	0.0
VAY				eLg		Lg	Lg	15 59 34.6	
	comp=N,775nm,0.2s								
KNT	Kendrikon	0.20	129	P		Pg	Pg	15 59 34.6	+0.1
KNT				S		Sg	Sg	15 59 37.5	+0.5
KNT	Kendrikon	0.20	129	P		Pg	Pg	15 59 34.6	+0.1
KNT				S		Sg	Sg	15 59 37.5	+0.5
GRG	Griva	0.40	214	P		Pg	Pg	15 59 38.0	-0.3
GRG				S		Sg	Sg	15 59 43.6	+0.1
GRG	Griva	0.40	214	*e*PG		Pg	Pg	15 59 38.1	-0.3
GRG				*e*SG		Sg	Sg	15 59 43.9	+0.4
GRG	Griva	0.40	214	P		Pg	Pg	15 59 38.0	-0.3
GRG				*e*Sg		Sg	Sg	15 59 43.9	+0.4
SOH	Sokhos	0.68	133	P		Pg	Pg	15 59 43.1	-0.6
SOH				S		Sg	Sg	15 59 52.5	0.0
SOH	Sokhos	0.68	133	*e*PG		Pg	Pg	15 59 43.2	-0.5
SOH				*e*SG		Sg	Sg	15 59 52.5	0.0
SOH	Sokhos	0.68	133	*e*Pg		Pg	Pg	15 59 43.2	-0.5
SOH				S		Sg	Sg	15 59 52.5	0.0
SRS	Serrai	0.70	104	P		Pg	Pg	15 59 44.3	+0.3
SRS				S		Sg	Sg	15 59 53.3	+0.3
SRS	Serrai	0.70	104	P		Pg	Pg	15 59 44.3	+0.3
SRS				S		Sg	Sg	15 59 53.3	+0.3
HORT	Hortiatis	0.75	156	P		Pg	Pg	15 59 44.5	-0.6
HORT				S		Sg	Sg	15 59 54.8	0.0
HORT	Hortiatis	0.75	156	P		Pg	Pg	15 59 44.5	-0.6
NVR	Nevrokopi	0.88	86	P		Pg	Pg	15 59 46.9	-0.6
NVR	Nevrokopi	0.88	86	*e*PG		Pg	Pg	15 59 46.9	-0.6
NVR				*e*SG		Sg	Sg	15 59 58.6	-0.3
NVR	Nevrokopi	0.88	86	P		Pg	Pg	15 59 46.9	-0.6
FNA	Florina	1.12	244	*e*PN		Pn	Pn	15 59 53.3	0.0
FNA	Florina	1.12	244	*e*Pn		Pn	Pn	15 59 53.3	0.0
VTS	Vitosha	1.36	16	P		Pn	Pn	15 59 53.3	-0.2
VTS				S		Sn	Sn	16 00 15.2	-0.2
VTS	Vitosha	1.36	16	*e*Pg		Pn	Pn	15 59 56.2	-0.5
VTS				*e*Sg		Sg	Sg	16 00 14.8	+0.5
VTS	Vitosha	1.36	16	P		Pn	Pn	15 59 56.3	-0.5
VTS				*e*Sg		Sg	Sg	16 00 14.8	+0.5
VTS				S		Sn	Sn	16 00 15.2	-0.2
KAVA	Kavala	1.40	101	P		Pn	Pn	15 59 56.9	-0.3
KAVA				S		Sg	Sg	16 00 15.9	+0.2
KAVA	Kavala	1.40	101	P		Pn	Pn	15 59 56.9	-0.3
KAVA				S		Sg	Sg	16 00 15.9	+0.2
BARS	Barje	1.66	337	*e*Sn		Sb	Sb	16 00 23.9	+0.6
BARS	Barje	1.66	337	*e*Sn		Sb	Sb	16 00 23.9	+0.6
ZAPS	Zavoj	1.99	359	*e*Pn		Pb	Pb	16 00 07.8	+0.3
ZAPS				*e*Sn		Sb	Sb	16 00 33.0	+0.3

*SKO **25** 16:04:18.5,41°41N×22°66E,h24km,M1.6,ML2.1*
*ISCJB **25** 16:04:20.9±1.0,41°24N±0°09×22°68E±0°05,h6km±14km, Error ellipse: s-maj=16.2km s-min=5.9km az=167.1*
*CSEM **25** 16:04:20.8±0.1,41°29N×22°69E,h12km,MD2.6,Error ellipse: s-maj=3.3km s-min=1.9km az=175.0*
*ATH **25** 16:04:21.2,41°28N×22°68E,h11km±9km,MD2.6/4*
ISC 25 16:04:21.0±1.1,41°30N±0°06×22°67E±0°03,h11km±8km, n10,σ0922/20,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.08	284	*i* Pg		Pg	Pg	16 04 23.3	-0.1
VAY				eLg		Lg	Lg	16 04 24.9	
	comp=E,1μm,0.3s								
VAY				*i* Sg		Sg	Sg	16 04 24.9	-0.3
VAY				eLg		Lg	Lg	16 04 24.9	
	comp=N,2μm,0.3s								
VAY	Valandovo	0.08	284	*i* Pg		Pg	Pg	16 04 23.7	+0.3
VAY				*i* Sg		Sg	Sg	16 04 25.3	+0.1
VAY				eLg		Lg	Lg	16 04 25.4	
	comp=N,2μm,0.3s								
GRG	Griva	0.40	211	*e*PB		Pg	Pg	16 04 29.1	+0.2
GRG				*e*SB		Sg	Sg	16 04 34.3	+0.1
GRG	Griva	0.40	211	*e*Pb		Pg	Pg	16 04 29.1	+0.2
GRG				*e*Sb		Sg	Sg	16 04 34.3	+0.1
SOH	Sokhos	0.70	133	*e*PB		Pg	Pg	16 04 34.4	-0.2
SOH				*e*SB		Sg	Sg	16 04 43.9	+0.1
SOH	Sokhos	0.70	133	*e*Pb		Pg	Pg	16 04 34.4	-0.2
SOH				*e*Sb		Sg	Sg	16 04 43.9	+0.1
NVR	Nevrokopi	0.90	87	*e*PB		Pg	Pg	16 04 38.2	-0.1
NVR				*e*SB		Sg	Sg	16 04 50.4	+0.4
NVR	Nevrokopi	0.90	87	*e*Pb		Pg	Pg	16 04 38.2	-0.1
NVR				*e*Sb		Sg	Sg	16 04 50.4	+0.4
FNA	Florina	1.11	243	*e*PN		Pb	Pb	16 04 42.1	-0.1
FNA				*e*SB		Sb	Sb	16 04 56.6	-0.1
FNA	Florina	1.11	243	*e*Pn		Pb	Pb	16 04 42.1	-0.1
FNA				*e*Sb		Sb	Sb	16 04 56.6	-0.1

IDC 25 16:16:25.5±2.1,29°12S×177°59W,h52km±11km,mb3.5/3, mb1 3.7/3,mb1mx3.4/17,mbtmp3.5/3,Error ellipse: s-maj=47.0km s-min=31.8km az=170.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island 855nm,0.3s,baz=67,slow=14,SNR=47	0.32	245	P		Pn	Pn	16 16 35.8	+0.9
RAO				S		Sn	Sn	16 16 44.4	+2.6
	4μm,0.3s,baz=73,slow=19,SNR=45								
STKA	Stephens Creek 1.1nm,0.4s,baz=82,slow=7.1,SNR=3.6	35.14	255	P		P	P	16 23 13.2	-1.0
ASAR	Alice Springs 0.3nm,0.6s,baz=106,slow=7.5,SNR=11	42.55	265	P		P	P	16 24 23.8	-0.7
WRA	Warramunga Arr 0.8nm,0.6s,baz=109,slow=7.5,SNR=11	44.43	271	P		P	P	16 24 31.5	0.0
FINES	FINESS Array B 0.4nm,0.4s,baz=62,slow=4.5,SNR=4.8	144.06	341	PKP		PKPdf	PKPdf	16 35 53.9	-0.7
AKASG	Malin Array Be 0.5nm,0.4s,baz=50,slow=2.9,SNR=4.0	150.49	324	PKPbc		PKPbc	PKPbc	16 36 10.7	-0.3
MMAI	Mount Meron Ar 0.9nm,0.5s,baz=78,slow=6.6,SNR=2.4	151.54	286	PKPbc		PKPbc	PKPbc	16 36 15.2	+1.0

*SKO **25** 16:20:47.8,41°33N×22°69E,h15km,M1.5,ML1.9*
*ATH **25** 16:20:48.9,41°26N×22°71E,h14km±1km,MD2.8/4*
*SOF **25** 16:20:48.0,41°29N×22°69E,h11km,MD2.5*
*CSEM **25** 16:20:48.8±0.2,41°27N×22°71E,h1km±1km,ML1.8,Error ellipse: s-maj=3.9km s-min=3.0km az=70.0*
*BEO **25** 16:20:49.7±1.3,41°25N×22°64E,h0km,ML1.8/4*
*THE **25** 16:20:49.0,41°27N×22°70E,h3km±2km,ML2.2/7,Error ellipse: s-maj=2.2km s-min=0.8km az=201.0*
ISC 25 16:20:48.5±0.8,41°27N±0°02×22°68E±0°02,h8km±6km, n43,σ0951/72,1C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	302	P		Pg	Pg	16 20 50.7	-0.1
VAY				S		Sg	Sg	16 20 52.5	0.0
VAY	Valandovo	0.09	302	*i* Pg		Pg	Pg	16 20 50.8	-0.1
VAY				*i* Sg		Sg	Sg	16 20 52.6	+0.1
VAY				eLg		Lg	Lg	16 20 52.6	
	comp=N,1μm,0.2s								
VAY				eLg		Lg	Lg	16 20 52.7	
	comp=E,374nm,0.4s								
VAY	Valandovo	0.09	302	⇑*i* Pg		Pg	Pg	16 20 50.6	-0.3
VAY	Valandovo	0.09	302	P		Pg	Pg	16 20 50.7	-0.1
VAY				S		Sg	Sg	16 20 52.5	0.0
VAY				*i* Sg		Sg	Sg	16 20 53.1	+0.6
VAY				eLg		Lg	Lg	16 20 53.2	
	comp=E,374nm,0.4s								
KNT	Kendrikon	0.20	123	P		Pg	Pg	16 20 53.1	+0.5
KNT				S		Sg	Sg	16 20 56.0	+0.6
KNT	Kendrikon	0.20	123	P		Pg	Pg	16 20 53.1	+0.5
KNT				S		Sg	Sg	16 20 56.0	+0.6
GRG	Griva	0.38	213	P		Pg	Pg	16 20 56.6	+0.7
GRG				S		Sb	Sb	16 21 02.5	-1.0
GRG	Griva	0.38	213	*e*PB		Pg	Pg	16 20 56.6	+0.7
GRG				*e*SB		Sb	Sb	16 21 02.4	-1.0
GRG	Griva	0.38	213	P		Pg	Pg	16 20 56.6	+0.7
GRG				*e*Sb		Sb	Sb	16 21 02.4	-1.0
KKB	Krupnik	0.67	27	*i* Pg		Pg	Pg	16 21 01.0	-0.5
KKB	Krupnik	0.67	27	*i* Pg		Pg	Pg	16 21 01.0	-0.5
THE	Thessaloniki	0.68	161	P		Pg	Pg	16 21 02.0	+0.4
THE				S		Sg	Sg	16 21 10.3	0.0
THE	Thessaloniki	0.68	161	P		Pg	Pg	16 21 02.0	+0.4
THE				S		Sg	Sg	16 21 10.3	0.0
SOH	Sokhos	0.68	131	P		Pg	Pg	16 21 01.7	0.0
SOH				S		Sg	Sg	16 21 10.4	-0.2
SOH	Sokhos	0.68	131	*e*PB		Pg	Pg	16 21 01.6	-0.1
SOH				*e*SB		Sg	Sg	16 21 10.8	+0.2
SOH	Sokhos	0.68	131	P		Pg	Pg	16 21 01.7	0.0
SOH				S		Sg	Sg	16 21 10.4	-0.2
SOH				*e*Sb		Sg	Sg	16 21 10.8	+0.2
SRS	Serrai	0.71	102	P		Pg	Pg	16 21 02.1	-0.1
SRS				S		Sb	Sb	16 21 12.7	-0.3
SRS	Serrai	0.71	102	P		Pg	Pg	16 21 02.1	-0.1
SRS				S		Sb	Sb	16 21 12.7	-0.3
HORT	Hortiatis	0.75	154	P		Pg	Pg	16 21 03.2	+0.3
HORT				S		Sg	Sg	16 21 13.3	+0.7
HORT	Hortiatis	0.75	154	P		Pg	Pg	16 21 03.2	+0.3
HORT				S		Sg	Sg	16 21 13.3	+0.7
MMB	Musomiste	0.85	68	*i* Pg		Pg	Pg	16 21 04.8	-0.2
MMB	Musomiste	0.85	68	*i* Pg		Pg	Pg	16 21 04.8	-0.2
NVR	Nevrokopi	0.90	85	P		Pg	Pg	16 21 05.0	-0.8
NVR				S		Sg	Sg	16 21 17.5	0.0
NVR	Nevrokopi	0.90	85	*e*PB		Pg	Pg	16 21 05.5	-0.3
NVR				*e*SB		Sg	Sg	16 21 17.5	0.0
NVR	Nevrokopi	0.90	85	P		Pg	Pg

AQU				Sg	Sg	16 37 35.0 +1.7
	57μm,1.5s					
PTQR	Pietraquaria	0.26	202	Pg	Pg	16 37 34.6 +0.9
PTQR				Sg	Sg	16 37 39.3 +2.2
PTQR	Pietraquaria	0.26	202	Pg	Pg	16 37 34.6 +0.9
PTQR				Sg	Sg	16 37 39.3 +2.2
VCEL	Villa Celiera	0.27	60	Pg	Pg	16 37 34.0 0.0
VCEL				Sg	Sg	16 37 38.5 +1.0
	9μm,0.6s					
VCEL	Villa Celiera	0.27	60	Pg	Pg	16 37 34.0 0.0
VCEL				Sg	Sg	16 37 38.5 +1.0
	9μm,0.6s					
CAMP	Campotosto	0.29	342	Pg	Pg	16 37 34.7 +0.3
CAMP				Sg	Sg	16 37 39.2 +0.9
	6μm,0.6s					
CAMP	Campotosto	0.29	342	Pg	Pg	16 37 34.7 +0.3
CAMP				Sg	Sg	16 37 39.2 +0.9
	6μm,0.6s					
FIAM	Fiamignano	0.31	272	Pg	Pg	16 37 35.4 +0.7
FIAM				Sg	Sb	16 37 42.3 +0.2
	3μm,0.8s					
FIAM	Fiamignano	0.31	272	Pg	Pg	16 37 35.4 +0.7
TERO	Teramo	0.37	9	Pg	Pg	16 37 35.6 -0.2
TERO				Sg	Sg	16 37 42.1 +1.4
	4μm,0.5s					
TERO	Teramo	0.37	9	Pg	Pg	16 37 35.6 -0.2
TERO				Sg	Sg	16 37 42.1 +1.4
	4μm,0.5s					
INTR	Introdacqua	0.37	132	Pg	Pg	16 37 36.1 +0.1
INTR				Sg	Sg	16 37 42.6 +1.7
	10μm,0.9s					
INTR	Introdacqua	0.37	132	Pg	Pg	16 37 36.1 +0.1
INTR				Sg	Sg	16 37 42.6 +1.7
	10μm,0.9s					
VVLD	Villa Vallelon	0.40	170	Pg	Pg	16 37 36.8 +0.4
VVLD				Sg	Sb	16 37 44.2 -0.4
	2μm,0.7s					
VVLD	Villa Vallelon	0.40	170	Pg	Pg	16 37 36.8 +0.4
GUAR	Guarcino	0.49	199	Pg	Pg	16 37 38.6 +0.4
	2μm,1.0s					
GUAR	Guarcino	0.49	199	Pg	Pg	16 37 38.6 +0.4
	2μm,1.0s					
LNSS	Leonessa	0.50	314	Pg	Pg	16 37 38.5 +0.2
LNSS				Sg	Sg	16 37 47.0 +2.2
	6μm,0.9s					
LNSS	Leonessa	0.50	314	Pg	Pg	16 37 38.5 +0.2
LNSS				Sg	Sg	16 37 47.0 +2.2
	6μm,0.9s					
CERT	Cerreto	0.51	233	Pg	Pg	16 37 38.8 +0.2
	5μm,0.8s					
CERT	Cerreto	0.51	233	Pg	Pg	16 37 38.8 +0.2
	5μm,0.8s					
LPEL	Lama dei Pelig	0.53	113	Pg	Pg	16 37 38.6 -0.3
LPEL				Sg	Sg	16 37 46.7 +0.9
	2μm,0.6s					
LPEL	Lama dei Pelig	0.53	113	Pg	Pg	16 37 38.6 -0.3
LPEL				Sg	Sg	16 37 46.7 +0.9
	2μm,0.6s					
POFI	Posta Fibreno	0.56	166	Pg	Pg	16 37 39.5 0.0
	1μm,0.9s					
POFI	Posta Fibreno	0.56	166	Pg	Pg	16 37 39.5 0.0
	1μm,0.9s					
SDI	San Donato	0.59	159	Pg	Pg	16 37 39.9 -0.1
SDI	San Donato	0.59	159	Pg	Pg	16 37 39.9 -0.1
CAFR	Castel Frentan	0.61	93	Pg	Pg	16 37 40.6 +0.2
	6μm,1.2s					
CAFR	Castel Frentan	0.61	93	Pg	Pg	16 37 40.6 +0.2
	6μm,1.2s					
TRTR	Tortoreto Alta	0.62	27	Pg	Pg	16 37 41.7 +1.1
TRTR	Tortoreto Alta	0.62	27	Pg	Pg	16 37 41.7 +1.1
MTCE	Montecelio	0.63	248	Pg	Pg	16 37 41.0 +0.1
	2μm,1.2s					
MTCE	Montecelio	0.63	248	Pg	Pg	16 37 41.0 +0.1
	2μm,1.2s					
MNS	Montasola	0.64	281	Pg	Pg	16 37 40.8 -0.3
	2μm,0.8s					
MNS	Montasola	0.64	281	Pg	Pg	16 37 40.8 -0.3
	2μm,0.8s					
NRCA	Norcia	0.65	332	Pg	Pg	16 37 40.8 -0.4
NRCA				Sg	Sg	16 37 50.8 +1.1
	872nm,0.6s					
NRCA	Norcia	0.65	332	Pg	Pg	16 37 40.8 -0.4
NRCA				Sg	Sg	16 37 50.8 +1.1
	872nm,0.6s					
OFFI	Offida	0.68	10	Pg	Pg	16 37 42.1 +0.2
	5μm,0.6s					
OFFI	Offida	0.68	10	Pg	Pg	16 37 42.1 +0.2
	5μm,0.6s					
RNI2	Rionero Sannit	0.73	140	Pg	Pg	16 37 42.7 +0.1
	2μm,0.8s					
RNI2	Rionero Sannit	0.73	140	Pg	Pg	16 37 42.7 +0.1
	2μm,0.8s					
GIUL	Giuliano Di Ro	0.73	196	Pg	Pg	16 37 42.6 -0.1
	1μm,0.8s					
GIUL	Giuliano Di Ro	0.73	196	Pg	Pg	16 37 42.6 -0.1
	1μm,0.8s					
CERA	Filignano	0.76	151	Pg	Pg	16 37 42.5 -0.7
	2μm,0.8s					
CERA	Filignano	0.76	151	Pg	Pg	16 37 42.5 -0.7
	2μm,0.8s					
CESX	Cesi	0.79	297	Pg	Pg	16 37 43.6 -0.2
	1μm,0.9s					
CESX	Cesi	0.79	297	Pg	Pg	16 37 43.6 -0.2
	1μm,0.9s					
RDP	Rocca di Papa	0.79	231	Pg	Pg	16 37 43.9 +0.1
	3μm,0.6s					
RDP	Rocca di Papa	0.79	231	Pg	Pg	16 37 43.9 +0.1
	3μm,0.6s					
MIDA	Miranda	0.82	139	Pg	Pg	16 37 43.7 -0.8
	1μm,1.0s					
MIDA	Miranda	0.82	139	Pg	Pg	16 37 43.7 -0.8
	1μm,1.0s					
FDMO	Fiordimonte	0.84	337	Pg	Pg	16 37 44.0 -0.9
	496nm,0.3s					
FDMO	Fiordimonte	0.84	337	Pg	Pg	16 37 44.0 -0.9
	496nm,0.3s					
GUMA	Gualdo di Mace	0.86	20	Pg	Pg	16 37 43.9 -1.3
	3μm,0.6s					
GUMA	Gualdo di Mace	0.86	20	Pg	Pg	16 37 43.9 -1.3
	3μm,0.6s					
CESI	CESI - Serrava	0.88	328	Pg	Pg	16 37 44.8 -0.7
	345nm,0.7s					
CESI	CESI - Serrava	0.88	328	Pg	Pg	16 37 44.8 -0.7
	345nm,0.7s					
TRIV	Trivento	0.91	123	Pg	Pg	16 37 45.6 -0.5
	742nm,1.0s					
TRIV	Trivento	0.91	123	Pg	Pg	16 37 45.6 -0.5
	742nm,1.0s					
VAGA	Valle Agricola	0.99	148	Pg	Pg	16 37 46.8 -1.0
	583nm,0.7s					
VAGA	Valle Agricola	0.99	148	Pg	Pg	16 37 46.8 -1.0
	583nm,0.7s					
CING	Cingoli	1.14	348	Pg	Pg	16 37 49.3 -1.3
	603nm,0.7s					
CING	Cingoli	1.14	348	Pg	Pg	16 37 49.3 -1.3
	603nm,0.7s					
NVLJ	Novalja	2.50	23	*i* Pn	Pn	16 38 09.8 -0.2
NVLJ				Sn	Sn	16 38 40.7 -0.2
NVLJ	Novalja	2.50	23	*i* Pn	Pn	16 38 09.8 -0.2
NVLJ				Sn	Sn	16 38 40.7 -0.2
MAIM	Mastiano	2.77	308	P	Pn	16 38 14.9 +1.1
STON	Ston	3.14	77	*e*Pn	Pn	16 38 18.6 -0.3
STON				Sn	Sn	16 38 57.9 +1.3
STON	Ston	3.14	77	*e*Pn	Pn	16 38 18.5 -0.3
STON				Sn	Sn	16 38 57.9 +1.3
PGF	Pioggiola	3.37	276	*e*Pn	Pn	16 38 23.0 +0.9
PGF				*e*Sn	Sn	16 39 00.2 -2.3
	20nm,0.9s					
PGF	Pioggiola	3.37	276	*e*Pn	Pn	16 38 23.0 +0.9
PGF				*e*Sn	Sn	16 39 00.2 -2.3
	9.8nm,0.9s					
VOY	Vojsko	3.78	4	*e*Pn	Pn	16 38 29.2 +1.5
VOY				*e*Sn	Sn	16 39 14.5 +1.9
VOY	Vojsko	3.78	4	Pn	Pn	16 38 29.2 +1.5
VOY				*e*Sn	Sn	16 39 14.5 +1.9
ABTA	Abfaltersbach	4.54	351	*i* Pn	Pn	16 38 39.2 +1.0
ABTA	Abfaltersbach	4.54	351	Pn	Pn	16 38 39.2 +1.0
SBF	Sospel	4.74	292	*e*Pn	Pn	16 38 41.5 +0.6
SBF	Sospel	4.74	292	*e*Pn	Pn	16 38 41.5 +0.6
DIVS	Divibare	5.07	67	*e*Pn	Pn	16 38 46.1 +0.7
DAVOX	Davos/Dischmat	5.22	331	Pn	Pn	16 38 50.3 +2.8
	1.6nm,0.3s,baz=137,slow=16,SNR=13					
DAVOX				Sn	Sn	16 39 53.7 +5.5
	0.4nm,0.3s,baz=353,slow=18,SNR=3.1					
FRF	La Foret Royal	5.22	287	*e*Pn	Pn	16 38 47.5 +0.1
FRF				*e*Sn	Sn	16 39 44.5 -3.5
	2.0nm,0.5s					
FRF	La Foret Royal	5.22	287	*e*Pn	Pn	16 38 47.5 +0.1
FRF				*e*Sn	Sn	16 39 44.5 -3.5
	1.0nm,0.5s					
LMR	La Mourre	5.28	284	*e*Pn	Pn	16 38 48.1 -0.1
LMR				*e*Sn	Sn	16 39 45.7 -3.6
	1.5nm,0.5s					
LMR	La Mourre	5.28	284	*e*Pn	Pn	16 38 48.1 -0.1
LMR				*e*Sn	Sn	16 39 45.7 -3.6
	0.8nm,0.5s					
MBDF	Montbardon	5.50	299	*e*Pn	Pn	16 38 51.5 +0.1
MBDF	Montbardon	5.50	299	*e*Pn	Pn	16 38 51.5 +0.1
GRUS	Gruza	5.51	70	*e*Pn	Pn	16 38 50.9 -0.5
LPG	La Plagne	5.87	306	*e*Pn	Pn	16 38 56.9 +0.3
LPG				*e*Sn	Sn	16 40 00.7 -3.7
	3.3nm,0.5s					
LPG	La Plagne	5.87	306	*e*Pn	Pn	16 38 56.9 +0.3
LPL	La Plagne	5.89	306	*e*Pn	Pn	16 38 57.3 +0.5
LPL				*e*Sn	Sn	16 40 01.2 -3.6
	2.6nm,0.3s					
LPL	La Plagne	5.89	306	*e*Pn	Pn	16 38 57.3 +0.5
SMRF	Simiane la Rot	6.07	289	*e*Pn	Pn	16 38 59.2 +0.1
SMRF	Simiane la Rot	6.07	289	*e*Pn	Pn	16 38 59.2 +0.1
BARS	Barje	6.15	82	*e*Pn	Pn	16 39 00.9 +0.7
ORIF	Oris-en-Rattie	6.16	298	*e*Pn	Pn	16 39 00.3 -0.1
ORIF				*e*Sn	Sn	16 40 07.1 -4.1
	4.6nm,0.7s					
ORIF	Oris-en-Rattie	6.16	298	*e*Pn	Pn	16 39 00.3 -0.1
GERES	GERESS Array B	6.59	1	Pn	Pn	16 39 06.5 +0.2
	0.4nm,0.3s,baz=169,slow=13,SNR=9.1					
GERES				Sn	Sn	16 40 20.6 -1.1
	0.6nm,0.3s,baz=173,slow=24,SNR=4.8					
KHC	Kasperske Hory	6.87	0	*e*Pn	Pn	16 39 09.9 -0.2
KHC				*ex*	x	16 39 20.0
KHC				*e*SN	Sn	16 40 27.9 -0.8
KHC				*ex*	x	16 40 48.0
KHC	Kasperske Hory	6.87	0	Pn	Pn	16 39 09.9 -0.2
KHC				Sn	Sn	16 40 27.9 -0.8
CABF	La Chapelle	6.88	312	*e*Pn	Pn	16 39 10.4 +0.2
CABF				*e*Sn	Sn	16 40 24.6 -4.3
	1.0nm,0.3s					
CABF	La Chapelle	6.88	312	*e*Pn	Pn	16 39 10.4 +0.2
VIVF	Saint-Julien-l	6.94	295	*e*Pn	Pn	16 39 10.9 -0.1
VIVF	Saint-Julien-l	6.94	295	*e*Pn	Pn	16 39 10.9 -0.1
KEST	Kesra	7.29	208	Pn	Pn	16 39 21.6 +5.8
	0.2nm,0.3s,baz=11,slow=5.2,SNR=5.9					
HINF	Hinteralfeld	7.29	322	*e*Pn	Pn	16 39 15.9 0.0
HINF				*e*Sn	Sn	16 40 34.8 -4.3
	4.6nm,0.6s					
HINF	Hinteralfeld	7.29	322	*e*Pn	Pn	16 39 15.9 0.0
CDF	Champ du Feu	7.56	327	*e*Pn	Pn	16 39 19.9 +0.2
CDF				*e*Sn	Sn	16 40 41.5 -4.3
	2.9nm,0.5s					
CDF	Champ du Feu	7.56	327	*e*Pn	Pn	16 39 19.9 +0.2
HAU	Haudompre	7.67	321	*e*Pn	Pn	16 39 21.2 +0.2
HAU	Haudompre	7.67	321	*e*Pn	Pn	16 39 21.2 +0.2
PAGF	Fort de Pagny	8.35	322	*e*Pn	Pn	16 39 30.5 +0.1
PAGF	Fort de Pagny	8.35	322	*e*Pn	Pn	16 39 30.5 +0.1
SFTF	Sexfontaines	8.44	318	*e*Pn	Pn	16 39 31.6 0.0
SFTF	Sexfontaines	8.44	318	*e*Pn	Pn	16 39 31.6 0.0
HFS	Hagfors	17.90	0	LR	LR	16 48 59.6
	comp=Z,34nm,18.5s,baz=316,slow=39					
TORD	Torodi Ar. Bea	30.77	203	P	P	16 43 47.2 +2.0
	0.5nm,0.8s,baz=10,0,slow=7.2,SNR=3.4					
MKAR	Makanchi Array	47.81	60	P	P	16 46 05.6 -1.4
	0.3nm,0.8s,baz=271,slow=9.9,SNR=2.8					
TSUM	Tsumeb	61.27	176	LR	LR	17 15 10.5
	comp=Z,32nm,19.4s,baz=137,slow=37					
YKA	Yellowknife Ar	67.63	337	P	P	16 48 27.2 +1.2
	0.3nm,0.9s,baz=51,slow=7.3,SNR=4.8					

*NOU **25** 17:06:15.8±0.3, 14°.92S×169°.75E, h30km, MD3.8, ML3.3*
*ISCJB **25** 17:06:24.8±0.6, 15°.01S×167°.36E±0°.09, h129km, mb3.9/15, Error ellipse: s-maj=12.6km s-min=5.5km az=165.5*
*IDC **25** 17:06:25.6±2.2, 14°.98S×167°.34E, h120km±18km, mb3.8/16, mb1 3.9/18, mb1mx3.8/26, mbtmp3.9/18, Error ellipse: s-maj=19.5km s-min=11.4km az=70.0*
ISC 25 17:06:26.2±0.7, **15°.00S**±0°.06×**167°.4E**±0°.1, **h129**km, **n33,** σ1°**23**/33, **mb3.9**/14, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.09	187	*e*P	Pn	17 08 05.9	-1.5
DZM				*e*S	Sn	17 09 27.2	+0.6
DZM				AMP		17 09 30.4	
	comp=Z,1μm,7.0s						
DZM	Mont Dzumac	7.09	187	P	Pn	17 08 06.5	-0.9
	comp=Z,32nm,0.3s,baz=18,slow=9.6,SNR=85						
DZM				S	Sn	17 09 27.6	+1.0
	comp=Z,13nm,0.3s,baz=317,slow=23,SNR=6.1						
BAYA	Yate Dam	7.13	184	*e*S	Sn	17 09 25.2	-2.4
NOUC	Port Laguerre	7.13	188	*e*P	Pn	17 08 07.0	-1.0
NOUC				*e*S	Sn	17 09 29.4	+1.8
NOUC				AMP		17 09 31.4	
	comp=Z,36nm,0.8s						
HNR	Honiara	9.11	307	P	Pn	17 08 34.5	-0.1
	comp=Z,8.0nm,0.3s,baz=172,slow=4.8,SNR=13						
HNR				S	Sn	17 10 15.7	+0.1
	comp=Z,9.1nm,0.3s,baz=139,slow=19,SNR=4.3						
CTA	Charters Tower	20.74	253	P	P	17 10 57.1	+0.4
	comp=Z,3.3nm,0.8s,baz=120,slow=16,SNR=3.0						
MTSU	Mount Surprise	22.30	259	P	P	17 11 13.8	+0.6
	baz=12,SNR=4.9						
QLP	Quilpie	24.45	238	P	P	17 11 33.9	+0.8
	baz=13,SNR=7.0						
URZ	Urewera	24.72	161	P	P	17 11 36.7	+1.2
	comp=Z,12nm,0.7s,baz=302,slow=5.5,SNR=7.5						
MMPI	Merauke	27.18	281	S	PcP	17 15 33.0	+18
	baz=20,SNR=3.9						
RPZ	Rata Peaks	28.80	174	P	P	17 12 12.4	+0.5
	comp=Z,6.1nm,0.7s,baz=262,slow=0.6,SNR=4.3						
STKA	Stephens Creek	28.88	230	P	P	17 12 13.9	+1.1
	comp=Z,5.1nm,0.5s,baz=53,slow=10,SNR=22						
STKA	Stephens Creek	28.88	230	P	P	17 12 13.7	+0.8
	baz=18,SNR=12						
WRA	Warramunga Arr	31.84	256	P	P	17 12 37.9	-1.2
	comp=Z,0.5nm,0.7s,baz=82,slow=7.1,SNR=5.4						
ASAR	Alice Springs	32.66	249	P	P	17 12 45.4	-0.8
	comp=Z,1.2nm,0.6s,baz=77,slow=9.4,SNR=33						
ASAR				ScP	ScP	17 19 04.0	+2.5
	comp=Z,0.4nm,0.7s,baz=79,slow=4.8,SNR=4.4						
BBOO	Buckleboo	33.48	232	P	P	17 12 54.0	+0.8
	baz=22,SNR=8.4						
KDU	Kakadu	33.93	269	P	P	17 13 12.8	+16
	baz=25,SNR=4.6						
MTN	Manton Dam	35.20	269	P	P	17 13 19.8	+12
	baz=26,SNR=3.3						
FITZ	Fitzroy Crossi	40.05	260	P	P	17 13 48.8	-0.2
	comp=Z,0.7nm,0.6s,baz=84,slow=10,SNR=5.1						
LUWI	Luwuk	46.15	283	P	pP	17 15 13.5	+5.8
	baz=39,SNR=7.4						
LUWI				S	PcS	17 20 03.5	-3.6
	baz=39,SNR=4.9						
MEEK	Meekatharra	46.76	247	P	P	17 14 42.8	0.0
	baz=36,SNR=5.4						
VNDA	Vanda	62.59	181	P	P	17 16 36.7	+0.6
	comp=Z,1.0nm,0.6s,baz=358,slow=6.2,SNR=7.5						
KSRS	Korea Array	64.01	326	P	P	17 16 47.0	+1.0
	comp=Z,0.3nm,0.5s,baz=134,slow=7.1,SNR=4.3						
PETK	Petropavlovsk-	68.34	354	P	P	17 17 14.3	+1.0
	comp=Z,2.6nm,0.8s,baz=156,slow=7.3,SNR=2.8						
QSPA	South Pole Qui	75.03	180	P	P	17 17 53.6	+0.2
	comp=Z,6.7nm,0.8s,baz=10,slow=6.2,SNR=21						
CMAR	Chiang Mai Arr	75.14	294	P	P	17 17 55.0	+0.2
	comp=Z,1.3nm,1.1s,baz=132,slow=5.5,SNR=5.0						
MAW	Mawson	81.67	202	P	pP	17 19 01.6	-0.7
	baz=73,SNR=7.8						
SONM	Songino Array	82.76	324	P	P	17 18 35.8	-0.1
	comp=Z,1.1nm,0.5s,baz=134,slow=4.2,SNR=3.7						
ILAR	Eielson Array	86.76	18	P	P	17 18 54.6	-0.7
	comp=Z,0.6nm,0.8s,baz=237,slow=5.7,SNR=8.1						
MKAR	Makanchi Array	97.46	316	P	Pdif	17 19 46.3	+0.9
	comp=Z,0.9nm,0.7s,baz=90,slow=6.1,SNR=8.5						
ZALV	Zalesovo Beam	97.66	324	P	P	17 19 45.9	-0.1
	comp=Z,0.7nm,0.5s,baz=124,slow=4.1,SNR=5.5						
ARCES	ARCESS Array B	120.53	345	PKP	PKPdf	17 25 00.8	-1.2
	comp=Z,0.7nm,0.3s,baz=79,slow=2.3,SNR=14						
TORD	Torodi Ar. Bea	165.97	264	PKP	PKPdf	17 26 16.6	-0.2
	comp=Z,0.9nm,0.6s,baz=90,slow=0.7,SNR=5.5						

IDC 25 17:08:47.5±2.7, **42°.14S**×**87°.97E**, **h0**km, **mb3.8**/4,
mb1 4.0/4, **mb1mx3.7**/19, **mbtmp3.8**/4, **MS3.4**/2, **Ms1 3.5**/2, **ms1mx3.0**/21, **Error ellipse: s-maj=83.0km s-min=39.3km az=29.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.18	79	P	P	17 16 41.8	-0.3
	1.8nm,0.7s,baz=224,slow=7.3,SNR=38						
ASAR				PcP	PcP	17 18 36.3	-0.1
	1.8nm,0.6s,baz=224,slow=2.5,SNR=32						
ASAR				LR	LR	17 33 09.0	
	comp=Z,61nm,18.1s,baz=90,slow=35						
WRA	Warramunga Arr	44.81	75	P	P	17 17 03.0	-0.3
	1.0nm,0.7s,baz=232,slow=7.8,SNR=9.2						
WRA				PcP	PcP	17 18 45.0	-0.3
	0.7nm,0.8s,baz=229,slow=2.8,SNR=9.9						
VNDA	Vanda	45.78	163	LR	LR	17 34 03.2	
	comp=Z,38nm,19.6s,baz=118,slow=33						
CMAR	Chiang Mai Arr	61.14	12	P	P	17 19 04.5	+0.9
	1.0nm,1.0s,baz=206,slow=7.6,SNR=4.2						
MKAR	Makanchi Array	88.69	356	P	P	17 21 41.6	-0.7
	0.2nm,0.6s,baz=165,slow=6.0,SNR=3.5						

GUC 25 17:10:43.0±0.6, **23°.92S**×**67°.52W**, **h229**km±11km, **ML4.1, 6C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.83	315⇑	*i* P	Pn	17 11 23.6	+1.1
LVC				*i* S	S	17 11 55.2	+1.9
PB04	Plate Boundary	2.45	312⇑	*i* P	Pn	17 11 35.5	+7.2
PB04				*i* S	S	17 12 14.8	+11
PB04				AML	AML	17 12 17.5	
	comp=N,260nm,0.6s						
CEN1	Los Morros	2.51	282⇓	*i* P	Pn	17 11 31.7	+2.7
CEN1				*i* S	S	17 12 08.4	+3.4
CEN1				AML	AML	17 12 10.5	
	comp=N,171nm,0.7s						
PB09	Plate Boundary	2.65	323⇑	*i* P	Pn	17 11 32.5	+1.9
PB09				*e*S	S	17 12 10.2	+2.4
PB09				AML	AML	17 12 13.3	
	comp=E,409nm,0.7s						
ANCH	Antofagasta	2.66	275⇓	*i* P	Pn	17 11 32.3	+1.8
ANCH				*i* S	S	17 12 08.5	+0.9
ANCH				AML	AML	17 12 11.8	
	comp=E,389nm,0.3s						
MACH	Maria Elena	2.68	309	*i* S	S	17 12 10.8	+2.1
PB07	Plate Boundary	3.09	315⇑	*i* P	Pn	17 11 37.5	+2.0
PB07				*i* S	S	17 12 18.7	+2.1
PB07				AML	AML	17 12 20.9	
	comp=N,243nm,0.7s						
PB01	Plate Boundary	3.40	327⇑	*i* P	Pn	17 11 40.6	+1.7
PB01				*i* S	S	17 12 25.2	+2.3
PB01				AML	AML	17 12 25.7	
	comp=E,90nm,0.1s						
HMBC	Humberstone	4.24	328⇑	*i* P	Pn	17 11 49.9	+0.9
HMBC				*e*S	S	17 12 42.7	+1.5

*SOF **25** 17:11:24.9, 41°.31N×22°.71E, h13km, MD3.8*
*CSEM **25** 17:11:25.7±0.2, 41°.28N×22°.74E, h8km, ML1.8, Error ellipse: s-maj=4.8km s-min=4.2km az=102.0*
*ISCJB **25** 17:11:25.2±0.6, 41°.29N±0°.03×22°.72E±0°.04, h3km±5km, Error ellipse: s-maj=4.6km s-min=4.3km az=7.7*
*SKO **25** 17:11:25.3, 41°.18N×22°.71E, h15km, ML1.6, ML1.9*
*ATH **25** 17:11:25.0, 41°.35N×22°.70E, h6km, MD2.8/5*
*BEO **25** 17:11:27.6±0.5, 41°.38N×22°.61E, h0km±5km, ML1.8/5*
ISC 25 17:11:25.4±0.9, **41°.31N**±0°.02×**22°.72E**±0°.03, **h10**km±6km, **n26,** σ0°**41**/44, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	Valandovo	0.11	278	*i* Pg	Pg	17 11 28.1	-0.1
VAY				*i* Sg	Sg	17 11 30.3	+0.1
VAY				*e*Lg	Lg	17 11 30.4	
	comp=E,612nm,0.2s						
VAY				*e*Lg	Lg	17 11 30.4	
	comp=N,1μm,0.2s						
VAY	Valandovo	0.11	278	*e*Pg	Pg	17 11 28.1	-0.1
VAY				*e*Sg	Sg	17 11 30.2	0.0
VAY	Valandovo	0.11	278	*i* Pg	Pg	17 11 28.6	+0.4
VAY				*e*Sg	Sg	17 11 30.2	0.0
VAY				*e*Lg	Lg	17 11 30.8	
	comp=N,1μm,0.2s						
GRG	Griva	0.42	214	*e*PB	Pg	17 11 34.0	+0.3
GRG				*e*SB	Sg	17 11 40.2	+0.9
GRG	Griva	0.42	214	*e*Pb	Pg	17 11 34.0	+0.3
GRG				*e*Sb	Sg	17 11 40.2	+0.9
KKB	Krupnik	0.62	26	*i* Pg	Pb	17 11 37.7	-0.7
KKB	Krupnik	0.62	26	*i* Pg	Pb	17 11 37.7	-0.7
SOH	Sokhos	0.68	135	*e*PG	Pg	17 11 38.6	0.0
SOH				*e*SB	Sb	17 11 48.7	-0.1
SOH	Sokhos	0.68	135	*e*Pg	Pg	17 11 38.6	0.0
SOH				*e*Sb	Sb	17 11 48.7	-0.1
MMB	Musomiste	0.81	69	*i* Pg	Pb	17 11 41.3	-0.2
MMB	Musomiste	0.81	69	*i* Pg	Pb	17 11 41.3	-0.2
NVR	Nevrokopi	0.86	87	*e*PB	Pb	17 11 42.2	-0.2
NVR				*e*SB	Sb	17 11 53.6	-0.4
NVR	Nevrokopi	0.86	87	*e*Pb	Pb	17 11 42.2	-0.2
NVR				*e*Sb	Sb	17 11 53.6	-0.4
PLG	Polygyros	1.08	149	*e*PB	Pb	17 11 45.8	-0.4
PLG				*e*SB	Sn	17 12 02.0	+0.4
PLG	Polygyros	1.08	149	*e*Pb	Pb	17 11 45.8	-0.4
PLG				*e*Sb	Sn	17 12 02.0	+0.4
FNA	Florina	1.14	243	*e*PN	Pb	17 11 46.5	-0.7
FNA	

DIYA				*i* S		**Sg**	**17 16 44.3 +0.6**		
DIYA	**Diyarbakir**	**1.44**	**257**	*i* P		**Pn**	**17 16 23.5 -0.2**		
DIYA				*i* S		**Sg**	**17 16 44.3 +0.6**		
HAKT	**HAKKARI**	**1.60**	**116**	*i* P		**Pn**	**17 16 26.3 +0.2**		
HAKT				*i* S		**Sg**	**17 16 50.3 +1.4**		
HAKT	**HAKKARI**	**1.60**	**116**	*i* P		**Pn**	**17 16 26.3 +0.2**		
HAKT				*i* S		**Sg**	**17 16 50.3 +1.4**		
EZM	**Erzurum**	**1.68**	**346**	*e*PN		**Pg**	**17 16 30.4 +0.7**		
CLDR	**Caldiran**	**1.81**	**61**	*e*PN		**Pg**	**17 16 33.4 +1.3**		
SVRC	**Sivrice-ELAZID**	**2.04**	**274**	*e*PN		**Pn**	**17 16 31.6 -0.4**		
SVRC	**Sivrice-ELAZID**	**2.04**	**274**	*e*Pn		**Pn**	**17 16 31.6 -0.4**		
PTK	**Pertek**	**2.06**	**288**	*e*PN		**Pn**	**17 16 32.9 +0.6**		
PTK	**Pertek**	**2.06**	**288**	*e*Pn		**Pn**	**17 16 32.9 +0.6**		
URFA	**Urfa**	**2.57**	**252**	*e*PN		**Pn**	**17 16 38.5 -0.7**		
URFA	**Urfa**	**2.57**	**252**	*e*Pn		**Pn**	**17 16 38.5 -0.7**		

IGQ 25 17:23:25.0, 2°.49S × 77°.87W, h121km ± 16km, Mb4.1, Ms3.9, 6C-17D, Error ellipse: s-maj=6.3km s-min=1.8km az=4.3, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.41**	**305**	⇓S	Sn	17 23 55.7	-0.5
MACE	**Macas**	**0.41**	**305**	⇓P	Pn	17 23 43.1	+0.3
RIOE	**Riobamba**	**1.06**	**314**	⇓P	Pn	17 23 47.7	-0.5
PAT1	**Patacocha**	**1.13**	**330**	⇓P	Pn	17 23 48.9	-0.1
ARRY	**Arrayan**	**1.14**	**329**	⇓P	Pn	17 23 48.6	-0.5
BMAS	**Trigal station**	**1.15**	**328**	⇓P	Pn	17 23 48.9	-0.3
ULBA	**Ulba**	**1.16**	**332**	P	Pn	17 23 49.1	-0.2
RETU	**Refugio**	**1.18**	**331**	P	Pn	17 23 49.3	-0.4
BRUN	**Tungurahua Vol**	**1.19**	**333**	⇓P	Pn	17 23 49.4	-0.2
RUN5	**Runtun**	**1.20**	**332**	⇓P	Pn	17 23 49.5	-0.2
BIL2	**Estacion Bilba**	**1.21**	**328**	P	Pn	17 23 49.9	+0.2
JUI6	**Juive**	**1.22**	**330**	⇓P	Pn	17 23 49.6	-0.2
IGUA	**Igualata**	**1.26**	**322**	P	Pn	17 23 50.1	-0.4
PISA	**Pisayambo**	**1.51**	**340**	⇑S	Sn	17 24 15.1	+0.3
PISA	**Pisayambo**	**1.51**	**340**	⇑P	Pn	17 23 53.7	+0.4
BMOR	**Cotopaxi Volca**	**1.84**	**341**	⇓P	Pn	17 23 57.9	+0.6
BMOR	**Cotopaxi Volca**	**1.84**	**341**	⇓S	Sn	17 24 22.2	+0.2
TAMB	**Tambo**	**1.85**	**344**	P	Pn	17 23 58.2	+0.8
MOV1	**Cotopaxi Vol s**	**1.85**	**342**	P	Pn	17 23 57.9	+0.3
COV1	**Cotopaxi Volc**	**1.87**	**345**	P	Pn	17 23 59.1	+1.2
BTAM	**Cotopaxi Volca**	**1.88**	**344**	⇓P	Pn	17 23 58.5	+0.8
BREF	**Cotopaxi Volca**	**1.89**	**342**	⇓P	Pn	17 23 59.0	+0.9
BVC2	**Cotopaxi Volca**	**1.90**	**343**	⇓P	Pn	17 23 58.9	+0.8
BNAS	**Cotopaxi Volca**	**1.91**	**341**	⇓P	Pn	17 23 58.6	+0.5
VC1	**Cotopaxi 1**	**1.91**	**344**	⇑P	Pn	17 23 59.2	+1.1
NAS2	**Nasa**	**1.93**	**342**	P	Pn	17 23 59.5	+1.2
PITA	**Cotopaxi Volc**	**2.00**	**343**	⇑P	Pn	17 24 00.1	+1.0
ANTI	**Antisana**	**2.04**	**352**	⇓S	Sn	17 24 27.8	+1.3
ANTI	**Antisana**	**2.04**	**352**	⇓P	Pn	17 24 00.5	+0.6
CATE	**Catamayo**	**2.10**	**226**	⇑S	Sn	17 24 27.9	+1.1
CATE	**Catamayo**	**2.10**	**226**	⇑P	Pn	17 23 60.0	0.0
LAV4	**Lava4-Reventad**	**2.39**	**6**	P	Pn	17 24 04.8	+0.9
CHAR	**Charly**	**2.39**	**5**	P	Pn	17 24 05.3	+1.3
GGP	**Refugio Guagua**	**2.41**	**342**	P	Pn	17 24 05.0	+0.6
CONE	**Cono NE Rev Vo**	**2.41**	**5**	P	Pn	17 24 04.3	+0.1
PINO	**Pino**	**2.43**	**342**	P	Pn	17 24 06.6	+1.9
CAYR	**Refugio Cayamb**	**2.49**	**357**	P	Pn	17 24 08.1	+2.5
OTAV	**Otavalo**	**2.77**	**348**	P	Pn	17 24 09.2	+0.3

*ISCJB **25** 17:35:36.6±0.4, 58°.89N±0°.04 × 18°.78E±0°.05, h0km, Error ellipse: s-maj=5.1km s-min=3.8km az=179.0*
*CSEM **25** 17:35:37.7±0.2, 58°.89N × 18°.75E, h2km, ML1.8, Error ellipse: s-maj=4.3km s-min=3.5km az=163.0, Mining explosion.*
*UPP **25** 17:35:37.3, 58°.87N × 18°.81E, h0km, ML1.8, Mining explosion.*
*HEL **25** 17:35:38.1±0.1, 58°.88N × 18°.78E, h0km, ML2.3, ML1.8(UPP), Explosion*
*NAO **25** 17:35:38.4±1.9, 58°.98N × 18°.71E, ML2.3*
*IDC **25** 17:35:39.4±2.9, 58°.95N × 18°.74E, h0km, mb1 3.0/3, mb1mx2.8/28, mbtmp2.8/3, ML3.1/2, Error ellipse: s-maj=34.8km s-min=8.8km az=177.0*
*BER **25** 17:35:40.3±3.2, 59°.04N × 18°.68E, h0km, ML2.3(NAO), Suspected explosion*

ISC 25 17:35:36.7±0.8, 58°.86N±0°.03 × 18°.70E±0°.03, h0km, n62, σ1s20/79, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRTU	**Norrtaelje**	**0.82**	**358**	*i* P	**Pg**	**17 35 52.4**	**0.0**
NRTU	**Norrtaelje**	**0.82**	**358**	P	**Pg**	**17 35 52.4**	**0.0**
UPP	**Uppsala**	**1.14**	**332**	*e*P	**Pb**	**17 35 58.9**	**-0.3**
UPP	**Uppsala**	**1.14**	**332**	P	**Pb**	**17 35 58.9**	**-0.3**
ESKU	**Eskilstuna**	**1.25**	**288**	*e*P	**Pg**	**17 36 00.9**	**+0.3**
ESKU	**Eskilstuna**	**1.25**	**288**	P	**Pg**	**17 36 00.9**	**+0.3**
BACU	**Backbrunna**	**1.28**	**321**	*e*P	**Pg**	**17 36 01.5**	**+0.2**
BACU	**Backbrunna**	**1.28**	**321**	P	**Pg**	**17 36 01.5**	**+0.2**
FLYU	**Flymyra**	**1.33**	**342**	*e*P	**Pg**	**17 36 02.2**	**-0.1**
FLYU	**Flymyra**	**1.33**	**342**	P	**Pg**	**17 36 02.2**	**-0.1**
AAL	**Aland**	**1.48**	**26**	*e*P	**Pn**	**17 36 03.9**	**-0.6**
AAL				*e*S	**Sg**	**17 36 22.4**	**-1.7**
AAL	**Aland**	**1.48**	**26**	P	**Pn**	**17 36 04.0**	**-0.6**
AAL				S	**Sg**	**17 36 22.4**	**-1.7**
LNKU	**Linkoeping**	**1.79**	**250**	*e*P	**Pb**	**17 36 10.3**	**-0.2**
LNKU	**Linkoeping**	**1.79**	**250**	P	**Pb**	**17 36 10.2**	**-0.2**
ASPU	**Aespoe**	**1.83**	**218**	*e*P	**Pb**	**17 36 10.6**	**-0.3**
ASPU	**Aespoe**	**1.83**	**218**	P	**Pb**	**17 36 10.6**	**-0.3**
ASKU	**Askersund**	**2.01**	**273**	*e*P	**Pb**	**17 36 13.9**	**-0.2**
ASKU	**Askersund**	**2.01**	**273**	P	**Pb**	**17 36 13.9**	**-0.2**
NRAU	**Nora**	**2.01**	**292**	*e*P	**Pb**	**17 36 14.1**	**-0.1**
NRAU	**Nora**	**2.01**	**292**	P	**Pb**	**17 36 14.0**	**-0.1**
IGGU	**Iggoen**	**2.13**	**342**	*e*P	**Pn**	**17 36 14.4**	**+0.9**
IGGU	**Iggoen**	**2.13**	**342**	P	**Pn**	**17 36 14.4**	**+0.9**
FALU	**Falun**	**2.19**	**320**	*e*P	**Pb**	**17 36 15.9**	**-1.2**
FALU	**Falun**	**2.19**	**320**	P	**Pb**	**17 36 15.9**	**-1.2**
SLIT	**Slitere, Latvi**	**2.27**	**122**	*e*P	**Pn**	**17 36 15.3**	**-0.1**
SLIT				*e*S	**Sn**	**17 36 44.8**	**+0.8**
SLIT	**Slitere, Latvi** SNR=50	**2.27**	**122**	*e*P	**Pn**	**17 36 16.6**	**+1.2**
SLIT				S	**Sn**	**17 36 44.7**	**+0.8**
RAF	**Rauma**	**2.66**	**34**	*e*P	**Pn**	**17 36 22.0**	**+1.1**
RAF				*e*S	**Sn**	**17 36 54.4**	**+0.7**
RAF	**Rauma**	**2.66**	**34**	P	**Pn**	**17 36 21.9**	**+1.1**
RAF				S	**Sn**	**17 36 54.4**	**+0.7**
MTSE	**Matsula**	**2.67**	**91**	*e*P	**Pn**	**17 36 21.4**	**+0.4**
MTSE				*e*S	**Sn**	**17 36 53.9**	**0.0**
MTSE	**Matsula**	**2.67**	**91**	P	**Pn**	**17 36 21.3**	**+0.4**
MTSE				S	**Sn**	**17 36 53.9**	**0.0**
HFS	**Hagfors** baz=108,slow=14	**2.85**	**299**	Pn	**Pn**	**17 36 24.7**	**+1.3**
HFS				Lg	Lg	17 37 05.2	
	baz=121,slow=37						
HFS	**Hagfors** baz=108,slow=14	**2.85**	**299**	Pn	**Pn**	**17 36 24.7**	**+1.3**
HFS				Lg	Lg	17 37 05.2	
	baz=121,slow=37						
HFS	**Hagfors**	**2.85**	**299**	*e*P	**Pn**	**17 36 26.0**	**+2.6**
HFS				*e*S	**Sn**	**17 37 00.2**	**+1.7**
HFS	**Hagfors** baz=108,slow=13,SNR=50	**2.85**	**299**	Pn	**Pn**	**17 36 24.7**	**+1.3**
HFS	**Hagfors**	**2.85**	**299**	P	**Pn**	**17 36 26.0**	**+2.6**
HFS				S	**Sn**	**17 37 00.1**	**+1.7**
HFS				Lg	Lg	17 37 05.2	
	baz=121,slow=29,SNR=50						
ARNU	**Arnoeviken**	**2.91**	**348**	*e*P	**Pn**	**17 36 24.7**	**+0.4**
ARNU	**Arnoeviken**	**2.91**	**348**	P	**Pn**	**17 36 24.6**	**+0.4**
BSD	**Bornholm Skovb**	**4.29**	**210**	*i* P	**Pn**	**17 36 42.9**	**-0.3**
BSD				*i* S	**Sn**	**17 37 33.4**	**-0.5**
BSD	**Bornholm Skovb**	**4.29**	**210**	*i* P	**Pn**	**17 36 42.9**	**-0.3**
BSD				*i* S	**Sn**	**17 37 33.4**	**-0.5**
NB2	**NORSAR Subarra** baz=124,slow=14	**4.35**	**303**	Pn	**Pn**	**17 36 44.1**	**+0.1**
NB2				Lg	Lg	17 37 52.2	
	baz=113,slow=37						
NB2	**NORSAR Subarra** baz=124,slow=14	**4.35**	**303**	Pn	**Pn**	**17 36 44.1**	**+0.1**
NB2				Lg	Lg	17 37 52.2	
	baz=113,slow=37						
NB2	**NORSAR Subarra** baz=124,slow=13,SNR=50	**4.35**	**303**	Pn	**Pn**	**17 36 44.2**	**+0.1**
NB2				Lg	Lg	17 37 52.2	
	baz=113,slow=31,SNR=50						
NOA	**NORSAR Array B** 0.3nm,0.3s,baz=132,slow=17,SNR=6.4	**4.35**	**303**	Pn	**Pn**	**17 36 44.5**	**+0.4**
NOA				Sn	**Sn**	**17 37 35.0**	**-0.4**
	0.6nm,0.3s,baz=322,slow=24,SNR=2.7						
NOA				Lg	Lg	17 37 52.9	
	2.4nm,0.3s,baz=133,slow=25,SNR=7.6						
KEF	**Keuruu**	**4.50**	**40**	*e*P	**Pn**	**17 36 47.4**	**+1.2**
KEF				MSG	**Sg**	**17 38 05.0**	**+3.7**
	comp=Z,4.3nm,0.2s						
KEF	**Keuruu**	**4.50**	**40**	P	**Pn**	**17 36 47.3**	**+1.2**
FIA0	**FINESS Array S** baz=232,slow=16	**4.50**	**52**	Pn	**Pn**	**17 36 46.8**	**+0.7**
FIA0				Sn	**Sn**	**17 37 39.1**	**-0.1**
	baz=245,slow=28						
FIA0				Lg	Lg	17 37 54.6	
	baz=240,slow=28						
FIA0	**FINESS Array S** baz=232,slow=16	**4.50**	**52**	Pn	**Pn**	**17 36 46.8**	**+0.7**
FIA0				Sn	**Sn**	**17 37 39.1**	**-0.1**
	baz=245,slow=28						
FIA0				Lg	Lg	17 37 54.6	
	baz=240,slow=28						
FIA0	**FINESS Array S** baz=232,slow=16,SNR=50	**4.50**	**52**	Pn	**Pn**	**17 36 46.8**	**+0.7**
FIA0				Sn	**Sn**	**17 37 39.1**	**-0.1**
	baz=245,slow=23,SNR=50						
FIA0				Lg	Lg	17 37 54.6	
	baz=240,slow=27,SNR=50						
FINES	**FINESS Array B** comp=Z,0.0nm,0.3s,baz=234,slow=12,SNR=7.1	**4.50**	**52**	Pn	**Pn**	**17 36 47.2**	**+1.1**
FINES				Sn	**Sn**	**17 37 39.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=251,slow=20,SNR=3.6						
FINES				Lg	Lg	17 37 57.4	
	comp=Z,0.4nm,0.3s,baz=239,slow=24,SNR=10						
VAF	**Ylistaro** comp=Z,3.3nm,0.2s	**4.62**	**23**	MSG	**Sg**	**17 38 10.1**	**+5.1**
VJF	**Virojoki** comp=Z,4.0nm,0.2s	**4.79**	**66**	MSG	Sg	17 38 23.8	+13
KAF	**Kangasniemi**	**4.98**	**46**	*e*P	**Pn**	**17 36 53.8**	**+1.1**
KAF	**Kangasniemi**	**4.98**	**46**	P	**Pn**	**17 36 53.7**	**+1.1**
SUF	**Sumiainen**	**5.32**	**40**	*e*P	**Pn**	**17 36 57.7**	**+0.4**
SUF				MSG	Sg	17 38 35.4	+8.1
	comp=Z,3.4nm,0.2s						
SUF	**Sumiainen**	**5.32**	**40**	P	**Pn**	**17 36 57.7**	**+0.4**
APA0	**Apatity Array** baz=225,slow=11	**10.85**	**30**	Pn	**Pn**	**17 38 12.5**	**-0.6**
APA0	**Apatity Array** baz=225,slow=11	**10.85**	**30**	Pn	**Pn**	**17 38 12.5**	**-0.6**
APA0	**Apatity Array** baz=225,slow=11,SNR=50	**10.85**	**30**	Pn	**Pn**	**17 38 12.5**	**-0.6**
ARA0	**ARCESS Array S** baz=196,slow=14	**11.11**	**13**	Pn	**Pn**	**17 38 14.4**	**-2.2**
ARA0				Sn	Sn	17 40 12.2	-9.1
	baz=190,slow=22						
ARA0	**ARCESS Array S** baz=196,slow=14	**11.11**	**13**	Pn	**Pn**	**17 38 14.4**	**-2.2**
ARA0				Sn	Sn	17 40 12.2	-9.1
	baz=190,slow=22						
ARA0	**ARCESS Array S** baz=196,slow=14,SNR=50	**11.11**	**13**	Pn	**Pn**	**17 38 14.4**	**-2.2**
ARCES	**ARCESS Array B** comp=Z,0.3nm,0.3s,baz=195,slow=14,SNR=20	**11.11**	**13**	Pn	**Pn**	**17 38 14.8**	**-1.8**

*CASC **25** 18:14:05.2±3.6, 13°.81N × 93°.76W, h34km ± 999km, MD4.2*
*IDC **25** 18:14:08.5±1.3, 14°.47N × 93°.22W, h0km, mb3.9/6, mb1 4.3/8, mb1mx3.9/26, mbtmp4.0/8, ML4.0/2, MS3.3/10, Ms1 3.4/10, ms1mx3.1/33, Error ellipse: s-maj=45.7km s-min=24.6km az=58.0*
*MEX **25** 18:14:09.0±0.9, 14°.05N × 93°.48W, h16km ± 98km, MD4.1*

ISC 25 18:14:07.9±2.3, 14°.33N±0°.06 × 93°.39W±0°.06, h0km ± 13km, n35, σ1s26/42, mb3.9/7, MS3.2/9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.23**	**62**	*i* P	**Pg**	**18 14 30.9**	**-0.7**
THIG				*i* S	**Sg**	**18 14 48.0**	**+0.5**
PCIG		**1.38**	**7**	*e*P	**Pn**	**18 14 33.2**	**-1.2**
PCIG				*i* S	**Sn**	**18 14 53.4**	**+0.1**
JAT	**Jato**	**1.70**	**90**	*e*P	**Pn**	**18 14 38.8**	**0.0**
JAT				*e*S	**Sg**	**18 15 04.7**	**+2.2**
CCIG	**Comitan**	**2.29**	**32**	*e*P	**Pn**	**18 14 47.9**	**+0.8**
CCIG				*i* S	**Sn**	**18 15 17.2**	**+1.2**
TGIG		**2.45**	**6**	*e*P	**Pn**	**18 14 50.2**	**+1.1**
TGIG				*i* S	**Sn**	**18 15 21.2**	**+1.3**
FUG	**Fuego 3**	**2.47**	**87**	*e*P	**Pn**	**18 14 48.9**	**-0.7**
FUG				*e*S	**Sb**	**18 15 24.6**	**+0.3**
IXG	**Ixpaco**	**2.85**	**93**	*e*P	**Pn**	**18 14 55.4**	**+0.6**
IXG				*e*S	**Sb**	**18 15 34.3**	**-0.9**
NBG	**Las Nubes**	**2.96**	**85**	*e*P	**Pn**	**18 14 57.2**	**+0.8**
NBG				*e*S	**Sb**	**18 15 37.7**	**-0.8**
RBDL	**Robledal**	**3.60**	**93**	*e*P	**Pn**	**18 15 04.1**	**-1.0**
RBDL				*e*S	**Sn**	**18 15 50.1**	**+1.7**
MRL	**Marmol**	**3.65**	**78**	*e*P	**Pn**	**18 15 06.3**	**+0.5**
MRL				*e*S	**Sb**	**18 15 55.3**	**-3.1**
RTR	**El Retiro**	**3.66**	**96**	*e*P	**Pn**	**18 15 05.1**	**-0.8**
SBLS	**San Blas**	**3.69**	**97**	*e*P	**Pn**	**18 15 04.9**	**-1.5**
SNJE	**San Jose**	**3.70**	**97**	*e*P	**Pn**	**18 15 05.1**	**-1.4**
TUIG	**Tuzandepetl**	**3.81**	**345**	*e*P	**Pn**	**18 15 08.6**	**+0.7**
TUIG				*i* S	**Sn**	**18 15 53.4**	**-0.1**
MTO2	**Montecristo 2**	**3.90**	**88**	*e*P	**Pn**	**18 15 09.4**	**+0.1**
BOQS	**Boqueron**	**4.03**	**98**	*e*P	**Pn**	**18 15 09.8**	**-1.3**
LFRS	**El Faro**	**4.26**	**99**	*e*P	**Pn**	**18 15 13.6**	**-0.6**
SNVI	**San Vicente**	**4.47**	**99**	*e*P	**Pn**	**18 15 15.8**	**-1.4**
SNVI				*e*S	**Sn**	**18 16 12.1**	**+2.1**
BLLM	**Bellamira**	**5.08**	**99**	*e*P	**Pn**	**18 15 24.8**	**-0.6**
TEIG	**Tepich** 6.3nm,0.3s,baz=254,slow=0.9,SNR=38	**7.63**	**39**	Pn	**Pn**	**18 15 59.7**	**-0.7**
TEIG				Sn	Sn	18 17 16.1	-11
	3.6nm,0.3s,baz=246,slow=20,SNR=3.9						
TEIG				LR	LR	18 19 18.7	
	comp=Z,285nm,20.7s,baz=332,slow=42						
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=150,slow=11,SNR=13	**17.70**	**329**	P	**P**	**18 18 17.8**	**+0.8**
TKL	**Tuckaleechee C** comp=Z,62nm,18.4s,baz=264,slow=42	**22.93**	**20**	LR	LR	18 29 59.5	
ANMO	**Albuquerque** 1.1nm,0.7s,baz=131,slow=9.3,SNR=2.2	**23.67**	**332**	P	**P**	**18 19 20.2**	**-1.2**
ANMO				LR	LR	18 29 36.8	
	comp=Z,22nm,20.8s,baz=72,slow=39						
ATAH	**Atahualpa** comp=Z,40nm,18.8s,baz=228,slow=29	**26.00**	**144**	LR	LR	18 26 53.8	
PDAR	**Pinedale Array** 0.5nm,0.6s,baz=133,slow=6.6,SNR=4.0	**31.58**	**337**	P	**P**	**18 20 32.1**	**-0.4**
ELK	**Elko** 1.1nm,0.7s,baz=145,slow=6.2,SNR=6.3	**32.49**	**328**	P	**P**	**18 20 40.7**	**+0.1**
ELK				LR	LR	18 36 00.3	
	comp=Z,51nm,18.2s,baz=267,slow=40						
NVAR	**Mina Array Bea** 1.7nm,0.8s,baz=141,slow=8.6,SNR=12	**32.58**	**322**	P	**P**	**18 20 43.5**	**+2.3**
SADO	**Sadowa** comp=Z,58nm,18.1s,baz=132,slow=40	**32.67**	**19**	LR	LR	18 35 53.2	
LPAZ	**La Paz** comp=Z,27nm,19.2s,baz=23,slow=33	**39.35**	**140**	LR	LR	18 35 43.4	
SCHQ	**Schefferville** comp=Z,94nm,19.2s,baz=87,slow=39	**45.39**	**21**	LR	LR	18 43 51.3	
YKA	**Yellowknife Ar** 3.9nm,0.7s,baz=153,slow=7.3,SNR=70	**50.41**	**347**	P	**P**	**18 23 06.1**	**-0.7**
YKA				PcP	**PcP**	**18 24 26.0**	**+0.8**
	0.3nm,0.6s,baz=155,slow=4.7,SNR=4.8						
CFAA	**Coronel Fontan** 0.1nm,0.4s,baz=311,slow=9.3,SNR=2.5	**51.66**	**152**	P	**P**	**18 23 18.2**	**+1.6**
NOA	**NORSAR Array B** comp=Z,34nm,18.1s,baz=350,slow=36	**84.50**	**28**	LR	LR	19 04 41.2	
ARCES	**ARCESS Array B** 1.5nm,0.9s,baz=304,slow=9.7,SNR=3.7	**86.24**	**18**	P	**P**	**18 26 50.2**	**-0.9**
ARCES				LR	LR	19 10 38.7	
	comp=Z,28nm,18.2s,baz=62,slow=39						
CMAR	**Chiang Mai Arr** 2.1nm,1.0s,baz=348,slow=4.5,SNR=9.0	**145.23**	**339**	PKPbc	**PKPbc**	**18 33 45.8**	**-2.3**

*ISCJB **25** 18:18:13.0±0.5, 39°.56N±0°.03 × 28°.02E±0°.03, h8km ± 5km, Error ellipse: s-maj=5.2km s-min=4.3km az=13.2*
*ISK **25** 18:18:12.4, 39°.53N × 28°.04E, h10km, MD2.6*
*DDA **25** 18:18:12.8, 39°.56N × 28°.00E, h7km, MD2.8*
*CSEM **25** 18:18:13.0±0.1, 39°.56N × 28°.03E, h11km ± 1km, MD2.6, Error ellipse: s-maj=3.2km s-min=2.7km az=31.0*

ISC 25 18:18:12.9±0.9, 39°.56N±0°.03 × 28°.02E±0°.02, h14km ± 6km, n32, σ0s37/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.14**	**309**	PG	**Pg**	**18 18 16.4**	**-0.1**
BALB				*e*SG	**Sg**	**18 18 19.3**	**+0.3**
BALB	**Balikesir**	**0.14**	**309**	*i* Pg	**Pg**	**18 18 16.4**	**-0.1**
BALB				*e*Sg	**Sg**	**18 18 19.3**	**+0.3**
DURS	**Dursunbey**	**0.36**	**82**	*i* P	**Pg**	**18 18 20.2**	**-0.1**
DURS				*i* S	**Sg**	**18 18 25.4**	**+0.2**
DURS	**Dursunbey**	**0.36**	**82**	*i* P	**Pg**	**18 18 20.2**	**-0.1**
DURS				*i* S	**Sg**	**18 18 25.4**	**+0.2**
BALY	**Balya**	**0.36**	**301**	*i* P	**Pg**	**18 18 19.9**	**-0.3**
BALY				*i* S	**Sg**	**18 18 25.3**	**+0.1**
BALY	**Balya**	**0.36**	**301**	*i* P	**Pg**	**18 18 19.9**	**-0.3**
BALY				*i* S	**Sg**	**18 18 25.3**	**+0.1**
DST	**Dursunbey**	**0.47**	**84**	*e*PG	**Pg**	**18 18 21.7**	**-0.5**
DST				*e*SG	**Sg**	**18 18 28.5**	**0.0**
DST	**Dursunbey**	**0.47**	**84**	*e*Pg	**Pg**	**18 18 21.7**	**-0.5**
DST				*e*Sg	**Sg**	**18 18 28.5**	**0.0**
GONE	**Gonen-Balikesi**	**0.55**	**333**	*e*PG	**Pb**	**18 18 24.2**	**-0.2**
GONE	**Gonen-Balikesi**	**0.55**	**333**	*e*Pg	**Pb**	**18 18 24.2**	**-0.2**
AKHS	**Akhisar**	**0.69**	**193**	*i* P	**Pb**	**18 18 26.9**	**+0.1**
AKHS				*i* S	**Sb**	**18 18 36.3**	**0.0**
AKHS	**Akhisar**	**0.69**	**193**	*i* P	**Pb**	**18 18 26.9**	**+0.1**
AKHS				*i* S	**Sb**	**18 18 36.3**	**0.0**
KCTX	**Karacabey (Bur**	**0.76**	**20**	*e*PG	**Pg**	**18 18 27.0**	**-0.6**
KCTX				*e*SG	**Sb**	**18 18 38.4**	**+0.3**
KCTX	**Karacabey (Bur**	**0.76**	**20**	*e*Pg	**Pg**	**18 18 27.0**	**-0.6**
KCTX				*e*Sg	**Sb**	**18 18 38.4**	**+0.3**
KRBG	**Karabiga-Canak**	**1.00**	**327**	*e*PG	**Pn**	**18 18 32.5**	**-0.1**
KRBG	**Karabiga-Canak**	**1.00**	**327**	*e*Pg	**Pn**	**18 18 32.5**	**-0.1**
ULDT	**Uludag**	**1.04**	**55**	*i* P	**Pn**	**18 18 33.3**	**0.0**
ULDT				*i* S	**Sb**	**18 18 46.6**	**+0.1**
ULDT	**Uludag**	**1.04**	**55**	*i* P	**Pn**	**18 18 33.3**	**0.0**
ULDT				*i* S	**Sb**	**18 18 46.6**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.05**	**39**	*e*PG	**Pb**	**18 18 32.9**	**0.0**
MDNY	**Mudanya-Bursa**	**1.05**	**39**	*e*Pg	**Pb**	**18 18 32.9**	**0.0**
MRMT	**Marmara Adasi**	**1.09**	**343**	*e*PN	**Pg**	**18 18 34.3**	**+0.2**
MRMT	**Marmara Adasi**	**1.09**	**343**	*e*Pn	**Pg**	**18 18 34.3**	**+0.2**
TVSB	**Tavsanli**	**1.12**	**95**	*e*PN	**Pb**	**18 18 33.9**	**-0.3**
TVSB	**Tavsanli**	**1.12**	**95**	*e*Pn	**Pb**	**18 18 33.9**	**-0.3**
KULA	**Kula-Manisa**	**1.15**	**154**	*e*PN	**Pn**	**18 18 34.1**	**-0.7**
KULA	**Kula-Manisa**	**1.15**	**154**	*e*Pn	**Pn**	**18 18 34.1**	**-0.7**
ARMT	**Armutlu**	**1.20**	**32**	*e*PN	**Pg**	**18 18 36.0**	**-0.1**
ARMT	**Armutlu**	**1.20**	**32**	*e*Pn	**Pg**	**18 18 36.0**	**-0.1**
GDZ	**Gediz**	**1.23**	**112**	*i* P	**Pg**	**18 18 37.0**	**+0.4**
GDZ				*i* S	**Sg**	**18 18 53.6**	**+1.0**
GDZ	**Gediz**	**1.23**	**112**	*i* P	**Pg**	**18 18 37.0**	**+0.4**
GDZ				*i* S	**Sg**	**18 18 53.6**	**+1.0**
RKY	**Sarkoy-Tekirda**	**1.30**	**331**	*e*PN	**Pb**	**18 18 37.5**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.30**	**331**	*e*Pn	**Pb**	**18 18 37.5**	**+0.3**

DDA 25 18:37:06.0, 37°.62N × 35°.66E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.20**	**137**	*e*PG	Pg	18 37 10.6	+0.5
KOZT				*e*SG	Sg	18 37 12.8	0.0
ANDN	**Andirin**	**0.55**	**94**	*i* P	Pg	18 37 16.8	0.0
ANDN				*i* S	Sg	18 37 25.1	+0.9
CEYT	**Ceyhan**	**0.62**	**173**	*e*PG	Pg	18 37 17.5	-0.4
GULE	**Gulek**	**0.78**	**244**	*i* P	Pg	18 37 21.1	-0.2
GULE				*i* S	Sb	18 37 32.5	-0.6
SARI	**SarD1z-Kayseri**	**0.99**	**37**	*e*PN	Pn	18 37 29.3	+2.8

*ISCJB **25** 18:45:20.2±0.8, 8°.32S±0°.09 × 121°.35E±0°.07, h200km, mb3.6/2, Error ellipse: s-maj=12.9km s-min=8.1km az=26.3*
*AUST **25** 18:45:20.6±1.3, 8°.22S × 121°.45E, h180km, Error ellipse: s-maj=2.3km s-min=1.3km az=14.0*
*IDC **25** 18:45:25.2±3.0, 8°.64S × 121°.08E, h240km ± 33km, mb3.4/2, mb1 3.4/5, mb1mx3.0/23, mbtmp3.2/5, Error ellipse: s-maj=88.5km s-min=13.3km az=54.

53nm,28.2s

IDC 25 19:09:13.6±3.6, 4°82'S×152°99'E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/18, mbtmp3.2/2, Error ellipse: s-maj=167.5km s-min=46.2km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.57**	**229**	P	P	19 14 26.9	+0.8
	0.6nm,0.5s,baz=52,slow=9.5,SNR=11						
ASAR	**Alice Springs**	**26.26**	**223**	P	P	19 14 49.9	-1.0
	0.1nm,0.4s,baz=55,slow=9.5,SNR=11						
TORD	**Torodi Ar. Bea**	**150.49**	**288**	PKPbc	PKPbc	19 29 08.3	-0.1
	0.8nm,1.1s,baz=112,slow=1.6,SNR=2.3						

IDC 25 19:29:15.1±8.0, 4°01'N×94°71'E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/26, mbtmp3.2/3, Error ellipse: s-maj=394.1km s-min=30.3km az=57.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**43.96**	**348**	P	P	19 37 23.8	-0.2
	0.1nm,0.3s,baz=162,slow=7.5,SNR=4.2						
WRA	**Warramunga Arr**	**45.64**	**123**	P	P	19 37 37.7	0.0
	0.3nm,0.6s,baz=301,slow=9.4,SNR=2.9						
ASAR	**Alice Springs**	**47.07**	**128**	P	P	19 37 48.8	-0.2
	0.2nm,0.5s,baz=297,slow=8.2,SNR=5.4						

*ISCJB **25** 19:32:18.6±1.3, 13°.6N±0°.1×91°.76W±0°.07, h66km±10km, mb3.6/7, Error ellipse: s-maj=19.3km s-min=8.9km az=27.5*
*CASC **25** 19:32:18.6±2.9, 13°.59N×91°.67W, h16km±13km, MD3.7, ML3.9*
*IDC **25** 19:32:20.6±1.8, 14°.03N×91°.11W, h45km±7km, mb3.5/7, mb1 3.8/8, mb1mx3.6/24, mbtmp3.5/8, ML4.1/1, Error ellipse: s-maj=47.3km s-min=29.5km az=21.0*
ISC 25 19:32:20.4±1.1, 13°.73N±0°.09×91°.73W±0°.07, h54km±8km, n28, σ1§78/39, mb3.7/7, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.59**	**9**	*e*P	**Pn**	**19 32 32.5**	**-0.5**
FUG	**Fuego 3**	**1.12**	**50**	*e*P	**Pn**	19 32 38.9	-1.1
PCG	**Pacaya**	**1.27**	**59**	*e*P	**Pn**	**19 32 41.8**	**-0.4**
PCG				*e*S	**Sn**	**19 32 59.7**	**+1.4**
IXG	**Ixpaco**	**1.31**	**70**	*e*P	**Pn**	19 32 41.1	-1.6
IXG				*e*S	**Sn**	**19 33 02.0**	**+2.8**
NBG	**Las Nubes**	**1.59**	**57**	*e*P	**Pn**	19 32 47.5	+1.1
NBG				*e*S	**Sn**	**19 33 10.0**	**+3.9**
RBDL	**Robledal**	**2.02**	**79**	*e*P	**Pn**	19 32 51.6	-0.7
RTR	**El Retiro**	**2.03**	**85**	*e*P	**Pn**	19 32 51.6	-0.7
SBLS	**San Blas**	**2.05**	**87**	*e*P	**Pn**	19 32 51.5	-1.2
SNJE	**San Jose**	**2.07**	**86**	*e*P	**Pn**	19 32 52.0	-1.0
SNJE				*e*S	**Sn**	19 33 16.2	-1.4
BOQS	**Boqueron**	**2.38**	**90**	*e*P	**Pn**	19 32 56.5	-0.7
BOQS				*e*S	**Sn**	19 33 24.9	-0.4
MRL	**Marmol**	**2.38**	**56**	*e*P	**Pn**	19 32 57.1	-0.1
MRL				*e*S	**Sn**	19 33 29.9	+4.6
MTO2	**Montecristo 2**	**2.39**	**74**	*e*P	**Pn**	19 32 56.5	-0.9
SNET	**Serv Nac Est T**	**2.43**	**91**	*e*P	**Pn**	19 32 57.1	-0.6
SNET				AML	AML	19 33 29.5	
	comp=Z,1μm,0.2s						
LFU	**La Fuente**	**2.54**	**89**	*e*P	**Pn**	**19 32 59.5**	**+0.3**
LFRS	**El Faro**	**2.59**	**92**	*e*P	**Pn**	19 32 59.6	-0.5
LFRS				*e*S	**Sn**	19 33 30.2	-0.3
LBRS	**Las Brisas**	**2.61**	**89**	*e*P	**Pn**	19 33 00.2	0.0
SNVI	**San Vicente**	**2.81**	**92**	*e*P	**Pn**	19 33 03.4	+0.3
SNVI				*e*S	**Sn**	19 33 36.6	+0.8
VSM	**San Miguel**	**3.37**	**95**	*e*P	**Pn**	19 33 11.3	+0.4
TEIG	**Tepich**	**7.26**	**27**	P	**Pn**	**19 34 03.1**	**-0.8**
	comp=Z,11nm,0.3s,baz=160,slow=0.0,SNR=45						
TEIG				S	**Sn**	**19 35 19.9**	**-5.0**
	baz=144,slow=23,SNR=2.5						
TXAR	**Lajitas Array**	**19.07**	**326**	P	**Pn**	**19 36 41.5**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=155,slow=12,SNR=21						
TKL	**Tuckaleechee C**	**22.98**	**17**	P	**P**	**19 37 18.6**	**-1.9**
	comp=Z,1.8nm,0.6s,baz=175,slow=9.0,SNR=5.2						
ANMO	**Albuquerque**	**24.97**	**330**	P	**P**	**19 37 41.3**	**+2.1**
	comp=Z,0.8nm,0.5s,baz=134,slow=13,SNR=6.3						
NVAR	**Mina Array Bea**	**34.05**	**321**	P	**P**	**19 39 02.6**	**+2.8**
	comp=Z,1.5nm,0.6s,baz=128,slow=9.0,SNR=13						
NVAR				pP	**pP**	**19 39 13.3**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=142,slow=8.4,SNR=4.4						
SCHQ	**Schefferville**	**45.38**	**20**	P	P	19 40 29.2	-4.2
	comp=Z,1.4nm,0.5s,baz=250,slow=12,SNR=6.0						
YKA	**Yellowknife Ar**	**51.35**	**347**	P	**P**	**19 41 18.2**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=149,slow=7.1,SNR=4.9						
YKA				PcP	**PcP**	**19 42 33.4**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=153,slow=4.1,SNR=5.3						
YKA				pPcP		19 42 46.3	
	comp=Z,0.3nm,0.6s,baz=146,slow=3.9,SNR=5.2						
ILAR	**Eielson Array**	**63.19**	**337**	P	**P**	**19 42 42.5**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=172,slow=4.0,SNR=7.1						
ILAR				pP	**pP**	**19 42 56.3**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=136,slow=4.3,SNR=6.1						
ESDC	**Sonseca Array**	**79.68**	**52**	P	**P**	**19 44 20.6**	**-2.0**
	comp=Z,0.2nm,0.4s,baz=290,slow=3.7,SNR=4.1						
CMAR	**Chiang Mai Arr**	**146.33**	**342**	PKPbc	**PKPab**	**19 51 57.0**	**+0.1**
	comp=Z,2.5nm,0.8s,baz=343,slow=3.1,SNR=16						
CMAR				pPKPbc	pPKPbc	19 52 10.4	-1.6
	comp=Z,2.7nm,0.8s,baz=329,slow=3.3,SNR=10.0						

*SKO **25** 19:46:34.0, 41°.28N×22°.68E, h15km, M1.5, ML1.9*
*ATH **25** 19:46:34.6, 41°.25N×22°.69E, h24km±1km, MD3.0/9*
*CSEM **25** 19:46:34.6±0.2, 41°.23N×22°.73E, h8km, ML1.7, Error ellipse: s-maj=5.2km s-min=4.6km az=79.0*
*BEO **25** 19:46:36.0±1.1, 41°.27N×22°.65E, h2km±2km, ML1.7/5*
ISC 25 19:46:34.5±0.8, 41°.28N±0°.03×22°.64E±0°.03, h15km±5km, n28, σ0§61/42, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.07**	**309**	*i* Pg	**Pg**	**19 46 37.5**	**0.0**
VAY				*i* Sg	**Sg**	**19 46 39.5**	**0.0**
VAY				*e*Lg	Lg	19 46 39.6	
	comp=E,738nm,0.6s						
VAY				*e*Lg	Lg	19 46 39.7	
	comp=N,1μm,0.2s						
VAY	**Valandovo**	**0.07**	**309**	*e*Pg	**Pg**	**19 46 37.3**	**-0.2**
VAY				*e*Sg	**Sg**	**19 46 39.5**	**0.0**
VAY	**Valandovo**	**0.07**	**309**	*e*Pg	**Pg**	**19 46 37.3**	**-0.2**
VAY				*i* Sg	**Sg**	**19 46 40.0**	**+0.5**
VAY				*e*Lg	Lg	19 46 40.1	
	comp=N,1μm,0.2s						
GRG	**Griva**	**0.37**	**210**	*e*PB	**Pb**	**19 46 42.7**	**-0.1**
GRG				*e*SB	**Sb**	**19 46 48.3**	**0.0**
GRG	**Griva**	**0.37**	**210**	*e*Pb	**Pb**	19 46 42.7	-0.1
GRG				*e*Sb	**Sb**	**19 46 48.3**	**0.0**
SOH	**Sokhos**	**0.70**	**130**	*e*PN	**Pg**	**19 46 47.9**	**-0.4**
SOH				*e*SN	**Sg**	**19 46 57.0**	**-0.6**
SOH	**Sokhos**	**0.70**	**130**	*e*Pn	**Pg**	**19 46 47.9**	**-0.4**
SOH				*e*Sn	**Sg**	**19 46 57.0**	**-0.6**
NVR	**Nevrokopi**	**0.92**	**85**	*e*PN	**Pb**	**19 46 51.9**	**-0.3**
NVR				*e*SN	**Sb**	**19 47 04.1**	**-0.2**
NVR	**Nevrokopi**	**0.92**	**85**	*e*Pn	**Pb**	**19 46 51.9**	**-0.3**
NVR				*e*Sn	**Sb**	**19 47 04.1**	**-0.2**
FNA	**Florina**	**1.08**	**243**	*e*PN	**Pg**	**19 46 55.7**	**+0.4**
FNA	**Florina**	**1.08**	**243**	*e*Pn	**Pg**	**19 46 55.7**	**+0.4**
PLG	**Polygyros**	**1.09**	**146**	*e*PN	**Pb**	**19 46 54.4**	**-0.7**
PLG				*e*SN	**Sb**	**19 47 09.0**	**-0.1**
PLG	**Polygyros**	**1.09**	**146**	*e*Pn	**Pb**	**19 46 54.4**	**-0.7**
PLG				*e*Sn	**Sb**	**19 47 09.0**	**-0.1**
LIT	**Litokhoron**	**1.18**	**186**	*e*PN	**Pn**	**19 46 56.3**	**-0.2**
LIT	**Litokhoron**	**1.18**	**186**	*e*Pn	**Pn**	**19 46 56.3**	**-0.2**
VTS	**Vitosha**	**1.38**	**18**	*e*Pg	**Pg**	**19 47 00.8**	**-0.3**
VTS				*e*Sg	**Sg**	**19 47 19.2**	**+0.1**
VTS	**Vitosha**	**1.38**	**18**	*e*Pg	**Pg**	**19 47 00.8**	**-0.3**
VTS				*e*Sg	**Sg**	**19 47 19.2**	**+0.1**
PAIG	**Paliouri**	**1.56**	**149**	*e*PN	**Pn**	**19 47 02.2**	**+0.5**
PAIG	**Paliouri**	**1.56**	**149**	*e*Pn	**Pn**	**19 47 02.2**	**+0.5**
BARS	**Barje**	**1.66**	**338**	*e*PN	**Pg**	**19 47 05.8**	**-0.6**
BARS	**Barje**	**1.66**	**338**	*e*Pn	**Pg**	**19 47 05.8**	**-0.6**
PLD	**Plovdiv**	**1.75**	**61**	*e*Sg	**Sg**	**19 47 32.0**	**+1.1**
PLD	**Plovdiv**	**1.75**	**61**	*e*Sg	**Sg**	**19 47 32.0**	**+1.1**
ZAPS	**Zavoj**	**2.00**	**360**	*e*Pn	**Pb**	**19 47 10.2**	**-0.3**
ZAPS				*e*Sn	**Sg**	**19 47 37.6**	**-1.1**
RDO	**Rodhopi**	**2.19**	**92**	*e*PN	**Pn**	**19 47 10.8**	**+0.5**
RDO	**Rodhopi**	**2.19**	**92**	*e*Pn	**Pn**	**19 47 10.8**	**+0.5**
SMTH	**Samothraki Isl**	**2.33**	**109**	*e*PB	**Pn**	**19 47 14.0**	**+1.7**
SMTH	**Samothraki Isl**	**2.33**	**109**	*e*Pb	**Pn**	**19 47 14.0**	**+1.7**

IDC 25 19:50:28.1±1.3, 4°.50N×126°.46E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/26, mbtmp3.7/7, MS2.9/1, Ms1 2.9/1, ms1mx2.2/25, Error ellipse: s-maj=109.5km s-min=16.4km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.48**	**182**	P	P	19 55 29.8	+0.6
	1.5nm,1.0s,baz=5.6,slow=13,SNR=2.1						
FITZ				LR	LR	20 04 13.7	
	comp=Z,37nm,21.9s,baz=104,slow=37						
WRA	**Warramunga Arr**	**25.50**	**163**	P	P	19 55 58.5	+0.1
	1.1nm,0.6s,baz=340,slow=10,SNR=11						
ASAR	**Alice Springs**	**28.92**	**166**	P	P	19 56 29.3	+0.1
	0.4nm,0.7s,baz=349,slow=6.8,SNR=13						
STKA	**Stephens Creek**	**38.94**	**159**	P	P	19 57 55.2	-0.8
	2.2nm,0.9s,baz=342,slow=9.4,SNR=5.4						
MKAR	**Makanchi Array**	**56.77**	**325**	P	P	20 00 14.2	+0.1
	0.5nm,0.5s,baz=118,slow=7.3,SNR=11						
KURBB	**Kurchatov Arra**	**60.95**	**327**	P	P	20 00 43.1	0.0
	0.8nm,0.6s,baz=128,slow=6.3,SNR=11						
BVAR	**Borovoye Array**	**66.53**	**327**	P	P	20 01 19.7	-0.2
	0.5nm,0.6s,baz=111,slow=7.9,SNR=4.5						

*ISCJB **25** 19:55:37.0±0.4, 58°.91N±0°.03×134°.57W±0°.06, h10km, Error ellipse: s-maj=5.1km s-min=3.2km az=152.0*
*NEIC **25** 19:55:38.1, 58°.89N×134°.80W, h6km, ML3.6(AEIC), ML3.9(PGC), After AEIC.*
NEIC Felt [III] at Skagway and [II] at Juneau. Also felt at Haines.
*PGC **25** 19:55:38.9±0.0, 58°.90N×134°.74W, h1km, ML3.9/5, 36km Ese of Haines, Ak Southeastern Alaska*
ISC 25 19:55:37.0±0.8, 58°.85N±0°.03×134°.69W±0°.04, h10km, n23, σ1§86/35, 2D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESE	**Bessie Mountai**	**0.28**	**198**	P	**Pg**	**19 55 43.1**	**+0.4**
BESE				S	**Sb**	**19 55 48.4**	**-0.6**
SKAG	**Skagway**	**0.70**	**332**	P	**Pg**	**19 55 50.4**	**0.0**
SKAG				S	**Sg**	**19 55 58.6**	**-0.9**
WHY	**Whitehorse**	**1.82**	**357**	P	**Pb**	**19 56 09.4**	**-0.9**
WHY				S	**Sb**	**19 56 34.4**	**+1.1**
WHY	**Whitehorse**	**1.82**	**357**	⇑Pn	**Pn**	**19 56 09.6**	**-0.8**
WHY				⇑Sg	**Sb**	**19 56 34.3**	**+1.1**
SIT	**Sitka**	**1.83**	**191**	P	**Pb**	**19 56 10.1**	**-0.4**
SIT				S	**Sg**	**19 56 35.5**	**-0.2**
HYT	**Haines Junctio**	**2.44**	**326**	P	**Pn**	**19 56 18.3**	**+1.4**
HYT				S	**Sn**	**19 56 48.4**	**+1.5**
HYT	**Haines Junctio**	**2.44**	**326**	⇑Pn	**Pn**	**19 56 18.9**	**+2.0**
HYT				⇑Sg	**Sb**	**19 56 53.2**	**+2.1**
DLBC	**Dease Lake**	**2.47**	**98**	P	**Pb**	**19 56 19.7**	**-1.7**
DLBC	**Dease Lake**	**2.47**	**98**	Pn	**Pb**	**19 56 19.8**	**-1.7**
DLBC				⇑Pg	**Pg**	**19 56 24.0**	**-0.3**
DLBC				⇑Sg	**Sg**	**19 56 56.9**	**+0.6**
PNL	**Peninsula**	**2.56**	**291**	P	**Pn**	**19 56 20.0**	**+1.6**
PNL				S	**Sb**	**19 56 52.0**	**-2.3**
WRAK	**Wrangell Islan**	**2.74**	**152**	P	**Pn**	**19 56 22.9**	**+2.0**
CRAG	**Craig**	**3.50**	**165**	*e*P	**Pn**	**19 56 33.3**	**+2.0**
GRNC	**Granite Creek**	**4.04**	**301**	P	**Pn**	**19 56 40.2**	**+1.2**
BARN	**Barnard Glacie**	**4.15**	**305**	P	**Pn**	**19 56 41.6**	**+1.2**
VRDR	**Verde Repeater**	**5.00**	**302**	P	**Pn**	**19 56 53.5**	**+1.1**
NDB	**Naden**	**5.00**	**168**	⇓Pn	**Pn**	**19 56 54.6**	**+2.6**
NDB				⇑Sg	**Sg**	**19 58 15.3**	**-2.1**
RUBB	**Prince Rupert**	**5.15**	**150**	⇓Pn	Pn	19 56 57.5	+3.4
RUBB				⇑Sn	**Sn**	**19 57 55.2**	**+1.7**
RUBB				⇑Sg	**Sg**	**19 58 20.3**	**-2.0**
RAGM	**Ragged Mountai**	**5.30**	**291**	P	**Pn**	**19 56 58.0**	**+1.9**
BCA3	**Beaver Creek A**	**5.46**	**324**	P	**Pn**	**19 57 00.1**	**+1.8**
DAWY	**Dawson**	**5.70**	**339**	P	**Pn**	**19 57 03.3**	**+1.7**
DAWY	**Dawson**	**5.70**	**339**	⇑Pn	**Pn**	**19 57 03.3**	**+1.7**
DAWY				⇑Sg	**Sg**	**19 58 34.1**	**-5.6**
DOT	**Dot Lake**	**6.60**	**321**	*e*P	Pn	19 57 17.4	+3.4
	7.8nm,0.6s						
EGAK	**Eagle**	**6.69**	**336**	*e*P	**Pn**	**19 57 17.2**	**+2.1**
	19nm,0.6s						

*ISCJB **25** 19:58:10.7±0.5, 50°.15N±0°.03×18°.98E±0°.03, h0km, Error ellipse: s-maj=5.1km s-min=2.4km az=13.5*
*CSEM **25** 19:58:11.7±0.4, 50°.15N×18°.98E, h1km, ML2.7/7, Error ellipse: s-maj=8.8km s-min=3.7km az=8.0*
*WAR **25** 19:58:11.6, 50°.11N×19°.11E*
*IPEC **25** 19:58:12.0±0.3, 50°.17N×19°.02E, h0km, ML1.9/3, Error ellipse: s-maj=2.7km s-min=2.2km az=166.0*
*PRU **25** 19:58:12.3, 50°.14N×18°.99E, h0km*
*VIE **25** 19:58:16.9±0.6, 49°.91N×18°.75E, h0km, mb1.5/2, ML2.1/3, Error ellipse: s-maj=4.3km s-min=3.1km az=0.0 37 km ENE of Ostrava Suspected Mining induced.*
ISC 25 19:58:11.5±0.8, 50°.09N±0°.04×19°.08E±0°.02, h0km, n32, σ1§05/52, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.48**	**74**	*e*Pg	**Pg**	**19 58 20.8**	**0.0**
OJC				*e*Sg	**Sg**	**19 58 27.6**	**+0.6**
OKC	**Ostrava-Krasne**	**0.65**	**247**	*e*PG	**Pg**	**19 58 24.5**	**+0.5**
OKC				*e*SG	**Sg**	**19 58 33.0**	**+0.6**
	comp=Z,8.8nm,0.3s						
OKC	**Ostrava-Krasne**	**0.65**	**247**	Pg	**Pg**	**19 58 24.5**	**+0.5**
OKC				Sg	**Sg**	**19 58 33.0**	**+0.6**
	8.8nm,0.3s						
MORC	**Moravsky Berou**	**1.04**	**253**	*e*Pg	**Pg**	**19 58 31.7**	**+0.3**
MORC				*e*Sg	**Sg**	**19 58 44.4**	**-0.4**
	31nm,0.4s,baz=67						
NIE	**Niedzica**	**1.05**	**129**	*e*Pg	**Pn**	**19 58 32.6**	**-0.9**
NIE				*e*Sg	**Sn**	**19 58 47.6**	**-1.2**
STHS	**Stebnicka Huta**	**1.56**	**115**	*e*PN	**Pg**	**19 58 42.2**	**+0.8**
STHS				*e*SN	**Sg**	**19 59 03.8**	**+2.2**
STHS	**Stebnicka Huta**	**1.56**	**115**	*e*Pn	**Pg**	**19 58 42.2**	**+0.8**
STHS				*e*Sn	**Sg**	**19 59 03.8**	**+2.2**
VYHS	**Vyhne**	**1.60**	**186**	*e*PN	**Pn**	**19 58 41.0**	**-0.1**
VYHS				*e*SN	**Sn**	**19 59 02.3**	**-0.2**
VYHS	**Vyhne**	**1.60**	**186**	*e*Pn	**Pn**	**19 58 41.0**	**-0.1**
VYHS				*e*Sn	**Sn**	**19 59 02.3**	**-0.2**
DPC	**Dobruska-Polom**	**1.79**	**279**	*e*PG	**Pn**	**19 58 43.3**	**-0.4**
DPC				*e*SG	**Sn**	**19 59 06.6**	**-0.5**
	comp=Z,9.6nm,0.5s						
DPC	**Dobruska-Polom**	**1.79**	**279**	Pg	**Pn**	**19 58 43.3**	**-0.4**
DPC				Sg	**Sn**	**19 59 06.6**	**-0.5**
	9.6nm,0.5s						
VRAC	**Vranov**	**1.79**	**245**	*e*Pn	**Pn**	**19 58 43.7**	**0.0**
VRAC				*e*Sg	**Sb**	**19 59 08.0**	**-0.2**
	7.2nm,0.3s,baz=60						
SMOL	**Smolenice**	**1.91**	**215**	*e*PN	**Pn**	**19 58 45.7**	**+0.4**
SMOL				*e*SN	**Sn**	**19 59 08.8**	**-1.3**
SMOL	**Smolenice**	**1.91**	**215**	*e*Pn	**Pn**	**19 58 45.7**	**+0.4**
SMOL				*e*Sn	**Sn**	**19 59 08.8**	**-1.3**
KSP	**Ksiaz**	**1.93**	**294**	*e*Pg	**Pg**	**19 58 49.5**	**+1.0**
KSP				*e*Sg	**Sg**	**19 59 13.3**	**-0.2**
CRVS	**Cervenica-Dubn**	**1.96**	**126**	*e*PN	**Pb**	**19 58 47.1**	**-0.9**
CRVS				*e*SN	**Sb**	**19 59 13.0**	**0.0**
CRVS	**Cervenica-Dubn**	**1.96**	**126**	*e*Pn	**Pb**	**19 58 47.1**	**-0.9**
UPC	**Upice**	**2.01**	**283**	*e*PG	**Pn**	**19 58 46.6**	**-0.1**
UPC				*e*SG	**Sb**	**19 59 14.8**	**+0.4**
UPC	**Upice**	**2.01**	**283**	Sg	**Sb**	**19 59 14.8**	**+0.4**
KRUC	**Moravsky**	**2.02**	**240**	*e*Pn	**Pn**	**19 58 47.5**	**+0.6**
	baz=56						
KRUC				*e*Sn	**Sb**	**19 59 14.7**	**-0.2**
	7.9nm,0.3s,baz=56						
PSZ	**Piszkesteto**	**2.24**	**166**	*e*Pn	**Pb**	**19 58 52.4**	**-0.5**
PSZ				*e*Sn	**Sn**	**19 59 17.3**	**-1.0**
KOLS	**Kolonicke sedl**	**2.38**	**118**	*e*	**Pg**	**19 58 57.0**	**-0.2**
KOLS				*e*		19 59 21.1	
PVCC	**Panska Ves**	**2.92**	**280**	*e*SG	**Sg**	**19 59 43.6**	**-1.7**
PVCC	**Panska Ves**	**2.92**	**280**	Sg	**Sg**	**19 59 43.6**	**-1.7**
PRU	**Pruhonice**	**2.92**	**270**	*e*SG	**Sb**	**19 59 42.4**	**+1.6**
	comp=Z,3.5nm,0.4s						
PRU	**Pruhonice**	**2.92**	**270**	Sg	**Sb**	**19 59 42.4**	**+1.6**
	3.5nm,0.4s						
CONA	**Conrad Observa**	**3.03**	**226**	⇓*i* Sn	**Sn**	**19 59 37.3**	**-0.4**
CONA	**Conrad Observa**	**3.03**	**226**	Sn	**Sn**	**19 59 37.3**	**-0.4**
BRG	**Berggiesshubel**	**3.37**	**285**	SG	**Sg**	**19 59 59.2**	**-0.5**
	2.4nm,0.6s						
KHC	**Kasperske Hory**	**3.70**	**257**	*e*PG	**Pg**	**19 59 25.5**	**+3.1**
KHC				*e*SG	**Sg**	**20 00 08.6**	**-1.8**
	comp=Z,3.4nm,0.5s						
KHC	**Kasperske Hory**	**3.70**	**257**	Sg	**Sg**	**20 00 08.6**	**-1.8**
	3.4nm,0.5s						
CLL	**Collm**	**4.05**	**290**	*e*Sg	**Sg**	**20 00 23.0**	**+1.5**

*MOS **25** 19:59:23.5±1.2, 52°.75N×159°.89E, h33km, mb5.1/64, Error ellipse: s-maj=8.1km s-min=3.8km az=95.8*
MOS Felt (II) at Petropavlovsk-Kamchatskiy.
*KRSC **25** 19:59:24.8±0.6, 52°.73N×160°.23E, h26km±25km, ML5.1*
*ISCJB **25** 19:59:25.8±0.4, 52°.73N±0°.02×160°.13E±0°.04, h57km±2km, mb4.7/140, MS3.9/24, Error ellipse: s-maj=5.3km s-min=2.5km az=41.8*
*IDC **25** 19:59:25.5±0.7, 52°.94N×159°.85E, h32km±4km, mb4.3/41, mb1 4.4/43, mb1mx4.4/46, mbtmp4.3/43, ML4.3/2, MS3.8/21, Ms1 3.8/21, ms1mx3.6/37, Error ellipse: s-maj=12.2km s-min=8.4km az=166.0*
*SZGRF **25** 19:59:26.4, 52°.73N×159°.89E, h33km, mb5.0, Off east coast of Kamchatka Peninsula, Russia*
*NEIC **25** 19:59:26.7±0.8, 52°.86N×159°.95E, h44km±7km, mb4.9/63, Error ellipse: s-maj=8.1km s-min=4.8km az=165.0*
NEIC Felt [II] at Petropavlovsk-Kamchatskiy.
*BJI **25** 19:59:26.1, 52°.90N×159°.90E, h62km, mB4.6/7, mb4.5/16, Ms4.3/6, Ms7 4.0/5*
ISC 25 19:59:25.3±0.5, 52°.73N±0°.04×160°.18E±0°.03, h41km±3km, h40km:pP-P, n500, σ1§43/568, mb4.8/140, MS3.9/24, 86C-42D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.38**	**346**	PN	**Pn**	**19 59 34.1**	**-0.5**
SPN	**Mys Shipunski**	**0.38**	**346**	P	**Pn**	19 59 34.1	-0.5
NLC	**Nalytchevo**	**0.67**	**312**	PN	**Pn**	**19 59 38.2**	**-0.1**
NLC	**Nalytchevo**	**0.67**	**312**	*e*P	**Pn**	19 59 38.2	-0.1
UGLR	**Uglovaya**	**0.95**	**301**	P	**Pn**	**19 59 42.6**	**+0.3**
SDLR	**Sedlovina**	**0.96**	**306**	P	**Pn**	**19 59 42.6**	**+0.2**
PET	**Petropavlovsk**	**0.97**	**288**	⇓*i* PN	**Pn**	**19 59 42.8**	**+0.4**
PET				pmax	pmax		
	comp=Z,6μm,1.0s						
PET				pmax	pmax		
	comp=Z,500nm,2.1s						
PET				pmax	pmax		
	comp=Z,4μm,0.3s						
PET	**Petropavlovsk**	**0.97**	**288**	P	**Pn**	**19 59 42.9**	**+0.5**
SMAR	**Somma**	**0.99**	**303**	P	**Pn**	**19 59 43.0**	**+0.1**
SMAR				*i* S	**Sn**	**19 59 55.7**	**-0.1**
INSR	**Institute**	**1.01**	**290**	*e*P	**Pn**	**19 59 43.4**	**+0.4**
INSR				*i* S	**Sn**	**19 59 56.9**	**+0.9**
AVH	**Avacha**	**1.02**	**302**	P	**Pn**	**19 59 43.9**	**+0.7**
KRER	**Koryakskii**	**1.04**	**304**	*e*P	**Pn**	**19 59 44.1**	**+0.5**
KRER				*i* S	**Sn**	**19 59 57.8**	**+0.8**
RUS	**Russkaya**	**1.06**	**254**	PN	**Pn**	**19 59 44.2**	**+0.6**
RUS	**Russkaya**	**1.06**	**254**	P	**Pn**	**19 59 44.2**	**+0.6**
RUS				*i* S	**Sn**	**19 59 58.5**	**+1.3**
KOK	**Koryaka**	**1.09**	**302**	P	**Pn**	**19 59 44.7**	**+0.5**
KOK				*i* S	**Sn**	**20 00 00.0**	**+1.9**
MTVR	**Mutnovka**	**1.24**	**259**	*e*P	**Pn**	**19 59 47.3**	**+1.0**
GRL	**Gorelyy**	**1.29**	**263**	P	**Pn**	**19 59 48.5**	**+1.5**
GRL				*i* S	**Sn**	**20 00 05.5**	**+2.3**
KII	**Karymskiy**	**1.38**	**342**	*e*P	**Pn**	**19 59 48.3**	**+0.2**
ASAK	**Asacha**	**1.43**	**257**	P	**Pn**	**19 59 50.4**	**+1.5**
ASAK				*i* S	**Sn**	**20 00 08.6**	**+2.1**
PEA0B	**Petropavlovsk-**	**1.55**	**285**	*e*P	**Pn**	**19 59 51.2**	**+0.8**
PETK	**Petropavlovsk-**	**1.55**	**285**	PN	**Pn**	**19 59 51.7**	**+1.3**
PETK						20 00 10.7	
PETK	**Petropavlovsk-**	**1.55**	**285**	Pn	**Pn**	**19 59 51.6**	**+1.3**
PETK				Sn	**Sn**	**20 00 10.7**	**+1.4**
PETK	**Petropavlovsk-**	**1.55**	**285**	Pn	**Pn**	**19 59 51.6**	**+1.3**
	comp=Z,592nm,0.3s,baz=98,slow=21,SNR=3219						
PETK				Sn	**Sn**	**20 00 10.7**	**+1.4**
	comp=Z,1μm,0.3s,baz=94,sl

FX1 LR LR 20 04 17.4
comp=E,290nm,21.5s,baz=298,slow=36
TILK Tilichiki 8.40 21 P **Pn** **20 01 27.0 +2.7**
SEY Seymchan 11.03 341 *i* PN **Pn** **20 02 02.6 +2.3**
YSS Yuzh-Sakhalins 12.63 250 *e*PN **P** **20 02 32.0 -0.8**
YSS MLR MLR
comp=Z,500nm,15.0s
ASAJ Asahikawa 14.48 240 *e*P **Pn** **20 02 48.9 +1.6**
comp=Z,11nm,0.8s
ASAJ Asahikawa 14.48 240 Pn **Pn** **20 02 47.7 +0.4**
comp=Z,1.7nm,0.3s,baz=55,slow=9.9,SNR=14
ASAJ LR LR 20 08 43.8
comp=Z,154nm,18.9s,baz=60,slow=39
BILL Bilibino 15.64 9⇑ *i*P **Pn** **20 03 02.8 +0.4**
BILL pmax pmax
comp=Z,52nm,1.0s
ERM Erimo 15.70 234⇓ *e*P **Pn** **20 03 00.4 -3.0**
ERM Erimo 15.70 234 *e*P **Pn** **20 02 59.5 -3.9**
HABR Khabarovsk 16.48 265 *e*P **Pn** **20 03 10.1 -3.1**
HABR *e*S **Sn** **20 06 10.2 -4.7**
HABR MLR MLR
comp=Z,333nm,17.0s
KLR Kul'dur 18.18 270 *e*P **P** **20 03 32.8 -1.5**
GAMB Gambell 18.29 42 *e*P **Pn** **20 03 36.2 +0.6**
comp=Z,5.8nm,0.8s
YAK Yakutsk 18.72 312 *e*P **P** **20 03 37.8 -2.2**
YAK *e*S **Sn** **20 07 08.4 -0.4**
YAK pmax pmax
comp=Z,51nm,1.0s
YAK pmax pmax
comp=E,22nm,1.1s
YAK pmax pmax
comp=N,14nm,1.2s
YAK smax smax
comp=N,39nm,2.2s
YAK smax smax
comp=E,54nm,1.8s
YAK MLR MLR
comp=N,222nm,16.0s
YAK MLR MLR
comp=E,284nm,17.0s
YAK MLR MLR
comp=Z,374nm,17.0s
USRK Ussuriysk Arra 20.43 257 P **P** **20 03 59.0 +0.1**
comp=Z,5.2nm,0.9s,baz=52,slow=9.9,SNR=7.7
USRK LR LR 20 13 01.6
comp=Z,255nm,18.2s,baz=47,slow=40
TNA Tin City 20.50 39 *e*P Pn 20 04 01.1 -0.7
comp=Z,43nm,0.8s
CLNS Chul'man 20.61 296 *e*P **P** **20 03 59.6 -1.1**
CLNS *e* 20 04 10.3
CLNS *e*PPP PPP 20 04 23.2
CLNS *e* 20 07 51.7
CLNS pmax pmax
comp=Z,5.0nm,0.4s
CLNS pmax pmax
comp=E,2.0nm,0.7s
CLNS pmax pmax
comp=N,4.0nm,0.7s
CLNS smax smax
comp=E,93nm,16.0s
CLNS smax smax
comp=N,128nm,14.6s
CLNS MLR MLR
comp=Z,155nm,12.0s
CLNS MLR MLR
comp=E,154nm,14.0s
CLNS MLR MLR
comp=N,136nm,17.0s
VLA Vladivostok 21.13 254⇑ *e*P **P** **20 04 03.6 -2.8**
VLA *e* 20 04 24.5
VLA S **S** **20 07 56.1 -2.9**
VLA pmax pmax
comp=Z,42nm,1.8s
MAJO Matsushiro 22.36 232 *e*P **P** **20 04 20.3 +0.6**
MAJO pmax pmax
comp=Z,43nm,1.0s
MAJO Matsushiro 22.36 232 *e*P **P** **20 04 20.3 +0.6**
comp=Z,43nm,1.0s
MAT Matsushiro 22.36 232 P **P** **20 04 20.3 +0.6**
MAT S Sn 20 08 31.2 -5.6
MJAR Matsushiro Arr 22.36 232 P **P** **20 04 21.3 +1.6**
MJAR Matsushiro Arr 22.36 232 P **P** **20 04 21.3 +1.6**
comp=Z,15nm,0.9s,baz=20,slow=9.7,SNR=33
MJAR LR LR 20 14 01.4
comp=Z,181nm,21.2s,baz=45,slow=39
TIXI Tiksi 23.43 336⇓ *i*P **P** **20 04 28.4 -1.9**
TIXI pmax pmax
comp=Z,18nm,1.1s
JHJ Hachijo jima 2 24.49 225 LR LR 20 12 55.3
comp=Z,105nm,21.5s,baz=79,slow=33
HIA Hailar 25.44 279 *e*P **P** **20 04 46.0 -3.1**
comp=Z,17nm,0.7s
KSRS Korea Array 27.13 249 P **P** **20 05 05.5 +1.2**
comp=Z,2.7nm,0.8s,baz=47,slow=8.9,SNR=16
KSAR Wonju Array Be 27.16 249 P **P** **20 05 05.5 +0.9**
SML Sawmill 28.55 51 *e*P **P** **20 05 16.8 0.0**
SML Sawmill 28.55 51 *e*P **P** **20 05 16.8 0.0**
JNU Nakatsue 28.74 239 P **P** **20 05 20.4 +1.6**
JNU Nakatsue 28.74 239 P **P** **20 05 20.4 +1.6**
comp=Z,4.0nm,0.7s,baz=31,slow=15,SNR=2.8
JNU LR LR 20 17 07.1
comp=Z,199nm,18.1s,baz=232,slow=37
ILAR Eielson Array 29.04 45 P **P** **20 05 21.9 +0.8**
ILAR Eielson Array 29.04 45 P **P** **20 05 21.9 +0.8**
comp=Z,1.6nm,0.8s,baz=260,slow=7.4,SNR=14
ILAR LR LR 20 17 02.2
comp=Z,62nm,18.6s,baz=30,slow=36
TLY Talaya 33.90 291 *e*P **P** **20 06 03.1 -0.9**
TLY *e* 20 07 15.7
TLY *e*S S 20 11 14.8 -11
TLY pmax pmax
comp=Z,5.0nm,1.0s
TLY MLR MLR
comp=Z,93nm,15.0s
SONM Songino Array 34.03 284 P **P** **20 06 04.4 -0.9**
SONM PcP **PcP** **20 08 43.1 +1.0**
SONM Songino Array 34.03 284 P **P** **20 06 04.4 -0.9**
comp=Z,2.8nm,0.8s,baz=77,slow=7.2,SNR=4.4
SONM PcP **PcP** **20 08 43.1 +1.0**
comp=Z,1.9nm,0.7s,baz=31,slow=3.8,SNR=5.8
SONM LR LR 20 21 26.3
comp=Z,348nm,18.3s,baz=80,slow=39
INK Inuvik 34.13 37 P **P** **20 06 07.0 +1.3**
INK PcP **PcP** **20 08 42.5 +0.7**
INK Inuvik 34.13 37 P **P** **20 06 07.0 +1.3**
comp=Z,3.3nm,0.7s,baz=294,slow=6.1,SNR=15
INK PcP **PcP** **20 08 42.5 +0.7**
comp=Z,0.8nm,0.4s,baz=333,slow=2.3,SNR=3.7
SKAG Skagway 35.29 53 *e*P **P** **20 06 16.1 +0.3**
comp=Z,4.0nm,0.7s
DLBC Dease Lake 38.22 53 *e*P **P** **20 06 43.4 +2.5**
GUMO Guam 40.91 203 LR LR 20 25 34.1
comp=Z,81nm,18.7s,baz=274,slow=38
GTA Gaotai 42.70 277 *e*P **P** **20 07 18.5 +0.4**
GTA pmax pmax
comp=Z,5.0nm,1.2s
ZAA0 Zalesovo Array 43.02 303 *e*P **P** **20 07 18.1 -2.2**
ZALV Zalesovo Beam 43.02 303 *i* P **P** **20 07 18.3 -2.0**
ZALV pmax pmax
comp=Z,3.0nm,0.7s
ZALV Zalesovo Beam 43.02 303 P **P** **20 07 17.9 -2.4**
ZALV ScP **ScP** **20 12 59.3 +1.9**
ZALV Zalesovo Beam 43.02 303 P **P** **20 07 17.9 -2.4**
comp=Z,2.5nm,0.7s,baz=60,slow=7.0,SNR=15
ZALV ScP **ScP** **20 12 59.3 +1.9**
comp=Z,0.3nm,0.3s,baz=26,slow=5.1,SNR=3.7
NVS Novosibirsk 43.36 305 *e*P **P** **20 07 21.4 -1.7**
NVS pmax pmax
comp=N,4.0nm,0.9s
NVS pmax pmax
comp=E,10.0nm,0.9s
NVS pmax pmax
comp=Z,16nm,0.9s
YKA Yellowknife Ar 43.40 42 P **P** **20 07 24.4 +1.2**
YKA pP **pP** **20 07 34.2 -0.6**
YKA Yellowknife Ar 43.40 42 P **P** **20 07 24.4 +1.2**
comp=Z,2.7nm,0.8s,baz=299,slow=8.0,SNR=22
YKA pP **pP** **20 07 34.2 -0.6**
comp=Z,2.3nm,0.7s,baz=300,slow=8.0,SNR=13
GYA Guiyang 47.47 258 *e*P **P** **20 07 53.3 -2.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s
KURK Kurchatov 47.97 302 P **P** **20 07 58.4 -1.1**
KURK pmax pmax
comp=Z,9.0nm,0.6s
KURK pmax pmax
comp=N,1.0nm,0.8s
KURK Kurchatov 47.97 302 *e*P **P** **20 07 57.2 -2.3**
comp=N,15nm,0.7s
KURK ScP **ScP** **20 13 19.9 +1.9**
KURBB Kurchatov Arra 48.07 302 P **P** **20 07 58.4 -1.9**
comp=N,9.2nm,0.6s,baz=57,slow=7.9,SNR=56
KURBB ScP **ScP** **20 13 19.9 +1.5**
comp=N,0.7nm,0.8s,baz=56,slow=3.2,SNR=5.0
MK31 Makanchi Array 48.36 296 *i* P **P** **20 08 00.3 -2.4**
MK31 pmax pmax
comp=Z,3.0nm,0.4s
MK31 Makanchi Array 48.36 296 *e*P **P** **20 08 00.5 -2.1**
MKAR Makanchi Array 48.36 296 *i* P **P** **20 08 00.6 -2.1**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MKAR Makanchi Array 48.36 296 P **P** **20 08 00.6 -2.1**
MKAR Makanchi Array 48.36 296 P **P** **20 08 00.6 -2.1**
comp=Z,3.4nm,0.4s,baz=55,slow=6.6,SNR=109
MKAR LR LR 20 29 37.4
comp=Z,82nm,19.0s,baz=37,slow=38
BVAR Borovoye Array 50.66 309 P **P** **20 08 17.8 -2.2**
BVAR 20 09 37.1
BVAR Borovoye Array 50.66 309 P **P** **20 08 17.8 -2.2**
BVAR PcP **PcP** **20 09 37.1 +0.2**
BVAR ScP **ScP** **20 13 31.4 +2.0**
BVAR Borovoye Array 50.66 309 P **P** **20 08 17.8 -2.2**
comp=Z,4.4nm,0.5s,baz=61,slow=7.2,SNR=26
BVAR PcP **PcP** **20 09 37.1 +0.2**
comp=Z,0.8nm,0.4s,baz=65,slow=3.8,SNR=2.5
BVAR ScP **ScP** **20 13 31.4 +2.0**
comp=Z,0.2nm,0.5s,baz=72,slow=4.8,SNR=4.2
BRVK Borovoye 50.69 309 *ce*P **P** **20 08 18.2 -2.0**
BRVK pmax pmax
comp=Z,4.0nm,0.6s
BRVK Borovoye 50.69 309 *e*P **P** **20 08 17.8 -2.4**
comp=Z,5.2nm,0.6s
DAG Danmarks Havn 50.77 360 *i* P **P** **20 08 20.6 +0.1**
DAG pmax pmax
comp=Z,15nm,0.9s
DAG Danmarks Havn 50.77 360 *i* P **P** **20 08 20.6 +0.1**
comp=Z,18nm,0.9s
YBH Yreka Blue Hor 51.10 70 P **P** **20 08 26.0 +2.4**
YBH Yreka Blue Hor 51.10 70 P **P** **20 08 26.0 +2.4**
comp=Z,3.8nm,1.0s,baz=259,slow=1.7,SNR=4.1
BSMT Bassoo Peak 51.52 59 *e*P **P** **20 08 28.6 +1.8**
comp=Z,4.6nm,0.8s
JTMT Jette 51.85 59 *e*P **P** **20 08 28.7 -0.5**
comp=Z,2.6nm,1.1s
SVE Sverdlovsk 52.58 317 *e*P **P** **20 08 33.5 -0.8**
SVE pmax pmax
comp=Z,5.0nm,0.6s
KEV Kevo 53.18 342 *e*P **P** **20 08 37.5 -1.0**
KEV pmax pmax
comp=Z,4.0nm,0.7s
KEV Kevo 53.18 342 *e*p **P** **20 08 37.5 -1.0**
comp=Z,3.5nm,0.7s
ARCES ARCESS Array B 53.65 342 P **P** **20 08 40.5 -1.5**
ARCES ARCESS Array B 53.65 342 P **P** **20 08 40.5 -1.5**
comp=Z,4.4nm,0.8s,baz=43,slow=8.9,SNR=18
ARCES LR LR 20 33 59.8
comp=Z,99nm,19.3s,baz=37,slow=39
BEKR Beckworth 53.67 70 *e*P **P** **20 08 43.9 +1.1**
comp=Z,1.5nm,0.8s
ARU Arti 53.70 318 *d i*P **P** **20 08 40.9 -1.6**
ARU *PP **pP** **20 08 55.8 +1.5**
ARU S **S** **20 16 10.6 -2.6**
ARU pmax pmax
comp=Z,10.0nm,0.8s
SUMG Summit 54.31 7 *i* P **P** **20 08 47.9 +0.6**
SUMG pmax pmax
comp=Z,25nm,0.9s
SUMG Summit 54.31 7 *e*P **P** **20 08 47.5 +0.2**
comp=Z,29nm,0.9s
SUMG Summit 54.31 7 *i* P **P** **20 08 47.9 +0.6**
comp=Z,25nm,0.9s
LSA Lhasa 54.50 274 *e*P **P** **20 08 49.8 +0.5**
LSA pmax pmax
comp=Z,3.0nm,0.6s
LSA Lhasa 54.50 274 *e*P **P** **20 08 49.8 +0.5**
comp=Z,2.6nm,0.6s
AAK Ala-Archa 55.29 296⇓ *i*P **P** **20 08 53.3 -1.2**
AAK pmax pmax
comp=Z,18nm,0.9s
AAK Ala-Archa 55.29 296 *e*P **P** **20 08 53.0 -1.5**
comp=Z,9.7nm,0.9s
AAK Ala-Archa 55.29 296 P **P** **20 08 53.2 -1.3**
comp=Z,9.8nm,0.9s,baz=60,slow=6.8,SNR=13
EKS2 Erkin-Say 55.66 297 *e*P **P** **20 08 55.4 -1.7**
EKS2 pmax pmax
comp=Z,10.0nm,0.8s
EKS2 Erkin-Say 55.66 297 *e*P **P** **20 08 55.4 -1.7**
comp=Z,10nm,0.8s
NVAR Mina Array Bea 55.82 70 P **P** **20 09 01.1 +2.7**
NVAR Mina Array Bea 55.82 70 P **P** **20 09 01.1 +2.7**
comp=Z,3.0nm,0.8s,baz=295,slow=7.1,SNR=16
ELK Elko 55.96 66 P **P** **20 09 01.8 +2.3**
ELK Elko 55.96 66 P **P** **20 09 01.8 +2.3**
comp=Z,2.5nm,0.8s,baz=287,slow=6.9,SNR=8.2
IMW Indian Meadow 56.15 60 *e*P **P** **20 09 02.7 +1.9**
comp=Z,3.0nm,0.9s
RRI2 Red Ridge 56.32 61 *e*P **P** **20 08 59.5 -2.5**
comp=Z,16nm,1.2s
TPAW Teton Pass 56.42 61 *e*P **P** **20 09 01.5 -1.2**
comp=Z,8.9nm,1.2s
LOHW Long Hollow 56.52 61 *e*P **P** **20 09 02.4 -1.0**
comp=Z,18nm,1.5s
KSH Kashi 56.59 293 *e*P **P** **20 09 06.3 +2.5**
KSH *e*pP **pP** **20 09 18.8 +3.1**
KSH *e*PcP **PcP** **20 10 02.8 +2.9**
KSH *e*PP **PP** **20 11 13.0 +3.3**
KSH *e*ScP **ScP** **20 13 56.5 +0.8**
KSH *e*PcS **PcS** **20 14 01.8 +1.1**
KSH *e*S **S** **20 16 52.3 -0.4**
KSH *e*ScS **ScS** **20 18 47.0 -2.6**
KSH *e*SS **SS** **20 20 39.8 -0.2**
KSH pmax pmax
comp=Z,5.0nm,0.7s
KSH pmax pmax
comp=Z,37nm,4.2s
KSH LR LR
comp=N,140nm,5.1s
KSH LR LR
comp=E,120nm,4.3s
KSH LR LR
comp=Z,93nm,3.7s
KK31 Karatay Array 57.11 299 *ce*P **P** **20 09 05.2 -2.1**
KK31 pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 57.11 299 *e*P **P** **20 09 05.4 -1.9**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 57.11 299 *e*P **P** **20 09 05.4 -1.9**
comp=Z,5.2nm,0.8s
KLMR Klimovskoe 57.29 330 *e*P P 20 09 02.2 -6.0
KLMR pmax pmax
comp=Z,11nm,1.1s
PDAR Pinedale Array 57.66 61 P **P** **20 09 13.6 +2.2**
PDAR Pinedale Array 57.66 61 P **P** **20 09 13.6 +2.2**
comp=Z,2.3nm,1.0s,baz=240,slow=1.2,SNR=7.1
JOF Joensuu 57.92 335 *e*P **P** **20 09 10.6 -2.0**
JOF pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 57.92 335 *ep* **P** **20 09 10.6 -2.0**
comp=Z,3.3nm,0.6s
AB31 Akbulak array 58.07 311 *ce*P **P** **20 09 11.9 -2.0**
AB31 pmax pmax
comp=Z,1.0nm,0.4s
ABKAR Akbulak array 58.07 311 *e*P **P** **20 09 11.3 -2.6**
comp=Z,1.4nm,0.5s
AKTO Aktyubinsk 58.11 313 P **P** **20 09 12.1 -2.1**
AKTO Aktyubinsk 58.11 313 P **P** **20 09 12.1 -2.1**
AKTO Aktyubinsk 58.11 313 P **P** **20 09 12.1 -2.1**
comp=Z,2.0nm,0.4s,baz=37,slow=3.6,SNR=4.9
CMAR Chiang Mai Arr 58.16 258 P **P** **20 09 16.0 +1.1**
CMAR Chiang Mai Arr 58.16 258 P **P** **20 09 16.0 +1.1**
comp=Z,2.0nm,0.8s,baz=23,slow=6.5,SNR=11
CMAR LR LR 20 37 10.1
comp=Z,85nm,19.3s,baz=289,slow=39
TAPN Taplejung 58.28 274 *e*P **P** **20 09 15.3 -0.8**
comp=Z,24nm,0.8s
ODAN Odare 58.84 274 *e*P **P** **20 09 19.6 -0.3**
GUN Gumba 58.98 276 *e*P **P** **20 09 21.0 0.0**
comp=Z,9.6nm,0.4s
RAMN Ramite 59.25 275 *e*P **P** **20 09 21.6 -1.1**
comp=Z,28nm,0.5s
KKN Kakani 59.43 277 *e*P **P** **20 09 23.2 -0.8**
comp=Z,13nm,0.5s
PKI Pulchoki 59.52 276 *e*P **P** **20 09 23.7 -1.0**
comp=Z,8.3nm,0.5s
PKIN Phulchoki 59.52 276 *e*P **P** **20 09 23.7 -0.9**
comp=Z,6.2nm,0.4s
RSSD Black Hills 59.56 56 *e*P **P** **20 09 26.4 +1.7**
RSSD pmax pmax
comp=Z,6.0nm,0.8s
RSSD Black Hills 59.56 56 *e*P **P** **20 09 26.4 +1.7**
comp=Z,5.7nm,0.8s
DMN Daman 59.67 277 *e*P **P** **20 09 25.2 -0.5**
comp=Z,18nm,0.8s
KAF Kangasniemi 59.84 337 *e*P **P** **20 09 24.1 -1.9**
KAF pmax pmax
comp=Z,4.0nm,0.5s
KAF Kangasniemi 59.84 337 *ep* **P** **20 09 24.1 -1.9**
comp=Z,3.6nm,0.5s
DANN Dangsing 59.94 278 *e*P **P** **20 09 26.5 -1.1**
comp=Z,16nm,0.8s
KOLN Koldanda 60.46 278 *e*P **P** **20 09 29.9 -1.1**
FINES FINESS Array B 60.47 337 P **P** **20 09 29.7 -0.6**
FINES FINESS Array B 60.47 337 P **P** **20 09 29.7 -0.6**
comp=Z,6.1nm,0.8s,baz=28,slow=9.0,SNR=19
FINES LR LR 20 38 00.0
comp=Z,127nm,20.2s,baz=343,slow=38
PYUN Piuthan 60.59 279 *e*P **P** **20 09 30.8 -1.1**
comp=Z,34nm,1.0s
ISCO Idaho Springs 61.85 61 *e*P **P** **20 09 41.2 +0.8**
ISCO pmax pmax
comp=Z,2.0nm,1.0s
ISCO Idaho Springs 61.85 61 *e*P **P** **20 09 41.2 +0.8**
comp=Z,2.2nm,1.0s
HNR Honiara 61.91 180 LR LR 20 31 32.3
comp=Z,108nm,20.4s,baz=110,slow=31
OBN Obninsk 62.85 327 *e*P **P** **20 09 47.4 +1.0**
OBN *e*S **sS** **20 18 36.3 +3.9**
OBN pmax pmax
comp=Z,7.0nm,1.1s
OBN MLR MLR
comp=Z,100nm,19.0s
VSU Vasula 62.90 335 *i* P **P** **20 09 45.0 -1.7**
VSU pmax pmax
comp=Z,15nm,0.9s
NB2 NORSAR Subarra 63.91 344 P **P** **20 09 52.3 -1.1**
comp=Z,1.1nm,0.8s,baz=24,slow=6.5
NOA NORSAR Array B 63.91 344 P **P** **20 09 52.9 -0.5**
NOA NORSAR Array B 63.91 344 P **P** **20 09 52.9 -0.5**
comp=Z,7.5nm,0.7s,baz=21,slow=6.6,SNR=37
NOA LR LR 20 43 44.2
comp=Z,92nm,18.2s,baz=25,slow=42
HFS Hagfors 64.31 342 P **P** **20 09 55.3 -0.7**
HFS Hagfors 64.31 342 P **P** **20 09 55.3 -0.7**
comp=Z,7.3nm,0.5s,baz=44,slow=4.5,SNR=76
COP Copenhagen 68.72 341 *i* P **P** **20 10 25.1 +1.0**
COP pmax pmax
comp=Z,9.0nm,0.8s
COP Copenhagen 68.72 341 *i* P **P** **20 10 25.1 +1.0**
comp=Z,9.4nm,0.8s
BSD Bornholm Skovb 68.74 339 *e*P **P** **20 10 25.2 +0.9**
BSD pmax pmax
comp=Z,7.0nm,0.8s
BSD Bornholm Skovb 68.74 339 *i* P **P** **20 10 25.2 +0.9**
comp=Z,7.3nm,0.8s
AKASG Malin Array Be 68.95 329 *ce*P **P** **20 10 25.2 -0.5**
AKASG pmax pmax
comp=Z,7.0nm,0.5s
AKASG Malin Array Be 68.95 329 P **P** **20 10 25.1 -0.5**
AKASG Malin Array Be 68.95 329 P **P** **20 10 25.1 -0.5**
comp=Z,7.4nm,0.5s,baz=29,slow=6.0,SNR=36
AKASG LR LR 20 43 45.8
comp=Z,170nm,20.2s,baz=15,slow=39
KIEV Kiev 68.96 329 *e*P **P** **20 10 25.1 -0.7**
KIEV pmax pmax
comp=Z,15nm,0.8s
KIEV Kiev 68.96 329 *e*P **P** **20 10 25.1 -0.7**
comp=Z,15nm,0.8s
AK01 Malin Array Si 68.96 329 *e*P **P** **20 10 24.6 -1.2**
AK02 Malin Array Si 69.00 329 *e*P **P** **20 10 25.2 -0.8**
KIV Kislovodsk 69.74 317 *e*P **P** **20 10 29.3 -1.5**
KIV pmax pmax
comp=Z,5.0nm,0.9s
KIV MLR MLR
comp=Z,138nm,18.0s
KBZ Khabaz 69.83 317 P **P** **20 10 30.6 -0.6**
KBZ Khabaz 69.83 317 P **P** **20 10 30.6 -0.6**
KBZ Khabaz 69.83 317 P **P** **20 10 30.6 -0.6**
comp=Z,6.1nm,0.9s,baz=50,slow=1.0,SNR=14
TXAR Lajitas Array 70.73 67 P **P** **20 10 38.8 +1.7**
TXAR Lajitas Array 70.73 67 P **P** **20 10 38.8 +1.7**
comp=Z,1.3nm,0.7s,baz=292,slow=3.9,SNR=12
LVV L'vov 71.29 332 *e*P **P** **20 10 38.8 -1.3**
EKA Eskdalemuir Ar 71.42 350 P **P** **20 10 41.0 +0.3**
EKA Eskdalemuir Ar 71.42 350 P **P** **20 10 41.0 +0.3**
comp=Z,6.1nm,0.7s,baz=16,slow=5.2,SNR=36
ESK Eskdalemuir 71.44 350 *i* P **P** **20 10 41.7 +0.8**
KWP Kalwaria Pacla 71.84 332⇑ P **P** **20 10 44.2 +0.8**
KWP Kalwaria Pacla 71.84 332 *e*P **P** **20 10 43.8 +0.5**
comp=Z,56nm,0.9s
KWP Kalwaria Pacla 71.84 332⇑ *i*P **P** **20 10 44.2 +0.8**
KWP Kalwaria Pacla 71.84 332 *e*P **P** **20 10 44.2 +0.8**
OJC Ojcow 72.09 335 *e*P **P** **20 10 44.9 0.0**
KIS Kishinev 72.32 327 *e*P **P** **20 10 45.0 -1.3**
KIS LRM MLR 20 46 20.0
comp=Z,300nm,16.0s
KSP Ksiaz 72.40 337 *e*P **P** **20 10 46.2 -0.5**
KSP Ksiaz 72.40 337 *e*P **P** **20 10 46.8 +0.1**
STHS Stebnicka Huta 72.44 333 *e*P **P** **20 10 48.2 +1.2**
STHS pmax pmax
comp=Z,15nm,0.9s
STHS Stebnicka Huta 72.44 333 *e*P **P** **20 10 48.2 +1.2**
KOLS Kolonicke sedl 72.59 332 *e*P **P** **20 10 48.0 +0.1**
KOLS pmax pmax
comp=Z,10.0nm,0.9s
KOLS Kolonicke sedl 72.59 332 *e*P **P** **20 10 48.0 +0.1**
NIE Niedzica 72.69 334 *e*P **P** **20 10 49.9 +1.4**
CLL Collm 72.71 339⇑ *i*P **P** **20 10 48.3 -0.2**
CLL pmax pmax
comp=Z,18nm,1.0s
CLL Collm 72.71 339⇑ *i*P **P** **20 10 48.3 -0.2**
comp=Z,18nm,1.0s
CLL *e*(pP) **pP** **20 11 03.0 +2.2**
UPC Upice 72.78 337 *e*P **P** **20 10 49.6 +0.6**
UPC Upice 72.78 337⇑ *e*P **P** **20 10 49.6 +0.6**
CRVS Cervenica-Dubn 72.85 333 *e*P **P** **20 10 48.0 -1.4**
CRVS pmax pmax
comp=Z,5.0nm,0.9s
CRVS Cervenica-Dubn 72.85 333 *e*P **P** **20 10 48.0 -1.4**
DPC Dobruska-Polom 72.85 337 *e*P **P** **20 10 50.5 +1.1**
DPC *e* 20 11 00.5
DPC Dobruska-Polom 72.85 337 *e*P **P** **20 10 50.5 +1.1**
DPC *e*pP **pP** **20 11 00.5 -1.2**
UZH Uzhgorod 72.86 332 *e*P **P** **20 10 50.3 +0.9**
OKC Ostrava-Krasne 72.87 335⇑ *i*P **P** **20 10 50.0 +0.5**
OKC *e* 20 11 05.1
OKC MLR MLR
comp=Z,200nm,18.7s
OKC Ostrava-Krasne 72.87 335⇑ *i*P **P** **20 10 50.0 +0.5**
OKC *e*pP **PcP** **20 11 05.1 -1.3**
OKC AMS AMS 20 46 30.0
comp=Z,200nm,18.7s
BRG Berggiesshubel 72.91 338 *e*P **P** **20 10 49.8 +0.1**
comp=Z,9.3nm,1.2s
BRG Berggiesshubel 72.91 338 *e*P **P** **20 10 49.8 +0.1**
BRG pmax pmax
comp=Z,9.0nm,1.2s
BURAR Bucovina Array 72.91 330⇓ *i*P **P** **20 10 50.5 +0.6**
LEOM Leova 72.97 327⇓ P **P** **20 10 50.0 -0.1**
LEOM Leova 72.97 327⇓ *i*P **P** **20 10 50.0 -0.1**
MORC Moravsky Berou 73.08 336⇓ P **P** **20 10 51.8 +1.0**
MORC Moravsky Berou 73.08 336 *e*P **P** **20 10 50.6 -0.2**
comp=Z,14nm,0.9s
MORC Moravsky Berou 73.08 336⇓ *i*P **P** **20 10 51.8 +1.0**
PVCC Panska Ves 73.09 338 *e*P **P** **20 10 51.5 +0.7**
PVCC Panska Ves 73.09 338⇑ *e*P **P** **20 10 51.5 +0.7**
TRPA Tarpa 73.24 332⇓ *i*P **P** **20 10 52.7 +1.0**
TRPA Tarpa 73.24 332⇓ *e*P **P** **20 10 52.5 +0.8**
TESR Tescani 73.45 329⇓ *i*P **P** **20 10 53.0 0.0**
CTA Charters Tower 73.52 194 LR LR 20 36 17.4
comp=Z,40nm,21.7s,baz=135,slow=30
PRU Pruhonice 73.60 338⇑ *i*P **P** **20 10 54.3 +0.5**
PRU *e* 20 11 04.5
PRU Pruhonice 73.60 338⇑ *i*P **P** **20 10 54.3 +0.5**
PRU *ex* x 20 10 58.5

PRU epP pP 20 11 04.5 -1.6
VRAC Vranov 73.75 336 P P 20 10 54.9 +0.2
VRAC Vranov 73.75 336⇓*iP* P 20 10 56.0 +1.3
VRAC Vranov 73.75 336 P P 20 10 54.9 +0.2
comp=Z,11nm,0.8s,baz=27,slow=7.1,SNR=12
NKC Novy Kostel 73.84 339 *eP* P 20 10 55.9 +0.6
NKC *e* 20 11 05.5
NKC Novy Kostel 73.84 339⇑*eP* P 20 10 55.9 +0.6
NKC epP pP 20 11 05.5 -2.0
TLCR 73.92 326 ⇓P P 20 10 55.6 -0.1
TLCR 73.92 326⇓*iP* P 20 10 55.6 -0.1
VYHS Vyhne 73.93 334 *eP* P 20 10 56.6 +0.8
VYHS pmax pmax
comp=Z,5.0nm,1.0s
VYHS Vyhne 73.93 334 *eP* P 20 10 56.6 +0.8
VRI Vrincioaia 74.00 328 ⇑P P 20 10 56.5 +0.2
VRI Vrincioaia 74.00 328⇑*iP* P 20 10 56.5 +0.2
TREC Trest 74.03 337 *eP* P 20 10 56.7 +0.3
TREC *e* 20 11 07.5
TREC *e* 20 11 07.7
TREC Trest 74.03 337⇑*eP* P 20 10 56.7 +0.3
TREC epP pP 20 11 07.7 -0.9
PLOR Plostina 74.04 328 ⇓P P 20 10 56.7 +0.2
PLOR Plostina 74.04 328⇓*iP* P 20 10 56.7 +0.2
CFR Carcaliu 74.15 327 ⇓P P 20 10 57.0 -0.1
CFR Carcaliu 74.15 327⇓*iP* P 20 10 57.0 -0.1
PSZ Piszkesteto 74.17 333 ⇑P P 20 10 58.8 +1.5
PSZ Piszkesteto 74.17 333 *eP* P 20 10 57.7 +0.4
comp=Z,7.9nm,0.8s
PSZ Piszkesteto 74.17 333⇑*iP* P 20 10 58.8 +1.5
PSZ Piszkesteto 74.17 333⇓*eP* P 20 10 58.1 +0.8
CJR Cluj-Napoca 74.21 331⇓*iP* P 20 10 58.7 +1.2
GRER 74.35 328⇑*iP* P 20 10 59.7 +1.4
DRGR 74.40 331 ⇓P P 20 10 59.1 +0.4
DRGR 74.40 331⇓*iP* P 20 10 59.1 +0.4
MLR Muntele Rosu 74.58 328 P P 20 11 00.1 +0.3
MLR Muntele Rosu 74.58 328⇑*iP* P 20 11 00.9 +1.1
MLR Muntele Rosu 74.58 328 P P 20 11 00.1 +0.3
comp=Z,3.6nm,0.7s,baz=70,slow=8.1
GRF Grafenberg Arr 74.62 340 *eP* P 20 11 00.4 +0.6
comp=Z,16nm,0.9s
GRF Grafenberg Arr 74.62 340 *eP* P 20 11 00.4 +0.6
GRF pmax pmax
comp=Z,16nm,0.9s
GRFO Grafenberg 74.62 340 *eP* P 20 11 00.3 +0.5
GRFO pmax pmax
comp=Z,12nm,0.9s
GRFO Grafenberg 74.62 340 *eP* P 20 11 00.3 +0.5
comp=Z,12nm,0.9s
KHC Kasperske Hory 74.63 338⇑*iP* P 20 11 00.6 +0.7
KHC *e* 20 11 10.8
KHC Kasperske Hory 74.63 338 *eP* P 20 11 00.4 +0.6
comp=Z,13nm,1.0s
KHC Kasperske Hory 74.63 338⇑*iP* P 20 11 00.6 +0.7
KHC epP pP 20 11 10.8 -1.3
HARR Harsova 74.65 327 ⇑P P 20 11 00.4 +0.4
HARR Harsova 74.65 327⇑*iP* P 20 11 00.3 +0.3
ZST Bratislava 74.65 335 *eP* P 20 11 00.3 +0.3
ZST pmax pmax
comp=Z,7.0nm,0.9s
ZST Bratislava 74.65 335 *eP* P 20 11 00.3 +0.3
DZM Mont Dzumac 74.68 174 *e*LR LR 20 34 01.2
comp=Z,157nm,26.3s
TIRR Tirgusor 74.69 326 ⇓P P 20 11 00.4 +0.2
TIRR Tirgusor 74.69 326 *eP* P 20 10 58.6 -1.6
comp=Z,14nm,0.9s
TIRR Tirgusor 74.69 326⇓*iP* P 20 11 00.4 +0.2
ISR Istrita 74.72 328 ⇓P P 20 11 02.0 +1.5
ISR Istrita 74.72 328⇓*iP* P 20 11 02.0 +1.5
MEM Membach 74.75 343 P P 20 11 01.0 +0.5
comp=Z,25nm,0.9s
PGOR Pogoanele 74.77 328⇓*iP* P 20 11 01.5 +0.8
GERES GERESS Array B 74.87 338 P P 20 11 01.7 +0.4
GERES GERESS Array B 74.87 338 P P 20 11 01.7 +0.4
comp=Z,4.1nm,0.9s,baz=40,slow=4.4,SNR=27
GERES LR LR 20 45 34.3
comp=Z,128nm,20.7s,baz=201,slow=37
VOIR 74.91 329 ⇓P P 20 11 02.5 +0.8
VOIR 74.91 329⇓*iP* P 20 11 02.5 +0.8
BCLA Clavier 75.05 344 P P 20 11 02.5 +0.3
comp=Z,8.7nm,1.2s
PKSG 75.06 334⇓*eP* P 20 11 03.4 +1.1
ARR Arges 75.11 329⇓*iP* P 20 11 04.6 +1.9
CSKK Cs˙‡kako 75.12 334⇓*eP* P 20 11 04.2 +1.5
TOD Tromm 75.19 341 *eP* P 20 11 03.7 +0.6
TOD Tromm 75.19 341 *eP* P 20 11 03.7 +0.6
CONA Conrad Observa 75.21 336⇑*iP* P 20 11 04.1 +0.8
comp=Z,15nm,1.1s
PKST T˙s 75.28 334⇓*eP* P 20 11 04.4 +0.8
LOT Lotru 75.30 330⇓*iP* P 20 11 03.6 -0.3
RUP Ruppelstein 75.43 342 *eP* P 20 11 04.9 +0.4
RUP Ruppelstein 75.43 342 *eP* P 20 11 04.9 +0.4
GIVF Givet 75.44 344⇑*iP* P 20 11 04.7 +0.2
comp=Z,16nm,0.8s
GIVF Givet 75.44 344⇑*iP* P 20 11 04.7 +0.2
GIVF pmax pmax
comp=Z,16nm,0.8s
GIVF Givet 75.44 344⇑*iP* P 20 11 04.7 +0.2
comp=Z,16nm,0.8s
DOU Dourbes 75.48 344 P P 20 11 05.1 +0.4
BAIF Baives 75.58 344⇑*iP* P 20 11 05.7 +0.4
comp=Z,25nm,0.8s
BAIF Baives 75.58 344⇑*iP* P 20 11 05.7 +0.4
BAIF pmax pmax
comp=Z,25nm,0.8s
BAIF Baives 75.58 344⇑*iP* P 20 11 05.7 +0.4
comp=Z,25nm,0.8s
WLF Walferdange 75.63 343 P P 20 11 06.6 +1.0
WRA Warramunga Arr 75.77 205 P P 20 11 07.6 +1.0
WRA Warramunga Arr 75.77 205 P P 20 11 07.6 +1.0
comp=Z,3.3nm,0.9s,baz=19,slow=6.3,SNR=16
BZS Buzias 75.79 331 ⇓P P 20 11 06.6 0.0
BZS Buzias 75.79 331⇓*iP* P 20 11 06.6 0.0
ARSA Arzberg 75.92 336⇑*iP* P 20 11 08.1 +0.8
comp=Z,11nm,1.0s,SNR=7.2
LANF Langenberg 75.98 342 *eP* P 20 11 08.3 +0.7
LANF Langenberg 75.98 342 *eP* P 20 11 08.3 +0.7
LANF Langenberg 75.98 342 *eP* P 20 11 08.3 +0.7
PKSM Moragy 76.08 334 ⇓P P 20 11 08.3 +0.1
PKSM Moragy 76.08 334⇓*iP* P 20 11 08.3 +0.1
SOKA Soboth 76.58 336⇑*iP* P 20 11 11.7 +0.6
comp=Z,14nm,1.1s
KBA Koelnbreinsper 76.61 337 *i*P P 20 11 12.8 +1.3
comp=Z,38nm,0.9s,SNR=18
FITZ Fitzroy Crossi 76.63 214 P P 20 11 13.0 +1.6
FITZ Fitzroy Crossi 76.63 214 P P 20 11 13.0 +1.6
comp=Z,2.1nm,0.9s,baz=0.0,slow=12,SNR=3.5
CDF Champ du Feu 76.63 342⇑*iP* P 20 11 11.8 +0.4
comp=Z,20nm,0.8s
CDF Champ du Feu 76.63 342⇑*iP* P 20 11 11.8 +0.4
CDF pmax pmax
comp=Z,20nm,0.8s
CDF Champ du Feu 76.63 342⇑*iP* P 20 11 11.8 +0.4
comp=Z,20nm,0.8s
SPAK Spaichingen-Ko 76.63 341 *eP* P 20 11 12.0 +0.6
GROS Grobnik 76.67 336 *eP* P 20 11 12.1 +0.4
PAGF Fort de Pagny 76.78 343⇑*iP* P 20 11 13.0 +0.9
comp=Z,11nm,0.9s
PAGF Fort de Pagny 76.78 343⇑*iP* P 20 11 13.0 +0.9
comp=Z,11nm,0.9s
ECH Echery 76.84 342 *eP* P 20 11 12.7 +0.2
ECH pmax pmax
comp=Z,6.0nm,0.8s
ECH Echery 76.84 342 *eP* P 20 11 12.7 +0.2
comp=Z,6.5nm,0.8s
ECH Echery 76.84 342 *eP* P 20 11 12.8 +0.2
MOTA Moosalm 76.86 339⇑*iP* P 20 11 13.3 +0.4
comp=Z,11nm,1.0s
BR131 Keskin Array S 76.93 320 *eP* P 20 11 12.7 -0.6
comp=Z,5.6nm,0.8s
BRTR Keskin Array B 76.93 320 P P 20 11 13.2 -0.2
BRTR Keskin Array B 76.93 320 P P 20 11 13.2 -0.2
comp=Z,5.9nm,0.7s,baz=45,slow=3.3,SNR=42
MEZF Maizieres J'vi 76.95 343 *eP* P 20 11 13.8 +0.7
comp=Z,14nm,0.6s
MEZF Maizieres J'vi 76.95 343 *eP* P 20 11 13.8 +0.7
comp=Z,14nm,0.6s
FELD Feldberg im Sc 77.00 341 *eP* P 20 11 13.7 +0.1
FELD Feldberg im Sc 77.00 341 *eP* P 20 11 13.7 +0.1
THEF They Montfort 77.05 343 *eP* P 20 11 14.4 +0.7
THEF They Montfort 77.05 343 *eP* P 20 11 14.4 +0.7
THEF They Montfort 77.05 343 *eP* P 20 11 14.4 +0.7
ABTA Abfaltersbach 77.11 338⇑*iP* P 20 11 14.4 +0.2
comp=Z,18nm,1.0s,SNR=5.4
DAVA Damuels 77.18 340⇑*iP* P 20 11 14.4 -0.2
comp=Z,5.7nm,0.7s
HAU Haudompre 77.19 342⇑*iP* P 20 11 14.8 +0.3
comp=Z,17nm,0.9s
HAU *eR*
comp=Z,88nm,20.8s
HAU Haudompre 77.19 342⇑*iP* P 20 11 14.8 +0.3
HAU pmax pmax
comp=Z,17nm,0.9s
HAU Haudompre 77.19 342⇑*iP* P 20 11 14.8 +0.3
comp=Z,17nm,0.9s
MOF Molkenrain 77.19 342 *eP* P 20 11 14.8 +0.2
MOF Molkenrain 77.19 342 *eP* P 20 11 14.8 +0.2
MOF Molkenrain 77.19 342 *eP* P 20 11 14.8 +0.2
SFTF Sexfontaines 77.24 343 *eP* P 20 11 15.2 +0.5
comp=Z,38nm,0.8s
SFTF Sexfontaines 77.24 343 *eP* P 20 11 15.2 +0.5
comp=Z,38nm,0.8s
FETA Feichten 77.25 339⇓*iP* P 20 11 15.9 +0.8
comp=Z,12nm,0.9s,SNR=7.3
HINF Hinteralfeld 77.28 342⇑*iP* P 20 11 15.0 0.0
comp=Z,9.2nm,0.8s
HINF Hinteralfeld 77.28 342⇑*iP* P 20 11 15.0 0.0
HINF pmax pmax
comp=Z,9.0nm,0.8s
HINF Hinteralfeld 77.28 342⇑*iP* P 20 11 15.0 0.0
comp=Z,9.2nm,0.8s
ROBS Robic 77.36 337 *eP* P 20 11 15.1 -0.3
FLN La Foliniere 77.56 347 *eP* P 20 11 16.5 0.0
FLN *eR*
comp=Z,75nm,19.2s
FLN La Foliniere 77.56 347 *eP* P 20 11 16.5 0.0
FLN La Foliniere 77.56 347 *eP* P 20 11 16.5 0.0
BOJS Bojanci 77.62 336 *eP* P 20 11 17.2 +0.3
BOJS *e* 20 11 27.6
DAVOX Davos/Dischmat 77.67 340 P P 20 11 18.1 +0.8
DAVOX Davos/Dischmat 77.67 340 P P 20 11 18.1 +0.8
comp=Z,6.8nm,0.8s,baz=355,slow=5.5,SNR=9.4
LDF La Druitiere 77.67 347 *eP* P 20 11 17.0 -0.1
LDF La Druitiere 77.67 347 *eP* P 20 11 17.0 -0.1
LDF La Druitiere 77.67 347 *eP* P 20 11 17.0 -0.1
GRR Gorron 77.97 347 *eP* P 20 11 19.0 +0.2
comp=Z,35nm,1.1s
GRR Gorron 77.97 347 *eP* P 20 11 19.0 +0.2
GRR pmax pmax
comp=Z,35nm,1.1s
GRR Gorron 77.97 347 *eP* P 20 11 19.0 +0.2
comp=Z,35nm,1.1s
VTS Vitosha 78.05 329 ⇓P P 20 11 19.7 +0.1
VTS Vitosha 78.05 329⇓*iP* P 20 11 19.7 +0.1
TUE Stuetta 78.07 340 *eP* P 20 11 20.5 +0.8
comp=Z,12nm,0.8s
SGMF Saint Gilles 78.32 348⇑*iP* P 20 11 21.1 +0.4
comp=Z,13nm,0.8s
SGMF Saint Gilles 78.32 348⇑*iP* P 20 11 21.1 +0.4
SGMF pmax pmax
comp=Z,13nm,0.8s
SGMF Saint Gilles 78.32 348⇑*iP* P 20 11 21.1 +0.4
comp=Z,13nm,0.8s
ROSF Rostrenen 78.33 349 *eP* P 20 11 21.1 +0.3
ROSF Rostrenen 78.33 349 *eP* P 20 11 21.1 +0.3
ROSF Rostrenen 78.33 349 *eP* P 20 11 21.1 +0.3
LOR Lormes 78.35 344⇑*iP* P 20 11 21.3 +0.4
comp=Z,18nm,0.8s
LOR *eR*
comp=Z,124nm,22.2s
LOR Lormes 78.35 344⇑*iP* P 20 11 21.3 +0.4
comp=Z,18nm,0.8s
CABF La Chapelle 78.58 342⇑*iP* P 20 11 23.1 +0.8
comp=Z,15nm,0.9s
CABF La Chapelle 78.58 342⇑*iP* P 20 11 23.1 +0.8
CABF pmax pmax
comp=Z,15nm,0.9s
CABF La Chapelle 78.58 342⇑*iP* P 20 11 23.1 +0.8
comp=Z,15nm,0.9s
SSF Saint Saulge 78.61 344⇑*iP* P 20 11 22.7 +0.4
comp=Z,12nm,0.8s
SSF Saint Saulge 78.61 344⇑*iP* P 20 11 22.7 +0.4
SSF pmax pmax
comp=Z,12nm,0.8s
SSF Saint Saulge 78.61 344⇑*iP* P 20 11 22.7 +0.4
comp=Z,12nm,0.8s
AVF Avril sur Loir 78.89 344⇑*iP* P 20 11 24.4 +0.5
comp=Z,24nm,0.9s
AVF Avril sur Loir 78.89 344⇑*iP* P 20 11 24.4 +0.5
AVF pmax pmax
comp=Z,24nm,0.9s
AVF Avril sur Loir 78.89 344⇑*iP* P 20 11 24.4 +0.5
comp=Z,24nm,0.9s
SMF Signal de Mont 78.95 344 *eP* P 20 11 24.7 +0.4
comp=Z,16nm,0.9s
SMF Signal de Mont 78.95 344 *eP* P 20 11 24.7 +0.4
SMF pmax pmax
comp=Z,16nm,0.9s
SMF Signal de Mont 78.95 344 *eP* P 20 11 24.7 +0.4
comp=Z,16nm,0.9s
BGF Bois d'Agland 79.20 344 *eP* P 20 11 26.2 +0.6
BGF Bois d'Agland 79.20 344 *eP* P 20 11 26.2 +0.6
BGF Bois d'Agland 79.20 344 *eP* P 20 11 26.2 +0.6
AS31 Alice Springs 79.45 204 *e*P P 20 11 28.6 +1.5
ASAR Alice Springs 79.45 204 P P 20 11 28.7 +1.6
ASAR Alice Springs 79.45 204 P P 20 11 28.7 +1.6
comp=Z,1.7nm,0.6s,baz=16,slow=5.0,SNR=48
LPL La Plagne 79.51 341⇑*iP* P 20 11 28.9 +1.3
comp=Z,24nm,0.8s
LPL La Plagne 79.51 341⇑*iP* P 20 11 28.9 +1.3
LPL pmax pmax
comp=Z,24nm,0.8s
LPL La Plagne 79.51 341⇑*iP* P 20 11 28.9 +1.3
comp=Z,24nm,0.8s
LPG La Plagne 79.53 341⇑*iP* P 20 11 29.2 +1.4
comp=Z,38nm,1.0s
LPG La Plagne 79.53 341⇑*iP* P 20 11 29.2 +1.4
LPG pmax pmax
comp=Z,38nm,1.0s
LPG La Plagne 79.53 341⇑*iP* P 20 11 29.2 +1.4
comp=Z,38nm,1.0s
TCF Toulx Ste Croi 79.57 345⇑*iP* P 20 11 28.3 +0.6
comp=Z,11nm,0.9s
TCF Toulx Ste Croi 79.57 345⇑*iP* P 20 11 28.3 +0.6
TCF pmax pmax
comp=Z,11nm,0.9s
TCF Toulx Ste Croi 79.57 345⇑*iP* P 20 11 28.3 +0.6
comp=Z,11nm,0.9s
MFF Saint Martin d 79.62 346 *eP* P 20 11 28.5 +0.6
comp=Z,15nm,1.0s
MFF Saint Martin d 79.62 346 *eP* P 20 11 28.5 +0.6
MFF pmax pmax
comp=Z,15nm,1.0s
MFF Saint Martin d 79.62 346 *eP* P 20 11 28.5 +0.6
comp=Z,15nm,1.0s
AGO Saint Agoulin 79.65 344 *eP* P 20 11 29.3 +1.2
AGO Saint Agoulin 79.65 344 *eP* P 20 11 29.3 +1.2
PYM Petit Puy Mans 79.96 344 *eP* P 20 11 30.9 +1.0
PYM Petit Puy Mans 79.96 344 *eP* P 20 11 30.9 +1.0
PYM Petit Puy Mans 79.96 344 *eP* P 20 11 30.9 +1.0
ORIF Oris-en-Rattie 80.25 342⇑*iP* P 20 11 32.9 +1.4
comp=Z,26nm,1.0s
ORIF *eR*
comp=Z,105nm,17.0s
ORIF Oris-en-Rattie 80.25 342⇑*iP* P 20 11 32.9 +1.4
ORIF pmax pmax
comp=Z,26nm,1.0s
ORIF Oris-en-Rattie 80.25 342⇑*iP* P 20 11 32.9 +1.4
comp=Z,26nm,1.0s
LBL Lubilhac 80.42 344 *eP* P 20 11 33.5 +1.2
LBL Lubilhac 80.42 344 *eP* P 20 11 33.5 +1.2
LBL Lubilhac 80.42 344 *eP* P 20 11 33.5 +1.2
VIVF Saint-Julien-l 80.54 343⇑*iP* P 20 11 34.1 +1.2
comp=Z,15nm,0.9s
VIVF Saint-Julien-l 80.54 343⇑*iP* P 20 11 34.1 +1.2
VIVF pmax pmax
comp=Z,15nm,0.9s
VIVF Saint-Julien-l 80.54 343⇑*iP* P 20 11 34.1 +1.2
comp=Z,15nm,0.9s
RJF Les Rejaudoux 80.64 345 *eP* P 20 11 34.4 +1.0
RJF *eR*
comp=Z,105nm,20.5s
RJF Les Rejaudoux 80.64 345 *eP* P 20 11 34.4 +1.0
RJF Les Rejaudoux 80.64 345 *eP* P 20 11 34.4 +1.0
PMOR Pomariorio Ree 80.90 130 *e*T T 21 40 46.6
comp=Z,3.1nm,0.2s
CAF Calviac 80.92 344⇑*iP* P 20 11 36.3 +1.3
comp=Z,13nm,0.9s
CAF Calviac 80.92 344⇑*iP* P 20 11 36.3 +1.3
CAF pmax pmax
comp=Z,13nm,0.9s
CAF Calviac 80.92 344⇑*iP* P 20 11 36.3 +1.3
comp=Z,13nm,0.9s
SBF Sospel 80.96 340 *eP* P 20 11 37.1 +1.9
comp=Z,17nm,0.8s
SBF Sospel 80.96 340 *eP* P 20 11 37.1 +1.9
SBF pmax pmax
comp=Z,17nm,0.8s
SBF Sospel 80.96 340 *eP* P 20 11 37.1 +1.9
comp=Z,17nm,0.8s
AQU L'Aquila 81.04 336 *eP* P 20 11 36.3 +0.7
comp=Z,21nm,1.0s
LFF La Frestale 81.12 345 *eP* P 20 11 37.0 +1.1
LFF La Frestale 81.12 345 *eP* P 20 11 37.0 +1.1
LFF La Frestale 81.12 345 *eP* P 20 11 37.0 +1.1
SMRF Simiane la Rot 81.22 342 *eP* P 20 11 37.9 +1.3
comp=Z,21nm,1.2s
SMRF Simiane la Rot 81.22 342 *eP* P 20 11 37.9 +1.3
comp=Z,21nm,1.2s
FRF La Foret Royal 81.41 341 *eP* P 20 11 39.2 +1.7
comp=Z,46nm,1.5s
FRF La Foret Royal 81.41 341 *eP* P 20 11 39.2 +1.7
FRF pmax pmax
comp=Z,46nm,1.5s
FRF La Foret Royal 81.41 341 *eP* P 20 11 39.2 +1.7
comp=Z,46nm,1.5s
LASF Ste Croix 81.44 343⇑*iP* P 20 11 39.1 +1.4
LASF Ste Croix 81.44 343⇑*iP* P 20 11 39.1 +1.4
LMR La Mourre 81.66 341 *eP* P 20 11 39.3 +0.5
comp=Z,21nm,1.1s
LMR La Mourre 81.66 341 *eP* P 20 11 39.3 +0.5
LMR pmax pmax
comp=Z,21nm,1.1s
LMR La Mourre 81.66 341 *eP* P 20 11 39.3 +0.5
comp=Z,21nm,1.1s
PGF Pioggiola 81.89 339 *eP* P 20 11 41.5 +1.3
comp=Z,23nm,1.2s
PGF Pioggiola 81.89 339 *eP* P 20 11 41.5 +1.3
PGF pmax pmax
comp=Z,23nm,1.2s
PGF Pioggiola 81.89 339 *eP* P 20 11 41.5 +1.3
comp=Z,23nm,1.2s
MMAI Mount Meron Ar 82.01 316 P P 20 11 41.1 +0.2
MMAI Mount Meron Ar 82.01 316 P P 20 11 41.1 +0.2
comp=Z,8.2nm,0.5s,baz=34,slow=6.5,SNR=31
ASF Jabal al Asfar 82.09 314 P P 20 11 41.7 +0.2
ASF Jabal al Asfar 82.09 314 P P 20 11 41.7 +0.2
comp=Z,12nm,0.9s,baz=267,slow=3.0,SNR=17
PPT Papeete 82.37 132 LR LR 20 46 44.1
comp=Z,85nm,18.5s,baz=356,slow=34
PPT2 Papeete2 82.39 132 *e*LR LR 20 37 33.2
comp=Z,160nm,26.0s
MTLF Montolieu 82.44 344 *eP* P 20 11 44.2 +1.3
MTLF Montolieu 82.44 344 *eP* P 20 11 44.2 +1.3
MTLF Montolieu 82.44 344 *eP* P 20 11 44.2 +1.3
CUC Castrocucco 82.62 333 *eP* P 20 11 42.4 -1.6
comp=Z,3.6nm,0.9s
CUC *e* 20 11 53.5
EPF Esparros 83.04 345 *eP* P 20 11 46.7 +0.6
comp=Z,7.7nm,0.9s
EPF Esparros 83.04 345 *eP* P 20 11 46.7 +0.6
EPF pmax pmax
comp=Z,8.0nm,0.9s
EPF Esparros 83.04 345 *eP* P 20 11 46.7 +0.6
comp=Z,7.7nm,0.9s
TIP Timpagrande 83.11 332 *eP* P 20 11 46.5 -0.1
comp=Z,16nm,1.0s
TIP *e* 20 11 57.2
SJPF Ste Jean 83.19 346 *eP* P 20 11 48.4 +1.5
SJPF Ste Jean 83.19 346 *eP* P 20 11 48.4 +1.5
SJPF Ste Jean 83.19 346 *eP* P 20 11 48.4 +1.5
ETSF Etsaut 83.31 346 *eP* P 20 11 48.9 +1.4
comp=Z,12nm,0.8s
ETSF Etsaut 83.31 346 *eP* P 20 11 48.9 +1.4
ETSF pmax pmax
comp=Z,12nm,0.8s
ETSF Etsaut 83.31 346 *eP* P 20 11 48.9 +1.4
comp=Z,12nm,0.8s
EIL Elat 85.09 314 P P 20 11 55.9 -0.8
EIL Elat 85.09 314 P P 20 11 55.9 -0.8
comp=Z,4.5nm,0.7s,baz=34,slow=8.1,SNR=4.2
STKA Stephens Creek 85.80 196 P P 20 12 01.4 +1.6
STKA Stephens Creek 85.80 196 P P 20 12 01.4 +1.6
comp=Z,2.3nm,0.9s,baz=332,slow=5.6,SNR=4.1
STKA LR LR 20 48 01.6
comp=Z,84nm,18.6s,baz=25,slow=34
ESDC Sonseca Array 86.95 348 P P 20 12 05.8 0.0
ESDC pP pP 20 12 16.3 -2.0
ESDC Sonseca Array 86.95 348 P P 20 12 05.8 0.0
comp=Z,0.7nm,0.4s,baz=9.2,slow=4.4,SNR=7.3
ESDC pP pP 20 12 16.3 -2.0
comp=Z,3.1nm,0.7s,baz=3.1,slow=4.9,SNR=9.7
KEST Kesra 88.31 337 *eP* P 20 12 11.0 -1.4
KEST pP pP 20 12 22.9 -2.0
KEST Kesra 88.31 337 P P 20 12 11.2 -1.3
comp=Z,1.1nm,0.8s,baz=0.0,slow=1.0,SNR=3.2
KEST pP pP 20 12 22.9 -2.0
comp=Z,3.3nm,1.0s,baz=269,slow=3.8,SNR=6.4
KEST LR LR 20 55 05.8
comp=Z,44nm,20.5s,baz=323,slow=38
TORD Torodi Ar. Bea 111.82 337 PP PP 20 18 26.0 -12
comp=Z,0.8nm,0.9s,baz=16,slow=9.4,SNR=4.8

IDC 25 19:59:31.6±6.0, 43°92N×105°30E, h0km, mb3.5/1, mb1 3.3/5, mb1mx3.2/29, mbtmp3.3/5, ML3.0/3, Error ellipse: s-maj=83.8km s-min=25.1km az=129.0, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**3.99**	**11**	Pn	Pn	20 00 34.4	+0.2
	0.6nm,0.3s,baz=188,slow=14,SNR=9.0						
SONM				Pg	Pb	20 00 45.0	+2.0
	4.7nm,0.3s,baz=192,slow=17,SNR=24						
SONM				Lg	Lg	20 01 38.1	
	5.4nm,0.3s,baz=183,slow=30,SNR=3.6						
MKAR	**Makanchi Array**	**16.41**	**288**	Pn	P	20 03 25.2	-1.0
	0.1nm,0.3s,baz=88,slow=15,SNR=4.8						
ZALV	**Zalesovo Beam**	**16.73**	**314**	Pn	Pn	20 03 26.8	-0.3
	baz=134,slow=14,SNR=2.2						
KURBB	**Kurchatov Arra**	**19.30**	**300**	P	P	20 03 56.8	-1.1
	0.0nm,0.3s,baz=103,slow=11,SNR=2.9						
BVAR	**Borovoye Array**	**24.66**	**304**	P	P	20 04 53.7	-0.1
	0.8nm,0.6s,baz=92,slow=8.8,SNR=4.7						

IDC 25 20:03:51.8±6.9, 20°30N×108°64W, h0km, mb3.6/4, mb1 4.0/7, mb1mx3.8/25, mbtmp3.7/7, ML3.1/1, MS3.7/10, Ms1 3.8/10, ms1mx3.4/24, Error ellipse: s-maj=113.0km s-min=59.5km az=147.0, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**10.06**	**26**	Pn	Pn	20 06 19.3	+1.5
	baz=206,slow=14,SNR=11						
TXAR				LR	LR	20 09 52.6	
	comp=Z,409nm,18.8s,baz=180,slow=36						
ANMO	**Albuquerque**	**14.71**	**7**	Pn	Pn	20 07 22.2	+0.7
	0.1nm,0.3s,baz=186,slow=13,SNR=5.0						
ANMO				LR	LR	20 12 34.4	
	comp=Z,350nm,19.3s,baz=206,slow=36						
PFO	**Pinyon Flat Ob**	**14.96**	**334**	LR	LR	20 12 17.9	
	comp=Z,227nm,18.6s,baz=330,slow=34						
TEIG	**Tepich**	**19.11**	**87**	LR	LR	20 16 24.0	
	comp=Z,152nm,21.1s,baz=345,slow=39						
NVAR	**Mina Array Bea**	**19.91**	**337**	P	P	20 08 25.6	+0.3
	baz=171,slow=12,SNR=11						
NVAR				LR	LR	20 15 58.4	
	comp=Z,162nm,18.6s,baz=16,slow=37						
ELK	**Elko**	**21.14**	**346**	P	P	20 08 38.1	-0.6
	3.2nm,1.1s,baz=174,slow=7.8,SNR=6.3						
PDAR	**Pinedale Array**	**22.41**	**358**	P	P	20 08 52.4	0.0
	1.8nm,0.8s,baz=180,slow=9.9,SNR=8.3						
INK	**Inuvik**	**50.45**	**348**	P	P	20 12 50.2	-0.8
	1.4nm,0.9s,baz=128,slow=6.9,SNR=3.5						
ILAR	**Eielson Array**	**51.13**	**340**	P	P	20 12 56.5	+0.3
	0.6nm,0.9s,baz=139,slow=5.7,SNR=7.6						
ILAR				LR	LR	20 36 35.6	
	comp=Z,76nm,18.6s,baz=101,slow=38						
PLCA	**Paso Flores**	**70.30**	**150**	LR	LR	20 39 39.1	
	comp=Z,74nm,18.9s,baz=178,slow=30						
NOA	**NORSAR Array B**	**85.76**	**25**	LR	LR	20 53 23.6	
	comp=Z,46nm,19.3s,baz=5.0,slow=35						
ESDC	**Sonseca Array**	**87.95**	**48**	LR	LR	20 57 43.2	
	comp=Z,69nm,18.2s,baz=170,slow=37						
MJAR	**Matsushiro Arr**	**95.32**	**312**	LR	LR	20 53 41.6	

comp=Z,29nm,20.5s,baz=200,slow=31

IDC 25 20:15:02.8±1.4, 2°49S×140°24E, h0km, mb3.7/6, mb1 4.1/7, mb1mx3.8/19, mbtmp3.9/7, ML4.1/1, Error ellipse: s-maj=48.2km s-min=21.9km az=99.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.28**	**198**	P	P	20 19 19.1	+0.8
	0.7nm,0.3s,baz=20,slow=12,SNR=30						
FITZ	**Fitzroy Crossi**	**21.11**	**222**	P	P	20 19 48.6	-0.6
	11nm,1.0s,baz=57,slow=9.8,SNR=10						
ASAR	**Alice Springs**	**21.92**	**196**	P	P	20 19 58.0	-0.1
	1.3nm,0.6s,baz=28,slow=9.9,SNR=15						
CMAR	**Chiang Mai Arr**	**45.66**	**299**	P	P	20 23 25.6	-0.1
	0.8nm,0.5s,baz=115,slow=6.2,SNR=4.9						
MKAR	**Makanchi Array**	**70.55**	**322**	P	P	20 26 20.6	+0.8
	0.4nm,0.4s,baz=98,slow=8.5,SNR=13						
BVAR	**Borovoye Array**	**80.01**	**325**	P	P	20 27 13.2	-0.9
	0.4nm,0.4s,baz=117,slow=6.7,SNR=4.4						
ILAR	**Eielson Array**	**85.01**	**24**	P	P	20 27 40.0	0.0
	0.3nm,0.8s,baz=261,slow=3.6,SNR=4.0						
DBIC	**Dimbokro**	**144.97**	**278**	PKP	PKPab	20 34 42.2	-0.2
	1.9nm,0.4s,baz=52,slow=3.4,SNR=7.8						

*ISCJB **25** 20:31:11.8±0.8, 41°.28N±0°.06×22°.71E±0°.04, h9km±7km, Error ellipse: s-maj=10.9km s-min=5.5km az=174.6*
*SKO **25** 20:31:11.5, 41°.31N×22°.73E, h15km, M1.5, ML1.8*
*ATH **25** 20:31:11.1, 41°.34N×22°.69E, h14km±4km, MD2.8/7*
*CSEM **25** 20:31:11.1±0.4, 41°.35N×22°.68E, h20km, MD2.8, Error ellipse: s-maj=9.2km s-min=4.7km az=178.0*

ISC 25 20:31:11.1±1.1, 41°33N±0°.06×22°.69E±0°.03, h19km±3km, n15, σ0°37/26, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.09**	**265**	*i* Pg	**Pg**	**20 31 14.7**	**-0.1**
VAY				*i* Sg	**Sg**	**20 31 17.0**	**-0.3**
VAY				*e*Lg	Lg	20 31 17.1	
	comp=N,683nm,0.2s						
VAY				*e*Lg	Lg	20 31 17.1	
	comp=E,303nm,0.2s						
VAY	**Valandovo**	**0.09**	**265**	*i* Pg	**Pg**	**20 31 15.1**	**+0.3**
VAY				*i* Sg	**Sg**	**20 31 17.4**	**+0.1**
VAY				*e*Lg	Lg	20 31 17.6	
	comp=E,303nm,0.2s						
GRG	**Griva**	**0.43**	**211**	*e*PB	**Pb**	**20 31 20.3**	**+0.1**
GRG				*e*SB	**Sb**	**20 31 26.3**	**-0.1**
SOH	**Sokhos**	**0.71**	**135**	*e*PG	**Pb**	**20 31 24.7**	**-0.2**
SOH				*e*SB	**Sb**	**20 31 34.2**	**-0.1**
SOH	**Sokhos**	**0.71**	**135**	*e*Pg	**Pb**	**20 31 24.7**	**-0.2**
SOH				*e*Sb	**Sb**	**20 31 34.2**	**-0.1**
NVR	**Nevrokopi**	**0.88**	**88**	*e*PB	**Pg**	**20 31 28.3**	**0.0**
NVR				*e*SB	**Sg**	**20 31 40.1**	**+0.2**
NVR	**Nevrokopi**	**0.88**	**88**	*e*Pb	**Pg**	**20 31 28.3**	**0.0**
NVR				*e*Sb	**Sg**	**20 31 40.1**	**+0.2**
PLG	**Polygyros**	**1.11**	**149**	*e*PB	**Pn**	**20 31 31.9**	**+0.2**
PLG				*e*SB	**Sg**	**20 31 47.5**	**+0.3**
PLG	**Polygyros**	**1.11**	**149**	*e*Pb	**Pn**	**20 31 31.9**	**+0.2**
PLG				*e*Sb	**Sg**	**20 31 47.5**	**+0.3**
FNA	**Florina**	**1.14**	**242**	*e*PB	**Pn**	**20 31 31.5**	**-0.5**
FNA				*e*SB	**Sg**	**20 31 48.4**	**+0.4**
FNA	**Florina**	**1.14**	**242**	*e*Pb	**Pn**	**20 31 31.5**	**-0.5**
FNA				*e*Sb	**Sg**	**20 31 48.4**	**+0.4**
LIT	**Litokhoron**	**1.24**	**187**	*e*PG	**Pb**	**20 31 34.5**	**+0.6**
LIT	**Litokhoron**	**1.24**	**187**	*e*Pg	**Pb**	**20 31 34.5**	**+0.6**
PAIG	**Paliouri**	**1.59**	**151**	*e*PB	**Pg**	**20 31 41.1**	**-0.6**
PAIG	**Paliouri**	**1.59**	**151**	*e*Pb	**Pg**	**20 31 41.1**	**-0.6**

*DDA **25** 20:31:47.9, 38°.42N×30°.58E, h35km, MD2.9*
*ISCJB **25** 20:31:48.7±0.6, 38°.42N±0°.03×30°.56E±0°.03, h5km±4km, Error ellipse: s-maj=5.0km s-min=3.4km az=157.1*
*ISK **25** 20:31:48.8, 38°.44N×30°.54E, h7km, MD2.8*
*CSEM **25** 20:31:48.4±0.2, 38°.41N×30°.56E, h5km, MD2.8, Error ellipse: s-maj=4.1km s-min=3.0km az=161.0*

ISC 25 20:31:48.5±1.0, 38°41N±0°.03×30°.55E±0°.02, h8km±7km, n36, σ0°67/62, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHUT	**Suhut-Afyon**	**0.14**	**359**	PG	**Pg**	**20 31 51.4**	**-0.2**
SHUT				*e*SG	**Sg**	**20 31 54.0**	**+0.2**
SHUT	**Suhut-Afyon**	**0.14**	**359**	*i* Pg	**Pg**	**20 31 51.4**	**-0.2**
SHUT				*e*Sg	**Sg**	**20 31 54.0**	**+0.2**
BOLV	**Bolvadin**	**0.44**	**45**	*i* P	**Pg**	**20 31 56.7**	**-0.4**
BOLV				*i* S	**Sg**	**20 32 03.5**	**+0.7**
BOLV	**Bolvadin**	**0.44**	**45**	*i* P	**Pg**	**20 31 56.7**	**-0.4**
BOLV				*i* S	**Sg**	**20 32 03.5**	**+0.7**
ALT	**Altintas**	**0.73**	**332**	*e*PG	**Pg**	**20 32 02.8**	**+0.2**
ALT				*e*SG	**Sb**	**20 32 13.0**	**-0.8**
ALT	**Altintas**	**0.73**	**332**	*e*Pg	**Pg**	**20 32 02.8**	**+0.2**
ALT				*e*Sg	**Sb**	**20 32 13.0**	**-0.8**
KHL	**Karahalli**	**0.81**	**264**	*e*PG	**Sg**	**20 32 04.7**	**+0.5**
KHL				*e*SG	**Sb**	**20 32 16.1**	**0.0**
KHL	**Karahalli**	**0.81**	**264**	*e*Pg	**Pg**	**20 32 04.7**	**+0.5**
KHL				*e*Sg	**Sb**	**20 32 16.1**	**0.0**
KHAL	**Karahalli**	**0.83**	**268**	*i* P	**Pg**	**20 32 04.0**	**-0.6**
KHAL				*i* S	**Sb**	**20 32 17.5**	**+0.7**
KHAL	**Karahalli**	**0.83**	**268**	*i* P	**Pg**	**20 32 04.0**	**-0.6**
KHAL				*i* S	**Sb**	**20 32 17.5**	**+0.7**
GDZ	**Gediz**	**1.08**	**309**	*i* P	**Pg**	**20 32 08.5**	**-0.7**
GDZ				*i* S	**Sb**	**20 32 24.1**	**+0.3**
GDZ	**Gediz**	**1.08**	**309**	*i* P	**Pg**	**20 32 08.5**	**-0.7**
GDZ				*i* S	**Sb**	**20 32 24.1**	**+0.3**
ESKT	**Eskisehir**	**1.13**	**12**	*e*PN	**Pn**	**20 32 10.7**	**-0.1**
ESKT				*e*SN	**Sn**	**20 32 26.6**	**0.0**
ESKT	**Eskisehir**	**1.13**	**12**	*e*Pn	**Pn**	**20 32 10.7**	**-0.1**
ESKT				*e*Sn	**Sn**	**20 32 26.6**	**0.0**
SEYT	**Eskypehyr**	**1.13**	**12**	*i* P	**Pn**	**20 32 11.3**	**+0.5**
SEYT				*i* S	**Sn**	**20 32 25.5**	**-1.1**
KIZT	**Kizilcal**	**1.14**	**65**	*e*PN	**Pn**	**20 32 11.2**	**+0.3**
KIZT				*e*SN	**Sn**	**20 32 27.4**	**+0.6**
KIZT	**Kizilcal**	**1.14**	**65**	*e*Pn	**Pn**	**20 32 11.2**	**+0.3**
KIZT				*e*Sn	**Sn**	**20 32 27.4**	**+0.6**
KDHN	**Kadinhani**	**1.23**	**84**	*i* P	**Pn**	**20 32 11.3**	**-0.8**
KDHN				*i* S	**Sb**	**20 32 27.2**	**-1.0**
KDHN	**Kadinhani**	**1.23**	**84**	*i* P	**Pn**	**20 32 11.3**	**-0.8**
KDHN				*i* S	**Sb**	**20 32 27.2**	**-1.0**
SVRH	**Sivrihisar-ESK**	**1.28**	**36**	*e*PN	**Pg**	**20 32 14.4**	**+1.3**
SVRH	**Sivrihisar-ESK**	**1.28**	**36**	*e*Pn	**Pg**	**20 32 14.4**	**+1.3**
TVSB	**Tavsanli**	**1.34**	**321**	*e*PN	**Pg**	**20 32 14.3**	**+0.1**
TVSB	**Tavsanli**	**1.34**	**321**	*e*Pn	**Pg**	**20 32 14.3**	**+0.1**
DNZL	**Cakiroluk**	**1.39**	**239**	*e*P	**Pn**	**20 32 14.7**	**+0.3**
DNZL				*i* S	**Sg**	**20 32 33.7**	**+0.4**
GOLH	**Golhisar**	**1.41**	**214**	*e*P	**Pn**	**20 32 13.3**	**-1.3**
GOLH				*i* S	**Sg**	**20 32 35.5**	**+1.6**
GOLH	**Golhisar**	**1.41**	**214**	*e*P	**Pn**	**20 32 13.3**	**-1.3**
GOLH				*i* S	**Sg**	**20 32 35.5**	**+1.6**
LADK	**Ladik-KONYA**	**1.44**	**98**	*e*PN	**Pb**	**20 32 15.4**	**-0.2**
LADK	**Ladik-KONYA**	**1.44**	**98**	*e*Pn	**Pb**	**20 32 15.4**	**-0.2**
KULA	**Kula-Manisa**	**1.49**	**275**	*e*PN	**Pb**	**20 32 16.5**	**0.0**
KULA	**Kula-Manisa**	**1.49**	**275**	*e*Pn	**Pb**	**20 32 16.5**	**0.0**
DEMI	**Demirci**	**1.57**	**294**	*i* P	**Pn**	**20 32 16.2**	**-0.6**
DEMI				*i* S	**Sb**	**20 32 38.3**	**+0.4**
DEMI	**Demirci**	**1.57**	**294**	*i* P	**Pn**	**20 32 16.2**	**-0.6**
DEMI				*i* S	**Sb**	**20 32 38.3**	**+0.4**
ELL	**Elmali**	**1.74**	**197**	*e*PN	**Pb**	**20 32 20.4**	**-0.3**
ELL	**Elmali**	**1.74**	**197**	*e*Pn	**Pb**	**20 32 20.4**	**-0.3**
DURS	**Dursunbey**	**2.01**	**307**	*i* P	**Pn**	**20 32 22.5**	**-0.3**
DURS				*i* S	**Sn**	**20 32 47.7**	**-0.5**
DURS	**Dursunbey**	**2.01**	**307**	*i* P	**Pn**	**20 32 22.5**	**-0.3**
DURS				*i* S	**Sn**	**20 32 47.7**	**-0.5**

*ISCJB **25** 21:16:34.8±2.0, 38°.48N±0°.05×26°.7E±0°.1, h6km±13km, Error ellipse: s-maj=13.5km s-min=8.5km az=5.9*
*DDA **25** 21:16:36, 38°.52N×26°.87E, h7km, MD2.8*

ISC 25 21:16:34.7±2.3, 38°48N±0°.05×26°.7E±0°.1, h7km±18km, n5, σ0°65/9, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.28**	**111**	PG	**Pg**	**21 16 40.5**	**+0.3**
BLCB				SG	**Sg**	**21 16 43.5**	**-0.3**
GCAM	**G?zelcaml?**	**0.88**	**152**	*i* P	**Pb**	**21 16 53.1**	**+0.8**
GCAM				*i* S	**Sb**	**21 17 04.6**	**+0.3**
AYDN	**Tasoluk**	**1.23**	**131**	*i* P	**Pb**	**21 16 58.4**	**+0.1**
AYDN				*i* S	**Sg**	**21 17 13.5**	**-0.9**
BALY	**Balya**	**1.44**	**29**	*i* P	**Pn**	**21 17 01.0**	**-0.3**
BALY				*i* S	**Sg**	**21 17 20.8**	**-0.3**
APE	**Apeiranthos**	**1.69**	**214**	*e*PN	**Pn**	**21 17 04.2**	**-0.5**

ISC 25 21:19:21.9±2.2, 41°.5N±0°.1×73°.06E±0°.06, h9km, n8, σ1°40/10, 2C-1D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**0.80**	**36**	P	**Pg**	**21 19 36.2**	**-1.2**
	SNR=8.2						
AAK	**Ala-Archa**	**1.56**	**43**	P	**Pn**	**21 19 50.5**	**+0.4**
	SNR=12						
KZA	**Kyzart**	**1.74**	**69**	P	**Pn**	**21 19 51.5**	**-1.2**
	SNR=9.0						
KBK	**Karagaybulak**	**1.82**	**50**	P	**Pn**	**21 19 53.9**	**+0.2**
	SNR=5.5						
USP	**Ospenovka**	**2.07**	**30**	P	**Sg**	**21 20 27.5**	**-1.0**
	SNR=5.7						
TKM2	**Tokmak 2**	**2.37**	**52**	⇓Pn	**Pn**	**21 20 01.9**	**+0.8**
	3.0nm,0.5s						
TKM2				⇑Sn	**Sn**	**21 20 33.1**	**+2.8**
	11nm,0.6s						
KK31	**Karatay Array**	**2.49**	**311**	⇑Pn	**Pb**	**21 20 06.2**	**-0.6**
	0.7nm,0.2s,baz=130,slow=12,SNR=68						
KK31				Sn	**Sg**	**21 20 42.5**	**+0.7**
	2.5nm,0.3s,baz=130,slow=26,SNR=9.0						
ULHL	**Ulahol**	**2.49**	**71**	P	**Pn**	**21 20 03.8**	**+0.9**
	SNR=6.2						

*NIED **25** 21:26:00, 44°.50N×149°.80E, h17km, Mw3.5 Best double couple: M0 1.83000×10^14 NP1:φs 16.00000°, δ 53.00000°, λ 72.00000°. NP2:φs 224.00000°, δ 41.00000°, λ 112.00000°.*
*IDC **25** 21:26:39.8±3.4, 44°.99N×149°.82E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/26, mbtmp3.6/6, ML2.3/1, Error ellipse: s-maj=102.9km s-min=32.6km az=179.0*
*ISCJB **25** 21:26:40.5±1.1, 43°.7N±0°.1×149°.8E±0°.1, h51km, mb3.6/5, Error ellipse: s-maj=18.4km s-min=6.4km az=151.6*
*JMA **25** 21:26:40.0±0.5, 44°.52N×149°.81E, h30km, M3.9*
*MOS **25** 21:26:46.3±1.0, 45°.13N×149°.64E, h58km, mb4.1/3, Error ellipse: s-maj=59.5km s-min=34.4km az=34.7*

ISC 25 21:26:42.2±1.3, 43°.8N±0°.1×149°.8E±0°.1, h51km, n23, σ1°22/27, mb3.6/5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.96**	**317**	*e*PN	Pn	21 27 08.5	-4.4
KUR				pmax	pmax		
	comp=Z,90nm,0.5s						
NEM2	**Nemuro 2**	**2.96**	**262**	P	**Pn**	**21 27 26.7**	**0.0**
NEM2				*e*S	**Sn**	**21 28 00.7**	**-0.3**
JRA	**Rausu**	**3.37**	**273**	P	**Pn**	**21 27 33.2**	**+1.0**
JAK	**Akkeshi**	**3.79**	**259**	P	**Pn**	**21 27 38.7**	**+0.7**
JAK				*e*S	**Sn**	**21 28 21.7**	**+0.4**
JTKR	**Abashiri--Toko**	**4.24**	**274**	P	**Pn**	**21 27 44.9**	**+0.7**
JAR	**Ashorobuto**	**4.39**	**265**	P	**Pn**	**21 27 47.9**	**+1.6**
JOB	**Onbets**	**4.43**	**260**	*e*S	**Sn**	**21 28 37.8**	**+0.8**
JMP	**Maruseppu**	**4.64**	**274**	P	**Pn**	**21 27 50.6**	**+0.9**
JCH	**Churui**	**4.84**	**258**	P	**Pn**	**21 27 53.8**	**+1.4**
JCH				*e*S	**Sn**	**21 28 47.3**	**+0.2**
JNBK	**Urakawa-nobuka**	**5.37**	**256**	*e*S	**Sn**	**21 29 01.2**	**+1.0**
JNB	**Noboribetsu**	**6.53**	**261**	P	**Pn**	**21 28 16.2**	**+0.6**
JNB				*e*S	**Sn**	**21 29 28.5**	**-0.2**
JKB	**Kayabe**	**6.71**	**256**	P	**Pn**	**21 28 38.2**	**+1.2**
JKB				*e*S	**Sn**	**21 29 31.1**	**-2.0**
JANG	**Nango**	**7.04**	**243**	*e*S	**Sn**	**21 29 39.5**	**-1.8**
JTH	**Tanohata**	**7.07**	**239**	*e*S	**Sn**	**21 29 39.5**	**-2.3**
JIO	**Ouri**	**8.32**	**233**	*e*S	**Sn**	**21 30 13.2**	**+0.6**
USRK	**Ussuriysk Arra**	**12.80**	**278**	Pn	**Pn**	**21 29 42.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=82,slow=14,SNR=5.2						
MKAR	**Makanchi Array**	**46.23**	**298**	P	**P**	**21 35 02.3**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**46.23**	**298**	P	**P**	**21 35 02.3**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=66,slow=7.6,SNR=9.4						
KURK	**Kurchatov**	**47.05**	**305**	P	**P**	**21 35 08.1**	**-0.3**
KURBB	**Kurchatov Arra**	**47.14**	**305**	P	**P**	**21 35 08.1**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=73,slow=7.8,SNR=7.0						
FINES	**FINESS Array B**	**65.65**	**334**	P	**P**	**21 37 18.8**	**-1.8**
	comp=Z,1.8nm,1.1s,baz=60,slow=8.2,SNR=4.4						
NOA	**NORSAR Array B**	**70.20**	**340**	P	**P**	**21 37 47.4**	**-1.8**
	comp=Z,0.5nm,0.6s,baz=31,slow=6.2,SNR=3.4						
TXAR	**Lajitas Array**	**81.01**	**58**	P	**P**	**21 38 53.2**	**+1.5**
	comp=Z,0.2nm,0.7s,baz=290,slow=3.7,SNR=4.2						

IDC 25 21:37:41.9±4.7, 60°.94S×154°.65E, h0km, mb4.0/3, mb1 4.0/4, mb1mx3.9/12, mbtmp3.8/4, ML3.2/1, MS3.7/7, Ms1 3.7/7, ms1mx3.5/13, Error ellipse: s-maj=307.5km s-min=37.0km az=76.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRV	**Dumont d'Urvil**	**8.64**	**222**	R		21 41 00.0	
VNDA	**Vanda**	**16.83**	**175**	Pn	Pn	21 41 38.5	+0.1
	0.1nm,0.3s,baz=338,slow=11,SNR=3.3						
VNDA				LR	LR	21 47 24.3	
	comp=Z,211nm,20.4s,baz=352,slow=35						
RPZ	**Rata Peaks**	**19.84**	**37**	LR	LR	21 48 18.4	
	comp=Z,279nm,19.6s,baz=164,slow=32						
URZ	**Urewera**	**26.70**	**42**	LR	LR	21 52 21.7	
	comp=Z,99nm,20.6s,baz=344,slow=33						
QSPA	**South Pole Qui**	**29.16**	**180**	LR	LR	21 54 39.3	
	comp=Z,111nm,18.6s,baz=22,slow=35						
STKA	**Stephens Creek**	**30.31**	**338**	P	P	21 43 55.2	+0.5
	1.7nm,0.9s,baz=192,slow=9.3,SNR=4.3						
MAW	**Mawson**	**36.84**	**220**	LR	LR	21 59 43.0	
	comp=Z,74nm,20.9s,baz=269,slow=36						
DZM	**Mont Dzumac**	**39.70**	**17**	*e*LR	LR	21 56 00.2	
	186nm,25.8s						
ASAR	**Alice Springs**	**39.91**	**330**	P	P	21 45 16.9	-0.6
	1.5nm,0.9s,baz=159,slow=8.9,SNR=11						
WRA	**Warramunga Arr**	**43.39**	**332**	P	P	21 45 45.9	0.0
	1.9nm,0.9s,baz=164,slow=7.2,SNR=12						
TBI	**Tubuai**	**53.45**	**71**	*e*T	T	22 44 53.9	
	20nm,0.3s						
PPT2	**Papeete2**	**58.40**	**68**	*e*LR	LR	22 04 50.1	
	40nm,24.2s						
TIAR	**Tiarei**	**58.53**	**68**	*e*T	T	22 51 13.8	
	6.7nm,0.3s						
RKT	**Rikitea**	**60.55**	**85**	*e*T	T	22 53 50.4	
	7.7nm,0.2s						
BOSA	**Boshof**	**81.76**	**223**	LR	LR	22 21 26.8	
	comp=Z,54nm,18.2s,baz=0.5,slow=32						
CMAR	**Chiang Mai Arr**	**90.77**	**308**	LR	LR	22 32 25.6	
	comp=Z,58nm,19.3s,baz=81,slow=36						

*SKO **25** 21:45:35.9, 41°.32N×22°.68E, h15km, M1.3, ML1.7*
*ISCJB **25** 21:45:36.4±0.9, 41°.28N±0°.05×22°.71E±0°.04, h6km±12km, Error ellipse: s-maj=8.4km s-min=5.3km az=7.5*
*CSEM **25** 21:45:36.6±0.1, 41°.28N×22°.69E, h10km, MD2.7, Error ellipse: s-maj=2.1km s-min=1.3km az=7.0*
*ATH **25** 21:45:37.0, 41°.28N×22°.70E, h4km, MD2.7/5*

ISC 25 21:45:36.4±1.1, 41°30N±0°.05×22°.70E±0°.03, h10km±10km, n12, σ0°17/22, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**281**	*i* Pg	**Pg**	**21 45 38.8**	**-0.2**
VAY				*i* Sg	**Sg**	**21 45 40.5**	**-0.3**
VAY				*e*Lg	Lg	21 45 40.5	
	comp=N,607nm,0.2s						
VAY				*e*Lg	Lg	21 45 40.6	
	comp=E,261nm,0.2s						
VAY	**Valandovo**	**0.10**	**281**	*i* Pg	**Pg**	**21 45 39.2**	**+0.2**
VAY				*i* Sg	**Sg**	**21 45 40.9**	**+0.1**
VAY				*e*Lg	Lg	21 45 41.0	
	comp=E,261nm,0.2s						
GRG	**Griva**	**0.41**	**213**	*e*PG	**Pg**	**21 45 44.6**	**+0.1**
GRG				*e*SG	**Sg**	**21 45 50.0**	**+0.1**
GRG	**Griva**	**0.41**	**213**	*e*Pg	**Pg**	**21 45 44.6**	**+0.1**
GRG				*e*Sg	**Sg**	**21 45 50.0**	**+0.1**
SOH	**Sokhos**	**0.69**	**134**	*e*PG	**Pg**	**21 45 49.8**	**0.0**
SOH				*e*SG	**Sg**	**21 45 58.9**	**+0.1**
SOH	**Sokhos**	**0.69**	**134**	*e*Pg	**Pg**	**21 45 49.8**	**0.0**
SOH				*e*Sg	**Sg**	**21 45 58.9**	**+0.1**
NVR	**Nevrokopi**	**0.88**	**87**	*e*PG	**Pb**	**21 45 53.9**	**+0.1**
NVR				*e*SG	**Sb**	**21 46 05.6**	**0.0**
NVR	**Nevrokopi**	**0.88**	**87**	*e*Pg	**Pb**	**21 45 53.9**	**+0.1**
NVR				*e*Sg	**Sb**	**21 46 05.6**	**0.0**
PLG	**Polygyros**	**1.09**	**148**	*e*PG	**Pg**	**21 45 57.0**	**-0.3**
PLG				*e*SG	**Sg**	**21 46 11.6**	**+0.1**
PLG	**Polygyros**	**1.09**	**148**	*e*Pg	**Pg**	**21 45 57.0**	**-0.3**
PLG				*e*Sg	**Sg**	**21 46 11.6**	**+0.1**
FNA	**Florina**	**1.12**	**243**	*e*PB	**Pb**	**21 45 57.9**	**-0.1**
FNA	**Florina**	**1.12**	**243**	*e*Pb	**Pb**	**21 45 57.9**	**-0.1**

*SKO **25** 21:56:36.0, 41°.32N×22°.73E, h18km, M1.4, ML1.6*
*ISCJB **25** 21:56:36.6±1.0, 41°.3N±0°.1×22°.75E±0°.06, h14km±8km, Error ellipse: s-maj=17.9km s-min=7.7km az=175.3*
*CSEM **25** 21:56:36.4±0.4, 41°.31N×22°.77E, h12km, MD2.9, Error ellipse: s-maj=10.1km s-min=5.5km az=6.0*
*ATH **25** 21:56:36.9, 41°.29N×22°.72E, h18km±2km, MD2.9/6*

ISC 25 21:56:36.8±1.2, 41°.30N±0°.06×22°.75E±0°.03, h12km±9km, n14, σ0°14/22, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.14**	**279**	*i* Pg	**Pg**	**21 56 39.9**	**-0.3**
VAY				*i* Sg	**Sg**	**21 56 42.4**	**-0.1**
VAY				*e*Lg	Lg	21 56 42.5	
	comp=E,294nm,0.2s						
VAY				*e*Lg	Lg	21 56 42.6	
	comp=N,309nm,0.2s						
VAY	**Valandovo**	**0.14**	**279**	*i* Pg	**Pg**	**21 56 40.3**	**+0.2**
VAY				*i* Sg	**Sg**	**21 56 42.8**	**+0.3**
VAY				*e*Lg	Lg	21 56 43.1	
	comp=N,309nm,0.2s						
GRG	**Griva**	**0.43**	**218**	*e*PB	**Pg**	**21 56 45.2**	**-0.2**
GRG				*e*SB	**Sg**	**21 56 51.3**	**+0.2**
GRG	**Griva**	**0.43**	**218**	*e*Pb	**Pg**	**21 56 45.2**	**-0.2**
GRG				*e*Sb	**Sg**	**21 56 51.3**	**+0.2**
SOH	**Sokhos**	**0.66**	**136**	*e*PB	**Pg**	**21 56 49.6**	**0.0**
SOH	**Sokhos**	**0.66**	**136**	*e*Pb	**Pg**	**21 56 49.6**	**0.0**
NVR	**Nevrokopi**	**0.84**	**86**	*e*PN	**Pb**	**21 56 53.3**	**0.0**
NVR	**Nevrokopi**	**0.84**	**86**	*e*Pn	**Pb**	**21 56 53.3**	**0.0**
PLG	**Polygyros**	**1.06**	**150**	*e*PN	**Pb**	**21 56 57.1**	**-0.1**
PLG				*e*SN	**Sb**	**21 57 11.2**	**+0.1**
PLG	**Polygyros**	**1.06**	**150**	*e*Pn	**Pb**	**21 56 57.1**	**-0.1**
PLG				*e*Sn	**Sb**	**21 57 11.2**	**+0.1**
FNA	**Florina**	**1.16**	**244**	*e*PN	**Pb**	**21 56 58.9**	**0.0**
FNA				*e*SN	**Sb**	**21 57 13.9**	**0.0**
FNA	**Florina**	**1.16**	**244**	*e*Pn	**Pb**	**21 56 58.9**	**0.0**
FNA				*e*Sn	**Sb**	**21 57 13.9**	**0.0**
PAIG	**Paliouri**	**1.54**	**152**	*e*PN	**Pb**	**21 57 05.3**	**0.0**
PAIG	**Paliouri**	**1.54**	**152**	*e*Pn	**Pb**	**21 57 05.3**	**0.0**

ROM 25 22:16:47.1±0.1, 42°.27N×13°.47E, h7km±1km, Md1.8/3, Ml0.9/2, Error ellipse: s-maj=4.3km s-min=0.6km az=28.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.08**	**93**	Pg	Pg	22 16 49.6	+0.3
FAGN				Sg	Sg	22 16 51.2	+0.4
	164nm,0.7s						
AQU	**L'Aquila**	**0.10**	**329**	Pg	Pg	22 16 49.7	+0.2
AQU				Sg	Sg	22 16 51.7	+0.5
	52nm,0.3s						
LPEL	**Lama dei Pelig**	**0.57**	**113**	Pg	Pg	22 16 58.6	+0.3
LPEL				Sg	Sb	22 17 07.6	-0.4
	5.0nm,0.3s						

*IPEC **25** 22:18:07.7±0.3, 50°.28N×18°.99E, h0km, ML2.2/3, Error ellipse: s-maj=2.3km s-min=1.9km az=34.0*
*ISCJB **25** 22:18:07.3±0.4, 50°.30N±0°.03×18°.87E±0°.03, h0km, Error ellipse: s-maj=4.8km s-min=2.3km az=17.4*
*WAR **25** 22:18:08.7, 50°.25N×18°.98E*
*CSEM **25** 22:18:08.5±0.2, 50°.28N×18°.88E, h2km, ML2.9/7, Error ellipse: s-maj=6.2km s-min=3.2km az=10.0*
*PRU **25** 22:18:09.4, 50°.25N×18°.85E, h0km*
*VIE **25** 22:18:10.8±0.7, 49°.72N×18°.98E, h0km, mb2.0/3, ML2.6/4, Error ellipse: s-maj=4.6km s-min=4.3km az=144.0 54 km ESE of Ostrava Suspected Mining induced.*

ISC 25 22:18:07.8±0.8, 50°24N±0°.03×18°.95E±0°.02, h0km, n50, σ1°31/81, 13C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.51**	**253**	*e*Pg	**Pb**	**22 18 19.3**	**-0.3**
RAC				*e*Sg	**Sb**	**22 18 26.9**	**-0.7**
OKC

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,6.8nm,0.4s						
KHC	**Kasperske Hory**	**3.66**	**254**	Pn	**Pn**	**22 19 06.7**	**+1.0**
MOA	**Molln**	**3.90**	**234**	⇑*i*Sg	**Sg**	**22 20 10.8**	**-2.1**
	7.2nm,0.6s						
MOA	**Molln**	**3.90**	**234**	Sg	**Sg**	**22 20 10.9**	**-2.1**
	7.2nm,0.6s						
CLL	**Collm**	**3.92**	**288**	*e*Sg	**Sg**	**22 20 15.0**	**+1.2**
NKC	**Novy Kostel**	**4.17**	**272**	*e*SG	**Sg**	**22 20 20.2**	**-1.6**
	comp=Z,8.2nm,0.7s						
NKC	**Novy Kostel**	**4.17**	**272**	Sg	**Sg**	**22 20 20.2**	**-1.6**
	8.2nm,0.7s						
DRGR		**4.26**	**143**	⇑*i*P	**Pn**	**22 19 14.8**	**+0.8**
DRGR		**4.26**	**143**	S	**Sn**	**22 20 05.8**	**+1.4**
DRGR		**4.26**	**143**	⇑*i*P	**Pn**	**22 19 14.8**	**+0.8**
BURAR	**Bucovina Array**	**4.89**	**120**	⇑*i*P	**Pn**	**22 19 24.0**	**+1.3**
BURAR	**Bucovina Array**	**4.89**	**120**	⇑*i*P	**Pn**	**22 19 24.0**	**+1.3**
BZS	**Buzias**	**4.96**	**158**	⇑*i*P	**Pn**	**22 19 24.4**	**+0.9**
BZS	**Buzias**	**4.96**	**158**	⇑*i*P	**Pn**	**22 19 24.4**	**+0.9**
BSD	**Bornholm Skovb**	**5.47**	**335**	*i* P	**Pn**	**22 19 30.3**	**-0.1**
BSD				*i* S	**Sn**	**22 20 29.5**	**-4.5**

*DHMR **25** 22:51:32.3±1.8, 11°.95N×43°.66E, h4km±10km, ML4.5*
*CSEM **25** 22:51:32.3, 11°.95N×43°.66E, h4km, ML4.5, After DHMR*
*IDC **25** 22:51:34.6±1.6, 11°.30N×43°.75E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.8/27, mbtmp3.9/10, MS3.5/12, Ms1 3.5/12, ms1mx3.3/32, Error ellipse: s-maj=38.1km s-min=23.5km az=177.0*
ISC 25 22:51:36.9±0.9**, 12°.16N**±0°.04×**43°.68E**±0°.05**, h10km, n34, σ1s.76**/31**, mb3.9**/9**, MS3.3**/10**, 5C-5D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.15**	**22**	⇑*i*P	**Pn**	**22 51 58.1**	**-1.1**
TRBA				*i* S	**Sn**	**22 52 17.0**	**+1.9**
TRBA				AML	AML	22 52 19.1	
	comp=Z,8µm,0.5s						
ADEN	**Aden**	**1.41**	**64**	⇓*i*P	**Pn**	**22 52 01.0**	**-1.6**
ADEN				*i* S	**Sg**	**22 52 22.2**	**-0.1**
ADEN				AML	AML	22 52 28.4	
	comp=N,10µm,0.6s						
ADEN	**Aden**	**1.41**	**64**	⇓*i*P	**Pn**	**22 52 01.0**	**-1.6**
ADEN				*i* S	**Sg**	**22 52 22.2**	**-0.1**
	comp=N,5µm,0.6s						
UDYN	**Al 'Udayn**	**1.82**	**9**	⇑*i*P	**Pb**	**22 52 08.9**	**-1.5**
UDYN				*i* S	**Sg**	**22 52 36.8**	**+1.4**
UDYN	**Al 'Udayn**	**1.82**	**9**	⇑*i*P	**Pb**	**22 52 08.9**	**-1.5**
UDYN				*i* S	**Sg**	**22 52 36.8**	**+1.4**
LBOS		**2.29**	**42**	⇓*i*P	**Pn**	**22 52 14.4**	**-0.5**
LBOS				*i* S	**Sg**	**22 52 49.4**	**-1.0**
DHBB	**Dhamar BB**	**2.49**	**16**	*i* P	**Pb**	**22 52 19.6**	**-2.4**
DHBB				*i* S	**Sg**	**22 52 56.3**	**-0.8**
DHBB	**Dhamar BB**	**2.49**	**16**	*i* P	**Pb**	**22 52 19.6**	**-2.4**
DHBB				*i* S	**Sg**	**22 52 56.3**	**-0.8**
BDHA	**Al Bayda'**	**2.57**	**45**	⇑*i*P	**Pn**	**22 52 18.4**	**-0.5**
BDHA				*i* S	**Sb**	**22 52 57.5**	**+2.3**
BDHA				AML	AML	22 53 07.0	
	comp=E,2µm,0.5s						
BDHA	**Al Bayda'**	**2.57**	**45**	⇑*i*P	**Pn**	**22 52 18.4**	**-0.5**
BDHA				*i* S	**Sb**	**22 52 57.5**	**+2.3**
	comp=E,1µm,0.5s						
HAJJ	**Hajjah**	**3.52**	**359**	⇓*i*P	**Pn**	**22 52 33.6**	**+1.8**
HAJJ				*i* S	**Sb**	**22 53 20.3**	**-2.0**
HAJJ				AML	AML	22 53 33.2	
	comp=Z,6µm,0.7s						
HAJJ	**Hajjah**	**3.52**	**359**	⇓*i*P	**Pn**	**22 52 33.6**	**+1.8**
HAJJ				*i* S	**Sb**	**22 53 20.3**	**-2.0**
	comp=Z,3µm,0.7s						
MUKL	**Al Mukalla**	**5.70**	**66**	*i* P	**Pn**	**22 53 01.6**	**0.0**
MUKL				*i* S	**Sn**	**22 54 10.4**	**+3.2**
FURI	**Furi**	**5.89**	**237**	P	**Pb**	**22 53 17.2**	**-2.8**
FURI				S	**Sb**	**22 54 33.4**	**+2.6**
WNDE	**Wendo Genet**	**7.08**	**225**	*e*P	Pn	22 53 25.8	+5.0
WNDE				P	**Pb**	**22 53 40.0**	**0.0**
WNDE				*e*S	Sg	22 55 12.3	-12
KMBO	**Kilima Mbogo**	**14.66**	**206**	LR	LR	23 00 30.7	
	comp=Z,194nm,20.8s,baz=62,slow=38						
MBAR	**Mbarara**	**18.05**	**226**	LR	LR	23 02 31.0	
	comp=Z,227nm,18.5s,baz=37,slow=38						
ASF	**Jabal al Asfar**	**20.87**	**344**	P	Pn	22 56 28.6	+6.8
	comp=Z,1.5nm,0.8s,baz=300,slow=6.2,SNR=3.8						
ASF				LR	LR	23 03 44.8	
	comp=Z,94nm,20.9s,baz=188,slow=34						
MMAI	**Mount Meron Ar**	**22.10**	**341**	LR	LR	23 04 08.9	
	comp=Z,90nm,20.6s,baz=165,slow=33						
GNI	**Garni**	**27.89**	**2**	LR	LR	23 08 60.0	
	comp=Z,49nm,18.6s,baz=77,slow=36						
BRTR	**Keskin Array B**	**28.86**	**344**	P	P	22 57 42.1	+6.4
	comp=Z,1.4nm,0.8s,baz=155,slow=9.0,SNR=9.6						
KBZ	**Khabaz**	**31.46**	**359**	P	P	22 58 05.3	+6.8
	comp=Z,1.5nm,0.8s,baz=188,slow=9.9,SNR=4.5						
KBZ				LR	LR	23 11 31.2	
	comp=Z,41nm,18.5s,baz=23,slow=37						
AAK	**Ala-Archa**	**40.45**	**36**	P	P	22 59 22.1	+6.3
	comp=Z,4.7nm,1.0s,baz=200,slow=6.0,SNR=6.3						
TORD	**Torodi Ar. Bea**	**40.95**	**276**	P	P	22 59 21.4	+1.3
	comp=Z,1.0nm,0.6s,baz=95,slow=7.2,SNR=7.6						
GERES	**GERESS Array B**	**44.22**	**332**	P	P	22 59 51.7	+5.3
	comp=Z,0.2nm,0.4s,baz=145,slow=4.9,SNR=4.3						
GERES				LR	LR	23 18 31.2	
	comp=Z,30nm,18.1s,baz=96,slow=36						
BOSA	**Boshof**	**44.28**	**203**	LR	LR	23 18 44.9	
	comp=Z,85nm,18.3s,baz=167,slow=38						
MKAR	**Makanchi Array**	**47.38**	**36**	P	P	23 00 14.1	+2.8
	comp=Z,3.0nm,0.9s,baz=247,slow=8.9,SNR=18						
FINES	**FINESS Array B**	**50.84**	**349**	LR	LR	23 24 17.3	
	comp=Z,36nm,19.0s,baz=156,slow=38						
ZALV	**Zalesovo Beam**	**52.83**	**29**	P	P	23 00 56.7	+4.2
	comp=Z,0.9nm,0.6s,baz=242,slow=6.2,SNR=6.3						
ZALV				LR	LR	23 27 04.8	
	comp=Z,120nm,19.4s,baz=248,slow=40						
CMAR	**Chiang Mai Arr**	**53.50**	**76**	P	**P**	**23 00 59.3**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=276,slow=8.2,SNR=6.1						
NOA	**NORSAR Array B**	**54.24**	**341**	LR	LR	23 25 19.5	
	comp=Z,33nm,18.2s,baz=125,slow=37						
ARCES	**ARCESS Array B**	**58.49**	**353**	LR	LR	23 29 44.9	
	comp=Z,53nm,18.2s,baz=67,slow=39						
SONM	**Songino Array**	**62.83**	**42**	P	P	23 02 06.6	+3.6
	comp=Z,0.9nm,0.8s,baz=242,slow=8.0,SNR=4.3						
TXAR	**Lajitas Array**	**128.09**	**323**	PKP	**PKPdf**	**23 10 42.8**	**-1.3**
	comp=Z,0.3nm,0.9s,baz=132,slow=1.3,SNR=3.7						

*ISCJB **25** 23:03:53.2±0.6, 41°.29N±0°.03×22°.72E±0°.05, h5km±7km, Error ellipse: s-maj=6.3km s-min=4.8km az=39.8*
*SKO **25** 23:03:53.1, 41°.31N×22°.73E, h15km, M1.2, ML1.5*
*ATH **25** 23:03:53.0, 41°.34N×22°.70E, h8km, MD2.8/6*
*CSEM **25** 23:03:53.5±0.2, 41°.28N×22°.75E, h5km, ML1.6, Error ellipse: s-maj=4.2km s-min=3.9km az=69.0*
*BEO **25** 23:03:55.3±0.8, 41°.31N×22°.69E, h0km±3km, ML1.6/6*
ISC 25 23:03:53.6±1.0**, 41°.30N**±0°.02×**22°.70E**±0°.03**, h14km**±7km**, n21, σ0s.60**/34**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**281**	*i* Pg	**Pg**	**23 03 56.5**	**-0.2**
VAY				*i* Sg	**Sg**	**23 03 58.9**	**0.0**
VAY				*e*Lg	Lg	23 03 59.0	
	comp=E,180nm,0.3s						
VAY				*e*Lg	Lg	23 03 59.1	
	comp=N,306nm,0.2s						
VAY	**Valandovo**	**0.10**	**281**	*i* Pg	**Pg**	**23 03 57.0**	**+0.2**
VAY				*e*Sg	**Sg**	**23 03 58.9**	**0.0**
VAY				*e*Lg	Lg	23 03 59.5	
	comp=N,306nm,0.2s						
GRG	**Griva**	**0.41**	**214**	*e*PB	**Pg**	**23 04 02.1**	**+0.3**
GRG				*e*SB	**Sg**	**23 04 07.8**	**+0.3**
GRG	**Griva**	**0.41**	**214**	*e*Pb	**Pg**	**23 04 02.1**	**+0.3**
GRG				*e*Sb	**Sg**	**23 04 07.8**	**+0.3**
SOH	**Sokhos**	**0.69**	**134**	*e*PB	**Pg**	**23 04 06.6**	**-0.4**
SOH	**Sokhos**	**0.69**	**134**	*e*Pb	**Pg**	**23 04 06.6**	**-0.4**
NVR	**Nevrokopi**	**0.87**	**86**	*e*PB	**Pg**	**23 04 10.1**	**-0.4**
NVR				*e*SB	**Sg**	**23 04 21.3**	**-0.7**
NVR	**Nevrokopi**	**0.87**	**86**	*e*Pb	**Pg**	**23 04 10.1**	**-0.4**
NVR				*e*Sb	**Sg**	**23 04 21.3**	**-0.7**
PLG	**Polygyros**	**1.08**	**148**	*e*PB	**Pb**	**23 04 13.7**	**-0.4**
PLG				*e*SB	**Sg**	**23 04 28.8**	**+0.2**
PLG	**Polygyros**	**1.08**	**148**	*e*Pb	**Pb**	**23 04 13.7**	**-0.4**
PLG				*e*Sb	**Sg**	**23 04 28.8**	**+0.2**
FNA	**Florina**	**1.13**	**243**	*e*PG	**Pb**	**23 04 14.2**	**-0.6**
FNA	**Florina**	**1.13**	**243**	*e*Pg	**Pb**	**23 04 14.2**	**-0.6**
VTS	**Vitosha**	**1.34**	**16**	*e*Pg	**Pg**	**23 04 19.4**	**0.0**
VTS				*e*Sg	**Sg**	**23 04 37.5**	**+0.6**
VTS	**Vitosha**	**1.34**	**16**	*e*Pg	**Pg**	**23 04 19.4**	**0.0**
VTS				*e*Sg	**Sg**	**23 04 37.5**	**+0.6**
PAIG	**Paliouri**	**1.56**	**151**	*e*PB	**Pb**	**23 04 22.9**	**+0.7**
PAIG	**Paliouri**	**1.56**	**151**	*e*Pb	**Pb**	**23 04 22.9**	**+0.7**
BARS	**Barje**	**1.65**	**337**	*e*Pn	**Pb**	**23 04 23.6**	**-0.1**
BARS				*e*Sg	**Sg**	**23 04 47.4**	**+0.6**
BARS	**Barje**	**1.65**	**337**	*e*Pn	**Pb**	**23 04 23.6**	**-0.1**
BARS				*e*Sg	**Sg**	**23 04 47.4**	**+0.6**
PLD	**Plovdiv**	**1.70**	**61**	*e*Sg	**Sg**	**23 04 49.6**	**+1.4**
PLD	**Plovdiv**	**1.70**	**61**	*e*Sg	**Sg**	**23 04 49.6**	**+1.4**
ZAPS	**Zavoj**	**1.97**	**359**	*e*Pn	**Pg**	**23 04 31.3**	**-0.1**
ZAPS				*e*Sn	**Sg**	**23 04 55.8**	**-1.2**

*CSEM **25** 23:11:13.9±0.6, 37°.84N×36°.31E, h2km, MD2.8, Error ellipse: s-maj=13.7km s-min=10.7km az=104.0*
*DDA **25** 23:11:14.9, 37°.64N×36°.28E, h5km, MD2.8*
*ISK **25** 23:11:15.4, 37°.67N×36°.35E, h4km, MD2.6*
ISC 25 23:11:15.1±1.2**, 37°.67N**±0°.03×**36°.29E**±0°.03**, h3km**±11km**, n20, σ0s.61**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.10**	**156**	*i* P	**Pg**	**23 11 17.0**	**-0.1**
ANDN				*i* S	**Sg**	**23 11 18.4**	**-0.1**
ANDN	**Andirin**	**0.10**	**156**	*i* P	**Pg**	**23 11 17.0**	**-0.1**
ANDN				*i* S	**Sg**	**23 11 18.4**	**-0.1**
KOZT	**Kozan**	**0.42**	**243**	*e*PG	**Pb**	**23 11 24.6**	**-0.5**
KOZT				*e*SG	**Sb**	**23 11 31.9**	**0.0**
KOZT	**Kozan**	**0.42**	**243**	*e*Pg	**Pb**	**23 11 24.7**	**-0.5**
KOZT				*e*Sg	**Sb**	**23 11 31.9**	**0.0**
AYKD	**Aykdinkavak**	**0.48**	**122**	*i* P	**Pg**	**23 11 24.3**	**0.0**
AYKD				*i* S	**Sg**	**23 11 30.5**	**-0.1**
KMRS	**Kahramanmaras**	**0.51**	**109**	*e*PG	**Pg**	**23 11 25.0**	**+0.1**
KMRS	**Kahramanmaras**	**0.51**	**109**	*e*Pg	**Pg**	**23 11 25.0**	**+0.1**
SARI	**SarD1z-Kayseri**	**0.74**	**8**	*e*PG	**Pb**	**23 11 30.4**	**-0.3**
SARI				*e*SG	**Sb**	**23 11 41.0**	**-0.3**
SARI	**SarD1z-Kayseri**	**0.74**	**8**	*e*Pg	**Pb**	**23 11 30.4**	**-0.3**
SARI				*e*Sg	**Sb**	**23 11 41.1**	**-0.3**
GAZ	**Gaziantep**	**0.89**	**124**	*e*PG	**Pg**	**23 11 32.6**	**+0.6**
GAZ				*e*SG	**Sg**	**23 11 44.6**	**+1.1**
GAZ	**Gaziantep**	**0.89**	**124**	*e*Pg	**Pg**	**23 11 32.7**	**+0.6**
GAZ				*e*Sg	**Sg**	**23 11 44.6**	**+1.1**
GZT	**Gaziantep**	**1.06**	**107**	*i* P	**Pn**	**23 11 36.5**	**-0.6**
GZT				*i* S	**Sn**	**23 11 51.8**	**-0.6**
KUZU	**Kuzuini**	**1.09**	**145**	*i* P	**Pn**	**23 11 37.2**	**-0.2**
KUZU				*i* S	**Sb**	**23 11 52.6**	**+1.2**
KUZU	**Kuzuini**	**1.09**	**145**	*i* P	**Pn**	**23 11 37.2**	**-0.2**
KUZU				*i* S	**Sb**	**23 11 52.6**	**+1.2**
BNN	**Bunyan**	**1.23**	**343**	*e*PN	**Pn**	**23 11 40.0**	**+0.7**
BNN	**Bunyan**	**1.23**	**343**	*e*Pn	**Pn**	**23 11 40.0**	**+0.7**
DARE	**Darende-Malaty**	**1.30**	**46**	*e*PN	**Pn**	**23 11 40.5**	**+0.3**
DARE	**Darende-Malaty**	**1.30**	**46**	*e*Pn	**Pn**	**23 11 40.5**	**+0.3**
MYA	**Malataya**	**1.81**	**68**	*e*PN	**Pb**	**23 11 47.9**	**-1.0**
MYA	**Malataya**	**1.81**	**68**	*e*Pn	**Pb**	**23 11 47.9**	**-1.0**

*ISCJB **25** 23:17:17.5±0.6, 42°.80S±0°.07×72°.3W±0°.1, h10km, mb4.2/9, MS3.5/2, Error ellipse: s-maj=14.2km s-min=6.7km az=36.1*
*IDC **25** 23:17:17.9±0.9, 42°.80S×72°.58W, h0km, mb4.0/6, mb1 4.3/7, mb1mx4.1/18, mbtmp4.0/7, ML4.1/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/20, Error ellipse: s-maj=36.6km s-min=14.3km az=118.0*
*NEIC **25** 23:17:19.1±0.5, 42°.80S×72°.49W, h10km, mb4.4/5, Error ellipse: s-maj=15.9km s-min=9.4km az=105.0*
ISC 25 23:17:19.2±0.7**, 42°.82S**±0°.09×**72°.4W**±0°.1**, h10km, n23, σ1s.03**/26**, mb4.2**/9**, Southern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.50**	**34**	*e*Pn	**Pn**	**23 18 01.6**	**+1.6**
PLCA				Pg	**Pb**	**23 18 04.5**	**+0.2**
PLCA				Lg	Lg	23 18 39.0	
PLCA				*e*Sg	**Sg**	**23 18 39.8**	**+0.2**
PLCA	**Paso Flores**	**2.50**	**34**	Pn	**Pn**	**23 18 02.1**	**+2.1**
	8.8nm,0.3s,baz=223,slow=16,SNR=85						
PLCA				Pg	**Pb**	**23 18 04.5**	**+0.2**
	8.8nm,0.3s,baz=223,slow=17,SNR=164						
PLCA				Lg	Lg	23 18 39.0	
	48nm,0.3s,baz=106,slow=20,SNR=15						
PLCA				LR	LR	23 19 13.2	
	comp=Z,483nm,20.8s,baz=164,slow=45						
TRQA	**Tornquist**	**9.26**	**63**	*e*Pn	**Pn**	**23 19 33.0**	**+0.3**
TRQA				Sn	**Sn**	**23 21 15.9**	**-1.1**
LVC	**Limon Verde**	**20.36**	**9**	*e*P	**P**	**23 21 56.0**	**-0.1**
	6.0nm,0.9s						
CPUP	**Villa Florida**	**20.55**	**42**	LR	LR	23 30 44.4	
	comp=Z,142nm,18.6s,baz=32,slow=39						
PMSA	**Palmer Station**	**22.50**	**171**	*e*P	**P**	**23 22 18.2**	**-0.3**
LPAZ	**La Paz**	**26.70**	**9**	*e*P	**P**	**23 22 59.3**	**+0.1**
	7.2nm,1.5s						
LPAZ	**La Paz**	**26.70**	**9**	P	**P**	**23 23 01.4**	**+2.2**
	1.4nm,0.8s,baz=180,slow=6.1,SNR=5.9						
QSPA	**South Pole Qui**	**47.43**	**180**	P	**P**	**23 25 54.2**	**+0.6**
QSPA	**South Pole Qui**	**47.43**	**180**	P	**P**	**23 25 54.2**	**+0.6**
	9.1nm,1.1s,baz=149,slow=7.6,SNR=10						
VNDA	**Vanda**	**55.42**	**192**	P	**P**	**23 26 54.5**	**+1.5**
VNDA	**Vanda**	**55.42**	**192**	P	**P**	**23 26 54.5**	**+1.5**
	3.2nm,1.2s,baz=152,slow=12,SNR=4.1						
VNDA				LR	LR	23 47 10.3	
	comp=Z,60nm,19.3s,baz=302,slow=32						
LRAL	**Lakeview Retre**	**76.67**	**347**	*e*P	**P**	**23 29 09.5**	**-0.5**
	3.3nm,0.8s						
TXAR	**Lajitas Array**	**77.35**	**332**	P	**P**	**23 29 13.6**	**-0.5**
TXAR	**Lajitas Array**	**77.35**	**332**	P	**P**	**23 29 13.6**	**-0.5**
	0.6nm,0.8s,baz=159,slow=8.0,SNR=8.2						
LAZ	**Ladron**	**83.16**	**332**	*e*P	**P**	**23 29 45.6**	**+0.2**
	5.4nm,1.7s						
TORD	**Torodi Ar. Bea**	**87.52**	**70**	P	**P**	**23 30 06.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**87.52**	**70**	P	**P**	**23 30 06.5**	**-0.9**
	0.7nm,1.0s,baz=230,slow=5.8,SNR=2.8						
ECSD	**EROS Data Cent**	**88.86**	**343**	*e*P	**P**	**23 30 11.9**	**-1.1**
	3.8nm,0.9s						
PDAR	**Pinedale Array**	**91.51**	**334**	P	**P**	**23 30 25.6**	**-0.1**
PDAR	**Pinedale Array**	**91.51**	**334**	P	**P**	**23 30 25.6**	**-0.1**
	0.5nm,0.7s,baz=156,slow=7.8,SNR=4.8						
ILAR	**Eielson Array**	**121.84**	**331**	PKP	**PKPdf**	**23 36 11.1**	**-1.2**
ILAR	**Eielson Array**	**121.84**	**331**	PKP	**PKPdf**	**23 36 11.1**	**-1.2**
	0.4nm,0.8s,baz=109,slow=1.2,SNR=6.1						

ROM 25 23:17:21.0±0.2**, 42°.40N**×**13°.35E, h6km**±1km**, Md1.5**/5**, Error ellipse: s-maj=2.9km s-min=1.0km az=1.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**140**	Pg	Pg	23 17 23.0	+0.3
AQU				Sg	Sg	23 17 23.9	0.0
	63nm,0.1s						
FIAM	**Fiamignano**	**0.22**	**233**	Pg	Pg	23 17 25.9	+0.4
FIAM				Sg	Sg	23 17 29.7	+1.2
	2.0nm,0.7s						
FAGN	**Fagnano**	**0.22**	**127**	Pg	Pg	23 17 26.0	+0.6
FAGN				Sg	Sg	23 17 29.9	+1.5

*LDG **25** 23:27:01.3±0.1, 39°.39N×73°.86E, h10km, Mb4.5/25, Ms3.1/6, Error ellipse: s-maj=13.7km s-min=3.8km az=44.0*
*IDC **25** 23:27:03.0±0.7, 39°.43N×73°.78E, h0km, mb4.1/17, mb1 4.3/23, mb1mx4.2/34, mbtmp4.1/23, ML3.8/6, MS3.2/12, Ms1 3.2/12, ms1mx3.0/43, Error ellipse: s-maj=12.6km s-min=9.8km az=121.0*
*BJI **25** 23:27:04.5, 39°.44N×73°.54E, h23km, mb4.3/11, ML3.9/6*
*ISCJB **25** 23:27:06.9±0.2, 39°.58N±0°.02×73°.63E±0°.03, h29km, mb4.4/62, MS3.3/6, Error ellipse: s-maj=3.8km s-min=3.1km az=1.2*
*NNC **25** 23:27:09.1±3.9, 39°.79N×73°.59E, h6km±16km, mb4.2, mpv4.3, Error ellipse: s-maj=27.5km s-min=11.1km az=174.0*
*MOS **25** 23:27:10.6±0.9, 39°.64N×73°.70E, h65km, mb4.9/35, Error ellipse: s-maj=6.5km s-min=4.2km az=104.2*
*TEH **25** 23:27:11.4, 39°.78N×73°.43E, h40km, ML4.7*
*NEIC **25** 23:27:11.3±0.7, 39°.64N×73°.69E, h57km±6km, mb4.8/31, Error ellipse: s-maj=7.2km s-min=5.7km az=162.0*
ISC 25 23:27:08.4±0.3**, 39°.62N**±0°.03×**73°.62E**±0°.04**, h29km, n300, σ1s.59**/303**, mb4.5**/62**, MS3.4**/6**, 28C-26D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.82**	**92**	Pg	Pn	23 27 31.8	-6.2
KSH				Sg	Sn	23 27 49.8	-11
KSH				smax	smax		
	comp=N,1µm,0.3s						
KSH				smax	smax		
	comp=E,1µm,0.8s						
AML	**Almayashu**	**2.52**	**1**	*i* PN	**Pn**	**23 27 49.7**	**+2.0**
AML	**Almayashu**	**2.52**	**1**	P	**Pn**	**23 27 49.7**	**+2.0**
	SNR=160						
UCH	**Uchtor**	**2.70**	**14**	*i* PN	**Pn**	**23 27 52.8**	**+2.5**
UCH	**Uchtor**	**2.70**	**14**	P	**Pn**	**23 27 52.9**	**+2.5**
	SNR=33						
KZA	**Kyzart**	**2.75**	**26**	*i* PN	**Pn**	**23 27 52.8**	**+1.8**
KZA	**Kyzart**	**2.75**	**26**	P	**Pn**	**23 27 52.9**	**+1.8**
	SNR=157						
EKS2	**Erkin-Say**	**3.05**	**2**	*e*PN	**Pn**	**23 27 57.8**	**+3.0**
EKS2				*e*		23 28 38.1	
EKS2	**Erkin-Say**	**3.05**	**2**	*e*Pn	**Pn**	**23 27 57.8**	**+3.0**
EKS2				*e*Sn	**Sb**	**23 28 38.1**	**-0.7**
EKS2	**Erkin-Say**	**3.05**	**2**	P	**Pn**	**23 27 57.5**	**+2.7**
	SNR=58						
AAK	**Ala-Archa**	**3.09**	**12**	*i* PN	**Pn**	**23 27 58.3**	**+2.9**
AAK	**Ala-Archa**	**3.09**	**12**	*e*Pn	**Pn**	**23 27 58.6**	**+3.2**
AAK				*e*Sn	**Sb**	**23 28 40.3**	**+0.3**
AAK				Lg	Lg	23 28 45.3	
AAK	**Ala-Archa**	**3.09**	**12**	P	**Pn**	**23 27 58.3**	**+2.9**
	SNR=124						
AAK	**Ala-Archa**	**3.09**	**12**	Pn	**Pn**	**23 27 58.3**	**+2.9**
	comp=E,45nm,0.3s,baz=168,slow=7.1,SNR=210						
AAK				Sn	**Sb**	**23 28 38.4**	**-1.6**
	comp=E,21nm,0.3s,baz=138,slow=12,SNR=6.3						
AAK				Lg	Lg	23 28 45.3	
	comp=E,41nm,0.3s,baz=59,slow=18,SNR=12						
AAK				LR	LR	23 29 22.4	
	comp=E,418nm,20.2s,baz=196,slow=43						
KBK	**Karagaybulak**	**3.20**	**18**	*i* PN	**Pn**	**23 27 59.9**	**+2.9**
KBK	**Karagaybulak**	**3.20**	**18**	P	**Pn**	**23 27 59.9**	**+2.9**
	SNR=24						
ULHL	**Ulahol**	**3.30**	**36**	*i* PN	**Pn**	**23 28 01.3**	**+3.0**
ULHL	**Ulahol**	**3.30**	**36**	P	**Pn**	**23 28 01.3**	**+3.0**
	SNR=38						
FRU	**Bishkek**	**3.30**	**13**	*e*PN	**Pn**	**23 28 01.0**	**+2.8**
FRU				*e*S	**Sb**	**23 28 43.0**	**-3.1**
FRU				pmax	pmax		
	comp=Z,320nm,1.0s						
FRU				pmax	pmax		
	comp=E,710nm,1.2s						
CHMS	**Chumysh**	**3.49**	**14**	*i* PN	**Pn**	**23 28 03.4**	**+2.6**
CHMS	**Chumysh**	**3.49**	**14**	P	**Pn**	**23 28 03.4**	**+2.6**
	SNR=85						
TKM2	**Tokmak 2**	**3.62**	**24**	⇑Pn	**Pn**	**23 28 05.1**	**+2.3**
	comp=E,72nm,0.6s						
TKM2				⇓Lg	Lg	23 29 00.3	
	comp=E,186nm,0.7s						
TKM2	**Tokmak 2**	**3.62**	**24**	*i* PN	**Pn**	**23 28 05.1**	**+2.3**
TKM2	**Tokmak 2**	**3.62**	**24**	*e*Pn	**Pn**	**23 28 05.6**	**+2.8**
TKM2				*e*Sn	**Sn**	**23 28 49.3**	**+4.6**
TKM2	**Tokmak 2**	**3.62**	**24**	P	**Pn**	**23 28 05.1**	**+2.3**
	SNR=63						
USP	**Ospenovka**	**3.71**	**10**	*i* PN	**Pn**	**23 28 06.0**	**+2.2**
USP	**Ospenovka**	**3.71**	**10**	P	**Pn**	**23 28 06.0**	**+2.2**
	SNR=21						
KK31	**Karatay Array**	**4.20**	**327**	⇑Pn	**Pn**	**23 28 12.5**	**+2.0**
	comp=E,10nm,0.3s,baz=124,slow=13,SNR=768						
KK31				⇑Pg	**Pb**	**23 28 24.1**	**+2.5**
	comp=E,20nm,0.3s,baz=146,slow=15,SNR=11						
KK31				⇓Lg	Lg	23 29 18.5	
	comp=E,149nm,0.8s,baz=150,slow=27,SNR=4.5						
KKAR	**Karatay Array**	**4.20**	**327**	*e*PN	**Pn**	**23 28 12.7**	**+2.2**
KKAR	**Karatay Array**	**4.20**	**327**	*e*Pn	**Pn**	**23 28 12.7**	**+2.2**
KKAR				*e*Sn	**Sn**	**23 28 53.8**	**-4.8**
KNDC	**Almaty**	**4.39**	**34**	⇓Pg	**Pb**	**23 28 25.5**	**+0.6**
	comp=E,98nm,0.6s						
KNDC				⇑Lg	Lg	23 29 23.2	
	comp=E,751nm,1.2s						
AAA	**Alma-Ata**	**4.43**	**33**	*e*PN	**Pb**	**23 28 25.4**	**-0.1**
AAA				pmax	pmax		
	comp=Z,151nm,0.7s						
CEP	**Cherat**	**5.94**	**194**	P	**Pn**	**23 28 37.3**	**+2.7**
CEP				S	Sn	23 29 49.0	+7.3
CHCP	**Chirah Chowk**	**5.95**	**183**	P	Pn	23 28 38.0	+3.4
KBL	**Kabul**	**6.25**	**217**	*e*PN	**Pn**	**23 28 41.5**	**+2.7**
KBL	**Kabul**	**6.25**	**217**	*e*Pn	**Pn**	**23 28 41.5**	**+2.7**
KBL				*e*Sn	**Sn**	**23 29 51.5**	**+2.1**
THW	**Thamme Wali**	**6.97**	**193**	P	Pn	23 28 51.8	+3.1
DLH	**Dalhousie**	**7.31**	**164**	*e*PKP	**Pn**	**23 28 54.0**	**+0.5**
DLH				*e*S	**Sn**	**23 30 17.0**	**+1.4**
DHRM	**DHARAMSHALA**	**7.66**	**163**	*e*PKP	**Pn**	**23 28 58.3**	**-0.1**
DHRM				*e*S	**Sn**	**23 30 27.4**	**+3.1**
DHRM				AML	AML	23 30 39.4	
	comp=Z,64nm,0.7s						
SMLA	**Simla**	**8.95**	**160**	*e*PKP	**Pn**	**23 29 14.5**	**-1.2**
SMLA				AMB	AMB	23 29 19.7	
	comp=Z,13nm,0.5s						
SMLA				*e*S	**Sn**	**23 30 57.6**	**+2.1**
SMLA				AML	AML	23 30 58.1	
	comp=Z,27nm,0.5s						
MK31	**Makanchi Array**	**9.56**	**39**	Pn	**Pn**	**23 29 26.1**	**+1.9**
	comp=Z,1.8nm,0.7s,baz=220,slow=12,SNR=11						
MK31				⇓Pg		23 30 00.7	
	comp=Z,1.8nm,0.5s,baz=226,slow=13,SNR=3.6						
MK31				⇓Lg	Lg	23 32 08.6	
	comp=Z,28nm,1.3s,baz=223,slow=29,SNR=6.4						
MK31	**Makanchi Array**	**9.56**	**39**	*e*P	**Pn**	**23 29 25.9**	**+1.8**
MK31				*e*		23 31 12.8	
MK31	**Makanchi Array**	**9.56**	**39**	*e*Pn	**Pn**	**23 29 25.9**	**+1.8**
MK31				*e*Sn	**Sn**	**23 31 12.8**	**+2.2**
MKAR	**Makanchi Array**	**9.56**	**39**	*i* P	Pn	23 29 27.7	+3.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**9.56**	**39**	Pn	**Pn**	**23 29 25.4**	**+1.3**
MKAR				Lg	Lg	23 32 07.3	
MKAR	**Makanchi Array**	**9.56**	**39**	Pn	**Pn**	**23 29 25.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=226,slow=15,SNR=12						
MKAR				Lg	Lg	23 32 07.3	
	comp=Z,0.5nm,0.3s,baz=227,slow=34,SNR=4.5						
MKAR				LR	LR	23 33 25.3	
	comp=Z,108nm,21.6s,baz=225,slow=40						
IMYA	**Miami**	**11.16**	**257**	*e*P	**Pn**	**23 29 43.7**	**-2.4**
NDI	**New Delhi**	**11.30**	**164**	*e*x	**Pn**	**23 29 46.7**	**-1.3**
NDI				AMB	AMB	23 29 47.8	
	comp=Z,7.7nm,0.8s						
NDI				*e*S	**Sn**	**23 31 52.3**	**-1.0**
WMQ	**Urumqi**	**11.33**	**64**	*e*P	Pn	23 29 53.8	+5.5
WMQ				PP	PnPn	23 30 03.5	+7.5
WMQ				S	Sn	23 32 00.8	+6.9
WMQ				SS	**SnSn**	**23 32 15.3**	**+10**
WMQ				PcP	**PcP**	**23 35 44.3**	**+3.0**
WMQ				PcS	**PcS**	**23 39 16.8**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KUR16	**Kurchatov Arra**	**11.54**	**16**	⇓Pn	**Pn**	**23 29 53.3**	**+2.3**
	comp=Z,0.2nm,0.9s						
KUR16				⇓Lg	Lg	23 33 08.0	
	comp=Z,4.2nm,1.1s						
KURBB	**Kurchatov Arra**	**11.54**	**16**	Pn	**Pn**	**23 29 50.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=15						
KURBB				Lg	Lg	23 33 11.0	
	comp=Z,0.1nm,0.3s,baz=200,slow=30,SNR=13						
KURBB				LR	LR	23 34 34.9	
	comp=Z,149nm,20.6s,baz=200,slow=39						
KURK	**Kurchatov**	**11.64**	**16**	⇓Pn	**Pn**	**23 29 54.8**	**+2.3**
	comp=Z,3.4nm,0.9s						
KURK				⇑Lg	Lg	23 33 14.0	
	comp=Z,169nm,1.5s						
KURK	**Kurchatov**	**11.64**	**16**	*ce*P	**Pn**	**23 29 55.2**	**+2.7**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KURK	**Kurchatov**	**11.64**	**16**	*e*Pn	**Pn**	**23 29 55.6**	**+3.1**
KURK				Lg	Lg	23 33 11.0	
IPAY	**Payeh**	**11.95**	**259**	*e*P	**Pn**	**23 29 54.8**	**-2.3**
IAKL	**Akhelmad**	**12.09**	**260**	*e*P	**Pn**	**23 29 56.4**	**-2.5**
ISHV	**Shirvan**	**12.63**	**266**	*e*P	Pn	23 30 02.8	-3.5
VOSK	**Vostochnaya**	**13.24**	**353**	⇓Pn	**Pn**	**23 30 12.8**	**-1.5**
	comp=Z,5.4nm,0.8s						
VOSK				⇓Lg	Lg	23 34 02.9	
	comp=Z,19nm,1.2s						
BVA0	**Borovoye Array**	**13.60**	**352**	⇑Pn	**Pn**	**23 30 17.8**	**-1.4**
	comp=Z,0.9nm,0.6s,baz=166,slow=14,SNR=51						
BVA0				⇓Lg	Lg	23 34 13.9	
	comp=Z,3.2nm,1.1s						
BVAR	**Borovoye Array**	**13.60**	**352**	P	**Pn**	**23 30 17.5**	**-1.7**

BVAR Borovoye Array 13.60 352 Pn Pn 23 30 17.5 -1.7
BVAR Lg Lg 23 34 18.8
BVAR Borovoye Array 13.60 352 Pn Pn 23 30 17.5 -1.7
comp=Z,0.6nm,0.3s,baz=163,slow=14,SNR=52
BVAR Lg Lg 23 34 18.8
comp=Z,0.4nm,0.3s,baz=161,slow=27,SNR=3.7
BVAR LR LR 23 35 18.2
comp=Z,43nm,19.8s,baz=203,slow=36
BRVK Borovoye 13.64 351 ⇑Pn Pn 23 30 18.1 -1.6
comp=Z,18nm,0.8s
BRVK ⇓Lg Lg 23 34 15.8
comp=Z,39nm,1.0s
BRVK Borovoye 13.64 351 *ce*P Pn 23 30 18.2 -1.6
BRVK pmax pmax
comp=Z,9.0nm,0.7s
BRVK Borovoye 13.64 351 *e*Pn Pn 23 30 18.6 -1.1
AB31 Akbulak array 13.70 319 ⇑Pn Pn 23 30 19.6 -1.1
comp=Z,4.8nm,0.6s
ABKAR Akbulak array 13.70 319 *e*Pn Pn 23 30 19.2 -1.4
ZRNK Zerenda 13.71 348 ⇑Pn Pn 23 30 19.7 -1.1
comp=Z,5.7nm,0.7s
ZRNK ⇑Lg Lg 23 34 18.0
comp=Z,21nm,1.4s
PYUN Piuthan 13.87 143 *e*P Pn 23 30 17.7 -5.5
comp=Z,35nm,0.5s
DANN Dangsing 14.03 140 *e*P Pn 23 30 19.8 -5.7
comp=Z,18nm,0.4s
KOLN Koldanda 14.43 142 *e*P Pn 23 30 25.7 -5.2
comp=Z,14nm,0.5s
KKN Kakani 15.26 137 *e*P Pn 23 30 36.1 -5.9
comp=Z,11nm,0.5s
AKTO Aktyubinsk 15.41 320 ⇓Pn Pn 23 30 42.7 -1.1
comp=Z,1.6nm,0.8s
AKTO Aktyubinsk 15.41 320 P P 23 30 42.8 -0.9
AKTO Aktyubinsk 15.41 320 Pn Pn 23 30 42.8 -0.9
AKTO Aktyubinsk 15.41 320 Pn Pn 23 30 42.8 -0.9
comp=Z,0.8nm,0.3s,baz=133,slow=13,SNR=28
AKTO LR LR 23 37 09.1
comp=Z,97nm,19.1s,baz=186,slow=39
GUN Gumba 15.48 135 *e*P Pn 23 30 38.3 -6.8
comp=Z,14nm,0.5s
PKIN Phulchoki 15.49 137 *e*P Pn 23 30 39.3 -5.8
comp=Z,5.7nm,0.4s
PKI Pulchoki 15.50 137 *e*P Pn 23 30 39.2 -6.1
ZAA0 Zalesovo Array 16.23 24 *e*Pn Pn 23 30 53.6 -0.6
ZALV Zalesovo Beam 16.23 24 *e*P Pn 23 30 54.3 +0.1
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 16.23 24 Pn Pn 23 30 53.0 -1.2
ZALV Lg Lg 23 35 42.3
ZALV Zalesovo Beam 16.23 24 Pn Pn 23 30 53.0 -1.2
comp=Z,0.6nm,0.3s,baz=211,slow=12,SNR=22
ZALV Lg Lg 23 35 42.3
comp=Z,0.2nm,0.3s,baz=207,slow=32,SNR=3.5
ZALV LR LR 23 37 58.2
comp=Z,36nm,19.8s,baz=221,slow=40
NVS Novosibirsk 16.55 20 *e*P Pn 23 30 57.6 -0.6
NVS pmax pmax
comp=Z,15nm,1.1s
NVS pmax pmax
comp=N,19nm,1.4s
NVS pmax pmax
comp=E,4.0nm,0.6s
RAMN Ramite 16.63 136 *e*P Pn 23 30 52.0 -7.7
TAPN Taplejung 16.94 132 *e*P Pn 23 30 56.4 -7.2
ODAN Odare 17.14 134 *e*P Pn 23 30 58.7 -7.3
HVS Khovu-Aksy 18.15 44 *c i*P P 23 31 19.6 +1.2
HVS pmax pmax
comp=Z,53nm,1.3s
SVE Sverdlovsk 19.21 338 ⇓*e*P Pn 23 31 31.6 +0.6
SVE pmax pmax
comp=Z,18nm,1.4s
ARU Arti 19.53 334 *d i*P P 23 31 33.7 +0.3
ARU S Sn 23 35 15.2 +2.2
ARU pmax pmax
comp=Z,12nm,1.2s
GTA Gaotai 20.20 82 *e*P P 23 31 42.0 +1.1
GTA pP pP 23 31 46.0 -2.7
GTA sP sP 23 31 48.0 -4.4
GTA pmax pmax
comp=Z,5.0nm,1.6s
ISRB Sarab 20.31 273 *e*P Pn 23 31 43.7 -0.7
IHRS Heris 20.68 275 *e*P Pn 23 31 47.6 -1.2
DGRG David-gareji 21.51 284 P P 23 31 56.5 +1.5
ISHB Shabestar 21.79 275 *e*P P 23 31 55.4 -2.8
TBLG Delisi 21.96 285 *e*P P 23 32 02.4 +2.6
TBLG Delisi 21.96 285 P P 23 32 02.4 +2.6
DUS Dusheti 21.97 286 P P 23 32 05.8 +5.9
GNI Garni 22.13 281 *e*P P 23 32 02.4 +0.7
GNI Garni 22.13 281 P P 23 32 01.9 +0.2
comp=Z,3.1nm,0.5s,baz=165,slow=12,SNR=3.4
GOR Gori 22.41 286 P P 23 32 06.5 +1.8
HYB Hyderabad 22.53 168 *i* P P 23 32 03.0 -3.0
ONI Oni 22.87 287 P P 23 32 13.0 +3.5
KBZ Khabaz 23.24 290 P P 23 32 14.6 +1.5
KBZ Khabaz 23.24 290 P P 23 32 14.6 +1.5
KBZ Khabaz 23.24 290 P P 23 32 14.6 +1.5
comp=Z,1.9nm,0.6s,baz=106,slow=8.8,SNR=6.4
KIV Kislovodsk 23.39 291 *e*P P 23 32 14.5 -0.3
KIV *e*S S 23 36 27.7 +1.7
KIV pmax pmax
comp=Z,4.0nm,0.6s
ZAK Zakamensk 23.43 53 *e*P P 23 32 14.9 -0.2
MIB Mutribah 23.64 254 *e*P P 23 32 18.1 +0.9
MIB AMb AMB 23 32 25.9
comp=Z,21nm,0.7s
NAY Al-Naaiem 24.01 253 *e*P P 23 32 21.0 +0.4
NAY AMb AMB 23 32 22.5
comp=Z,10nm,0.7s
TLY Talaya 24.03 50 *e*P P 23 32 23.5 +2.8
RST Umm Al-Ruwaisa 24.05 253 *e*P P 23 32 21.4 +0.3
RST AMb AMB 23 32 28.4
comp=Z,115nm,0.8s
LZH Lanzhou 24.07 89 *e*P P 23 32 22.5 +1.1
LZH pP pP 23 32 28.5 -1.3
LZH sP sP 23 32 30.5 -2.9
LZH pmax pmax
comp=Z,16nm,1.4s
SONM Songino Array 24.93 60 P P 23 32 27.8 -1.3
SONM Songino Array 24.93 60 P P 23 32 27.8 -1.3
comp=Z,1.1nm,0.8s,baz=262,slow=9.4,SNR=5.6
SONM LR LR 23 42 57.2
comp=Z,59nm,19.8s,baz=242,slow=38
ANN Anapa 27.15 293 *e*P P 23 32 46.4 -2.6
ANN pmax pmax
comp=Z,40nm,1.3s
RAYN Ar Rayn 28.67 244 *e*P P 23 33 03.3 +0.5
comp=Z,10nm,1.6s
OBN Obninsk 29.07 315 *e*P P 23 33 06.3 +0.3
OBN pmax pmax
comp=Z,6.0nm,1.1s
SIM Simferopol' 29.49 293 P P 23 33 11.9 +2.0
SIM pmax pmax
comp=Z,11nm,0.8s
KLMR Klimovskoe 29.90 327 *e*P P 23 33 12.5 -0.8
KLMR pmax pmax
comp=Z,12nm,1.3s
CHTO Chiang Mai 30.12 126 P P 23 33 17.2 +1.5
CHTO Chiang Mai 30.12 126 P P 23 33 17.2 +1.5
CMAR Chiang Mai Arr 30.39 127 P P 23 33 14.3 -3.8
CMAR Chiang Mai Arr 30.39 127 P P 23 33 14.3 -3.8
comp=Z,0.6nm,0.6s,baz=311,slow=8.3,SNR=4.4
BR131 Keskin Array S 30.60 283 *e*P P 23 33 20.7 +0.8
comp=Z,3.9nm,0.8s
BRTR Keskin Array B 30.60 283 P P 23 33 20.6 +0.6
BRTR PcP PcP 23 36 18.8 +0.9
BRTR Keskin Array B 30.60 283 P P 23 33 20.6 +0.6
comp=Z,3.5nm,0.8s,baz=97,slow=7.9,SNR=19
BRTR PcP PcP 23 36 18.8 +0.9
comp=Z,0.6nm,0.8s,baz=101,slow=5.1,SNR=4.0
AKASG Malin Array Be 32.74 305 *i* P P 23 33 38.7 +0.3
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 32.74 305 P P 23 33 38.8 +0.3
AKASG Malin Array Be 32.74 305 P P 23 33 38.8 +0.3
comp=Z,2.4nm,0.4s,baz=81,slow=7.1,SNR=11
AK01 Malin Array Si 32.75 305 *e*P P 23 33 38.0 -0.4
KIEV Kiev 32.75 305 *e*P P 23 33 38.6 +0.1
KIEV pmax pmax
comp=Z,4.0nm,0.6s
KIEV Kiev 32.75 305 *e*P P 23 33 38.6 +0.1
comp=Z,3.7nm,0.6s
TLCR 33.22 295 ⇑P P 23 33 43.4 +0.8
TLCR 33.22 295 ⇑*i*P P 23 33 43.4 +0.8
CFR Carcaliu 33.69 295 ⇑P P 23 33 47.9 +1.1
CFR Carcaliu 33.69 295 ⇑*i*P P 23 33 47.8 +1.0
JOF Joensuu 34.30 327 *e*P P 23 33 52.2 +0.4
JOF pmax pmax
comp=Z,3.0nm,0.6s
JOF Joensuu 34.30 327 *ep* P 23 33 52.2 +0.4
comp=Z,3.4nm,0.6s
TESR Tescani 34.58 297 ⇓*i*P P 23 33 55.5 +1.0
VRI Vrincioaia 34.59 296 ⇑P P 23 33 55.5 +0.8
VRI Vrincioaia 34.59 296 ⇑*i*P P 23 33 55.5 +0.8
PLOR Plostina 34.65 296 ⇓P P 23 33 57.3 +2.1
PLOR Plostina 34.65 296 ⇓*i*P P 23 33 57.3 +2.1
ISR Istrita 34.82 295 ⇑P P 23 33 59.3 +2.6
ISR Istrita 34.82 295 ⇑*i*P P 23 33 59.3 +2.6
MLR Muntele Rosu 35.19 296 ⇓*i*P P 23 34 01.9 +2.0
BURAR Bucovina Array 35.45 299 ⇓*i*P P 23 34 03.2 +1.1
BUR08 Bucovina Ar. S 35.46 299 *e*P P 23 34 02.7 +0.5
DOPR Dopca 35.51 296 ⇓*i*P P 23 34 20.4 +18
VOIR 35.82 296 ⇑P P 23 34 07.2 +1.9
VOIR 35.82 296 ⇑*i*P P 23 34 07.2 +1.9
ARR Arges 36.12 296 ⇑*i*P P 23 34 09.4 +1.6
FINES FINESS Array B 36.15 323 P P 23 34 08.3 +0.6
FINES FINESS Array B 36.15 323 P P 23 34 08.3 +0.6
comp=Z,3.1nm,0.4s,baz=108,slow=12,SNR=71
FINES LR LR 23 49 28.6
comp=Z,61nm,19.3s,baz=88,slow=37
KAF Kangasniemi 36.22 324 *e*P P 23 34 07.8 -0.6
KAF pmax pmax
comp=Z,2.0nm,0.6s
KAF Kangasniemi 36.22 324 *ep* P 23 34 07.8 -0.6
comp=Z,1.8nm,0.6s
LOT Lotru 36.71 296 ⇑*i*P P 23 34 15.0 +2.1
KWP Kalwaria Pacla 36.95 303 ⇓P P 23 34 15.6 +0.8
KWP Kalwaria Pacla 36.95 303 ⇓*i*P P 23 34 15.6 +0.8
DRGR 37.24 298 ⇑P P 23 34 19.1 +1.7
DRGR 37.24 298 ⇑*i*P P 23 34 19.1 +1.7
KOLS Kolonicke sedl 37.29 302 *e*P P 23 34 18.0 +0.3
KOLS Kolonicke sedl 37.29 302 *e*P P 23 34 18.0 +0.3
UZH Uzhgorod 37.30 301 *e*P P 23 34 18.3 +0.5
UZH *e* 23 34 37.1
QIZ Qiongzhong 37.31 113 P P 23 34 17.8 -0.4
QIZ S S 23 40 02.8 -1.3
VTS Vitosha 37.65 291 ⇓P P 23 34 22.9 +1.9
VTS Vitosha 37.65 291 ⇓*i*P P 23 34 22.9 +1.9
BZS Buzias 38.17 297 ⇓P P 23 34 27.1 +1.9
IDI Anoyia 38.55 279 *e*P P 23 34 28.8 +0.3
comp=Z,8.5nm,1.0s
KEV Kevo 38.73 336 *e*P P 23 34 30.1 +0.5
KEV Kevo 38.73 336 *ep* P 23 34 29.1 -0.4
comp=Z,2.7nm,0.6s
KEV Kevo 38.73 336 *e*P P 23 34 30.1 +0.5
comp=Z,80nm,1.7s
ARCES ARCESS Array B 39.11 335 P P 23 34 33.7 +0.9
ARCES ARCESS Array B 39.11 335 P P 23 34 33.7 +0.9
comp=Z,5.4nm,0.5s,baz=110,slow=8.9,SNR=85
ARCES LR LR 23 51 51.9
comp=Z,24nm,20.9s,baz=236,slow=38
VYHS Vyhne 39.60 302 *e*P P 23 34 38.9 +1.8
VYHS pmax pmax
comp=Z,44nm,3.9s
VYHS Vyhne 39.60 302 *e*P P 23 34 38.9 +1.8
MORC Moravsky Berou 40.27 304 *e*P P 23 34 42.8 +0.1
MORC pmax pmax
comp=Z,14nm,2.1s
MORC Moravsky Berou 40.27 304 *e*P P 23 34 42.8 +0.1
comp=Z,14nm,2.1s
HFS Hagfors 41.96 320 LR LR 23 52 05.8
comp=Z,57nm,19.2s,baz=178,slow=36
TIXI Tiksi 42.11 23 ⇑*i*P P 23 34 56.9 -0.6
TIXI pmax pmax
comp=Z,5.0nm,0.6s
BRG Berggiesshubel 42.40 306 *e*P P 23 35 01.1 +1.0
comp=Z,3.8nm,0.9s
BRG Berggiesshubel 42.40 306 *e*P P 23 35 01.1 +1.0
BRG pmax pmax
comp=Z,4.0nm,0.9s
GEC2 GERESS Array S 42.90 303 *e*P P 23 35 05.2 +0.9
GEC2 GERESS Array S 42.90 303 *e*P P 23 35 05.2 +0.9
GERES GERESS Array B 42.90 303 P P 23 35 05.5 +1.2
GERES GERESS Array B 42.90 303 P P 23 35 05.5 +1.2
comp=Z,1.0nm,0.5s,baz=63,slow=7.6,SNR=14
GERES LR LR 23 54 58.2
comp=Z,43nm,18.4s,baz=281,slow=39
CLL Collm 42.92 307 *e*P P 23 35 04.0 -0.3
CLL pmax pmax
comp=Z,3.0nm,0.7s
CLL Collm 42.92 307 *e*P P 23 35 04.0 -0.3
comp=Z,3.0nm,0.7s
CLL *e*PP PP 23 36 43.0 -1.0
KHC Kasperske Hory 42.92 303 *e*P P 23 35 04.5 +0.1
KHC Kasperske Hory 42.92 303 *e*P P 23 35 03.9 -0.6
comp=Z,6.5nm,1.3s
KHC Kasperske Hory 42.92 303 *e*P P 23 35 04.5 +0.1
NB2 NORSAR Subarra 43.20 321 P P 23 35 06.4 -0.1
comp=Z,4.7nm,0.6s,baz=91,slow=8.6
NOA NORSAR Array B 43.20 321 P P 23 35 06.7 +0.2
NOA NORSAR Array B 43.20 321 P P 23 35 06.7 +0.2
comp=Z,5.4nm,0.7s,baz=91,slow=8.0,SNR=39
NOA LR LR 23 53 58.3
comp=Z,40nm,19.8s,baz=305,slow=37
CUC Castrocucco 43.72 290 *e*P P 23 35 11.4 +0.5
comp=Z,5.0nm,0.7s
CDF Champ du Feu 47.15 304 *e*P P 23 35 38.1 0.0
comp=Z,8.8nm,1.0s
CDF Champ du Feu 47.15 304 *e*P P 23 35 38.1 0.0
CDF pmax pmax
comp=Z,9.0nm,1.0s
CDF Champ du Feu 47.15 304 *e*P P 23 35 38.1 0.0
comp=Z,8.8nm,1.0s
HINF Hinteralfeld 47.58 303 *e*P P 23 35 42.0 +0.6
comp=Z,6.8nm,0.8s
HINF Hinteralfeld 47.58 303 *e*P P 23 35 42.0 +0.6
HINF pmax pmax
comp=Z,7.0nm,0.8s
HINF Hinteralfeld 47.58 303 *e*P P 23 35 42.0 +0.6
comp=Z,6.8nm,0.8s
PGF Pioggiola 47.73 296 *e*P P 23 35 42.9 +0.2
PGF Pioggiola 47.73 296 *e*P P 23 35 42.9 +0.2
PGF Pioggiola 47.73 296 *e*P P 23 35 42.9 +0.2
HAU Haudompre 47.85 303 *e*P P 23 35 43.6 +0.1
comp=Z,6.6nm,0.7s
HAU *e*R
comp=Z,36nm,18.0s
HAU Haudompre 47.85 303 *e*P P 23 35 43.6 +0.1
HAU pmax pmax
comp=Z,7.0nm,0.7s
HAU Haudompre 47.85 303 *e*P P 23 35 43.6 +0.1
comp=Z,6.6nm,0.7s
PAGF Fort de Pagny 48.10 304 *e*P P 23 35 46.7 +1.3
comp=Z,2.1nm,0.8s
PAGF Fort de Pagny 48.10 304 *e*P P 23 35 46.7 +1.3
comp=Z,2.1nm,0.8s
GIVF Givet 48.26 306 *e*P P 23 35 47.3 +0.8
comp=Z,5.6nm,0.5s
GIVF Givet 48.26 306 *e*P P 23 35 47.3 +0.8
GIVF pmax pmax
comp=Z,6.0nm,0.5s
GIVF Givet 48.26 306 *e*P P 23 35 47.3 +0.8
comp=Z,5.6nm,0.5s
LPG La Plagne 48.33 300 *e*P P 23 35 47.5 0.0
comp=Z,14nm,0.7s
LPG La Plagne 48.33 300 *e*P P 23 35 47.5 0.0
LPG pmax pmax
comp=Z,14nm,0.7s
LPG La Plagne 48.33 300 *e*P P 23 35 47.5 0.0
comp=Z,14nm,0.7s
LPL La Plagne 48.33 300 *e*P P 23 35 47.7 +0.2
LPL La Plagne 48.33 300 *e*P P 23 35 47.7 +0.2
LPL La Plagne 48.33 300 *e*P P 23 35 47.7 +0.2
SBF Sospel 48.38 298 *e*P P 23 35 47.6 -0.1
comp=Z,29nm,0.8s
SBF Sospel 48.38 298 *e*P P 23 35 47.6 -0.1
SBF pmax pmax
comp=Z,29nm,0.8s
SBF Sospel 48.38 298 *e*P P 23 35 47.6 -0.1
comp=Z,29nm,0.8s
BAIF Baives 48.65 307 *e*P P 23 35 50.3 +0.8
comp=Z,9.7nm,0.7s
BAIF Baives 48.65 307 *e*P P 23 35 50.3 +0.8
BAIF pmax pmax
comp=Z,10.0nm,0.7s
BAIF Baives 48.65 307 *e*P P 23 35 50.3 +0.8
comp=Z,9.7nm,0.7s
FRF La Foret Royal 49.02 298 *e*P P 23 35 52.5 0.0
comp=Z,9.5nm,0.8s
FRF La Foret Royal 49.02 298 *e*P P 23 35 52.5 0.0
FRF pmax pmax
comp=Z,10.0nm,0.8s
FRF La Foret Royal 49.02 298 *e*P P 23 35 52.5 0.0
comp=Z,9.5nm,0.8s
SMRF Simiane la Rot 49.61 298 *e*P P 23 35 57.3 +0.2
comp=Z,8.0nm,0.8s
SMRF Simiane la Rot 49.61 298 *e*P P 23 35 57.3 +0.2
comp=Z,8.0nm,0.8s
SMF Signal de Mont 49.89 302 *e*P P 23 35 58.8 -0.3
comp=Z,3.9nm,0.5s
SMF Signal de Mont 49.89 302 *e*P P 23 35 58.8 -0.3
SMF pmax pmax
comp=Z,4.0nm,0.5s
SMF Signal de Mont 49.89 302 *e*P P 23 35 58.8 -0.3
comp=Z,3.9nm,0.5s
VIVF Saint-Julien-l 49.92 300 *e*P P 23 35 59.6 +0.2
comp=Z,6.8nm,0.7s
VIVF Saint-Julien-l 49.92 300 *e*P P 23 35 59.6 +0.2
VIVF pmax pmax
comp=Z,7.0nm,0.7s
VIVF Saint-Julien-l 49.92 300 *e*P P 23 35 59.6 +0.2
comp=Z,6.8nm,0.7s
SSF Saint Saulge 49.97 303 *e*P P 23 35 59.3 -0.4
comp=Z,8.1nm,0.9s
SSF Saint Saulge 49.97 303 *e*P P 23 35 59.3 -0.4
SSF pmax pmax
comp=Z,8.0nm,0.9s
SSF Saint Saulge 49.97 303 *e*P P 23 35 59.3 -0.4
comp=Z,8.1nm,0.9s
KEST Kesra 50.05 287 P P 23 36 01.5 +0.9
KEST Kesra 50.05 287 P P 23 36 01.5 +0.9
comp=Z,0.8nm,0.8s,baz=268,slow=17,SNR=3.7
AVF Avril sur Loir 50.16 303 *e*P P 23 36 01.1 0.0
comp=Z,14nm,0.7s
AVF Avril sur Loir 50.16 303 *e*P P 23 36 01.1 0.0
AVF pmax pmax
comp=Z,14nm,0.7s
AVF Avril sur Loir 50.16 303 *e*P P 23 36 01.1 0.0
comp=Z,14nm,0.7s
BGF Bois d'Agland 50.56 302 *e*P P 23 36 04.0 -0.2
comp=Z,5.2nm,0.7s
BGF Bois d'Agland 50.56 302 *e*P P 23 36 04.0 -0.2
BGF pmax pmax
comp=Z,5.0nm,0.7s
BGF Bois d'Agland 50.56 302 *e*P P 23 36 04.0 -0.2
comp=Z,5.2nm,0.7s
LASF Ste Croix 50.74 299 *e*P P 23 36 05.6 0.0
LASF Ste Croix 50.74 299 *e*P P 23 36 05.6 0.0
TCF Toulx Ste Croi 51.07 302 *e*P P 23 36 08.2 +0.1
comp=Z,8.4nm,0.8s
TCF Toulx Ste Croi 51.07 302 *e*P P 23 36 08.2 +0.1
TCF pmax pmax
comp=Z,8.0nm,0.8s
TCF Toulx Ste Croi 51.07 302 *e*P P 23 36 08.2 +0.1
comp=Z,8.4nm,0.8s
CAF Calviac 51.64 301 *e*P P 23 36 12.8 +0.5
comp=Z,9.7nm,0.9s
CAF Calviac 51.64 301 *e*P P 23 36 12.8 +0.5
CAF pmax pmax
comp=Z,10.0nm,0.9s
CAF Calviac 51.64 301 *e*P P 23 36 12.8 +0.5
comp=Z,9.7nm,0.9s
LDF La Druitiere 51.79 306 *e*P P 23 36 13.1 -0.3
comp=Z,9.9nm,0.5s
LDF La Druitiere 51.79 306 *e*P P 23 36 13.1 -0.3
LDF pmax pmax
comp=Z,10.0nm,0.5s
LDF La Druitiere 51.79 306 *e*P P 23 36 13.1 -0.3
comp=Z,9.9nm,0.5s
RJF Les Rejaudoux 51.87 301 *e*P P 23 36 14.6 +0.6
comp=Z,5.8nm,0.7s
RJF *e*R
comp=Z,54nm,17.0s
RJF Les Rejaudoux 51.87 301 *e*P P 23 36 14.6 +0.6
RJF pmax pmax
comp=Z,6.0nm,0.7s
RJF Les Rejaudoux 51.87 301 *e*P P 23 36 14.6 +0.6
comp=Z,5.8nm,0.7s
FLN La Foliniere 51.96 306 *e*P P 23 36 13.6 -1.0
FLN *e*R
comp=Z,38nm,19.7s
FLN La Foliniere 51.96 306 *e*P P 23 36 13.6 -1.0
FLN La Foliniere 51.96 306 *e*P P 23 36 13.6 -1.0
MTLF Montolieu 52.11 299 *e*P P 23 36 16.1 +0.2
comp=Z,13nm,0.9s
MTLF Montolieu 52.11 299 *e*P P 23 36 16.1 +0.2
MTLF pmax pmax
comp=Z,13nm,0.9s
MTLF Montolieu 52.11 299 *e*P P 23 36 16.1 +0.2
comp=Z,13nm,0.9s
GRR Gorron 52.32 306 *e*P P 23 36 16.9 -0.4
comp=Z,16nm,0.7s
GRR Gorron 52.32 306 *e*P P 23 36 16.9 -0.4
GRR pmax pmax
comp=Z,16nm,0.7s
GRR Gorron 52.32 306 *e*P P 23 36 16.9 -0.4
comp=Z,16nm,0.7s
LFF La Frestale 52.51 301 *e*P P 23 36 19.2 +0.4
comp=Z,9.5nm,0.5s
LFF La Frestale 52.51 301 *e*P P 23 36 19.2 +0.4
LFF pmax pmax
comp=Z,10.0nm,0.5s
LFF La Frestale 52.51 301 *e*P P 23 36 19.2 +0.4
comp=Z,9.5nm,0.5s
SGMF Saint Gilles 53.43 306 *e*P P 23 36 25.4 -0.1
comp=Z,8.8nm,0.5s
SGMF Saint Gilles 53.43 306 *e*P P 23 36 25.4 -0.1
SGMF pmax pmax
comp=Z,9.0nm,0.5s
SGMF Saint Gilles 53.43 306 *e*P P 23 36 25.4 -0.1
comp=Z,8.8nm,0.5s
ROSF Rostrenen 53.85 306 *e*P P 23 36 28.3 -0.2
ROSF Rostrenen 53.85 306 *e*P P 23 36 28.3 -0.2
ROSF Rostrenen 53.85 306 *e*P P 23 36 28.3 -0.2
QUIF Quistinic 53.93 306 *e*P P 23 36 28.9 -0.3
QUIF Quistinic 53.93 306 *e*P P 23 36 28.9 -0.3
QUIF Quistinic 53.93 306 *e*P P 23 36 28.9 -0.3
ETSF Etsaut 54.16 299 *e*P P 23 36 31.3 +0.3
ETSF Etsaut 54.16 299 *e*P P 23 36 31.3 +0.3
ETSF Etsaut 54.16 299 *e*P P 23 36 31.3 +0.3
BILL Bilibino 54.90 27 *e*P P 23 36 36.0 +0.1
BILL *i* 23 37 36.8
BILL *i* 23 38 38.3
BILL pmax pmax
comp=Z,10.0nm,1.2s
ESDC Sonseca Array 57.85 297 P P 23 36 57.3 -0.2
ESDC Sonseca Array 57.85 297 P P 23 36 57.3 -0.2
comp=Z,1.2nm,0.6s,baz=57,slow=7.4,SNR=11
TOA0 Torodi Ar. Sit 67.85 269 *e*P P 23 38 03.1 -1.2
TORD Torodi Ar. Bea 67.85 269 P P 23 38 02.9 -1.4
TORD Torodi Ar. Bea 67.85 269 P P 23 38 02.9 -1.4
comp=Z,2.0nm,0.6s,baz=50,slow=5.5,SNR=28
ILAR Eielson Array 71.21 17 P P 23 38 23.1 -1.2
ILAR Eielson Array 71.21 17 P P 23 38 23.1 -1.2
comp=Z,1.2nm,0.7s,baz=324,slow=4.5,SNR=23
DBIC Dimbokro 76.90 268 *e*P P 23 38 57.8 -0.4
YKA Yellowknife Ar 78.02 4 P P 23 39 03.5 -0.3
YKA Yellowknife Ar 78.02 4 P P 23 39 03.4 -0.3
comp=Z,1.3nm,0.5s,baz=350,slow=5.8,SNR=37
WRA Warramunga Arr 81.95 124 P P 23 39 23.8 -1.8
WRA Warramunga Arr 81.95 124 P P 23 39 23.8 -1.8
comp=Z,1.0nm,0.4s,baz=325,slow=5.2,SNR=8.0
ASAR Alice Springs 84.40 127 P P 23 39 36.4 -1.8
ASAR Alice Springs 84.40 127 P P 23 39 36.4 -1.8
comp=Z,0.7nm,0.7s,baz=316,slow=4.8,SNR=9.7

KRSC 25 23:31:15.9±1.0, 50.06°N×156.49°E, h5km±5km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.67**	**339**	P		P	Pb	23 31 29.7	-0.3
SKR				*i* S		S	Sb	23 31 39.8	+0.2
MTVR	**Mutnovka**	**2.65**	**23**	P		P	Pn	23 32 00.0	+0.5
MTVR				*i* S		S	Sn	23 32 31.8	-0.3
RUS	**Russkaya**	**2.69**	**27**	P		P	Pn	23 32 00.2	+0.3
RUS				*i* S		S	Sn	23 32 32.0	-0.8
UGLR	**Uglovaya**	**3.47**	**24**	P		P	Pn	23 32 12.0	+1.3
UGLR				*i* S		S	Sn	23 32 53.4	+1.1
KOK	**Koryaka**	**3.50**	**22**	P		P	Pn	23 32 12.2	+1.1
KOK				*i* S		S	Sn	23 32 54.2	+1.2
AVH	**Avacha**	**3.50**	**23**	P		P	Pn	23 32 12.5	+1.4
AVH				*i* S		S	Sn	23 32 54.3	+1.4
KRER	**Koryakskii**	**3.54**	**23**	P		P	Pn	23 32 13.4	+1.6
SDLR	**Sedlovina**	**3.55**	**24**	P		P	Pn	23 32 13.1	+1.3

SDLR *i* S Sn 23 32 55.3 +1.0

IDC 25 23:42:29.5±2.0, 3.77N×126.97E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/24, mbtmp3.6/4, Error ellipse: s-maj=182.3km s-min=22.3km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.65**	**163**	P	P	23 47 51.8	-0.4
	2.3nm,0.8s,baz=343,slow=11,SNR=8.8						
ASAR	**Alice Springs**	**28.09**	**166**	P	P	23 48 23.6	+0.4
	0.1nm,0.3s,baz=349,slow=8.5,SNR=2.9						
MKAR	**Makanchi Array**	**57.66**	**325**	P	P	23 52 21.0	-0.8
	0.2nm,0.4s,baz=117,slow=7.7,SNR=4.5						
KURBB	**Kurchatov Arra**	**61.84**	**327**	P	P	23 52 51.0	+0.6
	0.5nm,0.5s,baz=130,slow=6.4,SNR=5.5						

*ATH **25** 23:54:33.6, 34.21N×25.23E, h28km±1km, MD3.8/7*
*DDA **25** 23:54:36.0, 34.19N×25.84E, h25km, MD3.4*
*CSEM **25** 23:54:35.9±0.8, 34.21N×25.31E, h40km, MD3.8, Error ellipse: s-maj=19.8km s-min=6.6km az=13.0*

ISC 25 23:54:31.9±2.5, 34.1N±0.1×25.28E±0.0, h26km±15km, n28, σ1s83/37, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**1.01**	**338**	*e*PN	**Pb**	**23 54 51.0**	**+0.2**
SIVA				*e*SN	**Sn**	**23 55 03.1**	**-0.7**
SIVA	**Sivas**	**1.01**	**338**	*e*Pn	**Pb**	**23 54 51.0**	**+0.2**
SIVA				*e*Sn	**Sn**	**23 55 03.1**	**-0.7**
NPS	**Neapolis**	**1.21**	**13**	*e*PN	**Pb**	**23 54 54.2**	**+0.1**
NPS				*e*SN	**Sb**	**23 55 09.5**	**+0.1**
NPS	**Neapolis**	**1.21**	**13**	*e*Pn	**Pb**	**23 54 54.2**	**+0.1**
NPS				*e*Sn	**Sb**	**23 55 09.5**	**+0.1**
IDI	**Anoyia**	**1.25**	**345**	*e*PN	**Pb**	**23 54 54.8**	**0.0**
IDI				*e*SN	**Sb**	**23 55 10.0**	**-0.5**
IDI	**Anoyia**	**1.25**	**345**	*e*Pn	**Pb**	**23 54 54.8**	**0.0**
IDI				*e*Sn	**Sb**	**23 55 10.0**	**-0.5**
VAM	**Vamos**	**1.60**	**326**	*e*PN	**Pb**	**23 55 00.8**	**+0.1**
VAM				*e*SN	**Sb**	**23 55 19.7**	**-0.7**
VAM	**Vamos**	**1.60**	**326**	*e*Pn	**Pb**	**23 55 00.8**	**+0.1**
VAM				*e*Sn	**Sb**	**23 55 19.7**	**-0.7**
KARP	**Karpathos**	**2.13**	**46**	*e*PN	**Pb**	**23 55 08.7**	**-1.1**
KARP	**Karpathos**	**2.13**	**46**	*e*Pn	**Pb**	**23 55 08.7**	**-1.1**
ANKY	**Antikythira Is**	**2.41**	**318**	*e*PN	**Pb**	**23 55 12.0**	**-2.6**
ANKY	**Antikythira Is**	**2.41**	**318**	*e*Pn	**Pb**	**23 55 12.0**	**-2.6**
KYTH	**Kithira**	**2.87**	**321**	*e*PN	**Pn**	**23 55 18.2**	**+2.3**
KYTH	**Kithira**	**2.87**	**321**	*e*Pn	**Pn**	**23 55 18.2**	**+2.3**
ARG	**Arkhangelos**	**3.16**	**47**	*e*PN	**Pn**	**23 55 22.9**	**+3.0**
ARG	**Arkhangelos**	**3.16**	**47**	*e*Pn	**Pn**	**23 55 22.9**	**+3.0**
VLI	**Veliai**	**3.26**	**325**	*e*PN	Pn	23 55 23.6	+2.3
VLI	**Veliai**	**3.26**	**325**	*e*Pn	Pn	23 55 23.6	+2.3
AKAS	**Kas**	**4.14**	**58**	*i* P	**Pn**	**23 55 35.0**	**+1.4**
AKAS				*i* S	Sn	23 56 14.6	-6.6
AKAS	**Kas**	**4.14**	**58**	*i* P	**Pn**	**23 55 35.0**	**+1.4**
GOLH	**Golhisar**	**4.70**	**47**	*i* P	**Pn**	**23 55 41.8**	**+0.7**
GOLH				*i* S	**Sn**	**23 56 30.4**	**-4.5**
GOLH	**Golhisar**	**4.70**	**47**	*i* P	**Pn**	**23 55 41.8**	**+0.7**
KORT	**Korkueli**	**5.06**	**53**	*i* P	**Pn**	**23 55 48.9**	**+2.8**
KORT				*i* S	**Sn**	**23 56 42.6**	**-1.2**
KORT	**Korkueli**	**5.06**	**53**	*i* P	**Pn**	**23 55 48.9**	**+2.8**
KORT				*i* S	**Sn**	**23 56 42.6**	**-1.2**
GAZI	**Gazipasa**	**6.15**	**68**	*i* P	**Pn**	**23 56 01.7**	**+0.7**
GAZI				*e*S	Sn	23 56 55.2	-15
GAZI	**Gazipasa**	**6.15**	**68**	*i* P	**Pn**	**23 56 01.7**	**+0.7**
ERMK	**Ermenek**	**6.74**	**66**	*e*P	**Pn**	**23 56 12.4**	**+3.1**
ERMK	**Ermenek**	**6.74**	**66**	*e*P	**Pn**	**23 56 12.4**	**+3.1**

IDC 26 00:03:52.2±1.9, 6.75S×129.10E, h0km, mb3.8/1, mb1 4.1/3, mb1mx3.6/19, mbtmp3.9/3, ML4.0/2, Error ellipse: s-maj=114.3km s-min=30.6km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**6.37**	**162**	P	Sn	00 06 38.1	-3.0
	baz=4.0,SNR=3.9						
KDU	**Kakadu**	**6.77**	**151**	P	Sn	00 06 46.1	-4.7
	baz=4.6,SNR=5.1						
KNRA	**Kununurra**	**8.88**	**182**	P	Pn	00 06 07.6	+5.7
	baz=1.8,SNR=30						
FITZ	**Fitzroy Crossi**	**11.78**	**196**	P	Pn	00 06 47.0	+5.4
	baz=4.6,SNR=5.2						
WRA	**Warramunga Arr**	**14.06**	**159**	Pn	Pn	00 07 12.2	-0.7
	0.7nm,0.3s,baz=338,slow=13,SNR=7.3						
WRA				Sn	Sn	00 09 37.3	-13
	0.5nm,0.3s,baz=331,slow=23,SNR=5.7						
ASAR	**Alice Springs**	**17.44**	**165**	P	Pn	00 07 57.5	+0.4
	0.5nm,0.3s,baz=344,slow=11,SNR=26						
ASAR				S	Sn	00 11 02.4	-10
	0.1nm,0.3s,baz=220,slow=39,SNR=3.2						
MKAR	**Makanchi Array**	**67.53**	**327**	P	P	00 14 50.4	0.0
	0.4nm,0.3s,baz=124,slow=7.6,SNR=12						

IDC 26 00:17:54.4±1.6, 6.84S×155.39E, h0km, mb3.7/6, mb1 4.0/6, mb1mx3.7/18, mbtmp3.7/6, Error ellipse: s-maj=58.6km s-min=26.4km az=128.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.23**	**235**	P	P	00 23 13.1	-0.1
	0.5nm,0.4s,baz=59,slow=9.3,SNR=3.8						
ASAR	**Alice Springs**	**26.57**	**229**	P	P	00 23 34.7	+0.3
	0.2nm,0.3s,baz=62,slow=8.5,SNR=4.1						
CMAR	**Chiang Mai Arr**	**61.07**	**295**	P	P	00 28 10.9	+0.3
	1.5nm,0.6s,baz=126,slow=5.7,SNR=6.7						
SONM	**Songino Array**	**69.42**	**327**	P	P	00 29 04.4	-0.1
	0.2nm,0.3s,baz=116,slow=8.2,SNR=2.2						
ILAR	**Eielson Array**	**83.09**	**21**	P	P	00 30 21.3	-0.4
	0.3nm,0.8s,baz=249,slow=5.2,SNR=5.5						
YKA	**Yellowknife Ar**	**96.02**	**28**	P	P	00 31 24.3	+0.9
	0.3nm,0.8s,baz=265,slow=5.9,SNR=4.9						
TORD	**Torodi Ar. Bea**	**153.36**	**286**	PKPbc	PKPbc	00 37 55.0	-0.8
	0.5nm,0.7s,baz=50,slow=2.9,SNR=3.1						

JMA 26 00:34:34.4±0.2, 35.20N×140.19E, h23km±2km, M2.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTR	**Katsuura**	**0.12**	**117**	P	Pb	00 34 38.7	-0.2
KTR				*e*S	Sb	00 34 42.1	+0.2
JCN	**Nagara**	**0.22**	**3**	P	Pb	00 34 40.5	+0.4
JCN				*e*S	Sb	00 34 45.0	+1.0
BSO4	**Boso 4**	**0.24**	**150**	P	Pb	00 34 41.0	+0.7
TATJ	**Tateyama 2**	**0.30**	**236**	P	Pb	00 34 41.5	+0.3
TATJ				*e*S	Sn	00 34 48.2	-0.8
JYO	**Yokosk**	**0.43**	**273**	P	Pb	00 34 43.5	+0.1
JYO				*e*S	Sn	00 34 51.8	-0.5
BSO3	**Boso 3**	**0.48**	**146**	P	Pb	00 34 44.3	+0.5
BSO3				*e*S	Sn	00 34 53.2	+0.3
BSO2	**Boso 2**	**0.64**	**134**	*e*S	Sn	00 34 56.4	-0.6
MAT	**Matsushiro**	**2.10**	**310**	P	Pn	00 35 08.3	+0.2
MAT				*e*S	Sb	00 35 35.6	-1.8

IDC 26 00:36:33.6±54.0, 16.60S×175.52W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/19, mbtmp3.9/3, Error ellipse: s-maj=1017.0km s-min=180.3km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.68**	**241**	P	P	00 44 24.3	+0.2
	0.5nm,0.3s,baz=83,slow=13,SNR=4.2						
WRA	**Warramunga Arr**	**47.50**	**259**	P	P	00 45 11.6	-0.1
	0.3nm,0.4s,baz=96,slow=7.2,SNR=6.2						
ASAR	**Alice Springs**	**47.81**	**253**	P	P	00 45 12.9	-0.4
	3.1nm,0.7s,baz=86,slow=8.4,SNR=35						

IDC 26 00:47:08.0±1.2, 38.70N×110.11E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.5/27, mbtmp3.5/8, ML3.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/42, Error ellipse: s-maj=45.2km s-min=16.7km az=61.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**9.53**	**345**	Pn	Pn	00 49 26.6	0.0
	0.2nm,0.3s,baz=160,slow=12,SNR=10.0						
SONM				Lg	Lg	00 52 10.4	
	0.2nm,0.3s,baz=160,slow=22,SNR=5.4						
MKAR	**Makanchi Array**	**21.89**	**301**	P	P	00 52 02.4	-0.1
	1.0nm,0.7s,baz=97,slow=13,SNR=8.9						
CMAR	**Chiang Mai Arr**	**22.39**	**209**	P	P	00 52 07.8	-0.2
	0.5nm,0.3s,baz=13,slow=8.3,SNR=4.0						
ZALV	**Zalesovo Beam**	**23.01**	**320**	P	P	00 52 13.9	-0.5
	0.3nm,0.4s,baz=116,slow=6.6,SNR=3.5						
ASAJ	**Asahikawa**	**24.86**	**67**	LR	LR	01 01 53.8	
	comp=Z,109nm,21.7s,baz=274,slow=36						
KURBB	**Kurchatov Arra**	**25.23**	**309**	P	P	00 52 36.0	+0.5
	1.1nm,0.7s,baz=109,slow=11,SNR=8.4						
BRTR	**Keskin Array B**	**57.48**	**297**	P	P	00 56 58.9	-0.2
	0.8nm,0.9s,baz=99,slow=7.6,SNR=5.9						
WRA	**Warramunga Arr**	**62.60**	**154**	P	P	00 57 33.7	-0.4
	0.2nm,0.4s,baz=349,slow=8.2,SNR=4.8						
ASAR	**Alice Springs**	**65.92**	**156**	P	P	00 57 56.1	+0.3
	0.7nm,0.7s,baz=342,slow=6.5,SNR=7.4						

*IDC **26** 00:49:36.4±0.5, 21.16S×175.91W, h0km, mb4.4/16, mb1 4.7/17, mb1mx4.6/23, mbtmp4.4/17, ML3.1/1, MS5.0/29, Ms1 5.0/29, ms1mx4.9/36, Error ellipse: s-maj=21.3km s-min=16.8km az=149.0*
*NEIC **26** 00:49:39.5±0.3, 21.01S×177.02W, h35km, mb4.6/38, Error ellipse: s-maj=13.6km s-min=8.0km az=161.0*
*ISCJB **26** 00:49:40.0±0.3, 21.20S±0.09×176.20W±0.07, h33km, mb4.5/56, MS5.0/30, Error ellipse: s-maj=13.6km s-min=8.7km az=157.9*
*AUST **26** 00:49:42.3±11.0, 20.94S×175.54W, h27km±1km, Error ellipse: s-maj=3.4km s-min=1.4km az=357.0*
*GCMT **26** 00:49:42.8±0.1, 21.26S×175.58W, h12km, MW5.5, Moment Tensor Solution. s95,c167; s99,c208; Moment tensor: Scale 10^{17}Nm; M_{rr}2.38±.02; $M_{\theta\theta}$-0.87±.02; $M_{\phi\phi}$-1.52±.02; $M_{r\theta}$-0.20±.05; $M_{\theta\phi}$0.47±.02; $M_{\phi r}$-0.19±.05; Best double couple: $M_0$2.10000×10^{17} NP1:ϕ_s328.00000°, δ44.00000°, λ83.00000°. NP2:ϕ_s158.00000°, δ46.00000°, λ97.00000°. Principal axes: T 2.4100, Plg85.0000°, Azm141.0000°; N -0.6500, Plg5.0000°, Azm333.0000°; P -1.7600, Plg1.0000°, Azm243.0000°; Data Used: II IU IC G CN. Surface waves from 113 sta.*
*SZGRF **26** 00:49:43.8, 20.06S×175.69W, h33km, Tonga Islands BJI **26** 00:49:49.1, 21.10S×176.90W, h99km, mB5.2/4, mb4.7/4*

ISC 26 00:49:39.9±0.4, 21.08S±0.1×176.98W±0.07, h35km, n209, σ1s84/173, mb4.5/50, MS5.0/31, 15C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.72**	**304**	Pn	**Pn**	**00 51 01.5**	**-1.0**
	216nm,1.2s						
NIUE	**Niue**	**6.90**	**75**	P	Pn	00 51 02.7	-16
	baz=5.6,SNR=8.7						
RAO	**Raoul Island**	**8.24**	**186**	LR	LR	00 53 49.9	
	comp=Z,2μm,21.1s,baz=209,slow=31						
AFI	**Afiamalu**	**8.64**	**36**	LR	LR	00 54 21.6	
	comp=Z,12μm,20.5s,baz=191,slow=35						
DZM	**Mont Dzumac**	**15.46**	**263**	*e*P	**sP**	**00 53 33.9**	**+0.6**
	218nm,1.1s						
DZM				*e*LQ	LQ	00 56 43.1	
	9μm,27.1s						
DZM				*e*LR	LR	00 57 25.7	
	20μm,24.9s						
DZM	**Mont Dzumac**	**15.46**	**263**	*e*Pn	P	00 53 24.1	+4.4
	253nm,1.5s						
DZM	**Mont Dzumac**	**15.46**	**263**	Pn	P	00 53 29.3	+10
	0.1nm,0.3s,baz=56,slow=15,SNR=2.8						
RAR	**Rarotonga**	**16.05**	**94**	*e*Pn	**Pn**	**00 53 18.4**	**-4.7**
RAR	**Rarotonga**	**16.05**	**94**	LR	LR	00 57 19.9	
	comp=Z,8μm,20.9s,baz=135,slow=31						
URZ	**Urewera**	**17.93**	**195**	LR	LR	00 59 54.3	
	comp=Z,20μm,19.3s,baz=277,slow=34						
RPZ	**Rata Peaks**	**24.73**	**201**	LR	LR	01 04 42.6	
	comp=Z,13μm,18.5s,baz=32,slow=36						
HNR	**Honiara**	**25.03**	**294**	LR	LR	01 03 56.2	
	comp=Z,1μm,18.6s,baz=129,slow=33						
TBI	**Tubuai**	**25.57**	**100**	*e*LQ	LQ	00 59 46.3	
	6μm,26.8s						
TBI				*e*LR	LR	01 00 53.3	
	11μm,28.0s,baz=270						
TBI				*e*T	T	01 19 23.5	
	7.7nm,0.4s						
PAE	**Paea**	**26.05**	**87**	*e*T	T	01 20 04.0	
	9.7nm,0.4s						
PPT2	**Papeete2**	**26.07**	**87**	*e*LQ	LQ	00 59 56.0	
	5μm,25.0s						
PPT2				*e*LR	LR	01 01 03.1	
	13μm,27.0s,baz=257						
TVO	**Taravao**	**26.33**	**88**	*e*T	T	01 20 16.2	
	14nm,0.4s						
RMQ	**Roma**	**31.77**	**253**	P	sP	00 56 16.8	+1.4
	baz=33,SNR=4.7						
CTA	**Charters Tower**	**34.40**	**265**	P	pP	00 56 35.0	+0.8
CTA	**Charters Tower**	**34.40**	**265**	P	**pP**	**00 56 35.0**	**+0.8**
	11nm,0.7s,baz=108,slow=8.9,SNR=2.8						
CTA				LR	LR	01 09 35.0	
	comp=Z,4μm,19.8s,baz=92,slow=34						
CTAO	**Charters Tower**	**34.40**	**265**	P	**P**	**00 56 25.1**	**+1.0**
QLP	**Quilpie**	**35.83**	**253**	P	sP	00 56 50.5	-0.2
	baz=37,SNR=4.2						
PMG	**Port Moresby**	**36.39**	**283**	P	**P**	**00 56 39.8**	**-1.4**
PMG	**Port Moresby**	**36.39**	**283**	P	**pP**	**00 56 52.6**	**+1.2**
	18nm,0.8s,baz=121,slow=5.9,SNR=3.2						
PMG				LR	LR	01 10 53.4	
	comp=Z,3μm,18.6s,baz=312,slow=34						
MTSU	**Mount Surprise**	**36.52**	**268**	P	sP	00 56 58.2	+1.4
	baz=38,SNR=6.3						
STKA	**Stephens Creek**	**38.43**	**245**	LR	LR	01 11 44.8	
	comp=Z,5μm,18.2s,baz=81,slow=34						
COEN	**Coen**	**38.57**	**274**	*e*P	**P**	**00 56 59.1**	**-0.7**
	392nm,1.5s						
COEN	**Coen**	**38.57**	**274**	P	pP	00 57 11.9	+2.0
	baz=40,SNR=5.4						
RKT	**Rikitea**	**38.89**	**101**	*e*S	S	01 02 33.1	-25
	293nm,26.5s						
RKT				*e*LQ	LQ	01 05 20.7	
	880nm,25.8s						
RKT				*e*LR	LR	01 07 02.0	
	8μm,28.0s,baz=266						
RKT				*e*T	T	01 35 58.6	
	6.1nm,0.4s						
JAY	**Jayapura**	**45.12**	**288**	P	pP	00 58 04.4	+0.7
	baz=46,SNR=7.3						
AS31	**Alice Springs**	**45.33**	**257**	*e*P	**P**	**00 57 54.5**	**-0.4**
ASAR	**Alice Springs**	**45.34**	**257**	P	**pP**	**00 58 02.5**	**-2.9**
ASAR				PcP	**PP**	**00 59 40.6**	**-0.8**
ASAR	**Alice Springs**	**45.34**	**257**	P	**pP**	**00 58 02.4**	**-2.9**
	3.8nm,0.9s,baz=94,slow=7.4,SNR=14						
ASAR				PcP	**PP**	**00 59 40.6**	**-0.8**
	1.1nm,0.7s,baz=109,slow=4.7,SNR=4.9						
ASAR				LR	LR	01 15 14.0	
	comp=Z,3μm,21.8s,baz=134,slow=33						
WRAB	**Tennant Creek**	**45.47**	**262**	P	**P**	**00 57 54.9**	**-1.2**
	4.4nm,0.8s						
WRA	**Warramunga Arr**	**45.48**	**262**	P	**pP**	**00 58 05.2**	**-1.3**
WRA				PcP	**PP**	**00 59 40.6**	**-2.3**
WRA				PP	PcP	01 00 01.1	+26
WRA	**Warramunga Arr**	**45.48**	**262**	P	**pP**	**00 58 05.2**	**-1.3**
	2.3nm,0.7s,baz=96,slow=8.0,SNR=11						
WRA				PcP	**PP**	**00 59 40.6**	**-2.3**
	0.6nm,0.8s,baz=108,slow=2.9,SNR=3.7						
WRA				PP	PcP	01 00 01.1	+26
	1.8nm,0.9s,baz=98,slow=9.0,SNR=5.6						
WRA				LR	LR	01 17 13.8	
	comp=Z,2μm,18.0s,baz=110,slow=36						
GUMO	**Guam**	**50.87**	**309**	LR	LR	01 18 05.3	
	comp=Z,947nm,21.0s,baz=95,slow=33						
KNRA	**Kununurra**	**51.58**	**266**	P	P	00 59 10.7	+28
	baz=53,SNR=3.6						
FITZ	**Fitzroy Crossi**	**53.91**	**262**	*e*P	**P**	**00 59 00.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**53.91**	**262**	LR	LR	01 22 24.9	
	comp=Z,2μm,18.9s,baz=18,slow=36						
SBA	**Scott Base**	**57.42**	**184**	*e*P	**P**	**00 59 25.4**	**+0.9**
	3.5nm,0.8s						
VNDA	**Vanda**	**57.48**	**185**	*e*P	**P**	**00 59 24.2**	**-0.8**
	2.0nm,0.9s						
VNDA	**Vanda**	**57.48**	**185**	P	**P**	**00 59 25.6**	**+0.6**
	1.4nm,0.8s,baz=3.2,slow=4.2,SNR=7.6						
VNDA				LR	LR	01 20 39.8	
	comp=Z,633nm,20.9s,baz=19,slow=32						
MBWA	**Marble Bar**	**58.68**	**257**	*e*P	pP	00 59 41.8	-3.1
NWAO	**Narrogin (SRO)**	**58.99**	**243**	LR	LR	01 24 32.2	
	comp=Z,2μm,18.9s,baz=108,slow=35						
KAPI	**Kappang**	**63.29**	**275**	LR	LR	01 27 25.3	
	comp=Z,581nm,20.4s,baz=130,slow=35						
QSPA	**South Pole Qui**	**69.05**	**180**	*e*P	**P**	**01 00 41.7**	**-0.3**
	63nm,1.9s						
MJAR	**Matsushiro Arr**	**71.20**	**323**	P	pP	01 01 02.4	-3.8
MJAR	**Matsushiro Arr**	**71.20**	**323**	P	**pP**	**01 01 02.4**	**-3.8**
	1.1nm,0.3s,baz=153,slow=3.6,SNR=4.4						
MJAR				LR	LR	01 27 29.2	
	comp=Z,279nm,21.7s,baz=105,slow=32						
MAJO	**Matsushiro**	**71.20**	**323**	*e*P	**P**	**01 00 54.2**	**-1.2**
MAT	**Matsushiro**	**71.20**	**323**	P	P	01 00 57.6	+2.2
MAT				S	SKiKP	01 10 26.2	-7.6
PETK	**Petropavlovsk-**	**77.02**	**345**	P	P	01 01 33.4	+4.5
PETK	**Petropavlovsk-**	**77.02**	**345**	P	P	01 01 33.4	+4.5
	18nm,1.0s,baz=133,slow=10,SNR=9.2						
PETK				LR	LR	01 28 49.8	
	comp=Z,888nm,22.0s,baz=160,slow=30						
KSRS	**Korea Array**	**77.91**	**318**	P	**pP**	**01 01 41.2**	**-4.1**
	1.1nm,0.7s,baz=144,slow=7.4,SNR=7.9						
KSRS				LR	LR	01 34 30.0	
	comp=Z,416nm,20.1s,baz=126,slow=34						
KSAR	**Wonju Array Be**	**77.93**	**318**	P	pP	01 01 41.2	-4.2
ISA	**Isabella**	**79.02**	**45**	*e*P	**P**	**01 01 41.9**	**+1.4**
	1.0nm,0.4s						
CMB	**Columbia Colle**	**79.20**	**42**	*e*P	**P**	**01 01 40.0**	**-1.4**
	6.0nm,1.1s						
GSC	**Goldstone**	**79.92**	**46**	*e*P	**P**	**01 01 44.7**	**-0.9**
	1.1nm,0.8s						
USRK	**Ussurisk Arra**	**79.93**	**325**	LR	LR	01 37 02.5	
	comp=Z,1μm,19.4s,baz=77,slow=35						
GLA	**Glamis**	**80.04**	**49**	*e*P	**P**	**01 01 47.8**	**+1.6**
	1.8nm,0.9s						
BEKR	**Beckworth**	**80.33**	**41**	*e*P	**P**	**01 01 46.6**	**-1.1**
	2.0nm,0.8s						
NVAR	**Mina Array Bea**	**80.75**	**43**	P	**P**	**01 01 49.1**	**-1.0**
NVAR	**Mina Array Bea**	**80.75**	**43**	P	**P**	**01 01 49.1**	**-1.0**
	4.3nm,0.7s,baz=223,slow=9.3,SNR=14						
NVAR				LR	LR	01 29 44.8	
	comp=Z,1μm,20.4s,baz=38,slow=30						
NV11	**Mina Array Sit**	**80.84**	**43**	*e*P	**P**	**01 01 49.9**	**-0.6**
MAW	**Mawson**	**81.40**	**200**	P	P	01 01 55.7	+2.9
	2.2nm,0.6s,baz=73,slow=9.2,SNR=3.6						
MAW				LR	LR	01 37 17.2	
	comp=Z,1μm,18.2s,baz=78,slow=35						
MOD	**Modoc**	**81.61**	**39**	*e*P	**P**	**01 01 52.8**	**-1.6**
	1.3nm,0.8s						
QIZ	**Qiongzhong**	**81.94**	**294**	P	P	01 02 01.5	+5.0
QIZ				pmax	pmax		
	comp=Z,390nm,10.8s						
QIZ				LR	LR		
	comp=E,210nm,27.8s						
QIZ				LR	LR		
	comp=Z,480nm,45.6s						
TUC	**Tucson**	**82.55**	**51**	*e*P	**P**	**01 02 00.4**	**+0.8**
	comp=Z,1.5nm,1.3s						
DL2	**Dalian**	**82.77**	**316**	⇓*i*P	P	01 02 08.8	+8.4
DL2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DL2				pmax	pmax		
	comp=Z,400nm,6.5s						
DL2				LR	LR		
	comp=N,120nm,17.4s						
DL2				LR	LR		
	comp=E,140nm,17.9s						
DL2				LR	LR		
	comp=Z,280nm,18.2s						
CCUT	**Cedar City**	**83.48**	**46**	*e*P	**P**	**01 02 04.2**	**-0.2**
	comp=Z,5.8nm,0.9s						
ARUT	**Antelope Range**	**83.55**	**46**	*e*P	**P**	**01 02 04.6**	**-0.1**
	comp=Z,4.3nm,0.8s						
WUAZ	**Wupatki**	**83.77**	**48**	*e*P	**P**	**01 02 06.0**	**+0.2**
	comp=Z,3.6nm,0.8s						
LON	**Longmire**	**83.80**	**35**	*e*P	**P**	**01 02 06.8**	**+1.1**
	comp=Z,6.2nm,1.2s						
ELK	**Elko**	**84.01**	**42**	*e*P	**P**	**01 02 07.0**	**-0.1**
	comp=Z,3.4nm,0.9s						
MSU	**Marysvale**	**84.78**	**45**	*e*P	**P**	**01 02 11.3**	**+0.2**
	comp=Z,4.7nm,0.9s						
HAWA	**Hanford**	**84.80**	**36**	*e*P	**P**	**01 02 11.8**	**+1.1**
	comp=Z,9.1nm,0.9s						
BMO	**Blue Mountains**	**85.13**	**38**	*e*P	**P**	**01 02 11.9**	**-0.5**
	comp=Z,3.1nm,0.9s						
MFID	**Camas Ranch**	**85.16**	**40**	*e*P	**P**	**01 02 13.4**	**+0.7**
	comp=Z,6.4nm,1.0s						
HLID	**Hailey**	**86.10**	**40**	*e*P	**P**	**01 02 16.9**	**-0.5**
	comp=Z,4.1nm,0.9s						
MNTX	**Cornudas Mount**	**86.27**	**54**	*e*P	**P**	**01 02 16.7**	**-1.6**
	comp=Z,8.5nm,1.2s						
BNM	**Barren Site**	**86.48**	**51**	*e*P	**P**	**01 02 19.7**	**+0.1**
	comp=Z,2.6nm,0.9s						
TXAR	**Lajitas Array**	**86.53**	**57**	P	**P**	**01 02 18.6**	**-1.1**
TXAR	**Lajitas Array**	**86.53**	**57**	P	**P**	**01 02 18.6**	**-1.1**
	comp=Z,3.4nm,0.9s,baz=217,slow=7.8,SNR=11						
TRF	**Thorofare Moun**	**86.76**	**12**	*e*P	**P**	**01 02 20.5**	**+0.4**
	comp=Z,1nm,0.7s						
BJI	**Beijing**	**86.94**	**315**	P	P	01 02 24.8	+3.5
BJI				LR	LR		
	comp=N,200nm,20.5s						
BJI				LR	LR		
	comp=E,270nm,24.1s						
BJI				LR	LR		
	comp=Z,310nm,31.4s						
ANMO	**Albuquerque**	**86.98**	**51**	*e*P	**P**	**01 02 21.4**	**-0.6**
	comp=Z,4.1nm,1.2s						
PV01	**Paradox Valley**	**87.03**	**47**	*e*P	**P**	**01 02 20.8**	**-1.3**
ENH	**Enshi**	**87.12**	**304**	*e*P	**P**	**01 02 20.7**	**-1.8**
GDL2	**Guadalupe Moun**	**87.27**	**54**

HHC				S	**S**	**01 13 26.8**	**-3.5**
HHC				sS	sS	01 14 10.8	+22
HHC				SS	**SS**	**01 19 35.0**	**+3.3**
HHC				LR	LR		
	comp=N,180nm,13.1s						
HHC				LR	LR		
	comp=E,190nm,14.3s						
HHC				LR	LR		
	comp=Z,140nm,14.3s						
KMI	**Kunming**	**90.44**	**297**	P	P	01 02 44.3	+5.7
KMI				LR	LR		
	comp=N,250nm,19.3s						
KMI				LR	LR		
	comp=E,340nm,19.3s						
KMI				LR	LR		
	comp=Z,640nm,21.3s						
CMAR	**Chiang Mai Arr**	**91.19**	**289**	P	P	01 02 49.0	+7.0
CMAR	**Chiang Mai Arr**	**91.19**	**289**	P	P	01 02 49.0	+7.0
	comp=Z,0.5nm,0.3s,baz=105,slow=3.3,SNR=4.5						
CMAR				LR	LR	01 44 33.7	
	comp=Z,297nm,20.4s,baz=130,slow=36						
WMOK	**Wichita Mounta**	**92.57**	**54**	*eP*	**P**	**01 02 47.8**	**-0.2**
	comp=Z,28nm,2.0s						
RSSD	**Black Hills**	**92.86**	**44**	*eP*	**P**	**01 02 47.7**	**-1.7**
	comp=Z,1.2nm,0.9s						
INK	**Inuvik**	**94.53**	**15**	LR	LR	01 37 44.4	
	comp=Z,1µm,22.0s,baz=276,slow=31						
YKA	**Yellowknife Ar**	**96.58**	**24**	P	**P**	**01 03 06.6**	**+1.0**
YKA				PP	PP	01 06 51.8	-8.8
YKA	**Yellowknife Ar**	**96.58**	**24**	P	**P**	**01 03 06.6**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=241,slow=4.4,SNR=18						
YKA				PP	PP	01 06 51.8	-8.8
	comp=Z,0.0nm,0.3s,baz=240,slow=7.0,SNR=2.9						
ECSD	**EROS Data Cent**	**97.60**	**46**	*eP*	**P**	**01 03 09.7**	**-1.1**
	comp=Z,5.2nm,1.0s						
LPAZ	**La Paz**	**100.98**	**112**	LR	LR	01 38 57.0	
	comp=Z,621nm,21.1s,baz=306,slow=30						
ZALV	**Zalesovo Beam**	**111.50**	**321**	PKiKP	**PKiKP**	**01 08 13.6**	**+3.4**
ZALV	**Zalesovo Beam**	**111.50**	**321**	PKiKP	**PKiKP**	**01 08 13.6**	**+3.4**
	comp=Z,1.0nm,0.6s,baz=178,slow=3.7,SNR=5.5						
MKAR	**Makanchi Array**	**112.25**	**313**	PKiKP	**PKiKP**	**01 08 15.7**	**+3.7**
MKAR	**Makanchi Array**	**112.25**	**313**	PKiKP	**PKiKP**	**01 08 15.6**	**+3.7**
	comp=Z,0.7nm,0.6s,baz=227,slow=1.2,SNR=4.7						
KURK	**Kurchatov**	**115.03**	**317**	PKP	PKPdf	01 08 18.9	+1.9
KURBB	**Kurchatov Arra**	**115.08**	**317**	PKP	**PKPdf**	**01 08 18.9**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=97,slow=1.8,SNR=11						
BVAR	**Borovoye Array**	**120.09**	**320**	PKP	**PKPdf**	**01 08 28.9**	**+2.1**
BVAR	**Borovoye Array**	**120.09**	**320**	PKP	**PKPdf**	**01 08 28.9**	**+2.1**
	comp=Z,1.1nm,0.6s,baz=94,slow=1.2,SNR=10						
ARCES	**ARCESS Array B**	**129.60**	**350**	PKP	**PKPdf**	**01 08 46.7**	**+2.2**
ARCES	**ARCESS Array B**	**129.60**	**350**	PKP	**PKPdf**	**01 08 46.7**	**+2.2**
	comp=Z,3.1nm,0.8s,baz=4.1,slow=1.7,SNR=12						
NB2	**NORSAR Subarra**	**139.60**	**354**	PKP	**PKPdf**	**01 09 00.2**	**-3.3**
	comp=Z,1.4nm,0.7s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**139.60**	**354**	PKPpre	PKPpre	01 09 01.1	
NOA				PKP	**PKiKP**	**01 09 05.2**	**-0.7**
NOA	**NORSAR Array B**	**139.60**	**354**	PKhKP	PKPpre	01 09 01.1	
	comp=Z,1.2nm,0.8s,baz=23,slow=3.8,SNR=5.8						
NOA				PKP	**PKiKP**	**01 09 05.2**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=21,slow=3.9,SNR=6.0						
ONI	**Oni**	**139.96**	**312**	P	PKPdf	01 09 09.2	+4.4
BHD	**Baghdad**	**141.47**	**297**	*i* x	x	01 09 04.0	
AKASG	**Malin Array Be**	**143.93**	**332**	PKP	**PKPdf**	**01 09 11.8**	**+0.3**
AKASG	**Malin Array Be**	**143.93**	**332**	PKP	**PKPdf**	**01 09 11.8**	**+0.3**
	comp=Z,15nm,0.7s,baz=42,slow=4.3,SNR=15						
AK01	**Malin Array Si**	**143.94**	**332**	*e*PKPdf	PKPbc	01 09 08.3	-1.0
KIEV	**Kiev**	**143.94**	**332**	*e*PKPdf	**PKPdf**	**01 09 10.6**	**-0.9**
AK02	**Malin Array Si**	**143.97**	**331**	*e*PKPdf	PKPbc	01 09 09.2	-0.2
BSD	**Bornholm Skovb**	**144.80**	**348**	⇑*i*P	**PKPdf**	**01 09 13.3**	**+0.5**
	comp=Z,11nm,0.8s						
BSEG	**Bad Segeberg**	**146.67**	**352**	*e*PKPbc	**PKPab**	**01 09 19.9**	**+1.1**
BTCH	**Batrach**	**147.22**	**304**	*e*P	**PKPab**	**01 09 23.8**	**+2.1**
BTCH	**Batrach**	**147.22**	**304**	*e*P	**PKPab**	**01 09 23.8**	**+2.1**
	SNR=45						
KWP	**Kalwaria Pacla**	**147.45**	**336**	*e*PKPab	**PKPab**	**01 09 22.4**	**+0.3**
ARNB	**Al Arnab**	**147.65**	**304**	*e*P	**PKPab**	**01 09 24.8**	**+1.4**
ARNB	**Al Arnab**	**147.65**	**304**	*e*P	**PKPab**	**01 09 24.8**	**+1.4**
	SNR=45						
SALA	**Sala**	**147.89**	**298**	*e*P	**PKPab**	**01 09 25.6**	**+1.0**
SALA	**Sala**	**147.89**	**298**	*e*P	**PKPab**	**01 09 25.6**	**+1.0**
	SNR=45						
TLCR		**147.89**	**325**	⇓*i*P	**PKPab**	**01 09 24.0**	**+0.1**
BR131	**Keskin Array S**	**147.90**	**312**	*e*PKPab	**PKPab**	**01 09 23.3**	**-1.1**
BRTR	**Keskin Array B**	**147.90**	**312**	PKPbc	**PKPab**	**01 09 24.2**	**-0.1**
BRTR	**Keskin Array B**	**147.90**	**312**	PKPbc	**PKPab**	**01 09 24.2**	**-0.1**
	comp=Z,11nm,0.9s,baz=135,slow=2.9,SNR=19						
BUR08	**Bucovina Ar. S**	**147.97**	**331**	*e*PKPab	**PKPab**	**01 09 24.7**	**+0.4**
TESR	**Tescani**	**148.11**	**328**	⇓*i*P	**PKPab**	**01 09 25.5**	**+0.7**
CFR	**Carcaliu**	**148.26**	**325**	⇓*i*P	**PKPab**	**01 09 26.3**	**+0.9**
BRBR	**Barbar**	**148.36**	**300**	*e*P	**PKPab**	**01 09 29.5**	**+3.0**
BRBR	**Barbar**	**148.36**	**300**	*e*P	**PKPab**	**01 09 29.5**	**+3.0**
	SNR=45						
ANTO	**Ankara**	**148.41**	**313**	*e*PKPab	**PKPab**	**01 09 25.1**	**-1.2**
VRI	**Vrincioaia**	**148.52**	**327**	⇑*i*P	**PKPab**	**01 09 26.1**	**-0.4**
TCHB	**Talchebab**	**148.52**	**299**	*e*P	**PKPab**	**01 09 27.6**	**+0.6**
TCHB	**Talchebab**	**148.52**	**299**	*e*P	**PKPab**	**01 09 27.6**	**+0.6**
	SNR=45						
PLOR	**Plostina**	**148.57**	**328**	⇑*i*P	**PKPab**	**01 09 26.3**	**-0.4**
TIRR	**Tirgusor**	**148.57**	**324**	⇑*i*P	**PKPab**	**01 09 28.3**	**+1.6**
HARR	**Harsova**	**148.69**	**325**	⇑*i*P	**PKPab**	**01 09 27.8**	**+0.7**
CLL	**Collm**	**148.78**	**348**	*e*PKPbc	**PKPab**	**01 09 25.7**	**-1.6**
CLL	**Collm**	**148.78**	**348**	*e*PKiKP	**PKPab**	**01 09 26.0**	**-1.3**
	comp=Z,8.0nm,0.9s						
CLL				*i* PKPab	**PKiKP**	**01 09 28.0**	**+3.1**
CLL				*i* pPKPdf	**pPKPdf**	**01 09 29.7**	**-1.4**
	comp=Z,24nm,0.9s						
CLL				*e*		01 10 53.0	
CLL				*e*PSKS		01 23 24.0	
CLL				*e*PPS	PPS	01 25 48.0	
CLL				*e*PSPS		01 33 12.0	
CLL				*e*		01 42 18.0	
OKC	**Ostrava-Krasne**	**148.84**	**341**	*e*PKPAB	**PKPab**	**01 09 27.1**	**-0.5**
UPC	**Upice**	**148.84**	**344**	*e*PKPAB	**PKPab**	**01 09 26.3**	**-1.3**
UPC				*ex*	x	01 09 30.1	
DPC	**Dobruska-Polom**	**148.90**	**343**	*e*PKPAB	**PKPab**	**01 09 26.0**	**-1.9**
DPC				*ex*	x	01 09 30.5	
BRG	**Berggiesshubel**	**148.99**	**347**	*e*PKP	**PKPbc**	**01 09 25.1**	**+1.1**
	comp=Z,1.5nm,0.9s						
BRG				*e*		01 09 30.6	
	comp=Z,12nm,0.8s						
BRG							
	comp=N,842nm,29.6s						
BRG							
	comp=E,432nm,33.1s						
BRG							
	comp=Z,708nm,26.4s						
BRG	**Berggiesshubel**	**148.99**	**347**	*e*PKPbc	**PKPab**	**01 09 26.5**	**-1.7**
MORC	**Moravsky Berou**	**149.07**	**342**	*e*PKPab	**PKPab**	**01 09 26.8**	**-1.9**
DOPR	**Dopca**	**149.11**	**329**	⇓*i*P	**PKPab**	**01 09 32.5**	**+3.6**
ISR	**Istrita**	**149.13**	**327**	⇑*i*P	**PKPab**	**01 09 31.6**	**+2.6**
PVCC	**Panska Ves**	**149.18**	**346**	*e*PKPAB	**PKPab**	**01 09 26.3**	**-2.6**
MLR	**Muntele Rosu**	**149.18**	**328**	⇓*i*P	**PKPab**	**01 09 28.7**	**-0.6**
CJR	**Cluj-Napoca**	**149.38**	**332**	⇑*i*P	PKPab	01 09 34.3	+4.3
BUG	**Bochum--Univer**	**149.46**	**355**	*e*PKPbc	**PKPab**	**01 09 27.2**	**-2.8**
VOIR		**149.66**	**328**	⇑*i*P	**PKPab**	**01 09 30.4**	**-0.8**
MOX	**Moxa**	**149.67**	**349**	*e*PKPbc	**PKPab**	**01 09 27.8**	**-3.2**
PRU	**Pruhonice**	**149.69**	**345**	⇑*e*PKP	**PKPbc**	**01 09 26.3**	**+0.5**
PRU				*e*PKPAB	**PKPab**	**01 09 30.4**	**-0.6**
DRGR		**149.71**	**333**	⇑*i*P	**PKPab**	**01 09 27.1**	**+1.0**
UBBA	**Unterbreizbach**	**149.76**	**351**	*e*PKPbc	**PKPab**	**01 09 28.4**	**-2.7**
ARR	**Arges**	**149.91**	**329**	⇓*i*P	**PKPab**	**01 09 30.4**	**-1.8**
NKC	**Novy Kostel**	**149.91**	**348**	*e*PKPAB	**PKPab**	**01 09 30.6**	**-1.4**
PSZ	**Piszkesteto**	**149.91**	**337**	*e*PKPbc	**PKPbc**	**01 09 23.3**	**-3.2**
CSS	**Prodhromos**	**149.99**	**304**	*e*PKPbc	**PKPbc**	**01 09 26.1**	**-1.0**
TREC	**Trest**	**150.09**	**344**	⇑*e*PKP	**PKPbc**	**01 09 27.1**	**+0.2**
LOT	**Lotru**	**150.26**	**330**	⇓*i*P	**PKPbc**	**01 09 27.9**	**+0.4**
HUMR	**Humele**	**150.34**	**327**	⇑*i*P	**PKPab**	**01 09 31.2**	**-2.7**
MEM	**Membach**	**150.38**	**356**	PKPbc	**PKPab**	**01 09 30.6**	**-3.2**
ROTZ	**Rotzenmuhle**	**150.40**	**348**	*e*PKPbc	**PKPab**	**01 09 30.0**	**-4.0**
TNS	**Taunus Mts**	**150.54**	**353**	*e*PKPbc	**PKPbc**	**01 09 29.9**	**+1.9**
KHC	**Kasperske Hory**	**150.71**	**346**	*e*PKPbc	**PKPbc**	**01 09 27.3**	**-1.1**
KHC	**Kasperske Hory**	**150.71**	**346**	⇑*e*PKP	**PKPbc**	**01 09 27.5**	**-0.9**
KHC				*ex*	x	01 09 31.6	
GEC2	**GERESS Array S**	**150.95**	**345**	*e*PKPbc	**PKPbc**	**01 09 31.2**	**+2.2**
GERES	**GERESS Array B**	**150.95**	**345**	PKP	**PKPbc**	**01 09 27.1**	**-2.0**
GERES				PKPbc	**PKiKP**	**01 09 31.9**	**+2.3**
GERES	**GERESS Array B**	**150.95**	**345**	PKP	**PKPbc**	**01 09 27.1**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=29,slow=2.2,SNR=8.3						
GERES				PKPbc	**PKiKP**	**01 09 31.9**	**+2.3**
	comp=Z,5.2nm,0.8s,baz=9.6,slow=2.2,SNR=12						
DOU	**Dourbes**	**150.96**	**358**	PKPbc	**PKPbc**	**01 09 31.4**	**+2.5**
CONA	**Conrad Observa**	**151.23**	**342**	⇓*i*PKPab	**PKPab**	**01 09 35.0**	**-2.6**
	comp=Z,15nm,0.9s						
WLF	**Walferdange**	**151.31**	**356**	PKPbc	**PKPbc**	**01 09 32.2**	**+2.5**
WLF	**Walferdange**	**151.31**	**356**	*e*PKPbc	**PKPbc**	**01 09 32.1**	**+2.4**
WLF	**Walferdange**	**151.31**	**356**	*e*PKPbc	**PKPbc**	**01 09 28.5**	**-1.1**
PKSM	**Moragy**	**151.81**	**337**	⇑*i*P	**PKPbc**	**01 09 34.2**	**+3.3**
BFO	**Black Forest**	**152.42**	**352**	*e*PKPbc	**PKPbc**	**01 09 32.4**	**+0.1**
VTS	**Vitosha**	**152.62**	**326**	⇑*i*P	**PKPbc**	**01 09 33.5**	**+0.4**
ESDC	**Sonseca Array**	**160.47**	**16**	PKPab	**PKPab**	**01 10 18.5**	**+1.2**
ESDC	**Sonseca Array**	**160.47**	**16**	PKPab	**PKPab**	**01 10 18.5**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=329,slow=3.3,SNR=7.5						
KEST	**Kesra**	**164.33**	**341**	PKPab	**PKPab**	**01 10 37.3**	**+3.0**
KEST	**Kesra**	**164.33**	**341**	PKPab	**PKPab**	**01 10 37.3**	**+3.0**
	comp=Z,1.5nm,0.7s,baz=214,slow=4.1,SNR=6.8						
TORD	**Torodi Ar. Bea**	**172.07**	**171**	PKP	**PKPdf**	**01 09 47.1**	**+1.2**
TORD				PKPab	**PKPab**	**01 11 10.4**	**+1.6**
TORD	**Torodi Ar. Bea**	**172.07**	**171**	PKP	**PKPdf**	**01 09 47.1**	**+1.2**
	comp=Z,0.6nm,1.0s,baz=251,slow=4.4,SNR=2.7						
TORD				PKPab	**PKPab**	**01 11 10.4**	**+1.6**
	comp=Z,1.3nm,0.8s,baz=182,slow=4.1,SNR=19						

ISK ***26*** *00:53:16.8, 37.69N×37.33E, h3km, MD2.7*
DDA ***26*** *00:53:16.9, 37.67N×37.34E, h7km, MD2.8*
ISCJB ***26*** *00:53:17.2±0.5, 37.69N±0.03×37.35E±0.03, h3km±8km, Error ellipse: s-maj=4.6km s-min=4.4km az=3.4*
CSEM ***26*** *00:53:17.3±0.2, 37.71N×37.33E, h2km, MD2.7, Error ellipse: s-maj=4.4km s-min=3.6km az=168.0*

ISC 26 00:53:17.3±1.1, 37.68N±0.03×37.34E±0.02, h7km±10km, n27, σ0.849/40, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GZT	**Gaziantep**	**0.37**	**151**	*i*	P	**Pg**		**00 53 24.0**	**-0.6**
GZT				*i*	S	**Sg**		**00 53 29.7**	**+0.2**
KMRS	**Kahramanmaras**	**0.39**	**244**	*e*	PG	**Pg**		**00 53 24.9**	**-0.1**
KMRS				*e*	SG	**Sg**		**00 53 30.4**	**+0.3**
KMRS	**Kahramanmaras**	**0.39**	**244**	*e*	Pg	**Pg**		**00 53 24.9**	**-0.1**
KMRS				*e*	Sg	**Sg**		**00 53 30.4**	**+0.3**
AYKD	**Aykdinkavak**	**0.50**	**238**	*i*	P	**Pg**		**00 53 26.9**	**-0.1**
AYKD				*i*	S	**Sg**		**00 53 33.9**	**+0.3**
AYKD	**Aykdinkavak**	**0.50**	**238**	*i*	P	**Pg**		**00 53 26.9**	**-0.1**
AYKD				*i*	S	**Sg**		**00 53 33.9**	**+0.3**
GAZ	**Gaziantep**	**0.52**	**192**	*e*	PG	**Pb**		**00 53 28.2**	**-0.6**
GAZ				*e*	SG	**Sb**		**00 53 36.3**	**-0.2**
GAZ	**Gaziantep**	**0.52**	**192**	*e*	Pg	**Pb**		**00 53 28.2**	**-0.6**
GAZ				*e*	Sg	**Sb**		**00 53 36.3**	**-0.2**
ATAB	**Bozova**	**0.79**	**105**	*i*	P	**Pg**		**00 53 32.2**	**-0.2**
ATAB				*i*	S	**Sb**		**00 53 43.7**	**-0.5**
ATAB	**Bozova**	**0.79**	**105**	*i*	P	**Pg**		**00 53 32.2**	**-0.2**
ATAB				*i*	S	**Sb**		**00 53 43.7**	**-0.5**
DARE	**Darende-Malaty**	**0.90**	**7**	*e*	PG	**Pg**		**00 53 33.9**	**-0.7**
DARE				*e*	SG	**Sb**		**00 53 47.2**	**-0.3**
DARE	**Darende-Malaty**	**0.90**	**7**	*e*	Pg	**Pg**		**00 53 33.9**	**-0.7**
DARE				*e*	Sg	**Sb**		**00 53 47.2**	**-0.3**
SARI	**SarD1z-Kayseri**	**1.03**	**315**	*e*	PG	**Pb**		**00 53 37.6**	**0.0**
SARI				*e*	SG	**Sn**		**00 53 52.6**	**-0.5**
SARI	**SarD1z-Kayseri**	**1.03**	**315**	*e*	Pg	**Pb**		**00 53 37.6**	**0.0**
SARI				*e*	Sg	**Sn**		**00 53 52.6**	**-0.5**
MYA	**Malataya**	**1.07**	**53**	*e*	PG	**Pb**		**00 53 38.4**	**+0.2**
MYA	**Malataya**	**1.07**	**53**	*e*	Pg	**Pb**		**00 53 38.4**	**+0.2**
URFA	**Urfa**	**1.20**	**101**	*e*	PN	**Pg**		**00 53 40.4**	**0.0**
URFA	**Urfa**	**1.20**	**101**	*e*	Pn	**Pg**		**00 53 40.4**	**0.0**
KOZT	**Kozan**	**1.22**	**261**	*e*	PN	**Pb**		**00 53 40.5**	**-0.1**
KOZT	**Kozan**	**1.22**	**261**	*e*	Pn	**Pb**		**00 53 40.5**	**-0.1**
BNN	**Bunyan**	**1.66**	**315**	*e*	PN	**Pb**		**00 53 47.7**	**-0.6**
BNN	**Bunyan**	**1.66**	**315**	*e*	Pn	**Pb**		**00 53 47.7**	**-0.6**
SVRC	**Sivrice-ELAZID**	**1.70**	**65**	*e*	PN	**Pn**		**00 53 48.2**	**+0.7**
SVRC	**Sivrice-ELAZID**	**1.70**	**65**	*e*	Pn	**Pn**		**00 53 48.3**	**+0.7**
PTK	**Pertek**	**2.02**	**53**	*e*	PN	**Pn**		**00 53 52.9**	**+0.9**
PTK	**Pertek**	**2.02**	**53**	*e*	Pn	**Pn**		**00 53 52.9**	**+0.9**
NIG	**Nigde**	**2.20**	**282**	*e*	PN	**Pn**		**00 53 55.4**	**+0.8**
NIG	**Nigde**	**2.20**	**282**	*e*	Pn	**Pn**		**00 53 55.4**	**+0.8**

IDC ***26*** *00:58:24.5±3.1, 5.48S×133.96E, h0km, mb3.5/1, mb1 3.8/4, mb1mx3.5/18, mbtmp3.6/4, ML3.7/3, Error ellipse: s-maj=126.2km s-min=29.4km az=83.0*
AUST ***26*** *00:58:34.0, 5.46S×133.04E, h60km*

ISC 26 00:58:28.5±1.3, 5.54S±0.06×133.7E±0.2, h35km, n11, σ2.967/13, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.97**	**331**	P		**Pn**		**00 59 13.7**	**+0.5**
	baz=54,SNR=49								
FAKI	**Fak Fak**	**2.97**	**331**	P		**Pn**		**00 59 13.7**	**+0.5**
	baz=2.7,SNR=49								
FAKI				S		**Sn**		**00 59 45.9**	**-1.7**
	baz=2.7,SNR=9.9								
SWI	**Sorong**	**5.24**	**332**	P		**Pn**		**00 59 45.5**	**+1.2**
	baz=4.9,SNR=3.9								
SWI				S		**Sn**		**01 00 39.2**	**-4.3**
	baz=4.9,SNR=4.6								
KDU	**Kakadu**	**7.20**	**189**	P		Pn		01 00 16.5	+5.2
	baz=7.2,SNR=15								
MTN	**Manton Dam**	**7.68**	**199**	P		Pn		01 00 24.6	+6.7
	baz=7.6,SNR=9.2								
KNRA	**Kununurra**	**11.17**	**205**	P		Pn		01 01 10.4	+4.6
	baz=11,SNR=6.4								
KNRA				S		**Sn**		**01 03 12.3**	**+2.8**
	baz=11,SNR=3.7								
WRA	**Warramunga Arr**	**14.33**	**177**	Pn		**Pn**		**01 01 48.2**	**-0.8**
	0.1nm,0.3s,baz=359,slow=13,SNR=7.6								
WRA				Sn		**Sn**		**01 04 23.4**	**-3.4**
	0.3nm,0.3s,baz=358,slow=25,SNR=2.8								
FITZ	**Fitzroy Crossi**	**14.75**	**211**	Pn		**Pn**		**01 01 56.6**	**+1.9**
	0.5nm,0.3s,baz=34,slow=14,SNR=19								
FITZ				Sn		**Sn**		**01 04 33.1**	**-4.0**
	0.8nm,0.3s,baz=198,slow=17,SNR=7.2								
FITZ	**Fitzroy Crossi**	**14.75**	**211**	P		**P**		**01 01 59.3**	**-1.0**
	baz=15,SNR=8.8								
ASAR	**Alice Springs**	**18.02**	**179**	P		**P**		**01 02 38.4**	**+1.7**
	0.4nm,0.3s,baz=6.0,slow=12,SNR=13								
MKAR	**Makanchi Array**	**69.08**	**325**	P		**P**		**01 09 33.1**	**+2.1**
	0.4nm,0.7s,baz=111,slow=7.9,SNR=3.5								

ISCJB ***26*** *01:04:10.5±0.3, 10.64N±0.03×62.54W±0.02, h100km±3km, mb3.5/10, Error ellipse: s-maj=5.6km s-min=3.3km az=151.0*
IDC ***26*** *01:04:13.4±3.1, 10.90N×62.69W, h109km±22km, mb3.3/10, mb1 3.5/11, mb1mx3.3/27, mbtmp3.3/11, MS3.4/1, Ms1 3.5/1, ms1mx2.9/19, Error ellipse: s-maj=29.7km s-min=17.6km az=168.0*
TRN ***26*** *01:04:14.1, 10.75N×62.33W, h107km, MD3.7, M4.8(FDF)*
FUNV ***26*** *01:04:14.0, 10.54N×62.51W, h78km, MW3.8*

ISC 26 01:04:11.1±0.7, 10.64N±0.03×62.53W±0.03, h98km±6km, n47, σ1.962/66, mb3.5/10, 4C-7D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.30**	**88**	⇑*i*P		**Pn**		**01 04 26.0**	**+0.6**
GUIV				*e*S		**Sn**		**01 04 34.0**	**-2.2**
CRUV	**Carupano**	**0.69**	**273**	⇑*i*P		**Pn**		**01 04 29.6**	**+1.4**
CRUV				*e*S		**Sn**		**01 04 40.3**	**-0.9**
TPP	**Pointe-a-Pierr**	**1.11**	**107**	*e*P		**Pn**		**01 04 35.3**	**+2.7**
TPP				*e*S		**Sn**		**01 04 50.2**	**+1.4**
TRN	**Trinidad (W)**	**1.11**	**89**	*e*P		**Pn**		**01 04 34.4**	**+1.8**
TRN				*e*S		**Sn**		**01 04 48.3**	**-0.5**
TBH	**Brigand Hill**	**1.45**	**96**	*e*P		**Pn**		**01 04 38.9**	**+2.3**
TBH				*e*S		**Sn**		**01 04 56.2**	**+0.3**
GRW	**Mount Saint Ca**	**1.74**	**29**	*e*P		**Pn**		**01 04 41.6**	**+1.3**
ORIV	**Oritupano**	**1.78**	**209**	*e*S		**Sn**		**01 05 01.4**	**-2.0**
GRHS	**Sauteurs**	**1.80**	**29**	*e*P		**Pn**		**01 04 41.8**	**+0.7**
GRHS				*e*S		**Sn**		**01 05 02.5**	**-1.4**
TPR	**Prospect**	**1.81**	**72**	*e*P		**Pn**		**01 04 42.6**	**+1.5**
TPR				*e*S		**Sn**		**01 05 01.9**	**-2.1**
BOT	**Bacolet**	**1.86**	**73**	*e*P		**Pn**		**01 04 42.5**	**+0.7**
BOT				*e*S		**Sn**		**01 05 03.6**	**-1.5**
GRSS	**Sisters**	**1.88**	**29**	⇑*i*P		**Pn**		**01 04 43.1**	**+1.0**
GRSS				*e*S		**Sn**		**01 05 05.4**	**-0.3**
TOSP	**Speyside**	**2.07**	**71**	*e*P		**Pn**		**01 04 44.2**	**-0.2**
TOSP				*e*S		**Sn**		**01 05 08.2**	**-1.8**
PCRV	**Puerto La Cruz**	**2.12**	**258**	⇓*i*P		**Pn**		**01 04 47.0**	**+1.8**
PCRV				*e*S		**Sn**		**01 05 10.2**	**-1.1**
RIOV	**Rio Grande**	**2.65**	**164**	⇓*e*P		**Pn**		**01 04 53.4**	**+1.2**
RIOV				*e*S		**Sn**		**01 05 21.1**	**-2.6**
PRGV	**PARIAGUAN**	**2.80**	**228**	⇓*e*P		**Pn**		**01 04 55.8**	**+1.7**
SVB	**Belmont**	**2.90**	**25**	*e*P		**Pn**		**01 04 56.7**	**+1.2**
SVB				*e*S		**Sn**		**01 05 28.0**	**-1.8**
GURV	**El Guri**	**2.91**	**191**	⇓*i*P		**Pn**		**01 04 57.0**	**+1.3**
GURV				*e*S		**Sn**		**01 05 26.9**	**-3.0**
CUPV	**Cœpira**	**3.26**	**260**	*e*P		**Pn**		**01 05 02.0**	**+1.7**
CUPV				*e*S		**Sn**		**01 05 37.7**	**-0.6**
MCLT	**Moule a Chique**	**3.43**	**27**	*e*P		**Pn**		**01 05 02.6**	**+0.1**
MCLT				*e*S		**Sn**		**01 05 40.0**	**-2.3**
BIRV	**Birongo**	**3.68**	**268**	*e*P		**Pn**		**01 05 08.6**	**+2.7**
MERV	**Las Mercedes**	**3.96**	**250**	⇓*e*P		**Pn**		**01 05 10.7**	**+1.0**
MERV				*e*S		**Sn**		**01 05 53.1**	**-2.0**
MVM	**Montagne Vaucl**	**4.21**	**22**	*e*P		**Pn**		**01 05 13.7**	**+0.6**
FDF	**Fort de France**	**4.29**	**18**	⇓*e*P		**Pn**		**01 05 14.5**	**+0.3**
FDF				⇓*e*S		**Sn**		**01 05 59.7**	**-3.5**
LUEV	**Luepa**	**4.88**	**167**	*e*P		**Pn**		**01 05 22.0**	**-0.3**
LUEV				*e*S		**Sn**		**01 06 13.1**	**-4.7**
TURV	**Turiamo**	**5.22**	**268**	*e*P		**Pn**		**01 05 27.9**	**+1.1**
PHG	**Guadaloupe-2**	**5.42**	**9**	*e*P		**Pn**		**01 05 31.3**	**+1.8**
LZG	**Guadaloupe-1**	**5.52**	**8**	*e*P		**Pn**		**01 05 31.8**	**+1.0**
BAUV	**El Baul**	**5.69**	**253**	*e*P		**Pn**		**01 05 33.5**	**+0.4**
SEG	**Port Louis**	**5.82**	**10**	*e*P		**Pn**		**01 05 37.2**	**+2.3**
MAPV	**Macapo**	**5.89**	**263**	⇑*e*P		**Pn**		**01 05 36.8**	**+0.9**
TEPV	**Terepaima**	**6.59**	**265**	*e*P		**Pn**		**01 05 46.3**	**+0.9**
CURV	**Curarigua**	**7.34**	**266**	*e*P		**Pn**		**01 05 56.5**	**+0.8**
MONV	**Montecano**	**7.41**	**281**	*e*P		**Pn**		**01 05 57.7**	**+1.1**
SOCV	**Socops**	**8.54**	**255**	*e*P		**Pn**		**01 06 11.7**	**-0.3**
VIGV	**El Vigia**	**8.89**	**259**	*e*P		**Pn**		**01 06 16.0**	**-0.8**
ROSC	**El Rosal**	**13.02**	**245**	P		**Pn**		**01 07 14.3**	**+1.5**
	0.7nm,0.3s,baz=101,slow=16,SNR=3.4								
LPAZ	**La Paz**	**27.32**	**192**	LR		LR		01 22 53.1	
	comp=Z,87nm,21.2s,baz=235,slow=41								
TXAR	**Lajitas Array**	**42.62**	**302**

MAW Mawson 33.21 174 P **P** **01 25 31.2 -0.1**
comp=Z,2.2nm,0.6s,baz=272,slow=11,SNR=4.3
TSUM Tsumeb 36.01 286 P **P** **01 25 56.5 +0.2**
TSUM Tsumeb 36.01 286 P **P** **01 25 56.5 +0.2**
comp=Z,3.4nm,1.0s,baz=132,slow=12,SNR=4.0
TSUM LR LR 01 39 28.6
comp=Z,429nm,19.1s,baz=266,slow=34
KMBO Kilima Mbogo 37.11 331 *e*P **P** **01 26 06.6 +0.8**
KMBO Kilima Mbogo 37.11 331 P **P** **01 26 05.3 -0.4**
comp=Z,0.5nm,0.3s,baz=234,slow=22,SNR=3.8
KMBO LR LR 01 38 45.6
comp=Z,649nm,21.8s,baz=109,slow=32
MBAR Mbarara 40.54 322 LR LR 01 42 05.9
comp=Z,548nm,19.4s,baz=56,slow=34
SNAA Sanae 47.14 201 P **P** **01 27 27.1 +0.3**
SNAA Sanae 47.14 201 P **P** **01 27 27.1 +0.3**
comp=Z,1.2nm,0.7s,baz=175,slow=7.6,SNR=4.5
NWAO Narrogin (SRO) 51.49 107 LR LR 01 44 47.6
comp=Z,440nm,21.7s,baz=5.9,slow=30
QSPA South Pole Qui 55.37 180 *e*P **P** **01 28 28.0 -0.7**
comp=Z,9.3nm,0.7s
QSPA South Pole Qui 55.37 180 P **P** **01 28 28.3 -0.4**
comp=Z,8.7nm,0.7s,baz=266,slow=3.4,SNR=80
QSPA LR LR 01 49 05.5
comp=Z,793nm,20.1s,baz=302,slow=33
SHEL Horse Pasture 56.62 273 *i* P P 01 28 44.5 +6.3
DRV Dumont d'Urvil 56.91 152 S **S** **01 36 32.0 -0.4**
DRV SS SS 01 40 39.0 +19
DRV R 01 45 00.0
RAYN Ar Rayn 58.61 351 P **P** **01 28 51.0 -1.0**
comp=Z,87nm,1.1s,SNR=12
RAYN Ar Rayn 58.61 351 *e*P **P** **01 28 51.8 -0.1**
comp=Z,21nm,1.1s
IPM Ipoh 58.76 58 *e*P **P** **01 28 53.5 +0.3**
comp=Z,45nm,1.1s
VNDA Vanda 59.95 166 *e*P **P** **01 29 00.9 +0.3**
comp=Z,40nm,2.1s
VNDA Vanda 59.95 166 P **P** **01 29 00.8 +0.3**
comp=Z,3.3nm,1.0s,baz=254,slow=8.2,SNR=9.1
VNDA LR LR 01 51 33.7
comp=Z,572nm,19.4s,baz=281,slow=33
SBA Scott Base 60.73 167 *e*P **P** **01 29 03.8 -2.1**
SBA pmax pmax
comp=Z,74nm,2.0s
SBA Scott Base 60.73 167 *e*P **P** **01 29 03.8 -2.1**
comp=Z,74nm,2.0s
FITZ Fitzroy Crossi 64.77 95 *e*P **P** **01 29 32.1 -1.6**
comp=Z,16nm,1.1s
FITZ Fitzroy Crossi 64.77 95 P **P** **01 29 32.4 -1.3**
comp=Z,10nm,1.0s,baz=212,slow=7.3,SNR=8.0
PBKT Sadao Pong 67.62 49 P P 01 29 48.6 -3.2
comp=Z,8.3nm,1.6s
CMAR Chiang Mai Arr 67.84 46 P **P** **01 29 52.5 -0.7**
CMAR Chiang Mai Arr 67.84 46 P **P** **01 29 52.5 -0.7**
comp=Z,5.3nm,0.9s,baz=231,slow=6.6,SNR=15
CMAR LR LR 01 54 40.8
comp=Z,349nm,19.1s,baz=192,slow=32
BHD Baghdad 68.36 351 *i* x sP 01 30 06.0 +3.2
ASAR Alice Springs 68.69 105 P **P** **01 29 57.9 -0.9**
ASAR P'P' 01 58 19.7
ASAR Alice Springs 68.69 105 P **P** **01 29 57.9 -0.9**
comp=Z,3.2nm,0.5s,baz=234,slow=5.9,SNR=22
ASAR LR LR 01 56 28.4
comp=Z,204nm,19.9s,baz=260,slow=33
ASAR PKPPKP **P'P'df** **01 58 19.7 +3.2**
comp=Z,0.4nm,0.6s,baz=87,slow=3.1,SNR=4.8
TOA0 Torodi Ar. Sit 69.02 304 *e*P **P** **01 30 01.4 +0.7**
TORD Torodi Ar. Bea 69.02 304 P **P** **01 30 01.6 +0.9**
TORD PP PP 01 32 23.2 -10
TORD Torodi Ar. Bea 69.02 304 P **P** **01 30 01.6 +0.9**
comp=Z,6.0nm,1.0s,baz=126,slow=5.0,SNR=20
TORD PP PP 01 32 23.2 -10
comp=Z,0.8nm,0.9s,baz=133,slow=8.6,SNR=2.7
DBIC Dimbokro 69.32 294 P **P** **01 30 04.1 +1.5**
DBIC Dimbokro 69.32 294 P **P** **01 30 04.1 +1.5**
comp=Z,8.5nm,1.0s,baz=125,slow=6.2,SNR=4.4
KBL Kabul 70.35 13 *e*P **P** **01 30 08.5 -0.3**
KBL Kabul 70.35 13 *e*P **P** **01 30 08.5 -0.3**
STKA Stephens Creek 70.61 116 *e*P **P** **01 30 09.2 -1.2**
comp=Z,6.3nm,1.4s
STKA Stephens Creek 70.61 116 P **P** **01 30 09.7 -0.7**
comp=Z,7.6nm,1.0s,baz=234,slow=5.1,SNR=9.5
STKA LR LR 01 54 47.0
comp=Z,336nm,19.1s,baz=206,slow=31
WRA Warramunga Arr 70.91 101 P **P** **01 30 11.6 -0.8**
WRA P'P' 01 58 08.2
WRA Warramunga Arr 70.91 101 P **P** **01 30 11.6 -0.8**
comp=Z,18nm,1.0s,baz=238,slow=5.5,SNR=34
WRA PKPPKP **P'P'df** **01 58 08.2 -4.2**
comp=Z,1.6nm,1.0s,baz=66,slow=3.2,SNR=5.9
WRAB Tennant Creek 70.93 101 *ce*P **P** **01 30 11.6 -0.9**
WRAB pmax pmax
comp=Z,56nm,1.0s
WRAB Tennant Creek 70.93 101 *e*P **P** **01 30 11.8 -0.8**
comp=Z,31nm,1.1s
WRAB Tennant Creek 70.93 101 P **P** **01 30 11.6 -0.9**
comp=Z,136nm,1.2s,SNR=8.0
CSS Prodhromos 72.14 342 *e*P **P** **01 30 19.3 0.0**
comp=Z,44nm,1.4s
LSA Lhasa 72.96 33 P **P** **01 30 24.5 -0.4**
TAM Tamanrasset 73.67 314 *e*P **P** **01 30 28.8 0.0**
TAM pmax pmax
comp=Z,9.0nm,1.4s
TAM Tamanrasset 73.67 314 *e*P **P** **01 30 28.8 0.0**
comp=Z,8.9nm,1.4s
IDI Anoyia 74.97 335 *e*P **P** **01 30 36.7 +0.8**
comp=Z,31nm,1.5s
GNI Garni 75.11 352 *e*P **P** **01 30 35.1 -1.8**
comp=Z,39nm,1.4s
QIZ Qiongzhong 75.13 54 P **P** **01 30 37.5 +0.3**
QIZ S **S** **01 40 16.8 +1.4**
QIZ pmax pmax
comp=Z,14nm,1.3s
KMI Kunming 75.22 45 P **P** **01 30 39.8 +1.9**
KMI S **S** **01 40 18.5 +1.9**
KMI pmax pmax
comp=Z,6.0nm,0.7s
KMI LR LR
comp=N,260nm,16.1s
KMI LR LR
comp=E,310nm,10.0s
KMI LR LR
comp=Z,220nm,15.9s
DGRG David-gareji 76.33 353 P P 01 30 47.3 +3.6
AKH Akhalkalaki 76.50 352 P **P** **01 30 45.6 +0.9**
BR131 Keskin Array S 76.59 344 *e*P **P** **01 30 44.3 -0.9**
comp=Z,8.1nm,1.0s
BRTR Keskin Array B 76.59 344 P **P** **01 30 44.5 -0.8**
BRTR Keskin Array B 76.59 344 P **P** **01 30 44.5 -0.8**
comp=Z,6.0nm,1.0s,baz=170,slow=7.5,SNR=22
KSH Kashi 76.62 17 P **P** **01 30 42.3 -3.1**
KSH *e*pP **pP** **01 30 46.5 -3.8**
KSH *e*sP **sP** **01 30 49.5 -2.6**
KSH *e*PcP **PcP** **01 30 55.3 -1.5**
KSH *e*PP **PP** **01 33 34.0 -4.2**
KSH *e*S S 01 40 22.0 -9.2
KSH *e*SKS SKSac 01 40 46.8 -10
KSH *e*ScS **SKKSac** **01 40 52.5 -4.5**
KSH *e*SS SS 01 45 17.5 -10
KSH pmax pmax
comp=Z,10.0nm,0.9s
KSH LR LR
comp=N,53nm,5.1s
KSH LR LR
comp=E,98nm,4.5s
KSH LR LR
comp=Z,89nm,6.9s
TBLG Delisi 76.68 353 *e*P **P** **01 30 45.4 -0.1**
TBLG Delisi 76.68 353 P **P** **01 30 45.5 -0.1**
GOR Gori 77.00 352 P **P** **01 30 45.7 -1.7**
DUS Dusheti 77.04 353 P P 01 30 53.5 +5.8
MAK Makhachkala 77.65 355 *e*P **P** **01 30 51.7 +0.8**
ONI Oni 77.67 352 P **P** **01 30 51.6 +0.4**
GYA Guiyang 78.53 46 P **P** **01 30 57.8 +1.4**
GYA PP **PP** **01 33 56.5 +2.1**
GYA S **S** **01 40 51.3 -1.2**
GYA SKS **SKSac** **01 41 07.5 -3.5**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.3s
GYA LR LR
comp=N,560nm,19.6s
GYA LR LR
comp=E,450nm,20.9s
GYA LR LR
comp=Z,590nm,18.9s
KBZ Khabaz 78.86 352 P **P** **01 30 57.2 -0.4**
KBZ Khabaz 78.86 352 P **P** **01 30 57.2 -0.4**
KBZ Khabaz 78.86 352 P **P** **01 30 57.2 -0.4**
comp=Z,2.9nm,1.0s,baz=140,slow=4.5,SNR=5.7
KKAR Karatay Array 78.94 12 *e*P **P** **01 30 57.2 -1.0**
KKAR Karatay Array 78.94 12 *e*P **P** **01 30 57.2 -1.0**
KIV Kislovodsk 79.11 351 *ce*P **P** **01 30 58.8 -0.3**
KIV pmax pmax
comp=Z,31nm,1.3s
EKS2 Erkin-Say 79.13 14 *e*P **P** **01 30 59.3 0.0**
EKS2 pmax pmax
comp=Z,13nm,1.1s
EKS2 Erkin-Say 79.13 14 *e*P **P** **01 30 59.3 0.0**
comp=Z,13nm,1.1s
AAK Ala-Archa 79.25 15 *e*P **P** **01 31 00.4 +0.4**
AAK pmax pmax
comp=Z,21nm,1.2s
AAK Ala-Archa 79.25 15 *e*P **P** **01 31 00.4 +0.4**
comp=Z,21nm,1.2s
AAK Ala-Archa 79.25 15 P **P** **01 31 00.9 +0.9**
comp=Z,72nm,1.2s,SNR=6.7
FRU Bishkek 79.47 15 *e*P **P** **01 31 01.0 -0.1**
FRU pmax pmax
comp=Z,50nm,1.8s
TKM2 Tokmak 2 79.77 16 *e*P **P** **01 31 02.7 -0.2**
TKM2 Tokmak 2 79.77 16 *e*P **P** **01 31 02.4 -0.5**
comp=Z,20nm,1.4s
CD2 Chengdu 80.24 41 P **P** **01 31 07.8 +2.2**
CD2 pP **PcP** **01 31 12.5 -0.2**
CD2 sP **sP** **01 31 14.8 +2.5**
CD2 PP **PP** **01 34 13.3 +4.7**
CD2 S **S** **01 41 13.5 +3.2**
CD2 sS **SKSac** **01 41 20.8 -1.9**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
ANN Anapa 80.71 348 *e*P **P** **01 31 05.6 -2.0**
ANN *e*PP **pP** **01 31 11.2 -1.4**
ANN *e* 01 31 13.5
ANN *e* 01 34 12.5
ANN *e*S **S** **01 41 12.9 -1.5**
ANN pmax pmax
comp=Z,49nm,1.8s
ANN MLR MLR
comp=N,383nm,23.0s
ANN MLR MLR
comp=E,257nm,23.0s
ANN MLR MLR
comp=Z,350nm,23.0s
CEL Celeste 80.97 330 *e*P **P** **01 31 09.5 +0.2**
comp=Z,7.5nm,1.0s
TIP Timpagrande 81.41 331 *e*P **P** **01 31 10.8 -0.8**
comp=Z,30nm,1.4s
SIM Simferopol' 81.48 346 *e*P **P** **01 31 12.0 +0.3**
SIM pmax pmax
comp=Z,16nm,1.4s
SIM MLR MLR
comp=Z,440nm,22.9s
KEST Kesra 81.77 324 P **P** **01 31 15.0 +1.3**
KEST Kesra 81.77 324 P **P** **01 31 15.0 +1.3**
comp=Z,2.3nm,1.0s,baz=130,slow=5.1,SNR=5.0
VTS Vitosha 82.13 337 *i*P **P** **01 31 15.7 +0.3**
TIR Tirane 82.14 335 *e*P **P** **01 31 15.2 -0.1**
TIR pmax pmax
comp=Z,11nm,0.8s
TIR Tirane 82.14 335 *e*P **P** **01 31 15.2 -0.1**
comp=Z,11nm,0.8s
TIRR Tirgusor 82.34 342 ⇑*i*P P 01 31 22.1 +5.9
HARR Harsova 82.68 341 ⇑*i*P **P** **01 31 19.5 +1.5**
CFR Carcaliu 83.08 342 ⇓*i*P **P** **01 31 19.9 -0.2**
HUMR Humele 83.35 339 ⇓*i*P **P** **01 31 23.7 +2.2**
ABKAR Akbulak array 83.84 4 *e*P **P** **01 31 23.4 -0.6**
comp=Z,22nm,1.4s
WMQ Urumqi 83.95 24 P **P** **01 31 25.0 +0.2**
WMQ pP **pP** **01 31 30.0 +0.3**
WMQ sP **sP** **01 31 32.0 +0.5**
WMQ PP **PP** **01 34 40.8 +1.8**
WMQ S **S** **01 41 47.5 -0.5**
WMQ sS **sS** **01 41 55.5 -0.7**
WMQ SS **SS** **01 47 18.3 +1.3**
WMQ pmax pmax
comp=Z,18nm,1.5s
WMQ pmax pmax
comp=Z,120nm,3.6s
WMQ LR LR
comp=N,210nm,24.6s
WMQ LR LR
comp=E,350nm,23.0s
WMQ LR LR
comp=Z,290nm,23.8s
MLR Muntele Rosu 83.96 340 P **P** **01 31 24.2 -0.6**
MLR Muntele Rosu 83.96 340 ⇓*i*P **P** **01 31 24.4 -0.4**
MLR Muntele Rosu 83.96 340 P **P** **01 31 24.2 -0.6**
comp=Z,5.3nm,1.3s,baz=195,slow=3.0,SNR=14
VRI Vrincioaia 84.09 341 ⇓*i*P **P** **01 31 24.7 -0.6**
PLOR Plostina 84.10 341 ⇑*i*P **P** **01 31 25.1 -0.3**
VOIR 84.16 340 ⇑*i*P **P** **01 31 24.7 -1.1**
ARR Arges 84.21 339 ⇑*i*P **P** **01 31 24.7 -1.3**
LZH Lanzhou 84.29 38 *e*P **P** **01 31 25.5 -1.3**
LZH pP **PcP** **01 31 28.8 -1.7**
LZH sP **sP** **01 31 30.3 -3.2**
LZH *e*PP **PP** **01 34 42.5 +0.5**
LZH SKS **SKSac** **01 41 45.0 -4.9**
LZH *e*S **S** **01 41 50.0 -1.9**
LZH sS **sS** **01 41 58.0 -2.1**
LZH pmax pmax
comp=Z,21nm,1.5s
LZH pmax pmax
comp=Z,97nm,5.6s
LZH LR LR
comp=N,250nm,18.0s
LZH LR LR
comp=E,220nm,18.3s
LZH LR LR
comp=Z,350nm,19.5s
LOT Lotru 84.54 339 ⇓*i*P **P** **01 31 27.3 -0.5**
TESR Tescani 84.71 341 ⇑*i*P P 01 31 40.0 +12
AKTO Aktyubinsk 84.94 2 LR LR 02 10 02.1
comp=Z,462nm,18.9s,baz=253,slow=36
GTA Gaotai 84.97 34 *e*P **P** **01 31 30.0 -0.1**
GTA pP **pP** **01 31 34.5 -0.6**
GTA sP **sP** **01 31 38.0 +1.1**
GTA SKS **SKSac** **01 41 50.0 -4.0**
GTA S **S** **01 41 58.5 0.0**
GTA sS **sS** **01 42 05.5 -1.2**
GTA SS **SS** **01 47 35.8 +3.4**
GTA pmax pmax
comp=Z,14nm,1.6s
GTA pmax pmax
comp=Z,130nm,5.2s
GTA LR LR
comp=N,150nm,19.2s
GTA LR LR
comp=E,210nm,19.5s
GTA LR LR
comp=Z,230nm,20.2s
MK31 Makanchi Array 85.04 19 *e*P **P** **01 31 29.7 -0.5**
MK31 Makanchi Array 85.04 19 *e*P **P** **01 31 29.6 -0.5**
MKAR Makanchi Array 85.04 19 P **P** **01 31 29.5 -0.6**
MKAR Makanchi Array 85.04 19 P **P** **01 31 29.5 -0.6**
MKAR Makanchi Array 85.04 19 P **P** **01 31 29.5 -0.6**
comp=Z,3.7nm,0.9s,baz=212,slow=5.0,SNR=20
TPUB Ta-pu 85.38 58 *e*P P 01 31 37.4 +5.0
XAN Xi'an 85.45 43 P **P** **01 31 33.0 +0.5**
XAN pP **pP** **01 31 38.8 +1.3**
XAN pmax pmax
comp=Z,3.0nm,1.5s
XAN pmax pmax
comp=Z,13nm,3.9s
XAN LR LR
comp=N,150nm,17.4s
XAN LR LR
comp=E,44nm,16.4s
XAN LR LR
comp=Z,89nm,19.4s
YULB Yu-li 85.90 58 *e*P **P** **01 31 35.7 +0.7**
comp=Z,16nm,0.6s
DRGR 86.07 339 ⇑*i*P **P** **01 31 36.6 +1.3**
DRGR 86.07 339 ⇑*i*P **P** **01 31 36.6 +1.3**
BURAR Bucovina Array 86.11 341 ⇑*i*P **P** **01 31 37.2 +1.7**
BUR08 Bucovina Ar. S 86.14 341 *e*P **P** **01 31 35.6 -0.1**
WHN Wuhan 86.14 49 P P 01 31 42.8 +6.9
VRHR Novokhopersk 86.27 352 *e*P **P** **01 31 36.4 +0.4**
VRHR *e**SP **sP** **01 31 43.4 +0.6**
VRHR pmax pmax
comp=E,20nm,1.0s
VRHR pmax pmax
comp=Z,10.0nm,1.0s
VRHR pmax pmax
comp=N,10.0nm,0.4s
VRHR MLR MLR
comp=N,290nm,24.0s
VRHR MLR MLR
comp=E,270nm,24.0s
VRHR MLR MLR
comp=Z,720nm,24.0s
VORD Divnogorie 86.43 351 *e*P **P** **01 31 36.5 -0.3**
VORD *e**SP **sP** **01 31 43.4 -0.2**
VORD *e* 01 34 59.3
VORD pmax pmax
comp=N,20nm,1.1s
VORD pmax pmax
comp=E,10.0nm,1.1s
VORD pmax pmax
comp=Z,10.0nm,1.1s
VORD pmax pmax
comp=N,9.0nm,1.2s
VORD pmax pmax
comp=Z,6.0nm,1.2s
VORD pmax pmax
comp=E,3.0nm,0.6s
VORD MLR MLR
comp=N,220nm,19.0s
VORD MLR MLR
comp=E,360nm,19.0s
VORD MLR MLR
comp=Z,400nm,19.0s
VSR Storozhevoye 86.69 351 *e*P **P** **01 31 38.3 +0.2**
VSR *e**SP **sP** **01 31 45.1 +0.2**
VSR *e* 01 35 01.2
VSR *e*S **SKSac** **01 42 05.2 +1.3**
VSR pmax pmax
comp=N,20nm,1.1s
VSR pmax pmax
comp=E,8.0nm,1.1s
VSR pmax pmax
comp=Z,20nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,1.4s
VSR pmax pmax
comp=N,4.0nm,0.7s
VSR pmax pmax
comp=E,3.0nm,0.5s
VSR smax smax
comp=N,80nm,2.9s
VSR smax smax
comp=Z,70nm,2.9s
VSR smax smax
comp=E,9.0nm,1.5s
VSR MLR MLR
comp=N,200nm,19.0s
VSR MLR MLR
comp=E,300nm,19.0s
VSR MLR MLR
comp=Z,530nm,19.0s
PKSM Moragy 86.84 336 ⇑P **P** **01 31 39.1 +0.1**
PKSM Moragy 86.84 336 ⇑*i*P **P** **01 31 39.0 +0.1**
PKSM Moragy 86.84 336 ⇓*e*P **P** **01 31 40.8 +1.8**
PKS6 Bocsa 86.88 337 ⇓*e*P **P** **01 31 41.3 +2.2**
PKS2 Kecel 86.89 337 ⇓*e*P P 01 31 42.8 +3.6
PKS9 Tamasi 87.29 336 ⇓*e*P **P** **01 31 43.0 +1.8**
TRPA Tarpa 87.33 339 ⇑*i*P **P** **01 31 43.2 +1.9**
TRPA Tarpa 87.33 339 ⇓*e*P **P** **01 31 41.5 +0.2**
PGF Pioggiola 87.44 328 *e*P **P** **01 31 42.7 +0.5**
comp=Z,18nm,1.2s
PGF Pioggiola 87.44 328 *e*P **P** **01 31 42.7 +0.5**
PGF pmax pmax
comp=Z,18nm,1.2s
PGF Pioggiola 87.44 328 *e*P **P** **01 31 42.7 +0.5**
comp=Z,18nm,1.2s
BEHE Becsehely 87.70 335 ⇓*e*P **P** **01 31 45.5 +2.3**
KURK Kurchatov 87.81 15 *ce*P **P** **01 31 41.4 -2.2**
KURK pmax pmax
comp=Z,6.0nm,1.3s
KURK Kurchatov 87.81 15 *e*P **P** **01 31 41.7 -1.9**
comp=Z,6.3nm,1.3s
BUD Budapest 87.83 337 ⇓*e*P **P** **01 31 44.0 +0.3**
UZH Uzhgorod 87.85 339 *e*P **P** **01 31 43.5 -0.3**
UZH *i* 01 31 49.9
PSZ Piszkesteto 87.94 338 ⇓P **P** **01 31 44.4 0.0**
PSZ Piszkesteto 87.94 338 *e*P **P** **01 31 43.6 -0.8**
comp=Z,20nm,1.2s
PSZ Piszkesteto 87.94 338 ⇓*i*P **P** **01 31 44.4 0.0**
PSZ Piszkesteto 87.94 338 ⇓*e*P **P** **01 31 44.1 -0.3**
AK02 Malin Array Si 87.94 344 *e*P **P** **01 31 43.3 -0.8**
PKSG 87.95 336 ⇓*e*P **P** **01 31 44.1 -0.2**
PKST T˜'s 87.96 336 ⇓*e*P **P** **01 31 45.7 +1.3**
CSKK Cs˜‡kako 87.97 336 ⇓*e*P **P** **01 31 46.3 +1.9**
KIEV Kiev 87.98 344 *i* P **P** **01 31 43.3 -1.0**
KIEV Kiev 87.98 344 *e*P **P** **01 31 43.6 -0.7**
AKASG Malin Array Be 87.98 344 *i* P **P** **01 31 43.7 -0.7**
AKASG pmax pmax
comp=Z,5.0nm,0.9s
AKASG Malin Array Be 87.98 344 P **P** **01 31 43.6 -0.8**
AKASG Malin Array Be 87.98 344 P **P** **01 31 43.6 -0.8**
comp=Z,4.8nm,0.9s,baz=174,slow=4.7,SNR=18
AKASG LR LR 02 11 31.4
comp=Z,179nm,19.8s,baz=330,slow=36
KOLS Kolonicke sedl 88.13 340 *e*P **P** **01 31 45.9 +0.7**
KOLS pmax pmax
comp=Z,14nm,1.3s
KOLS Kolonicke sedl 88.13 340 *e*P **P** **01 31 45.9 +0.7**
CRVS Cervenica-Dubn 88.34 339 *e*P **P** **01 31 44.0 -2.2**
CRVS pmax pmax
comp=Z,26nm,1.5s
CRVS Cervenica-Dubn 88.34 339 *e*P **P** **01 31 44.0 -2.2**
SOKA Soboth 88.49 334 ⇓*i*P **P** **01 31 47.4 +0.3**
comp=Z,14nm,1.2s
BRVK Borovoye 88.60 10 *ce*P **P** **01 31 48.0 +0.7**
BRVK pmax pmax
comp=Z,9.0nm,1.7s
KWP Kalwaria Pacla 88.63 340 ⇑P **P** **01 31 46.6 -0.9**
KWP Kalwaria Pacla 88.63 340 *e*P **P** **01 31 45.9 -1.6**
comp=Z,15nm,1.1s
KWP Kalwaria Pacla 88.63 340 ⇑*i*P **P** **01 31 46.6 -0.9**
VYHS Vyhne 88.78 337 *e*P **P** **01 31 47.8 -0.5**
VYHS pmax pmax
comp=Z,9.0nm,1.4s
VYHS Vyhne 88.78 337 *e*P **P** **01 31 47.8 -0.5**
SOP Sopron 88.82 336 ⇓*e*P **P** **01 31 49.0 +0.6**
ZST Bratislava 89.08 336 *e*P **P** **01 31 49.5 -0.1**
ZST pmax pmax
comp=Z,17nm,1.5s
ZST Bratislava 89.08 336 *e*P **P** **01 31 49.5 -0.1**
REVF Revere 89.11 328 *e*P **P** **01 31 52.5 +2.5**
REVF Revere 89.11 328 *e*P **P** **01 31 52.5 +2.5**
REVF Revere 89.11 328 *e*P **P** **01 31 52.5 +2.5**
LMR La Mourre 89.17 327 *e*P **P** **01 31 51.2 +1.0**
comp=Z,53nm,1.4s
LMR La Mourre 89.17 327 *e*P **P** **01 31 51.2 +1.0**
LMR pmax pmax
comp=Z,53nm,1.4s
LMR La Mourre 89.17 327 *e*P **P** **01 31 51.2 +1.0**
comp=Z,53nm,1.4s
SBF Sospel 89.18 328 *e*P **P** **01 31 51.2 +0.9**
comp=Z,93nm,1.5s
SBF Sospel 89.18 328 *e*P **P** **01 31 51.2 +0.9**
comp=Z,93nm,1.5s
SAOF Saorge 89.23 328 *e*P **P** **01 31 52.8 +2.3**
SAOF Saorge 89.23 328 *e*P **P** **01 31 52.8 +2.3**
SAOF Saorge 89.23 328 *e*P **P** **01 31 52.8 +2.3**
CONA Conrad Observa 89.27 335 ⇓*i*P **P** **01 31 52.1 +1.4**
comp=Z,18nm,1.5s
FRF La Foret Royal 89.28 327 *e*P **P** **01 31 51.8 +1.1**
comp=Z,29nm,1.3s
FRF La Foret Royal 89.28 327 *e*P **P** **01 31 51.8 +1.1**
FRF pmax pmax
comp=Z,29nm,1.3s
FRF La Foret Royal 89.28 327 *e*P **P** **01 31 51.8 +1.1**
comp=Z,29nm,1.3s
AUTN L'Aution 89.29 328 *e*P P 01 31 57.4 +6.4
AUTN L'Aution 89.29 328 *e*P P 01 31 57.4 +6.4
AUTN L'Aution 89.29 328 *e*P P 01 31 57.4 +6.4
PLCA Paso Flores 89.32 219 LR LR 02 04 43.7
comp=Z,220nm,18.2s,baz=161,slow=31

CALN	**Calern**		**89.33**	**328**	*e*P		**P**	**01 31 53.8 +2.7**
CALN	**Calern**		**89.33**	**328**	*e*P		**P**	**01 31 53.8 +2.7**
CALN	**Calern**		**89.33**	**328**	*e*P		**P**	**01 31 53.8 +2.7**
MVIF	**Mont Vial**		**89.33**	**328**	*e*P		**P**	**01 31 52.5 +1.4**
MVIF	**Mont Vial**		**89.33**	**328**	*e*P		**P**	**01 31 52.5 +1.4**
MVIF	**Mont Vial**		**89.33**	**328**	*e*P		**P**	**01 31 52.5 +1.4**
TOUF	**Mont Tournerai**		**89.38**	**328**	*e*P		**P**	**01 31 52.8 +1.4**
TOUF	**Mont Tournerai**		**89.38**	**328**	*e*P		**P**	**01 31 52.8 +1.4**
TOUF	**Mont Tournerai**		**89.38**	**328**	*e*P		**P**	**01 31 52.8 +1.4**
ABTA	**Abfaltersbach**		**89.48**	**333**	⇓ *i* P		**P**	**01 31 53.1 +1.4**
	comp=Z,10nm,1.3s							
MOA	**Molln**		**89.76**	**334**	⇓ *i* P		**P**	**01 31 54.3 +1.4**
	comp=Z,13nm,1.6s							
NJ2	**Nanjing**		**89.97**	**50**	*e*P		**P**	**01 31 54.8 +0.6**
NJ2					pP		**pP**	**01 31 59.5 +0.3**
NJ2					sP		**sP**	**01 32 02.0 +1.0**
NJ2					PP		**PP**	**01 35 30.0 +2.3**
NJ2					S		**S**	**01 42 44.5 -2.0**
NJ2					sS		**ScS**	**01 42 52.0 +1.4**
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.7s							
NJ2					pmax	pmax		
	comp=Z,90nm,6.6s							
NJ2					LR	LR		
	comp=N,660nm,27.0s							
NJ2					LR	LR		
	comp=E,1μm,26.0s							
NJ2					LR	LR		
	comp=Z,170nm,22.1s							
OJC	**Ojcow**		**90.00**	**339**	*e*P		**P**	**01 31 55.2 +1.3**
OJC	**Ojcow**		**90.00**	**339**	*e*P		**P**	**01 31 55.2 +1.3**
SMRF	**Simiane la Rot**		**90.09**	**327**	*e*P		**P**	**01 31 54.8 +0.2**
	comp=Z,100nm,1.8s							
SMRF	**Simiane la Rot**		**90.09**	**327**	*e*P		**P**	**01 31 54.8 +0.2**
	comp=Z,100nm,1.8s							
MBDF	**Montbardon**		**90.16**	**328**	*e*P		**P**	**01 31 56.3 +1.3**
	comp=Z,89nm,1.4s							
MBDF	**Montbardon**		**90.16**	**328**	*e*P		**P**	**01 31 56.3 +1.3**
MBDF	**Montbardon**		**90.16**	**328**	*e*P		**P**	**01 31 56.3 +1.3**
	comp=Z,89nm,1.4s							
OKC	**Ostrava-Krasne**		**90.17**	**338**	*e*P		**P**	**01 31 56.1 +1.4**
OKC					MLR	MLR		
	comp=Z,600nm,21.8s							
OKC	**Ostrava-Krasne**		**90.17**	**338**	*e*P		**P**	**01 31 56.1 +1.4**
OKC					AMS	AMS		02 15 10.0
	comp=Z,600nm,21.8s							
VRAC	**Vranov**		**90.21**	**336**	LR	LR		02 14 47.2
	comp=Z,586nm,21.5s,baz=26,slow=37							
FUORN	**Ofenpass-Fuorn**		**90.24**	**331**	*e*P		**P**	**01 31 57.6 +2.2**
	comp=Z,39nm,1.8s							
MORC	**Moravsky Berou**		**90.31**	**337**	*e*P		**P**	**01 31 55.8 +0.3**
MORC	**Moravsky Berou**		**90.31**	**337**	*e*P		**P**	**01 31 55.8 +0.3**
FETA	**Feichten**		**90.39**	**332**	⇓ *i* P		**P**	**01 31 57.3 +1.3**
	comp=Z,12nm,1.4s							
TUE	**Stuetta**		**90.48**	**331**	*e*P		**P**	**01 31 57.7 +1.1**
	comp=Z,6.2nm,1.0s							
DAVOX	**Davos/Dischmat**		**90.52**	**331**	P		**P**	**01 31 57.6 +0.9**
DAVOX	**Davos/Dischmat**		**90.52**	**331**	P		**P**	**01 31 57.6 +0.9**
	comp=Z,4.0nm,0.9s,baz=187,slow=8.8,SNR=7.1							
DAVOX					LR	LR		02 17 53.2
	comp=Z,158nm,19.9s,baz=344,slow=39							
TREC	**Trest**		**90.57**	**336**	*e*P		**P**	**01 31 58.4 +1.8**
TREC					MLR	MLR		
	comp=Z,700nm,20.2s							
TREC	**Trest**		**90.57**	**336**	*e*P		**P**	**01 31 58.4 +1.8**
TREC					AMS	AMS		02 17 00.0
	comp=Z,700nm,20.2s							
ORIF	**Oris-en-Rattie**		**90.70**	**328**	*e*P		**P**	**01 31 58.5 +1.1**
	comp=Z,12nm,1.0s							
ORIF	**Oris-en-Rattie**		**90.70**	**328**	*e*P		**P**	**01 31 58.5 +1.1**
ORIF					pmax	pmax		
	comp=Z,12nm,1.0s							
ORIF	**Oris-en-Rattie**		**90.70**	**328**	*e*P		**P**	**01 31 58.5 +1.1**
	comp=Z,12nm,1.0s							
LPG	**La Plagne**		**90.78**	**329**	*e*P		**P**	**01 31 58.2 +0.2**
	comp=Z,62nm,1.7s							
LPG	**La Plagne**		**90.78**	**329**	*e*P		**P**	**01 31 58.2 +0.2**
LPG	**La Plagne**		**90.78**	**329**	*e*P		**P**	**01 31 58.2 +0.2**
	comp=Z,62nm,1.7s							
LPL	**La Plagne**		**90.80**	**329**	*e*P		**P**	**01 31 58.2 +0.1**
	comp=Z,32nm,1.3s							
LPL	**La Plagne**		**90.80**	**329**	*e*P		**P**	**01 31 58.2 +0.1**
LPL					pmax	pmax		
	comp=Z,32nm,1.3s							
LPL	**La Plagne**		**90.80**	**329**	*e*P		**P**	**01 31 58.2 +0.1**
	comp=Z,32nm,1.3s							
GERES	**GERESS Array B**		**90.81**	**335**	P		**P**	**01 31 58.3 +0.5**
GERES	**GERESS Array B**		**90.81**	**335**	P		**P**	**01 31 58.3 +0.5**
	comp=Z,0.2nm,0.7s,baz=164,slow=5.3,SNR=5.9							
GERES					LR	LR		02 16 51.7
	comp=Z,838nm,21.8s,baz=5.4,slow=38							
OBN	**Obninsk**		**90.85**	**350**	⇑ *e*P		**P**	**01 31 57.6 -0.1**
OBN					pmax	pmax		
	comp=Z,21nm,1.6s							
ARU	**Arti**		**90.95**	**2**	P		**P**	**01 31 59.1 +0.9**
ARU								01 35 34.9
ARU					S		**SKSac**	**01 42 30.6 +1.6**
KHC	**Kasperske Hory**		**91.09**	**335**	*e*P		**P**	**01 31 59.1 0.0**
KHC					*e*			01 32 08.2
KHC					MLR	MLR		
	comp=Z,900nm,21.2s							
KHC	**Kasperske Hory**		**91.09**	**335**	*e*P		**P**	**01 31 59.1 0.0**
KHC					*ex*		x	01 32 08.2
KHC					AMS	AMS		02 17 00.0
	comp=Z,900nm,21.2s							
VIVF	**Saint-Julien-l**		**91.18**	**327**	*e*P		**P**	**01 32 00.6 +1.0**
	comp=Z,66nm,1.7s							
VIVF	**Saint-Julien-l**		**91.18**	**327**	*e*P		**P**	**01 32 00.6 +1.0**
VIVF	**Saint-Julien-l**		**91.18**	**327**	*e*P		**P**	**01 32 00.6 +1.0**
	comp=Z,66nm,1.7s							
DPC	**Dobruska-Polom**		**91.20**	**337**	*e*P		**P**	**01 31 58.9 -0.7**
DPC					MLR	MLR		
	comp=Z,400nm,20.9s							
DPC	**Dobruska-Polom**		**91.20**	**337**	*e*P		**P**	**01 31 58.9 -0.7**
DPC					AMS	AMS		02 15 10.0
	comp=Z,400nm,20.9s							
SVE	**Sverdlovsk**		**91.44**	**3**	*e*P		**P**	**01 32 01.9 +1.5**
SVE					pmax	pmax		
	comp=Z,17nm,1.5s							
UPC	**Upice**		**91.44**	**337**	*e*P		**P**	**01 32 00.5 -0.1**
UPC					*e*			01 32 09.0
UPC	**Upice**		**91.44**	**337**	*e*P		**P**	**01 32 00.5 -0.1**
UPC					*ex*		x	01 32 09.0
PRU	**Pruhonice**		**91.48**	**336**	*e*P		**P**	**01 32 01.2 +0.4**
PRU					*e*			01 32 09.0
PRU					MLR	MLR		
	comp=Z,800nm,21.4s							
PRU	**Pruhonice**		**91.48**	**336**	*e*P		**P**	**01 32 01.2 +0.4**
PRU					*ex*		x	01 32 09.0
PRU					AMS	AMS		02 16 00.0
	comp=Z,800nm,21.4s							
ESDC	**Sonseca Array**		**91.58**	**319**	P		**P**	**01 32 02.3 +0.7**
ESDC	**Sonseca Array**		**91.58**	**319**	P		**P**	**01 32 02.3 +0.7**
	comp=Z,0.3nm,0.4s,baz=130,slow=4.1,SNR=12							
ESDC					LR	LR		02 14 59.6
	comp=Z,388nm,21.4s,baz=310,slow=37							
HHC	**Hu-ho-hao-te**		**91.86**	**40**	⇑ *e*P		**P**	**01 32 04.5 +1.5**
HHC					pP		**pP**	**01 32 09.3 +1.4**
HHC					sP		**sP**	**01 32 11.5 +1.8**
HHC					PP		**PP**	**01 35 47.5 +4.9**
HHC					SKS		**SKSac**	**01 42 35.5 +0.3**
HHC					S		**S**	**01 43 04.0 +0.4**
HHC					sS		**sS**	**01 43 12.0 +0.1**
HHC					pmax	pmax		
	comp=Z,43nm,1.2s							
HHC					LR	LR		
	comp=N,410nm,21.4s							
HHC					LR	LR		
	comp=E,210nm,21.4s							
HHC					LR	LR		
	comp=Z,220nm,21.4s							
PVCC	**Panska Ves**		**91.94**	**336**	*e*P		**P**	**01 32 04.0 +1.1**
PVCC					MLR	MLR		
	comp=Z,700nm,20.7s							
PVCC	**Panska Ves**		**91.94**	**336**	*e*P		**P**	**01 32 04.0 +1.1**
PVCC					AMS	AMS		02 15 40.0
	comp=Z,700nm,20.7s							
CABF	**La Chapelle**		**91.94**	**329**	*e*P		**P**	**01 32 03.9 +0.7**
CABF	**La Chapelle**		**91.94**	**329**	*e*P		**P**	**01 32 03.9 +0.7**
CABF	**La Chapelle**		**91.94**	**329**	*e*P		**P**	**01 32 03.9 +0.7**
FELD	**Feldberg im Sc**		**92.16**	**331**	*e*P		**P**	**01 32 05.5 +1.3**
FELD	**Feldberg im Sc**		**92.16**	**331**	*e*P		**P**	**01 32 05.5 +1.3**
LOMF	**Lomont**		**92.22**	**330**	*e*P		**P**	**01 32 06.8 +2.4**
LOMF	**Lomont**		**92.22**	**330**	*e*P		**P**	**01 32 06.8 +2.4**
LOMF	**Lomont**		**92.22**	**330**	*e*P		**P**	**01 32 06.8 +2.4**
ZALV	**Zalesovo Beam**		**92.25**	**17**	P		**P**	**01 32 04.2 0.0**
ZALV	**Zalesovo Beam**		**92.25**	**17**	P		**P**	**01 32 04.2 0.0**
ZALV	**Zalesovo Beam**		**92.25**	**17**	P		**P**	**01 32 04.2 0.0**
	comp=Z,0.3nm,0.3s,baz=217,slow=6.7,SNR=3.7							
HVS	**Khovu-Aksy**		**92.32**	**24**	*i* P		**P**	**01 32 04.9 +0.1**
BFO	**Black Forest**		**92.39**	**331**	*i* P		P	01 32 08.4 +3.3
NKC	**Novy Kostel**		**92.42**	**335**	AMS	AMS		02 15 20.0
	comp=Z,500nm,21.3s							
BRG	**Berggiesshubel**		**92.44**	**336**	*e*P		**P**	**01 32 07.4 +2.2**
	comp=Z,5.4nm,1.1s							
BRG	**Berggiesshubel**		**92.44**	**336**	*e*P		**P**	**01 32 07.4 +2.2**
BRG					pmax	pmax		
	comp=Z,5.0nm,1.2s							
HINF	**Hinteralfeld**		**92.58**	**330**	*e*P		**P**	**01 32 05.9 -0.1**
	comp=Z,26nm,1.4s							
HINF	**Hinteralfeld**		**92.58**	**330**	*e*P		**P**	**01 32 05.9 -0.1**
HINF					pmax	pmax		
	comp=Z,26nm,1.4s							
HINF	**Hinteralfeld**		**92.58**	**330**	*e*P		**P**	**01 32 05.9 -0.1**
	comp=Z,26nm,1.4s							
CDF	**Champ du Feu**		**92.88**	**331**	*e*P		**P**	**01 32 07.1 -0.4**
	comp=Z,28nm,1.6s							
CDF	**Champ du Feu**		**92.88**	**331**	*e*P		**P**	**01 32 07.1 -0.4**
CDF					pmax	pmax		
	comp=Z,28nm,1.6s							
CDF	**Champ du Feu**		**92.88**	**331**	*e*P		**P**	**01 32 07.1 -0.4**
	comp=Z,28nm,1.6s							
HAU	**Haudompre**		**92.94**	**330**	*e*P		**P**	**01 32 07.5 -0.1**
	comp=Z,15nm,1.2s							
HAU	**Haudompre**		**92.94**	**330**	*e*P		**P**	**01 32 07.5 -0.1**
HAU					pmax	pmax		
	comp=Z,15nm,1.2s							
HAU	**Haudompre**		**92.94**	**330**	*e*P		**P**	**01 32 07.5 -0.1**
	comp=Z,15nm,1.2s							
SMF	**Signal de Mont**		**92.94**	**328**	*e*P		**P**	**01 32 09.1 +1.4**
	comp=Z,26nm,1.4s							
SMF	**Signal de Mont**		**92.94**	**328**	*e*P		**P**	**01 32 09.1 +1.4**
SMF					pmax	pmax		
	comp=Z,26nm,1.4s							
SMF	**Signal de Mont**		**92.94**	**328**	*e*P		**P**	**01 32 09.1 +1.4**
	comp=Z,26nm,1.4s							
CLL	**Collm**		**93.12**	**335**	*e*P		**P**	**01 32 09.0 +0.6**
CLL					*i*			01 32 16.2
CLL					pmax	pmax		
	comp=Z,5.0nm,1.3s							
CLL					MLR	MLR		
	comp=Z,500nm,21.0s							
CLL	**Collm**		**93.12**	**335**	*e*P		**P**	**01 32 09.0 +0.6**
	comp=Z,5.0nm,1.3s							
CLL					*i*			01 32 16.2
	comp=Z,12nm,1.7s							
CLL					*e*SSSS			01 56 21.0
CLL					LmV			02 20 00.0
	comp=Z,500nm,21.0s							
TOD	**Tromm**		**93.24**	**332**	*e*P		**P**	**01 32 10.5 +1.5**
TOD	**Tromm**		**93.24**	**332**	*e*P		**P**	**01 32 10.5 +1.5**
AVF	**Avril sur Loir**		**93.26**	**328**	*e*P		**P**	**01 32 09.8 +0.7**
	comp=Z,12nm,1.1s							
AVF	**Avril sur Loir**		**93.26**	**328**	*e*P		**P**	**01 32 09.8 +0.7**
AVF					pmax	pmax		
	comp=Z,12nm,1.1s							
AVF	**Avril sur Loir**		**93.26**	**328**	*e*P		**P**	**01 32 09.8 +0.7**
	comp=Z,12nm,1.1s							
SSF	**Saint Saulge**		**93.40**	**328**	*e*P		**P**	**01 32 10.2 +0.4**
SSF	**Saint Saulge**		**93.40**	**328**	*e*P		**P**	**01 32 10.2 +0.4**
SSF	**Saint Saulge**		**93.40**	**328**	*e*P		**P**	**01 32 10.2 +0.4**
LOR	**Lormes**		**93.41**	**328**	*e*P		**P**	**01 32 10.2 +0.4**
	comp=Z,18nm,1.3s							
LOR	**Lormes**		**93.41**	**328**	*e*P		**P**	**01 32 10.2 +0.4**
	comp=Z,18nm,1.3s							
PAGF	**Fort de Pagny**		**93.62**	**330**	*e*P		**P**	**01 32 11.2 +0.4**
PAGF	**Fort de Pagny**		**93.62**	**330**	*e*P		**P**	**01 32 11.2 +0.4**
SFTF	**Sexfontaines**		**93.64**	**329**	*e*P		**P**	**01 32 11.4 +0.6**
	comp=Z,46nm,1.3s							
SFTF	**Sexfontaines**		**93.64**	**329**	*e*P		**P**	**01 32 11.4 +0.6**
	comp=Z,46nm,1.3s							
BJI	**Beijing**		**93.79**	**43**	P		**P**	**01 32 12.0 +0.3**
BJI					pmax	pmax		
	comp=Z,12nm,0.6s							
MEZF	**Maizieres J'vi**		**93.86**	**330**	*e*P		**P**	**01 32 12.5 +0.7**
	comp=Z,30nm,1.2s							
MEZF	**Maizieres J'vi**		**93.86**	**330**	*e*P		**P**	**01 32 12.5 +0.7**
	comp=Z,30nm,1.2s							
RUP	**Ruppelstein**		**94.00**	**331**	*e*P		**P**	**01 32 14.1 +1.6**
RUP	**Ruppelstein**		**94.00**	**331**	*e*P		**P**	**01 32 14.1 +1.6**
DZM	**Mont Dzumac**		**94.30**	**120**	*e*LR		LR	02 02 35.8
	comp=Z,264nm,24.8s							
SONM	**Songino Array**		**94.54**	**32**	P		**P**	**01 32 15.2 +0.1**
SONM	**Songino Array**		**94.54**	**32**	P		**P**	**01 32 15.2 +0.1**
	comp=Z,0.6nm,0.3s,baz=349,slow=1.5,SNR=4.0							
SONM					LR		LR	02 11 17.8
	comp=Z,372nm,21.3s,baz=90,slow=33							
BAIF	**Baives**		**95.42**	**330**	*e*P		**P**	**01 32 19.5 +0.6**
	comp=Z,19nm,1.4s							
BAIF	**Baives**		**95.42**	**330**	*e*P		**P**	**01 32 19.5 +0.6**
BAIF					pmax	pmax		
	comp=Z,19nm,1.4s							
BAIF	**Baives**		**95.42**	**330**	*e*P		**P**	**01 32 19.5 +0.6**
	comp=Z,19nm,1.4s							
KLMR	**Klimovskoe**		**96.09**	**353**	*e*P		P	01 32 17.8 -3.9
KLMR					pmax	pmax		
	comp=Z,16nm,1.7s							
KSAR	**Wonju Array Be**		**99.13**	**51**	P		**Pdif**	**01 32 34.6 -1.4**
KSRS	**Korea Array**		**99.16**	**51**	P		**Pdif**	**01 32 34.6 -1.6**
	comp=Z,0.5nm,0.3s,baz=224,slow=2.7,SNR=4.1							
KSRS					LR		LR	02 16 12.6
	comp=Z,98nm,18.2s,baz=314,slow=35							
CN2	**Changchun**		**101.49**	**44**	*e*P		**Pdif**	**01 32 49.0 +2.6**
CN2					*ep*P		pP	01 32 54.0 +2.4
CN2					*eS*		**Sdif**	**01 44 25.5 -0.6**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
CN2					pmax	pmax		
	comp=Z,200nm,5.0s							
CN2					LR	LR		
	comp=N,200nm,16.0s							
CN2					LR	LR		
	comp=E,200nm,16.0s							
CN2					LR	LR		
	comp=Z,200nm,16.0s							
TIXI	**Tiksi**		**118.00**	**20**	*i* PKIKP		**PKPdf**	**01 37 42.6 +2.1**
PPT2	**Papeete2**		**123.15**	**153**	*e*LR		LR	02 15 55.1
	comp=Z,157nm,23.5s							
SEY	**Seymchan**		**123.92**	**33**	*c i* PKIKP		**PKPdf**	**01 37 53.3 +1.2**
BILL	**Bilibino**		**129.96**	**27**	*e*PKIKP		**PKPdf**	**01 38 04.0 +0.5**
BILL					*e*			01 38 11.7
BILL					pmax	pmax		
	comp=Z,4.0nm,1.1s							
ACSO	**Alum Creek Sta**		**145.96**	**292**	*e*PKPbc		**PKPbc**	**01 38 34.2 -0.2**
INK	**Inuvik**		**146.16**	**5**	PKPbc		**PKPbc**	**01 38 33.9 -0.2**
INK	**Inuvik**		**146.16**	**5**	PKPbc		**PKPbc**	**01 38 33.9 -0.2**
	comp=Z,7.9nm,1.1s,baz=42,slow=8.8,SNR=14							
ILAR	**Eielson Array**		**147.37**	**17**	PKPbc		**PKPdf**	**01 38 36.2 +0.9**
ILAR	**Eielson Array**		**147.37**	**17**	PKPbc		**PKPdf**	**01 38 36.2 +0.9**
	comp=Z,2.0nm,0.8s,baz=308,slow=3.4,SNR=17							
TRF	**Thorofare Moun**		**147.54**	**20**	*e*PKPbc		**PKPbc**	**01 38 38.4 0.0**
SWET	**Sewanee**		**147.60**	**282**	*e*PKPbc		**PKPbc**	**01 38 39.2 -0.1**
MCK	**McKinley**		**147.70**	**19**	*e*PKP2		**PKPbc**	**01 38 38.0 -0.7**
MCK	**McKinley**		**147.70**	**19**	*e*PKPbc		**PKPbc**	**01 38 38.0 -0.7**
LRAL	**Lakeview Retre**		**147.99**	**278**	*e*PKPbc		**PKPbc**	**01 38 39.4 -0.9**
DOT	**Dot Lake**		**148.98**	**16**	*e*PKPbc		**PKPbc**	**01 38 42.5 +0.5**
WVT	**Waverly**		**149.28**	**284**	*e*PKP2		**PKPbc**	**01 38 42.7 -0.9**
WVT	**Waverly**		**149.28**	**284**	*e*PKPbc		**PKPbc**	**01 38 42.7 -0.9**
USIN	**University of**		**149.38**	**287**	*e*PKPbc		**PKPbc**	**01 38 44.7 +0.9**
OLIL	**Olney**		**149.79**	**289**	*e*PKPbc		**PKPbc**	**01 38 46.4 +1.6**
COWI	**Conover**		**150.25**	**303**	*e*PKPbc		**PKPbc**	**01 38 45.6 -0.1**
YKW3	**Yellowknife Ar**		**151.37**	**349**	*e*PKPdf		**PKPdf**	**01 38 41.8 +0.1**
YKW3					*e*PKPbc		**PKiKP**	**01 38 48.6 +0.4**
YKW3					*e*PKPab		**PKPab**	**01 38 54.5 -1.4**
JFWS	**Jewell Farm**		**151.42**	**297**	PKIKP		**PKPbc**	**01 38 50.2 +1.7**
JFWS	**Jewell Farm**		**151.42**	**297**	PKPbc		**PKPbc**	**01 38 50.2 +1.7**
YKA	**Yellowknife Ar**		**151.43**	**349**	PKP		**PKPdf**	**01 38 41.7 -0.1**
YKA					PKPbc		**PKPbc**	**01 38 47.9 0.0**
YKA	**Yellowknife Ar**		**151.43**	**349**	PKP		**PKPdf**	**01 38 41.7 -0.1**
	comp=Z,0.4nm,0.5s,baz=3.6,slow=1.9,SNR=5.3							
YKA					PKPbc		**PKPbc**	**01 38 47.9 0.0**
	comp=Z,3.2nm,0.9s,baz=11,slow=2.3,SNR=31							
ULM	**Lac du Bonnet**		**153.40**	**315**	PKPbc		**PKPbc**	**01 38 52.0 -0.7**
ULM	**Lac du Bonnet**		**153.40**	**315**	PKPbc		**PKPbc**	**01 38 52.0 -0.7**
	comp=Z,4.5nm,0.8s,baz=240,slow=2.9,SNR=3.0							
TXAR	**Lajitas Array**		**160.58**	**260**	PKP		**PKPdf**	**01 38 55.8 +0.7**
TXAR					PKPab		**PKPab**	**01 39 37.3 +0.6**
TXAR	**Lajitas Array**		**160.58**	**260**	PKP		**PKPdf**	**01 38 55.8 +0.7**
	comp=Z,1.1nm,0.4s,baz=198,slow=2.7,SNR=4.9							
TXAR					PKPab		**PKPab**	**01 39 37.3 +0.6**
	comp=Z,0.6nm,0.9s,baz=121,slow=3.5,SNR=1.8							
SWMT	**Swartz Lake**		**164.59**	**329**	*e*PKPdf		**PKPdf**	**01 38 58.1 -0.3**
SWMT					*e*PKPab		**PKPab**	**01 39 55.3 +1.7**
PDAR	**Pinedale Array**		**165.15**	**307**	PKP		**PKPdf**	**01 38 57.9 -1.4**
PDAR					PKPab		**PKPab**	**01 39 56.9 +0.4**
PDAR					PP		**PP**	**01 43 45.3 +1.9**
PDAR	**Pinedale Array**		**165.15**	**307**	PKP		**PKPdf**	**01 38 57.9 -1.4**
	comp=Z,1.1nm,1.0s,baz=116,slow=3.4,SNR=4.9							
PDAR					PKPab		**PKPab**	**01 39 56.9 +0.4**
	comp=Z,0.4nm,0.6s,baz=132,slow=5.2,SNR=2.5							
PDAR					PP		**PP**	**01 43 45.3 +1.9**
	comp=Z,0.7nm,1.0s,baz=90,slow=4.4,SNR=5.2							
MVU	**Marysvale**		**168.58**	**293**	*e*PKPdf		**PKPdf**	**01 39 01.0 -0.9**
NVAR	**Mina Array Bea**		**173.06**	**304**	PKP		**PKPdf**	**01 39 05.6 +1.3**
NVAR	**Mina Array Bea**		**173.06**	**304**	PKP		**PKPdf**	**01 39 05.6 +1.3**
	comp=Z,0.2nm,0.6s,baz=149,slow=0.5,SNR=2.2							

IDC 26 01:20:05.0±2.6, 0.61S×131.70E, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, ML3.5/2, Error ellipse: s-maj=125.7km s-min=24.5km az=76.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.38**	**199**	P	Pn	01 24 21.3	-0.1
	0.1nm,0.3s,baz=18,slow=13,SNR=5.2						
WRA	**Warramunga Arr**	**19.39**	**173**	P	P	01 24 32.7	0.0
	0.2nm,0.3s,baz=352,slow=11,SNR=5.9						
WRA				S	Sn	01 28 00.6	-11
	0.1nm,0.3s,baz=354,slow=24,SNR=3.8						
ASAR	**Alice Springs**	**23.02**	**175**	P	P	01 25 11.9	0.0
	2.3nm,0.9s,baz=359,slow=12,SNR=17						
MKAR	**Makanchi Array**	**63.94**	**324**	P	P	01 30 40.0	0.0
	0.3nm,0.6s,baz=114,slow=8.4,SNR=3.1						

*ISCJB **26** 01:23:45.9±0.4, 9.27S±0.04×113.60E±0.03, h73km, mb3.9/8, Error ellipse: s-maj=6.5km s-min=4.4km az=19.2*
*AUST **26** 01:23:45.1, 9.45S×113.40E, h35km*
*DJA **26** 01:23:46.4±1.1, 9.7S±7.7×11.4E±7.1, h23km±10km, M4.6/15, mb4.9/1, mB4.9/1, MLv4.5/15, Mw(mB)4.2/1*
*IDC **26** 01:23:47.0±0.7, 9.01S×113.68E, h71km±6km, mb3.8/8, mb1 4.0/9, mb1mx3.8/23, mbtmp3.9/9, Error ellipse: s-maj=21.6km s-min=13.2km az=49.0*

ISC 26 01:23:47.4±0.5, 9.05S±0.07×113.63E±0.04, h73km, n43, σ1°41/48, mb4.1/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**0.78**	**42**	P	**Pn**	**01 24 04.2**	**+0.8**
JAGI				S	**Sn**	**01 24 17.8**	**+2.6**
JAGI	**Jajag, Banyuwa**	**0.78**	**42**	P	**Pn**	**01 24 04.2**	**+0.8**
	baz=1.2,SNR=1000						
JAGI				S	**Sn**	**01 24 17.9**	**+2.7**
	baz=1.2,SNR=5.6						
GMJI	**Gumukmas**	**0.80**	**347**	P	**Pn**	**01 24 04.2**	**+0.6**
BLJI	**Banyuglugur**	**1.30**	**358**	P	Pn	01 24 12.5	+2.6
KRKI	**Karangkates**	**1.47**	**307**	P	**Pn**	**01 24 13.1**	**+1.1**
IGBI	**Denpasar**	**1.52**	**81**	P	**Pn**	**01 24 12.8**	**+0.2**
DNP	**Denpasar**	**1.61**	**77**	P	**Pn**	**01 24 15.0**	**+1.2**
SRBI	**Singaraja**	**1.84**	**59**	P	**Pn**	**01 24 18.4**	**+1.5**
KMMI	**Kalianget**	**2.02**	**10**	P	Pn	01 24 23.0	+3.6
KHKI	**Kahang-Kahang**	**2.07**	**71**	P	**Pn**	**01 24 21.0**	**+0.9**
PWJI	**Pagerwojo**	**2.08**	**299**	P	**Pn**	**01 24 21.0**	**+0.9**
SJI	**Sawahan**	**2.26**	**305**	P	**Pn**	**01 24 24.5**	**+1.8**
PCJI	**Pacitan**	**2.57**	**289**	P	**Pn**	**01 24 27.1**	**+0.3**
WOJI	**Wonogiri, Jawa**	**2.94**	**294**	P	**Pn**	**01 24 33.0**	**+1.2**
UGM	**Wanagama**	**3.28**	**290**	P	**Pn**	**01 24 37.0**	**

UDYN				*i* S	Sg	01 25 15.1	-1.1
UDYN				AML	AML	01 25 19.4	
	comp=E,676nm,0.5s						
LBOS		**2.51**	**35**	*i* P	Pb	01 24 50.6	-1.9
LBOS				*i* S	Sb	01 25 24.9	+0.7
BDHA	**Al Bayda'**	**2.78**	**39**	*i* P	Pb	01 24 55.4	-1.7
BDHA				*i* S	Sb	01 25 32.6	+0.8
BDHA				AML	AML	01 25 44.0	
	comp=E,597nm,0.5s						
HAJJ	**Hajjah**	**3.88**	**358**	*i* P	Pn	01 25 08.9	+1.7
HAJJ				*i* S	Sb	01 25 58.9	-4.5
HAJJ				AML	AML	01 26 09.4	
	comp=Z,328nm,0.5s						

SKO 26 01:29:54.7, 41°31'N×22°71'E, h1km, M0.1, ML0.2, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.11**	**276**	*i* Pg	Pg	01 29 56.6	-0.2
VAY				*i* Sg	Sg	01 29 58.4	+0.2
VAY				*e*Lg	Lg	01 29 58.5	
	comp=N,22nm,0.2s						
VAY				*e*Lg	Lg	01 29 58.7	
	comp=E,16nm,0.5s						

IDC 26 01:30:54.2±1.1, 20°47'N×120°27'E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.4/25, mbtmp3.5/5, Error ellipse: s-maj=75.7km s-min=22.0km az=64.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**40.50**	**319**	P	P	01 38 34.8	0.0
	0.4nm,0.5s,baz=112,slow=9.1,SNR=6.1						
WRA	**Warramunga Arr**	**42.46**	**160**	P	P	01 38 50.7	-0.4
	0.3nm,0.4s,baz=342,slow=9.1,SNR=6.9						
KURBB	**Kurchatov Arra**	**44.47**	**323**	P	P	01 39 06.7	-0.3
	0.3nm,0.5s,baz=123,slow=7.5,SNR=4.8						
ASAR	**Alice Springs**	**45.84**	**162**	P	P	01 39 18.4	+0.2
	0.4nm,0.5s,baz=343,slow=6.7,SNR=5.2						
YKA	**Yellowknife Ar**	**86.70**	**22**	P	P	01 43 39.7	0.0
	0.1nm,0.5s,baz=311,slow=4.7,SNR=4.8						

IDC 26 01:32:43.4±0.7, 34°75S×54°63E, h0km, mb4.0/9, mb1 4.1/9, mb1mx3.9/26, mbtmp4.0/9, Error ellipse: s-maj=31.1km s-min=21.1km az=68.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QSPA	**South Pole Qui**	**55.43**	**180**	P	P	01 42 18.6	-0.8
	3.9nm,0.8s,baz=266,slow=3.6,SNR=14						
VNDA	**Vanda**	**59.95**	**166**	P	P	01 42 51.1	+0.3
	1.0nm,1.0s,baz=269,slow=10,SNR=4.0						
CMAR	**Chiang Mai Arr**	**67.62**	**46**	P	P	01 43 40.7	-1.6
	2.9nm,1.1s,baz=219,slow=5.8,SNR=4.7						
ASAR	**Alice Springs**	**68.47**	**104**	P	P	01 43 48.1	+0.4
	0.8nm,0.6s,baz=225,slow=6.4,SNR=9.4						
TORD	**Torodi Ar. Bea**	**69.20**	**304**	P	P	01 43 52.6	+0.4
	1.0nm,1.0s,baz=132,slow=7.0,SNR=4.0						
WRA	**Warramunga Arr**	**70.68**	**101**	P	P	01 44 01.9	+0.4
	3.4nm,0.9s,baz=236,slow=5.1,SNR=16						
BRTR	**Keskin Array B**	**76.61**	**344**	P	P	01 44 35.5	-0.2
	1.0nm,0.8s,baz=166,slow=7.6,SNR=7.4						
MKAR	**Makanchi Array**	**84.91**	**19**	P	P	01 45 20.0	+0.1
	1.0nm,0.8s,baz=198,slow=3.2,SNR=8.6						
KURBB	**Kurchatov Arra**	**87.59**	**15**	P	P	01 45 33.7	+0.8
	0.3nm,0.2s,baz=346,slow=28,SNR=4.1						
INK	**Inuvik**	**146.08**	**5**	PKPbc	PKPbc	01 52 24.3	0.0
	0.7nm,0.8s,baz=16,slow=7.4,SNR=2.6						
ILAR	**Eielson Array**	**147.25**	**17**	PKPbc	PKPbc	01 52 27.0	-0.9
	0.5nm,0.9s,baz=332,slow=5.1,SNR=3.5						
YKA	**Yellowknife Ar**	**151.42**	**350**	PKPbc	PKPbc	01 52 37.8	-0.5
	0.7nm,0.9s,baz=8.1,slow=2.4,SNR=9.7						

IDC 26 01:52:47.9±7.2, 30°52S×178°31W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.7/17, mbtmp3.9/2, Error ellipse: s-maj=293.6km s-min=60.2km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.84**	**267**	P	P	02 00 47.5	-0.5
	0.7nm,0.6s,baz=106,slow=7.5,SNR=8.4						
WRA	**Warramunga Arr**	**43.84**	**272**	P	P	02 00 56.2	+0.1
	0.7nm,0.3s,baz=111,slow=8.1,SNR=19						
FINES	**FINESS Array B**	**145.17**	**340**	PKPbc	PKPbc	02 12 25.4	-0.8
	0.3nm,0.4s,baz=35,slow=5.1,SNR=3.9						

*NSSC **26** 02:01:22.1±3.0, 39°61N×39°96E, h0km±102km, MD1.9, ML4.0*
*DDA **26** 02:01:33.6, 38°70N×39°45E, h14km, MD3.7*
*ISK **26** 02:01:33.1, 38°71N×39°44E, h2km, ML3.8*
*CSEM **26** 02:01:34.7±0.1, 38°70N×39°44E, h2km, ML3.8, Error ellipse: s-maj=3.5km s-min=3.2km az=136.0*
*IDC **26** 02:01:34.9±0.8, 38°72N×39°62E, h0km, mb3.5/9, mb1 3.6/16, mb1mx3.5/33, mbtmp3.5/16, ML3.5/6, Error ellipse: s-maj=15.9km s-min=9.6km az=156.0*
ISC 26 02:01:34.8±1.1, 38°70'N±0'02×39°43'E±0'02, h0km±9km, n137, σ1§15/160, mb3.5/9, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.19**	**351**	PG	**Pg**	**02 01 38.0**	**-0.5**
PTK				*e*SG	**Sg**	**02 01 41.3**	**+0.3**
PTK	**Pertek**	**0.19**	**351**	*i* Pg	**Pg**	**02 01 38.0**	**-0.5**
PTK				*e*Sg	**Sg**	**02 01 41.3**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.34**	**196**	*e*PG	**Pg**	**02 01 40.6**	**-0.7**
SVRC	**Sivrice-ELAZID**	**0.34**	**196**	*e*Pg	**Pg**	**02 01 40.6**	**-0.7**
ELZG	**Elazig**	**0.40**	**240**	*i* P	**Pg**	**02 01 42.2**	**-0.4**
ELZG				*i* S	**Sg**	**02 01 49.2**	**+1.4**
ELZG	**Elazig**	**0.40**	**240**	*i* P	**Pg**	**02 01 42.2**	**-0.4**
ELZG				*i* S	**Sg**	**02 01 49.2**	**+1.4**
BINT	**Bingol**	**0.85**	**78**	*e*Pg	**Pb**	**02 01 52.4**	**-0.1**
MYA	**Malataya**	**0.87**	**245**	*e*PG	**Pg**	**02 01 50.2**	**-1.3**
MYA				*e*SG	**Sg**	**02 02 03.7**	**+0.8**
MYA	**Malataya**	**0.87**	**245**	*e*Pg	**Pg**	**02 01 50.2**	**-1.3**
MYA				*e*Sg	**Sg**	**02 02 03.7**	**+0.8**
ERZN	**Erzincan**	**0.91**	**14**	*e*PG	**Pg**	**02 01 50.6**	**-1.7**
KEMA	**Kemaliye**	**0.92**	**308**	*i* P	**Pg**	**02 01 51.2**	**-1.3**
KEMA				*i* S	**Sg**	**02 02 03.8**	**-0.7**
DIYA	**Diyarbakir**	**0.95**	**145**	*i* P	**Pg**	**02 01 52.7**	**-0.3**
DIYA	**Diyarbakir**	**0.95**	**145**	*i* P	**Pg**	**02 01 52.7**	**-0.3**
ILIC	**ilic-Erzincan**	**1.00**	**318**	*e*PG	**Pg**	**02 01 52.7**	**-1.4**
ILIC	**ilic-Erzincan**	**1.00**	**318**	*e*Pg	**Pg**	**02 01 52.7**	**-1.4**
BNGB	**Bing¨l¦l**	**1.02**	**73**	*e*PG	**Pg**	**02 01 52.4**	**-2.0**
BNGB				*e*SG	**Sg**	**02 02 07.2**	**-0.3**
DIY	**Diyarbakir**	**1.02**	**142**	*e*PG	**Pg**	**02 01 53.5**	**-0.9**
DIY	**Diyarbakir**	**1.02**	**142**	*e*Pg	**Pg**	**02 01 53.5**	**-0.9**
EZC	**Erzincan**	**1.05**	**357**	*e*PG	**Pg**	**02 01 53.2**	**-1.8**
EZC	**Erzincan**	**1.05**	**357**	*e*Pg	**Pg**	**02 01 53.2**	**-1.8**
AKCD	**Akcadag**	**1.25**	**251**	*i* P	**Pn**	**02 01 57.1**	**-2.6**
AKCD				*i* S	**Sb**	**02 02 13.0**	**-3.0**
AKCD	**Akcadag**	**1.25**	**251**	*i* P	**Pn**	**02 01 57.1**	**-2.6**
AKCD				*i* S	**Sb**	**02 02 13.0**	**-3.0**
URFA	**Urfa**	**1.35**	**201**	*e*PN	**Pn**	**02 01 59.8**	**-1.1**
URFA	**Urfa**	**1.35**	**201**	*e*Pn	**Pn**	**02 01 59.8**	**-1.1**
BNGL	**BINGOL**	**1.37**	**79**	*i* P	**Pn**	**02 01 59.0**	**-2.3**
KELT	**Kelkit**	**1.45**	**355**	*i* P	**Pn**	**02 02 01.1**	**-1.4**
KELT	**Kelkit**	**1.45**	**355**	*i* P	**Pn**	**02 02 01.1**	**-1.4**
ATAB	**Bozova**	**1.52**	**216**	*i* P	**Pn**	**02 02 02.9**	**-0.4**
ATAB				*i* S	**Sg**	**02 02 25.1**	**+1.4**
ATAB	**Bozova**	**1.52**	**216**	*i* P	**Pn**	**02 02 02.9**	**-0.4**
ATAB				*i* S	**Sg**	**02 02 25.1**	**+1.4**
DARE	**Darende-Malaty**	**1.53**	**266**	*e*PN	**Pn**	**02 02 02.5**	**-1.0**
DARE	**Darende-Malaty**	**1.53**	**266**	*e*Pn	**Pn**	**02 02 02.5**	**-1.0**
KOPT	**Kop Dagi**	**1.55**	**32**	*i* P	**Pn**	**02 02 02.7**	**-1.3**
VRTB	**Varto-Mus**	**1.65**	**73**	*e*PN	**Pn**	**02 02 04.1**	**-1.0**
VRTB	**Varto-Mus**	**1.65**	**73**	*e*Pn	**Pn**	**02 02 04.1**	**-1.0**
BTMT	**Batman**	**1.70**	**107**	*e*PN	**Pn**	**02 02 03.5**	**-2.2**
BTMT	**Batman**	**1.70**	**107**	*e*Pn	**Pn**	**02 02 03.6**	**-2.2**
MARD	**Mardin**	**1.75**	**142**	*i* P	**Pn**	**02 02 05.3**	**-1.2**
MARD				*i* S	**Sn**	**02 02 28.7**	**-0.8**
GUMT	**Gumushane**	**1.75**	**1**	*e*PN	**Pn**	**02 02 05.8**	**-0.8**
GUMT	**Gumushane**	**1.75**	**1**	*e*Pn	**Pn**	**02 02 05.8**	**-0.8**
BAYT	**Ayd¨¬ntepe-Bay**	**1.78**	**18**	*e*PN	**Pn**	**02 02 05.8**	**-1.1**
BAYT	**Ayd¨¬ntepe-Bay**	**1.78**	**18**	*e*Pn	**Pn**	**02 02 05.8**	**-1.1**
SUSE	**Susehri**	**1.78**	**328**	*i* P	**Pn**	**02 02 07.3**	**+0.4**
SUSE	**Susehri**	**1.78**	**328**	*i* P	**Pn**	**02 02 07.3**	**+0.4**
KBSD	**Kabsdagh**	**1.91**	**152**	*e*P	**Pn**	**02 02 08.1**	**-0.6**
KBSD				*e*S	**Sg**	**02 02 36.5**	**+0.2**
KBSD				AML	AML	02 02 41.9	
	comp=N,2μm,0.5s						
KBSD				AML	AML	02 02 44.1	
	comp=E,774nm,0.5s						
KBSD	**Kabsdagh**	**1.91**	**152**	*e*P	**Pn**	**02 02 08.1**	**-0.6**
	SNR=45						
KBSD				*e*S	**Sg**	**02 02 36.5**	**+0.2**
	comp=E,774nm,0.5s,SNR=40						
EZM	**Erzurum**	**1.92**	**51**	*e*PN	**Pn**	**02 02 08.1**	**-0.9**
ERZM	**Erzurum**	**1.92**	**51**	*i* P	**Pn**	**02 02 09.0**	**-0.1**
ERZM	**Erzurum**	**1.92**	**51**	*i* P	**Pn**	**02 02 09.0**	**-0.1**
GZT	**Gaziantep**	**1.99**	**228**	*i* P	**Pn**	**02 02 09.7**	**-0.2**
TATV	**Tatvan**	**2.23**	**94**	*i* P	**Pn**	**02 02 14.0**	**+0.7**
TATV	**Tatvan**	**2.23**	**94**	*i* P	**Pn**	**02 02 14.0**	**+0.7**
MACK	**Trabzon**	**2.25**	**7**	*i* P	**Pn**	**02 02 14.1**	**+0.7**
MACK	**Trabzon**	**2.25**	**7**	*i* P	**Pn**	**02 02 14.1**	**+0.7**
ESPY	**Espiye-Giresun**	**2.28**	**346**	*e*PN	**Pn**	**02 02 13.3**	**-0.4**
ESPY	**Espiye-Giresun**	**2.28**	**346**	*e*Pn	**Pn**	**02 02 13.3**	**-0.4**
GAZ	**Gaziantep**	**2.33**	**230**	*e*PN	**Pn**	**02 02 14.4**	**0.0**
GAZ	**Gaziantep**	**2.33**	**230**	*e*Pn	**Pn**	**02 02 14.4**	**0.0**
KMRS	**Kahramanmaras**	**2.33**	**240**	*e*PN	**Pn**	**02 02 14.0**	**-0.4**
KMRS	**Kahramanmaras**	**2.33**	**240**	*e*Pn	**Pn**	**02 02 14.0**	**-0.4**
HOMI	**Horasan**	**2.34**	**54**	*i* P	**Pb**	**02 02 17.3**	**-0.7**
RSDY	**Resadiye-TOKAT**	**2.34**	**317**	*e*PN	**Pn**	**02 02 14.5**	**-0.1**
RSDY	**Resadiye-TOKAT**	**2.34**	**317**	*e*Pn	**Pn**	**02 02 14.5**	**-0.1**
SFNV	**Sufian**	**2.34**	**166**	*e*P	**Pn**	**02 02 14.7**	**+0.1**
SFNV				*e*S	**Sg**	**02 02 51.0**	**+0.9**
SFNV				AML	AML	02 02 55.0	
	comp=E,1μm,0.5s						
SFNV				AML	AML	02 02 59.8	
	comp=N,2μm,0.5s						
SFNV	**Sufian**	**2.34**	**166**	*e*P	**Pn**	**02 02 14.7**	**+0.1**
	SNR=45						
SFNV				*e*S	**Sg**	**02 02 51.0**	**+0.9**
	comp=N,2μm,0.5s,SNR=40						
SARI	**SarD1z-Kayseri**	**2.38**	**264**	*e*PN	**Pn**	**02 02 15.0**	**-0.2**
AYKD	**Aykdinkavak**	**2.44**	**239**	*i* P	**Pn**	**02 02 15.5**	**-0.3**
AYKD				*i* S	**Sb**	**02 02 51.2**	**+1.1**
SIRN	**S¨¬rnak**	**2.65**	**116**	*i* P	**Pn**	**02 02 17.0**	**-1.8**
SIRN	**S¨¬rnak**	**2.65**	**116**	*i* P	**Pn**	**02 02 17.0**	**-1.8**
PZAR	**Pazar-Rize**	**2.72**	**24**	*e*PN	**Pn**	**02 02 20.0**	**+0.3**
PZAR	**Pazar-Rize**	**2.72**	**24**	*e*Pn	**Pn**	**02 02 20.0**	**+0.3**
TOKA	**Tokat**	**2.80**	**306**	*i* P	**Pb**	**02 02 23.2**	**-2.5**
BNN	**Bunyan**	**2.80**	**274**	*e*PN	**Pn**	**02 02 20.9**	**-0.1**
BNN	**Bunyan**	**2.80**	**274**	*e*Pn	**Pn**	**02 02 20.9**	**-0.1**
DDEM	**Demirkent**	**2.83**	**39**	*i* P	**Pn**	**02 02 20.8**	**-0.5**
DDEM	**Demirkent**	**2.83**	**39**	*i* P	**Pn**	**02 02 20.8**	**-0.5**
DBAD	**Bademkaya**	**2.90**	**36**	*i* P	**Pg**	**02 02 30.8**	**+0.4**
MZRK	**Al-Mazaregh**	**3.03**	**161**	*e*P	**Pn**	**02 02 22.4**	**-1.7**
MZRK				*e*S	**Sb**	**02 03 06.8**	**-0.5**
MZRK				AML	AML	02 03 17.1	
	comp=E,786nm,0.7s						
MZRK				AML	AML	02 03 22.3	
	comp=N,790nm,0.5s						
MZRK	**Al-Mazaregh**	**3.03**	**161**	*e*P	**Pn**	**02 02 22.4**	**-1.7**
	SNR=45						
MZRK				*e*S	**Sb**	**02 03 06.8**	**-0.5**
	comp=N,790nm,0.5s,SNR=40						
DAGI	**Agillar**	**3.05**	**38**	*i* P	**Pn**	**02 02 23.6**	**-0.7**
KOZT	**Kozan**	**3.09**	**248**	*e*PN	**Pn**	**02 02 24.9**	**0.0**
KOZT	**Kozan**	**3.09**	**248**	*e*Pn	**Pn**	**02 02 24.9**	**0.0**
VANB	**Van**	**3.10**	**91**	*e*PN	**Pn**	**02 02 25.1**	**0.0**
VANB	**Van**	**3.10**	**91**	*e*Pn	**Pn**	**02 02 25.1**	**0.0**
JHLN	**Al Jahlan**	**3.13**	**195**	*e*P	**Pn**	**02 02 25.2**	**-0.1**
JHLN				*e*S	**Sg**	**02 03 13.6**	**-1.7**
JHLN				AML	AML	02 03 23.3	
	comp=N,637nm,0.5s						
JHLN				AML	AML	02 03 23.7	
	comp=E,456nm,0.5s						
JHLN	**Al Jahlan**	**3.13**	**195**	*e*P	**Pn**	**02 02 25.2**	**-0.1**
	SNR=45						
JHLN				*e*S	**Sg**	**02 03 13.6**	**-1.7**
	comp=E,456nm,0.5s,SNR=40						
JHLN	**Al Jahlan**	**3.13**	**195**	*e*S	**Sg**	**02 03 13.6**	**-1.7**
	comp=E,456nm,0.5s,SNR=40						
YOZ	**Yozgat**	**3.33**	**288**	*e*PN	**Pn**	**02 02 28.8**	**+0.5**
YOZ	**Yozgat**	**3.33**	**288**	*e*Pn	**Pn**	**02 02 28.8**	**+0.5**
CEYT	**Ceyhan**	**3.37**	**241**	*e*PN	**Pn**	**02 02 29.0**	**+0.4**
CEYT	**Ceyhan**	**3.37**	**241**	*e*Pn	**Pn**	**02 02 29.0**	**+0.4**
KARS	**Kars**	**3.41**	**55**	*e*PN	**Pn**	**02 02 29.3**	**-0.1**
KARS	**Kars**	**3.41**	**55**	*e*Pn	**Pn**	**02 02 29.3**	**-0.1**
KVT	**Kavak**	**3.52**	**313**	*e*PN	**Pn**	**02 02 31.0**	**+0.2**
KVT	**Kavak**	**3.52**	**313**	*e*Pn	**Pn**	**02 02 31.0**	**+0.2**
CLDR	**Caldiran**	**3.53**	**81**	*e*PN	**Pn**	**02 02 31.4**	**+0.3**
CLDR	**Caldiran**	**3.53**	**81**	*e*Pn	**Pn**	**02 02 31.4**	**+0.3**
BTCH	**Batrach**	**3.56**	**223**	*e*P	**Pn**	**02 02 30.9**	**-0.5**
BTCH				*e*S	**Sb**	**02 03 24.3**	**+1.8**
BTCH				AML	AML	02 03 40.8	
	comp=E,708nm,0.6s						
BTCH				AML	AML	02 03 42.5	
	comp=N,473nm,0.6s						
BTCH	**Batrach**	**3.56**	**223**	*e*P	**Pn**	**02 02 30.9**	**-0.5**
	SNR=45						
BTCH				*e*S	**Sb**	**02 03 24.3**	**+1.8**
	comp=N,473nm,0.6s,SNR=40						
HTY	**Hatay**	**3.67**	**226**	*e*PN	**Pn**	**02 02 33.1**	**+0.2**
HTY	**Hatay**	**3.67**	**226**	*e*Pn	**Pn**	**02 02 33.1**	**+0.2**
NIG	**Nigde**	**3.83**	**263**	*e*PN	**Pn**	**02 02 35.5**	**+0.2**
NIG	**Nigde**	**3.83**	**263**	*e*Pn	**Pn**	**02 02 35.5**	**+0.2**
KRTS	**Karatas**	**3.86**	**238**	*e*PN	**Pn**	**02 02 36.7**	**+1.3**
KRTS	**Karatas**	**3.86**	**238**	*e*Pn	**Pn**	**02 02 36.7**	**+1.3**
CORM	**Corum**	**4.00**	**293**	*e*PN	**Pn**	**02 02 38.1**	**+0.7**
CORM	**Corum**	**4.00**	**293**	*e*Pn	**Pn**	**02 02 38.1**	**+0.7**
AKH	**Akhalkalaki**	**4.13**	**48**	P	**Pg**	**02 02 54.1**	**+0.2**
AKH				S	Sg	02 03 54.6	+7.2
DIKM	**Dikmen**	**4.34**	**314**	*e*PN	**Pn**	**02 02 42.6**	**+0.6**
DIKM	**Dikmen**	**4.34**	**314**	*e*Pn	**Pn**	**02 02 42.6**	**+0.6**
GNI	**Garni**	**4.36**	**69**	*e*PN	**Pn**	**02 02 43.1**	**+0.6**
GNI	**Garni**	**4.36**	**69**	Pn	**Pn**	**02 02 41.3**	**-1.1**
	comp=N,1.1nm,0.3s,baz=0.0,slow=1.0,SNR=3.4						
GNI				Pg	**Pb**	**02 02 54.1**	**+1.7**
	comp=N,1.4nm,0.3s,baz=305,slow=7.7,SNR=9.2						
GNI	**Garni**	**4.36**	**69**	*e*Pn	**Pn**	**02 02 43.1**	**+0.6**
BYBT	**Boyabat**	**4.52**	**309**	*e*PN	**Pn**	**02 02 45.1**	**+0.7**
BYBT	**Boyabat**	**4.52**	**309**	*e*Pn	**Pn**	**02 02 45.1**	**+0.7**
BRTR	**Keskin Array B**	**4.61**	**285**	Pn	**Pn**	**02 02 48.0**	**+2.1**
	comp=N,8.8nm,0.3s,baz=99,slow=12,SNR=4.0						
BRTR				Lg	Lg	02 04 06.5	
	comp=N,5.1nm,0.3s,baz=58,slow=21,SNR=1.6						
GOR	**Gori**	**4.85**	**46**	P	**Pg**	**02 03 07.3**	**-0.5**
ONI	**Oni**	**4.94**	**37**	P	**Pb**	**02 03 05.0**	**+2.8**
ONI				S	**Sg**	**02 04 15.5**	**+1.8**
TBLG	**Delisi**	**5.07**	**52**	P	Pg	02 03 08.7	-3.2
TBLG				S	**Sg**	**02 04 18.0**	**+0.5**
FKH	**Fakeheh**	**5.07**	**210**	*e*P	**Pn**	**02 02 52.5**	**+0.3**
FKH	**Fakeheh**	**5.07**	**210**	*e*P	**Pn**	**02 02 52.5**	**+0.3**
DUS	**Dusheti**	**5.26**	**48**	P	**Pg**	**02 03 16.1**	**+0.5**
DGRG	**David-gareji**	**5.32**	**57**	P	Pb	02 03 12.1	+3.4
DGRG				S	Sg	02 04 33.1	+7.3
KBZ	**Khabaz**	**5.66**	**26**	Pn	**Pn**	**02 03 00.9**	**+0.8**
	comp=N,0.2nm,0.3s,baz=329,slow=5.9,SNR=2.7						
MMAI	**Mount Meron Ar**	**6.55**	**211**	Pn	**Pn**	**02 03 14.5**	**+2.0**
	comp=N,3.0nm,0.3s,baz=60,slow=15,SNR=14						
MMAI				Pg	Pg	02 03 37.9	-2.5
	comp=N,3.1nm,0.3s,baz=76,slow=18,SNR=5.9						
MMAI				Lg	Lg	02 05 06.9	
	comp=N,3.0nm,0.3s,baz=20,slow=30,SNR=1.7						
ASF	**Jabal al Asfar**	**6.83**	**198**	Pn	**Pn**	**02 03 16.7**	**+0.3**
	comp=N,0.7nm,0.3s,baz=262,slow=12,SNR=14						
ASF				Lg	Lg	02 05 15.2	
	comp=N,1.5nm,0.3s,baz=260,slow=21,SNR=3.5						
MLR	**Muntele Rosu**	**12.09**	**308**	Pn	Pn	02 04 31.5	+3.1
	comp=N,0.0nm,0.3s,baz=128,slow=12,SNR=2.5						
AKTO	**Aktyubinsk**	**17.63**	**42**	P	**Pn**	**02 05 41.0**	**-0.8**
	comp=N,0.1nm,0.3s,baz=217,slow=15,SNR=3.5						
MICGM	**Minsk**	**17.64**	**337**	*e*LR	LR	02 06 25.0	
GERES	**GERESS Array B**	**21.07**	**307**	P	**P**	**02 06 23.9**	**+3.3**
	comp=N,0.6nm,0.7s,baz=110,slow=12,SNR=6.4						
KEST	**Kesra**	**24.09**	**272**	P	**P**	**02 06 54.2**	**+2.1**
	comp=N,0.9nm,0.8s,baz=295,slow=5.8,SNR=5.7						
FINES	**FINESS Array B**	**24.23**	**344**	P	**P**	**02 06 54.8**	**+1.8**
	comp=N,1.3nm,0.7s,baz=142,slow=7.2,SNR=6.6						
BVAR	**Borovoye Array**	**25.64**	**46**	P	**P**	**02 07 05.6**	**-0.2**
	comp=N,0.2nm,0.4s,baz=239,slow=13,SNR=2.8						
KURBB	**Kurchatov Arra**	**29.91**	**54**	P	**P**	**02 07 43.0**	**-1.2**
	comp=N,0.8nm,0.5s,baz=268,slow=8.9,SNR=8.4						
MKAR	**Makanchi Array**	**32.16**	**61**	P	**P**	**02 08 03.8**	**-0.4**
	comp=N,0.5nm,0.7s,baz=268,slow=8.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**41.97**	**243**	P	**P**	**02 09 27.9**	**+0.3**
	comp=N,0.9nm,1.1s,baz=56,slow=6.0,SNR=3.0						
KSRS	**Korea Array**	**66.83**	**60**	P	**P**	**02 12 26.3**	**-2.1**
	comp=N,0.6nm,0.3s,baz=299,slow=5.6,SNR=5.2						
YKA	**Yellowknife Ar**	**77.00**	**348**	P	**P**	**02 13 27.4**	**-1.6**
	comp=N,0.1nm,0.7s,baz=33,slow=6.0,SNR=3.9						

IDC 26 02:26:55.0±2.8, 20°65S×178°71W, h657km±37km, mb2.9/7, mb1 3.3/9, mb1mx3.1/20, mbtmp3.1/9, 1D, Error ellipse: s-maj=41.0km s-min=15.2km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.91**	**261**	P	P	02 29 50.8	-0.5
	1.0nm,0.3s,baz=155,slow=20,SNR=8.9						
URZ	**Urewera**	**17.92**	**191**	P	P	02 30 26.2	-1.3
	1.7nm,0.3s,baz=155,slow=14,SNR=6.2						
STKA	**Stephens Creek**	**37.12**	**244**	P	P	02 33 14.4	+1.2
	1.6nm,0.3s,baz=93,slow=12,SNR=10						
ASAR	**Alice Springs**	**43.84**	**257**	P	P	02 34 06.8	+0.5
	1.0nm,0.5s,baz=87,slow=8.7,SNR=15						
ASAR				PcP	PcP	02 35 37.9	+0.6
	0.4nm,0.5s,baz=100,slow=4.0,SNR=5.4						
ASAR				S	S	02 39 51.8	-0.4
	0.3nm,0.5s,baz=93,slow=14,SNR=4.9						
WRA	**Warramunga Arr**	**43.92**	**262**	P	P	02 34 06.2	-0.7
	0.6nm,0.5s,baz=98,slow=8.1,SNR=8.0						
NVAR	**Mina Array Bea**	**81.59**	**44**	P	P	02 38 06.9	+0.1
	0.5nm,0.6s,baz=219,slow=8.1,SNR=4.9						
TXAR	**Lajitas Array**	**87.70**	**58**	P	P	02 38 37.7	+1.2
	0.6nm,0.8s,baz=212,slow=4.4,SNR=4.7						
ILAR	**Eielson Array**	**88.61**	**13**	P	P	02 38 38.4	-1.3
	0.5nm,0.4s,baz=215,slow=5.4,SNR=14						
PDAR	**Pinedale Array**	**89.53**	**43**	P	P	02 38 44.9	+0.1
	0.2nm,0.3s,baz=151,slow=3.4,SNR=3.7						
MKAR	**Makanchi Array**	**110.82**	**313**	PKiKP	PKiKP	02 44 15.2	-0.1
	0.2nm,0.4s,baz=185,slow=0.7,SNR=5.7						
ARCES	**ARCESS Array B**	**128.94**	**349**	PKP	PKPdf	02 44 49.0	-0.3
	1.7nm,0.8s,baz=340,slow=1.4,SNR=4.4						
AKASG	**Malin Array Be**	**142.82**	**330**	PKP	PKPdf	02 45 12.8	-2.6
	2.2nm,0.4s,baz=40,slow=4.0,SNR=9.8						
BRTR	**Keskin Array B**	**146.44**	**312**	PKPbc	PKPbc	02 45 25.2	+0.3
	0.7nm,0.6s,baz=132,slow=5.1,SNR=5.3						
CLL	**Collm**	**148.05**	**346**	*i* P	PKPbc	02 45 29.2	+0.8
	comp=Z,5.0nm,0.8s						
CLL				*e*		02 45 34.0	
GERES	**GERESS Array B**	**150.16**	**343**	PKPbc	PKPbc	02 45 34.1	+0.4
	comp=Z,0.6nm,0.5s,baz=25,slow=3.5,SNR=6.8						

*SKO **26** 02:36:54.8, 41°29N×22°74E, h15km, M1.6, ML1.9*
*ATH **26** 02:36:55.6, 41°30N×22°71E, h18km±3km, MD2.9/5*
*THE **26**

KOZT	**Kozan**	**0.42**	**273**	*e*PG	**Pb**	**02 38 26.4**	**+0.1**		
KOZT				*e*SG	**Sb**	**02 38 33.3**	**+0.2**		
KOZT	**Kozan**	**0.42**	**273**	*e*Pg	**Pb**	**02 38 26.4**	**+0.1**		
KOZT				*e*Sg	**Sb**	**02 38 33.3**	**+0.2**		
KMRS	**Kahramanmaras**	**0.44**	**84**	*e*PG	**Pg**	**02 38 26.0**	**+1.6**		
KMRS				*e*SG	**Sb**	**02 38 33.0**	**-0.6**		
KMRS	**Kahramanmaras**	**0.44**	**84**	*e*Pg	**Pg**	**02 38 26.0**	**+1.6**		
KMRS				*e*Sg	**Sb**	**02 38 33.0**	**-0.6**		
GAZ	**Gaziantep**	**0.74**	**113**	*e*PG	**Pb**	**02 38 31.5**	**-0.3**		
GAZ				*e*SG	**Sn**	**02 38 43.2**	**-2.4**		
GAZ	**Gaziantep**	**0.74**	**113**	*e*Pg	**Pb**	**02 38 31.5**	**-0.3**		
GAZ				*e*Sg	**Sn**	**02 38 43.2**	**-2.4**		
SARI	**SarD1z-Kayseri**	**0.95**	**3**	*e*PG	**Pn**	**02 38 36.9**	**+0.3**		
SARI				*e*SG	**Sn**	**02 38 51.8**	**+0.9**		
SARI	**SarD1z-Kayseri**	**0.95**	**3**	*e*Pg	**Pn**	**02 38 36.9**	**+0.3**		
SARI				*e*Sg	**Sn**	**02 38 51.8**	**+0.9**		
GZT	**Gaziantep**	**0.97**	**96**	*i* P	**Pn**	**02 38 37.6**	**+0.7**		
GZT				*i* S	**Sn**	**02 38 52.3**	**+0.9**		
DARE	**Darende-Malaty**	**1.42**	**38**	*e*PN	**Pb**	**02 38 43.6**	**+0.1**		
DARE	**Darende-Malaty**	**1.42**	**38**	*e*Pn	**Pb**	**02 38 43.6**	**+0.1**		

IDC 26 03:15:34.2±1.0, 55.76S×29.74W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/17, mbtmp3.9/4, MS3.5/6, Ms1 3.5/6, ms1mx3.3/22, Error ellipse: s-maj=47.9km s-min=23.9km az=85.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**19.61**	**155**	LR	LR	03 25 07.1	
	comp=Z,30nm,20.2s,baz=25,slow=29						
PLCA	**Paso Flores**	**30.53**	**282**	LR	LR	03 32 06.4	
	comp=Z,148nm,19.9s,baz=156,slow=32						
QSPA	**South Pole Qui**	**34.49**	**180**	P	P	03 22 25.0	+1.4
	1.4nm,0.5s,baz=172,slow=5.2,SNR=14						
CPUP	**Villa Florida**	**35.56**	**314**	LR	LR	03 34 57.3	
	comp=Z,88nm,18.1s,baz=295,slow=33						
MAW	**Mawson**	**41.23**	**144**	LR	LR	03 38 38.5	
	comp=Z,83nm,19.3s,baz=282,slow=34						
BDFB	**Brasilia**	**42.43**	**333**	LR	LR	03 38 08.4	
	comp=Z,61nm,18.2s,baz=342,slow=32						
VNDA	**Vanda**	**46.79**	**183**	P	P	03 24 03.0	-1.6
	1.8nm,1.2s,baz=190,slow=6.1,SNR=2.6						
BOSA	**Boshof**	**47.31**	**78**	LR	LR	03 41 02.0	
	comp=Z,79nm,18.3s,baz=346,slow=32						
LPAZ	**La Paz**	**49.05**	**308**	P	P	03 24 23.9	+0.2
	1.0nm,0.7s,baz=199,slow=4.3,SNR=3.6						
TORD	**Torodi Ar. Bea**	**73.54**	**32**	P	P	03 27 08.9	+0.2
	1.1nm,1.1s,baz=199,slow=7.4,SNR=3.9						
YKA	**Yellowknife Ar**	**135.00**	**319**	PKP	PKPdf	03 34 53.1	-0.5
	0.1nm,0.7s,baz=119,slow=2.3,SNR=3.0						
ILAR	**Eielson Array**	**148.85**	**312**	PKPbc	PKPbc	03 35 21.0	-1.2
	1.9nm,1.0s,baz=126,slow=1.4,SNR=14						

*ISK **26** 03:39:57.4, 38.66N×39.41E, h4km, MD2.9*
*ISCJB **26** 03:39:58.3±0.6, 38.70N±0.03×39.43E±0.04, h3km±5km, Error ellipse: s-maj=5.7km s-min=4.4km az=2.2*
*DDA **26** 03:39:58.4, 38.72N×39.47E, h7km, MD2.6*
*CSEM **26** 03:39:58.2±0.3, 38.68N×39.48E, h2km, MD2.9, Error ellipse: s-maj=7.7km s-min=5.3km az=99.0*
ISC 26 03:39:58.6±1.0, 38.68N±0.02×39.44E±0.03, h11km±8km, n33, σ0962/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.21**	**351**	*e*PG	**Pg**	**03 40 02.6**	**-0.6**
PTK				*e*SG	**Sg**	**03 40 06.5**	**+0.2**
PTK	**Pertek**	**0.21**	**351**	*e*Pg	**Pg**	**03 40 02.6**	**-0.6**
PTK				*e*Sg	**Sg**	**03 40 06.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.32**	**198**	*e*PG	**Pg**	**03 40 04.7**	**-0.4**
SVRC	**Sivrice-ELAZID**	**0.32**	**198**	*e*Pg	**Pg**	**03 40 04.7**	**-0.4**
ELZG	**Elazig**	**0.40**	**243**	*i* P	**Pg**	**03 40 07.1**	**+0.6**
ELZG				*i* S	**Sb**	**03 40 13.8**	**-0.1**
ELZG	**Elazig**	**0.40**	**243**	*i* P	**Pg**	**03 40 07.1**	**+0.6**
ELZG				*i* S	**Sb**	**03 40 13.8**	**-0.1**
MYA	**Malataya**	**0.87**	**246**	*e*PG	**Pg**	**03 40 14.3**	**-0.9**
MYA				*e*SG	**Sg**	**03 40 26.2**	**-0.4**
MYA	**Malataya**	**0.87**	**246**	*e*Pg	**Pg**	**03 40 14.4**	**-0.9**
MYA				*e*Sg	**Sg**	**03 40 26.2**	**-0.4**
DIYA	**Diyarbakir**	**0.93**	**144**	*e*P	**Pg**	**03 40 16.1**	**-0.4**
DIYA	**Diyarbakir**	**0.93**	**144**	*e*P	**Pg**	**03 40 16.1**	**-0.4**
ERZN	**Erzincan**	**0.93**	**14**	*e*PG	**Pg**	**03 40 15.7**	**-0.8**
KEMA	**Kemaliye**	**0.94**	**309**	*i* P	**Pg**	**03 40 16.1**	**-0.6**
KEMA				*i* S	**Sg**	**03 40 29.3**	**+0.3**
KEMA	**Kemaliye**	**0.94**	**309**	*i* P	**Pg**	**03 40 16.1**	**-0.6**
KEMA				*i* S	**Sg**	**03 40 29.3**	**+0.3**
BNGB	**Bing¨¶l**	**1.02**	**72**	*e*PG	**Pg**	**03 40 17.8**	**-0.4**
ILIC	**ilic-Erzincan**	**1.02**	**319**	*e*PG	**Pg**	**03 40 17.6**	**-0.7**
ILIC				*e*SG	**Sb**	**03 40 32.5**	**+0.6**
ILIC	**ilic-Erzincan**	**1.02**	**319**	*e*Pg	**Pg**	**03 40 17.6**	**-0.7**
ILIC				*e*Sg	**Sb**	**03 40 32.5**	**+0.6**
EZC	**Erzincan**	**1.07**	**357**	*e*PN	**Pg**	**03 40 18.4**	**-0.8**
EZC	**Erzincan**	**1.07**	**357**	*e*Pn	**Pg**	**03 40 18.4**	**-0.8**
KELT	**Kelkit**	**1.47**	**355**	*i* P	**Pb**	**03 40 26.2**	**+0.1**
KELT				*i* S	**Sn**	**03 40 43.4**	**-1.3**
KELT	**Kelkit**	**1.47**	**355**	*i* P	**Pb**	**03 40 26.2**	**+0.1**
DARE	**Darende-Malaty**	**1.53**	**266**	*e*PN	**Pn**	**03 40 25.9**	**-0.1**
DARE	**Darende-Malaty**	**1.53**	**266**	*e*Pn	**Pn**	**03 40 25.9**	**-0.1**
MARD	**Mardin**	**1.73**	**142**	*i* P	**Pg**	**03 40 31.7**	**-0.1**
MARD				*i* S	**Sg**	**03 40 53.8**	**-0.4**
GUMT	**Gumushane**	**1.78**	**1**	*e*PN	**Pn**	**03 40 30.1**	**+0.7**
GUMT	**Gumushane**	**1.78**	**1**	*e*Pn	**Pn**	**03 40 30.1**	**+0.7**
BAYT	**Ayd¨¬ntepe-Bay**	**1.79**	**17**	*e*PN	**Pn**	**03 40 30.3**	**+0.6**
BAYT	**Ayd¨¬ntepe-Bay**	**1.79**	**17**	*e*Pn	**Pn**	**03 40 30.3**	**+0.6**
SUSE	**Susehri**	**1.80**	**328**	*i* P	**Pb**	**03 40 32.1**	**+0.5**
SUSE	**Susehri**	**1.80**	**328**	*i* P	**Pb**	**03 40 32.1**	**+0.5**
ESPY	**Espiye-Giresun**	**2.30**	**346**	*e*PN	**Pn**	**03 40 37.6**	**+1.1**
ESPY	**Espiye-Giresun**	**2.30**	**346**	*e*Pn	**Pn**	**03 40 37.6**	**+1.1**
KMRS	**Kahramanmaras**	**2.32**	**240**	*e*PN	**Pn**	**03 40 37.0**	**+0.3**
KMRS	**Kahramanmaras**	**2.32**	**240**	*e*Pn	**Pn**	**03 40 37.1**	**+0.3**

*IDC **26** 03:49:27.9±1.0, 53.88N×163.21W, h0km, mb3.8/12, mb1 3.9/15, mb1mx3.8/32, mbtmp3.7/15, ML3.6/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/41, Error ellipse: s-maj=26.1km s-min=15.5km az=179.0*
*NEIC **26** 03:49:34.1±0.7, 54.05N×163.02W, h38km±7km, mb4.2/2, ML3.8(AEIC), Error ellipse: s-maj=11.0km s-min=4.4km az=162.0*
ISC 26 03:49:32.0±1.5, 53.92N±0.06×163.09W±0.04, h26km±10km, n60, σ1911/70, mb4.0/14, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**0.82**	**332**	P	**Pb**	**03 49 47.1**	**-0.5**
SSLS	**Shishaldin Sou**	**0.95**	**326**	P	**Pn**	**03 49 49.7**	**-0.1**
SSLS				S	**Sn**	**03 50 03.1**	**+0.5**
FALS	**False Pass**	**0.95**	**349**	*e*Pg	**Pn**	**03 49 49.0**	**-0.7**
FALS				*e*S	**Sb**	**03 50 00.2**	**-1.8**
SSLW	**Shishaldin Wes**	**1.04**	**325**	P	**Pn**	**03 49 51.0**	**0.0**
WESN	**West Dahl Nort**	**1.09**	**307**	P	**Pb**	**03 49 52.4**	**+0.2**
DT1	**Dutton Round H**	**1.28**	**21**	P	**Pn**	**03 49 52.2**	**-1.9**
DOL	**Dolgoi Island**	**1.42**	**30**	P	**Pn**	**03 49 54.3**	**-1.9**
AKSA	**Akutan Strait**	**1.55**	**279**	P	**Pb**	**03 49 59.3**	**-0.7**
AKSA				S	**Sb**	**03 50 20.3**	**+1.0**
AKUT	**Akutan**	**1.60**	**279**	*e*Pn	**Pb**	**03 50 00.5**	**-0.3**
AKUT				*e*S	**Sn**	**03 50 17.9**	**-0.4**
PS4A	**Pavlof South-4**	**1.60**	**26**	P	**Pn**	**03 49 57.9**	**-0.7**
PVV	**Pavlof Volcano**	**1.64**	**27**	P	**Pn**	**03 49 58.5**	**-0.7**
AKLV	**Akutan Long Va**	**1.71**	**279**	P	**Pb**	**03 50 02.3**	**-0.3**
AKGG	**Akutan Green G**	**1.73**	**280**	P	**Pb**	**03 50 02.8**	**-0.3**
UNV	**Unalaska Valle**	**2.02**	**269**	*e*Pn	**Pn**	**03 50 05.6**	**+1.2**
UNV				*e*S	**Sb**	**03 50 32.5**	**-0.2**
SDPT	**Sand Point**	**2.08**	**46**	*e*Pn	**Pn**	**03 50 04.5**	**-0.7**
SDPT				*e*S	**Sn**	**03 50 31.0**	**+0.6**
MTBL	**Makushin Table**	**2.12**	**273**	P	**Pb**	**03 50 07.5**	**-2.3**
MREP	**Makushin Rep't**	**2.17**	**268**	P	**Pb**	**03 50 09.0**	**-1.6**
MCIR	**Makushin Cirqu**	**2.25**	**272**	P	**Pb**	**03 50 09.9**	**-2.0**
VNFG	**Veniaminof 2**	**3.12**	**39**	P	**Pn**	**03 50 20.0**	**+0.4**
VNHG	**Veniaminof 1**	**3.22**	**43**	P	**Pn**	**03 50 22.0**	**+0.9**
CHGN	**Chignik**	**3.59**	**47**	*e*Pn	**Pn**	**03 50 25.5**	**-0.4**
CHGN				*e*S	**Sn**	**03 51 08.1**	**+0.6**
OHAK	**Old Harbor**	**6.47**	**55**	*e*Pn	**Pn**	**03 51 03.7**	**-1.7**
	12nm,0.4s						
OHAK				*e*S	**Sb**	**03 52 42.0**	**+1.6**
KDAK	**Kodiak Island**	**7.06**	**53**	*e*Pn	**Pn**	**03 51 11.4**	**-2.2**
	9.9nm,0.6s						
KDAK					Sn	03 52 26.1	-6.8
KDAK	**Kodiak Island**	**7.06**	**53**	Pn	**Pn**	**03 51 12.5**	**-1.1**
	1.1nm,0.3s,baz=211,slow=8.6,SNR=8.8						
KDAK					Sn	03 52 26.1	-6.8
	baz=345,slow=19,SNR=1.5						
GAMB	**Gambell**	**10.83**	**339**	*e*Pn	**Pn**	**03 52 07.8**	**+2.7**
	7.9nm,1.1s						
TRF	**Thorofare Moun**	**11.62**	**30**	*e*Pn	**Pn**	**03 52 18.2**	**+2.1**
	16nm,1.2s						
ILAR	**Eielson Array**	**13.60**	**31**	Pn	**Pn**	**03 52 41.9**	**-1.1**
ILAR	**Eielson Array**	**13.60**	**31**	Pn	**Pn**	**03 52 41.9**	**-1.1**
	0.1nm,0.3s,baz=212,slow=12,SNR=5.0						
ILAR					LR	03 58 19.8	
	comp=Z,177nm,18.1s,baz=252,slow=39						
COLD	**Coldfoot**	**14.72**	**20**	*e*Pn	**Pn**	**03 52 57.5**	**-0.8**
	4.6nm,0.9s						
COLD				*e*S	S	03 56 06.1	+7.6
DLBC	**Dease Lake**	**18.82**	**63**	P	**Pn**	**03 53 51.8**	**+1.5**
DLBC	**Dease Lake**	**18.82**	**63**	P	**Pn**	**03 53 51.8**	**+1.5**
	0.1nm,0.3s,baz=262,slow=14,SNR=2.6						
INK	**Inuvik**	**19.98**	**32**	P	**P**	**03 54 03.0**	**+0.9**
INK	**Inuvik**	**19.98**	**32**	P	**P**	**03 54 03.0**	**+0.9**
	0.5nm,0.4s,baz=230,slow=9.5,SNR=5.7						
INK					LR	04 02 23.9	
	comp=Z,83nm,20.4s,baz=206,slow=39						
BBB	**Bella Bella**	**20.97**	**80**	LR	LR	04 00 41.2	
	comp=Z,56nm,21.1s,baz=64,slow=32						
PETK	**Petropavlovsk-**	**23.13**	**284**	P	**P**	**03 54 36.5**	**+0.6**
PETK	**Petropavlovsk-**	**23.13**	**284**	P	**P**	**03 54 36.5**	**+0.6**
	3.6nm,0.7s,baz=103,slow=13,SNR=4.3						
YKA	**Yellowknife Ar**	**26.34**	**52**	P	**P**	**03 55 06.2**	**+0.7**
YKA				PcP	**PcP**	**03 58 29.7**	**-0.8**
YKA	**Yellowknife Ar**	**26.34**	**52**	P	**P**	**03 55 06.2**	**+0.7**
	0.7nm,0.8s,baz=271,slow=9.0,SNR=13						
YKA				PcP	**PcP**	**03 58 29.7**	**-0.8**
	0.2nm,0.7s,baz=282,slow=2.6,SNR=4.6						
YBH	**Yreka Blue Hor**	**29.31**	**98**	LR	LR	04 04 26.8	
	comp=Z,62nm,21.8s,baz=87,slow=31						
MFID	**Camas Ranch**	**32.36**	**89**	P	**P**	**03 55 59.3**	**+0.1**
	2.8nm,0.8s						
NVAR	**Mina Array Bea**	**34.02**	**99**	P	**P**	**03 56 15.0**	**+1.1**
NVAR	**Mina Array Bea**	**34.02**	**99**	P	**P**	**03 56 15.0**	**+1.1**
	1.6nm,0.8s,baz=299,slow=8.9,SNR=11						
ARUT	**Antelope Range**	**37.31**	**95**	*e*P	**P**	**03 56 42.9**	**+0.9**
	5.0nm,1.1s						
PV01	**Paradox Valley**	**39.95**	**90**	*e*P	**P**	**03 57 04.0**	**-0.3**
	91nm,0.7s						
KSRS	**Korea Array**	**48.92**	**280**	P	**P**	**03 58 16.3**	**+0.7**
	2.1nm,1.0s,baz=47,slow=7.0,SNR=9.3						
KSAR	**Wonju Array Be**	**48.95**	**280**	P	**P**	**03 58 16.3**	**+0.4**
TXAR	**Lajitas Array**	**49.03**	**95**	P	**P**	**03 58 16.3**	**-0.3**
TXAR				PcP	**PcP**	**03 59 39.8**	**-0.5**
TXAR	**Lajitas Array**	**49.03**	**95**	P	**P**	**03 58 16.3**	**-0.3**
	1.0nm,0.8s,baz=298,slow=5.3,SNR=17						
TXAR				PcP	**PcP**	**03 59 39.8**	**-0.5**
	0.3nm,0.7s,baz=292,slow=0.5,SNR=2.9						
SONM	**Songino Array**	**53.68**	**303**	P	**P**	**03 58 51.0**	**-0.3**
SONM	**Songino Array**	**53.68**	**303**	P	**P**	**03 58 51.0**	**-0.3**
	1.5nm,0.8s,baz=77,slow=7.6,SNR=4.3						
FINES	**FINESS Array B**	**64.75**	**355**	P	**P**	**04 00 06.0**	**-1.5**
FINES	**FINESS Array B**	**64.75**	**355**	P	**P**	**04 00 06.0**	**-1.5**
	1.2nm,0.9s,baz=239,slow=7.5,SNR=3.2						
NOA	**NORSAR Array B**	**65.29**	**3**	P	**P**	**04 00 11.0**	**-0.1**
NOA	**NORSAR Array B**	**65.29**	**3**	P	**P**	**04 00 11.0**	**-0.1**
	0.7nm,0.8s,baz=355,slow=6.6,SNR=2.9						
MKAR	**Makanchi Array**	**65.38**	**317**	P	**P**	**04 00 11.0**	**-0.9**
MKAR	**Makanchi Array**	**65.38**	**317**	P	**P**	**04 00 11.0**	**-0.9**
	0.2nm,0.5s,baz=31,slow=4.9,SNR=3.1						
AKASG	**Malin Array Be**	**75.23**	**352**	P	**P**	**04 01 10.7**	**-1.3**
AKASG	**Malin Array Be**	**75.23**	**352**	P	**P**	**04 01 10.7**	**-1.3**
	2.3nm,0.7s,baz=7.6,slow=5.0,SNR=4.5						
GERES	**GERESS Array B**	**77.57**	**2**	P	**P**	**04 01 25.6**	**+0.2**
GERES	**GERESS Array B**	**77.57**	**2**	P	**P**	**04 01 25.6**	**+0.2**
	0.2nm,0.4s,baz=21,slow=4.9,SNR=4.0						

MEX 26 03:56:02.6±0.6, 18.20N×94.48W, h80km±54km, MD4.0, Bay of Campeche

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**1.92**	**137**	*i* P	Pn	03 56 32.6	-0.9
TGIG				*i* S	Sn	03 56 55.1	-1.9
VHO	**Vista Hermosa**	**2.43**	**243**	*i* P	Pn	03 56 39.0	-1.5
VHO				*i* S	Sn	03 57 08.1	-1.4
CCIG	**Comitan**	**2.94**	**130**	*i* P	Pn	03 56 45.6	-1.8
CCIG				*i* S	Sn	03 57 20.1	-1.7
UTMO	**Huajuapan**	**3.19**	**264**	*i* P	Pn	03 56 49.1	-1.7
UTMO				*i* S	Sn	03 57 25.8	-2.1
PNIG	**Pinotepa**	**3.92**	**243**	*i* P	Pn	03 56 54.8	-5.8
PNIG				*i* S	Sn	03 57 44.2	-1.3

*CSEM **26** 04:10:17.4±0.3, 41.57N×14.32E, h10km, MD1.8/5, Error ellipse: s-maj=10.0km s-min=5.5km az=69.0*
ROM 26 04:10:16.8±0.6, 41.57N×14.33E, h10km±7km, Md1.8/5, Ml1.1/4, Error ellipse: s-maj=6.3km s-min=2.7km az=71.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIDA	**Miranda**	**0.10**	**321**	Pg	Pg	04 10 19.1	-0.4
MIDA				Sg	Sg	04 10 22.1	+0.7
	66nm,0.2s						
MIDA	**Miranda**	**0.10**	**321**	Pg	Pg	04 10 19.1	-0.4
MIDA				Sg	Sg	04 10 22.1	+0.7
	66nm,0.2s						
VAGA	**Valle Agricola**	**0.17**	**206**	Pg	Pg	04 10 20.7	+0.1
VAGA				Sg	Sg	04 10 24.2	+1.1
	29nm,0.5s						
VAGA	**Valle Agricola**	**0.17**	**206**	Pg	Pg	04 10 20.7	+0.1
VAGA				Sg	Sg	04 10 24.2	+1.1
	29nm,0.5s						
RNI2	**Rionero Sannit**	**0.19**	**315**	Pg	Pg	04 10 21.3	+0.3
RNI2				Sg	Sg	04 10 25.2	+1.3
	35nm,0.4s						
RNI2	**Rionero Sannit**	**0.19**	**315**	Pg	Pg	04 10 21.3	+0.3
RNI2				Sg	Sg	04 10 25.2	+1.3
	35nm,0.4s						
CERA	**Filignano**	**0.24**	**278**	Pg	Pg	04 10 22.9	+1.1
CERA	**Filignano**	**0.24**	**278**	Pg	Pg	04 10 22.9	+1.1
PTRJ	**Pietraroja**	**0.25**	**144**	Pg	Pb	04 10 23.4	-0.2
	22nm,0.5s						
PTRJ	**Pietraroja**	**0.25**	**144**	Pg	Pb	04 10 23.4	-0.2
	22nm,0.5s						

GUC 26 04:10:20.7±0.8, 32.74S×71.83W, h20km±16km, MD3.6, ML2.6, 7C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.33**	**152**	*i*P	Pb	04 10 27.9	0.0
IHA				*i* S	Sb	04 10 32.8	+0.1
ROCH	**El Roble**	**0.72**	**109**	*i*P	Pb	04 10 34.1	-0.8
ROCH				*i* S	Sb	04 10 43.8	-0.9
ROCH				AML	AML	04 10 49.1	
	comp=N,301nm,0.7s						
LCCH	**Las Cruces**	**0.77**	**164**	*i*P	Pb	04 10 34.6	-0.8
LCCH				*i* S	Sb	04 10 44.9	-0.6
CHNG	**Los Chungos**	**0.90**	**18**	*i* P	Pb	04 10 37.0	-0.5
CHNG				*i* S	Sb	04 10 49.0	0.0
CHNG				AML	AML	04 10 50.7	
	comp=E,191nm,0.3s						
JACH	**Jahuel**	**1.04**	**87**	*i*P	Pb	04 10 39.1	-1.1
JACH				*i* S	Sb	04 10 53.1	-0.5
PEL	**Peldehue**	**1.04**	**113**	*i*P	Pb	04 10 39.4	-0.7
PEL				*i* S	Sb	04 10 53.3	-0.1
PEL				AML	AML	04 10 56.0	
	comp=E,779nm,0.3s						
TACH	**Talagante**	**1.18**	**141**	*i*P	Pn	04 10 41.1	-1.0
TACH				*i* S	Sb	04 10 56.5	-0.8
LNV	**Longovilo**	**1.26**	**164**	*e*P	Pn	04 10 41.9	-1.4
LNV				*i* S	Sn	04 10 58.0	-1.7
CLCH	**Cerro Calan**	**1.27**	**122**	*i*P	Pn	04 10 42.8	-0.6
CLCH				*i* S	Sn	04 10 59.3	-0.6
CLCH				AML	AML	04 11 05.0	
	comp=N,270nm,0.3s						
ANTU	**Antumapu**	**1.30**	**130**	*i* S	Sn	04 11 00.6	-0.1
ANTU				AML	AML	04 11 04.1	
	comp=N,262nm,0.3s						
PCH	**Pirque**	**1.41**	**129**	*i*P	Pn	04 10 45.3	-0.1
PCH				*i* S	Sb	04 11 03.9	-0.2
CHCH	**Chadas Angostu**	**1.54**	**141**	*e*P	Pn	04 10 47.2	0.0
CHCH				*i* S	Sb	04 11 07.4	-0.6
CMCH	**Combarbala**	**1.71**	**24**	*i*P	Pn	04 10 49.3	-0.2
CMCH				*i* S	Sn	04 11 11.6	+0.7
CACH	**El Canelo**	**1.71**	**144**	*e*P	Pn	04 10 50.6	+0.9

IDC 26 04:13:46.5±2.4, 21.11S×176.05W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.7/19, mbtmp3.6/4, Error ellipse: s-maj=151.7km s-min=31.0km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**46.16**	**257**	P	P	04 22 13.2	0.0
	0.6nm,0.8s,baz=94,slow=8.7,SNR=5.3						
NVAR	**Mina Array Bea**	**80.22**	**42**	P	P	04 25 59.3	0.0
	0.6nm,0.8s,baz=209,slow=7.2,SNR=3.5						
TXAR	**Lajitas Array**	**85.85**	**57**	P	P	04 26 28.6	+0.1
	0.6nm,0.9s,baz=220,slow=5.7,SNR=6.9						
ILAR	**Eielson Array**	**88.51**	**12**	P	P	04 26 40.5	+0.1
	0.2nm,0.6s,baz=213,slow=6.2,SNR=5.2						
BRTR	**Keskin Array B**	**148.59**	**313**	PKPbc	PKPbc	04 33 34.9	-1.0
	0.7nm,0.6s,baz=118,slow=2.1,SNR=5.7						

IDC 26 04:38:59.5±72.0, 12.82S×174.16E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/20, mbtmp3.9/3, Error ellipse: s-maj=1262.0km s-min=136.8km az=68.0, North of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.39**	**232**	P	P	04 45 56.0	-1.3
	0.7nm,0.4s,baz=70,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	**38.78**	**254**	P	P	04 46 26.9	+0.6
	0.2nm,0.3s,baz=84,slow=8.3,SNR=9.7						
ASAR	**Alice Springs**	**39.60**	**248**	P	P	04 46 33.1	0.0
	3.1nm,0.6s,baz=77,slow=9.1,SNR=39						

*AUST **26** 04:56:45.7, 7.49S×128.54E, h100km*
*ISCJB **26** 04:56:48.3±1.4, 7.61S±0.07×128.5E±0.1, h151km, mb3.5/1, Error ellipse: s-maj=19.6km s-min=9.4km az=9.5*
*IDC **26** 04:56:53.4±5.5, 8.45S×129.03E, h0km, mb3.6/1, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, ML3.6/3, MS4.5/1, Ms1 4.5/1, ms1mx2.7/36, Error ellipse: s-maj=68.6km s-min=49.1km az=140.0*
ISC 26 04:56:47.1±1.1, 7.63S±0.07×128.5E±0.09, h151km, n12, σ278/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.76**	**154**	P	Pn	04 58 14.5	+3.8
	baz=5.9,SNR=10						
MTN				S	**Sn**	**04 59 17.3**	**+1.2**
	baz=5.9,SNR=12						
FAKI	**Fak Fak**	**5.94**	**38**	P	**Pn**	**04 58 13.4**	**+0.3**
	baz=5.9,SNR=3.3						
FAKI				S	**Sn**	**04 59 17.7**	**-2.6**
	baz=5.9,SNR=3.8						
KDU	**Kakadu**	**6.33**	**143**	P	Pn	04 58 21.9	+3.7
	baz=6.5,SNR=5.4						
KDU				S	**Sn**	**04 59 28.7**	**-0.9**
	baz=6.5,SNR=7.2						
KNRA	**Kununurra**	**8.00**	**179**	P	Pn	04 58 44.2	+3.7
	baz=8.2,SNR=17						
KNRA				S	**Sn**	**05 00 10.9**	**+1.1**
	baz=8.2,SNR=6.3						
FITZ	**Fitzroy Crossi**	**10.80**	**195**	Pn	**Pn**	**04 59 19.5**	**+1.9**
	0.7nm,0.3s,baz=26,slow=14,SNR=36						
FITZ				Sn	**Sn**	**05 01 14.3**	**-2.8**
	0.8nm,0.3s,baz=222,slow=16,SNR=4.0						
FITZ	**Fitzroy Crossi**	**10.80**	**195**	P	**Pn**	**04 59 19.7**	**+2.1**
	baz=11,SNR=11						
FITZ				S	**Sn**	**05 01 15.4**	**-1.7**
	baz=11,SNR=3.3						
WRA	**Warramunga Arr**	**13.46**	**156**	Pn	**Pn**	**04 59 53.0**	**+0.8**
	0.3nm,0.3s,baz=338,slow=10,SNR=28						
WRA				Sn	**Sn**	**05 02 15.8**	**-5.6**
	1.0nm,0.3s,baz=329,slow=22,SNR=16						
COEN	**Coen**	**15.66**	**115**	P	**P**	**05 00 24.8**	**+4.2**
	baz=16,SNR=4.5						
ASAR	**Alice Springs**	**16.75**	**163**	Pn	Pn	05 00 37.9

VNDA				LR	LR	05 14 44.7		
	comp=Z,2µm,18.2s,baz=9.6,slow=34							
SBA	**Scott Base**	**15.69**	**179**	*e*Pn	**Pn**	**05 09 49.0**	**-0.3**	
	127nm,1.4s							
RPZ	**Rata Peaks**	**18.90**	**14**	P	**P**	**05 10 28.7**	**-0.4**	
RPZ	**Rata Peaks**	**18.90**	**14**	LR	LR	05 16 41.5		
	comp=Z,2µm,20.1s,baz=216,slow=34							
URZ	**Urewera**	**25.14**	**23**	*e*P	**P**	**05 11 33.3**	**-0.3**	
URZ	**Urewera**	**25.14**	**23**	LR	LR	05 20 19.0		
	comp=Z,918nm,19.7s,baz=197,slow=34							
QSPA	**South Pole Qui**	**27.84**	**180**	*e*P	**P**	**05 11 57.8**	**-0.2**	
	15nm,1.2s							
QSPA	**South Pole Qui**	**27.84**	**180**	P	**P**	**05 11 58.1**	**+0.1**	
	6.1nm,1.0s,baz=18,slow=9.1,SNR=7.0							
QSPA				LR	LR	05 21 31.4		
	comp=Z,740nm,18.9s,baz=29,slow=33							
STKA	**Stephens Creek**	**33.92**	**323**	P	**P**	**05 12 51.7**	**+0.1**	
STKA	**Stephens Creek**	**33.92**	**323**	P	**P**	**05 12 51.7**	**+0.1**	
	5.3nm,1.1s,baz=172,slow=7.3,SNR=6.0							
STKA				LR	LR	05 24 28.3		
	comp=Z,282nm,20.0s,baz=168,slow=32							
MAW	**Mawson**	**38.88**	**217**	LR	LR	05 29 40.5		
	comp=Z,1µm,18.2s,baz=121,slow=36							
DZM	**Mont Dzumac**	**40.17**	**2**	*e*LR	LR	05 24 38.9		
	289nm,27.9s							
AS31	**Alice Springs**	**43.94**	**317**	*e*P	**P**	**05 14 16.1**	**+0.6**	
ASAR	**Alice Springs**	**43.94**	**317**	P	**P**	**05 14 16.3**	**+0.8**	
ASAR	**Alice Springs**	**43.94**	**317**	P	**P**	**05 14 16.3**	**+0.8**	
	6.2nm,0.9s,baz=158,slow=7.9,SNR=22							
SNAA	**Sanae**	**46.09**	**185**	*e*P	**P**	**05 14 32.4**	**+0.2**	
	12nm,1.2s							
WRA	**Warramunga Arr**	**47.29**	**319**	P	**P**	**05 14 41.6**	**-0.5**	
WRA	**Warramunga Arr**	**47.29**	**319**	P	**P**	**05 14 41.6**	**-0.5**	
	2.1nm,1.0s,baz=157,slow=6.3,SNR=6.4							
WRAB	**Tennant Creek**	**47.30**	**319**	*e*P	**P**	**05 14 42.0**	**-0.1**	
TBI	**Tubuai**	**49.48**	**60**	*e*T	T	06 07 13.4		
	74nm,0.3s							
AFI	**Afiamalu**	**51.03**	**29**	LR	LR	05 33 11.8		
	comp=Z,158nm,19.1s,baz=176,slow=32							
PAE	**Paea**	**54.56**	**56**	*e*T	T	06 13 32.9		
	11nm,0.4s							
TVO	**Taravao**	**54.58**	**57**	*e*T	T	06 13 34.7		
	21nm,0.3s							
PPT2	**Papeete2**	**54.62**	**56**	*e*LR	LR	05 31 12.2		
	135nm,22.5s							
PPT2				*e*T	T	06 13 38.5		
	19nm,0.3s							
PPT	**Papeete**	**54.64**	**56**	LR	LR	05 34 48.1		
	comp=Z,193nm,18.7s,baz=349,slow=32							
TIAR	**Tiarei**	**54.74**	**57**	*e*T	T	06 13 47.2		
	24nm,0.3s							
RKT	**Rikitea**	**55.91**	**74**	*e*T	T	06 15 21.7		
	13nm,0.2s							
PMOR	**Pomariorio Ree**	**57.63**	**57**	*e*T	T	06 17 23.5		
	5.2nm,0.4s							
PLCA	**Paso Flores**	**68.08**	**137**	P	**P**	**05 17 08.8**	**+0.7**	
PLCA	**Paso Flores**	**68.08**	**137**	P	**P**	**05 17 08.8**	**+0.7**	
	3.0nm,0.9s,baz=257,slow=5.0,SNR=4.4							
SUR	**Sutherland**	**81.39**	**210**	LR	LR	05 52 38.1		
	comp=Z,213nm,18.8s,baz=202,slow=34							
CPUP	**Villa Florida**	**85.44**	**143**	P	**P**	**05 18 46.5**	**+0.4**	
CPUP	**Villa Florida**	**85.44**	**143**	P	**P**	**05 18 46.5**	**+0.4**	
	0.4nm,0.4s,baz=85,slow=11,SNR=2.1							
LPAZ	**La Paz**	**91.33**	**130**	*e*P	**P**	**05 19 14.8**	**-0.4**	
LPAZ	**La Paz**	**91.33**	**130**	P	**P**	**05 19 14.5**	**-0.7**	
	1.2nm,0.8s,baz=223,slow=4.6,SNR=2.5							
LPAZ				LR	LR	05 50 55.8		
	comp=Z,79nm,18.7s,baz=325,slow=29							
SIV	**San Ignacio**	**94.02**	**136**	LR	LR	05 55 41.4		
	comp=Z,55nm,20.5s,slow=32							
CMAR	**Chiang Mai Arr**	**95.63**	**299**	LR	LR	06 02 00.9		
	comp=Z,133nm,19.3s,baz=65,slow=35							
PDAR	**Pinedale Array**	**124.77**	**63**	PKP	**PKPdf**	**05 25 07.5**	**-0.3**	
PDAR	**Pinedale Array**	**124.77**	**63**	PKP	**PKPdf**	**05 25 07.5**	**-0.3**	
	0.3nm,0.4s,baz=172,slow=1.0,SNR=4.5							
TORD	**Torodi Ar. Bea**	**129.53**	**201**	PKP	**PKPdf**	**05 25 15.8**	**-1.6**	
TORD	**Torodi Ar. Bea**	**129.53**	**201**	PKP	**PKPdf**	**05 25 15.8**	**-1.6**	
	0.7nm,1.0s,baz=184,slow=3.9,SNR=2.7							
ILAR	**Eielson Array**	**131.64**	**25**	PKP	**PKPdf**	**05 25 20.3**	**+0.4**	
ILAR	**Eielson Array**	**131.64**	**25**	PKP	**PKPdf**	**05 25 20.3**	**+0.4**	
	0.8nm,1.1s,baz=245,slow=2.7,SNR=5.0							
YKA	**Yellowknife Ar**	**138.27**	**43**	PKP	**PKPdf**	**05 25 33.0**	**+0.7**	
YKA	**Yellowknife Ar**	**138.27**	**43**	PKP	**PKPdf**	**05 25 33.0**	**+0.7**	
	0.2nm,0.8s,baz=226,slow=2.6,SNR=4.2							

MEX ***26*** *05:10:01.2≈1.1, 16°23N×101°02W, h10km, MD4.5*
IDC ***26*** *05:10:05.5≈0.9, 16°81N×100°55W, h0km, mb4.0/9, mb1 4.2/11, mb1mx4.0/27, mbtmp3.9/11, ML3.0/2, MS3.5/8, Ms1 3.5/8, ms1mx3.3/32, Error ellipse: s-maj=39.9km s-min=16.3km az=65.0*
NEIC ***26*** *05:10:09.3≈1.5, 16°74N×100°47W, h27km±9km, mb4.3/36, MD4.5(MEX), Error ellipse: s-maj=12.3km s-min=6.3km az=220.0*

ISC 26 05:10:05.9≈1.9**, 16°56N±0°06×100°62W±0°05, h12**km±10km**, n362,** σ**19 05/362, mb4.3/42, MS3.5/8, 135C-127D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.59**	**35**	*e*P		**Pg**	**05 10 17.6**	**+0.1**
CAIG				*i* S		Sn	05 10 32.6	+2.7
CAIG	**El Cayaco**	**0.59**	**35**	*e*P		**Pg**	**05 10 17.6**	**+0.1**
CAIG				*i* S		Sn	05 10 32.6	+2.7
ACX	**Acapulco**	**0.80**	**67**	*i* P		**Pb**	**05 10 22.0**	**+0.3**
ACX				*i* S		**Sn**	**05 10 36.5**	**+1.6**
ACX	**Acapulco**	**0.80**	**67**	*i* P		**Pb**	**05 10 22.0**	**+0.3**
ACX				*i* S		**Sn**	**05 10 36.5**	**+1.6**
ZIIG	**Zihuatanejo**	**1.31**	**322**	*e*P		Pn	05 10 24.5	-5.7
ZIIG				*i* S		Sb	05 10 41.4	-6.1
ZIIG	**Zihuatanejo**	**1.31**	**322**	*e*P		Pn	05 10 24.5	-5.7
ZIIG				*i* S		Sb	05 10 41.4	-6.1
MEIG	**Mezcala**	**1.66**	**35**	*e*P		**Pn**	**05 10 33.7**	**-1.4**
MEIG				*i* S		**Sg**	**05 10 59.7**	**+0.2**
MEIG	**Mezcala**	**1.66**	**35**	*e*P		**Pn**	**05 10 33.7**	**-1.4**
MEIG				*i* S		**Sg**	**05 10 59.7**	**+0.2**
ARIG	**Puente Sto Nin**	**1.73**	**9**	*e*P		**Pn**	**05 10 33.1**	**-2.9**
ARIG				*i* S		**Sn**	**05 10 59.3**	**+1.3**
PLIG	**Platanillo**	**2.11**	**30**	*e*P		**Pn**	**05 10 40.0**	**-1.2**
PLIG				*i* S		**Sb**	**05 11 10.5**	**-0.1**
PLIG	**Platanillo**	**2.11**	**30**	*e*P		**Pn**	**05 10 40.0**	**-1.2**
PLIG				*i* S		**Sb**	**05 11 10.5**	**-0.1**
PNIG	**Pinotepa**	**2.40**	**94**	*e*P		**Pn**	**05 10 42.1**	**-3.0**
PNIG				*i* S		**Sn**	**05 11 14.7**	**+0.1**
PNIG	**Pinotepa**	**2.40**	**94**	*e*P		**Pn**	**05 10 42.1**	**-3.0**
PNIG				*i* S		**Sn**	**05 11 14.7**	**+0.1**
YAIG	**Yautepec**	**2.73**	**33**	*i* P		**Pn**	**05 10 48.3**	**-1.5**
YAIG				*i* S		**Sb**	**05 11 27.4**	**-1.0**
YAIG	**Yautepec**	**2.73**	**33**	*i* P		**Pn**	**05 10 48.3**	**-1.5**
YAIG				*i* S		**Sb**	**05 11 27.4**	**-1.0**
UTMO	**Huajuapan**	**2.98**	**64**	*e*P		**Pn**	**05 10 53.8**	**+0.6**
UTMO				*i* S		**Sb**	**05 11 34.6**	**-1.0**
UTMO	**Huajuapan**	**2.98**	**64**	*e*P		**Pn**	**05 10 53.8**	**+0.6**
UTMO				*i* S		**Sb**	**05 11 34.6**	**-1.0**
MMIG	**Aquila**	**3.12**	**304**	*i* P		Pn	05 10 47.3	-7.6
MMIG				*i* S		Sn	05 11 22.5	-10
MMIG	**Aquila**	**3.12**	**304**	*i* P		Pn	05 10 47.3	-7.6
MMIG				*i* S		Sn	05 11 22.5	-10
PPM	**Popocatepetl**	**3.14**	**37**	*e*P		**Pn**	**05 10 54.3**	**-1.4**
PPM				*i* S		**Sb**	**05 11 38.7**	**-1.7**
PPM	**Popocatepetl**	**3.14**	**37**	*e*P		**Pn**	**05 10 54.3**	**-1.4**
PPM				*i* S		**Sb**	**05 11 38.7**	**-1.7**
VHO	**Vista Hermosa**	**3.76**	**82**	*e*P		**Pn**	**05 11 04.5**	**+0.5**
VHO				*i* S		**Sn**	**05 11 50.8**	**+2.5**
VHO	**Vista Hermosa**	**3.76**	**82**	*e*P		**Pn**	**05 11 04.5**	**+0.5**
VHO				*i* S		**Sn**	**05 11 50.8**	**+2.5**
HUIG	**Huatulco**	**4.41**	**100**	*i* P		**Pn**	**05 11 10.9**	**-1.8**
HUIG				*i* S		**Sn**	**05 12 03.6**	**-0.5**
HUIG	**Huatulco**	**4.41**	**100**	*i* P		**Pn**	**05 11 10.9**	**-1.8**
HUIG				*i* S		**Sn**	**05 12 03.6**	**-0.5**
TXAR	**Lajitas Array**	**13.02**	**348**	Pn		**Pn**	**05 13 09.4**	**-1.5**
TXAR	**Lajitas Array**	**13.02**	**348**	Pn		**Pn**	**05 13 09.4**	**-1.5**
	0.0nm,0.3s,baz=131,slow=5.1,SNR=3.4							
628A	**Black Gap, Mar**	**13.03**	**351**	⇓P		Pn	05 13 13.9	+2.8
	baz=13							
627A	**Terlingua Ranc**	**13.08**	**349**	⇑P		Pn	05 13 14.5	+2.6
	baz=13							
TGUH	**Tegucigalpa,Un**	**13.12**	**99**	*e*Pn		P	05 13 17.9	-4.5
626A	**Big Bend Ranch**	**13.33**	**347**	⇑P		Pn	05 13 17.9	+2.8
	baz=13							
532A	**Rocksprings**	**13.52**	**3**	⇑P		**Pn**	**05 13 19.5**	**+1.8**
	baz=13							
530A	**J-C Ranch, Com**	**13.54**	**357**	⇓P		**Pn**	**05 13 19.8**	**+1.7**
	baz=13							
531A	**Rocksprings**	**13.54**	**0**	⇑P		**Pn**	**05 13 19.6**	**+1.6**
	baz=13							
528A	**Cox Ranch, San**	**13.68**	**352**	⇓P		**Pn**	**05 13 22.4**	**+2.4**
	baz=14							
527A	**Woodward Ranch**	**13.80**	**349**	⇓P		**Pn**	**05 13 24.1**	**+2.5**
	baz=14							
JCT	**Junction City**	**13.88**	**3**	⇓P		**Pn**	**05 13 24.0**	**+1.4**
	baz=14							
429A	**Davenport Ranc**	**14.05**	**355**	⇑P		**Pn**	**05 13 26.0**	**+1.1**
	baz=14							
431A	**Sonora**	**14.06**	**0**	⇓P		**Pn**	**05 13 26.7**	**+1.6**
	baz=14							
430A	**Baggett Ranch,**	**14.17**	**358**	⇑P		**Pn**	**05 13 27.7**	**+1.0**
	baz=14,SNR=6.3							
428A	**Kincaid Ranch,**	**14.23**	**353**	⇑P		**Pn**	**05 13 28.9**	**+1.4**
	baz=14							
432A	**Menard**	**14.27**	**3**	⇑P		**Pn**	**05 13 29.1**	**+1.1**
	baz=14							
426A	**McDonald Obser**	**14.38**	**348**	⇑P		**Pn**	**05 13 31.4**	**+1.7**
	baz=14							
331A	**San Angelo**	**14.68**	**1**	⇑P		**Pn**	**05 13 34.5**	**+0.9**
	baz=15							
332A	**Millersview**	**14.78**	**3**	⇑P		**Pn**	**05 13 34.6**	**-0.4**
	baz=15							
330A	**Mertzon**	**14.79**	**358**	⇑P		**Pn**	**05 13 35.4**	**+0.3**
	baz=15							
328A	**Wristen Ranch,**	**14.89**	**353**	⇓P		**Pn**	**05 13 36.5**	**0.0**
	baz=15							
325A	**Bean Ranch, Si**	**15.27**	**346**	⇑P		**Pn**	**05 13 44.1**	**+2.5**
	baz=15,SNR=15							
232A	**Coleman**	**15.29**	**3**	⇑P		**Pn**	**05 13 42.2**	**+0.5**
	baz=15							
231A	**Bronte**	**15.31**	**1**	⇓P		**Pn**	**05 13 42.2**	**+0.2**
	baz=15							
229A	**Bryant Ranch,**	**15.38**	**356**	⇓P		**Pn**	**05 13 43.9**	**+1.0**
	baz=15							
324A	**Moseley Ranch,**	**15.46**	**344**	⇓P		**Pn**	**05 13 46.5**	**+2.4**
	baz=15,SNR=15							
WHTX	**Lake Whitney**	**15.63**	**10**	⇓P		**Pn**	**05 13 47.1**	**+0.9**
	baz=16							
226B	**Tecolote Peak,**	**15.78**	**349**	⇑P		**Pn**	**05 13 49.9**	**+1.6**
	baz=16							
GDL2	**Guadalupe Moun**	**15.94**	**348**	*e*Pn		**P**	**05 13 54.5**	**+0.6**
225A	**Deer Hill, Car**	**15.94**	**347**	⇑P		**Pn**	**05 13 52.1**	**+1.6**
	baz=16,SNR=7.7							
130A	**Snyder**	**15.97**	**359**	⇓P		**Pn**	**05 13 51.3**	**+0.7**
	baz=16							
ABTX	**Abilene, Hawle**	**16.02**	**3**	⇓P		**Pn**	**05 13 52.3**	**+1.1**
	baz=16							
129A	**Stewart Farms,**	**16.04**	**356**	⇓P		**Pn**	**05 13 53.1**	**+1.5**
	baz=16,SNR=7.6							
224A	**Cornudas Mount**	**16.07**	**345**	⇓P		**Pn**	**05 13 53.8**	**+1.7**
	baz=16,SNR=9.6							
128A	**Castleberry Fa**	**16.08**	**354**	⇑P		**Pn**	**05 13 52.9**	**+0.9**
	baz=16							
127A	**Arkansas Junct**	**16.24**	**352**	⇓P		**Pn**	**05 13 54.6**	**+0.5**
	baz=16							
320A	**Kipp Ranch, An**	**16.38**	**335**	⇓P		**P**	**05 13 58.5**	**-0.3**
	baz=16							
125A	**Gardner Draw,**	**16.44**	**348**	⇑P		**Pn**	**05 13 57.8**	**+1.1**
	baz=16,SNR=9.3							
JTS	**JuntasAbangare**	**16.46**	**110**	*e*P		P	05 14 06.1	+6.4
	17.1nm,1.4s							
124A	**Stringfield Ra**	**16.65**	**346**	⇑P		**Pn**	**05 14 00.5**	**+0.9**
	baz=17,SNR=8.0							
Z29A	**Hungry Hill Ra**	**16.66**	**357**	⇓P		**Pn**	**05 13 60.0**	**+0.5**
	baz=17,SNR=8.2							
Z30A	**Sanderson Ranc**	**16.66**	**359**	⇑P		**Pn**	**05 13 59.8**	**+0.4**
	baz=17							
Z31A	**Sharp Cattle R**	**16.69**	**1**	⇓P		**Pn**	**05 13 59.6**	**-0.2**
	baz=17,SNR=7.4							
Z32A	**Haskell**	**16.71**	**3**	⇓P		**Pn**	**05 13 59.9**	**0.0**
	baz=17							
319A	**Douglas**	**16.72**	**333**	⇑P		**Pn**	**05 14 01.6**	**+1.3**
	baz=17							
Z28A	**Tucker Farm, M**	**16.73**	**355**	⇓P		**Pn**	**05 14 00.4**	**0.0**
	baz=17							
Z27A	**Tatum**	**16.85**	**352**	⇑P		**Pn**	**05 14 00.3**	**-1.5**
	baz=17,SNR=7.4							
220A	**Playas Peak, P**	**16.88**	**336**	⇑P		**Pn**	**05 14 03.4**	**+1.1**
	baz=17							
Z26A	**Caprock**	**16.91**	**350**	⇓P		**Pn**	**05 14 02.7**	**0.0**
	baz=17							
Z25A	**Roswell**	**17.05**	**348**	⇑P		**Pn**	**05 14 04.2**	**-0.3**
	baz=17							
121A	**Cookes Peak, D**	**17.17**	**339**	⇓P		**P**	**05 14 07.4**	**-0.2**
	baz=17							
Z24A	**Sheeppen Canyo**	**17.24**	**346**	⇓P		**Pn**	**05 14 07.2**	**+0.3**
	baz=17							
Y29A	**Portfield Fa**	**17.25**	**357**	⇑P		**Pn**	**05 14 06.4**	**-0.5**
	baz=17							
Y31A	**Rekieta Farm,**	**17.33**	**1**	⇑P		**Pn**	**05 14 07.0**	**-0.9**
	baz=17							
Y28A	**McKinney Farm,**	**17.34**	**355**	⇓P		**Pn**	**05 14 07.3**	**-0.7**
	baz=17							
Y27A	**Causey**	**17.40**	**353**	⇑P		**Pn**	**05 14 07.2**	**-1.6**
	baz=17							
MSTX	**Muleshoe**	**17.44**	**354**	⇑P		**Pn**	**05 14 07.7**	**-1.7**
	baz=17							
120A	**U Bar Ranch, L**	**17.49**	**337**	⇓P		**P**	**05 14 11.1**	**-0.1**
	baz=17							
Z22A	**Elephant Butte**	**17.58**	**342**	⇓P		**Pn**	**05 14 11.5**	**+0.5**
	baz=18							
Y25A	**Mesa, Roswell**	**17.67**	**349**	⇑P		**Pn**	**05 14 12.0**	**-0.2**
	baz=18							
X30A	**Coker Ranch, T**	**17.81**	**359**	⇓P		**Pn**	**05 14 12.8**	**-1.0**
	baz=18							
Y24A	**Capitan**	**17.83**	**347**	⇓P		**Pn**	**05 14 13.8**	**-0.3**
	baz=18							
X29A	**Tulia**	**17.84**	**357**	⇓P		**Pn**	**05 14 13.1**	**-1.1**
	baz=18							
Z21A	**St. Cloud Mine**	**17.85**	**340**	⇓P		**Pn**	**05 14 14.8**	**+0.3**
	baz=18							
X28A	**Dimmitt**	**17.94**	**356**	⇓P		**Pn**	**05 14 14.9**	**-0.6**
	baz=18							
Y23A	**Lovelace Mesa,**	**17.98**	**345**	⇑P		**Pn**	**05 14 16.2**	**+0.2**
	baz=18,SNR=12							
Z20A	**Nine Sixteen R**	**17.98**	**338**	⇓P		**P**	**05 14 16.9**	**+0.3**
	baz=18							
X31A	**McDonald Ranch**	**18.00**	**2**	⇓P		**Pn**	**05 14 15.4**	**-0.8**
	baz=18							
X26A	**CR and CF Fran**	**18.14**	**352**	⇓P		**Pn**	**05 14 17.6**	**-0.4**
	baz=18							
TUC	**Tucson**	**18.19**	**331**	P		**P**	**05 14 21.2**	**+2.5**
	0.7nm,0.8s							
Y22A	**Socorro**	**18.22**	**343**	⇓P		**P**	**05 14 20.2**	**+1.0**
	baz=18,SNR=8.3							
BNM	**Barren Site**	**18.33**	**344**	*e*Pn		**Pn**	**05 14 18.3**	**-2.0**
	8.0nm,1.1s							
LENM	**Lemitar**	**18.44**	**343**	*e*P		**Pn**	**05 14 22.2**	**+0.6**
X24A	**Lazy VL Ranch,**	**18.44**	**347**	⇑P		**P**	**05 14 21.6**	**0.0**
	baz=18,SNR=8.6							
Y21A	**Point of Rocks**	**18.50**	**341**	⇓P		**Pn**	**05 14 22.7**	**+0.3**
	baz=18							
W27A	**Bowe Ranch, En**	**18.56**	**354**	⇓P		**P**	**05 14 21.9**	**-0.9**
	baz=18							
X23A	**Hourglass Bar**	**18.63**	**345**	⇑P		**P**	**05 14 23.1**	**-0.6**
	baz=19,SNR=7.9							
Y20A	**Horse Springs,**	**18.63**	**339**	⇑P		**P**	**05 14 23.6**	**-0.2**
	baz=19							
W26A	**Owens Ranch, T**	**18.66**	**352**	⇑P		**P**	**05 14 23.6**	**-0.4**
	baz=19							
W25A	**X Bar L Ranch,**	**18.89**	**350**	⇑P		**P**	**05 14 24.7**	**-1.8**
	baz=19							
214A	**Organ Pipe Nat**	**18.91**	**326**	⇓P		**Pn**	**05 14 27.5**	**+0.3**
	baz=19,SNR=5.5							
X21A	**Alamocita Cree**	**18.93**	**341**	⇓P		**P**	**05 14 26.1**	**-1.0**
	baz=19							
ANMO	**Albuquerque**	**19.04**	**345**	*e*P		**P**	**05 14 28.4**	**+0.2**
	7.7nm,1.1s							
ANMO	**Albuquerque**	**19.04**	**345**	P		**P**	**05 14 28.2**	**-0.1**
	0.0nm,0.3s,baz=145,slow=9.5,SNR=9.0							
W24A	**Lazy 6 Ranch,**	**19.06**	**348**	⇓P		**P**	**05 14 27.7**	**-0.7**
	baz=19,SNR=7.0							
W23A	**Werner Place,**	**19.17**	**346**	⇓P		**P**	**05 14 28.4**	**-1.3**
	baz=19							
X20A	**Quemado**	**19.25**	**340**	⇓P		**P**	**05 14 31.1**	**+0.5**
	baz=19,SNR=8.4							
V26A	**Tequesquite Ra**	**19.36**	**352**	⇑P		**P**	**05 14 30.6**	**-1.1**
	baz=19							
V25A	**Rancho No Teng**	**19.53**	**350**	⇑P		**P**	**05 14 32.8**	**-0.8**
	baz=20							
V24A	**Rampart Ranch,**	**19.53**	**349**	⇓P		**P**	**05 14 32.9**	**-0.7**
	baz=20							
TUL1	**Tulsa**	**19.75**	**12**	⇓P		**P**	**05 14 34.1**	**-1.6**
	baz=20							
X18A	**Snowflake**	**19.75**	**337**	⇓P		**P**	**05 14 36.5**	**+0.5**
	baz=20							
W20A	**Ramah**	**19.79**	**341**	⇓P		**P**	**05 14 36.5**	**0.0**
	baz=20							
U27A	**Thompson Grove**	**19.88**	**355**	⇑P		**P**	**05 14 36.1**	**-1.2**
	baz=20							
U26A	**Atchley Ranch,**	**19.95**	**353**	⇓P		**P**	**05 14 37.6**	**-0.6**
	baz=20							
113A	**Mohawk Valley,**	**20.04**	**326**	⇓P		**P**	**05 14 39.8**	**+0.8**
	baz=20,SNR=5.5							
U25A	**Circle Dot Ran**	**20.04**	**351**	⇑P		**P**	**05 14 38.6**	**-0.6**
	baz=20							
V22A	**San Miguel Ran**	**20.07**	**345**	⇓P		**P**	**05 14 39.3**	**-0.2**
	baz=20							
V21A	**Milan**	**20.16**	**343**	⇓P		**P**	**05 14 40.1**	**-0.4**
	baz=20							
U23A	**El Rito**	**20.30**	**347**	⇓P		**P**	**05 14 42.2**	**+0.2**
	baz=20,SNR=17							
T31A	**Randall Ranch,**	**20.47**	**2**	⇓P		**P**	**05 14 42.5**	**-1.2**
	baz=20							
U22A	**Llaves**	**20.50**	**346**	⇓P		**P**	**05 14 43.7**	**-0.5**
	baz=20							
LRAL	**Lakeview Retre**	**20.51**	**34**	*e*P		**P**	**05 14 41.5**	**-2.5**
	4.0nm,0.8s							
T28A	**Walsh**	**20.52**	**357**	⇑P		**P**	**05 14 43.3**	**-0.9**
	baz=20							
Y14A	**Wickenburg**	**20.58**	**330**	⇑P		**P**	**05 14 45.7**	**+0.8**
	baz=21							
T26A	**Comanche Natio**	**20.70**	**353**	⇑P		**P**	**05 14 44.8**	**-1.5**
	baz=21							
U21A	**Nageezi**	**20.75**	**344**	⇑P		**P**	**05 14 46.4**	**-0.5**
	baz=21							
T25A	**Trinidad**	**20.77**	**351**	⇓P		**P**	**05 14 46.2**	**-0.9**
	baz=21							
T24A	**Torres, Weston**	**20.81**	**350**	⇓P		**P**	**05 14 46.8**	**-0.8**
	baz=21							
GLA	**Glamis**	**20.84**	**325**	⇑P		Pn	05 14 49.3	-0.8
	baz=21							
U20A	**Newcomb**	**20.95**	**342**	⇑P		**P**	**05 14 49.8**	**+0.8**
	baz=21,SNR=13							
T23A	**Casias Ranch,**	**20.95**	**348**	⇑P		**P**	**05 14 48.4**	**-0.7**
	baz=21							
S28A	**Manter**	**20.98**	**357**	⇑P		**P**	**05 14 47.5**	**-1.7**
	baz=21							
S29A	**Ulysses**	**20.98**	**359**	⇑P		**P**	**05 14 47.7**	**-1.5**
	baz=21							
T22A	**Edith**	**21.12**	**346**	⇑P		**P**	**05 14 50.4**	**-0.5**
	baz=21							
S26A	**Kim**	**21.13**	**354**	⇓P		**P**	**05 14 49.9**	**-1.0**
	baz=21							
WUAZ	**Wupatki**	**21.18**	**335**	*e*P		**P**	**05 14 50.0**	**-1.4**
	22nm,0.9s							
WUAZ	**Wupatki**	**21.18**	**335**	⇑P		**P**	**05 14 51.0**	**-0.4**
	baz=21,SNR=32							
Y12C	**Blythe**	**21.20**	**326**	⇑P		**P**	**05 14 52.6**	**+1.1**
	baz=21							
T21A	**Navajo Lake**	**21.25**	**345**	⇑P		**P**	**05 14 52.0**	**-0.3**
	baz=21							
S25A	**Robets Cordova**	**21.29**	**352**	⇑P		**P**	**05 14 51.6**	**-1.0**
	baz=21							
SWSC	**Sam W. Stewart**	**21.31**	**323**	⇑P		**P**	**05 14 54.5**	**+1.8**
	baz=21							
S24A	**Houchin Ranch,**	**21.39**	**350**	⇑P		**P**	**05 14 52.6**	**-1.2**
	baz=21							
PDMC	**Parker Dam,Lak**	**21.43**	**328**	⇓P		**P**	**05 14 54.9**	**+0.9**
	baz=21							
TIGA	**Tifton**	**21.44**	**43**	⇑P		**P**	**05 14 54.2**	**+0.1**
	baz=21							
PLAL	**Pickwick Lake**	**21.51**	**29**	*e*P		**P**	**05 14 56.6**	**+1.8**
	5.9nm,0.8s							
SDCO	**Great Sand Dun**	**21.54**	**349**	*e*P		**P**	**05 14 54.1**	**-1.4**
	4.9nm,1.0s							
BC3	**Big Chuckawall**	**21.64**	**325**	⇑P		**P**

baz=24
MVU Marysvale 24.11 337 eP P 05 15 22.7 +0.8
6.3nm,1.3s
Q16A Castle Valley 24.11 340 ⇑P P 05 15 21.9 0.0
baz=24,SNR=5.9
P19A Cripple Cowboy 24.12 344 ⇓P P 05 15 21.9 0.0
baz=24,SNR=7.2
N27A Anderson Farm, 24.22 356 ⇓P P 05 15 21.3 -1.4
baz=24
LRMC Laurel Mountai 24.22 324 ⇑P P 05 15 24.2 +1.3
baz=24
TKL Tuckaleechee C 24.23 35 LR LR 05 27 36.0
comp=Z,58nm,18.8s,baz=278,slow=44
O20A White River Ci 24.41 346 ⇓P P 05 15 24.5 -0.1
baz=24
P18A Preston Nutter 24.47 342 ⇑P P 05 15 24.7 -0.6
baz=24
MPMC Manual Prospec 24.54 326 ⇑P P 05 15 26.5 +0.6
baz=24
N23A Red Feather La 24.68 350 ⇓P P 05 15 24.7 -2.4
baz=25
M28A Bar X Bar Ranc 24.76 359 ⇓P P 05 15 25.9 -1.7
baz=25
O19A Miners Draw (B 24.78 344 ⇑P P 05 15 27.8 -0.1
baz=25,SNR=8.2
ISA Isabella 24.80 323 ⇑P P 05 15 29.7 +1.7
baz=25
N21A Black Mountain 24.84 347 ⇓P P 05 15 28.9 +0.3
baz=25,SNR=8.2
PHWY Pilot Hill 25.01 351 eP P 05 15 29.8 -0.3
4.2nm,0.8s
N20A Spence Gulch, 25.07 346 ⇑P P 05 15 30.5 -0.1
baz=25
M24A Cheyenne 25.08 353 ⇑P P 05 15 29.9 -0.8
baz=25
M23A Laramie 25.21 351 ⇓P P 05 15 30.2 -1.6
baz=25
VES Vestal, Richgr 25.28 323 ⇑P P 05 15 34.1 +1.8
baz=25
R11A Troy Canyon, C 25.37 332 ⇑P P 05 15 34.4 +1.1
baz=25,SNR=11
DAU Daniels Canyon 25.50 341 eP P 05 15 35.1 +0.6
8.6nm,1.1s
M20A Sweetwater, Wa 25.68 347 ⇓P P 05 15 35.0 -1.1
baz=26
RCTC Rector, Farmer 25.70 324 ⇓P P 05 15 37.4 +1.4
baz=26
DUG Dugway 25.82 338 ⇑P P 05 15 37.0 -0.3
baz=26
M19A Rock Springs 25.92 345 ⇓P P 05 15 37.9 -0.4
baz=26
L21A Rawlins 25.97 348 ⇓P P 05 15 37.9 -0.9
baz=26
L20A Wamsutter 26.21 347 ⇑P P 05 15 40.8 -0.1
baz=26,SNR=6.0
M17A Scullys Gap (B 26.29 343 ⇑P P 05 15 41.9 +0.2
baz=26,SNR=8.1
K22A Casper 26.49 350 ⇑P P 05 15 42.7 -0.6
baz=26
L19A Farson 26.54 345 ⇑P P 05 15 44.2 +0.4
baz=26,SNR=7.6
L18A Fontenelle, Gr 26.54 344 ⇑P P 05 15 43.3 -0.6
baz=26
K21A Alcova 26.60 349 ⇑P P 05 15 43.9 -0.5
baz=26
NV11 Mina Array Sit 26.67 328 eP P 05 15 45.7 +0.6
HWUT Hardware Ranch 26.68 342 eP P 05 15 45.3 +0.2
5.6nm,0.9s
NVAR Mina Array Bea 26.75 328 P P 05 15 45.6 -0.2
NVAR Mina Array Bea 26.75 328 P P 05 15 45.6 -0.2
4.2nm,0.8s,baz=152,slow=10.0,SNR=19
K20A Yellowstone Ra 26.84 347 ⇓P P 05 15 46.0 -0.5
baz=27
J24A Dixon Ranch, L 26.90 353 ⇓P P 05 15 46.1 -1.0
baz=27
K19A Absolon Red Bu 27.10 347 ⇑P P 05 15 48.1 -0.8
baz=27
BW06 Boulder Array 27.21 346 eP P 05 15 48.9 -1.0
5.2nm,0.8s
PDAR Pinedale Array 27.21 346 P P 05 15 49.3 -0.7
PDAR Pinedale Array 27.21 346 P P 05 15 49.3 -0.7
4.3nm,0.9s,baz=144,slow=10,SNR=27
PDAR LR LR 05 27 24.1
comp=Z,163nm,20.4s,baz=182,slow=38
ELK Elko 27.22 335 LR LR 05 27 38.4
comp=Z,208nm,18.9s,baz=325,slow=39
J22A Midwest 27.23 351 ⇓P P 05 15 49.1 -0.9
baz=27
J20A Shoshoni 27.45 348 ⇑P P 05 15 50.9 -1.1
baz=27
J19A Crowheart 27.57 347 ⇓P P 05 15 52.2 -0.9
baz=28
AHID Auburn Hatcher 27.61 343 eP P 05 15 53.7 +0.2
9.5nm,0.8s
I21A Big Trails, Te 27.75 350 ⇑P P 05 15 53.6 -1.1
baz=28
I20A Worland 28.03 348 ⇑P P 05 15 56.7 -0.5
baz=28
SNOW Snow King Moun 28.17 344 eP P 05 15 58.8 +0.3
14nm,1.0s
RRI2 Red Ridge 28.21 343 eP P 05 15 58.9 -0.1
6.3nm,0.8s
TPAW Teton Pass 28.24 344 eP P 05 16 00.5 +1.3
11nm,1.3s
LOHW Long Hollow 28.27 345 eP P 05 15 59.5 +0.1
6.9nm,0.8s
MOOW Moose Ponds 28.43 344 eP P 05 16 01.0 +0.2
2.7nm,0.8s
IMW Indian Meadow 28.62 344 eP P 05 16 02.4 -0.2
6.4nm,0.8s
J14A Carey 28.85 340 ⇓P P 05 16 04.6 +0.1
baz=29
G22A Birney 28.96 352 ⇑P P 05 16 05.0 -0.5
baz=29
H17A Grant Village 28.99 345 ⇑P P 05 16 05.7 -0.2
baz=29
I15A Monteview 29.14 342 ⇓P P 05 16 06.9 -0.1
baz=29
F23A Volborg 29.35 353 ⇓P P 05 16 08.2 -0.6
baz=29
HLID Hailey 29.36 339 ⇓P P 05 16 08.9 -0.1
baz=29
I14A Mackay 29.37 341 ⇑P P 05 16 08.9 -0.2
baz=29
H16A Russell Place, 29.45 344 ⇓P P 05 16 09.5 -0.4
baz=29
MFID Camas Ranch 29.73 337 ⇑P P 05 16 12.3 0.0
baz=30
H15A Lima 29.75 343 ⇑P P 05 16 13.8 +1.3
baz=30,SNR=8.4
H14A Leadore 29.96 342 ⇑P P 05 16 15.4 +1.0
baz=30,SNR=8.3
MCMT McKenzie Canyo 30.00 342 eP P 05 16 16.1 +1.3
3.1nm,0.9s
G15A Dillon 30.21 343 ⇑P P 05 16 17.2 +0.7
baz=30,SNR=6.9
F18A Big Timber 30.23 347 ⇓P P 05 16 16.6 0.0
baz=30
E21A Keefer Ranch, 30.37 351 ⇑P P 05 16 17.5 -0.3
baz=30
H12A Diamond D Ranc 30.38 340 ⇓P P 05 16 18.6 +0.5
baz=30
DLMT Dillon 30.42 343 eP P 05 16 19.9 +1.5
12nm,0.9s
BOZ Bozeman (W) 30.43 345 eP P 05 16 18.2 -0.3
3.9nm,0.9s
F17A Fitzpatrick Pl 30.44 346 ⇓P P 05 16 18.6 +0.1
baz=30
E20A Meyer Farm, Mu 30.50 350 ⇑P P 05 16 18.3 -0.7
baz=30
F16A Kennard Place, 30.56 345 ⇑P P 05 16 20.2 +0.6
baz=30,SNR=10.0
G14A Jackson 30.56 342 ⇓P P 05 16 19.9 +0.2
baz=30
E19A Rath Farm, Rou 30.58 349 ⇑P P 05 16 19.2 -0.4
baz=30
D24A Glendive 30.62 355 ⇑P P 05 16 19.6 -0.4
baz=30
G13A Cobalt 30.66 341 ⇓P P 05 16 20.7 +0.2
baz=31
F15A Butte 30.84 344 ⇓P P 05 16 22.3 +0.2
baz=31,SNR=7.5
D22A Cohagen 30.85 353 ⇑P P 05 16 21.9 -0.1
baz=31,SNR=7.9
D21A La Casta Ranch 30.87 352 ⇑P P 05 16 21.8 -0.4
baz=31
E18A Harlowton 30.90 347 ⇑P P 05 16 22.3 -0.3
baz=31
E17A Martinsdale 31.01 346 ⇓P P 05 16 23.7 +0.1
baz=31,SNR=7.4
C24A Savage 31.04 355 ⇓P P 05 16 23.4 -0.3
baz=31
G12A Big Creek, Yel 31.05 340 ⇓P P 05 16 24.2 +0.3
baz=31
F14A Wisdom 31.05 343 ⇑P P 05 16 24.4 +0.4
baz=31
D20A Manuel Ranch, 31.07 350 ⇑P P 05 16 24.0 0.0
baz=31
E16A East Helena 31.27 345 ⇑P P 05 16 26.2 +0.4
baz=31,SNR=12
D19A Cripps Ranch, 31.27 349 ⇑P P 05 16 25.8 0.0
baz=31,SNR=6.8
F13A Darby 31.32 341 ⇓P P 05 16 26.8 +0.6
baz=31,SNR=6.5
C23A Lambert 31.38 354 ⇑P P 05 16 26.6 -0.1
baz=31
C22A Vida 31.40 353 ⇑P P 05 16 26.6 -0.2
baz=31
E15A Deer Lodge 31.41 344 ⇓P P 05 16 27.5 +0.4
baz=31,SNR=9.6
D18A Linhart Farms, 31.48 348 ⇑P P 05 16 28.0 +0.3
baz=31,SNR=7.5
BMO Blue Mountains 31.51 337 eP P 05 16 27.1 -0.8
1.6nm,0.9s
F12A Elk City 31.58 340 ⇓P P 05 16 29.0 +0.4
baz=32,SNR=6.2
D17A Six Diamond Ra 31.62 347 ⇑P P 05 16 29.0 +0.1
baz=32,SNR=20
E14A Clinton 31.64 343 ⇑P P 05 16 29.7 +0.5
baz=32
C20A Veseth Ranch, 31.66 350 ⇓P P 05 16 29.1 0.0
baz=32,SNR=5.3
D16A Dana Ranch, Ca 31.70 346 ⇑P P 05 16 29.9 +0.2
baz=32,SNR=8.8
C19A Slack Wire Ran 31.85 349 ⇓P P 05 16 30.9 0.0
baz=32
E13A Victor 31.86 342 ⇓P P 05 16 31.6 +0.5
baz=32,SNR=7.6
D15A Lincoln 31.95 345 ⇑P P 05 16 32.0 +0.1
baz=32
DGMT Dagmar 31.96 356 ⇑P P 05 16 31.1 -0.7
baz=32
B22A Reddig Ranch S 31.96 353 ⇑P P 05 16 31.3 -0.5
baz=32
B23A Brockton 32.02 355 ⇑P P 05 16 32.1 -0.2
baz=32
C17A Wharram Farm, 32.09 347 ⇑P P 05 16 33.2 +0.2
baz=32,SNR=9.3
ATAH Atahualpa 32.22 135 LR LR 05 25 41.5
comp=Z,17nm,21.0s,baz=62,slow=29
D14A Greenough 32.25 343 ⇑P P 05 16 34.5 0.0
baz=32,SNR=7.2
EGMT Eagleton 32.26 348 ⇓P P 05 16 34.2 -0.3
baz=32
SLMT Seeley Lake 32.40 344 eP P 05 16 35.3 -0.5
4.8nm,0.8s
C16A Fuhringer Ranc 32.47 346 ⇓P P 05 16 36.4 0.0
baz=32,SNR=7.7
B19A Brinkman Farms 32.53 350 ⇓P P 05 16 36.5 -0.3
baz=32
D13A Huson 32.53 342 ⇓P P 05 16 37.0 +0.1
baz=32,SNR=11
B18A Beardsley Farm 32.62 349 ⇓P P 05 16 37.2 -0.4
baz=33
A22A Carney Farms, 32.63 354 ⇑P P 05 16 37.1 -0.7
baz=33
C15A Salmond Ranch, 32.66 345 ⇑P P 05 16 38.2 +0.2
baz=33
B17A L&G Farms, Che 32.73 347 ⇓P P 05 16 38.8 +0.3
baz=33
SWMT Swartz Lake 32.78 343 eP P 05 16 38.3 -0.8
4.0nm,0.8s
C14A Swan Lake 32.95 344 ⇓P P 05 16 40.7 +0.2
baz=33
A19A Klindworth Far 32.96 350 ⇓P P 05 16 40.8 +0.2
baz=33
C13A Hot Springs 33.09 343 ⇑P P 05 16 41.7 -0.1
baz=33
YBMT Yellow Bay 33.10 343 eP P 05 16 41.9 -0.1
3.7nm,0.9s
A18A Metzger Ranch, 33.14 349 ⇓P P 05 16 41.5 -0.7
baz=33
B15A Bradely Ranch, 33.15 345 ⇑P P 05 16 42.2 -0.1
baz=33,SNR=6.8
A17A Triple J Farms 33.33 348 ⇑P P 05 16 43.7 -0.1
baz=33,SNR=7.5
B14A Marquette Ranc 33.37 345 ⇑P P 05 16 44.4 +0.2
baz=33
A16A West Butte Ran 33.52 347 ⇓P P 05 16 45.2 -0.3
baz=34
B13A Whitefish 33.70 343 ⇓P P 05 16 47.4 +0.3
baz=34
A15A Johnson Ranch, 33.81 346 ⇑P P 05 16 48.1 +0.1
baz=34,SNR=5.7
ULM Lac du Bonnet 33.82 5 P P 05 16 46.0 -2.0
ULM Lac du Bonnet 33.82 5 P P 05 16 46.0 -2.0
3.1nm,0.7s,baz=180,slow=3.0,SNR=2.0
ULM LR LR 05 32 46.4
comp=Z,68nm,20.7s,baz=323,slow=40
A14A Double T Ranch 33.97 345 ⇑P P 05 16 49.8 +0.4
baz=34,SNR=8.2
B12A Libby 34.10 342 ⇓P P 05 16 50.9 +0.4
baz=34
A13A Flathead Natio 34.19 344 ⇑P P 05 16 51.6 +0.3
baz=34
FFC Flin Flon 38.10 359 eP P 05 17 23.9 -0.7
5.5nm,0.9s
SCHQ Schefferville 46.20 26 P P 05 18 29.9 -0.7
SCHQ Schefferville 46.20 26 P P 05 18 29.9 -0.7
3.1nm,0.9s,baz=231,slow=6.1,SNR=3.4
YKA Yellowknife Ar 46.92 351 P P 05 18 35.8 -0.4
YKA Yellowknife Ar 46.92 351 P P 05 18 35.7 -0.4
2.7nm,0.8s,baz=161,slow=7.4,SNR=38
SIV San Ignacio 50.68 128 P P 05 19 08.1 +2.4
SIV San Ignacio 50.68 128 P P 05 19 08.1 +2.4
2.3nm,0.6s,baz=307,slow=8.9,SNR=6.8
EGAK Eagle 55.37 340 eP P 05 19 40.1 +0.5
2.7nm,0.9s
PAX Paxson 55.76 337 eP P 05 19 36.8 -5.8
8.1nm,0.5s
PMR Palmer 56.45 335 eP P 05 19 47.6 +0.2
5.5nm,0.8s
CFAA Coronel Fontan 57.09 147 P P 05 19 55.5 +3.1
CFAA Coronel Fontan 57.09 147 P P 05 19 55.5 +3.1
0.3nm,0.8s,baz=333,slow=4.5,SNR=3.8
ILAR Eielson Array 57.31 338 P P 05 19 54.0 +0.5
ILAR Eielson Array 57.31 338 P P 05 19 54.0 +0.5
2.5nm,0.9s,baz=150,slow=5.3,SNR=26
SPU Mount Spurr 57.48 333 eP P 05 19 56.0 +1.1
TRF Thorofare Moun 57.86 336 eP P 05 19 56.9 -0.6
10nm,0.8s
PPT2 Papeete2 58.96 237 eLR LR 05 37 16.6
108nm,23.5s
BORG Borgarnes 70.59 27 LR LR 05 50 05.9
comp=Z,96nm,20.5s,baz=360,slow=34
DAVOX Davos/Dischmat 91.44 40 LR LR 06 07 09.9
comp=Z,53nm,18.4s,baz=269,slow=38
WRA Warramunga Arr 127.88 257 PKP PKPdf 05 29 12.4 -0.1
WRA Warramunga Arr 127.88 257 PKP PKPdf 05 29 12.4 -0.1
0.4nm,0.7s,baz=91,slow=2.4,SNR=4.8
ASAR Alice Springs 128.56 253 PKP PKPdf 05 29 14.7 +0.9
ASAR Alice Springs 128.56 253 PKP PKPdf 05 29 14.7 +0.9
0.2nm,0.3s,baz=134,slow=4.0,SNR=3.6

DHMR ***26*** *05:12:48.4±1.8, 11°.90N×43°.68E, h3km±16km, ML4.6*
ISCJB ***26*** *05:12:52.6±0.6, 11°.98N±0°.05×43°.85E±0°.07, h4km, mb3.8/8, MS3.5/7, Error ellipse: s-maj=10.6km s-min=6.2km az=29.7*
IDC ***26*** *05:12:54.1±1.3, 11°.99N×43°.78E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/28, mbtmp3.8/9, MS3.7/11, Ms1 3.7/11, ms1mx3.4/42, Error ellipse: s-maj=34.6km s-min=22.4km az=162.0*

ISC 26 05:12:54.4±0.7, 12°.02N±0°.07×43°.78E±0°.07, h4km, n25, σ1⁄65/21, mb3.8/8, MS3.4/7, 1C-2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h	m	s	ISC
TRBA	At Turbah	1.25	15	⇑*i*P		Pg	05	13	15.0	-3.5
TRBA				*i* S		Sg	05	13	33.9	-0.9
TRBA					AML	AML	05	13	37.6	
	comp=E,13μm,0.5s									
UDYN	Al 'Udayn	1.95	5	⇓*i*P		Pn	05	13	25.9	-2.5
UDYN				*i* S		Sn	05	13	54.2	+0.7
UDYN					AML	AML	05	14	01.2	
	comp=E,7μm,0.5s									
BDHA	Al Bayda'	2.62	42	⇓*i*P		Pn	05	13	35.9	-1.8
BDHA				*i* S		Sb	05	14	14.6	0.0
BDHA					AML	AML	05	14	26.6	
	comp=N,6μm,0.4s									
RADA	Ahram - Rada'a	2.63	23	*i* P		Pn	05	13	35.5	-2.4
MUKL	Al Mukalla	5.67	64	*i* P		Pn	05	14	17.2	-2.3
MUKL				*i* S		Sn	05	15	26.1	+0.9
FURI	Furi	5.89	239		Pn	Pb	05	14	34.0	-4.0
FURI					Pg	Pg	05	14	43.0	-4.5
FURI					SN	Sb	05	15	51.2	+2.1
FURI					SG	Sg	05	15	60.0	-3.9
WNDE	Wendo Genet	7.04	227	eP		Pn	05	14	40.0	+1.4
WNDE				eS		Sb	05	16	28.5	+6.4
KMBO	Kilima Mbogo	14.58	207	Pn		Pn	05	16	21.8	0.0
	baz=47,slow=23,SNR=3.6									
KMBO					LR	LR	05	21	49.6	
	comp=N,417nm,19.5s,baz=101,slow=37									
MBAR	Mbarara	18.02	227	LR		LR	05	23	41.2	
	comp=N,251nm,20.2s,baz=40,slow=36									
EIL	Elat	19.39	336	LR		LR	05	23	29.4	
	comp=N,152nm,21.0s,baz=284,slow=33									
ASF	Jabal al Asfar	21.04	344	LR		LR	05	25	11.5	
	comp=N,252nm,18.0s,baz=277,slow=35									
MMAI	Mount Meron Ar	22.27	341	LR		LR	05	25	16.7	
	comp=N,174nm,21.6s,baz=210,slow=33									
GNI	Garni	28.04	2	LR		LR	05	30	38.7	
	comp=N,88nm,19.1s,baz=102,slow=38									
BRTR	Keskin Array B	29.02	344	P		P	05	18	57.0	+1.2
	comp=N,0.4nm,0.5s,baz=152,slow=6.5,SNR=3.0									
KBZ	Khabaz	31.61	359	LR		LR	05	32	04.4	
	comp=N,55nm,18.5s,baz=283,slow=36									
AAK	Ala-Archa	40.51	35	P		P	05	20	34.6	-0.2
	comp=N,1.1nm,0.6s,baz=194,slow=17,SNR=2.6									
TORD	Torodi Ar. Bea	41.05	276	P		P	05	20	39.1	-0.4
	comp=N,0.4nm,0.8s,baz=94,slow=7.0,SNR=3.0									
GERES	GERESS Array B	44.39	332	P		P	05	21	06.4	+0.2
	comp=N,0.3nm,0.3s,baz=165,slow=8.1,SNR=4.3									
BVAR	Borovoye Array	46.12	22	P		P	05	21	20.6	+0.8
	comp=N,0.5nm,0.4s,baz=194,slow=3.7,SNR=3.3									
MKAR	Makanchi Array	47.45	36	P		P	05	21	29.9	-0.4
	comp=N,2.8nm,0.9s,baz=231,slow=7.7,SNR=16									
MKAR					LR	LR	05	43	46.6	
	comp=N,38nm,18.3s,baz=4.7,slow=39									
ZALV	Zalesovo Beam	52.91	29	LR		LR	05	48	19.9	
	comp=N,204nm,19.1s,baz=257,slow=40									
CMAR	Chiang Mai Arr	53.45	76	P		P	05	22	16.4	+0.2
	comp=N,5.1nm,0.8s,baz=275,slow=7.6,SNR=6.7									
NOA	NORSAR Array B	54.41	341	LR		LR	05	46	37.2	
	comp=N,40nm,19.1s,baz=135,slow=37									
SONM	Songino Array	62.87	42	P		P	05	23	22.7	+0.9
	comp=N,0.4nm,0.5s,baz=261,slow=5.9,SNR=5.4									
TXAR	Lajitas Array	128.26	323	PKP		PKPdf	05	32	04.2	+1.2
	comp=N,0.4nm,0.9s,baz=50,slow=2.1,SNR=4.0									

IDC 26 05:16:16.4±0.7, 21°.13S×175°.95W, h0km, mb4.0/8, mb1 4.3/8, mb1mx4.1/20, mbtmp4.0/8, Error ellipse: s-maj=32.8km s-min=21.5km az=136.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
					Op	ISC	h	m	s	ISC
DZM	Mont Dzumac	16.40	263	Pn		P	05	20	15.5	+4.4
	0.2nm,0.3s,baz=50,slow=19,SNR=3.6									
ASAR	Alice Springs	46.25	257	P		P	05	24	44.2	+0.4
	2.7nm,0.9s,baz=92,slow=8.1,SNR=16									
WRA	Warramunga Arr	46.42	262	P		P	05	24	44.5	-0.6
	0.7nm,0.8s,baz=100,slow=5.8,SNR=6.7									
VNDA	Vanda	57.47	186	P		P	05	26	06.8	+0.2
	1.0nm,0.9s,baz=3.8,slow=3.7,SNR=3.8									
QSPA	South Pole Qui	68.95	180	P		P	05	27	22.6	-0.6
	2.1nm,1.0s,baz=342,slow=3.0,SNR=6.4									
NVAR	Mina Array Bea	80.18	42	P		P	05	28	29.7	+0.8
	1.2nm,0.7s,baz=228,slow=8.7,SNR=9.5									
TXAR	Lajitas Array	85.79	57	P		P	05	28	58.9	+0.9
	3.5nm,1.1s,baz=213,slow=6.0,SNR=16									
ILAR	Eielson Array	88.51	12	P		P	05	29	09.2	-1.1
	0.7nm,0.9s,baz=210,slow=5.7,SNR=8.8									
YKA	Yellowknife Ar	96.28	24	P		P	05	29	45.0	-1.3
	0.3nm,0.8s,baz=239,slow=4.7,SNR=8.3									
ARCES	ARCESS Array B	129.87	350	PKP		PKPdf	05	35	25.8	-1.4
	5.2nm,1.1s,baz=52,slow=4.8,SNR=4.6									
AKASG	Malin Array Be	144.47	332	PKP		PKPab	05	35	52.0	-0.8
	2.8nm,0.6s,baz=42,slow=4.3,SNR=13									
BRTR	Keskin Array B	148.67	313	PKPbc		PKPbc	05	36	05.5	-0.4
	2.2nm,0.7s,baz=124,slow=4.1,SNR=11									
ASF	Jabal al Asfar	148.76	297	PKPbc		PKPbc	05	36	06.8	+0.4
	2.8nm,0.5s,baz=318,slow=2.9,SNR=5.9									
CLL	Collm	149.07	349	eP		PKPbc	05	36	05.0	-1.4
	comp=Z,6.0nm,0.6s									
BRG	Berggiesshubel	149.31	348	e(P)		PKPdf	05	36	02.8	+0.1
	comp=Z,3.8nm,0.9s									
MMAI	Mount Meron Ar	149.79	300	PKPbc		PKPbc	05	36	08.9	0.0
	comp=Z,5.6nm,0.6s,baz=79,slow=4.3,SNR=6.6									
EIL	Elat	150.89	293	PKPbc		PKPbc	05	36	11.7	+0.2
	comp=Z,6.1nm,0.9s,baz=167,slow=6.9,SNR=5.9									
GERES	GERESS Array B	151.28	347	PKPbc		PKPbc	05	36	11.4	-0.5
	comp=Z,0.9nm,0.5s,baz=5.7,slow=2.7,SNR=8.7									

NIED ***26*** *05:24:00, 42°.10N×142°.20E, h32km, Mw3.7 Best double couple: M0=4.50000×10^14 NP1:φ=273.00000°, δ=78.00000°, λ=58.00000°. NP2:φ=164.00000°, δ=34.00000°, λ=157.00000°.*
ISCJB ***26*** *05:24:35.4±0.4, 42°.10N±0°.04×142°.17E±0°.04, h57km±5km, mb3.6/6, MS3.5/1, Error ellipse: s-maj=6.7km s-min=4.0km az=152.1*
JMA ***26*** *05:24:35.4±0.1, 42°.08N×142°.21E, h54km±2km, M3.5*
JMA Felt I J1.
IDC ***26*** *05:24:35.9±2.7, 42°.04N×142°.76E, h40km±26km, mb3.4/6, mb1 3.7/10, mb1mx3.5/28, mbtmp3.5/10, ML3.8/4, MS2.9/3, Ms1 2.9/3, ms1mx2.5/27, Error ellipse: s-maj=32.2km s-min=12.1km az=107.0*

ISC 26 05:24:36.3±0.8, 42°.13N±0°.04×142°.17E±0°.03, h49km±8km, n24, σ0⁄88/36, mb3.6/6, 3C-5D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
					Op	ISC	h	m	s	ISC
JNBK	Urakawa-nobuka	0.46	70	⇓P		Pn	05	24	46.0	-1.1
JNBK				eS		Sn	05	24	54.4	-0.3
JBT2	Biratori 2	0.67	12	⇓P		Pn	05	24	49.4	-0.2
JBT2				eS		Sn	05	24	59.8	+0.6
JEM	Erimo	0.74	98	P		Pn	05	24	50.2	-0.4
JEM				eS		Sn	05	25	00.7	-0.3
JKB	Kayabe	0.88	255	⇓P		Pn	05	24	52.0	-0.4
JKB				eS		Sn	05	25	03.8	-0.3
JEW	Eniwo	0.89	324	⇑P		Pn	05	24	52.5	0.0
JEW				eS		Sn	05	25	05.1	+0.7
JNB	Noboribetsu	0.91	293	⇑P		Pn	05	24	52.0	-0.7
JNB				eS		Sn	05	25	04.1	-0.7
JCH	Churui	1.01	61	⇓P		Pn	05	24	53.8	-0.3
JCH				eS		Sn	05	25	07.7	+0.4
JFR	Furan	1.08	17	P		Pn	05	24	54.9	-0.3
JFR				eS		Sn	05	25	09.2	+0.1
JOT	Ohata	1.12	229	⇓P		Pn	05	24	55.0	-0.6
JOT				eS		Sn	05	25	09.7	-0.3
JYM2	Yakumo 2	1.34	270	P		Pn	05	24	58.7	+0.1
JYM2				eS		Sn	05	25	15.8	+0.6
JAB	Ashibetsu	1.38	2	P		Pn	05	25	00.0	+0.9
JSR	Shiriuchi	1.44	246	P		Pn	05	24	59.9	0.0
JSR				eS		Sn	05	25	17.8	+0.1
JOB	Onbets	1.46	57	⇑P		Pn	05	25	00.9	+0.7
JOB				eS		Sn	05	25	19.7	+1.6
ASAJ	Asahikawa	2.01	9	P		Pn	05	25	08.5	+0.7
	40nm,0.3s,baz=224,slow=12,SNR=95									
ASAJ				S		Sn	05	25	33.1	+1.4
	47nm,0.3s,baz=340,slow=29,SNR=12									
MJAR	Matsushiro Arr	6.37	210	P		Pn	05	26	10.2	+2.7
	0.8nm,0.3s,baz=16,slow=13,SNR=4.6									
MJAR					LR	LR	05	28	56.5	
	comp=Z,78nm,18.1s,baz=10.0,slow=40									
KSRS	Korea Array	11.91	252	P		Pn	05	27	29.6	+6.3
	0.4nm,0.3s,baz=64,slow=14,SNR=10									
KSRS					LR	LR	05	31	30.5	
	comp=Z,21nm,20.8s,baz=210,slow=34									
PETK	Petropavlovsk-	15.14	38	P		Pn	05	28	05.9	-0.9
	0.4nm,0.3s,baz=219,slow=11,SNR=10									
DAV	Davao City (W)	37.88	207	LR		LR	05	48	01.7	
	comp=Z,68nm,18.4s,baz=238,slow=37									
ZALV	Zalesovo Beam	39.08	308	P		P	05	32	02.7	+4.4
	0.8nm,0.3s,baz=108,slow=4.7,SNR=3.3									
ILAR	Eielson Array	44.94	35	P		P	05	32	45.7	-0.2
	0.5nm,0.8s,baz=280,slow=6.4,SNR=9.3									

YKA	**Yellowknife Ar**	**59.15**	**32**	P		**P**	**05 34 29.9**	**-1.5**
	0.3nm,0.6s,baz=306,slow=6.3,SNR=4.8							
WRA	**Warramunga Arr**	**62.18**	**188**	P		**P**	**05 34 52.0**	**-0.5**
	0.6nm,0.5s,baz=7.0,slow=7.0,SNR=14							
WRA				pP		**pP**	**05 35 07.7**	**+1.3**
	1.1nm,0.8s,baz=8.1,slow=6.9,SNR=8.2							
ASAR	**Alice Springs**	**65.91**	**188**	P		**P**	**05 35 16.9**	**-0.1**
	0.3nm,0.5s,baz=2.1,slow=7.4,SNR=3.5							
ASAR				pP		**pP**	**05 35 32.1**	**+1.2**
	0.2nm,0.7s,baz=357,slow=6.5,SNR=4.2							
TXAR	**Lajitas Array**	**86.57**	**53**	P		**P**	**05 37 14.8**	**+0.4**
	0.2nm,0.5s,baz=310,slow=4.4,SNR=4.5							

BJI **26** *05:31:17.3, 7˚.01S×150˚.95E, h32km, mB5.1/23, mb4.7/31, Ms4.9/25, Ms7 4.5/25*
ISCJB **26** *05:31:19.2±0.2, 6˚.81S±0˚.03×150˚.36E±0˚.04, h26km, mb4.9/69, MS4.2/19, Error ellipse: s-maj=5.6km s-min=3.7km az=21.0*
MOS **26** *05:31:20.1±1.1, 6˚.74S×150˚.32E, h33km, mb5.0/14, Error ellipse: s-maj=13.6km s-min=8.2km az=74.3*
AUST **26** *05:31:22.6±0.3, 6˚.85S×150˚.48E, h41km, Error ellipse: s-maj=1.0km s-min=0.8km az=304.0*
NEIC **26** *05:31:22.0±0.2, 6˚.75S×150˚.31E, h35km, mb5.0/32, Error ellipse: s-maj=7.3km s-min=4.5km az=117.0*
IDC **26** *05:31:23.1±0.5, 6˚.76S×150˚.29E, h42km±4km, mb4.5/20, mb1 4.6/21, mb1mx4.6/24, mbtmp4.5/21, ML3.8/1, MS4.0/9, Ms1 4.0/9, ms1mx3.8/23, Error ellipse: s-maj=14.6km s-min=7.7km az=122.0*
GCMT **26** *05:31:25.1±0.3, 6˚.90S×150˚.56E, h12km±1km, MW4.9, Moment Tensor Solution. s19,c22; s69,c94; Moment tensor: Scale 10^16Nm; Mrr-1.59±.17; Mθθ2.22±.12; Mφφ-0.63±.10; Mrθ1.35±.32; Mθφ1.26±.09; Mφr-1.27±.38; Best double couple: M0 3.00000×10^16 NP1:φs37.00000°, δ47.00000°, λ-147.00000°. NP2:φs283.00000°, δ67.00000°, λ-48.00000°. Principal axes: T 2.8700, Plg12.0000°, Azm344.0000°; N 0.2300, Plg38.0000°, Azm84.0000°; P -3.1000, Plg50.0000°, Azm240.0000°; Data Used: G IC II IU CN.*
DJA **26** *05:31:28.1±2.5, 7˚.S±13˚×15˚.0E±1˚.5, h90km±15km, M5.2/17, mB5.6/7, mb5.2/17, MLv5.4/1, Mw(mB)5.1/7*
ISC 26 05:31:22.6±0.3,**6˚.85S**±0˚.04×**150˚.36E**±0˚.05,**h36**km±2km,
h36km;**pP-P,n194,**σ1s**32**/261,**mb4.9**/69,**MS4.1**/19,**3C-4D,**
New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.19**	**34**	P		**Pn**	**05 32 08.9**	**-1.4**
	baz=3.1,SNR=14							
RABL				S		**Sn**	**05 32 48.3**	**+1.1**
	baz=3.1,SNR=5.7							
PMG	**Port Moresby**	**4.06**	**231**	*e*Pn		**Pn**	**05 32 23.7**	**+1.5**
PMG				*e*Sn		**Sn**	**05 33 03.7**	**-4.8**
PMG				S		**Sn**	**05 33 11.1**	**+2.6**
PMG	**Port Moresby**	**4.06**	**231**	P		**Pn**	**05 32 24.3**	**+2.1**
PMG	**Port Moresby**	**4.06**	**231**	P		**Pn**	**05 32 23.7**	**+1.5**
	43nm,0.3s,baz=49,slow=8.7,SNR=140							
PMG				S		**Sn**	**05 33 11.1**	**+2.6**
	87nm,0.3s,baz=131,slow=12,SNR=10.0							
HNR	**Honiara**	**9.84**	**106**	LR		LR	05 37 08.4	
	comp=Z,329nm,18.2s,baz=102,slow=35							
COEN	**Coen**	**9.99**	**224**	*e*Pn		**Pn**	**05 33 43.4**	**-0.3**
	161nm,1.0s							
COEN				*e*Sn		**Sn**	**05 35 29.9**	**-4.7**
COEN	**Coen**	**9.99**	**224**	P		**Pn**	**05 33 44.6**	**+0.9**
	baz=10,SNR=9.4							
COEN				S		**Sn**	**05 35 30.3**	**-4.2**
	baz=10,SNR=3.9							
MTSU	**Mount Surprise**	**12.67**	**207**	P		**Pn**	**05 34 22.0**	**+1.6**
	baz=13,SNR=6.0							
QIS	**Mount Isa**	**17.16**	**216**	P		**P**	**05 35 23.1**	**+2.0**
	baz=17,SNR=5.0							
EIDS	**Eidsvold**	**18.43**	**178**	*e*P		**Pn**	**05 35 35.7**	**+0.4**
	188nm,2.3s							
EIDS	**Eidsvold**	**18.43**	**178**	P		**Pn**	**05 35 35.7**	**+0.4**
	baz=18,SNR=6.1							
FAKI	**Fak Fak**	**18.45**	**281**	P		**Pn**	**05 35 37.1**	**+1.3**
	baz=19,SNR=4.4							
KDU	**Kakadu**	**18.55**	**250**	P		**P**	**05 35 36.2**	**-0.2**
	baz=19,SNR=15							
RMQ	**Roma**	**19.59**	**184**	P		**Pn**	**05 35 49.4**	**+0.1**
	baz=20,SNR=22							
MTN	**Manton Dam**	**19.85**	**251**	P		**P**	**05 35 50.9**	**+0.2**
	baz=20,SNR=16							
WRAB	**Tennant Creek**	**20.26**	**229**	*d* i P		**P**	**05 35 55.3**	**+0.1**
WRAB	**Tennant Creek**	**20.26**	**229**	*e*P		**P**	**05 35 55.3**	**+0.1**
	192nm,0.8s							
WRAB	**Tennant Creek**	**20.26**	**229**	P		**P**	**05 35 55.0**	**-0.2**
	2μm,0.7s							
WRA	**Warramunga Arr**	**20.27**	**229**	P		**P**	**05 35 54.5**	**-0.9**
WRA				S		**S**	**05 39 40.8**	**-0.2**
WRA				PcP		**PcP**	**05 40 09.3**	**+0.9**
WRA	**Warramunga Arr**	**20.27**	**229**	P		**P**	**05 35 54.5**	**-0.9**
	176nm,0.8s,baz=52,slow=11,SNR=145							
WRA				S		**S**	**05 39 40.7**	**-0.2**
	3.7nm,1.0s,baz=54,slow=20,SNR=5.8							
WRA				PcP		**PcP**	**05 40 09.3**	**+0.9**
	3.1nm,0.7s,baz=48,slow=2.1,SNR=4.9							
WRA				LR		LR	05 43 56.9	
	comp=Z,348nm,18.4s,baz=55,slow=37							
QLP	**Quilpie**	**20.47**	**196**	P		**P**	**05 35 58.0**	**+0.6**
	baz=21,SNR=20							
MSAI	**Masohi**	**21.62**	**278**	P		**P**	**05 36 09.1**	**-0.8**
	24nm,0.5s,1μm							
DZM	**Mont Dzumac**	**21.68**	**136**	*e*P		**P**	**05 36 11.6**	**+1.0**
DZM	**Mont Dzumac**	**21.68**	**136**	P		**P**	**05 36 11.5**	**+1.0**
	30nm,1.0s,baz=107,slow=16,SNR=9.1							
DZM				LR		LR	05 43 22.5	
	comp=Z,397nm,19.0s,baz=34,slow=33							
KNRA	**Kununurra**	**22.90**	**246**	P		**P**	**05 36 23.1**	**-0.4**
	baz=23,SNR=46							
AS31	**Alice Springs**	**23.01**	**222**	*e*P		**P**	**05 36 24.5**	**-0.1**
AS31				*e*S		**S**	**05 40 33.6**	**+0.7**
ASAR	**Alice Springs**	**23.01**	**222**	P		**P**	**05 36 22.9**	**-1.7**
ASAR				PcP		**PcP**	**05 40 14.2**	**+0.5**
ASAR				S		**S**	**05 40 33.8**	**+0.9**
ASAR				ScP		**ScP**	**05 43 48.2**	**-0.9**
ASAR	**Alice Springs**	**23.01**	**222**	P		**P**	**05 36 22.9**	**-1.7**
	39nm,0.8s,baz=53,slow=9.3,SNR=306							
ASAR				PcP		**PcP**	**05 40 14.2**	**+0.5**
	1.4nm,0.6s,baz=93,slow=2.7,SNR=4.3							
ASAR				S		**S**	**05 40 33.8**	**+0.9**
	5.9nm,0.9s,baz=42,slow=22,SNR=8.8							
ASAR				ScP		**ScP**	**05 43 48.2**	**-0.9**
	0.3nm,0.8s,baz=66,slow=3.2,SNR=2.7							
ASAR				LR		LR	05 45 46.3	
	comp=Z,472nm,19.9s,baz=48,slow=38							
ARMA	**Armidale**	**23.48**	**177**	*e*P		**P**	**05 36 28.9**	**-0.3**
	78nm,1.1s							
ARMA	**Armidale**	**23.48**	**177**	P		**P**	**05 36 30.2**	**+0.9**
	baz=24,SNR=16							
LBMI	**Labuha**	**23.61**	**284**	P		**P**	**05 36 29.2**	**-1.4**
	86nm,1.0s,2μm							
CMSA	**Cobar Meteorol**	**24.95**	**189**	P		**P**	**05 36 42.2**	**-0.4**
	baz=25,SNR=19							
STKA	**Stephens Creek**	**26.21**	**197**	*e*P		**P**	**05 36 53.5**	**-0.7**
	8.4nm,0.8s							
STKA	**Stephens Creek**	**26.21**	**197**	P		**P**	**05 36 53.5**	**-0.7**
	35nm,0.8s,baz=2.7,slow=7.9,SNR=48							
STKA				LR		LR	05 47 39.0	
	comp=Z,694nm,18.2s,baz=13,slow=37							
STKA	**Stephens Creek**	**26.21**	**197**	P		**P**	**05 36 53.5**	**-0.7**
	baz=26,SNR=72							
MGCD	**Mangrove Creek**	**26.24**	**179**	P		**P**	**05 36 55.0**	**+0.6**
	baz=26,SNR=6.3							
FITZ	**Fitzroy Crossi**	**26.56**	**243**	*e*P		**P**	**05 36 57.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**26.56**	**243**	P		**P**	**05 36 56.6**	**-0.8**
	67nm,0.7s,baz=78,slow=7.2,SNR=88							
FITZ	**Fitzroy Crossi**	**26.56**	**243**	P		**P**	**05 36 57.7**	**+0.3**
	baz=27,SNR=88							
YNG	**Young**	**27.38**	**184**	P		**P**	**05 37 04.4**	**-0.3**
	baz=28,SNR=7.5							
MMRI	**Maumere**	**27.91**	**265**	P		**P**	**05 37 09.3**	**-0.4**
	186nm,1.1s,2μm							
LUWI	**Luwuk**	**28.10**	**281**	S		**S**	**05 41 51.5**	**-2.8**
	baz=28,SNR=3.8							
CNB	**Canberra Magne**	**28.35**	**182**	P		**P**	**05 37 13.8**	**+0.4**
	baz=28,SNR=6.7							
BBOO	**Buckleboo**	**29.05**	**205**	*e*P		**P**	**05 37 18.7**	**-0.9**
	1μm,1.5s							
BBOO	**Buckleboo**	**29.05**	**205**	P		**P**	**05 37 19.2**	**-0.4**
	baz=29,SNR=9.2							
MSVF	**Nonsavu**	**29.10**	**114**	*e*P		**P**	**05 37 21.1**	**+0.9**
MSVF				pmax		pmax		
	comp=Z,40nm,1.4s							
MSVF	**Nonsavu**	**29.10**	**114**	*e*P		**P**	**05 37 21.1**	**+0.9**
	comp=Z,40nm,1.4s							
SKSI	**Soroako, Sulaw**	**29.23**	**277**	P		**P**	**05 37 20.6**	**-0.9**
	comp=Z,32nm,0.9s							
BASI	**Baing, Sumba**	**29.63**	**261**	P		**P**	**05 37 23.5**	**-1.4**
	comp=Z,439nm,1.2s,comp=Z,4μm							
WSI	**Waingapu**	**29.87**	**263**	S		S	05 42 33.6	+12
	baz=30,SNR=5.2							
KAPI	**Kappang**	**30.49**	**272**	*e*P		**P**	**05 37 31.0**	**-1.6**
	comp=Z,14nm,0.9s							
ARPS	**Mount Arapiles**	**30.78**	**193**	P		**P**	**05 37 35.0**	**+0.1**
	baz=31,SNR=14							
TOO	**Toolangi**	**30.90**	**188**	P		**P**	**05 37 36.4**	**+0.5**
	baz=31,SNR=4.2							
FORT	**Forrest**	**31.68**	**218**	*e*P		**P**	**05 37 42.9**	**+0.1**
	comp=Z,180nm,0.8s							
FORT	**Forrest**	**31.68**	**218**	P		**P**	**05 37 42.9**	**+0.1**
	baz=32,SNR=55							
MBWA	**Marble Bar**	**32.85**	**241**	*e*P		**P**	**05 37 51.8**	**-1.5**
	comp=Z,36nm,0.9s							
MOO	**Moorlands**	**35.56**	**184**	P		**P**	**05 38 17.6**	**+1.2**
	baz=36,SNR=4.6							
TAU	**Tasmania Unive**	**36.02**	**184**	*e*P		**P**	**05 38 20.9**	**+0.6**
TAU	**Tasmania Unive**	**36.02**	**184**	*e*P		**P**	**05 38 20.9**	**+0.6**
	comp=Z,57nm,0.9s							
MEEK	**Meekatharra**	**36.04**	**233**	P		**P**	**05 38 20.8**	**0.0**
	baz=36,SNR=42							
KMBL	**Kambalda**	**36.10**	**224**	P		**P**	**05 38 21.4**	**+0.2**
	baz=36,SNR=76							
KLBR	**Kellerberrin**	**39.14**	**227**	P		**P**	**05 38 46.8**	**-0.2**
	baz=39,SNR=48							
MORW	**Morawa**	**39.17**	**231**	P		**P**	**05 38 47.4**	**+0.1**
	baz=39,SNR=18							
BLDU	**Ballidu**	**39.41**	**229**	P		**P**	**05 38 49.3**	**0.0**
	baz=40,SNR=11							
NWAO	**Narrogin (SRO)**	**40.23**	**225**	*e*P		**P**	**05 38 55.5**	**-0.5**
	comp=Z,22nm,0.9s							
NWAO	**Narrogin (SRO)**	**40.23**	**225**	LR		LR	05 56 16.5	
	comp=Z,443nm,18.7s,baz=300,slow=37							
RKGY	**Rocky Gully**	**41.33**	**223**	P		**P**	**05 39 06.0**	**+0.9**
	baz=42,SNR=6.8							
JNU	**Nakatsue**	**43.85**	**336**	*e*P		**P**	**05 39 24.4**	**-1.2**
	comp=Z,19nm,1.1s							
JNU	**Nakatsue**	**43.85**	**336**	P		**P**	**05 39 24.4**	**-1.1**
	comp=Z,17nm,0.8s,baz=110,slow=5.5,SNR=11							
MJAR	**Matsushiro Arr**	**44.64**	**346**	P		**P**	**05 39 29.6**	**-2.2**
MJAR	**Matsushiro Arr**	**44.64**	**346**	P		**P**	**05 39 29.6**	**-2.2**
	comp=Z,5.7nm,0.7s,baz=169,slow=8.1,SNR=15							
MJAR				LR		LR	05 55 01.5	
	comp=Z,120nm,20.6s,baz=160,slow=32							
MAJO	**Matsushiro**	**44.64**	**346**	*e*P		**P**	**05 39 30.3**	**-1.5**
MAJO				pmax		pmax		
	comp=Z,12nm,0.9s							
MAJO	**Matsushiro**	**44.64**	**346**	*e*P		**P**	**05 39 29.6**	**-2.2**
	comp=Z,11nm,0.6s							
MAT	**Matsushiro**	**44.64**	**346**	P		**P**	**05 39 29.7**	**-2.1**
MAT				*e*S		S	05 45 43.8	-22
QIZ	**Qiongzhong**	**47.49**	**304**	P		**P**	**05 39 53.8**	**-0.7**
QIZ				S		**S**	**05 46 48.5**	**+1.4**
QIZ				pmax		pmax		
	comp=Z,15nm,1.4s							
QIZ				pmax		pmax		
	comp=Z,95nm,4.0s							
QIZ				LR		LR		
	comp=N,270nm,14.6s							
QIZ				LR		LR		
	comp=Z,250nm,16.5s							
KGM	**Kluang**	**47.76**	**279**	P		**P**	**05 39 58.1**	**+1.3**
KSRS	**Korea Array**	**48.80**	**336**	P		**P**	**05 40 02.4**	**-1.9**
	comp=Z,3.4nm,0.7s,baz=151,slow=8.8,SNR=24							
KSAR	**Wonju Array Be**	**48.81**	**336**	P		**P**	**05 40 02.4**	**-2.0**
NJ2	**Nanjing**	**48.98**	**324**	*e*P		**P**	**05 40 05.0**	**-0.8**
NJ2				pP		**pP**	**05 40 16.5**	**+0.1**
NJ2				sP		**sP**	**05 40 20.3**	**-0.3**
NJ2				PP		**PP**	**05 42 00.5**	**+0.9**
NJ2				S		**S**	**05 47 07.0**	**-0.7**
NJ2				sS		**sS**	**05 47 25.0**	**-0.3**
NJ2				pmax		pmax		
	comp=Z,30nm,1.0s							
NJ2				pmax		pmax		
	comp=Z,60nm,8.3s							
NJ2				LR		LR		
	comp=N,820nm,32.6s							
NJ2				LR		LR		
	comp=E,1μm,30.0s							
NJ2				LR		LR		
	comp=Z,420nm,39.8s							
FRIM	**Kepong**	**49.66**	**280**	P		**P**	**05 40 12.4**	**+1.1**
IPM	**Ipoh**	**50.51**	**282**	*e*P		**P**	**05 40 18.1**	**+0.3**
	comp=Z,17nm,0.8s							
IPM	**Ipoh**	**50.51**	**282**	P		**P**	**05 40 18.7**	**+0.9**
YUK	**Yuzh-Kuril'sk**	**50.81**	**356**	*d* iP		**P**	**05 40 21.3**	**+1.9**
YUK				*i* S		**S**	**05 47 35.1**	**+2.2**
YUK				*i* SS		SS	05 50 56.2	-12
PSI	**Prapat**	**52.22**	**279**	P		**P**	**05 40 30.8**	**0.0**
	baz=52,SNR=3.1							
USRK	**Ussuriysk Arra**	**53.45**	**344**	P		**P**	**05 40 39.0**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=164,slow=7.5,SNR=9.7							
USRK				LR		LR	06 00 04.1	
	comp=Z,86nm,20.7s,baz=88,slow=32							
GYA	**Guiyang**	**53.76**	**310**	P		**P**	**05 40 44.0**	**+2.1**
GYA				pP		**pP**	**05 40 53.5**	**+0.9**
GYA				PP		**PP**	**05 42 46.5**	**+3.2**
GYA				ScP		**ScP**	**05 45 42.8**	**-0.3**
GYA				S		**S**	**05 48 15.0**	**+0.7**
GYA				sS		**sS**	**05 48 32.0**	**0.0**
GYA				SS		**SS**	**05 51 55.5**	**-0.2**
GYA				pmax		pmax		
	comp=Z,20nm,1.0s							
GYA				pmax		pmax		
	comp=Z,120nm,5.0s							
GYA				LR		LR		
	comp=N,580nm,18.6s							
GYA				LR		LR		
	comp=E,490nm,19.9s							
GYA				LR		LR		
	comp=Z,540nm,19.0s							
MDJ	**Mudanjiang**	**54.54**	**342**	P		**P**	**05 40 46.5**	**-0.5**
MDJ				pP		**pP**	**05 40 55.5**	**-2.3**
MDJ				sP		**sP**	**05 40 59.5**	**-2.5**
MDJ				ScP		**ScP**	**05 45 45.5**	**-0.3**
MDJ				PcS		**PcS**	**05 45 49.3**	**-0.2**
MDJ				S		**S**	**05 48 23.8**	**-0.1**
MDJ				sS		**sS**	**05 48 39.3**	**-2.3**
MDJ				pmax		pmax		
	comp=Z,8.0nm,1.4s							
MDJ				pmax		pmax		
	comp=Z,30nm,3.9s							
MDJ				LR		LR		
	comp=N,82nm,33.8s							
MDJ				LR		LR		
	comp=E,59nm,29.0s							
MDJ				LR		LR		
	comp=Z,130nm,30.6s							
CN2	**Changchun**	**55.22**	**338**	*e*P		P	05 40 55.3	+3.3
CN2				*es*P		sP	05 41 09.3	+2.3
CN2				*e*S		**S**	**05 48 36.0**	**+2.9**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
CN2				pmax		pmax		
	comp=Z,200nm,3.0s							
CN2				LR		LR		
	comp=N,100nm,15.0s							
CN2				LR		LR		
	comp=E,100nm,15.0s							
KMI	**Kunming**	**56.17**	**306**	P		**P**	**05 41 01.8**	**+2.3**
KMI				S		**S**	**05 48 47.5**	**+0.7**
KMI				pmax		pmax		
	comp=Z,4.0nm,0.7s							
KMI				pmax		pmax		
	comp=Z,45nm,3.1s							
KMI				LR		LR		
	comp=N,210nm,18.0s							
KMI				LR		LR		
	comp=E,220nm,13.3s							
KMI				LR		LR		
	comp=Z,200nm,26.9s							
BJI	**Beijing**	**56.31**	**329**	P		**P**	**05 41 01.0**	**+1.1**
BJI				S		S	05 48 55.3	+7.7
BJI				pmax		pmax		
	comp=Z,10.0nm,0.5s							
BJI				LR		LR		
	comp=N,140nm,22.0s							
BJI				LR		LR		
	comp=E,160nm,18.5s							
BJI				LR		LR		
	comp=Z,140nm,34.6s							
XAN	**Xi'an**	**56.48**	**319**	P		P	05 41 05.0	+3.7
XAN				pP		pP	05 41 14.0	+1.9
XAN				pmax		pmax		
	comp=Z,2.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**56.59**	**297**	P		**P**	**05 41 01.8**	**-0.6**
CMAR				PcP		**PcP**	**05 41 58.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**56.59**	**297**	P		**P**	**05 41 01.8**	**-0.6**
	comp=Z,2.9nm,0.7s,baz=124,slow=5.7,SNR=12							
CMAR				PcP		**PcP**	**05 41 58.8**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=123,slow=3.3,SNR=4.7							
KLR	**Kul'dur**	**58.17**	**346**	*e*P		P	05 41 08.4	-4.4
CD2	**Chengdu**	**58.27**	**313**	P		**P**	**05 41 15.0**	**+1.0**
CD2				pP		**pP**	**05 41 25.5**	**+0.6**
CD2				sP		**sP**	**05 41 29.8**	**+0.8**
CD2				PcP		**PcP**	**05 42 05.3**	**+0.3**
CD2				PP		**PP**	**05 43 26.0**	**+2.6**
CD2				PcS		**PcS**	**05 46 05.5**	**-1.2**
CD2				S		**S**	**05 49 14.0**	**0.0**
CD2				sS		**sS**	**05 49 31.5**	**-0.3**
CD2				SS		**SS**	**05 53 08.0**	**+1.5**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,5.2s							
CD2				LR		LR		
	comp=N,1μm,20.6s							
CD2				LR		LR		
	comp=Z,180nm,17.6s							
HHC	**Hu-ho-hao-te**	**59.34**	**326**	*e*P		**P**	**05 41 23.3**	**+2.0**
HHC				pP		**pP**	**05 41 33.5**	**+1.3**
HHC				sP		**sP**	**05 41 37.3**	**+0.9**
HHC				PP		**PP**	**05 43 36.5**	**+3.7**
HHC				PcS		**PcS**	**05 46 11.0**	**-0.1**
HHC				S		**S**	**05 49 28.8**	**+1.2**
HHC				sS		**sS**	**05 49 45.5**	**0.0**
HHC				ScS		**ScS**	**05 51 07.3**	**-1.7**
HHC				SS		**SS**	**05 53 25.5**	**+2.4**
HHC				pmax		pmax		
	comp=Z,34nm,1.0s							
HHC				pmax		pmax		
	comp=Z,190nm,5.2s							
HHC				LR		LR		
	comp=N,240nm,22.2s							
HHC				LR		LR		
	comp=E,670nm,23.7s							
HHC				LR		LR		
	comp=Z,160nm,21.0s							
PETK	**Petropavlovsk-**	**60.05**	**5**	P		**P**	**05 41 24.4**	**-1.5**
PETK	**Petropavlovsk-**	**60.05**	**5**	P		**P**	**05 41 24.4**	**-1.5**
PETK	**Petropavlovsk-**	**60.05**	**5**	P		**P**	**05 41 24.4**	**-1.5**
	comp=Z,5.4nm,0.6s,baz=161,slow=7.8,SNR=9.9							
PETK				LR		LR	06 02 43.3	
	comp=Z,108nm,21.3s,baz=202,slow=31							
LZH	**Lanzhou**	**61.05**	**318**	*e*P		**P**	**05 41 33.5**	**+0.3**
LZH				pP		**pP**	**05 41 44.3**	**+0.2**
LZH				sP		**sP**	**05 41 48.5**	**+0.2**
LZH				*e*PP		**PP**	**05 43 50.5**	**+2.4**
LZH				*e*S		**S**	**05 49 49.5**	**-0.4**
LZH				sS		**sS**	**05 50 06.5**	**-1.3**
LZH				pmax		pmax		
	comp=Z,19nm,1.5s							
LZH				pmax		pmax		
	comp=Z,100nm,6.4s							
LZH				LR		LR		
	comp=N,580nm,15.0s							
LZH				LR		LR		
	comp=E,330nm,16.3s							
LZH				LR		LR		
	comp=Z,400nm,18.5s							
FX1	**Attu Island--F**	**62.58**	**15**	P		**P**	**05 41 42.5**	**-0.5**
FX1	**Attu Island--F**	**62.58**	**15**	P		**P**	**05 41 42.5**	**-0.5**
	comp=Z,10nm,0.6s,baz=233,slow=4.2,SNR=6.8							
ULN	**Ulaanbaatar**	**66.48**	**330**	*e*P		**P**	**05 42 07.8**	**-1.0**
	comp=Z,5.0nm,1.0s							
SONM	**Songino Array**	**66.80**	**329**	P		**P**	**05 42 09.5**	**-1.3**
SONM				pP		**pP**	**05 42 22.5**	**+0.8**
SONM	**Songino Array**	**66.80**	**329**	P		**P**	**05 42 09.5**	**-1.3**
	comp=Z,3.6nm,0.8s,baz=141,slow=4.6,SNR=9.8							
SONM				pP		**pP**	**05 42 22.5**	**+0.8**
	comp=Z,5.2nm,0.8s,baz=132,slow=5.2,SNR=6.3							
LSA	**Lhasa**	**67.42**	**306**	P		**P**	**05 42 15.0**	**-0.5**
SEY	**Seymchan**	**69.60**	**1**	*e*P		**P**	**05 42 26.2**	**-1.6**
ZAK	**Zakamensk**	**70.00**	**330**	*e*P		P	05 42 26.7	-4.0
ZAK				pmax		pmax		
	comp=Z,6.0nm,1.0s							
YAK	**Yakutsk**	**70.52**	**350**	*e*P		**P**	**05 42 32.8**	**-0.6**
YAK				pmax		pmax		
	comp=Z,13nm,1.3s							
VNDA	**Vanda**	**70.90**	**177**	*e*P		**P**	**05 42 35.7**	**+0.1**
	comp=Z,7.0nm,0.8s							
VNDA	**Vanda**	**70.90**	**177**	P		**P**	**05 42 36.3**	**+0.7**
	comp=Z,8.5nm,0.7s,baz=325,slow=6.7,SNR=35							
MIR	**Mirnyy**	**71.16**	**201**	*i* iP		**P**	**05 42 39.0**	**+1.7**
MIR				*i*			05 42 50.0	
MIR				pmax		pmax		
	comp=Z,41nm,1.0s							
BILL	**Bilibino**	**75.56**	**6**	*i* iP		**P**	**05 43 02.7**	**-0.5**
BILL				pmax		pmax		
	comp=Z,7.0nm,1.0s							
BILL	**Bilibino**	**75.56**	**6**	*e*P		**P**	**05 43 02.5**	**-0.6**
	comp=Z,9.1nm,1.0s							
WMQ	**Urumqi**	**75.62**	**318**	*e*P		**P**	**05 43 04.8**	**+0.7**
WMQ				pP		**pP**	**05 43 15.0**	**-0.3**
WMQ				sP		**sP**	**05 43 19.0**	**-0.4**
WMQ				PP		**PP**	**05 45 56.5**	**+2.4**
WMQ				S		**S**	**05 52 42.8**	**-0.1**
WMQ				sS		**sS**	**05 53 00.0**	**-1.3**
WMQ				SS		**SS**	**05 57 37.3**	**+2.4**
WMQ				pmax		pmax		
	comp=Z,6.0nm,0.6s							
WMQ				pmax		pmax		
	comp=Z,96nm,4.2s							
WMQ				LR		LR		
	comp=N,520nm,21.2s							
WMQ				LR		LR		
	comp=E,380nm,20.2s							
WMQ				LR		LR		
	comp=Z,390nm,23.4s							
OHAK	**Old Harbor

COLA	College	84.65	22	*eP*		P		05 43 50.8	-1.4
	comp=Z,20nm,0.8s								
ILAR	Eielson Array	84.96	22	P		P		05 43 51.5	-2.3
ILAR				pP		pP		05 44 04.3	-0.8
ILAR	Eielson Array	84.96	22	P		P		05 43 51.5	-2.3
	comp=Z,11nm,0.9s,baz=251,slow=5.1,SNR=102								
ILAR				pP		pP		05 44 04.3	-0.8
	comp=Z,15nm,0.8s,baz=248,slow=5.5,SNR=21								
COLD	Coldfoot	84.98	20	*eP*		P		05 43 53.2	-0.8
	comp=Z,8.0nm,0.8s								
MENT	Mentasta	85.42	25	*eP*		P		05 43 55.5	-0.7
DOT	Dot Lake	85.57	24	*eP*		P		05 43 56.0	-1.0
	comp=Z,13nm,1.0s								
PNL	Peninsula	86.09	29	*eP*		P		05 43 59.5	-0.1
	comp=Z,24nm,0.9s								
EGAK	Eagle	87.19	24	*eP*		P		05 44 04.6	-0.2
	comp=Z,18nm,0.9s								
WRAK	Wrangell Islan	88.69	33	*eP*		P		05 44 11.3	-0.8
	comp=Z,17nm,1.3s								
BVAR	Borovoye Array	89.42	323	P		P		05 44 14.4	-1.3
BVAR	Borovoye Array	89.42	323	P		P		05 44 14.4	-1.3
BVAR	Borovoye Array	89.42	323	P		P		05 44 14.4	-1.3
	comp=Z,1.5nm,0.9s,baz=116,slow=6.6,SNR=3.3								
DLBC	Dease Lake	90.38	31	*eP*		P		05 44 21.1	+1.0
SYO	Syowa Base	90.94	200	⇓*eP*		P		05 44 20.0	-2.5
MOD	Modoc	94.03	48	*eP*		P		05 44 37.5	0.0
	comp=Z,3.7nm,0.8s								
NVAR	Mina Array Bea	95.25	52	P		P		05 44 44.0	+0.7
NVAR				pP		pP		05 44 56.8	+2.1
NVAR	Mina Array Bea	95.25	52	P		P		05 44 44.0	+0.7
	comp=Z,2.9nm,0.8s,baz=254,slow=6.5,SNR=17								
NVAR				pP		pP		05 44 56.8	+2.1
	comp=Z,5.7nm,0.8s,baz=257,slow=5.2,SNR=17								
NV11	Mina Array Sit	95.37	52	*eP*		P		05 44 44.8	+1.0
LRMC	Laurel Mountai	95.51	55	P		P		05 44 46.0	+1.6
	baz=96								
MPMC	Manual Prospec	95.72	54	P		P		05 44 47.0	+1.5
	baz=96								
FURC	Furnace Creek,	96.26	54	P		P		05 44 49.5	+1.9
	baz=96								
SHOC	Shoshone	96.69	55	P		P		05 44 50.9	+1.3
	baz=97								
R11A	Troy Canyon, C	97.38	52	P		Pdif		05 44 54.6	+1.6
	baz=97								
D12A	Red Ives Fores	97.89	44	P		Pdif		05 44 55.7	+0.8
	baz=98								
YKA	Yellowknife Ar	98.36	28	P		P		05 44 56.3	-0.2
YKA				pP		pP		05 45 08.2	+0.4
YKA	Yellowknife Ar	98.36	28	P		P		05 44 56.3	-0.2
	comp=Z,1.1nm,0.7s,baz=270,slow=4.4,SNR=16								
YKA				pP		pP		05 45 08.2	+0.4
	comp=Z,2.0nm,0.8s,baz=272,slow=4.7,SNR=12								
C13A	Hot Springs	98.43	43	P		P		05 44 53.2	-4.1
	baz=98								
B13A	Whitefish	98.51	42	P		Pdif		05 44 59.0	+1.4
	baz=98								
ARUT	Antelope Range	99.05	53	P		Pdif		05 44 56.8	-3.6
ARUT				pmax		pmax			
	comp=Z,3.0nm,1.3s								
ARUT	Antelope Range	99.05	53	P		Pdif		05 44 56.8	-3.6
	comp=Z,3.1nm,1.3s								
PDAR	Pinedale Array	102.02	48	P		Pdif		05 45 13.8	+0.3
PDAR				pP				05 45 26.9	
PDAR	Pinedale Array	102.02	48	P		Pdif		05 45 13.8	+0.3
	comp=Z,0.7nm,0.6s,baz=252,slow=2.8,SNR=5.7								
PDAR				pP				05 45 26.9	
	comp=Z,1.1nm,0.8s,baz=242,slow=3.2,SNR=5.1								
OBN	Obninsk	109.09	326	*i* P		Pdif		05 45 44.1	-0.3
OBN				pmax		pmax			
	comp=Z,3.0nm,0.7s								
GERES	GERESS Array B	124.47	327	PKP		PKPdf		05 50 18.4	+0.1
GERES				pPKP		pPKPdf		05 50 31.0	+1.1
GERES	GERESS Array B	124.47	327	PKP		PKPdf		05 50 18.4	+0.1
	comp=Z,1.0nm,0.5s,baz=72,slow=0.4,SNR=11								
GERES				pPKP		pPKPdf		05 50 31.0	+1.1
	comp=Z,1.4nm,0.6s,baz=5.7,slow=1.3,SNR=5.6								
TSUM	Tsumeb	126.76	240	PKP		PKPdf		05 50 23.3	-0.3
TSUM	Tsumeb	126.76	240	PKP		PKPdf		05 50 23.3	-0.3
	comp=Z,2.1nm,0.8s,baz=99,slow=4.1,SNR=4.1								
CFAA	Coronel Fontan	126.90	138	PKP		PKPdf		05 50 22.2	-1.2
CFAA	Coronel Fontan	126.90	138	PKP		PKPdf		05 50 22.2	-1.2
	comp=Z,0.4nm,0.8s,baz=249,slow=4.3,SNR=7.1								
DAVOX	Davos/Dischmat	127.77	326	PKP		PKPdf		05 50 25.1	+0.3
DAVOX	Davos/Dischmat	127.77	326	PKP		PKPdf		05 50 25.1	+0.3
	comp=Z,3.4nm,0.4s,baz=326,slow=3.6,SNR=3.6								
ROSC	El Rosal	135.51	90	PKP		PKPdf		05 50 39.7	-1.0
ROSC	El Rosal	135.51	90	PKP		PKPdf		05 50 39.7	-1.0
	comp=Z,2.6nm,0.6s,baz=82,slow=20,SNR=6.3								
CPUP	Villa Florida	137.46	142	PKP		PKPdf		05 50 43.5	+0.1
CPUP	Villa Florida	137.46	142	PKP		PKPdf		05 50 43.5	+0.1
	comp=Z,0.3nm,0.4s,baz=267,slow=20,SNR=3.9								
SIV	San Ignacio	141.49	126	PKP		PKPdf		05 50 52.1	+1.1
SIV	San Ignacio	141.49	126	PKP		PKPdf		05 50 52.1	+1.1
	comp=Z,1.5nm,0.8s,baz=240,slow=1.8,SNR=4.2								
SPB	Sao Paulo	145.11	151	*e*PKPbc		PKPbc		05 50 56.5	-0.1
TOA0	Torodi Ar. Sit	148.53	284	*e*PKPbc		PKPbc		05 51 06.4	-0.3
TORD	Torodi Ar. Bea	148.53	284	PKPbc		PKPbc		05 51 06.5	-0.2
TORD				pPKPbc		pPKPbc		05 51 19.3	+0.9
TORD	Torodi Ar. Bea	148.53	284	PKPbc		PKPbc		05 51 06.5	-0.2
	comp=Z,8.7nm,0.7s,baz=56,slow=2.8,SNR=36								
TORD				pPKPbc		pPKPbc		05 51 19.3	+0.9
	comp=Z,12nm,0.7s,baz=70,slow=2.4,SNR=8.6								
BDFB	Brasilia	151.18	141	PKPbc		PKPbc		05 51 13.2	-0.2
BDFB	Brasilia	151.18	141	PKPbc		PKPbc		05 51 13.2	-0.2
	comp=Z,13nm,0.7s,baz=216,slow=2.0,SNR=21								
DBIC	Dimbokro	155.38	271	PKPab		PKPab		05 51 38.8	-0.2
DBIC	Dimbokro	155.38	271	PKPab		PKPab		05 51 38.8	-0.2
	comp=Z,14nm,0.8s,baz=81,slow=5.3,SNR=9.4								

*DHMR **26** 05:33:59.3±1.5, 11°.92N×43°.70E, h2km±7km, ML5.3*
*ISCJB **26** 05:34:03.9±0.3, 11°.94N±0°.04×43°.96E±0°.05, h4km, mb4.3/38, MS3.6/11, Error ellipse: s-maj=8.0km s-min=5.2km az=18.2*
*IDC **26** 05:34:04.8±0.7, 11°.84N×43°.92E, h0km, mb4.2/28, mb1 4.3/29, mb1mx4.3/36, mbtmp4.2/29, ML3.4/1, MS3.8/13, Ms1 3.8/13, ms1mx3.5/43, Error ellipse: s-maj=15.7km s-min=14.8km az=25.0*
*BJI **26** 05:34:05.2, 11°.95N×44°.18E, h5km, mB4.9/5, mb4.7/9, Ms4.6/2, Ms7 4.4/3*
*NEIC **26** 05:34:06.2±0.5, 11°.94N×43°.91E, h10km, mb4.4/8, Error ellipse: s-maj=11.1km s-min=9.0km az=110.0*
*CSEM **26** 05:34:06.0±0.3, 11°.99N×44°.05E, h2km, mb4.4/8, Error ellipse: s-maj=11.6km s-min=9.2km az=43.0*

ISC 26 05:34:05.8±0.4, **11°.96N**±0°.05×**43°.93E**±0°.06, **h4km**, **n156, σ1°33/144, mb4.3/38, MS3.6/11, 8C-1D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRBA	At Turbah	1.27	8	*i*	P	Pg		05 34 25.2	-5.1
TRBA				*i*	S	**Sg**		**05 34 44.4**	**-2.4**
TRBA	At Turbah	1.27	8	*i*	P	Pg		05 34 25.2	-5.1
TRBA				*i*	S	**Sg**		**05 34 44.4**	**-2.4**
BDHA	Al Bayda'	2.56	38	*i*	P	**Pn**		**05 34 46.6**	**-1.8**
BDHA				*i*	S	**Sb**		**05 35 24.4**	**0.0**
BDHA	Al Bayda'	2.56	38	⇓	P	**Pn**		**05 34 46.4**	**-2.0**
BDHA				*i*	S	**Sb**		**05 35 24.4**	**0.0**
BDHA					AML	AML		05 35 38.1	
	comp=N,23μm,0.5s								
BDHA	Al Bayda'	2.56	38	⇓	P	**Pn**		**05 34 46.4**	**-2.0**
	comp=N,12μm,0.5s								
BDHA				*i*	S	**Sb**		**05 35 24.5**	**0.0**
RADA	Ahram - Rada'a	2.62	20	⇓	P	**Pn**		**05 34 46.4**	**-2.8**
RADA	Ahram - Rada'a	2.62	20	⇓	P	**Pn**		**05 34 46.4**	**-2.8**
DAMY	Dhamar	2.63	10	P		**Pn**		**05 34 46.4**	**-3.0**
DAMY	Dhamar	2.63	10	P		**Pn**		**05 34 46.4**	**-3.0**
SANA	San'a	3.41	5	*i*	P	**Pn**		**05 34 58.0**	**-2.1**
SANA				*i*	S	**Sg**		**05 35 58.0**	**+2.4**
SANA	San'a	3.41	5	⇓	P	**Pn**		**05 34 58.0**	**-2.1**
SANA				*i*	S	**Sn**		**05 35 43.0**	**+1.8**
HAJJ	Hajjah	3.73	355	⇓	P	Pn		05 35 00.8	-3.6
HAJJ				*i*	S	**Sn**		**05 35 47.6**	**-1.3**
HAJJ	Hajjah	3.73	355	⇓	P	Pn		05 35 00.8	-3.6
HAJJ				*i*	S	**Sn**		**05 35 48.3**	**-0.6**
HAJJ					AML	AML		05 36 00.8	
	comp=Z,15μm,0.7s								
HAJJ	Hajjah	3.73	355	⇓	P	Pn		05 35 00.8	-3.6
HAJJ				*i*	S	**Sn**		**05 35 48.3**	**-0.6**
	comp=Z,8μm,0.7s								
FURI	Furi	5.99	240	P		**Pn**		**05 35 37.8**	**+2.1**
FURI				S		**Sb**		**05 37 02.3**	**-1.1**
WNDE	Wendo Genet	7.11	228	*eP*		**Pn**		**05 35 50.7**	**-0.3**
WNDE				*eS*		**Sb**		**05 37 38.7**	**+3.1**
RAYN	Ar Rayn	11.59	7	*eP*		Pn		05 36 55.8	+3.5
KMBO	Kilima Mbogo	14.60	207	*e*Pn		**Pn**		**05 37 30.8**	**-2.8**
	comp=Z,4.4nm,0.9s								
KMBO	Kilima Mbogo	14.60	207	Pn		**Pn**		**05 37 30.9**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=38,slow=17,SNR=5.7								
KMBO					LR	LR		05 43 00.2	
	comp=Z,808nm,19.8s,baz=40,slow=37								
BSY	Bisya	16.58	48	P		P		05 38 07.1	+5.1
	SNR=5.5								
ASUD	Al Ashush, Dub	16.59	39	P		**P**		**05 38 03.0**	**+0.9**
	SNR=11								
ASUD	Al Ashush, Dub	16.59	39	P		P		05 38 03.0	+0.9
	SNR=11								
NAZ	Nazwa, Dubai	17.06	39	P		**Pn**		**05 38 05.6**	**+0.2**
	SNR=9.8								
NAZ	Nazwa, Dubai	17.06	39	P		**Pn**		**05 38 05.6**	**+0.2**
	SNR=9.8								
HOQ	Hoqain	17.19	46	P		P		05 38 14.8	+6.1
	SNR=8.9								
SMDO	Samad	17.39	49	P		P		05 38 16.6	+5.5
	SNR=10.0								
MBAR	Mbarara	18.09	227	LR		LR		05 45 00.6	
	comp=Z,706nm,18.1s,baz=169,slow=36								
BANOM	Banah	18.14	38	⇓P		**Pn**		**05 38 18.9**	**0.0**
BANOM	Banah	18.14	38	P		**Pn**		**05 38 18.9**	**0.0**
ASF	Jabal al Asfar	21.13	343	P		**P**		**05 38 51.9**	**0.0**
ASF	Jabal al Asfar	21.13	343	P		**P**		**05 38 51.9**	**0.0**
	comp=Z,1.3nm,0.5s,baz=153,slow=2.3,SNR=2.6								
ASF					LR	LR		05 46 13.2	
	comp=Z,409nm,19.5s,baz=185,slow=34								
MMAI	Mount Meron Ar	22.36	341	P		**P**		**05 39 06.3**	**+1.2**
MMAI	Mount Meron Ar	22.36	341	P		**P**		**05 39 06.3**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=123,slow=16,SNR=2.4								
MMAI					LR	LR		05 46 26.9	
	comp=Z,334nm,21.5s,baz=135,slow=33								
MMAI	Mount Meron Ar	22.36	341	P		**P**		**05 39 06.3**	**+1.2**
GNI	Garni	28.08	1	LR		LR		05 51 26.6	
	comp=Z,179nm,21.0s,baz=181,slow=37								
BR131	Keskin Array S	29.11	344	*eP*		**P**		**05 40 08.3**	**+0.4**
	comp=Z,5.0nm,0.8s								
BR131	Keskin Array S	29.11	344	*eP*		**P**		**05 40 08.3**	**+0.4**
	comp=Z,5.0nm,0.8s								
BRTR	Keskin Array B	29.11	344	P		**P**		**05 40 08.7**	**+0.7**
BRTR	Keskin Array B	29.11	344	P		**P**		**05 40 08.7**	**+0.7**
	comp=Z,4.5nm,0.8s,baz=151,slow=8.7,SNR=18								
BRTR					LR	LR		05 50 59.8	
	comp=Z,299nm,19.9s,baz=242,slow=35								
BRTR	Keskin Array B	29.11	344	P		**P**		**05 40 08.6**	**+0.7**
LSZ	Lusaka	31.23	210	P		**P**		**05 40 26.4**	**-0.4**
LSZ	Lusaka	31.23	210	P		**P**		**05 40 26.4**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=25,slow=11,SNR=4.5								
LSZ					LR	LR		05 54 23.6	
	comp=Z,131nm,18.6s,baz=50,slow=39								
KBZ	Khabaz	31.66	359	P		**P**		**05 40 31.9**	**+1.7**
KBZ	Khabaz	31.66	359	P		**P**		**05 40 31.9**	**+1.7**
	comp=Z,7.2nm,1.0s,baz=179,slow=5.0,SNR=11								
KBZ					LR	LR		05 53 49.7	
	comp=Z,116nm,18.0s,baz=180,slow=37								
KBZ	Khabaz	31.66	359	P		**P**		**05 40 31.9**	**+1.7**
CFR	Carcaliu	35.75	341	⇓	*i*P	P		05 41 09.1	+3.3
MLR	Muntele Rosu	36.76	339	⇓	*i*P	P		05 41 20.8	+6.1
MLR	Muntele Rosu	36.76	339	LR		LR		05 58 11.4	
	comp=Z,18nm,18.1s,baz=262,slow=39								
VRI	Vrincioaia	36.82	340	⇓	*i*P	P		05 41 19.0	+4.0
PLOR	Plostina	36.83	340	⇑	*i*P	**P**		**05 41 16.2**	**+1.1**
PLOR	Plostina	36.83	340	⇑	*i*P	**P**		**05 41 16.2**	**+1.1**
VOIR		37.04	338	⇓	*i*P	P		05 41 20.5	+3.5
ARR	Arges	37.14	337	⇑	*i*P	P		05 41 22.4	+4.6
KKAR	Karatay Array	38.63	32	*eP*		**P**		**05 41 29.1**	**-1.3**
	comp=Z,2.1nm,0.6s								
KKAR	Karatay Array	38.63	32	*eP*		**P**		**05 41 29.1**	**-1.3**
	comp=Z,2.1nm,0.6s								
BURAR	Bucovina Array	38.85	340	⇓	*i*P	P		05 41 23.9	-8.4
DRGR		39.06	337	⇑	*i*P	**P**		**05 41 36.7**	**+2.7**
KEST	Kesra	39.17	313	*eP*		**P**		**05 41 32.0**	**-3.1**
KEST	Kesra	39.17	313	P		**P**		**05 41 36.5**	**+1.4**
	comp=Z,1.9nm,0.9s,baz=198,slow=5.3,SNR=3.2								
ABKAR	Akbulak array	39.48	17	*eP*		**P**		**05 41 36.8**	**-0.5**
	comp=Z,4.6nm,0.9s								
ABKAR	Akbulak array	39.48	17	*eP*		**P**		**05 41 36.8**	**-0.5**
	comp=Z,4.6nm,0.9s								
AKTO	Aktyubinsk	40.07	14	P		**P**		**05 41 44.0**	**+1.8**
AKTO	Aktyubinsk	40.07	14	P		**P**		**05 41 44.0**	**+1.8**
	comp=Z,3.1nm,0.9s,baz=226,slow=11,SNR=8.3								
AKTO	Aktyubinsk	40.07	14	P		**P**		**05 41 44.0**	**+1.8**
EKS2	Erkin-Say	40.08	35	*eP*		**P**		**05 41 43.6**	**+1.0**
	comp=Z,11nm,1.1s								
EKS2	Erkin-Say	40.08	35	*eP*		**P**		**05 41 43.6**	**+1.0**
	comp=Z,11nm,1.1s								
AKASG	Malin Array Be	40.46	346	P		**P**		**05 41 47.4**	**+2.0**
AKASG	Malin Array Be	40.46	346	P		**P**		**05 41 47.4**	**+2.0**
	comp=Z,2.0nm,0.6s,baz=161,slow=6.6,SNR=5.8								
AKASG					LR	LR		05 59 34.6	
	comp=Z,153nm,19.5s,baz=170,slow=38								
AKASG	Malin Array Be	40.46	346	P		**P**		**05 41 47.4**	**+2.0**
AAK	Ala-Archa	40.47	35	*eP*		**P**		**05 41 46.7**	**+0.8**
	comp=Z,8.2nm,0.9s								
AAK	Ala-Archa	40.47	35	P		P		05 41 51.7	+5.8
	SNR=5.7								
PSZ	Piszkesteto	41.10	335	⇑	*i*P	**P**		**05 41 52.5**	**+1.6**
PSZ	Piszkesteto	41.10	335	⇑	*i*P	**P**		**05 41 52.5**	**+1.6**
TORD	Torodi Ar. Bea	41.20	276	P		**P**		**05 41 50.8**	**-1.4**
TORD	Torodi Ar. Bea	41.20	276	P		**P**		**05 41 50.8**	**-1.4**
	comp=Z,2.8nm,0.8s,baz=93,slow=7.4,SNR=16								
VRAC	Vranov	43.56	334	LR		LR		06 01 56.0	
	comp=Z,45nm,18.2s,baz=155,slow=38								
GERES	GERESS Array B	44.51	332	P		**P**		**05 42 17.5**	**-1.1**
GERES	GERESS Array B	44.51	332	P		**P**		**05 42 17.5**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=108,slow=6.4,SNR=14								
GERES					LR	LR		06 00 51.1	
	comp=Z,56nm,21.2s,baz=280,slow=36								
GERES	GERESS Array B	44.51	332	P		**P**		**05 42 17.5**	**-1.1**
BVAR	Borovoye Array	46.11	22	P		**P**		**05 42 31.1**	**0.0**
BVAR	Borovoye Array	46.11	22	P		**P**		**05 42 31.1**	**0.0**
	comp=Z,3.5nm,0.9s,baz=216,slow=7.3,SNR=12								
BVAR	Borovoye Array	46.11	22	P		**P**		**05 42 31.1**	**0.0**
MK31	Makanchi Array	47.40	35	*eP*		**P**		**05 42 41.0**	**-0.4**
MK31	Makanchi Array	47.40	35	*eP*		**P**		**05 42 41.0**	**-0.4**
MKAR	Makanchi Array	47.40	35	P		**P**		**05 42 41.3**	**-0.1**
MKAR	Makanchi Array	47.40	35	P		**P**		**05 42 41.3**	**-0.1**
	comp=Z,9.3nm,0.9s,baz=224,slow=6.8,SNR=25								
MKAR	Makanchi Array	47.40	35	P		**P**		**05 42 41.3**	**-0.1**
KURBB	Kurchatov Arra	47.79	29	P		**P**		**05 42 44.7**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=232,slow=7.6,SNR=5.7								
KURK	Kurchatov	47.90	29	*eP*		**P**		**05 42 45.2**	**+0.1**
	comp=Z,3.4nm,0.8s								
KURK	Kurchatov	47.90	29	*eP*		**P**		**05 42 45.2**	**+0.1**
	comp=Z,3.4nm,0.8s								
DBIC	Dimbokro	48.38	268	P		**P**		**05 42 48.7**	**-0.7**
DBIC	Dimbokro	48.38	268	P		**P**		**05 42 48.7**	**-0.7**
	comp=Z,3.2nm,1.0s,baz=67,slow=12,SNR=3.6								
DBIC	Dimbokro	48.38	268	P		**P**		**05 42 48.7**	**-0.7**
ESDC	Sonseca Array	50.40	312	P		**P**		**05 43 04.7**	**+0.1**
ESDC	Sonseca Array	50.40	312	P		**P**		**05 43 04.7**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=111,slow=7.2,SNR=5.8								
ESDC	Sonseca Array	50.40	312	P		**P**		**05 43 04.7**	**+0.1**
FINES	FINESS Array B	51.08	349	P		**P**		**05 43 08.1**	**-1.2**
FINES	FINESS Array B	51.08	349	P		**P**		**05 43 08.1**	**-1.2**
	comp=Z,3.0nm,0.9s,baz=169,slow=8.5,SNR=2.7								
FINES					LR	LR		06 05 29.0	
	comp=Z,106nm,19.1s,baz=164,slow=37								
FINES	FINESS Array B	51.08	349	P		**P**		**05 43 08.1**	**-1.2**
JOF	Joensuu	51.67	353	*ep*		**P**		**05 43 13.5**	**-0.1**
ZALV	Zalesovo Beam	52.89	29	P		**P**		**05 43 21.9**	**-0.9**
ZALV	Zalesovo Beam	52.89	29	P		**P**		**05 43 21.9**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=233,slow=8.0,SNR=8.5								
ZALV	Zalesovo Beam	52.89	29	P		**P**		**05 43 22.0**	**-0.9**
HFS	Hagfors	53.02	342	P		**P**		**05 43 23.6**	**-0.2**
HFS	Hagfors	53.02	342	P		**P**		**05 43 23.5**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=119,slow=9.2,SNR=4.4								
HFS	Hagfors	53.02	342	P		**P**		**05 43 23.5**	**-0.2**
CHTO	Chiang Mai	53.31	75	*eP*		**P**		**05 43 25.3**	**-1.3**
	comp=Z,11nm,1.0s								
CHTO	Chiang Mai	53.31	75	*eP*		**P**		**05 43 25.3**	**-1.3**
	comp=Z,11nm,1.0s								
CM31	Chiang Mai Arr	53.32	76	P		**P**		**05 43 26.6**	**0.0**
	comp=Z,12nm,0.6s								
CM31	Chiang Mai Arr	53.32	76	P		**P**		**05 43 26.6**	**0.0**
	comp=Z,12nm,0.6s								
CMAR	Chiang Mai Arr	53.32	76	P		**P**		**05 43 26.9**	**+0.2**
CMAR	Chiang Mai Arr	53.32	76	P		**P**		**05 43 26.9**	**+0.2**
	comp=Z,12nm,0.9s,baz=273,slow=8.6,SNR=16								
CMAR	Chiang Mai Arr	53.32	76	P		**P**		**05 43 26.9**	**+0.2**
NB2	NORSAR Subarra	54.50	341	P		**P**		**05 43 33.7**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=139,slow=7.4								
NB2	NORSAR Subarra	54.50	341	P		**P**		**05 43 33.7**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=139,slow=7.3,SNR=5.2								
NOA	NORSAR Array B	54.50	341	P		**P**		**05 43 34.9**	**+0.3**
NOA	NORSAR Array B	54.50	341	P		**P**		**05 43 34.9**	**+0.3**
	comp=Z,2.4nm,0.9s,baz=138,slow=7.3,SNR=5.1								
NOA	NORSAR Array B	54.50	341	P		**P**		**05 43 34.9**	**+0.3**
GTA	Gaotai	56.26	50	*eP*		**P**		**05 43 48.3**	**+0.5**
GTA				pP		**pP**		**05 43 52.8**	**+3.7**
GTA				sP		sP		05 43 55.5	+5.9
GTA				pmax		pmax			
	comp=Z,4.0nm,0.9s								
EKA	Eskdalemuir Ar	56.65	330	P		**P**		**05 43 50.9**	**+0.8**
EKA	Eskdalemuir Ar	56.65	330	P		**P**		**05 43 50.9**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=140,slow=6.6,SNR=3.6								
EKA	Eskdalemuir Ar	56.65	330	P		**P**		**05 43 50.9**	**+0.8**
ARCES	ARCESS Array B	58.71	353	P		**P**		**05 44 04.8**	**+0.4**
ARCES	ARCESS Array B	58.71	353	P		**P**		**05 44 04.8**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=247,slow=2.5,SNR=5.8								
ARCES	ARCESS Array B	58.71	353	P		**P**		**05 44 04.8**	**+0.4**
LZH	Lanzhou	58.80	55	*eP*		**P**		**05 44 06.5**	**+0.7**
LZH				pP		**pP**		**05 44 11.0**	**+3.9**
LZH				sP		sP		05 44 14.0	+6.4
LZH				pmax		pmax			
	comp=Z,15nm,1.4s								
XAN	Xi'an	62.73	58	P		P		05 44 49.0	+17
XAN				pP		PcP		05 44 56.5	-15
XAN				pmax		pmax			
	comp=Z,2.0nm,0.6s								
SONM	Songino Array	62.81	42	P		**P**		**05 44 33.2**	**+0.3**
SONM	Songino Array	62.81	42	P		**P**		**05 44 33.2**	**+0.3**
	comp=Z,3.1nm,0.9s,baz=235,slow=6.8,SNR=7.7								
SONM	Songino Array	62.81	42	P		**P**		**05 44 33.2**	**+0.3**
SPITS	Spitsbergen Ar	67.64	354	P		**P**		**05 45 04.2**	**+0.7**
SPITS	Spitsbergen Ar	67.64	354	P		**P**		**05 45 04.2**	**+0.7**
	comp=Z,7.9nm,0.7s,baz=143,slow=13,SNR=6.8								
SPITS	Spitsbergen Ar	67.64	354	P		**P**		**05 45 04.2**	**+0.7**
KSAR	Wonju Array Be	78.07	54	P		**P**		**05 46 06.9**	**+0.7**
KSAR	Wonju Array Be	78.07	54	P		**P**		**05 46 06.9**	**+0.7**
KSRS	Korea Array	78.10	54	P		**P**		**05 46 06.9**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=274,slow=6.8,SNR=6.2								
FITZ	Fitzroy Crossi	85.95	109	P		**P**		**05 46 46.8**	**-1.1**
FITZ	Fitzroy Crossi	85.95	109	P

40nm,1.1s,baz=68,slow=12,SNR=37
CMAR Chiang Mai Arr 40.19 49 P **P** **05 46 51.8 +0.1**
CMAR PcP **PcP** **05 48 56.6 +0.7**
CMAR Chiang Mai Arr 40.19 49 P **P** **05 46 51.8 +0.1**
1.8nm,0.7s,baz=244,slow=9.2,SNR=6.0
CMAR PcP **PcP** **05 48 56.6 +0.7**
0.5nm,0.3s,baz=238,slow=4.8,SNR=3.1
CHTO Chiang Mai 40.41 49 *eP* **P** **05 46 55.7 +2.2**
12nm,1.0s
CHTO Chiang Mai 40.41 49 P **P** **05 46 53.8 +0.3**
16nm,1.2s
CMMT Chiang Mai 40.41 49 P **P** **05 46 54.2 +0.7**
14nm,1.1s
PBKT Sadao Pong 40.66 53 P **P** **05 46 55.1 -0.5**
17nm,1.0s
KSM Kuching 43.29 80 *eP* **P** **05 47 16.9 -0.2**
29nm,1.2s
UBPT Khong Chiam 43.69 58 P **P** **05 47 22.4 +2.0**
LBTB Lobatse 43.84 242 *eP* **P** **05 47 22.4 +0.8**
LBTB Lobatse 43.84 242 P **P** **05 47 20.7 -1.0**
8.4nm,1.0s,baz=84,slow=8.8,SNR=6.3
BOSA Boshof 45.20 237 P **P** **05 47 31.6 -0.9**
BOSA Boshof 45.20 237 P **P** **05 47 31.6 -0.9**
4.8nm,0.7s,baz=75,slow=6.5,SNR=9.3
BOSA LR LR 06 06 24.2
comp=Z,272nm,18.9s,baz=182,slow=36
KSH Kashi 47.57 8 *e*SS SS 05 58 32.8 +18
KSH pmax pmax
comp=Z,6.0nm,1.0s
KSH pmax pmax
comp=Z,50nm,6.7s
KSH LR LR
comp=N,86nm,3.5s
KSH LR LR
comp=E,88nm,3.9s
KSH LR LR
comp=Z,160nm,5.1s
ASF Jabal al Asfar 49.45 325 LR LR 06 07 30.5
comp=Z,137nm,18.5s,baz=197,slow=34
EKS2 Erkin-Say 50.41 6 *eP* P 05 48 16.5 +3.9
comp=Z,11nm,1.2s
AAK Ala-Archa 50.45 6 P **P** **05 48 13.3 +0.3**
AAK Ala-Archa 50.45 6 P **P** **05 48 13.3 +0.3**
comp=Z,0.9nm,0.3s,baz=216,slow=14,SNR=2.9
AAK LR LR 06 07 44.2
comp=Z,203nm,20.5s,baz=192,slow=34
KKAR Karatay Array 50.62 2 *eP* **P** **05 48 16.2 +2.2**
TKM2 Tokmak 2 50.87 7 *eP* **P** **05 48 18.6 +2.5**
comp=Z,14nm,1.2s
MMAI Mount Meron Ar 50.93 324 LR LR 06 07 36.6
comp=Z,135nm,18.1s,baz=95,slow=34
MK31 Makanchi Array 55.75 12 *eP* **P** **05 48 51.8 +0.1**
MKAR Makanchi Array 55.75 12 *eP* **P** **05 48 50.5 -1.2**
MKAR Makanchi Array 55.75 12 P **P** **05 48 50.5 -1.2**
comp=Z,3.0nm,0.8s,baz=203,slow=7.9,SNR=9.7
MKAR LR LR 06 12 04.2
comp=Z,184nm,20.9s,baz=44,slow=35
KBZ Khabaz 55.97 338 P **P** **05 48 53.1 -0.2**
KBZ Khabaz 55.97 338 P **P** **05 48 53.1 -0.2**
comp=Z,1.1nm,0.6s,baz=61,slow=10,SNR=2.8
BRTR Keskin Array B 56.83 329 P **P** **05 48 59.5 -0.2**
BRTR Keskin Array B 56.83 329 P **P** **05 48 59.5 -0.2**
comp=Z,3.9nm,0.8s,baz=140,slow=9.7,SNR=19
BRTR LR LR 06 11 34.7
comp=Z,127nm,20.2s,baz=308,slow=34
BR131 Keskin Array S 56.83 329 *eP* **P** **05 48 59.7 0.0**
comp=Z,4.0nm,0.9s
FITZ Fitzroy Crossi 57.05 107 P **P** **05 49 02.1 +0.5**
FITZ Fitzroy Crossi 57.05 107 P **P** **05 49 02.1 +0.5**
comp=Z,7.0nm,0.8s,baz=263,slow=6.9,SNR=6.9
ABKAR Akbulak array 57.14 354 *eP* **P** **05 49 02.7 +1.2**
AKTO Aktyubinsk 58.53 353 P **P** **05 49 10.7 -0.7**
AKTO Aktyubinsk 58.53 353 P **P** **05 49 10.7 -0.7**
comp=Z,9.5nm,0.9s,baz=155,slow=5.4,SNR=6.5
KURBB Kurchatov Arra 58.81 8 P **P** **05 49 11.9 -1.4**
comp=Z,2.3nm,0.9s,baz=208,slow=6.6,SNR=7.4
KURK Kurchatov 58.92 8 *eP* **P** **05 49 13.6 -0.3**
MAW Mawson 59.91 182 LR LR 06 08 46.3
comp=Z,130nm,21.4s,baz=54,slow=30
BVAR Borovoye Array 60.53 2 P **P** **05 49 24.2 -0.9**
BVAR Borovoye Array 60.53 2 P **P** **05 49 24.2 -0.9**
comp=Z,1.4nm,0.8s,baz=144,slow=10,SNR=5.3
BVAR LR LR 06 16 18.6
comp=Z,156nm,19.2s,baz=355,slow=37
YULB Yu-li 60.65 58 *eP* P 05 49 30.4 +3.9
comp=Z,32nm,1.3s
ZALV Zalesovo Beam 63.06 11 P **P** **05 49 40.6 -1.5**
ZALV Zalesovo Beam 63.06 11 P **P** **05 49 40.6 -1.5**
comp=Z,1.5nm,0.3s,baz=194,slow=5.3,SNR=2.2
SONM Songino Array 64.91 28 P **P** **05 49 55.2 +0.7**
SONM Songino Array 64.91 28 P **P** **05 49 55.2 +0.7**
comp=Z,9.2nm,0.8s,baz=216,slow=4.8,SNR=11
SONM LR LR 06 18 32.4
comp=Z,174nm,19.1s,baz=173,slow=36
ASAR Alice Springs 65.02 112 P **P** **05 49 55.1 -0.6**
ASAR Alice Springs 65.02 112 P **P** **05 49 55.1 -0.6**
comp=Z,1.6nm,0.7s,baz=277,slow=6.1,SNR=11
AS31 Alice Springs 65.02 112 *eP* P 05 49 59.5 +3.7
ULN Ulaanbaatar 65.23 28 *eP* **P** **05 49 59.8 +3.0**
comp=Z,42nm,2.2s
ULN Ulaanbaatar 65.23 28 P **P** **05 49 56.7 0.0**
WRA Warramunga Arr 65.32 108 P **P** **05 49 57.8 +0.1**
WRA Warramunga Arr 65.32 108 P **P** **05 49 57.8 +0.1**
comp=Z,7.0nm,1.0s,baz=280,slow=6.2,SNR=16
WRA LR LR 06 14 41.9
comp=Z,322nm,19.3s,baz=285,slow=33
WRAB Tennant Creek 65.33 108 *eP* **P** **05 49 57.0 -0.7**
comp=Z,29nm,1.2s
TIR Tirane 65.70 322 P **P** **05 50 00.8 +1.2**
AK01 Malin Array Si 67.08 334 *eP* **P** **05 50 06.9 -1.3**
AKASG Malin Array Be 67.08 334 PKIKP **P** **05 50 06.9 -1.4**
AKASG Malin Array Be 67.08 334 P **P** **05 50 06.9 -1.4**
AKASG Malin Array Be 67.08 334 P **P** **05 50 06.9 -1.4**
comp=Z,2.9nm,0.6s,baz=134,slow=5.8,SNR=9.4
KIEV Kiev 67.08 334 *e*PKIKP **P** **05 50 06.2 -2.1**
KIEV pmax pmax
comp=Z,6.0nm,0.9s
KIEV Kiev 67.08 334 *eP* **P** **05 50 06.2 -2.1**
comp=Z,5.5nm,0.9s
TOA0 Torodi Ar. Sit 68.91 287 *eP* **P** **05 50 19.6 -1.0**
TORD Torodi Ar. Bea 68.91 287 P **P** **05 50 19.9 -0.7**
TORD Torodi Ar. Bea 68.91 287 P **P** **05 50 19.9 -0.7**
comp=Z,4.5nm,1.1s,baz=107,slow=4.5,SNR=18
TORD LR LR 06 19 25.4
comp=Z,204nm,18.7s,baz=105,slow=35
KOLS Kolonicke sedl 69.07 330 *e*PKIKP **P** **05 50 20.1 -0.8**
KOLS Kolonicke sedl 69.07 330 *e*PKP **P** **05 50 20.1 -0.8**
KWP Kalwaria Pacla 69.32 330 *eP* **P** **05 50 21.7 -0.7**
comp=Z,85nm,0.4s
CRVS Cervenica-Dubn 69.46 329 *e*PKIKP P 05 50 20.1 -3.2
CRVS Cervenica-Dubn 69.46 329 *e*PKP P 05 50 20.1 -3.2
VYHS Vyhne 70.56 328 *e* **P** **05 50 28.9 -1.2**
KSAR Wonju Array Be 71.71 47 P **P** **05 50 37.1 -0.1**
KSRS Korea Array 71.75 47 P **P** **05 50 37.1 -0.3**
comp=Z,0.3nm,0.3s,baz=238,slow=7.2,SNR=4.3
CONA Conrad Observa 71.84 326 ⇓*i*P **P** **05 50 37.6 -0.3**
comp=Z,12nm,1.5s
STKA Stephens Creek 72.16 121 P **P** **05 50 39.5 -0.7**
STKA Stephens Creek 72.16 121 P **P** **05 50 39.5 -0.7**
comp=Z,1.2nm,0.8s,baz=333,slow=16,SNR=2.8
STKA LR LR 06 20 34.4
comp=Z,334nm,18.4s,baz=44,slow=34
JNU Nakatsue 72.23 52 LR LR 06 19 14.2
comp=Z,137nm,20.6s,baz=239,slow=33
MOA Molln 72.69 325 ⇑*i*P **P** **05 50 42.5 -0.4**
comp=Z,6.3nm,0.9s
WTTA Wattenberg 73.88 324 ⇑*i*P **P** **05 50 49.5 -0.7**
comp=Z,18nm,1.3s
DBIC Dimbokro 73.93 279 P **P** **05 50 50.9 0.0**
DBIC Dimbokro 73.93 279 P **P** **05 50 50.9 0.0**
comp=Z,5.1nm,0.7s,baz=91,slow=7.4,SNR=8.8
LIC Lamto 74.02 279 *eP* **P** **05 50 51.1 -0.4**
comp=Z,26nm,1.1s
LIC Lamto 74.02 279 *eP* **P** **05 50 51.1 -0.4**
comp=Z,26nm,1.1s
MOTA Moosalm 74.23 324 ⇓*i*P **P** **05 50 51.8 -0.4**
comp=Z,19nm,1.1s
FETA Feichten 74.29 323 ⇓*i*P **P** **05 50 52.7 +0.1**
comp=Z,7.0nm,0.8s
BRG Berggiesshubel 74.53 328 *eP* **P** **05 50 54.3 +0.6**
comp=Z,2.9nm,0.7s
DAVOX Davos/Dischmat 74.68 323 P **P** **05 50 54.5 -0.4**
DAVOX Davos/Dischmat 74.68 323 P **P** **05 50 54.5 -0.4**
comp=Z,2.6nm,0.4s,baz=99,slow=16,SNR=4.5
CLL Collm 75.27 328 *eP* **P** **05 50 58.0 +0.1**
SENIN Lac Senin/Sane 76.05 322 *eP* **P** **05 51 02.5 -0.3**
comp=Z,9.4nm,0.8s
USRK Ussuriysk Arra 77.36 42 P **P** **05 51 08.7 -1.3**
comp=Z,2.0nm,0.6s,baz=138,slow=43,SNR=3.1
MTLF Montolieu 78.06 317 *eP* **P** **05 51 12.7 -1.2**
comp=Z,73nm,1.6s
MTLF Montolieu 78.06 317 *eP* **P** **05 51 12.7 -1.2**
comp=Z,73nm,1.6s
PMG Port Moresby 78.26 98 LR LR 06 22 30.8
comp=Z,211nm,20.0s,baz=228,slow=33
SSF Saint Saulge 78.70 321 *eP* **P** **05 51 15.6 -1.8**
comp=Z,15nm,0.9s
SSF Saint Saulge 78.70 321 *eP* **P** **05 51 15.6 -1.8**
comp=Z,15nm,0.9s
BGF Bois d'Agland 78.91 320 *eP* **P** **05 51 17.3 -1.2**
comp=Z,26nm,0.9s
BGF Bois d'Agland 78.91 320 *eP* **P** **05 51 17.3 -1.2**
comp=Z,26nm,1.0s
GUMO Guam 79.29 75 LR LR 06 20 45.3
comp=Z,107nm,20.2s,baz=182,slow=31
BAIF Baives 79.54 324 *eP* **P** **05 51 20.7 -1.2**
comp=Z,34nm,1.1s
BAIF Baives 79.54 324 *eP* **P** **05 51 20.7 -1.2**
comp=Z,34nm,1.1s
LFF La Frestale 79.64 318 *eP* **P** **05 51 21.6 -0.9**
LFF La Frestale 79.64 318 *eP* **P** **05 51 21.6 -0.9**
HFS Hagfors 79.92 336 P **P** **05 51 23.0 -0.7**
HFS Hagfors 79.92 336 P **P** **05 51 23.0 -0.7**
comp=Z,2.4nm,0.8s,baz=70,slow=8.5,SNR=4.5
SJPF Ste Jean 80.32 316 *eP* **P** **05 51 25.5 -0.8**
comp=Z,38nm,1.1s
SJPF Ste Jean 80.32 316 *eP* **P** **05 51 25.5 -0.8**
comp=Z,38nm,1.1s
ESDC Sonseca Array 81.16 312 P **P** **05 51 31.2 +0.3**
ESDC Sonseca Array 81.16 312 P **P** **05 51 31.2 +0.3**
comp=Z,3.7nm,0.8s,baz=92,slow=4.7,SNR=8.2
QSPA South Pole Qui 82.33 180 *eP* **P** **05 51 36.8 +0.1**
comp=Z,23nm,1.6s
ARCES ARCESS Array B 82.36 346 P **P** **05 51 37.5 +1.0**
ARCES ARCESS Array B 82.36 346 P **P** **05 51 37.5 +1.0**
comp=Z,3.6nm,1.0s,baz=175,slow=2.3,SNR=4.7
VNDA Vanda 83.40 167 P **P** **05 51 41.5 -0.4**
VNDA Vanda 83.40 167 P **P** **05 51 41.5 -0.4**
comp=Z,1.5nm,0.7s,baz=275,slow=5.5,SNR=4.9
EKA Eskdalemuir Ar 85.71 327 P **P** **05 51 53.8 -0.1**
EKA Eskdalemuir Ar 85.71 327 P **P** **05 51 53.8 -0.1**
comp=Z,1.9nm,0.8s,baz=106,slow=6.2,SNR=4.2
PMSA Palmer Station 99.41 199 LR LR 06 34 12.7
comp=Z,218nm,18.8s,baz=305,slow=33
ILAR Eielson Array 117.98 16 PKP **PKPdf** **05 58 02.5 +1.1**
ILAR Eielson Array 117.98 16 PKP **PKPdf** **05 58 02.5 +1.1**
comp=Z,0.4nm,0.8s,baz=291,slow=1.7,SNR=4.3
YKA Yellowknife Ar 125.28 1 PKP **PKPdf** **05 58 14.4 -1.1**
YKA PP **PP** **06 00 07.7 +2.8**
YKA Yellowknife Ar 125.28 1 PKP **PKPdf** **05 58 14.4 -1.1**
comp=Z,0.5nm,0.8s,baz=345,slow=2.3,SNR=11
YKA PP **PP** **06 00 07.6 +2.8**
comp=Z,0.6nm,0.9s,baz=354,slow=6.4,SNR=6.2
EGMT Eagleton 139.77 358 *e*PKPdf **PKPdf** **05 58 46.0 +2.7**
BOZ Bozeman (W) 142.19 359 *e*PKPdf **PKPdf** **05 58 52.1 +4.2**
DLMT Dillon 142.48 1 *e*PKPdf **PKPdf** **05 58 52.5 +4.1**
HUMO Hull Mountain 143.94 14 *e*PKPdf **PKPdf** **05 58 52.3 +1.4**
MOOW Moose Ponds 144.07 358 *e*PKPdf PKPdf 05 58 57.2 +5.9
J22A Midwest 144.09 353 P **PKPdf** **05 58 54.9 +3.6**
baz=144
LOHW Long Hollow 144.21 358 *e*PKPdf PKPdf 05 59 00.5 +8.9
HLID Hailey 144.22 3 *e*PKPdf **PKPdf** **05 58 53.2 +1.7**
MFID Camas Ranch 144.28 5 *e*PKPdf PKPdf 05 58 57.3 +5.7
J20A Shoshoni 144.31 355 P **PKPdf** **05 58 51.2 -0.5**
baz=144
TPAW Teton Pass 144.34 359 *e*PKPdf **PKPdf** **05 58 53.8 +1.9**
J13A Cove Ranch, Pi 144.40 3 P PKPbc 05 58 51.0 +0.8
baz=144
J19A Crowheart 144.47 356 P PKPbc 05 58 51.4 +0.9
baz=144
K22A Casper 144.84 353 P **PKPab** **05 58 50.6 -1.0**
baz=145
K19A Absolon Red Bu 144.90 356 P **PKPab** **05 58 51.3 -0.5**
baz=145
WVOR Wild Horse Val 144.93 8 *e*PKPdf **PKPab** **05 58 51.8 -0.1**
K21A Alcova 144.94 354 P **PKPab** **05 58 51.7 -0.3**
baz=145
BW06 Boulder Array 145.00 357 *e*PKPdf **PKPdf** **05 58 54.1 +1.1**
PDAR Pinedale Array 145.00 357 PKP **PKPab** **05 58 51.6 -0.7**
PDAR Pinedale Array 145.00 357 PKP **PKPab** **05 58 51.6 -0.7**
comp=Z,9.1nm,0.6s,baz=116,slow=3.4,SNR=6.2
PLAL Pickwick Lake 145.00 324 *e*PKPdf **PKPab** **05 58 51.2 -1.0**
AHID Auburn Hatcher 145.06 359 *e*PKPdf **PKPdf** **05 58 53.2 +0.1**
MOD Modoc 145.18 11 *e*PKPbc **PKPbc** **05 58 53.0 +0.2**
L23A Garrett 145.26 352 P **PKPbc** **05 58 52.8 -0.3**
baz=145
KHMM Horse Mountain 145.38 16 *e*PKPdf PKPdf 05 59 01.1 +7.5
L22A Ellis Ranch, M 145.44 353 P **PKPbc** **05 58 53.3 -0.4**
baz=145
M26A McRoberts Ranc 145.44 348 P **PKPbc** **05 58 53.2 -0.3**
baz=145
L21A Rawlins 145.62 354 P **PKPdf** **05 58 53.8 -0.3**
baz=145
OTAV Otavalo 145.63 259 *e*PKPdf **PKPab** **05 58 56.3 +0.6**
M25A Palm-Egli Farm 145.65 349 P **PKPdf** **05 58 54.3 +0.2**
baz=146
L19A Farson 145.65 356 P **PKPdf** **05 58 54.2 +0.1**
baz=146
L20A Wamsutter 145.67 355 P **PKPdf** **05 58 54.3 +0.2**
baz=146
LRAL Lakeview Retre 145.69 321 *e*PKPdf **PKPdf** **05 58 53.4 -0.8**
M24A Cheyenne 145.75 350 P **PKPbc** **05 58 54.7 +0.1**
baz=146
KSU1 Kansas State U 145.76 338 *e*PKPdf **PKPdf** **05 58 53.5 -0.6**
L18A Fontenelle, Gr 145.87 357 P **PKPbc** **05 58 55.2 +0.2**
baz=146
M23A Laramie 145.90 351 P **PKPdf** **05 58 54.8 +0.2**
baz=146
WDC Whiskeytown Da 145.96 14 *e*PKPdf **PKPdf** **05 58 54.5 +0.1**
M21A Separation Pea 145.97 354 P **PKPdf** **05 58 55.0 +0.2**
baz=146
PHWY Pilot Hill 146.02 351 *e*PKPdf **PKPbc** **05 58 55.6 0.0**
HVU Hansel Valley 146.06 1 *e*PKPdf **PKPab** **05 58 56.5 +0.4**
OXF Oxford 146.10 325 *e*PKPdf **PKPdf** **05 58 55.2 +0.4**
M20A Sweetwater, Wa 146.17 355 P **PKPbc** **05 58 56.2 +0.2**
baz=146
HWUT Hardware Ranch 146.23 359 *e*PKPdf **PKPbc** **05 58 56.0 -0.2**
M19A Rock Springs 146.23 356 P **PKPbc** **05 58 56.1 -0.1**
baz=146
P31A Stockton 146.31 342 P **PKPdf** **05 58 55.4 +0.3**
baz=146
M17A Scullys Gap (B 146.34 358 P **PKPbc** **05 58 56.4 -0.1**
baz=146
N23A Red Feather La 146.49 352 P **PKPbc** **05 58 56.7 -0.3**
baz=146
O27A Beecher Island 146.52 347 P **PKPbc** **05 58 56.5 -0.4**
baz=146
P30A Selden 146.55 343 P **PKPbc** **05 58 56.7 -0.3**
baz=146
N21A Black Mountain 146.82 354 P **PKPbc** **05 58 57.6 -0.3**
baz=147
N20A Spence Gulch, 146.83 355 P **PKPbc** **05 58 57.8 -0.2**
baz=147
ELK Elko 146.98 4 *e*PKPdf **PKPbc** **05 58 57.8 -0.6**
ELK PKPbc **PKPbc** **05 58 58.4 0.0**
ELK Elko 146.98 4 PKPbc **PKPbc** **05 58 58.4 0.0**
comp=Z,2.1nm,0.8s,baz=0.4,slow=4.2,SNR=9.5
BMN Battle Mountai 147.09 7 *e*PKPdf **PKPdf** **05 58 56.4 -0.1**
BEKR Beckworth 147.13 12 *e*PKPdf **PKPbc** **05 58 58.5 -0.3**
P27A Ficken Ranch, 147.15 346 P **PKPbc** **05 58 58.0 -0.8**
baz=147
O23A Lake Granby, G 147.16 351 P **PKPbc** **05 58 58.2 -0.8**
baz=147
JLU Jordanelle 147.23 359 *e*PKPdf **PKPbc** **05 58 59.0 -0.1**
O22A Kremmling 147.29 352 P **PKPbc** **05 58 58.9 -0.5**
baz=147
Q29A Oakley 147.36 344 P **PKPbc** **05 58 58.7 -0.6**
baz=147
OHCM Honcut 147.40 14 *e*PKPab **PKPab** **05 59 05.2 +4.1**
DAU Daniels Canyon 147.42 359 *e*PKPdf **PKPbc** **05 59 00.5 +0.8**
Q28A Sharon Springs 147.43 345 P **PKPbc** **05 58 59.3 -0.2**
baz=147
O19A Miners Draw (B 147.43 356 P **PKPbc** **05 58 59.0 -0.6**
baz=147
UALR University of 147.49 329 *e*PKPdf **PKPdf** **05 58 58.2 +1.1**
O20A White River Ci 147.52 354 P **PKPbc** **05 58 59.4 -0.5**
baz=147
P25A Willow Gulch B 147.53 348 P **PKPbc** **05 58 59.6 -0.2**
baz=147
DUG Dugway 147.64 1 *e*PKPdf **PKPbc** **05 58 59.1 -1.0**
DUG Dugway 147.64 1 P **PKPbc** **05 59 00.5 +0.4**
baz=148
KSCO Kaye Shedlock' 147.68 346 P **PKPbc** **05 59 00.4 +0.1**
baz=148
R30A Dighton 147.72 342 P **PKPbc** **05 58 59.9 -0.4**
baz=148
WCN Washoe City 147.80 11 *e*PKPdf **PKPbc** **05 58 59.9 -0.8**
P22A Eagle 147.88 352 P **PKPbc** **05 59 01.1 +0.2**
baz=148
P23A Jefferson 147.96 351 P **PKPbc** **05 59 01.2 -0.1**
baz=148
Q26A Hugo 147.96 347 P **PKPbc** **05 59 01.2 +0.2**
baz=148
P21A Newcastle 148.04 353 P **PKPbc** **05 59 01.3 0.0**
baz=148
P19A Cripple Cowboy 148.08 355 P **PKPbc** **05 59 01.4 -0.1**
baz=148
R28A Tribune 148.10 345 P **PKPbc** **05 59 01.6 +0.2**
baz=148
P20A De Beque 148.16 355 P **PKPbc** **05 59 00.9 -0.7**
baz=148
P18A Preston Nutter 148.17 357 P **PKPbc** **05 59 01.5 -0.3**
baz=148
TUL1 Tulsa 148.20 334 P **PKPbc** **05 59 01.5 -0.1**
baz=148
SMCO Snowmass 148.32 352 *e*PKPbc **PKPbc** **05 59 02.3 0.0**
S30A Montezuma 148.38 342 P **PKPbc** **05 59 02.3 +0.2**
baz=148
R27A Eads 148.41 346 P **PKPbc** **05 59 02.2 +0.1**
baz=148
R26A Arlington 148.54 347 P **PKPbc** **05 59 02.8 +0.2**
baz=148
Q20A Ridgley Place, 148.69 354 P **PKPbc** **05 59 02.8 -0.2**
baz=148
SRU San Rafael 148.69 358 P **PKPbc** **05 59 02.9 -0.1**
baz=148
S28A Manter 148.83 344 P **PKPbc** **05 59 03.3 0.0**
baz=149
CMB Columbia Colle 148.89 13 *e*PKPbc **PKPbc** **05 59 02.8 -0.5**
NVAR Mina Array Bea 148.90 9 PKPbc **PKPbc** **05 59 04.4 +0.8**
NVAR Mina Array Bea 148.90 9 PKPbc **PKPbc** **05 59 04.4 +0.8**
comp=Z,3.7nm,0.8s,baz=272,slow=1.8,SNR=26
Q16A Castle Valley 148.91 359 P **PKPbc** **05 59 03.8 +0.2**
baz=149
NV11 Mina Array Sit 148.92 9 *e*PKPbc **PKPbc** **05 59 04.0 +0.4**
R24A Sanders Place, 148.95 349 P **PKPbc** **05 59 03.8 0.0**
baz=149
R23A Moffat 149.12 350 P **PKPbc** **05 59 04.5 +0.3**
baz=149
R21A Cimarron 149.19 353 P **PKPbc** **05 59 04.3 0.0**
baz=149
S26A Kim 149.20 347 P **PKPbc** **05 59 04.6 +0.4**
baz=149
R22A Saguache, Gunn 149.22 352 P **PKPbc** **05 59 05.0 +0.4**
baz=149
PV04 Paradox Valley 149.31 355 *e*PKPdf **PKPbc** **05 59 04.8 +0.2**
MSU Marysvale 149.32 0 *e*PKPbc **PKPbc** **05 59 05.4 +0.7**
MSU *e*PKPab **PKPab** **05 59 11.7 +2.5**
R11A Troy Canyon, C 149.33 5 P **PKPbc** **05 59 05.0 +0.3**
baz=149
T28A Walsh 149.33 344 P **PKPbc** **05 59 04.7 +0.2**
baz=149
MVU Marysvale 149.33 0 *e*PKPbc **PKPbc** **05 59 05.7 +0.9**
MVU *e*PKPab **PKPab** **05 59 11.8 +2.6**
S25A Robets Cordova 149.37 348 P **PKPbc** **05 59 04.6 -0.2**
baz=149
U30A WK&E Inc. Balk 149.46 342 P **PKPbc** **05 59 04.6 -0.3**
baz=149
R20A Redvale 149.46 354 P **PKPbc** **05 59 04.9 -0.1**
baz=149
SDCO Great Sand Dun 149.49 350 *e*PKPbc **PKPbc** **05 59 04.9 -0.3**
SDCO *e*PKPab **PKPab** **05 59 11.3 +1.3**
PV01 Paradox Valley 149.53 354 *e*PKPbc **PKPbc** **05 59 05.0 -0.3**
S24A Houchin Ranch, 149.54 349 P **PKPbc** **05 59 05.5 +0.1**
baz=149
T27A Campo 149.55 345 P **PKPbc** **05 59 05.0 -0.2**
baz=149
T26A Comanche Natio 149.65 346 P **PKPbc** **05 59 05.5 0.0**
baz=150
S22A 4UR Ranch, Cre 149.71 352 P **PKPbc** **05 59 05.8 0.0**
baz=150
S20A Disappointment 149.81 354 P **PKPbc** **05 59 06.2 +0.2**
baz=150
T25A Trinidad 149.87 348 P **PKPbc** **05 59 06.0 0.0**
baz=150
V31A Spring Creek L 149.88 340 P **PKPbc** **05 59 06.3 +0.4**
baz=150
MTUM Tungsten Hills 149.91 10 *e*PKPab **PKPab** **05 59 13.6 +2.1**
S21A Coal Bank Pass 149.92 353 P **PKPbc** **05 59 06.6 +0.4**
baz=150
T24A Torres, Weston 150.06 349 P **PKPbc** **05 59 07.0 +0.4**
baz=150
S18A Hurst Farm, Bl 150.08 357 P **PKPbc** **05 59 06.4 -0.2**
baz=150
U27A Thompson Grove 150.18 345 P **PKPbc** **05 59 06.5 -0.2**
baz=150
CCUT Cedar City 150.26 2 *e*PKPdf **PKPbc** **05 59 07.8 +0.8**
T23A Casias Ranch, 150.28 350 P **PKPbc** **05 59 07.2 +0.1**
baz=150
WMOK Wichita Mounta 150.43 337 *e*PKPdf **PKPdf** **05 59 02.2 +0.3**
U26A Atchley Ranch, 150.43 346 P **PKPbc** **05 59 07.2 -0.2**
baz=150
T22A Edith 150.44 352 P **PKPbc** **05 59 07.5 0.0**
baz=150
GRAC Grapevine Rang 150.45 9 P **PKPbc** **05 59 07.8 +0.6**
baz=150
W31A Holland Ranch, 150.45 339 P **PKPbc** **05 59 07.0 -0.3**
baz=150
T21A Navajo Lake 150.55 353 P **PKPbc** **05 59 08.2 +0.5**
baz=150
U25A Circle Dot Ran 150.58 347 P **PKPbc** **05 59 08.1 +0.3**
baz=150
V28A Channing 150.65 343 P **PKPbc** **05 59 07.8 0.0**
baz=150
V27A Dan Oppiter Fa 150.81 344 P **PKPbc** **05 59 08.4 +0.2**
baz=151
CWC Cottonwood Cre 150.88 10 P **PKPdf** **05 59 01.8 -1.0**
baz=151
U23A El Rito 151.00 350 P **PKPbc** **05 59 09.1 +0.4**
baz=151
V26A Tequesquite Ra 151.01 346 P **PKPbc** **05 59 08.0 -0.7**
baz=151
FURC Furnace Creek, 151.04 8 P **PKPbc** **05 59 09.4 +0.9**
baz=151
U22A Llaves 151.05 351 P **PKPbc** **05 59 09.0 +0.1**
baz=151
U21A Nageezi 151.12 353 P **PKPbc** **05 59 09.2 +0.1**
baz=151
V25A Rancho No Teng 151.16 347 P **PKPbc** **05 59 08.9 -0.2**
baz=151
VES Vestal, Richgr 151.28 12 P **PKPbc** **05 59 08.8 -0.3**
baz=151
Y32A R-V Farms, Ver 151.33 338 P **PKPbc** **05 59 09.4 0.0**
baz=151
MPMC Manual Prospec 151.35 9 P **PKPbc** **05 59 10.2 +0.6**
baz=151
U15A North Rim 151.41 0 P **PKPbc** **05 59 10.3 +0.5**
baz=151
V24A Rampart Ranch, 151.41 348 P **PKPbc** **05 59 10.4 +0.6**
baz=151
X30A Coker Ranch, T 151.44 340 P **PKPbc** **05 59 09.3 -0.3**
baz=151
W27A Bowe Ranch, En 151.52 344 P **PKPbc** **05 59 09.8 -0.1**
baz=151
Y31A Rekieta Farm, 151.66 339 P **PKPbc** **05 59 09.7 -0.4**
baz=152
SHOC Shoshone 151.68 7 P **PKPbc** **05 59 11.1 +1.0**
baz=152
X29A Tulia 151.71 342 P **PKPbc** **05 59 10.1 -0.2**
baz=152
W25A X Bar L Ranch, 151.72 347 P **PKPbc** **05 59 10.4 0.0**
baz=152
X28A Dimmitt 151.79 342 P **PKPbc** **05 59 10.6 +0.1**
baz=152
V20A Brimhall 151.83 354 P **PKPbc** **05 59 10.8 +0.1**
baz=152
LRMC Laurel Mountai 151.89 10 P **PKPbc** **05 59 11.1 +0.4**
baz=152
W24A Lazy 6 Ranch, 151.94 348 P **PKPbc** **05 59 10.8 -0.1**
baz=152
Z32A Haskell 151.96 337 P **PKPbc** **05 59 10.7 -0.1**
baz=152

GSC	Goldstone	152.19	8	*e*PKPbc	PKPbc	05 59 12.1	+0.7	
GSC	Goldstone baz=152	152.19	8	P	PKPbc	05 59 12.1	+0.7	
Z31A	Sharp Cattle R baz=152	152.20	338	P	PKPbc	05 59 11.1	-0.3	
X26A	CR and CF Fran baz=152	152.20	345	P	PKPbc	05 59 11.3	-0.2	
WUAZ	Wupatki	152.31	359	*e*PKPbc	PKPbc	05 59 12.0	+0.3	
WUAZ	Wupatki baz=152	152.31	359	P	PKPbc	05 59 11.7	0.0	
Y28A	McKinney Farm, baz=152	152.37	342	P	PKPbc	05 59 11.9	0.0	
ANMO	Albuquerque	152.39	350	*e*PKPbc	PKPbc	05 59 11.6	-0.4	
ANMO	Albuquerque comp=Z,0.8nm,0.7s,baz=114,slow=5.5,SNR=4.4	152.39	350	PKPbc	PKPbc	05 59 11.4	-0.6	
MSTX	Muleshoe baz=152	152.47	343	P	PKPbc	05 59 11.6	-0.5	
X24A	Lazy VL Ranch, baz=152	152.56	348	P	PKPbc	05 59 12.4	0.0	
Y27A	Causey baz=152	152.66	344	P	PKPbc	05 59 12.3	-0.2	
W13A	Hualapai Mount baz=152	152.68	3	P	PKPbc	05 59 13.2	+0.6	
X23A	Hourglass Bar baz=152	152.70	349	P	PKPbc	05 59 12.8	+0.1	
Z29A	Hungry Hill Ra baz=153	152.80	341	P	PKPbc	05 59 12.8	0.0	
LAZ	Ladron	153.03	351	*e*PKPbc	PKPbc	05 59 13.2	-0.2	
Z27A	Tatum baz=153	153.21	343	P	PKPab	05 59 20.0	-5.3	
LENM	Lemitar	153.24	350	*e*PKPbc	PKPbc	05 59 16.1	+2.3	
X16A	Lo Mia Camp, P baz=153	153.40	359	P	PKPab	05 59 21.1	-5.0	
Z26A	Caprock baz=153	153.46	345	P	PKPbc	05 59 13.9	-0.3	
128A	Castleberry Fa baz=154	153.64	341	P	PKPbc	05 59 14.7	+0.1	
Y20A	Horse Springs, baz=154	153.69	353	P	PKPbc	05 59 15.3	+0.4	
Y14A	Wickenburg baz=154	153.88	2	P	PKPbc	05 59 15.0	-0.1	
331A	San Angelo baz=154	154.10	337	P	PKPbc	05 59 15.7	+0.1	
Z21A	St. Cloud Mine baz=154	154.19	351	P	PKPbc	05 59 16.1	+0.2	
124A	Stringfield Ra baz=154	154.37	347	P	PKPbc	05 59 16.2	-0.2	
JCT	Junction City	154.57	335	*e*PKPdf	PKPbc	05 59 17.3	+0.7	
JCT	Junction City baz=154	154.57	335	P	PKPbc	05 59 17.0	+0.4	
431A	Sonora baz=155	154.72	336	P	PKPbc	05 59 17.5	+0.5	
224A	Cornudas Mount baz=155	154.98	347	P	PKPbc	05 59 17.6	0.0	
120A	U Bar Ranch, L baz=155	155.07	353	P		05 59 18.5		
MNTX	Cornudas Mount	155.31	346	*e*PKPbc	PKPdf	05 59 17.8	+8.6	
428A	Kincaid Ranch, baz=155	155.45	340	P	PKPdf	05 59 18.2	+8.8	
530A	J-C Ranch, Com baz=155	155.48	337	P	PKPdf	05 59 18.0	+8.5	
324A	Moseley Ranch, baz=155	155.58	346	P	PKPdf	05 59 18.1	+8.4	
TXAR	Lajitas Array	157.06	341	PKP	PKPdf	05 59 12.9	+1.3	
TXAR				PKPab	PKPab	05 59 41.3	-0.5	
TXAR	Lajitas Array comp=Z,0.2nm,0.8s,baz=324,slow=5.7,SNR=2.4	157.06	341	PKP	PKPdf	05 59 12.9	+1.3	
TXAR				PKPab	PKPab	05 59 41.3	-0.5	
	comp=Z,0.5nm,0.7s,baz=38,slow=2.3,SNR=4.8							

IDC 26 05:40:56.7±1.0, 56°25S×26°84W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/16, mbtmp4.2/4, Error ellipse: s-maj=45.8km s-min=28.0km az=81.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNDA	Vanda	46.38	183	P		P		05 49 24.0	0.0
	3.7nm,0.7s,baz=188,slow=5.2,SNR=19								
LPAZ	La Paz	50.65	305	P		P		05 49 59.0	+0.7
	1.5nm,0.5s,baz=152,slow=5.9,SNR=14								
TORD	Torodi Ar. Bea	73.13	29	P		P		05 52 29.2	+0.4
	1.4nm,0.8s,baz=202,slow=5.7,SNR=3.1								
ASAR	Alice Springs	98.74	162	P		Pdif		05 54 38.8	+0.7
	0.2nm,0.3s,baz=178,slow=5.1,SNR=4.7								
YKA	Yellowknife Ar	136.45	318	PKP		PKPdf		06 00 17.4	-1.5
	0.2nm,0.6s,baz=123,slow=2.4,SNR=5.4								
ILAR	Eielson Array	150.40	311	PKPbc		PKPbc		06 00 46.3	-2.1
	0.2nm,0.7s,baz=137,slow=5.5,SNR=6.3								

*ISCJB **26** 05:41:20.2±0.8, 51°.42N×0°.04×16°.10E×0°.04, h0km, Error ellipse: s-maj=6.1km s-min=3.3km az=14.9*
*WAR **26** 05:41:20.9, 51°.55N×16°.11E*
*CSEM **26** 05:41:20.9±0.5, 51°.48N×16°.10E, h2km, ML3.2/7, Error ellipse: s-maj=8.4km s-min=5.0km az=22.0*
*VIE **26** 05:41:23.1±0.4, 51°.29N×16°.17E, h0km, mb2.0/4, ML2.4/4, Error ellipse: s-maj=2.8km s-min=2.4km az=165.0 63 km WNW of Wroclaw Suspected Mining induced.*

ISC 26 05:41:21.0±1.3, 51°.50N±0°.06×16°.09E±0°.03, h0km, n26, σ0.71/49, 3C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.67	169	*e*Pg		Pg		05 41 34.3	+0.5
KSP				*e*Sg		Sg		05 41 43.6	+1.2
KSP	Ksiaz	0.67	169	*e*Pg		Pg		05 41 34.3	+0.5
KSP				*e*Sg		Sg		05 41 43.6	+1.2
UPC	Upice	0.99	183	*e*PG		Pg		05 41 40.4	+0.4
UPC	Upice	0.99	183	Pg		Pg		05 41 40.4	+0.4
DPC	Dobruska-Polom	1.16	173	*e*PG		Pg		05 41 42.8	-0.4
DPC				*e*SG		Sg		05 41 58.4	+0.2
	comp=Z,20nm,0.5s								
DPC	Dobruska-Polom	1.16	173	Pg		Pg		05 41 42.8	-0.4
DPC				Sg		Sg		05 41 58.4	+0.2
	20nm,0.5s								
PVCC	Panska Ves	1.36	225	*e*PG		Pb		05 41 47.2	-0.2
PVCC				*e*SG		Sn		05 42 06.5	+0.4
	comp=Z,90nm,0.2s								
PVCC	Panska Ves	1.36	225	Pg		Pb		05 41 47.2	-0.2
PVCC				Sg		Sn		05 42 06.5	+0.4
	90nm,0.2s								
BRG	Berggiesshubel	1.49	246	PG		Pb		05 41 49.1	-0.4
BRG				SG		Sn		05 42 10.2	+1.1
	30nm,0.6s								
PRU	Pruhonice	1.80	214	*e*PG		Pg		05 41 55.2	-0.3
PRU				*e*SG		Sb		05 42 18.4	+0.4
	comp=Z,17nm,0.3s								
PRU	Pruhonice	1.80	214	Pg		Pg		05 41 55.2	-0.3
PRU				Sg		Sb		05 42 18.4	+0.4
	17nm,0.3s								
CLL	Collm	1.94	266	*e*Pg		Pg		05 41 58.0	-0.2
CLL				*i*				05 42 00.8	
CLL				*e*Sg		Sg		05 42 24.0	+0.6
	comp=Z,10.0nm,0.5s								
MORC	Moravsky Berou	1.96	151	*e*Pn		Pn		05 41 54.5	-1.0
MORC				*e*Sg		Sb		05 42 22.9	+0.5
OKC	Ostrava-Krasne	2.12	141	*e*SG		Sb		05 42 27.4	+0.4
OKC	Ostrava-Krasne	2.12	141	Sg		Sb		05 42 27.4	+0.4
VRAC	Vranov	2.21	171	*e*Sg		Sb		05 42 30.6	+0.7
NKC	Novy Kostel	2.63	243	*e*PN		Pn		05 42 04.8	+0.1
NKC				*e*PG		Pg		05 42 11.1	-0.3
NKC				*e*SG		Sg		05 42 45.5	0.0
	comp=Z,26nm,0.4s								
NKC	Novy Kostel	2.63	243	Pn		Pn		05 42 04.8	+0.1
OJC	Ojcow	2.68	117	*e*Pg		Pg		05 42 12.0	-0.3
OJC				*e*Sg		Sg		05 42 47.1	+0.2
KHC	Kasperske Hory	2.86	215	*e*PN		Pn		05 42 08.4	+0.4
KHC				*e*PG		Pb		05 42 14.0	+1.0
KHC				*e*SN		Sn		05 42 41.7	-1.4
KHC				*e*SG		Sg		05 42 52.1	-0.9
	comp=Z,5.2nm,0.3s								
KHC	Kasperske Hory	2.86	215	Pn		Pn		05 42 08.4	+0.4
KHC	Kasperske Hory	2.86	215	Pg		Pb		05 42 14.0	+1.0
KHC				Sn		Sn		05 42 41.7	-1.4
KHC				Sg		Sg		05 42 52.1	-0.9
	comp=Z,5.2nm,0.3s								
CONA	Conrad Observa	3.58	182	⇑*i*	Pn	Pn		05 42 16.6	-1.2
CONA				⇑*i*	Sg	Sg		05 43 14.5	-1.3
	comp=Z,5.7nm,0.4s								
CONA	Conrad Observa	3.58	182	Pn		Pn		05 42 16.6	-1.2
CONA				Sg		Sg		05 43 14.5	-1.3
	comp=Z,5.7nm,0.4s								
MOA	Molln	3.84	199	⇑*i*	Pn	Pn		05 42 21.5	+0.2
MOA				⇓*i*	Sg	Sg		05 43 24.1	-0.2
	comp=Z,3.7nm,0.3s								
MOA	Molln	3.84	199	Pn		Pn		05 42 21.5	+0.2
MOA				Sg		Sg		05 43 24.1	-0.2
	comp=Z,3.7nm,0.3s								

*MEX **26** 05:42:42.2±1.2, 16°.20N×101°.07W, h5km, MD4.4*
*IDC **26** 05:42:47.9±0.8, 16°.89N×100°.48W, h0km, mb4.1/14, mb1 4.3/16, mb1mx4.1/29, mbtmp4.1/16, ML3.2/2, MS3.4/4, Ms1 3.5/4, ms1mx3.1/32, Error ellipse: s-maj=30.8km s-min=14.2km az=66.0*
*NEIC **26** 05:42:49.2±0.4, 16°.72N×100°.58W, h10km, mb4.4/43, MD4.4(MEX), Error ellipse: s-maj=7.0km s-min=4.1km az=211.0*

ISC 26 05:42:49.0±2.3, 16°.71N±0°.06×100°.70W±0°.04, h14km±13km, n405, σ1°15/418, mb4.3/48, MS3.4/3, 135C-150D, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.53	51	*e*P		Pb		05 42 59.7	-0.4
CAIG				*e*S		Sb		05 43 16.6	+9.0
CAIG	El Cayaco	0.53	51	*e*P		Pb		05 42 59.7	-0.4
CAIG				*e*S		Sb		05 43 16.6	+9.0
ACX	Acapulco	0.82	79	*e*P		Pn		05 43 04.5	-1.6
ACX				*i* S		Sn		05 43 19.2	+1.1
ACX	Acapulco	0.82	79	*e*P		Pn		05 43 04.5	-1.6
ACX				*i* S		Sn		05 43 19.2	+1.1
ZIIG	Zihuatanejo	1.16	321	*e*P		Pn		05 43 06.6	-4.1
ZIIG				*i* S		Sb		05 43 23.1	-2.5
ZIIG	Zihuatanejo	1.16	321	*e*P		Pn		05 43 06.6	-4.1
ZIIG				*i* S		Sb		05 43 23.1	-2.5
MEIG	Mezcala	1.59	40	*e*P		Pn		05 43 15.8	-1.0
MEIG				*i* S		Sg		05 43 42.8	+2.6
MEIG	Mezcala	1.59	40	*e*P		Pn		05 43 15.8	-1.0
MEIG				*i* S		Sg		05 43 42.8	+2.6
ARIG	Puente Sto Nin	1.60	12	*e*P		Pn		05 43 15.3	-1.6
ARIG				*e*S		Sg		05 43 41.7	+1.2
PLIG	Platanillo	2.03	34	*e*P		Pn		05 43 22.0	-0.8
PLIG				*i* S		Sg		05 43 54.9	+0.7
PLIG	Platanillo	2.03	34	*e*P		Pn		05 43 22.0	-0.8
PLIG				*i* S		Sg		05 43 54.9	+0.7
PNIG	Pinotepa	2.49	97	*e*P		Pn		05 43 26.5	-2.6
PNIG				*i* S		Sn		05 43 59.0	-0.2
PNIG	Pinotepa	2.49	97	*e*P		Pn		05 43 26.5	-2.6
PNIG				*i* S		Sn		05 43 59.0	-0.2
YAIG	Yautepec	2.65	36	*e*P		Pn		05 43 31.8	+0.4
YAIG				*e*S		Sg		05 44 10.9	-3.2
YAIG	Yautepec	2.65	36	*e*P		Pn		05 43 31.8	+0.4
YAIG				*e*S		Sg		05 44 10.9	-3.2
MMIG	Aquila	2.98	302	*i* P		Pn		05 43 27.8	-8.0
MMIG				*i* S		Sn		05 44 09.9	-8.4
UTMO	Huajuapan	2.98	68	*e*P		Pn		05 43 35.7	-0.4
UTMO				*i* S		Sb		05 44 17.6	-0.8
UTMO	Huajuapan	2.98	68	*e*P		Pn		05 43 35.7	-0.4
UTMO				*i* S		Sb		05 44 17.6	-0.8
PPM	Popocatepetl	3.06	40	*e*P		Pn		05 43 37.9	+0.4
PPM				*e*S		Sb		05 44 22.0	+1.0
PPM	Popocatepetl	3.06	40	*e*P		Pn		05 43 37.9	+0.4
PPM				*e*S		Sb		05 44 22.0	+1.0
VHO	Vista Hermosa	3.81	84	*i* P		Pn		05 43 46.4	-1.1
VHO				*i* S		Sn		05 44 34.7	+2.4
VHO	Vista Hermosa	3.81	84	*i* P		Pn		05 43 46.4	-1.1
VHO				*i* S		Sn		05 44 34.7	+2.4
HUIG	Huatulco	4.51	101	*i* P		Pn		05 43 55.4	-1.5
HUIG				*i* S		Sn		05 44 48.3	-0.8
HUIG	Huatulco	4.51	101	*i* P		Pn		05 43 55.4	-1.5
HUIG				*i* S		Sn		05 44 48.3	-0.8
TXAR	Lajitas Array	12.86	348	Pn		Pn		05 45 51.2	-0.3
TXAR	Lajitas Array 0.0nm,0.3s,baz=185,slow=9.8,SNR=2.6	12.86	348	Pn		Pn		05 45 51.2	-0.3
TGUH	Tegucigalpa,Un	13.21	100	*e*Pn		Pn		05 45 56.2	-0.1
532A	Rocksprings baz=13	13.38	3	⇑P		Pn		05 45 57.6	-0.9
530A	J-C Ranch, Com baz=13,SNR=5.7	13.39	358	⇑P		Pn		05 45 59.0	+0.3
531A	Rocksprings baz=13	13.39	1	⇑P		Pn		05 45 58.2	-0.6
529A	Stev Forest Ra baz=14	13.43	354	⇑P		Pn		05 46 00.6	+1.3
528A	Cox Ranch, San baz=14	13.53	352	⇓P		Pn		05 46 02.2	+1.6
527A	Woodward Ranch baz=14	13.64	349	⇓P		Pn		05 46 03.9	+1.7
526A	Mary Lane Ranc baz=14	13.65	347	⇑P		Pn		05 46 03.7	+1.4
JCT	Junction City	13.73	3	*e*Pn		Pn		05 46 05.5	+2.1
429A	Davenport Ranc baz=14	13.90	356	⇓P		Pn		05 46 06.5	+0.9
430A	Baggett Ranch, baz=14,SNR=9.3	14.02	358	⇓P		Pn		05 46 07.8	+0.4
428A	Kincaid Ranch, baz=14,SNR=6.5	14.07	353	⇓P		Pn		05 46 09.7	+1.6
432A	Menard baz=14	14.13	3	⇓P		Pn		05 46 08.6	-0.2
426A	McDonald Obser baz=14	14.23	348	⇓P		Pn		05 46 12.4	+2.1
427A	Hayter Ranch, baz=14	14.29	351	⇓P		Pn		05 46 12.6	+1.5
331A	San Angelo baz=15,SNR=5.9	14.54	1	⇑P		Pn		05 46 14.3	-0.1
332A	Millersview baz=15	14.63	3	⇑P		Pn		05 46 15.1	-0.6
330A	Mertzon baz=15,SNR=6.1	14.64	358	⇓P		Pn		05 46 16.2	+0.4
328A	Wristen Ranch, baz=15	14.73	353	⇓P		Pn		05 46 18.1	+1.0
329A	Wagon Wheel Ra baz=15,SNR=7.4	14.76	356	⇑P		P		05 46 23.3	-0.2
326A	Caldwell Ranch baz=15	14.85	349	⇓P		Pn		05 46 20.2	+1.5
325A	Bean Ranch, Si baz=15,SNR=23	15.11	346	⇓P		P		05 46 27.8	+0.4
232A	Coleman baz=15	15.14	3	⇓P		Pn		05 46 22.1	-0.5
231A	Bronte baz=15	15.16	1	⇓P		Pn		05 46 22.2	-0.6
229A	Bryant Ranch, baz=15	15.22	356	⇓P		Pn		05 46 24.6	+0.9
324A	Moseley Ranch, baz=15,SNR=17	15.30	344	⇑P		P		05 46 29.8	+0.2
WHTX	Lake Whitney baz=16	15.50	10	⇓P		Pn		05 46 25.6	-1.6
MNTX	Cornudas Mount 11nm,1.1s	15.52	345	*e*Pn		Pn		05 46 30.4	+2.9
226B	Hacienda Peak, baz=16	15.62	349	⇓P		Pn		05 46 30.8	+1.9
GDL2	Guadalupe Moun	15.78	349	*e*Pn		Pn		05 46 32.5	+1.6
225A	Deer Hill, Car baz=16,SNR=10	15.78	347	⇓P		Pn		05 46 32.3	+1.3
130A	Snyder baz=16	15.82	359	⇑P		P		05 46 34.7	-0.5
ABTX	Abilene, Hawle baz=16	15.88	3	⇑P		P		05 46 34.8	-0.9
129A	Stewart Farms, baz=16	15.89	356	⇓P		Pn		05 46 31.4	-0.9
131A	Roxy baz=16	15.90	1	⇓P		P		05 46 35.1	-0.9
224A	Cornudas Mount baz=16,SNR=12	15.91	345	⇓P		Pn		05 46 34.6	+1.9
128A	Castleberry Fa baz=16	15.93	354	⇑P		Pn		05 46 32.4	-0.4
127A	Arkansas Junct baz=16,SNR=5.8	16.08	352	⇓P		Pn		05 46 34.5	-0.3
320A	Kipp Ranch, An baz=16	16.21	335	⇑P		Pn		05 46 37.5	+0.9
125A	Gardner Draw, baz=16,SNR=9.0	16.28	348	⇑P		Pn		05 46 37.7	+0.3
124A	Stringfield Ra baz=17,SNR=10	16.49	346	⇓P		Pn		05 46 41.0	+0.7
Z29A	Hungry Hill Ra baz=17,SNR=12	16.50	357	⇓P		Pn		05 46 40.1	-0.1
Z30A	Sanderson Ranc baz=17,SNR=10	16.51	359	⇓P		Pn		05 46 39.9	-0.4
Z31A	Sharp Cattle R baz=17,SNR=6.6	16.55	2	⇓P		Pn		05 46 40.0	-0.7
319A	Douglas baz=17	16.56	333	⇓P		Pn		05 46 41.8	+0.9
Z32A	Haskell baz=17	16.56	4	⇑P		Pn		05 46 39.0	-1.9
Z28A	Tucker Farm, M baz=17	16.58	355	⇑P		Pn		05 46 40.3	-0.8
JTS	JuntasAbangare	16.58	111	*e*Pn		Pn		05 46 40.5	-0.7
	80nm,1.0s								
Z27A	Tatum baz=17,SNR=9.4	16.69	353	⇑P		Pn		05 46 41.4	-1.2
220A	Playas Peak, P baz=17	16.71	336	⇓P		Pn		05 46 43.7	+0.7
Z26A	Caprock baz=17	16.76	350	⇓P		Pn		05 46 42.5	-0.9
Z25A	Roswell baz=17	16.89	348	⇓P		Pn		05 46 44.9	-0.3
121A	Cookes Peak, D baz=17	17.01	339	⇓P		Pn		05 46 46.3	-0.5
Z24A	Sheeppen Canyo baz=17	17.08	347	⇓P		Pn		05 46 46.3	-1.2
Y29A	Porterfield Fa baz=17	17.10	357	⇓P		Pn		05 46 45.7	-2.0
Y28A	McKinney Farm, baz=17,SNR=9.4	17.18	356	⇑P		Pn		05 46 47.7	-1.1
Y31A	Rekieta Farm, baz=17	17.18	1	⇓P		Pn		05 46 45.7	-3.0
Y27A	Causey baz=17,SNR=6.8	17.25	353	⇑P		Pn		05 46 47.9	-1.7
MSTX	Muleshoe baz=17,SNR=5.5	17.29	354	⇓P		Pn		05 46 48.6	-1.5
120A	U Bar Ranch, L baz=17	17.33	337	⇑P		Pn		05 46 50.7	+0.1
Z22A	Elephant Butte baz=18,SNR=6.7	17.42	342	⇓P		Pn		05 46 52.5	+0.7
Y25A	Mesa, Roswell baz=18	17.51	349	⇑P		Pn		05 46 52.2	-0.7
X30A	Coker Ranch, T baz=18	17.66	360	⇑P		Pn		05 46 52.5	-2.2
Y24A	Capitan baz=18	17.67	347	⇓P		Pn		05 46 54.6	-0.3
Z21A	St. Cloud Mine baz=18	17.68	340	⇑P		Pn		05 46 55.5	+0.3
X29A	Tulia baz=18	17.69	357	⇓P		Pn		05 46 53.5	-1.6
Y23A	Lovelace Mesa, baz=18,SNR=21	17.81	345	⇓P		P		05 46 58.0	+0.6
Z20A	Nine Sixteen R baz=18	17.82	338	⇓P		Pn		05 46 57.4	+0.6
X31A	McDonald Ranch baz=18	17.86	2	⇓P		Pn		05 46 55.2	-1.9
X26A	CR and CF Fran baz=18	17.99	352	⇓P		Pn		05 46 58.2	-0.6
X27A	F and S Farms, baz=18	17.99	354	⇓P		Pn		05 46 57.9	-1.0
TUC	Tucson 1.1nm,1.0s	18.02	331	*e*P		Pn		05 47 00.2	+1.0
Y22A	Socorro baz=18,SNR=10	18.06	343	⇑P		P		05 47 00.9	+0.8
AMTX	Amarillo 9.2nm,0.9s	18.12	357	*e*P		P		05 47 01.4	+0.7
BNM	Barren Site 13nm,1.1s	18.17	344	*e*P		P		05 47 02.5	+1.2
LENM	Lemitar	18.27	343	*e*P		P		05 47 04.3	+1.8
X24A	Lazy VL Ranch, baz=18,SNR=11	18.28	347	⇑P		Pn		05 47 01.8	-0.6
LPM	Los Pinos Moun	18.32	344	*e*P		P		05 47 04.9	+1.9
Y21A	Point of Rocks baz=18	18.33	341	⇑P		Pn		05 47 03.1	-0.1
W27A	Bowe Ranch, En baz=18	18.40	354	⇓P		P		05 47 02.6	-1.2
W31A	Holland Ranch, baz=18	18.41	2	⇓P		P		05 47 01.8	-2.1
X23A	Hourglass Bar baz=19,SNR=8.8	18.47	346	⇑P		P		05 47 03.9	-0.7
Y20A	Horse Springs, baz=19	18.47	339	⇓P		P		05 47 04.3	-0.4
W26A	Owens Ranch, T baz=19	18.51	352	⇓P		P		05 47 03.8	-1.3
LAZ	Ladron 1.1nm,1.0s	18.54	343	*e*P		Pn		05 47 06.8	+1.1
W25A	X Bar L Ranch, baz=19,SNR=5.3	18.74	350	⇑P		P		05 47 06.4	-1.1
214A	Organ Pipe Nat baz=19,SNR=7.7	18.74	326	⇓P		Pn		05 47 09.6	+1.6
X21A	Alamocita Cree baz=19,SNR=6.8	18.77	342	⇑P		P		05 47 07.4	-0.6
ANMO	Albuquerque 16nm,1.4s	18.88	345	*e*P		P		05 47 09.9	+0.7
ANMO	Albuquerque 0.1nm,0.3s,baz=155,slow=12,SNR=13	18.88	345	P		P		05 47 09.0	-0.2
ANMO					LR	LR		05 55 20.9	
	comp=Z,17nm,21.2s,baz=39,slow=40								
W24A	Lazy 6 Ranch, baz=19,SNR=7.9	18.90	348	⇑P		P		05 47 09.5	+0.1
V31A	Spring Creek L baz=19	19.00	2	⇓P		P		05 47 08.4	-2.0
W23A	Werner Place, baz=19	19.01	346	⇓P		P		05 47 09.9	-0.8
V27A	Dan Oppiter Fa baz=19	19.07	355	⇑P		P		05 47 09.8	-1.3
X20A	Quemado baz=19,SNR=6.3	19.09	340	⇓P		P		05 47 10.6	-0.9
V26A	Tequesquite Ra baz=19,SNR=7.7	19.21	352	⇓P		P		05 47 11.5	-1.2
V25A	Rancho No Teng baz=19	19.37	350	⇓P		P		05 47 13.0	-1.6
V24A	Rampart Ranch, baz=20,SNR=12	19.37	349	⇓P		P		05 47 14.4	-0.3
V23A	Ortiz Mt. (NFS baz=20	19.58	347	⇑P		P		05 47 16.1	-0.7
X18A	Snowflake baz=20	19.59	337	⇑P		P		05 47 16.6	-0.4
TUL1	Tulsa baz=20,SNR=5.1	19.62	12	⇓P		P		05 47 13.0	-4.0
W20A	Ramah baz=20	19.62	341	⇓P		P		05 47 16.5	-0.8
U27A	Thompson Grove baz=20	19.73	355	⇓P		P		05 47 16.6	-1.7
U30A	WK&E Inc. Balk baz=20	19.74	0	⇓P		P		05 47 16.3	-2.1
U26A	Atchley Ranch, baz=20,SNR=6.5	19.79	353	⇑P		P		05 47 18.1	-1.0
113A	Mohawk Valley, baz=20	19.88	326	⇓P		P		05 47 20.2	+0.2
U25A	Circle Dot Ran baz=20	19.89	351	⇑P		P		05 47 18.4	-1.8
V22A	San Miguel Ran baz=20	19.91	345	⇑P		P		05 47 19.1	-1.3
Z14A	Wintersburg baz=20	19.92	329	⇑P		P		05 47 20.2	-0.2
V21A	Milan baz=20	20.00	343	⇓P		P		05 47 20.1	-1.3
U24A	Moreno Valley baz=20	20.04	349	⇑P		P		05 47 20.3	-1.7
X16A	Lo Mia Camp, P baz=20,SNR=11	20.10	333	⇓P		P		05 47 22.6	+0.1
U23A	El Rito baz=20,SNR=8.3	20.14	347	⇑P		P		05 47 21.8	-1.3
V20A	Brimhall baz=20	20.23	341	⇓P		P		05 47 23.0	-1

baz=21
S26A **Kim** 20.98 354 ⇓P P 05 47 30.9 -1.0
baz=21
WUAZ **Wupatki** 21.01 335 ⇑P P 05 47 33.1 +0.7
baz=21,SNR=37
Y12C **Blythe** 21.04 326 ⇓P P 05 47 33.4 +0.9
baz=21
T21A **Navajo Lake** 21.09 345 ⇓P P 05 47 32.9 -0.3
baz=21
S25A **Robets Cordova** 21.13 352 ⇓P P 05 47 33.0 -0.6
baz=21,SNR=8.0
S24A **Houchin Ranch,** 21.23 350 ⇑P P 05 47 33.9 -0.9
baz=21
PDMCI **Parker Dam,Lak** 21.27 328 ⇑P P 05 47 35.8 +0.8
baz=21
SDCO **Great Sand Dun** 21.38 350 *eP* P 05 47 36.0 -0.4
4.6nm,0.9s
PLAL **Pickwick Lake** 21.41 29 *eP* P 05 47 36.3 -0.2
6.6nm,0.8s
S23A **Nye Farm, Mont** 21.43 348 ⇓P P 05 47 35.9 -1.1
baz=22
BC3 **Big Chuckawall** 21.47 325 ⇓P P 05 47 38.2 +0.9
baz=22
R30A **Dighton** 21.50 1 ⇑P P 05 47 36.1 -1.3
baz=22,SNR=6.0
R28A **Tribune** 21.57 358 ⇑P P 05 47 36.9 -1.4
baz=22,SNR=9.2
R27A **Eads** 21.57 356 ⇓P P 05 47 36.7 -1.7
baz=22
R25A **Fountain Ranch** 21.59 352 ⇓P P 05 47 37.0 -1.5
baz=22
S22A **4UR Ranch, Cre** 21.64 347 ⇑P P 05 47 38.3 -1.0
baz=22,SNR=10
R26A **Arlington** 21.65 354 ⇓P P 05 47 37.6 -1.5
baz=22
IRM **Iron Mountain** 21.69 326 ⇓P P 05 47 39.9 +0.4
baz=22
W13A **Hualapai Mount** 21.78 330 ⇑P P 05 47 40.1 -0.6
baz=22
R24A **Sanders Place,** 21.79 351 ⇑P P 05 47 39.3 -1.4
baz=22
S21A **Coal Bank Pass** 21.79 345 ⇓P P 05 47 39.8 -1.1
baz=22
R23A **Moffat** 21.87 349 ⇓P P 05 47 39.7 -2.0
baz=22
PFO **Pinyon Flat Ob** 22.01 323 *eP* P 05 47 46.5 +3.5
5.9nm,1.1s
PFO **Pinyon Flat Ob** 22.01 323 P P 05 47 44.3 +1.2
4.8nm,0.9s,baz=113,slow=5.9,SNR=5.4
PFO **Pinyon Flat Ob** 22.01 323 ⇑P P 05 47 44.1 +1.0
baz=22
BELC **Belle Mtn. Jos** 22.03 324 ⇓P P 05 47 44.1 +0.7
baz=22
R22A **Saguache, Gunn** 22.09 347 ⇑P P 05 47 43.5 -0.6
baz=22,SNR=8.0
S20A **Disappointment** 22.10 344 ⇓P P 05 47 44.0 -0.1
baz=22
U15A **North Rim** 22.17 335 ⇑P P 05 47 46.4 +1.5
baz=22,SNR=8.6
Q26A **Hugo** 22.27 354 ⇓P P 05 47 44.5 -1.4
baz=22
KSCO **Kaye Shedlock'** 22.28 356 ⇓P P 05 47 44.4 -1.6
baz=22
Q28A **Sharon Springs** 22.29 358 ⇓P P 05 47 43.8 -2.2
baz=22
Q25A **Bedland, Calha** 22.34 353 ⇓P P 05 47 45.6 -1.1
baz=22
R20A **Redvale** 22.44 344 ⇑P P 05 47 48.2 +0.5
baz=22,SNR=13
MURC **Murrieta** 22.44 322 ⇑P P 05 47 48.8 +1.2
baz=22
S18A **Hurst Farm, Bl** 22.45 340 ⇓P P 05 47 48.3 +0.4
baz=22,SNR=12
WVT **Waverly** 22.47 28 *eP* P 05 47 46.5 -1.3
2.0nm,0.4s
Q22A **Crested Butte,** 22.73 347 ⇑P P 05 47 50.3 -0.7
baz=23
BBRC **Big Bear Solar** 22.75 323 ⇑P P 05 47 51.4 +0.3
baz=23
PV04 **Paradox Valley** 22.77 343 *eP* P 05 47 53.0 +1.7
P28A **Saint Francis** 22.80 358 ⇓P P 05 47 50.2 -1.3
baz=23
P27A **Ficken Ranch,** 22.82 356 ⇑P P 05 47 50.1 -1.6
baz=23
HEC **Hector,Ludlow** 22.83 325 ⇓P P 05 47 52.9 +1.1
baz=23
P26A **Davis Ranch, A** 22.89 355 ⇓P P 05 47 50.7 -1.7
baz=23
P25A **Willow Gulch B** 22.92 353 ⇑P P 05 47 51.0 -1.8
baz=23
P23A **Jefferson** 23.02 350 ⇑P P 05 47 53.1 -0.9
baz=23
SMCO **Snowmass** 23.05 347 *eP* P 05 47 56.5 +2.2
9.4nm,1.0s
TUQ **Turquoise Moun** 23.07 327 ⇓P P 05 47 55.9 +1.6
baz=23,SNR=6.6
SIUC **Southern Illin** 23.24 24 *eP* P 05 47 55.5 -0.4
8.0nm,0.7s
ISCO **Idaho Springs** 23.40 350 *eP* P 05 47 57.3 -0.5
3.2nm,0.9s
ISCO **Idaho Springs** 23.40 350 ⇑P P 05 47 55.7 -2.1
baz=24
GSC **Goldstone** 23.44 325 ⇑P P 05 47 57.9 -0.2
baz=24
P21A **Newcastle** 23.48 347 ⇓P P 05 47 57.0 -1.6
baz=24
CCUT **Cedar City** 23.58 334 *eP* P 05 48 01.0 +1.5
5.0nm,0.9s
CPCT **Cooper Cave** 23.59 35 *eP* P 05 47 59.4 0.0
P20A **De Beque** 23.68 345 ⇓P P 05 47 58.8 -1.6
baz=24
EDW2 **Edwards Air Fo** 23.80 323 ⇓P P 05 48 02.0 +0.5
baz=24
O23A **Lake Granby, G** 23.85 350 ⇓P P 05 47 59.8 -2.4
baz=24
O22A **Kremmling** 23.91 349 ⇑P P 05 48 01.3 -1.6
baz=24
SRU **San Rafael** 23.92 341 ⇑P P 05 48 02.0 -0.7
baz=24
MSU **Marysvale** 23.94 337 *eP* P 05 48 04.2 +1.2
Q16A **Castle Valley** 23.95 340 ⇑P P 05 48 03.6 +0.5
baz=24,SNR=8.4
P19A **Cripple Cowboy** 23.95 344 ⇑P P 05 48 02.9 -0.2
baz=24,SNR=8.9
N27A **Anderson Farm,** 24.07 357 ⇑P P 05 48 02.4 -1.6
baz=24
TKL **Tuckaleechee C** 24.16 35 P P 05 48 03.0 -1.7
TKL **Tuckaleechee C** 24.16 35 P P 05 48 03.0 -1.7
2.9nm,0.8s,baz=196,slow=18,SNR=5.1
O20A **White River Ci** 24.25 346 ⇑P P 05 48 05.5 -0.2
baz=24,SNR=5.7
N24A **Carr** 24.30 352 ⇓P P 05 48 04.6 -1.6
baz=24
P18A **Preston Nutter** 24.30 342 ⇑P P 05 48 05.7 -0.7
baz=24
MPMC **Manual Prospec** 24.38 325 ⇓P P 05 48 08.2 +1.2
baz=24,SNR=5.4
N22A **Wattenberg Ran** 24.52 349 ⇑P P 05 48 08.0 -0.4
baz=25
N23A **Red Feather La** 24.52 350 ⇓P P 05 48 07.7 -0.7
baz=25
O19A **Miners Draw (B** 24.62 344 ⇓P P 05 48 09.2 +0.1
baz=25,SNR=8.6
ISA **Isabella** 24.64 323 ⇑P P 05 48 09.8 +0.6
baz=25
N21A **Black Mountain** 24.68 348 ⇑P P 05 48 10.3 +0.5
baz=25,SNR=9.6
PHWY **Pilot Hill** 24.85 351 *eP* P 05 48 11.5 +0.2
2.8nm,0.8s
N20A **Spence Gulch,** 24.92 346 ⇓P P 05 48 10.9 -0.9
baz=25
M24A **Cheyenne** 24.93 353 ⇑P P 05 48 10.7 -1.3
baz=25
GRAC **Grapevine Rang** 25.02 327 ⇑P P 05 48 12.7 +0.1
baz=25
M23A **Laramie** 25.05 351 ⇑P P 05 48 11.7 -1.4
baz=25
R11A **Troy Canyon, C** 25.21 332 ⇑P P 05 48 15.6 +1.0
baz=25,SNR=12
KMSC **Kings Mountain** 25.22 40 ⇓P P 05 48 07.9 -6.5
baz=25
SMMC **Simmler** 25.29 321 ⇓P P 05 48 15.5 +0.3
baz=25
DAU **Daniels Canyon** 25.33 341 *eP* P 05 48 16.6 +0.8
M21A **Separation Pea** 25.47 348 ⇑P P 05 48 15.5 -1.3
baz=26
DUG **Dugway** 25.66 338 *eP* P 05 48 20.0 +1.5
6.5nm,0.9s

DUG **Dugway** 25.66 338 ⇓P P 05 48 18.9 +0.3
baz=26
L23A **Garrett** 25.68 351 ⇑P P 05 48 17.6 -1.2
baz=26
M19A **Rock Springs** 25.76 345 ⇑P P 05 48 19.0 -0.5
baz=26,SNR=7.2
L21A **Rawlins** 25.81 349 ⇓P P 05 48 19.7 -0.3
baz=26
L20A **Wamsutter** 26.05 347 ⇑P P 05 48 21.8 -0.4
baz=26,SNR=8.3
M17A **Scullys Gap (B** 26.13 343 ⇓P P 05 48 22.7 -0.2
baz=26
K22A **Casper** 26.33 350 ⇓P P 05 48 23.8 -0.8
baz=26
L19A **Farson** 26.38 345 ⇑P P 05 48 25.4 +0.3
baz=26,SNR=12
L18A **Fontenelle, Gr** 26.38 344 ⇓P P 05 48 24.8 -0.3
baz=26
K21A **Alcova** 26.44 349 ⇑P P 05 48 25.1 -0.5
baz=26
NVAR **Mina Array Bea** 26.59 328 P P 05 48 28.4 +1.3
NVAR **Mina Array Bea** 26.59 328 P P 05 48 28.4 +1.3
4.5nm,0.6s,baz=151,slow=12,SNR=26
K20A **Yellowstone Ra** 26.68 347 ⇑P P 05 48 27.3 -0.5
baz=27
K19A **Absolon Red Bu** 26.94 347 ⇑P P 05 48 29.7 -0.5
baz=27
BW06 **Boulder Array** 27.05 346 *eP* P 05 48 31.2 -0.1
12nm,1.1s
PDAR **Pinedale Array** 27.05 346 P P 05 48 31.9 +0.7
PDAR **Pinedale Array** 27.05 346 P P 05 48 31.9 +0.7
5.2nm,0.9s,baz=145,slow=11,SNR=30
ELK **Elko** 27.05 335 LR LR 05 59 44.0
comp=Z,91nm,18.5s,baz=45,slow=38
HVU **Hansel Valley** 27.06 340 *eP* P 05 48 32.2 +1.1
7.3nm,1.1s
J22A **Midwest** 27.07 351 ⇓P P 05 48 30.5 -0.7
baz=27
J21A **Lysite** 27.16 349 ⇓P P 05 48 31.5 -0.7
baz=27
J20A **Shoshoni** 27.29 348 ⇓P P 05 48 32.7 -0.5
baz=27
J19A **Crowheart** 27.41 347 ⇑P P 05 48 34.4 0.0
baz=28
AHID **Auburn Hatcher** 27.45 343 *eP* P 05 48 35.1 +0.4
16nm,0.9s
I21A **Big Trails, Te** 27.59 350 ⇓P P 05 48 35.9 0.0
baz=28
I20A **Worland** 27.88 348 ⇓P P 05 48 38.6 +0.2
baz=28
SNOW **Snow King Moun** 28.00 344 *eP* P 05 48 41.1 +1.4
22nm,1.1s
RRI2 **Red Ridge** 28.05 343 *eP* P 05 48 41.2 +1.0
10nm,0.9s
TPAW **Teton Pass** 28.08 344 *eP* P 05 48 41.5 +1.0
7.3nm,0.8s
LOHW **Long Hollow** 28.11 345 *eP* P 05 48 41.6 +1.0
10nm,0.9s
I19A **Meeteetse** 28.13 347 ⇓P P 05 48 40.9 +0.1
baz=28
MOOW **Moose Ponds** 28.27 345 *eP* P 05 48 42.9 +0.8
3.9nm,0.8s
H20A **Greybull** 28.37 349 ⇑P P 05 48 42.6 -0.2
baz=28
ROSC **El Rosal** 28.41 112 LR LR 05 59 33.2
comp=Z,68nm,20.3s,baz=182,slow=36
IMW **Indian Meadow** 28.46 344 *eP* P 05 48 44.7 +0.9
8.8nm,0.9s
I16A **Newdale** 28.58 344 ⇓P P 05 48 44.9 +0.1
baz=29
J14A **Carey** 28.68 340 ⇑P P 05 48 46.1 +0.3
baz=29
G24A **Alzada** 28.70 355 ⇓P P 05 48 45.4 -0.4
baz=29
J13A **Cove Ranch, Pi** 28.97 339 ⇑P P 05 48 49.0 +0.8
baz=29
G20A **Bridger** 29.12 349 ⇑P P 05 48 49.5 0.0
baz=29
HLID **Hailey** 29.19 339 *eP* P 05 48 51.4 +1.2
7.2nm,1.5s
HLID **Hailey** 29.19 339 ⇓P P 05 48 50.5 +0.3
baz=29
I14A **Mackay** 29.21 341 ⇑P P 05 48 50.9 +0.5
baz=29
H16A **Russell Place,** 29.29 345 ⇓P P 05 48 51.3 +0.1
baz=29
I13A **Wildhorse Cree** 29.41 340 ⇑P P 05 48 52.6 +0.4
baz=30
G18A **Lazy EL Ranch,** 29.48 347 ⇓P P 05 48 52.6 -0.1
baz=30
MFID **Camas Ranch** 29.57 337 *eP* P 05 48 54.6 +1.1
3.8nm,1.0s
MFID **Camas Ranch** 29.57 337 ⇑P P 05 48 53.8 +0.3
baz=30
H15A **Lima** 29.59 343 ⇓P P 05 48 53.2 -0.6
baz=30
F20A **Billings** 29.67 349 ⇑P P 05 48 54.2 -0.1
baz=30
G17A **Pierce Place,** 29.75 346 ⇓P P 05 48 57.0 +1.9
baz=30,SNR=7.9
H14A **Leadore** 29.80 342 ⇓P P 05 48 56.5 +0.8
baz=30,SNR=9.6
E22A **Miles City** 29.96 353 ⇓P P 05 48 56.4 -0.5
baz=30
G15A **Dillon** 30.05 343 ⇑P P 05 48 58.6 +0.8
baz=30,SNR=7.5
F18A **Big Timber** 30.07 347 ⇑P P 05 48 57.7 -0.2
baz=30
H12A **Diamond D Ranc** 30.21 340 ⇑P P 05 48 59.6 +0.3
baz=30
DLMT **Dillon** 30.26 343 *eP* P 05 49 01.2 +1.6
21nm,1.0s
F17A **Fitzpatrick Pl** 30.28 346 ⇑P P 05 49 00.1 +0.3
baz=30
E20A **Meyer Farm, Mu** 30.34 350 ⇓P P 05 49 00.4 +0.1
baz=30,SNR=5.5
F16A **Kennard Place,** 30.40 345 ⇓P P 05 49 01.7 +0.9
baz=30,SNR=12
E19A **Rath Farm, Rou** 30.42 349 ⇓P P 05 49 01.1 +0.1
baz=30,SNR=5.9
D24A **Glendive** 30.47 355 ⇓P P 05 49 00.7 -0.7
baz=31
G13A **Cobalt** 30.50 341 ⇑P P 05 49 01.7 -0.1
baz=31
LRM **Limekiln Ridge** 30.64 344 *eP* P 05 49 04.0 +0.9
F15A **Butte** 30.67 344 ⇑P P 05 49 03.9 +0.5
baz=31,SNR=12
D22A **Cohagen** 30.69 353 ⇑P P 05 49 03.3 0.0
baz=31,SNR=9.3
D21A **La Casta Ranch** 30.72 352 ⇓P P 05 49 03.2 -0.4
baz=31
E18A **Harlowton** 30.74 348 ⇑P P 05 49 03.6 -0.3
baz=31
E17A **Martinsdale** 30.85 346 ⇑P P 05 49 05.1 +0.2
baz=31,SNR=8.6
G12A **Big Creek, Yel** 30.88 340 ⇑P P 05 49 05.3 +0.1
baz=31
C24A **Savage** 30.89 355 ⇑P P 05 49 04.1 -0.9
baz=31
F14A **Wisdom** 30.89 343 ⇓P P 05 49 05.5 +0.2
baz=31
D20A **Manuel Ranch,** 30.92 350 ⇑P P 05 49 04.9 -0.4
baz=31
E16A **East Helena** 31.11 345 ⇓P P 05 49 07.7 +0.6
baz=31,SNR=14
D19A **Cripps Ranch,** 31.12 349 ⇑P P 05 49 07.3 +0.2
baz=31,SNR=7.0
F13A **Darby** 31.15 341 ⇑P P 05 49 07.8 +0.3
baz=31,SNR=7.1
C23A **Lambert** 31.23 354 ⇑P P 05 49 07.4 -0.6
baz=31
C22A **Vida** 31.25 353 ⇑P P 05 49 08.0 -0.2
baz=31,SNR=5.6
E15A **Deer Lodge** 31.25 344 ⇓P P 05 49 08.6 +0.2
baz=31,SNR=11
HRY **Holter Researc** 31.31 345 *eP* P 05 49 09.0 +0.1
4.8nm,0.5s
D18A **Linhart Farms,** 31.32 348 ⇑P P 05 49 09.2 +0.3
baz=31,SNR=9.2
F12A **Elk City** 31.41 340 ⇑P P 05 49 10.3 +0.5
baz=32,SNR=7.7
D17A **Six Diamond Ra** 31.46 347 ⇓P P 05 49 10.3 +0.1
baz=32,SNR=20
E14A **Clinton** 31.48 343 ⇑P P 05 49 10.5 +0.1
baz=32
C20A **Veseth Ranch,** 31.50 351 ⇑P P 05 49 09.5 -0.9
baz=32
D16A **Dana Ranch, Ca** 31.54 346 ⇓P P 05 49 11.0 0.0
baz=32,SNR=16
C19A **Slack Wire Ran** 31.70 349 ⇑P P 05 49 11.9 -0.2
baz=32
E13A **Victor** 31.70 342 ⇑P P 05 49 12.9 +0.6
baz=32,SNR=9.8
D15A **Lincoln** 31.79 345 ⇓P P 05 49 13.4 +0.2
baz=32,SNR=6.4
B22A **Reddig Ranch S** 31.80 353 ⇓P P 05 49 12.1 -1.1
baz=32
DGMT **Dagmar** 31.81 356 *eP* P 05 49 14.2 +1.2
6.6nm,0.9s
DGMT **Dagmar** 31.81 356 ⇑P P 05 49 12.4 -0.7
baz=32
B23A **Brockton** 31.86 355 ⇑P P 05 49 12.8 -0.8
baz=32
CHMT **Chamberlain Mo** 31.87 344 *eP* P 05 49 14.5 +0.6
C17A **Wharram Farm,** 31.93 347 ⇓P P 05 49 14.4 +0.1
baz=32,SNR=17
MSO **Missoula** 31.98 343 ⇑P P 05 49 14.8 0.0
baz=32
D14A **Greenough** 32.09 343 ⇑P P 05 49 15.6 -0.2
baz=32,SNR=10
EGMT **Eagleton** 32.10 349 *eP* P 05 49 19.1 +3.3
36nm,1.9s
EGMT **Eagleton** 32.10 349 ⇑P P 05 49 15.3 -0.5
baz=32
SLMT **Seeley Lake** 32.23 344 *eP* P 05 49 17.5 +0.5
A24A **Westby** 32.24 356 ⇑P P 05 49 16.0 -0.9
baz=32
C16A **Fuhringer Ranc** 32.31 346 ⇑P P 05 49 17.0 -0.7
baz=32
D13A **Huson** 32.37 342 ⇑P P 05 49 18.3 +0.1
baz=32,SNR=15
B19A **Brinkman Farms** 32.37 350 ⇓P P 05 49 17.7 -0.4
baz=32
A22A **Carney Farms,** 32.48 354 ⇓P P 05 49 18.0 -1.0
baz=33
C15A **Salmond Ranch,** 32.50 345 ⇑P P 05 49 18.9 -0.4
baz=33
B17A **L&G Farms, Che** 32.57 347 ⇑P P 05 49 19.6 -0.3
baz=33,SNR=7.2
D12A **Red Ives Fores** 32.60 341 ⇓P P 05 49 20.2 0.0
baz=33
SWMT **Swartz Lake** 32.62 343 *eP* P 05 49 20.9 +0.6
A20A **Cobblestone Ra** 32.62 351 ⇓P P 05 49 19.3 -1.0
baz=33
C14A **Swan Lake** 32.78 344 ⇓P P 05 49 21.7 0.0
baz=33
A19A **Klindworth Far** 32.80 350 ⇑P P 05 49 21.6 -0.2
baz=33
B16A **M & M Farms, S** 32.88 346 ⇑P P 05 49 22.4 -0.2
baz=33
JTMT **Jette** 32.91 343 *eP* P 05 49 23.3 +0.4
C13A **Hot Springs** 32.93 343 ⇓P P 05 49 23.0 -0.1
baz=33
YBMT **Yellow Bay** 32.94 343 *eP* P 05 49 23.6 +0.4
5.9nm,0.9s
A18A **Metzger Ranch,** 32.98 349 ⇓P P 05 49 23.1 -0.4
baz=33
B15A **Bradely Ranch,** 32.99 345 ⇓P P 05 49 23.2 -0.3
baz=33,SNR=7.6
A17A **Triple J Farms** 33.17 348 ⇓P P 05 49 25.2 +0.1
baz=33,SNR=8.2
B14A **Marquette Ranc** 33.21 345 ⇓P P 05 49 25.6 +0.1
baz=33
SADO **Sadowa** 33.34 28 P P 05 49 24.9 -1.6
SADO **Sadowa** 33.34 28 P P 05 49 24.9 -1.6
4.0nm,0.5s,baz=250,slow=9.7,SNR=10.0
A16A **West Butte Ran** 33.36 347 ⇓P P 05 49 26.3 -0.6
baz=34
B13A **Whitefish** 33.53 343 ⇑P P 05 49 28.6 +0.3
baz=34,SNR=8.3
A15A **Johnson Ranch,** 33.65 346 ⇑P P 05 49 29.2 -0.1
baz=34,SNR=7.4
ULM **Lac du Bonnet** 33.68 6 P P 05 49 28.2 -1.2
ULM **Lac du Bonnet** 33.68 6 P P 05 49 28.2 -1.2
3.2nm,0.5s,baz=203,slow=4.9,SNR=3.1
A14A **Double T Ranch** 33.81 345 ⇓P P 05 49 30.6 -0.2
baz=34,SNR=8.1
WALA **Waterton Lakes** 34.01 344 *eP* P 05 49 32.9 +0.4
0.2nm,1.0s
A13A **Flathead Natio** 34.03 344 ⇓P P 05 49 32.4 -0.2
baz=34
NEW **Newport** 34.23 340 ⇑P P 05 49 34.6 +0.3
baz=34
LON **Longmire** 34.70 334 *eP* P 05 49 39.1 +0.7
2.5nm,0.9s
SCHQ **Schefferville** 46.10 27 *eP* P 05 51 12.2 -0.4
12nm,1.1s
SCHQ **Schefferville** 46.10 27 P P 05 51 12.1 -0.4
6.8nm,0.9s,baz=207,slow=3.1,SNR=6.1
YKA **Yellowknife Ar** 46.77 351 P P 05 51 16.9 -0.7
YKA **Yellowknife Ar** 46.77 351 P P 05 51 16.9 -0.7
3.8nm,0.8s,baz=161,slow=7.5,SNR=49
DLBC **Dease Lake** 46.96 339 *eP* P 05 51 21.2 +1.9
SIV **San Ignacio** 50.83 128 P P 05 51 49.9 +0.4
SIV **San Ignacio** 50.83 128 P P 05 51 49.9 +0.4
3.2nm,0.8s,baz=336,slow=13,SNR=3.7
EGAK **Eagle** 55.21 340 *eP* P 05 52 21.7 +0.6
3.9nm,0.9s
DOT **Dot Lake** 55.48 338 *eP* P 05 52 25.6 +2.4
10nm,1.3s
SML **Sawmill** 56.07 335 *eP* P 05 52 30.0 +2.6
2.0nm,0.9s
OHAK **Old Harbor** 56.19 329 *eP* P 05 52 28.8 +0.6
14nm,0.9s
PMR **Palmer** 56.29 335 *eP* P 05 52 29.8 +0.9
5.5nm,0.7s
ILAR **Eielson Array** 57.15 338 P P 05 52 35.5 +0.5
ILAR **Eielson Array** 57.15 338 P P 05 52 35.5 +0.5
2.4nm,0.9s,baz=151,slow=5.4,SNR=30
CFAA **Coronel Fontan** 57.26 147 P P 05 52 38.7 +2.5
CFAA **Coronel Fontan** 57.26 147 P P 05 52 38.7 +2.5
0.5nm,1.0s,baz=295,slow=11,SNR=4.2
RSO **Redoubt South** 57.30 332 *eP* P 05 52 37.4 +1.0
SPU **Mount Spurr** 57.32 333 *eP* P 05 52 37.1 +0.8
MCK **McKinley** 57.32 337 *eP* P 05 52 37.6 +1.3
8.2nm,1.0s
TRF **Thorofare Moun** 57.70 336 *eP* P 05 52 39.2 +0.1
10nm,0.8s
CPUP **Villa Florida** 60.06 135 P P 05 52 56.7 +0.9
CPUP **Villa Florida** 60.06 135 P P 05 52 56.7 +0.9
1.6nm,0.8s,baz=283,slow=19,SNR=3.3
PLCA **Paso Flores** 63.64 155 P P 05 53 21.6 +1.9
PLCA **Paso Flores** 63.64 155 P P 05 53 21.6 +1.9
4.4nm,1.0s,baz=344,slow=8.7,SNR=4.4
ESDC **Sonseca Array** 84.55 50 LR LR 06 31 33.7
comp=Z,117nm,20.6s,baz=205,slow=35
NOA **NORSAR Array B** 85.67 27 P P 05 55 27.6 +0.4
NOA **NORSAR Array B** 85.67 27 P P 05 55 27.6 +0.4
0.9nm,0.8s,baz=302,slow=4.9,SNR=2.8
WRA **Warramunga Arr** 127.84 258 PKP PKPdf 06 01 55.0 -0.1
WRA **Warramunga Arr** 127.84 258 PKP PKPdf 06 01 55.0 -0.1
0.6nm,0.9s,baz=86,slow=3.1,SNR=4.2

CSEM ***26*** *05:59:37.0, 12.°11N×43.°77E, h4km, ML3.8, After DHMR*
DHMR 26 05:59:37.0±0.8, 12.°11N×43.°77E, h5km±4km, ML3.8, 1C,
Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	
TRBA	**At Turbah**	**1.17**	**17**	⇑	*i* P	Pg	05 59 59.0	-0.7
TRBA					*i* S	Sb	06 00 15.5	-0.1
TRBA					AML	AML	06 00 17.9	
	comp=N,2μm,0.3s							
ADEN	**Aden**	**1.36**	**61**		*i* P	Pn	06 00 02.3	-0.4
ADEN					*i* S	Sn	06 00 21.6	+0.5
ADEN					AML	AML	06 00 26.7	
	comp=E,2μm,0.3s							
ADEN	**Aden**	**1.36**	**61**		*i* P	Pn	06 00 02.3	-0.4
ADEN					*i* S	Sn	06 00 21.6	+0.5
UDYN	**Al 'Udayn**	**1.86**	**6**		*i* P	Pn	06 00 10.1	+0.3
UDYN					*i* S	Sg	06 00 36.8	-0.3
UDYN					AML	AML	06 00 44.3	
	comp=E,930nm,0.5s							
UDYN	**Al 'Udayn**	**1.86**	**6**		*i* P	Pn	06 00 10.1	+0.3
UDYN					*i* S	Sg	06 00 36.8	-0.3
LBOS		**2.27**	**39**		*i* P	Pn	06 00 16.8	+1.1
LBOS					*i* S	Sb	06 00 48.2	+0.6
DHBB	**Dhamar BB**	**2.52**	**14**		*i* P	Pn	06 00 21.0	+1.9
DHBB					*i* S	Sb	06 00 55.8	+0.9
BDHA	**Al Bayda'**	**2.55**	**43**		*i* P	Pb	06 00 21.8	-1.9
BDHA					*i* S	Sb	06 00 56.4	+0.8
BDHA					AML	AML	06 01 08.9	
	comp=N,614nm,0.5s							
BDHA	**Al Bayda'**	**2.55**	**43**		*i* P	Pb	06 00 21.8	-1.9

BDHA *i* S Sb 06 00 56.4 +0.8

ISK ***26*** *06:10:10.7, 37˚.73N×26˚.99E, h10km, MD2.6*
ISCJB ***26*** *06:10:11.2±0.7, 37˚.69N±0˚.03×26˚.93E±0˚.05, h7km±5km, Error ellipse: s-maj=7.6km s-min=4.3km az=150.6*
CSEM ***26*** *06:10:11.5±0.3, 37˚.70N×26˚.95E, h10km, MD3.1, Error ellipse: s-maj=6.9km s-min=4.2km az=60.0*
DDA ***26*** *06:10:12.4, 37˚.77N×27˚.00E, h4km, MD3.1*

ISC 26 06:10:11.6±1.1, 37˚.69N±0˚.03×26˚.94E±0˚.04, h14km±9km, n20, σ0s57/35, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GCAM	**G?zelcami?**	**0.24**	**88**	*i* P		**Pg**		**06 10 16.8**	**+0.1**
GCAM				*i* S		**Sg**		**06 10 20.2**	**+0.1**
GCAM	**G?zelcami?**	**0.24**	**88**	*i* P		**Pg**		**06 10 16.8**	**+0.1**
GCAM				*i* S		**Sg**		**06 10 20.2**	**+0.1**
BLCB	**Balcova**	**0.70**	**7**	*e*PG		**Pg**		**06 10 24.0**	**-1.2**
BLCB				*e*SG		**Sg**		**06 10 33.6**	**-0.8**
BLCB	**Balcova**	**0.70**	**7**	*e*Pg		**Pg**		**06 10 24.0**	**-1.2**
BLCB				*e*Sg		**Sg**		**06 10 33.6**	**-0.8**
BODT	**Bodrum**	**0.70**	**155**	*e*PG		**Pb**		**06 10 25.9**	**+0.3**
BODT				*e*SG		**Sb**		**06 10 35.4**	**+0.3**
BODT	**Bodrum**	**0.70**	**155**	*e*Pg		**Pb**		**06 10 25.9**	**+0.3**
BODT				*e*Sg		**Sb**		**06 10 35.4**	**+0.3**
URLA	**Izmir**	**0.72**	**338**	*i* P		**Pg**		**06 10 25.6**	**0.0**
URLA				*i* S		**Sb**		**06 10 36.0**	**+0.3**
URLA	**Izmir**	**0.72**	**338**	*i* P		**Pg**		**06 10 25.6**	**0.0**
URLA				*i* S		**Sb**		**06 10 36.0**	**+0.3**
AYDN	**Tasoluk**	**0.75**	**92**	*i* P		**Pg**		**06 10 26.1**	**-0.1**
AYDN				*i* S		**Sg**		**06 10 36.1**	**+0.1**
AYDN	**Tasoluk**	**0.75**	**92**	*i* P		**Pg**		**06 10 26.1**	**-0.1**
AYDN				*i* S		**Sg**		**06 10 36.1**	**+0.1**
MLSB	**Milas**	**0.78**	**120**	*e*PG		**Pg**		**06 10 25.3**	**-1.4**
MLSB				*e*SG		**Sg**		**06 10 36.8**	**-0.1**
MLSB	**Milas**	**0.78**	**120**	*e*Pg		**Pg**		**06 10 25.3**	**-1.4**
MLSB				*e*Sg		**Sg**		**06 10 36.8**	**-0.1**
YER	**Yerkesik**	**1.21**	**117**	*e*PN		**Pn**		**06 10 34.1**	**-0.1**
YER				*e*SN		**Sg**		**06 10 50.9**	**+0.3**
YER	**Yerkesik**	**1.21**	**117**	*e*Pn		**Pn**		**06 10 34.1**	**-0.1**
YER				*e*Sn		**Sg**		**06 10 50.9**	**+0.3**
APE	**Apeiranthos**	**1.28**	**241**	*e*PN		**Pn**		**06 10 35.3**	**+0.1**
APE	**Apeiranthos**	**1.28**	**241**	*e*Pn		**Pn**		**06 10 35.3**	**+0.1**
AKHS	**Akhisar**	**1.37**	**30**	*i* P		**Pg**		**06 10 38.2**	**+0.2**
AKHS				*i* S		**Sg**		**06 10 56.9**	**+1.1**
AKHS	**Akhisar**	**1.37**	**30**	*i* P		**Pg**		**06 10 38.2**	**+0.2**
KULA	**Kula-Manisa**	**1.59**	**58**	*e*PN		**Pn**		**06 10 39.1**	**-0.4**
KULA	**Kula-Manisa**	**1.59**	**58**	*e*Pn		**Pn**		**06 10 39.1**	**-0.4**

IDC 26 06:16:30.9±0.8, 7˚.06S×150˚.62E, h44km±6km, mb3.6/7, mb1 3.8/8, mb1mx3.6/20, mbtmp3.7/8, ML2.5/1, MS3.8/1, Ms1 3.8/1, ms1mx3.0/27, Error ellipse: s-maj=35.2km s-min=12.1km az=137.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.14**	**235**	P			Pn	06 17 32.0	+0.3
	2.1nm,0.3s,baz=61,slow=12,SNR=6.4								
PMG				S			Sn	06 18 19.4	+0.5
	7.4nm,0.3s,baz=133,slow=19,SNR=8.4								
WRA	**Warramunga Arr**	**20.33**	**229**	P			P	06 21 04.2	+0.6
	4.0nm,0.5s,baz=55,slow=11,SNR=36								
WRA					pP		pP	06 21 15.1	+0.9
	4.5nm,0.6s,baz=52,slow=11,SNR=13								
ASAR	**Alice Springs**	**23.03**	**222**	P			P	06 21 31.6	-0.9
	0.9nm,0.6s,baz=59,slow=8.6,SNR=14								
ASAR					pP		pP	06 21 43.5	+0.3
	1.9nm,0.7s,baz=54,slow=9.4,SNR=9.6								
STKA	**Stephens Creek**	**26.09**	**198**	P			P	06 21 58.8	-1.8
	1.4nm,0.7s,baz=17,slow=11,SNR=3.0								
FITZ	**Fitzroy Crossi**	**26.70**	**243**	P			P	06 22 05.9	-0.3
	3.2nm,0.8s,baz=88,slow=7.2,SNR=6.5								
FITZ					pP		pP	06 22 18.1	+0.2
	3.1nm,0.7s,baz=85,slow=5.3,SNR=4.4								
RAR	**Rarotonga**	**49.91**	**112**	LR			LR	06 41 17.8	
	comp=Z,115nm,21.3s,baz=135,slow=30								
QSPA	**South Pole Qui**	**82.92**	**180**	P			P	06 28 52.1	+1.1
	1.4nm,0.6s,baz=340,slow=1.0,SNR=7.5								
QSPA					pP		pP	06 29 04.7	+0.6
	1.6nm,0.7s,baz=8.1,slow=3.0,SNR=3.9								
ILAR	**Eielson Array**	**85.06**	**22**	P			P	06 29 00.8	-0.9
	0.4nm,0.9s,baz=247,slow=5.0,SNR=6.3								
ILAR					pP		pP	06 29 13.4	-1.4
	0.9nm,0.8s,baz=254,slow=5.1,SNR=8.3								
YKA	**Yellowknife Ar**	**98.42**	**28**	P			Pdif	06 30 05.4	+1.3
	0.1nm,0.5s,baz=268,slow=4.8,SNR=2.6								
YKA					pP		pP	06 30 17.7	+0.4
	0.2nm,0.7s,baz=267,slow=4.8,SNR=4.3								
TORD	**Torodi Ar. Bea**	**148.83**	**284**	PKPbc			PKPbc	06 36 14.7	-0.2
	0.3nm,0.3s,baz=99,slow=2.8,SNR=6.2								
TORD					pPKPbc		pPKPbc	06 36 28.1	-0.2
	0.9nm,0.7s,baz=91,slow=2.3,SNR=4.8								

KRSC 26 06:27:50.8±2.0, 49˚.75N×157˚.03E, h5km±5km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.10**	**328**	S			Sg	06 28 26.1	-0.1
PAU	**Pauzhetka**	**1.73**	**355**	S			Sb	06 28 44.6	-0.3
ASAK	**Asacha**	**2.69**	**11**	P			Pn	06 28 37.1	+2.2
MTVR	**Mutnovka**	**2.83**	**14**	P			Pn	06 28 38.8	+1.9
MTVR				S			Sn	06 29 13.8	+2.3
RUS	**Russkaya**	**2.84**	**19**	S			Sn	06 29 12.6	+1.2
UGLR	**Uglovaya**	**3.64**	**17**	P			Pn	06 28 50.6	+2.7
AVH	**Avacha**	**3.68**	**16**	P			Pn	06 28 51.2	+2.8
KVK	**Koryaka**	**3.69**	**15**	P			Pn	06 28 51.7	+3.2
SDLR	**Sedlovina**	**3.72**	**17**	P			Pn	06 28 50.8	+1.8
SDLR				S			Sn	06 29 34.8	+1.5
SPN	**Mys Shipunski**	**3.84**	**28**	S			Sn	06 29 37.1	+1.1

BJI ***26*** *06:38:35.9, 15˚.30S×75˚.57W, h10km, mB5.3/15, Ms5.4/13, Ms7 5.0/15*
IDC ***26*** *06:38:36.2±0.4, 14˚.43S×76˚.09W, h0km, mb4.6/24, mb1 4.7/28, mb1mx4.7/29, mbtmp4.6/28, ML3.8/4, MS4.7/21, Ms1 4.7/21, ms1mx4.6/23, Error ellipse: s-maj=20.1km s-min=10.1km az=65.0*
NEIC ***26*** *06:38:39.0±1.4, 14˚.42S×75˚.98W, h15km±9km, mb5.2/108, ML5.0(ARE), Error ellipse: s-maj=5.3km s-min=2.8km az=54.0*
NEIC Felt [III] at Ica and Palpa and [II] at Chincha Alta. Also felt at Nazca.
ISCJB ***26*** *06:38:39.2±0.2, 14˚.45S±0˚.04×76˚.09W±0˚.04, h29km, mb5.1/155, MS4.9/31, Error ellipse: s-maj=7.2km s-min=3.7km az=143.0*
MOS ***26*** *06:38:40.4±0.9, 14˚.36S×76˚.10W, h33km, mb5.4/36, Error ellipse: s-maj=9.9km s-min=6.3km az=103.2*
GCMT ***26*** *06:38:43.5±0.2, 14˚.48S×76˚.32W, h15km, MW5.4, Moment Tensor Solution. s70,c110; s80,c148; Moment tensor: Scale 10^17 Nm; Mrr 0.65±.01; Mθθ 0.03±.01; Mφφ -0.68±.01; Mrθ 0.08±.04; Mrφ 0.32±.01; Mθφ -1.42±.04; Best double couple: M0 1.60000×10^17 NP1: ϕ=319.00000°, δ 16.00000°, λ 55.00000°. NP2: ϕ=175.00000°, δ 77.00000°, λ 99.00000°. Principal axes: T 1.5600, Plg57.0000°, Azm97.0000°; N 0.0900, Plg9.0000°, Azm353.0000°; P -1.6400, Plg32.0000°, Azm258.0000°; Data Used: ll IU G CN IC.*

ISC 26 06:38:40.4±0.3, 14˚.54S±0˚.05×76˚.16W±0˚.06, h29km, n791, σ0s99/800, mb5.1/153, MS4.9/31, 203C-175D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NNA	**Nana**	**2.62**	**345**	*e*Pn			**Pn**	**06 39 21.3**	**+0.4**
NNA				*e*Sn			**Sn**	**06 39 49.8**	**-2.1**
NNA				Lg			Lg	06 39 55.3	
NNA	**Nana**	**2.62**	**345**	Pn			**Pn**	**06 39 18.7**	**-2.2**
	4μm,0.3s,SNR=26								
NNA	**Nana**	**2.62**	**345**	Pn			**Pn**	**06 39 18.1**	**-2.8**
	16nm,0.3s,baz=160,slow=14,SNR=28								
NNA				Lg			Lg	06 39 55.3	
	812nm,0.3s,baz=232,slow=14,SNR=9.5								
ARCH	**Arica**	**6.86**	**126**	*e*P			**Pn**	**06 40 17.5**	**-1.5**
ARCH	**Arica**	**6.86**	**126**	*e*P			**Pn**	**06 40 17.5**	**-1.5**
PSGC	**Pisagua**	**7.65**	**132**	*e*P			**Pn**	**06 40 29.2**	**-0.9**
PSGC	**Pisagua**	**7.65**	**132**	*e*P			**Pn**	**06 40 29.2**	**-0.9**
ATAH	**Atahualpa**	**7.68**	**343**	Pn			**Pn**	**06 40 29.8**	**-1.0**
ATAH				Lg			Lg	06 42 22.8	
ATAH	**Atahualpa**	**7.68**	**343**	Pn			**Pn**	**06 40 29.8**	**-1.0**
	1.5nm,0.3s,baz=168,slow=5.6,SNR=7.9								
ATAH					Lg		Lg	06 42 22.8	
	22nm,0.3s,baz=282,slow=22,SNR=4.4								
MNMC	**Minimini**	**7.76**	**127**	↑*i*P			**Pn**	**06 40 30.5**	**-1.3**
MNMC	**Minimini**	**7.76**	**127**	↑*i*P			**Pn**	**06 40 30.5**	**-1.3**
LPAZ	**La Paz**	**7.93**	**104**	*e*Pn			Pn	06 40 38.1	+3.7
LPAZ	**La Paz**	**7.93**	**104**	Pn			Pn	06 40 38.1	+3.7
	46nm,0.3s,baz=294,slow=12,SNR=1660								
LPAZ					LR		LR	06 43 19.3	
	comp=Z,1μm,20.2s,baz=286,slow=36								
HMBC	**Humberstone**	**8.27**	**135**	↑*i*P			**Pn**	**06 40 38.0**	**-0.6**
HMBC	**Humberstone**	**8.27**	**135**	↑*i*P			**Pn**	**06 40 38.0**	**-0.6**
PB07	**Plate Boundary**	**9.30**	**141**	↑*i*P			**Pn**	**06 40 51.8**	**-1.0**
PB07	**Plate Boundary**	**9.30**	**141**	↑*i*P			**Pn**	**06 40 51.8**	**-1.0**
PB04	**Plate Boundary**	**9.95**	**142**	*e*P			Pn	06 40 55.5	-6.0
PB04	**Plate Boundary**	**9.95**	**142**	*e*P			Pn	06 40 55.5	-6.0
LVC	**Limon Verde**	**10.56**	**141**	*e*Pn			**Pn**	**06 41 11.1**	**+0.9**
LVC				*e*Sn			**Sn**	**06 43 05.5**	**-2.2**
SAML	**Samuel**	**13.86**	**68**	*e*Pn			**Pn**	**06 41 52.8**	**-2.2**
	14nm,0.6s								
SIV	**San Ignacio**	**14.63**	**98**	Pn			**Pn**	**06 42 03.4**	**-2.2**
SIV	**San Ignacio**	**14.63**	**98**	Pn			**Pn**	**06 42 03.4**	**-2.2**
	1.7nm,0.3s,baz=284,slow=13,SNR=31								
SIV					LR		LR	06 48 29.7	
	comp=Z,17μm,18.9s,slow=41								
OTAV	**Otavalo**	**14.86**	**351**	*e*Pn			**P**	**06 42 12.8**	**-1.8**
LCO	**Las Campanas**	**15.26**	**162**	*e*Pn			**Pn**	**06 42 14.9**	**+0.7**
	78nm,1.3s								
CFAA	**Coronel Fontan**	**18.47**	**158**	P			**Pn**	**06 42 54.5**	**+0.2**
CFAA	**Coronel Fontan**	**18.47**	**158**	P			**Pn**	**06 42 54.5**	**+0.2**
	0.1nm,0.3s,baz=343,slow=9.1,SNR=8.3								
CFAA					LR		LR	06 48 52.9	
	comp=Z,235nm,19.1s,baz=340,slow=33								
ROSC	**El Rosal**	**19.35**	**5**	*e*P			**Pn**	**06 43 07.8**	**+2.3**
ROSC	**El Rosal**	**19.35**	**5**	P			**Pn**	**06 43 07.7**	**+2.3**
	0.7nm,0.3s,baz=201,slow=3.7,SNR=12								
ROSC					LR		LR	06 51 20.7	
	comp=Z,3μm,20.3s,baz=193,slow=40								
LMEL	**Las Melosas**	**19.97**	**165**	*e*P			**Pn**	**06 43 13.3**	**+0.9**
LMEL	**Las Melosas**	**19.97**	**165**	*e*P			**Pn**	**06 43 13.3**	**+0.9**
BCIP	**Isla Barro Col**	**23.83**	**351**	*e*P			**P**	**06 43 52.2**	**+1.0**
	25nm,1.8s								
SDV	**Santo Domingo**	**23.91**	**14**	*e*P			**P**	**06 43 51.9**	**-0.3**
	82nm,0.8s								
JTS	**JuntasAbangare**	**26.16**	**340**	*e*P			**P**	**06 44 13.4**	**+0.8**
	1μm,2.5s								
PLCA	**Paso Flores**	**26.55**	**170**	*e*P			**P**	**06 44 16.4**	**+0.5**
PLCA	**Paso Flores**	**26.55**	**170**	P			**P**	**06 44 15.5**	**-0.4**
	6.6nm,0.7s,baz=339,slow=11,SNR=12								
PLCA					LR		LR	06 52 25.0	
	comp=Z,993nm,20.3s,baz=339,slow=31								
BDFB	**Brasilia**	**27.19**	**96**	P			**P**	**06 44 20.9**	**-1.0**
BDFB	**Brasilia**	**27.19**	**96**	P			**P**	**06 44 20.9**	**-1.0**
	14nm,0.6s,baz=262,slow=12,SNR=29								
BDFB					LR		LR	06 57 06.7	
	comp=Z,2μm,21.6s,baz=262,slow=41								
SPB	**Sao Paulo**	**28.55**	**113**	*e*P			**P**	**06 44 35.4**	**+1.4**
	181nm,1.8s								
CRPR	**Cabo Rojo, PR**	**33.55**	**16**	*e*P			**P**	**06 45 18.5**	**+0.6**
	43nm,0.8s								
OBIP	**Obispado Ponce**	**33.72**	**17**	*e*P			**P**	**06 45 18.6**	**-0.8**
	44nm,0.9s								
MPR	**Mayaguez**	**33.73**	**16**	*e*P			**P**	**06 45 19.2**	**-0.3**
	93nm,1.0s								
CELP	**Cerrillos**	**33.75**	**17**	*e*P			**P**	**06 45 18.7**	**-1.0**
LRS	**Lares**	**33.89**	**16**	*e*P			**P**	**06 45 20.1**	**-0.8**
SJG	**San Juan**	**33.91**	**17**	*e*P			**P**	**06 45 20.1**	**-0.9**
	24nm,0.8s								
AOPR	**Arecibo Observ**	**33.97**	**16**	*e*P			**P**	**06 45 21.3**	**-0.3**
	50nm,0.9s								
TEIG	**Tepich**	**36.55**	**341**	*e*P			**P**	**06 45 43.6**	**-0.1**
	21nm,0.8s								
RCBR	**Riachuelo**	**40.50**	**82**	*e*P			**P**	**06 46 17.3**	**+0.1**
	34nm,1.1s								
HKT	**Hockley**	**48.13**	**337**	*c iP*			**P**	**06 47 17.9**	**+0.1**
HKT	**Hockley**	**48.13**	**337**	*e*P			**P**	**06 47 17.5**	**-0.3**
	84nm,2.2s								
GOGA	**Godfrey**	**48.19**	**352**	*e*P			**P**	**06 47 17.5**	**-0.8**
GOGA					pmax		pmax		
	comp=Z,28nm,1.4s								
GOGA	**Godfrey**	**48.19**	**352**	*e*P			**P**	**06 47 17.5**	**-0.8**
	comp=Z,28nm,1.4s								
LRAL	**Lakeview Retre**	**48.43**	**348**	*e*P			**P**	**06 47 18.8**	**-1.4**
	comp=Z,30nm,1.3s								
732A	**Laxson Ranch,**	**48.79**	**332**	⇓P			**P**	**06 47 23.3**	**+0.2**
	baz=49,SNR=11								
632A	**Uvalde**	**49.37**	**333**	⇑P			**P**	**06 47 27.5**	**0.0**
	baz=50,SNR=8.6								
631A	**Perdido Creek**	**49.65**	**332**	⇓P			**P**	**06 47 29.6**	**0.0**
	baz=50,SNR=17								
KMSC	**Kings Mountain**	**49.65**	**354**	⇓P			**P**	**06 47 29.1**	**-0.5**
	baz=50,SNR=5.6								
532A	**Rocksprings**	**49.96**	**333**	⇓P			**P**	**06 47 32.2**	**+0.2**
	baz=50,SNR=14								
JCT	**Junction City**	**50.22**	**333**	*e*P			**P**	**06 47 35.1**	**+1.1**
JCT					pmax		pmax		
	comp=Z,42nm,1.6s								
JCT	**Junction City**	**50.22**	**333**	*e*P			**P**	**06 47 35.1**	**+1.1**
	comp=Z,42nm,1.6s								
JCT	**Junction City**	**50.22**	**333**	⇑P			**P**	**06 47 34.3**	**+0.3**
	baz=50								
531A	**Rocksprings**	**50.28**	**332**	⇑P			**P**	**06 47 34.6**	**+0.2**
	baz=50,SNR=22								
CPCT	**Cooper Cave**	**50.34**	**351**	*e*P			**P**	**06 47 33.8**	**-1.0**
SWET	**Sewanee**	**50.34**	**350**	*e*P			**P**	**06 47 33.7**	**-1.1**
	comp=Z,32nm,1.3s								
TKL	**Tuckaleechee C**	**50.44**	**352**	*e*P			**P**	**06 47 35.5**	**-0.1**
PLAL	**Pickwick Lake**	**50.53**	**347**	*e*P			**P**	**06 47 34.7**	**-1.5**
	comp=Z,26nm,1.3s								
432A	**Menard**	**50.55**	**333**	⇓P			**P**	**06 47 36.6**	**+0.1**
	baz=51								
WHTX	**Lake Whitney**	**50.57**	**336**	⇓P			**P**	**06 47 36.7**	**+0.2**
	baz=51								
530A	**J-C Ranch, Com**	**50.62**	**332**	⇓P			**P**	**06 47 37.4**	**+0.3**
	baz=51,SNR=14								
431A	**Sonora**	**50.74**	**333**	⇓P			**P**	**06 47 38.0**	**+0.1**
	baz=51,SNR=15								
628A	**Black Gap, Mar**	**50.81**	**330**	⇓P			**P**	**06 47 38.8**	**+0.3**
	baz=51,SNR=22								
332A	**Millersview**	**50.97**	**334**	⇑P			**P**	**06 47 39.6**	**0.0**
	baz=51,SNR=18								
529A	**Stev Forest Ra**	**51.02**	**331**	⇑P			**P**	**06 47 40.0**	**-0.1**
	baz=51,SNR=30								
627A	**Terlingua Ranc**	**51.03**	**329**	⇑P			**P**	**06 47 40.6**	**+0.3**
	baz=51,SNR=8.4								
TXAR	**Lajitas Array**	**51.07**	**329**	P			**P**	**06 47 40.8**	**+0.3**
TXAR	**Lajitas Array**	**51.07**	**329**	P			**P**	**06 47 40.8**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=150,slow=8.6,SNR=21								
TXAR					LR		LR	07 08 03.0	
	comp=Z,1μm,18.5s,baz=185,slow=35								
430A	**Baggett Ranch,**	**51.12**	**332**	⇓P			**P**	**06 47 41.2**	**+0.4**
	baz=51,SNR=13								
331A	**San Angelo**	**51.20**	**333**	⇓P			**P**	**06 47 41.2**	**-0.2**
	baz=51,SNR=16								
429A	**Davenport Ranc**	**51.28**	**331**	⇑P			**P**	**06 47 42.0**	**-0.1**
	baz=52,SNR=16								
TZTN	**Tazewell**	**51.28**	**352**	*e*P			**P**	**06 47 40.7**	**-1.2**
	comp=Z,47nm,1.5s								
528A	**Cox Ranch, San**	**51.32**	**330**	⇓P			**P**	**06 47 42.2**	**-0.1**
	baz=52								
232A	**Coleman**	**51.37**	**334**	⇓P			**P**	**06 47 42.3**	**-0.3**
	baz=52,SNR=18								
UALR	**University of**	**51.40**	**343**	*e*P			**P**	**06 47 43.1**	**+0.4**
	comp=Z,55nm,1.5s								
626A	**Big Bend Ranch**	**51.48**	**329**	⇓P			**P**	**06 47 44.4**	**+0.8**
	baz=52,SNR=30								
WVT	**Waverly**	**51.59**	**348**	*e*P			**P**	**06 47 42.4**	**-1.7**
WVT					pmax		pmax		
	comp=Z,20nm,1.2s								
WVT	**Waverly**	**51.59**	**348**	*e*P			**P**	**06 47 42.4**	**-1.7**
	comp=Z,20nm,1.2s								
330A	**Mertzon**	**51.61**	**333**	⇓P			**P**	**06 47 44.3**	**-0.2**
	baz=52								
BLA	**Blacksburg**	**51.63**	**356**	*e*P			**P**	**06 47 43.5**	**-1.0**
BLA					pmax		pmax		
	comp=Z,63nm,1.7s								
BLA	**Blacksburg**	**51.63**	**356**	*e*P			**P**	**06 47 43.5**	**-1.0**
	comp=Z,63nm,1.7s								
231A	**Bronte**	**51.69**	**334**	⇓P			**P**	**06 47 45.0**	**0.0**
	baz=52								
527A	**Woodward Ranch**	**51.71**	**329**	⇑P			**P**	**06 47 45.4**	**+0.1**
	baz=52								
428A	**Kincaid Ranch,**	**51.74**	**331**	⇓P			**P**	**06 47 45.6**	**+0.2**
	baz=52								
526A	**Mary Lane Ranc**	**51.87**	**329**	⇑P			**P**	**06 47 46.5**	**0.0**
	baz=52								
JSRW	**J. Sargeant Re**	**51.98**	**358**	*e*P			**P**	**06 47 46.8**	**-0.1**
230A	**Sterling City**	**52.00**	**333**	⇓P			**P**	**06 47 47.2**	**-0.2**
	baz=52								
ABTX	**Abilene, Hawle**	**52.00**	**335**	⇓P			**P**	**06 47 47.3**	**0.0**
	baz=52								
329A	**Wagon Wheel Ra**	**52.05**	**332**	⇓P			**P**	**06 47 47.7**	**-0.1**
	baz=52								
427A	**Hayter Ranch,**	**52.18**	**330**	⇑P			**P**	**06 47 48.3**	**-0.5**
	baz=52								
426A	**McDonald Obser**	**52.34**	**329**	⇑P			**P**	**06 47 50.2**	**+0.1**
	baz=52,SNR=6.4								
328A	**Wristen Ranch,**	**52.34**	**331**	⇑P			**P**	**06 47 50.0**	**+0.1**
	baz=52,SNR=17								
131A	**Roby**	**52.36**	**334**	⇓P			**P**	**06 47 50.0**	**0.0**
	baz=53								
229A	**Bryant Ranch,**	**52.38**	**332**	⇑P			**P**	**06 47 49.9**	**-0.3**
	baz=53								
CBN	**Corbin**	**52.48**	**359**	*e*P			**P**	**06 47 50.5**	**-0.1**
	comp=Z,24nm,0.9s								
PARMO	**Parma**	**52.52**	**346**	*e*P			**P**	**06 47 50.6**	**-0.4**
Z32A	**Haskell**	**52.53**	**335**	⇑P			**P**	**06 47 51.4**	**+0.2**
	baz=53								
130A	**Snyder**	**52.54**	**333**	⇑P			**P**	**06 47 51.1**	**-0.3**
	baz=53								
327A	**Balmorhea Ranc**	**52.66**	**330**	⇑P			**P**	**06 47 52.0**	**-0.3**
	baz=53								
Z31A	**Sharp Cattle R**	**52.81**	**335**	⇓P			**P**	**06 47 53.2**	**-0.1**
	baz=53,SNR=15								
326A	**Caldwell Ranch**	**52.85**	**330**	⇓P			**P**	**06 47 53.4**	**-0.3**
	baz=53,SNR=8.3								
228A	**UT Block 9, Go**	**52.86**	**332**	⇑P			**P**	**06 47 53.3**	**-0.4**
	baz=53,SNR=6.4								
129A	**Stewart Farms,**	**52.96**	**333**	⇓P			**P**	**06 47 54.5**	**0.0**
	baz=53								
227A	**Bennet, Jal**	**53.09**	**331**	⇑P			**P**	**06 47 55.1**	**-0.4**
	baz=53								
Y32A	**R-V Farms, Ver**	**53.12**	**336**	⇓P			**P**	**06 47 55.5**	**-0.1**
	baz=53								
Z30A	**Sanderson Ranc**	**53.20**	**334**	⇑P			**P**	**06 47 56.1**	**-0.1**
	baz=53,SNR=12								
128A	**Castleberry Fa**	**53.23**	**332**	⇓P			**P**	**06 47 55.7**	**-0.8**
	baz=53,SNR=6.8								
USIN	**University of**	**53.33**	**349**	*e*P			**P**	**06 47 56.5**	**-0.5**
	comp=Z,49nm,1.3s								
325A	**Bean Ranch, Si**	**53.38**	**329**	⇓P			**P**	**06 47 57.5**	**-0.2**
	baz=54,SNR=25								
SIUC	**Southern Illin**	**53.41**	**347**	*e*P			**P**	**06 47 56.6**	**-1.0**
	comp=Z,20nm,0.8s								
Y31A	**Rekieta Farm,**	**53.42**	**335**	⇑P			**P**	**06 47 57.2**	**-0.6**
	baz=54,SNR=15								
Z29A	**Hungry Hill Ra**	**53.42**	**333**	⇓P			**P**	**06 47 57.3**	**-0.7**
	baz=54,SNR=5.5								
TUL1	**Tulsa**	**53.51**	**340**	⇓P			**P**	**06 47 57.8**	**-0.5**
	baz=54,SNR=7.6								
WMOK	**Wichita Mounta**	**53.51**	**337**	*e*P			**P**	**06 47 57.4**	**-1.0**
WMOK					pmax		pmax		
	comp=Z,20nm,1.4s								
WMOK	**Wichita Mounta**	**53.51**	**337**	*e*P			**P**	**06 47 57.4**	**-1.0**
	comp=Z,20nm,1.4s								
226B	**Tecolote Peak,**	**53.56**	**330**	⇑P			**P**	**06 47 59.0**	**+0.1**
	baz=54,SNR=26								
Y30A	**Stafford Cattl**	**53.61**	**334**	⇑P			**P**	**06 47 58.7**	**-0.5**
	baz=54,SNR=11								
SDMD	**Soldier's Deli**	**53.67**	**359**	*e*P			**P**	**06 47 59.1**	**-0.3**
	comp=Z,25nm,1.1s								
127A	**Arkansas Junct**	**53.68**	**331

baz=56,SNR=22
U30A **WK&E Inc. Balk** 55.81 336 ⇓P P 06 48 15.1 -0.1
baz=56
Z22A **Elephant Butte** 55.89 329 ⇑P P 06 48 16.2 +0.3
baz=56,SNR=17
T31A **Randall Ranch,** 55.94 337 ⇑P P 06 48 15.7 -0.3
baz=56
Y23A **Lovelace Mesa,** 55.99 330 ⇑P P 06 48 16.9 +0.2
baz=56,SNR=13
RKT **Rikitea** 56.01 252 *e*S S 06 56 00.3 -3.4
comp=Z,1μm,26.0s
RKT *e*LR LR 07 04 22.9
comp=Z,1μm,27.0s,baz=88
RKT *e*T T 07 48 25.4
comp=Z,16nm,0.2s
V27A **Dan Oppiter Fa** 56.04 334 ⇓P P 06 48 17.1 +0.2
baz=56
120A **U Bar Ranch, L** 56.19 327 ⇑P P 06 48 18.2 +0.1
baz=56
X24A **Lazy VL Ranch,** 56.21 331 ⇓P P 06 48 18.1 -0.2
baz=56
Z21A **St. Cloud Mine** 56.29 328 ⇓P P 06 48 19.4 +0.6
baz=56,SNR=8.0
W25A **X Bar L Ranch,** 56.30 332 ⇓P P 06 48 18.3 -0.4
baz=56,SNR=16
U28A **Mallet** 56.31 335 ⇓P P 06 48 18.7 -0.1
baz=56
Y22A **Socorro** 56.44 329 ⇑P P 06 48 20.1 +0.2
baz=57,SNR=12
BNM **Barren Site** 56.44 330 *e*P P 06 48 22.0 +2.0
comp=Z,26nm,0.2s
BINY **Binghamton** 56.45 0 *e*P P 06 48 19.2 -0.4
comp=Z,12nm,0.7s
V26A **Tequesquite Ra** 56.48 333 ⇑P P 06 48 19.9 -0.2
baz=57
LPM **Los Pinos Moun** 56.58 330 *e*P P 06 48 22.4 +1.6
X23A **Hourglass Bar** 56.58 330 ⇑P P 06 48 20.9 +0.1
baz=57
U27A **Thompson Grove** 56.60 334 ⇑P P 06 48 20.8 0.0
baz=57
T29A **Hugoton** 56.61 336 ⇑P P 06 48 21.0 +0.2
baz=57
Z20A **Nine Sixteen R** 56.61 327 ⇑P P 06 48 21.3 +0.2
baz=57,SNR=17
LENM **Lemitar** 56.62 329 *e*P P 06 48 24.0 +2.9
KSU1 **Kansas State U** 56.68 341 *e*P P 06 48 20.7 -0.5
comp=Z,9.8nm,0.8s
S30A **Montezuma** 56.71 337 ⇑P P 06 48 21.6 +0.1
baz=57
W24A **Lazy 6 Ranch,** 56.73 331 ⇓P P 06 48 21.7 -0.1
baz=57
Y21A **Point of Rocks** 56.85 329 ⇓P P 06 48 23.0 +0.2
baz=57,SNR=7.1
V25A **Rancho No Teng** 56.88 332 ⇑P P 06 48 23.0 0.0
baz=57,SNR=17
LAZ **Ladron** 56.90 329 *e*P P 06 48 23.3 +0.2
comp=Z,6.9nm,0.2s
T28A **Walsh** 56.90 335 ⇑P P 06 48 22.5 -0.5
baz=57
X22A **Bernardo** 56.92 330 ⇑P P 06 48 23.0 -0.2
baz=57
S29A **Ulysses** 56.94 336 ⇑P P 06 48 23.4 +0.2
baz=57
U26A **Atchley Ranch,** 56.97 334 ⇓P P 06 48 23.3 -0.2
baz=57
ANMO **Albuquerque** 57.00 330 *e*P P 06 48 24.3 +0.5
ANMO **Albuquerque** 57.00 330 P P 06 48 23.9 +0.1
comp=Z,6.1nm,1.1s,baz=148,slow=10,SNR=17
ANMO LR LR 07 10 15.9
comp=Z,281nm,21.7s,baz=53,slow=33
TRY **Troy** 57.03 2 *e*P P 06 48 23.3 -0.3
comp=Z,1μm,2.0s
W23A **Werner Place,** 57.03 331 ⇓P P 06 48 24.2 +0.1
baz=57
V24A **Rampart Ranch,** 57.09 332 ⇓P P 06 48 23.8 -0.7
baz=57
T27A **Campo** 57.10 335 ⇑P P 06 48 24.2 -0.3
baz=57
Y20A **Horse Springs,** 57.12 328 ⇓P P 06 48 25.3 +0.5
baz=57,SNR=9.0
TUC **Tucson** 57.18 325 *e*P P 06 48 25.6 +0.6
TUC **Tucson** 57.18 325 *e*P P 06 48 25.6 +0.6
comp=Z,3.1nm,1.1s
R30A **Dighton** 57.21 338 ⇑P P 06 48 24.9 -0.2
baz=57
S28A **Manter** 57.22 336 ⇑P P 06 48 24.6 -0.6
baz=57,SNR=7.5
X21A **Alamocita Cree** 57.25 329 ⇓P P 06 48 26.1 +0.4
baz=58,SNR=18
U25A **Circle Dot Ran** 57.26 333 ⇓P P 06 48 25.4 -0.2
baz=58,SNR=5.6
W22A **Albuquerque** 57.30 330 ⇑P P 06 48 25.7 -0.2
baz=58
V23A **Ortiz Mt. (NFS** 57.52 331 ⇑P P 06 48 27.2 -0.4
baz=58
T26A **Comanche Natio** 57.56 334 ⇑P P 06 48 27.5 -0.2
baz=58
R29A **Marienthal** 57.65 337 ⇑P P 06 48 28.0 -0.2
baz=58
ACCN **Adirondack Com** 57.68 2 *e*P P 06 48 27.8 -0.4
comp=Z,32nm,1.0s
X20A **Quemado** 57.69 328 ⇑P P 06 48 28.7 -0.1
baz=58
R28A **Tribune** 57.84 336 ⇑P P 06 48 29.1 -0.4
baz=58
T25A **Trinidad** 57.88 333 ⇓P P 06 48 29.8 -0.2
baz=58
S26A **Kim** 57.89 335 ⇓P P 06 48 30.1 +0.1
baz=58,SNR=12
V22A **San Miguel Ran** 58.00 331 ⇓P P 06 48 31.3 +0.3
baz=58,SNR=13
U23A **El Rito** 58.01 332 ⇑P P 06 48 30.9 0.0
baz=58
214A **Organ Pipe Nat** 58.06 323 ⇑P P 06 48 31.7 +0.5
baz=58,SNR=11
T24A **Torres, Weston** 58.11 333 ⇓P P 06 48 31.6 -0.1
baz=58
W20A **Ramah** 58.15 329 ⇓P P 06 48 32.0 +0.1
baz=58
R27A **Eads** 58.18 335 ⇓P P 06 48 32.6 +0.7
baz=58
V21A **Milan** 58.26 330 ⇓P P 06 48 33.1 +0.3
baz=58
S25A **Robets Cordova** 58.33 334 ⇑P P 06 48 33.2 0.0
baz=58
U22A **Llaves** 58.35 331 ⇓P P 06 48 34.0 +0.6
baz=59,SNR=11
X18A **Snowflake** 58.42 327 ⇓P P 06 48 34.2 +0.4
baz=59
R26A **Arlington** 58.46 335 ⇑P P 06 48 34.1 +0.1
baz=59
Q28A **Sharon Springs** 58.47 337 ⇓P P 06 48 34.3 +0.3
baz=59
T23A **Casias Ranch,** 58.52 332 ⇓P P 06 48 34.7 +0.2
baz=59
S24A **Houchin Ranch,** 58.65 333 ⇑P P 06 48 35.7 +0.2
baz=59
V20A **Brimhall** 58.66 329 ⇓P P 06 48 35.6 +0.1
baz=59
R25A **Fountain Ranch** 58.67 334 ⇑P P 06 48 35.6 +0.1
baz=59
KSCO **Kaye Shedlock'** 58.74 336 ⇑P P 06 48 36.4 +0.5
baz=59
W18A **Petrified Fore** 58.77 328 ⇓P P 06 48 36.9 +0.6
baz=59
U21A **Nageezi** 58.77 330 ⇑P P 06 48 36.8 +0.5
baz=59,SNR=6.5
SDCO **Great Sand Dun** 58.86 333 *e*P P 06 48 36.7 -0.2
comp=Z,16nm,1.2s
P28A **Saint Francis** 58.89 337 ⇑P P 06 48 37.2 +0.3
baz=59
T22A **Edith** 58.89 331 ⇓P P 06 48 38.0 +0.8
baz=59
Q26A **Hugo** 59.02 335 ⇑P P 06 48 38.5 +0.6
baz=59
SADO **Sadowa** 59.09 358 P P 06 48 36.2 -1.8
SADO **Sadowa** 59.09 358 P P 06 48 36.2 -1.8
comp=Z,12nm,0.9s,baz=210,slow=7.2,SNR=8.7
R24A **Sanders Place,** 59.10 334 ⇑P P 06 48 38.9 +0.4
baz=59,SNR=5.2
X16A **Lo Mia Camp, P** 59.13 326 ⇑P P 06 48 39.3 +0.6
baz=59,SNR=6.9
FRNY **Flat Rock** 59.13 2 *e*P P 06 48 37.8 -0.6
comp=Z,32nm,0.9s
T21A **Navajo Lake** 59.17 331 ⇑P P 06 48 38.9 -0.1
baz=59
P27A **Ficken Ranch,** 59.19 336 ⇑P P 06 48 39.0 0.0
baz=59
113A **Mohawk Valley,** 59.21 323 ⇑P P 06 48 39.2 +0.1
baz=59
Q25A **Bedland, Calha** 59.31 335 ⇑P P 06 48 39.9 -0.1
baz=60
R23A **Moffat** 59.38 333 ⇑P P 06 48 40.6 +0.1
baz=60
S22A **4UR Ranch, Cre** 59.46 332 ⇑P P 06 48 41.1 0.0
baz=60
P26A **Davis Ranch, A** 59.49 336 ⇑P P 06 48 41.5 +0.4
baz=60
Y14A **Wickenburg** 59.63 325 ⇓P P 06 48 42.8 +0.8
baz=60,SNR=8.0
O27A **Beecher Island** 59.70 337 ⇓P P 06 48 42.8 +0.3
baz=60
Q24A **Divide** 59.73 334 ⇓P P 06 48 43.0 0.0
baz=60
N28A **Pribbeno Ranch** 59.78 338 ⇑P P 06 48 43.4 +0.4
baz=60
P25A **Willow Gulch B** 59.78 335 ⇑P P 06 48 43.5 +0.3
baz=60
MVCO **Mesa Verde** 59.80 330 ⇓P P 06 48 43.8 +0.4
baz=60
R22A **Saguache, Gunn** 59.82 332 ⇑P P 06 48 44.3 +0.7
baz=60
S21A **Coal Bank Pass** 59.83 331 ⇑P P 06 48 44.3 +0.7
baz=60
WUAZ **Wupatki** 59.93 327 *e*P P 06 48 45.5 +1.3
comp=Z,21nm,1.1s
WUAZ **Wupatki** 59.93 327 ⇑P P 06 48 45.0 +0.8
baz=60,SNR=5.4
GLA **Glamis** 60.03 323 ⇓P P 06 48 45.9 +1.1
baz=60
O26A **Horse Wrangler** 60.06 336 ⇑P P 06 48 46.2 +1.2
baz=60
P24A **Kohler Place,** 60.09 335 ⇓P P 06 48 46.0 +0.7
baz=60
M29A **Burnside Ranch** 60.14 339 ⇓P P 06 48 46.7 +1.2
baz=60
OGNE **Ogallala** 60.19 338 *e*P P 06 48 45.5 -0.3
comp=Z,28nm,1.2s
OGNE **Ogallala** 60.19 338 ⇑P P 06 48 46.3 +0.5
baz=60
S20A **Disappointment** 60.23 331 ⇑P P 06 48 47.1 +0.7
baz=60,SNR=15
N27A **Anderson Farm,** 60.26 337 ⇑P P 06 48 46.5 +0.2
baz=60
R21A **Cimarron** 60.29 332 ⇑P P 06 48 46.9 +0.1
baz=60
M28A **Bar X Bar Ranc** 60.34 338 ⇓P P 06 48 47.2 +0.4
baz=60
Y12C **Blythe** 60.35 323 ⇓P P 06 48 47.9 +1.0
baz=61,SNR=6.7
P23A **Jefferson** 60.36 334 ⇓P P 06 48 47.6 +0.3
baz=61,SNR=9.0
Q22A **Creed Butte,** 60.41 333 ⇓P P 06 48 47.7 +0.1
baz=61
R20A **Redvale** 60.53 331 ⇓P P 06 48 48.8 +0.4
baz=61,SNR=18
PV01 **Paradox Valley** 60.58 331 *e*P P 06 48 49.1 +0.4
comp=Z,599nm,0.9s
ISCO **Idaho Springs** 60.62 334 *e*P P 06 48 49.4 +0.3
ISCO pmax pmax
comp=Z,28nm,1.8s
ISCO **Idaho Springs** 60.62 334 *e*P P 06 48 49.4 +0.3
comp=Z,28nm,1.8s
ISCO **Idaho Springs** 60.62 334 ⇓P P 06 48 49.0 -0.1
baz=61
O24A **Longmont** 60.67 335 ⇑P P 06 48 49.8 +0.6
baz=61
Q21A **Lamborn Mesa,** 60.68 332 ⇓P P 06 48 50.0 +0.7
baz=61
SMCO **Snowmass** 60.70 333 *e*P P 06 48 50.4 +0.7
comp=Z,19nm,1.3s
BC3 **Big Chuckawall** 60.83 323 ⇓P P 06 48 51.0 +0.7
baz=61,SNR=5.9
MONP **Monument Peak** 60.86 321 ⇑P P 06 48 50.9 +0.2
baz=61
S18A **Hurst Farm, Bl** 60.91 330 ⇑P P 06 48 51.3 +0.3
baz=61,SNR=11
ECSD **EROS Data Cent** 60.93 343 *e*P P 06 48 49.8 -0.9
comp=Z,49nm,1.6s
P22A **Eagle** 60.95 333 ⇑P P 06 48 51.1 -0.1
baz=61
W13A **Hualapai Mount** 60.97 325 ⇑P P 06 48 51.8 +0.3
baz=61,SNR=16
IRM **Iron Mountain** 61.01 323 ⇓P P 06 48 52.0 +0.5
baz=61,SNR=12
O23A **Lake Granby, G** 61.09 334 ⇑P P 06 48 52.3 +0.1
baz=61,SNR=6.2
U15A **North Rim** 61.10 327 ⇓P P 06 48 52.6 +0.3
baz=61,SNR=8.3
P21A **Newcastle** 61.19 333 ⇓P P 06 48 53.6 +0.8
baz=61
O22A **Kremmling** 61.32 334 ⇑P P 06 48 53.6 -0.2
baz=62
SPMN **St. Paul** 61.37 347 ⇓P P 06 48 52.5 -1.1
baz=62,SNR=6.5
PFO **Pinyon Flat Ob** 61.38 322 *e*P P 06 48 55.7 +1.5
PFO **Pinyon Flat Ob** 61.38 322 ⇓P P 06 48 55.1 +0.9
baz=62,SNR=8.2
BELC **Be Mtn. Jos** 61.39 323 ⇓P P 06 48 53.8 -0.3
baz=62
P20A **De Beque** 61.59 332 ⇑P P 06 48 55.7 +0.2
baz=62
N23A **Red Feather La** 61.68 335 ⇓P P 06 48 56.4 +0.3
baz=62
M24A **Cheyenne** 61.71 336 ⇓P P 06 48 56.6 +0.4
baz=62
K27A **Flueckinger Fa** 61.80 338 ⇑P P 06 48 57.2 +0.5
baz=62
N22A **Wattenberg Ran** 61.81 334 ⇓P P 06 48 57.4 +0.4
baz=62
PHWY **Pilot Hill** 61.82 335 *e*P P 06 48 57.6 +0.5
comp=Z,14nm,1.4s
MURC **Murrieta** 61.83 322 ⇑P P 06 48 57.6 +0.6
baz=62
L25A **Engebretsen Ra** 61.96 337 ⇓P P 06 48 58.5 +0.7
baz=62
P19A **Cripple Cowboy** 61.97 332 ⇓P P 06 48 58.6 +0.5
baz=62,SNR=7.2
O20A **White River Ci** 62.04 333 ⇑P P 06 48 58.5 0.0
baz=62,SNR=11
M23A **Laramie** 62.07 335 ⇓P P 06 48 58.5 -0.2
baz=62,SNR=12
BBRC **Big Bear Solar** 62.12 322 ⇑P P 06 48 59.5 +0.3
baz=62,SNR=5.0
HEC **Hector,Ludlow** 62.17 323 ⇑P P 06 49 00.5 +1.1
baz=62
N21A **Black Mountain** 62.23 333 ⇓P P 06 49 00.1 +0.3
baz=62,SNR=8.3
BRSD **Miller** 62.27 342 ⇓P P 06 48 59.7 0.0
baz=62
SRU **San Rafael** 62.28 330 ⇑P P 06 49 00.1 0.0
baz=62,SNR=13
TUQ **Turquoise Moun** 62.37 324 ⇑P P 06 49 01.6 +0.9
baz=63
M22A **Cedar Creek Ra** 62.37 335 ⇓P P 06 49 01.8 +1.0
baz=63
Q16A **Castle Valley** 62.44 330 ⇑P P 06 49 02.3 +1.1
baz=63
CCUT **Cedar City** 62.51 327 *e*P P 06 49 03.1 +1.3
comp=Z,13nm,1.1s
BFSC **Mount Baldy Ra** 62.54 322 ⇓P P 06 49 02.9 +1.0
baz=63
P18A **Preston Nutter** 62.55 331 ⇑P P 06 49 02.8 +0.7
baz=63
O19A **Miners Draw (B** 62.57 332 ⇓P P 06 49 02.4 +0.4
baz=63,SNR=15
L23A **Garrett** 62.60 336 ⇓P P 06 49 02.5 +0.2
baz=63
N20A **Spence Gulch,** 62.62 333 ⇓P P 06 49 02.7 +0.3
baz=63,SNR=9.6
MSU **Marysvale** 62.63 329 *e*P P 06 49 03.9 +1.4
MSU **Marysvale** 62.63 329 *e*P P 06 49 03.9 +1.4
MVU **Marysvale** 62.64 329 *e*P P 06 49 04.0 +1.4
comp=Z,5.7nm,0.8s
ARUT **Antelope Range** 62.73 327 *e*P P 06 49 04.5 +1.3
ARUT pmax pmax
comp=Z,15nm,0.8s
ARUT **Antelope Range** 62.73 327 *e*P P 06 49 04.5 +1.3
comp=Z,15nm,0.8s
MWC **Mount Wilson** 62.77 322 *e*P P 06 49 06.0 +2.5
MWC pmax pmax
comp=Z,14nm,1.0s
MWC **Mount Wilson** 62.77 322 *e*P P 06 49 06.0 +2.5
comp=Z,14nm,1.0s
GSC **Goldstone** 62.78 323 *e*P P 06 49 04.8 +1.4
GSC pmax pmax
comp=Z,12nm,1.3s
GSC **Goldstone** 62.78 323 *e*P P 06 49 04.8 +1.4
comp=Z,12nm,1.3s
GSC **Goldstone** 62.78 323 ⇓P P 06 49 03.0 -0.4
baz=63
M21A **Separation Pea** 62.86 334 ⇑P P 06 49 03.8 -0.2
baz=63,SNR=12
SHOC **Shoshone** 62.90 324 ⇑P P 06 49 04.3 +0.2
baz=63,SNR=5.5
K23A **Bowen Ranch, D** 63.11 336 ⇓P P 06 49 06.0 +0.4
baz=63
L21A **Rawlins** 63.16 334 ⇑P P 06 49 05.8 -0.2
baz=63,SNR=13
EDW2 **Edwards Air Fo** 63.18 322 ⇑P P 06 49 06.5 +0.4
baz=63
K22A **Casper** 63.38 335 ⇑P P 06 49 07.0 -0.3
baz=64,SNR=8.6
L20A **Wamsutter** 63.61 334 ⇑P P 06 49 09.4 +0.5
baz=64
FURC **Furnace Creek,** 63.63 324 ⇑P P 06 49 09.2 +0.3
baz=64,SNR=5.5
DAU **Daniels Canyon** 63.65 331 *e*P P 06 49 10.7 +1.3
DAU **Daniels Canyon** 63.65 331 *e*P P 06 49 10.7 +1.3
K21A **Alcova** 63.67 335 ⇓P P 06 49 09.4 +0.1
baz=64,SNR=11
MPMC **Manual Prospec** 63.71 323 ⇓P P 06 49 10.2 +0.5
baz=64,SNR=7.4
JLU **Jordanelle** 63.89 331 *e*P P 06 49 11.8 +0.9
comp=Z,63nm,1.8s
J22A **Midwest** 64.00 336 ⇓P P 06 49 11.5 +0.1
baz=64
ISA **Isabella** 64.01 322 *e*P P 06 49 13.1 +1.6
ISA pmax pmax
comp=Z,9.0nm,0.9s
ISA **Isabella** 64.01 322 *e*P P 06 49 13.1 +1.6
comp=Z,8.8nm,0.9s
ISA **Isabella** 64.01 322 ⇓P P 06 49 11.8 +0.3
baz=64,SNR=5.0
L19A **Farson** 64.13 333 ⇓P P 06 49 12.6 +0.2
baz=64
K20A **Yellowstone Ra** 64.14 334 ⇑P P 06 49 12.4 0.0
baz=64,SNR=6.3
M17A **Scullys Gap (B** 64.21 332 ⇑P P 06 49 13.1 +0.2
baz=64,SNR=7.3
DUG **Dugway** 64.23 329 *e*P P 06 49 14.0 +0.9
DUG pmax pmax
comp=Z,17nm,0.8s
DUG **Dugway** 64.23 329 *e*P P 06 49 14.0 +0.9
comp=Z,17nm,0.8s
DUG **Dugway** 64.23 329 ⇑P P 06 49 13.9 +0.9
baz=64,SNR=34
R11A **Troy Canyon, C** 64.28 326 ⇓P P 06 49 14.2 +0.8
baz=64,SNR=16
L18A **Fontenelle, Gr** 64.28 332 ⇓P P 06 49 13.1 -0.3
baz=64,SNR=8.4
PKM **Peak Mountain** 64.29 321 ⇑P P 06 49 14.0 +0.4
baz=64
GRAC **Grapevine Rang** 64.30 324 ⇓P P 06 49 14.0 +0.7
baz=64
CWC **Cottonwood Cre** 64.31 323 ⇑P P 06 49 13.8 +0.2
baz=64
J21A **Lysite** 64.34 335 ⇑P P 06 49 13.4 -0.2
baz=64,SNR=11
H24A **Dirks Ranch, A** 64.41 338 ⇑P P 06 49 13.8 -0.2
baz=65
I22A **9 Mile Ranch,** 64.41 336 ⇑P P 06 49 13.9 -0.1
baz=65,SNR=6.7
VES **Vestal, Richgr** 64.49 322 ⇑P P 06 49 15.1 +0.5
baz=65,SNR=6.0
K19A **Absolon Red Bu** 64.49 334 ⇑P P 06 49 14.2 -0.5
baz=65,SNR=6.8
J20A **Shoshoni** 64.61 335 ⇓P P 06 49 15.3 0.0
baz=65
I21A **Big Trails, Te** 64.66 336 ⇓P P 06 49 15.2 -0.6
baz=65,SNR=14
HWUT **Hardware Ranch** 64.73 331 *e*P P 06 49 16.2 -0.1
comp=Z,15nm,0.9s
BW06 **Boulder Array** 64.75 333 *e*P P 06 49 15.4 -1.0
comp=Z,11nm,1.2s
PDAR **Pinedale Array** 64.75 333 P P 06 49 16.4 0.0
PDAR **Pinedale Array** 64.75 333 P P 06 49 16.4 0.0
comp=Z,2.9nm,1.0s,baz=145,slow=8.1,SNR=13
PDAR LR LR 07 17 14.8
comp=Z,452nm,21.0s,baz=147,slow=36
G24A **Alzada** 64.86 338 ⇓P P 06 49 16.4 -0.5
baz=65,SNR=5.1
J19A **Crowheart** 64.94 334 ⇓P P 06 49 17.2 -0.3
baz=65,SNR=12
G23A **Biddle** 65.10 338 ⇓P P 06 49 17.8 -0.7
baz=65,SNR=8.3
I20A **Worland** 65.11 335 ⇓P P 06 49 18.4 -0.3
baz=65
MTUM **Tungsten Hills** 65.22 324 *e*P P 06 49 21.8 +2.2
H21A **Big Horn, Sher** 65.24 336 ⇑P P 06 49 19.2 -0.3
baz=65
F24A **Ekalaka** 65.31 339 ⇑P P 06 49 19.4 -0.4
baz=66,SNR=12
AHID **Auburn Hatcher** 65.43 332 *e*P P 06 49 21.1 +0.2
comp=Z,9.9nm,1.1s
HVU **Hansel Valley** 65.43 331 *e*P P 06 49 21.5 +0.7
HVU pmax pmax
comp=Z,19nm,1.1s
HVU **Hansel Valley** 65.43 331 *e*P P 06 49 21.4 +0.7
comp=Z,19nm,1.1s
G22A **Birney** 65.45 337 ⇑P P 06 49 20.6 -0.2
baz=66
H20A **Greybull** 65.51 335 ⇓P P 06 49 20.9 -0.2
baz=66
MDND **Maddock** 65.54 343 ⇑P P 06 49 21.5 +0.3
baz=66
I19A **Meeteetse** 65.54 335 ⇑P P 06 49 21.5 0.0
baz=66
F23A **Volborg** 65.55 338 ⇓P P 06 49 20.9 -0.4
baz=66,SNR=7.6
MLAC **Mammoth Lakes** 65.57 324 ⇑P P 06 49 21.6 -0.3
baz=66
I18A **Diamond G Ranc** 65.62 334 ⇓P P 06 49 21.6 -0.4
baz=66,SNR=7.5
NV11 **Mina Array Sit** 65.75 325 *e*P P 06 49 23.4 +0.5
G21A **Lodge Grass** 65.81 336 ⇑P P 06 49 22.7 -0.3
baz=66
NVAR **Mina Array Bea** 65.83 325 P P 06 49 23.9 +0.4
NVAR **Mina Array Bea** 65.83 325 P P 06 49 23.9 +0.4
comp=Z,1.6nm,0.9s,baz=146,slow=6.6,SNR=12
NVAR LR LR 07 17 34.4
comp=Z,411nm,19.9s,baz=234,slow=36
SNOW **Snow King Moun** 65.83 333 *e*P P 06 49 24.6 +1.2
ELK **Elko** 65.86 328 P P 06 49 24.1 +0.3
ELK **Elko** 65.86 328 P P 06 49 24.1 +0.3
comp=Z,2.6nm,0.9s,baz=129,slow=3.9,SNR=8.7
E24A **Baker** 65.88 339 ⇑P P 06 49 23.5 0.0
baz=66
LOHW **Long Hollow** 65.89 333 *e*P P 06 49 24.1 +0.3
comp=Z,22nm,1.6s
F22A **Rosebud** 65.91 337 ⇑P P 06 49 23.2 -0.5
baz=66
RRI2 **Red Ridge** 65.99 333 *e*P P 06 49 24.7 +0.2
MOOW **Moose Ponds** 66.06 333 *e*P P 06 49 25.1 +0.3
H19A **Powell** 66.06 335 ⇑P P 06 49 24.3 -0.4
baz=66
I17A **Pilgrim Ck.** 66.12 333 ⇑P P 06 49 25.0 -0.3
baz=66
E23A **Ismay** 66.18 338 ⇑P P 06 49 25.5 +0.1
baz=66
G20A **Bridger** 66.20 336 ⇑P P 06 49 24.9 -0.8
baz=66,SNR=5.1
IMW **Indian Meadow** 66.26 333 *e*P P 06 49 27.1 +0.9
comp=Z,18nm,1.4s
H18A **Shoshone NF, C** 66.34 335 ⇑P P 06 49 26.5 -0.1
baz=66
D24A **Glendive** 66.37 339 ⇑P P 06 49 26.8 +0.2
baz=67,SNR=5.1
I16A **Newdale** 66.48 333 ⇑P P 06 49 27.9 +0.4
baz=67
H17A **Grant Village** 66.50 334 ⇑P P 06 49 27.9 +0.2
baz=67
RLMT **Red Lodge** 66.54 335 *e*P P 06 49 28.1 +0.2
comp=Z,14nm,1.0s
LKWY **Lake** 66.56 334 *e*P P 06 49 29.4 +1.3
LKWY pmax pmax
comp=Z,6.0nm,0.8s
LKWY **Lake** 66.56 334 *e*P P 06 49 29.4 +1.3
comp=Z,5.8nm,0.8s
F20A **Billings** 66.65 336 ⇓P P 06 49 28.4 -0.1
baz=67,SNR=5.4
D23A **Lindsay** 66.72 339 ⇓P P 06 49 29.0 +0.1
baz=67,SNR=16
CMB **Columbia Colle** 66.74 323 *e*P P 06 49 30.3 +1.1

CMB pmax pmax
comp=Z,10.0nm,1.1s
CMB Columbia Colle 66.74 323 *e*P **P 06 49 30.3 +1.1**
comp=Z,9.7nm,1.1s
C24A Savage 66.76 340 ⇓P **P 06 49 29.2 +0.1**
baz=67,SNR=7.6
ULM Lac du Bonnet 66.80 346 *e*P **P 06 49 28.4 -0.8**
ULM Lac du Bonnet 66.80 346 P **P 06 49 28.4 -0.7**
comp=Z,14nm,0.7s,baz=169,slow=7.5,SNR=11
G18A Lazy EL Ranch, 66.82 335 ⇑P **P 06 49 29.6 -0.1**
baz=67,SNR=20
E21A Keefer Ranch, 66.86 337 ⇓P **P 06 49 30.2 +0.5**
baz=67
YMR Madison River 66.89 334 *e*P **P 06 49 31.2 +1.1**
comp=Z,52nm,1.6s
J14A Carey 66.97 331 ⇑P **P 06 49 31.3 +0.7**
baz=67
F19A Roth Farm, Mol 67.01 336 ⇑P **P 06 49 30.9 +0.1**
baz=67,SNR=16
I15A Monteview 67.03 332 ⇑P **P 06 49 31.4 +0.5**
baz=67
H16A Russell Place, 67.04 334 ⇑P **P 06 49 31.3 +0.2**
baz=67,SNR=17
D22A Cohagen 67.05 338 ⇑P **P 06 49 31.3 +0.4**
baz=67,SNR=41
E20A Meyer Farm, Mu 67.23 337 ⇓P **P 06 49 32.3 +0.2**
baz=67,SNR=18
WCN Washoe City 67.25 325 *e*P **P 06 49 34.3 +1.8**
WCN pmax pmax
comp=Z,7.0nm,1.0s
WCN Washoe City 67.25 325 *e*P **P 06 49 34.3 +1.8**
comp=Z,7.0nm,1.0s
GCMT Greycliff 67.25 335 *e*P **P 06 49 32.5 +0.2**
comp=Z,22nm,1.5s
C23A Lambert 67.26 339 ⇑P **P 06 49 32.2 0.0**
baz=68,SNR=6.6
D21A La Casta Ranch 67.27 338 ⇓P **P 06 49 32.5 +0.1**
baz=68,SNR=16
G17A Pierce Place, 67.31 334 ⇓P **P 06 49 33.5 +0.7**
baz=68
J13A Cove Ranch, Pi 67.34 331 ⇑P **P 06 49 33.3 +0.3**
baz=68
F18A Big Timber 67.36 335 ⇑P **P 06 49 32.8 -0.2**
baz=68,SNR=22
I14A Mackay 67.41 332 ⇑P **P 06 49 34.1 +0.6**
baz=68,SNR=14
E19A Rath Farm, Rou 67.45 336 ⇑P **P 06 49 33.7 +0.2**
baz=68,SNR=16
C22A Vida 67.45 339 ⇑P **P 06 49 33.6 +0.1**
baz=68,SNR=20
DGMT Dagmar 67.50 340 *e*P **P 06 49 34.3 +0.6**
comp=Z,45nm,1.1s
DGMT Dagmar 67.50 340 ⇑P **P 06 49 34.1 +0.4**
baz=68,SNR=8.9
HLID Hailey 67.58 331 *e*P **P 06 49 35.5 +1.0**
comp=Z,24nm,1.7s
HLID Hailey 67.58 331 ⇑P **P 06 49 35.0 +0.5**
baz=68,SNR=15
H15A Lima 67.58 333 ⇑P **P 06 49 35.0 +0.5**
baz=68,SNR=14
I13A Wildhorse Cree 67.71 331 ⇓P **P 06 49 35.7 +0.3**
baz=68,SNR=13
D20A Manuel Ranch, 67.72 337 ⇓P **P 06 49 35.3 +0.1**
baz=68,SNR=14
F17A Fitzpatrick Pl 67.75 335 ⇓P **P 06 49 35.7 +0.2**
baz=68,SNR=8.6
B23A Brockton 67.76 340 ⇓P **P 06 49 35.8 +0.4**
baz=68,SNR=20
MCMT McKenzie Canyo 67.83 333 *e*P **P 06 49 36.9 +0.7**
comp=Z,2.2nm,0.6s
A24A Westby 67.84 341 ⇓P **P 06 49 36.4 +0.5**
baz=68,SNR=10
H14A Leadore 67.90 332 ⇑P **P 06 49 36.7 +0.1**
baz=68,SNR=13
G15A Dillon 67.94 333 ⇓P **P 06 49 37.0 +0.3**
baz=68,SNR=9.3
BOZ Bozeman (W) 67.95 334 *e*P **P 06 49 36.7 -0.1**
BOZ pmax pmax
comp=Z,8.0nm,1.1s
BOZ Bozeman (W) 67.95 334 *e*P **P 06 49 36.7 -0.1**
comp=Z,7.8nm,1.1s
C21A Desert Coulee 67.95 338 ⇓P **P 06 49 36.7 +0.1**
baz=68,SNR=17
B22A Reddig Ranch S 67.97 339 ⇑P **P 06 49 36.7 0.0**
baz=68,SNR=15
E18A Harlowton 67.98 336 ⇓P **P 06 49 37.0 +0.1**
baz=68,SNR=8.4
F16A Kennard Place, 68.06 334 ⇑P **P 06 49 37.4 0.0**
baz=68,SNR=6.5
D19A Cripps Ranch, 68.07 337 ⇑P **P 06 49 37.6 +0.2**
baz=68,SNR=12
I12A Atlanta 68.09 331 ⇑P **P 06 49 38.0 +0.3**
baz=68,SNR=8.0
DLMT Dillon 68.14 333 *e*P **P 06 49 38.5 +0.5**
comp=Z,19nm,1.4s
MFID Camas Ranch 68.14 330 *e*P **P 06 49 39.1 +1.1**
MFID Camas Ranch 68.14 330 ⇑P **P 06 49 37.9 0.0**
baz=68,SNR=16
C20A Veseth Ranch, 68.19 337 ⇓P **P 06 49 38.0 -0.1**
baz=68,SNR=7.0
OHCM Honcut 68.25 324 *e*P **P 06 49 40.7 +2.1**
E17A Martindale 68.28 335 ⇓P **P 06 49 39.0 +0.2**
baz=68,SNR=7.0
B21A Ellsworth Farm 68.43 338 ⇑P **P 06 49 39.9 +0.3**
baz=69,SNR=6.1
LRM Limekiln Ridge 68.44 334 *e*P **P 06 49 40.8 +0.8**
D18A Linhart Farms, 68.45 336 ⇑P **P 06 49 40.1 +0.3**
baz=69,SNR=5.8
F15A Butte 68.47 334 ⇓P **P 06 49 40.0 -0.1**
baz=69
A22A Carney Farms, 68.53 339 ⇓P **P 06 49 40.6 +0.4**
baz=69,SNR=22
H12A Diamond D Ranc 68.53 331 ⇑P **P 06 49 40.5 0.0**
baz=69,SNR=7.2
C19A Slack Wire Ran 68.60 337 ⇑P **P 06 49 40.7 0.0**
baz=69,SNR=12
G13A Cobalt 68.66 332 ⇑P **P 06 49 41.3 +0.1**
baz=69,SNR=7.6
E16A East Helena 68.68 334 ⇑P **P 06 49 41.3 0.0**
baz=69,SNR=6.6
D17A Six Diamond Ra 68.77 335 ⇓P **P 06 49 41.7 -0.1**
baz=69,SNR=12
F14A Wisdom 68.83 333 ⇓P **P 06 49 42.6 +0.3**
baz=69
WVOR Wild Horse Val 68.84 328 *e*P **P 06 49 43.0 +0.6**
WVOR pmax pmax
comp=Z,8.0nm,1.2s
WVOR Wild Horse Val 68.84 328 *e*P **P 06 49 43.0 +0.6**
comp=Z,8.2nm,1.2s
E15A Deer Lodge 69.00 334 ⇑P **P 06 49 43.3 0.0**
baz=69,SNR=5.3
D16A Dana Ranch, Ca 69.02 335 ⇓P **P 06 49 43.5 +0.1**
baz=69,SNR=5.6
VNA1 Neumayer--Stat 69.10 161 *e*P **P 06 49 45.7 +2.3**
EGMT Eagleton 69.11 337 *e*P **P 06 49 44.0 +0.1**
comp=Z,19nm,1.1s
EGMT Eagleton 69.11 337 ⇓P **P 06 49 43.7 -0.2**
baz=69,SNR=8.6
A20A Cobblestone Ra 69.14 338 ⇓P **P 06 49 43.9 -0.1**
baz=69
B19A Brinkman Farms 69.16 337 ⇓P **P 06 49 44.0 -0.1**
baz=69,SNR=17
C17A Wharram Farm, 69.19 336 ⇓P **P 06 49 44.6 +0.2**
baz=69,SNR=9.5
G12A Big Creek, Yel 69.19 331 ⇓P **P 06 49 44.8 +0.3**
baz=69
F13A Darby 69.24 332 ⇑P **P 06 49 44.9 +0.1**
baz=69,SNR=8.3
TBI Tubuai 69.27 250 *e*S **S 06 58 48.6 -1.6**
comp=Z,1μm,28.8s
TBI *e*LR LR 07 10 32.1
comp=Z,1μm,26.5s,baz=92
TBI *e*T T 08 05 06.2
comp=Z,22nm,0.3s
MOD Modoc 69.34 326 *e*P **P 06 49 46.5 +1.0**
comp=Z,19nm,1.0s
E14A Clinton 69.36 333 ⇑P **P 06 49 45.9 +0.3**
baz=70,SNR=10
B18A Beardsley Farm 69.42 337 ⇓P **P 06 49 46.0 +0.2**
baz=70,SNR=10
D15A Lincoln 69.43 334 ⇑P **P 06 49 46.2 +0.2**
baz=70,SNR=5.5
A19A Klindworth Far 69.48 338 ⇑P **P 06 49 46.3 +0.2**
baz=70,SNR=5.7
SCHQ Schefferville 69.55 6 *e*P **P 06 49 45.5 -0.9**
comp=Z,8.2nm,0.8s
SCHQ Schefferville 69.55 6 P **P 06 49 46.2 -0.1**
comp=Z,9.0nm,0.8s,baz=204,slow=4.6,SNR=11

SCHQ LR LR 07 21 46.4
comp=Z,352nm,19.8s,baz=201,slow=37
F12A Elk City 69.63 332 ⇓P **P 06 49 47.1 -0.2**
baz=70,SNR=7.7
CHMT Chamberlain Mo 69.64 334 *e*P **P 06 49 47.7 +0.4**
E13A Victor 69.68 333 ⇑P **P 06 49 47.9 +0.4**
baz=70,SNR=12
C16A Fuhringer Ranc 69.72 335 ⇓P **P 06 49 47.8 +0.2**
baz=70
B17A L&G Farms, Che 69.73 336 ⇓P **P 06 49 48.1 +0.3**
baz=70
MSO Missoula 69.87 333 *e*P **P 06 49 49.2 +0.5**
comp=Z,20nm,1.4s
MSO Missoula 69.87 333 ⇑P **P 06 49 48.7 0.0**
baz=70,SNR=12
A18A Metzger Ranch, 69.88 337 ⇑P **P 06 49 48.4 -0.1**
baz=70,SNR=17
D14A Greenough 69.88 334 ⇓P **P 06 49 48.7 0.0**
baz=70,SNR=7.0
BMO Blue Mountains 69.92 330 *e*P **P 06 49 49.2 +0.2**
comp=Z,8.5nm,1.1s
SLMT Seeley Lake 70.00 334 *e*P **P 06 49 50.5 +1.0**
TIAR Tiarei 70.00 256 *e*T T 08 06 01.1
comp=Z,27nm,0.2s
C15A Salmond Ranch, 70.05 335 ⇓P **P 06 49 50.5 +0.7**
baz=70,SNR=18
B16A M & M Farms, S 70.19 336 ⇓P **P 06 49 50.7 +0.2**
baz=70
PPT2 Papeete2 70.22 256 *e*S **S 06 58 57.0 -4.7**
comp=Z,1μm,28.2s
PPT2 *e*LR LR 07 10 57.9
comp=Z,662nm,26.2s,baz=97
PPT Papeete 70.22 256 LR LR 07 11 52.9
comp=Z,493nm,18.1s,baz=151,slow=28
A17A Triple J Farms 70.22 337 ⇑P **P 06 49 50.9 +0.2**
baz=70,SNR=6.7
D13A Huson 70.30 333 ⇑P **P 06 49 51.4 +0.2**
baz=70,SNR=7.3
SWMT Swartz Lake 70.42 334 *e*P **P 06 49 53.5 +1.5**
B15A Bradely Ranch, 70.45 335 ⇑P **P 06 49 52.3 +0.2**
baz=71,SNR=8.6
C14A Swan Lake 70.52 334 ⇑P **P 06 49 53.2 +0.7**
baz=71
YBH Yreka Blue Hor 70.55 325 P **P 06 49 52.1 -0.8**
YBH Yreka Blue Hor 70.55 325 P **P 06 49 52.1 -0.8**
comp=Z,3.0nm,0.8s,baz=232,slow=14,SNR=4.8
A16A West Butte Ran 70.58 336 ⇑P **P 06 49 52.8 -0.1**
baz=71,SNR=9.0
D12A Red Ives Fores 70.66 333 ⇑P **P 06 49 53.9 +0.4**
baz=71
YBMT Yellow Bay 70.70 334 *e*P **P 06 49 54.2 +0.5**
comp=Z,3.1nm,0.6s
JTMT Jette 70.73 334 *e*P **P 06 49 55.0 +1.1**
B14A Marquette Ranc 70.78 335 ⇑P **P 06 49 54.4 +0.1**
baz=71,SNR=9.7
C13A Hot Springs 70.80 334 ⇓P **P 06 49 54.6 +0.3**
baz=71,SNR=26
BLMT Blacktail Moun 70.97 334 *e*P P 06 50 02.2 +6.7
BSMT Bassoo Peak 71.03 334 *e*P **P 06 49 57.2 +1.4**
A15A Johnson Ranch, 71.05 335 ⇓P **P 06 49 55.8 0.0**
baz=71
SNAA Sanae 71.06 161 *e*P **P 06 49 56.7 +1.1**
C12B Naegeli Ranch, 71.22 333 ⇓P **P 06 49 57.2 +0.5**
baz=71
B13A Whitefish 71.29 334 ⇓P **P 06 49 57.7 +0.4**
baz=72
A14A Double T Ranch 71.33 335 ⇑P **P 06 49 57.6 +0.1**
baz=72,SNR=7.7
WALA Waterton Lakes 71.59 335 *e*P **P 06 49 59.6 +0.5**
comp=Z,0.4nm,1.0s
A13A Flathead Natio 71.70 335 ⇓P **P 06 50 00.4 +0.7**
baz=72
B12A Libby 71.85 334 ⇓P **P 06 50 00.9 +0.3**
baz=72,SNR=7.2
HAWA Hanford 72.11 330 *e*P **P 06 50 03.6 +1.5**
comp=Z,8.4nm,0.9s
A12A Yaak River Ran 72.23 334 ⇓P **P 06 50 03.7 +0.8**
baz=72
NEW Newport 72.36 333 *e*P **P 06 50 04.2 +0.5**
NEW Newport 72.36 333 P **P 06 50 03.0 -0.7**
comp=Z,4.6nm,0.9s,baz=116,slow=7.6,SNR=7.2
NEW Newport 72.36 333 ⇓P **P 06 50 04.0 +0.3**
baz=73,SNR=7.9
LIC Lamto 73.47 79 *e*P **P 06 50 11.1 +0.2**
comp=Z,21nm,0.8s
LIC *e*R
comp=Z,3μm,20.0s
LIC Lamto 73.47 79 *e*P **P 06 50 11.1 +0.2**
comp=Z,21nm,0.8s
DBIC Dimbokro 73.76 79 P **P 06 50 12.4 -0.2**
DBIC Dimbokro 73.76 79 P **P 06 50 12.4 -0.2**
comp=Z,13nm,0.8s,baz=235,slow=6.2,SNR=17
DBIC LR LR 07 20 49.4
comp=Z,2μm,20.5s,baz=220,slow=34
QSPA South Pole Qui 75.61 180 P **P 06 50 23.5 +1.0**
QSPA South Pole Qui 75.61 180 P **P 06 50 23.5 +1.0**
comp=Z,9.5nm,0.8s,baz=147,slow=2.2,SNR=39
FRB Frobisher Bay 78.26 3 P **P 06 50 36.6 -0.4**
FRB Frobisher Bay 78.26 3 P **P 06 50 36.6 -0.4**
comp=Z,4.7nm,0.9s,baz=204,slow=6.0,SNR=3.4
SBA Scott Base 81.35 191 *e*P **P 06 50 56.5 +2.7**
SBA Scott Base 81.35 191 *e*P **P 06 50 56.5 +2.7**
MORF Marmelete 81.67 48 *e*P **P 06 50 58.5 +2.2**
comp=Z,58nm,1.5s
MORF Marmelete 81.67 48 *e*P **P 06 50 56.2 -0.1**
MORF *e*S **S 07 01 08.1 +1.0**
PTEO Sao Teotonio 81.72 48 *e*P **P 06 50 58.8 +2.4**
comp=Z,87nm,1.6s
TOA0 Torodi Ar. Sit 81.83 74 *e*P **P 06 50 57.5 0.0**
TORD Torodi Ar. Bea 81.83 74 P **P 06 50 57.9 +0.4**
TORD Torodi Ar. Bea 81.83 74 P **P 06 50 57.9 +0.4**
comp=Z,48nm,0.6s,baz=263,slow=5.1,SNR=186
TORD LR LR 07 26 42.1
comp=Z,756nm,19.7s,baz=230,slow=35
LIS Lisbon 81.92 47 *e*P **P 06 50 57.6 +0.2**
LIS AMS AMS 07 24 16.2
comp=Z,1μm,22.9s
LIS Lisbon 81.92 47 *e*P **P 06 50 57.6 +0.2**
LIS Lisbon 81.92 47 *e*P **P 06 50 57.6 +0.2**
LIS *e*S **S 07 01 10.4 +0.9**
LIS *e*S **S 07 01 10.4 +0.9**
LIS A A 07 24 16.2
comp=Z,1μm,22.9s
LIS A A 07 24 16.2
comp=Z,1μm,22.9s
LIS Lisbon 81.92 47 *e*P **P 06 50 57.6 +0.2**
PNCL Nicolau / Gran 82.10 47 *e*P **P 06 51 00.5 +2.1**
comp=Z,33nm,1.8s
MESJ Messejana 82.20 48 *e*P **P 06 50 58.9 -0.1**
MESJ *e*S **S 07 01 14.1 +1.6**
MESJ AMS AMS 07 23 01.3
comp=Z,467nm,22.0s
MESJ Messejana 82.20 48 *e*P **P 06 50 58.9 -0.1**
MESJ *e*S **S 07 01 14.1 +1.6**
MESJ A A 07 23 01.3
comp=Z,467nm,22.0s
MESJ Messejana 82.20 48 *e*P **P 06 50 58.9 -0.1**
MESJ *e*S **S 07 01 14.1 +1.6**
PVAQ Vaqueiros 82.38 48 *e*P **P 06 51 01.8 +1.9**
comp=Z,26nm,2.0s
PVAQ *e*S **S 07 01 13.5 -0.8**
PVAQ *e*LR LR 07 18 19.1
comp=Z,513nm,20.0s
VNDA Vanda 82.42 191 *e*P **P 06 51 01.1 +1.6**
VNDA Vanda 82.42 191 P **P 06 51 00.8 +1.3**
comp=Z,3.3nm,0.9s,baz=121,slow=4.8,SNR=12
VNDA LR LR 07 21 37.9
comp=Z,346nm,18.3s,baz=122,slow=31
YKA Yellowknife Ar 82.46 343 P **P 06 50 59.1 -0.6**
YKA Yellowknife Ar 82.46 343 P **P 06 50 59.1 -0.6**
comp=Z,4.5nm,0.7s,baz=141,slow=6.0,SNR=104
PBEJ Beja 82.54 48 *e*P **P 06 51 02.4 +1.7**
comp=Z,32nm,1.5s
EVOP Sao Brissos 82.56 47 *e*P **P 06 51 02.0 +1.2**
EVOP Sao Brissos 82.56 47 *e*P **P 06 51 02.0 +1.2**
comp=Z,70nm,1.0s
EVO Evora 82.65 47 *e*P **P 06 51 02.0 +0.7**
comp=Z,70nm,1.0s
EVO *e*R
comp=Z,1μm,22.5s
EVO Evora 82.65 47 *e*P **P 06 51 03.2 +1.9**
comp=Z,37nm,1.7s
PMTG Montargil 82.72 47 *e*P **P 06 51 03.4 +1.7**
comp=Z,58nm,1.2s
PTOM Tomar 82.83 46 *e*P **P 06 51 03.7 +1.5**
comp=Z,82nm,1.8s

PBAR Barrancos 83.19 48 *e*P **P 06 51 04.9 +0.8**
comp=Z,21nm,0.8s
PMRV Marv??o 83.46 47 *e*P **P 06 51 06.1 +0.6**
comp=Z,18nm,1.9s
PMRV *e*LR LR 07 20 40.4
comp=Z,1μm,20.0s
PCBR Castelo Branco 83.57 46 *e*P **P 06 51 07.1 +1.1**
comp=Z,25nm,1.7s
PVIS Viseu 83.65 45 *e*P **P 06 51 06.8 +0.3**
comp=Z,38nm,1.3s
MTE Manteigas 83.76 46 *e*P **P 06 51 07.9 +0.8**
comp=Z,34nm,1.2s
MTE *e*S **S 07 01 30.5 +2.1**
MTE *e*LR LR 07 20 13.0
comp=Z,1μm,22.0s
PGAV Gavieira, Arco 83.93 44 *e*LR LR 07 20 21.4
comp=Z,756nm,20.0s
PCAB Cabril 83.99 44 *e*P **P 06 51 09.6 +1.4**
comp=Z,34nm,1.6s
PVRL Vila Real 84.01 45 *e*P **P 06 51 09.5 +1.2**
comp=Z,21nm,1.4s
MVO Moncorvo 84.44 45 *e*P **P 06 51 11.3 +0.8**
comp=Z,22nm,1.3s
MVO *e*S **S 07 01 41.0 +5.9**
MVO *e*LR LR 07 20 26.8
comp=Z,771nm,20.0s
PBRG Braganca 84.90 45 *e*P **P 06 51 13.5 +0.7**
comp=Z,26nm,1.4s
DLBC Dease Lake 84.94 335 P **P 06 51 13.8 +1.1**
DLBC Dease Lake 84.94 335 P **P 06 51 13.8 +1.1**
comp=Z,7.8nm,0.8s,baz=124,slow=3.8,SNR=22
SYO Syowa Base 85.35 161 ⇑*e*P **P 06 51 13.6 -0.9**
SYO Syowa Base 85.35 161 ⇓*e*sP sP 06 51 21.6 -5.6
ESDC Sonseca Array 85.99 47 P **P 06 51 19.4 +1.1**
ESDC Sonseca Array 85.99 47 P **P 06 51 19.4 +1.1**
comp=Z,4.6nm,0.7s,baz=255,slow=5.2,SNR=20
ESDC LR LR 07 27 06.1
comp=Z,650nm,19.3s,baz=250,slow=34
TAM Tamanrasset 88.09 66 *e*P **P 06 51 29.7 +0.7**
TAM pmax pmax
comp=Z,15nm,1.1s
TAM Tamanrasset 88.09 66 *e*P **P 06 51 29.7 +0.7**
comp=Z,15nm,1.1s
TSUM Tsumeb 88.75 109 *e*P **P 06 51 32.0 -0.2**
comp=Z,9.1nm,1.0s
SJPF Ste Jean 89.17 45 *e*P **P 06 51 33.7 +0.2**
comp=Z,89nm,1.3s
SJPF Ste Jean 89.17 45 *e*P **P 06 51 33.7 +0.2**
SJPF pmax pmax
comp=Z,89nm,1.3s
SJPF Ste Jean 89.17 45 *e*P **P 06 51 33.7 +0.2**
comp=Z,89nm,1.3s
ETSF Etsaut 89.55 45 *e*P **P 06 51 35.5 +0.2**
comp=Z,20nm,1.0s
ETSF Etsaut 89.55 45 *e*P **P 06 51 35.5 +0.2**
ETSF pmax pmax
comp=Z,21nm,1.0s
ETSF Etsaut 89.55 45 *e*P **P 06 51 35.5 +0.2**
comp=Z,20nm,1.0s
SUMG Summit 90.40 11 *i* P **P 06 51 39.5 +0.5**
SUMG pmax pmax
comp=Z,10.0nm,1.0s
SUMG Summit 90.40 11 *i* P **P 06 51 39.5 +0.5**
comp=Z,9.9nm,1.0s
MFF Saint Martin d 91.10 42 *e*P **P 06 51 42.0 -0.4**
comp=Z,18nm,0.8s
MFF Saint Martin d 91.10 42 *e*P **P 06 51 42.0 -0.4**
MFF pmax pmax
comp=Z,18nm,0.8s
MFF Saint Martin d 91.10 42 *e*P **P 06 51 42.0 -0.4**
comp=Z,18nm,0.8s
LFF La Frestale 91.13 44 *e*P **P 06 51 42.3 -0.2**
LFF La Frestale 91.13 44 *e*P **P 06 51 42.3 -0.2**
LFF La Frestale 91.13 44 *e*P **P 06 51 42.3 -0.2**
GRR Gorron 91.27 40 *e*P **P 06 51 42.5 -0.6**
comp=Z,22nm,0.8s
GRR Gorron 91.27 40 *e*P **P 06 51 42.5 -0.6**
GRR pmax pmax
comp=Z,22nm,0.8s
GRR Gorron 91.27 40 *e*P **P 06 51 42.5 -0.6**
comp=Z,22nm,0.8s
MTLF Montolieu 91.62 46 *e*P **P 06 51 44.4 -0.5**
comp=Z,11nm,0.8s
MTLF Montolieu 91.62 46 *e*P **P 06 51 44.4 -0.5**
MTLF pmax pmax
comp=Z,11nm,0.8s
MTLF Montolieu 91.62 46 *e*P **P 06 51 44.4 -0.5**
comp=Z,11nm,0.8s
RJF Les Rejaudoux 91.77 44 *e*P **P 06 51 45.1 -0.4**
comp=Z,23nm,0.9s
RJF *e*R
comp=Z,736nm,20.2s
RJF Les Rejaudoux 91.77 44 *e*P **P 06 51 45.1 -0.4**
RJF pmax pmax
comp=Z,23nm,0.9s
RJF Les Rejaudoux 91.77 44 *e*P **P 06 51 45.1 -0.4**
comp=Z,23nm,0.9s
LDF La Druitiere 91.80 40 *e*P **P 06 51 45.6 +0.1**
comp=Z,26nm,0.8s
LDF La Druitiere 91.80 40 *e*P **P 06 51 45.6 +0.1**
LDF pmax pmax
comp=Z,26nm,0.8s
LDF La Druitiere 91.80 40 *e*P **P 06 51 45.6 +0.1**
comp=Z,26nm,0.8s
CAF Calviac 92.01 44 *e*P **P 06 51 46.3 -0.4**
comp=Z,24nm,1.0s
CAF Calviac 92.01 44 *e*P **P 06 51 46.3 -0.4**
CAF pmax pmax
comp=Z,24nm,1.0s
CAF Calviac 92.01 44 *e*P **P 06 51 46.3 -0.4**
comp=Z,24nm,1.0s
INK Inuvik 92.14 342 P **P 06 51 46.0 -0.6**
INK Inuvik 92.14 342 P **P 06 51 46.0 -0.6**
comp=Z,5.3nm,0.9s,baz=96,slow=6.3,SNR=20
TCF Toulx Ste Croi 92.54 43 *e*P **P 06 51 48.5 -0.6**
comp=Z,10nm,0.8s
TCF Toulx Ste Croi 92.54 43 *e*P **P 06 51 48.5 -0.6**
TCF pmax pmax
comp=Z,10.0nm,0.8s
TCF Toulx Ste Croi 92.54 43 *e*P **P 06 51 48.5 -0.6**
comp=Z,10nm,0.8s
BOSA Boshof 92.84 120 P **P 06 51 50.9 -0.2**
BOSA Boshof 92.84 120 P **P 06 51 50.9 -0.2**
comp=Z,3.6nm,0.7s,baz=314,slow=4.9,SNR=6.7
BOSA LR LR 07 30 33.9
comp=Z,638nm,19.3s,baz=342,slow=34
MAW Mawson 92.85 165 P **P 06 51 50.2 0.0**
MAW Mawson 92.85 165 P **P 06 51 50.2 0.0**
comp=Z,3.6nm,0.8s,baz=195,slow=6.0,SNR=6.2
MAW LR LR 07 30 23.5
comp=Z,560nm,21.5s,baz=226,slow=33
EGAK Eagle 92.87 337 *e*P **P 06 51 49.8 -0.3**
comp=Z,14nm,1.3s
LASF Ste Croix 92.97 45 *e*P **P 06 51 51.2 +0.1**
LASF Ste Croix 92.97 45 *e*P **P 06 51 51.2 +0.1**
BGF Bois d'Agland 93.04 43 *e*P **P 06 51 50.9 -0.5**
comp=Z,32nm,0.7s
BGF Bois d'Agland 93.04 43 *e*P **P 06 51 50.9 -0.5**
BGF pmax pmax
comp=Z,32nm,0.7s
BGF Bois d'Agland 93.04 43 *e*P **P 06 51 50.9 -0.5**
comp=Z,32nm,0.7s
AVF Avril sur Loir 93.44 43 *e*P **P 06 51 52.5 -0.7**
AVF Avril sur Loir 93.44 43 *e*P **P 06 51 52.5 -0.7**
AVF Avril sur Loir 93.44 43 *e*P **P 06 51 52.5 -0.7**
DOT Dot Lake 93.48 336 *e*P **P 06 51 52.9 -0.1**
comp=Z,7.7nm,1.0s
SSF Saint Saulge 93.63 42 *e*P **P 06 51 53.1 -0.9**
comp=Z,21nm,1.1s
SSF Saint Saulge 93.63 42 *e*P **P 06 51 53.1 -0.9**
SSF pmax pmax
comp=Z,21nm,1.1s
SSF Saint Saulge 93.63 42 *e*P **P 06 51 53.1 -0.9**
comp=Z,21nm,1.1s
SMF Signal de Mont 93.72 43 *e*P **P 06 51 54.0 -0.5**
comp=Z,25nm,0.9s
SMF Signal de Mont 93.72 43 *e*P **P 06 51 54.0 -0.5**
SMF pmax pmax
comp=Z,25nm,0.9s
SMF Signal de Mont 93.72 43 *e*P **P 06 51 54.0 -0.5**
comp=Z,25nm,0.9s
VIVF Saint-Julien-l 93.76 45 *e*P **P 06 51 54.9 +0.1**
comp=Z,31nm,1.2s
VIVF Saint-Julien-l 93.76 45 *e*P **P 06 51 54.9 +0.1**
VIVF pmax pmax
comp=Z,31nm,1.2s
VIVF Saint-Julien-l 93.76 45 *e*P **P 06 51 54.9 +0.1**

comp=Z,31nm,1.2s
LOR Lormes 93.92 42 *e*P **P** 06 51 55.1 -0.3
comp=Z,5.7nm,0.6s
LOR *e*R
comp=Z,330nm,21.0s
LOR Lormes 93.92 42 *e*P **P** 06 51 55.1 -0.3
comp=Z,5.7nm,0.6s
SMRF Simiane la Rot 94.13 46 *e*P **P** 06 51 56.1 -0.4
SMRF Simiane la Rot 94.13 46 *e*P **P** 06 51 56.1 -0.4
ORIF Oris-en-Rattie 94.60 45 *e*P **P** 06 51 59.1 +0.4
comp=Z,18nm,0.7s
ORIF *e*R
comp=Z,896nm,19.8s
ORIF Oris-en-Rattie 94.60 45 *e*P **P** 06 51 59.1 +0.4
ORIF pmax pmax
comp=Z,18nm,0.7s
ORIF Oris-en-Rattie 94.60 45 *e*P **P** 06 51 59.1 +0.4
comp=Z,18nm,0.7s
LMR La Mourre 94.61 47 *e*P **P** 06 51 58.6 0.0
LMR La Mourre 94.61 47 *e*P **P** 06 51 58.6 0.0
LMR La Mourre 94.61 47 *e*P **P** 06 51 58.6 0.0
FRF La Foret Royal 94.77 46 *e*P **P** 06 51 59.3 -0.1
FRF La Foret Royal 94.77 46 *e*P **P** 06 51 59.3 -0.1
FRF La Foret Royal 94.77 46 *e*P **P** 06 51 59.3 -0.1
KEST Kesra 94.77 54 P **P** 06 51 59.5 -0.2
KEST Kesra 94.77 54 P **P** 06 51 59.5 -0.2
comp=Z,0.6nm,0.8s,baz=260,slow=12,SNR=3.5
KEST LR LR 07 34 13.8
comp=Z,196nm,20.4s,baz=210,slow=35
BAIF Baives 94.95 40 *e*P **P** 06 51 59.5 -0.5
BAIF Baives 94.95 40 *e*P **P** 06 51 59.5 -0.5
BAIF Baives 94.95 40 *e*P **P** 06 51 59.5 -0.5
SFTF Sexfontaines 94.95 42 *e*P **P** 06 51 59.6 -0.5
comp=Z,14nm,0.6s
SFTF Sexfontaines 94.95 42 *e*P **P** 06 51 59.6 -0.5
comp=Z,14nm,0.6s
ILAR Eielson Array 95.07 336 P **P** 06 51 59.5 -0.8
ILAR PP **PP** 06 55 55.1 +5.0
ILAR Eielson Array 95.07 336 P **P** 06 51 59.5 -0.8
comp=Z,0.9nm,0.7s,baz=157,slow=3.4,SNR=14
ILAR PP **PP** 06 55 55.1 +5.0
comp=Z,0.7nm,0.9s,baz=122,slow=6.6,SNR=5.5
ILAR LR LR 07 35 59.0
comp=Z,416nm,18.5s,baz=342,slow=36
KDAK Kodiak Island 95.10 328 LR LR 07 35 44.8
comp=Z,198nm,21.2s,baz=103,slow=36
CABF La Chapelle 95.20 43 *e*P **P** 06 52 01.2 -0.2
comp=Z,26nm,1.0s
CABF La Chapelle 95.20 43 *e*P **P** 06 52 01.2 -0.2
CABF pmax pmax
comp=Z,26nm,1.0s
CABF La Chapelle 95.20 43 *e*P **P** 06 52 01.2 -0.2
comp=Z,26nm,1.0s
GIVF Givet 95.34 40 *e*P **P** 06 52 01.7 -0.1
GIVF Givet 95.34 40 *e*P **P** 06 52 01.7 -0.1
GIVF Givet 95.34 40 *e*P **P** 06 52 01.7 -0.1
LPL La Plagne 95.34 44 *e*P **P** 06 52 02.6 +0.4
comp=Z,9.7nm,0.7s
LPL La Plagne 95.34 44 *e*P **P** 06 52 02.6 +0.4
LPL pmax pmax
comp=Z,10.0nm,0.7s
LPL La Plagne 95.34 44 *e*P **P** 06 52 02.6 +0.4
comp=Z,9.7nm,0.7s
LPG La Plagne 95.35 45 *e*P **P** 06 52 02.9 +0.5
comp=Z,11nm,0.8s
LPG La Plagne 95.35 45 *e*P **P** 06 52 02.9 +0.5
LPG pmax pmax
comp=Z,11nm,0.8s
LPG La Plagne 95.35 45 *e*P **P** 06 52 02.9 +0.5
comp=Z,11nm,0.8s
PAGF Fort de Pagny 95.48 41 *e*P **P** 06 52 02.5 0.0
comp=Z,5.7nm,0.7s
PAGF Fort de Pagny 95.48 41 *e*P **P** 06 52 02.5 0.0
comp=Z,5.7nm,0.7s
COLA College 95.49 336 *e*P **P** 06 52 01.4 -0.7
COLA pmax pmax
comp=Z,4.0nm,1.0s
HAU Haudompre 95.74 42 *e*P **P** 06 52 03.8 +0.1
HAU *e*R
comp=Z,300nm,21.8s
HAU Haudompre 95.74 42 *e*P **P** 06 52 03.8 +0.1
HAU Haudompre 95.74 42 *e*P **P** 06 52 03.8 +0.1
HINF Hinteralfeld 96.02 42 *e*P **P** 06 52 04.9 -0.1
HINF Hinteralfeld 96.02 42 *e*P **P** 06 52 04.9 -0.1
HINF Hinteralfeld 96.02 42 *e*P **P** 06 52 04.9 -0.1
CDF Champ du Feu 96.44 42 *e*P **P** 06 52 06.5 -0.5
comp=Z,13nm,0.8s
CDF Champ du Feu 96.44 42 *e*P **P** 06 52 06.5 -0.5
CDF pmax pmax
comp=Z,13nm,0.8s
CDF Champ du Feu 96.44 42 *e*P **P** 06 52 06.5 -0.5
comp=Z,13nm,0.8s
DAVA Damuels 97.88 43⇑ *i*PcP Pdif 06 52 14.4 +0.7
comp=Z,15nm,1.0s
MOTA Moosalm 98.71 43⇓ *i*Pdiff Pdif 06 52 17.5 +0.1
comp=Z,12nm,0.7s
WTTA Wattenberg 99.05 44⇑ *i*Pdiff **Pdif 06 52 19.8 +0.9**
comp=Z,18nm,1.0s
KHC Kasperske Hory 100.67 42 *e*SKS SKSac 07 03 10.7 +7.8
KHC AMS AMS 07 36 30.0
comp=Z,500nm,17.9s
CLL Collm 100.68 40 *e*P **Pdif 06 52 28.0 +2.2**
CLL MLR MLR
comp=Z,400nm,19.0s
CLL Collm 100.68 40 *e*Pdif **Pdif 06 52 28.0 +2.2**
CLL *e*PPS PPS 07 06 16.0
CLL LmH 07 36 00.0
comp=N,100nm,19.0s
CLL LmH 07 36 00.0
comp=E,300nm,20.4s
CLL LmV 07 38 00.0
comp=N,100nm,20.5s
CLL LmV 07 38 00.0
comp=E,200nm,21.3s
CLL LmV 07 38 00.0
comp=Z,400nm,19.0s
GERES GERESS Array B 100.70 42 P **Pdif 06 52 25.9 -0.2**
GERES GERESS Array B 100.70 42 P **Pdif 06 52 25.9 -0.2**
comp=Z,3.0nm,0.9s,baz=242,slow=2.9,SNR=16
PRU Pruhonice 101.43 41 *e*PP PP 06 56 39.4 +0.2
PRU *e*SKS 07 03 13.4
PRU AMS AMS 07 37 00.0
comp=Z,300nm,16.5s
TREC Trest 101.93 42 AMS AMS 07 37 40.0
comp=Z,600nm,17.5s
CONA Conrad Observa 101.98 43⇑ *i*Pdiff **Pdif 06 52 32.1 +0.3**
comp=Z,5.5nm,1.2s
DPC Dobruska-Polom 102.61 41 AMS AMS 07 37 50.0
comp=Z,500nm,17.1s
OKC Ostrava-Krasne 103.72 42 AMS AMS 07 39 10.0
comp=Z,300nm,19.6s
DZM Mont Dzumac 108.67 240 *e*SP SP 07 06 51.3 -4.2
comp=Z,142nm,25.1s
DZM *e*LR LR 07 28 49.2
comp=Z,624nm,28.8s
BRTR Keskin Array B 114.31 53 PKP PKPdf 06 57 18.2 +0.4
BRTR Keskin Array B 114.31 53 PKP PKPdf 06 57 18.2 +0.4
comp=Z,0.7nm,0.8s,baz=225,slow=3.1,SNR=3.6
ANN Anapa 116.81 47 *i* PKIKP **PKPdf 06 57 17.9 -4.3**
ANN *e*PPP PPP 07 01 00.8
ANN *e* 07 04 05.8
ANN *e*SSS SSS 07 18 54.7
KIV Kislovodsk 120.66 47 *i* PKIKP **PKPdf 06 57 24.9 -4.9**
KIV *e* 07 04 22.2
KIV *e*PS **PS 07 08 43.0 -6.5**
KIV *e*SS SS 07 15 21.5 -4.8
KIV pmax pmax
comp=Z,5.0nm,0.8s
KIV MLR MLR
comp=Z,111nm,20.0s
KBZ Khabaz 120.85 48 PKIKP **PKPdf 06 57 30.6 +0.6**
KBZ Khabaz 120.85 48 PKP **PKPdf 06 57 30.6 +0.6**
KBZ Khabaz 120.85 48 PKP **PKPdf 06 57 30.6 +0.6**
comp=Z,3.0nm,0.8s,baz=192,slow=4.2,SNR=5.7
STKA Stephens Creek 121.35 218 PKP **PKPdf 06 57 31.9 +0.4**
STKA Stephens Creek 121.35 218 PKP **PKPdf 06 57 31.9 +0.4**
comp=Z,1.3nm,0.7s,baz=294,slow=7.1,SNR=3.9
AKTO Aktyubinsk 128.56 36 PKIKP **PKPdf 06 57 45.4 +0.7**
AKTO Aktyubinsk 128.56 36 PKP **PKPdf 06 57 45.4 +0.7**
AKTO Aktyubinsk 128.56 36 PKP **PKPdf 06 57 45.4 +0.7**
comp=Z,4.0nm,0.6s,baz=343,slow=5.6
ASAR Alice Springs 131.98 218 PKP **PKPdf 06 57 52.3 +0.2**
ASAR Alice Springs 131.98 218 PKP **PKPdf 06 57 52.3 +0.2**
comp=Z,1.4nm,0.8s,baz=123,slow=1.9,SNR=14
BVAR Borovoye Array 133.38 27 PKIKP **PKPdf 06 57 53.9 +0.2**
BVAR Borovoye Array 133.38 27 PKP **PKPdf 06 57 53.9 +0.2**
comp=Z,1.1nm,0.7s,baz=256,slow=2.4,SNR=8.3
WRAB Tennant Creek 134.46 222 *i* PKIKP **PKPdf 06 57 56.1 -0.7**
WRA Warramunga Arr 134.46 222 PKP **PKPdf 06 57 57.4 +0.6**
WRA Warramunga Arr 134.46 222 PKP **PKPdf 06 57 57.4 +0.6**
comp=Z,3.3nm,0.7s,baz=136,slow=1.8,SNR=38
ZALV Zalesovo Beam 137.93 17 PKIKP **PKPdf 06 58 03.0 +0.8**
ZALV Zalesovo Beam 137.93 17 PKP **PKPdf 06 58 03.0 +0.8**
ZALV Zalesovo Beam 137.93 17 PKP **PKPdf 06 58 03.0 +0.8**
comp=Z,10.0nm,0.9s,baz=318,slow=2.0,SNR=20
KURK Kurchatov 138.54 24⇓ *i* PKIKP **PKPdf 06 58 02.6 -0.7**
KURK Kurchatov 138.54 24 PKP **PKPdf 06 58 04.0 +0.7**
KURBB Kurchatov Arra 138.58 24 PKP **PKPdf 06 58 04.0 +0.6**
comp=Z,5.8nm,0.9s,baz=312,slow=2.6,SNR=41
USRK Ussuriysk Arra 141.95 327 PKP **PKPdf 06 58 10.8 +1.1**
comp=Z,2.1nm,0.9s,baz=30,slow=4.4,SNR=5.0
AAK Ala-Archa 142.30 36 *i* PKIKP **PKPdf 06 58 06.9 -3.8**
AAK Ala-Archa 142.30 36 PKPpre PKPpre 06 58 06.4
AAK PKP **PKiKP 06 58 12.9 -0.8**
AAK Ala-Archa 142.30 36 PKhKP PKPpre 06 58 06.4
AAK PKP **PKiKP 06 58 12.9 -0.8**
comp=Z,1.5nm,0.3s,baz=88,slow=13,SNR=6.2
MJAR Matsushiro Arr 142.34 312 PKPpre PKPpre 06 58 06.3
MJAR PKP **PKPdf 06 58 12.2 +1.5**
MJAR Matsushiro Arr 142.34 312 PKhKP PKPpre 06 58 06.3
comp=Z,1.0nm,0.6s,baz=114,slow=1.8,SNR=3.6
MJAR PKP **PKPdf 06 58 12.2 +1.5**
comp=Z,1.9nm,0.8s,baz=126,slow=1.6,SNR=4.9
MDJ Mudanjiang 142.90 329 PKP **PKPdf 06 58 11.5 +0.1**
MKAR Makanchi Array 143.14 25 PKIKP PKPbc 06 58 08.5 -0.2
MKAR Makanchi Array 143.14 25 PKPpre PKPpre 06 58 08.5
MKAR Makanchi Array 143.14 25 PKhKP PKPpre 06 58 08.5
comp=Z,1.7nm,0.7s,baz=323,slow=1.8,SNR=17
ZAK Zakamensk 144.25 1 *e*PKIKP PKPbc 06 58 12.7 +0.7
KSH Kashi 145.11 39 PKPbc **PKPdf 06 58 16.0 +0.4**
KSH *e*PKPab **PKPab 06 58 17.0 +1.8**
KSH PP PP **07 01 33.0 -0.9**
KSH PKS **PKSdf 07 01 50.5 -0.8**
KSH SKS **SKSdf 07 05 20.5 -2.6**
KSH AMB AMB
comp=Z,380nm,6.4s
KSH LR LR
comp=N,53nm,5.1s
KSH LR LR
comp=E,92nm,3.6s
CN2 Changchun 145.49 332 *e*PKPbc **PKPab 06 58 19.0 +2.8**
CN2 PP PP 07 01 42.5 +7.0
CN2 SS SS 07 20 32.5 +6.9
CN2 AMB AMB
comp=Z,400nm,8.0s
CN2 LR LR
comp=N,200nm,20.0s
CN2 LR LR
comp=E,200nm,20.0s
CN2 LR LR
comp=Z,200nm,20.0s
SONM Songino Array 146.74 357 PKPbc **PKPbc 06 58 20.3 +0.5**
SONM Songino Array 146.74 357 PKPbc **PKPbc 06 58 20.3 +0.5**
comp=Z,12nm,0.7s,baz=334,slow=1.6,SNR=36
WMQ Urumqi 147.72 22 PKPbc **PKPdf 06 58 21.0 +1.2**
WMQ PP PP 07 01 54.0 +5.4
WMQ SKS **SKSdf 07 05 24.0 -2.5**
WMQ SKKS **SKKSac 07 08 38.5 -0.7**
WMQ LR LR
comp=N,270nm,23.4s
WMQ LR LR
comp=E,200nm,28.0s
WMQ LR LR
comp=Z,220nm,24.6s
KSRS Korea Array 148.72 321 PKP **PKPdf 06 58 20.9 -0.6**
comp=Z,3.9nm,0.9s,baz=201,slow=0.7,SNR=7.3
KSRS PKPbc **PKiKP 06 58 26.6 -0.1**
comp=Z,5.6nm,1.0s,baz=30,slow=1.5,SNR=22
KSAR Wonju Array Be 148.75 321 PKP **PKPdf 06 58 20.9 -0.7**
KSAR PKPbc **PKiKP 06 58 26.6 -0.2**
DL2 Dalian 151.10 330 P **PKPab 06 58 38.0 -0.7**
DL2 pmax pmax
comp=Z,31nm,0.9s
BJI Beijing 152.39 339 PKPbc **PKPbc 06 58 34.5 +0.5**
BJI PP **PP 07 02 18.0 +2.6**
HHC Hu-ho-hao-te 152.94 347⇑ *e*PKPbc **PKPdf 06 58 29.5 +1.4**
HHC PKS **PKSdf 07 02 02.5 -0.1**
HHC PP **PP 07 02 23.3 +4.8**
HHC SKS **SKSdf 07 05 35.3 +1.8**
HHC SKKS **SKKSac 07 09 11.3 +3.3**
HHC AMB AMB
comp=Z,130nm,5.2s
HHC LR LR
comp=N,330nm,20.8s
HHC LR LR
comp=E,210nm,21.0s
HHC LR LR
comp=Z,240nm,20.2s
GTA Gaotai 154.97 7 *e*PKP **PKPdf 06 58 31.3 +0.2**
GTA pPKP **PKPbc 06 58 35.8 -4.0**
GTA sPKP 06 58 39.0
PYUN Piuthan 156.40 52 *e*P **PKPab 06 59 01.1 -0.7**
comp=Z,48nm,1.1s
DANN Dangsing 156.85 50 *e*P **PKPab 06 59 04.4 +0.5**
comp=Z,38nm,0.8s
NJ2 Nanjing 157.82 324 *e*PKPbc PKPdf 06 58 28.0 -6.8
NJ2 pPKP pPKPdf 06 58 38.5 -6.0
NJ2 sPKP 06 58 42.8
NJ2 PKPab **PKPab 06 59 03.3 -4.2**
NJ2 PKS PKSdf 07 02 00.0 -8.6
NJ2 PP **PP 07 02 44.0 -2.3**
NJ2 AMB AMB
comp=Z,90nm,5.2s
NJ2 LR LR
comp=N,350nm,24.3s
NJ2 LR LR
comp=E,430nm,30.5s
NJ2 LR LR
comp=Z,230nm,20.6s
DMN Daman 158.25 50 *e*P **PKPab 06 59 09.3 -0.6**
comp=Z,44nm,1.0s
KKN Kakani 158.28 50 *e*P **PKPab 06 59 10.4 +0.5**
comp=Z,31nm,0.7s
PKI Pulchoki 158.49 50 *e*P **PKPab 06 59 11.0 0.0**
comp=Z,17nm,0.8s
LZH Lanzhou 158.54 0 *e*PKP **PKPdf 06 58 34.5 -1.3**
LZH pPKP pPKPdf 06 58 38.0 -7.5
LZH sPKP 06 58 39.3
LZH *e*PP **PP 07 02 53.0 +3.4**
LZH SKKS 07 09 38.5
LZH AMB AMB
comp=Z,130nm,8.3s
LZH LR LR
comp=N,170nm,18.0s
LZH LR LR
comp=E,150nm,18.6s
LZH LR LR
comp=Z,200nm,20.1s
GUN Gumba 158.65 49 *e*P **PKPab 06 59 12.3 +0.6**
comp=Z,69nm,1.0s
RAMN Ramite 159.72 50 *e*P **PKPab 06 59 15.0 -1.3**
CD2 Chengdu 163.70 0 PKP **PKPdf 06 58 40.5 -0.8**
GYA Guiyang 167.85 348 *e*PKP **PKPdf 06 58 44.8 -0.1**
GYA PKPab **PKPab 06 59 51.5 -0.1**
GYA PKS **PKSdf 07 02 16.0 -1.7**
GYA PP **PP 07 03 41.3 +2.4**
GYA SKKS 07 10 27.8
GYA AMB AMB
comp=Z,120nm,8.0s
GYA LR LR
comp=N,180nm,22.6s
GYA LR LR
comp=E,130nm,24.9s
GYA LR LR
comp=Z,140nm,23.0s
KMI Kunming 169.42 5 PKP **PKPdf 06 58 45.3 -0.8**
KMI sPKP 06 58 50.8
QIZ Qiongzhong 172.72 309 PKP **PKPdf 06 58 47.0 -0.6**
QIZ SS SS 07 25 18.8 +3.1
QIZ LR LR
comp=Z,260nm,22.5s
CMAR Chiang Mai Arr 173.89 50 PKP **PKPdf 06 58 48.9 +0.8**
CMAR Chiang Mai Arr 173.89 50 PKP **PKPdf 06 58 48.9 +0.8**
comp=Z,1.0nm,0.4s,baz=287,slow=1.9,SNR=5.6

*SKO **26** 06:43:46.7, 41.28N×22.70E, h15km, M1.7, ML2.2*

*ATH **26** 06:43:46.3, 41.30N×22.63E, h35km±2km, MD3.3/6*
*ISCJB **26** 06:43:47.9±0.4, 41.28N±0.02×22.71E±0.03, h4km±3km,*
Error ellipse: s-maj=3.8km s-min=2.7km az=141.1
*THE **26** 06:43:48.3, 41.28N×22.71E, h1km, ML2.7/10, Error*
ellipse: s-maj=0.7km s-min=0.3km az=265.0
*CSEM **26** 06:43:48.0±0.2, 41.27N×22.73E, h8km, ML2.3, Error*
ellipse: s-maj=5.1km s-min=3.9km az=53.0
*BEO **26** 06:43:49.5±0.8, 41.26N×22.64E, h0km±2km, ML2.3/7*
ISC 26 06:43:48.0±0.8, **41.25N**±0.02×**22.69E**±0.02, **h8**km±6km,
n52, σ0**88**/90, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**307**	P	**Pg**	**06 43 50.4**	**-0.1**
VAY				S	**Sg**	**06 43 52.5**	**+0.2**
VAY	**Valandovo**	**0.11**	**307**	*i* Pg	**Pg**	**06 43 50.4**	**-0.1**
VAY				*e*Lg	Lg	06 43 52.4	
	comp=E,785nm,0.3s						
VAY				*e*Sg	**Sg**	**06 43 52.4**	**+0.1**
VAY				*e*Lg	Lg	06 43 52.6	
	comp=N,1μm,0.3s						
VAY	**Valandovo**	**0.11**	**307**	P	**Pg**	**06 43 50.4**	**-0.1**
VAY	**Valandovo**	**0.11**	**307**	*i* Pg	**Pg**	**06 43 50.9**	**+0.4**
VAY				S	**Sg**	**06 43 52.5**	**+0.2**
VAY				*e*Lg	Lg	06 43 53.1	
	comp=N,1μm,0.3s						
KNT	**Kendrikon**	**0.18**	**120**	P	**Pg**	**06 43 52.2**	**+0.5**
KNT				S	**Sg**	**06 43 55.0**	**+0.8**
KNT	**Kendrikon**	**0.18**	**120**	P	**Pg**	**06 43 52.2**	**+0.5**
KNT				S	**Sg**	**06 43 55.0**	**+0.8**
GRG	**Griva**	**0.37**	**216**	P	**Pg**	**06 43 56.0**	**+0.8**
GRG				S	**Sb**	**06 44 01.8**	**-0.9**
GRG	**Griva**	**0.37**	**216**	*e*PB	**Pg**	**06 43 56.0**	**+0.8**
GRG				*e*SB	**Sb**	**06 44 02.1**	**-0.6**
GRG	**Griva**	**0.37**	**216**	*e*Pb	**Pg**	**06 43 56.0**	**+0.8**
GRG				S	**Sb**	**06 44 01.8**	**-0.9**
GRG				*e*Sb	**Sb**	**06 44 02.1**	**-0.6**
THE	**Thessaloniki**	**0.66**	**161**	P	**Pg**	**06 44 01.0**	**+0.4**
THE				S	**Sb**	**06 44 11.0**	**+0.1**
SOH	**Sokhos**	**0.66**	**130**	P	**Pg**	**06 44 00.8**	**+0.1**
SOH				S	**Sb**	**06 44 10.8**	**-0.4**
SOH	**Sokhos**	**0.66**	**130**	*e*PN	**Pg**	**06 44 00.9**	**+0.2**
SOH				*e*SN	**Sb**	**06 44 11.1**	**-0.1**
SOH	**Sokhos**	**0.66**	**130**	*e*Pn	**Pg**	**06 44 00.9**	**+0.2**
SOH				S	**Sb**	**06 44 10.8**	**-0.4**
SOH				*e*Sn	**Sb**	**06 44 11.1**	**-0.1**
SRS	**Serrai**	**0.69**	**101**	P	**Pg**	**06 44 01.2**	**-0.2**
SRS	**Serrai**	**0.69**	**101**	P	**Pg**	**06 44 01.2**	**-0.2**
HORT	**Hortiatis**	**0.72**	**154**	P	**Pg**	**06 44 02.4**	**+0.5**
HORT				S	**Sb**	**06 44 13.2**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**83**	P	**Pg**	**06 44 04.8**	**-0.2**
NVR				S	**Sb**	**06 44 17.5**	**-0.3**
NVR	**Nevrokopi**	**0.89**	**83**	*e*PN	**Pg**	**06 44 04.8**	**-0.2**
NVR				*e*SN	**Sg**	**06 44 17.0**	**+0.4**
NVR	**Nevrokopi**	**0.89**	**83**	*e*Pn	**Pg**	**06 44 04.8**	**-0.2**
NVR				*e*Sn	**Sg**	**06 44 17.0**	**+0.4**
NVR				S	**Sb**	**06 44 17.5**	**-0.3**
PLG	**Polygyros**	**1.05**	**147**	P	**Pb**	**06 44 08.3**	**-0.1**
PLG				S	**Sn**	**06 44 24.0**	**+0.1**
PLG	**Polygyros**	**1.05**	**147**	*e*PN	**Pb**	**06 44 07.1**	**-1.3**
PLG				*e*SN	**Sg**	**06 44 21.9**	**+0.2**
PLG	**Polygyros**	**1.05**	**147**	*e*Pn	**Pb**	**06 44 07.1**	**-1.3**
PLG				*e*Sn	**Sg**	**06 44 21.9**	**+0.2**
PLG				S	**Sn**	**06 44 24.0**	**+0.1**
FNA	**Florina**	**1.10**	**245**	P	**Pb**	**06 44 09.2**	**-0.1**
FNA				S	**Sn**	**06 44 25.4**	**+0.2**
FNA	**Florina**	**1.10**	**245**	*e*PN	**Pb**	**06 44 06.2**	**-3.1**
FNA	**Florina**	**1.10**	**245**	*e*Pn	**Pb**	**06 44 06.2**	**-3.1**
FNA	**Florina**	**1.10**	**245**	P	**Pb**	**06 44 09.2**	**-0.1**
FNA				S	**Sn**	**06 44 25.4**	**+0.2**
SKO	**Skopje**	**1.18**	**308**	*e*Pg	**Pg**	**06 44 10.8**	**+0.2**
SKO				*e*Sg	**Sg**	**06 44 26.4**	**+0.4**
SKO	**Skopje**	**1.18**	**308**	*e*Pg	**Pg**	**06 44 10.8**	**+0.2**
SKO				*e*Sg	**Sg**	**06 44 26.4**	**+0.4**
OUR	**Ouranopolis**	**1.34**	**133**	P	**Pb**	**06 44 13.4**	**0.0**
OUR				S	**Sg**	**06 44 33.0**	**+1.8**
VTS	**Vitosha**	**1.39**	**16**	P	**Pn**	**06 44 13.6**	**-0.3**
VTS				S	**Sg**	**06 44 33.0**	**+0.2**
VTS	**Vitosha**	**1.39**	**16**	*e*Pg	**Pb**	**06 44 14.3**	**-0.1**
VTS				*e*Sg	**Sg**	**06 44 33.0**	**+0.2**
VTS	**Vitosha**	**1.39**	**16**	P	**Pn**	**06 44 13.6**	**-0.3**
VTS	**Vitosha**	**1.39**	**16**	*e*Pg	**Pb**	**06 44 14.3**	**-0.1**
VTS				S	**Sg**	**06 44 33.0**	**+0.2**
KAVA	**Kavala**	**1.40**	**100**	P	**Pb**	**06 44 14.2**	**-0.2**
KAVA				S	**Sg**	**06 44 34.1**	**+1.1**
PAIG	**Paliouri**	**1.52**	**150**	P	**Pb**	**06 44 16.3**	**-0.2**
PAIG				S	**Sg**	**06 44 37.8**	**+0.8**
BARS	**Barje**	**1.69**	**338**	*e*Pn	**Pn**	**06 44 18.4**	**+0.5**
BARS				*e*Sn	**Sg**	**06 44 42.4**	**0.0**
BARS	**Barje**	**1.69**	**338**	*e*Pn	**Pn**	**06 44 18.4**	**+0.5**
BARS				*e*Sn	**Sg**	**06 44 42.4**	**0.0**
PLD	**Plovdiv**	**1.73**	**60**	*e*Pn	**Pg**	**06 44 21.6**	**+0.4**
PLD	**Plovdiv**	**1.73**	**60**	*e*Pn	**Pg**	**06 44 21.6**	**+0.4**
XOR	**Xorichti**	**1.92**	**168**	P	**Pn**	**06 44 22.1**	**+1.0**
XOR	**Xorichti**	**1.92**	**168**	P	**Pn**	**06 44 22.1**	**+1.0**
ZAPS	**Zavoj**	**2.02**	**359**	*e*Pn	**Pb**	**06 44 23.7**	**-1.3**
ZAPS				*e*Sn	**Sb**	**06 44 51.0**	**+0.7**
RDO	**Rodhopi**	**2.15**	**92**	*e*PN	**Pn**	**06 44 22.1**	**-2.1**
RDO	**Rodhopi**	**2.15**	**92**	*e*Pn	**Pn**	**06 44 22.1**	**-2.1**
AOS	**Alonnisos**	**2.27**	**156**	P	**Pn**	**06 44 26.5**	**+0.7**
AOS	**Alonnisos**	**2.27**	**156**	*e*PN	**Pn**	**06 44 24.7**	**-1.1**
AOS	**Alonnisos**	**2.27**	**156**	*e*Pn	**Pn**	**06 44 24.7**	**-1.1**
AOS	**Alonnisos**	**2.27**	**156**	P	**Pn**	**06 44 26.5**	**+0.7**
ALN	**Alexandroupoli**	**2.56**	**97**	*e*PN	**Pn**	**06 44 28.2**	**-1.6**
ALN	**Alexandroupoli**	**2.56**	**97**	*e*Pn	**Pn**	**06 44 28.2**	**-1.6**
GRUS	**Gruza**	**3.01**	**332**	*e*Pn	**Pn**	**06 44 36.9**	**+0.9**
GRUS				*e*Sn	**Sn**	**06 45 14.0**	**+1.7**
GRUS	**Gruza**	**3.01**	**332**	*e*Pn	**Pn**	**06 44 36.9**	**+0.9**
GRUS				*e*Sn	**Sn**	**06 45 14.0**	**+1.7**

MEX 26 06:52:13.1±0.9, **19.85N**×**105.90W**, **h16**km±79km, **MD3.5,**
Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**0.88**	**113**	*i* P	Pb	06 52 26.9	-3.2
CJM				*i* S	Sb	06 52 36.6	-5.0
ANIG	**Ahuacatlan**	**1.76**	**47**	*i* P	Pn	06 52 39.9	-3.2
ANIG				*i* S	Sn	06 53 00.9	-4.4
R15V		**1.93**	**110**	*e*P	Pn	06 52 42.2	-3.2
R15V				*i* S	Sn	06 53 05.5	-4.0
EZ5V		**2.20**	**99**	*i* P	Pn	06 52 46.6	-2.7
EZ5V				*i* S	Sn	06 53 12.2	-4.2
MMIG	**Aquila**	**2.87**	**122**	*i* P	Pn	06 52 55.5	-2.8
MMIG				*i* S	Sn	06 53 28.3	-4.2

MEX 26 06:55:49.9±0.8, **16.40N**×**100.99W**, **h12**km±19km, **MD3.8,**
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.95**	**47**	*e*P	Pg	06 56 04.8	-3.4
CAIG				*i* S	Sg	06 56 16.1	-4.5
ACX	**Acapulco**	**1.18**	**67**	*e*P	Pn	06 56 08.6	-3.7
ACX				*i* S	Sb	06 56 21.7	-5.9
ZIIG	**Zihuatanejo**	**1.28**	**339**	*e*P	Pn	06 56 10.2	-3.4
ZIIG				*i* S	Sb	06 56 25.2	-5.2
ARIG	**Puente Sto Nin**	**1.97**	**18**	*e*P	Pn	06 56 19.8	-3.4
ARIG				*e*S	Sn	06 56 43.8	-4.0
MEIG	**Mezcala**	**2.00**	**41**	*e*P	Pn	06 56 20.5	-3.2
MEIG				*i* S	Sn	06 56 44.6	-4.2
PLIG	**Platanillo**	**2.44**	**35**	*e*P	Pn	06 56 26.1	-3.6
PLIG				*e*S	Sn	06 56 55.9	-3.6
PNIG	**Pinotepa**	**2.75**	**90**	*e*P	Pn	06 56 31.6	-2.3
PNIG				*i* S	Sn	06 57 02.3	-4.8
YAIG	**Yautepec**	**3.06**	**37**	*e*P	Pn	06 56 35.1	-3.2
YAIG				*e*S	Sn	06 57 11.4	-3.6

*IDC **26** 07:04:15.3±1.2, 5.81S×130.35E, h0km, mb4.2/5,*
mb1 4.5/8, mb1mx4.1/19, mbtmp4.3/8, ML4.5/3, Error
ellipse: s-maj=67.2km s-min=18.3km az=71.0
*AUST **26** 07:04:19.2, 5.98S×130.53E, h0km*
*NEIC **26** 07:04:20.4±0.7, 5.79S×130.47E, h35km, mb4.1/3, Error*
ellipse: s-maj=21.6km s-min=10.0km az=71.0
ISC 26 07:04:24.5±0.5, **6.10S**±0.04×**130.82E**±0.08, **h86**km, **n49,**
σ2**92**/52, **mb4.1**/7, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.46**	**24**	P	**Pn**	**07 05 16.5**	**+0.2**
	baz=3.5,SNR=49						
FAKI				S	**Sn**	**07 05 53.9**	**-2.3**
	baz=3.5,SNR=11						
MTN	**Manton Dam**	**6.71**	**177**	P	Pn	07 06 04.4	+3.8
	baz=6.9,SNR=130						
MTN				S	**Sn**	**07 07 19.3**	**+3.8**
	baz=6.9,SNR=8.0						
KDU	**Kakadu**	**6.75**	**166**	P	Pn	07 06 05.2	+4.2
	baz=7.0,SNR=114						
KDU				S	**Sn**	**07 07 18.9**	**+2.4**
	baz=7.0,SNR=6.0						
KNRA	**Kununurra**	**9.73**	**192**	P	**Pn**	**07 06 43.5**	**+1.7**
	baz=9.9,SNR=46						
KNRA				S	**Sn**	**07 08 27.0**	**-2.3**
	baz=9.9,SNR=7.1						
FITZ	**Fitzroy Crossi**	**12.96**	**203**	*e*Pn	**Pn**	**07 07 24.8**	**-0.7**
	0.6nm,0.3s						
FITZ				*e*Sn	**Sn**	**07 09 44.5**	**-3.5**
FITZ	**Fitzroy Crossi**	**12.96**	**203**	Pn	**Pn**	**07 07 24.4**	**-1.1**
	3.8nm,0.3s,baz=39,slow=11,SNR=61						
FITZ				Sn	Sn	07 09 36.1	-12
	0.9nm,0.3s,baz=24,slow=13,SNR=4.0						
FITZ	**Fitzroy Crossi**	**12.96**	**203**	P	**Pn**	**07 07 24.6**	**-0.9**
	baz=13,SNR=36						
PALU	**Palau**	**13.84**	**15**	S	S	07 10 18.5	-7.4
	baz=14,SNR=3.8						
WRAB	**Tennant Creek**	**14.18**	**166**	*e*Pn	**Pn**	**07 07 40.9**	**-0.5**
	5.7nm,0.4s						
WRAB				*e*Sn	**Sn**	**07 10 14.4**	**-3.1**
WRA	**Warramunga Arr**	**14.18**	**166**	Pn	**Pn**	**07 07 41.2**	**-0.3**
WRA				Sn	**Sn**	**07 10 12.5**	**-5.2**
WRA	**Warramunga Arr**	**14.18**	**166**	Pn	**Pn**	**07 07 41.2**	**-0.3**
	1.3nm,0.3s,baz=353,slow=14,SNR=41						
WRA				Sn	**Sn**	**07 10 12.5**	**-5.2**
	5.5nm,0.3s,baz=338,slow=24,SNR=14						
COEN	**Coen**	**14.45**	**124**	*e*Pn	**P**	**07 07 49.8**	**+0.5**
	51nm,0.3s						
COEN				*e*Sn	**Sn**	**07 10 21.5**	**-2.6**
COEN	**Coen**	**14.45**	**124**	P	**P**	**07 07 49.7**	**+0.3**
	baz=15,SNR=35						
COEN				S	**Sn**	**07 10 21.1**	**-3.1**
	baz=15,SNR=8.4						
QIS	**Mount Isa**	**16.71**	**150**	P	**P**	**07 08 18.7**	**+4.3**
	baz=17,SNR=6.9						
QIS				S	**Sn**	**07 11 17.6**	**-1.3**
	baz=17,SNR=5.6						
AS31	**Alice Springs**	**17.72**	**171**	*e*P	**Pn**	**07 08 30.0**	**+4.2**
ASAR	**Alice Springs**	**17.72**	**171**	P	**Pn**	**07 08 29.1**	**+3.3**
ASAR				S	**Sn**	**07 11 36.9**	**-6.3**
ASAR	**Alice Springs**	**17.72**	**171**	P	**Pn**	**07 08 29.1**	**+3.3**
	1.7nm,0.3s,baz=345,slow=9.2,SNR=104						
ASAR				S	**Sn**	**07 11 36.9**	**-6.3**
	0.6nm,0.3s,baz=351,slow=26,SNR=6.4						
MTSU	**Mount Surprise**	**17.80**	**133**	P	Pn	07 08 34.0	+7.3
	baz=18,SNR=6.3						
MBWA	**Marble Bar**	**18.43**	**215**	*e*P	**Pn**	**07 08 34.9**	**+0.5**
	31nm,1.4s						
CISI	**Cisompet, Garu**	**22.89**	**265**	P	P	07 09 07.5	-14
	baz=23,SNR=3.6						
MEEK	**Meekatharra**	**23.51**	**208**	P	**P**	**07 09 29.5**	**+2.5**
	baz=24,SNR=5.3						
STKA	**Stephens Creek**	**27.56**	**160**	*e*P	**P**	**07 10 07.4**	**+3.9**
	0.5nm,0.7s						
STKA	**Stephens Creek**	**27.56**	**160**	P	**P**	**07 10 07.5**	**+4.1**
	1.2nm,0.4s,baz=336,slow=13,SNR=7.6						
STKA	**Stephens Creek**	**27.56**	**160**	P	**P**	**07 10 07.6**	**+4.1**
	baz=28,SNR=6.1						
PPI	**Padang Panjang**	**30.87**	**279**	S	S	07 15 42.8	+12
	baz=31,SNR=8.0						
LHI	**Lord Howe Isla**	**36.58**	**137**	P	P	07 11 43.3	+21
	baz=37,SNR=3.4						
CMAR	**Chiang Mai Arr**	**39.79**	**308**	P	P	07 11 44.9	-4.6
CMAR	**Chiang Mai Arr**	**39.79**	**308**	P	P	07 11 44.9	-4.6
	2.9nm,0.4s,baz=135,slow=6.7,SNR=7.9						
HHC	**Hu-ho-hao-te**	**49.95**	**341**	*e*P	**P**	**07 13 11.0**	**+1.1**
HHC				pP	pP	07 13 21.5	-9.5
HHC				sP	sP	07 13 25.5	-15
HHC				PP	**PP**	**07 15 05.5**	**-0.2**
HHC				S	**S**	**07 20 17.0**	**+2.9**
HHC				sS	sS	07 20 35.0	-15
HHC				ScS	**ScS**	**07 22 57.8**	**+4.6**
HHC	**Hu-ho-hao-te**	**49.95**	**341**	SS	SKiKP	07 23 46.5	-53
HHC				pmax	pmax		
	comp=Z,55nm,0.6s						
HHC				pmax	pmax		
	comp=Z,260nm,5.1s						
HHC				LR	LR		
	comp=N,160nm,15.5s						
HHC				LR	LR		
	comp=E,180nm,15.5s						
HHC				LR	LR		
	comp=Z,160nm,16.7s						
ODAN	**Odare**	**53.29**	**310**	*e*P	P	07 13 31.8	-3.5
	comp=Z,7.9nm,0.4s						
TAPN	**Taplejung**	**53.31**	**311**	*e*P	P	07 13 31.3	-4.1
	comp=Z,15nm,0.4s						
RAMN	**Ramite**	**53.94**	**310**	*e*P	**P**	**07 13 37.1**	**-2.9**
	comp=Z,21nm,0.4s						
GUN	**Gumba**	**54.98**	**310**	*e*P	**P**	**07 13 44.6**	**-3.1**
	comp=Z,16nm,0.4s						
PKI	**Pulchoki**	**55.17**	**310**	*e*P	**P**	**07 13 45.9**	**-3.1**
KKN	**Kakani**	**55.38**	**310**	*e*P	**P**	**07 13 47.6**	**-2.8**
DMN	**Daman**	**55.42**	**310**	*e*P	**P**	**07 13 48.1**	**-2.6**
	comp=Z,7.4nm,0.4s						
KOLN	**Koldanda**	**56.66**	**309**	*e*P	**P**	**07 13 57.4**	**-2.1**
	comp=Z,7.2nm,0.5s						
DANN	**Dangsing**	**56.82**	**310**	*e*P	**P**	**07 13 58.6**	**-2.1**
	comp=Z,8.1nm,0.5s						
PYUN	**Piuthan**	**57.29**	**309**	*e*P	**P**	**07 14 02.3**	**-1.7**
SONM	**Songino Array**	**57.85**	**341**	P	**P**	**07 14 07.3**	**-0.1**
SONM	**Songino Array**	**57.85**	**341**	P	**P**	**07 14 07.3**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=162,slow=5.5,SNR=3.3						
MK31	**Makanchi Array**	**67.92**	**326**	*e*P	**P**	**07 15 13.3**	**-0.8**
MKAR	**Makanchi Array**	**67.92**	**326**	P	**P**	**07 15 13.4**	**-0.7**
MKAR	**Makanchi Array**	**67.92**	**326**	P	**P**	**07 15 13.4**	**-0.7**
	comp=Z,2.4nm,0.4s,baz=113,slow=8.1,SNR=44						
ZALV	**Zalesovo Beam**	**71.14**	**333**	P	**P**	**07 15 31.8**	**-2.0**
ZALV	**Zalesovo Beam**	**71.14**	**333**	P	**P**	**07 15 31.8**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=137,slow=9.3,SNR=3.4						
KURK	**Kurchatov**	**72.18**	**328**	*e*P	**P**	**07 15 38.6**	**-1.4**
	comp=Z,2.5nm,1.0s						
NACGM	**Naroch**	**103.03**	**325**	*e*LR	LR	07 34 14.0	

IDC **26** *07:15:31.8±2.3,51.77N×179.32E,h0km,mb3.3/4, mb1 3.7/5,mb1mx3.4/29,mbtmp3.4/5,ML3.6/1, Error ellipse: s-maj=71.7km s-min=15.2km az=2.0*
ISCJB **26** *07:15:41.7±1.2,51.9N±0.3×178.0E±0.2,h157km±10km, mb3.0/4, Error ellipse: s-maj=49.6km s-min=8.2km az=16.7*
NEIC **26** *07:15:43.2,51.83N×178.06E,h160km,MG3.0(AEIC), After AEIC.*

ISC 26 07:15:42.7±1.3,51.9N±0.2×177.99E±0.09,h153km±11km, n11,σ0.94/14,mb3.1/4,Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSNW	**Little Sitkin**	**0.34**	**75**	P	**Pn**	**07 16 04.7**	**+1.0**
CETU	**Semis' Tuman**	**0.93**	**84**	P	**Pn**	**07 16 06.8**	**-0.4**
AMKA	**Amchitka**	**0.96**	**121**	P	**Pn**	**07 16 06.9**	**-0.5**
AMKA				S	**Sn**	**07 16 26.2**	**0.0**
CERAA	**Semis' Rag'd T**	**1.05**	**88**	P	**Pn**	**07 16 07.7**	**-0.4**
SMY	**Shemya**	**2.54**	**291**	P	**Pn**	**07 16 24.6**	**+0.3**
SMY				S	**Sn**	**07 16 57.3**	**+0.9**
FX1	**Attu Island--F**	**3.12**	**291**	P	**Pn**	**07 16 31.6**	**-0.1**
FX1	**Attu Island--F**	**3.12**	**291**	Pn	**Pn**	**07 16 31.5**	**-0.1**
	13nm,0.3s,baz=131,slow=5.6,SNR=72						
FX1				Sn	**Sn**	**07 17 07.6**	**-1.9**
	13nm,0.3s,baz=294,slow=21,SNR=9.5						
ILAR	**Eielson Array**	**22.14**	**41**	P	**P**	**07 20 24.4**	**-1.1**
	0.2nm,0.8s,baz=245,slow=8.0,SNR=6.1						
YKA	**Yellowknife Ar**	**36.33**	**46**	P	**P**	**07 22 32.0**	**+0.8**
	0.5nm,0.7s,baz=284,slow=8.6,SNR=7.5						
NVAR	**Mina Array Bea**	**45.46**	**81**	P	**P**	**07 23 47.2**	**+0.8**
	0.2nm,0.5s,baz=296,slow=6.0,SNR=3.7						
PDAR	**Pinedale Array**	**48.05**	**71**	P	**P**	**07 24 06.1**	**-0.4**
	0.2nm,0.3s,baz=305,slow=5.4,SNR=3.1						

IDC 26 07:58:49.1±65.0,17.81S×179.14E,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.5/18,mbtmp3.6/3,Error ellipse: s-maj=1169.0km s-min=156.0km az=78.0,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.64**	**240**	P	P	08 05 57.1	-0.5
	0.6nm,0.4s,baz=74,slow=12,SNR=3.0						
WRA	**Warramunga Arr**	**42.35**	**260**	P	P	08 06 46.2	+0.8
	0.2nm,0.3s,baz=93,slow=7.6,SNR=19						
ASAR	**Alice Springs**	**42.57**	**254**	P	P	08 06 46.0	-1.2
	0.4nm,0.7s,baz=80,slow=9.0,SNR=4.6						

ISCJB **26** *08:00:59.8±1.0,37.70N±0.04×26.96E±0.06,h4km±5km, Error ellipse: s-maj=8.2km s-min=5.7km az=153.1*
ISK **26** *08:00:59.7,37.76N×27.06E,h10km,MD2.8*
DDA **26** *08:01:00.6,37.76N×27.00E,h5km,MD3.1*
CSEM **26** *08:01:00.5±0.3,37.72N×27.00E,h10km,MD3.1, Error ellipse: s-maj=6.9km s-min=5.3km az=64.0*

ISC 26 08:01:00.3±1.1,37.73N±0.03×26.98E±0.05,h13km±8km, n21,σ0.946/36,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.20**	**98**	*i* P	**Pg**	**08 01 04.9**	**0.0**
GCAM				*i* S	**Sb**	**08 01 09.1**	**-0.6**
GCAM	**G?zelcaml?**	**0.20**	**98**	*i* P	**Pg**	**08 01 04.9**	**0.0**
GCAM				*i* S	**Sb**	**08 01 09.1**	**-0.6**
BLCB	**Balcova**	**0.66**	**4**	*e*PG	**Pg**	**08 01 12.3**	**-0.9**
BLCB				*e*SG	**Sg**	**08 01 21.2**	**-0.5**
BLCB	**Balcova**	**0.66**	**4**	*e*Pg	**Pg**	**08 01 12.3**	**-0.9**
BLCB				*e*Sg	**Sg**	**08 01 21.3**	**-0.5**
AYDN	**Tasoluk**	**0.72**	**95**	*i* P	**Pg**	**08 01 14.2**	**-0.1**
AYDN				*i* S	**Sg**	**08 01 23.8**	**0.0**
AYDN	**Tasoluk**	**0.72**	**95**	*i* P	**Pg**	**08 01 14.2**	**-0.1**
AYDN				*i* S	**Sg**	**08 01 23.8**	**0.0**
MLSB	**Milas**	**0.77**	**124**	*e*PG	**Pg**	**08 01 14.5**	**-0.7**
MLSB				*e*SG	**Sg**	**08 01 25.3**	**-0.1**
MLSB	**Milas**	**0.77**	**124**	*e*Pg	**Pg**	**08 01 14.5**	**-0.7**
MLSB				*e*Sg	**Sg**	**08 01 25.3**	**-0.1**
YER	**Yerkesik**	**1.20**	**119**	*e*PN	**Pn**	**08 01 22.4**	**-0.4**
YER				*e*SN	**Sb**	**08 01 38.5**	**+0.2**
YER	**Yerkesik**	**1.20**	**119**	*e*Pn	**Pn**	**08 01 22.4**	**-0.4**
YER				*e*Sn	**Sb**	**08 01 38.5**	**+0.2**
AKHS	**Akhisar**	**1.32**	**30**	*i* P	**Pg**	**08 01 26.1**	**+0.3**
AKHS				*i* S	**Sg**	**08 01 43.3**	**+0.3**
AKHS	**Akhisar**	**1.32**	**30**	*i* P	**Pg**	**08 01 26.1**	**+0.3**
AKHS				*i* S	**Sg**	**08 01 43.3**	**+0.3**
APE	**Apeiranthos**	**1.33**	**241**	*e*PN	**Pb**	**08 01 25.9**	**+0.8**
APE	**Apeiranthos**	**1.33**	**241**	*e*Pn	**Pb**	**08 01 25.9**	**+0.8**
MANT	**Manisa**	**1.46**	**58**	*i* P	**Pg**	**08 01 28.5**	**+0.1**
MANT				*i* S	**Sn**	**08 01 45.7**	**-0.1**
MANT	**Manisa**	**1.46**	**58**	*i* P	**Pg**	**08 01 28.5**	**+0.1**
MANT				*i* S	**Sn**	**08 01 45.7**	**-0.1**
KULA	**Kula-Manisa**	**1.54**	**59**	*e*PN	**Pn**	**08 01 27.7**	**+0.1**
KULA	**Kula-Manisa**	**1.54**	**59**	*e*Pn	**Pn**	**08 01 27.7**	**+0.1**
DEMI	**Demirci**	**1.89**	**46**	*i* P	**Pg**	**08 01 36.4**	**-0.3**
DEMI				*i* S	**Sg**	**08 02 00.5**	**-0.8**
TVSB	**Tavsanli**	**2.60**	**48**	*e*PN	**Pn**	**08 01 42.4**	**+0.3**
TVSB	**Tavsanli**	**2.60**	**48**	*e*Pn	**Pn**	**08 01 42.4**	**+0.3**

AUST **26** *08:08:25.8,6.50N×126.51E,h60km*
ISCJB **26** *08:08:31.6±0.3,5.87N±0.03×126.86E±0.04,h83km, mb4.4/33,Error ellipse: s-maj=5.5km s-min=3.5km az=158.3*
BJI **26** *08:08:31.0,5.30N×126.76E,h121km,mB5.0/6,mb4.6/9*
IDC **26** *08:08:34.5±1.2,5.87N×126.64E,h104km±10km,mb4.0/20, mb1 4.2/21,mb1mx4.1/27,mbtmp4.0/21,Error ellipse: s-maj=20.4km s-min=8.8km az=79.0*
NEIC **26** *08:08:35.2±1.0,5.85N×126.48E,h109km±9km,mb4.4/11, Error ellipse: s-maj=14.4km s-min=5.8km az=79.0*
DJA **26** *08:08:35.6±0.6,6.4N×12.7E±,h94km±11km,M5.0/10, mB5.3/7,mb5.1/10,MLv5.1/8,Mw(mB)4.7/7*

ISC 26 08:08:32.7±0.4,5.88N±0.04×126.77E±0.05,h83km,n97, σ1.72/112,mb4.4/33,3C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.68**	**315**	*e*Pn	**Pn**	**08 09 02.5**	**+2.0**
DAV				S	**Sn**	**08 09 23.4**	**+1.9**
DAV	**Davao City (W)**	**1.68**	**315**	P	**Pn**	**08 09 01.6**	**+1.2**
DAV	**Davao City (W)**	**1.68**	**315**	P	**Pn**	**08 09 01.2**	**+0.8**
	125nm,0.3s,baz=126,slow=2.3,SNR=15						
DAV				S	**Sn**	**08 09 23.4**	**+1.9**
	324nm,0.3s,baz=126,slow=21,SNR=12						
DMPH	**Davao City--Mi**	**1.74**	**314**	*e*P	**Pn**	**08 09 03.6**	**+2.4**
DMPH				*e*S	**Sn**	**08 09 24.6**	**+1.7**
KCP	**Kidapawan**	**2.02**	**304**	*e*P	Pn	08 09 08.2	+3.3
KCP				*e*S	**Sn**	**08 09 31.5**	**+1.9**
CTBH	**Cotabato--PC H**	**2.84**	**298**	*i* P	**Pn**	**08 09 16.2**	**+0.2**
CGP	**Cagayan de Oro**	**3.29**	**321**	*e*P	Pn	08 09 39.6	+18
CGP				*e*S	**Sn**	**08 10 04.0**	**+4.0**
GAMI	**Galela, Maluku**	**4.14**	**166**	P	**Pn**	**08 09 36.5**	**+3.0**
GAMI				S	Sn	08 10 28.3	+7.5
TBP	**Tagbilaran**	**4.76**	**323**	*e*P	**Pn**	**08 09 43.2**	**+1.2**
MNI	**Manado**	**4.80**	**204**	P	**Pn**	**08 09 43.8**	**+1.1**
TNTI	**Ternate**	**5.10**	**173**	P	**Pn**	**08 09 48.6**	**+1.9**
	338nm,1.1s,8μm1.6nm						
KMSI	**Cibinong**	**5.96**	**208**	P	**Pn**	**08 10 00.2**	**+1.9**
	325nm,0.7s,1.3nm						
LBMI	**Labuha**	**6.51**	**174**	P	**Pn**	**08 10 08.9**	**+3.0**
	97nm,0.9s,2μm0.5nm						
MRSI	**Marisa**	**7.21**	**222**	P	**Pn**	**08 10 16.1**	**+0.6**
	160nm,0.6s,1μm0.6nm						
MRSI				S	**Sn**	**08 11 36.0**	**+0.1**
	160nm,0.6s,1μm0.6nm						
PALU	**Palau**	**7.79**	**79**	P	Pn	08 10 10.8	-13
	baz=7.9,SNR=3.8						
PALU				S	**Sn**	**08 11 49.3**	**-0.7**
	baz=7.9,SNR=7.8						
LUWI	**Luwuk**	**7.95**	**210**	P	**Pn**	**08 10 26.6**	**+1.1**
	266nm,0.8s,2μm0.7nm						
LUWI	**Luwuk**	**7.95**	**210**	P	Pn	08 10 29.5	+4.0
	baz=8.4,SNR=10.0						
SWI	**Sorong**	**8.05**	**146**	P	Pn	08 10 31.6	+4.6
	baz=8.8,SNR=3.1						
SWI				S	Sn	08 11 45.1	-11
	baz=8.8,SNR=14						
NLAI	**Namlea**	**9.06**	**178**	P	**Pn**	**08 10 40.9**	**+0.2**
	138nm,0.6s,5μm						
SKSI	**Soroako, Sulaw**	**9.96**	**213**	P	**Pn**	**08 10 52.5**	**-0.5**
	43nm,0.8s,430nm						
FAKI	**Fak Fak**	**10.31**	**148**	P	Pn	08 11 02.0	+4.3
	baz=11,SNR=5.6						
TTSI	**Tana Toraja**	**11.26**	**218**	P	**Pn**	**08 11 12.0**	**+1.3**
	116nm,1.0s,3μm						
KAPI	**Kappang**	**12.89**	**213**	P	**Pn**	**08 11 31.1**	**-1.7**
KAPI	**Kappang**	**12.89**	**213**	P	**Pn**	**08 11 31.1**	**-1.7**
	51nm,0.9s						
KAPI	**Kappang**	**12.89**	**213**	P	**Pn**	**08 11 31.1**	**-1.7**
	1.2nm,0.3s,baz=31,slow=8.6,SNR=9.7						
MTN	**Manton Dam**	**19.09**	**167**	P	**Pn**	**08 12 51.2**	**+0.7**
	baz=20,SNR=22						
MTN				S	Sn	08 16 34.1	+10
	baz=20,SNR=6.2						
KDU	**Kakadu**	**19.29**	**163**	P	**Pn**	**08 12 52.9**	**0.0**
	baz=20,SNR=26						
KNRA	**Kununurra**	**21.50**	**175**	P	**P**	**08 13 15.9**	**+1.0**
	baz=22,SNR=26						
FITZ	**Fitzroy Crossi**	**23.85**	**183**	*e*P	**P**	**08 13 38.4**	**0.0**
	9.1nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.85**	**183**	P	**P**	**08 13 38.8**	**+0.3**
	3.8nm,0.4s,baz=27,slow=8.3,SNR=18						
FITZ	**Fitzroy Crossi**	**23.85**	**183**	P	**P**	**08 13 38.8**	**+0.3**
	baz=25,SNR=18						
COEN	**Coen**	**25.56**	**141**	*e*P	**P**	**08 13 55.8**	**+1.7**
	28nm,0.6s						
COEN	**Coen**	**25.56**	**141**	P	**P**	**08 13 55.9**	**+1.9**
	baz=26,SNR=7.7						
WRAB	**Tennant Creek**	**26.71**	**164**	*e*P	**P**	**08 14 04.8**	**+0.4**
	9.3nm,0.6s						
WRA	**Warramunga Arr**	**26.71**	**164**	P	**P**	**08 14 04.8**	**+0.4**
WRA	**Warramunga Arr**	**26.71**	**164**	P	**P**	**08 14 04.8**	**+0.4**
	6.7nm,0.4s,baz=342,slow=10.0,SNR=111						
NJ2	**Nanjing**	**27.07**	**345**	*e*P	**P**	**08 14 10.3**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WHN	**Wuhan**	**27.18**	**336**	P	**P**	**08 14 11.3**	**+2.8**
QIS	**Mount Isa**	**29.14**	**155**	P	**P**	**08 14 27.3**	**+1.3**
	baz=30,SNR=7.9						
MTSU	**Mount Surprise**	**29.48**	**144**	P	**P**	**08 14 32.0**	**+2.9**
	baz=30,SNR=4.9						
CMAR	**Chiang Mai Arr**	**29.88**	**297**	P	**P**	**08 14 30.3**	**-2.4**
CMAR	**Chiang Mai Arr**	**29.88**	**297**	P	**P**	**08 14 30.3**	**-2.4**
	comp=Z,0.9nm,0.5s,baz=116,slow=10,SNR=2.6						
AS31	**Alice Springs**	**30.18**	**167**	*e*P	**P**	**08 14 35.6**	**+0.4**
ASAR	**Alice Springs**	**30.18**	**167**	P	**P**	**08 14 35.8**	**+0.5**
ASAR				ScP	**ScP**	**08 21 08.2**	**-1.6**
ASAR	**Alice Springs**	**30.18**	**167**	P	**P**	**08 14 35.8**	**+0.5**
	comp=Z,5.1nm,0.4s,baz=345,slow=7.1,SNR=76						
ASAR				ScP	**ScP**	**08 21 08.2**	**-1.6**
	comp=Z,0.7nm,0.9s,baz=348,slow=3.0,SNR=4.8						
KSAR	**Wonju Array Be**	**31.44**	**2**	P	**P**	**08 14 46.3**	**+0.2**
KSRS	**Korea Array**	**31.45**	**2**	P	**P**	**08 14 46.3**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=175,slow=11,SNR=5.7						
MJAR	**Matsushiro Arr**	**32.27**	**17**	P	**P**	**08 14 52.9**	**-0.6**
MJAR	**Matsushiro Arr**	**32.27**	**17**	P	**P**	**08 14 52.9**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=196,slow=10.0,SNR=6.1						
XAN	**Xi'an**	**32.54**	**332**	P	**P**	**08 14 57.0**	**+1.0**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MEEK	**Meekatharra**	**33.27**	**193**	P	**P**	**08 15 01.5**	**-0.9**
	baz=34,SNR=7.1						
QLP	**Quilpie**	**36.44**	**153**	P	**P**	**08 15 30.7**	**+1.1**
	baz=37,SNR=4.6						
FORT	**Forrest**	**36.47**	**178**	*e*P	**P**	**08 15 29.7**	**0.0**
	comp=Z,18nm,0.5s						
FORT	**Forrest**	**36.47**	**178**	P	**P**	**08 15 30.1**	**+0.4**
	baz=37,SNR=24						
KMBL	**Kambalda**	**37.33**	**187**	P	**P**	**08 15 36.8**	**-0.3**
	baz=38,SNR=5.3						
HHC	**Hu-ho-hao-te**	**37.39**	**341**	*e*P	**P**	**08 15 38.8**	**+1.1**
HHC				pP	pP	08 16 04.5	+7.2
HHC				sP	sP	08 16 17.8	+11
HHC				PP	**PnPn**	**08 17 10.0**	**+3.9**
HHC				S	**S**	**08 21 18.5**	**-1.4**
HHC				SS	**SnSn**	**08 24 00.3**	**-4.6**
HHC				ScS	**ScS**	**08 25 37.8**	**-5.5**
HHC				pmax	pmax		
	comp=Z,66nm,0.9s						
HHC				pmax	pmax		
	comp=Z,660nm,9.6s						
HHC				LR	LR		
	comp=N,240nm,17.8s						
HHC				LR	LR		
	comp=E,680nm,20.2s						
HHC				LR	LR		
	comp=Z,180nm,17.8s						
BLDU	**Ballidu**	**37.54**	**194**	P	**P**	**08 15 38.0**	**-0.9**
	baz=38,SNR=7.8						
USRK	**Ussuriysk Arra**	**38.45**	**6**	P	**P**	**08 15 45.3**	**-1.0**
	comp=Z,1.6nm,0.4s,baz=185,slow=8.2,SNR=14						
BBOO	**Buckleboo**	**39.47**	**168**	*e*P	**P**	**08 15 55.8**	**+0.8**
	comp=Z,179nm,0.6s						
BBOO	**Buckleboo**	**39.47**	**168**	P	**P**	**08 15 56.0**	**+1.0**
	baz=40,SNR=80						
NWAO	**Narrogin (SRO)**	**39.64**	**193**	P	**P**	**08 15 54.8**	**-1.7**
NWAO	**Narrogin (SRO)**	**39.64**	**193**	P	**P**	**08 15 54.8**	**-1.7**
	comp=Z,5.3nm,0.3s,baz=22,slow=9.5,SNR=7.7						
STKA	**Stephens Creek**	**40.12**	**160**	*e*P	**P**	**08 16 01.4**	**+1.0**
	comp=Z,0.9nm,0.4s						
STKA	**Stephens Creek**	**40.12**	**160**	P	**P**	**08 16 00.1**	**-0.3**
	comp=Z,4.6nm,0.3s,baz=341,slow=7.8,SNR=26						
STKA	**Stephens Creek**	**40.12**	**160**	P	**P**	**08 16 01.7**	**+1.3**
	baz=41,SNR=34						
ASAJ	**Asahikawa**	**40.54**	**18**	*e*P	**P**	**08 16 06.0**	**+2.2**
	comp=Z,4.4nm,1.0s						
ASAJ	**Asahikawa**	**40.54**	**18**	P	**P**	**08 16 04.0**	**+0.2**
	comp=Z,3.1nm,0.4s,baz=279,slow=18,SNR=5.5						
ARPS	**Mount Arapiles**	**44.70**	**163**	P	**P**	**08 16 39.4**	**+1.9**
	baz=46,SNR=13						
ULN	**Ulaanbaatar**	**45.11**	**341**	*e*P	**P**	**08 16 42.3**	**+1.5**
	comp=Z,2.8nm,0.7s						
SONM	**Songino Array**	**45.30**	**341**	P	**P**	**08 16 42.5**	**+0.2**
SONM				PcP	**PcP**	**08 18 20.6**	**-0.2**
SONM	**Songino Array**	**45.30**	**341**	P	**P**	**08 16 42.4**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=163,slow=9.3,SNR=7.6						
SONM				PcP	**PcP**	**08 18 20.6**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=145,slow=5.1,SNR=3.3						
PETK	**Petropavlovsk-**	**53.44**	**23**	P	**P**	**08 17 44.2**	**+0.2**
PETK	**Petropavlovsk-**	**53.44**	**23**	P	**P**	**08 17 44.2**	**+0.2**
	comp=Z,3.3nm,0.6s,baz=197,slow=4.6,SNR=3.9						
MK31	**Makanchi Array**	**55.84**	**324**	*e*P	**P**	**08 17 59.4**	**-2.1**
MKAR	**Makanchi Array**	**55.84**	**324**	P	**P**	**08 17 59.8**	**-1.8**
MKAR				PcP	**PcP**	**08 18 58.9**	**-0.7**
MKAR				ScP	**ScP**	**08 22 48.5**	**-2.9**
MKAR	**Makanchi Array**	**55.84**	**324**	P	**P**	**08 17 59.8**	**-1.8**
	comp=Z,1.5nm,0.5s,baz=117,slow=7.5,SNR=15						
MKAR				PcP	**PcP**	**08 18 58.

*SOF **26** 08:22:53.0,41°.26N×22°.68E,h10km,MD3.1*
*SKO **26** 08:22:53.2,41°.31N×22°.65E,h15km,M2.3,ML2.8*
*ISCJB **26** 08:22:53.7±0.3, 41°.28N±0°.01×22°.66E±0°.02,h3km±3km, Error ellipse: s-maj=2.7km s-min=2.3km az=136.3*
*ATH **26** 08:22:53.8,41°.29N×22°.67E,h20km,MD3.2/9*
*CSEM **26** 08:22:54.0±0.1,41°.28N×22°.66E,h2km,ML2.6, Error ellipse: s-maj=2.2km s-min=1.9km az=64.0*
*THE **26** 08:22:54.3,41°.28N×22°.66E,h0km,ML2.9/11, Error ellipse: s-maj=0.9km s-min=0.2km az=334.0*
*BEO **26** 08:22:55.0±0.7,41°.27N×22°.66E,h0km±2km,ML2.7/8*

ISC 26 08:22:54.4±1.0, 41°.28N±0°.01×22°.67E±0°.01, h2km±8km, n102,σ0§70/155, 3C-2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**298**	P	**Pg**	**08 22 56.0**	**0.0**
VAY				S	**Sg**	**08 22 57.5**	**+0.4**
VAY	**Valandovo**	**0.08**	**298**	*e*Pg	**Pg**	**08 22 56.0**	**0.0**
VAY				*e*Sg	**Sg**	**08 22 57.6**	**+0.5**
VAY				eLg	Lg	08 22 57.7	
	comp=E,8μm,0.4s						
VAY				eLg	Lg	08 22 57.7	
	comp=N,13μm,0.2s						
VAY	**Valandovo**	**0.08**	**298**	*e*Pg	**Pg**	**08 22 55.8**	**-0.2**
VAY				*e*Sg	**Sg**	**08 22 57.5**	**+0.4**
VAY	**Valandovo**	**0.08**	**298**	P	**Pg**	**08 22 56.0**	**0.0**
VAY				S	**Sg**	**08 22 57.5**	**+0.4**
VAY				eLg	Lg	08 22 58.1	
	comp=N,13μm,0.2s						
KNT	**Kendrikon**	**0.21**	**125**	P	**Pg**	**08 22 58.8**	**+0.3**
KNT				S	**Sg**	**08 23 01.8**	**+0.5**
KNT	**Kendrikon**	**0.21**	**125**	P	**Pg**	**08 22 58.8**	**+0.3**
KNT				S	**Sg**	**08 23 01.8**	**+0.5**
GRG	**Griva**	**0.38**	**212**	P	**Pg**	**08 23 01.9**	**+0.2**
GRG				S	**Sg**	**08 23 07.1**	**+0.4**
GRG	**Griva**	**0.38**	**212**	*e*PB	**Pg**	**08 23 01.9**	**+0.2**
GRG				*e*SB	**Sg**	**08 23 07.9**	**+1.2**
GRG	**Griva**	**0.38**	**212**	P	**Pg**	**08 23 01.9**	**+0.2**
GRG				S	**Sg**	**08 23 07.1**	**+0.4**
GRG				*e*Sb	**Sg**	**08 23 07.9**	**+1.2**
KKB	**Krupnik**	**0.66**	**28**	*i* Pg	**Pg**	**08 23 06.6**	**-0.5**
KKB	**Krupnik**	**0.66**	**28**	*i* Pg	**Pg**	**08 23 06.6**	**-0.5**
THE	**Thessaloniki**	**0.69**	**161**	P	**Pg**	**08 23 07.1**	**-0.5**
THE				S	**Sg**	**08 23 17.1**	**+0.6**
THE	**Thessaloniki**	**0.69**	**161**	P	**Pg**	**08 23 07.1**	**-0.5**
THE				S	**Sg**	**08 23 17.1**	**+0.6**
SOH	**Sokhos**	**0.70**	**131**	P	**Pg**	**08 23 07.2**	**-0.5**
SOH				S	**Sg**	**08 23 17.7**	**+1.0**
SOH	**Sokhos**	**0.70**	**131**	*e*PN	**Pg**	**08 23 07.3**	**-0.5**
SOH				*e*SN	**Sg**	**08 23 17.0**	**+0.3**
SOH	**Sokhos**	**0.70**	**131**	*e*Pn	**Pg**	**08 23 07.3**	**-0.5**
SOH				*e*Sn	**Sg**	**08 23 17.0**	**+0.3**
SOH				S	**Sg**	**08 23 17.7**	**+1.0**
SRS	**Serrai**	**0.72**	**103**	P	**Pg**	**08 23 07.8**	**-0.4**
SRS				S	**Sg**	**08 23 18.6**	**+1.1**
SRS	**Serrai**	**0.72**	**103**	P	**Pg**	**08 23 07.8**	**-0.4**
HORT	**Hortiatis**	**0.76**	**154**	P	**Pg**	**08 23 08.7**	**-0.2**
HORT				S	**Sg**	**08 23 19.6**	**+0.8**
HORT	**Hortiatis**	**0.76**	**154**	P	**Pg**	**08 23 08.7**	**-0.2**
HORT				S	**Sg**	**08 23 19.6**	**+0.8**
MMB	**Musomiste**	**0.85**	**69**	*i* Pg	**Pg**	**08 23 10.2**	**-0.6**
MMB	**Musomiste**	**0.85**	**69**	*i* Pg	**Pg**	**08 23 10.2**	**-0.6**
NVR	**Nevrokopi**	**0.90**	**85**	P	**Pg**	**08 23 11.2**	**-0.5**
NVR				S	**Sb**	**08 23 24.9**	**-0.4**
NVR	**Nevrokopi**	**0.90**	**85**	*e*PN	**Pg**	**08 23 11.1**	**-0.6**
NVR				*e*SN	**Sg**	**08 23 23.6**	**+0.2**
NVR	**Nevrokopi**	**0.90**	**85**	P	**Pg**	**08 23 11.2**	**-0.5**
NVR				*e*Sn	**Sg**	**08 23 23.6**	**+0.2**
NVR				S	**Sb**	**08 23 24.9**	**-0.4**
BIA	**Bitola**	**1.05**	**256**	P	**Pg**	**08 23 13.8**	**-0.7**
BIA				S	**Sb**	**08 23 28.9**	**-0.5**
BIA	**Bitola**	**1.05**	**256**	*e*Pg	**Pg**	**08 23 13.7**	**-0.7**
BIA	**Bitola**	**1.05**	**256**	P	**Pg**	**08 23 13.8**	**-0.7**
PLG	**Polygyros**	**1.08**	**147**	P	**Pg**	**08 23 14.4**	**-0.7**
PLG				S	**Sb**	**08 23 30.5**	**+0.1**
PLG	**Polygyros**	**1.08**	**147**	*e*PN	**Pg**	**08 23 14.5**	**-0.7**
PLG				*e*SN	**Sg**	**08 23 29.4**	**+0.2**
PLG	**Polygyros**	**1.08**	**147**	P	**Pg**	**08 23 14.4**	**-0.7**
PLG				S	**Sb**	**08 23 30.5**	**+0.1**
FNA	**Florina**	**1.10**	**243**	P	**Pg**	**08 23 14.7**	**-0.7**
FNA				S	**Sb**	**08 23 30.6**	**-0.2**
FNA	**Florina**	**1.10**	**243**	*e*PN	**Pg**	**08 23 14.9**	**-0.5**
FNA				*e*SN	**Sg**	**08 23 30.1**	**+0.5**
FNA	**Florina**	**1.10**	**243**	P	**Pg**	**08 23 14.7**	**-0.7**
SKO	**Skopje**	**1.15**	**307**	*e*Pg	**Pg**	**08 23 15.3**	**-1.1**
SKO				*e*Sg	**Sg**	**08 23 30.7**	**-0.6**
SKO				eLg	Lg	08 23 32.5	
	comp=E,73nm,0.3s						
SKO				eLg	Lg	08 23 32.8	
	comp=N,142nm,0.8s						
SKO	**Skopje**	**1.15**	**307**	*e*Pg	**Pb**	**08 23 16.8**	**-0.1**
SKO	**Skopje**	**1.15**	**307**	*e*Pg	**Pg**	**08 23 15.8**	**-0.6**
SKO				*e*Sg	**Sg**	**08 23 31.2**	**-0.1**
SKO				eLg	Lg	08 23 33.2	
	comp=N,142nm,0.8s						
KZN	**Kozani**	**1.19**	**215**	*e*PN	**Pg**	**08 23 16.9**	**-0.3**
KZN				*e*SN	**Sb**	**08 23 33.4**	**-0.1**
KZN	**Kozani**	**1.19**	**215**	*e*Pn	**Pg**	**08 23 16.9**	**-0.3**
KZN				*e*Sn	**Sb**	**08 23 33.4**	**-0.1**
VTS	**Vitosha**	**1.37**	**17**	P	**Pn**	**08 23 20.3**	**-0.3**
VTS	**Vitosha**	**1.37**	**17**	*e*Pg	**Pn**	**08 23 20.1**	**-0.5**
VTS				*e*Sg	**Sg**	**08 23 38.7**	**+0.3**
VTS	**Vitosha**	**1.37**	**17** ⇑	*i*P	**Pn**	**08 23 20.0**	**-0.5**
VTS	**Vitosha**	**1.37**	**17**	*i* P	**Pn**	**08 23 20.1**	**-0.5**
VTS	**Vitosha**	**1.37**	**17**	*i* P	**Pn**	**08 23 20.1**	**-0.5**
VTS				*e*Sg	**Sg**	**08 23 38.7**	**+0.3**
VTS				*e*Sn	**Sb**	**08 23 39.1**	**+0.3**
OUR	**Ouranopolis**	**1.38**	**133**	P	**Pn**	**08 23 20.0**	**-0.5**
OUR				S	**Sn**	**08 23 39.6**	**+0.3**
OUR	**Ouranopolis**	**1.38**	**133**	P	**Pn**	**08 23 20.0**	**-0.5**
OUR				S	**Sn**	**08 23 39.6**	**+0.3**
KAVA	**Kavala**	**1.43**	**101**	P	**Pn**	**08 23 20.5**	**-0.7**
KAVA				S	**Sn**	**08 23 40.8**	**+0.3**
KAVA	**Kavala**	**1.43**	**101**	P	**Pn**	**08 23 20.5**	**-0.7**
KAVA				S	**Sn**	**08 23 40.8**	**+0.3**
NEST	**Nestorio**	**1.50**	**235**	P	**Pn**	**08 23 21.8**	**-0.6**
NEST	**Nestorio**	**1.50**	**235**	P	**Pn**	**08 23 21.8**	**-0.6**
PAIG	**Paliouri**	**1.56**	**150**	P	**Pn**	**08 23 22.1**	**-1.0**
PAIG				S	**Sb**	**08 23 44.1**	**0.0**
PAIG	**Paliouri**	**1.56**	**150**	*e*PN	**Pn**	**08 23 22.3**	**-0.8**
PAIG				*e*SN	**Sb**	**08 23 44.0**	**0.0**
PAIG	**Paliouri**	**1.56**	**150**	*e*Pn	**Pn**	**08 23 22.3**	**-0.8**
RZN	**Rozhen**	**1.59**	**75**	P	**Pn**	**08 23 22.2**	**-1.5**
RZN	**Rozhen**	**1.59**	**75**	P	**Pn**	**08 23 22.2**	**-1.5**
BARS	**Barje**	**1.66**	**338**	*e*Pn	**Pn**	**08 23 24.2**	**-0.3**
BARS				*e*Sn	**Sb**	**08 23 47.1**	**+0.2**
BARS	**Barje**	**1.66**	**338**	*e*Pn	**Pn**	**08 23 24.2**	**-0.3**
BARS				*e*Sn	**Sb**	**08 23 47.1**	**+0.2**
PGB	**Panagyurishte**	**1.69**	**41**	*i* P	**Pn**	**08 23 23.9**	**-1.0**
PGB	**Panagyurishte**	**1.69**	**41**	*i* P	**Pn**	**08 23 23.9**	**-1.0**
PHP	**Peshkopia**	**1.72**	**284**	*e*PN	**Pn**	**08 23 24.8**	**-0.5**
PHP				*i* SN	**Sb**	**08 23 48.4**	**-0.3**
PHP	**Peshkopia**	**1.72**	**284**	P	**Pn**	**08 23 24.8**	**-0.5**
PHP	**Peshkopia**	**1.72**	**284**	P	**Pn**	**08 23 24.8**	**-0.5**
PHP				*i* Sn	**Sb**	**08 23 48.4**	**-0.3**
PLD	**Plovdiv**	**1.73**	**61**	*e*Pn	**Pg**	**08 23 27.8**	**+0.2**
PLD				*e*Sg	**Sg**	**08 23 50.2**	**+0.2**
PLD	**Plovdiv**	**1.73**	**61**	*e*Pn	**Pg**	**08 23 27.8**	**+0.2**
PLD				*e*Sg	**Sg**	**08 23 50.2**	**+0.2**
THL	**Klokotos Trika**	**1.79**	**196**	P	**Pn**	**08 23 25.5**	**-0.7**
THL	**Klokotos Trika**	**1.79**	**196**	*e*PN	**Pn**	**08 23 25.8**	**-0.4**
THL	**Klokotos Trika**	**1.79**	**196**	P	**Pn**	**08 23 25.5**	**-0.7**
THL	**Klokotos Trika**	**1.79**	**196**	*e*Pn	**Pn**	**08 23 25.8**	**-0.4**
XOR	**Xorichti**	**1.96**	**168**	P	**Pn**	**08 23 28.0**	**-0.6**
XOR	**Xorichti**	**1.96**	**168**	P	**Pn**	**08 23 28.0**	**-0.6**
ZAPS	**Zavoj**	**1.99**	**359**	*e*Pn	**Pb**	**08 23 30.3**	**-1.0**
NEO	**Neokhori**	**2.02**	**168**	*e*PB	**Pn**	**08 23 28.5**	**-0.9**
NEO	**Neokhori**	**2.02**	**168**	*e*Pb	**Pn**	**08 23 28.5**	**-0.9**
KDZ	**Kurdzhali**	**2.10**	**79**	P	**Pn**	**08 23 30.5**	**0.0**
KDZ	**Kurdzhali**	**2.10**	**79**	P	**Pn**	**08 23 30.5**	**0.0**
RDO	**Rodhopi**	**2.17**	**93**	P	**Pn**	**08 23 31.0**	**-0.5**
RDO	**Rodhopi**	**2.17**	**93**	*e*PN	**Pn**	**08 23 31.0**	**-0.5**
RDO	**Rodhopi**	**2.17**	**93**	P	**Pn**	**08 23 31.0**	**-0.5**
MPEP	**Malo Peshtene**	**2.22**	**21**	*i* P	**Pn**	**08 23 32.3**	**+0.1**
AGG	**Agios Georgios**	**2.27**	**187**	P	**Pn**	**08 23 32.5**	**-0.4**
AGG	**Agios Georgios**	**2.27**	**187**	*e*PB	**Pn**	**08 23 32.7**	**-0.2**
AGG	**Agios Georgios**	**2.27**	**187**	P	**Pn**	**08 23 32.5**	**-0.4**
MAKR	**Makrakomi, Fth**	**2.30**	**190**	P	**Pn**	**08 23 33.0**	**-0.3**
MAKR	**Makrakomi, Fth**	**2.30**	**190**	P	**Pn**	**08 23 33.0**	**-0.3**
AOS	**Alonnisos**	**2.31**	**156**	*e*PN	**Pn**	**08 23 32.5**	**-0.8**
AOS	**Alonnisos**	**2.31**	**156**	*e*Pn	**Pn**	**08 23 32.5**	**-0.8**
SMTH	**Samothraki Isl**	**2.32**	**110**	*e*PB	**Pn**	**08 23 33.5**	**0.0**
SMTH	**Samothraki Isl**	**2.32**	**110**	*e*Pb	**Pn**	**08 23 33.5**	**0.0**
LIA	**Limnos Island**	**2.36**	**125**	*e*PB	**Pn**	**08 23 34.6**	**+0.5**
LIA	**Limnos Island**	**2.36**	**125**	*e*Pb	**Pn**	**08 23 34.6**	**+0.5**
ALN	**Alexandroupoli**	**2.58**	**97**	*e*PN	**Pn**	**08 23 36.6**	**-0.5**
ALN	**Alexandroupoli**	**2.58**	**97**	*e*Pn	**Pn**	**08 23 36.6**	**-0.5**
BOLS	**Boljevac**	**2.60**	**349**	*e*Pn	**Pn**	**08 23 38.9**	**+1.5**
BOLS				*e*Sn	**Sn**	**08 24 11.2**	**+1.7**
BOLS	**Boljevac**	**2.60**	**349**	*e*Pn	**Pn**	**08 23 38.9**	**+1.5**
BOLS				*e*Sn	**Sn**	**08 24 11.2**	**+1.7**
GRUS	**Gruza**	**2.98**	**332**	*e*Pn	**Pn**	**08 23 42.1**	**-0.4**
GRUS				*e*Sn	**Sn**	**08 24 20.2**	**+1.4**
GRUS	**Gruza**	**2.98**	**332**	*e*Pn	**Pn**	**08 23 42.1**	**-0.4**
GRUS				*e*Sn	**Sn**	**08 24 20.2**	**+1.4**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn	**Pn**	**08 23 48.6**	**-0.3**
DIVS				*e*Sn	**Sn**	**08 24 31.1**	**+0.9**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn	**Pn**	**08 23 48.6**	**-0.3**
DIVS				*e*Sn	**Sn**	**08 24 31.1**	**+0.9**
VOIR		**4.50**	**22** ⇓	*i*P	**Pn**	**08 24 01.8**	**-1.8**
VOIR		**4.50**	**22** ⇓	*i* P	**Pn**	**08 24 01.8**	**-1.8**
MLR	**Muntele Rosu**	**4.84**	**29** ⇑	*i* P	Pn	08 24 13.0	+4.8
VRI	**Vrincioaia**	**5.45**	**31** ⇑	*i* P	**Pn**	**08 24 19.3**	**+2.8**

IDC 26 08:23:34.9±2.7, 54°.34N×86°.91E, h0km, mb1 3.0/3, mb1mx2.9/31, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=25.7km s-min=18.6km az=17.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.29**	**253**	Pg	Pg	08 23 58.0	-1.7
	3.5nm,0.3s,baz=72,slow=17,SNR=28						
ZALV				Lg	Lg	08 24 17.1	
	2.1nm,0.3s,baz=72,slow=29,SNR=12						
KURBB	**Kurchatov Arra**	**6.33**	**237**	Pn	Pn	08 25 10.3	+1.0
	0.1nm,0.3s,baz=51,slow=13,SNR=4.7						
KURBB				Lg	Lg	08 26 55.5	
	0.1nm,0.3s,baz=47,slow=29,SNR=4.1						
MKAR	**Makanchi Array**	**8.10**	**203**	Pn	Pn	08 25 34.9	+1.1
	0.1nm,0.3s,baz=26,slow=13,SNR=5.3						
MKAR				Lg	Lg	08 27 51.1	
	0.0nm,0.3s,baz=26,slow=23,SNR=3.5						
SONM	**Songino Array**	**13.85**	**110**	Pn	Pn	08 26 53.4	+0.9
	0.1nm,0.3s,baz=305,slow=5.1,SNR=2.6						

*ISCJB **26** 08:29:51.7±0.8, 34°.9S±0°.1×54°.4E±0°.2, h10km, mb4.2/9, MS3.7/5, Error ellipse: s-maj=28.2km s-min=12.8km az=144.7*
*IDC **26** 08:29:52.0±0.8, 34°.80S×54°.50E, h0km, mb4.0/7, mb1 4.2/8, mb1mx3.9/25, mbtmp4.0/8, ML3.6/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/32, Error ellipse: s-maj=33.4km s-min=22.2km az=53.0*
*NEIC **26** 08:29:53.4±0.5, 34°.84S×54°.45E, h10km, mb4.4/3, Error ellipse: s-maj=20.1km s-min=9.4km az=54.0*

ISC 26 08:29:53.5±0.8, 34°.9S±0°.1×54°.2E±0°.2, h10km, n35, σ1§46/32, mb4.1/9, MS3.6/5, 1D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**17.00**	**337**	*e*P	**Pn**	**08 33 51.1**	**-0.5**
	7.0nm,0.8s						
OPO	**Ambohidratompo**	**17.43**	**337**	P	**P**	**08 33 57.9**	**-0.3**
OPO	**Ambohidratompo**	**17.43**	**337**	P	**P**	**08 33 57.9**	**-0.3**
	0.2nm,0.3s,baz=152,slow=14,SNR=3.4						
OPO				LR	LR	08 39 25.0	
	comp=Z,144nm,19.4s,baz=157,slow=33						
MAW	**Mawson**	**33.12**	**174**	LR	LR	08 46 14.4	
	comp=Z,137nm,20.3s,baz=166,slow=30						
KMBO	**Kilima Mbogo**	**37.14**	**331**	LR	LR	08 49 56.8	
	comp=Z,107nm,20.4s,baz=95,slow=32						
TRBA	**At Turbah**	**48.82**	**347** ⇓	*i*P	**P**	**08 38 38.8**	**-0.6**
TRBA				*e*		08 38 38.9	
	baz=187,slow=8.6						
TRBA				AML	AML	08 38 56.5	
	comp=N,101nm,0.3s						
QSPA	**South Pole Qui**	**55.28**	**180**	*e*P	**P**	**08 39 27.2**	**+0.4**
	comp=N,7.6nm,1.3s						
QSPA	**South Pole Qui**	**55.28**	**180**	P	**P**	**08 39 27.7**	**+0.9**
	comp=N,2.6nm,0.7s,baz=291,slow=2.0,SNR=13						
VNDA	**Vanda**	**59.88**	**166**	LR	LR	09 03 59.3	
	comp=N,74nm,19.2s,baz=294,slow=34						
CMAR	**Chiang Mai Arr**	**67.97**	**46**	P	**P**	**08 40 51.2**	**-1.7**
CMAR	**Chiang Mai Arr**	**67.97**	**46**	P	**P**	**08 40 51.2**	**-1.7**
	comp=N,1.9nm,0.3s,baz=211,slow=6.6,SNR=3.6						
ASAR	**Alice Springs**	**68.76**	**105**	P	**P**	**08 40 57.1**	**-0.8**
ASAR	**Alice Springs**	**68.76**	**105**	P	**P**	**08 40 57.1**	**-0.8**
	comp=N,0.7nm,0.7s,baz=230,slow=5.8,SNR=12						
TORD	**Torodi Ar. Bea**	**69.00**	**304**	P	**P**	**08 41 00.1**	**+0.8**
TORD	**Torodi Ar. Bea**	**69.00**	**304**	P	**P**	**08 41 00.1**	**+0.8**
	comp=N,0.9nm,1.0s,baz=125,slow=4.6,SNR=4.5						
WRA	**Warramunga Arr**	**70.99**	**101**	P	**P**	**08 41 10.4**	**-1.3**
WRA	**Warramunga Arr**	**70.99**	**101**	P	**P**	**08 41 10.4**	**-1.3**
	comp=N,1.0nm,0.6s,baz=236,slow=5.2,SNR=50						
WRAB	**Tennant Creek**	**71.00**	**101**	*e*P	**P**	**08 41 11.0**	**-0.8**
	comp=N,2.9nm,0.8s						
BRTR	**Keskin Array B**	**76.65**	**344**	P	**P**	**08 41 44.0**	**-0.4**
BRTR	**Keskin Array B**	**76.65**	**344**	P	**P**	**08 41 44.0**	**-0.4**
	comp=N,1.0nm,0.8s,baz=178,slow=7.3,SNR=4.8						
BRTR				LR	LR	09 17 16.4	
	comp=N,16nm,18.0s,baz=262,slow=37						
MKAR	**Makanchi Array**	**85.16**	**19**	P	**P**	**08 42 28.9**	**-0.6**
MKAR	**Makanchi Array**	**85.16**	**19**	P	**P**	**08 42 28.9**	**-0.6**
	comp=N,0.3nm,0.7s,baz=188,slow=5.4,SNR=2.8						
HHC	**Hu-ho-hao-te**	**91.99**	**40**	*e*P	**P**	**08 43 03.3**	**+0.9**
HHC				sP	**sP**	**08 43 09.3**	**+2.4**
HHC				PP	**PP**	**08 46 45.5**	**+3.0**
HHC	**Hu-ho-hao-te**	**91.99**	**40**	SKS	**SKSac**	**08 53 33.8**	**-1.6**
HHC	**Hu-ho-hao-te**	**91.99**	**40**	S	**S**	**08 54 03.0**	**-1.2**
HHC	**Hu-ho-hao-te**	**91.99**	**40**	sS	**S**	**08 54 09.0**	**+4.8**
HHC	**Hu-ho-hao-te**	**91.99**	**40**	SS	SS	09 00 12.3	-1.6
HHC				pmax	pmax		
	comp=Z,32nm,0.6s						
HHC				pmax	pmax		
	comp=Z,94nm,3.8s						
HHC				LR	LR		
	comp=N,63nm,16.7s						
HHC				LR	LR		
	comp=E,79nm,16.7s						
HHC				LR	LR		
	comp=Z,13nm,16.7s						
PICO	**Pico**	**105.70**	**306**	*e*P	PKiKP	08 48 25.1	+8.0
PCAN	**Candelaria**	**105.72**	**306**	*e*P	**PP**	**08 48 28.0**	**+0.7**
INK	**Inuvik**	**146.26**	**5**	PKPbc	**PKPbc**	**08 49 33.4**	**+0.2**
INK	**Inuvik**	**146.26**	**5**	PKPbc	**PKPbc**	**08 49 33.4**	**+0.2**
	comp=Z,1.2nm,0.9s,baz=22,slow=5.4,SNR=4.6						
ILAR	**Eielson Array**	**147.49**	**17**	PKPbc	**PKPbc**	**08 49 36.0**	**-0.8**
ILAR	**Eielson Array**	**147.49**	**17**	PKPbc	**PKPbc**	**08 49 36.0**	**-0.8**
	comp=Z,0.4nm,0.9s,baz=286,slow=4.2,SNR=4.7						
YKA	**Yellowknife Ar**	**151.51**	**349**	PKPbc	**PKPbc**	**08 49 46.0**	**-0.9**
YKA	**Yellowknife Ar**	**151.51**	**349**	PKPbc	**PKPbc**	**08 49 46.0**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=11,slow=2.3,SNR=7.7						

GUC 26 09:02:29.6±0.6, 23°.36S×67°.19W, h215km±15km, ML3.5, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.75**	**295** ⇑	*i*P	Pn	09 03 08.4	+1.2
LVC				*e*S	S	09 03 38.4	+2.1
PB09	**Plate Boundary**	**2.45**	**309** ⇑	*i*P	Pn	09 03 15.7	+1.5
PB09				AML	AML	09 03 53.9	
	comp=N,93nm,0.2s						
CEN1	**Los Morros**	**2.77**	**269**	*e*P	Pn	09 03 20.9	+3.4
CEN1				*i* S	S	09 03 59.0	+4.3
CEN1				AML	AML	09 03 59.9	
	comp=N,72nm,0.2s						
ANCH	**Antofagasta**	**2.97**	**263** ⇓	*i*P	Pn	09 03 21.8	+2.1
ANCH				*i* S	S	09 04 00.8	+2.2
PB01	**Plate Boundary**	**3.14**	**317** ⇓	*i*P	Pn	09 03 22.4	+0.6
PB01				*i* S	S	09 04 03.7	+1.3
PB01				AML	AML	09 04 04.9	
	comp=E,54nm,0.2s						

MEX 26 09:04:31.3±0.4, 16°.24N×100°.96W, h10km, MD3.7, Near coast of Guerrero

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**1.05**	**39**	*e*P	Pg	09 04 47.8	-3.7
CAIG				*e*S	Sg	09 05 01.4	-3.7
ACX	**Acapulco**	**1.23**	**59**	*e*P	Pn	09 04 50.2	-4.4
ACX				*e*S	Sb	09 05 05.2	-5.5
ZIIG	**Zihuatanejo**	**1.45**	**341**	*i* P	Pn	09 04 53.8	-3.8
ZIIG				*i* S	Sn	09 05 12.4	-4.2
MEIG	**Mezcala**	**2.12**	**37**	*e*P	Pn	09 05 04.1	-2.8
MEIG				*e*S	Sn	09 05 28.3	-5.1
ARIG	**Puente Sto Nin**	**2.12**	**16**	*e*P	Pn	09 05 02.9	-3.9
ARIG				*e*S	Sn	09 05 29.3	-4.0
PLIG	**Platanillo**	**2.56**	**33**	*e*P	Pn	09 05 09.5	-3.5
PLIG				*i* S	Sn	09 05 40.6	-3.7
PNIG	**Pinotepa**	**2.73**	**86**	*e*P	Pn	09 05 12.8	-2.4
PNIG				*e*S	Sn	09 05 44.7	-3.6
YAIG	**Yautepec**	**3.18**	**34**	*i* P	Pn	09 05 18.1	-3.5
YAIG				*i* S	Sn	09 05 55.5	-4.2
UTMO	**Huajuapan**	**3.41**	**62**	*e*P	Pn	09 05 22.3	-2.6
UTMO				*e*S	Sn	09 06 01.9	-3.8

GUC 26 09:45:12.2±0.4, 23°.92S×67°.45W, h241km±7km, ML3.6, 1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.87**	**314**	*e*P	Pn	09 45 54.7	+1.6
LVC				*e*S	S	09 46 27.0	+1.8
PB04	**Plate Boundary**	**2.50**	**311**	*e*P	Pn	09 46 06.2	+7.4
PB04				*i* S	S	09 46 46.8	+11
PB04				AML	AML	09 46 52.9	
	comp=N,94nm,0.4s						
CEN1	**Los Morros**	**2.57**	**281** ⇓	*i*P	Pn	09 46 02.2	+2.5
CEN1				*e*S	S	09 46 39.8	+2.7
CEN1				AML	AML	09 46 41.5	
	comp=N,78nm,0.5s						
ANCH	**Antofagasta**	**2.72**	**274**	*e*P	Pn	09 46 03.2	+2.1
ANCH				*i* S	S	09 46 41.4	+1.8
PB01	**Plate Boundary**	**3.43**	**326**	*e*P	Pn	09 46 11.3	+2.2
PB01				*i* S	S	09 46 56.5	+2.4
PB01				AML	AML	09 47 01.3	
	comp=N,32nm,0.2s						
HMBC	**Humberstone**	**4.27**	**328**	*e*P	Pn	09 46 20.7	+1.7
HMBC				*e*S	S	09 47 14.1	+2.0

*ISCJB **26** 09:57:25.0±0.7, 37°.71N±0°.03×27°.05E±0°.06, h9km±5km, Error ellipse: s-maj=8.3km s-min=4.3km az=163.3*
*ISK **26** 09:57:24.7, 37°.74N×27°.14E, h7km, MD3.0*
*DDA **26** 09:57:24.6, 37°.71N×26°.95E, h7km, MD2.8*
*CSEM **26** 09:57:25.5±0.3, 37°.71N×27°.12E, h10km, MD2.8, Error ellipse: s-maj=10.2km s-min=5.4km az=74.0*

ISC 26 09:57:25.2±1.1, 37°.70N±0°.03×27°.09E±0°.03, h9km±11km, n23,σ1§07/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcami?**	**0.11**	**89**	*i* P	**Pb**	**09 57 29.9**	**+2.0**
GCAM				*i* S	**Sb**	**09 57 32.9**	**+3.1**
GCAM	**G?zelcami?**	**0.11**	**89**	*i* P	**Pb**	**09 57 29.9**	**+2.0**
BODT	**Bodrum**	**0.66**	**165**	*e*PG	**Pg**	**09 57 38.4**	**+0.4**
BODT				*e*SG	**Sb**	**09 57 48.4**	**+0.3**
BODT	**Bodrum**	**0.66**	**165**	*e*Pg	**Pg**	**09 57 38.4**	**+0.4**
BODT				*e*Sg	**Sb**	**09 57 48.4**	**+0.3**
MLSB	**Milas**	**0.68**	**126**	*e*PG	**Pb**	**09 57 38.1**	**-1.1**
MLSB				*e*SG	**Sg**	**09 57 47.8**	**+0.6**
MLSB	**Milas**	**0.68**	**126**	*e*Pg	**Pb**	**09 57 38.1**	**-1.1**
M

	comp=E,264nm,0.3s								
VAY					*e*Lg	Lg	10 01 58.4		
	comp=N,454nm,0.3s								
VAY	**Valandovo**	**0.10**	**297**	⇑ *i* Pg		**Pg**	**10 01 56.2**	**-0.1**
VAY	**Valandovo**	**0.10**	**297**	P		**Pg**	**10 01 56.2**	**-0.1**
VAY	**Valandovo**	**0.10**	**297**	*i* Pg		**Pg**	**10 01 56.7**	**+0.4**
VAY				S		**Sg**	**10 01 58.3**	**+0.3**
VAY				*e*Sg		Sg	10 01 58.6	+0.6
VAY				*e*Lg	Lg	10 01 58.8		
	comp=N,454nm,0.3s								
KNT	**Kendrikon**	**0.19**	**125**	P		**Pg**	**10 01 58.1**	**+0.2**
KNT				S		**Sg**	**10 02 00.7**	**+0.1**
KNT	**Kendrikon**	**0.19**	**125**	P		**Pg**	**10 01 58.1**	**+0.2**
KNT				S		**Sg**	**10 02 00.7**	**+0.1**
GRG	**Griva**	**0.39**	**215**	P		**Pg**	**10 02 01.9**	**+0.4**
GRG				S		**Sg**	**10 02 07.7**	**+1.2**
GRG	**Griva**	**0.39**	**215**	*e*PB		**Pg**	**10 02 01.9**	**+0.4**
GRG				*e*SB		**Sg**	**10 02 07.7**	**+1.2**
GRG	**Griva**	**0.39**	**215**	P		**Pg**	**10 02 01.9**	**+0.4**
GRG				S		**Sg**	**10 02 07.7**	**+1.2**
SOH	**Sokhos**	**0.68**	**132**	P		**Pg**	**10 02 06.8**	**-0.2**
SOH				S		**Sg**	**10 02 16.6**	**+0.8**
SOH	**Sokhos**	**0.68**	**132**	*e*PN		**Pg**	**10 02 06.8**	**-0.2**
SOH				*e*SN		**Sg**	**10 02 16.3**	**+0.5**
SOH	**Sokhos**	**0.68**	**132**	P		**Pg**	**10 02 06.8**	**-0.2**
SOH				*e*Sn		**Sg**	**10 02 16.3**	**+0.5**
SOH				S		**Sg**	**10 02 16.6**	**+0.8**
SRS	**Serrai**	**0.70**	**103**	P		**Pg**	**10 02 07.2**	**-0.2**
SRS				S		**Sg**	**10 02 17.2**	**+0.7**
SRS	**Serrai**	**0.70**	**103**	P		**Pg**	**10 02 07.2**	**-0.2**
SRS				S		**Sg**	**10 02 17.2**	**+0.7**
HORT	**Hortiatis**	**0.74**	**155**	P		**Pg**	**10 02 08.2**	**0.0**
HORT				S		**Sb**	**10 02 18.9**	**-0.6**
HORT	**Hortiatis**	**0.74**	**155**	P		**Pg**	**10 02 08.2**	**0.0**
HORT				S		**Sb**	**10 02 18.9**	**-0.6**
NVR	**Nevrokopi**	**0.89**	**85**	*e*PN		**Pg**	**10 02 10.8**	**-0.2**
NVR				*e*SN		**Sg**	**10 02 22.6**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**85**	*e*Pn		**Pg**	**10 02 10.8**	**-0.2**
NVR				*e*Sn		**Sg**	**10 02 22.6**	**+0.1**
PLG	**Polygyros**	**1.07**	**147**	*e*PN		**Pg**	**10 02 13.6**	**-0.8**
PLG				*e*SN		**Sg**	**10 02 28.4**	**+0.1**
PLG	**Polygyros**	**1.07**	**147**	*e*Pn		**Pg**	**10 02 13.6**	**-0.8**
PLG				*e*Sn		**Sg**	**10 02 28.4**	**+0.1**
FNA	**Florina**	**1.11**	**244**	P		**Pg**	**10 02 15.1**	**-0.1**
FNA	**Florina**	**1.11**	**244**	P		**Pg**	**10 02 15.1**	**-0.1**
VTS	**Vitosha**	**1.37**	**16**	P		**Pb**	**10 02 19.9**	**0.0**
VTS	**Vitosha**	**1.37**	**16**	*e*Pg		**Pg**	**10 02 20.3**	**0.0**
VTS				*e*Sg		**Sg**	**10 02 38.2**	**+0.1**
VTS	**Vitosha**	**1.37**	**16**	P		**Pb**	**10 02 19.9**	**0.0**
VTS	**Vitosha**	**1.37**	**16**	*e*Pg		**Pg**	**10 02 20.3**	**0.0**
VTS				*e*Sg		**Sg**	**10 02 38.2**	**+0.1**
VTS				*e*Sn		**Sn**	**10 02 38.8**	**+0.9**
PAIG	**Paliouri**	**1.54**	**150**	*e*PN		**Pb**	**10 02 22.1**	**-0.6**
PAIG	**Paliouri**	**1.54**	**150**	*e*Pn		**Pb**	**10 02 22.1**	**-0.6**
BARS	**Barje**	**1.67**	**337**	*e*Pn		**Pb**	**10 02 24.3**	**-0.7**
BARS				*e*Sg		**Sg**	**10 02 47.7**	**0.0**
BARS	**Barje**	**1.67**	**337**	*e*Pn		**Pb**	**10 02 24.3**	**-0.7**
BARS				*e*Sg		**Sg**	**10 02 47.7**	**0.0**
PLD	**Plovdiv**	**1.72**	**61**	*e*Sg		**Sg**	**10 02 51.5**	**+2.3**
PLD	**Plovdiv**	**1.72**	**61**	*e*Sg		**Sg**	**10 02 51.5**	**+2.3**
ZAPS	**Zavoj**	**2.00**	**359**	*e*Pn		**Pb**	**10 02 29.7**	**-0.8**
ZAPS				*e*Sn		**Sb**	**10 02 55.3**	**-0.3**

*ISCJB **26** 10:06:39.7±0.8,37.°77N±0.°04×27.°1E±0.°1,h12km±8km, Error ellipse: s-maj=13.8km s-min=7.0km az=174.2*
*ISK **26** 10:06:39.1,37.°76N×27.°18E,h13km, MD2.7*
*DDA **26** 10:06:39.6,37.°78N×27.°01E,h7km, MD2.6*
*CSEM **26** 10:06:39.9±0.3,37.°78N×27.°11E,h15km, MD2.7, Error ellipse: s-maj=11.3km s-min=6.9km az=87.0*

ISC 26 10:06:39.3±1.5, 37.°78N±0.°03×27.°11E±0.°06, h12km±15km, n14, σ0°52/18, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.12**	**129**	*i* P		**Pb**	**10 06 43.9**	**+0.3**
GCAM	**G?zelcaml?**	**0.12**	**129**	*i* P		**Pb**	**10 06 43.9**	**+0.3**
BLCB	**Balcova**	**0.61**	**355**	*e*PG		**Pb**	**10 06 51.5**	**-0.4**
BLCB				*e*SG		**Sb**	**10 07 01.1**	**+0.8**
BLCB	**Balcova**	**0.61**	**355**	*e*Pg		**Pb**	**10 06 51.5**	**-0.4**
BLCB				*e*Sg		**Sb**	**10 07 01.2**	**+0.8**
AYDN	**Tasoluk**	**0.62**	**101**	*e*P		**Pn**	**10 06 53.3**	**-0.6**
AYDN	**Tasoluk**	**0.62**	**101**	*e*P		**Pn**	**10 06 53.3**	**-0.6**
IZM	**Izmir**	**0.63**	**11**	*e*PG		**Pg**	**10 06 51.8**	**+0.2**
IZM				*e*SG		**Sb**	**10 07 01.7**	**+0.6**
IZM	**Izmir**	**0.63**	**11**	*e*Pg		**Pg**	**10 06 51.8**	**+0.2**
IZM				*e*Sg		**Sb**	**10 07 01.7**	**+0.6**
BODT	**Bodrum**	**0.73**	**168**	*e*PG		**Pg**	**10 06 53.4**	**-0.1**
BODT	**Bodrum**	**0.73**	**168**	*e*Pg		**Pg**	**10 06 53.4**	**-0.1**
KULA	**Kula-Manisa**	**1.42**	**58**	*e*PN		**Pn**	**10 07 04.6**	**-0.5**
KULA	**Kula-Manisa**	**1.42**	**58**	*e*Pn		**Pn**	**10 07 04.6**	**-0.5**
APE	**Apeiranthos**	**1.45**	**241**	*e*PN		**Pb**	**10 07 06.3**	**+0.1**
APE	**Apeiranthos**	**1.45**	**241**	*e*Pn		**Pb**	**10 07 06.3**	**+0.1**

LJU 26 10:10:54.0, 45.°93N×14.°80E, h0km, ML0.8, 3C Artificial, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VISS	**Visnje**	**0.13**	**168**	⇑ *i* Pg		Pg	10 10 56.8	+0.2
VISS				*i* Sg		Sg	10 10 58.5	+0.2
VNDS	**Vrh nad Dolski**	**0.18**	**338**	⇑ *i* Pg		Pg	10 10 57.3	-0.3
PDKS	**Podkum**	**0.19**	**47**	⇑ *i* Pg		Pg	10 10 58.2	+0.5
CRNS	**Crni Vrh**	**0.40**	**292**	*i* Pg		Pg	10 11 01.6	-0.2
CRNS				*i* Sg		Sg	10 11 08.1	+1.0
CRNS								
	comp=Z,4.0nm,0.1s							

*NIED **26** 10:11:00,27.°80N×140.°50E,h440km,Mw4.7 Best double couple: M0 1.24000×10^16 NP1:φ=270.00000°, δ=75.00000°, λ=-53.00000°. NP2:φ=19.00000°, δ=39.00000°, λ=-156.00000°.*
*DJA **26** 10:11:52.6±2.7,28.°8N×14.°0E±1.°4,h416km±32km, M4.7/19,mB5.2/9,mb4.8/19,Mw(mB)4.6/9*
*MOS **26** 10:11:57.3±0.8,27.°62N×140.°20E,h461km,mb4.5/40, Error ellipse: s-maj=9.0km s-min=5.1km az=109.9*
*ISCJB **26** 10:11:58.0±0.2,27.°57N±0.°02×140.°28E±0.°03, h472km±2km,mb4.5/101, Error ellipse: s-maj=4.3km s-min=3.2km az=3.0*
*NEIC **26** 10:11:58.2±0.2,27.°59N×140.°15E,mb4.5/26, MW4.7(NIED), Error ellipse: s-maj=6.1km s-min=4.3km az=83.0*
NEIC Recorded [1 JMA] in the Haha-jima-retto.
*IDC **26** 10:11:58.6±0.4,27.°60N×140.°11E,h461km±4km,mb4.0/34, mb1 4.1/40,mb1mx4.1/43,mbtmp4.0/40, Error ellipse: s-maj=8.7km s-min=5.4km az=85.0*
*BJI **26** 10:11:58.9,27.°54N×140.°11E,h481km,mB4.7/26, mb4.8/46*
*JMA **26** 10:11:59.7±0.2,27.°80N×140.°47E,h460km±3km, M5.0*
JMA Felt I J1.

ISC 26 10:11:59.0±0.3, 27.°63N±0.°03×140.°24E±0.°04, h468km: pP-P, n351, σ1961/501, mb4.5/101, 24C-4D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.81**	**107**	P		**P**	**10 12 59.8**	**-0.0**
CBIJ				*e*S		**S**	**10 13 46.0**	**-4.0**
JHHJ	**Haha-jima-NKT**	**2.00**	**120**	P		**P**	**10 13 01.2**	**-0.1**
JHHJ				*e*S		**S**	**10 13 50.1**	**-1.6**
JHCJ	**Hachijojimakas**	**5.44**	**356**	P		**P**	**10 13 28.2**	**-0.2**
JHCJ				*e*S		**S**	**10 14 36.7**	**-4.7**
JHJ2	**Mitsune**	**5.48**	**356**	P		**P**	**10 13 28.5**	**-0.3**
JHJ2				*e*S		**S**	**10 14 37.9**	**-4.2**
JHJ	**Hachijo jima 2**	**5.49**	**356**	P		**P**	**10 13 28.7**	**-0.2**
	250nm,0.3s,baz=191,slow=10,SNR=262							
JHJ				S		**S**	**10 14 38.3**	**-3.9**
	233nm,0.3s,baz=64,slow=18,SNR=13							
TTO1	**TONANKAI O.B.S**	**6.67**	**334**	P		**P**	**10 13 42.7**	**+2.3**
BSO1	**Boso 1**	**7.03**	**5**	P		**P**	**10 13 44.4**	**+0.6**
BSO1				*e*S		**S**	**10 13 56.5**	**-3.4**
JWZ	**Kozaga**	**7.06**	**328**	P		**P**	**10 13 46.5**	**+1.8**
JWZ				*e*S		**S**	**10 15 09.8**	**-1.6**
BSO3	**Boso 3**	**7.15**	**2**	P		**P**	**10 13 45.4**	**0.0**
JIE	**Ise**	**7.39**	**337**	P		**P**	**10 13 49.7**	**+1.6**
JKN2	**Miekihoku**	**7.42**	**334**	P		**P**	**10 13 50.1**	**+1.7**
JWM	**Minabe**	**7.49**	**327**	P		**P**	**10 13 51.3**	**+2.1**
JOD2	**Odawara 2**	**7.67**	**353**	P		**P**	**10 13 50.8**	**-0.3**
JOD2				*e*S		**S**	**10 15 19.7**	**-3.5**
JWY	**Kouya**	**7.68**	**330**	P		**P**	**10 13 53.6**	**+2.3**
MRT2	**Murotomisaki 2**	**7.78**	**319**	P		**P**	**10 13 54.7**	**+2.4**
JAI	**Aioi**	**7.91**	**322**	P		**P**	**10 13 56.0**	**+2.4**
JHE	**Heguri**	**8.01**	**332**	P		**P**	**10 13 56.6**	**+1.8**
JAO	**Obara**	**8.03**	**342**	P		**P**	**10 13 55.8**	**+0.9**
JMN	**Monobe**	**8.18**	**320**	P		**P**	**10 13 59.1**	**+2.5**
JTO	**Tosashimizu**	**8.28**	**311**	P		**P**	**10 13 59.2**	**+1.6**
JRY	**Ryogami san**	**8.44**	**353**	P		**P**	**10 13 59.1**	**-0.2**
JRY				*e*S		**S**	**10 15 33.4**	**-4.7**
JGM	**Miyama**	**8.59**	**340**	P		**P**	**10 14 01.8**	**+0.9**
JTN	**Tanegashima 3**	**8.64**	**293**	P		**P**	**10 14 03.4**	**+1.9**
JFM	**Mihama**	**8.67**	**336**	P		**P**	**10 14 03.3**	**+1.6**
JWT	**Wachi**	**8.67**	**333**	P		**P**	**10 14 03.4**	**+1.6**
JET	**Tanbara**	**8.71**	**316**	P		**P**	**10 14 04.6**	**+2.4**
JNAR	**Kushima--Naru**	**8.72**	**299**	P		**P**	**10 14 05.1**	**+2.8**
JAG	**Ashikaga**	**8.79**	**356**	P		**P**	**10 14 02.3**	**-0.8**
JTSN	**Tsuno**	**8.86**	**303**	P		**P**	**10 14 06.3**	**+2.4**
JGN	**Niukaw**	**8.92**	**345**	P		**P**	**10 14 04.7**	**+0.2**
JNA	**Nagahama**	**8.92**	**313**	P		**P**	**10 14 07.0**	**+2.5**
JNG	**Nsakai**	**8.94**	**349**	P		**P**	**10 14 04.5**	**-0.2**
JAD	**Aida**	**8.95**	**326**	P		**P**	**10 14 06.6**	**+1.9**
JHO	**Hitachi**	**8.96**	**2**	P		**P**	**10 14 05.3**	**+0.5**
JHO				S		**S**	**10 15 44.0**	**-4.3**
JTZ	**Takazaki**	**9.02**	**300**	P		**P**	**10 14 08.1**	**+2.6**
MJAR	**Matsushiro Arr**	**9.05**	**350**	P		**P**	**10 14 04.9**	**-0.9**
MJAR				S		**S**	**10 15 45.7**	**-4.4**
MJAR				ScP		**ScP**	**10 22 25.4**	**-0.2**
MJAR	**Matsushiro Arr**	**9.05**	**350**	P		**P**	**10 14 04.9**	**-0.9**
	12nm,0.3s,baz=166,slow=9.2,SNR=98							
MJAR				S		**S**	**10 15 45.7**	**-4.4**
	4.6nm,0.3s,baz=254,slow=33,SNR=5.4							
MJAR				ScP		**ScP**	**10 22 25.4**	**-0.2**
	baz=188,slow=3.5,SNR=4.4							
MAJO	**Matsushiro**	**9.05**	**350**	*c i* P		**P**	**10 14 05.1**	**-0.8**
MAJO	**Matsushiro**	**9.05**	**350**	*e*P		**P**	**10 14 05.1**	**-0.8**
MAJO				*e*S		**S**	**10 15 50.7**	**+0.5**
MAT	**Matsushiro**	**9.05**	**350**	P		**P**	**10 14 05.1**	**-0.7**
MAT				S		**S**	**10 15 45.4**	**-4.7**
MAT	**Matsushiro**	**9.05**	**350**	P		**P**	**10 14 05.3**	**-0.5**
MAT				*e*S		**S**	**10 15 46.2**	**-3.9**
JKIT	**Kitakata**	**9.09**	**305**	P		**P**	**10 14 02.4**	**+2.9**
JUS	**Usuki**	**9.12**	**309**	P		**P**	**10 14 09.4**	**+2.8**
JKT	**Katashina**	**9.15**	**355**	P		**P**	**10 14 06.6**	**-0.4**
JHM	**Kurahashi**	**9.27**	**316**	P		**P**	**10 14 10.5**	**+2.3**
JTT	**Ttatey**	**9.28**	**345**	P		**P**	**10 14 09.3**	**+1.0**
JSB	**Shiboa**	**9.31**	**358**	P		**P**	**10 14 09.2**	**+0.5**
JSB				S		**S**	**10 15 51.9**	**-3.4**
JSU	**Suzuyama**	**9.35**	**297**	P		**P**	**10 14 11.1**	**+1.9**
JNN	**Nakanoshima**	**9.36**	**286**	P		**P**	**10 14 10.2**	**+0.9**
JAM	**Amami Oshima**	**9.43**	**277**	P		**P**	**10 14 12.0**	**+2.0**
OIT2	**Oita 2**	**9.44**	**309**	P		**P**	**10 14 12.9**	**+2.8**
ONAJ	**Iwakimizuishiy**	**9.46**	**3**	P		**P**	**10 14 10.6**	**+0.4**
JZO	**Okuchi**	**9.50**	**301**	P		**P**	**10 14 12.7**	**+2.0**
JIU2	**Izumi 2**	**9.52**	**303**	P		**P**	**10 14 13.5**	**+2.6**
JHS	**Saijyo**	**9.54**	**322**	P		**P**	**10 14 13.0**	**+1.9**
JHS				*e*S		**S**	**10 16 02.0**	**+2.2**
JKI	**Kunimi**	**9.57**	**311**	P		**P**	**10 14 13.9**	**+2.5**
JKD	**Kudamatsu**	**9.62**	**314**	P		**P**	**10 14 14.4**	**+2.4**
JHK	**Hiroka**	**9.65**	**354**	P		**P**	**10 14 11.9**	**-0.3**
JHT	**Toyohira**	**9.69**	**318**	P		**P**	**10 14 14.4**	**+1.6**
JNU	**Nakatsue**	**9.76**	**306**	*e*P		**P**	**10 14 14.9**	**+1.3**
JNU				*e*S		**S**	**10 15 59.8**	**-4.4**
JNU	**Nakatsue**	**9.76**	**306**	P		**P**	**10 14 15.8**	**+2.2**
JNU	**Nakatsue**	**9.76**	**306**	P		**P**	**10 14 14.9**	**+1.3**
	13nm,0.3s,baz=112,slow=8.4,SNR=140							
JAMN	**Amaminishikomi**	**9.80**	**276**	P		**P**	**10 14 16.0**	**+1.9**
JHIK	**Hikimi**	**9.90**	**316**	P		**P**	**10 14 16.7**	**+1.7**
JHD	**Hondo**	**9.99**	**301**	P		**P**	**10 14 18.1**	**+2.1**
JSJ	**Shimokoshiki**	**10.00**	**296**	P		**P**	**10 14 17.9**	**+1.7**
JSZ	**Suzu**	**10.09**	**347**	P		**P**	**10 14 16.5**	**-0.4**
JFA	**Akaike**	**10.14**	**309**	P		**P**	**10 14 19.3**	**+1.7**
JNS	**Sasagawa**	**10.19**	**356**	P		**P**	**10 14 18.5**	**+0.5**
JMM	**Marumori**	**10.22**	**2**	P		**P**	**10 14 19.5**	**+1.2**
JFI	**Itaya**	**10.27**	**307**	P		**P**	**10 14 20.8**	**+1.7**
JTY	**Toyota**	**10.28**	**312**	P		**P**	**10 14 20.9**	**+1.8**
NGSJ	**Nagasakinomoza**	**10.32**	**301**	P		**P**	**10 14 21.2**	**+1.7**
JUR	**Ureshino**	**10.42**	**304**	P		**P**	**10 14 22.4**	**+1.8**
JSD	**Sado**	**10.51**	**351**	P		**P**	**10 14 21.2**	**-0.3**
JYS	**Shirataka**	**10.56**	**359**	P		**P**	**10 14 23.7**	**+1.6**
JOU	**Okura**	**10.71**	**2**	P		**P**	**10 14 25.4**	**+1.7**
JAW	**Awa shima**	**10.83**	**356**	P		**P**	**10 14 26.2**	**+1.3**
JIO	**Ouri**	**10.84**	**5**	P		**P**	**10 14 26.3**	**+1.3**
JYA	**Atsumi**	**10.94**	**358**	P		**P**	**10 14 27.9**	**+1.7**
JMK	**Ichinoseki**	**11.32**	**4**	P		**P**	**10 14 31.6**	**+1.4**
JMK				*e*S		**S**	**10 16 33.8**	**-1.1**
OFUJ	**Ofunato**	**11.48**	**6**	P		**P**	**10 14 33.5**	**+1.5**
JTB	**Tobi-shima**	**11.55**	**357**	P		**P**	**10 14 34.1**	**+1.4**
JTU	**Tsushima**	**11.55**	**309**	P		**P**	**10 14 33.7**	**+0.9**
JRG	**Rokugo**	**11.74**	**2**	P		**P**	**10 14 36.5**	**+1.7**
JOM	**Ohasama**	**11.84**	**4**	P		**P**	**10 14 37.6**	**+1.7**
JYW	**Yuwa**	**11.88**	**360**	P		**P**	**10 14 38.3**	**+2.1**
MIYJ	**Miyakonagasawa**	**11.99**	**6**	P		**P**	**10 14 39.0**	**+1.6**
JKE	**Kume jima 2**	**12.07**	**267**	P		**P**	**10 14 39.1**	**+0.6**
JOG2	**Oga 2**	**12.26**	**358**	P		**P**	**10 14 42.2**	**+1.9**
JTH	**Tanohata**	**12.35**	**6**	P		**P**	**10 14 42.8**	**+1.5**
JKZ	**Kuzumaki**	**12.36**	**4**	P		**P**	**10 14 43.1**	**+1.7**
JAH	**Hinai**	**12.53**	**1**	P		**P**	**10 14 45.3**	**+2.1**
JANG	**Nango**	**12.76**	**4**	P		**P**	**10 14 46.7**	**+1.0**
JIW	**Iwasaki**	**12.93**	**359**	P		**P**	**10 14 49.5**	**+1.9**
JTM	**Tenmabayashi**	**13.14**	**3**	P		**P**	**10 14 51.2**	**+1.4**
JSI2	**Shiura 2**	**13.39**	**1**	P		**P**	**10 14 53.8**	**+1.3**
JOT	**Ohata**	**13.73**	**3**	P		**P**	**10 14 57.3**	**+1.2**
JKB	**Kayabe**	**14.24**	**2**	P		**P**	**10 15 01.4**	**-0.1**
KSRS	**Korea Array**	**14.26**	**316**	P		**P**	**10 15 01.2**	**-0.6**
	2.0nm,0.3s,baz=135,slow=10,SNR=90							
KSRS				S		S	10 17 42.3	+10
	baz=135,slow=14,SNR=4.4							
KSAR	**Wonju Array Be**	**14.28**	**316**	P		**P**	**10 15 01.2**	**-0.8**
KSAR				S		S	10 17 42.3	+9.2
JOSM	**Okushiri--Mats**	**14.43**	**358**	P		**P**	**10 15 04.4**	**+0.8**
JOSM				*e*S		**S**	**10 17 33.2**	**-2.7**
ERM	**Erimo**	**14.55**	**9**	*d i* P		**P**	**10 15 06.5**	**+1.7**
ERM				pmax		pmax		
	comp=Z,68nm,1.0s							
ERM	**Erimo**	**14.55**	**9**	*e*P		**P**	**10 15 06.8**	**+2.0**
GUMO	**Guam**	**14.62**	**162**	P		**P**	**10 15 06.8**	**+0.8**
GUMO				S		S	10 17 50.6	+10
GUMO	**Guam**	**14.62**	**162**	P		**P**	**10 15 06.7**	**+0.8**
	comp=Z,6.1nm,0.3s,baz=202,slow=8.2,SNR=5.3							
GUMO				S		S	10 17 50.6	+10
	comp=Z,5.2nm,0.3s,baz=356,slow=19,SNR=4.1							
INCN	**Inchon**	**15.09**	**314**	*e*P		**P**	**10 15 09.5**	**-1.2**
	comp=Z,72nm,0.6s							
NEM2	**Nemuro 2**	**16.32**	**14**	P		**P**	**10 15 24.3**	**+0.8**
ASAJ	**Asahikawa**	**16.56**	**6**	*e*P		**P**	**10 15 27.4**	**+1.3**
	comp=Z,14nm,0.9s							
ASAJ				S		S	10 18 26.1	+9.2
ASAJ	**Asahikawa**	**16.56**	**6**	P		**P**	**10 15 27.4**	**+1.3**
	comp=Z,1.9nm,0.3s,baz=222,slow=15,SNR=21							
ASAJ				S		S	10 18 26.1	+9.2
	comp=Z,0.9nm,0.3s,baz=72,slow=20,SNR=5.0							
JTKR	**Abashiri--Toko**	**16.57**	**9**	P		**P**	**10 15 27.5**	**+1.3**
VLA	**Vladivostok**	**16.87**	**339**	*i* P		**P**	**10 15 27.1**	**-2.2**
VLA				*i* S		**S**	**10 18 19.9**	**-2.7**
VLA				pmax		pmax		
	comp=Z,212nm,0.6s							
YUK	**Yuzh-Kuril'sk**	**16.98**	**14**	⇑ *i* P		**P**	**10 15 28.5**	**-2.0**
YUK				S		**S**	**10 18 21.7**	**-2.9**
YUK				pmax		pmax		
	comp=Z,28nm,1.5s							
YUK				pmax		pmax		
	comp=Z,56nm,1.5s							
YUK				pmax		pmax		
	comp=N,53nm,0.7s							
YUK				smax		smax		
	comp=E,392nm,2.3s							
YUK				smax		smax		
	comp=N,792nm,2.3s							
YUK				MLR		MLR		
	comp=N,73nm,18.0s							
YUK				MLR		MLR		
	comp=E,141nm,18.0s							
YUK				MLR		MLR		
	comp=Z,75nm,18.0s							
JWK2	**Keihoku**	**17.70**	**4**	P		**P**	**10 15 39.3**	**+1.5**
SSLB	**Suanglung**	**17.79**	**262**	*e*P		**P**	**10 15 39.2**	**+0.1**
	comp=Z,30nm,0.8s							
USRK	**Ussuriysk Arra**	**17.81**	**340**	P		**P**	**10 15 39.2**	**+0.4**
	comp=Z,6.4nm,0.3s,baz=155,slow=8.4,SNR=79							
USRK				ScP		**ScP**	**10 22 40.0**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=147,slow=3.9,SNR=5.8							
MDJ	**Mudanjiang**	**18.98**	**336**	P		**P**	**10 15 50.8**	**+0.9**
MDJ				sP		**sP**	**10 17 53.0**	**+0.5**
MDJ				S		**S**	**10 18 58.0**	**-0.1**
MDJ				ScP		**ScP**	**10 22 42.5**	**0.0**
MDJ				PcS		**PcS**	**10 23 29.5**	**+0.8**
MDJ				pmax		pmax		
	comp=Z,23nm,1.6s							
MDJ				pmax		pmax		
	comp=Z,190nm,4.6s							
MDJ	**Mudanjiang**	**18.98**	**336**	*e*P		**P**	**10 15 51.5**	**+1.6**
	comp=Z,25nm,0.6s							
NJ2	**Nanjing**	**19.06**	**289**	*e*P		**P**	**10 15 49.5**	**-1.3**
NJ2				sP		**sP**	**10 17 50.5**	**-2.9**
NJ2				S		**S**	**10 18 56.5**	**-3.3**
NJ2				PcP		**PcP**	**10 19 52.5**	**+0.6**
NJ2				pmax		pmax		
	comp=Z,30nm,0.5s							
NJ2				pmax		pmax		
	comp=Z,90nm,5.2s							
DL2	**Dalian**	**19.16**	**311**	P		**P**	**10 15 50.8**	**-0.8**
DL2				sP		**sP**	**10 17 51.5**	**-3.0**
DL2				S		**S**	**10 19 01.8**	**+0.6**
DL2				pmax		pmax		
	comp=Z,86nm,0.8s							
DL2				pmax		pmax		
	comp=Z,87nm,8.9s							
YSS	**Yuzh-Sakhalins**	**19.39**	**5**	*c i* P		**P**	**10 15 54.5**	**+0.9**
YSS				pmax		pmax		
	comp=E,60nm,0.7s							
SNY	**Shenyang**	**19.65**	**320**	⇑ P		**P**	**10 15 56.0**	**0.0**
SNY				sP		**sP**	**10 17 59.3**	**-0.6**
SNY				S		**S**	**10 19 15.5**	**+6.4**
SNY				pmax		pmax		
	comp=Z,90nm,1.0s							
SNY				pmax		pmax		
	comp=Z,130nm,3.5s							
CN2	**Changchun**	**20.06**	**327**	⇓ P		**P**	**10 16 00.3**	**+0.5**
CN2				*e*sP		**sP**	**10 18 05.5**	**+1.0**
CN2				*e*S		**S**	**10 19 14.0**	**-1.7**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.9s							
CN2				pmax		pmax		
	comp=Z,200nm,5.0s							
HABR	**Khabarovsk**	**21.20**	**350**	*c e* P		**P**	**10 16 09.7**	**-0.3**
HABR				*e*S		**S**	**10 19 35.5**	**+1.8**
HABR				*e*			10 26 31.3	
HABR				pmax		pmax		
	comp=Z,123nm,1.6s							
HABR				pmax		pmax		
	comp=E,24nm,1.2s							
HABR				pmax		pmax		
	comp=N,50nm,1.6s							
TGY	**Tagaytay City**	**22.46**	**237**	P		**P**	**10 16 22.3**	**+0.4**
TGY	**Tagaytay City**	**22.46**	**237**	P		**P**	**10 16 22.3**	**+0.4**
	comp=N,94nm,0.3s,baz=217,slow=16,SNR=4.4							
KLR	**Kul'dur**	**22.54**	**345**	*e*P		**P**	**10 16 18.8**	**-3.3**
KLR				pmax		pmax		
	comp=Z,38nm,1.4s							
WHN	**Wuhan**	**22.80**	**284**	P		**P**	**10 16 25.0**	**+0.3**
BJI	**Beijing**	**23.43**	**308**	P		**P**	**10 16 29.3**	**-0.9**
BJI				sP		**sP**	**10 18 42.5**	**+1.2**
BJI				S		**S**	**10 20 11.5**	**+2.2**
BJI				pmax		pmax		
	comp=Z,23nm,1.1s							
HIA	**Hailar**	**26.75**	**329**	*e*P		**P**	**10 16 59.9**	**+0.3**
	comp=Z,34nm,1.0s							
HHC	**Hu-ho-hao-te**	**26.99**	**307**	⇑ *e*P		**P**	**10 17 02.0**	**0.0**
HHC				sP		**sP**	**10 19 18.5**	**+1.

comp=Z,38nm,0.9s
YAK pmax pmax
comp=N,17nm,1.3s
YAK pmax pmax
comp=Z,101nm,4.8s
YAK pmax pmax
comp=E,28nm,4.3s
YAK smax smax
comp=N,42nm,2.0s
YAK smax smax
comp=E,40nm,2.4s
GTA Gaotai 35.42 300 P **P** **10 18 14.3 -0.3**
GTA pP **pP** **10 19 40.8 +2.5**
GTA sP **sP** **10 20 35.0 +2.7**
GTA S **S** **10 23 13.8 -1.4**
GTA sS **sS** **10 25 48.0 -1.2**
GTA ScS **ScS** **10 27 37.0 -1.8**
GTA pmax pmax
comp=Z,25nm,0.8s
GTA pmax pmax
comp=Z,75nm,4.7s
BTM Bintulu 35.53 232 P **P** **10 18 16.2 +0.5**
ZAK Zakamensk 36.07 319⇑ *i*P **P** **10 18 19.9 +0.1**
ZAK *e* 10 23 33.0
ZAK pmax pmax
comp=Z,13nm,1.1s
SEY Seymchan 36.20 9⇑ *i*P **P** **10 18 22.0 +1.5**
TLY Talaya 36.44 321*c i*P **P** **10 18 23.3 +0.6**
TLY pmax pmax
comp=Z,13nm,1.2s
SBUM Sibu 36.67 232 P **P** **10 18 24.5 -0.6**
SBUM Sibu 36.67 232 P **P** **10 18 23.5 -1.6**
comp=Z,13nm,1.2s
PMG Port Moresby 37.42 169 *e*P **P** **10 18 31.6 +0.4**
PMG Port Moresby 37.42 169 P **P** **10 18 31.5 +0.2**
comp=Z,25nm,0.6s,baz=343,slow=5.3,SNR=12
KAPI Kappang 38.01 214 *e*P **P** **10 18 35.4 -0.7**
comp=Z,28nm,1.0s
KAPI Kappang 38.01 214 P **P** **10 18 33.8 -2.3**
comp=Z,29nm,1.0s
KAPI Kappang 38.01 214 P **P** **10 18 35.0 -1.1**
comp=Z,18nm,0.8s,baz=26,slow=1.9,SNR=7.5
KSM Kuching 38.70 233 *e*P **P** **10 18 41.9 +0.1**
comp=Z,9.3nm,0.9s
KSM Kuching 38.70 233 P **P** **10 18 41.9 +0.1**
KSM Kuching 38.70 233 P **P** **10 18 39.7 -2.1**
comp=Z,11nm,0.9s,comp=Z,342nm
CMMT Chiang Mai 38.80 266 P **P** **10 18 41.3 -1.3**
comp=Z,9.8nm,0.9s
CHTO Chiang Mai 38.80 266 *e*P **P** **10 18 42.9 +0.3**
CHTO pmax pmax
comp=Z,5.0nm,0.7s
CHTO Chiang Mai 38.80 266 *e*P **P** **10 18 42.9 +0.3**
comp=Z,5.2nm,0.7s
CMAR Chiang Mai Arr 38.93 265 P **P** **10 18 43.8 +0.1**
CMAR PcP **PcP** **10 20 43.7 +0.8**
CMAR ScP **ScP** **10 23 47.4 +1.2**
CMAR Chiang Mai Arr 38.93 265 P **P** **10 18 43.8 +0.1**
comp=Z,1.8nm,0.7s,baz=54,slow=8.8,SNR=12
CMAR PcP **PcP** **10 20 43.7 +0.8**
comp=Z,1.1nm,0.3s,baz=61,slow=4.2,SNR=5.8
CMAR ScP **ScP** **10 23 47.4 +1.2**
comp=Z,1.8nm,0.9s,baz=53,slow=2.0,SNR=8.8
COEN Coen 41.44 176 *e*P **P** **10 19 04.7 +0.9**
comp=Z,311nm,0.7s
HVS Khovu-Aksy 42.03 317*c i*P **P** **10 19 08.7 +0.5**
BILL Bilibino 43.34 14*c i*P **P** **10 19 17.9 -0.2**
BILL pmax pmax
comp=Z,35nm,0.8s
BILL Bilibino 43.34 14 *e*P **P** **10 19 19.2 +1.1**
comp=Z,51nm,0.9s
TIXI Tiksi 44.51 355*c i*P **P** **10 19 27.3 +0.1**
TIXI pmax pmax
comp=Z,21nm,1.3s
WMQ Urumqi 44.86 305 P **P** **10 19 30.5 +0.1**
WMQ pP **PcP** **10 21 01.0 -1.4**
WMQ PP **PP** **10 21 24.0 +0.5**
WMQ sP **sP** **10 21 53.3 +1.7**
WMQ PcS **PcS** **10 24 56.0 -0.9**
WMQ S **S** **10 25 32.3 -0.6**
WMQ sS **sS** **10 28 14.3 +1.0**
WMQ pmax pmax
comp=Z,43nm,1.0s
WMQ pmax pmax
comp=Z,150nm,4.6s
TAPN Taplejung 46.30 282 *e*P **P** **10 19 41.8 -0.2**
comp=Z,23nm,0.7s
ODAN Odare 46.69 282 *e*P **P** **10 19 45.4 +0.5**
comp=Z,44nm,0.6s
RAMN Ramite 47.35 282 *e*P **P** **10 19 50.5 +0.6**
comp=Z,49nm,0.6s
FITZ Fitzroy Crossi 47.61 199 *e*P **P** **10 19 51.6 0.0**
comp=Z,21nm,1.2s
FITZ ScP **ScP** **10 24 20.9 -0.4**
FITZ Fitzroy Crossi 47.61 199 P **P** **10 19 51.6 0.0**
comp=Z,15nm,0.7s,baz=17,slow=7.7,SNR=30
FITZ ScP **ScP** **10 24 20.9 -0.4**
comp=Z,5.5nm,0.9s,baz=122,slow=2.9,SNR=7.0
WRAB Tennant Creek 47.62 188*d i*P **P** **10 19 51.3 -0.4**
WRAB pmax pmax
comp=Z,123nm,1.0s
WRAB Tennant Creek 47.62 188 *e*P **P** **10 19 50.5 -1.1**
comp=Z,56nm,0.8s
WRA Warramunga Arr 47.64 188 P **P** **10 19 50.9 -0.9**
WRA PcP **PcP** **10 21 12.6 +0.1**
WRA ScP **ScP** **10 24 20.6 -0.9**
WRA S **S** **10 26 09.2 -2.9**
WRA Warramunga Arr 47.64 188 P **P** **10 19 50.9 -0.9**
comp=Z,36nm,0.6s,baz=7.1,slow=7.9,SNR=140
WRA PcP **PcP** **10 21 12.6 +0.1**
comp=Z,6.3nm,0.7s,baz=0.2,slow=3.7,SNR=65
WRA ScP **ScP** **10 24 20.6 -0.9**
comp=Z,2.9nm,0.8s,baz=5.6,slow=4.8,SNR=6.2
WRA S **S** **10 26 09.2 -2.9**
comp=Z,1.2nm,0.6s,baz=11,slow=14,SNR=5.1
GUN Gumba 47.75 284 *e*P **P** **10 19 54.0 +0.9**
comp=Z,86nm,0.5s
CTAO Charters Tower 47.79 172 *e*P **P** **10 19 53.3 +0.4**
CTAO Charters Tower 47.79 172 *e*P **P** **10 19 53.3 +0.4**
ZAA0 Zalesovo Array 47.95 319 *e*P **P** **10 19 53.1 -0.6**
ZALV Zalesovo Beam 47.95 319 *i* P **P** **10 19 53.4 -0.3**
ZALV pmax pmax
comp=Z,9.0nm,0.3s
ZALV Zalesovo Beam 47.95 319 P **P** **10 19 53.4 -0.3**
ZALV PcP **PcP** **10 21 12.7 -0.4**
ZALV ScP **ScP** **10 24 21.0 -1.3**
ZALV Zalesovo Beam 47.95 319 P **P** **10 19 53.4 -0.3**
comp=Z,8.6nm,0.3s,baz=100,slow=6.9,SNR=48
ZALV PcP **PcP** **10 21 12.7 -0.4**
comp=Z,2.6nm,0.3s,baz=135,slow=3.8,SNR=6.7
ZALV ScP **ScP** **10 24 21.0 -1.3**
comp=Z,5.6nm,0.7s,baz=110,slow=4.3,SNR=15
PKI Pulchoki 48.24 283 *e*P **P** **10 19 56.9 +0.2**
comp=Z,20nm,0.5s
PKIN Phulchoki 48.25 283 *e*P **P** **10 19 57.2 +0.5**
comp=Z,8.7nm,0.4s
KKN Kakani 48.30 284 *e*P **P** **10 19 57.4 +0.4**
comp=Z,23nm,0.4s
DMN Daman 48.49 284 *e*P **P** **10 19 59.0 +0.5**
comp=Z,35nm,0.4s
MK31 Makanchi Array 48.80 309*ce*P **P** **10 20 00.2 0.0**
MK31 pmax pmax
comp=Z,3.0nm,0.3s
MK31 Makanchi Array 48.80 309 *e*P **P** **10 20 00.3 +0.1**
MKAR Makanchi Array 48.80 309*ce*P **P** **10 20 00.5 +0.2**
MKAR pmax pmax
comp=Z,18nm,0.8s
MKAR Makanchi Array 48.80 309 P **P** **10 20 00.5 +0.2**
MKAR PcP **PcP** **10 21 16.5 0.0**
MKAR pP **pP** **10 21 29.4 -1.3**
MKAR ScP **ScP** **10 24 25.4 -0.7**
MKAR Makanchi Array 48.80 309 P **P** **10 20 00.5 +0.2**
comp=Z,18nm,0.8s,baz=94,slow=9.4,SNR=94
MKAR PcP **PcP** **10 21 16.5 0.0**
comp=Z,0.8nm,0.3s,baz=81,slow=6.9,SNR=4.2
MKAR pP **pP** **10 21 29.4 -1.3**
comp=Z,1.4nm,0.9s,baz=88,slow=7.5,SNR=1.3
MKAR ScP **ScP** **10 24 25.4 -0.7**
comp=Z,6.7nm,0.8s,baz=83,slow=4.7,SNR=22
NVS Novosibirsk 49.02 320⇑ *i*P **P** **10 20 01.3 -0.3**
NVS *e* 10 28 59.5
NVS pmax pmax
comp=N,5.0nm,1.2s
NVS pmax pmax
comp=E,14nm,1.2s
NVS pmax pmax

comp=Z,24nm,1.2s
DANN Dangsing 49.48 285 *e*P **P** **10 20 06.8 +0.9**
comp=Z,46nm,0.3s
KOLN Koldanda 49.75 284 *e*P **P** **10 20 08.3 +0.5**
comp=Z,20nm,0.3s
PYUN Piuthan 50.19 285 *e*P **P** **10 20 11.7 +0.6**
comp=Z,143nm,0.3s
AS31 Alice Springs 51.36 187 *e*P **P** **10 20 18.9 -0.4**
ASAR Alice Springs 51.36 187 P **P** **10 20 18.9 -0.5**
ASAR PcP **PcP** **10 21 27.4 +1.1**
ASAR ScP **ScP** **10 24 37.7 +0.3**
ASAR S **S** **10 27 00.6 -2.4**
ASAR Alice Springs 51.36 187 P **P** **10 20 18.9 -0.5**
comp=Z,11nm,0.3s,baz=360,slow=4.8,SNR=453
ASAR PcP **PcP** **10 21 27.4 +1.1**
comp=Z,4.3nm,0.8s,baz=12,slow=3.1,SNR=6.9
ASAR ScP **ScP** **10 24 37.7 +0.3**
comp=Z,0.5nm,0.7s,baz=8.7,slow=4.4,SNR=4.0
ASAR S **S** **10 27 00.6 -2.4**
comp=Z,0.5nm,0.7s,baz=22,slow=21,SNR=4.3
KURK Kurchatov 51.38 314*d i*P **P** **10 20 18.7 -0.4**
KURK pmax pmax
comp=Z,69nm,1.2s
KURK Kurchatov 51.38 314 *e*P **P** **10 20 19.0 0.0**
KURK pP **pP** **10 21 49.4 -1.4**
KURK S **S** **10 27 00.9 -1.6**
KURBB Kurchatov Arra 51.43 314 P **P** **10 20 19.4 -0.1**
comp=Z,40nm,0.7s,baz=92,slow=7.7,SNR=318
KURBB pP **pP** **10 21 49.4 -1.9**
comp=Z,8.3nm,1.1s,baz=93,slow=6.9,SNR=4.7
KURBB S **S** **10 27 00.9 -2.3**
comp=Z,0.4nm,0.5s,baz=89,slow=11,SNR=8.7
CHGN Chignik 51.67 39 *e*P **P** **10 20 18.4 -2.7**
MBWA Marble Bar 52.40 204 *e*P **P** **10 20 26.9 +0.1**
ULHL Ulahol 53.29 304 *i* P **P** **10 20 34.1 +0.8**
ULHL Ulahol 53.29 304 P **P** **10 20 34.1 +0.8**
SNR=7.9
TKM2 Tokmak 2 53.69 305 *i* P **P** **10 20 37.0 +0.9**
TKM2 Tokmak 2 53.69 305 *e*P **P** **10 20 37.0 +0.9**
TKM2 Tokmak 2 53.69 305 P **P** **10 20 37.1 +0.9**
SNR=15
EIDS Eidsvold 53.72 168 *e*P **P** **10 20 37.0 +0.8**
comp=Z,28nm,0.8s
KSH Kashi 53.82 300⇑ *i*P P 10 20 40.8 +3.8
KSH *e*PcP **PcP** **10 21 40.3 +4.7**
KSH *e*PP PP 10 22 51.3 +7.1
KSH *es*P sP 10 23 07.0 +5.8
KSH *e*S **S** **10 27 38.0 +2.2**
KSH *e*ScS **ScS** **10 29 37.3 +0.1**
KSH *es*S sS 10 30 27.3 +4.7
KSH *e*SS **SS** **10 31 29.3 +4.4**
KSH pmax pmax
comp=Z,42nm,0.6s
KSH pmax pmax
comp=Z,180nm,3.5s
KZA Kyzart 54.04 304 *i* P **P** **10 20 40.4 +1.5**
KZA Kyzart 54.04 304 P **P** **10 20 40.4 +1.5**
SNR=20
KBK Karagaybulak 54.19 304 *i* P **P** **10 20 40.5 +0.8**
KBK Karagaybulak 54.19 304 P **P** **10 20 40.5 +0.8**
SNR=12
AAK Ala-Archa 54.53 304 *i* P **P** **10 20 42.6 +0.5**
AAK pmax pmax
comp=Z,21nm,1.3s
AAK Ala-Archa 54.53 304 *e*P **P** **10 20 42.5 +0.5**
comp=Z,1.8nm,0.5s
AAK Ala-Archa 54.53 304 P **P** **10 20 42.6 +0.5**
SNR=9.8
AAK Ala-Archa 54.53 304 P **P** **10 20 42.5 +0.5**
comp=Z,5.7nm,0.4s,baz=108,slow=4.6,SNR=19
KDAK Kodiak Island 54.98 37 P **P** **10 20 45.7 +1.1**
KDAK Kodiak Island 54.98 37 P **P** **10 20 45.7 +1.1**
comp=Z,4.2nm,0.8s,baz=258,slow=23,SNR=5.2
EKS2 Erkin-Say 55.05 304 *i* P **P** **10 20 46.3 +0.6**
EKS2 Erkin-Say 55.05 304 *e*P **P** **10 20 46.3 +0.6**
EKS2 Erkin-Say 55.05 304 P **P** **10 20 46.3 +0.6**
SNR=6.6
AML Almayashu 55.18 304 *i* P **P** **10 20 48.1 +1.2**
AML Almayashu 55.18 304 P **P** **10 20 48.1 +1.2**
SNR=11
DZM Mont Dzumac 55.52 150 P **P** **10 20 50.8 +1.7**
DZM Mont Dzumac 55.52 150 P **P** **10 20 50.8 +1.7**
comp=Z,10nm,0.8s,baz=40,slow=20,SNR=6.2
BVA0 Borovoye Array 56.48 317 P **P** **10 20 55.3 0.0**
BVA0 pmax pmax
comp=Z,4.0nm,0.5s
BVAR Borovoye Array 56.48 317 P **P** **10 20 55.5 +0.2**
BVAR *PP **pP** **10 22 26.0 -3.4**
BVAR Borovoye Array 56.48 317 P **P** **10 20 55.5 +0.2**
BVAR pP **pP** **10 22 26.0 -3.4**
BVAR ScP **ScP** **10 24 58.4 -1.1**
BVAR Borovoye Array 56.48 317 P **P** **10 20 55.5 +0.2**
comp=Z,29nm,0.4s,baz=92,slow=8.1,SNR=121
BVAR pP **pP** **10 22 26.0 -3.4**
comp=Z,0.8nm,0.5s,baz=89,slow=7.8,SNR=1.1
BVAR ScP **ScP** **10 24 58.4 -1.1**
comp=Z,1.5nm,0.6s,baz=90,slow=4.4,SNR=3.7
BRVK Borovoye 56.54 317*c i*P **P** **10 20 55.8 +0.1**
BRVK pmax pmax
comp=Z,29nm,1.2s
BRVK Borovoye 56.54 317 *e*P **P** **10 20 55.6 -0.1**
comp=Z,26nm,0.8s
COLD Coldfoot 56.94 26 *e*P **P** **10 21 00.0 +1.8**
comp=Z,3.2nm,0.7s
MCK McKinley 57.13 30 *e*P **P** **10 21 00.6 +1.0**
MCK pmax pmax
comp=Z,9.0nm,0.9s
MCK McKinley 57.13 30 *e*P **P** **10 21 00.6 +1.0**
comp=Z,9.2nm,0.9s
SML Sawmill 57.30 32 *e*P **P** **10 21 02.2 +1.4**
SML pmax pmax
comp=Z,5.0nm,0.9s
SML Sawmill 57.30 32 *e*P **P** **10 21 02.2 +1.4**
comp=Z,5.0nm,0.9s
KK31 Karatay Array 57.37 305*ce*P **P** **10 21 01.8 +0.2**
KK31 pmax pmax
comp=Z,8.0nm,0.4s
KKAR Karatay Array 57.37 305 *e*P **P** **10 21 01.9 +0.3**
KKAR pmax pmax
comp=Z,13nm,0.6s
KKAR Karatay Array 57.37 305 *e*P **P** **10 21 01.9 +0.3**
comp=Z,13nm,0.6s
COLA College 57.67 29 *e*P **P** **10 21 04.7 +1.5**
ILAR Eielson Array 58.08 29 P **P** **10 21 06.0 0.0**
ILAR pP **pP** **10 22 38.5 -2.2**
ILAR S **S** **10 28 30.9 +0.8**
ILAR Eielson Array 58.08 29 P **P** **10 21 06.0 0.0**
comp=Z,1.2nm,0.4s,baz=262,slow=5.4,SNR=21
ILAR pP **pP** **10 22 38.5 -2.2**
comp=Z,0.9nm,0.8s,baz=257,slow=4.4,SNR=2.7
ILAR S **S** **10 28 30.9 +0.8**
comp=Z,0.2nm,0.8s,baz=263,slow=9.6,SNR=4.2
STKA Stephens Creek 59.19 179 P **P** **10 21 14.0 0.0**
STKA Stephens Creek 59.19 179 P **P** **10 21 14.0 0.0**
comp=Z,31nm,0.5s,baz=349,slow=6.8,SNR=139
FORT Forrest 59.24 192 *e*P **P** **10 21 14.1 -0.1**
comp=Z,59nm,0.8s
KBL Kabul 60.23 296 *e*P **P** **10 21 21.5 +0.2**
KBL pmax pmax
comp=Z,14nm,0.8s
KBL Kabul 60.23 296 *e*P **P** **10 21 21.5 +0.2**
comp=Z,14nm,0.8s
BBOO Buckleboo 60.24 184 *e*P **P** **10 21 20.9 0.0**
comp=Z,798nm,0.8s
EGAK Eagle 60.53 29 *e*P **P** **10 21 23.0 +0.5**
comp=Z,2.3nm,0.8s
ARU Arti 62.94 322*c i*P **P** **10 21 38.2 -0.2**
ARU pmax pmax
comp=Z,20nm,1.0s
CAN Canberra 63.16 172 *e*P **P** **10 21 41.0 +0.9**
CAN pmax pmax
comp=Z,18nm,1.0s
CAN Canberra 63.16 172 *e*P **P** **10 21 41.0 +0.9**
comp=Z,18nm,1.0s
INK Inuvik 63.26 25 P **P** **10 21 40.9 +0.6**
INK pP **pP** **10 23 16.4 -0.7**
INK Inuvik 63.26 25 P **P** **10 21 40.9 +0.6**
comp=Z,1.7nm,0.5s,baz=292,slow=8.7,SNR=18
INK pP **pP** **10 23 16.4 -0.7**
comp=Z,0.7nm,0.5s,baz=273,slow=3.6,SNR=2.0
AB31 Akbulak array 63.48 314*ce*P **P** **10 21 41.7 -0.4**
AB31 pmax pmax
comp=Z,2.0nm,0.2s
ABKAR Akbulak array 63.48 314 *e*P **P** **10 21 41.9 -0.2**
comp=Z,11nm,0.6s

NWAO Narrogin (SRO) 64.07 201 P **P** **10 21 45.8 -0.2**
NWAO Narrogin (SRO) 64.07 201 P **P** **10 21 45.8 -0.2**
comp=Z,27nm,0.9s,baz=32,slow=6.7,SNR=12
AKTO Aktyubinsk 64.44 315 P **P** **10 21 47.6 -0.6**
AKTO Aktyubinsk 64.44 315 P **P** **10 21 47.6 -0.6**
AKTO Aktyubinsk 64.44 315 P **P** **10 21 47.6 -0.6**
comp=Z,6.9nm,0.7s,baz=86,slow=7.2,SNR=32
SPITS Spitsbergen Ar 69.55 349 P **P** **10 22 20.0 +0.7**
SPITS Spitsbergen Ar 69.55 349 P **P** **10 22 20.0 +0.7**
comp=Z,6.2nm,0.6s,baz=84,slow=3.4,SNR=19
KBS Kingsbay 69.74 351 *e*P **P** **10 22 20.8 +0.4**
KBS pmax pmax
comp=Z,21nm,1.2s
KLMR Klimovskoe 71.25 329 P **P** **10 22 28.5 -1.2**
KLMR pmax pmax
comp=Z,10.0nm,0.6s
ARCES ARCESS Array B 72.47 340 P **P** **10 22 37.2 +0.5**
ARCES ARCESS Array B 72.47 340 P **P** **10 22 37.2 +0.5**
comp=Z,5.9nm,0.5s,baz=78,slow=8.8,SNR=37
YKA Yellowknife Ar 72.49 28 P **P** **10 22 37.5 +0.6**
YKA pP **pP** **10 24 15.4 -1.7**
YKA Yellowknife Ar 72.49 28 P **P** **10 22 37.4 +0.6**
comp=Z,4.3nm,0.6s,baz=296,slow=5.9,SNR=57
YKA pP **pP** **10 24 15.4 -1.7**
comp=Z,1.3nm,0.8s,baz=295,slow=5.5,SNR=3.6
URZ Urewera 74.08 151 P **P** **10 22 45.6 -0.7**
URZ Urewera 74.08 151 P **P** **10 22 45.6 -0.7**
comp=Z,5.7nm,0.7s,baz=7.1,slow=8.1,SNR=4.8
VRHR Novokhopersk 74.08 320 *e*P **P** **10 22 45.0 -1.3**
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s
VRHR pmax pmax
comp=E,2.0nm,0.2s
OBN Obninsk 75.10 325⇑ *i*P **P** **10 22 52.1 +0.2**
OBN pmax pmax
comp=Z,16nm,1.3s
VSR Storozhevoye 75.43 320 *e*P **P** **10 22 53.1 -0.8**
VSR *e*S **S** **10 31 52.4 -2.8**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=N,3.0nm,0.3s
VSR pmax pmax
comp=E,5.0nm,0.3s
VSR smax smax
comp=N,110nm,3.7s
VSR smax smax
comp=E,160nm,3.7s
VSR smax smax
comp=Z,10.0nm,1.8s
KBZ Khabaz 76.37 312 P **P** **10 22 59.8 +0.6**
KBZ Khabaz 76.37 312 P **P** **10 22 59.8 +0.6**
KBZ Khabaz 76.37 312 P **P** **10 22 59.8 +0.6**
comp=Z,7.9nm,0.8s,baz=94,slow=2.5,SNR=22
KIV Kislovodsk 76.42 313 *e*P **P** **10 23 00.3 +0.7**
KIV pmax pmax
comp=Z,6.0nm,0.9s
RPZ Rata Peaks 76.42 158 P **P** **10 22 59.8 +0.5**
RPZ pP **pP** **10 24 39.8 -1.2**
RPZ Rata Peaks 76.42 158 P **P** **10 22 59.8 +0.5**
comp=Z,6.2nm,0.3s,baz=230,slow=8.8,SNR=5.2
RPZ pP **pP** **10 24 39.8 -1.2**
comp=Z,3.5nm,0.4s,baz=315,slow=2.9,SNR=3.1
FINES FINESS Array B 76.70 333 P **P** **10 23 00.7 0.0**
FINES FINESS Array B 76.70 333 P **P** **10 23 00.6 0.0**
comp=Z,14nm,0.3s,baz=65,slow=6.6,SNR=75
VSU Vasula 78.08 330 *e*P **P** **10 23 07.6 -0.7**
VSU pmax pmax
comp=Z,14nm,1.0s
ANN Anapa 79.40 315 *e*P **P** **10 23 12.6 -3.0**
ANN *e* 10 23 20.0
ANN *e**PP **pP** **10 23 55.0 -3.1**
ANN *e* 10 26 23.2
ANN *e*PPP PPP 10 28 15.6
ANN *e*S **S** **10 32 33.3 -4.1**
ANN pmax pmax
comp=Z,32nm,1.0s
SLMT Seeley Lake 80.31 42 *e*P **P** **10 23 21.8 +1.2**
SLMT *e*pP **pP** **10 25 08.4 +5.0**
AKASG Malin Array Be 81.16 323*ce*P **P** **10 23 24.2 -0.5**
AKASG pmax pmax
comp=Z,3.0nm,0.2s
AKASG Malin Array Be 81.16 323 P **P** **10 23 24.2 -0.5**
AKASG pP **pP** **10 25 06.2 -1.5**
AKASG Malin Array Be 81.16 323 P **P** **10 23 24.2 -0.5**
comp=Z,3.0nm,0.2s,baz=50,slow=5.5,SNR=21
AKASG pP **pP** **10 25 06.2 -1.5**
comp=Z,0.3nm,0.3s,baz=50,slow=5.6,SNR=1.8
KIEV Kiev 81.17 323 *e*P **P** **10 23 24.2 -0.6**
KIEV Kiev 81.17 323 *e*P **P** **10 23 24.2 -0.6**
comp=Z,4.6nm,0.3s
KIEV *e*pP **pP** **10 25 11.7 +3.9**
AK02 Malin Array Si 81.19 323 *e*P **P** **10 23 24.3 -0.6**
AK02 *e*pP **pP** **10 25 11.7 +3.8**
NVAR Mina Array Bea 81.54 51 P **P** **10 23 28.8 +1.5**
NVAR pP **pP** **10 25 10.1 -0.3**
NVAR Mina Array Bea 81.54 51 P **P** **10 23 28.8 +1.5**
comp=Z,1.4nm,0.7s,baz=295,slow=5.3,SNR=15
NVAR pP **pP** **10 25 10.1 -0.3**
comp=Z,0.9nm,0.8s,baz=289,slow=5.1,SNR=3.7
HFS Hagfors 82.24 336 P **P** **10 23 29.2 -0.9**
HFS Hagfors 82.24 336 P **P** **10 23 29.2 -0.9**
comp=Z,4.1nm,0.3s,baz=117,slow=1.3,SNR=54
NB2 NORSAR Subarra 82.47 338 P **P** **10 23 30.0 -1.3**
comp=Z,7.9nm,0.8s,baz=49,slow=4.6
NB2 NORSAR Subarra 82.47 338 P **P** **10 23 30.0 -1.3**
baz=49,slow=4.6
NOA NORSAR Array B 82.47 338 P **P** **10 23 30.8 -0.5**
NOA PP **PP** **10 26 48.2 +0.3**
NOA NORSAR Array B 82.47 338 P **P** **10 23 30.8 -0.5**
comp=Z,6.8nm,0.6s,baz=46,slow=4.9,SNR=27
NOA PP **PP** **10 26 48.2 +0.3**
comp=Z,1.0nm,0.8s,baz=44,slow=8.1,SNR=4.5
KONO Kongsberg 84.03 337 *e*P **P** **10 23 38.7 -0.4**
KONO pmax pmax
comp=Z,11nm,1.1s
BR131 Keskin Array S 84.37 312 *e*P **P** **10 23 40.7 -0.7**
comp=Z,0.9nm,0.5s
BRTR Keskin Array B 84.37 312 P **P** **10 23 40.9 -0.5**
BRTR pP **pP** **10 25 23.1 -2.2**
BRTR Keskin Array B 84.37 312 P **P** **10 23 40.9 -0.5**
comp=Z,1.8nm,0.6s,baz=84,slow=4.0,SNR=9.1
BRTR pP **pP** **10 25 23.1 -2.2**
comp=Z,1.7nm,0.9s,baz=80,slow=1.4,SNR=5.0
PDAR Pinedale Array 85.04 44 P **P** **10 23 46.9 +2.1**
PDAR pP **pP** **10 25 28.0 -0.9**
PDAR Pinedale Array 85.04 44 P **P** **10 23 46.9 +2.1**
comp=Z,0.3nm,0.3s,baz=321,slow=1.2,SNR=3.3
PDAR pP **pP** **10 25 28.0 -0.9**
comp=Z,0.3nm,0.6s,baz=252,slow=2.1,SNR=1.8
STHS Stebnicka Huta 86.07 325 *e*P **P** **10 23 49.8 +0.5**
STHS pmax pmax
comp=Z,2.0nm,0.8s
STHS Stebnicka Huta 86.07 325 *e*P **P** **10 23 49.8 +0.5**
CRVS Cervenica-Dubn 86.28 325 *e*P **P** **10 23 51.0 +0.7**
CRVS Cervenica-Dubn 86.28 325 *e*P **P** **10 23 51.0 +0.7**
MMAI Mount Meron Ar 86.60 306 P **P** **10 23 51.3 -0.9**
MMAI Mount Meron Ar 86.60 306 P **P** **10 23 51.3 -0.9**
comp=Z,3.4nm,0.6s,baz=40,slow=11,SNR=2.6
VYHS Vyhne 87.88 325 *e*P **P** **10 23 57.8 -0.1**
VYHS pmax pmax
comp=Z,2.0nm,1.2s
VYHS Vyhne 87.88 325 *e*P **P** **10 23 57.8 -0.1**
GERES GERESS Array B 90.15 328 P **P** **10 24 08.0 -0.5**
GERES GERESS Array B 90.15 328 P **P** **10 24 08.0 -0.5**
comp=Z,0.9nm,0.5s,baz=69,slow=4.4,SNR=7.9
TXAR Lajitas Array 96.66 52 P **P** **10 24 40.0 +1.3**
TXAR pP **pP** **10 26 22.8 -1.8**
TXAR Lajitas Array 96.66 52 P **P** **10 24 40.0 +1.3**
comp=Z,0.4nm,0.6s,baz=306,slow=1.0,SNR=6.5
TXAR pP **pP** **10 26 22.8 -1.8**
comp=Z,0.4nm,0.9s,baz=305,slow=3.2,SNR=2.7
QSPA South Pole Qui 117.40 180 *e*PKPdf **PKPdf** **10 29 49.7 -0.2**
TORD Torodi Ar. Bea 122.92 310 PKP **PKPdf** **10 30 01.6 -0.4**
TORD PP **PP** **10 31 45.5 -2.0**
TORD PKKPbc **PKKPbc** **10 39 55.3 -0.2**
TORD Torodi Ar. Bea 122.92 310 PKP **PKPdf** **10 30 01.6 -0.4**
comp=Z,0.6nm,0.5s,baz=51,slow=0.6,SNR=13
TORD PP **PP** **10 31 45.5 -2.0**
comp=Z,0.9nm,0.9s,baz=21,slow=4.4,SNR=4.5
TORD PKKPbc **PKKPbc** **10 39 55.3 -0.2**
comp=Z,0.9nm,0.8s,baz=225,slow=3.1,SNR=7.6
BOSA Boshof 123.31 252 PKP **PKPdf** **10 30 03.0 +0.5**

BOSA	**Boshof**	**123.31**	**252**	PKP	**PKPdf**		**10 30 03.0**	**+0.5**
	comp=Z,1.4nm,0.7s,baz=180,slow=5.1,SNR=3.8							
SNAA	**Sanae**	**131.46**	**195**	*e*P	**SKPbc**		**10 32 57.0**	**-0.7**
DBIC	**Dimbokro**	**132.03**	**310**	PKP	**PKPdf**		**10 30 21.2**	**+1.8**
DBIC				SKPbc	**SKPbc**		**10 33 01.2**	**-0.3**
DBIC	**Dimbokro**	**132.03**	**310**	PKP	**PKPdf**		**10 30 21.2**	**+1.8**
	comp=Z,5.3nm,1.1s,baz=27,slow=2.3,SNR=2.4							
DBIC				SKPbc	**SKPbc**		**10 33 01.2**	**-0.3**
	comp=Z,11nm,0.7s,baz=33,slow=4.5,SNR=17							
VNA1	**Neumayer--Stat**	**133.40**	**194**	*e*P	**SKPbc**		**10 33 03.4**	**-0.8**
SAML	**Samuel**	**151.12**	**54**	*e*PKPdf	**PKPdf**		**10 30 53.6**	**+0.7**
SAML				*e*PKPbc	**PKiKP**		**10 30 59.6**	**0.0**
SAML				*e*PKPab	**PKPab**		**10 31 09.9**	**+0.9**
LPAZ	**La Paz**	**151.44**	**73**	*e*PKPdf	**PKPdf**		**10 30 55.1**	**+1.1**
LPAZ				*e*PKPbc	**PKiKP**		**10 31 01.5**	**+0.6**
LPAZ				PKPbc	**PKPbc**		**10 31 01.7**	**+1.0**
LPAZ				*e*PKPab	**PKPab**		**10 31 13.9**	**+2.8**
LPAZ	**La Paz**	**151.44**	**73**	PKPbc	**PKPbc**		**10 31 01.7**	**+1.0**
	comp=Z,5.5nm,0.7s,baz=296,slow=2.0,SNR=27							
PLCA	**Paso Flores**	**151.53**	**125**	PKPbc	**PKPbc**		**10 31 00.7**	**+1.1**
PLCA	**Paso Flores**	**151.53**	**125**	PKPbc	**PKPbc**		**10 31 00.7**	**+1.1**
	comp=Z,5.6nm,0.6s,baz=240,slow=3.3,SNR=21							

JMA 26 10:14:04.6±0.1, 26.87N×129.45E, h74km, M2.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.01**	**334**	P	Pn	10 14 23.7	+0.2
JOW	**Kunigami**	**1.05**	**268**	*e*P	Pn	10 14 24.2	+0.3
JOW	**Kunigami**	**1.05**	**268**	P	Pn	10 14 24.3	+0.4
JOW	**Kunigami**	**1.05**	**268**	P	Pn	10 14 24.3	+0.4
JOW				S	Sn	10 14 38.4	0.0
JIH	**Iheya**	**1.33**	**277**	P	Pn	10 14 27.6	+0.1
JIH				S	Sn	10 14 46.0	+1.2
JZK	**Kikaishima**	**1.51**	**18**	S	Sn	10 14 49.9	+1.0
JAM	**Amami Oshima**	**1.54**	**5**	P	Pn	10 14 30.6	+0.4
JMZ	**Minamidaito 2**	**1.90**	**123**	P	Pn	10 14 35.7	+0.7
JMZ				S	Sn	10 14 58.1	-0.1
JKE	**Kume jima 2**	**2.45**	**258**	P	Pn	10 14 43.8	+1.5

SKO 26 10:21:35.7, 41.30N×22.70E, h1km, M0.8, ML1.1, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**282**	*i* Pg	Pg	10 21 37.3	-0.4
VAY				*e*Lg	Lg	10 21 39.1	
	comp=E,78nm,0.2s						
VAY				*i* Sg	Sg	10 21 39.2	+0.2
VAY				*e*Lg	Lg	10 21 39.3	
	comp=N,186nm,0.2s						

VIE 26 10:26:31.9±0.3, 47.15N×15.80E, h0km, mb0.2/1, ML0.8/1, 1C-2D, Error ellipse: s-maj=3.0km s-min=1.5km az=80.0 8 km NE of Gleisdorf Mining explosion., Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARSA	**Arzberg**	**0.21**	**299**	⇑ *i* Pg	Pg	10 26 35.7	-0.3
	1.3nm,0.1s						
ARSA				⇓ *i* Sg	Sg	10 26 39.1	+0.3
	2.4nm,0.1s						
CSNA	**Conrad Observa**	**0.78**	**3**	⇓ *i* Pg	Pg	10 26 46.9	-0.1
	1.2nm,0.1s						

IDC 26 10:27:00.3±1.1, 32.08N×104.45E, h0km, mb3.3/6, mb1 3.5/8, mb1mx3.4/29, mbtmp3.4/8, ML3.5/2, Error ellipse: s-maj=41.0km s-min=19.6km az=56.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**15.81**	**5**	Pn	Pn	10 30 44.7	+0.3
	0.2nm,0.3s,baz=191,slow=13,SNR=2.4						
KSRS	**Korea Array**	**20.00**	**68**	P	P	10 31 35.1	+0.7
	0.1nm,0.3s,baz=263,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**22.46**	**317**	P	P	10 32 02.4	+1.4
	0.1nm,0.3s,baz=116,slow=9.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**25.99**	**333**	P	P	10 32 34.3	-0.3
	1.2nm,0.3s,baz=130,slow=10,SNR=6.9						
KURBB	**Kurchatov Arra**	**26.65**	**322**	P	P	10 32 40.4	-0.3
	0.1nm,0.4s,baz=142,slow=9.0,SNR=3.7						
WRA	**Warramunga Arr**	**59.12**	**147**	P	P	10 37 02.4	-0.4
	0.1nm,0.4s,baz=342,slow=7.6,SNR=6.7						
ASAR	**Alice Springs**	**62.17**	**149**	P	P	10 37 24.0	+0.4
	0.2nm,0.9s,baz=339,slow=6.9,SNR=4.1						
YKA	**Yellowknife Ar**	**80.68**	**17**	P	P	10 39 13.9	-1.0
	0.2nm,0.6s,baz=331,slow=5.3,SNR=4.2						

*SKO **26** 10:31:14.5, 41.28N×22.69E, h15km, M1.6, ML2.1*
*ISCJB **26** 10:31:15.3±0.4, 41.28N±0.02×22.68E±0.03, h1km±4km, Error ellipse: s-maj=3.4km s-min=2.9km az=137.0*
*ATH **26** 10:31:15.8, 41.26N×22.70E, h1km±1km, MD3.2/6*
*CSEM **26** 10:31:15.7±0.1, 41.27N×22.68E, h0km, ML2.2, Error ellipse: s-maj=2.4km s-min=1.8km az=44.0*
*THE **26** 10:31:16.2, 41.26N×22.68E, h2km, ML2.6/10, Error ellipse: s-maj=0.7km s-min=0.3km az=238.0*
*BEO **26** 10:31:17.1±0.5, 41.32N×22.61E, h2km±2km, ML2.2/7*

ISC 26 10:31:16.0±0.9, 41.27N±0.02×22.68E±0.02, h4km±8km, n57, σ0°50/103, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**302**	P	**Pg**	**10 31 17.8**	**-0.2**
VAY				S	**Sg**	**10 31 19.6**	**+0.2**
VAY	**Valandovo**	**0.10**	**302**	*i* Pg	**Pg**	**10 31 17.8**	**-0.2**
VAY				*e*Sg	**Sg**	**10 31 19.7**	**+0.3**
VAY				*e*Lg	Lg	10 31 19.9	
	comp=N,1μm,0.2s						
VAY				*e*Lg	Lg	10 31 19.9	
	comp=E,908nm,0.5s						
VAY	**Valandovo**	**0.10**	**302**	P	**Pg**	**10 31 17.8**	**-0.2**
VAY	**Valandovo**	**0.10**	**302**	*i* Pg	**Pg**	**10 31 18.2**	**+0.2**
VAY				S	**Sg**	**10 31 19.6**	**+0.2**
VAY				*e*Lg	Lg	10 31 20.3	
	comp=E,908nm,0.5s						
KNT	**Kendrikon**	**0.19**	**123**	P	**Pg**	**10 31 19.8**	**+0.1**
KNT				S	**Sg**	**10 31 22.7**	**+0.4**
KNT	**Kendrikon**	**0.19**	**123**	P	**Pg**	**10 31 19.8**	**+0.1**
KNT				S	**Sg**	**10 31 22.7**	**+0.4**
GRG	**Griva**	**0.38**	**215**	P	**Pg**	**10 31 23.4**	**+0.2**
GRG				S	**Sg**	**10 31 28.6**	**+0.4**
GRG	**Griva**	**0.38**	**215**	*e*PB	**Pg**	**10 31 23.4**	**+0.2**
GRG				*e*SB	**Sg**	**10 31 28.8**	**+0.6**
GRG	**Griva**	**0.38**	**215**	P	**Pg**	**10 31 23.4**	**+0.2**
GRG				S	**Sg**	**10 31 28.6**	**+0.4**
THE	**Thessaloniki**	**0.67**	**161**	P	**Pg**	**10 31 28.6**	**-0.2**
THE				S	**Sg**	**10 31 38.2**	**+0.7**
THE	**Thessaloniki**	**0.67**	**161**	P	**Pg**	**10 31 28.6**	**-0.2**
THE				S	**Sg**	**10 31 38.2**	**+0.7**
SOH	**Sokhos**	**0.68**	**131**	P	**Pg**	**10 31 28.6**	**-0.3**
SOH				S	**Sg**	**10 31 38.5**	**+0.8**
SOH	**Sokhos**	**0.68**	**131**	*e*PB	**Pg**	**10 31 28.5**	**-0.3**
SOH				*e*SB	**Sg**	**10 31 37.7**	**0.0**
SOH	**Sokhos**	**0.68**	**131**	P	**Pg**	**10 31 28.6**	**-0.3**
SOH				*e*Sb	**Sg**	**10 31 37.7**	**0.0**
SOH				S	**Sg**	**10 31 38.5**	**+0.8**
SRS	**Serrai**	**0.70**	**102**	P	**Pg**	**10 31 29.2**	**-0.2**
SRS				S	**Sb**	**10 31 39.8**	**-1.0**
SRS	**Serrai**	**0.70**	**102**	P	**Pg**	**10 31 29.2**	**-0.2**
SRS				S	**Sb**	**10 31 39.8**	**-1.0**
HORT	**Hortiatis**	**0.74**	**155**	P	**Pg**	**10 31 30.0**	**-0.1**
HORT				S	**Sg**	**10 31 40.5**	**+0.8**
HORT	**Hortiatis**	**0.74**	**155**	P	**Pg**	**10 31 30.0**	**-0.1**
HORT				S	**Sg**	**10 31 40.5**	**+0.8**
NVR	**Nevrokopi**	**0.89**	**84**	P	**Pg**	**10 31 32.7**	**-0.4**
NVR				S	**Sb**	**10 31 45.8**	**-0.5**
NVR	**Nevrokopi**	**0.89**	**84**	*e*PB	**Pg**	**10 31 32.7**	**-0.4**
NVR				*e*SB	**Sg**	**10 31 44.7**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**84**	P	**Pg**	**10 31 32.7**	**-0.4**
NVR				*e*Sb	**Sg**	**10 31 44.7**	**+0.1**
NVR				S	**Sb**	**10 31 45.8**	**-0.5**
PLG	**Polygyros**	**1.06**	**147**	P	**Pg**	**10 31 36.0**	**-0.4**
PLG				S	**Sb**	**10 31 51.1**	**-0.1**
PLG	**Polygyros**	**1.06**	**147**	*e*PG	**Pg**	**10 31 35.7**	**-0.7**
PLG				*e*SB	**Sg**	**10 31 50.4**	**+0.3**
PLG	**Polygyros**	**1.06**	**147**	*e*Pg	**Pg**	**10 31 35.7**	**-0.7**
PLG	**Polygyros**	**1.06**	**147**	P	**Pg**	**10 31 36.0**	**-0.4**
PLG				*e*Sb	**Sg**	**10 31 50.4**	**+0.3**
PLG				S	**Sb**	**10 31 51.1**	**-0.1**
FNA	**Florina**	**1.10**	**244**	P	**Pg**	**10 31 36.7**	**-0.4**
FNA				S	**Sb**	**10 31 52.5**	**+0.1**
FNA	**Florina**	**1.10**	**244**	*e*PB	**Pg**	**10 31 36.7**	**-0.4**
FNA				*e*SB	**Sb**	**10 31 52.0**	**-0.4**
FNA	**Florina**	**1.10**	**244**	P	**Pg**	**10 31 36.7**	**-0.4**
FNA				*e*Sb	**Sb**	**10 31 52.0**	**-0.4**
FNA				S	**Sb**	**10 31 52.5**	**+0.1**
OUR	**Ouranopolis**	**1.36**	**133**	P	**Pn**	**10 31 41.2**	**-0.5**
OUR				S	**Sn**	**10 32 00.7**	**+0.6**
OUR	**Ouranopolis**	**1.36**	**133**	P	**Pn**	**10 31 41.2**	**-0.5**
OUR				S	**Sn**	**10 32 00.7**	**+0.6**
VTS	**Vitosha**	**1.38**	**16**	P	**Pn**	**10 31 41.8**	**-0.4**
VTS	**Vitosha**	**1.38**	**16**	*e*Pg	**Pn**	**10 31 42.0**	**-0.1**
VTS				*e*Sg	**Sb**	**10 32 00.5**	**0.0**
VTS	**Vitosha**	**1.38**	**16**	*e*Pb	**Pn**	**10 31 42.1**	**-0.1**
VTS				*e*Sb	**Sb**	**10 32 00.5**	**0.0**
KAVA	**Kavala**	**1.41**	**100**	P	**Pn**	**10 31 42.0**	**-0.4**
KAVA				S	**Sn**	**10 32 02.0**	**+0.6**
KAVA	**Kavala**	**1.41**	**100**	P	**Pn**	**10 31 42.0**	**-0.4**
KAVA				S	**Sn**	**10 32 02.0**	**+0.6**
PAIG	**Paliouri**	**1.54**	**150**	P	**Pn**	**10 31 43.8**	**-0.4**
PAIG				S	**Sn**	**10 32 04.8**	**+0.2**
PAIG	**Paliouri**	**1.54**	**150**	*e*PG	**Pn**	**10 31 44.3**	**+0.1**
PAIG				*e*SB	**Sg**	**10 32 05.6**	**+0.2**
PAIG	**Paliouri**	**1.54**	**150**	P	**Pn**	**10 31 43.8**	**-0.4**
PAIG	**Paliouri**	**1.54**	**150**	*e*Pg	**Pn**	**10 31 44.3**	**+0.1**
PAIG				S	**Sn**	**10 32 04.8**	**+0.2**
PAIG				*e*Sb	**Sg**	**10 32 05.6**	**+0.2**
BARS	**Barje**	**1.68**	**338**	*e*Pn	**Pn**	**10 31 46.1**	**0.0**
BARS				*e*Sg	**Sn**	**10 32 06.8**	**-1.3**
BARS	**Barje**	**1.68**	**338**	*e*Pn	**Pn**	**10 31 46.1**	**0.0**
PLD	**Plovdiv**	**1.73**	**60**	*e*Pn	**Pb**	**10 31 48.1**	**-0.2**
PLD				*e*Sg	**Sg**	**10 32 12.1**	**+0.6**
PLD	**Plovdiv**	**1.73**	**60**	*e*Pn	**Pb**	**10 31 48.1**	**-0.2**
PLD				*e*Sg	**Sg**	**10 32 12.1**	**+0.6**
THL	**Klokotos Trika**	**1.78**	**197**	P	**Pn**	**10 31 47.3**	**-0.2**
THL	**Klokotos Trika**	**1.78**	**197**	*e*PN	**Pb**	**10 31 48.5**	**-0.6**
THL	**Klokotos Trika**	**1.78**	**197**	P	**Pn**	**10 31 47.3**	**-0.2**
THL	**Klokotos Trika**	**1.78**	**197**	*e*Pn	**Pb**	**10 31 48.5**	**-0.6**
ZAPS	**Zavoj**	**2.00**	**359**	*e*Pn	**Pn**	**10 31 51.8**	**+1.1**
SELS	**Selova**	**2.27**	**330**	*e*Pn	**Pn**	**10 31 53.6**	**-0.7**
SELS				*e*Sg	**Sb**	**10 32 25.9**	**-0.1**
SMTH	**Samothraki Isl**	**2.30**	**109**	*e*PN	**Pn**	**10 31 55.8**	**+1.1**
SMTH	**Samothraki Isl**	**2.30**	**109**	*e*Pn	**Pn**	**10 31 55.8**	**+1.1**
ALN	**Alexandroupoli**	**2.57**	**97**	*e*PB	**Pn**	**10 31 58.8**	**+0.5**
ALN	**Alexandroupoli**	**2.57**	**97**	*e*Pb	**Pn**	**10 31 58.8**	**+0.5**
GRUS	**Gruza**	**3.00**	**332**	*e*Pn	**Pn**	**10 32 04.3**	**+0.1**
GRUS				*e*Sn	**Sn**	**10 32 41.8**	**+1.2**
GRUS	**Gruza**	**3.00**	**332**	*e*Pn	**Pn**	**10 32 04.3**	**+0.1**
GRUS				*e*Sn	**Sn**	**10 32 41.8**	**+1.2**
DIVS	**Divibare**	**3.46**	**326**	*e*Pn	**Pn**	**10 32 10.7**	**+0.1**
DIVS	**Divibare**	**3.46**	**326**	*e*Pn	**Pn**	**10 32 10.7**	**+0.1**

*NIED **26** 10:31:00, 42.00N×142.30E, h53km, Mw4.9 Best double couple: M0 2.29000×10^16 NP1:φ0=23.00000°, δ65.00000°, λ76.00000°. NP2:φ0=233.00000°, δ29.00000°, λ117.00000°.*
*DJA **26** 10:31:04.6±2.2, 42°N±12'×14'4E±3'5, h10km, M5.0/12, mB5.5/4, mb5.0/12, Mw(mB)4.9/4*
*JMA **26** 10:31:19.7±0.2, 41.93N×142.35E, h70km±3km, M4.7 Broadband fault plane solution: P waves. NP1: φ=27.00000°, δ83.00000°, λ83.00000°. NP2:φ=254.00000°, δ10.00000°, λ136.00000°. Principal axes: T Plg51.0000°, Azm289.0000°; N Plg7.0000°, Azm28.0000°; P Plg38.0000°, Azm123.0000°;*
JMA Felt III J1.
*BJI **26** 10:31:19.1, 41.86N×142.28E, h72km, mB4.9/28, mb4.8/48, Ms4.2/42, Ms7 4.0/43*
*ISCJB **26** 10:31:20.0±0.2, 41.98N±0.02×142.28E±0.02, h68km±1km, mb4.7/205, Error ellipse: s-maj=4.0km s-min=2.4km az=148.9*
*MOS **26** 10:31:19.0±0.8, 42.07N×142.22E, h56km, mb5.3/72, Error ellipse: s-maj=6.8km s-min=4.0km az=114.3*
*SZGRF **26** 10:31:20.3, 43.17N×143.17E, h33km, mb5.1, MS4.4, Hokkaido, Japan, region*
*IDC **26** 10:31:21.7±0.5, 41.98N×142.31E, h71km±4km, mb4.5/36, mb1 4.6/41, mb1mx4.6/43, mbtmp4.5/41, MS3.8/26, Ms1 3.8/26, ms1mx3.7/40, Error ellipse: s-maj=10.2km s-min=6.7km az=105.0*
*NEIC **26** 10:31:21.4±0.4, 42.02N×142.21E, h66km±4km, mb4.9/100, MW4.8(NIED), Error ellipse: s-maj=4.6km s-min=2.9km az=159.0*
NEIC Felt at Ebetsu and Sapporo. Felt [II] at Misawa, Honshu. Recorded [3 JMA] in south-central and southwestern Hokkaido. Also recorded [2 JMA] in Aomori, Honshu.
*GCMT **26** 10:31:21.5±0.2, 42.00N×142.47E, h66km±2km, MW4.9, Moment Tensor Solution. s33,c41; s69,c93; Moment tensor: Scale 10^16Nm; Mrr2.04±.11; Mθθ-0.28±.12; Mφφ-1.76±.11; Mrθ0.42±.07; Mrφ-0.97±.09; Mθφ1.43±.07; Best double couple: M0 2.60000×10^16 NP1:φ0=213.00000°, δ28.00000°, λ102.00000°. NP2:φ0=20.00000°, δ62.00000°, λ84.00000°. Principal axes: T 2.5200, Plg72.0000°, Azm276.0000°; N 0.1800, Plg5.0000°, Azm23.0000°; P -2.7000, Plg17.0000°, Azm115.0000°; Data Used: II IU IC G CN.*

ISC 26 10:31:20.5±0.3, 42.01N±0.03×142.30E±0.03, h61km±2km, h60km:pP-P, n884, σ0°98/991, mb4.9/216, 206C-189D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.43**	**51**	⇑ P	**Pn**	**10 31 31.6**	**-0.2**
JNBK				*e*S	**Sn**	**10 31 40.6**	**+0.6**
ERM	**Erimo**	**0.64**	**89**	*c i* PN	**Pn**	**10 31 33.6**	**-0.4**
ERM	**Erimo**	**0.64**	**89**	*e*Pn	**Pn**	**10 31 33.8**	**-0.2**
ERM				*e*Sn	**Sn**	**10 31 45.9**	**+2.0**
JEM	**Erimo**	**0.64**	**89**	⇑ P	**Pn**	**10 31 33.9**	**-0.1**
JEM				*e*S	**Sn**	**10 31 44.4**	**+0.5**
JBT2	**Biratori 2**	**0.77**	**3**	⇓ P	**Pn**	**10 31 36.2**	**+0.5**
JBT2				*e*S	**Sn**	**10 31 48.9**	**+2.1**
JKB	**Kayabe**	**0.96**	**263**	⇓ P	**Pn**	**10 31 37.9**	**-0.1**
JKB				*e*S	**Sn**	**10 31 51.2**	**+0.3**
JCH	**Churui**	**0.99**	**52**	⇑ P	**Pn**	**10 31 38.8**	**+0.3**
JCH				*e*S	**Sn**	**10 31 52.7**	**+1.0**
JEW	**Eniwo**	**1.04**	**323**	⇓ P	**Pn**	**10 31 40.2**	**+1.0**
JEW				*e*S	**Sn**	**10 31 55.8**	**+2.5**
JNB	**Noboribetsu**	**1.05**	**297**	⇓ P	**Pn**	**10 31 39.2**	**0.0**
JNB				*e*S	**Sn**	**10 31 54.0**	**+1.0**
JOT	**Ohata**	**1.13**	**237**	⇓ P	**Pn**	**10 31 39.8**	**-0.4**
JOT				*e*S	**Sn**	**10 31 54.5**	**-0.4**
JFR	**Furan**	**1.18**	**10**	⇓ P	**Pn**	**10 31 41.4**	**+0.5**
JFR				*e*S	**Sn**	**10 31 57.3**	**+1.2**
JAR	**Ashorobuto**	**1.68**	**40**	P	**Pn**	**10 31 48.1**	**+0.4**
JAR				*e*S	**Sn**	**10 32 09.7**	**+1.5**
JANG	**Nango**	**1.74**	**200**	⇑ P	**Pn**	**10 31 47.7**	**-0.7**
JANG				*e*S	**Sn**	**10 32 08.9**	**-0.6**
JHR	**Hokuryu**	**1.79**	**346**	⇓ P	**Pn**	**10 31 50.9**	**+1.8**
JHR				*e*S	**Sn**	**10 32 14.6**	**+3.9**
ASAJ	**Asahikawa**	**2.12**	**6**	*e*Pn	**Pn**	**10 31 55.1**	**+1.5**
ASAJ				*e*Sn	**Sn**	**10 32 21.8**	**+3.0**
ASAJ	**Asahikawa**	**2.12**	**6**	P	**Pn**	**10 31 55.0**	**+1.5**
	184nm,0.3s,baz=213,slow=11,SNR=542						
ASAJ				S	**Sn**	**10 32 21.8**	**+3.0**
	152nm,0.3s,baz=324,slow=29,SNR=18						
YUK	**Yuzh-Kuril'sk**	**3.30**	**51**	*c i* PN	**Pn**	**10 32 10.8**	**+1.1**
YUK				*i* S	**Sn**	**10 32 47.7**	**0.0**
YUK				pmax	pmax		
	comp=E,165nm,0.3s						
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=N,419nm,0.4s						
YUK				smax	smax		
	comp=N,2μm,0.5s						
YUK				smax	smax		
	comp=E,989nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.96**	**4**	⇑ *i* PN	Pn	10 32 36.2	+3.9
YSS				*e*S	**Sn**	**10 33 29.5**	**+1.2**
YSS				pmax	pmax		
	comp=N,120nm,0.8s						
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YSS				smax	smax		
	comp=N,190nm,1.2s						
KUR	**Kuril'sk**	**5.17**	**50**	*e*PN	**Pn**	**10 32 36.5**	**+1.3**
KUR				*e*S	**Sn**	**10 33 35.0**	**+1.6**
KUR				pmax	pmax		
	comp=E,170nm,0.6s						
KUR				pmax	pmax		
	comp=Z,350nm,0.6s						
KUR				pmax	pmax		
	comp=N,240nm,0.5s						
KUR				smax	smax		
	comp=N,3μm,2.5s						
KUR				smax	smax		
	comp=E,2μm,2.5s						
KUR				smax	smax		
	comp=N,440nm,0.7s						
KUR				smax	smax		
	comp=E,520nm,0.7s						
MAJO	**Matsushiro**	**6.31**	**212**	*c i* PN	**Pn**	**10 32 51.9**	**+0.9**
MAJO	**Matsushiro**	**6.31**	**212**	*e*Pn	**Pn**	**10 32 52.1**	**+1.1**
MAJO				*e*Sn	**Sn**	**10 34 05.4**	**+3.7**
MAT	**Matsushiro**	**6.31**	**212**	P	**Pn**	**10 32 51.9**	**+0.9**
MAT				*e*S	**Sn**	**10 34 05.2**	**+3.5**
MJAR	**Matsushiro Arr**	**6.31**	**212**	P	**Pn**	**10 32 51.9**	**+0.8**
MJAR	**Matsushiro Arr**	**6.31**	**212**	P	**Pn**	**10 32 51.9**	**+0.8**
	comp=E,6.9nm,0.3s,baz=24,slow=15,SNR=36						
MJAR				LR	LR	10 34 44.1	
	comp=E,178nm,21.5s,baz=25,slow=32						
UGL	**Uglegorsk**	**7.07**	**359**	*e*PN	**Pn**	**10 33 03.0**	**+1.7**
UGL				pmax	pmax		
	comp=Z,33nm,0.7s						
UGL				MLR	MLR		
	comp=N,1μm,20.0s						
UGL				MLR	MLR		
	comp=E,300nm,20.0s						
VLA	**Vladivostok**	**7.77**	**282**	*d i* PN	**Pn**	**10 33 13.0**	**+2.1**
VLA				*e*S	**Sn**	**10 34 41.2**	**+3.8**
USRK	**Ussuriysk Arra**	**7.86**	**290**	P	**Pn**	**10 33 13.1**	**+1.0**
	comp=E,2.5nm,0.3s,baz=94,slow=14,SNR=171						
USRK				LR	LR	10 36 21.1	
	comp=E,670nm,20.5s,baz=88,slow=38						
HABR	**Khabarovsk**	**8.24**	**324**	*e*PN	**Pn**	**10 33 15.4**	**-1.9**
HABR				pmax	pmax		
	comp=E,109nm,1.6s						
HABR				pmax	pmax		
	comp=Z,196nm,1.6s						
HABR				pmax	pmax		
	comp=N,96nm,1.6s						
HABR				MLR	MLR		
	comp=Z,810nm,20.0s						
JHJ	**Hachijo jima 2**	**9.10**	**194**	P	**Pn**	**10 33 26.1**	**-2.9**
	comp=Z,26nm,0.3s,baz=25,slow=19,SNR=9.7						
JHJ				S	Sn	10 35 02.0	-7.9
	comp=Z,28nm,0.3s,baz=266,slow=23,SNR=5.9						
MDJ	**Mudanjiang**	**9.63**	**290**	P	**Pn**	**10 33 35.5**	**-0.7**
MDJ				sP		10 33 56.5	
MDJ				S	**Sn**	**10 35 22.0**	**-0.8**
MDJ				ScP	**ScP**	**10 43 16.8**	**+2.6**
MDJ				PcS	**PcS**	**10 43 22.5**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,30nm,3.5s						
MDJ				LR	LR		
	comp=N,270nm,17.6s						
MDJ				LR	LR		
	comp=E,520nm,25.1s						
MDJ				LR	LR		
	comp=Z,720nm,31.8s						
MDJ	**Mudanjiang**	**9.63**	**290**	*e*P	Pn	10 33 39.7	+3.5
	comp=Z,60nm,0.9s						
KLR	**Kul'dur**	**10.33**	**318**	*e*PN	**Pn**	**10 33 44.8**	**-1.0**
KLR				*e*		10 35 46.0	
KLR				pmax	pmax		
	comp=E,100nm,1.2s						
KLR				pmax	pmax		
	comp=Z,110nm,1.2s						
KLR				MLR	MLR		
	comp=E,800nm,13.5s						
KLR				MLR	MLR		
	comp=Z,2μm,13.5s						
KSRS	**Korea Array**	**11.97**	**252**	P	**Pn**	**10 34 09.6**	**+1.3**
	comp=Z,1.3nm,0.3s,baz=66,slow=12,SNR=42						
KSRS				S	**Sn**	**10 36 24.1**	**+4.1**
	comp=Z,2.0nm,0.3s,baz=66,slow=24,SNR=12						
KSRS				LR	LR	10 38 19.3	
	comp=Z,560nm,21.1s,baz=38,slow=35						
KSAR	**Wonju Array Be**	**12.00**	**252**	P	**Pn**	**10 34 09.6**	**+0.9**
KSAR				S	**Sn**	**10 36 24.1**	**+3.3**
CN2	**Changchun**	**12.49**	**284**	*e*P	**Pn**	**10 34 17.0**	**+1.6**
CN2				*ep*P	**P**	**10 34 26.3**	**+1.2**
CN2				*es*P		10 34 35.5	
CN2				*e*S	**Sn**	**10 36 34.3**	**+1.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,14.0s						
CN2				LR	LR		
	comp=E,500nm,14.0s						
CN2				LR	LR		
	comp=Z,600nm,15.0s						
JNU	**Nakatsue**	**12.67**	**229**	*e*Pn	**Pn**	**10 34 18.9**	**+1.0**
JNU	**Nakatsue**	**12.67**	**229**	P	**Pn**	**10 34 17.7**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=36,slow=6.1,SNR=8.4						
INCN	**Inchon**	**12.88**	**255**	P	P	10 34 25.4	-4.0
	SNR=7.8						
SNY	**Shenyang**	**13.95**	**276**	⇓ P	**P**	**10 34 42.0**	**+0.7**
SNY				S	**S**	**10 37 26.5**	**-0.2**
SNY				pmax	pmax		
	comp=Z,21nm,0.8s						
SNY				pmax	pmax		
	comp=Z,52nm,3.5s						
SNY				LR	LR		
	comp=N,190nm,12.6s						
SNY				L

NJ2	**Nanjing**	**21.14**	**250**	*e*P	**P**	**10 35 58.5**	**-1.8**
NJ2				PP	**PnPn**	**10 36 22.0**	**+0.2**
NJ2				S	S	10 39 44.5	-7.5
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s						
NJ2				LR	LR		
	comp=N,460nm,16.4s						
NJ2				LR	LR		
	comp=E,480nm,16.6s						
YAK	**Yakutsk**	**21.43**	**344**	*e*P	**P**	**10 35 59.4**	**-3.8**
YAK				*e**PP	**pP**	**10 36 19.3**	**+2.9**
YAK				*e*S	**S**	**10 39 50.5**	**-6.9**
YAK				*e*		10 40 00.8	
YAK				*e**SS	sS	10 40 24.6	+5.7
YAK				*e*		10 47 16.0	
YAK				pmax	pmax		
	comp=Z,50nm,0.9s						
YAK				pmax	pmax		
	comp=N,16nm,1.1s						
YAK				smax	smax		
	comp=N,292nm,2.0s						
YAK				smax	smax		
	comp=E,169nm,1.7s						
SEY	**Seymchan**	**21.79**	**12**⇑	*i*P	**P**	**10 36 04.7**	**-2.3**
HHC	**Hu-ho-hao-te**	**23.02**	**277**⇓	*i*P	**P**	**10 36 20.3**	**-0.1**
HHC				pP	**pP**	**10 36 34.5**	**+0.6**
HHC				sP	**sP**	**10 36 42.0**	**+0.6**
HHC				PP	**PnPn**	**10 36 52.0**	**+4.4**
HHC				S	**S**	**10 40 21.5**	**-4.9**
HHC				sS	Sn	10 40 45.5	-1.5
HHC				SS	**SnSn**	**10 41 09.0**	**+5.3**
HHC				PcS	**PcS**	**10 43 48.5**	**+1.4**
HHC				pmax	pmax		
	comp=Z,42nm,1.1s						
HHC				pmax	pmax		
	comp=Z,94nm,4.2s						
HHC				LR	LR		
	comp=N,640nm,19.2s						
HHC				LR	LR		
	comp=E,750nm,20.2s						
HHC				LR	LR		
	comp=Z,610nm,20.0s						
FX1	**Attu Island--F**	**23.35**	**52**	*e*P	**P**	**10 36 26.6**	**+3.2**
FX1	**Attu Island--F**	**23.35**	**52**	LR	LR	10 45 13.3	
	comp=Z,106nm,20.9s,baz=262,slow=36						
TATO	**Taipei**	**24.19**	**232**	*e*P	**P**	**10 36 31.2**	**0.0**
WHN	**Wuhan**	**25.16**	**252**	P	**P**	**10 36 37.8**	**-2.2**
WHN				S	**S**	**10 41 01.0**	**+0.2**
WHN				LR	LR		
	comp=Z,680nm,17.5s						
ULN	**Ulaanbaatar**	**25.48**	**295**	*e*P	**P**	**10 36 42.9**	**-0.1**
	comp=Z,58nm,1.5s						
ULN	**Ulaanbaatar**	**25.48**	**295**	P	**P**	**10 36 42.9**	**-0.1**
	SNR=14						
ULN	**Ulaanbaatar**	**25.48**	**295**	P	**P**	**10 36 40.6**	**-2.4**
	comp=Z,22nm,1.3s,comp=Z,353nm						
SONM	**Songino Array**	**25.92**	**295**	P	**P**	**10 36 47.4**	**+0.5**
SONM	**Songino Array**	**25.92**	**295**	P	**P**	**10 36 47.4**	**+0.5**
	comp=Z,20nm,0.8s,baz=87,slow=9.0,SNR=35						
SONM				LR	LR	10 47 44.9	
	comp=Z,461nm,18.1s,baz=87,slow=38						
TWG	**Pinlang**	**26.09**	**229**	P	**P**	**10 36 51.1**	**+2.5**
	comp=Z,85nm,0.9s						
XAN	**Xi'an**	**27.34**	**264**	P	**P**	**10 36 59.8**	**0.0**
XAN				S	**S**	**10 41 33.0**	**-2.3**
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				LR	LR		
	comp=N,120nm,23.5s						
XAN				LR	LR		
	comp=E,69nm,19.4s						
TLY	**Talaya**	**27.86**	**304**	*e*P	**P**	**10 37 04.3**	**+0.1**
TLY				*e*		10 37 21.5	
TLY				pmax	pmax		
	comp=Z,35nm,1.5s						
TLY				MLR	MLR		
	comp=Z,270nm,19.0s						
ZAK	**Zakamensk**	**28.01**	**301**	*e*P	**P**	**10 37 04.9**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GUMO	**Guam**	**28.40**	**175**	LR	LR	10 47 05.7	
	comp=Z,154nm,18.9s,baz=270,slow=33						
ENH	**Enshi**	**28.80**	**257**	*e*P	**P**	**10 37 11.1**	**-1.7**
	comp=Z,48nm,1.0s						
BILL	**Bilibino**	**29.08**	**18**	*e*P	**P**	**10 37 14.0**	**-0.8**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MOY	**Mondy**	**29.51**	**303**	*e*P	**P**	**10 37 18.6**	**-0.3**
MOY				pmax	pmax		
	comp=Z,41nm,2.2s						
LZH	**Lanzhou**	**30.27**	**272**	*e*P	**P**	**10 37 25.0**	**-0.9**
LZH				pP	**pP**	**10 37 39.8**	**-1.0**
LZH				sP	**sP**	**10 37 47.3**	**-0.6**
LZH				*e*PP	**PnPn**	**10 38 25.3**	**-0.4**
LZH				*e*S	**S**	**10 42 17.3**	**-4.1**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,4.5s						
LZH				LR	LR		
	comp=N,370nm,13.5s						
LZH				LR	LR		
	comp=E,310nm,13.0s						
LZH				LR	LR		
	comp=Z,430nm,15.2s						
TIXI	**Tiksi**	**30.46**	**352**⇓	*i*P	**P**	**10 37 23.9**	**-3.0**
GTA	**Gaotai**	**32.08**	**280**	*e*P	**P**	**10 37 41.5**	**-0.2**
GTA				pP	**pP**	**10 37 56.0**	**-0.7**
GTA				sP	**sP**	**10 38 04.0**	**+0.2**
GTA				PcP	**PcP**	**10 40 31.0**	**+1.1**
GTA				S	**S**	**10 42 47.8**	**-1.8**
GTA				sS	**sS**	**10 43 13.0**	**-2.1**
GTA				SS	**SnSn**	**10 44 44.5**	**+0.2**
GTA				ScS	**ScS**	**10 48 06.0**	**-0.9**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,73nm,6.4s						
GTA				LR	LR		
	comp=N,210nm,12.8s						
GTA				LR	LR		
	comp=E,360nm,13.8s						
GTA				LR	LR		
	comp=Z,200nm,17.1s						
CD2	**Chengdu**	**32.67**	**263**	P	**P**	**10 37 48.5**	**+1.6**
CD2				pP	**pP**	**10 38 03.3**	**+1.4**
CD2				sP	**sP**	**10 38 10.5**	**+1.5**
CD2				PP	**PnPn**	**10 38 58.8**	**+2.2**
CD2				PcP	**PcP**	**10 40 34.0**	**+2.5**
CD2				S	**S**	**10 42 58.5**	**-0.3**
CD2				sS	**sS**	**10 43 24.0**	**-0.3**
CD2				PcS	**PcS**	**10 44 18.0**	**+1.1**
CD2				SS	**SnSn**	**10 44 58.0**	**-0.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=N,210nm,15.7s						
CD2				LR	LR		
	comp=E,300nm,30.4s						
CD2				LR	LR		
	comp=Z,210nm,26.9s						
GYA	**Guiyang**	**33.02**	**253**	*e*P	**P**	**10 37 51.0**	**+0.9**
GYA				pP	**pP**	**10 38 06.8**	**+1.7**
GYA				sP	**sP**	**10 38 12.5**	**+0.3**
GYA				PP	**PnPn**	**10 39 02.3**	**+1.1**
GYA				PcP	**PcP**	**10 40 34.8**	**+2.1**
GYA				S	**S**	**10 43 03.0**	**-1.5**
GYA				sS	**sS**	**10 43 29.5**	**-0.6**
GYA				ScP	**ScP**	**10 44 11.3**	**-0.2**
GYA				ScS	**ScS**	**10 48 10.8**	**-1.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HVS	**Khovu-Aksy**	**34.08**	**302**⇓	*i*P	**P**	**10 37 59.2**	**+0.2**
HVS				pmax	pmax		
	comp=Z,56nm,1.1s						
QIZ	**Qiongzhong**	**35.81**	**240**	P	**P**	**10 38 15.3**	**+1.2**
QIZ				S	**S**	**10 43 49.5**	**+2.2**
QIZ				LR	LR		
	comp=N,150nm,25.9s						
QIZ				LR	LR		
	comp=E,100nm,23.7s						
QIZ				LR	LR		
	comp=Z,170nm,23.5s						

KMI	**Kunming**	**36.65**	**255**	P	**P**	**10 38 21.3**	**-0.2**
KMI				pP	**pP**	**10 38 38.0**	**+1.4**
KMI				S	**S**	**10 44 00.5**	**+0.1**
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
KMI				LR	LR		
	comp=N,130nm,16.6s						
KMI				LR	LR		
	comp=E,150nm,10.9s						
KMI				LR	LR		
	comp=Z,190nm,23.6s						
ZAA0	**Zalesovo Array**	**39.23**	**308**	*e*P	**P**	**10 38 42.5**	**-0.2**
ZALV	**Zalesovo Beam**	**39.23**	**308**	P	**P**	**10 38 42.6**	**0.0**
ZALV				*PP	**pP**	**10 38 59.9**	**+2.0**
ZALV						10 40 50.8	
ZALV						10 44 33.9	
ZALV	**Zalesovo Beam**	**39.23**	**308**	P	**P**	**10 38 42.6**	**0.0**
ZALV				pP	**pP**	**10 38 59.9**	**+2.0**
ZALV				PcP	**PcP**	**10 40 50.8**	**+0.2**
ZALV				ScP	**ScP**	**10 44 33.9**	**+0.2**
ZALV	**Zalesovo Beam**	**39.23**	**308**	P	**P**	**10 38 42.6**	**0.0**
	comp=Z,35nm,0.8s,baz=86,slow=7.8,SNR=118						
ZALV				pP	**pP**	**10 38 59.9**	**+2.0**
	comp=Z,15nm,0.7s,baz=88,slow=7.5,SNR=4.4						
ZALV				PcP	**PcP**	**10 40 50.8**	**+0.2**
	comp=Z,6.3nm,0.7s,baz=94,slow=3.2,SNR=5.6						
ZALV				ScP	**ScP**	**10 44 33.9**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=98,slow=5.1,SNR=3.6						
ZALV				LR	LR	10 55 47.8	
	comp=Z,240nm,18.9s,baz=249,slow=37						
WMQ	**Urumqi**	**39.42**	**292**	P	**P**	**10 38 44.5**	**0.0**
WMQ				pP	**pP**	**10 39 00.0**	**+0.2**
WMQ				sP	**sP**	**10 39 07.0**	**+0.2**
WMQ				PP	**PnPn**	**10 40 20.3**	**+1.2**
WMQ				PcP	**PcP**	**10 40 50.0**	**-1.5**
WMQ				ScP	**ScP**	**10 44 34.5**	**-0.2**
WMQ				S	**S**	**10 44 41.5**	**-0.3**
WMQ				sS	**sS**	**10 45 07.5**	**-0.2**
WMQ				ScS	**ScS**	**10 48 45.3**	**-1.6**
WMQ				pmax	pmax		
	comp=Z,37nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.0s						
WMQ				LR	LR		
	comp=N,260nm,12.0s						
WMQ				LR	LR		
	comp=E,340nm,18.8s						
WMQ				LR	LR		
	comp=Z,190nm,18.6s						
NVS	**Novosibirsk**	**40.05**	**310**⇑	*i*P	**P**	**10 38 49.2**	**-0.2**
NVS				*e**PP	**pP**	**10 39 05.6**	**+0.9**
NVS				*e*S	**S**	**10 44 51.5**	**+0.8**
NVS				pmax	pmax		
	comp=N,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,16nm,1.0s						
NVS				pmax	pmax		
	comp=Z,25nm,1.0s						
NVS				smax	smax		
	comp=N,4.0nm,1.3s						
NVS				smax	smax		
	comp=E,7.0nm,1.3s						
UBPT	**Khong Chiam**	**41.38**	**241**	P	**P**	**10 38 59.6**	**-1.2**
	comp=E,22nm,1.8s						
MK31	**Makanchi Array**	**42.24**	**298***c*	eP	**P**	**10 39 07.3**	**-0.3**
MK31				pmax	pmax		
	comp=Z,41nm,0.7s						
MK31	**Makanchi Array**	**42.24**	**298**	*e*P	**P**	**10 39 07.2**	**-0.3**
MKAR	**Makanchi Array**	**42.24**	**298**	P	**P**	**10 39 07.2**	**-0.4**
MKAR				*PP	**pP**	**10 39 25.2**	**+2.2**
MKAR						10 41 00.4	
MKAR	**Makanchi Array**	**42.24**	**298**	P	**P**	**10 39 07.2**	**-0.4**
MKAR				pP	**pP**	**10 39 25.1**	**+2.2**
MKAR				PcP	**PcP**	**10 41 00.4**	**-0.1**
MKAR				ScP	**ScP**	**10 44 45.5**	**-0.2**
MKAR	**Makanchi Array**	**42.24**	**298**	P	**P**	**10 39 07.2**	**-0.4**
	comp=Z,27nm,0.8s,baz=82,slow=9.3,SNR=234						
MKAR				pP	**pP**	**10 39 25.1**	**+2.2**
	comp=Z,13nm,0.8s,baz=99,slow=7.9,SNR=6.7						
MKAR				PcP	**PcP**	**10 41 00.4**	**-0.1**
	comp=Z,1.6nm,0.5s,baz=65,slow=5.8,SNR=3.5						
MKAR				ScP	**ScP**	**10 44 45.5**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=85,slow=5.1,SNR=4.6						
MKAR				LR	LR	10 57 59.8	
	comp=Z,98nm,19.3s,baz=73,slow=38						
MYLDM	**Lahad Datu**	**42.36**	**217**	P	P	10 39 05.0	-3.8
	comp=Z,14nm,1.0s						
LSA	**Lhasa**	**42.66**	**270**	P	P	10 39 15.0	+3.3
LSA	**Lhasa**	**42.66**	**270**	*e*P	**P**	**10 39 12.9**	**+1.2**
LSA				pmax	pmax		
	comp=Z,18nm,0.8s						
LSA	**Lhasa**	**42.66**	**270**	*e*P	**P**	**10 39 12.8**	**+1.2**
	comp=Z,18nm,0.8s						
CMMT	**Chiang Mai**	**43.36**	**251**	P	**P**	**10 39 16.4**	**-0.5**
	comp=Z,21nm,1.3s,comp=Z,501nm						
CHTO	**Chiang Mai**	**43.37**	**251**	*e*P	**P**	**10 39 17.7**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**43.37**	**251**	*e*P	**P**	**10 39 17.7**	**+0.8**
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**43.37**	**251**	P	**P**	**10 39 18.1**	**+1.1**
	SNR=6.6						
CHTO	**Chiang Mai**	**43.37**	**251**	P	**P**	**10 39 15.8**	**-1.1**
	comp=Z,24nm,1.3s,comp=Z,533nm						
PBKT	**Sadao Pong**	**43.48**	**247**	P	**P**	**10 39 16.9**	**-0.9**
	comp=Z,17nm,1.3s						
COLD	**Coldfoot**	**43.52**	**31**	*e*P	**P**	**10 39 17.6**	**0.0**
KURK	**Kurchatov**	**43.55**	**304***c*	*i*P	**P**	**10 39 17.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,103nm,1.2s						
KURK	**Kurchatov**	**43.55**	**304**	*e*P	**P**	**10 39 17.5**	**-0.6**
	comp=Z,58nm,0.8s						
KURK				S	**S**	**10 45 44.5**	**+2.0**
KURK	**Kurchatov**	**43.55**	**304**	P	**P**	**10 39 18.2**	**+0.1**
	SNR=39						
TRF	**Thorofare Moun**	**43.59**	**37**	*e*P	**P**	**10 39 18.5**	**+0.1**
	comp=Z,7.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**43.60**	**251**	P	**P**	**10 39 19.3**	**+0.5**
CMAR				PcP	**PcP**	**10 41 06.3**	**+0.8**
CMAR				ScP	**ScP**	**10 44 51.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**43.60**	**251**	P	**P**	**10 39 19.3**	**+0.5**
	comp=Z,3.8nm,0.7s,baz=41,slow=7.6,SNR=18						
CMAR				PcP	**PcP**	**10 41 06.3**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=29,slow=3.5,SNR=4.1						
CMAR				ScP	**ScP**	**10 44 51.8**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=69,slow=4.9,SNR=6.3						
CMAR				LR	LR	10 56 44.3	
	comp=Z,146nm,21.6s,baz=64,slow=35						
KURBB	**Kurchatov Arra**	**43.63**	**304**	P	**P**	**10 39 18.5**	**-0.2**
	comp=Z,55nm,0.8s,baz=77,slow=8.4,SNR=316						
KURBB				S	**S**	**10 45 44.5**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=77,slow=18,SNR=4.1						
COLA	**College**	**44.56**	**35***c*	*i*P	**P**	**10 39 25.7**	**-0.2**
COLA				pmax	pmax		
	comp=Z,11nm,1.0s						
COLA	**College**	**44.56**	**35**	*e*P	**P**	**10 39 26.6**	**+0.8**
	comp=Z,14nm,0.9s						
SML	**Sawmill**	**44.64**	**39**	*e*P	**P**	**10 39 27.2**	**+0.5**
SML				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SML	**Sawmill**	**44.64**	**39**	*e*P	**P**	**10 39 27.2**	**+0.5**
	comp=Z,4.5nm,0.9s						
ILAR	**Eielson Array**	**44.98**	**35**	P	**P**	**10 39 29.1**	**-0.1**
ILAR	**Eielson Array**	**44.98**	**35**	P	**P**	**10 39 29.1**	**-0.1**
	comp=Z,6.0nm,0.8s,baz=272,slow=6.5,SNR=61						
ILAR				LR	LR	11 01 13.8	
	comp=Z,69nm,19.7s,baz=287,slow=40						
DIV	**Divide**	**45.96**	**40**	*e*P	**P**	**10 39 37.4**	**+0.2**
	comp=Z,11nm,0.9s						
DOT	**Dot Lake**	**46.34**	**36**	*e*P	**P**	**10 39 40.3**	**+0.3**
	comp=Z,4.9nm,0.8s						
TAPN	**Taplejung**	**46.47**	**270**	*e*P	**P**	**10 39 42.4**	**+0.5**
	comp=Z,97nm,0.9s						
MENT	**Mentasta**	**46.61**	**37**	*e*P	**P**	**10 39 43.4**	**+1.2**
ODAN	**Odare**	**46.97**	**269**	*e*P	**P**	**10 39 46.3**	**+0.5**
	comp=Z,70nm,0.8s						
EGAK	**Eagle**	**47.41**	**34**	*e*P	**P**	**10 39 47.8**	**-0.5**
	comp=Z,11nm,1.1s						
RAMN	**Ramite**	**47.51**	**270**	*e*P	**P**	**10 39 50.1**	**+0.1**
	comp=Z,140nm,0.8s						
GUN	**Gumba**	**47.53**	**272**	*e*P	**P**	**10 39 50.3**	**+0.1**
	comp=Z,219nm,0.8s						
SBUM	**Sibu**	**47.73**	**223**	P	**P**	**10 39 49.9**	**-1.5**
	comp=Z,12nm,1.0s						
ULHL	**Ulahol**	**47.84**	**294**	*i*P	**P**	**10 39 52.8**	**+0.5**
ULHL	**Ulahol**	**47.84**	**294**	P	**P**	**10 39 52.8**	**+0.5**

	SNR=5.3						
BVA0	**Borovoye Array**	**47.85**	**309**	P	**P**	**10 39 51.8**	**-0.1**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BVAR	**Borovoye Array**	**47.85**	**309**	P	**P**	**10 39 52.2**	**+0.2**
BVAR				*PP	**pP**	**10 40 08.6**	**+1.0**
BVAR						10 41 20.2	
BVAR	**Borovoye Array**	**47.85**	**309**	P	**P**	**10 39 52.2**	**+0.2**
BVAR				pP	**pP**	**10 40 08.6**	**+1.0**
BVAR				PcP	**PcP**	**10 41 20.2**	**+0.5**
BVAR	**Borovoye Array**	**47.85**	**309**	P	**P**	**10 39 52.2**	**+0.2**
	comp=Z,12nm,0.4s,baz=78,slow=9.2,SNR=51						
BVAR				pP	**pP**	**10 40 08.5**	**+1.0**
	comp=Z,5.7nm,0.4s,baz=87,slow=9.1,SNR=4.2						
BVAR				PcP	**PcP**	**10 41 20.2**	**+0.5**
	comp=Z,4.4nm,0.7s,baz=46,slow=4.3,SNR=3.8						
BVAR				LR	LR	11 01 14.3	
	comp=Z,150nm,19.5s,baz=70,slow=38						
BRVK	**Borovoye**	**47.90**	**309***c*	*i*P	**P**	**10 39 52.4**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,18nm,1.2s						
BRVK	**Borovoye**	**47.90**	**309**	*e*P	**P**	**10 39 52.6**	**+0.3**
BRVK	**Borovoye**	**47.90**	**309**	P	**P**	**10 39 52.8**	**+0.5**
	SNR=10						
TKM2	**Tokmak 2**	**48.02**	**295**	*i*P	**P**	**10 39 54.0**	**+0.4**
TKM2	**Tokmak 2**	**48.02**	**295**	*e*P	**P**	**10 39 54.0**	**+0.4**
	comp=Z,62nm,0.8s						
TKM2	**Tokmak 2**	**48.02**	**295**	P	**P**	**10 39 54.1**	**+0.4**
	SNR=89						
KKN	**Kakani**	**48.04**	**272**	*e*P	**P**	**10 39 54.0**	**0.0**
	comp=Z,110nm,0.8s						
PKI	**Pulchoki**	**48.06**	**272**	*e*P	**P**	**10 39 54.1**	**-0.2**
	comp=Z,44nm,0.6s						
PKIN	**Phulchoki**	**48.07**	**272**	*e*P	**P**	**10 39 54.5**	**+0.2**
	comp=Z,53nm,0.7s						
DMN	**Daman**	**48.27**	**272**	*e*P	**P**	**10 39 56.1**	**+0.3**
	comp=Z,82nm,0.9s						
KBK	**Karagaybulak**	**48.56**	**295**	*i*P	**P**	**10 39 58.0**	**+0.2**
KBK	**Karagaybulak**	**48.56**	**295**	P	**P**	**10 39 58.1**	**+0.2**
	SNR=37						
KZA	**Kyzart**	**48.59**	**294**	*i*P	**P**	**10 39 59.3**	**+1.0**
KZA	**Kyzart**	**48.59**	**294**	P	**P**	**10 39 59.3**	**+1.0**
	SNR=22						
USP	**Ospenovka**	**48.62**	**296**	*i*P	**P**	**10 39 58.2**	**+0.1**
USP	**Ospenovka**	**48.62**	**296**	P	**P**	**10 39 58.2**	**+0.1**
	SNR=5.9						
DANN	**Dangsing**	**48.87**	**273**	*e*P	**P**	**10 40 00.8**	**+0.3**
	comp=Z,226nm,0.6s						
AAK	**Ala-Archa**	**48.88**	**295**	*i*P	**P**	**10 40 00.1**	**-0.1**
AAK	**Ala-Archa**	**48.88**	**295**	*e*P	**P**	**10 39 59.5**	**-0.7**
	comp=Z,17nm,1.8s						
AAK	**Ala-Archa**	**48.88**	**295**	P	**P**	**10 40 00.4**	**+0.2**
	SNR=8.4						
AAK	**Ala-Archa**	**48.88**	**295**	P	**P**	**10 40 00.1**	**-0.1**
	SNR=14						
AAK	**Ala-Archa**	**48.88**	**295**	P	**P**	**10 40 00.2**	**-0.1**
	comp=Z,7.4nm,0.4s,baz=94,slow=5.8,SNR=27						
AAK				LR	LR	10 59 39.8	
	comp=Z,107nm,18.7s,baz=56,slow=35						
KSH	**Kashi**	**49.16**	**291**⇑	*i*P	P	10 40 06.0	+3.7
KSH				*e*sP	sP	10 40 28.5	+3.5
KSH				*e*PcP	**PcP**	**10 41 28.0**	**+3.1**
KSH				*e*PP	**PP**	**10 42 01.0**	**+4.7**
KSH				*e*ScP	**ScP**	**10 45 17.0**	**+2.3**
KSH				*e*PcS	**PcS**	**10 45 24.3**	**+2.8**
KSH				*e*S	**S**	**10 47 05.8**	**+2.5**
KSH				*e*SS	**SS**	**10 50 34.0**	**-0.8**
KSH				pmax	pmax		
	comp=Z,39nm,1.0s						
KSH				pmax	pmax		
	comp=Z,120nm,7.2s						
KSH				LR	LR		
	comp=Z,64nm,4.2s						
KOLN	**Koldanda**	**49.30**	**273**	*e*P	**P**	**10 40 03.8**	**+0.1**
	comp=Z,48nm,0.6s						
EKS2	**Erkin-Say**	**49.35**	**295**	*i*P	**P**	**10 40 03.8**	**0.0**
EKS2	**Erkin-Say**	**49.35**	**295**	*e*P	**P**	**10 40 03.6**	**-0.1**
	comp=Z,21nm,0.6s						
EKS2	**Erkin-Say**	**49.35**	**295**	P	**P**	**10 40 03.8**	**0.0**
	SNR=24						
KSM	**Kuching**	**49.54**	**224**	*e*P	**P**	**10 40 06.2**	**+0.9**
	comp=Z,55nm,1.1s						
KSM	**Kuching**	**49.54**	**224**	P	P	10 40 02.0	-3.3
	comp=Z,50nm,1.0s						
PYUN	**Piuthan**	**49.58**	**274**	*e*P	**P**	**10 40 05.8**	**0.0**
	comp=Z,161nm,0.7s						
AML	**Almayashu**	**49.62**	**295**	*i*P	**P**	**10 40 06.6**	**+0.4**
AML	**Almayashu**	**49.62**	**295**	P	**P**	**10 40 06.6**	**+0.4**
	SNR=26						
KAPI	**Kappang**	**51.11**	**209**	P	**P**	**10 40 16.6**	**-0.5**
KAPI	**Kappang**	**51.11**	**209**	P	P	10 40 10.0	-7.1
	comp=Z,24nm,1.2s						
KAPI	**Kappang**	**51.11**	**209**	P	**P**	**10 40 16.6**	**-0.5**
	comp=Z,9.0nm,0.8s,baz=13,slow=5.1,SNR=5.0						
KK31	**Karatay Array**	**51.35**	**297***c*	*e*P	**P**	**10 40 18.2**	**-0.6**
KK31				pmax	pmax		
	comp=Z,23nm,0.6s						
KKAR	**Karatay Array**	**51.35**	**297**	*e*P	**P**	**10 40 18.3**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,23nm,0.6s						
KKAR	**Karatay Array**	**51.35**	**297**	*e*P	**P**	**10 40 18.3**	**-0.5**
	comp=Z,23nm,0.6s						
SVE	**Sverdlovsk**	**51.95**	**316**⇓	*e*P	**P**	**10 40 23.3**	**+0.3**
SVE				pmax	pmax		
	comp=Z,68nm,0.9s						
KULM	**Kulim**	**52.01**	**237**	P	**P**	**10 40 21.9**	**-2.0**
	comp=Z,46nm,0.9s						
SOKR	**Solikamsk**	**52.86**	**321***c*	*i*P	**P**	**10 40 29.6**	**0.0**
SOKR				pmax	pmax		
	comp=Z,50nm,1.1s						
ARU	**Arti**	**53.16**	**316***c*	*i*P	**P**	**10 40 31.5**	**-0.4**
ARU				*PP	**pP**	**10 40 44.0**	**-3.8**
ARU						10 41 38.5	
ARU						10 42 29.9	
ARU				S	**S**	**10 47 59.0**	**+1.1**
ARU				SS	**SS**	**10 51 34.5**	**-2.9**
ARU				pmax	pmax		
	comp=Z,63nm,1.2s						
CHCP	**Chirah Chowk**	**53.83**	**285**	P	**P**	**10 40 38.1**	**+0.9**
DLBC	**Dease Lake**	**54.34**	**40**	*e*P	**P**	**10 40 42.6**	**+2.0**
CEP	**Cherat**	**54.72**	**286**	P	**P**	**10 40 43.8**	**0.0**
AB31	**Akbulak array**	**55.35**	**308***c*	*e*P	**P**	**10 40 47.6**	**-0.3**
AB31				pmax	pmax		
	comp=Z,15nm,0.5s						
ABKAR	**Akbulak array**	**55.35**	**308**	*e*P	**P**	**10 40 47.8**	**-0.1**
	comp=Z,12nm,0.5s						
AKTO	**Aktyubinsk**	**55.94**	**310**	P	**P**	**10 40 52.1**	**-0.1**
AKTO	**Aktyubinsk**	**55.94**	**310**	P	**P**	**10 40 52.0**	**-0.1**
AKTO	**Aktyubinsk**	**55.94**	**310**	P	**P**	**10 40 52.0**	**-0.1**
	comp=Z,5.6nm,0.6s,baz=66,slow=7.9,SNR=19						
AKTO				LR	LR	11 06 12.1	

WRA **Warramunga Arr** 62.08 188 P P 10 41 33.6 -1.2
comp=Z,3.1nm,0.5s,baz=6.9,slow=6.9,SNR=113
WRA pP pP 10 41 53.0 +2.0
comp=Z,6.9nm,0.8s,baz=4.8,slow=7.0,SNR=7.1
MOS **Moscow** 63.70 322 *e*P P 10 41 44.4 -0.9
PALK **Pallekele** 64.18 256 P P 10 41 49.0 -0.1
PALK **Pallekele** 64.18 256 P P 10 41 49.0 -0.1
comp=Z,8.5nm,0.8s,baz=56,slow=7.5,SNR=3.1
VRHR **Novokhopersk** 64.51 317 *e*P P 10 41 48.9 -1.7
VRHR pmax pmax
comp=N,30nm,1.0s
VRHR pmax pmax
comp=E,20nm,1.0s
VRHR pmax pmax
comp=Z,40nm,1.0s
OBN **Obninsk** 64.56 322*c i*P P 10 41 50.2 -0.7
OBN pmax pmax
comp=Z,37nm,1.0s
FINES **FINESS Array B** 64.76 332 P P 10 41 51.9 -0.1
FINES **FINESS Array B** 64.76 332 P P 10 41 51.9 -0.1
comp=Z,8.5nm,0.5s,baz=94,slow=5.6,SNR=20
FINES LR LR 11 12 38.4
comp=Z,231nm,19.6s,baz=8.5,slow=38
VSR **Storozhevoye** 65.68 318 *e*P P 10 41 57.8 -0.4
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,20nm,0.8s
VSR pmax pmax
comp=N,5.0nm,0.4s
SUMG **Summit** 65.72 0 *i*P P 10 41 58.6 0.0
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG **Summit** 65.72 0 *e*P P 10 41 58.3 -0.4
comp=Z,7.1nm,0.7s
SUMG **Summit** 65.72 0 *i*P P 10 41 58.6 0.0
comp=Z,9.3nm,0.9s
AS31 **Alice Springs** 65.80 188 *e*P P 10 41 58.9 -0.4
ASAR **Alice Springs** 65.80 188 P P 10 41 58.8 -0.5
ASAR pP pP 10 42 18.5 +2.8
ASAR **Alice Springs** 65.80 188 P P 10 41 58.8 -0.5
comp=Z,1.0nm,0.4s,baz=7.9,slow=7.8,SNR=36
ASAR pP pP 10 42 18.5 +2.8
comp=Z,2.1nm,0.5s,baz=6.7,slow=7.4,SNR=8.2
NEW **Newport** 66.13 46 *e*P P 10 42 01.9 +0.7
comp=Z,2.5nm,0.8s
NEW **Newport** 66.13 46 ⇑P P 10 42 01.7 +0.4
baz=66
VSU **Vasula** 66.54 329*c i*P P 10 42 03.3 -0.3
VSU pmax pmax
comp=Z,47nm,1.1s
A13A **Flathead Natio** 67.15 44 ⇓P P 10 42 07.8 0.0
baz=67
C12B **Naegeli Ranch,** 67.35 46 ⇑P P 10 42 09.6 +0.5
baz=67
B13A **Whitefish** 67.47 45 ⇓P P 10 42 10.4 +0.6
baz=67,SNR=12
A14A **Double T Ranch** 67.64 44 ⇑P P 10 42 11.0 0.0
baz=67,SNR=7.2
D12A **Red Ives Fores** 67.82 46 ⇓P P 10 42 11.7 -0.4
baz=68
C13A **Hot Springs** 67.84 45 ⇑P P 10 42 12.8 +0.6
baz=68,SNR=5.7
JTMT **Jette** 67.96 45 *e*P P 10 42 14.0 +1.0
comp=Z,5.6nm,1.0s
A15A **Johnson Ranch,** 67.99 43 ⇑P P 10 42 12.8 -0.3
baz=68,SNR=8.4
BMO **Blue Mountains** 68.10 49 *e*P P 10 42 14.8 +0.9
comp=Z,4.2nm,1.2s
B14A **Marquette Ranc** 68.10 44 ⇑P P 10 42 13.9 0.0
baz=68,SNR=9.4
DGRG **David-gareji** 68.16 306 P P 10 42 19.1 +4.9
DUS **Dusheti** 68.17 307 P P 10 42 16.7 +2.4
KIV **Kislovodsk** 68.21 310*c i*P P 10 42 15.2 +0.6
KBZ **Khabaz** 68.22 310 P P 10 42 15.1 +0.6
KBZ **Khabaz** 68.22 310 P P 10 42 15.1 +0.6
KBZ **Khabaz** 68.22 310 P P 10 42 15.1 +0.6
comp=Z,20nm,0.9s,baz=47,slow=3.6,SNR=37
KBZ LR LR 11 18 27.9
comp=Z,108nm,18.1s,baz=243,slow=41
SWMT **Swartz Lake** 68.25 45 *e*P P 10 42 15.8 +1.0
comp=Z,5.5nm,1.0s
D13A **Huson** 68.27 46 ⇑P P 10 42 14.8 -0.1
baz=68,SNR=7.0
TBLG **Delisi** 68.36 307 *e*P P 10 42 16.3 +0.8
TBLG **Delisi** 68.36 307 P P 10 42 16.4 +0.8
B15A **Bradely Ranch,** 68.50 44 ⇑P P 10 42 16.3 0.0
baz=68,SNR=16
ONI **Oni** 68.60 308 P P 10 42 18.2 +1.2
F12A **Elk City** 68.67 47 ⇑P P 10 42 17.7 +0.2
baz=68,SNR=8.0
MSO **Missoula** 68.71 46 ⇓P P 10 42 17.5 -0.2
baz=68,SNR=5.2
KZR **Kazreti** 68.77 307 P P 10 42 18.2 +0.1
D14A **Greenough** 68.78 45 ⇓P P 10 42 18.2 +0.1
baz=69,SNR=7.1
C15A **Salmond Ranch,** 68.82 44 ⇑P P 10 42 18.4 0.0
baz=69,SNR=14
E13A **Victor** 68.82 46 ⇑P P 10 42 18.5 +0.1
baz=69
B16A **M & M Farms, S** 68.87 43 ⇑P P 10 42 19.0 +0.3
baz=69
NACGM **Naroch** 68.97 326 *e* P 10 42 17.0 -2.0
CHMT **Chamberlain Mo** 69.02 45 *e*P P 10 42 20.1 +0.3
comp=Z,1.0nm,0.9s
G12A **Big Creek, Yel** 69.03 48 ⇓P P 10 42 20.0 +0.3
baz=69
A17A **Triple J Farms** 69.04 42 ⇓P P 10 42 19.6 0.0
baz=69,SNR=19
F13A **Darby** 69.16 47 ⇑P P 10 42 20.2 -0.3
baz=69
FFC **Flin Flon** 69.18 34 *e*P P 10 42 20.4 +0.1
FFC pmax pmax
comp=Z,19nm,0.9s
FFC **Flin Flon** 69.18 34 *e*P P 10 42 20.4 +0.1
comp=Z,19nm,0.9s
E14A **Clinton** 69.21 46 ⇑P P 10 42 20.9 0.0
baz=69
C16A **Fuhringer Ranc** 69.25 44 ⇑P P 10 42 21.2 +0.2
baz=69,SNR=11
GNI **Garni** 69.33 306 P P 10 42 22.8 +1.1
GNI **Garni** 69.33 306 P P 10 42 22.8 +1.1
comp=Z,4.1nm,0.3s,baz=148,slow=12,SNR=5.5
D15A **Lincoln** 69.33 45 ⇓P P 10 42 21.6 0.0
baz=69
B17A **L&G Farms, Che** 69.42 43 ⇓P P 10 42 21.8 -0.1
baz=69,SNR=7.4
A18A **Metzger Ranch,** 69.49 42 ⇓P P 10 42 22.4 0.0
baz=69,SNR=8.0
G13A **Cobalt** 69.65 47 ⇑P P 10 42 23.0 -0.6
baz=69
H12A **Diamond D Ranc** 69.65 48 ⇑P P 10 42 23.4 -0.2
baz=69
E15A **Deer Lodge** 69.66 45 ⇑P P 10 42 23.6 0.0
baz=69,SNR=8.9
F14A **Wisdom** 69.66 46 ⇓P P 10 42 23.4 -0.2
baz=69
MFID **Camas Ranch** 69.82 49 ⇑P P 10 42 24.5 -0.1
baz=70
D16A **Dana Ranch, Ca** 69.84 44 ⇑P P 10 42 24.6 -0.1
baz=70
HFS **Hagfors** 69.85 335 P P 10 42 23.9 -0.4
HFS **Hagfors** 69.85 335 P P 10 42 23.9 -0.4
comp=Z,10.0nm,0.3s,baz=54,slow=7.3,SNR=9.3
C17A **Wharram Farm,** 69.86 44 ⇓P P 10 42 24.6 -0.2
baz=70,SNR=5.0
B18A **Beardsley Farm** 69.86 42 ⇑P P 10 42 24.8 +0.1
baz=70,SNR=14
NB2 **NORSAR Subarra** 69.88 337 P P 10 42 23.9 -0.6
comp=Z,10nm,0.7s,baz=36,slow=6.5
NOA **NORSAR Array B** 69.88 337 P P 10 42 24.1 -0.4
NOA **NORSAR Array B** 69.88 337 P P 10 42 24.1 -0.4
comp=Z,10.0nm,0.7s,baz=37,slow=6.1,SNR=43
NOA LR LR 11 15 07.4
comp=Z,117nm,20.1s,baz=30,slow=38
HRY **Holter Researc** 69.90 45 *e*P P 10 42 26.3 +1.2
comp=Z,5.3nm,0.7s
I12A **Atlanta** 69.97 49 ⇓P P 10 42 25.8 +0.2
baz=70,SNR=6.6
A19A **Klindworth Far** 70.03 42 ⇓P P 10 42 25.7 0.0
baz=70,SNR=17
E16A **East Helena** 70.10 45 ⇑P P 10 42 26.3 +0.1
baz=70,SNR=5.4
F15A **Butte** 70.11 46 ⇓P P 10 42 26.6 +0.1
baz=70,SNR=6.4
EGMT **Eagleton** 70.12 43 *e*P P 10 42 26.6 +0.3
comp=Z,15nm,0.9s

EGMT **Eagleton** 70.12 43 ⇑P P 10 42 26.3 0.0
baz=70,SNR=9.1
LRM **Limekiln Ridge** 70.15 46 *e*P P 10 42 27.6 +0.8
comp=Z,60nm,1.0s
D17A **Six Diamond Ra** 70.21 44 ⇓P P 10 42 26.9 -0.1
baz=70
B19A **Brinkman Farms** 70.24 42 ⇑P P 10 42 27.3 +0.2
baz=70,SNR=12
DLMT **Dillon** 70.37 46 *e*P P 10 42 28.9 +0.9
comp=Z,4.6nm,0.8s
H14A **Leadore** 70.43 47 ⇓P P 10 42 28.3 -0.1
baz=70
A20A **Cobblestone Ra** 70.46 41 ⇑P P 10 42 28.2 -0.1
baz=70
I13A **Wildhorse Cree** 70.47 48 ⇓P P 10 42 29.2 +0.5
baz=70,SNR=6.7
HLID **Hailey** 70.53 49 *e*P P 10 42 29.4 +0.4
comp=Z,2.3nm,1.0s
HLID **Hailey** 70.53 49 ⇓P P 10 42 29.3 +0.3
baz=70,SNR=6.2
G15A **Dillon** 70.55 46 ⇑P P 10 42 29.1 0.0
baz=70,SNR=19
E17A **Martinsdale** 70.58 45 ⇓P P 10 42 29.4 +0.1
baz=70,SNR=10.0
MCMT **McKenzie Canyo** 70.58 47 *e*P P 10 42 30.3 +0.9
comp=Z,1.2nm,1.0s
ANN **Anapa** 70.61 313 *e*P P 10 42 26.5 -2.7
ANN *e**PP pP 10 42 41.9 -3.8
ANN *e* 10 42 47.5
ANN *e* 10 45 03.4
ANN *e*S S 10 51 36.4 -1.8
ANN pmax pmax
comp=Z,38nm,1.0s
F16A **Kennard Place,** 70.61 45 ⇓P P 10 42 29.5 +0.1
baz=70
D18A **Linhart Farms,** 70.64 43 ⇑P P 10 42 29.7 +0.2
baz=70
C19A **Slack Wire Ran** 70.67 43 ⇓P P 10 42 29.9 +0.2
baz=70,SNR=15
BOZ **Bozeman (W)** 70.70 46 *e*P P 10 42 31.0 +1.0
BOZ pmax pmax
comp=Z,4.0nm,0.8s
BOZ **Bozeman (W)** 70.70 46 *e*P P 10 42 31.0 +1.0
comp=Z,4.4nm,0.8s
J13A **Cove Ranch, Pi** 70.77 49 ⇑P P 10 42 31.1 +0.7
baz=71,SNR=8.7
AKASG **Malin Array Be** 70.81 322*ce*P P 10 42 29.7 -0.5
AKASG pmax pmax
comp=Z,10.0nm,0.5s
AKASG **Malin Array Be** 70.81 322 P P 10 42 29.8 -0.5
AKASG **Malin Array Be** 70.81 322 P P 10 42 29.8 -0.5
comp=Z,9.5nm,0.5s,baz=44,slow=6.0,SNR=48
KIEV **Kiev** 70.82 322*c i*P P 10 42 29.7 -0.6
KIEV **Kiev** 70.82 322 *e*P P 10 42 29.7 -0.6
comp=Z,20nm,0.8s
AK01 **Malin Array Si** 70.82 322 *e*P P 10 42 30.1 -0.3
H15A **Lima** 70.82 47 ⇓P P 10 42 30.8 0.0
baz=71
I14A **Mackay** 70.83 48 ⇓P P 10 42 31.3 +0.5
baz=71,SNR=8.6
AK02 **Malin Array Si** 70.84 322 *e*P P 10 42 30.4 -0.1
E18A **Harlowton** 71.00 44 ⇓P P 10 42 31.9 +0.2
baz=71
F17A **Fitzpatrick Pl** 71.05 45 ⇓P P 10 42 32.1 0.0
baz=71
D19A **Cripps Ranch,** 71.13 43 ⇑P P 10 42 32.7 +0.2
baz=71,SNR=9.2
J14A **Carey** 71.18 48 ⇓P P 10 42 34.1 +1.2
baz=71,SNR=14
C20A **Veseth Ranch,** 71.21 42 ⇓P P 10 42 33.1 +0.2
baz=71,SNR=8.7
A22A **Carney Farms,** 71.36 40 ⇑P P 10 42 33.7 -0.2
baz=71,SNR=17
G17A **Pierce Place,** 71.39 45 ⇓P P 10 42 34.1 -0.1
baz=71
NVAR **Mina Array Bea** 71.51 55 P P 10 42 35.8 +0.7
NVAR pP PcP 10 42 55.3 +1.0
NVAR **Mina Array Bea** 71.51 55 P P 10 42 35.8 +0.7
comp=Z,3.2nm,0.8s,baz=285,slow=6.0,SNR=27
NVAR pP PcP 10 42 55.3 +1.0
comp=Z,1.9nm,0.7s,baz=294,slow=5.7,SNR=6.4
H16A **Russell Place,** 71.52 46 ⇓P P 10 42 35.0 0.0
baz=71,SNR=8.3
F18A **Big Timber** 71.54 44 ⇑P P 10 42 35.7 +0.7
baz=71,SNR=6.0
D20A **Manuel Ranch,** 71.56 43 ⇓P P 10 42 35.0 0.0
baz=71
C21A **Dent Coulee** 71.58 42 ⇓P P 10 42 35.4 +0.2
baz=71,SNR=6.6
E19A **Rath Farm, Rou** 71.65 44 ⇑P P 10 42 36.1 +0.5
baz=71,SNR=9.8
MLAC **Mammoth Lakes** 71.69 56 ⇑P P 10 42 36.8 +0.6
baz=72
B22A **Reddig Ranch S** 71.80 41 ⇑P P 10 42 36.7 +0.2
baz=72
ELK **Elko** 71.86 51 LR LR 11 14 50.2
comp=Z,39nm,19.0s,baz=279,slow=36
I16A **Newdale** 71.94 47 ⇑P P 10 42 38.8 +1.3
baz=72,SNR=11
E20A **Meyer Farm, Mu** 71.96 43 ⇑P P 10 42 37.6 +0.1
baz=72
F19A **Roth Farm, Mol** 71.98 44 ⇓P P 10 42 37.8 +0.2
baz=72,SNR=8.2
G18A **Lazy EL Ranch,** 72.01 45 ⇑P P 10 42 38.3 +0.4
baz=72
H17A **Grant Village** 72.09 46 ⇑P P 10 42 39.6 +1.1
baz=72,SNR=11
D21A **La Casta Ranch** 72.15 42 ⇑P P 10 42 38.6 0.0
baz=72
B23A **Brockton** 72.17 40 ⇓P P 10 42 38.6 0.0
baz=72,SNR=18
IMW **Indian Meadow** 72.22 47 *e*P P 10 42 41.0 +1.7
comp=Z,5.4nm,0.8s
C22A **Vida** 72.24 41 ⇓P P 10 42 38.5 -0.5
baz=72
SIM **Simferopol'** 72.29 315 *e*P P 10 42 40.0 +0.7
SIM *e*S SKiKP 10 52 06.0 -3.3
SIM pmax pmax
comp=Z,21nm,1.0s
SIM MLR MLR
comp=Z,120nm,20.4s
DCID1 **Drake Creek** 72.29 47 *e*P P 10 42 41.5 +1.9
comp=Z,18nm,1.1s
A24A **Westby** 72.33 39 ⇓P P 10 42 39.7 +0.1
baz=72
RRI2 **Red Ridge** 72.38 47 *e*P P 10 42 42.0 +1.7
comp=Z,7.8nm,1.0s
H18A **Shoshone NF, C** 72.39 45 ⇑P P 10 42 40.7 +0.4
baz=72
I17A **Pilgrim Ck.** 72.40 46 ⇑P P 10 42 41.0 +0.7
baz=72
F20A **Billings** 72.42 44 ⇑P P 10 42 40.7 +0.4
baz=72
MOOW **Moose Ponds** 72.42 47 *e*P P 10 42 41.9 +1.4
comp=Z,6.2nm,1.1s
TPAW **Teton Pass** 72.48 47 *e*P P 10 42 42.5 +1.6
comp=Z,4.7nm,1.0s
D22A **Cohagen** 72.50 42 ⇑P P 10 42 40.4 -0.3
baz=72
C23A **Lambert** 72.54 41 ⇓P P 10 42 41.0 +0.1
baz=72,SNR=5.5
DGMT **Dagmar** 72.55 40 *e*P P 10 42 41.3 +0.4
comp=Z,13nm,1.0s
DGMT **Dagmar** 72.55 40 ⇑P P 10 42 40.9 0.0
baz=72
VES **Vestal, Richgr** 72.66 57 ⇑P P 10 42 41.7 -0.1
baz=72
H19A **Powell** 72.75 45 ⇓P P 10 42 42.0 -0.3
baz=72
G20A **Bridger** 72.78 44 ⇑P P 10 42 42.0 -0.5
baz=72
AHID **Auburn Hatcher** 72.88 48 *e*P P 10 42 44.0 +0.8
comp=Z,3.4nm,1.0s
CWC **Cottonwood Cre** 72.91 56 ⇓P P 10 42 43.8 +0.4
baz=73
D23A **Lindsay** 72.96 41 ⇓P P 10 42 43.9 +0.5
baz=73,SNR=8.5
GRAC **Grapevine Rang** 72.99 55 ⇑P P 10 42 44.3 +0.6
baz=73,SNR=7.3
C24A **Savage** 73.10 41 ⇑P P 10 42 44.5 +0.4
baz=73
E22A **Miles City** 73.10 42 ⇓P P 10 42 44.6 +0.4
baz=73
SBC **Santa Barbara** 73.15 59 ⇓P P 10 42 44.7 +0.1
baz=73
I19A **Meeteetse** 73.17 46 ⇑P P 10 42 45.3 +0.5
baz=73
R11A **Troy Canyon, C** 73.20 53 ⇑P P 10 42 45.4 +0.2
baz=73
G21A **Lodge Grass** 73.30 44 ⇑P P 10 42 45.8 +0.3
baz=73
E23A **Ismay** 73.38 42 ⇓P P 10 42 46.2 +0.4
baz=73,SNR=8.7
HWUT **Hardware Ranch** 73.39 49 *e*P P 10 42 47.3 +1.0
comp=Z,6.7nm,1.0s
BSD **Bornholm Skovb** 73.40 332 *i*P P 10 42 45.4 -0.3
BSD pmax pmax
comp=Z,13nm,0.9s
BSD **Bornholm Skovb** 73.40 332 *i*P P 10 42 45.4 -0.3
comp=Z,13nm,0.9s
F22A **Rosebud** 73.40 43 ⇑P P 10 42 46.3 +0.2
baz=73
D24A **Glendive** 73.44 41 ⇓P P 10 42 46.1 0.0
baz=73,SNR=6.7
MPMC **Manual Prospec** 73.52 56 ⇓P P 10 42 47.7 +0.7
baz=73
STKA **Stephens Creek** 73.52 181 LR LR 11 13 18.9
comp=Z,104nm,18.2s,baz=25,slow=34
KIS **Kishinev** 73.57 319 *e*P P 10 42 46.0 -0.9
KIS **Kishinev** 73.57 319 *e*P P 10 42 46.0 -0.9
DUG **Dugway** 73.62 50 *e*P P 10 42 48.7 +1.2
DUG pmax pmax
comp=Z,8.0nm,1.0s
DUG **Dugway** 73.62 50 *e*P P 10 42 48.6 +1.2
comp=Z,8.1nm,1.0s
DUG **Dugway** 73.62 50 ⇑P P 10 42 48.0 +0.5
baz=73,SNR=10
FURC **Furnace Creek,** 73.64 56 ⇑P P 10 42 48.1 +0.7
baz=74,SNR=8.5
J19A **Crowheart** 73.66 46 ⇑P P 10 42 48.2 +0.5
baz=73,SNR=11
I20A **Worland** 73.69 45 ⇓P P 10 42 48.5 +0.7
baz=74,SNR=7.2
PDAR **Pinedale Array** 73.73 47 P P 10 42 48.4 +0.2
PDAR **Pinedale Array** 73.73 47 P P 10 42 48.4 +0.2
comp=Z,5.5nm,0.8s,baz=280,slow=2.8,SNR=34
PDAR LR LR 11 13 26.8
comp=Z,64nm,21.8s,baz=129,slow=34
G22A **Birney** 73.77 43 ⇓P P 10 42 48.2 -0.1
baz=74
H21A **Big Horn, Sher** 73.80 44 ⇑P P 10 42 48.6 +0.2
baz=74
E24A **Baker** 73.83 41 ⇓P P 10 42 48.7 +0.2
baz=74
F23A **Volborg** 73.87 42 ⇓P P 10 42 48.8 0.0
baz=74,SNR=14
EDW2 **Edwards Air Fo** 73.96 57 ⇑P P 10 42 49.8 +0.3
baz=74
M17A **Scullys Gap (B** 73.99 48 ⇑P P 10 42 49.6 -0.1
baz=74
L18A **Fontenelle, Gr** 74.03 48 ⇓P P 10 42 50.2 +0.2
baz=74,SNR=11
K19A **Absolon Red Bu** 74.07 46 ⇓P P 10 42 50.0 -0.1
baz=74
J20A **Shoshoni** 74.12 46 ⇓P P 10 42 50.7 +0.3
baz=74
I21A **Big Trails, Te** 74.22 45 ⇑P P 10 42 51.4 +0.4
baz=74,SNR=16
MUD **Monsted U'grnd** 74.24 335 *e*P P 10 42 50.5 -0.1
MUD pmax pmax
comp=Z,11nm,0.8s
MUD **Monsted U'grnd** 74.24 335 *i*P P 10 42 50.5 -0.1
comp=Z,11nm,0.8s
G23A **Biddle** 74.24 43 ⇓P P 10 42 51.3 +0.3
baz=74
F24A **Ekalaka** 74.27 42 ⇓P P 10 42 50.8 -0.3
baz=74,SNR=8.0
L19A **Farson** 74.28 47 ⇓P P 10 42 51.9 +0.5
baz=74
SHOC **Shoshone** 74.37 56 ⇓P P 10 42 52.4 +0.6
baz=74
GSC **Goldstone** 74.43 56 ⇑P P 10 42 52.0 -0.2
baz=74
K20A **Yellowstone Ra** 74.46 46 ⇑P P 10 42 52.2 -0.2
baz=74
J21A **Lysite** 74.46 45 ⇓P P 10 42 52.5 +0.1
baz=74
KWP **Kalwaria Pacla** 74.50 324 ⇓P P 10 42 53.1 +0.8
KWP **Kalwaria Pacla** 74.50 324 ⇓*i*P P 10 42 53.1 +0.8
KWP **Kalwaria Pacla** 74.50 324 *e*P P 10 42 52.8 +0.5
BFSC **Mount Baldy Ra** 74.59 58 ⇑P P 10 42 53.6 +0.4
baz=74
I22A **9 Mile Ranch,** 74.59 44 ⇓P P 10 42 52.9 -0.2
baz=74
G24A **Alzada** 74.65 42 ⇓P P 10 42 53.1 -0.2
baz=74
BUR08 **Bucovina Ar. S** 74.84 321 *e*P P 10 42 54.5 +0.1
BURAR **Bucovina Array** 74.85 321 ⇓*i*P P 10 42 54.6 +0.1
TUQ **Turquoise Moun** 74.89 56 ⇑P P 10 42 55.6 +0.6
baz=75
L20A **Wamsutter** 74.90 47 ⇑P P 10 42 55.1 +0.1
baz=75
TESR **Tescani** 74.97 320 ⇑*i*P P 10 42 55.3 +0.3
H24A **Dirks Ranch, A** 74.99 43 ⇑P P 10 42 55.0 -0.3
baz=75
ULM **Lac du Bonnet** 74.99 34 P P 10 42 54.4 -0.7
ULM **Lac du Bonnet** 74.99 34 P P 10 42 54.4 -0.7
comp=Z,2.7nm,0.4s,baz=316,slow=5.3,SNR=4.0
ULM LR LR 11 17 40.6
comp=Z,36nm,19.4s,baz=5.6,slow=37
HEC **Hector,Ludlow** 75.03 57 ⇑P P 10 42 56.6 +0.9
baz=75
K21A **Alcova** 75.06 46 ⇑P P 10 42 55.9 0.0
baz=75,SNR=6.2
MVU **Marysvale** 75.09 51 *e*P P 10 42 57.1 +0.9
comp=Z,2.0nm,0.8s
MSU **Marysvale** 75.11 51 *e*P P 10 42 58.0 +1.7
MSU pmax pmax
comp=Z,2.0nm,0.8s
MSU **Marysvale** 75.11 51 *e*P P 10 42 58.0 +1.7
comp=Z,2.2nm,0.8s
MDND **Maddock** 75.14 38 ⇑P P 10 42 56.4 +0.4
baz=75
CFR **Carcaliu** 75.19 318 ⇓P P 10 42 56.7 +0.4
CFR **Carcaliu** 75.19 318 ⇓*i*P P 10 42 56.7 +0.4
KOLS **Kolonicke sedl** 75.21 324 *e*P P 10 42 56.7 +0.3
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS **Kolonicke sedl** 75.21 324 *e*P P 10 42 56.7 +0.3
KOLS *e*PP PP 10 45 38.7 -6.1
MURC **Murrieta** 75.29 58 ⇓P P 10 42 57.8 +0.7
baz=75
STHS **Stebnicka Huta** 75.30 325 *e*P P 10 42 58.1 +1.2
STHS pmax pmax
comp=Z,12nm,0.7s
STHS **Stebnicka Huta** 75.30 325 *e*P P 10 42 58.1 +1.2
OJC **Ojcow** 75.30 326 ⇑*i*P P 10 42 57.1 +0.2
OJC **Ojcow** 75.30 326 *i*P P 10 42 57.1 +0.2
VRI **Vrincioaia** 75.39 319 ⇑P P 10 42 58.7 +1.2
VRI **Vrincioaia** 75.39 319 ⇑*i*P P 10 42 58.7 +1.2
Q16A **Castle Valley** 75.42 51 ⇓P P 10 42 58.2 +0.2
baz=75
K22A **Casper** 75.43 45 ⇑P P 10 42 57.8 -0.2
baz=75
PLOR **Plostina** 75.44 319 ⇓P P 10 42 58.5 +0.7
PLOR **Plostina** 75.44 319 ⇓*i*P P 10 42 58.5 +0.7
L21A **Rawlins** 75.46 46 ⇓P P 10 42 58.1 -0.2
baz=75,SNR=7.4
P18A **Preston Nutter** 75.47 50 ⇑P P 10 42 59.1 +0.6
baz=75,SNR=7.2
TIRR **Tirgusor** 75.57 317 ⇓P P 10 42 58.4 -0.1
TIRR **Tirgusor** 75.57 317 ⇓*i*P P 10 42 58.4 -0.1
CRVS **Cervenica-Dubn** 75.59 324 *e*P P 10 42 57.1 -1.5
CRVS pmax pmax
comp=Z,10.0nm,1.1s
CRVS **Cervenica-Dubn** 75.59 324 *e*P P 10 42 57.1 -1.5
CRVS *e*PP PP 10 45 41.5 -6.5
O19A **Miners Draw (B** 75.64 48 ⇑P P 10 42 59.2 -0.1
baz=75
SRU **San Rafael** 75.66 50 ⇑P P 10 42 59.8 +0.4
baz=76,SNR=12
RSSD **Black Hills** 75.69 43 *e*P P 10 42 58.5 -1.0
RSSD **Black Hills** 75.69 43 *e*P P 10 42 58.5 -1.0
comp=Z,4.1nm,0.8s
TRPA **Tarpa** 75.69 323 ⇓*i*P P 10 43 00.3 +1.2
NIE **Niedzica** 75.69 325 *e*P P 10 43 00.2 +1.0
NIE **Niedzica** 75.69 325 *e*P P 10 43 00.2 +1.0
M21A **Separation Pea** 75.71 47 ⇓P P 10 42 59.8 +0.1
baz=76,SNR=6.9
N20A **Spence Gulch,** 75.75 48 ⇓P P 10 43 00.5 +0.6
baz=76,SNR=11
PFO **Pinyon Flat Ob** 75.75 58 ⇑P P 10 43 00.2 +0.3
baz=76
K23A **Bowen Ranch, D** 75.83 45 ⇓P P 10 43 00.1 -0.2

baz=76
BSEG Bad Segeberg 75.94 333 *e*P P 10 43 00.4 0.0
comp=Z,32nm,0.9s
BSEG Bad Segeberg 75.94 333 *e*P P 10 43 00.4 0.0
ISR Istrita 76.02 319 ⇓P P 10 43 02.4 +1.2
ISR Istrita 76.02 319 ⇓*i*P P 10 43 02.3 +1.1
MLR Muntele Rosu 76.05 320 P P 10 43 01.3 -0.1
MLR Muntele Rosu 76.05 320 ⇑*i*P P 10 43 02.3 +0.9
MLR Muntele Rosu 76.05 320 P P 10 43 01.3 -0.1
comp=Z,0.7nm,0.4s,baz=159,slow=6.0,SNR=6.0
BR131 Keskin Array S 76.08 311 *e*P P 10 43 02.1 +0.5
comp=Z,6.3nm,0.8s
BRTR Keskin Array B 76.09 311 P P 10 43 02.2 +0.5
BRTR Keskin Array B 76.09 311 P P 10 43 02.2 +0.5
comp=Z,5.9nm,0.7s,baz=74,slow=3.5,SNR=29
BRTR LR LR 11 24 43.9
comp=Z,41nm,18.4s,baz=216,slow=42
P19A Cripple Cowboy 76.18 49 ⇑P P 10 43 02.6 +0.2
baz=76,SNR=14
IRM Iron Mountain 76.21 56 ⇓P P 10 43 02.5 +0.2
baz=76
N21A Black Mountain 76.21 47 ⇑P P 10 43 02.6 +0.1
baz=76,SNR=9.5
KSP Ksiaz 76.24 328 *e*P P 10 43 02.3 +0.1
KSP Ksiaz 76.24 328 *e*P P 10 43 02.6 +0.4
L23A Garrett 76.24 45 ⇑P P 10 43 02.1 -0.6
baz=76,SNR=6.0
O20A White River Ci 76.24 48 ⇑P P 10 43 02.5 -0.2
baz=76
M22A Cedar Creek Ra 76.26 46 ⇑P P 10 43 02.8 -0.1
baz=76
OKC Ostrava-Krasne 76.28 327 *e*P P 10 43 03.1 +0.6
OKC Ostrava-Krasne 76.28 327 *e*P P 10 43 03.1 +0.6
BC3 Big Chuckawall 76.35 57 ⇑P P 10 43 03.6 +0.3
baz=76
W13A Hualapai Mount 76.36 55 ⇑P P 10 43 03.4 -0.1
baz=76
U15A North Rim 76.44 53 ⇓P P 10 43 04.3 +0.4
baz=76,SNR=8.8
ANTO Ankara 76.46 312 *e*P P 10 43 04.8 +1.0
ANTO pmax pmax
comp=Z,10.0nm,0.6s
ANTO Ankara 76.46 312 *e*P P 10 43 04.8 +1.0
comp=Z,9.9nm,0.6s
VOIR 76.52 320 ⇓P P 10 43 04.8 +0.8
VOIR 76.52 320 ⇓*i*P P 10 43 04.8 +0.8
MORC Moravsky Berou 76.58 327 ⇓P P 10 43 04.7 +0.5
MORC Moravsky Berou 76.58 327 *e*P P 10 43 03.9 -0.3
comp=Z,21nm,0.9s
MORC Moravsky Berou 76.58 327 ⇓*i*P P 10 43 04.7 +0.5
P20A De Beque 76.60 49 ⇓P P 10 43 04.8 +0.1
baz=76
DRGR 76.61 322 ⇑P P 10 43 05.0 +0.5
DRGR 76.61 322 ⇑*i*P P 10 43 05.0 +0.5
UPC Upice 76.62 328 *e*P P 10 43 04.8 +0.4
UPC Upice 76.62 328 *e*P P 10 43 04.8 +0.4
M23A Laramie 76.69 46 ⇓P P 10 43 05.0 -0.2
baz=76,SNR=7.0
PDMCI Parker Dam,Lak 76.74 56 ⇑P P 10 43 05.9 +0.5
baz=77
N22A Wattenberg Ran 76.76 47 ⇓P P 10 43 05.5 -0.2
baz=76
ARR Arges 76.77 320 ⇑*i*P P 10 43 06.7 +1.3
K25A Mack Ranch, Ha 76.85 44 ⇑P P 10 43 05.7 -0.3
baz=77
Y12C Blythe 76.87 56 ⇓P P 10 43 06.4 +0.3
baz=77
S18A Hurst Farm, Bl 76.93 51 ⇓P P 10 43 06.8 +0.1
baz=77,SNR=9.5
PHWY Pilot Hill 76.95 46 *e*P P 10 43 07.3 +0.6
comp=Z,6.6nm,1.3s
N23A Red Feather La 76.97 46 ⇓P P 10 43 07.7 +0.8
baz=77,SNR=5.2
PSZ Piszkesteto 77.02 324 *e*P P 10 43 07.8 +1.0
PSZ pmax pmax
comp=Z,22nm,1.1s
PSZ Piszkesteto 77.02 324 *e*P P 10 43 07.8 +1.0
comp=Z,22nm,1.1s
PSZ Piszkesteto 77.02 324 ⇑*i*P P 10 43 07.7 +1.0
VYHS Vyhne 77.03 325 *e*P P 10 43 06.9 +0.2
VYHS pmax pmax
comp=Z,5.0nm,1.0s
VYHS Vyhne 77.03 325 *e*P P 10 43 06.9 +0.2
P21A Newcastle 77.11 48 ⇓P P 10 43 08.0 +0.4
baz=77,SNR=9.6
BRG Berggiesshubel 77.13 329 *e*P P 10 43 06.9 -0.3
comp=Z,7.3nm,0.8s
BRG Berggiesshubel 77.13 329 *e*P P 10 43 06.9 -0.3
comp=Z,7.0nm,0.9s
BRG Berggiesshubel 77.13 329 *e*P P 10 43 06.9 -0.3
BRG pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 77.13 330 *e*P P 10 43 06.7 -0.5
comp=Z,23nm,1.0s
CLL Collm 77.13 330 *i* P P 10 43 06.7 -0.5
CLL pmax pmax
comp=Z,23nm,1.0s
CLL Collm 77.13 330 *i* P P 10 43 06.7 -0.5
comp=Z,23nm,1.0s
CLL *es*P **sP 10 43 31.0 +0.3**
CLL LmV 11 18 00.0
comp=Z,100nm,21.9s
K26A Motz Farm, Whi 77.14 43 ⇓P P 10 43 07.5 0.0
baz=77
GLA Glamis 77.14 57 ⇓P P 10 43 07.7 0.0
baz=77
O22A Kremmling 77.16 47 ⇑P P 10 43 07.7 -0.3
baz=77
M24A Cheyenne 77.17 45 ⇑P P 10 43 08.1 +0.2
baz=77,SNR=8.2
NRDL Niedersach Rie 77.20 332 *e*P P 10 43 07.2 -0.3
comp=Z,11nm,1.0s
VRAC Vranov 77.33 327 P P 10 43 08.6 +0.2
VRAC Vranov 77.33 327 ⇓*i*P P 10 43 09.0 +0.6
VRAC Vranov 77.33 327 P P 10 43 08.6 +0.2
comp=Z,14nm,0.9s,baz=41,slow=6.8,SNR=12
P22A Eagle 77.44 48 ⇓P P 10 43 10.1 +0.6
baz=77,SNR=8.6
PV01 Paradox Valley 77.44 50 *e*P P 10 43 09.2 -0.3
comp=Z,159nm,0.6s
O23A Lake Granby, G 77.47 47 ⇓P P 10 43 09.7 0.0
baz=77
R20A Redvale 77.51 50 ⇓P P 10 43 10.3 +0.4
baz=77,SNR=7.0
Q21A Lamborn Mesa, 77.52 49 ⇑P P 10 43 10.2 +0.3
baz=77
N24A Carr 77.59 46 ⇑P P 10 43 10.5 +0.3
baz=77
WUAZ Wupatki 77.60 53 *e*P P 10 43 11.3 +1.0
comp=Z,4.5nm,0.8s
WUAZ Wupatki 77.60 53 ⇑P P 10 43 11.0 +0.6
baz=77,SNR=5.5
PRU Pruhonice 77.61 329 *e*P P 10 43 10.5 +0.6
PRU Pruhonice 77.61 329 *e*P P 10 43 10.5 +0.6
SMCO Snowmass 77.61 48 *e*P P 10 43 11.5 +0.8
comp=Z,2.9nm,0.8s
K27A Flueckinger Fa 77.62 43 ⇑P P 10 43 10.2 -0.1
baz=77
Y14A Wickenburg 77.68 55 ⇓P P 10 43 10.9 +0.2
baz=78
S20A Disappointment 77.77 50 ⇑P P 10 43 11.5 +0.1
baz=78,SNR=5.5
TREC Trest 77.78 328 *e*P P 10 43 11.7 +0.7
TREC Trest 77.78 328 *e*P P 10 43 11.7 +0.7
R21A Cimarron 77.86 49 ⇑P P 10 43 11.8 0.0
baz=78
Q22A Crested Butte, 77.87 48 ⇓P P 10 43 12.4 +0.4
baz=78,SNR=6.7
ISCO Idaho Springs 77.92 47 *e*P P 10 43 13.2 +0.9
ISCO pmax pmax
comp=Z,6.0nm,1.2s
ISCO Idaho Springs 77.92 47 *e*P P 10 43 13.2 +0.9
comp=Z,6.4nm,1.2s
ISCO Idaho Springs 77.92 47 ⇓P P 10 43 12.3 0.0
baz=78
BRSD Miller 77.96 40 ⇑P P 10 43 11.9 -0.1
baz=78
ZST Bratislava 77.99 326 *e*P P 10 43 11.8 -0.3
ZST pmax pmax
comp=Z,7.0nm,1.3s
ZST Bratislava 77.99 326 *e*P P 10 43 11.8 -0.3
113A Mohawk Valley, 78.00 57 ⇓P P 10 43 13.0 +0.6
baz=78
BZS Buzias 78.00 322 ⇑P P 10 43 12.4 +0.2
BZS Buzias 78.00 322 ⇑*i*P P 10 43 12.4 +0.2
M26A McRoberts Ranc 78.05 44 ⇓P P 10 43 12.8 0.0
baz=78
P23A Jefferson 78.10 47 ⇓P P 10 43 13.7 +0.4
baz=78
MVCO Mesa Verde 78.12 50 *e*P P 10 43 13.8 +0.4
comp=Z,9.9nm,1.4s
MVCO Mesa Verde 78.12 50 ⇑P P 10 43 13.5 +0.1
baz=78
MOX Moxa 78.18 330 *e*P P 10 43 12.8 -0.3
comp=Z,8.0nm,0.8s
MOX *e*L L 11 19 36.1
comp=Z,168nm,18.2s
MOX Moxa 78.18 330 *e*P P 10 43 12.8 -0.3
MOX pmax pmax
comp=Z,8.0nm,0.8s
MOX MLR MLR
comp=Z,200nm,18.2s
S21A Coal Bank Pass 78.21 50 ⇓P P 10 43 13.9 0.0
baz=78
X16A Lo Mia Camp, P 78.31 54 ⇑P P 10 43 14.6 +0.3
baz=78,SNR=6.9
R22A Saguache, Gunn 78.40 49 ⇓P P 10 43 15.3 +0.4
baz=78,SNR=5.5
P24A Kohler Place, 78.51 47 ⇓P P 10 43 15.9 +0.5
baz=78
KHC Kasperske Hory 78.67 328 *e*P P 10 43 16.5 +0.6
KHC pmax pmax
comp=Z,14nm,0.8s
KHC Kasperske Hory 78.67 328 *e*P P 10 43 16.5 +0.6
comp=Z,14nm,0.8s
KHC Kasperske Hory 78.67 328 *e*P P 10 43 16.0 +0.1
ROTZ Rotzenmuhle 78.68 330 *e*P P 10 43 16.1 +0.2
comp=Z,12nm,1.0s
S22A 4UR Ranch, Cre 78.70 49 ⇑P P 10 43 17.1 +0.5
baz=78
CONA Conrad Observa 78.72 327 ⇑*i*P P 10 43 16.9 +0.7
comp=Z,16nm,1.3s
Q24A Divide 78.77 47 ⇓P P 10 43 17.1 +0.1
baz=78
N27A Anderson Farm, 78.84 44 ⇓P P 10 43 17.4 +0.3
baz=79
O26A Horse Wrangler 78.84 45 ⇓P P 10 43 17.0 -0.1
baz=79
GEC2 GERESS Array S 78.85 328 *e*P P 10 43 16.6 -0.3
comp=Z,8.0nm,1.1s
GEC2 GERESS Array S 78.85 328 *e*P P 10 43 16.6 -0.3
GEC2 pmax pmax
comp=Z,8.0nm,1.1s
GERES GERESS Array B 78.85 328 P P 10 43 17.2 +0.2
GERES GERESS Array B 78.85 328 P P 10 43 17.2 +0.2
comp=Z,3.9nm,0.7s,baz=34,slow=5.0,SNR=25
GERES LR LR 11 18 03.0
comp=Z,105nm,21.0s,baz=206,slow=36
PKSM Moragy 78.88 324 ⇓P P 10 43 16.9 -0.1
PKSM Moragy 78.88 324 ⇓*i*P P 10 43 16.9 -0.1
P25A Willow Gulch B 78.91 46 ⇓P P 10 43 17.6 0.0
baz=79,SNR=5.3
WET Wettzell 78.93 329 *e*P P 10 43 17.5 +0.2
comp=Z,14nm,0.9s
WET Wettzell 78.93 329 *e*P P 10 43 17.5 +0.2
WET pmax pmax
comp=Z,14nm,0.9s
OGNE Ogallala 79.00 44 ⇓P P 10 43 17.9 0.0
baz=79
BUG Bochum--Univer 79.05 333 *e*P P 10 43 17.3 -0.5
comp=Z,22nm,1.1s
GRF Grafenberg Arr 79.11 330 *e*P P 10 43 18.4 +0.2
comp=Z,26nm,0.9s
GRF *e*L L 11 21 21.2
comp=Z,118nm,18.4s
GRF Grafenberg Arr 79.11 330 *e*P P 10 43 18.4 +0.2
GRF pmax pmax
comp=Z,26nm,0.9s
GRF MLR MLR
comp=Z,100nm,18.4s
GRFO Grafenberg 79.11 330 *e*P P 10 43 19.0 +0.8
GRFO pmax pmax
comp=Z,17nm,1.0s
GRFO Grafenberg 79.11 330 *e*P P 10 43 19.0 +0.8
comp=Z,17nm,1.0s
V20A Brimhall 79.12 51 ⇓P P 10 43 18.3 -0.6
baz=79
X18A Snowflake 79.13 53 ⇓P P 10 43 19.1 +0.2
baz=79
U21A Nageezi 79.15 50 ⇑P P 10 43 19.1 +0.1
baz=79
T22A Edith 79.17 50 ⇓P P 10 43 19.6 +0.5
baz=79,SNR=6.2
Q25A Bedland, Calha 79.30 47 ⇓P P 10 43 19.4 -0.3
baz=79
R24A Sanders Place, 79.31 48 ⇓P P 10 43 19.9 +0.1
baz=79,SNR=10
ASF Jabal al Asfar 79.32 304 P P 10 43 20.4 +0.6
ASF Jabal al Asfar 79.32 304 P P 10 43 20.4 +0.6
comp=Z,3.4nm,0.8s,baz=53,slow=5.1,SNR=4.7
P26A Davis Ranch, A 79.32 46 ⇑P P 10 43 19.8 0.0
baz=79
O27A Beecher Island 79.32 45 ⇓P P 10 43 19.5 -0.2
baz=79
ARSA Arzberg 79.39 326 ⇑*i*P P 10 43 20.3 +0.4
comp=Z,6.9nm,0.8s
SDCO Great Sand Dun 79.44 48 *e*P P 10 43 21.4 +0.7
comp=Z,2.2nm,1.1s
VTS Vitosha 79.52 319 ⇑P P 10 43 21.2 +0.4
VTS Vitosha 79.52 319 ⇑*i*P P 10 43 21.2 +0.4
W20A Ramah 79.57 52 ⇓P P 10 43 21.5 +0.2
baz=79
V21A Milan 79.60 51 ⇓P P 10 43 21.5 0.0
baz=79
ECSD EROS Data Cent 79.61 39 *e*P P 10 43 21.1 0.0
comp=Z,15nm,1.1s
T23A Casias Ranch, 79.64 49 ⇑P P 10 43 20.9 -0.8
baz=79
U22A Llaves 79.65 50 ⇓P P 10 43 22.1 +0.4
baz=79,SNR=5.7
MMAI Mount Meron Ar 79.66 305 P P 10 43 22.8 +1.2
MMAI Mount Meron Ar 79.66 305 P P 10 43 22.8 +1.2
comp=Z,9.1nm,0.7s,baz=40,slow=8.0,SNR=10
TNS Taunus Mts 79.67 332 *e*P P 10 43 21.0 -0.3
comp=Z,11nm,1.1s
TNS Taunus Mts 79.67 332 *e*P P 10 43 21.0 -0.3
TNS pmax pmax
comp=Z,11nm,1.1s
S24A Houchin Ranch, 79.68 48 ⇓P P 10 43 22.2 +0.3
baz=80
Q26A Hugo 79.68 46 ⇑P P 10 43 22.2 +0.4
baz=80,SNR=5.6
P27A Ficken Ranch, 79.73 45 ⇑P P 10 43 22.0 +0.1
baz=80
R25A Fountain Ranch 79.83 47 ⇓P P 10 43 22.5 -0.1
baz=80
V22A San Miguel Ran 79.94 50 ⇓P P 10 43 23.2 -0.1
baz=80
X20A Quemado 79.98 52 ⇓P P 10 43 24.1 +0.5
baz=80,SNR=8.0
SOKA Soboth 80.05 326 ⇓*i*P P 10 43 23.5 0.0
comp=Z,28nm,1.1s
U23A El Rito 80.06 50 ⇑P P 10 43 23.8 -0.1
baz=80,SNR=12
TOD Tromm 80.06 331 *e*P P 10 43 23.3 -0.1
TOD Tromm 80.06 331 *e*P P 10 43 23.3 -0.1
S25A Robets Cordova 80.09 48 ⇓P P 10 43 23.8 -0.2
baz=80
RJOB Jochberg 80.10 328 *e*P P 10 43 23.9 +0.2
comp=Z,19nm,0.9s
P28A Saint Francis 80.15 45 ⇓P P 10 43 23.9 -0.3
baz=80
T24A Torres, Weston 80.17 49 ⇑P P 10 43 24.7 +0.2
baz=80
R26A Arlington 80.17 47 ⇓P P 10 43 24.1 -0.3
baz=80,SNR=8.7
SPMN St. Paul 80.19 36 ⇓P P 10 43 23.6 -0.5
baz=80
SCHQ Schefferville 80.38 17 P P 10 43 25.0 0.0
SCHQ Schefferville 80.38 17 P P 10 43 25.0 0.0
comp=Z,6.0nm,0.7s,baz=356,slow=6.0,SNR=7.2
OBKA Obir 80.39 326 ⇑*i*P P 10 43 25.0 -0.4
comp=Z,12nm,0.7s
KBA Koelnbreinsper 80.42 327 ⇑*i*P P 10 43 25.7 +0.1
comp=Z,23nm,1.1s,SNR=10
X21A Alamocita Cree 80.47 52 ⇑P P 10 43 26.2 0.0
baz=80,SNR=6.3
V23A Ortiz Mt. (NFS 80.48 50 ⇑P P 10 43 26.3 +0.1
baz=80
T25A Trinidad 80.48 48 ⇑P P 10 43 26.0 -0.1
baz=80,SNR=6.7
Q28A Sharon Springs 80.48 45 ⇓P P 10 43 25.7 -0.3
baz=80
Y20A Horse Springs, 80.49 53 ⇓P P 10 43 26.6 +0.3
baz=80,SNR=7.7
R27A Eads 80.53 46 ⇑P P 10 43 26.3 0.0
baz=80
BGNE Belgrade 80.63 42 ⇑P P 10 43 26.5 -0.1
baz=80
S26A Kim 80.65 47 ⇓P P 10 43 27.2 +0.2
baz=80
MYKA Terra Mystica 80.66 327 ⇑*i*P P 10 43 26.4 -0.3
comp=Z,19nm,1.6s
Y21A Point of Rocks 80.84 52 ⇑P P 10 43 28.3 +0.2
baz=81
ANMO Albuquerque 80.89 51 *e*P P 10 43 29.5 +1.1
comp=Z,2.6nm,1.0s
T26A Comanche Natio 80.91 48 ⇓P P 10 43 28.3 -0.1
baz=81,SNR=6.0
WATA Walderalm 80.91 329 ⇑*i*P P 10 43 28.1 -0.1
comp=Z,16nm,1.0s
W23A Werner Place, 80.91 51 ⇑P P 10 43 28.4 -0.1
baz=81
Z20A Nine Sixteen R 80.92 53 ⇓P P 10 43 29.3 +0.8
baz=81,SNR=9.8
LANF Langenberg 80.94 332 *e*P P 10 43 28.1 0.0
LANF Langenberg 80.94 332 *e*P P 10 43 28.1 0.0
LANF Langenberg 80.94 332 *e*P P 10 43 28.1 0.0
WTTA Wattenberg 80.94 328 ⇑*i*P P 10 43 28.6 +0.2
comp=Z,14nm,0.7s
GIVF Givet 81.00 334 *e*P P 10 43 27.9 -0.5
GIVF Givet 81.00 334 *e*P P 10 43 27.9 -0.5
GIVF Givet 81.00 334 *e*P P 10 43 27.9 -0.5
V24A Rampart Ranch, 81.01 50 ⇑P P 10 43 29.8 +0.7
baz=81,SNR=6.4
U25A Circle Dot Ran 81.01 49 ⇓P P 10 43 28.8 -0.2
baz=81
R28A Tribune 81.02 46 ⇑P P 10 43 28.4 -0.5
baz=81
MOTA Moosalm 81.08 329 ⇓*i*P P 10 43 29.2 +0.1
comp=Z,24nm,0.9s
RETA Reute 81.10 329 ⇑*i*P P 10 43 29.4 +0.3
comp=Z,24nm,1.1s
BAIF Baives 81.24 334 *e*P P 10 43 29.2 -0.5
comp=Z,33nm,1.2s
BAIF Baives 81.24 334 *e*P P 10 43 29.2 -0.5
BAIF pmax pmax
comp=Z,33nm,1.2s
BAIF Baives 81.24 334 *e*P P 10 43 29.2 -0.5
comp=Z,33nm,1.2s
120A U Bar Ranch, L 81.29 54 ⇑P P 10 43 30.9 +0.4
baz=81
V25A Rancho No Teng 81.30 49 ⇑P P 10 43 30.2 -0.3
baz=81
BFO Black Forest 81.30 331 *e*P P 10 43 29.7 -0.4
comp=Z,30nm,1.6s
BFO Black Forest 81.30 331 *i* P P 10 43 30.7 +0.6
W24A Lazy 6 Ranch, 81.30 50 ⇓P P 10 43 31.3 +0.8
baz=81,SNR=12
X23A Hourglass Bar 81.30 51 ⇓P P 10 43 30.6 0.0
baz=81
R29A Marienthal 81.32 45 ⇑P P 10 43 30.0 -0.4
baz=81
SPAK Spaichingen-Ko 81.33 331 *e*P P 10 43 30.2 -0.1
Z21A St. Cloud Mine 81.33 53 ⇑P P 10 43 31.4 +0.7
baz=81,SNR=8.2
U26A Atchley Ranch, 81.39 48 ⇑P P 10 43 30.9 -0.1
baz=81
FETA Feichten 81.50 329 ⇑*i*P P 10 43 31.4 +0.1
comp=Z,16nm,1.0s
S28A Manter 81.53 46 ⇑P P 10 43 30.6 -1.0
baz=81
DAVA Damuels 81.60 329 ⇓*i*P P 10 43 31.8 0.0
comp=Z,26nm,0.9s
CDF Champ du Feu 81.61 332 *e*P P 10 43 31.6 -0.2
comp=Z,22nm,1.0s
CDF Champ du Feu 81.61 332 *e*P P 10 43 31.6 -0.2
CDF pmax pmax
comp=Z,22nm,1.0s
CDF Champ du Feu 81.61 332 *e*P P 10 43 31.6 -0.2
comp=Z,22nm,1.0s
319A Douglas 81.72 55 ⇑P P 10 43 32.2 -0.5
baz=82
Z22A Elephant Butte 81.79 52 ⇑P P 10 43 32.7 -0.4
baz=82
V26A Tequesquite Ra 81.80 49 ⇑P P 10 43 32.8 -0.3
baz=82
FELD Feldberg im Sc 81.80 331 *e*P P 10 43 32.4 -0.5
FELD Feldberg im Sc 81.80 331 *e*P P 10 43 32.4 -0.5
220A Playas Peak, P 81.81 54 ⇑P P 10 43 33.4 +0.2
baz=82
121A Cookes Peak, D 81.81 53 ⇓P P 10 43 33.9 +0.6
baz=82,SNR=7.5
ECH Echery 81.82 332 *e*P P 10 43 32.6 -0.2
ECH Echery 81.82 332 *e*P P 10 43 32.6 -0.2
ECH Echery 81.82 332 *e*P P 10 43 32.6 -0.2
W25A X Bar L Ranch, 81.83 49 ⇑P P 10 43 33.4 +0.1
baz=82,SNR=8.5
Y23A Lovelace Mesa, 81.84 51 ⇑P P 10 43 33.4 -0.1
baz=82,SNR=9.0
R30A Dighton 81.88 45 ⇓P P 10 43 32.7 -0.6
baz=82
DAVOX Davos/Dischmat 82.02 329 P P 10 43 33.9 -0.3
DAVOX Davos/Dischmat 82.02 329 P P 10 43 33.8 -0.3
comp=Z,12nm,1.0s,baz=79,slow=5.2,SNR=9.6
PAGF Fort de Pagny 82.03 333 *e*P P 10 43 34.0 +0.1
comp=Z,12nm,0.8s
PAGF Fort de Pagny 82.03 333 *e*P P 10 43 34.0 +0.1
comp=Z,12nm,0.8s
320A Kipp Ranch, An 82.20 55 ⇑P P 10 43 35.2 -0.1
baz=82
Y24A Capitan 82.20 51 ⇓P P 10 43 35.2 -0.1
baz=82
Z23A Rita Site, Whi 82.21 52 ⇓P P 10 43 35.2 -0.1
baz=82
X25A Clemmons Ranch 82.22 50 ⇑P P 10 43 35.4 +0.1
baz=82
THEF They Montfort 82.22 332 *e*P P 10 43 34.5 -0.4
THEF They Montfort 82.22 332 *e*P P 10 43 34.5 -0.4
THEF They Montfort 82.22 332 *e*P P 10 43 34.5 -0.4
EIL Elat 82.25 303 P P 10 43 36.2 +0.8
EIL Elat 82.25 303 P P 10 43 36.2 +0.8
comp=Z,9.1nm,0.8s,baz=24,slow=6.0,SNR=6.5
S30A Montezuma 82.26 45 ⇑P P 10 43 35.2 -0.1
baz=82
HINF Hinteralfeld 82.27 332 *e*P P 10 43 34.6 -0.6
comp=Z,6.8nm,0.7s
HINF Hinteralfeld 82.27 332 *e*P P 10 43 34.6 -0.6
HINF pmax pmax
comp=Z,7.0nm,0.7s
HINF Hinteralfeld 82.27 332 *e*P P 10 43 34.6 -0.6
comp=Z,6.8nm,0.7s
HAU Haudompre 82.28 332 *e*P P 10 43 34.8 -0.4
comp=Z,14nm,0.8s
HAU *e*R
comp=Z,158nm,21.8s
HAU Haudompre 82.28 332 *e*P P 10 43 34.8 -0.4
HAU pmax pmax
comp=Z,14nm,0.8s
HAU Haudompre 82.28 332 *e*P P 10 43 34.8 -0.4
comp=Z,14nm,0.8s
MEZF Maizieres J'vi 82.31 333 *e*P P 10 43 35.4 +0.1
comp=Z,25nm,0.9s
MEZF Maizieres J'vi 82.31 333 *e*P P 10 43 35.4 +0.1
comp=Z,25nm,0.9s
BBS Basel-Blauen 82.33 331 *e*P P 10 43 35.4 -0.1
BBS Basel-Blauen 82.33 331 *e*P P 10 43 35.4 -0.1
TUE Stuetta 82.48 329 *e*P P 10 43 36.8 +0.3
comp=Z,9.2nm,0.8s
SFTF Sexfontaines 82.56 333 *e*P P 10 43 36.4 -0.3
comp=Z,37nm,1.0s
SFTF Sexfontaines 82.56 333 *e*P P 10 43 36.4 -0.3
comp=Z,37nm,1.0s
Y25A Mesa, Roswell 82.64 51 ⇑P P 10 43 37.1 -0.4
baz=82
Z24A Sheeppen Canyo 82.67 51 ⇓P P 10 43 37.7 -0.1
baz=82
X26A CR and CF Fran 82.69 50 ⇓P P 10 43 37.7 0.0
baz=82
W27A Bowe Ranch, En 82.73 49 ⇓P P 10 43 38.2 +0.2
baz=82
X27A F and S Farms, 83.02 49 ⇓P P 10 43 39.6 +0.1
baz=83
124A Stringfield Ra 83.07 52 ⇑P P 10 43 39.8 -0.1
baz=83
T31A Randall Ranch, 83.08 45 ⇓P P 10 43 39.4 -0.2
baz=83
Z25A Roswell 83.08 51 ⇑P P 10 43 40.2 +0.4
baz=83
Y26A Elida 83.13 50 ⇑P P 10 43 40.4 +0.4

	baz=83									
KSU1	**Kansas State U**	83.14	42	e	P		P	10 43 39.5	-0.4	
	comp=Z,5.1nm,0.6s									
224A	**Cornudas Mount**	83.48	52	⇓	P		P	10 43 42.2	+0.3	
	baz=83,SNR=5.6									
Z26A	**Caprock**	83.52	51	⇑	P		P	10 43 42.2	+0.2	
	baz=83,SNR=15									
U31A	**Nine Bar Ranch**	83.53	46	⇑	P		P	10 43 42.5	+0.5	
	baz=83									
Y27A	**Causey**	83.54	50	⇑	P		P	10 43 42.2	+0.1	
	baz=83									
CABF	**La Chapelle**	83.57	331	e	P		P	10 43 41.5	-0.5	
	comp=Z,9.9nm,0.9s									
CABF	**La Chapelle**	83.57	331	e	P		P	10 43 41.5	-0.5	
CABF					pmax	pmax				
	comp=Z,10.0nm,0.9s									
CABF	**La Chapelle**	83.57	331	e	P		P	10 43 41.5	-0.5	
	comp=Z,9.9nm,0.9s									
125A	**Gardner Draw,**	83.57	51	⇓	P		P	10 43 43.0	+0.7	
	baz=83									
MSTX	**Muleshoe**	83.70	49	⇑	P		P	10 43 42.9	0.0	
	baz=84									
LOR	**Lormes**	83.78	333	e	P		P	10 43 42.6	-0.4	
	comp=Z,54nm,0.9s									
LOR					eR					
	comp=Z,146nm,21.8s									
LOR	**Lormes**	83.78	333	e	P		P	10 43 42.6	-0.4	
	comp=Z,54nm,0.9s									
MNTX	**Cornudas Mount**	83.83	52	e	P		P	10 43 43.7	+0.2	
	comp=Z,3.2nm,1.1s									
FLN	**La Foliniere**	83.85	336	e	P		P	10 43 42.8	-0.4	
	comp=Z,26nm,0.9s									
FLN					eR					
	comp=Z,123nm,23.0s									
FLN	**La Foliniere**	83.85	336	e	P		P	10 43 42.8	-0.4	
FLN					pmax	pmax				
	comp=Z,26nm,0.9s									
FLN	**La Foliniere**	83.85	336	e	P		P	10 43 42.8	-0.4	
	comp=Z,26nm,0.9s									
225A	**Deer Hill, Car**	83.87	52	⇑	P		P	10 43 43.9	0.0	
	baz=84									
LDF	**La Druitiere**	83.89	336	e	P		P	10 43 43.0	-0.5	
LDF	**La Druitiere**	83.89	336	e	P		P	10 43 43.0	-0.5	
LDF	**La Druitiere**	83.89	336	e	P		P	10 43 43.0	-0.5	
Z27A	**Tatum**	83.92	50	⇓	P		P	10 43 44.4	+0.3	
	baz=84,SNR=16									
126A	**Clayton Basin,**	83.95	51	⇑	P		P	10 43 44.3	+0.1	
	baz=84									
324A	**Moseley Ranch,**	83.96	53	⇓	P		P	10 43 44.6	+0.3	
	baz=84									
V31A	**Spring Creek L**	83.98	46	⇑	P		P	10 43 44.4	+0.2	
	baz=84									
Y28A	**McKinney Farm,**	84.04	49	⇓	P		P	10 43 44.7	0.0	
	baz=84									
GDL2	**Guadalupe Moun**	84.07	52	e	P		P	10 43 45.5	+0.6	
	comp=Z,3.6nm,0.7s									
SSF	**Saint Saulge**	84.08	333	e	P		P	10 43 44.2	-0.3	
	comp=Z,29nm,0.9s									
SSF	**Saint Saulge**	84.08	333	e	P		P	10 43 44.2	-0.3	
SSF					pmax	pmax				
	comp=Z,29nm,0.9s									
SSF	**Saint Saulge**	84.08	333	e	P		P	10 43 44.2	-0.3	
	comp=Z,29nm,0.9s									
IDI	**Anoyia**	84.10	313	e	P		P	10 43 43.9	-1.0	
	comp=Z,18nm,0.8s									
HYF	**Humbligny**	84.18	334	e	P		P	10 43 45.3	+0.3	
HYF	**Humbligny**	84.18	334	e	P		P	10 43 45.3	+0.3	
LPL	**La Plagne**	84.27	330	e	P		P	10 43 45.9	+0.2	
	comp=Z,32nm,1.0s									
LPL	**La Plagne**	84.27	330	e	P		P	10 43 45.9	+0.2	
LPL					pmax	pmax				
	comp=Z,32nm,1.0s									
LPL	**La Plagne**	84.27	330	e	P		P	10 43 45.9	+0.2	
	comp=Z,32nm,1.0s									
226B	**Tecolote Peak,**	84.27	51	⇑	P		P	10 43 46.2	+0.3	
	baz=84,SNR=7.3									
LPG	**La Plagne**	84.28	330	e	P		P	10 43 46.1	+0.2	
	comp=Z,25nm,0.8s									
LPG	**La Plagne**	84.28	330	e	P		P	10 43 46.1	+0.2	
LPG					pmax	pmax				
	comp=Z,25nm,0.8s									
LPG	**La Plagne**	84.28	330	e	P		P	10 43 46.1	+0.2	
	comp=Z,25nm,0.8s									
GRR	**Gorron**	84.29	336	e	P		P	10 43 45.4	-0.1	
	comp=Z,17nm,0.6s									
GRR	**Gorron**	84.29	336	e	P		P	10 43 45.4	-0.1	
GRR					pmax	pmax				
	comp=Z,17nm,0.6s									
GRR	**Gorron**	84.29	336	e	P		P	10 43 45.4	-0.1	
	comp=Z,17nm,0.6s									
325A	**Bean Ranch, Si**	84.31	52	⇑	P		P	10 43 46.0	-0.1	
	baz=84									
SMF	**Signal de Mont**	84.32	333	e	P		P	10 43 45.6	-0.1	
	comp=Z,46nm,1.0s									
SMF	**Signal de Mont**	84.32	333	e	P		P	10 43 45.6	-0.1	
SMF					pmax	pmax				
	comp=Z,46nm,1.0s									
SMF	**Signal de Mont**	84.32	333	e	P		P	10 43 45.6	-0.1	
	comp=Z,46nm,1.0s									
AVF	**Avril sur Loir**	84.36	333	e	P		P	10 43 45.9	0.0	
	comp=Z,49nm,0.7s									
AVF	**Avril sur Loir**	84.36	333	e	P		P	10 43 45.9	0.0	
AVF	**Avril sur Loir**	84.36	333	e	P		P	10 43 45.9	0.0	
	comp=Z,49nm,0.7s									
W31A	**Holland Ranch,**	84.36	47	⇓	P		P	10 43 46.4	+0.2	
	baz=84									
Y29A	**Porterfield Fa**	84.40	49	⇓	P		P	10 43 46.6	+0.1	
	baz=84									
Z28A	**Tucker Farm, M**	84.41	50	⇑	P		P	10 43 46.1	-0.5	
	baz=84									
BGF	**Bois d'Agland**	84.74	333	e	P		P	10 43 47.7	-0.1	
	comp=Z,16nm,0.9s									
BGF	**Bois d'Agland**	84.74	333	e	P		P	10 43 47.7	-0.1	
BGF					pmax	pmax				
	comp=Z,16nm,0.9s									
BGF	**Bois d'Agland**	84.74	333	e	P		P	10 43 47.7	-0.1	
	comp=Z,16nm,0.9s									
X31A	**McDonald Ranch**	84.76	47	⇓	P		P	10 43 47.9	-0.3	
	baz=84,SNR=7.3									
Y30A	**Stafford Cattl**	84.81	48	⇑	P		P	10 43 48.2	-0.3	
	baz=85									
Z29A	**Hungry Hill Ra**	84.82	49	⇓	P		P	10 43 48.6	0.0	
	baz=85,SNR=11									
128A	**Castleberry Fa**	84.85	50	⇓	P		P	10 43 48.7	-0.1	
	baz=85,SNR=5.7									
SGMF	**Saint Gilles**	84.91	337	e	P		P	10 43 48.8	+0.2	
SGMF	**Saint Gilles**	84.91	337	e	P		P	10 43 48.8	+0.2	
SGMF	**Saint Gilles**	84.91	337	e	P		P	10 43 48.8	+0.2	
MBDF	**Montbardon**	84.92	330	e	P		P	10 43 48.5	-0.5	
	comp=Z,19nm,0.7s									
MBDF	**Montbardon**	84.92	330	e	P		P	10 43 48.5	-0.5	
MBDF					pmax	pmax				
	comp=Z,19nm,0.7s									
MBDF	**Montbardon**	84.92	330	e	P		P	10 43 48.5	-0.5	
	comp=Z,19nm,0.7s									
326A	**Caldwell Ranch**	84.94	52	⇓	P		P	10 43 48.9	-0.3	
	baz=85,SNR=8.8									
ROSF	**Rostrenen**	85.04	338	e	P		P	10 43 49.5	+0.2	
ROSF	**Rostrenen**	85.04	338	e	P		P	10 43 49.5	+0.2	
ROSF	**Rostrenen**	85.04	338	e	P		P	10 43 49.5	+0.2	
CUC	**Castrocucco**	85.05	322	e	P		P	10 43 48.4	-1.1	
	comp=Z,5.1nm,0.9s									
ORIF	**Oris-en-Rattie**	85.09	331	e	P		P	10 43 49.8	+0.1	
	comp=Z,26nm,0.8s									
ORIF					eR					
	comp=Z,74nm,18.8s									
ORIF	**Oris-en-Rattie**	85.09	331	e	P		P	10 43 49.8	+0.1	
ORIF					pmax	pmax				
	comp=Z,26nm,0.8s									
ORIF	**Oris-en-Rattie**	85.09	331	e	P		P	10 43 49.8	+0.1	
	comp=Z,26nm,0.8s									
Y31A	**Rekieta Farm,**	85.10	48	⇑	P		P	10 43 49.6	-0.3	
	baz=85									
Z30A	**Sanderson Ranc**	85.12	49	⇓	P		P	10 43 49.7	-0.4	
	baz=85,SNR=5.2									
228A	**UT Block 9, Go**	85.16	50	⇓	P		P	10 43 50.2	-0.1	
	baz=85									
TCF	**Toulx Ste Croi**	85.19	333	e	P		P	10 43 50.2	+0.1	
	comp=Z,20nm,0.9s									
TCF	**Toulx Ste Croi**	85.19	333	e	P		P	10 43 50.2	+0.1	
TCF					pmax	pmax				
	comp=Z,20nm,0.9s									
TCF	**Toulx Ste Croi**	85.19	333	e	P		P	10 43 50.2	+0.1	
	comp=Z,20nm,0.9s									
SAOF	**Saorge**	85.26	329	e	P		P	10 43 49.6	-0.9	
SAOF	**Saorge**	85.26	329	e	P		P	10 43 49.6	-0.9	
SAOF	**Saorge**	85.26	329	e	P		P	10 43 49.6	-0.9	
AUTN	**L'Aution**	85.30	329	e	P		P	10 43 50.1	-0.9	
AUTN	**L'Aution**	85.30	329	e	P		P	10 43 50.1	-0.9	
AUTN	**L'Aution**	85.30	329	e	P		P	10 43 50.1	-0.9	
WMOK	**Wichita Mounta**	85.33	46	e	P		P	10 43 51.3	+0.3	
WMOK	**Wichita Mounta**	85.33	46	e	P		P	10 43 51.3	+0.3	
	comp=Z,2.6nm,0.9s									
TOUF	**Mont Tournerai**	85.35	329	e	P		P	10 43 51.5	+0.3	
TOUF	**Mont Tournerai**	85.35	329	e	P		P	10 43 51.5	+0.3	
TOUF	**Mont Tournerai**	85.35	329	e	P		P	10 43 51.5	+0.3	
426A	**McDonald Obser**	85.38	52	⇓	P		P	10 43 51.5	-0.1	
	baz=85									
QUIF	**Quistinic**	85.39	338	e	P		P	10 43 51.1	+0.1	
QUIF	**Quistinic**	85.39	338	e	P		P	10 43 51.1	+0.1	
QUIF	**Quistinic**	85.39	338	e	P		P	10 43 51.1	+0.1	
SBF	**Sospel**	85.41	329	e	P		P	10 43 50.6	-0.7	
	comp=Z,42nm,0.9s									
SBF	**Sospel**	85.41	329	e	P		P	10 43 50.6	-0.7	
SBF					pmax	pmax				
	comp=Z,42nm,0.9s									
SBF	**Sospel**	85.41	329	e	P		P	10 43 50.6	-0.7	
	comp=Z,42nm,0.9s									
Y32A	**R-V Farms, Ver**	85.52	47	⇓	P		P	10 43 52.1	+0.1	
	baz=85									
328A	**Wristen Ranch,**	85.57	51	⇑	P		P	10 43 52.8	+0.5	
	baz=85									
PMOR	**Pomariorio Ree**	85.58	115	e	T		T	12 17 41.1		
	comp=Z,18nm,0.2s									
VIVF	**Saint-Julien-l**	85.58	331	e	P		P	10 43 52.3	+0.2	
	comp=Z,36nm,0.9s									
VIVF	**Saint-Julien-l**	85.58	331	e	P		P	10 43 52.3	+0.2	
VIVF					pmax	pmax				
	comp=Z,36nm,0.9s									
VIVF	**Saint-Julien-l**	85.58	331	e	P		P	10 43 52.3	+0.2	
	comp=Z,36nm,0.9s									
427A	**Hayter Ranch,**	85.61	52	⇓	P		P	10 43 52.8	+0.2	
	baz=85,SNR=5.2									
Z31A	**Sharp Cattle R**	85.65	48	⇑	P		P	10 43 52.9	+0.2	
	baz=85									
MFF	**Saint Martin d**	85.67	335	e	P		P	10 43 52.8	+0.3	
	comp=Z,35nm,0.8s									
MFF	**Saint Martin d**	85.67	335	e	P		P	10 43 52.8	+0.3	
MFF					pmax	pmax				
	comp=Z,35nm,0.8s									
MFF	**Saint Martin d**	85.67	335	e	P		P	10 43 52.8	+0.3	
	comp=Z,35nm,0.8s									
CALN	**Calern**	85.71	329	e	P		P	10 43 52.0	-0.9	
CALN	**Calern**	85.71	329	e	P		P	10 43 52.0	-0.9	
CALN	**Calern**	85.71	329	e	P		P	10 43 52.0	-0.9	
229A	**Bryant Ranch,**	85.71	50	⇓	P		P	10 43 53.4	+0.3	
	baz=86									
526A	**Mary Lane Ranc**	85.78	53	⇑	P		P	10 43 54.2	+0.6	
	baz=86,SNR=5.5									
FRF	**La Foret Royal**	85.97	329	e	P		P	10 43 53.4	-0.6	
	comp=Z,20nm,0.9s									
FRF	**La Foret Royal**	85.97	329	e	P		P	10 43 53.4	-0.6	
FRF					pmax	pmax				
	comp=Z,20nm,0.9s									
FRF	**La Foret Royal**	85.97	329	e	P		P	10 43 53.4	-0.6	
	comp=Z,20nm,0.9s									
329A	**Wagon Wheel Ra**	85.97	50	⇑	P		P	10 43 54.7	+0.3	
	baz=86									
527A	**Woodward Ranch**	86.00	52	⇓	P		P	10 43 54.9	+0.3	
	baz=86									
TUL1	**Tulsa**	86.01	44	⇓	P		P	10 43 54.3	-0.1	
	baz=86									
Z32A	**Haskell**	86.03	48	⇑	P		P	10 43 54.6	+0.1	
	baz=86									
428A	**Kincaid Ranch,**	86.12	51	⇑	P		P	10 43 55.2	+0.1	
	baz=86,SNR=5.6									
626A	**Big Bend Ranch**	86.12	53	⇑	P		P	10 43 54.9	-0.3	
	baz=86									
230A	**Sterling City**	86.17	50	⇓	P		P	10 43 55.1	-0.2	
	baz=86,SNR=5.5									
LMR	**La Mourre**	86.21	329	e	P		P	10 43 54.8	-0.4	
	comp=Z,50nm,1.0s									
LMR	**La Mourre**	86.21	329	e	P		P	10 43 54.8	-0.4	
LMR					pmax	pmax				
	comp=Z,51nm,1.0s									
LMR	**La Mourre**	86.21	329	e	P		P	10 43 54.8	-0.4	
	comp=Z,50nm,1.0s									
PPT	**Papeete**	86.28	117		LR		LR	11 13 57.3		
	comp=Z,98nm,21.0s,baz=176,slow=30									
RJF	**Les Rejaudoux**	86.28	333	e	P		P	10 43 55.9	+0.4	
	comp=Z,14nm,0.8s									
RJF					eR					
	comp=Z,159nm,23.0s									
RJF	**Les Rejaudoux**	86.28	333	e	P		P	10 43 55.9	+0.4	
RJF					pmax	pmax				
	comp=Z,14nm,0.8s									
RJF	**Les Rejaudoux**	86.28	333	e	P		P	10 43 55.9	+0.4	
	comp=Z,14nm,0.8s									
PPT2	**Papeete2**	86.29	118	e	LR		LR	11 11 06.5		
	comp=Z,264nm,26.5s									
CEL	**Celeste**	86.39	321	e	P		P	10 43 55.3	-0.9	
	comp=Z,9.0nm,0.8s									
TIAR	**Tiarei**	86.42	117	e	T		T	12 19 01.0		
	comp=Z,5.1nm,0.2s									
CAF	**Calviac**	86.43	333	e	P		P	10 43 57.1	+0.8	
	comp=Z,52nm,0.8s									
CAF	**Calviac**	86.43	333	e	P		P	10 43 57.1	+0.8	
CAF					pmax	pmax				
	comp=Z,53nm,0.8s									
CAF	**Calviac**	86.43	333	e	P		P	10 43 57.1	+0.8	
	comp=Z,52nm,0.8s									
ABTX	**Abilene, Hawle**	86.45	48	⇓	P		P	10 43 56.7	+0.1	
	baz=86									
528A	**Cox Ranch, San**	86.48	52	⇓	P		P	10 43 57.2	+0.3	
	baz=86									
330A	**Mertzon**	86.49	50	⇑	P		P	10 43 56.7	-0.2	
	baz=86									
LASF	**Ste Croix**	86.55	331	e	P		P	10 43 56.1	-0.8	
LASF	**Ste Croix**	86.55	331	e	P		P	10 43 56.1	-0.8	
TXAR	**Lajitas Array**	86.56	53		P		P	10 43 57.9	+0.6	
TXAR	**Lajitas Array**	86.56	53		P		P	10 43 57.9	+0.6	
	comp=Z,3.0nm,0.8s,baz=296,slow=3.8,SNR=34									
SFIN	**Scholer Farm**	86.58	36	⇑	P		P	10 43 56.9	-0.2	
	baz=86									
231A	**Bronte**	86.59	49	⇑	P		P	10 43 57.2	-0.2	
	baz=86									
627A	**Terlingua Ranc**	86.64	53	⇑	P		P	10 43 57.5	-0.2	
	baz=86									
529A	**Stev Forest Ra**	86.83	52	⇓	P		P	10 43 58.7	+0.1	
	baz=87									
LFF	**La Frestale**	86.86	334	e	P		P	10 43 59.1	+0.8	
	comp=Z,56nm,1.0s									
LFF	**La Frestale**	86.86	334	e	P		P	10 43 59.1	+0.8	
LFF					pmax	pmax				
	comp=Z,56nm,1.0s									
LFF	**La Frestale**	86.86	334	e	P		P	10 43 59.1	+0.8	
	comp=Z,56nm,1.0s									
430A	**Baggett Ranch,**	86.92	50	⇓	P		P	10 43 58.9	0.0	
	baz=87									
232A	**Coleman**	87.00	49	⇑	P		P	10 43 59.2	-0.2	
	baz=87									
332A	**Millersview**	87.32	49	⇓	P		P	10 44 00.9	0.0	
	baz=87									
530A	**J-C Ranch, Com**	87.33	51	⇓	P		P	10 44 01.0	0.0	
	baz=87									
431A	**Sonora**	87.35	50	⇑	P		P	10 44 01.1	0.0	
	baz=87									
432A	**Menard**	87.67	50	⇑	P		P	10 44 02.0	-0.7	
	baz=88									
MTLF	**Montolieu**	87.77	332	e	P		P	10 44 02.4	-0.4	
	comp=Z,28nm,1.2s									
MTLF	**Montolieu**	87.77	332	e	P		P	10 44 02.4	-0.4	
MTLF					pmax	pmax				
	comp=Z,28nm,1.2s									
MTLF	**Montolieu**	87.77	332	e	P		P	10 44 02.4	-0.4	
	comp=Z,28nm,1.2s									
531A	**Rocksprings**	87.78	50	⇑	P		P	10 44 02.6	-0.5	
	baz=88									
SIUC	**Southern Illin**	87.80	38	e	P		P	10 44 03.8	+0.8	
	comp=Z,23nm,0.9s									
532A	**Rocksprings**	88.17	50	⇓	P		P	10 44 04.5	-0.5	
	baz=88									
631A	**Perdido Creek**	88.32	51	⇑	P		P	10 44 05.6	-0.1	
	baz=88									
632A	**Uvalde**	88.70	50	⇑	P		P	10 44 07.6	+0.1	
	baz=88									
ETSF	**Etsaut**	89.11	334	e	P		P	10 44 09.9	+0.7	
	comp=Z,20nm,0.9s									
ETSF	**Etsaut**	89.11	334	e	P		P	10 44 09.9	+0.7	
ETSF					pmax	pmax				
	comp=Z,20nm,0.9s									
ETSF	**Etsaut**	89.11	334	e	P		P	10 44 09.9	+0.7	
	comp=Z,20nm,0.9s									
TBI	**Tubuai**	90.50	121	e	LR		LR	11 13 07.0		
	comp=Z,183nm,29.2s									
TBI					eT		T	12 24 01.9		
	comp=Z,11nm,0.3s									
KEST	**Kesra**	91.47	323		P		P	10 44 18.5	-1.8	
KEST	**Kesra**	91.47	323		P		P	10 44 18.5	-1.8	
	comp=Z,1.0nm,0.7s,baz=45,slow=1.4,SNR=3.4									
KEST					LR		LR	11 26 48.1		
	comp=Z,39nm,21.8s,baz=308,slow=36									
ESDC	**Sonseca Array**	93.12	335		P		P	10 44 27.8	-0.1	
ESDC	**Sonseca Array**	93.12	335		P		P	10 44 27.8	-0.1	
	comp=Z,2.0nm,0.7s,baz=16,slow=3.7,SNR=7.8									
ESDC					LR		LR	11 28 44.3		
	comp=Z,97nm,19.0s,baz=340,slow=37									
TORD	**Torodi Ar. Bea**	114.23	317		PKP		PKPdf	10 49 52.6	-1.0	
TORD					PP		**PP**	10 50 46.1	-2.4	
TORD	**Torodi Ar. Bea**	114.23	317		PKP		PKPdf	10 49 52.6	-1.0	
	comp=Z,0.9nm,0.8s,baz=22,slow=3.7,SNR=3.8									
TORD					PP		**PP**	10 50 46.1	-2.4	
	comp=Z,4.7nm,1.1s,baz=25,slow=6.5,SNR=12									
LPAZ	**La Paz**	143.41	55		PKP		**PKPdf**	10 50 48.5	-0.6	
LPAZ	**La Paz**	143.41	55		PKP		**PKPdf**	10 50 48.5	-0.6	
	comp=Z,0.7nm,0.7s,baz=333,slow=4.5,SNR=3.6									
SNAA	**Sanae**	145.69	199	e	PKPdf		**PKPdf**	10 50 51.0	+0.2	
SNAA	**Sanae**	145.69	199	e	PKPdf		**PKPdf**	10 50 50.8	0.0	
BDFB	**Brasilia**	152.26	22		PKPbc		**PKPbc**	10 51 10.1	+0.2	
BDFB	**Brasilia**	152.26	22		PKPbc		**PKPbc**	10 51 10.1	+0.2	
	comp=Z,1.3nm,0.5s,baz=304,slow=3.6,SNR=4.5									

IDC 26 10:37:10.8±3.4, 31°.74S×177°.37W, h0km, mb4.1/2, mb1 4.3/4, mb1mx3.9/19, mbtmp4.1/4, ML3.7/2, Error ellipse: s-maj=75.3km s-min=28.5km az=111.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	2.52	349	Pn		Pn	10 37 52.3	-0.7
	69nm,0.3s,baz=180,slow=20,SNR=2.6							
RAO				Sn		Sn	10 38 17.7	-6.7
	104nm,0.3s,baz=73,slow=20,SNR=5.8							
URZ	**Urewera**	7.93	213	Pn		Pn	10 39 06.9	-0.4
	0.2nm,0.3s,baz=116,slow=18,SNR=4.1							
URZ				Sn		Sn	10 40 36.6	-1.1
	2.2nm,0.3s,baz=153,slow=20,SNR=9.4							
ASAR	**Alice Springs**	43.59	268	P		P	10 45 17.1	+0.2
	1.1nm,0.7s,baz=109,slow=7.7,SNR=11							
WRA	**Warramunga Arr**	44.70	273	P		P	10 45 25.8	-0.1
	3.2nm,0.7s,baz=111,slow=8.1,SNR=19							
FINES	**FINESS Array B**	146.58	340	PKPbc		PKPbc	10 56 52.7	-0.7
	0.8nm,0.8s,baz=346,slow=1.7,SNR=3.5							

*NEIC **26** 10:39:05.2, 27°.32N×53°.56E, h14km, mb4.3/8, ML4.2(THR), MN4.1(TEH), After THR.*
*THR **26** 10:39:05.2±0.6, 27°.32N×53°.56E, h14km±9km, ML4.2*
*IDC **26** 10:39:06.5±0.9, 27°.59N×53°.56E, h0km, mb4.0/22, mb1 4.1/23, mb1mx4.0/35, mbtmp4.0/23, ML3.7/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/39, Error ellipse: s-maj=22.9km s-min=14.8km az=13.0*
*MOS **26** 10:39:09.1±1.3, 27°.51N×53°.53E, h33km, mb4.5/9, Error ellipse: s-maj=11.0km s-min=8.1km az=92.8*
*CSEM **26** 10:39:10.8±0.2, 27°.68N×53°.52E, h20km, mb4.3/14, Ms3.9, Error ellipse: s-maj=7.6km s-min=5.4km az=25.0*
*BJI **26** 10:39:11.3, 27°.13N×53°.14E, h91km, mB5.2/3, mb4.7/4*
*TEH **26** 10:39:11.3, 27°.72N×53°.48E, h20km, ML4.1*

ISC 26 10:39:11.8±1.2, 27°.66N±0°.04×53°.54E±0°.04, h31km±9km, n174, σ1°29/181, mb4.1/37, 3C-5D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GHIR	**Ghir-Karzin**	0.80	322	ePg		**Pb**	10 39 25.8	-1.5
GHIR				eSg		**Sn**	10 39 40.4	+2.5
GHIR				AML		AML	10 39 46.1	
	comp=N,4μm,0.4s							
GHIR	**Ghir-Karzin**	0.80	322	ePg		**Pb**	10 39 25.0	-2.3
GHIR				eSg		**Sn**	10 39 40.0	+2.1
GHIR	**Ghir-Karzin**	0.80	322	ePg		**Pb**	10 39 25.8	-1.5
GHIR				eSg		**Sn**	10 39 40.4	+2.5
ISRV	**Sarvestan**	1.76	348⇓	ePn		**Pn**	10 39 41.1	+0.6
ISRV				eSg		**Sb**	10 40 05.2	-0.3
ISRV				e			10 40 13.8	
	comp=Z,38μm,0.6s							
ISRV	**Sarvestan**	1.76	348⇓	ePn		**Pn**	10 39 41.1	+0.6
ISRV				eSg		**Sb**	10 40 05.2	-0.3
SHI	**Shiraz**	2.17	336	ePn		**Pn**	10 39 47.0	+0.9

ITEG	**Tejag**	**6.90**	**40**	*e*Pn	**Pn**	**10 40 52.9**	**+1.9**
ITEG				*e*		10 41 58.2	
	comp=Z,421nm,0.0s						
ITEG	**Tejag**	**6.90**	**40**	*e*Pn	**Pn**	**10 40 52.9**	**+1.9**
GNI	**Garni**	**14.43**	**332**	LR	LR	10 49 17.8	
	comp=Z,49nm,21.4s,baz=101,slow=42						
ASF	**Jabal al Asfar**	**15.12**	**291**	Pn	**Pn**	**10 42 43.9**	**+0.6**
ASF	**Jabal al Asfar**	**15.12**	**291**	Pn	**Pn**	**10 42 43.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=77,slow=15,SNR=2.9						
ASF				LR	LR	10 50 05.5	
	comp=Z,72nm,18.9s,baz=264,slow=44						
EIL	**Elat**	**16.44**	**281**	Pn	**P**	**10 43 04.2**	**+1.5**
EIL	**Elat**	**16.44**	**281**	Pn	**P**	**10 43 04.2**	**+1.5**
	baz=48,slow=8.9,SNR=4.3						
EIL				LR	LR	10 50 36.7	
	comp=Z,84nm,20.6s,baz=95,slow=42						
MMAI	**Mount Meron Ar**	**16.54**	**293**	LR	LR	10 50 53.0	
	comp=Z,74nm,19.6s,baz=125,slow=43						
BRTR	**Keskin Array B**	**20.42**	**311**	P	**P**	**10 43 47.4**	**+0.8**
BRTR	**Keskin Array B**	**20.42**	**311**	P	**P**	**10 43 47.4**	**+0.8**
	comp=Z,2.8nm,0.6s,baz=135,slow=13,SNR=5.9						
BRTR	**Keskin Array B**	**20.42**	**311**	P	**P**	**10 43 47.4**	**+0.8**
KKAR	**Karatay Array**	**20.65**	**37**	*e*P	**P**	**10 43 48.4**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	**Karatay Array**	**20.65**	**37**	*e*P	**P**	**10 43 48.4**	**-0.5**
	comp=Z,8.9nm,0.8s						
KKAR	**Karatay Array**	**20.65**	**37**	*e*P	**P**	**10 43 48.4**	**-0.5**
	comp=Z,9.0nm,0.8s						
AML	**Almayashu**	**21.88**	**43**	P	**P**	**10 44 03.0**	**+0.5**
	SNR=13						
ABKAR	**Akbulak array**	**22.12**	**11**	*e*P	**P**	**10 44 03.9**	**-0.7**
	comp=Z,4.6nm,0.6s						
ABKAR	**Akbulak array**	**22.12**	**11**	*e*P	**P**	**10 44 03.9**	**-0.7**
	comp=Z,4.6nm,0.6s						
EKS2	**Erkin-Say**	**22.23**	**42**	*e*P	**P**	**10 44 06.1**	**+0.1**
EKS2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
EKS2	**Erkin-Say**	**22.23**	**42**	*e*P	**P**	**10 44 06.1**	**+0.1**
	comp=Z,3.9nm,0.6s						
EKS2	**Erkin-Say**	**22.23**	**42**	*e*P	**P**	**10 44 06.1**	**+0.1**
	comp=Z,4.0nm,0.6s						
AAK	**Ala-Archa**	**22.65**	**43**	P	**P**	**10 44 11.2**	**+0.7**
AAK	**Ala-Archa**	**22.65**	**43**	P	**P**	**10 44 11.2**	**+0.7**
AAK	**Ala-Archa**	**22.65**	**43**	P	**P**	**10 44 11.2**	**+0.7**
	comp=Z,0.6nm,0.3s,baz=179,slow=11,SNR=4.1						
AAK	**Ala-Archa**	**22.65**	**43**	P	**P**	**10 44 11.2**	**+0.7**
AKTK	**Aktyubinsk**	**23.00**	**7**	P	**P**	**10 44 14.7**	**+0.8**
AKTO	**Aktyubinsk**	**23.00**	**7**	P	**P**	**10 44 14.7**	**+0.7**
AKTO	**Aktyubinsk**	**23.00**	**7**	P	**P**	**10 44 14.7**	**+0.7**
AKTO	**Aktyubinsk**	**23.00**	**7**	P	**P**	**10 44 14.7**	**+0.7**
	comp=Z,6.1nm,1.0s,baz=187,slow=12,SNR=6.4						
AKTO	**Aktyubinsk**	**23.00**	**7**	P	**P**	**10 44 14.6**	**+0.7**
TKM2	**Tokmak 2**	**23.48**	**44**	*e*P	**P**	**10 44 18.9**	**-0.1**
TKM2	**Tokmak 2**	**23.48**	**44**	*e*P	**P**	**10 44 18.9**	**-0.1**
	comp=Z,2.9nm,0.8s						
TKM2	**Tokmak 2**	**23.48**	**44**	*e*P	**P**	**10 44 18.9**	**-0.1**
	comp=Z,2.9nm,0.8s						
VRHR	**Novokhopersk**	**25.09**	**342**	*e*P	**P**	**10 44 34.0**	**+0.5**
VRHR				pmax	pmax		
	comp=N,80nm,1.5s						
VRHR				pmax	pmax		
	comp=Z,50nm,1.5s						
VRHR				pmax	pmax		
	comp=E,40nm,0.8s						
VRHR	**Novokhopersk**	**25.09**	**342**	*e*P	**P**	**10 44 34.0**	**+0.5**
VSR	**Storozhevoye**	**25.92**	**339**	*e*P	**P**	**10 44 41.7**	**+0.6**
VSR				pmax	pmax		
	comp=E,20nm,1.0s						
VSR				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR				pmax	pmax		
	comp=N,5.0nm,0.3s						
VSR	**Storozhevoye**	**25.92**	**339**	*e*P	**P**	**10 44 41.7**	**+0.6**
	comp=N,5.0nm,0.3s						
MLR	**Muntele Rosu**	**28.22**	**316**	P	**P**	**10 45 02.4**	**+0.5**
MLR	**Muntele Rosu**	**28.22**	**316**	P	**P**	**10 45 02.4**	**+0.5**
	comp=N,0.3nm,0.5s,baz=137,slow=19,SNR=1.7						
MLR	**Muntele Rosu**	**28.22**	**316**	P	**P**	**10 45 02.4**	**+0.5**
BVAR	**Borovoye Array**	**28.27**	**22**	P	**P**	**10 45 02.6**	**+0.5**
BVAR	**Borovoye Array**	**28.27**	**22**	P	**P**	**10 45 02.6**	**+0.5**
BVAR	**Borovoye Array**	**28.27**	**22**	P	**P**	**10 45 02.6**	**+0.5**
	comp=N,2.1nm,0.4s,baz=210,slow=8.4,SNR=8.3						
BVAR	**Borovoye Array**	**28.27**	**22**	P	**P**	**10 45 02.6**	**+0.5**
AKASG	**Malin Array Be**	**29.50**	**328**	P	**P**	**10 45 12.6**	**-0.5**
AKASG	**Malin Array Be**	**29.50**	**328**	P	**P**	**10 45 12.6**	**-0.5**
AKASG	**Malin Array Be**	**29.50**	**328**	P	**P**	**10 45 12.6**	**-0.5**
	comp=N,1.0nm,0.3s,baz=120,slow=7.3,SNR=4.5						
AKASG	**Malin Array Be**	**29.50**	**328**	P	**P**	**10 45 12.6**	**-0.5**
MKAR	**Makanchi Array**	**29.57**	**42**	P	**P**	**10 45 13.3**	**-0.5**
MKAR	**Makanchi Array**	**29.57**	**42**	P	**P**	**10 45 13.2**	**-0.5**
MKAR	**Makanchi Array**	**29.57**	**42**	P	**P**	**10 45 13.2**	**-0.5**
	comp=N,0.7nm,0.6s,baz=231,slow=11,SNR=5.4						
MKAR	**Makanchi Array**	**29.57**	**42**	P	**P**	**10 45 13.3**	**-0.5**
KURBB	**Kurchatov Array**	**29.77**	**33**	P	**P**	**10 45 15.4**	**0.0**
	comp=N,1.2nm,0.8s,baz=233,slow=8.4,SNR=6.3						
KURK	**Kurchatov**	**29.87**	**33**	P	**P**	**10 45 15.4**	**-1.0**
KURK	**Kurchatov**	**29.87**	**33**	P	**P**	**10 45 15.4**	**-1.0**
KURK	**Kurchatov**	**29.87**	**33**	P	**P**	**10 45 15.4**	**-1.0**
KMBO	**Kilima Mbogo**	**32.62**	**211**	LR	LR	10 59 15.3	
	comp=N,86nm,18.2s,baz=94,slow=37						
ZALV	**Zalesovo Beam**	**34.86**	**32**	P	**P**	**10 45 58.0**	**-2.1**
ZALV	**Zalesovo Beam**	**34.86**	**32**	P	**P**	**10 45 58.0**	**-2.1**
ZALV	**Zalesovo Beam**	**34.86**	**32**	P	**P**	**10 45 58.0**	**-2.1**
	comp=N,0.9nm,0.3s,baz=239,slow=8.4,SNR=5.5						
ZALV	**Zalesovo Beam**	**34.86**	**32**	P	**P**	**10 45 58.0**	**-2.1**
MORC	**Moravsky Berou**	**35.23**	**319**	P	**P**	**10 46 00.8**	**-2.6**
MORC				pmax	pmax		
	comp=Z,12nm,1.3s						
MORC	**Moravsky Berou**	**35.23**	**319**	P	**P**	**10 46 00.8**	**-2.6**
	comp=Z,12nm,1.3s						
KBA	**Koelnbreinsper**	**36.86**	**313**	⇑*i*pP	**P**	**10 46 17.8**	**+0.3**
	comp=Z,7.1nm,0.9s						
KBA	**Koelnbreinsper**	**36.86**	**313**	P	**P**	**10 46 17.8**	**+0.3**
	comp=Z,7.1nm,0.9s						
GERES	**GERESS Array B**	**37.20**	**316**	P	**P**	**10 46 17.9**	**-2.3**
GERES	**GERESS Array B**	**37.20**	**316**	P	**P**	**10 46 17.9**	**-2.3**
	comp=Z,1.0nm,0.9s,baz=102,slow=4.2,SNR=4.1						
GERES	**GERESS Array B**	**37.20**	**316**	P	**P**	**10 46 17.9**	**-2.3**
KHC	**Kasperske Hory**	**37.37**	**316**	*e*P	**P**	**10 46 19.9**	**-1.7**
KHC				pmax	pmax		
	comp=Z,11nm,1.4s						
KHC	**Kasperske Hory**	**37.37**	**316**	*e*P	**P**	**10 46 19.9**	**-1.7**
	comp=Z,10nm,1.4s						
KHC	**Kasperske Hory**	**37.37**	**316**	*e*P	**P**	**10 46 19.9**	**-1.7**
	comp=Z,11nm,1.4s						
WTTA	**Wattenberg**	**38.03**	**312**	⇑*i*pP	**P**	**10 46 28.4**	**+1.0**
	comp=Z,16nm,1.0s						
WTTA	**Wattenberg**	**38.03**	**312**	P	**P**	**10 46 28.4**	**+1.0**
	comp=Z,16nm,1.0s						
JOF	**Joensuu**	**38.16**	**344**	*e*P	**P**	**10 46 28.5**	**+0.5**
JOF	**Joensuu**	**38.16**	**344**	*e*p	**P**	**10 46 28.5**	**+0.5**
JOF	**Joensuu**	**38.16**	**344**	*e*P	**P**	**10 46 28.5**	**+0.5**
FETA	**Feichten**	**38.56**	**312**	⇑*i*pP	**P**	**10 46 33.0**	**+1.2**
	comp=Z,11nm,0.9s						
FETA	**Feichten**	**38.56**	**312**	P	**P**	**10 46 33.0**	**+1.2**
	comp=Z,11nm,0.9s						
KAF	**Kangasniemi**	**38.89**	**340**	*e*P	**P**	**10 46 36.7**	**+2.5**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KAF	**Kangasniemi**	**38.89**	**340**	*e*p	**P**	**10 46 36.7**	**+2.5**
	comp=Z,1.4nm,0.3s						
KAF	**Kangasniemi**	**38.89**	**340**	*e*P	**P**	**10 46 36.7**	**+2.5**
	comp=Z,1.0nm,0.3s						
DAVA	**Damuels**	**39.19**	**312**	⇓*i*pP	**P**	**10 46 36.7**	**-0.4**
	comp=Z,13nm,0.6s						
DAVA	**Damuels**	**39.19**	**312**	P	**P**	**10 46 36.7**	**-0.4**
	comp=Z,13nm,0.6s						
HFS	**Hagfors**	**42.22**	**331**	P	**P**	**10 47 00.1**	**-1.6**
HFS	**Hagfors**	**42.22**	**331**	P	**P**	**10 47 00.1**	**-1.6**
	comp=Z,2.0nm,0.4s,baz=135,slow=8.7,SNR=13						
HFS	**Hagfors**	**42.22**	**331**	P	**P**	**10 47 00.1**	**-1.6**
CHTO	**Chiang Mai**	**42.45**	**92**	*e*P	P	10 47 00.4	-3.7
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHTO	**Chiang Mai**	**42.45**	**92**	*e*P	P	10 47 00.4	-3.7
	comp=Z,8.9nm,1.0s						
CMAR	**Chiang Mai Arr**	**42.57**	**92**	P	**P**	**10 47 04.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**42.57**	**92**	P	**P**	**10 47 04.0**	**-1.2**
	comp=Z,3.9nm,1.0s,baz=282,slow=9.5,SNR=11						
CMAR	**Chiang Mai Arr**	**42.57**	**92**	P	**P**	**10 47 04.0**	**-1.2**
LZH	**Lanzhou**	**43.14**	**66**	*e*P	**P**	**10 47 09.5**	**-0.3**
LZH				pmax	pmax		
	comp=Z,21nm,1.5s						
NB2	**NORSAR Subarra**	**43.74**	**332**	P	**P**	**10 47 12.7**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=123,slow=8.6						
NB2	**NORSAR Subarra**	**43.74**	**332**	P	**P**	**10 47 12.7**	**-1.3**
	comp=Z,0.8nm,0.4s,SNR=6.4						
NOA	**NORSAR Array B**	**43.74**	**332**	P	**P**	**10 47 13.0**	**-1.0**
NOA	**NORSAR Array B**	**43.74**	**332**	P	**P**	**10 47 13.0**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=120,slow=8.1,SNR=6.7						
NOA	**NORSAR Array B**	**43.74**	**332**	P	**P**	**10 47 13.0**	**-1.0**
ZAK	**Zakamensk**	**43.81**	**45**	*e*P	**P**	**10 47 13.8**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ZAK	**Zakamensk**	**43.81**	**45**	*e*P	**P**	**10 47 13.8**	**-1.0**
	comp=Z,2.0nm,1.2s						
ARCES	**ARCESS Array B**	**44.96**	**346**	P	**P**	**10 47 23.7**	**0.0**
ARCES	**ARCESS Array B**	**44.96**	**346**	P	**P**	**10 47 23.7**	**0.0**
	comp=Z,0.7nm,0.4s,baz=147,slow=7.0,SNR=11						
ARCES	**ARCESS Array B**	**44.96**	**346**	P	**P**	**10 47 23.7**	**0.0**
SONM	**Songino Array**	**45.41**	**49**	P	**P**	**10 47 28.1**	**+0.4**
SONM	**Songino Array**	**45.41**	**49**	P	**P**	**10 47 28.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=271,slow=6.8,SNR=6.3						
SONM	**Songino Array**	**45.41**	**49**	P	**P**	**10 47 28.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**50.34**	**264**	P	**P**	**10 48 06.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**50.34**	**264**	P	**P**	**10 48 06.7**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=57,slow=7.5,SNR=9.2						
TORD	**Torodi Ar. Bea**	**50.34**	**264**	P	**P**	**10 48 06.7**	**+0.5**
SPITS	**Spitsbergen Ar**	**53.31**	**351**	P	**P**	**10 48 27.6**	**+0.2**
SPITS	**Spitsbergen Ar**	**53.31**	**351**	P	**P**	**10 48 27.6**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=144,slow=14,SNR=5.4						
SPITS	**Spitsbergen Ar**	**53.31**	**351**	P	**P**	**10 48 27.6**	**+0.2**
KSAR	**Wonju Array Be**	**61.96**	**60**	P	**P**	**10 49 28.2**	**-0.7**
KSAR	**Wonju Array Be**	**61.96**	**60**	P	**P**	**10 49 28.2**	**-0.7**
KSRS	**Korea Array**	**61.99**	**60**	P	**P**	**10 49 28.2**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=273,slow=6.2,SNR=2.6						
KSRS	**Korea Array**	**61.99**	**60**	P	**P**	**10 49 28.2**	**-0.9**
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**86.51**	**9**	P	**P**	**10 51 50.6**	**-0.7**
ILAR	**Eielson Array**	**86.51**	**9**	P	**P**	**10 51 50.6**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=315,slow=3.9,SNR=12						
ILAR	**Eielson Array**	**86.51**	**9**	P	**P**	**10 51 50.7**	**-0.7**
EGAK	**Eagle**	**87.16**	**6**	*e*P	**P**	**10 51 54.0**	**-0.5**
	comp=Z,7.8nm,1.2s						
EGAK	**Eagle**	**87.16**	**6**	*e*P	**P**	**10 51 54.0**	**-0.5**
	comp=Z,7.8nm,1.2s						
YKA	**Yellowknife Ar**	**89.66**	**355**	P	**P**	**10 52 06.6**	**+0.2**
YKA	**Yellowknife Ar**	**89.66**	**355**	P	**P**	**10 52 06.6**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=5,2,slow=4.8,SNR=12						
YKA	**Yellowknife Ar**	**89.66**	**355**	P	**P**	**10 52 06.6**	**+0.2**
WRA	**Warramunga Arr**	**91.33**	**112**	P	**P**	**10 52 14.3**	**-0.6**
WRA	**Warramunga Arr**	**91.33**	**112**	P	**P**	**10 52 14.3**	**-0.6**
	comp=Z,0.7nm,0.9s,baz=304,slow=3.7,SNR=6.2						
WRA	**Warramunga Arr**	**91.33**	**112**	P	**P**	**10 52 14.3**	**-0.6**
ASAR	**Alice Springs**	**92.76**	**115**	P	**P**	**10 52 20.7**	**-0.8**
ASAR	**Alice Springs**	**92.76**	**115**	P	**P**	**10 52 20.7**	**-0.8**
	comp=Z,1.0nm,0.9s,baz=299,slow=4.5,SNR=10						
ASAR	**Alice Springs**	**92.76**	**115**	P	**P**	**10 52 20.7**	**-0.8**

*MEX **26** 10:49:53.1±0.8, 16.°64N×100.°91W, h26km±14km, MD4.2*
*IDC **26** 10:49:55.7±5.9, 17.°49N×99.°85W, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.7/24, mbtmp3.4/6, ML3.0/2, MS3.6/4, Ms1 3.5/4, ms1mx3.0/27, Error ellipse: s-maj=118.1km s-min=97.0km az=76.0*

ISC 26 10:49:52.1±2.2, 16.°69N±0.°09×100.°76W±0.°07, h13km±12km, n17, σ1s26/20, mb3.6/4, MS3.9/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.59**	**53**	*e*P	**Pg**	**10 50 04.4**	**+0.6**
CAIG				*i* S	**Sb**	**10 50 14.1**	**+1.4**
ACX	**Acapulco**	**0.88**	**78**	*e*P	**Pb**	**10 50 08.9**	**-0.5**
ACX				*i* S	**Sb**	**10 50 20.9**	**-0.3**
ARIG	**Puente Sto Nin**	**1.63**	**14**	*e*P	**Pn**	**10 50 19.0**	**-1.6**
MEIG	**Mezcala**	**1.65**	**41**	*e*P	**Pn**	**10 50 20.4**	**-0.5**
MEIG				*i* S	**Sn**	**10 50 41.4**	**-0.6**
PLIG	**Platanillo**	**2.08**	**35**	*e*P	**Pn**	**10 50 26.6**	**-0.2**
PLIG				*e*S	**Sn**	**10 50 51.3**	**-1.4**
PNIG	**Pinotepa**	**2.54**	**96**	*e*P	**Pn**	**10 50 31.9**	**-1.3**
PNIG				*i* S	**Sn**	**10 51 02.8**	**-1.3**
UTMO	**Huajuapan**	**3.05**	**68**	*e*P	**Pn**	**10 50 40.8**	**+0.5**
UTMO				*i* S	**Sn**	**10 51 16.0**	**-0.8**
TPIG	**Tehuac#an**	**3.67**	**62**	*e*P	**Pn**	**10 50 48.7**	**-0.2**
TPIG				*i* S	**Sn**	**10 51 33.0**	**+0.8**
TXAR	**Lajitas Array**	**12.87**	**349**	Pn	**Pn**	**10 52 53.5**	**-1.5**
	0.0nm,0.3s,baz=143,slow=9.1,SNR=3.0						
TXAR				LR	LR	10 57 50.3	
	comp=Z,52nm,19.7s,baz=0.0,slow=39						
ANMO	**Albuquerque**	**18.88**	**345**	P	**P**	**10 54 10.8**	**-1.8**
	0.0nm,0.3s,baz=137,slow=5.0,SNR=3.5						
NVAR	**Mina Array Bea**	**26.57**	**328**	P	P	10 55 33.9	+3.6
	1.1nm,0.6s,baz=151,slow=12,SNR=11						
PDAR	**Pinedale Array**	**27.06**	**346**	P	**P**	**10 55 36.4**	**+1.8**
	1.2nm,0.9s,baz=139,slow=12,SNR=5.7						
YKA	**Yellowknife Ar**	**46.78**	**351**	P	**P**	**10 58 21.8**	**+0.7**
	0.8nm,0.8s,baz=160,slow=7.3,SNR=12						
ILAR	**Eielson Array**	**57.14**	**338**	P	**P**	**10 59 40.3**	**+1.9**
	0.5nm,1.0s,baz=151,slow=4.4,SNR=5.8						
AFI	**Afiamalu**	**76.43**	**251**	LR	LR	11 27 49.9	
	comp=Z,51nm,18.8s,baz=82,slow=29						
ARCES	**ARCESS Array B**	**86.11**	**17**	LR	LR	11 48 20.5	
	comp=Z,48nm,18.1s,baz=285,slow=41						
TORD	**Torodi Ar. Bea**	**97.87**	**74**	LR	LR	11 48 37.6	
	comp=Z,36nm,18.1s,baz=115,slow=36						

KRSC 26 10:56:17.2±1.6, 49.°52N×156.°51E, h5km±5km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.19**	**348**	P	Pg	10 56 39.6	-0.4
SKR				S	Sb	10 56 55.9	-0.1
PAU	**Pauzhetka**	**1.96**	**6**	S	Sb	10 57 18.0	0.0
ASAK	**Asacha**	**3.00**	**17**	P	Pn	10 57 07.7	+2.2
MTVR	**Mutnovka**	**3.15**	**19**	P	Pn	10 57 09.8	+2.2
MTVR				S	Sn	10 57 48.6	+2.9
RUS	**Russkaya**	**3.18**	**23**	P	Pn	10 57 09.6	+1.8
RUS				S	Sn	10 57 48.1	+2.0
UGLR	**Uglovaya**	**3.97**	**21**	P	Pn	10 57 21.0	+2.2
KOK	**Koryaka**	**4.00**	**19**	P	Pn	10 57 22.1	+2.8
KRER	**Koryakskii**	**4.04**	**19**	P	Pn	10 57 22.3	+2.4
SDLR	**Sedlovina**	**4.05**	**21**	P	Pn	10 57 22.0	+2.1
GNL	**Ganaly**	**4.28**	**11**	P	Pn	10 57 25.9	+2.8
MKZ	**Mys Kozlova**	**5.98**	**31**	P	Pn	10 57 47.2	+0.9

GUC 26 11:30:39.1±0.8, 32.°59S×70.°99W, h71km±4km, MD3.5, ML2.7, 9C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JACH	**Jahuel**	**0.35**	**105**	⇑*i*P	Pn	11 30 50.9	+0.1
JACH				*i* S	Sn	11 31 00.2	+0.8
ROCH	**El Roble**	**0.38**	**182**	⇓*i*P	Pn	11 30 51.5	+0.2
ROCH				*i* S	Sn	11 31 01.2	+1.1
PEL	**Peldehue**	**0.61**	**155**	⇑*i*P	Pn	11 30 53.5	+0.3
PEL				*i* S	Sn	11 31 04.5	+1.0
PEL				AML	AML	11 31 05.5	
	comp=E,1μm,0.4s						
IHA	**Instituto Hidr**	**0.70**	**231**	*e*P	Pn	11 30 54.0	0.0
IHA				*i* S	Sn	11 31 05.5	+0.5
CHNG	**Los Chungos**	**0.83**	**329**	⇑*i*P	Pn	11 30 56.0	+0.5
CHNG				*i* S	Sn	11 31 08.5	+0.8
CHNG				AML	AML	11 31 09.2	
	comp=E,97nm,0.2s						
CLCH	**Cerro Calan**	**0.89**	**155**	⇓*i*P	Pn	11 30 56.9	+0.5
CLCH				*i* S	Sn	11 31 10.1	+0.9
CLCH				AML	AML	11 31 11.2	
	comp=E,175nm,0.5s						
ANTU	**Antumapu**	**1.02**	**163**	⇑*i*P	Pn	11 30 58.1	+0.1
ANTU				*i* S	Sn	11 31 12.9	+0.9
ANTU				AML	AML	11 31 13.8	
	comp=E,367nm,0.4s						
TACH	**Talagante**	**1.06**	**177**	⇑*i*P	Pn	11 30 58.5	+0.1
TACH				*i* S	Sn	11 31 13.9	+1.1
PCH	**Pirque**	**1.10**	**159**	⇑*i*P	Pn	11 30 59.2	+0.1
PCH				*i* S	Sn	11 31 14.8	+0.8
LNV	**Longovilo**	**1.40**	**194**	⇑*i*P	Pn	11 31 02.8	0.0
CMCH	**Combarbala**	**1.41**	**360**	⇑*i*P	Pn	11 31 01.9	-1.2
CMCH				*i* S	Sn	11 31 19.6	-1.5
CMCH				AML	AML	11 31 21.0	
	comp=E,404nm,0.7s						
LMEL	**Las Melosas**	**1.42**	**152**	⇑*i*P	Pn	11 31 03.8	+0.6
LMEL				*i* S	Sn	11 31 22.5	+1.2
LMEL				AML	AML	11 31 24.3	
	comp=N,449nm,0.1s						

IDC 26 11:36:43.5±5.2, 5.°56S×151.°14E, h46km±45km, mb3.2/4, mb1 3.6/5, mb1mx3.3/19, mbtmp3.5/5, ML3.4/1, Error ellipse: s-maj=99.7km s-min=32.4km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.49**	**226**	P	Pn	11 38 04.6	+1.8
	7.6nm,0.3s,baz=34,slow=7.8,SNR=21						
PMG				S	Sn	11 39 04.9	+0.1
	2.7nm,0.3s,baz=142,slow=19,SNR=2.2						
WRA	**Warramunga Arr**	**21.71**	**227**	P	P	11 41 30.4	-0.5
	1.1nm,0.6s,baz=53,slow=11,SNR=9.6						
ASAR	**Alice Springs**	**24.49**	**221**	P	P	11 41 58.3	-0.3
	0.6nm,0.5s,baz=55,slow=9.2,SNR=11						
ASAR				pP	pP	11 42 10.2	-0.6
	0.8nm,0.7s,baz=50,slow=9.7,SNR=6.9						
FITZ	**Fitzroy Crossi**	**27.84**	**241**	P	P	11 42 28.8	-0.1
	1.1nm,0.7s,baz=44,slow=6.8,SNR=4.5						
ILAR	**Eielson Array**	**83.48**	**22**	P	P	11 49 05.4	-0.6
	0.2nm,0.9s,baz=235,slow=5.2,SNR=3.5						
TORD	**Torodi Ar. Bea**	**148.94**	**286**	PKPbc	PKPbc	11 56 27.8	+0.3
	0.7nm,0.6s,baz=88,slow=2.4,SNR=11						
TORD				pPKPbc	pPKPbc	11 56 39.8	-1.9
	0.4nm,0.7s,baz=81,slow=1.3,SNR=2.6						

JMA 26 11:44:21.6, 29.°38N×141.°58E, h135km, M3.7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.34**	**167**	P	Pn	11 45 00.4	+0.4
CBIJ				*e*S	Sn	11 45 29.9	+0.4
JHHJ	**Haha-jima-NKT**	**2.79**	**169**	P	Pn	11 45 06.1	+0.4
JHJ2	**Mitsune**	**4.01**	**338**	P	Pn	11 45 22.2	+0.6
JHJ2				*e*S	Sn	11 46 08.4	+0.2
BSO1	**Boso 1**	**5.28**	**355**	P	Pn	11 45 39.7	+1.9
BSO1				*e*S	Sn	11 46 39.0	+1.7
BSO3	**Boso 3**	**5.48**	**351**	P	Pn	11 45 42.0	+1.2
BSO3				*e*S	Sn	11 46 45.0	+2.4
BSO4	**Boso 4**	**5.69**	**350**	P	Pn	11 45 45.4	+1.6
JOD2	**Odawara 2**	**6.23**	**341**	P	Pn	11 45 52.9	+1.6
JHU	**Hanno**	**6.74**	**344**	P	Pn	11 45 58.8	+0.8
JYT	**Yasato**	**6.93**	**351**	P	Pn	11 46 01.7	+1.2
JYT				*e*S	Sn	11 47 18.5	+0.5
JRY	**Ryogami san**	**6.99**	**342**	P	Pn	11 46 03.0	+1.5
JAG	**Ashikaga**	**7.25**	**346**	P	Pn	11 46 05.1	+0.2
JHO	**Hitachi**	**7.26**	**354**	P	Pn	11 46 05.6	+0.6

IDC 26 11:52:05.2±8.5, 2.°70N×127.°60E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/21, mbtmp3.6/3, Error ellipse: s-maj=187.2km s-min=132.0km az=78.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.46**	**164**	P	P	11 57 16.3	-0.2
	3.0nm,1.0s,baz=342,slow=11,SNR=12						
ASAR	**Alice Springs**	**26.92**	**167**	P	P	11 57 49.4	+1.0
	0.1nm,0.5s,baz=355,slow=10,SNR=3.0						
STKA	**Stephens Creek**	**36.87**	**160**	P	P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.60**	**167**	*e*Pg	**Pg**	**12 04 01.9**	**-0.2**
KSP				*e*Sg	**Sg**	**12 04 11.2**	**+1.3**
KSP	**Ksiaz**	**0.60**	**167**	⇑*e*Pg	**Pg**	**12 04 02.1**	**0.0**
KSP				*i* Sg	**Sg**	**12 04 12.0**	**+2.1**
UPC	**Upice**	**0.92**	**183**	*e*PG	**Pg**	**12 04 07.3**	**-1.0**
UPC				*e*SG	**Sg**	**12 04 20.3**	**0.0**
	comp=Z,31nm,0.2s						
UPC	**Upice**	**0.92**	**183**	Pg	**Pg**	**12 04 07.3**	**-1.0**
UPC				Sg	**Sg**	**12 04 20.3**	**0.0**
	31nm,0.2s						
DPC	**Dobruska-Polom**	**1.09**	**172**	*e*PG	**Pg**	**12 04 10.8**	**-0.7**
DPC				*e*SG	**Sg**	**12 04 26.3**	**+0.7**
	comp=Z,38nm,0.3s						
DPC	**Dobruska-Polom**	**1.09**	**172**	Pg	**Pg**	**12 04 10.8**	**-0.7**
DPC				Sg	**Sg**	**12 04 26.3**	**+0.7**
	38nm,0.3s						
PVCC	**Panska Ves**	**1.32**	**227**	*e*PG	**Pn**	**12 04 15.3**	**-0.9**
PVCC				*e*SG	**Sg**	**12 04 33.3**	**+0.4**
	comp=Z,151nm,0.2s						
PVCC	**Panska Ves**	**1.32**	**227**	Pg	**Pn**	**12 04 15.3**	**-0.9**
PVCC				Sg	**Sg**	**12 04 33.3**	**+0.4**
	151nm,0.2s						
KRLC	**Kraliky**	**1.43**	**162**	*e*PG	**Pn**	**12 04 16.4**	**-1.4**
KRLC				*e*SG	**Sg**	**12 04 36.7**	**+0.3**
KRLC	**Kraliky**	**1.43**	**162**	Pg	**Pn**	**12 04 16.4**	**-1.4**
KRLC				Sg	**Sg**	**12 04 36.7**	**+0.3**
PRU	**Pruhonice**	**1.75**	**215**	*e*PG	**Pb**	**12 04 22.8**	**-0.7**
PRU				*e*SG	**Sb**	**12 04 46.5**	**+0.6**
	comp=Z,40nm,0.3s						
PRU	**Pruhonice**	**1.75**	**215**	Pg	**Pb**	**12 04 22.8**	**-0.7**
PRU				Sg	**Sb**	**12 04 46.5**	**+0.6**
	40nm,0.3s						
MORC	**Moravsky Berou**	**1.90**	**150**	*e*Sg	**Sn**	**12 04 49.8**	**+0.9**
	21nm,0.4s,baz=334						
OKC	**Ostrava-Krasne**	**2.06**	**140**	*e*PG	**Pb**	**12 04 28.2**	**-0.7**
OKC				*e*SG	**Sg**	**12 04 56.3**	**-0.6**
	comp=Z,21nm,0.5s						
OKC	**Ostrava-Krasne**	**2.06**	**140**	Pg	**Pb**	**12 04 28.2**	**-0.7**
OKC				Sg	**Sg**	**12 04 56.3**	**-0.6**
	21nm,0.5s						
VRAC	**Vranov**	**2.15**	**171**	*e*Pn	**Pn**	**12 04 26.8**	**-0.9**
VRAC				*e*Sg	**Sb**	**12 04 58.2**	**+0.7**
	34nm,0.6s,baz=353						
TREC	**Trest**	**2.17**	**190**	*e*SG	**Sb**	**12 04 59.9**	**+1.7**
	comp=Z,16nm,0.2s						
TREC	**Trest**	**2.17**	**190**	Sg	**Sb**	**12 04 59.9**	**+1.7**
	16nm,0.2s						
KRUC	**Moravsky**	**2.38**	**175**	*e*Sg	**Sb**	**12 05 05.8**	**+1.6**
	17nm,0.6s,baz=356						
NKC	**Novy Kostel**	**2.60**	**244**	*e*PN	**Pn**	**12 04 33.3**	**-0.6**
NKC				*e*PG	**Pb**	**12 04 38.3**	**+0.2**
NKC				*e*SG	**Sg**	**12 05 14.0**	**-0.1**
	comp=Z,38nm,0.4s						
NKC	**Novy Kostel**	**2.60**	**244**	Pn	**Pn**	**12 04 33.3**	**-0.6**
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**12 04 40.4**	**-0.9**
OJC				*e*Sg	**Sg**	**12 05 15.4**	**-0.2**
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**12 04 40.4**	**-0.9**
OJC				*e*Sg	**Sg**	**12 05 15.4**	**-0.2**
KHC	**Kasperske Hory**	**2.81**	**216**	*e*PN	**Pn**	**12 04 36.9**	**+0.1**
KHC				*e*PG	**Pb**	**12 04 41.9**	**+0.3**
KHC				*e*SN	**Sn**	**12 05 11.4**	**+0.1**
KHC				*e*SG	**Sb**	**12 05 19.5**	**+3.0**
	comp=Z,12nm,0.4s						
KHC	**Kasperske Hory**	**2.81**	**216**	Pn	**Pn**	**12 04 36.9**	**+0.1**
ZST	**Bratislava**	**3.30**	**168**	*e*SG	**Sg**	**12 05 37.4**	**+0.7**
ZST	**Bratislava**	**3.30**	**168**	*e*Sg	**Sg**	**12 05 37.4**	**+0.7**
VYHS	**Vyhne**	**3.43**	**148**	*e*SG	**Sg**	**12 05 40.2**	**-0.6**
VYHS	**Vyhne**	**3.43**	**148**	*e*Sg	**Sg**	**12 05 40.2**	**-0.6**
CONA	**Conrad Observa**	**3.51**	**182**	⇓*i*Pn	**Pn**	**12 04 45.1**	**-1.3**
CONA				⇑*i*Sg	**Sg**	**12 05 41.4**	**-1.8**
	8.0nm,0.3s						
MOA	**Molln**	**3.77**	**199**	⇑*i*Pn	**Pn**	**12 04 49.2**	**-0.9**
MOA				⇑*i*Sg	**Sg**	**12 05 50.8**	**-0.9**
	11nm,0.5s						
MOA	**Molln**	**3.77**	**199**	Pn	**Pn**	**12 04 49.2**	**-0.9**
MOA				Sg	**Sg**	**12 05 50.8**	**-0.9**
	11nm,0.5s						
STHS	**Stebnicka Huta**	**3.86**	**119**	*e*	**Pg**	**12 05 05.8**	**+1.2**
STHS	**Stebnicka Huta**	**3.86**	**119**	*e*SG	**Sg**	**12 05 56.6**	**+1.9**
STHS	**Stebnicka Huta**	**3.86**	**119**	*e*Sg	**Sg**	**12 05 56.6**	**+1.9**

NIED ***26*** *12:04:00, 43˚.60N×136˚.00E, h380km, Mw4.7 Best double couple: M₀1.08000×10¹⁶ NP1:φ₀358.00000°, δ82.00000°, λ-37.00000°. NP2:φ₀94.00000°, δ54.00000°, λ-170.00000°.*

ISCJB ***26*** *12:04:07.2±0.2, 43˚.71N±0˚.02×135˚.66E±0˚.02, h346km±1km, mb4.4/176, Error ellipse: s-maj=3.3km s-min=2.6km az=171.2*

MOS ***26*** *12:04:07.2±0.9, 43˚.87N×135˚.58E, h339km, mb4.6/69, Error ellipse: s-maj=6.5km s-min=4.0km az=111.0*

SKHL ***26*** *12:04:07.5±0.7, 43˚.72N×135˚.74E, h341km±6km, mb4.7/8, msh4.6/2*

JMA ***26*** *12:04:07.9±0.3, 43˚.60N×135˚.98E, h373km, M4.1*

IDC ***26*** *12:04:08.3±0.8, 43˚.74N×135˚.60E, h347km±7km, mb3.9/32, mb1 4.0/38, mb1mx4.0/41, mbtmp3.9/38, Error ellipse: s-maj=8.5km s-min=8.0km az=3.0*

BJI ***26*** *12:04:08.4, 43˚.80N×135˚.60E, h330km, mB4.4/10, mb4.8/25*

NEIC ***26*** *12:04:08.3±0.3, 43˚.74N×135˚.55E, h344km±4km, mb4.5/90, Error ellipse: s-maj=5.0km s-min=3.0km az=170.0*

ISC 26 12:04:08.3±0.4, 43.75N±0˚.04×135.72E±0˚.03, h347km±3km, n815, σ1ŝ10/901, mb4.5/187, 196C-165D, Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEY	**Ternei**	**1.44**	**26**	⇓*i*P	**Pn**	**12 04 56.4**	**+0.7**
TEY				AMB	AMB	12 04 56.7	
	87nm,0.4s						
TEY				AMB	AMB	12 04 56.7	
	52nm,0.4s						
TEY				*e*S	**S**	**12 05 33.4**	**-0.3**
TEY				A	A	12 05 34.1	
	2μm,1.8s						
TEY				A	A	12 05 36.0	
	235nm,0.9s						
TEY				A	A	12 05 36.0	
	368nm,0.9s						
USRK	**Ussuriysk Arra**	**2.73**	**281**	P	**Pn**	**12 05 05.3**	**+0.4**
	19nm,0.3s,baz=94,slow=8.3,SNR=323						
USRK				S	**S**	**12 05 48.5**	**-2.0**
	baz=84,slow=18,SNR=1.3						
VLA	**Vladivostok**	**2.86**	**259**	*c* iP	**Pn**	**12 05 06.4**	**+0.2**
VLA				*i* S	**S**	**12 05 52.4**	**-0.3**
VLA	**Vladivostok**	**2.86**	**259**	⇑*i*P	**Pn**	**12 05 06.4**	**+0.2**
VLA				*i* S	**S**	**12 05 52.4**	**-0.3**
JOSM	**Okushiri--Mats**	**3.22**	**120**	P	**Pn**	**12 05 08.8**	**-0.7**
JOSM				*e*S	**S**	**12 05 55.7**	**-3.0**
JSH	**Shimam**	**3.35**	**108**	P	**Pn**	**12 05 10.0**	**-0.7**
JSH				*e*S	**S**	**12 05 59.8**	**-1.1**
JSK	**Shakotan**	**3.48**	**95**	P	**Pn**	**12 05 11.3**	**-0.6**
JSK				*e*S	**S**	**12 06 02.1**	**-1.0**
JSR	**Shiriuchi**	**4.12**	**121**	P	**Pn**	**12 05 17.7**	**-0.6**
JSR				*e*S	**S**	**12 06 13.5**	**-1.3**
JYG	**Yagishiri**	**4.17**	**79**	P	**Pn**	**12 05 18.8**	**0.0**
JYG				*e*S	**S**	**12 06 13.7**	**-2.0**
JEW	**Eniwo**	**4.28**	**100**	P	**Pn**	**12 05 19.0**	**-1.1**
JEW				*e*S	**S**	**12 06 16.9**	**-1.0**
JKB	**Kayabe**	**4.33**	**114**	P	**Pn**	**12 05 19.7**	**-0.9**
JKB				*e*S	**S**	**12 06 16.6**	**-2.2**
MDJ	**Mudanjiang**	**4.49**	**283**	Pg	**Pn**	**12 05 22.8**	**+0.6**
MDJ				Sg	**S**	**12 06 22.0**	**+0.2**
MDJ				smax	smax		
	comp=N,86nm,1.7s						
MDJ				smax	smax		
	comp=E,86nm,2.0s						
MDJ	**Mudanjiang**	**4.49**	**283**	*e*Pn	**Pn**	**12 05 22.8**	**+0.6**
MDJ				*e*S	**S**	**12 06 22.6**	**+0.7**
JOT	**Ohata**	**4.59**	**119**	P	**Pn**	**12 05 21.5**	**-1.9**
JOT				*e*S	**S**	**12 06 21.1**	**-2.9**
JWK2	**Keihoku**	**4.69**	**68**	P	**Pn**	**12 05 25.6**	**+1.3**
JWK2				*e*S	**S**	**12 06 25.7**	**0.0**
HABR	**Khabarovsk**	**4.75**	**355**	*ce*P	**Pn**	**12 05 24.9**	**0.0**
HABR				*e*S	**S**	**12 06 26.3**	**-0.5**
HABR				pmax	pmax		
	comp=Z,70nm,0.8s						
HABR				pmax	pmax		
	comp=N,36nm,1.0s						
HABR				pmax	pmax		
	comp=E,17nm,1.0s						
HABR	**Khabarovsk**	**4.75**	**355**	⇑*e*P	**Pn**	**12 05 24.9**	**0.0**
ASAJ	**Asahikawa**	**4.98**	**83**	*e*Pn	**Pn**	**12 05 27.4**	**-0.1**
ASAJ				*e*S	**S**	**12 06 30.5**	**-1.1**
ASAJ	**Asahikawa**	**4.98**	**83**	P	**Pn**	**12 05 27.3**	**-0.3**
	baz=272,slow=8.2						
ASAJ				S	**S**	**12 06 29.7**	**-1.9**
	comp=E,3.0nm,0.3s,baz=127,slow=32,SNR=20						
JKA	**Kamikawa-asahi**	**4.99**	**83**	P	**Pn**	**12 05 27.3**	**-0.3**
JFR	**Furan**	**5.04**	**94**	P	**Pn**	**12 05 27.3**	**-0.9**
JFR				*e*S	**S**	**12 06 30.0**	**-2.8**
ERM	**Erimo**	**5.74**	**105**	*i* P	**Pn**	**12 05 34.7**	**-1.3**
ERM				*i* S	**S**	**12 06 46.0**	**-1.0**
ERM	**Erimo**	**5.74**	**105**	*e*Pn	**Pn**	**12 05 34.8**	**-1.1**
ERM				*e*S	**S**	**12 06 46.0**	**-1.0**
ERM	**Erimo**	**5.74**	**105**	*i* P	**Pn**	**12 05 34.7**	**-1.3**
YSS	**Yuzh-Sakhalins**	**5.91**	**55**	⇑*e*P	**Pn**	**12 05 38.8**	**+1.0**
YSS				*e*S	**S**	**12 06 50.0**	**-0.4**
YSS				pmax	pmax		
	comp=N,50nm,0.8s						
YSS				pmax	pmax		
	comp=Z,90nm,0.8s						
YSS				smax	smax		
	comp=N,110nm,1.0s						
YSS				smax	smax		
	comp=E,120nm,1.0s						
YSS	**Yuzh-Sakhalins**	**5.91**	**55**	⇑*e*P	**Pn**	**12 05 38.8**	**+1.0**
YSS				AMB	AMB	12 05 40.0	
	comp=E,50nm,0.8s						
YSS				AMB	AMB	12 05 40.0	
	comp=E,90nm,0.8s						
YSS				*e*S	**S**	**12 06 50.0**	**-0.4**
YSS				A	A	12 06 51.8	
	comp=E,110nm,1.0s						
YSS				A	A	12 06 51.8	
	comp=E,120nm,1.0s						
JTKR	**Abashiri--Toko**	**5.93**	**85**	P	**Pn**	**12 05 37.5**	**-0.6**
JTKR				*e*S	**S**	**12 06 46.9**	**-4.0**
KLR	**Kul'dur**	**6.13**	**335**	⇑*i*P	Pn	12 05 36.2	-4.1
KLR				*e*S	**S**	**12 06 50.8**	**-4.2**
KLR				pmax	pmax		
	comp=E,60nm,1.0s						
KLR				pmax	pmax		
	comp=Z,92nm,1.0s						
KLR				smax	smax		
	comp=N,80nm,1.6s						
KLR				smax	smax		
	comp=E,80nm,1.6s						
KLR	**Kul'dur**	**6.13**	**335**	⇑*i*P	**Pn**	**12 05 39.4**	**-0.9**
KLR				AMB	AMB	12 05 40.9	
	comp=E,92nm,1.0s						
JMK	**Ichinoseki**	**6.33**	**137**	P	Pn	12 05 39.5	-3.4
UGL	**Uglegorsk**	**6.90**	**37**	⇑*i*P	**Pn**	**12 05 50.0**	**+0.7**
UGL				S	**S**	**12 07 10.0**	**-1.4**
UGL				pmax	pmax		
	comp=Z,160nm,0.8s						
UGL				smax	smax		
	comp=N,300nm,4.0s						
UGL				smax	smax		
	comp=E,500nm,5.0s						
UGL	**Uglegorsk**	**6.90**	**37**	⇑*i*P	**Pn**	**12 05 50.0**	**+0.7**
UGL				AMB	AMB	12 05 52.0	
	comp=E,160nm,0.8s						
UGL				*e*S	**S**	**12 07 10.0**	**-1.4**
UGL				A	A	12 07 16.0	
	comp=E,300nm,5.0s						
UGL				A	A	12 07 16.0	
	comp=E,500nm,5.0s						
GRNR	**Gornyy**	**7.04**	**4**	⇑*i*P	**Pn**	**12 05 51.6**	**+0.7**
GRNR				AMB	AMB	12 05 51.9	
	comp=E,28nm,0.7s						
GRNR				*e*S	**S**	**12 07 13.3**	**-1.1**
GRNR				A	A	12 07 17.8	
	comp=E,79nm,1.4s						
GRNR				A	A	12 07 17.8	
	comp=E,50nm,1.4s						
NEM2	**Nemuro 2**	**7.30**	**90**	P	**Pn**	**12 05 51.7**	**-2.3**
NEM2				*e*S	S	12 07 10.6	-9.4
YUK	**Yuzh-Kuril'sk**	**7.34**	**84**	*d* iP	**Pn**	**12 05 55.3**	**+0.8**
YUK				*i* S	**S**	**12 07 17.0**	**-3.9**
YUK				pmax	pmax		
	comp=Z,62nm,0.5s						
YUK				pmax	pmax		
	comp=E,34nm,0.4s						
YUK				pmax	pmax		
	comp=N,22nm,0.4s						
YUK				smax	smax		
	comp=N,1μm,2.5s						
YUK				smax	smax		
	comp=E,598nm,2.8s						
YUK				MLR	MLR		
	comp=E,59nm,12.0s						
YUK				MLR	MLR		
	comp=N,149nm,12.0s						
YUK				MLR	MLR		
	comp=Z,61nm,12.0s						
YUK	**Yuzh-Kuril'sk**	**7.34**	**84**	*e*P	**Pn**	**12 05 55.3**	**+0.8**
YUK				AMB	AMB	12 05 56.1	
	comp=Z,22nm,0.5s						
YUK				AMB	AMB	12 05 56.1	
	comp=E,34nm,0.5s						
YUK				AMB	AMB	12 05 56.1	
	comp=Z,62nm,0.5s						
YUK				*e*S	**S**	**12 07 17.0**	**-3.9**
YUK				A	A	12 07 26.2	
	comp=Z,80nm,0.5s						
YUK				A	A	12 07 26.2	
	comp=Z,270nm,0.5s						
CN2	**Changchun**	**7.43**	**274**	*e*P	**Pn**	**12 05 56.3**	**+0.7**
CN2				*e*S	**S**	**12 07 24.0**	**+1.0**
CN2				pmax	pmax		
	comp=Z,30nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
MAJO	**Matsushiro**	**7.45**	**164**	*e*P	**Pn**	**12 05 55.7**	**-0.2**
MAJO	**Matsushiro**	**7.45**	**164**	*e*Pn	**Pn**	**12 05 55.0**	**-1.0**
MAT	**Matsushiro**	**7.45**	**164**	P	**Pn**	**12 05 54.6**	**-1.3**
MAT				S	S	12 07 16.8	-6.7
MAT	**Matsushiro**	**7.45**	**164**	P	**Pn**	**12 05 54.4**	**-1.5**
MJAR	**Matsushiro Arr**	**7.45**	**164**	P	**Pn**	**12 05 55.5**	**-0.4**
MJAR				S	**S**	**12 07 22.9**	**-0.6**
MJAR	**Matsushiro Arr**	**7.45**	**164**	*e*P	**Pn**	**12 05 55.5**	**-0.4**
MJAR	**Matsushiro Arr**	**7.45**	**164**	P	**Pn**	**12 05 55.5**	**-0.4**
	comp=Z,6.3nm,0.3s,baz=351,slow=10,SNR=59						
MJAR				S	**S**	**12 07 22.9**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=346,slow=20,SNR=2.2						
SAI	**Saigo**	**7.75**	**194**	P	**Pn**	**12 06 00.6**	**+1.0**
JRY	**Ryogami san**	**8.10**	**161**	P	**Pn**	**12 06 00.8**	**-2.9**
TYV	**Tymovskoe**	**8.54**	**31**	⇓*i*P	**P**	**12 06 10.2**	**-1.2**
TYV				AMB	AMB	12 06 11.0	
	comp=Z,33nm,0.8s						
TYV				AMB	AMB	12 06 11.0	
	comp=Z,26nm,0.8s						
TYV				AMB	AMB	12 06 11.0	
	comp=Z,144nm,0.8s						
KSRS	**Korea Array**	**8.64**	**226**	P	**P**	**12 06 11.2**	**-1.5**
KSRS	**Korea Array**	**8.64**	**226**	P	**P**	**12 06 11.2**	**-1.5**
	comp=Z,3.4nm,0.3s,baz=44,slow=11,SNR=137						
KSRS				S	**S**	**12 07 54.6**	**+5.2**
	baz=48,slow=22,SNR=2.0						
KSAR	**Wonju Array Be**	**8.67**	**226**	P	**Pn**	**12 06 11.2**	**+0.8**
KSAR				S	**S**	**12 07 54.6**	**+4.6**
KSAR	**Wonju Array Be**	**8.67**	**226**	P	**Pn**	**12 06 11.2**	**+0.8**
KUR	**Kuril'sk**	**8.81**	**76**	P	Pn	12 06 03.0	-9.0
KUR				pmax	pmax		
	comp=Z,140nm,0.9s						
KUR	**Kuril'sk**	**8.81**	**76**	*e*P	**Pn**	**12 06 12.0**	**0.0**
KUR				*e*S	**S**	**12 07 49.5**	**-3.5**
KUR				A	A	12 07 55.0	
	comp=Z,90nm,0.7s						
JOD2	**Odawara 2**	**8.86**	**162**	P	**Pn**	**12 06 09.8**	**-3.0**
JOD2				*e*S	S	12 07 45.0	-9.5
JHS	**Saijyo**	**8.96**	**194**	P	**Pn**	**12 06 14.7**	**+0.7**
SNY	**Shenyang**	**9.13**	**262**	⇑P	**P**	**12 06 17.5**	**-0.6**
SNY				S	**S**	**12 08 01.5**	**+1.5**
SNY				pmax	pmax		
	comp=Z,13nm,0.5s						
SNY				pmax	pmax		
	comp=Z,110nm,3.5s						
SNY				LR	LR		
	comp=N,99nm,4.6s						
SNY				LR	LR		
	comp=E,70nm,4.9s						
SNY				LR	LR		
	comp=Z,57nm,4.6s						
INCN	**Inchon**	**9.31**	**231**	*e*Pn	**Pn**	**12 06 17.6**	**-0.6**
INCN	**Inchon**	**9.31**	**231**	P	**P**	**12 06 19.7**	**-0.6**
	SNR=21						
JIE	**Ise**	**9.37**	**175**	P	**Pn**	**12 06 19.3**	**+0.4**
EKMR	**Ekimchan**	**9.51**	**350**	⇑*e*P	**Pn**	**12 06 19.6**	**-0.6**
EKMR				AMB	AMB	12 06 20.9	
	comp=Z,13nm,0.9s						
BSO1	**Boso 1**	**9.95**	**154**	P	Pn	12 06 21.6	-3.6
NKL	**Nikolayevsk**	**9.97**	**18**	⇑*i*P	**Pn**	**12 06 23.1**	**-2.5**
NKL				AMB	AMB	12 06 24.0	
	comp=Z,60nm,1.0s						
NKL				AMB	AMB	12 06 24.0	
	comp=Z,17nm,1.0s						
NKL				AMB	AMB	12 06 24.0	
	comp=Z,140nm,1.0s						
NKL				*e*S	**S**	**12 08 14.0**	**-4.2**
JWZ	**Kozaga**	**10.20**	**180**	P	**Pn**	**12 06 27.3**	**-1.5**
JTU	**Tsushima**	**10.43**	**210**	P	**P**	**12 06 32.3**	**-0.4**
OKH	**Okha**	**10.90**	**23**	*e*P	**P**	**12 06 38.2**	**+0.6**
OKH				*e*S	**S**	**12 08 39.2**	**+0.3**
OKH				pmax	pmax		
	comp=Z,700nm,0.5s						
OKH				smax	smax		
	comp=N,700nm,6.0s						
OKH				smax	smax		
	comp=E,500nm,7.0s						
OKH	**Okha**	**10.90**	**23**	⇑*i*P	**P**	**12 06 38.2**	**+0.6**
OKH				⇑*i*P	**Pn**	**12 06 39.5**	**+2.7**
OKH				AMB	AMB	12 06 40.1	
	comp=E,300nm,0.6s						
OKH				*e*S	**S**	**12 08 39.2**	**+0.3**
OKH				A	A	12 08 40.2	
	comp=E,700nm,7.0s						
OKH				A	A	12 08 40.2	
	comp=E,500nm,7.0s						
JHJ	**Hachijo jima 2**	**11.08**	**162**	P	Pn	12 06 35.5	-3.6
	comp=E,24nm,0.3s,baz=249,slow=0.3,SNR=10.0						
JHJ				S	S	12 08 32.0	-11
	comp=E,32nm,0.3s,baz=62,slow=23,SNR=9.9						
JHJ2	**Mitsune**	**11.09**	**162**	P	Pn	12 06 35.1	-4.3
JHJ2				*e*S	S	12 08 33.0	-11
JTO	**Tosashimizu**	**11.11**	**193**	P	**Pn**	**12 06 39.6**	**+0.1**
JNU	**Nakatsue**	**11.26**	**201**	*e*Pn	**P**	**12 06 42.0**	**0.0**
JNU	**Nakatsue**	**11.26**	**201**	P	**P**	**12 06 41.8**	**-0.3**
	comp=E,1.9nm,0.3s,baz=33,slow=9.6,SNR=46						
ZEA	**Zeya**	**11.44**	**334**	⇓*i*P	**P**	**12 06 43.9**	**+0.3**
ZEA				⇓*i*P	**P**	**12 06 43.9**	**+0.3**
ZEA				AMB	AMB	12 06 45.0	
	comp=E,410nm,1.2s						
ZEA				AMB	AMB	12 06 45.0	
	comp=E,290nm,1.4s						
ZEA				*e*S	**S**	**12 08 49.2**	**-1.8**
ZEA				A	A	12 08 52.2	
	comp=E,400nm,5.0s						
ZEA				A	A	12 08 52.2	
	comp=E,600nm,5.0s						
DL2	**Dalian**	**11.64**	**250**	⇑P	**P**	**12 06 47.5**	**+1.5**
DL2				S	**S**	**12 08 56.5**	**+0.8**
DL2				pmax	pmax		
	comp=Z,130nm,0.7s						
DL2				pmax	pmax		
	comp=Z,40nm,5.1s						
KROS	**Kirovskiy**	**12.12**	**335**	⇓*i*P	**P**	**12 06 50.7**	**-0.5**
KROS				AMB	AMB	12 06 52.7	
	comp=Z,44nm,0.7s						
KROS				AMB	AMB	12 06 52.7	
	comp=Z,21nm,0.7s						
KROS				AMB	AMB	12 06 52.7	
	comp=Z,54nm,0.7s						
HIA	**Hailar**	**12.30**	**302**	*e*Pn	**Pn**	**12 06 53.8**	**+0.2**
HIA	**Hailar**	**12.30**	**302**	*i* P	**P**	**12 06 52.9**	**-0.4**
JSJ	**Shimokoshiki**	**12.95**	**203**	P	**P**	**12 07 00.5**	**-0.1**
CLNS	**Chul'man**	**14.79**	**336**	*e*P	**P**	**12 07 21.2**	**+0.7**
CLNS				*e*S	**S**	**12 10 05.1**	**+5.2**
CLNS				pmax	pmax		
	comp=N,54nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,74nm,0.9s						
CLNS				pmax	pmax		
	comp=E,14nm,1.1s						
CLNS				smax	smax		
	comp=N,141nm,12.3s						
CLNS				smax	smax		
	comp=E,156nm,14.9s						
CLNS	**Chul'man**	**14.79**	**336**	*e*P	**P**	**12 07 21.2**	**+0.7**
BJI	**Beijing**	**15.01**	**262**	P	**P**	**12 07 23.3**	**+0.2**
BJI				S	**S**	**12 10 03.5**	**-1.2**
BJI				pmax	pmax		
	comp=Z,58nm,0.8s						
BJI				pmax	pmax		
	comp=Z,94nm,3.7s						
BJT	**Baijiatuau**	**15.03**	**262**	*e*P	**P**	**12 07 22.3**	**-0.9**
SKR	**Severo-Kuril's**	**15.47**	**56**	*e*P	**P**	**12 07 27.5**	**-0.5**
SKR				AMB	AMB	12 07 28.2	
	comp=Z,110nm,0.7s						
OKHT	**Okhotsk**	**16.30**	**14**	*e*P	**P**	**12 07 36.8**	**0.0**
PEA0B	**Petropavlovsk-**	**17.27**	**49**	*e*P	**P**	**12 07 47.5**	**+0.1**
PETK	**Petropavlovsk-**	**17.27**	**49**	P	**P**	**12 07 46.8**	**-0.6**
PETK	**Petropavlovsk-**	**17.27**	**49**	P	**P**	**12 07 46.8**	**-0.6**
PETK				PcP	**PcP**	**12 12 09.2**	**-1.4**
PETK	**Petropavlovsk-**	**17.27**	**49**	P	**P**	**12 07 46.8**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=213,slow=7.0,SNR=45						
PETK				PcP	**PcP**	**12 12 09.2**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=298,slow=9.3,SNR=3.2						
NJ2	**Nanjing**	**17.66**	**234**	*e*P	**P**	**12 07 48.5**	**-3.3**
NJ2				sP	sP	12 09 10.0	-16
NJ2				S	S	12 10 44.5	-13
NJ2				PcP	**PcP**	**12 12 15.3**	**+3.7**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,120nm,5.6s						
NJ2				LR	LR		
	comp=N,100nm,26.8s						
NJ2				LR	LR		
	comp=E,130nm,20.5s						
NJ2				LR	LR		
	comp=Z,100nm,20.0s						
PET	**Petropavlovsk**	**17.77**	**50**	*e*P	**P**	**12 07 52.1**	**-0.6**
PET	**Petropavlovsk**	**17.77**	**50**	*e*P	**P**	**12 07 52.1**	**-0.6**
YAK	**Yakutsk**	**18.66**	**351**	*e*P	**P**	**12 07 57.7**	**-4.3**
YAK				*e*S	**S**	**12 11 12.2**	**-3.7**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK				smax	smax		
	comp=N,216nm,1.6s						
YAK				smax	smax		
	comp=E,71nm,1.5s						
ULN	**Ulaanbaatar**	**20.34**	**292**	*e*P	**P**	**12 08 18.6**	**

comp=Z,3.0nm,0.7s
HVS Khovu-Aksy 29.03 300*c i*P P 12 09 36.6 -0.8
HVS pmax pmax
comp=Z,51nm,1.0s
HVS Khovu-Aksy 29.03 300 *i* P P 12 09 36.6 -0.8
BILL Bilibino 29.17 23*c i*P P 12 09 37.7 -0.5
BILL pmax pmax
comp=Z,11nm,1.0s
BILL Bilibino 29.17 23 *e*P P 12 09 37.9 -0.3
comp=Z,5.0nm,0.5s
ZAA0 Zalesovo Array 34.31 306 *e*P P 12 10 21.8 -1.1
ZALV Zalesovo Beam 34.31 306 *i*P P 12 10 21.7 -1.2
ZALV pmax pmax
comp=Z,22nm,0.5s
ZALV Zalesovo Beam 34.31 306 P P 12 10 21.8 -1.1
ZALV PcP **PcP** 12 12 49.9 -0.1
ZALV ScP **ScP** 12 16 00.7 -0.5
ZALV Zalesovo Beam 34.31 306 P P
comp=Z,22nm,0.5s,baz=83,slow=8.8,SNR=101
ZALV PcP **PcP** 12 12 49.9 -0.1
comp=Z,4.7nm,0.5s,baz=94,slow=2.4,SNR=11
ZALV ScP **ScP** 12 16 00.7 -0.5
comp=Z,5.7nm,0.4s,baz=88,slow=3.5,SNR=22
NVS Novosibirsk 35.18 307⇓*i*P P 12 10 29.0 -1.2
NVS pmax pmax
comp=N,2.0nm,0.7s
NVS pmax pmax
comp=E,7.0nm,0.7s
NVS pmax pmax
comp=Z,10.0nm,0.7s
NVS Novosibirsk 35.18 307 *i*P P 12 10 29.0 -1.2
MK31 Makanchi Array 37.12 294*ce*P P 12 10 45.6 -1.1
MK31 pmax pmax
comp=Z,17nm,0.5s
MK31 Makanchi Array 37.12 294 *e*P P 12 10 45.9 -0.8
MKAR Makanchi Array 37.12 294*ce*P P 12 10 45.9 -0.8
MKAR pmax pmax
comp=Z,13nm,0.6s
MKAR Makanchi Array 37.12 294 *e*P P 12 10 46.0 -0.8
MKAR PcP **PcP** 12 12 58.2 -0.3
MKAR ScP **ScP** 12 16 10.8 -0.9
MKAR *e*ScP **S** 12 16 11.2 +4.6
MKAR Makanchi Array 37.12 294 P P 12 10 45.9 -0.8
comp=Z,13nm,0.6s,baz=84,slow=9.7,SNR=145
MKAR PcP **PcP** 12 12 58.2 -0.3
comp=Z,1.1nm,0.5s,baz=80,slow=4.0,SNR=7.4
MKAR ScP **ScP** 12 16 10.8 -0.9
comp=Z,1.6nm,0.6s,baz=69,slow=5.1,SNR=7.8
KURK Kurchatov 38.54 301*d i*P P 12 10 57.2 -1.1
KURK pmax pmax
comp=Z,34nm,1.0s
KURK Kurchatov 38.54 301 *e*P P 12 10 57.3 -1.1
comp=Z,33nm,1.0s
KURK PcP **PcP** 12 13 02.8 -0.1
KURK ScP **ScP** 12 16 16.4 -0.6
KURK Kurchatov 38.54 301 P P 12 10 57.6 -0.8
SNR=16
KURK Kurchatov 38.54 301 *i* P P 12 10 57.2 -1.1
KURBB Kurchatov Arra 38.62 301 P P 12 10 57.9 -1.1
comp=Z,17nm,0.6s,baz=80,slow=8.8,SNR=93
KURBB PcP **PcP** 12 13 02.8 -0.3
comp=Z,2.4nm,0.8s,baz=82,slow=3.6,SNR=5.2
KURBB ScP **ScP** 12 16 16.4 -0.9
comp=Z,0.9nm,0.6s,baz=87,slow=4.0,SNR=7.5
CMAR Chiang Mai Arr 39.84 242 P P 12 11 07.5 -1.9
CMAR Chiang Mai Arr 39.84 242 P P 12 11 07.5 -1.9
comp=Z,0.5nm,0.3s,baz=36,slow=4.8,SNR=3.2
KKM Kota Kinabalu 41.28 210 *e*P P 12 11 18.3 -2.9
TAPN Taplejung 41.74 263 *e*P P 12 11 25.0 0.0
comp=Z,25nm,0.5s
ODAN Odare 42.26 263 *e*P P 12 11 29.1 0.0
comp=Z,19nm,0.5s
GUN Gumba 42.73 265 *e*P P 12 11 32.1 -0.9
comp=Z,72nm,0.5s
RAMN Ramite 42.77 264 *e*P P 12 11 32.4 -0.8
comp=Z,49nm,0.7s
TKM2 Tokmak 2 42.88 291 *i*P P 12 11 33.7 -0.2
TKM2 pmax pmax
comp=Z,43nm,0.7s
TKM2 Tokmak 2 42.88 291 *e*P P 12 11 33.9 0.0
comp=Z,47nm,0.8s
TKM2 *e*ScP **ScP** 12 16 33.2 -1.4
TKM2 Tokmak 2 42.88 291 P P 12 11 34.0 +0.1
SNR=66
BVA0 Borovoye Array 42.96 306 *i*P P 12 11 33.6 -0.4
BVAR Borovoye Array 42.96 306 P P 12 11 33.7 -0.3
BVAR 12 13 16.4
BVAR Borovoye Array 42.96 306 P P 12 11 33.7 -0.3
BVAR PcP **PcP** 12 13 16.4 -0.9
BVAR ScP **ScP** 12 16 33.7 -0.8
BVAR Borovoye Array 42.96 306 P P 12 11 33.7 -0.3
comp=Z,26nm,0.6s,baz=71,slow=8.1,SNR=95
BVAR PcP **PcP** 12 13 16.4 -0.9
comp=Z,2.2nm,0.5s,baz=66,slow=3.3,SNR=3.8
BVAR ScP **ScP** 12 16 33.7 -0.8
comp=Z,1.3nm,0.5s,baz=76,slow=6.1,SNR=4.2
BRVK Borovoye 43.01 306*d i*P P 12 11 34.1 -0.3
BRVK pmax pmax
comp=Z,26nm,1.0s
BRVK Borovoye 43.01 306 *e*P P 12 11 34.2 -0.3
comp=Z,22nm,0.7s
BRVK Borovoye 43.01 306 P P 12 11 34.5 0.0
SNR=12
KKN Kakani 43.24 266 *e*P P 12 11 36.3 -0.6
comp=Z,56nm,0.6s
PKI Pulchoki 43.27 265 *e*P P 12 11 36.2 -1.1
comp=Z,36nm,0.6s
PKIN Phulchoki 43.27 265 *e*P P 12 11 36.4 -0.8
comp=Z,38nm,0.7s
KBK Karagaybulak 43.42 291 *i*P P 12 11 38.1 0.0
KBK Karagaybulak 43.42 291 P P 12 11 38.2 0.0
SNR=36
KZA Kyzart 43.45 290 *i*P P 12 11 39.0 +0.4
KZA Kyzart 43.45 290 P P 12 11 39.0 +0.4
SNR=16
DMN Daman 43.47 266 *e*P P 12 11 37.7 -1.0
comp=Z,33nm,0.6s
USP Ospenovka 43.49 292 *i*P P 12 11 38.1 -0.3
USP Ospenovka 43.49 292 P P 12 11 38.1 -0.3
SNR=6.5
AAK Ala-Archa 43.74 291 *e*P P 12 11 40.0 -0.6
AAK Ala-Archa 43.74 291 *e*P P 12 11 40.0 -0.6
comp=Z,2.4nm,0.9s
AAK ScP **ScP** 12 16 37.5 -0.6
AAK Ala-Archa 43.74 291 P P 12 11 40.5 -0.1
SNR=6.8
AAK Ala-Archa 43.74 291 P P 12 11 40.2 -0.4
SNR=8.4
AAK Ala-Archa 43.74 291 P P 12 11 39.9 -0.7
comp=Z,4.4nm,0.5s,baz=98,slow=5.7,SNR=20
AAK ScP **ScP** 12 16 37.5 -0.6
comp=Z,0.7nm,0.3s,baz=31,slow=5.8,SNR=3.8
KSH Kashi 44.01 286 *i*P P 12 11 46.5 +3.8
KSH *e*S **S** 12 17 53.5 +5.4
KSH pmax pmax
comp=Z,15nm,0.7s
KSH pmax pmax
comp=Z,260nm,5.1s
KSH LR LR
comp=N,140nm,3.7s
KSH LR LR
comp=E,61nm,4.3s
KSH LR LR
comp=Z,78nm,4.8s
DANN Dangsing 44.02 267 *e*P P 12 11 42.1 -1.0
comp=Z,409nm,0.6s
EKS2 Erkin-Say 44.22 291 *e*P P 12 11 43.9 -0.4
EKS2 pmax pmax
comp=Z,11nm,0.8s
EKS2 Erkin-Say 44.22 291 *e*P P 12 11 43.9 -0.4
comp=Z,11nm,0.8s
EKS2 *e*ScP **ScP** 12 16 39.5 -0.5
EKS2 Erkin-Say 44.22 291 P P 12 11 43.3 -1.0
SNR=13
PPLA Purkeypile 44.39 39 *e*P P 12 11 46.9 +1.5
comp=Z,10nm,0.8s
PPLA *e*PP **PP** 12 13 37.2 +1.4
KOLN Koldanda 44.46 267 *e*P P 12 11 45.4 -1.1
comp=Z,70nm,0.7s
AML Almayashu 44.48 290 *i*P P 12 11 46.8 +0.1
AML Almayashu 44.48 290 P P 12 11 46.8 +0.1
SNR=13
RSO Redoubt South 44.58 42 *e*P P 12 11 48.1 +1.2
COLD Coldfoot 44.60 32 *e*P P 12 11 47.4 +0.7
comp=Z,6.0nm,0.8s
PYUN Piuthan 44.72 268 *e*P P 12 11 46.5 -2.0
comp=Z,89nm,0.7s
SPU Mount Spurr 44.77 41 *e*P P 12 11 49.6 +1.4
OHAK Old Harbor 45.05 47 *e*P P 12 11 50.2 -0.2
comp=Z,30nm,0.6s
TRF Thorofare Moun 45.14 38 *e*P P 12 11 51.5 +0.3
comp=Z,6.1nm,0.9s
KDAK Kodiak Island 45.27 46 *e*P P 12 11 52.5 +0.4
comp=Z,18nm,0.6s
MCK McKinley 45.68 37 *e*P P 12 11 56.5 +1.2
MCK pmax pmax
comp=Z,24nm,1.0s
MCK McKinley 45.68 37 *e*P P 12 11 56.5 +1.2
comp=Z,24nm,1.0s
MCK McKinley 45.68 37 *e*P P 12 11 56.5 +1.2
COLA College 45.92 35*c i*P P 12 11 57.9 +0.9
COLA pmax pmax
comp=Z,31nm,0.8s
COLA College 45.92 35 *e*P P 12 11 58.0 +1.0
comp=Z,41nm,0.8s
COLA College 45.92 35 *i*P P 12 11 57.9 +0.9
PMR Palmer 46.06 40 *e*P P 12 11 58.6 +0.5
PMR pmax pmax
comp=Z,32nm,1.4s
PMR Palmer 46.06 40 *e*P P 12 11 58.6 +0.5
comp=Z,32nm,1.4s
KK31 Karatay Array 46.23 293*ce*P P 12 11 59.0 -0.8
KK31 pmax pmax
comp=Z,7.0nm,0.5s
KKAR Karatay Array 46.23 293 *e*P P 12 11 59.3 -0.5
KKAR Karatay Array 46.23 293 *e*P P 12 11 59.2 -0.5
SEW Seward 46.27 42 *e*P P 12 12 00.4 +0.6
comp=Z,34nm,0.9s
ILAR Eielson Array 46.34 35 P P 12 12 00.6 +0.3
ILAR Eielson Array 46.34 35 P P 12 12 00.6 +0.3
ILAR Eielson Array 46.34 35 P P 12 12 00.6 +0.3
comp=Z,12nm,0.8s,baz=280,slow=5.9,SNR=179
SML Sawmill 46.38 40 *e*P P 12 12 02.1 +1.4
SML pmax pmax
comp=Z,7.0nm,0.7s
SML Sawmill 46.38 40 *e*P P 12 12 02.1 +1.4
comp=Z,6.5nm,0.7s
DIV Divide 47.74 40 *e*P P 12 12 12.6 +1.5
comp=Z,19nm,1.0s
KSM Kuching 47.78 215 *e*P P 12 12 13.9 +2.0
comp=Z,7.2nm,0.9s
DOT Dot Lake 47.81 36 *e*P P 12 12 11.7 0.0
comp=Z,33nm,0.8s
MENT Mentasta 48.16 37 *e*P P 12 12 15.3 +1.1
SOKR Solikamsk 48.39 318*d i*P P 12 12 16.1 +0.2
SOKR pmax pmax
comp=Z,20nm,0.8s
RAGM Ragged Mountai 48.47 41 *e*P P 12 12 17.9 +1.3
comp=Z,17nm,0.9s
ARU Arti 48.51 314*d i*P P 12 12 16.9 -0.1
ARU 12 13 32.3
ARU 12 14 09.2
ARU S **S** 12 18 52.1 +1.3
ARU pmax pmax
comp=Z,80nm,1.2s
ARU Arti 48.51 314 *i* P P 12 12 16.9 -0.1
EGAK Eagle 48.72 34 *e*P P 12 12 19.0 +0.6
comp=Z,22nm,1.1s
EGAK *e*PcP **PcP** 12 13 35.8 -1.6
AB31 Akbulak array 50.41 305*ce*P P 12 12 30.9 -0.4
AB31 pmax pmax
comp=Z,21nm,0.4s
ABKAR Akbulak array 50.41 305 *e*P P 12 12 31.3 0.0
comp=Z,25nm,0.5s
AKTO Aktyubinsk 51.06 307 P P 12 12 35.6 -0.5
AKTO Aktyubinsk 51.06 307 P P 12 12 35.6 -0.5
AKTO ScP **ScP** 12 17 06.8 -1.8
AKTO Aktyubinsk 51.06 307 P P 12 12 35.6 -0.5
comp=Z,15nm,0.6s,baz=77,slow=8.0,SNR=66
AKTO ScP **ScP** 12 17 06.8 -1.8
comp=Z,1.3nm,0.5s,baz=66,slow=10.0,SNR=3.6
PNL Peninsula 51.21 40 *e*P P 12 12 38.5 +1.5
comp=Z,16nm,0.8s
SPITS Spitsbergen Ar 53.06 347 P P 12 12 50.2 0.0
SPITS Spitsbergen Ar 53.06 347 P P 12 12 50.2 0.0
comp=Z,1.0nm,0.3s,baz=45,slow=11,SNR=18
SKAG Skagway 53.19 40 *e*P P 12 12 53.2 +1.8
comp=Z,8.3nm,0.8s
KEV Kevo 55.59 336 *e*P P 12 13 10.3 +1.9
KEV Kevo 55.59 336 *ep* P 12 13 10.3 +1.9
KLMR Klimovskoe 55.77 324*d i*P P 12 13 09.5 -0.2
KLMR *e*S **S** 12 20 29.9 +1.4
KLMR pmax pmax
comp=Z,26nm,0.9s
DLBC Dease Lake 56.10 39 *e*P P 12 13 14.3 +2.1
ARCES ARCESS Array B 56.15 337 P P 12 13 12.1 -0.2
ARCES ARCESS Array B 56.15 337 P P 12 13 12.1 -0.2
ARCES ARCESS Array B 56.15 337 P P 12 13 12.1 -0.2
comp=Z,6.1nm,0.8s,baz=59,slow=8.9,SNR=16
JOF Joensuu 57.98 328 *e*P P 12 13 24.6 -0.5
JOF pmax pmax
comp=Z,8.0nm,0.4s
JOF Joensuu 57.98 328 *ep* P 12 13 24.6 -0.5
comp=Z,8.1nm,0.4s
MOS Moscow 59.30 319 *e*P P 12 13 34.1 -0.1
MOS pmax pmax
comp=Z,51nm,0.9s
MOS Moscow 59.30 319 *e*P P 12 13 34.1 -0.1
VRHR Novokhopersk 59.85 313 *e*P P 12 13 36.4 -1.6
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,30nm,0.9s
OBN Obninsk 60.15 319⇓*i*P P 12 13 39.8 -0.1
OBN pmax pmax
comp=Z,24nm,0.9s
OBN Obninsk 60.15 319 *i* P P 12 13 39.8 -0.1
YKA Yellowknife Ar 60.20 30 P P 12 13 40.3 +0.1
YKA ScP **ScP** 12 17 49.9 +1.3
YKA Yellowknife Ar 60.20 30 P P 12 13 40.3 +0.1
YKA Yellowknife Ar 60.20 30 P P 12 13 40.3 +0.1
comp=Z,3.2nm,0.7s,baz=308,slow=6.3,SNR=61
YKA ScP **ScP** 12 17 49.8 +1.3
comp=Z,0.1nm,0.6s,baz=304,slow=4.4,SNR=3.6
KAF Kangasniemi 60.34 329 *e*P P 12 13 40.6 -0.5
KAF pmax pmax
comp=Z,14nm,0.5s
KAF Kangasniemi 60.34 329 *ep* P 12 13 40.6 -0.5
comp=Z,14nm,0.5s
FINES FINESS Array B 60.84 329 P P 12 13 44.1 -0.3
FINES FINESS Array B 60.84 329 P P 12 13 44.1 -0.3
comp=Z,21nm,0.6s,baz=50,slow=10,SNR=31
VSR Storozhevoye 61.07 314 *e*P P 12 13 45.7 -0.5
VSR pmax pmax
comp=N,9.0nm,0.6s
VSR pmax pmax
comp=E,6.0nm,0.6s
VSR pmax pmax
comp=Z,30nm,0.6s
VORD Divnogorie 61.15 314 *e*P P 12 13 46.2 -0.5
VORD pmax pmax
comp=E,6.0nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s
VORD pmax pmax
comp=N,2.0nm,0.3s
FITZ Fitzroy Crossi 62.23 191 P P 12 13 53.7 -0.5
FITZ Fitzroy Crossi 62.23 191 P P 12 13 53.7 -0.5
comp=N,1.2nm,0.7s,baz=346,slow=4.2,SNR=3.2
VSU Vasula 62.46 326 *e*P P 12 13 54.9 -0.3
VSU pmax pmax
comp=Z,17nm,0.7s
KIV Kislovodsk 63.32 306*d i*P P 12 14 01.7 +0.4
KIV pmax pmax
comp=Z,59nm,1.0s
KIV Kislovodsk 63.32 306 *i* P P 12 14 01.7 +0.4
KBZ Khabaz 63.33 306 P P 12 14 01.4 +0.3
KBZ Khabaz 63.33 306 P P 12 14 01.4 +0.3
KBZ Khabaz 63.33 306 P P 12 14 01.4 +0.3
comp=Z,11nm,0.7s,baz=23,slow=4.8,SNR=38
WRA Warramunga Arr 63.39 181 P P 12 14 01.1 -0.6
WRA pP **pP** 12 15 20.4 +3.3
WRA sP **sP** 12 15 55.3 +0.8
WRA Warramunga Arr 63.39 181 P P 12 14 01.1 -0.6
comp=Z,0.8nm,0.7s,baz=11,slow=6.9,SNR=12
WRA pP **pP** 12 15 20.4 +3.3
comp=Z,0.4nm,0.6s,baz=356,slow=7.6,SNR=2.1
WRA sP **sP** 12 15 55.3 +0.8
comp=Z,0.4nm,0.6s,baz=5.7,slow=7.0,SNR=1.9
IZAR Zarasai 64.42 324 *e*P P 12 14 08.1 +0.2
IZAR AMB AMB 12 14 09.1
comp=Z,9.1nm,0.9s
IDID Didziasalis 64.49 323 *e*P P 12 14 08.5 +0.1
IDID AMB AMB 12 14 09.7
comp=Z,10nm,1.1s
ISAL Salakas 64.59 324 *e*P P 12 14 09.2 +0.1
ISAL AMB AMB 12 14 10.3
comp=Z,16nm,1.1s
IIGN Ignalina 64.69 323 *e*P P 12 14 09.9 +0.2
IIGN AMB AMB 12 14 11.0
comp=Z,16nm,0.6s
NACGM Naroch 64.74 323 *e* P 12 14 08.0 -2.1
ANN Anapa 65.82 309 *e*P P 12 14 15.3 -1.8
ANN *e* 12 14 43.2
ANN *e**PP **pP** 12 15 32.1 -0.9
ANN *e*S **S** 12 22 33.1 -2.1
ANN *e*SS **SS** 12 26 55.5 -1.0
ANN pmax pmax
comp=Z,47nm,1.4s
HFS Hagfors 66.16 332 P P 12 14 18.4 -0.6
HFS Hagfors 66.16 332 P P 12 14 18.4 -0.6
HFS Hagfors 66.16 332 P P 12 14 18.4 -0.6
comp=Z,5.6nm,0.6s,baz=52,slow=5.2,SNR=21
NB2 NORSAR Subarra 66.29 334 P P 12 14 19.1 -0.7
comp=Z,7.7nm,0.7s,baz=40,slow=6.2
NOA NORSAR Array B 66.29 334 P P 12 14 19.4 -0.4
NOA PP **PP** 12 16 50.0 -0.3
NOA NORSAR Array B 66.29 334 P P 12 14 19.4 -0.4
comp=Z,7.6nm,0.8s,baz=39,slow=6.2,SNR=32
NOA PP **PP** 12 16 50.0 -0.3
comp=Z,0.7nm,0.7s,baz=46,slow=7.8,SNR=3.2
AKASG Malin Array Be 66.36 318 P P 12 14 20.0 -0.4
AKASG Malin Array Be 66.36 318 P P 12 14 20.0 -0.4
AKASG Malin Array Be 66.36 318 P P 12 14 20.0 -0.4
comp=Z,7.7nm,0.4s,baz=46,slow=6.5,SNR=32
KIEV Kiev 66.37 318*d i*P P 12 14 19.7 -0.8
KIEV Kiev 66.37 318 *e*P P 12 14 20.0 -0.5
comp=Z,18nm,0.8s
BSY Bisya 66.54 280 P P 12 14 22.8 +0.7
SNR=8.1
ASUD Al Ashush, Dub 66.69 282 P P 12 14 23.0 0.0
SNR=5.4
LON Longmire 66.88 47 *e*P P 12 14 24.5 +0.7
LON pmax pmax
comp=Z,3.0nm,0.8s
LON Longmire 66.88 47 *e*P P 12 14 24.5 +0.7
comp=Z,2.9nm,0.8s
ASAR Alice Springs 67.10 182 P P 12 14 25.4 +0.1
ASAR Alice Springs 67.10 182 P P 12 14 25.4 +0.1
comp=Z,1.0nm,0.7s,baz=355,slow=6.0,SNR=4.0
SIM Simferopol' 67.56 311 *e*P P 12 14 28.0 0.0
SIM pmax pmax
comp=Z,23nm,0.6s
NEW Newport 68.30 43 *e*P P 12 14 33.8 +1.2
comp=Z,5.6nm,0.8s
NEW Newport 68.30 43 *e*P P 12 14 33.8 +1.2
NEW Newport 68.30 43 ⇓P P 12 14 33.1 +0.5
baz=68
B12A Libby 68.92 43 ⇑P P 12 14 36.9 +0.5
baz=69
MIB Mutribah 68.99 291 *e*P P 12 14 35.8 -1.2
MIB AMb AMB 12 14 37.1
comp=Z,72nm,0.8s
C11A Tepee Creek (N 69.02 43 ⇓P P 12 14 37.7 +0.7
baz=69
A13A Flathead Natio 69.17 42 ⇑P P 12 14 38.7 +0.7
baz=69
RDF Al-Radifah 69.40 291 *e*P P 12 14 38.6 -0.9
RDF AMb AMB 12 14 40.1
comp=Z,62nm,0.9s
NAY Al-Naaiem 69.40 291 *e*P P 12 14 38.1 -1.5
NAY AMb AMB 12 14 39.5
comp=Z,19nm,0.8s
RST Umm Al-Ruwaisa 69.41 291 *e*P P 12 14 38.0 -1.6
RST AMb AMB 12 14 39.7
comp=Z,413nm,0.9s
LVV L'vov 69.42 320 *i*P P 12 14 38.9 -0.4
B13A Whitefish 69.53 42 ⇑P P 12 14 41.3 +1.1
baz=69,SNR=6.8
A14A Double T Ranch 69.62 41 ⇓P P 12 14 41.5 +0.7
baz=69,SNR=11
YBH Yreka Blue Hor 69.63 51 *e*P P 12 14 42.3 +1.4
comp=Z,5.9nm,1.2s
BSMT Bassoo Peak 69.73 43 *e*P P 12 14 42.7 +1.2
BLMT Blacktail Moun 69.83 42 *e*P P 12 14 43.8 +1.6
A15A Johnson Ranch, 69.94 41 ⇑P P 12 14 43.0 +0.3
baz=70,SNR=7.8
C13A Hot Springs 69.96 43 ⇑P P 12 14 43.8 +1.1
baz=70,SNR=14
D12A Red Ives Fores 70.00 43 ⇓P P 12 14 43.5 +0.4
baz=70
JTMT Jette 70.05 42 *e*P P 12 14 44.7 +1.4
YBMT Yellow Bay 70.10 42 *e*P P 12 14 45.0 +1.3
comp=Z,3.2nm,0.9s
B14A Marquette Ranc 70.11 41 ⇑P P 12 14 44.7 +1.0
baz=70,SNR=8.9
KWP Kalwaria Pacla 70.16 320⇑P P 12 14 44.9 +1.0
KWP Kalwaria Pacla 70.16 320⇑*i*P P 12 14 44.9 +1.0
SWMT Swartz Lake 70.35 42 *e*P P 12 14 46.4 +1.2
BUR08 Bucovina Ar. S 70.37 318 *e*P P 12 14 45.4 +0.2
BURAR Bucovina Array 70.39 318⇑*i*P P 12 14 46.0 +0.7
D13A Huson 70.42 43 ⇓P P 12 14 46.3 +0.8
baz=70,SNR=10
TESR Tescani 70.44 316⇑*i*P P 12 14 45.5 0.0
B15A Bradely Ranch, 70.49 41 ⇓P P 12 14 46.7 +0.8
baz=70,SNR=37
BMO Blue Mountains 70.50 46 *e*P P 12 14 47.0 +0.9
comp=Z,2.1nm,0.4s
CFR Carcaliu 70.59 314 ⇓P P 12 14 46.5 +0.1
CFR Carcaliu 70.59 314⇓*i*P P 12 14 46.5 +0.1
SLMT Seeley Lake 70.79 42 *e*P P 12 14 49.0 +1.2
B16A M & M Farms, S 70.82 41 ⇑P P 12 14 48.4 +0.4
baz=71,SNR=12
VRI Vrincioaia 70.84 316⇑P P 12 14 48.3 +0.3
VRI Vrincioaia 70.84 316⇑*i*P P 12 14 48.3 +0.3
C15A Salmond Ranch, 70.84 42 ⇑P P 12 14 49.3 +1.1
baz=71,SNR=20
MSO Missoula 70.86 43 *e*P P 12 14 48.8 +0.6
comp=Z,5.6nm,1.1s
MSO Missoula 70.86 43 ⇓P P 12 14 48.8 +0.6
baz=71,SNR=6.2
KOLS Kolonicke sedl 70.86 320 *e*P P 12 14 48.4 +0.4
KOLS pmax pmax
comp=Z,5.0nm,0.7s
KOLS Kolonicke sedl 70.86 320 *e*P P 12 14 48.4 +0.4
MOD Modoc 70.87 50 *e*P P 12 14 49.5 +1.1
comp=Z,8.7nm,1.0s
PLOR Plostina 70.89 316⇑P P 12 14 48.9 +0.6
PLOR Plostina 70.89 316⇑*i*P P 12 14 48.9 +0.6
D14A Greenough 70.89 43 ⇑P P 12 14 49.0 +0.6
baz=71,SNR=19
A17A Triple J Farms 70.92 40 ⇓P P 12 14 49.1 +0.6
baz=71,SNR=15
TIRR Tirgusor 70.94 314⇑P P 12 14 48.9 +0.4
F12A Elk City 70.94 44 ⇑P P 12 14 49.5 +0.8
baz=71,SNR=25
STHS Stebnicka Huta 70.99 321 *e*P P 12 14 49.7 +0.9
STHS pmax pmax
comp=Z,8.0nm,0.6s
STHS Stebnicka Huta 70.99 321 *e*P P 12 14 49.6 +0.8
E13A Victor 71.00 43 ⇑P P 12 14 49.2 +0.2
baz=71
OJC Ojcow 71.06 322⇓*i*P P 12 14 49.7 +0.5
OJC Ojcow 71.06 322 *e*P P 12 14 49.6 +0.5
comp=Z,41nm,0.8s
OJC Ojcow 71.06 322 *i* P P 12 14 49.7 +0.5
CHMT Chamberlain Mo 71.13 43 *e*P P 12 14 50.2 +0.2
BR131 Keskin Array S 71.23 307 *e*P P 12 14 50.5 0.0
comp=Z,4.4nm,0.6s
BRTR Keskin Array B 71.23 307 P P 12 14 50.6 0.0
BRTR Keskin Array B 71.23 307 P P 12 14 50.6 0.0
comp=Z,6.8nm,0.7s,baz=71,slow=3.8,SNR=28
C16A Fuhringer Ranc 71.24 41 ⇑P P 12 14 51.2 +0.8
baz=71,SNR=8.6
CRVS Cervenica-Dubn 71.26 321 *e*P P 12 14 49.2 -1.2
CRVS pmax pmax
comp=Z,6.0nm,0.9s
CRVS Cervenica-Dubn 71.26 321 *e*P P 12 14 49.2 -1.2
TRPA Tarpa 71.31 319⇓*i*P P 12 14 51.5 +0.8
TRPA Tarpa 71.31 319⇓*e* P 12 14 51.4 +0.8
A18A Metzger Ranch, 71.33 39 ⇑P P 12 14 51.4 +0.5
baz=71
G12A Big Creek, Yel 71.34 45 ⇓P P 12 14 51.4 +0.3
baz=71,SNR=8.0

B17A **L&G Farms, Che** 71.34 40 ⇑P P 12 14 51.7 +0.7
baz=71,SNR=9.7
E14A **Clinton** 71.36 43 ⇓P P 12 14 51.7 +0.4
baz=71,SNR=7.1
F13A **Darby** 71.38 44 ⇓P P 12 14 51.5 +0.2
baz=71
D15A **Lincoln** 71.40 42 ⇑P P 12 14 52.1 +0.6
baz=71
NIE **Niedzica** 71.41 322 eP P 12 14 52.4 +1.1
NIE **Niedzica** 71.41 322 eP P 12 14 52.4 +1.1
WVOR **Wild Horse Val** 71.43 49 eP P 12 14 52.4 +0.7
WVOR pmax pmax
comp=Z,4.0nm,0.9s
WVOR **Wild Horse Val** 71.43 49 eP P 12 14 52.4 +0.7
comp=Z,3.8nm,0.9s
MLR **Muntele Rosu** 71.50 316 P P 12 14 51.7 -0.3
MLR **Muntele Rosu** 71.50 316 ⇓iP P 12 14 53.1 +1.1
MLR **Muntele Rosu** 71.50 316 P P 12 14 51.7 -0.3
comp=Z,0.4nm,0.3s,baz=101,slow=2.4,SNR=4.7
ANTO **Ankara** 71.62 308 eP P 12 14 53.6 +0.8
ANTO pmax pmax
comp=Z,18nm,0.9s
ANTO **Ankara** 71.62 308 eP P 12 14 53.6 +0.8
comp=Z,18nm,0.9s
B18A **Beardsley Farm** 71.74 40 ⇓P P 12 14 54.1 +0.8
baz=72,SNR=15
E15A **Deer Lodge** 71.78 43 ⇓P P 12 14 54.3 +0.6
baz=72,SNR=6.4
C17A **Wharram Farm,** 71.83 41 ⇑P P 12 14 54.2 +0.3
baz=72
A19A **Klindworth Far** 71.83 39 ⇑P P 12 14 54.6 +0.8
baz=72,SNR=5.9
F14A **Wisdom** 71.85 43 ⇓P P 12 14 54.4 +0.2
baz=72
D16A **Dana Ranch, Ca** 71.88 42 ⇓P P 12 14 55.1 +0.8
baz=72,SNR=7.9
G13A **Cobalt** 71.92 44 ⇓P P 12 14 54.6 +0.1
baz=72
HRY **Holter Researc** 71.97 42 eP P 12 14 56.2 +1.4
H12A **Diamond D Ranc** 71.98 45 ⇓P P 12 14 55.6 +0.7
baz=72
VOIR 71.99 316 ⇑P P 12 14 55.5 +0.6
VOIR 71.99 316 ⇑iP P 12 14 55.5 +0.6
EGMT **Eagleton** 72.02 40 eP P 12 14 55.9 +0.9
comp=Z,18nm,0.8s
EGMT **Eagleton** 72.02 40 ⇓P P 12 14 55.8 +0.8
baz=72,SNR=12
OKC **Ostrava-Krasne** 72.06 323 eP P 12 14 56.1 +1.0
OKC **Ostrava-Krasne** 72.06 323 eP P 12 14 56.1 +1.0
B19A **Brinkman Farms** 72.08 39 ⇑P P 12 14 55.9 +0.6
baz=72
E16A **East Helena** 72.17 42 ⇓P P 12 14 57.1 +1.1
baz=72,SNR=11
DRGR 72.18 318 ⇑P P 12 14 56.5 +0.5
DRGR 72.18 318 ⇑iP P 12 14 56.5 +0.5
BEKR **Beckworth** 72.20 52 eP P 12 14 56.9 +0.6
comp=Z,4.1nm,0.8s
D17A **Six Diamond Ra** 72.20 41 ⇑P P 12 14 56.7 +0.5
baz=72,SNR=5.9
ARR **Arges** 72.24 316 ⇓iP P 12 14 57.6 +1.2
MFID **Camas Ranch** 72.26 47 eP P 12 14 57.6 +1.0
comp=Z,13nm,0.8s
MFID **Camas Ranch** 72.26 47 ⇑P P 12 14 57.4 +0.9
baz=72,SNR=16
F15A **Butte** 72.26 43 ⇑P P 12 14 57.4 +0.8
baz=72,SNR=8.6
LRM **Limekiln Ridge** 72.30 43 eP P 12 14 57.9 +1.0
I12A **Atlanta** 72.36 46 ⇓P P 12 14 58.2 +1.0
baz=72
MORC **Moravsky Berou** 72.37 323 ⇑P P 12 14 58.0 +1.0
MORC **Moravsky Berou** 72.37 323 eP P 12 14 57.2 +0.2
comp=Z,17nm,0.9s
MORC **Moravsky Berou** 72.37 323 ⇑iP P 12 14 58.0 +1.0
DPC **Dobruska-Polom** 72.47 324 eP P 12 14 58.5 +0.9
DPC pmax pmax
comp=Z,10.0nm,0.9s
DPC **Dobruska-Polom** 72.47 324 eP P 12 14 58.5 +0.9
comp=Z,10nm,0.9s
DPC **Dobruska-Polom** 72.47 324 eP P 12 14 58.4 +0.9
UPC **Upice** 72.48 324 eP P 12 14 58.1 +0.5
UPC **Upice** 72.48 324 eP P 12 14 58.1 +0.5
DLMT **Dillon** 72.55 43 eP P 12 14 59.5 +1.3
comp=Z,20nm,0.7s
C19A **Slack Wire Ran** 72.56 40 ⇑P P 12 14 59.1 +0.9
baz=72,SNR=7.3
D18A **Linhart Farms,** 72.59 41 ⇓P P 12 14 59.4 +0.9
baz=72,SNR=7.8
E17A **Martinsdale** 72.62 42 ⇑P P 12 14 59.9 +1.2
baz=72,SNR=24
PSZ **Piszkesteto** 72.69 321 eP P 12 15 00.0 +1.1
PSZ pmax pmax
comp=Z,14nm,1.0s
PSZ **Piszkesteto** 72.69 321 eP P 12 15 00.0 +1.1
comp=Z,14nm,1.0s
PSZ **Piszkesteto** 72.69 321 ⇓iP P 12 14 59.9 +1.1
PSZ **Piszkesteto** 72.69 321 ⇑e P 12 15 00.0 +1.1
H14A **Leadore** 72.69 44 ⇑P P 12 14 59.3 +0.1
baz=72
F16A **Kennard Place,** 72.73 43 ⇓P P 12 15 00.2 +1.0
baz=72,SNR=11
G15A **Dillon** 72.74 43 ⇑P P 12 15 00.4 +0.9
baz=73,SNR=32
VYHS **Vyhne** 72.75 322 eP P 12 15 00.0 +0.8
VYHS pmax pmax
comp=Z,4.0nm,0.9s
VYHS **Vyhne** 72.75 322 eP P 12 15 00.0 +0.8
I13A **Wildhorse Cree** 72.80 45 ⇓P P 12 15 01.1 +1.2
baz=73,SNR=29
MCMT **McKenzie Canyo** 72.80 44 eP P 12 15 00.7 +0.8
comp=Z,1.0nm,0.7s
BOZ **Bozeman (W)** 72.83 43 eP P 12 15 01.0 +1.1
BOZ pmax pmax
comp=Z,6.0nm,0.8s
BOZ **Bozeman (W)** 72.83 43 eP P 12 15 01.0 +1.1
comp=Z,6.0nm,0.8s
HLID **Hailey** 72.90 46 eP P 12 15 01.6 +1.3
comp=Z,2.8nm,0.8s
HLID **Hailey** 72.90 46 ⇓P P 12 15 01.4 +1.1
baz=73,SNR=5.5
WCN **Washoe City** 72.92 52 eP P 12 15 01.3 +0.7
WCN pmax pmax
comp=Z,5.0nm,0.9s
WCN **Washoe City** 72.92 52 eP P 12 15 01.3 +0.7
comp=Z,4.9nm,0.9s
B21A **Ellsworth Farm** 72.97 38 ⇓P P 12 15 01.1 +0.6
baz=73
E18A **Harlowton** 73.00 41 ⇓P P 12 15 01.9 +1.1
baz=73,SNR=8.4
A22A **Carney Farms,** 73.04 37 ⇑P P 12 15 01.1 +0.2
baz=73,SNR=5.9
D19A **Cripps Ranch,** 73.05 40 ⇑P P 12 15 01.9 +0.8
baz=73,SNR=5.2
C20A **Veseth Ranch,** 73.05 39 ⇓P P 12 15 01.8 +0.8
baz=73,SNR=10
H15A **Lima** 73.06 44 ⇓P P 12 15 01.9 +0.6
baz=73
BRG **Berggiesshubel** 73.06 326 eP P 12 15 01.3 +0.4
comp=Z,6.3nm,0.8s
BRG **Berggiesshubel** 73.06 326 eP P 12 15 01.1 +0.2
comp=Z,6.0nm,0.8s
BRG **Berggiesshubel** 73.06 326 eP P 12 15 01.3 +0.4
BRG pmax pmax
comp=Z,6.0nm,0.8s
PVCC **Panska Ves** 73.07 325 eP P 12 15 01.7 +0.7
PVCC **Panska Ves** 73.07 325 eP P 12 15 01.7 +0.7
CLL **Collm** 73.11 326 eP P 12 15 01.0 -0.3
comp=Z,13nm,0.7s
CLL **Collm** 73.11 326 ⇓iP P 12 15 00.9 -0.3
CLL pmax pmax
comp=Z,13nm,0.7s
CLL **Collm** 73.11 326 ⇓iP P 12 15 00.9 -0.3
comp=Z,13nm,0.7s
CLL **Collm** 73.11 326 iP P 12 15 00.9 -0.3
F17A **Fitzpatrick Pl** 73.11 42 ⇑P P 12 15 02.7 +1.2
baz=73,SNR=10
I14A **Mackay** 73.13 45 ⇓P P 12 15 03.0 +1.3
baz=73
VRAC **Vranov** 73.13 323 ⇑iP P 12 15 01.9 +0.5
J13A **Cove Ranch, Pi** 73.14 46 ⇑P P 12 15 03.0 +1.3
baz=73,SNR=16
C21A **Desert Coulee** 73.38 39 ⇑P P 12 15 03.4 +0.5
baz=73,SNR=5.8
CMB **Columbia Colle** 73.42 53 eP P 12 15 04.4 +1.1
CMB pmax pmax
comp=Z,12nm,1.1s
CMB **Columbia Colle** 73.42 53 eP P 12 15 04.4 +1.1
comp=Z,12nm,1.1s
D20A **Manuel Ranch,** 73.45 40 ⇑P P 12 15 04.2 +0.8
baz=73,SNR=6.8
PRU **Pruhonice** 73.49 325 eP P 12 15 04.2 +0.8
PRU **Pruhonice** 73.49 325 eP P 12 15 04.2 +0.8
G17A **Pierce Place,** 73.50 42 ⇓P P 12 15 05.1 +1.3
baz=73
B22A **Reddig Ranch S** 73.52 38 ⇑P P 12 15 04.1 +0.4
baz=73
J14A **Carey** 73.53 45 ⇓P P 12 15 05.5 +1.5
baz=73,SNR=15
BZS **Buzias** 73.55 318 ⇑P P 12 15 04.2 +0.3
BZS **Buzias** 73.55 318 ⇑iP P 12 15 04.2 +0.3
F18A **Big Timber** 73.57 41 ⇓P P 12 15 05.1 +0.9
baz=73,SNR=15
E19A **Rath Farm, Rou** 73.61 41 ⇑P P 12 15 05.3 +1.0
baz=73
TREC **Trest** 73.62 324 eP P 12 15 04.8 +0.6
TREC **Trest** 73.62 324 eP P 12 15 04.8 +0.6
H16A **Russell Place,** 73.69 43 ⇓P P 12 15 06.0 +1.1
baz=74,SNR=11
ZST **Bratislava** 73.75 322 eP P 12 15 05.0 +0.1
ZST pmax pmax
comp=Z,7.0nm,0.7s
ZST **Bratislava** 73.75 322 eP P 12 15 05.0 +0.1
B23A **Brockton** 73.84 37 ⇑P P 12 15 06.1 +0.6
baz=74,SNR=5.9
E20A **Meyer Farm, Mu** 73.88 40 ⇑P P 12 15 06.8 +0.9
baz=74,SNR=6.1
F19A **Roth Farm, Mol** 73.98 41 ⇓P P 12 15 07.3 +0.9
baz=74,SNR=8.8
C22A **Vida** 73.99 38 ⇑P P 12 15 06.8 +0.4
baz=74
D21A **La Casta Ranch** 73.99 39 ⇓P P 12 15 07.2 +0.7
baz=74
NKC **Novy Kostel** 74.16 326 eP P 12 15 07.9 +0.6
NKC **Novy Kostel** 74.16 326 eP P 12 15 07.9 +0.6
I16A **Newdale** 74.17 44 ⇓P P 12 15 09.3 +1.7
baz=74,SNR=14
MOX **Moxa** 74.18 327 eP P 12 15 07.5 +0.1
comp=Z,10.0nm,1.4s
MOX **Moxa** 74.18 327 eP P 12 15 07.5 +0.1
MOX pmax pmax
comp=Z,10.0nm,1.4s
MOX MLR MLR
comp=Z,300nm,20.1s
MOX **Moxa** 74.18 327 eP P 12 15 07.5 +0.1
LKWY **Lake** 74.21 43 eP P 12 15 10.7 +2.7
LKWY pmax pmax
comp=Z,5.0nm,0.8s
LKWY **Lake** 74.21 43 eP P 12 15 10.7 +2.7
comp=Z,5.5nm,0.8s
H17A **Grant Village** 74.25 43 ⇓P P 12 15 10.3 +2.1
baz=74,SNR=15
C23A **Lambert** 74.26 38 ⇑P P 12 15 08.7 +0.7
baz=74
D22A **Cohagen** 74.30 39 ⇑P P 12 15 09.0 +0.8
baz=74
NVAR **Mina Array Bea** 74.35 52 P P 12 15 09.9 +1.0
NVAR **Mina Array Bea** 74.35 52 P P 12 15 09.9 +1.0
comp=Z,8.9nm,0.7s,baz=300,slow=5.4,SNR=95
RLMT **Red Lodge** 74.36 42 eP P 12 15 09.7 +0.9
comp=Z,5.9nm,0.6s
F20A **Billings** 74.39 41 ⇑P P 12 15 09.5 +0.6
baz=74
IMW **Indian Meadow** 74.43 44 eP P 12 15 11.2 +1.9
comp=Z,7.9nm,0.8s
H18A **Shoshone NF, C** 74.49 42 ⇓P P 12 15 10.4 +0.8
baz=74
CONA **Conrad Observa** 74.50 323 ⇑iP P 12 15 08.5 -0.8
comp=Z,11nm,0.8s
DCID1 **Drake Creek** 74.52 44 eP P 12 15 12.2 +2.5
comp=Z,5.3nm,0.4s
KHC **Kasperske Hory** 74.55 325 eP P 12 15 10.1 +0.5
KHC **Kasperske Hory** 74.55 325 eP P 12 15 10.2 +0.5
comp=Z,10nm,0.8s
KHC **Kasperske Hory** 74.55 325 eP P 12 15 10.1 +0.5
KHC **Kasperske Hory** 74.55 325 eP P 12 15 10.1 +0.5
I17A **Pilgrim Ck.** 74.59 43 ⇑P P 12 15 11.7 +1.6
baz=74
MLAC **Mammoth Lakes** 74.59 53 ⇓P P 12 15 12.1 +1.8
baz=74
ROTZ **Rotzenmuhle** 74.62 326 eP P 12 15 10.7 +0.7
comp=Z,12nm,1.1s
MOOW **Moose Ponds** 74.63 44 eP P 12 15 12.0 +1.6
comp=Z,10nm,1.0s
RRI2 **Red Ridge** 74.63 44 eP P 12 15 12.5 +2.0
comp=Z,14nm,0.8s
TPAW **Teton Pass** 74.71 44 eP P 12 15 12.7 +1.8
comp=Z,18nm,1.5s
D23A **Lindsay** 74.72 38 ⇑P P 12 15 11.6 +0.9
baz=74
GEC2 **GERESS Array S** 74.72 325 eP P 12 15 10.7 +0.1
comp=Z,6.0nm,0.7s
GEC2 **GERESS Array S** 74.72 325 eP P 12 15 11.2 +0.5
GEC2 **GERESS Array S** 74.72 325 eP P 12 15 11.2 +0.5
GERES **GERESS Array B** 74.72 325 P P 12 15 10.2 -0.5
GERES **GERESS Array B** 74.72 325 P P 12 15 10.2 -0.5
comp=Z,4.0nm,0.6s,baz=42,slow=6.1,SNR=28
G20A **Brger** 74.79 41 ⇑P P 12 15 11.6 +0.5
baz=75
LOHW **Long Hollow** 74.80 44 eP P 12 15 13.0 +1.6
comp=Z,4.2nm,0.8s
H19A **Powell** 74.82 42 ⇓P P 12 15 12.4 +1.0
baz=75
WET **Wettzell** 74.83 325 eP P 12 15 11.7 +0.5
comp=Z,9.0nm,1.0s
WET **Wettzell** 74.83 325 eP P 12 15 11.7 +0.5
WET pmax pmax
comp=Z,9.0nm,1.0s
F21A **Absaloka Mine,** 74.86 40 ⇓P P 12 15 12.3 +0.9
baz=75
E22A **Miles City** 74.94 39 ⇓P P 12 15 12.9 +1.0
baz=75
VTS **Vitosha** 74.94 315 ⇓P P 12 15 12.5 +0.4
VTS **Vitosha** 74.94 315 ⇓iP P 12 15 12.5 +0.4
GRF **Grafenberg Arr** 75.08 326 eP P 12 15 13.3 +0.7
comp=Z,26nm,1.1s
GRF **Grafenberg Arr** 75.08 326 eP P 12 15 13.3 +0.7
GRF pmax pmax
comp=Z,26nm,1.1s
D24A **Glendive** 75.16 38 ⇑P P 12 15 14.0 +0.9
baz=75
AHID **Auburn Hatcher** 75.16 44 eP P 12 15 14.2 +0.8
comp=Z,3.4nm,0.7s
E23A **Ismay** 75.19 39 ⇓P P 12 15 14.2 +0.9
baz=75
BUG **Bochum--Univer** 75.20 330 eP P 12 15 13.2 +0.1
comp=Z,19nm,0.9s
G21A **Lodge Grass** 75.26 41 ⇑P P 12 15 14.5 +0.8
baz=75
I19A **Meeteetse** 75.28 42 ⇑P P 12 15 14.8 +0.7
baz=75
F22A **Rosebud** 75.29 40 ⇑P P 12 15 14.8 +0.9
baz=75
EKA **Eskdalemuir Ar** 75.31 337 P P 12 15 13.7 0.0
EKA **Eskdalemuir Ar** 75.31 337 P P 12 15 13.7 0.0
comp=Z,0.4nm,0.3s,baz=51,slow=6.0,SNR=7.6
STKA **Stephens Creek** 75.45 175 P P 12 15 15.4 +0.8
STKA **Stephens Creek** 75.45 175 P P 12 15 15.4 +0.8
comp=Z,0.9nm,0.3s,baz=351,slow=3.7,SNR=7.0
E24A **Baker** 75.59 38 ⇓P P 12 15 16.2 +0.6
baz=75
G22A **Birney** 75.70 40 ⇑P P 12 15 16.7 +0.4
baz=76
F23A **Volborg** 75.73 39 ⇑P P 12 15 16.7 +0.4
baz=76,SNR=7.1
TNS **Taunus Mts** 75.75 328 eP P 12 15 16.4 +0.1
comp=Z,40nm,2.0s
TNS **Taunus Mts** 75.75 328 eP P 12 15 16.4 +0.1
TNS pmax pmax
comp=Z,40nm,2.0s
HWUT **Hardware Ranch** 75.76 46 eP P 12 15 18.1 +1.3
comp=Z,17nm,1.2s
I20A **Worland** 75.77 42 ⇑P P 12 15 17.8 +1.1
baz=76,SNR=13
H21A **Big Horn, Sher** 75.79 41 ⇓P P 12 15 17.4 +0.6
baz=76
SOKA **Soboth** 75.81 322 ⇑iP P 12 15 16.9 0.0
comp=Z,17nm,0.9s
J19A **Crowheart** 75.82 43 ⇓P P 12 15 18.0 +0.9
baz=76,SNR=9.0
CWC **Cottonwood Cre** 75.85 53 ⇓P P 12 15 18.5 +1.2
baz=76
GRAC **Grapevine Rang** 75.87 52 ⇑P P 12 15 18.5 +1.2
baz=76,SNR=9.6
R11A **Troy Canyon, C** 75.93 50 ⇑P P 12 15 18.3 +0.5
baz=76
BW06 **Boulder Array** 75.94 44 eP P 12 15 18.1 +0.3
comp=Z,11nm,0.9s
PDAR **Pinedale Array** 75.94 44 P P 12 15 18.3 +0.5
PDAR **Pinedale Array** 75.94 44 P P 12 15 18.3 +0.5
comp=Z,12nm,0.8s,baz=327,slow=1.6,SNR=65
RJOB **Jochberg** 75.96 324 eP P 12 15 18.3 +0.7
comp=Z,14nm,0.8s
F24A **Ekalaka** 76.07 39 ⇑P P 12 15 18.7 +0.4
baz=76,SNR=6.9
DUG **Dugway** 76.13 47 eP P 12 15 20.3 +1.5
DUG pmax pmax
comp=Z,7.0nm,0.9s
DUG **Dugway** 76.13 47 eP P 12 15 20.3 +1.5
comp=Z,7.1nm,0.9s
DUG **Dugway** 76.13 47 ⇓P P 12 15 19.8 +1.0
baz=76,SNR=7.6
G23A **Biddle** 76.13 40 ⇓P P 12 15 19.3 +0.7
baz=76
ULM **Lac du Bonnet** 76.16 31 P P 12 15 17.9 -0.6
ULM **Lac du Bonnet** 76.16 31 P P 12 15 17.9 -0.6
comp=Z,2.8nm,0.4s,baz=328,slow=8.8,SNR=3.1
ISA **Isabella** 76.16 54 ⇓P P 12 15 19.1 +0.1
baz=76
J20A **Shoshoni** 76.23 42 ⇑P P 12 15 19.8 +0.5
baz=76
KBA **Koelnbreinsper** 76.24 324 ⇑iP P 12 15 19.7 +0.4
comp=Z,15nm,0.9s
K19A **Absolon Red Bu** 76.25 43 ⇓P P 12 15 19.7 +0.2
baz=76
SBC **Santa Barbara** 76.28 55 ⇑P P 12 15 21.2 +1.7
baz=76
I21A **Big Trails, Te** 76.28 42 ⇑P P 12 15 20.2 +0.6
baz=76,SNR=19
L18A **Fontenelle, Gr** 76.32 44 ⇓P P 12 15 20.7 +0.8
baz=76,SNR=11
M17A **Scullys Gap (B** 76.33 45 ⇑P P 12 15 20.9 +1.0
baz=76
MPMC **Manual Prospec** 76.46 53 ⇑P P 12 15 21.3 +0.5
baz=76,SNR=8.1
L19A **Farson** 76.53 44 ⇓P P 12 15 21.7 +0.6
baz=76,SNR=9.2
FURC **Furnace Creek,** 76.53 52 ⇑P P 12 15 21.8 +0.9
baz=76,SNR=9.3
J21A **Lysite** 76.55 42 ⇑P P 12 15 21.7 +0.6
baz=76
JLU **Jordanelle** 76.55 46 eP P 12 15 22.6 +1.3
comp=Z,2.7nm,0.8s
I22A **9 Mile Ranch,** 76.60 41 ⇑P P 12 15 21.9 +0.5
baz=76
STU **Stuttgart** 76.62 327 eP P 12 15 21.4 +0.2
comp=Z,24nm,1.2s
K20A **Yellowstone Ra** 76.62 43 ⇑P P 12 15 21.5 0.0
baz=76
LRMC **Laurel Mountai** 76.75 53 ⇑P P 12 15 23.0 +0.7
baz=77
DAU **Daniels Canyon** 76.79 46 eP P 12 15 24.2 +1.5
DAU **Daniels Canyon** 76.79 46 eP P 12 15 24.2 +1.5
H24A **Dirks Ranch, A** 76.86 39 ⇑P P 12 15 22.8 0.0
baz=77,SNR=5.4
MPU **Maple Canyon** 76.88 47 eP P 12 15 24.5 +1.4
comp=Z,5.8nm,0.8s
MOTA **Moosalm** 76.98 325 ⇑iP P 12 15 24.1 +0.7
comp=Z,11nm,0.9s
EDW2 **Edwards Air Fo** 76.99 54 ⇓P P 12 15 24.3 +0.7
baz=77,SNR=5.2
RETA **Reutte** 77.01 325 ⇓iP P 12 15 24.0 +0.5
comp=Z,10.0nm,0.9s
M19A **Rock Springs** 77.07 44 ⇑P P 12 15 24.3 +0.2
baz=77
L20A **Wamsutter** 77.11 43 ⇓P P 12 15 24.9 +0.6
baz=77,SNR=6.9
K21A **Alcova** 77.18 42 ⇓P P 12 15 25.1 +0.4
baz=77,SNR=16
SHOC **Shoshone** 77.27 52 ⇓P P 12 15 25.7 +0.7
baz=77
BFO **Black Forest** 77.32 327 eP P 12 15 25.2 +0.1
comp=Z,21nm,1.3s
BFO **Black Forest** 77.32 327 iP P 12 15 25.9 +0.8
BFO **Black Forest** 77.32 327 eP P 12 15 25.6 +0.6
GSC **Goldstone** 77.39 53 eP P 12 15 26.6 +0.8
GSC pmax pmax
comp=Z,5.0nm,0.8s
GSC **Goldstone** 77.39 53 eP P 12 15 26.6 +0.8
comp=Z,4.7nm,0.8s
GSC **Goldstone** 77.39 53 ⇓P P 12 15 26.6 +0.8
baz=77
K22A **Casper** 77.52 42 ⇑P P 12 15 27.0 +0.5
baz=77
DAVA **Damuels** 77.53 326 ⇑iP P 12 15 26.6 +0.2
comp=Z,12nm,0.8s
RSSD **Black Hills** 77.58 40 eP P 12 15 27.3 +0.4
RSSD pmax pmax
comp=Z,8.0nm,0.7s
RSSD **Black Hills** 77.58 40 eP P 12 15 27.3 +0.4
comp=Z,7.5nm,0.7s
L21A **Rawlins** 77.62 43 ⇓P P 12 15 27.4 +0.3
baz=77,SNR=5.8
BFSC **Mount Baldy Ra** 77.64 54 ⇑P P 12 15 27.6 +0.4
baz=78
CDF **Champ du Feu** 77.66 328 eP P 12 15 26.7 -0.4
comp=Z,6.9nm,0.6s
CDF **Champ du Feu** 77.66 328 eP P 12 15 26.7 -0.4
CDF pmax pmax
comp=Z,7.0nm,0.6s
CDF **Champ du Feu** 77.66 328 eP P 12 15 26.7 -0.4
comp=Z,6.9nm,0.6s
MVU **Marysvale** 77.67 48 eP P 12 15 29.0 +1.5
comp=Z,3.3nm,0.7s
MSU **Marysvale** 77.68 48 eP P 12 15 29.1 +1.6
MSU **Marysvale** 77.68 48 eP P 12 15 29.1 +1.6
TUQ **Turquoise Moun** 77.80 52 ⇑P P 12 15 29.0 +0.9
baz=78,SNR=5.6
M21A **Separation Pea** 77.89 43 ⇓P P 12 15 28.9 +0.3
baz=78,SNR=6.8
P18A **Preston Nutter** 77.89 46 ⇑P P 12 15 29.7 +0.9
baz=78,SNR=12
FUORN **Ofenpass-Fuorn** 77.91 325 eP P 12 15 29.3 +0.7
Q16A **Castle Valley** 77.93 47 ⇑P P 12 15 29.6 +0.7
baz=78
O19A **Miners Draw (B** 77.98 45 ⇑P P 12 15 29.7 +0.6
baz=78
SCI **San Clemente I** 77.99 56 ⇓P P 12 15 30.3 +1.3
baz=78
HEC **Hector,Ludlow** 78.00 53 ⇓P P 12 15 30.0 +0.9
baz=78
N20A **Spence Gulch,** 78.02 44 ⇓P P 12 15 30.0 +0.7
baz=78,SNR=9.8
BBRC **Big Bear Solar** 78.05 54 ⇓P P 12 15 30.3 +0.7
baz=78
SRU **San Rafael** 78.13 47 ⇑P P 12 15 30.5 +0.6
baz=78,SNR=7.8
PAGF **Fort de Pagny** 78.14 329 eP P 12 15 29.5 0.0
comp=Z,5.0nm,0.7s
PAGF **Fort de Pagny** 78.14 329 eP P 12 15 29.5 0.0
comp=Z,5.0nm,0.7s
L23A **Garrett** 78.32 42 ⇑P P 12 15 31.2 +0.2
baz=78
HAU **Haudompre** 78.35 328 eP P 12 15 30.1 -0.6
comp=Z,11nm,0.8s
HAU **Haudompre** 78.35 328 eP P 12 15 30.1 -0.6
HAU pmax pmax
comp=Z,11nm,0.8s
HAU **Haudompre** 78.35 328 eP P 12 15 30.1 -0.6
comp=Z,11nm,0.8s
M22A **Cedar Creek Ra** 78.42 43 ⇑P P 12 15 31.7 +0.2
baz=78
N21A **Black Mountain** 78.45 44 ⇓P P 12 15 32.0 +0.3
baz=78
P19A **Cripple Cowboy** 78.55 45 ⇓P P 12 15 32.6 +0.4
baz=78,SNR=9.0
O20A **White River Ci** 78.55 45 ⇓P P 12 15 32.6 +0.4
baz=78,SNR=5.3
SFTF **Sexfontaines** 78.69 329 eP P 12 15 32.1 -0.4
SFTF **Sexfontaines** 78.69 329 eP P 12 15 32.1 -0.4
BELC **Belle Mtn. Jos** 78.78 54 ⇑P P 12 15 34.1 +0.6
baz=79
PFO **Pinyon Flat Ob** 78.79 54 ⇓P P 12 15 34.1 +0.6
baz=79
M23A **Laramie** 78.80 42 ⇓P P 12 15 34.1 +0.5
baz=79
O21A **Pagoda** 78.88 44 ⇑P P 12 15 34.9 +0.8
baz=79
N22A **Wattenberg Ran** 78.95 43 ⇓P P 12 15 35.2 +0.8
baz=79,SNR=7.1
P20A **De Beque** 78.95 45 ⇓P P 12 15 34.8 +0.4
baz=79
PHWY **Pilot Hill** 79.06 42 eP P 12 15 35.7 +0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,4.1nm,0.9s						
K26A	Motz Farm, Whi	79.07	40	⇑P	P	12 15 35.3	+0.5
	baz=79						
N23A	Red Feather La	79.13	43	⇑P	P	12 15 36.1	+0.7
	baz=79						
U15A	North Rim	79.14	50	⇑P	P	12 15 36.6	+1.1
	baz=79,SNR=18						
IRM	Iron Mountain	79.16	53	⇑P	P	12 15 36.3	+1.0
	baz=79						
W13A	Hualapai Mount	79.21	51	⇓P	P	12 15 36.4	+0.5
	baz=79,SNR=6.5						
IDI	Anoyia	79.31	309	eP	P	12 15 34.8	-1.4
	comp=Z,13nm,0.7s						
MONP	Monument Peak	79.32	55	⇑P	P	12 15 37.2	+0.8
	baz=79						
BC3	Big Chuckawall	79.34	53	⇑P	P	12 15 37.4	+1.0
	baz=79						
O22A	Kremmling	79.39	44	⇑P	P	12 15 37.4	+0.6
	baz=79						
Q20A	Ridgley Place,	79.41	45	⇑P	P	12 15 37.6	+0.8
	baz=79						
P21A	Newcastle	79.41	45	⇓P	P	12 15 37.7	+0.8
	baz=79,SNR=6.1						
S18A	Hurst Farm, Bl	79.45	47	⇑P	P	12 15 37.7	+0.5
	baz=79,SNR=11						
PV04	Paradox Valley	79.51	46	eP	P	12 15 39.0	+1.7
PDMCI	Parker Dam,Lak	79.64	52	⇑P	P	12 15 38.9	+1.1
	baz=80						
O23A	Lake Granby, G	79.66	43	⇑P	P	12 15 39.3	+1.0
	baz=80						
DVTC	Desert V Tower	79.67	55	⇑P	P	12 15 38.9	+0.7
	baz=80						
P22A	Eagle	79.71	44	⇑P	P	12 15 39.4	+0.9
	baz=80,SNR=7.3						
Y12C	Blythe	79.81	53	⇑P	P	12 15 39.9	+1.1
	baz=80						
Q21A	Lamborn Mesa,	79.87	45	⇑P	P	12 15 40.0	+0.7
	baz=80						
PV01	Paradox Valley	79.88	46	eP	P	12 15 40.5	+1.1
	comp=Z,125nm,0.5s						
LOR	Lormes	79.91	329	eP	P	12 15 38.3	-0.8
	comp=Z,22nm,0.9s						
LOR	Lormes	79.91	329	eP	P	12 15 38.3	-0.8
	comp=Z,22nm,0.9s						
SMCO	Snowmass	79.92	45	eP	P	12 15 41.0	+1.2
	comp=Z,7.2nm,0.9s						
SCHQ	Schefferville	79.93	13	P	P	12 15 39.0	0.0
SCHQ	Schefferville	79.93	13	P	P	12 15 39.0	0.0
	comp=Z,1.6nm,0.8s,baz=303,slow=17,SNR=3.4						
R20A	Redvale	79.94	46	⇓P	P	12 15 40.6	+0.9
	baz=80						
ISCO	Idaho Springs	80.13	43	eP	P	12 15 42.0	+1.2
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ISCO	Idaho Springs	80.13	43	eP	P	12 15 42.0	+1.2
	comp=Z,3.6nm,0.9s						
ISCO	Idaho Springs	80.13	43	⇓P	P	12 15 41.5	+0.7
	baz=80						
GLA	Glamis	80.14	53	eP	P	12 15 41.4	+0.8
GLA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GLA	Glamis	80.14	53	eP	P	12 15 41.4	+0.8
	comp=Z,6.5nm,0.7s						
GLA	Glamis	80.14	53	⇑P	P	12 15 42.0	+1.4
	baz=80						
Q22A	Crested Butte,	80.19	45	⇓P	P	12 15 42.1	+1.0
	baz=80,SNR=5.3						
SSF	Saint Saulge	80.21	329	eP	P	12 15 40.0	-0.7
	comp=Z,13nm,0.9s						
SSF	Saint Saulge	80.21	329	eP	P	12 15 40.0	-0.7
SSF				pmax	pmax		
	comp=Z,13nm,0.9s						
SSF	Saint Saulge	80.21	329	eP	P	12 15 40.0	-0.7
	comp=Z,13nm,0.9s						
S20A	Disappointment	80.21	46	⇑P	P	12 15 41.9	+0.7
	baz=80						
R21A	Cimarron	80.23	45	⇓P	P	12 15 42.5	+1.2
	baz=80						
LPL	La Plagne	80.25	326	eP	P	12 15 40.9	-0.3
	comp=Z,14nm,0.6s						
LPL	La Plagne	80.25	326	eP	P	12 15 40.9	-0.3
LPL				pmax	pmax		
	comp=Z,14nm,0.6s						
LPL	La Plagne	80.25	326	eP	P	12 15 40.9	-0.3
	comp=Z,14nm,0.6s						
LPG	La Plagne	80.25	326	eP	P	12 15 41.0	-0.3
	comp=Z,13nm,0.6s						
LPG	La Plagne	80.25	326	eP	P	12 15 41.0	-0.3
LPG				pmax	pmax		
	comp=Z,13nm,0.6s						
LPG	La Plagne	80.25	326	eP	P	12 15 41.0	-0.3
	comp=Z,13nm,0.6s						
WUAZ	Wupatki	80.31	50	eP	P	12 15 43.0	+1.4
	comp=Z,4.1nm,0.9s						
WUAZ	Wupatki	80.31	50	⇓P	P	12 15 42.8	+1.2
	baz=80,SNR=5.4						
P23A	Jefferson	80.34	44	⇓P	P	12 15 42.8	+0.9
	baz=80						
SMF	Signal de Mont	80.44	329	eP	P	12 15 41.3	-0.6
	comp=Z,10nm,0.6s						
SMF	Signal de Mont	80.44	329	eP	P	12 15 41.3	-0.6
SMF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SMF	Signal de Mont	80.44	329	eP	P	12 15 41.3	-0.6
	comp=Z,10nm,0.6s						
AVF	Avril sur Loir	80.50	329	eP	P	12 15 41.7	-0.5
	comp=Z,34nm,1.1s						
AVF	Avril sur Loir	80.50	329	eP	P	12 15 41.7	-0.5
AVF				pmax	pmax		
	comp=Z,34nm,1.1s						
AVF	Avril sur Loir	80.50	329	eP	P	12 15 41.7	-0.5
	comp=Z,34nm,1.1s						
Y14A	Wickenburg	80.55	52	⇑P	P	12 15 43.8	+1.0
	baz=80						
S21A	Coal Bank Pass	80.64	46	⇓P	P	12 15 44.6	+1.0
	baz=80,SNR=6.3						
R22A	Saguache, Gunn	80.75	45	⇓P	P	12 15 44.9	+0.8
	baz=81						
MBDF	Montbardon	80.88	326	eP	P	12 15 43.5	-0.9
MBDF	Montbardon	80.88	326	eP	P	12 15 43.5	-0.9
MBDF	Montbardon	80.88	326	eP	P	12 15 43.5	-0.9
BGF	Bois d'Agland	80.88	329	eP	P	12 15 43.6	-0.6
BGF	Bois d'Agland	80.88	329	eP	P	12 15 43.6	-0.6
BGF	Bois d'Agland	80.88	329	eP	P	12 15 43.6	-0.6
O26A	Horse Wrangler	80.91	42	⇑P	P	12 15 45.2	+0.5
	baz=81						
113A	Mohawk Valley,	80.96	53	⇑P	P	12 15 46.0	+1.2
	baz=81						
OGNE	Ogallala	80.97	40	⇓P	P	12 15 45.6	+0.6
	baz=81						
S22A	4UR Ranch, Cre	81.07	45	⇓P	P	12 15 46.5	+0.7
	baz=81,SNR=5.5						
X16A	Lo Mia Camp, P	81.08	50	⇑P	P	12 15 46.9	+1.2
	baz=81,SNR=5.0						
ORIF	Oris-en-Rattie	81.08	326	eP	P	12 15 44.2	-1.2
	comp=Z,6.3nm,0.6s						
ORIF	Oris-en-Rattie	81.08	326	eP	P	12 15 44.2	-1.2
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ORIF	Oris-en-Rattie	81.08	326	eP	P	12 15 44.2	-1.2
	comp=Z,6.3nm,0.6s						
T21A	Navajo Lake	81.28	46	⇑P	P	12 15 47.7	+1.0
	baz=81						
TCF	Toulx Ste Croi	81.34	329	eP	P	12 15 46.3	-0.4
TCF	Toulx Ste Croi	81.34	329	eP	P	12 15 46.3	-0.4
TCF	Toulx Ste Croi	81.34	329	eP	P	12 15 46.3	-0.4
O27A	Beecher Island	81.35	41	⇑P	P	12 15 47.6	+0.6
	baz=81						
R24A	Sanders Place,	81.58	44	⇑P	P	12 15 49.5	+1.2
	baz=81						
T22A	Edith	81.59	46	⇑P	P	12 15 49.4	+0.9
	baz=81						
VIVF	Saint-Julien-l	81.61	327	eP	P	12 15 47.7	-0.4
	comp=Z,6.7nm,0.5s						
VIVF	Saint-Julien-l	81.61	327	eP	P	12 15 47.7	-0.4
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VIVF	Saint-Julien-l	81.61	327	eP	P	12 15 47.7	-0.4
	comp=Z,6.7nm,0.5s						
U21A	Nageezi	81.64	47	⇑P	P	12 15 49.4	+0.8
	baz=82,SNR=6.4						
V20A	Brimhall	81.68	48	⇓P	P	12 15 49.8	+0.9
	baz=82						
SDCO	Great Sand Dun	81.75	45	eP	P	12 15 49.9	+0.6
	comp=Z,1.6nm,0.8s						
P27A	Ficken Ranch,	81.80	42	⇑P	P	12 15 49.8	+0.5
	baz=82						
X18A	Snowflake	81.82	49	⇓P	P	12 15 50.7	+1.1
	baz=82						
Q26A	Hugo	81.84	43	⇑P	P	12 15 50.2	+0.7
	baz=82						
CEL	Celeste	81.88	316	eP	P	12 15 48.8	-0.8
	comp=Z,15nm,0.8s						
FRF	La Foret Royal	81.89	325	eP	P	12 15 48.5	-1.0
FRF	La Foret Royal	81.89	325	eP	P	12 15 48.5	-1.0
FRF	La Foret Royal	81.89	325	eP	P	12 15 48.5	-1.0
S24A	Houchin Ranch,	81.98	44	⇑P	P	12 15 50.9	+0.4
	baz=82						
T23A	Casias Ranch,	82.02	45	⇓P	P	12 15 51.8	+1.1
	baz=82						
R25A	Fountain Ranch	82.06	44	⇑P	P	12 15 51.4	+0.7
	baz=82						
U22A	Llaves	82.10	46	⇓P	P	12 15 52.1	+1.1
	baz=82						
214A	Organ Pipe Nat	82.10	53	⇓P	P	12 15 52.0	+1.1
	baz=82						
V21A	Milan	82.12	47	⇑P	P	12 15 52.1	+1.0
	baz=82						
LMR	La Mourre	82.13	325	eP	P	12 15 50.0	-0.7
	comp=Z,13nm,0.8s						
LMR	La Mourre	82.13	325	eP	P	12 15 50.0	-0.7
LMR				pmax	pmax		
	comp=Z,13nm,0.8s						
LMR	La Mourre	82.13	325	eP	P	12 15 50.0	-0.7
	comp=Z,13nm,0.8s						
W20A	Ramah	82.17	48	⇓P	P	12 15 52.1	+0.7
	baz=82,SNR=6.0						
KSCO	Kaye Shedlock'	82.20	42	⇓P	P	12 15 51.9	+0.5
	baz=82						
R26A	Arlington	82.36	43	⇑P	P	12 15 52.5	+0.3
	baz=82,SNR=7.3						
S25A	Robets Cordova	82.36	44	⇑P	P	12 15 52.6	+0.3
	baz=82						
BGNE	Belgrade	82.38	38	⇓P	P	12 15 53.0	+0.9
	baz=82						
V22A	San Miguel Ran	82.42	47	⇑P	P	12 15 53.7	+1.0
	baz=82						
RJF	Les Rejaudoux	82.44	329	eP	P	12 15 51.7	-0.6
RJF	Les Rejaudoux	82.44	329	eP	P	12 15 51.7	-0.6
RJF	Les Rejaudoux	82.44	329	eP	P	12 15 51.7	-0.6
U23A	El Rito	82.48	46	⇓P	P	12 15 54.3	+1.3
	baz=82						
T24A	Torres, Weston	82.50	45	⇑P	P	12 15 54.0	+0.9
	baz=82						
Q28A	Sharon Springs	82.55	41	⇑P	P	12 15 54.0	+0.9
	baz=82						
CAF	Calviac	82.55	329	eP	P	12 15 52.0	-1.0
CAF	Calviac	82.55	329	eP	P	12 15 52.0	-1.0
CAF	Calviac	82.55	329	eP	P	12 15 52.0	-1.0
X20A	Quemado	82.61	49	⇓P	P	12 15 54.9	+1.3
	baz=82						
R27A	Eads	82.69	43	⇑P	P	12 15 54.4	+0.6
	baz=82						
T25A	Trinidad	82.78	44	⇓P	P	12 15 54.9	+0.4
	baz=83						
S26A	Kim	82.87	43	⇓P	P	12 15 55.2	+0.3
	baz=83						
X21A	Alamocita Cree	83.06	48	⇑P	P	12 15 57.3	+1.2
	baz=83,SNR=8.9						
R28A	Tribune	83.12	42	⇑P	P	12 15 56.6	+0.6
	baz=83						
Y20A	Horse Springs,	83.15	49	⇓P	P	12 15 57.9	+1.4
	baz=83,SNR=7.0						
T26A	Comanche Natio	83.16	44	⇓P	P	12 15 56.8	+0.4
	baz=83						
U25A	Circle Dot Ran	83.35	45	⇑P	P	12 15 57.9	+0.5
	baz=83						
W23A	Werner Place,	83.39	47	⇓P	P	12 15 59.0	+1.3
	baz=83						
ANMO	Albuquerque	83.40	47	eP	P	12 15 59.1	+1.4
	comp=Z,2.3nm,1.0s						
V24A	Rampart Ranch,	83.42	46	⇓P	P	12 15 58.5	+0.7
	baz=83						
X22A	Bernardo	83.44	48	⇓P	P	12 15 59.2	+1.4
	baz=83						
Y21A	Point of Rocks	83.46	48	⇓P	P	12 15 59.6	+1.6
	baz=83						
Z20A	Nine Sixteen R	83.63	50	⇑P	P	12 16 00.1	+1.3
	baz=84,SNR=11						
S28A	Manter	83.67	42	⇑P	P	12 15 59.2	+0.4
	baz=84						
V25A	Rancho No Teng	83.67	45	⇑P	P	12 16 00.2	+1.1
	baz=84						
U26A	Atchley Ranch,	83.69	44	⇑P	P	12 16 00.3	+1.2
	baz=84						
W24A	Lazy 6 Ranch,	83.75	46	⇓P	P	12 16 00.2	+0.8
	baz=84						
X23A	Hourglass Bar	83.82	47	⇑P	P	12 16 00.9	+1.2
	baz=84						
MTLF	Montolieu	83.84	328	eP	P	12 15 58.5	-1.0
	comp=Z,4.5nm,0.6s						
MTLF	Montolieu	83.84	328	eP	P	12 15 58.5	-1.0
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MTLF	Montolieu	83.84	328	eP	P	12 15 58.5	-1.0
	comp=Z,4.5nm,0.6s						
Y22A	Socorro	83.89	48	⇓P	P	12 16 01.2	+1.1
	baz=84						
R30A	Dighton	83.91	41	⇑P	P	12 16 00.5	+0.5
	baz=84						
BNM	Barren Site	83.91	48	eP	P	12 16 01.5	+1.2
	comp=Z,1.3nm,0.7s						
Z21A	St. Cloud Mine	83.99	49	⇑P	P	12 16 01.9	+1.3
	baz=84,SNR=7.9						
120A	U Bar Ranch, L	84.03	50	⇑P	P	12 16 02.1	+1.3
	baz=84						
U27A	Thompson Grove	84.13	44	⇓P	P	12 16 01.9	+0.7
	baz=84						
V26A	Tequesquite Ra	84.13	45	⇓P	P	12 16 01.9	+0.7
	baz=84						
X24A	Lazy VL Ranch,	84.23	47	⇓P	P	12 16 03.1	+1.3
	baz=84						
W25A	X Bar L Ranch,	84.23	46	⇓P	P	12 16 02.7	+0.9
	baz=84						
S30A	Montezuma	84.33	42	⇑P	P	12 16 02.5	+0.4
	baz=84						
Y23A	Lovelace Mesa,	84.39	47	⇓P	P	12 16 03.6	+1.0
	baz=84,SNR=11						
Z22A	Elephant Butte	84.41	48	⇓P	P	12 16 03.7	+1.0
	baz=84,SNR=6.4						
U28A	Mallet	84.46	43	⇓P	P	12 16 03.0	+0.2
	baz=84						
121A	Cookes Peak, D	84.51	49	⇑P	P	12 16 04.4	+1.2
	baz=84,SNR=5.3						
319A	Douglas	84.55	51	⇓P	P	12 16 04.2	+0.9
	baz=84						
220A	Playas Peak, P	84.58	50	⇑P	P	12 16 04.4	+0.9
	baz=84						
X25A	Clemmons Ranch	84.66	46	⇓P	P	12 16 04.9	+1.0
	baz=84						
Y24A	Capitan	84.72	47	⇓P	P	12 16 05.0	+0.8
	baz=84						
Z23A	Rita Site, Whi	84.80	48	⇑P	P	12 16 05.9	+1.3
	baz=85						
320A	Kipp Ranch, An	85.00	51	⇓P	P	12 16 06.4	+0.7
	baz=85						
W27A	Bowe Ranch, En	85.07	45	⇑P	P	12 16 06.9	+1.1
	baz=85						
X26A	CR and CF Fran	85.09	46	⇓P	P	12 16 06.8	+0.8
	baz=85						
Y25A	Mesa, Roswell	85.11	47	⇑P	P	12 16 06.7	+0.6
	baz=85,SNR=5.1						
Z24A	Sheeppen Canyo	85.22	47	⇓P	P	12 16 07.9	+1.2
	baz=85						
ETSF	Etsaut	85.27	329	eP	P	12 16 06.0	-0.6
ETSF	Etsaut	85.27	329	eP	P	12 16 06.0	-0.6
ETSF	Etsaut	85.27	329	eP	P	12 16 06.0	-0.6
SJPF	Ste Jean	85.33	330	eP	P	12 16 06.2	-0.6
SJPF	Ste Jean	85.33	330	eP	P	12 16 06.2	-0.6
SJPF	Ste Jean	85.33	330	eP	P	12 16 06.2	-0.6
Z25A	Roswell	85.60	47	⇑P	P	12 16 09.4	+0.9
	baz=85						
124A	Stringfield Ra	85.65	48	⇓P	P	12 16 09.7	+0.8
	baz=86						
Z26A	Caprock	85.99	46	⇑P	P	12 16 11.4	+1.0
	baz=86						
224A	Cornudas Mount	86.09	48	⇑P	P	12 16 12.1	+1.1
	baz=86						
125A	Gardner Draw,	86.11	47	⇓P	P	12 16 12.1	+1.1
	baz=86						
324A	Moseley Ranch,	86.60	49	⇑P	P	12 16 14.1	+0.6
	baz=86						
GDL2	Guadalupe Moun	86.62	47	eP	P	12 16 14.4	+0.9
	comp=Z,1.0nm,0.2s						
226B	Tecolote Peak,	86.82	47	⇓P	P	12 16 15.4	+1.0
	baz=87						
325A	Bean Ranch, Si	86.94	48	⇓P	P	12 16 16.1	+1.0
	baz=87						
X31A	McDonald Ranch	86.96	43	⇑P	P	12 16 15.8	+0.9
	baz=87						
Z29A	Hungry Hill Ra	87.18	45	⇑P	P	12 16 17.0	+1.0
	baz=87						
Z30A	Sanderson Ranc	87.46	45	⇑P	P	12 16 18.0	+0.7
	baz=87						
326A	Caldwell Ranch	87.51	48	⇑P	P	12 16 18.6	+0.9
	baz=87						
SFIN	Scholer Farm	87.79	31	⇓P	P	12 16 19.7	+1.0
	baz=88						
426A	McDonald Obser	87.99	48	⇓P	P	12 16 21.2	+1.1
	baz=88						
328A	Wristen Ranch,	88.08	47	⇓P	P	12 16 20.9	+0.6
	baz=88						
427A	Hayter Ranch,	88.19	48	⇓P	P	12 16 21.3	+0.5
	baz=88						
Z32A	Haskell	88.27	43	⇑P	P	12 16 21.2	+0.1
	baz=88						
526A	Mary Lane Ranc	88.43	49	⇓P	P	12 16 22.7	+0.7
	baz=88						
428A	Kincaid Ranch,	88.66	47	⇑P	P	12 16 24.0	+0.9
	baz=88						
626A	Big Bend Ranch	88.80	49	⇑P	P	12 16 24.5	+0.8
	baz=89						
330A	Mertzon	88.92	46	⇑P	P	12 16 24.4	+0.2
	baz=89						
231A	Bronte	88.94	45	⇑P	P	12 16 25.1	+0.8
	baz=89						
528A	Cox Ranch, San	89.05	48	⇓P	P	12 16 25.6	+0.7
	baz=89						
429A	Davenport Ranc	89.16	47	⇑P	P	12 16 25.7	+0.3
	baz=89						
TXAR	Lajitas Array	89.22	49	P	P	12 16 26.3	+0.6
TXAR				PP	PP	12 20 06.1	+5.1
TXAR	Lajitas Array	89.22	49	P	P	12 16 26.3	+0.6
	comp=Z,2.0nm,0.9s,baz=288,slow=2.8,SNR=20						
TXAR				PP	PP	12 20 06.1	+5.1
	comp=Z,0.5nm,0.9s,baz=324,slow=5.9,SNR=3.5						
627A	Terlingua Ranc	89.28	48	⇑P	P	12 16 26.3	+0.3
	baz=89						
ESDC	Sonseca Array	89.33	330	P	P	12 16 25.4	-0.5
ESDC	Sonseca Array	89.33	330	P	P	12 16 25.4	-0.5
	comp=Z,0.3nm,0.4s,baz=29,slow=3.4,SNR=2.9						
430A	Baggett Ranch,	89.38	46	⇑P	P	12 16 26.8	+0.4
	baz=89						
529A	Stev Forest Ra	89.38	47	⇓P	P	12 16 27.1	+0.7
	baz=89						
331A	San Angelo	89.39	45	⇓P	P	12 16 26.8	+0.4
	baz=89						
628A	Black Gap, Mar	89.53	48	⇓P	P	12 16 27.8	+0.7
	baz=89						
332A	Millersview	89.68	45	⇓P	P	12 16 28.6	+0.9
	baz=90						
431A	Sonora	89.79	46	⇓P	P	12 16 28.9	+0.6
	baz=90						
530A	J-C Ranch, Com	89.83	47	⇓P	P	12 16 29.1	+0.7
	baz=90						
432A	Menard	90.06	45	⇓P	P	12 16 30.1	+0.6
	baz=90						
531A	Rocksprings	90.23	46	⇑P	P	12 16 30.8	+0.4
	baz=90						
JCT	Junction City	90.37	45	⇓P	P	12 16 31.4	+0.4
	baz=90						
532A	Rocksprings	90.60	46	⇑P	P	12 16 32.8	+0.7
	baz=90						
631A	Perdido Creek	90.82	47	⇓P	P	12 16 33.6	+0.6
	baz=91						
TORD	Torodi Ar. Bea	109.56	312	PKiKP	PKiKP	12 21 57.2	-1.1
TORD				PP	PP	12 22 28.6	-5.9
TORD	Torodi Ar. Bea	109.56	312	PKiKP	PKiKP	12 21 57.2	-1.1
	comp=Z,0.2nm,0.4s,baz=2.7,slow=1.5,SNR=6.3						
TORD				PP	PP	12 22 28.6	-5.9
	comp=Z,3.0nm,1.0s,baz=32,slow=7.3,SNR=4.9						
LPAZ	La Paz	145.96	44	PKPbc	PKPbc	12 23 08.4	-0.2
LPAZ	La Paz	145.96	44	PKPbc	PKPbc	12 23 08.4	-0.2
	comp=Z,1.9nm,0.9s,baz=303,slow=2.6,SNR=6.0						

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*IDC **26** 12:05:15.2±1.0, 9°.04N×121°.87E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.7/24, mbtmp3.7/7, MS3.2/5, Ms1 3.3/5, ms1mx2.9/36, Error ellipse: s-maj=44.7km s-min=18.8km az=69.0*

*MAN **26** 12:05:17, 9°.17N×121°.91E, h31km, mb5.0, ML4.0, MS4.1*

*ISCJB **26** 12:05:18.1±0.5, 9°.15N±0°.04×121°.94E±0°.05, h37km, mb3.6/7, MS3.0/3, Error ellipse: s-maj=8.2km s-min=5.4km az=155.4*

ISC 26 12:05:20.0±0.8**, 9°.15N**±0°.05×**121°.93E**±0°.06**, h37**km**, n22,** σ**1s.61**/21**, mb3.7**/7**, MS3.0**/3**, 3C-2D, Sulu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	1.31	81	⇑iP	Pn	12 05 25.7	-16
SNPH				iS	Sn	12 05 46.0	-12
IPIL	Ipil	1.50	155	⇑eP	Pn	12 05 43.3	-1.0
IPIL				eS	Sn	12 06 01.5	-1.1
DCPH	Dipolog City	1.52	112	⇓eP	Pn	12 05 42.0	-2.5
GUIM	Jordan	1.61	24	eP	Pn	12 05 43.0	-2.8
PAGZ	Pagadian	1.94	132	eP	Pn	12 05 50.0	-0.4
PAGZ				eS	Sn	12 06 11.8	-1.6
TBP	Tagbilaran	1.98	74	eP	Pn	12 05 48.9	-2.1
LLP	Lapu-Lapu	2.32	60	eP	Pn	12 05 54.3	-1.3
LLP				eS	Sn	12 06 22.8	-0.2
RCP	Roxas	2.53	19	⇑eP	Pn	12 05 57.2	-1.3
CTBH	Cotabato--PC H	2.99	130	⇓iP	Pn	12 06 04.6	-0.3
MSLP	Maasin	3.05	71	eP	Pn	12 06 07.6	+1.9
MSLP				eS	Sn	12 06 19.3	-22
ENPP	El Nido	3.20	310	eP	Pn	12 06 06.4	-1.3
SJMP	San Jose	3.38	347	eP	Pn	12 06 08.3	-2.0
DAV	Davao City (W)	4.17	119	LR	LR	12 08 15.6	
	comp=Z,697nm,18.4s,baz=285,slow=43						
KAPI	Kappang	14.24	189	LR	LR	12 13 57.9	
	comp=Z,73nm,18.9s,baz=245,slow=37						
CMAR	Chiang Mai Arr	24.14	295	P	P	12 10 33.2	+0.6
	0.6nm,0.3s,baz=121,slow=7.3,SNR=4.1						
CMAR				LR	LR	12 19 38.8	
	comp=Z,57nm,21.4s,baz=105,slow=36						
KSRS	Korea Array	28.70	10	P	P	12 11 15.7	+2.2
	0.4nm,0.5s,baz=182,slow=9.6,SNR=2.8						
KSRS				LR	LR	12 24 28.1	
	comp=Z,42nm,19.4s,baz=357,slow=40						
JHJ	Hachijo jima 2	29.00	32	LR	LR	12 23 56.8	
	comp=Z,34nm,18.1s,baz=225,slow=38						
WRA	Warramunga Arr	31.39	157	P	P	12 11 37.5	-0.1
	0.3nm,0.5s,baz=342,slow=9.5,SNR=6.1						
ASAR	Alice Springs	34.65	160	P	P	12 12 07.0	+0.9
	0.5nm,0.5s,baz=339,slow=7.2,SNR=14						
STKA	Stephens Creek	44.92	156	P	P	12 13 29.5	-1.8
	0.4nm,0.3s,baz=335,slow=14,SNR=2.8						
MKAR	Makanchi Array	50.41	325	P	P	12 14 14.7	+0.9
	1.3nm,0.7s,baz=119,slow=7.8,SNR=4.7						
YKA	Yellowknife Ar	96.48	23	P	P	12 18 46.1	+0.8
	0.3nm,0.9s,baz=312,slow=4.8,SNR=4.0						

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*ISCJB **26** 12:08:32.1±0.6, 1°.11N±0°.04×127°.19E±0°.06, h10km, mb3.8/6, MS3.6/2, Error ellipse: s-maj=8.5km s-min=5.9km az=173.4*

*IDC **26** 12:08:32.9±1.7, 0°.82N×126°.89E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/22, mbtmp3.8/4, MS3.6/2, Ms1 3.6/2, ms1mx2.7/34, Error ellipse: s-maj=162.2km s-min=21.2km az=66.0*

*DJA **26** 12:08:33.0±0.5, 1°N±2°×12°7E±°, h10km, M3.6/4, MLv3.6/4*

*NEIC **26** 12:08:37.9±0.8, 0°.86N×126°.96E, h35km, mb3.7/3, Error ellipse: s-maj=17.3km s-min=10.7km az=225.0*

NEIC Felt [II] at Jailolo, Indonesia.

ISC 26 12:08:33.2±0.8**, 1°.13N**±0°.04×**127°.20E**±0°.07**, h10**km**, n18,** σ**1s.35**/19**, mb3.9**/6**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.39	155	P	Pg	12 08 40.6	-0.3
TNTI				S	Sg	12 08 45.3	-0.7
GAMI	Galela, Maluku	0.92	40	P	Pg	12 08 50.1	-0.8
GAMI				S	Sg	12 09 01.8	-1.1
LBMI	Labuha	1.78	170	P	Pn	12 09 04.5	+0.5
LBMI				S	Sg	12 09 30.4	0.0
MNI	Manado	2.38	278	P	Pn	12 09 13.0	+0.7
KAPI	Kappang	9.62	231	ePn	Pn	12 10 50.1	-1.8
KSM	Kuching	16.89	271	ePn	Pn	12 12 28.0	-2.0
	3.8nm,0.6s						

WRAB	**Tennant Creek**	**22.07**	**162**	*e*P		**P**	**12 13 28.2**	**-0.3**
	1.1nm,0.4s							
WRA	**Warramunga Arr**	**22.08**	**162**	P		**P**	**12 13 27.6**	**-1.0**
WRA	**Warramunga Arr**	**22.08**	**162**	P		**P**	**12 13 27.6**	**-1.0**
	1.4nm,0.5s,baz=340,slow=11,SNR=12							
ASAR	**Alice Springs**	**25.49**	**166**	P		**P**	**12 14 01.3**	**-0.6**
ASAR	**Alice Springs**	**25.49**	**166**	P		**P**	**12 14 01.3**	**-0.6**
	2.0nm,0.8s,baz=344,slow=9.7,SNR=10							
CTAO	**Charters Tower**	**28.16**	**139**	*e*P		**P**	**12 14 27.1**	**+1.1**
	1.9nm,0.6s							
HNR	**Honiara**	**34.26**	**109**	LR		LR	12 27 50.8	
	comp=Z,43nm,19.0s,baz=296,slow=34							
MKAR	**Makanchi Array**	**59.96**	**326**	P		**P**	**12 18 42.0**	**+2.2**
MKAR	**Makanchi Array**	**59.96**	**326**	P		**P**	**12 18 42.0**	**+2.2**
	0.7nm,0.6s,baz=126,slow=7.4,SNR=6.0							
KURBB	**Kurchatov Arra**	**64.18**	**328**	P		**P**	**12 19 09.7**	**+1.6**
	0.7nm,0.6s,baz=126,slow=6.2,SNR=8.1							
KURK	**Kurchatov**	**64.18**	**328**	P		**P**	**12 19 09.7**	**+1.6**
OPO	**Ambohidratompo**	**80.89**	**251**	LR		LR	12 53 57.6	
	comp=Z,70nm,18.5s,baz=174,slow=34							

SKO 26 12:13:15.2, 41′.30N×22°.73E, h15km, M0.4, ML0.7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**280**	*i* Pg	Pg	12 13 18.7	-0.1
VAY				*i* Sg	Sg	12 13 20.4	-0.6
VAY				*e*Lg	Lg	12 13 20.6	
	comp=N,52nm,0.3s						
VAY				*e*Lg	Lg	12 13 20.6	
	comp=E,45nm,0.3s						

*CSEM **26** 12:14:09.6, 36°.43N×21°.65E, h30km, MD3.9, After ATH*
*ATH **26** 12:14:09.6, 36°.43N×21°.65E, h30km, MD3.1/6*
ISC 26 12:14:09.4±2.4, 36°.39N±0°.08×21°.6E±0°.1, h29km±14km, n14, σ0°.37/24, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.52**	**12**	*e*PB	**Pb**	**12 14 20.2**	**+0.1**
PYL				*e*SB	**Sb**	**12 14 27.1**	**-0.3**
PYL	**PYLOS**	**0.52**	**12**	*e*Pb	**Pb**	**12 14 20.2**	**+0.1**
PYL				*e*Sb	**Sb**	**12 14 27.1**	**-0.3**
DYR	**Agios Nikonas**	**0.69**	**57**	*e*PN	**Pb**	**12 14 22.6**	**-0.4**
DYR				*e*SN	**Sb**	**12 14 32.3**	**0.0**
DYR	**Agios Nikonas**	**0.69**	**57**	*e*Pn	**Pb**	**12 14 22.6**	**-0.4**
DYR				*e*Sn	**Sb**	**12 14 32.3**	**0.0**
ITM	**Ithomi**	**0.83**	**18**	*e*PN	**Pb**	**12 14 25.4**	**+0.1**
ITM				*e*SN	**Sb**	**12 14 36.5**	**+0.3**
ITM	**Ithomi**	**0.83**	**18**	*e*Pn	**Pb**	**12 14 25.4**	**+0.1**
ITM				*e*Sn	**Sb**	**12 14 36.5**	**+0.3**
VLI	**Veliai**	**1.12**	**72**	*e*PN	**Pb**	**12 14 30.1**	**0.0**
VLI				*e*SN	**Sb**	**12 14 45.4**	**+1.1**
VLI	**Veliai**	**1.12**	**72**	*e*Pn	**Pb**	**12 14 30.1**	**0.0**
VLI				*e*Sn	**Sn**	**12 14 42.8**	**-0.7**
KYTH	**Kithira**	**1.16**	**95**	*e*PN	**Pb**	**12 14 31.0**	**+0.2**
KYTH	**Kithira**	**1.16**	**95**	*e*Pn	**Pb**	**12 14 31.0**	**+0.2**
VLX	**Vlachokerasia**	**1.16**	**32**	*e*PN	**Pn**	**12 14 30.0**	**+0.2**
VLX				*e*SN	**Sb**	**12 14 45.8**	**+0.2**
VLX	**Vlachokerasia**	**1.16**	**32**	*e*Pn	**Pn**	**12 14 30.0**	**+0.2**
VLX				*e*Sn	**Sb**	**12 14 45.8**	**+0.2**
ANKY	**Antikythira Is**	**1.46**	**110**	*e*PN	**Pb**	**12 14 35.7**	**-0.3**
ANKY	**Antikythira Is**	**1.46**	**110**	*e*Pn	**Pb**	**12 14 35.7**	**-0.3**

*IDC **26** 12:30:26.0±2.0, 9°.39N×122°.30E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, Error ellipse: s-maj=102.1km s-min=22.6km az=54.0*
ISC 26 12:30:30.0±1.3, 9°.43N±0°.08×122°.34E±0°.10, h29km, n11, σ1°.47/8, mb3.4/4, 2C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.89**	**96**	⇑*i*P	Pn	12 30 36.8	-10
SNPH				*i* S	**Sn**	**12 30 56.0**	**-2.6**
DCPH	**Dipolog City**	**1.31**	**130**	⇓*e*P	**Pb**	**12 30 53.7**	**-0.3**
TBP	**Tagbilaran**	**1.53**	**80**	*e*P	Pb	12 31 01.5	+3.9
LLP	**Lapu-Lapu**	**1.83**	**61**	*e*P	Pb	12 31 05.9	+3.1
LLP				*e*S	Sb	12 31 34.5	+9.2
RCP	**Roxas**	**2.15**	**11**	*e*P	**Pb**	**12 31 08.7**	**+0.4**
CGP	**Cagayan de Oro**	**2.52**	**112**	⇓*e*P	**Pb**	**12 31 16.0**	**+1.4**
CGP				*e*S	**Sb**	**12 31 46.6**	**+1.3**
CTBH	**Cotabato--PC H**	**2.90**	**139**	⇑*i*P	Pn	12 31 07.1	-7.1
CMAR	**Chiang Mai Arr**	**24.39**	**294**	P	**P**	**12 35 45.8**	**-0.2**
	0.4nm,0.3s,baz=106,slow=6.7,SNR=2.6						
WRA	**Warramunga Arr**	**31.49**	**158**	P	**P**	**12 36 49.6**	**+0.1**
	0.2nm,0.6s,baz=339,slow=9.7,SNR=2.5						
ASAR	**Alice Springs**	**34.79**	**161**	P	**P**	**12 37 18.3**	**0.0**
	0.3nm,0.5s,baz=340,slow=7.0,SNR=6.6						
MKAR	**Makanchi Array**	**50.41**	**325**	P	P	12 39 25.6	+0.8
	0.4nm,0.6s,baz=116,slow=9.8,SNR=4.4						

*ISCJB **26** 12:30:29.9±1.0, 1°.15N±0°.09×126°.96E±0°.08, h10km, mb3.4/3, Error ellipse: s-maj=14.1km s-min=8.8km az=38.8*
*DJA **26** 12:30:29.9±0.6, 1°.N±4″×12°.7E±°, h10km, M3.4/4, MLv3.4/4*
*IDC **26** 12:30:32.4±2.2, 1°.04N×127°.45E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=184.6km s-min=25.2km az=67.0*
ISC 26 12:30:29.7±1.4, 1°.20N±0°.09×126°.99E±0°.08, h10km, n7, σ1°.63/8, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.57**	**139**	P	**Pg**	**12 30 38.8**	**-1.9**
TNTI				S	**Sg**	**12 30 48.8**	**+0.6**
GAMI	**Galela, Maluku**	**1.02**	**51**	P	**Pn**	**12 30 50.5**	**+0.5**
LBMI	**Labuha**	**1.90**	**164**	P	**Pb**	**12 31 03.9**	**-0.5**
LBMI				S	**Sg**	**12 31 32.6**	**+1.9**
MNI	**Manado**	**2.17**	**276**	P	**Pn**	**12 31 05.7**	**-0.2**
WRA	**Warramunga Arr**	**22.21**	**161**	P	**P**	**12 35 26.8**	**+0.2**
	1.1nm,0.7s,baz=341,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**25.62**	**165**	P	**P**	**12 36 01.8**	**+2.3**
	0.9nm,0.8s,baz=345,slow=10,SNR=7.8						
MKAR	**Makanchi Array**	**59.78**	**326**	P	P	12 40 42.0	+6.9
	0.2nm,0.5s,baz=122,slow=7.6,SNR=2.6						

WEL 26 13:13:01.1±0.9, 36°.75S×176°.55E, h300km±8km, ML3.7/11, 1D, Error ellipse: s-maj=11.3km s-min=8.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.57**	**164**	PN	Pn	13 13 44.8	+0.2
URZ				SN	S	13 14 17.9	-1.4
MWZ	**Matawai**	**1.76**	**154**	PN	Pn	13 13 46.3	+0.2
PUZ	**Puketiti**	**1.89**	**135**	PN	Pn	13 13 47.2	+0.2
RAHZ	**Arahi**	**2.20**	**169**	PN	Pn	13 13 50.0	+0.5
BKZ	**Black Stump Fm**	**2.41**	**181**	PN	Pn	13 13 51.3	-0.1
KNZ	**Kokohu**	**2.43**	**159**	PN	Pn	13 13 51.6	+0.2
FWVZ	**Far West T-bar**	**2.62**	**197**	PN	Pn	13 13 54.1	+0.6
TRVZ	**Turoa**	**2.66**	**197**	PN	Pn	13 13 54.5	+0.6
WNVZ	**Wahianoa**	**2.68**	**196**	PN	Pn	13 13 54.3	+1.4
MCHZ	**McNeill Hill**	**2.69**	**178**	PN	Pn	13 13 54.1	+0.3
BHHZ	**Black Hill Sta**	**2.76**	**188**	PN	Pn	13 13 54.4	-0.1
KAHZ	**Kahuranaki**	**3.05**	**175**	PN	Pn	13 13 57.1	-0.3
KAHZ				SN	S	13 14 42.4	+0.2
PNHZ	**Pukenui**	**3.17**	**185**	⇓PN	Pn	13 13 57.9	-0.6
BFZ	**Birch Farm**	**3.93**	**183**	PN	Pn	13 14 05.4	-1.1
MRZ	**Mangatainoka R**	**3.98**	**191**	PN	Pn	13 14 05.4	-1.6
MRZ				SN	S	13 14 55.6	-4.2
OGWZ	**Otaki Gorge**	**4.20**	**194**	PN	Pn	13 14 08.0	-1.4
OGWZ				SN	S	13 15 00.8	-3.4
KIW	**Kapiti Island**	**4.30**	**197**	PN	Pn	13 14 09.2	-1.4
KIW				SN	S	13 15 03.0	-3.3
CAW	**Cannon Point**	**4.50**	**194**	PN	Pn	13 14 11.0	-1.9
SNZO	**South Karori**	**4.77**	**197**	PN	Pn	13 14 14.2	-1.7
TCW	**Tory Channel**	**4.79**	**201**	PN	Pn	13 14 14.7	-1.4
TUWZ	**Tuamarina**	**5.09**	**203**	PN	Pn	13 14 18.1	-1.5
NNZ	**Nelson**	**5.10**	**208**	PN	Pn	13 14 18.0	-1.7
QRZ	**Quartz Range**	**5.14**	**216**	PN	Pn	13 14 18.6	-1.6
THZ	**Tophouse**	**5.75**	**208**	PN	Pn	13 14 25.8	-1.6
KHZ	**Kahutara**	**6.12**	**201**	PN	Pn	13 14 30.4	-1.3
LTZ	**Lake Taylor**	**6.87**	**207**	PN	Pn	13 14 38.4	-2.4

IDC 26 13:14:41.7±1.9, 3°.38S×144°.99E, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.3/18, mbtmp3.3/4, ML3.3/1, Error ellipse: s-maj=126.9km s-min=28.7km az=121.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.47**	**211**	P	P	13 19 10.4	+0.1
	0.1nm,0.3s,baz=29,slow=10,SNR=9.9						
ASAR	**Alice Springs**	**22.84**	**207**	P	P	13 19 46.4	-0.3
	0.3nm,0.5s,baz=34,slow=10,SNR=12						
FITZ	**Fitzroy Crossi**	**23.95**	**231**	P	P	13 19 58.1	+0.2
	0.9nm,0.8s,baz=58,slow=9.4,SNR=5.0						
ILAR	**Eielson Array**	**83.89**	**24**	P	P	13 27 13.2	0.0
	0.2nm,0.8s,baz=265,slow=3.2,SNR=4.1						

*ISCJB **26** 13:27:31.8±0.5, 39°.11N±0°.03×29°.07E±0°.04, h11km±4km, Error ellipse: s-maj=5.1km s-min=4.3km az=27.6*
*ISK **26** 13:27:31.5, 39°.12N×29°.04E, h16km, MD2.7*
*CSEM **26** 13:27:32.9±0.1, 39°.11N×29°.05E, h12km, MD2.6, Error ellipse: s-maj=3.5km s-min=3.0km az=102.0*
*DDA **26** 13:27:32.9, 39°.09N×29°.02E, h3km, MD2.6*
ISC 26 13:27:31.8±0.9, 39°.11N±0°.02×29°.05E±0°.02, h15km±8km, n34, σ0°.62/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.27**	**256**	*i* P	**Pg**	**13 27 37.8**	**+0.1**
DEMI				*i* S	**Sg**	**13 27 41.1**	**-0.5**
DEMI	**Demirci**	**0.27**	**256**	*i* P	**Pg**	**13 27 37.8**	**+0.1**
DEMI				*i* S	**Sg**	**13 27 41.1**	**-0.5**
TVSB	**Tavsanli**	**0.46**	**43**	*e*PG	**Pg**	**13 27 41.3**	**+0.2**
TVSB				*e*SG	**Sg**	**13 27 48.2**	**+0.8**
TVSB	**Tavsanli**	**0.46**	**43**	*e*Pg	**Pg**	**13 27 41.3**	**+0.2**
TVSB				*e*Sg	**Sg**	**13 27 48.2**	**+0.8**
DURS	**Dursunbey**	**0.67**	**318**	*i* P	**Pb**	**13 27 45.3**	**0.0**
DURS				*e*S	**Sb**	**13 27 54.2**	**-0.2**
DURS	**Dursunbey**	**0.67**	**318**	*i* P	**Pb**	**13 27 45.3**	**0.0**
DURS				*e*S	**Sb**	**13 27 54.2**	**-0.2**
KULA	**Kula-Manisa**	**0.67**	**207**	*e*PG	**Pg**	**13 27 44.9**	**-0.1**
KULA	**Kula-Manisa**	**0.67**	**207**	*e*Pg	**Pg**	**13 27 44.9**	**-0.1**
MANT	**Manisa**	**0.73**	**212**	*i* P	**Pg**	**13 27 46.1**	**0.0**
MANT				*e*S	**Sg**	**13 27 55.2**	**-0.6**
MANT	**Manisa**	**0.73**	**212**	*i* P	**Pg**	**13 27 46.1**	**0.0**
MANT				*e*S	**Sg**	**13 27 55.2**	**-0.6**
KHAL	**Karahalli**	**0.81**	**155**	*i* P	**Pb**	**13 27 48.5**	**+0.7**
KHAL				*i* S	**Sg**	**13 27 57.5**	**-0.9**
KHAL	**Karahalli**	**0.81**	**155**	*i* P	**Pb**	**13 27 48.5**	**+0.7**
KHAL				*i* S	**Sg**	**13 27 57.5**	**-0.9**
ALT	**Altintas**	**0.82**	**94**	*e*PG	**Pb**	**13 27 48.7**	**+0.7**
ALT	**Altintas**	**0.82**	**94**	*e*Pg	**Pb**	**13 27 48.7**	**+0.7**
ORLT	**Orhaneli**	**0.94**	**353**	*e*PG	**Pg**	**13 27 50.4**	**+0.3**
ORLT	**Orhaneli**	**0.94**	**353**	*e*Pg	**Pg**	**13 27 50.4**	**+0.3**
AKHS	**Akhisar**	**0.99**	**257**	*e*P	**Pn**	**13 27 51.7**	**+0.4**
AKHS				*i* S	**Sb**	**13 28 03.9**	**+0.2**
AKHS	**Akhisar**	**0.99**	**257**	*e*P	**Pn**	**13 27 51.7**	**+0.4**
AKHS				*i* S	**Sb**	**13 28 03.9**	**+0.2**
ULDT	**Uludag**	**1.03**	**3**	*e*P	**Pb**	**13 27 51.5**	**-0.1**
ULDT				*e*S	**Sb**	**13 28 03.0**	**-2.0**
ULDT	**Uludag**	**1.03**	**3**	*e*P	**Pb**	**13 27 51.5**	**-0.1**
ULDT				*e*S	**Sb**	**13 28 03.0**	**-2.0**
BALB	**Balikesir**	**1.05**	**301**	*e*PG	**Pn**	**13 27 52.3**	**+0.2**
BALB	**Balikesir**	**1.05**	**301**	*e*Pg	**Pn**	**13 27 52.3**	**+0.2**
CAVI	**Cavuskoy**	**1.25**	**29**	*e*PN	**Pn**	**13 27 55.0**	**+0.1**
CAVI	**Cavuskoy**	**1.25**	**29**	*e*Pn	**Pn**	**13 27 55.0**	**+0.1**
KCTX	**Karacabey (Bur**	**1.27**	**335**	*e*PN	**Pn**	**13 27 55.3**	**+0.1**
KCTX	**Karacabey (Bur**	**1.27**	**335**	*e*Pn	**Pn**	**13 27 55.3**	**+0.1**
BALY	**Balya**	**1.28**	**300**	*i* P	**Pg**	**13 27 56.9**	**+0.5**
BALY				*i* S	**Sg**	**13 28 13.5**	**+0.5**
BALY	**Balya**	**1.28**	**300**	*i* P	**Pg**	**13 27 56.9**	**+0.5**
BALY				*i* S	**Sg**	**13 28 13.5**	**+0.5**
GONE	**Gonen-Balikesi**	**1.41**	**312**	*e*PN	**Pn**	**13 27 57.4**	**+0.4**
GONE	**Gonen-Balikesi**	**1.41**	**312**	*e*Pn	**Pn**	**13 27 57.4**	**+0.4**
ARMT	**Armutlu**	**1.46**	**354**	*e*PN	**Pn**	**13 27 57.2**	**-0.5**
ARMT	**Armutlu**	**1.46**	**354**	*e*Pn	**Pn**	**13 27 57.2**	**-0.5**
MRMT	**Marmara Adasi**	**1.87**	**323**	*e*PN	**Pn**	**13 28 03.2**	**-0.2**
MRMT	**Marmara Adasi**	**1.87**	**323**	*e*Pn	**Pn**	**13 28 03.2**	**-0.2**

*ISCJB **26** 14:17:23.7±0.5, 29°.17N±0°.04×130°.15E±0°.09, h54km±6km, mb3.3/6, Error ellipse: s-maj=14.5km s-min=4.2km az=19.8*
*JMA **26** 14:17:23.2±0.1, 29°.18N×130°.15E, h58km±4km, M3.4*
*IDC **26** 14:17:36.4±10.0, 30°.04N×130°.06E, h113km±56km, mb3.1/6, mb1 3.2/8, mb1mx3.1/27, mbtmp3.1/8, Error ellipse: s-maj=131.7km s-min=27.4km az=178.0*
ISC 26 14:17:24.3±1.2, 29°.17N±0°.04×130°.16E±0°.10, h44km±12km, n19, σ0°.78/25, mb3.3/6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.72**	**340**	P	**Pn**	**14 17 37.3**	**-0.8**
JNN				S	**Sn**	**14 17 48.5**	**+0.5**
JZK	**Kikaishima**	**0.86**	**191**	P	**Pn**	**14 17 39.6**	**-0.5**
JZK				*e*S	**Sn**	**14 17 52.6**	**+1.1**
JAM	**Amami Oshima**	**0.90**	**213**	P	**Pn**	**14 17 39.7**	**-0.8**
JAM				S	**Sn**	**14 17 52.1**	**-0.2**
JAMN	**Amaminishikomi**	**1.26**	**224**	P	**Pn**	**14 17 45.3**	**-0.2**
JAMN				*e*S	**Sn**	**14 18 01.7**	**+0.4**
JKC	**Kuchinoerabu**	**1.29**	**1**	P	**Pn**	**14 17 45.3**	**-0.6**
JKC				*e*S	**Sn**	**14 18 03.3**	**+1.3**
JTN	**Tanegashima 3**	**1.64**	**25**	P	**Pn**	**14 17 50.2**	**-0.5**
JTN				*e*S	**Sn**	**14 18 11.2**	**+0.5**
JTK	**Tokunoshima**	**1.74**	**218**	P	**Pn**	**14 17 52.4**	**+0.3**
JTK				*e*S	**Sn**	**14 18 14.7**	**+1.7**
JTSR	**Tashiro 2**	**2.10**	**18**	P	**Pn**	**14 17 56.6**	**-0.4**
JOW	**Kunigami**	**2.86**	**216**	P	**Pn**	**14 18 06.8**	**-0.7**
JIH	**Iheya**	**2.88**	**223**	P	**Pn**	**14 18 07.1**	**-0.5**
JNU	**Nakatsue**	**3.99**	**9**	P	**Pn**	**14 18 23.9**	**+0.9**
	2.7nm,0.3s,baz=210,slow=3.6,SNR=39						
JNU				S	**Sn**	**14 19 08.9**	**+0.3**
	0.3nm,0.3s,baz=242,slow=15,SNR=2.3						
KSRS	**Korea Array**	**8.47**	**348**	P	Pn	14 19 28.6	+4.2
	0.2nm,0.3s,baz=172,slow=14,SNR=6.2						
MJAR	**Matsushiro Arr**	**9.99**	**41**	P	Pn	14 19 49.9	+4.6
	0.3nm,0.3s,baz=222,slow=14,SNR=4.0						
SONM	**Songino Array**	**26.16**	**322**	P	**P**	**14 22 53.6**	**-0.9**
	1.0nm,0.7s,baz=142,slow=9.9,SNR=6.3						
MKAR	**Makanchi Array**	**40.94**	**309**	P	**P**	**14 25 03.0**	**+0.4**
	0.4nm,0.7s,baz=98,slow=9.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**41.02**	**320**	P	**P**	**14 25 02.4**	**-0.7**
	0.3nm,0.4s,baz=107,slow=10,SNR=3.8						
ILAR	**Eielson Array**	**61.05**	**29**	P	**P**	**14 27 32.6**	**-0.6**
	0.1nm,0.8s,baz=268,slow=6.9,SNR=4.2						
YKA	**Yellowknife Ar**	**75.15**	**26**	P	**P**	**14 29 01.9**	**+0.3**
	0.1nm,0.3s,baz=301,slow=6.2,SNR=4.4						
BRTR	**Keskin Array**	**76.58**	**308**	P	**P**	**14 29 11.1**	**+0.7**
	0.5nm,0.6s,baz=109,slow=7.8,SNR=3.1						

*AUST **26** 14:20:24.3, 5°.48S×129°.52E, h30km*
IDC 26 14:20:43.2±2.0, 7°.65S×129°.42E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/20, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=76.9km s-min=25.8km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.42**	**162**	P	Pb	14 22 13.3	-5.7
	baz=7.5,SNR=7.2						
MTN				S	Sg	14 23 41.7	+4.0
	baz=7.5,SNR=4.2						
FAKI	**Fak Fak**	**5.48**	**31**	S	Pn	14 22 01.7	-4.5
	baz=3.7,SNR=7.3						
KDU	**Kakadu**	**5.83**	**149**	P	Pn	14 22 18.2	+7.2
	baz=7.8,SNR=7.8						
SWI	**Sorong**	**6.99**	**15**	S	Pn	14 22 29.1	+2.2
	baz=4.9,SNR=3.0						
KNRA	**Kununurra**	**8.00**	**185**	P	Pn	14 22 45.4	+4.6
	baz=10,SNR=9.0						
KNRA				S	Sb	14 24 45.2	+6.5
	baz=10,SNR=7.4						
FITZ	**Fitzroy Crossi**	**11.02**	**199**	Pn	Pn	14 23 23.9	+1.6
	0.3nm,0.3s,baz=26,slow=12,SNR=13						
FITZ	**Fitzroy Crossi**	**11.02**	**199**	P	Pn	14 23 24.0	+1.8
	baz=13,SNR=7.1						
FITZ				S	Sn	14 26 00.4	+34
	baz=13,SNR=4.1						
WRA	**Warramunga Arr**	**13.11**	**159**	Pn	Pn	14 23 51.9	+0.9
	0.1nm,0.3s,baz=342,slow=13,SNR=6.5						
WRA				Sn	Sn	14 26 16.6	-1.1
	0.2nm,0.3s,baz=333,slow=24,SNR=3.3						
QIS	**Mount Isa**	**16.18**	**144**	P	P	14 24 50.5	+15
	baz=18,SNR=6.2						
ASAR	**Alice Springs**	**16.49**	**165**	Pn	Pn	14 24 34.4	-1.9
	0.5nm,0.3s,baz=342,slow=10.0,SNR=33						
MKAR	**Makanchi Array**	**68.46**	**327**	P	P	14 31 47.1	-0.1
	0.3nm,0.5s,baz=138,slow=7.1,SNR=6.5						

*TIR **26** 14:56:36.6, 41°.32N×22°.70E, h10km, ML2.9, ML2.9*
*THE **26** 14:56:38.9, 41°.29N×22°.70E, h3km, ML2.9/10, Error ellipse: s-maj=0.6km s-min=0.3km az=19.0*
*SKO **26** 14:56:38.6, 41°.29N×22°.68E, h10km, M2.3, ML2.7*
*SOF **26** 14:56:38.6, 41°.37N×22°.72E, h2km, MD3.1*
*CSEM **26** 14:56:38.8±0.1, 41°.28N×22°.68E, h2km, ML2.6, Error ellipse: s-maj=3.2km s-min=2.7km az=62.0*
*BEO **26** 14:56:39.7±0.6, 41°.30N×22°.65E, h4km±2km, ML2.6/9*
ISC 26 14:56:39.0±0.9, 41°.28N±0°.02×22°.68E±0°.02, h5km±7km, n79, σ0°.81/110, 4C-9D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**296**	P	**Pg**	**14 56 40.8**	**-0.2**
VAY				S	**Sg**	**14 56 42.7**	**+0.3**
VAY	**Valandovo**	**0.10**	**296**	*i* Pg	**Pg**	**14 56 40.8**	**-0.2**
VAY				*i* Sg	**Sg**	**14 56 42.7**	**+0.3**
VAY				*e*Lg	Lg	14 56 42.7	
	comp=E,2μm,0.2s						
VAY				*e*Lg	Lg	14 56 42.8	
	comp=N,10μm,0.3s						
VAY	**Valandovo**	**0.10**	**296**	⇓*i*Pg	**Pg**	**14 56 40.6**	**-0.4**
VAY				*e*Sg	**Sg**	**14 56 42.6**	**+0.2**
VAY	**Valandovo**	**0.10**	**296**	P	**Pg**	**14 56 40.8**	**-0.2**
VAY				S	**Sg**	**14 56 42.7**	**+0.3**
VAY				*e*Lg	Lg	14 56 43.2	
	comp=N,10μm,0.3s						
KNT	**Kendrikon**	**0.20**	**126**	P	**Pg**	**14 56 43.1**	**+0.2**
KNT				S	**Sg**	**14 56 45.9**	**+0.4**
KNT	**Kendrikon**	**0.20**	**126**	P	**Pg**	**14 56 43.1**	**+0.2**
KNT				S	**Sg**	**14 56 45.9**	**+0.4**
GRG	**Griva**	**0.39**	**214**	P	**Pg**	**14 56 46.6**	**+0.2**
GRG				S	**Sg**	**14 56 52.4**	**+0.9**
GRG	**Griva**	**0.39**	**214**	P	**Pg**	**14 56 46.6**	**+0.2**
GRG				S	**Sg**	**14 56 52.4**	**+0.9**
KKB	**Krupnik**	**0.66**	**27**	*i* Pg	**Pg**	**14 56 50.9**	**-0.8**
THE	**Thessaloniki**	**0.68**	**162**	P	**Pg**	**14 56 51.8**	**-0.2**
THE				S	**Sg**	**14 57 01.7**	**+0.9**
THE	**Thessaloniki**	**0.68**	**162**	P	**Pg**	**14 56 51.8**	**-0.2**
THE				S	**Sg**	**14 57 01.7**	**+0.9**
SOH	**Sokhos**	**0.68**	**132**	P	**Pg**	**14 56 51.7**	**-0.4**
SOH				S	**Sg**	**14 57 01.5**	**+0.6**
SOH	**Sokhos**	**0.68**	**132**	P	**Pg**	**14 56 51.7**	**-0.4**
SOH				S	**Sg**	**14 57 01.5**	**+0.6**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**14 56 51.9**	**-0.6**
SRS				S	**Sg**	**14 57 02.2**	**+0.6**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**14 56 51.9**	**-0.6**
SRS				S	**Sg**	**14 57 02.2**	**+0.6**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**14 56 53.1**	**-0.3**
HORT				S	**Sg**	**14 57 03.9**	**+0.8**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**14 56 53.1**	**-0.3**
HORT				S	**Sg**	**14 57 03.9**	**+0.8**
MMB	**Musomiste**	**0.84**	**68**	*i* P	**Pg**	**14 56 54.4**	**-0.8**
NVR	**Nevrokopi**	**0.89**	**85**	P	**Pg**	**14 56 55.3**	**-0.8**
NVR				S	**Sg**	**14 57 08.0**	**+0.4**
BIA	**Bitola**	**1.06**	**256**	*i* Pg	**Pg**	**14 56 59.4**	**+0.1**
BIA				*i* Sg	**Sg**	**14 57 13.0**	**0.0**
PLG	**Polygyros**	**1.07**	**147**	P	**Pg**	**14 56 58.9**	**-0.6**
PLG	**Polygyros**	**1.07**	**147**	P	**Pg**	**14 56 58.9**	**-0.6**
FNA	**Florina**	**1.11**	**244**	P	**Pg**	**14 56 59.7**	**-0.5**
SKO	**Skopje**	**1.16**	**307**	*i* Pn	**Pb**	**14 57 01.4**	**-0.1**
SKO				*e*Lg	Lg	14 57 19.1	
	comp=E,68nm,0.7s						
SKO				*e*Lg	Lg	14 57 20.9	
	comp=N,104nm,0.4s						
SKO	**Skopje**	**1.16**	**307**	*e*Pg	**Pg**	**14 57 01.3**	**0.0**
SKO				*e*Sg	**Sg**	**14 57 16.5**	**+0.2**
SKO	**Skopje**	**1.16**	**307**	*e*P

BOJS				*i* Sg	**Sb**	**15 26 18.0**	**-0.2**
BOJS								
	comp=Z,86nm,0.2s							
BOJS	**Bojanci**	**0.45**	**33**	*i* Pg	**Pg**	**15 26 10.9**	**0.0**
BOJS				*i* Sg	**Sb**	**15 26 18.0**	**-0.2**
KNDS	**Knezji Dol**	**0.55**	**317**	*i* Pg	**Pg**	**15 26 11.8**	**-1.0**
KNDS				*i* Sg	**Sg**	**15 26 20.4**	**+0.3**
KNDS								
	comp=Z,27nm,0.1s							
KNDS	**Knezji Dol**	**0.55**	**317**	*i* Pg	**Pg**	**15 26 11.8**	**-1.0**
KNDS				*i* Sg	**Sg**	**15 26 20.4**	**+0.3**
NVLJ	**Novalja**	**0.56**	**183**	*i* Pg	**Pg**	**15 26 12.8**	**-0.3**
NVLJ				Sg	**Sb**	**15 26 21.6**	**0.0**
NVLJ	**Novalja**	**0.56**	**183**	*i* Pg	**Pg**	**15 26 12.8**	**-0.3**
NVLJ				Sg	**Sb**	**15 26 21.5**	**0.0**
VISS	**Visnje**	**0.68**	**356**	*i* Pg	**Pg**	**15 26 14.6**	**-0.6**
VISS				*i* Sg	**Sg**	**15 26 23.6**	**-0.6**
VISS								
	comp=Z,37nm,0.2s							
VISS	**Visnje**	**0.68**	**356**	*i* Pg	**Pg**	**15 26 14.6**	**-0.6**
VISS				*i* Sg	**Sg**	**15 26 23.6**	**-0.6**
VOY	**Vojsko**	**1.15**	**322**	*e*Pn	**Pn**	**15 26 22.4**	**-1.4**
VOY				*e*		15 26 25.0		
VOY				*e*Sn	**Sg**	**15 26 40.1**	**+0.9**
VOY	**Vojsko**	**1.15**	**322**	*e*Pn	**Pn**	**15 26 22.4**	**-1.4**
VOY				*e*Sn	**Sg**	**15 26 40.1**	**+0.9**
SABO	**M.te Sabotino**	**1.25**	**313**	⇓*e*Pg	**Pn**	**15 26 23.9**	**-1.2**
SABO				*e*Sg	**Sg**	**15 26 43.7**	**+1.2**
SABO	**M.te Sabotino**	**1.25**	**313**	⇓*e*Pg	**Pn**	**15 26 23.9**	**-1.2**
SABO				*e*Sg	**Sg**	**15 26 43.7**	**+1.2**
DRE	**Drenchia**	**1.37**	**320**	⇑*e*Pg	**Pb**	**15 26 27.9**	**+0.5**
DRE				*e*Sg	**Sg**	**15 26 47.9**	**+1.6**
DRE	**Drenchia**	**1.37**	**320**	⇑*e*Pg	**Pb**	**15 26 27.9**	**+0.5**
DRE				*e*Sg	**Sg**	**15 26 47.9**	**+1.6**
OBKA	**Obir**	**1.40**	**350**	⇓*i*Pn	**Pn**	**15 26 26.9**	**-0.3**
OBKA				⇑*i*Pg	**Pb**	**15 26 28.0**	**-0.1**
OBKA				⇓*i*Sn	**Sb**	**15 26 46.1**	**+0.3**
OBKA	**Obir**	**1.40**	**350**	⇓*i*Pn	**Pn**	**15 26 27.0**	**-0.3**
OBKA	**Obir**	**1.40**	**350**	Pg	**Pb**	**15 26 28.0**	**-0.1**
OBKA				*i* Sn	**Sb**	**15 26 46.2**	**+0.3**
SOKA	**Soboth**	**1.55**	**3**	⇓*i*Pn	**Pn**	**15 26 29.1**	**-0.2**
SOKA				⇓*i*Pg	**Pg**	**15 26 31.5**	**-0.4**
SOKA				⇑*i*Sn	**Sn**	**15 26 49.7**	**+0.4**
SOKA				⇓*i*Sg	**Sg**	**15 26 52.4**	**+0.4**
	comp=Z,7.8nm,0.4s							
SOKA	**Soboth**	**1.55**	**3**	⇓*i*Pn	**Pn**	**15 26 29.1**	**-0.2**
VINO	**Villanova**	**1.60**	**315**	⇑*e*Pg	**Pb**	**15 26 31.7**	**+0.3**
VINO	**Villanova**	**1.60**	**315**	⇑*e*Pg	**Pb**	**15 26 31.7**	**+0.3**
ACOM	**Acomizza, Ital**	**1.72**	**326**	⇑*e*Pg	**Pb**	**15 26 34.2**	**+0.7**
ACOM				*e*Sg	**Sg**	**15 26 59.5**	**+2.0**
ACOM	**Acomizza, Ital**	**1.72**	**326**	⇑*e*Pg	**Pb**	**15 26 34.2**	**+0.7**
ACOM				*e*Sg	**Sg**	**15 26 59.5**	**+2.0**
MYKA	**Terra Mystica**	**1.74**	**330**	⇓*i*Pg	**Pb**	**15 26 34.1**	**+0.3**
MYKA				⇑*i*Sn	**Sn**	**15 26 54.2**	**+0.3**
MYKA				⇓*i*Sg	**Sg**	**15 26 57.8**	**-0.3**
MYKA	**Terra Mystica**	**1.74**	**330**	⇓*i*Pg	**Pb**	**15 26 34.1**	**+0.3**
MYKA				*i* Sn	**Sn**	**15 26 54.2**	**+0.3**
MYKA				Sg	**Sg**	**15 26 57.8**	**-0.3**

MAN 26 15:30:17,18˝.58N×120˝.70E,h33km,mb3.8,ML2.5,MS2.1, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.26**	**198**	⇑*i*P	Pn	15 30 26.2	+1.7
PIP				*e*S	Sb	15 30 31.2	+1.9
APYP	**Conner**	**0.88**	**144**	*e*P	Pb	15 30 33.6	-0.2
APYP				*e*S	Sn	15 30 40.6	-4.0
ABRA	**Dolores**	**0.92**	**180**	*e*P	Pb	15 30 34.6	0.0
ABRA				*e*S	Sn	15 30 39.5	-6.3

WEL 26 15:31:11.9±0.6,39˚.55S×174˚.18E,h264km±4km,ML3.7/5, 9D,Error ellipse: s-maj=3.3km s-min=2.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFE	**Dawson Falls**	**0.23**	**344**	PN	Pn	15 31 45.9	-0.2
NEZ	**North Egmont**	**0.28**	**346**	PN	Pn	15 31 46.2	+0.1
NRZ	**Ngariki Road**	**0.28**	**317**	PN	Pn	15 31 45.8	-0.2
RAEZ	**Rainy Point**	**0.30**	**33**	PN	Pn	15 31 46.0	0.0
PKE	**Pukeiti**	**0.38**	**337**	PN	Pn	15 31 45.8	-0.4
VRZ	**Vera Road**	**0.61**	**47**	⇓PN	Pn	15 31 46.0	-0.8
WAZ	**Wanganui**	**0.66**	**109**	⇓PN	Pn	15 31 47.3	+0.4
WAZ				SN	S	15 32 12.9	-1.5
PKVZ	**Pokaka**	**0.94**	**75**	PN	Pn	15 31 47.8	-0.4
PKVZ				SN	S	15 32 13.4	-3.4
MTVZ	**Mangateitei**	**1.01**	**81**	PN	Pn	15 31 48.4	-0.2
MTVZ				SN	S	15 32 14.7	-2.7
TRVZ	**Turoa**	**1.09**	**77**	⇓PN	Pn	15 31 49.0	-0.2
FWVZ	**Far West T-bar**	**1.10**	**75**	⇓PN	Pn	15 31 49.0	-0.3
FWVZ				SN	S	15 32 15.0	-3.7
DRZ	**Dome Shelter**	**1.10**	**76**	PN	Pn	15 31 49.2	-0.2
WPVZ	**Whakapapa**	**1.11**	**73**	PN	Pn	15 31 49.0	-0.2
WNVZ	**Wahianoa**	**1.12**	**79**	⇓PN	Pn	15 31 49.2	-0.1
WNVZ				SN	S	15 32 15.3	-3.4
HIZ	**Hauiti**	**1.16**	**27**	⇓PN	Pn	15 31 48.6	-0.7
TUVZ	**Tukino**	**1.17**	**77**	PN	Pn	15 31 49.6	0.0
WTVZ	**West Tongariro**	**1.17**	**69**	PN	Pn	15 31 49.4	-0.2
KRVZ	**Karewarewa**	**1.22**	**69**	PN	Pn	15 31 49.7	-0.1
MOVZ	**Moawhango**	**1.22**	**84**	PN	Pn	15 31 49.4	-0.4
DUWZ	**D'Urville Isla**	**1.27**	**189**	PN	Pn	15 31 49.9	-0.1
KIW	**Kapiti Island**	**1.43**	**157**	PN	Pn	15 31 50.7	-0.3
BHHZ	**Black Hill Sta**	**1.46**	**88**	PN	Pn	15 31 50.9	-0.4
OGWZ	**Otaki Gorge**	**1.48**	**150**	⇓PN	Pn	15 31 51.3	0.0
POWZ	**Post Office Ro**	**1.48**	**125**	PN	Pn	15 31 51.3	0.0
MRZ	**Mangatainoka R**	**1.55**	**137**	⇓PN	Pn	15 31 51.7	-0.2
PNHZ	**Pukenui**	**1.60**	**104**	PN	Pn	15 31 52.5	+0.2
TCW	**Tory Channel**	**1.67**	**178**	PN	Pn	15 31 52.6	-0.1
HOWZ	**Holdsworth Sta**	**1.69**	**143**	PN	Pn	15 31 52.7	-0.3
CAW	**Cannon Point**	**1.70**	**157**	PN	Pn	15 31 52.9	-0.1
DVHZ	**Dannevirke**	**1.70**	**117**	PN	Pn	15 31 53.2	+0.1
NNZ	**Nelson**	**1.78**	**200**	⇓PN	Pn	15 31 53.4	-0.2
WEL	**Wellington**	**1.80**	**166**	PN	Pn	15 31 53.7	-0.1
QRZ	**Quartz Range**	**1.80**	**224**	PN	Pn	15 31 53.1	-0.7
SNZO	**South Karori**	**1.81**	**167**	PN	Pn	15 31 53.5	-0.3
WPHZ	**Waipukurau**	**1.82**	**107**	PN	Pn	15 31 54.3	+0.4
BKZ	**Black Stump Fm**	**1.83**	**79**	PN	Pn	15 31 54.0	-0.2
TUWZ	**Tuamarina**	**1.89**	**185**	PN	Pn	15 31 54.3	-0.2
BHW	**Baring Head**	**1.94**	**164**	PN	Pn	15 31 54.9	0.0
BFZ	**Birch Farm**	**1.95**	**126**	PN	Pn	15 31 55.1	0.0
MCHZ	**McNeill Hill**	**1.95**	**88**	PN	Pn	15 31 56.0	+0.9
PRHZ	**Porangahau**	**2.02**	**112**	PN	Pn	15 31 56.2	+0.5
TMWZ	**Te Maipa**	**2.04**	**141**	PN	Pn	15 31 55.8	0.0
MSWZ	**Moikau Station**	**2.04**	**157**	PN	Pn	15 31 55.6	-0.2
KAHZ	**Kahuranaki**	**2.10**	**98**	PN	Pn	15 31 57.2	+0.8
PXZ	**Pawanui**	**2.12**	**104**	PN	Pn	15 31 57.1	+0.5
BSWZ	**Blackbirch Sta**	**2.18**	**186**	PN	Pn	15 31 57.2	+0.1
PLWZ	**Palliser**	**2.18**	**158**	PN	Pn	15 31 57.0	-0.2
RAHZ	**Arahi**	**2.34**	**75**	PN	Pn	15 31 59.2	+0.5
THZ	**Tophouse**	**2.42**	**203**	PN	Pn	15 31 58.8	-0.6
KNZ	**Kokohu**	**2.76**	**80**	PN	Pn	15 32 02.9	+0.2
MWZ	**Matawai**	**2.88**	**66**	PN	Pn	15 32 03.4	-0.6
KHZ	**Kahutara**	**2.91**	**189**	PN	Pn	15 32 03.6	-0.6
MHGZ	**Mahia Peninsul**	**2.91**	**83**	PN	Pn	15 32 04.8	+0.5
LTZ	**Lake Taylor**	**3.54**	**203**	PN	Pn	15 32 10.0	-1.1
CRLZ	**Canterbury Las**	**4.20**	**196**	PN	Pn	15 32 16.6	-1.8
MQZ	**McQueen's Vall**	**4.32**	**195**	PN	Pn	15 32 17.9	-1.9
WVZ	**Waitaha Valley**	**4.38**	**215**	PN	Pn	15 32 19.2	-1.4
FOZ	**Fox Glacier**	**5.24**	**219**	PN	Pn	15 32 28.0	-3.0
LBZ	**Lake Benmore**	**5.68**	**210**	PN	Pn	15 32 34.9	-1.4
JCZ	**Jackson Bay**	**6.07**	**220**	PN	Pn	15 32 38.8	-2.4
ODZ	**Otahua Downs**	**6.09**	**204**	PN	Pn	15 32 40.9	-0.4
WKZ	**Wanaka**	**6.53**	**214**	PN	Pn	15 32 44.0	-2.7
TUZ	**Tuapeka**	**7.23**	**206**	PN	Pn	15 32 54.0	-1.4
SYZ	**Scrubby Hill**	**7.90**	**206**	PN	Pn	15 33 04.0	+0.1

GUC 26 15:32:39.9±0.6,23˚.78S×67˚.23W,h248km±11km,ML4.2, 4C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.93**	**307**	⇑*i*P	Pn	15 33 23.7	+1.7
LVC				*e*S	Sb	15 33 56.9	+1.9
PB09	**Plate Boundary**	**2.71**	**316**	⇑*i*P	Pn	15 33 32.3	+2.9
PB09				*i* S	S	15 34 11.7	+3.1
PB09				AML	AML	15 34 14.7	
	comp=E,540nm,0.6s						
CEN1	**Los Morros**	**2.75**	**277**	⇑*i*P	Pn	15 33 32.6	+2.8
CEN1				*i* S	S	15 34 13.6	+4.4
CEN1				AML	AML	15 34 16.4	
	comp=N,107nm,0.5s						
ANCH	**Antofagasta**	**2.91**	**271**	⇑*i*P	Pn	15 33 33.6	+2.2
ANCH				*i* S	S	15 34 13.5	+1.6
PB07	**Plate Boundary**	**3.19**	**309**	⇑*i*P	Pn	15 33 37.3	+2.7
PB07				*i* S	S	15 34 20.1	+2.2
PB07				AML	AML	15 34 21.5	
	comp=E,238nm,0.4s						
PB01	**Plate Boundary**	**3.43**	**322**	*e*P	Pn	15 33 39.5	+2.3
PB01				*i* S	S	15 34 25.3	+2.7
PB01				AML	AML	15 34 27.6	
	comp=E,214nm,0.5s						
HMBC	**Humberstone**	**4.26**	**324**	*e*P	Pn	15 33 49.5	+2.5
HMBC				*i* S	S	15 34 42.8	+2.5
MNMC	**Minimini**	**5.12**	**334**	*e*P	Pn	15 34 00.0	+2.5
MNMC				*e*S	S	15 35 02.3	+2.9

*ISCJB **26** 15:37:37.8±0.4,59˚.86N±0˚.03×22˚.30E±0˚.05,h0km, Error ellipse: s-maj=4.3km s-min=3.3km az=165.0*
*CSEM **26** 15:37:38.5±0.1,59˚.86N×22˚.32E,h2km,ML2.2, Error ellipse: s-maj=4.1km s-min=2.8km az=166.0,Mining explosion.*
*IDC **26** 15:37:39.8±2.0,59˚.93N×22˚.36E,h0km,mb1 3.0/3, mb1mx2.8/28,mbtmp2.9/3,ML2.6/3,Error ellipse: s-maj=23.4km s-min=7.7km az=163.0*
*HEL **26** 15:37:39.0±0.1,59˚.82N×22˚.27E,h0km,ML1.5, ML2.2(UPP),Explosion*
*NAO **26** 15:37:39.2±1.3,59˚.93N×22˚.24E,ML2.0*
*UPP **26** 15:37:40.3,59˚.86N×22˚.05E,h0km,ML2.2,Mining explosion.*
*BER **26** 15:37:41.1±3.5,60˚.00N×22˚.14E,h0km,ML2.0(NAO), Suspected explosion*

ISC 26 15:37:36.9±0.7,59˚.83N±0˚.03×22˚.27E±0˚.02,h0km,n57, σ1s39/88,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.14**	**69**	*e*P	**Pg**	**15 37 59.0**	**+0.3**
MEF				*e*S	**Sg**	**15 38 14.2**	**+0.8**
MEF				MSG	**Sg**	**15 38 14.2**	**+0.8**
	comp=Z,4.7nm,0.4s						
MEF	**Metsahovi**	**1.14**	**69**	P	**Pg**	**15 37 59.0**	**+0.3**
MEF				S	**Sg**	**15 38 14.2**	**+0.8**
	comp=Z,4.7nm,0.4s						
AAL	**Aland**	**1.20**	**288**	*e*P	**Pb**	**15 38 00.4**	**+0.1**
AAL	**Aland**	**1.20**	**288**	P	**Pb**	**15 38 00.4**	**+0.1**
RAF	**Rauma**	**1.23**	**348**	*e*P	**Pb**	**15 38 01.1**	**+0.2**
RAF				*e*SB	**Sb**	**15 38 18.2**	**+0.9**
RAF				MSG		15 38 18.2	
	comp=Z,2.6nm,0.2s						
RAF				*e*RG	Rg	15 38 22.4	
RAF	**Rauma**	**1.23**	**348**	P	**Pb**	**15 38 01.0**	**+0.2**
RAF				Sb	**Sb**	**15 38 18.1**	**+0.9**
	comp=Z,2.6nm,0.2s						
MTSE	**Matsula**	**1.37**	**144**	*e*P	**Pb**	**15 38 03.2**	**-0.1**
MTSE				*e*SB	**Sb**	**15 38 21.2**	**-0.1**
MTSE	**Matsula**	**1.37**	**144**	P	**Pb**	**15 38 03.2**	**-0.1**
MTSE				Sb	**Sb**	**15 38 21.2**	**-0.1**
NRTU	**Norrtaelje**	**1.85**	**267**	*e*P	**Pb**	**15 38 11.5**	**+0.1**
NRTU	**Norrtaelje**	**1.85**	**267**	P	**Pb**	**15 38 11.5**	**+0.1**
PVF	**Pernaja**	**1.94**	**67**	*e*P	**Pb**	**15 38 12.9**	**0.0**
PVF				*e*SG	**Sg**	**15 38 38.5**	**-0.5**
PVF				MSG	**Sg**	**15 38 38.5**	**-0.5**
	comp=Z,3.6nm,0.1s						
PVF	**Pernaja**	**1.94**	**67**	P	**Pb**	**15 38 12.9**	**0.0**
PVF				Sg	**Sg**	**15 38 38.5**	**-0.5**
	comp=Z,3.6nm,0.1s						
NYNU	**Nynaeshamn**	**2.33**	**251**	*e*P	**Pb**	**15 38 18.8**	**-0.9**
NYNU	**Nynaeshamn**	**2.33**	**251**	P	**Pb**	**15 38 18.8**	**-0.9**
FIA0	**FINESS Array S**	**2.48**	**48**	Pn	**Pb**	**15 38 21.2**	**-1.0**
FIA0	baz=232,slow=14			Lg	Lg	15 38 54.0	
	baz=249,slow=22						
FIA0	**FINESS Array S**	**2.48**	**48**	Pn	**Pb**	**15 38 21.2**	**-1.0**
FIA0	baz=232,slow=14			Lg	Lg	15 38 54.0	
	baz=249,slow=22						
FIA0	**FINESS Array S**	**2.48**	**48**	*e*P	**Pb**	**15 38 21.4**	**-0.9**
FIA0				*e*S	**Sn**	**15 38 50.2**	**+0.8**
FIA0				MSG	**Sn**	**15 38 50.2**	**+0.8**
	comp=Z,0.1nm,0.3s						
FIA0				*e*RG	Rg	15 39 09.7	
FIA0	**FINESS Array S**	**2.48**	**48**	Pn	**Pb**	**15 38 21.2**	**-1.0**
	baz=232,slow=13,SNR=50						
FIA0				S	**Sn**	**15 38 50.2**	**+0.8**
	comp=Z,0.1nm,0.3s						
FIA0				Lg	Lg	15 38 54.0	
	baz=249,slow=22,SNR=4.8						
FINES	**FINESS Array B**	**2.48**	**48**	Pn	**Pb**	**15 38 21.3**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=234,slow=13,SNR=46						
FINES				Lg	Lg	15 38 53.7	
	comp=Z,3.8nm,0.3s,baz=235,slow=24,SNR=27						
BACU	**Backbrunna**	**2.60**	**273**	*e*P	**Pb**	**15 38 22.5**	**-1.8**
BACU	**Backbrunna**	**2.60**	**273**	P	**Pb**	**15 38 22.5**	**-1.8**
KEF	**Keuruu**	**2.67**	**27**	*e*PB	**Pb**	**15 38 25.2**	**-0.3**
KEF				*e*SB	**Sb**	**15 38 59.8**	**+1.0**
KEF				MSG	**Sb**	**15 38 59.8**	**+1.0**
	comp=Z,4.5nm,0.2s						
KEF	**Keuruu**	**2.67**	**27**	Pb	**Pb**	**15 38 25.1**	**-0.3**
KEF				Sb	**Sb**	**15 38 59.7**	**+1.0**
	comp=Z,4.5nm,0.2s						
IGGU	**Iggoen**	**2.67**	**295**	*e*P	**Pn**	**15 38 23.2**	**+2.1**
IGGU	**Iggoen**	**2.67**	**295**	P	**Pn**	**15 38 23.2**	**+2.1**
VSU	**Vasula**	**2.68**	**119**	Pn	**Pn**	**15 38 22.7**	**+1.5**
VSU				Sn	**Sb**	**15 38 59.6**	**+0.6**
VSU	**Vasula**	**2.68**	**119**	Pn	**Pn**	**15 38 22.7**	**+1.5**
VSU				Sn	**Sb**	**15 38 59.6**	**+0.6**
VSU	**Vasula**	**2.68**	**119**	Pn	**Pn**	**15 38 22.7**	**+1.5**
	SNR=50						
VSU				Sn	**Sb**	**15 38 59.6**	**+0.6**
	SNR=50						
VJF	**Virojoki**	**2.74**	**73**	*e*P	**Pn**	**15 38 23.9**	**+1.9**
VJF				MSG	**Sb**	**15 39 01.5**	**+0.9**
	comp=Z,2.0nm,0.4s						
VJF				*e*SB	**Sb**	**15 39 01.5**	**+0.9**
VJF	**Virojoki**	**2.74**	**73**	P	**Pn**	**15 38 23.8**	**+1.9**
VJF				Sb	**Sb**	**15 39 01.5**	**+0.9**
KAF	**Kangasniemi**	**3.02**	**39**	*e*P	**Pb**	**15 38 29.9**	**-1.6**
KAF				*e*SB	**Sb**	**15 39 08.6**	**-0.3**
KAF				MSG	**Sb**	**15 39 08.6**	**-0.3**
	comp=Z,7.1nm,0.2s						
KAF	**Kangasniemi**	**3.02**	**39**	P	**Pb**	**15 38 29.9**	**-1.6**
KAF				Sb	**Sb**	**15 39 08.5**	**-0.3**
	comp=Z,7.1nm,0.2s						
ARNU	**Arnoeviken**	**3.04**	**310**	*e*P	**Pn**	**15 38 28.4**	**+2.2**
ARNU	**Arnoeviken**	**3.04**	**310**	P	**Pn**	**15 38 28.3**	**+2.2**
ESKU	**Eskilstuna**	**3.05**	**261**	*e*P	**Pn**	**15 38 28.9**	**+2.6**
ESKU	**Eskilstuna**	**3.05**	**261**	P	**Pn**	**15 38 28.9**	**+2.6**
VIKU	**Vikbolandet**	**3.16**	**248**	*e*P	**Pn**	**15 38 30.3**	**+2.5**
VIKU	**Vikbolandet**	**3.16**	**248**	P	**Pn**	**15 38 30.3**	**+2.5**
VAF	**Ylistaro**	**3.23**	**3**	MSG	**Sg**	**15 39 21.3**	**+0.7**
	comp=Z,1.1nm,0.4s						
VAF				*e*SG	**Sg**	**15 39 21.3**	**+0.7**
VAF	**Ylistaro**	**3.23**	**3**	Sg	**Sg**	**15 39 21.3**	**+0.7**
SUF	**Sumiainen**	**3.46**	**31**	*e*P	Pb	15 38 35.6	-3.2
SUF				*e*SG	**Sg**	**15 39 27.4**	**-0.3**
SUF				MSG	**Sg**	**15 39 27.4**	**-0.3**
	comp=Z,1.2nm,0.4s						
SUF	**Sumiainen**	**3.46**	**31**	P	Pb	15 38 35.6	-3.2
SUF				Sg	**Sg**	**15 39 27.4**	**-0.3**
	comp=Z,1.2nm,0.4s						
ROTU	**Roteberg**	**3.56**	**299**	*e*P	**Pn**	**15 38 34.8**	**+1.5**
ROTU	**Roteberg**	**3.56**	**299**	P	**Pn**	**15 38 34.8**	**+1.5**
HFS	**Hagfors**	**4.32**	**278**	Pn	**Pn**	**15 38 46.2**	**+2.5**
HFS	baz=95,slow=8.6			Sn	**Sn**	**15 39 34.2**	**-0.5**
	baz=94,slow=28						
HFS				Lg	Lg	15 39 48.7	
	baz=87,slow=37						
HFS	**Hagfors**	**4.32**	**278**	Pn	**Pn**	**15 38 46.2**	**+2.5**
	baz=95,slow=8.6						
HFS				Sn	**Sn**	**15 39 34.2**	**-0.5**
	baz=94,slow=28						
HFS				Lg	Lg	15 39 48.7	
	baz=87,slow=37						
HFS	**Hagfors**	**4.32**	**278**	Pn	**Pn**	**15 38 46.2**	**+2.5**
	baz=95,slow=8.3,SNR=50						
HFS				Sn	**Sn**	**15 39 34.2**	**-0.5**
	baz=94,slow=25,SNR=50						
HFS				Lg	Lg	15 39 48.7	
	baz=87,slow=33,SNR=90						
NB2	**NORSAR Subarra**	**5.61**	**287**	Pn	**Pn**	**15 39 03.1**	**+1.7**
	baz=95,slow=14						
NB2	**NORSAR Subarra**	**5.61**	**287**	Pn	**Pn**	**15 39 03.1**	**+1.7**
	baz=95,slow=14						
NB2	**NORSAR Subarra**	**5.61**	**287**	Pn	**Pn**	**15 39 03.1**	**+1.7**
	baz=95,slow=12,SNR=50						
NOA	**NORSAR Array B**	**5.61**	**287**	Pn	**Pn**	**15 39 02.9**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=96,slow=13,SNR=6.2						
NOA				Sn	**Sn**	**15 40 06.2**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=203,slow=4.5,SNR=2.2						
NOA				Lg	Lg	15 40 32.4	
	comp=Z,0.3nm,0.3s,baz=118,slow=20,SNR=3.9						
ARA0	**ARCESS Array S**	**9.84**	**7**	Pn	**Pn**	**15 39 59.4**	**0.0**
	baz=188,slow=14						
ARA0				Sn	Sn	15 41 44.2	-6.3
	baz=193,slow=28						
ARA0	**ARCESS Array S**	**9.84**	**7**	Pn	**Pn**	**15 39 59.4**	**0.0**
	baz=188,slow=14						
ARA0				Sn	Sn	15 41 44.2	-6.3
	baz=193,slow=28						
ARA0	**ARCESS Array S**	**9.84**	**7**	Pn	**Pn**	**15 39 59.4**	**0.0**
	baz=188,slow=14,SNR=50						
ARCES	**ARCESS Array B**	**9.84**	**7**	Pn	**Pn**	**15 39 59.2**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=183,slow=14,SNR=5.7						
ARCES				Sn	Sn	15 41 44.3	-6.2
	comp=Z,0.1nm,0.3s,baz=193,slow=23,SNR=2.7						
SPA0	**Spitsbergen Ar**	**18.54**	**356**	P	**P**	**15 41 50.2**	**-4.3**
	baz=161,slow=22						
SPA0	**Spitsbergen Ar**	**18.54**	**356**	P	**P**	**15 41 50.2**	**-4.3**
	baz=161,slow=22						

*DDA **26** 15:39:24.5,37˚.54N×35˚.73E,h7km,MD2.8*
*ISCJB **26** 15:39:25.1±0.6,37˚.56N±0˚.04×35˚.72E±0˚.04,h11km±5km, Error ellipse: s-maj=7.5km s-min=4.9km az=161.1*
*CSEM **26** 15:39:25.2±0.2,37˚.56N×35˚.72E,h10km,MD2.7, Error ellipse: s-maj=4.8km s-min=3.8km az=179.0*
*ISK **26** 15:39:25.0,37˚.56N×35˚.75E,h10km,MD2.7*

ISC 26 15:39:25.3±0.9,37˚.53N±0˚.04×35˚.72E±0˚.03,h14km±6km, n21,σ0s49/32,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.10**	**119**	PG	**Pg**	**15 39 28.5**	**+0.1**
KOZT				*e*SG	**Sg**	**15 39 30.2**	**-0.2**
KOZT	**Kozan**	**0.10**	**119**	*i* Pg	**Pg**	**15 39 28.5**	**+0.1**
KOZT				*e*Sg	**Sg**	**15 39 30.2**	**-0.2**
ANDN	**Andirin**	**0.50**	**84**	*i* P	**Pg**	**15 39 34.8**	**-0.4**
ANDN				*i* S	**Sb**	**15 39 43.6**	**+0.4**
ANDN	**Andirin**	**0.50**	**84**	*i* P	**Pg**	**15 39 34.8**	**-0.4**
ANDN				*i* S	**Sb**	**15 39 43.6**	**+0.4**
CEYT	**Ceyhan**	**0.52**	**178**	*e*PG	**Pg**	**15 39 35.5**	**+0.1**
CEYT				*e*SG	**Sb**	**15 39 44.2**	**+0.7**
CEYT	**Ceyhan**	**0.52**	**178**	*e*Pg	**Pg**	**15 39 35.6**	**+0.1**
CEYT				*e*Sg	**Sb**	**15 39 44.2**	**+0.7**
GULE	**Gulek**	**0.79**	**252**	*e*P	**Pg**	**15 39 39.8**	**-0.9**
GULE				*e*S	**Sb**	**15 39 52.1**	**+0.5**
GULE	**Gulek**	**0.79**	**252**	*e*P	**Pg**	**15 39 39.8**	**-0.9**
GULE				*e*S	**Sb**	**15 39 52.1**	**+0.5**
AYKD	**Aykdinkavak**	**0.87**	**97**	*e*P	**Pg**	**15 39 41.4**	**-0.8**
AYKD				*e*S	**Sg**	**15 39 53.2**	**-0.3**
KMRS	**Kahramanmaras**	**0.94**	**91**	*e*PG	**Pb**	**15 39 42.9**	**-0.5**
KMRS				*e*SG	**Sg**	**15 39 56.1**	**+0.4**
KMRS	**Kahramanmaras**	**0.94**	**91**	*e*Pg	**Pb**	**15 39 42.9**	**-0.5**
KMRS				*e*Sg	**Sg**	**15 39 56.1**	**+0.4**
KRTS	**Karatas**	**0.99**	**196**	*e*PG	**Pn**	**15 39 45.0**	**+0.2**
KRTS	**Karatas**	**0.99**	**196**	*e*Pg	**Pn**	**15 39 45.0**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.04**	**32**	*e*PG	**Pb**	**15 39 44.6**	**-0.6**
SARI	**SarD1z-K

KOK	**Koryaka**	**1.29**	**291**	P		**Pn**	15 55 41.1	**+0.1**
KOK				*i* S		**Sg**	**15 55 57.6**	**-0.5**
RUS	**Russkaya**	**1.37**	**253**	PN		**Pn**	15 55 42.2	**+0.3**
RUS				S		**Sb**	**15 55 59.5**	**-0.5**
RUS	**Russkaya**	**1.37**	**253**	P		**Pn**	15 55 42.2	**+0.3**
RUS				*i* S		**Sb**	**15 55 59.5**	**-0.5**
MTVR	**Mutnovka**	**1.55**	**257**	*e*P		**Pn**	15 55 44.8	**+0.3**
MTVR				*i* S		**Sn**	**15 56 04.8**	**-0.1**
GRL	**Gorelyy**	**1.60**	**260**	*e*P		**Pb**	15 55 46.2	**-0.1**
GRL				*i* S		**Sb**	**15 56 06.3**	**-0.4**
ASAK	**Asacha**	**1.74**	**256**	P		**Pn**	15 55 48.4	**+1.3**
ASAK				*i* S		**Sb**	**15 56 10.7**	**-0.1**
PETK	**Petropavlovsk-**	**1.80**	**279**	PN		**Pn**	15 55 48.9	**+0.9**
PETK							15 56 10.9	
PETK				pmax	pmax			
	comp=Z,40nm,0.3s							
PETK				smax	smax			
	comp=N,24nm,0.3s							
PETK	**Petropavlovsk-**	**1.80**	**279**	Pn		**Pn**	**15 55 48.9**	**+0.9**
	comp=N,40nm,0.3s,baz=104,slow=17,SNR=205							
PETK				Sn		**Sn**	**15 56 10.8**	**-0.2**
	comp=N,24nm,0.3s,baz=102,slow=21,SNR=10.0							
MKZ	**Mys Kozlova**	**1.83**	**20**	PN		**Pn**	15 55 47.7	**-0.5**
MKZ				S		**Sn**	**15 56 09.4**	**-2.2**
MKZ	**Mys Kozlova**	**1.83**	**20**	*e*P		**Pn**	15 55 47.7	**-0.5**
MKZ				*i* S		**Sn**	**15 56 09.4**	**-2.2**
GNL	**Ganaly**	**1.83**	**299**	P		**Pb**	15 55 49.7	**-0.7**
GNL				*i* S		**Sb**	**15 56 12.9**	**-0.7**
APC	**Apacha**	**2.12**	**273**	*e*P		**Pb**	15 55 54.2	**-0.9**
APC				*i* S		**Sb**	**15 56 20.6**	**-1.0**
MIPR	**Malaya Ipel'ka**	**2.44**	**258**	*e*P		**Pb**	15 55 59.4	**-1.3**
MIPR				*i* S		**Sb**	**15 56 28.6**	**-2.4**
TUMR	**Tumrok**	**2.46**	**353**	*e*P		**Pn**	15 55 58.8	**+1.8**
TUMR				*i* S		**Sn**	**15 56 27.7**	**+0.4**
PAU	**Pauzhetka**	**2.74**	**241**	PN		**Pn**	15 56 03.2	**+2.4**
PAU				S		**Sn**	**15 56 35.9**	**+1.8**
PAU	**Pauzhetka**	**2.74**	**241**	*e*P		**Pn**	15 56 03.2	**+2.4**
PAU				*i* S		**Sn**	**15 56 35.9**	**+1.8**
KMNR	**Kamenistaya**	**2.92**	**355**	*e*P		**Pn**	15 56 05.8	**+2.4**
KMNR				*i* S		**Sn**	**15 56 41.1**	**+2.3**
BZMR	**Bezymyannaya**	**3.10**	**358**	*e*P		**Pn**	15 56 08.0	**+2.2**
BZMR				*i* S		**Sn**	**15 56 44.8**	**+1.7**
BZGR	**Bezymyannyi-Gr**	**3.10**	**0**	*e*P		**Pn**	15 56 07.9	**+2.1**
BZGR				*i* S		**Sn**	**15 56 44.4**	**+1.3**
KIRR	**Kirishev**	**3.12**	**357**	*e*P		**Pn**	15 56 08.9	**+2.8**
KIRR				*i* S		**Sn**	**15 56 45.4**	**+1.8**
BZWR	**Bezymyannyi-We**	**3.12**	**358**	*e*P		**Pn**	15 56 08.7	**+2.5**
BZWR				*i* S		**Sn**	**15 56 44.9**	**+1.1**
KPT	**Kopyto**	**3.13**	**356**	*e*P		**Pn**	15 56 08.9	**+2.6**
KPT				*i* S		**Sn**	**15 56 46.5**	**+2.5**
ZLN	**Zelenaya**	**3.18**	**2**	*e*P		**Pn**	15 56 09.4	**+2.5**
ZLN				*i* S		**Sn**	**15 56 46.4**	**+1.4**
LGNR	**Loginova**	**3.24**	**0**	*e*P		**Pn**	15 56 10.7	**+2.7**
LGNR				*i* S		**Sn**	**15 56 48.5**	**+1.6**
KOZ	**Kozyrevsk**	**3.25**	**352**	*e*P		**Pb**	15 56 11.7	**-2.7**
KOZ				*i* S		**Sb**	**15 56 50.9**	**-3.2**
KOZR	**Kozyr**	**3.25**	**353**	PN		Pb	15 56 11.7	-2.8
KOZR				S		**Sb**	**15 56 50.9**	**-3.4**
CIRR	**Tsirk**	**3.27**	**1**	*e*P		**Pn**	15 56 10.7	**+2.4**
CIRR				*i* S		**Sn**	**15 56 48.3**	**+0.8**
ESO	**Esso**	**3.29**	**340**	PN		**Pn**	15 56 10.2	**+1.9**
ESO	**Esso**	**3.29**	**340**	*e*P		**Pn**	15 56 10.2	**+1.9**
ESO				*i* S		**Sn**	**15 56 48.2**	**+0.5**
KRSR	**Krestovskiy**	**3.38**	**359**	*e*P		**Pn**	15 56 12.3	**+2.7**
KRSR				*i* S		**Sn**	**15 56 52.5**	**+2.5**
KLY	**Klyuchi**	**3.47**	**0**	PN		**Pn**	15 56 13.0	**+2.2**
KLY	**Klyuchi**	**3.47**	**0**	*e*P		**Pn**	15 56 13.0	**+2.2**
KLY				*i* S		**Sn**	**15 56 53.3**	**+1.2**
SRDR	**Sredinnyy**	**3.52**	**351**	*e*P		**Pn**	15 56 13.3	**+1.7**
SKR	**Severo-Kuril's**	**3.55**	**234**	PN		Pn	15 56 15.5	+3.5
SKR				*e*S		**Sn**	**15 56 56.0**	**+1.9**
SKR				smax	smax			
	comp=N,80nm,0.5s							
SKR				smax	smax			
	comp=E,110nm,0.5s							
SKR	**Severo-Kuril's**	**3.55**	**234**	*e*P		**Pn**	**15 56 13.9**	**+1.9**
SKR				*i* S		**Sn**	**15 56 54.0**	**-0.1**
KBG	**Krutoberegovo**	**3.62**	**18**	PN		Pn	15 56 16.9	+4.1
KBG				S		**Sn**	**15 56 59.9**	**+4.2**
KBG	**Krutoberegovo**	**3.62**	**18**	*e*P		Pn	15 56 16.9	+4.1
KBG				*i* S		**Sn**	**15 56 59.9**	**+4.2**
BKI	**Bering**	**3.93**	**51**	**PN**		**Pn**	**15 56 18.8**	**+1.7**
BKI	**Bering**	**3.93**	**51**	P		**Pn**	**15 56 18.8**	**+1.7**
FX1	**Attu Island--F**	**7.58**	**85**	Pn		**Pn**	**15 57 06.9**	**-0.3**
	comp=E,13nm,0.3s,baz=289,slow=0.9,SNR=68							
FX1				Sn		Sn	15 58 27.8	-5.4
	comp=E,4.5nm,0.3s,baz=86,slow=19,SNR=5.9							
ASAJ	**Asahikawa**	**14.79**	**241**	Pn		**Pn**	**15 58 46.8**	**+1.0**
	comp=E,0.6nm,0.3s,baz=71,slow=12,SNR=8.9							
ASAJ				LR		LR	16 03 47.7	
	comp=E,35nm,20.3s,baz=44,slow=34							
USRK	**Ussuriysk Arra**	**20.74**	**257**	LR		LR	16 09 10.1	
	comp=E,49nm,19.4s,baz=23,slow=40							
MJAR	**Matsushiro Arr**	**22.66**	**233**	P		**P**	**16 00 19.1**	**+0.9**
	comp=E,2.5nm,0.9s,baz=19,slow=11,SNR=8.8							
MJAR				LR		LR	16 08 45.8	
	comp=E,46nm,19.6s,baz=55,slow=36							
ILAR	**Eielson Array**	**28.75**	**45**	P		**P**	**16 01 13.4**	**-0.7**
	comp=E,0.4nm,0.8s,baz=258,slow=7.3,SNR=4.7							
ILAR				LR		LR	16 11 57.2	
	comp=E,26nm,19.6s,baz=66,slow=35							
YKA	**Yellowknife Ar**	**43.12**	**43**	P		**P**	**16 03 16.2**	**-0.6**
	comp=E,0.5nm,0.9s,baz=295,slow=7.2,SNR=5.2							
KURK	**Kurchatov**	**48.15**	**302**	P		**P**	**16 03 55.9**	**-0.9**
KURBB	**Kurchatov Arra**	**48.25**	**302**	P		**P**	**16 03 55.9**	**-1.7**
	comp=E,0.2nm,0.5s,baz=57,slow=7.4,SNR=3.3							
MKAR	**Makanchi Array**	**48.56**	**296**	P		**P**	**16 04 00.0**	**-0.1**
MKAR	**Makanchi Array**	**48.56**	**296**	P		**P**	**16 04 00.0**	**-0.1**
	comp=E,0.2nm,0.6s,baz=68,slow=6.6,SNR=3.1							
TXAR	**Lajitas Array**	**70.42**	**67**	P		**P**	**16 06 30.6**	**-0.7**
	comp=E,0.5nm,0.5s,baz=335,slow=4.0,SNR=6.5							

*IDC **26** 15:57:03.2±0.9, 17°.97S×167°.06E, h0km, mb4.2/11, mb1 4.5/13, mb1mx4.3/23, mbtmp4.4/13, ML5.0/1, MS3.7/13, Ms1 3.7/13, ms1mx3.5/31, Error ellipse: s-maj=22.2km s-min=17.4km az=78.0*

*ISCJB **26** 15:57:05.1±0.5, 17°.89S±0°.04×167°.05E±0°.07, h20km, mb4.2/14, MS3.7/13, Error ellipse: s-maj=9.2km s-min=5.8km az=171.1*

*BJI **26** 15:57:08.8, 17°.90S×167°.00E, h35km, mB4.9/4, mb4.5/5, Ms5.1/2, Ms7 4.7/2*

*NEIC **26** 15:57:08.8±0.5, 17°.92S×166°.98E, h35km, mb4.7/2, Error ellipse: s-maj=11.4km s-min=10.2km az=200.0*

*AUST **26** 15:57:10.5±0.0, 17°.73S×167°.13E, h60km, Error ellipse: s-maj=1.5km s-min=1.1km az=39.0*

ISC 26 15:57:07.4±0.6, 17°.91S±0°.05×166°.95E±0°.08, h20km, n59, σ1♀84/62, mb4.3/14, MS3.8/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.17**	**186**	Pn	**Pn**	**15 58 09.2**	**-0.8**
DZM				Sn	**Sn**	**15 58 56.2**	**-2.0**
DZM	**Mont Dzumac**	**4.17**	**186**	Pn	**Pn**	**15 58 09.2**	**-0.8**
	101nm,0.3s,baz=37,slow=16,SNR=1143						
DZM				Sn	**Sn**	**15 58 56.2**	**-2.0**
	63nm,0.3s,baz=322,slow=19,SNR=6.3						
NOUC	**Port Laguerre**	**4.21**	**188**	*e*P	**Pn**	**15 58 11.9**	**+1.4**
NOUC				*e*S	**Sn**	**15 59 01.1**	**+2.0**
BAYA	**Yate Dam**	**4.22**	**181**	*e*P	**Pn**	**15 58 09.7**	**-0.9**
BAYA				*e*S	**Sn**	**15 58 58.0**	**-1.4**
MSVF	**Nonsavu**	**10.57**	**91**	*e*P	**Pn**	**15 59 38.2**	**+0.3**
	117nm,1.0s						
HNR	**Honiara**	**10.83**	**320**	*e*P	**Pn**	**15 59 41.0**	**-0.3**
	143nm,0.9s						
HNR				Sn	**Sn**	**16 01 38.2**	**-3.9**
HNR	**Honiara**	**10.83**	**320**	Pn	**Pn**	**15 59 41.4**	**0.0**
HNR				Sn	**Sn**	**16 01 38.2**	**-3.9**
	7.0nm,0.3s,baz=18,slow=20,SNR=4.9						
HNR				LR	LR	16 03 10.1	
	comp=Z,232nm,18.4s,baz=121,slow=34						
NFK	**Norfolk Island**	**11.12**	**176**	P	**Pn**	**15 59 47.9**	**+2.6**
	baz=11,SNR=3.4						
EIDS	**Eidsvold**	**16.51**	**241**	*e*P	**P**	**16 00 59.9**	**-0.4**
EIDS	**Eidsvold**	**16.51**	**241**	P	**P**	**16 01 00.9**	**+0.6**
	baz=17,SNR=4.1						
ARMA	**Armidale**	**18.70**	**225**	P	**Pn**	**16 01 27.8**	**+2.8**
	baz=19,SNR=5.9						
CTAO	**Charters Tower**	**19.69**	**260**	P	**Pn**	**16 01 36.5**	**-0.5**
	22nm,0.9s						
AFI	**Afiamalu**	**20.84**	**82**	LR	LR	16 07 52.5	
	comp=Z,138nm,20.9s,baz=76,slow=31						

MGCD	**Mangrove Creek**	**20.85**	**220**	P		**Pn**	16 01 53.4	+2.9
	baz=21,SNR=4.5								
PMG	**Port Moresby**	**20.99**	**291**	LR		LR	16 09 19.1		
	comp=Z,228nm,18.1s,baz=16,slow=35								
MTSU	**Mount Surprise**	**21.53**	**266**	P		**P**	**16 01 56.9**	**+1.4**
	baz=22,SNR=14								
URZ	**Urewera**	**22.14**	**158**	*e*P		**P**	**16 02 03.4**	**+1.6**
URZ	**Urewera**	**22.14**	**158**	P		**P**	**16 01 59.9**	**-1.8**
	28nm,1.1s,baz=43,slow=2.2,SNR=5.3								
URZ				LR		LR	16 07 47.3		
	comp=Z,48nm,19.7s,baz=332,slow=29								
QLP	**Quilpie**	**22.70**	**244**	P		**P**	**16 02 09.1**	**+1.2**
	baz=23,SNR=18								
YNG	**Young**	**23.26**	**222**	P		**P**	**16 02 15.1**	**+1.5**
	baz=24,SNR=9.5								
CNB	**Canberra Magne**	**23.34**	**219**	P		**P**	**16 02 15.8**	**+1.3**
	baz=24,SNR=24								
CMSA	**Cobar Meteorol**	**23.54**	**231**	P		**P**	**16 02 17.3**	**+0.9**
	baz=24,SNR=26								
MILA	**Mila**	**24.68**	**216**	P		**P**	**16 02 30.0**	**+3.0**
	baz=25,SNR=6.3								
RPZ	**Rata Peaks**	**25.96**	**173**	P		**P**	**16 02 36.7**	**-1.8**
RPZ	**Rata Peaks**	**25.96**	**173**	P		**P**	**16 02 36.7**	**-1.8**
	6.5nm,0.7s,baz=250,slow=1.5,SNR=7.6								
RPZ				LR		LR	16 11 16.0		
	comp=Z,288nm,18.9s,baz=45,slow=33								
STKA	**Stephens Creek**	**26.79**	**234**	*e*P		**P**	**16 02 46.7**	**+0.5**
STKA	**Stephens Creek**	**26.79**	**234**	P		**P**	**16 02 46.5**	**+0.2**
	14nm,0.7s,baz=66,slow=9.9,SNR=42								
STKA				LR		LR	16 13 31.9		
	comp=Z,134nm,19.3s,baz=224,slow=37								
STKA	**Stephens Creek**	**26.79**	**234**	P		**P**	**16 02 47.1**	**+0.9**
	baz=27,SNR=29								
WRAB	**Tennant Creek**	**30.88**	**261**	*e*P		**P**	**16 03 22.0**	**-0.7**
WRA	**Warramunga Arr**	**30.89**	**261**	P		**P**	**16 03 21.2**	**-1.6**
WRA	**Warramunga Arr**	**30.89**	**261**	P		**P**	**16 03 21.2**	**-1.6**
	2.2nm,0.8s,baz=94,slow=9.1,SNR=14								
AS31	**Alice Springs**	**31.38**	**254**	*e*P		**P**	**16 03 25.8**	**-1.3**
ASAR	**Alice Springs**	**31.38**	**254**	P		**P**	**16 03 26.1**	**-1.1**
ASAR	**Alice Springs**	**31.38**	**254**	P		**P**	**16 03 26.1**	**-1.1**
	0.4nm,0.8s,baz=79,slow=8.4,SNR=6.6								
ASAR				LR		LR	16 15 59.0		
	comp=Z,232nm,18.7s,baz=77,slow=36								
BBOO	**Buckleboo**	**31.47**	**236**	P		**P**	**16 03 28.3**	**+0.5**
	baz=32,SNR=9.1								
KNRA	**Kununurra**	**36.59**	**268**	P		**P**	**16 04 11.2**	**-1.2**
	baz=37,SNR=7.7								
SWI	**Sorong**	**38.94**	**292**	S		S	16 10 02.5	-28	
	baz=39,SNR=6.3								
FITZ	**Fitzroy Crossi**	**39.23**	**263**	*e*P		**P**	**16 04 34.2**	**-0.5**
FITZ	**Fitzroy Crossi**	**39.23**	**263**	P		**P**	**16 04 34.0**	**-0.7**
	6.7nm,0.8s,baz=118,slow=6.9,SNR=13								
FITZ				LR		LR	16 20 35.0		
	comp=Z,142nm,18.2s,baz=83,slow=36								
FITZ	**Fitzroy Crossi**	**39.23**	**263**	P		**P**	**16 04 34.6**	**-0.1**
	baz=39,SNR=5.4								
PPT2	**Papeete2**	**41.33**	**96**	*e*LR		LR	16 16 18.3		
	117nm,24.5s								
MEEK	**Meekatharra**	**45.35**	**250**	P		P	16 05 40.0	+15	
	baz=46,SNR=3.1								
VNDA	**Vanda**	**59.69**	**181**	P		**P**	**16 07 08.0**	**-2.0**
VNDA	**Vanda**	**59.69**	**181**	P		**P**	**16 07 08.0**	**-2.0**
	1.4nm,1.0s,baz=358,slow=7.2,SNR=3.6								
VNDA				LR		LR	16 29 40.6		
	comp=Z,78nm,19.0s,baz=330,slow=33								
SBA	**Scott Base**	**59.97**	**180**	*e*P		**P**	**16 07 11.0**	**-0.9**
	16nm,1.5s								
KSRS	**Korea Array**	**66.20**	**327**	P		**P**	**16 07 55.4**	**+1.6**
	0.7nm,0.8s,baz=112,slow=5.4,SNR=3.1								
KSRS				LR		LR	16 35 39.1		
	comp=Z,50nm,18.2s,baz=134,slow=35								
KSAR	**Wonju Array Be**	**66.21**	**327**	P		**P**	**16 07 55.4**	**+1.6**
PETK	**Petropavlovsk-**	**71.17**	**354**	LR		LR	16 34 27.8		
	comp=Z,33nm,20.3s,baz=55,slow=32								
CMAR	**Chiang Mai Arr**	**75.98**	**295**	P		**P**	**16 08 53.7**	**+0.2**
CMAR	**Chiang Mai Arr**	**75.98**	**295**	P		**P**	**16 08 53.7**	**+0.2**
	1.5nm,0.9s,baz=128,slow=4.8,SNR=11								
HHC	**Hu-ho-hao-te**	**77.81**	**320**	*e*P		**P**	**16 09 06.0**	**+2.5**
HHC				pP		**PcP**	**16 09 16.0**	**+2.6**
HHC				sP		sP	16 09 21.0	+8.5
HHC				PP		**PP**	**16 12 04.0**	**+4.5**
HHC				S		**S**	**16 18 55.3**	**0.0**
HHC				sS		**SKSac**	**16 19 13.0**	**-3.3**
HHC				ScS		**SKKSac**	**16 19 19.0**	**+1.8**
HHC				SS		**SS**	**16 24 00.8**	**+4.4**
HHC				pmax	pmax			
	comp=Z,22nm,0.7s							
HHC				pmax	pmax			
	comp=Z,260nm,5.4s							
HHC				LR	LR			
	comp=N,170nm,15.5s							
HHC				LR	LR			
	comp=E,250nm,16.7s							
HHC				LR	LR			
	comp=Z,160nm,15.5s							
GTA	**Gaotai**	**84.65**	**314**	*e*P		P	16 09 46.0	+6.1	
GTA				pP		pP	16 09 50.5	+3.9	
GTA				sP		sP	16 09 53.3	+4.4	
GTA				pmax	pmax				
	comp=Z,3.0nm,0.9s								
NVAR	**Mina Array Bea**	**89.57**	**49**	P		**P**	**16 10 01.7**	**-2.2**	
NVAR	**Mina Array Bea**	**89.57**	**49**	P		**P**	**16 10 01.7**	**-2.2**	
	comp=Z,1.0nm,0.7s,baz=227,slow=8.4,SNR=7.3								
ILAR	**Eielson Array**	**89.63**	**18**	P		**P**	**16 10 02.4**	**-0.9**	
ILAR	**Eielson Array**	**89.63**	**18**	P		**P**	**16 10 02.4**	**-0.9**	
	comp=Z,0.1nm,0.5s,baz=230,slow=5.6,SNR=2.8								
ILAR				LR		LR	16 50 25.9		
	comp=Z,54nm,18.4s,baz=240,slow=36								
ZALV	**Zalesovo Beam**	**99.76**	**324**	LR		LR	16 55 47.7		
	comp=Z,35nm,18.5s,baz=69,slow=35								
YKA	**Yellowknife Ar**	**100.50**	**28**	P		**Pdif**	**16 10 52.0**	**-0.9**	
YKA	**Yellowknife Ar**	**100.50**	**28**	P		**Pdif**	**16 10 52.0**	**-0.9**	
	comp=Z,0.1nm,0.4s,baz=251,slow=3.8,SNR=3.3								

*ISCJB **26** 16:02:37.2±0.7, 56°.08N±0°.06×17°.32E±0°.08, h0km, Error ellipse: s-maj=9.6km s-min=4.0km az=144.2*

*CSEM **26** 16:02:39.6±0.2, 56°.09N×17°.07E, h1km, ML2.5, Error ellipse: s-maj=7.0km s-min=3.5km az=148.0, Mining explosion.*

*BER **26** 16:02:39.4±3.1, 55°.99N×16°.99E, h0km, ML2.1(NAO), Suspected explosion*

*HEL **26** 16:02:40.2±0.7, 56°.13N×17°.16E, h0km, ML2.5(UPP), Explosion*

*UPP **26** 16:02:40.1, 56°.09N×17°.06E, h5km, ML2.5, Mining explosion.*

*NAO **26** 16:02:45.1±4.1, 56°.29N×17°.04E, h15km±22km, ML2.1*

ISC 26 16:02:37.5±0.9, 56°.16N±0°.04×17°.18E±0°.05, h0km, n64, σ1♀75/61, 2C, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLEU	**Blekinge**	**0.78**	**282**	*i* P	**Pb**	**16 02 53.7**	**-0.2**
BLEU	**Blekinge**	**0.78**	**282**	P	**Pb**	**16 02 53.7**	**-0.2**
BYXU	**Byxelkrok**	**1.14**	**355**	*e*P	**Pn**	**16 03 02.3**	**+1.6**
BYXU	**Byxelkrok**	**1.14**	**355**	P	**Pn**	**16 03 02.3**	**+1.6**
OSKU	**Oskarshamn**	**1.20**	**331**	*e*P	**Pn**	**16 03 02.7**	**+1.2**
OSKU	**Oskarshamn**	**1.20**	**331**	P	**Pn**	**16 03 02.7**	**+1.2**
ASPU	**Aespoe**	**1.31**	**346**	*e*P	**Pn**	**16 03 05.2**	**+2.2**
ASPU	**Aespoe**	**1.31**	**346**	P	**Pn**	**16 03 05.1**	**+2.2**
VXJU	**Vaexsjoe**	**1.46**	**303**	*e*P	**Pg**	**16 03 06.3**	**+0.8**
VXJU	**Vaexsjoe**	**1.46**	**303**	P	**Pg**	**16 03 06.3**	**+0.8**
BSD	**Bornholm Skovb**	**1.66**	**232**	*i* P	**Pn**	**16 03 07.9**	**+0.2**
BSD				*i* S	**Sb**	**16 03 30.5**	**+0.3**
BSD	**Bornholm Skovb**	**1.66**	**232**	*i* P	**Pn**	**16 03 08.0**	**+0.2**
	SNR=49						
BSD	**Bornholm Skovb**	**1.66**	**232**	*i* Pg	**Pg**	**16 03 09.6**	**+0.4**
	SNR=93						
BSD				*i* S	**Sb**	**16 03 30.5**	**+0.3**
	15nm,0.1s,SNR=49						
EKSU	**Eksjoe**	**1.75**	**325**	*e*P	**Pg**	**16 03 12.1**	**+1.0**
EKSU	**Eksjoe**	**1.75**	**325**	P	**Pg**	**16 03 12.1**	**+1.0**
DEL	**Delary**	**1.87**	**281**	*e*P	**Pb**	**16 03 13.0**	**+0.5**
DEL	**Delary**	**1.87**	**281**	P	**Pb**	**16 03 13.0**	**+0.5**
GNOU	**Gnosjoe**	**2.20**	**302**	*e*P	**Pb**	**16 03 17.2**	**-1.0**
GNOU	**Gnosjoe**	**2.20**	**302**	P	**Pb**	**16 03 17.2**	**-1.0**
BJUU	**Bjuv**	**2.33**	**270**	*e*P	**Pn**	**16 03 17.6**	**+0.5**
BJUU	**Bjuv**	**2.33**	**270**	P	**Pn**	**16 03 17.6**	**+0.5**
FABU	**Falkenberg**	**2.61**	**291**	*e*P	**Pn**	**16 03 22.4**	**+1.5**
FABU	**Falkenberg**	**2.61**	**291**	P	**Pn**	**16 03 22.4**	**+1.5**
BORU	**Boraas**	**2.84**	**303**	*e*P	**Pn**	**16 03 25.9**	**+1.9**
BORU	**Boraas**	**2.84**	**303**	P	**Pn**	**16 03 25.9**	**+1.9**
LLD	**Lille Linde**	**2.93**	**256**	*i* P	**Pn**	**16 03 25.9**	**+0.7**
LLD	**Lille Linde**	**2.93**	**256**	*i* P	**Pn**	**16 03 25.9**	**+0.7**

AAL	**Aland**	**4.30**	**19**	*e*P		**Pn**	16 03 48.4	+4.3	
AAL				*e*S		**Sn**	**16 04 35.7**	**+0.9**	
AAL	**Aland**	**4.30**	**19**	P		**Pn**	16 03 48.3	+4.3	
AAL				S		**Sn**	**16 04 35.7**	**+0.9**	
HFS	**Hagfors**	**4.39**	**337**	Pn		Pn	16 03 49.1	+3.7	
	baz=166,slow=11								
HFS				Sn		**Sn**	**16 04 34.6**	**-2.6**	
	baz=156,slow=28								
HFS				Lg		Lg	16 04 58.7		
	baz=156,slow=37								
HFS	**Hagfors**	**4.39**	**337**	Pn		Pn	16 03 49.1	+3.7	
	baz=166,slow=11								
HFS				Sn		**Sn**	**16 04 34.6**	**-2.6**	
	baz=156,slow=28								
HFS				Lg		Lg	16 04 58.7		
	baz=156,slow=37								
HFS	**Hagfors**	**4.39**	**337**	Pn		Pn	16 03 49.1	+3.7	
	baz=166,slow=10,SNR=8.9								
HFS				Sn		**Sn**	**16 04 34.6**	**-2.6**	
	baz=156,slow=24,SNR=2.7								
HFS				Lg		Lg	16 04 58.7		
	baz=156,slow=28,SNR=7.6								
MTSE	**Matsula**	**4.41**	**52**	*e*P		Pn	16 03 48.9	+3.4	
MTSE				*e*S		**Sn**	**16 04 35.4**	**-2.1**	
MTSE	**Matsula**	**4.41**	**52**	P		Pn	16 03 48.9	+3.4	
MTSE				S		**Sn**	**16 04 35.4**	**-2.1**	
RAF	**Rauma**	**5.44**	**24**	*e*P		Pn	16 04 04.5	+4.8	
RAF				*e*S		**Sn**	**16 05 01.1**	**-1.8**	
RAF	**Rauma**	**5.44**	**24**	P		Pn	16 04 04.4	+4.8	
MEF	**Metsahovi**	**5.58**	**40**	*e*P		Pn	16 04 06.1	+4.4	
MEF				*e*S		**Sn**	**16 05 02.6**	**-3.8**	
MEF	**Metsahovi**	**5.58**	**40**	P		Pn	16 04 06.0	+4.4	
NB2	**NORSAR Subarra**	**5.80**	**330**	Pn		**Pn**	**16 04 06.1**	**+1.3**	
	baz=147,slow=16								
NB2				Lg		Lg	16 05 42.5		
	baz=142,slow=37								
NB2	**NORSAR Subarra**	**5.80**	**330**	Pn		**Pn**	**16 04 06.1**	**+1.3**	
	baz=147,slow=16								
NB2				Lg		Lg	16 05 42.5		
	baz=142,slow=37								
NB2	**NORSAR Subarra**	**5.80**	**330**	Pn		**Pn**	**16 04 06.1**	**+1.3**	
	baz=147,slow=14,SNR=0.1								
NB2				Lg		Lg	16 05 42.5		
	baz=142,slow=32,SNR=3.7								
PVF	**Pernaja**	**6.34**	**42**	*e*P		Pn	16 04 15.8	+3.6	
PVF				*e*S		**Sn**	**16 05 21.7**	**-3.4**	
PVF	**Pernaja**	**6.34**	**42**	P		Pn	16 04 15.7	+3.6	
VJF	**Virojoki**	**7.00**	**47**	*e*P		**Pn**	**16 04 23.2**	**+2.0**	
VJF				*e*S		**Sn**	**16 05 38.9**	**-2.5**	
VJF	**Virojoki**	**7.00**	**47**	P		**Pn**	**16 04 23.2**	**+2.0**	
FIA0	**FINESS Array S**	**7.03**	**37**	Pn		Pn	16 04 25.0	+3.4	
	baz=221,slow=11								
FIA0				Sn		**Sn**	**16 05 42.8**	**+0.7**	
	baz=218,slow=28								
FIA0	**FINESS Array S**	**7.03**	**37**	Pn		**Pn**	16 04 25.0	+3.4	
	baz=221,slow=11								
FIA0				Sn		**Sn**	**16 05 42.8**	**+0.7**	
	baz=218,slow=28								
FIA0	**FINESS Array S**	**7.03**	**37**	*e*P		Pn	16 04 24.9	+3.3	
FIA0				*e*S		**Sn**	**16 05 40.1**	**-2.0**	
FIA0	**FINESS Array S**	**7.03**	**37**	P		Pn	16 04 24.8	+3.3	
FIA0				Sn		**Sn**	**

QSPA	**South Pole Qui**	**58.60**	**180**	P		**P**	**16 23 57.9**	**+1.3**
	1.9nm,0.7s,baz=66,slow=1.0,SNR=15							
PALU	**Palau**	**59.83**	**302**	P		P	16 24 01.2	-4.4
	baz=60,SNR=3.3							
JNU	**Nakatsue**	**80.56**	**318**	LR		LR	16 53 51.6	
	comp=Z,2μm,21.8s,baz=257,slow=30							
ASAJ	**Asahikawa**	**83.55**	**332**	LR		LR	17 00 39.7	
	comp=Z,30nm,18.5s,baz=162,slow=33							
NVAR	**Mina Array Bea**	**88.88**	**43**	P		**P**	**16 26 56.0**	**+1.7**
	0.4nm,0.6s,baz=232,slow=6.7,SNR=4.2							
TXAR	**Lajitas Array**	**92.77**	**57**	LR		LR	17 02 24.7	
	comp=Z,31nm,21.6s,baz=155,slow=31							
KAF	**Kangasniemi**	**145.68**	**340**	*ep*		**PKPab**	**16 33 38.6**	**+0.4**
KBZ	**Khabaz**	**145.94**	**303**	PKPbc		**PKPab**	**16 33 39.5**	**-0.2**
	3.3nm,1.0s,baz=73,slow=3.3,SNR=5.5							
FINES	**FINESS Array B**	**146.28**	**340**	PKPbc		**PKPab**	**16 33 40.5**	**0.0**
	3.8nm,0.7s,baz=64,slow=3.2,SNR=8.6							
FINES				pPKPbc		pPKPbc	16 33 53.7	+5.5
	4.9nm,0.7s,baz=71,slow=8.3,SNR=4.5							
AKASG	**Malin Array Be**	**152.34**	**322**	PKPbc		**PKPbc**	**16 33 58.2**	**+3.0**
	0.5nm,0.4s,baz=55,slow=3.6,SNR=4.6							
BRTR	**Keskin Array B**	**153.35**	**297**	PKPbc		**PKPbc**	**16 33 59.4**	**+1.3**
	0.2nm,0.3s,baz=111,slow=3.2,SNR=2.6							
TORD	**Torodi Ar. Bea**	**161.71**	**178**	PKPab		**PKPab**	**16 34 47.5**	**+1.1**
	0.6nm,0.8s,baz=167,slow=2.5,SNR=4.6							

MEX 26 16:26:45.3±0.5, 17°.96N×101°.75W, h16km±7km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.44**	**142**	*eP*	Pg	16 26 52.7	-1.6
ZIIG				*i* S	Sg	16 26 58.9	-1.4
ARIG	**Puente Sto Nin**	**1.38**	**76**	*i* P	Pn	16 27 06.2	-3.7
ARIG				*i* S	Sn	16 27 22.2	-5.6
MMIG	**Aquila**	**1.55**	**283**	*i* P	Pn	16 27 09.0	-3.2
MMIG				*i* S	Sn	16 27 26.4	-5.6
CAIG	**El Cayaco**	**1.68**	**122**	*i* P	Pn	16 27 10.9	-3.1
CAIG				*i* S	Sn	16 27 29.6	-5.7
PLIG	**Platanillo**	**2.18**	**78**	*eP*	Pn	16 27 18.8	-2.3
PLIG				*i* S	Sn	16 27 43.7	-4.2

*ISCJB **26** 16:30:14.4±0.3, 2°.40N±0°.04×126°.77E±0°.03, h55km, mb4.0/12, MS2.8/1, Error ellipse: s-maj=5.4km s-min=4.8km az=1.4*
*DJA **26** 16:30:14.7±0.5, 2°.N±5°×12°.7E±°, h10km, M4.4/9, mb4.6/7, mB4.8/3, MLv4.3/9, Mw(mB)4.1/3*
*IDC **26** 16:30:15.9±2.9, 2°.23N×126°.65E, h62km±26km, mb3.7/13, mb1 3.9/13, mb1mx3.8/22, mbtmp3.7/13, MS2.9/1, Ms1 3.1/1, ms1mx1.8/30, Error ellipse: s-maj=31.5km s-min=10.3km az=77.0*
*AUST **26** 16:30:18.9±0.3, 2°.26N×126°.76E, h98km, Error ellipse: s-maj=1.0km s-min=0.8km az=239.0*

ISC 26 16:30:15.9±0.5, 2°.34N±0°.05×126°.75E±0°.05, h55km, n43, σ1§46/46, mb4.0/12, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.15**	**116**	P	**Pn**	**16 30 35.8**	**0.0**
GAMI				S	**Sn**	**16 30 51.5**	**+0.9**
TNTI	**Ternate**	**1.68**	**158**	P	**Pn**	**16 30 42.7**	**-0.2**
TNTI				S	**Sn**	**16 31 06.8**	**+3.6**
MNI	**Manado**	**2.10**	**245**	P	**Pn**	**16 30 48.6**	**-0.1**
MNI				S	**Sn**	**16 31 14.3**	**+0.5**
LBMI	**Labuha**	**3.05**	**166**	P	**Pn**	**16 31 03.3**	**+1.6**
KMSI	**Cibinong**	**3.27**	**238**	P	**Pn**	**16 31 05.5**	**+0.8**
MRSI	**Marisa**	**5.15**	**249**	P	**Pn**	**16 31 32.0**	**+1.5**
	94nm,0.5s,981nm0.3nm						
LUWI	**Luwuk**	**5.21**	**230**	P	**Pn**	**16 31 33.6**	**+2.4**
	113nm,0.7s,2μm0.5nm						
LUWI	**Luwuk**	**5.21**	**230**	P	**Pn**	**16 31 33.5**	**+2.3**
	baz=5.2,SNR=10						
CTBH	**Cotabato--PC H**	**5.45**	**333**	*ii* P	**Pn**	**16 31 35.8**	**+1.2**
SWI	**Sorong**	**5.52**	**125**	P	**Pn**	**16 31 37.7**	**+2.2**
	14nm,1.0s,0.1nm						
SWI	**Sorong**	**5.52**	**125**	P	**Pn**	**16 31 38.1**	**+2.6**
	baz=5.5,SNR=5.3						
SKSI	**Soroako, Sulaw**	**7.26**	**228**	P	**Pn**	**16 32 01.1**	**+1.7**
	32nm,0.7s,333nm0.1nm						
FAKI	**Fak Fak**	**7.58**	**134**	P	Pn	16 32 07.2	+3.4
	baz=7.5,SNR=3.4						
MYLDM	**Lahad Datu**	**8.70**	**289**	P	Pn	16 32 22.8	+3.6
	41nm,1.0s						
TTSI	**Tana Toraja**	**8.75**	**232**	P	**Pn**	**16 32 21.5**	**+1.7**
	20nm,1.1s						
PALU	**Palau**	**9.16**	**57**	P	**Pn**	**16 32 27.0**	**+1.5**
	baz=9.2,SNR=8.3						
PALU				S	**Sn**	**16 34 05.8**	**-1.4**
	baz=9.2,SNR=3.6						
SPSI	**Sidrap Palu**	**9.37**	**228**	P	**Pn**	**16 32 29.9**	**+1.5**
KKM	**Kota Kinabalu**	**11.13**	**290**	P	Pn	16 32 56.1	+3.6
	baz=11,SNR=6.2						
SBUM	**Sibu**	**14.52**	**271**	P	**P**	**16 33 45.0**	**+1.4**
MTN	**Manton Dam**	**15.70**	**164**	P	**Pn**	**16 33 51.3**	**-2.3**
	baz=16,SNR=6.5						
KDU	**Kakadu**	**15.97**	**159**	P	**P**	**16 33 59.8**	**0.0**
	baz=16,SNR=8.6						
KNRA	**Kununurra**	**18.01**	**174**	P	**P**	**16 34 21.2**	**-1.1**
	baz=18,SNR=8.8						
FITZ	**Fitzroy Crossi**	**20.34**	**183**	P	**P**	**16 34 45.7**	**-2.1**
	4.3nm,0.5s,baz=8.2,slow=10,SNR=21						
FITZ	**Fitzroy Crossi**	**20.34**	**183**	P	**P**	**16 34 46.1**	**-1.7**
	baz=20,SNR=27						
WRA	**Warrumunga Arr**	**23.36**	**162**	P	**P**	**16 35 17.9**	**-1.9**
	5.1nm,0.4s,baz=338,slow=11,SNR=64						
WRA				S	**S**	**16 39 26.8**	**-1.9**
	3.2nm,0.9s,baz=342,slow=18,SNR=10						
QIS	**Mount Isa**	**26.01**	**152**	P	**P**	**16 35 44.2**	**+0.3**
	baz=26,SNR=14						
ASAR	**Alice Springs**	**26.77**	**165**	P	**P**	**16 35 50.2**	**-0.5**
	1.1nm,0.3s,baz=344,slow=9.6,SNR=49						
ASAR				S	**S**	**16 40 22.5**	**-0.6**
	0.8nm,0.9s,baz=348,slow=18,SNR=4.9						
MEEK	**Meekatharra**	**29.86**	**195**	P	**P**	**16 36 17.5**	**-0.8**
	baz=30,SNR=4.7						
CMAR	**Chiang Mai Arr**	**31.61**	**302**	P	**P**	**16 36 33.0**	**-0.8**
	1.7nm,0.8s,baz=112,slow=6.6,SNR=14						
CMAR				LR	LR	16 49 28.7	
	comp=Z,23nm,21.6s,baz=185,slow=36						
FORT	**Forrest**	**32.96**	**178**	P	**P**	**16 36 45.1**	**-0.3**
	baz=33,SNR=8.0						
KSRS	**Korea Array**	**34.96**	**2**	P	**P**	**16 37 03.5**	**+0.7**
	1.1nm,0.5s,baz=179,slow=9.1,SNR=8.3						
MJAR	**Matsushiro Arr**	**35.64**	**16**	P	**P**	**16 37 08.6**	**-0.1**
	2.3nm,0.6s,baz=192,slow=9.8,SNR=12						
BBOO	**Buckleboo**	**36.05**	**167**	P	**P**	**16 37 11.4**	**-0.7**
	baz=36,SNR=7.4						
STKA	**Stephens Creek**	**36.83**	**159**	P	**P**	**16 37 17.8**	**-1.0**
	1.1nm,0.4s,baz=336,slow=8.8,SNR=13						
STKA	**Stephens Creek**	**36.83**	**159**	P	**P**	**16 37 19.0**	**+0.2**
	baz=37,SNR=8.1						
ARMA	**Armidale**	**40.31**	**146**	P	**P**	**16 37 48.9**	**+0.7**
	baz=40,SNR=4.9						
USRK	**Ussuriysk Arra**	**41.94**	**6**	P	**P**	**16 38 02.5**	**+1.3**
	3.3nm,0.8s,baz=204,slow=8.0,SNR=9.3						
SONM	**Songino Array**	**48.62**	**342**	P	**P**	**16 38 54.2**	**0.0**
	1.1nm,0.7s,baz=159,slow=9.8,SNR=7.1						
MKAR	**Makanchi Array**	**58.70**	**326**	P	**P**	**16 40 07.3**	**-0.6**
	1.0nm,0.3s,baz=121,slow=7.5,SNR=28						
ZALV	**Zalesovo Beam**	**61.83**	**333**	P	**P**	**16 40 28.1**	**-1.1**
	0.4nm,0.3s,baz=132,slow=6.4,SNR=4.4						
VNDA	**Vanda**	**82.05**	**173**	P	**P**	**16 42 28.2**	**-1.6**
	0.7nm,0.9s,baz=326,slow=6.7,SNR=3.7						
ILAR	**Eielson Array**	**86.34**	**25**	P	**P**	**16 42 50.5**	**-1.3**
	0.1nm,0.5s,baz=248,slow=4.8,SNR=4.3						
CFAA	**Coronel Fontan**	**147.64**	**156**	PKPbc	**PKPdf**	**16 49 53.5**	**+1.3**
	0.2nm,0.7s,baz=219,slow=6.5,SNR=3.1						

ISC 26 16:31:30.6±1.1, 51°.6N±0°.1×6°.6E±0°.3, h10km, n6, σ0§98/10, Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WTSB	**Winterswijk**	**0.40**	**23**	*eP*	**Pn**	**16 31 41.9**	**-0.5**
	20nm,0.4s						
WTSB				*eS*	**Sb**	**16 31 47.4**	**+1.5**
HGN	**Heimansgroeve**	**0.92**	**205**	*eP*	**Pg**	**16 31 47.8**	**-0.6**
	1.4nm,0.2s						
HGN				*eP*	**Pb**	**16 31 48.8**	**0.0**
	29nm,0.2s						
HGN				*eS*	**Sg**	**16 32 00.8**	**+0.4**
HGN				*eS*	**Sb**	**16 32 02.2**	**+1.2**
BEBN	**Eben Emael**	**0.97**	**215**	P	**Pg**	**16 31 48.2**	**-1.2**
MEM	**Membach**	**1.05**	**199**	P	**Pg**	**16 31 50.0**	**-0.8**
BCLA	**Clavier**	**1.42**	**214**	P	**Pn**	**16 31 56.3**	**-0.1**
DOU	**Dourbes**	**1.95**	**220**	P	**Pn**	**16 32 04.0**	**+0.3**

*CSEM **26** 16:40:24.7, 12°.07N×43°.81E, h11km, ML3.8, After DHMR*
DHMR 26 16:40:24.7±1.0, 12°.07N×43°.81E, h11km±10km, ML3.8, 1D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**1.19**	**14**	*ii* P	Pn	16 40 47.0	-0.7
TRBA				*i* S	Sg	16 41 03.8	0.0
TRBA				AML	AML	16 41 06.5	
	comp=N,2μm,0.3s						
ADEN	**Aden**	**1.34**	**58**	*i* P	Pb	16 40 49.7	-0.2
ADEN				*i* S	Sg	16 41 08.3	+0.3
ADEN				AML	AML	16 41 16.7	
	comp=N,2μm,0.7s						
ADEN	**Aden**	**1.34**	**58**	*i* P	Pb	16 40 49.7	-0.2
ADEN				*i* S	Sg	16 41 08.3	+0.3
	comp=N,1μm,0.7s						
UDYN	**Al 'Udayn**	**1.89**	**5**	*i* P	Pn	16 40 57.7	+0.5
UDYN				*i* S	Sg	16 41 24.9	-1.2
UDYN				AML	AML	16 41 33.1	
	comp=E,1μm,0.3s						
UDYN	**Al 'Udayn**	**1.89**	**5**	*i* P	Pn	16 40 57.7	+0.5
UDYN				*i* S	Sg	16 41 24.9	-1.2
	comp=E,624nm,0.3s						
LBOS		**2.27**	**38**	*i* P	Pb	16 41 04.4	-1.8
LBOS				*i* S	Sb	16 41 35.5	+0.9
DHBB	**Dhamar BB**	**2.55**	**13**	*i* P	Pn	16 41 08.5	+2.1
DHBB				*i* S	Sb	16 41 42.9	+0.3
BDHA	**Al Bayda'**	**2.55**	**42**	*i* P	Pn	16 41 08.5	+2.1
BDHA				*i* S	Sb	16 41 42.7	+0.1
BDHA				AML	AML	16 41 58.8	
	comp=N,572nm,0.5s						
BDHA	**Al Bayda'**	**2.55**	**42**	*i* P	Pn	16 41 08.5	+2.1
BDHA				*i* S	Sb	16 41 42.7	+0.1
	comp=N,286nm,0.5s						

*ISCJB **26** 16:45:15.2±0.7, 42°.83S±0°.09×72°.7W±0°.2, h10km, mb4.0/8, MS3.7/3, Error ellipse: s-maj=20.7km s-min=11.4km az=22.3*
*IDC **26** 16:45:15.2±0.9, 42°.80S×72°.60W, h0km, mb3.9/8, mb1 4.2/9, mb1mx4.1/18, mbtmp3.9/9, ML3.9/1, MS3.7/4, Ms1 3.6/4, ms1mx3.3/25, Error ellipse: s-maj=36.1km s-min=13.7km az=119.0*
*NEIC **26** 16:45:16.4±0.6, 42°.85S×72°.75W, h10km, mb4.6/4, Error ellipse: s-maj=19.9km s-min=10.8km az=115.0*

ISC 26 16:45:16.6±0.7, 42°.78S±0°.10×72°.7W±0°.1, h10km, n27, σ1§15/29, mb4.0/8, MS3.9/3, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.60**	**39**	Pn	**Pn**	**16 45 59.0**	**+0.2**
PLCA				Pg	**Pb**	**16 46 01.9**	**-1.4**
PLCA				*eS*	**Sb**	**16 46 36.0**	**+0.6**
PLCA				Lg	Lg	16 46 36.4	
PLCA	**Paso Flores**	**2.60**	**39**	Pn	**Pn**	**16 45 59.0**	**+0.2**
	5.0nm,0.3s,baz=222,slow=17,SNR=78						
PLCA				Pg	**Pb**	**16 46 01.9**	**-1.4**
	12nm,0.3s,baz=222,slow=17,SNR=122						
PLCA				Lg	Lg	16 46 36.4	
	60nm,0.3s,baz=311,slow=20,SNR=25						
PLCA				LR	LR	16 47 10.2	
	comp=Z,517nm,20.2s,baz=157,slow=45						
TRQA	**Tornquist**	**9.44**	**64**	Pn	**Pn**	**16 47 34.2**	**+1.6**
CFAA	**Coronel Fontan**	**11.70**	**19**	LR	LR	16 52 55.0	
	comp=Z,17nm,20.1s,baz=326,slow=39						
LVC	**Limon Verde**	**20.36**	**10**	*eP*	**P**	**16 49 54.6**	**+1.1**
	46nm,1.9s						
CPUP	**Villa Florida**	**20.67**	**42**	P	**P**	**16 49 57.5**	**+0.9**
CPUP	**Villa Florida**	**20.67**	**42**	P	**P**	**16 49 57.5**	**+0.9**
	0.5nm,0.4s,baz=269,slow=20,SNR=2.4						
CPUP				LR	LR	16 58 42.3	
	comp=Z,130nm,20.0s,baz=44,slow=39						
LPAZ	**La Paz**	**26.69**	**10**	P	**P**	**16 50 58.7**	**+2.1**
LPAZ	**La Paz**	**26.69**	**10**	P	**P**	**16 50 58.7**	**+2.1**
	1.0nm,0.7s,baz=180,slow=3.0,SNR=4.5						
BDFB	**Brasilia**	**34.33**	**46**	P	**P**	**16 52 04.0**	**+0.5**
BDFB	**Brasilia**	**34.33**	**46**	P	**P**	**16 52 04.0**	**+0.5**
	3.2nm,0.6s,baz=298,slow=12,SNR=4.7						
BDFB				LR	LR	17 07 16.6	
	comp=Z,221nm,18.7s,baz=360,slow=38						
SNAA	**Sanae**	**43.77**	**155**	*eP*	**P**	**16 53 22.0**	**+0.1**
	17nm,1.4s						
QSPA	**South Pole Qui**	**47.47**	**180**	*eP*	**P**	**16 53 51.4**	**0.0**
	11nm,1.1s						
QSPA	**South Pole Qui**	**47.47**	**180**	P	**P**	**16 53 51.7**	**+0.3**
	8.2nm,1.1s,baz=146,slow=4.5,SNR=10.0						
VNDA	**Vanda**	**55.42**	**192**	P	**P**	**16 54 51.4**	**+0.9**
VNDA	**Vanda**	**55.42**	**192**	P	**P**	**16 54 51.4**	**+0.9**
	3.1nm,1.1s,baz=141,slow=6.5,SNR=5.6						
TXAR	**Lajitas Array**	**77.20**	**333**	P	**P**	**16 57 11.1**	**+0.5**
TXAR	**Lajitas Array**	**77.20**	**333**	P	**P**	**16 57 11.1**	**+0.5**
	0.6nm,0.9s,baz=139,slow=6.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**87.71**	**70**	P	**P**	**16 58 04.0**	**-1.6**
TORD	**Torodi Ar. Bea**	**87.71**	**70**	P	**P**	**16 58 04.1**	**-1.6**
	0.5nm,0.8s,baz=224,slow=4.0,SNR=3.6						
TORD				LR	LR	17 34 03.1	
	comp=Z,57nm,19.0s,baz=260,slow=33						
PDAR	**Pinedale Array**	**91.37**	**334**	P	**P**	**16 58 21.8**	**-0.7**
PDAR	**Pinedale Array**	**91.37**	**334**	P	**P**	**16 58 21.8**	**-0.7**
	0.3nm,0.7s,baz=134,slow=6.4,SNR=3.6						
ILAR	**Eielson Array**	**121.69**	**331**	PKP	**PKPdf**	**17 04 09.2**	**-0.3**
ILAR	**Eielson Array**	**121.69**	**331**	PKP	**PKPdf**	**17 04 09.2**	**-0.3**
	0.2nm,0.7s,baz=156,slow=1.4,SNR=4.3						
ABKAR	**Akbulak array**	**146.93**	**62**	*eP*PKPbc	**PKPbc**	**17 04 57.4**	**-1.2**
MKAR	**Makanchi Array**	**161.83**	**69**	PKPab	**PKPab**	**17 06 01.7**	**-1.5**
MKAR	**Makanchi Array**	**161.83**	**69**	PKPab	**PKPab**	**17 06 01.7**	**-1.5**
	0.3nm,0.8s,baz=263,slow=5.1,SNR=4.2						

IDC 26 16:48:40.0±2.0, 4°.30S×153°.10E, h87km±9km, mb3.4/3, mb1 3.7/4, mb1mx3.2/20, mbtmp3.5/4, MS3.4/3, Ms1 3.4/3, ms1mx3.0/14, Error ellipse: s-maj=93.2km s-min=25.3km az=130.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.78**	**229**	P	Pn	16 50 30.1	-0.4
	1.4nm,0.3s,baz=110,slow=2.2,SNR=6.3						
PMG				S	Sn	16 51 56.7	-0.3
	2.4nm,0.3s,baz=0.0,slow=20,SNR=8.4						
HNR	**Honiara**	**8.49**	**127**	LR	LR	16 53 16.1	
	comp=Z,75nm,18.2s,baz=227,slow=32						
WRA	**Warramunga Arr**	**24.00**	**228**	P	P	16 53 46.5	-0.3
	1.2nm,0.6s,baz=53,slow=9.7,SNR=25						
ASAR	**Alice Springs**	**26.72**	**222**	P	P	16 54 11.6	+0.2
	0.3nm,0.5s,baz=58,slow=9.2,SNR=12						
ASAR				pP	pP	16 54 32.1	+0.9
	0.2nm,0.5s,baz=55,slow=9.0,SNR=1.8						
FITZ	**Fitzroy Crossi**	**30.16**	**241**	P	P	16 54 41.8	-0.2
	1.8nm,0.7s,baz=60,slow=9.1,SNR=8.3						
FITZ				pP	pP	16 55 03.2	+1.1
	1.3nm,0.6s,baz=57,slow=10,SNR=2.7						
FITZ				LR	LR	17 05 42.3	
	comp=Z,54nm,21.6s,baz=3.7,slow=34						
MJAR	**Matsushiro Arr**	**42.95**	**342**	LR	LR	17 12 34.8	
	comp=Z,146nm,18.2s,baz=210,slow=33						
TORD	**Torodi Ar. Bea**	**150.44**	**289**	PKPbc	PKPbc	17 08 22.6	+0.1
	0.2nm,0.5s,baz=84,slow=2.3,SNR=3.3						
TORD				pPKPbc	pPKPbc	17 08 45.6	-1.2
	0.5nm,0.7s,baz=73,slow=2.4,SNR=3.8						

*IDC **26** 16:51:38.2±0.8, 3°.55N×126°.85E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.9/24, mbtmp4.0/11, MS3.5/5, Ms1 3.5/5, ms1mx2.9/39, Error ellipse: s-maj=54.6km s-min=14.2km az=71.0*
*BJI **26** 16:51:38.2, 3°.01N×127°.21E, h48km, mB4.8/4, mb4.6/7, Ms4.6/2, Ms7 4.2/2*
*ISCJB **26** 16:51:42.6±0.4, 3°.63N±0°.04×127°.07E±0°.06, h48km, mb4.1/15, MS3.5/6, Error ellipse: s-maj=9.4km s-min=5.4km az=162.3*
*NEIC **26** 16:51:44.2±5.1, 3°.58N×126°.91E, h48km±49km, mb4.5/4, Error ellipse: s-maj=31.7km s-min=9.9km az=63.0*
*DJA **26** 16:51:46.8±1.3, 3°.N±11°×12°.7E±°, h10km, M4.4/8, mb4.5/4, mB4.8/3, MLv4.3/8, Mw(mB)4.1/3*
*AUST **26** 16:51:58.3, 2°.50N×127°.00E, h100km*

ISC 26 16:51:44.6±0.5, 3°.58N±0°.05×127°.07E±0°.08, h48km, n53, σ1§78/58, mb4.0/15, MS3.7/6, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.87**	**157**	P	**Pn**	**16 52 13.9**	**-0.3**
GAMI				S	**Sn**	**16 52 33.6**	**-3.1**
TNTI	**Ternate**	**2.80**	**174**	P	**Pn**	**16 52 27.8**	**+0.8**
MNI	**Manado**	**3.07**	**226**	P	**Pn**	**16 52 30.2**	**-0.5**
LBMI	**Labuha**	**4.21**	**174**	P	**Pn**	**16 52 47.3**	**+1.0**
KMSI	**Cibinong**	**4.29**	**226**	P	**Pn**	**16 52 49.1**	**+1.7**
CTBH	**Cotabato--PC H**	**4.58**	**322**	*ii* P	**Pn**	**16 52 52.8**	**+1.4**
MRSI	**Marisa**	**5.98**	**239**	P	**Pn**	**16 53 10.6**	**0.0**
	54nm,0.8s,703nm0.2nm						
SWI	**Sorong**	**6.08**	**136**	P	**Pn**	**16 53 13.2**	**+1.2**
	23nm,0.8s,526nm0.1nm						
SWI	**Sorong**	**6.08**	**136**	P	**Pn**	**16 53 14.2**	**+2.2**
	baz=5.4,SNR=8.8						
SWI				S	Sn	16 54 29.7	+9.3
	baz=5.4,SNR=33						
LUWI	**Luwuk**	**6.29**	**223**	P	**Pn**	**16 53 17.4**	**+2.6**
	111nm,1.1s,1μm0.5nm						
LUWI	**Luwuk**	**6.29**	**223**	P	**Pn**	**16 53 17.7**	**+2.9**
	baz=5.5,SNR=11						
FAKI	**Fak Fak**	**8.27**	**141**	P	**Pn**	**16 53 44.6**	**+2.5**
	baz=7.5,SNR=6.5						
SKSI	**Soroako, Sulaw**	**8.35**	**223**	P	**Pn**	**16 53 45.3**	**+2.2**
WSI	**Waingapu**	**14.79**	**207**	P	**Pn**	**16 55 08.0**	**-2.9**
	baz=14,SNR=4.6						
WSI				S	Sn	16 57 43.8	-10
	baz=14,SNR=4.5						
MTN	**Manton Dam**	**16.81**	**166**	P	**Pn**	**16 55 35.4**	**-1.3**
	baz=16,SNR=4.8						
KSM	**Kuching**	**16.87**	**263**	P	**Pn**	**16 55 35.2**	**-2.3**
	9.0nm,0.8s						
KSM	**Kuching**	**16.87**	**263**	P	**P**	**16 55 42.7**	**+3.6**
	baz=17,SNR=5.2						
KDU	**Kakadu**	**17.03**	**162**	P	**P**	**16 55 44.0**	**+3.3**
	baz=16,SNR=4.8						
KNRA	**Kununurra**	**19.20**	**175**	P	**Pn**	**16 56 05.8**	**-0.2**
	baz=18,SNR=7.0						
GUMO	**Guam**	**20.20**	**59**	LR	LR	17 02 28.7	
	comp=Z,55nm,21.9s,baz=153,slow=32						
FITZ	**Fitzroy Crossi**	**21.59**	**184**	*eP*	**P**	**16 56 29.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**21.59**	**184**	P	**P**	**16 56 29.9**	**-0.6**
	1.7nm,0.6s,baz=7.1,slow=12,SNR=4.1						
FITZ	**Fitzroy Crossi**	**21.59**	**184**	P	**P**	**16 56 30.5**	**0.0**
	baz=21,SNR=6.0						
WRAB	**Tennant Creek**	**24.44**	**163**	*eP*	**P**	**16 56 58.0**	**-1.0**
	9.2nm,0.8s						
WRA	**Warramunga Arr**	**24.44**	**163**	P	**P**	**16 56 58.2**	**-0.8**
WRA	**Warramunga Arr**	**24.44**	**163**	P	**P**	**16 56 58.2**	**-0.8**
	2.7nm,0.6s,baz=338,slow=11,SNR=22						
AS31	**Alice Springs**	**27.89**	**167**	*eP*	**P**	**16 57 31.3**	**+1.1**
ASAR	**Alice Springs**	**27.89**	**167**	P	**P**	**16 57 31.4**	**+1.2**
ASAR	**Alice Springs**	**27.89**	**167**	P	**P**	**16 57 31.4**	**+1.2**
	0.4nm,0.3s,baz=342,slow=7.6,SNR=17						
CMAR	**Chiang Mai Arr**	**31.24**	**300**	P	**P**	**16 57 58.2**	**-1.7**
CMAR	**Chiang Mai Arr**	**31.24**	**300**	P	**P**	**16 57 58.2**	**-1.7**
	0.4nm,0.6s,baz=122,slow=8.6,SNR=3.2						
CMAR				LR	LR	17 10 56.8	
	comp=Z,32nm,21.5s,baz=185,slow=37						
KSAR	**Wonju Array Be**	**33.71**	**1**	P	**P**	**16 58 21.4**	**+0.1**
KSRS	**Korea Array**	**33.72**	**1**	P	**P**	**16 58 21.4**	**0.0**
	1.0nm,0.7s,baz=185,slow=9.4,SNR=4.5						
BJT	**Baijiatuan**	**37.59**	**346**	P	**P**	**16 58 51.8**	**-2.8**
	19nm,0.8s						
STKA	**Stephens Creek**	**37.87**	**160**	*eP*	**P**	**16 58 57.0**	**0.0**
	0.4nm,0.4s						
STKA	**Stephens Creek**	**37.87**	**160**	P	**P**	**16 58 57.2**	**+0.2**
STKA	**Stephens Creek**	**37.87**	**160**	P	**P**	**16 58 57.2**	**+0.2**
	1.9nm,0.4s,baz=336,slow=9.6,SNR=18						
STKA	**Stephens Creek**	**37.87**	**160**	P	**P**	**16 58 57.7**	**+0.6**
	baz=37,SNR=8.7						
HHC	**Hu-ho-hao-te**	**39.65**	**341**	*eP*	**P**	**16 59 13.5**	**+1.5**
HHC				pP	**pP**	**16 59 26.8**	**+2.0**
HHC				sP	**sP**	**16 59 31.5**	**+1.0**
HHC				PP	**PnPn**	**17 00 50.0**	**+2.8**
HHC				S	**S**	**17 05 14.0**	**+2.0**
HHC				sS	**sS**	**17 05 35.5**	**+2.0**
HHC				SS	**SS**	**17 08 05.5**	**-3.3**
HHC				ScS	**ScS**	**17 09 13.0**	**-2.9**
HHC				pmax	pmax		
	comp=Z,25nm,0.6s						
HHC				pmax	pmax		
	comp=Z,120nm,5.5s						
HHC				LR	LR		
	comp=N,240nm,17.8s						
HHC				LR	LR		
	comp=E,220nm,15.5s						
HHC				LR	LR		
	comp=Z,140nm,16.7s						
SONM	**Songino Array**	**47.55**	**341**	P	**P**	**17 00 15.5**	**+0.1**
SONM	**Songino Array**	**47.55**	**341**	P	**P**	**17 00 15.5**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=160,slow=8.1,SNR=5.5						
MK31	**Makanchi Array**	**57.87**	**325**	*eP*	**P**	**17 01 30.6**	**-1.1**
MK

KBZ Khabaz 59.02 318 P **P** 17 01 24.2 -0.2
3.4nm,0.8s,baz=139,slow=6.5,SNR=11
BRTR Keskin Array B 64.28 311 P **P** 17 01 59.6 -0.3
2.1nm,0.6s,baz=134,slow=7.2,SNR=14
AKASG Malin Array Be 70.12 322 P **P** 17 02 35.2 -1.0
2.1nm,0.5s,baz=92,slow=5.6,SNR=7.2
JOF Joensuu 72.86 335 *ep* **P** 17 02 51.8 -0.5
FINES FINESS Array B 74.72 332 P **P** 17 03 01.3 -1.8
2.4nm,0.4s,baz=101,slow=4.4,SNR=13
KAF Kangasniemi 74.81 333 *ep* P 17 03 03.6 0.0
BOSA Boshof 75.37 238 P P 17 03 11.8 +4.2
2.9nm,0.9s,baz=86,slow=6.1,SNR=5.1
ARCES ARCESS Array B 77.27 340 P **P** 17 03 17.3 -0.1
1.2nm,0.4s,baz=98,slow=6.5,SNR=17
GERES GERESS Array B 79.76 318 P **P** 17 03 32.6 +1.0
1.2nm,0.7s,baz=90,slow=5.9,SNR=8.7
TORD Torodi Ar. Bea 91.86 283 P **P** 17 04 34.7 +2.9
0.2nm,0.4s,baz=83,slow=4.3,SNR=3.5

IDC ***26*** *17:00:30.1±1.2,3°.10N×125°.81E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/23, mbtmp3.6/6, Error ellipse: s-maj=103.5km s-min=18.7km az=69.0*
ISCJB ***26*** *17:00:34.6±0.8,3°.67N±0°.07×127°.06E±0°.08, h48km, mb3.6/6, Error ellipse: s-maj=12.0km s-min=9.4km az=172.1*
DJA ***26*** *17:00:37.2±1.6,3°N±14°×12°7E±°, h10km, M3.8/5, mb4.3/1, MLv3.6/5*
ISC 26 17:00:36.1±1.0,3°.64N±0°.07×127°.06E±0°.09, h48km, n12, σ1ᵖ38/12, mb3.6/6,1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**1.93**	**158**	P	**Pn**	**17 01 06.7**	**+0.2**
TNTI	**Ternate**	**2.86**	**174**	P	**Pn**	**17 01 20.9**	**+1.6**
MNI	**Manado**	**3.10**	**226**	P	**Pn**	**17 01 24.3**	**+1.6**
MNI				S	**Sn**	**17 01 58.6**	**0.0**
LBMI	**Labuha**	**4.27**	**174**	P	**Pn**	**17 01 40.9**	**+2.3**
CTBH	**Cotabato--PC H**	**4.53**	**322**	*i* P	**Pn**	**17 01 43.7**	**+1.5**
MRSI	**Marisa**	**6.00**	**239**	P	**Pn**	**17 02 02.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**21.64**	**184**	P	P	17 05 16.2	-6.4
	0.8nm,0.6s,baz=5.7,slow=10,SNR=1.9						
WRA	**Warramunga Arr**	**24.50**	**163**	P	**P**	**17 05 49.5**	**-1.6**
	1.5nm,0.9s,baz=338,slow=11,SNR=12						
ASAR	**Alice Springs**	**27.95**	**167**	P	**P**	**17 06 21.9**	**-0.4**
	0.3nm,0.5s,baz=340,slow=8.0,SNR=7.2						
STKA	**Stephens Creek**	**37.93**	**160**	P	**P**	**17 07 48.6**	**-0.4**
	0.9nm,0.5s,baz=340,slow=6.3,SNR=6.0						
SONM	**Songino Array**	**47.49**	**341**	P	**P**	**17 09 07.1**	**+0.6**
	0.3nm,0.4s,baz=165,slow=6.5,SNR=3.6						
MKAR	**Makanchi Array**	**57.82**	**325**	P	**P**	**17 10 21.7**	**-1.1**
	0.6nm,0.5s,baz=118,slow=7.8,SNR=12						

ISCJB ***26*** *17:03:37.0±0.4,39°.35N±0°.02×27°.00E±0°.02, h6km±4km, Error ellipse: s-maj=3.9km s-min=3.2km az=1.5*
ISK ***26*** *17:03:36.4,39°.34N×26°.97E, h8km, MD2.9*
DDA ***26*** *17:03:37.2,39°.33N×27°.01E, h7km, MD2.8*
CSEM ***26*** *17:03:37.3±0.1,39°.34N×26°.99E, h10km, MD2.8, Error ellipse: s-maj=2.7km s-min=2.4km az=169.0*
THE ***26*** *17:03:38.7,39°.27N×26°.95E, h11km±1km, ML2.2/3, Error ellipse: s-maj=1.5km s-min=0.6km az=279.0*
ISC 26 17:03:37.1±0.9,39°.33N±0°.02×27°.00E±0°.02, h14km±8km, n59, σ0ᵖ51/79, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.24**	**264**	*i* P	**Pb**	**17 03 42.6**	**-0.6**
AYVA				*i* S	**Sg**	**17 03 46.5**	**+0.7**
AYVA	**Ayvalik**	**0.24**	**264**	*i* P	**Pb**	**17 03 42.6**	**-0.6**
AYVA				*i* S	**Sg**	**17 03 46.5**	**+0.7**
PRK	**Paraskevi**	**0.57**	**261**	P	**Pb**	**17 03 48.9**	**0.0**
PRK				S	**Sb**	**17 03 57.1**	**+0.2**
PRK	**Paraskevi**	**0.57**	**261**	P	**Pb**	**17 03 48.9**	**0.0**
PRK				S	**Sb**	**17 03 57.1**	**+0.2**
BALY	**Balya**	**0.63**	**50**	*i* P	**Pb**	**17 03 49.5**	**-0.5**
BALY				*i* S	**Sb**	**17 03 58.5**	**-0.2**
BALY	**Balya**	**0.63**	**50**	*i* P	**Pb**	**17 03 49.5**	**-0.5**
BALY				*i* S	**Sb**	**17 03 58.5**	**-0.2**
EZN	**Ezine**	**0.71**	**314**	*e*Pg	**Pg**	**17 03 50.3**	**-0.8**
EZN				*e*Sg	**Sg**	**17 04 00.3**	**-0.2**
EZN	**Ezine**	**0.71**	**314**	*e*Pg	**Pg**	**17 03 50.3**	**-0.8**
EZN				*e*Sg	**Sg**	**17 04 00.3**	**-0.2**
BALB	**Balikesir**	**0.75**	**66**	*e*PG	**Pb**	**17 03 51.8**	**-0.2**
BALB	**Balikesir**	**0.75**	**66**	*e*Pg	**Pb**	**17 03 51.8**	**-0.2**
AKHS	**Akhisar**	**0.78**	**125**	*i* P	**Pg**	**17 03 52.2**	**-0.1**
AKHS				*i* S	**Sb**	**17 04 03.0**	**0.0**
AKHS	**Akhisar**	**0.78**	**125**	*i* P	**Pg**	**17 03 52.2**	**-0.1**
AKHS				*i* S	**Sb**	**17 04 03.0**	**0.0**
BOZC	**Bozcaada**	**0.89**	**305**	*i* P	**Pb**	**17 03 54.6**	**+0.2**
BOZC				*i* S	**Sb**	**17 04 06.3**	**+0.2**
GONE	**Gonen-Balikesi**	**0.89**	**37**	*e*PG	**Pg**	**17 03 53.5**	**-0.9**
GONE	**Gonen-Balikesi**	**0.89**	**37**	*e*Pg	**Pg**	**17 03 53.5**	**-0.9**
SIGR	**SIGRI**	**0.89**	**263**	P	**Pb**	**17 03 54.6**	**+0.2**
SIGR				S	**Sb**	**17 04 07.0**	**+0.8**
SIGR	**SIGRI**	**0.89**	**263**	P	**Pb**	**17 03 54.6**	**+0.2**
SIGR				S	**Sb**	**17 04 07.0**	**+0.8**
BLCB	**Balcova**	**0.95**	**178**	*e*PG	**Pg**	**17 03 55.2**	**-0.3**
BLCB	**Balcova**	**0.95**	**178**	*e*Pg	**Pg**	**17 03 55.2**	**-0.3**
IZM	**Izmir**	**0.96**	**167**	*e*PG	**Pb**	**17 03 55.5**	**-0.1**
IZM				*e*SG	**Sn**	**17 04 09.3**	**-0.3**
IZM	**Izmir**	**0.96**	**167**	*e*Pg	**Pb**	**17 03 55.5**	**-0.1**
LPK	**Lapseki**	**1.05**	**350**	*e*PG	**Pb**	**17 03 56.9**	**-0.3**
LPK	**Lapseki**	**1.05**	**350**	*e*Pg	**Pb**	**17 03 56.9**	**-0.3**
KRBG	**Karabiga-Canak**	**1.08**	**12**	*e*PN	**Pb**	**17 03 57.6**	**-0.1**
KRBG	**Karabiga-Canak**	**1.08**	**12**	*e*Pn	**Pb**	**17 03 57.6**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.14**	**339**	*e*PN	**Pb**	**17 03 58.5**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.14**	**339**	*e*Pn	**Pb**	**17 03 58.5**	**-0.1**
DURS	**Dursunbey**	**1.17**	**76**	*e*P	**Pg**	**17 04 00.2**	**+0.4**
DURS				*i* S	**Sb**	**17 04 14.3**	**-0.1**
DURS	**Dursunbey**	**1.17**	**76**	*e*P	**Pg**	**17 04 00.2**	**+0.4**
DURS				*i* S	**Sb**	**17 04 14.3**	**-0.1**
CHOS	**Chios island**	**1.20**	**218**	P	**Pn**	**17 03 59.0**	**-0.5**
CHOS				S	**Sg**	**17 04 15.4**	**-0.4**
CHOS	**Chios island**	**1.20**	**218**	P	**Pn**	**17 03 59.0**	**-0.5**
CHOS				S	**Sg**	**17 04 15.4**	**-0.4**
BNT	**Bandirma**	**1.25**	**35**	*e*PN	**Pb**	**17 04 00.6**	**+0.1**
BNT	**Bandirma**	**1.25**	**35**	*e*Pn	**Pb**	**17 04 00.6**	**+0.1**
DST	**Dursunbey**	**1.28**	**77**	*e*PN	**Pg**	**17 04 01.6**	**-0.2**
DST	**Dursunbey**	**1.28**	**77**	*e*Pn	**Pg**	**17 04 01.7**	**-0.2**
MRMT	**Marmara Adasi**	**1.35**	**20**	*e*PN	**Pn**	**17 04 01.8**	**+0.2**
MRMT	**Marmara Adasi**	**1.35**	**20**	*e*Pn	**Pn**	**17 04 01.8**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.36**	**6**	*e*PN	**Pb**	**17 04 02.2**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.36**	**6**	*e*Pn	**Pb**	**17 04 02.2**	**-0.2**
DEMI	**Demirci**	**1.37**	**102**	*e*P	**Pg**	**17 04 04.0**	**+0.5**
DEMI	**Demirci**	**1.37**	**102**	*e*P	**Pg**	**17 04 04.0**	**+0.5**
ERIK	**Erikli-Kesan**	**1.39**	**345**	*e*PN	**Pb**	**17 04 02.5**	**-0.3**
ERIK	**Erikli-Kesan**	**1.39**	**345**	*e*Pn	**Pb**	**17 04 02.5**	**-0.3**
KCTX	**Karacabey (Bur**	**1.40**	**48**	*e*PN	**Pb**	**17 04 03.0**	**-0.1**
KCTX	**Karacabey (Bur**	**1.40**	**48**	*e*Pn	**Pb**	**17 04 03.0**	**-0.1**
KULA	**Kula-Manisa**	**1.53**	**122**	*e*PN	**Pb**	**17 04 05.3**	**-0.1**
KULA	**Kula-Manisa**	**1.53**	**122**	*e*Pn	**Pb**	**17 04 05.3**	**-0.1**
ENEZ	**Enez**	**1.54**	**335**	*e*PN	**Pn**	**17 04 04.8**	**+0.6**
ENEZ	**Enez**	**1.54**	**335**	*e*Pn	**Pn**	**17 04 04.8**	**+0.6**
ALN	**Alexandroupoli**	**1.72**	**335**	P	**Pb**	**17 04 08.1**	**-0.5**
ALN				S	**Sb**	**17 04 30.6**	**+0.5**
ALN	**Alexandroupoli**	**1.72**	**335**	P	**Pb**	**17 04 08.1**	**-0.5**
ALN				S	**Sb**	**17 04 30.6**	**+0.5**
ARMT	**Armutlu**	**1.89**	**49**	*e*PN	**Pb**	**17 04 10.3**	**-1.1**
ARMT	**Armutlu**	**1.89**	**49**	*e*Pn	**Pb**	**17 04 10.3**	**-1.1**
TVSB	**Tavsanli**	**1.91**	**86**	*e*PN	**Pb**	**17 04 11.2**	**-0.7**
TVSB	**Tavsanli**	**1.91**	**86**	*e*Pn	**Pb**	**17 04 11.2**	**-0.7**
CTKS	**Kestanelik-??a**	**2.22**	**31**	*e*PN	**Pn**	**17 04 14.7**	**+1.1**
CTKS	**Kestanelik-??a**	**2.22**	**31**	*e*Pn	**Pn**	**17 04 14.7**	**+1.1**
EDRB	**Edirne**	**2.52**	**356**	*e*PN	**Pn**	**17 04 18.6**	**+1.0**
EDRB	**Edirne**	**2.52**	**356**	*e*Pn	**Pn**	**17 04 18.6**	**+1.0**

ISCJB ***26*** *17:24:02.8±0.5,8°.18S±0°.06×107°.87E±0°.04, h50km±17km, Error ellipse: s-maj=9.9km s-min=5.2km az=155.5*
DJA ***26*** *17:24:02.9±0.6,8°.S±4°×10°.8E±°, h24km±5km, M3.8/13, MLv3.8/13*
AUST ***26*** *17:24:03.6,8°.38S×107°.88E, h60km*
ISC 26 17:24:02.2±1.1,8°.14S±0°.06×107°.88E±0°.04, h69km±12km, n20, σ1ᵖ95/24, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.58**	**354**	P	**Pn**	**17 24 15.8**	**0.0**
CISI				S	**Sn**	**17 24 23.8**	**-2.0**
CISI	**Cisompet, Garu**	**0.58**	**354**	P	**Pn**	**17 24 15.4**	**-0.5**
baz=0.8,SNR=81							
CLJI	**Cilicap**	**1.20**	**70**	P	**Pn**	**17 24 23.4**	**+0.2**
LEM	**Lembang**	**1.33**	**349**	P	**Pn**	**17 24 26.5**	**+1.5**
LEM	**Lembang**	**1.33**	**349**	P	**Pn**	**17 24 26.5**	**+1.5**
baz=1.6,SNR=48							
SKJI	**Sukabumi**	**1.73**	**310**	P	**Pn**	**17 24 30.1**	**-0.1**
SKJI				S	**Sn**	**17 24 53.0**	**+1.6**
TGJI	**Tegal**	**1.76**	**44**	P	**Pn**	**17 24 32.0**	**+1.3**
DBJI	**Dramaga**	**1.93**	**324**	P	**Pn**	**17 24 35.4**	**+2.5**
BJII	**Banjamegara**	**1.98**	**66**	P	**Pn**	**17 24 36.2**	**+2.5**
BJII				S	**Sn**	**17 24 59.1**	**+1.5**
UGM	**Wanagama**	**2.63**	**85**	P	**Pn**	**17 24 44.0**	**+1.6**
UGM	**Wanagama**	**2.63**	**85**	P	**Pn**	**17 24 43.7**	**+1.3**
baz=2.7,SNR=21							
SMRI	**Semarang**	**2.76**	**67**	P	**Pn**	**17 24 45.9**	**+1.7**
SMRI	**Semarang**	**2.76**	**67**	P	**Pn**	**17 24 46.8**	**+2.6**
baz=2.9,SNR=5.9							
SMRI				S	**Sn**	**17 25 17.6**	**+1.2**
baz=2.9,SNR=3.1							
XMI	**Christmas Isla**	**3.16**	**223**	P	**Pn**	**17 24 51.5**	**+1.9**
baz=3.0,SNR=8.7							
XMI				S	**Sn**	**17 25 27.0**	**+0.9**
baz=3.0,SNR=5.5							
XMIS	**Christmas Isla**	**3.20**	**223**	P	**Pn**	**17 24 51.7**	**+1.4**
baz=3.0,SNR=30							
XMIS				S	**Sn**	**17 25 27.1**	**-0.2**
baz=3.0,SNR=5.6							
PCJI	**Pacitan**	**3.27**	**91**	P	**Pn**	**17 24 52.3**	**+1.3**
PWJI	**Pagerwojo**	**3.89**	**89**	P	Pn	17 25 03.0	+3.5
JAGI	**Jajag, Banyuwa**	**6.22**	**94**	P	Pn	17 25 37.2	+5.8
baz=6.2,SNR=6.2							
KNRA	**Kununurra**	**21.75**	**112**	S	**S**	**17 32 41.1**	**-4.2**
baz=22,SNR=5.7							
MTSU	**Mount Surprise**	**36.78**	**109**	S	**S**	**17 36 40.3**	**-2.7**
baz=37,SNR=17							

AUST ***26*** *17:28:07.5±8.0,8°.51S×106°.80E, h18km, Error ellipse: s-maj=2.2km s-min=0.9km az=311.0*
ISCJB ***26*** *17:28:08.0±0.8,8°.50S±0°.06×106°.83E±0°.07, h33km, Error ellipse: s-maj=10.4km s-min=7.3km az=24.4*
DJA ***26*** *17:28:16.5±1.4,8°.S±8°×10°7E±1°.3, h25km, M3.4/4, MLv3.4/4*
ISC 26 17:28:08.5±1.4,8°.55S±0°.06×106°.85E±0°.06, h35km, n11, σ1ᵖ82/14, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.38**	**44**	P	**Pn**	**17 28 30.5**	**-0.8**
CISI				S	**Sn**	**17 28 46.5**	**-1.8**
CISI	**Cisompet, Garu**	**1.38**	**44**	P	**Pn**	**17 28 30.4**	**-0.9**
baz=1.4,SNR=63							
CISI				S	**Sn**	**17 28 47.1**	**-1.3**
baz=1.4,SNR=4.5							
SKJI	**Sukabumi**	**1.56**	**349**	P	**Pn**	**17 28 34.7**	**+0.9**
LEM	**Lembang**	**1.87**	**24**	P	**Pn**	**17 28 40.3**	**+2.0**
LEM	**Lembang**	**1.87**	**24**	P	**Pn**	**17 28 40.5**	**+2.2**
baz=1.9,SNR=23							
DBJI	**Dramaga**	**1.98**	**357**	P	**Pn**	**17 28 42.3**	**+2.6**
DBJI				S	**Sn**	**17 29 01.5**	**-1.8**
XMI	**Christmas Isla**	**2.21**	**211**	P	**Pn**	**17 28 43.5**	**+0.7**
baz=2.2,SNR=3.9							
XMIS	**Christmas Isla**	**2.25**	**211**	P	**Pn**	**17 28 43.7**	**+0.4**
baz=2.3,SNR=6.9							
UGM	**Wanagama**	**3.69**	**80**	P	**Pn**	**17 29 04.4**	**+1.2**
baz=3.7,SNR=5.4							
MNAI	**Manna**	**5.68**	**317**	S	**Sn**	**17 30 32.5**	**-2.0**
baz=5.6,SNR=3.7							
JAGI	**Jajag, Banyuwa**	**7.22**	**90**	P	**Pn**	**17 29 53.7**	**+1.9**
baz=7.3,SNR=5.0							

WEL 26 17:29:55.1±0.1,41°.08S×174°.58E, h39km±1km, ML3.5/13, 5C-8D, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNZO	**South Karori**	**0.25**	**158**	⇑P*	Pn	17 30 02.6	-0.6
SNZO				S*	Sn	17 30 08.3	-1.4
WEL	**Wellington**	**0.25**	**146**	⇓P*	Pn	17 30 02.7	-0.5
WEL				S*	Sn	17 30 08.9	-0.8
TCW	**Tory Channel**	**0.27**	**239**	⇓P*	Pn	17 30 02.4	-0.9
KIW	**Kapiti Island**	**0.33**	**49**	⇓P*	Pn	17 30 03.4	-0.3
KIW				S*	Sn	17 30 09.4	-0.6
CAW	**Cannon Point**	**0.37**	**95**	⇓P*	Pn	17 30 04.1	+0.1
BHW	**Baring Head**	**0.40**	**147**	⇑P*	Pn	17 30 04.4	0.0
OGWZ	**Otaki Gorge**	**0.52**	**60**	⇓P*	Pn	17 30 06.0	0.0
DUWZ	**D'Urville Isla**	**0.57**	**298**	⇑P*	Pn	17 30 06.4	-0.5
DUWZ				S*	Sn	17 30 14.4	-0.8
TUWZ	**Tuamarina**	**0.60**	**233**	⇓P*	Pn	17 30 06.5	-0.7
MSWZ	**Moikau Station**	**0.61**	**124**	P*	Pn	17 30 07.3	-0.1
MSWZ				S*	Sn	17 30 17.5	+1.5
PAWZ	**Paruwai Farm**	**0.71**	**116**	P*	Pn	17 30 08.1	-0.2
PLWZ	**Palliser**	**0.71**	**134**	P*	Pn	17 30 08.4	-0.4
CMWZ	**Cape Campbell**	**0.73**	**202**	P*	Pn	17 30 09.7	+0.8
HOWZ	**Holdsworth Sta**	**0.73**	**76**	⇓P*	Pn	17 30 09.0	0.0
BSWZ	**Blackbirch Sta**	**0.83**	**220**	P*	Pn	17 30 10.4	0.0
MRZ	**Mangatainoka R**	**0.86**	**62**	P*	Pn	17 30 10.9	+0.1
TRWZ	**Traveller**	**0.89**	**112**	⇑P*	Pn	17 30 11.0	-0.3
NNZ	**Nelson**	**0.92**	**261**	PN	Pn	17 30 11.0	-0.6
TMWZ	**Te Maipa**	**0.99**	**92**	P*	Pn	17 30 12.1	-0.4
TIWZ	**Tintock**	**1.03**	**74**	⇓PN	Pn	17 30 12.8	-0.3
POWZ	**Post Office Ro**	**1.13**	**53**	PN	Pn	17 30 14.3	-0.2
BFZ	**Birch Farm**	**1.32**	**73**	PN	Pn	17 30 16.2	-0.8
WAZ	**Wanganui**	**1.35**	**13**	⇑PN	Pn	17 30 18.6	+1.1
DVHZ	**Dannevirke**	**1.43**	**58**	PN	Pn	17 30 17.8	-0.9
THZ	**Tophouse**	**1.44**	**241**	PN	Pn	17 30 18.5	-0.2
KHZ	**Kahutara**	**1.55**	**210**	PN	Pn	17 30 19.8	-0.4
QRZ	**Quartz Range**	**1.57**	**278**	PN	Pn	17 30 21.1	+0.5
PNHZ	**Pukenui**	**1.69**	**47**	PN	Pn	17 30 21.6	-0.7
WPHZ	**Waipukurau**	**1.74**	**55**	PN	Pn	17 30 22.0	-0.9
PRHZ	**Porangahau**	**1.76**	**63**	PN	Pn	17 30 21.7	-1.4
DFE	**Dawson Falls**	**1.79**	**348**	PN	Pn	17 30 25.0	+1.5
RAEZ	**Rainy Point**	**1.79**	**355**	PN	Pn	17 30 25.2	+1.6
NRZ	**Ngariki Road**	**1.81**	**344**	PN	Pn	17 30 25.8	+2.1
MTVZ	**Mangateitei**	**1.82**	**22**	PN	Pn	17 30 25.5	+1.5
NEZ	**North Egmont**	**1.84**	**348**	PN	Pn	17 30 27.0	+2.6
PKVZ	**Pokaka**	**1.88**	**18**	PN	Pn	17 30 26.5	+1.7
NWEZ	**Newall Road**	**1.88**	**343**	PN	Pn	17 30 24.7	-0.1
MOVZ	**Moawhango**	**1.89**	**29**	PN	Pn	17 30 26.4	+1.4
DREZ	**Durham Road**	**1.91**	**351**	PN	Pn	17 30 26.6	+1.4
WNVZ	**Wahianoa**	**1.91**	**24**	PN	Pn	17 30 26.2	+0.8
TRVZ	**Turoa**	**1.92**	**23**	PN	Pn	17 30 26.5	+0.9
PKE	**Pukeiti**	**1.93**	**346**	PN	Pn	17 30 26.9	+1.4
BHHZ	**Black Hill Sta**	**1.95**	**36**	PN	Pn	17 30 26.3	+0.5
DRZ	**Dome Shelter**	**1.95**	**23**	PN	Pn	17 30 28.5	+2.3
VRZ	**Vera Road**	**1.95**	**4**	PN	Pn	17 30 26.9	+1.1
FWVZ	**Far West T-bar**	**1.96**	**23**	PN	Pn	17 30 27.2	+1.0
TUVZ	**Tukino**	**1.98**	**25**	PN	Pn	17 30 27.9	+1.6
MHEZ	**Mangahewa**	**2.01**	**354**	PN	Pn	17 30 28.4	+2.0
WPVZ	**Whakapapa**	**2.01**	**22**	PN	Pn	17 30 27.9	+1.2
PXZ	**Pawanui**	**2.03**	**60**	PN	Pn	17 30 25.3	-1.4
OTVZ	**Oturere**	**2.08**	**24**	PN	Pn	17 30 29.4	+1.7
WTVZ	**West Tongariro**	**2.10**	**22**	PN	Pn	17 30 29.7	+1.7
KRVZ	**Karewarewa**	**2.14**	**23**	PN	Pn	17 30 32.7	+4.2
KAHZ	**Kahuranaki**	**2.17**	**55**	PN	Pn	17 30 27.8	-1.0
BKZ	**Black Stump Fm**	**2.41**	**38**	PN	Pn	17 30 36.6	+4.5
LTZ	**Lake Taylor**	**2.43**	**225**	PN	Pn	17 30 31.6	-0.7
HIZ	**Hauiti**	**2.57**	**5**	PN	Pn	17 30 35.5	+1.3
MQZ	**McQueen's Vall**	**2.99**	**208**	PN	Pn	17 30 37.4	-2.6
TOZ	**Tahuroa Road**	**3.42**	**12**	PN	Pn	17 30 47.4	+1.6
FOZ	**Fox Glacier**	**4.40**	**234**	PN	Pn	17 30 56.6	-2.6
ODZ	**Otahua Downs**	**4.90**	**215**	PN	Pn	17 31 03.4	-2.9
JCZ	**Jackson Bay**	**5.24**	**233**	PN	Pn	17 31 09.7	-1.3

IDC 26 17:36:29.8±0.8,19°.85N×146°.12E, h56km±6km, mb3.6/12, mb1 3.8/15, mb1mx3.6/30, mbtmp3.6/15, MS3.3/5, Ms1 3.3/5, ms1mx2.9/27, Error ellipse: s-maj=20.0km s-min=11.9km az=94.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**6.33**	**191**	P	Pn	17 38 02.0	+1.3
3.3nm,0.3s,baz=328,slow=7.8,SNR=4.6							
GUMO				S	Sn	17 39 13.9	+2.2
3.6nm,0.3s,baz=177,slow=21,SNR=2.5							
GUMO				LR	LR	17 40 00.6	
comp=Z,108nm,18.9s,baz=278,slow=33							
MJAR	**Matsushiro Arr**	**18.02**	**339**	P	Pn	17 40 37.2	+0.8
0.2nm,0.3s,baz=167,slow=11,SNR=6.1							
JNU	**Nakatsue**	**18.97**	**317**	P	P	17 40 47.3	+0.6
0.1nm,0.3s,baz=221,slow=19,SNR=2.5							
KSRS	**Korea Array**	**23.65**	**322**	P	P	17 41 36.6	+0.5
3.0nm,0.9s,baz=157,slow=8.6,SNR=11							
KSRS				pP	pP	17 41 50.9	+1.3
2.4nm,0.8s,baz=148,slow=8.3,SNR=6.6							
KSRS				LR	LR	17 51 10.7	
comp=Z,500nm,18.8s,baz=345,slow=37							
ASAJ	**Asahikawa**	**24.38**	**354**	LR	LR	17 49 51.2	
comp=Z,43nm,21.6s,baz=344,slow=33							
WRA	**Warramunga Arr**	**41.19**	**197**	P	P	17 44 07.6	-1.6
1.1nm,0.4s,baz=17,slow=8.8,SNR=19							
SONM	**Songino Array**	**42.51**	**320**	P	P	17 44 18.8	-1.1
0.6nm,0.5s,baz=129,slow=9.2,SNR=3.3							
ASAR	**Alice Springs**	**44.86**	**196**	P	P	17 44 38.9	0.0
0.4nm,0.6s,baz=22,slow=9.5,SNR=12							
STKA	**Stephens Creek**	**51.61**	**185**	LR	LR	18 08 12.9	
comp=Z,53nm,19.1s,baz=25,slow=37							
ZALV	**Zalesovo Beam**	**57.36**	**322**	P	P	17 46 11.8	-0.4
1.1nm,0.6s,baz=99,slow=7.6,SNR=6.8							
MKAR	**Makanchi Array**	**57.97**	**313**	P	P	17 46 17.0	+0.3
0.7nm,0.6s,baz=87,slow=7.5,SNR=4.3							
MKAR				pP	pP	17 46 31.5	-0.2
0.8nm,0.7s,baz=89,slow=10,SNR=5.8							
KDAK	**Kodiak Island**	**58.19**	**34**	P	P	17 46 18.0	0.0
2.4nm,0.7s,baz=268,slow=8.8,SNR=5.6							
ILAR	**Eielson Array**	**62.45**	**26**	P	P	17 46 45.7	-1.3
0.9nm,0.7s,baz=260,slow=5.4,SNR=2.4							
PPT	**Papeete**	**73.25**	**116**	LR	LR	18 19 37.6	
comp=Z,84nm,18.1s,baz=152,slow=35							
YKA	**Yellowknife Ar**	**76.79**	**28**	P	P	17 48 15.2	-0.1
0.5nm,0.7s,baz=288,slow=5.6,SNR=7.9							
YKA				pP	pP	17 48 31.2	+0.3
0.7nm,0.7s,baz=289,slow=5.7,SNR=7.5							
NVAR	**Mina Array Bea**	**82.12**	**52**	P	P	17 48 45.5	+0.4
2.1nm,0.7s,baz=279,slow=5.9,SNR=17							
ELK	**Elko**	**83.57**	**49**	P	P	17 48 53.3	+0.7
1.6nm,0.8s,baz=330,slow=8.1,SNR=6.3							
BRTR	**Keskin Array B**	**93.60**	**314**	P	P	17 49 41.5	+1.0
0.1nm,0.4s,baz=79,slow=3.1,SNR=2.0							
BRTR				pP	pP	17 49 54.8	-1.7
0.5nm,0.7s,baz=75,slow=7.6,SNR=4.0							

IDC ***26*** *17:40:20.9±0.9,67°.07N×20°.85E, h0km, mb1 3.0/4, mb1mx2.8/29, mbtmp2.9/4, ML2.4/4, Error ellipse: s-maj=16.9km s-min=7.7km az=118.0*
ISCJB ***26*** *17:40:20.1±0.4,67°.06N±0°.02×21°.13E±0°.07, h0km, Error ellipse: s-maj=4.0km s-min=3.2km az=6.8*
UPP ***26*** *17:40:20.7,67°.06N×20°.93E, h0km, ML2.1, Mining explosion.*
NAO ***26*** *17:40:21.6±1.2,67°.06N×21°.22E, ML2.7*
HEL ***26*** *17:40:21.4±0.1,67°.07N×20°.94E, h0km, ML1.9, ML2.1(UPP), Explosion*
CSEM ***26*** *17:40:21.0±0.2,67°.06N×21°.01E, h2km, ML1.9/1, Error ellipse: s-maj=4.1km s-min=3.0km az=89.0, Mining explosion.*
BER ***26*** *17:40:23.7±3.0,67°.04N×21°.02E, h0km, ML2.1, ML2.7(NAO), Suspected explosion*
**ISC 26 17:40:19.8±0.7,67°.06N±0°.02×21°.03E±0°.03, h0km, n64, σ1ᵖ24/

VRF					*e*SG	**Sg**	17 42 06.2	-2.2
VRF	**Varrio**	**3.38**	**74**		P	**Pn**	17 41 16.3	+2.5
MSF	**Maaselka**	**3.41**	**106**		MSG	**Sg**	17 42 08.9	-0.4
	comp=Z,0.8nm,0.4s							
MSF					MSG	**Sg**	17 42 08.9	
	comp=Z,0.8nm,0.4s							
MSF					*e*	**Sg**	17 42 08.9	-0.4
MSF					*e*SG	**Sg**	17 42 08.9	-0.4
MSF	**Maaselka**	**3.41**	**106**		Sg	**Sg**	17 42 08.9	-0.4
KEV	**Kevo**	**3.49**	**37**		*e*P	**Pn**	17 41 16.9	+1.6
KEV	**Kevo**	**3.49**	**37**		P	**Pn**	17 41 16.9	+1.6
APA0	**Apatity Array**	**4.66**	**78**		Pn	**Pn**	17 41 32.5	+1.2
	baz=268,slow=12							
APA0					Sn	**Sn**	17 42 23.8	-2.3
	baz=275,slow=22							
APA0	**Apatity Array**	**4.66**	**78**		Pn	**Pn**	17 41 32.5	+1.2
	baz=268,slow=12							
APA0					Sn	**Sn**	17 42 23.8	-2.3
	baz=275,slow=22							
APA0	**Apatity Array**	**4.66**	**78**		Pn	**Pn**	17 41 32.5	+1.2
	baz=268,slow=12,SNR=50							
APA0					Sn	**Sn**	17 42 23.8	-2.3
	baz=275,slow=21,SNR=50							
FIA0	**FINESS Array S**	**6.05**	**156**		Pn	**Pn**	17 41 53.0	+2.6
	baz=346,slow=14							
FIA0					Sn	**Sn**	17 42 59.9	-0.4
	baz=350,slow=37							
FIA0	**FINESS Array S**	**6.05**	**156**		Pn	**Pn**	17 41 53.0	+2.6
	baz=346,slow=14							
FIA0					Sn	**Sn**	17 42 59.9	-0.4
	baz=350,slow=37							
FIA0	**FINESS Array S**	**6.05**	**156**		Pn	**Pn**	17 41 53.0	+2.6
	baz=346,slow=13,SNR=50							
FIA0					Sn	**Sn**	17 42 59.9	-0.4
	baz=350,slow=33,SNR=50							
FINES	**FINESS Array B**	**6.05**	**156**		Pn	**Pn**	17 41 52.8	+2.4
	comp=Z,0.2nm,0.3s,baz=347,slow=15,SNR=7.7							
FINES					Sn	**Sn**	17 43 00.6	+0.4
	comp=Z,0.4nm,0.3s,baz=339,slow=24,SNR=12							
NB2	**NORSAR Subarra**	**7.41**	**220**		Pn	**Pn**	17 42 09.5	+0.4
	baz=32,slow=14							
NB2	**NORSAR Subarra**	**7.41**	**220**		Pn	**Pn**	17 42 09.5	+0.4
	baz=32,slow=14							
NB2	**NORSAR Subarra**	**7.41**	**220**		Pn	**Pn**	17 42 09.5	+0.4
	baz=32,slow=14,SNR=50							
NOA	**NORSAR Array B**	**7.41**	**220**		Pn	**Pn**	17 42 07.8	-1.3
	comp=Z,0.1nm,0.3s,baz=27,slow=13,SNR=2.8							
NOA					Sn	Sn	17 43 27.6	-6.2
	comp=Z,0.1nm,0.3s,baz=131,slow=25,SNR=2.6							
HFS	**Hagfors**	**7.68**	**209**		Pn	**Pn**	17 42 13.4	+0.7
	baz=33,slow=12							
HFS	**Hagfors**	**7.68**	**209**		Pn	**Pn**	17 42 13.4	+0.7
	baz=33,slow=12							
HFS	**Hagfors**	**7.68**	**209**		Pn	**Pn**	17 42 12.8	+0.1
	comp=Z,0.1nm,0.3s,baz=26,slow=14,SNR=7.8							
HFS					Sn	**Sn**	17 43 37.4	-2.8
	comp=Z,0.1nm,0.3s,baz=16,slow=41,SNR=2.7							
HFS	**Hagfors**	**7.68**	**209**		Pn	**Pn**	17 42 13.4	+0.7
	baz=33,slow=12,SNR=50							

ISCJB ***26*** *17:41:09.6±1.0,74.2°26N±0.0°06×9.8°8E±0.0°3,h10km,mb3.4/3, Error ellipse: s-maj=12.0km s-min=8.6km az=164.9*
IDC ***26*** *17:41:10.1±1.1,74.2°17N×8.6°56E,h0km,mb3.5/3,mb1 3.8/6, mb1mx3.4/29,mbtmp3.7/6,ML3.6/3,MS2.6/1,Ms1 2.7/1, ms1mx2.1/38,Error ellipse: s-maj=21.6km s-min=14.1km az=92.0*
CSEM ***26*** *17:41:11.9±0.7,74.2°28N×9.2°93E,h10km,ML1.8,Error ellipse: s-maj=19.2km s-min=8.5km az=63.0*
BER ***26*** *17:41:13.1±2.1,74.2°14N×9.2°42E,h20km±37km,MD2.0, ML1.8,ML3.3(NAO)*
NAO ***26*** *17:41:15.5±5.1,74.2°29N×11.2°38E,h2km±95km,ML3.3*
ISC 26 17:41:10.7±1.2,74.2°18N±0.0°07×10.0°0E±0.0°1,h10km,n16,
σ1§73/22,mb3.2/3,Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BJO	**Bjornoya**	**2.53**	**78**	*e*P		**Pn**	**17 41 53.4**	**+1.7**
BJO				*e*S		**Sn**	**17 42 22.1**	**-0.3**
BJO	**Bjornoya**	**2.53**	**78**	*e*P		**Pn**	**17 41 53.4**	**+1.7**
	SNR=55							
BJO				*e*S		**Sn**	**17 42 22.1**	**-0.3**
	SNR=55							
SPA0	**Spitsbergen Ar**	**4.30**	**18**	Pn		**Pn**	**17 42 16.9**	**+0.9**
	baz=198,slow=16							
SPA0				Sn		**Sn**	**17 43 05.0**	**-1.1**
SPA0	**Spitsbergen Ar**	**4.30**	**18**	Pn		**Pn**	**17 42 16.9**	**+0.9**
	baz=198,slow=16							
SPA0				Sn		**Sn**	**17 43 05.0**	**-1.1**
SPA0	**Spitsbergen Ar**	**4.30**	**18**	Pn		**Pn**	**17 42 16.9**	**+0.9**
	baz=198,slow=15,SNR=55							
SPA0				Sn		**Sn**	**17 43 05.0**	**-1.1**
	SNR=55							
SPITS	**Spitsbergen Ar**	**4.30**	**18**	Pn		**Pn**	**17 42 16.9**	**+0.9**
	baz=190,slow=14,SNR=383							
SPITS				Sn		**Sn**	**17 43 05.5**	**-0.6**
	baz=172,slow=31,SNR=1.2							
KBS	**Kingsbay**	**4.79**	**5**	*e*P		**Pn**	**17 42 21.9**	**-0.9**
KBS				AML		AML	17 43 21.8	
	comp=Z,3.5nm,0.4s							
KBS	**Kingsbay**	**4.79**	**5**	*e*P		**Pn**	**17 42 21.9**	**-0.9**
	SNR=53							
JMIC	**Jan Mayen**	**6.38**	**249**	Pn		Pn	17 42 38.9	-5.6
	comp=Z,1.6nm,0.3s,baz=141,slow=13,SNR=5.1							
ARA0	**ARCESS Array S**	**6.71**	**126**	Pn		**Pn**	**17 42 51.1**	**+2.0**
	baz=326,slow=10							
ARA0				Sn		**Sn**	**17 44 02.2**	**-3.4**
	baz=323,slow=22							
ARA0	**ARCESS Array S**	**6.71**	**126**	Pn		**Pn**	**17 42 51.1**	**+2.0**
	baz=326,slow=10							
ARA0				Sn		**Sn**	**17 44 02.2**	**-3.4**
	baz=323,slow=22							
ARA0	**ARCESS Array S**	**6.71**	**126**	Pn		**Pn**	**17 42 51.2**	**+2.0**
	baz=326,slow=9.7,SNR=55							
ARCES	**ARCESS Array B**	**6.71**	**126**	Pn		Pn	17 42 52.6	+3.5
	comp=Z,0.6nm,0.3s,baz=326,slow=10,SNR=6.2							
ARCES				Sn		**Sn**	**17 44 03.1**	**-2.4**
	comp=Z,0.7nm,0.3s,baz=319,slow=19,SNR=4.7							
ARCES				LR		LR	17 45 25.3	
	comp=Z,53nm,20.9s,baz=272,slow=36							
ILAR	**Eielson Array**	**40.47**	**345**	P		**P**	**17 48 49.6**	**+0.9**
	comp=Z,0.5nm,0.9s,baz=1.8,slow=7.0,SNR=4.6							
MKAR	**Makanchi Array**	**40.90**	**90**	P		P	17 48 57.9	+5.4
	comp=Z,0.3nm,0.8s,baz=338,slow=6.3,SNR=3.0							
TORD	**Torodi Ar. Bea**	**61.20**	**189**	P		**P**	**17 51 25.5**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=357,slow=7.3,SNR=11							

BJI ***26*** *17:59:59.0,43.2°12N×128.0°01W,h10km,mB4.9/5,mb4.6/5, Ms4.7/4,Ms7 4.3/4*
IDC ***26*** *18:00:02.8±1.0,43.2°81N×128.2°10W,h0km,mb3.8/11, mb1 4.0/20,mb1mx3.9/37,mbtmp3.8/20,ML3.6/9,MS3.7/22, Ms1 3.7/22,ms1mx3.6/44,Error ellipse: s-maj=24.2km s-min=10.4km az=44.0*
ISCJB ***26*** *18:00:03.8±0.4,43.2°87N±0.0°03×128.2°03W±0.0°05,h10km, mb4.2/25,MS3.8/18,Error ellipse: s-maj=5.9km s-min=3.5km az=42.5*
NEIC ***26*** *18:00:05.1±0.5,43.2°83N×128.2°06W,h10km,mb4.3/21, Error ellipse: s-maj=7.8km s-min=4.6km az=225.0*
ISC 26 18:00:04.6±0.6,43.2°81N±0.0°07×128.2°06W±0.0°06,h10km,
n320,σ1§14/311,mb4.3/25,MS3.8/18,86C-96D,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KEBM	**Edson Butte**	**2.88**	**108**	*e*Pn		**Pn**	**18 00 47.9**	**-2.6**
KEBM				*e*Sn		**Sn**	**18 01 22.3**	**-2.9**
KBO	**Bosley Butte**	**3.23**	**118**	*e*Pn		**Pn**	**18 00 53.0**	**-2.4**
MPOR	**Mary's Peak**	**3.32**	**76**	P		**Pn**	**18 00 55.7**	**-1.0**
HEBO	**Mount Hebo**	**3.39**	**64**	P		**Pn**	**18 00 57.4**	**-0.2**
COR	**Corvallis**	**3.51**	**76**	*e*Pn		**Pn**	**18 00 59.1**	**0.0**
DBO	**Dodson Butte**	**3.58**	**99**	P		**Pn**	**18 00 59.5**	**-0.7**
HSO	**Harness Mounta**	**3.62**	**93**	P		**Pn**	**18 01 00.7**	**-0.1**
F03A	**Seaside**	**3.84**	**55**	P		**Pn**	**18 01 03.9**	**+0.1**
HUMO	**Hull Mountain**	**3.92**	**106**	*e*Pn		**Pn**	**18 01 03.6**	**-1.3**
HUMO				*e*Sn		**Sn**	**18 01 47.1**	**-3.8**
NLO	**Nicolai Mounta**	**3.99**	**54**	P		**Pn**	**18 01 06.2**	**+0.3**
BBOR	**Butler Butte**	**4.03**	**101**	P		**Pn**	**18 01 06.2**	**-0.3**
BROR	**Big Rock Looko**	**4.07**	**82**	P		**Pn**	**18 01 07.0**	**+0.1**
SSOR	**Sweet Springs**	**4.16**	**73**	P		**Pn**	**18 01 09.1**	**+0.9**
H04A	**Detroit Lake**	**4.31**	**76**	P		**Pn**	**18 01 10.6**	**+0.3**
BMW	**Boistfort Moun**	**4.34**	**50**	P		**Pn**	**18 01 10.9**	**+0.3**
KHMM	**Horse Mountain**	**4.34**	**131**	*e*Pn		**Pn**	**18 01 10.8**	**0.0**
YBH	**Yreka Blue Hor**	**4.45**	**116**	Pn		**Pn**	**18 01 12.1**	**-0.2**
YBH				Sn		**Sn**	**18 02 05.3**	**+1.2**
YBH	**Yreka Blue Hor**	**4.45**	**116**	Pn		**Pn**	**18 01 12.1**	**-0.2**
	0.6nm,0.3s,baz=306,slow=12,SNR=9.9							
YBH				Sn		**Sn**	**18 02 05.3**	**+1.2**
	0.2nm,0.3s,baz=246,slow=18,SNR=5.0							
F04A	**Amboy**	**4.54**	**60**	P		**Pn**	**18 01 14.3**	**+1.0**
NLWA	**Neilton Lookou**	**4.64**	**38**	*e*Pn		**Pn**	**18 01 14.8**	**0.0**
VFP	**Flag Point**	**4.95**	**70**	P		**Pn**	**18 01 20.2**	**+1.1**
ASR	**Mount Adams--S**	**5.15**	**61**	P		**Pn**	**18 01 23.2**	**+1.3**
WDC	**Whiskeytown Da**	**5.22**	**126**	*e*Pn		**Pn**	**18 01 23.7**	**+1.1**
	22nm,1.1s							
LON	**Longmire**	**5.30**	**54**	*e*Pn		**Pn**	**18 01 24.6**	**+0.7**
	72nm,0.7s							
PGC	**Sidney**	**5.81**	**32**	*e*Pn		**Pn**	**18 01 30.9**	**+0.2**
MOD	**Modoc**	**6.01**	**106**	Pn		**Pn**	**18 01 34.8**	**+1.1**
	4.7nm,0.8s							
HOPS	**Hopland**	**6.10**	**140**	Pn		Pn	18 01 26.1	-8.7
	51nm,1.3s							
HAWA	**Hanford**	**6.57**	**64**	*e*Pn		**Pn**	**18 01 41.8**	**+0.6**
	14nm,0.6s							
BEKR	**Beckworth**	**6.97**	**122**	*e*Pn		Pn	18 01 50.6	+3.8
	3.8nm,0.8s							
WVOR	**Wild Horse Val**	**7.03**	**98**	*e*Pn		**Pn**	**18 01 49.1**	**+1.4**
	4.9nm,0.8s							
WCN	**Washoe City**	**7.68**	**123**	*e*Pn		**Pn**	**18 01 57.9**	**+1.3**
	3.1nm,0.6s							
BMO	**Blue Mountains**	**7.79**	**79**	*e*Pn		**Pn**	**18 01 56.1**	**-1.8**
	10nm,1.1s							
CMB	**Columbia Colle**	**8.18**	**132**	*e*Pn		**Pn**	**18 02 05.0**	**+1.5**
	34nm,1.3s							
BBB	**Bella Bella**	**8.39**	**360**	Pn		**Pn**	**18 02 06.0**	**0.0**
BBB	**Bella Bella**	**8.39**	**360**	Pn		**Pn**	**18 02 06.0**	**0.0**
	0.5nm,0.3s,baz=206,slow=12,SNR=3.0							
NEW	**Newport**	**8.82**	**56**	*e*Pn		**Pn**	**18 02 11.7**	**-0.4**
	9.8nm,0.9s							
NEW	**Newport**	**8.82**	**56**	Pn		**Pn**	**18 02 12.1**	**0.0**
	0.8nm,0.3s,baz=246,slow=15,SNR=5.6							
NEW				LR		LR	18 05 46.6	
	comp=Z,1μm,18.1s,baz=252,slow=39							
NEW	**Newport**	**8.82**	**56**	⇓P		**Pn**	**18 02 12.1**	**0.0**
	baz=8.8							
NVAR	**Mina Array Bea**	**9.11**	**123**	Pn		Pn	18 02 19.2	+2.9
NVAR	**Mina Array Bea**	**9.11**	**123**	Pn		Pn	18 02 19.2	+2.9
	0.2nm,0.3s,baz=305,slow=13,SNR=26							
NVAR				LR		LR	18 05 43.0	
	comp=Z,414nm,19.8s,baz=59,slow=37							
NV11	**Mina Array Sit**	**9.20**	**122**	*e*Pn		**Pn**	**18 02 19.4**	**+1.9**
F12A	**Elk City**	**9.32**	**73**	⇑P		**Pn**	**18 02 19.2**	**+0.2**
	baz=9.3,SNR=14							
HLID	**Hailey**	**9.89**	**87**	Pn		**Pn**	**18 02 26.3**	**-0.7**
	2.5nm,0.8s							
HLID	**Hailey**	**9.89**	**87**	⇓P		**Pn**	**18 02 27.4**	**+0.4**
	baz=9.9							
F13A	**Darby**	**9.96**	**74**	⇓P		**Pn**	**18 02 28.9**	**+1.0**
	baz=9.9,SNR=16							
G13A	**Cobalt**	**9.98**	**78**	⇓P		**Pn**	**18 02 28.6**	**+0.5**
	baz=9.9,SNR=13							
ELK	**Elko**	**9.98**	**103**	Pn		**Pn**	**18 02 30.6**	**+2.3**
ELK	**Elko**	**9.98**	**103**	Pn		**Pn**	**18 02 30.6**	**+2.3**
	0.1nm,0.3s,baz=286,slow=14,SNR=9.2							
ELK				LR		LR	18 06 34.3	
	comp=Z,238nm,21.3s,baz=102,slow=39							
BSMT	**Bassoo Peak**	**10.11**	**62**	*e*Pn		**Pn**	**18 02 32.0**	**+2.0**
	14nm,0.8s							
D13A	**Huson**	**10.11**	**66**	⇓P		**Pn**	**18 02 30.2**	**+0.4**
	baz=10,SNR=9.5							
E13A	**Victor**	**10.16**	**70**	⇑P		**Pn**	**18 02 30.4**	**-0.1**
	baz=10							
C13A	**Hot Springs**	**10.19**	**63**	⇑P		**Pn**	**18 02 31.2**	**+0.3**
	baz=10,SNR=17							
MSO	**Missoula**	**10.40**	**68**	*e*Pn		**Pn**	**18 02 34.6**	**+0.8**
	3.5nm,0.7s							
JTMT	**Jette**	**10.40**	**63**	*e*Pn		**Pn**	**18 02 36.5**	**+2.6**
	9.0nm,0.9s							
BLMT	**Blacktail Moun**	**10.43**	**61**	*e*Pn		**Pn**	**18 02 35.2**	**+0.9**
	11nm,0.9s							
B13A	**Whitefish**	**10.49**	**59**	⇓P		**Pn**	**18 02 35.1**	**+0.1**
	baz=10							
SWMT	**Swartz Lake**	**10.52**	**64**	*e*Pn		**Pn**	**18 02 36.8**	**+1.3**
	6.9nm,0.9s							
I14A	**Mackay**	**10.55**	**84**	⇑P		**Pn**	**18 02 37.4**	**+1.4**
	baz=10,SNR=6.6							
J14A	**Carey**	**10.57**	**88**	⇓P		**Pn**	**18 02 37.3**	**+1.1**
	baz=10,SNR=8.5							
E14A	**Clinton**	**10.63**	**71**	⇓P		**Pn**	**18 02 37.3**	**+0.3**
	baz=11							
D14A	**Greenough**	**10.74**	**67**	⇑P		**Pn**	**18 02 38.8**	**+0.3**
	baz=11							
SLMT	**Seeley Lake**	**10.79**	**66**	*e*Pn		**Pn**	**18 02 40.3**	**+1.2**
	10nm,0.9s							
CHMT	**Chamberlain Mo**	**10.88**	**68**	*e*Pn		**Pn**	**18 02 41.7**	**+1.3**
	12nm,1.3s							
MCMT	**McKenzie Canyo**	**10.95**	**79**	*e*Pn		**Pn**	**18 02 43.7**	**+2.2**
	2.5nm,0.9s							
ISA	**Isabella**	**10.98**	**135**	*e*Pn		**Pn**	**18 02 44.2**	**+2.5**
	7.2nm,0.9s							
WALA	**Waterton Lakes**	**11.09**	**57**	*e*Pn		**Pn**	**18 02 44.3**	**+1.1**
	0.5nm,0.9s							
DLMT	**Dillon**	**11.14**	**77**	*e*Pn		**Pn**	**18 02 44.0**	**-0.1**
	7.5nm,1.0s							
E15A	**Deer Lodge**	**11.21**	**71**	⇑P		**Pn**	**18 02 45.4**	**+0.5**
	baz=11							
B14A	**Marquette Ranc**	**11.23**	**61**	⇓P		**Pn**	**18 02 45.7**	**+0.4**
	baz=11							
F15A	**Butte**	**11.25**	**74**	⇑P		**Pn**	**18 02 44.6**	**-0.9**
	baz=11							
LRM	**Limekiln Ridge**	**11.28**	**74**	*e*Pn		**Pn**	**18 02 48.0**	**+2.1**
	24nm,0.8s							
A14A	**Double T Ranch**	**11.35**	**58**	⇓P		**Pn**	**18 02 48.3**	**+1.5**
	baz=11,SNR=7.4							
D15A	**Lincoln**	**11.39**	**68**	⇓P		**Pn**	**18 02 47.0**	**-0.4**
	baz=11							
C15A	**Salmond Ranch,**	**11.50**	**64**	⇓P		**Pn**	**18 02 50.0**	**+1.1**
	baz=12,SNR=21							
B15A	**Bradely Ranch,**	**11.67**	**62**	⇓P		**Pn**	**18 02 51.9**	**+0.7**
	baz=12,SNR=23							
G16A	**Moss Hill, Enn**	**11.70**	**77**	⇑P		**Pn**	**18 02 51.5**	**-0.1**
	baz=12							
A15A	**Johnson Ranch,**	**11.78**	**59**	⇑P		**Pn**	**18 02 53.0**	**+0.3**
	baz=12							
BSC	**Santa Cruz Isl**	**11.79**	**143**	⇑P		**Pn**	**18 02 53.3**	**+0.6**
	baz=12							
EDW2	**Edwards Air Fo**	**11.83**	**135**	⇑P		**Pn**	**18 02 53.1**	**-0.3**
	baz=12							
BOZ	**Bozeman (W)**	**11.84**	**75**	*e*Pn		**Pn**	**18 02 55.9**	**+2.4**
	3.1nm,0.8s							
E16A	**East Helena**	**11.88**	**71**	⇑P		**Pn**	**18 02 53.4**	**-0.8**
	baz=12,SNR=5.4							
DUG	**Dugway**	**11.90**	**102**	Pn		**Pn**	**18 02 57.3**	**+2.9**
QLMT	**Earthquake Lak**	**11.96**	**79**	*e*Pn		**Pn**	**18 02 53.0**	**-2.3**
	0.4nm,0.3s							
D16A	**Dana Ranch, Ca**	**12.04**	**69**	⇓P		**Pn**	**18 02 56.3**	**-0.1**
	baz=12,SNR=7.3							
C16A	**Fuhringer Ranc**	**12.07**	**65**	⇓P		**Pn**	**18 02 56.9**	**+0.3**
	baz=12,SNR=13							
H16A	**Russell Place,**	**12.10**	**80**	⇓P		**Pn**	**18 02 56.7**	**-0.4**
	baz=12							
GSC	**Goldstone**	**12.14**	**131**	*e*Pn		Pn	18 03 00.6	+3.0
	9.1nm,1.1s							
B16A	**M & M Farms, S**	**12.25**	**62**	⇓P		**Pn**	**18 02 58.7**	**-0.3**
	baz=12,SNR=12							
YMR	**Madison River**	**12.30**	**80**	*e*Pn		**Pn**	**18 03 00.1**	**+0.2**
	28nm,0.4s							
IMW	**Indian Meadow**	**12.37**	**84**	*e*Pn		**Pn**	**18 03 03.2**	**+2.3**
	2.0nm,0.7s							
TPAW	**Teton Pass**	**12.40**	**86**	*e*Pn		**Pn**	**18 03 03.5**	**+2.1**
	5.2nm,0.9s							
AHID	**Auburn Hatcher**	**12.41**	**89**	*e*Pn		**Pn**	**18 03 00.0**	**-1.4**
	11nm,0.4s							
A16A	**West Butte Ran**	**12.47**	**60**	⇑P		**Pn**	**18 03 02.2**	**0.0**
	baz=12,SNR=6.5							
F17A	**Fitzpatrick Pl**	**12.53**	**74**	⇓P		**Pn**	**18 03 03.0**	**0.0**
	baz=12							
D17A	**Six Diamond Ra**	**12.64**	**69**	⇑P		**Pn**	**18 03 05.0**	**+0.4**
	baz=13,SNR=9.3							
C17A	**Wharram Farm,**	**12.68**	**66**	⇓P		**Pn**	**18 03 05.1**	**+0.1**
	baz=13,SNR=5.5							
HEC	**Hector,Ludlow**	**12.75**	**131**	⇓P		**Pn**	**18 03 07.0**	**+1.0**
	baz=13,SNR=5.4							
CCUT	**Cedar City**	**12.78**	**114**	Pn		Pn	18 03 11.2	+4.7
	6.1nm,1.6s							
B17A	**L&G Farms, Che**	**12.80**	**63**	⇓P		**Pn**	**18 03 06.8**	**+0.2**
	baz=13,SNR=12							
A17A	**Triple J Farms**	**13.04**	**61**	⇑P		**Pn**	**18 03 09.6**	**-0.2**
	baz=13,SNR=9.3							
MVU	**Marysvale**	**13.06**	**109**	Pn		Pn	18 03 15.3	+5.0
	15nm,1.3s							
MSU	**Marysvale**	**13.08**	**108**	Pn		**Pn**	**18 03 13.1**	**+2.5**
	4.6nm,0.5s							
E18A	**Harlowton**	**13.10**	**72**	⇑P		**Pn**	**18 03 10.6**	**-0.1**
	baz=13							
LDFC	**Landfair**	**13.26**	**127**	*e*Pn		Pn	18 03 16.4	+3.5
	114nm,1.4s							
G18A	**Lazy EL Ranch,**	**13.28**	**77**	⇑P		**Pn**	**18 03 13.0**	**-0.3**
	baz=13							
EGMT	**Eagleton**	**13.42**	**65**	*e*Pn		**Pn**	**18 03 12.4**	**-2.6**
	43nm,1.4s							
RLMT	**Red Lodge**	**13.49**	**78**	Pn		**Pn**	**18 03 16.4**	**+0.2**
	4.7nm,0.8s							
PDAR	**Pinedale Array**	**13.53**	**88**	Pn		**Pn**	**18 03 19.6**	**+2.9**
PDAR	**Pinedale Array**	**13.53**	**88**	Pn		**Pn**	**18 03 19.6**	**+2.9**
	0.1nm,0.3s,baz=270,slow=10,SNR=9.4							
PDAR				LR		LR	18 08 48.5	
	comp=Z,643nm,19.2s,baz=303,slow=39							
A18A	**Metzger Ranch,**	**13.57**	**61**	⇑P		**Pn**	**18 03 17.0**	**-0.1**
	baz=14							
PFO	**Pinyon Flat Ob**	**13.62**	**134**	Pn		Pn	18 03 21.1	+3.3
PFO	**Pinyon Flat Ob**	**13.62**	**134**	Pn		Pn	18 03 21.1	+3.3
	0.2nm,0.3s,baz=329,slow=5.9,SNR=2.9							
PFO				LR		LR	18 08 16.2	
	comp=Z,518nm,18.5s,baz=313,slow=36							
C19A	**Slack Wire Ran**	**13.84**	**67**	⇓P		**Pn**	**18 03 20.8**	**+0.1**
	baz=14,SNR=11							
IRM	**Iron Mountain**	**13.90**	**130**	⇑P		**Pn**	**18 03 22.6**	**+1.0**
	baz=14							
P18A	**Preston Nutter**	**13.95**	**101**	⇓P		**Pn**	**18 03 22.7**	**+0.3**
	baz=14							
B19A	**Brinkman Farms**	**14.04**	**64**	⇑P		**Pn**	**18 03 22.6**	**-0.9**
	baz=14							
MONP	**Monument Peak**	**14.20**	**136**	⇑P		**Pn**	**18 03 26.4**	**+0.5**
	baz=14							
DLBC	**Dease Lake**	**14.70**	**356**	Pn		**Pn**	**18 03 33.5**	**+1.0**
DLBC	**Dease Lake**	**14.70**	**356**	Pn		**Pn**	**18 03 33.5**	**+1.0**
	0.3nm,0.3s,baz=170,slow=12,SNR=3.4							
DLBC				LR		LR	18 08 29.3	
	comp=Z,352nm,19.3s,baz=355,slow=34							
N20A	**Spence Gulch,**	**14.94**	**95**	⇑P		**Pn**	**18 03 36.8**	**+0.7**
	baz=15,SNR=8.7							
S18A	**Hurst Farm, Bl**	**14.98**	**108**	⇑P		**Pn**	**18 03 36.3**	**-0.3**
	baz=15							
I21A	**Big Trails, Te**	**15.00**	**83**	⇓P		**Pn**	**18 03 35.2**	**-1.4**
	baz=15							
WUAZ	**Wupatki**	**15.27**	**117**	*e*Pn		**Pn**	**18 03 42.0**	**+1.7**
	12nm,1.0s							
N21A	**Black Mountain**	**15.50**	**94**	⇑P		**Pn**	**18 03 42.2**	**-1.3**
	baz=16							
G22A	**Birney**	**15.59**	**77**	⇑P		**Pn**	**18 03 44.3**	**-0.1**
	baz=16							
D22A	**Cohagen**	**15.70**	**70**	⇓P		**Pn**	**18 03 45.4**	**-0.3**
	baz=16							
PV01	**Paradox Valley**	**15.76**	**104**	*e*Pn		**P**	**18 03 49.7**	**-1.1**
	888nm,1.3s							
B22A	**Reddig Ranch S**	**15.95**	**66**	⇓P		**Pn**	**18 03 49.0**	**0.0**
	baz=16,SNR=9.2							
A22A	**Carney Farms,**	**16.11**	**63**	⇓P		**Pn**	**18 03 51.6**	**+0.5**
	baz=16,SNR=14							
F23A	**Volborg**	**16.20**	**75**	⇑P		**Pn**	**18 03 52.0**	**-0.2**
	baz=16,SNR=7.9							
N22A	**Wattenberg Ran**	**16.26**	**93**	⇑P		**Pn**	**18 03 53.0**	**-0.3**
	baz=16							
C23A	**Lambert**	**16.43**	**68**	⇑P		**Pn**	**18 03 55.7**	**+0.6**
	baz=16							
SMCO	**Snowmass**	**16.45**	**99**	Pn		**Pn**	**18 03 56.0**	**+0.1**
	4.8nm,1.0s							
N23A	**Red Feather La**	**16.60**	**92**	⇑P		**Pn**	**18 03 58.1**	**+0.5**
	baz=17							
B23A	**Brockton**

	baz=19							
U25A	**Circle Dot Ran**	**19.51**	**104**	⇓P		**Pn**	**18 04 33.5**	**+0.2**
	baz=20,SNR=8.9							
Z22A	**Elephant Butte**	**19.53**	**116**	⇓P		**Pn**	**18 04 33.8**	**+0.3**
	baz=20,SNR=8.1							
S26A	**Kim**	**19.60**	**100**	⇓P		**P**	**18 04 33.8**	**+0.7**
	baz=20							
V25A	**Rancho No Teng**	**19.64**	**106**	⇑P		**Pn**	**18 04 35.0**	**+0.1**
	baz=20,SNR=14							
T26A	**Comanche Natio**	**19.71**	**101**	⇓P		**P**	**18 04 35.0**	**+0.6**
	baz=20,SNR=7.7							
R27A	**Eads**	**19.80**	**97**	⇑P		**P**	**18 04 36.1**	**+0.9**
	baz=20							
U26A	**Atchley Ranch,**	**19.98**	**103**	⇓P		**Pn**	**18 04 39.0**	**0.0**
	baz=20							
Z23A	**Rita Site, Whi**	**20.00**	**114**	⇑P		**P**	**18 04 38.7**	**+1.2**
	baz=20							
W25A	**X Bar L Ranch,**	**20.08**	**107**	⇓P		**P**	**18 04 39.0**	**+0.8**
	baz=20,SNR=9.3							
FFC	**Flin Flon**	**20.10**	**48**	*e*P		Pn	18 04 39.7	-0.4
	44nm,1.4s							
Y24A	**Capitan**	**20.14**	**112**	⇑P		**P**	**18 04 39.2**	**+0.2**
	baz=20							
222A	**Williams Famil**	**20.18**	**118**	⇑P		**P**	**18 04 40.3**	**+1.0**
	baz=20							
V26A	**Tequesquite Ra**	**20.25**	**105**	⇑P		**P**	**18 04 41.4**	**+1.4**
	baz=20,SNR=12							
YKA	**Yellowknife Ar**	**20.31**	**18**	P		**P**	**18 04 40.5**	**+0.1**
YKA	**Yellowknife Ar**	**20.31**	**18**	P		**P**	**18 04 40.4**	**+0.1**
	5.0nm,0.8s,baz=207,slow=11,SNR=41							
DIV	**Divide**	**20.31**	**335**	P		**P**	**18 04 40.4**	**-0.1**
X25A	**Clemmons Ranch**	**20.32**	**109**	⇓P		Pn	18 04 42.9	0.0
	baz=20,SNR=8.2							
YKW3	**Yellowknife Ar**	**20.36**	**18**	*e*P		**P**	**18 04 40.6**	**-0.3**
	0.2nm,1.0s							
T27A	**Campo**	**20.39**	**101**	⇓P		**P**	**18 04 42.5**	**+0.9**
	baz=20,SNR=6.8							
R28A	**Tribune**	**20.49**	**96**	⇓P		**P**	**18 04 44.1**	**+1.5**
	baz=20							
Z24A	**Sheeppen Canyo**	**20.54**	**113**	⇑P		**P**	**18 04 44.8**	**+1.4**
	baz=20,SNR=5.4							
U27A	**Thompson Grove**	**20.61**	**102**	⇑P		**P**	**18 04 45.1**	**+1.0**
	baz=21							
W26A	**Owens Ranch, T**	**20.63**	**107**	⇑P		**P**	**18 04 45.2**	**+0.9**
	baz=21							
Y25A	**Mesa, Roswell**	**20.64**	**111**	⇓P		**P**	**18 04 45.1**	**+0.7**
	baz=21							
KDAK	**Kodiak Island**	**20.72**	**321**		LR	LR	18 10 38.2	
	comp=Z,360nm,21.4s,baz=126,slow=31							
T28A	**Walsh**	**20.79**	**100**	⇓P		**P**	**18 04 47.2**	**+1.2**
	baz=21							
124A	**Stringfield Ra**	**20.86**	**114**	⇑P		**P**	**18 04 47.6**	**+0.7**
	baz=21,SNR=11							
X26A	**CR and CF Fran**	**20.89**	**108**	⇓P		**P**	**18 04 48.3**	**+1.3**
	baz=21							
Z25A	**Roswell**	**21.00**	**112**	⇓P		**P**	**18 04 48.6**	**+0.3**
	baz=21							
U28A	**Mallet**	**21.06**	**102**	⇑P		**P**	**18 04 48.2**	**-0.6**
	baz=21,SNR=5.9							
224A	**Cornudas Mount**	**21.21**	**116**	⇑P		**P**	**18 04 51.4**	**+0.8**
	baz=21,SNR=7.1							
Y26A	**Elida**	**21.23**	**109**	⇑P		**P**	**18 04 51.7**	**+0.9**
	baz=21,SNR=12							
S29A	**Ulysses**	**21.29**	**98**	⇑P		**P**	**18 04 52.4**	**+1.2**
	baz=21							
125A	**Gardner Draw,**	**21.42**	**113**	⇑P		**P**	**18 04 53.7**	**+0.9**
	baz=21,SNR=8.0							
Z26A	**Caprock**	**21.50**	**111**	⇓P		**P**	**18 04 54.4**	**+0.8**
	baz=22,SNR=8.3							
MNTX	**Cornudas Mount**	**21.55**	**117**	*e*P		**P**	**18 04 54.9**	**+0.8**
	7.0nm,1.3s							
SML	**Sawmill**	**21.63**	**333**	*e*P		**P**	**18 04 55.2**	**+0.5**
	5.0nm,1.0s							
225A	**Deer Hill, Car**	**21.65**	**115**	⇑P		**P**	**18 04 56.6**	**+1.3**
	baz=22							
324A	**Moseley Ranch,**	**21.65**	**117**	⇑P		**P**	**18 04 56.4**	**+1.1**
	baz=22							
Y27A	**Causey**	**21.70**	**109**	⇑P		**P**	**18 04 57.0**	**+1.1**
	baz=22							
PMR	**Palmer**	**21.74**	**332**	*e*P		**P**	**18 04 57.3**	**+1.6**
	16nm,1.1s							
Z27A	**Tatum**	**22.00**	**110**	⇑P		**P**	**18 04 58.8**	**-0.1**
	baz=22,SNR=9.9							
325A	**Bean Ranch, Si**	**22.03**	**117**	⇓P		**P**	**18 04 59.1**	**-0.2**
	baz=22,SNR=8.8							
226B	**Tecolote Peak,**	**22.10**	**114**	⇓P		**P**	**18 05 00.9**	**+0.8**
	baz=22							
U30A	**WK&E Inc. Balk**	**22.11**	**100**	⇓P		**P**	**18 05 01.1**	**+1.0**
	baz=22							
AMTX	**Amarillo**	**22.19**	**105**	*e*P		**P**	**18 05 02.3**	**+1.3**
	11nm,0.9s							
127A	**Arkansas Junct**	**22.28**	**112**	⇑P		**P**	**18 05 03.0**	**+1.0**
	baz=22							
Y28A	**McKinney Farm,**	**22.32**	**108**	⇓P		**P**	**18 05 03.2**	**+0.8**
	baz=22							
X29A	**Tulia**	**22.41**	**106**	⇓P		**P**	**18 05 04.1**	**+0.8**
	baz=22							
V30A	**Spur Ranch, Mi**	**22.44**	**102**	⇓P		**P**	**18 05 05.3**	**+1.6**
	baz=22							
T31A	**Randall Ranch,**	**22.55**	**98**	⇓P		**P**	**18 05 04.7**	**0.0**
	baz=22,SNR=5.7							
ECSD	**EROS Data Cent**	**22.64**	**79**	*e*P		**P**	**18 05 06.0**	**+0.3**
	5.5nm,0.8s							
326A	**Caldwell Ranch**	**22.71**	**115**	⇓P		**P**	**18 05 07.1**	**+0.5**
	baz=23							
ULM	**Lac du Bonnet**	**22.75**	**62**	P		**P**	**18 05 07.7**	**+1.0**
ULM	**Lac du Bonnet**	**22.75**	**62**	P		**P**	**18 05 07.7**	**+1.0**
	16nm,0.8s,baz=279,slow=9.3,SNR=12							
ULM					LR	LR	18 14 14.1	
	comp=Z,444nm,18.8s,baz=263,slow=37							
128A	**Castleberry Fa**	**22.90**	**111**	⇑P		**P**	**18 05 09.3**	**+0.7**
	baz=23							
327A	**Balmorhea Ranc**	**23.00**	**114**	⇓P		**P**	**18 05 10.7**	**+1.1**
	baz=23							
V31A	**Spring Creek L**	**23.04**	**101**	⇓P		**P**	**18 05 10.1**	**+0.2**
	baz=23							
Z29A	**Hungry Hill Ra**	**23.06**	**108**	⇓P		**P**	**18 05 10.9**	**+0.7**
	baz=23							
426A	**McDonald Obser**	**23.10**	**117**	⇑P		**P**	**18 05 11.5**	**+0.7**
	baz=23							
228A	**UT Block 9, Go**	**23.13**	**112**	⇑P		**P**	**18 05 11.7**	**+0.8**
	baz=23							
MCK	**McKinley**	**23.26**	**336**	*e*P		**P**	**18 05 13.5**	**+1.6**
	8.9nm,1.0s							
W31A	**Holland Ranch,**	**23.26**	**102**	⇓P		**P**	**18 05 12.8**	**+0.6**
	baz=23							
427A	**Hayter Ranch,**	**23.39**	**115**	⇓P		**P**	**18 05 13.5**	**0.0**
	baz=23,SNR=5.2							
328A	**Wristen Ranch,**	**23.44**	**113**	⇓P		**P**	**18 05 14.9**	**+0.9**
	baz=23							
Z30A	**Sanderson Ranc**	**23.44**	**107**	⇓P		**P**	**18 05 14.2**	**+0.1**
	baz=23							
TRF	**Thorofare Moun**	**23.45**	**335**	P		**P**	**18 05 13.8**	**-0.2**
	23nm,1.5s							
X31A	**McDonald Ranch**	**23.52**	**103**	⇑P		**P**	**18 05 14.9**	**+0.1**
	baz=24							
ILAR	**Eielson Array**	**23.52**	**340**	P		**P**	**18 05 15.7**	**+1.2**
ILAR	**Eielson Array**	**23.52**	**340**	P		**P**	**18 05 15.7**	**+1.2**
	1.5nm,0.8s,baz=148,slow=8.6,SNR=14							
ILAR					LR	LR	18 12 50.3	
	comp=Z,310nm,21.0s,baz=140,slow=33							
Y31A	**Rekieta Farm,**	**23.67**	**105**	⇓P		**P**	**18 05 17.1**	**+0.8**
	baz=24							
PPLA	**Purkeypile**	**23.68**	**332**	*e*P		**P**	**18 05 16.4**	**+0.2**
	73nm,1.7s							
527A	**Woodward Ranch**	**23.71**	**117**	⇓P		**P**	**18 05 17.8**	**+1.0**
	baz=24							
229A	**Bryant Ranch,**	**23.75**	**111**	⇓P		**P**	**18 05 18.0**	**+1.0**
	baz=24							
626A	**Big Bend Ranch**	**23.78**	**119**	⇑P		**P**	**18 05 18.1**	**+0.8**
	baz=24							
428A	**Kincaid Ranch,**	**23.94**	**115**	⇓P		**P**	**18 05 19.4**	**+0.5**
	baz=24							
KSU1	**Kansas State U**	**23.96**	**90**	*e*P		**P**	**18 05 20.3**	**+1.4**
TXAR	**Lajitas Array**	**24.22**	**118**	P		**P**	**18 05 22.4**	**+0.8**
TXAR	**Lajitas Array**	**24.22**	**118**	P		**P**	**18 05 22.4**	**+0.8**
	0.9nm,0.7s,baz=300,slow=7.2,SNR=9.2							
TXAR					LR	LR	18 15 03.4	
	comp=Z,65nm,21.0s,baz=0.0,slow=37							
528A	**Cox Ranch, San**	**24.24**	**116**	⇑P		**P**	**18 05 21.7**	**0.0**
	baz=24,SNR=6.5							
230A	**Sterling City**	**24.27**	**110**	⇓P		**P**	**18 05 22.2**	**+0.2**
	baz=24							
WMOK	**Wichita Mounta**	**24.31**	**102**	*e*P		**P**	**18 05 24.0**	**+1.7**
	60nm,1.6s							
627A	**Terlingua Ranc**	**24.32**	**118**	⇑P		**P**	**18 05 22.5**	**0.0**
	baz=24,SNR=5.3							
330A	**Mertzon**	**24.52**	**111**	⇓P		**P**	**18 05 24.3**	**+0.1**
	baz=24							
429A	**Davenport Ranc**	**24.52**	**114**	⇓P		**P**	**18 05 24.6**	**+0.3**
	baz=24							
Z32A	**Haskell**	**24.58**	**106**	⇑P		**P**	**18 05 25.2**	**+0.5**
	baz=24							
628A	**Black Gap, Mar**	**24.62**	**117**	⇓P		**P**	**18 05 26.0**	**+0.8**
	baz=25							
529A	**Stev Forest Ra**	**24.63**	**115**	⇑P		**P**	**18 05 25.9**	**+0.7**
	baz=25,SNR=13							
INK	**Inuvik**	**24.73**	**355**	P		**P**	**18 05 25.8**	**+0.1**
INK	**Inuvik**	**24.73**	**355**	P		**P**	**18 05 25.8**	**+0.1**
	2.5nm,0.9s,baz=168,slow=10,SNR=5.4							
INK					LR	LR	18 14 42.0	
	comp=Z,314nm,18.3s,baz=289,slow=36							
231A	**Bronte**	**24.78**	**109**	⇓P		**P**	**18 05 27.1**	**+0.5**
	baz=25							
ABTX	**Abilene, Hawle**	**24.84**	**107**	⇑P		**P**	**18 05 27.5**	**+0.4**
	baz=25							
430A	**Baggett Ranch,**	**24.86**	**113**	⇓P		**P**	**18 05 28.1**	**+0.7**
	baz=25							
SPMN	**St. Paul**	**25.07**	**74**	⇑P		**P**	**18 05 29.2**	**+0.2**
	baz=25							
331A	**San Angelo**	**25.08**	**111**	⇑P		**P**	**18 05 29.9**	**+0.6**
	baz=25							
530A	**J-C Ranch, Com**	**25.20**	**114**	⇑P		**P**	**18 05 31.2**	**+0.8**
	baz=25							
232A	**Coleman**	**25.27**	**109**	⇑P		**P**	**18 05 31.2**	**+0.3**
	baz=25							
431A	**Sonora**	**25.35**	**112**	⇓P		**P**	**18 05 32.2**	**+0.5**
	baz=25							
332A	**Millersview**	**25.50**	**110**	⇓P		**P**	**18 05 33.7**	**+0.6**
	baz=26							
531A	**Rocksprings**	**25.71**	**113**	⇓P		**P**	**18 05 35.7**	**+0.6**
	baz=26							
432A	**Menard**	**25.78**	**111**	⇑P		**P**	**18 05 36.2**	**+0.6**
	baz=26							
TUL1	**Tulsa**	**25.87**	**97**	⇑P		**P**	**18 05 36.8**	**+0.4**
	baz=26							
JCT	**Junction City**	**26.02**	**111**	⇑P		**P**	**18 05 38.4**	**+0.6**
	baz=26							
532A	**Rocksprings**	**26.17**	**112**	⇓P		**P**	**18 05 39.0**	**-0.2**
	baz=26							
631A	**Perdido Creek**	**26.18**	**114**	⇑P		**P**	**18 05 39.5**	**+0.2**
	baz=26							
632A	**Uvalde**	**26.64**	**113**	⇓P		**P**	**18 05 43.2**	**-0.3**
	baz=27							
OXF	**Oxford**	**31.14**	**94**	*e*P		**P**	**18 06 24.4**	**+1.0**
	61nm,1.2s							
WVT	**Waverly**	**31.53**	**90**	*e*P		**P**	**18 06 26.7**	**-0.1**
	19nm,1.1s							
ACSO	**Alum Creek Sta**	**33.37**	**80**	*e*P		**P**	**18 06 41.2**	**-1.6**
	25nm,1.0s							
KMSC	**Kings Mountain**	**36.68**	**87**	⇑P		**P**	**18 07 10.9**	**-0.7**
	baz=37							
SCHQ	**Schefferville**	**40.16**	**52**		LR	LR	18 24 07.0	
	comp=Z,96nm,21.9s,baz=291,slow=36							
SUMG	**Summit**	**48.76**	**24**	*e*LR		**P**	**18 08 49.4**	**-0.1**
	4.1nm,0.8s							
PPT2	**Papeete2**	**64.20**	**203**	*e*LR		LR	18 09 59.4	
	70nm,24.5s							
ARCES	**ARCESS Array B**	**65.31**	**10**		LR	LR	18 43 08.7	
	comp=Z,42nm,18.1s,baz=240,slow=40							
MDJ	**Mudanjiang**	**68.14**	**311**	P		**P**	**18 11 03.5**	**-1.2**
MDJ					pmax	pmax		
	comp=Z,4.0nm,0.7s							
MDJ					pmax	pmax		
	comp=Z,11nm,3.6s							
NOA	**NORSAR Array B**	**70.40**	**20**	P		**P**	**18 11 17.5**	**-0.9**
NOA	**NORSAR Array B**	**70.40**	**20**	P		**P**	**18 11 17.5**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=331,slow=5.8,SNR=3.7							
NOA					LR	LR	18 41 30.3	
	comp=Z,33nm,18.2s,baz=350,slow=35							
CN2	**Changchun**	**70.92**	**313**	*e*P		**P**	**18 11 21.8**	**0.0**
SONM	**Songino Array**	**76.93**	**326**	P		**P**	**18 11 55.0**	**-2.1**
SONM	**Songino Array**	**76.93**	**326**	P		**P**	**18 11 55.0**	**-2.1**
	comp=Z,1.1nm,0.9s,baz=58,slow=3.2,SNR=4.0							
ZALV	**Zalesovo Beam**	**78.64**	**341**	P		**P**	**18 12 06.1**	**-0.3**
ZALV	**Zalesovo Beam**	**78.64**	**341**	P		**P**	**18 12 06.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=35,slow=5.3,SNR=2.7							
ZALV					LR	LR	18 48 46.6	
	comp=Z,28nm,19.2s,baz=64,slow=37							
HHC	**Hu-ho-hao-te**	**80.11**	**318**	⇓*e*P		**P**	**18 12 15.0**	**+0.2**
HHC				pP		**pP**	**18 12 19.5**	**+1.4**
HHC				sP		**sP**	**18 12 22.0**	**+2.7**
HHC				PP		**PP**	**18 15 18.0**	**+1.8**
HHC				S		**S**	**18 22 16.5**	**-2.9**
HHC				SKS		**SKSac**	**18 22 26.5**	**-5.9**
HHC				pmax	pmax			
	comp=Z,89nm,5.1s							
HHC					LR	LR		
	comp=N,130nm,22.8s							
HHC					LR	LR		
	comp=E,120nm,21.4s							
HHC					LR	LR		
	comp=Z,110nm,21.4s							
LPAZ	**La Paz**	**81.02**	**123**	P		**P**	**18 12 19.0**	**-1.4**
LPAZ	**La Paz**	**81.02**	**123**	P		**P**	**18 12 19.0**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=350,slow=8.9,SNR=4.7							
LPAZ					LR	LR	18 48 13.2	
	comp=Z,34nm,19.0s,baz=134,slow=36							
GERES	**GERESS Array B**	**81.83**	**24**	P		**P**	**18 12 22.9**	**-0.8**
GERES	**GERESS Array B**	**81.83**	**24**	P		**P**	**18 12 22.9**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=335,slow=4.3,SNR=5.3							
GERES					LR	LR	18 47 50.0	
	comp=Z,35nm,18.9s,baz=304,slow=35							
KURK	**Kurchatov**	**83.04**	**343**	*e*P		**P**	**18 12 32.1**	**+2.2**
	comp=Z,2.3nm,1.1s							
MKAR	**Makanchi Array**	**85.88**	**340**	P		**P**	**18 12 44.6**	**+0.2**
MKAR	**Makanchi Array**	**85.88**	**340**	P		**P**	**18 12 44.6**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=33,slow=3.4,SNR=3.0							
MKAR					LR	LR	18 53 24.4	
	comp=Z,57nm,18.1s,baz=4.0,slow=37							
AKTO	**Aktyubinsk**	**85.99**	**356**		LR	LR	18 50 13.1	
	comp=Z,53nm,19.0s,baz=34,slow=35							
WMQ	**Urumqi**	**87.10**	**335**	*e*P		**P**	**18 12 51.5**	**+1.0**
WMQ					LR	LR		
	comp=N,41nm,23.6s							
WMQ					LR	LR		
	comp=E,48nm,22.4s							
WMQ					LR	LR		
	comp=Z,59nm,20.6s							
LZH	**Lanzhou**	**87.55**	**320**	*e*P		P	18 12 50.5	-2.5
LZH				pP		**PcP**	**18 12 53.8**	**-1.2**
LZH				*e*PP		**PP**	**18 16 17.3**	**+0.2**
LZH				pmax	pmax			
	comp=Z,61nm,6.6s							
LZH					LR	LR		
	comp=N,140nm,17.1s							
LZH					LR	LR		
	comp=E,140nm,17.5s							
LZH					LR	LR		
	comp=Z,150nm,19.8s							
BDFB	**Brasilia**	**93.69**	**108**		LR	LR	19 01 31.3	
	comp=Z,44nm,19.3s,baz=184,slow=39							
GYA	**Guiyang**	**93.96**	**313**	*e*P		**P**	**18 13 22.8**	**-0.2**
BRTR	**Keskin Array B**	**95.22**	**14**		LR	LR	18 57 58.9	
	comp=Z,33nm,19.1s,baz=137,slow=36							

*ISCJB **26** 18:47:55.0±0.4,41.°95N±0.°03×142.°32E±0.°04,h75km±3km, mb3.7/12,Error ellipse: s-maj=6.4km s-min=4.1km az=142.1*
*JMA **26** 18:47:55.3±0.2,41.°94N×142.°32E,h71km±2km,M3.5*
JMA Felt I J1.
*MOS **26** 18:47:55.6±1.0,41.°95N×142.°39E,h85km,mb4.0/7,Error ellipse: s-maj=20.2km s-min=12.4km az=78.6*
*IDC **26** 18:47:56.2±1.7,41.°99N×142.°39E,h71km±14km,mb3.4/11, mb1 3.5/15,mb1mx3.4/30,mbtmp3.4/15,Error ellipse: s-maj=20.6km s-min=11.7km az=108.0*
*NIED **26** 18:48:00,41.°90N×142.°30E,h65km,Mw3.8 Best double couple: M0 5.46000×10^14 NP1:ϕs=30.00000°,δ62.00000°, λ94.00000°. NP2:ϕs=202.00000°,δ29.00000°,λ83.00000°.*
ISC 26 18:47:56.1±0.8,41.°95N±0.°04×142.°31E±0.°04,h67km±7km, n33,σ0°74/47,mb3.8/12,4C-6D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JNBK	**Urakawa-nobuka**	**0.46**	**45**	⇑P		**Pn**	**18 48 07.3**	**-1.0**
JNBK					*e*S	**Sn**	**18 48 16.6**	**-0.6**
JEM	**Erimo**	**0.63**	**84**	⇑P		**Pn**	**18 48 09.7**	**-0.3**
JEM					*e*S	**Sn**	**18 48 20.1**	**-0.1**
JBT2	**Biratori 2**	**0.82**	**3**	⇓P		**Pn**	**18 48 11.8**	**-0.5**
JBT2					*e*S	**Sn**	**18 48 24.2**	**0.0**
JKB	**Kayabe**	**0.96**	**266**	⇓P		**Pn**	**18 48 13.3**	**-0.6**
JKB					*e*S	**Sn**	**18 48 27.0**	**-0.1**
JCH	**Churui**	**1.02**	**49**	⇑P		**Pn**	**18 48 14.5**	**-0.2**
JCH					*e*S	**Sn**	**18 48 29.6**	**+1.1**
JNB	**Noboribetsu**	**1.08**	**299**	⇓P		**Pn**	**18 48 14.5**	**-0.9**
JNB					*e*S	**Sn**	**18 48 29.4**	**-0.4**
JEW	**Eniwo**	**1.09**	**324**	⇓P		**Pn**	**18 48 15.6**	**0.0**
JEW					*e*S	**Sn**	**18 48 30.2**	**0.0**
JOT	**Ohata**	**1.11**	**239**	⇓P		**Pn**	**18 48 15.3**	**-0.5**
JOT					*e*S	**Sn**	**18 48 30.0**	**-0.4**
JFR	**Furan**	**1.23**	**10**	P		**Pn**	**18 48 17.0**	**-0.4**
JFR					*e*S	**Sn**	**18 48 33.0**	**-0.3**
JYM2	**Yakumo 2**	**1.46**	**277**	⇓P		**Pn**	**18 48 19.9**	**-0.5**
JYM2					*e*S	**Sn**	**18 48 39.4**	**+0.8**
JANG	**Nango**	**1.69**	**201**	P		**Pn**	**18 48 23.4**	**-0.1**
JANG					*e*S	**Sn**	**18 48 44.5**	**+0.2**
JAR	**Ashorobuto**	**1.72**	**38**	P		**Pn**	**18 48 23.9**	**0.0**
JAR					*e*S	**Sn**	**18 48 45.9**	**+0.9**
JHR	**Hokuryu**	**1.84**	**347**	P		**Pn**	**18 48 26.3**	**+0.8**
ASAJ	**Asahikawa**	**2.17**	**5**	P		**Pn**	**18 48 30.7**	**+0.7**
	11nm,0.3s,baz=164,slow=18,SNR=103							
ASAJ					S	**Sn**	**18 48 55.5**	**-0.4**
	9.1nm,0.3s,baz=330,slow=20,SNR=12							
YUK	**Yuzh-Kuril'sk**	**3.33**	**50**	*c* iP		**Pn**	**18 48 46.7**	**+0.9**
YUK				*i* S		**Sn**	**18 49 23.7**	**-0.4**
YUK				pmax	pmax			
	comp=E,26nm,0.1s							
YUK				pmax	pmax			
	comp=Z,54nm,0.3s							
YUK				pmax	pmax			
	comp=N,15nm,0.2s							
YUK				smax	smax			
	comp=N,95nm,0.4s							
YUK				smax	smax			
	comp=E,97nm,0.3s							
MJAR	**Matsushiro Arr**	**6.27**	**212**	P		**Pn**	**18 49 27.0**	**+1.0**
	comp=E,0.2nm,0.3s,baz=19,slow=13,SNR=3.8							
USRK	**Ussuriysk Arra**	**7.88**	**290**	P		**Pn**	**18 49 48.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=98,slow=14,SNR=7.0							
KSRS	**Korea Array**	**11.96**	**253**	P		**Pn**	**18 50 46.6**	**+3.0**
	comp=E,0.3nm,0.3s,baz=60,slow=14,SNR=5.6							
ZALV	**Zalesovo Beam**	**39.27**	**308**	P		**P**	**18 55 17.9**	**-0.1**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.4s							
ZALV	**Zalesovo Beam**	**39.27**	**308**	P		**P**	**18 55 17.9**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=90,slow=8.5,SNR=6.2							
MKAR	**Makanchi Array**	**42.27**	**298**	P		**P**	**18 55 42.5**	**-0.3**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**42.27**	**298**	P		**P**	**18 55 42.5**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=86,slow=9.4,SNR=11							
KURK	**Kurchatov**	**43.59**	**304**	P		**P**	**18 55 53.6**	**+0.2**
KURK				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KURBB	**Kurchatov Arra**	**43.67**	**304**	P		**P**	**18 55 53.6**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=76,slow=8.7,SNR=23							
ILAR	**Eielson Array**	**45.02**	**35**	P		**P**	**18 56 03.2**	**-1.4**
	comp=Z,0.1nm,0.5s,baz=278,slow=6.3,SNR=4.6							
BVAR	**Borovoye Array**	**47.89**	**309**	P		**P**	**18 56 27.4**	**+0.2**
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BVAR	**Borovoye Array**	**47.89**	**309**	P		**P**	**18 56 27.4**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=74,slow=8.3,SNR=13							
YKA	**Yellowknife Ar**	**59.23**	**32**	P		**P**	**18 57 50.2**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=304,slow=8.0,SNR=2.6							
WRA	**Warramunga Arr**	**62.02**	**188**	P		**P**	**18 58 08.9**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=8.8,slow=6.8,SNR=4.0							
FINES	**FINESS Array B**	**64.81**	**332**	P		**P**	**18 58 26.9**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=46,slow=6.4,SNR=9.8							
ASAR	**Alice Springs**	**65.75**	**188**	P		**P**	**18 58 33.4**	**-0.5**
	comp=Z,0.6nm,1.2s,baz=2.1,slow=7.4,SNR=2.5							
HFS	**Hagfors**	**69.90**	**335**	P		**P**	**18 58 58.7**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=59,slow=5.6,SNR=8.4							
NOA	**NORSAR Array B**	**69.93**	**337**	P		**P**	**18 58 59.4**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=39,slow=7.9,SNR=4.0							

*NSSP **26** 18:56:37.6,38.°55N×44.°47E,h10km,Ms2.7*
*DDA **26** 18:56:38.5,38.°77N×44.°75E,h7km,MD2.6*
*CSEM **26** 18:56:40.7±0.7,38.°78N×44.°60E,h2km,MD2.6,Error ellipse: s-maj=14.4km s-min=9.5km az=115.0*
ISC 26 18:56:40.8±1.4,38.°74N±0.°03×44.°56E±0.°04,h1km±11km, n19,σ1°43/30,5C-2D,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
TVAN	**Van**	**0.93**	**257**	*i* P		**Pn**	**18 57 00.0**	**-1.3**
TVAN	**Van**	**0.93**	**257**	*i* P		**Pn**	**18 57 00.0**	**-1.3**
DYDN	**Diyadin**	**1.05**	**320**	*i* P		**

PVCC	**Panska Ves**	**1.43**	**223**	*e*PG		**Pb**	**19 04 42.1**	**0.0**
PVCC				*e*SG		**Sn**	**19 05 01.4**	**+0.1**
	comp=Z,201nm,0.2s							
PVCC	**Panska Ves**	**1.43**	**223**	Pg		**Pb**	**19 04 42.1**	**0.0**
PVCC				Sg		**Sn**	**19 05 01.4**	**+0.1**
	201nm,0.2s							
BRG	**Berggiesshubel**	**1.53**	**243**	PN		**Pn**	**19 04 43.2**	**0.0**
BRG				PG		**Pg**	**19 04 44.5**	**+0.5**
BRG				SG		**Sn**	**19 05 05.0**	**+1.2**
	173nm,0.5s							
KRLC	**Kraliky**	**1.57**	**164**	*e*PG		**Pn**	**19 04 44.2**	**+0.4**
KRLC				*e*SG		**Sb**	**19 05 05.2**	**+0.3**
KRLC	**Kraliky**	**1.57**	**164**	Pg		**Pn**	**19 04 44.2**	**+0.4**
KRLC				Sg		**Sb**	**19 05 05.2**	**+0.3**
PRU	**Pruhonice**	**1.88**	**212**	*e*PN		**Pn**	**19 04 48.1**	**+0.1**
PRU				*e*PG		**Pg**	**19 04 50.3**	**-0.3**
PRU				*e*SG		**Sg**	**19 05 14.2**	**-0.7**
	comp=Z,35nm,0.3s							
PRU	**Pruhonice**	**1.88**	**212**	Pn		**Pn**	**19 04 48.1**	**+0.1**
PRU	**Pruhonice**	**1.88**	**212**	Pg		**Pg**	**19 04 50.3**	**-0.3**
PRU				Sg		**Sg**	**19 05 14.2**	**-0.7**
	35nm,0.3s							
CLL	**Collm**	**1.96**	**263**	*i* Pn		**Pn**	**19 04 49.3**	**+0.2**
CLL				*e*Pg		**Pg**	**19 04 53.0**	**+0.8**
CLL				*i*			19 04 56.6	
CLL				*i* Sg		**Sg**	**19 05 19.3**	**+1.8**
	comp=Z,79nm,0.6s							
RAC	**Raciborz**	**2.00**	**138**	*e*Pg		**Pg**	**19 04 52.9**	**0.0**
RAC				*e*Sg		**Sg**	**19 05 19.5**	**+0.6**
MORC	**Moravsky Berou**	**2.02**	**153**	*e*Pn		**Pn**	**19 04 50.0**	**0.0**
MORC				*e*Sg		**Sb**	**19 05 17.6**	**-0.4**
	comp=Z,62nm,0.5s,baz=335							
OKC	**Ostrava-Krasne**	**2.17**	**143**	*e*PG		**Pg**	**19 04 55.8**	**-0.5**
OKC				*e*SG		**Sb**	**19 05 23.6**	**+1.3**
	comp=Z,115nm,0.6s							
OKC	**Ostrava-Krasne**	**2.17**	**143**	Pg		**Pg**	**19 04 55.8**	**-0.5**
OKC				Sg		**Sb**	**19 05 23.6**	**+1.3**
	comp=Z,115nm,0.6s							
VRAC	**Vranov**	**2.29**	**172**	Pn		**Pn**	**19 04 54.8**	**+1.0**
	comp=Z,1.8nm,0.3s,baz=359,slow=16,SNR=30							
VRAC				Lg		Lg	19 05 27.0	
	comp=Z,4.7nm,0.3s,baz=72,slow=21,SNR=12							
VRAC	**Vranov**	**2.29**	**172**	*e*Pn		**Pn**	**19 04 54.2**	**+0.5**
	baz=354							
VRAC				*e*Sg		**Sb**	**19 05 26.6**	**+0.8**
	comp=Z,126nm,0.9s,baz=354							
TREC	**Trest**	**2.32**	**190**	*e*PN		**Pn**	**19 04 55.5**	**+1.4**
TREC				*e*PG		**Pb**	**19 04 58.1**	**+0.8**
TREC				*e*SG		**Sg**	**19 05 28.7**	**-0.5**
	comp=Z,33nm,0.2s							
KRUC	**Moravsky**	**2.53**	**176**	*e*Pn		**Pn**	**19 04 57.5**	**+0.6**
	baz=357							
KRUC				*e*Sg		**Sb**	**19 05 34.0**	**+1.5**
	comp=Z,32nm,0.4s,baz=357							
NKC	**Novy Kostel**	**2.68**	**241**	*e*PN		**Pn**	**19 04 59.8**	**+0.8**
NKC				*e*PG		**Pg**	**19 05 05.2**	**-0.7**
NKC				*e*SG		**Sg**	**19 05 41.7**	**+1.1**
	comp=Z,141nm,0.5s							
NKC	**Novy Kostel**	**2.68**	**241**	Pn		**Pn**	**19 04 59.8**	**+0.8**
NKC	**Novy Kostel**	**2.68**	**241**	Pg		**Pg**	**19 05 05.2**	**-0.7**
NKC				Sg		**Sg**	**19 05 41.7**	**+1.1**
	comp=Z,141nm,0.5s							
OJC	**Ojcow**	**2.71**	**119**	*e*Pg		**Pg**	**19 05 06.6**	**+0.1**
OJC				*e*Sg		**Sg**	**19 05 42.2**	**+0.7**
OJC	**Ojcow**	**2.71**	**119**	*e*Pg		**Pg**	**19 05 06.6**	**+0.1**
OJC				*e*Sg		**Sg**	**19 05 42.2**	**+0.7**
KHC	**Kasperske Hory**	**2.94**	**214**	*e*PN		**Pn**	**19 05 02.9**	**+0.3**
KHC				*e*PG		**Pg**	**19 05 09.3**	**-1.6**
KHC				*e*SN		**Sn**	**19 05 38.0**	**-0.5**
KHC				*e*SG		**Sg**	**19 05 48.9**	**0.0**
	comp=Z,26nm,0.6s							
KHC	**Kasperske Hory**	**2.94**	**214**	Pn		**Pn**	**19 05 02.9**	**+0.3**
KHC	**Kasperske Hory**	**2.94**	**214**	Pg		**Pg**	**19 05 09.3**	**-1.6**
KHC				Sn		**Sn**	**19 05 38.0**	**-0.5**
KHC				Sg		**Sg**	**19 05 48.9**	**0.0**
	comp=Z,26nm,0.6s							
GERES	**GERESS Array B**	**3.14**	**210**	Pn		**Pn**	**19 05 06.9**	**+1.5**
	comp=Z,1.7nm,0.3s,baz=35,slow=13,SNR=18							
GERES				Pg		**Pg**	**19 05 13.3**	**-1.5**
	comp=Z,3.0nm,0.3s,baz=27,slow=15,SNR=21							
GERES				Sn		**Sn**	**19 05 44.2**	**+0.6**
	comp=Z,2.2nm,0.3s,baz=26,slow=27,SNR=5.4							
GERES				Lg		Lg	19 05 54.8	
	comp=Z,5.9nm,0.3s,baz=23,slow=28,SNR=9.5							
SMOL	**Smolenice**	**3.19**	**164**	*e*		**Pg**	**19 05 15.5**	**-0.2**
SMOL	**Smolenice**	**3.19**	**164**	*e*SG		**Sg**	**19 05 55.5**	**-1.4**
SMOL	**Smolenice**	**3.19**	**164**	*e*Sg		**Sg**	**19 05 55.5**	**-1.4**
ZST	**Bratislava**	**3.45**	**169**	*e*		**Pb**	**19 05 17.6**	**+1.1**
ZST	**Bratislava**	**3.45**	**169**	*e*SG		**Sg**	**19 06 03.1**	**-2.2**
ZST	**Bratislava**	**3.45**	**169**	*e*Sg		**Sg**	**19 06 03.1**	**-2.2**
NIE	**Niedzica**	**3.45**	**127**	*e*P		**Pg**	**19 05 20.7**	**0.0**
NIE				*e*S		**Sg**	**19 06 06.8**	**+1.4**
NIE	**Niedzica**	**3.45**	**127**	*e*Pg		**Pg**	**19 05 20.7**	**0.0**
NIE				*e*Sg		**Sg**	**19 06 06.8**	**+1.4**
VYHS	**Vyhne**	**3.56**	**149**	*e*PN		**Pn**	**19 05 11.3**	**+0.2**
VYHS				*e*			19 05 23.6	
VYHS	**Vyhne**	**3.56**	**149**	*e*Pn		**Pn**	**19 05 11.3**	**+0.2**
VYHS				*e*Sg		**Sg**	**19 06 09.0**	**+0.2**
CONA	**Conrad Observa**	**3.66**	**183**	⇓*i*Pn		**Pn**	**19 05 13.0**	**+0.5**
	SNR=12							
CONA				⇑*i*Sg		**Sg**	**19 06 10.6**	**-1.5**
	comp=Z,80nm,0.7s							
CONA	**Conrad Observa**	**3.66**	**183**	Pn		**Pn**	**19 05 13.0**	**+0.5**
	SNR=12							
CONA				Sg		**Sg**	**19 06 10.6**	**-1.5**
	comp=Z,80nm,0.7s							
MOA	**Molln**	**3.92**	**198**	⇑*i*Pn		**Pn**	**19 05 16.9**	**+0.8**
	SNR=11							
MOA				⇑*i*Sg		**Sg**	**19 06 19.7**	**-0.8**
	comp=Z,59nm,0.7s							
MOA	**Molln**	**3.92**	**198**	Pn		**Pn**	**19 05 16.9**	**+0.8**
	SNR=11							
MOA				Sg		**Sg**	**19 06 19.7**	**-0.8**
	comp=Z,59nm,0.7s							
STHS	**Stebnicka Huta**	**3.93**	**121**	*e*PN		**Pn**	**19 05 18.0**	**+1.8**
STHS				*e*			19 05 31.8	
STHS	**Stebnicka Huta**	**3.93**	**121**	*e*Pn		**Pn**	**19 05 18.0**	**+1.8**
STHS				*e*Sg		**Sg**	**19 06 20.7**	**-0.2**
KECS	**Kecovo**	**4.19**	**136**	*e*PN		**Pn**	**19 05 20.7**	**+0.9**
KECS				*e*			19 05 35.6	
KECS	**Kecovo**	**4.19**	**136**	*e*Pn		**Pn**	**19 05 20.7**	**+0.9**
KECS				*e*Sg		**Sg**	**19 06 28.2**	**-1.1**
ARSA	**Arzberg**	**4.35**	**185**	⇑*i*Pn		**Pn**	**19 05 22.3**	**+0.3**
ARSA				⇑*i*Sg		**Sg**	**19 06 33.7**	**-0.6**
	comp=Z,44nm,0.7s							
ARSA	**Arzberg**	**4.35**	**185**	Pn		**Pn**	**19 05 22.3**	**+0.3**
ARSA				Sg		**Sg**	**19 06 33.7**	**-0.6**
	comp=Z,44nm,0.7s							
CRVS	**Cervenica-Dubn**	**4.36**	**126**	*e*PN		**Pn**	**19 05 22.4**	**+0.3**
CRVS				*e*			19 05 38.2	
CRVS	**Cervenica-Dubn**	**4.36**	**126**	*e*Pn		**Pn**	**19 05 22.4**	**+0.3**
CRVS				*e*Sg		**Sg**	**19 06 33.1**	**-1.5**
BLEU	**Blekinge**	**4.74**	**358**	P		**Pn**	**19 05 27.9**	**+0.7**
BLEU				S		**Sn**	**19 06 21.8**	**-1.0**
KOLS	**Kolonicke sedl**	**4.76**	**121**	*e*PN		**Pn**	**19 05 27.9**	**+0.3**
KOLS				*e*			19 05 48.3	
KOLS	**Kolonicke sedl**	**4.76**	**121**	*e*Pn		**Pn**	**19 05 27.9**	**+0.3**
KOLS				*e*Sg		**Sg**	**19 06 45.9**	**-1.6**
KBA	**Koelnbreinsper**	**4.85**	**203**	⇑*i*Pn		**Pn**	**19 05 30.2**	**+1.2**
KBA				⇑*i*Sg		**Sg**	**19 06 50.6**	**+0.1**
	comp=Z,22nm,0.6s							
KBA	**Koelnbreinsper**	**4.85**	**203**	Pn		**Pn**	**19 05 30.2**	**+1.2**
KBA				Sg		**Sg**	**19 06 50.6**	**+0.1**
	comp=Z,22nm,0.6s							
DEL	**Delary**	**5.07**	**346**	P		**Pn**	**19 05 33.1**	**+1.2**
DEL				S		**Sn**	**19 06 29.0**	**-2.1**
VXJU	**Vaexsjoe**	**5.40**	**353**	P		**Pn**	**19 05 37.2**	**+0.9**
OSKU	**Oskarshamn**	**5.63**	**360**	P		**Pn**	**19 05 40.2**	**+0.8**
BYXU	**Byxelkrok**	**5.75**	**5**	P		**Pn**	**19 05 42.5**	**+1.4**
ASPU	**Aespoe**	**5.86**	**3**	P		**Pn**	**19 05 43.9**	**+1.3**
GNOU	**Gnosjoe**	**5.88**	**347**	P		**Pn**	**19 05 43.4**	**+0.4**
CDF	**Champ du Feu**	**6.51**	**244**	*e*Pn		**Pn**	**19 05 50.5**	**-1.2**
CDF				*e*Sg		Sg	19 07 36.0	-7.7
	comp=Z,36nm,0.9s							
CDF	**Champ du Feu**	**6.51**	**244**	*e*Pn		**Pn**	**19 05 50.5**	**-1.2**
VIKU	**Vikbolandet**	**6.95**	**3**	P		**Pn**	**19 05 59.1**	**+1.6**
	baz=178							
HINF	**Hinteralfeld**	**7.08**	**241**	*e*Pn		**Pn**	**19 05 57.3**	**-2.2**
HINF				*e*Sg		Sg	19 07 53.1	-8.8
	comp=Z,22nm,0.8s							
HINF	**Hinteralfeld**	**7.08**	**241**	*e*Pn		**Pn**	**19 05 57.3**	**-2.2**
HAU	**Haudompre**	**7.26**	**244**	*e*Pn		**Pn**	**19 05 59.3**	**-2.6**
HAU				*e*Sg		Sg	19 07 58.7	-8.8
	comp=Z,12nm,0.7s							
HAU	**Haudompre**	**7.26**	**244**	*e*Pn		**Pn**	**19 05 59.3**	**-2.6**
GIVF	**Givet**	**7.29**	**263**	*e*Pn		**Pn**	**19 06 00.8**	**-1.6**
GIVF				*e*Sg		Sg	19 08 01.7	-7.1
	comp=Z,5.3nm,0.4s							
GIVF	**Givet**	**7.29**	**263**	*e*Pn		**Pn**	**19 06 00.8**	**-1.6**
PAGF	**Fort de Pagny**	**7.33**	**250**	*e*Pn		**Pn**	**19 06 00.8**	**-2.1**
PAGF				*e*Sg		Sg	19 08 01.4	-8.6
	comp=Z,7.5nm,1.0s							
PAGF	**Fort de Pagny**	**7.33**	**250**	*e*Pn		**Pn**	**19 06 00.8**	**-2.1**
BAIF	**Baives**	**7.69**	**263**	*e*Pn		**Pn**	**19 06 06.1**	**-1.7**
BAIF				*e*Sg		Sg	19 08 13.5	-7.9
	comp=Z,4.9nm,0.6s							
BAIF	**Baives**	**7.69**	**263**	*e*Pn		**Pn**	**19 06 06.1**	**-1.7**
MEZF	**Maizieres J'vi**	**7.75**	**251**	*e*Pn		**Pn**	**19 06 06.5**	**-2.2**
MEZF				*e*Sg		Sg	19 08 14.8	-8.6
	comp=Z,7.5nm,0.8s							
MEZF	**Maizieres J'vi**	**7.75**	**251**	*e*Pn		**Pn**	**19 06 06.5**	**-2.2**
SFTF	**Sexfontaines**	**7.90**	**249**	*e*Pn		**Pn**	**19 06 08.7**	**-2.0**
SFTF				*e*Sg		Sg	19 08 19.4	-8.8
	comp=Z,8.4nm,0.6s							
SFTF	**Sexfontaines**	**7.90**	**249**	*e*Pn		**Pn**	**19 06 08.7**	**-2.0**
CABF	**La Chapelle**	**8.24**	**237**	*e*Sg		Sg	19 08 28.6	-11
	comp=Z,100nm,1.5s							
AKASG	**Malin Array Be**	**8.30**	**91**	Pn		**Pn**	**19 06 13.4**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=280,slow=12,SNR=3.5							
HFS	**Hagfors**	**8.68**	**352**	Pn		**Pn**	**19 06 21.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=172,slow=14,SNR=3.9							
LOR	**Lormes**	**9.07**	**246**	*e*Pn		**Pn**	**19 06 24.4**	**-2.3**
LOR	**Lormes**	**9.07**	**246**	*e*Pn		**Pn**	**19 06 24.4**	**-2.3**
SSF	**Saint Saulge**	**9.38**	**246**	*e*Pn		**Pn**	**19 06 28.5**	**-2.5**
SSF	**Saint Saulge**	**9.38**	**246**	*e*Pn		**Pn**	**19 06 28.5**	**-2.5**
FINES	**FINESS Array B**	**11.30**	**25**	Pn		**Pn**	**19 06 57.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=214,slow=9.8,SNR=3.3							
EKA	**Eskdalemuir Ar**	**12.07**	**296**	Pn		**Pn**	**19 07 09.0**	**+1.2**
	baz=107,slow=15,SNR=2.8							
ARCES	**ARCESS Array B**	**18.55**	**10**	Pn		**P**	**19 08 32.3**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=185,slow=12,SNR=5.0							
MKAR	**Makanchi Array**	**42.19**	**69**	P		**P**	**19 12 10.1**	**+1.2**
	comp=Z,0.2nm,0.8s,baz=307,slow=6.5,SNR=2.9							
YKA	**Yellowknife Ar**	**59.79**	**336**	P		**P**	**19 14 22.7**	**+1.8**
	comp=Z,0.3nm,0.6s,baz=27,slow=6.6,SNR=5.4							

GUC 26 19:05:18.9±0.6, 35°25S×71°26W, h22km±4km, MD3.6, ML3.5, 7C-3D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.34**	**244**	⇑*i*P			Pb	19 05 26.4	+0.1
TALC				*i* S			Sb	19 05 31.6	+0.3
TALC				AML		AML		19 05 31.7	
	comp=E,26μm,0.1s								
CACH	**El Canelo**	**1.25**	**26**	⇑*i*P			Pn	19 05 40.5	-0.8
CACH				*i* S			Sn	19 05 57.5	-0.1
LNV	**Longovilo**	**1.29**	**355**	⇑*i*P			Pn	19 05 41.2	-0.4
CHCH	**Chadas Angostu**	**1.41**	**21**	⇑*i*P			Pn	19 05 43.0	-0.2
CCHI	**Chillan**	**1.50**	**206**	⇑*i*P			Pb	19 05 45.8	-0.4
CCHI				*i* S			Sb	19 06 05.7	+0.9
COCH	**Cobquecura**	**1.52**	**234**	⇓*i*P			Pn	19 05 44.9	+0.1
COCH				*i* S			Sn	19 06 04.5	+0.6
TACH	**Talagante**	**1.61**	**10**	*e*P			Pn	19 05 46.5	+0.4
TACH				*i* S			Sb	19 06 07.3	-0.7
LMEL	**Las Melosas**	**1.65**	**32**	⇓*i*P			Pn	19 05 47.6	+0.8
LMEL				*i* S			Sb	19 06 08.8	-0.5
LMEL				AML		AML		19 06 11.3	
	comp=N,533nm,0.3s								
PCH	**Pirque**	**1.74**	**21**	⇑*i*P			Pn	19 05 48.6	+0.7
PCH				*i* S			Sb	19 06 10.6	-1.1
ANTU	**Antumapu**	**1.75**	**17**	*i* S			Sb	19 06 11.6	-0.6
ANTU				AML		AML		19 06 13.4	
	comp=E,703nm,0.3s								
RCDM	**Rinconada Maip**	**1.79**	**12**	⇑*i*P			Pn	19 05 49.1	+0.6
RCDM				*i* S			Sb	19 06 12.3	-0.9
RCDM				AML		AML		19 06 13.2	
	comp=E,1μm,0.1s								
SAN	**Santiago**	**1.86**	**16**	*i* S			Sb	19 06 14.3	-0.8
SAN				AML		AML		19 06 15.1	
	comp=N,266nm,0.5s								
CLCH	**Cerro Calan**	**1.94**	**18**	⇓*i*P			Pn	19 05 51.9	+1.2
CLCH				*i* S			Sb	19 06 16.7	-0.9
CLCH				AML		AML		19 06 19.8	
	comp=N,359nm,0.3s								
PEL	**Peldehue**	**2.15**	**13**	*i* S			Sb	19 06 21.9	-1.7
PEL				AML		AML		19 06 24.5	
	comp=N,545nm,0.5s								
ROCH	**El Roble**	**2.28**	**5**	*e*P			Pn	19 05 55.7	+0.2
ROCH				*i* S			Sn	19 06 25.0	+1.8
ROCH				AML		AML		19 06 33.5	
	comp=N,359nm,0.4s								

*ISCJB **26** 19:05:40.5±0.8, 6°.85N±0°.09×72°.92W±0°.10, h169km±8km, mb3.4/1, Error ellipse: s-maj=20.5km s-min=6.5km az=43.0*
*FUNV **26** 19:05:40.2, 6°.68N×73°.16W, h151km, MW3.7*
*IDC **26** 19:05:42.9±7.1, 6°.74N×75°.88W, h124km±82km, mb3.2/1, mb1 3.6/2, mb1mx2.9/22, mbtmp3.4/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/15, Error ellipse: s-maj=163.5km s-min=33.6km az=80.0*

ISC 26 19:05:41.2±1.7, 6°.9N±0°.2×72°.9W±0°.1, h166km±11km, n15, σ0§65/20, 2C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.17**	**32**	⇑*i*P			**Pn**	**19 06 09.6**	**+0.4**
CAPV				*e*S			**Sn**	**19 06 29.7**	**-1.1**
ROSC	**El Rosal**	**2.42**	**215**	P			Pn	19 06 22.4	-0.3
	33nm,0.3s,baz=94,slow=23,SNR=43								
ROSC				S			Sn	19 06 53.4	-1.4
	28nm,0.3s,baz=103,slow=21,SNR=6.1								
SOCV	**Socops**	**2.50**	**55**	⇓*i*P			**Pn**	**19 06 24.1**	**+0.9**
SOCV				*e*S			**Sn**	**19 06 56.0**	**+0.3**
VIGV	**El Vigia**	**2.51**	**38**	⇑*i*P			**Pn**	**19 06 24.1**	**+0.8**
VIGV				*e*S			**Sn**	**19 06 55.6**	**-0.3**
QARV	**Quebrada Arrib**	**4.09**	**35**	*e*P			**Pn**	**19 06 43.6**	**+0.4**
QARV				*e*S			**Sn**	**19 07 31.0**	**-0.5**
SANV	**Sanarito**	**4.27**	**52**	*e*P			**Pn**	**19 06 46.2**	**+0.7**
SANV				*e*S			**Sn**	**19 07 35.2**	**-0.5**
CURV	**Curarigua**	**4.30**	**43**	*e*P			**Pn**	**19 06 46.4**	**+0.5**
CURV				*e*S			**Sn**	**19 07 36.0**	**-0.3**
DABV	**Dabajuro**	**4.63**	**29**	*e*P			**Pn**	**19 06 50.6**	**+0.5**
SIQV	**Siquisique**	**4.87**	**39**	*e*P			**Pn**	**19 06 53.3**	**0.0**
SIQV				*e*S			**Sn**	**19 07 48.9**	**-0.8**
BAUV	**El Baul**	**5.27**	**67**	*e*P			**Pn**	**19 06 58.1**	**-0.4**
BAUV				*e*S			Sn	19 07 57.6	-1.4
BIRV	**Birongo**	**7.51**	**61**	*e*P			**Pn**	**19 07 28.7**	**+0.6**
PDAR	**Pinedale Array**	**48.15**	**324**	LR			LR	19 34 34.3	
	comp=Z,74nm,19.9s,baz=354,slow=37								
YKA	**Yellowknife Ar**	**63.29**	**340**	P			**P**	**19 15 52.4**	**+0.4**
	0.3nm,0.5s,baz=131,slow=6.7,SNR=8.9								
ASAR	**Alice Springs**	**149.28**	**234**	PKPbc			**PKPbc**	**19 25 10.9**	**-0.3**
	0.3nm,0.6s,baz=116,slow=3.6,SNR=4.9								
WRA	**Warramunga Arr**	**150.51**	**241**	PKPbc			**PKPbc**	**19 25 13.6**	**-0.7**
	0.4nm,0.4s,baz=108,slow=2.8,SNR=15								

*TIR **26** 19:11:03.5±0.6, 41°.18N×20°.22E, h7km±301km, ML3.6*
*ATH **26** 19:11:04.0, 41°.45N×20°.26E, h16km±2km, MD3.7/8*
*BEO **26** 19:11:05.9±0.7, 41°.09N×20°.22E, h0km±3km, ML3.5/1*
*ISCJB **26** 19:11:06.1±0.4, 41°.21N±0°.02×20°.21E±0°.02, h3km±3km, Error ellipse: s-maj=3.4km s-min=1.9km az=140.5*
*PDG **26** 19:11:06.8±0.5, 41°.22N×20°.22E, h6km, MD3.5/1, ML3.4/9, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*SKO **26** 19:11:06.6, 41°.14N×20°.31E, h8km, M3.0, ML3.4*
*CSEM **26** 19:11:07.3±0.1, 41°.19N×20°.24E, h2km, ML3.6, Error ellipse: s-maj=3.8km s-min=2.2km az=58.0*
*THE **26** 19:11:07.0, 41°.21N×20°.27E, h0km±2km, ML3.4/5, Error ellipse: s-maj=2.0km s-min=0.8km az=292.0*

ISC 26 19:11:07.0±1.1, 41°.20N±0°.02×20°.25E±0°.02, h0km±9km, n175, σ1§12/261, 25C-21D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**297**	*e*PG			**Pg**	**19 11 12.3**	**-0.9**
TIR				*i* SG			**Sg**	**19 11 19.6**	**+2.1**
TIR	**Tirane**	**0.33**	**297**	P			**Pg**	**19 11 12.3**	**-0.9**
TIR				S			**Sg**	**19 11 18.5**	**+1.0**
TIR	**Tirane**	**0.33**	**297**	⇑*i*Pg			**Pg**	**19 11 12.3**	**-0.9**
TIR				*e*Sg			**Sg**	**19 11 17.8**	**+0.3**
TIR	**Tirane**	**0.33**	**297**	*e*Pb			**Pg**	**19 11 12.4**	**-0.8**
TIR				*e*Sb			**Sg**	**19 11 17.6**	**+0.1**
TIR				S			**Sg**	**19 11 18.5**	**+1.0**
PHP	**Peshkopia**	**0.50**	**16**	*e*PG			**Pg**	**19 11 16.3**	**-0.4**
PHP				*i* SG			**Sb**	**19 11 25.1**	**-1.6**
PHP	**Peshkopia**	**0.50**	**16**	P			**Pg**	**19 11 16.1**	**-0.6**
PHP				S			**Sg**	**19 11 24.2**	**+1.0**
PHP	**Peshkopia**	**0.50**	**16**	*e*Pg			**Pg**	**19 11 16.3**	**-0.4**
	SNR=9.0								
PHP				S			**Sg**	**19 11 24.2**	**+1.0**
PHP				*i* Sg			**Sb**	**19 11 25.1**	**-1.6**
	SNR=9.0								
KBN	**Korca**	**0.71**	**145**	*e*PG			**Pg**	**19 11 19.8**	**-0.7**
KBN				*i* SG			**Sb**	**19 11 31.7**	**-0.8**
KBN	**Korca**	**0.71**	**145**	P			**Pg**	**19 11 19.6**	**-0.9**
KBN				S			**Sg**	**19 11 30.0**	**+0.3**
KBN	**Korca**	**0.71**	**145**	*e*Pg			**Pg**	**19 11 19.8**	**-0.7**
	SNR=9.0								
KBN				S			**Sg**	**19 11 30.0**	**+0.3**
KBN				*i* Sg			**Sb**	**19 11 31.7**	**-0.8**
	SNR=9.0								
BIA	**Bitola**	**0.83**	**102**	P			**Pg**	**19 11 21.5**	**-1.5**
BIA				S			**Sb**	**19 11 35.1**	**-1.0**
BIA	**Bitola**	**0.83**	**102**	*e*Pn			**Pg**	**19 11 21.4**	**-1.5**
BIA	**Bitola**	**0.83**	**102**	P			**Pg**	**19 11 21.5**	**-1.5**
BIA				S			**Sb**	**19 11 35.1**	**-1.0**
PUK	**Puka**	**0.88**	**342**	*e*PN			**Pg**	**19 11 23.4**	**-0.5**
PUK				*i* SN			**Sb**	**19 11 37.0**	**-0.6**
FNA	**Florina**	**0.95**	**116**	P			**Pg**	**19 11 24.0**	**-1.1**
FNA				S			**Sb**	**19 11 39.4**	**0.0**
FNA	**Florina**	**0.95**	**116**	*e*PN			**Pg**	**19 11 24.1**	**-1.1**
FNA				*e*SN			**Sb**	**19 11 39.5**	**0.0**
FNA	**Florina**	**0.95**	**116**	*e*Pb			**Pg**	**19 11 24.1**	**-1.1**
FNA				S			**Sb**	**19 11 39.4**	**0.0**
NEST	**Nestorio**	**0.99**	**142**	P			**Pg**	**19 11 25.1**	**-0.9**
NEST				S			**Sg**	**19 11 39.6**	**+0.7**
NEST	**Nestorio**	**0.99**	**142**	P			**Pg**	**19 11 25.1**	**-0.9**
NEST				S			**Sg**	**19 11 39.6**	**+0.7**
ULC	**Ulcinj**	**1.07**	**316**	⇓*i*Pg			**Pg**	**19 11 25.3**	**-2.3**
ULC				*e*Sg			**Sb**	**19 11 42.5**	**-0.5**
ULC	**Ulcinj**	**1.07**	**316**	⇓*i*Pg			**Pg**	**19 11 25.3**	**-2.3**
ULC				*e*Sg			**Sb**	**19 11 42.5**	**-0.5**
BCI	**Bajram Curri**	**1.17**	**353**	*e*PN			**Pg**	**19 11 29.3**	**-0.2**
BCI				*i* SN			**Sb**	**19 11 46.6**	**-0.8**
BCI	**Bajram Curri**	**1.17**	**353**	*e*Pn			**Pg**	**19 11 29.3**	**-0.2**
BCI				*i* Sn			**Sb**	**19 11 46.6**	**-0.8**
SKO	**Skopje**	**1.18**	**49**	P			**Pg**	**19 11 29.2**	**-0.4**
SKO				S			**Sn**	**19 11 47.2**	**-0.3**
SKO	**Skopje**	**1.18**	**49**	*e*Pn			**Pb**	**19 11 30.1**	**-0.1**
SKO				*e*Lg		Lg		19 11 47.1	
	comp=E,685nm,0.8s								
SKO				*e*Lg		Lg		19 11 48.9	
	comp=N,1μm,0.4s								
SKO	**Skopje**	**1.18**	**49**	*e*Pg			**Pg**	**19 11 29.1**	**-0.5**
SKO				*e*Sg			**Sn**	**19 11 46.4**	**-1.1

AGG	**Agios Georgios**	**2.70**	**143**		*e*Pn		**Pn**	19 11 51.5	-0.2
AGG					S		**Sn**	**19 12 25.8**	**+0.8**
GRUS	**Gruza**	**2.71**	**7**		*e*Pn		**Pn**	19 11 52.3	+0.6
GRUS	**Gruza**	**2.71**	**7**		*e*Pn		**Pn**	19 11 52.3	+0.6
BBLS	**Lazići**	**2.73**	**347**		*e*Pn		**Pn**	19 11 53.1	+0.9
BBLS	**Lazići**	**2.73**	**347**		*e*Pn		**Pn**	19 11 53.1	+0.9
DIVS	**Divibare**	**2.90**	**356**		P		**Pn**	19 11 56.0	+1.5
DIVS					S		**Sb**	**19 12 34.6**	**-1.1**
DIVS	**Divibare**	**2.90**	**356**		*e*Pn		**Pn**	19 11 55.8	+1.3
DIVS	**Divibare**	**2.90**	**356**		*e*Pn		**Pn**	19 11 55.8	+1.3
DIVS					S		**Sb**	**19 12 34.6**	**-1.1**
XOR	**Xorichti**	**2.90**	**128**		P		**Pn**	19 11 53.2	-1.2
XOR					S		**Sn**	**19 12 31.0**	**+1.0**
XOR	**Xorichti**	**2.90**	**128**		P		**Pn**	19 11 53.2	-1.2
XOR					S		**Sn**	**19 12 31.0**	**+1.0**
PAIG	**Paliouri**	**2.91**	**115**		P		**Pn**	19 11 53.3	-1.2
PAIG	**Paliouri**	**2.91**	**115**		*e*PN		**Pn**	19 11 53.3	-1.2
PAIG	**Paliouri**	**2.91**	**115**		*e*Pn		**Pn**	19 11 53.3	-1.2
BOLS	**Boljevac**	**2.91**	**25**	⇑	*i*Pn		**Pn**	19 11 52.8	-1.8
BOLS	**Boljevac**	**2.91**	**25**	⇑	*i*Pn		**Pn**	19 11 52.8	-1.8
NEO	**Neokhori**	**2.96**	**129**		*e*PN		**Pn**	19 11 54.9	-0.3
NEO					*e*SN		**Sn**	**19 12 32.3**	**+0.9**
NEO	**Neokhori**	**2.96**	**129**		*e*Pn		**Pn**	19 11 54.9	-0.3
NEO					*e*Sn		**Sn**	**19 12 32.3**	**+0.9**
OUR	**Ouranopolis**	**2.96**	**106**		P		**Pn**	19 11 55.5	+0.3
OUR	**Ouranopolis**	**2.96**	**106**		P		**Pn**	19 11 55.5	+0.3
SVIS	**Svilajnac**	**3.14**	**13**		*e*Pn		**Pn**	19 11 58.8	+1.1
KAVA	**Kavala**	**3.23**	**92**		P		**Pn**	19 11 58.5	-0.4
KAVA	**Kavala**	**3.23**	**92**		P		**Pn**	19 11 58.5	-0.4
LAKA	**Lakka**	**3.24**	**155**		P		**Pn**	19 12 00.6	+1.5
LAKA	**Lakka**	**3.24**	**155**		P		**Pn**	19 12 00.6	+1.5
RLS	**Riolos of Patr**	**3.28**	**163**		*e*PN		**Pn**	19 12 01.2	+1.7
RLS	**Riolos of Patr**	**3.28**	**163**		*e*Pn		**Pn**	19 12 01.2	+1.7
DSF	**Desfina**	**3.29**	**147**		P		**Pn**	19 11 59.6	-0.2
DSF	**Desfina**	**3.29**	**147**		P		**Pn**	19 11 59.6	-0.2
AOS	**Alonnisos**	**3.44**	**125**		P		**Pn**	19 12 01.7	-0.1
AOS	**Alonnisos**	**3.44**	**125**		P		**Pn**	19 12 01.7	-0.1
LTK	**Loutraki**	**3.81**	**146**		P		**Pn**	19 12 06.9	+0.1
LTK	**Loutraki**	**3.81**	**146**		P		**Pn**	19 12 06.9	+0.1
FGSL	**Fruska Gora**	**3.97**	**355**		*e*Pn		**Pn**	19 12 08.5	-0.6
FRGS	**Fruska Gora**	**3.97**	**355**		*e*Pn		**Pn**	19 12 08.5	-0.6
ITM	**Ithomi**	**4.22**	**161**		*e*PN		**Pn**	19 12 14.7	+2.1
ITM	**Ithomi**	**4.22**	**161**		*e*Pn		**Pn**	19 12 14.7	+2.1
DID	**Didima**	**4.36**	**147**		P		**Pn**	19 12 14.9	+0.5
DID	**Didima**	**4.36**	**147**		P		**Pn**	19 12 14.9	+0.5
BZS	**Buzias**	**4.52**	**12**		*e*Pn		**Pn**	19 12 17.4	+0.7
BZS	**Buzias**	**4.52**	**12**	⇑	*i*P		**Pn**	19 12 19.2	+2.5
BZS	**Buzias**	**4.52**	**12**		*e*Pn		**Pn**	19 12 17.4	+0.7
BZS	**Buzias**	**4.52**	**12**	⇑	*i*P		**Pn**	19 12 19.2	+2.5
VLI	**Veliai**	**4.94**	**154**		P		**Pn**	19 12 23.3	+0.8
VLI	**Veliai**	**4.94**	**154**		P		**Pn**	19 12 23.3	+0.8
PKSM	**Moragy**	**5.14**	**347**	⇑	*i*P		**Pn**	19 12 27.7	+2.5
PKSM	**Moragy**	**5.14**	**347**	⇑	*i*P		**Pn**	19 12 27.7	+2.5
NVLJ	**Novalja**	**5.19**	**312**		*e*Pn		**Pn**	19 12 24.3	-1.5
NVLJ					Sn		**Sn**	**19 13 24.9**	**-1.4**
NVLJ	**Novalja**	**5.19**	**312**		*e*Pn		**Pn**	19 12 24.2	-1.5
NVLJ					Sn		**Sn**	**19 13 24.8**	**-1.4**
AQU	**L'Aquila**	**5.25**	**285**	⇓	*i*P		**Pn**	19 12 26.6	-0.1
AQU	**L'Aquila**	**5.25**	**285**	⇓	*i*P		**Pn**	19 12 26.6	-0.1
ARR	**Arges**	**5.25**	**36**	⇓	*i*P		**Pn**	19 12 27.0	+0.3
ARR	**Arges**	**5.25**	**36**	⇓	*i*P		**Pn**	19 12 27.0	+0.3
VOIR		**5.49**	**38**	⇑	*i*P		**Pn**	19 12 30.5	+0.4
VOIR		**5.49**	**38**	⇑	*i*P		**Pn**	19 12 30.5	+0.4
BOJS	**Bojanci**	**5.64**	**321**		*i* Pn		**Pn**	19 12 31.6	-0.4
BOJS					*i* Sn		**Sn**	**19 13 36.7**	**-0.6**
BOJS	**Bojanci**	**5.64**	**321**		Pn		**Pn**	19 12 31.6	-0.4
BOJS					*i* Sn		**Sn**	**19 13 36.7**	**-0.6**
DRGR		**5.86**	**17**	⇑	*i*P		**Pn**	19 12 36.6	+1.4
DRGR		**5.86**	**17**	⇑	*i*P		**Pn**	19 12 36.6	+1.4
MLR	**Muntele Rosu**	**5.97**	**42**	⇓	*i*P		**Pn**	19 12 37.8	+1.2
MLR	**Muntele Rosu**	**5.97**	**42**	⇓	*i*P		**Pn**	19 12 37.8	+1.2
KNDS	**Knezji Dol**	**6.08**	**317**		*i* Pn		**Pn**	19 12 35.1	-3.1
KNDS	**Knezji Dol**	**6.08**	**317**		*i* Sn		**Sn**	**19 13 48.5**	**0.0**
SKDS	**Skadanscina**	**6.28**	**316**		*i* Pn		**Pn**	19 12 41.4	+0.5
SKDS					*i* Sn		**Sn**	**19 13 52.5**	**-0.9**
SKDS	**Skadanscina**	**6.28**	**316**		*i* Pn		**Pn**	19 12 41.4	+0.5
SKDS					*i* Sn		**Sn**	**19 13 52.5**	**-0.9**
JAVS	**Javornik**	**6.49**	**318**		*i* Pn		**Pn**	19 12 43.5	-0.4
JAVS					*i* Sn		**Sn**	**19 13 57.4**	**-1.2**
JAVS	**Javornik**	**6.49**	**318**		*i* Pn		**Pn**	19 12 43.5	-0.4
JAVS					*i* Sn		**Sn**	**19 13 57.4**	**-1.2**
PLOR	**Plostina**	**6.57**	**43**	⇑	*i*P		**Pn**	19 12 45.5	+0.6
PLOR	**Plostina**	**6.57**	**43**	⇑	*i*P		**Pn**	19 12 45.5	+0.6
VRI	**Vrincioaia**	**6.62**	**43**	⇓	*i*P		**Pn**	19 12 47.1	+1.5
VRI	**Vrincioaia**	**6.62**	**43**	⇓	*i*P		**Pn**	19 12 47.1	+1.5
SOKA	**Soboth**	**6.64**	**327**	⇑	*i*Pn		**Pn**	19 12 46.8	+0.9
SOKA	**Soboth**	**6.64**	**327**		Pn		**Pn**	19 12 46.8	+0.9
VOY	**Vojsko**	**6.68**	**318**		*e*Pn		**Pn**	19 12 46.3	0.0
VOY					*e*Sn		**Sn**	**19 14 02.8**	**-0.3**
VOY	**Vojsko**	**6.68**	**318**		*e*Pn		**Pn**	19 12 46.3	0.0
VOY					*e*Sn		**Sn**	**19 14 02.8**	**-0.3**
PSZ	**Piszkesteto**	**6.72**	**358**	⇓	*i*P		**Pn**	19 12 48.5	+1.6
PSZ	**Piszkesteto**	**6.72**	**358**	⇓	*i*P		**Pn**	19 12 48.5	+1.6
TIRR	**Tirgusor**	**6.83**	**59**	⇑	*i*P		**Pn**	19 12 48.7	+0.4
TIRR	**Tirgusor**	**6.83**	**59**	⇑	*i*P		**Pn**	19 12 48.7	+0.4
TRPA	**Tarpa**	**7.12**	**12**	⇑	*i*P		**Pn**	19 12 53.1	+0.8
TRPA	**Tarpa**	**7.12**	**12**	⇑	*i*P		**Pn**	19 12 53.1	+0.8
BURAR	**Bucovina Array**	**7.33**	**27**	⇓	*i*P		**Pn**	19 12 56.4	+1.1
BURAR	**Bucovina Array**	**7.33**	**27**	⇓	*i*P		**Pn**	19 12 56.4	+1.1
ZST	**Bratislava**	**7.34**	**343**		*e*PN		**Pn**	19 12 53.2	-2.2
VYHS	**Vyhne**	**7.36**	**353**		*e*PN		**Pn**	19 12 58.6	+2.9
VYHS					*e*SN		**Sn**	**19 14 20.2**	**+0.4**
VYHS	**Vyhne**	**7.36**	**353**		*e*Pn		**Pn**	19 12 58.6	+2.9
VYHS					*e*Sn		**Sn**	**19 14 20.2**	**+0.4**
CRVS	**Cervenica-Dubn**	**7.75**	**6**		*e*PN		**Pn**	19 12 59.6	-1.4
CRVS	**Cervenica-Dubn**	**7.75**	**6**		*e*Pn		**Pn**	19 12 59.6	-1.4
KOLS	**Kolonicke sedl**	**7.86**	**10**		*e*PN		**Pn**	19 13 04.9	+2.4
KOLS	**Kolonicke sedl**	**7.86**	**10**		*e*Pn		**Pn**	19 13 04.9	+2.4

*CSEM **26** 19:12:39.7, 12°.12N×43°.73E, h6km, ML3.6, After DHMR*
DHMR 26 19:12:39.7±1.4, 12°.12N×43°.73E, h7km±9km, ML3.6,
Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.16**	**19**	*i* P	Pg	19 13 02.2	-0.2
TRBA				*i* S	Sg	19 13 17.5	-0.2
ADEN	**Aden**	**1.39**	**62**	*i* P	Pn	19 13 05.2	-0.4
ADEN				*i* S	Sg	19 13 24.8	+0.5
ADEN				AML	AML	19 13 31.7	
	comp=N,1μm,0.5s						
ADEN	**Aden**	**1.39**	**62**	*i* P	Pn	19 13 05.2	-0.3
ADEN				*i* S	Sg	19 13 24.8	+0.5
	comp=N,630nm,0.5s						
UDYN	**Al 'Udayn**	**1.85**	**7**	*i* P	Pn	19 13 12.7	+0.6
UDYN				*i* S	Sg	19 13 39.3	-0.2
UDYN				AML	AML	19 13 48.5	
	comp=E,543nm,0.5s						
UDYN	**Al 'Udayn**	**1.85**	**7**	*i* P	Pn	19 13 12.7	+0.6
UDYN				*i* S	Sg	19 13 39.3	-0.2
	comp=E,271nm,0.5s						
LBOS		**2.28**	**40**	*i* P	Pn	19 13 19.4	+1.2
LBOS				*i* S	Sb	19 13 51.5	+1.1
DHBB	**Dhamar BB**	**2.52**	**15**	*i* P	Pb	19 13 23.7	-2.0
DHBB				*i* S	Sb	19 13 58.4	+1.2
DHBB	**Dhamar BB**	**2.52**	**15**	*i* P	Pb	19 13 23.7	-2.0
DHBB				*i* S	Sb	19 13 58.4	+1.2
BDHA	**Al Bayda'**	**2.57**	**44**	*i* P	Pb	19 13 24.8	-1.7
BDHA				*i* S	Sb	19 13 59.4	+0.9
BDHA	**Al Bayda'**	**2.57**	**44**	*i* P	Pb	19 13 24.8	-1.7
BDHA				*i* S	Sb	19 13 59.4	+0.9
HAJJ	**Hajjah**	**3.56**	**358**	*i* P	Pn	19 13 37.9	+2.2
HAJJ				*i* S	Sb	19 14 23.1	-3.8
HAJJ				AML	AML	19 14 39.5	
	comp=N,231nm,0.7s						
HAJJ	**Hajjah**	**3.56**	**358**	*i* P	Pn	19 13 37.9	+2.2
HAJJ				*i* S	Sb	19 14 23.1	-3.8
	comp=N,116nm,0.7s						

*CASC **26** 19:12:23.7±2.4, 19°.37N×101°.18W, h20km±999km, MD4.9, mb4.5(NEIC)*
*IDC **26** 19:13:43.1±0.8, 15°.86N×95°.77W, h0km, mb4.1/17, mb1 4.3/19, mb1mx4.2/30, mbtmp4.2/19, ML4.2/2, MS3.6/22, Ms1 3.7/22, ms1mx3.6/33, Error ellipse: s-maj=28.4km s-min=12.0km az=60.0*
*NEIC **26** 19:13:46.5±1.0, 15°.89N×95°.65W, h26km±7km, mb4.5/55, MD4.6(MEX), Error ellipse: s-maj=6.7km s-min=4.2km az=216.0*
*ISCJB **26** 19:13:47.0±0.4, 15°.93N±0°.03×95°.66W±0°.02, h41km±4km, mb4.4/64, MS3.7/21, Error ellipse: s-maj=6.2km s-min=3.2km az=26.0*
*MEX **26** 19:13:47.6±0.4, 15°.90N×95°.65W, h9km±4km, MD4.6*
*BJI **26** 19:13:51.3, 16°.00N×95°.50W, h66km, Ms5.0/1, Ms7 4.7/1*
ISC 26 19:13:48.1±0.6, 15°.93N±0°.04×95°.67W±0°.03, h37km±1km, n391, σ1°20/388, mb4.5/64, MS3.7/21, 118C-104D, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.45**	**249**	*eP*	**Pn**	**19 13 56.1**	**-1.8**
HUIG				*i* S	**Sn**	**19 14 02.8**	**-2.1**
HUIG	**Huatulco**	**0.45**	**249**	*eP*	**Pn**	**19 13 56.1**	**-1.8**
HUIG				*i* S	**Sn**	**19 14 02.8**	**-2.1**
VHO	**Vista Hermosa**	**1.52**	**318**	*eP*	**Pn**	**19 14 12.1**	**-0.9**
VHO				*i* S	**Sn**	**19 14 31.5**	**-0.2**
VHO	**Vista Hermosa**	**1.52**	**318**	*eP*	**Pn**	**19 14 12.1**	**-0.9**
VHO				*i* S	**Sn**	**19 14 31.5**	**-0.2**
OXX	**Oaxaca**	**1.52**	**319**	*i* P	**Pn**	**19 14 13.1**	**+0.1**
OXX				*i* S	**Sn**	**19 14 32.6**	**+0.9**
OXX	**Oaxaca**	**1.52**	**319**	*i* P	**Pn**	**19 14 13.1**	**+0.1**
OXX				*i* S	**Sn**	**19 14 32.6**	**+0.9**
PCIG		**2.37**	**95**	*eP*	**Pn**	**19 14 23.5**	**-1.0**
PCIG				*i* S	**Sn**	**19 14 51.0**	**-1.3**
PCIG		**2.37**	**95**	*eP*	**Pn**	**19 14 23.5**	**-1.0**
PCIG				*i* S	**Sn**	**19 14 51.0**	**-1.3**
PNIG	**Pinotepa**	**2.40**	**281**	*eP*	**Pn**	**19 14 22.8**	**-2.1**
PNIG				*i* S	**Sn**	**19 14 53.8**	**+0.6**
PNIG	**Pinotepa**	**2.40**	**281**	*eP*	**Pn**	**19 14 23.2**	**-1.7**
PNIG				*i* S	**Sn**	**19 14 53.8**	**+0.6**
TUIG	**Tuzandepetl**	**2.41**	**30**	*eP*	**Pn**	**19 14 24.0**	**-1.0**
TUIG				*i* S	**Sn**	**19 14 53.5**	**+0.4**
TUIG	**Tuzandepetl**	**2.41**	**30**	*eP*	**Pn**	**19 14 24.0**	**-1.0**
TUIG				*i* S	**Sn**	**19 14 53.5**	**+0.4**
TGIG		**2.59**	**71**	*eP*	**Pn**	**19 14 27.2**	**-0.3**
TGIG				*i* S	**Sn**	**19 14 56.5**	**-1.3**
TGIG		**2.59**	**71**	*eP*	**Pn**	**19 14 27.2**	**-0.3**
TGIG				*i* S	**Sn**	**19 14 56.5**	**-1.3**
UTMO	**Huajuapan**	**2.78**	**313**	*i* P	**Pn**	**19 14 30.2**	**-0.1**
UTMO				*i* S	**Sn**	**19 15 04.5**	**+1.8**
UTMO	**Huajuapan**	**2.78**	**313**	*i* P	**Pn**	**19 14 30.2**	**-0.1**
UTMO				*i* S	**Sn**	**19 15 02.9**	**+0.2**
TPIG	**Tehuac#an**	**2.95**	**327**	*i* P	**Pn**	**19 14 32.3**	**-0.4**
TPIG				*i* S	**Sn**	**19 15 08.1**	**+1.2**
TPIG	**Tehuac#an**	**2.95**	**327**	*i* P	**Pn**	**19 14 32.3**	**-0.4**
TPIG				*i* S	**Sn**	**19 15 08.1**	**+1.2**
CCIG	**Comitan**	**3.42**	**84**	*eP*	**Pn**	**19 14 38.5**	**-0.5**
CCIG				*i* S	**Sn**	**19 15 17.8**	**-0.5**
CCIG	**Comitan**	**3.42**	**84**	*eP*	**Pn**	**19 14 38.5**	**-0.5**
CCIG				*i* S	**Sn**	**19 15 17.8**	**-0.5**
THIG		**3.44**	**107**	*i* P	**Pn**	**19 14 37.8**	**-1.4**
THIG				*i* S	**Sn**	**19 15 16.9**	**-1.8**
THIG		**3.44**	**107**	*i* P	**Pn**	**19 14 37.8**	**-1.4**
THIG				*i* S	**Sn**	**19 15 16.9**	**-1.8**
JAT	**Jato**	**4.21**	**112**	*eP*	**Pn**	**19 14 52.0**	**+2.2**
FUG	**Fuego 3**	**4.89**	**107**	*eP*	Pn	19 15 02.9	+3.6
NBG	**Las Nubes**	**5.31**	**104**	*eP*	**Pn**	**19 15 08.3**	**+3.2**
IXG	**Ixpaco**	**5.33**	**108**	*eP*	**Pn**	**19 15 08.2**	**+2.9**
MRL	**Marmol**	**5.83**	**98**	*eP*	**Pn**	**19 15 12.4**	**+0.2**
RBDL	**Robledal**	**6.06**	**107**	*eP*	Pn	19 15 19.6	+4.2
SBLS	**San Blas**	**6.21**	**109**	*eP*	Pn	19 15 20.8	+3.4
LFU	**La Fuente**	**6.70**	**108**	*eP*	Pn	19 15 28.7	+4.6
LFRS	**El Faro**	**6.79**	**109**	*eP*	Pn	19 15 29.3	+3.9
SNVI	**San Vicente**	**7.00**	**108**	*eP*	Pn	19 15 32.8	+4.6
TEIG	**Tepich** 102nm,0.6s	**8.23**	**58**	*e*Pn	**Pn**	**19 15 42.4**	**-2.5**
TEIG				*e*Sn	Sn	19 17 05.9	-11
TEIG				Sn	**Sn**	**19 17 13.2**	**-3.5**
TEIG	**Tepich** 24nm,0.3s,baz=265,slow=1.4,SNR=38	**8.23**	**58**	Pn	**Pn**	**19 15 43.7**	**-1.3**
TEIG				Sn	**Sn**	**19 17 13.2**	**-3.5**
	24nm,0.3s,baz=322,slow=20,SNR=7.3						
TEIG				LR	LR	19 19 57.6	
	comp=Z,192nm,18.0s,baz=204,slow=45						
TGUH	**Tegucigalpa,Un** 47nm,1.0s	**8.33**	**102**	*e*Pn	**Pn**	**19 15 49.4**	**+3.1**
JTS	**JuntasAbangare** 220nm,1.1s	**11.85**	**117**	*e*Pn	**Pn**	**19 16 36.7**	**+2.0**
732A	**Laxson Ranch,** baz=13	**13.34**	**343**	⇓P	**Pn**	**19 16 56.2**	**+1.3**
632A	**Uvalde** baz=14	**14.03**	**345**	⇑P	**Pn**	**19 17 05.0**	**+0.6**
631A	**Perdido Creek** baz=14	**14.15**	**342**	⇑P	**Pn**	**19 17 07.0**	**+0.9**
532A	**Rocksprings** baz=15,SNR=5.7	**14.65**	**345**	⇓P	**Pn**	**19 17 13.4**	**+0.5**
531A	**Rocksprings** baz=15,SNR=5.5	**14.86**	**343**	⇑P	**Pn**	**19 17 16.3**	**+0.7**
JCT	**Junction City** 19nm,0.7s	**14.97**	**346**	*e*Pn	**Pn**	**19 17 17.6**	**+0.5**
JCT	**Junction City** baz=15	**14.97**	**346**	⇑P	**Pn**	**19 17 17.6**	**+0.5**
628A	**Black Gap, Mar** baz=15,SNR=6.3	**15.04**	**335**	⇑P	**Pn**	**19 17 19.4**	**+1.4**
530A	**J-C Ranch, Com** baz=15	**15.07**	**341**	⇑P	**Pn**	**19 17 19.2**	**+0.7**
627A	**Terlingua Ranc** baz=15,SNR=8.3	**15.21**	**333**	⇓P	**Pn**	**19 17 22.4**	**+1.9**
TXAR	**Lajitas Array**	**15.23**	**332**	Pn	**Pn**	**19 17 21.0**	**+0.3**
TXAR				Lg	Lg	19 21 56.2	
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=152,slow=13,SNR=15	**15.23**	**332**	Pn	**Pn**	**19 17 21.0**	**+0.3**
TXAR				Lg	Lg	19 21 56.2	
	0.1nm,0.3s,baz=325,slow=30,SNR=2.7						
TXAR				LR	LR	19 24 38.3	
	comp=Z,66nm,20.0s,baz=45,slow=43						
432A	**Menard** baz=16	**15.35**	**346**	⇑P	**Pn**	**19 17 22.4**	**+0.4**
529A	**Stev Forest Ra** baz=16	**15.35**	**338**	⇓P	**Pn**	**19 17 23.1**	**+1.0**
431A	**Sonora** baz=16	**15.36**	**344**	⇑P	**Pn**	**19 17 23.0**	**+0.7**
528A	**Cox Ranch, San** baz=16	**15.60**	**336**	⇑P	**Pn**	**19 17 26.5**	**+1.1**
626A	**Big Bend Ranch** baz=16	**15.63**	**332**	⇑P	**Pn**	**19 17 27.2**	**+1.4**
430A	**Baggett Ranch,** baz=16,SNR=6.4	**15.64**	**342**	⇓P	**Pn**	**19 17 26.6**	**+0.8**
429A	**Davenport Ranc** baz=16,SNR=10	**15.70**	**340**	⇑P	**Pn**	**19 17 27.5**	**+0.9**
332A	**Millersview** baz=16	**15.82**	**347**	⇑P	**Pn**	**19 17 27.8**	**-0.4**
331A	**San Angelo** baz=16	**15.91**	**345**	⇓P	**Pn**	**19 17 29.2**	**-0.1**
527A	**Woodward Ranch** baz=16,SNR=6.7	**15.91**	**334**	⇑P	**Pn**	**19 17 30.9**	**+1.4**
526A	**Mary Lane Ranc** baz=16	**16.05**	**333**	⇓P	**Pn**	**19 17 32.7**	**+1.5**
428A	**Kincaid Ranch,** baz=16,SNR=8.3	**16.06**	**338**	⇓P	**Pn**	**19 17 32.7**	**+1.3**
WHTX	**Lake Whitney** baz=16	**16.07**	**355**	⇓P	**Pn**	**19 17 32.3**	**+1.0**
330A	**Mertzon** baz=16	**16.20**	**343**	⇓P	**Pn**	**19 17 33.6**	**+0.6**
232A	**Coleman** baz=16,SNR=8.0	**16.29**	**348**	⇓P	**Pn**	**19 17 33.7**	**-0.4**
427A	**Hayter Ranch,** baz=16,SNR=9.5	**16.45**	**336**	⇓P	**Pn**	**19 17 37.0**	**+0.7**
231A	**Bronte** baz=17	**16.48**	**346**	⇑P	**Pn**	**19 17 36.9**	**+0.3**
329A	**Wagon Wheel Ra** baz=17	**16.52**	**341**	⇓P	**Pn**	**19 17 37.6**	**+0.5**
426A	**McDonald Obser** baz=17,SNR=8.5	**16.54**	**334**	⇑P	**Pn**	**19 17 39.0**	**+1.4**
230A	**Sterling City** baz=17	**16.64**	**344**	⇑P	**Pn**	**19 17 38.9**	**+0.3**
328A	**Wristen Ranch,** baz=17	**16.70**	**338**	⇑P	**Pn**	**19 17 39.6**	**+0.2**
BCIP	**Isla Barro Col** 10nm,0.7s	**16.85**	**112**	*e*Pn	**P**	**19 17 45.3**	**+2.3**
229A	**Bryant Ranch,** baz=17	**16.91**	**342**	⇑P	**Pn**	**19 17 42.0**	**-0.1**
ABTX	**Abilene, Hawle** baz=17,SNR=5.6	**17.00**	**348**	⇑P	**Pn**	**19 17 42.8**	**-0.3**
425A	**Indio Mountain** baz=17	**17.07**	**332**	⇑P	**Pn**	**19 17 44.4**	**+0.4**
326A	**Caldwell Ranch** baz=17,SNR=12	**17.09**	**335**	⇑P	**Pn**	**19 17 45.1**	**+0.8**
131A	**Roby** baz=17	**17.21**	**346**	⇓P	**Pn**	**19 17 45.2**	**-0.5**
130A	**Snyder** baz=17	**17.27**	**345**	⇑P	**Pn**	**19 17 46.3**	**-0.2**
228A	**UT Block 9, Go** baz=17	**17.30**	**340**	⇑P	**Pn**	**19 17 46.2**	**-0.6**
227A	**Bennet, Jal** baz=18	**17.45**	**338**	⇓P	**Pn**	**19 17 48.3**	**-0.4**
325A	**Bean Ranch, Si** baz=18,SNR=6.0	**17.56**	**333**	⇑P	**Pn**	**19 17 49.2**	**-1.0**
Z32A	**Haskell** baz=18,SNR=11	**17.64**	**349**	⇓P	**Pn**	**19 17 50.5**	**-0.4**
128A	**Castleberry Fa** baz=18	**17.73**	**341**	⇑P	**Pn**	**19 17 51.5**	**-0.7**
Z31A	**Sharp Cattle R** baz=18	**17.78**	**348**	⇑P	**Pn**	**19 17 51.7**	**-1.0**
226B	**Tecolote Peak,** baz=18,SNR=7.4	**17.83**	**336**	⇓P	**Pn**	**19 17 53.9**	**+0.4**
324A	**Moseley Ranch,** baz=18,SNR=17	**17.85**	**332**	⇓P	**Pn**	**19 17 53.9**	**+0.2**
CLNB	**Carlsbad** 0.9nm,0.4s	**17.89**	**337**	*e*Pn	**P**	**19 17 56.0**	**+1.5**
Z30A	**Sanderson Ranc** baz=18,SNR=8.6	**17.97**	**345**	P	**Pn**	**19 17 54.0**	**-1.2**
MNTX	**Cornudas Mount** 7.3nm,0.9s	**18.02**	**332**	*e*Pn	**P**	**19 17 56.7**	**+0.8**
GDL2	**Guadalupe Moun** 8.7nm,0.6s	**18.02**	**336**	*e*Pn	**Pn**	**19 17 56.0**	**+0.2**
127A	**Arkansas Junct** baz=18	**18.07**	**339**	⇓P	**Pn**	**19 17 55.7**	**-0.7**
Z29A	**Hungry Hill Ra** baz=18	**18.09**	**344**	⇓P	**Pn**	**19 17 55.9**	**-0.7**
225A	**Deer Hill, Car** baz=18,SNR=5.5	**18.13**	**334**	⇓P	**Pn**	**19 17 57.3**	**+0.1**
126A	**Clayton Basin,** baz=18,SNR=5.5	**18.28**	**337**	⇓P	**P**	**19 17 59.0**	**+0.1**
Y32A	**R-V Farms, Ver** baz=18	**18.31**	**350**	⇑P	**P**	**19 17 58.6**	**-0.6**
224A	**Cornudas Mount** baz=18,SNR=9.0	**18.40**	**333**	⇑P	**P**	**19 18 00.1**	**-0.1**
Y31A	**Rekieta Farm,** baz=18	**18.42**	**348**	⇑P	**P**	**19 17 59.5**	**-0.8**
Y30A	**Stafford Cattl** baz=19	**18.48**	**346**	⇓P	**P**	**19 18 00.5**	**-0.5**
125A	**Gardner Draw,** baz=19,SNR=9.5	**18.54**	**336**	⇑P	**P**	**19 18 01.7**	**0.0**
Z27A	**Tatum** baz=19,SNR=18	**18.60**	**340**	P	**P**	**19 18 02.6**	**+0.2**
LRAL	**Lakeview Retre** 4.0nm,0.5s	**18.75**	**23**	*e*P	**Pn**	**19 18 04.7**	**+0.2**
Z26A	**Caprock** baz=19,SNR=8.3	**18.83**	**338**	⇓P	**P**	**19 18 04.5**	**-0.4**
Y28A	**McKinney Farm,** baz=19	**18.86**	**343**	⇑P	**P**	**19 18 05.1**	**0.0**
124A	**Stringfield Ra** baz=19,SNR=7.9	**18.91**	**334**	⇑P	**P**	**19 18 06.2**	**+0.3**
WMOK	**Wichita Mounta** 8.3nm,0.6s	**18.93**	**352**	*e*P	**P**	**19 18 06.6**	**+0.7**
WMOK				*e*Sn	Sn	19 21 27.6	-10
UALR	**University of** 17nm,0.7s	**19.00**	**8**	*e*P	**P**	**19 18 06.4**	**-0.2**
X31A	**McDonald Ranch** baz=19	**19.02**	**349**	⇓P	**P**	**19 18 07.0**	**+0.1**
X30A	**Coker Ranch, T** baz=19	**19.02**	**347**	⇑P	**P**	**19 18 06.6**	**-0.3**
MSTX	**Muleshoe** baz=19	**19.07**	**342**	⇓P	**P**	**19 18 07.9**	**+0.4**
Y27A	**Causey** baz=19	**19.11**	**341**	⇑P	**P**	**19 18 08.4**	**+0.4**
Z25A	**Roswell** baz=19,SNR=6.3	**19.11**	**336**	⇑P	**P**	**19 18 07.

baz=22
T27A Campo 21.95 345 ⇓P P 19 18 39.2 +0.4
baz=22
S30A Montezuma 22.03 350 ⇑P P 19 18 39.9 +0.4
baz=22
V22A San Miguel Ran 22.28 335 ⇑P P 19 18 44.1 +1.7
baz=22
T26A Comanche Natio 22.29 343 ⇑P P 19 18 43.5 +1.0
baz=22
W20A Ramah 22.30 331 ⇑P P 19 18 44.8 +2.2
baz=22
214A Organ Pipe Nat 22.31 319 ⇓P P 19 18 44.2 +1.7
baz=22
TKL Tuckaleechee C 22.34 26 P P 19 18 44.5 +1.8
TKL Tuckaleechee C 22.34 26 P P 19 18 44.5 +1.8
4.6nm,0.8s,baz=208,slow=8.9,SNR=3.1
SIUC Southern Illin 22.43 14 P P 19 18 45.0 +1.3
24nm,0.7s
T25A Trinidad 22.50 342 ⇑P P 19 18 45.7 +1.0
baz=23,SNR=5.9
X18A Snowflake 22.53 328 ⇓P P 19 18 46.7 +1.7
baz=23,SNR=7.3
R30A Dighton 22.63 351 ⇓P P 19 18 46.2 +0.2
baz=23
T24A Torres, Weston 22.64 340 ⇑P P 19 18 47.2 +0.9
baz=23
U22A Llaves 22.67 336 ⇑P P 19 18 47.6 +1.1
baz=23
S26A Kim 22.68 344 ⇑P P 19 18 47.8 +1.3
baz=23,SNR=5.6
V20A Brimhall 22.85 332 ⇑P P 19 18 49.7 +1.3
baz=23
R29A Marienthal 22.92 349 ⇑P P 19 18 49.3 +0.3
baz=23
S25A Robets Cordova 22.99 342 ⇓P P 19 18 50.1 +0.3
baz=23,SNR=7.6
U21A Nageezi 23.03 335 ⇓P P 19 18 50.6 +0.3
baz=23
KMSC Kings Mountain 23.04 31 ⇑P P 19 18 49.9 -0.3
baz=23
OTAV Otavalo 23.07 131 eP P 19 18 55.0 +3.9
R27A Eads 23.14 346 P P 19 18 51.4 +0.2
baz=23,SNR=5.3
S24A Houchin Ranch, 23.21 340 ⇓P P 19 18 53.0 +0.8
baz=23,SNR=5.4
X16A Lo Mia Camp, P 23.23 325 ⇑P P 19 18 53.5 +1.2
baz=23,SNR=8.2
T22A Edith 23.24 337 ⇑P P 19 18 53.5 +1.0
baz=23,SNR=5.5
R26A Arlington 23.31 344 ⇑P P 19 18 53.7 +0.8
baz=23,SNR=11
U20A Newcomb 23.35 333 ⇓P P 19 18 54.0 +0.5
baz=24
R25A Fountain Ranch 23.39 343 ⇑P P 19 18 54.9 +1.1
baz=24,SNR=12
SDCO Great Sand Dun 23.40 340 eP P 19 18 54.8 +0.8
15nm,0.9s
113A Mohawk Valley, 23.45 319 ⇑P P 19 18 55.6 +1.4
baz=24
T21A Navajo Lake 23.47 336 ⇑P P 19 18 55.5 +0.9
baz=24
OLIL Olney 23.67 15 eP P 19 18 57.3 +1.0
42nm,0.8s
ROSC El Rosal 23.67 115 P P 19 18 59.3 +2.4
ROSC El Rosal 23.67 115 P P 19 18 59.3 +2.4
8.6nm,0.4s,baz=70,slow=21,SNR=7.8
WCI Wyandotte Cave 23.70 19 eP P 19 18 58.3 +1.7
15nm,0.8s
R24A Sanders Place, 23.72 341 ⇓P P 19 18 57.9 +0.9
baz=24,SNR=7.5
Y14A Wickenburg 23.78 322 ⇓P P 19 18 59.7 +2.3
baz=24
KSCO Kaye Shedlock' 23.79 346 ⇑P P 19 18 58.1 +0.6
baz=24
S22A 4UR Ranch, Cre 23.86 338 ⇑P P 19 18 59.5 +1.0
baz=24,SNR=5.2
R23A Moffat 23.91 340 ⇑P P 19 18 60.0 +1.1
baz=24
Q26A Hugo 23.92 345 P P 19 18 59.8 +1.0
baz=24,SNR=7.7
WUAZ Wupatki 24.03 327 eP P 19 18 59.6 -0.3
17nm,1.0s
WUAZ Wupatki 24.03 327 ⇓P P 19 19 00.9 +1.0
baz=24,SNR=5.2
Q25A Bedland, Calha 24.10 343 ⇑P P 19 19 01.4 +0.8
baz=24
P28A Saint Francis 24.15 348 ⇓P P 19 19 01.3 +0.5
baz=24
S21A Coal Bank Pass 24.15 336 ⇓P P 19 19 02.6 +1.4
baz=24
R22A Saguache, Gunn 24.26 338 ⇑P P 19 19 02.8 +0.6
baz=24
GLA Glamis 24.31 318 P P 19 19 02.1 -0.2
20nm,0.9s
GLA Glamis 24.31 318 ⇓P P 19 19 04.4 +2.1
baz=24,SNR=5.5
P26A Davis Ranch, A 24.48 346 ⇑P P 19 19 04.6 +0.7
baz=25
S20A Disappointment 24.52 335 ⇑P P 19 19 05.7 +1.3
baz=25
P25A Willow Gulch B 24.64 344 ⇓P P 19 19 06.0 +0.6
baz=25
PDMCI Parker Dam,Lak 24.71 321 ⇑P P 19 19 08.5 +2.7
baz=25
PV01 Paradox Valley 24.87 335 eP P 19 19 09.5 +1.9
1µm,1.2s
Q22A Crested Butte, 24.88 339 ⇑P P 19 19 08.7 +0.9
baz=25
O27A Beecher Island 24.89 348 ⇑P P 19 19 08.2 +0.6
baz=25
Q21A Lamborn Mesa, 25.09 338 ⇑P P 19 19 11.2 +1.6
baz=25
BC3 Big Chuckawall 25.10 318 ⇓P P 19 19 11.7 +2.1
baz=25,SNR=5.7
S18A Hurst Farm, Bl 25.10 332 ⇑P P 19 19 10.3 +0.6
baz=25,SNR=5.6
W13A Hualapai Mount 25.11 323 ⇓P P 19 19 11.9 +2.1
baz=25,SNR=7.4
O26A Horse Wrangler 25.12 346 ⇓P P 19 19 10.9 +1.2
baz=25
N29A Votaw Ranch, W 25.17 351 ⇓P P 19 19 11.1 +1.1
baz=25
SMCO Snowmass 25.19 339 eP P 19 19 08.9 -1.8
17nm,1.2s
U15A North Rim 25.20 327 ⇓P P 19 19 12.0 +1.3
baz=25
PV04 Paradox Valley 25.23 335 eP P 19 19 11.6 +0.8
IRM Iron Mountain 25.23 320 ⇓P P 19 19 11.9 +1.2
baz=25,SNR=5.8
MONP Monument Peak 25.26 316 ⇓P P 19 19 12.3 +1.2
baz=25
PV10 Paradox Valley 25.27 335 eP P 19 19 11.4 +0.2
267nm,0.9s
ISCO Idaho Springs 25.31 342 eP P 19 19 10.7 -1.0
12nm,0.9s
ISCO Idaho Springs 25.31 342 ⇑P P 19 19 11.3 -0.4
baz=25,SNR=5.7
OGNE Ogallala 25.53 349 eP P 19 19 13.3 0.0
31nm,0.8s
OGNE Ogallala 25.53 349 ⇑P P 19 19 14.1 +0.7
baz=26
BELC Belle Mtn. Jos 25.67 318 ⇑P P 19 19 17.0 +2.2
baz=26
PFO Pinyon Flat Ob 25.72 317 P P 19 19 18.4 +3.2
PFO Pinyon Flat Ob 25.72 317 P P 19 19 18.4 +3.2
1.6nm,0.7s,baz=142,slow=17,SNR=3.3
PFO LR LR 19 29 23.9
comp=Z,246nm,20.7s,baz=315,slow=37
PFO Pinyon Flat Ob 25.72 317 ⇓P P 19 19 18.0 +2.8
baz=26
SCIA State Center 25.97 4 eP P 19 19 14.8 -2.4
41nm,0.8s
P20A De Beque 25.98 337 ⇑P P 19 19 18.2 +0.6
baz=26,SNR=6.6
HEC Hector,Ludlow 26.41 319 ⇓P P 19 19 23.6 +2.2
baz=26
TUQ Turquoise Moun 26.55 321 ⇓P P 19 19 24.6 +1.9
baz=27
PHWY Pilot Hill 26.66 343 P P 19 19 23.4 -0.4
4.2nm,0.9s
MSU Marysvale 26.77 330 eP P 19 19 33.5 +8.7
3.8nm,0.9s
ARUT Antelope Range 26.83 328 eP P 19 19 26.6 +1.3
15nm,0.9s
BFSC Mount Baldy Ra 26.89 317 ⇑P P 19 19 27.6 +1.8
baz=27
JFWS Jewell Farm 27.29 9 P P 19 19 27.9 -1.3
17nm,0.6s

L23A Garrett 27.48 344 ⇑P P 19 19 31.2 0.0
baz=28,SNR=5.7
M21A Separation Pea 27.50 341 ⇓P P 19 19 31.8 +0.5
baz=28,SNR=8.0
ECSD EROS Data Cent 27.72 359 P P 19 19 32.3 -0.7
4.9nm,0.6s
L21A Rawlins 27.83 341 ⇑P P 19 19 34.9 +0.6
baz=28
DAU Daniels Canyon 27.90 334 eP P 19 19 35.1 +0.1
6.7nm,0.9s
MPMC Manual Prospec 27.92 320 ⇑P P 19 19 36.6 +1.5
baz=28
R11A Troy Canyon, C 28.38 326 ⇓P P 19 19 40.7 +1.5
baz=28
GRAC Grapevine Rang 28.46 322 ⇑P P 19 19 41.7 +2.0
baz=28
ATAH Atahualpa 28.60 142 P P 19 19 45.0 +3.4
ATAH Atahualpa 28.60 142 P P 19 19 45.0 +3.4
2.0nm,0.5s,baz=270,slow=5.5,SNR=3.6
ATAH LR LR 19 29 13.9
comp=Z,50nm,20.1s,baz=120,slow=32
K19A Absolon Red Bu 29.08 340 ⇑P P 19 19 45.0 -0.4
baz=29
J21A Lysite 29.11 342 ⇑P P 19 19 46.5 +0.9
baz=29
PDAR Pinedale Array 29.27 339 P P 19 19 48.2 +1.2
PDAR Pinedale Array 29.27 339 P P 19 19 48.2 +1.2
1.0nm,0.7s,baz=141,slow=9.6,SNR=4.2
J20A Shoshoni 29.31 341 ⇓P P 19 19 47.1 -0.2
baz=29
NVAR Mina Array Bea 29.97 323 LR LR 19 32 50.0
comp=Z,244nm,19.8s,baz=224,slow=38
ELK Elko 29.99 329 eP P 19 19 55.0 +1.5
1.8nm,0.8s
ELK Elko 29.99 329 P P 19 19 55.4 +1.9
2.0nm,0.8s,baz=118,slow=7.0,SNR=9.2
ELK LR LR 19 33 02.9
comp=Z,120nm,18.1s,baz=44,slow=39
I18A Diamond G Ranc 30.18 339 ⇑P P 19 19 55.9 +0.7
baz=30
SNOW Snow King Moun 30.30 338 eP P 19 20 04.7 +8.4
22nm,0.7s
LOHW Long Hollow 30.38 338 eP P 19 20 04.8 +7.9
26nm,1.2s
TPAW Teton Pass 30.40 338 eP P 19 20 05.2 +8.1
6.8nm,0.6s
MOOW Moose Ponds 30.55 338 eP P 19 20 06.2 +7.9
8.4nm,0.8s
BMN Battle Mountai 30.77 327 eP P 19 20 09.1 +8.9
8.3nm,0.8s
H19A Powell 30.78 341 ⇓P P 19 20 01.4 +1.1
baz=31,SNR=6.5
H18A Shoshone NF, C 31.00 340 ⇓P P 19 20 03.2 +0.9
baz=31,SNR=8.9
RLMT Red Lodge 31.27 341 eP P 19 20 10.2 +5.5
G18A Lazy EL Ranch, 31.54 341 ⇓P P 19 20 07.1 +0.1
baz=32
H16A Russell Place, 31.56 339 ⇓P P 19 20 07.3 +0.1
baz=32
J13A Cove Ranch, Pi 31.59 334 ⇑P P 19 20 08.7 +1.2
baz=32,SNR=6.0
HLID Hailey 31.83 334 eP P 19 20 10.5 +0.9
11nm,0.9s
HLID Hailey 31.83 334 ⇓P P 19 20 10.9 +1.3
baz=32,SNR=10
F19A Roth Farm, Mol 31.84 342 ⇓P P 19 20 09.5 0.0
baz=32
SADO Sadowa 31.96 23 LR LR 19 35 59.6
comp=Z,79nm,18.5s,baz=262,slow=42
I13A Wildhorse Cree 31.99 334 ⇓P P 19 20 11.4 +0.3
baz=32
H15A Lima 31.99 337 ⇑P P 19 20 12.2 +1.2
baz=32,SNR=7.0
GCMT Greiff 32.00 341 eP P 19 20 10.2 -0.8
5.2nm,0.9s
F18A Big Timber 32.12 341 ⇑P P 19 20 12.0 0.0
baz=32
BEKR Beckworth 32.12 323 P P 19 20 12.2 0.0
4.1nm,1.1s
G16A Moss Hill, Enn 32.21 338 ⇓P P 19 20 13.0 +0.1
baz=32,SNR=7.3
MCMT McKenzie Canyo 32.25 337 eP P 19 20 14.6 +1.2
7.0nm,0.8s
H14A Leadore 32.27 336 ⇓P P 19 20 12.8 -0.7
baz=32,SNR=7.8
D22A Cohagen 32.33 347 ⇓P P 19 20 13.9 +0.1
baz=32
I12A Atlanta 32.33 333 ⇑P P 19 20 14.4 +0.4
baz=32
E19A Rath Farm, Rou 32.34 343 ⇓P P 19 20 13.3 -0.6
baz=32
G15A Dillon 32.40 338 ⇑P P 19 20 14.4 -0.2
baz=32,SNR=9.5
F17A Fitzpatrick Pl 32.41 340 ⇑P P 19 20 14.8 +0.1
baz=32,SNR=10
DLMT Dillon 32.61 338 eP P 19 20 17.8 +1.4
28nm,1.0s
C23A Lambert 32.74 348 ⇓P P 19 20 17.4 0.0
baz=33
E18A Harlowton 32.77 342 ⇓P P 19 20 17.8 0.0
baz=33,SNR=5.9
H12A Diamond D Ranc 32.82 334 ⇑P P 19 20 19.4 +1.1
baz=33,SNR=12
C22A Vida 32.83 347 ⇓P P 19 20 18.1 0.0
baz=33
WVOR Wild Horse Val 32.95 328 eP P 19 20 20.2 +0.8
18nm,1.0s
LRM Limekiln Ridge 32.95 338 eP P 19 20 19.9 +0.5
127nm,1.0s
E17A Martinsdale 32.97 341 ⇓P P 19 20 19.2 -0.3
baz=33
F15A Butte 32.98 338 ⇓P P 19 20 19.3 -0.4
baz=33,SNR=9.4
D19A Cripps Ranch, 33.02 343 ⇓P P 19 20 20.2 +0.3
baz=33
C21A Desert Coulee 33.17 346 ⇑P P 19 20 22.0 +0.9
baz=33
F14A Wisdom 33.28 337 ⇑P P 19 20 22.7 +0.4
baz=33
C20A Veseth Ranch, 33.29 345 ⇑P P 19 20 22.8 +0.7
baz=33
E16A East Helena 33.30 340 ⇓P P 19 20 22.6 +0.2
baz=33,SNR=9.5
B22A Reddig Ranch S 33.38 347 ⇓P P 19 20 23.2 +0.3
baz=34
MOD Modoc 33.45 326 eP P 19 20 24.4 +0.6
11nm,0.8s
G12A Big Creek, Yel 33.48 334 ⇓P P 19 20 24.2 +0.1
baz=34
D17A Six Diamond Ra 33.53 341 ⇓P P 19 20 24.8 +0.3
baz=34
E15A Deer Lodge 33.54 339 ⇑P P 19 20 24.6 +0.1
baz=34,SNR=5.1
C19A Slack Wire Ran 33.58 344 ⇓P P 19 20 24.3 -0.4
baz=34
F13A Darby 33.62 336 ⇑P P 19 20 25.9 +0.7
baz=34,SNR=7.4
D16A Dana Ranch, Ca 33.70 340 ⇓P P 19 20 26.0 +0.2
baz=34
F12A Elk City 33.96 335 P P 19 20 29.0 +0.8
baz=34,SNR=5.6
C17A Wharram Farm, 33.98 342 ⇑P P 19 20 28.4 +0.1
baz=34
D15A Lincoln 34.03 339 ⇑P P 19 20 28.8 +0.1
baz=34
E13A Victor 34.12 337 ⇓P P 19 20 29.8 +0.4
baz=34,SNR=8.3
CHMT Chamberlain Mo 34.17 338 eP P 19 20 38.4 +8.3
3.9nm,1.1s
B19A Brinkman Farms 34.22 344 ⇑P P 19 20 30.5 +0.3
baz=34
ULM Lac du Bonnet 34.23 360 P P 19 20 32.9 +2.7
ULM Lac du Bonnet 34.23 360 P P 19 20 32.9 +2.7
3.7nm,0.6s,baz=220,slow=7.9,SNR=3.2
ULM LR LR 19 36 46.7
comp=Z,76nm,18.6s,baz=164,slow=40
MSO Missoula 34.35 338 P P 19 20 32.7 +1.2
6.2nm,1.0s
D14A Greenough 34.41 338 ⇑P P 19 20 32.3 +0.3
baz=34
A19A Klindworth Far 34.60 345 ⇑P P 19 20 33.8 +0.3
baz=35
D13A Huson 34.76 337 ⇓P P 19 20 35.4 +0.4
baz=35,SNR=8.2
A18A Metzger Ranch, 34.88 344 ⇓P P 19 20 36.1 +0.1
baz=35
SWMT Swartz Lake 34.95 338 eP P 19 20 44.3 +7.6
6.8nm,1.1s

B16A M & M Farms, S 34.97 341 ⇓P P 19 20 37.2 +0.4
baz=35
D12A Red Ives Fores 35.07 336 ⇓P P 19 20 37.5 -0.1
baz=35
A17A Triple J Farms 35.14 343 ⇑P P 19 20 38.4 +0.1
baz=35
JTMT Jette 35.25 338 eP P 19 20 39.7 +0.5
6.1nm,1.1s
YBMT Yellow Bay 35.25 338 eP P 19 20 37.6 -1.7
7.5nm,1.0s
C13A Hot Springs 35.30 338 ⇓P P 19 20 40.0 +0.4
baz=35
C12B Naegeli Ranch, 35.66 337 ⇑P P 19 20 42.8 +0.2
baz=36
A15A Johnson Ranch, 35.79 341 ⇑P P 19 20 44.1 +0.3
baz=36
B13A Whitefish 35.85 338 ⇓P P 19 20 44.8 +0.5
baz=36
A14A Double T Ranch 36.01 340 ⇓P P 19 20 46.1 +0.4
baz=36
B12A Libby 36.33 338 ⇓P P 19 20 49.0 +0.5
baz=36
NEW Newport 36.75 336 P P 19 20 52.5 +0.6
4.6nm,0.8s
NEW Newport 36.75 336 ⇑P P 19 20 52.1 +0.1
baz=37
SAML Samuel 40.57 125 eP P 19 21 22.4 -2.0
3.9nm,1.0s
LPAZ La Paz 41.99 138 eP P 19 21 37.2 +0.4
1.8nm,0.6s
LPAZ La Paz 41.99 138 P P 19 21 37.7 +1.0
2.0nm,0.6s,baz=5.8,slow=2.7,SNR=5.4
LPAZ LR LR 19 38 04.1
comp=Z,46nm,20.7s,baz=12,slow=35
BBB Bella Bella 44.37 332 LR LR 19 41 48.6
comp=Z,84nm,18.8s,baz=175,slow=38
SCHQ Schefferville 44.76 23 P P 19 22 00.7 +2.8
SCHQ Schefferville 44.76 23 P P 19 22 00.7 +2.8
1.9nm,0.8s,baz=237,slow=19,SNR=2.5
SCHQ LR LR 19 45 25.2
comp=Z,89nm,18.8s,baz=55,slow=42
LVC Limon Verde 46.41 145 P P 19 22 10.7 -0.9
3.9nm,0.9s
SIV San Ignacio 46.61 131 P P 19 22 13.0 -0.1
SIV San Ignacio 46.61 131 P P 19 22 13.0 -0.1
5.2nm,0.7s,baz=315,slow=7.8,SNR=17
YKA Yellowknife Ar 48.38 348 P P 19 22 25.3 -0.8
YKA Yellowknife Ar 48.38 348 P P 19 22 25.3 -0.8
1.0nm,0.7s,baz=152,slow=7.5,SNR=13
YKW3 Yellowknife Ar 48.45 348 P P 19 22 25.6 -1.0
0.1nm,1.0s
DLBC Dease Lake 49.48 337 P P 19 22 29.6 -5.0
DLBC Dease Lake 49.48 337 P P 19 22 29.6 -5.0
3.4nm,0.7s,baz=75,slow=9.3,SNR=8.4
DLBC LR LR 19 46 20.7
comp=Z,86nm,18.9s,baz=132,slow=40
CFAA Coronel Fontan 54.10 151 P P 19 23 10.9 +1.4
CFAA Coronel Fontan 54.10 151 P P 19 23 10.9 +1.4
0.6nm,0.8s,baz=330,slow=4.3,SNR=7.1
RKT Rikitea 54.63 226 eT T 20 21 42.9
12nm,0.2s
CPUP Villa Florida 56.16 138 P P 19 23 23.9 -0.5
CPUP Villa Florida 56.16 138 P P 19 23 23.9 -0.5
1.0nm,0.4s,baz=75,slow=4.5,SNR=4.2
CPUP LR LR 19 46 32.1
comp=Z,68nm,18.6s,baz=114,slow=35
BDFB Brasilia 56.55 121 P P 19 23 28.1 +0.7
BDFB Brasilia 56.55 121 P P 19 23 28.1 +0.7
2.7nm,0.7s,baz=312,slow=8.2,SNR=2.8
INK Inuvik 57.61 344 P P 19 23 33.9 -0.1
INK Inuvik 57.61 344 P P 19 23 33.9 -0.1
3.1nm,0.7s,baz=122,slow=8.1,SNR=9.7
ILAR Eielson Array 59.68 337 P P 19 23 48.6 +0.1
ILAR Eielson Array 59.68 337 P P 19 23 48.6 +0.1
1.7nm,0.9s,baz=129,slow=5.2,SNR=18
ILAR LR LR 19 50 57.9
comp=Z,96nm,18.7s,baz=154,slow=37
COLA College 60.09 337 P P 19 23 49.9 -1.5
TRF Thorofare Moun 60.39 335 eP P 19 23 52.4 -1.2
9.5nm,1.0s
PPT2 Papeete2 62.70 240 eLR LR 19 42 40.1
48nm,24.0s
TBI Tubuai 65.49 235 eLR LR 19 44 00.7
253nm,31.8s
BORG Borgarnes 69.03 26 LR LR 19 52 15.2
comp=Z,61nm,21.7s,baz=156,slow=33
ESDC Sonseca Array 81.30 51 P P 19 26 00.8 -0.1
ESDC Sonseca Array 81.30 51 P P 19 26 00.8 -0.1
1.3nm,0.7s,baz=293,slow=5.1,SNR=7.5
NB2 NORSAR Subarra 84.13 28 P P 19 26 15.5 +0.3
comp=Z,4.4nm,1.1s,baz=295,slow=4.8
NOA NORSAR Array B 84.13 28 P P 19 26 15.4 +0.3
NOA NORSAR Array B 84.13 28 P P 19 26 15.4 +0.3
comp=Z,1.6nm,0.9s,baz=300,slow=5.1,SNR=5.1
NOA LR LR 20 02 19.5
comp=Z,40nm,20.6s,baz=285,slow=35
ARCES ARCESS Array B 85.40 18 LR LR 20 06 20.9
comp=Z,31nm,18.1s,baz=51,slow=37
FINES FINESS Array B 90.23 24 LR LR 20 08 39.9
comp=Z,53nm,18.0s,baz=6.0,slow=36
KEST Kesra 92.53 52 LR LR 20 05 23.0
comp=Z,24nm,19.8s,baz=272,slow=34
TORD Torodi Ar. Bea 93.35 75 LR LR 20 06 25.5
comp=Z,68nm,19.7s,baz=300,slow=34
AKASG Malin Array Be 98.02 32 LR LR 20 11 54.9
comp=Z,54nm,18.3s,baz=280,slow=36
HHC Hu-ho-hao-te 118.11 337 ePKP PKPdf 19 32 30.0 -1.7
HHC sPKP 19 32 55.8
HHC PP PP 19 33 49.3 +3.6
HHC PKS PKSdf 19 36 05.0 -3.5
HHC SKS SKSdf 19 39 37.8 -3.4
HHC SKKS SKKSac 19 40 37.3 -7.4
HHC SS SS 19 49 55.5 -1.9
WMQ Urumqi 120.46 357 ePKP PKPdf 19 32 35.0 -1.1
LZH Lanzhou 125.07 341 ePKP PKPdf 19 32 42.5 -2.7
LZH sPKP 19 33 09.0
LZH LR LR
comp=N,130nm,18.1s
LZH LR LR
comp=E,120nm,18.5s
LZH LR LR
comp=Z,150nm,20.3s
WRA Warramunga Arr 132.39 257 PKP PKPdf 19 32 59.6 +0.3
WRA Warramunga Arr 132.39 257 PKP PKPdf 19 32 59.6 +0.3
comp=Z,0.5nm,0.8s,baz=88,slow=2.8,SNR=6.5
ASAR Alice Springs 132.91 252 PKP PKPdf 19 33 00.8 +0.5
ASAR Alice Springs 132.91 252 PKP PKPdf 19 33 00.8 +0.5
comp=Z,0.3nm,0.7s,baz=89,slow=2.3,SNR=4.9
CMAR Chiang Mai Arr 142.92 337 PKP PKPdf 19 33 18.2 -0.5
CMAR Chiang Mai Arr 142.92 337 PKP PKPdf 19 33 18.2 -0.5
comp=Z,0.8nm,0.9s,baz=326,slow=2.4,SNR=5.4
HYB Hyderabad 146.38 10 *i* PKP PKPdf 19 33 24.0 -0.8

IDC ***26*** *19:15:58.0±0.8, 6.02S×151.74E, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.2/19, mbtmp4.1/13, ML3.2/1, MS3.4/7, Ms1 3.4/7, ms1mx3.2/21, Error ellipse: s-maj=31.1km s-min=16.4km az=124.0*
AUST ***26*** *19:16:00.1±4.5, 6.11S×152.00E, h0km, Error ellipse: s-maj=2.0km s-min=1.0km az=283.0*
ISCJB ***26*** *19:16:02.3±0.5, 5.99S±0.07×151.64E±0.09, h36km, mb4.1/18, MS3.4/5, Error ellipse: s-maj=14.8km s-min=6.6km az=33.6*
NEIC ***26*** *19:16:06.5±2.2, 6.02S×151.57E, h62km±19km, mb4.3/8, Error ellipse: s-maj=16.9km s-min=11.4km az=106.0*
ISC 26 19:16:03.7±0.6, 6.09S±0.08×151.8E±0.1, h36km, n56, σ1§48/54, mb4.2/18, MS3.5/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.92**	**11**	P	**Pn**	**19 16 34.1**	**+0.2**
	baz=1.9,SNR=36						
RABL				S	**Sn**	**19 16 59.2**	**+2.3**
	baz=1.9,SNR=5.8						
PMG	**Port Moresby**	**5.65**	**234**	Pn	**Pn**	**19 17 25.5**	**+0.3**
PMG				Sn	**Sn**	**19 18 29.8**	**+1.0**
PMG				*e*Sn	Sn	19 18 30.7	+1.9
PMG	**Port Moresby**	**5.65**	**234**	Pn	**Pn**	**19 17 25.5**	**+0.3**
	4.4nm,0.3s,baz=53,slow=3.3,SNR=28						
PMG				Sn	**Sn**	**19 18 29.8**	**+1.0**
	17nm,0.3s,baz=23,slow=18,SNR=10						
PMG				LR	LR	19 19 34.4	
	comp=Z,141nm,21.6s,baz=39,slow=38						
HNR	**Honiara**	**8.74**	**113**	LR	LR	19 21 04.0	
	comp=Z,236nm,21.9s,baz=287,slow=35						

KDU	Kakadu	20.14	250	P	P	19 20 34.9	0.0
	baz=20,SNR=11							
RMQ	Roma	20.49	188	P	P	19 20 40.5	+1.9
	baz=21,SNR=5.6							
GUMO	Guam	20.73	341	LR	LR	19 27 25.0	
	comp=Z,39nm,18.8s,baz=84,slow=33							
SWI	Sorong	21.13	283	P	P	19 20 48.1	+2.4
	baz=21,SNR=6.9							
DZM	Mont Dzumac	21.28	140	LR	LR	19 27 26.9	
	comp=Z,297nm,20.0s,baz=7.3,slow=32							
MTN	Manton Dam	21.44	250	P	P	19 20 52.8	+3.9
	baz=22,SNR=5.3							
QLP	Quilpie	21.61	199	P	P	19 20 51.6	+0.9
	baz=22,SNR=9.1							
WRAB	Tennant Creek	21.83	229	Pn	P	19 20 53.7	+0.5
	13nm,1.3s							
WRA	Warramunga Arr	21.84	229	P	P	19 20 53.4	+0.1
WRA	Warramunga Arr	21.84	229	P	P	19 20 53.4	+0.1
	1.4nm,0.8s,baz=56,slow=10,SNR=12							
KNRA	Kununurra	24.51	245	P	P	19 21 24.7	+4.7
	baz=25,SNR=13							
AS31	Alice Springs	24.52	223	eP	P	19 21 19.7	-0.4
ASAR	Alice Springs	24.52	223	P	P	19 21 19.9	-0.2
ASAR	Alice Springs	24.52	223	P	P	19 21 19.9	-0.2
	3.5nm,0.8s,baz=56,slow=8.6,SNR=36							
STKA	Stephens Creek	27.37	199	P	P	19 21 46.5	+0.9
	1.8nm,1.0s							
STKA	Stephens Creek	27.37	199	P	P	19 21 46.0	+0.4
	5.3nm,0.9s,baz=27,slow=9.7,SNR=3.6							
STKA				LR	LR	19 33 26.2		
	comp=Z,71nm,19.4s,baz=22,slow=38							
STKA	Stephens Creek	27.37	199	P	P	19 21 48.2	+2.6
	baz=28,SNR=4.7							
FITZ	Fitzroy Crossi	28.17	243	eP	P	19 21 52.0	-0.9
	6.0nm,1.3s							
FITZ	Fitzroy Crossi	28.17	243	P	P	19 21 52.4	-0.6
	3.3nm,0.7s,baz=76,slow=6.8,SNR=14							
FITZ	Fitzroy Crossi	28.17	243	P	P	19 21 52.5	-0.4
	baz=26,SNR=4.4							
MILA	Mila	30.91	184	P	P	19 22 30.6	+13
	baz=31,SNR=7.5							
MBWA	Marble Bar	34.47	241	eP	P	19 22 52.8	+4.5
	12nm,0.8s							
MEEK	Meekatharra	37.63	233	P	P	19 23 22.9	+7.4
	baz=38,SNR=5.6							
MJAR	Matsushiro Arr	44.28	344	LR	LR	19 41 19.1		
	comp=Z,61nm,18.9s,baz=170,slow=34							
CMAR	Chiang Mai Arr	57.53	296	P	P	19 25 48.9	-1.2
CMAR	Chiang Mai Arr	57.53	296	P	P	19 25 48.9	-1.2
	0.7nm,1.0s,baz=104,slow=3.8,SNR=4.9							
CMAR				LR	LR	19 50 00.4		
	comp=Z,48nm,19.3s,baz=175,slow=36							
CHTO	Chiang Mai	57.65	297	eP	P	19 25 48.7	-2.1
	2.3nm,1.0s							
LSA	Lhasa	68.15	305	P	P	19 26 59.4	-1.7
VNDA	Vanda	71.59	178	P	P	19 27 19.3	-1.5
VNDA	Vanda	71.59	178	P	P	19 27 19.3	-1.5
	1.3nm,0.9s,baz=336,slow=7.2,SNR=6.2							
BILL	Bilibino	74.66	6	eP	P	19 27 39.9	+0.8
	2.1nm,0.7s							
MK31	Makanchi Array	80.64	319	eP	P	19 28 11.5	-1.4
MKAR	Makanchi Array	80.64	319	P	P	19 28 11.6	-1.3
MKAR	Makanchi Array	80.64	319	P	P	19 28 11.6	-1.3
	0.4nm,0.8s,baz=111,slow=5.3,SNR=3.9							
ZAA0	Zalesovo Array	81.67	327	P	P	19 28 16.3	-1.8
ZALV	Zalesovo Beam	81.67	327	P	P	19 28 16.4	-1.7
ZALV	Zalesovo Beam	81.67	327	P	P	19 28 16.4	-1.7
	0.4nm,0.4s,baz=115,slow=6.6,SNR=4.9							
MCK	McKinley	82.43	23	eP	P	19 28 22.4	+0.4
	17nm,1.0s							
COLA	College	83.42	22	P	P	19 28 25.0	-2.0
ILAR	Eielson Array	83.73	22	P	P	19 28 28.0	-0.6
ILAR	Eielson Array	83.73	22	P	P	19 28 28.0	-0.6
	5.1nm,0.8s,baz=251,slow=5.2,SNR=44							
QSPA	South Pole Qui	83.88	180	P	P	19 28 29.4	-0.2
	7.6nm,1.4s							
EKS2	Erkin-Say	85.34	314	eP	P	19 28 36.2	-1.3
INK	Inuvik	90.01	21	P	P	19 28 59.5	+0.4
INK	Inuvik	90.01	21	P	P	19 28 59.5	+0.4
	3.2nm,1.2s,baz=272,slow=5.9,SNR=4.0							
NVAR	Mina Array Bea	93.67	52	P	P	19 29 18.6	+1.5
NVAR	Mina Array Bea	93.67	52	P	P	19 29 18.6	+1.5
	0.3nm,0.4s,baz=246,slow=8.4,SNR=3.7							
YKA	Yellowknife Ar	97.03	28	P	P	19 29 32.6	+1.1
YKA	Yellowknife Ar	97.03	28	P	P	19 29 32.6	+1.1
	0.6nm,0.7s,baz=272,slow=4.8,SNR=9.3							
TOA0	Torodi Ar. Sit	149.72	286	ePKPbc	PKPbc	19 35 49.3	-1.5
TORD	Torodi Ar. Bea	149.72	286	PKPbc	PKPbc	19 35 50.8	0.0
TORD				PKPab	PKPab	19 35 55.6	-0.5
TORD	Torodi Ar. Bea	149.72	286	PKPbc	PKPbc	19 35 50.8	0.0
	4.7nm,0.8s,baz=64,slow=2.7,SNR=25							
TORD				PKPab	PKPab	19 35 55.6	-0.5
	3.2nm,0.8s,baz=90,slow=3.3,SNR=9.5							

*IDC **26** 19:37:17.2±2.7,23°.13N×121°.78E,h0km,mb3.4/4, mb1 3.5/4,mb1mx3.3/24,mbtmp3.4/4,MS3.2/2,Ms1 3.2/2, ms1mx2.2/27,Error ellipse: s-maj=229.1km s-min=22.6km az=63.0*

*ISCJB **26** 19:37:18.4±0.3,22°.87N±0°.01×121°.10E±0°.02,h3km±2km, mb3.3/4,MS3.2/2,Error ellipse: s-maj=2.8km s-min=2.4km az=178.7*

*TAP **26** 19:37:18.5,22°.92N×121°.00E,h4km,ML3.8,C*

*JMA **26** 19:37:20.0±0.4,22°.98N×121°.04E,h119km,M2.8*

ISC 26 19:37:19.4±0.8,22°.91N±0°.02×121°.05E±0°.02,h13km±5km, n75,σ0°97/116,mb3.3/4,7C-15D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	Pinlang	0.09	167	⇓iP	Pg	19 37 21.8	-0.5
	baz=141						
TWG				S	Sg	19 37 23.8	-0.6
	baz=141						
TTN	Taitung	0.18	150	⇓iP	Pg	19 37 24.3	+0.8
	baz=137						
TTN				S	Sg	19 37 28.3	+2.0
	baz=137						
ELDTW	Lidau	0.28	354	⇑iP	Pg	19 37 24.5	-0.8
	baz=16						
ELDTW				iS	Sg	19 37 28.3	-1.1
	baz=16						
ECL	Taimali	0.32	196	⇑iP	Pg	19 37 24.9	-1.1
	baz=186						
CHKT	Chengkung	0.35	57	⇓iP	Pb	19 37 27.8	+0.3
	baz=63						
CHKT				iS	Sb	19 37 34.4	+1.5
	baz=63						
SGST	Jiashian	0.46	292	⇓eP	Pg	19 37 27.6	-0.9
	baz=294						
TWF1	Yuli	0.50	27	⇓iP	Pb	19 37 29.0	-1.0
	baz=24						
TWF1				iS	Sg	19 37 35.4	-0.4
	baz=24						
WTP	Ta-pu	0.52	310	⇓iP	Pg	19 37 29.3	-0.4
	baz=315						
WTP				S	Sg	19 37 36.4	-0.3
	baz=315						
SGLT	Jiouru	0.55	251	⇓eP	Pg	19 37 29.4	-0.7
	baz=246						
SGLT				eS	Sb	19 37 38.0	-0.6
	baz=246						
CHN1	Nanshi	0.55	300	⇓iP	Pg	19 37 30.0	-0.3
	baz=302						
CHN1				eS	Sb	19 37 38.5	-0.3
	baz=302						
EAST	Anshuo	0.56	200	⇑P	Pg	19 37 29.3	-1.0
	baz=192						
EAST				eS	Sg	19 37 36.5	-1.2
	baz=192						
TAW	Tawu	0.57	195	P	Pg	19 37 29.5	-1.0
	baz=197						
TAW				eS	Sg	19 37 36.4	-1.7
	baz=197						
TWM1	Shoushan	0.58	262	⇓iP	Pg	19 37 30.5	-0.4
	baz=261						
YUS	Yu-Shan	0.58	351	P	Pg	19 37 30.3	-0.7
	baz=9.0						
YUS				eS	Sg	19 37 37.9	-0.9
	baz=9.0						
CHN4	Tsaushan	0.61	316	⇓iP	Pb	19 37 31.1	-0.9
	baz=321						
CHN4				eS	Sb	19 37 40.4	0.0
	baz=321						
TWK	Hsinying	0.63	305	⇓iP	Pb	19 37 31.6	-0.7
	baz=308						
TWK				eS	Sb	19 37 40.3	-0.7
	baz=308						
ALS	Alishan	0.64	339	⇑iP	Pg	19 37 31.6	-0.4
	baz=344						
EHY	Hungye	0.65	23	⇓iP	Pb	19 37 31.4	-1.2
	baz=29						
EHY				eS	Sg	19 37 39.6	-1.0
	baz=29						
CHN3	Shinhua	0.65	285	eP	Pb	19 37 33.2	+0.6
	baz=288						
CHN3				eS	Sn	19 37 44.4	-0.1
	baz=288						
SCZT	Fangliau	0.67	217	⇓eP	Pg	19 37 30.8	-1.5
	baz=211						
SCZT				eS	Sg	19 37 39.6	-1.5
	baz=211						
KAU	Kaohsiung	0.76	244	eP	Pb	19 37 35.0	+0.5
	baz=242						
CHN5	Tsauling	0.77	334	⇓P	Pb	19 37 33.9	-0.8
	baz=336						
TAI1	Yung-k'ang	0.77	280	eP	Pb	19 37 35.3	+0.7
	baz=280						
CHN2	Minshiung	0.81	320	eP	Pb	19 37 35.1	-0.3
	baz=323						
CHN2				S	Sn	19 37 48.1	-0.4
	baz=323						
CHY	Chiayi	0.82	316	⇑P	Pb	19 37 35.6	0.0
	baz=319						
CHY				S	Sb	19 37 47.6	+1.1
	baz=319						
SCLT	Jiali	0.83	289	eP	Pb	19 37 36.0	+0.3
	baz=305						
SCLT				eS	Sn	19 37 49.6	+0.7
	baz=305						
TWP	Hsiaoliuchiu	0.85	229	eP	Pn	19 37 36.9	-0.1
	baz=218						
CHN8	Yiju	0.89	300	P	Pb	19 37 36.5	-0.2
	baz=300						
CHN8				S	Sn	19 37 50.7	+0.4
	baz=300						
WGK	Gukeng	0.89	330	⇑P	Pn	19 37 37.3	-0.4
	baz=335						
WGK				eS	Sn	19 37 50.6	+0.1
	baz=335						
HEN	Hengchun	0.94	198	eP	Pb	19 37 37.7	+0.1
	baz=207						
ESL	Shilin	0.97	21	eP	Pg	19 37 37.0	-1.2
	baz=35						
SMLT	Sun Moon Lake	0.98	352	eP	Pb	19 37 37.6	-0.7
	baz=7.0						
SMLT				eS	Sn	19 37 52.7	-0.1
	baz=7.0						
LAY	Lan-yu	0.98	152	eP	Pg	19 37 36.5	-1.9
	baz=153						
TWK1	Hengchun	0.99	193	eP	Pg	19 37 37.8	-0.6
	baz=181						
TYC	Yuchr	1.01	350	eP	Pb	19 37 38.4	-0.3
	baz=5.0						
TYC				eS	Sn	19 37 54.3	+1.0
	baz=5.0						
TSEB	Hengchuen, Pin	1.01	188	eP	Pn	19 37 39.9	+0.6
	baz=178						
WNT	Mingjian	1.02	341	eP	Pn	19 37 39.4	0.0
	baz=346						
WNT				eS	Sn	19 37 54.7	+1.0
	baz=346						
WSF	Szhu	1.05	314	⇓P	Pb	19 37 39.2	-0.2
	baz=316						
WSF				S	Sn	19 37 54.7	+0.3
	baz=316						
HWA	Hwalien	1.18	26	eP	Pn	19 37 41.7	+0.1
	baz=25						
WTCT	Ta-ch'eng	1.18	324	eP	Pg	19 37 41.0	-1.3
	baz=327						
WTCT				eS	Sn	19 37 58.1	+0.5
	baz=327						
WHF	Hehuan Shan	1.25	9	eP	Pg	19 37 42.0	-1.4
	baz=26						
WHF				eS	Sn	19 38 00.9	+1.1
	baz=26						
TWD	Chiawan	1.27	23	eP	Pb	19 37 42.7	-0.5
	baz=21						
TCU	Taichung	1.28	345	eP	Pn	19 37 44.9	+1.9
	baz=350						
TCU				eS	Sn	19 38 02.9	+2.9
	baz=350						
WDGT	Dungji	1.33	286	⇑iP	Pn	19 37 42.7	-0.9
	baz=284						
WDGT				eS	Sg	19 38 00.4	-1.8
	baz=284						
TWT	Tachien	1.34	5	eP	Pb	19 37 44.6	0.0
	baz=20						
TWT				eS	Sn	19 38 03.4	+1.5
	baz=20						
TWQ1	Liyutan	1.46	350	eP	Pg	19 37 47.4	0.0
	baz=355						
TWQ1				eS	Sg	19 38 08.4	+2.1
	baz=355						
PNG	Penghu	1.52	296	eP	Pn	19 37 45.5	-0.8
	baz=295						
PNG				eS	Sn	19 38 05.5	-0.5
	baz=295						
NSY	Sanyi	1.52	350	eP	Pg	19 37 48.6	-0.1
	baz=355						
NSY				eS	Sg	19 38 09.9	+1.4
	baz=355						
NNS	Nan Shan	1.55	11	eP	Pb	19 37 47.7	-0.4
	baz=19						
ENA	Nanau	1.64	23	eP	Pb	19 37 48.6	-0.9
	baz=20						
NSTT	Nanjuang	1.71	359	eP	Pg	19 37 51.1	-1.2
	baz=342						
NSTT				eS	Sg	19 38 15.1	+0.4
	baz=342						
NSK	Sanguang	1.78	9	eP	Pb	19 37 51.1	-0.9
	baz=14						
NSK				eS	Sg	19 38 15.9	-0.9
	baz=14						
ENTT	Nioudou	1.79	15	eP	Pb	19 37 51.4	-0.6
	baz=32						
ENTT				eS	Sg	19 38 15.9	-1.1
	baz=32						
TWC	Suao	1.84	23	eP	Pb	19 37 52.6	-0.4
	baz=27						
TWC				eS	Sb	19 38 16.4	+0.4
	baz=27						
TWE	Neicheng	1.89	17	eP	Pb	19 37 53.6	-0.2
	baz=28						
NCU	National Centr	2.06	3	eP	Pg	19 37 56.9	-1.9
	baz=1.0						
EGS		2.09	23	eP	Pb	19 37 56.6	-0.5
	baz=19						
TAP	Taipei	2.16	11	eP	Pg	19 37 58.8	-2.0
	baz=351						
TAP1	Taipei	2.17	11	eP	Pb	19 37 58.2	-0.2
	baz=351						
TWS1	Kuangyinshan	2.21	9	eP	Pg	19 37 59.9	-1.9
	baz=351						
NWF	Wu-fen Shan	2.25	17	eP	Pb	19 37 58.1	-1.9
	baz=25						
TWB1	Santiao Chiao	2.26	22	eP	Pb	19 37 59.7	-0.4
	baz=18						
YOJ	Yonaguni jima	2.37	49	eP	Pn	19 37 58.2	+0.2
	baz=57						
YOJ	Yonaguni jima	2.37	49	P	Pn	19 37 58.1	+0.2
YOJ				eS	Sn	19 38 27.3	+0.3
HATJ	Hateruma jima	2.78	65	P	Pn	19 38 03.6	0.0
HATJ				eS	Sn	19 38 36.4	-0.5
IRIF	Iriomote-Funau	2.84	59	P	Pn	19 38 04.7	+0.3
IRIF				eS	Sn	19 38 39.1	+0.6
JKRS	Kuro-shima	3.02	63	P	Pn	19 38 07.1	+0.2
JKRS				eS	Sn	19 38 43.0	0.0
JIJ	Ishigaki jima	3.19	62	P	Pn	19 38 08.7	-0.5
JIJ				eS	Sn	19 38 45.5	-1.6
JTJ	Tarama	3.76	62	P	Pn	19 38 16.8	-0.3
JTJ				eS	Sn	19 39 01.5	+0.2
MKAR	Makanchi Array	39.17	317	P	P	19 44 49.3	+2.3
	0.3nm,0.6s,baz=114,slow=10.0,SNR=4.8						
PETK	Petropavlovsk-	40.99	33	LR	LR	20 03 04.2	
	comp=Z,21nm,20.6s,baz=246,slow=38						
ZALV	Zalesovo Beam	41.25	328	P	P	19 45 05.1	+1.1
	1.1nm,0.8s,baz=115,slow=8.0,SNR=6.1						
WRA	Warramunga Arr	44.52	162	P	P	19 45 30.7	-0.2
	0.3nm,0.7s,baz=344,slow=8.8,SNR=5.7						
ASAR	Alice Springs	47.95	164	P	P	19 45 58.1	+0.2
	0.1nm,0.3s,baz=340,slow=7.0,SNR=5.1						
HNR	Honiara	49.83	126	LR	LR	20 07 05.1	
	comp=Z,36nm,18.2s,baz=231,slow=36						

*IDC **26** 19:57:21.4±2.5,42°.45S×171°.62E,h0km,mb3.5/2, mb1 3.8/2,mb1mx3.6/14,mbtmp3.5/2,Error ellipse: s-maj=54.3km s-min=16.0km az=90.0*

*ISCJB **26** 19:57:25.8±0.4,44°.48S±0°.03×169°.84E±0°.05,h12km, mb3.5/2,Error ellipse: s-maj=5.7km s-min=3.8km az=136.2*

*WEL **26** 19:57:26.3±0.1,44°.50S×169°.86E,h5km,ML4.3/17,Error ellipse: s-maj=1.2km s-min=0.9km az=90.0*

WEL Felt from Canterbury to Otago, maximum reported intensity MM 4.

*NEIC **26** 19:57:26.3,44°.50S×169°.86E,h5km,ML4.3(WEL),After WEL.*

NEIC Felt from Canterbury to Otago.

ISC 26 19:57:26.2±0.8,44°.50S±0°.03×169°.84E±0°.03,h12km,n44, σ0s46/50,6C-6D,South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBZ	Lake Benmore	0.27	67	⇓PG	Pg	19 57 31.8	0.0
LBZ				SG	Sg	19 57 35.8	+0.2
LBZ	Lake Benmore	0.27	67	⇓Pg	Pg	19 57 31.8	0.0
LBZ				Sg	Sg	19 57 35.8	+0.2
ODZ	Otahua Downs	0.80	134	⇑P*	Pg	19 57 41.3	-0.2
ODZ				S*	Sg	19 57 52.1	+0.1
ODZ	Otahua Downs	0.80	134	⇑P*	Pg	19 57 41.3	-0.2
ODZ				S*	Sg	19 57 52.1	+0.1
EAZ	Earnscleugh	0.83	207	⇑P*	Pg	19 57 42.0	-0.2
EAZ				S*	Sg	19 57 52.8	-0.3
EAZ	Earnscleugh	0.83	207	⇑P*	Pg	19 57 42.0	-0.2
EAZ				S*	Sg	19 57 52.8	-0.3
JCZ	Jackson Bay	0.88	298	⇓P*	Pg	19 57 42.8	-0.5
JCZ	Jackson Bay	0.88	298	⇓P*	Pg	19 57 42.8	-0.5
FOZ	Fox Glacier	0.94	353	P*	Pg	19 57 43.8	-0.4
FOZ	Fox Glacier	0.94	353	P*	Pg	19 57 43.9	-0.4
RPZ	Rata Peaks	1.17	49	P*	Pb	19 57 47.9	-0.5
RPZ	Rata Peaks	1.17	49	P*	Pb	19 57 47.9	-0.5
RPZ	Rata Peaks	1.17	49	Pg	Pb	19 57 47.9	-0.5
	313nm,0.3s,baz=237,slow=6.1,SNR=966						
RPZ				Lg	Lg	19 58 03.5	
	588nm,0.3s,baz=336,slow=20,SNR=30						
MSZ	Milford Sound	1.38	262	PN	Pb	19 57 52.2	+0.4
MSZ	Milford Sound	1.38	262	Pn	Pb	19 57 52.2	+0.4
MLZ	Mavora Lakes	1.46	234	PN	Pg	19 57 53.8	-0.4
MLZ	Mavora Lakes	1.46	234	Pn	Pg	19 57 53.9	-0.4
TUZ	Tuapeka	1.47	186	PN	Pn	19 57 52.5	0.0
TUZ	Tuapeka	1.47	186	Pn	Pn	19 57 52.5	0.0
WVZ	Waitaha Valley	1.56	25	PN	Pn	19 57 54.3	+0.6
WVZ	Waitaha Valley	1.56	25	Pn	Pn	19 57 54.3	+0.6
WHZ	Wether Hill Ro	1.94	223	PN	Pn	19 57 59.1	+0.1
WHZ	Wether Hill Ro	1.94	223	Pn	Pn	19 57 59.1	+0.1
SYZ	Scrubby Hill	2.10	193	PN	Pn	19 58 01.2	+0.1
SYZ	Scrubby Hill	2.10	193	Pn	Pn	19 58 01.2	+0.1
DCZ	Deep Cove	2.14	242	PN	Pn	19 58 02.3	+0.6
DCZ	Deep Cove	2.14	242	Pn	Pn	19 58 02.3	+0.6
MQZ	McQueen's Vall	2.17	70	PN	Pn	19 58 01.9	-0.2
MQZ	McQueen's Vall	2.17	70	Pn	Pn	19 58 01.9	-0.2
CRLZ	Canterbury Las	2.21	66	PN	Pn	19 58 04.0	+1.4
CRLZ	Canterbury Las	2.21	66	Pn	Pn	19 58 04.0	+1.4
LTZ	Lake Taylor	2.46	47	⇑Pn	Pn	19 58 06.0	-0.2
LTZ	Lake Taylor	2.46	47	⇑Pn	Pn	19 58 06.0	-0.2
APZ	The Paps	2.67	208	⇓PN	Pn	19 58 08.5	-0.6
APZ	The Paps	2.67	208	⇓Pn	Pn	19 58 08.5	-0.6
KHZ	Kahutara	3.40	54	PN	Pn	19 58 18.4	-0.6
KHZ	Kahutara	3.40	54	Pn	Pn	19 58 18.4	-0.6
THZ	Tophouse	3.53	40	PN	Pn	19 58 20.7	-0.3
THZ	Tophouse	3.53	40	Pn	Pn	19 58 20.7	-0.3
QRZ	Quartz Range	4.17	29	PN	Pn	19 58 29.5	-0.1
QRZ	Quartz Range	4.17	29	Pn	Pn	19 58 29.5	-0.1
ASAR	Alice Springs	35.90	293	P	P	20 04 26.4	+0.2
	0.3nm,0.6s,baz=129,slow=6.7,SNR=7.7						
WRA	Warramunga Arr	38.28	298	P	P	20 04 46.4	-0.2
	0.5nm,0.4s,baz=136,slow=7.9,SNR=28						
TORD	Torodi Ar. Bea	147.15	202	PKPbc	PKPab	20 17 11.9	+0.9
	0.3nm,0.6s,baz=142,slow=3.2,SNR=5.5						

*IDC **26** 20:08:57.5±2.1,6°.79S×129°.46E,h0km,mb3.2/1, mb1 3.7/4,mb1mx3.4/19,mbtmp3.5/4,ML3.8/3,Error ellipse: s-maj=90.6km s-min=27.5km az=76.0*

*AUST **26** 20:09:06.1,6°.98S×129°.54E,h100km*

*ISCJB **26** 20:09:08.2±1.0,7°.09S±0°.05×129°.6E±0°.2,h139km, mb2.9/1,Error ellipse: s-maj=22.7km s-min=6.8km az=9.0*

ISC 26 20:09:06.3±1.2,7°.07S±0°.07×129°.48E±0°.09,h139km±1km,n11, σ3s10/14,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	4.96	34	P	Pn	20 10 21.5	+2.4
	baz=4.9,SNR=10.0						
FAKI				S	Sn	20 11 14.9	-0.8
	baz=4.9,SNR=16						
MTN	Manton Dam	5.96	164	P	Pn	20 10 35.5	+3.1
	baz=6.1,SNR=31						
MTN				S	Sn	20 11 37.8	-2.0
	baz=6.1,SNR=8.3						
KDU	Kakadu	6.31	152	P	Pn	20 10 39.7	+2.6
	baz=6.4,SNR=30						
KDU				S	Sn	20 11 44.8	-3.3
	baz=6.4,SNR=7.8						
SWI	Sorong	6.42	16	P	Pn	20 10 42.1	+3.6
	baz=6.4,SNR=10						
SWI				S	Sn	20 11 48.4	-2.2
	baz=6.4,SNR=5.4						
KNRA	Kununurra	8.58	185	P	Pn	20 11 10.0	+2.4
	baz=8.7,SNR=33						
KNRA				S	Sn	20 12 39.3	-3.6
	baz=8.7,SNR=10						
WSI	Waingapu	9.45	254	S	Sn	20 13 02.0	-1.8
	baz=9.5,SNR=4.2						
FITZ	Fitzroy Crossi	11.59	199	Pn	Pn	20 11 49.2	+1.6
	0.4nm,0.3s,baz=28,slow=13,SNR=32						
FITZ	Fitzroy Crossi	11.59	199	P	Pn	20 11 49.0	+1.5
	baz=12,SNR=20						
WRA	Warramunga Arr	13.64	160	Pn	Pn	20 12 15.0	+0.9
	0.6nm,0.3s,baz=340,slow=13,SNR=45						
WRA				Sn	Sn	20 14 37.5	-7.5
	1.1nm,0.3s,baz=344,slow=22,SNR=11						
ASAR	Alice Springs	17.04	166	P	Pn	20 13 00.6	+4.2
	0.2nm,0.3s,baz=347,slow=8.4,SNR=11						
ASAR				S	S	20 16 01.6	-4.9
	0.3nm,0.3s,baz=332,slow=18,SNR=6.2						
MKAR	Makanchi Array	68.00	327	P	P	20 19 57.1	+6.6
	0.1nm,0.4s,baz=116,slow=8.1,SNR=3.9						

IDC 26 20:16:26.8±1.2,42°.87S×72°.38W,h0km,mb3.6/5, mb1 3.9/6,mb1mx3.9/17,mbtmp3.7/6,ML3.8/1,MS3.1/2, Ms1 3.1/2,ms1mx2.8/15,Error ellipse: s-maj=47.8km s-min=15.6km az=119.0,Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	Paso Flores	2.54	33	Pn	Pn	20 17 10.1	+0.7
	4.5nm,0.3s,baz=210,slow=14,SNR=70						
PLCA				Pg	Pb	20 17 12.7	-0.7
	7.3nm,0.3s,baz=223,slow=16,SNR=134						
PLCA				Lg	Lg	20 17 47.

	0.1nm,0.3s,baz=17,slow=11,SNR=8.2						
FITZ				Sn	Sn	20 29 48.6	+13
	0.1nm,0.3s,baz=175,slow=22,SNR=3.5						
WRA	**Warramunga Arr**	**11.33**	**151**	Pn	Pn	20 28 40.5	+1.5
	0.0nm,0.3s,baz=337,slow=9.8,SNR=4.5						
WRA				Sn	Sn	20 31 05.0	+19
	0.1nm,0.3s,baz=12,slow=31,SNR=7.9						
ASAR	**Alice Springs**	**14.48**	**160**	Pn	Pn	20 29 22.1	0.0
	0.1nm,0.3s,baz=342,slow=12,SNR=7.1						
MKAR	**Makanchi Array**	**69.98**	**328**	P	P	20 37 09.2	+0.1
	0.3nm,0.6s,baz=116,slow=7.7,SNR=5.4						

ISCJB ***26*** *20:59:08.3±0.5,34.7°71N±0.08×137.0°04E±0.10, h334km±3km, mb3.0/8, Error ellipse: s-maj=13.1km s-min=11.7km az=33.1*

JMA ***26*** *20:59:08.7±0.1,34.7°73N×137.0°02E, h333km±1km, M2.8*

IDC ***26*** *20:59:09.2±0.6,34.7°71N×136.9°96E, h329km±6km, mb2.8/8, mb1 3.0/13, mb1mx2.9/31, mbtmp2.8/13, Error ellipse: s-maj=15.9km s-min=9.6km az=69.0*

ISC 26 20:59:09.4±0.8, 34.7°5N±0.0°08×136.9°7E±0.0°08, h328km±6km, n20, σ1§14/27, mb2.9/8, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAA	**Atsumi**	**0.19**	**129**	P		Pn		**20 59 50.7**	**0.0**
JAA				*e*S		**S**		**21 00 23.4**	**-0.3**
JIE	**Ise**	**0.42**	**211**	P		Pn		**20 59 50.9**	**-0.2**
JIE				*e*S		**S**		**21 00 23.6**	**-0.8**
JGM	**Miyama**	**0.97**	**348**	P		Pn		**20 59 52.9**	**+0.3**
JGM				*e*S		**S**		**21 00 27.2**	**0.0**
TK02	**Tokai 2**	**1.03**	**140**	P		Pn		**20 59 52.6**	**-0.1**
JWT	**Wachi**	**1.39**	**293**	P		Pn		**20 59 54.9**	**+0.2**
JWT				*e*S		**S**		**21 00 30.8**	**-0.1**
JKG	**Kaga**	**1.61**	**341**	P		Pn		**20 59 56.1**	**+0.2**
MAT	**Matsushiro**	**2.06**	**29**	P		Pn		**20 59 58.9**	**-0.1**
MAT				S		**S**		**21 00 37.9**	**-0.9**
MJAR	**Matsushiro Arr**	**2.06**	**29**	P		Pn		**20 59 58.9**	**-0.2**
	11nm,0.3s,baz=208,slow=8.6,SNR=208								
MJAR				S		**S**		**21 00 37.4**	**-1.4**
	baz=106,slow=16,SNR=2.7								
JHJ	**Hachijo jima 2**	**2.85**	**124**	P		Pn		**21 00 07.1**	**+1.3**
	2.4nm,0.3s,baz=80,slow=24,SNR=3.1								
JHJ				S		**S**		**21 00 53.9**	**+2.9**
	13nm,0.3s,baz=55,slow=21,SNR=9.3								
JNU	**Nakatsue**	**5.31**	**254**	P		Pn		**21 00 32.0**	**+0.3**
	0.5nm,0.3s,baz=80,slow=3.6,SNR=5.3								
KSRS	**Korea Array**	**7.80**	**293**	P		Pn		**21 01 02.4**	**+1.6**
	0.2nm,0.3s,baz=100,slow=13,SNR=4.1								
USRK	**Ussuriysk Arra**	**10.19**	**339**	P		Pn		**21 01 30.3**	**+0.9**
	0.3nm,0.3s,baz=151,slow=10,SNR=9.0								
ZALV	**Zalesovo Beam**	**40.86**	**314**	P		P		**21 06 20.7**	**+0.7**
	0.2nm,0.3s,baz=103,slow=6.5,SNR=3.0								
MKAR	**Makanchi Array**	**42.32**	**304**	P		P		**21 06 32.4**	**+0.5**
	0.4nm,0.8s,baz=97,slow=8.9,SNR=3.0								
KURBB	**Kurchatov Arra**	**44.61**	**309**	P		P		**21 06 50.0**	**+0.1**
	0.5nm,0.7s,baz=84,slow=7.7,SNR=5.0								
ILAR	**Eielson Array**	**53.34**	**31**	P		P		**21 07 54.6**	**-0.6**
	0.2nm,0.6s,baz=279,slow=4.9,SNR=4.6								
WRA	**Warramunga Arr**	**54.45**	**183**	P		P		**21 08 01.4**	**-2.4**
	0.6nm,0.3s,baz=359,slow=7.6,SNR=24								
ASAR	**Alice Springs**	**58.17**	**183**	P		P		**21 08 27.7**	**-2.1**
	0.4nm,0.5s,baz=13,slow=13,SNR=7.1								
ARCES	**ARCESS Array B**	**64.84**	**339**	P		P		**21 09 14.0**	**+0.5**
	0.7nm,0.5s,baz=66,slow=9.0,SNR=4.8								
YKA	**Yellowknife Ar**	**67.56**	**28**	P		P		**21 09 31.9**	**+1.2**
	0.1nm,0.4s,baz=74,slow=15,SNR=4.0								

MEX 26 20:59:35.9±0.8, 16.5°3N×98.2°0W, h20km±13km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**152**	*e*P		Pb		20 59 39.0	-1.5
PNIG				*e*S		Sb		20 59 43.3	-0.3
UTMO	**Huajuapan**	**1.35**	**16**	*e*P		Pn		20 59 56.4	-3.5
UTMO				*i* S		Sn		21 00 13.4	-4.1
ACX	**Acapulco**	**1.62**	**282**	*e*P		Pn		21 00 00.3	-3.1
ACX				*e*S		Sn		21 00 18.6	-5.2
MEIG	**Mezcala**	**1.94**	**316**	*i* P		Pn		21 00 04.5	-3.4
MEIG				*i* S		Sn		21 00 27.6	-4.2
CAIG	**El Cayaco**	**2.05**	**285**	*i* P		Pn		21 00 06.2	-3.0
CAIG				*i* S		Sn		21 00 30.6	-3.6
HUIG	**Huatulco**	**2.15**	**110**	*i* P		Pn		21 00 08.2	-2.5
HUIG				*i* S		Sn		21 00 33.6	-3.1
PLIG	**Platanillo**	**2.23**	**326**	*e*P		Pn		21 00 09.7	-2.2
PLIG				*e*S		Sn		21 00 35.8	-3.2
ARIG	**Puente Sto Nin**	**2.69**	**311**	*e*P		Pn		21 00 16.0	-2.1
ARIG				*e*S		Sn		21 00 47.4	-2.8

IDC 26 21:03:52.0±7.7, 19.9°4S×168.8°5E, h177km±41km, mb3.7/3, mb1 3.9/3, mb1mx3.3/16, mbtmp3.7/3, Error ellipse: s-maj=107.3km s-min=72.1km az=126.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.09**	**226**	P		Pn		21 04 42.0	+0.3
	0.2nm,0.3s,baz=75,slow=13,SNR=3.8								
DZM				S		Sn		21 05 20.6	+0.2
	0.7nm,0.3s,baz=357,slow=19,SNR=8.5								
STKA	**Stephens Creek**	**27.16**	**239**	P		P		21 09 19.0	0.0
	1.4nm,0.8s,baz=96,slow=9.2,SNR=4.6								
WRA	**Warramunga Arr**	**32.41**	**264**	P		P		21 10 05.0	-0.3
	0.5nm,0.4s,baz=95,slow=7.4,SNR=30								
ASAR	**Alice Springs**	**32.60**	**257**	P		P		21 10 07.2	+0.1
	3.9nm,0.5s,baz=88,slow=8.4,SNR=68								

NIED ***26*** *21:40:00, 39.5°0N×142.0°0E, h35km, Mw3.9 Best double couple: M0 7.35000×10^14 NP1:φs65.00000°, δ55.00000°, λ55.00000°. NP2:φs296.00000°, δ48.00000°, λ129.00000°.*

BJI ***26*** *21:40:37.9, 39.6°9N×142.4°6E, h40km, mB4.6/1, mb4.6/3*

ISCJB ***26*** *21:40:40.7±0.5, 39.5°4N±0.0°3×141.9°8E±0.0°6, h41km±3km, mb4.1/17, MS4.1/1, Error ellipse: s-maj=7.4km s-min=3.9km az=17.0*

JMA ***26*** *21:40:41.5, 39.5°5N×141.9°4E, h33km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs68.00000°, δ54.00000°, λ63.00000°. NP2:φs289.00000°, δ44.00000°, λ122.00000°. Principal axes: T Plg68.0000°, Azm280.0000°; N Plg21.0000°, Azm85.0000°; P Plg5.0000°, Azm177.0000°;*

JMA Felt II J1.

IDC ***26*** *21:40:42.1±1.0, 39.5°2N×141.9°1E, h36km±6km, mb3.8/13, mb1 3.9/18, mb1mx3.8/30, mbtmp3.8/18, ML3.9/4, MS3.3/2, Ms1 3.3/2, ms1mx2.5/42 Error ellipse: s-maj=19.5km s-min=14.1km az=103.0*

NEIC ***26*** *21:40:43.4±0.6, 39.5°6N×141.9°0E, h49km±5km, mb4.3/2, Error ellipse: s-maj=9.7km s-min=5.2km az=122.0*

ISC 26 21:40:42.0±0.7, 39.5°5N±0.0°3×141.9°2E±0.0°5, h34km±1km, h35km:pP-P, n55, σ1§21/80, mb4.2/17, 3C-7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.08**	**289**	⇑P		Pb		**21 40 47.1**	**-0.7**
MIYJ				S		Sb		**21 40 50.9**	**-0.9**
JTH	**Tanohata**	**0.39**	**354**	⇓P		Pn		**21 40 50.3**	**-1.0**
JTH				S		Sn		**21 40 56.8**	**-0.5**
JOM	**Ohasama**	**0.49**	**261**	⇑P		Pb		**21 40 51.8**	**-0.7**
JOM				*e*S		Sb		**21 40 59.0**	**-0.7**
OFUJ	**Ofunato**	**0.51**	**202**	⇓P		Pb		**21 40 51.9**	**-0.8**
OFUJ				*e*S		Sb		**21 40 59.1**	**-1.1**
JKZ	**Kuzumaki**	**0.63**	**314**	⇓P		Pb		**21 40 53.9**	**-0.8**
JKZ				*e*S		Sb		**21 41 02.6**	**-0.8**
JMK	**Ichinoseki**	**0.81**	**222**	⇓P		Pn		**21 40 56.4**	**-0.5**
JMK				*e*S		Sn		**21 41 07.1**	**-0.5**
JANG	**Nango**	**0.88**	**340**	⇓P		Pn		**21 40 57.0**	**-0.9**
JANG				*e*S		Sn		**21 41 09.0**	**-0.4**
JRG	**Rokugo**	**1.00**	**262**	⇑P		Pn		**21 40 59.6**	**0.0**
JRG				*e*S		Sb		**21 41 14.1**	**+0.2**
JAH	**Hinai**	**1.17**	**303**	⇓P		Pb		**21 41 02.2**	**-1.5**
JAH				*e*S		Sb		**21 41 17.6**	**-1.1**
JIO	**Ouri**	**1.18**	**202**	⇓P		Pn		**21 41 01.6**	**-0.4**
JIO				*e*S		Sn		**21 41 17.1**	**+0.2**
ERM	**Erimo**	**2.63**	**21**	*e*Pn		Pn		**21 41 23.1**	**+1.0**
ERM				*e*Sn		Sn		**21 41 53.4**	**+0.6**
MAJO	**Matsushiro**	**4.19**	**225**	*e*Pn		Pn		**21 41 45.0**	**+1.4**
MJAR	**Matsushiro Arr**	**4.19**	**225**	Pn		Pn		**21 41 45.0**	**+1.5**
	2.5nm,0.3s,baz=47,slow=8.8,SNR=26								
MAT	**Matsushiro**	**4.20**	**225**	P		Pn		21 41 46.1	+2.6
MAT				*e*S		**Sn**		**21 42 31.6**	**+0.3**
ASAJ	**Asahikawa**	**4.59**	**6**	*e*Pn		**Pn**		**21 41 49.9**	**+1.0**
ASAJ				*e*Sn		**Sn**		**21 42 41.6**	**+0.6**
ASAJ	**Asahikawa**	**4.59**	**6**	Pn		**Pn**		**21 41 50.0**	**+1.0**
	6.3nm,0.3s,baz=219,slow=8.9,SNR=45								
ASAJ				Sn		**Sn**		**21 42 42.4**	**+1.4**
	3.4nm,0.3s,baz=245,slow=27,SNR=4.4								
JHJ	**Hachijo jima 2**	**6.65**	**196**	Pn		**Pn**		**21 42 17.2**	**0.0**
	12nm,0.3s,baz=45,slow=1.4,SNR=8.2								
JHJ				Sn		**Sn**		**21 43 29.9**	**-1.8**
	13nm,0.3s,baz=49,slow=19,SNR=4.3								
USRK	**Ussuriysk Arra**	**8.73**	**305**	Pn		**Pn**		**21 42 47.3**	**+1.6**
	0.2nm,0.3s,baz=117,slow=12,SNR=10								
USRK				LR		LR		21 46 02.7	
	comp=Z,54nm,21.5s,baz=178,slow=37								
KSRS	**Korea Array**	**11.17**	**264**	Pn		**Pn**		**21 43 21.1**	**+2.0**
	0.6nm,0.3s,baz=66,slow=16,SNR=4.7								
KSAR	**Wonju Array Be**	**11.20**	**264**	Pn		**Pn**		**21 43 21.1**	**+1.5**
HHC	**Hu-ho-hao-te**	**23.17**	**283**	*e*P		**P**		**21 45 45.5**	**0.0**
HHC				pP		**pP**		**21 45 57.5**	**+2.7**
HHC				sP		sP		21 46 03.5	+4.4
HHC				PP		**PnPn**		**21 46 17.8**	**+6.4**
HHC				PcP		**PcP**		**21 49 34.0**	**+1.0**
HHC				S		**S**		**21 49 50.8**	**-4.0**
HHC				sS		**sS**		**21 50 09.8**	**-1.2**
HHC				SS		SnSn		21 50 39.5	+10
HHC				pmax		pmax			
	comp=Z,15nm,0.6s								
HHC				pmax		pmax			
	comp=Z,150nm,5.2s								
GYA	**Guiyang**	**32.11**	**257**	*e*P		P		21 47 08.8	+2.7
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
ZAA0	**Zalesovo Array**	**40.55**	**310**	*e*P		**P**		**21 48 17.2**	**-0.5**
ZAA0				*e*				21 48 26.9	
ZALV	**Zalesovo Beam**	**40.55**	**310**	P		**P**		**21 48 17.7**	**0.0**
ZALV				pP		**pP**		**21 48 27.2**	**-0.5**
ZALV				PcP		**PcP**		**21 50 19.2**	**-0.2**
ZALV	**Zalesovo Beam**	**40.55**	**310**	P		**P**		**21 48 17.7**	**0.0**
	comp=Z,5.8nm,0.4s,baz=91,slow=8.3,SNR=43								
ZALV				pP		**pP**		**21 48 27.2**	**-0.5**
	comp=Z,2.5nm,0.4s,baz=92,slow=7.8,SNR=9.2								
ZALV				PcP		**PcP**		**21 50 19.2**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=72,slow=4.7,SNR=2.9								
MK31	**Makanchi Array**	**43.16**	**300**	*e*P		**P**		**21 48 38.2**	**-1.0**
MKAR	**Makanchi Array**	**43.16**	**300**	P		**P**		**21 48 38.9**	**-0.3**
MKAR				pP		**pP**		**21 48 49.6**	**+0.3**
MKAR	**Makanchi Array**	**43.16**	**300**	P		**P**		**21 48 38.9**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=82,slow=9.7,SNR=13								
MKAR				pP		**pP**		**21 48 49.6**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=90,slow=8.0,SNR=6.5								
KURK	**Kurchatov**	**44.73**	**306**	*e*P		**P**		**21 48 51.2**	**-0.5**
	comp=Z,4.3nm,0.8s								
ILAR	**Eielson Array**	**47.17**	**34**	P		**P**		**21 49 10.6**	**-0.1**
ILAR				pP		**pP**		**21 49 21.8**	**+0.9**
ILAR	**Eielson Array**	**47.17**	**34**	P		**P**		**21 49 10.6**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=265,slow=5.6,SNR=9.0								
ILAR				pP		**pP**		**21 49 21.8**	**+0.9**
	comp=Z,0.5nm,0.8s,baz=274,slow=8.0,SNR=4.0								
INK	**Inuvik**	**51.98**	**28**	P		**P**		**21 49 47.5**	**+0.3**
INK	**Inuvik**	**51.98**	**28**	P		**P**		**21 49 47.5**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=297,slow=9.3,SNR=4.2								
ABKAR	**Akbulak array**	**56.64**	**309**	*e*P		**P**		**21 50 20.9**	**-0.5**
	comp=Z,1.4nm,0.4s								
ABKAR				*e*				21 50 30.0	
WRA	**Warramunga Arr**	**59.60**	**188**	P		**P**		**21 50 41.7**	**-0.7**
WRA	**Warramunga Arr**	**59.60**	**188**	P		**P**		**21 50 41.7**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=5.4,slow=6.9,SNR=27								
YKA	**Yellowknife Ar**	**61.44**	**31**	P		**P**		**21 50 54.8**	**+0.3**
YKA	**Yellowknife Ar**	**61.44**	**31**	P		**P**		**21 50 54.8**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=296,slow=6.3,SNR=2.8								
ARCES	**ARCESS Array B**	**61.79**	**339**	P		**P**		**21 50 57.3**	**+0.5**
ARCES	**ARCESS Array B**	**61.79**	**339**	P		**P**		**21 50 57.3**	**+0.5**
	comp=Z,3.6nm,0.9s,baz=56,slow=8.0,SNR=3.0								
ASAR	**Alice Springs**	**63.33**	**188**	P		**P**		**21 51 07.0**	**-0.6**
ASAR	**Alice Springs**	**63.33**	**188**	P		**P**		**21 51 07.0**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=9.8,slow=6.4,SNR=7.0								
FINES	**FINESS Array B**	**66.78**	**332**	P		**P**		**21 51 29.3**	**-0.2**
FINES	**FINESS Array B**	**66.78**	**332**	P		**P**		**21 51 29.3**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=54,slow=9.7,SNR=5.2								
KBZ	**Khabaz**	**69.57**	**310**	P		**P**		**21 51 47.1**	**-0.2**
KBZ	**Khabaz**	**69.57**	**310**	P		**P**		**21 51 47.1**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=54,slow=1.5,SNR=4.6								
NB2	**NORSAR Subarra**	**72.02**	**337**	P		**P**		**21 52 01.7**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=38,slow=5.9								
NOA	**NORSAR Array B**	**72.02**	**337**	P		**P**		**21 52 01.9**	**-0.1**
NOA	**NORSAR Array B**	**72.02**	**337**	P		**P**		**21 52 01.9**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=39,slow=6.0,SNR=4.5								
AKASG	**Malin Array Be**	**72.56**	**322**	P		**P**		**21 52 04.9**	**-0.4**
AKASG	**Malin Array Be**	**72.56**	**322**	P		**P**		**21 52 04.9**	**-0.4**
	comp=Z,1.1nm,0.3s,baz=44,slow=6.3,SNR=4.3								
NWAO	**Narrogin (SRO)**	**75.66**	**201**	LR		LR		22 27 31.9	
	comp=Z,84nm,19.2s,baz=113,slow=37								
BRTR	**Keskin Array B**	**77.48**	**311**	P		**P**		**21 52 33.8**	**-0.3**
BRTR	**Keskin Array B**	**77.48**	**311**	P		**P**		**21 52 33.8**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=81,slow=2.8,SNR=4.2								

DDA ***26*** *21:49:52.9, 37.7°6N×26.7°9E, h7km, MD2.5*

ISC 26 21:49:51.8±6.5, 37.9°N±0.4°×27.0°E±0.6, h13km, n5, σ0§67/4, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.26**	**143**	*i* P		**Pg**		**21 49 57.1**	**-0.1**
GCAM				*i* S		**Sg**		**21 50 01.2**	**+0.4**
AYDN	**Tasoluk**	**0.71**	**110**	*i* P		Pn		21 50 23.1	+15
AYDN				*i* S		Sn		21 50 32.7	+14
MLSB	**Milas**	**0.85**	**136**	*e*PG		Pn		21 50 15.2	+5.8
MLSB				*e*SG		**Sn**		**21 50 21.2**	**-0.5**
BODT	**Bodrum**	**0.87**	**166**	*e*PG		Pn		21 50 16.2	+6.5
YER	**Yerkesik**	**1.25**	**128**	*e*PG		**Pb**		**21 50 15.5**	**+0.2**

IDC 26 21:53:37.4±2.0, 11.0°0S×164.9°1E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/20, mbtmp3.7/5, ML4.6/1, Error ellipse: s-maj=54.0km s-min=31.8km az=153.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.12**	**287**	Pn		Pn		21 54 56.2	+0.8
	20nm,0.3s,baz=130,slow=1.8,SNR=8.6								
HNR				Sn		Sn		21 55 57.1	+1.8
	15nm,0.3s,baz=135,slow=19,SNR=2.2								
WRA	**Warramunga Arr**	**30.73**	**249**	P		P		21 59 54.8	+0.4
	0.9nm,1.0s,baz=78,slow=8.8,SNR=4.6								
ASAR	**Alice Springs**	**32.08**	**243**	P		P		22 00 05.7	-0.7
	0.2nm,0.5s,baz=66,slow=10.0,SNR=3.3								
ILAR	**Eielson Array**	**83.73**	**19**	P		P		22 06 08.3	+0.4
	0.2nm,0.7s,baz=236,slow=3.8,SNR=4.3								
MKAR	**Makanchi Array**	**92.92**	**317**	P		P		22 06 51.7	-0.8
	0.3nm,0.8s,baz=92,slow=6.2,SNR=3.2								

IDC ***26*** *22:13:30.7±1.5, 32.4°4S×177.9°5W, h0km, mb3.9/4, mb1 4.1/6, mb1mx3.9/21, mbtmp4.0/6, ML4.2/2, Error ellipse: s-maj=37.7km s-min=27.4km az=89.0*

ISC 26 22:13:32.5±1.3, 32.5°4S±0.0°8×177.9°W±0.2°, h20km, n33, σ2§64/34, mb4.0/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.27**	**360**	Pn		**Pn**		**22 14 21.4**	**-1.3**
	104nm,0.3s,baz=104,slow=23,SNR=6.1								
RAO				Sn		**Sn**		**22 14 57.7**	**-3.3**
	288nm,0.3s,baz=142,slow=20,SNR=6.0								
MWZ	**Matawai**	**6.88**	**211**	PN		**Pn**		**22 15 13.7**	**+1.4**
MWZ				eSN		**Sn**		**22 16 31.6**	**+1.6**
URZ	**Urewera**	**7.01**	**214**	PN		**Pn**		**22 15 15.7**	**+1.7**
URZ				SN		**Sn**		**22 16 34.6**	**+1.5**
URZ	**Urewera**	**7.01**	**214**	Pn		**Pn**		**22 15 15.3**	**+1.4**
	1.1nm,0.3s,baz=73,slow=9.0,SNR=9.2								
URZ				Sn		**Sn**		**22 16 34.2**	**+1.2**
	6.6nm,0.3s,baz=131,slow=20,SNR=13								
KNZ	**Kokohu**	**7.40**	**208**	PN		**Pn**		**22 15 19.5**	**+0.2**
MHGZ	**Mahia Peninsul**	**7.42**	**206**	PN		**Pn**		**22 15 20.3**	**+0.6**
RAHZ	**Arahi**	**7.55**	**211**	SN		**Sn**		**22 16 47.7**	**+1.1**
BHHZ	**Black Hill Sta**	**8.48**	**213**	PN		**Pn**		**22 15 36.0**	**+1.8**
FWVZ	**Far West T-bar**	**8.55**	**216**	PN		Pn		22 15 38.7	+3.4
WHVZ	**Whangaehu Hut**	**8.55**	**216**	SN		**Sn**		**22 17 10.8**	**-0.5**
WPHZ	**Waipukurau**	**8.79**	**210**	SN		**Sn**		**22 17 15.6**	**-1.2**
DVHZ	**Dannevirke**	**9.10**	**210**	SN		**Sn**		**22 17 21.3**	**-3.2**
ANWZ	**Angora Road**	**9.11**	**208**	SN		**Sn**		**22 17 21.3**	**-3.3**
BFZ	**Birch Farm**	**9.38**	**208**	PN		**Pn**		**22 15 47.1**	**+0.5**
PRWZ	**Pori Road**	**9.39**	**210**	SN		**Sn**		**22 17 28.8**	**-2.9**
MRZ	**Mangatainoka R**	**9.65**	**211**	PN		**Pn**		**22 15 48.5**	**-1.7**
MRZ				SN		**Sn**		**22 17 33.6**	**-4.4**
HOWZ	**Holdsworth Sta**	**9.87**	**210**	SN		**Sn**		**22 17 37.6**	**-5.8**
OGWZ	**Otaki Gorge**	**9.96**	**212**	PN		**Pn**		**22 15 53.3**	**-1.1**
KIW	**Kapiti Island**	**10.11**	**213**	SN		**Sn**		**22 17 44.7**	**-4.6**
PAWZ	**Paruwai Farm**	**10.31**	**209**	SN		**Sn**		**22 17 48.9**	**-5.3**
PLWZ	**Palliser**	**10.54**	**209**	SN		**Sn**		**22 17 54.1**	**-5.7**
TCW	**Tory Channel**	**10.68**	**214**	SN		Sn		22 17 56.7	-6.5
TUWZ	**Tuamarina**	**11.01**	**214**	*e*PN		**Pn**		**22 16 09.3**	**+0.5**
KHZ	**Kahutara**	**11.97**	**212**	PN		**Pn**		**22 16 21.3**	**-0.6**
LTZ	**Lake Taylor**	**12.84**	**214**	PN		**Pn**		**22 16 34.5**	**+0.6**
LTZ				SN		Sn		22 18 45.5	-11
OXZ	**Oxford**	**13.36**	**213**	SN		Sn		22 18 57.3	-12
MQZ	**McQueen's Vall**	**13.39**	**211**	SN		Sn		22 18 57.7	-12
STKA	**Stephens Creek**	**34.12**	**260**	P		**P**		**22 20 17.4**	**+1.4**
	1.3nm,0.8s,baz=101,slow=10,SNR=2.9								
ASAR	**Alice Springs**	**43.11**	**269**	P		**P**		**22 21 32.5**	**+0.8**
	0.4nm,0.5s,baz=112,slow=8.8,SNR=5.4								
WRA	**Warramunga Arr**	**44.29**	**274**	P		**P**		**22 21 41.7**	**+0.6**
	1.4nm,0.3s,baz=113,slow=8.0,SNR=38								
QSPA	**South Pole Qui**	**57.58**	**180**	P		**P**		**22 23 22.0**	**+1.3**
	1.7nm,1.0s,baz=35,slow=7.4,SNR=3.5								
MMAI	**Mount Meron Ar**	**152.04**	**280**	PKPbc		**PKPbc**		**22 33 29.3**	**+2.7**
	0.8nm,0.4s,baz=76,slow=6.1,SNR=6.1								
BRTR	**Keskin Array B**	**153.62**	**295**	PKPbc		**PKPbc**		**22 33 31.3**	**+1.4**
	0.3nm,0.5s,baz=111,slow=3.8,SNR=3.7								

IDC ***26*** *22:26:12.0±3.1, 38.7°0N×72.0°7E, h0km, mb3.7/2, mb1 3.5/8, mb1mx3.4/33, mbtmp3.4/8, ML3.1/6, Error ellipse: s-maj=40.3km s-min=23.0km az=179.0*

NNC ***26*** *22:26:18.6±5.6, 39.0°5N×71.5°9E, h0km, mb3.4, mpv3.3, Error ellipse: s-maj=45.3km s-min=27.6km az=0.0*

ISC 26 22:26:17.9±1.9, 38.8°N±0.1°×71.5°7E±0.0°9, h34km, n19, σ1§38/22, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.69**	**25**	P		**Pn**		**22 27 12.8**	**-0.1**
	SNR=29								
KZA	**Kyzart**	**4.30**	**40**	P		**Pn**		**22 27 21.4**	**+0.1**
	SNR=7.4								
KK31	**Karatay Array**	**4.36**	**350**	⇑Pn		**Pn**		**22 27 22.9**	**+1.2**
	4.0nm,0.4s,baz=171,slow=13,SNR=159								
KK31				⇑Sn		**Sn**		**22 28 12.9**	**+1.6**
	5.1nm,0.3s,baz=169,slow=22								
AAK	**Ala-Archa**	**4.42**	**29**	P		**Pn**		**22 27 23.0**	**+0.3**
	SNR=16								
AAK	**Ala-Archa**	**4.42**	**29**	Pn		**Pn**		**22 27 22.8**	**+0.1**
	1.2nm,0.3s,baz=184,slow=4.4,SNR=13								
AAK				Sn		**Sn**		**22 28 13.2**	**+0.2**
	1.6nm,0.3s,baz=120,slow=23,SNR=6.3								
AAK				Lg		Lg		22 28 23.8	
	2.3nm,0.3s,baz=254,slow=8.7,SNR=6.1								
KBK	**Karagaybulak**	**4.62**	**33**	P		**Pn**		**22 27 26.2**	**+0.7**
	SNR

	baz=42										
EAST	**Anshuo**	**1.40**	**58**	⇓	*i*	P		**Pn**	**22 27 58.7**	**0.0**
	baz=62										
EAST						*e*	S	**Sn**	**22 28 15.4**	**-1.1**
	baz=62										
TWM1	**Shoushan**	**1.42**	**34**		*e*	P		**Pb**	**22 27 59.5**	**-1.0**
	baz=37										
TWM1						*e*	S	**Sn**	**22 28 15.5**	**-1.5**
	baz=37										
TAW	**Tawu**	**1.42**	**60**	⇓	*i*	P		**Pn**	**22 27 58.9**	**-0.1**
	baz=64										
TAW						S		**Sn**	**22 28 15.8**	**-1.2**
	baz=64										
TAI1	**Yung-k'ang**	**1.52**	**23**	⇑	*e*	P		**Pn**	**22 28 00.2**	**-0.2**
	baz=26										
TAI1						*e*	S	**Sn**	**22 28 18.2**	**-1.2**
	baz=26										
ECL	**Taimali**	**1.60**	**53**	⇓	*i*	P		**Pn**	**22 28 01.4**	**-0.1**
	baz=57										
CHN3	**Shinhua**	**1.61**	**27**	⇑	*e*	P		**Pn**	**22 28 01.9**	**+0.3**
	baz=29										
CHN3						*e*	S	**Sn**	**22 28 21.3**	**-0.3**
	baz=29										
WDGT	**Dungji**	**1.61**	**3**	⇑	*i*	P		**Pn**	**22 28 00.0**	**-1.7**
	baz=4.0										
WDGT						*e*	S	**Sn**	**22 28 18.3**	**-3.5**
	baz=4.0										
SCLT	**Jiali**	**1.63**	**21**		*e*	P		**Pn**	**22 28 01.7**	**-0.3**
	baz=23										
SCLT						*e*	S	**Sn**	**22 28 21.3**	**-0.9**
	baz=23										
SGST	**Jiashian**	**1.71**	**33**	⇑	*e*	P		**Pn**	**22 28 03.2**	**0.0**
	baz=36										
CHN1	**Nanshi**	**1.77**	**30**	⇑	*i*	P		**Pn**	**22 28 03.7**	**-0.3**
	baz=21										
CHN1						*e*	S	**Sn**	**22 28 24.1**	**-1.7**
	baz=21										
CHN8	**Yiju**	**1.80**	**19**		*e*	P		**Pn**	**22 28 03.6**	**-0.7**
	baz=31										
CHN8						*e*	S	**Sn**	**22 28 24.6**	**-1.8**
	baz=31										
TWG	**Pinlang**	**1.82**	**50**	⇓	*i*	P		**Pn**	**22 28 05.0**	**+0.4**
	baz=43										
TWG						*e*	S	**Sn**	**22 28 25.5**	**-1.4**
	baz=43										
TWG	**Pinlang**	**1.82**	**50**		*e*	Pn		**Pn**	**22 28 04.7**	**+0.1**
TWG						*e*	S	**Sn**	**22 28 25.9**	**-1.0**
TWK	**Hsinying**	**1.83**	**27**	⇑	*i*	P		**Pn**	**22 28 04.4**	**-0.3**
	baz=20										
TWK						*e*	S	**Sn**	**22 28 25.5**	**-1.6**
	baz=20										
TTN	**Taitung**	**1.83**	**53**		*e*	P		**Pn**	**22 28 05.6**	**+0.8**
	baz=46										
TTN						*e*	S	**Sn**	**22 28 27.1**	**-0.1**
	baz=46										
WTP	**Ta-pu**	**1.87**	**31**	⇑		P		**Pn**	**22 28 04.9**	**-0.4**
	baz=44										
LAY	**Lan-yu**	**1.88**	**77**	⇓	*e*	P		**Pn**	**22 28 04.2**	**-1.2**
	baz=71										
PNG	**Penghu**	**1.92**	**360**	⇑	*i*	P		**Pn**	**22 28 04.2**	**-1.7**
	baz=1.0										
PNG						*e*	S	**Sn**	**22 28 26.1**	**-3.2**
	baz=1.0										
TPUB	**Ta-pu**	**1.92**	**30**		*e*	Pn		**Pn**	**22 28 04.7**	**-1.3**
CHN4	**Tsaushan**	**1.95**	**29**	⇑	*i*	P		**Pn**	**22 28 05.9**	**-0.4**
	baz=21										
CHN4						S		**Sn**	**22 28 28.0**	**-2.1**
	baz=21										
CHY	**Chiayi**	**2.01**	**23**		*e*	P		**Pn**	**22 28 06.7**	**-0.5**
	baz=25										
CHY						*e*	S	**Sn**	**22 28 29.5**	**-2.1**
	baz=25										
ELDTW	**Lidau**	**2.04**	**41**		*e*	P		**Pn**	**22 28 07.7**	**0.0**
	baz=43										
CHN2	**Minshiung**	**2.06**	**24**	⇑	*e*	P		**Pn**	**22 28 07.5**	**-0.4**
	baz=25										
CHN2						S		**Sn**	**22 28 31.0**	**-1.8**
	baz=25										
WSF	**Szhu**	**2.08**	**17**		*e*	P		**Pn**	**22 28 07.3**	**-0.8**
	baz=18										
WSF						S		**Sn**	**22 28 31.0**	**-2.2**
	baz=18										
ALS	**Alishan**	**2.18**	**31**	⇑	*i*	P		**Pn**	**22 28 09.5**	**-0.3**
	baz=24										
ALS						*e*	S	**Sn**	**22 28 34.1**	**-2.2**
	baz=24										
CHN5	**Tsauling**	**2.20**	**27**	⇑		P		**Pn**	**22 28 09.3**	**-0.6**
	baz=29										
CHKT	**Chengkung**	**2.21**	**49**	⇓	*i*	P		**Pn**	**22 28 10.3**	**+0.4**
	baz=51										
CHKT						*e*	S	**Sn**	**22 28 35.6**	**-0.8**
	baz=51										
WGK	**Gukeng**	**2.23**	**24**	⇑	*e*	P		**Pn**	**22 28 09.9**	**-0.3**
	baz=26										
WGK					*i*	S		**Sn**	**22 28 35.4**	**-1.6**
	baz=26										
YUS	**Yu-Shan**	**2.24**	**34**	⇑		P		**Pn**	**22 28 11.0**	**+0.2**
	baz=47										
YUS						*e*	S	**Sn**	**22 28 36.3**	**-1.6**
	baz=47										
WTCT	**Ta-ch'eng**	**2.31**	**16**		*e*	P		**Pn**	**22 28 10.2**	**-1.1**
	baz=18										
WTCT						S		**Sn**	**22 28 36.5**	**-2.4**
	baz=18										
TWF1	**Yuli**	**2.33**	**43**	⇓	*e*	P		**Pn**	**22 28 12.2**	**+0.5**
	baz=37										
TWF1						*e*	S	**Sn**	**22 28 38.1**	**-1.5**
	baz=37										
YULB	**Yu-li**	**2.36**	**42**		*e*	Pn		**Pn**	**22 28 12.4**	**+0.4**
WNT	**Mingjian**	**2.45**	**25**		P			**Pn**	**22 28 12.8**	**-0.4**
	baz=26										
WNT						*e*	S	**Sn**	**22 28 40.1**	**-2.4**
	baz=26										
EHY	**Hungye**	**2.46**	**41**	⇓	*i*	P		**Pn**	**22 28 14.1**	**+0.6**
	baz=43										
EHY						*e*	S	**Sn**	**22 28 41.1**	**-1.7**
	baz=43										
SSLB	**Suanglung**	**2.49**	**31**		*e*	Pn		**Pn**	**22 28 13.1**	**-0.7**
SSLB						*e*	S	**Sn**	**22 28 42.5**	**-1.0**
SMLT	**Sun Moon Lake**	**2.55**	**29**	⇑	*i*	P		**Pn**	**22 28 14.6**	**-0.1**
	baz=30										
TYC	**Yuchr**	**2.55**	**28**	⇑	*i*	P		**Pn**	**22 28 14.5**	**-0.1**
	baz=22										
TYC						*e*	S	**Sn**	**22 28 42.9**	**-1.9**
	baz=22										
TCU	**Taichung**	**2.69**	**22**		*e*	P		**Pn**	**22 28 16.8**	**+0.2**
	baz=30										
TCU						*e*	S	**Sn**	**22 28 47.4**	**-1.1**
	baz=30										
ESL	**Shilin**	**2.76**	**38**		*e*	P		**Pn**	**22 28 17.8**	**+0.3**
	baz=40										
ESL						*e*	S	**Sn**	**22 28 47.5**	**-2.7**
	baz=40										
TWQ1	**Liyutan**	**2.91**	**22**		*e*	P		**Pn**	**22 28 19.5**	**-0.1**
	baz=24										
WHF	**Hehuan Shan**	**2.94**	**32**		*e*	P		**Pn**	**22 28 20.5**	**+0.1**
	baz=25										
KNM	**Kinmen**	**2.96**	**339**	⇑	*e*	P		**Pn**	**22 28 18.9**	**-1.2**
	baz=337										
KNM						*e*	S	**Sn**	**22 28 52.2**	**-2.7**
	baz=337										
NSY	**Sanyi**	**2.97**	**21**		*e*	P		**Pn**	**22 28 20.3**	**-0.1**
	baz=23										
NSY						*e*	S	**Sn**	**22 28 55.0**	**-0.3**
	baz=23										
HWA	**Hwalien**	**2.99**	**39**		*e*	P		**Pn**	**22 28 21.0**	**+0.4**
	baz=40										
HWA						*e*	S	**Sn**	**22 28 53.3**	**-2.4**
	baz=40										
TWT	**Tachien**	**2.99**	**29**	⇑		P		**Pn**	**22 28 21.0**	**+0.1**
	baz=31										
TWT						*e*	S	**Sn**	**22 28 54.2**	**-1.9**
	baz=31										
TWD	**Chiawan**	**3.06**	**37**		*e*	P		**Pn**	**22 28 22.0**	**+0.3**
	baz=39										
TWD						*e*	S	**Sn**	**22 28 55.0**	**-2.5**
	baz=39										
NACB	**Ninganchiao**	**3.14**	**36**		*e*	Pn		**Pn**	**22 28 22.6**	**0.0**
NNS	**Nan Shan**	**3.24**	**30**		*e*	P		**Pn**	**22 28 24.6**	**+0.3**
	baz=38										
NNS						S		**Sn**	**22 29 01.7**	**-0.5**
	baz=38										
NSTT	**Nanjuang**	**3.25**	**24**	⇑	*e*	P		**Pn**	**22 28 23.9**	**-0.4**
	baz=25										
NSTT						*e*	S	**Sn**	**22 28 59.6**	**-2.7**
	baz=25										
HSN	**Hsinchu**	**3.40**	**22**		*e*	P		**Pn**	**22 28 26.6**	**+0.3**
	baz=24										
HSN						*e*	S	**Sn**	**22 29 04.9**	**-1.0**
	baz=24										
QZH	**Quanzhou**	**3.41**	**345**	⇓	*i*	Pn		**Pn**	**22 28 25.5**	**-0.9**
QZH						Sn		**Sn**	**22 29 00.5**	**-5.6**
QZH						smax	smax			
	comp=N,3μm,0.8s									
QZH						smax	smax			
	comp=E,4μm,1.2s									
QZH						LR	LR			
	comp=N,12μm,7.2s									
QZH						LR	LR			
	comp=E,11μm,6.7s									
QZH						LR	LR			
	comp=Z,16μm,15.0s									
ENA	**Nanau**	**3.42**	**35**		*e*	P		**Pn**	**22 28 26.7**	**+0.1**
	baz=45									
NSK	**Sanguang**	**3.44**	**28**	⇑	*i*	P		**Pn**	**22 28 27.1**	**+0.2**
	baz=19									
PIP	**Pasuquin**	**3.44**	**163**	⇑	*i*	P		Pb	22 28 52.1	+17
PIP						*e*	S	**Sn**	**22 29 01.6**	**-5.4**
YHNB	**Yeheng**	**3.44**	**28**		*e*	Pn		**Pn**	**22 28 27.0**	**0.0**
ENTT	**Nioudou**	**3.50**	**31**		*e*	P		**Pn**	**22 28 28.5**	**+0.7**
	baz=33									
ENTT						*e*	S	**Sn**	**22 29 08.1**	**-0.4**
	baz=33									
TWC	**Suao**	**3.62**	**35**		*e*	P		**Pn**	**22 28 30.1**	**+0.8**
	baz=44									
TWC						*e*	S	**Sn**	**22 29 10.0**	**-1.4**
	baz=44									
TWE	**Neicheng**	**3.62**	**32**		*e*	P		**Pn**	**22 28 30.8**	**+1.4**
	baz=33									
TWE						*e*	S	**Sn**	**22 29 10.8**	**-0.5**
	baz=33									
NCU	**National Centr**	**3.63**	**24**		*e*	P		**Pn**	**22 28 29.4**	**-0.1**
	baz=25									
NCU						*e*	S	**Sn**	**22 29 09.3**	**-2.3**
	baz=25									
ILA	**Ilan**	**3.70**	**32**		*e*	P		**Pn**	**22 28 32.0**	**+1.6**
	baz=22									
TATO	**Taipei**	**3.76**	**28**		*e*	Pn		**Pn**	**22 28 30.4**	**-0.8**
TAP	**Taipei**	**3.82**	**27**		*e*	P		**Pn**	**22 28 32.0**	**-0.1**
	baz=29									
TAP						*e*	S	**Sn**	**22 29 13.9**	**-2.4**
	baz=29									
TAP1	**Taipei**	**3.83**	**28**		*e*	P		**Pn**	**22 28 31.7**	**-0.5**
	baz=29									
TAP1						*e*	S	**Sn**	**22 29 13.8**	**-2.6**
	baz=29									
TWS1	**Kuangyinshan**	**3.84**	**26**		*e*	P		**Pn**	**22 28 32.2**	**-0.1**
	baz=27									
TWS1						*e*	S	**Sn**	**22 29 14.8**	**-1.9**
	baz=27									
EGS		**3.86**	**34**		*e*	P		**Pn**	**22 28 34.4**	**+1.8**
	baz=45									
NWF	**Wu-fen Shan**	**3.97**	**30**		*e*	P		**Pn**	**22 28 34.4**	**+0.1**
	baz=32									
TWB1	**Santiao Chiao**	**4.02**	**33**		*e*	P		**Pn**	**22 28 36.0**	**+1.1**
	baz=45									
TWB1						S		**Sn**	**22 29 20.2**	**-1.0**
	baz=45									
TWY	**Chenhua**	**4.07**	**27**		*e*	P		**Pn**	**22 28 35.1**	**-0.4**
	baz=18									
TWY						*e*	S	**Sn**	**22 29 20.3**	**-2.1**
	baz=18									
APYP	**Conner**	**4.08**	**157**		*e*	P		**Pn**	**22 28 33.9**	**-1.7**
APYP						*e*	S	Sn	22 29 05.0	-18
ABRA	**Dolores**	**4.11**	**165**		*e*	P		**Pn**	**22 28 33.8**	**-2.4**
YOJ	**Yonaguni jima**	**4.23**	**48**		*e*	P		**Pn**	**22 28 38.2**	**+0.4**
	baz=41									
YOJ						*e*	S	**Sn**	**22 29 25.3**	**-1.2**
	baz=41									
YOJ	**Yonaguni jima**	**4.23**	**48**			P		**Pn**	**22 28 38.8**	**+1.0**
YOJ						*e*	S	**Sn**	**22 29 24.9**	**-1.5**
CVP	**Callao Caves**	**4.45**	**151**	⇓	*e*	P		**Pn**	**22 28 40.9**	**+0.1**
CVP					*i*	S		**Sn**	**22 29 30.1**	**-1.8**
PCYT	**Pengchaiyu**	**4.58**	**30**		*e*	P		**Pn**	**22 28 42.2**	**-0.4**
	baz=31									
PCYT						*e*	S	**Sn**	**22 29 31.0**	**-4.1**
	baz=31									
HATJ	**Hateruma jima**	**4.59**	**58**			P		**Pn**	**22 28 42.4**	**-0.2**
HATJ						*e*	S	**Sn**	**22 29 32.1**	**-3.0**
IRIF	**Iriomote-Funau**	**4.68**	**54**			P		**Pn**	**22 28 44.1**	**+0.2**
IRIF						*e*	S	**Sn**	**22 29 35.1**	**-2.3**
JKRS	**Kuro-shima**	**4.84**	**57**			P		**Pn**	**22 28 46.2**	**+0.1**
JKRS						*e*	S	**Sn**	**22 29 38.7**	**-2.7**
JIJ	**Ishigaki jima**	**5.01**	**56**			P		**Pn**	**22 28 48.3**	**-0.1**
JIJ						*e*	S	**Sn**	**22 29 42.7**	**-2.9**
CAUP	**Cauayan**	**5.13**	**155**		*e*	P		**Pn**	**22 28 51.7**	**+1.6**
JTJ	**Tarama**	**5.59**	**57**			P		**Pn**	**22 28 56.2**	**-0.2**
JTJ						*e*	S	**Sn**	**22 29 58.0**	**-1.8**
GZH	**Guangzhou**	**5.94**	**285**			Pn		Pn	22 28 57.8	-3.4
GZH						smax	smax			
	comp=N,980nm,1.1s									
GZH						smax	smax			
	comp=E,730nm,1.2s									
JMJ	**Miyako jima 2**	**6.14**	**58**		*e*	S		**Sn**	**22 30 11.2**	**-2.2**
BALP	**Baler**	**6.17**	**162**		*e*	P		**Pn**	**22 29 04.0**	**-0.3**
JOGS	**Gusukube**	**6.20**	**59**			P		**Pn**	**22 29 05.0**	**+0.2**
JOGS					*e*	S		**Sn**	**22 30 12.3**	**-2.7**
TGY	**Tagaytay City**	**7.61**	**170**			Pn		**Pn**	**22 29 23.8**	**-0.5**
TGY	**Tagaytay City**	**7.61**	**170**			Pn		**Pn**	**22 29 23.8**	**-0.5**
	comp=E,27nm,0.3s,baz=72,slow=9.0,SNR=1.6									
JKE	**Kume jima 2**	**8.08**	**53**			P		**Pn**	**22 29 30.3**	**-0.3**
JKE						*e*	S	**Sn**	**22 30 58.2**	**-3.0**
JAGN	**Aguni-jima**	**8.56**	**53**		*e*	S		**Sn**	**22 31 09.7**	**-3.4**
JIH	**Iheya**	**9.35**	**53**		*e*	S		**Sn**	**22 31 28.3**	**-4.1**
JOW	**Kunigami**	**9.47**	**55**		*e*	Pn		**Pn**	**22 29 48.3**	**-1.5**
JOW					*e*	Sn		**Sn**	**22 31 33.0**	**-2.6**
JOW	**Kunigami**	**9.47**	**55**			P		**Pn**	**22 29 48.3**	**-1.5**
JOW					*e*	S		Sn	22 31 29.1	-6.4
QIZ	**Qiongzhong**	**9.49**	**256**			P		**Pn**	**22 29 50.5**	**+0.5**
QIZ						S		**Sn**	**22 31 39.5**	**+3.6**
QIZ						pmax	pmax			
	comp=Z,41nm,1.4s									
QIZ						LR	LR			
	comp=N,6μm,18.2s									
QIZ						LR	LR			
	comp=Z,4μm,12.1s									
QIZ	**Qiongzhong**	**9.49**	**256**		*e*	Pn		**Pn**	**22 29 49.0**	**-1.0**
	comp=Z,86nm,1.0s									
QIZ					*e*	Sn		**Sn**	**22 31 30.8**	**-5.1**
SSE	**Sheshan**	**9.53**	**8**			P		Pn	22 29 56.0	+5.6
SSE						pmax	pmax			
	comp=Z,18nm,0.8s									
SSE						pmax	pmax			
	comp=Z,56nm,7.1s									
SSE						LR	LR			
	comp=N,720nm,13.5s									
SSE						LR	LR			
	comp=E,2μm,13.5s									
SSE						LR	LR			
	comp=Z,2μm,15.4s									
NJ2	**Nanjing**	**10.39**	**357**		*e*	P		**Pn**	**22 30 02.5**	**+0.2**
NJ2						pP			22 30 07.5	
NJ2						PP		**PnPn**	**22 30 10.8**	**+0.6**
NJ2						sP			22 30 12.3	
NJ2						S		**Sn**	**22 31 58.5**	**+0.6**
NJ2						pmax	pmax			
	comp=Z,30nm,1.0s									
NJ2						pmax	pmax			
	comp=Z,110nm,5.1s									
NJ2						LR	LR			
	comp=N,4μm,12.8s									
NJ2						LR	LR			
	comp=E,3μm,13.1s									
NJ2						LR	LR			
	comp=Z,4μm,14.2s									
JTK	**Tokunoshima**	**10.49**	**52**		*e*	S		**Sn**	**22 31 55.2**	**-5.3**
JAMN	**Amaminishikomi**	**10.91**	**51**		*e*	S		**Sn**	**22 32 06.7**	**-4.1**
JAM	**Amami Oshima**	**11.32**	**51**		*e*	S		Sn	22 32 14.2	-6.5
JMZ	**Minamidaito 2**	**11.45**	**66**		*e*	S		Sn	22 32 13.1	-11
ENH	**Enshi**	**12.49**	**316**		*e*	Pn		**Pn**	**22 30 31.1**	**0.0**
	comp=Z,20nm,0.9s									
ENH					*e*	Sn		**Sn**	**22 32 46.1**	**-3.4**
GYA	**Guiyang**	**12.73**	**295**	⇑	*i*	P		**Pn**	**22 30 32.5**	**-1.9**
GYA						S		Sn	22 32 49.3	-6.2
GYA						SS		**SnSn**	**22 33 12.5**	**+4.8**
GYA						pmax	pmax			
	comp=Z,30nm,1.0s									
GYA						pmax	pmax			
	comp=Z,130nm,4.3s									
GYA						LR	LR			
	comp=N,1μm,9.6s									
GYA						LR	LR			
	comp=E,3μm,13.9s									
GYA						LR	LR			
	comp=Z,3μm,13.9s									
TIA	**Tai'an**	**14.68**	**352**			P		P	22 31 12.0	+5.2
TIA						LR	LR			
	comp=N,2μm,21.5s									
TIA						LR	LR			
	comp=E,3μm,15.5s									
TIA						LR	LR			
	comp=Z,2μm,13.4s									
KDM	**Kudat**	**14.88**	**191**			P		**Pn**	**22 31 05.2**	**+1.6**
CTBH	**Cotabato--PC H**	**15.03**	**162**	⇑	*i*	P		**P**	**22 31 09.3**	**-1.6**
JNU	**Nakatsue**	**15.21**	**39**			Pn		**Pn**	**22 31 09.8**	**+1.8**
JNU	**Nakatsue**	**15.21**	**39**			Pn		**Pn**	**22 31 09.8**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=204,slow=10,SNR=4.0									
XAN	**Xi'an**	**15.52**	**325**			P		**P**	**22 31 16.8**	**+0.5**
XAN						pmax	pmax			
	comp=Z,21nm,1.3s									
XAN						LR	LR			
	comp=N,2μm,13.5s									
XAN						LR	LR			
	comp=E,810nm,12.1s									
XAN						LR	LR			
	comp=Z,1μm,11.8s									
DAV	**Davao City (W)**	**15.61**	**157**			Pn		**Pn**	**22 31 13.2**	**0.0**
DAV	**Davao City (W)**	**15.61**	**157**			Pn		**Pn**	**22 31 13.2**	**0.0**
	comp=Z,33nm,0.3s,baz=315,slow=4.3,SNR=2.3									
DAV						LR	LR		22 37 50.9	
	comp=Z,1μm,19.6s,baz=339,slow=40									
KMI	**Kunming**	**15.84**	**286**			P		**Pn**	**22 31 14.0**	**-2.4**
KMI						pP		**P**	**22 31 17.0**	**-3.1**
KMI						sP		sP	22 31 21.5	-8.3
KMI						PP		**PnPn**	**22 31 25.3**	**+0.2**
KMI						S		**Sn**	**22 34 09.0**	**-2.4**
KMI						sS		**S**	**22 34 20.5**	**-5.0**
KMI						SS		**SnSn**	**22 34 27.8**	**+3.4**
KMI						pmax	pmax			
	comp=Z,8.0nm,1.1s									
KMI						pmax	pmax			
	comp=Z,240nm,4.3s									
KMI						LR	LR			
	comp=N,1μm,9.1s									
KMI						LR	LR			
	comp=E,1μm,10.0s									
KMI						LR	LR			
	comp=Z,1μm,10.9s									
KKM	**Kota Kinabalu**	**15.84**	**192**		*e*	Pn		**Pn**	**22 31 16.6**	**+0.2**
	comp=Z,157nm,1.3s									
KKM	**Kota Kinabalu**	**15.84**	**192**			P		**Pn**	**22 31 17.1**	**+0.7**
KKM	**Kota Kinabalu**	**15.84**	**192**			P		**P**	**22 31 19.8**	**-0.2**
	comp=Z,92nm,1.4s,comp=Z,1μm									
SDKM	**Sandakan**	**16.07**	**189**			P		**Pn**	**22 31 19.7**	**+0.4**
MYLDM	**Lahad Datu**	**16.40**	**184**			P		**P**	**22 31 25.5**	**-0.6**
MYLDM	**Lahad Datu**	**16.40**	**184**			P		**Pn**	**22 31 24.5**	**+1.1**
	comp=Z,103nm,1.6s,comp=Z,2μm									
CD2	**Chengdu**	**16.91**	**306**			P		**Pn**	**22 31 27.5**	**-2.3**
CD2						pP		**P**	**22 31 32.0**	**+0.3**
CD2						sP		sP	22 31 36.0	-5.5
CD2						PP		**PnPn**	**22 31 41.5**	**+1.9**
CD2						S		**Sn**	**22 34 32.3**	**-4.8**
CD2						sS		S	22 34 39.5	-7.5
CD2						SS		**SnSn**	**22 34 52.8**	**+2.3**
CD2						pmax	pmax			
	comp=Z,20nm,0.7s									
CD2						pmax	pmax			
	comp=Z,220nm,4.5s									
CD2						LR	LR			
	comp=N,4μm,10.0s									
CD2						LR	LR			
	comp=E,4μm,10.2s									
CD2						LR	LR			
	comp=Z,5μm,12.5s									
KSAR	**Wonju Array Be**	**17.32**	**23**			P		**P**	**22 31 36.6**	**+0.5**
TSM	**Tawau**	**17.32**	**186**			P		**P**	**22 31 35.8**	**-0.5**
KSRS	**Korea Array**	**17.34**	**23**			P		**P**	**22 31 36.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=13									
BJT	**Baijiatuau**	**18.55**	**352**		*e*	P		**Pn**	**22 31 52.4**	**+2.4**
	comp=Z,64nm,0.9s									
BJI	**Beijing**	**18.57**	**352**			P		**Pn**	**22 31 51.0**	**+0.8**
BJI						S		**S**	**22 35 18.5**	**-1.7**
BJI						pmax	pmax			
	comp=Z,34nm,0.9s									
BJI						pmax	pmax			
	comp=Z,260nm,4.2s									
BJI						LR	LR			
	comp=N,2μm,13.6s									
BJI						LR	LR			
	comp=E,1μm,20.4s									
BJI						LR	LR			
	comp=Z,870nm,16.1s									
BTM	**Bintulu**	**19.39**	**200**			P		**P**	**22 31 59.7**	**+0.6**
JWT	**Wachi**	**19.42**	**42**			P		**Pn**	**22 32 01.4**	**+0.9**
CHTO	**Chiang Mai**	**19.56**	**265**		*e*	P		**P**	**22 32 01.6**	**+0.6**
CHTO						pmax	pmax			
	comp=Z,60nm,1.5s									
CHTO	**Chiang Mai**	**19.56**	**265**		*e*	Pn		**P**	**22 32 01.6**	**+0.6**
	comp=Z,60nm,1.5s									
CHTO	**Chiang Mai**	**19.56**	**265**			P		**P**	**22 32 01.2**	**+0.2**
	comp=Z,33nm,2.6s,comp=Z,834nm									
CMAR	**Chiang Mai Arr**	**19.64**	**264**			P		**P**	**22 32 01.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**19.64**	**264**			P		**P**	**22 32 01.9**	**+0.2**
	baz=74,slow=9.3,SNR=29									
CMAR						LR	LR		22 40 33.7	
	comp=Z,732nm,18.9s,baz=81,slow=40									
LZH	**Lanzhou**	**19.88**	**320**	⇑		P		**Pn**	**22 32 06.0**	**-0.2**
LZH						pP		**pP**	**22 32 11.3**	**+0.1**
LZH						sP

MAT Matsushiro 21.98 43 P **P** **22 32 27.5 +0.5**
MAT S **S** **22 36 25.8 -2.7**
MAT Matsushiro 21.98 43 P **P** **22 32 30.9 +3.9**
MJAR Matsushiro Arr 21.98 43 P **P** **22 32 27.2 +0.2**
MJAR Matsushiro Arr 21.98 43 P **P** **22 32 27.2 +0.2**
comp=Z,6.7nm,0.9s,baz=230,slow=11,SNR=20
MJAR LR LR 22 41 37.5
comp=Z,202nm,21.7s,baz=230,slow=38
SMKI Samarinda 22.07 186 P **P** **22 32 28.8 +0.7**
comp=Z,87nm,1.3s,comp=Z,8µm
TNTI Ternate 22.09 159 P **P** **22 32 26.6 -1.7**
comp=Z,142nm,1.3s,comp=Z,2µm
JRY Ryogami san 22.12 45 P **P** **22 32 29.5 +0.9**
CN2 Changchun 22.63 11 *e*P **P** **22 32 36.5 +2.6**
CN2 *es*P **sP** **22 32 43.5 -0.3**
CN2 *e*S **S** **22 36 38.8 -1.6**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,900nm,13.0s
CN2 LR LR
comp=E,1µm,13.0s
CN2 LR LR
comp=Z,1µm,15.0s
LUWI Luwuk 22.76 172 P **P** **22 32 34.2 -1.2**
comp=Z,296nm,1.2s,comp=Z,3µm
STKI Sintang 22.85 201 P **P** **22 32 35.1 -1.3**
comp=Z,37nm,1.5s,comp=Z,7µm
LBMI Labuha 23.46 160 P **P** **22 32 41.0 -1.6**
comp=Z,109nm,1.2s,comp=Z,1µm
MDJ Mudanjiang 24.36 18 P **P**
MDJ pP **pP** **22 32 58.3 +0.2**
MDJ sP **sP** **22 33 01.0 -0.1**
MDJ S **S** **22 37 12.8 +3.9**
MDJ pmax pmax
comp=Z,5.0nm,1.1s
MDJ pmax pmax
comp=Z,40nm,4.7s
MDJ LR LR
comp=N,630nm,15.5s
MDJ LR LR
comp=E,570nm,16.5s
MDJ LR LR
comp=Z,700nm,14.8s
MDJ Mudanjiang 24.36 18 *e*P **P** **22 32 51.7 +0.8**
comp=Z,67nm,1.3s
GTA Gaotai 24.47 321 *e*P **P** **22 32 51.8 -0.3**
GTA pP **pP** **22 32 56.0 -3.3**
GTA sP **sP** **22 32 59.3 -3.0**
GTA S **S** **22 37 11.5 +0.5**
GTA sS **sS** **22 37 19.0 -3.9**
GTA pmax pmax
comp=Z,17nm,2.0s
GTA pmax pmax
comp=Z,170nm,5.2s
GTA LR LR
comp=N,1µm,11.2s
GTA LR LR
comp=E,2µm,12.8s
GTA LR LR
comp=Z,2µm,13.3s
KULM Kulim 24.50 231 *e*P **P** **22 32 54.4 +2.1**
comp=Z,18nm,1.3s
USRK Ussuriysk Arra 24.74 22 P **P** **22 32 55.8 +1.6**
comp=Z,1.6nm,0.6s,baz=214,slow=10,SNR=6.2
USRK LR LR 22 44 17.7
comp=Z,304nm,18.1s,baz=195,slow=41
KBKI Kotabaru 25.01 188 P **P** **22 32 55.7 -1.2**
comp=Z,41nm,1.6s,comp=Z,790nm
SWI Sorong 25.11 151 P **P** **22 32 56.8 -1.1**
comp=Z,106nm,0.9s,comp=Z,1µm
GUMO Guam 25.38 104 LR LR 22 42 42.2
comp=Z,491nm,18.6s,baz=171,slow=36
SHL Shillong 25.65 284 *e*PKP **P** **22 33 03.0 0.0**
JOM Ohasama 25.69 41 P **P** **22 33 04.3 +1.3**
KAPI Kappang 26.49 180 *e*P **P** **22 33 11.7 +1.3**
comp=Z,23nm,0.9s
KAPI Kappang 26.49 180 P **P** **22 33 11.1 +0.7**
comp=Z,24nm,1.0s,baz=340,slow=15,SNR=6.0
KAPI LR LR 22 43 20.8
comp=Z,171nm,20.8s,baz=116,slow=36
LSA Lhasa 26.79 293 P **P** **22 33 14.3 +0.7**
LSA pmax pmax
comp=Z,40nm,0.9s
LSA LR LR
comp=N,320nm,12.7s
LSA LR LR
comp=E,600nm,12.7s
LSA LR LR
comp=Z,860nm,13.9s
LSA Lhasa 26.79 293 *e*P **P** **22 33 13.8 +0.2**
LSA pmax pmax
comp=Z,25nm,0.8s
LSA Lhasa 26.79 293 *e*P **P** **22 33 13.8 +0.2**
comp=Z,25nm,0.8s
ULN Ulaanbaatar 28.04 342 *e*P **P** **22 33 24.6 +0.4**
comp=Z,10nm,0.9s
ULN Ulaanbaatar 28.04 342 P **P** **22 33 21.6 -2.6**
SONM Songino Array 28.20 341 P **P** **22 33 25.9 +0.2**
SONM Songino Array 28.20 341 P **P** **22 33 25.9 +0.2**
comp=Z,6.8nm,0.8s,baz=156,slow=11
SONM LR LR 22 45 32.6
comp=Z,866nm,20.1s,baz=155,slow=38
ERM Erimo 28.37 39 *e*P P 22 33 33.1 +6.1
ERM pmax pmax
comp=Z,12nm,1.3s
KLR Kul'dur 29.19 16 *e*P **P** **22 33 36.3 +2.1**
KLR MLR MLR
comp=E,2µm,15.0s
KLR MLR MLR
comp=E,900nm,12.0s
KLR MLR MLR
comp=Z,3µm,12.0s
ASAJ Asahikawa 29.42 35 P **P** **22 33 36.9 +0.6**
ASAJ Asahikawa 29.42 35 P **P** **22 33 36.9 +0.6**
comp=Z,4.0nm,0.7s,baz=185,slow=11,SNR=2.4
ASAJ LR LR 22 45 49.8
comp=Z,433nm,21.1s,baz=23,slow=37
TAPN Taplejung 29.50 288 *e*P **P** **22 33 37.8 +0.2**
HABR Khabarovsk 29.50 21 *e*P P 22 33 40.2 +3.2
HABR *e**SP sP 22 33 48.9 +1.7
HABR *e* 22 34 37.5
HABR *e*PPP PPP 22 34 45.7
HABR *e*S S 22 38 38.9 +8.9
HABR *e* 22 40 24.7
HABR *i* 22 44 13.4
HABR pmax pmax
comp=E,139nm,2.0s
HABR pmax pmax
comp=Z,74nm,2.5s
HABR pmax pmax
comp=N,37nm,1.2s
ODAN Odare 29.75 286 *e*P **P** **22 33 39.5 -0.2**
comp=N,26nm,1.0s
RAMN Ramite 30.46 287 *e*P **P** **22 33 46.3 +0.3**
GUN Gumba 31.15 288 *e*P **P** **22 33 52.2 -0.1**
comp=N,105nm,1.3s
YUK Yuzh-Kuril'sk 31.18 38 *d* *i*P P 22 33 59.9 +8.1
YUK *i* 22 34 53.6
YUK *i*S SS 22 40 41.1 -29
YUK *i*SS SSS 22 41 00.4
YUK MLR MLR
comp=E,189nm,18.0s
YUK MLR MLR
comp=N,215nm,18.0s
YUK MLR MLR
comp=Z,189nm,18.0s
YSS Yuzh-Sakhalins 31.46 31 *e*P P 22 34 02.0 +7.7
YSS MLR MLR
comp=N,300nm,16.0s
YSS MLR MLR
comp=Z,400nm,16.0s
PKI Pulchoki 31.55 288 *e*P **P** **22 33 55.1 -0.6**
PKIN Phulchoki 31.56 288 *e*P **P** **22 33 55.7 -0.1**
KKN Kakani 31.68 288 *e*P **P** **22 33 56.1 -0.6**
comp=Z,45nm,1.3s
DMN Daman 31.82 288 *e*P **P** **22 33 57.5 -0.5**
comp=Z,53nm,1.3s
TLY Talaya 32.44 341 *e*P **P** **22 34 03.3 +0.4**
TLY *e*S **S** **22 39 10.2 -5.9**
TLY pmax pmax
comp=Z,13nm,0.9s
TLY MLR MLR
comp=Z,570nm,15.0s

IRK Irkutsk 32.76 343 *e*P **P** **22 34 05.4 -0.3**
IRK pmax pmax
comp=Z,30nm,1.2s
DANN Dangsing 33.05 289 *e*P **P** **22 34 08.3 -0.6**
KOLN Koldanda 33.16 288 *e*P **P** **22 34 09.2 -0.5**
comp=Z,25nm,1.1s
MOY Mondy 33.27 339 *e*P **P** **22 34 10.8 +0.5**
WMQ Urumqi 34.43 317 P **P** **22 34 20.8 +0.4**
WMQ pP **pP** **22 34 26.5 -1.2**
WMQ sP **sP** **22 34 29.5 -1.2**
WMQ PP **PP** **22 35 37.0 -1.6**
WMQ PcP **PcP** **22 36 55.8 +0.2**
WMQ S **S** **22 39 48.0 +0.8**
WMQ sS **sS** **22 39 57.3 -1.9**
WMQ PcS **PcS** **22 40 42.0 +0.1**
WMQ SS **SnSn** **22 41 58.0 -0.4**
WMQ ScS **ScS** **22 44 40.0 -2.0**
WMQ pmax pmax
comp=Z,13nm,1.0s
WMQ pmax pmax
comp=Z,47nm,4.6s
WMQ LR LR
comp=N,950nm,14.6s
WMQ LR LR
comp=E,1µm,12.4s
WMQ LR LR
comp=Z,640nm,17.0s
HVS Khovu-Aksy 35.69 332 *e*P **P** **22 34 32.0 +0.8**
HVS pmax pmax
comp=Z,18nm,1.0s
DDI Dehra Dun 38.14 292 *ex* **P** **22 34 51.0 -1.3**
MK31 Makanchi Array 39.19 319 *i* P **P** **22 35 00.7 -0.2**
MK31 pmax pmax
comp=Z,26nm,0.9s
MK31 Makanchi Array 39.19 319 *e*P **P** **22 35 00.9 0.0**
MKAR Makanchi Array 39.19 319 P **P** **22 35 01.0 +0.1**
MKAR Makanchi Array 39.19 319 P **P** **22 35 00.9 +0.1**
MKAR Makanchi Array 39.19 319 P **P** **22 35 00.9 +0.1**
comp=Z,11nm,0.8s,baz=112,slow=9.6,SNR=92
MKAR LR LR 22 51 38.1
comp=Z,272nm,21.5s,baz=116,slow=37
YAK Yakutsk 40.96 7 *e*P **P** **22 35 16.3 +1.1**
YAK pmax pmax
comp=Z,18nm,1.3s
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=N,15nm,1.0s
YAK MLR MLR
comp=N,359nm,14.0s
YAK MLR MLR
comp=Z,512nm,17.0s
PMG Port Moresby 41.05 136 *e*P **P** **22 35 16.6 +0.1**
PMG Port Moresby 41.05 136 P **P** **22 35 15.7 -0.8**
comp=Z,31nm,1.1s,baz=324,slow=5.4,SNR=4.5
KSH Kashi 41.10 306 ⇑ *i*P **P** **22 35 20.0 +3.1**
KSH sP **sP** **22 35 30.8 +3.5**
KSH *e*PP **PnPn** **22 36 59.3 +2.9**
KSH *e*PcP **PcP** **22 37 18.8 +2.5**
KSH *e*ScP **ScP** **22 41 05.5 +0.8**
KSH *e*S **S** **22 41 33.0 +4.4**
KSH *e*sS **sS** **22 41 45.5 +4.7**
KSH *e*SS **SS** **22 44 33.0 +1.5**
KSH *e*ScS **ScS** **22 45 20.0 -0.2**
KSH pmax pmax
comp=Z,33nm,1.0s
KSH pmax pmax
comp=Z,99nm,3.3s
KSH LR LR
comp=N,470nm,9.9s
KSH LR LR
comp=E,390nm,9.8s
KSH LR LR
comp=Z,410nm,10.5s
ULHL Ulahol 41.57 310 *i*P **P** **22 35 21.9 +1.1**
ULHL Ulahol 41.57 310 P **P** **22 35 22.0 +1.1**
SNR=45
ZAA0 Zalesovo Array 41.62 330 *e*P **P** **22 35 20.0 -0.8**
ZALV Zalesovo Beam 41.62 330 P **P** **22 35 20.3 -0.5**
ZALV Zalesovo Beam 41.62 330 P **P** **22 35 20.3 -0.5**
ZALV Zalesovo Beam 41.62 330 P **P** **22 35 20.3 -0.5**
comp=Z,17nm,0.8s,baz=117,slow=7.8,SNR=87
ZALV LR LR 22 54 05.8
comp=Z,669nm,18.4s,baz=250,slow=38
TKM2 Tokmak 2 42.22 311 *e*P **P** **22 35 27.1 +1.0**
TKM2 Tokmak 2 42.22 311 *e*P **P** **22 35 27.1 +1.0**
TKM2 Tokmak 2 42.22 311 P **P** **22 35 27.2 +1.0**
SNR=18
KZA Kyzart 42.24 309 *i*P **P** **22 35 28.2 +1.7**
KZA Kyzart 42.24 309 P **P** **22 35 28.3 +1.7**
SNR=31
COEN Coen 42.29 145 *e*P **P** **22 35 26.2 -0.4**
comp=Z,178nm,1.0s
KBK Karagaybulak 42.61 310 *i*P **P** **22 35 30.6 +1.4**
KBK Karagaybulak 42.61 310 P **P** **22 35 30.7 +1.4**
SNR=18
PETK Petropavlovsk- 42.80 33 LR LR 22 55 00.1
comp=Z,166nm,18.2s,baz=332,slow=38
UCH Uchtor 42.81 309 *i*P **P** **22 35 33.4 +2.2**
UCH Uchtor 42.81 309 P **P** **22 35 33.4 +2.2**
SNR=7.9
CHMS Chumysh 42.84 310 *i*P **P** **22 35 31.6 +0.7**
CHMS Chumysh 42.84 310 P **P** **22 35 31.7 +0.7**
SNR=17
NVS Novosibirsk 42.90 330 ⇑ *i*P **P** **22 35 30.5 -0.7**
NVS pmax pmax
comp=N,19nm,1.9s
NVS pmax pmax
comp=Z,40nm,1.9s
NVS pmax pmax
comp=E,16nm,1.4s
AAK Ala-Archa 42.92 310 *c* *i*P **P** **22 35 31.6 -0.2**
AAK pmax pmax
comp=Z,23nm,1.2s
AAK Ala-Archa 42.92 310 *e*P **P** **22 35 32.8 +1.0**
comp=Z,1.9nm,0.8s
AAK Ala-Archa 42.92 310 P **P** **22 35 32.9 +1.1**
SNR=9.6
USP Ospenovka 43.09 311 *i*P **P** **22 35 33.0 +0.1**
USP Ospenovka 43.09 311 P **P** **22 35 33.1 +0.1**
SNR=14
KURK Kurchatov 43.14 322 *c* *i*P **P** **22 35 33.1 -0.1**
KURK pmax pmax
comp=Z,49nm,1.2s
KURK Kurchatov 43.14 322 *e*P **P** **22 35 33.0 -0.1**
comp=Z,38nm,1.1s
KURBB Kurchatov Arra 43.15 322 P **P** **22 35 33.3 0.0**
comp=Z,27nm,0.9s,baz=124,slow=7.5,SNR=138
AML Almayashu 43.38 309 *i*P **P** **22 35 37.2 +1.5**
AML Almayashu 43.38 309 P **P** **22 35 37.3 +1.5**
SNR=69
EKS2 Erkin-Say 43.44 310 *e*P **P** **22 35 37.1 +1.1**
EKS2 pmax pmax
comp=Z,56nm,1.9s
EKS2 Erkin-Say 43.44 310 *e*P **P** **22 35 37.1 +1.1**
comp=Z,56nm,1.9s
EKS2 Erkin-Say 43.44 310 P **P** **22 35 37.1 +1.1**
SNR=12
WRAB Tennant Creek 43.77 160 *d* *i*P **P** **22 35 36.9 -1.7**
WRAB Tennant Creek 43.77 160 *e*P **P** **22 35 35.9 -2.7**
comp=Z,50nm,1.0s
WRA Warramunga Arr 43.78 160 P **P** **22 35 37.1 -1.6**
WRA PcP **PcP** **22 37 24.6 -0.6**
WRA S S 22 42 17.2 +9.2
WRA Warramunga Arr 43.78 160 P **P** **22 35 37.1 -1.6**
comp=Z,28nm,0.8s,baz=342,slow=8.8,SNR=110
WRA PcP **PcP** **22 37 24.6 -0.6**
comp=Z,5.0nm,0.9s,baz=340,slow=3.6,SNR=7.6
WRA S S 22 42 17.2 +9.2
comp=Z,1.7nm,1.0s,baz=344,slow=16,SNR=4.5
KK31 Karatay Array 45.88 310 *c*P **P** **22 35 55.3 0.0**
KK31 pmax pmax
comp=Z,26nm,0.9s
KKAR Karatay Array 45.88 310 *e*P **P** **22 35 55.3 0.0**
KKAR *e* 22 36 05.4
KKAR pmax pmax
comp=Z,24nm,0.9s
KKAR Karatay Array 45.88 310 *e*P **P** **22 35 55.3 0.0**
comp=Z,24nm,0.9s
KKAR *e* 22 36 05.4
KBL Kabul 45.96 298 *e*P **P** **22 35 57.1 +0.8**
KBL Kabul 45.96 298 *e*P **P** **22 35 57.1 +0.8**
SEY Seymchan 46.86 20 *e*P P 22 36 07.5 +4.9
AS31 Alice Springs 47.15 162 *e*P **P** **22 36 03.8 -1.5**
AS31 *e*PcP **PcP** **22 37 36.2 -0.6**

ASAR Alice Springs 47.15 162 P **P** **22 36 04.3 -1.0**
ASAR PcP **PcP** **22 37 36.4 -0.4**
ASAR S S 22 43 11.3 +15
ASAR Alice Springs 47.15 162 P **P** **22 36 04.3 -1.0**
comp=Z,14nm,0.8s,baz=332,slow=6.8,SNR=95
ASAR PcP **PcP** **22 37 36.4 -0.4**
comp=Z,5.3nm,0.9s,baz=346,slow=3.2,SNR=8.9
ASAR S S 22 43 11.3 +15
comp=Z,0.2nm,0.3s,baz=357,slow=25,SNR=6.4
VOSK Vostochnaya 48.29 322 *i* P **P** **22 36 13.0 -0.9**
VOSK pmax pmax
comp=Z,18nm,1.3s
BVAR Borovoye Array 48.74 323 P **P** **22 36 17.4 +0.1**
BVAR Borovoye Array 48.74 323 P **P** **22 36 17.4 +0.1**
BVAR Borovoye Array 48.74 323 P **P** **22 36 17.4 +0.1**
comp=Z,6.6nm,0.8s,baz=112,slow=11,SNR=40
BRVK Borovoye 48.81 323 *c* *i*P **P** **22 36 18.1 +0.2**
BRVK pmax pmax
comp=Z,44nm,1.7s
BRVK Borovoye 48.81 323 *e*P **P** **22 36 17.3 -0.5**
comp=Z,21nm,1.0s
CTAO Charters Tower 48.99 146 *e*P **P** **22 36 19.7 0.0**
CTAO pmax pmax
comp=Z,68nm,1.2s
CTAO Charters Tower 48.99 146 *e*P **P** **22 36 19.7 0.0**
comp=Z,68nm,1.2s
TIXI Tiksi 50.31 4 *e*P P 22 36 32.3 +3.3
TIXI pmax pmax
comp=Z,24nm,1.4s
IMYA Miami 53.28 300 *e*P **P** **22 36 53.1 +1.1**
ISRO Mashad 53.79 300 *e*P **P** **22 36 57.2 +1.5**
IPAY Payeh 54.17 300 *e*P **P** **22 36 59.9 +1.3**
AB31 Akbulak array 54.18 316 *c* *e*P **P** **22 36 58.4 +0.2**
AB31 pmax pmax
comp=Z,5.0nm,0.5s
ABKAR Akbulak array 54.18 316 *e*P **P** **22 36 58.2 0.0**
comp=Z,5.2nm,0.6s
IAKL Akhelmad 54.36 300 *e*P **P** **22 37 00.4 +0.4**
BILL Bilibino 54.57 20 *e*P P 22 37 05.7 +5.0
BILL pmax pmax
comp=Z,4.0nm,1.1s
ISFR Sfrayin 54.95 301 *e*P **P** **22 37 03.2 -1.1**
SVE Sverdlovsk 55.24 325 ⇑ *i*P **P** **22 37 06.6 +0.9**
SVE *e*S S 22 44 55.5 +7.8
SVE pmax pmax
comp=Z,51nm,1.2s
SVE MLR MLR
comp=Z,511nm,13.0s
AKTO Aktyubinsk 55.58 317 *i*P **P** **22 37 07.8 -0.5**
AKTO Aktyubinsk 55.58 317 P **P** **22 37 08.6 +0.4**
AKTO Aktyubinsk 55.58 317 P **P** **22 37 08.6 +0.4**
comp=Z,7.1nm,0.9s,baz=86,slow=6.9,SNR=18
AKTO LR LR 23 02 31.5
comp=Z,447nm,18.8s,baz=104,slow=38
ARU Arti 56.26 324 *c* *i*P **P** **22 37 12.7 -0.3**
ARU 22 39 17.8
ARU S **S** **22 45 04.0 +2.6**
ARU pmax pmax
comp=Z,35nm,1.2s
ARU MLR MLR
comp=Z,593nm,17.0s
IBND Bandar-abas 57.11 289 *e*P **P** **22 37 21.2 +1.7**
STKA Stephens Creek 57.24 158 *e*P **P** **22 37 19.5 -0.7**
comp=Z,6.2nm,0.9s
STKA Stephens Creek 57.24 158 P **P** **22 37 19.8 -0.5**
comp=Z,22nm,0.8s,baz=337,slow=6.9,SNR=47
STKA LR LR 23 03 20.6
comp=Z,190nm,18.2s,baz=24,slow=38
SOKR Solikamsk 57.84 328 ⇑ *i*P **P** **22 37 25.1 +1.0**
SOKR S S 22 45 14.9 -7.1
SOKR pmax pmax
comp=Z,20nm,1.2s
SOKR MLR MLR
comp=Z,1µm,18.0s
IANJ Anjilo 58.34 299 *e*P **P** **22 37 29.2 +0.8**
IPAR Pars 59.77 293 *e*P **P** **22 37 38.6 +0.2**
ISRV Sarvestan 59.78 292 *e*P **P** **22 37 38.3 -0.3**
IZEF Zefreh 59.94 296 *e*P **P** **22 37 40.0 +0.5**
MAK Makhachkala 62.66 308 *e*P P 22 37 50.9 -6.5
MAK *e* 22 38 34.2
MAK *e*PPP PPP 22 41 41.4
MAK *e*S **S** **22 46 19.2 -5.2**
MAK *e* 22 47 46.4
MAK pmax pmax
comp=Z,26nm,1.1s
IHRS Heris 63.51 303 *e*P **P** **22 38 04.0 +0.5**
DGRG David-gareji 64.39 307 P **P** **22 38 10.8 +1.8**
IMRD Marand 64.49 304 *e*P **P** **22 38 10.8 +0.9**
IDHR Dehrash 64.56 299 *e*P **P** **22 38 08.6 -1.8**
RDF Al-Radifah 64.65 293 *e*P **P** **22 38 10.3 -0.6**
RDF AMb AMB 22 38 11.7
comp=Z,33nm,1.0s
MIB Mutribah 64.66 294 *e*P **P** **22 38 10.0 -0.8**
MIB AMb AMB 22 38 11.3
comp=Z,18nm,0.9s
DUS Dusheti 64.81 307 P **P** **22 38 14.8 +3.0**
TBLG Delisi 64.83 307 *e*P **P** **22 38 13.0 +1.2**
TBLG Delisi 64.83 307 P **P** **22 38 13.0 +1.2**
NAY Al-Naaiem 64.85 293 *e*P **P** **22 38 10.8 -1.4**
NAY AMb AMB 22 38 12.0
comp=Z,10.0nm,1.0s
GNI Garni 65.03 305 *e*P **P** **22 38 13.0 -0.4**
comp=Z,27nm,1.4s
GNI Garni 65.03 305 P **P** **22 38 14.1 +0.8**
comp=Z,3.3nm,0.8s,baz=168,slow=18,SNR=6.1
GOR Gori 65.26 307 P **P** **22 38 16.2 +1.6**
GOF Gofitskoye 65.66 311 *e*P P 22 38 09.6 -7.5
ONI Oni 65.67 308 P **P** **22 38 19.2 +1.9**
AKH Akhalkalaki 65.80 307 P **P** **22 38 19.6 +1.3**
KBZ Khabaz 65.92 309 P **P** **22 38 19.3 +0.5**
KBZ Khabaz 65.92 309 P **P** **22 38 19.3 +0.5**
KBZ Khabaz 65.92 309 P **P** **22 38 19.3 +0.5**
comp=Z,11nm,1.0s,baz=81,slow=6.1,SNR=23
VRHR Novokhopersk 65.98 318 *e*P **P** **22 38 17.8 -1.2**
VRHR pmax pmax
comp=N,9.0nm,0.9s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR MLR MLR
comp=N,120nm,17.0s
VRHR MLR MLR
comp=E,160nm,17.0s
VRHR MLR MLR
comp=Z,280nm,17.0s
KIV Kislovodsk 66.04 310 *c* *i*P **P** **22 38 18.3 -1.4**
KIV pmax pmax
comp=Z,60nm,1.7s
KLMR Klimovskoe 66.52 328 *e*P **P** **22 38 20.1 -2.2**
KLMR *i* *SP **sP** **22 38 29.0 -3.9**
KLMR *e* 22 38 50.8
KLMR 22 40 44.9
KLMR pmax pmax
comp=Z,21nm,1.5s
KLMR MLR MLR
comp=Z,1µm,12.0s
VORD Divnogorie 67.46 318 *e*P **P** **22 38 27.5 -0.9**
VORD pmax pmax
comp=E,10.0nm,1.1s
VORD pmax pmax
comp=Z,10.0nm,1.1s
VORD pmax pmax
comp=N,5.0nm,0.6s
VSR Storozhevoye 67.51 318 *e*P **P** **22 38 27.9 -0.9**
VSR pmax pmax
comp=N,7.0nm,1.2s
VSR pmax pmax
comp=E,20nm,1.2s
VSR pmax pmax
comp=Z,20nm,1.2s
VSR MLR MLR
comp=N,130nm,24.0s
VSR MLR MLR
comp=Z,340nm,24.0s
VSR MLR MLR
comp=E,70nm,12.0s
OBN Obninsk 68.58 322 *e*P **P** **22 38 34.2 -1.2**
OBN pmax pmax
comp=Z,42nm,1.7s
APA Apatity 68.75 336 ⇑ *i*P P 22 38 46.8 +11
APA MLR MLR
comp=Z,500nm,18.0s
MSVF Nonsavu 69.36 120 *e*P **P** **22 38 42.1 +1.2**
MSVF pmax pmax

comp=Z,32nm,1.2s
ANN Anapa 69.63 311 *e*P P **22 38 39.7 -2.4**
ANN *e* 22 39 04.3
ANN *e* 22 41 11.8
ANN *e*S S **22 47 47.4 -1.7**
ANN *e*SS SS **22 52 17.4 +0.5**
ANN pmax pmax
comp=Z,41nm,1.3s
ARCES ARCESS Array B 71.34 338 P P **22 38 52.5 +0.3**
ARCES ARCESS Array B 71.34 338 P P **22 38 52.5 +0.3**
comp=Z,3.3nm,0.8s,baz=57,slow=5.5,SNR=5.7
ARCES LR LR 23 13 47.5
comp=Z,246nm,18.7s,baz=78,slow=39
SIM Simferopol' 71.91 312 *e*P P **22 38 56.0 0.0**
SIM *i* 22 39 07.0
SIM pmax pmax
comp=Z,11nm,0.8s
SIM MLR MLR
comp=Z,160nm,17.3s
ILAR Eielson Array 72.14 27 P P **22 38 57.4 +0.3**
ILAR Eielson Array 72.14 27 P P **22 38 57.4 +0.3**
comp=Z,0.6nm,0.7s,baz=295,slow=7.4,SNR=11
ILAR LR LR 23 12 05.7
comp=Z,88nm,18.6s,baz=253,slow=37
ASF Jabal al Asfar 72.85 298 P P **22 39 02.9 +0.9**
ASF Jabal al Asfar 72.85 298 P P **22 39 02.9 +0.9**
comp=Z,2.1nm,0.7s,baz=101,slow=5.2,SNR=6.1
FINES FINESS Array B 72.89 330 P P **22 39 01.6 +0.1**
FINES FINESS Array B 72.89 330 P P **22 39 01.6 +0.1**
comp=Z,3.1nm,0.9s,baz=134,slow=5.5,SNR=4.1
FINES LR LR 23 13 53.6
comp=Z,411nm,18.4s,baz=181,slow=38
VSU Vasula 73.28 327 *e*P P **22 39 03.5 -0.4**
VSU pmax pmax
comp=Z,19nm,1.4s
BR131 Keskin Array S 73.48 307 *e*P P **22 39 05.8 +0.1**
comp=Z,3.4nm,1.0s
BRTR Keskin Array B 73.48 307 P P **22 39 05.6 -0.1**
BRTR Keskin Array B 73.48 307 P P **22 39 05.6 -0.1**
comp=Z,1.8nm,0.8s,baz=107,slow=6.4,SNR=14
BRTR LR LR 23 17 15.8
comp=Z,61nm,18.1s,baz=226,slow=41
AKASG Malin Array Be 73.78 319*c*e P **22 39 06.5 -0.5**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 73.78 319 P P **22 39 06.4 -0.5**
AKASG Malin Array Be 73.78 319 P P **22 39 06.4 -0.5**
comp=Z,1.7nm,0.6s,baz=62,slow=6.0,SNR=8.7
AKASG LR LR 23 13 22.3
comp=Z,220nm,19.4s,baz=80,slow=37
AK01 Malin Array Si 73.79 319 *e*P P **22 39 06.2 -0.8**
AK01 *e*PP PP **22 41 50.8 -0.7**
KIEV Kiev 73.79 319 *e*P P **22 39 06.2 -0.8**
KIEV pmax pmax
comp=Z,21nm,1.4s
KIEV Kiev 73.79 319 *e*P P **22 39 06.2 -0.8**
comp=Z,21nm,1.4s
AK02 Malin Array Si 73.80 318 *e*P P **22 39 08.3 +1.2**
MMAI Mount Meron Ar 73.84 300 P P **22 39 08.6 +0.8**
MMAI Mount Meron Ar 73.84 300 P P **22 39 08.6 +0.8**
comp=Z,1.2nm,0.8s,baz=130,slow=5.8,SNR=3.8
IDID Didziasalis 74.06 324 *e*P P **22 39 08.6 +0.1**
IDID AMB AMB 22 39 20.9
comp=Z,13nm,1.3s
ANTO Ankara 74.08 307 *e*P P **22 39 08.7 -0.4**
ANTO pmax pmax
comp=Z,6.0nm,1.0s
ANTO Ankara 74.08 307 *e*P P **22 39 08.7 -0.4**
comp=Z,6.4nm,1.0s
NACGM Naroch 74.15 323 *e* P **22 39 07.0 -2.1**
IZAR Zarasai 74.22 324 *e*P P **22 39 09.3 -0.1**
IZAR AMB AMB 22 39 21.6
comp=Z,6.6nm,1.1s
ISAL Salakas 74.33 324 *e*P P **22 39 10.1 -0.1**
ISAL AMB AMB 22 39 22.4
comp=Z,9.5nm,1.4s
IIGN Ignalina 74.34 324 *e*P P **22 39 10.1 -0.1**
IIGN AMB AMB 22 39 22.4
comp=Z,5.7nm,0.9s
TLCR 75.49 313⇑ *i*P P **22 39 17.4 +0.4**
CFR Carcaliu 75.95 313⇑ *i*P P **22 39 21.8 +2.1**
AFI Afiamalu 76.04 111 LR LR 23 08 03.7
comp=Z,112nm,18.2s,baz=25,slow=32
INK Inuvik 76.13 21 P P **22 39 20.4 +0.1**
INK Inuvik 76.13 21 P P **22 39 20.4 +0.1**
comp=Z,3.7nm,0.8s,baz=292,slow=5.8,SNR=13
SUW Suwalki 76.42 323 *e*P P **22 39 21.7 -0.4**
SUW *e* 22 39 32.7
SUW pmax pmax
comp=Z,7.0nm,0.4s
SUW Suwalki 76.42 323 *e*P P **22 39 21.7 -0.4**
comp=Z,7.4nm,0.4s
SUW *e*PcP PcP **22 39 32.7 -1.2**
TESR Tescani 76.56 315⇑ *i*P P **22 39 20.0 -3.1**
VRI Vrincioaia 76.70 314⇑ *i*P P **22 39 24.2 +0.2**
PLOR Plostina 76.76 314⇑ *i*P P **22 39 24.8 +0.5**
BURAR Bucovina Array 77.16 316⇑ *i*P P **22 39 26.2 -0.4**
BUR08 Bucovina Ar. S 77.16 316 *e*P P **22 39 26.4 -0.2**
MLR Muntele Rosu 77.34 314⇑ *i*P P **22 39 28.7 +1.0**
VOIR 77.95 314⇑ *i*P P **22 39 30.7 -0.4**
KWP Kalwaria Pacla 78.10 319 *e*P P **22 39 31.7 0.0**
KWP *e* 22 39 41.6
KWP pmax pmax
comp=Z,34nm,1.0s
KWP Kalwaria Pacla 78.10 319 *e*P P **22 39 31.7 0.0**
comp=Z,34nm,1.0s
KWP *e*PcP PcP **22 39 41.6 +0.4**
KWP Kalwaria Pacla 78.10 319⇓ *i*P P **22 39 33.1 +1.4**
KOLS Kolonicke sedl 78.60 318 *e*P P **22 39 34.4 -0.1**
KOLS pmax pmax
comp=Z,29nm,2.5s
KOLS Kolonicke sedl 78.60 318 *e*P P **22 39 34.4 -0.1**
UZH Uzhgorod 78.69 318 *e*P P **22 39 34.2 -0.7**
UZH *i* 22 39 44.0
LOT Lotru 78.80 314⇓ *i*P P **22 39 34.9 -0.9**
DRGR 79.05 316⇑ *i*P P **22 39 35.7 -1.4**
STHS Stebnicka Huta 79.07 319 *e*P P **22 39 37.7 +0.6**
STHS pmax pmax
comp=Z,3.0nm,1.0s
STHS Stebnicka Huta 79.07 319 *e*P P **22 39 37.7 +0.6**
CRVS Cervenica-Dubn 79.11 318 *e*P P **22 39 37.2 -0.1**
CRVS pmax pmax
comp=Z,12nm,1.5s
CRVS Cervenica-Dubn 79.11 318 *e*P P **22 39 37.2 -0.1**
OJC Ojcow 79.66 320 *e*P P **22 39 40.2 0.0**
OJC Ojcow 79.66 320 *e*P P **22 39 40.2 0.0**
NB2 NORSAR Subarra 79.77 332 P P **22 39 39.8 -0.9**
comp=Z,0.2nm,0.6s,baz=66,slow=6.2
NOA NORSAR Array B 79.77 332 P P **22 39 40.0 -0.6**
NOA NORSAR Array B 79.77 332 P P **22 39 40.0 -0.6**
comp=Z,2.0nm,0.8s,baz=63,slow=5.5,SNR=6.8
NOA LR LR 23 18 21.4
comp=Z,617nm,19.5s,baz=55,slow=38
VTS Vitosha 80.15 312⇓ *i*P P **22 39 43.9 +0.6**
RPZ Rata Peaks 80.35 145 LR LR 23 12 04.1
comp=Z,116nm,19.3s,baz=188,slow=33
URZ Urewera 80.39 138 LR LR 23 11 18.1
comp=Z,112nm,18.7s,baz=310,slow=33
OKC Ostrava-Krasne 80.79 320 *e*P P **22 39 46.3 0.0**
OKC *e* 22 39 57.2
OKC Ostrava-Krasne 80.79 320 *e*P P **22 39 46.3 0.0**
OKC *e*pP pP **22 39 57.2 +3.0**
VYHS Vyhne 80.88 319 *e*P P **22 39 47.0 +0.1**
VYHS pmax pmax
comp=Z,8.0nm,1.4s
VYHS Vyhne 80.88 319 *e*P P **22 39 47.0 +0.1**
KSP Ksiaz 81.48 321 *e*P P **22 39 50.7 +0.7**
KSP *e*PP pP **22 40 00.7 +2.8**
VRAC Vranov 81.93 320⇑ *i*P P **22 39 53.0 +0.6**
TREC Trest 82.59 320 AMS AMS 23 20 00.0
comp=Z,300nm,21.4s
BRG Berggiesshubel 82.83 322 *e*P P **22 39 57.1 +0.1**
comp=Z,5.1nm,1.0s
BRG *e* 22 40 08.7
comp=Z,9.5nm,1.3s
BRG
comp=N,178nm,14.7s
BRG
comp=E,145nm,10.8s
BRG
comp=Z,296nm,18.4s
BRG Berggiesshubel 82.83 322 *e*P P **22 39 57.2 +0.1**
BRG *e* 22 40 08.7
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG MLR MLR
comp=N,178nm,14.7s
BRG MLR MLR
comp=E,145nm,10.8s
BRG MLR MLR
comp=Z,296nm,18.4s
PRU Pruhonice 82.86 321 *e*P P **22 39 57.2 0.0**
PRU *e* 22 40 08.3
PRU MLR MLR
comp=Z,200nm,15.5s
PRU Pruhonice 82.86 321 *e*P P **22 39 57.2 0.0**
PRU *e*pP pP **22 40 08.3 +3.2**
PRU AMS AMS 23 20 10.0
comp=Z,200nm,15.5s
CLL Collm 83.17 323 *i* P P **22 39 58.8 0.0**
CLL *i* 22 40 09.1
CLL pmax pmax
comp=Z,16nm,1.6s
CLL MLR MLR
comp=Z,300nm,18.3s
CLL Collm 83.17 323 *i* P P **22 39 58.8 0.0**
comp=Z,16nm,1.6s
CLL *i* sP sP **22 40 09.1 -0.5**
CLL *i* sPcP 22 40 12.9
CLL LmV 23 20 00.0
comp=Z,300nm,18.3s
KMBO Kilima Mbogo 83.27 266 *e*P P **22 39 60.0 -0.3**
comp=Z,4.2nm,1.0s
KMBO Kilima Mbogo 83.27 266 P P **22 39 59.8 -0.5**
comp=Z,3.5nm,0.9s,baz=46,slow=15,SNR=8.8
KMBO LR LR 23 14 18.4
comp=Z,90nm,20.5s,baz=286,slow=34
KHC Kasperske Hory 83.80 321 *e*P P **22 40 01.8 -0.3**
KHC *e* 22 40 13.0
KHC MLR MLR
comp=Z,300nm,16.3s
KHC Kasperske Hory 83.80 321 *e*P P **22 40 01.8 -0.3**
KHC *e*pP pP **22 40 13.0 +2.9**
KHC AMS AMS 23 20 30.0
comp=Z,300nm,16.3s
GEC2 GERESS Array S 83.85 320 *e*P P **22 40 02.0 -0.5**
GEC2 GERESS Array S 83.85 320 *e*P P **22 40 02.0 -0.5**
GERES GERESS Array B 83.85 320 P P **22 40 02.5 0.0**
GERES GERESS Array B 83.85 320 P P **22 40 02.5 0.0**
comp=Z,1.8nm,0.9s,baz=60,slow=5.3,SNR=8.4
GERES LR LR 23 21 13.0
comp=Z,182nm,20.5s,baz=82,slow=38
MOA Molln 83.94 319⇑ *i*P P **22 40 03.0 +0.2**
comp=Z,15nm,1.6s
NKC Novy Kostel 83.97 322 *e*P P **22 40 03.6 +0.6**
NKC *e* 22 40 13.9
NKC MLR MLR
comp=Z,400nm,16.5s
NKC Novy Kostel 83.97 322 *e*P P **22 40 03.6 +0.6**
NKC *e*pP pP **22 40 13.9 +3.0**
NKC AMS AMS 23 19 50.0
comp=Z,400nm,16.5s
WET Wettzell 84.20 321 *e*P P **22 40 04.3 +0.1**
WET Wettzell 84.20 321 *e*P P **22 40 04.3 +0.1**
MOX Moxa 84.25 323 *e*L L 23 21 02.1
comp=Z,264nm,20.1s
ROTZ Rotzenmuhle 84.31 322 *e*P P **22 40 05.0 +0.3**
BOJS Bojanci 84.33 317 *i* P P **22 40 05.5 +0.6**
VISS Visnje 84.46 317 *i* P P **22 40 05.6 0.0**
GRF Grafenberg Arr 84.92 322 *e*P P 22 40 04.2 -3.6
comp=Z,46nm,1.7s
GRF *e*pP pP 22 40 17.8 +2.1
GRF *e*L L 23 21 27.4
comp=Z,278nm,18.2s
GRF Grafenberg Arr 84.92 322 *e*P P 22 40 04.2 -3.6
GRF *e**P pP 22 40 17.8 +2.1
GRF pmax pmax
comp=Z,46nm,1.7s
GRF MLR MLR
comp=Z,300nm,18.2s
YKW3 Yellowknife Ar 85.83 22 *e*P P **22 40 11.6 -0.4**
comp=Z,0.1nm,1.1s
YKA Yellowknife Ar 85.88 22 P P **22 40 12.8 +0.6**
YKA Yellowknife Ar 85.88 22 P P **22 40 12.8 +0.6**
comp=Z,2.0nm,0.8s,baz=317,slow=4.7,SNR=39
CEL Celeste 86.97 310 *e*P P **22 40 18.1 -0.1**
comp=Z,31nm,1.2s
ESK Eskdalemuir 89.26 331 *i* P P 22 40 24.7 -4.0
KEST Kesra 92.78 310 LR LR 23 25 51.7
comp=Z,44nm,18.9s,baz=275,slow=38
PPT Papeete 97.08 106 LR LR 23 19 11.3
comp=Z,120nm,20.4s,baz=343,slow=32
TXAR Lajitas Array 114.40 41 PKP PKPdf 22 46 13.4 +0.2
TXAR Lajitas Array 114.40 41 PKP PKPdf 22 46 13.4 +0.2
comp=Z,0.8nm,0.9s,baz=222,slow=2.2,SNR=5.3

GUC 26 22:42:27.9±1.2, 24.03S×69.91W, h41km±20km, ML3.9, 6C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANCH	**Antofagasta**	**0.57**	**307**⇑	*i*P	Pn	22 42 39.5	-0.2
ANCH				*i* S	Sn	22 42 47.9	-0.2
ANCH				AML	AML	22 42 49.0	
	comp=N,8μm,0.1s						
CEN1	**Los Morros**	**0.69**	**337**⇑	*i*P	Pn	22 42 40.2	-1.2
CEN1				*i* S	Sn	22 42 49.1	-2.1
CEN1				AML	AML	22 42 51.1	
	comp=E,2μm,0.5s						
LVC	**Limon Verde**	**1.69**	**33**⇑	*i*P	Pn	22 42 57.0	+1.7
LVC				*i* S	Sn	22 43 18.5	+2.7
PB04	**Plate Boundary**	**1.80**	**13**⇑	*i*P	Pn	22 42 54.4	-2.0
PB04				*i* S	Sn	22 43 16.0	-2.1
PB04				AML	AML	22 43 18.9	
	comp=E,3μm,0.9s						
PB07	**Plate Boundary**	**2.29**	**1**⇑	*i*P	Pn	22 43 02.4	-1.1
PB07				*i* S	Sn	22 43 31.2	+0.6
PB07				AML	AML	22 43 35.3	
	comp=N,1μm,0.2s						
PB09	**Plate Boundary**	**2.31**	**16**⇑	*i*P	Pn	22 43 04.3	+0.6
PB09				*i* S	Sn	22 43 33.3	+2.2
PB09				AML	AML	22 43 42.1	
	comp=E,3μm,0.3s						

IDC 26 22:45:17.9±10.0, 58.11S×159.63E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.6/13, mbtmp3.4/3, ML2.9/1, MS3.4/1, Ms1 3.5/1, ms1mx3.1/9, Error ellipse: s-maj=493.5km s-min=32.3km az=73.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	**19.51**	**179**	P	P	22 49 46.4	+0.1
	0.0nm,0.3s,baz=347,slow=11,SNR=3.9						
VNDA				LR	LR	22 55 34.1	
	comp=Z,124nm,20.5s,baz=164,slow=32						
ASAR	**Alice Springs**	**39.04**	**321**	P	P	22 52 46.9	+0.7
	0.6nm,0.8s,baz=159,slow=8.0,SNR=5.9						
WRA	**Warramunga Arr**	**42.36**	**323**	P	P	22 53 12.7	-1.0
	0.3nm,0.4s,baz=162,slow=6.8,SNR=6.8						

*ISCJB **26** 22:47:03.3±0.7, 70.44N±0.09×15.1W±0.2, h10km, mb3.3/6, MS3.2/6, Error ellipse: s-maj=12.5km s-min=9.9km az=161.6*
*IDC **26** 22:47:03.8±1.1, 70.40N×15.41W, h0km, mb3.3/6, mb1 3.6/10, mb1mx3.5/31, mbtmp3.5/10, ML3.2/4, MS3.2/10, Ms1 3.3/10, ms1mx3.0/34, Error ellipse: s-maj=27.7km s-min=19.6km az=45.0*
*BER **26** 22:47:47.9±0.7, 71.07N×7.07W, h10km, MD2.4, ML3.2, MW3.0*

ISC 26 22:47:05.2±0.8, 70.40N±0.10×15.13W±0.09, h10km, n20, σ1s48/11, mb3.2/6, MS3.1/6, 1C-2D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMI	**Jan Mayen**	**2.19**	**73**⇓	*i*P	Pg	22 47 57.6	+10
JMI				*e*S	**Sn**	**22 48 05.6**	**-3.1**
JMI				AML	AML	22 48 08.0	
	comp=Z,364nm,0.3s						
JNW	**Jan Mayen West**	**2.31**	**71**⇑	*i*P	Pg	22 47 56.0	+6.6
JNW				*e*S	Sn	22 48 01.8	-10
JNW				AML	AML	22 48 03.1	
	comp=Z,2μm,0.2s						
JNE	**Jan Mayen East**	**2.34**	**72**⇓	*i*P	Pg	22 47 55.4	+5.3
JNE				*e*S	Sn	22 48 00.0	-12
JNE				AML	AML	22 48 02.9	
	comp=Z,2μm,0.1s						
BORG	**Borgarnes**	**6.15**	**206**	Pn	**Pn**	**22 48 35.0**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=39,slow=11,SNR=6.5						
SPITS	**Spitsbergen Ar**	**11.35**	**33**	Pn	**Pn**	**22 49 48.2**	**+1.2**
	baz=230,slow=12,SNR=9.1						
ARCES	**ARCESS Array B**	**13.77**	**74**	LR	LR	22 54 18.3	
	comp=Z,65nm,19.4s,baz=316,slow=31						
NOA	**NORSAR Array B**	**14.19**	**118**	LR	LR	22 54 40.9	
	comp=Z,72nm,21.3s,baz=325,slow=32						
HFS	**Hagfors**	**15.65**	**117**	Pn	**Pn**	**22 50 46.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=294,slow=12,SNR=2.4						
HFS				LR	LR	22 55 49.6	
	comp=Z,78nm,19.1s,baz=326,slow=33						
FINES	**FINESS Array B**	**18.64**	**98**	P	**P**	**22 51 23.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=335,slow=13,SNR=4.0						
FINES				LR	LR	22 57 35.4	
	comp=Z,125nm,19.3s,baz=351,slow=34						
FRB	**Frobisher Bay**	**21.16**	**278**	LR	LR	22 59 18.4	
	comp=Z,52nm,19.0s,baz=148,slow=35						
GERES	**GERESS Array B**	**25.58**	**132**	P	**P**	**22 52 35.8**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=335,slow=8.6,SNR=2.7						
GERES				LR	LR	23 02 26.2	
	comp=Z,32nm,20.0s,baz=314,slow=36						
VRAC	**Vranov**	**25.90**	**128**	LR	LR	23 02 01.8	
	comp=Z,62nm,19.3s,baz=356,slow=35						
DAVOX	**Covos/Dischmat**	**26.62**	**140**	LR	LR	23 01 57.7	
	comp=Z,55nm,20.8s,baz=264,slow=34						
SCHQ	**Schefferville**	**27.28**	**262**	LR	LR	23 02 50.7	
	comp=Z,74nm,19.8s,baz=87,slow=35						
YKA	**Yellowknife Ar**	**36.10**	**309**	P	**P**	**22 54 06.8**	**+0.2**
	comp=Z,1.2nm,1.0s,baz=32,slow=8.6,SNR=6.8						
BRTR	**Keskin Array B**	**39.58**	**114**	P	**P**	**22 54 36.5**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=352,slow=4.4,SNR=3.1						
ILAR	**Eielson Array**	**41.04**	**331**	P	**P**	**22 54 46.9**	**-1.1**
	comp=Z,0.5nm,1.0s,baz=24,slow=5.0,SNR=3.8						
MKAR	**Makanchi Array**	**49.15**	**64**	P	**P**	**22 55 53.0**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=342,slow=8.0,SNR=2.7						
TORD	**Torodi Ar. Bea**	**58.17**	**161**	P	**P**	**22 56 58.6**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=353,slow=6.7,SNR=3.3						
NVAR	**Mina Array Bea**	**58.51**	**296**	LR	LR	23 22 57.1	
	comp=Z,61nm,18.9s,baz=56,slow=37						

IDC 26 23:05:46.8±4.5, 16.47S×174.94W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.7/19, mbtmp3.8/4, Error ellipse: s-maj=203.4km s-min=31.1km az=137.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPT2	**Papeete2**	**24.28**	**96**	*e*LR	LR	23 12 13.0	
	199nm,29.0s						
TBI	**Tubuai**	**24.89**	**110**	*e*LR	LR	23 12 11.0	
	122nm,31.5s						
STKA	**Stephens Creek**	**42.22**	**241**	P	P	23 13 42.0	+0.2
	0.9nm,0.7s,baz=63,slow=6.8,SNR=3.6						
WRA	**Warramunga Arr**	**48.16**	**258**	P	P	23 14 29.4	+0.1
	0.4nm,0.6s,baz=95,slow=7.1,SNR=5.0						
ASAR	**Alice Springs**	**48.37**	**253**	P	P	23 14 30.5	-0.4
	5.3nm,0.5s,baz=89,slow=8.5,SNR=93						
ILAR	**Eielson Array**	**83.78**	**12**	P	P	23 18 17.8	+0.3
	0.2nm,0.7s,baz=225,slow=5.9,SNR=3.3						
BRTR	**Keskin Array B**	**146.01**	**319**	PKPbc	PKPdf	23 25 27.5	-0.8
	0.3nm,0.6s,baz=48,slow=4.3,SNR=3.3						

WEL 26 23:26:36.3±0.6, 41.57S×178.16E, h33km, ML3.7/23, Error ellipse: s-maj=7.4km s-min=2.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BFZ	**Birch Farm**	**1.69**	**301**	PN	Pn	23 27 03.4	-0.1
PRHZ	**Porangahau**	**1.73**	**318**	PN	Pn	23 27 03.5	-0.7
TMWZ	**Te Maipa**	**1.77**	**284**	PN	Pn	23 27 03.6	-0.9
TMWZ				SN	Sn	23 27 27.2	+1.3
PXZ	**Pawanui**	**1.82**	**327**	PN	Pn	23 27 04.5	-0.7
PXZ				SN	Sn	23 27 25.6	-1.5
PXZ				SN	Sb	23 27 26.2	-5.1
TRWZ	**Traveller**	**1.86**	**274**	PN	Pn	23 27 04.1	-1.7
DVHZ	**Dannevirke**	**1.97**	**309**	PN	Pn	23 27 06.6	-0.8
WPHZ	**Waipukurau**	**1.98**	**318**	PN	Pn	23 27 07.1	-0.5
KAHZ	**Kahuranaki**	**2.02**	**331**	PN	Pn	23 27 07.8	-0.2
MTW	**Mount Morrison**	**2.04**	**281**	PN	Pn	23 27 05.1	-3.2
PAWZ	**Paruwai Farm**	**2.06**	**274**	PN	Pn	23 27 06.3	-2.2
CKHZ	**Cape Kidnapper**	**2.07**	**336**	PN	Pn	23 27 09.6	+0.9
HOWZ	**Holdsworth Sta**	**2.10**	**288**	PN	Pn	23 27 08.7	-0.5
MRZ	**Mangatainoka R**	**2.14**	**294**	PN	Pn	23 27 08.7	-1.1
POWZ	**Post Office Ro**	**2.15**	**302**	PN	Pn	23 27 09.4	-0.5
PLWZ	**Palliser**	**2.18**	**269**	PN	Pn	23 27 06.8	-3.9
PLWZ				SN	Sn	23 27 31.4	-4.7
MSWZ	**Moikau Station**	**2.19**	**273**	PN	Pn	23 27 07.3	-3.0
PNHZ	**Pukenui**	**2.22**	**317**	PN	Pn	23 27 10.4	-0.4
CAW	**Cannon Point**	**2.37**	**280**	PN	Pn	23 27 11.7	-1.1
CAW				SN	Sn	23 27 35.9	-4.8
OGWZ	**Otaki Gorge**	**2.37**	**287**	PN	Pn	23 27 11.7	-1.2
MCHZ	**McNeill Hill**	**2.39**	**332**	PN	Pn	23 27 13.4	+0.2
MHGZ	**Mahia Peninsul**	**2.42**	**355**	PN	Pn	23 27 12.9	-0.6
KIW	**Kapiti Island**	**2.55**	**285**	PN	Pn	23 27 13.5	-1.8
KNZ	**Kokohu**	**2.57**	**352**	PN	Pn	23 27 15.2	-0.3
SNZO	**South Karori**	**2.61**	**274**	PN	Pn	23 27 13.6	-2.5
BHHZ	**Black Hill Sta**	**2.62**	**322**	PN	Pn	23 27 16.1	-0.2
PRGZ	**Paritu Road**	**2.65**	**355**	PN	Pn	23 27 16.4	-0.3
NMHZ	**Naumai**	**2.67**	**337**	PN	Pn	23 27 17.5	+0.4
BKZ	**Black Stump Fm**	**2.71**	**332**	PN	Pn	23 27 17.0	-0.6
RAHZ	**Arahi**	**2.77**	**342**	PN	Pn	23 27 17.8	-0.6
MOVZ	**Moawhango**	**2.83**	**319**	PN	Pn	23 27 19.5	+0.2
TCW	**Tory Channel**	**2.94**	**276**	PN	Pn	23 27 18.6	-2.1
WNVZ	**Wahianoa**	**2.97**	**318**	PN	Pn	23 27 22.2	+1.0
TUVZ	**Tukino**	**2.98**	**319**	PN	Pn	23 27 22.1	+0.6
MTVZ	**Mangateitei**	**2.99**	**316**	PN	Pn	23 27 19.6	-1.9
TRVZ	**Turoa**	**3.01**	**318**	PN	Pn	23 27 22.5	+0.5
WAZ	**Wanganui**	**3.01**	**306**	PN	Pn	23 27 22.9	+1.2
DRZ	**Dome Shelter**	**3.02**	**318**	PN	Pn	23 27 23.0	+0.8
FWVZ	**Far West T-bar**	**3.04**	**318**	PN	Pn	23 27 22.9	+0.4
OTVZ	**Oturere**	**3.06**	**321**	PN	Pn	23 27 23.1	+0.5
CNGZ	**Carnagh Statio**	**3.08**	**1**	PN	Pn	23 27 22.4	-0.1
NGZ	**Ngauruhoe**	**3.08**	**320**	PN	Pn	23 27 23.4	+0.5
WPVZ	**Whakapapa**	**3.09**	**319**	PN	Pn	23 27 23.6	+0.8
PKVZ	**Pokaka**	**3.12**	**316**	PN	Pn	23 27 24.3	+0.9
KRVZ	**Karewarewa**	**3.13**	**321**	PN	Pn	23 27 24.3	+0.8
WTVZ	**West Tongariro**	**3.13**	**320**	PN	Pn	23 27 24.1	+0.5
TUWZ	**Tuamarina**	**3.17**	**271**	PN	Pn	23 27 22.9	-0.9
KATZ	**Kakaramea**	**3.20**	**323**	PN	Pn	23 27 25.4	+1.0
BSWZ	**Blackbirch Sta**	**3.21**	**266**	PN	Pn	23 27 21.6	-2.8
TWVZ	**Taurewa**	**3.24**	**319**	PN	Pn	23 27 25.5	+0.5
MWZ	**Matawai**	**3.26**	**351**	PN	Pn	23 27 24.5	-0.7
DUWZ	**D'Urville Isla**	**3.28**	**282**	PN	Pn	23 27 25.3	-0.2
URZ	**Urewera**	**3.40**	**346**	PN	Pn	23 27 25.9	-1.0
KHZ	**Kahutara**	**3.54**	**255**	PN	Pn	23 27 23.9	-5.1
VRZ	**Vera Road**	**3.56**	**312**	PN	Pn	23 27 29.9	+0.6
NNZ	**Nelson**	**3.61**	**274**	PN	Pn	23 27 27.4	-2.5
RAEZ	**Rainy Point**	**3.66**	**307**	PN	Pn	23 27 31.9	+1.2
THZ	**Tophouse**	**3.94**	**265**	PN	Pn	23 27 30.6	-3.9
PKE	**Pukeiti**	**3.97**	**305**	*e*PN	Pn	23 27 35.4	+0.6
QRZ	**Quartz Range**	**4.31**	**278**	PN	Pn	23 27 37.1	-2.4
CTZ	**Chatham Island**	**4.42**	**121**	PN	Pn	23 27 33.4	-7.7
LTZ	**Lake Taylor**	**4.54**	**252**	PN	Pn	23 27 38.0	-4.8
MQZ	**McQueen's Vall**	**4.59**	**240**	PN	Pn	23 27 37.5	-5.9

IDC 26 23:38:42.6±0.7, 70.33N×15.45W, h0km, mb3.7/11, mb1 3.9/15, mb1mx3.7/31, mbtmp3.7/15, ML3.5/4, MS3.5/19, Ms1 3.5/19, ms1mx3.3/48, Error ellipse: s-maj=22.6km s-min=14.2km az=28.0, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCO	**Scoresbysund**	**2.20**	**277**	*i* P	Pn	23 39 15.7	-4.6
JMIC	**Jan Mayen**	**2.40**	**71**	Pn	Pn	23 39 17.2	-5.9
	1.0nm,0.3s,baz=246,slow=12,SNR=1.7						
JMIC				Sn	Sn	23 39 43.1	-10
	2.7nm,0.3s,baz=317,slow=1.7,SNR=3.9						
JMIC				LR	LR	23 39 54.7	
	comp=Z,301nm,19.5s,baz=248,slow=30						
BORG	**Borgarnes**	**6.04**	**205**	Pn	Pn	23 40 13.7	+0.6
	1.7nm,0.3s,baz=19,slow=7.9,SNR=7.3						
SPITS	**Spitsbergen Ar**	**11.47**	**33**	Pn	Pn	23 41 25.5	-1.9
	baz=230,slow=13,SNR=8.6						
SPITS				LR	LR	23 44 41.7	
	comp=Z,143nm,20.5s,baz=240,slow=31						
SFJD	**Kangerlussuaq**	**13.10**	**272**	LR	LR	23 46 28.2	
	comp=Z,283nm,21.2s,baz=69,slow=36						
ARCES	**ARCESS Array B**	**13.89**	**74**	LR	LR	23 46 06.7	

comp=Z,208nm,21.3s,baz=265,slow=32
NOA NORSAR Array B 14.25 117 LR LR 23 46 42.2
comp=Z,120nm,21.4s,baz=320,slow=34
HFS Hagfors 15.72 116 LR LR 23 47 38.1
comp=Z,202nm,18.9s,baz=324,slow=34
EKA Eskdalemuir Ar 16.01 154 Pn Pn 23 42 27.9 -0.9
baz=344,slow=13,SNR=3.4
FINES FINESS Array B 18.74 97 P P 23 43 01.9 -0.6
0.1nm,0.3s,baz=284,slow=11,SNR=3.7
FINES LR LR 23 49 21.9
comp=Z,221nm,19.1s,baz=287,slow=34
FRB Frobisher Bay 21.06 278 LR LR 23 51 36.4
comp=Z,113nm,18.0s,baz=12,slow=37
GERES GERESS Array B 25.61 132 P P 23 44 14.6 +1.3
1.2nm,0.9s,baz=354,slow=8.0,SNR=5.4
GERES LR LR 23 54 32.0
comp=Z,85nm,18.6s,baz=275,slow=37
VRAC Vranov 25.94 127 LR LR 23 54 47.4
comp=Z,125nm,18.2s,baz=163,slow=37
DAVOX Davos/Dischmat 26.64 139 LR LR 23 54 50.0
comp=Z,98nm,18.7s,baz=272,slow=36
SCHQ Schefferville 27.16 262 P P 23 44 26.8 -0.5
2.9nm,0.8s,baz=40,slow=14,SNR=3.5
SCHQ LR LR 23 54 29.3
comp=Z,132nm,19.4s,baz=48,slow=35
AKASG Malin Array Be 28.44 110 P P 23 44 38.9 +0.3
0.6nm,0.4s,baz=335,slow=11,SNR=3.5
MLR Muntele Rosu 32.06 119 LR LR 23 58 28.3
comp=Z,24nm,19.2s,baz=64,slow=37
YKA Yellowknife Ar 36.06 309 P P 23 45 45.8 +0.7
1.3nm,0.9s,baz=36,slow=8.6,SNR=14
YKA PcP PcP 23 48 09.8 -1.2
0.6nm,0.9s,baz=36,slow=2.8,SNR=7.5
MDT Midelt 38.04 165 LR LR 23 59 34.4
comp=Z,49nm,20.7s,baz=310,slow=33
BRTR Keskin Array B 39.65 114 P P 23 46 17.5 +1.6
0.6nm,1.1s,baz=350,slow=6.3,SNR=2.1
ULM Lac du Bonnet 40.75 284 P P 23 46 25.0 +0.3
1.6nm,0.5s,baz=12,slow=8.9,SNR=3.1
ULM LR LR 00 03 02.5
comp=Z,66nm,18.1s,baz=326,slow=36
ILAR Eielson Array 41.05 331 P P 23 46 28.4 +1.3
0.5nm,0.9s,baz=11,slow=8.4,SNR=7.2
ILAR PcP PcP 23 48 25.6 -1.0
0.7nm,0.9s,baz=348,slow=3.6,SNR=7.1
ZALV Zalesovo Beam 43.67 57 LR LR 00 06 10.8
comp=Z,53nm,18.6s,baz=69,slow=38
MKAR Makanchi Array 49.28 64 P P 23 47 31.6 -1.1
0.6nm,0.9s,baz=316,slow=4.0,SNR=4.7
PDAR Pinedale Array 51.78 291 LR LR 00 09 50.2
comp=Z,88nm,19.3s,baz=34,slow=36
TORD Torodi Ar. Bea 58.14 160 P P 23 48 36.8 -1.0
1.3nm,0.9s,baz=356,slow=5.9,SNR=6.7
NVAR Mina Array Bea 58.45 296 P P 23 48 40.0 0.0
0.5nm,0.6s,baz=56,slow=4.9,SNR=3.7
NVAR LR LR 00 14 25.8
comp=Z,101nm,18.3s,baz=122,slow=37
TXAR Lajitas Array 62.11 279 P P 23 49 04.2 -0.9
0.4nm,0.8s,baz=43,slow=6.3,SNR=5.2
TXAR LR LR 00 16 16.3
comp=Z,94nm,18.6s,baz=15,slow=36

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*ISCJB **26** 23:52:42.9±0.1, 33.76N±0.02×48.46E±0.02, h10km, mb4.6/113, MS3.8/17, Error ellipse: s-maj=2.9km s-min=2.0km az=17.4*
*BJI **26** 23:52:43.6, 34.00N×48.50E, h5km, mB4.9/15, mb4.5/22, Ms4.6/13, Ms7 4.3/13*
*CSEM **26** 23:52:45.5±0.1, 33.87N×48.47E, h15km, mb4.8/69, Ms4.0, Error ellipse: s-maj=4.0km s-min=2.9km az=7.0*
*THR **26** 23:52:45.8±1.8, 34.01N×48.52E, h15km, ML4.7*
*MOS **26** 23:52:46.3±1.0, 33.88N×48.36E, h33km, mb4.9/33, Error ellipse: s-maj=6.3km s-min=3.6km az=122.0*
*NEIC **26** 23:52:47.1, 34.01N×48.52E, h5km, mb4.9/35, ML4.7(THR), MN4.8(TEH), After TEH.*
*IDC **26** 23:52:47.9±3.3, 33.94N×48.46E, h32km±25km, mb4.2/33, mb1 4.2/40, mb1mx4.2/45, mbtmp4.2/40, ML3.7/5, MS3.6/17, Ms1 3.6/17, ms1mx3.4/44, Error ellipse: s-maj=11.6km s-min=9.6km az=148.0*
*TEH **26** 23:52:48.4, 33.94N×48.52E, h16km, ML4.8*
*OMAN **26** 23:52:52.7±99.0, 33.86N×49.09E, h149km±80km, Error ellipse: s-maj=30.4km s-min=11.2km az=241.0*
*AZER **26** 23:53:18.2, 36.00N×48.19E, h20km*

ISC 26 23:52:47.1±0.9, 33.90N±0.03×48.49E±0.02, h24km±6km, n786, σ1§40/746, mb4.7/113, MS3.7/17, 31C-38D, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**0.86**	**289**	*e*Pg		**Pb**	**23 53 01.7**	**-1.7**
IKOM				*e*Sg		**Sn**	**23 53 16.0**	**+0.2**
IKOM				*e*			23 53 19.1	
	comp=Z,81μm,0.3s							
IKOM	**Komasi**	**0.86**	**289**	Pg		**Pb**	**23 53 02.3**	**-1.1**
IKOM	**Komasi**	**0.86**	**289**	Pg		**Pb**	**23 53 02.3**	**-1.1**
IKOM				*e*Sg		**Sn**	**23 53 16.0**	**+0.2**
IVIS	**Veis**	**1.50**	**295**	*e*Pn		**Pb**	**23 53 13.4**	**-0.9**
IVIS				*e*Sg		**Sb**	**23 53 35.8**	**+2.9**
IVIS				*e*			23 53 44.2	
	comp=Z,34μm,0.3s							
IVIS	**Veis**	**1.50**	**295**	Pn		**Pb**	**23 53 13.3**	**-1.0**
IVIS	**Veis**	**1.50**	**295**	Pn		**Pb**	**23 53 13.3**	**-1.0**
SNGE	**Sanandaj**	**1.52**	**322**	*e*Pg		**Pn**	**23 53 12.1**	**-0.9**
SNGE				AML		AML	23 53 40.9	
	comp=E,7μm,0.4s							
SNGE	**Sanandaj**	**1.52**	**322**	*e*Pg		**Pn**	**23 53 12.0**	**-0.9**
SNGE	**Sanandaj**	**1.52**	**322**	*e*Pg		**Pn**	**23 53 12.0**	**-0.9**
ILIN	**Lien**	**1.62**	**309**	*e*Pn		**Pb**	**23 53 15.5**	**-1.0**
ILIN				*e*			23 53 17.6	
	comp=Z,9μm,0.3s							
ILIN	**Lien**	**1.62**	**309**	Pn		**Pb**	**23 53 15.5**	**-1.0**
ILIN	**Lien**	**1.62**	**309**	Pn		**Pb**	**23 53 15.5**	**-1.0**
IGHG	**Ghaleghazi**	**1.65**	**285**	*e*Pn		**Pb**	**23 53 17.4**	**+0.4**
IGHG				*e*Sg		**Sb**	**23 53 40.0**	**+2.5**
IGHG				*e*			23 53 46.4	
	comp=Z,98μm,0.3s							
IGHG	**Ghaleghazi**	**1.65**	**285**	Pn		**Pb**	**23 53 17.8**	**+0.8**
IGHG				Sg		**Sb**	**23 53 38.9**	**+1.4**
IGHG	**Ghaleghazi**	**1.65**	**285**	*e*Pn		**Pb**	**23 53 17.4**	**+0.4**
SHGR	**Shooshtar-Gavs**	**1.81**	**172**	*e*Pg		**Pb**	**23 53 20.6**	**+1.0**
SHGR				AML		AML	23 53 49.2	
	comp=E,8μm,0.6s							
SHGR				AML		AML	23 53 52.1	
	comp=N,14μm,0.6s							
SHGR	**Shooshtar-Gavs**	**1.81**	**172**	*e*Pg		**Pb**	**23 53 20.0**	**+0.5**
SHGR				*e*Sg		**Sb**	**23 53 47.0**	**+5.3**
SHGR	**Shooshtar-Gavs**	**1.81**	**172**	*e*Pg		**Pb**	**23 53 20.5**	**+1.0**
IRAZ	**Razeghan**	**1.91**	**38**	*e*Pn		**Pn**	**23 53 17.4**	**-0.9**
IRAZ				*e*			23 53 55.3	
	comp=Z,87μm,0.2s							
IRAZ	**Razeghan**	**1.91**	**38**	Pn		**Pn**	**23 53 18.2**	**-0.1**
IRAZ	**Razeghan**	**1.91**	**38**	Pn		**Pn**	**23 53 18.2**	**-0.1**
IDHR	**Dehrash**	**1.92**	**295**	*e*Pn		**Pb**	**23 53 20.7**	**-0.8**
IDHR				*e*Sg		**Sb**	**23 53 48.8**	**+3.8**
IDHR				*e*			23 53 54.3	
	comp=Z,95μm,0.2s							
IDHR	**Dehrash**	**1.92**	**295**	*e*Pn		**Pb**	**23 53 20.7**	**-0.8**
IR5	**Iran Long-Peri**	**2.16**	**52**	*e*Pn		**Pn**	**23 53 21.8**	**+0.1**
IR5	**Iran Long-Peri**	**2.16**	**52**	*e*Pn		**Pn**	**23 53 21.8**	**+0.1**
GHVR	**GHOM**	**2.39**	**75**	*e*Pn		**Pn**	**23 53 25.6**	**+0.8**
GHVR				*e*Sg		**Sb**	**23 53 57.3**	**-1.3**
GHVR				AML		AML	23 54 05.4	
	comp=N,5μm,0.7s							
GHVR				AML		AML	23 54 06.5	
	comp=E,5μm,0.6s							
GHVR	**GHOM**	**2.39**	**75**	*e*Pn		**Pn**	**23 53 25.6**	**+0.8**
GHVR				*e*Sg		**Sb**	**23 53 57.3**	**-1.3**
IMHD	**Mahdasht**	**2.52**	**45**	*e*Pn		**Pn**	**23 53 28.5**	**+1.8**
IMHD				*e*			23 54 07.3	
	comp=Z,39μm,0.3s							
IMHD	**Mahdasht**	**2.52**	**45**	Pn		**Pn**	**23 53 28.5**	**+1.8**
IMHD	**Mahdasht**	**2.52**	**45**	*e*Pn		**Pn**	**23 53 28.5**	**+1.8**
IR3	**Iran Long-Peri**	**2.61**	**52**	*e*Pn		**Pn**	**23 53 29.5**	**+1.7**
IR3	**Iran Long-Peri**	**2.61**	**52**	*e*Pn		**Pn**	**23 53 29.5**	**+1.7**
IKLH	**Kolahrood**	**2.64**	**102**	*e*Pn		**Pn**	**23 53 30.3**	**+1.9**
IKLH				*e*			23 54 12.9	
	comp=Z,48μm,0.2s							
IKLH	**Kolahrood**	**2.64**	**102**	Pn		**Pb**	**23 53 31.1**	**-2.7**
IKLH	**Kolahrood**	**2.64**	**102**	Pn		**Pb**	**23 53 31.1**	**-2.7**
THKV	**Tehran--Karaj**	**2.81**	**44**	*e*Pn		**Pn**	**23 53 32.0**	**+1.4**
THKV	**Tehran--Karaj**	**2.81**	**44**	*e*Pn		**Pn**	**23 53 32.0**	**+1.4**
IGZV	**Ghazvin**	**2.85**	**29**	*e*Pn		**Pn**	**23 53 32.3**	**+0.9**
IGZV				*e*			23 54 23.4	
	comp=Z,27μm,0.2s							
IGZV	**Ghazvin**	**2.85**	**29**	Pn		**Pn**	**23 53 32.2**	**+0.9**
IGZV	**Ghazvin**	**2.85**	**29**	Pn		**Pn**	**23 53 32.2**	**+0.9**
IVRN	**Varamin**	**2.89**	**67**	*e*Pn		**Pn**	**23 53 33.0**	**+1.3**
IVRN				*e*			23 54 31.7	
	comp=Z,28μm,0.3s							
IVRN	**Varamin**	**2.89**	**67**	Pn		**Pn**	**23 53 32.9**	**+1.3**
IVRN	**Varamin**	**2.89**	**67**	Pn		**Pn**	**23 53 32.9**	**+1.3**
CHTH	**Charan**	**2.95**	**47**	*e*Pn		**Pn**	**23 53 34.1**	**+1.5**
CHTH	**Charan**	**2.95**	**47**	*e*Pn		**Pn**	**23 53 34.1**	**+1.5**
IBRJ	**Brojen**	**3.06**	**130**	*e*Pn		**Pn**	**23 53 34.7**	**+0.5**
IBRJ				*e*Sg		Sb	23 54 26.8	+8.8
IGAR	**Gharneh**	**3.33**	**116**	*e*Pn		**Pn**	**23 53 39.9**	**+2.0**
IGAR				*e*			23 54 43.3	
	comp=Z,13μm,0.3s							
DAMV	**Damavand**	**3.34**	**58**	*e*Pn		**Pn**	**23 53 39.2**	**+1.1**
DAMV				AML		AML	23 54 30.3	
	comp=N,1μm,0.5s							
DAMV	**Damavand**	**3.34**	**58**	*e*Pn		**Pn**	**23 53 39.2**	**+1.1**
IZEF	**Zefreh**	**3.36**	**106**	*e*Pn		**Pn**	**23 53 40.0**	**+1.6**
IZEF				*e*			23 54 41.9	
	comp=Z,14μm,0.4s							
IZEF	**Zefreh**	**3.36**	**106**	Pn		**Pn**	**23 53 40.0**	**+1.6**
IZEF	**Zefreh**	**3.36**	**106**	*e*Pn		**Pn**	**23 53 40.0**	**+1.6**
BHD	**Baghdad**	**3.49**	**261**	*ex*		**Pn**	**23 53 39.0**	**-0.9**
BHD				*ex*		x	23 54 21.3	
BHD	**Baghdad**	**3.49**	**261**	*e*Pn		**Pn**	**23 53 39.0**	**-0.9**
BHD				*e*Sn		**Sn**	**23 54 21.3**	**+0.9**
IFIR	**Firoozkooh**	**3.91**	**62**	*e*Pn		**Pn**	**23 53 47.4**	**+1.5**
IFIR				*e*			23 53 60.0	
	comp=Z,9μm,0.2s							
IFIR	**Firoozkooh**	**3.91**	**62**	Pn		**Pn**	**23 53 47.3**	**+1.4**
IFIR	**Firoozkooh**	**3.91**	**62**	Pn		**Pn**	**23 53 47.3**	**+1.4**
ISRB	**Sarab**	**3.97**	**350**	*e*Pn		**Pn**	**23 53 48.0**	**+1.3**
ISRB				*e*			23 54 07.4	
	comp=Z,12μm,0.4s							
ISRB	**Sarab**	**3.97**	**350**	*e*Pn		**Pn**	**23 53 48.0**	**+1.3**
MIB	**Mutribah**	**4.20**	**194**	*e*P		Pn	23 53 52.9	+3.2
MIB				AML		AML	23 54 43.0	
	comp=Z,645nm,0.6s							
MIB	**Mutribah**	**4.20**	**194**	*e*P		Pn	23 53 52.9	+3.2
IAZR	**Azarshahr**	**4.29**	**332**	*e*Pn		**Pn**	**23 53 52.6**	**+1.6**
IAZR	**Azarshahr**	**4.29**	**332**	*e*Pn		**Pn**	**23 53 52.6**	**+1.6**
UMR	**Umm Al-Rimmam**	**4.39**	**189**	*e*P		Pn	23 53 55.0	+2.8
UMR	**Umm Al-Rimmam**	**4.39**	**189**	*e*P		Pn	23 53 55.0	+2.8
IFTB	**Fath-abad**	**4.44**	**338**	*e*Pn		**Pn**	**23 53 55.3**	**+2.1**
IHRS	**Heris**	**4.56**	**345**	*e*Pn		**Pn**	**23 53 56.6**	**+1.8**
IHRS				*e*			23 54 12.6	
	comp=Z,5μm,0.3s							
IHRS	**Heris**	**4.56**	**345**	*e*Pn		**Pn**	**23 53 56.6**	**+1.8**
ITBZ	**Tabriz**	**4.72**	**337**	*e*Pn		**Pn**	**23 53 58.5**	**+1.6**
ITBZ				*e*			23 54 18.3	
	comp=Z,3μm,0.4s							
ITBZ	**Tabriz**	**4.72**	**337**	*e*Pn		**Pn**	**23 53 58.5**	**+1.6**
NAY	**Al-Naaiem**	**4.76**	**193**	*e*P		Pn	23 54 00.1	+2.7
NAY				AML		AML	23 54 52.6	
	comp=Z,166nm,0.5s							
NAY	**Al-Naaiem**	**4.76**	**193**	*e*P		Pn	23 54 00.1	+2.7
KBD	**Kabd**	**4.76**	**188**	*e*P		**Pn**	**23 54 00.0**	**+2.6**
KBD				AML		AML	23 54 51.6	
	comp=Z,85nm,0.4s							
KBD	**Kabd**	**4.76**	**188**	*e*P		**Pn**	**23 54 00.0**	**+2.6**
LKRN	**Lenkeran, Azer**	**4.80**	**3**	P		**Pn**	**23 53 59.5**	**+1.6**
	SNR=7.7							
LKRN	**Lenkeran, Azer**	**4.80**	**3**	Pn		**Pn**	**23 53 59.5**	**+1.6**
	SNR=7.7							
LKRN	**Lenkeran, Azer**	**4.80**	**3**	Pn		**Pn**	**23 53 59.5**	**+1.6**
	SNR=7.7							
LKRN	**Lenkeran, Azer**	**4.80**	**3**	Pn		**Pn**	**23 53 59.5**	**+1.6**
	SNR=7.7							
LKRN	**Lenkeran, Azer**	**4.80**	**3**	P		**Pn**	**23 53 59.5**	**+1.6**
	SNR=7.7							
ISHB	**Shabestar**	**4.95**	**333**	*e*Pn		**Pn**	**23 54 01.3**	**+1.1**
ISHB				*e*			23 54 28.5	
	comp=Z,7μm,0.4s							
ISHB	**Shabestar**	**4.95**	**333**	*e*Pn		**Pn**	**23 54 01.3**	**+1.1**
RDF	**Al-Radifah**	**5.03**	**189**	*e*P		Pn	23 54 04.4	+3.4
RDF				AML		AML	23 55 04.4	
	comp=Z,722nm,0.7s							
RDF	**Al-Radifah**	**5.03**	**189**	*e*P		Pn	23 54 04.4	+3.4
IMRD	**Marand**	**5.30**	**336**	*e*			23 54 42.1	
	comp=Z,4μm,0.2s							
IMRD				*e*Pn		**Pn**	**23 54 06.3**	**+1.4**
GLBA	**Clilabad**	**5.33**	**359**	P		**Pn**	**23 54 07.5**	**+2.4**
	SNR=63							
GLBA	**Clilabad**	**5.33**	**359**	Pn		**Pn**	**23 54 07.5**	**+2.4**
	SNR=63							
GLBA	**Clilabad**	**5.33**	**359**	Pn		**Pn**	**23 54 07.5**	**+2.4**
	SNR=63							
GLBA	**Clilabad**	**5.33**	**359**	Pn		**Pn**	**23 54 07.5**	**+2.4**
	SNR=63							
GLBA	**Clilabad**	**5.33**	**359**	P		**Pn**	**23 54 07.5**	**+2.4**
	SNR=63							
NAX	**Nakhchivan**	**5.79**	**336**	P		Pn	23 54 15.7	+4.2
	SNR=3.9							
NAX	**Nakhchivan**	**5.79**	**336**	Pn		Pn	23 54 15.7	+4.2
	SNR=3.9							
NAX	**Nakhchivan**	**5.79**	**336**	Pn		Pn	23 54 15.7	+4.2
	SNR=3.9							
NAX	**Nakhchivan**	**5.79**	**336**	Pn		Pn	23 54 15.7	+4.2
	SNR=3.9							
ALIB	**Äli-Bayra**	**6.06**	**4**	P		Pn	23 54 18.8	+3.7
	SNR=3.7							
ALIB	**Äli-Bayra**	**6.06**	**4**	Pn		Pn	23 54 18.8	+3.7
	SNR=3.7							
ALIB	**Äli-Bayra**	**6.06**	**4**	Pn		Pn	23 54 18.8	+3.7
	SNR=3.7							
ALIB	**Äli-Bayra**	**6.06**	**4**	Pn		Pn	23 54 18.8	+3.7
	SNR=3.7							
SIRN	**S¨¨rnak**	**6.11**	**308**	*i* P		**Pn**	**23 54 16.5**	**+0.6**
SIRN	**S¨¨rnak**	**6.11**	**308**	*i* P		**Pn**	**23 54 16.5**	**+0.6**
TVAN	**Van**	**6.18**	**320**	*i* P		Pn	23 54 20.2	+3.2
GEVA	**Gevas**	**6.22**	**317**	*i* P		**Pn**	**23 54 20.0**	**+2.4**
GEVA	**Gevas**	**6.22**	**317**	*i* P		**Pn**	**23 54 20.0**	**+2.4**
BRDA	**Brd**	**6.43**	**351**	P		Pn	23 54 24.3	+4.0
	SNR=18							
BRDA	**Brd**	**6.43**	**351**	Pn		Pn	23 54 24.3	+4.0
	SNR=18							
BRDA	**Brd**	**6.43**	**351**	Pn		Pn	23 54 24.3	+4.0
	SNR=18							
BRDA	**Brd**	**6.43**	**351**	Pn		Pn	23 54 24.3	+4.0
	SNR=18							
GOBA	**Gobu**	**6.56**	**8**	P		Pn	23 54 26.7	+4.6
	SNR=4.3							
GOBA	**Gobu**	**6.56**	**8**	Pn		Pn	23 54 26.7	+4.6
	SNR=4.3							
GOBA	**Gobu**	**6.56**	**8**	Pn		Pn	23 54 26.7	+4.6
	SNR=4.3							
GOBA	**Gobu**	**6.56**	**8**	Pn		Pn	23 54 26.7	+4.6
	SNR=4.3							
IML	**Ismayili**	**6.88**	**358**	P		**Pn**	**23 54 29.2**	**+2.7**
	SNR=11							
IML	**Ismayili**	**6.88**	**358**	Pn		**Pn**	**23 54 29.2**	**+2.7**
	SNR=11							
IML	**Ismayili**	**6.88**	**358**	Pn		**Pn**	**23 54 29.2**	**+2.7**
	SNR=11							
IML	**Ismayili**	**6.88**	**358**	Pn		**Pn**	**23 54 29.2**	**+2.7**
	SNR=11							
GNI	**Garni**	**6.92**	**335**	*e*Pn		**Pn**	**23 54 28.2**	**+1.1**
GNI	**Garni**	**6.92**	**335**	Pn		**Pn**	**23 54 28.9**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=131,slow=17,SNR=2.3							
GNI				LR		LR	23 57 25.9	
	comp=Z,864nm,20.9s,baz=150,slow=40							
GNI	**Garni**	**6.92**	**335**	*e*P		**Pn**	**23 54 27.9**	**+0.8**
	comp=Z,18nm,0.8s							
GNI	**Garni**	**6.92**	**335**	*e*Pn		**Pn**	**23 54 28.2**	**+1.1**
GANJ	**Ganja**	**6.95**	**346**	P		Pn	23 54 30.8	+3.4
	SNR=17							
GANJ	**Ganja**	**6.95**	**346**	Pn		Pn	23 54 30.8	+3.4
	SNR=17							
GANJ	**Ganja**	**6.95**	**346**	Pn		Pn	23 54 30.8	+3.4
	SNR=17							
GANJ	**Ganja**	**6.95**	**346**	Pn		Pn	23 54 30.8	+3.4
	SNR=17							
BEST	**Besiri**	**7.08**	**306**	*i* P		**Pn**	**23 54 29.5**	**+0.2**
MARD	**Mardin**	**7.14**	**301**	*i* P		**Pn**	**23 54 30.1**	**-0.1**
SIZA	**Siyzn**	**7.17**	**2**	P		Pn	23 54 33.4	+3.0
	SNR=7.2							
SIZA	**Siyzn**	**7.17**	**2**	Pn		Pn	23 54 33.4	+3.0
	SNR=7.2							
SIZA	**Siyzn**	**7.17**	**2**	Pn		Pn	23 54 33.4	+3.0
	SNR=7.2							
SIZA	**Siyzn**	**7.17**	**2**	Pn		Pn	23 54 33.4	+3.0
	SNR=7.2							
SEKA	**Sheki**	**7.37**	**352**	P		**Pn**	**23 54 35.8**	**+2.6**
	SNR=181							
SEKA	**Sheki**	**7.37**	**352**	Pn		**Pn**	**23 54 35.8**	**+2.6**
	SNR=181							
SEKA	**Sheki**	**7.37**	**352**	Pn		**Pn**	**23 54 35.8**	**+2.6**
	SNR=181							
SEKA	**Sheki**	**7.37**	**352**	Pn		**Pn**	**23 54 35.8**	**+2.6**
	SNR=181							
QUBA	**Quba, Azerbaij**	**7.44**	**360**	P		Pn	23 54 37.1	+2.9
	SNR=7.0							
QUBA	**Quba, Azerbaij**	**7.44**	**360**	Pn		Pn	23 54 37.1	+2.9
	SNR=7.0							
QUBA	**Quba, Azerbaij**	**7.44**	**360**	Pn		Pn	23 54 37.1	+2.9
	SNR=7.0							
QUBA	**Quba, Azerbaij**	**7.44**	**360**	Pn		Pn	23 54 37.1	+2.9
	SNR=7.0							
BNGL	**BINGOL**	**7.77**	**313**	*i* P		**Pn**	**23 54 41.0**	**+2.2**
DGRG	**David-gareji**	**7.93**	**343**	P		Pn	23 54 46.8	+6.0
DGRG				S		Sb	23 56 49.8	+12
KZR	**Kazreti**	**8.13**	**338**	P		**Pn**	**23 54 46.0**	**+2.3**
ERZM	**Erzurum**	**8.27**	**318**	*e*P		Pn	23 54 50.6	+4.8
TBLG	**Delisi**	**8.36**	**340**	*e*P		Pn	23 54 51.9	+5.2
TBLG	**Delisi**	**8.36**	**340**	P		Pn	23 54 52.0	+5.2
TBLG				S		Sb	23 57 10.6	+21
AKH	**Akhalkalaki**	**8.48**	**334**	P		Pn	23 54 52.9	+4.4
DUS	**Dusheti**	**8.70**	**341**	P		Pn	23 54 59.2	+7.7
GOR	**Gori**	**8.78**	**338**	P		Pn	23 54 47.8	-4.7
GOR				S			23 57 33.5	
DDEM	**Demirkent**	**8.80**	**324**	*i* P		Pn	23 54 57.2	+4.4
KOPT	**Kop Dagi**	**8.84**	**316**	*i* P		Pn	23 54 59.7	+6.1
DAGI	**Agillar**	**8.86**	**326**	*i* P		Pn	23 54 58.3	+4.6
ATAB	**Bozova**	**9.03**	**296**	*i* P		**Pn**	**23 54 55.3**	**-0.6**
ATAB	**Bozova**	**9.03**	**296**	*i* P		**Pn**	**23 54 55.3**	**-0.6**
MAK	**Makhachkala**	**9.08**	**355**	*e*P		Pn	23 55 00.0	+3.5
MAK				*e*S		**Sn**	**23 56 43.3**	**+5.4**
MAK				pmax		pmax		
	comp=Z,150nm,0.8s							
MAK				MLR		MLR		
	comp=Z,561nm,14.0s							
GZT	**Gaziantep**	**9.54**	**294**	*i* P		**Pn**	**23 55 02.2**	**-0.9**
KEMA	**Kemaliye**	**9.66**	**307**	*i* P		Pn	23 55 09.6	+5.0
KELT	**Kelkit**	**9.66**	**313**	*i* P		Pn	23 55 09.3	+4.5
ASF	**Jabal al Asfar**	**9.89**	**263**	Pn		**Pn**	**23 55 06.9**	**-0.8**
ASF	**Jabal al Asfar**	**9.89**	**263**	Pn		**Pn**	**23 55 06.9**	**-0.8**
	comp=Z,3.0nm,0.3s,baz=327,slow=12,SNR=19							
ASF				LR		LR	23 59 56.7	
	comp=Z,533nm,19.6s,baz=111,slow=44							
SUSE	**Susehri**	**10.35**	**310**	*i* P		Pn	23 55 19.2	+5.0
YAYL	**Yayladag**	**10.38**	**285**	*i* P		**Pn**	**23 55 13.9**	**-0.7**
YAYL	**Yayladag**	**10.38**	**285**	*i* P		**Pn**	**23 55 13.9**	**-0.7**
BANOM	**Banah**	**10.44**	**138**	P		**Pn**	**23 55 14.1**	**-1.3**
	SNR=86							
BANOM				⇓S		Sn	23 57 05.7	-5.9
BANOM	**Banah**	**10.44**	**138**	P		**Pn**	**23 55 14.1**	**-1.3**
	SNR=86							
ANDN	**Andirin**	**10.53**	**294**	*i* P		**Pn**	**23 55 15.2**	**-1.4**
ANDN	**Andirin**	**10.53**	**294**	*i* P		**Pn**	**23 55 15.2**	**-1.4**
RAYN	**Ar Rayn**	**10.67**	**195**	*e*Pn		**Pn**	**23 55 17.7**	**-0.8**
RAYN	**Ar Rayn**	**10.67**	**195**	*e*Pn		**Pn**	**23 55 17.7**	**-0.8**
KBZ	**Khabaz**	**10.73**	**338**	P		Pn	23 55 23.3	+4.0
KBZ	**Khabaz**	**10.73**	**338**	Pn		Pn	23 55 23.2	+4.0
KBZ	**Khabaz**	**10.73**	**338**	Pn		Pn	23 55 23.2	+4.0
	comp=Z,0.1nm,0.3s,baz=147,slow=11,SNR=12							
KBZ				LR		LR	23 59 21.7	
	comp=Z,77nm,18.8s,baz=117,slow=37							
NAZ	**Nazwa, Dubai**	**10.86**	**143**	⇑P		**Pn**	**23 55 20.0**	**-1.0**
	SNR=46							
NAZ				⇑S		Sn	23 57 14.3	-7.4
NAZ	**Nazwa, Dubai**	**10.86**	**143**	P		**Pn**	**23 55 20.0**	**-1.0**
	SNR=46							
PINB	**Pinarbasi**	**10.86**	**299**	*i* P		**Pn**	**23 55 22.9**	**+1.7**
PINB	**Pinarbasi**	**10.86**	**299**	*i* P		**Pn**	**23 55 22.9**	**+1.7**
MMAI	**Mount Meron Ar**	**10.97**	**269**	Pn		**Pn**	**23 55 20.8**	**-1.8**
MMAI	**Mount Meron Ar**	**10.97**	**269**	Pn		**Pn**	**23 55 20.8**	**-1.8**
	comp=Z,1.6nm,0.3s,baz=84,slow=17,SNR=14							
MMAI				LR		LR	00 00 32.2	
	comp=Z,508nm,20.9s,baz=85,slow=42							
MMAI	**Mount Meron Ar**	**10.97**	**269**	Pn		**Pn**	**23 55 20.8**	**-1.8**
ASUD	**Al Ashush, Dub**	**11.00**	**145**	⇑P		**Pn**	**23 55 22.6**	**-0.3**

SNR=12
AYDN Tasoluk 17.14 289 *i* P **P** 23 56 47.2 +0.7
AYDN Tasoluk 17.14 289 *i* P **P** 23 56 47.2 +0.7
AB31 Akbulak array 17.54 26 *i* P **Pn** 23 56 47.8 -2.0
AB31 pmax pmax
comp=Z,3.0nm,0.4s
ABKAR Akbulak array 17.54 26 *e*Pn **Pn** 23 56 48.4 -1.4
ABKAR Akbulak array 17.54 26 *e*Pn **Pn** 23 56 48.4 -1.4
BALY Balya 17.68 295 *i* P **P** 23 56 51.9 -0.6
BALY Balya 17.68 295 *i* P **P** 23 56 51.9 -0.6
VRHR Novokhopersk 17.90 346 *e*P **P** 23 56 55.1 +0.4
VRHR pmax pmax
comp=Z,30nm,0.8s
VRHR pmax pmax
comp=N,6.0nm,0.4s
VRHR pmax pmax
comp=E,7.0nm,0.4s
VRHR Novokhopersk 17.90 346 *e*P **P** 23 56 55.1 +0.4
comp=E,30nm,0.8s
AKTK Aktyubinsk 17.94 20 P **Pn** 23 56 53.3 -1.5
AKTO Aktyubinsk 17.94 20 P **Pn** 23 56 53.3 -1.5
AKTO Aktyubinsk 17.94 20 P **Pn** 23 56 53.2 -1.5
AKTO Aktyubinsk 17.94 20 P **Pn** 23 56 53.2 -1.5
comp=E,0.6nm,0.3s,baz=202,slow=11,SNR=14
AKTO Aktyubinsk 17.94 20 P **Pn** 23 56 53.2 -1.5
VSR Storozhevoye 18.59 341 *e*P **P** 23 57 02.0 -0.3
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 18.59 341 *e*P **P** 23 57 02.0 -0.3
TIRR Tirgusor 18.75 310 ⇓P **Pn** 23 57 04.6 -0.1
TIRR Tirgusor 18.75 310 ⇓*i*P **Pn** 23 57 04.6 -0.1
TIRR Tirgusor 18.75 310 P **Pn** 23 57 04.6 -0.1
TLCR 18.85 313 ⇓P **P** 23 57 05.2 0.0
TLCR 18.85 313 ⇓*i*P **P** 23 57 05.2 0.0
TLCR 18.85 313 P **P** 23 57 05.2 0.0
CFR Carcaliu 19.26 312 ⇓P **P** 23 57 09.2 -0.6
CFR Carcaliu 19.26 312 ⇓*i*P **P** 23 57 09.2 -0.6
CFR Carcaliu 19.26 312 P **P** 23 57 09.2 -0.6
MUKL Al Mukalla 19.35 178 *e*P **Pn** 23 57 12.2 +0.1
IDI Anoyia 19.48 281 P **Pn** 23 57 13.1 -0.5
IDI Anoyia 19.48 281 *e*Pn **Pn** 23 57 13.3 -0.3
comp=Z,52nm,0.7s
IDI Anoyia 19.48 281 *e*Pn **Pn** 23 57 13.3 -0.3
comp=Z,52nm,0.7s
KK31 Karatay Array 19.48 55 *i* P **Pn** 23 57 13.4 -0.2
KK31 pmax pmax
comp=Z,17nm,0.6s
KK31 Karatay Array 19.48 55 *i* P **Pn** 23 57 13.4 -0.2
comp=Z,17nm,0.6s
KKAR Karatay Array 19.48 55 *e*P **Pn** 23 57 13.9 +0.3
KKAR Karatay Array 19.48 55 *e*Pn **Pn** 23 57 13.9 +0.3
KKAR Karatay Array 19.48 55 *e*P **Pn** 23 57 13.9 +0.3
SIVA Sivas 19.56 280 P **Pn** 23 57 14.5 0.0
SIVA Sivas 19.56 280 P **Pn** 23 57 14.5 0.0
KIS Kishinev 19.81 317 *e*P **P** 23 57 14.0 -1.8
KIS Kishinev 19.81 317 *e*P **P** 23 57 14.0 -1.8
KIS Kishinev 19.81 317 *e*P **P** 23 57 14.0 -1.8
LEOM Leova 19.85 315 ⇑P **P** 23 57 16.3 +0.1
LEOM Leova 19.85 315 ⇑*i*P **P** 23 57 16.3 +0.1
LEOM Leova 19.85 315 P **P** 23 57 16.3 +0.1
VAM Vamos 20.03 281 P **Pn** 23 57 18.9 -1.2
VAM Vamos 20.03 281 P **Pn** 23 57 18.9 -1.2
GVD Gavdhos 20.16 280 *e*P **P** 23 57 19.7 0.0
GVD Gavdhos 20.16 280 *e*P **P** 23 57 19.7 0.0
LBOS 20.16 189 ⇑*e*P **Pn** 23 57 21.6 -0.4
LBOS AMb AMB 23 57 23.2
comp=Z,192nm,1.0s
PTL Penteli 20.34 289 P **Pn** 23 57 23.2 -0.5
PTL Penteli 20.34 289 P **Pn** 23 57 23.2 -0.5
ATHU Athens Univers 20.39 289 P **Pn** 23 57 24.1 -0.3
ATHU Athens Univers 20.39 289 P **Pn** 23 57 24.1 -0.3
VRI Vrincioaia 20.46 312 ⇑P **P** 23 57 23.0 +0.1
VRI Vrincioaia 20.46 312 ⇑*i*P **P** 23 57 23.0 +0.1
VRI Vrincioaia 20.46 312 P **P** 23 57 23.0 +0.1
PLOR Plostina 20.50 312 ⇓P **P** 23 57 24.1 +0.7
PLOR Plostina 20.50 312 ⇓*i*P **P** 23 57 24.0 +0.7
PLOR Plostina 20.50 312 P **P** 23 57 24.1 +0.7
MLR Muntele Rosu 20.78 311 P **P** 23 57 25.8 -0.6
MLR Muntele Rosu 20.78 311 ⇓*i*P **Pn** 23 57 27.8 -1.2
MLR Muntele Rosu 20.78 311 P **P** 23 57 25.8 -0.6
comp=Z,1.7nm,0.6s,baz=87,slow=5.1,SNR=25
MLR Muntele Rosu 20.78 311 P **P** 23 57 25.8 -0.6
DID Didima 20.80 287 P **P** 23 57 26.3 -0.4
DID Didima 20.80 287 P **P** 23 57 26.3 -0.4
TESR Tescani 20.82 314 ⇑*i*P **P** 23 57 26.5 -0.3
NVR Nevrokopi 20.83 298 P **Pn** 23 57 28.1 -1.4
SMIA Simia 20.92 291 P **Pn** 23 57 29.4 -1.2
SMIA Simia 20.92 291 P **Pn** 23 57 29.4 -1.2
KYTH Kithira 20.95 284 P **P** 23 57 27.7 -0.6
KYTH Kithira 20.95 284 P **P** 23 57 27.7 -0.6
TRBA At Turbah 20.96 192 *e*P **Pn** 23 57 30.2 -1.1
SRS Serrai 20.98 297 P **Pn** 23 57 29.6 -1.6
HUMR Humele 21.01 307 ⇓*i*P **P** 23 57 29.4 +0.6
VLI Veliai 21.03 285 P **P** 23 57 27.9 -1.2
VLI Veliai 21.03 285 P **P** 23 57 27.9 -1.2
LTK Loutraki 21.04 289 P **P** 23 57 29.6 +0.3
LTK Loutraki 21.04 289 P **P** 23 57 29.6 +0.3
ATAL Atalanti 21.05 290 P **P** 23 57 30.0 +0.7
ATAL Atalanti 21.05 290 P **P** 23 57 30.0 +0.7
THAL Thalero 21.28 289 P **P** 23 57 32.0 +0.2
THAL Thalero 21.28 289 P **P** 23 57 32.0 +0.2
VOIR 21.33 310 ⇓P **P** 23 57 33.6 +1.3
VOIR 21.33 310 ⇓*i*P **P** 23 57 33.6 +1.3
VOIR 21.33 310 P **P** 23 57 33.6 +1.3
DOPR Dopca 21.34 311 ⇑*i*P **P** 23 57 33.5 +1.1
AXAR Agios Charalam 21.34 291 P **P** 23 57 33.7 +1.3
AXAR Agios Charalam 21.34 291 P **P** 23 57 33.7 +1.3
DSF Desfina 21.41 290 P **P** 23 57 33.2 -0.1
DSF Desfina 21.41 290 P **P** 23 57 33.2 -0.1
AML Almayashu 21.43 60 *i* P **P** 23 57 35.9 +2.1
AML Almayashu 21.43 60 P **P** 23 57 35.9 +2.1
SNR=19
AML Almayashu 21.43 60 P **P** 23 57 33.0 -0.8
SNR=18
VLX Vlachokerasia 21.48 287 P **P** 23 57 33.3 -0.8
VLX Vlachokerasia 21.48 287 P **P** 23 57 33.3 -0.8
DYR Agios Nikonas 21.51 285 P **P** 23 57 34.2 -0.1
DYR Agios Nikonas 21.51 285 P **P** 23 57 34.2 -0.1
GUR Goura 21.53 288 P **P** 23 57 33.8 -0.8
GUR Goura 21.53 288 P **P** 23 57 33.8 -0.8
ARR Arges 21.57 309 ⇓*i*P **P** 23 57 35.7 +0.8
VTS Vitosha 21.61 301 ⇑P **P** 23 57 34.4 -1.0
VTS Vitosha 21.61 301 ⇑*i*P **P** 23 57 34.4 -1.0
VTS Vitosha 21.61 301 P **P** 23 57 34.4 -1.0
AGG Agios Georgios 21.62 291 P **P** 23 57 35.6 +0.1
AGG Agios Georgios 21.62 291 P **P** 23 57 35.6 +0.1
EKS2 Erkin-Say 21.63 59 *i* P **P** 23 57 41.1 +5.5
EKS2 Erkin-Say 21.63 59 *e*P **P** 23 57 36.0 +0.4
comp=Z,9.9nm,0.8s
EKS2 Erkin-Say 21.63 59 P **P** 23 57 41.2 +5.5
SNR=7.6
EKS2 Erkin-Say 21.63 59 *e*P **P** 23 57 36.0 +0.4
comp=Z,9.9nm,0.8s
MAKR Makrakomi, Fth 21.77 291 P **P** 23 57 39.2 +2.1
MAKR Makrakomi, Fth 21.77 291 P **P** 23 57 39.2 +2.1
GRG Griva 21.84 296 P **P** 23 57 40.0 +2.3
LAKA Lakka 21.84 289 P **P** 23 57 37.8 0.0
LAKA Lakka 21.84 289 P **P** 23 57 37.8 0.0
ITM Ithomi 21.84 286 P **P** 23 57 36.8 -1.0
ITM Ithomi 21.84 286 P **P** 23 57 36.8 -1.0
AK02 Malin Array Si 21.89 326 *e*P **P** 23 57 36.8 -1.4
AK02 Malin Array Si 21.89 326 *e*P **P** 23 57 36.8 -1.4
EFP Efpalio 21.90 290 P **P** 23 57 38.4 0.0
EFP Efpalio 21.90 290 P **P** 23 57 38.4 0.0
AK01 Malin Array Si 21.91 326 *e*P **P** 23 57 36.8 -1.6
AK01 Malin Array Si 21.91 326 *e*P **P** 23 57 36.8 -1.6
AKASG Malin Array Be 21.91 326 *ce*P **P** 23 57 37.5 -0.9
AKASG pmax pmax
comp=Z,14nm,0.8s
AKASG Malin Array Be 21.91 326 P **P** 23 57 36.8 -1.6
AKASG Malin Array Be 21.91 326 P **P** 23 57 36.8 -1.6
comp=Z,14nm,0.8s,baz=133,slow=9.8,SNR=24
AKASG Malin Array Be 21.91 326 *e*P **P** 23 57 37.5 -0.9
comp=Z,14nm,0.8s
KIEV Kiev 21.92 326 ⇓*i*P **P** 23 57 37.7 -0.7
KIEV Kiev 21.92 326 *e*P **P** 23 57 37.1 -1.3
comp=Z,21nm,0.8s
KIEV Kiev 21.92 326 *i* P **P** 23 57 37.7 -0.7

THL Klokotos Trika 21.92 293 P **P** 23 57 39.3 +0.7
PYL PYLOS 21.99 285 P **P** 23 57 37.8 -1.6
PYL PYLOS 21.99 285 P **P** 23 57 37.8 -1.6
AAK Ala-Archa 22.13 59 P **P** 23 57 40.9 -0.2
AAK Ala-Archa 22.13 59 *e*P **P** 23 57 42.5 +1.4
AAK Ala-Archa 22.13 59 P **P** 23 57 40.9 -0.2
comp=Z,2.3nm,0.6s,baz=235,slow=10,SNR=8.4
AAK Ala-Archa 22.13 59 P **P** 23 57 40.9 -0.2
LOT Lotru 22.16 309 ⇓*i*P **P** 23 57 41.0 -0.3
BURAR Bucovina Array 22.22 315 ⇑*i*P **P** 23 57 43.2 +1.3
RLS Riolos of Patr 22.23 289 P **P** 23 57 41.7 -0.2
RLS Riolos of Patr 22.23 289 P **P** 23 57 41.7 -0.2
BUR08 Bucovina Ar. S 22.24 315 *e*P **P** 23 57 41.8 -0.3
BUR08 Bucovina Ar. S 22.24 315 *e*P **P** 23 57 41.8 -0.3
FRU Bishkek 22.27 59 *e*P **P** 23 57 46.0 +3.6
FRU *e* 23 58 12.0
USP Ospenovka 22.30 58 *i* P **P** 23 57 46.2 +3.4
USP Ospenovka 22.30 58 P **P** 23 57 46.2 +3.4
SNR=17
CHMS Chumysh 22.41 58 P P 23 57 50.9 +7.0
SNR=12
KBK Karagaybulak 22.46 59 P P 23 57 52.4 +7.8
SNR=7.2
KZA Kyzart 22.55 61 P P 23 57 53.3 +7.5
SNR=12
FNA Florina 22.57 296 P **P** 23 57 47.9 +2.2
KSH Kashi 22.68 68 *e*P **P** 23 57 45.0 -2.0
KSH *e*PP **PnPn** 23 58 13.0 +2.0
KSH *e*S **PcP** 00 01 39.0 +0.1
KSH *e*PcP PcP 00 01 42.5 +3.7
KSH *e*SS Sn 00 02 21.3 +13
KSH pmax pmax
comp=Z,5.0nm,0.8s
KSH pmax pmax
comp=Z,170nm,5.0s
KSH LR LR
comp=N,360nm,6.7s
KSH LR LR
comp=E,530nm,10.2s
KSH LR LR
comp=Z,740nm,14.7s
NEST Nestorio 22.76 295 P **P** 23 57 49.0 +1.2
OBN Obninsk 22.79 342 ⇑*i*P **P** 23 57 47.9 +0.2
OBN pmax pmax
comp=Z,24nm,1.2s
OBN Obninsk 22.79 342 *i* P **P** 23 57 47.9 +0.2
comp=Z,24nm,1.2s
LKD2 Lefkada island 22.90 290 P **P** 23 57 47.7 -1.4
LKD2 Lefkada island 22.90 290 P **P** 23 57 47.7 -1.4
VLS Valsamata 22.92 289 P **P** 23 57 47.8 -1.6
VLS Valsamata 22.92 289 P **P** 23 57 47.8 -1.6
TKM2 Tokmak 2 22.99 59 *i* P **P** 23 57 53.2 +3.0
TKM2 Tokmak 2 22.99 59 *e*P **P** 23 57 51.1 +0.9
comp=Z,25nm,1.6s
TKM2 Tokmak 2 22.99 59 P **P** 23 57 53.2 +3.0
SNR=7.4
TKM2 Tokmak 2 22.99 59 *e*P **P** 23 57 51.1 +0.9
comp=Z,25nm,1.6s
KBN Korca 22.99 295 P **P** 23 57 51.7 +1.6
MOS Moscow 23.10 344 *e*P **P** 23 57 50.5 -0.4
MOS *e* 23 58 18.2
MOS pmax pmax
comp=Z,37nm,1.1s
MOS Moscow 23.10 344 *e*P **P** 23 57 50.5 -0.4
comp=Z,37nm,1.1s
IGT Igoumenitsa 23.21 292 P **P** 23 57 50.6 -1.7
IGT Igoumenitsa 23.21 292 P **P** 23 57 50.6 -1.7
ULHL Ulahol 23.30 61 *i* P **P** 23 57 55.2 +1.8
ULHL Ulahol 23.30 61 P **P** 23 57 55.2 +1.8
SNR=13
ULHL Ulahol 23.30 61 *i* P **P** 23 57 55.2 +1.8
DRGR 23.37 311 ⇓P **P** 23 57 53.8 0.0
DRGR 23.37 311 ⇓*i*P **P** 23 57 53.8 0.0
DRGR 23.37 311 P **P** 23 57 53.8 0.0
PHP Peshkopia 23.42 298 P **P** 23 57 55.2 +0.8
ARU Arti 23.57 14 *d i*P **P** 23 57 56.4 +0.8
ARU 23 58 25.8
ARU PPP PPP 23 58 33.7
ARU S **S** **00 02 07.7 -0.5**
ARU SS **SnSn** **00 02 50.5 +4.9**
ARU pmax pmax
comp=Z,22nm,2.5s
ARU Arti 23.57 14 *i* P **P** 23 57 56.4 +0.8
comp=Z,22nm,2.5s
KEK Kerkira 23.64 293 P **P** 23 57 56.1 -0.4
TIR Tirane 23.79 297 *e*P **P** 23 57 57.8 -0.1
TIR pmax pmax
comp=Z,42nm,0.7s
TIR Tirane 23.79 297 *e*P **P** 23 57 57.8 -0.1
comp=Z,42nm,0.7s
TIR Tirane 23.79 297 *e*P **P** 23 57 57.8 -0.1
comp=Z,42nm,0.7s
TRPA Tarpa 24.05 314 ⇓*i*P **P** 23 58 00.2 0.0
SMLA Simla 24.30 89 *i* x **P** 23 58 03.4 +0.7
baz=92,slow=28
SMLA *i* P **P** 23 58 03.4 +0.7
SVE Sverdlovsk 24.39 16 ⇓*e*P **P** 23 58 03.9 +0.7
SVE *e*S **S** **00 02 25.7 +4.4**
SVE pmax pmax
comp=Z,17nm,1.2s
SVE Sverdlovsk 24.39 16 *e*P **P** 23 58 03.9 +0.7
comp=Z,17nm,1.2s
UZH Uzhgorod 24.42 315 *e*P **P** 23 58 02.0 -1.7
UZH *e* 23 58 09.4
UZH Uzhgorod 24.42 315 *e*P **P** 23 58 02.0 -1.7
KOLS Kolonicke sedl 24.58 316 *e*P **P** 23 58 06.1 +1.0
KOLS pmax pmax
comp=Z,12nm,1.1s
KOLS Kolonicke sedl 24.58 316 *e*P **P** 23 58 06.1 +1.0
KOLS Kolonicke sedl 24.58 316 *e*P **P** 23 58 06.1 +1.0
comp=Z,12nm,1.1s
BRVK Borovoye 24.66 32 *e*P **P** 23 58 04.6 -1.2
BRVK pmax pmax
comp=Z,27nm,1.0s
BRVK Borovoye 24.66 32 *e*P **P** 23 58 04.6 -1.2
comp=Z,27nm,1.0s
BRVK Borovoye 24.66 32 P P 23 58 10.9 +5.1
SNR=15
BRVK Borovoye 24.66 32 *e*P **P** 23 58 04.6 -1.2
comp=Z,27nm,1.0s
KWP Kalwaria Pacla 24.66 317 *e*P **P** 23 58 05.7 -0.2
KWP pmax pmax
comp=Z,18nm,1.0s
KWP Kalwaria Pacla 24.66 317 *e*P **P** 23 58 05.7 -0.2
comp=Z,18nm,1.0s
KWP Kalwaria Pacla 24.66 317 ⇑*i*P **P** 23 58 06.0 +0.1
KWP Kalwaria Pacla 24.66 317 *e*P **P** 23 58 06.5 +0.6
KWP Kalwaria Pacla 24.66 317 *e*P **P** 23 58 05.7 -0.2
comp=Z,18nm,1.0s
BVAR Borovoye Array 24.68 33 P **P** 23 58 05.7 -0.3
BVAR Borovoye Array 24.68 33 P **P** 23 58 05.7 -0.3
BVAR Borovoye Array 24.68 33 P **P** 23 58 05.7 -0.3
comp=Z,21nm,0.8s,baz=224,slow=8.0,SNR=23
BVAR Borovoye Array 24.68 33 P **P** 23 58 05.7 -0.3
CRVS Cervenica-Dubn 25.04 315 *e*P **P** 23 58 08.0 -1.3
CRVS pmax pmax
comp=Z,8.0nm,1.2s
CRVS Cervenica-Dubn 25.04 315 *e*P **P** 23 58 08.0 -1.3
CRVS Cervenica-Dubn 25.04 315 *e*P **P** 23 58 08.0 -1.3
comp=Z,8.0nm,1.2s
DDI Dehra Dun 25.25 90 *ex* **P** 23 58 11.5 +0.1
STHS Stebnicka Huta 25.40 316 *e*P **P** 23 58 12.7 +0.2
STHS Stebnicka Huta 25.40 316 *e*P **P** 23 58 12.7 +0.2
KECS Kecovo 25.44 313 *e*P **P** 23 58 14.2 +1.3
KECS pmax pmax
comp=Z,4.0nm,0.7s
KECS Kecovo 25.44 313 *e*P **P** 23 58 14.2 +1.3
PSZ Piszkesteto 25.57 312 *e*P **P** 23 58 14.5 +0.3
PSZ pmax pmax
comp=Z,26nm,1.1s
PSZ Piszkesteto 25.57 312 *e*P **P** 23 58 14.5 +0.3
comp=Z,26nm,1.1s
PSZ Piszkesteto 25.57 312 *e*P **P** 23 58 14.5 +0.3
comp=Z,26nm,1.1s
STON Ston 25.63 300 P **P** 23 58 12.9 -1.7
PKSM Moragy 25.79 307 ⇓P **P** 23 58 16.6 +0.6
PKSM Moragy 25.79 307 ⇓*i*P **P** 23 58 16.6 +0.6
PKSM Moragy 25.79 307 ⇓*i*P **P** 23 58 16.6 +0.6
NACGM Naroch 25.90 331 *e* **P** 23 58 15.0 -2.0
NIE Niedzica 25.94 315 *e*P **P** 23 58 20.7 +3.2
NIE Niedzica 25.94 315 *e*P **P** 23 58 20.7 +3.2
IDID Didziasalis 26.22 331 *e*P **P** 23 58 19.6 -0.2
IDID AMB AMB 23 58 23.3
comp=Z,12nm,1.0s

IDID Didziasalis 26.22 331 *e*P **P** 23 58 19.6 -0.2
comp=Z,12nm,1.0s,SNR=33
IIGN Ignalina 26.45 331 *e*P **P** 23 58 22.2 +0.3
IIGN AMB AMB 23 58 23.8
comp=Z,14nm,0.9s
IIGN Ignalina 26.45 331 *e*P **P** 23 58 22.2 +0.3
comp=Z,14nm,0.9s,SNR=33
VYHS Vyhne 26.45 312 *e*P **P** 23 58 22.0 -0.1
VYHS pmax pmax
comp=Z,2.0nm,0.8s
VYHS Vyhne 26.45 312 *e*P **P** 23 58 22.0 -0.1
OJC Ojcow 26.60 316 *e*P **P** 23 58 23.5 +0.1
OJC pmax pmax
comp=Z,11nm,0.8s
OJC Ojcow 26.60 316 *e*P **P** 23 58 23.5 +0.1
comp=Z,11nm,0.8s
OJC Ojcow 26.60 316 *e*P **P** 23 58 23.2 -0.2
OJC Ojcow 26.60 316 *e*P **P** 23 58 23.5 +0.1
comp=Z,11nm,0.8s
CEL Celeste 26.62 289 *e*P **P** 23 58 24.6 +0.7
comp=Z,79nm,0.8s
CEL Celeste 26.62 289 *e*P **P** 23 58 24.5 +0.7
comp=Z,79nm,0.8s
ISAL Salakas 26.64 331 *e*P **P** 23 58 24.0 +0.3
ISAL AMB AMB 23 58 25.6
comp=Z,14nm,0.9s
ISAL Salakas 26.64 331 *e*P **P** 23 58 24.0 +0.3
comp=Z,14nm,0.9s,SNR=28
CUC Castrocucco 26.72 293 *e*P **P** 23 58 25.4 +0.8
comp=Z,33nm,0.7s
CUC Castrocucco 26.72 293 *e*P **P** 23 58 25.4 +0.8
comp=Z,33nm,0.7s
IZAR Zarasai 26.72 332 *e*P **P** 23 58 24.7 +0.3
IZAR AMB AMB 23 58 26.3
comp=Z,18nm,0.8s
IZAR Zarasai 26.72 332 *e*P **P** 23 58 24.7 +0.3
comp=Z,18nm,0.8s,SNR=28
SUW Suwalki 26.88 326 *e*P **P** 23 58 25.6 -0.2
SUW pmax pmax
comp=Z,80nm,1.0s
SUW Suwalki 26.88 326 *e*P **P** 23 58 25.6 -0.2
comp=Z,80nm,1.0s
SUW Suwalki 26.88 326 *e*P **P** 23 58 25.9 +0.1
SUW Suwalki 26.88 326 *e*P **P** 23 58 25.6 -0.2
comp=Z,80nm,1.0s
OKC Ostrava-Krasne 27.40 315 *e*P **P** 23 58 30.4 -0.1
OKC Ostrava-Krasne 27.40 315 *e*P **P** 23 58 30.4 -0.1
OKC Ostrava-Krasne 27.40 315 *e*P **P** 23 58 30.4 -0.1
ZST Bratislava 27.42 311 *e*P **P** 23 58 29.0 -1.8
ZST pmax pmax
comp=Z,3.0nm,0.8s
ZST Bratislava 27.42 311 *e*P **P** 23 58 29.0 -1.8
ZST Bratislava 27.42 311 *e*P **P** 23 58 29.0 -1.8
comp=Z,3.0nm,0.8s
KURBB Kurchatov Arra 27.55 44 P **P** 23 58 31.3 -0.5
comp=Z,10nm,0.7s,baz=248,slow=9.3,SNR=40
KLMR Klimovskoe 27.59 351 *e*P **P** 23 58 30.0 -2.1
KLMR *e* 23 59 14.6
KLMR *e*S S 00 03 03.0 -9.0
KLMR pmax pmax
comp=Z,28nm,1.4s
KLMR Klimovskoe 27.59 351 *e*P **P** 23 58 30.0 -2.1
comp=Z,28nm,1.4s
KURK Kurchatov 27.64 43 *e*P **P** 23 58 32.9 +0.2
KURK pmax pmax
comp=Z,24nm,1.2s
KURK Kurchatov 27.64 43 *e*P **P** 23 58 33.6 +0.9
comp=Z,14nm,0.8s
KURK Kurchatov 27.64 43 P P 23 58 38.5 +5.8
SNR=6.7
KURK Kurchatov 27.64 43 *e*P **P** 23 58 32.9 +0.2
comp=Z,24nm,1.2s
VRAC Vranov 28.13 313 P **P** 23 58 37.0 -0.1
VRAC Vranov 28.13 313 P **P** 23 58 37.0 -0.1
comp=Z,0.7nm,0.4s,baz=120,slow=11,SNR=3.9
VRAC LR LR 00 11 45.4
comp=Z,88nm,18.1s,baz=113,slow=40
VRAC Vranov 28.13 313 P **P** 23 58 37.0 -0.1
VSU Vasula 28.56 336 *e*P **P** 23 58 39.9 -0.9
VSU pmax pmax
comp=Z,19nm,0.9s
VSU Vasula 28.56 336 *e*P **P** 23 58 39.9 -0.9
comp=Z,19nm,0.9s
MK31 Makanchi Array 28.56 53 *ce*P **P** 23 58 43.5 +2.5
MK31 pmax pmax
comp=Z,2.0nm,0.6s
MK31 Makanchi Array 28.56 53 *e*P **P** 23 58 41.8 +0.8
MK31 Makanchi Array 28.56 53 *e*P **P** 23 58 41.8 +0.8
MKAR Makanchi Array 28.56 53 *i* P P 23 58 45.7 +4.7
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 28.56 53 *e*P **P** 23 58 44.1 +3.1
MKAR PcP **PcP** **00 01 49.4 -2.5**
MKAR Makanchi Array 28.56 53 P **P** 23 58 41.9 +0.9
comp=Z,1.9nm,0.6s,baz=250,slow=8.4,SNR=16
MKAR PcP **PcP** **00 01 49.4 -2.5**
comp=Z,0.9nm,0.8s,baz=251,slow=4.4,SNR=3.9
MKAR Makanchi Array 28.56 53 PcP **PcP** **00 01 49.4 -2.5**
TREC Trest 28.80 312 *e*P **P** 23 58 43.8 +0.7
TREC Trest 28.80 312 *e*P **P** 23 58 43.8 +0.7
TREC Trest 28.80 312 *e*P **P** 23 58 43.8 +0.7
UPC Upice 28.92 315 *e*P **P** 23 58 44.5 +0.3
UPC Upice 28.92 315 *e*P **P** 23 58 44.5 +0.3
UPC Upice 28.92 315 *e*P **P** 23 58 44.5 +0.3
MOA Molln 29.12 309 ⇓*i*P **P** 23 58 46.0 0.0
comp=Z,5.7nm,0.7s
MOA Molln 29.12 309 P **P** 23 58 46.0 0.0
comp=Z,5.7nm,0.7s
KBA Koelnbreinsper 29.53 307 ⇓*i*P **P** 23 58 49.9 +0.1
comp=Z,11nm,0.8s
KBA Koelnbreinsper 29.53 307 P **P** 23 58 49.9 +0.1
comp=Z,11nm,0.8s
PRU Pruhonice 29.61 313 *e*P **P** 23 58 48.2 -2.1
PRU AMS AMS 00 14 20.0
comp=Z,200nm,16.3s
GERES GERESS Array B 29.77 311 P **P** 23 58 51.3 -0.5
GERES GERESS Array B 29.77 311 P **P** 23 58 51.3 -0.5
comp=Z,0.9nm,0.6s,baz=117,slow=8.4,SNR=12
GERES LR LR 00 13 27.1
comp=Z,72nm,18.7s,baz=78,slow=42
GERES GERESS Array B 29.77 311 P **P** 23 58 51.3 -0.5
PVCC Panska Ves 29.79 314 AMS AMS 00 12 20.0
comp=Z,200nm,18.9s
KHC Kasperske Hory 29.93 311 *e*P **P** 23 58 52.6 -0.6
KHC Kasperske Hory 29.93 311 *e*P **P** 23 58 52.6 -0.6
KHC Kasperske Hory 29.93 311 *e*P **P** 23 58 52.6 -0.6
PYUN Piuthan 30.04 92 *e*P **P** 23 58 55.9 +1.4
comp=Z,54nm,0.9s
DANN Dangsing 30.59 91 *e*P **P** 23 58 59.5 0.0
comp=Z,36nm,0.8s
KOLN Koldanda 30.66 92 *e*P **P** 23 59 00.1 +0.1
WTTA Wattenberg 30.71 307 ⇑*i*P **P** 23 58 59.5 -0.7
comp=Z,22nm,1.2s
WTTA Wattenberg 30.71 307 P **P** 23 58 59.5 -0.7
comp=Z,22nm,1.2s
JOF Joensuu 30.98 345 *e*P **P** 23 59 02.9 +0.7
JOF pmax pmax
comp=Z,7.0nm,0.6s
JOF Joensuu 30.98 345 *ep* **P** 23 59 02.9 +0.7
comp=Z,6.8nm,0.6s
JOF Joensuu 30.98 345 *e*P **P** 23 59 02.9 +0.7
comp=Z,7.0nm,0.6s
MOTA Moosalm 31.08 307 ⇓*i*P **P** 23 59 02.0 -1.5
comp=Z,14nm,0.8s
MOTA Moosalm 31.08 307 P **P** 23 59 02.0 -1.5
comp=Z,14nm,0.8s
FINES FINESS Array B 31.09 339 P **P** 23 59 02.7 -0.5
FINES FINESS Array B 31.09 339 P **P** 23 59 02.7 -0.5
comp=Z,3.9nm,0.5s,baz=141,slow=9.0,SNR=17
FINES FINESS Array B 31.09 339 P **P** 23 59 02.7 -0.5
FETA Feichten 31.27 306 ⇑*i*P **P** 23 59 04.4 -0.7
comp=Z,22nm,0.9s
FETA Feichten 31.27 306 P **P** 23 59 04.4 -0.7
comp=Z,22nm,0.9s
KAF Kangasniemi 31.56 340 *e*P **P** 23 59 07.4 +0.1
KAF Kangasniemi 31.56 340 *ep* **P** 23 59 07.4 +0.1
KAF Kangasniemi 31.56 340 *e*P **P** 23 59 07.4 +0.1
DAVOX Davos/Dischmat 31.80 306 P **P** 23 59 09.2 -0.6
DAVOX Davos/Dischmat 31.80 306 P **P** 23 59 09.2 -0.6
comp=Z,5.1nm,0.5s,baz=110,slow=7.2,SNR=11
DAVOX LR LR 00 13 48.0
comp=Z,98nm,21.2s,baz=88,slow=40
DAVOX Davos/Dischmat 31.80 306 P **P** 23 59 09.2 -0.6
WMQ Urumqi 31.83 60 *e*P **P** 23 59 12.8 +2.8
WMQ PP **PP** **00 00 19.3 -2.7**

WMQ PcP **PcP** 00 02 03.3 +2.7
WMQ S **S** 00 04 18.8 -0.3
WMQ PcS **PcS** 00 05 46.5 +1.4
WMQ pmax pmax
comp=Z,6.0nm,0.5s
WMQ pmax pmax
comp=Z,110nm,6.0s
WMQ LR LR
comp=N,150nm,8.4s
WMQ LR LR
comp=E,120nm,6.4s
DAVA Damuels 31.89 306⇑ *i*P **P** 23 59 09.6 -1.0
comp=E,26nm,0.7s
DAVA Damuels 31.89 306 P **P** 23 59 09.6 -1.0
comp=E,26nm,0.7s
DMN Daman 31.96 91 *e*P **P** 23 59 12.2 +0.6
comp=E,49nm,1.0s
NVS Novosibirsk 31.98 38 *e*P **P** 23 59 10.3 -0.8
NVS pmax pmax
comp=N,3.0nm,1.0s
NVS pmax pmax
comp=E,4.0nm,1.0s
NVS pmax pmax
comp=Z,9.0nm,1.0s
NVS Novosibirsk 31.98 38 *e*P **P** 23 59 10.3 -0.8
KKN Kakani 32.05 91 *e*P **P** 23 59 11.9 -0.3
comp=Z,26nm,0.7s
KEST Kesra 32.05 285 *e*P **P** 23 59 13.5 +1.5
KEST PcP **PcP** 00 02 00.6 -0.7
KEST Kesra 32.05 285 P **P** 23 59 12.4 +0.3
comp=Z,3.5nm,0.9s,baz=76,slow=4.2,SNR=6.1
KEST PcP **PcP** 00 02 00.6 -0.7
comp=Z,0.7nm,0.6s,baz=153,slow=2.3,SNR=4.2
KEST Kesra 32.05 285 *e*P **P** 23 59 13.5 +1.5
TUE Stuetta 32.11 305 *e*P **P** 23 59 14.9 +2.3
comp=Z,7.2nm,0.9s
PKIN Phulchoki 32.22 91 *e*P **P** 23 59 13.3 -0.5
PKI Pulchoki 32.23 91 *e*P **P** 23 59 13.8 -0.2
ZALV Zalesovo Beam 32.44 41 *i* P **P** 23 59 17.3 +2.1
ZALV pmax pmax
comp=Z,8.0nm,0.7s
ZALV Zalesovo Beam 32.44 41 P **P** 23 59 15.2 0.0
ZALV Zalesovo Beam 32.44 41 P **P** 23 59 15.2 0.0
comp=Z,7.7nm,0.7s,baz=251,slow=8.8,SNR=28
ZALV Zalesovo Beam 32.44 41 P **P** 23 59 15.2 0.0
GUN Gumba 32.50 90 *e*P **P** 23 59 16.7 +0.3
comp=Z,42nm,0.7s
SBF Sospel 33.17 300 *e*P **P** 23 59 20.8 -1.0
comp=Z,38nm,0.8s
SBF Sospel 33.17 300 *e*P **P** 23 59 20.8 -1.0
SBF pmax pmax
comp=Z,38nm,0.8s
SBF Sospel 33.17 300 *e*P **P** 23 59 20.8 -1.0
comp=Z,38nm,0.8s
SBF Sospel 33.17 300 *e*P **P** 23 59 20.8 -1.0
comp=Z,19nm,0.8s
RAMN Ramite 33.44 92 *e*P **P** 23 59 24.3 -0.2
comp=Z,29nm,0.6s
MBDF Montbardon 33.71 301 *e*P **P** 23 59 25.4 -1.1
comp=Z,19nm,0.7s
MBDF Montbardon 33.71 301 *e*P **P** 23 59 25.4 -1.1
MBDF pmax pmax
comp=Z,19nm,0.7s
MBDF Montbardon 33.71 301 *e*P **P** 23 59 25.4 -1.1
comp=Z,19nm,0.7s
MBDF Montbardon 33.71 301 *e*P **P** 23 59 25.4 -1.1
comp=Z,9.5nm,0.7s
LPG La Plagne 33.78 303⇓ *i*P **P** 23 59 26.1 -1.2
comp=Z,22nm,0.8s
LPG La Plagne 33.78 303⇓ *i*P **P** 23 59 26.1 -1.2
LPG pmax pmax
comp=Z,23nm,0.8s
LPG La Plagne 33.78 303⇓ *i*P **P** 23 59 26.1 -1.2
comp=Z,22nm,0.8s
LPG La Plagne 33.78 303⇓ *i*P **P** 23 59 26.1 -1.2
comp=Z,11nm,0.8s
LPL La Plagne 33.80 303⇓ *i*P **P** 23 59 26.1 -1.3
comp=Z,42nm,1.1s
LPL La Plagne 33.80 303⇓ *i*P **P** 23 59 26.1 -1.3
LPL pmax pmax
comp=Z,42nm,1.1s
LPL La Plagne 33.80 303⇓ *i*P **P** 23 59 26.1 -1.3
comp=Z,42nm,1.1s
LPL La Plagne 33.80 303⇓ *i*P **P** 23 59 26.1 -1.3
comp=Z,21nm,1.1s
CDF Champ du Feu 33.81 308 *e*P **P** 23 59 26.1 -1.2
CDF Champ du Feu 33.81 308 *e*P **P** 23 59 26.1 -1.2
CDF Champ du Feu 33.81 308 *e*P **P** 23 59 26.1 -1.2
CDF Champ du Feu 33.81 308 *e*P **P** 23 59 26.1 -1.2
ECH Echery 33.86 308 *e*P **P** 23 59 25.6 -2.0
ECH pmax pmax
comp=Z,6.0nm,1.0s
ECH Echery 33.86 308 *e*P **P** 23 59 25.6 -2.0
comp=Z,6.4nm,1.0s
ECH Echery 33.86 308 *e*P **P** 23 59 25.6 -2.0
comp=Z,6.0nm,1.0s
HINF Hinteralfeld 34.00 307 *e*P **P** 23 59 27.2 -1.7
HINF Hinteralfeld 34.00 307 *e*P **P** 23 59 27.2 -1.7
HINF Hinteralfeld 34.00 307 *e*P **P** 23 59 27.2 -1.7
HINF Hinteralfeld 34.00 307 *e*P **P** 23 59 27.2 -1.7
ODAN Odare 34.13 91 *e*P **P** 23 59 29.1 -1.4
comp=Z,22nm,0.7s
TAPN Taplejung 34.22 90 *e*P **P** 23 59 31.4 +0.1
comp=Z,59nm,0.9s
ORIF Oris-en-Rattie 34.35 302 *e*P **P** 23 59 30.4 -1.6
comp=Z,9.3nm,0.8s
ORIF *e*R
comp=Z,100nm,18.5s
ORIF Oris-en-Rattie 34.35 302 *e*P **P** 23 59 30.4 -1.6
ORIF pmax pmax
comp=Z,9.0nm,0.8s
ORIF Oris-en-Rattie 34.35 302 *e*P **P** 23 59 30.4 -1.6
comp=Z,9.3nm,0.8s
ORIF Oris-en-Rattie 34.35 302 *e*P **P** 23 59 30.4 -1.6
comp=Z,4.7nm,0.8s
CABF La Chapelle 34.35 305 *e*P **P** 23 59 31.0 -1.0
comp=Z,39nm,0.7s
CABF La Chapelle 34.35 305 *e*P **P** 23 59 31.0 -1.0
CABF pmax pmax
comp=Z,39nm,0.7s
CABF La Chapelle 34.35 305 *e*P **P** 23 59 31.0 -1.0
comp=Z,39nm,0.7s
CABF La Chapelle 34.35 305 *e*P **P** 23 59 31.0 -1.0
comp=Z,20nm,0.7s
HAU Haudompre 34.36 307 *e*P **P** 23 59 30.2 -1.8
HAU *e*R
comp=Z,71nm,17.2s
HAU Haudompre 34.36 307 *e*P **P** 23 59 30.2 -1.8
HAU Haudompre 34.36 307 *e*P **P** 23 59 30.2 -1.8
HAU Haudompre 34.36 307 *e*P **P** 23 59 30.2 -1.8
APA Apatity 34.83 350⇓ *i*P **P** 23 59 36.0 +0.3
APA MLR MLR
comp=Z,200nm,12.0s
APA Apatity 34.83 350 *i* P **P** 23 59 36.0 +0.3
comp=Z,200nm,12.0s
SET Setif 35.14 286 P **P** 23 59 41.0 +2.0
VIVF Saint-Julien-l 35.21 301 *e*P **P** 23 59 37.6 -1.7
VIVF Saint-Julien-l 35.21 301 *e*P **P** 23 59 37.6 -1.7
VIVF Saint-Julien-l 35.21 301 *e*P **P** 23 59 37.6 -1.7
VIVF Saint-Julien-l 35.21 301 *e*P **P** 23 59 37.6 -1.7
SFTF Sexfontaines 35.26 307 *e*P **P** 23 59 38.3 -1.4
comp=Z,22nm,0.9s
SFTF Sexfontaines 35.26 307 *e*P **P** 23 59 38.3 -1.4
comp=Z,22nm,0.9s
SFTF Sexfontaines 35.26 307 *e*P **P** 23 59 38.3 -1.4
comp=Z,11nm,0.9s
MEZF Maizieres J'vi 35.29 308 *e*P **P** 23 59 39.6 -0.4
comp=Z,12nm,0.7s
MEZF Maizieres J'vi 35.29 308 *e*P **P** 23 59 39.6 -0.4
comp=Z,12nm,0.7s
MEZF Maizieres J'vi 35.29 308 *e*P **P** 23 59 39.6 -0.4
comp=Z,5.9nm,0.7s
LASF Ste Croix 35.76 300 *e*P **P** 23 59 42.7 -1.4
LASF Ste Croix 35.76 300 *e*P **P** 23 59 42.7 -1.4
LASF Ste Croix 35.76 300 *e*P **P** 23 59 42.7 -1.4
SMF Signal de Mont 35.90 304 *e*P **P** 23 59 43.8 -1.5
comp=Z,40nm,0.9s
SMF Signal de Mont 35.90 304 *e*P **P** 23 59 43.8 -1.5
SMF pmax pmax
comp=Z,40nm,0.9s
SMF Signal de Mont 35.90 304 *e*P **P** 23 59 43.8 -1.5
comp=Z,40nm,0.9s
SMF Signal de Mont 35.90 304 *e*P **P** 23 59 43.8 -1.5
comp=Z,20nm,0.9s
LOR Lormes 35.94 305 *e*P **P** 23 59 44.0 -1.6
LOR *e*R
comp=Z,103nm,22.5s
LOR Lormes 35.94 305 *e*P **P** 23 59 44.0 -1.6
LOR Lormes 35.94 305 *e*P **P** 23 59 44.0 -1.6
BAIF Baives 36.08 310 *e*P **P** 23 59 45.9 -0.8
comp=Z,47nm,1.4s
BAIF Baives 36.08 310 *e*P **P** 23 59 45.9 -0.8
BAIF pmax pmax
comp=Z,47nm,1.4s
BAIF Baives 36.08 310 *e*P **P** 23 59 45.9 -0.8
comp=Z,47nm,1.4s
BAIF Baives 36.08 310 *e*P **P** 23 59 45.9 -0.8
comp=Z,23nm,1.4s
SSF Saint Saulge 36.16 305 *e*P **P** 23 59 46.0 -1.5
comp=Z,7.9nm,0.8s
SSF Saint Saulge 36.16 305 *e*P **P** 23 59 46.0 -1.5
SSF pmax pmax
comp=Z,8.0nm,0.8s
SSF Saint Saulge 36.16 305 *e*P **P** 23 59 46.0 -1.5
comp=Z,7.9nm,0.8s
SSF Saint Saulge 36.16 305 *e*P **P** 23 59 46.0 -1.5
comp=Z,4.0nm,0.8s
NB2 NORSAR Subarra 36.19 330 P **P** 23 59 45.9 -1.6
comp=Z,13nm,0.9s,baz=122,slow=8.6
NB2 NORSAR Subarra 36.19 330 P **P** 23 59 45.9 -1.6
comp=Z,13nm,0.9s,baz=122,slow=8.5,SNR=8.7
NOA NORSAR Array B 36.19 330 P **P** 23 59 46.7 -0.8
NOA PP **PnPn** 00 01 08.8 -0.4
NOA NORSAR Array B 36.19 330 P **P** 23 59 46.7 -0.8
comp=Z,8.6nm,0.8s,baz=122,slow=8.4,SNR=19
NOA PP **PnPn** 00 01 08.8 -0.4
comp=Z,2.6nm,0.8s,baz=129,slow=11,SNR=4.4
NOA LR LR 00 15 21.4
comp=Z,105nm,18.7s,baz=135,slow=38
NOA NORSAR Array B 36.19 330 P **P** 23 59 46.7 -0.8
NAO01 NORSAR Array S 36.22 330 *e*P **P** 23 59 48.8 +1.0
comp=Z,7.1nm,0.8s
NAO01 NORSAR Array S 36.22 330 *e*P **P** 23 59 48.8 +1.0
comp=Z,7.1nm,0.8s
AVF Avril sur Loir 36.25 305 *e*P **P** 23 59 46.5 -1.7
comp=Z,24nm,1.0s
AVF Avril sur Loir 36.25 305 *e*P **P** 23 59 46.5 -1.7
AVF pmax pmax
comp=Z,24nm,1.0s
AVF Avril sur Loir 36.25 305 *e*P **P** 23 59 46.5 -1.7
comp=Z,24nm,1.0s
AVF Avril sur Loir 36.25 305 *e*P **P** 23 59 46.5 -1.7
comp=Z,12nm,1.0s
LSA Lhasa 36.30 85 P **P** 23 59 49.5 0.0
LSA Lhasa 36.30 85 *e*P **P** 23 59 50.2 +0.7
LSA Lhasa 36.30 85 *e*P **P** 23 59 50.2 +0.7
LSA Lhasa 36.30 85 *e*P **P** 23 59 50.2 +0.7
KMBO Kilima Mbogo 36.41 199 P **P** 23 59 50.0 -0.2
KMBO Kilima Mbogo 36.41 199 P **P** 23 59 50.0 -0.2
comp=Z,1.0nm,0.6s,baz=30,slow=13,SNR=4.8
KMBO LR LR 00 14 57.9
comp=Z,92nm,18.8s,baz=102,slow=36
KMBO Kilima Mbogo 36.41 199 P **P** 23 59 50.0 -0.2
BGF Bois d'Agland 36.58 304 *e*P **P** 23 59 49.5 -1.5
comp=Z,5.2nm,0.6s
BGF Bois d'Agland 36.58 304 *e*P **P** 23 59 49.5 -1.5
BGF pmax pmax
comp=Z,5.0nm,0.6s
BGF Bois d'Agland 36.58 304 *e*P **P** 23 59 49.5 -1.5
comp=Z,5.2nm,0.6s
BGF Bois d'Agland 36.58 304 *e*P **P** 23 59 49.5 -1.5
comp=Z,2.6nm,0.6s
HVS Khovu-Aksy 36.84 48⇑ *i*P **P** 23 59 54.7 +1.4
HVS pmax pmax
comp=Z,35nm,1.0s
HVS Khovu-Aksy 36.84 48 *i* P **P** 23 59 54.7 +1.4
comp=Z,35nm,1.0s
TCF Toulx Ste Croi 37.00 304 *e*P **P** 23 59 53.1 -1.6
comp=Z,15nm,0.9s
TCF Toulx Ste Croi 37.00 304 *e*P **P** 23 59 53.1 -1.6
TCF pmax pmax
comp=Z,15nm,0.9s
TCF Toulx Ste Croi 37.00 304 *e*P **P** 23 59 53.1 -1.6
comp=Z,15nm,0.9s
TCF Toulx Ste Croi 37.00 304 *e*P **P** 23 59 53.1 -1.6
comp=Z,7.7nm,0.9s
CAF Calviac 37.06 301 *e*P **P** 23 59 53.2 -2.0
CAF Calviac 37.06 301 *e*P **P** 23 59 53.2 -2.0
CAF Calviac 37.06 301 *e*P **P** 23 59 53.2 -2.0
CAF Calviac 37.06 301 *e*P **P** 23 59 53.2 -2.0
RJF Les Rejaudoux 37.45 302 *e*P **P** 23 59 56.7 -1.8
RJF *e*R
comp=Z,74nm,20.5s
RJF Les Rejaudoux 37.45 302 *e*P **P** 23 59 56.7 -1.8
RJF Les Rejaudoux 37.45 302 *e*P **P** 23 59 56.7 -1.8
RJF Les Rejaudoux 37.45 302 *e*P **P** 23 59 56.7 -1.8
KEV Kevo 37.83 348 *e*p **P** 00 00 01.1 -0.2
comp=Z,2.2nm,0.4s
ARCES ARCESS Array B 37.91 347 P **P** 00 00 01.5 -0.5
ARCES ARCESS Array B 37.91 347 P **P** 00 00 01.5 -0.5
comp=Z,4.8nm,0.7s,baz=154,slow=9.1,SNR=23
ARCES ARCESS Array B 37.91 347 P **P** 00 00 01.5 -0.5
LFF La Frestale 38.00 301 *e*P **P** 00 00 01.5 -1.6
LFF La Frestale 38.00 301 *e*P **P** 00 00 01.5 -1.6
LFF La Frestale 38.00 301 *e*P **P** 00 00 01.5 -1.6
LFF La Frestale 38.00 301 *e*P **P** 00 00 01.5 -1.6
MBAR Mbarara 38.16 210 P **P** 00 00 04.9 0.0
MBAR Mbarara 38.16 210 P **P** 00 00 04.9 0.0
comp=Z,2.9nm,0.4s,baz=27,slow=15,SNR=6.6
MBAR Mbarara 38.16 210 P **P** 00 00 04.9 0.0
MFF Saint Martin d 38.64 304 *e*P **P** 00 00 06.6 -1.9
MFF Saint Martin d 38.64 304 *e*P **P** 00 00 06.6 -1.9
MFF Saint Martin d 38.64 304 *e*P **P** 00 00 06.6 -1.9
MFF Saint Martin d 38.64 304 *e*P **P** 00 00 06.6 -1.9
LDF La Druitiere 38.72 307 *e*P **P** 00 00 07.4 -1.7
comp=Z,9.6nm,0.7s
LDF La Druitiere 38.72 307 *e*P **P** 00 00 07.4 -1.7
LDF pmax pmax
comp=Z,10.0nm,0.6s
LDF La Druitiere 38.72 307 *e*P **P** 00 00 07.4 -1.7
comp=Z,9.6nm,0.6s
LDF La Druitiere 38.72 307 *e*P **P** 00 00 07.4 -1.7
comp=Z,4.8nm,0.7s
FLN La Foliniere 38.97 307 *e*P **P** 00 00 09.7 -1.5
comp=Z,11nm,0.6s
FLN *e*R
comp=Z,100nm,19.2s
FLN La Foliniere 38.97 307 *e*P **P** 00 00 09.7 -1.5
FLN pmax pmax
comp=Z,11nm,0.6s
FLN La Foliniere 38.97 307 *e*P **P** 00 00 09.7 -1.5
comp=Z,11nm,0.6s
FLN La Foliniere 38.97 307 *e*P **P** 00 00 09.7 -1.5
comp=Z,5.3nm,0.6s
GRR Gorron 39.19 307 *e*P **P** 00 00 11.3 -1.8
GRR Gorron 39.19 307 *e*P **P** 00 00 11.3 -1.8
GRR Gorron 39.19 307 *e*P **P** 00 00 11.3 -1.8
GRR Gorron 39.19 307 *e*P **P** 00 00 11.3 -1.8
PALK Pallekele 39.83 124 P **P** 00 00 20.4 +1.6
PALK Pallekele 39.83 124 P **P** 00 00 20.4 +1.6
comp=Z,16nm,0.8s,baz=302,slow=9.5,SNR=5.8
PALK Pallekele 39.83 124 P **P** 00 00 20.4 +1.6
QUIF Quistinic 40.72 306 *e*P **P** 00 00 24.3 -1.5
QUIF Quistinic 40.72 306 *e*P **P** 00 00 24.3 -1.5
QUIF Quistinic 40.72 306 *e*P **P** 00 00 24.3 -1.5
QUIF Quistinic 40.72 306 *e*P **P** 00 00 24.3 -1.5
ROSF Rostrenen 40.80 307 *e*P **P** 00 00 24.2 -2.2
ROSF Rostrenen 40.80 307 *e*P **P** 00 00 24.2 -2.2
ROSF Rostrenen 40.80 307 *e*P **P** 00 00 24.2 -2.2
ROSF Rostrenen 40.80 307 *e*P **P** 00 00 24.2 -2.2
ESDC Sonseca Array 41.91 294 P **P** 00 00 35.0 -0.7
ESDC PcP **PcP** 00 02 30.5 -0.5
ESDC Sonseca Array 41.91 294 P **P** 00 00 35.0 -0.7
comp=Z,1.5nm,0.5s,baz=72,slow=8.6,SNR=15
ESDC PcP **PcP** 00 02 30.5 -0.5
comp=Z,0.8nm,0.5s,baz=71,slow=3.5,SNR=5.8
ESDC LR LR 00 17 53.6
comp=Z,46nm,19.2s,baz=325,slow=36
ESDC Sonseca Array 41.91 294 P **P** 00 00 35.0 -0.7
ESDC Sonseca Array 41.91 294 PcP **PcP** 00 02 30.5 -0.5
ZAK Zakamensk 42.82 50 *e*P **P** 00 00 43.0 0.0
ZAK Zakamensk 42.82 50 *e*P **P** 00 00 43.0 0.0
PBRG Braganca 43.67 297 *e*P **P** 00 00 50.6 +0.6
comp=Z,19nm,1.7s
PBRG Braganca 43.67 297 *e*P **P** 00 00 50.6 +0.6
comp=Z,19nm,1.7s
MDT Midelt 43.95 284 P **P** 00 00 51.3 -1.1
MDT Midelt 43.95 284 P **P** 00 00 51.3 -1.1
comp=Z,5.0nm,1.0s,baz=79,slow=5.2,SNR=4.6
MDT Midelt 43.95 284 P **P** 00 00 51.3 -1.1
PVRL Vila Real 44.48 297 *e*P **P** 00 00 56.7 +0.2
comp=Z,22nm,1.8s
PVRL Vila Real 44.48 297 *e*P **P** 00 00 56.7 +0.2
comp=Z,22nm,1.8s
MTE Manteigas 44.50 295 *e*P **P** 00 00 57.8 +1.1
comp=Z,30nm,1.2s
MTE Manteigas 44.50 295 *e*P **P** 00 00 57.8 +1.1
comp=Z,30nm,1.2s
POLO Lamas de Olo 44.52 297 *e*P **P** 00 00 57.4 +0.6
comp=Z,22nm,1.7s
POLO Lamas de Olo 44.52 297 *e*P **P** 00 00 57.4 +0.6
comp=Z,22nm,1.7s
PBAR Barrancos 44.55 292 *e*P **P** 00 00 57.0 0.0
comp=Z,41nm,1.5s
PBAR Barrancos 44.55 292 *e*P **P** 00 00 57.0 0.0
comp=Z,41nm,1.5s
PCBR Castelo Branco 44.55 295 *e*P **P** 00 00 57.2 +0.2
comp=Z,26nm,1.1s
PCBR Castelo Branco 44.55 295 *e*P **P** 00 00 57.2 +0.2
comp=Z,26nm,1.1s
PMRV Marv??o 44.56 294 *e*P **P** 00 00 57.5 +0.4
comp=Z,26nm,1.5s
PMRV Marv??o 44.56 294 *e*P **P** 00 00 57.5 +0.4
comp=Z,26nm,1.5s
PGAV Gavieira, Arco 44.78 298 *e*P **P** 00 00 58.9 0.0
comp=Z,29nm,1.3s
PGAV Gavieira, Arco 44.78 298 *e*P **P** 00 00 58.9 0.0
comp=Z,29nm,1.3s
LZH Lanzhou 44.88 71 *e*P **P** 00 01 00.8 +0.9
LZH *e*PP **PP** 00 02 45.5 +0.8
LZH *e*S **S** 00 07 34.3 -2.1
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,100nm,5.2s
LZH LR LR
comp=N,250nm,14.5s
LZH LR LR
comp=E,210nm,13.0s
LZH LR LR
comp=Z,330nm,17.5s
PBEJ Beja 45.21 292 *e*P **P** 00 01 02.9 +0.6
comp=Z,28nm,1.3s
PBEJ Beja 45.21 292 *e*P **P** 00 01 02.9 +0.6
comp=Z,28nm,1.3s
EVO Evora 45.22 293 *e*P P 00 00 59.6 -2.7
EVO Evora 45.22 293 *e*P P 00 00 59.6 -2.7
PVAQ Vaqueiros 45.24 291 *e*P **P** 00 01 02.5 0.0
comp=Z,23nm,1.4s
PVAQ Vaqueiros 45.24 291 *e*P **P** 00 01 02.5 0.0
comp=Z,23nm,1.4s
PTOM Tomar 45.30 294 *e*P **P** 00 01 03.8 +0.9
comp=Z,32nm,2.3s
PTOM Tomar 45.30 294 *e*P **P** 00 01 03.8 +0.9
comp=Z,32nm,2.3s
PFVI Vila Bisbo 46.16 291 *e*P **P** 00 01 10.3 +0.5
comp=Z,72nm,1.4s
PFVI Vila Bisbo 46.16 291 *e*P **P** 00 01 10.3 +0.5
comp=Z,72nm,1.4s
CD2 Chengdu 46.28 78 P **P** 00 01 12.5 +1.6
CD2 PcP **PcP** 00 02 48.3 +2.2
CD2 PP **PP** 00 03 01.0 +1.4
CD2 PcS **PcS** 00 06 41.3 +0.5
CD2 S **S** 00 07 54.8 -1.8
CD2 SS ScS 00 11 12.5 +7.5
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.2s
SPITS Spitsbergen Ar 46.49 351 P **P** 00 01 12.3 +0.5
SPITS Spitsbergen Ar 46.49 351 P **P** 00 01 12.3 +0.5
comp=Z,1.7nm,0.4s,baz=137,slow=11,SNR=13
SPITS Spitsbergen Ar 46.49 351 P **P** 00 01 12.3 +0.5
TORD Torodi Ar. Bea 47.15 256 P **P** 00 01 17.4 -0.3
TORD PcP **PcP** 00 02 49.0 -0.3
TORD Torodi Ar. Bea 47.15 256 P **P** 00 01 17.4 -0.3
comp=Z,7.0nm,0.6s,baz=71,slow=6.7,SNR=167
TORD PcP **PcP** 00 02 49.0 -0.3
comp=Z,1.5nm,0.8s,baz=56,slow=2.5,SNR=4.9
TORD LR LR 00 23 12.2
comp=Z,59nm,19.3s,baz=90,slow=39
TORD Torodi Ar. Bea 47.15 256 P **P** 00 01 17.5 -0.3
TORD Torodi Ar. Bea 47.15 256 PcP **PcP** 00 02 49.0 -0.3
CMAR Chiang Mai Arr 47.36 96 P **P** 00 01 19.0 -0.4
CMAR Chiang Mai Arr 47.36 96 P **P** 00 01 19.0 -0.4
comp=Z,2.4nm,0.4s,baz=295,slow=7.7,SNR=15
CMAR LR LR 00 25 00.4
comp=Z,72nm,21.4s,baz=135,slow=41
CMAR Chiang Mai Arr 47.36 96 P **P** 00 01 19.0 -0.4
KMI Kunming 47.55 86 P **P** 00 01 23.8 +2.7
KMI pmax pmax
comp=Z,10.0nm,1.0s
XAN Xi'an 49.44 72 P **P** 00 01 34.5 -0.8
XAN pmax pmax
comp=Z,3.0nm,1.2s
XAN LR LR
comp=N,79nm,15.3s
XAN LR LR
comp=E,34nm,18.3s
HHC Hu-ho-hao-te 49.65 63 *e*P P 00 01 41.0 +4.1
HHC PcP PcP 00 03 03.8 +5.8
HHC PP **PP** 00 03 36.0 +4.8
HHC S **S** 00 08 50.0 +5.9
HHC ScS **ScS** 00 11 31.8 +4.6
HHC SS **SS** 00 12 18.0 +1.8
HHC pmax pmax
comp=Z,29nm,0.6s
HHC pmax pmax
comp=Z,130nm,4.8s
HHC LR LR
comp=N,280nm,15.5s
HHC LR LR
comp=E,200nm,15.5s
HHC LR LR
comp=Z,280nm,15.5s
GYA Guiyang 50.26 82 P **P** 00 01 43.0 +1.2
GYA PP **PP** 00 03 38.8 +1.7
GYA ScP **ScP** 00 06 52.0 -2.9
GYA S **S** 00 08 50.8 -2.3
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,4.9s
OPO Ambohidratompo 52.20 182 P **P** 00 01 55.8 -0.4
OPO Ambohidratompo 52.20 182 P **P** 00 01 55.8 -0.4
comp=Z,1.3nm,0.6s,baz=334,slow=7.8,SNR=2.6
OPO Ambohidratompo 52.20 182 P **P** 00 01 55.8 -0.4
BJI Beijing 53.26 62 P **P** 00 02 03.0 -0.7
BJI pmax pmax
comp=Z,9.0nm,1.0s
DBIC Dimbokro 56.14 254 P **P** 00 02 24.0 -0.9
DBIC PcP **PcP** 00 03 21.9 -0.9
DBIC Dimbokro 56.14 254 P **P** 00 02 24.0 -0.9
comp=Z,7.3nm,0.6s,baz=16,slow=8.0,SNR=21
DBIC PcP **PcP** 00 03 21.9 -0.9
comp=Z,4.4nm,0.7s,baz=355,slow=7.0,SNR=4.2
DBIC LR LR 00 27 05.5
comp=Z,72nm,21.7s,baz=36,slow=37
DBIC Dimbokro 56.14 254 P **P** 00 02 24.0 -0.9
LIC Lamto 56.54 253⇑ *i*P **P** 00 02 27.5 -0.3
comp=Z,28nm,0.7s,baz=50
LIC *e*R
comp=Z,235nm,17.0s
LIC Lamto 56.54 253⇑ *i*P **P** 00 02 27.5 -0.3
comp=Z,28nm,0.7s
LIC Lamto 56.54 253⇑ *i*P **P** 00 02 27.5 -0.3
comp=Z,14nm,0.7s,baz=50
LBTB Lobatse 62.51 203 *e*P **P** 00 03 10.0 +1.2
comp=Z,7.2nm,0.8s
LBTB Lobatse 62.51 203 *e*P **P** 00 03 10.0 +1.2
comp=Z,7.0nm,0.8s
KSAR Wonju Array Be 62.74 62 P **P** 00 03 09.1 -1.2
KSAR Wonju Array Be 62.74 62 P **P** 00 03 09.1 -1.2
KSRS Korea Array 62.77 62 P **P** 00 03 09.1 -1.3
comp=Z,1.7nm,0.6s,baz=286,slow=7.0,SNR=5.7
KSRS LR LR 00 33 57.5
comp=Z,57nm,19.9s,baz=140,slow=39
KSRS Korea Array 62.77 62 P **P** 00 03 09.1 -1.3
comp=Z,57nm,19.9s
USRK Ussuriysk Arra 63.04 53 P **P** 00 03 10.8 -1.3
comp=Z,1.3nm,0.6s,baz=313,slow=6.9,SNR=3.2
BOSA Boshof 65.96 202 P **P** 00 03 31.4 0.0
BOSA Boshof 65.96 202 P **P** 00 03 31.4 0.0
comp=Z,5.8nm,0.8s,baz=20,slow=5.6,SNR=13
BOSA Boshof 65.96 202 P **P** 00 03 31.4 0.0
BILL Bilibino 68.37 211⇑ *i*P **P** 00 03 46.0 -0.1
BILL *e**PP pP 00 04 00.6 +6.9

BILL *e* 00 06 17.8
BILL pmax pmax
comp=Z,8.0nm,1.3s
BILL Bilibino 68.37 21 *i* P **P 00 03 46.0 -0.1**
comp=Z,8.0nm,1.3s
FRB Frobisher Bay 70.78 335 P **P 00 04 00.3 -0.8**
FRB Frobisher Bay 70.78 335 P **P 00 04 00.3 -0.8**
comp=Z,7.6nm,0.7s,baz=58,slow=7.5,SNR=6.5
FRB Frobisher Bay 70.78 335 P **P 00 04 00.3 -0.8**
SCHQ Schefferville 75.70 327 P **P 00 04 31.2 +0.9**
SCHQ Schefferville 75.70 327 P **P 00 04 31.2 +0.9**
comp=Z,1.9nm,0.5s,baz=307,slow=6.7,SNR=3.5
SCHQ Schefferville 75.70 327 P **P 00 04 31.2 +0.9**
INK Inuvik 78.09 1 P **P 00 04 42.1 -1.3**
INK Inuvik 78.09 1 P **P 00 04 42.1 -1.3**
comp=Z,1.7nm,0.9s,baz=358,slow=5.5,SNR=4.0
INK Inuvik 78.09 1 P **P 00 04 42.1 -1.3**
ILAR Eielson Array 80.91 7 P **P 00 04 57.5 -1.5**
ILAR PP **PP 00 08 03.0 +0.3**
ILAR Eielson Array 80.91 7 P **P 00 04 57.5 -1.5**
comp=Z,1.2nm,0.8s,baz=334,slow=4.0,SNR=14
ILAR PP **PP 00 08 03.0 +0.3**
comp=Z,0.3nm,0.7s,baz=341,slow=7.8,SNR=4.1
ILAR Eielson Array 80.91 7 P **P 00 04 57.5 -1.5**
ILAR Eielson Array 80.91 7 PP PP 00 08 03.0 +0.3
YKA Yellowknife Ar 82.98 352 P **P 00 05 08.5 -1.3**
YKA Yellowknife Ar 82.98 352 P **P 00 05 08.5 -1.3**
comp=Z,2.3nm,0.9s,baz=11,slow=5.7,SNR=26
YKA Yellowknife Ar 82.98 352 P **P 00 05 08.5 -1.3**
WRA Warramunga Arr 97.56 109 P **P 00 06 19.4 -0.2**
WRA Warramunga Arr 97.56 109 P **P 00 06 19.4 -0.2**
comp=Z,0.2nm,0.3s,baz=314,slow=4.1,SNR=2.7
WRA Warramunga Arr 97.56 109 P **P 00 06 19.4 -0.2**
QSPA South Pole Qui 123.73 180 PKP **PKPdf 00 11 40.1 -1.8**
QSPA South Pole Qui 123.73 180 PKP **PKPdf 00 11 40.1 -1.8**
comp=Z,2.0nm,1.0s,baz=282,slow=1.0,SNR=6.3

AUST ***27*** *00:04:44.1,24˙.23S×175˙.17W,h30km*
BJI ***27*** *00:04:45.5,24˙.60S×175˙.50W,h30km,mB5.3/17, mb5.0/24,Ms5.2/10,Ms7 4.8/14*
GCMT ***27*** *00:04:46.9±0.4,24˙.58S×175˙.01W,h20km±1km,MW4.9, Moment Tensor Solution. s29,c33; s60,c71; Moment tensor: Scale 10¹⁶Nm; Mrr-2.26±.17; Mθθ0.29±.13; Mφφ1.97±.12; Mrθ0.74±.30; Mθφ-1.06±.10; Mφr0.62±.23; Best double couple: M₀2.60000×10¹⁶ NP1:φs314.00000°, δ46.00000°,λ-120.00000°. NP2:φs174.00000°, δ52.00000°,λ-63.00000°. Principal axes: T 2.4900, Plg3.0000°, Azm245.0000°; N 0.1400, Plg21.0000°, Azm336.0000°; P -2.6400, Plg69.0000°, Azm148.0000°; Data Used: II IU G CN IC.*
SZGRF ***27*** *00:04:47.0,24˙.43S×175˙.60W,h33km,South of Tonga Islands*
ISCJB ***27*** *00:04:47.2±0.2,24˙.66S±0˙.05×175˙.60W±0˙.05,h51km, mb4.9/93,MS4.3/11,Error ellipse: s-maj=7.5km s-min=4.7km az=140.8*
IDC ***27*** *00:04:49.9±0.6,24˙.55S×175˙.68W,h59km±4km,mb4.4/21, mb1 4.6/21,mb1mx4.6/22,mbtmp4.4/21,MS4.2/7, Ms1 4.1/7,ms1mx3.6/30,Error ellipse: s-maj=12.5km s-min=10.9km az=168.0*
NEIC ***27*** *00:04:49.4±0.2,24˙.65S×175˙.54W,mb4.9/61,Error ellipse: s-maj=8.2km s-min=5.3km az=142.0*

ISC 27 00:04:48.2±0.4,24˙.64S±0˙.05×175˙.56W±0˙.05,h45km±2km, h45km:pP-P,n620,σ1‡04/671,mb4.9/91,MS4.3/11, 166C-175D,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.05**	**204**	*e*Pn	**Pn**	**00 06 00.6**	**-0.8**
RAO				S	**Sn**	**00 06 59.0**	**+0.5**
RAO	**Raoul Island**	**5.05**	**204**	P	**Pn**	**00 06 01.1**	**-0.3**
	275nm,0.3s,baz=86,slow=20,SNR=7.3						
RAO				S	**Sn**	**00 06 59.0**	**+0.5**
	433nm,0.3s,baz=59,slow=23,SNR=12						
NIUE	**Niue**	**7.61**	**44**	P	Pn	00 06 25.9	-11
	baz=7.1,SNR=48						
NIUE				S	Sn	00 07 37.7	-24
	baz=7.1,SNR=11						
MSVF	**Nonsavu**	**9.10**	**318**	*e*Pn	**Pn**	**00 06 57.8**	**+0.7**
	71nm,0.7s						
AFI	**Afiamalu**	**11.25**	**19**	*e*Pn	Pn	00 07 17.4	-9.1
AFI				S	Sn	00 09 10.3	-21
AFI	**Afiamalu**	**11.25**	**19**	P	Pn	00 07 17.2	-9.4
	11nm,0.3s,baz=272,slow=22,SNR=5.5						
AFI				S	Sn	00 09 10.3	-21
	18nm,0.3s,baz=306,slow=20,SNR=7.5						
RAR	**Rarotonga**	**14.94**	**80**	P	Pn	00 08 05.8	-11
RAR				S	Sn	00 10 34.5	-26
RAR	**Rarotonga**	**14.94**	**80**	P	Pn	00 08 05.8	-11
	18nm,0.3s,baz=244,slow=7.9,SNR=52						
RAR				S	Sn	00 10 34.5	-26
	4.1nm,0.3s,baz=73,slow=19,SNR=6.1						
RAR				LR	LR	00 11 54.8	
	comp=Z,636nm,19.1s,baz=283,slow=28						
URZ	**Urewera**	**14.94**	**203**	*e*Pn	**Pn**	**00 08 14.5**	**-1.9**
URZ				S	Sn	00 10 48.9	-12
URZ	**Urewera**	**14.94**	**203**	P	Pn	00 08 12.4	-4.0
	2.0nm,0.3s,baz=266,slow=6.0,SNR=6.7						
URZ				S	Sn	00 10 48.9	-12
	3.7nm,0.3s,baz=282,slow=23,SNR=7.1						
DZM	**Mont Dzumac**	**16.73**	**275**	P	**P**	**00 08 42.7**	**+1.5**
DZM	**Mont Dzumac**	**16.73**	**275**	P	**P**	**00 08 42.7**	**+1.5**
	0.8nm,0.3s,baz=90,slow=16,SNR=9.4						
KHZ	**Kahutara**	**19.89**	**204**	*e*P	**P**	**00 09 12.5**	**-3.2**
	56nm,0.6s						
RPZ	**Rata Peaks**	**21.96**	**207**	*e*P	**P**	**00 09 37.2**	**-0.9**
RPZ				S	S	00 13 26.1	-12
RPZ	**Rata Peaks**	**21.96**	**207**	P	P	00 09 32.6	-5.4
	6.1nm,0.4s,baz=179,slow=13,SNR=4.0						
RPZ				S	S	00 13 26.1	-12
	3.1nm,0.3s,baz=259,slow=13,SNR=4.8						
TBI	**Tubuai**	**23.87**	**92**	*e*LR	LR	00 15 50.3	
	548nm,22.2s						
TBI				*e*T	T	00 35 44.4	
	4.2nm,0.3s						
TBI	**Tubuai**	**23.87**	**92**	*e*S	**S**	**00 14 14.5**	**+3.9**
	978nm,28.2s						
TBI				*e*LR	LR	00 17 42.6	
	2µm,27.5s						
PPT2	**Papeete2**	**25.20**	**79**	*e*LR	LR	00 16 12.4	
	582nm,22.2s						
TIAR	**Tiarei**	**25.42**	**79**	*e*P	**P**	**00 10 10.5**	**-1.3**
	50nm,0.9s						
MILA	**Mila**	**32.54**	**239**	S	S	00 16 55.8	+28
	baz=33,SNR=10						
TOO	**Toolangi**	**35.51**	**239**	P	**P**	**00 11 41.5**	**+0.7**
	baz=36,SNR=4.6						
TOO				S	S	00 17 36.7	+24
	baz=36,SNR=6.4						
RKT	**Rikitea**	**37.05**	**96**	*e*T	T	00 50 51.2	
	1.2nm,0.3s						
MTSU	**Mount Surprise**	**37.82**	**272**	P	**P**	**00 12 00.8**	**+0.1**
	baz=38,SNR=6.9						
STKA	**Stephens Creek**	**38.23**	**249**	P	**P**	**00 12 03.0**	**-0.9**
STKA				PcP	**PcP**	**00 14 19.6**	**+1.9**
STKA	**Stephens Creek**	**38.23**	**249**	P	**P**	**00 12 03.0**	**-0.9**
	1.5nm,0.5s,baz=68,slow=7.8,SNR=5.1						
STKA				PcP	**PcP**	**00 14 19.6**	**+1.9**
	3.9nm,0.9s,baz=79,slow=8.6,SNR=4.3						
STKA				LR	LR	00 26 10.8	
	comp=Z,305nm,19.7s,baz=36,slow=34						
STKA	**Stephens Creek**	**38.23**	**249**	P	**P**	**00 12 04.2**	**+0.3**
	baz=39,SNR=4.6						
PMG	**Port Moresby**	**38.58**	**287**	*e*P	**P**	**00 12 06.5**	**-0.4**
PMG	**Port Moresby**	**38.58**	**287**	P	**P**	**00 12 06.0**	**-0.9**
	67nm,0.8s,baz=113,slow=5.1,SNR=18						
COEN	**Coen**	**40.23**	**278**	*e*P	**P**	**00 12 20.1**	**-0.7**
	18nm,0.4s						
COEN	**Coen**	**40.23**	**278**	P	**P**	**00 12 20.5**	**-0.3**
	baz=40,SNR=5.9						
AS31	**Alice Springs**	**45.91**	**260**	*e*P	**P**	**00 13 06.6**	**-0.1**
AS31				*e*PcP	**PcP**	**00 14 44.0**	**+0.7**
ASAR	**Alice Springs**	**45.91**	**260**	P	**P**	**00 13 06.3**	**-0.4**
ASAR				pP	**pP**	**00 13 21.2**	**+2.0**
ASAR				PcP	**PcP**	**00 14 43.9**	**+0.7**
ASAR				S	**S**	**00 19 45.9**	**-2.4**
ASAR	**Alice Springs**	**45.91**	**260**	P	**P**	**00 13 06.3**	**-0.4**
	4.9nm,0.9s,baz=97,slow=8.0,SNR=30						
ASAR				pP	**pP**	**00 13 21.2**	**+2.0**
	3.3nm,0.7s,baz=100,slow=7.7,SNR=5.6						
ASAR				PcP	**PcP**	**00 14 43.9**	**+0.7**
	3.1nm,0.7s,baz=110,slow=3.8,SNR=6.6						
ASAR				S	**S**	**00 19 45.9**	**-2.4**
	1.7nm,1.0s,baz=99,slow=16,SNR=8.4						
ASAR				LR	LR	00 30 56.2	
	comp=Z,185nm,18.6s,baz=108,slow=34						
WRAB	**Tennant Creek**	**46.39**	**265**	*e*P	**P**	**00 13 08.4**	**-2.1**
	8.0nm,0.8s						
WRA	**Warramunga Arr**	**46.40**	**265**	P	**P**	**00 13 08.9**	**-1.6**
WRA				pP	**pP**	**00 13 24.1**	**+1.1**
WRA				PcP	**PcP**	**00 14 45.4**	**+0.5**
WRA				S	**S**	**00 19 50.5**	**-4.8**
WRA	**Warramunga Arr**	**46.40**	**265**	P	**P**	**00 13 08.9**	**-1.6**
	8.3nm,0.7s,baz=103,slow=7.9,SNR=36						
WRA				pP	**pP**	**00 13 24.1**	**+1.1**
	3.8nm,0.6s,baz=102,slow=8.3,SNR=4.6						
WRA				PcP	**PcP**	**00 14 45.4**	**+0.5**
	5.2nm,0.9s,baz=103,slow=3.6,SNR=7.5						
WRA				S	**S**	**00 19 50.5**	**-4.8**
	1.1nm,0.9s,baz=99,slow=12,SNR=3.6						
JAY	**Jayapura**	**47.55**	**291**	P	**P**	**00 13 18.4**	**-1.2**
	baz=48,SNR=6.2						
KNRA	**Kununurra**	**52.73**	**269**	P	**P**	**00 13 58.2**	**-0.5**
	baz=53,SNR=4.3						
SBA	**Scott Base**	**53.92**	**185**	*e*P	P	00 14 10.7	+4.0
	9.2nm,1.0s						
VNDA	**Vanda**	**54.02**	**186**	P	**P**	**00 14 08.9**	**+1.6**
VNDA				pP	**pP**	**00 14 24.1**	**+4.0**
VNDA	**Vanda**	**54.02**	**186**	P	**P**	**00 14 08.9**	**+1.6**
	3.3nm,1.0s,baz=2.4,slow=6.2,SNR=11						
VNDA				pP	**pP**	**00 14 24.1**	**+4.0**
	3.8nm,1.0s,baz=1.3,slow=3.2,SNR=5.8						
FITZ	**Fitzroy Crossi**	**54.80**	**265**	P	**P**	**00 14 13.6**	**-0.4**
FITZ				pP	**pP**	**00 14 29.8**	**+3.1**
FITZ	**Fitzroy Crossi**	**54.80**	**265**	P	**P**	**00 14 13.6**	**-0.4**
	7.5nm,0.9s,baz=132,slow=4.9,SNR=11						
FITZ				pP	**pP**	**00 14 29.8**	**+3.1**
	5.9nm,0.9s,baz=160,slow=7.6,SNR=4.2						
FITZ				LR	LR	00 36 46.3	
	comp=Z,130nm,21.5s,baz=81,slow=35						
FITZ	**Fitzroy Crossi**	**54.80**	**265**	P	**P**	**00 14 14.2**	**+0.2**
	baz=55,SNR=5.3						
KLBR	**Kellerberrin**	**58.44**	**247**	P	**P**	**00 14 38.5**	**-1.1**
	baz=59,SNR=4.6						
MEEK	**Meekatharra**	**58.77**	**253**	P	**P**	**00 14 41.4**	**-0.6**
	baz=59,SNR=3.1						
MORW	**Morawa**	**60.42**	**249**	P	**P**	**00 14 53.1**	**-0.3**
	baz=61,SNR=3.2						
CASY	**Casey**	**61.23**	**206**	*e*P	**P**	**00 14 59.8**	**+1.6**
	29nm,1.2s						
QSPA	**South Pole Qui**	**65.45**	**180**	*e*P	**P**	**00 15 26.6**	**+0.3**
	14nm,0.9s						
QSPA	**South Pole Qui**	**65.45**	**180**	P	**P**	**00 15 27.7**	**+1.5**
	12nm,0.8s,baz=47,slow=2.1,SNR=31						
MJAR	**Matsushiro Arr**	**74.86**	**323**	P	**P**	**00 16 23.6**	**-0.5**
MJAR	**Matsushiro Arr**	**74.86**	**323**	P	**P**	**00 16 23.6**	**-0.5**
	10nm,0.9s,baz=166,slow=6.0,SNR=18						
MAJO	**Matsushiro**	**74.86**	**323**	*e*P	**P**	**00 16 23.9**	**-0.1**
	12nm,0.9s						
MAT	**Matsushiro**	**74.86**	**323**	P	**P**	**00 16 23.7**	**-0.4**
MAT				S	**S**	**00 25 52.4**	**-5.4**
ATKA	**Atka Island**	**76.52**	**1**	*e*P	**P**	**00 16 32.3**	**-0.8**
	41nm,1.0s						
NACB	**Ninganchiao**	**77.85**	**304**	*e*P	**P**	**00 16 41.3**	**0.0**
	43nm,1.0s						
TPUB	**Ta-pu**	**78.10**	**303**	*e*P	**P**	**00 16 41.9**	**-0.8**
ASAJ	**Asahikawa**	**78.42**	**331**	*e*P	**P**	**00 16 45.7**	**+1.8**
	5.4nm,0.9s						
MAW	**Mawson**	**78.44**	**199**	P	**P**	**00 16 45.5**	**+1.7**
MAW	**Mawson**	**78.44**	**199**	P	**P**	**00 16 45.5**	**+1.7**
	6.3nm,0.6s,baz=134,slow=8.7,SNR=8.3						
MAW				LR	LR	00 48 42.8	
	comp=Z,123nm,18.1s,baz=347,slow=34						
ARVC	**Arvin**	**80.11**	**44**	⇓P	**P**	**00 16 52.7**	**-0.7**
	baz=80						
MURC	**Murrieta**	**80.21**	**46**	⇓P	**P**	**00 16 53.4**	**-0.6**
	baz=80						
MONP	**Monument Peak**	**80.29**	**47**	⇓P	**P**	**00 16 53.9**	**-0.8**
	baz=80						
BFSC	**Mount Baldy Ra**	**80.30**	**45**	⇓P	**P**	**00 16 53.9**	**-0.8**
	baz=80						
VES	**Vestal, Richgr**	**80.40**	**43**	⇓P	**P**	**00 16 54.4**	**-0.5**
	baz=81						
EDW2	**Edwards Air Fo**	**80.49**	**45**	⇓P	**P**	**00 16 55.1**	**-0.4**
	baz=81,SNR=7.8						
ISA	**Isabella**	**80.67**	**44**	*e*P	**P**	**00 16 56.7**	**+0.2**
	22nm,1.4s						
ISA	**Isabella**	**80.67**	**44**	⇑P	**P**	**00 16 56.2**	**-0.3**
	baz=81,SNR=7.3						
PFO	**Pinyon Flat Ob**	**80.70**	**47**	P	**P**	**00 16 55.0**	**-1.8**
PFO	**Pinyon Flat Ob**	**80.70**	**47**	P	**P**	**00 16 55.0**	**-1.8**
	4.6nm,0.9s,baz=303,slow=4.4,SNR=4.9						
PFO	**Pinyon Flat Ob**	**80.70**	**47**	⇑P	**P**	**00 16 56.1**	**-0.7**
	baz=81						
SWSC	**Sam W. Stewart**	**80.74**	**47**	⇓P	**P**	**00 16 56.4**	**-0.4**
	baz=81						
PETK	**Petropavlovsk-**	**80.84**	**344**	P	**P**	**00 16 56.7**	**-0.2**
PETK	**Petropavlovsk-**	**80.84**	**344**	P	**P**	**00 16 56.7**	**-0.2**
	12nm,0.8s,baz=144,slow=11,SNR=15						
CMB	**Columbia Cole**	**81.02**	**41**	*e*P	**P**	**00 16 57.2**	**-1.1**
	14nm,1.0s						
LRMC	**Laurel Mountai**	**81.06**	**44**	⇓P	**P**	**00 16 58.1**	**-0.5**
	baz=81,SNR=8.0						
RRX	**Edison Barstow**	**81.13**	**45**	⇑P	**P**	**00 16 58.3**	**-0.6**
	baz=81						
OHCM	**Honcut**	**81.24**	**39**	*e*P	**P**	**00 16 59.3**	**0.0**
BELC	**Belle Mtn. Jos**	**81.24**	**46**	⇑P	**P**	**00 16 59.3**	**-0.4**
	baz=81,SNR=5.4						
BC3	**Big Chuckawall**	**81.39**	**47**	⇓P	**P**	**00 17 00.4**	**-0.1**
	baz=82,SNR=5.2						
CWC	**Cottonwood Cre**	**81.41**	**43**	⇑P	**P**	**00 17 00.2**	**-0.4**
	baz=82						
GLA	**Glamis**	**81.45**	**48**	*e*P	**P**	**00 17 01.0**	**+0.3**
	29nm,1.8s						
GLA	**Glamis**	**81.45**	**48**	⇓P	**P**	**00 17 00.6**	**-0.1**
	baz=82						
KSRS	**Korea Array**	**81.46**	**318**	P	**P**	**00 17 01.6**	**+1.1**
	4.1nm,0.9s,baz=139,slow=5.6,SNR=20						
KSRS				pP	**pP**	**00 17 16.8**	**+2.9**
	1.8nm,0.6s,baz=142,slow=6.5,SNR=4.4						
WDC	**Whiskeytown Da**	**81.47**	**38**	*e*P	**P**	**00 17 00.6**	**+0.1**
	18nm,1.1s						
KSAR	**Wonju Array Be**	**81.48**	**318**	P	**P**	**00 17 01.6**	**+1.0**
KSAR				pP	**pP**	**00 17 16.8**	**+2.8**
GSC	**Goldstone**	**81.51**	**45**	*e*P	**P**	**00 17 00.9**	**-0.1**
	9.3nm,1.1s						
GSC	**Goldstone**	**81.51**	**45**	⇑P	**P**	**00 17 00.6**	**-0.4**
	baz=82,SNR=5.6						
HEC	**Hector,Ludlow**	**81.53**	**46**	⇑P	**P**	**00 17 00.6**	**-0.5**
	baz=82,SNR=9.1						
MPMC	**Manual Prospec**	**81.55**	**44**	⇑P	**P**	**00 17 01.1**	**-0.2**
	baz=82,SNR=10						
MTUM	**Tungsten Hills**	**81.69**	**42**	*e*P	**P**	**00 17 02.3**	**+0.3**
IRM	**Iron Mountain**	**81.90**	**47**	⇓P	**P**	**00 17 02.9**	**-0.1**
	baz=82,SNR=8.1						
113A	**Mohawk Valley,**	**82.01**	**49**	⇑P	**P**	**00 17 03.1**	**-0.5**
	baz=82						
Y12C	**Blythe**	**82.07**	**47**	⇓P	**P**	**00 17 03.5**	**-0.4**
	baz=82						
YBH	**Yreka Blue Hor**	**82.16**	**37**	*e*P	**P**	**00 17 03.1**	**-1.2**
	10nm,1.0s						
TUQ	**Turquoise Moun**	**82.16**	**45**	⇓P	**P**	**00 17 04.2**	**-0.3**
	baz=82,SNR=5.3						
214A	**Organ Pipe Nat**	**82.19**	**50**	⇑P	**P**	**00 17 04.2**	**-0.4**
	baz=82						
FURC	**Furnace Creek,**	**82.20**	**44**	⇑P	**P**	**00 17 04.1**	**-0.3**
	baz=82						
GRAC	**Grapevine Rang**	**82.21**	**43**	⇓P	**P**	**00 17 04.9**	**+0.3**
	baz=82						
SHOC	**Shoshone**	**82.22**	**45**	⇓P	**P**	**00 17 04.5**	**-0.1**
	baz=82						
WCN	**Washoe City**	**82.22**	**40**	*e*P	**P**	**00 17 04.4**	**-0.4**
	17nm,1.0s						
BEKR	**Beckworth**	**82.24**	**40**	*e*P	**P**	**00 17 04.0**	**-0.9**
	7.6nm,1.3s						
LBCM	**Butte Creek Ri**	**82.31**	**38**	P	**P**	**00 17 05.2**	**0.0**
LDFC	**Landfair**	**82.48**	**46**	*e*P	**P**	**00 17 06.2**	**+0.1**
	9.8nm,0.4s						
NVAR	**Mina Array Bea**	**82.53**	**42**	P	**P**	**00 17 06.2**	**-0.2**
NVAR	**Mina Array Bea**	**82.53**	**42**	P	**P**	**00 17 06.2**	**-0.2**
	11nm,0.8s,baz=224,slow=9.4,SNR=78						
NEE2	**Needles Airpor**	**82.61**	**47**	⇓P	**P**	**00 17 06.6**	**-0.1**
	baz=83						
NV11	**Mina Array Sit**	**82.62**	**42**	*e*P	**P**	**00 17 06.3**	**-0.6**
PDMCI	**Parker Dam,Lak**	**82.65**	**47**	⇑P	**P**	**00 17 06.9**	**0.0**
	baz=83						
Z14A	**Wintersburg**	**82.91**	**48**	⇑P	**P**	**00 17 08.2**	**-0.1**
	baz=83,SNR=5.6						
RNO	**Roman Nose**	**83.11**	**35**	P	**P**	**00 17 09.5**	**+0.4**
SYO	**Syowa Base**	**83.19**	**192**	⇑*e*P	**P**	**00 17 07.4**	**-1.7**
W13A	**Hualapai Mount**	**83.30**	**47**	⇓P	**P**	**00 17 10.4**	**-0.1**
	baz=84,SNR=5.1						
MPOR	**Mary's Peak**	**83.62**	**35**	P	**P**	**00 17 12.3**	**+0.5**
USRK	**Ussuriysk Arra**	**83.64**	**325**	P	**P**	**00 17 12.6**	**+0.8**
	9.2nm,0.8s,baz=127,slow=2.6,SNR=25						
TUC	**Tucson**	**83.81**	**50**	*e*P	**P**	**00 17 12.9**	**-0.1**
	1.8nm,1.0s						
SNAA	**Sanae**	**83.82**	**178**	*e*P	**P**	**00 17 12.5**	**0.0**
SNAA	**Sanae**	**83.82**	**178**	P	**P**	**00 17 12.5**	**0.0**
	2.2nm,0.8s,baz=237,slow=4.6,SNR=8.7						
R11A	**Troy Canyon, C**	**84.15**	**43**	⇓P	**P**	**00 17 14.2**	**-0.5**
	baz=84						
NJ2	**Nanjing**	**84.24**	**309**	*e*P	**P**	**00 17 17.0**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,30nm,1.1s						
319A	**Douglas**	**84.36**	**52**	⇓P	**P**	**00 17 15.7**	**-0.2**
	baz=84						
BMN	**Battle Mountai**	**84.44**	**41**	*e*P	**P**	**00 17 16.0**	**-0.2**
	comp=Z,20nm,1.1s						
X16A	**Lo Mia Camp, P**	**84.54**	**48**	⇓P	**P**	**00 17 17.1**	**+0.2**
	baz=85,SNR=13						
QIZ	**Qiongzhong**	**84.59**	**294**	P	**P**	**00 17 18.0**	**+0.8**
QIZ				S	**S**	**00 27 43.5**	**+2.3**
PLCA	**Paso Flores**	**84.81**	**133**	*e*P	**P**	**00 17 18.8**	**+0.6**
	comp=Z,8.6nm,1.0s						
PLCA	**Paso Flores**	**84.81**	**133**	P	**P**	**00 17 18.4**	**+0.3**
	comp=Z,6.5nm,0.9s,baz=248,slow=6.3,SNR=11						
320A	**Kipp Ranch, An**	**84.88**	**52**	⇑P	**P**	**00 17 18.6**	**+0.1**
	baz=85						
WVOR	**Wild Horse Val**	**84.89**	**39**	*e*P	**P**	**00 17 17.4**	**-1.0**
	comp=Z,21nm,1.1s						
CCUT	**Cedar City**	**85.08**	**45**	*e*P	**P**	**00 17 19.9**	**+0.4**
	comp=Z,20nm,1.0s						
U15A	**North Rim**	**85.12**	**46**	⇓P	**P**	**00 17 20.1**	**+0.3**
	baz=85,SNR=29						
VIPM	**Ingram Point**	**85.16**	**36**	P	**P**	**00 17 19.7**	**0.0**
ARUT	**Antelope Range**	**85.17**	**45**	*e*P	**P**	**00 17 19.4**	**-0.5**
	comp=Z,1.0nm,0.3s						
220A	**Playas Peak, P**	**85.18**	**52**	⇓P	**P**	**00 17 20.2**	**+0.1**
	baz=85,SNR=9.8						
MDJ	**Mudanjiang**	**85.19**	**324**	P	**P**	**00 17 20.8**	**+1.3**
MDJ				pP	**pP**	**00 17 29.0**	**-4.0**
MDJ				sP	sP	00 17 32.3	-5.8
MDJ				S	**SKKSac**	**00 27 49.0**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,110nm,6.8s						
MDJ				LR	LR		
	comp=Z,56nm,22.1s						
WUAZ	**Wupatki**	**85.21**	**47**	*e*P	**P**	**00 17 18.8**	**-1.4**
	comp=Z,20nm,1.3s						
WUAZ	**Wupatki**	**85.21**	**47**	⇑P	**P**	**00 17 20.2**	**+0.1**
	baz=85,SNR=7.7						
VFP	**Flag Point**	**85.25**	**35**	P	**P**	**00 17 20.1**	**0.0**
LVP	**Lakeview Peak**	**85.28**	**34**	P	**P**	**00 17 20.2**	**+0.1**
120A	**U Bar Ranch, L**	**85.45**	**51**	⇓P	**P**	**00 17 21.6**	**+0.2**
	baz=86,SNR=15						
X18A	**Snowflake**	**85.62**	**49**	⇑P	**P**	**00 17 22.2**	**0.0**
	baz=86						
221A	**Mesquite Ranch**	**85.78**	**52**	⇑P	**P**	**00 17 22.8**	**-0.2**
	baz=86						
Z20A	**Nine Sixteen R**	**85.79**	**51**	⇑P	**P**	**00 17 23.4**	**+0.3**
	baz=86,SNR=10						
ELK	**Elko**	**85.83**	**41**	*e*P	**P**	**00 17 23.0**	**-0.2**
	comp=Z,9.5nm,1.3s						
121A	**Cookes Peak, D**	**86.05**	**52**	⇑P	**P**	**00 17 24.5**	**+0.1**
	baz=86,SNR=7.0						
W18A	**Petrified Fore**	**86.09**	**49**	⇑P	**P**	**00 17 24.5**	**-0.1**
	baz=86						
222A	**Williams Famil**	**86.31**	**52**	⇑P	**P**	**00 17 25.9**	**+0.3**
	baz=86						
Y20A	**Horse Springs,**	**86.37**	**50**	⇓P	**P**	**00 17 26.4**	**+0.3**
	baz=87,SNR=9.2						
MVU	**Marysvale**	**86.37**	**45**	*e*P	**P**	**00 17 26.0**	**0.0**
	comp=Z,12nm,1.2s						
MSU	**Marysvale**	**86.40**	**45**	*e*P	**P**	**00 17 26.7**	**+0.6**
Z21A	**St. Cloud Mine**	**86.55**	**51**	⇓P	**P**	**00 17 27.2**	**+0.4**
	baz=87,SNR=10						
X20A	**Quemado**	**86.63**	**50**	⇓P	**P**	**00 17 27.5**	**+0.2**
	baz=87,SNR=8.3						
WHN	**Wuhan**	**86.69**	**306**	P	**P**	**00 17 27.5**	**+0.2**
122A	**Conniff Cattle**	**86.70**	**52**	⇑P	**P**	**00 17 27.8**	**+0.2**
	baz=87						
223A	**Chaparral, Ant**	**86.75**	**53**	⇑P	**P**	**00 17 28.2**	**+0.4**
	baz=87						
Y21A	**Point of Rocks**	**86.92**	**50**	⇓P	**P**	**00 17 29.2**	**+0.5**
	baz=87,SNR=13						
CN2	**Changchun**	**86.94**	**322**	*e*P	P	00 17 31.5	+3.3
W20A	**Ramah**	**86.94**	**49**	⇑P	**P**	**00 17 29.1**	**+0.3**
	baz=87,SNR=18						
DUG	**Dugway**	**86.98**	**43**	*e*P	**P**	**00 17 28.5**	**-0.2**
	comp=Z,9.2nm,1.5s						
DUG	**Dugway**	**86.98**	**43**	⇓P	**P**	**00 17 28.5**	**-0.2**

225A	Deer Hill, Car baz=88,SNR=7.7	87.97	53	⇑P		P	00 17 33.2	-0.5
Y23A	Lovelace Mesa, baz=88,SNR=7.9	88.02	51	⇓P		P	00 17 33.5	-0.4
HLID	Hailey comp=Z,3.6nm,0.9s	88.02	40	eP		P	00 17 33.7	0.0
HLID	Hailey baz=88	88.02	40	⇓P		P	00 17 33.3	-0.4
W22A	Albuquerque baz=88	88.05	50	⇓P		P	00 17 34.2	+0.2
J13A	Cove Ranch, Pi baz=88	88.06	40	⇓P		P	00 17 33.4	-0.5
JLU	Jordanelle comp=Z,34nm,2.0s	88.06	43	eP		P	00 17 33.9	-0.2
DAU	Daniels Canyon	88.08	44	eP		P	00 17 34.3	+0.1
628A	Black Gap, Mar baz=88,SNR=10	88.09	56	⇓P		P	00 17 33.6	-0.6
326A	Caldwell Ranch baz=88	88.19	54	⇓P		P	00 17 34.0	-0.7
Z24A	Sheeppen Canyo baz=88,SNR=6.9	88.20	52	⇑P		P	00 17 34.5	-0.3
U21A	Nageezi baz=88	88.22	48	⇓P		P	00 17 34.6	-0.3
X23A	Hourglass Bar baz=88	88.26	51	⇑P		P	00 17 34.8	-0.3
ANMO	Albuquerque comp=Z,10nm,0.9s	88.27	50	eP		P	00 17 34.6	-0.4
P18A	Preston Nutter baz=88	88.27	45	⇓P		P	00 17 34.6	-0.6
H12A	Diamond D Ranc baz=89	88.36	39	⇑P		P	00 17 34.5	-0.8
125A	Gardner Draw, baz=88,SNR=7.7	88.37	53	⇓P		P	00 17 35.2	-0.3
427A	Hayter Ranch, baz=88,SNR=15	88.38	55	⇑P		P	00 17 35.3	-0.3
J14A	Carey baz=89	88.40	40	⇑P		P	00 17 35.5	0.0
I13A	Wildhorse Cree baz=89	88.40	39	⇓P		P	00 17 34.7	-0.8
226B	Tecolote Peak, baz=89,SNR=6.3	88.43	54	⇓P		P	00 17 35.1	-0.7
G12A	Big Creek, Yel baz=89	88.45	38	⇓P		P	00 17 34.9	-0.8
Y24A	Capitan baz=89,SNR=25	88.45	51	⇓P		P	00 17 35.7	-0.3
V22A	San Miguel Ran baz=89	88.46	49	⇓P		P	00 17 35.4	-0.7
528A	Cox Ranch, San baz=89,SNR=6.8	88.50	56	⇓P		P	00 17 35.5	-0.7
S20A	Disappointment baz=89	88.51	47	⇑P		P	00 17 35.8	-0.4
PMR	Palmer comp=Z,14nm,1.0s	88.53	12	eP		P	00 17 35.3	-0.1
HWUT	Hardware Ranch comp=Z,2.8nm,0.7s	88.57	42	eP		P	00 17 34.9	-1.5
327A	Balmorhea Ranc baz=89	88.57	54	⇑P		P	00 17 36.0	-0.5
W23A	Werner Place, baz=89	88.59	50	⇓P		P	00 17 36.2	-0.5
T21A	Navajo Lake baz=89	88.61	48	⇓P		P	00 17 36.1	-0.6
Z25A	Roswell baz=89,SNR=6.9	88.64	52	⇓P		P	00 17 36.4	-0.4
R20A	Redvale baz=89	88.69	47	⇑P		P	00 17 36.0	-1.0
S21A	Coal Bank Pass baz=89	88.80	47	⇓P		P	00 17 37.3	-0.4
I14A	Mackay baz=89	88.80	40	⇑P		P	00 17 36.8	-0.6
DIV	Divide comp=Z,20nm,0.9s	88.81	14	eP		P	00 17 36.8	0.0
126A	Clayton Basin, baz=89	88.82	53	⇓P		P	00 17 37.1	-0.5
428A	Kincaid Ranch, baz=89,SNR=6.1	88.86	55	⇓P		P	00 17 37.4	-0.4
V23A	Ortiz Mt. (NFS baz=89	88.88	50	⇓P		P	00 17 38.1	+0.2
F12A	Elk City baz=89,SNR=13	88.88	37	⇑P		P	00 17 36.8	-0.8
529A	Stev Forest Ra baz=89	88.91	56	⇓P		P	00 17 36.9	-1.2
Y25A	Mesa, Roswell baz=89,SNR=12	88.98	52	⇑P		P	00 17 37.9	-0.5
G13A	Cobalt baz=89	89.05	38	⇑P		P	00 17 37.3	-1.2
M17A	Scullys Gap (B baz=89	89.05	43	⇓P		P	00 17 38.1	-0.5
T22A	Edith baz=89	89.05	48	⇓P		P	00 17 38.1	-0.7
328A	Wristen Ranch, baz=89	89.08	55	⇓P		P	00 17 38.4	-0.4
P19A	Cripple Cowboy baz=89	89.09	45	⇓P		P	00 17 37.9	-1.0
W24A	Lazy 6 Ranch, baz=89,SNR=11	89.14	50	⇑P		P	00 17 38.3	-0.9
Q20A	Ridgley Place, baz=89	89.16	46	⇓P		P	00 17 38.5	-0.7
Z26A	Caprock baz=89,SNR=6.5	89.17	53	⇑P		P	00 17 38.3	-1.0
U23A	El Rito baz=89	89.17	49	⇑P		P	00 17 39.1	-0.3
H14A	Leadore baz=90	89.25	39	⇑P		P	00 17 39.1	-0.4
X25A	Clemmons Ranch baz=90,SNR=13	89.31	51	⇑P		P	00 17 39.3	-0.7
127A	Arkansas Junct baz=90	89.32	53	⇑P		P	00 17 38.9	-1.1
R21A	Cimarron baz=90,SNR=5.9	89.34	47	⇑P		P	00 17 39.8	-0.3
P20A	De Beque baz=90	89.39	45	⇑P		P	00 17 39.4	-0.9
429A	Davenport Ranc baz=90	89.40	56	⇓P		P	00 17 39.5	-0.9
I15A	Monteview baz=90	89.40	40	⇓P		P	00 17 39.7	-0.5
F13A	Darby baz=90,SNR=6.9	89.41	38	⇑P		P	00 17 39.2	-1.0
NEW	Newport comp=Z,7.2nm,1.0s	89.44	35	eP		P	00 17 39.6	-0.5
NEW	Newport baz=90	89.44	35	⇑P		P	00 17 39.2	-0.9
S22A	4UR Ranch, Cre baz=90,SNR=17	89.49	48	⇓P		P	00 17 40.7	-0.2
V24A	Rampart Ranch, baz=90,SNR=5.9	89.50	50	⇓P		P	00 17 40.6	-0.3
Q21A	Lamborn Mesa, baz=90	89.57	46	⇓P		P	00 17 40.4	-0.7
530A	J-C Ranch, Com baz=90	89.59	56	⇓P		P	00 17 40.6	-0.6
Y26A	Elida baz=90	89.61	52	⇑P		P	00 17 40.8	-0.6
H15A	Lima baz=90	89.67	39	⇓P		P	00 17 41.2	-0.3
MCMT	McKenzie Canyo comp=Z,3.7nm,1.1s	89.68	39	eP		P	00 17 40.9	-0.7
L18A	Fontenelle, Gr baz=90	89.69	43	⇑P		P	00 17 40.5	-1.2
Z27A	Tatum baz=90	89.74	53	⇓P		P	00 17 41.2	-0.8
329A	Wagon Wheel Ra baz=90	89.75	55	⇑P		P	00 17 41.7	-0.3
R22A	Saguache, Gunn baz=90,SNR=9.1	89.79	47	⇓P		P	00 17 42.3	-0.1
W25A	X Bar L Ranch, baz=90,SNR=7.4	89.81	51	⇑P		P	00 17 41.4	-0.8
631A	Perdido Creek baz=90,SNR=10	89.82	57	⇓P		P	00 17 41.3	-1.0
O20A	White River Ci baz=90	89.84	45	⇓P		P	00 17 41.1	-1.3
E13A	Victor baz=90	89.88	37	⇓P		P	00 17 41.3	-1.0
I16A	Newdale baz=90	89.92	41	⇓P		P	00 17 42.1	-0.5
X26A	CR and CF Fran baz=90	89.93	52	⇑P		P	00 17 41.9	-1.0
C12B	Naegeli Ranch, baz=90,SNR=6.3	89.96	36	⇑P		P	00 17 41.9	-0.6
732A	Laxson Ranch, baz=90	89.96	58	⇑P		P	00 17 42.3	-0.7
F14A	Wisdom baz=90	89.96	38	⇑P		P	00 17 42.1	-0.7
430A	Baggett Ranch, baz=90	89.97	56	⇑P		P	00 17 42.1	-0.9
M19A	Rock Springs baz=90	90.00	43	⇓P		P	00 17 42.1	-1.0
V25A	Rancho No Teng baz=90,SNR=11	90.01	50	⇑P		P	00 17 42.7	-0.6
TPAW	Teton Pass	90.02	41	eP		P	00 17 43.2	0.0
	comp=Z,4.6nm,0.9s							
TRF	Thorofare Moun comp=Z,18nm,0.9s	90.03	11	eP		P	00 17 41.0	-1.7
Y27A	Causey baz=90	90.06	52	⇑P		P	00 17 42.6	-0.9
G15A	Dillon baz=90,SNR=12	90.08	39	⇑P		P	00 17 42.9	-0.5
SKAG	Skagway comp=Z,36nm,1.5s	90.10	19	eP		P	00 17 44.1	+1.4
TNA	Tin City comp=Z,14nm,1.1s	90.10	3	eP		P	00 17 42.6	0.0
D13A	Huson baz=90	90.13	37	⇓P		P	00 17 42.7	-0.7
DLMT	Dillon comp=Z,15nm,1.3s	90.14	39	eP		P	00 17 43.6	+0.1
SMCO	Snowmass comp=Z,8.1nm,1.3s	90.15	46	eP		P	00 17 43.5	-0.6
531A	Rocksprings baz=90,SNR=7.5	90.20	57	⇑P		P	00 17 43.3	-0.7
N20A	Spence Gulch, baz=90,SNR=5.6	90.20	44	⇓P		P	00 17 43.4	-0.7
L19A	Farson baz=90	90.21	43	⇓P		P	00 17 43.1	-1.0
MSO	Missoula comp=Z,2.8nm,0.8s	90.25	37	eP		P	00 17 42.8	-1.2
MSO	Missoula baz=90,SNR=5.8	90.25	37	⇑P		P	00 17 42.7	-1.3
E14A	Clinton baz=90,SNR=7.2	90.25	38	⇓P		P	00 17 43.2	-0.9
IMW	Indian Meadow comp=Z,10nm,1.3s	90.26	41	eP		P	00 17 44.5	+0.1
LOHW	Long Hollow comp=Z,28nm,2.0s	90.30	41	eP		P	00 17 44.5	+0.1
Z28A	Tucker Farm, M baz=90	90.33	53	⇑P		P	00 17 43.8	-0.9
T24A	Torres, Weston baz=90	90.34	49	⇑P		P	00 17 44.3	-0.6
B12A	Libby baz=91	90.36	35	⇑P		P	00 17 44.1	-0.3
SDCO	Great Sand Dun comp=Z,5.9nm,1.0s	90.38	48	eP		P	00 17 43.8	-1.3
MSTX	Muleshoe baz=91	90.39	53	⇓P		P	00 17 44.2	-0.8
R23A	Moffat baz=91,SNR=5.5	90.39	48	⇑P		P	00 17 44.6	-0.5
BSMT	Bassoo Peak	90.41	36	eP		P	00 17 44.0	-0.8
C13A	Hot Springs baz=91	90.42	36	⇓P		P	00 17 43.9	-0.9
U25A	Circle Dot Ran baz=91,SNR=11	90.44	50	⇓P		P	00 17 44.6	-0.7
BW06	Boulder Array comp=Z,4.0nm,0.9s	90.45	42	eP		P	00 17 44.1	-1.1
PDAR	Pinedale Array	90.45	42	P		P	00 17 44.4	-0.8
PDAR	Pinedale Array comp=Z,2.8nm,0.9s,baz=216,slow=3.7,SNR=13	90.45	42	P		P	00 17 44.4	-0.8
PDAR					LR	LR	00 52 40.3	
	comp=Z,168nm,19.6s,baz=111,slow=32							
632A	Uvalde baz=91,SNR=7.3	90.47	58	⇑P		P	00 17 44.6	-0.8
F15A	Butte baz=91,SNR=7.3	90.48	39	⇓P		P	00 17 44.6	-0.6
LRM	Limekiln Ridge	90.49	39	eP		P	00 17 44.8	-0.6
X27A	F and S Farms, baz=91	90.49	52	⇓P		P	00 17 44.6	-0.8
QLMT	Earthquake Lak	90.50	40	eP		P	00 17 46.1	+0.8
P22A	Eagle baz=91	90.51	46	⇓P		P	00 17 44.5	-1.1
G16A	Moss Hill, Enn baz=91,SNR=8.4	90.51	39	⇓P		P	00 17 44.9	-0.5
S24A	Houchin Ranch, baz=91,SNR=5.7	90.52	48	⇓P		P	00 17 45.2	-0.5
MCK	McKinley comp=Z,16nm,1.0s	90.53	12	eP		P	00 17 44.1	-0.6
H16A	Russell Place, baz=91	90.53	40	⇓P		P	00 17 45.4	-0.1
V26A	Tequesquite Ra baz=91,SNR=6.2	90.57	51	⇓P		P	00 17 44.8	-1.0
230A	Sterling City baz=91	90.59	55	⇑P		P	00 17 45.4	-0.5
M20A	Sweetwater, Wa baz=91	90.61	44	⇓P		P	00 17 44.8	-1.1
JTMT	Jette	90.62	36	eP		P	00 17 43.0	-2.7
GYA	Guiyang	90.63	299	P		P	00 17 47.5	+1.2
GYA				pP		pP	00 17 58.3	-1.5
GYA				sP		sP	00 18 02.5	-2.4
GYA				PP		PP	00 21 25.0	+2.8
GYA				SKS		SKSac	00 28 15.5	+0.9
GYA				S		S	00 28 39.5	+0.5
GYA				sS		sS	00 28 57.5	-4.3
GYA				SS		SS	00 34 45.0	+3.1
GYA	comp=Z,20nm,1.0s			pmax		pmax		
GYA	comp=Z,120nm,5.2s			pmax		pmax		
GYA	comp=N,480nm,20.6s			LR		LR		
GYA	comp=E,330nm,21.9s			LR		LR		
GYA	comp=Z,440nm,20.0s			LR		LR		
N21A	Black Mountain baz=91	90.64	45	⇓P		P	00 17 45.1	-1.0
D14A	Greenough baz=91,SNR=6.2	90.64	37	⇑P		P	00 17 44.6	-1.2
532A	Rocksprings baz=91,SNR=13	90.67	57	⇑P		P	00 17 45.3	-1.0
CHMT	Chamberlain Mo	90.68	37	eP		P	00 17 45.2	-1.0
W27A	Bowe Ranch, En baz=91,SNR=7.0	90.72	51	⇓P		P	00 17 45.5	-1.0
E15A	Deer Lodge baz=91,SNR=6.8	90.73	38	⇑P		P	00 17 45.5	-0.8
Y28A	McKinney Farm, baz=91	90.74	53	⇑P		P	00 17 45.9	-0.6
H17A	Grant Village baz=91	90.75	41	⇓P		P	00 17 46.5	-0.1
L20A	Wamsutter baz=91	90.79	43	⇓P		P	00 17 45.7	-1.1
T25A	Trinidad baz=91,SNR=6.6	90.82	49	⇓P		P	00 17 46.2	-0.9
I18A	Diamond G Ranc baz=91	90.82	41	⇓P		P	00 17 46.1	-0.8
LCCM	Lewis and Clar	90.82	39	P		P	00 17 46.6	-0.1
331A	San Angelo baz=91	90.83	56	⇑P		P	00 17 45.8	-1.2
CFAA	Coronel Fontan	90.86	125	P		P	00 17 46.4	-0.9
CFAA	Coronel Fontan comp=Z,0.3nm,0.6s,baz=243,slow=5.2,SNR=4.3	90.86	125	P		P	00 17 46.4	-0.9
B13A	Whitefish baz=91	90.90	36	⇓P		P	00 17 46.2	-0.7
R24A	Sanders Place, baz=91	90.90	48	⇓P		P	00 17 46.9	-0.5
U26A	Atchley Ranch, baz=91,SNR=9.5	90.90	50	⇑P		P	00 17 46.5	-0.9
JCT	Junction City comp=Z,11nm,1.3s	90.91	57	eP		P	00 17 47.0	-0.4
JCT	Junction City baz=91	90.91	57	⇓P		P	00 17 46.7	-0.7
K19A	Absolon Red Bu baz=91	90.92	43	⇑P		P	00 17 46.2	-1.2
F16A	Kennard Place, baz=91,SNR=10	90.94	39	⇓P		P	00 17 46.9	-0.3
O22A	Kremmling baz=91	90.95	46	⇓P		P	00 17 46.8	-0.9
DLBC	Deese Lake	90.99	22	eP		P	00 17 46.7	-0.4
P23A	Jefferson baz=91	91.00	47	⇑P		P	00 17 47.2	-0.8
J19A	Crowheart baz=91,SNR=5.9	91.04	42	⇓P		P	00 17 47.0	-0.9
130A	Snyder baz=91	91.04	54	⇓P		P	00 17 47.4	-0.6
S25A	Robets Cordova baz=91,SNR=6.2	91.06	49	⇑P		P	00 17 47.4	-0.7
432A	Menard baz=91	91.11	56	⇓P		P	00 17 47.2	-1.1
K20A	Yellowstone Ra baz=91	91.14	43	⇓P		P	00 17 47.5	-0.8
D15A	Lincoln baz=91,SNR=6.2	91.16	38	⇓P		P	00 17 47.7	-0.5
G17A	Pierce Place, baz=91	91.18	40	⇑P		P	00 17 48.7	+0.3
231A	Bronte baz=91	91.21	55	⇓P		P	00 17 47.8	-0.9
V27A	Dan Oppiter Fa baz=91,SNR=7.2	91.22	51	⇑P		P	00 17 48.1	-0.8
Z30A	Sanderson Ranc baz=91	91.25	54	⇑P		P	00 17 47.9	-1.0
E16A	East Helena baz=92,SNR=9.5	91.34	38	⇓P		P	00 17 48.6	-0.5
HRY	Holter Researc	91.36	38	eP		P	00 17 49.2	0.0
ISCO	Idaho Springs comp=Z,4.1nm,1.2s	91.37	46	eP		P	00 17 50.0	+0.3
ISCO	Idaho Springs baz=92	91.37	46	⇑P		P	00 17 49.0	-0.6
332A	Millersview baz=92	91.38	56	⇓P		P	00 17 48.6	-1.0
O23A	Lake Granby, G baz=92	91.38	46	⇓P		P	00 17 49.1	-0.6
X29A	Tulia baz=92	91.39	53	⇓P		P	00 17 48.9	-0.7
T26A	Comanche Natio baz=92	91.40	49	⇑P		P	00 17 48.8	-0.9
R25A	Fountain Ranch baz=92	91.42	48	⇓P		P	00 17 49.0	-0.7
H18A	Shoshone NF, C baz=92	91.45	41	⇓P		P	00 17 49.3	-0.5
I19A	Meeteetse baz=92,SNR=5.8	91.50	41	⇓P		P	00 17 49.6	-0.4
131A	Roby baz=92	91.51	55	⇓P		P	00 17 49.4	-0.7
B14A	Marquette Ranc baz=92,SNR=20	91.53	36	⇑P		P	00 17 49.3	-0.6
C15A	Salmond Ranch, baz=92,SNR=7.8	91.54	37	⇑P		P	00 17 49.1	-1.0
U27A	Thompson Grove baz=92	91.56	50	⇑P		P	00 17 49.7	-0.6
F17A	Fitzpatrick Pl baz=92,SNR=10	91.56	39	⇑P		P	00 17 50.3	+0.1
M22A	Cedar Creek Ra baz=92	91.57	45	⇑P		P	00 17 49.8	-0.6
WALA	Waterton Lakes comp=Z,0.3nm,0.9s	91.60	35	eP		P	00 17 49.4	-0.9
V28A	Channing baz=92	91.65	51	⇓P		P	00 17 50.3	-0.5
J20A	Shoshoni baz=92,SNR=8.7	91.68	42	⇑P		P	00 17 50.3	-0.5
232A	Coleman baz=92,SNR=10.0	91.69	56	⇑P		P	00 17 49.9	-1.1
D16A	Dana Ranch, Ca baz=92,SNR=15	91.70	38	⇓P		P	00 17 50.3	-0.4
S26A	Kim baz=92	91.71	49	⇑P		P	00 17 50.3	-0.8
N23A	Red Feather La baz=92	91.72	45	⇓P		P	00 17 50.9	-0.3
E17A	Martinsdale baz=92	91.76	39	⇓P		P	00 17 50.5	-0.6
COLA	College comp=Z,11nm,1.0s	91.77	11	eP		P	00 17 49.1	-1.3
Q25A	Bedland, Calha baz=92	91.83	48	⇑P		P	00 17 51.0	-0.6
H19A	Powell baz=92	91.85	41	⇑P		P	00 17 51.1	-0.4
ILAR	Eielson Array	91.86	12	P		P	00 17 49.8	-1.1
ILAR	Eielson Array comp=Z,4.1nm,0.8s,baz=220,slow=5.4,SNR=46	91.86	12	P		P	00 17 49.8	-1.1
G18A	Lazy EL Ranch, baz=92	91.87	40	⇑P		P	00 17 51.3	-0.3
B15A	Bradely Ranch, baz=92	91.88	37	⇓P		P	00 17 50.4	-1.2
RLMT	Red Lodge comp=Z,6.4nm,1.1s	91.93	40	eP		P	00 17 51.7	-0.3
T27A	Campo baz=92	91.95	50	⇓P		P	00 17 51.6	-0.5
U28A	Mallet baz=92	91.96	51	⇑P		P	00 17 51.7	-0.5
I20A	Worland baz=92	91.97	42	⇑P		P	00 17 51.9	-0.2
X30A	Coker Ranch, T baz=92	91.99	53	⇓P		P	00 17 51.4	-1.0
Z31A	Sharp Cattle R baz=92,SNR=5.4	91.99	54	⇓P		P	00 17 51.2	-1.1
C16A	Fuhringer Ranc baz=92,SNR=8.1	92.03	37	⇑P		P	00 17 51.2	-1.0
ABTX	Abilene, Hawle baz=92,SNR=5.3	92.04	55	⇓P		P	00 17 51.5	-1.0
R26A	Arlington baz=92	92.06	49	⇓P		P	00 17 51.8	-0.8
J21A	Lysite baz=92,SNR=10.0	92.07	43	⇓P		P	00 17 52.1	-0.6
F18A	Big Timber baz=92,SNR=6.3	92.11	40	⇑P		P	00 17 52.5	-0.1
M23A	Laramie baz=92	92.16	45	⇑P		P	00 17 52.8	-0.4
A15A	Johnson Ranch, baz=92,SNR=9.2	92.18	36	⇓P		P	00 17 51.8	-1.1
P25A	Willow Gulch B baz=92	92.18	47	⇓P		P	00 17 52.4	-0.9
Y31A	Rekieta Farm, baz=92,SNR=6.5	92.21	54	⇑P		P	00 17 52.3	-1.0
D17A	Six Diamond Ra baz=92,SNR=25	92.25	38	⇓P		P	00 17 53.1	-0.2
K22A	Casper baz=92	92.27	44	⇓P		P	00 17 53.1	-0.5
Q26A	Hugo baz=92	92.32	48	⇑P		P	00 17 53.0	-0.8
H20A	Greybull baz=93	92.34	41	⇓P		P	00 17 53.4	-0.4
E18A	Harlowton baz=93,SNR=11	92.36	39	⇑P		P	00 17 53.9	+0.1
N24A	Carr baz=93	92.38	46	⇑P		P	00 17 53.7	-0.4
T28A	Walsh baz=93	92.40	50	⇑P		P	00 17 53.6	-0.6
B16A	M & M Farms, S baz=93,SNR=10	92.41	37	⇑P		P	00 17 52.7	-1.3
I21A	Big Trails, Te baz=93,SNR=7.7	92.41	42	⇑P		P	00 17 53.2	-1.0
XAN	Xi'an	92.41	306	P		P	00 17 56.8	+2.5
XAN				pmax		pmax		
XAN	comp=Z,2.0nm,0.7s			pmax		pmax		
	comp=Z,12nm,4.9s							
Z32A	Haskell baz=93,SNR=8.5	92.48	54	⇑P		P	00 17 53.8	-0.8
C17A	Wharram Farm, baz=93,SNR=7.6	92.48	38	⇓P		P	00 17 53.7	-0.6
R27A	Eads baz=93	92.50	49	⇓P		P	00 17 54.1	-0.5
L23A	Garrett baz=93,SNR=6.4	92.51	44	⇓P		P	00 17 53.8	-1.0
F19A	Roth Farm, Mol baz=93,SNR=6.9	92.53	40	⇑P		P	00 17 54.1	-0.5
G20A	Bridger baz=93	92.61	41	⇑P		P	00 17 54.6	-0.4
M24A	Cheyenne baz=93	92.74	45	⇓P		P	00 17 55.9	+0.1
V30A	Spur Ranch, Mi baz=93	92.75	52	⇓P		P	00 17 56.0	+0.1
P26A	Davis Ranch, A baz=93	92.76	47	⇑P		P	00 17 55.4	-0.4
D18A	Linhart Farms, baz=93	92.78	39	⇑P		P	00 17 56.2	+0.5
S28A	Manter baz=93	92.78	50	⇑P		P	00 17 55.3	-0.6
Y32A	R-V Farms, Ver baz=93	92.83	54	⇓P		P	00 17 55.4	-0.8
B17A	L&G Farms, Che baz=93,SNR=11	92.83	37	⇑P		P	00 17 55.1	-0.8
K23A	Bowen Ranch, D baz=93	92.89	44	⇑P		P	00 17 56.7	+0.2
I22A	9 Mile Ranch, baz=93	92.95	43	⇑P		P	00 17 56.3	-0.3
E19A	Rath Farm, Rou baz=93,SNR=9.4	92.95	40	⇑P		P	00 17 56.2	-0.3
F20A	Billings baz=93	92.96	40	⇓P		P	00 17 55.9	-0.7
L24A	Wheatland baz=93	92.97	45	⇓P		P	00 17 56.6	-0.2
KSCO	Kaye Shedlock' baz=93	92.97	48	⇓P		P	00 17 56.4	-0.4
H21A	Big Horn, Sher baz=93	93.00	42	⇑P		P	00 17 56.2	-0.6
W31A	Holland Ranch, baz=93	93.02	53	⇑P		P	00 17 56.6	-0.4
R28A	Tribune baz=93	93.20	49	⇑P		P	00 17 57.6	-0.2
KMI	Kunming	93.21	296	P		P	00 18 02.5	+4.1
KMI				S		S	00 29 00.8	-1.7
KMI	comp=Z,7.0nm,1.0s			pmax		pmax		
KMI	comp=Z,71nm,22.8s			LR		LR		
M25A	Palm-Egli Farm baz=93	93.22	46	⇑P		P	00 17 57.8	-0.2
A17A	Triple J Farms baz=94,SNR=7.4	93.26	37	⇓P		P	00 17 57.2	-0.6
EGMT	Eagleton	93.26	38	⇓P		P	00 17 57.7	-0.2

baz=94
D19A Cripps Ranch, 93.28 39 ⇓P P 00 17 57.9 -0.1
baz=94
S29A Ulysses 93.33 50 ⇑P P 00 17 58.0 -0.5
baz=94
E20A Meyer Farm, Mu 93.36 40 ⇑P P 00 17 58.1 -0.2
baz=94
V31A Spring Creek L 93.37 52 ⇓P P 00 17 58.5 -0.1
baz=94
H22A Clearmont 93.40 42 ⇓P P 00 17 57.8 -0.8
baz=94
B18A Beardsley Farm 93.46 38 ⇓P P 00 17 58.1 -0.6
baz=94,SNR=9.0
C19A Slack Wire Ran 93.50 38 ⇑P P 00 17 58.8 -0.2
baz=94,SNR=16
ATAH Atahualpa 93.52 99 P P 00 18 02.3 +1.9
ATAH Atahualpa 93.52 99 P P 00 18 02.3 +1.9
comp=Z,3.3nm,0.5s,baz=74,slow=20,SNR=4.0
CMAR Chiang Mai Arr 93.59 289 P P 00 18 02.4 +2.4
CMAR Chiang Mai Arr 93.59 289 P P 00 18 02.4 +2.4
comp=Z,1.9nm,0.4s,baz=131,slow=3.4,SNR=16
U31A Nine Bar Ranch 93.64 52 ⇓P P 00 17 59.6 -0.3
baz=94
D20A Manuel Ranch, 93.67 39 ⇓P P 00 17 59.5 -0.2
baz=94,SNR=7.2
A18A Metzger Ranch, 93.71 37 ⇓P P 00 17 59.1 -0.8
baz=94,SNR=11
CHTO Chiang Mai 93.74 289 eP P 00 18 02.5 +1.8
comp=Z,8.5nm,0.9s
G22A Birney 93.76 41 ⇓P P 00 18 00.0 -0.3
baz=94
J24A Dixon Ranch, L 93.79 44 ⇓P P 00 18 00.1 -0.4
baz=94
HHC Hu-ho-hao-te 93.84 313 eP P 00 18 01.8 +1.1
HHC pP pP 00 18 12.8 -1.5
HHC sP sP 00 17 10.0 -2.4
HHC PP PP 00 21 51.0 +3.9
HHC SKS SKSac 00 28 31.5 -0.3
HHC S S 00 29 07.0 -0.1
HHC sS sS 00 29 24.5 -5.4
HHC SS SS 00 35 31.3 +3.9
HHC pmax pmax
comp=Z,28nm,0.9s
HHC pmax pmax
comp=Z,130nm,4.9s
HHC LR LR
comp=N,350nm,17.8s
HHC LR LR
comp=E,330nm,16.7s
HHC LR LR
comp=Z,140nm,19.0s
N27A Anderson Farm, 93.91 47 ⇓P P 00 18 00.5 -0.6
baz=94
B19A Brinkman Farms 93.95 38 ⇓P P 00 18 01.0 -0.1
baz=94
E21A Keefer Ranch, 93.99 40 ⇑P P 00 18 01.0 -0.2
baz=94
F22A Rosebud 94.08 41 ⇑P P 00 18 01.1 -0.5
baz=94
C20A Veseth Ranch, 94.08 39 ⇑P P 00 18 01.4 -0.2
baz=94
T31A Randall Ranch, 94.10 51 ⇑P P 00 18 01.0 -1.0
baz=94
G23A Biddle 94.30 42 ⇑P P 00 18 02.0 -0.7
baz=94
K26A Motz Farm, Whi 94.42 45 ⇓P P 00 18 03.6 +0.3
baz=95
F23A Volborg 94.56 41 ⇑P P 00 18 03.5 -0.4
baz=95
H24A Dirks Ranch, A 94.58 43 ⇑P P 00 18 02.9 -1.2
baz=95,SNR=7.4
RSSD Black Hills 94.58 43 eP P 00 18 03.4 -0.8
comp=Z,10nm,1.1s
E22A Miles City 94.60 41 ⇓P P 00 18 03.9 -0.1
baz=95
C21A Desert Coulee 94.66 39 ⇓P P 00 18 04.0 -0.2
baz=95
D22A Cohagen 94.83 40 ⇓P P 00 18 04.9 -0.2
baz=95,SNR=6.2
CD2 Chengdu 94.89 302 P P 00 18 06.5 +0.7
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.6s
G24A Alzada 94.95 42 ⇑P P 00 18 05.4 -0.3
baz=95
E23A Ismay 95.01 41 ⇓P P 00 18 05.9 0.0
baz=95
B21A Ellsworth Farm 95.02 38 ⇑P P 00 18 05.8 -0.1
baz=95
F24A Ekalaka 95.20 42 ⇑P P 00 18 06.7 -0.2
baz=95
D23A Lindsay 95.41 40 ⇑P P 00 18 07.7 0.0
baz=96
B22A Reddig Ranch S 95.53 39 ⇑P P 00 18 08.4 +0.1
baz=96
C23A Lambert 95.75 40 ⇑P P 00 18 09.2 0.0
baz=96
D24A Glendive 95.90 41 ⇓P P 00 18 09.9 0.0
baz=96
B23A Brockton 96.19 39 ⇓P P 00 18 11.1 -0.2
baz=96
A24A Westby 96.99 39 ⇑P P 00 18 15.2 +0.4
baz=97
LZH Lanzhou 97.05 306 eP Pdif 00 18 16.0 +0.3
LZH pP pP 00 18 29.5 +0.3
LZH sP sP 00 18 34.8 +0.6
LZH ePP PP 00 22 16.0 +3.8
LZH pmax pmax
comp=Z,15nm,1.5s
LZH pmax pmax
comp=Z,87nm,8.6s
LZH LR LR
comp=N,150nm,18.1s
LZH LR LR
comp=E,170nm,17.8s
LZH LR LR
comp=Z,220nm,20.0s
LPAZ La Paz 98.41 112 P Pdif 00 18 23.6 +0.7
LPAZ La Paz 98.41 112 P Pdif 00 18 23.6 +0.7
comp=Z,0.9nm,0.6s,baz=278,slow=1.9,SNR=3.7
YKA Yellowknife Ar 99.33 24 P Pdif 00 18 24.0 -0.9
YKA PKKPbc PKKPbc 00 34 49.0 -2.0
YKA Yellowknife Ar 99.33 24 P Pdif 00 18 24.0 -0.9
comp=Z,1.0nm,0.8s,baz=238,slow=4.4,SNR=16
YKA PKKPbc PKKPbc 00 34 49.0 -2.0
comp=Z,0.1nm,0.4s,baz=40,slow=3.0,SNR=5.2
ZALV Zalesovo Beam 115.11 320 PKP PKPdf 00 23 22.6 -1.3
ZALV Zalesovo Beam 115.11 320 PKP PKPdf 00 23 22.6 -1.3
comp=Z,0.9nm,0.5s,baz=186,slow=0.8,SNR=6.0
MKAR Makanchi Array 115.65 312 PKP PKPdf 00 23 24.1 -1.3
MKAR PKKPab PKKPab 00 34 01.1 -0.7
MKAR Makanchi Array 115.65 312 PKP PKPdf 00 23 24.1 -1.3
comp=Z,0.6nm,0.4s,baz=214,slow=1.2,SNR=16
MKAR PKKPab PKKPab 00 34 01.1 -0.7
comp=Z,0.4nm,0.6s,baz=298,slow=2.6,SNR=4.0
KURK Kurchatov 118.54 316 PKP PKPdf 00 23 29.6 -1.1
KURK PKKPbc PKKPbc 00 33 47.0 -1.7
KURBB Kurchatov Arra 118.59 316 PKP PKPdf 00 23 29.6 -1.2
comp=Z,1.5nm,0.7s,baz=94,slow=2.0,SNR=16
KURBB PKKPbc PKKPbc 00 33 47.0 -1.5
comp=Z,0.4nm,0.9s,baz=282,slow=3.9,SNR=4.2
SUR Sutherland 121.19 196 PKP PKPdf 00 23 36.3 -0.5
SUR Sutherland 121.19 196 PKP PKPdf 00 23 36.3 -0.5
comp=Z,7.5nm,0.7s,baz=138,slow=1.1,SNR=8.8
BOSA Boshof 123.39 202 PKP PKPdf 00 23 41.5 +0.4
BOSA Boshof 123.39 202 PKP PKPdf 00 23 41.5 +0.4
comp=Z,6.0nm,0.9s,baz=141,slow=14,SNR=6.7
KKAR Karatay Array 123.55 307 ePKPdf PKPdf 00 23 40.3 -0.4
BVAR Borovoye Array 123.67 318 PKP PKPdf 00 23 39.8 -0.7
BVAR Borovoye Array 123.67 318 PKP PKPdf 00 23 39.8 -0.7
comp=Z,2.3nm,0.7s,baz=98,slow=3.0,SNR=12
KBL Kabul 123.80 296 ePKPdf PKPdf 00 23 41.7 0.0
ARCES ARCESS Array B 133.38 350 PKP PKPdf 00 23 57.2 -1.3
ARCES ARCESS Array B 133.38 350 PKP PKPdf 00 23 57.2 -1.3
comp=Z,5.6nm,0.8s,baz=101,slow=1.2,SNR=12
FINES FINESS Array B 140.36 344 PKPpre PKPpre 00 24 03.3
FINES PKP PKPdf 00 24 10.3 -1.3
FINES FINESS Array B 140.36 344 PKhKP PKPpre 00 24 03.3
comp=Z,2.1nm,0.8s,baz=140,slow=15,SNR=3.5
FINES PKP PKPdf 00 24 10.3 -1.3
comp=Z,3.7nm,0.7s,baz=0.0,slow=0.8,SNR=4.5
NB2 NORSAR Subarra 143.32 354 PKP PKPab 00 24 13.1 +0.1
comp=Z,0.9nm,0.6s,baz=10,slow=3.2
NOA NORSAR Array B 143.32 354 PKPpre PKPpre 00 24 11.5
NOA NORSAR Array B 143.32 354 PKhKP PKPpre 00 24 11.5
comp=Z,1.2nm,0.7s,baz=5.2,slow=2.3,SNR=6.3
KBZ Khabaz 143.34 311 PKPpre PKPpre 00 24 11.3
KBZ Khabaz 143.34 311 PKhKP PKPpre 00 24 11.3
comp=Z,1.8nm,0.8s,baz=117,slow=2.4,SNR=6.2
HFS Hagfors 143.95 352 PKPpre PKPpre 00 24 14.8
HFS Hagfors 143.95 352 PKhKP PKPpre 00 24 14.8
comp=Z,4.8nm,0.5s,baz=85,slow=3.3,SNR=22
IZAR Zarasai 145.05 338 eP PKPdf 00 24 19.8 -0.3
IZAR AMB AMB 00 24 20.7
comp=Z,19nm,1.0s
IDID Didziasalis 145.24 338 eP PKPdf 00 24 20.2 -0.3
IDID AMB AMB 00 24 21.3
comp=Z,20nm,0.9s
ISAL Salakas 145.24 338 eP PKPdf 00 24 20.2 -0.2
ISAL AMB AMB 00 24 21.4
comp=Z,22nm,1.0s
IIGN Ignalina 145.38 338 eP PKPab 00 24 20.6 -0.2
IIGN AMB AMB 00 24 21.9
comp=Z,27nm,0.9s
MICGM Minsk 145.46 336 eP PKPdf 00 24 20.0 -0.9
NACGM Naroch 145.55 337 eP PKPdf 00 24 19.0 -2.0
MZRK Al-Mazaregh 146.96 298 eP PKPdf 00 24 23.5 -0.6
SFNV Sufian 147.29 300 eP PKPbc 00 24 26.7 -0.4
SUW Suwalki 147.49 339 ePKPdf PKPdf 00 24 24.4 +0.1
SUW Suwalki 147.49 339 ePKP PKPbc 00 24 26.6 -0.3
AKASG Malin Array Be 147.71 330 PKPbc PKPbc 00 24 26.9 -0.7
AKASG pPKPbc pPKPbc 00 24 42.9 +1.4
AKASG Malin Array Be 147.71 330 PKPbc PKPbc 00 24 26.9 -0.7
comp=Z,14nm,0.7s,baz=40,slow=3.9,SNR=37
AKASG pPKPbc pPKPbc 00 24 42.9 +1.4
comp=Z,4.0nm,0.6s,baz=40,slow=3.8,SNR=3.9
KIEV Kiev 147.72 330 ePKPbc PKPbc 00 24 26.9 -0.7
AK01 Malin Array Si 147.72 330 ePKPab PKPbc 00 24 26.9 -0.8
AK02 Malin Array Si 147.75 330 ePKPdf PKPbc 00 24 27.1 -0.6
MUD Monsted U'grnd 148.03 355 i P PKPbc 00 24 28.2 0.0
comp=Z,24nm,1.0s
EKA Eskdalemuir Ar 148.83 8 PKPbc PKPbc 00 24 29.2 -1.2
EKA Eskdalemuir Ar 148.83 8 PKPbc PKPbc 00 24 29.2 -1.2
comp=Z,8.7nm,0.8s,baz=331,slow=2.6,SNR=14
GKP Gorka Klasztor 149.82 345 ePKP PKPbc 00 24 33.0 +0.1
BEL Belsk 150.10 339 ePKP PKPbc 00 24 34.2 +0.6
BTCH Batrach 150.25 300 eP PKPbc 00 24 34.3 -0.3
BSEG Bad Segeberg 150.41 353 ePKPbc PKPbc 00 24 34.6 +0.3
BSEG ePKPab PKPab 00 24 40.4 -0.4
KIS Kishinev 150.41 325 eP PKPbc 00 24 34.0 -0.5
ASF Jabal al Asfar 150.56 292 PKPbc PKPbc 00 24 36.5 +0.9
ASF Jabal al Asfar 150.56 292 PKPbc PKPbc 00 24 36.5 +0.9
comp=Z,11nm,0.9s,baz=307,slow=1.2,SNR=21
SALA Sala 150.64 293 eP PKPdf 00 24 31.5 +1.2
ARNB Al Arnab 150.68 300 eP PKPdf 00 24 32.4 +2.2
LEOM Leova 151.05 325⇑iP PKPbc 00 24 36.4 +0.3
BR131 Keskin Array S 151.23 309 ePKPbc PKPbc 00 24 35.8 -1.1
BRTR Keskin Array B 151.23 309 PKP PKPdf 00 24 29.8 -1.2
BRTR PKPbc PKPbc 00 24 36.8 -0.2
BRTR Keskin Array B 151.23 309 PKP PKPdf 00 24 29.8 -1.2
comp=Z,0.8nm,0.9s,baz=134,slow=3.6,SNR=3.7
BRTR PKPbc PKPbc 00 24 36.8 -0.2
comp=Z,7.8nm,0.8s,baz=136,slow=3.6,SNR=39
KWP Kalwaria Pacla 151.27 335 ePKPdf PKPdf 00 24 31.4 +0.8
KWP ePKPbc PKPbc 00 24 36.4 -0.1
KWP ePKPab PKPab 00 24 44.9 +0.3
KWP Kalwaria Pacla 151.27 335⇓iP PKPbc 00 24 36.7 +0.2
KWP Kalwaria Pacla 151.27 335 ePKP PKPbc 00 24 36.8 +0.2
TCHB Talchebab 151.28 293 eP PKPdf 00 24 32.9 +1.8
MMAI Mount Meron Ar 151.70 294 PKPbc PKPbc 00 24 38.9 +0.7
MMAI Mount Meron Ar 151.70 294 PKPbc PKPbc 00 24 38.9 +0.7
comp=Z,18nm,0.8s,baz=67,slow=6.4,SNR=38
BUR08 Bucovina Ar. S 151.75 330 ePKPdf PKPdf 00 24 31.3 -0.2
BURAR Bucovina Array 151.76 330⇓iP PKPbc 00 24 39.1 +1.3
OJC Ojcow 151.82 339 ePKP PKPbc 00 24 37.8 +0.1
TESR Tescani 151.85 326⇓iP PKPbc 00 24 37.9 0.0
NRDL Niedersach Rie 151.85 353 ePKPbc PKPbc 00 24 37.8 +0.2
CFR Carcaliu 151.94 323⇑iP PKPbc 00 24 37.9 -0.2
STHS Stebnicka Huta 152.00 336 ePKP PKPdf 00 24 33.2 +1.6
STHS e 00 24 38.8
KOLS Kolonicke sedl 152.00 335 ePKP PKPdf 00 24 32.2 +0.5
KOLS e 00 24 39.1
VRI Vrincioaia 152.25 325⇑iP PKPbc 00 24 38.5 -0.4
KSP Ksiaz 152.28 344 ePKP PKPbc 00 24 39.3 +0.5
NIE Niedzica 152.33 337 ePKP PKPbc 00 24 39.8 +0.8
CRVS Cervenica-Dubn 152.34 335 ePKP PKPbc 00 24 38.0 -1.0
CRVS e 00 24 47.7
EIL Elat 152.44 287 PKPbc PKPbc 00 24 40.5 +0.6
EIL Elat 152.44 287 PKPbc PKPbc 00 24 40.5 +0.6
comp=Z,9.1nm,0.8s,baz=35,slow=4.4,SNR=13
TRPA Tarpa 152.53 333⇑iP PKPbc 00 24 39.6 +0.2
CLL Collm 152.57 348 ePKPbc PKPbc 00 24 39.4 0.0
CLL ePKPab PKPab 00 24 49.4 -0.5
CLL Collm 152.57 348⇓iPKPbc PKPbc 00 24 39.2 -0.2
comp=Z,21nm,1.0s
CLL i PKPab PKPab 00 24 49.1 -0.8
comp=Z,12nm,0.9s
CLL epPKPbc pPKPbc 00 24 57.0 +3.7
CLL epPKPab pPKPab 00 25 05.0 +1.4
CLL LmV 01 37 00.0
comp=Z,100nm,21.7s
UPC Upice 152.66 344⇑ePKP PKPbc 00 24 40.2 +0.6
UPC ePKPAB PKPab 00 24 50.6 +0.3
OKC Ostrava-Krasne 152.67 340⇑ePKP PKPbc 00 24 39.8 +0.1
OKC ePKPAB PKPab 00 24 51.1 +0.7
BRG Berggiesshubel 152.80 347 ePKP PKPdf 00 24 33.2 +0.5
comp=Z,7.7nm,1.5s
BRG i 00 24 40.2
comp=Z,15nm,0.8s
BRG Berggiesshubel 152.80 347 ePKPbc PKPbc 00 24 39.9 0.0
MLR Muntele Rosu 152.91 326⇑iP PKPbc 00 24 40.3 -0.2
MORC Moravsky Berou 152.91 341 ePKPdf PKPdf 00 24 32.2 -0.9
MORC Moravsky Berou 152.91 341⇓iP PKPbc 00 24 40.5 +0.2
CSS Prodhromos 152.99 299 ePKPdf PKPdf 00 24 35.4 +1.8
PVCC Panska Ves 152.99 346⇑ePKP PKPbc 00 24 41.0 +0.7
KECS Kecovo 153.05 336 ePKP PKPab 00 24 52.3 +0.3
MOX Moxa 153.45 350 ePKPab PKPab 00 24 53.1 -0.6
PRU Pruhonice 153.50 345⇑ePKP PKPbc 00 24 41.8 +0.3
PRU ePKPAB PKPab 00 24 53.8 -0.1
DRGR 153.51 331⇓iP PKPbc 00 24 41.5 -0.2
VRAC Vranov 153.60 342 PKPbc PKPbc 00 24 42.2 +0.4
VRAC PKPab PKPab 00 24 55.0 +0.7
VRAC Vranov 153.60 342⇑iP PKPab 00 24 54.9 +0.5
VRAC Vranov 153.60 342 PKPbc PKPbc 00 24 42.2 +0.4
comp=Z,0.8nm,0.4s,baz=166,slow=20,SNR=3.0
VRAC PKPab PKPab 00 24 55.0 +0.7
comp=Z,6.4nm,0.9s,baz=60,slow=4.2,SNR=9.3
VYHS Vyhne 153.62 338 ePKP PKPbc 00 24 42.1 +0.3
VYHS e 00 24 55.1
ARR Arges 153.66 327⇓iP PKPdf 00 24 34.6 +0.3
NKC Novy Kostel 153.70 348 ePKPAB PKPab 00 24 54.6 -0.2
PSZ Piszkesteto 153.74 336 ePKPab PKPab 00 24 55.5 +0.4
PSZ Piszkesteto 153.74 336⇑iP PKPab 00 24 55.4 +0.3
HUMR Humele 154.06 325⇑iP PKPbc 00 24 41.9 -1.0
SMOL Smolenice 154.06 340 ePKP PKPbc 00 24 43.4 +0.6
SMOL e 00 24 56.8
ROTZ Rotzenmuhle 154.20 348 ePKPab PKPab 00 24 56.5 -0.3
BCLA Clavier 154.25 359 PKPab PKPab 00 24 56.5 -0.5
TNS Taunus Mts 154.27 354 ePKPab PKPab 00 24 56.5 -0.7
ZST Bratislava 154.45 340 ePKP PKPab 00 24 57.8 -0.1
KHC Kasperske Hory 154.53 346 ePKPdf PKPdf 00 24 34.8 -0.5
KHC ePKPab PKPab 00 24 57.5 -0.8
KHC Kasperske Hory 154.53 346 ePKPDF PKPdf 00 24 35.9 +0.6
KHC ⇑ePKP PKiKP 00 24 43.5 -0.3
KHC ePKPAB PKPab 00 24 58.4 +0.1
GEC2 GERESS Array S 154.77 346 ePKPab PKPab 00 24 58.9 -0.5
GERES GERESS Array B 154.77 346 PKP PKPdf 00 24 35.7 -0.1
GERES PKPbc PKiKP 00 24 44.5 +0.1
GERES PKPab PKPab 00 24 58.9 -0.5
GERES GERESS Array B 154.77 346 PKP PKPdf 00 24 35.7 -0.1
comp=Z,0.9nm,0.8s,baz=349,slow=1.0,SNR=6.5
GERES PKPbc PKiKP 00 24 44.5 +0.1
comp=Z,1.1nm,0.7s,baz=17,slow=1.8,SNR=5.9
GERES PKPab PKPab 00 24 58.9 -0.5
comp=Z,1.5nm,0.6s,baz=21,slow=2.7,SNR=8.6
WLF Walferdange 154.98 357 ePKPab PKPab 00 24 59.9 -0.3
CONA Conrad Observa 155.06 342⇑iPKPab PKPab 00 24 59.5 -1.1
comp=Z,14nm,1.1s
BFO Black Forest 156.16 354 ePKPab PKPab 00 25 04.8 -0.5
BFO Black Forest 156.16 354 ePKPab PKPab 00 25 04.8 -0.5
KOGS Kog 156.27 339 i PKPab PKPab 00 25 05.8 0.0
VTS Vitosha 156.33 324⇓iP PKPab 00 25 06.8 +0.4
SOKA Soboth 156.43 342⇑iPKPab PKPab 00 25 06.6 0.0
comp=Z,12nm,1.1s
GROS Grobnik 156.49 341 i PKPab PKPab 00 25 06.6 -0.3
MOTA Moosalm 156.73 348⇓iPKPab PKPab 00 25 04.7 -3.2
comp=Z,8.4nm,0.8s
JAVS Javornik 157.42 342 ePKPab PKPab 00 25 10.1 -0.8
DAVOX Davos/Dischmat 157.48 350 PKPab PKPab 00 25 10.2 -1.0
DAVOX Davos/Dischmat 157.48 350 PKPab PKPab 00 25 10.2 -1.0
comp=Z,4.5nm,0.6s,baz=23,slow=5.1,SNR=4.8
DBIC Dimbokro 160.03 152 PKPab PKPab 00 25 21.9 -1.0
DBIC Dimbokro 160.03 152 PKPab PKPab 00 25 21.9 -1.0
comp=Z,3.4nm,1.0s,baz=169,slow=1.5,SNR=3.2
ESDC Sonseca Array 163.42 23 PKP PKPdf 00 24 46.2 +0.2
ESDC PKPab PKPab 00 25 36.0 -1.1
ESDC Sonseca Array 163.42 23 PKP PKPdf 00 24 46.2 +0.2
comp=Z,1.1nm,0.8s,baz=351,slow=3.6,SNR=6.6
ESDC PKPab PKPab 00 25 36.0 -1.1
comp=Z,1.4nm,0.8s,baz=315,slow=3.7,SNR=5.8
KEST Kesra 168.16 340 PKPab PKPab 00 25 57.6 -0.5
KEST Kesra 168.16 340 PKPab PKPab 00 25 57.6 -0.5
comp=Z,2.7nm,1.0s,baz=104,slow=4.7,SNR=4.6
TORD Torodi Ar. Bea 168.28 167 PKP PKPdf 00 24 49.9 -0.8
TORD PKPab PKPab 00 25 58.5 -0.5
TORD Torodi Ar. Bea 168.28 167 PKP PKPdf 00 24 49.9 -0.8
comp=Z,2.0nm,1.0s,baz=252,slow=2.9,SNR=7.9
TORD PKPab PKPab 00 25 58.5 -0.5
comp=Z,2.1nm,0.9s,baz=185,slow=3.3,SNR=7.1

THR ***27*** *00:10:48.8±1.0, 34.00N×48.50E, h14km±8km, ML4.0*
CSEM ***27*** *00:10:48.5±0.2, 33.86N×48.49E, h10km, mb4.6/8, Ms3.9, Error ellipse: s-maj=7.5km s-min=5.0km az=37.0*
TEH ***27*** *00:10:50.6, 33.93N×48.54E, h7km, ML4.1*
NEIC ***27*** *00:10:50.0, 33.96N×48.54E, h1km, mb4.3/5, ML4.0(THR), MN4.1(TEH), After TEH.*
IDC ***27*** *00:10:51.4±4.0, 33.95N×48.38E, h35km±30km, mb3.6/15, mb1 3.7/21, mb1mx3.6/34, mbtmp3.6/21, ML3.6/4, MS3.1/4, Ms1 3.1/4, ms1mx2.5/40, Error ellipse: s-maj=23.9km s-min=13.3km az=142.0*
OMAN ***27*** *00:12:22.6±99.0, 28.54N×53.60E, h152km±999km, Error ellipse: s-maj=718.7km s-min=58.3km az=329.0*
ISC 27 00:10:49.6±1.6, 33.98N±0.03×48.52E±0.03, h8km±11km, n162, σ1$27/117, mb4.1/22, 9C-4D, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
					Op	ISC	h m s	ISC
IKOM	Komasi	0.86	283	*e*Sg	Sg	00 11 18.2		+0.8
IKOM				*e*Pg	Pg	00 11 05.0		-1.2
IKOM				*e*		00 11 25.1		
	comp=Z,78μm,0.1s							
SNGE	Sanandaj	1.47	319	*e*Pg	Pn	00 11 15.6		-1.1
SNGE				*e*Sg	Sb	00 11 34.9		-1.4
SNGE				AML	AML	00 11 39.2		
	comp=N,2μm,1.0s							
SNGE	Sanandaj	1.47	319	*e*Pg	Pn	00 11 15.0		-1.6
SNGE				*e*Sg	Sb	00 11 34.0		-2.3
IVIS	Veis	1.49	292	*e*Pn	Pn	00 11 15.5		-1.3
IVIS				*e*		00 11 19.4		
	comp=Z,26μm,0.2s							
IVIS	Veis	1.49	292	Pn	Pn	00 11 16.1		-0.7
IVIS	Veis	1.49	292	Pn	Pn	00 11 16.1		-0.7
ILIN	Lien	1.59	306	*e*Pn	Pn	00 11 17.8		-0.5
ILIN				*e*		00 11 19.9		
	comp=Z,19μm,0.1s							
ILIN	Lien	1.59	306	Pn	Pn	00 11 17.8		-0.5
ILIN	Lien	1.59	306	*e*Pn	Pn	00 11 17.8		-0.5
IGHG	Ghaleghazi	1.66	283	*e*Pn	Pn	00 11 20.4		+1.2
IGHG				*e*		00 11 22.2		
	comp=Z,33μm,0.1s							
IGHG				*e*Sg	Sb	00 11 43.9		+2.3
IGHG	Ghaleghazi	1.66	283	Pn	Pn	00 11 20.3		+1.1
IGHG	Ghaleghazi	1.66	283	Pn	Pn	00 11 20.3		+1.1
IGHG				*e*Sg	Sb	00 11 43.9		+2.3
IRAZ	Razeghan	1.83	39	*e*Pn	Pn	00 11 20.9		-0.7
IRAZ				*e*		00 11 57.9		
	comp=Z,18μm,0.2s							
IRAZ	Razeghan	1.83	39	Pn	Pn	00 11 20.9		-0.7
IRAZ	Razeghan	1.83	39	*e*Pn	Pn	00 11 20.9		-0.7
SHGR	Shooshtar-Gavs	1.89	173	*e*Pg	Pn	00 11 23.1		+0.9
SHGR				AML	AML	00 11 52.2		
	comp=E,1μm,0.3s							
SHGR				AML	AML	00 11 54.8		
	comp=N,2μm,0.4s							
SHGR	Shooshtar-Gavs	1.89	173	*e*Pg	Pn	00 11 23.0		+0.9
SHGR	Shooshtar-Gavs	1.89	173	*e*Pg	Pn	00 11 23.0		+0.9
IDHR	Dehrash	1.91	293	*e*Pn	Pn	00 11 23.7		+1.1
IDHR				*e*Sg	Sb	00 11 50.9		+2.1
IDHR				*e*		00 11 56.8		
	comp=Z,49μm,0.3s							
IDHR	Dehrash	1.91	293	Pn	Pn	00 11 23.6		+1.0
IDHR				Sg	Sn	00 11 49.7		+2.8
IDHR	Dehrash	1.91	293	*e*Pn	Pn	00 11 23.7		+1.1
IDHR				*e*Sg	Sb	00 11 50.9		+2.1
IR5	Iran Long-Peri	2.10	54	*e*Pn	Pn	00 11 24.8		-0.4
IR5	Iran Long-Peri	2.10	54	*e*Pn	Pn	00 11 24.8		-0.4
GHVR	GHOM	2.35	77	*e*Pn	Pn	00 11 28.9		+0.3
GHVR				AML	AML	00 12 08.0		
	comp=N,911nm,0.5s							
GHVR				AML	AML	00 12 09.3		
	comp=E,961nm,0.7s							
GHVR	GHOM	2.35	77	*e*Pn	Pn	00 11 28.0		-0.6
GHVR	GHOM	2.35	77	*e*Pn	Pn	00 11 28.0		-0.6
IMHD	Mahdasht	2.45	46	*e*Pn	Pn	00 11 31.3		+1.2
IMHD				*e*		00 12 08.1		
	comp=Z,9μm,0.2s							
IMHD	Mahdasht	2.45	46	Pn	Pn	00 11 31.2		+1.2
IMHD	Mahdasht	2.45	46	Pn	Pn	00 11 31.2		+1.2
IR3	Iran Long-Peri	2.54	53	*e*Pn	Pn	00 11 32.5		+1.2
IR3	Iran Long-Peri	2.54	53	*e*Pn	Pn	00 11 32.5		+1.2
IKLH	Kolahrood	2.63	104	*e*Pn	Pn	00 11 33.3		+0.6
IKLH	Kolahrood	2.63	104	Pn	Pn	00 11 33.7		+1.0
IKLH	Kolahrood	2.63	104	*e*Pn	Pn	00 11 33.3		+0.6
ZNJK	Zanjan	2.68	3	*e*Pn	Pn	00 11 34.0		+0.7
THKV	Tehran--Karaj	2.73	44	*e*Pn	Pn	00 11 34.9		+0.9
THKV				*e*Sg	Sb	00 12 14.0		+1.4
IGZV	Ghazvin	2.77	30	*e*Pn	Pn	00 11 35.5		+1.0
IGZV				*e*		00 12 20.2		
	comp=Z,5μm,0.3s							
IGZV	Ghazvin	2.77	30	Pn	Pn	00 11 35.5		+1.0
IGZV	Ghazvin	2.77	30	*e*Pn	Pn	00 11 35.5		+1.0
IVRN	Varamin	2.83	68	*e*Pn	Pn	00 11 35.9		+0.7
IVRN				*e*		00 12 26.7		
	comp=Z,6μm,0.2s							
IVRN	Varamin	2.83	68	Pn	Pn	00 11 35.8		+0.6
IVRN	Varamin	2.83	68	*e*Pn	Pn	00 11 35.8		+0.6
CHTH	Charan	2.88	47	*e*Pn	Pn	00 11 36.8		+0.8
DAMV	Damavand	3.28	59	*e*Pn	Pn	00 11 41.9		+0.4
IGAR	Gharneh	3.35	117	*e*Pn	Pn	00 11 42.6		+0.2
IGAR				*e*		00 11 53.1		
	comp=Z,3μm,0.2s							
IZEF	Zefreh	3.36	108	*e*Pn	Pn	00 11 42.9		+0.2
IZEF				*e*		00 12 38.0		
	comp=Z,3μm,0.3s							
IZEF	Zefreh	3.36	108	Pn	Pn	00 11 43.2		+0.5
IZEF	Zefreh	3.36	108	Pn	Pn	00 11 43.2		+0.5
BHD	Baghdad	3.53	260	*ex*	Pn	00 11 43.6		-1.1
BHD				*ex*	x	00 12 24.0		
BHD	Baghdad	3.53	260	*e*P	Pn	00 11 43.6		-1.1
BHD				*e*S	Sn	00 12 24.0		-2.6
IFIR	Firoozkooh	3.85	63	*e*Pn	Pn	00 11 49.9		+0.4
IFIR				*e*		00 12 02.6		
	comp=Z,2μm,0.2s							
IFIR	Firoozkooh	3.85	63	Pn	Pn	00 11 49.9		+0.4
IFIR	Firoozkooh	3.85	63	*e*Pn	Pn	00 11 49.9		+0.4
ISRB	Sarab	3.90	350	*e*Pn	Pn	00 11 51.3		+1.3
ISRB				*e*		00 12 09.2		
	comp=Z,1μm,0.1s							
ISRB	Sarab	3.90	350	Pn	Pn	00 11 51.0		+1.0
ISRB	Sarab	3.90	350	*e*Pn	Pn	00 11 51.3		+1.3
IAZR	Azarshahr	4.22	331	*e*Pn	Pn	00 11 56.4		+1.9
IAZR	Azarshahr	4.22	331	*e*Pn	Pn	00 11 56.4		+1.9
MIB	Mutribah	4.29	194	*e*P	Pn	00 11 55.6		+0.4
MIB				AML	AML	00 12 45.6		
	comp=Z,74nm,0.6s							
MIB	Mutribah	4.29	194	*e*P	Pn	00 11 55.6		+0.4
IFTB	Fath-abad	4.38	337	*e*Pn	Pn	00 11 57.6		+1.0
UMR	Umm Al-Rimmam	4.47	189	*e*P	Pn	00 11 57.6		-0.1
UMR	Umm Al-Rimmam	4.47	189	*e*P	Pn	00 11 57.6		-0.1
IHRS	Heris	4.49	345	*e*Pn	Pn	00 11 59.4		+1.3
IHRS				*e*		00 12 19.0		
	comp=Z,1μm,0.4s							
IHRS	Heris	4.49	345	Pn	Pn	00 11 59.9		+1.8
IHRS	Heris	4.49	345	*e*Pn	Pn	00 11 59.4		+1.3
KBD	Kabd	4.84	189	*e*P	Pn	00 12 02.8		0.0
KBD				AML	AML	00 12 56.7		
	comp=Z,36nm,0.3s							
K

NAY	**Al-Naaiem**	**4.84**	**193**	*e*P	**Pn**	**00 12 03.0**	**+0.1**		
NAY	**Al-Naaiem**	**4.84**	**193**	*e*P	**Pn**	**00 12 03.0**	**+0.1**		
RDF	**Al-Radifah**	**5.11**	**190**	*e*P	**Pn**	**00 12 06.8**	**+0.3**		
RDF				AML	AML	00 13 03.2			
	comp=Z,33nm,0.3s								
RDF	**Al-Radifah**	**5.11**	**190**	*e*P	**Pn**	**00 12 06.8**	**+0.3**		
IMRD	**Marand**	**5.24**	**335**	*e*		00 12 37.7			
	comp=Z,659nm,0.3s								
IMRD				*e*Pn	**Pn**	**00 12 09.5**	**+1.1**		
IMRD	**Marand**	**5.24**	**335**	Pn	**Pn**	**00 12 11.2**	**+2.8**		
GNI	**Garni**	**6.86**	**335**	Pn	Pn	00 12 27.0	-3.6		
GNI				e*P*g	Pg	00 12 56.7	-4.2		
GNI				*e*S	**Sg**	**00 14 30.7**	**+1.0**		
GNI	**Garni**	**6.86**	**335**	Pn	**Pn**	**00 12 32.3**	**+1.7**		
	comp=Z,0.2nm,0.3s,baz=153,slow=4.5,SNR=1.7								
GNI				Pg	Pb	00 12 52.8	+3.7		
	comp=Z,0.3nm,0.3s,baz=274,slow=4.3,SNR=4.9								
GNI				Lg	Lg	00 14 29.8			
	baz=17,slow=19,SNR=1.8								
GNI				LR	LR	00 15 27.4			
	comp=Z,182nm,18.0s,baz=212,slow=40								
ASF	**Jabal al Asfar**	**9.92**	**263**	Pn	Pn	00 13 09.1	-3.5		
	comp=Z,1.1nm,0.3s,baz=323,slow=7.8,SNR=1								
ASF				Sn	**Sn**	**00 15 00.7**	**-3.5**		
	comp=Z,0.5nm,0.3s,baz=121,slow=5.9,SNR=2.8								
ASF				Lg	Lg	00 16 11.3			
	comp=Z,0.2nm,0.3s,baz=270,slow=11,SNR=1.7								
ASF				LR	LR	00 17 59.2			
	comp=Z,76nm,19.5s,baz=61,slow=44								
BANOM	**Banah**	**10.48**	**138**	⇑P	Pn	00 13 17.0	-3.3		
	SNR=10								
BANOM	**Banah**	**10.48**	**138**	Pn	Pn	00 13 16.4	-3.9		
	SNR=45								
BANOM	**Banah**	**10.48**	**138**	P	Pn	00 13 17.0	-3.3		
	SNR=10								
BANOM				Sn	Sn	00 15 02.4	-16		
NAZ	**Nazwa, Dubai**	**10.91**	**143**	P	Pn	00 13 23.0	-3.0		
	SNR=8.9								
NAZ	**Nazwa, Dubai**	**10.91**	**143**	Pn	Pn	00 13 22.6	-3.4		
NAZ	**Nazwa, Dubai**	**10.91**	**143**	P	Pn	00 13 23.0	-3.0		
	SNR=8.9								
MMAI	**Mount Meron Ar**	**11.00**	**269**	Pn	Pn	00 13 24.4	-2.9		
	comp=Z,0.5nm,0.3s,baz=82,slow=10,SNR=4.5								
MMAI				Sn	**Sn**	**00 15 33.0**	**+2.4**		
	comp=Z,0.2nm,0.3s,baz=80,slow=40,SNR=2.1								
MMAI				Lg	Lg	00 16 37.8			
	comp=Z,0.5nm,0.3s,baz=76,slow=31,SNR=3.0								
ASUD	**Al Ashush, Dub**	**11.05**	**146**	P	Pn	00 13 25.4	-2.6		
	SNR=6.9								
ASUD	**Al Ashush, Dub**	**11.05**	**146**	Pn	Pn	00 13 25.0	-3.0		
ASUD	**Al Ashush, Dub**	**11.05**	**146**	P	Pn	00 13 25.4	-2.6		
	SNR=6.9								
FAQ	**Al Faqa, Dubai**	**11.08**	**144**	Pn	Pn	00 13 24.9	-3.5		
HATD	**Hatta, Dubai**	**11.28**	**142**	P	Pn	00 13 27.6	-3.6		
	SNR=7.3								
HATD	**Hatta, Dubai**	**11.28**	**142**	Pn	Pn	00 13 27.2	-3.9		
HATD	**Hatta, Dubai**	**11.28**	**142**	P	Pn	00 13 27.6	-3.6		
	SNR=7.3								
ASHO	**Ashiyiah**	**11.36**	**143**	P	Pn	00 13 28.2	-4.0		
	SNR=13								
ASHO				⇑S	Sn	00 15 31.5	-7.9		
ASHO	**Ashiyiah**	**11.36**	**143**	Pn	Pn	00 13 28.2	-4.0		
	SNR=13								
ASHO				S	Sn	00 15 31.5	-7.9		
EIL	**Elat**	**12.31**	**253**	Pn	Pn	00 13 42.0	-3.2		
	comp=Z,1.8nm,0.3s,baz=85,slow=5.2,SNR=19								
EIL				LR	LR	00 19 35.9			
	comp=Z,96nm,18.8s,baz=266,slow=43								
BRTR	**Keskin Array B**	**13.22**	**300**	Pn	Pn	00 13 55.5	-2.3		
	comp=Z,0.1nm,0.3s,baz=115,slow=5.6,SNR=5.6								
AKTO	**Aktyubinsk**	**17.86**	**20**	P	**Pn**	**00 14 58.7**	**+0.4**		
	comp=Z,0.3nm,0.3s,baz=196,slow=12,SNR=5.3								
KKAR	**Karatay Array**	**19.42**	**56**	*e*P	**P**	**00 15 17.4**	**+1.2**		
	comp=Z,2.9nm,0.7s								
KKAR	**Karatay Array**	**19.42**	**56**	*e*P	**P**	**00 15 17.4**	**+1.2**		
	comp=Z,2.9nm,0.7s								
MLR	**Muntele Rosu**	**20.75**	**310**	⇑*i*P	**P**	**00 15 31.1**	**+0.3**		
MLR	**Muntele Rosu**	**20.75**	**310**	P	**P**	**00 15 29.3**	**-1.5**		
	comp=Z,0.4nm,0.9s,baz=156,slow=20								
MLR	**Muntele Rosu**	**20.75**	**310**	⇑*i*P	**P**	**00 15 31.1**	**+0.3**		
TESR	**Tescani**	**20.78**	**314**	⇑*i*P	**P**	**00 15 29.6**	**-1.4**		
TESR	**Tescani**	**20.78**	**314**	⇑*i*P	**P**	**00 15 29.6**	**-1.4**		
VOIR		**21.29**	**309**	⇓*i*P	**P**	**00 15 36.1**	**-0.6**		
VOIR		**21.29**	**309**	⇓*i*P	**P**	**00 15 36.1**	**-0.6**		
ARR	**Arges**	**21.53**	**309**	⇑*i*P	**P**	**00 15 39.9**	**+0.7**		
ARR	**Arges**	**21.53**	**309**	⇑*i*P	**P**	**00 15 39.9**	**+0.7**		
AKASG	**Malin Array Be**	**21.86**	**326**	P	**P**	**00 15 39.7**	**-2.9**		
	comp=Z,1.0nm,0.4s,baz=128,slow=8.9,SNR=5.8								
AAK	**Ala-Archa**	**22.07**	**59**	LR	LR	00 25 59.6			
	comp=Z,34nm,18.5s,baz=272,slow=41								
LOT	**Lotru**	**22.13**	**309**	⇓*i*P	**P**	**00 15 43.9**	**-1.7**		
LOT	**Lotru**	**22.13**	**309**	⇓*i*P	**P**	**00 15 43.9**	**-1.7**		
BURAR	**Bucovina Array**	**22.18**	**315**	⇑*i*P	**P**	**00 15 48.8**	**+2.7**		
BVAR	**Borovoye Array**	**24.60**	**33**	P	**P**	**00 16 09.0**	**-1.1**		
	comp=Z,2.9nm,0.8s,baz=224,slow=6.0,SNR=5.1								
IIGN	**Ignalina**	**26.39**	**331**	*e*P	**P**	**00 16 24.6**	**-1.7**		
IIGN	**Ignalina**	**26.39**	**331**	*e*P	**P**	**00 16 24.6**	**-1.7**		
ISAL	**Salakas**	**26.59**	**331**	*e*P	**P**	**00 16 26.8**	**-1.2**		
ISAL	**Salakas**	**26.59**	**331**	*e*P	**P**	**00 16 26.8**	**-1.2**		
CEL	**Celeste**	**26.62**	**289**	*e*P	**P**	**00 16 27.4**	**-1.2**		
	comp=Z,18nm,0.8s								
CEL	**Celeste**	**26.62**	**289**	*e*P	**P**	**00 16 27.4**	**-1.2**		
	comp=Z,18nm,0.8s								
CUC	**Castrocucco**	**26.71**	**293**	*e*P	**P**	**00 16 28.1**	**-1.3**		
	comp=Z,5.9nm,0.7s								
CUC	**Castrocucco**	**26.71**	**293**	*e*P	**P**	**00 16 28.1**	**-1.3**		
	comp=Z,5.9nm,0.7s								
KURBB	**Kurchatov Arra**	**27.47**	**44**	P	**P**	**00 16 35.5**	**-0.6**		
	comp=Z,1.6nm,0.7s,baz=248,slow=9.2,SNR=12								
KURK	**Kurchatov**	**27.57**	**44**	*e*P	**P**	**00 16 36.6**	**-0.3**		
	comp=Z,1.2nm,0.7s								
KURK	**Kurchatov**	**27.57**	**44**	*e*P	**P**	**00 16 36.6**	**-0.3**		
	comp=Z,1.2nm,0.7s								
MKAR	**Makanchi Array**	**28.50**	**53**	P	**P**	**00 16 45.0**	**-0.3**		
	comp=Z,0.3nm,0.5s,baz=251,slow=4.4,SNR=2.6								
GERES	**GERESS Array B**	**29.74**	**310**	P	P	00 16 53.8	-2.6		
	comp=Z,0.2nm,0.4s,baz=126,slow=9.9,SNR=3.7								
FINES	**FINESS Array B**	**31.02**	**339**	P	P	00 17 05.6	-1.8		
	comp=Z,7.2nm,1.1s,baz=163,slow=7.2,SNR=6.3								
ZALV	**Zalesovo Beam**	**32.37**	**41**	P	**P**	**00 17 18.5**	**-0.9**		
	comp=Z,0.8nm,0.5s,baz=259,slow=10,SNR=6.2								
LPG	**La Plagne**	**33.76**	**303**	*e*P	P	00 17 30.5	-1.5		
	comp=Z,9.1nm,0.8s								
LPG	**La Plagne**	**33.76**	**303**	*e*P	P	00 17 30.5	-1.5		
	comp=Z,9.1nm,0.8s								
LPG	**La Plagne**	**33.76**	**303**	*e*P	P	00 17 30.5	-1.5		
	comp=Z,9.1nm,0.8s								
BNI	**Bardonecchia**	**33.77**	**302**	P	P	00 17 29.3	-2.7		
	comp=Z,4.8nm,0.6s								
BNI	**Bardonecchia**	**33.77**	**302**	P	P	00 17 29.3	-2.7		
	comp=Z,4.8nm,0.6s								
LPL	**La Plagne**	**33.77**	**303**	*e*P	P	00 17 29.8	-2.3		
LPL	**La Plagne**	**33.77**	**303**	*e*P	P	00 17 29.8	-2.3		
LPL	**La Plagne**	**33.77**	**303**	*e*P	P	00 17 29.8	-2.3		
CABF	**La Chapelle**	**34.33**	**304**	*e*P	P	00 17 33.6	-3.1		
	comp=Z,13nm,0.8s								
CABF	**La Chapelle**	**34.33**	**304**	*e*P	P	00 17 33.6	-3.1		
	comp=Z,13nm,0.8s								
CABF	**La Chapelle**	**34.33**	**304**	*e*P	P	00 17 33.6	-3.1		
	comp=Z,13nm,0.8s								
HAU	**Haudompre**	**34.33**	**307**	*e*P	P	00 17 33.1	-3.5		
HAU	**Haudompre**	**34.33**	**307**	*e*P	P	00 17 33.1	-3.5		
HAU	**Haudompre**	**34.33**	**307**	*e*P	P	00 17 33.1	-3.5		
ORIF	**Oris-en-Rattie**	**34.33**	**301**	*e*P	P	00 17 33.5	-3.2		
ORIF	**Oris-en-Rattie**	**34.33**	**301**	*e*P	P	00 17 33.5	-3.2		
ORIF	**Oris-en-Rattie**	**34.33**	**301**	*e*P	P	00 17 33.5	-3.2		
VIVF	**Saint-Julien-l**	**35.18**	**301**	*e*P	P	00 17 40.3	-3.8		
	comp=Z,7.7nm,0.9s								
VIVF	**Saint-Julien-l**	**35.18**	**301**	*e*P	P	00 17 40.3	-3.8		
	comp=Z,7.7nm,0.9s								
VIVF	**Saint-Julien-l**	**35.18**	**301**	*e*P	P	00 17 40.3	-3.8		
	comp=Z,7.7nm,0.9s								
SMF	**Signal de Mont**	**35.87**	**304**	*e*P	P	00 17 47.4	-2.5		
SMF	**Signal de Mont**	**35.87**	**304**	*e*P	P	00 17 47.4	-2.5		
SMF	**Signal de Mont**	**35.87**	**304**	*e*P	P	00 17 47.4	-2.5		
NOA	**NORSAR Array B**	**36.13**	**330**	P	P	00 17 49.4	-2.6		
	comp=Z,0.6nm,0.7s,baz=130,slow=6.7,SNR=4.7								
ARCES	**ARCESS Array B**	**37.83**	**347**	P	P	00 18 04.0	-2.3		
	comp=Z,1.5nm,0.8s,baz=155,slow=7.6,SNR=7.5								
ESDC	**Sonseca Array**	**41.90**	**294**	P	P	00 18 38.4	-2.2		
	comp=Z,0.2nm,0.3s,baz=77,slow=7.1,SNR=3.7								
TORD	**Torodi Ar. Bea**	**47.19**	**256**	P	P	00 19 20.3	-2.7		
	comp=Z,1.2nm,0.6s,baz=66,slow=7.1,SNR=25								
DBIC	**Dimbokro**	**56.18**	**254**	P	P	00 20 27.3	-3.0		
	comp=Z,1.7nm,0.8s,baz=67,slow=7.7,SNR=3.4								
LIC	**Lamto**	**56.58**	**253**	*e*P	P	00 20 30.2	-2.9		
	comp=Z,7.0nm,0.7s								
LIC	**Lamto**	**56.58**	**253**	*e*P	P	00 20 30.2	-2.9		
	comp=Z,7.0nm,0.7s								
LIC	**Lamto**	**56.58**	**253**	*e*P	P	00 20 30.2	-2.9		
	comp=Z,7.0nm,0.7s								
BOSA	**Boshof**	**66.04**	**202**	P	P	00 21 33.8	-3.2		
	comp=Z,2.3nm,0.8s,baz=34,slow=6.6,SNR=3.2								
ILAR	**Eielson Array**	**80.83**	**7**	LR	LR	01 02 07.1			
	comp=Z,183nm,20.3s,baz=291,slow=38								
YKA	**Yellowknife Ar**	**82.90**	**352**	P	P	00 23 10.9	-3.5		
	comp=Z,0.3nm,0.5s,baz=1.7,slow=5.1,SNR=6.9								

ROM 27 00:12:46.4±0.3, 42.36N×13.51E, h8km, Md1.5/3, Ml1.1/2, Error ellipse: s-maj=4.4km s-min=0.7km az=29.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.08**	**268**	Pg	Pg	00 12 49.0	+0.4
AQU				Sg	Sg	00 12 50.6	+0.4
	23nm,0.1s						
FAGN	**Fagnano**	**0.10**	**150**	Pg	Pg	00 12 49.1	+0.1
FAGN				Sg	Sg	00 12 51.5	+0.8
	38nm,0.4s						

IDC 27 00:17:11.4±1.8, 5.52S×125.98E, h533km±23km, mb2.9/4, mb1 3.2/8, mb1mx3.0/25, mbtmp3.1/8, Error ellipse: s-maj=45.5km s-min=14.8km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**6.22**	**274**	P	P	00 18 51.1	-0.2
	5.5nm,0.3s,baz=119,slow=4.9,SNR=16						
FITZ	**Fitzroy Crossi**	**12.51**	**181**	P	P	00 19 55.0	-0.3
	2.9nm,0.3s,baz=18,slow=12,SNR=28						
FITZ				S	S	00 22 08.0	-2.2
	baz=197,slow=17,SNR=3.8						
WRA	**Warramunga Arr**	**16.48**	**151**	P	P	00 20 35.5	-0.7
	0.5nm,0.3s,baz=329,slow=10,SNR=14						
WRA				S	S	00 23 21.1	-2.5
	0.2nm,0.3s,baz=323,slow=14,SNR=8.7						
ASAR	**Alice Springs**	**19.59**	**158**	P	P	00 21 04.8	+0.1
	1.0nm,0.3s,baz=342,slow=9.4,SNR=26						
ASAR				S	S	00 24 12.3	-1.9
	0.1nm,0.3s,baz=339,slow=20,SNR=8.3						
ASAR				ScP	ScP	00 27 43.9	-1.1
	0.1nm,0.3s,baz=337,slow=1.3,SNR=6.7						
USRK	**Ussuriysk Arra**	**49.79**	**6**	P	P	00 25 15.1	0.0
	0.9nm,0.5s,baz=184,slow=5.3,SNR=4.6						
MKAR	**Makanchi Array**	**64.84**	**328**	P	P	00 26 58.1	+0.2
	0.4nm,0.4s,baz=115,slow=7.9,SNR=9.1						
ZALV	**Zalesovo Beam**	**68.54**	**335**	P	P	00 27 20.1	-0.4
	0.3nm,0.3s,baz=132,slow=4.1,SNR=3.0						
KURBB	**Kurchatov Arra**	**69.20**	**330**	P	P	00 27 24.6	0.0
	0.2nm,0.3s,baz=145,slow=4.6,SNR=4.6						

IDC 27 00:26:04.2±2.6, 10.43S×118.67E, h0km, mb3.3/3, mb1 3.5/6, mb1mx3.4/21, mbtmp3.4/6, ML3.4/2, Error ellipse: s-maj=210.2km s-min=21.3km az=51.0
AUST 27 00:26:14.2, 11.96S×115.89E, h100km
ISC 27 00:26:07.8±1.3, 11.2S±0.2×117.6E±0.4, h35km, n13, σ0=97/5, mb3.4/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**4.36**	**309**	P	Pn	00 27 14.3	+2.8
	baz=3.9,SNR=7.5						
FITZ	**Fitzroy Crossi**	**10.36**	**132**	Pn	Pn	00 28 29.7	-4.2
	0.4nm,0.3s,baz=311,slow=7.8,SNR=3.3						
FITZ				Sn	Sn	00 30 13.1	-16
	0.7nm,0.3s,baz=212,slow=17,SNR=4.9						
LUWI	**Luwuk**	**11.37**	**27**	P	Pn	00 29 16.0	+28
	baz=13,SNR=4.7						
GIRL	**Giralia**	**11.78**	**195**	P	Pn	00 28 48.8	-4.5
	baz=11,SNR=4.4						
GIRL				S	Sn	00 30 40.2	-23
	baz=11,SNR=4.9						
MEEK	**Meekatharra**	**15.35**	**176**	P	Pn	00 29 34.7	-7.1
	baz=15,SNR=5.9						
MEEK				S	Sn	00 32 06.8	-24
	baz=15,SNR=19						
MNAI	**Manna**	**16.01**	**294**	P	Pn	00 29 35.1	-15
	baz=15,SNR=3.6						
MORW	**Morawa**	**17.79**	**184**	P	Pn	00 30 08.0	-4.8
	baz=17,SNR=6.6						
MORW				S	Sn	00 33 07.4	-23
	baz=17,SNR=10						
WRA	**Warramunga Arr**	**18.30**	**120**	P	P	00 30 13.5	-5.5
	baz=299,slow=13,SNR=2.7						
WRA				S	Sn	00 33 25.4	-17
	0.1nm,0.3s,baz=306,slow=26,SNR=2.8						
ASAR	**Alice Springs**	**19.85**	**131**	P	**P**	**00 30 36.0**	**+0.1**
	0.1nm,0.3s,baz=308,slow=13,SNR=5.2						
KLBR	**Kellerberrin**	**20.25**	**180**	P	**P**	**00 30 40.0**	**-0.1**
	baz=20,SNR=5.4						
KLBR				S	S	00 34 05.2	-20
	baz=20,SNR=6.1						
MKAR	**Makanchi Array**	**65.83**	**334**	P	**P**	**00 36 49.2**	**-0.4**
	0.1nm,0.4s,baz=150,slow=7.1,SNR=3.0						
KURBB	**Kurchatov Arra**	**70.37**	**335**	P	**P**	**00 37 19.1**	**+1.1**
	0.2nm,0.5s,baz=147,slow=6.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**70.64**	**340**	P	**P**	**00 37 18.9**	**-0.7**
	0.4nm,0.5s,baz=138,slow=8.9,SNR=3.1						

ISCJB 27 00:35:20.8±0.6, 45.11N±0.02×22.92E±0.03, h0km±5km, Error ellipse: s-maj=4.2km s-min=3.3km az=38.2
BUC 27 00:35:21.9±1.1, 45.17N×22.93E, h10km±5km, MD2.8/4, Error ellipse: s-maj=8.9km s-min=4.0km az=19.0
CSEM 27 00:35:21.5±0.2, 45.11N×22.93E, h2km, ML1.7, Error ellipse: s-maj=4.0km s-min=3.1km az=125.0
BEO 27 00:35:22.9±0.4, 45.13N×22.91E, h10km±2km, ML1.7/7
ISC 27 00:35:22.1±1.0, 45.13N±0.02×22.93E±0.02, h8km±9km, n35, σ0=35/58, 13C-3D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJES	**Djerdap**	**0.55**	**213**	*e*Sg	**Sg**	**00 35 40.8**	**+1.0**
LOT	**Lotru**	**0.67**	**61**	⇓*i*P	**Pg**	**00 35 35.0**	**-0.1**
LOT				*i* S	**Sg**	**00 35 44.0**	**+0.1**
LOT	**Lotru**	**0.67**	**61**	⇓*i*P	**Pg**	**00 35 35.0**	**-0.1**
LOT	**Lotru**	**0.67**	**61**	⇓*i*P	**Pg**	**00 35 35.0**	**-0.1**
LOT				S	**Sg**	**00 35 44.0**	**+0.1**
DEV	**Deva**	**0.76**	**358**	⇑*i*P	**Pg**	**00 35 36.7**	**0.0**
DEV				*i* S	**Sg**	**00 35 46.8**	**+0.3**
DEV	**Deva**	**0.76**	**358**	⇑*i*P	**Pg**	**00 35 36.7**	**0.0**
DEV	**Deva**	**0.76**	**358**	⇑*i*P	**Pg**	**00 35 36.7**	**0.0**
DEV				S	**Sg**	**00 35 46.8**	**+0.3**
BZS	**Buzias**	**1.05**	**298**	*e*Pg	**Pg**	**00 35 42.0**	**-0.3**
BZS				*e*Sg	**Sg**	**00 35 55.5**	**-0.4**
BZS	**Buzias**	**1.05**	**298**	⇑*i*P	**Pg**	**00 35 41.9**	**-0.3**
BZS				*i* S	**Sg**	**00 35 55.8**	**-0.1**
BZS	**Buzias**	**1.05**	**298**	⇑*i*P	**Pg**	**00 35 41.9**	**-0.3**
BZS	**Buzias**	**1.05**	**298**	*e*Pg	**Pg**	**00 35 42.0**	**-0.3**
BZS				*e*Sg	**Sg**	**00 35 55.5**	**-0.4**
BZS				S	**Sg**	**00 35 55.8**	**-0.1**
ARR	**Arges**	**1.23**	**78**	⇑*i*P	**Pg**	**00 35 45.4**	**-0.2**
ARR				*i* S	**Sb**	**00 36 01.5**	**0.0**
ARR	**Arges**	**1.23**	**78**	⇑*i*P	**Pg**	**00 35 45.4**	**-0.2**
ARR	**Arges**	**1.23**	**78**	⇑*i*P	**Pg**	**00 35 45.4**	**-0.2**
ARR				S	**Sb**	**00 36 01.5**	**0.0**
BOLS	**Boljevac**	**1.48**	**209**	*e*Pg	**Pn**	**00 35 48.6**	**-0.4**
BOLS				*e*Sg	**Sg**	**00 36 09.2**	**-0.3**
BOLS	**Boljevac**	**1.48**	**209**	*e*Pg	**Pn**	**00 35 48.6**	**-0.4**
BOLS				*e*Sg	**Sg**	**00 36 09.2**	**-0.3**
VOIR		**1.53**	**78**	⇑*i*P	**Pn**	**00 35 50.1**	**+0.3**
VOIR				*i* S	**Sg**	**00 36 10.8**	**-0.4**
VOIR		**1.53**	**78**	⇑*i*P	**Pn**	**00 35 50.1**	**+0.3**
VOIR		**1.53**	**78**	⇑*i*P	**Pn**	**00 35 50.1**	**+0.3**
VOIR				S	**Sg**	**00 36 10.8**	**-0.4**
DRGR		**1.67**	**355**	*e*Pn	**Pn**	**00 35 51.4**	**-0.3**
DRGR		**1.67**	**355**	*e*Pg	**Pb**	**00 35 53.2**	**0.0**
DRGR				*e*Sn	**Sn**	**00 36 13.7**	**+0.3**
DRGR		**1.67**	**355**	⇑*i*P	**Pn**	**00 35 51.4**	**-0.3**
DRGR				*i* S	**Sn**	**00 36 13.6**	**+0.2**
DRGR				**1.67 355**	⇑*i*P	**Pn**	**00 35 51.4**	**-0.3**
DRGR		**1.67**	**355**	*e*Pn	**Pn**	**00 35 51.4**	**-0.3**
DRGR		**1.67**	**355**	*e*Pg	**Pb**	**00 35 53.2**	**0.0**
DRGR				*e*Sn	**Sn**	**00 36 13.7**	**+0.3**
ZAPS	**Zavoj**	**1.87**	**187**	*e*Sn	**Sn**	**00 36 18.4**	**+0.3**
GRUS	**Gruza**	**2.01**	**233**	*e*Pn	**Pn**	**00 35 57.1**	**+0.7**
GRUS				*e*Sg	**Sg**	**00 36 27.0**	**+0.2**
GRUS	**Gruza**	**2.01**	**233**	*e*Pn	**Pn**	**00 35 57.1**	**+0.7**
GRUS				*e*Sg	**Sg**	**00 36 27.0**	**+0.2**
MLR	**Muntele Rosu**	**2.16**	**79**	*i* S	**Sn**	**00 36 25.5**	**+0.1**
MLR	**Muntele Rosu**	**2.16**	**79**	S	**Sn**	**00 36 25.5**	**+0.1**
MLR	**Muntele Rosu**	**2.16**	**79**	S	**Sn**	**00 36 25.5**	**+0.1**
DIVS	**Divibare**	**2.34**	**245**	*e*Pn	**Pn**	**00 36 01.6**	**+0.7**
DIVS				*e*Sn	**Sn**	**00 36 29.4**	**-0.5**
DIVS	**Divibare**	**2.34**	**245**	*e*Pn	**Pn**	**00 36 01.6**	**+0.7**
DIVS				*e*Sn	**Sn**	**00 36 29.4**	**-0.5**
VTS	**Vitosha**	**2.54**	**175**	*e*Pg	**Pb**	**00 36 08.1**	**0.0**
VTS				*e*Sg	**Sg**	**00 36 43.4**	**-0.4**
VTS	**Vitosha**	**2.54**	**175**	*e*Pg	**Pb**	**00 36 08.1**	**0.0**
VTS				*e*Sg	**Sg**	**00 36 43.4**	**-0.4**

IDC 27 00:39:22.6±46.0, 15.49S×172.12W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/21, mbtmp4.0/3, Error ellipse: s-maj=901.3km s-min=202.1km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**45.06**	**240**	P	P	00 47 40.8	+0.2
	1.1nm,0.5s,baz=54,slow=8.7,SNR=3.4						
WRA	**Warramunga Arr**	**51.02**	**257**	P	P	00 48 26.6	-0.4
	0.3nm,0.5s,baz=95,slow=7.1,SNR=5.3						
ASAR	**Alice Springs**	**51.26**	**252**	P	P	00 48 28.5	-0.2
	3.6nm,0.6s,baz=88,slow=8.1,SNR=42						

IDC 27 00:56:34.9±8.1, 5.65S×147.09E, h173km±87km, mb2.8/2, mb1 3.1/4, mb1mx2.9/18, mbtmp2.8/4, Error ellipse: s-maj=126.9km s-min=30.7km az=134.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.74**	**179**	P	Pn	00 57 33.1	+0.7
	1.2nm,0.3s,baz=236,slow=15,SNR=2.6						
PMG				S	Sn	00 58 17.8	+0.3
	2.2nm,0.3s,baz=14,slow=14,SNR=7.4						
WRA	**Warramunga Arr**	**18.86**	**220**	P	P	01 00 41.4	-0.7
	0.4nm,0.3s,baz=40,slow=12,SNR=7.6						
WRA				pP	pP	01 01 15.3	+4.0
	0.4nm,0.3s,baz=53,slow=9.6,SNR=4.5						
ASAR	**Alice Springs**	**21.96**	**214**	P	P	01 01 15.1	0.0
	0.3nm,0.4s,baz=47,slow=8.4,SNR=4.7						
ILAR	**Eielson Array**	**85.12**	**23**	P	P	01 08 50.8	-0.3
	0.3nm,0.6s,baz=243,slow=4.8,SNR=5.7						
TORD	**Torodi Ar. Bea**	**145.09**	**285**	PKPbc	PKPbc	01 15 52.1	-0.4
	0.7nm,0.5s,baz=96,slow=2.4,SNR=17						

NNC 27 00:59:32.7±2.0, 43.13N×75.77E, h0km, mb2.8, mpv2.8, Error ellipse: s-maj=24.2km s-min=4.2km az=145.0
KNET 27 00:59:32.7±0.7, 42.94N×75.79E, h21km±2km, ml1.6, Error ellipse: s-maj=5.2km s-min=1.8km az=43.0
ISCJB 27 00:59:33.5±0.9, 42.97N±0.05×75.83E±0.04, h14km±5km, Error ellipse: s-maj=8.0km s-min=5.4km az=2.7
ISC 27 00:59:33.2±1.1, 42.97N±0.05×75.84E±0.03, h16km±8km, n9, σ0=78/17, 10C-6D, Lake Issyk-Kul region

ellipse: s-maj=5.0km s-min=4.0km az=64.0
BEO ***27*** *01:10:33.1±0.8, 41°.33N×22°.63E, h6km, 3km, ML1.5/4*

ISC 27 01:10:31.1±0.8, **41°.28N**±0°.02×**22°.69E**±0°.03, **h15**km±6km, **n18**, σ0**s44**/34, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**293**	*i* Pg	**Pg**	**01 10 34.2**	**-0.2**
VAY				*e*Sg	**Sg**	**01 10 36.4**	**-0.1**
VAY				*e*Lg	Lg	01 10 36.5	
	comp=E,500nm,0.2s						
VAY				*e*Lg	Lg	01 10 36.5	
	comp=N,498nm,0.2s						
VAY	**Valandovo**	**0.10**	**293**	*e*Pg	**Pg**	**01 10 34.1**	**-0.2**
VAY				*e*Sg	**Sg**	**01 10 36.4**	**-0.1**
VAY	**Valandovo**	**0.10**	**293**	*i* Pg	**Pg**	**01 10 34.6**	**+0.3**
VAY				*e*Sg	**Sg**	**01 10 36.8**	**+0.3**
VAY				*e*Lg	Lg	01 10 37.0	
	comp=N,498nm,0.2s						
GRG	**Griva**	**0.39**	**214**	*e*PB	**Pb**	**01 10 39.6**	**-0.2**
GRG				*e*SB	**Sb**	**01 10 45.6**	**0.0**
GRG	**Griva**	**0.39**	**214**	*e*Pb	**Pb**	**01 10 39.6**	**-0.2**
GRG				*e*Sb	**Sb**	**01 10 45.6**	**0.0**
SOH	**Sokhos**	**0.68**	**132**	*e*PN	**Pg**	**01 10 44.5**	**+0.1**
SOH				*e*SN	**Sg**	**01 10 53.3**	**-0.1**
SOH	**Sokhos**	**0.68**	**132**	*e*Pn	**Pg**	**01 10 44.5**	**+0.1**
SOH				*e*Sn	**Sg**	**01 10 53.3**	**-0.1**
NVR	**Nevrokopi**	**0.89**	**85**	*e*PN	**Pb**	**01 10 48.0**	**-0.2**
NVR				*e*SN	**Sb**	**01 10 59.9**	**0.0**
NVR	**Nevrokopi**	**0.89**	**85**	*e*Pn	**Pb**	**01 10 48.0**	**-0.2**
NVR				*e*Sn	**Sb**	**01 10 59.9**	**0.0**
PLG	**Polygyros**	**1.07**	**147**	*e*PN	**Pb**	**01 10 50.9**	**-0.5**
PLG				*e*SN	**Sg**	**01 11 05.7**	**-0.2**
PLG	**Polygyros**	**1.07**	**147**	*e*Pn	**Pb**	**01 10 50.9**	**-0.5**
PLG				*e*Sn	**Sg**	**01 11 05.7**	**-0.2**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pg**	**01 10 57.6**	**+0.2**
VTS				*e*Sg	**Sg**	**01 11 15.2**	**0.0**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pg**	**01 10 57.6**	**+0.2**
VTS				*e*Sg	**Sg**	**01 11 15.2**	**0.0**
BARS	**Barje**	**1.67**	**337**	*e*Pn	**Pb**	**01 11 02.1**	**+0.6**
BARS				*e*Sg	**Sg**	**01 11 23.8**	**-1.0**
BARS	**Barje**	**1.67**	**337**	*e*Pn	**Pb**	**01 11 02.1**	**+0.6**
BARS				*e*Sg	**Sg**	**01 11 23.8**	**-1.0**
ZAPS	**Zavoj**	**1.99**	**359**	*e*Pn	**Pb**	**01 11 06.0**	**-1.1**
ZAPS				*e*Sn	**Sb**	**01 11 31.3**	**-0.4**
RDO	**Rodhopi**	**2.15**	**93**	*e*PN	**Pn**	**01 11 07.1**	**+0.6**
RDO	**Rodhopi**	**2.15**	**93**	*e*Pn	**Pn**	**01 11 07.1**	**+0.6**

KRSC 27 01:11:21.9±0.2, **54°.76N**×**165°.67E**, **h11**km±11km, **ML3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.48**	**21**	*e*P	Pg	01 11 30.5	-0.7
BKI				*i* S	Sg	01 11 36.0	-1.6
KBG	**Krutoberegovo**	**2.26**	**313**	*e*P	Pb	01 12 01.6	-1.0
KBG				*i* S	Sb	01 12 30.4	-0.1
MKZ	**Mys Kozlova**	**2.30**	**267**	*e*P	Pn	01 11 59.3	-0.4
MKZ				*i* S	Sn	01 12 25.8	-2.1
NLC	**Nalytchevo**	**4.06**	**249**	*e*P	Pn	01 12 24.5	+0.6
NLC				*i* S	Sn	01 13 09.5	-1.8
SDLR	**Sedlovina**	**4.27**	**252**	*e*P	Pn	01 12 28.2	+1.3
SDLR				*i* S	Sn	01 13 16.5	-0.3
SMAR	**Somma**	**4.32**	**252**	*e*P	Pn	01 12 29.3	+1.5
UGLR	**Uglovaya**	**4.33**	**252**	*e*P	Pn	01 12 29.2	+1.4
KRER	**Koryakskii**	**4.33**	**253**	*e*P	Pn	01 12 29.6	+1.7
AVH	**Avacha**	**4.36**	**253**	*e*P	Pn	01 12 30.2	+2.1
AVH				*e*S	Sn	01 13 19.0	+0.2
KOK	**Koryaka**	**4.40**	**253**	*e*P	Pn	01 12 30.3	+1.6
GNL	**Ganaly**	**4.66**	**260**	*e*P	Pn	01 12 33.9	+1.6
MTVR	**Mutnovka**	**5.01**	**246**	*e*P	Pn	01 12 38.5	+1.4
MTVR				*e*S	Sn	01 13 33.9	-1.1
ASAK	**Asacha**	**5.21**	**246**	*e*P	Pn	01 12 41.6	+1.8

IDC ***27*** *01:27:33.4±5.2, 36°.01N×70°.67E, h141km±42km, mb3.3/6, mb1 3.3/11, mb1mx3.1/32, mbtmp3.2/11, MS3.5/1, Ms1 3.5/1, ms1mx2.4/39, Error ellipse: s-maj=48.9km s-min=30.8km az=141.0*
ISCJB ***27*** *01:27:41.6±0.6, 36°.59N±0°.05×70°.69E±0°.08, h204km, mb3.3/5, Error ellipse: s-maj=10.0km s-min=5.7km az=148.2*
NNC ***27*** *01:27:43.4±7.2, 36°.81N×70°.46E, h174km±67km, mb2.5, mpv3.3, Error ellipse: s-maj=59.9km s-min=37.7km az=20.0*

ISC 27 01:27:41.7±1.0, **36°.57N**±0°.09×**70°.66E**±0°.09, **h204**km, **n27,** σ1**s83**/30, **mb3.3**/5, **3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.52**	**359**	P	**Pn**	**01 29 15.0**	**-0.7**
	0.7nm,0.3s,baz=170,slow=11,SNR=32						
KK31				S	**S**	**01 30 26.5**	**-3.7**
	5.0nm,0.5s,baz=183,slow=22,SNR=18						
AAK	**Ala-Archa**	**6.74**	**25**	P	**Pn**	**01 29 18.1**	**-0.5**
	0.6nm,0.3s,baz=163,slow=8.3,SNR=5.6						
AAK				S	**S**	**01 30 35.2**	**-0.2**
	0.5nm,0.3s,baz=317,slow=23,SNR=14						
TKM2	**Tokmak 2**	**7.39**	**29**	⇑P	**Pn**	**01 29 24.7**	**-2.5**
	0.9nm,0.4s						
TKM2				⇑S	**S**	**01 30 49.7**	**-1.2**
	2.6nm,0.9s						
MKAR	**Makanchi Array**	**13.39**	**37**	P	**Pn**	**01 30 43.7**	**-0.2**
	0.0nm,0.3s,baz=223,slow=14,SNR=2.8						
AB31	**Akbulak array**	**14.89**	**332**	P	**Pn**	**01 31 02.1**	**-0.1**
	0.5nm,0.6s,baz=145,slow=13,SNR=17						
AB31				⇓S	S	01 33 40.6	-6.6
	0.3nm,0.5s						
KURBB	**Kurchatov Arra**	**15.14**	**20**	P	**P**	**01 31 07.5**	**+1.8**
	0.1nm,0.3s,baz=209,slow=11,SNR=6.7						
DMN	**Daman**	**15.14**	**122**	*e*P	**P**	**01 31 06.3**	**0.0**
	10nm,0.4s						
KKN	**Kakani**	**15.15**	**121**	*e*P	**P**	**01 31 06.4**	**+0.1**
	31nm,0.6s						
PKIN	**Phulchoki**	**15.36**	**122**	*e*P	**P**	**01 31 09.0**	**+0.3**
	12nm,0.3s						
PKI	**Pulchoki**	**15.38**	**122**	*e*P	**P**	**01 31 09.0**	**+0.1**
	25nm,0.6s						
GUN	**Gumba**	**15.49**	**120**	*e*P	**P**	**01 31 10.5**	**+0.3**
	15nm,0.5s						
VOSK	**Vostochnaya**	**16.15**	**1**	⇓P	**Pn**	**01 31 19.3**	**+1.8**
	0.7nm,0.4s						
ZRNK	**Zerenda**	**16.42**	**356**	⇓P	**Pn**	**01 31 21.9**	**+1.3**
	1.1nm,0.6s						
BVA0	**Borovoye Array**	**16.45**	**359**	P	**Pn**	**01 31 22.6**	**+1.6**
	0.1nm,0.4s,baz=157,slow=9.0,SNR=7.8						
BVAR	**Borovoye Array**	**16.45**	**359**	P	**Pn**	**01 31 22.9**	**+1.9**
	0.6nm,0.3s,baz=162,slow=8.7,SNR=9.2						
AKTO	**Aktyubinsk**	**16.58**	**331**	⇑P	**P**	**01 31 21.9**	**+0.3**
	0.2nm,0.5s						
AKTO				⇓S	**S**	**01 34 22.2**	**-2.2**
	0.2nm,1.0s						
AKTO	**Aktyubinsk**	**16.58**	**331**	P	**Pn**	**01 31 23.9**	**+1.3**
	0.3nm,0.3s,baz=121,slow=10.0,SNR=4.4						
RAMN	**Ramite**	**16.59**	**121**	*e*P	**P**	**01 31 19.7**	**-2.5**
TAPN	**Taplejung**	**17.12**	**118**	*e*P	**P**	**01 31 25.6**	**-2.5**
ODAN	**Odare**	**17.19**	**120**	*e*P	**P**	**01 31 24.7**	**-4.1**
	8.1nm,0.6s						
ZALV	**Zalesovo Beam**	**19.96**	**25**	P	**P**	**01 32 00.1**	**+1.9**
	1.4nm,0.3s,baz=223,slow=11,SNR=16						
FINES	**FINESS Array B**	**37.27**	**326**	P	**P**	**01 34 35.3**	**+1.7**
	2.1nm,0.8s,baz=134,slow=14,SNR=3.5						
VRAC	**Vranov**	**40.73**	**306**	LR	LR	01 55 39.5	
	comp=Z,58nm,18.4s,baz=46,slow=41						
ARCES	**ARCESS Array B**	**40.97**	**338**	P	**P**	**01 35 06.2**	**+2.0**
	1.6nm,0.8s,baz=120,slow=6.3,SNR=9.4						
NOA	**NORSAR Array B**	**44.16**	**323**	P	**P**	**01 35 31.0**	**+1.1**
	0.7nm,0.6s,baz=96,slow=7.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**65.44**	**268**	P	**P**	**01 38 01.1**	**-2.0**
	0.2nm,0.4s,baz=50,slow=5.8,SNR=9.9						
YKA	**Yellowknife Ar**	**81.18**	**2**	P	**P**	**01 39 35.6**	**+1.5**
	0.2nm,0.5s,baz=350,slow=5.2,SNR=5.0						

ISCJB ***27*** *01:54:10.6±0.3, 51°.47N±0°.02×16°.10E±0°.02, h0km, mb3.3/4, Error ellipse: s-maj=2.7km s-min=2.2km az=12.0*
CSEM ***27*** *01:54:12.1±0.2, 51°.50N×16°.11E, h0km, ML3.7/12, Error ellipse: s-maj=3.4km s-min=2.7km az=8.0*
IPEC ***27*** *01:54:12.7±0.4, 51°.51N×16°.26E, h1km±2km, ML2.8/3, Error ellipse: s-maj=2.8km s-min=1.5km az=24.0*
IDC ***27*** *01:54:13.7±0.6, 51°.47N×15°.97E, h0km, mb3.4/4, mb1 3.6/12, mb1mx3.5/31, mbtmp3.5/12, ML3.4/8, Error ellipse: s-maj=11.9km s-min=5.9km az=104.0*
WAR ***27*** *01:54:13.0, 51°.53N×16°.10E*
PRU ***27*** *01:54:13.9, 51°.45N×16°.06E, h0km*
VIE ***27*** *01:54:14.9±0.4, 51°.31N×16°.02E, h0km, mb2.8/5, ML3.2/5, Error ellipse: s-maj=2.8km s-min=1.9km az=27.0 73 km WNW of Wroclaw Suspected Mining induced.*
LDG ***27*** *01:54:15.2±0.4, 51°.58N×15°.92E, h1km, Ml3.3/12, Error ellipse: s-maj=14.8km s-min=4.5km az=143.0, Suspected Mining induced.*

ISC 27 01:54:12.4±0.5, **51°.49N**±0°.02×**16°.09E**±0°.02, **h0km**, **n114,** σ1**s37**/152, **mb3.4**/4, **8C-10D, Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**169**	*e*Pg	**Pg**	**01 54 26.0**	**+1.0**
KSP				*e*Sg	**Sg**	**01 54 34.5**	**+0.9**
KSP	**Ksiaz**	**0.66**	**169**	*e*	Pn	01 54 37.9	+8.9
KSP	**Ksiaz**	**0.66**	**169**	⇓*i*Pg	**Pg**	**01 54 26.1**	**+1.0**
KSP				*i* Sg	**Sg**	**01 54 34.6**	**+0.9**
UPC	**Upice**	**0.99**	**183**	*e*PG	**Pg**	**01 54 32.1**	**+0.8**
UPC	**Upice**	**0.99**	**183**	Pg	**Pg**	**01 54 32.1**	**+0.8**
DPC	**Dobruska-Polom**	**1.15**	**173**	*e*SG	**Sg**	**01 54 49.1**	**-0.3**
	comp=Z,119nm,0.4s						
DPC	**Dobruska-Polom**	**1.15**	**173**	Sg	**Sg**	**01 54 49.1**	**-0.3**
	119nm,0.4s						
PVCC	**Panska Ves**	**1.36**	**226**	*e*PG	**Pn**	**01 54 39.1**	**+0.4**
PVCC				*e*SG	**Sg**	**01 54 56.5**	**+0.3**
	comp=Z,400nm,0.3s						
PVCC	**Panska Ves**	**1.36**	**226**	Pg	**Pn**	**01 54 39.1**	**+0.4**
PVCC				Sg	**Sg**	**01 54 56.5**	**+0.3**
	400nm,0.3s						
KRLC	**Kraliky**	**1.48**	**163**	*e*PG	**Pn**	**01 54 40.5**	**+0.1**
KRLC	**Kraliky**	**1.48**	**163**	Pg	**Pn**	**01 54 40.5**	**+0.1**
BRG	**Berggiesshubel**	**1.49**	**246**	PN	**Pn**	**01 54 40.2**	**-0.2**
BRG				PG	**Pb**	**01 54 41.8**	**+0.9**
BRG				SG	**Sg**	**01 55 01.0**	**+0.8**
	194nm,0.4s						
PRU	**Pruhonice**	**1.80**	**214**	*e*PN	**Pn**	**01 54 44.7**	**0.0**
PRU				*e*PG	**Pb**	**01 54 46.6**	**+0.4**
PRU				*e*SG	**Sn**	**01 55 08.5**	**+0.3**
	comp=Z,65nm,0.4s						
PRU	**Pruhonice**	**1.80**	**214**	Pn	**Pn**	**01 54 44.7**	**0.0**
GKP	**Gorka Klasztor**	**1.91**	**21**	*e*Pg	**Pg**	**01 54 49.6**	**+0.6**
GKP				*e*Sg	**Sg**	**01 55 18.7**	**+5.0**
GKP	**Gorka Klasztor**	**1.91**	**21**	*e*Pg	**Pg**	**01 54 49.7**	**+0.7**
GKP				*e*Sg	**Sg**	**01 55 18.8**	**+5.0**
RAC	**Raciborz**	**1.94**	**136**	*e*Pg	**Pb**	**01 54 49.2**	**+0.6**
RAC				*e*Sg	**Sb**	**01 55 14.5**	**+1.2**
CLL	**Collm**	**1.94**	**266**	*e*Pn	**Pn**	**01 54 47.0**	**+0.4**
CLL				*e*Pg	**Pb**	**01 54 49.0**	**+0.3**
CLL				*e*		01 54 52.0	
CLL				*e*		01 54 54.0	
CLL				*e*Sg	**Sg**	**01 55 16.0**	**+1.2**
	comp=Z,63nm,0.5s						
MORC	**Moravsky Berou**	**1.95**	**151**	⇓*i*P	**Pn**	**01 54 46.8**	**0.0**
MORC	**Moravsky Berou**	**1.95**	**151**	*e*Pn	**Pn**	**01 54 46.6**	**-0.2**
MORC				*e*Sg	**Sn**	**01 55 12.8**	**+0.8**
	comp=Z,78nm,0.6s,baz=335						
VRAC	**Vranov**	**2.21**	**171**	⇑*i*P	**Pn**	**01 54 51.1**	**+0.8**
VRAC	**Vranov**	**2.21**	**171**	Pn	**Pn**	**01 54 51.1**	**+0.8**
	comp=Z,5.9nm,0.3s,baz=343,slow=13,SNR=47						
VRAC				Lg	Lg	01 55 22.6	
	comp=Z,6.3nm,0.3s,baz=270,slow=21,SNR=4.7						
VRAC	**Vranov**	**2.21**	**171**	*e*Pn	**Pn**	**01 54 50.3**	**0.0**
	baz=355						
VRAC	**Vranov**	**2.21**	**171**	⇑*i*P	**Pn**	**01 54 51.1**	**+0.8**
VRAC				*e*Sg	**Sb**	**01 55 21.8**	**+0.7**
	comp=Z,46nm,0.5s,baz=355						
TREC	**Trest**	**2.23**	**190**	*e*PN	**Pn**	**01 54 51.4**	**+0.7**
TREC				*e*PG	**Pb**	**01 54 54.7**	**+1.1**
TREC	**Trest**	**2.23**	**190**	Pn	**Pn**	**01 54 51.4**	**+0.7**
KRUC	**Moravsky**	**2.44**	**175**	*e*Pn	**Pn**	**01 54 54.0**	**+0.5**
	baz=358						
KRUC	**Moravsky**	**2.44**	**175**	*e*Pg	**Pb**	**01 54 57.4**	**+0.3**
	baz=358						
KRUC				*e*Sg	**Sb**	**01 55 29.5**	**+1.8**
	comp=Z,48nm,0.5s,baz=358						
NKC	**Novy Kostel**	**2.63**	**243**	*e*PN	**Pn**	**01 54 56.7**	**+0.6**
NKC				*e*PG	**Pb**	**01 55 02.1**	**+1.7**
NKC				*e*SG	**Sg**	**01 55 37.3**	**+0.4**
	comp=Z,129nm,0.3s						
NKC	**Novy Kostel**	**2.63**	**243**	Pn	**Pn**	**01 54 56.7**	**+0.6**
OJC	**Ojcow**	**2.67**	**117**	*e*Pn	**Pn**	**01 54 55.2**	**-1.4**
OJC				*e*Pg	**Pg**	**01 55 03.7**	**+0.2**
OJC				*e*Sg	**Sg**	**01 55 38.7**	**+0.6**
OJC				*e*		01 55 39.9	
OJC	**Ojcow**	**2.67**	**117**	*e*Pn	**Pn**	**01 54 55.2**	**-1.4**
KHC	**Kasperske Hory**	**2.86**	**215**	*e*PN	**Pn**	**01 55 00.2**	**+0.9**
KHC				*e*PG	**Pb**	**01 55 06.1**	**+1.8**
KHC				*e*SN	**Sn**	**01 55 33.5**	**-0.9**
KHC				*e*SG	**Sb**	**01 55 42.6**	**+2.7**
	comp=Z,34nm,0.5s						
KHC	**Kasperske Hory**	**2.86**	**215**	Pn	**Pn**	**01 55 00.2**	**+0.9**
GERES	**GERESS Array B**	**3.06**	**211**	Pn	**Pn**	**01 55 02.8**	**+0.6**
	comp=Z,3.4nm,0.3s,baz=26,slow=12,SNR=83						
GERES				Pg	**Pb**	**01 55 09.0**	**+1.2**
	comp=Z,9.7nm,0.3s,baz=31,slow=19,SNR=68						
GERES				Lg	Lg	01 55 49.8	
	comp=Z,7.5nm,0.3s,baz=29,slow=28,SNR=5.2						
SMOL	**Smolenice**	**3.10**	**163**	*e*PN	**Pn**	**01 55 05.2**	**+2.6**
SMOL				*e*		01 55 12.9	
SMOL	**Smolenice**	**3.10**	**163**	*e*Pn	**Pn**	**01 55 05.2**	**+2.6**
SMOL				*e*Sg	**Sg**	**01 55 51.5**	**-0.5**
ZST	**Bratislava**	**3.36**	**168**	*e*	**Pb**	**01 55 14.5**	**+1.7**
ZST	**Bratislava**	**3.36**	**168**	*e*SG	**Sb**	**01 55 57.3**	**+3.0**
ZST				*e*		01 56 07.1	
ZST	**Bratislava**	**3.36**	**168**	*e*Sg	**Sb**	**01 55 57.3**	**+3.0**
NIE	**Niedzica**	**3.40**	**126**	*e*Pn	**Pn**	**01 55 07.5**	**+0.8**
NIE				*e*Pg	**Pb**	**01 55 16.1**	**+2.6**
NIE				*e*Sg	**Sg**	**01 56 00.8**	**-0.8**
NIE				*e*		01 56 01.3	
VYHS	**Vyhne**	**3.48**	**148**	*e*PN	**Pn**	**01 55 08.0**	**+0.2**
VYHS				*e*		01 55 18.4	
VYHS	**Vyhne**	**3.48**	**148**	*e*SG	**Sg**	**01 56 04.0**	**-0.3**
VYHS				*e*		01 56 13.0	
VYHS	**Vyhne**	**3.48**	**148**	*e*Pn	**Pn**	**01 55 08.0**	**+0.2**
VYHS				*e*Sg	**Sg**	**01 56 04.0**	**-0.3**
CONA	**Conrad Observa**	**3.57**	**183**	⇑*i*Pn	**Pn**	**01 55 10.2**	**+1.1**
	SNR=16						
CONA				⇑*i*Sg	**Sg**	**01 56 06.9**	**-0.2**
	comp=Z,36nm,0.4s						
CONA	**Conrad Observa**	**3.57**	**183**	Pn	**Pn**	**01 55 10.2**	**+1.1**
	SNR=16						
CONA				Sg	**Sg**	**01 56 06.9**	**-0.2**
	comp=Z,36nm,0.4s						
BSD	**Bornholm Skovb**	**3.70**	**349**	*i* P	**Pn**	**01 55 10.4**	**-0.3**
BSD				*i* S	**Sn**	**01 55 50.8**	**-4.1**
BSD				*i*		01 55 53.2	
MOA	**Molln**	**3.83**	**199**	⇓*i*Pn	**Pn**	**01 55 13.1**	**+0.5**
	SNR=13						
MOA				⇑*i*Sg	**Sg**	**01 56 15.9**	**+0.4**
	comp=Z,60nm,0.8s						
MOA	**Molln**	**3.83**	**199**	Pn	**Pn**	**01 55 13.1**	**+0.5**
	SNR=13						
MOA				Sg	**Sg**	**01 56 15.9**	**+0.4**
	comp=Z,60nm,0.8s						
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*PN	**Pn**	**01 55 13.9**	**+0.5**
STHS				*e*		01 55 27.7	
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*SG	**Sg**	**01 56 20.7**	**+3.4**
STHS				*e*		01 56 33.4	
STHS	**Stebnicka Huta**	**3.89**	**120**	*e*Pn	**Pn**	**01 55 13.9**	**+0.5**
STHS				*e*Sg	**Sg**	**01 56 20.7**	**+3.4**
KECS	**Kecovo**	**4.13**	**135**	*e*PN	**Pn**	**01 55 16.6**	**-0.2**
KECS				*e*		01 55 31.9	
KECS	**Kecovo**	**4.13**	**135**	*e*SG	**Sg**	**01 56 23.1**	**-2.1**
KECS				*e*		01 56 36.3	
KECS	**Kecovo**	**4.13**	**135**	*e*Pn	**Pn**	**01 55 16.6**	**-0.2**
KECS				*e*Sg	**Sg**	**01 56 23.1**	**-2.1**
ARSA	**Arzberg**	**4.26**	**185**	⇑*i*Pn	**Pn**	**01 55 18.8**	**+0.3**
	SNR=6.8						
ARSA				⇓*i*Sg	**Sg**	**01 56 29.8**	**+0.5**
	comp=Z,27nm,0.5s						
ARSA	**Arzberg**	**4.26**	**185**	Pn	**Pn**	**01 55 18.8**	**+0.3**
	SNR=6.8						
ARSA				Sg	**Sg**	**01 56 29.8**	**+0.5**
	comp=Z,27nm,0.5s						
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*PN	**Pn**	**01 55 18.0**	**-1.2**
CRVS				*e*		01 55 33.3	
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*SG	**Sg**	**01 56 29.9**	**-1.0**
CRVS				*e*		01 56 49.9	
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*Pn	**Pn**	**01 55 18.0**	**-1.2**
CRVS				*e*Sg	**Sg**	**01 56 29.9**	**-1.0**
KWP	**Kalwaria Pacla**	**4.61**	**111**	⇓*i*P	**Pn**	**01 55 23.3**	**0.0**
KWP	**Kalwaria Pacla**	**4.61**	**111**	*e*Pn	**Pn**	**01 55 23.0**	**-0.3**
KWP				*e*Pg	Pg	01 55 38.3	-2.4
KWP	**Kalwaria Pacla**	**4.61**	**111**	⇓*i*P	**Pn**	**01 55 23.3**	**0.0**
KOLS	**Kolonicke sedl**	**4.72**	**120**	*e*PN	**Pn**	**01 55 25.3**	**+0.5**
KOLS				*e*		01 55 44.8	
KOLS	**Kolonicke sedl**	**4.72**	**120**	*e*SN	**Sn**	**01 56 18.3**	**-2.0**
KOLS				*e*		01 57 08.3	
KOLS	**Kolonicke sedl**	**4.72**	**120**	*e*Pn	**Pn**	**01 55 25.3**	**+0.5**
KOLS				*e*Sn	**Sn**	**01 56 18.3**	**-2.0**
GROS	**Grobnik**	**5.05**	**185**	*i* Pn	**Pn**	**01 55 31.2**	**+1.8**
GROS	**Grobnik**	**5.05**	**185**	Pn	**Pn**	**01 55 31.2**	**+1.8**
TRPA	**Tarpa**	**5.36**	**126**	⇑*i*P	**Pn**	**01 55 33.1**	**-0.4**
TRPA	**Tarpa**	**5.36**	**126**	⇑*i*P	**Pn**	**01 55 33.1**	**-0.4**
VNDS	**Vrh nad Dolski**	**5.47**	**190**	*i* Pn	**Pn**	**01 55 36.6**	**+1.5**
VISS	**Visnje**	**5.75**	**189**	*i* Pn	**Pn**	**01 55 40.2**	**+1.2**
VISS	**Visnje**	**5.75**	**189**	*i* Pn	**Pn**	**01 55 40.2**	**+1.2**
BOJS	**Bojanci**	**6.02**	**186**	*i* Pn	**Pn**	**01 55 44.0**	**+1.4**
BOJS	**Bojanci**	**6.02**	**186**	*i* Pn	**Pn**	**01 55 44.0**	**+1.4**
DAVOX	**Davos/Dischmat**	**6.23**	**223**	Pn	**Pn**	**01 55 45.0**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=34,slow=8.5,SNR=3.7						
DAVOX				Lg	Lg	01 57 30.4	
	comp=Z,0.5nm,0.3s,baz=204,slow=20,SNR=3.1						
DRGR		**6.40**	**135**	⇓*i*P	**Pn**	**01 55 48.8**	**+0.9**
DRGR		**6.40**	**135**	⇓*i*P	**Pn**	**01 55 48.8**	**+0.9**
CDF	**Champ du Feu**	**6.47**	**245**	*e*Pn	**Pn**	**01 55 49.2**	**+0.3**
CDF				*e*Sg	Sg	01 57 34.7	-5.4
	comp=Z,27nm,0.8s						
CDF	**Champ du Feu**	**6.47**	**245**	*e*Pn	**Pn**	**01 55 49.2**	**+0.3**
HINF	**Hinteralfeld**	**7.04**	**242**	*e*Pn	**Pn**	**01 55 56.1**	**-0.5**
HINF				*e*Sg	Sg	01 57 52.2	-6.0
	comp=Z,19nm,0.8s						
HINF	**Hinteralfeld**	**7.04**	**242**	*e*Pn	**Pn**	**01 55 56.1**	**-0.5**
BURAR	**Bucovina Array**	**7.09**	**120**	⇓*i*P	**Pn**	**01 55 58.0**	**+0.6**
BURAR	**Bucovina Array**	**7.09**	**120**	⇓*i*P	**Pn**	**01 55 58.0**	**+0.6**
HAU	**Haudompre**	**7.21**	**245**	*e*Pn	**Pn**	**01 55 58.3**	**-0.7**
HAU				*e*Sg	Sg	01 57 57.7	-6.2
	comp=Z,11nm,0.5s						
HAU	**Haudompre**	**7.21**	**245**	*e*Pn	**Pn**	**01 55 58.3**	**-0.7**
GIVF	**Givet**	**7.28**	**263**	*e*Pn	**Pn**	**01 55 59.9**	**0.0**
GIVF				*e*Sg	Sg	01 58 00.7	-5.3
	comp=Z,3.0nm,0.3s						
GIVF	**Givet**	**7.28**	**263**	*e*Pn	**Pn**	**01 55 59.9**	**0.0**
PAGF	**Fort de Pagny**	**7.30**	**250**	*e*Pn	**Pn**	**01 55 59.8**	**-0.4**
	baz=62						
PAGF				*e*Sg	Sg	01 58 00.3	-6.3
	comp=Z,0.9nm,0.4s						
PAGF	**Fort de Pagny**	**7.30**	**250**	*e*Pn	**Pn**	**01 55 59.8**	**-0.4**
	baz=62						
BAIF	**Baives**	**7.67**	**264**	*e*Pn	**Pn**	**01 56 05.2**	**-0.1**
BAIF				*e*Sg	Sg	01 58 12.6	-6.0
	comp=Z,1.5nm,0.4s						
BAIF	**Baives**	**7.67**	**264**	*e*Pn	**Pn**	**01 56 05.2**	**-0.1**
MEZF	**Maizieres J'vi**	**7.72**	**251**	*e*Pn	**Pn**	**01 56 05.6**	**-0.3**
MEZF				*e*Sg	Sg	01 58 13.8	-6.3
	comp=Z,3.4nm,0.4s						
MEZF	**Maizieres J'vi**	**7.72**	**251**	*e*Pn	**Pn**	**01 56 05.6**	**-0.3**
SFTF	**Sexfontaines**	**7.87**	**250**	*e*Pn	**Pn**	**01 56 07.7**	**-0.3**
SFTF				*e*Sg	Sg	01 58 18.5	-6.3
	comp=Z,4.2nm,0.3s						
SFTF	**Sexfontaines**	**7.87**	**250**	*e*Pn	**Pn**	**01 56 07.7**	**-0.3**
AKASG	**Malin Array Be**	**8.31**	**90**	Pn	**

ASAR	**Alice Springs**	**25.22**	**163**	P		P	02 01 22.0	+0.1
	0.2nm,0.5s,baz=339,slow=9.2,SNR=3.3							
MKAR	**Makanchi Array**	**59.87**	**327**	P		P	02 06 01.7	-0.1
	0.2nm,0.4s,baz=135,slow=7.1,SNR=4.9							

CSEM ***27*** *01:56:23.3, 38.14N×22.66E, h5km, MD2.9, After ATH*

ATH 27 01:56:23.3, 38.14N×22.66E, h5km, MD2.9/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LTK	**Loutraki**	**0.27**	**116**	*e*PG	Pg	01 56 28.5	-0.1
LTK				*e*SG	Sg	01 56 32.5	+0.3
LTK	**Loutraki**	**0.27**	**116**	*e*Pg	Pg	01 56 28.5	-0.1
LTK				*e*Sg	Sg	01 56 32.5	+0.3
GUR	**Goura**	**0.32**	**231**	*e*PB	Pg	01 56 29.8	+0.1
GUR				*e*SB	Sg	01 56 34.3	+0.2
GUR	**Goura**	**0.32**	**231**	*e*Pb	Pg	01 56 29.8	+0.1
GUR				*e*Sb	Sg	01 56 34.3	+0.2
KLV	**Kalavryta, Ach**	**0.41**	**257**	*e*PB	Pg	01 56 31.4	0.0
KLV				*e*SB	Sg	01 56 37.2	+0.3
KLV	**Kalavryta, Ach**	**0.41**	**257**	*e*Pb	Pg	01 56 31.4	0.0
KLV				*e*Sb	Sg	01 56 37.2	+0.3
LKR	**Lokris**	**0.57**	**28**	*e*PB	Pg	01 56 33.6	-0.8
LKR				*e*SB	Sg	01 56 43.0	+1.1
LKR	**Lokris**	**0.57**	**28**	*e*Pb	Pg	01 56 33.6	-0.8
LKR				*e*Sb	Sg	01 56 43.0	+1.1
DID	**Didima**	**0.78**	**144**	*e*PB	Pg	01 56 38.3	-0.1
DID				*e*SB	Sg	01 56 49.3	+0.8
DID	**Didima**	**0.78**	**144**	*e*Pb	Pg	01 56 38.3	-0.1
DID				*e*Sb	Sg	01 56 49.3	+0.8

ISCJB ***27*** *02:00:29.5±0.5, 22.00N±0.03×99.36W±0.05, h10km, mb3.1/4, Error ellipse: s-maj=6.7km s-min=3.6km az=157.0*

MEX ***27*** *02:00:33.0±0.5, 22.01N×99.33W, h5km±8km, MD4.3*

IDC ***27*** *02:00:34.4±4.5, 22.69N×98.76W, h0km, mb3.1/4, mb1 3.6/6, mb1mx3.5/25, mbtmp3.3/6, ML3.6/2, Error ellipse: s-maj=118.1km s-min=31.1km az=31.0*

ISC 27 02:00:31.1±0.8, 21.99N±0.04×99.35W±0.05, h10km, n21, σ1§20/28, mb3.2/4, Central Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEIG	**Demacu**	**1.70**	**170**	*e*P	**Pn**	**02 00 59.6**	**-1.4**
DEIG				*e*S	**Sn**	**02 01 21.8**	**-1.2**
IIO	**Organos**	**2.45**	**166**	*e*P	**Pn**	**02 01 11.7**	**+0.2**
IIO				*i* S	**Sn**	**02 01 41.5**	**-0.3**
MZVM		**2.78**	**178**	*i* P	**Pn**	**02 01 15.9**	**+0.2**
MZVM				*i* S	**Sn**	**02 01 48.5**	**-0.8**
LNIG	**Linares**	**2.90**	**358**	*e*P	**Pn**	**02 01 17.0**	**-0.4**
LNIG				*i* S	**Sn**	**02 01 50.5**	**-1.8**
PPM	**Popocatepetl**	**2.98**	**167**	*e*P	**Pn**	**02 01 19.2**	**+0.3**
PPM				*i* S	**Sn**	**02 01 55.0**	**+0.1**
ZAIG	**Zacatecas**	**3.08**	**285**	*e*P	**Pn**	**02 01 19.9**	**-0.1**
ZAIG				*i* S	**Sn**	**02 01 56.2**	**-0.9**
YAIG	**Yautepec**	**3.12**	**175**	*e*P	**Pn**	**02 01 20.2**	**-0.2**
YAIG				*i* S	**Sn**	**02 01 58.1**	**+0.2**
LVIG	**Laguna Verde**	**3.55**	**129**	*e*P	**Pn**	**02 01 26.2**	**0.0**
LVIG				*i* S	**Sn**	**02 02 07.0**	**-1.2**
PLIG	**Platanillo**	**3.58**	**182**	*i* P	**Pn**	**02 01 27.2**	**+0.4**
PLIG				*i* S	**Sn**	**02 02 09.0**	**-0.1**
SFJM	**Santa Fe**	**3.75**	**247**	*i* P	**Pb**	**02 01 36.0**	**-1.5**
EZ5V		**4.70**	**239**	*i* P	Pn	02 01 46.7	+4.5
ANIG	**Ahuacatlan**	**4.90**	**260**	*i* P	**Pn**	**02 01 44.4**	**-0.5**
ANIG				*i* S	**Sn**	**02 02 41.5**	**-0.3**
R15V		**5.16**	**238**	*i* P	**Pn**	**02 01 47.0**	**-1.5**
MMIG	**Aquila**	**5.25**	**226**	*e*P	Pn	02 01 55.2	+5.5
HPIG		**7.57**	**312**	*e*P	Pn	02 02 28.0	+6.2
TXAR	**Lajitas Array**	**8.29**	**333**	Pn	**Pn**	**02 02 31.6**	**+0.2**
	0.1nm,0.3s,baz=158,slow=13,SNR=4.2						
TXAR				Lg	Lg	02 04 50.1	
	0.1nm,0.3s,baz=161,slow=22,SNR=3.5						
TEIG	**Tepich**	**10.48**	**98**	Pn	**Pn**	**02 02 59.5**	**-2.0**
	2.7nm,0.3s,baz=125,slow=1.3,SNR=14						
TEIG				Sn	Sn	02 04 48.0	-11
	0.2nm,0.3s,baz=21,slow=23,SNR=3.0						
PDAR	**Pinedale Array**	**22.41**	**340**	P	**P**	**02 05 29.4**	**-0.7**
	0.2nm,0.4s,baz=153,slow=6.1,SNR=2.2						
NVAR	**Mina Array Bea**	**23.10**	**319**	P	**P**	**02 05 40.9**	**+3.5**
	1.1nm,1.0s,baz=129,slow=12,SNR=5.3						
YKA	**Yellowknife Ar**	**41.81**	**349**	P	**P**	**02 08 21.1**	**+0.5**
	0.5nm,1.0s,baz=158,slow=7.7,SNR=5.9						
ILAR	**Eielson Array**	**52.78**	**337**	P	**P**	**02 09 48.0**	**+1.9**
	0.2nm,0.8s,baz=170,slow=5.4,SNR=4.4						

FUNV 27 02:03:06.8, 9.49N×73.67W, h74km, MW3.5, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**2.10**	**140↑**	*e*P	Pn	02 03 38.9	-1.3
CAPV				*e*S	Sn	02 04 03.6	-2.0
VIGV	**El Vigia**	**2.37**	**106↑**	*e*P	Pn	02 03 43.5	-0.1
VIGV				*e*S	Sn	02 04 10.2	-1.5
SOCV	**Socops**	**3.03**	**113**	*e*P	Pn	02 03 51.9	-0.6
SOCV				*e*S	Sn	02 04 24.1	-3.7
QARV	**Quebrada Arrib**	**3.19**	**77**	*e*P	Pn	02 03 53.3	-1.4
QARV				*e*S	Sn	02 04 28.9	-2.8
DABV	**Dabajuro**	**3.31**	**64**	*e*P	Pn	02 03 55.0	-1.4
CURV	**Curarigua**	**3.70**	**82**	*e*P	Pn	02 04 00.4	-1.2
SIQV	**Siquisique**	**3.98**	**73**	*e*P	Pn	02 04 04.6	-0.9
SIQV				*e*S	Sn	02 04 46.0	-5.0
SANV	**Sanarito**	**4.08**	**89**	*e*P	Pn	02 04 05.5	-1.5
MAPV	**Macapo**	**5.15**	**86**	*e*P	Pn	02 04 20.0	-1.6
BAUV	**El Baul**	**5.59**	**95**	*e*P	Pn	02 04 25.7	-1.7
TURV	**Turiamo**	**5.83**	**80**	*e*P	Pn	02 04 29.3	-1.4
BIRV	**Birongo**	**7.36**	**82**	*e*P	Pn	02 04 49.8	-1.8

AUST ***27*** *02:08:40.7±26.0, 18.89S×172.87W, h0km, Error ellipse: s-maj=2.1km s-min=1.3km az=38.0*

DJA ***27*** *02:08:40.5±0.4, 19°S±10'×17°3W±', h15km, M5.5/13, mB5.9/1, mb5.2/13, MLv5.6/1, Mw(mB)5.5/1*

ISCJB ***27*** *02:08:44.1±0.2, 19.32S±0.04×172.76W±0.03, h37km, mb5.1/140, MS4.6/41, Error ellipse: s-maj=6.6km s-min=3.7km az=151.4*

GCMT ***27*** *02:08:45.1±0.1, 19.32S×172.37W, h12km, MW5.2, Moment Tensor Solution. s59,c84; s92,c157; Moment tensor: Scale 10^16 Nm; Mrr=6.66±.14; Mθθ=1.38±.15; Mφφ=8.04±.11; Mrθ=0.58±.41; Mrφ=0.16±.12; Mθφ=2.03±.31; Best double couple: M0=7.70000×10^16 NP1:φ=8.00000°, δ=38.00000°, λ=-80.00000°. NP2:φ=175.00000°, δ=53.00000°, λ=-98.00000°. Principal axes: T 8.3200, Plg8.0000°, Azm270.0000°; N -1.3200, Plg6.0000°, Azm180.0000°; P -7.0000, Plg80.0000°, Azm52.0000°; Data Used: II IU G CN IC.*

SZGRF ***27*** *02:08:45.2, 19.38S×172.19W, h33km, Tonga Islands region*

BJI ***27*** *02:08:45.9, 19.20S×172.80W, h37km, mB5.4/25, mb5.2/34, Ms5.1/28, Ms7 4.7/28*

NEIC ***27*** *02:08:45.8±0.1, 19.22S×172.79W, mb5.1/98, Error ellipse: s-maj=6.8km s-min=3.7km az=142.0*

IDC ***27*** *02:08:47.4±2.4, 19.30S×172.81W, h55km±20km, mb4.6/26, mb1 4.7/27, mb1mx4.7/31, mbtmp4.6/27, ML4.8/1, MS4.4/23, Ms1 4.5/23, ms1mx4.2/37, Error ellipse: s-maj=15.1km s-min=9.6km az=150.0*

MOS ***27*** *02:08:47.2±1.3, 19.09S×172.79W, h56km, mb5.3/36, MS4.8/7, Error ellipse: s-maj=10.6km s-min=8.3km az=136.2*

ISC 27 02:08:45.5±0.2, 19.35S±0.05×172.68W±0.04, h35km, h35km:pP-P, n852, σ1§08/943, mb5.1/139, MS4.6/41, 198C-197D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.48**	**9**	*e*Pn	Pn	02 09 53.3	-12
AFI				*e*Sn	Sn	02 10 51.5	-15
AFI	**Afiamalu**	**5.48**	**9**	P	Pn	02 09 55.2	-10
	42nm,0.3s,baz=119,slow=2.6,SNR=11						
AFI				S	Sn	02 10 50.6	-16
	108nm,0.3s,baz=31,slow=21,SNR=5.1						
MSVF	**Nonsavu**	**8.94**	**279**	*e*P	**Pn**	**02 10 55.2**	**+2.8**
MSVF	**Nonsavu**	**8.94**	**279**	*e*Pn	**Pn**	**02 10 55.2**	**+2.8**
MSVF	**Nonsavu**	**8.94**	**279**	Pn	**Pn**	**02 10 55.0**	**+2.7**
	906nm,0.9s,SNR=40						
RAO	**Raoul Island**	**10.95**	**205**	S	Sn	02 13 07.7	-13
RAO	**Raoul Island**	**10.95**	**205**	S	Sn	02 13 07.7	-13
	192nm,0.3s,baz=168,slow=17,SNR=5.9						
RAR	**Rarotonga**	**12.25**	**101**	*e*Pn	Pn	02 11 31.0	-6.5
	161nm,0.7s						
RAR				*e*Sn	Sn	02 13 40.1	-13
RAR	**Rarotonga**	**12.25**	**101**	P	Pn	02 11 30.7	-6.8
	31nm,0.3s,baz=261,slow=9.5,SNR=43						
RAR				S	Sn	02 13 38.4	-14
	7.2nm,0.3s,baz=140,slow=19,SNR=5.7						
RAR				LR	LR	02 15 12.7	
	comp=Z,3μm,21.2s,baz=281,slow=31						
DZM	**Mont Dzumac**	**19.72**	**259**	*e*P	**P**	**02 13 10.8**	**-1.5**
DZM	**Mont Dzumac**	**19.72**	**259**	P	**P**	**02 13 11.8**	**-0.4**
DZM	**Mont Dzumac**	**19.72**	**259**	P	**P**	**02 13 11.8**	**-0.4**
	3.1nm,0.3s,baz=82,slow=17,SNR=24						
DZM				LR	LR	02 19 38.6	
	comp=Z,3μm,19.0s,baz=65,slow=33						
NOUC	**Port Laguerre**	**19.85**	**258**	*e*P	**P**	**02 13 11.5**	**-2.0**
OUZ	**Omahuta**	**19.93**	**215**	*e*P	**Pn**	**02 13 16.3**	**+0.1**
	267nm,1.8s						
URZ	**Urewera**	**20.83**	**203**	*e*P	Pn	02 13 25.9	-0.7
	64nm,0.8s						
URZ				S	S	02 17 07.0	-7.5
URZ				*e*S	Sn	02 17 20.8	-0.1
URZ	**Urewera**	**20.83**	**203**	P	**P**	**02 13 23.8**	**-0.3**
	23nm,0.4s,baz=2.0,slow=6.1,SNR=18						
URZ				S	S	02 17 07.0	-7.5
	15nm,0.7s,baz=135,slow=20,SNR=4.9						
URZ				LR	LR	02 20 36.7	
	comp=Z,420nm,19.0s,baz=229,slow=34						
PAE	**Paea**	**21.96**	**89**	*e*P	**P**	**02 13 35.1**	**-1.3**
	35nm,1.3s						
PAE				*e*T	T	02 35 41.5	
	5.7nm,0.3s						
TBI	**Tubuai**	**21.98**	**105**	*e*P	**P**	**02 13 33.5**	**-3.0**
	507nm,1.0s						
TBI				*e*S	S	02 17 29.5	-7.8
	4μm,27.2s						
TBI				*e*LR	LR	02 18 30.0	
	4μm,30.0s,baz=282						
PPT2	**Papeete2**	**21.98**	**89**	*e*P	**P**	**02 13 35.7**	**-1.0**
	111nm,1.3s						
PPT2				*e*S	**S**	**02 17 32.5**	**-5.1**
	2μm,24.8s						
PPT2				*e*LR	LR	02 18 38.8	
	6μm,26.2s,baz=257						
PPT	**Papeete**	**21.98**	**89**	P	**P**	**02 13 37.0**	**+0.3**
PPT	**Papeete**	**21.98**	**89**	P	**P**	**02 13 37.0**	**+0.3**
	68nm,0.9s,baz=282,slow=9.8,SNR=4.8						
PPT				LR	LR	02 19 31.1	
	comp=Z,2μm,19.7s,baz=294,slow=29						
TIAR	**Tiarei**	**22.20**	**89**	*e*P	**P**	**02 13 37.7**	**-1.3**
	108nm,1.0s						
TVO	**Taravao**	**22.26**	**90**	*e*P	**P**	**02 13 38.1**	**-1.6**
	144nm,1.1s						
SNZO	**South Karori**	**24.39**	**203**	*e*P	**P**	**02 14 00.4**	**-0.1**
	76nm,1.0s						
KHZ	**Kahutara**	**25.79**	**204**	*e*P	**P**	**02 14 13.3**	**+0.2**
	45nm,0.8s						
RPZ	**Rata Peaks**	**27.87**	**206**	*e*P	**P**	**02 14 32.6**	**+0.8**
	58nm,1.2s						
RPZ	**Rata Peaks**	**27.87**	**206**	P	**P**	**02 14 31.0**	**-0.9**
	4.6nm,0.6s,baz=1.0,slow=5.2,SNR=4.9						
LHI	**Lord Howe Isla**	**28.16**	**239**	P	P	02 14 27.3	-7.3
	baz=28,SNR=3.7						
HNR	**Honara**	**28.25**	**287**	LR	LR	02 24 12.8	
	comp=Z,705nm,18.4s,baz=300,slow=33						
EIDS	**Eidsvold**	**33.98**	**253**	*e*P	**P**	**02 15 24.1**	**-1.8**
	86nm,1.8s						
EIDS	**Eidsvold**	**33.98**	**253**	P	**P**	**02 15 25.6**	**-0.4**
	baz=34,SNR=4.2						
ARMA	**Armidale**	**34.07**	**244**	*e*P	**P**	**02 15 26.3**	**-0.6**
	104nm,2.0s						
ARMA	**Armidale**	**34.07**	**244**	P	**P**	**02 15 26.6**	**-0.3**
	baz=34,SNR=9.4						
MGCD	**Mangrove Creek**	**35.09**	**239**	P	**P**	**02 15 35.8**	**+0.3**
	baz=35,SNR=5.5						
RKT	**Rikitea**	**35.28**	**103**	*e*S	**S**	**02 21 05.0**	**-4.0**
	391nm,28.8s						
RKT				*e*LQ	LQ	02 23 36.3	
	630nm,29.2s						
RKT				*e*LR	LR	02 24 37.9	
	3μm,28.8s,baz=273						
RKT				*e*T	T	02 54 08.8	
	1.7nm,0.3s						
RMQ	**Roma**	**36.12**	**251**	P	**P**	**02 15 44.0**	**-0.5**
	baz=36,SNR=7.8						
CNB	**Canberra Magne**	**37.03**	**237**	P	**P**	**02 15 52.7**	**+0.6**
	baz=37,SNR=16						
CAN	**Canberra**	**37.31**	**237**	*e*P	**P**	**02 15 54.3**	**-0.3**
CAN				pmax	pmax		
	comp=Z,36nm,0.9s						
CAN	**Canberra**	**37.31**	**237**	*e*P	**P**	**02 15 54.3**	**-0.3**
	comp=Z,36nm,0.9s						
CTAO	**Charters Tower**	**38.60**	**262**	*e*P	**P**	**02 16 04.7**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,48nm,1.0s						
CTAO	**Charters Tower**	**38.60**	**262**	*e*P	**P**	**02 16 04.7**	**-0.9**
	comp=Z,48nm,1.0s						
CMSA	**Cobar Meteorol**	**39.28**	**244**	P	**P**	**02 16 09.9**	**-1.2**
	baz=39,SNR=11						
PMG	**Port Moresby**	**40.05**	**278**	*e*P	**P**	**02 16 16.5**	**-1.2**
	comp=Z,48nm,0.9s						
PMG				*ep*P	**pP**	**02 16 27.7**	**-0.2**
PMG	**Port Moresby**	**40.05**	**278**	P	**P**	**02 16 15.6**	**-2.1**
	comp=Z,56nm,0.9s						
PMG	**Port Moresby**	**40.05**	**278**	P	**P**	**02 16 15.7**	**-2.0**
	comp=Z,36nm,0.8s,baz=90,slow=6.7,SNR=11						
PMG				LR	LR	02 31 45.8	
	comp=Z,1μm,18.0s,baz=260,slow=34						
QLP	**Quilpie**	**40.17**	**251**	P	**P**	**02 16 16.9**	**-1.7**
	baz=40,SNR=15						
TOO	**Toolangi**	**40.62**	**234**	P	**P**	**02 16 22.4**	**+0.2**
	baz=41,SNR=5.1						
MTSU	**Mount Surprise**	**40.67**	**264**	P	**P**	**02 16 20.4**	**-2.4**
	baz=40,SNR=17						
COEN	**Coen**	**42.55**	**270**	*e*P	**P**	**02 16 36.4**	**-1.8**
	comp=Z,267nm,1.2s						
COEN	**Coen**	**42.55**	**270**	P	**P**	**02 16 36.4**	**-1.8**
	baz=42,SNR=20						
STKA	**Stephens Creek**	**42.79**	**244**	*e*P	**P**	**02 16 39.5**	**-0.5**
	comp=Z,4.1nm,1.0s						
STKA	**Stephens Creek**	**42.79**	**244**	P	**P**	**02 16 38.0**	**-2.0**
	comp=Z,13nm,0.8s,baz=95,slow=10.0,SNR=22						
STKA				LR	LR	02 33 16.8	
	comp=Z,1μm,18.2s,baz=61,slow=34						
STKA	**Stephens Creek**	**42.79**	**244**	P	**P**	**02 16 39.9**	**-0.1**
	baz=43,SNR=11						
KIP	**Kipapa**	**42.99**	**20***c*	*i*P	**P**	**02 16 41.0**	**-0.6**
KIP				pmax	pmax		
	comp=Z,135nm,2.5s						
KIP	**Kipapa**	**42.99**	**20**	*e*P	**P**	**02 16 41.0**	**-0.6**
	comp=Z,52nm,0.9s						
BBOO	**Buckleboo**	**47.53**	**243**	*e*P	**P**	**02 17 16.9**	**-0.8**
	comp=Z,301nm,0.8s						
BBOO	**Buckleboo**	**47.53**	**243**	P	**P**	**02 17 16.6**	**-1.0**
	baz=48,SNR=15						
JAY	**Jayapura**	**48.53**	**284**	P	**P**	**02 17 24.2**	**-1.4**
	baz=48,SNR=8.2						
JAY				S	S	02 24 33.8	+8.8
	baz=48,SNR=3.2						
AS31	**Alice Springs**	**49.65**	**255**	*e*P	**P**	**02 17 32.6**	**-1.5**
ASAR	**Alice Springs**	**49.66**	**255**	P	**P**	**02 17 32.5**	**-1.7**
ASAR				PcP	**PcP**	**02 18 55.4**	**+0.1**
ASAR				S	**S**	**02 24 37.3**	**-3.4**
ASAR	**Alice Springs**	**49.66**	**255**	P	**P**	**02 17 32.5**	**-1.7**
	comp=Z,43nm,0.9s,baz=86,slow=8.6,SNR=137						
ASAR				PcP	**PcP**	**02 18 55.4**	**+0.1**
	comp=Z,7.1nm,0.7s,baz=90,slow=5.3,SNR=4.3						
ASAR				S	**S**	**02 24 37.3**	**-3.4**
	comp=Z,1.4nm,0.8s,baz=93,slow=16,SNR=7.5						
ASAR				LR	LR	02 36 33.1	
	comp=Z,628nm,20.3s,baz=89,slow=34						
WRAB	**Tennant Creek**	**49.72**	**260**	*e*P	**P**	**02 17 32.0**	**-2.7**
WRAB				pmax	pmax		
	comp=Z,41nm,1.0s						
WRAB	**Tennant Creek**	**49.72**	**260**	*e*P	**P**	**02 17 31.9**	**-2.7**
	comp=Z,42nm,1.0s						
WRAB	**Tennant Creek**	**49.72**	**260**	P	**P**	**02 17 32.5**	**-2.1**
	comp=Z,195nm,0.9s,SNR=27						
WRA	**Warramunga Arr**	**49.73**	**260**	P	**P**	**02 17 32.6**	**-2.1**
WRA				PcP	**PcP**	**02 18 55.6**	**+0.1**
WRA				S	**S**	**02 24 37.5**	**-4.2**
WRA	**Warramunga Arr**	**49.73**	**260**	P	**P**	**02 17 32.6**	**-2.1**
	comp=Z,21nm,1.0s,baz=94,slow=6.9,SNR=72						
WRA				PcP	**PcP**	**02 18 55.6**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=88,slow=3.8,SNR=5.4						
WRA				S	**S**	**02 24 37.5**	**-4.2**
	comp=Z,6.2nm,0.9s,baz=95,slow=14,SNR=7.5						
WRA				LR	LR	02 38 15.6	
	comp=Z,1μm,18.4s,baz=95,slow=36						
KDU	**Kakadu**	**52.96**	**268**	P	**P**	**02 17 57.2**	**-1.7**
	baz=53,SNR=29						
GUMO	**Guam**	**53.10**	**305**	LR	LR	02 35 34.8	
	comp=Z,162nm,21.3s,baz=87,slow=30						
MTN	**Manton Dam**	**54.19**	**268**	P	**P**	**02 18 06.4**	**-1.5**
	baz=54,SNR=6.7						
FORT	**Forrest**	**54.34**	**246**	*e*P	**P**	**02 18 09.1**	**+0.2**
	comp=Z,34nm,0.6s						
FORT	**Forrest**	**54.34**	**246**	P	**P**	**02 18 08.1**	**-0.8**
	baz=54,SNR=12						
KNRA	**Kununurra**	**55.75**	**264**	P	P	02 18 15.6	-3.6
	baz=56,SNR=12						
KNRA				S	**S**	**02 26 03.5**	**-0.4**
	baz=56,SNR=5.9						
DRV	**Dumont d'Urvil**	**56.14**	**201**	S	**S**	**02 26 08.0**	**+0.3**
DRV				SP	SPn	02 26 35.0	+19
DRV				L	L	02 32 00.0	
DRV				R		02 35 00.0	
FITZ	**Fitzroy Crossi**	**58.15**	**260**	*e*P	**P**	**02 18 35.1**	**-1.2**
	comp=Z,8.2nm,0.6s						
FITZ	**Fitzroy Crossi**	**58.15**	**260**	LR	LR	02 43 08.4	
	comp=Z,343nm,19.4s,baz=97,slow=36						
FITZ	**Fitzroy Crossi**	**58.15**	**260**	P	**P**	**02 18 35.2**	**-1.1**
	baz=58,SNR=22						
SBA	**Scott Base**	**59.39**	**185**	*e*P	**P**	**02 18 46.9**	**+3.0**
SBA	**Scott Base**	**59.39**	**185**	*e*P	**P**	**02 18 46.9**	**+3.0**
	comp=Z,333nm,2.4s						
VNDA	**Vanda**	**59.54**	**186**	*e*P	**P**	**02 18 46.6**	**+1.6**
	comp=Z,17nm,1.2s						
VNDA	**Vanda**	**59.54**	**186**	P	**P**	**02 18 45.6**	**+0.6**
	comp=Z,7.5nm,0.9s,baz=7.9,slow=6.8,SNR=37						
VNDA				LR	LR	02 40 49.3	
	comp=Z,234nm,20.0s,baz=11,slow=32						
MBWA	**Marble Bar**	**62.99**	**256**	*e*P	**P**	**02 19 08.2**	**-1.0**
	comp=Z,42nm,1.2s						
MEEK	**Meekatharra**	**63.02**	**249**	P	**P**	**02 19 09.1**	**-0.3**
	baz=63,SNR=8.4						
KLBR	**Kellerberrin**	**63.06**	**244**	P	**P**	**02 19 09.9**	**+0.3**
	baz=63,SNR=9.7						
CASY	**Casey**	**67.14**	**205**	*e*P	**P**	**02 19 36.0**	**+0.7**
	comp=Z,40nm,1.1s						
QSPA	**South Pole Qui**	**70.71**	**180**	*e*P	**P**	**02 19 58.8**	**+1.0**
	comp=Z,66nm,1.3s						
JAGI	**Jajag, Banyuwa**	**71.42**	**267**	P	**P**	**02 20 02.6**	**-0.3**
	baz=71,SNR=7.2						
MYLDM	**Lahad Datu**	**71.93**	**282**	P	**P**	**02 20 06.1**	**+0.2**
	comp=Z,23nm,1.5s						
MJAR	**Matsushiro Arr**	**72.40**	**320**	P	**P**	**02 20 08.7**	**+0.5**
MJAR	**Matsushiro Arr**	**72.40**	**320**	P	**P**	**02 20 08.7**	**+0.5**
	comp=Z,11nm,0.8s,baz=166,slow=6.2,SNR=24						
MJAR				LR	LR	02 46 08.4	
	comp=Z,234nm,20.3s,baz=145,slow=31						
MAJO	**Matsushiro**	**72.40**	**320**	*e*P	**P**	**02 20 07.7**	**-0.5**
MAJO				*e**PP	**pP**	**02 20 19.7**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,32nm,1.1s						
MAJO	**Matsushiro**	**72.40**	**320**	*e*P	**P**	**02 20 07.7**	**-0.5**
	comp=Z,32nm,1.1s						
MAJO				*ep*P	**pP**	**02 20 19.6**	**+0.6**
MAT	**Matsushiro**	**72.40**	**320**	P	**P**	**02 20 08.6**	**+0.4**
MAT				S	**S**	**02 29 28.0**	**-1.6**
BSC	**Santa Cruz Isl**	**73.24**	**44**	⇑P	**P**	**02 20 14.2**	**+1.0**
	baz=73						
SCI	**San Clemente I**	**73.35**	**45**	⇓P	**P**	**02 20 14.5**	**+0.6**
	baz=74						
PKM	**Peak Mountain**	**73.68**	**43**	⇑P	**P**	**02 20 16.3**	**+0.3**
	baz=74						
MIR	**Mirnyy**	**74.13**	**205**	⇑*i*P	**P**	**02 20 21.0**	**+3.1**
MIR				*i*		02 20 32.0	
MIR				pmax	pmax		
	comp=Z,63nm,1.0s						
KKM	**Kota Kinabalu**	**74.36**	**282**	*e*P	**P**	**02 20 20.8**	**+0.4**
	comp=Z,14nm,0.8s						
MWC	**Mount Wilson**	**74.42**	**45**	*e*P	**P**	**02 20 19.2**	**-1.2**
MWC				*e**PP	**pP**	**02 20 31.4**	**+0.1**
MWC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MWC	**Mount Wilson**	**74.42**	**45**	*e*P	**P**	**02 20 19.2**	**-1.2**
	comp=Z,9.6nm,0.8s						
MWC				*ep*P	**pP**	**02 20 31.4**	**+0.1**
ARVC	**Arvin**	**74.46**	**43**	⇓P	**P**	**02 20 20.2**	**-0.1**
	baz=75						
MURC	**Murrieta**	**74.62**	**45**	⇑P	**P**	**02 20 21.4**	**0.0**
	baz=75						
BFSC	**Mount Baldy Ra**	**74.69**	**45**	⇑P	**P**	**02 20 21.5**	**-0.4**
	baz=75						
VES	**Vestal, Richgr**	**74.73**	**43**	⇓P	**P**	**02 20 21.6**	**-0.3**
	baz=75,SNR=7.4						
MONP	**Monument Peak**	**74.74**	**46**	⇓P	**P**	**02 20 22.3**	**0.0**
	baz=75						
DVTC	**Desert V Tower**	**74.82**	**47**	⇑P	**P**	**02 20 22.5**	**-0.1**
	baz=75						
EDW2	**Edwards Air Fo**	**74.86**	**44**	⇑P	**P**	**02 20 22.6**	**-0.1**
	baz=75,SNR=9.9						
JNU	**Nakatsue**	**75.00**	**314**	*e*P	**P**	**02 20 24.9**	**+1.3**
	comp=Z,14nm,0.9s						
JNU				*ep*P	**pP**	**02 20 35.2**	**+0.7**
JNU	**Nakatsue**	**75.00**	**314**	P

comp=Z,8.2nm,0.8s,baz=125,slow=10.0,SNR=15
BEKR Beckworth 76.47 39 *e*P **P 02 20 31.1 -0.9**
comp=Z,1.9nm,0.7s
BEKR *ep*P **PcP 02 20 43.7 +0.1**
WCN Washoe City 76.47 40 *e*P **P 02 20 31.3 -0.7**
WCN pmax pmax
comp=Z,8.0nm,0.7s
WCN Washoe City 76.47 40 *e*P **P 02 20 31.3 -0.7**
comp=Z,8.2nm,0.7s
113A Mohawk Valley, 76.50 48 ⇑P **P 02 20 32.1 0.0**
baz=77,SNR=7.8
Y12C Blythe 76.53 47 ⇑P **P 02 20 32.6 +0.4**
baz=77
GRAC Grapevine Rang 76.53 43 ⇑P **P 02 20 32.7 +0.4**
baz=77
FURC Furnace Creek, 76.55 43 ⇓P **P 02 20 32.5 +0.3**
baz=77
TUQ Turquoise Moun 76.55 45 ⇑P **P 02 20 32.5 0.0**
baz=77,SNR=7.9
PETK Petropavlovsk- 76.58 342 P **P 02 20 29.9 -2.2**
PETK Petropavlovsk- 76.58 342 P **P 02 20 29.9 -2.2**
PETK Petropavlovsk- 76.58 342 P **P 02 20 29.9 -2.2**
comp=Z,15nm,1.0s,baz=130,slow=11,SNR=7.2
PETK LR LR 02 47 09.9
comp=Z,98nm,20.1s,baz=82,slow=30
SHOC Shoshone 76.59 44 ⇑P **P 02 20 32.9 +0.3**
baz=77
214A Organ Pipe Nat 76.73 49 ⇑P **P 02 20 33.8 +0.3**
baz=77
NVAR Mina Array Bea 76.82 41 P **P 02 20 33.5 -0.6**
NVAR Mina Array Bea 76.82 41 P **P 02 20 33.5 -0.6**
comp=Z,6.3nm,0.6s,baz=227,slow=9.0,SNR=46
NVAR LR LR 02 50 23.8
comp=Z,238nm,18.4s,baz=123,slow=32
LDFC Landfair 76.89 45 *e*P **P 02 20 34.8 +0.4**
comp=Z,42nm,1.4s
LDFC *ep*P **PcP 02 20 46.4 +1.0**
NV11 Mina Array Sit 76.91 41 *e*P **P 02 20 33.6 -0.9**
NEE2 Needles Airpor 77.04 46 ⇓P **P 02 20 35.4 +0.3**
baz=77
PDMCI Parker Dam,Lak 77.10 46 ⇑P **P 02 20 35.7 +0.3**
baz=77
YSS Yuzh-Sakhalins 77.24 330 *e*P **P 02 20 36.0 +0.1**
YSS *e* 02 20 48.8
Z14A Wintersburg 77.41 48 ⇓P **P 02 20 37.4 +0.2**
baz=78
TPUB Ta-pu 77.65 300 *e*P **P 02 20 38.7 -0.1**
comp=Z,46nm,1.0s
Y14A Wickenburg 77.68 47 ⇓P **P 02 20 39.0 +0.2**
baz=78,SNR=12
W13A Hualapai Mount 77.72 46 ⇓P **P 02 20 39.3 +0.1**
baz=78,SNR=6.6
KSM Kuching 78.25 276 *e*P **P 02 20 43.9 +1.6**
comp=Z,42nm,1.0s
KSM *ep*P **pP 02 20 54.3 +1.0**
KSM Kuching 78.25 276 P **P 02 20 42.5 +0.2**
comp=Z,48nm,1.2s
KSM Kuching 78.25 276 P **P 02 20 44.7 +2.4**
baz=78,SNR=6.9
TUC Tucson 78.38 50 *e*P **P 02 20 43.1 +0.4**
TUC *e**PP **pP 02 20 54.8 +1.1**
TUC Tucson 78.38 50 *e*P **P 02 20 43.1 +0.4**
comp=Z,2.6nm,1.0s
TUC *ep*P **pP 02 20 54.8 +1.1**
R11A Troy Canyon, C 78.47 42 ⇓P **P 02 20 43.1 -0.1**
baz=79
BMN Battle Mountai 78.70 40 *e*P **P 02 20 43.9 -0.5**
BMN *e**PP **PcP 02 20 54.0 +0.8**
BMN pmax pmax
comp=Z,17nm,1.3s
BMN Battle Mountai 78.70 40 *e*P **P 02 20 43.9 -0.5**
comp=Z,17nm,1.3s
BMN *ep*P **PcP 02 20 54.0 +0.8**
319A Douglas 78.99 51 ⇓P **P 02 20 46.9 +0.7**
baz=79,SNR=9.0
X16A Lo Mia Camp, P 79.03 48 ⇓P **P 02 20 47.2 +0.8**
baz=79,SNR=15
WVOR Wild Horse Val 79.10 38 *e*P **P 02 20 45.9 -0.6**
WVOR pmax pmax
comp=Z,18nm,1.1s
WVOR Wild Horse Val 79.10 38 *e*P **P 02 20 45.9 -0.6**
comp=Z,18nm,1.1s
CCUT Cedar City 79.45 44 *e*P **P 02 20 49.4 +0.7**
comp=Z,7.4nm,1.0s
KSRS Korea Array 79.45 316 P **P 02 20 49.2 +0.9**
comp=Z,20nm,0.9s,baz=132,slow=5.6,SNR=44
KSRS LR LR 02 49 00.1
comp=Z,202nm,21.5s,baz=132,slow=30
KSAR Wonju Array Be 79.47 316 P **P 02 20 49.2 +0.8**
320A Kipp Ranch, An 79.52 52 ⇑P **P 02 20 50.1 +1.0**
baz=80,SNR=7.4
U15A North Rim 79.54 45 ⇑P **P 02 20 50.0 +0.8**
baz=80,SNR=11
WUAZ Wupatki 79.67 47 *e*P **P 02 20 50.5 +0.6**
comp=Z,14nm,1.4s
WUAZ Wupatki 79.67 47 ⇑P **P 02 20 50.4 +0.5**
baz=80,SNR=8.2
220A Playas Peak, P 79.81 51 ⇓P **P 02 20 51.7 +1.0**
baz=80,SNR=6
120A U Bar Ranch, L 80.06 50 ⇓P **P 02 20 52.7 +0.7**
baz=80,SNR=5.7
ELK Elko 80.10 41 *e*P **P 02 20 51.7 -0.4**
comp=Z,190nm,1.3s
ELK Elko 80.10 41 P **P 02 20 51.7 -0.4**
comp=Z,3.2nm,0.6s,baz=230,slow=4.8,SNR=19
X18A Snowflake 80.13 48 ⇓P **P 02 20 52.9 +0.5**
baz=80,SNR=6.2
PMSA Palmer Station 80.31 156 *e*P **P 02 20 54.4 +1.8**
Z20A Nine Sixteen R 80.37 50 ⇓P **P 02 20 54.5 +0.8**
baz=80,SNR=14
221A Mesquite Ranch 80.41 51 ⇑P **P 02 20 54.5 +0.6**
baz=81
W18A Petrified Fore 80.59 48 ⇑P **P 02 20 55.3 +0.5**
baz=81
121A Cookes Peak, D 80.67 51 ⇑P **P 02 20 56.2 +0.9**
baz=81,SNR=11
MVU Marysvale 80.74 44 *e*P **P 02 20 55.8 +0.2**
comp=Z,21nm,1.4s
MSU Marysvale 80.76 44 *e*P **P 02 20 56.5 +0.7**
MSU *e**PP **pP 02 21 08.1 +1.3**
MSU Marysvale 80.76 44 *e*P **P 02 20 56.5 +0.7**
MSU *ep*P **pP 02 21 08.1 +1.3**
Y20A Horse Springs, 80.93 49 ⇓P **P 02 20 57.5 +0.7**
baz=81,SNR=19
USRK Ussuriysk Arra 80.94 323 P **P 02 20 55.0 -1.3**
comp=Z,0.6nm,0.5s,baz=148,slow=40,SNR=5.4
USRK LR LR 02 50 37.5
comp=Z,367nm,21.5s,baz=133,slow=31
222A Williams Famil 80.96 51 ⇓P **P 02 20 57.4 +0.5**
baz=81
HAWA Hanford 81.13 34 *e*P **P 02 20 56.6 -0.6**
comp=Z,38nm,1.6s
Z21A St. Cloud Mine 81.14 50 ⇓P **P 02 20 59.0 +1.1**
baz=81,SNR=17
X20A Quemado 81.17 49 ⇑P **P 02 20 59.0 +1.0**
baz=81,SNR=9.3
DUG Dugway 81.29 42 *e*P **P 02 20 57.7 -0.7**
DUG *e**PP **pP 02 21 10.5 +1.0**
DUG pmax pmax
comp=Z,8.0nm,1.2s
DUG Dugway 81.29 42 *e*P **P 02 20 57.7 -0.7**
comp=Z,7.9nm,1.2s
DUG *ep*P **pP 02 21 10.5 +1.0**
DUG Dugway 81.29 42 ⇓P **P 02 20 58.5 +0.1**
baz=82
122A Conniff Cattle 81.33 51 ⇑P **P 02 20 59.7 +1.0**
baz=82
MFID Camas Ranch 81.33 38 *e*P **P 02 20 58.4 -0.2**
comp=Z,7.3nm,1.0s
MFID *ep*P **pP 02 21 09.4 -0.2**
MFID Camas Ranch 81.33 38 ⇑P **P 02 20 58.3 -0.2**
baz=82,SNR=6.1
BMO Blue Mountains 81.37 36 *e*P **P 02 20 57.6 -1.0**
comp=Z,13nm,1.4s
223A Chaparral, Ant 81.41 52 ⇓P **P 02 20 59.9 +0.7**
baz=82
W20A Ramah 81.46 48 ⇓P **P 02 21 00.3 +0.7**
baz=82,SNR=18
Y21A Point of Rocks 81.48 50 ⇑P **P 02 21 00.7 +1.0**
baz=82
ETW Entiat 81.50 33 P **P 02 20 58.9 -0.5**
X21A Alamocita Cree 81.62 49 ⇑P **P 02 21 01.4 +0.9**
baz=82
Z22A Elephant Butte 81.63 51 ⇑P **P 02 21 01.3 +0.9**
baz=82
Q16A Castle Valley 81.64 44 ⇑P **P 02 21 01.2 +0.8**
baz=82
WTV Waterville 81.75 33 P **P 02 21 00.3 -0.3**
S18A Hurst Farm, Bl 81.77 45 ⇓P **P 02 21 01.6 +0.4**
baz=82
V20A Brimhall 81.83 48 ⇑P **P 02 21 01.8 +0.3**
baz=82
123A Bell Site, Whi 81.84 51 ⇑P **P 02 21 02.2 +0.8**
baz=82
324A Moseley Ranch, 81.85 53 ⇑P **P 02 21 02.1 +0.5**
baz=82,SNR=17
425A Indio Mountain 81.91 54 ⇑P **P 02 21 02.6 +0.7**
baz=82,SNR=23
MPU Maple Canyon 81.95 43 *e*P **P 02 21 03.5 +1.5**
comp=Z,11nm,1.2s
SPU Mount Spurr 81.95 10 *e*P **P 02 21 00.5 -0.8**
Y22A Socorro 81.96 50 ⇑P **P 02 21 02.8 +0.7**
baz=82,SNR=8.9
I12A Atlanta 81.97 38 ⇓P **P 02 21 02.0 0.0**
baz=82,SNR=11
626A Big Bend Ranch 81.99 55 ⇓P **P 02 21 02.9 +0.6**
baz=82,SNR=19
HABR Khabarovsk 82.03 328 *de*P **P 02 21 00.2 -1.7**
HABR *e**SP **sP 02 21 14.5 -2.5**
HABR *e* 02 24 07.5
HABR PPP PPP 02 25 57.9
HABR *e*S **S 02 31 11.9 -1.8**
HABR *e*SS **SS 02 36 32.2 -1.6**
HABR MLR MLR
comp=Z,253nm,17.0s
MNTX Cornudas Mount 82.04 53 *e*P **P 02 21 02.3 -0.2**
comp=Z,13nm,1.1s
MNTX *ep*P **pP 02 21 14.8 +1.3**
W21A San Fidel 82.06 49 ⇑P **P 02 21 03.3 +0.6**
baz=82
Y22D IRIS PASSCAL I 82.06 50 ⇑P **P 02 21 03.5 +0.9**
baz=82
LAZ Ladron 82.06 49 *e*P **P 02 21 03.4 +0.7**
comp=Z,4.6nm,1.3s
U20A Newcomb 82.09 47 ⇓P **P 02 21 03.2 +0.4**
baz=82
224A Cornudas Mount 82.12 52 ⇓P **P 02 21 03.6 +0.6**
baz=82,SNR=13
Z23A Rita Site, Whi 82.16 51 ⇑P **P 02 21 04.0 +0.8**
baz=82
SRU San Rafael 82.17 44 ⇑P **P 02 21 03.4 +0.2**
baz=82
325A Bean Ranch, Si 82.20 53 ⇑P **P 02 21 03.8 +0.3**
baz=82,SNR=27
X22A Bernardo 82.21 49 ⇓P **P 02 21 04.5 +1.1**
baz=82
HVU Hansel Valley 82.21 41 *e*P **P 02 21 03.6 +0.3**
HVU pmax pmax
comp=Z,58nm,2.2s
HVU Hansel Valley 82.21 41 *e*P **P 02 21 03.5 +0.3**
comp=Z,58nm,2.2s
HLID Hailey 82.25 39 *e*P **P 02 21 03.3 -0.1**
comp=Z,16nm,1.3s
HLID *ep*P **pP 02 21 14.9 +0.4**
HLID Hailey 82.25 39 ⇓P **P 02 21 03.5 +0.1**
baz=82,SNR=15
TXAR Lajitas Array 82.25 55 P **P 02 21 03.2 -0.5**
TXAR Lajitas Array 82.25 55 P **P 02 21 03.2 -0.5**
comp=Z,14nm,1.1s,baz=216,slow=6.2,SNR=51
TXAR LR LR 02 52 04.2
comp=Z,202nm,18.2s,baz=50,slow=32
526A Mary Lane Ranc 82.26 55 ⇑P **P 02 21 04.3 +0.6**
baz=82,SNR=21
RC01 Rabbit Creek A 82.26 11 *e*P **P 02 21 02.1 -0.7**
comp=Z,38nm,1.3s
J13A Cove Ranch, Pi 82.30 39 ⇓P **P 02 21 03.8 +0.2**
baz=82,SNR=16
BNM Barren Site 82.31 50 *e*P **P 02 21 05.1 +1.1**
comp=Z,29nm,1.9s
JLU Jordanelle 82.39 42 *e*P **P 02 21 04.9 +0.5**
comp=Z,12nm,1.4s
LPM Los Pinos Moun 82.39 50 *e*P **P 02 21 05.7 +1.3**
V21A Milan 82.41 48 ⇑P **P 02 21 04.9 +0.4**
baz=83
124A Stringfield Ra 82.47 52 ⇓P **P 02 21 05.4 +0.5**
baz=83,SNR=14
627A Terlingua Ranc 82.52 55 ⇓P **P 02 21 05.7 +0.6**
baz=83,SNR=30
MVCO Mesa Verde 82.53 46 ⇑P **P 02 21 05.3 +0.2**
baz=83
MDJ Mudanjiang 82.56 322 P **P 02 21 06.5 +1.7**
MDJ sP **sP 02 21 17.8 -2.1**
MDJ PP **PP 02 24 16.0 +1.2**
MDJ S **SKKSac 02 31 25.5 -1.5**
MDJ sS **sS 02 31 39.5 +1.9**
MDJ SS **SS 02 36 46.8 +4.9**
MDJ pmax pmax
comp=Z,16nm,1.4s
MDJ pmax pmax
comp=Z,170nm,6.0s
MDJ LR LR
comp=N,140nm,37.1s
MDJ LR LR
comp=E,110nm,31.3s
MDJ LR LR
comp=Z,200nm,35.2s
H12A Diamond D Ranc 82.57 38 ⇑P **P 02 21 04.8 -0.4**
baz=83
426A McDonald Obser 82.59 54 ⇓P **P 02 21 06.1 +0.5**
baz=83,SNR=24
W22A Albuquerque 82.59 49 ⇓P **P 02 21 06.2 +0.8**
baz=83
Y23A Lovelace Mesa, 82.62 50 ⇑P **P 02 21 06.0 +0.4**
baz=83,SNR=6.6
I13A Wildhorse Cree 82.63 38 ⇓P **P 02 21 05.3 -0.1**
baz=83,SNR=6.5
P18A Preston Nutter 82.63 44 ⇑P **P 02 21 05.8 +0.1**
baz=83,SNR=8.4
J14A Carey 82.64 39 ⇑P **P 02 21 06.1 +0.6**
baz=83,SNR=22
G12A Big Creek, Yel 82.65 37 ⇓P **P 02 21 05.2 -0.3**
baz=83
225A Deer Hill, Car 82.66 52 ⇑P **P 02 21 06.5 +0.7**
baz=83,SNR=14
527A Woodyard Ranch 82.67 55 ⇓P **P 02 21 06.1 +0.2**
baz=83,SNR=20
U21A Nageezi 82.71 47 ⇓P **P 02 21 06.6 +0.6**
baz=83,SNR=11
ANMO Albuquerque 82.82 49 *e*P **P 02 21 06.9 +0.3**
comp=Z,13nm,1.1s
Z24A Sheeppen Canyo 82.83 51 ⇑P **P 02 21 07.3 +0.6**
baz=83
X23A Hourglass Bar 82.84 50 ⇓P **P 02 21 07.2 +0.4**
baz=83
PMR Palmer 82.84 11 *e*P **P 02 21 04.9 -0.9**
PMR pmax pmax
comp=Z,56nm,1.5s
PMR Palmer 82.84 11 *e*P **P 02 21 04.9 -0.9**
comp=Z,56nm,1.5s
GAMB Gambell 82.86 0 *e*P **P 02 21 05.1 -0.7**
comp=Z,18nm,1.3s
HWUT Hardware Ranch 82.87 41 *e*P **P 02 21 05.3 -1.4**
comp=Z,11nm,1.4s
PV04 Paradox Valley 82.87 45 *e*P **P 02 21 07.3 +0.5**
PV04 *ep*P **pP 02 21 19.0 +1.1**
326A Caldwell Ranch 82.92 53 ⇓P **P 02 21 07.1 0.0**
baz=83,SNR=5.3
628A Black Gap, Mar 82.93 56 ⇑P **P 02 21 07.5 +0.4**
baz=83,SNR=13
S20A Disappointment 82.94 46 ⇑P **P 02 21 07.7 +0.4**
baz=83,SNR=5.6
PV01 Paradox Valley 82.96 46 *e*P **P 02 21 07.2 -0.2**
comp=Z,690nm,0.7s
V22A San Miguel Ran 82.98 48 ⇓P **P 02 21 07.8 +0.4**
baz=83
I14A Mackay 83.03 39 ⇓P **P 02 21 07.6 +0.1**
baz=83,SNR=6.4
125A Gardner Draw, 83.04 52 ⇑P **P 02 21 08.2 +0.5**
baz=83,SNR=9.4
GDL2 Guadalupe Moun 83.04 53 *e*P **P 02 21 08.8 +1.1**
GDL2 *ep*P **pP 02 21 19.1 +0.3**
F12A Elk City 83.06 36 ⇓P **P 02 21 07.0 -0.6**
baz=83,SNR=19
Y24A Capitan 83.06 51 ⇑P **P 02 21 08.5 +0.5**
baz=83,SNR=17
DIV Divide 83.07 13 *e*P **P 02 21 07.0 -0.1**
comp=Z,25nm,1.0s
T21A Navajo Lake 83.08 47 ⇑P **P 02 21 08.5 +0.5**
baz=83
NJ2 Nanjing 83.09 307 *e*P **P 02 21 09.0 +1.2**
NJ2 S **S 02 31 26.0 +0.8**
NJ2 pmax pmax
comp=Z,30nm,1.0s
NJ2 LR LR
comp=N,460nm,24.1s
NJ2 LR LR
comp=Z,320nm,24.9s
R20A Redvale 83.11 46 ⇑P **P 02 21 08.3 +0.2**
baz=83
226B Tecolote Peak, 83.13 53 ⇑P **P 02 21 08.8 +0.6**
baz=83,SNR=20
W23A Werner Place, 83.15 49 ⇓P **P 02 21 08.7 +0.3**
baz=83
427A Hayter Ranch, 83.15 54 ⇑P **P 02 21 09.1 +0.8**
baz=83,SNR=20
S21A Coal Bank Pass 83.24 46 ⇓P **P 02 21 09.6 +0.7**
baz=83,SNR=7.0
U22A Llaves 83.25 48 ⇓P **P 02 21 09.2 +0.4**
baz=83
G13A Cobalt 83.25 37 ⇓P **P 02 21 08.1 -0.4**
baz=83
Z25A Roswell 83.29 51 ⇓P **P 02 21 09.8 +0.8**
baz=83,SNR=6.2
PNL Peninsula 83.29 16 *e*P **P 02 21 08.1 -0.2**
comp=Z,42nm,1.1s
528A Cox Ranch, San 83.31 55 ⇓P **P 02 21 09.8 +0.6**
baz=84,SNR=12
327A Balmorhea Ranc 83.32 54 ⇑P **P 02 21 09.6 +0.4**
baz=84
M17A Scullys Gap (B 83.36 42 ⇓P **P 02 21 08.8 -0.5**
baz=84
X24A Lazy VL Ranch, 83.37 50 ⇑P **P 02 21 09.6 +0.1**
baz=84
V23A Ortiz Mt. (NFS 83.41 49 ⇓P **P 02 21 11.0 +1.3**
baz=84,SNR=7.2
P19A Cripple Cowboy 83.46 44 ⇓P **P 02 21 09.8 -0.1**
baz=84,SNR=12
H14A Leadore 83.48 38 ⇓P **P 02 21 10.1 +0.3**
baz=84,SNR=7.8
126A Clayton Basin, 83.51 52 ⇑P **P 02 21 10.4 +0.3**
baz=84,SNR=5.6
T22A Edith 83.53 47 ⇑P **P 02 21 10.9 +0.5**
baz=84,SNR=7.1
Q20A Ridgley Place, 83.56 45 ⇓P **P 02 21 10.8 +0.4**
baz=84,SNR=14
NEW Newport 83.58 34 P **P 02 21 08.8 -1.2**
NEW Newport 83.58 34 P **P 02 21 08.8 -1.2**
comp=Z,2.1nm,0.7s,baz=300,slow=7.7,SNR=4.8
NEW Newport 83.58 34 ⇑P **P 02 21 09.6 -0.5**
baz=84
F13A Darby 83.61 37 ⇓P **P 02 21 09.7 -0.7**
baz=84,SNR=6.7
Y25A Mesa, Roswell 83.61 51 ⇓P **P 02 21 10.7 0.0**
baz=84
428A Kincaid Ranch, 83.64 55 ⇓P **P 02 21 11.6 +0.8**
baz=84,SNR=8.0
I15A Monteview 83.64 39 ⇑P **P 02 21 11.0 +0.4**
baz=84
U23A El Rito 83.69 48 ⇓P **P 02 21 11.9 +0.8**
baz=84,SNR=14
W24A Lazy 6 Ranch, 83.70 49 ⇓P **P 02 21 11.3 +0.1**
baz=84,SNR=13
O19A Miners Draw (B 83.72 44 ⇓P **P 02 21 11.0 -0.1**
baz=84
529A Stev Forest Ra 83.73 55 ⇓P **P 02 21 11.4 +0.1**
baz=84,SNR=14
227A Bennet, Jal 83.76 53 ⇑P **P 02 21 11.5 +0.1**
baz=84
R21A Cimarron 83.77 46 ⇑P **P 02 21 12.1 +0.6**
baz=84,SNR=9.0
C11A Tepee Creek (N 83.78 34 ⇓P **P 02 21 10.9 -0.2**
baz=84
P20A De Beque 83.78 45 ⇓P **P 02 21 11.8 +0.3**
baz=84,SNR=21
G14A Jackson 83.78 38 ⇑P **P 02 21 11.5 +0.1**
baz=84
D12A Red Ives Fores 83.79 35 ⇑P **P 02 21 12.4 +1.2**
baz=84
Z26A Caprock 83.83 52 ⇑P **P 02 21 12.0 +0.2**
baz=84,SNR=9.9
328A Wristen Ranch, 83.84 54 ⇓P **P 02 21 11.8 0.0**
baz=84,SNR=6.3
H15A Lima 83.90 38 ⇓P **P 02 21 12.1 +0.1**
baz=84,SNR=12
MCMT McKenzie Canyo 83.90 38 *e*P **P 02 21 11.7 -0.3**
comp=Z,8.2nm,1.0s
MCMT *ep*P **pP 02 21 24.0 +0.9**
X25A Clemmons Ranch 83.92 50 ⇑P **P 02 21 12.4 +0.2**
baz=84,SNR=17
S22A 4UR Ranch, Cre 83.95 47 ⇑P **P 02 21 13.2 +0.7**
baz=84,SNR=26
RRI2 Red Ridge 83.98 40 *e*P **P 02 21 13.2 +0.7**
comp=Z,10nm,0.8s
RRI2 *ep*P **pP 02 21 23.6 0.0**
Q21A Lamborn Mesa, 83.99 45 ⇓P **P 02 21 13.1 +0.5**
baz=84
L18A Fontenelle, Gr 84.00 42 ⇑P **P 02 21 11.9 -0.6**
baz=84
127A Arkansas Junct 84.02 52 ⇑P **P 02 21 12.5 -0.2**
baz=84
V24A Rampart Ranch, 84.05 49 ⇑P **P 02 21 13.4 +0.4**
baz=84,SNR=11
E13A Victor 84.07 36 ⇑P **P 02 21 11.6 -1.1**
baz=84,SNR=7.7
C12B Naegeli Ranch, 84.12 35 ⇓P **P 02 21 12.4 -0.4**
baz=84
T23A Casias Ranch, 84.14 48 ⇓P **P 02 21 14.1 +0.6**
baz=84
F14A Wisdom 84.17 37 ⇓P **P 02 21 12.8 -0.4**
baz=84
I16A Newdale 84.17 40 ⇓P **P 02 21 13.8 +0.5**
baz=84,SNR=11
KLR Kul'dur 84.19 327 *e*P **P 02 21 10.0 -3.1**
KLR pmax pmax
comp=Z,76nm,2.2s
429A Davenport Ranc 84.21 55 ⇓P **P 02 21 13.6 -0.1**
baz=84,SNR=30
O20A White River Ci 84.21 44 ⇓P **P 02 21 13.8 +0.1**
baz=84,SNR=8.2
R22A Saguache, Gunn 84.24 46 ⇑P **P 02 21 14.9 +0.9**
baz=84,SNR=14
Y26A Elida 84.25 51 ⇓P **P 02 21 13.9 0.0**
baz=84
SKAG Skagway 84.25 18 *e*P **P 02 21 13.4 +0.3**
comp=Z,37nm,1.3s
SKAG *ep*P **pP 02 21 24.4 +0.3**
TPAW Teton Pass 84.28 40 *e*P **P 02 21 13.8 -0.3**
comp=Z,8.1nm,0.7s
G15A Dillon 84.30 38 ⇓P **P 02 21 13.8 -0.2**
baz=84,SNR=19
D13A Huson 84.30 36 ⇓P **P 02 21 12.6 -1.3**
baz=84,SNR=9.0
M19A Rock Springs 84.33 43 ⇓P **P 02 21 14.1 -0.2**
baz=84,SNR=7.1
228A UT Block 9, Go 84.34 53 ⇓P **P 02 21 14.1 -0.2**
baz=84
DLMT Dillon 84.35 38 *e*P **P 02 21 14.0 -0.2**
comp=Z,11nm,0.8s
U24A Moreno Valley 84.37 48 ⇑P **P 02 21 15.3 +0.6**
baz=84
TRF Thorofare Moun 84.37 10 *e*P **P 02 21 11.9 -2.0**
comp=Z,23nm,1.0s
SNOW Snow King Moun 84.39 40 *e*P **P 02 21 14.2 -0.4**
comp=Z,12nm,0.6s
W25A X Bar L Ranch, 84.39 50 ⇑P **P 02 21 14.6 0.0**
baz=84,SNR=14
Z27A Tatum 84.42 52 ⇓P **P 02 21 14.5 -0.3**
baz=85
P21A Newcastle 84.42 45 ⇓P **P 02 21 14.7 -0.1**
baz=85
DL2 Dalian 84.42 314 ⇑P **P 02 21 16.8 +2.3**
DL2 S **S 02 31 41.5 +3.2**
DL2 pmax pmax
comp=Z,31nm,0.9s
DL2 pmax pmax
comp=Z,150nm,4.2s
DL2 LR LR
comp=N,120nm,14.4s
DL2 LR LR
comp=E,100nm,19.2s
DL2 LR LR
comp=Z,130nm,16.1s
530A J-C Ranch, Com 84.43 56 ⇓P **P 02 21 15.0 +0.2**
baz=85,SNR=9.7
MSO Missoula 84.43 36 *e*P **P 02 21 13.1 -1.5**
comp=Z,5.4nm,1.1s
E14A Clinton 84.44 37 ⇑P **P 02 21 14.0 -0.7**
baz=85,SNR=12
Q22A Crested Butte, 84.45 46 ⇓P **P 02 21 15.5 +0.5**
baz=85,SNR=9.9
S23A Nye Farm, Mont 84.50 47 ⇑P **P 02 21 15.8 +0.6**
baz=85

IMW **Indian Meadow** 84.51 40 eP P 02 21 15.4 +0.2
comp=Z,7.3nm,0.8s
IMW epP pP 02 21 27.1 +0.8
B12A **Libby** 84.52 34 ⇑P P 02 21 14.4 -0.4
baz=85
L19A **Farson** 84.52 42 ⇓P P 02 21 15.1 -0.1
baz=85,SNR=12
329A **Wagon Wheel Ra** 84.52 54 ⇓P P 02 21 15.4 +0.1
baz=85,SNR=6.3
CN2 **Changchun** 84.55 320 eP P 02 21 16.3 +1.3
CN2 eS S 02 31 42.5 +3.1
CN2 SS SS 02 37 14.0 +2.7
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,21.0s
CN2 LR LR
comp=E,300nm,21.0s
CN2 LR LR
comp=Z,200nm,22.0s
X26A **CR and CF Fran** 84.55 51 ⇑P P 02 21 15.2 -0.2
baz=85
MOOW **Moose Ponds** 84.55 40 eP P 02 21 15.6 +0.3
comp=Z,2.5nm,0.8s
N20A **Spence Gulch,** 84.56 43 ⇑P P 02 21 15.6 +0.2
baz=85,SNR=14
LOHW **Long Hollow** 84.56 40 eP P 02 21 15.1 -0.3
comp=Z,18nm,1.5s
SMCO **Snowmass** 84.56 45 eP P 02 21 15.8 0.0
comp=Z,30nm,1.4s
V25A **Rancho No Teng** 84.57 49 ⇑P P 02 21 16.1 +0.5
baz=85,SNR=25
BSMT **Bassoo Peak** 84.57 35 eP P 02 21 15.1 -0.3
C13A **Hot Springs** 84.59 35 ⇓P P 02 21 14.1 -1.1
baz=85
128A **Castleberry Fa** 84.65 53 ⇓P P 02 21 16.1 +0.2
baz=85
F15A **Butte** 84.68 38 ⇑P P 02 21 15.4 -0.5
baz=85,SNR=7.7
LRM **Limekiln Ridge** 84.70 38 eP P 02 21 15.3 -0.8
LRM epP pP 02 21 26.1 -1.1
631A **Perdido Creek** 84.71 56 ⇓P P 02 21 16.2 +0.1
baz=85,SNR=14
Y27A **Causey** 84.71 52 ⇑P P 02 21 16.0 -0.2
baz=85
QLMT **Earthquake Lak** 84.74 39 eP P 02 21 16.9 +0.7
G16A **Moss Hill, Enn** 84.74 38 ⇓P P 02 21 15.9 -0.3
baz=85,SNR=8.8
I17A **Pilgrim Ck.** 84.75 40 ⇓P P 02 21 16.7 +0.4
baz=85
BW06 **Boulder Array** 84.75 41 eP P 02 21 14.9 -1.4
comp=Z,12nm,1.0s
PDAR **Pinedale Array** 84.75 41 P P 02 21 15.4 -1.0
PDAR **Pinedale Array** 84.75 41 P P 02 21 15.4 -1.0
comp=Z,5.2nm,0.6s,baz=204,slow=3.3,SNR=34
PDAR LR LR 02 55 17.6
comp=Z,151nm,18.5s,baz=246,slow=33
O21A **Pagoda** 84.76 44 ⇑P P 02 21 16.5 0.0
baz=85
A12A **Yaak River Ran** 84.76 34 ⇓P P 02 21 16.0 -0.1
baz=85
H16A **Russell Place,** 84.77 39 ⇑P P 02 21 16.9 +0.5
baz=85,SNR=9.4
430A **Baggett Ranch,** 84.79 55 ⇑P P 02 21 16.7 +0.1
baz=85
PAX **Paxson** 84.80 12 eP P 02 21 14.8 -1.2
PAX pmax pmax
comp=Z,22nm,1.3s
PAX **Paxson** 84.80 12 eP P 02 21 14.8 -1.2
comp=Z,22nm,1.3s
D14A **Greenough** 84.82 36 ⇑P P 02 21 15.3 -1.2
baz=85,SNR=8.0
W26A **Owens Ranch, T** 84.83 50 ⇑P P 02 21 16.8 -0.1
baz=85,SNR=5.8
T24A **Torres, Weston** 84.85 48 ⇓P P 02 21 17.8 +0.7
baz=85,SNR=8.1
R23A **Moffat** 84.85 47 ⇑P P 02 21 17.4 +0.4
baz=85,SNR=6.7
MCK **McKinley** 84.86 10 eP P 02 21 15.6 -0.5
MCK pmax pmax
comp=Z,44nm,1.1s
MCK **McKinley** 84.86 10 eP P 02 21 15.6 -0.5
comp=Z,44nm,1.1s
SDCO **Great Sand Dun** 84.86 47 eP P 02 21 17.1 0.0
comp=Z,17nm,1.7s
SDCO epP pP 02 21 28.2 0.0
229A **Bryant Ranch,** 84.86 54 ⇓P P 02 21 17.1 +0.1
baz=85
CHMT **Chamberlain Mo** 84.87 36 eP P 02 21 16.0 -0.8
732A **Laxson Ranch,** 84.89 57 ⇑P P 02 21 17.1 -0.1
baz=85,SNR=5.7
P22A **Eagle** 84.92 45 ⇓P P 02 21 17.2 -0.1
baz=85,SNR=5.1
E15A **Deer Lodge** 84.93 37 ⇓P P 02 21 16.5 -0.6
baz=85
M20A **Sweetwater, Wa** 84.95 43 ⇑P P 02 21 17.2 -0.2
baz=85,SNR=7.4
U25A **Circle Dot Ran** 84.98 49 ⇑P P 02 21 17.8 +0.2
baz=85,SNR=10.0
N21A **Black Mountain** 85.00 44 ⇓P P 02 21 17.8 +0.1
baz=85,SNR=18
H17A **Grant Village** 85.00 39 ⇑P P 02 21 18.4 +0.8
baz=85,SNR=5.6
S24A **Houchin Ranch,** 85.01 47 ⇑P P 02 21 18.5 +0.6
baz=85,SNR=8.7
QIZ **Qiongzhong** 85.02 292 P P 02 21 19.0 +1.1
QIZ S S 02 31 45.5 +0.4
QIZ pmax pmax
comp=Z,17nm,1.7s
QIZ pmax pmax
comp=Z,150nm,12.2s
QIZ LR LR
comp=Z,210nm,43.8s
Z28A **Tucker Farm, M** 85.02 52 ⇓P P 02 21 17.6 -0.2
baz=85,SNR=7.2
LCCM **Lewis and Clar** 85.04 38 P P 02 21 16.9 -0.8
MSTX **Muleshoe** 85.04 52 ⇑P P 02 21 18.0 +0.1
baz=85,SNR=7.7
531A **Rocksprings** 85.05 56 ⇓P P 02 21 18.1 +0.1
baz=85,SNR=17
B13A **Whitefish** 85.06 35 ⇑P P 02 21 16.6 -1.0
baz=85
BOZ **Bozeman (W)** 85.07 38 eP P 02 21 17.2 -0.6
BOZ pmax pmax
comp=Z,9.0nm,1.0s
BOZ **Bozeman (W)** 85.07 38 eP P 02 21 17.2 -0.6
comp=Z,9.3nm,1.0s
I18A **Diamond G Ranc** 85.09 40 ⇓P P 02 21 17.8 -0.3
baz=85
330A **Mertzon** 85.10 54 ⇑P P 02 21 17.9 -0.3
baz=85
X27A **F and S Farms,** 85.11 51 ⇑P P 02 21 18.8 +0.5
baz=85,SNR=9.9
L20A **Wamsutter** 85.12 42 ⇓P P 02 21 18.3 +0.1
baz=85,SNR=12
129A **Stewart Farms,** 85.12 53 ⇓P P 02 21 18.3 +0.1
baz=85
V26A **Tequesquite Ra** 85.14 50 ⇑P P 02 21 18.3 -0.1
baz=85,SNR=9.1
F16A **Kennard Place,** 85.15 38 ⇓P P 02 21 18.2 +0.1
baz=85
Q23A **Hartsel** 85.20 46 ⇓P P 02 21 18.9 +0.1
baz=85
LKWY **Lake** 85.20 39 eP P 02 21 19.0 +0.4
LKWY **Lake** 85.20 39 eP P 02 21 19.0 +0.4
comp=Z,2.7nm,1.3s
K19A **Absolon Red Bu** 85.22 41 ⇓P P 02 21 18.1 -0.6
baz=85
431A **Sonora** 85.23 55 ⇓P P 02 21 18.6 -0.2
baz=85
J19A **Crowheart** 85.33 41 ⇓P P 02 21 18.9 -0.3
baz=86,SNR=11
W27A **Bowe Ranch, En** 85.33 50 ⇑P P 02 21 19.3 0.0
baz=86,SNR=16
T25A **Trinidad** 85.33 48 ⇓P P 02 21 19.7 +0.3
baz=86
O22A **Kremmling** 85.34 45 ⇑P P 02 21 19.6 +0.1
baz=86,SNR=6.2
D15A **Lincoln** 85.35 37 ⇑P P 02 21 18.5 -0.6
baz=86,SNR=5.5
230A **Sterling City** 85.36 54 ⇑P P 02 21 19.6 +0.1
baz=86
632A **Uvalde** 85.37 57 ⇓P P 02 21 20.1 +0.6
baz=86,SNR=5.9
R24A **Sanders Place,** 85.37 47 ⇓P P 02 21 20.1 +0.5
baz=86,SNR=6.8
Y28A **McKinney Farm,** 85.40 52 ⇓P P 02 21 19.9 +0.2
baz=86
G17A **Pierce Place,** 85.41 39 ⇓P P 02 21 19.7 +0.1
baz=86
A13A **Flathead Natio** 85.42 34 ⇓P P 02 21 18.9 -0.5
baz=86
P23A **Jefferson** 85.43 46 ⇑P P 02 21 20.5 +0.5
baz=86
K20A **Yellowstone Ra** 85.45 42 ⇑P P 02 21 19.1 -0.7
baz=86,SNR=5.6
U26A **Atchley Ranch,** 85.45 49 ⇓P P 02 21 20.1 +0.1
baz=86,SNR=9.8
Z29A **Hungry Hill Ra** 85.52 53 ⇓P P 02 21 20.1 -0.2
baz=86,SNR=13
M21A **Separation Pea** 85.53 43 ⇑P P 02 21 20.0 -0.3
baz=86,SNR=10
532A **Rocksprings** 85.54 56 ⇓P P 02 21 20.7 +0.3
baz=86,SNR=20
E16A **East Helena** 85.54 37 ⇓P P 02 21 19.7 -0.4
baz=86,SNR=8.5
HRY **Holter Researc** 85.56 37 eP P 02 21 19.4 -0.7
S25A **Robets Cordova** 85.56 48 ⇑P P 02 21 20.6 0.0
baz=86,SNR=8.3
331A **San Angelo** 85.64 55 ⇑P P 02 21 20.9 0.0
baz=86
DOT **Dot Lake** 85.69 12 eP P 02 21 20.1 -0.2
comp=Z,84nm,1.2s
B14A **Marquette Ranc** 85.69 35 ⇓P P 02 21 19.6 -1.2
baz=86,SNR=6.2
Q24A **Divide** 85.69 46 ⇓P P 02 21 21.4 +0.1
baz=86
H18A **Shoshone NF, C** 85.71 40 ⇓P P 02 21 20.6 -0.5
baz=86
L21A **Rawlins** 85.71 43 ⇓P P 02 21 20.8 -0.4
baz=86,SNR=5.5
X28A **Dimmitt** 85.72 51 ⇓P P 02 21 21.4 +0.1
baz=86,SNR=11
C15A **Salmond Ranch,** 85.72 36 ⇑P P 02 21 20.0 -1.0
baz=86,SNR=6.9
N22A **Wattenberg Ran** 85.72 44 ⇑P P 02 21 21.5 +0.2
baz=86
JCT **Junction City** 85.77 56 eP P 02 21 20.7 -0.8
JCT pmax pmax
comp=Z,10.0nm,1.0s
JCT **Junction City** 85.77 56 eP P 02 21 20.6 -0.8
comp=Z,10nm,1.0s
JCT **Junction City** 85.77 56 ⇑P P 02 21 21.3 -0.2
baz=86
I19A **Meeteetse** 85.77 40 ⇓P P 02 21 21.5 +0.1
baz=86
F17A **Fitzpatrick Pl** 85.78 38 ⇓P P 02 21 21.4 0.0
baz=86,SNR=5.3
130A **Snyder** 85.78 53 ⇓P P 02 21 21.6 0.0
baz=86
O23A **Lake Granby, G** 85.78 45 ⇑P P 02 21 21.7 0.0
baz=86
ISCO **Idaho Springs** 85.79 45 ⇑P P 02 21 22.2 +0.5
baz=86
V27A **Dan Oppiter Fa** 85.81 50 ⇓P P 02 21 22.3 +0.6
baz=86
Y29A **Porterfield Fa** 85.81 52 ⇓P P 02 21 22.0 +0.3
baz=86,SNR=5.9
WHN **Wilan** 85.87 304 P P 02 21 25.0 +3.1
D16A **Dana Ranch, Ca** 85.89 37 ⇑P P 02 21 22.2 +0.3
baz=86
R25A **Fountain Ranch** 85.90 47 ⇑P P 02 21 22.2 +0.1
baz=86
T26A **Comanche Natio** 85.92 48 ⇓P P 02 21 22.2 -0.1
baz=86
M22A **Cedar Creek Ra** 85.93 44 ⇑P P 02 21 22.0 -0.3
baz=86
432A **Menard** 85.94 55 ⇓P P 02 21 22.1 -0.3
baz=86,SNR=7.1
Z30A **Sanderson Ranc** 85.96 53 ⇓P P 02 21 22.3 -0.1
baz=86,SNR=14
E17A **Martinsdale** 85.97 38 ⇑P P 02 21 22.2 -0.1
baz=86
J20A **Shoshoni** 85.97 41 ⇓P P 02 21 22.1 -0.3
baz=86,SNR=6.4
231A **Bronte** 85.99 54 ⇑P P 02 21 22.2 -0.4
baz=86,SNR=12
W28A **Vega** 86.04 51 ⇓P P 02 21 22.7 -0.1
baz=86
X29A **Tulia** 86.05 52 ⇓P P 02 21 23.2 +0.3
baz=86,SNR=6.2
B15A **Bradely Ranch,** 86.06 35 ⇓P P 02 21 22.6 0.0
baz=86
COLA **College** 86.10 10 eP P 02 21 21.1 -1.1
COLA e*PP pP 02 21 42.6 +9.3
COLA pmax pmax
comp=Z,54nm,1.0s
COLA **College** 86.10 10 eP P 02 21 21.1 -1.1
comp=Z,54nm,1.0s
COLA epP pP 02 21 42.6 +9.3
N23A **Red Feather La** 86.10 44 ⇓P P 02 21 23.3 +0.1
baz=86
G18A **Lazy EL Ranch,** 86.11 39 ⇑P P 02 21 23.0 0.0
baz=86
H19A **Powell** 86.11 40 ⇓P P 02 21 23.2 +0.2
baz=86
U27A **Thompson Grove** 86.12 49 ⇓P P 02 21 23.1 -0.1
baz=86
P24A **Kohler Place,** 86.12 46 ⇓P P 02 21 23.2 -0.1
baz=86
K21A **Alcova** 86.13 42 ⇑P P 02 21 23.0 -0.2
baz=86
ILAR **Eielson Array** 86.17 11 P P 02 21 21.1 -1.6
ILAR PKKPbc PKKPbc 02 39 21.9 -2.8
ILAR **Eielson Array** 86.17 11 P P 02 21 21.1 -1.6
comp=Z,8.9nm,1.0s,baz=217,slow=5.0,SNR=58
ILAR PKKPbc PKKPbc 02 39 21.9 -2.8
comp=Z,0.2nm,0.7s,baz=330,slow=3.9,SNR=4.2
ILAR LR LR 03 00 26.2
comp=Z,101nm,18.4s,baz=139,slow=36
332A **Millersview** 86.20 55 ⇓P P 02 21 23.4 -0.2
baz=86,SNR=5.6
C16A **Fuhringer Ranc** 86.22 36 ⇑P P 02 21 22.5 -0.9
baz=86
S26A **Kim** 86.22 48 ⇑P P 02 21 23.6 -0.1
baz=86
V28A **Channing** 86.25 50 ⇓P P 02 21 24.1 +0.2
baz=86
131A **Roby** 86.26 54 ⇑P P 02 21 23.9 0.0
baz=86,SNR=7.2
I20A **Worland** 86.26 41 ⇓P P 02 21 23.6 -0.1
baz=86
AMTX **Amarillo** 86.26 51 eP P 02 21 23.6 -0.3
comp=Z,37nm,1.0s
AMTX epP pP 02 21 35.6 +0.7
Q25A **Bedland, Calha** 86.29 47 ⇓P P 02 21 24.2 +0.1
baz=86
L22A **Ellis Ranch, M** 86.35 43 ⇑P P 02 21 24.5 +0.2
baz=86
PLCA **Paso Flores** 86.36 132 eP P 02 21 25.8 +1.3
comp=Z,50nm,1.4s
PLCA **Paso Flores** 86.36 132 P P 02 21 25.0 +0.6
comp=Z,14nm,1.0s,baz=249,slow=6.0,SNR=18
J21A **Lysite** 86.37 42 ⇓P P 02 21 24.3 -0.1
baz=86,SNR=10
W29A **Amraillo** 86.39 51 ⇓P P 02 21 24.8 +0.3
baz=86,SNR=5.0
Y30A **Stafford Cattl** 86.39 52 ⇓P P 02 21 24.9 +0.4
baz=86
D17A **Six Diamond Ra** 86.45 37 ⇓P P 02 21 24.3 -0.3
baz=87,SNR=7.0
T27A **Campo** 86.49 49 ⇑P P 02 21 24.9 -0.1
baz=87
SEY **Seymchan** 86.49 345 eP P 02 21 23.3 -0.9
M23A **Laramie** 86.53 44 ⇓P P 02 21 25.3 0.0
baz=87
U28A **Mallet** 86.53 50 ⇑P P 02 21 25.3 0.0
baz=87
R26A **Arlington** 86.55 47 ⇓P P 02 21 25.4 +0.1
baz=87
E18A **Harlowton** 86.58 38 ⇑P P 02 21 25.3 +0.1
baz=87,SNR=6.5
P25A **Willow Gulch B** 86.62 46 ⇑P P 02 21 25.7 -0.1
baz=87
S27A **Las Animas** 86.65 48 ⇑P P 02 21 25.5 -0.3
baz=87
X30A **Coker Ranch, T** 86.66 52 ⇑P P 02 21 25.8 0.0
baz=87,SNR=6.9
C17A **Wharram Farm,** 86.67 37 ⇑P P 02 21 25.3 -0.4
baz=87
I21A **Big Trails, Te** 86.70 41 ⇓P P 02 21 25.4 -0.6
baz=87
Z31A **Sharp Cattle R** 86.72 53 ⇑P P 02 21 26.1 0.0
baz=87
F19A **Roth Farm, Mol** 86.76 39 ⇓P P 02 21 26.1 -0.1
baz=87
N24A **Carr** 86.77 45 ⇑P P 02 21 26.6 +0.2
baz=87
Q26A **Hugo** 86.79 47 ⇓P P 02 21 26.4 -0.2
baz=87
ABTX **Abilene, Hawle** 86.80 54 ⇓P P 02 21 26.5 0.0
baz=87,SNR=9.4
V29A **Stinnett** 86.82 50 ⇑P P 02 21 26.9 +0.3
baz=87
L23A **Garrett** 86.86 43 ⇑P P 02 21 26.5 -0.4
baz=87
G20A **Bridger** 86.87 40 ⇓P P 02 21 26.7 0.0
baz=87
Y31A **Rekieta Farm,** 86.91 53 ⇑P P 02 21 26.9 -0.1
baz=87,SNR=8.9
A16A **West Butte Ran** 86.94 35 ⇓P P 02 21 26.5 -0.5
baz=87
O25A **Wiggins** 86.94 46 ⇑P P 02 21 26.9 -0.3
baz=87
T28A **Walsh** 86.95 49 ⇓P P 02 21 26.9 -0.4
baz=87
D18A **Linhart Farms,** 86.98 37 ⇓P P 02 21 27.2 +0.1
baz=87
R27A **Eads** 87.00 48 ⇑P P 02 21 27.0 -0.5
baz=87
J22A **Midwest** 87.01 42 ⇑P P 02 21 26.9 -0.6
baz=87
B17A **L&G Farms, Che** 87.02 36 ⇑P P 02 21 26.5 -0.7
baz=87
M24A **Cheyenne** 87.12 44 ⇑P P 02 21 28.1 0.0
baz=87
E19A **Rath Farm, Rou** 87.18 38 ⇑P P 02 21 28.1 -0.1
baz=87
P26A **Davis Ranch, A** 87.21 46 ⇓P P 02 21 28.4 -0.2
baz=87
Z32A **Haskell** 87.22 53 ⇓P P 02 21 28.7 +0.2
baz=87,SNR=22
EGAK **Eagle** 87.29 13 eP P 02 21 27.7 -0.4
S28A **Manter** 87.31 49 ⇑P P 02 21 28.9 -0.1
baz=88
V30A **Spur Ranch, Mi** 87.37 51 ⇑P P 02 21 29.7 +0.4
baz=88
X31A **McDonald Ranch** 87.41 52 ⇑P P 02 21 29.2 -0.2
baz=88
A17A **Triple J Farms** 87.43 36 ⇑P P 02 21 29.0 -0.2
baz=88
Y32A **R-V Farms, Ver** 87.54 53 ⇑P P 02 21 30.3 +0.3
baz=88,SNR=9.8
O26A **Horse Wrangler** 87.55 46 ⇓P P 02 21 30.1 0.0
baz=88
T29A **Hugoton** 87.55 49 ⇓P P 02 21 29.9 -0.2
baz=88
B18A **Beardsley Farm** 87.64 36 ⇓P P 02 21 29.9 -0.4
baz=88
W31A **Holland Ranch,** 87.67 52 ⇑P P 02 21 30.6 -0.1
baz=88,SNR=7.4
H22A **Clearmont** 87.68 41 ⇑P P 02 21 30.3 -0.3
baz=88
C19A **Slack Wire Ran** 87.70 37 ⇑P P 02 21 30.8 +0.3
baz=88
R28A **Tribune** 87.72 48 ⇑P P 02 21 30.9 0.0
baz=88
N26A **Koester Ranch,** 87.88 45 ⇓P P 02 21 31.5 -0.2
baz=88
D20A **Manuel Ranch,** 87.89 38 ⇓P P 02 21 31.3 -0.2
baz=88
COLD **Coldfoot** 87.92 9 eP P 02 21 32.0 +0.9
comp=Z,12nm,1.2s
IPM **Ipoh** 87.98 275 eP P 02 21 33.9 +1.3
comp=Z,30nm,0.9s
IPM epP pP 02 21 45.5 +1.7
WHTX **Lake Whitney** 88.22 55 ⇑P P 02 21 33.2 -0.1
baz=88
BILL **Bilibino** 88.50 352 eP P 02 21 33.4 -0.4
BILL e 02 25 02.6
BILL eS SKSac 02 31 55.8 -3.9
BILL pmax pmax
comp=Z,8.0nm,1.3s
BILL **Bilibino** 88.50 352 eP P 02 21 33.1 -0.6
comp=Z,10nm,1.1s
KULM **Kulim** 88.60 276 eP P 02 21 35.7 +0.2
comp=Z,8.2nm,0.8s
BJI **Beijing** 88.67 313 P P 02 21 36.5 +1.3
BJI S S 02 32 26.5 +6.9
BJI pmax pmax
comp=Z,18nm,1.3s
BJI pmax pmax
comp=Z,270nm,3.3s
BJI LR LR
comp=N,140nm,18.8s
BJI LR LR
comp=E,130nm,19.3s
BJI LR LR
comp=Z,190nm,25.2s
HKT **Hockley** 88.69 58 eP P 02 21 36.5 +1.0
HKT pmax pmax
comp=Z,33nm,1.7s
HKT **Hockley** 88.69 58 eP P 02 21 36.5 +1.0
comp=Z,33nm,1.7s
K26A **Motz Farm, Whi** 88.78 44 ⇑P P 02 21 36.0 +0.2
baz=89
SYO **Syowa Base** 88.88 191 eP P 02 21 34.4 -1.4
RSSD **Black Hills** 88.90 42 eP P 02 21 35.2 -1.4
RSSD pmax pmax
comp=Z,3.0nm,0.9s
RSSD **Black Hills** 88.90 42 eP P 02 21 35.2 -1.4
comp=Z,3.4nm,0.9s
SNAA **Sanae** 88.94 177 eP P 02 21 35.9 -0.2
comp=Z,21nm,1.2s
PSI **Prapat** 89.41 273 P P 02 21 36.8 -2.7
comp=Z,26nm,1.1s
PSI **Prapat** 89.41 273 P P 02 21 40.6 +1.1
baz=89,SNR=7.2
ENH **Enshi** 89.61 302 eP P 02 21 41.9 +2.0
comp=Z,58nm,1.4s
B22A **Reddig Ranch S** 89.75 38 ⇑P P 02 21 40.3 +0.1
baz=90
C23A **Lambert** 89.98 39 ⇑P P 02 21 41.4 +0.2
baz=90
D24A **Glendive** 90.15 39 ⇑P P 02 21 42.3 +0.2
baz=90
B23A **Brockton** 90.41 38 ⇓P P 02 21 43.6 +0.3
baz=91
GYA **Guiyang** 90.49 298 P P 02 21 45.0 +0.7
GYA PP PP 02 25 21.5 +2.0
GYA SKS SKSac 02 32 13.8 +0.3
GYA S S 02 32 37.0 -0.4
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.6s
GYA LR LR
comp=N,580nm,20.8s
GYA LR LR
comp=E,530nm,21.5s
GYA LR LR
comp=Z,640nm,20.8s
LCO **Las Campanas** 90.72 121 eP P 02 21 46.5 +0.9
comp=Z,84nm,1.4s
TUL1 **Tulsa** 91.05 52 ⇓P P 02 21 46.9 +0.4
baz=91
JTS **JuntasAbangare** 91.23 80 eP P 02 21 49.1 +1.2
comp=Z,131nm,0.9s
JTS epP pP 02 22 01.0 +2.0
XAN **Xi'an** 91.48 306 P P 02 21 49.8 +1.2
XAN pP pP 02 22 00.8 +1.0
XAN SKS SKSac 02 32 19.8 +1.1
XAN pmax pmax
comp=Z,4.0nm,1.3s
XAN pmax pmax
comp=Z,31nm,5.2s
XAN LR LR
comp=N,78nm,20.4s
XAN LR LR
comp=Z,48nm,17.3s
CLNS **Chul'man** 92.01 331 eP P 02 21 51.4 +0.9
CLNS pmax pmax
comp=Z,18nm,1.3s
CLNS pmax pmax
comp=E,9.0nm,1.3s
CLNS pmax pmax
comp=N,10.0nm,1.3s
HHC **Hu-ho-hao-te** 92.20 313 eP P 02 21 51.0 -0.9
HHC PP PP 02 25 33.5 +0.8
HHC SKS SKSac 02 32 21.8 -0.8

HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,270nm,3.6s
HHC LR LR
comp=N,530nm,20.2s
HHC LR LR
comp=E,400nm,17.8s
KMI Kunming 93.34 295 P **P** **02 21 58.3 +0.7**
KMI pP **pP** **02 22 09.0 +0.2**
KMI PP **PP** **02 25 41.5 -0.6**
KMI S **S** **02 32 59.5 -3.8**
KMI sS **sS** **02 33 17.5 -4.4**
KMI SS **SS** **02 39 19.5 -0.9**
KMI pmax pmax
comp=Z,17nm,0.5s
KMI pmax pmax
comp=Z,130nm,5.5s
KMI LR LR
comp=N,140nm,17.2s
KMI LR LR
comp=E,230nm,16.7s
KMI LR LR
comp=Z,270nm,23.3s
YKA Yellowknife Ar 93.43 23 P **P** **02 21 55.8 -1.1**
YKA Yellowknife Ar 93.43 23 P **P** **02 21 55.7 -1.1**
comp=Z,2.4nm,0.8s,baz=237,slow=4.2,SNR=44
YKW3 Yellowknife Ar 93.47 23 *e*P **P** **02 21 55.9 -1.1**
comp=Z,0.1nm,0.8s
TRQA Tornquist 93.51 132 *e*P **P** **02 21 59.4 +1.4**
comp=Z,7.1nm,1.0s
ECSD EROS Data Cent 93.56 45 *e*P **P** **02 21 57.6 -0.3**
comp=Z,22nm,1.3s
ECSD *e*pP **pP** **02 22 09.2 +0.1**
CD2 Chengdu 94.44 301 P **P** **02 22 02.0 -0.3**
CD2 pP **pP** **02 22 13.8 +0.3**
CD2 sP **sP** **02 22 18.0 +0.5**
CD2 PP **PP** **02 25 52.3 +1.9**
CD2 SKS **SKSac** **02 32 32.5 -2.7**
CD2 S **S** **02 33 08.0 -4.4**
CD2 sS **sS** **02 33 27.8 -3.1**
CD2 SS **SS** **02 39 34.5 -1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.4s
CD2 LR LR
comp=N,330nm,16.6s
CD2 LR LR
comp=E,230nm,18.6s
CD2 LR LR
comp=Z,220nm,16.6s
CMAR Chiang Mai Arr 94.49 288 P **P** **02 22 02.1 -0.6**
CMAR Chiang Mai Arr 94.49 288 P **P** **02 22 02.1 -0.6**
comp=Z,3.5nm,0.8s,baz=128,slow=4.5,SNR=13
CMAR LR LR 03 04 34.9
comp=Z,96nm,18.7s,baz=287,slow=36
CHTO Chiang Mai 94.61 288 *e*P **P** **02 22 03.5 +0.2**
CHTO pmax pmax
comp=Z,3.0nm,0.4s
CHTO Chiang Mai 94.61 288 *e*P **P** **02 22 03.5 +0.2**
comp=Z,2.5nm,0.4s
CHTO Chiang Mai 94.61 288 P **P** **02 22 02.9 -0.4**
LVC Limon Verde 94.68 116 *e*P **P** **02 22 05.5 +1.5**
comp=Z,41nm,1.1s
FFC Flin Flon 95.01 33 *e*P **P** **02 22 04.3 +0.1**
FFC pmax pmax
comp=Z,4.0nm,1.0s
FFC Flin Flon 95.01 33 *e*P **P** **02 22 04.3 +0.1**
comp=Z,4.3nm,1.0s
GNAR Gosnell 95.44 54 *e*P P 02 21 59.8 -6.9
comp=Z,1μm,0.5s
LZH Lanzhou 96.10 306 *e*P **P** **02 22 12.5 +2.5**
LZH *e*PP **PP** **02 26 07.5 +4.2**
LZH SKS **SKSac** **02 32 47.0 +2.9**
LZH *e*S **ScS** **02 33 27.8 +0.4**
LZH pmax pmax
comp=Z,20nm,1.5s
LZH pmax pmax
comp=Z,100nm,8.0s
LZH LR LR
comp=N,260nm,18.0s
LZH LR LR
comp=E,220nm,18.2s
LZH LR LR
comp=Z,380nm,19.8s
ULM Lac du Bonnet 96.56 39 LR LR 03 03 02.7
comp=Z,229nm,18.5s,baz=305,slow=34
SPMN St. Paul 96.64 44 ⇑P **P** **02 22 11.7 -0.2**
baz=97
LPAZ La Paz 97.81 110 *e*P Pdif 02 22 20.2 +1.4
comp=Z,3.5nm,1.2s
LPAZ La Paz 97.81 110 P Pdif 02 22 20.4 +1.6
comp=Z,0.8nm,0.6s,baz=254,slow=2.0,SNR=3.4
SONM Songino Array 98.23 318 LR LR 03 02 27.4
comp=Z,148nm,21.2s,baz=236,slow=33
TIXI Tiksi 98.97 344 *e*P Pdif 02 22 22.0 +0.2
TIXI pmax pmax
comp=Z,2.0nm,1.3s
GTA Gaotai 100.17 308 *e*P **Pdif** **02 22 31.5 +3.4**
GTA pP pP 02 22 41.8 +2.5
GTA sP sP 02 22 46.0 +2.7
GTA PP **PP** **02 26 38.5 +4.1**
GTA SKS **SKSac** **02 33 05.8 +1.3**
GTA S **Sdif** **02 34 00.8 -0.3**
GTA sS **sS** **02 34 18.3 -1.5**
GTA SS **SS** **02 40 56.5 +0.3**
GTA pmax pmax
comp=Z,2.0nm,0.8s
GTA pmax pmax
comp=Z,71nm,5.9s
GTA LR LR
comp=N,190nm,20.2s
GTA LR LR
comp=E,250nm,22.6s
GTA LR LR
comp=Z,270nm,24.0s
SIV San Ignacio 104.13 113 Pdif **Pdif** **02 22 46.1 -0.1**
SIV San Ignacio 104.13 113 Pdiff **Pdif** **02 22 46.1 -0.1**
comp=Z,0.2nm,0.4s,baz=301,slow=7.7,SNR=4.2
ZALV Zalesovo Beam 112.74 321 PKIKP **PKiKP** **02 27 16.7 -1.5**
ZALV Zalesovo Beam 112.74 321 PKiKP **PKiKP** **02 27 16.6 -1.5**
ZALV Zalesovo Beam 112.74 321 PKiKP **PKiKP** **02 27 16.6 -1.5**
comp=Z,0.7nm,0.3s,baz=241,slow=1.5,SNR=3.9
MK31 Makanchi Array 114.06 313 *e*PKIKP **PKiKP** **02 27 20.6 -0.4**
MK31 Makanchi Array 114.06 313 *e*PKiP **PKiKP** **02 27 20.6 -0.4**
MKAR Makanchi Array 114.06 313 *c i*PKiKP **PKiKP** **02 27 20.6 -0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 114.06 313 PKiKP PKPdf 02 27 19.7 -1.3
MKAR PP **PP** **02 28 15.3 -0.6**
MKAR PKKPbc **PKKPbc** **02 38 03.4 0.0**
MKAR Makanchi Array 114.06 313 PKiKP PKPdf 02 27 19.7 -1.3
comp=Z,0.8nm,0.5s,baz=176,slow=0.7,SNR=12
MKAR PP **PP** **02 28 15.3 -0.6**
comp=Z,0.8nm,0.9s,baz=76,slow=6.4,SNR=3.5
MKAR PKKPbc **PKKPbc** **02 38 03.4 0.0**
comp=Z,0.2nm,0.5s,baz=278,slow=3.6,SNR=3.7
KURK Kurchatov 116.54 318 PKIKP **PKPdf** **02 27 23.6 -2.0**
KURK 02 28 37.6
KURK Kurchatov 116.54 318 PKP **PKPdf** **02 27 23.6 -2.0**
KURK *e*PKPdf **PKPdf** **02 27 23.7 -2.0**
KURK PP **PP** **02 28 37.5 +4.4**
KURK PKKPbc **PKKPbc** **02 37 54.1 -0.7**
KURBB Kurchatov Arra 116.59 318 PKP **PKPdf** **02 27 23.6 -2.1**
comp=Z,0.9nm,0.5s,baz=106,slow=1.8,SNR=11
KURBB PP **PP** **02 28 37.5 +4.0**
comp=Z,0.6nm,0.8s,baz=90,slow=6.8,SNR=5.0
KURBB PKKPbc **PKKPbc** **02 37 54.1 -0.5**
comp=Z,1.4nm,1.0s,baz=265,slow=4.6,SNR=9.8
TKM2 Tokmak 2 118.70 309 *e*PKIKP **PKPdf** **02 27 29.9 -0.4**
TKM2 Tokmak 2 118.70 309 *e*PKPdf **PKPdf** **02 27 29.9 -0.4**
AAK Ala-Archa 119.51 309 *e*PKIKP **PKPdf** **02 27 31.7 -0.1**
AAK Ala-Archa 119.51 309 *e*PKPdf **PKPdf** **02 27 31.7 -0.1**
EKS2 Erkin-Say 120.04 309 *e*PKIKP **PKPdf** **02 27 32.2 -0.6**
EKS2 Erkin-Say 120.04 309 *e*PKPdf **PKPdf** **02 27 32.2 -0.6**
BRVK Borovoye 121.45 321 ⇑*i*PKIKP **PKPdf** **02 27 34.2 -0.8**
BRVK pmax pmax
comp=Z,6.0nm,1.2s
BRVK Borovoye 121.45 321 *e*PKPdf **PKPdf** **02 27 34.2 -0.8**
KBL Kabul 123.72 299 *e*PKIKP **PKPdf** **02 27 39.6 -0.6**
KBL Kabul 123.72 299 *e*PKPdf **PKPdf** **02 27 39.6 -0.6**
ARU Arti 127.03 327 *i* PKIKP **PKPdf** **02 27 45.5 -0.1**
ARU 02 29 40.6
ARU 02 34 47.1

ARCES ARCESS Array B 128.60 352 PKP **PKPdf** **02 27 46.8 -1.5**
ARCES ARCESS Array B 128.60 352 PKP **PKPdf** **02 27 46.8 -1.5**
comp=Z,3.9nm,0.4s,baz=54,slow=1.2,SNR=63
ABKAR Akbulak array 128.64 318 *e*PKPdf **PKPdf** **02 27 49.6 +0.8**
BOSA Boshof 129.26 200 PKP **PKPdf** **02 27 50.6 -0.4**
BOSA *e*PKPdf **PKiKP** **02 27 51.9 +0.2**
BOSA Boshof 129.26 200 PKP **PKPdf** **02 27 50.6 -0.4**
comp=Z,1.7nm,0.7s,baz=180,slow=6.7,SNR=4.5
KLMR Klimovskoe 132.72 339 PKIKP **PKPdf** **02 27 54.9 -1.3**
KLMR pmax pmax
comp=Z,16nm,1.5s
FINES FINESS Array B 135.93 347 PKP **PKPdf** **02 28 01.4 -0.9**
FINES FINESS Array B 135.93 347 PKP **PKPdf** **02 28 01.4 -0.9**
comp=Z,1.8nm,0.5s,baz=48,slow=2.8,SNR=9.7
OBN Obninsk 137.98 335 ⇑*i*PKIKP **PKPdf** **02 28 06.6 +0.4**
OBN *e* 02 30 57.9
OBN pmax pmax
comp=Z,13nm,1.2s
NB2 NORSAR Subarra 138.26 357 PKP **PKPdf** **02 28 08.6 +1.9**
comp=Z,0.7nm,0.6s,baz=17,slow=2.6
NOA NORSAR Array B 138.26 357 PKP **PKPdf** **02 28 06.4 -0.2**
NOA NORSAR Array B 138.26 357 PKP **PKPdf** **02 28 06.4 -0.2**
comp=Z,1.7nm,0.7s,baz=13,slow=4.0,SNR=3.6
HFS Hagfors 139.01 355 PKPpre PKPpre 02 27 59.1
HFS PKP **PKPdf** **02 28 08.0 0.0**
HFS Hagfors 139.01 355 PKhKP PKPpre 02 27 59.1
comp=Z,2.0nm,0.7s,baz=123,slow=7.3,SNR=5.1
HFS PKP **PKPdf** **02 28 08.0 0.0**
comp=Z,2.5nm,0.6s,baz=54,slow=2.6,SNR=6.9
KIV Kislovodsk 141.62 318 *i* PKIKP **PKPdf** **02 28 16.7 +3.3**
KIV pmax pmax
comp=Z,3.0nm,0.9s
KIV MLR MLR
comp=Z,109nm,22.0s
ESK Eskdalemuir 143.22 10 *e*PKIKP PKPbc 02 28 14.3 +1.6
ESK Eskdalemuir 143.22 10 *e*PKPdf PKPbc 02 28 14.3 +1.6
SUW Suwalki 143.32 344 *e*PKP PKPbc 02 28 13.0 0.0
HAKT HAKKARI 143.52 308 *i* P PKPbc 02 28 14.3 -0.2
SOC Sochi 143.67 319 *e*PKIKP **PKPdf** **02 28 17.0 +0.1**
SOC *e* 02 31 27.9
SOC MLR MLR
comp=Z,185nm,22.0s
BHD Baghdad 144.21 300 *i* x PKPab 02 28 09.5 -6.4
AKASG Malin Array Be 144.22 336 PKIKP **PKPab** **02 28 14.5 -0.9**
AKASG Malin Array Be 144.22 336 PKP **PKPab** **02 28 14.5 -0.9**
AKASG Malin Array Be 144.22 336 PKP **PKPab** **02 28 14.5 -0.9**
comp=Z,3.3nm,0.5s,baz=37,slow=4.1,SNR=14
KIEV Kiev 144.24 336 *e*PKIKP **PKPab** **02 28 14.3 -1.2**
KIEV Kiev 144.24 336 *e*PKPdf **PKPab** **02 28 14.2 -1.2**
KMBO Kilima Mbogo 144.26 239 *e*PKPdf PKPbc 02 28 17.9 +0.5
KMBO PKP **PKPab** **02 28 18.1 +1.2**
KMBO Kilima Mbogo 144.26 239 PKP PKPbc 02 28 18.1 +0.8
comp=Z,11nm,0.9s,baz=72,slow=4.7,SNR=24
ANN Anapa 144.37 322 *e*PKIKP PKPbc 02 28 17.1 +0.7
ANN pmax pmax
comp=Z,137nm,7.2s
BNGL ENGOL 144.87 311 *i* P **PKPdf** **02 28 20.2 +0.8**
KOPT Kop Dagi 144.88 313 *i* P **PKPab** **02 28 15.1 -3.5**
GKP Gorka Klasztor 145.29 350 *e*PKP **PKPbc** **02 28 17.9 -1.2**
BSEG Bad Segeberg 145.40 357 *e*PKPbc **PKPbc** **02 28 19.4 0.0**
BSEG Bad Segeberg 145.40 357 *e*PKIKP **PKPbc** **02 28 19.4 0.0**
KELT Kelkit 145.67 314 *i* P **PKPdf** **02 28 20.2 -0.5**
MARD Mardin 145.78 309 *i* P **PKPdf** **02 28 20.2 -0.7**
BEL Belsk 145.90 345 *e*PKPc 02 28 22.4
DIYA Diyarbakir 146.02 310 *i* P **PKPab** **02 28 23.0 +0.4**
SIM Simferopol' 146.14 325 *d i*PKP2 **PKPab** **02 28 23.0 +0.3**
SIM pmax pmax
comp=Z,27nm,0.7s
SUSE Susehri 146.35 315 *i* P **PKPab** **02 28 23.9 0.0**
RUE Ruedersdorf 146.56 353 *e*PKPbc **PKPbc** **02 28 22.9 -0.1**
KEMA Kemaliye 146.59 313 *i* P **PKPbc** **02 28 23.9 +0.2**
SFNV Sufian 146.61 307 *e*P **PKPbc** **02 28 23.6 -0.2**
LVV L'vov 146.80 340 *e*PKP2 **PKPbc** **02 28 24.1 +0.3**
NRDL Niedersach Rie 146.85 357 *e*PKPbc **PKPbc** **02 28 24.1 +0.3**
ERBA Erbaa 147.06 317 *i* P **PKPbc** **02 28 25.3 +0.3**
KIS Kishinev 147.30 332 *e*PKP2 **PKPdf** **02 28 24.0 +1.1**
KIS pmax pmax
comp=Z,360nm,3.0s
KIS Kishinev 147.30 332 *e*PKP **PKPdf** **02 28 24.0 +1.1**
comp=Z,400nm,3.0s
KIS *e*SKSP 02 42 08.0
KIS *e*LR LR 03 29 58.0
comp=Z,300nm,19.0s
KWP Kalwaria Pacla 147.37 341 ⇑PKP2 **PKPbc** **02 28 26.2 +0.7**
KWP Kalwaria Pacla 147.37 341 *e*PKPbc **PKPbc** **02 28 25.1 -0.4**
KWP Kalwaria Pacla 147.37 341 ⇑*i*P **PKPbc** **02 28 26.2 +0.7**
KWP Kalwaria Pacla 147.37 341 *e*PKP **PKPbc** **02 28 25.8 +0.3**
TOKA Tokat 147.43 316 *i* P **PKPdf** **02 28 24.7 +1.2**
HAVZ Havza 147.52 318 *i* P **PKPbc** **02 28 27.2 +1.0**
KSP Ksiaz 147.78 349 *e*PKP2 **PKPbc** **02 28 27.5 +1.0**
KSP Ksiaz 147.78 349 *e*PKP **PKPab** **02 28 28.0 -0.9**
CLL Collm 147.80 353 *e*PKPbc **PKPbc** **02 28 26.5 0.0**
CLL Collm 147.80 353 *i* PKP2 **PKPbc** **02 28 27.0 +0.5**
CLL pmax pmax
comp=Z,85nm,1.9s
CLL Collm 147.80 353 *i* PKPbc **PKPbc** **02 28 27.0 +0.5**
comp=Z,85nm,1.9s
CLL *i* PKPab **PKPab** **02 28 29.2 +0.2**
comp=Z,61nm,1.3s
CLL *ep*PKPbc **pPKPbc** **02 28 38.0 +0.1**
CLL *i* 02 28 46.8
CLL LmV 03 43 00.0
comp=Z,100nm,20.2s
STHS Stebnicka Huta 147.99 343 *e*PKP2 **PKPbc** **02 28 28.3 +1.1**
STHS Stebnicka Huta 147.99 343 *e*PKP **PKPbc** **02 28 28.3 +1.1**
GZT Gaziantep 148.10 311 *i* P **PKPbc** **02 28 28.7 +0.6**
KOLS Kolonicke sedl 148.12 341 *e*PKP2 **PKPdf** **02 28 25.5 +1.1**
KOLS Kolonicke sedl 148.12 341 *e*PKP **PKPdf** **02 28 25.4 +1.1**
UPC Upice 148.16 349 *e*PKP2 **PKPbc** **02 28 26.2 -1.4**
UPC Upice 148.16 349 ⇓*e*PKP **PKPbc** **02 28 26.2 -1.4**
BUR08 Bucovina Ar. S 148.25 337 *e*PKPbc **PKPbc** **02 28 28.9 +0.9**
BURAR Bucovina Array 148.26 337 ⇑*i*P **PKPbc** **02 28 29.3 +1.2**
CTKT Corum 148.35 316 *i* P **PKPbc** **02 28 29.2 +0.6**
PVCC Panska Ves 148.36 351 *e*PKIKP **PKPdf** **02 28 25.6 +1.0**
PVCC Panska Ves 148.36 351 ⇑*e*PKP **PKPdf** **02 28 25.6 +1.0**
OKC Ostrava-Krasne 148.38 347 *e*PKP2 **PKPbc** **02 28 28.4 +0.3**
OKC MLR MLR
comp=Z,200nm,17.4s
OKC Ostrava-Krasne 148.38 347 ⇑*e*PKP **PKPbc** **02 28 28.4 +0.3**
OKC AMS AMS 03 41 50.0
comp=Z,200nm,17.4s
UZH Uzhgorod 148.39 341 *c i*PKP2 **PKPbc** **02 28 28.6 +0.4**
CRVS Cervenica-Dubn 148.39 342 *e*PKIKP **PKPdf** **02 28 23.9 -0.8**
CRVS Cervenica-Dubn 148.39 342 *e*PKP **PKPdf** **02 28 23.9 -0.8**
MORC Moravsky Berou 148.56 347 *e*PKIKP **PKPdf** **02 28 25.3 +0.3**
MORC *e* 02 28 28.8
MORC Moravsky Berou 148.56 347 ⇑PKP2 **PKPbc** **02 28 29.8 +1.1**
MORC Moravsky Berou 148.56 347 *e*PKPdf **PKPdf** **02 28 25.3 +0.3**
MORC *e*PKPbc **PKPbc** **02 28 28.8 +0.1**
MORC *e*PKPab **PKPab** **02 28 32.6 +0.5**
MORC Moravsky Berou 148.56 347 ⇑*i*P **PKPbc** **02 28 29.8 +1.1**
MOX Moxa 148.59 355 *e*PKPbc **PKPbc** **02 28 28.8 +0.1**
MOX Moxa 148.59 355 *e*PKP2 **PKPbc** **02 28 28.8 +0.1**
TESR Tescani 148.60 334 ⇑*i*P **PKPbc** **02 28 29.6 +0.8**
AYKD Aykdinkavak 148.62 311 *i* P **PKPbc** **02 28 29.8 +0.6**
BALT Daday 148.69 321 *i* P **PKPbc** **02 28 30.5 +1.0**
WERD Werda 148.72 354 *e*PKPbc **PKPbc** **02 28 29.3 +0.2**
TRPA Tarpa 148.75 340 ⇑*i*P **PKPbc** **02 28 30.0 +0.9**
TRPA Tarpa 148.75 340 ⇓*e* **PKPbc** **02 28 29.1 0.0**
MEM Membach 148.79 2 PKPbc **PKPbc** **02 28 30.0 +0.9**
GUNZ Gunzen 148.80 354 *e*PKPbc **PKPbc** **02 28 29.5 +0.2**
WERN Wernitzgruen 148.87 354 *e*PKPbc **PKPbc** **02 28 30.1 +0.6**
PRU Pruhonice 148.89 351 *e*PKP2 **PKPbc** **02 28 30.1 +0.6**
PRU MLR MLR
comp=Z,200nm,16.4s
PRU Pruhonice 148.89 351 ⇑*e*PKP **PKPbc** **02 28 30.1 +0.6**
PRU *ep*PKP pPKPdf 02 28 44.2 +7.2
PRU AMS AMS 03 39 00.0
comp=Z,200nm,16.4s
NKC Novy Kostel 148.92 354 *e*PKP2 **PKPbc** **02 28 30.2 +0.6**
NKC Novy Kostel 148.92 354 ⇓*e*PKP **PKPbc** **02 28 30.2 +0.6**
NKC *ep*PKP **pPKPdf** **02 28 42.7 +5.7**
BCLA Clavier 148.96 3 PKPbc **PKPab** **02 28 31.7 -1.9**
CFR Carcaliu 148.99 331 ⇑PKP2 **PKPbc** **02 28 30.7 +0.9**
CFR Carcaliu 148.99 331 ⇑*i*P **PKPbc** **02 28 30.7 +0.9**
KECS Kecovo 149.05 343 *e*PKP2 **PKPbc** **02 28 30.7 +0.8**
KECS Kecovo 149.05 343 *e*PKP **PKPbc** **02 28 30.7 +0.8**
CDAG Cicekdag 149.17 317 *i* P **PKPbc** **02 28 30.4 -0.2**
TNS Taunus Mts 149.19 359 *e*PKPbc **PKPbc** **02 28 30.5 +0.2**
TNS Taunus Mts 149.19 359 *e*PKP2 **PKPbc** **02 28 30.5 +0.2**
MANZ Manzenberg 149.20 354 *e*PKPbc **PKPbc** **02 28 30.7 +0.4**
VRAC Vranov 149.20 348 ⇓*i*P **PKPbc** **02 28 31.3 +1.0**

DOU Dourbes 149.25 3 PKPbc **PKPbc** **02 28 30.5 +0.2**
AVNT Avonos 149.30 315 *i* P **PKPbc** **02 28 30.9 -0.2**
ROTZ Rotzenmuhle 149.40 354 *e*PKPbc **PKPbc** **02 28 31.4 +0.6**
TIRR Tirgusor 149.40 330 ⇓PKP2 **PKPbc** **02 28 31.1 +0.2**
TIRR Tirgusor 149.40 330 ⇓*i*P **PKPbc** **02 28 31.1 +0.2**
TREC Trest 149.41 349 *e*PKP2 **PKPbc** **02 28 30.5 -0.3**
TREC MLR MLR
comp=Z,300nm,19.3s
TREC Trest 149.41 349 ⇑*e*PKP **PKPbc** **02 28 30.5 -0.3**
TREC AMS AMS 03 39 00.0
comp=Z,300nm,19.3s
VYHS Vyhne 149.47 345 *e*PKIKP **PKPdf** **02 28 27.1 +0.6**
VYHS *e* 02 28 32.1
VYHS Vyhne 149.47 345 *e*PKP **PKPdf** **02 28 27.1 +0.6**
VYHS *e* 02 28 32.1
GRF Grafenberg Arr 149.57 355 *e*PKPbc **PKPbc** **02 28 32.0 +0.8**
GRF Grafenberg Arr 149.57 355 *e*PKP2 **PKPbc** **02 28 32.0 +0.8**
BRTR Keskin Array B 149.59 318 PKPbc **PKPbc** **02 28 31.3 -0.4**
BRTR Keskin Array B 149.59 318 PKPbc **PKPbc** **02 28 31.3 -0.4**
comp=Z,13nm,0.9s,baz=136,slow=2.3,SNR=56
MLR Muntele Rosu 149.71 334 ⇓*i*P **PKPbc** **02 28 32.0 +0.2**
RUP Ruppelstein 149.72 0 PKP2 **PKPbc** **02 28 32.7 +1.1**
RUP Ruppelstein 149.72 0 PKP **PKPbc** **02 28 32.7 +1.1**
PSZ Piszkesteto 149.73 343 ⇓PKP2 **PKPbc** **02 28 32.3 +0.6**
PSZ Piszkesteto 149.73 343 *e*PKPdf **PKPdf** **02 28 27.3 +0.3**
PSZ *e*PKPbc **PKPbc** **02 28 32.4 +0.6**
PSZ Piszkesteto 149.73 343 ⇓*i*P **PKPbc** **02 28 32.3 +0.6**
PSZ Piszkesteto 149.73 343 ⇓*e*PKPdf **PKPbc** **02 28 32.4 +0.6**
YAYL Yayladag 149.73 309 *i* P **PKPbc** **02 28 30.6 -1.6**
WLF Walferdange 149.74 2 PKPbc **PKPbc** **02 28 33.1 +1.5**
WLF Walferdange 149.74 2 *e*PKP2 **PKPbc** **02 28 32.8 +1.2**
WLF Walferdange 149.74 2 *e*PKPbc **PKPbc** **02 28 32.8 +1.2**
TOD Tromm 149.79 358 PKP2 **PKPbc** **02 28 32.5 +0.7**
TOD Tromm 149.79 358 PKP **PKPbc** **02 28 32.5 +0.7**
DRGR 149.86 339 ⇓PKP2 **PKPbc** **02 28 32.4 +0.3**
DRGR 149.86 339 ⇓*i*P **PKPbc** **02 28 32.4 +0.3**
KHC Kasperske Hory 149.87 352 *e*PKHKP PKPpre 02 28 26.5
KHC MLR MLR
comp=Z,300nm,15.6s
KHC Kasperske Hory 149.87 352 *e*PKPdf **PKPdf** **02 28 26.1 -1.0**
KHC *e*PKPbc **PKPbc** **02 28 31.6 -0.4**
KHC Kasperske Hory 149.87 352 *e*PKPDF **PKPdf** **02 28 26.5 -0.6**
KHC ⇑*e*PKP **PKPbc** **02 28 31.2 -0.8**
KHC *ep*PKP pPKPdf 02 28 48.3 +10
KHC AMS AMS 03 40 20.0
comp=Z,300nm,15.6s
ARNB Al Arnab 149.91 309 *e*P **PKPbc** **02 28 32.1 -0.4**
WET Wettzell 149.94 353 *e*PKPbc **PKPbc** **02 28 32.8 +0.7**
WET Wettzell 149.94 353 *e*PKP2 **PKPbc** **02 28 32.8 +0.7**
BBAL Bala 150.02 318 *i* P **PKPbc** **02 28 34.3 +1.6**
ANTO Ankara 150.04 318 *e*PKP2 **PKPbc** **02 28 33.2 +0.5**
ANTO Ankara 150.04 318 *e*PKPbc **PKPbc** **02 28 33.2 +0.5**
GULE Gulek 150.11 312 *i* P **PKPbc** **02 28 33.3 +0.2**
VOIR 150.13 335 ⇓PKP2 **PKPbc** **02 28 33.5 +0.7**
VOIR 150.13 335 ⇓*i*P **PKPbc** **02 28 33.5 +0.7**
GEC2 GERESS Array S 150.13 352 *e*PKPbc **PKPbc** **02 28 32.5 -0.2**
GEC2 GERESS Array S 150.13 352 *e*PKP2 **PKPbc** **02 28 32.5 -0.2**
GERES GERESS Array B 150.13 352 *e*PKPbc **PKPbc** **02 28 32.1 -0.5**
GERES GERESS Array B 150.13 352 *e*PKPbc **PKPbc** **02 28 32.1 -0.5**
comp=Z,4.4nm,0.8s,baz=48,slow=2.0,SNR=25
ZST Bratislava 150.15 347 *e*PKP2 **PKPbc** **02 28 32.2 -0.4**
ZST Bratislava 150.15 347 *e*PKP **PKPbc** **02 28 32.2 -0.4**
ARR Arges 150.35 335 ⇑*i*P **PKPbc** **02 28 34.2 +0.9**
BUD Budapest 150.36 344 ⇓*e*PKPdf **PKPbc** **02 28 33.5 +0.4**
LANF Langenberg 150.44 359 PKIKP **PKPbc** **02 28 34.5 +1.2**
LANF Langenberg 150.44 359 PKP **PKPbc** **02 28 34.5 +1.2**
LANF Langenberg 150.44 359 PKP **PKPbc** **02 28 34.5 +1.2**
SALA Sala 150.53 303 *e*P **PKPbc** **02 28 32.8 -1.5**
PKSG 150.61 345 ⇓*e*PKPdf **PKPbc** **02 28 34.1 +0.4**
STU Stuttgart 150.61 357 *e*PKPbc **PKPbc** **02 28 34.1 +0.4**
STU Stuttgart 150.61 357 *e*PKIKP **PKPbc** **02 28 34.3 +0.6**
STU Stuttgart 150.61 357 *e*PKPbc **PKPbc** **02 28 34.3 +0.6**
LOT Lotru 150.62 336 ⇑*i*P **PKPbc** **02 28 34.0 0.0**
CONA Conrad Observa 150.66 348 ⇑*i*PKiKP **PKPbc** **02 28 34.1 +0.2**
comp=Z,31nm,1.4s
CSKK Cs˙ˇkako 150.67 345 ⇓*e*PKPdf **PKPbc** **02 28 34.2 +0.3**
SOP Sopron 150.76 347 ⇓*e*PKPdf **PKPbc** **02 28 35.0 +0.9**
PKST T˜˜s 150.82 345 ⇓*e*PKPdf **PKPbc** **02 28 34.5 +0.2**
BRBR Barbar 150.90 305 *e*P **PKPbc** **02 28 34.4 -0.8**
MOA Molln 151.02 350 ⇑*i*PKiKP **PKPbc** **02 28 34.4 -0.3**
comp=Z,6.7nm,0.6s
PKS6 Bocsa 151.02 342 ⇓*e*PKPdf **PKPab** **02 28 43.2 +1.0**
FUR Furstenfeldbru 151.08 355 *e*PKPbc **PKPbc** **02 28 34.9 0.0**
FUR Furstenfeldbru 151.08 355 *e*PKIKP **PKPbc** **02 28 34.9 0.0**
BFO Black Forest 151.08 359 *e*PKPbc **PKPbc** **02 28 34.9 0.0**
BFO Black Forest 151.08 359 *e*PKIKP **PKPbc** **02 28 34.4 -0.5**
BFO Black Forest 151.08 359 *e*PKPbc **PKPbc** **02 28 34.4 -0.5**
THEF They Montfort 151.18 2 PKIKP **PKPbc** **02 28 34.5 -0.6**
THEF They Montfort 151.18 2 PKP **PKPbc** **02 28 34.5 -0.6**
THEF They Montfort 151.18 2 PKP **PKPbc** **02 28 34.5 -0.6**
PKS2 Kecel 151.22 343 ⇑*e*PKPdf **PKPbc** **02 28 36.2 +1.0**
KDHN Kadinhani 151.25 317 *i* P **PKPbc** **02 28 35.4 -0.2**
BZS Buzias 151.26 339 ⇓PKIKP **PKPbc** **02 28 36.0 +0.7**
BZS Buzias 151.26 339 ⇓*i*P **PKPbc** **02 28 36.0 +0.7**
SPAK Spaichingen-Ko 151.30 358 PKP **PKPbc** **02 28 36.2 +0.8**
RJOB Jochberg 151.34 352 *e*PKPbc **PKPbc** **02 28 35.4 -0.1**
ARSA Arzberg 151.38 348 ⇓*i*PKiKP **PKiKP** **02 28 36.0 -0.1**
comp=Z,12nm,1.5s
PKS9 Tamasi 151.38 344 ⇓*e*PKPdf **PKPbc** **02 28 35.6 0.0**
FELD Feldberg im Sc 151.54 359 PKP **PKPbc** **02 28 34.7 -1.4**
FELD Feldberg im Sc 151.54 359 PKP **PKPbc** **02 28 34.7 -1.4**
MOF Molkenrain 151.57 0 PKIKP **PKPbc** **02 28 36.6 +0.5**
MOF Molkenrain 151.57 0 PKP **PKPbc** **02 28 36.6 +0.5**
MOF Molkenrain 151.57 0 PKP **PKPbc** **02 28 36.6 +0.5**
PKSM Moragy 151.63 343 ⇑PKIKP **PKPbc** **02 28 36.5 +0.4**
PKSM Moragy 151.63 343 ⇑*i*P **PKPbc** **02 28 36.5 +0.4**
PKSM Moragy 151.63 343 ⇓*e*PKPdf **PKPbc** **02 28 36.6 +0.4**
RETA Reutte 151.80 355 ⇑*i*PKPbc **PKPbc** **02 28 35.7 -0.9**
comp=Z,12nm,1.1s
BEHE Becsehely 151.86 346 ⇓*e*PKPdf **PKPdf** **02 28 30.3 +0.1**
WATA Walderalm 151.87 354 ⇑*i*PKPbc **PKPbc** **02 28 35.8 -1.0**
comp=Z,9.5nm,0.5s
MOTA Moosalm 151.91 355 ⇑*i*PKiKP **PKPbc** **02 28 36.5 -0.5**
comp=Z,20nm,0.9s
WTTA Wattenberg 151.94 354 ⇑*i*PKiKP **PKPbc** **02 28 36.9 -0.2**
comp=Z,26nm,0.6s
BBS Basel-Blauen 151.96 360 PKIKP **PKPbc** **02 28 37.7 +0.8**
BBS Basel-Blauen 151.96 360 PKP **PKPbc** **02 28 37.7 +0.8**
CSS Prodhromos 152.24 309 *e*PKPbc **PKPbc** **02 28 37.9 -0.1**
CSS *e*PKPab **PKPab** **02 28 48.0 +0.2**
ABTA Abfaltersbach 152.35 352 ⇑*i*PKPbc **PKPbc** **02 28 37.0 -0.9**
comp=Z,19nm,0.6s
GCIS Gornji Cirnik 152.68 347 *e*PKPdf **PKPdf** **02 28 35.0 +3.5**
GCIS *i* PKPbc **PKiKP** **02 28 39.2 +0.4**
LJU Ljubljana 152.72 349 *i* PKPbc **PKPbc** **02 28 39.0 +0.3**
DURS Dursunbey 152.81 322 *i* P **PKPbc** **02 28 38.9 -0.3**
TUE Stuetta 152.90 357 *e*PKPdf **PKPdf** **02 28 31.9 -0.1**
TUE *e*PKPbc **PKPbc** **02 28 39.2 -0.1**
TUE *e*PKPab **PKPab** **02 28 50.6 +0.2**
JAVS Javornik 152.95 350 *e*PKPdf **PKPdf** **02 28 33.2 +1.2**
JAVS *i* PKPbc **PKiKP** **02 28 40.7 +1.3**
BOJS Bojanci 153.11 348 *e*PKPdf **PKPdf** **02 28 32.9 +0.8**
BOJS *i* PKPbc **PKiKP** **02 28 39.9 +0.2**
AGO Saint Agoulin 153.15 6 PKP **PKPbc** **02 28 40.4 +0.8**
AGO Saint Agoulin 153.15 6 PKP **PKPbc** **02 28 40.4 +0.8**
VTS Vitosha 153.22 333 ⇑PKIKP **PKPbc** **02 28 40.7 +0.7**
VTS Vitosha 153.22 333 ⇑*i*P **PKPbc** **02 28 40.7 +0.7**
PYM Petit Puy Mans 153.43 7 PKIKP **PKPbc** **02 28 40.4 +0.1**
PYM Petit Puy Mans 153.43 7 PKP **PKPbc** **02 28 40.4 +0.1**
PYM Petit Puy Mans 153.43 7 PKP **PKPbc** **02 28 40.4 +0.1

TAM	**Tamanrasset**	**176.19**	**26**	*e*PKIKP	**PKPdf**	02 28 53.2	**+0.3**
TAM	**Tamanrasset**	**176.19**	**26**	*e*PKPdf	**PKPdf**	02 28 53.2	**+0.3**

CSEM ***27*** *02:18:00.2±0.3, 35˚.39N×22˚.49E, h10km, Mw3.8, Error ellipse: s-maj=8.2km s-min=5.2km az=96.0*
ISCJB ***27*** *02:18:01.2±1.4, 35˚.42N±0˚.04×22˚.49E±0˚.07, h23km±13km, Error ellipse: s-maj=10.2km s-min=5.3km az=163.1*
THE ***27*** *02:18:03.2, 35˚.50N×22˚.60E, h18km±5km, ML2.9/3, Error ellipse: s-maj=7.2km s-min=1.9km az=218.0*

ISC 27 02:18:02.2±1.4, 35˚.45N±0˚.04×22˚.52E±0˚.05, h21km±5km, n38, σ0965/49, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**0.93**	**27**	P	**Pb**	**02 18 19.2**	**-0.4**
KYTH	**Kithira**	**0.93**	**27**	P	**Pb**	**02 18 19.2**	**-0.4**
VLI	**Veliai**	**1.31**	**15**	P	**Pn**	**02 18 25.3**	**+0.1**
VLI				S	**Sn**	**02 18 42.1**	**+0.1**
VLI	**Veliai**	**1.31**	**15**	P	**Pn**	**02 18 25.3**	**+0.1**
VLI				S	**Sn**	**02 18 42.1**	**+0.1**
DYR	**Agios Nikonas**	**1.32**	**353**	P	**Pb**	**02 18 26.0**	**-0.2**
DYR				S	**Sb**	**02 18 42.9**	**+0.3**
DYR	**Agios Nikonas**	**1.32**	**353**	P	**Pb**	**02 18 26.0**	**-0.2**
DYR				S	**Sb**	**02 18 42.9**	**+0.3**
VAM	**Vamos**	**1.37**	**91**	P	**Pn**	**02 18 26.6**	**+0.5**
VAM				S	**Sn**	**02 18 42.8**	**-0.8**
VAM	**Vamos**	**1.37**	**91**	P	**Pn**	**02 18 26.6**	**+0.5**
VAM				S	**Sn**	**02 18 42.8**	**-0.8**
PYL	**PYLOS**	**1.57**	**337**	P	**Pb**	**02 18 30.7**	**+0.2**
PYL	**PYLOS**	**1.57**	**337**	P	**Pb**	**02 18 30.7**	**+0.2**
ITM	**Ithomi**	**1.79**	**345**	P	**Pn**	**02 18 32.7**	**+0.9**
ITM				S	**Sn**	**02 18 54.8**	**+0.9**
ITM	**Ithomi**	**1.79**	**345**	P	**Pn**	**02 18 32.7**	**+0.9**
ITM				S	**Sn**	**02 18 54.8**	**+0.9**
VLX	**Vlachokerasia**	**1.92**	**357**	P	**Pn**	**02 18 34.3**	**+0.6**
VLX				S	**Sn**	**02 18 57.0**	**-0.2**
VLX	**Vlachokerasia**	**1.92**	**357**	P	**Pn**	**02 18 34.3**	**+0.6**
VLX				S	**Sn**	**02 18 57.0**	**-0.2**
DIDY	**Didyma**	**2.10**	**15**	P	**Pn**	**02 18 35.6**	**-0.5**
DIDY	**Didyma**	**2.10**	**15**	P	**Pn**	**02 18 35.6**	**-0.5**
DID	**Didima**	**2.13**	**16**	P	**Pn**	**02 18 35.9**	**-0.6**
DID	**Didima**	**2.13**	**16**	P	**Pn**	**02 18 35.9**	**-0.6**
GUR	**Goura**	**2.48**	**357**	P	**Pn**	**02 18 42.0**	**+0.5**
GUR	**Goura**	**2.48**	**357**	P	**Pn**	**02 18 42.0**	**+0.5**
LTK	**Loutraki**	**2.59**	**8**	P	**Pn**	**02 18 43.0**	**+0.1**
LTK	**Loutraki**	**2.59**	**8**	P	**Pn**	**02 18 43.0**	**+0.1**
RLS	**Riolos of Patr**	**2.73**	**342**	P	**Pn**	**02 18 45.3**	**+0.5**
RLS	**Riolos of Patr**	**2.73**	**342**	P	**Pn**	**02 18 45.3**	**+0.5**
TRIZ	**Trizonia**	**2.93**	**353**	P	**Pn**	**02 18 47.3**	**-0.2**
TRIZ	**Trizonia**	**2.93**	**353**	P	**Pn**	**02 18 47.3**	**-0.2**
KALE	**Kalithea**	**2.95**	**354**	P	**Pn**	**02 18 47.4**	**-0.4**
KALE	**Kalithea**	**2.95**	**354**	P	**Pn**	**02 18 47.4**	**-0.4**
VLS	**Valsamata**	**3.13**	**331**	P	**Pn**	**02 18 48.8**	**-1.5**
VLS	**Valsamata**	**3.13**	**331**	P	**Pn**	**02 18 48.8**	**-1.5**
AGG	**Agios Georgios**	**3.57**	**358**	P	**Pn**	**02 18 56.6**	**+0.3**
AGG	**Agios Georgios**	**3.57**	**358**	P	**Pn**	**02 18 56.6**	**+0.3**
MAKR	**Makrakomi, Fth**	**3.57**	**355**	P	**Pn**	**02 18 57.3**	**+1.0**
MAKR	**Makrakomi, Fth**	**3.57**	**355**	P	**Pn**	**02 18 57.3**	**+1.0**
LTBQ	**Tobruq**	**3.58**	**161**	*i* P	**Pn**	**02 18 57.8**	**+1.3**
	SNR=23						
LTBQ				*e*S	**Sn**	**02 19 38.4**	**+0.3**
	SNR=23						
LKD2	**Lefkada island**	**3.65**	**336**	P	**Pn**	**02 18 56.9**	**-0.5**
LKD2	**Lefkada island**	**3.65**	**336**	P	**Pn**	**02 18 56.9**	**-0.5**
LJBD	**Adjabya**	**4.93**	**204**	*i* P	**Pn**	**02 19 14.0**	**-0.9**
	SNR=23						
LJBD				*e*S	Sn	02 20 06.6	-4.7
	SNR=23						

SKO ***27*** *02:42:50.4, 41˚.34N×22˚.66E, h15km, M1.4, ML1.8*
CSEM ***27*** *02:42:50.8±0.1, 41˚.30N×22˚.66E, h15km, MD3.0, Error ellipse: s-maj=2.5km s-min=1.4km az=177.0*
ATH ***27*** *02:42:51.1, 41˚.29N×22˚.66E, h4km, MD3.0/5*

ISC 27 02:42:50.5±1.0, 41˚.30N±0˚.06×22˚.66E±0˚.03, h15km±6km, n12, σ0928/24, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.07**	**284**	*i* Pg	**Pg**	**02 42 53.4**	**-0.2**
VAY				*i* Lg	Lg	02 42 55.2	
	comp=E,242nm,0.2s						
VAY				*i* Sg	**Sg**	**02 42 55.3**	**-0.1**
VAY				*i* Lg	Lg	02 42 55.4	
	comp=N,981nm,0.2s						
VAY	**Valandovo**	**0.07**	**284**	*i* Pg	**Pg**	**02 42 53.8**	**+0.3**
VAY				*i* Sg	**Sg**	**02 42 55.8**	**+0.3**
VAY				*i* Lg	Lg	02 42 55.8	
	comp=N,981nm,0.2s						
GRG	**Griva**	**0.40**	**210**	*e*PG	**Pb**	**02 42 59.2**	**-0.1**
GRG				*e*SG	**Sg**	**02 43 04.0**	**-0.1**
GRG	**Griva**	**0.40**	**210**	*e*Pg	**Pb**	**02 42 59.2**	**-0.1**
GRG				*e*Sg	**Sg**	**02 43 04.0**	**-0.1**
SOH	**Sokhos**	**0.71**	**132**	*e*PG	**Pb**	**02 43 04.7**	**0.0**
SOH				*e*SG	**Sg**	**02 43 13.5**	**-0.3**
SOH	**Sokhos**	**0.71**	**132**	*e*Pg	**Pb**	**02 43 04.7**	**0.0**
SOH				*e*Sg	**Sg**	**02 43 13.5**	**-0.3**
NVR	**Nevrokopi**	**0.91**	**87**	*e*PG	**Pn**	**02 43 08.4**	**-0.4**
NVR				*e*SG	**Sg**	**02 43 20.3**	**+0.3**
NVR	**Nevrokopi**	**0.91**	**87**	*e*Pg	**Pn**	**02 43 08.4**	**-0.4**
NVR				*e*Sg	**Sg**	**02 43 20.3**	**+0.3**
FNA	**Florina**	**1.10**	**242**	*e*PG	**Pg**	**02 43 12.2**	**+0.4**
FNA				*e*SG	**Sb**	**02 43 25.7**	**+0.2**
FNA	**Florina**	**1.10**	**242**	*e*Pg	**Pg**	**02 43 12.2**	**+0.4**
FNA				*e*Sg	**Sb**	**02 43 25.7**	**+0.2**
PLG	**Polygyros**	**1.10**	**147**	*e*PG	**Pg**	**02 43 12.2**	**+0.4**
PLG				*e*SG	**Sn**	**02 43 26.5**	**0.0**
PLG	**Polygyros**	**1.10**	**147**	*e*Pg	**Pg**	**02 43 12.2**	**+0.4**
PLG				*e*Sg	**Sn**	**02 43 26.5**	**0.0**

IDC ***27*** *02:50:21.7±0.5, 33˚.13S×15˚.93W, h0km, mb4.6/23, mb1 4.7/23, mb1mx4.6/27, mbtmp4.6/23, MS4.5/23, Ms1 4.4/23, ms1mx4.4/29, Error ellipse: s-maj=15.3km s-min=12.5km az=168.0*
ISCJB ***27*** *02:50:22.0±0.3, 33˚.13S±0˚.06×15˚.92W±0˚.06, h10km, mb5.0/98, MS4.5/30, Error ellipse: s-maj=8.6km s-min=6.9km az=144.2*
BJI ***27*** *02:50:23.8, 33˚.10S×15˚.90W, h10km, mB5.4/11, Ms5.2/9, Ms7 4.9/12*
NEIC ***27*** *02:50:23.6±0.2, 33˚.07S×15˚.95W, h10km, mb5.1/36, Error ellipse: s-maj=5.8km s-min=4.5km az=149.0*
GCMT ***27*** *02:50:27.9±0.2, 33˚.13S×15˚.69W, h12km, MW5.0, Moment Tensor Solution. s35,c40; s91,c125; Moment tensor: Scale 10¹⁶Nm; Mrr4.29±.09; Mθθ-1.11±.11; Mϕϕ-3.18±.09; Mrθ0.65±.42; Mθϕ-0.61±.10; Mϕr1.37±.38; Best double couple: M₀4.10000×10¹⁶ NP1:ϕs193.00000°, δ34.00000°, λ.86.00000°. NP2:ϕs18.00000°, δ56.00000°, λ93.00000°. Principal axes: T 4.5800, Plg79.0000°, Azm299.0000°; N -0.9500, Plg2.0000°, Azm197.0000°; P -3.6300, Plg11.0000°, Azm106.0000°; Data Used: II IU G IC CN.*
SZGRF ***27*** *02:50:29.2, 31˚.96S×17˚.87W, h33km, mb5.2, Southern Mid-Atlantic Ridge*

ISC 27 02:50:23.6±0.3, 33˚.11S±0˚.08×15˚.97W±0˚.06, h10km, n238, σ0996/237, mb5.1/98, MS4.5/30, 15C-10D, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**30.85**	**99**	*e*P	**P**	**02 56 40.4**	**+0.2**
	33nm,1.3s						
SUR	**Sutherland**	**30.85**	**99**	P	**P**	**02 56 38.7**	**-1.5**
	15nm,1.1s,baz=265,slow=1.5,SNR=4.4						
SUR				LR	LR	03 06 27.6	
	comp=Z,1μm,19.5s,baz=91,slow=31						
RCBR	**Riachuelo**	**32.88**	**321**	*e*P	**P**	**02 56 58.5**	**+0.6**
	34nm,1.2s						
RCBR	**Riachuelo**	**32.88**	**321**	P	**P**	**02 56 57.8**	**-0.2**
	18nm,1.1s,baz=140,slow=9.3,SNR=6.1						
RCBR				LR	LR	03 06 57.2	
	comp=Z,653nm,20.1s,baz=314,slow=30						
TSUM	**Tsumeb**	**32.99**	**74**	*e*P	**P**	**02 56 57.8**	**-1.3**
	11nm,1.0s						
BDFB	**Brasilia**	**33.79**	**293**	P	**P**	**02 57 05.5**	**-0.6**
BDFB	**Brasilia**	**33.79**	**293**	P	**P**	**02 57 05.5**	**-0.6**
	47nm,1.1s,baz=126,slow=8.1,SNR=34						
BDFB				LR	LR	03 08 52.4	
	comp=Z,1μm,18.4s,baz=170,slow=33						
BOSA	**Boshof**	**35.51**	**94**	*e*P	**P**	**02 57 20.3**	**-0.6**
	185nm,2.9s						
BOSA	**Boshof**	**35.51**	**94**	P	**P**	**02 57 20.2**	**-0.6**
	9.9nm,1.1s,baz=263,slow=11,SNR=6.5						
BOSA				LR	LR	03 08 59.8	
	comp=Z,1μm,19.1s,baz=176,slow=32						
CPUP	**Villa Florida**	**36.37**	**270**	P	**P**	**02 57 26.9**	**-1.2**
CPUP	**Villa Florida**	**36.37**	**270**	P	**P**	**02 57 26.9**	**-1.2**
	2.7nm,0.9s,baz=94,slow=17,SNR=4.0						
CPUP				LR	LR	03 10 17.0	
	comp=Z,1μm,19.3s,baz=114,slow=33						
LBTB	**Lobatse**	**37.03**	**88**	*e*P	**P**	**02 57 32.5**	**-1.3**
	17nm,1.1s						
LBTB	**Lobatse**	**37.03**	**88**	P	**P**	**02 57 32.2**	**-1.6**
	12nm,1.0s,baz=276,slow=8.4,SNR=7.8						
TRQA	**Tornquist**	**37.45**	**249**	*e*P	**P**	**02 57 38.5**	**+1.3**
	6.4nm,0.9s						
SNAA	**Sanae**	**39.26**	**173**	*e*P	**P**	**02 57 51.5**	**-0.5**
	14nm,1.4s						
SNAA	**Sanae**	**39.26**	**173**	P	**P**	**02 57 51.3**	**-0.7**
	1.3nm,0.8s,baz=323,slow=21,SNR=3.2						
LIC	**Lamto**	**40.47**	**17**	*e*P	**P**	**02 58 01.6**	**-1.0**
	55nm,0.9s,baz=201						
LIC				*e*R			
	426nm,19.5s						
LIC	**Lamto**	**40.47**	**17**	*e*P	**P**	**02 58 01.6**	**-1.0**
	55nm,0.9s						
DBIC	**Dimbokro**	**40.94**	**17**	*e*P	**P**	**02 58 05.4**	**-1.1**
	44nm,1.0s						
DBIC	**Dimbokro**	**40.94**	**17**	P	**P**	**02 58 05.5**	**-0.9**
	22nm,0.8s,baz=175,slow=9.7,SNR=27						
DBIC				LR	LR	03 10 44.6	
	comp=Z,320nm,19.7s,baz=171,slow=30						
USHA	**Ushuaia**	**42.33**	**223**	LR			
	comp=Z,824nm,18.6s,baz=134,slow=32						
LSZ	**Lusaka**	**43.66**	**77**	P	**P**	**02 58 29.0**	**+0.1**
LSZ	**Lusaka**	**43.66**	**77**	P	**P**	**02 58 29.0**	**+0.1**
	4.0nm,1.0s,baz=194,slow=19,SNR=5.6						
LSZ				LR	LR	03 14 07.5	
	comp=Z,392nm,21.1s,baz=341,slow=33						
PLCA	**Paso Flores**	**43.70**	**244**	*e*P	**P**	**02 58 28.8**	**0.0**
	6.8nm,1.0s						
PLCA	**Paso Flores**	**43.70**	**244**	P	**P**	**02 58 29.2**	**+0.3**
	6.0nm,1.0s,baz=79,slow=4.6,SNR=5.2						
PLCA				LR	LR	03 14 59.0	
	comp=Z,379nm,18.9s,baz=139,slow=34						
CFAA	**Coronel Fontan**	**43.80**	**257**	P	**P**	**02 58 29.0**	**-0.8**
CFAA	**Coronel Fontan**	**43.80**	**257**	P	**P**	**02 58 29.0**	**-0.8**
	0.9nm,0.9s,baz=94,slow=7.4,SNR=14						
SYO	**Syowa Base**	**47.30**	**156**	*e*P	**P**	**02 58 54.8**	**-2.1**
BBTS	**Babate**	**47.50**	**359**	P	**P**	**02 58 59.4**	**+0.4**
BBTS	**Babate**	**47.50**	**359**	P	**P**	**02 58 59.4**	**+0.4**
	25nm,0.8s,baz=195,slow=3.1,SNR=4.4						
BBTS				LR	LR	03 14 23.8	
	comp=Z,475nm,21.0s,baz=183,slow=30						
LVC	**Limon Verde**	**47.53**	**269**	*e*P	**P**	**02 59 00.3**	**+0.7**
	10nm,1.2s						
TOA0	**Torodi Ar. Sit**	**48.99**	**23**	*e*P	**P**	**02 59 09.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**48.99**	**23**	P	**P**	**02 59 09.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**48.99**	**23**	P	**P**	**02 59 09.6**	**-1.0**
	36nm,1.0s,baz=201,slow=7.1,SNR=124						
TORD				LR	LR	03 15 44.4	
	comp=Z,201nm,18.1s,baz=190,slow=31						
SAML	**Samuel**	**49.66**	**288**	*e*P	**P**	**02 59 16.3**	**+0.5**
	15nm,1.1s						
LPAZ	**La Paz**	**49.76**	**276**	*e*P	**P**	**02 59 16.5**	**-0.7**
	8.7nm,1.2s						
LPAZ	**La Paz**	**49.76**	**276**	P	**P**	**02 59 16.6**	**-0.7**
	4.0nm,0.9s,baz=96,slow=8.7,SNR=10						
LPAZ				LR	LR	03 19 21.9	
	comp=Z,639nm,21.1s,baz=96,slow=35						
MBAR	**Mbarara**	**54.47**	**63**	LR	LR	03 21 32.1	
	comp=Z,1μm,18.1s,baz=196,slow=34						
MAW	**Mawson**	**55.64**	**153**	*e*P	**P**	**02 59 59.0**	**-0.3**
	4.1nm,1.2s						
MAW	**Mawson**	**55.64**	**153**	P	**P**	**02 59 58.5**	**-0.8**
	9.8nm,1.0s,baz=280,slow=8.2,SNR=4.7						
MAW				LR	LR	03 18 00.8	
	comp=Z,463nm,21.6s,baz=285,slow=30						
QSPA	**South Pole Qui**	**57.14**	**180**	*e*P	**P**	**03 00 10.7**	**+0.4**
	18nm,0.9s						
KMBO	**Kilima Mbogo**	**59.13**	**69**	*e*P	**P**	**03 00 24.9**	**-0.2**
	5.2nm,1.2s						
KMBO	**Kilima Mbogo**	**59.13**	**69**	LR	LR	03 22 58.3	
	comp=Z,317nm,18.9s,baz=261,slow=33						
NNA	**Nana**	**59.21**	**276**	*e*P	**P**	**03 00 27.5**	**+2.2**
TAM	**Tamanrasset**	**59.25**	**23**	*e*P	**P**	**03 00 25.6**	**+0.1**
	28nm,1.2s						
ATAH	**Atahualpa**	**63.09**	**279**	P	**P**	**03 00 53.2**	**+1.1**
ATAH	**Atahualpa**	**63.09**	**279**	P	**P**	**03 00 53.2**	**+1.1**
	13nm,1.2s,baz=82,slow=7.9,SNR=8.4						
ATAH				LR	LR	03 26 49.2	
	comp=Z,368nm,20.8s,baz=323,slow=35						
PMPS	**Porto Santo**	**65.81**	**360**	*e*P	P	03 01 02.0	-6.9
	151nm,1.8s						
MDT	**Midelt**	**66.44**	**10**	LR	LR	03 28 38.1	
	comp=Z,269nm,18.5s,baz=2.8,slow=35						
SDV	**Santo Domingo**	**66.66**	**299**	*e*P	**P**	**03 01 15.5**	**+0.5**
	31nm,1.1s						
ROSC	**El Rosal**	**66.86**	**293**	LR	LR	03 29 55.7	
	comp=Z,482nm,18.4s,baz=203,slow=36						
OTAV	**Otavalo**	**67.32**	**286**	*e*P	**P**	**03 01 21.4**	**+1.8**
	13nm,1.3s						
SBA	**Scott Base**	**69.28**	**181**	*e*P	**P**	**03 01 31.6**	**+1.2**
	17nm,1.0s						
VNDA	**Vanda**	**69.62**	**179**	*e*P	**P**	**03 01 33.1**	**+0.6**
VNDA	**Vanda**	**69.62**	**179**	P	**P**	**03 01 32.4**	**-0.1**
	2.7nm,1.0s,baz=209,slow=5.3,SNR=11						
VNDA				LR	LR	03 27 22.8	
	comp=Z,152nm,19.6s,baz=180,slow=32						
PBDV	**Barranco-do-Ve**	**70.39**	**7**	*e*P	**P**	**03 01 38.0**	**+0.4**
	26nm,1.3s						
PVAQ	**Vaqueiros**	**70.57**	**7**	*e*P	**P**	**03 01 38.5**	**-0.2**
	39nm,1.4s						
PVAQ				*e*LR	LR	03 26 16.4	
	152nm,22.0s						
PBAR	**Barrancos**	**71.41**	**7**	*e*P	**P**	**03 01 44.8**	**+1.1**
	29nm,1.4s						
EVOP	**Sao Brissos**	**71.64**	**6**	*e*P	**P**	**03 01 45.2**	**0.0**
	46nm,1.3s						
EVO	**Evora**	**71.66**	**7**	*e*P	**P**	**03 01 45.2**	**-0.1**
	46nm,1.3s						
EVO				*e*R			
	214nm,19.2s						
PESTR	**Estremoz**	**72.03**	**7**	*e*P	**P**	**03 01 48.4**	**+0.9**
	22nm,1.5s						
KEST	**Kesra**	**72.47**	**21**	*e*P	**P**	**03 01 50.0**	**-0.3**
KEST	**Kesra**	**72.47**	**21**	P	**P**	**03 01 50.2**	**-0.1**
	5.4nm,1.0s,baz=225,slow=3.2,SNR=9.1						
PMRV	**Marv??o**	**72.61**	**7**	*e*LR	LR	03 27 18.1	
	136nm,18.0s						
ESDC	**Sonseca Array**	**73.27**	**10**	P	**P**	**03 01 54.8**	**-0.2**
ESDC	**Sonseca Array**	**73.27**	**10**	P	**P**	**03 01 54.8**	**-0.2**
	4.4nm,1.0s,baz=187,slow=5.9,SNR=14						
ESDC				LR	LR	03 32 13.7	
	comp=Z,96nm,18.7s,baz=295,slow=34						
PGAV	**Gavieira, Arco**	**75.04**	**6**	*e*LR	LR	03 26 24.5	
	128nm,22.0s						
CEL	**Celeste**	**76.94**	**25**	*e*P	**P**	**03 02 15.8**	**-0.4**
ETSF	**Etsaut**	**76.95**	**12**	*e*P	**P**	**03 02 15.9**	**-0.2**
	16nm,1.0s						
ETSF	**Etsaut**	**76.95**	**12**	*e*P	**P**	**03 02 15.9**	**-0.2**
	16nm,1.0s						
EPF	**Esparros**	**77.23**	**12**	*e*P	**P**	**03 02 17.4**	**-0.3**
	22nm,1.2s						
EPF	**Esparros**	**77.23**	**12**	*e*P	**P**	**03 02 17.4**	**-0.3**
	22nm,1.3s						
MTLF	**Montolieu**	**77.88**	**13**	*e*P	**P**	**03 02 21.2**	**0.0**
	28nm,1.1s						
MTLF	**Montolieu**	**77.88**	**13**	*e*P	**P**	**03 02 21.2**	**0.0**
	28nm,1.1s						
JTS	**JuntasAbangare**	**78.48**	**290**	*e*P	**P**	**03 02 24.3**	**-1.0**
	80nm,1.1s						
DRV	**Dumont d'Urvil**	**78.86**	**170**	SS	SS	03 17 11.0	-17
DRV				L	L	03 22 00.0	
DRV				R		03 31 00.0	
LASF	**Ste Croix**	**78.92**	**14**	*e*P	**P**	**03 02 26.5**	**-0.5**
	47nm,1.2s						
LASF	**Ste Croix**	**78.92**	**14**	*e*P	**P**	**03 02 26.5**	**-0.5**
	47nm,1.3s						
FRF	**La Foret Royal**	**79.05**	**17**	*e*P	**P**	**03 02 27.8**	**+0.1**
	64nm,1.2s						
FRF	**La Foret Royal**	**79.05**	**17**	*e*P	**P**	**03 02 27.8**	**+0.1**
	64nm,1.2s						
LFF	**La Frestale**	**79.15**	**12**	*e*P	**P**	**03 02 27.9**	**-0.3**
	53nm,1.4s						
LFF	**La Frestale**	**79.15**	**12**	*e*P	**P**	**03 02 27.9**	**-0.3**
	53nm,1.4s						
SMRF	**Simiane la Rot**	**79.19**	**16**	*e*P	**P**	**03 02 28.5**	**0.0**
	43nm,1.1s						
SMRF	**Simiane la Rot**	**79.19**	**16**	*e*P	**P**	**03 02 28.5**	**0.0**
	43nm,1.1s						
CAF	**Calviac**	**79.38**	**13**	*e*P	**P**	**03 02 29.0**	**-0.5**
	35nm,1.3s						
CAF	**Calviac**	**79.38**	**13**	*e*P	**P**	**03 02 29.0**	**-0.5**
	35nm,1.3s						
RJF	**Les Rejaudoux**	**79.64**	**12**	*e*P	**P**	**03 02 30.6**	**-0.3**
	34nm,1.2s						
RJF				*e*R			
	289nm,21.5s						
RJF	**Les Rejaudoux**	**79.64**	**12**	*e*P	**P**	**03 02 30.6**	**-0.3**
	34nm,1.2s						
AQU	**L'Aquila**	**79.79**	**22**	*e*P	**P**	**03 02 32.3**	**+0.5**
	34nm,1.3s						
VIVF	**Saint-Julien-l**	**79.83**	**15**	*e*P	**P**	**03 02 31.8**	**-0.2**
	58nm,1.4s						
VIVF	**Saint-Julien-l**	**79.83**	**15**	*e*P	**P**	**03 02 31.8**	**-0.2**
	58nm,1.4s						
ORIF	**Oris-en-Rattie**	**80.16**	**16**	*e*P	**P**	**03 02 33.8**	**0.0**
	33nm,1.2s						
ORIF				*e*R			
	393nm,19.2s						
ORIF	**Oris-en-Rattie**	**80.16**	**16**	*e*P	**P**	**03 02 33.8**	**0.0**
	33nm,1.2s						
MBDF	**Montbardon**	**80.18**	**16**	*e*P	**P**	**03 02 33.9**	**-0.1**
	37nm,1.1s						
MBDF	**Montbardon**	**80.18**	**16**	*e*P	**P**	**03 02 33.9**	**-0.1**
	37nm,1.1s						
BNI	**Bardonecchia**	**80.47**	**16**	*e*P	**P**	**03 02 35.0**	**-0.5**
	20nm,1.4s						
MFF	**Saint Martin d**	**80.62**	**11**	*e*P	**P**	**03 02 35.9**	**-0.2**
	47nm,1.4s						
MFF	**Saint Martin d**	**80.62**	**11**	*e*P	**P**	**03 02 35.9**	**-0.2**
	47nm,1.4s						
TCF	**Toulx Ste Croi**	**80.72**	**13**	*e*P	**P**	**03 02 36.6**	**-0.1**
	41nm,1.4s						
TCF	**Toulx Ste Croi**	**80.72**	**13**	*e*P	**P**	**03 02 36.6**	**-0.1**
	41nm,1.4s						
LPG	**La Plagne**	**80.91**	**16**	*e*P	**P**	**03 02 38.0**	**0.0**
	48nm,1.1s						
LPG	**La Plagne**	**80.91**	**16**	*e*P	**P**	**03 02 38.0**	**0.0**
	48nm,1.1s						
LPL	**La Plagne**	**80.92**	**16**	*e*P	**P**	**03 02 37.9**	**-0.1**
	60nm,1.2s						
LPL	**La Plagne**	**80.92**	**16**	*e*P	**P**	**03 02 37.9**	**-0.1**
	60nm,1.2s						
TIR	**Tirane**	**81.11**	**26**	*e*P	**P**	**03 02 39.4**	**+0.5**
	46nm,1.1s						
RAYN	**Ar Rayn**	**81.25**	**55**	*e*P	**P**	**03 02 42.4**	**+2.3**
SMF	**Signal de Mont**	**81.37**	**14**	*e*P	**P**	**03 02 39.8**	**-0.4**
	50nm,1.2s						
SMF	**Signal de Mont**	**81.37**	**14**	*e*P	**P**	**03 02 39.8**	**-0.4**
	50nm,1.2s						
AVF	**Avril sur Loir**	**81.42**	**13**	*e*P	**P**	**03 02 40.2**	**-0.1**
	45nm,1.1s						
AVF	**Avril sur Loir**	**81.42**	**13**	*e*P	**P**	**03 02 40.2**	**-0.1**
	45nm,1.1s						
QUIF	**Quistinic**	**81.47**	**9**	*e*P	**P**	**03 02 40.5**	**-0.1**
	92nm,1.4s						
QUIF	**Quistinic**	**81.47**	**9**	*e*P	**P**	**03 02 40.5**	**-0.1**
	92nm,1.4s						
MMAI	**Mount Meron Ar**	**81.64**	**42**	P	**P**	**03 02 42.5**	**+0.5**
MMAI	**Mount Meron Ar**	**81.64**	**42**	P	**P**	**03 02 42.5**	**+0.5**
	0.6nm,0.3s,baz=322,slow=4.4						
SSF	**Saint Saulge**	**81.71**	**13**	*e*P	**P**	**03 02 41.6**	**-0.3**
	27nm,1.2s						
SSF	**Saint Saulge**	**81.71**	**13**	*e*P	**P**	**03 02 41.6**	**-0.3**
	27nm,1.2s						
HYF	**Humbligny**	**81.74**	**13**	*e*P	**P**	**03 02 41.0**	**-1.1**
HYF	**Humbligny**	**81.74**	**13**	*e*P	**P**	**03 02 41.0**	**-1.1**
CABF	**La Chapelle**	**81.81**	**15**	*e*P	**P**	**03 02 41.8**	**-0.8**
	44nm,1.2s						
CABF	**La Chapelle**	**81.81**	**15**	*e*P	**P**	**03 02 41.8**	**-0.8**
	44nm,1.2s						
SGMF	**Saint Gilles**	**81.88**	**9**	*e*P	**P**	**03 02 42.4**	**-0.4**
	107nm,1.4s						
SGMF	**Saint Gilles**	**81.88**	**9**	*e*P	**P**	**03 02 42.4**	**-0.4**
	107nm,1.4s						
LOR	**Lormes**	**81.97**	**13**	*e*P	**P**	**03 02 42.8**	**-0.5**
	20nm,1.1s						
LOR				*e*R			
	224nm,20.8s						
LOR	**Lormes**	**81.97**	**13**	*e*P	**P**	**03 02 42.8**	**-0.5**
	20nm,1.1s						
CSS	**Prodhromos**	**81.99**	**39**	*e*P	**P**	**03 02 44.9**	**+1.2**
	23nm,1.2s						
FLN	**La Foliniere**	**82.67**	**10**	*e*P	**P**	**03 02 46.7**	**-0.2**
	48nm,1.2s						
FLN				*e*R			
	249n

PKSG		85.88	23	⇑	*e*P		P	03 03 04.0	+0.8
GRF	Grafenberg Arr	85.90	17		*e*P		P	03 03 03.4	+0.1
	comp=Z,24nm,1.1s								
KHC	Kasperske Hory	86.00	19		*e*P		P	03 03 03.9	+0.1
BUD	Budapest	86.16	23	⇑	*e*P		P	03 03 05.7	+1.1
ZST	Bratislava	86.18	21		*e*P		P	03 03 04.4	-0.3
ROTZ	Rotzenmuhle	86.22	18		*e*P		P	03 03 04.9	0.0
	comp=Z,22nm,1.5s								
ARR	Arges	86.35	27	⇑	*i*P		P	03 03 06.2	+0.5
VOIR		86.57	28	⇑	*i*P		P	03 03 06.8	0.0
PSZ	Piszkesteto	86.83	23		*e*P		P	03 03 08.2	+0.2
	comp=Z,36nm,1.2s								
PSZ	Piszkesteto	86.83	23	⇓	*i*P		P	03 03 08.1	+0.1
PSZ	Piszkesteto	86.83	23	⇓	*e*P		P	03 03 09.6	+1.6
DRGR		86.83	25	⇓	*i*P		P	03 03 08.1	0.0
MLR	Muntele Rosu	86.97	28	⇓	*i*P		P	03 03 08.8	0.0
TEIG	Tepich	86.98	296		*e*P		P	03 03 10.0	+0.7
	comp=Z,29nm,1.2s								
VYHS	Vyhne	86.99	22		*e*P		P	03 03 08.4	-0.3
KECS	Kecovo	87.52	23		*e*P		P	03 03 11.4	+0.2
MORC	Moravsky Berou	87.72	21		*e*P		P	03 03 12.2	-0.1
	comp=Z,12nm,1.4s								
MORC	Moravsky Berou	87.72	21	⇑	*i*P		P	03 03 13.1	+0.9
CLL	Collm	87.84	18		*e*P		P	03 03 13.0	+0.3
	comp=Z,22nm,1.8s								
CLL	Collm	87.84	18		*i* P		P	03 03 13.8	+1.1
	comp=Z,12nm,1.2s								
CLL					*e*PP		PP	03 06 37.0	-2.1
CRVS	Cervenica-Dubn	88.21	24		*e*P		P	03 03 13.1	-1.4
BUR08	Bucovina Ar. S	88.47	26		*e*P		P	03 03 16.3	+0.4
KOLS	Kolonicke sedl	88.51	24		*e*P		P	03 03 16.1	+0.1
KWP	Kalwaria Pacla	89.25	24		*e*P		P	03 03 19.6	+0.1
	comp=Z,8.9nm,0.9s								
GNI	Garni	91.97	42		*e*P		P	03 03 33.8	+1.3
	comp=Z,25nm,1.1s								
KIEV	Kiev	92.48	27		*e*P		P	03 03 34.4	0.0
	comp=Z,8.3nm,1.1s								
AKASG	Malin Array Be	92.49	27		P		P	03 03 34.0	-0.4
AKASG	Malin Array Be	92.49	27		P		P	03 03 34.0	-0.4
	comp=Z,5.7nm,1.0s,baz=220,slow=4.9,SNR=11								
KBZ	Khabaz	93.43	38		P		P	03 03 40.0	+1.1
KBZ	Khabaz	93.43	38		P		P	03 03 40.0	+1.1
	comp=Z,4.1nm,1.0s,baz=278,slow=3.5,SNR=6.1								
NOA	NORSAR Array B	96.40	13		LR		LR	03 42 27.1	
	comp=Z,52nm,19.3s,baz=175,slow=32								
SCHQ	Schefferville	97.87	333		LR		LR	03 43 18.6	
	comp=Z,135nm,18.8s,baz=145,slow=32								
TXAR	Lajitas Array	103.62	296		PP		PP	03 08 44.4	+2.2
TXAR	Lajitas Array	103.62	296		PP		PP	03 08 44.4	+2.2
	comp=Z,0.7nm,0.9s,baz=111,slow=5.5,SNR=5.9								
TBI	Tubuai	108.46	225		*e*LR		LR	03 40 37.3	
	comp=Z,100nm,26.5s								
KSH	Kashi	111.50	56		*e*PKP		PKiKP	03 09 02.0	+3.8
KSH					*e*PKS		PKSdf	03 12 37.5	+2.6
KSH					*e*SKS		SKSdf	03 16 09.5	-0.9
KSH					AMB		AMB		
	comp=Z,180nm,5.9s								
KSH					LR		LR		
	comp=N,170nm,5.4s								
KSH					LR		LR		
	comp=E,130nm,8.2s								
KSH					LR		LR		
	comp=Z,160nm,6.2s								
TKM2	Tokmak 2	112.69	53		*e*PKPdf		PKiKP	03 09 01.2	+0.7
PPT2	Papeete2	112.89	229		*e*SS		SS	03 25 39.9	+8.1
	comp=Z,72nm,24.0s								
PPT2					eLR		LR	03 42 40.1	
	comp=Z,238nm,34.5s								
PDAR	Pinedale Array	113.98	306		PP		PP	03 09 55.8	-1.8
PDAR	Pinedale Array	113.98	306		PP		PP	03 09 55.8	-1.8
	comp=Z,0.5nm,0.8s,baz=125,slow=10.0,SNR=4.4								
KURK	Kurchatov	117.54	46		*e*PKPdf		PKPdf	03 09 09.4	+0.2
MK31	Makanchi Array	118.54	51		*e*PKPdf		PKPdf	03 09 10.6	-0.7
MKAR	Makanchi Array	118.54	51		PKP		PKPdf	03 09 12.3	+0.9
MKAR	Makanchi Array	118.54	51		PKP		PKPdf	03 09 12.3	+0.9
	comp=Z,0.7nm,1.0s,baz=222,slow=6.5,SNR=4.3								
CMAR	Chiang Mai Arr	120.44	87		PKP		PKPdf	03 09 15.5	-0.3
CMAR	Chiang Mai Arr	120.44	87		PKP		PKPdf	03 09 15.5	-0.3
	comp=Z,0.4nm,0.3s,baz=225,slow=3.6,SNR=5.7								
CHTO	Chiang Mai	120.61	87		*e*PKPdf		PKPdf	03 09 16.6	+0.4
WMQ	Urumqi	121.24	55		*e*PKP		PKPdf	03 09 16.5	-0.2
WMQ					LR		LR		
	comp=N,83nm,19.4s								
WMQ					LR		LR		
	comp=E,130nm,24.4s								
WMQ					LR		LR		
	comp=Z,140nm,22.2s								
ZALV	Zalesovo Beam	122.10	43		PKKPbc		PKKPbc	03 19 14.7	-0.7
ZALV	Zalesovo Beam	122.10	43		PKKPbc		PKKPbc	03 19 14.7	-0.7
	comp=Z,0.4nm,0.3s,baz=72,slow=4.8,SNR=4.1								
YKA	Yellowknife Ar	122.68	327		PKP		PKPdf	03 09 17.4	-1.4
YKA					PKKPbc		PKKPbc	03 19 13.4	+0.1
YKA	Yellowknife Ar	122.68	327		PKP		PKPdf	03 09 17.4	-1.4
	comp=Z,1.5nm,0.9s,baz=92,slow=1.9,SNR=15								
YKA					PKKPbc		PKKPbc	03 19 13.4	+0.1
	comp=Z,0.4nm,1.0s,baz=278,slow=4.1,SNR=4.0								
YKW3	Yellowknife Ar	122.70	327		*e*PKPdf		PKPdf	03 09 18.0	-0.8
KMI	Kunming	126.51	82		PKP		PKPdf	03 09 27.8	+0.2
KMI					PP		PP	03 11 28.0	+4.2
KMI					SS		SS	03 28 29.5	0.0
KMI					AMB		AMB		
	comp=Z,54nm,4.1s								
KMI					LR		LR		
	comp=Z,81nm,23.4s								
CD2	Chengdu	129.46	75		PKP		PKPdf	03 09 32.5	-0.3
CD2					PP		PP	03 11 46.5	+3.5
CD2					PKS		PKSdf	03 13 07.5	-2.0
CD2					SKS		SKSdf	03 16 41.5	-3.1
CD2					SKKS		SKKSac	03 18 36.8	-3.0
CD2					SS		SS	03 29 05.5	-0.1
CD2					AMB		AMB		
	comp=Z,120nm,6.2s								
CD2					LR		LR		
	comp=N,180nm,19.1s								
CD2					LR		LR		
	comp=E,200nm,17.6s								
CD2					LR		LR		
	comp=Z,160nm,16.2s								
GYA	Guiyang	130.29	82		Pdif		Pdif	03 06 24.0	0.0
GYA					PKP		PKPdf	03 09 33.8	-0.8
GYA					PP		PP	03 11 51.5	+3.0
GYA					PKS		PKSdf	03 13 09.8	-1.5
GYA					SKKS			03 18 41.0	
GYA					SS		SS	03 29 15.8	-0.2
GYA					AMB		AMB		
	comp=Z,130nm,7.8s								
GYA					LR		LR		
	comp=N,160nm,24.8s								
GYA					LR		LR		
	comp=E,130nm,25.5s								
GYA					LR		LR		
	comp=Z,140nm,23.8s								
LZH	Lanzhou	131.06	69		*e*PKP		PKPdf	03 09 30.5	-5.3
LZH					sPKP			03 09 35.0	
LZH					AMB		AMB		
	comp=Z,130nm,8.0s								
LZH					LR		LR		
	comp=N,170nm,19.0s								
LZH					LR		LR		
	comp=E,150nm,18.5s								
LZH					LR		LR		
	comp=Z,200nm,20.3s								
ILAR	Eielson Array	136.62	332		PKP		PKPdf	03 09 44.5	-0.6
ILAR	Eielson Array	136.62	332		PKP		PKPdf	03 09 44.5	-0.6
	comp=Z,1.4nm,0.9s,baz=254,slow=0.2,SNR=17								
MCK	McKinley	137.85	331		*e*PKPdf		PKPdf	03 09 47.6	+0.1
TRF	Thorofare Moun	138.52	331		*e*PKPdf		PKPdf	03 09 48.6	-0.3
PPLA	Purkeypile	139.54	331		*e*PKPdf		PKPdf	03 09 50.9	+0.1
BJI	Beijing	141.33	66		PKP		PKPdf	03 09 56.3	+1.8
BJI					LR		LR		
	comp=N,110nm,21.3s								
BJI					LR		LR		
	comp=E,130nm,16.5s								
BJI					LR		LR		
	comp=Z,79nm,23.4s								
NJ2	Nanjing	142.14	79		*e*PKP		PKPdf	03 09 56.8	+0.6
BILL	Bilibino	145.00	359		*e*PKPbc		PKPbc	03 09 59.5	0.0
GAMB	Gambell	145.79	341		*e*PKPdf		PKPbc	03 10 01.9	-0.2
CN2	Changchun	148.21	59		*e*PKPbc		PKPbc	03 10 09.0	-0.6
CN2					PP		PP	03 13 43.8	+5.3
CN2					SS		SS	03 32 46.5	+0.5
CN2					LR		LR		
	comp=N,500nm,20.0s								
CN2					LR		LR		
	comp=E,300nm,20.0s								
CN2					LR		LR		
	comp=Z,200nm,20.0s								
KSAR	Wonju Array Be	150.29	71		PKP		PKPdf	03 10 08.8	-1.0
KSAR					PKPbc		PKPbc	03 10 13.7	-1.3
KSRS	Korea Array	150.32	71		PKP		PKPdf	03 10 08.8	-1.0
	comp=Z,0.3nm,0.3s,baz=275,slow=1.8,SNR=3.6								
KSRS					PKPbc		PKPbc	03 10 13.7	-1.4
	comp=Z,4.8nm,1.1s,baz=286,slow=2.5,SNR=11								
MDJ	Mudanjiang	151.03	57		PKPbc		PKPdf	03 10 10.5	-0.3
MDJ					sPKP			03 10 15.3	
MDJ					PP		PP	03 13 56.5	+1.7
MDJ					AMB		AMB		
	comp=Z,68nm,14.4s								
MDJ	Mudanjiang	151.03	57		*e*PKPbc		PKPbc	03 10 16.2	-0.4
USRK	Ussuriysk Arra	152.81	57		PKPbc		PKPbc	03 10 20.5	-0.1
	comp=Z,0.3nm,0.5s,baz=308,slow=9.2,SNR=4.3								

NIED ***27*** *03:03:00,32˙00N×132˙20E,h26km,Mw3.6 Best double couple: M◎3.03000×10¹⁴ NP1:φ◎s28.00000°,δ63.00000°, λ86.00000°. NP2:φ◎s217.00000°,δ27.00000°,λ98.00000°.*

JMA 27 03:03:12.2±0.2,32˙01N×132˙19E,h19km±3km,M3.5, 5C-1D,Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JTSN	Tsuno	0.63	292	⇓	P		Pb	03 03 23.9	-0.6
JTSN					S		Sb	03 03 32.4	-0.5
JKIT	Kitakata	0.87	315		P		Pb	03 03 28.6	-0.2
JKIT					*e*S		Sg	03 03 40.7	-0.2
JNAR	Kushima--Naru	0.92	239		P		Pb	03 03 29.2	-0.3
JNAR					*e*S		Sg	03 03 42.5	+0.2
JTZ	Takazaki	0.94	264	⇑	P		Pb	03 03 29.3	-0.7
JTZ					*e*S		Sb	03 03 41.6	-0.5
JTO	Tosashimizu	0.99	31	⇑	P		Pb	03 03 30.3	-0.5
JTO					*e*S		Sb	03 03 43.7	+0.2
JUS	Usuki	1.12	341	⇑	P		Pb	03 03 33.2	+0.3
JUS					S		Sg	03 03 48.9	+0.3
UWA2	Uwa jima 2	1.25	17	⇑	P		Pn	03 03 34.5	-0.3
UWA2					S		Sb	03 03 50.8	-0.4
JIU2	Izumi 2	1.28	295	⇑	P		Pn	03 03 35.3	+0.2

KISR ***27*** *03:12:30.8±3.0,47˙62N×27˙60E,h0km,mb4.9*
ISCJB ***27*** *03:12:49.9±0.1,45˙68N±0˙01×26˙53E±0˙02,h149km±1km, mb3.9/23,Error ellipse: s-maj=2.4km s-min=1.9km az=19.5*
CSEM ***27*** *03:12:50.7±0.1,45˙69N×26˙51E,h146km±1km,mb4.1/6, Error ellipse: s-maj=2.7km s-min=2.1km az=3.0*
BUC ***27*** *03:12:50.5±1.1,45˙69N×26˙49E,h152km±10km,MD4.9/2, Error ellipse: s-maj=8.1km s-min=7.7km az=69.0*
SOF ***27*** *03:12:50.5,45˙56N×26˙35E,h8km,MD3.6*
MOS ***27*** *03:12:50.1±0.9,45˙69N×26˙52E,h149km,mb4.0/10,Error ellipse: s-maj=6.2km s-min=4.9km az=112.3*
IDC ***27*** *03:12:50.6±0.4,45˙74N×26˙37E,h138km±4km,mb3.5/15, mb1 3.6/23,mb1mx3.5/37,mbtmp3.5/23,Error ellipse: s-maj=12.2km s-min=9.3km az=135.0*
BEO ***27*** *03:12:54.2±1.4,45˙62N×26˙43E,h101km,ML3.9/1*

ISC 27 03:12:51.0±0.5,45˙68N±0˙03×26˙51E±0˙02,h149km±4km, n473,σ◎s99/566,mb3.9/23,98C-84D,Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.20	29	⇑	P		Pn	03 13 11.0	-0.2
PLOR					S		Sn	03 13 26.4	-0.2
PLOR	Plostina	0.20	29	⇑	*i*P		Pn	03 13 11.0	-0.2
PLOR					*i* S		Sn	03 13 26.4	-0.2
PLOR	Plostina	0.20	29	⇑	*i*P		Pn	03 13 11.0	-0.2
PLOR	Plostina	0.20	29	⇑	*i*P		Pn	03 13 11.0	-0.2
PLOR					*i* S		Sn	03 13 26.4	-0.2
VRI	Vrincioaia	0.24	39	⇑	P		Pn	03 13 11.2	-0.1
VRI					S		Sn	03 13 26.5	-0.2
VRI	Vrincioaia	0.24	39	⇑	*i*P		Pn	03 13 11.2	-0.1
VRI					*i* S		Sn	03 13 26.5	-0.2
VRI	Vrincioaia	0.24	39	⇑	*i*P		Pn	03 13 11.2	-0.1
VRI	Vrincioaia	0.24	39	⇑	*i*P		Pn	03 13 11.2	-0.1
VRI					*i* S		Sn	03 13 26.5	-0.2
ODBI	Odobesti	0.39	77	⇓	*i*P		Pn	03 13 12.7	+1.0
ODBI	Odobesti	0.39	77	⇓	*i*P		Pn	03 13 12.7	+1.0
ODBI	Odobesti	0.39	77	⇓	*i*P		Pn	03 13 12.7	+1.0
MLR	Muntele Rosu	0.44	245	⇑	*i*P		Pn	03 13 12.0	-0.1
MLR					*i* S		Sn	03 13 27.7	-0.4
MLR	Muntele Rosu	0.44	245	⇑	*i*P		Pn	03 13 12.0	-0.1
MLR	Muntele Rosu	0.44	245		P		Pn	03 13 11.7	-0.4
	baz=270,slow=1.0								
MLR					S		Sn	03 13 26.3	-1.8
	baz=246,slow=10.0								
MLR	Muntele Rosu	0.44	245		P		Pn	03 13 11.7	-0.4
MLR					*i* S		Sn	03 13 27.7	-0.4
GRER		0.44	132	⇑	*i*P		Pn	03 13 13.0	+1.0
GRER					*i* S		Sn	03 13 29.0	+1.2
GRER		0.44	132	⇑	*i*P		Pn	03 13 13.0	+1.0
GRER		0.44	132	⇑	*i*P		Pn	03 13 13.0	+1.0
GRER					*i* S		Sn	03 13 29.0	+1.2
PETR	Petresti	0.51	85	⇑	*i*P		Pn	03 13 12.8	+0.6
PETR					*i* S		Sn	03 13 28.7	+0.4
PETR	Petresti	0.51	85	⇑	*i*P		Pn	03 13 12.8	+0.6
PETR	Petresti	0.51	85	⇑	*i*P		Pn	03 13 12.8	+0.6
PETR					*i* S		Sn	03 13 28.7	+0.4
ISR	Istrita	0.56	178	⇑	P		Pn	03 13 12.7	+0.1
ISR					S		Sn	03 13 27.0	-2.0
ISR	Istrita	0.56	178	⇑	*i*P		Pn	03 13 12.7	+0.1
ISR	Istrita	0.56	178	⇑	*i*P		Pn	03 13 12.7	+0.1
ISR	Istrita	0.56	178	⇑	*i*P		Pn	03 13 12.7	+0.1
SECR		0.71	206	⇑	*i*P		Pn	03 13 13.9	+0.4
SECR					*i* S		Sn	03 13 31.0	+0.4
SECR		0.71	206	⇑	*i*P		Pn	03 13 13.9	+0.4
SECR		0.71	206	⇑	*i*P		Pn	03 13 13.9	+0.4
SECR					*i* S		Sn	03 13 31.0	+0.4
DOPR	Dopca	0.84	291	⇓	*i*P		Pn	03 13 14.2	-0.2
DOPR					*i* S		Sn	03 13 31.3	-0.9
DOPR	Dopca	0.84	291	⇓	*i*P		Pn	03 13 14.2	-0.2
DOPR	Dopca	0.84	291	⇓	*i*P		Pn	03 13 14.2	-0.2
DOPR					*i* S		Sn	03 13 31.3	-0.9
PLAR	PLOIESTI	0.84	204	⇑	*i*P		Pn	03 13 14.8	+0.4
PLAR					*i* S		Sn	03 13 33.0	+0.9
PLAR	PLOIESTI	0.84	204	⇑	*i*P		Pn	03 13 14.8	+0.4
PLAR	PLOIESTI	0.84	204	⇑	*i*P		Pn	03 13 14.8	+0.4
PLAR					*i* S		Sn	03 13 33.0	+0.9
PGOR	Pogoanele	0.84	156	⇑	*i*P		Pn	03 13 14.8	+0.4
PGOR	Pogoanele	0.84	156	⇑	*i*P		Pn	03 13 14.8	+0.4
PGOR	Pogoanele	0.84	156	⇑	*i*P		Pn	03 13 14.8	+0.4
TESR	Tescani	0.84	7	⇑	*i*P		Pn	03 13 14.0	-0.4
TESR					*i* S		Sn	03 13 30.7	-1.6
TESR	Tescani	0.84	7	⇑	*i*P		Pn	03 13 14.0	-0.4
TESR	Tescani	0.84	7	⇑	*i*P		Pn	03 13 14.0	-0.4
TESR					*i* S		Sn	03 13 30.7	-1.6
SULR		1.01	190	⇑	*i*P		Pn	03 13 16.1	+0.3
SULR					*i* S		Sn	03 13 35.0	+0.4
SULR		1.01	190	⇑	*i*P		Pn	03 13 16.1	+0.3
SULR		1.01	190	⇑	*i*P		Pn	03 13 16.1	+0.3
SULR					*i* S		Sn	03 13 35.0	+0.4
VOIR		1.05	257	⇓	P		Pn	03 13 15.7	-0.5
VOIR					S		Sn	03 13 34.1	-1.3
VOIR		1.05	257	⇓	*i*P		Pn	03 13 15.7	-0.5
VOIR					*i* S		Sn	03 13 34.1	-1.3
VOIR		1.05	257	⇓	*i*P		Pn	03 13 15.7	-0.5
VOIR		1.05	257	⇓	*i*P		Pn	03 13 15.7	-0.5
VOIR					*i* S		Sn	03 13 34.1	-1.3
MTUR	Matau	1.11	247	⇓	P		Pn	03 13 16.8	0.0
MTUR	Matau	1.11	247	⇓	*i*P		Pn	03 13 16.8	0.0
MTUR	Matau	1.11	247	⇓	*i*P		Pn	03 13 16.8	0.0
MTUR	Matau	1.11	247	⇓	*i*P		Pn	03 13 16.8	0.0
AMRR	Amara	1.22	151	⇓	P		Pn	03 13 17.8	+0.2
AMRR					S		Sn	03 13 37.8	-0.1
AMRR	Amara	1.22	151	⇑	*i*P		Pn	03 13 17.9	+0.3
AMRR					*i* S		Sn	03 13 38.0	+0.1
AMRR	Amara	1.22	151		P		Pn	03 13 17.8	+0.2
AMRR					*i* S		Sn	03 13 38.0	+0.1
CFR	Carcaliu	1.25	113	⇓	P		Pn	03 13 17.8	-0.1
CFR					S		Sn	03 13 37.4	-1.0
CFR	Carcaliu	1.25	113	⇓	*i*P		Pn	03 13 17.8	-0.1
CFR					*i* S		Sn	03 13 37.4	-1.0
CFR	Carcaliu	1.25	113	⇓	*i*P		Pn	03 13 17.8	-0.1
CFR	Carcaliu	1.25	113	⇓	*i*P		Pn	03 13 17.8	-0.1
CFR					*i* S		Sn	03 13 37.4	-1.0
INCR	INCERC-Sediu C	1.26	191	⇑	*i*P		Pn	03 13 18.0	-0.1
INCR					*i* S		Sn	03 13 38.1	-0.6
INCR	INCERC-Sediu C	1.26	191	⇑	*i*P		Pn	03 13 18.0	-0.1
INCR					*i* S		Sn	03 13 38.1	-0.6
BUC	Bucharest	1.30	193	⇓	P		Pn	03 13 18.3	-0.1
BUC					S		Sn	03 13 38.7	-0.6
BUC	Bucharest	1.30	193	⇓	*i*P		Pn	03 13 18.4	0.0
BUC					*i* S		Sn	03 13 38.9	-0.4
BUC	Bucharest	1.30	193	⇓	*i*P		Pn	03 13 18.4	0.0
BUC	Bucharest	1.30	193		P		Pn	03 13 18.3	-0.1
BUC					S		Sn	03 13 38.7	-0.6
ARR	Arges	1.35	257	⇓	*i*P		Pn	03 13 18.9	-0.2
ARR					*i* S		Sn	03 13 40.3	-0.2
ARR	Arges	1.35	257	⇓	*i*P		Pn	03 13 18.9	-0.2
ARR	Arges	1.35	257	⇓	*i*P		Pn	03 13 18.9	-0.2
ARR					*i* S		Sn	03 13 40.3	-0.2
BUC1	Bucharest	1.37	195	⇓	*i*P		Pn	03 13 18.4	-0.8
BUC1					*i* S		Sn	03 13 38.9	-1.7
GOLR		1.38	233	⇓	*i*P		Pn	03 13 19.4	+0.2
GOLR					*i* S		Sn	03 13 40.4	-0.3
GOLR		1.38	233	⇓	*i*P		Pn	03 13 19.4	+0.2
GOLR		1.38	233	⇓	*i*P		Pn	03 13 19.4	+0.2
GOLR					*i* S		Sn	03 13 40.4	-0.3
HARR	Harsova	1.41	134	⇑	P		Pn	03 13 19.6	+0.1
HARR	Harsova	1.41	134	⇑	*i*P		Pn	03 13 19.6	+0.1
HARR	Harsova	1.41	134	⇑	*i*P		Pn	03 13 19.6	+0.1
HARR	Harsova	1.41	134	⇑	*i*P		Pn	03 13 19.6	+0.1
LEOM	Leova	1.45	56	⇓	P		Pn	03 13 20.2	+0.3
LEOM					S		Sn	03 13 41.4	-0.6
LEOM	Leova	1.45	56	⇓	*i*P		Pn	03 13 20.2	+0.3
LEOM					*i* S		Sn	03 13 41.4	-0.6
LEOM	Leova	1.45	56	⇓	*i*P		Pn	03 13 20.2	+0.3
LEOM	Leova	1.45	56	⇓	*i*P		Pn	03 13 20.2	+0.3
LEOM					*i* S		Sn	03 13 41.4	-0.6
MDB	Medias	1.56	288	⇑	P		Pn	03 13 21.6	+0.5
MDB	Medias	1.56	288	⇑	*i*P		Pn	03 13 21.4	+0.3
MDB	Medias	1.56	288	⇑	*i*P		Pn	03 13 21.4	+0.3
MDB	Medias	1.56	288	⇑	*i*P		Pn	03 13 21.4	+0.3
HUMR	Humele	1.58	224	⇓	P		Pn	03 13 21.0	-0.3
HUMR					*i* S		Sn	03 13 43.1	-1.4
HUMR	Humele	1.58	224	⇓	*i*P		Pn	03 13 21.0	-0.3
HUMR	Humele	1.58	224	⇓	*i*P		Pn	03 13 21.0	-0.3
HUMR					*i* S		Sn	03 13 43.1	-1.4
SIBR	Sibiu	1.64	275	⇑	*i*P		Pn	03 13 22.4	+0.4
SIBR	Sibiu	1.64	275	⇑	*i*P		Pn	03 13 22.4	+0.4
SIBR	Sibiu	1.64	275	⇑	*i*P		Pn	03 13 22.4	+0.4
IAS	Iasi	1.68	25	⇓	P		Pn	03 13 22.4	+0.1
IAS					S		Sn	03 13 45.1	-1.5
IAS	Iasi	1.68	25	⇓	*i*P		Pn	03 13 22.5	+0.1
IAS					*i* S		Sn	03 13 45.0	-1.5
IAS	Iasi	1.68	25	⇓	*i*P		Pn	03 13 22.5	+0.1
IAS	Iasi	1.68	25		P		Pn	03 13 22.4	+0.1
IAS					S		Sn	03 13 45.1	-1.5
TLCR		1.70	106	⇑	P		Pn	03 13 22.6	0.0
TLCR		1.70	106	⇑	*i*P		Pn	03 13 22.6	0.0
TLCR					*i* S		Sn	03 13 46.3	-0.4
TLCR		1.70	106	⇑	*i*P		Pn	03 13 22.6	0.0
TLCR		1.70	106	⇑	*i*P		Pn	03 13 22.6	0.0
TLCR					*i* S		Sn	03 13 46.3	-0.4
CVD	Cernavoda	1.74	141	⇓	P		Pn	03 13 23.1	0.0
CVD					S		Sn	03 13 45.5	-2.1
CVD	Cernavoda	1.74	141	⇑	*i*P		Pn	03 13 23.1	0.0
CVD	Cernavoda	1.74	141	⇑	*i*P		Pn	03 13 23.1	0.0
CVD	Cernavoda	1.74	141	⇑	*i*P		Pn	03 13 23.1	0.0
CVD					*i* S		Sn	03 13 45.5	-2.1
TIRR	Tirgusor	1.82	131	⇑	P		P

BOLS Boljevac 3.73 242 ⇓ *i* Pn Pn 03 13 44.9 -2.9
PLD Plovdiv 3.80 201 P Pn 03 13 48.1 -0.5
PLD Plovdiv 3.80 201 ⇓ *i* Pn Pn 03 13 47.5 -1.1
PLD *e* Sn Sn 03 14 20.8 -13
PLD Plovdiv 3.80 201 P Pn 03 13 47.9 -0.7
PLD Plovdiv 3.80 201 ⇓ *i* Pn Pn 03 13 47.5 -1.1
PLD Plovdiv 3.80 201 P Pn 03 13 47.9 -0.7
EDRB Edirne 3.83 177 *e* P Pn 03 13 48.4 -0.6
EDRB Edirne 3.83 177 P Pn 03 13 49.0 -0.1
EDRB Edirne 3.83 177 P Pn 03 13 49.0 -0.1
VTS Vitosha 3.89 219 ⇓ P Pn 03 13 49.4 -0.6
VTS Vitosha 3.89 219 P Pn 03 13 49.4 -0.6
VTS Vitosha 3.89 219 ⇓ *i* Pn Pn 03 13 49.2 -0.7
VTS Vitosha 3.89 219 ⇓ *i* P Pn 03 13 49.4 -0.6
VTS Vitosha 3.89 219 ⇓ *i* P Pn 03 13 49.4 -0.6
VTS Vitosha 3.89 219 P Pn 03 13 49.3 -0.7
VTS Vitosha 3.89 219 ⇓ *i* P Pn 03 13 49.4 -0.6
KDZ Kurdzhali 4.10 192 *i* P Pn 03 13 52.7 +0.1
KDZ Kurdzhali 4.10 192 *i* P Pn 03 13 52.7 +0.1
UZH Uzhgorod 4.12 317 *d* i P Pn 03 13 52.8 +0.1
UZH *e* S Sn 03 14 41.0 +0.2
UZH smax smax
comp=E,31nm,0.8s
UZH MLR MLR
comp=N,35nm,1.0s
UZH MLR MLR
comp=E,36nm,1.0s
UZH MLR MLR
comp=Z,20nm,1.0s
UZH Uzhgorod 4.12 317 *i* P Pn 03 13 52.8 +0.1
UZH *e* S Sn 03 14 41.0 +0.2
RZN Rozhen 4.20 199 *i* P Pn 03 13 53.9 -0.1
RZN Rozhen 4.20 199 *i* P Pn 03 13 53.9 -0.1
KOLS Kolonicke sedl 4.35 320 *e* P Pn 03 13 56.9 +1.2
KOLS Kolonicke sedl 4.35 320 *e* P Pn 03 13 56.9 +1.2
KOLS Kolonicke sedl 4.35 320 *e* P Pn 03 13 56.9 +1.2
CTYL Yal??k??y-??at 4.39 162 *e* P Pn 03 13 54.6 -1.8
BARS Barje 4.42 231 ⇓ *i* Pn Pn 03 13 56.3 -0.5
BARS *e* Sn Sn 03 14 35.9 -12
LVV L'vov 4.47 339 *i* P Pn 03 14 01.1 +3.8
LVV *e* S Sn 03 14 49.3 +0.4
LVV L'vov 4.47 339 *i* P Pn 03 14 01.1 +3.8
LVV *e* S Sn 03 14 49.3 +0.4
GRUS Gruza 4.50 249 ⇓ *i* Pn Pn 03 13 56.9 -0.8
GRUS *e* Sn Sn 03 14 37.7 -12
GRUS Gruza 4.50 249 ⇓ *i* Pn Pn 03 13 56.9 -0.8
KKB Krupnik 4.55 214 *i* P Pn 03 13 58.4 0.0
KKB Krupnik 4.55 214 *i* P Pn 03 13 58.4 0.0
MMB Musomiste 4.56 207 *i* P Pn 03 13 58.9 +0.3
MMB Musomiste 4.56 207 *i* P Pn 03 13 58.9 +0.3
SELS Selova 4.58 239 ⇑ *i* Pn Pn 03 13 57.8 -1.0
SELS *e* Sn Sn 03 14 39.3 -12
SELS Selova 4.58 239 ⇑ *i* Pn Pn 03 13 57.8 -1.0
RDO Rodhopi 4.58 189 P Pn 03 13 58.9 0.0
RDO Rodhopi 4.58 189 P Pn 03 13 58.9 0.0
SLVT Silivri 4.62 164 *e* P Pn 03 13 57.7 -1.6
CRLT Corlu 4.63 168 *e* P Pn 03 13 57.9 -1.7
CTKS Kestanelik-??a 4.67 161 *e* P Pn 03 13 58.4 -1.6
CRVS Cervenica-Dubn 4.71 315 *e* P Pn 03 13 59.1 -1.4
CRVS Cervenica-Dubn 4.71 315 *e* P Pn 03 13 59.1 -1.4
CRVS Cervenica-Dubn 4.71 315 *e* P Pn 03 13 59.1 -1.4
KWP Kalwaria Pacla 4.72 328 ⇑ P Pn 03 14 01.5 +0.9
KWP Kalwaria Pacla 4.72 328 *e* P Pn 03 14 01.7 +1.1
KWP *e* S Sn 03 14 59.4 +4.6
KWP Kalwaria Pacla 4.72 328 P Pn 03 14 01.5 +0.9
KWP *e* S Sn 03 14 59.4 +4.6
NVR Nevrokopi 4.74 205 P Pn 03 14 00.7 -0.2
NVR Nevrokopi 4.74 205 P Pn 03 14 00.7 -0.2
ELBA Catalca 4.74 162 *i* P Pn 03 14 01.0 0.0
ELBA Catalca 4.74 162 *i* P Pn 03 14 01.0 0.0
FGSL Fruska Gora 4.75 266 ⇑ *i* Pn Pn 03 14 00.6 -0.4
FRGS Fruska Gora 4.75 266 ⇑ *i* Pn Pn 03 14 00.6 -0.4
BGKT Bogazkoy 4.79 159 *e* P Pn 03 14 00.2 -1.4
ALN Alexandroupoli 4.79 184 P Pn 03 14 02.0 +0.4
ALN Alexandroupoli 4.79 184 P Pn 03 14 02.0 +0.4
KLYT Kilyos 4.79 156 *e* P Pn 03 14 00.2 -1.4
DIVS Divibare 4.89 253 P Pn 03 14 01.8 -1.2
DIVS Divibare 4.89 253 *e* Sn Sn 03 14 47.2 -12
DIVS Divibare 4.89 253 P Pn 03 14 01.8 -1.2
ENEZ Enez 4.95 183 *e* P Pn 03 14 03.6 -0.1
ISK Istanbul-Kandi 4.97 157 *e* P Pn 03 14 03.3 -0.7
ISK Istanbul-Kandi 4.97 157 P Pn 03 14 04.0 0.0
ISK Istanbul-Kandi 4.97 157 P Pn 03 14 04.0 0.0
KECS Kecovo 4.98 306 *e* P Pn 03 14 04.0 -0.1
KECS Kecovo 4.98 306 *e* P Pn 03 14 04.0 -0.1
KECS Kecovo 4.98 306 *e* P Pn 03 14 04.0 -0.1
ERIK Erikli-Kesan 5.00 180 *e* P Pn 03 14 04.2 -0.2
RKY Sarkoy-Tekirda 5.01 174 *e* P Pn 03 14 03.7 -0.9
SRS Serrai 5.03 206 P Pn 03 14 04.4 -0.4
SRS Serrai 5.03 206 P Pn 03 14 04.4 -0.4
PSZ Piszkesteto 5.07 299 ⇑ *e* Pn 03 14 04.3 -1.0
SILT Sile 5.07 152 *e* P Pn 03 14 04.0 -1.3
TEKS Tekeris 5.07 260 ⇑ *i* Pn Pn 03 14 05.2 -0.1
TEKS Tekeris 5.07 260 ⇑ *i* Pn Pn 03 14 05.2 -0.1
MRMT Marmara Adasi 5.13 171 *e* P Pn 03 14 05.5 -0.7
PKS2 Kecel 5.14 282 ⇓ *e* Pn 03 14 06.7 +0.5
STHS Stebnicka Huta 5.17 318 *e* P Pn 03 14 08.2 +1.7
STHS Stebnicka Huta 5.17 318 *e* P Pn 03 14 08.2 +1.7
STHS Stebnicka Huta 5.17 318 *e* P Pn 03 14 08.2 +1.7
BUY Buyukada 5.18 158 *e* P Pn 03 14 05.9 -0.9
SEV Sevastopol' 5.19 100 ⇑ *i* P Pn 03 14 06.3 -0.6
SEV *e* S Sn 03 15 03.6 -2.4
SEV Sevastopol' 5.19 100 *i* P Pn 03 14 06.3 -0.6
SEV *e* S Sn 03 15 03.6 -2.4
SKO Skopje 5.21 227 P Pn 03 14 07.9 +0.7
SKO Skopje 5.21 227 *i* Pn Pn 03 14 07.9 +0.7
SKO Skopje 5.21 227 ⇓ *i* Pn Pn 03 14 07.5 +0.3
SKO *e* Sn Sn 03 14 55.3 -11
SKO Skopje 5.21 227 ⇓ *i* Pn Pn 03 14 07.5 +0.3
SKO Skopje 5.21 227 P Pn 03 14 07.9 +0.7
VAY Valandovo 5.21 215 *i* Pn Pn 03 14 06.5 -0.8
VAY Valandovo 5.21 215 ⇓ *i* Pn Pn 03 14 06.4 -0.8
VAY *e* Sn Sn 03 14 53.7 -13
VAY Valandovo 5.21 215 ⇓ *i* Pn Pn 03 14 06.4 -0.8
KNT Kendrikon 5.22 211 P Pn 03 14 07.2 -0.2
KNT Kendrikon 5.22 211 P Pn 03 14 07.2 -0.2
SJES Sjenica 5.26 245 *e* Pn Pn 03 14 06.7 -1.3
GELI Tayfur-Gelibol 5.28 180 *e* P Pn 03 14 07.4 -0.7
LPK Lapseki 5.30 178 *e* P Pn 03 14 08.7 +0.3
KRBG Karabiga-Canak 5.31 173 *e* P Pn 03 14 08.0 -0.5
AKASG Malin Array Be 5.34 19 P Pn 03 14 07.6 -1.3
AKASG S Sn 03 15 06.1 -3.6
AKASG pmax pmax
comp=Z,50nm,0.3s
AKASG smax smax
comp=N,13nm,0.3s
AKASG Malin Array Be 5.34 19 P Pn 03 14 07.5 -1.3
comp=N,50nm,0.3s,baz=204,slow=12,SNR=130
AKASG S Sn 03 15 06.1 -3.6
comp=N,13nm,0.3s,baz=200,slow=22,SNR=6.7
AKASG Malin Array Be 5.34 19 P Pn 03 14 07.6 -1.3
comp=N,50nm,0.3s
SOH Sokhos 5.37 207 P Pn 03 14 09.0 -0.4
SOH Sokhos 5.37 207 P Pn 03 14 09.0 -0.4
BBLS Lazići 5.37 253 ⇓ *i* Pn Pn 03 14 08.7 -0.7
BBLS Lazići 5.37 253 ⇓ *i* Pn Pn 03 14 08.7 -0.7
ARMT Armutlu 5.39 161 *e* P Pn 03 14 08.7 -0.9
SIM Simferopol' 5.41 95 *d* i P Pn 03 14 09.4 -0.4
SIM *e* S Sn 03 15 09.1 -2.3
SIM pmax pmax
comp=Z,94nm,0.4s
SIM smax smax
comp=N,62nm,1.0s
SIM smax smax
comp=E,124nm,1.0s
SIM Simferopol' 5.41 95 *i* P Pn 03 14 09.4 -0.4
comp=E,94nm,0.4s
SIM *e* S Sn 03 15 09.1 -2.3
BNT Bandirma 5.42 169 *e* P Pn 03 14 09.8 -0.1
PKSM Moragy 5.51 278 *e* Pn P Pn 03 14 11.1 0.0
PKSM Moragy 5.51 278 ‖ *e* Pn P Pn 03 14 11.6 +0.5
PKSM Moragy 5.51 278 *e* Pn Pn 03 14 11.1 0.0
YLV Yalova 5.52 157 *e* P Pn 03 14 11.3 -0.1
YAL Yalta 5.54 100 *e* P Pn 03 14 11.5 0.0
YAL *e* S Sn 03 15 13.4 -1.0
YAL Yalta 5.54 100 *e* P Pn 03 14 11.5 0.0
YAL *e* S Sn 03 15 13.4 -1.0
KCTX Karacabey (Bur 5.58 165 *e* P Pn 03 14 10.9 -1.2
MDNY Mudanya-Bursa 5.58 161 *e* P Pn 03 14 11.8 -0.4
GRG Griva 5.59 214 P Pn 03 14 11.6 -0.7
GEMT Gemlik 5.59 159 *e* P Pn 03 14 11.6 -0.7

NIE Niedzica 5.62 314 *e* P Pn 03 14 14.0 +1.4
NIE Niedzica 5.62 314 *e* Pn Pn 03 14 14.0 +1.4
NIE Niedzica 5.62 314 *e* P Pn 03 14 14.0 +1.4
KDZE Karadeniz Ereo 5.65 139 *e* P Pn 03 14 12.8 -0.2
ALU Alushta 5.67 97 *e* P Pn 03 14 12.5 -0.7
ALU *e* S Sn 03 15 15.8 -1.6
ALU Alushta 5.67 97 *e* P Pn 03 14 12.5 -0.7
ALU *e* S Sn 03 15 15.8 -1.6
GONE Gonen-Balikesi 5.69 171 *e* P Pn 03 14 13.1 -0.5
BCI Bajram Curri 5.70 237 *e* PN Pn 03 14 13.8 +0.1
BCI Bajram Curri 5.70 237 *e* Pn Pn 03 14 13.8 +0.1
ADVT Abdulvahap 5.75 155 *e* P Pn 03 14 13.8 -0.6
PLG Polygyros 5.76 204 P Pn 03 14 14.2 -0.3
PKS9 Tamasi 5.79 282 ⇓ *e* Pn 03 14 15.0 +0.1
EZN Ezine 5.85 181 *e* P Pn 03 14 16.3 +0.6
ORLT Orhaneli 5.89 162 *e* P Pn 03 14 16.1 -0.2
PHP Peshkopia 5.94 230 *e* PN Pn 03 14 16.9 0.0
PHP Peshkopia 5.94 230 P Pn 03 14 17.0 0.0
PHP Peshkopia 5.94 230 *e* Pn Pn 03 14 16.9 0.0
VYHS Vyhne 5.95 301 *e* P Pn 03 14 16.7 -0.2
VYHS Vyhne 5.95 301 *e* P Pn 03 14 16.7 -0.2
VYHS Vyhne 5.95 301 *e* P Pn 03 14 16.7 -0.2
BALY Balya 5.99 172 *i* P Pn 03 14 18.7 +1.1
BALY Balya 5.99 172 *i* P Pn 03 14 18.7 +1.1
CAVI Cavuskoy 5.99 155 *e* P Pn 03 14 17.3 -0.4
PUK Puka 6.01 235 *e* PN Pn 03 14 17.5 -0.3
PUK Puka 6.01 235 *e* Pn Pn 03 14 17.5 -0.3
GULT Gulveren 6.01 149 *e* P Pn 03 14 17.4 -0.5
SUDU Sudak 6.04 94 ‖ *e* P Pn 03 14 17.2 -1.0
SUDU *e* S Sn 03 15 26.1 -0.3
SUDU Sudak 6.04 94 *e* P Pn 03 14 17.2 -1.0
SUDU *e* S Sn 03 15 26.1 -0.3
GPA Golpazari 6.06 151 *e* P Pn 03 14 18.8 +0.2
PKST T``s 6.06 288 ⇑ *e* Pn 03 14 18.7 +0.2
PAIG Paliouri 6.11 201 P Pn 03 14 18.3 -0.9
BALB Balikesir 6.12 170 *e* P Pn 03 14 19.3 0.0
PDG Podgorica 6.15 241 P Pn 03 14 20.2 +0.5
FNA Florina 6.16 219 P Pn 03 14 20.0 +0.1
MDUB Mudurnu 6.23 145 *e* P Pn 03 14 20.1 -0.8
DST Dursunbey 6.27 165 *e* P Pn 03 14 20.7 -0.6
FEO Feodosiya 6.29 93 *e* P Pn 03 14 20.8 -0.7
FEO *e* S Sn 03 15 30.0 -2.4
FEO Feodosiya 6.29 93 *e* P Pn 03 14 20.8 -0.7
FEO *e* S Sn 03 15 30.0 -2.4
SAFT Safranbolu 6.31 132 *e* P Pn 03 14 20.5 -1.4
AYVA Ayvalik 6.37 179 *i* P Pn 03 14 23.9 +1.3
AYVA Ayvalik 6.37 179 *i* P Pn 03 14 23.9 +1.3
BALT Daday 6.48 127 *i* P Pn 03 14 23.5 -0.8
BALT Daday 6.48 127 *i* P Pn 03 14 23.5 -0.8
KBN Korca 6.56 222 *e* PN Pn 03 14 26.0 +0.8
KBN Korca 6.56 222 *e* Pn Pn 03 14 26.0 +0.8
TVSB Tavsanli 6.59 160 *e* P Pn 03 14 26.1 +0.4
ZST Bratislava 6.92 295 *e* P Pn 03 14 28.7 -1.1
ZST Bratislava 6.92 295 *e* P Pn 03 14 28.7 -1.1
ZST Bratislava 6.92 295 *e* P Pn 03 14 28.7 -1.1
STON Ston 6.92 249 *i* Pn Pn 03 14 31.1 +1.3
STON Sn Sn 03 15 47.7 +0.4
STON Ston 6.92 249 *i* Pn Pn 03 14 31.1 +1.3
STON Sn Sn 03 15 47.7 +0.4
ALT Altintas 7.13 157 *e* P Pn 03 14 33.4 +0.5
ALT Altintas 7.13 157 P Pn 03 14 33.5 +0.6
KULA Kula-Manisa 7.33 167 *e* P Pn 03 14 35.0 -0.6
MAKR Makrakomi, Fth 7.41 207 P Pn 03 14 36.6 +0.1
KHL Karahalli 7.68 162 *e* P Pn 03 14 41.0 +0.7
GROS Grobnik 7.70 280 *i* P Pn 03 14 41.0 +0.6
DOBS Dobrina 7.72 277 *i* P Pn 03 14 41.8 +1.2
SHUT Suhut-Afyon 7.73 156 *e* P Pn 03 14 41.1 +0.2
ARSA Arzberg 7.75 286 ⇓ *i* Pn Pn 03 14 41.9 +0.9
KIZT Kizilcal 7.87 148 *e* P Pn 03 14 42.9 +0.1
BOJS Bojanci 7.90 273 *i* P Pn 03 14 44.1 +1.2
BRTR Keskin Array B 7.93 136 P Pn 03 14 43.5 -0.1
comp=E,0.2nm,0.3s,baz=327,slow=10,SNR=16
NVLJ Novalja 8.31 266 *e* Pn Pn 03 14 51.2 +2.9
CEY Cerknica 8.46 275 *i* P Pn 03 14 52.0 +1.6
SUW Suwalki 8.62 347 *e* P Pn 03 14 51.0 -1.4
SUW Suwalki 8.62 347 *e* P Pn 03 14 51.1 -1.4
LADK Ladik-KONYA 8.65 148 *e* P Pn 03 14 53.2 +0.1
NACGM Naroch 9.23 1 *e* Sn 03 16 33.0 -10
GERES GERESS Array B 9.27 295 P Pn 03 15 00.2 -1.1
comp=E,0.1nm,0.3s,baz=101,slow=14,SNR=4.7
GERES GERESS Array B 9.27 295 P Pn 03 15 00.2 -1.1
KHC Kasperske Hory 9.42 296 *e* P Pn 03 15 04.5 +1.2
KHC Kasperske Hory 9.42 296 *e* P Pn 03 15 04.5 +1.2
KHC Kasperske Hory 9.42 296 *e* P Pn 03 15 04.5 +1.2
VORD Divnogorie 10.02 54 *e* P Pn 03 15 09.5 -1.6
VORD *e* S Sn 03 16 56.7 -5.2
VORD pmax pmax
comp=N,20nm,0.5s
VORD pmax pmax
comp=E,60nm,0.5s
VORD pmax pmax
comp=Z,40nm,0.5s
VORD smax smax
comp=N,70nm,1.1s
VORD smax smax
comp=E,160nm,1.1s
VORD smax smax
comp=Z,10.0nm,0.4s
VORD Divnogorie 10.02 54 *e* P Pn 03 15 09.5 -1.6
VSR Storozhevoye 10.06 52 *e* P Pn 03 15 10.3 -1.4
VSR *e* S Sn 03 16 56.2 -6.8
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,20nm,0.5s
VSR smax smax
comp=N,60nm,0.7s
VSR smax smax
comp=E,50nm,0.7s
VSR smax smax
comp=Z,10.0nm,0.3s
VSR Storozhevoye 10.06 52 *e* P Pn 03 15 10.3 -1.4
OBN Obninsk 11.41 30 ‖ *e* P Pn 03 15 25.7 -3.6
OBN *i* S Sn 03 17 25.3 -10
OBN pmax pmax
comp=Z,16nm,0.5s
VRHR Novokhopersk 11.41 56 *e* P Pn 03 15 28.9 -0.5
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=Z,20nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.4s
VRHR Novokhopersk 11.41 56 *e* P Pn 03 15 28.9 -0.5
KIV Kislovodsk 11.62 93 *e* P Pn 03 15 32.4 0.0
KIV *e* S Sn 03 17 37.4 -3.4
KIV pmax pmax
comp=Z,6.0nm,0.7s
KIV Kislovodsk 11.62 93 *e* P Pn 03 15 32.4 0.0
comp=Z,6.0nm,0.7s
GOF Gofitskoye 11.64 87 *e* P Pn 03 15 24.3 -8.3
GOF pmax pmax
comp=Z,40nm,1.0s
KBZ Khabaz 11.83 94 P Pn 03 15 35.3 +0.4
KBZ Khabaz 11.83 94 P Pn 03 15 35.3 +0.4
comp=Z,0.4nm,0.3s,baz=110,slow=20,SNR=5.7
KBZ Khabaz 11.83 94 P Pn 03 15 35.3 +0.4
BSD Bornholm Skovb 11.98 326 *i* P P 03 15 42.9 -0.6
BSD Bornholm Skovb 11.98 326 *i* P P 03 15 42.9 -0.6
MOS Moscow 12.27 31 *e* P Pn 03 15 36.9 -3.7
MOS *e* S Sn 03 17 48.8 -7.3
MOS pmax pmax
comp=Z,26nm,0.6s
CDF Champ du Feu 13.40 289 *e* P Pn 03 15 53.4 -1.8
SBF Sospel 13.67 269 *e* P Pn 03 15 58.9 +0.1
LPG La Plagne 13.84 276 *e* P Pn 03 16 02.1 +1.0
comp=Z,20nm,0.8s
LPG La Plagne 13.84 276 *e* P Pn 03 16 02.1 +1.0
comp=Z,10nm,0.8s
LPL La Plagne 13.85 276 *e* P Pn 03 16 02.1 +0.9
comp=Z,14nm,0.8s
MBDF Montbardon 13.95 273 *e* P Pn 03 16 02.8 +0.4
CABF La Chapelle 14.19 281 *e* P P 03 16 08.6 +0.4
comp=Z,9.7nm,0.4s
CABF La Chapelle 14.19 281 *e* P P 03 16 08.6 +0.4
comp=Z,4.8nm,0.4s
MMAI Mount Meron Ar 14.38 148 P Pn 03 16 07.5 -0.3
comp=Z,1.8nm,0.3s,baz=328,slow=16,SNR=3.7
GNI Garni 14.45 106 *e* P P 03 16 12.1 +0.9
comp=Z,11nm,1.3s

ORIF Oris-en-Rattie 14.54 274 *e* P P 03 16 11.3 -0.9
ORIF Oris-en-Rattie 14.54 274 *e* P P 03 16 11.3 -0.9
SFTF Sexfontaines 14.88 288 *e* P Pn 03 16 13.2 -0.6
comp=Z,6.6nm,0.5s
GIVF Givet 15.19 295 *e* P Pn 03 16 15.8 -1.8
LOR Lormes 15.68 284 *e* P P 03 16 24.6 -0.1
comp=Z,8.2nm,0.8s
LOR Lormes 15.68 284 *e* P P 03 16 24.6 -0.1
comp=Z,4.1nm,0.8s
SMF Signal de Mont 15.73 282 *e* P Pn 03 16 24.3 -0.1
SMF Signal de Mont 15.73 282 *e* P Pn 03 16 24.3 -0.1
FINES FINESS Array B 15.80 359 P Pn 03 16 22.9 -2.0
comp=Z,0.6nm,0.3s,baz=166,slow=9.8,SNR=8.3
SSF Saint Saulge 15.93 283 *e* P P 03 16 27.4 0.0
comp=Z,12nm,1.1s
SSF Saint Saulge 15.93 283 *e* P P 03 16 27.4 0.0
comp=Z,5.8nm,1.1s
AVF Avril sur Loir 16.05 282 *e* P P 03 16 28.8 0.0
comp=Z,10nm,0.9s
AVF Avril sur Loir 16.05 282 *e* P P 03 16 28.8 0.0
comp=Z,5.1nm,0.9s
HFS Hagfors 16.36 337 P Pn 03 16 30.4 -1.5
comp=Z,0.8nm,0.3s,baz=146,slow=10,SNR=15
HFS Hagfors 16.36 337 P Pn 03 16 30.4 -1.5
comp=Z,1.0nm,0.3s
BGF Bois d'Agland 16.42 282 *e* P Pn 03 16 32.5 -0.3
comp=Z,9.8nm,0.7s
BGF Bois d'Agland 16.42 282 *e* P Pn 03 16 32.5 -0.3
comp=Z,4.9nm,0.7s
KAF Kangasniemi 16.47 360 *e* P Pn 03 16 30.2 -3.0
KAF pmax pmax
comp=Z,10.0nm,0.5s
KAF Kangasniemi 16.47 360 *ep* Pn 03 16 30.2 -3.0
comp=Z,10nm,0.5s
KLMR Klimovskoe 17.02 22 *e* P P 03 16 34.0 -5.3
KLMR *e* 03 19 33.8
KLMR pmax pmax
comp=Z,11nm,1.1s
MTLF Montolieu 17.47 271 *e* P Pn 03 16 45.8 +0.4
MTLF Montolieu 17.47 271 *e* P Pn 03 16 45.8 +0.4
JOF Joensuu 17.49 7 *e* P P 03 16 44.2 -0.2
JOF pmax pmax
comp=Z,5.0nm,0.4s
JOF Joensuu 17.49 7 *ep* P 03 16 44.2 -0.2
comp=Z,5.1nm,0.4s
JOF Joensuu 17.49 7 *e* P P 03 16 44.2 -0.2
comp=Z,5.0nm,0.4s
RJF Les Rejaudoux 17.51 278 *e* P P 03 16 45.2 +0.3
RJF Les Rejaudoux 17.51 278 *e* P P 03 16 45.2 +0.3
NB2 NORSÄR Subarra 17.82 335 P P 03 16 47.7 -0.3
comp=Z,4.0nm,0.6s,baz=143,slow=11
NB2 NORSÄR Subarra 17.82 335 P P 03 16 47.7 -0.3
comp=Z,4.0nm,0.6s,baz=143,slow=11,SNR=1.1
NOA NORSÄR Array B 17.82 335 P P 03 16 47.2 -0.8
comp=Z,0.8nm,0.3s,baz=145,slow=9.8,SNR=11
NOA NORSÄR Array B 17.82 335 P P 03 16 47.2 -0.8
comp=Z,1.0nm,0.3s
LFF La Frestale 18.12 277 *e* P Pn 03 16 53.0 -0.1
comp=Z,8.2nm,0.5s
LFF La Frestale 18.12 277 *e* P Pn 03 16 53.0 -0.1
comp=Z,4.1nm,0.5s
LDF La Druitiere 18.32 289 *e* P P 03 16 52.8 -0.8
LDF La Druitiere 18.32 289 *e* P P 03 16 52.8 -0.8
MFF Saint Martin d 18.47 282 *e* P P 03 16 55.1 -0.2
MFF Saint Martin d 18.47 282 *e* P P 03 16 55.1 -0.2
FLN La Foliniere 18.55 289 *e* P P 03 16 56.4 +0.2
FLN La Foliniere 18.55 289 *e* P P 03 16 56.4 +0.2
GRR Gorron 18.81 288 *e* P P 03 16 57.7 -1.3
GRR Gorron 18.81 288 *e* P P 03 16 57.7 -1.3
EPF Esparros 18.87 271 *e* P Pn 03 17 01.0 -1.0
comp=Z,2.9nm,0.5s
EPF Esparros 18.87 271 *e* P Pn 03 17 01.0 -1.0
comp=Z,1.5nm,0.5s
ETSF Etsaut 19.54 272 *e* P Pn 03 17 09.1 -0.8
comp=Z,6.0nm,0.6s
ETSF Etsaut 19.54 272 *e* P Pn 03 17 09.1 -0.8
comp=Z,3.0nm,0.6s
SGMF Saint Gilles 19.95 288 *e* P P 03 17 11.6 +0.3
SGMF Saint Gilles 19.95 288 *e* P P 03 17 11.6 +0.3
QUIF Quistinic 20.38 287 *e* P P 03 17 16.4 +0.5
QUIF Quistinic 20.38 287 *e* P P 03 17 16.4 +0.5
ROSF Rostrenen 20.43 288 *e* P P 03 17 16.7 +0.4
ROSF Rostrenen 20.43 288 *e* P P 03 17 16.7 +0.4
EKA Eskdalemuir Ar 21.05 308 P P 03 17 23.2 +0.3
comp=Z,3.7nm,0.7s,baz=104,slow=11,SNR=7.0
EKA Eskdalemuir Ar 21.05 308 P P 03 17 23.2 +0.3
comp=Z,4.0nm,0.7s
AKTK Aktyubinsk 21.49 66 P P 03 17 29.3 +1.5
comp=Z,4.0nm,0.5s
AKTO Aktyubinsk 21.49 66 P P 03 17 29.3 +1.5
AKTO pmax pmax
comp=Z,4.0nm,0.5s
AKTO Aktyubinsk 21.49 66 P P 03 17 29.3 +1.5
comp=Z,4.0nm,0.5s,baz=269,slow=9.3,SNR=22
ARU Arti 22.63 50 *c i* P P 03 17 38.1 -1.0
ARU 03 18 03.1
ARU S S 03 21 36.2 +0.8
ARU pmax pmax
comp=Z,3.0nm,0.6s
ARU Arti 22.63 50 *i* P P 03 17 38.1 -1.0
comp=Z,3.0nm,0.6s
MIB Mutribah 22.75 127 *e* P P 03 17 41.5 +1.0
MIB AMb AMB 03 17 43.1
comp=Z,21nm,0.8s
MIB Mutribah 22.75 127 *e* P P 03 17 41.5 +1.0
comp=Z,21nm,0.8s
RST Umm Al-Ruwaisa 22.80 128 *e* P P 03 17 42.3 +1.4
RST AMb AMB 03 17 44.7
comp=Z,176nm,0.9s
RST Umm Al-Ruwaisa 22.80 128 *e* P P 03 17 42.3 +1.4
comp=Z,176nm,0.9s
ESDC Sonseca Array 23.11 266 P P 03 17 42.2 -1.6
comp=Z,0.7nm,0.4s,baz=59,slow=9.1,SNR=9.4
NAY Al-Naaiem 23.13 128 *e* P P 03 17 45.5 +1.5
NAY AMb AMB 03 17 46.4
comp=Z,8.5nm,0.8s
NAY Al-Naaiem 23.13 128 *e* P P 03 17 45.5 +1.5
comp=Z,8.5nm,0.8s
ARCES ARCESS Array B 23.93 359 P P 03 17 51.4 +0.6
comp=Z,1.1nm,0.5s,baz=189,slow=10,SNR=14
ARCES ARCESS Array B 23.93 359 P P 03 17 51.4 +0.6
comp=Z,1.0nm,0.5s
KEV Kevo 24.15 0 *e* P P 03 17 53.8 +1.0
KEV Kevo 24.15 0 *ep* P 03 17 53.8 +1.0
KEV Kevo 24.15 0 *e* P P 03 17 53.8 +1.0
BRVK Borovoye 29.06 59 *e* P P 03 18 39.0 +2.0
BRVK pmax pmax
comp=Z,1.0nm,1.0s
BVAR Borovoye Array 29.13 59 P P P 03 18 38.9 +1.3
BVAR *PP pP 03 19 08.0 -1.0
BVAR pmax pmax
comp=Z,1.0nm,0.5s
BVAR Borovoye Array 29.13 59 P P 03 18 38.9 +1.3
comp=Z,0.6nm,0.5s,baz=273,slow=13,SNR=4.1
BVAR pP pP 03 19 08.0 -1.0
comp=Z,1.3nm,0.6s,baz=277,slow=15,SNR=6.4
SPITS Spitsbergen Ar 32.85 356 P P 03 19 10.2 +0.1
comp=Z,0.8nm,0.3s,baz=140,slow=13,SNR=9.2
AAK Ala-Archa 34.16 78 P P 03 19 23.4 +1.5
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 34.16 78 P P 03 19 23.4 +1.5
comp=Z,1.5nm,0.7s,baz=286,slow=6.5,SNR=4.9
KURBB Kurchatov Arra 34.46 63 P P 03 19 25.6 +1.4
comp=Z,0.9nm,0.5s,baz=287,slow=9.4,SNR=5.3
KURK Kurchatov 34.50 62 P P 03 19 25.6 +1.1
KURK pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 37.55 56 P P 03 19 51.9 +1.5
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 37.55 56 P P 03 19 51.9 +1.5
comp=Z,1.3nm,0.5s,baz=284,slow=7.5,SNR=4.7
MKAR Makanchi Array 37.91 68 *c e* P P 03 19 55.7 +2.1
MKAR Makanchi Array 37.91 68 P P 03 19 54.8 +1.2
comp=Z,0.3nm,0.4s,baz=271,slow=8.0,SNR=8.8
MKAR pP pP 03 20 25.6 -0.3
comp=Z,2.0nm,0.5s,baz=268,slow=8.2,SNR=2.9
TORD Torodi Ar. Bea 38.64 221 P P 03 20 00.6 +0.6
comp=Z,1.7nm,0.4s,baz=28,slow=8.7,SNR=89
TORD PcP PcP 03 22 08.9 -0.1
comp=Z,0.7nm,0.9s,baz=28,slow=3.0,SNR=4.7
DBIC Dimbokro 47.40 225 P P 03 21 10.0 -0.3
comp=Z,6.3nm,0.3s,baz=12,slow=9.2,SNR=54
LIC Lamto 47.87 225 *e* P P 03 21 13.8 -0.1
comp=Z,10nm,0.4s,baz=37

YKA	**Yellowknife Ar**	**67.78**	**342**	P	**P**	**03 23 32.3**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=30,slow=5.8,SNR=25						
ILAR	**Eielson Array**	**69.77**	**357**	P	**P**	**03 23 45.7**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=358,slow=4.7,SNR=5.3						
PDAR	**Pinedale Array**	**83.65**	**329**	P	**P**	**03 25 03.2**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=104,slow=6.3,SNR=4.8						

IDC 27 03:27:05.9±2.0, 2.65N×127.57E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/21, mbtmp3.5/4, Error ellipse: s-maj=167.3km s-min=24.4km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.41**	**164**	P	P	03 32 16.9	+0.1
	0.3nm,0.4s,baz=342,slow=10,SNR=5.0						
ASAR	**Alice Springs**	**26.87**	**167**	P	P	03 32 49.6	+1.0
	0.1nm,0.3s,baz=349,slow=9.5,SNR=2.8						
STKA	**Stephens Creek**	**36.83**	**160**	P	P	03 34 14.4	-1.5
	1.0nm,0.6s,baz=339,slow=11,SNR=2.5						
MKAR	**Makanchi Array**	**58.92**	**325**	P	P	03 37 07.3	+0.3
	0.4nm,0.5s,baz=134,slow=8.2,SNR=5.4						

MOS 27 03:33:35.6±2.9, 54.10N×97.80E, h6km, mb4.3/1, Error ellipse: s-maj=47.3km s-min=29.5km az=42.5, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORL	**Orlik**	**1.98**	**142**	*e*PN	Pn	03 34 10.2	+0.5
ORL				*e*		03 34 37.2	
ORL				pmax	pmax		
	comp=Z,46nm,0.4s						
ORL				smax	smax		
	comp=N,219nm,0.4s						
ARS	**Arshan**	**3.54**	**126**	*e*PN	Pb	03 34 38.0	-0.8
ARS				*e*		03 35 26.3	
ARS				pmax	pmax		
	comp=Z,42nm,0.3s						
ARS				smax	smax		
	comp=E,210nm,0.5s						
TRG	**Tyrgan**	**5.29**	**101**	*e*PN	Pn	03 34 53.2	-1.9
TRG				*e*		03 35 09.6	
TRG				*e*S	Sn	03 35 55.5	-0.8
TRG				*e*		03 36 20.1	
TRG				pmax	pmax		
	comp=Z,6.0nm,0.2s						
TRG				smax	smax		
	comp=N,71nm,0.8s						
OGRR	**Ongureny**	**5.81**	**91**	*e*PN	Pn	03 35 04.6	+2.3
OGRR				*e*		03 35 21.8	
OGRR				*e*		03 36 35.9	
OGRR				pmax	pmax		
	comp=Z,4.0nm,0.2s						
OGRR				smax	smax		
	comp=N,106nm,0.8s						
NIZ	**Nizh Angarsk**	**6.97**	**71**	*e*PN	Pn	03 35 21.0	+2.8
NIZ				*e*		03 35 43.2	
NIZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						

IDC 27 03:46:44.5±13.0, 22.60S×179.31W, h384km±126km, mb3.8/4, mb1 3.9/5, mb1mx3.3/20, mbtmp3.7/5, Error ellipse: s-maj=89.4km s-min=28.7km az=39.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**15.91**	**190**	P	P	03 50 07.4	+0.1
	1.2nm,0.3s,baz=16,slow=4.0,SNR=7.7						
RPZ	**Rata Peaks**	**22.52**	**198**	P	P	03 51 12.8	-0.1
	6.7nm,0.5s,baz=20,slow=8.8,SNR=10						
CTA	**Charters Tower**	**32.13**	**268**	P	P	03 52 39.1	+0.9
	0.0nm,0.3s,baz=97,slow=24,SNR=12						
STKA	**Stephens Creek**	**35.81**	**246**	P	P	03 53 08.9	-0.4
	2.6nm,0.6s,baz=95,slow=8.3,SNR=12						
ASAR	**Alice Springs**	**42.89**	**259**	P	P	03 54 07.0	-0.3
	3.3nm,0.4s,baz=96,slow=8.1,SNR=47						
WRA	**Warramunga Arr**	**43.15**	**265**	P	P	03 54 08.9	-0.4
	4.9nm,0.3s,baz=94,slow=8.5,SNR=61						
BRTR	**Keskin Array B**	**147.28**	**309**	PKPbc	PKPbc	04 05 43.3	-0.6
	0.9nm,0.6s,baz=85,slow=2.5,SNR=6.2						

NEIC 27 03:51:14.2, 51.40N×177.06W, h14km, ML3.6(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**1.95**	**65**	P	Pn	03 51 44.9	-2.0
ATKA				S	Sn	03 52 08.0	-3.2
KOWE	**Korovin West**	**1.99**	**60**	P	Pn	03 51 44.7	-2.8
KOWE				S	Sn	03 52 10.6	-1.7
KOFP	**Korovin Flat P**	**2.04**	**63**	P	Pn	03 51 46.4	-1.8
KOFP				S	Sn	03 52 13.2	-0.2
KOKV	**Korovin Volcan**	**2.04**	**61**	P	Pn	03 51 46.3	-1.9
KOKV				S	Sn	03 52 11.4	-2.1
KOSE	**Korovin Southe**	**2.09**	**62**	P	Pn	03 51 47.0	-2.0
CESW	**Semis' Southwe**	**2.16**	**285**	P	Pn	03 51 47.6	-2.2
CESW				S	Sn	03 52 12.8	-3.7
CETU	**Semis' Tuman**	**2.22**	**286**	P	Pn	03 51 49.0	-1.6
AMKA	**Amchitka**	**2.28**	**271**	*e*Pn	Pn	03 51 50.3	-1.1
AMKA				*e*S	Sn	03 52 18.8	-0.5
LSPA	**Little Sitkin**	**2.78**	**283**	P	Pn	03 51 56.7	-1.6
LSPA				S	Sn	03 52 31.4	-0.2
FX1	**Attu Island--F**	**6.20**	**288**	P	Pn	03 52 43.7	-1.6

IDC 27 04:03:10.6±7.6, 18.75S×174.61W, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.7/20, mbtmp3.7/3, Error ellipse: s-maj=330.8km s-min=39.6km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**48.03**	**260**	P	P	04 11 51.9	-0.1
	0.6nm,0.4s,baz=97,slow=8.6,SNR=7.8						
ASAR	**Alice Springs**	**48.05**	**255**	P	P	04 11 52.0	-0.1
	1.0nm,0.6s,baz=89,slow=8.5,SNR=15						
ILAR	**Eielson Array**	**85.94**	**12**	P	P	04 15 52.0	-0.1
	0.2nm,0.8s,baz=220,slow=6.6,SNR=4.4						

IDC 27 04:17:52.6±1.7, 0.69N×123.43E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/23, mbtmp3.5/3, Error ellipse: s-maj=185.9km s-min=25.0km az=62.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.12**	**153**	P	P	04 23 00.8	+0.2
	1.8nm,0.6s,baz=332,slow=11,SNR=20						
ASAR	**Alice Springs**	**26.26**	**158**	P	P	04 23 29.6	-0.3
	0.2nm,0.5s,baz=342,slow=15,SNR=2.7						
MKAR	**Makanchi Array**	**58.26**	**328**	P	P	04 27 49.1	0.0
	0.4nm,0.5s,baz=126,slow=8.5,SNR=6.1						

IDC 27 04:28:41.8±1.3, 17.83S×172.72W, h0km, mb3.8/6, mb1 4.2/7, mb1mx3.9/22, mbtmp3.9/7, ML2.2/1, Error ellipse: s-maj=56.7km s-min=19.7km az=141.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.00**	**13**	Pn	Pn	04 29 44.2	-0.4
	8.7nm,0.3s,baz=121,slow=14,SNR=6.3						
AFI				Sn	Sn	04 30 32.4	+0.1
	25nm,0.3s,baz=323,slow=20,SNR=5.3						
PPT2	**Papeete2**	**22.04**	**93**	*e*LR	LR	04 38 33.3	
	54nm,24.5s						
TBI	**Tubuai**	**22.44**	**108**	*e*LR	LR	04 38 30.4	
	71nm,28.8s						
STKA	**Stephens Creek**	**43.44**	**242**	P	P	04 36 46.1	-0.6
	0.4nm,0.3s,baz=94,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**49.97**	**259**	P	P	04 37 37.8	-0.4
	1.8nm,0.9s,baz=94,slow=6.2,SNR=12						
ASAR	**Alice Springs**	**50.02**	**254**	P	P	04 37 38.4	-0.1
	1.6nm,0.5s,baz=90,slow=7.9,SNR=18						
NVAR	**Mina Array Bea**	**75.70**	**41**	P	P	04 40 29.6	+0.1
	0.4nm,0.5s,baz=231,slow=9.4,SNR=3.5						
TXAR	**Lajitas Array**	**81.43**	**56**	P	P	04 41 00.8	-0.3
	0.2nm,0.8s,baz=230,slow=7.8,SNR=3.5						
PDAR	**Pinedale Array**	**83.64**	**41**	P	P	04 41 12.4	-0.2
	0.6nm,0.7s,baz=190,slow=4.5,SNR=4.1						
BRTR	**Keskin Array B**	**148.43**	**319**	PKPbc	PKPbc	04 48 31.7	+0.8
	0.7nm,0.6s,baz=72,slow=4.0,SNR=4.5						

WEL 27 04:47:54.7±0.1, 39.15S×176.19E, h60km±1km, ML3.6/13, 8C-11D, Error ellipse: s-maj=0.9km s-min=0.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BKZ	**Black Stump Fm**	**0.24**	**95**	P*	Pn	04 48 03.9	-0.6
BKZ				S*	Sn	04 48 10.7	-0.9
HATZ	**Hinemaiaia**	**0.26**	**344**	P*	Pn	04 48 04.1	-0.5
HATZ				S*	Sn	04 48 10.8	-1.0
RITZ	**Rihia Road**	**0.30**	**303**	P*	Pn	04 48 04.8	0.0
BHHZ	**Black Hill Sta**	**0.35**	**195**	⇑P*	Pn	04 48 05.0	-0.4
BHHZ				S*	Sn	04 48 12.8	-0.4
OTVZ	**Oturere**	**0.40**	**267**	P*	Pn	04 48 05.8	-0.1
OTVZ				S*	Sn	04 48 14.0	-0.1
KAWZ	**Kakaramea**	**0.42**	**294**	⇓P*	Pn	04 48 05.9	-0.1
MOVZ	**Moawhango**	**0.42**	**232**	⇑P*	Pn	04 48 05.5	-0.5
MOVZ				S*	Sn	04 48 13.3	-0.9
RATZ	**Rangitukua**	**0.42**	**311**	⇓P*	Pn	04 48 05.6	-0.4
KRVZ	**Karewarewa**	**0.43**	**277**	⇓P*	Pn	04 48 05.9	-0.2
KRVZ				S*	Sn	04 48 14.0	-0.4
TUVZ	**Tukino**	**0.43**	**253**	⇑P*	Pn	04 48 06.0	-0.2
NGZ	**Ngauruhoe**	**0.46**	**266**	⇑P*	Pn	04 48 06.3	-0.1
NGZ				S*	Sn	04 48 14.7	-0.2
WTVZ	**West Tongariro**	**0.46**	**273**	P*	Pn	04 48 06.3	-0.2
NMHZ	**Naumai**	**0.49**	**85**	PN	Pn	04 48 07.0	+0.4
WNVZ	**Wahianoa**	**0.49**	**248**	⇑P*	Pn	04 48 06.5	-0.3
WNVZ				S*	Sn	04 48 15.1	-0.4
MCHZ	**McNeill Hill**	**0.50**	**127**	⇓PN	Pn	04 48 07.5	+0.8
DRZ	**Dome Shelter**	**0.50**	**255**	⇓P*	Pn	04 48 06.7	-0.3
WPVZ	**Whakapapa**	**0.50**	**263**	P*	Pn	04 48 06.8	-0.1
WPVZ				S*	Sn	04 48 15.6	0.0
FWVZ	**Far West T-bar**	**0.50**	**257**	⇑P*	Pn	04 48 06.7	-0.3
WHTZ	**Whakaora**	**0.51**	**340**	P*	Pn	04 48 06.8	-0.1
TRVZ	**Turoa**	**0.52**	**253**	⇑P*	Pn	04 48 06.8	-0.3
WATZ	**Wairara**	**0.56**	**321**	P*	Pn	04 48 06.9	-0.5
TWVZ	**Taurewa**	**0.59**	**277**	P*	Pn	04 48 07.3	-0.5
ALRZ	**Allen Road**	**0.59**	**12**	P*	Pn	04 48 07.2	-0.5
MTVZ	**Mangateitei**	**0.60**	**246**	P*	Pn	04 48 07.7	-0.2
PKVZ	**Pokaka**	**0.67**	**257**	P*	Pn	04 48 08.6	0.0
PRRZ	**Plateau Road**	**0.67**	**14**	P*	Pn	04 48 08.1	-0.5
RAHZ	**Arahi**	**0.74**	**72**	⇓PN	Pn	04 48 09.7	+0.3
HRRZ	**Handcock Road**	**0.76**	**6**	P*	Pn	04 48 09.4	-0.3
PNHZ	**Pukenui**	**0.77**	**179**	PN	Pn	04 48 09.7	-0.1
KAHZ	**Kahuranaki**	**0.84**	**141**	PN	Pn	04 48 10.8	0.0
RRRZ	**Republican Roa**	**0.84**	**18**	⇓P*	Pn	04 48 10.2	-0.5
WPHZ	**Waipukurau**	**0.94**	**168**	PN	Pn	04 48 11.8	-0.2
TARZ	**Mount Tarawera**	**0.94**	**16**	P*	Pn	04 48 11.9	-0.3
PXZ	**Pawanui**	**1.03**	**150**	PN	Pn	04 48 12.7	-0.4
VRZ	**Vera Road**	**1.11**	**271**	P*	Pn	04 48 14.3	+0.2
WAZ	**Wanganui**	**1.11**	**236**	⇑PN	Pn	04 48 14.8	+0.6
URZ	**Urewera**	**1.14**	**40**	P*	Pn	04 48 14.0	-0.6
DVHZ	**Dannevirke**	**1.15**	**181**	⇓PN	Pn	04 48 14.1	-0.7
KNZ	**Kokohu**	**1.17**	**84**	PN	Pn	04 48 15.0	+0.1
PRHZ	**Porangahau**	**1.17**	**163**	PN	Pn	04 48 14.4	-0.6
HIZ	**Hauiti**	**1.22**	**301**	⇓PN	Pn	04 48 15.6	0.0
POWZ	**Post Office Ro**	**1.29**	**194**	PN	Pn	04 48 16.0	-0.5
MWZ	**Matawai**	**1.33**	**53**	P*	Pn	04 48 16.7	-0.4
MHGZ	**Mahia Peninsul**	**1.34**	**91**	PN	Pn	04 48 17.4	+0.2
TOZ	**Tahuroa Road**	**1.51**	**339**	⇓P*	Pn	04 48 19.4	-0.1
BFZ	**Birch Farm**	**1.53**	**178**	PN	Pn	04 48 18.6	-1.2
MRZ	**Mangatainoka R**	**1.58**	**197**	PN	Pn	04 48 19.5	-1.1
TIWZ	**Tintock**	**1.65**	**188**	PN	Pn	04 48 20.3	-1.1
CNGZ	**Carnagh Statio**	**1.71**	**68**	*e*PN	Pn	04 48 23.1	+0.9
HOWZ	**Holdsworth Sta**	**1.82**	**196**	⇓PN	Pn	04 48 22.2	-1.6
OGWZ	**Otaki Gorge**	**1.84**	**205**	PN	Pn	04 48 22.9	-1.1
KIW	**Kapiti Island**	**1.97**	**209**	PN	Pn	04 48 24.7	-1.1
MTW	**Mount Morrison**	**2.08**	**194**	PN	Pn	04 48 24.9	-2.3
CAW	**Cannon Point**	**2.14**	**203**	PN	Pn	04 48 26.1	-1.9
MKAZ	**Moumakai**	**2.19**	**338**	PN	Pn	04 48 28.7	+0.1
TRWZ	**Traveller**	**2.28**	**189**	PN	Pn	04 48 27.8	-2.2
MXZ	**Matakaoa Point**	**2.30**	**47**	P*	Pn	04 48 30.4	+0.3
PAWZ	**Paruwai Farm**	**2.31**	**194**	PN	Pn	04 48 27.9	-2.5
MSWZ	**Moikau Station**	**2.38**	**197**	PN	Pn	04 48 28.7	-2.6
DUWZ	**D'Urville Isla**	**2.40**	**226**	PN	Pn	04 48 30.3	-1.3
SNZO	**South Karori**	**2.44**	**207**	PN	Pn	04 48 29.9	-2.2
BHW	**Baring Head**	**2.47**	**204**	PN	Pn	04 48 30.1	-2.5
PLWZ	**Palliser**	**2.52**	**196**	PN	Pn	04 48 30.4	-2.9
TCW	**Tory Channel**	**2.53**	**215**	PN	Pn	04 48 31.3	-2.0
TUWZ	**Tuamarina**	**2.85**	**216**	PN	Pn	04 48 35.5	-2.2
NNZ	**Nelson**	**2.98**	**225**	PN	Pn	04 48 38.4	-1.1
BSWZ	**Blackbirch Sta**	**3.11**	**214**	PN	Pn	04 48 39.1	-2.2
THZ	**Tophouse**	**3.62**	**223**	PN	Pn	04 48 45.7	-2.6
KHZ	**Kahutara**	**3.84**	**211**	PN	Pn	04 48 47.7	-3.5
MQZ	**McQueen's Vall**	**5.27**	**209**	PN	Pn	04 49 06.5	-4.3

AUST 27 04:58:59.2, 32.74S×116.42E, h10km, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLBR	**Kellerberrin**	**1.61**	**45**	P	Pn	04 59 28.2	+0.5
	baz=1.6,SNR=14						
KLBR				S	Sg	04 59 50.5	-0.5
	baz=1.6,SNR=5.3						
RKGY	**Rocky Gully**	**1.92**	**166**	P	Pb	04 59 33.5	-0.8
	baz=1.9,SNR=5.3						
RKGY				S	Sb	04 59 57.5	-0.9
	baz=1.9,SNR=11						
BLDU	**Ballidu**	**2.13**	**7**	P	Pn	04 59 36.0	+1.1
	baz=2.1,SNR=4.6						
BLDU				S	Sn	04 59 58.8	-2.7
	baz=2.1,SNR=6.8						
WSI	**Waingapu**	**23.24**	**10**	S	S	05 08 16.8	-2.1
	baz=23,SNR=4.4						
XMI	**Christmas Isla**	**24.29**	**334**	S	S	05 08 49.6	+14
	baz=24,SNR=4.7						
KDU	**Kakadu**	**24.79**	**40**	P	P	05 04 23.2	+1.9
	baz=25,SNR=3.4						

*IDC **27** 05:06:13.1±1.4, 24.14S×66.96W, h158km±12km, mb3.8/12, mb1 4.0/16, mb1mx3.9/21, mbtmp3.8/16, Error ellipse: s-maj=16.3km s-min=10.2km az=82.0*
*ISCJB **27** 05:06:14.2±0.3, 24.27S±0.04×66.91W±0.07, h181km, mb4.1/31, Error ellipse: s-maj=8.9km s-min=5.6km az=164.6*
*NEIC **27** 05:06:14.2±0.6, 24.24S×66.88W, h165km±5km, mb4.2/23, Error ellipse: s-maj=8.2km s-min=5.8km az=69.0*

ISC 27 05:06:15.5±0.4, 24.17S±0.07×66.91W±0.08, h181km, n352, d099/350, mb4.1/31, 150C-130D, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.40**	**310**	*e*Pn	**Pn**	**05 06 56.6**	**-0.9**
LVC				*e*Sn	**Sn**	**05 07 27.4**	**-2.6**
LCO	**Las Campanas**	**5.89**	**214**	*e*Pn	Pn	05 07 37.4	-4.0
CFAA	**Coronel Fontan**	**7.50**	**189**	P	**Pn**	**05 07 59.8**	**-2.4**
CFAA				S	Sn	05 09 21.1	-5.5
CFAA	**Coronel Fontan**	**7.50**	**189**	P	**Pn**	**05 07 59.8**	**-2.4**
	0.1nm,0.3s,baz=11,slow=13,SNR=8.6						
CFAA				S	Sn	05 09 21.1	-5.5
	0.8nm,0.3s,baz=144,slow=13,SNR=10						
LPAZ	**La Paz**	**7.93**	**351**	*e*Pn	**Pn**	**05 08 08.7**	**+0.1**
LPAZ				S	Sn	05 09 31.2	-6.6
LPAZ				*e*Sn		05 09 36.0	
LPAZ	**La Paz**	**7.93**	**351**	P	**Pn**	**05 08 06.4**	**-2.1**
	2.1nm,0.3s,baz=149,slow=9.3,SNR=58						
LPAZ				S	Sn	05 09 31.2	-6.6
	baz=217,slow=19,SNR=1.4						
CPUP	**Villa Florida**	**8.94**	**106**	P	**Pn**	**05 08 19.6**	**-1.6**
CPUP	**Villa Florida**	**8.94**	**106**	P	**Pn**	**05 08 19.6**	**-1.6**
	0.8nm,0.3s,baz=268,slow=10,SNR=15						
TRQA	**Tornquist**	**14.47**	**164**	*e*Pn	**Pn**	**05 09 30.9**	**-1.1**
	8.4nm,0.6s						
SAML	**Samuel**	**15.55**	**14**	*e*Pn	**Pn**	**05 09 45.1**	**-0.4**
	1.8nm,0.7s						
PLCA	**Paso Flores**	**16.79**	**190**	*e*P	**P**	**05 09 59.2**	**-0.2**
PLCA	**Paso Flores**	**16.79**	**190**	P	**P**	**05 09 58.6**	**-0.8**
	0.4nm,0.3s,baz=4.7,slow=14,SNR=8.1						
SPB	**Sao Paulo**	**17.83**	**92**	*e*P	**P**	**05 10 11.2**	**+0.4**
	17nm,0.7s						
BDFB	**Brasilia**	**19.68**	**68**	P	**P**	**05 10 31.0**	**0.0**
BDFB	**Brasilia**	**19.68**	**68**	P	**P**	**05 10 31.0**	**0.0**
	4.8nm,0.3s,baz=240,slow=11,SNR=104						
SNAA	**Sanae**	**59.16**	**161**	P	**P**	**05 15 57.0**	**+0.1**
SNAA	**Sanae**	**59.16**	**161**	P	**P**	**05 15 57.0**	**+0.1**
	0.6nm,0.5s,baz=334,slow=20,SNR=5.1						
732A	**Laxson Ranch,**	**61.47**	**327**	⇑P	**P**	**05 16 13.2**	**+0.2**
	baz=62						
632A	**Uvalde**	**62.02**	**328**	⇓P	**P**	**05 16 16.4**	**-0.3**
	baz=62						
631A	**Perdido Creek**	**62.33**	**327**	⇓P	**P**	**05 16 18.7**	**-0.1**
	baz=63						
532A	**Rocksprings**	**62.59**	**328**	⇑P	**P**	**05 16 20.4**	**-0.1**
	baz=63,SNR=5.3						
JCT	**Junction City**	**62.83**	**328**	*e*P	**P**	**05 16 22.4**	**+0.3**
	5.8nm,0.6s						
JCT	**Junction City**	**62.83**	**328**	⇑P	**P**	**05 16 22.2**	**+0.1**
	baz=63						
531A	**Rocksprings**	**62.94**	**327**	⇑P	**P**	**05 16 23.1**	**+0.3**
	baz=63						
432A	**Menard**	**63.16**	**328**	⇑P	**P**	**05 16 23.8**	**-0.4**
	baz=64						
530A	**J-C Ranch, Com**	**63.31**	**327**	⇑P	**P**	**05 16 25.8**	**+0.4**
	baz=64						
431A	**Sonora**	**63.39**	**328**	⇓P	**P**	**05 16 25.8**	**0.0**
	baz=64						
332A	**Millersview**	**63.55**	**329**	⇓P	**P**	**05 16 26.5**	**-0.3**
	baz=64						
628A	**Black Gap, Mar**	**63.58**	**325**	⇑P	**P**	**05 16 27.8**	**+0.7**
	baz=64,SNR=5.2						
529A	**Stev Forest Ra**	**63.74**	**326**	⇓P	**P**	**05 16 28.4**	**+0.3**
	baz=64,SNR=8.3						
430A	**Baggett Ranch,**	**63.78**	**327**	⇑P	**P**	**05 16 28.5**	**+0.1**
	baz=64						
627A	**Terlingua Ranc**	**63.81**	**325**	⇑P	**P**	**05 16 29.0**	**+0.4**
	baz=64						
331A	**San Angelo**	**63.82**	**328**	⇓P	**P**	**05 16 28.4**	**-0.2**
	baz=64,SNR=5.3						
TXAR	**Lajitas Array**	**63.86**	**324**	P	**P**	**05 16 28.9**	**0.0**
TXAR	**Lajitas Array**	**63.86**	**324**	P	**P**	**05 16 28.9**	**0.0**
	0.8nm,0.8s,baz=152,slow=7.1,SNR=13						
429A	**Davenport Ranc**	**63.98**	**327**	⇑P	**P**	**05 16 30.1**	**+0.4**
	baz=64						
528A	**Cox Ranch, San**	**64.06**	**326**	⇑P	**P**	**05 16 30.2**	**-0.1**
	baz=64						
330A	**Mertzon**	**64.26**	**328**	⇓P	**P**	**05 16 31.6**	**+0.1**
	baz=65						
231A	**Bronte**	**64.28**	**329**	⇑P	**P**	**05 16 31.0**	**-0.6**
	baz=65						
626A	**Big Bend Ranch**	**64.29**	**324**	⇑P	**P**	**05 16 32.6**	**+0.8**
	baz=65,SNR=12						
428A	**Kincaid Ranch,**	**64.46**	**326**	⇑P	**P**	**05 16 33.0**	**+0.2**
	baz=65						
527A	**Woodward Ranch**	**64.48**	**325**	⇑P	**P**	**05 16 33.0**	**0.0**
	baz=65						
526A	**Mary Lane Ranc**	**64.66**	**325**	⇓P	**P**	**05 16 34.8**	**+0.6**
	baz=65,SNR=8.0						
329A	**Wagon Wheel Ra**	**64.72**	**327**	⇓P	**P**	**05 16 34.5**	**0.0**
	baz=65						
131A	**Roby**	**64.93**	**329**	⇓P	**P**	**05 16 35.8**	**0.0**
	baz=65						
427A	**Hayter Ranch,**	**64.93**	**326**	⇓P	**P**	**05 16 36.4**	**+0.5**
	baz=65						
229A	**Bryant Ranch,**	**65.03**	**328**	⇓P	**P**	**05 16 36.7**	**+0.2**
	baz=65						
328A	**Wristen Ranch,**	**65.05**	**326**	⇑P	**P**	**05 16 36.9**	**+0.3**
	baz=65,SNR=6.5						
426A	**McDonald Obser**	**65.11**	**325**	⇓P	**P**	**05 16 37.6**	**+0.4**
	baz=65,SNR=6.3						
130A	**Snyder**	**65.14**	**329**	⇑P	**P**	**05 16 37.0**	**-0.1**
	baz=66						
Z31A	**Sharp Cattle R**	**65.35**	**330**	⇓P	**P**	**05 16 38.5**	**+0.1**
	baz=66						
228A	**UT Block 9, Go**	**65.54**	**327**	⇑P	**P**	**05 16 39.8**	**+0.1**
	baz=66						
326A	**Caldwell Ranch**	**65.60**	**325**	⇓P	**P**	**05 16 40.6**	**+0.4**
	baz=66,SNR=5.5						
425A	**Indio Mountain**	**65.71**	**324**	⇑P	**P**	**05 16 41.3**	**+0.4**
	baz=66,SNR=7.9						
Z30A	**Sanderson Ranc**	**65.78**	**329**	⇑P	**P**	**05 16 40.9**	**-0.4**
	baz=66						
227A	**Bennet, Jal**	**65.80**	**326**	⇓P	**P**	**05 16 42.1**	**+0.6**
	baz=66						
128A	**Castleberry Fa**	**65.89**	**327**	⇑P	**P**	**05 16 41.9**	**-0.1**
	baz=66						
Y31A	**Rekieta Farm,**	**65.94**	**330**	⇓P	**P**	**05 16 42.2**	**0.0**
	baz=66						
QSPA	**South Pole Qui**	**66.03**	**180**	*e*P	**P**	**05 16 43.6**	**+1.0**
	48nm,2.3s						
QSPA	**South Pole Qui**	**66.03**	**180**	P	**P**	**05 16 43.5**	**+1.0**
	4.2nm,0.5s,baz=192,slow=1.5,SNR=18						
Z29A	**Hungry Hill Ra**	**66.03**	**328**	⇓P	**P**	**05 16 42.9**	**0.0**
	baz=66						
325A	**Bean Ranch, Si**	**66.16**	**325**	⇓P	**P**	**05 16 44.0**	**+0.1**
	baz=66,SNR=16						
226B	**Tecolote Peak,**	**66.30**	**326**	⇑P	**P**	**05 16 45.4**	**+0.8**
	baz=67,SNR=5.5						
X31A	**McDonald Ranch**	**66.37**	**331**	⇑P	**P**	**05 16 44.7**	**-0.2**
	baz=67,SNR=9.4						
Z28A	**Tucker Farm, M**	**66.39**	**328**	⇓P	**P**	**05 16 44.6**	**-0.5**
	baz=67						
324A	**Moseley Ranch,**	**66.49**	**324**	⇑P	**P**	**05 16 45.6**	**-0.4**
	baz=67,SNR=8.4						
Y29A	**Porterfield Fa**	**66.51**	**329**	⇑P	**P**	**05 16 45.7**

baz=69
W25A X Bar L Ranch, 68.95 328 ⇑P P 05 17 01.2 0.0
baz=69,SNR=6.4
120A U Bar Ranch, L 69.04 323 ⇓P P 05 17 03.3 +1.4
baz=69
V26A Tequesquite Ra 69.09 329 ⇑P P 05 17 02.2 +0.1
baz=69,SNR=5.1
Z21A St. Cloud Mine 69.10 324 ⇓P P 05 17 03.4 +1.1
baz=69,SNR=5.7
U27A Thompson Grove 69.15 330 ⇓P P 05 17 03.6 +1.1
baz=70
S29A Ulysses 69.37 332 ⇓P P 05 17 04.5 +0.8
baz=70
T28A Walsh 69.40 331 ⇑P P 05 17 04.1 +0.2
baz=70
W24A Lazy 6 Ranch, 69.41 327 ⇑P P 05 17 04.5 +0.3
baz=70,SNR=5.3
Z20A Nine Sixteen R 69.44 323 ⇑P P 05 17 05.6 +1.3
baz=70,SNR=5.6
V25A Rancho No Teng 69.53 328 ⇑P P 05 17 05.1 +0.3
baz=70
U26A Atchley Ranch, 69.56 329 ⇑P P 05 17 05.4 +0.4
baz=70,SNR=5.7
T27A Campo 69.63 330 ⇑P P 05 17 05.7 +0.4
baz=70,SNR=5.4
Y21A Point of Rocks 69.64 325 ⇓P P 05 17 06.9 +1.3
baz=70
S28A Manter 69.69 331 ⇑P P 05 17 06.2 +0.5
baz=70,SNR=5.2
ANMO Albuquerque 69.73 326 eP P 05 17 07.2 +1.0
3.8nm,0.9s
W23A Werner Place, 69.75 326 ⇓P P 05 17 07.2 +1.0
baz=70
V24A Rampart Ranch, 69.75 327 ⇓P P 05 17 06.9 +0.6
baz=70
U25A Circle Dot Ran 69.88 328 ⇑P P 05 17 07.4 +0.5
baz=70,SNR=5.6
Y20A Horse Springs, 69.93 324 ⇑P P 05 17 08.7 +1.3
baz=70
X21A Alamocita Cree 70.03 325 ⇑P P 05 17 09.4 +1.4
baz=70
W22A Albuquerque 70.04 326 ⇑P P 05 17 09.4 +1.4
baz=70
TUC Tucson 70.07 321 eP P 05 17 09.4 +1.3
3.5nm,1.2s
T26A Comanche Natio 70.12 330 ⇑P P 05 17 09.1 +0.7
baz=70,SNR=5.7
JFWS Jewell Farm 70.13 342 eP P 05 17 08.0 -0.2
10.0nm,0.6s
R28A Tribune 70.28 331 ⇑P P 05 17 09.3 +0.1
baz=71
S26A Kim 70.43 330 ⇑P P 05 17 11.1 +0.9
baz=71,SNR=8.5
T25A Trinidad 70.47 329 ⇓P P 05 17 11.5 +0.9
baz=71
W21A San Fidel 70.48 325 ⇓P P 05 17 12.0 +1.4
baz=71
X20A Quemado 70.48 324 ⇑P P 05 17 12.2 +1.4
baz=71
R27A Eads 70.67 331 ⇑P P 05 17 11.5 -0.1
baz=71
U23A El Rito 70.69 327 ⇑P P 05 17 12.9 +1.0
baz=71
V22A San Miguel Ran 70.72 326 ⇑P P 05 17 13.6 +1.4
baz=71
T24A Torres, Weston 70.72 328 ⇑P P 05 17 13.0 +0.8
baz=71
Q28A Sharon Springs 70.88 332 ⇑P P 05 17 13.4 +0.5
baz=71
S25A Robets Cordova 70.90 329 ⇑P P 05 17 14.1 +1.0
baz=71,SNR=8.9
W20A Ramah 70.93 325 ⇑P P 05 17 14.8 +1.4
baz=71
R26A Arlington 70.97 330 ⇓P P 05 17 13.9 +0.5
baz=71,SNR=6.5
214A Organ Pipe Nat 70.98 320 ⇓P P 05 17 14.9 +1.4
baz=71
U22A Llaves 71.06 327 ⇑P P 05 17 15.8 +1.6
baz=71
T23A Casias Ranch, 71.17 328 ⇑P P 05 17 16.3 +1.4
baz=72
KSCO Kaye Shedlock' 71.19 331 ⇓P P 05 17 15.6 +0.8
baz=72
R25A Fountain Ranch 71.23 330 ⇓P P 05 17 15.4 +0.4
baz=72
X18A Snowflake 71.25 323 ⇑P P 05 17 16.6 +1.3
baz=72
S24A Houchin Ranch, 71.25 329 ⇓P P 05 17 16.6 +1.2
baz=72
BGNE Belgrade 71.39 336 ⇓P P 05 17 15.8 0.0
baz=72
V20A Brimhall 71.43 325 ⇓P P 05 17 17.5 +1.1
baz=72
U21A Nageezi 71.50 326 ⇑P P 05 17 18.1 +1.3
baz=72
Q26A Hugo 71.51 331 ⇓P P 05 17 17.7 +0.9
baz=72
T22A Edith 71.58 327 ⇑P P 05 17 18.6 +1.4
baz=72
R24A Sanders Place, 71.68 329 ⇓P P 05 17 18.8 +1.0
baz=72
N29A Votaw Ranch, W 71.85 334 ⇑P P 05 17 19.3 +0.7
baz=72
T21A Navajo Lake 71.87 327 ⇓P P 05 17 20.4 +1.4
baz=72
U20A Newcomb 71.90 326 ⇓P P 05 17 20.3 +1.1
baz=72,SNR=6.7
R23A Moffat 71.98 329 ⇑P P 05 17 20.9 +1.2
baz=72
X16A Lo Mia Camp, P 71.99 322 ⇑P P 05 17 21.5 +1.8
baz=72
O27A Beecher Island 72.10 332 ⇑P P 05 17 20.8 +0.7
baz=72
S22A 4UR Ranch, Cre 72.12 328 ⇑P P 05 17 21.7 +1.1
baz=72
P25A Willow Gulch B 72.28 331 ⇑P P 05 17 22.4 +1.0
baz=73
M29A Burnside Ranch 72.41 334 ⇑P P 05 17 22.7 +0.8
baz=73
R22A Saguache, Gunn 72.46 328 ⇓P P 05 17 24.2 +1.6
baz=73
O26A Horse Wrangler 72.50 332 ⇓P P 05 17 23.7 +1.2
baz=73
Y14A Wickenburg 72.52 321 ⇓P P 05 17 24.1 +1.3
baz=73
MVCO Mesa Verde 72.53 326 eP P 05 17 24.2 +1.3
3.4nm,0.8s
MVCO Mesa Verde 72.53 326 ⇓P P 05 17 24.1 +1.1
baz=73,SNR=5.4
N27A Anderson Farm, 72.63 332 ⇑P P 05 17 24.3 +1.0
baz=73
WUAZ Wupatki 72.77 323 eP P 05 17 25.1 +0.9
5.5nm,1.0s
WUAZ Wupatki 72.77 323 ⇓P P 05 17 25.8 +1.5
baz=73
ECSD EROS Data Cent 72.87 338 eP P 05 17 23.2 -1.3
3.1nm,0.9s
S20A Disappointment 72.94 327 ⇓P P 05 17 26.8 +1.4
baz=73
R21A Cimarron 72.96 328 ⇓P P 05 17 26.2 +0.8
baz=73
SPMN St. Paul 72.99 341 ⇑P P 05 17 24.5 -0.6
baz=73
Q22A Crested Butte, 73.03 328 ⇓P P 05 17 27.0 +1.1
baz=73
ISCO Idaho Springs 73.17 330 eP P 05 17 27.9 +1.2
2.3nm,0.6s
ISCO Idaho Springs 73.17 330 ⇑P P 05 17 27.6 +0.8
baz=74
R20A Redvale 73.23 327 ⇓P P 05 17 28.5 +1.5
baz=74,SNR=5.5
N25A Grover 73.31 331 ⇓P P 05 17 28.2 +0.9
baz=74
SMCO Snowmass 73.31 329 eP P 05 17 29.1 +1.4
3.4nm,0.9s
P22A Eagle 73.54 329 ⇑P P 05 17 30.1 +1.3
baz=74
O23A Lake Granby, G 73.64 330 ⇑P P 05 17 30.4 +0.9
baz=74
S18A Hurst Farm, Bl 73.66 326 ⇓P P 05 17 31.0 +1.4
baz=74,SNR=6.4
BC3 Big Chuckawall 73.75 319 ⇑P P 05 17 31.4 +1.4
baz=74
MONP Monument Peak 73.80 318 ⇑P P 05 17 32.5 +2.0
baz=74
P21A Newcastle 73.81 328 ⇑P P 05 17 31.5 +1.1
baz=74
W13A Hualapai Mount 73.86 321 ⇑P P 05 17 31.8 +1.1
baz=74
O22A Kremmling 73.89 329 ⇓P P 05 17 32.0 +1.1
baz=74
IRM Iron Mountain 73.93 320 ⇑P P 05 17 32.5 +1.6
baz=74
U15A North Rim 73.94 323 ⇓P P 05 17 32.7 +1.5
baz=74,SNR=6.5
M24A Cheyenne 74.16 331 ⇑P P 05 17 33.3 +1.0
baz=74
P20A De Beque 74.25 328 ⇓P P 05 17 34.2 +1.4
baz=75
BELC Belle Mtn. Jos 74.32 319 ⇓P P 05 17 34.8 +1.5
baz=75
PFO Pinyon Flat Ob 74.32 319 ⇓P P 05 17 36.0 +2.7
baz=75
N22A Wattenberg Ran 74.36 330 ⇓P P 05 17 34.6 +1.0
baz=75
VNDA Vanda 74.55 190 P P 05 17 34.9 +1.1
VNDA Vanda 74.55 190 P P 05 17 34.9 +1.1
1.2nm,0.9s,baz=145,slow=0.4,SNR=5.8
LDFC Landfair 74.55 321 eP P 05 17 36.6 +2.0
5.9nm,1.0s
P19A Cripple Cowboy 74.64 328 ⇓P P 05 17 36.4 +1.3
baz=75,SNR=9.3
O20A White River Ci 74.67 328 ⇑P P 05 17 36.7 +1.4
baz=75
SRU San Rafael 75.01 326 ⇑P P 05 17 38.0 +0.7
baz=75,SNR=6.1
HEC Hector,Ludlow 75.09 320 ⇓P P 05 17 39.1 +1.5
baz=75
O19A Miners Draw (B 75.22 328 ⇓P P 05 17 39.5 +1.1
baz=76
N20A Spence Gulch, 75.22 329 ⇑P P 05 17 39.5 +1.0
baz=76
P18A Preston Nutter 75.26 327 ⇑P P 05 17 40.2 +1.4
baz=76
CCUT Cedar City 75.34 323 eP P 05 17 41.3 +2.0
5.8nm,0.8s
M21A Separation Pea 75.41 330 ⇑P P 05 17 40.7 +1.2
baz=76
MSU Marysvale 75.42 325 eP P 05 17 41.1 +1.5
MVU Marysvale 75.43 325 eP P 05 17 41.5 +1.8
3.4nm,0.8s
K23A Bowen Ranch, D 75.55 332 ⇓P P 05 17 41.1 +0.9
baz=76
ARUT Antelope Range 75.56 324 eP P 05 17 41.9 +1.5
2.5nm,0.8s
L21A Rawlins 75.70 330 ⇓P P 05 17 41.9 +0.7
baz=76
GSC Goldstone 75.70 320 ⇓P P 05 17 42.5 +1.4
baz=76
K21A Alcova 76.17 331 ⇑P P 05 17 44.8 +1.0
baz=76
L20A Wamsutter 76.18 329 ⇑P P 05 17 44.1 +0.3
baz=76
BLG Laguna Peak 76.25 318 ⇑P P 05 17 48.4 +4.2
baz=76
J22A Midwest 76.45 331 ⇑P P 05 17 45.7 +0.4
baz=77
FURC Furnace Creek, 76.54 321 ⇑P P 05 17 47.5 +1.8
baz=77
TOA0 Torodi Ar. Sit 76.56 69 eP P 05 17 46.7 +0.4
TORD Torodi Ar. Bea 76.56 69 P P 05 17 46.4 +0.1
TORD Torodi Ar. Bea 76.56 69 P P 05 17 46.4 +0.1
1.5nm,0.4s,baz=263,slow=6.1,SNR=46
MPMC Manual Prospec 76.62 320 ⇓P P 05 17 47.7 +1.3
baz=77
K20A Yellowstone Ra 76.69 330 ⇑P P 05 17 47.2 +0.5
baz=77
H24A Dirks Ranch, A 76.72 333 ⇓P P 05 17 47.1 +0.5
baz=77
L19A Farson 76.73 329 ⇓P P 05 17 48.2 +1.3
baz=77
I22A 9 Mile Ranch, 76.84 332 ⇓P P 05 17 48.2 +0.8
baz=77
L18A Fontenelle, Gr 76.91 328 ⇑P P 05 17 48.9 +0.9
baz=77
ISA Isabella 76.94 319 ⇓P P 05 17 49.5 +1.4
baz=77
DUG Dugway 76.99 326 eP P 05 17 49.8 +1.5
4.7nm,1.2s
DUG Dugway 76.99 326 ⇑P P 05 17 49.9 +1.5
baz=77
K19A Absolon Red Bu 77.05 330 ⇑P P 05 17 49.2 +0.5
baz=77
J20A Shoshoni 77.12 330 ⇓P P 05 17 49.5 +0.5
baz=78
I21A Big Trails, Te 77.13 331 ⇑P P 05 17 49.6 +0.5
baz=78
R11A Troy Canyon, C 77.14 323 ⇑P P 05 17 50.7 +1.4
baz=78,SNR=6.1
G24A Alzada 77.14 334 ⇓P P 05 17 49.7 +0.7
baz=78
PKM Peak Mountain 77.24 318 ⇑P P 05 17 51.6 +1.6
baz=78
PDAR Pinedale Array 77.34 329 P P 05 17 50.5 +0.2
PDAR Pinedale Array 77.34 329 P P 05 17 50.5 +0.2
0.8nm,0.5s,baz=136,slow=8.4,SNR=4.8
VES Vestal, Richgr 77.42 319 ⇓P P 05 17 52.1 +1.5
baz=78
G23A Biddle 77.44 333 ⇓P P 05 17 51.2 +0.6
baz=78
MDND Maddock 77.48 338 ⇑P P 05 17 51.0 +0.3
baz=78
J19A Crowheart 77.49 330 ⇓P P 05 17 52.1 +1.0
baz=78
F24A Ekalaka 77.58 334 ⇓P P 05 17 51.5 +0.1
baz=78
I20A Worland 77.61 331 ⇓P P 05 17 52.2 +0.6
baz=78
H21A Big Horn, Sher 77.67 332 ⇑P P 05 17 52.7 +0.6
baz=78
F23A Volborg 77.86 334 ⇑P P 05 17 53.7 +0.8
baz=78
H20A Greybull 77.97 331 ⇑P P 05 17 54.1 +0.4
baz=78
I19A Meeteetse 78.06 330 ⇓P P 05 17 55.1 +0.8
baz=78
E24A Baker 78.11 335 ⇑P P 05 17 55.1 +0.8
baz=78
G21A Lodge Grass 78.22 332 ⇓P P 05 17 55.7 +0.7
baz=79
F22A Rosebud 78.26 333 ⇑P P 05 17 55.8 +0.6
baz=79
ULM Lac du Bonnet 78.42 341 P P 05 17 55.1 -0.7
ULM Lac du Bonnet 78.42 341 P P 05 17 55.1 -0.7
4.1nm,0.5s,baz=157,slow=5.1,SNR=4.3
E23A Ismay 78.46 334 ⇑P P 05 17 56.0 -0.2
baz=79
LOHW Long Hollow 78.47 329 eP P 05 17 57.8 +1.2
2.1nm,0.6s
MLAC Mammoth Lakes 78.48 320 ⇑P P 05 17 58.7 +1.9
baz=79
G20A Bridger 78.65 332 ⇓P P 05 17 57.7 +0.3
baz=79,SNR=7.1
ELK Elko 78.66 325 eP P 05 17 58.8 +1.1
2.8nm,0.8s
NVAR Mina Array Bea 78.72 321 P P 05 17 58.3 +0.2
NVAR Mina Array Bea 78.72 321 P P 05 17 58.3 +0.2
0.7nm,0.6s,baz=145,slow=5.9,SNR=7.9
DCID1 Drake Creek 78.73 329 eP P 05 18 01.0 +3.0
16nm,0.4s
H18A Shoshone NF, C 78.86 330 ⇓P P 05 17 59.6 +0.9
baz=79
C24A Savage 78.96 335 ⇓P P 05 17 59.6 +0.7
baz=79
F20A Billings 79.08 332 ⇓P P 05 18 00.4 +0.7
baz=79
I16A Newdale 79.09 329 ⇓P P 05 18 01.1 +1.2
baz=79
E21A Keefer Ranch, 79.21 333 ⇑P P 05 18 01.1 +0.8
baz=80
G18A Lazy EL Ranch, 79.31 331 ⇑P P 05 18 02.1 +1.1
baz=80
D22A Cohagen 79.34 334 ⇓P P 05 18 02.0 +1.0
baz=80
F19A Roth Farm, Mol 79.46 332 ⇑P P 05 18 02.4 +0.7
baz=80
C23A Lambert 79.48 335 ⇑P P 05 18 02.4 +0.7
baz=80
D21A La Casta Ranch 79.60 333 ⇑P P 05 18 03.4 +1.0
baz=80
H16A Russell Place, 79.61 330 ⇑P P 05 18 04.7 +2.0
baz=80
E20A Meyer Farm, Mu 79.62 332 ⇑P P 05 18 03.4 +0.9
baz=80,SNR=7.0
DGMT Dagmar 79.65 336 ⇓P P 05 18 03.4 +0.8
baz=80
J14A Carey 79.66 327 ⇓P P 05 18 04.8 +1.8
baz=80
I15A Monteview 79.66 328 ⇑P P 05 18 04.6 +1.7
baz=80
F18A Big Timber 79.84 331 ⇑P P 05 18 04.8 +1.0
baz=80,SNR=5.6
E19A Rath Farm, Rou 79.87 332 ⇓P P 05 18 04.5 +0.6
baz=80,SNR=6.6
B23A Brockton 79.94 335 ⇑P P 05 18 05.1 +0.9
baz=80
I14A Mackay 80.07 328 ⇑P P 05 18 06.6 +1.4
baz=80,SNR=5.7
D20A Manuel Ranch, 80.09 333 ⇑P P 05 18 05.6 +0.5
baz=80,SNR=5.1
C21A Desert Coulee 80.25 334 ⇑P P 05 18 06.5 +0.7
baz=81
F17A Fitzpatrick Pl 80.26 331 ⇑P P 05 18 07.2 +1.1
baz=81
G16A Moss Hill, Enn 80.26 330 ⇓P P 05 18 07.2 +1.0
baz=81
HLID Hailey 80.28 327 eP P 05 18 07.7 +1.4
4.5nm,0.8s
HLID Hailey 80.28 327 ⇑P P 05 18 07.7 +1.4
baz=81,SNR=11
I13A Wildhorse Cree 80.39 327 ⇓P P 05 18 08.2 +1.3
baz=81
E18A Harlowton 80.44 331 ⇑P P 05 18 07.4 +0.4
baz=81
MCMT McKenzie Canyo 80.45 329 eP P 05 18 08.5 +1.2
2.1nm,1.0s
D19A Cripps Ranch, 80.46 332 ⇓P P 05 18 07.4 +0.3
baz=81
C20A Veseth Ranch, 80.53 333 ⇑P P 05 18 07.6 +0.3
baz=81
G15A Dillon 80.53 329 ⇓P P 05 18 09.0 +1.3
baz=81
H14A Leadore 80.54 328 ⇓P P 05 18 09.5 +1.8
baz=81
BOSA Boshof 80.58 117 P P 05 18 09.1 +0.7
BOSA Boshof 80.58 117 P P 05 18 09.1 +0.7
1.7nm,0.4s,baz=238,slow=7.2,SNR=7.2
B21A Ellsworth Farm 80.70 334 ⇓P P 05 18 09.0 +0.8
baz=81
A22A Carney Farms, 80.73 335 ⇑P P 05 18 09.1 +0.7
baz=81,SNR=5.6
E17A Martinsdale 80.77 331 ⇑P P 05 18 09.7 +0.9
baz=81
I12A Atlanta 80.80 327 ⇓P P 05 18 10.7 +1.6
baz=81
D18A Linhart Farms, 80.88 332 ⇓P P 05 18 10.1 +0.8
baz=81
MFID Camas Ranch 80.88 326 ⇑P P 05 18 10.9 +1.5
baz=81
C19A Slack Wire Ran 80.98 333 ⇓P P 05 18 10.4 +0.6
baz=81
F15A Butte 81.04 330 ⇑P P 05 18 11.6 +1.3
baz=81
OHCM Honcut 81.17 320 eP P 05 18 07.1 -3.7
E16A East Helena 81.19 331 ⇓P P 05 18 12.2 +1.2
baz=82
H12A Diamond D Ranc 81.21 328 ⇑P P 05 18 12.7 +1.5
baz=82
D17A Six Diamond Ra 81.23 331 ⇓P P 05 18 11.8 +0.6
baz=82,SNR=5.9
MAW Mawson 81.25 163 P P 05 18 11.5 +0.6
MAW Mawson 81.25 163 P P 05 18 11.5 +0.6
1.5nm,0.5s,baz=252,slow=6.4,SNR=5.5
G13A Cobalt 81.31 328 ⇓P P 05 18 13.3 +1.6
baz=82,SNR=9.7
A20A Cobblestone Ra 81.43 334 ⇑P P 05 18 12.9 +0.8
baz=82
F14A Wisdom 81.43 329 ⇑P P 05 18 13.5 +1.2
baz=82
B19A Brinkman Farms 81.50 333 ⇑P P 05 18 13.0 +0.5
baz=82
EGMT Eagleton 81.50 333 ⇓P P 05 18 12.8 +0.2
baz=82
D16A Dana Ranch, Ca 81.52 331 ⇓P P 05 18 13.9 +1.3
baz=82,SNR=7.9
E15A Deer Lodge 81.55 330 ⇑P P 05 18 13.9 +1.0
baz=82
C17A Wharram Farm, 81.63 332 ⇑P P 05 18 14.2 +1.0
baz=82
A19A Klindworth Far 81.79 334 ⇓P P 05 18 14.3 +0.2
baz=82
B18A Beardsley Farm 81.80 333 ⇑P P 05 18 14.8 +0.7
baz=82,SNR=6.6
F13A Darby 81.86 329 ⇑P P 05 18 15.6 +1.0
baz=82,SNR=6.3
E14A Clinton 81.93 330 ⇓P P 05 18 15.9 +1.0
baz=82
D15A Lincoln 81.96 330 ⇓P P 05 18 16.5 +1.5
baz=82
C16A Fuhringer Ranc 82.19 331 ⇓P P 05 18 16.7 +0.6
baz=82
A18A Metzger Ranch, 82.24 333 ⇓P P 05 18 16.5 +0.2
baz=83
E13A Victor 82.28 329 ⇓P P 05 18 17.8 +1.2
baz=83,SNR=5.8
F12A Elk City 82.28 328 ⇓P P 05 18 17.6 +0.9
baz=83
D14A Greenough 82.44 330 ⇑P P 05 18 18.8 +1.3
baz=83
MSO Missoula 82.45 330 P P 05 18 18.5 +1.0
baz=83
C15A Salmond Ranch, 82.55 331 ⇑P P 05 18 18.9 +0.9
baz=83,SNR=7.1
A17A Triple J Farms 82.61 333 ⇓P P 05 18 18.8 +0.5
baz=83
D13A Huson 82.88 329 ⇓P P 05 18 20.8 +1.1
baz=83
B15A Bradely Ranch, 82.93 331 ⇑P P 05 18 20.2 +0.2
baz=83
A16A West Butte Ran 83.00 332 ⇓P P 05 18 21.1 +0.8
baz=83,SNR=10
C14A Swan Lake 83.06 330 ⇓P P 05 18 21.5 +0.8
baz=83
D12A Red Ives Fores 83.27 329 ⇑P P 05 18 22.7 +0.9
baz=84
C13A Hot Springs 83.37 330 ⇑P P 05 18 22.9 +0.7
baz=84
A15A Johnson Ranch, 83.51 332 ⇑P P 05 18 23.4 +0.4
baz=84
B13A Whitefish 83.83 330 ⇓P P 05 18 25.2 +0.7
baz=84
A13A Flathead Natio 84.22 331 ⇓P P 05 18 27.7 +1.2
baz=85
C11A Tepee Creek (N 84.26 329 ⇓P P 05 18 27.2 +0.5
baz=85
A12A Yaak River Ran 84.77 330 ⇑P P 05 18 30.5 +1.2
baz=85
YKA Yellowknife Ar 94.31 340 P P 05 19 13.8 0.0
YKA Yellowknife Ar 94.31 340 P P 05 19 13.8 0.0
1.2nm,0.5s,baz=131,slow=4.6,SNR=45
ASAR Alice Springs 128.33 205 PKP PKPdf 05 25 01.1 -0.1
ASAR Alice Springs 128.33 205 PKP PKPdf 05 25 01.1 -0.1
1.3nm,0.5s,baz=135,slow=1.9,SNR=16
WRA Warramunga Arr 131.51 207 PKP PKPdf 05 25 07.4 +0.1
WRA SKPbc SKPbc 05 28 15.4 -0.4
WRA Warramunga Arr 131.51 207 PKP PKPdf 05 25 07.4 +0.1
1.3nm,0.5s,baz=158,slow=1.6,SNR=24
WRA SKPbc SKPbc 05 28 15.4 -0.4
0.6nm,0.5s,baz=150,slow=3.4,SNR=20
ZALV Zalesovo Beam 143.51 28 PKP PKPbc 05 25 26.9 +0.9
ZALV Zalesovo Beam 143.51 28 PKP PKPbc 05 25 26.9 +0.9
1.6nm,0.5s,baz=298,slow=4.2,SNR=7.1
MKAR Makanchi Array 146.61 40 PKPbc PKPdf 05 25 34.8 +1.0
MKAR Makanchi Array 146.61 40 PKPbc PKPdf 05 25 34.8 +1.0
1.4nm,0.5s,baz=336,slow=2.1,SNR=16
MJAR Matsushiro Arr 155.14 306 PKPab PKPab 05 26 13.1 +0.2
MJAR Matsushiro Arr 155.14 306 PKPab PKPab 05 26 13.1 +0.2
0.6nm,0.3s,baz=88,slow=2.3,SNR=4.6

KRSC 27 05:06:24.9±0.7, 50.52N×156.99E, h103km±7km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.58	287	P		Pn	05 06 43.5	+2.0
SKR				*i* S		Sn	05 06 57.0	+3.0
PAU	Pauzhetka	0.95	353	P		Pn	05 06 47.0	+2.0
PAU				*i* S		Sn	05 07 03.7	+3.5
MIPR	Malaya Ipel'ka	1.77	355	P		Pn	05 06 54.9	+0.3
MIPR				*i* S		Sn	05 07 17.1	-0.1
ASAK	Asacha	1.95	17	P		Pn	05 06 58.7	+1.7
MTVR	Mutnovka	2.10	20	P		Pn	05 07 01.0	+1.9
MTVR				*i* S		Sn	05 07 26.7	+1.5
RUS	Russkaya	2.14	26	P		Pn	05 07 00.4	+1.1

RUS				*i* S		Sn	05 07 26.2	+0.5
UGLR	**Uglovaya**	**2.92**	**22**	P		Pn	05 07 11.5	+1.7
AVH	**Avacha**	**2.96**	**21**	P		Pn	05 07 12.3	+2.1
KOK	**Koryaka**	**2.96**	**20**	P		Pn	05 07 12.5	+2.3
KRER	**Koryakskii**	**2.99**	**21**	P		Pn	05 07 12.5	+1.7
SDLR	**Sedlovina**	**3.00**	**22**	P		Pn	05 07 12.2	+1.4
GNL	**Ganaly**	**3.23**	**10**	P		Pn	05 07 14.2	+0.3

*CSEM **27** 05:07:28.8, 12°.14N×43°.84E, h9km, ML3.9, After DHMR*
DHMR 27 05:07:28.8±1.1, 12°.14N×43°.84E, h10km±9km, ML3.9, 3D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.12**	**14**	*i* P	Pb	05 07 50.1	-0.5
TRBA				*i* S	Sb	05 08 05.9	+0.3
TRBA				AML	AML	05 08 12.4	
	comp=E,2μm,0.5s						
ADEN	**Aden**	**1.29**	**60**	*i* P	Pn	05 07 52.6	-0.3
ADEN				*i* S	Sn	05 08 10.2	-0.1
ADEN				AML	AML	05 08 18.0	
	comp=N,3μm,0.8s						
ADEN	**Aden**	**1.29**	**60**	*i* P	Pn	05 07 52.6	-0.3
ADEN				*i* S	Sn	05 08 10.2	-0.1
UDYN	**Al 'Udayn**	**1.82**	**4**	*i* P	Pn	05 08 01.0	+0.5
UDYN				*i* S	Sb	05 08 26.6	+1.0
UDYN				AML	AML	05 08 34.3	
	comp=E,2μm,0.4s						
UDYN	**Al 'Udayn**	**1.82**	**4**	*i* P	Pn	05 08 01.0	+0.5
UDYN				*i* S	Sb	05 08 26.6	+0.9
LBOS		**2.21**	**38**	*i* P	Pb	05 08 07.7	-1.6
LBOS				*i* S	Sb	05 08 38.3	+1.4
DHBB	**Dhamar BB**	**2.48**	**12**	*i* P	Pn	05 08 11.4	+1.6
DHBB				*i* S	Sb	05 08 45.2	+0.4
DHBB	**Dhamar BB**	**2.48**	**12**	*i* P	Pn	05 08 11.4	+1.7
DHBB				*i* S	Sb	05 08 45.2	+0.4
BDHA	**Al Bayda'**	**2.49**	**43**	*i* P	Pb	05 08 12.0	-2.0
BDHA				*i* S	Sb	05 08 45.7	+0.8
BDHA				AML	AML	05 08 53.0	
	comp=N,865nm,0.4s						
BDHA	**Al Bayda'**	**2.49**	**43**	*i* P	Pb	05 08 12.0	-2.0
BDHA				*i* S	Sb	05 08 45.7	+0.8

IDC 27 05:25:11.0±5.8, 15°.29S×173°.56W, h82km±45km, mb3.5/3, mb1 3.9/4, mb1mx3.5/21, mbtmp3.6/4, ML2.7/1, Error ellipse: s-maj=203.4km s-min=24.4km az=153.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.21**	**52**	P	Pn	05 25 47.8	+1.9
	121nm,0.3s,baz=195,slow=2.9,SNR=111						
AFI				S	Sn	05 26 12.7	+0.2
	126nm,0.3s,baz=125,slow=23,SNR=28						
WRA	**Warramunga Arr**	**49.72**	**257**	P	P	05 33 55.2	-0.2
	0.4nm,0.5s,baz=96,slow=8.3,SNR=11						
ASAR	**Alice Springs**	**50.00**	**252**	P	P	05 33 57.0	-0.4
	2.7nm,0.6s,baz=85,slow=8.4,SNR=34						
TXAR	**Lajitas Array**	**80.68**	**56**	P	P	05 37 16.0	+0.4
	0.3nm,1.0s,baz=205,slow=5.5,SNR=3.6						

WEL 27 05:36:06.6±0.6, 36°.36S×177°.57E, h205km±7km, ML3.5/11, Error ellipse: s-maj=8.9km s-min=7.0km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	**Puketiti**	**1.80**	**162**	PN	Pn	05 36 43.1	-0.4
PUZ				SN	S	05 37 11.1	-0.9
URZ	**Urewera**	**1.93**	**191**	PN	Pn	05 36 45.0	+0.3
URZ				SN	S	05 37 14.5	+0.3
MWZ	**Matawai**	**1.98**	**181**	PN	Pn	05 36 46.0	+0.7
MWZ				*e*SN	S	05 37 16.4	+1.3
CNGZ	**Carnagh Statio**	**2.19**	**167**	PN	Pn	05 36 47.7	+0.3
RAHZ	**Arahi**	**2.58**	**188**	PN	Pn	05 36 52.4	+0.7
KNZ	**Kokohu**	**2.66**	**178**	PN	Pn	05 36 52.4	-0.1
KNZ				SN	S	05 37 28.4	+0.4
NMHZ	**Naumai**	**2.80**	**192**	PN	Pn	05 36 55.3	+1.0
BKZ	**Black Stump Fm**	**2.93**	**197**	PN	Pn	05 36 55.4	-0.3
MCHZ	**McNeill Hill**	**3.16**	**192**	PN	Pn	05 36 59.0	+0.7
TUVZ	**Tukino**	**3.28**	**207**	PN	Pn	05 37 00.8	+0.9
BHHZ	**Black Hill Sta**	**3.34**	**200**	PN	Pn	05 37 00.1	-0.5
WNVZ	**Wahianoa**	**3.35**	**207**	PN	Pn	05 37 01.2	+0.4
MOVZ	**Moawhango**	**3.37**	**205**	PN	Pn	05 37 00.8	-0.1
KAHZ	**Kahuranaki**	**3.48**	**189**	PN	Pn	05 37 01.8	-0.3
PXZ	**Pawanui**	**3.71**	**188**	PN	Pn	05 37 04.2	-0.7
PNHZ	**Pukenui**	**3.71**	**196**	PN	Pn	05 37 04.3	-0.7
WPHZ	**Waipukurau**	**3.81**	**193**	PN	Pn	05 37 05.5	-0.6
PRHZ	**Porangahau**	**3.97**	**190**	PN	Pn	05 37 07.4	-0.7
POWZ	**Post Office Ro**	**4.27**	**199**	PN	Pn	05 37 10.6	-1.2
BFZ	**Birch Farm**	**4.44**	**193**	PN	Pn	05 37 12.4	-1.6
MRZ	**Mangatainoka R**	**4.57**	**199**	PN	Pn	05 37 13.9	-1.7
HOWZ	**Holdsworth Sta**	**4.81**	**199**	PN	Pn	05 37 16.7	-2.0
OGWZ	**Otaki Gorge**	**4.83**	**202**	PN	Pn	05 37 17.0	-1.9
TMWZ	**Te Maipa**	**4.92**	**195**	PN	Pn	05 37 18.2	-1.8
KIW	**Kapiti Island**	**4.96**	**204**	PN	Pn	05 37 18.4	-2.0
MTW	**Mount Morrison**	**5.06**	**198**	PN	Pn	05 37 19.2	-2.6
CAW	**Cannon Point**	**5.13**	**202**	PN	Pn	05 37 20.2	-2.5
TCW	**Tory Channel**	**5.49**	**207**	PN	Pn	05 37 25.1	-2.2
KHZ	**Kahutara**	**6.81**	**206**	PN	Pn	05 37 41.7	-2.5

*IDC **27** 05:38:16.2±2.7, 2°.16S×133°.90E, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.7/19, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=122.5km s-min=28.6km az=76.0*
*DJA **27** 05:38:16.6±1.0, 2°.5±6°×13°.4E±°, h10km, M3.6/3, MLv3.6/3*
*ISCJB **27** 05:38:17.6±0.6, 2°.14S±0°.05×134°.02E±0°.05, h25km, mb3.7/2, Error ellipse: s-maj=9.4km s-min=5.8km az=136.1*
ISC 27 05:38:17.8±0.9, 2°.15S±0°.07×134°.06E±0°.05, h25km, n8, σ1s55/12, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.65**	**11**	P	**Pb**	**05 38 29.2**	**-1.4**
RKPI				S	**Sb**	**05 38 38.5**	**-0.8**
KMPI	**Kaimana, Papua**	**1.54**	**193**	P	**Pn**	**05 38 43.5**	**-0.2**
FAKI	**Fak Fak**	**1.96**	**247**	P	**Pn**	**05 38 49.8**	**+0.3**
FAKI				S	**Sb**	**05 39 14.7**	**-2.2**
SRPI	**Serui, Papua**	**2.20**	**83**	P	**Pn**	**05 38 51.4**	**-1.4**
SRPI				S	**Sb**	**05 39 22.7**	**-1.2**
BAKI	**Biak**	**2.26**	**65**	P	**Pn**	**05 38 54.8**	**+1.1**
BAKI				S	**Sb**	**05 39 25.5**	**-0.1**
WRA	**Warramunga Arr**	**17.68**	**179**	P	**P**	**05 42 22.8**	**-0.6**
	0.3nm,0.3s,baz=358,slow=12,SNR=29						
ASAR	**Alice Springs**	**21.39**	**180**	P	**P**	**05 43 06.3**	**+2.5**
	5.0nm,1.0s,baz=7.5,slow=12,SNR=24						
MKAR	**Makanchi Array**	**66.56**	**324**	P	**P**	**05 49 07.6**	**+1.7**
	0.2nm,0.3s,baz=110,slow=6.9,SNR=4.7						

MEX 27 05:41:08.3±0.5, 15°.41N×93°.10W, h110km±6km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.31**	**339**	*e*P	Pn	05 41 23.1	-1.1
PCIG				*i* S	Sn	05 41 34.3	-1.8
THIG		**0.95**	**122**	*i* P	Pn	05 41 27.5	-1.5
THIG				*i* S	Sn	05 41 42.9	-1.7
CCIG	**Comitan**	**1.27**	**47**	*e*P	Pn	05 41 32.0	-0.7
CCIG				*i* S	Sn	05 41 49.5	-1.6
TGIG		**1.36**	**359**	*e*P	Pn	05 41 32.6	-1.0
TGIG				*i* S	Sn	05 41 50.8	-2.0
HUIG	**Huatulco**	**2.92**	**277**	*i* P	Pn	05 41 52.1	-1.2
HUIG				*i* S	Sn	05 42 25.7	-2.2

*IDC **27** 05:43:40.5±7.1, 6°.74N×72°.58W, h148km±47km, mb2.6/1, mb1 3.0/2, mb1mx2.7/23, mbtmp2.8/2, Error ellipse: s-maj=127.8km s-min=40.3km az=101.0*
*ISCJB **27** 05:43:42.6±0.8, 6°.90N±0°.08×73°.01W±0°.08, h164km±8km, mb2.9/1, Error ellipse: s-maj=16.6km s-min=7.1km az=44.5*
*FUNV **27** 05:43:42.9, 6°.80N×73°.24W, h149km, MW3.4*
ISC 27 05:43:43.0±1.1, 6°.88N±0°.08×73°.04W±0°.09, h160km±10km, n12, σ0s94/19, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.22**	**36**	↓*i* P	**Pn**	**05 44 11.8**	**+0.9**
CAPV				*e*S	**Sn**	**05 44 31.0**	**-1.2**
ROSC	**El Rosal**	**2.38**	**213**	P	**Pn**	**05 44 22.7**	**-0.9**
	5.1nm,0.3s,baz=271,slow=17,SNR=15						
ROSC				S	**Sn**	**05 44 55.7**	**+0.7**
	16nm,0.3s,baz=81,slow=16,SNR=17						
VIGV	**El Vigia**	**2.56**	**40**	*e*P	**Pn**	**05 44 25.9**	**+0.5**
VIGV				*e*S	**Sn**	**05 44 58.0**	**-0.2**
SOCV	**Socops**	**2.57**	**57**	*e*P	**Pn**	**05 44 26.1**	**+0.6**
SOCV				*e*S	**Sn**	**05 44 58.3**	**-0.1**
ELOV	**Elorza**	**3.53**	**88**	*e*P	**Pn**	**05 44 38.1**	**+0.7**
ELOV				*e*S	**Sn**	**05 45 19.6**	**-0.2**
SANV	**Sanarito**	**4.34**	**53**	*e*P	**Pn**	**05 44 49.0**	**+1.0**
CURV	**Curarigua**	**4.36**	**44**	*e*P	**Pn**	**05 44 48.8**	**+0.6**
CURV				*e*S	**Sn**	**05 45 38.0**	**-1.1**
TEPV	**Terepaima**	**4.89**	**51**	*e*P	**Pn**	**05 44 55.1**	**0.0**
MAPV	**Macapo**	**5.40**	**57**	*e*P	**Pn**	**05 45 02.0**	**+0.1**
MAPV				*e*S	**Sn**	**05 46 01.4**	**-2.3**
MONV	**Montecano**	**5.88**	**31**	*e*P	**Pn**	**05 45 08.3**	**0.0**
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**05 53 54.9**	**+0.7**
	0.1nm,0.5s,baz=131,slow=6.9,SNR=4.4						
WRA	**Warramunga Arr**	**150.44**	**241**	PKPbc	**PKPbc**	**06 03 16.1**	**-0.5**
	0.2nm,0.4s,baz=110,slow=2.4,SNR=6.5						

MAN 27 05:43:58, 8°.51N×124°.62E, h32km, mb3.8, ML2.6, MS2.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**0.09**	**129**	↑*i* P	Pb	05 44 04.1	+0.5
CGP				*i* S	Sb	05 44 07.4	+0.1
BUKP	**Musuan**	**0.77**	**145**	*e*P	Pb	05 44 13.0	+0.1
BUKP				*e*S	Sn	05 44 20.1	-3.0
PAGZ	**Pagadian**	**1.39**	**242**	*e*P	Pn	05 44 22.0	+0.8
PAGZ				*e*S	Sn	05 44 38.1	-0.4

*ISCJB **27** 05:47:24.0±0.5, 15°.05S±0°.1×173°.4W±0°.1, h10km, mb4.0/12, MS3.5/10, Error ellipse: s-maj=22.6km s-min=9.8km az=143.4*
*IDC **27** 05:47:24.8±0.7, 15°.03S×173°.62W, h0km, mb3.9/10, mb1 4.2/10, mb1mx4.1/19, mbtmp3.9/10, MS3.6/10, Ms1 3.7/10, ms1mx3.5/25, Error ellipse: s-maj=40.2km s-min=18.1km az=139.0*
*NEIC **27** 05:47:25.6±0.6, 15°.05S×173°.35W, h10km, mb4.6/3, Error ellipse: s-maj=26.8km s-min=11.6km az=142.0*
ISC 27 05:47:25.4±0.6, 15°.05S±0°.2×173°.3W±0°.1, h10km, n42, σ1s29/29, mb4.1/12, MS3.6/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.87**	**54**	Pn	**Pn**	**05 47 55.2**	**-2.3**
AFI				Sn	Sn	05 48 14.0	-7.2
AFI				*e*Sn	Sb	05 48 14.3	-8.8
AFI	**Afiamalu**	**1.87**	**54**	Pn	**Pn**	**05 47 55.2**	**-2.3**
	86nm,0.3s,baz=47,slow=3.6,SNR=86						
AFI				Sn	Sn	05 48 14.0	-7.2
	415nm,0.3s,baz=96,slow=19,SNR=25						
AFI				LR	LR	05 48 31.1	
	comp=Z,330nm,18.4s,baz=235,slow=32						
MSVF	**Nonsavu**	**8.70**	**251**	*e*Pn	**Pn**	**05 49 32.1**	**+0.6**
	12nm,1.1s						
DZM	**Mont Dzumac**	**20.41**	**247**	LR	LR	05 58 10.0	
	comp=Z,116nm,18.6s,baz=52,slow=32						
PPT	**Papeete**	**22.94**	**100**	LR	LR	05 58 46.4	
	comp=Z,5.9nm,21.2s,baz=220,slow=29						
PPT2	**Papeete2**	**22.94**	**100**	*e*LR	LR	05 57 41.6	
	142nm,27.5s						
TIAR	**Tiarei**	**23.16**	**100**	*e*T	T	06 16 03.8	
	5.4nm,0.2s						
TBI	**Tubuai**	**23.99**	**114**	*e*LR	LR	05 58 16.7	
	166nm,26.5s						
TBI				*e*T	T	06 17 04.1	
	5.4nm,0.2s						
PMOR	**Pomariorio Ree**	**24.57**	**93**	*e*T	T	06 18 18.1	
	2.4nm,0.2s						
URZ	**Urewera**	**24.64**	**198**	P	**P**	**05 52 46.0**	**-0.2**
URZ	**Urewera**	**24.64**	**198**	LR	LR	06 00 49.6	
	comp=Z,194nm,19.8s,baz=29,slow=33						
HNR	**Honiara**	**26.69**	**279**	LR	LR	06 01 35.2	
	comp=Z,67nm,21.9s,baz=60,slow=32						
RKT	**Rikitea**	**37.05**	**109**	*e*T	T	06 33 20.9	
	2.4nm,0.3s						
CTAO	**Charters Tower**	**38.79**	**257**	P	**P**	**05 54 50.5**	**-0.2**
STKA	**Stephens Creek**	**44.28**	**240**	P	**P**	**05 55 34.4**	**-1.2**
STKA	**Stephens Creek**	**44.28**	**240**	P	**P**	**05 55 34.4**	**-1.2**
	5.0nm,1.0s,baz=78,slow=9.6,SNR=5.8						
WRA	**Warramunga Arr**	**50.00**	**256**	P	**P**	**05 56 19.1**	**-1.3**
WRA	**Warramunga Arr**	**50.00**	**256**	P	**P**	**05 56 19.1**	**-1.3**
	1.2nm,0.9s,baz=92,slow=6.9,SNR=18						
ASAR	**Alice Springs**	**50.29**	**252**	P	**P**	**05 56 21.5**	**-1.1**
ASAR	**Alice Springs**	**50.29**	**252**	P	**P**	**05 56 21.5**	**-1.1**
	2.3nm,0.6s,baz=88,slow=8.4,SNR=34						
VNDA	**Vanda**	**63.76**	**186**	*e*P	**P**	**05 57 57.5**	**+0.4**
	2.8nm,1.2s						
VNDA	**Vanda**	**63.76**	**186**	P	**P**	**05 57 58.0**	**+0.9**
	2.0nm,1.1s,baz=16,slow=6.9,SNR=5.2						
VNDA				LR	LR	06 18 37.2	
	comp=Z,86nm,20.1s,baz=278,slow=29						
PETK	**Petropavlovsk-**	**72.29**	**342**	LR	LR	06 32 07.4	
	comp=Z,24nm,18.1s,baz=108,slow=37						
NVAR	**Mina Array Bea**	**74.00**	**42**	P	P	05 59 04.8	+3.0
NVAR	**Mina Array Bea**	**74.00**	**42**	P	P	05 59 04.8	+3.0
	0.4nm,0.7s,baz=246,slow=6.8,SNR=3.1						
QSPA	**South Pole Qui**	**75.02**	**180**	*e*P	**P**	**05 59 07.2**	**+0.1**
	6.8nm,1.0s						
ARUT	**Antelope Range**	**76.89**	**45**	*e*P	**P**	**05 59 16.2**	**-2.0**
	4.0nm,0.3s						
TXAR	**Lajitas Array**	**80.35**	**56**	P	**P**	**05 59 39.7**	**+2.3**
TXAR	**Lajitas Array**	**80.35**	**56**	P	**P**	**05 59 39.7**	**+2.3**
	0.5nm,0.8s,baz=197,slow=6.4,SNR=6.7						
PDAR	**Pinedale Array**	**81.94**	**42**	P	**P**	**05 59 47.0**	**+1.2**
PDAR	**Pinedale Array**	**81.94**	**42**	P	**P**	**05 59 47.0**	**+1.2**
	0.6nm,0.8s,baz=208,slow=5.0,SNR=4.5						
PDAR				LR	LR	06 28 57.5	
	comp=Z,39nm,19.3s,baz=67,slow=30						
ILAR	**Eielson Array**	**82.06**	**11**	P	**P**	**05 59 46.1**	**+0.5**
ILAR	**Eielson Array**	**82.06**	**11**	P	**P**	**05 59 46.1**	**+0.5**
	0.5nm,0.8s,baz=234,slow=6.5,SNR=6.5						
ILAR				LR	LR	06 36 16.6	
	comp=Z,27nm,18.1s,baz=243,slow=36						
MAW	**Mawson**	**88.17**	**199**	P	**P**	**06 00 16.1**	**-0.2**
MAW	**Mawson**	**88.17**	**199**	P	**P**	**06 00 16.1**	**-0.2**
	2.0nm,0.7s,baz=94,slow=7.5,SNR=3.9						
MAW				LR	LR	06 34 58.5	
	comp=Z,74nm,18.8s,baz=130,slow=32						
PLCA	**Paso Flores**	**89.71**	**132**	LR	LR	06 34 54.0	
	comp=Z,168nm,18.0s,baz=180,slow=32						
YKA	**Yellowknife Ar**	**89.72**	**23**	P	**P**	**06 00 24.9**	**+1.3**
YKA	**Yellowknife Ar**	**89.72**	**23**	P	**P**	**06 00 24.9**	**+1.3**
	0.2nm,0.7s,baz=239,slow=5.1,SNR=4.7						
GERES	**GERESS Array B**	**145.78**	**352**	PKPbc	**PKPab**	**06 07 05.9**	**+0.6**
GERES	**GERESS Array B**	**145.78**	**352**	PKPbc	**PKPab**	**06 07 05.9**	**+0.6**
	0.6nm,0.6s,baz=70,slow=1.6,SNR=4.7						
BRTR	**Keskin Array B**	**145.91**	**321**	PKPbc	**PKPbc**	**06 07 05.5**	**-0.2**
BRTR	**Keskin Array B**	**145.91**	**321**	PKPbc	**PKPbc**	**06 07 05.5**	**-0.2**
	1.9nm,0.8s,baz=90,slow=1.7,SNR=7.6						

MAN 27 05:55:17, 8°.14N×125°.18E, h1km, mb4.2, ML3.0, MS2.7, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.29**	**205**	*e*P	Pg	05 55 22.9	+0.3
BUKP				*e*S	Sb	05 55 39.2	+8.7
CGP	**Cagayan de Oro**	**0.57**	**303**	↓*e*P	Pg	05 55 28.3	+0.3
CGP				*e*S	Sn	05 55 45.3	+2.8
CTBH	**Cotabato--PC H**	**1.30**	**225**	↓*i* P	Pg	05 55 40.2	-1.9
PAGZ	**Pagadian**	**1.81**	**261**	*e*P	Pb	05 55 50.9	-0.1
PAGZ				*e*S	Sn	05 55 57.9	-15

IDC 27 06:14:52.1±3.0, 30°.48S×138°.24E, h0km, mb1 3.5/4, mb1mx3.4/17, mbtmp3.3/4, ML3.2/4, Error ellipse: s-maj=70.6km s-min=14.5km az=40.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.19**	**117**	Pn	Pn	06 15 43.6	+0.1
	1.2nm,0.3s,baz=296,slow=13,SNR=16						
STKA				Pg	Pg	06 15 52.0	-1.4
	4.3nm,0.3s,baz=296,slow=15,SNR=24						
STKA				Sn	Sn	06 16 22.5	+0.1
	3.8nm,0.3s,baz=260,slow=19,SNR=6.3						
STKA				Lg	Lg	06 16 32.0	
	6.5nm,0.3s,baz=213,slow=23,SNR=5.4						
ASAR	**Alice Springs**	**7.81**	**329**	Pn	Pn	06 16 48.5	+1.4
	0.3nm,0.3s,baz=148,slow=13,SNR=8.1						
ASAR				Sn	Sn	06 18 17.2	+0.9
	0.4nm,0.3s,baz=153,slow=22,SNR=4.7						
WRA	**Warramunga Arr**	**11.07**	**341**	Pn	Pn	06 17 31.8	0.0
	0.2nm,0.3s,baz=162,slow=13,SNR=17						
WRA				Sn	Sn	06 19 35.4	-1.0
	0.2nm,0.3s,baz=162,slow=22,SNR=4.6						
FITZ	**Fitzroy Crossi**	**16.83**	**314**	Pn	Pn	06 18 47.5	-1.7
	0.1nm,0.3s,baz=146,slow=11,SNR=3.8						

*ISCJB **27** 06:30:50.7±0.5, 2°.18S±0°.05×128°.32E±0°.07, h34km, mb3.9/5, MS2.9/1, Error ellipse: s-maj=10.0km s-min=6.3km az=157.1*
*IDC **27** 06:30:51.9±0.9, 2°.29S×128°.09E, h32km±6km, mb3.7/5, mb1 3.8/7, mb1mx3.6/22, mbtmp3.7/7, ML3.7/2, MS3.0/2, Ms1 3.0/2, ms1mx2.3/28, Error ellipse: s-maj=56.9km s-min=16.6km az=78.0*
*DJA **27** 06:30:52.7±1.1, 2°.5±3°×12°.8E±°, h28km±17km, M4.2/5, mb4.9/2, mB5.0/2, MLv3.9/5, Mw(mB)4.3/2*
*AUST **27** 06:30:57.9, 2°.49S×128°.51E, h60km*
ISC 27 06:30:51.8±0.6, 2°.23S±0°.05×128°.27E±0°.06, h34km, n23, σ2s02/29, mb3.9/5, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.29**	**149**	P	**Pb**	**06 31 16.6**	**+1.0**
MSAI				S	**Sb**	**06 31 36.3**	**+4.5**
AAI	**Ambon**	**1.45**	**183**	P	**Pb**	**06 31 18.1**	**-0.2**
AAI	**Ambon**	**1.45**	**183**	P	**Pb**	**06 31 17.9**	**-0.3**
	baz=1.2,SNR=7.5						
NLAI	**Namlea**	**1.54**	**229**	P	**Pn**	**06 31 16.9**	**0.0**
NLAI				S	**Sb**	**06 31 41.2**	**+2.2**
LBMI	**Labuha**	**1.76**	**334**	P	**Pn**	**06 31 19.8**	**-0.2**
TNTI	**Ternate**	**3.12**	**343**	P	**Pn**	**06 31 39.3**	**+0.7**
FAKI	**Fak Fak**	**4.03**	**100**	P	**Pn**	**06 31 51.2**	**0.0**
	baz=3.8,SNR=6.9						
MRSI	**Marisa**	**6.88**	**293**	P	**Pn**	**06 32 30.5**	**+0.2**
	38nm,0.7s,1μm						
MRSI				S	**Sn**	**06 33 44.9**	**-2.6**
	38nm,0.7s,1μm						
BKSI	**Bulukumba**	**8.69**	**249**	P	**Pn**	**06 32 58.2**	**+3.0**
KAPI	**Kappang**	**8.94**	**252**	Pn	**Pn**	**06 33 01.6**	**+2.9**
	11nm,0.3s,baz=62,slow=7.3,SNR=26						
KAPI				LR	LR	06 36 40.0	
	comp=Z,119nm,19.8s,baz=315,slow=40						
MTN	**Manton Dam**	**10.92**	**165**	P	Pn	06 33 29.9	+4.1
	baz=11,SNR=5.6						
KDU	**Kakadu**	**11.19**	**158**	S	**Sn**	**06 35 29.5**	**-4.0**
	baz=11,SNR=5.4						
PALU	**Palau**	**11.35**	**33**	S	Sn	06 35 44.7	+7.3
	baz=12,SNR=3.9						
KNRA	**Kununurra**	**13.37**	**178**	P	**P**	**06 34 08.5**	**+0.2**
	baz=13,SNR=3.3						
FITZ	**Fitzroy Crossi**	**15.98**	**189**	Pn	**Pn**	**06 34 33.0**	**-1.2**
	0.1nm,0.3s,baz=4.1,slow=14,SNR=3.2						
FITZ	**Fitzroy Crossi**	**15.98**	**189**	P	**P**	**06 34 38.3**	**+0.9**
	baz=16,SNR=6.6						
WRA	**Warramunga Arr**	**18.57**	**162**	P	**P**	**06 35 04.9**	**-1.2**
	0.5nm,0.3s,baz=341,slow=12,SNR=26						
WRA				S	**Sn**	**06 38 29.1**	**-4.2**
	0.1nm,0.3s,baz=337,slow=21,SNR=4.2						
ASAR	**Alice Springs**	**22.00**	**166**	P	**P**	**06 35 42.8**	**-0.4**
	5.5nm,0.4s,baz=346,slow=11,SNR=83						
ASAR				S	**S**	**06 39 40.9**	**-3.3**
	4.6nm,0.8s,baz=347,slow=22,SNR=19						
STKA	**Stephens Creek**	**32.05**	**158**	P	**P**	**06 37 17.0**	**+1.5**
	0.7nm,0.4s,baz=343,slow=11,SNR=3.1						
KSRS	**Korea Array**	**39.49**	**360**	P	**P**	**06 38 19.9**	**+0.8**
	1.2nm,0.6s,baz=169,slow=9.6,SNR=6.6						
KSRS				LR	LR	06 53 46.9	
	comp=Z,18nm,20.0s,baz=230,slow=35						
USRK	**Ussuriysk Arra**	**46.35**	**4**	P	**P**	**06 39 14.6**	**0.0**
	1.5nm,0.8s,baz=204,slow=7.3,SNR=4.4						
USRK				pP	**pP**	**06 39 25.4**	**+0.7**
	1.7nm,0.8s,baz=212,slow=6.6,SNR=4.2						
MKAR	**Makanchi Array**	**63.32**	**326**	P	**P**	**06 41 17.0**	**-0.5**
	0.3nm,0.7s,baz=144,slow=10.0,SNR=3.3						
MKAR				pP	**pP**	**06 41 27.0**	**-1.0**
	0.9nm,0.7s,baz=123,slow=8.0,SNR=9.3						
TORD	**Torodi Ar. Bea**	**126.07**	**285**	PKP	**PKPdf**	**06 49 52.8**	**+1.1**
	0.3nm,0.7s,baz=18,slow=2.0,SNR=3.4						
TORD				pPKP	**pPKPdf**	**06 50 02.6**	**-0.2**
	0.8nm,0.8s,baz=50,slow=1.1,SNR=4.4						

IDC 27 06:41:17.8±6.3, 13°.85N×92°.60W, h0km, mb3.6/3, mb1 3.9/5, mb1mx3.7/24, mbtmp3.6/5, ML3.5/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/25, Error ellipse: s-maj=113.6km s-min=40.9km az=153.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**7.57**	**32**	Pn	Pn	06 43 10.0	+0.6
	2.2nm,0.3s,baz=

CFAA				S		Sn	07 24 17.1	-2.2
	0.1nm,0.3s,baz=294,slow=20,SNR=8.3							
LPAZ	**La Paz**	**7.94**	**352**	P		Pn	07 23 03.8	+0.7
	0.9nm,0.3s,baz=166,slow=8.4,SNR=22							
LPAZ				S		Sn	07 24 30.7	-1.6
	0.1nm,0.3s,baz=237,slow=17,SNR=2.1							
CPUP	**Villa Florida**	**9.03**	**106**	P		Pn	07 23 17.5	+0.9
	0.2nm,0.3s,baz=284,slow=14,SNR=3.9							
PLCA	**Paso Flores**	**16.75**	**189**	P		Pn	07 24 54.9	-0.1
	0.1nm,0.3s,baz=346,slow=10,SNR=3.0							
BDFB	**Brasilia**	**19.78**	**68**	P		P	07 25 27.8	0.0
	1.1nm,0.3s,baz=244,slow=10,SNR=25							
TXAR	**Lajitas Array**	**63.83**	**325**	P		P	07 31 25.3	+0.2
	0.1nm,0.4s,baz=144,slow=7.8,SNR=4.9							
QSPA	**South Pole Qui**	**66.01**	**180**	P		P	07 31 39.0	+0.3
	0.8nm,0.5s,baz=159,slow=14,SNR=10							
TORD	**Torodi Ar. Bea**	**76.66**	**69**	P		P	07 32 42.8	-0.6
	0.4nm,0.5s,baz=262,slow=6.3,SNR=11							
YKA	**Yellowknife Ar**	**94.30**	**340**	P		P	07 34 09.9	-0.3
	0.3nm,0.5s,baz=130,slow=4.8,SNR=11							
ASAR	**Alice Springs**	**128.26**	**205**	PKP		PKPdf	07 39 57.2	-0.5
	0.3nm,0.4s,baz=128,slow=1.3,SNR=5.1							
WRA	**Warramunga Arr**	**131.44**	**207**	PKP		PKPdf	07 40 03.5	-0.3
	0.3nm,0.5s,baz=154,slow=1.9,SNR=9.7							
MKAR	**Makanchi Array**	**146.69**	**40**	PKPbc		PKPbc	07 40 32.4	-0.2
	0.4nm,0.5s,baz=299,slow=4.3,SNR=5.5							

IDC 27 07:28:47.9±4.0, 23°.32N×94°.31E, h116km±38km, mb3.1/5, mb1 3.3/6, mb1mx3.1/28, mbtmp3.1/6, Error ellipse: s-maj=64.3km s-min=16.8km az=57.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHL	**Shillong**	**3.15**	**316**	*e*Pn		Pn	07 29 28.0	-8.2
SHL				*e*Sn		Sn	07 30 01.0	-13
CMAR	**Chiang Mai Arr**	**6.49**	**137**	P		Pn	07 30 20.8	-0.2
	0.0nm,0.3s,baz=312,slow=12,SNR=5.2							
MKAR	**Makanchi Array**	**25.34**	**340**	P		P	07 34 04.3	+0.4
	1.1nm,0.7s,baz=152,slow=9.6,SNR=9.3							
KURBB	**Kurchatov Arra**	**29.90**	**340**	P		P	07 34 44.2	-0.3
	0.3nm,0.5s,baz=161,slow=6.1,SNR=3.2							
WRA	**Warramunga Arr**	**58.08**	**135**	P		P	07 38 29.1	-0.2
	0.3nm,0.5s,baz=324,slow=7.4,SNR=9.9							
ASAR	**Alice Springs**	**60.50**	**138**	P		P	07 38 46.2	+0.3
	0.2nm,0.4s,baz=324,slow=6.9,SNR=5.0							
TORD	**Torodi Ar. Bea**	**87.25**	**283**	P		P	07 41 21.7	-0.3
	0.3nm,0.9s,baz=76,slow=6.1,SNR=3.7							

HLW 27 08:04:18.2, 36°.39N×27°.44E, h32km±34km, Md0.0, Ml3.5
ISCJB 27 08:04:19.2±0.7, 36°.24N±0°.06×27°.36E±0°.08, h90km±16km, Error ellipse: s-maj=10.8km s-min=9.6km az=43.6
CSEM 27 08:04:20.7±0.3, 36°.27N×27°.39E, h80km, MD3.0, Error ellipse: s-maj=8.8km s-min=4.3km az=93.0
ISK 27 08:04:23.6, 36°.48N×27°.57E, h66km, MD3.0
DDA 27 08:04:25.7, 36°.72N×27°.44E, h8km, MD3.1

IDC 27 08:04:19.6±1.0, 36°.25N±0°.05×27°.53E±0°.05, h74km±20km, n55, σ2s06/59, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.83**	**348**	*e*PG		**Pn**	**08 04 38.0**	**+1.7**
BODT				*e*SG		**Sn**	**08 04 48.7**	**0.0**
BODT	**Bodrum**	**0.83**	**348**	*e*Pg		**Pn**	**08 04 38.0**	**+1.7**
BODT				*e*Sg		**Sn**	**08 04 48.7**	**0.0**
MLSB	**Milas**	**1.06**	**11**	*e*PG		**Pn**	**08 04 40.4**	**+1.3**
MLSB	**Milas**	**1.06**	**11**	*e*Pg		**Pn**	**08 04 40.4**	**+1.3**
TURN	**Turunc**	**1.07**	**54**	*i* P		**Pn**	**08 04 39.3**	**+0.2**
TURN				*i* S		Sn	08 04 47.6	-6.1
TURN	**Turunc**	**1.07**	**54**	*i* P		**Pn**	**08 04 39.3**	**+0.2**
TURN				*i* S		Sn	08 04 47.6	-6.1
YER	**Yerkesik**	**1.07**	**34**	*e*PG		**Pn**	**08 04 41.0**	**+1.7**
YER	**Yerkesik**	**1.07**	**34**	*e*Pg		**Pn**	**08 04 41.0**	**+1.7**
FETY	**Fethiye**	**1.31**	**73**	*e*PN		Pn	08 04 45.9	+3.6
FETY	**Fethiye**	**1.31**	**73**	*e*Pn		Pn	08 04 45.9	+3.6
AYDN	**Tasoluk**	**1.44**	**11**	*i* P		**Pn**	**08 04 45.6**	**+1.6**
AYDN	**Tasoluk**	**1.44**	**11**	*i* P		**Pn**	**08 04 45.6**	**+1.6**
GCAM	**G?zelcaml?**	**1.47**	**351**	*i* P		**Pn**	**08 04 44.9**	**+0.6**
GCAM				*i* S		**Sn**	**08 04 58.9**	**-3.9**
GCAM	**G?zelcaml?**	**1.47**	**351**	*i* P		**Pn**	**08 04 44.9**	**+0.6**
GCAM				*i* S		**Sn**	**08 04 58.9**	**-3.9**
AKAS	**Kas**	**1.68**	**90**	*i* P		Pn	08 04 51.5	+4.3
AKAS				*i* S		**Sn**	**08 05 12.3**	**+4.2**
AKAS	**Kas**	**1.68**	**90**	*i* P		Pn	08 04 51.5	+4.3
AKAS				*i* S		**Sn**	**08 05 12.3**	**+4.2**
GLHS	**Glhisar (BURDU**	**1.82**	**60**	*e*PN		Pn	08 04 52.1	+3.0
GLHS	**Glhisar (BURDU**	**1.82**	**60**	*e*Pn		Pn	08 04 52.1	+3.0
GOLH	**Golhisar**	**1.91**	**58**	*i* P		Pn	08 04 53.9	+3.7
GOLH				*i* S		**Sn**	**08 05 12.5**	**-1.0**
GOLH	**Golhisar**	**1.91**	**58**	*i* P		Pn	08 04 53.9	+3.7
GOLH				*i* S		**Sn**	**08 05 12.5**	**-1.0**
ELL	**Elmali**	**1.98**	**75**	*e*PN		Pn	08 04 55.1	+3.8
ELL	**Elmali**	**1.98**	**75**	*e*Pn		Pn	08 04 55.1	+3.8
KULA	**Kula-Manisa**	**2.43**	**21**	*e*PN		**Pn**	**08 04 59.5**	**+2.2**
KULA	**Kula-Manisa**	**2.43**	**21**	*e*Pn		**Pn**	**08 04 59.5**	**+2.2**
KHL	**Karahalli**	**2.61**	**37**	*e*PN		Pn	08 05 02.4	+2.7
KHL	**Karahalli**	**2.61**	**37**	*e*Pn		Pn	08 05 02.4	+2.7
KHAL	**Karahalli**	**2.63**	**36**	*i* P		**Pn**	**08 05 01.0**	**+1.0**
KHAL				*i* S		**Sn**	**08 05 30.5**	**-0.5**
KHAL	**Karahalli**	**2.63**	**36**	*i* P		**Pn**	**08 05 01.0**	**+1.0**
KHAL				*i* S		**Sn**	**08 05 30.5**	**-0.5**
GAZI	**Gazipasa**	**3.87**	**89**	*i* P		**Pn**	**08 05 18.3**	**+1.5**
GAZI				*i* S		**Sn**	**08 05 59.9**	**-1.2**
GAZI	**Gazipasa**	**3.87**	**89**	*i* P		**Pn**	**08 05 18.3**	**+1.5**
GAZI				*i* S		**Sn**	**08 05 59.9**	**-1.2**
SLUM		**5.12**	**203**	P		**Pn**	**08 05 34.7**	**+0.9**
HNAT	**Natroun**	**7.09**	**158**	P		**Pn**	**08 06 02.7**	**+1.9**
	baz=157							
HNAT	**Natroun**	**7.09**	**158**	P		**Pn**	**08 06 02.7**	**+1.9**
SWA2		**7.20**	**195**	P		**Pn**	**08 06 03.1**	**+0.8**
	baz=194							
SWA2				AMP			08 07 00.0	
	comp=N,20μm,0.3s,logA/T=4.8,baz=194							
SWA2		**7.20**	**195**	P		**Pn**	**08 06 03.1**	**+0.8**
KOT	**Kottamia**	**7.26**	**149**	P		**Pn**	**08 06 05.0**	**+1.8**
	baz=149							
KOT	**Kottamia**	**7.26**	**149**	P		**Pn**	**08 06 05.0**	**+1.8**
AMAG	**Maghara**	**7.33**	**138**	P		**Pn**	**08 06 05.3**	**+1.2**
	baz=138							
AMAG	**Maghara**	**7.33**	**138**	P		**Pn**	**08 06 05.3**	**+1.2**
HHAG	**Hagoal**	**7.36**	**147**	P		**Pn**	**08 06 06.1**	**+1.7**
	baz=147							
HHAG				AMP			08 07 00.0	
	comp=N,30μm,0.2s,logA/T=5.2,baz=147							
HHAG	**Hagoal**	**7.36**	**147**	P		**Pn**	**08 06 06.1**	**+1.7**
RSH		**7.38**	**134**	P		**Pn**	**08 06 06.8**	**+2.0**
	baz=134							
RSH		**7.38**	**134**	P		**Pn**	**08 06 06.8**	**+2.0**
HSAF	**As Saff**	**7.43**	**152**	P		**Pn**	**08 06 07.8**	**+2.4**
	baz=151							
HSAF	**As Saff**	**7.43**	**152**	P		**Pn**	**08 06 07.8**	**+2.4**
GLL	**Jalalah**	**7.53**	**151**	P		**Pn**	**08 06 09.0**	**+2.3**
	baz=151							
GLL	**Jalalah**	**7.53**	**151**	P		**Pn**	**08 06 09.0**	**+2.3**
ZAF		**8.13**	**147**	P		**Pn**	**08 06 17.1**	**+2.1**
	baz=147							
ZAF		**8.13**	**147**	P		**Pn**	**08 06 17.1**	**+2.1**
HNKL	**Nakhl**	**8.31**	**138**	P		**Pn**	**08 06 19.0**	**+1.6**
	baz=137							
HNKL				S		**Sn**	**08 07 47.0**	**-2.7**
	baz=137							
HNKL	**Nakhl**	**8.31**	**138**	P		**Pn**	**08 06 19.0**	**+1.6**
HNKL				S		**Sn**	**08 07 47.0**	**-2.7**
HFRF	**Wahat Farafira**	**9.10**	**176**	P		**Pn**	**08 06 29.8**	**+1.6**
	baz=175							
HFRF				S		**Sn**	**08 08 05.0**	**-4.0**
	baz=175							
HFRF	**Wahat Farafira**	**9.10**	**176**	P		**Pn**	**08 06 29.8**	**+1.6**
HFRF				S		**Sn**	**08 08 05.0**	**-4.0**
HKAT	**Jabal Katrina**	**9.45**	**143**	P		**Pn**	**08 06 34.9**	**+1.8**
	baz=143							
HKAT	**Jabal Katrina**	**9.45**	**143**	P		**Pn**	**08 06 34.9**	**+1.8**

SKO 27 08:16:03.5, 41°.23N×22°.68E, h15km, M1.7, ML2.1
ISCJB 27 08:16:03.1±0.4, 41°.34N±0°.02×22°.67E±0°.04, h12km±4km, Error ellipse: s-maj=5.3km s-min=3.6km az=6.5
CSEM 27 08:16:03.4±0.3, 41°.33N×22°.64E, h2km, ML1.9, Error ellipse: s-maj=5.8km s-min=5.0km az=81.0
ATH 27 08:16:04.1, 41°.27N×22°.69E, h20km±4km, MD2.9/3
THE 27 08:16:04.7, 41°.28N×22°.71E, h2km±2km, ML2.1/4, Error ellipse: s-maj=2.5km s-min=0.7km az=205.0
BEO 27 08:16:06.0±0.6, 41°.36N×22°.62E, h0km, ML1.9/4

ISC 27 08:16:03.6±0.8, 41°.30N±0°.03×22°.66E±0°.02, h14km±5km, n33, σ0s55/59, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.07**	**290**	P		**Pg**	**08 16 06.2**	**-0.1**
VAY				S		**Sg**	**08 16 08.2**	**-0.1**
VAY	**Valandovo**	**0.07**	**290**	*i* Pg		**Pg**	**08 16 06.2**	**-0.1**
VAY				*e*Lg		Lg	08 16 08.2	
	comp=E,1μm,0.2s							
VAY				*i* Sg		**Sg**	**08 16 08.2**	**-0.1**
VAY				*e*Lg		Lg	08 16 08.3	
	comp=N,1μm,0.2s							
VAY	**Valandovo**	**0.07**	**290**	*e*Pg		**Pg**	**08 16 06.3**	**-0.1**
VAY				*e*Sg		**Sg**	**08 16 08.0**	**-0.3**
VAY	**Valandovo**	**0.07**	**290**	*i* Sg		Sg	08 16 01.6	-6.7
VAY				*e*Lg		Lg	08 16 01.7	
	comp=N,1μm,0.2s							
VAY	**Valandovo**	**0.07**	**290**	*i* Pg		Pg	08 16 01.7	-4.7
VAY	**Valandovo**	**0.07**	**290**	P		**Pg**	**08 16 06.2**	**-0.1**
VAY				S		**Sg**	**08 16 08.2**	**-0.1**
KNT	**Kendrikon**	**0.23**	**127**	P		**Pg**	**08 16 08.9**	**+0.3**
KNT				S		**Sg**	**08 16 11.8**	**-0.1**
KNT	**Kendrikon**	**0.23**	**127**	P		**Pg**	**08 16 08.9**	**+0.3**
KNT				S		**Sg**	**08 16 11.8**	**-0.1**
GRG	**Griva**	**0.39**	**210**	P		**Pb**	**08 16 12.0**	**-0.3**
GRG				S		**Sb**	**08 16 17.5**	**-0.8**
GRG	**Griva**	**0.39**	**210**	*e*PB		**Pb**	**08 16 12.1**	**-0.3**
GRG				*e*SB		**Sb**	**08 16 18.0**	**-0.3**
GRG	**Griva**	**0.39**	**210**	*e*Pb		**Pb**	**08 16 12.1**	**-0.3**
GRG				S		**Sb**	**08 16 17.5**	**-0.8**
GRG				*e*Sb		**Sb**	**08 16 18.0**	**-0.3**
THE	**Thessaloniki**	**0.70**	**161**	P		**Pb**	**08 16 17.6**	**-0.1**
THE				S		**Sb**	**08 16 26.9**	**-0.3**
THE	**Thessaloniki**	**0.70**	**161**	P		**Pb**	**08 16 17.6**	**-0.1**
THE				S		**Sb**	**08 16 26.9**	**-0.3**
SOH	**Sokhos**	**0.71**	**132**	P		**Pb**	**08 16 17.4**	**-0.4**
SOH				S		**Sb**	**08 16 26.7**	**-0.7**
SOH	**Sokhos**	**0.71**	**132**	*e*PN		**Pb**	**08 16 17.6**	**-0.2**
SOH				*e*SN		**Sb**	**08 16 26.8**	**-0.7**
SOH	**Sokhos**	**0.71**	**132**	*e*Pn		**Pb**	**08 16 17.6**	**-0.2**
SOH				S		**Sb**	**08 16 26.7**	**-0.7**
SRS	**Serrai**	**0.73**	**104**	P		**Pb**	**08 16 17.6**	**-0.5**
SRS				S		**Sg**	**08 16 26.5**	**-0.8**
SRS	**Serrai**	**0.73**	**104**	P		**Pb**	**08 16 17.6**	**-0.5**
SRS				S		**Sg**	**08 16 26.5**	**-0.8**
HORT	**Hortiatis**	**0.78**	**154**	P		**Pb**	**08 16 19.0**	**0.0**
HORT				S		**Sb**	**08 16 29.2**	**-0.2**
HORT	**Hortiatis**	**0.78**	**154**	P		**Pb**	**08 16 19.0**	**0.0**
HORT				S		**Sb**	**08 16 29.2**	**-0.2**
NVR	**Nevrokopi**	**0.91**	**86**	P		**Pb**	**08 16 21.0**	**-0.2**
NVR				S		**Sb**	**08 16 33.3**	**+0.1**
NVR	**Nevrokopi**	**0.91**	**86**	*e*PN		**Pb**	**08 16 21.0**	**-0.2**
NVR				*e*SN		**Sb**	**08 16 33.6**	**+0.4**
NVR	**Nevrokopi**	**0.91**	**86**	*e*Pn		**Pb**	**08 16 21.0**	**-0.2**
NVR				S		**Sb**	**08 16 33.3**	**+0.1**
NVR				*e*Sn		**Sb**	**08 16 33.6**	**+0.4**
FNA	**Florina**	**1.10**	**243**	P		**Pn**	**08 16 25.9**	**+1.2**
FNA	**Florina**	**1.10**	**243**	P		**Pn**	**08 16 25.9**	**+1.2**
VTS	**Vitosha**	**1.36**	**17**	P		**Pg**	**08 16 30.4**	**+0.7**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg		**Pg**	**08 16 30.2**	**+0.5**
VTS				*e*Sg		**Sg**	**08 16 46.8**	**-0.6**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg		**Pg**	**08 16 30.2**	**+0.5**
VTS				*e*Sg		**Sg**	**08 16 46.8**	**-0.6**
KAVA	**Kavala**	**1.43**	**101**	P		**Pg**	**08 16 30.2**	**-1.0**
KAVA				S		**Sg**	**08 16 50.5**	**+0.7**
KAVA	**Kavala**	**1.43**	**101**	P		**Pg**	**08 16 30.2**	**-1.0**
KAVA				S		**Sg**	**08 16 50.5**	**+0.7**
BARS	**Barje**	**1.64**	**338**	eSg		**Sg**	**08 16 56.1**	**-0.4**
BARS	**Barje**	**1.64**	**338**	eSg		**Sg**	**08 16 56.1**	**-0.4**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Pg		**Pg**	**08 16 41.0**	**-0.5**
ZAPS				*e*Sg		**Sg**	**08 17 05.8**	**-1.3**

IDC 27 08:25:31.8±16.0, 8°.49S×129°.26E, h170km±112km, mb3.4/1, mb1 3.3/3, mb1mx3.0/19, mbtmp3.1/3, Error ellipse: s-maj=125.9km s-min=105.8km az=166.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.40**	**157**	P		Pn	08 28 21.9	-1.0
	0.3nm,0.3s,baz=341,slow=12,SNR=24							
WRA				S		Sn	08 30 41.0	+0.4
	0.8nm,0.3s,baz=332,slow=21,SNR=12							
ASAR	**Alice Springs**	**15.74**	**164**	P		P	08 29 05.7	+0.7
	0.2nm,0.3s,baz=340,slow=11,SNR=17							
STKA	**Stephens Creek**	**25.95**	**155**	P		P	08 30 48.5	0.0
	1.5nm,0.8s,baz=324,slow=8.7,SNR=3.1							

IDC 27 08:27:44.8±3.2, 10°.94S×120°.15E, h93km±37km, mb3.5/2, mb1 3.7/5, mb1mx3.4/21, mbtmp3.5/5, Error ellipse: s-maj=56.3km s-min=17.0km az=73.0
AUST 27 08:27:48.9±17.0, 12°.54S×119°.93E, h0km, Error ellipse: s-maj=1.5km s-min=0.9km az=271.0

ISC 27 08:27:40.4±1.0, 11°.19S±0°.07×120°.0E±0°.1, h35km, n15, σ2s82/14, South of Sumba

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.54**	**10**	P		Sn	08 28 33.0	+9.0
	baz=2.9,SNR=5.7							
KAPI	**Kappang**	**6.14**	**357**	P		**Pn**	**08 29 09.1**	**+0.4**
	1.4nm,0.3s,baz=167,slow=5.1,SNR=7.3							
KAPI				S		**Sn**	**08 30 17.3**	**-0.5**
	2.8nm,0.3s,baz=211,slow=23,SNR=4.8							
FITZ	**Fitzroy Crossi**	**8.76**	**142**	P		**Pn**	**08 29 46.8**	**+2.1**
	baz=7.8,SNR=5.9							
FITZ				S		**Sn**	**08 31 21.9**	**-0.4**
	baz=7.8,SNR=3.2							
KNRA	**Kununurra**	**9.60**	**119**	P		Pn	08 30 00.4	+4.2
	baz=9.1,SNR=5.8							
MTN	**Manton Dam**	**10.99**	**100**	S		**Sn**	**08 32 18.2**	**+1.1**
	baz=11,SNR=7.0							
GIRL	**Giralia**	**12.66**	**205**	P		Pn	08 30 31.6	-6.5
	baz=12,SNR=4.8							
GIRL				S		Sx	08 32 36.9	
	baz=12,SNR=3.0							
FAKI	**Fak Fak**	**14.65**	**57**	P		**P**	**08 31 13.9**	**+2.8**
	baz=16,SNR=4.2							
MEEK	**Meekatharra**	**15.43**	**185**	P		Pn	08 31 08.3	-7.2
	baz=14,SNR=33							
MEEK				S		Sx	08 33 42.8	
	baz=14,SNR=7.8							
WRA	**Warramunga Arr**	**16.30**	**124**	P		**Pn**	**08 31 27.8**	**+1.0**
	0.4nm,0.3s,baz=300,slow=14,SNR=2.9							
WRA				S		**Sn**	**08 34 22.2**	**-4.5**
	0.4nm,0.3s,baz=295,slow=24,SNR=6.1							
ASAR	**Alice Springs**	**18.13**	**135**	P		**P**	**08 31 51.5**	**+1.7**
	0.5nm,0.3s,baz=313,slow=12,SNR=23							
ASAR				S		**Sn**	**08 35 06.9**	**-4.1**
	0.1nm,0.3s,baz=305,slow=22,SNR=4.3							
MORW	**Morawa**	**18.17**	**191**	P		Pn	08 31 44.6	-5.5
	baz=17,SNR=4.3							
MORW				S		Sx	08 34 44.9	
	baz=17,SNR=12							
BLDU	**Ballidu**	**19.57**	**189**	P		**P**	**08 32 03.8**	**-1.7**
	baz=18,SNR=6.1							
MMPI	**Merauke**	**20.24**	**84**	S		**S**	**08 35 54.8**	**-3.5**
	baz=20,SNR=4.4							
NWAO	**Narrogin (SRO)**	**21.79**	**186**	P		**P**	**08 32 32.1**	**+2.7**
	7.4nm,0.6s,baz=4.7,slow=11,SNR=6.0							
MKAR	**Makanchi Array**	**66.85**	**333**	P		**P**	**08 38 25.7**	**-3.2**
	0.2nm,0.5s,baz=132,slow=6.4,SNR=2.6							

CSEM 27 08:29:18.5±0.2, 33°.94N×48°.47E, h2km, ML3.8, Error ellipse: s-maj=6.0km s-min=4.6km az=23.0
THR 27 08:29:18.6±0.5, 33°.98N×48°.44E, h15km, ML3.8
TEH 27 08:29:19.9, 33°.93N×48°.50E, h7km, ML3.8

ISC 27 08:29:19.2±1.2, 34°.00N±0°.03×48°.47E±0°.03, h9km±14km, n54, σ1s28/65, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IKOM	**Komasi**	**0.81**	**283**	*e*Pg		**Pg**	**08 29 33.4**	**-1.5**
IKOM				*e*Sg		**Sb**	**08 29 46.2**	**-0.7**
IKOM				*e*			08 29 51.1	
	comp=Z,20μm,0.1s							
IKOM	**Komasi**	**0.81**	**283**	*e*Pg		**Pg**	**08 29 33.4**	**-1.5**
IKOM				*e*Sg		**Sb**	**08 29 46.2**	**-0.7**
SNGE	**Sanandaj**	**1.43**	**320**	*e*Pg		**Pn**	**08 29 45.0**	**-0.6**
SNGE	**Sanandaj**	**1.43**	**320**	*e*Pg		**Pn**	**08 29 45.0**	**-0.6**
IVIS	**Veis**	**1.44**	**292**	*e*Pn		**Pn**	**08 29 44.9**	**-0.7**
IVIS				*e*		Sg	08 30 15.1	+9.5
	comp=Z,6μm,0.2s							
IVIS	**Veis**	**1.44**	**292**	*e*Pn		**Pn**	**08 29 45.0**	**-0.7**
ILIN	**Lien**	**1.55**	**307**	*e*Pn		**Pb**	**08 29 48.8**	**+0.6**
ILIN				*e*		**Sg**	**08 30 14.7**	**+5.7**
	comp=Z,7μm,0.3s							
ILIN	**Lien**	**1.55**	**307**	*e*Pn		**Pb**	**08 29 48.8**	**+0.6**
IGHG	**Ghaleghazi**	**1.61**	**282**	*e*Pn		**Pb**	**08 29 49.5**	**+0.2**
IGHG				*e*			08 29 52.1	
	comp=Z,7μm,0.1s							
IGHG	**Ghaleghazi**	**1.61**	**282**	*e*Pn		**Pb**	**08 29 49.5**	**+0.2**
IRAZ	**Razeghan**	**1.85**	**40**	*e*Pn		**Pn**	**08 29 50.9**	**-0.5**
IRAZ				*e*		Sg	08 30 27.7	+9.0
	comp=Z,13μm,0.3s							
IRAZ	**Razeghan**	**1.85**	**40**	*e*Pn		**Pn**	**08 29 50.9**	**-0.5**
IDHR	**Dehrash**	**1.86**	**293**	*e*Pn		**Pb**	**08 29 52.9**	**-0.6**
IDHR				*e*Sg		**Sg**	**08 30 20.2**	**+1.2**
IDHR				*e*			08 30 22.8	
	comp=Z,12μm,0.2s							
IDHR	**Dehrash**	**1.86**	**293**	*e*Pn		**Pb**	**08 29 52.9**	**-0.6**
IDHR				*e*Sg		**Sg**	**08 30 20.2**	**+1.2**
SHGR	**Shooshtar-Gavs**	**1.91**	**171**	*e*Pg		**Pb**	**08 29 53.1**	**-1.1**
SHGR					AML	AML	08 30 23.2	
	comp=E,686nm,0.5s							
SHGR					AML	AML	08 30 23.4	
	comp=N,2μm,0.6s							
SHGR	**Shooshtar-Gavs**	**1.91**	**171**	*e*Pg		**Pb**	**08 29 53.1**	**-1.1**
GHVR	**GHOM**	**2.39**	**78**	*e*Pn		**Pn**	**08 29 59.1**	**+0.4**
GHVR					AML	AML	08 30 32.3	
	comp=E,488nm,0.6s							
GHVR					AML	AML	08 30 36.7	
	comp=N,470nm,0.3s							
GHVR	**GHOM**	**2.39**	**78**	*e*Pn		**Pn**	**08 29 59.1**	**+0.4**
IMHD	**Mahdasht**	**2.47**	**46**	*e*Pn		**Pn**	**08 30 00.9**	**+1.1**
IMHD				*e*		**Sg**	**08 30 37.1**	**-1.5**
	comp=Z,4μm,0.2s							
IMHD	**Mahdasht**	**2.47**	**46**	*e*Pn		**Pn**	**08 30 00.9**	**+1.1**
IR3	**Iran Long-Peri**	**2.57**	**54**	*e*Pn		**Pn**	**08 30 02.2**	**+1.1**
IR3	**Iran Long-Peri**	**2.57**	**54**	*e*Pn		**Pn**	**08 30 02.2**	**+1.1**
IKLH	**Kolahrood**	**2.68**	**104**	*e*Pn		**Pn**	**08 30 03.2**	**+0.4**
IKLH				*e*		**Sg**	**08 30 46.5**	**+1.1**
	comp=Z,5μm,0.2s							
IKLH	**Kolahrood**	**2.68**	**104**	*e*Pn		**Pn**	**08 30 03.2**	**+0.4**
IGZV	**Ghazvin**	**2.78**	**31**	*e*		**Sg**	**08 30 46.8**	**-1.8**
	comp=Z,4μm,0.3s							
IGZV				*e*Pn		**Pn**	**08 30 05.5**	**+1.3**
IVRN	**Varamin**	**2.87**	**69**	*e*Pn		**Pn**	**08 30 05.8**	**+0.5**
IVRN				*e*Pn		Pb	08 30 05.9	-4.8
IVRN				*e*			08 30 52.9	
	comp=Z,3μm,0.2s							
IVRN	**Varamin**	**2.87**	**69**	*e*Pn		**Pn**	**08 30 05.8**	**+0.5**
CHTH	**Charan**	**2.90**	**48**	*e*Pn		**Pn**	**08 30 07.0**	**+1.2**
CHTH	**Charan**	**2.90**	**48**	*e*Pn		**Pn**	**08 30 07.0**	**+1.2**
DAMV	**Damavand**	**3.31**	**60**	*e*Pn		**Pn**	**08 30 12.3**	**+0.8**
DAMV					AML	AML	08 31 05.2	
	comp=E,149nm,0.6s							
DAMV					AML	AML	08 31 11.7	
	comp=N,137nm,0.6s							
DAMV	**Damavand**	**3.31**	**60**	*e*Pn		**Pn**	**08 30 12.3**	**+0.8**
IDMV	**Damavand**	**3.33**	**61**	*e*Pn		**Pn**	**08 30 12.4**	**+0.6**
IDMV				*e*			08 30 13.3	
	comp=Z,3μm,0.3s							
IDMV	**Damavand**	**3.33**	**61**	*e*Pn		**Pn**	**08 30 12.4**	**+0.6**
IGAR	**Gharneh**	**3.39**	**117**	*e*Pn		**Pn**	**08 30 12.5**	**-0.1**
IGAR				*e*		**Sg**	**08 31 12.0**	**+3.8**
	comp=Z,2μm,0.3s							
IZEF	**Zefreh**	**3.41**	**108**	*e*Pn		**Pn**	**08 30 13.2**	**+0.

GRG				*e*Sg	**Sg**	**08 48 55.2**	**+0.8**
SOH	**Sokhos**	**0.70**	**133**	*e*PB	**Pb**	**08 48 54.8**	**-0.2**
SOH				*e*SG	**Sg**	**08 49 03.2**	**-0.5**
SOH	**Sokhos**	**0.70**	**133**	*e*Pb	**Pb**	**08 48 54.8**	**-0.2**
SOH				*e*Sg	**Sg**	**08 49 03.2**	**-0.5**
NVR	**Nevrokopi**	**0.89**	**87**	*e*PG	**Pg**	**08 48 58.1**	**0.0**
NVR				*e*SG	**Sg**	**08 49 09.7**	**0.0**
NVR	**Nevrokopi**	**0.89**	**87**	*e*Pg	**Pg**	**08 48 58.1**	**0.0**
NVR				*e*Sg	**Sg**	**08 49 09.7**	**0.0**
VTS	**Vitosha**	**1.34**	**17**	*e*Pg	**Pg**	**08 49 07.3**	**+0.6**
VTS				*e*Sg	**Sg**	**08 49 25.1**	**+0.9**
VTS	**Vitosha**	**1.34**	**17**	*e*Pg	**Pg**	**08 49 07.3**	**+0.6**
VTS				*e*Sg	**Sg**	**08 49 25.1**	**+0.9**
BARS	**Barje**	**1.64**	**337**	*e*Pg	**Pg**	**08 49 11.8**	**-0.6**
BARS				*e*Sg	**Sg**	**08 49 33.4**	**-0.3**
BARS	**Barje**	**1.64**	**337**	*e*Pg	**Pg**	**08 49 11.8**	**-0.6**
BARS				*e*Sg	**Sg**	**08 49 33.4**	**-0.3**

IDC 27 08:49:13.9±1.9, **15°59S**×72°08W, **h134**km±22km, **mb3.6**/2, **mb1 3.4**/5, **mb1mx3.1**/22, **mbtmp3.3**/5, **Error ellipse: s-maj=49.3km s-min=17.0km az=31.0, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.86**	**101**	P	Pn	08 50 12.6	-0.1
	3.6nm,0.3s,baz=278,slow=11,SNR=93						
NNA	**Nana**	**5.85**	**307**	P	Pn	08 50 39.0	+0.4
	4.9nm,0.3s,baz=127,slow=14,SNR=21						
NNA				S	Sn	08 51 44.8	+0.1
	6.5nm,0.3s,baz=205,slow=20,SNR=8.6						
CFAA	**Coronel Fontan**	**16.32**	**168**	P	Pn	08 52 55.3	-0.1
	0.0nm,0.3s,baz=334,slow=11,SNR=6.1						
BDFB	**Brasilia**	**23.18**	**93**	P	P	08 54 08.5	-0.6
	2.3nm,0.5s,baz=265,slow=11,SNR=4.8						
TORD	**Torodi Ar. Bea**	**78.35**	**73**	P	P	09 01 00.2	+0.2
	1.2nm,0.7s,baz=250,slow=6.0,SNR=11						

SKO ***27*** *08:49:50.4, 41°.34N×22°.68E, h16km, M1.3, ML1.6*
ISCJB ***27*** *08:49:51.5±0.4, 41°.29N±0°.03×22°.68E±0°.03, h4km±6km, Error ellipse: s-maj=4.5km s-min=3.6km az=28.4*
ATH ***27*** *08:49:51.5, 41°.24N×22°.70E, h25km±4km, MD2.9/3*
CSEM ***27*** *08:49:51.8±0.1, 41°.28N×22°.68E, h2km, ML1.6, Error ellipse: s-maj=2.4km s-min=2.0km az=21.0*
THE ***27*** *08:49:52.0, 41°.28N×22°.69E, h2km±2km, ML2.0/5, Error ellipse: s-maj=2.2km s-min=0.6km az=325.0*
BEO ***27*** *08:49:53.6±1.5, 41°.28N×22°.54E, h1km±4km, ML1.6/3*

ISC 27 08:49:52.1±1.0, **41°.28N**±0°.03×**22°.68E**±0°.02, **h3**km±9km, **n27**, **σ0 51/53, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**297**	P	**Pg**	**08 49 53.6**	**-0.4**
VAY				S	**Sg**	**08 49 55.5**	**+0.1**
VAY	**Valandovo**	**0.10**	**297**	*i* Pg	**Pg**	**08 49 53.7**	**-0.4**
VAY				*e*Lg	Lg	08 49 55.7	
	comp=E,212nm,0.2s						
VAY				*i* Sg	**Sg**	**08 49 55.8**	**+0.4**
VAY				*e*Lg	Lg	08 49 55.9	
	comp=N,489nm,0.2s						
VAY	**Valandovo**	**0.10**	**297**	*e*Pg	**Pg**	**08 49 53.7**	**-0.4**
VAY				*e*Sg	**Sg**	**08 49 55.7**	**+0.4**
VAY	**Valandovo**	**0.10**	**297**	*e*Pg	**Pg**	**08 49 53.7**	**-0.4**
VAY				S	**Sg**	**08 49 55.5**	**+0.1**
VAY				*e*Lg	Lg	08 49 56.3	
	comp=N,489nm,0.2s						
KNT	**Kendrikon**	**0.20**	**125**	P	**Pg**	**08 49 55.9**	**-0.1**
KNT				S	**Sg**	**08 49 58.9**	**+0.3**
KNT	**Kendrikon**	**0.20**	**125**	P	**Pg**	**08 49 55.9**	**-0.1**
KNT				S	**Sg**	**08 49 58.9**	**+0.3**
GRG	**Griva**	**0.39**	**214**	P	**Pg**	**08 49 59.4**	**-0.1**
GRG				S	**Sg**	**08 50 05.4**	**+0.9**
GRG	**Griva**	**0.39**	**214**	*e*PB	**Pg**	**08 49 59.4**	**-0.1**
GRG				*e*SB	**Sg**	**08 50 05.4**	**+0.9**
GRG	**Griva**	**0.39**	**214**	P	**Pg**	**08 49 59.4**	**-0.1**
GRG				S	**Sg**	**08 50 05.4**	**+0.9**
SOH	**Sokhos**	**0.68**	**132**	P	**Pg**	**08 50 04.6**	**-0.6**
SOH				S	**Sg**	**08 50 13.7**	**-0.3**
SOH	**Sokhos**	**0.68**	**132**	*e*PN	**Pg**	**08 50 04.7**	**-0.5**
SOH				*e*SN	**Sg**	**08 50 13.7**	**-0.3**
SOH	**Sokhos**	**0.68**	**132**	*e*Pn	**Pg**	**08 50 04.7**	**-0.5**
SOH				S	**Sg**	**08 50 13.7**	**-0.3**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**08 50 05.0**	**-0.6**
SRS				S	**Sg**	**08 50 15.7**	**+1.0**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**08 50 05.0**	**-0.6**
SRS				S	**Sg**	**08 50 15.7**	**+1.0**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**08 50 06.0**	**-0.5**
HORT				S	**Sg**	**08 50 16.6**	**+0.5**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**08 50 06.0**	**-0.5**
HORT				S	**Sg**	**08 50 16.6**	**+0.5**
NVR	**Nevrokopi**	**0.89**	**85**	P	**Pg**	**08 50 08.6**	**-0.6**
NVR				S	**Sg**	**08 50 21.0**	**+0.3**
NVR	**Nevrokopi**	**0.89**	**85**	*e*PN	**Pg**	**08 50 08.6**	**-0.6**
NVR				*e*SN	**Sg**	**08 50 21.0**	**+0.3**
NVR	**Nevrokopi**	**0.89**	**85**	P	**Pg**	**08 50 08.6**	**-0.6**
NVR				S	**Sg**	**08 50 21.0**	**+0.3**
FNA	**Florina**	**1.10**	**244**	P	**Pg**	**08 50 12.7**	**-0.6**
FNA				S	**Sb**	**08 50 28.0**	**-0.7**
FNA	**Florina**	**1.10**	**244**	P	**Pg**	**08 50 12.7**	**-0.6**
FNA				S	**Sb**	**08 50 28.0**	**-0.7**
VTS	**Vitosha**	**1.37**	**16**	*e*Pg	**Pb**	**08 50 19.0**	**+0.5**
VTS				*e*Sg	**Sn**	**08 50 38.0**	**+0.9**
VTS	**Vitosha**	**1.37**	**16**	*e*Pg	**Pb**	**08 50 19.0**	**+0.5**
KAVA	**Kavala**	**1.41**	**101**	P	**Pn**	**08 50 18.5**	**-0.2**
KAVA				S	**Sn**	**08 50 38.0**	**+0.2**
KAVA	**Kavala**	**1.41**	**101**	P	**Pn**	**08 50 18.5**	**-0.2**
KAVA				S	**Sn**	**08 50 38.0**	**+0.2**
BARS	**Barje**	**1.67**	**337**	*e*Pg	**Pb**	**08 50 23.4**	**-0.1**
BARS				*e*Sg	**Sb**	**08 50 45.0**	**+0.1**
BARS	**Barje**	**1.67**	**337**	*e*Pg	**Pb**	**08 50 23.4**	**-0.1**
BARS				*e*Sg	**Sb**	**08 50 45.0**	**+0.1**

NIED ***27*** *08:59:00, 37°.10N×135°.00E, h14km, Mw3.4 Best double couple: M0 1.44000×10^14 NP1:φs158.00000°, δ79.00000°, λ15.00000°. NP2:φs65.00000°, δ75.00000°, λ168.00000°.*
IDC ***27*** *08:59:08.8±1.9, 37°.08N×134°.96E, h0km, mb3.5/1, mb1 3.3/5, mb1mx3.1/30, mbtmp3.1/5, ML2.5/4, MS3.3/1, Ms1 3.3/1, ms1mx2.3/26, Error ellipse: s-maj=34.7km s-min=29.4km az=18.0*
JMA ***27*** *08:59:08.2±0.2, 37°.13N×134°.95E, h22km, M3.7*
ISCJB ***27*** *08:59:10.2±2.1, 37°.08N±0°.04×135°.03E±0°.04, h28km±21km, mb3.6/1, Error ellipse: s-maj=7.8km s-min=5.1km az=147.7*

ISC 27 08:59:10.2±1.2, **37°.03N**±0°.05×**135°.09E**±0°.03, **h16**km±8km, **n20**, **σ0 83/31, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKG	**Kaga**	**1.25**	**126**	P	**Pn**	**08 59 33.0**	**0.0**
JKG				S	**Sn**	**08 59 50.0**	**+0.6**
JJH	**Hakui**	**1.36**	**94**	P	**Pn**	**08 59 33.8**	**-0.7**
JJH				S	**Sg**	**08 59 54.1**	**0.0**
JKY	**Yasaka**	**1.39**	**179**	P	**Pn**	**08 59 34.1**	**-0.9**
JKY				*e*S	**Sn**	**08 59 53.2**	**+0.1**
JKSM	**Kasumi**	**1.48**	**194**	P	**Pn**	**08 59 35.2**	**-0.9**
JKSM				S	**Sn**	**08 59 53.9**	**-1.2**
SAI	**Saigo**	**1.63**	**240**	P	**Pb**	**08 59 39.8**	**-0.1**
SAI				S	**Sg**	**09 00 01.4**	**-1.4**
JHG	**Hegura jima**	**1.67**	**60**	*e*S	**Sn**	**08 59 59.3**	**-0.7**
JWT	**Wachi**	**1.76**	**172**	P	**Pn**	**08 59 39.2**	**-0.8**
JWT				S	**Sb**	**09 00 04.6**	**+0.7**
JSZ	**Suzu**	**1.86**	**76**	P	**Pn**	**08 59 41.1**	**-0.4**
JSZ				*e*S	**Sn**	**09 00 04.2**	**-0.5**
JGM	**Miyama**	**1.86**	**135**	P	**Pn**	**08 59 41.4**	**-0.1**
JGM				S	**Sn**	**09 00 05.0**	**+0.2**
MAT	**Matsushiro**	**2.55**	**100**	P	**Pb**	**08 59 55.4**	**-0.2**
MAT				S	**Sb**	**09 00 27.8**	**+1.1**
MAT	**Matsushiro**	**2.55**	**100**	P	**Pn**	**08 59 51.9**	**+1.0**
MJAR	**Matsushiro Arr**	**2.55**	**100**	Pn	**Pb**	**08 59 54.8**	**-0.8**
	0.4nm,0.3s,baz=288,slow=15,SNR=4.0						
JIE	**Ise**	**2.94**	**153**	P	**Pn**	**08 59 57.2**	**+0.9**
JIE				*e*S	**Sn**	**09 00 31.5**	**+0.3**
JGT	**Gotsu**	**2.99**	**229**	P	**Pn**	**08 59 57.0**	**0.0**
JHT	**Toyohira**	**3.20**	**223**	P	**Pn**	**09 00 00.1**	**+0.2**
JHT				*e*S	**Sn**	**09 00 37.8**	**0.0**
JNU	**Nakatsue**	**5.20**	**223**	Pn	**Pn**	**09 00 29.6**	**+2.2**
	0.4nm,0.3s,baz=31,slow=5.9,SNR=4.0						
KSRS	**Korea Array**	**5.73**	**276**	Pn	**Pn**	**09 00 35.5**	**+0.9**
	0.3nm,0.3s,baz=90,slow=14,SNR=2.7						
USRK	**Ussuriysk Arra**	**7.54**	**343**	Pn	**Pn**	**09 00 58.4**	**-1.1**
	0.2nm,0.2s,baz=166,slow=12,SNR=4.0						
ASAJ	**Asahikawa**	**9.10**	**37**	LR	LR	09 04 52.8	
	comp=Z,215nm,21.9s,baz=8.5,slow=38						
WRA	**Warramunga Arr**	**56.66**	**181**	P	**P**	**09 08 52.8**	**0.0**
	0.7nm,1.1s,baz=357,slow=7.4,SNR=2.3						
WRA				pP	**pP**	**09 08 58.5**	**+0.6**
	0.3nm,0.4s,baz=358,slow=7.6,SNR=4.8						

HEL 27 09:11:18.8±0.4, **67°.62N×34°.39E, h0**km, **ML2.2, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**1.83**	**276**	*e*P	Pn	09 11 51.2	-0.3
VRF				*e*S	Sn	09 12 14.4	-0.9
MSF	**Maaselka**	**2.73**	**233**	*e*SB	Sb	09 12 40.8	-1.6
MSF	**Maaselka**	**2.73**	**233**	*e*P	Pb	09 12 06.8	-1.6
MSF				*e*S	Sb	09 12 41.2	-1.3
SGF	**Sodankyl**	**3.03**	**270**	*e*PG	Pb	09 12 12.4	-1.0
SGF				*e*S	Sn	09 12 44.4	-0.4
KEV	**Kevo**	**3.44**	**312**	*e*P	Pn	09 12 14.1	+0.6
KEV				MSG		09 13 05.1	
	comp=Z,6.8nm,0.2s						
ARA0	**ARCESS Array S**	**3.78**	**305**	*e*P	Pn	09 12 18.3	0.0
HEF	**Hetta**	**4.11**	**286**	MSG		09 13 25.8	
	comp=Z,3.5nm,0.2s						
HEF	**Hetta**	**4.11**	**286**	*e*P	Pb	09 12 30.6	-1.4
HEF				*e*S	Sb	09 13 22.0	-0.2
KJN	**Kajaani**	**4.49**	**221**	*e*S	Sn	09 13 20.9	+0.1
KJN				MSG		09 13 22.4	
	comp=Z,1.0nm,0.2s						
JOF	**Joensuu**	**4.90**	**197**	*e*P	Pn	09 12 33.5	-0.1
JOF				*e*S	Sn	09 13 29.5	-1.3
SUF	**Sumiainen**	**6.02**	**219**	*e*S	Sn	09 13 57.9	-0.6
KEF	**Keuruu**	**6.80**	**221**	*e*S	Sn	09 14 16.6	-1.2

MAN 27 09:29:43, 8°.98N×123°.18E, h20km, **mb4.6, ML3.5, MS3.5, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCPH	**Dipolog City**	**0.43**	**156**	⇓*i* P	Pb	09 29 52.1	+0.2
TBP	**Tagbilaran**	**0.98**	**44**	*e*P	Pn	09 30 01.6	-0.1
TBP				*e*S	Sn	09 30 14.8	-0.2
PAGZ	**Pagadian**	**1.14**	**170**	*e*P	Pb	09 30 04.7	+0.6
PAGZ				*e*S	Sb	09 30 17.3	-1.1
CGP	**Cagayan de Oro**	**1.59**	**109**	⇑*e*P	Pn	09 30 10.1	+0.1
CGP				*e*S	Sb	09 30 31.4	+0.1
GUIM	**Jordan**	**1.74**	**341**	*e*P	Pb	09 30 14.2	0.0
GUIM				*e*S	Sn	09 30 32.2	-1.5

NSSP ***27*** *09:50:07.7, 39°.88N×43°.03E, h10km, Ms3.8*
TIF ***27*** *09:50:10.2, 39°.82N×43°.18E, h4km±3km*
IDC ***27*** *09:50:12.5±1.8, 39°.63N×43°.45E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/27, mbtmp3.4/7, ML3.1/2, MS3.0/5, Ms1 3.0/5, ms1mx2.7/25, Error ellipse: s-maj=60.0km s-min=13.6km az=159.0*
ISK ***27*** *09:50:12.9, 39°.93N×43°.37E, h5km, MD4.0, ML3.9*
DDA ***27*** *09:50:13.3, 39°.91N×43°.24E, h3km, ML3.8*
CSEM ***27*** *09:50:13.9±0.1, 39°.94N×43°.35E, h2km, ML3.8, Error ellipse: s-maj=3.5km s-min=2.7km az=147.0*
MOS ***27*** *09:50:15.7±1.1, 40°.04N×43°.21E, h22km, mb4.0/4, Error ellipse: s-maj=12.8km s-min=7.7km az=71.6*

ISC 27 09:50:13.4±1.1, **39°.94N**±0°.01×**43°.28E**±0°.01, **h1**km±8km, **n154**, **σ1 07/201, mb3.6/8, MS2.9/4, 23C-26D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNNZ	**Vanand**	**0.45**	**68**	⇑*i* P	**Pg**	**09 50 22.0**	**0.0**
VNNZ				⇓*i* S	**Sb**	**09 50 31.4**	**+0.1**
VNNZ	**Vanand**	**0.45**	**68**	⇑P	**Pg**	**09 50 22.0**	**0.0**
VNNZ				S	**Sb**	**09 50 31.5**	**+0.1**
DYDN	**Diyadin**	**0.50**	**141**	*i* P	**Pg**	**09 50 23.4**	**+0.3**
DYDN				*i* S	**Sg**	**09 50 31.5**	**+1.9**
DYDN	**Diyadin**	**0.50**	**141**	*i* P	**Pg**	**09 50 23.4**	**+0.3**
DYDN				*i* S	**Sg**	**09 50 31.5**	**+1.9**
NARZ	**Nor Artik**	**0.62**	**32**	⇓*i* P	**Pg**	**09 50 26.0**	**+0.6**
NARZ				⇑*i* S	**Sb**	**09 50 37.2**	**+0.7**
NARZ	**Nor Artik**	**0.62**	**32**	⇓P	**Pg**	**09 50 26.0**	**+0.6**
NARZ				S	**Sb**	**09 50 37.2**	**+0.7**
TUTA	**Tutak**	**0.65**	**214**	*i* P	**Pg**	**09 50 25.6**	**-0.2**
TUTA				*i* S	**Sg**	**09 50 33.5**	**-0.7**
TUTA	**Tutak**	**0.65**	**214**	*i* P	**Pg**	**09 50 25.6**	**-0.2**
NPPZ	**NPP**	**0.69**	**70**	⇑*i* P	**Pg**	**09 50 25.9**	**-0.8**
NPPZ				⇓*i* S	**Sb**	**09 50 38.0**	**-0.4**
NPPZ	**NPP**	**0.69**	**70**	⇑P	**Pg**	**09 50 25.9**	**-0.8**
NPPZ				S	**Sb**	**09 50 38.0**	**-0.4**
KARS	**Kars**	**0.71**	**347**	*e*PG	**Pg**	**09 50 26.5**	**-0.5**
KARS				*e*SG	**Sg**	**09 50 37.6**	**+1.4**
KARS	**Kars**	**0.71**	**347**	*e*Pg	**Pg**	**09 50 26.5**	**-0.5**
KARS				*e*Sg	**Sg**	**09 50 37.6**	**+1.4**
VRNZ	**Vardanashen**	**0.71**	**81**	⇑*i* P	**Pg**	**09 50 26.2**	**-0.8**
VRNZ				⇓*i* S	**Sn**	**09 50 41.5**	**-0.7**
VRNZ	**Vardanashen**	**0.71**	**81**	⇑P	**Pg**	**09 50 26.2**	**-0.8**
ARUZ	**Aruch**	**0.71**	**61**	⇑*i* P	**Pg**	**09 50 25.9**	**-1.1**
ARUZ				⇑*i* S	**Sb**	**09 50 38.0**	**-1.0**
ARUZ	**Aruch**	**0.71**	**61**	⇑P	**Pg**	**09 50 25.9**	**-1.1**
ARUZ				S	**Sb**	**09 50 38.0**	**-1.0**
LERZ	**Lernakert**	**0.81**	**39**	⇓P	**Pg**	**09 50 29.6**	**+0.6**
HARI	**Harich**	**0.87**	**39**	⇓*i* P	**Pg**	**09 50 30.4**	**+0.4**
HARI				⇑*i* S	**Sb**	**09 50 43.4**	**-0.2**
HARI	**Harich**	**0.87**	**39**	⇓P	**Pg**	**09 50 30.4**	**+0.4**
HARI				S	**Sb**	**09 50 43.4**	**-0.2**
PAAR	**P'arak'ar**	**0.87**	**76**	⇓*i* P	**Pg**	**09 50 29.5**	**-0.6**
PAAR				⇓*i* S	**Sn**	**09 50 46.2**	**0.0**
PAAR	**P'arak'ar**	**0.87**	**76**	⇓P	**Pg**	**09 50 29.5**	**-0.6**
AMBZ	**Amberd**	**0.87**	**59**	⇑*i* P	**Pg**	**09 50 29.0**	**-1.2**
AMBZ				⇑*i* S	**Sn**	**09 50 46.7**	**+0.2**
AMBZ	**Amberd**	**0.87**	**59**	⇑P	**Pg**	**09 50 29.0**	**-1.2**
CLDR	**Caldiran**	**0.93**	**148**	*e*PG	**Pg**	**09 50 30.3**	**-1.0**
CLDR				*e*SG	**Sg**	**09 50 43.1**	**-0.3**
CLDR	**Caldiran**	**0.93**	**148**	*e*Pg	**Pg**	**09 50 30.3**	**-1.0**
CLDR				*e*Sg	**Sg**	**09 50 43.1**	**-0.3**
HNAZ	**Hnaberd**	**0.96**	**43**	⇓*i* P	**Pg**	**09 50 32.2**	**+0.4**
HNAZ				⇑*i* S	**Sn**	**09 50 50.0**	**+1.4**
HNAZ	**Hnaberd**	**0.96**	**43**	⇓P	**Pg**	**09 50 32.2**	**+0.4**
GMRZ	**Gyumri**	**0.97**	**26**	*e*P	**Pb**	**09 50 33.0**	**-0.1**
GMRZ				⇑S	**Sn**	**09 50 48.0**	**-0.7**
KAMZ	**Kamo**	**1.02**	**30**	⇓*i* P	**Pg**	**09 50 33.0**	**0.0**
KAMZ				⇑*i* S	**Sn**	**09 50 49.8**	**-0.2**
KAMZ	**Kamo**	**1.02**	**30**	⇓P	**Pg**	**09 50 33.0**	**0.0**
KAMZ				S	**Sn**	**09 50 49.8**	**-0.2**
HOMI	**Horasan**	**1.06**	**276**	*i* P	**Pg**	**09 50 32.7**	**-1.1**
HOMI				*i* S	**Sb**	**09 50 49.1**	**-0.1**
GNI	**Garni**	**1.14**	**79**	*e*PG	**Pg**	**09 50 34.3**	**-1.0**
GNI	**Garni**	**1.14**	**79**	⇑*i* P	**Pg**	**09 50 35.3**	**0.0**
GNI				⇓*i* S	**Sn**	**09 50 55.2**	**+2.2**
GNI	**Garni**	**1.14**	**79**	Pg	**Pg**	**09 50 35.3**	**0.0**
	238nm,0.3s,baz=285,slow=4.5,SNR=247						
GNI				Lg	Lg	09 50 54.6	
	127nm,0.3s,baz=13,slow=22,SNR=11						
GNI	**Garni**	**1.14**	**79**	*i* Pg	**Pg**	**09 50 35.0**	**-0.3**
	2μm,0.7s						
GNI	**Garni**	**1.14**	**79**	⇑P	**Pg**	**09 50 35.3**	**0.0**
KAPZ	**Kaputan**	**1.15**	**70**	⇓*i* P	**Pg**	**09 50 34.1**	**-1.4**
KAPZ				⇓*i* S	**Sb**	**09 50 52.4**	**+0.6**
KAPZ	**Kaputan**	**1.15**	**70**	⇓P	**Pg**	**09 50 34.1**	**-1.4**
KAPZ				S	**Sb**	**09 50 52.3**	**+0.6**
VANB	**Van**	**1.34**	**176**	*e*PN	**Pg**	**09 50 39.1**	**-0.1**
VANB	**Van**	**1.34**	**176**	*e*Pn	**Pg**	**09 50 39.1**	**-0.1**
STE	**Stepanavan**	**1.35**	**38**	⇓P	**Pg**	**09 50 38.0**	**-1.3**
STEZ	**Stepenevan**	**1.36**	**38**	⇓*i* P	**Pg**	**09 50 38.0**	**-1.5**
STEZ				⇓S	**Sn**	**09 51 01.0**	**+2.6**
TVAN	**Van**	**1.41**	**176**	*i* P	**Pn**	**09 50 40.3**	**-0.1**
TVAN				*i* S	**Sg**	**09 50 58.8**	**+0.1**
TVAN	**Van**	**1.41**	**176**	*i* P	**Pn**	**09 50 40.3**	**-0.1**
TVAN				*i* S	**Sg**	**09 50 58.8**	**+0.1**
ERZM	**Erzurum**	**1.47**	**269**	*i* P	**Pg**	**09 50 41.6**	**-0.1**
ERZM				*i* S	**Sn**	**09 51 04.2**	**+2.8**
ERZM	**Erzurum**	**1.47**	**269**	*i* P	**Pg**	**09 50 41.6**	**-0.1**
ERZM				*i* S	**Sn**	**09 51 04.2**	**+2.8**
EZM	**Erzurum**	**1.48**	**269**	*e*PN	**Pn**	**09 50 41.1**	**-0.2**
AKH	**Akhalkalaki**	**1.48**	**6**	P	**Pn**	**09 50 41.2**	**-0.1**
AKH				S	**Sn**	**09 51 03.5**	**+2.1**
DDEM	**Demirkent**	**1.51**	**310**	*i* P	**Pn**	**09 50 41.5**	**-0.2**
DDEM				*e*S	**Sg**	**09 51 01.2**	**-0.7**
DDEM	**Demirkent**	**1.51**	**310**	*i* P	**Pn**	**09 50 41.5**	**-0.2**
DDEM				*e*S	**Sg**	**09 51 01.2**	**-0.7**
DAGI	**Agillar**	**1.54**	**318**	*i* P	**Pn**	**09 50 42.3**	**+0.1**
DAGI				*e*S	**Sn**	**09 51 01.4**	**-1.4**
VRTB	**Varto-Mus**	**1.61**	**242**	*e*PN	**Pb**	**09 50 43.6**	**-0.4**
VRTB	**Varto-Mus**	**1.61**	**242**	*e*Pn	**Pb**	**09 50 43.6**	**-0.4**
ARTV	**Artvin**	**1.62**	**321**	*i* P	**Pn**	**09 50 43.3**	**0.0**
ARTV	**Artvin**	**1.62**	**321**	*i* P	**Pn**	**09 50 43.3**	**0.0**
TATV	**Tatvan**	**1.63**	**209**	*i* P	**Pn**	**09 50 42.2**	**-1.2**
TATV				*i* S	**Sn**	**09 51 03.0**	**-2.1**
TATV	**Tatvan**	**1.63**	**209**	*i* P	**Pn**	**09 50 42.2**	**-1.2**
GEVA	**Gevas**	**1.63**	**186**	*i* P	**Pb**	**09 50 44.3**	**-0.1**
GEVA				*i* S	**Sg**	**09 51 06.3**	**+0.5**
GEVA	**Gevas**	**1.63**	**186**	*i* P	**Pb**	**09 50 44.3**	**-0.1**
GEVA				*i* S	**Sg**	**09 51 06.3**	**+0.5**
KZR	**Kazreti**	**1.68**	**31**	P	**Pb**	**09 50 44.6**	**-0.5**
KZR				S	**Sg**	**09 51 08.9**	**+1.5**
DBOC	**Borcka**	**1.87**	**319**	*i* P	**Pb**	**09 50 47.6**	**-0.7**
DBOC				*i* S	**Sn**	**09 51 09.1**	**-1.7**
DBOC	**Borcka**	**1.87**	**319**	*i* P	**Pb**	**09 50 47.6**	**-0.7**
VADZ	**Vardenis**	**1.91**	**82**	⇓*i* P	**Pn**	**09 50 48.0**	**+0.8**
VADZ				⇓*i* S	Sg	09 51 22.0	+7.4
VADZ	**Vardenis**	**1.91**	**82**	⇓P	**Pn**	**09 50 48.0**	**+0.8**
BNGL	**BINGOL**	**1.92**	**240**	*i* P	**Pn**	**09 50 48.2**	**+0.7**
BNGL				*i* S	**Sb**	**09 51 13.8**	**-0.1**
BCA	**Borcka**	**1.96**	**321**	*e*PN	**Pn**	**09 50 48.4**	**+0.5**
BCA	**Borcka**	**1.96**	**321**	*e*Pn	**Pn**	**09 50 48.4**	**+0.5**
TBLG	**Delisi**	**2.10**	**31**	*e*PN	**Pn**	**09 50 50.6**	**+0.8**
TBLG	**Delisi**	**2.10**	**31**	P	**Pn**	**09 50 50.6**	**+0.8**
TBLG				S	**Sg**	**09 51 21.1**	**0.0**
TBLG	**Delisi**	**2.10**	**31**	P	**Pn**	**09 50 50.6**	**+0.8**
TBLG				S	**Sg**	**09 51 21.1**	**0.0**
GOR	**Gori**	**2.14**	**17**	*e*PN	**Pb**	**09 50 52.1**	**-0.9**
GOR	**Gori**	**2.14**	**17**	P	**Pb**	**09 50 52.1**	**-0.9**
GOR	**Gori**	**2.14**	**17**	*e*Pn	**Pb**	**09 50 52.1**	**-0.9**
KOPT	**Kop Dagi**	**2.14**	**273**	*i* P	**Pb**	**09 50 53.0**	**-0.2**
KOPT	**Kop Dagi**	**2.14**	**273**	*i* P	**Pb**	**09 50 53.0**	**-0.2**
DGRG	**David-gareji**	**2.19**	**46**	*e*PN	**Pb**	**09 50 52.9**	**-1.0**
DGRG	**David-gareji**	**2.19**	**46**	P	**Pb**	**09 50 52.9**	**-1.0**
DGRG				S	**Sg**	**09 51 28.4**	**+4.5**
DGRG	**David-gareji**	**2.19**	**46**	*e*Pn	**Pb**	**09 50 52.9**	**-1.0**
PZAR	**Pazar-Rize**	**2.20**	**305**	*e*PN	**Pn**	**09 50 52.1**	**+1.1**
PZAR	**Pazar-Rize**	**2.20**	**305**	*e*Pn	**Pn**	**09 50 52.1**	**+1.1**
BNGB	**Bing¶l**	**2.23**	**246**	*e*PN	**Pn**	**09 50 52.4**	**+0.9**
BTMT	**Batman**	**2.23**	**219**	*e*PN	**Pb**	**09 50 54.0**	**-0.6**
BTMT	**Batman**	**2.23**	**219**	*e*Pn	**Pb**	**09 50 54.0**	**-0.6**
GRS	**Goris**	**2.39**	**100**	⇑*i* P	**Pn**	**09 50 55.0**	**+1.1**
GRS				⇑*i* S	Sg	09 51 37.0	+6.7
GRS	**Goris**	**2.39**	**100**	⇑P	**Pn**	**09 50 55.0**	**+1.1**
HAKT	**HAKKARI**	**2.40**	**172**	*i* P	**Pb**	**09 50 57.5**	**0.0**
HAKT				*i* S	**Sb**	**09 51 29.3**	**+1.6**
DUS	**Dusheti**	**2.40**	**26**	P	**Pb**	**09 50 56.6**	**-0.9**

comp=Z,47nm,21.1s,baz=102,slow=37
TORD Torodi Ar. Bea 45.19 246 P **P** 09 58 31.4 -0.7
comp=Z,0.3nm,0.7s,baz=30,slow=8.2,SNR=2.6
ULN Ulaanbaatar 45.45 58 *eP* **P** 09 58 34.8 +0.8
YKA Yellowknife Ar 76.37 350 P **P** 10 02 03.4 -0.4
comp=Z,0.3nm,0.8s,baz=12,slow=6.0,SNR=5.1
YKA Yellowknife Ar 76.37 350 P **P** 10 02 03.4 -0.4

IDC 27 09:50:52.2±1.4, 17°88'N×147°21'E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/26, mbtmp3.4/4, MS2.7/1, Ms1 2.7/1, ms1mx2.4/18, Error ellipse: s-maj=62.3km s-min=30.9km az=110.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**25.82**	**323**	LR	LR	10 05 46.4	
	comp=Z,15nm,20.0s,baz=225,slow=35						
WRA	**Warramunga Arr**	**39.66**	**199**	P	P	09 58 26.0	-0.1
	0.2nm,0.6s,baz=24,slow=8.5,SNR=3.9						
KURBB	**Kurchatov Arra**	**62.88**	**318**	P	P	10 01 19.8	-0.2
	0.3nm,0.5s,baz=95,slow=7.9,SNR=3.5						
ILAR	**Eielson Array**	**63.75**	**26**	P	P	10 01 25.1	-0.5
	0.4nm,0.8s,baz=252,slow=4.7,SNR=5.3						
YKA	**Yellowknife Ar**	**78.03**	**28**	P	P	10 02 53.2	+0.8
	0.2nm,0.5s,baz=282,slow=5.3,SNR=4.0						

*NSSP **27** 10:03:25.1, 39°.98N×42°.82E, h5km, Ms3.1*
*TIF **27** 10:03:27.7, 39°.84N×43°.19E, h11km±5km*
*ISK **27** 10:03:28.6, 39°.90N×43°.28E, h9km, MD3.6*
*DDA **27** 10:03:29.6, 39°.92N×43°.23E, h2km, MD3.4*
*CSEM **27** 10:03:29.5±0.2, 39°.91N×43°.24E, h5km, MD3.4, Error ellipse: s-maj=5.3km s-min=4.4km az=121.0*
ISC 27 10:03:29.8±1.1, 39°.91N±0°.02×43°.27E±0°.02, h1km±11km, n57, σ1°27/79, 10C-6D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DYDN	**Diyadin**	**0.48**	**138**	*i* P	**Pg**	**10 03 40.0**	**+0.9**
DYDN				*i* S	**Sb**	**10 03 47.8**	**-1.1**
DYDN	**Diyadin**	**0.48**	**138**	*i* P	**Pg**	**10 03 40.0**	**+0.9**
DYDN				*i* S	**Sb**	**10 03 47.8**	**-1.1**
TUTA	**Tutak**	**0.62**	**215**	*i* P	**Pg**	**10 03 41.6**	**0.0**
TUTA				*i* S	**Sg**	**10 03 50.7**	**+1.2**
TUTA	**Tutak**	**0.62**	**215**	*i* P	**Pg**	**10 03 41.6**	**0.0**
TUTA				*i* S	**Sg**	**10 03 50.7**	**+1.2**
NARZ	**Nor Artik**	**0.65**	**31**	⇑*i* P	**Pg**	**10 03 41.7**	**-0.6**
NARZ				⇑*i* S	**Sb**	**10 03 53.0**	**-0.8**
NARZ	**Nor Artik**	**0.65**	**31**	⇑P	**Pg**	**10 03 41.7**	**-0.6**
NARZ				S	**Sb**	**10 03 53.0**	**-0.8**
KARS	**Kars**	**0.73**	**348**	*e*PG	**Pg**	**10 03 42.7**	**-1.2**
KARS				*e*SG	**Sg**	**10 03 53.5**	**+0.1**
KARS	**Kars**	**0.73**	**348**	*e*Pg	**Pg**	**10 03 42.7**	**-1.2**
KARS				*e*Sg	**Sg**	**10 03 53.5**	**+0.1**
CLDR	**Caldiran**	**0.91**	**147**	*e*PG	**Pg**	**10 03 46.4**	**-0.9**
CLDR				*e*SG	**Sg**	**10 03 59.4**	**+0.4**
CLDR	**Caldiran**	**0.91**	**147**	*e*Pg	**Pg**	**10 03 46.4**	**-0.9**
CLDR				*e*Sg	**Sg**	**10 03 59.4**	**+0.4**
HNAZ	**Hnaberd**	**0.98**	**42**	⇓*i* P	**Pg**	**10 03 49.2**	**+0.5**
HNAZ				⇓*i* S	**Sb**	**10 04 04.1**	**+0.7**
HNAZ	**Hnaberd**	**0.98**	**42**	⇓P	**Pg**	**10 03 49.2**	**+0.5**
HNAZ				S	**Sb**	**10 04 04.1**	**+0.7**
KAMZ	**Kamo**	**1.05**	**29**	⇑*i* P	**Pg**	**10 03 48.8**	**-1.2**
KAMZ				⇑*i* S	**Sb**	**10 04 05.5**	**+0.3**
KAMZ	**Kamo**	**1.05**	**29**	⇑P	**Pg**	**10 03 48.8**	**-1.2**
KAMZ				S	**Sb**	**10 04 05.5**	**+0.3**
HOMI	**Horasan**	**1.06**	**278**	*i* P	**Pg**	**10 03 49.2**	**-0.9**
HOMI				*i* S	**Sn**	**10 04 07.9**	**+0.4**
GNI	**Garni**	**1.15**	**77**	*e*PN	**Pg**	**10 03 51.4**	**-0.5**
GNI				*e*SN	**Sg**	**10 04 07.6**	**+0.8**
GNI	**Garni**	**1.15**	**77**	⇓*i* P	**Pg**	**10 03 51.5**	**-0.4**
GNI				⇑*i* S	**Sn**	**10 04 13.9**	**+4.2**
GNI	**Garni**	**1.15**	**77**	⇓P	**Pg**	**10 03 51.5**	**-0.4**
GNI				*e*Sn	**Sg**	**10 04 07.6**	**+0.8**
VANB	**Van**	**1.31**	**176**	*e*PN	**Pg**	**10 03 53.4**	**-1.5**
VANB	**Van**	**1.31**	**176**	*e*Pn	**Pg**	**10 03 53.4**	**-1.5**
STE	**Stepanavan**	**1.38**	**37**	⇑P	**Pg**	**10 03 54.0**	**-2.2**
STE				S	**Sn**	**10 04 16.0**	**+0.8**
STEZ	**Stepenevan**	**1.39**	**38**	⇑*e*P	**Pn**	**10 03 54.0**	**-2.5**
STEZ				⇑S	**Sn**	**10 04 16.0**	**+0.4**
ERZM	**Erzurum**	**1.47**	**271**	*i* P	**Pb**	**10 03 57.8**	**-0.2**
ERZM	**Erzurum**	**1.47**	**271**	*i* P	**Pb**	**10 03 57.8**	**-0.2**
ERZM	**Erzurum**	**1.47**	**271**	*e*PN	**Pn**	**10 03 57.8**	**-1.6**
AKH	**Akhalkalaki**	**1.51**	**6**	P	**Pn**	**10 03 57.8**	**-0.4**
DDEM	**Demirkent**	**1.52**	**311**	*i* P	**Pn**	**10 03 58.0**	**-0.2**
DDEM	**Demirkent**	**1.52**	**311**	*i* P	**Pn**	**10 03 58.0**	**-0.2**
DAGI	**Agillar**	**1.56**	**319**	*i* P	**Pg**	**10 03 59.4**	**-0.3**
VRTB	**Varto-Mus**	**1.59**	**243**	*e*PN	**Pn**	**10 03 58.1**	**-1.1**
VRTB	**Varto-Mus**	**1.59**	**243**	*e*Pn	**Pn**	**10 03 58.1**	**-1.1**
GEVA	**Gevas**	**1.60**	**186**	*i* P	**Pg**	**10 04 00.6**	**+0.1**
GEVA				*i* S	**Sg**	**10 04 24.7**	**+3.5**
GEVA	**Gevas**	**1.60**	**186**	*i* P	**Pg**	**10 04 00.6**	**+0.1**
DBAD	**Bademkaya**	**1.64**	**313**	*i* P	**Pn**	**10 03 59.5**	**-0.4**
DBAD				*i* S	**Sg**	**10 04 27.7**	**+5.3**
DBAD	**Bademkaya**	**1.64**	**313**	*i* P	**Pn**	**10 03 59.5**	**-0.4**
KZR	**Kazreti**	**1.71**	**30**	P	**Pb**	**10 04 01.8**	**-0.3**
BNGL	**BINGOL**	**1.90**	**241**	*i* P	**Pb**	**10 04 05.1**	**-0.2**
BNGL				*i* S	**Sg**	**10 04 31.8**	**+0.9**
VADZ	**Vardenis**	**1.92**	**81**	*e*P	**Pb**	**10 04 05.0**	**-0.7**
VADZ				⇓S	Sg	10 04 40.0	+8.7
VADZ	**Vardenis**	**1.92**	**81**	P	**Pb**	**10 04 05.0**	**-0.7**
BCA	**Borcka**	**1.98**	**321**	*e*PN	**Pn**	**10 04 03.3**	**-1.2**
BCA	**Borcka**	**1.98**	**321**	*e*Pn	**Pn**	**10 04 03.3**	**-1.2**
TBLG	**Delisi**	**2.13**	**31**	P	**Pb**	**10 04 07.8**	**-1.5**
TBLG	**Delisi**	**2.13**	**31**	P	**Pb**	**10 04 07.8**	**-1.5**
BNGB	**Bing¯||ı**	**2.21**	**246**	*e*PN	**Pn**	**10 04 06.3**	**-1.4**
DGRG	**David-gareji**	**2.22**	**45**	P	**Pn**	**10 04 08.8**	**+1.0**
BINT	**Bingol**	**2.39**	**245**	*e*Pn	Pn	10 04 06.3	-3.9
DUS	**Dusheti**	**2.44**	**26**	P	**Pg**	**10 04 17.5**	**+1.0**
BAYT	**Ayd¯–ntepe-Bay**	**2.45**	**282**	*e*PN	**Pn**	**10 04 09.9**	**-1.1**
BAYT	**Ayd¯–ntepe-Bay**	**2.45**	**282**	*e*Pn	**Pn**	**10 04 09.9**	**-1.1**
BEST	**Besiri**	**2.55**	**218**	*i* P	Pg	10 04 21.9	+3.3
BEST				*i* S	**Sg**	**10 04 51.8**	**+0.1**
CUKT	**Cukurca**	**2.67**	**174**	*e*PN	**Pn**	**10 04 12.8**	**-1.2**
CUKT	**Cukurca**	**2.67**	**174**	*e*Pn	**Pn**	**10 04 12.8**	**-1.2**
ONI	**Oni**	**2.68**	**3**	P	**Pn**	**10 04 14.4**	**+0.2**
EZC	**Erzincan**	**3.02**	**268**	*e*PN	**Pn**	**10 04 18.3**	**-0.6**
EZC	**Erzincan**	**3.02**	**268**	*e*Pn	**Pn**	**10 04 18.3**	**-0.6**
PTK	**Pertek**	**3.17**	**253**	*e*PN	**Pn**	**10 04 20.1**	**-0.9**
PTK	**Pertek**	**3.17**	**253**	*e*Pn	**Pn**	**10 04 20.1**	**-0.9**

MAN 27 10:36:23, 8°78N×122°73E, h1km, mb4.4, ML3.2, MS3.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DCPH	**Dipolog City**	**0.65**	**107**	⇑*e*P	Pb	10 36 36.5	-0.6
SNPH	**Sibulan**	**0.75**	**42**	⇓*i* P	Pg	10 36 25.3	-12
SNPH				*i* S	Sg	10 36 35.5	-12
IPIL	**Ipil**	**1.00**	**189**	*e*P	Pn	10 36 43.7	-0.4
IPIL				*e*S	Sb	10 36 57.3	+0.6
PAGZ	**Pagadian**	**1.13**	**145**	*e*P	Pn	10 36 45.9	-0.1
TBP	**Tagbilaran**	**1.44**	**51**	*e*P	Pn	10 36 50.1	-0.1
GUIM	**Jordan**	**1.84**	**356**	*e*P	Pn	10 36 56.6	+0.8

*IDC **27** 10:51:06.9±9.0, 59°.90N×153°.47W, h78km±75km, mb3.6/1, mb1 3.5/3, mb1mx3.1/27, mbtmp3.3/3, ML3.8/1, Error ellipse: s-maj=63.9km s-min=39.7km az=25.0*
*ISCJB **27** 10:51:08.5±0.8, 59°.85N±0°.05×152°.9W±0°.2, h124km±7km, mb4.0/1, Error ellipse: s-maj=14.9km s-min=6.8km az=17.9*
*NEIC **27** 10:51:10.8, 59°.87N×153°.12W, h114km, MG2.5(AEIC), After AEIC.*
ISC 27 10:51:09.5±1.2, 59°.83N±0°.05×152°.9W±0°.1, h118km±10km, n13, σ0°95/22, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RSO	**Redoubt South**	**0.64**	**8**	*e*Pn	**Pn**	**10 51 28.6**	**+0.2**
RSO				*e*Sn	**Sn**	**10 51 42.9**	**+0.2**
KDAK	**Kodiak Island**	**2.06**	**175**	*e*Pn	**Pn**	**10 51 43.0**	**-0.6**
KDAK				*e*Sn	**Sn**	**10 52 09.6**	**0.0**
PMR	**Palmer**	**2.58**	**45**	*e*Pn	**Pn**	**10 51 49.9**	**-0.1**
PMR				*e*Sn	**Sn**	**10 52 19.9**	**-1.3**
PPLA	**Purkeypile**	**3.10**	**6**	*e*Pn	**Pn**	**10 51 57.7**	**+0.7**
TRF	**Thorofare Moun**	**3.85**	**18**	*e*Pn	**Pn**	**10 52 06.2**	**-0.8**
TRF				*e*Sn	**Sn**	**10 52 50.5**	**-1.0**
MCK	**McKinley**	**4.35**	**24**	*e*Pn	**Pn**	**10 52 14.2**	**+0.6**
MCK				*e*Sn	**Sn**	**10 53 04.6**	**+1.3**
PAX	**Paxson**	**4.78**	**46**	*e*Pn	**Pn**	**10 52 19.7**	**+0.4**
PAX				*e*Sn	**Sn**	**10 53 12.8**	**-0.9**
MENT	**Mentasta**	**5.42**	**51**	*e*Pn	**Pn**	**10 52 27.8**	**-0.1**
MENT				*e*Sn	**Sn**	**10 53 30.8**	**+1.7**
COLA	**College**	**5.59**	**23**	*e*Pn	**Pn**	**10 52 29.8**	**-0.3**
	2.7nm,0.4s						
ILAR	**Eielson Array**	**5.70**	**27**	P	**Pn**	**10 52 31.2**	**-0.5**
ILAR				S	**Sn**	**10 53 34.3**	**-1.5**
ILAR	**Eielson Array**	**5.70**	**27**	P	**Pn**	**10 52 31.2**	**-0.5**
	1.3nm,0.3s,baz=217,slow=14,SNR=79						
ILAR				S	**Sn**	**10 53 34.3**	**-1.5**
	0.3nm,0.3s,baz=215,slow=20,SNR=3.2						
YKA	**Yellowknife Ar**	**18.50**	**65**	P	**Pn**	**10 55 18.3**	**+0.8**
	0.1nm,0.3s,baz=277,slow=9.9,SNR=8.7						
ZALV	**Zalesovo Beam**	**57.53**	**324**	P	**P**	**11 00 45.9**	**+0.1**
	0.6nm,0.4s,baz=47,slow=6.3,SNR=2.8						

*NSSP **27** 10:55:53.8, 38°.52N×44°.87E, h10km, Ms3.4*
*TEH **27** 10:55:55.2, 38°.69N×44°.51E, h16km, ML3.6*
*ISCJB **27** 10:55:57.7±1.0, 38°.54N±0°.05×44°.73E±0°.04, h7km±9km, Error ellipse: s-maj=7.9km s-min=4.9km az=174.3*
*CSEM **27** 10:55:57.5±0.2, 38°.54N×44°.72E, h10km, ML3.6, Error ellipse: s-maj=6.9km s-min=5.0km az=4.0*
ISC 27 10:55:58.2±1.2, 38°63N±0°03×44°78E±0°02, h14km±11km, n32, σ1°21/48, 6C-8D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMRD	**Marand**	**0.73**	**83**	⇑*e*Pg	**Pb**	**10 56 12.3**	**-0.5**
IMRD				*e*		10 56 12.9	
	comp=Z,49μm,0.1s						
IMRD	**Marand**	**0.73**	**83**	⇑*e*Pg	**Pb**	**10 56 12.3**	**-0.5**
ISHB	**Shabestar**	**0.74**	**118**	⇓*e*Pg	**Pb**	**10 56 12.7**	**-0.4**
ISHB				*e*		10 56 15.5	
	comp=Z,16μm,0.1s						
ISHB				*e*Sg	**Sn**	**10 56 25.3**	**-0.5**
ISHB	**Shabestar**	**0.74**	**118**	⇓*e*Pg	**Pb**	**10 56 12.7**	**-0.4**
TVAN	**Van**	**1.08**	**265**	*i* P	**Pb**	**10 56 18.8**	**-0.1**
TVAN	**Van**	**1.08**	**265**	*i* P	**Pb**	**10 56 18.8**	**-0.1**
ITBZ	**Tabriz**	**1.15**	**110**	*e*Pn	**Pn**	**10 56 19.5**	**-0.5**
ITBZ				*e*		10 56 22.2	
	comp=Z,6μm,0.1s						
ITBZ				*e*Sg	**Sn**	**10 56 38.2**	**+2.6**
ITBZ	**Tabriz**	**1.15**	**110**	*e*Pn	**Pn**	**10 56 19.5**	**-0.5**
DYDN	**Diyadin**	**1.24**	**317**	*i* P	**Pn**	**10 56 20.0**	**-1.4**
DYDN				*i* S	**Sn**	**10 56 40.6**	**+2.4**
DYDN	**Diyadin**	**1.24**	**317**	*i* P	**Pn**	**10 56 20.0**	**-1.4**
DYDN				*i* S	**Sn**	**10 56 40.6**	**+2.4**
IAZR	**Azarshahr**	**1.34**	**135**	*e*Pn	**Pn**	**10 56 22.5**	**-0.3**
IAZR				*e*		10 56 31.3	
	comp=Z,15μm,0.2s						
IAZR	**Azarshahr**	**1.34**	**135**	*e*Pn	**Pn**	**10 56 22.5**	**-0.3**
HAKT	**HAKKARI**	**1.37**	**219**	*i* P	**Pn**	**10 56 22.1**	**-1.0**
HAKT				*i* S	**Sg**	**10 56 43.8**	**+1.4**
HAKT	**HAKKARI**	**1.37**	**219**	*i* P	**Pn**	**10 56 22.1**	**-1.0**
GEVA	**Gevas**	**1.39**	**257**	*i* P	**Pn**	**10 56 21.3**	**-2.1**
GEVA				*i* S	**Sg**	**10 56 43.8**	**+0.8**
GEVA	**Gevas**	**1.39**	**257**	*i* P	**Pn**	**10 56 21.3**	**-2.1**
GEVA				*i* S	**Sg**	**10 56 43.8**	**+0.8**
GRS	**Goris**	**1.49**	**54**	⇓*i* P	**Pb**	**10 56 25.0**	**-0.7**
GRS				⇑*i* S	**Sg**	**10 56 46.0**	**-0.1**
GRS	**Goris**	**1.49**	**54**	⇓P	**Pb**	**10 56 25.0**	**-0.7**
GRS				S	**Sg**	**10 56 46.0**	**-0.1**
GNI	**Garni**	**1.52**	**359**	⇑*i* P	**Pb**	**10 56 26.1**	**-0.1**
GNI				⇓*i* S	**Sg**	**10 56 49.2**	**+2.1**
GNI	**Garni**	**1.52**	**359**	⇑P	**Pb**	**10 56 26.1**	**-0.1**
GNI				S	**Sg**	**10 56 49.2**	**+2.1**
VADZ	**Vardenis**	**1.71**	**26**	*e*P	**Pb**	**10 56 29.0**	**-0.6**
VADZ				⇓S	**Sg**	**10 56 54.0**	**+0.7**
VADZ	**Vardenis**	**1.71**	**26**	P	**Pb**	**10 56 29.0**	**-0.6**
VADZ				S	**Sg**	**10 56 54.0**	**+0.7**
TUTA	**Tutak**	**1.71**	**297**	*i* S	**Sn**	**10 56 49.5**	**-0.3**
TUTA	**Tutak**	**1.71**	**297**	*i* S	**Sn**	**10 56 49.5**	**-0.3**
IHRS	**Heris**	**1.80**	**99**	*e*Pn	**Pn**	**10 56 29.6**	**+0.5**
IHRS				*e*		10 56 33.8	
	comp=Z,5μm,0.1s						
IHRS	**Heris**	**1.80**	**99**	*e*Pn	**Pn**	**10 56 29.6**	**+0.5**
STKZ		**1.93**	**52**	⇓*i* P	**Pb**	**10 56 31.7**	**-1.5**
STKZ				⇑*i* S	**Sg**	**10 56 59.1**	**-1.2**
STKZ		**1.93**	**52**	⇓P	**Pb**	**10 56 31.7**	**-1.5**
STKZ				S	**Sg**	**10 56 59.1**	**-1.2**
SIRN	**S¯–rnak**	**2.19**	**239**	*i* P	**Pg**	**10 56 39.8**	**-0.3**
ISRB	**Sarab**	**2.41**	**109**	*e*	Pg	10 56 52.0	+7.6
	comp=N,2μm,0.2s						
ISRB				*e*Sg	**Sg**	**10 57 17.5**	**+1.8**
DGRG	**David-gareji**	**2.85**	**9**	P	**Pb**	**10 56 50.3**	**+1.3**
DGRG				S	**Sg**	**10 57 30.5**	**+0.7**
TBLG	**Delisi**	**3.09**	**359**	P	**Sg**	**10 57 37.3**	**-0.3**

IDC 27 11:00:11.5±2.1, 4°49N×126°51E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/23, mbtmp3.4/3, Error ellipse: s-maj=163.3km s-min=25.4km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.47**	**163**	P	P	11 05 41.7	+0.2
	0.5nm,0.5s,baz=343,slow=10,SNR=9.5						
ASAR	**Alice Springs**	**28.90**	**166**	P	P	11 06 12.1	-0.2
	0.2nm,0.4s,baz=346,slow=9.0,SNR=3.3						
MKAR	**Makanchi Array**	**56.81**	**325**	P	P	11 09 57.6	-0.1
	0.1nm,0.3s,baz=124,slow=7.2,SNR=3.4						

*ISCJB **27** 11:11:30.1±0.6, 13°.69N±0°.07×144°.83E±0°.10, h123km±4km, mb4.2/25, Error ellipse: s-maj=16.0km s-min=11.8km az=178.9*
*IDC **27** 11:11:30.5±0.5, 13°.73N×145°.01E, h115km±3km, mb3.9/19, mb1 4.1/19, mb1mx4.0/27, mbtmp3.9/19, MS2.9/3, Ms1 3.0/3, ms1mx2.4/29, Error ellipse: s-maj=17.4km s-min=10.7km az=90.0*
*NEIC **27** 11:11:31.2±0.8, 13°.69N×144°.90E, h120km±7km, mb4.4/6, Error ellipse: s-maj=12.0km s-min=8.8km az=94.0*
NEIC Felt at Barrigada, Dededo and Santa Rita.
ISC 27 11:11:31.0±0.7, 13°71N±0°08×144°9E±0°1, h118km±5km, n100, σ0°76/113, mb4.2/25, 17C-24D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.12**	**200**	P	**Pn**	**11 11 47.6**	**+0.2**
GUMO				*e*Sn	**Sn**	**11 11 58.7**	**-0.8**
GUMO				S	**Sn**	**11 11 59.6**	**+0.1**
GUMO	**Guam**	**0.12**	**200**	P	**Pn**	**11 11 47.6**	**+0.2**
	589nm,0.3s,baz=152,slow=4.7,SNR=1195						
GUMO				S	**Sn**	**11 11 59.6**	**+0.1**
	2μm,0.3s,baz=121,slow=23,SNR=250						
JNU	**Nakatsue**	**23.18**	**329**	P	**P**	**11 16 28.2**	**+0.9**
JNU	**Nakatsue**	**23.18**	**329**	P	**P**	**11 16 28.2**	**+0.9**
	5.1nm,0.6s,baz=90,slow=11,SNR=3.9						
MJAR	**Matsushiro Arr**	**23.52**	**346**	P	**P**	**11 16 30.5**	**0.0**
MJAR	**Matsushiro Arr**	**23.52**	**346**	P	**P**	**11 16 30.5**	**0.0**
	1.3nm,0.6s,baz=219,slow=7.6,SNR=7.1						
KSRS	**Korea Array**	**28.08**	**330**	P	**P**	**11 17 11.5**	**0.0**
	2.3nm,0.8s,baz=144,slow=10,SNR=9.9						
KSRS				PcP	**PcP**	**11 20 24.2**	**+1.1**
	1.3nm,0.8s,baz=159,slow=3.5,SNR=6.8						
KSRS				LR	LR	11 26 27.9	
	comp=Z,8.7nm,18.9s,baz=180,slow=32						
KSAR	**Wonju Array Be**	**28.09**	**330**	P	**P**	**11 17 11.5**	**-0.1**
KSAR				PcP	**PcP**	**11 20 24.2**	**+1.0**
ASAJ	**Asahikawa**	**30.37**	**357**	LR	LR	11 31 24.2	
	comp=Z,23nm,18.5s,baz=134,slow=39						
WRA	**Warramunga Arr**	**35.02**	**198**	P	**P**	**11 18 11.8**	**-0.6**
WRA				PcP	**PcP**	**11 20 42.6**	**+0.5**
WRA	**Warramunga Arr**	**35.02**	**198**	P	**P**	**11 18 11.8**	**-0.6**
	2.0nm,0.5s,baz=20,slow=9.5,SNR=28						
WRA				PcP	**PcP**	**11 20 42.6**	**+0.5**
	0.2nm,0.5s,baz=11,slow=3.3,SNR=3.0						
FITZ	**Fitzroy Crossi**	**36.88**	**212**	P	**P**	**11 18 28.4**	**+0.1**
FITZ	**Fitzroy Crossi**	**36.88**	**212**	P	**P**	**11 18 28.4**	**+0.1**
	2.7nm,0.8s,baz=70,slow=13,SNR=19						
ASAR	**Alice Springs**	**38.67**	**196**	P	**P**	**11 18 42.9**	**-0.5**
ASAR				PP	**PP**	**11 20 14.2**	**-0.2**
ASAR	**Alice Springs**	**38.67**	**196**	P	**P**	**11 18 42.9**	**-0.5**
	1.2nm,0.8s,baz=24,slow=12,SNR=18						
ASAR				PP	**PP**	**11 20 14.2**	**-0.2**
	0.7nm,0.9s,baz=22,slow=14,SNR=4.4						
PETK	**Petropavlovsk-**	**40.60**	**12**	PcP	**PcP**	**11 20 58.5**	**-0.3**
	3.1nm,0.8s,baz=189,slow=8.3,SNR=4.2						
DZM	**Mont Dzumac**	**41.35**	**149**	P	**P**	**11 19 06.3**	**+0.7**
DZM	**Mont Dzumac**	**41.35**	**149**	P	**P**	**11 19 06.3**	**+0.7**
	13nm,1.0s,baz=324,slow=18,SNR=5.8						
CMAR	**Chiang Mai Arr**	**44.34**	**282**	P	**P**	**11 19 30.5**	**+0.8**
CMAR				PcP	**PcP**	**11 21 12.7**	**+0.8**
CMAR	**Chiang Mai Arr**	**44.34**	**282**	P	**P**	**11 19 30.5**	**+0.8**
	1.6nm,0.7s,baz=86,slow=5.9,SNR=7.5						
CMAR				PcP	**PcP**	**11 21 12.7**	**+0.8**
	2.0nm,0.7s,baz=93,slow=2.1,SNR=11						
CMAR				LR	LR	11 38 19.2	
	comp=Z,24nm,18.5s,baz=195,slow=36						
FX1	**Attu Island--F**	**45.08**	**24**	*e*P	**P**	**11 19 35.0**	**-0.1**
STKA	**Stephens Creek**	**45.44**	**184**	P	**P**	**11 19 37.3**	**-0.8**
STKA	**Stephens Creek**	**45.44**	**184**	P	**P**	**11 19 37.3**	**-0.8**
	2.1nm,0.4s,baz=357,slow=7.9,SNR=8.6						
CHGN	**Chignik**	**60.45**	**32**	*e*P	**P**	**11 21 28.2**	**+0.2**
MK31	**Makanchi Array**	**61.44**	**316**	*e*P	**P**	**11 21 35.7**	**+0.7**
MKAR	**Makanchi Array**	**61.44**	**316**	P	**P**	**11 21 35.8**	**+0.8**
MKAR				*e*pP	**P**	**11 21 36.0**	**+1.0**
MKAR	**Makanchi Array**	**61.44**	**316**	P	**P**	**11 21 35.8**	**+0.8**
	3.7nm,0.5s,baz=90,slow=8.4,SNR=44						
ZALV	**Zalesovo Beam**	**61.55**	**324**	P	**P**	**11 21 35.4**	**-0.2**
ZALV				PcP	**PcP**	**11 22 15.4**	**-0.4**
ZALV	**Zalesovo Beam**	**61.55**	**324**	P	**P**	**11 21 35.4**	**-0.2**
	0.7nm,0.3s,baz=122,slow=7.0,SNR=3.3						
ZALV				PcP	**PcP**	**11 22 15.4**	**-0.8**
	1.1nm,0.4s,baz=123,slow=5.5,SNR=3.9						
KDAK	**Kodiak Island**	**63.95**	**32**	P	**P**	**11 21 51.0**	**-0.4**
KDAK	**Kodiak Island**	**63.95**	**32**	P	**P**	**11 21 51.0**	**-0.4**
	2.7nm,0.4s,baz=234,slow=8.9,SNR=5.0						
COLD	**Coldfoot**	**67.82**	**22**	*e*P	**P**	**11 22 15.5**	**-0.6**
	2.0nm,0.6s						
ILAR	**Eielson Array**	**68.44**	**25**	P	**P**	**11 22 17.6**	**-2.4**
ILAR	**Eielson Array**	**68.44**	**25**	P	**P**	**11 22 17.6**	**-2.4**
	2.3nm,0.5s,baz=251,slow=5.8,SNR=58						
YKA	**Yellowknife Ar**	**82.73**	**27**	P	**P**	**11 23 40.5**	**-1.0**
YKA	**Yellowknife Ar**	**82.73**	**27**	P	**P**	**11 23 40.5**	**-1.0**
	2.2nm,0.6s,baz=286,slow=5.1,SNR=34						
NEW	**Newport**	**85.11**	**42**	*e*P	**P**	**11 23 54.4**	**+0.4**
	7.3nm,0.8s						
NEW	**Newport**	**85.11**	**42**	⇑P	**P**	**11 23 53.7**	**-0.3**
	baz=85						
BMO	**Blue Mountains**	**85.88**	**45**	*e*P	**P**	**11 23 58.1**	**+0.2**
	6.7nm,1.0s						
C12B	**Naegeli Ranch,**	**86.33**	**42**	⇑P	**P**	**11 24 00.5**	**+0.6**
	baz=86						
D12A	**Red Ives Fores**	**86.59**	**42**	⇑P	**P**	**11 24 01.4**	**+0.1**
	baz=86						
A13A	**Flathead Natio**	**86.66**	**40**	⇓P	**P**	**11 24 02.5**	**+0.9**
	baz=87,SNR=5.4						
B13A	**Whitefish**	**86.79**	**41**	⇓P	**P**	**11 24 02.8**	**+0.6**
	baz=87,SNR=9.4						
NVAR	**Mina Array Bea**	**86.81**	**51**	P	**P**	**11 24 03.5**	**+0.7**
NVAR	**Mina Array Bea**	**86.81**	**51**	P	**P**	**11 24 03.5**	**+0.7**
	2.0nm,0.5s,baz=268,slow=5.9,SNR=26						
C13A	**Hot Springs**	**86.92**	**42**	⇓P	**P**	**11 24 03.0**	**+0.1**
	baz=87,SNR=5.9						
ARCES	**ARCESS Array B**	**86.99**	**342**	P	**P**	**11 24 02.5**	**-0.2**
ARCES	**ARCESS Array B**	**86.99**	**342**	P	**P**	**11 24 02.5**	**-0.2**
	1.7nm,0.6s,baz=81,slow=7.5,SNR=9.8						
ARE0	**ARCESS Array S**

n17,σ0$80/32, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWQ	**Hawqa**	**0.29**	**346**	*eP*	**Pg**	**11 38 41.9**	**0.0**
HWQ				*eS*	**Sg**	**11 38 45.5**	**-0.2**
HWQ	**Hawqa**	**0.29**	**346**	*eP*	**Pg**	**11 38 41.9**	**0.0**
HWQ				*eS*	**Sg**	**11 38 45.5**	**-0.2**
BHL	**Bhannes**	**0.33**	**253**	*eP*	**Pg**	**11 38 42.9**	**+0.2**
BHL				*eS*	**Sg**	**11 38 47.3**	**+0.4**
BHL	**Bhannes**	**0.33**	**253**	*eP*	**Pg**	**11 38 42.9**	**+0.2**
BHL				*eS*	**Sg**	**11 38 47.3**	**+0.4**
QASN	**Qassioun**	**0.51**	**156**	*eP*	**Pg**	**11 38 44.9**	**-1.2**
QASN				*eS*	**Sg**	**11 38 52.7**	**0.0**
QASN	comp=N,736nm,0.2s			AML	AML	11 38 54.3	
QASN	comp=E,1μm,0.2s			AML	AML	11 38 55.0	
QASN	**Qassioun** SNR=91	**0.51**	**156**	*eP*	**Pg**	**11 38 44.9**	**-1.2**
QASN	comp=E,1μm,0.2s,SNR=59			*eS*	**Sg**	**11 38 52.7**	**0.0**
RCY	**Rachaya**	**0.53**	**198**	*eP*	**Pg**	**11 38 46.7**	**+0.2**
RCY				*eS*	**Sg**	**11 38 54.0**	**+0.7**
BRBR	**Barbar**	**0.59**	**187**	*eP*	**Pg**	**11 38 46.2**	**-1.5**
BRBR				*eS*	**Sg**	**11 38 55.8**	**+0.4**
BRBR	comp=E,376nm,0.5s			AML	AML	11 38 56.9	
BRBR	comp=N,331nm,0.2s			AML	AML	11 38 58.0	
BRBR	**Barbar** SNR=92	**0.59**	**187**	*eP*	**Pg**	**11 38 46.2**	**-1.5**
BRBR	comp=N,331nm,0.2s,SNR=59			*eS*	**Sg**	**11 38 55.8**	**+0.4**
TOTH	**TOTAH**	**0.72**	**152**	*eP*	**Pg**	**11 38 50.9**	**+0.8**
TOTH				*eS*	**Sg**	**11 39 01.3**	**+1.9**
TOTH	comp=N,74nm,0.3s			AML	AML	11 39 07.3	
TOTH	comp=E,76nm,0.9s			AML	AML	11 39 14.0	
TOTH	**TOTAH** SNR=75	**0.72**	**152**	*eP*	**Pg**	**11 38 50.9**	**+0.8**
TOTH	comp=E,76nm,0.9s,SNR=59			*eS*	**Sg**	**11 39 01.3**	**+1.9**
MATL	**Matarih**	**0.78**	**229**	*eP*	**Pg**	**11 38 51.1**	**-0.1**
MATL	**Matarih**	**0.78**	**229**	*eP*	**Pg**	**11 38 51.1**	**-0.1**
SALA	**Sala**	**1.41**	**155**	*eP*	**Pn**	**11 39 02.8**	**-0.6**
SALA				*eS*	**Sg**	**11 39 22.1**	**+0.3**
SALA	comp=E,10nm,0.4s			AML	AML	11 39 26.4	
SALA	comp=N,87nm,0.9s			AML	AML	11 39 30.1	
SALA	**Sala** SNR=57	**1.41**	**155**	*eP*	**Pn**	**11 39 02.8**	**-0.6**
SALA	comp=N,87nm,0.9s,SNR=49			*eS*	**Sg**	**11 39 22.1**	**+0.3**
ZALF	**Zalf**	**1.53**	**134**	*eP*	**Pn**	**11 39 05.0**	**+0.1**
ZALF				*eS*	**Sn**	**11 39 25.5**	**0.0**
ZALF	comp=N,62nm,0.4s			AML	AML	11 39 28.6	
ZALF	comp=E,37nm,0.8s			AML	AML	11 39 30.3	
ZALF	**Zalf** SNR=57	**1.53**	**134**	*eP*	**Pn**	**11 39 05.0**	**+0.1**
ZALF	comp=E,37nm,0.8s,SNR=49			*eS*	**Sn**	**11 39 25.5**	**0.0**

IDC 27 11:39:57.4±1.9, 3°.62N×127°.04E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.6/5, MS3.4/1, Ms1 3.4/1, ms1mx2.0/28, Error ellipse: s-maj=105.6km s-min=26.1km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 1.4nm,0.9s,baz=350,slow=9.3,SNR=2.9	**21.63**	**184**	P	P	11 44 50.8	+1.5
WRA	**Warramunga Arr** 1.2nm,0.7s,baz=339,slow=10,SNR=13	**24.49**	**163**	P	P	11 45 17.9	-0.7
ASAR	**Alice Springs** 0.2nm,0.5s,baz=339,slow=9.8,SNR=5.4	**27.93**	**166**	P	P	11 45 50.5	+0.9
STKA	**Stephens Creek** 1.4nm,0.7s,baz=342,slow=13,SNR=3.6	**37.92**	**160**	P	P	11 47 15.3	-1.3
MKAR	**Makanchi Array** 0.4nm,0.6s,baz=124,slow=7.6,SNR=3.6	**57.82**	**325**	P	P	11 49 50.6	-0.2
MKAR	comp=Z,34nm,18.6s,baz=346,slow=37			LR	LR	12 15 58.7	

*NEIC **27** 11:40:08.9±2.5, 24°.33N×122°.10E, h10km, ML4.3(TAP), Error ellipse: s-maj=26.0km s-min=8.7km az=83.0*
NEIC Recorded [4 TAP] in I-lan and [3 TAP] in Hua-lien.
*ISCJB **27** 11:40:09.2±0.4, 24°.37N±0°.01×122°.09E±0°.01, h2km±2km, Error ellipse: s-maj=2.6km s-min=2.1km az=147.6*
*TAP **27** 11:40:10.8, 24°.39N×121°.96E, h20km, ML3.8, B*
*JMA **27** 11:40:11.3±0.3, 24°.72N×122°.05E, h48km, M3.2*

ISC 27 11:40:09.6±1.0, 24°.39N±0°.02×122°.08E±0°.02, h9km±8km, n71,σ0$71/126, 11C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao** baz=343	**0.30**	**317**	⇑*iP*	**Pb**	**11 40 16.7**	**-0.5**
TWC	baz=343			*eS*	**Sg**	**11 40 20.1**	**+0.4**
ENA	**Nanau** baz=287	**0.31**	**278**	⇑*iP*	**Pg**	**11 40 16.1**	**+0.4**
ENA	baz=287			*eS*	**Sg**	**11 40 19.8**	**0.0**
EHP	**Heping Village** baz=253	**0.32**	**256**	P	**Pg**	**11 40 16.1**	**+0.3**
EHP	baz=253			S	**Sg**	**11 40 20.5**	**+0.5**
EGS	baz=357	**0.48**	**344**	⇓*iP*	**Pb**	**11 40 20.5**	**+0.4**
EGS	baz=357			*eS*	**Sb**	**11 40 26.8**	**-0.5**
ILA	**Ilan** baz=331	**0.48**	**322**	P	**Pb**	**11 40 20.2**	**-0.1**
ILA	baz=331			S	**Sb**	**11 40 26.3**	**-1.2**
NACB	**Ninganchiao**	**0.49**	**245**	*ePg*	**Pg**	**11 40 18.6**	**-0.4**
NACB				*eSg*	**Sg**	**11 40 25.4**	**0.0**
TWE	**Neicheng** baz=323	**0.50**	**312**	⇑*iP*	**Pb**	**11 40 20.0**	**-0.6**
TWE	baz=323			S	**Sg**	**11 40 25.8**	**0.0**
ENTT	**Nioudou** baz=305	**0.53**	**299**	⇑*iP*	**Pg**	**11 40 20.2**	**+0.3**
ENTT	baz=305			S	**Sg**	**11 40 26.5**	**-0.3**
TWD	**Chiawan** baz=229	**0.53**	**235**	*eP*	**Pg**	**11 40 20.1**	**+0.2**
TWD	baz=229			*eS*	**Sg**	**11 40 27.4**	**+0.5**
HWA	**Hwalien** baz=217	**0.59**	**227**	*eP*	**Pb**	**11 40 22.6**	**+0.5**
TWB1	**Santiao Chiao** baz=358	**0.63**	**353**	⇓*iP*	**Pb**	**11 40 23.2**	**+0.6**
TWB1	baz=358			S	**Sb**	**11 40 31.4**	**-0.2**
NNS	**Nan Shan** baz=281	**0.64**	**275**	⇑*iP*	**Pg**	**11 40 21.9**	**-0.2**
NNS	baz=281			S	**Sg**	**11 40 29.4**	**-1.1**
YHNB	**Yeheng**	**0.70**	**294**	*ePg*	**Pg**	**11 40 23.0**	**0.0**
YHNB				*eSg*	**Sg**	**11 40 30.9**	**-1.2**
NSK	**Sanguang** baz=301	**0.71**	**294**	⇑*iP*	**Pg**	**11 40 23.4**	**0.0**
NSK	baz=301			S	**Sg**	**11 40 31.4**	**-1.3**
NWF	**Wu-fen Shan** baz=340	**0.73**	**339**	P	**Pn**	**11 40 25.2**	**-1.0**
NWF	baz=340			S	**Sb**	**11 40 34.5**	**-0.3**
WHF	**Hehuan Shan** baz=255	**0.78**	**252**	⇑*iP*	**Pg**	**11 40 24.4**	**-0.2**
WHF	baz=255			*eS*	**Sg**	**11 40 34.8**	**0.0**
TATO	**Taipei**	**0.80**	**318**	*ePg*	**Pg**	**11 40 25.0**	**+0.1**
TATO				*eSg*	**Sg**	**11 40 34.8**	**-0.4**
ESL	**Shilin** baz=228	**0.82**	**226**	⇓P	**Pg**	**11 40 25.4**	**+0.1**
ESL	baz=228			*eS*	**Sb**	**11 40 37.6**	**+0.5**
TAP1	**Taipei**	**0.82**	**322**	*eP*	**Pb**	**11 40 26.3**	**+0.3**
TAP1	baz=321			*eS*	**Sb**	**11 40 37.0**	**-0.3**
TWT	**Tachien** baz=263	**0.83**	**261**	⇑*iP*	**Pg**	**11 40 25.8**	**+0.2**
TWT	baz=263			*eS*	**Sb**	**11 40 37.2**	**-0.5**
TAP	**Taipei** baz=321	**0.83**	**322**	*eP*	**Pb**	**11 40 26.2**	**0.0**
TAP	baz=321			*eS*	**Sb**	**11 40 37.2**	**-0.3**
YOJ	**Yonaguni jima** baz=78	**0.85**	**85**	⇑P	**Pn**	**11 40 27.9**	**+0.1**
YOJ	baz=78			*eS*	**Sn**	**11 40 40.4**	**-0.1**
YOJ	**Yonaguni jima**	**0.85**	**85**	P	**Pn**	**11 40 27.9**	**+0.1**
YOJ				*eS*	**Sn**	**11 40 40.0**	**-0.4**
TWS1	**Kuangyinshan** baz=321	**0.93**	**320**	*eP*	**Pn**	**11 40 28.7**	**-0.2**
TWS1	baz=321			*eS*	**Sb**	**11 40 40.7**	**+0.3**
TWY	**Chenhua** baz=342	**0.99**	**334**	*eP*	**Pn**	**11 40 29.7**	**+0.1**
TWY	baz=342			*eS*	**Sb**	**11 40 41.6**	**-0.3**
NCU	**National Centr** baz=317	**1.00**	**306**	*eP*	**Pn**	**11 40 29.7**	**0.0**
NCU	baz=317			*eS*	**Sb**	**11 40 42.5**	**+0.2**
NSTT	**Nanjuang** baz=291	**1.01**	**284**	P	**Pb**	**11 40 29.1**	**-0.1**
NSTT	baz=291			*eS*	**Sg**	**11 40 40.9**	**-1.2**
HSN	**Hsinchu** baz=294	**1.09**	**293**	*eP*	**Pn**	**11 40 31.1**	**0.0**
HSN	baz=294			*eS*	**Sn**	**11 40 46.1**	**-0.2**
EHY	**Hungye** baz=213	**1.11**	**218**	*eP*	**Pb**	**11 40 29.6**	**-1.4**
SMLT	**Sun Moon Lake** baz=234	**1.19**	**245**	⇑P	**Pn**	**11 40 32.3**	**-0.1**
SMLT	baz=234			*eS*	**Sb**	**11 40 47.7**	**-0.1**
SSLB	**Suanglung**	**1.19**	**240**	*ePg*	**Pb**	**11 40 31.4**	**-0.9**
SSLB				*eSg*	**Sn**	**11 40 48.8**	**+0.1**
TWQ1	**Liyutan** baz=268	**1.19**	**268**	*eP*	**Pg**	**11 40 32.9**	**+0.5**
TWQ1	baz=268			*eS*	**Sn**	**11 40 48.7**	**-0.1**
NSY	**Sanyi** baz=278	**1.20**	**272**	*eP*	**Pg**	**11 40 33.4**	**+0.8**
NSY	baz=278			*eS*	**Sn**	**11 40 50.4**	**+1.4**
TYC	**Yuchr** baz=236	**1.21**	**247**	⇑P	**Pb**	**11 40 32.6**	**-0.1**
TYC	baz=236			*eS*	**Sb**	**11 40 48.1**	**-0.4**
YULB	**Yu-li**	**1.22**	**216**	*ePg*	**Pn**	**11 40 31.0**	**-1.9**
PCYT	**Pengchaiyu** baz=6.0	**1.24**	**360**	*eP*	**Pb**	**11 40 33.1**	**-0.1**
TWF1	**Yuli** baz=223	**1.25**	**215**	*eP*	**Pn**	**11 40 31.8**	**-1.5**
TWF1	baz=223			*eS*	**Sb**	**11 40 48.9**	**-0.8**
TCU	**Taichung** baz=258	**1.30**	**260**	*eP*	**Pg**	**11 40 34.6**	**+0.1**
TCU	baz=258			*eS*	**Sg**	**11 40 52.9**	**+1.5**
YUS	**Yu-Shan** baz=223	**1.36**	**229**	⇓*iP*	**Pn**	**11 40 34.9**	**-0.3**
YUS	baz=223			*eS*	**Sb**	**11 40 53.2**	**-0.1**
WNT	**Mingjian** baz=246	**1.37**	**249**	*eP*	**Pg**	**11 40 35.9**	**+0.1**
WNT	baz=246			*eS*	**Sg**	**11 40 56.3**	**+2.7**
CHKT	**Chengkung** baz=186	**1.44**	**207**	*eP*	**Pn**	**11 40 34.0**	**-1.7**
CHKT	baz=186			*eS*	**Sb**	**11 40 55.4**	**+0.4**
ALS	**Alishan** baz=228	**1.45**	**233**	⇓P	**Pn**	**11 40 36.5**	**+0.2**
ALS	baz=228			*eS*	**Sb**	**11 40 56.0**	**+0.3**
CHN5	**Tsauling** baz=235	**1.50**	**239**	*eP*	**Pb**	**11 40 37.7**	**0.0**
CHN5	baz=235			*eS*	**Sg**	**11 40 57.9**	**+0.1**
IRIF	**Iriomote-Funau**	**1.51**	**92**	P	**Pn**	**11 40 37.0**	**+0.2**
IRIF				*eS*	**Sn**	**11 40 56.3**	**-0.3**
ELDTW	**Lidau** baz=202	**1.54**	**219**	*eP*	**Pn**	**11 40 36.3**	**-0.9**
WGK	**Gukeng** baz=240	**1.55**	**244**	*eP*	**Pb**	**11 40 38.4**	**0.0**
WGK	baz=240			*eS*	**Sg**	**11 40 59.2**	**-0.2**
HATJ	**Hateruma jima**	**1.61**	**101**	P	**Pb**	**11 40 39.6**	**+0.1**
HATJ				*eS*	**Sb**	**11 41 01.0**	**+1.0**
CHN2	**Minshiung** baz=237	**1.69**	**240**	*eP*	**Pb**	**11 40 40.9**	**0.0**
CHN2	baz=237			*eS*	**Sg**	**11 41 04.4**	**+0.3**
CHN4	**Tsaushan** baz=229	**1.70**	**233**	*eP*	**Pb**	**11 40 40.8**	**-0.3**
CHN4	baz=229			*eS*	**Sg**	**11 41 04.8**	**+0.5**
TPUB	**Ta-pu**	**1.71**	**231**	*ePn*	**Pn**	**11 40 39.5**	**-0.1**
TPUB				*eSg*	**Sb**	**11 41 03.5**	**+0.7**
WTCT	**Ta-ch'eng** baz=252	**1.72**	**253**	*eP*	**Pn**	**11 40 39.8**	**+0.1**
WTCT	baz=252			*eS*	**Sb**	**11 41 03.0**	**-0.1**
CHY	**Chiayi** baz=238	**1.75**	**240**	*eP*	**Pn**	**11 40 40.3**	**+0.2**
WTP	**Ta-pu** baz=225	**1.75**	**230**	*eP*	**Pb**	**11 40 41.3**	**-0.7**
WTP	baz=225			*eS*	**Sb**	**11 41 04.3**	**+0.2**
JKRS	**Kuro-shima**	**1.77**	**94**	P	**Pb**	**11 40 41.7**	**-0.5**
JKRS				S	**Sb**	**11 41 03.9**	**-0.6**
TWG	**Pinlang** baz=194	**1.81**	**211**	*eP*	**Pn**	**11 40 39.4**	**-1.5**
TWG	**Pinlang**	**1.81**	**211**	*ePn*	**Pn**	**11 40 39.6**	**-1.4**
TWK	**Hsinying** baz=229	**1.83**	**233**	*eP*	**Pn**	**11 40 41.8**	**+0.5**
TWK	baz=229			*eS*	**Sb**	**11 41 06.5**	**+0.1**
WSF	**Szhu** baz=245	**1.85**	**247**	*eP*	**Pb**	**11 40 42.5**	**-1.1**
WSF	baz=245			*eS*	**Sb**	**11 41 07.4**	**+0.5**
CHN1	**Nanshi** baz=226	**1.85**	**230**	P	**Pb**	**11 40 42.9**	**-0.8**
CHN1	baz=226			*eS*	**Sb**	**11 41 06.6**	**-0.4**
JIJ	**Ishigaki jima**	**1.89**	**90**	P	**Pn**	**11 40 42.4**	**+0.4**
JIJ				S	**Sn**	**11 41 05.0**	**-0.9**
CHN8	**Yiju** baz=220	**2.00**	**239**	*eP*	**Pn**	**11 40 44.5**	**+1.0**
CHN8	baz=220			*eS*	**Sb**	**11 41 10.3**	**-0.7**
ECL	**Taimali** baz=195	**2.06**	**210**	*eP*	**Pn**	**11 40 44.3**	**0.0**
SSD	**Sandimen** baz=215	**2.10**	**219**	*eP*	**Pn**	**11 40 46.1**	**+1.1**
SSD	baz=215			*eS*	**Sn**	**11 41 12.2**	**+1.0**
TWM1	**Shoushan** baz=221	**2.17**	**225**	*eP*	**Pn**	**11 40 47.2**	**+1.3**
EAST	**Anshuo** baz=195	**2.29**	**210**	*eP*	**Pn**	**11 40 47.5**	**-0.1**
LAY	**Lan-yu** baz=187	**2.38**	**192**	*eP*	**Pn**	**11 40 47.8**	**-1.1**
JTJ	**Tarama**	**2.41**	**83**	P	**Pn**	**11 40 50.1**	**+1.0**
JTJ				*eS*	**Sn**	**11 41 18.4**	**-0.3**
SCZT	**Fangliau** baz=197	**2.41**	**214**	*eP*	**Pn**	**11 40 50.9**	**+1.7**
PNG	**Penghu** baz=249	**2.45**	**251**	*eP*	**Pn**	**11 40 49.2**	**-0.4**
WDGT	**Dungji** baz=242	**2.48**	**244**	*eP*	**Pn**	**11 40 50.3**	**+0.2**
KNM	**Kinmen** baz=270	**3.32**	**271**	*eP*	**Pn**	**11 41 02.9**	**+1.2**

NNC 27 11:44:53.8±6.5, 37°.45N×70°.06E, h0km, mb3.9, mpv3.8, 3C-3D, Error ellipse: s-maj=50.4km s-min=47.6km

az=179.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.92**	**157**	⇑P	Pn	11 45 37.4	-18
KK31	**Karatay Array** 2.9nm,0.3s,baz=172,slow=12,SNR=74	**5.66**	**3**	Pn	Pn	11 46 22.6	+3.4
KK31	1.9nm,0.4s,baz=183,slow=23,SNR=7.5			⇑Sn	Sn	11 47 31.3	+6.3
TKM2	**Tokmak 2** 5.1nm,0.6s	**6.92**	**36**	⇓Pn	Pn	11 46 34.9	-1.9
TKM2	2.5nm,0.8s			⇓Sn	Sn	11 47 58.5	+2.1
AB31	**Akbulak array** 0.1nm,0.2s,baz=157,slow=12,SNR=11	**13.89**	**331**	⇑Pn	Pn	11 48 09.7	-2.2
AB31	0.4nm,0.4s,baz=159,slow=24,SNR=3.9			⇓Sn	Sn	11 50 43.8	-3.0

*IDC **27** 12:01:51.2±0.8, 5°.83S×75°.80W, h0km, mb3.8/6, mb1 4.0/9, mb1mx3.9/23, mbtmp3.8/9, ML3.6/3, Error ellipse: s-maj=20.6km s-min=16.0km az=155.0*
*ISCJB **27** 12:01:52.5±0.5, 5°.91S±0°.06×75°.75W±0°.06, h20km, mb3.9/9, Error ellipse: s-maj=8.8km s-min=7.7km az=33.5*
*NEIC **27** 12:01:56.6±1.1, 5°.91S×75°.78W, h37km±11km, mb4.3/3, Error ellipse: s-maj=13.2km s-min=8.0km az=200.0*
NEIC Felt [II] at Yurimaguas.

ISC 27 12:01:54.2±0.6, 5°.89S±0°.07×75°.76W±0°.06, h20km, n29, σ1$00/33, mb3.9/9, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.90**	**245**	Pn	**Pn**	**12 02 39.4**	**-0.2**
ATAH				Sn	**Sn**	**12 03 13.8**	**-0.4**
ATAH				Lg	Lg	12 03 22.8	
ATAH	**Atahualpa** 11nm,0.3s,baz=74,slow=9.6,SNR=43	**2.90**	**245**	Pn	**Pn**	**12 02 39.4**	**-0.2**
ATAH	13nm,0.3s,baz=53,slow=20,SNR=9.0			Sn	**Sn**	**12 03 13.8**	**-0.4**
ATAH	24nm,0.3s,baz=15,slow=19,SNR=6.5			Lg	Lg	12 03 22.8	
NNA	**Nana**	**6.15**	**190**	Pn	**Pn**	**12 03 25.7**	**+1.6**
NNA				Sn	**Sn**	**12 04 33.2**	**-0.8**
NNA	**Nana** 1.6nm,0.3s,baz=3.8,slow=15,SNR=2.9	**6.15**	**190**	Pn	**Pn**	**12 03 25.7**	**+1.6**
NNA	16nm,0.3s,baz=166,slow=15,SNR=9.7			Sn	**Sn**	**12 04 33.2**	**-0.8**
ROSC	**El Rosal** 2.2nm,0.3s,baz=90,slow=20,SNR=2.6	**10.77**	**8**	Lg	Lg	12 07 36.7	
LPAZ	**La Paz**	**12.75**	**145**	Pn	**Pn**	**12 04 55.3**	**+0.2**
LPAZ				Lg	Lg	12 08 44.2	
LPAZ	**La Paz** 0.1nm,0.3s,baz=338,slow=9.1,SNR=2.7	**12.75**	**145**	Pn	**Pn**	**12 04 55.3**	**+0.2**
LPAZ	0.2nm,0.3s,baz=12,slow=20,SNR=3.1			Lg	Lg	12 08 44.2	
SAML	**Samuel** 3.3nm,0.5s	**12.83**	**104**	*e*Pn	**Pn**	**12 04 57.0**	**+1.3**
SAML				*e*Sn	**Sn**	**12 07 14.1**	**-3.9**
CPUP	**Villa Florida**	**26.88**	**141**	P	**P**	**12 07 34.1**	**+0.2**
CPUP	**Villa Florida** 1.4nm,0.4s,baz=302,slow=6.3,SNR=6.2	**26.88**	**141**	P	**P**	**12 07 34.1**	**+0.2**
SDCO	**Great Sand Dun** 2.4nm,1.2s	**51.50**	**330**	*eP*	**P**	**12 10 59.7**	**+0.8**
PDAR	**Pinedale Array**	**57.33**	**331**	P	**P**	**12 11 41.1**	**-0.2**
PDAR	**Pinedale Array** 0.2nm,0.3s,baz=119,slow=7.3,SNR=2.2	**57.33**	**331**	P	**P**	**12 11 41.1**	**-0.2**
GCMT	**Greycliff** 2.4nm,0.8s	**59.68**	**333**	*eP*	**P**	**12 11 57.1**	**-0.3**
MFID	**Camas Ranch** 4.9nm,1.3s	**60.99**	**328**	*eP*	**P**	**12 12 07.0**	**+0.5**
DBIC	**Dimbokro**	**71.84**	**81**	P	**P**	**12 13 16.6**	**+0.2**
DBIC	**Dimbokro** 1.5nm,0.4s,baz=241,slow=8.6,SNR=3.3	**71.84**	**81**	P	**P**	**12 13 16.6**	**+0.2**
YKA	**Yellowknife Ar**	**74.37**	**342**	P	**P**	**12 13 29.8**	**-0.4**
YKA	**Yellowknife Ar** 0.5nm,0.6s,baz=138,slow=5.7,SNR=12	**74.37**	**342**	P	**P**	**12 13 29.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**79.19**	**75**	P	**P**	**12 13 59.5**	**+1.0**
TORD	**Torodi Ar. Bea** 0.8nm,0.7s,baz=282,slow=5.4,SNR=4.8	**79.19**	**75**	P	**P**	**12 13 59.5**	**+1.0**
ILAR	**Eielson Array**	**87.38**	**336**	P	**P**	**12 14 39.5**	**-0.1**
ILAR	**Eielson Array** 0.3nm,0.8s,baz=146,slow=3.2,SNR=4.8	**87.38**	**336**	P	**P**	**12 14 39.5**	**-0.1**
ZALV	**Zalesovo Beam**	**129.55**	**15**	PKP	**PKPdf**	**12 21 02.2**	**+0.5**
ZALV	**Zalesovo Beam** 0.3nm,0.4s,baz=297,slow=4.3,SNR=4.0	**129.55**	**15**	PKP	**PKPdf**	**12 21 02.2**	**+0.5**
ASAR	**Alice Springs**	**138.76**	**223**	PKP	**PKPdf**	**12 21 19.4**	**-0.6**
ASAR	**Alice Springs** 0.4nm,0.9s,baz=116,slow=2.2,SNR=4.1	**138.76**	**223**	PKP	**PKPdf**	**12 21 19.3**	**-0.6**
WRA	**Warramunga Arr**	**140.82**	**228**	PKP	**PKPdf**	**12 21 23.2**	**-0.6**
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=117,slow=2.3,SNR=4.1	**140.82**	**228**	PKP	**PKPdf**	**12 21 23.2**	**-0.6**

*ISCJB **27** 12:09:48.3±1.8, 35°.0N±0°.3×33°.89E±0°.08, h48km±10km, Error ellipse: s-maj=46.2km s-min=7.2km az=168.8*
*CSEM **27** 12:09:49.2, 34°.83N×33°.83E, h33km, ML2.8, After NIC*
*NIC **27** 12:09:49.2±0.1, 34°.83N×33°.83E, h33km, ML2.8, MW3.0*

ISC 27 12:09:48.5±2.7, 34°.9N±0°.3×33°.89E±0°.08, h46km±11km, n11,σ0$38/18, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni** 8.8nm,0.4s	**0.16**	**49**	P	**Pn**	**12 09 56.3**	**+0.2**
PHNC				S	**Sn**	**12 10 01.7**	**+0.2**
PHNC	**Paralimni** 8.8nm,0.4s	**0.16**	**49**	P	**Pn**	**12 09 56.3**	**+0.2**
PHNC				S	**Sn**	**12 10 01.7**	**+0.2**
CSS	**Prodhromos** 3.8nm,0.2s	**0.46**	**278**	P	**Pn**	**12 09 58.7**	**-0.4**
CSS				S	**Sn**	**12 10 06.1**	**-0.5**
CSS	**Prodhromos** 3.8nm,0.2s	**0.46**	**278**	P	**Pn**	**12 09 58.7**	**-0.4**
CSS				S	**Sn**	**12 10 06.1**	**-0.5**
ALFC	**Alevga** 2.7nm,0.2s	**1.09**	**284**	P	**Pn**	**12 10 07.4**	**0.0**
ALFC				S	**Sn**	**12 10 21.7**	**+0.4**
ALFC	**Alevga** 2.7nm,0.2s	**1.09**	**284**	P	**Pn**	**12 10 07.4**	**0.0**
ALFC				S	**Sn**	**12 10 21.7**	**+0.4**
PPCY	**Paphos**	**1.27**	**270**	P	**Pn**	**12 10 09.8**	**0.0**
PPCY	**Paphos**	**1.27**	**270**	P	**Pn**	**12 10 09.8**	**0.0**
AKMC	**Akamas**	**1.28**	**276**	P	**Pn**	**12 10 10.5**	**+0.4**
AKMC	**Akamas**	**1.28**	**276**	P	**Pn**	**12 10 10.5**	**+0.4**
YAYL	**Yayladag**	**2.14**	**57**	*i* P	**Pn**	**12 10 21.9**	**+0.1**
YAYL				*i* S	**Sn**	**12 10 46.5**	**-0.7**

IDC 27 12:14:27.6±59.0, 17°.19S×178°.02E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/18, mbtmp3.9/3, Error ellipse: s-maj=1050.0km s-min=145.8km az=76.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 1.8nm,0.6s,baz=76,slow=11,SNR=6.1	**36.02**	**239**	P	P	12 21 30.7	-0.1
WRA	**Warramunga Arr** 0.2nm,0.4s,baz=92,slow=8.4,SNR=6.7	**41.41**	**259**	P	P	12 22 16.1	-0.1
ASAR	**Alice Springs** 2.1nm,0.7s,baz=85,slow=8.8,SNR=15	**41.71**	**254**	P	P	12 22 18.4	-0.2

*ISCJB **27** 12:22:15.3±0.6, 10°.74N±0°.04×62°.47W±0°.03, h93km±7km, Error ellipse: s-maj=7.5km s-min=4.6km az=144.7*
*FUNV **27** 12:22:16.5, 10°.70N×62°.37W, h89km, MW3.1*
*TRN **27** 12:22:19.3, 10°.84N×62°.35W, h69km, MD3.3*

ISC 27 12:22:15.2±1.3, 10°.71N±0°.04×62°.49W±0°.04, h97km±9km, n18,σ1$48/31, 1C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.27**	**104**	⇑*iP*	**Pn**	**12 22 29.6**	**+0.2**
GUIV				*eS*	**Sn**	**12 22 38.1**	**-1.7**
CRUV	**Carupano**	**0.74**	**267**	⇓*eP*	**Pn**	**12 22 33.6**	**+0.9**
CRUV				*eS*	**Sn**	**12 22 46.1**	**+0.2**
TRN	**Trinidad (W)**	**1.07**	**93**	*eP*	**Pn**	**12 22 37.1**	**+0.9**
TRN				*eS*	**Sn**	**12 22 50.9**	**-1.0**
TPP	**Pointe-a-Pierr**	**1.09**	**111**	*eP*	**Pn**	**12 22 38.3**	**+1.8**
TPP				*eS*	**Sn**	**12 22 52.4**	**-0.1**
TBH	**Brigand Hill**	**1.41**	**99**	*eP*	**Pn**	**12 22 41.6**	**+1.4**
TBH				*eS*	**Sn**	**12 22 58.4**	**-0.8**
GRW	**Mount Saint Ca**	**1.65**	**29**	*eP*	**Pn**	**12 22 44.3**	**+1.0**
GRW				*eS*	**Sn**	**12 23 02.2**	**-2.5**
TPR	**Prospect**	**1.74**	**74**	*eP*	**Pn**	**12 22 45.7**	**+1.3**

TPR				*e*S		**Sn**	**12 23 06.1**	**-0.5**
BOT	**Bacolet**	**1.79**	**75**	*e*S		**Sn**	**12 23 06.1**	**-1.7**
ORIV	**Oritupano**	**1.87**	**209**	⇓*e*P		**Pn**	**12 22 47.8**	**+1.8**
ORIV				*e*S		**Sn**	**12 23 10.1**	**+0.7**
TOSP	**Speyside**	**2.00**	**73**	*e*P		**Pn**	**12 22 49.5**	**+1.8**
TOSP				*e*S		**Sn**	**12 23 11.5**	**-1.0**
PCRV	**Puerto La Cruz**	**2.18**	**256**	*e*P		**Pn**	**12 22 51.6**	**+1.5**
SVB	**Belmont**	**2.82**	**25**	*e*P		**Pn**	**12 23 00.3**	**+1.8**
SVB				*e*S		**Sn**	**12 23 29.9**	**-1.9**
PRGV	**PARIAGUAN**	**2.88**	**228**	*e*P		**Pn**	**12 23 00.7**	**+1.4**
GURV	**El Guri**	**2.99**	**191**	*e*P		**Pn**	**12 23 01.6**	**+0.8**
GURV				*e*S		**Sn**	**12 23 33.9**	**-2.0**
MCLT	**Moule a Chique**	**3.34**	**27**	*e*P		**Pn**	**12 23 07.2**	**+1.7**
MCLT				*e*S		**Sn**	**12 23 43.0**	**-1.4**
BIRV	**Birongo**	**3.73**	**267**	*e*P		**Pn**	**12 23 11.5**	**+0.8**
LUEV	**Luepa**	**4.94**	**168**	*e*P		**Pn**	**12 23 26.7**	**-0.6**
LUEV				*e*S		Sn	12 24 18.0	-5.4
BAUV	**El Baul**	**5.75**	**253**	*e*P		**Pn**	**12 23 38.8**	**+0.6**
BAUV				*e*S		**Sn**	**12 24 40.5**	**-2.4**

ISCJB ***27*** *12:38:29.5±0.5, 16.89N±0.10×95.16W±0.04, h136km±9km, mb3.5/4, Error ellipse: s-maj=15.9km s-min=5.4km az=9.0*
MEX ***27*** *12:38:30.5±0.9, 16.94N×95.18W, h150km±14km, MD4.1*
IDC ***27*** *12:38:36.6±4.8, 17.61N×94.79W, h142km±46km, mb3.3/5, mb1 3.5/7, mb1mx3.3/26, mbtmp3.2/7, Error ellipse: s-maj=43.8km s-min=19.8km az=44.0*

ISC 27 12:38:30.8±0.8, 17.08N±0.08×95.11W±0.04, h119km±12km, n14, σ1§76/20, mb3.6/4, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**1.55**	**270**	*e*P		**Pn**	**12 38 58.9**	**0.0**
VHO				*i* S		**Sn**	**12 39 21.8**	**+0.9**
HUIG	**Huatulco**	**1.62**	**216**	*e*P		**Pn**	**12 38 57.8**	**-1.8**
HUIG				*e*S		**Sn**	**12 39 20.1**	**-1.3**
TGIG		**1.93**	**99**	*e*P		**Pn**	**12 39 04.2**	**+0.9**
TGIG				*i* S		**Sn**	**12 39 29.5**	**+1.4**
PCIG		**2.27**	**127**	*e*P		**Pn**	**12 39 08.0**	**+0.4**
PCIG				*i* S		**Sn**	**12 39 36.3**	**+0.5**
CCIG	**Comitan**	**2.96**	**105**	*e*P		**Pn**	**12 39 15.7**	**-0.9**
CCIG				*i* S		**Sn**	**12 39 52.2**	**+0.2**
PNIG	**Pinotepa**	**2.97**	**257**	*e*P		Pn	12 39 14.6	-2.1
PNIG				*i* S		**Sn**	**12 39 49.6**	**-2.4**
THIG		**3.49**	**128**	*i* P		**Pn**	**12 39 22.4**	**-1.0**
THIG				*i* S		**Sn**	**12 40 02.5**	**-1.7**
TEIG	**Tepich** 2.8nm,0.3s,baz=267,slow=16,SNR=17	**7.19**	**63**	P		**Pn**	**12 40 11.4**	**-1.9**
TEIG				S		**Sn**	**12 41 29.0**	**-4.4**
	6.9nm,0.3s,baz=270,slow=20,SNR=12							
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=145,slow=14,SNR=6.1	**14.50**	**329**	P		**Pn**	**12 41 51.0**	**+0.6**
ANMO	**Albuquerque** 1.7nm,0.7s,baz=145,slow=9.4,SNR=4.8	**20.48**	**332**	P		**P**	**12 43 00.5**	**+1.1**
NVAR	**Mina Array Bea** 0.8nm,0.7s,baz=133,slow=9.0,SNR=7.5	**29.40**	**321**	P		**P**	**12 44 25.5**	**+2.3**
LPAZ	**La Paz** 1.0nm,0.8s,baz=344,slow=12,SNR=3.9	**42.51**	**140**	P		P	12 46 20.4	+5.0
YKA	**Yellowknife Ar** 0.5nm,0.5s,baz=154,slow=7.1,SNR=7.8	**47.38**	**348**	P		**P**	**12 46 52.0**	**-0.6**
INK	**Inuvik** 1.0nm,0.8s,baz=134,slow=9.1,SNR=4.1	**56.66**	**344**	P		**P**	**12 48 01.4**	**+0.2**

NSSP ***27*** *12:41:19.0, 38.52N×44.72E, Ms2.8*
DDA ***27*** *12:41:20.2, 38.65N×44.70E, h7km, MD3.0*
CSEM ***27*** *12:41:20.6±0.5, 38.58N×44.71E, h2km, MD3.0, Error ellipse: s-maj=13.3km s-min=7.4km az=144.0*

ISC 27 12:41:20.8±1.5, 38.63N±0.05×44.72E±0.05, h10km±15km, n17, σ1§12/30, 4C-3D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TVAN	**Van**	**1.03**	**265**	*i* P		**Pn**	**12 41 41.4**	**-0.2**
TVAN				*i* S		**Sb**	**12 41 54.8**	**+0.1**
TVAN	**Van**	**1.03**	**265**	*i* P		**Pn**	**12 41 41.4**	**-0.2**
TVAN				*i* S		**Sb**	**12 41 54.8**	**+0.1**
DYDN	**Diyadin**	**1.22**	**319**	*i* P		**Pn**	**12 41 43.5**	**-0.6**
DYDN				*i* S		**Sb**	**12 41 59.4**	**-0.5**
DYDN	**Diyadin**	**1.22**	**319**	*i* P		**Pn**	**12 41 43.5**	**-0.6**
DYDN				*i* S		**Sb**	**12 41 59.4**	**-0.5**
HAKT	**HAKKARI**	**1.33**	**217**	*i* P		**Pb**	**12 41 45.8**	**-0.3**
HAKT				*i* S		**Sn**	**12 42 05.9**	**+2.2**
HAKT	**HAKKARI**	**1.33**	**217**	*i* P		**Pb**	**12 41 45.8**	**-0.3**
GEVA	**Gevas**	**1.34**	**257**	*i* P		**Pn**	**12 41 44.3**	**-1.5**
GEVA				*i* S		**Sn**	**12 42 04.8**	**+1.0**
GEVA	**Gevas**	**1.34**	**257**	*i* P		**Pn**	**12 41 44.3**	**-1.5**
GEVA				*i* S		**Sn**	**12 42 04.8**	**+1.0**
GNI	**Garni**	**1.52**	**1**	⇑*i* P		**Pg**	**12 41 50.4**	**+0.4**
GNI				⇓*i* S		**Sg**	**12 42 12.4**	**+2.7**
GNI	**Garni**	**1.52**	**1**	⇑P		**Pg**	**12 41 50.4**	**+0.4**
GNI				S		**Sg**	**12 42 12.4**	**+2.7**
GRS	**Goris**	**1.53**	**55**	⇑*i* P		**Pn**	**12 41 48.0**	**-0.4**
GRS				⇓*i* S		**Sg**	**12 42 10.0**	**0.0**
GRS	**Goris**	**1.53**	**55**	⇑P		**Pn**	**12 41 48.0**	**-0.4**
GRS				S		**Sg**	**12 42 10.0**	**0.0**
TUTA	**Tutak**	**1.67**	**298**	*i* P		**Pb**	**12 41 50.9**	**-1.0**
TUTA	**Tutak**	**1.67**	**298**	*i* P		**Pb**	**12 41 50.9**	**-1.0**
VADZ	**Vardenis**	**1.73**	**27**	*e*P		**Pg**	**12 41 54.0**	**-0.1**
VADZ				⇓S		**Sg**	**12 42 17.0**	**+0.4**
VADZ	**Vardenis**	**1.73**	**27**	P		**Pg**	**12 41 54.0**	**-0.1**
VADZ				S		**Sg**	**12 42 17.0**	**+0.4**
STE	**Stepanavan**	**2.38**	**354**	P		**Pg**	**12 42 05.0**	**-1.5**

DJA 27 12:46:09.6±2.1, 7°S±9°×107°E±1°, h23km±24km, M3.7/5, MLv3.7/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**0.49**	**345**	P		Pb	12 46 19.9	+0.3
DBJI	**Dramaga**	**0.92**	**4**	P		Pb	12 46 26.8	-0.2
DBJI				S		Sb	12 46 38.7	-0.1
CISI	**Cisompet, Garu**	**1.13**	**94**	P		Pn	12 46 28.9	-1.2
LEM	**Lembang**	**1.13**	**55**	P		Pn	12 46 29.5	-0.8
LEM				S		Sb	12 46 44.7	-0.5

IDC 27 13:01:31.8±4.0, 42.77S×72.15W, h35km±30km, mb3.7/7, mb1 4.0/8, mb1mx3.8/19, mbtmp3.7/8, MS3.6/2, Ms1 3.5/2, ms1mx3.0/19, Error ellipse: s-maj=40.7km s-min=18.3km az=94.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores** 3.9nm,0.3s,baz=217,slow=17,SNR=72	**2.36**	**31**	Pn		Pn	13 02 10.1	+1.9
PLCA				Pg		Pb	13 02 13.8	0.0
	9.7nm,0.3s,baz=222,slow=17,SNR=154							
PLCA				Lg		Lg	13 02 48.2	
	33nm,0.3s,baz=112,slow=9.2,SNR=18							
CPUP	**Villa Florida** 0.7nm,0.5s,baz=233,slow=15,SNR=3.4	**20.39**	**41**	P		Pn	13 06 09.6	+1.7
CPUP				LR		LR	13 14 53.4	
	comp=Z,89nm,21.1s,baz=153,slow=39							
SIV	**San Ignacio** 0.4nm,0.3s,baz=193,slow=10,SNR=4.2	**28.33**	**23**	P		P	13 07 21.6	-0.7
BDFB	**Brasilia** comp=Z,160nm,20.2s,baz=198,slow=39	**34.04**	**45**	LR		LR	13 23 28.6	
SNAA	**Sanae** 0.5nm,0.3s,baz=272,slow=13,SNR=3.9	**43.60**	**155**	P		P	13 09 31.9	-0.3
QSPA	**South Pole Qui** 8.7nm,1.1s,baz=160,slow=6.2,SNR=11	**47.48**	**180**	P		P	13 10 03.4	+0.4
VNDA	**Vanda** 4.7nm,1.3s,baz=125,slow=8.9,SNR=4.3	**55.51**	**192**	P		P	13 11 03.5	+0.8
TXAR	**Lajitas Array** 0.5nm,0.9s,baz=149,slow=5.8,SNR=4.2	**77.39**	**332**	P		P	13 13 23.9	+0.8
TORD	**Torodi Ar. Bea** 0.4nm,0.9s,baz=242,slow=5.1,SNR=2.3	**87.33**	**70**	P		P	13 14 15.2	0.0
PDAR	**Pinedale Array** 0.6nm,0.9s,baz=120,slow=3.6,SNR=3.7	**91.55**	**333**	P		P	13 14 34.9	+0.2
ILAR	**Eielson Array** 0.3nm,0.8s,baz=122,slow=1.2,SNR=3.8	**121.89**	**331**	PKP		PKPdf	13 20 19.1	-1.9
CMAR	**Chiang Mai Arr** 0.3nm,0.4s,baz=233,slow=4.4,SNR=4.7	**154.61**	**160**	PKPbc		PKPbc	13 21 28.5	-0.7
CMAR				PKPab		PKPab	13 21 42.7	-1.1
	0.5nm,0.9s,baz=224,slow=3.8,SNR=4.1							
MKAR	**Makanchi Array** 0.6nm,0.8s,baz=289,slow=3.7,SNR=4.5	**161.45**	**69**	PKPab		PKPab	13 22 13.6	+0.7

IDC 27 13:03:25.0±2.0, 4.31N×127.39E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/23, mbtmp3.6/5, 1C, Error ellipse: s-maj=105.1km s-min=20.3km az=58.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**4.26**	**313**	⇑*i*P		Pb	13 04 37.3	-3.5
WRA	**Warramunga Arr** 2.2nm,0.7s,baz=342,slow=10,SNR=22	**25.05**	**164**	P		P	13 08 50.1	-1.1
ASAR	**Alice Springs** 0.2nm,0.4s,baz=341,slow=6.7,SNR=4.2	**28.52**	**167**	P		P	13 09 22.5	-0.1
CMAR	**Chiang Mai Arr** 0.4nm,0.5s,baz=101,slow=9.3,SNR=3.3	**31.16**	**299**	P		P	13 09 46.7	+0.7
STKA	**Stephens Creek** 0.9nm,0.5s,baz=339,slow=8.6,SNR=5.2	**38.44**	**160**	P		P	13 10 49.8	+1.1
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=126,slow=7.1,SNR=4.7	**57.46**	**325**	P		P	13 13 15.2	-0.6

BUC 27 13:10:44.5±0.6, 46.32N×25.30E, h4km±6km, MD2.4/3, 8C-4D, Error ellipse: s-maj=5.2km s-min=3.0km az=319.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DOPR	**Dopca**	**0.35**	**170**	*i* S		Sb	13 10 58.3	-1.2
DOPR	**Dopca**	**0.35**	**170**	S		Sb	13 10 58.3	-1.2
VOIR		**0.90**	**191**	⇑*i*P		Pb	13 11 02.4	-0.4
VOIR				*i* S		Sb	13 11 16.4	+1.2
VOIR		**0.90**	**191**	⇑*i*P		Pb	13 11 02.4	-0.4
MLR	**Muntele Rosu**	**0.94**	**151**	⇓*i*P		Pb	13 11 03.9	+0.3
MLR				*i* S		Sb	13 11 17.3	+0.7
MLR	**Muntele Rosu**	**0.94**	**151**	⇓*i*P		Pb	13 11 03.9	+0.3
TESR	**Tescani**	**0.95**	**78**	⇑*i*P		Pb	13 11 03.8	+0.1
TESR				*i* S		Sb	13 11 17.3	+0.6
TESR	**Tescani**	**0.95**	**78**	⇑*i*P		Pb	13 11 03.8	+0.1
VRI	**Vrincioaia**	**1.09**	**114**	⇑*i*P		Pb	13 11 06.3	+0.2
VRI				*i* S		Sn	13 11 22.3	0.0
VRI	**Vrincioaia**	**1.09**	**114**	⇑*i*P		Pb	13 11 06.3	+0.2
LOT	**Lotru**	**1.38**	**231**	⇑*i*P		Pb	13 11 11.0	0.0
LOT				*i* S		Sn	13 11 30.3	+0.8
LOT	**Lotru**	**1.38**	**231**	⇑*i*P		Pb	13 11 11.0	0.0
DRGR		**1.85**	**286**	⇓*i*P		Pb	13 11 18.3	-0.7
DRGR				*i* S		Sb	13 11 42.8	+0.3
DRGR		**1.85**	**286**	⇓*i*P		Pb	13 11 18.3	-0.7

AUST ***27*** *13:14:06.2±0.0, 26.27S×177.22W, h194km, Error ellipse: s-maj=1.6km s-min=0.9km az=287.0*
IDC ***27*** *13:14:07.2±1.5, 26.27S×177.79W, h176km±13km, mb3.8/14, mb1 4.0/15, mb1mx4.0/19, mbtmp3.8/15, Error ellipse: s-maj=15.6km s-min=13.6km az=155.0*
NEIC ***27*** *13:14:07.8±1.1, 26.31S×177.74W, h183km±9km, mb4.5/4, Error ellipse: s-maj=13.3km s-min=10.0km az=82.0*

ISC 27 13:14:08.7±0.6, 26.58S±0.07×177.7W±0.1, h200km, n94, σ1§41/71, mb3.9/17, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.67**	**185**	P		**Pn**	**13 14 54.8**	**+0.3**
RAO				S		**Sn**	**13 15 32.9**	**+2.5**
RAO	**Raoul Island** 467nm,0.3s,baz=75,slow=20,SNR=31	**2.67**	**185**	P		**Pn**	**13 14 54.8**	**+0.3**
RAO				S		**Sn**	**13 15 32.9**	**+2.5**
	904nm,0.3s,baz=18,slow=20,SNR=7.3							
MSVF	**Nonsavu** 214nm,1.1s	**9.66**	**335**	*e*P		**Pn**	**13 16 20.7**	**-3.0**
NIUE	**Niue** baz=9.8,SNR=11	**10.31**	**45**	P		Pn	13 16 24.9	-7.1
PUZ	**Puketiti**	**11.97**	**196**	PN		Pn	13 16 46.7	-6.4
PUZ				SN		Sn	13 18 56.4	-10
CNGZ	**Carnagh Statio**	**12.37**	**195**	PN		Pn	13 16 53.7	-4.5
MWZ	**Matawai**	**12.41**	**198**	PN		Pn	13 16 51.8	-6.8
MWZ				*e*SN		Sn	13 19 06.5	-11
URZ	**Urewera**	**12.46**	**199**	*e*Pn		Pn	13 16 52.7	-6.5
URZ				S		Sn	13 19 08.9	-9.2
URZ	**Urewera**	**12.46**	**199**	PN		Pn	13 16 52.9	-6.3
URZ				SN		Sn	13 19 09.9	-8.2
URZ	**Urewera** 0.9nm,0.3s,baz=126,slow=12,SNR=16	**12.46**	**199**	P		Pn	13 16 52.5	-6.8
URZ				S		Sn	13 19 08.9	-9.2
	24nm,0.3s,baz=12,slow=18,SNR=18							
KNZ	**Kokohu**	**13.01**	**196**	*e*PN		Pn	13 17 02.9	-3.3
NMHZ	**Naumai**	**13.32**	**199**	SN		S	13 19 30.8	-7.9
BKZ	**Black Stump Fm**	**13.48**	**200**	PN		Pn	13 17 06.4	-5.7
BKZ				SN		S	13 19 33.9	-8.5
MCHZ	**McNeill Hill**	**13.67**	**199**	*e*PN		Pn	13 17 08.0	-6.5
AFI	**Afiamalu**	**13.75**	**25**	*e*P		Pn	13 17 04.1	-12
AFI				S		S	13 19 21.3	-28
AFI	**Afiamalu** 19nm,0.3s,baz=142,slow=3.6,SNR=42	**13.75**	**25**	P		Pn	13 17 04.3	-11
AFI				S		S	13 19 21.3	-28
	11nm,0.3s,baz=217,slow=21,SNR=3.9							
BHHZ	**Black Hill Sta**	**13.91**	**201**	PN		Pn	13 17 12.9	-4.5
KAHZ	**Kahuranaki**	**13.95**	**198**	SN		S	13 19 43.6	-10
PXZ	**Pawanui**	**14.18**	**197**	SN		S	13 19 43.1	-15
PNHZ	**Pukenui**	**14.26**	**200**	SN		S	13 19 49.5	-11
WPHZ	**Waipukurau**	**14.32**	**199**	SN		S	13 19 50.8	-11
BFZ	**Birch Farm**	**14.95**	**198**	PN		**Pn**	**13 17 25.5**	**-4.7**
MRZ	**Mangatainoka R**	**15.13**	**200**	PN		Pn	13 17 26.7	-5.7
DZM	**Mont Dzumac**	**15.18**	**284**	*e*P		**P**	**13 17 34.9**	**+1.1**
DZM	**Mont Dzumac**	**15.18**	**284**	P		**P**	**13 17 35.6**	**+1.9**
DZM	**Mont Dzumac** 1.6nm,0.3s,baz=102,slow=17,SNR=16	**15.18**	**284**	P		**P**	**13 17 35.6**	**+1.9**
HOWZ	**Holdsworth Sta**	**15.36**	**200**	SN		S	13 20 13.3	-13
TUWZ	**Tuamarina**	**16.36**	**203**	PN		P	13 17 41.0	-5.4
NNZ	**Nelson**	**16.38**	**205**	PN		**P**	**13 17 43.0**	**-3.6**
KHZ	**Kahutara**	**17.37**	**202**	PN		**P**	**13 17 53.0**	**-4.5**
OXZ	**Oxford**	**18.70**	**204**	SN		S	13 21 24.6	-10
RPZ	**Rata Peaks**	**19.40**	**205**	P		**Pn**	**13 18 21.2**	**-1.9**
RPZ				S		S	13 21 39.3	-8.7
RPZ	**Rata Peaks** 0.4nm,0.3s,baz=53,slow=5.1,SNR=3.2	**19.40**	**205**	P		**Pn**	**13 18 21.2**	**-1.9**
RPZ				S		S	13 21 39.3	-8.7
	2.7nm,0.3s,baz=353,slow=16,SNR=12							
EIDS	**Eidsvold** baz=28,SNR=5.0	**28.10**	**265**	P		P	13 19 43.5	+1.5
RMQ	**Roma** baz=30,SNR=14	**30.01**	**263**	P		P	13 20 01.1	+2.3
CTAO	**Charters Tower** 11nm,0.6s	**33.69**	**273**	*e*P		**P**	**13 20 31.4**	**+0.4**
QLP	**Quilpie** baz=34,SNR=5.8	**34.01**	**261**	P		**P**	**13 20 34.9**	**+1.2**
STKA	**Stephens Creek** 0.4nm,0.6s	**35.81**	**252**	*e*P		**P**	**13 20 50.3**	**+1.2**
STKA				PcP		**PcP**	**13 23 14.2**	**+2.1**
STKA	**Stephens Creek** 1.6nm,0.5s,baz=99,slow=10,SNR=11	**35.81**	**252**	P		**P**	**13 20 50.1**	**+1.1**
STKA				PcP		**PcP**	**13 23 14.2**	**+2.1**
	1.5nm,0.7s,baz=78,slow=5.8,SNR=2.8							
STKA	**Stephens Creek** baz=36,SNR=8.7	**35.81**	**252**	P		**P**	**13 20 50.5**	**+1.4**
MTSU	**Mount Surprise** baz=36,SNR=16	**36.06**	**275**	P		P	13 20 52.5	+1.1
COEN	**Coen** baz=39,SNR=5.9	**38.68**	**281**	P		P	13 21 15.3	+1.9
BBOO	**Buckleboo** baz=41,SNR=6.3	**40.44**	**250**	P		**P**	**13 21 28.0**	**+0.3**
AS31	**Alice Springs**	**43.76**	**263**	*e*P		**P**	**13 21 54.4**	**-0.3**
ASAR	**Alice Springs**	**43.76**	**263**	P		**P**	**13 21 54.6**	**-0.1**
ASAR				S		**S**	**13 28 10.7**	**+0.7**
ASAR	**Alice Springs** 9.6nm,0.8s,baz=112,slow=8.0,SNR=72	**43.76**	**263**	P		**P**	**13 21 54.6**	**-0.1**
ASAR				S		**S**	**13 28 10.7**	**+0.7**
	0.9nm,1.1s,baz=96,slow=14,SNR=5.5							
WRAB	**Tennant Creek** 7.7nm,0.8s	**44.39**	**268**	*e*P		**P**	**13 21 59.1**	**-0.6**
WRA	**Warramunga Arr**	**44.40**	**268**	P		**P**	**13 21 59.3**	**-0.5**
WRA				PcP		**PcP**	**13 23 41.4**	**+1.4**
WRA	**Warramunga Arr** 9.2nm,0.8s,baz=104,slow=7.6,SNR=50	**44.40**	**268**	P		**P**	**13 21 59.3**	**-0.5**
WRA				PcP		**PcP**	**13 23 41.4**	**+1.4**
	1.6nm,0.8s,baz=104,slow=3.3,SNR=4.9							
FORT	**Forrest** baz=48,SNR=20	**47.43**	**252**	P		**P**	**13 22 22.8**	**-0.5**
KDU	**Kakadu** baz=49,SNR=11	**48.68**	**276**	P		**P**	**13 22 33.8**	**+0.8**
MTN	**Manton Dam** baz=50,SNR=5.8	**49.81**	**276**	P		**P**	**13 22 42.0**	**+0.5**
KNRA	**Kununurra** baz=51,SNR=34	**50.84**	**271**	P		**P**	**13 22 49.1**	**-0.1**
SBA	**Scott Base**	**51.86**	**184**	*e*P		P	13 23 00.9	+5.0
VNDA	**Vanda**	**51.91**	**186**	P		P	13 23 00.7	+4.3
VNDA	**Vanda** 2.0nm,0.5s,baz=3.1,slow=7.9,SNR=13	**51.91**	**186**	P		P	13 23 00.7	+4.3

FITZ	**Fitzroy Crossi** 5.3nm,0.6s	**52.78**	**267**	*e*P		**P**	**13 23 03.4**	**-0.3**
FITZ	**Fitzroy Crossi** 11nm,0.7s,baz=129,slow=6.8,SNR=35	**52.78**	**267**	P		**P**	**13 23 03.6**	**0.0**
FITZ	**Fitzroy Crossi** baz=53,SNR=21	**52.78**	**267**	P		**P**	**13 23 03.7**	**+0.1**
KLBR	**Kellerberrin** baz=56,SNR=5.0	**55.96**	**248**	P		**P**	**13 23 25.9**	**-0.4**
MEEK	**Meekatharra** baz=57,SNR=6.3	**56.42**	**254**	P		**P**	**13 23 28.9**	**-0.9**
BLDU	**Ballidu** baz=57,SNR=12	**57.05**	**249**	P		**P**	**13 23 33.5**	**-0.5**
MORW	**Morawa** baz=58,SNR=5.1	**57.99**	**251**	P		**P**	**13 23 40.3**	**-0.4**
QSPA	**South Pole Qui** 8.9nm,1.0s	**63.52**	**180**	*e*P		P	13 24 20.6	+3.2
MAW	**Mawson**	**75.98**	**200**	P		P	13 25 36.0	+2.7
MAW	**Mawson** 9.8nm,0.6s,baz=130,slow=8.0,SNR=53	**75.98**	**200**	P		P	13 25 36.0	+2.7
MAW	**Mawson** baz=76,SNR=42	**75.98**	**200**	P		P	13 25 36.0	+2.7
SYO	**Syowa Base**	**80.89**	**193**	⇓*e*P		**P**	**13 26 00.8**	**+0.7**
KSRS	**Korea Array** 0.4nm,0.4s,baz=153,slow=8.2,SNR=4.3	**81.66**	**319**	P		**P**	**13 26 05.1**	**+0.6**
KSAR	**Wonju Array Be**	**81.67**	**319**	P		**P**	**13 26 05.1**	**+0.5**
PETK	**Petropavlovsk-**	**82.20**	**345**	P		**P**	**13 26 06.7**	**-0.3**
PETK	**Petropavlovsk-** 1.1nm,0.5s,baz=132,slow=7.3,SNR=8.5	**82.20**	**345**	P		**P**	**13 26 06.7**	**-0.3**
USRK	**Ussuriysk Arra** 1.1nm,0.8s,baz=57,slow=14,SNR=5.0	**84.16**	**326**	P		**P**	**13 26 16.9**	**-0.2**
PLCA	**Paso Flores** 0.3nm,0.3s,baz=219,slow=5.9,SNR=2.1	**84.88**	**133**	P		P	13 26 24.0	+2.7
PLCA	**Paso Flores**	**84.88**	**133**	P		P	13 26 24.0	+2.7
NVAR	**Mina Array Bea**	**85.23**	**43**	P		**P**	**13 26 23.6**	**+0.6**
NVAR	**Mina Array Bea** 1.2nm,0.7s,baz=221,slow=9.5,SNR=10	**85.23**	**43**	P		**P**	**13 26 23.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**92.43**	**289**	P		P	13 26 58.8	+1.6
CMAR	**Chiang Mai Arr** 0.4nm,0.4s,baz=134,slow=6.4,SNR=4.3	**92.43**	**289**	P		P	13 26 58.8	+1.6
PDAR	**Pinedale Array**	**93.15**	**43**	P		**P**	**13 26 59.8**	**-0.5**
PDAR	**Pinedale Array** 0.8nm,0.8s,baz=252,slow=2.8,SNR=4.8	**93.15**	**43**	P		**P**	**13 26 59.8**	**-0.5**
ILAR	**Eielson Array**	**94.15**	**13**	P		**P**	**13 27 02.9**	**-1.1**
ILAR				PP		**PP**	**13 30 55.5**	**+1.7**
ILAR	**Eielson Array** 0.4nm,0.8s,baz=212,slow=5.6,SNR=4.4	**94.15**	**13**	P		**P**	**13 27 02.9**	**-1.1**
ILAR				PP		**PP**	**13 30 55.5**	**+1.7**
	0.8nm,1.0s,baz=219,slow=7.1,SNR=5.1							
MKAR	**Makanchi Array**	**115.52**	**311**	PKP		**PKPdf**	**13 32 26.2**	**-0.5**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=108,slow=3.2,SNR=2.7	**115.52**	**311**	PKP		**PKPdf**	**13 32 26.2**	**-0.5**
ARCES	**ARCESS Array B**	**134.93**	**349**	PKP		**PKPdf**	**13 33 03.5**	**+0.6**
ARCES	**ARCESS Array B** 2.7nm,1.1s,baz=52,slow=2.0,SNR=4.3	**134.93**	**349**	PKP		**PKPdf**	**13 33 03.5**	**+0.6**
NB2	**NORSAR Subarra1** comp=Z,8.6nm,1.0s,baz=14,slow=3.3	**145.03**	**352**	PKP		**PKPdf**	**13 33 20.6**	**-0.9**
NOA	**NORSAR Array B**	**145.03**	**352**	PKP		**PKPdf**	**13 33 20.9**	**-0.6**
NOA	**NORSAR Array B** comp=Z,3.2nm,0.8s,baz=18,slow=2.8,SNR=7.2	**145.03**	**352**	PKP		**PKPdf**	**13 33 20.9**	**-0.6**
BRTR	**Keskin Array B**	**150.87**	**305**	PKPbc		**PKPbc**	**13 33 38.1**	**+0.3**
BRTR				PKPab		**PKPab**	**13 33 46.1**	**+0.3**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.6s,baz=87,slow=2.6,SNR=4.6	**150.87**	**305**	PKPbc		**PKPbc**	**13 33 38.1**	**+0.3**
BRTR				PKPab		**PKPab**	**13 33 46.1**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=77,slow=2.3,SNR=7.4							
TORD	**Torodi Ar. Bea**	**166.62**	**177**	PKP		**PKPdf**	**13 33 50.6**	**-0.3**
TORD				PKPab		**PKPab**	**13 34 55.7**	**+1.6**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.6s,baz=346,slow=1.0,SNR=6.1	**166.62**	**177**	PKP		**PKPdf**	**13 33 50.6**	**-0.3**
TORD				PKPab		**PKPab**	**13 34 55.7**	**+1.6**
	comp=Z,1.8nm,0.7s,baz=180,slow=3.5,SNR=11							

NDI 27 13:30:58.8±1.9, 32.89N×75.44E, h10km, ML3.8, 2D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**0.51**	**153**	*e*PKP		Pg

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.54**	**26**	P	Pn	14 05 21.6	+1.2
SPN				S	Sn	14 05 33.5	+1.5
NLC	**Nalytchevo**	**0.58**	**343**	*e*P	Pn	14 05 21.6	+0.9
NLC				*e*S	Sn	14 05 33.7	+1.1
RUS	**Russkaya**	**0.71**	**255**	P	Pn	14 05 22.2	+0.3
RUS				*e*S	Sn	14 05 34.7	+0.1
PET	**Petropavlovsk**	**0.72**	**305**	P	Pn	14 05 22.4	+0.4
PET				*e*S	Sn	14 05 34.8	0.0
UGLR	**Uglovaya**	**0.77**	**321**	P	Pn	14 05 23.5	+0.9
UGLR				*e*S	Sn	14 05 37.0	+1.1
SDLR	**Sedlovina**	**0.80**	**326**	P	Pn	14 05 23.5	+0.5
SDLR				*e*S	Sn	14 05 37.5	+1.0
SMAR	**Somma**	**0.82**	**322**	P	Pn	14 05 23.8	+0.6
SMAR				*e*S	Sn	14 05 37.6	+0.6
AVH	**Avacha**	**0.84**	**320**	P	Pn	14 05 24.3	+1.0
AVH				S	Sn	14 05 38.2	+1.0
KRER	**Koryakskii**	**0.87**	**322**	P	Pn	14 05 24.6	+0.8
KRER				*e*S	Sn	14 05 39.2	+1.3
MTVR	**Mutnovka**	**0.89**	**262**	*e*P	Pn	14 05 24.4	+0.4
MTVR				*e*S	Sn	14 05 38.5	+0.2
KOK	**Koryaka**	**0.90**	**319**	P	Pn	14 05 24.7	+0.7
KOK				S	Sn	14 05 39.6	+1.3
GRL	**Gorelyy**	**0.95**	**267**	P	Pn	14 05 25.6	+1.0
GRL				S	Sn	14 05 40.7	+1.4
ASAK	**Asacha**	**1.08**	**258**	P	Pn	14 05 26.5	+0.5
ASAK				S	Sn	14 05 42.6	+0.8
GNL	**Ganaly**	**1.48**	**317**	P	Pn	14 05 30.5	-0.3
GNL				S	Sn	14 05 49.3	-1.1
APC	**Apacha**	**1.53**	**282**	*e*P	Pn	14 05 31.7	+0.5
APC				*e*S	Sn	14 05 51.0	-0.2
MIPR	**Malaya Ipel'ka**	**1.79**	**260**	*e*P	Pn	14 05 35.0	+0.4
MIPR				S	Sn	14 05 57.2	+0.1
MKZ	**Mys Kozlova**	**2.31**	**32**	*e*P	Pn	14 05 42.1	+0.9
MKZ				*e*S	Sn	14 06 08.7	-0.4
TUMR	**Tumrok**	**2.69**	**6**	P	Pn	14 05 47.8	+1.4
TUMR				S	Sn	14 06 19.8	+1.5
SKR	**Severo-Kuril's**	**2.92**	**230**	S	Sn	14 06 23.0	-0.7
KMNR	**Kamenistaya**	**3.16**	**6**	*e*P	Pn	14 05 54.2	+1.4
ESO	**Esso**	**3.36**	**351**	*e*P	Pn	14 05 55.6	+0.3
BZMR	**Bezymyannaya**	**3.36**	**8**	*e*P	Pn	14 05 57.2	+1.7
KIRR	**Kirishev**	**3.37**	**7**	*e*P	Pn	14 05 57.3	+1.7
KPT	**Kopyto**	**3.37**	**6**	*e*P	Pn	14 05 56.8	+1.2
BZGR	**Bezymyannyi-Gr**	**3.38**	**10**	*e*P	Pn	14 05 57.4	+1.6
BZWR	**Bezymyannyi-We**	**3.39**	**8**	*e*P	Pn	14 05 57.6	+1.7
ZLN	**Zelenaya**	**3.47**	**11**	P	Pn	14 05 58.6	+1.6
KBTR	**Krutoberegovo**	**4.05**	**26**	P	Pn	14 06 05.3	+0.7
KBTR				S	Sn	14 06 48.8	-2.0
SMKR	**Semkarok**	**4.11**	**14**	P	Pn	14 06 06.3	+0.8
SRKR	**Sorokina**	**4.14**	**12**	P	Pn	14 06 06.6	+0.7

*ISCJB **27** 14:11:08.4±0.9, 32°.34S±0°.04×71°.1W±0°.1, h80km±10km, Error ellipse: s-maj=14.6km s-min=5.2km az=167.0*
*NEIC **27** 14:11:08.1, 32°.33S×70°.99W, h82km, MG3.7(GUC), After GUC.*
NEIC Felt [II] at La Ligua.
*GUC **27** 14:11:08.1±0.9, 32°.33S×70°.99W, h82km±6km, ML3.7*

ISC 27 14:11:09.3±1.5, 32°.34S±0°.03×71°.01W±0°.07, h72km±12km, n25, σ0°.55/44, 13C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.49**	**135**	⇑*i*P	**Pn**	**14 11 21.7**	**-0.6**
JACH	**Jahuel**	**0.49**	**135**	⇑*i*P	**Pn**	**14 11 21.7**	**-0.6**
CHNG	**Los Chungos**	**0.62**	**317**	⇑*i*P	**Pn**	**14 11 23.4**	**0.0**
CHNG				*i* S	**Sn**	**14 11 34.6**	**+0.8**
CHNG	**Los Chungos**	**0.62**	**317**	⇑*i*P	**Pn**	**14 11 23.4**	**0.0**
CHNG				*i* S	**Sn**	**14 11 34.6**	**+0.8**
ROCH	**El Roble**	**0.64**	**180**	⇓*i*P	**Pn**	**14 11 23.4**	**-0.5**
ROCH				*i* S	**Sn**	**14 11 34.6**	**0.0**
ROCH				AML	AML	14 11 36.2	
	comp=N,4μm,0.2s						
PEL	**Peldehue**	**0.85**	**162**	⇑*i*P	**Pn**	**14 11 25.8**	**-0.4**
PEL				*i* S	**Sn**	**14 11 38.9**	**+0.3**
PEL				AML	AML	14 11 40.5	
	comp=E,4μm,0.3s						
IHA	**Instituto Hidr**	**0.87**	**218**	⇓*i*P	**Pn**	**14 11 26.0**	**-0.3**
IHA				*e*S	**Sn**	**14 11 38.8**	**-0.2**
IHA	**Instituto Hidr**	**0.87**	**218**	⇓*i*P	**Pn**	**14 11 26.0**	**-0.3**
IHA				*e*S	**Sn**	**14 11 38.8**	**-0.2**
CLCH	**Cerro Calan**	**1.13**	**160**	⇓*i*P	**Pn**	**14 11 29.3**	**-0.3**
CLCH				*i* S	**Sn**	**14 11 45.5**	**+0.8**
CLCH				AML	AML	14 11 46.5	
	comp=E,2μm,0.7s						
SAN	**Santiago**	**1.15**	**166**	*e*P	**Pn**	**14 11 29.7**	**-0.2**
SAN				*i* S	**Sn**	**14 11 45.5**	**+0.3**
SAN	**Santiago**	**1.15**	**166**	*e*P	**Pn**	**14 11 29.7**	**-0.2**
SAN				*i* S	**Sn**	**14 11 45.5**	**+0.3**
ANTU	**Antumapu**	**1.27**	**166**	⇑*i*P	**Pn**	**14 11 31.1**	**-0.2**
ANTU				*i* S	**Sn**	**14 11 48.4**	**+0.5**
ANTU	**Antumapu**	**1.27**	**166**	⇑*i*P	**Pn**	**14 11 31.1**	**-0.2**
ANTU				*i* S	**Sn**	**14 11 48.4**	**+0.5**
ANTU				AML	AML	14 11 49.3	
	comp=E,3μm,0.4s						
TACH	**Talagante**	**1.31**	**178**	⇑*i*P	**Pn**	**14 11 31.5**	**-0.5**
TACH				*i* S	**Sn**	**14 11 49.1**	**+0.2**
TACH	**Talagante**	**1.31**	**178**	⇑*i*P	**Pn**	**14 11 31.5**	**-0.5**
TACH				*i* S	**Sn**	**14 11 49.1**	**+0.2**
PCH	**Pirque**	**1.35**	**162**	*e*P	**Pn**	**14 11 31.7**	**-0.7**
PCH				*i* S	**Sn**	**14 11 50.1**	**+0.3**
PCH	**Pirque**	**1.35**	**162**	*e*P	**Pn**	**14 11 31.7**	**-0.7**
PCH				*i* S	**Sn**	**14 11 50.1**	**+0.3**
CHCH	**Chadas Angostu**	**1.62**	**170**	⇑*i*P	**Pn**	**14 11 35.6**	**-0.4**
CHCH	**Chadas Angostu**	**1.62**	**170**	⇑*i*P	**Pn**	**14 11 35.6**	**-0.4**
LNV	**Longovilo**	**1.65**	**192**	*e*P	**Pn**	**14 11 35.5**	**-0.8**
LNV	**Longovilo**	**1.65**	**192**	*e*P	**Pn**	**14 11 35.5**	**-0.8**
CACH	**El Canelo**	**1.81**	**169**	⇑*i*P	**Pn**	**14 11 38.7**	**+0.2**
CACH				*e*S	**Sn**	**14 12 02.1**	**+1.4**
CACH	**El Canelo**	**1.81**	**169**	⇑*i*P	**Pn**	**14 11 38.7**	**+0.2**
CACH				*e*S	**Sn**	**14 12 02.1**	**+1.4**
TLL	**Tololo Astrono**	**2.17**	**5**	⇓*i*P	**Pn**	**14 11 42.9**	**-0.6**
TLL				*e*S	**Sn**	**14 12 09.8**	**+0.2**
TLL	**Tololo Astrono**	**2.17**	**5**	⇓*i*P	**Pn**	**14 11 42.9**	**-0.6**
TLL				*e*S	**Sn**	**14 12 09.8**	**+0.2**

*ISCJB **27** 14:39:10.1±0.9, 70°.48N±0°.05×23°.1E±0°.1, h0km, Error ellipse: s-maj=7.8km s-min=6.8km az=150.1*
*CSEM **27** 14:39:11.9±0.2, 70°.43N×23°.10E, h2km, ML1.5, Error ellipse: s-maj=4.7km s-min=4.1km az=16.0, Mining explosion.*
*NAO **27** 14:39:12.3±1.0, 70°.40N×23°.06E, ML2.1*
*BER **27** 14:39:13.5±2.7, 70°.40N×23°.09E, h0km, ML1.5, ML2.1(NAO), Explosion*
*HEL **27** 14:39:13.2±0.4, 70°.39N×23°.02E, h0km, ML1.7, Explosion*

ISC 27 14:39:10.7±0.9, 70°.50N±0°.05×23°.01E±0°.05, h0km, n27, σ1°23/42, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARA0	**ARCESS Array S**	**1.29**	**137**	Pg	**Pg**	**14 39 34.8**	**-0.5**
	baz=310,slow=16						
ARA0				Lg	Lg	14 39 51.3	
	baz=319,slow=28						
ARA0				Rg	Rg	14 39 55.4	
	baz=308,slow=22						
ARA0	**ARCESS Array S**	**1.29**	**137**	Pg	**Pg**	**14 39 34.8**	**-0.5**
	baz=310,slow=16						
ARA0				Lg	Lg	14 39 51.3	
	baz=319,slow=28						
ARA0				Rg	Rg	14 39 55.4	
	baz=308,slow=22						
ARA0	**ARCESS Array S**	**1.29**	**137**	*e*P	**Pg**	**14 39 34.8**	**-0.5**
ARA0	**ARCESS Array S**	**1.29**	**137**	P	**Pg**	**14 39 34.8**	**-0.5**
ARA0				Lg	Lg	14 39 51.3	
	baz=319,slow=25						
KTK1	**Kautokeino**	**1.49**	**177**	*e*P	**Pn**	**14 39 38.3**	**-0.4**
KTK1				*e*S	**Sg**	**14 39 57.3**	**-1.2**
KTK1				AML	AML	14 40 04.7	
	comp=Z,15nm,0.2s						
KTK1	**Kautokeino**	**1.49**	**177**	*e*P	**Pn**	**14 39 38.3**	**-0.4**
	SNR=50						
KTK1				*e*S	**Sg**	**14 39 57.3**	**-1.2**
	comp=Z,15nm,0.2s,SNR=50						
KEV	**Kevo**	**1.56**	**117**	*e*PG	**Pb**	**14 39 40.6**	**+0.4**
KEV				*e*SN	**Sg**	**14 40 01.3**	**+0.8**
KEV				MSG		14 40 01.3	
	comp=Z,6.1nm,0.4s						
KEV	**Kevo**	**1.56**	**117**	Pg	**Pb**	**14 39 40.6**	**+0.4**
KEV				Sn	**Sg**	**14 40 01.3**	**+0.8**
TRO	**Tromso**	**1.65**	**240**	*e*P	**Pn**	**14 39 41.8**	**+1.0**
TRO				AML	AML	14 40 04.7	
	comp=Z,5.7nm,0.1s						
TRO	**Tromso**	**1.65**	**240**	*e*P	**Pn**	**14 39 41.8**	**+1.0**
	SNR=50						
KIF	**Kilpisjarvi**	**1.68**	**208**	*e*P	**Pn**	**14 39 40.6**	**-0.7**
KIF				*e*SN	**Sn**	**14 40 03.4**	**-0.1**
KIF				MSG		14 40 03.4	
	comp=Z,5.9nm,0.4s						
KIF	**Kilpisjarvi**	**1.68**	**208**	P	**Pn**	**14 39 40.6**	**-0.7**
KIF				Sn	**Sn**	**14 40 03.4**	**-0.1**
HEF	**Hetta**	**2.11**	**173**	*e*PB	**Pn**	**14 39 48.4**	**+1.3**
HEF				*e*SG	**Sn**	**14 40 14.6**	**+0.6**
HEF	**Hetta**	**2.11**	**173**	Pb	**Pn**	**14 39 48.4**	**+1.3**
HEF				Sg	**Sn**	**14 40 14.6**	**+0.6**
LANU	**Lannavaara**	**2.48**	**189**	*e*P	**Pn**	**14 39 53.4**	**+1.0**
LANU				*e*S	**Sn**	**14 40 23.4**	**+0.1**
LANU				*e*RG	Rg	14 40 43.5	
LANU	**Lannavaara**	**2.48**	**189**	P	**Pn**	**14 39 53.3**	**+1.0**
LANU				S	**Sn**	**14 40 23.4**	**+0.1**
RNF	**Rovaniemi**	**4.06**	**163**	*e*P	**Pn**	**14 40 15.0**	**+1.1**
RNF	**Rovaniemi**	**4.06**	**163**	P	**Pn**	**14 40 15.0**	**+1.1**
APA0	**Apatity Array**	**4.61**	**124**	Pn	**Pn**	**14 40 21.9**	**+0.5**
	baz=307,slow=14						
APA0				Sn	**Sn**	**14 41 13.4**	**-2.1**
	baz=315,slow=28						
APA0	**Apatity Array**	**4.61**	**124**	Pn	**Pn**	**14 40 21.9**	**+0.5**
	baz=307,slow=14						
APA0				Sn	**Sn**	**14 41 13.4**	**-2.1**
	baz=315,slow=28						
APA0	**Apatity Array**	**4.61**	**124**	Pn	**Pn**	**14 40 21.9**	**+0.5**
	baz=307,slow=12,SNR=50						
APA0				Sn	**Sn**	**14 41 13.4**	**-2.1**
	baz=315,slow=28,SNR=50						
SPA0	**Spitsbergen Ar**	**7.92**	**350**	Pn	**Pn**	**14 41 09.1**	**+2.2**
	baz=155,slow=18						
SPA0				Sn	**Sn**	**14 42 34.6**	**-2.5**
	baz=168,slow=22						
SPA0	**Spitsbergen Ar**	**7.92**	**350**	Pn	**Pn**	**14 41 09.1**	**+2.2**
	baz=155,slow=18						
SPA0				Sn	**Sn**	**14 42 34.6**	**-2.5**
	baz=168,slow=22						
SPA0	**Spitsbergen Ar**	**7.92**	**350**	Pn	**Pn**	**14 41 09.1**	**+2.2**
	baz=155,slow=17,SNR=50						
FIA0	**FINESS Array S**	**9.18**	**171**	Pn	**Pn**	**14 41 24.6**	**+0.5**
FIA0	**FINESS Array S**	**9.18**	**171**	Pn	**Pn**	**14 41 24.6**	**+0.5**
FIA0	**FINESS Array S**	**9.18**	**171**	Pn	**Pn**	**14 41 24.5**	**+0.5**
	SNR=50						

*IDC **27** 14:40:42.7±5.6, 37°.01N×72°.02E, h97km±40km, mb3.4/5, mb1 3.6/9, mb1mx3.3/30, mbtmp3.5/9, Error ellipse: s-maj=52.0km s-min=29.6km az=149.0*
*ISCJB **27** 14:40:43.8±0.4, 37°.08N±0°.03×72°.20E±0°.08, h142km, mb3.5/5, Error ellipse: s-maj=9.4km s-min=4.3km az=166.6*
*NNC **27** 14:40:43.5±4.6, 37°.49N×71°.02E, h0km, mb3.8, mpv3.8, Error ellipse: s-maj=46.2km s-min=31.6km az=42.0*

ISC 27 14:40:44.6±0.7, 37°.07N±0°.05×72°.2E±0°.1, h142km, n39, σ1°44/36, mb3.3/5, 10C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.25**	**184**	P	**Pn**	**14 41 36.3**	**+1.3**
CEP				S	**Sn**	**14 42 11.0**	**-2.9**
CHCP	**Chirah Chowk**	**3.53**	**165**	⇑P	**Pn**	**14 41 40.8**	**+2.3**
THW	**Thamme Wali**	**4.28**	**185**	P	**Pn**	**14 41 48.9**	**+0.5**
AML	**Almayashu**	**5.19**	**13**	P	**Pn**	**14 42 00.5**	**-0.1**
	SNR=22						
UCH	**Uchtor**	**5.46**	**19**	P	**Sn**	**14 43 04.4**	**-2.1**
	SNR=6.5						
KZA	**Kyzart**	**5.54**	**25**	P	**Pn**	**14 42 06.2**	**+0.9**
	SNR=5.0						
EKS2	**Erkin-Say**	**5.72**	**12**	P	**Pn**	**14 42 08.2**	**+0.7**
	SNR=8.4						
AAK	**Ala-Archa**	**5.84**	**17**	P	**Pn**	**14 42 10.6**	**+1.5**
	SNR=8.4						
AAK	**Ala-Archa**	**5.84**	**17**	P	**Pn**	**14 42 09.8**	**+0.7**
	2.2nm,0.3s,baz=168,slow=6.0,SNR=16						
AAK				S	**Sn**	**14 43 13.7**	**-1.4**
	1.1nm,0.3s,baz=344,slow=20,SNR=18						
KK31	**Karatay Array**	**6.15**	**349**	⇑P	**Pn**	**14 42 11.4**	**-1.8**
	7.0nm,0.3s,baz=169,slow=11,SNR=129						
KK31				⇑S	Sn	14 43 15.4	-7.1
	12nm,0.5s,baz=171,slow=22,SNR=16						
TKM2	**Tokmak 2**	**6.41**	**23**	⇑P	Pn	14 42 19.2	+2.4
	3.2nm,0.7s						
TKM2	**Tokmak 2**	**6.41**	**23**	P	**Pn**	**14 42 18.5**	**+1.7**
	SNR=6.2						
MKAR	**Makanchi Array**	**12.29**	**35**	P	**Pn**	**14 43 35.2**	**+0.5**
	0.1nm,0.3s,baz=223,slow=12,SNR=5.0						
DANN	**Dangsing**	**13.07**	**128**	*e*P	**Pn**	**14 43 44.6**	**-0.7**
	11nm,0.3s						
DANN				*e*S	Sn	14 45 59.9	-10
KOLN	**Koldanda**	**13.39**	**131**	*e*P	**Pn**	**14 43 48.5**	**-0.7**
	12nm,0.4s						
KURBB	**Kurchatov Arra**	**14.30**	**17**	P	**Pn**	**14 43 58.3**	**-2.0**
	0.0nm,0.3s,baz=204,slow=11,SNR=2.8						
KUR15	**Kurchatov Arra**	**14.30**	**17**	⇑P	**P**	**14 44 05.4**	**+2.1**
	0.1nm,0.7s						
KURK	**Kurchatov**	**14.40**	**17**	⇑P	**P**	**14 44 06.5**	**+2.0**
	2.3nm,0.8s						
KKN	**Kakani**	**14.43**	**126**	*e*P	**Pn**	**14 44 01.0**	**-1.4**
	11nm,0.5s						
PKIN	**Phulchoki**	**14.65**	**126**	*e*P	**Pn**	**14 44 03.9**	**-1.3**
	5.8nm,0.3s						
PKI	**Pulchoki**	**14.66**	**126**	*e*P	**Pn**	**14 44 04.4**	**-1.1**
	8.0nm,0.4s						
GUN	**Gumba**	**14.74**	**124**	*e*P	**Pn**	**14 44 05.5**	**-0.9**
	10nm,0.3s						
AB31	**Akbulak array**	**15.06**	**328**	⇑P	**Pn**	**14 44 07.5**	**-2.4**
	0.5nm,0.3s,baz=3.9,slow=27,SNR=19						
AB31				⇓S	Sn	14 46 41.8	-15
	1.0nm,0.5s,baz=156,slow=22,SNR=12						
VOSK	**Vostochnaya**	**15.67**	**357**	⇓P	**Pn**	**14 44 15.7**	**-1.7**
	1.0nm,0.4s						
RAMN	**Ramite**	**15.86**	**125**	*e*P	**Pn**	**14 44 19.8**	**-0.4**
	8.1nm,0.6s						
RAMN				*e*S	Sn	14 47 06.7	-10
BVA0	**Borovoye Array**	**16.00**	**356**	⇓P	**P**	**14 44 23.3**	**+1.2**
	0.5nm,1.0s,baz=161,slow=11,SNR=12						
BVAR	**Borovoye Array**	**16.00**	**356**	P	**Pn**	**14 44 20.2**	**-1.3**
	0.2nm,0.3s,baz=161,slow=12,SNR=3.8						
ZRNK	**Zerenda**	**16.03**	**353**	⇑P	**P**	**14 44 21.5**	**-1.0**
	1.8nm,0.6s						
BRVK	**Borovoye**	**16.04**	**356**	⇓P	**P**	**14 44 22.1**	**-0.4**
	5.9nm,0.9s						
TAPN	**Taplejung**	**16.33**	**122**	*e*P	**Pn**	**14 44 25.8**	**-0.3**
ODAN	**Odare**	**16.44**	**124**	*e*P	**P**	**14 44 27.5**	**0.0**
	9.0.5s						
AKTO	**Aktyubinsk**	**16.77**	**327**	⇑P	**Pn**	**14 44 30.8**	**-0.1**
	0.5nm,0.4s						
AKTO				⇑S	S	14 47 24.9	-13
	0.6nm,1.2s						
AKTO	**Aktyubinsk**	**16.77**	**327**	P	**Pn**	**14 44 31.9**	**+1.0**
	1.5nm,0.3s,baz=132,slow=10,SNR=15						
ZALV	**Zalesovo Beam**	**19.02**	**23**	P	**Pn**	**14 44 58.0**	**+0.5**
	0.5nm,0.3s,baz=216,slow=11,SNR=8.9						
FINES	**FINESS Array B**	**37.53**	**325**	P	P	14 47 46.9	+2.4
	4.7nm,1.0s,baz=120,slow=8.2,SNR=3.4						
ARCES	**ARCESS Array B**	**40.97**	**337**	P	P	14 48 15.9	+3.0
	1.7nm,0.8s,baz=114,slow=8.6,SNR=8.3						
TORD	**Torodi Ar. Bea**	**66.65**	**269**	P	**P**	**14 51 21.8**	**+1.5**
	0.4nm,0.9s,baz=54,slow=5.0,SNR=5.1						
ILAR	**Eielson Array**	**73.97**	**16**	P	P	14 52 07.3	+3.4
	0.5nm,0.9s,baz=319,slow=4.0,SNR=4.5						
YKA	**Yellowknife Ar**	**80.63**	**3**	P	P	14 52 45.0	+4.1
	0.3nm,0.6s,baz=349,slow=5.6,SNR=5.4						

WEL 27 14:50:43.8±0.4, 38°.52S×175°.66E, h172km±3km, ML3.8/16, 15C-2D, Error ellipse: s-maj=2.0km s-min=1.9km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.58**	**197**	PN	Pn	14 51 07.9	-0.2
WTVZ	**West Tongariro**	**0.60**	**185**	PN	Pn	14 51 08.1	0.0
WTVZ				SN	Sn	14 51 26.6	-0.6
OTVZ	**Oturere**	**0.64**	**180**	PN	Pn	14 51 08.7	+0.2
OTVZ				SN	Sn	14 51 27.2	-0.4
NGZ	**Ngauruhoe**	**0.66**	**184**	PN	Pn	14 51 08.5	-0.1
WPVZ	**Whakapapa**	**0.69**	**187**	PN	Pn	14 51 08.7	0.0
FWVZ	**Far West T-bar**	**0.74**	**186**	PN	Pn	14 51 08.9	-0.2
TUVZ	**Tukino**	**0.75**	**180**	PN	Pn	14 51 09.1	0.0
TUVZ				SN	Sn	14 51 27.7	-1.0
DRZ	**Dome Shelter**	**0.76**	**186**	PN	Pn	14 51 09.7	+0.4
TRVZ	**Turoa**	**0.78**	**186**	⇑PN	Pn	14 51 09.3	-0.1
TRVZ				SN	Sn	14 51 28.0	-1.3
TOZ	**Tahuroa Road**	**0.80**	**351**	⇓PN	Pn	14 51 09.4	+0.2
WNVZ	**Wahianoa**	**0.81**	**183**	⇑PN	Pn	14 51 09.5	0.0
MOVZ	**Moawhango**	**0.89**	**175**	⇑PN	Pn	14 51 09.6	-0.3
BKZ	**Black Stump Fm**	**0.92**	**135**	⇑PN	Pn	14 51 09.9	-0.1
VRZ	**Vera Road**	**0.93**	**229**	PN	Pn	14 51 10.1	0.0
BHHZ	**Black Hill Sta**	**1.02**	**162**	⇑PN	Pn	14 51 10.5	-0.3
NMHZ	**Naumai**	**1.07**	**123**	PN	Pn	14 51 12.0	+0.8
URZ	**Urewera**	**1.17**	**78**	PN	Pn	14 51 11.4	-0.6
URZ				SN	Sn	14 51 32.0	-1.7
RAHZ	**Arahi**	**1.19**	**110**	PN	Pn	14 51 12.5	+0.4
MCHZ	**McNeill Hill**	**1.23**	**139**	PN	Pn	14 51 13.2	+0.7
WAZ	**Wanganui**	**1.34**	**203**	PN	Pn	14 51 13.3	-0.2
NEZ	**North Egmont**	**1.43**	**238**	PN	Pn	14 51 14.7	+0.2
PNHZ	**Pukenui**	**1.45**	**163**	⇑PN	Pn	14 51 14.3	-0.3
PKE	**Pukeiti**	**1.47**	**242**	PN	Pn	14 51 14.7	-0.1
MWZ	**Matawai**	**1.48**	**83**	PN	Pn	14 51 14.5	-0.4
NRZ	**Ngariki Road**	**1.57**	**238**	PN	Pn	14 51 15.6	-0.2
CKHZ	**Cape Kidnapper**	**1.58**	**136**	PN	Pn	14 51 16.2	+0.4
KAHZ	**Kahuranaki**	**1.59**	**144**	⇑PN	Pn	14 51 16.1	+0.2
KNZ	**Kokohu**	**1.65**	**108**	PN	Pn	14 51 16.6	+0.1
WPHZ	**Waipukurau**	**1.66**	**159**	⇑PN	Pn	14 51 16.3	-0.3
PXZ	**Pawanui**	**1.77**	**149**	PN	Pn	14 51 17.5	-0.3
DVHZ	**Dannevirke**	**1.82**	**168**	⇑PN	Pn	14 51 17.4	-0.9
MHGZ	**Mahia Peninsul**	**1.87**	**111**	PN	Pn	14 51 19.0	+0.2
POWZ	**Post Office Ro**	**1.87**	**177**	PN	Pn	14 51 17.9	-1.0
PRHZ	**Porangahau**	**1.90**	**157**	PN	Pn	14 51 18.7	-0.4
PUZ	**Puketiti**	**2.09**	**78**	PN	Pn	14 51 21.1	-0.2
MRZ	**Mangatainoka R**	**2.14**	**182**	⇑PN	Pn	14 51 20.4	-1.4
BFZ	**Birch Farm**	**2.21**	**168**	⇓PN	Pn	14 51 21.4	-1.1
TIWZ	**Tintock**	**2.26**	**176**	PN	Pn	14 51 21.9	-1.3
OGWZ	**Otaki Gorge**	**2.33**	**189**	PN	Pn	14 51 22.5	-1.4
HOWZ	**Holdsworth Sta**	**2.38**	**183**	⇑PN	Pn	14 51 22.8	-1.7
KIW	**Kapiti Island**	**2.41**	**194**	⇑PN	Pn	14 51 23.1	-1.8
TMWZ	**Te Maipa**	**2.59**	**176**	PN	Pn	14 51 25.3	-1.8
CAW	**Cannon Point**	**2.62**	**190**	PN	Pn	14 51 25.5	-1.9
DUWZ	**D'Urville Isla**	**2.65**	**210**	PN	Pn	14 51 25.7	-2.0
WEL	**Wellington**	**2.85**	**194**	PN	Pn	14 51 28.0	-2.1
TRWZ	**Traveller**	**2.88**	**180**	PN	Pn	14 51 28.4	-2.1
SNZO	**South Karori**	**2.88**	**194**	PN	Pn	14 51 28.1	-2.3
TCW	**Tory Channel**	**2.89**	**201**	PN	Pn	14 51 28.5	-2.2
MSWZ	**Moikau Station**	**2.91**	**186**	⇑PN	Pn	14 51 28.5	-2.3
BHW	**Baring Head**	**2.95**	**192**	⇑PN	Pn	14 51 28.9	-2.4
PLWZ	**Palliser**	**3.06**	**186**	PN	Pn	14 51 30.1	-2.6
TUWZ	**Tuamarina**	**3.19**	**204**	PN	Pn	14 51 32.0	-2.3
NNZ	**Nelson**	**3.21**	**212**	PN	Pn	14 51 31.7	-2.9
QRZ	**Quartz Range**	**3.34**	**225**	PN	Pn	14 51 32.8	-3.4
BSWZ	**Blackbirch Sta**	**3.47**	**203**	PN	Pn	14 51 35.3	-2.6
THZ	**Tophouse**	**3.87**	**212**	PN	Pn	14 51 39.7	-3.2
KHZ	**Kahutara**	**4.21**	**202**	⇑PN	Pn	14 51 44.5	-2.8
LTZ	**Lake Taylor**	**4.98**	**210**	PN	Pn	14 51 53.4	-3.8

*ISCJB **27** 15:09:43.8±0.6, 37°.78N±0°.03×27°.35E±0°.06, h11km±7km, Error ellipse: s-maj=8.3km s-min=4.3km az=159.2*
*ISK **27** 15:09:43.7, 37°.80N×27°.45E, h8km, MD2.8*
*DDA **27** 15:09:44.0, 37°.73N×27°.33E, h7km, MD2.7*
*CSEM **27** 15:09:43.9±0.2, 37°.79N×27°.36E, h10km, MD2.7, Error ellipse: s-maj=7.3km s-min=4.0km az=66.0*

ISC 27 15:09:43.8±0.9, 37°.79N±0°.03×27°.34E±0°.04, h9km±9km, n20, σ0°78/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.12**	**224**	*i* P	**Pg**	**15 09 46.5**	**0.0**
GCAM				*i* S	**Sg**	**15 09 48.5**	**+0.1**
GCAM	**G?zelcaml?**

NSSC ***27*** *15:28:11.2±2.7, 37°52N×39°07E, h0km±26km, MD1.6, ML2.7*
DDA ***27*** *15:28:11.9, 37°51N×38°58E, h7km, ML3.4*
ISK ***27*** *15:28:11.3, 37°54N×38°56E, h4km, MD3.0*
CSEM ***27*** *15:28:12.1±0.3, 37°45N×38°68E, h20km, MD3.0*

ISC 27 15:28:11.9±0.8, 37°49N±0°03×38°58E±0°02, h16km±6km, n31, σ0§94/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.19**	**104**	*e*PG		**Pg**	**15 28 16.5**	**-0.2**
URFA				*e*SG		**Sg**	**15 28 20.6**	**+0.7**
URFA	**Urfa**	**0.19**	**104**	*e*Pg		**Pg**	**15 28 16.5**	**-0.2**
URFA				*e*Sg		**Sg**	**15 28 20.6**	**+0.7**
ATAB	**Bozova**	**0.23**	**265**	*i* Pg		**Pg**	**15 28 17.2**	**0.0**
ATAB				*i* Sg		**Sg**	**15 28 20.7**	**-0.1**
MYA	**Malataya**	**0.84**	**351**	*e*PG		**Pb**	**15 28 27.4**	**-0.9**
MYA				*e*SG		**Sb**	**15 28 38.6**	**-0.8**
MYA	**Malataya**	**0.84**	**351**	*e*Pg		**Pb**	**15 28 27.4**	**-0.9**
AKCD	**Akcadag**	**0.96**	**327**	*e*P		**Pn**	**15 28 30.9**	**+0.1**
AKCD				*e*S		**Sb**	**15 28 43.0**	**+0.3**
AKCD	**Akcadag**	**0.96**	**327**	*e*P		**Pn**	**15 28 30.9**	**+0.1**
AKCD				*e*S		**Sb**	**15 28 43.0**	**+0.3**
ELZG	**Elazig**	**1.06**	**17**	*e*P		**Pn**	15 28 32.1	-0.1
ELZG				*e*S		**Sn**	**15 28 47.7**	**+1.1**
ELZG	**Elazig**	**1.06**	**17**	*e*P		**Pn**	15 28 32.1	-0.1
ELZG				*e*S		**Sn**	**15 28 47.7**	**+1.1**
SVRC	**Sivrice-ELAZID**	**1.06**	**33**	*e*PG		**Pb**	**15 28 31.6**	**-0.3**
SVRC				*e*SG		**Sb**	**15 28 46.5**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.06**	**33**	*e*Pg		**Pb**	**15 28 31.6**	**-0.3**
SVRC				*e*Sg		**Sb**	**15 28 46.5**	**+1.0**
GAZ	**Gaziantep**	**1.14**	**254**	*e*PN		**Pn**	**15 28 33.7**	**+0.5**
GAZ	**Gaziantep**	**1.14**	**254**	*e*Pn		**Pn**	**15 28 33.7**	**+0.5**
KMRS	**Kahramanmaras**	**1.34**	**271**	*e*PN		**Pb**	**15 28 36.5**	**-0.1**
KMRS	**Kahramanmaras**	**1.34**	**271**	*e*Pn		**Pb**	**15 28 36.5**	**-0.1**
AYKD	**Aykdinkavak**	**1.42**	**268**	*i* P		**Pg**	**15 28 37.9**	**-1.3**
AYKD				*i* S		**Sb**	**15 28 55.8**	**0.0**
SFNV	**Sufian**	**1.62**	**131**	*e*P		Pn	15 28 34.8	-5.1
SFNV				*e*S		Sn	15 28 55.9	-4.7
SFNV					AML	AML	15 28 59.8	
	comp=E,238nm,0.4s							
SFNV					AML	AML	15 29 00.8	
	comp=N,248nm,0.4s							
SFNV	**Sufian** SNR=57	**1.62**	**131**	*e*P		Pn	15 28 34.8	-5.1
SFNV				*e*S		Sn	15 28 55.8	-4.7
	comp=N,248nm,0.4s,SNR=49							
KBSD	**Kabsdagh**	**1.64**	**107**	*e*P		Pn	15 28 35.0	-5.0
KBSD				*e*S		Sn	15 28 54.2	-6.5
KBSD					AML	AML	15 29 00.1	
	comp=E,109nm,0.4s							
KBSD					AML	AML	15 29 02.5	
	comp=N,234nm,0.6s							
KBSD	**Kabsdagh** SNR=57	**1.64**	**107**	*e*P		Pn	15 28 35.0	-5.0
KBSD				*e*S		Sn	15 28 54.2	-6.5
	comp=N,234nm,0.6s,SNR=49							
ANDN	**Andirin**	**1.78**	**274**	*e*P		**Pn**	**15 28 42.9**	**+0.8**
ANDN				*e*S		**Sn**	**15 29 05.4**	**+0.9**
ANDN	**Andirin**	**1.78**	**274**	*e*P		**Pn**	**15 28 42.9**	**+0.8**
ANDN				*e*S		**Sn**	**15 29 05.4**	**+0.9**
JHLN	**Al Jahlan**	**1.82**	**184**	*e*P		**Pg**	**15 28 46.4**	**-0.4**
JHLN				*e*S		**Sb**	**15 29 09.7**	**+2.5**
JHLN					AML	AML	15 29 11.8	
	comp=E,165nm,0.4s							
JHLN					AML	AML	15 29 14.1	
	comp=N,138nm,0.5s							
SARI	**SarD1z-Kayseri**	**1.94**	**299**	*e*PN		**Pb**	**15 28 45.9**	**-1.1**
SARI	**SarD1z-Kayseri**	**1.94**	**299**	*e*Pn		**Pb**	**15 28 45.9**	**-1.1**
KOZT	**Kozan**	**2.19**	**271**	*e*PN		**Pb**	**15 28 49.8**	**-1.4**
KOZT	**Kozan**	**2.19**	**271**	*e*Pn		**Pb**	**15 28 49.8**	**-1.4**
MZRK	**Al-Mazaregh**	**2.35**	**134**	*e*P		**Pn**	**15 28 47.9**	**-1.9**
MZRK				*e*S		Sn	15 29 14.4	-3.9
MZRK					AML	AML	15 29 32.6	
	comp=E,84nm,0.3s							
MZRK					AML	AML	15 29 33.5	
	comp=N,114nm,0.4s							
MZRK	**Al-Mazaregh** SNR=45	**2.35**	**134**	*e*P		**Pn**	**15 28 47.9**	**-1.9**
MZRK				*e*S		Sn	15 29 14.4	-3.9
	comp=N,114nm,0.4s,SNR=40							
BTMT	**Batman**	**2.40**	**72**	*e*PN		**Pn**	**15 28 50.3**	**-0.3**
BTMT	**Batman**	**2.40**	**72**	*e*Pn		**Pn**	**15 28 50.3**	**-0.3**

ISK ***27*** *16:05:34.7, 41°49N×36°05E, h8km, MD2.6*
ISCJB ***27*** *16:05:37.3±1.0, 41°38N±0°05×35°87E±0°07, h12km, Error ellipse: s-maj=9.6km s-min=4.9km az=139.5*
CSEM ***27*** *16:05:37.5±0.4, 41°35N×35°84E, h5km, MD2.6, Error ellipse: s-maj=9.7km s-min=4.5km az=40.0*
DDA ***27*** *16:05:41.1, 40°92N×35°82E, h6km, MD2.6*

ISC 27 16:05:36.8±1.2, 41°36N±0°04×35°86E±0°04, h12km, n16, σ0§40/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HAVZ	**Havza**	**0.31**	**200**	*i* P		**Pg**	**16 05 43.7**	**+0.6**
HAVZ				*i* S		**Sb**	**16 05 48.6**	**-0.7**
HAVZ	**Havza**	**0.31**	**200**	*i* P		**Pg**	**16 05 43.7**	**+0.6**
HAVZ				*i* S		**Sb**	**16 05 48.6**	**-0.7**
KVT	**Kavak**	**0.32**	**153**	*e*PG		**Pg**	**16 05 43.1**	**-0.2**
KVT				*e*SG		**Sb**	**16 05 49.2**	**-0.4**
KVT	**Kavak**	**0.32**	**153**	*e*Pg		**Pg**	**16 05 43.1**	**-0.2**
KVT				*e*Sg		**Sb**	**16 05 49.2**	**-0.4**
DIKM	**Dikmen**	**0.53**	**302**	*e*PG		**Pg**	**16 05 47.0**	**-0.3**
DIKM				*e*SG		**Sb**	**16 05 56.1**	**+0.3**
DIKM	**Dikmen**	**0.53**	**302**	*e*Pg		**Pg**	**16 05 47.0**	**-0.3**
DIKM				*e*Sg		**Sb**	**16 05 56.1**	**+0.3**
BYBT	**Boyabat**	**0.83**	**278**	*e*PG		**Pg**	**16 05 53.1**	**+0.2**
BYBT	**Boyabat**	**0.83**	**278**	*e*Pg		**Pg**	**16 05 53.1**	**+0.2**
ERBA	**Erbaa**	**0.96**	**135**	*i* P		**Pb**	**16 05 55.9**	**+0.4**
ERBA	**Erbaa**	**0.96**	**135**	*i* P		**Pb**	**16 05 55.9**	**+0.4**
CTKT	**Corum**	**1.10**	**228**	*i* P		**Pb**	**16 05 57.5**	**-0.3**
CTKT				*i* S		**Sb**	**16 06 12.0**	**-0.2**
CTKT	**Corum**	**1.10**	**228**	*i* P		**Pb**	**16 05 57.6**	**-0.3**
CTKT				*i* S		**Sb**	**16 06 12.0**	**-0.2**
CORM	**Corum**	**1.51**	**219**	*e*PN		**Pb**	**16 06 05.2**	**+0.4**
CORM	**Corum**	**1.51**	**219**	*e*Pn		**Pb**	**16 06 05.2**	**+0.4**
BALT	**Daday**	**1.87**	**276**	*i* P		**Pb**	**16 06 11.0**	**0.0**
BALT	**Daday**	**1.87**	**276**	*i* P		**Pb**	**16 06 11.0**	**0.0**

IDC 27 16:31:41.1±2.2, 6°63S×129°72E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.3/20, mbtmp3.2/4, ML2.9/2, Error ellipse: s-maj=90.4km s-min=28.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.07**	**199**	Pn		Pn	16 34 35.0	+0.5
	0.1nm,0.3s,baz=26,slow=11,SNR=8.1							
FITZ				Sn		Sn	16 36 37.4	-13
	0.1nm,0.3s,baz=49,slow=20,SNR=3.3							
WRA	**Warramunga Arr**	**13.97**	**162**	Pn		Pn	16 35 00.1	-0.4
	0.1nm,0.3s,baz=344,slow=13,SNR=5.3							
WRA				Sn		Sn	16 37 21.4	-15
	0.2nm,0.3s,baz=326,slow=23,SNR=7.8							
ASAR	**Alice Springs**	**17.41**	**167**	P		Pn	16 35 45.4	-0.1
	0.0nm,0.3s,baz=340,slow=9.1,SNR=5.9							
MKAR	**Makanchi Array**	**67.77**	**327**	P		P	16 42 40.7	0.0
	0.1nm,0.5s,baz=134,slow=8.2,SNR=3.4							

SKO ***27*** *16:39:21.0, 41°30N×22°72E, h15km, M1.4, ML1.8*
SOF ***27*** *16:39:21.8, 41°29N×22°72E, h10km, MD2.6*
ATH ***27*** *16:39:22.3, 41°30N×22°72E, h5km±2km, MD3.0/3*
CSEM ***27*** *16:39:22.5±0.1, 41°27N×22°74E, h2km, ML1.8, Error ellipse: s-maj=2.9km s-min=2.3km az=72.0*
THE ***27*** *16:39:22.6, 41°28N×22°72E, h1km±1km, ML2.2/4, Error ellipse: s-maj=1.5km s-min=0.4km az=194.0*
ISCJB ***27*** *16:39:22.3±0.5, 41°27N±0°02×22°73E±0°03, h1km±4km, Error ellipse: s-maj=3.9km s-min=3.3km az=152.4*
BEO ***27*** *16:39:23.4±1.4, 41°26N×22°66E, h1km±3km, ML1.8/4*

ISC 27 16:39:22.5±0.9, 41°29N±0°02×22°72E±0°02, h5km±8km, n45, σ0§46/71, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**286**	P		**Pg**	**16 39 24.7**	**-0.2**
VAY				S		**Sg**	**16 39 26.7**	**+0.2**
VAY	**Valandovo**	**0.12**	**286**	*i* Pg		**Pg**	**16 39 24.7**	**-0.2**
VAY				*i* Sg		**Sg**	**16 39 26.9**	**+0.4**
VAY				*e*Lg		Lg	16 39 26.9	
	comp=N,863nm,0.5s							
VAY				*e*Lg		Lg	16 39 27.0	
	comp=E,422nm,0.3s							
VAY	**Valandovo**	**0.12**	**286**	*e*Pg		**Pg**	**16 39 24.7**	**-0.2**
VAY				*e*Sg		**Sg**	**16 39 26.7**	**+0.2**
VAY	**Valandovo**	**0.12**	**286**	P		**Pg**	**16 39 24.7**	**-0.2**
VAY	**Valandovo**	**0.12**	**286**	*i* Pg		**Pg**	**16 39 25.2**	**+0.3**
VAY				S		**Sg**	**16 39 26.7**	**+0.2**
VAY				*e*Lg		Lg	16 39 27.5	
	comp=E,422nm,0.3s							
KNT	**Kendrikon**	**0.18**	**133**	P		**Pg**	**16 39 26.5**	**+0.4**
KNT				S		**Sg**	**16 39 29.2**	**+0.6**
KNT	**Kendrikon**	**0.18**	**133**	P		**Pg**	**16 39 26.5**	**+0.4**
KNT				S		**Sg**	**16 39 29.2**	**+0.6**
GRG	**Griva**	**0.41**	**216**	P		**Pg**	**16 39 30.5**	**+0.1**
GRG				S		**Sg**	**16 39 36.4**	**+0.7**
GRG	**Griva**	**0.41**	**216**	*e*PB		**Pg**	**16 39 30.5**	**+0.1**
GRG				*e*SB		**Sg**	**16 39 36.5**	**+0.7**
GRG	**Griva**	**0.41**	**216**	P		**Pg**	**16 39 30.5**	**+0.1**
GRG				S		**Sg**	**16 39 36.4**	**+0.7**
KKB	**Krupnik**	**0.64**	**25**	*i* P		**Pg**	**16 39 34.6**	**-0.2**
KKB	**Krupnik**	**0.64**	**25**	*i* P		**Pg**	**16 39 34.6**	**-0.2**
SOH	**Sokhos**	**0.67**	**134**	P		**Pg**	**16 39 35.2**	**-0.1**
SOH	**Sokhos**	**0.67**	**134**	*e*PB		**Pg**	**16 39 35.2**	**-0.1**
SOH				*e*SB		**Sg**	**16 39 44.4**	**+0.4**
SOH	**Sokhos**	**0.67**	**134**	P		**Pg**	**16 39 35.2**	**-0.1**
SOH				*e*Sb		**Sg**	**16 39 44.4**	**+0.4**
SRS	**Serrai**	**0.68**	**104**	P		**Pg**	**16 39 35.3**	**-0.3**
SRS				S		**Sg**	**16 39 45.0**	**+0.6**
SRS	**Serrai**	**0.68**	**104**	P		**Pg**	**16 39 35.3**	**-0.3**
SRS				S		**Sg**	**16 39 45.0**	**+0.6**
THE	**Thessaloniki**	**0.68**	**164**	P		**Pg**	**16 39 35.2**	**-0.4**
THE	**Thessaloniki**	**0.68**	**164**	P		**Pg**	**16 39 35.2**	**-0.4**
HORT	**Hortiatis**	**0.75**	**157**	P		**Pg**	**16 39 36.5**	**-0.3**
HORT				S		**Sg**	**16 39 47.3**	**+0.7**
HORT	**Hortiatis**	**0.75**	**157**	P		**Pg**	**16 39 36.5**	**-0.3**
HORT				S		**Sg**	**16 39 47.3**	**+0.7**
MMB	**Musomiste**	**0.81**	**68**	*i* P		**Pg**	**16 39 38.0**	**-0.1**
MMB	**Musomiste**	**0.81**	**68**	*i* P		**Pg**	**16 39 38.0**	**-0.1**
NVR	**Nevrokopi**	**0.86**	**86**	P		**Pg**	**16 39 38.7**	**-0.3**
NVR				S		**Sg**	**16 39 51.0**	**+0.8**
NVR	**Nevrokopi**	**0.86**	**86**	*e*PB		**Pg**	**16 39 38.8**	**-0.3**
NVR				*e*SB		**Sg**	**16 39 50.6**	**+0.4**
NVR	**Nevrokopi**	**0.86**	**86**	*e*Pb		**Pg**	**16 39 38.8**	**-0.3**
NVR				*e*Sb		**Sg**	**16 39 50.6**	**+0.4**
NVR				S		**Sg**	**16 39 51.0**	**+0.8**
PLG	**Polygyros**	**1.07**	**149**	*e*PG		**Pg**	**16 39 42.4**	**-0.6**
PLG				*e*SB		**Sg**	**16 39 57.0**	**+0.2**
PLG	**Polygyros**	**1.07**	**149**	*e*Pg		**Pg**	**16 39 42.4**	**-0.6**
PLG				*e*Sb		**Sg**	**16 39 57.0**	**+0.2**
OUR	**Ouranopolis**	**1.35**	**134**	P		**Pn**	**16 39 47.4**	**-0.6**
OUR	**Ouranopolis**	**1.35**	**134**	P		**Pn**	**16 39 47.4**	**-0.6**
VTS	**Vitosha**	**1.35**	**15**	P		**Pn**	**16 39 48.1**	**-0.1**
VTS				S		**Sn**	**16 40 07.7**	**+1.1**
VTS	**Vitosha**	**1.35**	**15**	*e*Pg		**Pg**	**16 39 48.6**	**+0.2**
VTS				*e*Sg		**Sn**	**16 40 07.5**	**+0.9**
VTS	**Vitosha**	**1.35**	**15**	*i* P		**Pn**	**16 39 48.1**	**-0.1**
VTS	**Vitosha**	**1.35**	**15**	P		**Pn**	**16 39 48.1**	**-0.1**
VTS	**Vitosha**	**1.35**	**15**	*e*Pg		**Pg**	**16 39 48.6**	**+0.2**
VTS				*e*Sg		**Sn**	**16 40 07.5**	**+0.9**
KAVA	**Kavala**	**1.39**	**102**	P		**Pn**	**16 39 48.3**	**-0.2**
KAVA	**Kavala**	**1.39**	**102**	P		**Pn**	**16 39 48.3**	**-0.2**
RZN	**Rozhen**	**1.55**	**74**	*i* P		**Pb**	**16 39 51.5**	**-0.3**
RZN	**Rozhen**	**1.55**	**74**	*i* P		**Pb**	**16 39 51.5**	**-0.3**
BARS	**Barje**	**1.67**	**337**	*e*Pn		**Pb**	**16 39 53.3**	**-0.4**
BARS				*e*Sn		**Sg**	**16 40 16.3**	**+0.2**
BARS	**Barje**	**1.67**	**337**	*e*Pn		**Pb**	**16 39 53.3**	**-0.4**
BARS				*e*Sn		**Sg**	**16 40 16.3**	**+0.2**
ZAPS	**Zavoj**	**1.98**	**358**	*e*Sn		**Sb**	**16 40 24.1**	**-0.1**
KDZ	**Kurdzhali**	**2.06**	**79**	P		**Pb**	**16 39 59.5**	**-0.9**
KDZ	**Kurdzhali**	**2.06**	**79**	P		**Pb**	**16 39 59.5**	**-0.9**
MPEP	**Malo Peshtene**	**2.20**	**20**	*i* P		**Pg**	**16 40 04.0**	**-0.7**

ISCJB ***27*** *16:41:03.1±1.1, 19°3S±0°1×169°3E±0°1, h104km, mb4.0/5, Error ellipse: s-maj=23.0km s-min=9.8km az=39.2*
NOU ***27*** *16:41:03.5±0.6, 19°07S×169°25E, h30km, MD3.2, ML3.1*
IDC ***27*** *16:41:10.6±2.9, 19°71S×169°03E, h153km±22km, mb3.7/5, mb1 3.9/8, mb1mx3.6/21, mbtmp3.8/8, Error ellipse: s-maj=27.2km s-min=25.7km az=173.0*

ISC 27 16:41:05.2±1.3, 19°4S±0°1×169°2E±0°2, h104km, n11, σ1§28/14, mb4.0/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.52**	**218**	*e*P		**Pn**	**16 41 58.5**	**+0.5**
BAYA				*e*S		**Sn**	**16 42 39.3**	**+0.5**
BAYA					AMP		16 42 40.7	
	comp=Z,12nm,0.7s							
DZM	**Mont Dzumac**	**3.73**	**224**	*e*S		**Sn**	**16 42 44.7**	**+0.7**
DZM					AMP		16 42 51.1	
	comp=Z,834nm,2.7s							
DZM	**Mont Dzumac**	**3.73**	**224**	P		**Pn**	**16 42 02.3**	**+1.4**
	comp=Z,18nm,0.3s,baz=45,slow=18,SNR=358							
DZM				S		**Sn**	**16 42 44.1**	**0.0**
	comp=Z,20nm,0.3s,baz=320,slow=24,SNR=11							
NOUC	**Port Laguerre**	**3.84**	**225**	*e*P		**Pn**	**16 42 03.5**	**+1.2**
NOUC				*e*S		**Sn**	**16 42 47.4**	**+0.8**
NOUC					AMP		16 42 56.8	
	comp=Z,48nm,9.4s							
HNR	**Honiara**	**13.36**	**316**	P		**P**	**16 44 17.2**	**+0.7**
	comp=Z,2.2nm,0.3s,baz=168,slow=4.4,SNR=4.1							
URZ	**Urewera**	**20.02**	**162**	P		**P**	**16 45 28.9**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=333,slow=10.0,SNR=3.6							
STKA	**Stephens Creek**	**27.76**	**238**	P		**P**	**16 46 43.2**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=78,slow=9.0,SNR=17							
WRA	**Warramunga Arr**	**32.82**	**263**	P		**P**	**16 47 26.7**	**-2.4**
	comp=Z,0.9nm,0.5s,baz=96,slow=8.4,SNR=16							
ASAR	**Alice Springs**	**33.08**	**256**	P		**P**	**16 47 29.7**	**-1.6**
	comp=Z,6.8nm,0.6s,baz=85,slow=8.8,SNR=202							
FITZ	**Fitzroy Crossi**	**41.22**	**264**	P		**P**	**16 48 39.2**	**-0.9**
	comp=Z,3nm,0.6s,baz=84,slow=10,SNR=11							
ILAR	**Eielson Array**	**90.38**	**17**	P		**P**	**16 53 55.6**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=234,slow=5.5,SNR=3.2							

DHMR 27 16:47:08.6±2.0, 13°42N×49°30E, h5km±157km, ML3.5, 1C-2D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.08**	**346**	⇓*i*P		Pg	16 47 27.8	-1.6
MUKL				*i* S		Sb	16 47 44.6	+0.4
BDHA	**Al Bayda'**	**3.67**	**279**	*e*		Pn	16 48 09.1	+2.7
	baz=109,slow=16							
BDHA				⇑*i*P		Pb	16 48 09.3	-5.0
BDHA					AML	AML	16 48 09.8	
	comp=E,180nm,0.3s							
BDHA				*i* S		Sb	16 48 56.0	-3.4
LBOS		**3.96**	**277**	⇓*i*P		Pn	16 48 13.2	+2.7
LBOS				*i* S		Sn	16 49 02.0	+4.4

ISCJB ***27*** *16:52:03.7±0.3, 51°55N±0°02×16°12E±0°03, h0km, Error ellipse: s-maj=2.4km s-min=2.1km az=136.1*
CSEM ***27*** *16:52:05.7±0.1, 51°54N×16°11E, h0km, ML3.8/16, Error ellipse: s-maj=3.0km s-min=2.5km az=59.0*
IPEC ***27*** *16:52:06.1±0.3, 51°56N×16°24E, h0km, ML2.6/3, Error ellipse: s-maj=2.0km s-min=1.5km az=34.0*
WAR ***27*** *16:52:07.8, 51°51N×16°13E*
IDC ***27*** *16:52:07.1±0.6, 51°53N×15°99E, h0km, mb1 3.5/9, mb1mx3.3/31, mbtmp3.4/9, ML3.3/8, Error ellipse: s-maj=9.6km s-min=5.6km az=101.0*
UPP ***27*** *16:52:08.6, 51°65N×15°52E, h0km, ML2.3, Suspected Mining explosion.*
LDG ***27*** *16:52:09.8±0.5, 51°24N×16°09E, h1km, Ml3.5/12, Error ellipse: s-maj=13.2km s-min=4.6km az=14.0, Suspected Mining induced.*
VIE ***27*** *16:52:09.5±0.6, 51°27N×16°07E, h0km, mb2.8/6, ML3.2/6, Error ellipse: s-maj=3.5km s-min=3.2km az=163.0 68 km WNW of Wroclaw Suspected Mining induced.*

ISC 27 16:52:05.9±0.6, 51°53N±0°03×16°07E±0°02, h0km, n97, σ1§24/148, 7C-10D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**168**	*e*Pg		**Pg**	**16 52 20.4**	**+1.1**
KSP				*e*Sg		**Sg**	**16 52 29.8**	**+1.5**
KSP	**Ksiaz**	**0.70**	**168**	*e*		**Sn**	**16 52 34.0**	**-0.5**
KSP	**Ksiaz** baz=357	**0.70**	**168**	*e*Pg		**Pg**	**16 52 20.2**	**+0.9**
UPC	**Upice**	**1.02**	**182**	*e*PG		**Pg**	**16 52 25.7**	**+0.3**
UPC				*e*SG		**Sg**	**16 52 39.2**	**+0.5**
	comp=Z,95nm,0.2s							
UPC	**Upice**	**1.02**	**182**	Pg		**Pg**	**16 52 25.7**	**+0.3**
UPC				Sg		**Sg**	**16 52 39.2**	**+0.5**
	95nm,0.2s							
DPC	**Dobruska-Polom**	**1.19**	**172**	*e*PG		**Pg**	**16 52 28.9**	**+0.2**
DPC				*e*SG		**Sg**	**16 52 44.4**	**+0.4**
	comp=Z,82nm,0.4s							
DPC	**Dobruska-Polom**	**1.19**	**172**	Pg		**Pg**	**16 52 28.9**	**+0.2**
DPC				Sg		**Sg**	**16 52 44.4**	**+0.4**
	82nm,0.4s							
PVCC	**Panska Ves**	**1.38**	**224**	*e*PG		Pn	16 52 32.5	+0.1
PVCC				*e*SG		**Sg**	**16 52 51.4**	**+1.2**
	comp=Z,421nm,0.2s							
PVCC	**Panska Ves**	**1.38**	**224**	Pg		Pn	16 52 32.5	+0.1
PVCC				Sg		**Sg**	**16 52 51.4**	**+1.2**
	421nm,0.2s							
BRG	**Berggiesshubel**	**1.49**	**245**	PN		Pn	16 52 33.8	-0.1
BRG				PG		Pb	16 52 35.3	+0.8
BRG				SG		**Sg**	**16 52 55.7**	**+1.9**
	404nm,0.4s							
PRU	**Pruhonice**	**1.82**	**213**	*e*PG		Pn	16 52 40.2	+1.7
PRU				*e*SG		**Sg**	**16 53 05.3**	**+0.9**
	comp=Z,161nm,0.6s							
PRU	**Pruhonice**	**1.82**	**213**	Pg		Pn	16 52 40.2	+1.7
PRU				Sg		**Sg**	**16 53 05.3**	**+0.9**
	161nm,0.6s							
GKP	**Gorka Klasztor**	**1.89**	**22**	*e*Pg		Pg	16 52 46.6	+4.6
GKP				*e*Sg		**Sg**	**16 53 09.0**	**+2.5**
CLL	**Collm**	**1.94**	**265**	*i* Pn		Pn	16 52 40.1	+0.1
CLL				*e*Pg		Pb	16 52 43.0	+1.0
CLL				*e*			16 52 45.0	
CLL				*e*			16 52 47.0	
CLL				*e*Sg		**Sb**	**16 53 09.0**	**+2.3**
	comp=Z,107nm,0.7s							
RAC	**Raciborz**	**1.98**	**136**	*e*Pg		**Pg**	**16 52 44.0**	**+0.3**
RAC				*e*Sg		**Sg**	**16 53 10.7**	**+1.4**
MORC	**Moravsky Berou**	**1.99**	**151**	⇓*i*P		Pn	16 52 40.6	-0.2
MORC	**Moravsky Berou**	**1.99**	**151**	⇓*i*P		Pn	16 52 40.6	-0.2
MORC				*e*Sg		**Sb**	**16 53 07.9**	**-0.3**
	comp=Z,51nm,0.3s,baz=336							
OKC	**Ostrava-Krasne**	**2.15**	**141**	*e*PG		**Pb**	**16 52 45.8**	**+0.2**
OKC				*e*SG		**Sg**	**16 53 15.0**	**+0.2**
	comp=Z,69nm,0.5s							
OKC	**Ostrava-Krasne**	**2.15**	**141**	Pg		**Pb**	**16 52 45.8**	**+0.2**
OKC				Sg		**Sg**	**16 53 15.0**	**+0.2**
	comp=Z,69nm,0.5s							
VRAC	**Vranov**	**2.25**	**171**	⇓*i*P		Pn	16 52 44.8	+0.5
VRAC	**Vranov**	**2.25**	**171**	Pn		Pn	16 52 45.4	+1.1
	comp=Z,1.9nm,0.3s,baz=346,slow=12,SNR=38							
VRAC				Pg		**Pg**	**16 52 49.3**	**+0.4**
	comp=Z,6.8nm,0.3s,baz=355,slow=15,SNR=19							
VRAC				Sn		**Sb**	**16 53 15.3**	**-0.4**
	comp=Z,9.2nm,0.3s,baz=76,slow=22,SNR=5.7							
VRAC	**Vranov**	**2.25**	**171**	⇓*i*P		Pn	16 52 44.8	+0.5
VRAC				*e*Sg		**Sb**	**16 53 16.9**	**+1.2**
	comp=Z,25nm,0.2s,baz=354							
TREC	**Trest**	**2.27**	**190**	*e*PG		Pb	16 52 48.4	+0.7
TREC				*e*SG		**Sg**	**16 53 18.8**	**+0.2**
	comp=Z,64nm,0.2s							
TREC	**Trest**	**2.27**	**190**	Pg		Pb	16 52 48.4	+0.7
TREC				Sg		**Sg**	**16 53 18.8**	**+0.2**
	comp=Z,64nm,0.2s							
KRUC	**Moravsky** baz=358	**2.48**	**175**	*e*Pn		Pn	16 52 48.2	+0.7
KRUC	**Moravsky** baz=358	**2.48**	**175**	*e*Pg		Pb	16 52 51.8	+0.6
KRUC				*e*Sg		**Sg**	**16 53 24.6**	**-0.8**
	comp=Z,32nm,0.4s,baz=358							
NKC	**Novy Kostel**	**2.64**	**242**	*e*PN		Pn	16 52 50.6	+0.9
NKC				*e*PG		Pb	16 52 55.8	+1.8
NKC				*e*SG		**Sg**	**16 53 31.9**	**+1.4**
	comp=Z,241nm,0.3s							
NKC	**Novy Kostel**	**2.64**	**242**	Pn		Pn	16 52 50.6	+0.9
NKC	**Novy Kostel**	**2.64**	**242**	Pg		Pb	16 52 55.8	+1.8
NKC			

EKSU	**Eksjoe**	**6.08 356**	P		**Pn**		**16 53 36.3**	**-0.6**
DAVOX	**Davos/Dischmat**	**6.25 223**	Pn		**Pn**		**16 53 42.1**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=42,slow=15,SNR=2.4							
DAVOX			Lg		Lg		16 55 21.4	
	comp=Z,0.5nm,0.3s,baz=165,slow=19,SNR=3.0							
DRGR		**6.43 135**	*j i*	P	**Pn**		**16 53 42.8**	**+0.9**
DRGR		**6.43 135**	*j i*	P	**Pn**		**16 53 42.8**	**+0.9**
CDF	**Champ du Feu**	**6.47 245**	*e*	Pn	**Pn**		**16 53 43.2**	**+0.7**
CDF			*e*	Sg	**Sg**		**16 55 29.7**	**-4.0**
	comp=Z,33nm,0.9s							
CDF	**Champ du Feu**	**6.47 245**	*e*	Pn	**Pn**		**16 53 43.2**	**+0.7**
LNKU	**Linkoeping**	**6.72 357**	P		**Pn**		**16 53 44.9**	**-0.8**
HINF	**Hinteralfeld**	**7.04 242**	*e*	Pn	**Pn**		**16 53 50.4**	**+0.2**
HINF			*e*	Sg	Sg		16 55 47.3	-4.6
	comp=Z,14nm,0.6s							
HINF	**Hinteralfeld**	**7.04 242**	*e*	Pn	**Pn**		**16 53 50.4**	**+0.2**
HAU	**Haudompre**	**7.22 245**	*e*	Pn	**Pn**		**16 53 52.8**	**+0.2**
HAU			*e*	Sg	Sg		16 55 52.7	-4.8
	comp=Z,28nm,0.8s							
HAU	**Haudompre**	**7.22 245**	*e*	Pn	**Pn**		**16 53 52.8**	**+0.2**
GIVF	**Givet**	**7.27 263**	*e*	Pn	**Pn**		**16 53 55.0**	**+1.7**
GIVF			*e*	Sg	**Sg**		**16 55 55.7**	**-3.5**
	comp=Z,3.9nm,0.3s							
GIVF	**Givet**	**7.27 263**	*e*	Pn	**Pn**		**16 53 55.0**	**+1.7**
PAGF	**Fort de Pagny**	**7.30 250**	*e*	Pn	**Pn**		**16 53 54.9**	**+1.2**
PAGF			*e*	Sg	Sg		16 55 55.4	-4.7
	comp=Z,5.9nm,0.8s							
PAGF	**Fort de Pagny**	**7.30 250**	*e*	Pn	**Pn**		**16 53 54.9**	**+1.2**
BAIF	**Baives**	**7.66 264**	*e*	Pn	**Pn**		**16 54 00.3**	**+1.6**
BAIF			*e*	Sg	Sg		16 56 07.6	-4.2
	comp=Z,2.0nm,0.3s							
BAIF	**Baives**	**7.66 264**	*e*	Pn	**Pn**		**16 54 00.3**	**+1.6**
MEZF	**Maizieres J'vi**	**7.72 251**	*e*	Pn	**Pn**		**16 54 00.7**	**+1.3**
MEZF			*e*	Sg	Sg		16 56 08.6	-5.0
	comp=Z,9.7nm,0.6s							
MEZF	**Maizieres J'vi**	**7.72 251**	*e*	Pn	**Pn**		**16 54 00.7**	**+1.3**
SFTF	**Sexfontaines**	**7.87 249**	*e*	Pn	**Pn**		**16 54 02.6**	**+1.1**
SFTF			*e*	Sg	Sg		16 56 13.7	-4.6
	comp=Z,14nm,0.6s							
SFTF	**Sexfontaines**	**7.87 249**	*e*	Pn	**Pn**		**16 54 02.6**	**+1.1**
AKASG	**Malin Array Be**	**8.32 91**	Pn		**Pn**		**16 54 06.1**	**-1.6**
	comp=Z,1.6nm,0.3s,baz=278,slow=12,SNR=4.9							
AKASG			Sn		Sn		16 55 36.1	-6.2
	comp=Z,0.8nm,0.3s,baz=272,slow=25,SNR=2.9							
HFS	**Hagfors**	**8.73 352**	Pn		**Pn**		**16 54 12.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=161,slow=11,SNR=4.7							
HFS			Sn		Sn		16 55 46.2	-6.1
	comp=Z,0.3nm,0.3s,baz=184,slow=21,SNR=3.1							
LOR	**Lormes**	**9.03 247**	*e*	Pn	**Pn**		**16 54 18.5**	**+1.0**
LOR			*e*	Sg	Sn		16 56 49.0	+49
	comp=Z,7.4nm,0.7s							
LOR	**Lormes**	**9.03 247**	*e*	Pn	**Pn**		**16 54 18.5**	**+1.0**
LOR			*e*	Sg	Sn		16 56 49.0	+49
	comp=Z,3.7nm,0.7s							
SSF	**Saint Saulge**	**9.35 246**	*e*	Pn	**Pn**		**16 54 22.4**	**+0.6**
SSF			*e*	Sg	Sn		16 56 59.5	+52
	comp=Z,2.4nm,0.5s							
SSF	**Saint Saulge**	**9.35 246**	*e*	Pn	**Pn**		**16 54 22.4**	**+0.6**
NOA	**NORSAR Array B**	**9.91 346**	Pn		**Pn**		**16 54 27.8**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=170,slow=9.9,SNR=3.2							
FINES	**FINESS Array B**	**11.36 25**	Pn		**Pn**		**16 54 47.3**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=219,slow=11,SNR=4.7							
FINES			Sn		Sn		16 56 46.3	-10
	comp=Z,0.4nm,0.3s,baz=218,slow=24,SNR=3.2							
EKA	**Eskdalemuir Ar**	**12.08 296**	Pn		**Pn**		**16 54 59.8**	**+0.7**
	baz=100,slow=14,SNR=4.0							
ARCES	**ARCESS Array B**	**18.61 10**	Pn	P			16 56 20.2	-4.3
	comp=Z,0.1nm,0.3s,baz=194,slow=14,SNR=6.6							

MEX 27 17:00:31.9±0.7, 18°23.N×103°.54W, h5km±104km, MD4.0, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MMIG	**Aquila**	**0.19**	**71**	*eP*		Pg	17 00 35.4	-0.3
MMIG				*i* S		Sg	17 00 38.1	-0.1
R15V		**1.03**	**336**	*eP*		Pg	17 00 48.8	-3.0
R15V				*eS*		Sg	17 01 02.4	-2.8
EZ5V		**1.25**	**357**	*eP*		Pg	17 00 53.0	-3.2
EZ5V				*i* S		Sg	17 01 09.1	-3.6
ANIG	**Ahuacatlan**	**2.96**	**342**	*eP*		Pn	17 01 17.4	-2.4
ANIG				*eS*		Sn	17 01 52.0	-3.9
ZAIG	**Zacatecas**	**4.61**	**11**	*i* S		Sn	17 02 32.1	-4.8

*IDC **27** 17:03:09.6±1.8, 21°.43N×93°.00E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.2/27, mbtmp3.2/4, ML2.9/1, Error ellipse: s-maj=76.0km s-min=25.0km az=53.0*

ISC 27 17:03:43.7±3.8, 23°.3N±0°.3×94°.0E±0°.2, h200km, n15, σ0s58/14, mb3.1/3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHL	**Shillong**	**2.95**	**320**	*e*	PN	Pn	17 04 28.0	-4.9
SHL				*eS*		**Sn**	**17 05 11.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**6.70**	**135**	Pg		Pn	17 05 04.9	-15
	0.1nm,0.3s,baz=298,slow=18,SNR=3.2							
ODAN	**Odare**	**6.94**	**302**	*eP*		**Pn**	**17 05 22.5**	**-0.8**
	11nm,0.2s							
TAPN	**Taplejung**	**6.95**	**307**	*eP*		**Pn**	**17 05 24.1**	**+0.6**
	11nm,0.3s							
RAMN	**Ramite**	**7.60**	**300**	*eP*		**Pn**	**17 05 31.3**	**-0.7**
	13nm,0.3s							
GUN	**Gumba**	**8.62**	**304**	*eP*		**Pn**	**17 05 46.0**	**+0.6**
	15nm,0.2s							
PKI	**Pulchoki**	**8.83**	**301**	*eP*		**Pn**	**17 05 47.8**	**-0.2**
	9.2nm,0.3s							
PKIN	**Phulchoki**	**8.84**	**301**	*eP*		**Pn**	**17 05 48.6**	**+0.5**
	8.2nm,0.2s							
PKIN				*eS*		**Sn**	**17 07 28.0**	**+0.6**
KKN	**Kakani**	**9.03**	**301**	*eP*		**Pn**	**17 05 51.0**	**+0.5**
	6.5nm,0.2s							
DMN	**Daman**	**9.09**	**300**	*eP*		**Pn**	**17 05 51.5**	**+0.2**
	4.1nm,0.2s							
KOLN	**Koldanda**	**10.37**	**298**	*eP*		**Pn**	**17 06 08.0**	**+0.2**
	8.2nm,0.3s							
KOLN				*eS*		**Sn**	**17 08 03.2**	**-0.5**
DANN	**Dangsing**	**10.48**	**301**	*eP*		**Pn**	**17 06 10.1**	**+0.7**
MKAR	**Makanchi Array**	**25.26**	**341**	P		**P**	**17 08 51.2**	**-0.2**
	0.2nm,0.4s,baz=150,slow=11,SNR=5.1							
WRA	**Warramunga Arr**	**58.29**	**134**	P		P	17 13 01.2	-17
	0.2nm,0.5s,baz=322,slow=7.5,SNR=4.7							
ASAR	**Alice Springs**	**60.70**	**138**	P		P	17 13 18.1	-16
	0.3nm,0.5s,baz=323,slow=6.8,SNR=14							

WEL 27 17:06:20.0±0.3, 38°.43S×176°.02E, h152km±2km, ML3.5/6, 19C, Error ellipse: s-maj=1.7km s-min=1.5km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WHTZ	**Whakaora**	**0.24**	**191**		PN	Pn	17 06 40.8	+0.1
WATZ	**Wairara**	**0.36**	**218**		PN	Pn	17 06 41.1	0.0
HATZ	**Hinemaiaia**	**0.47**	**173**		PN	Pn	17 06 41.6	+0.2
RATZ	**Rangitukua**	**0.48**	**204**		⇑PN	Pn	17 06 41.4	-0.1
RITZ	**Rihia Road**	**0.56**	**193**		PN	Pn	17 06 42.2	+0.2
KATZ	**Kakaramea**	**0.60**	**205**		PN	Pn	17 06 42.3	0.0
KRVZ	**Karewarewa**	**0.73**	**204**		PN	Pn	17 06 42.9	-0.1
WTVZ	**West Tongariro**	**0.76**	**206**		PN	Pn	17 06 43.2	-0.1
OTVZ	**Oturere**	**0.79**	**200**		PN	Pn	17 06 43.5	0.0
TWVZ	**Taurewa**	**0.79**	**215**		⇑PN	Pn	17 06 43.3	-0.2
TOZ	**Tahuroa Road**	**0.81**	**330**		PN	Pn	17 06 43.4	-0.1
TOZ					SN	Sn	17 07 01.4	+0.2
NGZ	**Ngauruhoe**	**0.81**	**203**		PN	Pn	17 06 43.7	0.0
BKZ	**Black Stump Fm**	**0.83**	**153**		⇑PN	Pn	17 06 43.6	-0.1
BKZ					SN	Sn	17 07 00.8	-1.1
WPVZ	**Whakapapa**	**0.86**	**205**		⇑PN	Pn	17 06 43.9	-0.1
URZ	**Urewera**	**0.88**	**79**		⇑PN	Pn	17 06 43.5	-0.5
URZ					SN	Sn	17 07 00.9	-1.3
TUVZ	**Tukino**	**0.89**	**199**		⇑PN	Pn	17 06 44.2	0.0
FWVZ	**Far West T-bar**	**0.90**	**204**		PN	Pn	17 06 44.1	-0.4
NMHZ	**Naumai**	**0.91**	**138**		PN	Pn	17 06 45.2	+0.9
HIZ	**Hauiti**	**0.92**	**264**		PN	Pn	17 06 44.1	-0.1
HIZ					SN	Sn	17 07 02.7	-0.1
DRZ	**Dome Shelter**	**0.92**	**203**		PN	Pn	17 06 44.7	0.0
TRVZ	**Turoa**	**0.94**	**203**		PN	Pn	17 06 44.5	-0.3
WNVZ	**Wahianoa**	**0.96**	**200**		⇑PN	Pn	17 06 44.6	-0.2
RAHZ	**Arahi**	**0.97**	**121**		PN	Pn	17 06 45.4	+0.7
RAHZ					SN	Sn	17 07 03.9	+0.2
MOVZ	**Moawhango**	**1.00**	**192**		⇑PN	Pn	17 06 44.6	-0.5
PKVZ	**Pokaka**	**1.01**	**211**		⇑PN	Pn	17 06 44.8	-0.2
MTVZ	**Mangateitei**	**1.05**	**204**		PN	Pn	17 06 45.2	-0.2
BHHZ	**Black Hill Sta**	**1.06**	**178**		PN	Pn	17 06 45.2	-0.3
MCHZ	**McNeill Hill**	**1.15**	**153**		⇑PN	Pn	17 06 47.0	+0.8
MWZ	**Matawai**	**1.19**	**86**		PN	Pn	17 06 46.4	-0.2
MWZ					SN	Sn	17 07 05.9	-1.2
VRZ	**Vera Road**	**1.21**	**234**		PN	Pn	17 06 46.7	0.0
VRZ					SN	Sn	17 07 08.0	+0.7
KNZ	**Kokohu**	**1.43**	**115**		PN	Pn	17 06 49.0	+0.2
CKHZ	**Cape Kidnapper**	**1.48**	**146**		⇑PN	Pn	17 06 49.8	+0.4
PNHZ	**Pukenui**	**1.49**	**175**		⇑PN	Pn	17 06 49.2	-0.5
KAHZ	**Kahuranaki**	**1.52**	**154**		⇑PN	Pn	17 06 50.2	+0.2
RAEZ	**Rainy Point**	**1.53**	**235**		PN	Pn	17 06 50.5	+0.5
PRGZ	**Paritu Road**	**1.54**	**109**		PN	Pn	17 06 50.3	+0.1
WAZ	**Wanganui**	**1.55**	**211**		⇑PN	Pn	17 06 49.8	-0.4
MHGZ	**Mahia Peninsul**	**1.65**	**117**		PN	Pn	17 06 51.6	+0.3
WPHZ	**Waipukurau**	**1.67**	**169**		⇑PN	Pn	17 06 51.1	-0.4
NEZ	**North Egmont**	**1.72**	**240**		⇑PN	Pn	17 06 52.4	+0.3
CNGZ	**Carnagh Statio**	**1.72**	**93**		PN	Pn	17 06 52.6	+0.6
PXZ	**Pawanui**	**1.73**	**158**		⇑PN	Pn	17 06 51.9	-0.2
PKE	**Pukeiti**	**1.76**	**244**		PN	Pn	17 06 52.5	-0.1
DVHZ	**Dannevirke**	**1.87**	**176**		⇑PN	Pn	17 06 52.8	-0.9
PRHZ	**Porangahau**	**1.90**	**166**		PN	Pn	17 06 53.5	-0.5
POWZ	**Post Office Ro**	**1.97**	**186**		PN	Pn	17 06 53.8	-1.1
MRZ	**Mangatainoka R**	**2.26**	**188**		⇑PN	Pn	17 06 56.7	-1.5
BFZ	**Birch Farm**	**2.26**	**176**		PN	Pn	17 06 56.9	-1.3
TIWZ	**Tintock**	**2.35**	**182**		PN	Pn	17 06 57.9	-1.5
OGWZ	**Otaki Gorge**	**2.48**	**195**		PN	Pn	17 06 59.2	-1.6
HOWZ	**Holdsworth Sta**	**2.50**	**189**		PN	Pn	17 06 59.2	-1.9
KIW	**Kapiti Island**	**2.58**	**199**		PN	Pn	17 07 00.1	-2.0
TMWZ	**Te Maipa**	**2.68**	**182**		PN	Pn	17 07 01.3	-2.1
CAW	**Cannon Point**	**2.77**	**195**		PN	Pn	17 07 02.4	-2.2
DUWZ	**D'Urville Isla**	**2.87**	**214**		PN	Pn	17 07 03.3	-2.4
TRWZ	**Traveller**	**2.98**	**185**		PN	Pn	17 07 04.8	-2.3
WEL	**Wellington**	**3.01**	**198**		PN	Pn	17 07 05.3	-2.2
MSWZ	**Moikau Station**	**3.04**	**191**		PN	Pn	17 07 05.3	-2.6
SNZO	**South Karori**	**3.05**	**199**		PN	Pn	17 07 05.3	-2.6
TCW	**Tory Channel**	**3.09**	**205**		PN	Pn	17 07 05.8	-2.6
BHW	**Baring Head**	**3.10**	**196**		PN	Pn	17 07 06.0	-2.7
PLWZ	**Palliser**	**3.19**	**190**		PN	Pn	17 07 07.0	-2.8
TUWZ	**Tuamarina**	**3.40**	**207**		PN	Pn	17 07 09.6	-2.8
NNZ	**Nelson**	**3.45**	**215**		PN	Pn	17 07 10.3	-2.8
QRZ	**Quartz Range**	**3.60**	**227**		PN	Pn	17 07 11.6	-3.5
THZ	**Tophouse**	**4.10**	**215**		PN	Pn	17 07 18.4	-3.2
KHZ	**Kahutara**	**4.41**	**205**		PN	Pn	17 07 22.2	-3.3
LTZ	**Lake Taylor**	**5.20**	**212**		PN	Pn	17 07 32.4	-3.7

IDC 27 17:15:17.8±0.8, 10°.25S×78°.51W, h46km±5km, mb3.7/9, mb1 3.9/11, mb1mx3.8/22, mbtmp3.7/11, MS2.8/4, Ms1 2.9/4, ms1mx2.8/31, Error ellipse: s-maj=39.7km s-min=15.1km az=45.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NNA	**Nana**	**2.38**	**137**	P		Pn	17 15 54.1	-0.3
	25nm,0.3s,baz=320,slow=10,SNR=60							
NNA				S		Sn	17 16 23.1	+0.7
	103nm,0.3s,baz=151,slow=21,SNR=11							
ATAH	**Atahualpa**	**3.10**	**2**	P		Pn	17 16 09.0	+4.3
	24nm,0.3s,baz=228,slow=4.8,SNR=48							
ATAH				S		Sn	17 16 47.9	+7.0
	39nm,0.3s,baz=339,slow=15,SNR=11							
ATAH				LR		LR	17 17 31.6	
	comp=Z,250nm,20.3s,baz=14,slow=43							
LPAZ	**La Paz**	**11.74**	**122**	P		Pn	17 18 06.0	+2.4
	0.1nm,0.3s,baz=310,slow=7.9,SNR=2.9							
LPAZ				LR		LR	17 22 34.7	
	comp=Z,43nm,21.2s,baz=62,slow=37							
ROSC	**El Rosal**	**15.57**	**16**	LR		LR	17 25 40.0	
	comp=Z,84nm,21.9s,baz=186,slow=40							
SIV	**San Ignacio**	**17.91**	**110**	P		Pn	17 19 23.4	-0.3
	0.1nm,0.3s,baz=296,slow=14,SNR=6.0							
CFAA	**Coronel Fontan**	**23.28**	**157**	LR		LR	17 29 01.2	
	comp=Z,11nm,19.6s,baz=186,slow=35							
CPUP	**Villa Florida**	**25.63**	**131**	P		P	17 20 44.0	+0.9
	1.6nm,0.8s,baz=92,slow=20,SNR=4.2							
TXAR	**Lajitas Array**	**46.23**	**329**	P		P	17 23 39.2	+0.4
	0.3nm,0.5s,baz=143,slow=6.8,SNR=4.3							
PDAR	**Pinedale Array**	**59.91**	**334**	P		P	17 25 19.4	-0.1
	0.3nm,0.4s,baz=145,slow=9.7,SNR=3.3							
NVAR	**Mina Array Bea**	**61.02**	**325**	P		P	17 25 28.4	+1.3
	1.0nm,0.6s,baz=144,slow=6.5,SNR=11							
NVAR				pP		pP	17 25 40.8	+0.7
	0.6nm,0.7s,baz=121,slow=7.0,SNR=3.7							
SCHQ	**Schefferville**	**65.58**	**7**	P		P	17 25 56.1	-0.5
	2.2nm,0.8s,baz=214,slow=14,SNR=3.5							
DBIC	**Dimbokro**	**75.24**	**80**	P		P	17 26 56.8	+0.4
	1.7nm,0.6s,baz=260,slow=7.6,SNR=4.1							
YKA	**Yellowknife Ar**	**77.72**	**344**	P		P	17 27 09.1	-0.4
	1.1nm,0.5s,baz=142,slow=6.0,SNR=21							
YKA				pP		pP	17 27 22.1	-0.8
	0.5nm,0.6s,baz=140,slow=6.0,SNR=5.0							
TORD	**Torodi Ar. Bea**	**82.92**	**75**	P		P	17 27 38.5	0.0
	1.1nm,0.9s,baz=263,slow=5.0,SNR=5.3							
TORD				pP		pP	17 27 52.7	+0.7
	1.3nm,0.9s,baz=274,slow=3.7,SNR=4.7							
ILAR	**Eielson Array**	**90.25**	**337**	P		P	17 28 12.4	-0.8
	0.3nm,0.7s,baz=143,slow=3.3,SNR=5.0							
ILAR				pP		pP	17 28 26.5	-0.4
	0.4nm,0.8s,baz=189,slow=4.3,SNR=3.5							
ASAR	**Alice Springs**	**133.73**	**223**	PKP		PKPdf	17 34 29.4	-1.1
	0.4nm,0.7s,baz=131,slow=2.7,SNR=9.5							
ASAR				pPKP		pPKPdf	17 34 44.1	-0.5
	0.3nm,0.7s,baz=121,slow=2.0,SNR=2.7							
ZALV	**Zalesovo Beam**	**134.42**	**14**	PKP		PKPdf	17 34 30.1	-0.7
	1.1nm,0.9s,baz=352,slow=2.9,SNR=4.1							
ZALV				pPKP		pPKPdf	17 34 45.2	+0.3
	0.7nm,0.4s,baz=263,slow=2.4,SNR=4.4							
WRA	**Warramunga Arr**	**135.89**	**227**	PKP		PKPdf	17 34 34.0	-0.6
	0.5nm,0.6s,baz=121,slow=2.0,SNR=6.7							
WRA				pPKP		pPKPdf	17 34 47.8	-1.0
	0.7nm,0.7s,baz=117,slow=1.8,SNR=4.9							
MKAR	**Makanchi Array**	**140.09**	**21**	PKP		PKPdf	17 34 41.1	-0.5
	0.4nm,0.9s,baz=304,slow=1.0,SNR=3.2							
KSRS	**Korea Array**	**143.95**	**323**	PKP		PKPab	17 34 46.0	0.0
	1.0nm,0.7s,baz=53,slow=3.4,SNR=5.3							

*ISCJB **27** 17:16:48.9±0.4, 49°.01N±0°.07×150°.85E±0°.1, h308km, mb3.5/13, Error ellipse: s-maj=11.9km s-min=4.8km az=44.4*
*MOS **27** 17:16:50.3±1.4, 48°.91N×150°.84E, h333km, mb3.9/10, Error ellipse: s-maj=16.8km s-min=8.5km az=60.5*
*IDC **27** 17:16:51.1±1.7, 48°.93N×150°.83E, h324km±18km, mb3.2/12, mb1 3.4/16, mb1mx3.2/31, mbtmp3.2/16, Error ellipse: s-maj=16.7km s-min=9.8km az=146.0*

ISC 27 17:16:49.9±0.5, 48°.94N±0°.09×150°.85E±0°.08, h308km, n34, σ1s57/38, mb3.5/13, 3C-1D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.83**	**61**	*e*	PN	**Pn**	**17 17 54.5**	**-0.1**
SKR				*e*			17 18 44.5	
SKR				pmax		pmax		
	comp=N,60nm,0.5s							
SKR				pmax		pmax		
	comp=Z,80nm,0.5s							
YSS	**Yuzh-Sakhalins**	**5.79**	**253**	*e*	PN	**Pn**	**17 18 19.6**	**+2.7**
YUK	**Yuzh-Kuril'sk**	**5.99**	**217**	*c i*	PN	**Pn**	**17 18 19.7**	**+0.4**
YUK				*i* S		**S**	**17 19 31.0**	**-0.5**
YUK				pmax		pmax		
	comp=N,22nm,0.2s							
YUK				pmax		pmax		
	comp=E,18nm,0.1s							
YUK				pmax		pmax		
	comp=Z,47nm,0.2s							
YUK				smax		smax		
	comp=E,34nm,0.8s							
YUK				smax		smax		
	comp=N,65nm,0.8s							
PETK	**Petropavlovsk-**	**6.01**	**43**	*e*	PN	Pn	17 18 25.3	+5.9
PETK	**Petropavlovsk-**	**6.01**	**43**	P		**Pn**	**17 18 20.4**	**+0.9**
	comp=N,0.1nm,0.3s,baz=203,slow=14,SNR=3.8							
PETK				S		S	17 19 47.3	+16
	comp=N,0.2nm,0.3s,baz=119,slow=12,SNR=2.3							
PET	**Petropavlovsk**	**6.40**	**47**	*e*	PN	**Pn**	**17 18 25.1**	**+1.0**
PET				*eS*		**S**	**17 19 36.8**	**-3.3**
PET				smax		smax		
	comp=E,9.0nm,0.7s							
PET				smax		smax		
	comp=N,18nm,0.6s							
ASAJ	**Asahikawa**	**7.46**	**233**	P		**Pn**	**17 18 39.0**	**+2.1**
	comp=N,0.5nm,0.3s,baz=99,slow=16,SNR=4.2							
ERM	**Erimo**	**8.78**	**221**	*e*	PN	**Pn**	**17 18 51.8**	**-1.2**
USRK	**Ussuriysk Arra**	**13.80**	**257**	P		**P**	**17 19 52.8**	**-0.5**
	comp=N,0.2nm,0.3s,baz=60,slow=11,SNR=4.1							
SEY	**Seymchan**	**14.06**	**3**	*e*	P	**Pn**	**17 19 58.9**	**+2.3**
FX1	**Attu Island--F**	**14.60**	**66**	P		**P**	**17 20 02.9**	**+0.9**
	comp=N,2.7nm,0.3s,baz=44,slow=22,SNR=7.7							
FX1				S		**S**	**17 22 45.5**	**+4.0**
	comp=N,1.5nm,0.3s,baz=90,slow=20,SNR=5.8							
MJAO	**Matsu Arr-Jizo**	**15.44**	**221**	*e*	P	**Pn**	**17 20 13.6**	**+0.4**
MJAO				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MAJO	**Matsushiro**	**15.45**	**221**	*i*	P	**Pn**	**17 20 13.9**	**+0.5**
MAT	**Matsushiro**	**15.45**	**221**	P		**Pn**	**17 20 13.6**	**+0.2**
MJAR	**Matsushiro Arr**	**15.45**	**221**	P		**P**	**17 20 12.8**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=18,slow=12,SNR=13							
KSRS	**Korea Array**	**20.19**	**244**	P		**P**	**17 21 02.4**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=44,slow=10.0,SNR=6.7							
BILL	**Bilibino**	**20.66**	**16**	*e*	P	**P**	**17 21 06.7**	**+0.2**
BILL				*i*	S	**S**	**17 24 32.0**	**-5.1**
BILL				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ILAR	**Eielson Array**	**35.83**	**40**	P		**P**	**17 23 20.1**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=276,slow=8.9,SNR=34							
ZALV	**Zalesovo Beam**	**40.12**	**303**	*e*	P	**P**	**17 23 56.0**	**-0.1**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**40.12**	**303**	P		**P**	**17 23 55.3**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=54,slow=7.9,SNR=6.2							
MKAR	**Makanchi Array**	**44.61**	**294**	*e*	P	**P**	**17 24 31.8**	**-0.4**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.6s							
MKAR	**Makanchi Array**	**44.61**	**294**	P		**P**	**17 24 31.6**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=66,slow=7.7,SNR=26							
MKAR				PcP		**PcP**	**17 26 08.3**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=85,slow=3.0,SNR=3.9							
KURK	**Kurchatov**	**44.91**	**301**	*d i*	P	**P**	**17 24 33.6**	**-0.8**
KURK				pmax		pmax		
	comp=Z,4.0nm,0.8s							
BVAR	**Borovoye Array**	**48.31**	**307**	P		**P**	**17 25 00.1**	**-0.4**
BVAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
BVAR	**Borovoye Array**	**48.31**	**307**	P		**P**	**17 25 00.1**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=60,slow=8.8,SNR=6.0							
BRVK	**Borovoye**	**48.35**	**307**	*c i*	P	**P**	**17 24 58.7**	**-2.1**
BRVK				pmax		pmax		
	comp=Z,1.0nm,1.0s							
YKA	**Yellowknife Ar**	**50.09**	**37**	P		**P**	**17 25 13.7**	**0.0**
	comp=Z,1.1nm,0.5s,baz=302,slow=7.2,SNR=13							
CMAR	**Chiang Mai Arr**	**51.48**	**253**	P		**P**	**17 25 24.5**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=33,slow=7.5,SNR=6.1							
AAK	**Ala-Archa**	**51.53**	**294**	P		**P**	**17 25 24.5**	**-0.4**
AAK				pmax		pmax		
	comp=Z,1.0nm,0.4s							
AAK	**Ala-Archa**	**51.53**	**294**	P		**P**	**17 25 24.5**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=110,slow=2.5,SNR=5.0							
NVAR

VAY	**Valandovo**	**0.51**	**287**	*e*Pg	**Pg**	**17 44 04.3**	**-0.9**
VAY				*e*Sg	**Sg**	**17 44 12.1**	**+0.1**
VAY				*e*Lg	Lg	17 44 13.4	
	comp=E,109nm,0.7s						
VAY				*e*Lg	Lg	17 44 13.5	
	comp=N,122nm,0.3s						
VAY	**Valandovo**	**0.51**	**287**	⇓*i*Pg	**Pg**	**17 44 04.4**	**-0.9**
VAY				*e*Sg	**Sg**	**17 44 11.8**	**-0.2**
VAY	**Valandovo**	**0.51**	**287**	⇓*i*Pg	**Pg**	**17 44 04.4**	**-0.9**
VAY	**Valandovo**	**0.51**	**287**	P	**Pg**	**17 44 04.7**	**-0.5**
VAY				*e*Sg	**Sg**	**17 44 11.8**	**-0.2**
VAY				S	**Sg**	**17 44 12.1**	**+0.1**
VAY				*e*Lg	Lg	17 44 14.0	
	comp=N,122nm,0.3s						
NVR	**Nevrokopi**	**0.51**	**70**	P	**Pg**	**17 44 04.8**	**-0.5**
NVR				S	**Sg**	**17 44 12.0**	**0.0**
NVR	**Nevrokopi**	**0.51**	**70**	*e*PB	**Pg**	**17 44 04.9**	**-0.4**
NVR				*e*SB	**Sg**	**17 44 12.4**	**+0.4**
NVR	**Nevrokopi**	**0.51**	**70**	*e*Pb	**Pg**	**17 44 04.9**	**-0.4**
NVR				S	**Sg**	**17 44 12.0**	**0.0**
NVR				*e*Sb	**Sg**	**17 44 12.4**	**+0.4**
MMB	**Musomiste**	**0.56**	**42**	*i* P	**Pg**	**17 44 05.4**	**-0.8**
MMB	**Musomiste**	**0.56**	**42**	*i* P	**Pg**	**17 44 05.4**	**-0.8**
THE	**Thessaloniki**	**0.58**	**200**	P	**Pg**	**17 44 06.6**	**+0.2**
THE				S	**Sb**	**17 44 15.2**	**-0.8**
THE	**Thessaloniki**	**0.58**	**200**	P	**Pg**	**17 44 06.6**	**+0.2**
THE				S	**Sb**	**17 44 15.2**	**-0.8**
HORT	**Hortiatis**	**0.58**	**189**	P	**Pg**	**17 44 06.8**	**+0.2**
HORT				S	**Sg**	**17 44 15.2**	**+1.0**
HORT	**Hortiatis**	**0.58**	**189**	P	**Pg**	**17 44 06.8**	**+0.2**
HORT				S	**Sg**	**17 44 15.2**	**+1.0**
GRG	**Griva**	**0.66**	**251**	P	**Pg**	**17 44 07.8**	**-0.2**
GRG				S	**Sg**	**17 44 17.4**	**+0.8**
GRG	**Griva**	**0.66**	**251**	*e*PN	**Pg**	**17 44 08.2**	**+0.2**
GRG				*e*SN	**Sb**	**17 44 17.7**	**-0.7**
GRG	**Griva**	**0.66**	**251**	P	**Pg**	**17 44 07.8**	**-0.2**
GRG	**Griva**	**0.66**	**251**	*e*Pn	**Pg**	**17 44 08.2**	**+0.2**
GRG				S	**Sg**	**17 44 17.4**	**+0.8**
GRG				*e*Sn	**Sb**	**17 44 17.7**	**-0.7**
KKB	**Krupnik**	**0.70**	**351**	*i* P	**Pg**	**17 44 07.8**	**-1.0**
KKB	**Krupnik**	**0.70**	**351**	*i* P	**Pg**	**17 44 07.8**	**-1.0**
PLG	**Polygyros**	**0.82**	**168**	P	**Pg**	**17 44 10.7**	**-0.3**
PLG				S	**Sg**	**17 44 22.0**	**+0.3**
PLG	**Polygyros**	**0.82**	**168**	*e*PN	**Pg**	**17 44 10.8**	**-0.3**
PLG				*e*SN	**Sg**	**17 44 22.0**	**+0.3**
PLG	**Polygyros**	**0.82**	**168**	P	**Pg**	**17 44 10.7**	**-0.3**
PLG				S	**Sg**	**17 44 22.0**	**+0.3**
KAVA	**Kavala**	**0.99**	**100**	P	**Pg**	**17 44 13.3**	**-1.1**
KAVA	**Kavala**	**0.99**	**100**	P	**Pg**	**17 44 13.3**	**-1.1**
OUR	**Ouranopolis**	**1.02**	**145**	P	**Pg**	**17 44 14.7**	**-0.2**
OUR				S	**Sb**	**17 44 29.1**	**+0.4**
OUR	**Ouranopolis**	**1.02**	**145**	P	**Pg**	**17 44 14.7**	**-0.2**
OUR				S	**Sb**	**17 44 29.1**	**+0.4**
LIT	**Litokhoron**	**1.21**	**208**	*e*PN	**Pb**	**17 44 17.6**	**-0.9**
LIT	**Litokhoron**	**1.21**	**208**	*e*Pn	**Pb**	**17 44 17.6**	**-0.9**
RZN	**Rozhen**	**1.23**	**65**	*i* P	**Pb**	**17 44 19.1**	**+0.1**
RZN	**Rozhen**	**1.23**	**65**	*i* P	**Pb**	**17 44 19.1**	**+0.1**
PAIG	**Paliouri**	**1.29**	**164**	P	**Pn**	**17 44 19.3**	**-0.4**
PAIG	**Paliouri**	**1.29**	**164**	*e*PN	**Pn**	**17 44 19.1**	**-0.6**
PAIG	**Paliouri**	**1.29**	**164**	P	**Pn**	**17 44 19.3**	**-0.4**
KZN	**Kozani**	**1.40**	**232**	*e*PN	**Pb**	**17 44 21.6**	**-0.2**
KZN	**Kozani**	**1.40**	**232**	*e*Pn	**Pb**	**17 44 21.6**	**-0.2**
VTS	**Vitosha**	**1.42**	**360**	P	**Pb**	**17 44 22.0**	**-0.2**
VTS				S	**Sb**	**17 44 40.1**	**-0.3**
VTS	**Vitosha**	**1.42**	**360**	*e*Pg	**Pb**	**17 44 22.3**	**+0.2**
VTS				*e*Sg	**Sg**	**17 44 41.5**	**+0.6**
VTS	**Vitosha**	**1.42**	**360**	*i* P	**Pb**	**17 44 21.9**	**-0.2**
VTS	**Vitosha**	**1.42**	**360**	*i* P	**Pb**	**17 44 21.9**	**-0.2**
VTS	**Vitosha**	**1.42**	**360**	*e*Pg	**Pb**	**17 44 22.3**	**+0.2**
VTS				S	**Sb**	**17 44 40.1**	**-0.3**
VTS				*e*Sg	**Sg**	**17 44 41.5**	**+0.6**
PLD	**Plovdiv**	**1.45**	**50**	*e*Pn	**Pg**	**17 44 23.3**	**+0.2**
PLD				*e*Sg	**Sg**	**17 44 43.7**	**+1.8**
PLD	**Plovdiv**	**1.45**	**50**	*e*Pn	**Pg**	**17 44 23.3**	**+0.2**
PLD				*e*Sg	**Sg**	**17 44 43.7**	**+1.8**
FNA	**Florina**	**1.45**	**255**	*e*PN	**Pb**	**17 44 22.3**	**-0.3**
FNA	**Florina**	**1.45**	**255**	*e*Pn	**Pb**	**17 44 22.3**	**-0.3**
PGB	**Panagyurishte**	**1.54**	**27**	*i* P	**Pn**	**17 44 23.7**	**+0.5**
PGB	**Panagyurishte**	**1.54**	**27**	*i* P	**Pn**	**17 44 23.7**	**+0.5**
KDZ	**Kurdzhali**	**1.72**	**73**	*i* P	**Pn**	**17 44 25.9**	**+0.3**
KDZ	**Kurdzhali**	**1.72**	**73**	*i* P	**Pn**	**17 44 25.9**	**+0.3**
RDO	**Rodhopi**	**1.75**	**90**	P	**Pn**	**17 44 25.4**	**-0.5**
RDO	**Rodhopi**	**1.75**	**90**	*e*PN	**Pn**	**17 44 25.4**	**-0.5**
RDO	**Rodhopi**	**1.75**	**90**	P	**Pn**	**17 44 25.4**	**-0.5**
THL	**Klokotos Trika**	**1.85**	**210**	*e*PN	**Pn**	**17 44 28.1**	**+0.7**
THL	**Klokotos Trika**	**1.85**	**210**	*e*Pn	**Pn**	**17 44 28.1**	**+0.7**
BARS	**Barje**	**1.95**	**328**	*e*Sn	**Sb**	**17 44 56.5**	**+1.0**
BARS	**Barje**	**1.95**	**328**	*e*Sn	**Sb**	**17 44 56.5**	**+1.0**
AOS	**Alonnisos**	**2.06**	**166**	*e*PB	**Pn**	**17 44 29.9**	**-0.4**
AOS	**Alonnisos**	**2.06**	**166**	*e*Pb	**Pn**	**17 44 29.9**	**-0.4**
ZAPS	**Zavoj**	**2.14**	**348**	*e*Pn	**Pn**	**17 44 32.8**	**+1.4**
ZAPS				*e*Sn	**Sb**	**17 45 00.5**	**-0.7**
ALN	**Alexandroupoli**	**2.15**	**96**	*e*PB	**Pn**	**17 44 31.2**	**-0.3**
ALN	**Alexandroupoli**	**2.15**	**96**	*e*Pb	**Pn**	**17 44 31.2**	**-0.3**
MPEP	**Malo Peshtene**	**2.21**	**10**	*i* Pg	**Pg**	**17 44 37.0**	**-0.7**
AGG	**Agios Georgios**	**2.26**	**198**	*e*PB	**Pn**	**17 44 33.4**	**+0.4**
AGG	**Agios Georgios**	**2.26**	**198**	*e*Pb	**Pn**	**17 44 33.4**	**+0.4**

*IDC **27** 18:02:20.5±2.6, 43.°34N×105.°17W, h0km, mb4.2/1, mb1 4.0/4, mb1mx3.5/29, mbtmp3.8/4, ML2.9/2, MS2.7/4, Ms1 2.7/4, ms1mx2.5/45, Error ellipse: s-maj=56.8km s-min=9.3km az=155.0*

*ISCJB **27** 18:02:22.0±0.2, 43.°65N±0.°01×105.°31W±0.°02, h0km, mb4.5/1, Error ellipse: s-maj=1.9km s-min=1.7km az=157.5*

*NEIC **27** 18:02:22.3±0.5, 43.°62N×105.°25W, h0km, ML3.2, Error ellipse: s-maj=7.7km s-min=6.1km az=172.0, Suspected Mining explosion.*

NEIC 80 km [50 miles] SSE of Gillette.

ISC 27 18:02:22.0±0.6, 43.°63N±0.°01×105.°29W±0.°01, h0km, n177, σ0s91/229, 68C-98D, Wyoming

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
I23A	**Meade Ranch, G** baz=0.4,SNR=84	**0.36**	**340**	P			**Pg**	**18 02 29.6**	**+0.7**
I23A	baz=0.4			⇓S			**Sg**	**18 02 33.5**	**+0.1**
I23A	**Meade Ranch, G** baz=0.4,SNR=84	**0.36**	**340**	P			**Pg**	**18 02 29.6**	**+0.7**
I23A	baz=0.4			⇓S			**Sg**	**18 02 33.5**	**+0.1**
I24A	**Kuemmerle Ranc** baz=0.5,SNR=598	**0.54**	**64**	P			**Pg**	**18 02 32.7**	**+0.5**
I24A	baz=0.5			⇓S			**Sb**	**18 02 41.4**	**-1.2**
I24A	**Kuemmerle Ranc** baz=0.5,SNR=598	**0.54**	**64**	P			**Pg**	**18 02 32.7**	**+0.5**
I24A	baz=0.5			⇓S			**Sb**	**18 02 41.4**	**-1.2**
J24A	**Dixon Ranch, L** baz=0.5,SNR=146	**0.55**	**123**	P			**Pg**	**18 02 33.0**	**+0.6**
J24A	baz=0.5			⇓S			**Sb**	**18 02 41.3**	**-1.6**
J24A	**Dixon Ranch, L** baz=0.5,SNR=146	**0.55**	**123**	P			**Pg**	**18 02 33.0**	**+0.6**
J24A	baz=0.5			⇓S			**Sb**	**18 02 41.3**	**-1.6**
J22A	**Midwest** baz=0.9,SNR=166	**0.89**	**256**	⇑P			**Pg**	**18 02 39.0**	**0.0**
J22A	**Midwest** baz=0.9,SNR=166	**0.89**	**256**	⇑P			**Pg**	**18 02 39.0**	**0.0**
I22A	**9 Mile Ranch,** baz=0.9,SNR=166	**0.90**	**287**	P			**Pg**	**18 02 39.4**	**+0.1**
I22A	baz=0.9			⇑S			**Sg**	**18 02 50.8**	**-0.2**
I22A	**9 Mile Ranch,** baz=0.9,SNR=166	**0.90**	**287**	P			**Pg**	**18 02 39.4**	**+0.1**
I22A	baz=0.9			⇑S			**Sg**	**18 02 50.8**	**-0.2**
K23A	**Bowen Ranch, D** baz=0.9	**0.91**	**196**	⇑P			**Pb**	**18 02 40.3**	**-0.3**
K23A	**Bowen Ranch, D** baz=0.9	**0.91**	**196**	⇑P			**Pb**	**18 02 40.3**	**-0.3**
H23A	**Clabaugh Cattl** baz=1.0	**0.94**	**355**	⇓P			**Pg**	**18 02 39.4**	**-0.5**
H23A	**Clabaugh Cattl** baz=1.0	**0.94**	**355**	⇓P			**Pg**	**18 02 39.4**	**-0.5**
K24A	**Anderson Ranch** baz=0.9,SNR=33	**0.97**	**159**	⇓P			**Pg**	**18 02 40.8**	**+0.3**
K24A	**Anderson Ranch** baz=0.9,SNR=33	**0.97**	**159**	⇓P			**Pg**	**18 02 40.8**	**+0.3**
RSSD	**Black Hills**	**1.03**	**61**	*e*P			**Pg**	**18 02 41.2**	**-0.6**
H22A	**Clearmont** baz=1.3,SNR=71	**1.23**	**322**	⇑P			**Pg**	**18 02 45.3**	**-0.3**
H22A	**Clearmont** baz=1.3,SNR=71	**1.23**	**322**	⇑P			**Pg**	**18 02 45.3**	**-0.3**
H24A	**Dirks Ranch, A** baz=1.2	**1.24**	**25**	⇑P			**Pg**	**18 02 44.6**	**-1.1**
H24A	**Dirks Ranch, A** baz=1.2	**1.24**	**25**	⇑P			**Pg**	**18 02 44.6**	**-1.1**
K22A	**Casper** baz=1.3,SNR=115	**1.33**	**223**	P			**Pg**	**18 02 47.0**	**-0.5**
K22A	**Casper** baz=1.3,SNR=115	**1.33**	**223**	P			**Pg**	**18 02 47.0**	**-0.5**
I21A	**Big Trails, Te** baz=1.5	**1.46**	**278**	⇓P			**Pn**	**18 02 48.8**	**-1.0**
I21A	baz=1.5			⇓S			**Sg**	**18 03 08.8**	**-0.1**
I21A	**Big Trails, Te** baz=1.5	**1.46**	**278**	⇓P			**Pn**	**18 02 48.8**	**-1.0**
I21A	baz=1.5			⇓S			**Sg**	**18 03 08.8**	**-0.1**
L23A	**Garrett** baz=1.5,SNR=210	**1.54**	**191**	⇑P			**Pn**	**18 02 50.4**	**-0.5**
L23A	**Garrett** baz=1.5,SNR=210	**1.54**	**191**	⇑P			**Pn**	**18 02 50.4**	**-0.5**
G23A	**Biddle** baz=1.6	**1.58**	**357**	⇑P			**Pn**	**18 02 50.8**	**-0.5**
G23A	baz=1.6			⇑S			**Sg**	**18 03 13.6**	**+1.0**
G23A	**Biddle** baz=1.6	**1.58**	**357**	⇑P			**Pn**	**18 02 50.8**	**-0.5**
G23A	baz=1.6			⇑S			**Sg**	**18 03 13.6**	**+1.0**
J21A	**Lysite** baz=1.6,SNR=118	**1.59**	**261**	P			**Pn**	**18 02 51.1**	**-0.5**
J21A	baz=1.6			⇓S			**Sn**	**18 03 12.8**	**-0.2**
J21A	**Lysite** baz=1.6,SNR=118	**1.59**	**261**	P			**Pn**	**18 02 51.1**	**-0.5**
J21A	baz=1.6			⇓S			**Sn**	**18 03 12.8**	**-0.2**
L24A	**Wheatland** baz=1.6,SNR=54	**1.60**	**170**	⇑P			**Pn**	**18 02 51.9**	**+0.2**
L24A	baz=1.6			⇑S			**Sg**	**18 03 13.8**	**+0.3**
L24A	**Wheatland** baz=1.6,SNR=54	**1.60**	**170**	⇑P			**Pn**	**18 02 51.9**	**+0.2**
L24A	baz=1.6			⇑S			**Sg**	**18 03 13.8**	**+0.3**
H21A	**Big Horn, Sher** baz=1.6,SNR=44	**1.61**	**309**	⇓P			**Pn**	**18 02 51.8**	**0.0**
H21A	**Big Horn, Sher** baz=1.6,SNR=44	**1.61**	**309**	⇓P			**Pn**	**18 02 51.8**	**0.0**
G22A	**Birney** baz=1.8,SNR=15	**1.75**	**336**	⇑P			**Pn**	**18 02 53.9**	**+0.3**
G22A	baz=1.8			⇓Sb			**Sg**	**18 03 18.6**	**+0.5**
G22A	**Birney** baz=1.8,SNR=15	**1.75**	**336**	⇑P			**Pn**	**18 02 53.9**	**+0.3**
G22A	baz=1.8			⇓Sb			**Sg**	**18 03 18.6**	**+0.5**
L25A	**Engebretsen Ra** baz=1.7,SNR=22	**1.76**	**146**	⇓P			**Pb**	**18 02 55.2**	**0.0**
L25A	baz=1.7			⇓Sb			**Sg**	**18 03 19.5**	**+0.9**
L25A	**Engebretsen Ra** baz=1.7,SNR=22	**1.76**	**146**	⇓P			**Pb**	**18 02 55.2**	**0.0**
L25A	baz=1.7			⇓Sb			**Sg**	**18 03 19.5**	**+0.9**
K26A	**Motz Farm, Whi** baz=1.8,SNR=9.2	**1.80**	**120**	P			**Pb**	**18 02 55.3**	**-0.6**
K26A	baz=1.8			⇑Sb			**Sg**	**18 03 21.0**	**+1.2**
K26A	**Motz Farm, Whi** baz=1.8,SNR=9.2	**1.80**	**120**	P			**Pb**	**18 02 55.3**	**-0.6**
K26A	baz=1.8			⇑Sb			**Sg**	**18 03 21.0**	**+1.2**
L22A	**Ellis Ranch, M** baz=1.8,SNR=121	**1.80**	**208**	P			**Pn**	**18 02 55.2**	**+0.7**
L22A	**Ellis Ranch, M** baz=1.8,SNR=121	**1.80**	**208**	P			**Pn**	**18 02 55.2**	**+0.7**
G24A	**Alzada** baz=1.8,SNR=24	**1.81**	**20**	⇓P			**Pn**	**18 02 54.9**	**+0.4**
G24A	baz=1.8			⇓S			**Sb**	**18 03 19.7**	**+0.3**
G24A	**Alzada** baz=1.8,SNR=24	**1.81**	**20**	⇓P			**Pn**	**18 02 54.9**	**+0.4**
G24A	baz=1.8			⇓S			**Sb**	**18 03 19.7**	**+0.3**
J20A	**Shoshoni** baz=2.1	**2.05**	**263**	⇓Pg			**Pb**	**18 03 00.2**	**0.0**
J20A	baz=2.1			⇓Sg			**Sg**	**18 03 28.6**	**+0.7**
J20A	**Shoshoni** baz=2.1	**2.05**	**263**	⇓Pg			**Pb**	**18 03 00.2**	**0.0**
J20A	baz=2.1			⇓Sg			**Sg**	**18 03 28.6**	**+0.7**
I20A	**Worland** baz=2.1,SNR=162	**2.08**	**280**	⇓Pb			**Pb**	**18 02 59.7**	**-1.0**
I20A	baz=2.1			⇓Sb			**Sb**	**18 03 27.4**	**+0.3**
I20A	**Worland** baz=2.1,SNR=162	**2.08**	**280**	⇓Pb			**Pb**	**18 02 59.7**	**-1.0**
I20A	baz=2.1			⇓Sb			**Sb**	**18 03 27.4**	**+0.3**
F23A	**Volborg** baz=2.1,SNR=60	**2.10**	**358**	P			**Pn**	**18 02 58.5**	**+0.1**
F23A	baz=2.1			⇑S			**Sn**	**18 03 26.4**	**+1.1**
F23A	**Volborg** baz=2.1,SNR=60	**2.10**	**358**	P			**Pn**	**18 02 58.5**	**+0.1**
F23A	baz=2.1			⇑S			**Sn**	**18 03 26.4**	**+1.1**
G21A	**Lodge Grass** baz=2.1,SNR=22	**2.11**	**320**	⇓P			**Pn**	**18 02 58.8**	**+0.2**
G21A	baz=2.1			⇑Sb			**Sb**	**18 03 28.5**	**+0.6**
G21A	**Lodge Grass** baz=2.1,SNR=22	**2.11**	**320**	⇓P			**Pn**	**18 02 58.8**	**+0.2**
G21A	baz=2.1			⇑Sb			**Sb**	**18 03 28.5**	**+0.6**
M24A	**Cheyenne** baz=2.2	**2.19**	**171**	⇓Pb			**Pb**	**18 03 02.2**	**-0.3**
M24A	baz=2.2			⇑Sb			**Sg**	**18 03 31.4**	**-0.7**
M24A	**Cheyenne** baz=2.2	**2.19**	**171**	⇓Pb			**Pb**	**18 03 02.2**	**-0.3**
M24A	baz=2.2			⇑Sb			**Sg**	**18 03 31.4**	**-0.7**
L21A	**Rawlins** baz=2.3	**2.26**	**223**	⇓P			**Pn**	**18 03 00.5**	**-0.3**
L21A	baz=2.3			⇓Sb			**Sb**	**18 03 32.4**	**+0.1**
L21A	**Rawlins** baz=2.3	**2.26**	**223**	⇓P			**Pn**	**18 03 00.5**	**-0.3**
L21A	baz=2.3			⇓Sb			**Sb**	**18 03 32.4**	**+0.1**
F22A	**Rosebud** baz=2.3,SNR=54	**2.26**	**343**	P			**Pn**	**18 03 00.3**	**-0.4**
F22A	**Rosebud** baz=2.3,SNR=54	**2.26**	**343**	P			**Pn**	**18 03 00.3**	**-0.4**
L26A	**Underwood Farm** baz=2.2	**2.27**	**134**	⇓Pb			**Pb**	**18 03 04.2**	**+0.2**
L26A	baz=2.2			⇓Sb			**Sg**	**18 03 34.7**	**-0.4**
L26A	**Underwood Farm** baz=2.2	**2.27**	**134**	⇓Pb			**Pb**	**18 03 04.2**	**+0.2**
L26A	baz=2.2			⇓Sb			**Sg**	**18 03 34.7**	**-0.4**
F24A	**Ekalaka** baz=2.3,SNR=6.3	**2.30**	**15**	⇓P			**Pn**	**18 03 01.7**	**+0.5**
F24A	baz=2.3			⇓Sb			**Sg**	**18 03 35.2**	**-0.7**
F24A	**Ekalaka** baz=2.3,SNR=6.3	**2.30**	**15**	⇓P			**Pn**	**18 03 01.7**	**+0.5**
F24A	baz=2.3			⇓Sb			**Sg**	**18 03 35.2**	**-0.7**
PHWY	**Pilot Hill**	**2.33**	**183**	*e*P			**Pn**	**18 03 03.2**	**+1.4**
K27A	**Flueckinger Fa** baz=2.4	**2.42**	**111**	⇑Sb			**Sg**	**18 03 39.3**	**-0.3**
K27A	**Flueckinger Fa** baz=2.4	**2.42**	**111**	⇑Sb			**Sg**	**18 03 39.3**	**-0.3**
M22A	**Cedar Creek Ra** baz=2.4	**2.42**	**204**	⇓Sb			**Sb**	**18 03 37.6**	**+0.5**
M22A	**Cedar Creek Ra** baz=2.4	**2.42**	**204**	⇓Sb			**Sb**	**18 03 37.6**	**+0.5**
K20A	**Yellowstone Ra** baz=2.5	**2.43**	**248**	⇑Sb			**Sb**	**18 03 37.7**	**+0.4**
K20A	**Yellowstone Ra** baz=2.5	**2.43**	**248**	⇑Sb			**Sb**	**18 03 37.7**	**+0.4**
M21A	**Separation Pea** baz=2.5	**2.53**	**218**	⇓Sb			**Sb**	**18 03 41.0**	**+0.7**
M21A	**Separation Pea** baz=2.5	**2.53**	**218**	⇓Sb			**Sb**	**18 03 41.0**	**+0.7**
F21A	**Absaloka Mine,** baz=2.6	**2.56**	**330**	⇑Sb			**Sb**	**18 03 42.0**	**+1.3**
F21A	**Absaloka Mine,** baz=2.6	**2.56**	**330**	⇑Sb			**Sb**	**18 03 42.0**	**+1.3**
G20A	**Bridger** baz=2.7,SNR=108	**2.63**	**308**	P			**Pn**	**18 03 05.6**	**-0.2**
G20A	baz=2.7			⇓Sb			**Sb**	**18 03 44.3**	**+1.4**
G20A	**Bridger** baz=2.7,SNR=108	**2.63**	**308**	P			**Pn**	**18 03 05.6**	**-0.2**
G20A	baz=2.7			⇓Sb			**Sb**	**18 03 44.3**	**+1.4**
I19A	**Meeteetse** baz=2.7	**2.71**	**280**	⇑Sb			**Sb**	**18 03 45.4**	**+0.1**
I19A	**Meeteetse** baz=2.7	**2.71**	**280**	⇑Sb			**Sb**	**18 03 45.4**	**+0.1**
K19A	**Absolon Red Bu** baz=2.7	**2.72**	**254**	⇓Sb			**Sb**	**18 03 45.9**	**+0.3**
K19A	**Absolon Red Bu** baz=2.7	**2.72**	**254**	⇓Sb			**Sb**	**18 03 45.9**	**+0.3**
J19A	**Crowheart** baz=2.8	**2.76**	**264**	⇓Sb			**Sb**	**18 03 47.1**	**+0.3**
J19A	**Crowheart** baz=2.8	**2.76**	**264**	⇓Sb			**Sb**	**18 03 47.1**	**+0.3**
L20A	**Wamsutter** baz=2.8	**2.77**	**235**	⇓Sb			**Sb**	**18 03 47.9**	**+0.9**
L20A	**Wamsutter** baz=2.8	**2.77**	**235**	⇓Sb			**Sb**	**18 03 47.9**	**+0.9**
N23A	**Red Feather La** baz=2.8	**2.77**	**190**	⇓Sb			**Sb**	**18 03 48.3**	**+1.1**
N23A	**Red Feather La** baz=2.8	**2.77**	**190**	⇓Sb			**Sb**	**18 03 48.3**	**+1.1**
E22A	**Miles City** baz=2.9	**2.85**	**351**	⇓P			**Pn**	**18 03 08.2**	**-0.5**
E22A	**Miles City** baz=2.9	**2.85**	**351**	⇓P			**Pn**	**18 03 08.2**	**-0.5**
E23A	**Ismay** baz=2.9,SNR=33	**2.87**	**360**	⇑P			**Pn**	**18 03 08.9**	**-0.1**
E23A	**Ismay** baz=2.9,SNR=33	**2.87**	**360**	⇑P			**Pn**	**18 03 08.9**	**-0.1**
N25A	**Grover** baz=2.9	**2.95**	**162**	⇓Pb			**Pb**	**18 03 15.5**	**0.0**
N25A	baz=2.9			⇓Sb			**Sg**	**18 03 54.9**	**-1.8**
N25A	**Grover** baz=2.9	**2.95**	**162**	⇓Pb			**Pb**	**18 03 15.5**	**0.0**
N25A	baz=2.9			⇓Sb			**Sg**	**18 03 54.9**	**-1.8**
N22A	**Wattenberg Ran** baz=3.0	**2.95**	**197**	⇑Pb			**Pb**	**18 03 15.0**	**-0.7**
N22A	baz=3.0			⇓Sb			**Sb**	**18 03 53.6**	**+1.2**
N22A	**Wattenberg Ran** baz=3.0	**2.95**	**197**	⇑Pb			**Pb**	**18 03 15.0**	**-0.7**
N22A	baz=3.0			⇓Sb			**Sb**	**18 03 53.6**	**+1.2**
F20A	**Billings** baz=3.0,SNR=23	**2.98**	**318**	⇓P			**Pn**	**18 03 10.2**	**-0.4**
F20A	baz=3.0			⇑Sb			**Sb**	**18 03 54.5**	**+1.5**
F20A	**Billings** baz=3.0,SNR=23	**2.98**	**318**	⇓P			**Pn**	**18 03 10.2**	**-0.4**
F20A	baz=3.0			⇑Sb			**Sb**	**18 03 54.5**	**+1.5**
E24A	**Baker** baz=3.0,SNR=37	**3.02**	**13**	⇓P			**Pn**	**18 03 11.3**	**+0.3**
E24A	baz=3.0			⇓S			**Sn**	**18 03 49.3**	**+1.4**
E24A	**Baker** baz=3.0,SNR=37	**3.02**	**13**	⇓P			**Pn**	**18 03 11.3**	**+0.3**
E24A	baz=3.0			⇓S			**Sn**	**18 03 49.3**	**+1.4**
RLMT	**Red Lodge**	**3.22**	**299**	*e*P			**Pn**	**18 03 14.2**	**+0.2**
PDAR	**Pinedale Array**	**3.24**	**256**	Pn			**Pn**	**18 03 16.9**	**+2.6**
PDAR				Lg			Lg	18 04 02.2	
PDAR	**Pinedale Array** 7.9nm,0.3s,baz=91,slow=16,SNR=44	**3.24**	**256**	Pn			**Pn**	**18 03 16.9**	**+2.6**
PDAR	20nm,0.3s,baz=65,slow=32,SNR=21			Lg			Lg	18 04 02.2	
BW06	**Boulder Array**	**3.24**	**256**	*e*P			**Pn**	**18 03 14.7**	**+0.4**
BW06				*e*S			**Sb**	**18 03 57.3**	**-3.2**
I18A	**Diamond G Ranc** baz=3.3	**3.29**	**273**	⇑Sb			**Sb**	**18 04 02.6**	**+0.7**
I18A	**Diamond G Ranc** baz=3.3	**3.29**	**273**	⇑Sb			**Sb**	**18 04 02.6**	**+0.7**
F19A	**Roth Farm, Mol** baz=3.5,SNR=45	**3.42**	**312**	⇓P			**Pn**	**18 03 17.0**	**+0.2**
F19A	**Roth Farm, Mol** baz=3.5,SNR=45	**3.42**	**312**	⇓P			**Pn**	**18 03 17.0**	**+0.2**
G18A	**Lazy EL Ranch,** baz=3.5,SNR=18	**3.49**	**300**	⇑P			**Pn**	**18 03 17.7**	**0.0**
G18A	**Lazy EL Ranch,** baz=3.5,SNR=18	**3.49**	**300**	⇑P			**Pn**	**18 03 17.7**	**0.0**
E20A	**Meyer Farm, Mu** baz=3.5,SNR=6.4	**3.51**	**326**	⇓P			**Pn**	**18 03 17.9**	**+0.1**
E20A	**Meyer Farm, Mu** baz=3.5,SNR=6.4	**3.51**	**326**	⇓P			**Pn**	**18 03 17.9**	**+0.1**
D23A	**Lindsay** baz=3.6,SNR=8.9	**3.55**	**1**	⇑P			**Pn**	**18 03 18.8**	**+0.4**
D23A	**Lindsay** baz=3.6,SNR=8.9	**3.55**	**1**	⇑P			**Pn**	**18 03 18.8**	**+0.4**
D24A	**Glendive** baz=3.6,SNR=17	**3.55**	**11**	⇓P			**Pn**	**18 03 19.2**	**+0.8**
D24A	**Glendive** baz=3.6,SNR=17	**3.55**	**11**	⇓P			**Pn**	**18 03 19.2**	**+0.8**
D22A	**Cohagen** baz=3.6,SNR=9.6	**3.58**	**350**	⇑P			**Pn**	**18 03 18.5**	**-0.2**
D22A	**Cohagen** baz=3.6,SNR=9.6	**3.58**	**350**	⇑P			**Pn**	**18 03 18.5**	**-0.2**
OGNE	**Ogallala**	**3.61**	**137**	*e*P			**Pn**	**18 03 20.7**	**+1.5**
E19A	**Rath Farm, Rou** baz=3.8,SNR=8.5	**3.76**	**320**	⇓P			**Pn**	**18 03 21.1**	**-0.2**
E19A	**Rath Farm, Rou** baz=3.8,SNR=8.5	**3.76**	**320**	⇓P			**Pn**	**18 03 21.1**	**-0.2**
GCMT	**Greycliff**	**3.80**	**306**	*e*P			**Pn**	**18 03 20.3**	**-1.5**
ISCO	**Idaho Springs**	**3.83**	**184**	*e*P			**P

B23A	**Brockton**	**4.84**	**2**	⇑P		**Pn**	**18 03 36.9**	**+0.8**
	baz=4.9,SNR=7.7							
B23A	**Brockton**	**4.84**	**2**	⇑P		**Pn**	**18 03 36.9**	**+0.8**
	baz=4.9,SNR=7.7							
DGMT	**Dagmar**	**4.90**	**9**	*eP*		**Pn**	**18 03 38.5**	**+1.5**
BOZ	**Bozeman (W)**	**4.95**	**296**	*eP*		**Pn**	**18 03 37.1**	**-0.7**
HWUT	**Hardware Ranch**	**5.05**	**249**	P		**Pn**	**18 03 37.9**	**-1.2**
D17A	**Six Diamond Ra**	**5.18**	**315**	⇓P		**Pn**	**18 03 41.0**	**+0.1**
	baz=5.2,SNR=38							
D17A	**Six Diamond Ra**	**5.18**	**315**	⇓P		**Pn**	**18 03 41.0**	**+0.1**
	baz=5.2,SNR=38							
EGMT	**Eagleton**	**5.39**	**326**	*ePn*		**Pn**	**18 03 41.1**	**-2.6**
DAU	**Daniels Canyon**	**5.48**	**236**	P		**Pn**	**18 03 44.0**	**-1.1**
R26A	**Arlington**	**5.50**	**165**	⇑P		**Pn**	**18 03 45.7**	**+0.5**
	baz=5.5,SNR=19							
R26A	**Arlington**	**5.50**	**165**	⇑P		**Pn**	**18 03 45.7**	**+0.5**
	baz=5.5,SNR=19							
DLMT	**Dillon**	**5.51**	**291**	P		**Pn**	**18 03 46.2**	**+0.8**
DLMT				*eSg*		**Sg**	**18 05 17.4**	**-1.4**
LRM	**Limekiln Ridge**	**5.55**	**296**	P		**Pn**	**18 03 48.1**	**+2.0**
LRM				*eSg*		**Sg**	**18 05 17.5**	**-2.9**
MCMT	**McKenzie Canyo**	**5.56**	**285**	*ePn*		**Pn**	**18 03 49.4**	**+3.2**
MDND	**Maddock**	**5.80**	**41**	⇓P		**Pn**	**18 03 48.9**	**-0.4**
	baz=5.8,SNR=6.5							
MDND	**Maddock**	**5.80**	**41**	⇓P		**Pn**	**18 03 48.9**	**-0.4**
	baz=5.8,SNR=6.5							
SDCO	**Great Sand Dun**	**5.88**	**182**	P		**Pn**	**18 03 50.6**	**0.0**
PV04	**Paradox Valley**	**5.90**	**209**	*eP*		**Pn**	**18 03 51.5**	**+0.7**
ECSD	**EROS Data Cent**	**6.29**	**86**	*eP*		**Pn**	**18 03 56.0**	**0.0**
CHMT	**Chamberlain Mo**	**6.51**	**303**	*ePn*		**Pn**	**18 03 59.7**	**+0.6**
DUG	**Dugway**	**6.58**	**241**	*eP*		**Pn**	**18 04 01.8**	**+1.8**
B14A	**Marquette Ranc**	**7.30**	**313**	⇑P		**Pn**	**18 04 10.0**	**+0.1**
	baz=7.3,SNR=6.9							
B14A	**Marquette Ranc**	**7.30**	**313**	⇑P		**Pn**	**18 04 10.0**	**+0.1**
	baz=7.3,SNR=6.9							
ULM	**Lac du Bonnet**	**9.23**	**41**	Pn		**Pn**	**18 04 34.9**	**-1.5**
ULM				Lg		Lg	18 07 12.0	
ULM	**Lac du Bonnet**	**9.23**	**41**	Pn		**Pn**	**18 04 34.9**	**-1.5**
	1.4nm,0.3s,baz=235,slow=12,SNR=4.8							
ULM				Lg		Lg	18 07 12.0	
	0.2nm,0.3s,baz=329,slow=18,SNR=5.3							
NEW	**Newport**	**9.45**	**303**	LR		LR	18 08 56.4	
	comp=Z,55nm,20.6s,baz=146,slow=41							
YBH	**Yreka Blue Hor**	**12.96**	**268**	LR		LR	18 10 30.7	
	comp=Z,50nm,18.8s,baz=15,slow=38							
PFO	**Pinyon Flat Ob**	**13.26**	**225**	LR		LR	18 10 24.1	
	comp=Z,24nm,18.2s,baz=137,slow=37							
TKL	**Tuckaleechee C**	**18.35**	**108**	LR		LR	18 12 46.4	
	comp=Z,21nm,20.4s,baz=93,slow=34							
YKA	**Yellowknife Ar**	**19.67**	**347**	P		**Pn**	**18 06 53.7**	**+0.1**
YKA	**Yellowknife Ar**	**19.67**	**347**	P		**Pn**	**18 06 53.7**	**+0.1**
	0.1nm,0.3s,baz=156,slow=8.5,SNR=4.9							
ARCES	**ARCESS Array B**	**61.53**	**18**	P		**P**	**18 12 39.4**	**-0.8**
ARCES	**ARCESS Array B**	**61.53**	**18**	P		**P**	**18 12 39.4**	**-0.8**
	2.8nm,0.9s,baz=340,slow=6.8,SNR=4.5							

IDC 27 18:13:43.5±60.0, 12.84S×168.11E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.6/19, mbtmp3.9/3, MS3.5/2, Ms1 3.5/2, ms1mx2.7/26, Error ellipse: s-maj=1028.0km s-min=113.8km az=62.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**26.56**	**164**	LR	LR	18 28 35.3	
	comp=Z,56nm,18.2s,baz=8.1,slow=34						
STKA	**Stephens Creek**	**30.84**	**228**	P	P	18 20 01.7	+0.2
	2.5nm,0.6s,baz=52,slow=10,SNR=12						
WRA	**Warramunga Arr**	**33.11**	**253**	P	P	18 20 21.9	+0.3
	0.4nm,0.5s,baz=85,slow=9.0,SNR=6.5						
ASAR	**Alice Springs**	**34.13**	**247**	P	P	18 20 30.0	-0.5
	0.8nm,0.4s,baz=74,slow=9.3,SNR=42						
TXAR	**Lajitas Array**	**94.66**	**61**	LR	LR	18 58 47.5	
	comp=Z,31nm,20.8s,baz=5.0,slow=29						

IDC 27 18:17:04.6±65.0, 18.24S×168.53E, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.8/17, mbtmp4.3/3, MS3.4/3, Ms1 3.4/3, ms1mx3.0/20, Error ellipse: s-maj=1088.0km s-min=109.4km az=72.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**16.53**	**134**	LR	LR	18 25 50.4	
	comp=Z,86nm,21.9s,baz=45,slow=32						
RPZ	**Rata Peaks**	**25.48**	**176**	LR	LR	18 31 50.2	
	comp=Z,84nm,18.4s,baz=254,slow=35						
STKA	**Stephens Creek**	**27.83**	**236**	P	P	18 22 55.5	-0.3
	5.5nm,0.8s,baz=64,slow=9.8,SNR=11						
WRA	**Warramunga Arr**	**32.33**	**261**	P	P	18 23 35.7	-0.1
	1.6nm,0.7s,baz=91,slow=9.1,SNR=11						
ASAR	**Alice Springs**	**32.73**	**254**	P	P	18 23 39.5	+0.2
	3.2nm,0.9s,baz=81,slow=9.1,SNR=27						
SONM	**Songino Array**	**86.03**	**323**	LR	LR	19 04 04.8	
	comp=Z,36nm,19.6s,baz=285,slow=33						

*TIR **27** 18:17:03.8±0.8, 42.35N×19.42E, h14km±49km, ML2.5*
*ISCJB **27** 18:17:05.7±0.4, 42.35N±0.02×19.53E±0.02, h11km±4km, Error ellipse: s-maj=3.7km s-min=2.8km az=11.8*
*PDG **27** 18:17:05.9±0.2, 42.34N×19.50E, h15km, MD2.0/1, ML2.0/9, Error ellipse: s-maj=0.3km s-min=0.3km az=0.0*
*CSEM **27** 18:17:05.8±0.2, 42.34N×19.52E, h10km, ML1.7, Error ellipse: s-maj=3.5km s-min=2.6km az=7.0*
*BEO **27** 18:17:07.6±0.3, 42.41N×19.50E, h4km±3km, ML1.7/7*
ISC 27 18:17:05.9±0.9, 42.33N±0.02×19.51E±0.02, h14km±8km, n39, σ0961/74, 7C-8D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTG	**Podgorica**	**0.21**	**299**	⇓*iPg*	**Pg**	**18 17 10.2**	**-0.3**
TTG				*eSg*	**Sb**	**18 17 14.4**	**-0.7**
PDG	**Podgorica**	**0.21**	**298**	*ePg*	**Pg**	**18 17 10.8**	**+0.2**
PDG				*eSg*	**Sb**	**18 17 14.5**	**-0.8**
PDG	**Podgorica**	**0.21**	**298**	⇓*iPg*	**Pg**	**18 17 10.2**	**-0.4**
PDG				*eSg*	**Sb**	**18 17 14.4**	**-0.8**
PUK	**Puka**	**0.41**	**135**	*ePg*	**Pg**	**18 17 13.8**	**-0.3**
PUK				*i* SG	**Sb**	**18 17 20.7**	**-0.3**
PUK	**Puka**	**0.41**	**135**	*ePg*	**Pg**	**18 17 13.8**	**-0.3**
	SNR=9.0						
PUK				*i* Sg	**Sb**	**18 17 20.7**	**-0.3**
	SNR=9.0						
ULC	**Ulcinj**	**0.42**	**208**	⇓*iPg*	**Pg**	**18 17 13.7**	**-0.5**
ULC				*eSg*	**Sb**	**18 17 21.2**	**0.0**
ULC	**Ulcinj**	**0.42**	**208**	⇓*iPg*	**Pg**	**18 17 13.7**	**-0.5**
ULC				*eSg*	**Sb**	**18 17 21.2**	**0.0**
BCI	**Bajram Curri**	**0.42**	**85**	*ePG*	**Pg**	**18 17 14.1**	**-0.2**
BCI				*i* SG	**Sb**	**18 17 21.0**	**-0.3**
BCI	**Bajram Curri**	**0.42**	**85**	*ePg*	**Pg**	**18 17 14.1**	**-0.2**
	SNR=9.0						
BCI				*i* Sg	**Sb**	**18 17 21.0**	**-0.3**
	SNR=9.0						
PVY	**Plav**	**0.43**	**52**	⇑*iPg*	**Pg**	**18 17 14.5**	**0.0**
PVY				*eSg*	**Sb**	**18 17 21.6**	**0.0**
BUM	**Brajici-Budva**	**0.45**	**266**	⇑*iPg*	**Pg**	**18 17 14.7**	**-0.2**
BUM				*eSg*	**Sb**	**18 17 22.3**	**-0.1**
BUM	**Brajici-Budva**	**0.45**	**266**	⇑*iPg*	**Pg**	**18 17 14.7**	**-0.2**
BUM				*eSg*	**Sb**	**18 17 22.3**	**-0.1**
BEY	**Berane**	**0.61**	**28**	⇓*iPg*	**Pg**	**18 17 17.5**	**-0.4**
BEY				*eSg*	**Sb**	**18 17 26.9**	**0.0**
NKY	**Niksic**	**0.61**	**322**	⇑*iPg*	**Pg**	**18 17 17.7**	**-0.2**
NKY				*eSg*	**Sb**	**18 17 27.2**	**+0.2**
NKY	**Niksic**	**0.61**	**322**	⇑*iPg*	**Pg**	**18 17 17.7**	**-0.2**
NKY				*eSg*	**Sb**	**18 17 27.2**	**+0.2**
IVA	**Berane**	**0.61**	**28**	⇓*iPg*	**Pg**	**18 17 17.5**	**-0.4**
IVA				*eSg*	**Sb**	**18 17 26.9**	**-0.1**
HCY	**Herceg Novi**	**0.76**	**279**	⇑*iPg*	**Pg**	**18 17 20.1**	**-0.5**
HCY				*eSg*	**Sb**	**18 17 31.8**	**+0.8**
HCY	**Herceg Novi**	**0.76**	**279**	⇑*iPg*	**Pg**	**18 17 20.1**	**-0.5**
HCY				*eSg*	**Sb**	**18 17 31.8**	**+0.8**
BRY	**Bratogost**	**0.91**	**309**	*ePg*	**Pb**	**18 17 22.9**	**-0.7**
BRY				*eSg*	**Sn**	**18 17 37.2**	**-0.3**
BRY	**Bratogost**	**0.91**	**309**	*ePg*	**Pb**	**18 17 22.9**	**-0.7**
PHP	**Peshkopia**	**0.95**	**133**	*i* PG	**Pb**	**18 17 23.2**	**-1.0**
PHP				*i* SG	**Sn**	**18 17 38.8**	**+0.5**
PHP	**Peshkopia**	**0.95**	**133**	*i* Pg	**Pb**	**18 17 23.2**	**-1.0**
	SNR=9.0						
PHP				*i* Sg	**Sn**	**18 17 38.8**	**+0.5**
	SNR=9.0						
UPM	**Unac-Piva**	**0.98**	**333**	⇓*iPg*	**Pb**	**18 17 23.7**	**-1.0**
UPM				*eSg*	**Sn**	**18 17 39.0**	**-0.1**
UPM	**Unac-Piva**	**0.98**	**333**	⇓*iPg*	**Pb**	**18 17 23.7**	**-1.0**
UPM				*eSg*	**Sn**	**18 17 39.0**	**-0.1**
TIR	**Tirane**	**1.02**	**165**	*eSg*	**Sn**	**18 17 42.1**	**+2.2**
STON	**Ston**	**1.44**	**293**	*ePn*	**Pn**	**18 17 31.6**	**0.0**
STON				Sn	**Sg**	**18 17 53.5**	**+1.3**
STON	**Ston**	**1.44**	**293**	*ePn*	**Pn**	**18 17 31.5**	**0.0**
STON				Sn	**Sg**	**18 17 53.5**	**+1.3**
BBLS	**Lazi?i**	**1.54**	**357**	*ePn*	**Pb**	**18 17 33.9**	**-0.3**
BBLS				*eSn*	**Sg**	**18 17 54.9**	**-0.5**
BBLS	**Lazi?i**	**1.54**	**357**	*ePn*	**Pb**	**18 17 33.9**	**-0.3**
BBLS				*eSn*	**Sg**	**18 17 54.9**	**-0.5**
BARS	**Barje**	**1.77**	**73**	*ePg*	**Pg**	**18 17 39.4**	**-0.5**
BARS				*eSg*	**Sg**	**18 18 03.2**	**+0.2**
BARS	**Barje**	**1.77**	**73**	*ePg*	**Pg**	**18 17 39.4**	**-0.5**
BARS				*eSg*	**Sg**	**18 18 03.2**	**+0.2**
GRUS	**Gruza**	**1.79**	**29**	*ePg*	**Pb**	**18 17 38.9**	**+0.4**
GRUS				*eSg*	**Sb**	**18 18 01.7**	**+0.9**
GRUS	**Gruza**	**1.79**	**29**	*ePg*	**Pb**	**18 17 38.9**	**+0.4**
GRUS				*eSg*	**Sb**	**18 18 01.7**	**+0.9**
DIVS	**Divibare**	**1.80**	**11**	*eSn*	**Sb**	**18 18 01.3**	**+0.1**
DIVS	**Divibare**	**1.80**	**11**	*eSn*	**Sb**	**18 18 01.3**	**+0.1**
ZAPS	**Zavoj**	**2.49**	**67**	*ePg*	**Pg**	**18 17 52.7**	**-0.9**
ZAPS				*eSg*	**Sg**	**18 18 25.9**	**+0.1**
ZAPS	**Zavoj**	**2.49**	**67**	*ePg*	**Pg**	**18 17 52.7**	**-0.9**
ZAPS				*eSg*	**Sg**	**18 18 25.9**	**+0.1**
NVLJ	**Novalja**	**4.04**	**305**	*ePn*	**Pn**	**18 18 08.2**	**+0.9**
NVLJ				Sn	**Sn**	**18 18 54.1**	**-0.3**
NVLJ	**Novalja**	**4.04**	**305**	*ePn*	**Pn**	**18 18 08.2**	**+0.9**
NVLJ				Sn	**Sn**	**18 18 54.1**	**-0.3**

IDC 27 18:47:34.4±2.6, 22.90N×11.60W, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.5/28, mbtmp3.8/5, ML3.1/1, MS3.4/1, Ms1 3.3/1, ms1mx2.5/31, Error ellipse: s-maj=78.3km s-min=34.3km az=75.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**15.92**	**125**	Pn	Pn	18 51 20.4	+0.5
	0.1nm,0.3s,baz=311,slow=12,SNR=4.5						
TORD				Sn	Sn	18 54 16.0	-1.2
	0.1nm,0.3s,baz=305,slow=22,SNR=3.3						
GERES	**GERESS Array B**	**32.73**	**31**	P	P	18 54 09.1	+0.2
	0.8nm,0.9s,baz=227,slow=10,SNR=4.0						
HFS	**Hagfors**	**41.22**	**19**	P	P	18 55 19.8	-0.9
	3.3nm,1.0s,baz=204,slow=10,SNR=5.0						
SCHQ	**Schefferville**	**51.70**	**323**	LR	LR	19 15 06.0	
	comp=Z,33nm,19.7s,baz=122,slow=32						
KURBB	**Kurchatov Arra**	**72.72**	**42**	P	P	18 59 04.6	+0.3
	0.9nm,0.8s,baz=284,slow=6.5,SNR=9.1						
MKAR	**Makanchi Array**	**76.22**	**45**	P	P	18 59 25.1	+0.3
	0.3nm,0.5s,baz=294,slow=5.0,SNR=7.9						
WRA	**Warrmunga Arr**	**148.19**	**91**	PKPbc	PKPbc	19 07 22.2	-0.9
	0.6nm,0.8s,baz=292,slow=2.4,SNR=3.9						
ASAR	**Alice Springs**	**148.35**	**98**	PKPbc	PKPbc	19 07 22.9	-0.6
	0.5nm,0.7s,baz=275,slow=3.3,SNR=8.5						

IDC 27 19:08:26.9±2.1, 28.22S×177.79W, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, Error ellipse: s-maj=64.2km s-min=30.3km az=43.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.45**	**265**	P	P	19 16 31.4	-0.5
	0.3nm,0.5s,baz=102,slow=6.5,SNR=11						
WRA	**Warramunga Arr**	**44.24**	**270**	P	P	19 16 38.5	+0.1
	0.4nm,0.5s,baz=108,slow=7.6,SNR=3.1						
VNDA	**Vanda**	**50.27**	**186**	P	P	19 17 24.9	+0.4
	0.4nm,0.6s,baz=2.2,slow=7.9,SNR=4.0						
QSPA	**South Pole Qui**	**61.88**	**180**	P	P	19 18 48.1	+0.1
	2.2nm,1.0s,baz=15,slow=3.2,SNR=5.7						
FINES	**FINESS Array B**	**143.16**	**341**	PKP	PKPdf	19 28 01.4	-0.8
	2.2nm,0.8s,baz=45,slow=4.1,SNR=4.8						
BRTR	**Keskin Array B**	**151.66**	**302**	PKPbc	PKPbc	19 28 23.9	+0.3
	0.9nm,1.0s,baz=159,slow=4.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**165.00**	**178**	PKPab	PKPab	19 29 28.6	-1.4
	0.8nm,0.9s,baz=156,slow=3.4,SNR=3.3						

IDC 27 20:16:21.0±4.2, 42.78S×72.28W, h20km±25km, mb3.7/9, mb1 4.0/10, mb1mx3.9/20, mbtmp3.8/10, ML3.9/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/25, Error ellipse: s-maj=36.1km s-min=16.8km az=99.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.42**	**33**	Pn	Pn	20 17 01.6	+2.1
	6.6nm,0.3s,baz=218,slow=16,SNR=76						
PLCA				Pg	Pb	20 17 04.2	+0.3
	8.7nm,0.3s,baz=223,slow=17,SNR=149						
PLCA				Lg	Lg	20 17 38.5	
	32nm,0.3s,baz=131,slow=7.1,SNR=17						
CPUP	**Villa Florida**	**20.46**	**41**	P	Pn	20 20 58.5	-1.0
	1.1nm,0.6s,baz=212,slow=8.9,SNR=4.6						
CPUP				LR	LR	20 29 35.2	
	comp=Z,147nm,18.3s,baz=343,slow=39						
LPAZ	**La Paz**	**26.64**	**9**	P	P	20 21 59.3	+0.2
	1.2nm,0.8s,baz=217,slow=4.2,SNR=5.5						
SIV	**San Ignacio**	**28.37**	**23**	P	P	20 22 12.5	-1.4
	1.4nm,0.7s,baz=220,slow=8.1,SNR=5.1						
BDFB	**Brasilia**	**34.10**	**45**	LR	LR	20 37 24.1	
	comp=Z,48nm,21.2s,baz=199,slow=37						
SNAA	**Sanae**	**43.64**	**155**	P	P	20 24 23.5	-0.2
	0.4nm,0.4s,baz=260,slow=6.1,SNR=3.8						
QSPA	**South Pole Qui**	**47.47**	**180**	P	P	20 24 54.2	-0.1
	8.5nm,1.1s,baz=163,slow=4.2,SNR=10						
VNDA	**Vanda**	**55.49**	**192**	P	P	20 25 54.5	+0.7
	3.2nm,1.1s,baz=144,slow=5.6,SNR=5.2						
TXAR	**Lajitas Array**	**77.35**	**332**	P	P	20 28 14.2	0.0
	0.7nm,0.8s,baz=142,slow=4.7,SNR=6.2						
TORD	**Torodi Ar. Bea**	**87.42**	**70**	P	P	20 29 06.3	-0.7
	0.6nm,0.9s,baz=225,slow=4.1,SNR=3.4						
NVAR	**Mina Array Bea**	**90.99**	**326**	P	P	20 29 24.3	+0.7
	0.4nm,0.8s,baz=190,slow=4.6,SNR=2.7						
ILAR	**Eielson Array**	**121.84**	**331**	PKP	PKPdf	20 35 11.5	-0.9
	0.4nm,0.8s,baz=155,slow=1.3,SNR=5.2						
BRTR	**Keskin Array B**	**125.91**	**66**	PKP	PKPdf	20 35 21.3	0.0
	0.3nm,0.5s,baz=198,slow=4.2,SNR=3.5						
AKTO	**Aktyubinsk**	**145.56**	**60**	PKPbc	PKPdf	20 35 56.5	-0.5
	2.2nm,0.8s,baz=291,slow=4.1,SNR=6.2						
BVAR	**Borovoye Array**	**153.24**	**54**	PKPbc	PKPbc	20 36 16.9	+0.2
	0.5nm,0.7s,baz=0.0,slow=0.1,SNR=2.9						
CMAR	**Chiang Mai Arr**	**154.64**	**160**	PKPbc	PKPbc	20 36 20.1	-0.6
	0.4nm,0.6s,baz=191,slow=5.8,SNR=3.6						
KURBB	**Kurchatov Arra**	**158.60**	**58**	PKP	PKPdf	20 36 15.5	-0.8
	0.5nm,0.9s,baz=255,slow=1.5,SNR=3.7						
ZALV	**Zelesovo Beam**	**161.21**	**46**	PKP	PKPdf	20 36 18.6	-0.5
	0.2nm,0.3s,baz=305,slow=5.1,SNR=2.6						
ZALV				PKPab	PKPab	20 37 02.6	-0.3
	0.4nm,0.6s,baz=297,slow=6.3,SNR=2.7						
MKAR	**Makanchi Array**	**161.54**	**69**	PKPab	PKPab	20 37 03.8	-0.9
	0.8nm,0.8s,baz=276,slow=3.5,SNR=7.5						

*IDC **27** 20:27:36.2±1.7, 11.16S×165.31E, h0km, mb3.9/5, mb1 4.2/6, mb1mx3.8/20, mbtmp4.0/6, ML4.7/1, MS3.3/3, Ms1 3.3/3, ms1mx2.6/36, Error ellipse: s-maj=48.6km s-min=28.5km az=119.0*
*ISCJB **27** 20:27:37.8±1.2, 11.48S±0.09×165.5E±0.2, h24km, mb3.9/5, MS3.2/3, Error ellipse: s-maj=28.4km s-min=12.2km az=169.5*
ISC 27 20:27:39.7±1.3, 11.4S±0.1×165.5E±0.2, h24km, n9, σ1983/9, mb3.8/5, MS3.2/3, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.68**	**175**	*eP*	**Pn**	**20 30 13.0**	**+1.8**
DZM				*eS*	**Sn**	**20 32 08.4**	**-1.7**
DZM	**Mont Dzumac**	**10.68**	**175**	Pn	**Pn**	**20 30 13.4**	**+2.1**
	5.5nm,0.3s,baz=351,slow=13,SNR=44						
DZM				Sn	**Sn**	**20 32 07.6**	**-2.5**
	0.3nm,0.3s,baz=330,slow=20,SNR=2.4						
AFI	**Afiamalu**	**22.33**	**99**	LR	LR	20 39 31.7	
	comp=Z,88nm,18.1s,baz=73,slow=32						
STKA	**Stephens Creek**	**30.02**	**224**	P	**P**	**20 33 48.1**	**+1.3**
	2.6nm,0.7s,baz=37,slow=8.3,SNR=9.0						
STKA				LR	LR	20 45 01.4	
	comp=Z,98nm,20.6s,baz=21,slow=35						
WRA	**Warramunga Arr**	**31.13**	**250**	P	**P**	**20 33 56.1**	**-0.6**
	4.2nm,0.8s,baz=82,slow=9.1,SNR=22						
ASAR	**Alice Springs**	**32.41**	**244**	P	**P**	**20 34 07.1**	**-0.9**
	0.6nm,0.6s,baz=65,slow=9.7,SNR=15						
PETK	**Petropavlovsk-**	**64.57**	**355**	LR	LR	21 01 06.0	
	comp=Z,14nm,21.8s,baz=314,slow=31						
ILAR	**Eielson Array**	**83.91**	**19**	P	**P**	**20 40 06.7**	**-0.5**
	0.2nm,0.6s,baz=238,slow=5.2,SNR=3.8						
MKAR	**Makanchi Array**	**93.58**	**317**	P	**P**	**20 40 53.5**	**-0.5**
	0.3nm,0.7s,baz=88,slow=6.1,SNR=3.4						

*NSSC **27** 20:28:00.5±1.9, 38.58N×43.21E, h0km±200km, MD2.2, ML3.3*
*ISK **27** 20:28:03.5, 38.57N×42.64E, h3km, ML4.0*
*DDA **27** 20:28:04.4, 38.66N×42.68E, h17km, ML4.1*
*ISCJB **27** 20:28:04.7±0.6, 38.61N±0.02×42.64E±0.03, h4km±4km, mb3.1/3, Error ellipse: s-maj=3.7km s-min=2.9km az=37.7*
*CSEM **27** 20:28:05.0±0.1, 38.62N×42.71E, h5km, ML4.1, Error ellipse: s-maj=3.9km s-min=3.2km az=115.0*
*IDC **27** 20:28:07.1±1.1, 38.54N×42.78E, h0km, mb3.3/3, mb1 3.3/9, mb1mx3.2/30, mbtmp3.3/9, ML3.1/4, Error ellipse: s-maj=25.4km s-min=12.4km az=137.0*
ISC 27 20:28:05.0±1.1, 38.62N±0.02×42.66E±0.02, h4km±8km, n130, σ1919/164, mb3.2/3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATV	**Tatvan**	**0.33**	**250**	*i* P	**Pg**	**20 28 11.2**	**-0.2**
TATV				*i* S	**Sg**	**20 28 16.7**	**+0.9**
TATV	**Tatvan**	**0.33**	**250**	*i* P	**Pg**	**20 28 11.2**	**-0.2**
TATV				*i* S	**Sg**	**20 28 16.7**	**+0.9**
GEVA	**Gevas**	**0.44**	**135**	*i* P	**Pg**	**20 28 13.3**	**-0.2**
GEVA				*i* S	**Sg**	**20 28 20.4**	**+1.2**
GEVA	**Gevas**	**0.44**	**135**	*i* P	**Pg**	**20 28 13.3**	**-0.2**
GEVA				*i* S	**Sg**	**20 28 20.4**	**+1.2**
TVAN	**Van**	**0.59**	**99**	*i* P	**Pg**	**20 28 16.5**	**+0.2**
TVAN	**Van**	**0.59**	**99**	*i* P	**Pg**	**20 28 16.5**	**+0.2**
TUTA	**Tutak**	**0.79**	**9**	*i* P	**Pg**	**20 28 19.5**	**-0.6**
TUTA				*i* S	**Sg**	**20 28 29.0**	**-1.4**
TUTA	**Tutak**	**0.79**	**9**	*i* P	**Pg**	**20 28 19.5**	**-0.6**
TUTA				*i* S	**Sg**	**20 28 29.0**	**-1.4**
BTMT	**Batman**	**1.02**	**245**	PN	**Pb**	**20 28 25.3**	**+0.1**
BTMT	**Batman**	**1.02**	**245**	*i* Pn	**Pb**	**20 28 25.3**	**+0.1**
VRTB	**Varto-Mus**	**1.08**	**300**	*ePn*	**Pg**	**20 28 25.1**	**-0.7**
VRTB				*eSN*	**Sg**	**20 28 40.5**	**+0.7**
VRTB	**Varto-Mus**	**1.08**	**300**	*ePn*	**Pg**	**20 28 25.1**	**-0.7**
VRTB				*eSn*	**Sg**	**20 28 40.6**	**+0.7**
CLDR	**Caldiran**	**1.11**	**62**	*ePN*	**Pg**	**20 28 25.9**	**-0.4**
CLDR				*eSN*	**Sn**	**20 28 42.6**	**-0.8**
CLDR	**Caldiran**	**1.11**	**62**	*ePn*	**Pg**	**20 28 25.9**	**-0.4**
CLDR				*eSn*	**Sn**	**20 28 42.6**	**-0.8**
SIRN	**S¨¨rnak**	**1.14**	**190**	*i* P	**Pn**	**20 28 27.6**	**-0.3**
SIRN				*i* S	**Sn**	**20 28 43.2**	**-0.8**
SIRN	**S¨¨rnak**	**1.14**	**190**	*i* P	**Pn**	**20 28 27.6**	**-0.3**
SIRN				*i* S	**Sn**	**20 28 43.2**	**-0.8**
DYDN	**Diyadin**	**1.22**	**41**	*i* P	**Pg**	**20 28 27.5**	**-0.9**
DYDN				*i* S	**Sg**	**20 28 43.4**	**-0.8**
DYDN	**Diyadin**	**1.22**	**41**	*i* P	**Pg**	**20 28 27.5**	**-0.9**
DYDN				*i* S	**Sg**	**20 28 43.4**	**-0.8**
BNGL	**BINGOL**	**1.23**	**286**	*i* P	**Pg**	**20 28 27.5**	**-1.0**
BNGL				*i* S	**Sg**	**20 28 44.1**	**-0.3**
BEST	**Besiri**	**1.32**	**237**	*i* P	**Pn**	**20 28 30.2**	**0.0**
BEST				*i* S	**Sn**	**20 28 49.4**	**+1.0**
HAKT	**HAKKARI**	**1.34**	**142**	*i* P	**Pn**	**20 28 29.1**	**-1.7**
HAKT				*i* S	**Sn**	**20 28 53.0**	**+3.7**
HAKT	**HAKKARI**	**1.34**	**142**	*i* P	**Pn**	**20 28 29.1**	**-1.7**
HOMI

GAZ	**Gaziantep**	**4.55**	**253**	*e*PN	**Pn**	**20 29 14.8**	**+0.1**
GAZ	**Gaziantep**	**4.55**	**253**	*e*Pn	**Pn**	**20 29 14.8**	**+0.1**
KMRS	**Kahramanmaras**	**4.68**	**258**	*e*PN	**Pn**	**20 29 17.2**	**+0.7**
KMRS	**Kahramanmaras**	**4.68**	**258**	*e*Pn	**Pn**	**20 29 17.2**	**+0.7**
SARI	**SarD1z-Kayseri**	**4.90**	**269**	*e*PN	**Pn**	**20 29 20.6**	**+1.0**
SARI	**SarD1z-Kayseri**	**4.90**	**269**	*e*Pn	**Pn**	**20 29 20.6**	**+1.0**
KBZ	**Khabaz**	**5.11**	**2**	Pn	Pb	20 29 28.7	-6.1
	comp=Z,0.1nm,0.3s,baz=176,slow=8.0,SNR=3.6						
BHD	**Baghdad**	**5.52**	**165**	*ex*	**Pb**	**20 29 40.6**	**-1.3**
BHD				*ex*	x	20 30 58.3	
HTY	**Hatay**	**5.76**	**246**	*e*PN	**Pn**	**20 29 32.5**	**+1.3**
HTY	**Hatay**	**5.76**	**246**	*e*Pn	**Pn**	**20 29 32.6**	**+1.3**
FKH	**Fakeheh**	**6.67**	**231**	*e*P	**Pn**	**20 29 44.1**	**+0.2**
HWQ	**Hawqa**	**6.93**	**233**	*e*P	**Pn**	**20 29 47.8**	**+0.3**
HWQ	**Hawqa**	**6.93**	**233**	*e*P	**Pn**	**20 29 47.8**	**+0.3**
BRTR	**Keskin Array B**	**7.10**	**282**	Pn	Pn	20 29 53.1	+3.3
	comp=Z,0.1nm,0.3s,baz=112,slow=15,SNR=3.3						
ZALF	**Zalf**	**7.15**	**219**	*i* P	**Pn**	**20 29 50.4**	**0.0**
ZALF				*e*S	**Sn**	**20 31 10.4**	**-1.6**
ZALF				AML	AML	20 32 11.6	
	comp=E,18nm,0.7s						
ZALF				AML	AML	20 32 13.5	
	comp=N,30nm,0.7s						
ZALF	**Zalf**	**7.15**	**219**	*e*P	**Pn**	**20 29 49.5**	**-0.8**
ZALF	**Zalf**	**7.15**	**219**	*i* P	**Pn**	**20 29 50.4**	**0.0**
	SNR=45						
ZALF				*e*S	**Sn**	**20 31 10.4**	**-1.6**
	comp=N,30nm,0.7s,SNR=40						
TOTH	**TOTAH**	**7.28**	**226**	*e*P	**Pn**	**20 29 52.8**	**+0.5**
TOTH				*e*S	**Sn**	**20 31 14.6**	**-0.9**
TOTH	**TOTAH**	**7.28**	**226**	*e*P	**Pn**	**20 29 52.8**	**+0.5**
	SNR=45						
TOTH				*e*S	**Sn**	**20 31 14.6**	**-0.9**
	SNR=40						
BHL	**Bhannes**	**7.36**	**232**	*e*P	**Pn**	**20 29 54.1**	**+0.7**
BHL	**Bhannes**	**7.36**	**232**	*e*P	**Pn**	**20 29 54.1**	**+0.7**
BRBR	**Barbar**	**7.52**	**228**	*e*P	**Pn**	**20 29 56.1**	**+0.4**
BRBR				*e*S	**Sn**	**20 31 21.0**	**-0.5**
BRBR				AML	AML	20 32 13.5	
	comp=E,29nm,0.6s						
BRBR				AML	AML	20 32 22.1	
	comp=Z,24nm,0.7s						
BRBR	**Barbar**	**7.52**	**228**	*e*P	**Pn**	**20 29 57.4**	**+1.7**
BRBR				*e*S	Pb	20 30 05.7	-10
BRBR	**Barbar**	**7.52**	**228**	*e*P	**Pn**	**20 29 56.1**	**+0.4**
	SNR=45						
BRBR				*e*S	**Sn**	**20 31 21.0**	**-0.5**
	comp=Z,24nm,0.7s,SNR=40						
SALA	**Sala**	**7.62**	**221**	*i* P	**Pn**	**20 29 57.5**	**+0.5**
SALA				*e*P	Pb	20 29 57.8	-20
SALA				*e*S	**Sn**	**20 31 22.3**	**-1.6**
SALA				AML	AML	20 32 22.4	
	comp=N,38nm,0.7s						
SALA				AML	AML	20 32 23.8	
	comp=E,4.0nm,0.6s						
SALA	**Sala**	**7.62**	**221**	*e*P	**Pn**	**20 29 55.2**	**-1.7**
SALA	**Sala**	**7.62**	**221**	*i* P	**Pn**	**20 29 57.5**	**+0.5**
	SNR=45						
SALA				*e*S	**Sn**	**20 31 22.3**	**-1.6**
	comp=E,4.0nm,0.6s,SNR=40						
ASF	**Jabal al Asfar**	**7.97**	**218**	Pn	**Pn**	**20 30 02.3**	**+0.6**
	comp=E,0.8nm,0.3s,baz=275,slow=7.8,SNR=13						
ASF				Lg	Lg	20 32 20.3	
	comp=E,0.8nm,0.3s,baz=269,slow=19,SNR=2.8						
TCHB	**Talchebab**	**8.06**	**225**	*e*P	**Pn**	**20 30 03.2**	**+0.4**
TCHB				*e*S	**Sn**	**20 31 32.3**	**-2.1**
TCHB	**Talchebab**	**8.06**	**225**	*e*P	**Pn**	**20 29 59.9**	**-2.9**
TCHB	**Talchebab**	**8.06**	**225**	*e*P	**Pn**	**20 30 03.2**	**+0.4**
	SNR=45						
MMAI	**Mount Meron Ar**	**8.12**	**229**	Pn	**Pn**	**20 30 06.2**	**+2.3**
	comp=E,0.9nm,0.3s,baz=78,slow=20,SNR=7.5						
MMAI				Lg	Lg	20 32 24.4	
	comp=E,1.0nm,0.3s,baz=17,slow=32,SNR=1.8						
MIB	**Mutribah**	**9.61**	**155**	*e*P	**Pn**	**20 30 22.0**	**-2.1**
MIB				AMb	AMB	20 30 30.4	
	comp=Z,15nm,0.7s						
MIB	**Mutribah**	**9.61**	**155**	*e*P	**Pn**	**20 30 22.0**	**-2.1**
	comp=Z,15nm,0.7s						
RST	**Umm Al-Ruwaisa**	**9.78**	**157**	*e*P	**Pn**	**20 30 23.8**	**-2.6**
RST				AMb	AMB	20 30 33.5	
	comp=Z,126nm,0.8s						
NAY	**Al-Naaiem**	**10.09**	**157**	*e*P	Pn	20 30 24.8	-5.9
NAY				AMb	AMB	20 30 33.5	
	comp=Z,5.0nm,0.8s						
EIL	**Elat**	**10.97**	**218**	Lg	Lg	20 33 54.1	
	comp=Z,0.1nm,0.3s,baz=276,slow=16,SNR=1.6						
AKASG	**Malin Array Be**	**15.37**	**326**	Pn	**P**	**20 31 45.9**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=124,slow=11,SNR=4.5						
AKTO	**Aktyubinsk**	**16.07**	**38**	Pn	**P**	**20 31 55.4**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=267,slow=10,SNR=4.5						
KURBB	**Kurchatov Arra**	**27.93**	**53**	P	**P**	**20 33 59.6**	**+3.5**
	comp=Z,0.3nm,0.8s,baz=261,slow=8.9,SNR=3.9						
MKAR	**Makanchi Array**	**29.98**	**61**	P	P	20 34 18.8	+4.3
	comp=Z,0.3nm,0.8s,baz=260,slow=4.0,SNR=3.4						
TORD	**Torodi Ar. Bea**	**44.22**	**246**	P	P	20 36 19.6	+4.1
	comp=Z,0.6nm,1.1s,baz=43,slow=7.9,SNR=2.7						

PRU **27** *20:34:45.2, 40˚.96N*$_{\kappa}$*20˚.58E, h0*^{km}
IDC **27** *20:34:47.0*±*0.8, 41˚.13N*$_{\kappa}$*20˚.26E, h0*^{km}*, mb3.9/17, mb1 4.0/23, mb1mx3.9/36, mbtmp3.9/23, ML3.5/5, MS2.9/5, Ms1 3.0/5, ms1mx2.5/46, Error ellipse: s-maj=16.7km s-min=10.9km az=37.0*
TIR **27** *20:34:47.5*±*6.9, 41˚.21N*$_{\kappa}$*20˚.15E, h20*^{km}±*242*^{km}*, ML3.7*
ISCJB **27** *20:34:47.9*±*0.3, 41˚.18N*±*0.0˚.01-20˚.19E*±*0˚.02, h13*^{km}±*2*^{km}*, mb4.1/24, MS3.4/2, Error ellipse: s-maj=2.4km s-min=1.7km az=44.2*
PDG **27** *20:34:47.7*±*0.4, 41˚.18N*$_{\kappa}$*20˚.24E, h6*^{km}*, MD4.0/7, ML3.9/8, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
THE **27** *20:34:47.8, 41˚.23N*$_{\kappa}$*20˚.27E, h2*^{km}±*1*^{km}*, ML3.9/4, Error ellipse: s-maj=1.1km s-min=0.5km az=253.0*
BEO **27** *20:34:47.5*±*0.5, 41˚.03N*$_{\kappa}$*20˚.24E, h9*^{km}±*2*^{km}*, ML3.7/1*
ROM **27** *20:34:47.9*±*0.3, 41˚.19N*$_{\kappa}$*20˚.20E, h10*^{km}*, Ml3.4/9, Error ellipse: s-maj=5.3km s-min=2.3km az=77.0*
SKO **27** *20:34:48.5, 41˚.18N*$_{\kappa}$*20˚.21E, h7*^{km}*, M3.6, ML3.9*
CSEM **27** *20:34:48.1*±*0.1, 41˚.17N*$_{\kappa}$*20˚.20E, h5*^{km}*, mb4.2/13, Error ellipse: s-maj=2.1km s-min=1.6km az=39.0*
LDG **27** *20:34:48.7*±*0.1, 41˚.24N*$_{\kappa}$*20˚.22E, h10*^{km}*, Ml3.9/15, Error ellipse: s-maj=2.7km s-min=1.8km az=24.0*
MOS **27** *20:34:48.9*±*1.1, 41˚.22N*$_{\kappa}$*20˚.19E, h21*^{km}*, mb4.2/16, Error ellipse: s-maj=11.0km s-min=5.1km az=86.4*
ATH **27** *20:34:49.6, 41˚.14N*$_{\kappa}$*20˚.36E, h19*^{km}±*4*^{km}*, MD3.4/11*

ISC 27 20:34:47.8±0.9,**41˚.17N**±0˚.02$_{\kappa}$**20˚.22E**±0˚.01,**h5**^{km}±6^{km}**, n449,**σ**1$38/533,mb4.0**/24**,55C-40D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.32**	**303**	*e*PG	**Pg**	**20 34 54.1**	**0.0**
TIR				*i* SG	**Sg**	**20 34 58.9**	**+0.5**
TIR	**Tirane**	**0.32**	**303**	P	**Pg**	**20 34 54.2**	**+0.1**
TIR				S	**Sg**	**20 34 58.8**	**+0.4**
TIR	**Tirane**	**0.32**	**303**	Pg	**Pg**	**20 34 54.1**	**0.0**
TIR				Sg	**Sg**	**20 34 58.8**	**+1.4**
TIR	**Tirane**	**0.32**	**303**	P	**Pg**	**20 34 54.2**	**+0.1**
TIR				S	**Sg**	**20 34 58.8**	**+0.4**
TIR				*e*Sg	**Sb**	**20 35 03.0**	**+1.5**
PHP	**Peshkopia**	**0.54**	**18**	*e*PG	**Pg**	**20 34 57.9**	**-0.3**
PHP				*i* SG	**Sg**	**20 35 06.4**	**+1.2**
PHP	**Peshkopia**	**0.54**	**18**	P	**Pg**	**20 34 56.8**	**-1.4**
PHP	**Peshkopia**	**0.54**	**18**	P	**Pg**	**20 34 56.8**	**-1.4**
PHP	**Peshkopia**	**0.54**	**18**	*e*Pg	**Pg**	**20 34 57.9**	**-0.3**
	SNR=9.0						
PHP				*i* Sg	**Sg**	**20 35 06.4**	**+1.2**
	SNR=9.0						
KBN	**Korca**	**0.69**	**142**	*e*PG	**Pg**	**20 35 01.4**	**+0.3**
KBN				*i* SG	**Sb**	**20 35 13.4**	**+1.2**
KBN	**Korca**	**0.69**	**142**	P	**Pg**	**20 35 01.2**	**+0.1**
KBN				S	**Sb**	**20 35 12.4**	**+0.2**
KBN	**Korca**	**0.69**	**142**	P	**Pg**	**20 35 01.2**	**+0.1**
KBN				S	**Sb**	**20 35 12.4**	**+0.2**
KBN				*i* Sg	**Sb**	**20 35 13.4**	**+1.2**
	SNR=9.0						
BIA	**Bitola**	**0.84**	**100**	P	**Pg**	**20 35 02.9**	**-1.1**
BIA				S	**Sg**	**20 35 15.3**	**+0.3**
BIA	**Bitola**	**0.84**	**100**	*i* Pg	**Pg**	**20 35 03.0**	**-1.0**
BIA				*i* Sg	**Sb**	**20 35 16.4**	**-0.3**
BIA	**Bitola**	**0.84**	**100**	P	**Pg**	**20 35 02.9**	**-1.1**
BIA				S	**Sg**	**20 35 15.3**	**+0.3**
BIA				*i* Sg	**Sb**	**20 35 16.3**	**-0.3**
TPE	**Tepelena**	**0.89**	**191**	*e*PN	**Pg**	**20 35 05.1**	**+0.3**
TPE				*i* SN	**Sn**	**20 35 23.4**	**+3.3**
	SNR=9.0						
TPE				*i* Sn	**Sn**	**20 35 23.4**	**+3.3**
	SNR=9.0						
VLO	**Vlora**	**0.89**	**219**	*e*PN	**Pn**	**20 35 06.4**	**-0.5**
VLO	**Vlora**	**0.89**	**219**	P	**Pb**	**20 35 05.8**	**+0.1**
VLO				S	**Sn**	**20 35 19.7**	**-0.5**
VLO	**Vlora**	**0.89**	**219**	P	**Pb**	**20 35 05.8**	**+0.1**
VLO	**Vlora**	**0.89**	**219**	*e*Pn	**Pn**	**20 35 06.4**	**-0.5**
	SNR=9.0						
VLO				S	**Sn**	**20 35 19.7**	**-0.5**
PUK	**Puka**	**0.91**	**344**	*e*PG	**Pg**	**20 35 05.0**	**-0.2**
PUK				*i* SG	**Sb**	**20 35 18.8**	**+0.4**
PUK	**Puka**	**0.91**	**344**	*e*Pg	**Pg**	**20 35 05.0**	**-0.2**
	SNR=9.0						
PUK				*i* Sg	**Sb**	**20 35 18.8**	**+0.4**
	SNR=9.0						
FNA	**Florina**	**0.95**	**114**	P	**Pg**	**20 35 05.8**	**-0.3**
FNA				S	**Sb**	**20 35 19.7**	**0.0**
FNA	**Florina**	**0.95**	**114**	*e*PN	**Pg**	**20 35 05.9**	**-0.2**
FNA				*e*SN	**Sn**	**20 35 22.0**	**+0.2**
FNA	**Florina**	**0.95**	**114**	P	**Pg**	**20 35 05.8**	**-0.3**
FNA				S	**Sb**	**20 35 19.7**	**0.0**
FNA				*e*Sn	**Sn**	**20 35 22.0**	**+0.2**
NEST	**Nestorio**	**0.98**	**140**	P	**Pg**	**20 35 06.3**	**-0.3**
NEST				S	**Sb**	**20 35 21.1**	**+0.6**
NEST	**Nestorio**	**0.98**	**140**	P	**Pg**	**20 35 06.3**	**-0.3**
NEST				S	**Sb**	**20 35 21.1**	**+0.6**
ULC	**Ulcinj**	**1.08**	**317**	⇑*i* Pg	**Pg**	**20 35 07.3**	**-1.2**
ULC				*e*Sg	**Sn**	**20 35 25.0**	**+0.1**
ULC	**Ulcinj**	**1.08**	**317**	⇑*i* Pg	**Pg**	**20 35 07.3**	**-1.2**
ULC				*e*Sg	**Sn**	**20 35 25.0**	**+0.1**
SKO	**Skopje**	**1.21**	**48**	P	**Pb**	**20 35 10.4**	**-0.8**
SKO				S	**Sn**	**20 35 27.8**	**-0.4**
SKO	**Skopje**	**1.21**	**48**	*i* Pg	**Pb**	**20 35 10.5**	**-0.8**
SKO				*i* Sg	**Sg**	**20 35 26.7**	**-0.1**
SKO				*i* Lg	Lg	20 35 28.9	
	comp=N,3μm,0.4s						
SKO				*i* Lg	Lg	20 35 31.1	
	comp=E,3μm,0.8s						
SKO	**Skopje**	**1.21**	**48**	*e*Pg	**Pn**	**20 35 11.3**	**-0.1**
SKO				*e*Sg	**Sn**	**20 35 28.3**	**+0.1**
SKO	**Skopje**	**1.21**	**48**	P	**Pb**	**20 35 10.4**	**-0.8**
SKO	**Skopje**	**1.21**	**48**	*e*Pg	**Pn**	**20 35 11.3**	**-0.1**
SKO				S	**Sn**	**20 35 27.8**	**-0.4**
SKO				*e*Sg	**Sn**	**20 35 28.3**	**+0.1**
SKO				*i* Lg	Lg	20 35 31.5	
	comp=E,3μm,0.8s						
PVY	**Plav**	**1.44**	**352**	⇑*i* Pg	**Pn**	**20 35 14.1**	**-0.5**
PVY				*e*Sg	**Sg**	**20 35 36.5**	**+2.5**
PVY	**Plav**	**1.44**	**352**	⇑*i* Pg	**Pn**	**20 35 14.1**	**-0.5**
PVY				*e*Sg	**Sg**	**20 35 36.5**	**+2.5**
PDG	**Podgorica**	**1.45**	**330**	⇑*i* Pn	**Pn**	**20 35 14.1**	**-0.5**
PDG				*e*Sn	**Sg**	**20 35 36.7**	**+2.2**
PDG	**Podgorica**	**1.45**	**330**	Pg	**Pn**	**20 35 14.1**	**-0.5**
PDG	**Podgorica**	**1.45**	**330**	Pg	**Pn**	**20 35 14.1**	**-0.5**
PDG				*e*Sn	**Sg**	**20 35 36.7**	**+2.2**
PDG				*e*Sg	**Sg**	**20 35 37.5**	**+3.0**
TTG	**Podgorica**	**1.45**	**330**	⇑*i* Pg	**Pn**	**20 35 14.1**	**-0.5**
TTG				*e*Sg	**Sg**	**20 35 37.5**	**+3.0**
KZN	**Kozani**	**1.46**	**126**	*e*PN	**Pb**	**20 35 15.2**	**-0.2**
KZN	**Kozani**	**1.46**	**126**	*e*Pn	**Pb**	**20 35 15.2**	**-0.2**
BUM	**Brajici-Budva**	**1.51**	**319**	⇑*i* Pg	**Pn**	**20 35 15.6**	**+0.1**
BUM				*e*Sg	**Sg**	**20 35 39.2**	**+3.0**
BUM	**Brajici-Budva**	**1.51**	**319**	⇑*i* Pg	**Pn**	**20 35 15.6**	**+0.1**
BUM				*e*Sg	**Sg**	**20 35 39.2**	**+3.0**
JAN	**Janina**	**1.59**	**162**	P	**Pn**	**20 35 16.5**	**0.0**
JAN	**Janina**	**1.59**	**162**	*e*PN	**Pb**	**20 35 17.5**	**-0.1**
JAN	**Janina**	**1.59**	**162**	P	**Pn**	**20 35 16.5**	**0.0**
JAN	**Janina**	**1.59**	**162**	*e*Pn	**Pb**	**20 35 17.5**	**-0.1**
IGT	**Igoumenitsa**	**1.64**	**177**	P	**Pb**	**20 35 18.8**	**+0.4**
IGT	**Igoumenitsa**	**1.64**	**177**	P	**Pb**	**20 35 18.8**	**+0.4**
GRG	**Griva**	**1.66**	**97**	P	**Pn**	**20 35 17.5**	**0.0**
GRG				S	**Sb**	**20 35 39.9**	**-0.1**
GRG	**Griva**	**1.66**	**97**	*e*PN	**Pb**	**20 35 18.5**	**-0.3**
GRG	**Griva**	**1.66**	**97**	P	**Pn**	**20 35 17.5**	**0.0**
GRG	**Griva**	**1.66**	**97**	*e*Pn	**Pb**	**20 35 18.5**	**-0.3**
GRG				S	**Sb**	**20 35 39.9**	**-0.1**
BEY	**Berane**	**1.72**	**352**	⇓*i* Pn	**Pb**	**20 35 19.0**	**-0.9**
BEY				*e*Sn	**Sg**	**20 35 44.4**	**+1.4**
IVA	**Berane**	**1.72**	**352**	⇓*i* Pn	**Pb**	**20 35 19.0**	**-0.9**
IVA				*e*Sn	**Sg**	**20 35 44.4**	**+1.4**
SCTE	**Santa Cesarea**	**1.73**	**231**	Pg	**Pn**	**20 35 19.0**	**+0.6**
	comp=E,245nm,0.5s						
SCTE	**Santa Cesarea**	**1.73**	**231**	Pg	**Pn**	**20 35 19.0**	**+0.6**
	comp=E,245nm,0.5s						
VAY	**Valandovo**	**1.77**	**84**	P	**Pn**	**20 35 18.9**	**-0.1**
VAY				S	**Sn**	**20 35 41.5**	**-0.5**
VAY	**Valandovo**	**1.77**	**84**	*i* Pn	**Pn**	**20 35 18.8**	**-0.1**
VAY				*i* Sg	**Sg**	**20 35 45.9**	**+1.1**
VAY				*i* Lg	Lg	20 35 47.5	
	comp=N,744nm,0.7s						
VAY				*i* Lg	Lg	20 35 47.6	
	comp=E,945nm,0.7s						
VAY	**Valandovo**	**1.77**	**84**	*e*Pg	**Pn**	**20 35 19.0**	**-0.1**
VAY				*e*Sg	**Sg**	**20 35 45.9**	**+1.1**
VAY	**Valandovo**	**1.77**	**84**	*e*Pg	**Pn**	**20 35 19.0**	**-0.1**
VAY	**Valandovo**	**1.77**	**84**	*i* Pn	**Pn**	**20 35 19.3**	**+0.2**
VAY				S	**Sn**	**20 35 41.5**	**-0.5**
VAY				*e*Sg	**Sg**	**20 35 45.9**	**+1.1**
VAY				*i* Lg	Lg	20 35 48.1	
	comp=E,945nm,0.7s						
HCY	**Herceg Novi**	**1.82**	**315**	⇓*i* Pn	**Pb**	**20 35 20.5**	**-1.0**
HCY				*e*Sn	**Sg**	**20 35 46.9**	**+0.7**
HCY	**Herceg Novi**	**1.82**	**315**	⇓*i* Pn	**Pb**	**20 35 20.5**	**-1.0**
HCY				*e*Sn	**Sg**	**20 35 46.9**	**+0.7**
NKY	**Niksic**	**1.88**	**331**	⇓*i* Pn	**Pb**	**20 35 22.1**	**-0.5**
NKY				*e*Sn	**Sg**	**20 35 48.4**	**+0.2**
NKY	**Niksic**	**1.88**	**331**	⇓*i* Pn	**Pb**	**20 35 22.1**	**-0.5**
MESG	**Mesagne**	**1.89**	**253**	Pg	**Pn**	**20 35 20.5**	**-0.2**
	comp=E,122nm,0.5s						
MESG	**Mesagne**	**1.89**	**253**	Pg	**Pn**	**20 35 20.5**	**-0.2**
	comp=E,122nm,0.5s						
KNT	**Kendrikon**	**2.02**	**89**	P	**Pn**	**20 35 22.8**	**+0.4**
KNT	**Kendrikon**	**2.02**	**89**	P	**Pn**	**20 35 22.8**	**+0.4**
BARS	**Barje**	**2.03**	**35**	⇓*i* Pn	**Pn**	**20 35 22.9**	**+0.3**
BARS	**Barje**	**2.03**	**35**	⇓*i* Pn	**Pn**	**20 35 22.9**	**+0.3**
SJES	**Sjenica**	**2.10**	**355**	⇓*i* Pn	**Pb**	**20 35 25.4**	**-0.9**
SJES				*e*Sn	**Sb**	**20 35 53.2**	**+0.5**
SJES	**Sjenica**	**2.10**	**355**	⇓*i* Pn	**Pb**	**20 35 25.4**	**-0.9**
SJES				*e*Sn	**Sb**	**20 35 53.2**	**+0.5**
THL	**Klokotos Trika**	**2.11**	**139**	P	**Pn**	**20 35 24.6**	**+1.0**
THL	**Klokotos Trika**	**2.11**	**139**	*e*PN	**Pb**	**20 35 25.1**	**-1.3**
THL	**Klokotos Trika**	**2.11**	**139**	P	**Pn**	**20 35 24.6**	**+1.0**
THL	**Klokotos Trika**	**2.11**	**139**	*e*Pn	**Pb**	**20 35 25.1**	**-1.3**
BRY	**Bratogost**	**2.14**	**325**	*e*Pn	**Pn**	**20 35 25.5**	**+1.3**
BRY				*e*Sn	**Sb**	**20 35 54.2**	**+0.3**
BRY	**Bratogost**	**2.14**	**325**	*e*Pn	**Pn**	**20 35 25.5**	**+1.3**
THE	**Thessaloniki**	**2.15**	**104**	P	**Pn**	**20 35 25.0**	**+0.8**
THE	**Thessaloniki**	**2.15**	**104**	P	**Pn**	**20 35 25.0**	**+0.8**
SELS	**Selova**	**2.15**	**18**	*e*Pn	**Pn**	**20 35 24.4**	**+0.1**
SELS				*e*Sn	**Sb**	**20 35 54.0**	**-0.2**
HORT	**Hortiatis**	**2.25**	**104**	P	**Pn**	**20 35 25.8**	**+0.1**
HORT	**Hortiatis**	**2.25**	**104**	P	**Pn**	**20 35 25.8**	**+0.1**
UPM	**Unac-Piva**	**2.25**	**335**	⇓*i* Pn	**Pb**	**20 35 27.6**	**-1.5**
UPM				*e*Sn	**Sb**	**20 35 57.5**	**+0.2**
UPM	**Unac-Piva**	**2.25**	**335**	⇓*i* Pn	**Pb**	**20 35 27.6**	**-1.5**
UPM				*e*Sn	**Sb**	**20 35 57.5**	**+0.2**
KKB	**Krupnik**	**2.26**	**71**	*i* P	**Pn**	**20 35 26.9**	**+1.2**
KKB	**Krupnik**	**2.26**	**71**	*i* P	**Pn**	**20 35 26.9**	**+1.2**
KKB	**Krupnik**	**2.26**	**71**	*i* P	**Pn**	**20 35 26.9**	**+1.2**
SOH	**Sokhos**	**2.39**	**97**	P	**Pn**	**20 35 28.5**	**+0.9**
SOH	**Sokhos**	**2.39**	**97**	*e*PB	**Pn**	**20 35 28.5**	**+0.9**
SOH	**Sokhos**	**2.39**	**97**	P	**Pn**	**20 35 28.5**	**+0.9**
LKD2	**Lefkada island**	**2.40**	**172**	P	**Pb**	**20 35 29.8**	**-1.7**
LKD2	**Lefkada island**	**2.40**	**172**	*e*PB	**Pb**	**20 35 29.8**	**-1.7**
LKD2	**Lefkada island**	**2.40**	**172**	P	**Pb**	**20 35 29.7**	**-1.7**
NOCI	**Noci**	**2.42**	**262**	Pg	**Pn**	**20 35 27.3**	**-0.7**
	comp=E,257nm,0.4s						
NOCI	**Noci**	**2.42**	**262**	Pg	**Pn**	**20 35 27.3**	**-0.7**
	comp=E,257nm,0.4s						
BAI	**Bari**	**2.53**	**270**	*e*Pn	**Pn**	**20 35 30.3**	**+0.9**
STON	**Ston**	**2.54**	**313**	*i* Pn	**Pn**	**20 35 30.0**	**+0.5**
STON					Sn	**Sb**	**20 36 04.3**	**-0.9**
STON	**Ston**	**2.54**	**313**	*i* Pn	**Pn**	**20 35 30.0**	**+0.5**
STON					Sn	**Sb**	**20 36 04.2**	**-0.9**
SRS	**Serrai**	**2.54**	**90**	P	**Pn**	**20 35 30.1**	**+0.4**
SRS	**Serrai**	**2.54**	**90**	P	**Pn**	**20 35 30.1**	**+0.4**
PLG	**Polygyros**	**2.57**	**107**	P	**Pn**	**20 35 31.8**	**+1.7**
PLG	**Polygyros**	**2.57**	**107**	*e*PB	**Pn**	**20 35 32.0**	**+1.9**
PLG	**Polygyros**	**2.57**	**107**	P	**Pn**	**20 35 31.8**	**+1.7**
MAKR	**Makrakomi, Fth**	**2.60**	**145**	P	**Pn**	**20 35 32.6**	**+2.1**
MAKR	**Makrakomi, Fth**	**2.60**	**145**	P	**Pn**	**20 35 32.6**	**+2.1**
VTS	**Vitosha**	**2.64**	**57**	P	**Pn**	**20 35 32.4**	**+1.3**
VTS	**Vitosha**	**2.64**	**57**	⇓*i* Pn	**Pn**	**20 35 32.3**	**+1.2**
VTS				*e*Sn	**Sn**	**20 36 03.3**	**-0.3**
VTS	**Vitosha**	**2.64**	**57**	⇓*i* P	**Pn**	**20 35 32.5**	**+1.3**
VTS	**Vitosha**	**2.64**	**57**	P	**Pn**	**20 35 32.4**	**+1.3**
VTS				*e*Sn	**Sn**	**20 36 03.3**	**-0.3**
MMB	**Musomiste**	**2.67**	**80**	*e*P	**Pn**	**20 35 32.3**	**+0.9**
MMB	**Musomiste**	**2.67**	**80**	*e*P	**Pn**	**20 35 32.3**	**+0.9**
MMB	**Musomiste**	**2.67**	**80**	*e*P	**Pn**	**20 35 32.3**	**+0.9**
AGG	**Agios Georgios**	**2.69**	**142**	P	**Pn**	**20 35 32.3**	**+0.7**
AGG	**Agios Georgios**	**2.69**	**142**	*e*PN	**Pn**	**20 35 33.0**	**+1.4**
AGG	**Agios Georgios**	**2.69**	**142**	P	**Pn**	**20 35 32.3**	**+0.7**
AGG	**Agios Georgios**	**2.69**	**142**	*e*Pn	**Pn**	**20 35 33.0**	**+1.4**
MATE	**Matera**	**2.72**	**260**	Pn	**Pn**	**20 35 32.0**	**0.0**
MATE	**Matera**	**2.72**	**260**	Pn	**Pn**	**20 35 32.0**	**0.0**
GRUS	**Gruza**	**2.74**	**7**	*e*Pn	**Pn**	**20 35 33.4**	**+1.0**
GRUS	**Gruza**	**2.74**	**7**	*e*Pn	**Pn**	**20 35 33.4**	**+1.0**
NVR	**Nevrokopi**	**2.75**	**85**	P	**Pn**	**20 35 33.3**	**+0.8**
NVR	**Nevrokopi**	**2.75**	**85**	*e*PN	**Pn**	**20 35 33.6**	**+1.1**
NVR	**Nevrokopi**	**2.75**	**85**	P	**Pn**	**20 35 33.3**	**+0.8**
NVR	**Nevrokopi**	**2.75**	**85**	*e*Pn	**Pn**	**20 35 33.6**	**+1.1**
AMUR	**Altamura**	**2.75**	**266**	Pn	**Pn**	**20 35 32.2**	**-0.3**
AMUR	**Altamura**	**2.75**	**266**	Pn	**Pn**	**20 35 32.2**	**-0.3**
ZAPS	**Zavoj**	**2.76**	**40**	⇓*i* Pn	**Pn**	**20 35 33.8**	**+1.1**
BBLS	**Lazići**	**2.76**	**348**	⇑*i* Pn	**Pn**	**20 35 34.4**	**+1.7**
BBLS				*e*Sn	**Sb**	**20 36 09.3**	**-2.5**
BBLS	**Lazići**	**2.76**	**348**	⇑*i* Pn	**Pn**	**20 35 34.4**	**+1.7**
BBLS				*e*Sn	**Sb**	**20 36 09.3**	**-2.5**
XOR	**Xorichti**	**2.90**	**127**	P	**Pn**	**20 35 34.4**	**-0.2**
XOR	**Xorichti**	**2.90**	**127**	P	**Pn**	**20 35 34.4**	**-0.2**
PAIG	**Paliouri**	**2.91**	**114**	P	**Pn**	**20 35 34.8**	**+0.1**
PAIG	**Paliouri**	**2.91**	**114**	*e*PN	**Pn**	**20 35 35.3**	**+0.6**
PAIG	**Paliouri**	**2.91**	**114**

BOJS	**Bojanci**	**5.65**	**322**	*i* Pn	**Pn**	**20 36 13.4 +1.1**
BOJS				*i* Sn	**Sn**	**20 37 18.5 +1.0**
PRD	**Provadia**	**5.70**	**67**	*e*P	**Pn**	**20 36 15.2 +2.2**
PRD	**Provadia**	**5.70**	**67**	*e*P	**Pn**	**20 36 15.2 +2.2**
PRD	**Provadia**	**5.70**	**67**	*e*P	**Pn**	**20 36 15.2 +2.2**
APE	**Apeiranthos**	**5.81**	**133**⇓	*i*P	**Pn**	**20 36 17.3 +2.7**
APE	**Apeiranthos**	**5.81**	**133**⇓	*i*P	**Pn**	**20 36 17.3 +2.7**
DRGR		**5.90**	**17**⇑	*i*P	**Pn**	**20 36 17.0 +1.2**
DRGR		**5.90**	**17**⇑	*i*P	**Pn**	**20 36 17.0 +1.2**
MLR	**Muntele Rosu**	**6.00**	**42**⇓	*i*P	**Pn**	**20 36 18.8 +1.5**
MLR	**Muntele Rosu** baz=239,slow=14	**6.00**	**42**	Pn	**Pn**	**20 36 19.1 +1.8**
MLR	**Muntele Rosu**	**6.00**	**42**	P	**Pn**	**20 36 19.1 +1.8**
VISS	**Visnje**	**6.06**	**322**	*i* Pn	**Pn**	**20 36 19.3 +1.3**
VISS				*i* Sn	**Sn**	**20 37 30.2 +2.4**
VISS	**Visnje**	**6.06**	**322**	*i* Pn	**Pn**	**20 36 19.3 +1.3**
VISS				*i* Sn	**Sn**	**20 37 30.2 +2.4**
ISR	**Istrita**	**6.08**	**47**⇓	*i*P	**Pn**	**20 36 20.6 +2.4**
ISR	**Istrita**	**6.08**	**47**⇓	*i*P	**Pn**	**20 36 20.6 +2.4**
PGOR	**Pogoanele**	**6.20**	**51**⇓	*i*P	**Pn**	**20 36 21.8 +1.9**
PGOR	**Pogoanele**	**6.20**	**51**⇓	*i*P	**Pn**	**20 36 21.8 +1.9**
PKST	**T˜'s**	**6.29**	**346**⇑	*e*Pn	Pn	20 36 25.0 +3.9
PKST				*e*Sn	Sn	20 37 42.2 +9.0
SKDS	**Skadanscina**	**6.29**	**316**	*i* Pn	**Pn**	**20 36 21.9 +0.7**
SKDS				*i* Sn	**Sn**	**20 37 33.1 -0.3**
SKDS	**Skadanscina**	**6.29**	**316**	*i* Pn	**Pn**	**20 36 21.9 +0.7**
SKDS				*i* Sn	**Sn**	**20 37 33.1 -0.3**
CSKK	**Cs˜‡kako**	**6.35**	**348**	*e*Sn	Sn	20 37 44.3 +10
BUD	**Budapest**	**6.37**	**353**	*e*	Sn	20 37 41.9 +6.7
PSN	**Preselentsi**	**6.40**	**64**	*e*P	**Pn**	**20 36 24.0 +1.4**
PSN	**Preselentsi**	**6.40**	**64**	*e*P	**Pn**	**20 36 24.0 +1.4**
PSN	**Preselentsi**	**6.40**	**64**	*e*P	**Pn**	**20 36 24.0 +1.4**
GRER		**6.48**	**47**⇓	*i*P	**Pn**	**20 36 26.2 +2.5**
GRER		**6.48**	**47**⇓	*i*P	**Pn**	**20 36 26.2 +2.5**
JAVS	**Javornik**	**6.50**	**319**	*i* Pn	**Pn**	**20 36 24.9 +0.8**
JAVS				*i* Sn	**Sn**	**20 37 38.9 +0.1**
JAVS	**Javornik**	**6.50**	**319**	*i* Pn	**Pn**	**20 36 25.0 +0.8**
JAVS				*i* Sn	**Sn**	**20 37 38.9 +0.1**
PLOR	**Plostina**	**6.61**	**43**⇑	*i*P	**Pn**	**20 36 26.9 +1.4**
PLOR	**Plostina**	**6.61**	**43**⇑	*i*P	**Pn**	**20 36 26.9 +1.4**
SOKA	**Soboth**	**6.66**	**328**⇑	*i*Pn	**Pn**	**20 36 27.0 +0.7**
SOKA				⇓*i*Sn	**Sn**	**20 37 41.3 -1.2**
SOKA	**Soboth**	**6.66**	**328**	Pn	**Pn**	**20 36 27.0 +0.7**
SOKA				Sn	**Sn**	**20 37 41.3 -1.2**
VRI	**Vrincioaia**	**6.66**	**43**⇓	*i*P	**Pn**	**20 36 28.4 +2.2**
VRI	**Vrincioaia**	**6.66**	**43**⇓	*i*P	**Pn**	**20 36 28.4 +2.2**
VOY	**Vojsko**	**6.69**	**319**	*e*Pn	**Pn**	**20 36 27.6 +1.0**
VOY				*e*Sn	**Sn**	**20 37 42.7 -0.5**
VOY	**Vojsko**	**6.69**	**319**	*e*Pn	**Pn**	**20 36 27.6 +1.0**
VOY				*e*Sn	**Sn**	**20 37 42.7 -0.5**
OBKA	**Obir**	**6.73**	**324**⇑	*i*Pn	**Pn**	**20 36 27.9 +0.7**
OBKA	**Obir**	**6.73**	**324**	Pn	**Pn**	**20 36 27.9 +0.7**
PSZ	**Piszkesteto**	**6.75**	**358**⇑	*i*P	**Pn**	**20 36 29.1 +1.6**
PSZ	**Piszkesteto**	**6.75**	**358**⇓	*e*Pn	**PnPn**	**20 36 29.6 +2.1**
PSZ				*e*Sn	**Sn**	**20 37 48.6 +3.8**
PSZ	**Piszkesteto**	**6.75**	**358**⇑	*i*P	**Pn**	**20 36 29.1 +1.6**
TIRR	**Tirgusor**	**6.86**	**59**⇑	*i*P	**Pn**	**20 36 30.1 +1.2**
TIRR	**Tirgusor**	**6.86**	**59**⇑	*i*P	**Pn**	**20 36 30.1 +1.2**
ARSA	**Arzberg**	**6.95**	**333**⇓	*i*Pn	**Pn**	**20 36 31.2 +1.0**
ARSA	**Arzberg**	**6.95**	**333**	Pn	**Pn**	**20 36 31.2 +1.0**
CFR	**Carcaliu**	**7.03**	**53**⇑	*i*P	**Pn**	**20 36 33.6 +2.3**
CFR	**Carcaliu**	**7.03**	**53**⇑	*i*P	**Pn**	**20 36 33.6 +2.3**
TESR	**Tescani**	**7.08**	**39**⇓	*i*P	**Pn**	**20 36 32.4 +0.5**
TESR	**Tescani**	**7.08**	**39**⇓	*i*P	**Pn**	**20 36 32.4 +0.5**
TRPA	**Tarpa**	**7.15**	**13**⇓	*i*P	**Pn**	**20 36 34.3 +1.4**
TRPA	**Tarpa**	**7.15**	**13**⇓	*i*P	**Pn**	**20 36 34.3 +1.4**
KECS	**Kecovo**	**7.32**	**1**	*e*P	**Pn**	**20 36 35.6 +0.4**
KECS				*e*		20 37 59.7
KECS	**Kecovo**	**7.32**	**1**	*e*PN	**Pn**	**20 36 35.6 +0.4**
KECS				*e*SN	**Sn**	**20 37 59.7 +1.2**
KECS				*e*SG	**Sg**	**20 38 42.6 +0.1**
KECS	**Kecovo**	**7.32**	**1**	*e*P	**Pn**	**20 36 35.6 +0.4**
KECS				*e*S	**Sn**	**20 37 59.7 +1.2**
BURAR	**Bucovina Array**	**7.37**	**27**⇑	*i*P	**Pn**	**20 36 37.5 +1.5**
BURAR	**Bucovina Array**	**7.37**	**27**⇑	*i*P	**Pn**	**20 36 37.5 +1.5**
ZST	**Bratislava**	**7.37**	**343**	*e*P	Pn	20 36 39.4 +3.5
ZST	**Bratislava**	**7.37**	**343**	*e*PN	Pn	20 36 39.4 +3.5
ZST	**Bratislava**	**7.37**	**343**	*e*P	Pn	20 36 39.4 +3.5
VYHS	**Vyhne**	**7.39**	**353**	*e*P	**Pn**	**20 36 38.5 +2.3**
VYHS				*e*		20 37 57.5
VYHS	**Vyhne**	**7.39**	**353**	*e*PN	**Pn**	**20 36 38.5 +2.3**
VYHS				*e*SN	**Sn**	**20 37 57.5 -2.9**
VYHS	**Vyhne**	**7.39**	**353**	*e*P	**Pn**	**20 36 38.5 +2.3**
CONA	**Conrad Observa**	**7.44**	**337**⇑	*i*Pn	**Pn**	**20 36 24.0 +1.1**
CONA	**Conrad Observa**	**7.44**	**337**	Pn	**Pn**	**20 36 38.1 +1.1**
TLCR		**7.45**	**55**⇑	*i*P	Pn	20 36 40.5 +3.5
TLCR		**7.45**	**55**⇑	*i*P	Pn	20 36 40.5 +3.5
UZH	**Uzhgorod**	**7.60**	**10**	*e*P	**Pn**	**20 36 40.1 +1.0**
UZH	**Uzhgorod**	**7.60**	**10**	*e*P	**Pn**	**20 36 40.1 +1.0**
SMOL	**Smolenice**	**7.61**	**346**	*e*P	Pn	20 36 43.9 +4.7
SMOL	**Smolenice**	**7.61**	**346**	*e*PN	Pn	20 36 43.9 +4.7
KBA	**Koelnbreinsper**	**7.70**	**322**⇓	*i*Pn	**Pn**	**20 36 41.1 +0.4**
KBA	**Koelnbreinsper**	**7.70**	**322**	Pn	**Pn**	**20 36 41.1 +0.4**
CRVS	**Cervenica-Dubn**	**7.78**	**6**	*e*P	**Pn**	**20 36 40.9 -0.7**
CRVS	**Cervenica-Dubn**	**7.78**	**6**	*e*PN	**Pn**	**20 36 40.9 -0.7**
CRVS	**Cervenica-Dubn**	**7.78**	**6**	*e*SG	**Sg**	**20 39 00.7 +3.3**
CRVS	**Cervenica-Dubn**	**7.78**	**6**	*e*P	**Pn**	**20 36 40.9 -0.7**
KOLS	**Kolonicke sedl**	**7.90**	**10**	*e*P	**Pn**	**20 36 44.9 +1.7**
KOLS	**Kolonicke sedl**	**7.90**	**10**	*e*PN	**Pn**	**20 36 44.9 +1.7**
KOLS	**Kolonicke sedl**	**7.90**	**10**	*e*P	**Pn**	**20 36 44.9 +1.7**
MOA	**Molln**	**7.92**	**329**⇑	*i*Pn	**Pn**	**20 36 43.8 +0.3**
MOA				⇓*i*Sn	**Sn**	**20 38 13.9 +0.5**
MOA	**Molln**	**7.92**	**329**	Pn	**Pn**	**20 36 43.8 +0.3**
MOA				Sn	**Sn**	**20 38 13.9 +0.5**
NIE	**Niedzica**	**8.25**	**0**	*e*P	**Pn**	**20 36 45.0 -3.0**
NIE	**Niedzica**	**8.25**	**0**	*e*Pn	**Pn**	**20 36 45.0 -3.0**
NIE				*e*PP	**PnPn**	**20 36 52.7 -2.9**
STHS	**Stebnicka Huta**	**8.28**	**5**	*e*P	**Pn**	**20 36 50.2 +1.8**
STHS				*e*		20 38 27.4
STHS	**Stebnicka Huta**	**8.28**	**5**	*e*PN	**Pn**	**20 36 50.2 +1.8**
STHS				*e*SN	**Sn**	**20 38 27.4 +5.2**
STHS	**Stebnicka Huta**	**8.28**	**5**	*e*P	**Pn**	**20 36 50.2 +1.8**
PGF	**Pioggiola**	**8.49**	**283**	*e*Pn	**Pn**	**20 36 50.4 -1.0**
PGF				*e*Sn	Sn	20 38 19.6 -8.0
	comp=E,7.2nm,0.6s					
PGF	**Pioggiola**	**8.49**	**283**	*e*PN	**Pn**	**20 36 50.4 -1.0**
VRAC	**Vranov**	**8.53**	**344**	Pn	Pn	20 36 54.9 +3.0
	comp=E,0.1nm,0.3s,baz=156,slow=13,SNR=3.0					
VRAC	**Vranov**	**8.53**	**344**	P	Pn	20 36 54.9 +3.0
KWP	**Kalwaria Pacla**	**8.64**	**11**⇑	*i*P	Pn	20 36 56.7 +3.4
KWP	**Kalwaria Pacla**	**8.64**	**11**⇑	*i*P	Pn	20 36 56.7 +3.4
WTTA	**Wattenberg**	**8.66**	**318**⇑	*i*Pn	**Pn**	**20 36 54.5 +0.6**
WTTA				⇑*i*Sn	**Sn**	**20 38 32.7 +0.7**
WTTA	**Wattenberg**	**8.66**	**318**	Pn	**Pn**	**20 36 54.5 +0.6**
WTTA				Sn	**Sn**	**20 38 32.7 +0.7**
TREC	**Trest**	**8.78**	**339**	AMS	AMS	20 40 40.0
	comp=E,200nm,10.0s					
OKC	**Ostrava-Krasne**	**8.79**	**351**	AMS	AMS	20 41 20.0
	comp=E,200nm,9.5s					
MORC	**Moravsky Berou**	**8.81**	**349**⇑	*i*P	**Pn**	**20 36 57.8 +2.1**
MORC	**Moravsky Berou**	**8.81**	**349**⇑	*i*P	**Pn**	**20 36 57.8 +2.1**
GERES	**GERESS Array B**	**8.95**	**331**	Pn	**Pn**	**20 36 58.6 +0.9**
	comp=E,0.3nm,0.3s,baz=150,slow=14,SNR=12					
GERES				Sn	**Sn**	**20 38 40.9 +2.0**
	comp=E,0.5nm,0.3s,baz=153,slow=24,SNR=5.8					
GERES				LR	LR	20 41 06.5
	comp=E,149nm,18.3s,baz=137,slow=42					
GERES	**GERESS Array B**	**8.95**	**331**	P	**Pn**	**20 36 58.6 +0.9**
	comp=E,1.0nm,0.3s					
GERES				S	**Sn**	**20 38 40.9 +2.0**
MOTA	**Moosalm**	**8.99**	**316**⇑	*i*Pn	**Pn**	**20 36 58.7 +0.4**
MOTA	**Moosalm**	**8.99**	**316**	Pn	**Pn**	**20 36 58.7 +0.4**
KHC	**Kasperske Hory**	**9.24**	**332**	*e*P	**Pn**	**20 37 02.5 +0.9**
KHC				*e*		20 38 46.1
KHC				MLR	MLR	
	comp=Z,200nm,8.0s					
KHC	**Kasperske Hory**	**9.24**	**332**	*e*PN	**Pn**	**20 37 02.5 +0.9**
KHC				*e*SN	**Sn**	**20 38 46.1 +0.3**
KHC				AMS	AMS	20 40 50.0
	comp=Z,200nm,8.0s					
KHC	**Kasperske Hory**	**9.24**	**332**	Pn	**Pn**	**20 37 02.5 +0.9**
KHC				Sn	**Sn**	**20 38 46.1 +0.3**
DAVOX	**Davos/Dischmat**	**9.33**	**310**	Pn	**Pn**	**20 37 04.0 +1.1**
	comp=Z,1.4nm,0.3s,baz=134,slow=14,SNR=10					
DAVOX				Sn	**Sn**	**20 38 46.0 -2.3**
	comp=Z,0.3nm,0.3s,baz=332,slow=23,SNR=1.8					
DAVOX	**Davos/Dischmat**	**9.33**	**310**	P	**Pn**	**20 37 04.0 +1.1**
	comp=Z,1.0nm,0.3s					
DAVOX				S	**Sn**	**20 38 46.0 -2.3**
DPC	**Dobruska-Polom**	**9.57**	**345**	AMS	AMS	20 40 40.0
	comp=Z,200nm,12.6s					

PRU	**Pruhonice**	**9.67**	**338**	*e*SN	**Sn**	**20 38 56.2 -0.2**
PRU				AMS	AMS	20 41 10.0
	comp=Z,200nm,8.8s					
PRU	**Pruhonice**	**9.67**	**338**	Sn	**Sn**	**20 38 56.2 -0.2**
PVCC	**Panska Ves**	**10.15**	**339**	AMS	AMS	20 41 30.0
	comp=Z,200nm,10.5s					
BRTR	**Keskin Array B**	**10.33**	**94**	Pn	**Pn**	**20 37 14.7 -2.0**
	baz=301,slow=15,SNR=2.6					
FRF	**La Foret Royal**	**10.33**	**288**	*e*P	Pn	20 37 19.7 +3.2
FRF				*e*Sn	Sn	20 39 03.2 -9.4
	comp=Z,3.8nm,0.6s					
LMR	**La Mourre**	**10.40**	**287**	*e*Pn	**Pn**	**20 37 14.7 -2.7**
LPG	**La Plagne**	**10.72**	**298**	*e*Pn	**Pn**	**20 37 19.4 -2.8**
LPG				*e*Sn	Sn	20 39 12.7 -10
	comp=Z,19nm,0.8s					
LPL	**La Plagne**	**10.74**	**298**	*e*Pn	**Pn**	**20 37 19.7 -2.7**
LPL				*e*Sn	Sn	20 39 13.3 -10
	comp=Z,18nm,0.8s					
ORIF	**Oris-en-Rattie**	**11.14**	**294**	*e*Pn	**Pn**	**20 37 24.8 -3.0**
CLL	**Collm**	**11.30**	**336**	*e*P	Pn	20 37 25.0 -4.7
CLL	**Collm**	**11.30**	**336**	*e*(P)	Pn	20 37 25.0 -4.7
CLL				*e*		20 40 18.0
CABF	**La Chapelle**	**11.55**	**303**	*e*Pn	**Pn**	**20 37 30.8 -2.5**
CABF				*e*Sn	Sn	20 39 32.4 -10
	comp=Z,12nm,0.8s					
HINF	**Hinteralfeld**	**11.62**	**309**	*e*Pn	**Pn**	**20 37 31.2 -3.1**
HINF				*e*Sn	Sn	20 39 33.9 -11
	comp=Z,7.2nm,0.7s					
CDF	**Champ du Feu**	**11.70**	**313**	*e*Pn	**Pn**	**20 37 32.2 -3.1**
CDF				*e*Sn	Sn	20 39 35.3 -11
	comp=Z,1.8nm,0.6s					
VIVF	**Saint-Julien-l**	**11.96**	**293**	*e*Pn	**Pn**	**20 37 36.1 -2.8**
VIVF				*e*Sn	Sn	20 39 42.3 -10
	comp=Z,0.6nm,0.4s					
HAU	**Haudompre**	**12.01**	**309**	*e*Pn	**Pn**	**20 37 36.5 -3.1**
HAU				*e*Sn	Sn	20 39 42.8 -11
	comp=Z,4.8nm,0.5s					
SFTF	**Sexfontaines**	**12.88**	**308**	*e*Pn	Pn	20 37 47.8 -3.6
SFTF				*e*Sn	Sn	20 40 03.8 -11
	comp=Z,5.5nm,0.6s					
MEZF	**Maizieres J'vi**	**13.01**	**309**	*e*Pn	**Pn**	**20 37 50.2 -3.0**
MEZF				*e*Sn	Sn	20 40 06.8 -11
SMF	**Signal de Mont**	**13.01**	**300**	*e*Pn	**Pn**	**20 37 50.3 -2.9**
SMF				*e*Sn	Sn	20 40 07.1 -11
	comp=Z,6.2nm,0.7s					
LOR	**Lormes**	**13.22**	**303**	*e*Pn	**Pn**	**20 37 53.0 -3.0**
LOR				*e*Sn	Sn	20 40 11.9 -11
	comp=Z,5.4nm,0.5s					
SSF	**Saint Saulge**	**13.37**	**302**	*e*Pn	**Pn**	**20 37 55.1 -2.9**
SSF				*e*Sn	Sn	20 40 15.6 -11
	comp=Z,5.0nm,0.8s					
AVF	**Avril sur Loir**	**13.38**	**300**	*e*Pn	Pn	20 37 54.8 -3.3
AVF				*e*Sn	Sn	20 40 15.7 -11
	comp=Z,5.7nm,0.7s					
MMAI	**Mount Meron Ar**	**14.58**	**119**	Pn	**Pn**	**20 38 15.7 +1.0**
	comp=Z,0.4nm,0.3s,baz=323,slow=12,SNR=3.9					
MMAI				LR	LR	20 44 44.2
	comp=Z,47nm,19.7s,baz=70,slow=41					
SOC	**Sochi**	**14.61**	**74**	*e*P	**Pn**	**20 38 16.4 +1.4**
SOC				*e*		20 41 01.4
SOC				pmax	pmax	
	comp=Z,19nm,1.1s					
ASF	**Jabal al Asfar**	**16.09**	**119**	LR	LR	20 44 39.4
	comp=Z,23nm,21.0s,baz=95,slow=37					
KIV	**Kislovodsk**	**16.77**	**73**	*e*P	**Pn**	**20 38 41.1 -2.3**
KIV				pmax	pmax	
	comp=Z,2.0nm,0.9s					
KBZ	**Khabaz**	**16.92**	**74**	P	**P**	**20 38 51.6 +4.4**
KBZ	**Khabaz**	**16.92**	**74**	Pn	**P**	**20 38 51.6 +4.4**
	comp=Z,0.1nm,0.3s,baz=288,slow=10,SNR=4.1					
OBN	**Obninsk**	**17.64**	**32**⇑	*e*P	**P**	**20 38 54.3 -0.7**
OBN				*i* S	**Sn**	**20 42 09.8 -0.9**
OBN				pmax	pmax	
	comp=Z,15nm,1.2s					
OBN				MLR	MLR	
	comp=Z,100nm,16.0s					
OBN	**Obninsk**	**17.64**	**32**	*e*P	**P**	**20 38 54.3 -0.7**
	comp=Z,15nm,1.2s					
VSU	**Vasula**	**17.80**	**11**	*e*P	**P**	**20 38 56.4 -0.3**
VSU				pmax	pmax	
	comp=Z,17nm,1.2s					
VSU	**Vasula**	**17.80**	**11**	*e*P	**P**	**20 38 56.4 -0.3**
	comp=Z,17nm,1.2s					
MOS	**Moscow**	**18.51**	**32**	*e*P	**Pn**	**20 39 05.3 +0.6**
MOS				*e*S	**Sn**	**20 42 33.0 +1.3**
MOS				pmax	pmax	
	comp=Z,28nm,0.8s					
MOS	**Moscow**	**18.51**	**32**	*e*P	**Pn**	**20 39 05.3 +0.6**
	comp=Z,28nm,0.8s					
HFS	**Hagfors**	**19.41**	**350**	P	**P**	**20 39 14.6 +0.1**
	comp=Z,0.3nm,0.3s,baz=167,slow=14,SNR=8.5					
HFS				LR	LR	20 47 29.4
	comp=Z,56nm,18.8s,baz=137,slow=39					
HFS	**Hagfors**	**19.41**	**350**	P	**P**	**20 39 14.6 +0.1**
	comp=Z,56nm,18.8s					
FINES	**FINESS Array B**	**20.61**	**8**	P	**P**	**20 39 27.4 -0.1**
	comp=Z,2.1nm,0.5s,baz=176,slow=11,SNR=8.7					
FINES	**FINESS Array B**	**20.61**	**8**	P	**P**	**20 39 27.4 -0.1**
	comp=Z,2.0nm,0.5s					
NB2	**NORSAR Subarra**	**20.65**	**348**	P	**P**	**20 39 27.7 -0.3**
	comp=Z,3.2nm,0.8s,baz=150,slow=10					
NB2	**NORSAR Subarra**	**20.65**	**348**	P	**P**	**20 39 27.7 -0.3**
	comp=Z,3.2nm,0.8s,SNR=7.1					
NOA	**NORSAR Array B**	**20.65**	**348**	P	**P**	**20 39 28.2 +0.2**
	comp=Z,1.8nm,0.7s,baz=151,slow=9.8,SNR=7.7					
NOA				LR	LR	20 48 04.3
	comp=Z,28nm,18.3s,baz=150,slow=38					
NOA	**NORSAR Array B**	**20.65**	**348**	P	**P**	**20 39 28.2 +0.2**
	comp=Z,29nm,18.3s					
EKA	**Eskdalemuir Ar**	**20.91**	**321**	P	**P**	**20 39 30.7 -0.1**
	comp=Z,2.4nm,0.8s,baz=115,slow=10,SNR=5.2					
EKA	**Eskdalemuir Ar**	**20.91**	**321**	P	**P**	**20 39 30.7 -0.1**
	comp=Z,2.0nm,0.8s					
KAF	**Kangasniemi**	**21.29**	**8**	*e*P	**P**	**20 39 31.0 -3.8**
KAF				pmax	pmax	
	comp=Z,7.0nm,0.9s					
KAF	**Kangasniemi**	**21.29**	**8**	*e*p	**P**	**20 39 31.0 -3.8**
	comp=Z,6.9nm,0.9s					
JOF	**Joensuu**	**22.76**	**13**	*e*P	**P**	**20 39 52.4 +1.9**
JOF				pmax	pmax	
	comp=Z,7.0nm,0.8s					
JOF	**Joensuu**	**22.76**	**13**	*e*p	**P**	**20 39 52.4 +1.9**
	comp=Z,7.3nm,0.8s					
JOF	**Joensuu**	**22.76**	**13**	*e*P	**P**	**20 39 52.4 +1.9**
	comp=Z,7.0nm,0.8s					
KLMR	**Klimovskoe**	**22.98**	**24**	*e*P	**P**	**20 39 50.9 -2.0**
KLMR				pmax	pmax	
	comp=Z,15nm,1.3s					
RST	**Umm Al-Ruwaisa**	**24.65**	**110**	*e*P	**P**	**20 40 09.2 -0.1**
RST				AMb	AMB	20 40 15.0
	comp=Z,93nm,0.8s					
RST	**Umm Al-Ruwaisa**	**24.65**	**110**	*e*P	**P**	**20 40 09.2 -0.1**
	comp=Z,93nm,0.8s					
MIB	**Mutribah**	**24.72**	**109**	*e*P	**P**	**20 40 09.8 -0.1**
MIB				AMb	AMB	20 40 13.6
	comp=Z,25nm,0.8s					
MIB	**Mutribah**	**24.72**	**109**	*e*P	**P**	**20 40 09.8 -0.1**
	comp=Z,25nm,0.8s					
NAY	**Al-Naaiem**	**24.97**	**110**	*e*P	**P**	**20 40 09.8 -2.3**
NAY				AMb	AMB	20 40 14.6
	comp=Z,5.1nm,0.7s					
NAY	**Al-Naaiem**	**24.97**	**110**	*e*P	**P**	**20 40 09.8 -2.3**
	comp=Z,5.1nm,0.7s					
AKTK	**Aktyubinsk**	**27.66**	**58**	P	**P**	**20 40 36.6 +0.3**
	comp=Z,1.0nm,0.4s					
AKTO	**Aktyubinsk**	**27.66**	**58**	P	**P**	**20 40 36.6 +0.2**
AKTO				pmax	pmax	
	comp=Z,1.0nm,0.4s					
AKTO	**Aktyubinsk**	**27.66**	**58**	P	**P**	**20 40 36.5 +0.2**
	comp=Z,1.1nm,0.4s,baz=267,slow=8.8,SNR=8.8					
ARCES	**ARCESS Array B**	**28.56**	**4**	P	**P**	**20 40 42.6 -1.5**
	comp=Z,2.3nm,0.8s,baz=186,slow=4.9,SNR=4.2					
ARCES	**ARCESS Array B**	**28.56**	**4**	P	**P**	**20 40 42.6 -1.5**
	comp=Z,2.0nm,0.8s					
TORD	**Torodi Ar. Bea**	**32.27**	**215**	P	**P**	**20 41 18.3 +0.9**
	comp=Z,1.5nm,1.0s,baz=33,slow=9.2,SNR=7.8					
BVAR	**Borovoye Array**	**35.44**	**53**	P	**P**	**20 41 45.4 +0.8**
BVAR				pmax	pmax	
	comp=Z,2.0nm,0.7s					
BVAR	**Borovoye Array**	**35.44**	**53**	P	**P**	**20 41 45.4 +0.8**
	comp=Z,2.1nm,0.7s,baz=272,slow=7.1,SNR=13					
BVAR	**Borovoye Array**	**35.44**	**53**	P	**P**	**20 41 45.4 +0.8**
	comp=Z,2.0nm,0.7s					
KURBB	**Kurchatov Arra**	**40.70**	**56**	P	**P**	**20 42 28.8 -0.1**
	comp=Z,2.0nm,0.8s,baz=284,slow=9.3,SNR=16					
KURK	**Kurchatov**	**40.74**	**56**	P	**P**	**20 42 28.8 -0.5**
KURK				pmax	pmax	
	comp=Z,2.0nm,0.8s					
KURK	**Kurchatov**	**40.74**	**56**	P	**P**	**20 42 28.8 -0.5**
	comp=Z,2.0nm,0.8s					
NVS	**Novosibirsk**	**42.85**	**49**	*e*P	**P**	**20 42 47.9 +1.4**
NVS	**Novosibirsk**	**42.85**	**49**	*e*P	**P**	**20 42 47.9 +1.4**
ZALV	**Zalesovo Beam**	**43.91**	**50**	*e*P	**P**	**20 42 55.8 +0.7**
ZALV				pmax	pmax	
	comp=Z,3.0nm,0.4s					
ZALV	**Zalesovo Beam**	**43.91**	**50**	P	**P**	**20 42 55.2 +0.1**
	comp=Z,2.7nm,0.4s,baz=276,slow=8.5,SNR=20					
ZALV	**Zalesovo Beam**	**43.91**	**50**	*e*P	**P**	**20 42 55.8 +0.7**
	comp=Z,3.0nm,0.4s					
MKAR	**Makanchi Array**	**43.99**	**61**	*e*P	**P**	**20 42 55.9 0.0**
MKAR	**Makanchi Array**	**43.99**	**61**	P	**P**	**20 42 55.7 -0.1**
	comp=Z,0.4nm,0.3s,baz=281,slow=7.1,SNR=23					
MKAR				PcP	**PcP**	**20 44 43.0 +1.5**
	comp=Z,0.3nm,0.7s,baz=277,slow=6.2,SNR=2.4					
MKAR	**Makanchi Array**	**43.99**	**61**	*e*P	**P**	**20 42 55.9 0.0**
DANN	**Dangsing**	**52.68**	**83**	*e*P	**P**	**20 44 02.9 -0.6**
	comp=Z,20nm,0.6s					
KOLN	**Koldanda**	**52.86**	**84**	*e*P	**P**	**20 44 03.5 -1.2**
	comp=Z,5.5nm,0.6s					
DMN	**Daman**	**54.08**	**83**	*e*P	**P**	**20 44 12.4 -1.3**
	comp=Z,6.8nm,0.6s					
KKN	**Kakani**	**54.11**	**83**	*e*P	**P**	**20 44 12.4 -1.5**
	comp=Z,8.3nm,0.6s					
PKIN	**Phulchoki**	**54.31**	**83**	*e*P	**P**	**20 44 14.5 -1.0**
	comp=Z,3.7nm,0.6s					
GUN	**Gumba**	**54.49**	**82**	*e*P	**P**	**20 44 16.2 -0.7**
	comp=Z,15nm,0.7s					
RAMN	**Ramite**	**55.55**	**83**	*e*P	**P**	**20 44 23.3 -1.1**
	comp=Z,27nm,0.6s					
ZAK	**Zakamensk**	**55.79**	**50**	*e*P	**P**	**20 44 26.0 +0.4**
ZAK				pmax	pmax	
	comp=Z,1.0nm,1.1s					
ZAK	**Zakamensk**	**55.79**	**50**	*e*P	**P**	**20 44 26.0 +0.4**
	comp=Z,1.0nm,1.1s					
TAPN	**Taplejung**	**56.16**	**82**	*e*P	**P**	**20 44 28.2 -0.7**
	comp=Z,7.0nm,0.6s					
ODAN	**Odare**	**56.19**	**82**	*e*P	**P**	**20 44 28.1 -0.9**
	comp=Z,13nm,0.6s					
SONM	**Songino Array**	**58.76**	**52**	P	**P**	**20 44 47.1 +0.4**
	comp=Z,2.5nm,0.8s,baz=288,slow=8.0,SNR=13					
SONM	**Songino Array**	**58.76**	**52**	P	**P**	**20 44 47.1 +0.4**
	comp=Z,3.0nm,0.8s					
BILL	**Bilibino**	**68.16**	**13**⇑	*e*P	P	20 45 45.0 -3.3
BILL				*i*		20 48 20.3
BILL				*e*S	**S**	**20 54 48.4 0.0**
BILL				pmax	pmax	
	comp=Z,23nm,1.7s					
BILL				MLR	MLR	
	comp=Z,100nm,20

SLVN				*e*Sg	**Sg**	20 40 01.4	-0.2
TTVN	**Tram Tau**	**2.45**	**84**	*e*Pn	**Pn**	20 39 37.1	-0.5
TTVN				*e*Pg	**Pg**	20 39 44.1	+0.5
TTVN				*e*Sg	**Sg**	20 40 17.5	+2.1
MCVV	**Moc Chau**	**2.75**	**99**	*e*Pn	**Pn**	20 39 41.5	-0.3
MCVV				*e*Sg	**Sg**	20 40 26.8	+1.6
CMAR	**Chiang Mai Arr**	**3.82**	**224**	Pn	**Pn**	20 39 57.0	+0.6
	1.8nm,0.3s,baz=33,slow=13,SNR=39						
CMAR				Pg	**Pg**	20 40 09.1	-0.9
	8.3nm,0.3s,baz=41,slow=17,SNR=146						
CMAR				Lg	Lg	20 41 00.4	
	7.0nm,0.3s,baz=183,slow=24,SNR=6.3						
SONM	**Songino Array**	**26.80**	**7**	P	**P**	20 44 39.3	+1.1
	0.8nm,0.9s,baz=179,slow=13,SNR=4.1						
MKAR	**Makanchi Array**	**30.00**	**333**	P	**P**	20 45 06.4	-0.2
	0.2nm,0.7s,baz=140,slow=7.8,SNR=2.0						
ZALV	**Zalesovo Beam**	**35.12**	**343**	P	**P**	20 45 51.6	+0.4
	0.6nm,0.6s,baz=145,slow=5.4,SNR=5.5						
WRA	**Warramunga Arr**	**51.88**	**140**	P	P	20 48 08.6	+1.9
	0.3nm,0.6s,baz=334,slow=8.3,SNR=3.1						

WEL 27 20:42:24.0±1.0, 38°04'S×175°80'E, h186km±7km, ML3.6/16, 3C, Error ellipse: s-maj=8.1km s-min=6.2km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.05**	**103**	⇑PN	Pn	20 42 52.4	-0.2
URZ				SN	Sn	20 43 14.1	-0.6
NGZ	**Ngauruhoe**	**1.15**	**188**	PN	Pn	20 42 53.8	+0.2
WPVZ	**Whakapapa**	**1.18**	**190**	PN	Pn	20 42 53.9	+0.1
FWVZ	**Far West T-bar**	**1.23**	**189**	PN	Pn	20 42 54.3	0.0
TUVZ	**Tukino**	**1.23**	**185**	PN	Pn	20 42 54.4	+0.1
BKZ	**Black Stump Fm**	**1.25**	**155**	⇑PN	Pn	20 42 54.0	-0.3
WNVZ	**Wahianoa**	**1.30**	**187**	PN	Pn	20 42 54.7	-0.1
NMHZ	**Naumai**	**1.32**	**144**	PN	Pn	20 42 55.5	+0.7
MOVZ	**Moawhango**	**1.37**	**182**	PN	Pn	20 42 54.7	-0.6
MWZ	**Matawai**	**1.39**	**103**	PN	Pn	20 42 55.4	-0.1
MWZ				SN	Sn	20 43 19.7	-0.2
MCHZ	**McNeill Hill**	**1.57**	**154**	PN	Pn	20 42 57.3	+0.3
KNZ	**Kokohu**	**1.76**	**124**	PN	Pn	20 42 58.6	-0.3
PNHZ	**Pukenui**	**1.90**	**171**	PN	Pn	20 42 59.4	-0.9
CNGZ	**Carnagh Statio**	**1.94**	**104**	PN	Pn	20 43 01.4	+0.7
KAHZ	**Kahuranaki**	**1.94**	**155**	PN	Pn	20 43 00.5	-0.4
MHGZ	**Mahia Peninsul**	**1.99**	**125**	PN	Pn	20 43 01.1	-0.2
WPHZ	**Waipukurau**	**2.08**	**166**	PN	Pn	20 43 01.2	-1.1
PXZ	**Pawanui**	**2.15**	**158**	PN	Pn	20 43 02.0	-1.0
DVHZ	**Dannevirke**	**2.28**	**173**	⇑PN	Pn	20 43 02.6	-1.8
PRHZ	**Porangahau**	**2.32**	**164**	PN	Pn	20 43 03.6	-1.3
POWZ	**Post Office Ro**	**2.35**	**181**	PN	Pn	20 43 03.3	-2.0
MRZ	**Mangatainoka R**	**2.63**	**184**	PN	Pn	20 43 06.1	-2.3
BFZ	**Birch Farm**	**2.66**	**173**	PN	Pn	20 43 06.6	-2.2
OGWZ	**Otaki Gorge**	**2.82**	**190**	PN	Pn	20 43 08.5	-2.2
HOWZ	**Holdsworth Sta**	**2.87**	**184**	PN	Pn	20 43 08.6	-2.6
KIW	**Kapiti Island**	**2.90**	**194**	PN	Pn	20 43 08.9	-2.8
TMWZ	**Te Maipa**	**3.07**	**179**	PN	Pn	20 43 11.3	-2.4
CAW	**Cannon Point**	**3.12**	**190**	PN	Pn	20 43 11.5	-2.7
DUWZ	**D'Urville Isla**	**3.12**	**207**	PN	Pn	20 43 12.0	-2.3
MTW	**Mount Morrison**	**3.12**	**184**	PN	Pn	20 43 11.1	-3.3
TRWZ	**Traveller**	**3.36**	**181**	PN	Pn	20 43 14.0	-3.2
SNZO	**South Karori**	**3.38**	**194**	PN	Pn	20 43 14.2	-3.2
TCW	**Tory Channel**	**3.38**	**200**	PN	Pn	20 43 14.4	-3.0
MSWZ	**Moikau Station**	**3.40**	**187**	PN	Pn	20 43 14.2	-3.5
PLWZ	**Palliser**	**3.55**	**187**	PN	Pn	20 43 15.9	-3.7
TUWZ	**Tuamarina**	**3.68**	**202**	PN	Pn	20 43 18.1	-3.0
NNZ	**Nelson**	**3.69**	**210**	PN	Pn	20 43 18.5	-2.7
BSWZ	**Blackbirch Sta**	**3.96**	**201**	PN	Pn	20 43 21.6	-3.0
THZ	**Tophouse**	**4.34**	**210**	PN	Pn	20 43 27.1	-2.5
KHZ	**Kahutara**	**4.71**	**201**	PN	Pn	20 43 30.4	-3.7
LTZ	**Lake Taylor**	**5.45**	**209**	PN	Pn	20 43 39.6	-4.3

*ISCJB **27** 20:56:60.0±0.8, 36°97'N×0°05'×27°79'E±0°04, h12km±5km, Error ellipse: s-maj=8.6km s-min=5.7km az=16.5*
*ISK **27** 20:56:59.2, 37°02'N×27°77'E, h24km, MD2.4*
*DDA **27** 20:56:59.6, 36°98'N×27°83'E, h6km, MD2.7*
*CSEM **27** 20:56:59.9±0.3, 36°97'N×27°78'E, h15km, MD2.4, Error ellipse: s-maj=5.9km s-min=3.8km az=25.0*

ISC 27 20:56:59.9±1.1, 37°02'N±0°04'×27°81'E±0°03, h23km±9km, n19, σ1°37/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.27**	**355**	*e*PG	**Pb**	**20 57 06.4**	**0.0**
MLSB				*e*SG	**Sb**	**20 57 11.2**	**+0.3**
MLSB	**Milas**	**0.27**	**355**	*e*Pg	**Pb**	**20 57 06.4**	**0.0**
MLSB				*e*Sg	**Sb**	**20 57 11.2**	**+0.3**
BODT	**Bodrum**	**0.40**	**276**	*e*PG	**Pb**	**20 57 07.7**	**-0.6**
BODT				*e*SG	**Sb**	**20 57 14.0**	**-0.1**
BODT	**Bodrum**	**0.40**	**276**	*e*Pg	**Pb**	**20 57 07.7**	**-0.6**
BODT				*e*Sg	**Sb**	**20 57 14.0**	**-0.1**
YER	**Yerkesik**	**0.40**	**73**	*e*PG	**Pb**	**20 57 08.5**	**+0.2**
YER				*e*SG	**Sn**	**20 57 16.0**	**-1.1**
YER	**Yerkesik**	**0.40**	**73**	*e*Pg	**Pb**	**20 57 08.5**	**+0.2**
YER				*e*Sg	**Sn**	**20 57 16.0**	**-1.1**
AYDN	**Tasoluk**	**0.64**	**5**	*i* P	**Pn**	**20 57 13.4**	**-0.2**
AYDN				*i* S	**Sb**	**20 57 22.2**	**+1.2**
AYDN	**Tasoluk**	**0.64**	**5**	*i* P	**Pn**	**20 57 13.4**	**-0.2**
AYDN				*i* S	**Sb**	**20 57 22.2**	**+1.2**
TURN	**Turunc**	**0.66**	**103**	*i* P	Pn	20 57 07.1	-5.6
TURN				*i* S	Sb	20 57 13.2	-8.1
GCAM	**G?zelcaml?**	**0.82**	**326**	*i* P	**Pb**	**20 57 16.0**	**+0.6**
GCAM				*i* S	**Sn**	**20 57 28.8**	**+1.5**
GCAM	**G?zelcaml?**	**0.82**	**326**	*i* P	**Pb**	**20 57 16.0**	**+0.6**
GCAM				*i* S	**Sn**	**20 57 28.8**	**+1.5**
FETY	**Fethiye**	**1.10**	**110**	*e*PN	**Pb**	**20 57 19.9**	**-0.2**
FETY	**Fethiye**	**1.10**	**110**	*e*Pn	**Pb**	**20 57 19.9**	**-0.2**
DNZL	**Cakiroluk**	**1.19**	**56**	*i* P	**Pb**	**20 57 22.8**	**+0.9**
DNZL				*i* S	**Sn**	**20 57 33.7**	**-3.2**
DNZL	**Cakiroluk**	**1.19**	**56**	*i* P	**Pb**	**20 57 22.8**	**+0.9**
DNZL				*i* S	**Sn**	**20 57 33.7**	**-3.2**
AKAS	**Kas**	**1.65**	**118**	*i* P	**Pb**	**20 57 29.2**	**-0.4**
AKAS				*i* S	**Sb**	**20 57 53.1**	**+3.1**
AKAS	**Kas**	**1.65**	**118**	*i* P	**Pb**	**20 57 29.2**	**-0.4**
AKAS				*i* S	**Sb**	**20 57 53.1**	**+3.1**
KHAL	**Karahalli**	**1.90**	**44**	*i* P	**Pb**	**20 57 33.0**	**-0.9**
KHAL				*i* S	**Sn**	**20 57 53.3**	**-0.9**
KHAL	**Karahalli**	**1.90**	**44**	*i* P	**Pb**	**20 57 33.0**	**-0.9**
KHAL				*i* S	**Sn**	**20 57 53.3**	**-0.9**

TRN 27 21:01:10.0, 14°11N×60°86W, h19km, MD3.5, M2.5(FDF), 2C-5D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLW	**Petit Monier**	**0.12**	**223**	⇑*i*P	Pg	21 01 16.6	+2.5
SLW				*e*S	Sg	21 01 18.6	+1.8
SLPE	**Piton Saint Es**	**0.29**	**207**	⇑*i*P	Pn	21 01 19.4	0.0
SLPE				*e*S	Sn	21 01 23.3	-1.9
SLB	**Belfond**	**0.33**	**213**	⇓*i*P	Pn	21 01 20.0	+0.1
SLB				*e*S	Sn	21 01 26.9	+0.7
SLDE	**Delcer**	**0.36**	**213**	*e*P	Pn	21 01 19.9	-0.3
SLDE				*e*S	Sn	21 01 25.8	-0.9
MCLT	**Moule a Chique**	**0.40**	**192**	*e*P	Pn	21 01 20.6	-0.2
MCLT				*e*S	Sb	21 01 25.9	+1.5
MVM	**Montagne Vaucl**	**0.45**	**355**	⇓*e*P	Pn	21 01 20.9	-0.6
MVM				⇓*e*S	Sb	21 01 27.1	+1.3
FDF	**Fort de France**	**0.69**	**336**	⇓*e*P	Pg	21 01 24.2	+0.5
FDF				⇓*e*S	Sg	21 01 33.5	+0.6
SVV	**Soufriere Volc**	**0.86**	**204**	*e*P	Pn	21 01 29.9	+2.9
SVV				*e*S	Sn	21 01 42.3	+3.2
SVB	**Belmont**	**0.91**	**205**	*e*P	Pg	21 01 29.4	+1.5
SVB				*e*S	Sn	21 01 42.6	+2.1

IDC 27 21:18:30.7±0.6, 13°66N×146°35E, h48km±4km, mb3.5/12, mb1 3.7/12, mb1mx3.6/25, mbtmp3.5/12, Error ellipse: s-maj=14.0km s-min=7.9km az=166.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.45**	**268**	P	Pn	21 18 52.5	-2.0
	276nm,0.3s,baz=108,slow=4.5,SNR=129						
GUMO				S	Sn	21 19 12.6	+0.3
	135nm,0.3s,baz=211,slow=22,SNR=8.2						
MJAR	**Matsushiro Arr**	**23.93**	**344**	P	P	21 23 39.6	-0.9
	2.2nm,1.0s,baz=202,slow=9.2,SNR=3.6						
MJAR				pP	pP	21 23 52.5	-0.2
	1.4nm,0.7s,baz=254,slow=28,SNR=3.1						
JNU	**Nakatsue**	**23.97**	**327**	P	P	21 23 42.2	+1.4
	15nm,1.1s,baz=118,slow=7.0,SNR=2.0						
JNU				pP	pP	21 23 53.6	+0.5
	18nm,1.0s,baz=95,slow=14,SNR=3.7						
KSRS	**Korea Array**	**28.84**	**329**	P	P	21 24 24.8	+0.2
	1.4nm,0.7s,baz=149,slow=9.5,SNR=4.7						
KSRS				pP	pP	21 24 36.8	-0.3
	2.7nm,0.5s,baz=144,slow=9.4,SNR=5.8						
WRA	**Warramunga Arr**	**35.42**	**200**	P	P	21 25 21.3	-1.1
	0.4nm,0.4s,baz=10,slow=27,SNR=5.6						
WRA				pP	pP	21 25 35.5	+0.5
	1.1nm,0.9s,baz=24,slow=9.6,SNR=3.2						
ASAR	**Alice Springs**	**39.04**	**198**	P	P	21 25 52.7	-0.4
	0.4nm,0.6s,baz=14,slow=10,SNR=5.7						
ASAR				pP	pP	21 26 06.0	+0.1
	0.4nm,0.5s,baz=32,slow=9.3,SNR=2.1						
CMAR	**Chiang Mai Arr**	**45.71**	**283**	P	P	21 26 47.5	-0.1
	0.4nm,0.4s,baz=87,slow=6.3,SNR=4.4						
CMAR				pP	pP	21 27 00.3	-0.1
	0.9nm,0.7s,baz=89,slow=6.0,SNR=3.3						
SONM	**Songino Array**	**47.52**	**324**	P	P	21 27 01.0	-0.5
	0.4nm,0.5s,baz=133,slow=5.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**62.41**	**324**	P	P	21 28 47.5	-1.2
	0.4nm,0.3s,baz=99,slow=7.4,SNR=3.4						
ZALV				pP	pP	21 29 00.9	-1.2
	0.4nm,0.3s,baz=85,slow=8.8,SNR=2.2						
MKAR	**Makanchi Array**	**62.45**	**316**	P	P	21 28 49.1	-0.1
	1.0nm,0.4s,baz=91,slow=8.8,SNR=27						
MKAR				pP	pP	21 29 02.1	-0.5
	0.7nm,0.4s,baz=94,slow=8.1,SNR=6.4						
ILAR	**Eielson Array**	**67.89**	**25**	P	P	21 29 24.1	0.0
	0.3nm,0.6s,baz=247,slow=4.7,SNR=3.5						
ILAR				pP	pP	21 29 36.9	-0.8
	0.7nm,0.6s,baz=252,slow=5.8,SNR=5.6						
YKA	**Yellowknife Ar**	**82.14**	**28**	P	P	21 30 45.5	-0.7
	0.2nm,0.6s,baz=290,slow=5.1,SNR=2.7						
YKA				pP	pP	21 31 02.0	+1.8
	0.2nm,0.5s,baz=286,slow=5.3,SNR=3.5						
NVAR	**Mina Array Bea**	**85.75**	**52**	P	P	21 31 07.4	+1.9
	0.2nm,0.5s,baz=289,slow=5.6,SNR=2.4						
NVAR				pP	pP	21 31 20.4	+0.9
	0.7nm,0.6s,baz=277,slow=5.1,SNR=4.3						
DBIC	**Dimbokro**	**145.00**	**303**	PKPbc	PKPab	21 38 03.4	+0.2
	2.3nm,0.7s,baz=99,slow=3.4,SNR=3.0						
DBIC				pPKPbc	pPKPbc	21 38 16.7	-1.1
	5.1nm,0.8s,baz=19,slow=4.9,SNR=3.9						

IDC 27 21:37:40.1±3.2, 2°61S×139°97E, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.7/18, mbtmp3.9/5, ML4.1/1, Error ellipse: s-maj=87.7km s-min=17.0km az=89.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.09**	**197**	P	P	21 41 54.8	+1.3
	0.7nm,0.3s,baz=20,slow=13,SNR=22						
WRA				S	Sn	21 45 07.5	-8.1
	0.0nm,0.3s,baz=97,slow=30,SNR=2.0						
FITZ	**Fitzroy Crossi**	**20.85**	**221**	P	P	21 42 24.4	+0.7
	2.8nm,0.6s,baz=44,slow=10,SNR=8.9						
FITZ				S	S	21 46 11.0	-6.2
	1.5nm,0.8s,baz=308,slow=18,SNR=1.8						
ASAR	**Alice Springs**	**21.74**	**195**	P	P	21 42 34.1	+0.7
	1.5nm,0.7s,baz=28,slow=9.8,SNR=12						
ASAR				S	S	21 46 34.9	-0.1
	0.2nm,0.3s,baz=14,slow=28,SNR=1.9						
CMAR	**Chiang Mai Arr**	**45.49**	**299**	P	P	21 46 01.1	-0.5
	0.9nm,0.6s,baz=122,slow=6.1,SNR=7.8						
MKAR	**Makanchi Array**	**70.48**	**322**	P	P	21 48 56.5	-0.2
	0.5nm,0.4s,baz=111,slow=8.1,SNR=14						

*CSEM **27** 21:49:58.8±0.4, 45°18N×14°43E, h5km, ML2.6/4*
*LJU **27** 21:50:00.7, 45°31N×14°44E, h12km, ML1.9*
*ROM **27** 21:50:00.7±0.4, 45°27N×14°49E, h5km, Md2.5/2, Ml2.0/3, Error ellipse: s-maj=6.7km s-min=4.0km az=49.0*
*VIE **27** 21:50:01.2±0.4, 45°33N×14°47E, h8km, mb1.9/1, ML2.5/3, Error ellipse: s-maj=2.4km s-min=1.2km az=1.0 5 km ESE of Rijeka*

ISC 27 21:50:01.4±1.1, 45°31N±0°03'×14°45E±0°02', h4km±9km, n50, σ0°78/93, 21C-7D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDS	**Knezji Dol**	**0.22**	**348**	*i* Pg	**Pg**	**21 50 05.5**	**-0.3**
KNDS				*i* Sg	**Sg**	**21 50 09.4**	**+0.7**
KNDS							
	comp=Z,84nm,0.2s						
KNDS	**Knezji Dol**	**0.22**	**348**	*i* Pg	**Pg**	**21 50 05.4**	**-0.3**
KNDS				*i* Sg	**Sg**	**21 50 09.4**	**+0.7**
GBRS	**Gornja Briga**	**0.34**	**49**	⇓*i*Pg	**Pg**	**21 50 07.9**	**0.0**
GBRS				*e*Sg	**Sg**	**21 50 13.6**	**+1.2**
SKDS	**Skadanscina**	**0.39**	**308**	⇑*i*Pg	**Pg**	**21 50 07.8**	**-1.0**
SKDS				*i* Sg	**Sg**	**21 50 14.2**	**+0.3**
SKDS							
	comp=Z,75nm,0.1s						
SKDS	**Skadanscina**	**0.39**	**308**	⇑*i*Pg	**Pg**	**21 50 07.8**	**-1.0**
SKDS				*e*Sg	**Sg**	**21 50 14.2**	**+0.3**
BOJS	**Bojanci**	**0.60**	**71**	*i* Pg	**Pg**	**21 50 12.3**	**-0.6**
BOJS				*i* Sg	**Sg**	**21 50 21.1**	**+0.4**
BOJS							
	comp=Z,34nm,0.2s						
BOJS	**Bojanci**	**0.60**	**71**	*i* Pg	**Pg**	**21 50 12.3**	**-0.6**
BOJS				*i* Sg	**Sg**	**21 50 21.1**	**+0.4**
TRI	**Trieste**	**0.62**	**310**	*e*Pg	**Pg**	**21 50 12.7**	**-0.6**
TRI				*e*Sg	**Sg**	**21 50 22.0**	**+0.6**
TRI	**Trieste**	**0.62**	**310**	*e*Pg	**Pg**	**21 50 12.7**	**-0.6**
TRI				*e*Sg	**Sg**	**21 50 22.0**	**+0.6**
NVLJ	**Novalja**	**0.81**	**158**	*e*Pg	**Pg**	**21 50 17.0**	**+0.2**
NVLJ				Sg	**Sb**	**21 50 28.4**	**-0.7**
NVLJ	**Novalja**	**0.81**	**158**	*e*Pg	**Pg**	**21 50 16.9**	**+0.2**
VOY	**Vojsko**	**0.82**	**332**	*e*Pg	**Pg**	**21 50 15.9**	**-1.2**
VOY				*e*Sg	**Sb**	**21 50 29.0**	**-0.7**
VOY	**Vojsko**	**0.82**	**332**	*i* Pg	**Pg**	**21 50 15.9**	**-1.2**
VOY				*e*Sg	**Sb**	**21 50 29.0**	**-0.7**
SABO	**M.te Sabotino**	**0.90**	**319**	⇑*e*Pg	**Pg**	**21 50 17.9**	**-0.7**
SABO	**M.te Sabotino**	**0.90**	**319**	Pn	**Pg**	**21 50 18.4**	**-0.1**
SABO				Sn	**Sb**	**21 50 31.3**	**-0.5**
	comp=Z,81nm,0.7s						
SABO	**M.te Sabotino**	**0.90**	**319**	⇑*e*Pg	**Pg**	**21 50 17.9**	**-0.7**
SABO	**M.te Sabotino**	**0.90**	**319**	Pn	**Pg**	**21 50 18.4**	**-0.1**
SABO				Sn	**Sb**	**21 50 31.3**	**-0.5**
	comp=Z,81nm,0.7s						
DRE	**Drenchia**	**1.03**	**327**	*e*Pg	**Pg**	**21 50 20.2**	**-0.9**
DRE				*e*Sg	**Sb**	**21 50 36.2**	**+0.5**
DRE	**Drenchia**	**1.03**	**327**	*e*Pg	**Pg**	**21 50 20.2**	**-0.9**
DRE				*e*Sg	**Sb**	**21 50 36.2**	**+0.5**
COLI	**Coloredo**	**1.11**	**318**	*e*Pg	**Pg**	**21 50 21.1**	**-1.6**
COLI				*e*Sg	**Sb**	**21 50 38.4**	**+0.4**
COLI	**Coloredo**	**1.11**	**318**	*e*Pg	**Pg**	**21 50 21.1**	**-1.6**
COLI				*e*Sg	**Sb**	**21 50 38.4**	**+0.4**
OBKA	**Obir**	**1.20**	**3**	⇓*i*Pg	**Pb**	**21 50 24.0**	**-0.8**
OBKA				⇓*i*Sg	**Sb**	**21 50 40.6**	**-0.1**
	comp=Z,32nm,0.3s						
OBKA	**Obir**	**1.20**	**3**	⇓*i*Pg	**Pb**	**21 50 24.0**	**-0.8**
OBKA				*i* Sg	**Sb**	**21 50 40.6**	**-0.1**
VINO	**Villanova**	**1.25**	**320**	⇑*e*Pg	**Pn**	**21 50 25.1**	**-0.5**
VINO				*e*Sg	**Sn**	**21 50 43.5**	**+0.5**
VINO	**Villanova**	**1.25**	**320**	Pn	**Pn**	**21 50 24.6**	**-1.1**
VINO				Sn	**Sn**	**21 50 43.0**	**0.0**
VINO	**Villanova**	**1.25**	**320**	Pn	**Pn**	**21 50 24.6**	**-1.1**
VINO	**Villanova**	**1.25**	**320**	⇑*e*Pg	**Pn**	**21 50 25.1**	**-0.5**
VINO				Sn	**Sn**	**21 50 43.0**	**0.0**
VINO				*e*Sg	**Sn**	**21 50 43.5**	**+0.5**
BAD	**Bernadia**	**1.25**	**318**	*e*Pg	**Pn**	**21 50 25.2**	**-0.5**
BAD				*e*Sg	**Sn**	**21 50 43.7**	**+0.7**
BAD	**Bernadia**	**1.25**	**318**	*e*Pg	**Pn**	**21 50 25.2**	**-0.5**
BAD				*e*Sg	**Sn**	**21 50 43.7**	**+0.7**
GEPF	**Gemona**	**1.33**	**317**	Pg	**Pn**	**21 50 26.5**	**-0.2**
GEPF				Sn	**Sg**	**21 50 45.5**	**+1.4**
	comp=Z,10.0nm,0.4s						
LSR	**Lussari**	**1.33**	**332**	⇑*e*Pg	**Pn**	**21 50 26.7**	**-0.2**
LSR				*e*Sg	**Sg**	**21 50 46.1**	**+1.9**
LSR	**Lussari**	**1.33**	**332**	⇑*e*Pg	**Pn**	**21 50 26.7**	**-0.2**
LSR				*e*Sg	**Sg**	**21 50 46.1**	**+1.9**
PTCC	**Patocco-Chiusa**	**1.34**	**326**	Pg	**Pn**	**21 50 26.7**	**-0.2**
PTCC				Sn	**Sg**	**21 50 45.4**	**+1.1**
	comp=Z,1.0nm,0.3s						
PTCC	**Patocco-Chiusa**	**1.34**	**326**	Pg	**Pn**	**21 50 26.7**	**-0.2**
PTCC				Sn	**Sg**	**21 50 45.4**	**+1.1**
	comp=Z,1.0nm,0.3s						
ACOM	**Acomizza, Ital**	**1.40**	**333**	⇑*e*Pg	**Pb**	**21 50 27.9**	**-0.3**
ACOM	**Acomizza, Ital**	**1.40**	**333**	Pn	**Pg**	**21 50 28.4**	**+0.2**
ACOM				Sn	**Sg**	**21 50 47.9**	**+1.5**
	comp=Z,38nm,1.1s						
ACOM	**Acomizza, Ital**	**1.40**	**333**	⇑*e*Pg	**Pb**	**21 50 27.9**	**-0.3**
ACOM	**Acomizza, Ital**	**1.40**	**333**	Pn	**Pg**	**21 50 28.4**	**+0.2**
ACOM				Sn	**Sg**	**21 50 47.9**	**+1.5**
	comp=Z,38nm,1.1s						
SOKA	**Soboth**	**1.43**	**16**	⇑*i*Pg	**Pb**	**21 50 28.4**	**-0.2**
SOKA				⇓*i*Sg	**Sg**	**21 50 47.5**	**+0.2**
	comp=Z,5.0nm,0.3s						
SOKA	**Soboth**	**1.43**	**16**	⇑*i*Pg	**Pb**	**21 50 28.4**	**-0.2**
SOKA				*i* Sg	**Sg**	**21 50 47.5**	**+0.2**
MYKA	**Terra Mystica**	**1.44**	**337**	⇑*i*Pg	**Pg**	**21 50 29.0**	**+0.1**
MYKA				⇑*i*Sg	**Sg**	**21 50 48.9**	**+1.4**
	comp=Z,19nm,0.3s						
MYKA	**Terra Mystica**	**1.44**	**337**	⇑*i*Pg	**Pg**	**21 50 29.0**	**+0.1**
MYKA				*i* Sg	**Sg**	**21 50 48.9**	**+1.4**
FUSE	**Fusea**	**1.50**	**318**	⇑*e*Pg	**Pn**	**21 50 29.0**	**-0.1**
FUSE	**Fusea**	**1.50**	**318**	⇑*e*Pg	**Pn**	**21 50 29.0**	**-0.1**
MLNI	**Malnisio**	**1.54**	**304**	⇓*e*Pg	**Pn**	**21 50 29.4**	**-0.2**
MLNI				*e*Sg	**Sg**	**21 50 51.4**	**+0.7**
MLNI	**Malnisio**	**1.54**	**304**	⇓*e*Pg	**Pn**	**21 50 29.4**	**-0.2**
MLNI				*e*Sg	**Sg**	**21 50 51.4**	**+0.7**
POLC	**Polcenigo**	**1.54**	**298**	⇑*e*Pg	**Pn**	**21 50 29.9**	**+0.3**
POLC				Sn	**Sg**	**21 50 51.6**	**+0.7**
POLC				*e*Sg	**Sb**	**21 50 52.3**	**+2.0**
ZOU	**Zoufplan**	**1.62**	**321**	⇑*e*Pg	**Pb**	**21 50 31.3**	**-0.6**
VARN	**Col Varnada, M**	**1.78**	**293**	⇑*e*Pg	**Pn**	**21 50 32.4**	**-0.6**
VARN				*e*Sg	**Sn**	**21 50 56.4**	**+0.3**
VARN	**Col Varnada, M**	**1.78**	**293**	⇑*e*Pg	**Pn**	**21 50 32.4**	**-0.6**
VARN				*e*Sg	**Sn**	**21 50 56.4**	**+0.3**

*ISCJB **27** 22:07:30.7±0.8, 40°02N±0°03'×23°81E±0°08, h12km±4km, Error ellipse: s-maj=10.9km s-min=5.2km az=14.4*
*CSEM **27** 22:07:30.4±0.4, 40°01N×23°86E, h12km, MD2.7, Error ellipse: s-maj=10.3km s-min=5.3km az=96.0*
*THE **27** 22:07:31.8, 40°05N×23°77E, h2km±12km, ML1.4/2, Error ellipse: s-maj=12.2km s-min=0.3km az=172.0*
*ATH **27** 22:07:31.5, 39°99N×23°71E, h15km±2km, MD2.7/6*

ISC 27 22:07:31.0±1.0, 40°02N±0°03'×23°82E±0°05, h12km±7km, n21, σ0°34/32, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAIG	**Paliouri**	**0.14**	**229**	P	**Pg**	**22 07 34.4**	**+0.2**
PAIG				S	**Sg**	**22 07 36.5**	**-0.2**
PAIG	**Paliouri**	**0.14**	**229**	⇑*i*PB	**Pg**	**22 07 34.5**	**+0.2**
PAIG				*e*SB	**Sg**	**22 07 36.5**	**-0.2**
PAIG	**Paliouri**	**0.14**	**229**	⇑*i*Pb	**Pg**	**22 07 34.5**	**+0.2**
PAIG				S	**Sg**	**22 07 36.5**	**-0.2**
OUR	**Ouranopolis**	**0.34**	**22**	P	**Pg**	**22 07 37.9**	**0.0**
OUR				S	**Sg**	**22 07 42.7**	**+0.3**
OUR	**Ouranopolis**	**0.34**	**22**	P	**Pg**	**22 07 37.9**	**0.0**
OUR				S	**Sg**	**22 07 42.7**	**+0.3**
PLG	**Polygyros**	**0.46**	**321**	P	**Pg**	**22 07 39.5**	**-0.5**
PLG				S	**Sg**	**22 07 45.4**	**-0.7**
PLG	**Polygyros**	**0.46**	**321**	*e*PB	**Pg**	**22 07 40.6**	**+0.6**
PLG	**Polygyros**	**0.46**	**321**	P	**Pg**	**22 07 39.5**	**-0.5**
PLG	**Polygyros**	**0.46**	**321**	*e*Pb	**Pg**

OUR				S	Sg	22 20 04.6	+0.7				
KAVA	**Kavala**	**1.39**	**102**	P	Pb	22 19 46.5	-0.1				
KAVA	**Kavala**	**1.39**	**102**	P	Pb	22 19 46.5	-0.1				
PAIG	**Paliouri**	**1.55**	**151**	*e*PN	Pn	22 19 48.6	+0.3				
PAIG				*e*SN	Sn	22 20 08.4	-0.3				
PAIG	**Paliouri**	**1.55**	**151**	*e*Pn	Pn	22 19 48.6	+0.3				
PAIG				*e*Sn	Sn	22 20 08.4	-0.3				
BARS	**Barje**	**1.66**	**337**	*e*Pg	Pg	22 19 52.1	0.0				
BARS				*e*Sg	Sn	22 20 10.2	-1.2				
BARS	**Barje**	**1.66**	**337**	*e*Pg	Pg	22 19 52.1	0.0				
ZAPS	**Zavoj**	**1.98**	**358**	*e*Pn	Pb	22 19 57.1	+0.5				
ZAPS				*e*Sn	Sn	22 20 18.8	-0.5				

IDC 27 22:46:10.0±2.1, 1°28N×128°06E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.5/3, Error ellipse: s-maj=138.5km s-min=26.6km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.97**	**164**	P	P	22 51 04.3	-1.4
	1.0nm,0.7s,baz=344,slow=11,SNR=4.6						
ASAR	**Alice Springs**	**25.44**	**167**	P	P	22 51 40.9	+1.1
	1.4nm,1.0s,baz=359,slow=11,SNR=5.6						
MKAR	**Makanchi Array**	**60.31**	**325**	P	P	22 56 20.5	-0.2
	0.4nm,0.6s,baz=116,slow=8.0,SNR=5.9						

IDC 27 23:10:22.0±9.2, 4°35S×101°86E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/23, mbtmp3.5/3, Error ellipse: s-maj=319.7km s-min=31.3km az=61.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.23**	**119**	P	P	23 17 17.7	-0.8
	0.1nm,0.3s,baz=293,slow=8.1,SNR=2.2						
ASAR	**Alice Springs**	**36.39**	**125**	P	P	23 17 29.0	+0.5
	0.3nm,0.3s,baz=302,slow=7.8,SNR=5.8						
SONM	**Songino Array**	**52.12**	**4**	P	P	23 19 34.1	0.0
	0.4nm,0.5s,baz=203,slow=6.8,SNR=5.3						

*ATH **27** 23:12:56.0, 38°.15N×21°.90E, h4km±2km, MD3.2/8*
*ISCJB **27** 23:12:58.9±0.3, 38°.35N±0°.02×21°.80E±0°.02, h6km±2km, mb3.5/5, Error ellipse: s-maj=2.9km s-min=2.6km az=29.2*
*IDC **27** 23:12:58.8±1.3, 38°.23N×21°.76E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.4/31, mbtmp3.4/8, ML2.8/2, Error ellipse: s-maj=28.4km s-min=19.5km az=144.0*
*THE **27** 23:12:58.9, 38°.34N×21°.81E, h11km, ML3.4/5, Error ellipse: s-maj=0.6km s-min=0.3km az=147.0*
*CSEM **27** 23:12:59.0±0.1, 38°.32N×21°.82E, h2km, ML3.3, Error ellipse: s-maj=2.5km s-min=2.3km az=119.0*

ISC 27 23:12:59.5±0.7, 38°33N±0°.02×21°82E±0°.02, h8km±4km, n99, σ0°88/138, mb3.6/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UPR	**University Cam**	**0.06**	**207**	P	Pg	23 13 00.8	-0.5
UPR				S	Sg	23 13 02.6	0.0
UPR	**University Cam**	**0.06**	**207**	P	Pg	23 13 00.8	-0.5
UPR				S	Sg	23 13 02.6	0.0
EFP	**Efpalio**	**0.12**	**36**	P	Pg	23 13 01.7	-0.5
EFP				S	Sg	23 13 04.1	+0.1
EFP	**Efpalio**	**0.12**	**36**	P	Pg	23 13 01.7	-0.5
EFP				S	Sg	23 13 04.1	+0.1
LAKA	**Lakka**	**0.16**	**126**	P	Pg	23 13 02.6	-0.2
LAKA				S	Sg	23 13 05.6	+0.5
LAKA	**Lakka**	**0.16**	**126**	P	Pg	23 13 02.6	-0.2
LAKA				S	Sg	23 13 05.6	+0.5
TRIZ	**Trizonia**	**0.20**	**81**	P	Pg	23 13 03.3	-0.3
TRIZ				S	Sg	23 13 07.0	+0.6
TRIZ	**Trizonia**	**0.20**	**81**	P	Pg	23 13 03.3	-0.3
TRIZ				S	Sg	23 13 05.9	-0.5
KALE	**Kalithea**	**0.26**	**77**	P	Pg	23 13 04.3	-0.4
KALE				S	Sg	23 13 08.6	+0.4
KALE	**Kalithea**	**0.26**	**77**	P	Pg	23 13 04.3	-0.4
KALE				S	Sg	23 13 08.6	+0.4
RLS	**Riolos of Patr**	**0.39**	**225**	P	Pg	23 13 07.0	-0.1
RLS				S	Sg	23 13 12.7	+0.4
RLS	**Riolos of Patr**	**0.39**	**225**	P	Pg	23 13 07.0	-0.1
RLS				S	Sg	23 13 12.7	+0.4
DSF	**Desfina**	**0.56**	**82**	P	Pg	23 13 09.4	-1.0
DSF				S	Sg	23 13 18.0	+0.2
DSF	**Desfina**	**0.56**	**82**	P	Pg	23 13 09.4	-1.0
DSF				S	Sg	23 13 18.0	+0.2
GUR	**Goura**	**0.57**	**134**	P	Pg	23 13 09.7	-0.9
GUR				S	Sg	23 13 18.5	+0.4
GUR	**Goura**	**0.57**	**134**	P	Pg	23 13 09.7	-0.9
GUR				S	Sg	23 13 18.5	+0.4
MAKR	**Makrakomi, Fth**	**0.72**	**20**	P	Pg	23 13 12.9	-0.5
MAKR	**Makrakomi, Fth**	**0.72**	**20**	P	Pg	23 13 12.9	-0.5
MAKR				S	Sg	23 13 23.5	+0.7
THAL	**Thalero**	**0.73**	**114**	P	Pg	23 13 12.7	-0.8
THAL	**Thalero**	**0.73**	**114**	P	Pg	23 13 12.7	-0.8
AXAR	**Agios Charalam**	**0.79**	**56**	P	Pg	23 13 13.7	-1.0
AXAR				S	Sg	23 13 25.3	+0.4
AXAR	**Agios Charalam**	**0.79**	**56**	P	Pg	23 13 13.7	-1.0
AXAR				S	Sg	23 13 25.3	+0.4
AGG	**Agios Georgios**	**0.80**	**30**	P	Pg	23 13 13.5	-1.3
AGG				S	Sg	23 13 25.3	+0.1
AGG	**Agios Georgios**	**0.80**	**30**	*e*PG	Pg	23 13 13.8	-1.0
AGG				*e*SG	Sb	23 13 26.5	0.0
AGG	**Agios Georgios**	**0.80**	**30**	P	Pg	23 13 13.5	-1.3
AGG	**Agios Georgios**	**0.80**	**30**	*e*Pg	Pg	23 13 13.8	-1.0
AGG				S	Sg	23 13 25.3	+0.1
AGG				*e*Sg	Sb	23 13 26.5	0.0
AMT	**Artemida-Makis**	**0.80**	**186**	P	Pg	23 13 14.2	-0.8
AMT				S	Sb	23 13 26.5	-0.2
KFL	**Anninata**	**0.84**	**255**	P	Pg	23 13 15.2	-0.5
KFL	**Anninata**	**0.84**	**255**	P	Pg	23 13 15.2	-0.5
LTK	**Loutraki**	**0.96**	**109**	P	Pg	23 13 17.1	-0.8
LTK	**Loutraki**	**0.96**	**109**	P	Pg	23 13 17.1	-0.8
LTK				S	Sb	23 13 30.9	-0.2
VLS	**Valsamata**	**0.98**	**261**	P	Pg	23 13 16.9	-1.4
VLS	**Valsamata**	**0.98**	**261**	P	Pg	23 13 16.9	-1.4
VLS				S	Sb	23 13 31.9	+0.1
ATAL	**Atalanti**	**1.01**	**69**	P	Pg	23 13 17.8	-1.1
ATAL				S	Sb	23 13 32.8	+0.2
ATAL	**Atalanti**	**1.01**	**69**	P	Pg	23 13 17.8	-1.1
ATAL				S	Sb	23 13 32.8	+0.2
LKD2	**Lefkada island**	**1.02**	**297**	P	Pg	23 13 17.7	-1.3
LKD2	**Lefkada island**	**1.02**	**297**	*e*PG	Pg	23 13 17.8	-1.3
LKD2				*e*SB	Sn	23 13 34.0	-0.5
LKD2	**Lefkada island**	**1.02**	**297**	P	Pg	23 13 17.7	-1.3
LKD2				*e*Sb	Sn	23 13 34.0	-0.5
VLX	**Vlachokerasia**	**1.06**	**155**	P	Pg	23 13 18.5	-1.3
VLX	**Vlachokerasia**	**1.06**	**155**	P	Pg	23 13 18.5	-1.3
VLX				S	Sb	23 13 34.7	+0.6
VIL2	**Platees**	**1.15**	**96**	P	Pb	23 13 21.6	+0.1
ITM	**Ithomi**	**1.16**	**176**	P	Pg	23 13 20.4	-1.2
ITM	**Ithomi**	**1.16**	**176**	P	Pg	23 13 20.4	-1.2
ITM				S	Sn	23 13 37.6	-0.3
SMIA	**Simia**	**1.22**	**63**	P	Pb	23 13 22.0	-0.8
SMIA	**Simia**	**1.22**	**63**	P	Pb	23 13 22.0	-0.8
THL	**Klokotos Trika**	**1.24**	**7**	P	Pn	23 13 22.6	-0.5
THL	**Klokotos Trika**	**1.24**	**7**	P	Pn	23 13 22.6	-0.5
DID	**Didima**	**1.39**	**126**	P	Pn	23 13 24.6	-0.6
DID	**Didima**	**1.39**	**126**	P	Pn	23 13 24.6	-0.6
DID				S	Sg	23 13 44.2	-0.1
DIDY	**Didyma**	**1.40**	**127**	P	Pn	23 13 24.7	-0.6
DIDY	**Didyma**	**1.40**	**127**	P	Pn	23 13 24.7	-0.6
PYL	**PYLOS**	**1.44**	**182**	P	Pn	23 13 25.2	-0.6
PYL	**PYLOS**	**1.44**	**182**	P	Pn	23 13 25.2	-0.6
MRKA	**Markates**	**1.44**	**74**	P	Pn	23 13 26.0	+0.2
MRKA				S	Sg	23 13 46.3	+0.6
MRKA	**Markates**	**1.44**	**74**	P	Pn	23 13 26.0	+0.2
MRKA				S	Sg	23 13 46.3	+0.6
XOR	**Xorichti**	**1.49**	**46**	P	Pn	23 13 26.3	-0.2
XOR	**Xorichti**	**1.49**	**46**	P	Pn	23 13 26.3	-0.2
JAN	**Janina**	**1.52**	**331**	P	Pg	23 13 29.1	+0.4
JAN	**Janina**	**1.52**	**331**	P	Pg	23 13 29.1	+0.4
ATHU	**Athens Univers**	**1.59**	**103**	P	Pn	23 13 28.1	+0.2
ATHU	**Athens Univers**	**1.59**	**103**	P	Pn	23 13 28.1	+0.2
DYR	**Agios Nikonas**	**1.62**	**165**	P	Pn	23 13 28.8	+0.5
DYR	**Agios Nikonas**	**1.62**	**165**	P	Pn	23 13 28.8	+0.5
DYR				S	Sg	23 13 52.5	+0.9
PTL	**Penteli**	**1.64**	**99**	P	Pn	23 13 28.4	-0.2
PTL	**Penteli**	**1.64**	**99**	P	Pn	23 13 28.4	-0.2
AOS	**Alonnisos**	**1.82**	**62**	P	Pn	23 13 30.7	-0.3
AOS	**Alonnisos**	**1.82**	**62**	*e*PB	Pn	23 13 30.8	-0.3
AOS	**Alonnisos**	**1.82**	**62**	P	Pn	23 13 30.7	-0.3
VLI	**Veliai**	**1.84**	**151**	P	Pn	23 13 32.0	+0.7
VLI	**Veliai**	**1.84**	**151**	P	Pn	23 13 31.8	+0.5
KZN	**Kozani**	**1.97**	**359**	*e*PN	Pb	23 13 35.2	-0.4
KZN	**Kozani**	**1.97**	**359**	*e*Pn	Pb	23 13 35.2	-0.4
PAIG	**Paliouri**	**2.15**	**42**	*e*PB	Pn	23 13 35.3	-0.3
PAIG	**Paliouri**	**2.15**	**42**	*e*Pb	Pn	23 13 35.3	-0.3
NEST	**Nestorio**	**2.16**	**344**	P	Pb	23 13 39.9	+1.0
NEST	**Nestorio**	**2.16**	**344**	P	Pb	23 13 39.9	+1.0
KYTH	**Kithira**	**2.27**	**154**	P	Pb	23 13 39.9	-0.7
KYTH	**Kithira**	**2.27**	**154**	P	Pb	23 13 39.9	-0.7
FNA	**Florina**	**2.47**	**352**	P	Pb	23 13 42.2	-2.0
FNA	**Florina**	**2.47**	**352**	*e*PB	Pb	23 13 42.4	-1.8
FNA	**Florina**	**2.47**	**352**	*e*Pb	Pb	23 13 42.4	-1.8
GRG	**Griva**	**2.66**	**10**	*e*PN	Pn	23 13 44.1	+1.5
GRG	**Griva**	**2.66**	**10**	*e*Pn	Pn	23 13 44.1	+1.5
SOH	**Sokhos**	**2.75**	**25**	*e*PN	Pn	23 13 45.0	+1.1
SOH	**Sokhos**	**2.75**	**25**	*e*Pn	Pn	23 13 45.0	+1.1
VAY	**Valandovo**	**3.04**	**11**	*e*Pn	Pn	23 13 50.8	+2.9
VAY	**Valandovo**	**3.04**	**11**	*e*Pn	Pb	23 13 51.2	-2.6
STON	**Ston**	**5.51**	**327**	*e*Pn	Pn	23 14 21.2	-0.6
STON				Sn	Sn	23 15 24.1	-1.1
STON	**Ston**	**5.51**	**327**	*e*Pn	Pn	23 14 21.1	-0.6
STON				Sn	Sn	23 15 24.1	-1.1
MLR	**Muntele Rosu**	**7.79**	**22**	Pn	Pn	23 14 57.6	+4.5
	0.0nm,0.3s,baz=246,slow=10.0,SNR=4.7						
NVLJ	**Novalja**	**8.12**	**322**	*e*Pn	Pn	23 14 57.4	-0.2
NVLJ				Sn	Sn	23 16 28.3	-1.1
NVLJ	**Novalja**	**8.12**	**322**	*e*Pn	Pn	23 14 57.3	-0.2
NVLJ				Sn	Sn	23 16 28.3	-1.1
BRTR	**Keskin Array B**	**9.30**	**78**	Pn	Pn	23 15 17.1	+3.1
	0.1nm,0.3s,baz=254,slow=13,SNR=5.6						
ESDC	**Sonseca Array**	**20.06**	**282**	P	P	23 17 33.6	+0.5
	0.7nm,0.6s,baz=75,slow=11,SNR=5.8						
HFS	**Hagfors**	**22.42**	**349**	P	P	23 18 00.6	+2.3
	3.7nm,0.9s,baz=159,slow=12,SNR=3.8						
EKA	**Eskdalemuir Ar**	**23.90**	**323**	P	P	23 18 13.4	0.0
	1.5nm,0.8s,baz=119,slow=9.9,SNR=6.1						
TORD	**Torodi Ar. Bea**	**30.80**	**221**	P	P	23 19 16.0	+0.3
	0.4nm,0.8s,baz=39,slow=9.3,SNR=3.4						
MKAR	**Makanchi Array**	**44.35**	**59**	P	P	23 21 10.7	+0.6
	0.3nm,0.4s,baz=280,slow=7.1,SNR=6.5						
ZALV	**Zalesovo Beam**	**44.83**	**48**	P	P	23 21 13.7	+0.1
	0.3nm,0.3s,baz=280,slow=6.4,SNR=3.2						

*BJI **27** 23:22:22.6, 23°.58S×68°.51W, h99km, mB5.2/14*
*NEIC **27** 23:22:24.4±0.5, 23°.63S×67°.72W, h112km±4km, mb5.2/114, Error ellipse: s-maj=5.7km s-min=3.8km az=65.0*
*ISCJB **27** 23:22:24.3±0.5, 23°.54S±0°.03×67°.67W±0°.04, h120km±3km, mb5.1/146, Error ellipse: s-maj=6.4km s-min=4.6km az=140.9*
*IDC **27** 23:22:24.9±1.2, 23°.57S×67°.74W, h113km±10km, mb4.8/26, mb1 4.9/32, mb1mx4.8/34, mbtmp4.7/32, MS3.8/8, Ms1 3.8/8, ms1mx3.6/21, Error ellipse: s-maj=12.5km s-min=9.1km az=53.0*
*GUC **27** 23:22:25.6±0.4, 23°.58S×68°.04W, h139km±3km, ML5.1*
*MOS **27** 23:22:25.5±1.2, 23°.35S×67°.65W, h123km, mb5.1/33, Error ellipse: s-maj=13.3km s-min=6.6km az=110.0*
*GCMT **27** 23:22:30.8±0.2, 23°.80S×68°.07W, h150km±1km, MW5.2, Moment Tensor Solution. s59,c82; s81,c124; Moment tensor: Scale 10^16^Nm; Mrr-5.34±.15; Mθθ-0.06±.21; Mϕϕ5.39±.23; Mrθ2.44±.13; Mrϕ-3.53±.17; Mθϕ-3.89±.15; Best double couple: M0 7.80000×10^16^ NP1:ϕs 160.00000°, δ27.00000°, λ-80.00000°. NP2:ϕs 329.00000°, δ63.00000°, λ-95.00000°. Principal axes: T 8.6200, Plg18.0000°, Azm63.0000°; N -1.7500, Plg5.0000°, Azm331.0000°; P -6.8700, Plg71.0000°, Azm228.0000°; Data Used: II IU IC G CN.*

ISC 27 23:22:24.8±0.5, 23°60S±0°.04×67°69W±0°.04, h115km±4km, n855, σ1°$02/928, mb5.2/146, 202C-226D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**0.83**	**325**	⇑*i*P	Pn	23 22 47.7	+2.6
SPCH				*i* S	Sn	23 23 04.5	+4.1
LVC	**Limon Verde**	**1.49**	**311**	*e*Pn	Pn	23 22 53.4	+1.2
LVC				*e*Sn	Sn	23 23 13.4	+0.6
LVC	**Limon Verde**	**1.49**	**311**	*e*P	Pn	23 22 53.1	+0.9
LVC				*i* S	Sn	23 23 13.7	+0.9
PB04	**Plate Boundary**	**2.12**	**308**	⇑*i*P	Pn	23 23 05.0	+5.4
PB04				*i* S	Sn	23 23 34.8	+8.6
PB04				AML	AML	23 23 40.7	
	comp=N,10μm,0.6s						
PB09	**Plate Boundary**	**2.29**	**321**	⇓*i*P	Pn	23 23 03.4	+1.4
PB09				*i* S	Sn	23 23 31.5	+1.1
PB09				AML	AML	23 23 39.5	
	comp=E,20μm,1.0s						
ANCH	**Antofagasta**	**2.50**	**268**	⇑*i*P	Pn	23 23 03.1	-1.3
ANCH				*i* S	Sn	23 23 31.3	-3.5
ANCH				AML	AML	23 23 32.4	
	comp=E,8μm,0.3s						
PB01	**Plate Boundary**	**3.04**	**326**	⇓*i*P	Pn	23 23 11.8	+0.2
PB01				*i* S	Sn	23 23 47.6	0.0
PB01				AML	AML	23 23 52.9	
	comp=E,4μm,0.8s						
HMBC	**Humberstone**	**3.88**	**328**	⇓*i*P	Pn	23 23 21.7	-1.1
HMBC				*i* S	Sn	23 24 06.2	-1.6
PSGC	**Pisagua**	**4.58**	**330**	⇓*i*P	Pn	23 23 29.9	-2.2
PSGC				*i* S	Sn	23 24 20.9	-3.6
LCO	**Las Campanas**	**6.03**	**206**	*e*Pn	Pn	23 23 48.0	-3.9
LCO				*e*Sn	Sn	23 24 52.6	-7.2
LPAZ	**La Paz**	**7.28**	**357**	*e*Pn	Pn	23 24 10.6	+1.4
LPAZ				*e*Sn	Sn	23 25 21.2	-10
LPAZ				S	Sn	23 25 28.9	-1.8
LPAZ	**La Paz**	**7.28**	**357**	P	Pn	23 24 09.8	+0.6
	comp=E,10nm,0.3s,baz=160,slow=8.0,SNR=155						
LPAZ				S	Sn	23 25 28.9	-1.8
	baz=168,slow=19,SNR=2.0						
CFAA	**Coronel Fontan**	**7.99**	**183**	P	Pn	23 24 16.6	-1.6
CFAA				S	Sn	23 25 39.2	-7.8
CFAA	**Coronel Fontan**	**7.99**	**183**	P	Pn	23 24 16.6	-1.6
	comp=E,4.6nm,0.3s,baz=354,slow=14,SNR=258						
CFAA				S	Sn	23 25 39.2	-7.8
	comp=E,2.5nm,0.3s,baz=248,slow=19,SNR=8.2						
CFAA				LR	LR	23 26 52.3	
	comp=E,34nm,20.1s,baz=3.8,slow=33						
CPUP	**Villa Florida**	**9.79**	**108**	*e*Pn	Pn	23 24 43.6	+1.1
CPUP				S	Sn	23 26 32.2	+1.7
CPUP	**Villa Florida**	**9.79**	**108**	P	Pn	23 24 43.3	+0.8
	comp=E,3.6nm,0.3s,baz=274,slow=11,SNR=18						
CPUP				S	Sn	23 26 32.2	+1.7
	comp=E,1.3nm,0.3s,baz=322,slow=10.0,SNR=1.3						
CPUP				LR	LR	23 28 40.5	
	comp=E,1μm,18.6s,baz=70,slow=38						
SIV	**San Ignacio**	**9.80**	**41**	P	Pn	23 24 42.4	-0.3
SIV				S	Sn	23 26 25.4	-5.6
SIV	**San Ignacio**	**9.80**	**41**	P	Pn	23 24 42.4	-0.3
	comp=E,82nm,0.3s,baz=232,slow=14,SNR=400						
SIV				S	Sn	23 26 25.4	-5.6
	baz=210,slow=21,SNR=4.6						
NNA	**Nana**	**14.46**	**321**	*e*Pn	Pn	23 25 44.6	+0.4
NNA				S	Sn	23 28 26.1	+2.2
NNA	**Nana**	**14.46**	**321**	P	P	23 25 48.0	+0.3
	comp=E,621nm,1.1s,SNR=7.1						
NNA	**Nana**	**14.46**	**321**	P	P	23 25 48.0	+0.3
	comp=E,3.3nm,0.3s,baz=171,slow=11,SNR=18						
NNA				S	Sn	23 28 26.1	+2.2
	comp=E,0.9nm,0.3s,baz=78,slow=22,SNR=2.2						
NNA				LR	LR	23 31 05.3	
	comp=E,148nm,21.3s,baz=34,slow=36						
SAML	**Samuel**	**15.19**	**17**	*e*Pn	Pn	23 25 51.7	-1.7
	comp=E,76nm,1.0s						
SAML				Sn	Sn	23 28 36.4	-5.1
TRQA	**Tornquist**	**15.22**	**163**	*e*Pn	Pn	23 25 53.2	-0.4
	comp=E,386nm,1.4s						
TRQA				*e*S	S	23 28 48.2	-2.4
PLCA	**Paso Flores**	**17.26**	**187**	*e*Pn	P	23 26 17.7	-0.8
	comp=E,74nm,1.1s						
PLCA				PcP	PcP	23 30 55.5	+0.3
PLCA	**Paso Flores**	**17.26**	**187**	P	P	23 26 18.2	-0.3
	comp=E,0.6nm,0.3s,baz=15,slow=14,SNR=16						
PLCA				PcP	PcP	23 30 55.5	+0.3
	comp=E,0.3nm,0.3s,baz=39,slow=3.9,SNR=7.6						
SPB	**Sao Paulo**	**18.57**	**94**	*e*P	Pn	23 26 34.0	-0.5
	comp=E,199nm,1.4s						
ATAH	**Atahualpa**	**19.33**	**326**	P	P	23 26 42.8	+1.1
ATAH	**Atahualpa**	**19.33**	**326**	P	P	23 26 42.8	+1.1
	comp=E,0.8nm,0.3s,baz=172,slow=7.2,SNR=19						

BDFB	**Brasilia**	**20.14**	**70**	P	P	23 26 50.7	+0.5
BDFB	**Brasilia**	**20.14**	**70**	P	P	23 26 50.7	+0.5
	comp=E,280nm,0.8s,baz=242,slow=11,SNR=372						
COYC	**Coyhaique**	**22.21**	**188**	*e*P	P	23 27 10.4	-1.4
COYC	**Coyhaique**	**22.21**	**188**	*e*P	P	23 27 10.4	-1.4
OTAV	**Otavalo**	**25.90**	**335**	*e*P	P	23 27 47.4	+0.7
	comp=E,6.1nm,1.3s						
OTAV				*e*PcP	PcP	23 31 14.1	+1.0
ROSC	**El Rosal**	**29.01**	**346**	LR	LR	23 40 16.7	
	comp=E,73nm,18.8s,baz=15,slow=37						
RCBR	**Riachuelo**	**35.32**	**65**	*e*P	P	23 29 09.3	-0.1
	comp=E,102nm,1.2s						
RCBR	**Riachuelo**	**35.32**	**65**	P	P	23 29 09.2	-0.1
	comp=E,56nm,1.1s,baz=234,slow=10,SNR=14						
GRGR	**Grenville**	**36.00**	**10**	*e*P	P	23 29 15.3	+0.4
GRGR				*e*PP	PnPn	23 30 39.8	+0.1
JTS	**JuntasAbangare**	**37.67**	**331**	P	P	23 29 31.0	+1.8
	comp=E,188nm,0.7s,SNR=5.9						
JTS	**JuntasAbangare**	**37.67**	**331**	*e*P	P	23 29 29.6	+0.4
	comp=E,289nm,1.1s						
JTS				*e*PcP	PcP	23 31 45.2	+0.8
MVM	**Montagne Vaucl**	**38.49**	**11**	*e*P	P	23 29 35.3	-0.7
HOPE	**Hope Point**	**38.51**	**151**	*e*P	P	23 29 37.7	+2.0
	comp=E,669nm,1.8s						
FDF	**Fort de France**	**38.63**	**10**	*e*P	P	23 29 38.2	+1.0
FDF				*e*		23 31 47.7	
FDF				pmax	pmax		
	comp=Z,294nm,1.1s						
FDF	**Fort de France**	**38.63**	**10**	*e*P	P	23 29 38.2	+1.0
	comp=E,294nm,1.1s						
FDF				*e*PcP	PcP	23 31 47.7	+0.5
FDF	**Fort de France**	**38.63**	**10**	*e*P	P	23 29 36.9	-0.3
OBIP	**Obispado Ponce**	**41.40**	**2**	*e*P	P	23 30 00.5	+0.5
	comp=Z,37nm,0.8s						
ANWB	**Willy Bob**	**41.42**	**9**	*e*P	P	23 30 04.9	+4.8
	comp=Z,154nm,0.8s						
CELP	**Cerrillos**	**41.43**	**2**	*e*P	P	23 29 58.9	-1.3
SJG	**San Juan**	**41.48**	**2**	*e*P	P	23 29 58.0	-2.6
	comp=Z,59nm,0.9s						
MTP	**Monte Pirata**	**41.49**	**3**	*e*P	P	23 30 01.4	+0.7
MTP				*e*PP	PP	23 31 38.6	-0.4
LSP	**Las Mesas**	**41.52**	**1**	*e*P	P	23 30 01.8	+0.8
LRS	**Lares**	**41.64**	**1**	P	P	23 30 04.8	+2.8
TGUH	**Tegucigalpa,Un**	**42.04**	**331**	*e*P	P	23 30 05.5	+0.3
	comp=Z,65nm,0.8s						
TEIG	**Tepich**	**47.96**	**334**	*e*P	P	23 30 51.1	-1.0
	comp=Z,25nm,0.8s						
TEIG	**Tepich**	**47.96**	**334**	P	P	23 30 51.3	-0.7
	comp=Z,21nm,0.7s,baz=140,slow=3.7,SNR=12						
TIGA	**Tifton**	**56.80**	**344**	⇑P	P	23 31 56.6	-0.6
	baz=57						
LRAL	**Lakeview Retre**	**59.25**	**341**	*e*P	P	23 32 12.8	-1.5
	comp=Z,40nm,1.2s						
HKT	**Hockley**	**59.71**	**332**	*e*P	P	23 32 17.5	+0.1
HKT				*e*		23 33 04.3	
HKT				pmax	pmax		
	comp=Z,31nm,1.2s						
HKT	**Hockley**	**59.71**	**332**	*e*P	P	23 32 17.5	+0.1
	comp=Z,31nm,1.2s						
HKT				*e*PcP	PcP	23 33 04.2	+1.1
KMSC	**Kings Mountain**	**59.83**	**347**	⇓P	P	23 32 18.2	0.0
	baz=60,SNR=21						
SNAA	**Sanae**	**59.94**	**161**	*e*P	P	23 32 18.8	+0.2
	comp=Z,72nm,1.3s						
SNAA				*e*PcP	PcP	23 33 03.7	0.0
732A	**Laxson Ranch,**	**60.61**	**327**	⇓P	P	23 32 23.2	-0.4
	baz=61,SNR=18						
CPCT	**Cooper Cave**	**60.85**	**344**	*e*P	P	23 32 24.6	-0.5
CPCT				*e*PcP	PcP	23 33 07.2	-0.4
TKL	**Tuckaleechee C**	**60.87**	**345**	P	P	23 32 24.6	-0.7
TKL	**Tuckaleechee C**	**60.87**	**345**	P	P	23 32 24.6	-0.7
	comp=Z,36nm,0.8s,baz=165,slow=7.9,SNR=49						
SWET	**Sewanee**	**60.99**	**343**	*e*P	P	23 32 25.5	-0.6
	comp=Z,100nm,1.0s						
632A	**Uvalde**	**61.16**	**328**	⇑P	P	23 32 27.0	-0.3
	baz=61,SNR=10						
RKT	**Rikitea**	**61.21**	**256**	*e*LR	LR	23 50 42.0	
	comp=Z,291nm,35.8s

baz=64,SNR=13
MVL Millersville 63.78 353 eP P 23 32 45.3 +0.8
comp=Z,77nm,1.9s
526A Mary Lane Ranc 63.78 325 ⇑P P 23 32 45.2 +0.2
baz=64,SNR=78
329A Wagon Wheel Ra 63.86 328 ⇓P P 23 32 44.9 -0.4
baz=64,SNR=37
WCI Wyandotte Cave 63.93 344 eP P 23 32 44.4 -1.2
WCI pmax pmax
comp=Z,59nm,1.2s
WCI Wyandotte Cave 63.93 344 eP P 23 32 44.4 -1.2
comp=Z,59nm,1.2s
USIN University of 64.05 343 eP P 23 32 45.4 -0.9
comp=Z,43nm,1.0s
427A Hayter Ranch, 64.06 326 ⇑P P 23 32 46.5 -0.2
baz=64,SNR=32
131A Roby 64.07 330 ⇓P P 23 32 46.4 -0.2
baz=64,SNR=33
229A Bryant Ranch, 64.17 328 ⇓P P 23 32 46.6 -0.8
baz=64,SNR=15
328A Wristen Ranch, 64.18 327 ⇑P P 23 32 47.2 -0.3
baz=64,SNR=39
Z32A Haskell 64.19 331 ⇓P P 23 32 46.7 -0.7
baz=64,SNR=12
426A McDonald Obser 64.23 325 ⇓P P 23 32 48.0 0.0
baz=64,SNR=48
SIUC Southern Illin 64.26 341 eP P 23 32 46.8 -0.9
comp=Z,54nm,1.1s
130A Snyder 64.28 329 ⇑P P 23 32 47.5 -0.5
baz=65,SNR=22
Z31A Sharp Cattle R 64.50 330 ⇓P P 23 32 49.0 -0.4
baz=65,SNR=32
327A Balmorhea Ranc 64.52 326 ⇓P P 23 32 49.7 +0.1
baz=65
228A UT Block 9, Go 64.67 328 ⇓P P 23 32 49.9 -0.7
baz=65,SNR=11
326A Caldwell Ranch 64.72 326 ⇑P P 23 32 51.0 0.0
baz=65,SNR=42
129A Stewart Farms, 64.74 328 ⇑P P 23 32 50.4 -0.6
baz=65,SNR=6.8
Y32A R-V Farms, Ver 64.76 331 ⇑P P 23 32 50.6 -0.4
baz=65,SNR=8.8
425A Indio Mountain 64.83 325 ⇓P P 23 32 51.6 -0.1
baz=65,SNR=119
BLO Bloomington 64.88 344 eP P 23 32 50.6 -1.1
BLO pmax pmax
comp=Z,55nm,1.3s
BLO Bloomington 64.88 344 eP P 23 32 50.6 -1.1
comp=Z,55nm,1.3s
TUL1 Tulsa 64.88 335 ⇑P P 23 32 51.2 -0.6
baz=65,SNR=6.6
OLIL Olney 64.89 342 eP P 23 32 50.6 -1.2
comp=Z,22nm,0.9s
Z30A Sanderson Ranc 64.93 329 ⇓P P 23 32 51.4 -0.9
baz=65,SNR=43
227A Bennet, Jal 64.93 327 ⇑P P 23 32 52.4 +0.1
baz=65,SNR=10
128A Castleberry Fa 65.03 328 ⇑P P 23 32 52.2 -0.7
baz=65,SNR=14
ACSO Alum Creek Sta 65.08 347 eP P 23 32 52.4 -0.6
comp=Z,47nm,1.0s
Y31A Rekieta Farm, 65.09 330 ⇓P P 23 32 52.9 -0.3
baz=65,SNR=17
WMOK Wichita Mounta 65.09 332 eP P 23 32 52.1 -1.1
WMOK pmax pmax
comp=Z,13nm,0.9s
WMOK Wichita Mounta 65.09 332 eP P 23 32 52.1 -1.1
comp=Z,13nm,0.9s
Z29A Hungry Hill Ra 65.18 329 ⇑P P 23 32 52.8 -1.1
baz=66,SNR=10.0
BRYW Bryant College 65.28 357 eP P 23 32 55.2 +1.0
325A Bean Ranch, Si 65.28 325 ⇑P P 23 32 54.5 -0.3
baz=66,SNR=149
Y30A Stafford Cattl 65.31 330 ⇓P P 23 32 53.7 -1.0
baz=66,SNR=5.2
226B Tecolote Peak, 65.43 326 ⇓P P 23 32 56.0 +0.4
baz=66,SNR=56
CLNB Carlsbad 65.43 327 eP P 23 32 55.6 0.0
comp=Z,0.9nm,0.2s
X31A McDonald Ranch 65.52 331 ⇑P P 23 32 55.4 -0.6
baz=66,SNR=32
Z28A Tucker Farm, M 65.52 328 ⇑P P 23 32 55.2 -1.0
baz=66,SNR=7.0
324A Moseley Ranch, 65.61 325 ⇑P P 23 32 55.9 -0.9
baz=66
GDL2 Guadalupe Moun 65.63 326 eP P 23 32 56.8 -0.1
comp=Z,26nm,1.0s
Y29A Porterfield Fa 65.65 329 ⇑P P 23 32 56.2 -0.8
baz=66,SNR=5.9
MNTX Cornudas Mount 65.75 325⇓eP P 23 32 56.5 -1.0
comp=Z,22nm,1.0s
X30A Coker Ranch, T 65.77 330 ⇓P P 23 32 56.9 -0.8
baz=66,SNR=12
225A Deer Hill, Car 65.79 326 ⇓P P 23 32 57.6 -0.4
baz=66,SNR=43
126A Clayton Basin, 65.81 327 ⇑P P 23 32 57.8 -0.2
baz=66,SNR=26
HRV Adam Dziewonsk 65.87 357 eP P 23 32 58.7 +0.7
HRV pmax pmax
comp=Z,29nm,1.0s
HRV Adam Dziewonsk 65.87 357 eP P 23 32 58.7 +0.7
comp=Z,29nm,1.0s
BINY Binghamton 65.91 353 eP P 23 32 58.4 0.0
comp=Z,40nm,1.1s
ALLY Alegheny Colle 65.93 350 eP P 23 32 58.5 +0.1
comp=Z,36nm,0.9s
Z27A Tatum 65.95 328 ⇓P P 23 32 58.2 -0.7
baz=66,SNR=49
Y28A McKinney Farm, 65.97 329 ⇓P P 23 32 58.1 -0.9
baz=66
W31A Holland Ranch, 65.97 331 ⇑P P 23 32 58.0 -1.0
baz=66
224A Cornudas Mount 66.12 325 ⇑P P 23 32 59.4 -0.7
baz=66,SNR=59
125A Gardner Draw, 66.14 326 ⇓P P 23 32 59.3 -0.8
baz=66,SNR=40
X29A Tulia 66.15 330 ⇓P P 23 32 59.4 -0.8
baz=66,SNR=9.8
SFIN Scholer Farm 66.16 344 ⇓P P 23 32 58.2 -1.7
baz=66,SNR=8.7
TRY Troy 66.22 355 eP P 23 33 01.3 +1.0
W30A Crocket Farms 66.25 331 ⇑P P 23 33 00.3 -0.4
baz=66
MSTX Muleshoe 66.27 329 ⇑P P 23 33 00.3 -0.6
baz=66,SNR=30
Z26A Caprock 66.29 327 ⇑P P 23 33 00.7 -0.4
baz=67,SNR=43
ERPA Erie 66.36 350 eP P 23 33 01.6 +0.3
comp=Z,74nm,1.3s
Y27A Causey 66.38 328 ⇑P P 23 33 01.0 -0.7
baz=67,SNR=26
V31A Spring Creek L 66.43 332 ⇓P P 23 33 01.7 -0.1
baz=67,SNR=7.4
X28A Dimmitt 66.44 329 ⇓P P 23 33 01.2 -0.9
baz=67
AMTX Amarillo 66.50 330 eP P 23 33 01.6 -0.7
comp=Z,9.0nm,0.5s
223A Chaparral, Ant 66.55 325 ⇑P P 23 33 02.8 +0.1
baz=67
124A Stringfield Ra 66.58 326 ⇑P P 23 33 03.0 -0.1
baz=67,SNR=69
QSPA South Pole Qui 66.61 180 eP P 23 33 02.8 0.0
comp=Z,93nm,1.0s
Z25A Roswell 66.67 327 ⇓P P 23 33 02.9 -0.6
baz=67,SNR=27
W29A Amraillo 66.69 330 ⇑P P 23 33 02.8 -0.7
baz=67,SNR=5.7
Y26A Elida 66.74 328 ⇓P P 23 33 03.1 -0.8
baz=67,SNR=16
V30A Spur Ranch, Mi 66.79 331 ⇓P P 23 33 04.4 +0.2
baz=67
ACCN Adirondack Com 66.88 355 eP P 23 33 05.5 +1.0
comp=Z,19nm,1.3s
HDIL Hopedale 66.92 342 eP P 23 33 03.4 -1.3
comp=Z,32nm,0.6s
U31A Nine Bar Ranch 66.93 332 ⇓P P 23 33 04.9 -0.1
baz=67
123A Bell Site, Whi 66.95 325 ⇑P P 23 33 05.4 0.0
baz=67
X27A F and S Farms, 66.97 329 ⇓P P 23 33 04.9 -0.5
baz=67
222A Williams Famil 66.98 324 ⇓P P 23 33 06.1 +0.5
baz=67,SNR=27
Z24A Sheeppen Canyo 67.03 326 ⇑P P 23 33 05.8 -0.1
baz=67,SNR=32
W28A Vega 67.05 330 ⇑P P 23 33 05.4 -0.5
baz=67,SNR=9.0
HNH Hanover 67.10 356 eP P 23 33 07.2 +1.4

Y25A Mesa, Roswell 67.17 327 ⇓P P 23 33 06.0 -0.7
baz=67,SNR=35
320A Kipp Ranch, An 67.18 323 ⇓P P 23 33 07.4 +0.6
baz=67,SNR=24
X26A CR and CF Fran 67.24 328 ⇓P P 23 33 06.9 -0.2
baz=68,SNR=31
V29A Stinnett 67.25 331 ⇑P P 23 33 06.7 -0.4
baz=68
221A Mesquite Ranch 67.28 324 ⇓P P 23 33 08.4 +1.0
baz=68
W27A Bowe Ranch, En 67.30 329 ⇓P P 23 33 06.9 -0.5
baz=68,SNR=16
U30A WK&E Inc. Balk 67.42 332 ⇑P P 23 33 07.9 -0.1
baz=68,SNR=5.8
Z23A Rita Site, Whi 67.42 326 ⇑P P 23 33 08.8 +0.5
baz=68,SNR=16
V28A Channing 67.47 330 ⇓P P 23 33 08.3 -0.2
baz=68
T31A Randall Ranch, 67.48 333 ⇓P P 23 33 08.2 -0.3
baz=68,SNR=10.0
NCB Newcomb 67.50 355 eP P 23 33 09.2 +0.8
comp=Z,23nm,1.0s
Y24A Capitan 67.54 327 ⇓P P 23 33 08.7 -0.4
baz=68,SNR=11
220A Playas Peak, P 67.61 323 ⇓P P 23 33 10.0 +0.5
baz=68,SNR=44
U29A Oasis Ranch, S 67.62 331 ⇓P P 23 33 09.4 0.0
baz=68,SNR=5.1
319A Douglas 67.63 322 ⇑P P 23 33 10.4 +0.8
baz=68,SNR=29
X25A Clemmons Ranch 67.63 328 ⇑P P 23 33 09.1 -0.5
baz=68,SNR=21
W26A Owens Ranch, T 67.65 329 ⇑P P 23 33 09.7 0.0
baz=68,SNR=18
121A Cookes Peak, D 67.68 324 ⇑P P 23 33 10.9 +0.9
baz=68,SNR=34
V27A Dan Oppiter Fa 67.76 330 ⇓P P 23 33 10.4 +0.1
baz=68
T30A Plains 67.80 332 ⇓P P 23 33 10.4 -0.1
baz=68
Z22A Elephant Butte 67.80 325 ⇑P P 23 33 11.7 +1.0
baz=68,SNR=65
S31A Mullinville 67.84 333 ⇑P P 23 33 10.6 -0.1
baz=68
Y23A Lovelace Mesa, 67.86 326 ⇓P P 23 33 11.2 +0.1
baz=68,SNR=12
LIC Lamto 67.92 72 eP P 23 33 11.5 -0.1
comp=Z,8.2nm,0.4s,baz=250
LIC Lamto 67.92 72 eP P 23 33 11.5 -0.1
comp=Z,8.2nm,0.4s
U28A Mallet 67.99 330 ⇓P P 23 33 11.5 -0.3
baz=68,SNR=13
KSU1 Kansas State U 67.99 336 eP P 23 33 10.8 -0.8
comp=Z,34nm,1.1s
X24A Lazy VL Ranch, 68.05 327 ⇑P P 23 33 12.4 +0.1
baz=68,SNR=7.2
W25A X Bar L Ranch, 68.09 328 ⇑P P 23 33 12.3 -0.2
baz=68,SNR=10
120A U Bar Ranch, L 68.15 323 ⇑P P 23 33 13.7 +0.8
baz=68,SNR=17
LONY Lake Ozonia 68.17 355 eP P 23 33 13.2 +0.6
comp=Z,33nm,1.2s
Z21A St. Cloud Mine 68.22 325 ⇑P P 23 33 14.4 +1.0
baz=68,SNR=42
T29A Hugoton 68.22 332 ⇑P P 23 33 13.1 0.0
baz=68
V26A Tequesquite Ra 68.23 329 ⇑P P 23 33 13.1 -0.2
baz=68,SNR=19
S30A Montezuma 68.27 332 ⇓P P 23 33 13.4 -0.1
baz=69,SNR=6.0
DBIC Dimbokro 68.28 72 eP P 23 33 14.7 +0.8
DBIC Dimbokro 68.28 72 P P 23 33 14.0 +0.1
comp=Z,27nm,0.8s,baz=215,slow=6.7,SNR=23
DBIC LR LR 00 04 01.6
comp=Z,90nm,19.5s,baz=207,slow=36
U27A Thompson Grove 68.30 330 ⇓P P 23 33 13.4 -0.2
baz=69,SNR=6.9
FRNY Flat Rock 68.31 355 eP P 23 33 14.3 +0.9
comp=Z,20nm,1.0s
BNM Barren Site 68.33 326 eP P 23 33 14.7 +0.6
Y22A Socorro 68.33 326 ⇓P P 23 33 14.7 +0.6
baz=69,SNR=14
Y22D IRIS PASSCAL I 68.42 326 ⇑P P 23 33 15.3 +0.8
baz=69
X23A Hourglass Bar 68.44 326 ⇓P P 23 33 15.3 +0.6
baz=69,SNR=8.5
LPM Los Pinos Moun 68.45 326 eP P 23 33 15.3 +0.5
LENM Lemitar 68.52 326 eP P 23 33 16.0 +0.8
S29A Ulysses 68.53 332 ⇓P P 23 33 15.3 +0.3
baz=69,SNR=17
W24A Lazy 6 Ranch, 68.55 327 ⇓P P 23 33 15.3 -0.1
baz=69,SNR=26
T28A Walsh 68.55 331 ⇓P P 23 33 14.8 -0.4
baz=69,SNR=10
Z20A Nine Sixteen R 68.56 324 ⇓P P 23 33 16.4 +1.0
baz=69,SNR=37
MSNY Massena 68.58 355 eP P 23 33 16.4 +1.4
V25A Rancho No Teng 68.66 328 ⇑P P 23 33 16.2 +0.1
baz=69,SNR=22
U26A Atchley Ranch, 68.70 329 ⇓P P 23 33 16.3 0.0
baz=69,SNR=29
R30A Highrock 68.73 333 ⇓P P 23 33 16.2 -0.1
baz=69,SNR=6.4
Y21A Point of Rocks 68.76 325 ⇓P P 23 33 18.0 +1.2
baz=69,SNR=46
T27A Campo 68.78 330 ⇓P P 23 33 16.4 -0.2
baz=69,SNR=20
LAZ Ladron 68.78 326 eP P 23 33 17.6 +0.8
SADO Sadowa 68.83 351 P P 23 33 16.5 -0.2
SADO Sadowa 68.83 351 P P 23 33 16.5 -0.2
comp=Z,11nm,0.5s,baz=186,slow=5.2,SNR=14
S28A Manter 68.85 331 ⇑P P 23 33 17.0 -0.1
baz=69,SNR=38
ANMO Albuquerque 68.86 327 eP P 23 33 17.2 -0.1
comp=Z,36nm,1.0s
W23A Werner Place, 68.88 327 ⇓P P 23 33 18.0 +0.6
baz=69,SNR=20
V24A Rampart Ranch, 68.89 328 ⇑P P 23 33 17.6 0.0
baz=69,SNR=24
U25A Circle Dot Ran 69.02 329 ⇓P P 23 33 18.4 +0.2
baz=69,SNR=27
Y20A Horse Springs, 69.05 325 ⇓P P 23 33 19.5 +0.9
baz=69,SNR=27
X21A Alamocita Cree 69.16 325 ⇑P P 23 33 20.3 +1.0
baz=69,SNR=43
W22A Albuquerque 69.17 326 ⇓P P 23 33 20.3 +1.1
baz=69,SNR=10
TUC Tucson 69.17 322 eP P 23 33 19.6 +0.4
TUC pmax pmax
comp=Z,10.0nm,1.2s
TUC Tucson 69.17 322 eP P 23 33 19.6 +0.4
comp=Z,10nm,1.2s
R29A Marienthal 69.22 332 ⇑P P 23 33 19.3 0.0
baz=70,SNR=9.3
T26A Comanche Natio 69.27 330 ⇓P P 23 33 20.1 +0.4
baz=70,SNR=24
SCIA State Center 69.33 340 eP P 23 33 19.5 -0.2
comp=Z,57nm,1.0s
V23A Ortiz Mt. (NFS 69.36 327 ⇑P P 23 33 21.3 +0.9
baz=70,SNR=14
S27A Las Animas 69.37 331 ⇑P P 23 33 20.1 -0.2
baz=70
JFWS Jewell Farm 69.37 342 eP P 23 33 19.5 -0.5
JFWS pmax pmax
comp=Z,45nm,0.6s
JFWS Jewell Farm 69.37 342 eP P 23 33 19.5 -0.5
comp=Z,45nm,0.6s
R28A Tribune 69.43 332 ⇓P P 23 33 20.5 -0.2
baz=70,SNR=11
U24A Moreno Valley 69.44 328 ⇓P P 23 33 21.6 +0.7
baz=70
S26A Kim 69.58 330 ⇓P P 23 33 22.2 +0.6
baz=70,SNR=49
W21A San Fidel 69.60 326 ⇑P P 23 33 22.8 +0.8
baz=70,SNR=5.5
X20A Quemado 69.60 325 ⇑P P 23 33 23.0 +1.0
baz=70,SNR=9.9
T25A Trinidad 69.61 329 ⇓P P 23 33 22.6 +0.6
baz=70,SNR=22
R27A Eads 69.82 331 ⇑P P 23 33 22.9 -0.2
baz=70
U23A El Rito 69.82 328 ⇑P P 23 33 23.9 +0.6
baz=70,SNR=16
V22A San Miguel Ran 69.85 327 ⇑P P 23 33 24.7 +1.2
baz=70,SNR=33
T24A Torres, Weston 69.86 329 ⇑P P 23 33 24.3 +0.8
baz=70,SNR=20
Q28A Sharon Springs 70.04 332 ⇑P P 23 33 24.5 +0.1

baz=70,SNR=6.0
S25A Robets Cordova 70.05 330 ⇑P P 23 33 25.1 +0.6
baz=70,SNR=36
W20A Ramah 70.05 325 ⇓P P 23 33 25.5 +0.8
baz=70,SNR=17
R26A Arlington 70.12 331 ⇑P P 23 33 25.2 +0.3
baz=70,SNR=32
U22A Llaves 70.19 327 ⇓P P 23 33 26.4 +0.9
baz=70,SNR=5.9
T23A Casias Ranch, 70.31 328 ⇓P P 23 33 26.8 +0.5
baz=71,SNR=5.5
KSCO Kaye Shedlock' 70.34 332 ⇑P P 23 33 26.7 +0.4
baz=71,SNR=12
X18A Snowflake 70.37 324 ⇓P P 23 33 27.4 +0.8
baz=71,SNR=7.7
R25A Fountain Ranch 70.37 330 ⇑P P 23 33 26.7 +0.2
baz=71,SNR=15
S24A Houchin Ranch, 70.40 329 ⇑P P 23 33 27.7 +0.9
baz=71,SNR=31
P28A Saint Francis 70.44 333 ⇓P P 23 33 26.9 +0.1
baz=71
V20A Brimhall 70.55 326 ⇑P P 23 33 28.2 +0.5
baz=71,SNR=13
BGNE Belgrade 70.58 336 ⇑P P 23 33 27.4 -0.1
baz=71,SNR=14
SDCO Great Sand Dun 70.62 329 eP P 23 33 28.5 +0.4
comp=Z,35nm,1.2s
SDCO ePcP PcP 23 33 48.4 -0.1
U21A Nageezi 70.63 327 ⇑P P 23 33 28.9 +0.7
baz=71,SNR=28
Q26A Hugo 70.66 331 ⇑P P 23 33 28.6 +0.4
baz=71
W18A Petrified Fore 70.70 324 ⇓P P 23 33 29.3 +0.7
baz=71,SNR=15
T22A Edith 70.71 328 ⇓P P 23 33 29.6 +0.9
baz=71,SNR=27
P27A Ficken Ranch, 70.78 332 ⇓P P 23 33 29.2 +0.4
baz=71
N30A Hueftle Ranch, 70.80 334 ⇑P P 23 33 29.1 +0.2
baz=71
R24A Sanders Place, 70.82 330 ⇓P P 23 33 29.9 +0.6
baz=71,SNR=22
S23A Nye Farm, Mont 70.82 329 ⇓P P 23 33 30.1 +0.8
baz=71
Q25A Bedland, Calha 70.98 331 ⇓P P 23 33 30.1 -0.1
baz=71,SNR=6.7
T21A Navajo Lake 71.01 327 ⇓P P 23 33 31.0 +0.6
baz=71,SNR=13
N29A Votaw Ranch, W 71.03 334 ⇓P P 23 33 30.5 +0.2
baz=71
U20A Newcomb 71.03 326 ⇓P P 23 33 31.0 +0.5
baz=71,SNR=20
X16A Lo Mia Camp, P 71.10 323 ⇓P P 23 33 32.0 +1.0
baz=71,SNR=33
P26A Davis Ranch, A 71.11 332 ⇓P P 23 33 31.4 +0.5
baz=71,SNR=8.2
R23A Moffat 71.13 329 ⇑P P 23 33 32.0 +0.7
baz=71,SNR=24
Z14A Wintersburg 71.18 321 ⇑P P 23 33 31.9 +0.6
baz=71
113A Mohawk Valley, 71.23 320 ⇑P P 23 33 32.2 +0.6
baz=72,SNR=14
S22A 4UR Ranch, Cre 71.25 328 ⇑P P 23 33 32.5 +0.5
baz=72,SNR=15
O27A Beecher Island 71.26 333 ⇓P P 23 33 32.5 +0.7
baz=72,SNR=5.2
N28A Pribbeno Ranch 71.28 333 ⇑P P 23 33 32.1 +0.2
baz=72
Q24A Divide 71.43 330 ⇓P P 23 33 33.5 +0.4
baz=72,SNR=22
P25A Willow Gulch B 71.44 331 ⇑P P 23 33 33.7 +0.8
baz=72,SNR=21
M29A Burnside Ranch 71.58 334 ⇓P P 23 33 34.0 +0.4
baz=72
R22A Saguache, Gunn 71.60 328 ⇑P P 23 33 34.8 +0.7
baz=72,SNR=9.1
Y14A Wickenburg 71.63 321 ⇑P P 23 33 34.7 +0.7
baz=72,SNR=18
S21A Coal Bank Pass 71.66 327 ⇑P P 23 33 35.1 +0.6
baz=72,SNR=16
O26A Horse Wrangler 71.66 332 ⇓P P 23 33 34.7 +0.5
baz=72
Q23A Hartsel 71.70 329 ⇑P P 23 33 35.2 +0.5
baz=72
OGNE Ogallala 71.70 333 eP P 23 33 34.0 -0.3
comp=Z,9.2nm,0.8s
OGNE Ogallala 71.70 333 ⇓P P 23 33 34.7 +0.3
baz=72,SNR=8.1
P24A Kohler Place, 71.77 330 ⇑P P 23 33 35.7 +0.8
baz=72
N27A Anderson Farm, 71.80 333 ⇓P P 23 33 35.4 +0.4
baz=72
M28A Bar X Bar Ranc 71.81 334 ⇑P P 23 33 35.7 +0.6
baz=72
WUAZ Wupatki 71.88 324 eP P 23 33 36.7 +1.1
comp=Z,50nm,0.9s
WUAZ Wupatki 71.88 324 ⇓P P 23 33 36.8 +1.1
baz=72,SNR=39
O25A Wiggins 71.91 331 ⇓P P 23 33 36.6 +0.9
baz=72,SNR=9.3
COWI Conover 72.05 344 eP P 23 33 35.9 -0.4
comp=Z,41nm,1.3s
GLA Glamis 72.06 320 eP P 23 33 37.5 +0.8
GLA pmax pmax
comp=Z,18nm,0.8s
GLA Glamis 72.06 320 eP P 23 33 37.5 +0.8
comp=Z,18nm,0.8s
GLA Glamis 72.06 320 ⇓P P 23 33 37.4 +0.7
baz=72,SNR=6.9
S20A Disappointment 72.07 327 ⇓P P 23 33 38.0 +1.2
baz=72,SNR=22
ECSD EROS Data Cent 72.07 338 eP P 23 33 35.8 -0.6
comp=Z,45nm,1.2s
P23A Jefferson 72.08 330 ⇓P P 23 33 37.9 +0.9
baz=72,SNR=12
R21A Cimarron 72.09 328 ⇓P P 23 33 37.8 +0.8
baz=72,SNR=18
N26A Koester Ranch, 72.11 332 ⇓P P 23 33 37.4 +0.6
baz=72
Q22A Crested Butte, 72.17 329 ⇑P P 23 33 38.3 +0.8
baz=72,SNR=7.3
SPMN St. Paul 72.22 342 ⇑P P 23 33 36.5 -0.7
baz=73
ISCO Idaho Springs 72.32 330 eP P 23 33 38.2 -0.1
ISCO e 23 33 56.2
ISCO pmax pmax
comp=Z,30nm,0.6s
ISCO Idaho Springs 72.32 330 eP P 23 33 38.2 -0.1
comp=Z,30nm,0.6s
ISCO ePcP PcP 23 33 56.2 +0.4
O24A Longmont 72.33 331 ⇑P P 23 33 38.8 +0.5
baz=73
M27A Reverse DX Ran 72.34 333 ⇑P P 23 33 38.9 +0.7
baz=73
R20A Redvale 72.36 327 ⇑P P 23 33 39.6 +1.1
baz=73,SNR=19
Y12C Blythe 72.38 320 ⇑P P 23 33 39.3 +0.9
baz=73,SNR=18
PV01 Paradox Valley 72.41 327 eP P 23 33 39.7 +0.8
SMCO Snowmass 72.45 329 eP P 23 33 40.3 +1.0
comp=Z,28nm,0.9s
N25A Grover 72.46 332 ⇓P P 23 33 40.0 +1.0
baz=73
Q21A Lamborn Mesa, 72.47 328 ⇓P P 23 33 39.8 +0.7
baz=73
PDMCI Parker Dam,Lak 72.54 321 ⇓P P 23 33 40.1 +0.7
baz=73
DVTC Desert V Tower 72.55 319 ⇓P P 23 33 40.3 +0.7
baz=73,SNR=9.1
SWSC Sam W. Stewart 72.56 319 ⇓P P 23 33 40.2 +0.7
baz=73,SNR=7.6
M26A McRoberts Ranc 72.60 333 ⇓P P 23 33 40.5 +0.7
baz=73
P22A Eagle 72.68 329 ⇓P P 23 33 41.2 +0.8
baz=73,SNR=15
L27A T5 Ranch, Ells 72.77 334 ⇑P P 23 33 41.4 +0.6
baz=73
O23A Lake Granby, G 72.79 330 ⇓P P 23 33 41.9 +0.8
baz=73,SNR=18
S18A Hurst Farm, Bl 72.79 326 ⇑P P 23 33 42.1 +1.0
baz=73,SNR=82
N24A Carr 72.82 331 ⇓P P 23 33 42.1 +1.0
baz=73,SNR=5.3
PV10 Paradox Valley 72.83 327 eP P 23 33 41.7 +0.3
BC3 Big Chuckawall 72.86 320 ⇓P P 23 33 42.2 +0.8
baz=73,SNR=29
MONP Monument Peak 72.90 319 ⇑P P 23 33 42.6 +0.8
baz=73,SNR=16

BAR **Barrett** 72.91 318 *e*P P 23 33 42.4 +0.8
comp=Z,42nm,1.1s baz=78,SNR=41
Q20A **Ridgley Place,** 72.91 328 ⇑P P 23 33 42.0 +0.3
baz=73,SNR=6.1
P21A **Newcastle** 72.95 329 ⇓P P 23 33 43.1 +1.1
baz=73,SNR=29
M25A **Palm-Egli Farm** 72.96 332 ⇓P P 23 33 42.5 +0.6
baz=73
W13A **Hualapai Mount** 72.97 322 ⇑P P 23 33 43.3 +1.0
baz=73,SNR=19
IRM **Iron Mountain** 73.03 320 ⇓P P 23 33 43.1 +0.7
baz=73,SNR=24
O22A **Kremmling** 73.04 330 ⇑P P 23 33 43.0 +0.4
baz=73,SNR=21
L26A **Underwood Farm** 73.05 333 ⇑P P 23 33 43.2 +0.8
baz=73
U15A **North Rim** 73.06 324 ⇑P P 23 33 44.0 +1.3
baz=73,SNR=46
NEE2 **Needles Airpor** 73.15 321 ⇓P P 23 33 43.7 +0.6
baz=73
K27A **Flueckinger Fa** 73.26 334 ⇑P P 23 33 44.6 +1.0
baz=74
M24A **Cheyenne** 73.32 332 ⇓P P 23 33 45.0 +0.9
baz=74,SNR=27
109C **Camp Elliot, M** 73.32 318 ⇓P P 23 33 44.7 +0.7
baz=74
N23A **Red Feather La** 73.35 331 ⇓P P 23 33 45.0 +0.6
baz=74,SNR=22
P20A **De Beque** 73.39 328 ⇑P P 23 33 45.4 +0.9
baz=74
BELC **Belle Mtn. Jos** 73.42 320 ⇑P P 23 33 45.5 +0.7
baz=74,SNR=13
PFO **Pinyon Flat Ob** 73.42 319 P P 23 33 45.0 +0.2
comp=Z,120nm,1.2s,SNR=12
PFO **Pinyon Flat Ob** 73.42 319 *e*P P 23 33 44.7 0.0
comp=Z,28nm,1.2s
PFO **Pinyon Flat Ob** 73.42 319 P P 23 33 45.7 +0.9
comp=Z,17nm,1.0s,baz=124,slow=4.2,SNR=25
PFO **Pinyon Flat Ob** 73.42 319 ⇑P P 23 33 45.5 +0.8
baz=74,SNR=17
PHWY **Pilot Hill** 73.46 331 *e*P P 23 33 44.9 -0.2
comp=Z,30nm,1.1s
PHWY *e*PcP PcP 23 34 00.8 +0.2
BRSD **Miller** 73.51 337 ⇓P P 23 33 44.5 -0.3
baz=74
N22A **Wattenberg Ran** 73.51 330 ⇑P P 23 33 46.2 +0.9
baz=74,SNR=16
O21A **Pagoda** 73.51 329 ⇓P P 23 33 46.4 +1.1
baz=74
L25A **Engebretsen Ra** 73.52 333 ⇓P P 23 33 46.1 +1.0
baz=74
K26A **Motz Farm, Whi** 73.64 334 ⇓P P 23 33 46.5 +0.7
baz=74
M23A **Laramie** 73.71 331 ⇓P P 23 33 47.0 +0.6
baz=74,SNR=28
P19A **Cripple Cowboy** 73.78 328 ⇓P P 23 33 47.8 +0.9
baz=74,SNR=84
O20A **White River Ci** 73.81 329 ⇓P P 23 33 47.8 +0.8
baz=74,SNR=16
L24A **Wheatland** 73.83 332 ⇓P P 23 33 47.7 +0.7
baz=74
MURC **Murrieta** 73.86 319 ⇓P P 23 33 48.0 +0.7
baz=74,SNR=7.7
TBI **Tubuai** 73.89 251 *e*P P 23 33 49.2 +1.5
comp=Z,210nm,1.4s
TBI *e*S S 23 43 11.2 +0.7
comp=Z,130nm,28.5s
TBI *e*LR LR 23 56 34.5
comp=Z,86nm,44.8s
N21A **Black Mountain** 73.96 330 ⇓P P 23 33 48.9 +1.0
baz=74,SNR=6.1
SBA **Scott Base** 73.98 190 *e*P P 23 33 48.5 +1.3
SBA pmax pmax
comp=Z,38nm,1.2s
SBA **Scott Base** 73.98 190 *e*P P 23 33 48.5 +1.3
comp=Z,38nm,1.2s
PMAR **Madeira** 74.05 43 *e*P P 23 33 45.0 -3.5
comp=Z,119nm,1.6s
M22A **Cedar Creek Ra** 74.05 331 ⇓P P 23 33 49.3 +0.8
baz=74
SRU **San Rafael** 74.14 327 ⇑P P 23 33 49.6 +0.7
baz=74
SYO **Syowa Base** 74.15 159 ⇑/P P 23 33 47.4 -0.9
BBRC **Big Bear Solar** 74.15 319 ⇑P P 23 33 50.4 +1.2
baz=74
HEC **Hector,Ludlow** 74.19 320 ⇑P P 23 33 50.3 +1.1
baz=74,SNR=43
L23A **Garrett** 74.23 332 ⇓P P 23 33 49.7 +0.3
baz=74,SNR=8.3
SCI **San Clemente I** 74.27 317 ⇓P P 23 33 50.5 +0.9
baz=74
Q16A **Castle Valley** 74.32 326 ⇓P P 23 33 50.8 +0.8
baz=75,SNR=14
K24A **Anderson Ranch** 74.34 332 ⇓P P 23 33 51.1 +1.1
baz=75
EYMN **Ely** 74.36 344 *e*P P 23 33 48.9 -0.9
comp=Z,25nm,1.0s
O19A **Miners Draw (B** 74.36 328 ⇑P P 23 33 51.0 +0.8
baz=75
N20A **Spence Gulch,** 74.37 329 ⇑P P 23 33 50.8 +0.5
baz=75,SNR=23
TUQ **Turquoise Moun** 74.38 321 ⇑P P 23 33 51.2 +0.9
baz=75,SNR=19
P18A **Preston Nutter** 74.39 327 ⇑P P 23 33 51.3 +0.8
baz=75,SNR=36
CCUT **Cedar City** 74.46 324 *e*P P 23 33 51.6 +0.8
comp=Z,44nm,0.9s
CIS **Catalina Islan** 74.47 318 ⇓P P 23 33 51.5 +0.7
baz=75
L22A **Ellis Ranch, M** 74.48 331 ⇓P P 23 33 51.8 +0.9
baz=75,SNR=7.1
MSU **Marysvale** 74.54 325 *e*P P 23 33 52.3 +1.0
MSU **Marysvale** 74.54 325 *e*P P 23 33 52.3 +1.0
MVU **Marysvale** 74.55 325 *e*P P 23 33 52.5 +1.1
comp=Z,35nm,0.9s
M21A **Separation Pea** 74.56 330 ⇓P P 23 33 51.9 +0.5
baz=75,SNR=27
BFSC **Mount Baldy Ra** 74.58 319 ⇓P P 23 33 52.0 +0.5
baz=75,SNR=21
FMP **Fort Macarthur** 74.61 318 ⇑P P 23 33 52.1 +0.6
baz=75
RRX **Edison Barstow** 74.63 320 ⇓P P 23 33 52.7 +1.1
baz=75
ARUT **Antelope Range** 74.68 324 *e*P P 23 33 53.2 +1.2
ARUT **Antelope Range** 74.68 324 *e*P P 23 33 53.2 +1.2
J24A **Dixon Ranch, L** 74.77 333 ⇑P P 23 33 53.5 +1.1
baz=75,SNR=12
GSC **Goldstone** 74.80 320 *e*P P 23 33 53.8 +1.1
GSC pmax pmax
comp=Z,59nm,1.4s
GSC **Goldstone** 74.80 320 *e*P P 23 33 53.8 +1.1
comp=Z,59nm,1.4s
GSC **Goldstone** 74.80 320 ⇓P P 23 33 53.7 +1.0
baz=75,SNR=21
MWC **Mount Wilson** 74.81 319 *e*P P 23 33 53.6 +0.7
MWC pmax pmax
comp=Z,37nm,1.0s
MWC **Mount Wilson** 74.81 319 *e*P P 23 33 53.6 +0.7
comp=Z,38nm,1.0s
L21A **Rawlins** 74.85 330 ⇑P P 23 33 53.4 +0.4
baz=75,SNR=48
M20A **Sweetwater, Wa** 74.85 330 ⇓P P 23 33 53.6 +0.6
baz=75,SNR=11
PASC **Pasadena Art C** 74.85 318 *e*P P 23 33 53.4 +0.4
comp=Z,38nm,1.1s
SHOC **Shoshone** 74.91 321 ⇑P P 23 33 54.0 +0.7
baz=75
VNDA **Vanda** 74.99 190 *e*P P 23 33 54.2 +1.1
comp=Z,19nm,1.0s
VNDA **Vanda** 74.99 190 P P 23 33 54.2 +1.1
comp=Z,12nm,0.9s,baz=132,slow=5.0,SNR=33
DECC **Green Verdugo** 74.99 318 ⇓P P 23 33 54.6 +0.8
baz=75
K22A **Casper** 75.02 331 ⇑P P 23 33 54.4 +0.5
baz=75,SNR=16
RSSD **Black Hills** 75.17 334 *e*P P 23 33 55.2 +0.4
RSSD pmax pmax
comp=Z,21nm,0.9s
RSSD **Black Hills** 75.17 334 *e*P P 23 33 55.2 +0.4
comp=Z,21nm,0.9s
I24A **Kuemmerle Ranc** 75.19 333 ⇓P P 23 33 55.4 +0.6
baz=76,SNR=7.2
EDW2 **Edwards Air Fo** 75.22 319 ⇑P P 23 33 55.4 +0.3
baz=76,SNR=9.7
M19A **Rock Springs** 75.31 329 ⇓P P 23 33 55.7 0.0
baz=76,SNR=6.5
L20A **Wamsutter** 75.33 330 ⇓P P 23 33 56.3 +0.6
baz=76,SNR=15

PMOR **Pomariorio Ree** 75.33 260 *e*P P 23 33 57.1 +1.0
comp=Z,114nm,1.2s
BLG **Laguna Peak** 75.35 318 ⇑P P 23 33 56.4 +0.7
baz=76
MPU **Maple Canyon** 75.38 327 *e*P P 23 33 55.7 -0.4
comp=Z,41nm,1.2s
LRMC **Laurel Mountai** 75.45 320 ⇓P P 23 33 57.1 +0.6
baz=76,SNR=19
OSI **Osito Adit** 75.48 319 ⇑P P 23 33 57.2 +0.6
baz=76
DAU **Daniels Canyon** 75.49 327 *e*P P 23 33 57.8 +1.0
DAU **Daniels Canyon** 75.49 327 *e*P P 23 33 57.8 +1.0
BSC **Santa Cruz Isl** 75.62 318 ⇓P P 23 33 57.8 +0.5
baz=76,SNR=9.4
FURC **Furnace Creek,** 75.65 321 ⇑P P 23 33 58.4 +1.1
baz=76,SNR=31
MPMC **Manual Prospec** 75.73 320 ⇑P P 23 33 58.6 +0.4
baz=76,SNR=28
JLU **Jordanelle** 75.73 327 *e*P P 23 33 58.5 +0.3
comp=Z,54nm,1.3s
JLU *e*PcP PcP 23 34 10.3 -0.1
TIAR **Tiarei** 75.74 257 *e*P P 23 33 59.8 +1.3
comp=Z,45nm,1.0s
K20A **Yellowstone Ra** 75.84 330 ⇓P P 23 33 58.8 +0.2
baz=76,SNR=25
L19A **Farson** 75.87 329 ⇓P P 23 33 59.5 +0.7
baz=76,SNR=18
ARVC **Arvin** 75.89 319 ⇓P P 23 33 59.7 +0.9
baz=76
H24A **Dirks Ranch, A** 75.89 334 ⇑P P 23 33 58.7 0.0
baz=76,SNR=28
PAE **Paea** 75.91 257 *e*P P 23 34 00.3 +0.9
comp=Z,7.1nm,0.8s
PPT2 **Papeete2** 75.93 257 *e*P P 23 34 00.5 +0.9
comp=Z,63nm,1.2s
PPT2 *e*S S 23 43 33.1 -0.5
comp=Z,174nm,27.2s
PPT2 *e*LR LR 23 57 35.6
comp=Z,411nm,35.2s
PPT **Papeete** 75.94 257 LR LR 00 01 04.4
comp=Z,52nm,20.2s,baz=353,slow=31
SBC **Santa Barbara** 75.97 318 ⇓P P 23 33 59.9 +0.7
baz=76
J21A **Lysite** 75.98 331 ⇑P P 23 33 59.9 +0.5
baz=76,SNR=20
I22A **9 Mile Ranch,** 76.00 332 ⇓P P 23 33 59.7 +0.3
baz=76,SNR=30
M17A **Scullys Gap (B** 76.01 328 ⇓P P 23 33 59.7 +0.1
baz=76,SNR=8.8
ISA **Isabella** 76.04 319 *e*P P 23 34 00.9 +1.1
ISA pmax pmax
comp=Z,39nm,1.0s
ISA **Isabella** 76.04 319 *e*P P 23 34 00.9 +1.1
comp=Z,39nm,1.0s
ISA **Isabella** 76.04 319 ⇓P P 23 34 00.7 +1.0
baz=76,SNR=23
L18A **Fontenelle, Gr** 76.05 329 ⇓P P 23 34 00.4 +0.5
baz=76,SNR=45
H23A **Clabaugh Cattl** 76.09 333 ⇑P P 23 34 00.1 +0.2
baz=76
DUG **Dugway** 76.12 326 *e*P P 23 34 01.1 +0.9
DUG pmax pmax
comp=Z,33nm,1.1s
DUG **Dugway** 76.12 326 *e*P P 23 34 01.1 +0.9
comp=Z,33nm,1.1s
DUG **Dugway** 76.12 326 ⇓P P 23 34 01.1 +0.9
baz=76,SNR=31
K19A **Absolon Red Bu** 76.20 330 ⇓P P 23 34 00.7 +0.1
baz=76,SNR=23
R11A **Troy Canyon, C** 76.25 323 ⇑P P 23 34 02.0 +1.0
baz=76,SNR=33
J20A **Shoshoni** 76.27 331 ⇓P P 23 34 01.8 +0.8
baz=77,SNR=16
I21A **Big Trails, Te** 76.28 332 ⇑P P 23 34 01.2 +0.1
baz=77,SNR=52
GRAC **Grapevine Rang** 76.31 321 ⇓P P 23 34 02.3 +1.1
baz=77
G24A **Alzada** 76.32 334 ⇓P P 23 34 01.5 +0.3
baz=77
CWC **Cottonwood Cre** 76.34 320 ⇑P P 23 34 02.5 +1.0
baz=77
PKM **Peak Mountain** 76.34 318 ⇓P P 23 34 02.4 +0.8
baz=77,SNR=34
BW06 **Boulder Array** 76.48 330 *e*P P 23 34 01.2 -1.1
comp=Z,19nm,1.2s
PDAR **Pinedale Array** 76.48 330 P P 23 34 02.2 -0.1
PDAR **Pinedale Array** 76.48 330 P P 23 34 02.2 -0.1
comp=Z,6.7nm,0.8s,baz=141,slow=7.3,SNR=29
H22A **Clearmont** 76.51 333 ⇓P P 23 34 02.4 +0.1
baz=77,SNR=7.1
VES **Vestal, Richgr** 76.52 319 ⇓P P 23 34 02.9 +0.5
baz=77,SNR=11
SUR **Sutherland** 76.56 120 P P 23 34 05.8 +2.7
comp=Z,190nm,1.5s,SNR=6.4
G23A **Biddle** 76.61 334 ⇑P P 23 34 03.0 +0.3
baz=77,SNR=25
J19A **Crowheart** 76.64 330 ⇑P P 23 34 03.6 +0.5
baz=77,SNR=40
MDND **Maddock** 76.68 339 ⇓P P 23 34 03.4 +0.4
baz=77,SNR=10
SMMC **Simmler** 76.72 318 ⇑P P 23 34 04.7 +1.1
baz=77,SNR=7.4
F24A **Ekalaka** 76.75 335 ⇓P P 23 34 03.8 +0.2
baz=77
I20A **Worland** 76.76 331 ⇓P P 23 34 04.0 +0.3
baz=77,SNR=20
H21A **Big Horn, Sher** 76.83 332 ⇓P P 23 34 03.9 -0.2
baz=77,SNR=11
TIN **Tinemaha** 76.84 321 ⇓P P 23 34 05.3 +1.0
baz=77,SNR=5.5
RCTC **Rector, Farmer** 76.93 320 ⇑P P 23 34 04.8 +0.1
baz=77
G22A **Birney** 76.99 333 ⇓P P 23 34 04.8 -0.1
baz=77,SNR=6.7
TOA0 **Torodi Ar. Sit** 77.02 69 *e*P P 23 34 06.0 +0.4
TORD **Torodi Ar. Bea** 77.02 69 P P 23 34 06.0 +0.4
TORD **Torodi Ar. Bea** 77.02 69 P P 23 34 06.0 +0.4
comp=Z,32nm,0.6s,baz=260,slow=5.9,SNR=425
F23A **Volborg** 77.04 334 ⇓P P 23 34 05.4 +0.2
baz=77,SNR=25
H20A **Greybull** 77.13 332 ⇑P P 23 34 05.8 +0.1
baz=77,SNR=32
AHID **Auburn Hatcher** 77.20 329 *e*P P 23 34 06.2 -0.1
comp=Z,96nm,1.3s
I19A **Meeteetse** 77.21 331 ⇓P P 23 34 07.0 +0.6
baz=78,SNR=31
HVU **Hansel Valley** 77.28 327 *e*P P 23 34 07.0 +0.3
HVU pmax pmax
comp=Z,27nm,1.0s
HVU **Hansel Valley** 77.28 327 *e*P P 23 34 07.0 +0.3
comp=Z,27nm,1.0s
E24A **Baker** 77.29 335 ⇑P P 23 34 07.3 +0.8
baz=78,SNR=13
I18A **Diamond G Ranc** 77.33 330 ⇑P P 23 34 07.7 +0.7
baz=78,SNR=28
G21A **Lodge Grass** 77.38 333 ⇑P P 23 34 07.3 +0.2
baz=78,SNR=5.3
F22A **Rosebud** 77.43 333 ⇓P P 23 34 07.5 +0.2
baz=78,SNR=18
SNOW **Snow King Moun** 77.58 329 *e*P P 23 34 07.5 -0.9
comp=Z,34nm,0.9s
MLAC **Mammoth Lakes** 77.59 321 ⇑P P 23 34 09.6 +1.0
baz=78
LOHW **Long Hollow** 77.62 330 *e*P P 23 34 09.2 +0.6
comp=Z,18nm,0.8s
E23A **Ismay** 77.63 334 ⇓P P 23 34 08.3 -0.1
baz=78,SNR=11
ULM **Lac du Bonnet** 77.65 342 P P 23 34 07.7 -0.6
ULM **Lac du Bonnet** 77.65 342 P P 23 34 07.7 -0.6
comp=Z,36nm,0.7s,baz=152,slow=6.8,SNR=22
ULM LR LR 00 11 58.4
comp=Z,72nm,18.9s,baz=53,slow=38
TPAW **Teton Pass** 77.69 329 *e*P P 23 34 09.7 +0.6
comp=Z,32nm,0.9s
H19A **Powell** 77.71 331 ⇓P P 23 34 09.3 +0.3
baz=78,SNR=15
NV11 **Mina Array Sit** 77.75 322 *e*P P 23 34 09.0 -0.3
RRI2 **Red Ridge** 77.75 329 *e*P P 23 34 10.1 +0.6
comp=Z,61nm,1.1s
D24A **Glendive** 77.76 335 ⇓P P 23 34 09.7 +0.6
baz=78,SNR=8.6
ELK **Elko** 77.78 325 *e*P P 23 34 10.2 +0.5
comp=Z,22nm,1.0s
ELK **Elko** 77.78 325 P P 23 34 10.1 +0.5
comp=Z,17nm,0.9s,baz=141,slow=5.8,SNR=34
MOOW **Moose Ponds** 77.79 330 *e*P P 23 34 10.1 +0.5
comp=Z,85nm,2.0s
G20A **Bridger** 77.81 332 ⇓P P 23 34 09.5 0.0

F21A **Absaloka Mine,** 77.82 333 ⇑P P 23 34 10.0 +0.5
baz=78
NVAR **Mina Array Bea** 77.83 322 P P 23 34 10.5 +0.6
NVAR **Mina Array Bea** 77.83 322 P P 23 34 10.5 +0.6
comp=Z,7.0nm,0.9s,baz=151,slow=6.3,SNR=42
E22A **Miles City** 77.84 334 ⇑P P 23 34 09.5 -0.1
baz=78,SNR=5.4
I17A **Pilgrim Ck.** 77.84 330 ⇓P P 23 34 11.0 +1.1
baz=78,SNR=8.7
DCID1 **Drake Creek** 77.88 329 *e*P P 23 34 11.3 +1.3
comp=Z,51nm,1.2s
IMW **Indian Meadow** 77.99 330 *e*P P 23 34 11.6 +0.8
comp=Z,44nm,1.1s
H18A **Shoshone NF, C** 78.02 331 ⇓P P 23 34 11.1 +0.3
baz=78,SNR=29
SCHQ **Schefferville** 78.11 1 *e*P P 23 34 10.9 +0.1
SCHQ **Schefferville** 78.11 1 P P 23 34 10.8 0.0
comp=Z,6.4nm,0.8s,baz=172,slow=2.4,SNR=8.8
C24A **Savage** 78.14 336 ⇓P P 23 34 11.9 +0.7
baz=78,SNR=12
D23A **Lindsay** 78.15 335 ⇓P P 23 34 12.2 +1.0
baz=78,SNR=10
RLMT **Red Lodge** 78.19 331 *e*P P 23 34 12.2 +0.5
comp=Z,52nm,1.3s
H17A **Grant Village** 78.21 330 ⇑P P 23 34 13.4 +1.4
baz=78
I16A **Newdale** 78.23 329 ⇑P P 23 34 12.7 +0.7
baz=78,SNR=15
F20A **Billings** 78.24 332 ⇑P P 23 34 12.1 +0.3
baz=78
TSUM **Tsumeb** 78.37 106 *e*P P 23 34 14.8 +1.4
comp=Z,2.5nm,1.1s
E21A **Keefer Ranch,** 78.38 333 ⇑P P 23 34 13.0 +0.4
baz=79,SNR=16
G18A **Lazy EL Ranch,** 78.47 331 ⇓P P 23 34 13.6 +0.3
baz=79,SNR=13
D22A **Cohagen** 78.51 334 ⇑P P 23 34 14.0 +0.7
baz=79,SNR=20
YMR **Madison River** 78.60 330 *e*P P 23 34 15.8 +1.8
comp=Z,76nm,1.1s
BMN **Battle Mountai** 78.62 324 *e*P P 23 34 14.4 +0.2
BMN pmax pmax
comp=Z,14nm,1.4s
BMN **Battle Mountai** 78.62 324 *e*P P 23 34 14.4 +0.2
comp=Z,14nm,1.4s
F19A **Roth Farm, Mol** 78.62 332 ⇑P P 23 34 14.4 +0.4
baz=79,SNR=42
C23A **Lambert** 78.66 335 ⇓P P 23 34 14.5 +0.5
baz=79,SNR=14
H16A **Russell Place,** 78.75 330 ⇑P P 23 34 16.0 +1.2
baz=79,SNR=19
CMB **Columbia Colle** 78.77 320 *e*P P 23 34 15.2 +0.3
CMB pmax pmax
comp=Z,24nm,1.5s
CMB **Columbia Colle** 78.77 320 *e*P P 23 34 15.2 +0.3
comp=Z,24nm,1.5s
D21A **La Casta Ranch** 78.77 334 ⇓P P 23 34 15.4 +0.7
baz=79
E20A **Meyer Farm, Mu** 78.79 333 ⇑P P 23 34 15.4 +0.6
baz=79,SNR=27
I15A **Monteview** 78.80 329 ⇓P P 23 34 16.3 +1.3
baz=79,SNR=13
DGMT **Dagmar** 78.83 336 *e*P P 23 34 15.9 +0.9
comp=Z,105nm,1.1s
DGMT **Dagmar** 78.83 336 ⇓P P 23 34 15.7 +0.7
baz=79,SNR=7.5
C22A **Vida** 78.88 335 ⇑P P 23 34 15.5 +0.3
baz=79,SNR=6.9
GCMT **Greycliff** 78.89 332 *e*P P 23 34 16.3 +0.8
QLMT **Earthquake Lak** 78.93 330 *e*P P 23 34 17.5 +1.7
F18A **Big Timber** 78.99 332 ⇑P P 23 34 16.5 +0.4
baz=79,SNR=28
G17A **Pierce Place,** 79.00 331 ⇓P P 23 34 17.2 +1.1
baz=79
E19A **Rath Farm, Rou** 79.03 332 ⇑P P 23 34 16.6 +0.4
baz=79,SNR=71
B23A **Brockton** 79.13 336 ⇑P P 23 34 17.1 +0.5
baz=79,SNR=6.4
A24A **Westby** 79.14 337 ⇑P P 23 34 17.7 +1.0
baz=80
J13A **Cove Ranch, Pi** 79.17 327 ⇓P P 23 34 18.0 +0.9
baz=79,SNR=24
I14A **Mackay** 79.21 328 ⇑P P 23 34 18.6 +1.3
baz=80,SNR=31
WCN **Washoe City** 79.25 321 *e*P P 23 34 17.6 -0.1
WCN pmax pmax
comp=Z,11nm,1.1s
WCN **Washoe City** 79.25 321 *e*P P 23 34 17.6 -0.1
comp=Z,11nm,1.1s
D20A **Manuel Ranch,** 79.26 333 ⇓P P 23 34 17.6 +0.2
baz=80,SNR=17
H15A **Lima** 79.34 329 ⇓P P 23 34 19.2 +1.1
baz=80,SNR=7.7
B22A **Reddig Ranch S** 79.38 335 ⇓P P 23 34 18.4 +0.5
baz=80,SNR=11
HLID **Hailey** 79.41 327 *e*P P 23 34 19.5 +1.1
comp=Z,49nm,0.9s
HLID **Hailey** 79.41 327 ⇓P P 23 34 19.6 +1.2
baz=80,SNR=85
G16A **Moss Hill, Enn** 79.41 330 ⇓P P 23 34 18.9 +0.5
baz=80,SNR=13
F17A **Fitzpatrick Pl** 79.41 331 ⇓P P 23 34 19.2 +0.9
baz=80,SNR=33
C21A **Desert Coulee** 79.42 334 ⇓P P 23 34 18.4 +0.2
baz=80,SNR=19
A23A **Redstone** 79.49 336 ⇑P P 23 34 19.2 +0.7
baz=80
I13A **Wildhorse Cree** 79.52 328 ⇓P P 23 34 20.3 +1.2
baz=80,SNR=34
MCMT **McKenzie Canyo** 79.59 329 *e*P P 23 34 20.6 +1.2
E18A **Harlowton** 79.60 332 ⇓P P 23 34 19.7 +0.4
baz=80,SNR=13
D19A **Cripps Ranch,** 79.63 333 ⇑P P 23 34 19.5 +0.1
baz=80,SNR=8.0
BOZ **Bozeman (W)** 79.65 330 *e*P P 23 34 18.9 -0.8
BOZ pmax pmax
comp=Z,19nm,1.4s
BOZ **Bozeman (W)** 79.65 330 *e*P P 23 34 18.9 -0.8
comp=Z,19nm,1.4s
G15A **Dillon** 79.68 330 ⇑P P 23 34 20.4 +0.6
baz=80,SNR=26
H14A **Leadore** 79.68 329 ⇓P P 23 34 21.0 +1.1
baz=80,SNR=18
C20A **Veseth Ranch,** 79.70 334 ⇓P P 23 34 19.6 -0.1
baz=80,SNR=6.8
F16A **Kennard Place,** 79.75 330 ⇓P P 23 34 20.6 +0.5
baz=80
DLMT **Dillon** 79.88 330 *e*P P 23 34 20.8 -0.1
comp=Z,45nm,1.3s
B21A **Ellsworth Farm** 79.88 335 ⇑P P 23 34 21.1 +0.5
baz=80,SNR=12
A22A **Carney Farms,** 79.91 336 ⇓P P 23 34 21.4 +0.5
baz=80,SNR=22
E17A **Martinsdale** 79.93 331 ⇓P P 23 34 21.6 +0.5
baz=80,SNR=21
I12A **Atlanta** 79.93 327 ⇓P P 23 34 22.2 +0.9
baz=80,SNR=26
BEKR **Beckworth** 79.98 322 *e*P P 23 34 21.7 +0.1
comp=Z,19nm,1.3s
MFID **Camas Ranch** 80.01 327 *e*P P 23 34 22.4 +0.8
comp=Z,72nm,1.6s
MFID **Camas Ranch** 80.01 327 ⇓P P 23 34 22.3 +0.8
baz=80,SNR=13
D18A **Linhart Farms,** 80.04 332 ⇓P P 23 34 21.9 +0.3
baz=80,SNR=9.2
C19A **Slack Wire Ran** 80.15 333 ⇑P P 23 34 22.3 +0.2
baz=80,SNR=20
LRM **Limekiln Ridge** 80.16 330 *e*P P 23 34 23.2 +0.7
F15A **Butte** 80.19 330 ⇓P P 23 34 23.2 +0.6
baz=80,SNR=38
G14A **Jackson** 80.19 329 ⇑P P 23 34 23.3 +0.7
baz=80
E16A **East Helena** 80.35 331 ⇓P P 23 34 23.9 +0.6
baz=81,SNR=9.6
H12A **Diamond D Ranc** 80.35 328 ⇓P P 23 34 24.3 +0.8
baz=81,SNR=28
D17A **Six Diamond Ra** 80.39 332 ⇑P P 23 34 24.0 +0.5
baz=81,SNR=79
G13A **Cobalt** 80.45 329 ⇓P P 23 34 25.0 +1.1
baz=81,SNR=113
HRY **Holter Researc** 80.55 331 *e*P P 23 34 25.3 +0.9
F14A **Wisdom** 80.57 330 ⇑P P 23 34 25.7 +1.1
baz=81,SNR=18
A20A **Cobblestone Ra** 80.60 334 ⇑P P 23 34 24.9 +0.3
baz=81
EGMT **Eagleton** 80.67 333 *e*P P 23 34 25.0 +0.1
EGMT **Eagleton** 80.67 333 ⇓P P 23 34 24.9 0.0

baz=81,SNR=10
D16A **Dana Ranch, Ca** 80.67 331 ⇑P P P 23 34 26.0 +0.9
baz=81,SNR=72
B19A **Brinkman Farms** 80.67 334 ⇑P P P 23 34 25.0 +0.1
baz=81,SNR=33
E15A **Deer Lodge** 80.70 330 ⇑P P P 23 34 25.8 +0.6
baz=81,SNR=26
C17A **Wharram Farm,** 80.79 332 ⇓P P P 23 34 25.6 0.0
baz=81,SNR=9.9
A19A **Klindworth Far** 80.97 334 ⇑P P P 23 34 26.5 0.0
baz=81,SNR=11
B18A **Beardsley Farm** 80.97 333 ⇓P P P 23 34 26.8 +0.3
baz=81,SNR=23
G12A **Big Creek, Yel** 81.00 328 ⇑P P P 23 34 27.2 +0.3
baz=81,SNR=20
F13A **Darby** 81.01 329 ⇑P P P 23 34 27.7 +0.8
baz=81,SNR=71
E14A **Clinton** 81.08 330 ⇑P P P 23 34 28.2 +0.9
baz=81,SNR=11
D15A **Lincoln** 81.11 331 ⇑P P P 23 34 28.2 +0.8
baz=81,SNR=18
B17A **L&G Farms, Che** 81.32 333 ⇑P P P 23 34 28.2 -0.2
baz=82,SNR=11
CHMT **Chamberlain Mo** 81.34 330 *e*P P P 23 34 29.3 +0.5
C16A **Fuhringer Ranc** 81.34 332 ⇑P P P 23 34 28.7 +0.2
baz=82,SNR=18
A18A **Metzger Ranch,** 81.41 333 ⇓P P P 23 34 28.6 -0.2
baz=82,SNR=27
E13A **Victor** 81.42 330 ⇑P P P 23 34 29.9 +0.9
baz=82,SNR=40
F12A **Elk City** 81.42 328 ⇑P P P 23 34 29.4 +0.3
baz=82,SNR=20
BOSA **Boshof** 81.48 117 *e*P P P 23 34 30.5 +0.6
comp=Z,35nm,1.3s
BOSA **Boshof** 81.48 117 P P P 23 34 30.7 +0.8
comp=Z,11nm,0.8s,baz=257,slow=5.7,SNR=27
D14A **Greenough** 81.58 330 ⇑P P P 23 34 30.4 +0.5
baz=82,SNR=20
MSO **Missoula** 81.59 330 *e*P P P 23 34 30.8 +0.9
comp=Z,26nm,1.4s
MSO **Missoula** 81.59 330 ⇓P P P 23 34 30.8 +0.9
baz=82
SLMT **Seeley Lake** 81.70 330 *e*P P P 23 34 30.9 +0.4
C15A **Salmond Ranch,** 81.70 331 ⇓P P P 23 34 31.3 +0.8
baz=82,SNR=67
WDC **Whiskeytown Da** 81.70 321 *e*P P P 23 34 29.5 -1.0
WDC pmax pmax
comp=Z,13nm,0.8s
WDC **Whiskeytown Da** 81.70 321 *e*P P P 23 34 29.5 -1.0
comp=Z,13nm,0.8s
BMO **Blue Mountains** 81.78 327 *e*P P P 23 34 30.4 -0.5
comp=Z,43nm,1.3s
A17A **Triple J Farms** 81.78 333 ⇓P P P 23 34 30.8 0.0
baz=82,SNR=27
B16A **M & M Farms, S** 81.80 332 ⇑P P P 23 34 30.7 -0.2
baz=82,SNR=5.3
MAW **Mawson** 82.01 163 P P P 23 34 32.3 +0.6
MAW **Mawson** 82.01 163 P P P 23 34 32.3 +0.6
comp=Z,37nm,0.8s,baz=221,slow=6.1,SNR=33
MAW LR LR 00 07 58.9
comp=Z,62nm,21.7s,baz=341,slow=33
D13A **Huson** 82.03 330 ⇓P P P 23 34 32.8 +0.7
baz=82,SNR=61
B15A **Bradely Ranch,** 82.09 332 ⇓P P P 23 34 32.1 -0.4
baz=82,SNR=30
SWMT **Swartz Lake** 82.13 330 *e*P P P 23 34 33.2 +0.5
MDT **Midelt** 82.24 49 P P P 23 34 35.5 +1.9
MDT **Midelt** 82.24 49 P P P 23 34 35.5 +1.9
comp=Z,4.7nm,0.7s,baz=180,slow=3.7,SNR=9.0
YBMT **Yellow Bay** 82.39 331 *e*P P P 23 34 34.7 +0.6
JTMT **Jette** 82.43 330 *e*P P P 23 34 33.9 -0.4
comp=Z,18nm,0.8s
B14A **Marquette Ranc** 82.44 331 ⇑P P P 23 34 34.4 +0.1
baz=83
C13A **Hot Springs** 82.51 330 ⇓P P P 23 34 35.2 +0.6
baz=83,SNR=38
YBH **Yreka Blue Hor** 82.55 322 *e*P P P 23 34 33.5 -1.6
comp=Z,6.2nm,0.9s
YBH **Yreka Blue Hor** 82.55 322 P P P 23 34 33.8 -1.2
comp=Z,6.6nm,0.8s,baz=125,slow=2.0,SNR=12
BLMT **Blacktail Moun** 82.66 330 *e*P P P 23 34 36.1 +0.5
BSMT **Bassoo Peak** 82.74 330 P P P 23 34 36.6 +0.6
PCVE **Castro Verde** 82.76 44 A A A 23 35 07.0
comp=Z,53nm,2.1s
C12B **Naegeli Ranch,** 82.95 330 ⇑P P P 23 34 37.3 +0.4
baz=83,SNR=7.3
B13A **Whitefish** 82.98 331 ⇑P P P 23 34 37.4 +0.3
baz=83,SNR=30
LBTB **Lobatse** 83.13 114 *e*P P P 23 34 39.2 +0.6
comp=Z,32nm,1.2s
WALA **Waterton Lakes** 83.24 331 *e*P P P 23 34 37.7 -0.8
comp=Z,1.1nm,1.1s
VIPM **Ingram Point** 83.25 325 P P P 23 34 39.4 +0.8
VIPM **Ingram Point** 83.25 325 P P P 23 34 39.4 +0.8
FFC **Flin Flon** 83.37 341 *i*P P P 23 34 38.8 0.0
FFC **Flin Flon** 83.37 341 *e*P P P 23 34 37.9 -0.9
comp=Z,29nm,1.1s
FFC **Flin Flon** 83.37 341 P P P 23 34 38.7 0.0
comp=Z,123nm,1.1s,SNR=7.9
B12A **Libby** 83.56 330 ⇓P P P 23 34 40.6 +0.6
baz=84
PBAR **Barrancos** 83.72 44 *e*P P P 23 34 42.0 +1.0
comp=Z,26nm,1.9s
A12A **Yaak River Ran** 83.92 330 ⇑P P P 23 34 42.2 +0.3
baz=84
HAWA **Hanford** 83.97 327 *e*P P P 23 34 41.7 -0.4
comp=Z,58nm,1.4s
BROR **Big Rock Looko** 84.07 324 P P P 23 34 42.3 -0.2
NEW **Newport** 84.12 329 *e*P P P 23 34 42.4 -0.4
comp=Z,29nm,1.5s
NEW **Newport** 84.12 329 P P P 23 34 42.4 -0.4
comp=Z,3.4nm,0.5s,baz=105,slow=18,SNR=8.9
NEW **Newport** 84.12 329 ⇓P P P 23 34 42.3 -0.6
baz=84
PMRV **Marv??o** 84.25 43 *e*P P P 23 34 45.3 +1.6
comp=Z,26nm,1.6s
OD2 **Odessa Site #2** 84.26 328 P P P 23 34 44.0 +0.4
C09A **Chrisman Ranch** 84.33 328 P P P 23 34 44.1 +0.2
MTE **Manteigas** 84.73 42 *e*P P P 23 34 47.4 +1.2
comp=Z,25nm,1.3s
TAM **Tamanrasset** 84.77 63 *e*P P P 23 34 46.9 +0.1
TAM pmax pmax
comp=Z,10.0nm,1.2s
TAM **Tamanrasset** 84.77 63 *e*P P P 23 34 46.9 +0.1
comp=Z,9.6nm,1.2s
MPOR **Mary's Peak** 84.82 324 P P P 23 34 47.4 +0.8
TBM **Table Mountain** 85.04 327 P P P 23 34 48.2 +0.7
TWW **Teanaway** 85.15 327 P P P 23 34 48.9 +0.8
PVRL **Vila Real** 85.16 41 *e*P P P 23 34 49.8 +1.6
comp=Z,34nm,1.7s
MVO **Moncorvo** 85.50 41 *e*P P P 23 34 50.7 +0.7
comp=Z,31nm,1.7s
PBRG **Braganca** 86.06 41 *e*P P P 23 34 52.0 -0.7
comp=Z,30nm,1.6s
PAB **San Pablo** 86.22 44 *e*P P P 23 34 53.9 +0.3
PAB pmax pmax
comp=Z,12nm,0.9s
PAB **San Pablo** 86.22 44 *e*P P P 23 34 53.9 +0.3
comp=Z,12nm,0.9s
JCW **Jim Creek** 86.39 327 P P P 23 34 53.3 -0.9
ESDC **Sonseca Array** 86.54 44 P P P 23 34 55.8 +0.6
ESDC **Sonseca Array** 86.54 44 P P P 23 34 55.8 +0.6
comp=Z,4.0nm,0.9s,baz=243,slow=4.3,SNR=14
CMW **Cultus Mountai** 86.64 327 P P P 23 34 55.0 -0.4
NLWA **Neilton Lookou** 86.85 326 P P P 23 34 56.6 +0.2
FRB **Frobisher Bay** 87.05 360 P P P 23 34 56.6 -0.3
FRB **Frobisher Bay** 87.05 360 P P P 23 34 56.6 -0.3
comp=Z,16nm,1.0s,baz=183,slow=6.7,SNR=3.9
OBC **Olympics--Boni** 87.38 326 P P P 23 34 59.7 +0.7
PGC **Sidney** 87.46 327 *e*P P P 23 34 59.1 -0.1
comp=Z,4.0nm,1.1s
ETSF **Etsaut** 90.46 43 *e*P P P 23 35 11.6 -2.0
comp=Z,54nm,1.5s
ETSF **Etsaut** 90.46 43 *e*P P P 23 35 11.6 -2.0
ETSF pmax pmax
comp=Z,54nm,1.5s
ETSF **Etsaut** 90.46 43 *e*P P P 23 35 11.6 -2.0
comp=Z,54nm,1.5s
EPF **Esparros** 91.09 43 *e*P P P 23 35 14.7 -1.8
comp=Z,71nm,1.7s
EPF **Esparros** 91.09 43 *e*P P P 23 35 14.7 -1.8
EPF pmax pmax
comp=Z,71nm,1.7s
EPF **Esparros** 91.09 43 *e*P P P 23 35 14.7 -1.8
comp=Z,71nm,1.7s
BBB **Bella Bella** 92.00 328 P P P 23 35 19.7 -0.6
BBB **Bella Bella** 92.00 328 P P P 23 35 19.7 -0.6
comp=Z,19nm,0.8s,baz=120,slow=2.7,SNR=6.4
LFF **La Frestale** 92.33 41 *e*P P P 23 35 20.3 -1.8
LFF **La Frestale** 92.33 41 *e*P P P 23 35 20.3 -1.8
LFF **La Frestale** 92.33 41 *e*P P P 23 35 20.3 -1.8
YKA **Yellowknife Ar** 93.53 340 P P P 23 35 27.0 -0.2
YKA PKKP PKKPdf 23 52 32.5 -1.6
YKA **Yellowknife Ar** 93.53 340 P P P 23 35 27.0 -0.2
comp=Z,23nm,0.8s,baz=133,slow=4.5,SNR=343
YKA PKKP PKKPdf 23 52 32.5 -1.6
comp=Z,0.1nm,0.4s,baz=317,slow=3.1,SNR=3.7
YKW3 **Yellowknife Ar** 93.58 340 *e*P P P 23 35 26.6 -0.8
comp=Z,0.6nm,0.9s
KEST **Kesra** 93.67 53 P P P 23 35 31.3 +2.7
KEST **Kesra** 93.67 53 P P P 23 35 31.3 +2.7
comp=Z,3.6nm,1.0s,baz=195,slow=2.9,SNR=5.5
KEST LR LR 00 15 43.4
comp=Z,44nm,20.9s,baz=320,slow=34
LOR **Lormes** 95.38 40 *e*P P P 23 35 34.0 -2.1
comp=Z,16nm,1.0s
LOR **Lormes** 95.38 40 *e*P P P 23 35 34.0 -2.1
comp=Z,16nm,1.0s
DLBC **Dease Lake** 96.58 332 *e*P P P 23 35 41.0 -0.3
DLBC **Dease Lake** 96.58 332 P P P 23 35 41.6 +0.3
comp=Z,6.0nm,0.7s,baz=340,slow=25,SNR=11
GERES **GERESS Array B** 102.01 42 PKKPbc PKKPbc 23 52 10.0 -1.3
GERES **GERESS Array B** 102.01 42 PKKPbc PKKPbc 23 52 10.0 -1.3
comp=Z,0.7nm,0.8s,baz=78,slow=1.9,SNR=5.7
CLL **Collm** 102.52 39 *e*PP PP 23 40 18.0 -4.6
CLL *e*SP SP 23 49 17.0 -0.2
CLL *e*(SS) 23 54 54.0
INK **Inuvik** 103.29 340 PKiKP **PKiKP** 23 40 29.3 -0.2
INK **Inuvik** 103.29 340 PKiKP **PKiKP** 23 40 29.3 -0.2
comp=Z,1.6nm,1.1s,baz=108,slow=5.0,SNR=4.2
ILAR **Eielson Array** 106.61 334 Pdif **Pdif** 23 36 24.9 -1.0
ILAR PP **PP** 23 40 50.5 -2.2
ILAR PKKPbc **PKKPbc** 23 51 54.8 -3.0
ILAR **Eielson Array** 106.61 334 Pdiff **Pdif** 23 36 24.9 -1.0
comp=Z,0.4nm,0.7s,baz=149,slow=2.1,SNR=4.2
ILAR PP **PP** 23 40 50.5 -2.2
comp=Z,1.7nm,1.2s,baz=136,slow=4.7,SNR=5.3
ILAR PKKPbc **PKKPbc** 23 51 54.8 -3.0
comp=Z,0.4nm,0.6s,baz=290,slow=4.0,SNR=5.1
AKASG **Malin Array Be** 112.17 43 PKiKP **PKiKP** 23 40 46.1 -0.5
AKASG 23 41 30.6
AKASG **Malin Array Be** 112.17 43 PKiKP **PKiKP** 23 40 46.0 -0.5
AKASG PP **PP** 23 41 30.6 -2.6
AKASG **Malin Array Be** 112.17 43 PKiKP **PKiKP** 23 40 46.0 -0.5
comp=Z,0.4nm,0.4s,baz=249,slow=2.6,SNR=4.7
AKASG PP **PP** 23 41 30.6 -2.6
comp=Z,0.2nm,0.3s,baz=264,slow=6.1,SNR=8.6
ARCES **ARCESS Array B** 112.99 22 PKKPbc PKKPbc 23 51 34.3 -2.9
ARCES **ARCESS Array B** 112.99 22 PKKPbc PKKPbc 23 51 34.3 -2.9
comp=Z,3.7nm,0.8s,baz=93,slow=3.8,SNR=7.0
BRTR **Keskin Array B** 113.10 55 PKiKP **PKiKP** 23 40 48.3 -0.7
BRTR PP **PP** 23 41 38.6 -1.7
BRTR PKKPab **PKKPab** 23 51 43.1 +1.0
BRTR **Keskin Array B** 113.10 55 PKiKP **PKiKP** 23 40 48.3 -0.7
comp=Z,1.4nm,0.8s,baz=184,slow=5.0,SNR=8.5
BRTR PP **PP** 23 41 38.6 -1.7
comp=Z,0.9nm,0.9s,baz=224,slow=8.6,SNR=4.0
BRTR PKKPab **PKKPab** 23 51 43.1 +1.0
comp=Z,1.2nm,0.8s,baz=102,slow=5.2,SNR=9.0
APA **Apatity** 115.81 25⇑ *e*PKiKP **PKPdf** 23 40 52.4 -0.7
APA *e* 23 41 21.0
OBN **Obninsk** 117.10 39⇑ *i*PKiKP **PKPdf** 23 40 55.3 -0.6
OBN *e* 23 47 37.5
OBN *e*PS **PKKPdf** 23 51 48.4 -1.2
OBN pmax pmax
comp=Z,14nm,1.2s
STKA **Stephens Creek** 118.13 208 PKP **PKPdf** 23 40 57.6 -1.2
STKA **Stephens Creek** 118.13 208 PKP **PKPdf** 23 40 57.6 -1.2
comp=Z,2.9nm,0.8s,baz=263,slow=3.3,SNR=3.8
VSR **Storozhevoye** 118.47 43 *e*PKiKP **PKPdf** 23 40 57.9 -0.8
VSR pmax pmax
comp=N,10.0nm,1.8s
VSR pmax pmax
comp=E,10.0nm,1.8s
VSR pmax pmax
comp=Z,10.0nm,1.8s
VORD **Divnogorie** 118.54 44 *e*PKiKP **PKPdf** 23 40 57.0 -1.8
VORD pmax pmax
comp=Z,5.0nm,1.0s
VORD pmax pmax
comp=N,7.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.7s
KLMR **Klimovskoe** 118.68 32 *e*PKiKP **PKPdf** 23 40 56.8 -2.0
KLMR pmax pmax
comp=Z,29nm,1.7s
VRHR **Novokhopersk** 120.02 43 *e*PKiKP **PKPdf** 23 41 00.1 -1.6
VRHR pmax pmax
comp=Z,10.0nm,1.3s
VRHR pmax pmax
comp=N,4.0nm,0.6s
VRHR pmax pmax
comp=E,5.0nm,0.6s
KIV **Kislovodsk** 120.40 52 *e*PKiKP **PKPdf** 23 41 02.3 -0.5
KIV *e* 23 52 15.9
KIV pmax pmax
comp=Z,11nm,1.1s
KBZ **Khabaz** 120.53 52 PKiKP **PKPdf** 23 41 03.6 +0.7
KBZ **Khabaz** 120.53 52 PKP **PKPdf** 23 41 03.5 +0.7
KBZ **Khabaz** 120.53 52 PKP **PKPdf** 23 41 03.5 +0.7
comp=Z,7.3nm,0.9s,baz=233,slow=3.7,SNR=18
RST **Umm Al-Ruwaisa** 121.94 69 *e*P **PKPdf** 23 41 05.7 -0.4
RST AMb AMB 23 41 07.5
comp=Z,142nm,0.9s
NAY **Al-Naaiem** 122.10 69 *e*P **PKPdf** 23 41 05.8 -0.6
NAY AMb AMB 23 41 07.2
comp=Z,4.9nm,1.2s
MIB **Mutribah** 122.29 69 *e*P **PKPdf** 23 41 05.8 -0.9
MIB AMb AMB 23 41 07.3
comp=Z,6.9nm,0.8s
BILL **Bilibino** 124.88 338 *i*PKiKP **PKPdf** 23 41 10.3 -0.2
BILL pmax pmax
comp=Z,31nm,1.2s
ASAR **Alice Springs** 128.55 206 PKP **PKPdf** 23 41 18.3 -0.8
ASAR **Alice Springs** 128.55 206 PKP **PKPdf** 23 41 18.3 -0.8
comp=Z,14nm,0.8s,baz=148,slow=2.2,SNR=97
AS31 **Alice Springs** 128.55 206 *e*PKPdf **PKPdf** 23 41 18.1 -1.0
ARU **Arti** 129.22 35 *i* PKiKP **PKPdf** 23 41 19.9 +0.7
ARU 23 43 27.8
SVE **Sverdlovsk** 130.18 34 *e*PKiKP **PKPdf** 23 41 22.1 +1.1
SVE pmax pmax
comp=Z,12nm,1.1s
AKTO **Aktyubinsk** 130.42 43 PKiKP **PKPdf** 23 41 22.6 +1.0
AKTO **Aktyubinsk** 130.42 43 PKP **PKPdf** 23 41 22.6 +1.0
AKTO **Aktyubinsk** 130.42 43 PKP **PKPdf** 23 41 22.6 +1.0
comp=Z,4.4nm,0.9s,baz=278,slow=2.1,SNR=16
TIXI **Tiksi** 131.00 353*c* *i*PKiKP **PKPdf** 23 41 21.9 -0.2
TIXI pmax pmax
comp=Z,8.0nm,1.7s
WRA **Warramunga Arr** 131.69 208 PKPpre PKPpre 23 41 12.1
WRA PKP **PKPdf** 23 41 24.0 -1.1
WRA SKPbc **SKPbc** 23 44 38.6 -1.7
WRA **Warramunga Arr** 131.69 208 PKhKP PKPpre 23 41 12.1
comp=Z,0.4nm,0.7s,baz=58,slow=2.7,SNR=14
WRA PKP **PKPdf** 23 41 24.0 -1.1
comp=Z,7.1nm,0.6s,baz=160,slow=1.7,SNR=6.5
WRA SKPbc **SKPbc** 23 44 38.6 -1.7
comp=Z,8.3nm,1.1s,baz=149,slow=3.6,SNR=13
WRAB **Tennant Creek** 131.69 208 *e*PKiKP **PKPdf** 23 41 24.3 -0.8
WRAB **Tennant Creek** 131.69 208 *e*PKPdf **PKPdf** 23 41 24.3 -0.8
ABKAR **Akbulak array** 131.89 44 *e*PKPdf **PKPdf** 23 41 24.6 +0.2
SEY **Seymchan** 132.46 336*c* *i*PKiKP **PKPdf** 23 41 26.0 +0.9
PETK **Petropavlovsk-** 134.91 323 PKHKP PKPpre 23 41 19.1
PETK 23 41 29.9
PETK **Petropavlovsk-** 134.91 323 PKPpre PKPpre 23 41 19.1
PETK PKP **PKPdf** 23 41 29.9 -0.2
PETK **Petropavlovsk-** 134.91 323 PKhKP PKPpre 23 41 19.1
comp=Z,3.9nm,0.9s,baz=118,slow=16,SNR=3.6
PETK PKP **PKPdf** 23 41 29.9 -0.2
comp=Z,3.7nm,0.8s,baz=107,slow=9.5,SNR=4.6
FITZ **Fitzroy Crossi** 136.56 199 PKP **PKPdf** 23 41 34.3 +0.1
FITZ **Fitzroy Crossi** 136.56 199 PKP **PKPdf** 23 41 34.3 +0.1
comp=Z,9.5nm,0.8s,baz=180,slow=4.8,SNR=13
BRVK **Borovoye** 136.77 36*c* *i*PKiKP **PKPdf** 23 41 34.7 +1.2
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK **Borovoye** 136.77 36 *e*PKPdf **PKPdf** 23 41 32.8 -0.7
YAK **Yakutsk** 139.80 347 *e*PKHKP PKPdf 23 41 32.0 -6.7
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.1s
KKAR **Karatay Array** 140.52 50 *e*PKiKP **PKPdf** 23 41 40.9 +0.2
KKAR *e* 23 44 40.2
KKAR **Karatay Array** 140.52 50 *e*PKPdf **PKPdf** 23 41 40.9 +0.2
KKAR *e*PP **PP** 23 44 40.2 -0.9
NVS **Novosibirsk** 142.04 27 *e*PKiKP **PKPdf** 23 41 43.4 +0.4
NVS pmax pmax
comp=E,8.0nm,1.3s
NVS pmax pmax
comp=Z,36nm,1.3s
KURK **Kurchatov** 142.42 35 *e*PKHKP **PKPdf** 23 41 39.6 -4.2
KURK **Kurchatov** 142.42 35 *e*PKPdf **PKPdf** 23 41 39.6 -4.2
KURK SKPbc **SKPbc** 23 45 11.0 -0.1
KURBB **Kurchatov Arra** 142.42 36 SKPbc **SKPbc** 23 45 11.0 -0.1
comp=Z,4.6nm,0.8s,baz=296,slow=3.2,SNR=16
EKS2 **Erkin-Say** 142.95 50 *e*PKiKP **PKPdf** 23 41 45.6 +0.4
EKS2 **Erkin-Say** 142.95 50 *e*PKPbc **PKPdf** 23 41 45.6 +0.4
EKS2 **Erkin-Say** 142.95 50 P **PKPdf** 23 41 46.6 +1.4
SNR=7.2
USP **Ospenovka** 143.25 48 P **PKPdf** 23 41 46.7 +1.1
SNR=6.7
ZAA0 **Zalesovo Array** 143.33 27 *e*PKPdf PKPab 23 41 42.3 +0.8
ZAA0 *e*SKPbc **SKPbc** 23 45 12.9 -0.4
ZALV **Zalesovo Beam** 143.33 27 PKiKP PKPbc 23 41 43.4 +0.7
ZALV **Zalesovo Beam** 143.33 27 PKP PKPbc 23 41 43.4 +0.7
ZALV SKPbc **SKPbc** 23 45 13.1 -0.1
ZALV **Zalesovo Beam** 143.33 27 PKP PKPbc 23 41 43.4 +0.7
comp=Z,17nm,1.0s,baz=304,slow=4.3,SNR=47
ZALV SKPbc **SKPbc** 23 45 13.1 -0.1
comp=Z,17nm,1.0s,baz=298,slow=3.2,SNR=22
AAK **Ala-Archa** 143.46 49 *i* PKiKP **PKPdf** 23 41 45.5 -0.7
AAK **Ala-Archa** 143.46 49 SKPbc **SKPbc** 23 45 15.3 +1.1
AAK **Ala-Archa** 143.46 49 SKPbc **SKPbc** 23 45 15.3 +1.1
comp=Z,8.1nm,0.9s,baz=206,slow=3.6,SNR=11
FRU **Bishkek** 143.48 49 *e*PKiKP PKPbc 23 41 44.0 +0.4
TKM2 **Tokmak 2** 144.12 49 *e*PKiKP PKPbc 23 41 46.0 +0.3
TKM2 **Tokmak 2** 144.12 49 *e*PKPdf PKPbc 23 41 46.0 +0.3
TKM2 *e*SKPbc **SKPbc** 23 45 15.7 -0.1
TKM2 **Tokmak 2** 144.12 49 P PKPbc 23 41 46.6 +0.8
SNR=13
KZA **Kyzart** 144.17 50 P **PKPdf** 23 41 47.7 -0.1
SNR=8.5
ULHL **Ulahol** 144.81 49 P **PKPdf** 23 41 49.4 +0.8
SNR=37
KSH **Kashi** 145.47 54 *i* PKPbc **PKPbc** 23 41 50.3 +0.3
KSH sPKP 23 42 27.5
KSH *e*PKS **PKSdf** 23 45 24.8 -0.4
KSH AMB AMB
comp=Z,210nm,5.2s
KSH LR LR
comp=N,29nm,3.6s
KSH LR LR
comp=E,47nm,3.4s
CLNS **Chul'man** 145.55 348 *e*PKP2 **PKPdf** 23 41 49.2 0.0
CLNS pmax pmax
comp=Z,27nm,0.9s
CLNS pmax pmax
comp=N,7.0nm,0.9s
CLNS pmax pmax
comp=E,3.0nm,1.1s
YSS **Yuzh-Sakhalins** 146.28 321 *i* PKP2 **PKPdf** 23 41 51.5 +0.9
YSS pmax pmax
comp=Z,50nm,1.2s
MK31 **Makanchi Array** 146.61 39 *e*PKP2 **PKPdf** 23 41 51.7 +0.4
MK31 *e* 23 45 19.8
MK31 **Makanchi Array** 146.61 39 *e*PKPdf **PKPdf** 23 41 51.7 +0.4
MK31 *e*SKPbc **SKPbc** 23 45 19.8 -1.3
MKAR **Makanchi Array** 146.61 39 PKP2 **PKPdf** 23 41 51.7 +0.4
MKAR 23 45 20.6
MKAR **Makanchi Array** 146.61 39 PKPbc **PKPdf** 23 41 51.7 +0.4
MKAR SKPbc **SKPbc** 23 45 20.6 -0.6
MKAR **Makanchi Array** 146.61 39 PKPbc **PKPdf** 23 41 51.7 +0.4
comp=Z,19nm,0.8s,baz=308,slow=1.8,SNR=93
MKAR SKPbc **SKPbc** 23 45 20.6 -0.6
comp=Z,3.0nm,0.9s,baz=316,slow=3.3,SNR=6.2
HYB **Hyderabad** 147.84 95 *i* PKP **PKPbc** 23 41 57.0 -0.2
HYB *e* 23 42 33.0
ASAJ **Asahikawa** 147.85 317 *e*PKPdf **PKPdf** 23 41 53.7 +0.4
ASAJ PKPbc **PKPbc** 23 41 56.8 +0.4
GMJI **Gumukmas** 148.31 182 P **PKPab** 23 42 02.7 +1.0
comp=Z,78nm,1.2s
PCJI **Pacitan** 148.38 178 P **PKPbc** 23 41 59.4 +0.7
comp=Z,188nm,1.5s
ERM **Erimo** 148.47 313 *e*PKP2 **PKPbc** 23 41 58.4 +0.3
ERM **Erimo** 148.47 313 *e*PKPbc **PKPbc** 23 41 58.4 +0.3
PWJI **Pagerwojo** 148.57 179 P **PKPbc** 23 41 59.4 +0.2
comp=Z,85nm,1.3s
CISI **Cisompet, Garu** 148.73 171 P **PKPbc** 23 41 59.4 -0.3
comp=Z,247nm,1.0s,comp=Z,3μm
WOJI **Wonogiri, Jawa** 148.73 177 P **PKPbc** 23 41 59.9 +0.3
comp=Z,155nm,1.0s,comp=Z,4μm
DDI **Dehra Dun** 148.82 70 *ex* **PKPdf** 23 41 55.0 -0.5
BLJI **Banyuglugur** 148.82 182 P **PKPbc** 23 42 00.6 +0.8
comp=Z,110nm,1.1s,comp=Z,8μm
SJI **Sawahan** 148.86 179 P **PKPab** 23 42 05.5 +1.4
BJII **Banjamegara** 149.16 175 P **PKPbc** 23 42 10.0 +4.7
HABR **Khabarovsk** 149.33 330 *e*PKP2 **PKPbc** 23 41 59.6 -0.5
HABR *e* 23 45 30.5
HABR PPP PPP 23 48 52.3
HABR *e* 23 48 53.1
HABR SS SS 00 04 36.1 -0.1
HABR pmax pmax
comp=E,39nm,1.0s
HABR pmax pmax
comp=N,41nm,2.1s
HABR pmax pmax
comp=Z,148nm,2.1s
LEM **Lembang** 149.42 171 P **PKPbc** 23 42 02.1 +0.5
comp=Z,224nm,1.1s
SMRI **Semarang** 149.49 176 P **PKPbc** 23 42 02.3 +0.8
DBJI **Dramaga** 149.55 169 P **PKPbc** 23 42 02.2 +0.5
comp=Z,129nm,1.4s,comp=Z,3μm
KASI **Kota Agung** 150.07 164 P **PKPbc** 23 42 03.0 +0.1
comp=Z,154nm,0.9s,comp=Z,2μm
KLR **Kul'dur** 150.19 334 *e*PKHKP **PKPdf** 23 41 57.7 +0.7
KLR pmax pmax
comp=E,25nm,1.2s
KLR pmax pmax
comp=Z,50nm,1.2s
BKSI **Bulukumba** 150.26 196 P P **PKPbc** 23 42 03.1 -0.3
comp=Z,80nm,1.1s,comp=Z,743nm
LWLI **Liwa** 150.44 163 P **PKPbc** 23 42 04.8 +0.8
comp=Z,131nm,0.8s
MOY **Mondy** 150.65 14 *e*PKiKP **PKPbc** 23 42 04.4 +1.1
MOY pmax pmax
comp=Z,70nm,1.4s
KAPI **Kappang** 150.65 195 *e*PKPdf **PKPdf** 23 41 58.8 0.0
KAPI *e*PKPbc **PKPbc** 23 42 03.5 -0.9
KAPI PKPbc **PKPbc** 23 42 03.6 -0.7
KAPI **Kappang** 150.65 195 PKPbc **PKPbc** 23 42 03.6 -0.7
comp=Z,67nm,1.0s,baz=164,slow=2.2,SNR=13
TLY **Talaya** 151.18 11 *e*PKiKP **PKPdf** 23 42 00.2 +1.7
TLY pmax pmax
comp=Z,10.0nm,0.8s
KSI **Kapahiang** 151.31 159 P P **PKPbc** 23 42 06.0 0.0
comp=Z,89nm,0.7s
WMQ **Urumqi** 151.44 39 PKPbc **PKPdf** 23 42 00.3 +1.1
WMQ pPKP **pPKPdf** 23 42 27.0 -3.4
WMQ sPKP 23 42 37.5
WMQ PP **PP** 23 45 49.5 +4.3
WMQ SKS **SKSdf** 23 48 56.0 -0.2
WMQ LR LR
comp=N,43nm,25.0s
WMQ LR LR
comp=E,62nm,31.4s
WMQ LR LR
comp=Z,40nm,32.4s
ZAK **Zakamensk** 152.35 13 *e*PKiKP **PKPdf** 23 42 01.2 +0.8
ZAK pmax pmax
comp=Z,8.0nm,1.0s
LUWI **Luwuk** 153.48 204 P P **PKPbc** 23 42 11.5 +0.8
comp=Z,101nm,1.2s,comp=Z,2μm
USRK **Ussuriysk Arra** 153.87 327 PKP **PKPdf** 23 42 02.2 -0.4
comp=Z,6.2nm,1.1s,baz=17,slow=2.0,SNR=10.0
USRK PKPbc **PKPbc** 23 42 09.9 -0.7
comp=Z,8.7nm,1.0s,baz=7.2,slow=2.3,SNR=12
USRK PKPab **PKPab** 23 42 23.9 -0.3
comp=Z,4.0nm,0.6s,baz=50,slow=3.4,SNR=8.1
MJAR **Matsushiro Arr** 154.23 306 PKP **PKPdf** 23 42 02.8 -0.6
MJAR PKPbc **PKPbc** 23 42 11.5 -0.2
MJAR PKPab **PKPab** 23 42 26.0 0.0
MJAR **Matsushiro Arr** 154.23 306 PKP **PKPdf** 23 42 02.8 -0.6
comp=Z,1.4nm,0.6s,baz=241,slow=1.9,SNR=5.9
MJAR PKPbc **PKPbc** 23 42 11.5 -0.2

	comp=Z,10nm,1.1s,baz=85,slow=1.9,SNR=11								
MJAR					PKPab	**PKPab**	23 42 26.0	**0.0**	
	comp=Z,14nm,0.9s,baz=110,slow=2.0,SNR=12								
MAJO	**Matsushiro**	**154.23**	**306**	*e*PKIKP	**PKPbc**	**23 42 12.9**	**+1.2**		
MAJO				*e*		23 42 26.1			
MAJO	**Matsushiro**	**154.23**	**306**	*e*PKPbc	**PKPbc**	**23 42 12.8**	**+1.2**		
MAJO				*e*PKPab	**PKPab**	**23 42 26.1**	**+0.1**		
SONM	**Songino Array**	**155.36**	**10**	PKP	**PKPdf**	**23 42 05.4**	**+0.6**		
SONM				PKPab	**PKPab**	**23 42 31.4**	**+0.9**		
SONM	**Songino Array**	**155.36**	**10**	PKP	**PKPdf**	**23 42 05.4**	**+0.6**		
	comp=Z,5.3nm,0.9s,baz=284,slow=1.1,SNR=35								
SONM				PKPab	**PKPab**	**23 42 31.4**	**+0.9**		
	comp=Z,3.8nm,0.8s,baz=320,slow=3.9,SNR=9.6								
ULN	**Ulaanbaatar**	**155.42**	**9**	*e*PKPdf	**PKPdf**	**23 42 05.0**	**+0.1**		
ULN				*e*PKPab	**PKPab**	**23 42 30.6**	**-0.2**		
PSI	**Prapat**	**155.60**	**146**	P	**PKPab**	**23 42 32.9**	**+0.4**		
CN2	**Changchun**	**157.13**	**335**	*e*PKP	**PKPdf**	**23 42 08.8**	**+1.8**		
KSRS	**Korea Array**	**160.76**	**319**	PKP	**PKPdf**	**23 42 11.8**	**+0.4**		
	comp=Z,8.4nm,1.1s,baz=54,slow=1.1,SNR=21								
KSRS				PKPab	**PKPab**	**23 42 54.4**	**+0.3**		
	comp=Z,5.5nm,0.9s,baz=52,slow=4.0,SNR=9.8								
KSAR	**Wonju Array Be**	**160.79**	**319**	PKP	**PKPdf**	**23 42 11.8**	**+0.3**		
KSAR				PKPab	**PKPab**	**23 42 54.4**	**+0.2**		
GTA	**Gaotai**	**161.00**	**31**	*e*PKP	**PKPdf**	**23 42 12.5**	**+0.6**		
GTA				sPKP		23 42 50.3			
HHC	**Hu-ho-hao-te**	**162.78**	**2**	*e*PKP	**PKPdf**	**23 42 13.8**	**+0.2**		
HHC				pPKP	**pPKPdf**	**23 42 40.5**	**-4.4**		
HHC				sPKP		23 42 51.3			
HHC				PKS	**PKSdf**	**23 45 46.0**	**-0.8**		
HHC				PP	**PP**	**23 46 51.0**	**+4.2**		
HHC				SKS	**SKSdf**	**23 49 06.5**	**-1.4**		
HHC				SKKS	**SKKSac**	**23 53 25.8**	**+0.8**		
HHC				AMB	AMB				
	comp=Z,120nm,4.7s								
BJI	**Beijing**	**163.28**	**350**	PKP	**PKPdf**	**23 42 14.8**	**+0.9**		
BJI				LR	LR				
	comp=Z,27μm,18.0s								
LZH	**Lanzhou**	**165.56**	**29**	*e*PKP	pPKPdf	23 42 44.5	-3.1		
LZH	**Lanzhou**	**165.56**	**29**	pPKP	pPKPdf	23 42 49.5	+1.9		
LZH	**Lanzhou**	**165.56**	**29**	sPKP	**PKPab**	**23 43 11.5**	**-3.8**		
CMAR	**Chiang Mai Arr**	**166.51**	**110**	PKP	**PKPdf**	**23 42 17.9**	**+0.5**		
CMAR				PKPab	**PKPab**	**23 43 20.4**	**+0.3**		
CMAR	**Chiang Mai Arr**	**166.51**	**110**	PKP	**PKPdf**	**23 42 17.9**	**+0.5**		
	comp=Z,1.2nm,0.4s,baz=291,slow=2.5,SNR=18								
CMAR				PKPab	**PKPab**	**23 43 20.4**	**+0.3**		
	comp=Z,1.4nm,0.3s,baz=262,slow=3.5,SNR=4.6								
CHTO	**Chiang Mai**	**166.66**	**108**	*e*PKIKP	**PKPdf**	**23 42 17.6**	**+0.1**		
CHTO				*e*		23 43 21.1			
CHTO	**Chiang Mai**	**166.66**	**108**	*e*PKPdf	**PKPdf**	**23 42 17.6**	**+0.1**		
CHTO				*e*PKPab	**PKPab**	**23 43 21.1**	**+0.5**		
XAN	**Xi'an**	**169.18**	**15**	PKP	**PKPdf**	**23 42 19.0**	**+0.2**		
CD2	**Chengdu**	**169.47**	**44**	PKP	**PKPdf**	**23 42 17.8**	**-1.3**		
CD2				pPKP	**pPKPdf**	**23 42 48.3**	**-2.2**		
CD2				sPKP		23 43 00.0			
CD2				PKPab	**PKPab**	**23 43 33.8**	**+1.1**		
CD2				PKS	**PKSdf**	**23 45 49.0**	**-2.7**		
CD2				PP	**PP**	**23 47 24.3**	**+2.0**		
CD2				SKS	**SKSdf**	**23 49 08.8**	**-3.6**		
CD2				SKKS	**SKKSac**	**23 53 58.8**	**-0.2**		
CD2				AMB	AMB				
	comp=Z,120nm,6.2s								
NJ2	**Nanjing**	**169.78**	**327**	*e*PKP	**PKPdf**	**23 42 19.5**	**+0.3**		
KMI	**Kunming**	**171.14**	**78**	PKP	**PKPdf**	**23 42 19.8**	**-0.6**		
KMI				sPKP		23 42 58.5			
KMI				PP	**PP**	**23 47 34.0**	**+2.0**		
KMI				AMB	AMB				
	comp=Z,90nm,7.5s								
KMI				LR	LR				
	comp=N,150nm,17.5s								
KMI				LR	LR				
	comp=E,110nm,19.0s								
KMI				LR	LR				
	comp=Z,130nm,22.4s								
ENH	**Enshi**	**172.89**	**20**	*e*PKPdf	**PKPdf**	**23 42 20.4**	**-0.5**		
GYA	**Guiyang**	**174.14**	**60**	*i* PKP	**PKPdf**	**23 42 21.5**	**0.0**		
GYA				pPKP	**pPKPdf**	**23 42 51.3**	**-1.6**		
GYA				sPKP		23 43 02.8			
GYA				PKPab	**PKPab**	**23 43 55.0**	**+1.2**		
GYA				PKS	**PKSdf**	**23 45 51.5**	**-2.5**		
GYA				PP	**PP**	**23 47 47.5**	**+1.4**		
GYA				AMB	AMB				
	comp=Z,120nm,8.2s								

MEX 27 23:27:21.8±0.7, 16.86N×99.97W, h12km±3km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	**0.08**	**77**	*e*P	Pg	23 27 23.6	-0.8
ACP2				*e*S	Sg	23 27 25.4	-1.0
CAIG	**El Cayaco**	**0.35**	**303**	*e*P	Pg	23 27 28.0	-0.8
CAIG				*i* S	Sg	23 27 34.0	+0.5
ARIG	**Puente Sto Nin**	**1.46**	**346**	*e*P	Pn	23 27 44.6	-3.4
ARIG				*e*S	Sn	23 28 02.8	-4.3
PLIG	**Platanillo**	**1.59**	**16**	*e*P	Pn	23 27 45.7	-4.2
PLIG				*e*S	Sn	23 28 04.9	-5.6
ZIIG	**Zihuatanejo**	**1.62**	**298**	*e*P	Pn	23 27 46.3	-3.8
ZIIG				*i* S	Sn	23 28 05.7	-5.1
PNIG	**Pinotepa**	**1.82**	**104**	*e*P	Pn	23 27 50.2	-2.7
PNIG				*e*S	Sn	23 28 11.1	-4.9

*ISCJB **27** 23:29:11.8±0.5, 50.24N±0.04×19.00E±0.03, h0km, Error ellipse: s-maj=5.6km s-min=2.4km az=10.5*
*CSEM **27** 23:29:12.9±0.3, 50.24N×19.03E, h2km, ML2.6/9, Error ellipse: s-maj=7.8km s-min=2.9km az=5.0*
*IPEC **27** 23:29:12.6±0.5, 50.30N×19.05E, h3km±1km, ML1.7/3, Error ellipse: s-maj=8.0km s-min=1.0km az=167.0*
*PRU **27** 23:29:13.4, 50.26N×19.02E, h0km*
*WAR **27** 23:29:13.5, 50.20N×19.14E*

ISC 27 23:29:13.1±0.8, 50.19N±0.04×19.09E±0.02, h0km, n39, σ1§43/73, 4C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.45**	**86**	*e*Pg	**Pg**	**23 29 22.1**	**+0.4**
OJC				*e*Sg	**Sb**	**23 29 28.7**	**-2.5**
OJC	**Ojcow**	**0.45**	**86**	*e*Pg	**Pg**	**23 29 22.1**	**+0.4**
OJC				*e*Sg	**Sb**	**23 29 28.7**	**-2.5**
RAC	**Raciborz**	**0.59**	**260**	*e*Pg	**Pg**	**23 29 25.5**	**+1.2**
RAC				*e*Sg	**Sb**	**23 29 34.4**	**-0.7**
OKC	**Ostrava-Krasne**	**0.71**	**240**	*e*PG	**Pg**	**23 29 25.1**	**-1.5**
OKC				*e*SG	**Sg**	**23 29 34.3**	**-1.4**
	comp=Z,13nm,0.3s						
OKC	**Ostrava-Krasne**	**0.71**	**240**	Pg	**Pg**	**23 29 25.1**	**-1.5**
OKC				Sg	**Sg**	**23 29 34.3**	**-1.4**
	13nm,0.3s						
MORC	**Moravsky Berou**	**1.08**	**248**	⇓*i*P	**Pg**	**23 29 33.7**	**-0.1**
MORC	**Moravsky Berou**	**1.08**	**248**	⇓*i*P	**Pg**	**23 29 33.7**	**-0.1**
MORC				*e*Sg	**Sg**	**23 29 47.2**	**-0.7**
	20nm,0.3s,baz=61						
NIE	**Niedzica**	**1.11**	**134**	*e*Pg	**Pn**	**23 29 35.5**	**-0.3**
NIE				*e*Sg	**Sn**	**23 29 52.3**	**+0.5**
NIE	**Niedzica**	**1.11**	**134**	*e*Pg	**Pn**	**23 29 35.5**	**-0.3**
NIE				*e*Sg	**Sn**	**23 29 52.3**	**+0.5**
STHS	**Stebnicka Huta**	**1.59**	**118**	*e*PN	**Pg**	**23 29 43.5**	**-0.1**
STHS				*e*SN	**Sg**	**23 30 08.2**	**+4.0**
STHS	**Stebnicka Huta**	**1.59**	**118**	*e*Pn	**Pg**	**23 29 43.5**	**-0.1**
STHS				*e*Sn	**Sg**	**23 30 08.2**	**+4.0**
VYHS	**Vyhne**	**1.71**	**186**	*e*PN	**Pn**	**23 29 43.3**	**-0.8**
VYHS				*e*SN	**Sn**	**23 30 07.0**	**+0.4**
VYHS	**Vyhne**	**1.71**	**186**	*e*Pn	**Pn**	**23 29 43.3**	**-0.8**
VYHS				*e*Sn	**Sn**	**23 30 07.0**	**+0.4**
VRAC	**Vranov**	**1.85**	**242**	⇑*i*P	**Pn**	**23 29 46.9**	**+0.9**
VRAC	**Vranov**	**1.85**	**242**	*e*Pn	**Pn**	**23 29 45.9**	**-0.1**
VRAC	**Vranov**	**1.85**	**242**	⇑*i*P	**Pn**	**23 29 46.9**	**+0.9**
VRAC				*e*Sg	**Sn**	**23 30 10.9**	**+0.8**
	5.5nm,0.2s,baz=57						
KSP	**Ksiaz**	**1.90**	**291**	*e*Pg	**Pb**	**23 29 48.4**	**-0.2**
KSP				*e*Sg	**Sg**	**23 30 15.2**	**+1.0**
KECS	**Kecovo**	**1.94**	**151**	*e*PN	**Pn**	**23 29 46.8**	**-0.4**
KECS				*e*SN	**Sn**	**23 30 11.1**	**-1.2**
KECS	**Kecovo**	**1.94**	**151**	*e*Pn	**Pn**	**23 29 46.8**	**-0.4**
UPC	**Upice**	**2.00**	**280**	*e*PG	**Pn**	**23 29 48.6**	**+0.5**
UPC				*e*SG	**Sb**	**23 30 16.2**	**+0.5**
	comp=Z,2.5nm,0.4s						
UPC	**Upice**	**2.00**	**280**	Pg	**Pn**	**23 29 48.6**	**+0.5**
UPC				Sg	**Sb**	**23 30 16.2**	**+0.5**
	2.5nm,0.4s						
SMOL	**Smolenice**	**2.00**	**214**	*e*SN	**Sn**	**23 30 14.9**	**+1.0**
SMOL	**Smolenice**	**2.00**	**214**	*e*Sn	**Sn**	**23 30 14.9**	**+1.0**
CRVS	**Cervenica-Dubn**	**2.01**	**129**	*e*PN	**Pb**	**23 29 49.4**	**-1.1**
CRVS				*e*SN	**Sn**	**23 30 13.3**	**-0.8**
CRVS	**Cervenica-Dubn**	**2.01**	**129**	*e*Pn	**Pb**	**23 29 49.4**	**-1.1**
CRVS				*e*Sn	**Sn**	**23 30 13.3**	**-0.8**
KRUC	**Moravsky**	**2.09**	**238**	*e*Pn	**Pn**	**23 29 48.6**	**-0.7**
	baz=53						
KRUC				*e*Sn	**Sn**	**23 30 17.0**	**+1.0**
	2.7nm,0.3s,baz=53						
PSZ	**Piszkesteto**	**2.34**	**167**	⇑*i*P	**Pg**	**23 29 57.9**	**+0.1**
PSZ	**Piszkesteto**	**2.34**	**167**	⇑*i*P	**Pg**	**23 29 57.9**	**+0.1**
KOLS	**Kolonicke sedl**	**2.42**	**120**	*e*PN	**Pn**	**23 29 54.5**	**+0.6**
KOLS				*e*SN	**Sn**	**23 30 24.2**	**-0.1**
KOLS	**Kolonicke sedl**	**2.42**	**120**	*e*Pn	**Pn**	**23 29 54.5**	**+0.6**
KOLS				*e*Sn	**Sn**	**23 30 24.2**	**-0.1**
TREC	**Trest**	**2.51**	**250**	*e*PN	**Pn**	**23 29 54.6**	**-0.5**
TREC				*e*PG	**Pb**	**23 29 57.3**	**-1.6**
TREC				*e*SG	**Sb**	**23 30 31.5**	**+1.2**
	comp=Z,4.0nm,0.2s						
TREC	**Trest**	**2.51**	**250**	Pn	**Pn**	**23 29 54.6**	**-0.5**
TREC				Sg	**Sb**	**23 30 31.5**	**+1.2**
	4.0nm,0.2s						
PVCC	**Panska Ves**	**2.92**	**278**	*e*PN	**Pn**	**23 30 00.2**	**-0.5**
PVCC				*e*PG	**Pb**	**23 30 05.1**	**-0.8**
PVCC				*e*SG	**Sg**	**23 30 45.3**	**-1.4**
	comp=Z,6.6nm,0.4s						
PVCC	**Panska Ves**	**2.92**	**278**	Pn	**Pn**	**23 30 00.2**	**-0.5**
PVCC				Sg	**Sg**	**23 30 45.3**	**-1.4**
	6.6nm,0.4s						
PRU	**Pruhonice**	**2.94**	**268**	*e*PN	**Pn**	**23 29 59.9**	**-1.1**
PRU				*e*PG	**Pb**	**23 30 05.2**	**-1.1**
PRU				*e*SG	**Sb**	**23 30 44.8**	**+2.1**
	comp=Z,3.3nm,0.4s						
PRU	**Pruhonice**	**2.94**	**268**	Pn	**Pn**	**23 29 59.9**	**-1.1**
PRU				Sg	**Sb**	**23 30 44.8**	**+2.1**
	3.3nm,0.4s						
BRG	**Berggiesshubel**	**3.36**	**284**	SG	**Sg**	**23 30 59.3**	**-1.5**
	3.1nm,0.4s						
KHC	**Kasperske Hory**	**3.74**	**256**	*e*PN	**Pn**	**23 30 11.1**	**-0.9**
KHC				*e*SN	**Sn**	**23 30 59.0**	**+2.3**
KHC				*e*SG	**Sb**	**23 31 10.2**	**+4.4**
	comp=Z,3.6nm,0.6s						
KHC	**Kasperske Hory**	**3.74**	**256**	Pn	**Pn**	**23 30 11.1**	**-0.9**
KHC				Sg	**Sb**	**23 31 10.2**	**+4.4**
	3.6nm,0.6s						

GUC 27 23:32:57.1±0.4, 23.96S×67.54W, h223km±8km, ML4.1, 3C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.85**	**316**	⇑*i*P	Pn	23 33 37.6	+1.3
LVC				*i* S	S	23 34 08.7	+2.0
PB04	**Plate Boundary**	**2.47**	**313**	⇓*i*P	Pn	23 33 49.6	+7.4
PB04				*i* S	S	23 34 28.5	+11
PB04				AML	AML	23 34 31.2	
	comp=E,218nm,0.3s						
CEN1	**Los Morros**	**2.51**	**283**	⇓*i*P	Pn	23 33 44.8	+2.0
CEN1				*i* S	S	23 34 21.3	+3.0
ANCH	**Antofagasta**	**2.65**	**276**	⇑*i*P	Pn	23 33 45.8	+1.7
ANCH				*i* S	S	23 34 22.4	+1.8
PB09	**Plate Boundary**	**2.67**	**324**	⇑*i*P	Pn	23 33 47.4	+2.8
PB09				*i* S	S	23 34 25.1	+3.5
PB09				AML	AML	23 34 26.2	
	comp=N,477nm,0.5s						
PB01	**Plate Boundary**	**3.42**	**328**	*e*P	Pn	23 33 55.2	+2.2
PB01				*i* S	S	23 34 39.2	+2.3
PB01				AML	AML	23 34 39.9	
	comp=E,82nm,0.2s						

IDC 28 00:10:19.7±3.2, 2.52N×95.71E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/26, mbtmp3.7/5, ML4.4/1, Error ellipse: s-maj=111.4km s-min=31.0km az=60.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**16.16**	**11**	Pn	Pn	00 14 09.3	+1.0
	0.5nm,0.3s,baz=187,slow=12,SNR=4.4						
WRA	**Warramunga Arr**	**43.99**	**122**	P	P	00 18 29.2	0.0
	0.2nm,0.4s,baz=301,slow=9.4,SNR=2.6						
MKAR	**Makanchi Array**	**45.62**	**347**	P	P	00 18 42.4	+0.5
	0.6nm,0.4s,baz=159,slow=8.7,SNR=12						
MKAR				pP		00 18 48.9	
	1.2nm,0.7s,baz=157,slow=8.3,SNR=11						
SONM	**Songino Array**	**46.08**	**10**	P	P	00 18 45.3	-0.3
	0.8nm,0.6s,baz=188,slow=9.0,SNR=8.3						
SONM				pP		00 18 51.4	
	0.9nm,0.9s,baz=189,slow=7.7,SNR=5.6						
ZALV	**Zalesovo Beam**	**52.04**	**352**	P	P	00 19 30.1	-0.9
	1.1nm,0.6s,baz=186,slow=9.3,SNR=6.0						

*ISK **28** 00:13:21.2, 37.67N×38.28E, h6km, MD2.8*
*DDA **28** 00:13:22.2, 37.70N×38.28E, h7km, MD3.2*
*CSEM **28** 00:13:22.0±0.2, 37.69N×38.28E, h5km, MD3.2, Error ellipse: s-maj=5.1km s-min=3.8km az=133.0*

ISC 28 00:13:22.3±1.1, 37.70N±0.02×38.28E±0.03, h5km±10km, n25, σ0§59/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.23**	**176**	*i* P	**Pg**	**00 13 26.9**	**+0.2**
ATAB				*i* S	**Sg**	**00 13 30.1**	**+0.4**
ATAB	**Bozova**	**0.23**	**176**	*i* P	**Pg**	**00 13 26.9**	**+0.2**
ATAB				*i* S	**Sg**	**00 13 30.1**	**+0.4**
URFA	**Urfa**	**0.50**	**120**	*e*PG	**Pg**	**00 13 31.1**	**-0.9**
URFA				*e*SG	**Sg**	**00 13 38.5**	**0.0**
URFA	**Urfa**	**0.50**	**120**	*e*Pg	**Pg**	**00 13 31.1**	**-0.9**
URFA				*e*Sg	**Sg**	**00 13 38.5**	**0.0**
MYA	**Malataya**	**0.64**	**11**	*e*PG	**Pg**	**00 13 34.3**	**-0.4**
MYA				*e*SG	**Sg**	**00 13 44.2**	**+1.2**
MYA	**Malataya**	**0.64**	**11**	*e*Pg	**Pg**	**00 13 34.3**	**-0.4**
MYA				*e*Sg	**Sg**	**00 13 44.2**	**+1.2**
AKCD	**Akcadag**	**0.66**	**335**	*i* P	**Pg**	**00 13 35.0**	**-0.1**
AKCD				*i* S	**Sg**	**00 13 43.5**	**-0.1**
AKCD	**Akcadag**	**0.66**	**335**	*i* P	**Pg**	**00 13 35.0**	**-0.1**
AKCD				*i* S	**Sg**	**00 13 43.5**	**-0.1**
ELZG	**Elazig**	**0.98**	**35**	*e*P	**Pb**	**00 13 42.2**	**+0.3**
ELZG				*e*S	**Sg**	**00 13 53.7**	**0.0**
ELZG	**Elazig**	**0.98**	**35**	*e*P	**Pb**	**00 13 42.2**	**+0.3**
ELZG				*e*S	**Sg**	**00 13 53.7**	**0.0**
GAZ	**Gaziantep**	**1.00**	**239**	*e*PG	**Pg**	**00 13 40.6**	**-0.8**
GAZ				*e*SG	**Sg**	**00 13 54.8**	**+0.5**
GAZ	**Gaziantep**	**1.00**	**239**	*e*Pg	**Pg**	**00 13 40.6**	**-0.8**
GAZ				*e*Sg	**Sg**	**00 13 54.8**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.06**	**50**	*e*PG	**Pg**	**00 13 42.2**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.06**	**50**	*e*Pg	**Pg**	**00 13 42.2**	**-0.5**
KMRS	**Kahramanmaras**	**1.11**	**261**	*e*PN	**Pg**	**00 13 42.8**	**-0.8**
KMRS	**Kahramanmaras**	**1.11**	**261**	*e*Pn	**Pg**	**00 13 42.8**	**-0.8**
AYKD	**Aykdinkavak**	**1.20**	**257**	*i* P	**Pg**	**00 13 44.4**	**-1.0**
AYKD				*i* S	**Sg**	**00 14 00.4**	**-0.5**
KUZU	**Kuzuini**	**1.33**	**227**	*i* P	**Pg**	**00 13 48.2**	**+0.4**
KUZU				*i* S	**Sn**	**00 14 06.6**	**+0.9**
KUZU	**Kuzuini**	**1.33**	**227**	*i* P	**Pg**	**00 13 48.2**	**+0.4**
KUZU				*i* S	**Sn**	**00 14 06.6**	**+0.9**
ANDN	**Andirin**	**1.54**	**266**	*i* P	**Pn**	**00 13 49.8**	**-0.7**
ANDN				*i* S	**Sn**	**00 14 10.8**	**-0.1**
ANDN	**Andirin**	**1.54**	**266**	*i* P	**Pn**	**00 13 49.8**	**-0.7**
ANDN				*i* S	**Sn**	**00 14 10.8**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.63**	**296**	*e*PN	**Pn**	**00 13 51.9**	**0.0**
SARI	**SarD1z-Kayseri**	**1.63**	**296**	*e*Pn	**Pn**	**00 13 51.9**	**0.0**
KOZT	**Kozan**	**1.96**	**264**	*e*PN	**Pn**	**00 13 55.9**	**-0.3**
KOZT	**Kozan**	**1.96**	**264**	*e*Pn	**Pn**	**00 13 55.9**	**-0.3**

*MOS **28** 00:23:40.6±1.1, 14.48N×92.12W, h33km, mb5.3/47, Error ellipse: s-maj=8.4km s-min=4.6km az=102.2*
*NEIC **28** 00:23:44.0±0.3, 14.40N×92.30W, mb5.0/125, MW5.0, MD4.6(MEX), Error ellipse: s-maj=7.1km s-min=3.9km az=215.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^16 Nm; Mrr3.58; Mθθ-1.23; Mϕϕ-2.35; Mrθ0.49; Mθϕ3.28; Mϕr-0.27; Best double couple: M=4.60000×10^16 NP1:ϕ326.00000°, δ42.00000°, λ98.00000°. NP2: ϕ134.00000°, δ49.00000°, λ83.00000°. Principal axes: T 3.6300, Plg83.0000°, Azm351.0000°; N 1.5200, Plg5.0000°, Azm139.0000°; P -5.1500, Plg3.0000°, Azm229.0000°;*
NEIC Felt at Guatemala. Also felt at Pijijiapan, Mexico.
*GCMT **28** 00:23:44.4±0.2, 14.32N×92.77W, h34km, MW5.1, Moment Tensor Solution. s74,c113; s81,c125; Moment tensor: Scale 10^16 Nm; Mrr5.39±.16; Mθθ-4.43±.11; Mϕϕ-0.96±.13; Mrθ2.33±.10; Mrϕ2.23±.08; Mθϕ-1.56±.13; Best double couple: M=6.10000×10^16 NP1:ϕ292.00000°, δ32.00000°, λ84.00000°. NP2:ϕ120.00000°, δ59.00000°, λ94.00000°. Principal axes: T 6.0800, Plg76.0000°, Azm41.0000°; N 0.1100, Plg3.0000°, Azm298.0000°; P -6.1900, Plg14.0000°, Azm207.0000°; Data Used: II IU G CN IC.*
*CASC **28** 00:23:44.5±1.4, 14.15N×92.58W, h50km±66km, MD4.7, ML5.0, mb5.0(NEIC)*
*MEX **28** 00:23:44.5±1.4, 14.33N×92.79W, h16km±54km, MD4.6*
*BJI **28** 00:23:46.8, 14.50N×92.30W, h67km, mB5.2/7, Ms5.1/8, Ms7 4.7/7*
*ISCJB **28** 00:23:47.2±0.5, 14.52N±0.04×92.25W±0.03, h92km±3km, mb4.8/164, Error ellipse: s-maj=7.6km s-min=3.4km az=39.4*
*IDC **28** 00:23:48.7±2.6, 14.53N×92.24W, h88km±21km, mb4.4/30, mb1 4.6/32, mb1mx4.5/34, mbtmp4.4/32, MS4.4/24, Ms1 4.4/24, ms1mx4.3/30, Error ellipse: s-maj=16.7km s-min=9.6km az=61.0*

ISC 28 00:23:43.9±0.4, 14.41N±0.04×92.58W±0.04, h50km±3km, h50km:pP-P, n859, σ1§55/873, mb5.0/166, MS4.5/28, 197C-192D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.57**	**31**	*e*P	**Pn**	**00 23 55.9**	**-0.2**
THIG				*i* S	**Sn**	**00 24 06.0**	**+1.2**
THIG		**0.57**	**31**	*e*P	**Pn**	**00 23 55.9**	**-0.2**
THIG				*i* S	**Sn**	**00 24 06.0**	**+1.2**
JAT	**Jato**	**0.91**	**96**	*e*P	**Pn**	**00 24 02.1**	**+1.6**
PCIG		**1.43**	**334**	*e*P	**Pn**	**00 24 05.5**	**-1.9**
PCIG				*i* S	**Sn**	**00 24 22.4**	**-2.6**
PCIG		**1.43**	**334**	*e*P	**Pn**	**00 24 05.5**	**-1.9**
PCIG				*i* S	**Sn**	**00 24 22.4**	**-2.6**
FUG	**Fuego 3**	**1.68**	**89**	*e*P	**Pn**	**00 24 11.8**	**+0.7**
CCIG	**Comitan**	**1.90**	**13**	*e*P	**Pn**	**00 24 16.4**	**+2.3**
CCIG				*i* S	**Sn**	**00 24 39.5**	**+2.5**
CCIG	**Comitan**	**1.90**	**13**	*e*P	**Pn**	**00 24 16.4**	**+2.3**
CCIG				*i* S	**Sn**	**00 24 39.5**	**+2.5**
PCG	**Pacaya**	**1.91**	**90**	*e*P	**Pn**	**00 24 15.3**	**+1.1**
GCG	**Guatemala City**	**1.98**	**85**	*e*P	Pn	00 24 17.5	+2.3
GCG				*e*S	Sn	00 24 51.7	+13
NBG	**Las Nubes**	**2.17**	**85**	*e*P	Pn	00 24 20.5	+2.8
NBG				*e*S	Sn	00 24 57.0	+13
SCX	**San Cristobal**	**2.31**	**359**	*i* P	**Pn**	**00 24 22.0**	**+2.5**
SCX	**San Cristobal**	**2.31**	**359**	*i* P	**Pn**	**00 24 22.0**	**+2.5**
TGIG		**2.41**	**347**	*e*P	**Pn**	**00 24 21.6**	**+0.6**
TGIG				*i* S	**Sn**	**00 24 49.8**	**+0.5**
TGIG		**2.41**	**347**	*e*P	**Pn**	**00 24 21.6**	**+0.6**
TGIG				*i* S	**Sn**	**00 24 49.8**	**+0.5**
RBDL	**Robledal**	**2.82**	**96**	*e*P	**Pn**	**00 24 27.4**	**+0.7**
MRL	**Marmol**	**2.86**	**77**	*e*P	Pn	00 24 29.9	+2.6
RTR	**El Retiro**	**2.89**	**100**	*e*P	**Pn**	**00 24 28.0**	**+0.4**
SBLS	**San Blas**	**2.92**	**101**	*e*P	**Pn**	**00 24 28.1**	**0.0**
SNJE	**San Jose**	**2.93**	**100**	*e*P	**Pn**	**00 24 28.4**	**+0.2**
MTO2	**Montecristo 2**	**3.11**	**90**	*e*P	**Pn**	**00 24 31.6**	**+0.9**
BOQS	**Boqueron**	**3.27**	**102**	*e*P	**Pn**	**00 24 33.2**	**+0.3**
BOQS				*e*S	**Sn**	**00 25 12.3**	**+1.7**
SNET	**Serv Nac Est T**	**3.32**	**102**	*e*P	**Pn**	**00 24 34.0**	**+0.5**
SNET				*e*S	**Sn**	**00 25 11.6**	**-0.2**
SNET				AML	AML	00 25 37.8	
	comp=Z,9μm,0.7s						
LFU	**La Fuente**	**3.42**	**101**	*e*P	**Pn**	**00 24 35.5**	**+0.6**
LBRS	**Las Brisas**	**3.49**	**101**	*e*P	**Pn**	**00 24 36.4**	**+0.6**
LFRS	**El Faro**	**3.50**	**103**	⇑*e*P	**Pn**	**00 24 36.4**	**+0.4**
HUIG	**Huatulco**	**3.67**	**292**	*e*P	Pn	00 24 35.5	-2.7
HUIG				*i* S	Sn	00 25 16.4	-3.8
HUIG	**Huatulco**	**3.67**	**292**	*e*P	Pn	00 24 35.5	-2.7
HUIG				*i* S	Sn	00 25 16.4	-3.8
SNVI	**San Vicente**	**3.71**	**102**	*e*P	**Pn**	**00 24 39.8**	**+0.9**
TUIG	**Tuzandepetl**	**

TXAR S S 00 31 23.4 +7.8
baz=141,slow=21,SNR=2.1
TXAR PcP PcP 00 32 24.4 +0.6
comp=Z,0.1nm,0.3s,baz=159,slow=3.9,SNR=3.5
TXAR LR LR 00 36 45.2
comp=Z,425nm,18.1s,baz=180,slow=43
WHTX Lake Whitney 18.06 347 ⇑P **Pn 00 27 52.1 +1.0**
baz=18
332A Millersview 18.12 340 ⇑P **Pn 00 27 53.2 +1.2**
baz=18,SNR=20
430A Baggett Ranch, 18.14 335 ⇓P **Pn 00 27 54.1 +1.8**
baz=18,SNR=22
429A Davenport Ranc 18.27 334 ⇓P **Pn 00 27 55.9 +2.0**
baz=18,SNR=71
528A Cox Ranch, San 18.28 331 ⇓P **Pn 00 27 55.9 +1.8**
baz=18,SNR=17
331A San Angelo 18.29 338 ⇓P **Pn 00 27 55.3 +1.2**
baz=18,SNR=7.9
MASC Masc 18.42 69 *e*P **Pn 00 27 56.5 +0.8**
626A Big Bend Ranch 18.47 327 ⇓P **Pn 00 27 58.6 +2.3**
baz=19,SNR=104
232A Coleman 18.56 341 ⇓P **Pn 00 27 58.6 +1.2**
baz=19,SNR=5.5
330A Mertzon 18.66 336 ⇓P **Pn 00 27 59.9 +1.3**
baz=19,SNR=17
527A Woodward Ranch 18.67 329 ⇑P **Pn 00 28 00.5 +1.7**
baz=19,SNR=38
428A Kincaid Ranch, 18.71 332 ⇓P **Pn 00 28 01.3 +2.1**
baz=19,SNR=28
231A Bronte 18.82 339 ⇓P **Pn 00 28 01.7 +1.2**
baz=19,SNR=15
TIGA Tifton 18.84 24 ⇓P **P 00 27 59.4 -0.3**
baz=19,SNR=6.9
526A Mary Lane Ranc 18.85 328 ⇑P **Pn 00 28 02.2 +1.3**
baz=19,SNR=21
329A Wagon Wheel Ra 19.05 335 ⇑P **Pn 00 28 04.1 +0.7**
baz=19,SNR=20
230A Sterling City 19.07 337 ⇓P **Pn 00 28 04.0 +0.5**
baz=19,SNR=15
427A Hayter Ranch, 19.15 330 ⇑P **Pn 00 28 05.4 +0.9**
baz=19,SNR=31
LRAL Lakeview Retre 19.22 14 *e*P **Pn 00 28 04.6 -0.6**
comp=Z,37nm,0.8s
LRAL *e*S **S 00 31 36.0 -3.0**
ABTX Abilene, Hawle 19.24 342 ⇑P **P 00 28 05.4 +1.3**
baz=19,SNR=20
426A McDonald Obser 19.30 329 ⇓P **Pn 00 28 07.3 +0.9**
baz=20,SNR=54
328A Wristen Ranch, 19.32 333 ⇑P **P 00 28 06.8 +1.8**
baz=20,SNR=64
229A Bryant Ranch, 19.41 336 ⇑P **Pn 00 28 08.1 +0.6**
baz=20,SNR=23
131A Roby 19.52 340 ⇑P **Pn 00 28 09.2 +0.3**
baz=20,SNR=30
327A Balmorhea Ranc 19.62 331 ⇓P **P 00 28 10.2 +1.8**
baz=20
130A Snyder 19.65 339 ⇑P **P 00 28 10.4 +1.8**
baz=20,SNR=13
326A Caldwell Ranch 19.81 330 ⇑P **P 00 28 12.5 +2.1**
baz=20,SNR=137
Z32A Haskell 19.83 343 ⇑P **P 00 28 11.3 +0.7**
baz=20,SNR=37
OTAV Otavalo 19.84 134 *e*P **P 00 28 11.6 +0.3**
comp=Z,2.5nm,0.9s
228A UT Block 9, Go 19.86 334 ⇓P **P 00 28 12.4 +1.4**
baz=20,SNR=24
425A Indio Mountain 19.89 327 ⇑P **P 00 28 12.8 +1.4**
baz=20,SNR=68
129A Stewart Farms, 20.02 337 ⇑P **P 00 28 13.7 +1.1**
baz=20,SNR=11
Z31A Sharp Cattle R 20.04 341 ⇓P **P 00 28 13.7 +0.9**
baz=20,SNR=28
227A Bennet, Jal 20.07 333 ⇑P **P 00 28 15.1 +1.9**
baz=20,SNR=39
OXF Oxford 20.21 8 *e*P **P 00 28 15.4 +0.7**
OXF *e* 00 28 27.7
OXF pmax pmax
comp=Z,338nm,1.3s
OXF Oxford 20.21 8 *e*P **P 00 28 15.3 +0.7**
comp=Z,338nm,1.3s
OXF *e* 00 28 27.7
128A Castleberry Fa 20.25 335 ⇑P **P 00 28 16.5 +1.3**
baz=20,SNR=43
UALR University of 20.27 1 *e*Pn **P 00 28 15.2 -0.1**
comp=Z,808nm,2.2s
ROSC El Rosal 20.32 116 P Pn 00 28 19.8 +0.9
ROSC S Sn 00 32 12.6 +5.0
ROSC El Rosal 20.32 116 P Pn 00 28 19.8 +0.9
comp=Z,32nm,1.0s,baz=286,slow=13,SNR=24
ROSC S Sn 00 32 12.6 +5.0
comp=Z,4.6nm,0.6s,baz=285,slow=12,SNR=2.6
Z30A Sanderson Ranc 20.33 339 ⇑P **P 00 28 16.6 +0.5**
baz=20,SNR=29
325A Bean Ranch, Si 20.35 328 ⇓P **P 00 28 17.7 +1.3**
baz=21,SNR=33
Y32A R-V Farms, Ver 20.47 344 ⇓P **P 00 28 17.8 +0.3**
baz=21,SNR=11
Z29A Hungry Hill Ra 20.52 338 ⇓P **P 00 28 18.8 +0.8**
baz=21,SNR=25
226B Tecolote Peak, 20.53 331 ⇑P **P 00 28 20.3 +2.1**
baz=21,SNR=120
CLNB Carlsbad 20.55 332 *e*P **P 00 28 19.7 +1.2**
comp=Z,9.3nm,0.7s
GOGA Godfrey 20.64 22 *e*P Pn 00 28 20.9 -1.1
GOGA pmax pmax
comp=Z,44nm,0.8s
GOGA Godfrey 20.64 22 *e*Pn Pn 00 28 20.9 -1.1
comp=Z,44nm,0.8s
127A Arkansas Junct 20.67 333 ⇓P **P 00 28 20.5 +0.8**
baz=21,SNR=25
324A Moseley Ranch, 20.67 327 ⇑P **P 00 28 20.6 +0.8**
baz=21,SNR=52
Y31A Rekieta Farm, 20.67 342 ⇓P **P 00 28 20.2 +0.6**
baz=21,SNR=50
GDL2 Guadalupe Moun 20.72 331 *e*P **P 00 28 22.5 +2.2**
Y30A Stafford Cattl 20.79 340 ⇓P **P 00 28 21.6 +0.6**
baz=21,SNR=35
Z28A Tucker Farm, M 20.80 336 ⇑P **P 00 28 21.7 +0.6**
baz=21
MNTX Cornudas Mount 20.82 328 *e*P **P 00 28 22.4 +1.1**
comp=Z,26nm,0.8s
225A Deer Hill, Car 20.87 330 ⇓P **P 00 28 23.4 +1.4**
baz=21,SNR=60
PLAL Pickwick Lake 20.88 10 *e*P **P 00 28 21.3 -0.6**
SDDR Presa de Saban 20.88 75 *e*Pn **P 00 28 22.7 +0.6**
comp=Z,56nm,0.9s
126A Clayton Basin, 20.93 332 ⇑P **P 00 28 23.9 +1.3**
baz=21,SNR=46
WMOK Wichita Mounta 21.00 346 *e*P **P 00 28 23.1 0.0**
WMOK *e*S **S 00 32 14.3 -0.1**
WMOK pmax pmax
comp=Z,22nm,0.8s
WMOK Wichita Mounta 21.00 346 *e*P **P 00 28 23.1 0.0**
comp=Z,22nm,0.8s
WMOK *e*S **S 00 32 14.2 -0.1**
Y29A Porterfield Fa 21.04 339 ⇑P **P 00 28 24.1 +0.4**
baz=21
HBAR Harrisburg 21.12 4 *e*P **P 00 28 26.6 +2.1**
Z27A Tatum 21.16 335 ⇑P **P 00 28 25.6 +0.6**
baz=21,SNR=51
224A Cornudas Mount 21.19 328 ⇓P **P 00 28 26.6 +1.1**
baz=21,SNR=111
X31A McDonald Ranch 21.21 343 ⇑P **P 00 28 26.1 +0.6**
baz=21,SNR=28
125A Gardner Draw, 21.24 331 ⇑P **P 00 28 27.1 +1.2**
baz=21,SNR=188
Y28A McKinney Farm, 21.30 337 ⇓P **P 00 28 26.4 -0.1**
baz=22,SNR=15
X30A Coker Ranch, T 21.31 341 ⇑P **P 00 28 27.1 +0.6**
baz=22,SNR=20
Z26A Caprock 21.45 333 ⇓P **P 00 28 29.1 +1.0**
baz=22,SNR=155
MSTX Muleshoe 21.55 336 ⇑P **P 00 28 29.3 +0.1**
baz=22,SNR=30
SWET Sewanee 21.56 15 *e*P **P 00 28 29.4 +0.2**
comp=Z,133nm,1.0s
X29A Tulia 21.58 339 ⇓P **P 00 28 29.9 +0.4**
baz=22,SNR=7.7
GNAR Gosnell 21.58 6 *e*P **P 00 28 29.9 +0.5**
comp=Z,5μm,1.3s
GNAR *e* 00 28 43.7
TUL1 Tulsa 21.60 353 ⇓P **P 00 28 29.0 -0.6**
baz=22
223A Chaparral, Ant 21.61 326 ⇓P **P 00 28 30.6 +0.7**
baz=22
Y27A Causey 21.63 335 ⇓P **P 00 28 29.9 -0.1**
baz=22,SNR=41
124A Stringfield Ra 21.66 329 ⇑P **P 00 28 32.4 +1.9**
baz=22,SNR=107
W31A Holland Ranch, 21.72 344 ⇓P **P 00 28 31.0 +0.1**
baz=22,SNR=6.3
Z25A Roswell 21.78 332 ⇑P **P 00 28 33.0 +1.3**
baz=22,SNR=51
X28A Dimmitt 21.82 338 ⇓P **P 00 28 32.1 0.0**
baz=22
W30A Cricket Farms 21.90 342 ⇓P **P 00 28 33.2 +0.4**
baz=22
Y26A Elida 21.93 334 ⇑P **P 00 28 34.1 +0.8**
baz=22,SNR=17
GLAT Glass 21.96 7 *e*P **P 00 28 33.8 +0.4**
GLAT *e* 00 28 46.2
AMTX Amarillo 21.97 340 *e*P **P 00 28 33.8 +0.1**
comp=Z,81nm,0.9s
AMTX S Sn 00 32 42.6 -3.6
123A Bell Site, Whi 22.01 328 ⇓P **P 00 28 35.4 +1.2**
baz=22,SNR=8.1
WVT Waverly 22.04 10 *e*P **P 00 28 33.2 -1.1**
WVT *e* 00 28 47.8
WVT pmax pmax
comp=Z,76nm,1.3s
WVT Waverly 22.04 10 *e*P **P 00 28 33.1 -1.1**
comp=Z,76nm,1.3s
WVT *e* 00 28 47.8
222A Williams Famil 22.05 325 ⇓P **P 00 28 35.6 +1.0**
baz=22,SNR=21
Z24A Sheeppen Canyo 22.13 331 ⇑P **P 00 28 37.1 +1.6**
baz=22,SNR=27
CPCT Cooper Cave 22.16 18 *e*P **P 00 28 35.8 +0.2**
SDV Santo Domingo 22.17 102 *e*P **P 00 28 34.2 -1.9**
comp=Z,31nm,0.6s
W29A Amraillo 22.18 340 ⇑P **P 00 28 36.7 +0.8**
baz=22,SNR=18
V31A Spring Creek L 22.25 344 ⇑P **P 00 28 38.2 +1.6**
baz=22,SNR=15
X27A F and S Farms, 22.27 337 ⇓P **P 00 28 37.2 +0.3**
baz=22,SNR=20
PARMO Parma 22.30 6 *e*P **P 00 28 36.7 -0.4**
320A Kipp Ranch, An 22.31 322 ⇑P **P 00 28 39.7 +2.3**
baz=22,SNR=12
Y25A Mesa, Roswell 22.31 333 ⇓P **P 00 28 38.6 +1.1**
baz=22,SNR=106
221A Mesquite Ranch 22.36 324 ⇑P **P 00 28 40.1 +2.2**
baz=23,SNR=20
122A Conniff Cattle 22.45 327 ⇓P **P 00 28 40.3 +1.4**
baz=23
X26A CR and CF Fran 22.47 335 ⇑P **P 00 28 39.4 +0.3**
baz=23,SNR=23
V30A Spur Ranch, Mi 22.47 343 ⇑P **P 00 28 39.9 +0.9**
baz=23
W28A Vega 22.49 339 ⇓P **P 00 28 39.4 +0.1**
baz=23,SNR=9.7
Z23A Rita Site, Whi 22.50 329 ⇑P **P 00 28 40.4 +1.0**
baz=23,SNR=71
TKL Tuckaleechee C 22.58 19 P **P 00 28 39.6 -0.5**
TKL Tuckaleechee C 22.58 19 P **P 00 28 39.6 -0.5**
comp=Z,40nm,0.9s,baz=207,slow=8.0,SNR=46
TKL LR LR 00 39 20.7
comp=Z,908nm,19.4s,baz=190,slow=42
W27A Bowe Ranch, En 22.63 337 ⇑P **P 00 28 41.2 +0.5**
baz=23,SNR=70
Y24A Capitan 22.65 331 ⇓P **P 00 28 42.6 +1.5**
baz=23,SNR=148
220A Playas Peak, P 22.71 323 ⇓P **P 00 28 43.6 +1.9**
baz=23,SNR=34
121A Cookes Peak, D 22.75 325 ⇑P **P 00 28 44.1 +2.0**
baz=23,SNR=45
319A Douglas 22.79 321 ⇑P **P 00 28 44.6 +2.1**
baz=23,SNR=22
X25A Clemmons Ranch 22.81 334 ⇓P **P 00 28 43.7 +1.0**
baz=23,SNR=38
U31A Nine Bar Ranch 22.81 345 ⇓P **P 00 28 43.1 +0.5**
baz=23
V29A Stinnett 22.83 341 ⇑P **P 00 28 43.3 +0.5**
baz=23
Z22A Elephant Butte 22.86 328 ⇓P **P 00 28 44.4 +1.1**
baz=23,SNR=33
W26A Owens Ranch, T 22.92 336 ⇓P **P 00 28 44.2 +0.4**
baz=23
V28A Channing 22.95 340 ⇓P **P 00 28 44.6 +0.5**
baz=23,SNR=5.4
Y23A Lovelace Mesa, 22.95 330 ⇓P **P 00 28 45.7 +1.5**
baz=23,SNR=74
KMSC Kings Mountain 22.99 24 ⇑P **P 00 28 43.5 -0.8**
baz=23,SNR=18
V27A Dan Oppiter Fa 23.16 338 ⇓P **P 00 28 46.4 +0.1**
baz=23
U30A WK&E Inc. Balk 23.18 343 ⇓P **P 00 28 46.9 +0.6**
baz=23,SNR=14
X24A Lazy VL Ranch, 23.18 332 ⇑P **P 00 28 47.4 +0.9**
baz=23,SNR=38
120A U Bar Ranch, L 23.24 324 ⇑P **P 00 28 49.2 +2.2**
baz=24,SNR=35
Z21A St. Cloud Mine 23.28 327 ⇓P **P 00 28 49.2 +1.7**
baz=24,SNR=25
U29A Oasis Ranch, S 23.28 342 ⇑P **P 00 28 48.0 +0.6**
baz=24,SNR=13
W25A X Bar L Ranch, 23.32 335 ⇓P **P 00 28 48.5 +0.8**
baz=24,SNR=58
SIUC Southern Illin 23.40 7 *e*P **P 00 28 48.9 +0.6**
comp=Z,206nm,0.8s
Y22A Socorro 23.40 329 ⇑P **P 00 28 50.0 +1.4**
baz=24,SNR=38
BNM Barren Site 23.41 330 *e*P **P 00 28 49.8 +1.1**
comp=Z,41nm,1.1s
T31A Randall Ranch, 23.46 346 ⇑P **P 00 28 48.8 -0.2**
baz=24,SNR=9.9
TZTN Tazewell 23.47 18 *e*P **P 00 28 48.2 -0.8**
comp=Z,307nm,1.6s
Y22D IRIS PASSCAL I 23.49 329 ⇑P **P 00 28 50.5 +1.0**
baz=24
U28A Mallet 23.52 340 ⇓P **P 00 28 49.9 +0.3**
baz=24,SNR=8.7
LPM Los Pinos Moun 23.54 330 *e*P **P 00 28 51.9 +1.9**
X23A Hourglass Bar 23.54 331 ⇑P **P 00 28 51.2 +1.3**
baz=24,SNR=21
V26A Tequesquite Ra 23.55 337 ⇑P **P 00 28 50.5 +0.5**
baz=24,SNR=49
LENM Lemitar 23.59 329 *e*P **P 00 28 53.1 +2.7**
T30A Plains 23.64 344 ⇑P **P 00 28 51.2 +0.6**
baz=24,SNR=10
Z20A Nine Sixteen R 23.64 325 ⇑P **P 00 28 53.0 +2.2**
baz=24,SNR=34
W24A Lazy 6 Ranch, 23.71 333 ⇓P **P 00 28 53.1 +1.5**
baz=24,SNR=121
U27A Thompson Grove 23.76 339 ⇓P **P 00 28 52.4 +0.5**
baz=24,SNR=31
Y21A Point of Rocks 23.82 328 ⇓P **P 00 28 54.7 +2.0**
baz=24,SNR=17
USIN University of 23.86 10 *e*P **P 00 28 52.7 +0.1**
comp=Z,590nm,1.8s
LAZ Ladron 23.86 329 *e*P **P 00 28 55.0 +2.1**
comp=Z,22nm,1.2s
LAZ *e* 00 29 08.0
S31A Mullinville 23.91 346 ⇓P **P 00 28 53.4 +0.2**
baz=24
V25A Rancho No Teng 23.91 335 ⇓P **P 00 28 54.9 +1.4**
baz=24,SNR=61
T29A Hugoton 23.95 343 ⇑P **P 00 28 54.0 +0.5**
baz=24
ANMO Albuquerque 23.97 331 P **P 00 28 55.6 +1.7**
comp=Z,64nm,0.8s
ANMO Albuquerque 23.97 331 P **P 00 28 55.6 +1.7**
comp=Z,22nm,0.8s,baz=151,slow=12,SNR=78
ANMO LR LR 00 39 52.1
comp=Z,375nm,18.2s,baz=258,slow=40
W23A Werner Place, 24.00 332 ⇓P **P 00 28 55.5 +1.3**
baz=24,SNR=24
U26A Atchley Ranch, 24.06 337 ⇑P **P 00 28 56.0 +1.2**
baz=24,SNR=63
V24A Rampart Ranch, 24.09 334 ⇑P **P 00 28 56.7 +1.7**
baz=24,SNR=26
Y20A Horse Springs, 24.12 326 ⇑P **P 00 28 57.8 +2.4**
baz=24,SNR=27
T28A Walsh 24.16 341 ⇑P **P 00 28 55.6 +0.1**
baz=24,SNR=8.3
S30A Montezuma 24.17 345 ⇓P **P 00 28 55.8 +0.3**
baz=24,SNR=26
SLM Saint Louis 24.21 4 *e*P **P 00 28 56.5 +0.6**
SLM pmax pmax
comp=Z,126nm,0.9s
SLM Saint Louis 24.21 4 *e*P **P 00 28 56.5 +0.6**
comp=Z,126nm,0.9s
X21A Alamocita Cree 24.22 328 ⇓P **P 00 28 58.7 +2.4**
baz=24,SNR=42
W22A Albuquerque 24.27 330 ⇑P **P 00 28 58.7 +2.1**
baz=24,SNR=13
T27A Campo 24.30 340 ⇓P **P 00 28 57.1 +0.2**
baz=24,SNR=17
U25A Circle Dot Ran 24.32 336 ⇑P **P 00 28 58.4 +1.3**
baz=24,SNR=67
S29A Ulysses 24.33 343 ⇓P **P 00 28 57.7 +0.7**
baz=24,SNR=9.6
TUC Tucson 24.36 320 *e*P **P 00 28 59.0 +1.6**
TUC Tucson 24.36 320 *e*P **P 00 28 59.0 +1.6**
comp=Z,12nm,1.5s
WCI Wyandotte Cave 24.36 12 *e*P **P 00 28 56.0 -1.3**
WCI *e* 00 29 11.1
WCI pmax pmax
comp=Z,211nm,1.0s
WCI Wyandotte Cave 24.36 12 *e*P **P 00 28 56.0 -1.3**
comp=Z,211nm,1.0s
WCI *e* 00 29 11.1
V23A Ortiz Mt. (NFS 24.50 333 ⇓P **P 00 29 01.1 +2.3**
baz=25,SNR=36
S28A Manter 24.53 342 ⇑P **P 00 28 58.9 +0.1**
baz=25,SNR=9.8
OLIL Olney 24.55 8 *e*P **P 00 28 58.9 0.0**
comp=Z,182nm,0.9s
CNNC Cliffs of the 24.59 30 *e*P **P 00 28 57.2 -2.1**
comp=Z,86nm,0.6s
X20A Quemado 24.66 327 ⇓P **P 00 29 02.2 +1.9**
baz=25
U24A Moreno Valley 24.68 335 ⇓P **P 00 29 02.2 +1.7**
baz=25,SNR=19
W21A San Fidel 24.68 329 ⇑P **P 00 29 01.8 +1.4**
baz=25,SNR=6.4
T26A Comanche Natio 24.70 339 ⇓P **P 00 29 01.4 +0.8**
baz=25,SNR=13
R30A Dighton 24.73 345 ⇑P **P 00 29 00.8 +0.1**
baz=25,SNR=33
KSU1 Kansas State U 24.85 353 *e*P **P 00 29 01.0 -0.6**
comp=Z,63nm,0.8s
S27A Las Animas 24.93 340 ⇓P **P 00 29 02.8 +0.2**
baz=25,SNR=22
T25A Trinidad 24.97 337 ⇓P **P 00 29 04.4 +1.4**
baz=25,SNR=52
V22A San Miguel Ran 24.97 332 ⇑P **P 00 29 05.0 +1.9**
baz=25,SNR=27
U23A El Rito 25.00 333 ⇑P **P 00 29 05.6 +2.4**
baz=25,SNR=162
S26A Kim 25.06 339 ⇓P **P 00 29 04.5 +0.8**
baz=25,SNR=18
R29A Marienthal 25.09 344 ⇑P **P 00 29 04.2 +0.3**
baz=25,SNR=14
W20A Ramah 25.12 328 ⇓P **P 00 29 06.7 +2.3**
baz=25,SNR=19
BLA Blacksburg 25.15 23 *e*P **P 00 29 03.7 -0.8**
BLA *e* 00 29 18.7
BLA *e* 00 32 38.3
BLA pmax pmax
comp=Z,67nm,1.0s
BLA Blacksburg 25.15 23 *e*P **P 00 29 03.7 -0.8**
comp=Z,67nm,1.0s
BLA *e* 00 29 18.7
BLA *e*PcP **PcP 00 32 38.3 +0.7**
T24A Torres, Weston 25.16 336 ⇑P **P 00 29 06.9 +2.1**
baz=25,SNR=77
R28A Tribune 25.20 343 ⇑P **P 00 29 05.8 +0.8**
baz=25,SNR=15
V21A Milan 25.23 330 ⇑P **P 00 29 06.9 +1.5**
baz=25
BLO Bloomington 25.23 11 *e*P **P 00 29 05.2 +0.1**
BLO *e*PP **pP 00 29 18.5 +0.6**
BLO pmax pmax
comp=Z,97nm,0.8s
BLO Bloomington 25.23 11 *e*P **P 00 29 05.2 +0.1**
comp=Z,97nm,0.8s
BLO *e*pP **pP 00 29 18.5 +0.6**
U22A Llaves 25.33 332 ⇑P **P 00 29 08.0 +1.6**
baz=26,SNR=55
214A Organ Pipe Nat 25.43 317 ⇑P **P 00 29 09.0 +1.9**
baz=26,SNR=10.0
S25A Robets Cordova 25.44 338 ⇓P **P 00 29 09.1 +1.9**
baz=26,SNR=43
X18A Snowflake 25.44 325 ⇓P **P 00 29 09.7 +2.4**
baz=26
R27A Eads 25.44 341 ⇑P **P 00 29 07.8 +0.6**
baz=26,SNR=6.6
T23A Casias Ranch, 25.53 334 ⇑P **P 00 29 10.2 +2.0**
baz=26,SNR=29
ATAH Atahualpa 25.62 146 P **P 00 29 11.2 +1.9**
ATAH Atahualpa 25.62 146 P **P 00 29 11.2 +1.9**
comp=Z,30nm,0.7s,baz=335,slow=6.6,SNR=21
ATAH LR LR 00 37 23.6
comp=Z,532nm,21.6s,baz=308,slow=32
V20A Brimhall 25.63 329 ⇑P **P 00 29 11.2 +2.1**
baz=26,SNR=13
R26A Arlington 25.67 340 ⇑P **P 00 29 10.6 +1.4**
baz=26,SNR=15
S24A Houchin Ranch, 25.71 336 ⇑P **P 00 29 12.1 +2.2**
baz=26,SNR=22
U21A Nageezi 25.74 331 ⇑P **P 00 29 12.4 +2.3**
baz=26,SNR=22
W18A Petrified Fore 25.76 326 ⇓P **P 00 29 12.1 +1.9**
baz=26
R25A Fountain Ranch 25.82 338 ⇓P **P 00 29 11.9 +1.3**
baz=26,SNR=22
Q28A Sharon Springs 25.87 343 ⇓P **P 00 29 11.9 +0.8**
baz=26,SNR=5.4
T22A Edith 25.88 333 ⇓P **P 00 29 13.4 +2.1**
baz=26,SNR=54
HUMP Col San Antoni 25.91 78 *e*PcP **PcP 00 32 40.4 +0.8**
SDCO Great Sand Dun 25.92 336 *e*P **P 00 29 13.2 +1.4**
comp=Z,26nm,1.1s
SDCO *e*PcP **PcP 00 32 40.3 +0.7**
KSCO Kaye Shedlock' 26.06 342 ⇓P **P 00 29 13.6 +0.8**
baz=26,SNR=5.4
S23A Nye Farm, Mont 26.09 335 ⇓P **P 00 29 14.9 +1.8**
baz=26
U20A Newcomb 26.11 330 ⇓P **P 00 29 15.6 +2.3**
baz=26,SNR=5.2
T21A Navajo Lake 26.14 332 ⇓P **P 00 29 15.6 +1.9**
baz=26,SNR=39
MTP Monte Pirata 26.19 78 *e*P **P 00 29 12.1 -1.9**
comp=Z,32nm,1.0s
R24A Sanders Place, 26.19 337 ⇑P **P 00 29 15.7 +1.6**
baz=26,SNR=14
HDIL Hopedale 26.20 6 *e*pP pP 00 29 28.0 +1.2
X16A Lo Mia Camp, P 26.21 323 ⇓P **P 00 29 16.2 +1.8**
baz=26,SNR=21
Q26A Hugo 26.25 340 ⇑P **P 00 29 15.5 +1.0**
baz=26
SFIN Scholer Farm 26.31 9 ⇓P **P 00 29 14.4 -0.5**
baz=26
P28A Saint Francis 26.33 344 ⇑P **P 00 29 16.1 +0.9**
baz=26,SNR=9.3
Z14A Wintersburg 26.42 319 ⇑P **P 00 29 17.9 +1.9**
baz=27
R23A Moffat 26.43 336 ⇑P **P 00 29 18.2 +1.8**
baz=27,SNR=17
S22A 4UR Ranch, Cre 26.46 334 ⇑P **P 00 29 18.6 +2.0**
baz=27,SNR=82
Q25A Bedland, Calha 26.49 339 ⇓P **P 00 29 18.1 +1.3**
baz=27,SNR=5.8
P27A Ficken Ranch, 26.55 343 ⇓P **P 00 29 18.0 +0.8**
baz=27
113A Mohawk Valley, 26.57 317 ⇓P **P 00 29 19.1 +1.7**
baz=27
JSRW J. Sargeant Re 26.61 27 *e*P **P 00 29 17.2 -0.3**
MVCO Mesa Verde 26.77 331 *e*P **P 00 29 21.5 +2.2**
comp=Z,103nm,0.8s
MVCO Mesa Verde 26.77 331 ⇓P **P 00 29 21.4 +2.0**
baz=27
P26A Davis Ranch, A 26.78 341 ⇑P **P 00 29 20.7 +1.4**
baz=27
S21A Coal Bank Pass 26.81 332 ⇑P **P 00 29 21.5 +1.7**
baz=27,SNR=12
Y14A Wickenburg 26.83 320 ⇓P **P 00 29 21.3 +1.6**
baz=27,SNR=7.4
R22A Saguache, Gunn 26.84 335 ⇓P **P 00 29 21.9 +1.8**
baz=27,SNR=17
Q24A Divide 26.85 338 ⇑P **P 00 29 21.4 +1.2**
baz=27
WUAZ Wupatki 26.96 325 *e*P **P 00 29 23.1 +2.2**
comp=Z,29nm,1.1s
WUAZ *e*PcP **PcP 00 32 43.5 +1.6**
WUAZ Wupatki 26.96 325 ⇑P **P 00 29 22.9 +1.9**
baz=27,SNR=15
P25A Willow Gulch B 27.00 340 ⇓P **P 00 29 22.9 +1.6**
baz=27
ACSO Alum Creek Sta 27.06 16 *e*P **P 00 29 21.2 -0.4**
comp=Z,31nm,0.8s
O27A Beecher Island 27.11 343 ⇑P **P 00 29 23.1 +0.9**

baz=27
S20A **Disappointment** 27.21 332 ⇓P P 00 29 25.3 +2.0
baz=27,SNR=22
P24A **Kohler Place,** 27.25 339 ⇓P P 00 29 25.0 +1.3
baz=27
R21A **Cimarron** 27.29 334 ⇑P P 00 29 25.7 +1.7
baz=28,SNR=8.6
N28A **Pribbeno Ranch** 27.32 345 ⇓P P 00 29 25.1 +1.0
baz=28
O26A **Horse Wrangler** 27.39 342 ⇓P P 00 29 26.1 +1.3
baz=28
Q22A **Crested Butte,** 27.44 335 ⇑P P 00 29 26.7 +1.2
baz=28,SNR=11
GLA **Glamis** 27.45 316 eP P 00 29 27.8 +2.5
GLA pmax pmax
comp=Z,112nm,2.1s
GLA **Glamis** 27.45 316 eP P 00 29 27.8 +2.5
comp=Z,112nm,2.1s
GLA **Glamis** 27.45 316 ⇑P P 00 29 26.9 +1.7
baz=28,SNR=7.2
P23A **Jefferson** 27.47 337 ⇓P P 00 29 27.5 +1.8
baz=28,SNR=36
R20A **Redvale** 27.51 332 ⇓P P 00 29 28.0 +2.0
baz=28,SNR=9.7
O25A **Wiggins** 27.53 341 ⇓P P 00 29 27.3 +1.3
baz=28
PV01 **Paradox Valley** 27.55 332 eP P 00 29 28.4 +2.0
comp=Z,4µm,1.1s
PV01 ePcP PcP 00 32 44.0 +0.6
Y12C **Blythe** 27.68 318 ⇑P P 00 29 29.2 +1.9
baz=28
OGNE **Ogallala** 27.69 344 ⇓P P 00 29 28.1 +0.8
baz=28
N27A **Anderson Farm,** 27.69 344 ⇑P P 00 29 28.5 +1.0
baz=28,SNR=6.5
Q21A **Lamborn Mesa,** 27.69 334 ⇓P P 00 29 29.2 +1.6
baz=28,SNR=10
SMCO **Snowmass** 27.74 335 eP P 00 29 30.1 +1.9
comp=Z,23nm,1.1s
ISCO **Idaho Springs** 27.76 338 eP P 00 29 29.1 +0.8
ISCO pmax pmax
comp=Z,6.0nm,0.8s
ISCO **Idaho Springs** 27.76 338 eP P 00 29 29.1 +0.8
comp=Z,5.7nm,0.8s
PDMCI **Parker Dam,Lak** 27.78 319 ⇓P P 00 29 30.0 +1.8
baz=28,SNR=6.6
O24A **Longmont** 27.85 339 ⇓P P 00 29 30.2 +1.2
baz=28
S18A **Hurst Farm, Bl** 27.87 329 ⇓P P 00 29 30.9 +1.7
baz=28,SNR=19
N26A **Koester Ranch,** 27.91 343 ⇓P P 00 29 29.9 +0.6
baz=28
PV04 **Paradox Valley** 27.91 332 eP P 00 29 32.2 +2.6
P22A **Eagle** 28.01 336 ⇑P P 00 29 31.8 +1.4
baz=28,SNR=6.7
SWSC **Sam W. Stewart** 28.04 315 ⇓P P 00 29 32.6 +2.1
baz=28
DVTC **Desert V Tower** 28.09 314 ⇓P P 00 29 32.8 +1.8
baz=28
Q20A **Ridgley Place,** 28.10 333 ⇑P P 00 29 32.7 +1.5
baz=28,SNR=7.0
U15A **North Rim** 28.13 325 ⇓P P 00 29 33.0 +1.4
baz=28,SNR=11
W13A **Hualapai Mount** 28.14 321 ⇑P P 00 29 33.5 +1.8
baz=28,SNR=15
P21A **Newcastle** 28.23 335 ⇑P P 00 29 34.3 +1.9
baz=28,SNR=12
BC3 **Big Chuckawall** 28.23 317 ⇑P P 00 29 34.3 +1.9
baz=28,SNR=17
O23A **Lake Granby, G** 28.23 338 ⇓P P 00 29 33.6 +1.1
baz=28
IRM **Iron Mountain** 28.34 318 ⇑P P 00 29 35.3 +2.1
baz=29,SNR=11
O22A **Kremmling** 28.42 337 ⇓P P 00 29 35.2 +1.0
baz=29,SNR=9.8
MONP **Monument Peak** 28.44 314 ⇑P P 00 29 36.2 +1.9
baz=29
JFWS **Jewell Farm** 28.47 4 eP P 00 29 35.0 +0.8
JFWS e*PP pP 00 29 45.4 -1.7
JFWS pmax pmax
comp=Z,34nm,1.2s
JFWS **Jewell Farm** 28.47 4 eP P 00 29 35.0 +0.8
comp=Z,34nm,1.2s
JFWS epP pP 00 29 45.4 -1.7
SDMD **Soldier's Deli** 28.49 26 eP P 00 29 34.0 -0.4
comp=Z,24nm,0.8s
P20A **De Beque** 28.60 334 ⇑P P 00 29 37.4 +1.8
baz=29,SNR=12
BELC **Belle Mtn. Jos** 28.80 317 ⇓P P 00 29 39.5 +2.0
baz=29,SNR=5.9
O21A **Pagoda** 28.82 336 ⇓P P 00 29 40.3 +2.6
baz=29
AAM **Ann Arbor** 28.84 14 eP P 00 29 36.4 -1.1
AAM e 00 29 50.3
AAM pmax pmax
comp=Z,14nm,0.8s
AAM **Ann Arbor** 28.84 14 eP P 00 29 36.4 -1.1
comp=Z,14nm,0.8s
AAM e 00 29 50.2
N23A **Red Feather La** 28.84 339 ⇓P P 00 29 39.4 +1.5
baz=29
PFO **Pinyon Flat Ob** 28.88 316 eP P 00 29 40.7 +2.6
PFO **Pinyon Flat Ob** 28.88 316 P P 00 29 40.2 +2.2
comp=Z,2.9nm,0.7s,baz=117,slow=12,SNR=6.2
PFO LR LR 00 41 48.4
comp=Z,628nm,20.7s,baz=132,slow=37
PFO **Pinyon Flat Ob** 28.88 316 ⇑P P 00 29 40.3 +2.2
baz=29
N22A **Wattenberg Ran** 28.95 338 ⇓P P 00 29 40.4 +1.7
baz=29,SNR=5.3
P19A **Cripple Cowboy** 28.96 333 ⇓P P 00 29 40.6 +1.7
baz=29
M24A **Cheyenne** 28.98 341 ⇑P P 00 29 40.8 +1.8
baz=29
PHWY **Pilot Hill** 29.04 340 eP P 00 29 41.2 +1.6
comp=Z,7.6nm,1.0s
PHWY ePcP PcP 00 32 48.2 +1.2
O20A **White River Ci** 29.07 335 ⇑P P 00 29 41.7 +2.0
baz=29,SNR=8.6
SSPA **Standing Stone** 29.10 23 eP P 00 29 39.3 -0.5
comp=Z,12nm,0.9s
MVL **Millersville** 29.19 26 eP P 00 29 40.4 -0.2
comp=Z,20nm,0.9s
SRU **San Rafael** 29.25 331 ⇑P P 00 29 43.1 +1.7
baz=30,SNR=9.3
N21A **Black Mountain** 29.31 336 ⇑P P 00 29 44.1 +2.1
baz=30,SNR=19
MURC **Murrieta** 29.38 315 ⇑P P 00 29 44.8 +2.4
baz=30
Q16A **Castle Valley** 29.41 330 ⇓P P 00 29 44.8 +2.0
baz=30,SNR=6.5
ECSD **EROS Data Cent** 29.42 354 eP P 00 29 41.6 -1.0
comp=Z,11nm,0.8s
HEC **Hector,Ludlow** 29.52 318 ⇓P P 00 29 45.8 +2.1
baz=30,SNR=5.5
M22A **Cedar Creek Ra** 29.52 338 ⇑P P 00 29 45.7 +1.8
baz=30
P18A **Preston Nutter** 29.53 332 ⇑P P 00 29 45.8 +1.8
baz=30,SNR=17
CCUT **Cedar City** 29.53 325 eP P 00 29 46.8 +2.8
comp=Z,14nm,1.1s
O19A **Miners Draw (B** 29.57 334 ⇓P P 00 29 46.0 +1.8
baz=30
MSU **Marysvale** 29.60 328 eP P 00 29 46.6 +2.0
MSU e 00 32 50.0
MSU **Marysvale** 29.60 328 eP P 00 29 46.6 +2.0
MSU ePcP PcP 00 32 50.0 +1.5
TUQ **Turquoise Moun** 29.63 319 ⇑P P 00 29 46.6 +1.8
baz=30
N20A **Spence Gulch,** 29.66 336 ⇑P P 00 29 46.9 +1.8
baz=30,SNR=48
ARUT **Antelope Range** 29.75 325 eP P 00 29 47.5 +1.7
ARUT **Antelope Range** 29.75 325 eP P 00 29 47.5 +1.7
SCG **Saint Claude** 29.84 83 eP S 00 34 41.8 +1.4
L23A **Garrett** 29.85 340 ⇓P P 00 29 48.0 +1.3
baz=30,SNR=14
M21A **Separation Pea** 29.98 337 ⇑P P 00 29 49.6 +1.7
baz=30,SNR=17
L22A **Ellis Ranch, M** 30.02 339 ⇑P P 00 29 49.9 +1.7
baz=30
BFSC **Mount Baldy Ra** 30.05 315 ⇑P P 00 29 50.1 +1.5
baz=30
CIS **Catalina Islan** 30.11 313 ⇓P P 00 29 51.4 +2.5
baz=30
GSC **Goldstone** 30.12 318 ePcP PcP 00 32 51.4 +1.7
GSC **Goldstone** 30.12 318 ⇓P P 00 29 50.9 +1.9
baz=30
M20A **Sweetwater, Wa** 30.19 336 ⇑P P 00 29 51.2 +1.4
baz=30,SNR=12
L21A **Rawlins** 30.29 338 ⇑P P 00 29 52.1 +1.5
baz=30,SNR=23
K23A **Bowen Ranch, D** 30.40 341 ⇓P P 00 29 52.8 +1.3
baz=31
BRSD **Miller** 30.42 351 ⇓P P 00 29 52.0 +0.5
baz=31
MPU **Maple Canyon** 30.48 330 eP P 00 29 54.3 +2.0
comp=Z,24nm,1.0s
M19A **Rock Springs** 30.59 335 ⇓P P 00 29 54.7 +1.4
baz=31
K22A **Casper** 30.60 340 ⇓P P 00 29 54.6 +1.3
baz=31,SNR=8.4
DAU **Daniels Canyon** 30.62 331 eP P 00 29 55.7 +2.1
DAU **Daniels Canyon** 30.62 331 eP P 00 29 55.7 +2.1
EDW2 **Edwards Air Fo** 30.65 316 ⇑P P 00 29 55.4 +1.8
baz=31
L20A **Wamsutter** 30.70 337 ⇑P P 00 29 55.3 +1.1
baz=31
SPMN **St. Paul** 30.71 360 ⇓P P 00 29 54.7 +0.6
baz=31,SNR=7.9
JLU **Jordanelle** 30.86 331 eP P 00 29 57.6 +1.9
comp=Z,27nm,1.6s
FURC **Furnace Creek,** 30.87 320 ⇓P P 00 29 57.8 +2.3
baz=31,SNR=7.2
MPMC **Manual Prospec** 31.02 319 ⇓P P 00 29 59.2 +2.1
baz=31,SNR=13
I24A **Kuemmerle Ranc** 31.10 343 ⇓P P 00 29 58.6 +0.9
baz=31
L19A **Farson** 31.18 335 ⇑P P 00 29 59.8 +1.4
baz=31
BINY **Binghamton** 31.18 24 eP P 00 29 56.4 -1.9
comp=Z,26nm,0.8s
BINY ePcP PcP 00 32 52.5 +0.3
RSSD **Black Hills** 31.18 344 eP P 00 29 59.4 +1.0
RSSD pmax pmax
comp=Z,6.0nm,0.8s
RSSD **Black Hills** 31.18 344 eP P 00 29 59.4 +1.0
comp=Z,6.3nm,0.8s
DUG **Dugway** 31.20 329 eP P 00 30 00.5 +2.0
DUG pmax pmax
comp=Z,33nm,1.9s
DUG **Dugway** 31.20 329 eP P 00 30 00.5 +2.0
comp=Z,32nm,1.9s
DUG **Dugway** 31.20 329 ⇑P P 00 30 00.7 +2.2
baz=31,SNR=6.2
M17A **Scullys Gap (B** 31.20 333 ⇓P P 00 30 00.3 +1.6
baz=31,SNR=14
K20A **Yellowstone Ra** 31.25 337 ⇑P P 00 30 00.3 +1.3
baz=31
J22A **Midwest** 31.26 340 ⇓P P 00 30 00.3 +1.2
baz=31
L18A **Fontenelle, Gr** 31.31 334 ⇑P P 00 30 01.1 +1.6
baz=32,SNR=16
R11A **Troy Canyon, C** 31.34 324 ⇓P P 00 30 02.1 +2.1
baz=32,SNR=12
ARVC **Arvin** 31.35 316 ⇓P P 00 30 02.1 +2.3
baz=32
ISA **Isabella** 31.42 317 eP P 00 30 02.5 +2.0
ISA pmax pmax
comp=Z,28nm,1.9s
ISA **Isabella** 31.42 317 eP P 00 30 02.5 +2.0
comp=Z,28nm,1.9s
ISA **Isabella** 31.42 317 ⇓P P 00 30 02.6 +2.0
baz=32
GRAC **Grapevine Rang** 31.52 320 ⇑P P 00 30 03.6 +2.2
baz=32,SNR=6.3
J21A **Lysite** 31.53 339 ⇓P P 00 30 03.2 +1.7
baz=32,SNR=17
K19A **Absolon Red Bu** 31.59 337 ⇑P P 00 30 03.2 +1.1
baz=32,SNR=9.0
CWC **Cottonwood Cre** 31.63 319 ⇑P P 00 30 04.3 +1.9
baz=32
I22A **9 Mile Ranch,** 31.70 341 ⇓P P 00 30 04.2 +1.3
baz=32,SNR=6.4
J20A **Shoshoni** 31.76 338 ⇑P P 00 30 04.9 +1.4
baz=32,SNR=12
PDAR **Pinedale Array** 31.82 336 P P 00 30 05.0 +0.9
PDAR PcP PcP 00 32 54.4 +0.2
PDAR **Pinedale Array** 31.82 336 P P 00 30 05.0 +0.9
comp=Z,9.5nm,0.9s,baz=138,slow=9.3,SNR=38
PDAR PcP PcP 00 32 54.4 +0.2
comp=Z,2.4nm,0.9s,baz=134,slow=4.3,SNR=4.3
PDAR LR LR 00 45 01.4
comp=Z,387nm,19.5s,baz=152,slow=40
BW06 **Boulder Array** 31.82 336 eP P 00 30 05.2 +1.1
comp=Z,12nm,1.0s
BW06 epP pP 00 30 19.1 +2.0
BW06 esP sP 00 30 27.6 +4.6
BW06 ePcP PcP 00 32 53.7 -0.5
I21A **Big Trails, Te** 31.89 340 ⇑P P 00 30 06.2 +1.6
baz=32
PKM **Peak Mountain** 31.90 315 ⇓P P 00 30 06.8 +1.9
baz=32
H24A **Dirks Ranch, A** 31.90 344 ⇑P P 00 30 05.7 +1.0
baz=32,SNR=14
VES **Vestal, Richgr** 31.93 317 ⇑P P 00 30 07.3 +2.4
baz=32,SNR=5.7
J19A **Crowheart** 32.04 337 ⇑P P 00 30 07.3 +1.3
baz=32,SNR=14
H22A **Clearmont** 32.28 341 ⇓P P 00 30 08.8 +0.8
baz=32
I20A **Worland** 32.30 339 ⇑P P 00 30 09.6 +1.4
baz=32,SNR=22
RCTC **Rector, Farmer** 32.30 317 ⇑P P 00 30 10.5 +2.4
baz=32
SADO **Sadowa** 32.34 18 P P 00 30 06.9 -1.4
SADO **Sadowa** 32.34 18 P P 00 30 06.9 -1.4
comp=Z,6.5nm,0.8s,baz=235,slow=8.3,SNR=6.0
HVU **Hansel Valley** 32.40 331 eP P 00 30 11.3 +2.1
HVU pmax pmax
comp=Z,42nm,1.1s
HVU **Hansel Valley** 32.40 331 eP P 00 30 11.3 +2.1
comp=Z,42nm,1.1s
G24A **Alzada** 32.40 344 ⇑P P 00 30 10.5 +1.5
baz=33
MTUM **Tungsten Hills** 32.49 319 eP P 00 30 12.1 +2.1
H21A **Big Horn, Sher** 32.53 341 ⇑P P 00 30 11.5 +1.3
baz=33
G23A **Biddle** 32.55 343 ⇑P P 00 30 11.2 +0.9
baz=33
I19A **Meeteetse** 32.68 338 ⇑P P 00 30 13.4 +1.8
baz=33,SNR=14
I18A **Diamond G Ranc** 32.71 337 ⇓P P 00 30 13.3 +1.4
baz=33,SNR=12
H20A **Greybull** 32.72 339 ⇑P P 00 30 13.1 +1.3
baz=33
QUA2 **Belchertown** 32.80 28 eP P 00 30 10.8 -1.6
comp=Z,13nm,0.8s
QUA2 ePcP PcP 00 32 57.2 +0.6
G22A **Birney** 32.83 342 ⇑P P 00 30 13.5 +0.7
baz=33
REDW **Red Top Meadow** 32.83 335 eP P 00 30 14.9 +1.9
comp=Z,1.3nm,0.9s
ELK **Elko** 32.84 327 eP P 00 30 15.6 +2.5
comp=Z,93nm,0.9s
ELK ePcP PcP 00 32 58.0 +0.9
SNOW **Snow King Moun** 32.88 335 eP P 00 30 15.5 +2.1
comp=Z,167nm,0.9s
F24A **Ekalaka** 32.89 345 ⇓P P 00 30 14.1 +0.9
baz=33,SNR=5.3
NV11 **Mina Array Sit** 32.91 321 eP P 00 30 15.6 +1.9
NV11 ePcP PcP 00 32 57.9 +0.7
LOHW **Long Hollow** 32.94 336 eP P 00 30 15.7 +1.8
comp=Z,40nm,0.9s
TPAW **Teton Pass** 32.98 335 eP P 00 30 16.3 +2.0
comp=Z,58nm,0.9s
NVAR **Mina Array Bea** 33.00 321 P P 00 30 17.4 +2.9
NVAR PcP PcP 00 32 59.2 +1.7
NVAR **Mina Array Bea** 33.00 321 P P 00 30 17.4 +2.9
comp=Z,14nm,0.7s,baz=132,slow=8.4,SNR=122
NVAR PcP PcP 00 32 59.2 +1.7
comp=Z,4.9nm,0.8s,baz=127,slow=3.0,SNR=8.5
NVAR LR LR 00 45 31.2
comp=Z,1µm,18.5s,baz=229,slow=39
RRI2 **Red Ridge** 33.02 335 eP P 00 30 16.6 +2.0
comp=Z,39nm,0.9s
F23A **Volborg** 33.03 343 ⇓P P 00 30 15.3 +0.8
baz=33,SNR=8.4
MOOW **Moose Ponds** 33.11 336 eP P 00 30 17.1 +1.7
comp=Z,27nm,0.9s
ACCN **Adirondack Com** 33.11 26 eP P 00 30 14.2 -1.0
comp=Z,14nm,1.1s
G21A **Lodge Grass** 33.12 341 ⇑P P 00 30 16.2 +1.0
baz=33
DCID1 **Drake Creek** 33.16 335 eP P 00 30 18.3 +2.5
comp=Z,56nm,0.9s
I17A **Pilgrim Ck.** 33.19 336 ⇓P P 00 30 18.1 +2.1
baz=33,SNR=9.4
H19A **Powell** 33.23 338 ⇓P P 00 30 18.2 +1.9
baz=33,SNR=8.3
IMW **Indian Meadow** 33.31 335 eP P 00 30 18.9 +1.7
comp=Z,23nm,0.9s
NCB **Newcomb** 33.37 24 eP P 00 30 15.8 -1.6
comp=Z,11nm,0.8s
NCB ePcP PcP 00 32 57.8 -0.4
G20A **Bridger** 33.44 340 ⇑P P 00 30 18.9 +0.7
baz=34,SNR=11
H18A **Shoshone NF, C** 33.48 338 ⇓P P 00 30 19.6 +1.0
baz=34,SNR=26
I16A **Newdale** 33.52 335 ⇓P P 00 30 20.4 +1.5
baz=34,SNR=11
E24A **Baker** 33.52 345 ⇓P P 00 30 19.9 +1.1
baz=34,SNR=13
H17A **Grant Village** 33.59 336 ⇓P P 00 30 21.2 +1.6
baz=34,SNR=6.6
BMN **Battle Mountai** 33.69 325 eP P 00 30 22.5 +2.1
BMN pmax pmax
comp=Z,8.0nm,0.8s
BMN **Battle Mountai** 33.69 325 eP P 00 30 22.5 +2.1
comp=Z,8.2nm,0.8s
RLMT **Red Lodge** 33.72 339 eP P 00 30 21.2 +0.6
comp=Z,4.5nm,0.8s
RLMT epP pP 00 30 35.5 +1.8
RLMT ePcP PcP 00 33 00.2 +0.8
E23A **Ismay** 33.72 344 ⇓P P 00 30 20.9 +0.4
baz=34
LONY **Lake Ozonia** 33.77 23 eP P 00 30 19.6 -1.3
comp=Z,22nm,1.0s
E22A **Miles City** 33.84 343 ⇓P P 00 30 22.1 +0.6
baz=34,SNR=6.7
MDND **Maddock** 33.84 351 ⇓P P 00 30 21.4 -0.1
baz=34,SNR=7.1
F20A **Billings** 33.93 340 ⇓P P 00 30 23.6 +1.2
baz=34
J14A **Carey** 33.95 332 ⇓P P 00 30 24.3 +1.6
baz=34
YMR **Madison River** 33.97 336 eP P 00 30 24.0 +1.2
comp=Z,66nm,1.0s
G18A **Lazy EL Ranch,** 33.99 338 ⇓P P 00 30 23.8 +0.8
baz=34,SNR=7.9
I15A **Monteview** 34.04 334 ⇓P P 00 30 25.4 +2.1
baz=34
D24A **Glendive** 34.05 346 ⇑P P 00 30 24.4 +1.1
baz=34
CMB **Columbia Colle** 34.05 319 eP P 00 30 25.7 +2.2
CMB pmax pmax
comp=Z,6.0nm,0.9s
CMB **Columbia Colle** 34.05 319 eP P 00 30 25.7 +2.2
comp=Z,6.1nm,0.9s
H16A **Russell Place,** 34.11 336 ⇓P P 00 30 25.6 +1.6
baz=34,SNR=9.9
F19A **Roth Farm, Mol** 34.24 340 ⇓P P 00 30 25.9 +0.8
baz=34,SNR=12
E21A **Keefer Ranch,** 34.26 342 ⇑P P 00 30 25.8 +0.7
baz=34,SNR=7.1
QLMT **Earthquake Lak** 34.28 336 eP P 00 30 28.6 +3.0
J13A **Cove Ranch, Pi** 34.31 332 ⇓P P 00 30 27.2 +1.5
baz=34,SNR=14
D23A **Lindsay** 34.32 345 ⇓P P 00 30 26.8 +1.1
baz=34
FRNY **Flat Rock** 34.34 24 eP P 00 30 24.6 -1.1
comp=Z,18nm,1.2s
I14A **Mackay** 34.40 333 ⇓P P 00 30 29.0 +2.4
baz=35,SNR=39
G17A **Pierce Place,** 34.43 337 ⇑P P 00 30 29.6 +2.9
baz=35
C24A **Savage** 34.46 346 ⇓P P 00 30 28.3 +1.5
baz=35,SNR=8.9
HLID **Hailey** 34.55 332 eP P 00 30 29.8 +1.9
comp=Z,24nm,1.0s
HLID **Hailey** 34.55 332 ⇓P P 00 30 29.5 +1.7
baz=35,SNR=46
F18A **Big Timber** 34.55 339 ⇑P P 00 30 28.6 +0.9
baz=35,SNR=20
D22A **Cohagen** 34.56 344 ⇑P P 00 30 28.7 +1.0
baz=35,SNR=38
H15A **Lima** 34.60 334 ⇑P P 00 30 30.7 +2.4
baz=35,SNR=44
I13A **Wildhorse Cree** 34.69 332 ⇑P P 00 30 31.0 +1.9
baz=35,SNR=32
D21A **La Casta Ranch** 34.71 343 ⇓P P 00 30 30.8 +1.8
baz=35
E19A **Rath Farm, Rou** 34.72 340 ⇓P P 00 30 30.3 +1.1
baz=35,SNR=18
G16A **Moss Hill, Enn** 34.76 336 ⇑P P 00 30 31.4 +1.7
baz=35,SNR=16
MCMT **McKenzie Canyo** 34.86 334 eP P 00 30 32.6 +2.1
comp=Z,45nm,1.0s
MCMT epP pP 00 30 46.2 +2.6
F17A **Fitzpatrick Pl** 34.89 338 ⇓P P 00 30 32.5 +1.7
baz=35,SNR=27
C23A **Lambert** 34.90 345 ⇓P P 00 30 31.6 +1.0
baz=35,SNR=9.2
H14A **Leadore** 34.91 334 ⇑P P 00 30 33.2 +2.3
baz=35,SNR=50
G15A **Dillon** 34.99 335 ⇓P P 00 30 33.9 +2.4
baz=35,SNR=46
C22A **Vida** 35.03 344 ⇑P P 00 30 33.0 +1.3
baz=35,SNR=11
BOZ **Bozeman (W)** 35.04 336 eP P 00 30 33.0 +1.0
BOZ e*PP pP 00 30 46.8 +1.7
BOZ pmax pmax
comp=Z,7.0nm,0.8s
BOZ **Bozeman (W)** 35.04 336 eP P 00 30 33.0 +1.0
comp=Z,6.7nm,0.8s
BOZ epP pP 00 30 46.8 +1.7
I12A **Atlanta** 35.06 331 ⇑P P 00 30 34.5 +2.2
baz=35,SNR=52
D20A **Manuel Ranch,** 35.08 341 ⇓P P 00 30 33.3 +1.1
baz=35,SNR=15
MFID **Camas Ranch** 35.10 330 eP P 00 30 34.8 +2.3
comp=Z,20nm,1.0s
MFID **Camas Ranch** 35.10 330 ⇓P P 00 30 34.3 +1.7
baz=35,SNR=6.9
BEKR **Beckworth** 35.15 321 eP P 00 30 34.8 +1.8
comp=Z,5.4nm,1.0s
BEKR ePcP PcP 00 33 04.7 +1.1
F16A **Kennard Place,** 35.16 337 ⇓P P 00 30 34.5 +1.5
baz=35,SNR=6.4
DLMT **Dillon** 35.19 335 eP P 00 30 35.6 +2.3
comp=Z,60nm,1.1s
E18A **Harlowton** 35.20 339 ⇓P P 00 30 34.4 +1.1
baz=35,SNR=15
DGMT **Dagmar** 35.29 347 eP P 00 30 35.1 +1.1
comp=Z,29nm,0.9s
DGMT **Dagmar** 35.29 347 ⇑P P 00 30 34.8 +0.8
baz=36
D19A **Cripps Ranch,** 35.38 341 ⇑P P 00 30 36.0 +1.2
baz=36,SNR=13
C21A **Desert Coulee** 35.43 343 ⇓P P 00 30 36.0 +0.8
baz=36,SNR=11
E17A **Martinsdale** 35.44 338 ⇑P P 00 30 36.8 +1.3
baz=36,SNR=5.5
G14A **Jackson** 35.45 334 ⇑P P 00 30 37.3 +1.7
baz=36
B23A **Brockton** 35.47 346 ⇑P P 00 30 36.5 +1.0
baz=36,SNR=7.6
LRM **Limekiln Ridge** 35.51 336 eP P 00 30 38.0 +1.8
H12A **Diamond D Ranc** 35.51 332 ⇑P P 00 30 38.1 +1.9
baz=36,SNR=64
OHCM **Honcut** 35.52 320 eP P 00 30 37.6 +1.6
F15A **Butte** 35.54 336 ⇑P P 00 30 37.8 +1.4
baz=36,SNR=48
B22A **Reddig Ranch S** 35.57 345 ⇑P P 00 30 37.4 +1.0
baz=36,SNR=7.3
C20A **Veseth Ranch,** 35.59 342 ⇓P P 00 30 37.7 +1.1
baz=36,SNR=9.4
G13A **Cobalt** 35.66 333 ⇑P P 00 30 39.0 +1.7
baz=36,SNR=14
D18A **Linhart Farms,** 35.70 340 ⇓P P 00 30 39.1 +1.4
baz=36
E16A **East Helena** 35.80 337 ⇓P P 00 30 40.0 +1.5
baz=36,SNR=9.4
WVOR **Wild Horse Val** 35.84 326 eP P 00 30 40.1 +1.2
WVOR pmax pmax
comp=Z,19nm,1.0s
WVOR **Wild Horse Val** 35.84 326 eP P 00 30 40.1 +1.2
comp=Z,19nm,1.0s
ULM **Lac du Bonnet** 35.84 356 P P 00 30 37.8 -0.8
ULM **Lac du Bonnet** 35.84 356 P P 00 30 37.8 -0.8
comp=Z,10nm,0.8s,baz=181,slow=9.7,SNR=7.4
ULM LR LR 00 47 10.6
comp=Z,333nm,21.5s,baz=86,slow=39

F14A **Wisdom** 35.87 335 ⇓P P 00 30 40.8 +1.6
baz=36,SNR=6.9
C19A **Slack Wire Ran** 35.93 341 ⇑P P 00 30 40.8 +1.3
baz=36,SNR=11
D17A **Six Diamond Ra** 35.97 339 ⇓P P 00 30 41.4 +1.4
baz=36,SNR=22
E15A **Deer Lodge** 36.08 336 ⇓P P 00 30 42.2 +1.2
baz=36,SNR=28
G12A **Big Creek, Yel** 36.17 332 ⇑P P 00 30 43.3 +1.5
baz=36,SNR=43
D16A **Dana Ranch, Ca** 36.17 338 ⇑P P 00 30 42.9 +1.2
baz=36,SNR=6.7
A22A **Carney Farms,** 36.19 345 ⇓P P 00 30 42.9 +1.2
baz=36,SNR=6.5
F13A **Darby** 36.26 334 ⇓P P 00 30 43.8 +1.4
baz=36,SNR=34
C17A **Wharram Farm,** 36.41 339 ⇓P P 00 30 45.0 +1.3
baz=37,SNR=9.5
E14A **Clinton** 36.41 335 ⇓P P 00 30 45.0 +1.2
baz=37,SNR=15
EGMT **Eagleton** 36.41 340 *e*P P 00 30 45.3 +1.6
comp=Z,31nm,1.2s
EGMT **Eagleton** 36.41 340 ⇑P P 00 30 45.0 +1.3
baz=37,SNR=5.4
B19A **Brinkman Farms** 36.54 342 ⇑P P 00 30 45.9 +1.2
baz=37,SNR=17
D15A **Lincoln** 36.55 337 ⇓P P 00 30 46.0 +1.1
baz=37,SNR=9.0
F12A **Elk City** 36.63 333 ⇑P P 00 30 47.3 +1.7
baz=37,SNR=124
E13A **Victor** 36.72 335 ⇑P P 00 30 47.7 +1.4
baz=37,SNR=31
CHMT **Chamberlain Mo** 36.72 336 *e*P P 00 30 47.7 +1.2
B18A **Beardsley Farm** 36.74 341 ⇓P P 00 30 47.4 +0.9
baz=37
BMO **Blue Mountains** 36.88 330 *e*P P 00 30 48.3 +0.5
comp=Z,21nm,1.3s
BMO *e*PcP PcP 00 33 09.6 +1.1
C16A **Fuhringer Ranc** 36.90 338 ⇓P P 00 30 49.0 +1.2
baz=37,SNR=22
A19A **Klindworth Far** 36.90 342 ⇑P P 00 30 48.8 +1.0
baz=37,SNR=7.6
MSO **Missoula** 36.93 335 *e*P P 00 30 49.4 +1.3
comp=Z,26nm,1.2s
D14A **Greenough** 36.96 336 ⇑P P 00 30 49.3 +0.9
baz=37,SNR=15
B17A **L&G Farms, Che** 36.99 340 ⇓P P 00 30 49.1 +0.6
baz=37
SLMT **Seeley Lake** 37.09 336 *e*P P 00 30 50.5 +1.0
C15A **Salmond Ranch,** 37.19 338 ⇓P P 00 30 51.4 +1.1
baz=37,SNR=13
A18A **Metzger Ranch,** 37.23 341 ⇓P P 00 30 51.5 +0.9
baz=37,SNR=8.3
SAML **Samuel** 37.27 127 *e*P P 00 30 49.6 -1.5
comp=Z,18nm,0.9s
SAML *e*pP pP 00 31 01.5 -2.8
SAML *es*P sP 00 31 08.8 -1.4
SAML *e*PcP PcP 00 33 10.7 +0.6
D13A **Huson** 37.35 335 ⇓P P 00 30 52.8 +1.2
baz=38,SNR=34
B16A **M & M Farms, S** 37.41 339 ⇑P P 00 30 52.9 +0.8
baz=38,SNR=5.5
SWMT **Swartz Lake** 37.50 336 *e*P P 00 30 54.1 +1.1
A17A **Triple J Farms** 37.52 340 ⇑P P 00 30 53.7 +0.7
baz=38,SNR=6.7
C14A **Swan Lake** 37.62 336 ⇓P P 00 30 54.5 +0.6
baz=38
B15A **Bradely Ranch,** 37.62 338 ⇑P P 00 30 54.8 +0.8
baz=38,SNR=9.6
D12A **Red Ives Fores** 37.69 334 ⇑P P 00 30 55.4 +0.9
baz=38
YBMT **Yellow Bay** 37.80 336 *e*P P 00 30 56.8 +1.4
comp=Z,9.6nm,0.8s
JTMT **Jette** 37.81 336 *e*P P 00 30 56.9 +1.4
A16A **West Butte Ran** 37.83 339 ⇑P P 00 30 56.8 +1.1
baz=38
C13A **Hot Springs** 37.87 336 ⇑P P 00 30 57.1 +1.1
baz=38,SNR=10
BLMT **Blacktail Moun** 38.05 336 *e*P P 00 30 59.6 +1.9
BSMT **Bassoo Peak** 38.09 336 *e*P P 00 30 59.6 +1.6
A15A **Johnson Ranch,** 38.24 338 ⇓P P 00 31 00.5 +1.3
baz=38
C12B **Naegeli Ranch,** 38.26 335 ⇓P P 00 31 00.6 +1.3
baz=38,SNR=5.6
B13A **Whitefish** 38.39 336 ⇑P P 00 31 02.0 +1.7
baz=39,SNR=16
A14A **Double T Ranch** 38.49 338 ⇑P P 00 31 02.6 +1.3
baz=39
C11A **Tepee Creek (N** 38.69 334 ⇓P P 00 31 04.4 +1.6
baz=39
A13A **Flathead Natio** 38.83 337 ⇑P P 00 31 05.5 +1.5
baz=39
IRO **Indian Ridge** 38.86 325 P P 00 31 08.3 +3.8
LPAZ **La Paz** 38.91 141 *e*P P 00 31 05.5 -0.2
LPAZ PcP PcP 00 33 16.3 +0.4
LPAZ **La Paz** 38.91 141 P P 00 31 05.5 -0.2
comp=Z,4.4nm,0.6s,baz=331,slow=7.0,SNR=25
LPAZ PcP PcP 00 33 16.3 +0.4
comp=Z,1.6nm,0.7s,baz=358,slow=3.6,SNR=3.1
LPAZ LR LR 00 46 41.8
comp=Z,422nm,21.2s,baz=254,slow=35
B12A **Libby** 38.91 336 ⇑P P 00 31 06.4 +1.7
baz=39,SNR=8.4
BROR **Big Rock Looko** 39.13 325 P P 00 31 08.1 +1.5
A12A **Yaak River Ran** 39.31 336 ⇓P P 00 31 09.4 +1.4
baz=40
NEW **Newport** 39.38 334 *e*P P 00 31 09.2 +0.5
comp=Z,14nm,1.1s
NEW **Newport** 39.38 334 ⇓P P 00 31 09.5 +0.8
baz=40,SNR=9.0
C09A **Chrisman Ranch** 39.53 333 P P 00 31 11.3 +1.4
SAW **Saint Andrews** 39.96 332 P P 00 31 15.6 +2.1
ETW **Entiat** 40.33 331 P P 00 31 18.7 +2.1
LON **Longmire** 40.45 329 *e*P P 00 31 19.4 +1.9
LON pmax pmax
comp=Z,11nm,0.8s
LON **Longmire** 40.45 329 *e*P P 00 31 19.4 +1.9
comp=Z,11nm,0.8s
FFC **Flin Flon** 40.89 352 *i* P P 00 31 21.7 +0.8
FFC **Flin Flon** 40.89 352 *e*P P 00 31 20.5 -0.5
comp=Z,5.5nm,0.6s
FFC *e*PcP PcP 00 33 20.9 +0.1
PNT **Penticton** 41.26 333 P P 00 31 25.9 +1.8
PNT **Penticton** 41.26 333 P P 00 31 25.9 +1.8
NLWA **Neilton Lookou** 41.92 328 *e*P P 00 31 32.5 +2.9
comp=Z,23nm,1.1s
PGC **Sidney** 42.55 330 *e*P P 00 31 36.5 +1.9
comp=Z,1.2nm,0.8s
SCHQ **Schefferville** 45.03 21 *e*P P 00 31 52.9 -1.6
SCHQ *e*PcP PcP 00 33 34.1 -0.7
SCHQ PcP PcP 00 33 34.6 -0.1
SCHQ **Schefferville** 45.03 21 P P 00 31 52.0 -2.5
comp=Z,14nm,1.0s,baz=198,slow=6.0,SNR=15
SCHQ PcP PcP 00 33 34.6 -0.1
comp=Z,9.8nm,0.8s,baz=224,slow=2.1,SNR=8.5
SCHQ LR LR 00 52 06.2
comp=Z,928nm,18.5s,baz=30,slow=38
YKA **Yellowknife Ar** 50.50 347 P P 00 32 37.4 +0.7
YKA PcP PcP 00 33 54.5 +0.4
YKA **Yellowknife Ar** 50.50 347 P P 00 32 37.3 +0.7
comp=Z,38nm,0.7s,baz=151,slow=7.5,SNR=488
YKA PcP PcP 00 33 54.4 +0.4
comp=Z,3.0nm,0.8s,baz=155,slow=3.7,SNR=6.5
YKW3 **Yellowknife Ar** 50.56 347 *e*P P 00 32 36.9 -0.2
comp=Z,0.9nm,0.8s
DLBC **Dease Lake** 52.05 336 *e*P P 00 32 50.0 +1.5
TAOE **Nuku Hiva Isla** 52.54 247 *e*T T 01 28 52.7
comp=Z,169nm,0.3s
CPUP **Villa Florida** 53.06 140 P P 00 32 54.6 -1.6
CPUP PcP PcP 00 34 04.6 +0.3
CPUP **Villa Florida** 53.06 140 P P 00 32 54.6 -1.6
comp=Z,3.1nm,0.7s,baz=298,slow=7.1,SNR=8.3
CPUP PcP PcP 00 34 04.6 +0.3
comp=Z,1.3nm,0.5s,baz=327,slow=3.8,SNR=3.8
CPUP LR LR 00 57 05.5
comp=Z,335nm,18.2s,baz=314,slow=38
BDFB **Brasilia** 53.21 122 P P 00 32 57.4 -0.3
BDFB **Brasilia** 53.21 122 P P 00 32 57.4 -0.3
comp=Z,8.4nm,0.7s,baz=280,slow=9.2,SNR=18
BDFB LR LR 00 54 45.5
comp=Z,253nm,20.5s,baz=248,slow=35
RKT **Rikitea** 55.80 229 *e*S S 00 41 10.2 +10
comp=Z,451nm,31.0s
RKT *e*LR LR 00 49 47.4
comp=Z,830nm,25.8s,baz=50
RKT *e*T T 01 32 37.2
PLCA **Paso Flores** 58.55 160 P P 00 33 35.2 -0.2
comp=Z,3.9nm,0.9s,baz=315,slow=8.0,SNR=4.9
PLCA LR LR 00 54 39.2
comp=Z,399nm,18.8s,baz=96,slow=32
RCBR **Riachuelo** 59.69 106 *e*P P 00 33 43.6 -0.2
comp=Z,53nm,0.8s
EGAK **Eagle** 60.12 338 *e*P P 00 33 46.8 +0.9
comp=Z,18nm,1.4s
DIV **Divide** 60.13 333 *e*P P 00 33 46.9 +0.7
comp=Z,16nm,1.0s
PAX **Paxson** 60.85 335 *e*P P 00 33 52.5 +1.5
PAX pmax pmax
comp=Z,23nm,0.9s
PAX **Paxson** 60.85 335 *e*P P 00 33 52.5 +1.5
comp=Z,22nm,0.9s
SML **Sawmill** 61.54 333 *e*P P 00 33 56.6 +1.0
SML pmax pmax
comp=Z,8.0nm,1.1s
SML **Sawmill** 61.54 333 *e*P P 00 33 56.6 +1.0
comp=Z,7.8nm,1.1s
PMR **Palmer** 61.80 333 *e*P P 00 33 57.8 +0.5
PMR pmax pmax
comp=Z,22nm,1.1s
PMR **Palmer** 61.80 333 *e*P P 00 33 57.8 +0.5
comp=Z,22nm,1.1s
PMOR **Pomariorio Ree** 62.02 244 *e*T T 01 40 50.2
comp=Z,3.1nm,0.2s
ILAR **Eielson Array** 62.24 337 P P 00 34 00.9 +0.7
ILAR PcP PcP 00 34 40.5 +0.7
ILAR **Eielson Array** 62.24 337 P P 00 34 00.9 +0.7
comp=Z,11nm,0.9s,baz=132,slow=4.8,SNR=77
ILAR PcP PcP 00 34 40.5 +0.7
comp=Z,3.1nm,1.0s,baz=118,slow=3.7,SNR=2.8
ILAR LR LR 01 04 41.3
comp=Z,373nm,18.9s,baz=341,slow=39
MCK **McKinley** 62.59 335 *e*P P 00 34 02.9 +0.2
MCK pmax pmax
comp=Z,13nm,0.8s
MCK **McKinley** 62.59 335 *e*P P 00 34 02.9 +0.2
comp=Z,13nm,0.8s
COLA **College** 62.66 337 *e*P P 00 34 04.1 +1.1
COLA *e* 00 34 42.1
COLA pmax pmax
comp=Z,14nm,1.0s
COLA **College** 62.66 337 *e*P P 00 34 04.0 +1.1
comp=Z,14nm,1.0s
COLA *e*PcP PcP 00 34 42.0 +0.7
RSO **Redoubt South** 63.02 331 *e*P P 00 34 07.0 +1.2
comp=Z,89nm,0.7s
TRF **Thofare Moun** 63.03 335 *e*P P 00 34 05.9 +0.2
comp=Z,34nm,0.9s
PPLA **Purkeypile** 63.62 334 *e*P P 00 34 10.0 +0.4
comp=Z,13nm,0.9s
COLD **Coldfoot** 64.54 339 *e*P P 00 34 16.4 +0.9
comp=Z,10nm,0.9s
COLD *e*pP pP 00 34 30.3 +0.8
PPT **Papeete** 64.58 242 LR LR 00 54 04.7
comp=Z,253nm,21.2s,baz=34,slow=28
PPT2 **Papeete2** 64.59 242 *e*S S 00 43 03.2 +10
PPT2 comp=Z,133nm,25.5s *e*SS SS 00 47 10.5 +5.8
PPT2 comp=Z,130nm,31.0s *e*LR LR 00 53 24.8
comp=Z,540nm,26.0s,baz=56
TBI **Tubuai** 67.11 237 *e*S S 00 43 35.4 +12
comp=Z,108nm,26.0s
TBI *e*LR LR 00 54 47.2
comp=Z,504nm,27.0s,baz=59
JMIC **Jan Mayen** 74.54 20 P P 00 35 17.9 +1.0
JMIC **Jan Mayen** 74.54 20 P P 00 35 17.9 +1.0
comp=Z,25nm,0.5s,baz=181,slow=9.9,SNR=2.7
PGAV **Gavieira, Arco** 76.32 50 *e*LR LR 01 01 44.3
comp=Z,244nm,20.0s
PVIS **Viseu** 76.76 51 *e*P P 00 35 28.4 -2.0
comp=Z,38nm,2.1s
EVOP **Sao Brissos** 76.88 53 *e*P P 00 35 27.2 -3.8
EVOP pmax pmax
comp=Z,20nm,0.9s
EVOP **Sao Brissos** 76.88 53 *e*P P 00 35 27.2 -3.8
comp=Z,20nm,0.9s
EVO **Evora** 76.97 53 *e*P P 00 35 27.2 -4.3
EVO *e*R
comp=Z,20nm,0.9s
comp=Z,235nm,20.0s
EVO **Evora** 76.97 53 *e*P P 00 35 29.9 -1.6
comp=Z,22nm,1.9s
MTE **Manteigas** 77.07 51 *e*P P 00 35 29.9 -2.2
comp=Z,34nm,1.8s
MTE *e*LR LR 01 02 53.0
comp=Z,222nm,20.0s
PBEJ **Beja** 77.16 54 *e*P P 00 35 28.6 -4.0
comp=Z,32nm,1.7s
PMRV **Marv??o** 77.32 52 *e*P P 00 35 31.3 -2.2
comp=Z,20nm,2.6s
PMRV *e*LR LR 01 02 24.9
comp=Z,198nm,20.0s
MVO **Moncorvo** 77.35 50 *e*P P 00 35 31.7 -2.0
comp=Z,21nm,1.8s
MVO *e*LR LR 01 02 47.9
comp=Z,163nm,20.0s
PVAQ **Vaqueiros** 77.36 54 *e*LR LR 01 03 55.4
comp=Z,197nm,20.0s
PBRG **Braganca** 77.47 50 *e*P P 00 35 32.2 -2.1
comp=Z,21nm,1.8s
PBAR **Barrancos** 77.78 54 *e*P P 00 35 34.0 -2.0
comp=Z,35nm,1.9s
ESK **Eskdalemuir** 77.93 36 *i* P P 00 35 35.4 -1.1
EKA **Eskdalemuir Ar** 77.96 36 P P 00 35 34.4 -2.3
EKA **Eskdalemuir Ar** 77.96 36 P P 00 35 34.4 -2.3
comp=Z,12nm,0.9s,baz=274,slow=4.9,SNR=18
SPITS **Spitsbergen Ar** 79.79 11 P P 00 35 45.4 -1.0
SPITS **Spitsbergen Ar** 79.79 11 P P 00 35 45.4 -1.0
comp=Z,1.7nm,0.7s,baz=265,slow=6.8,SNR=4.5
ESDC **Sonseca Array** 79.90 52 P P 00 35 45.7 -2.0
ESDC **Sonseca Array** 79.90 52 P P 00 35 45.7 -2.0
comp=Z,7.1nm,1.0s,baz=290,slow=5.8,SNR=18
ESDC LR LR 01 07 40.6
comp=Z,201nm,19.6s,baz=275,slow=33
GRR **Gorron** 80.50 42 *e*P P 00 35 47.7 -3.0
GRR **Gorron** 80.50 42 *e*P P 00 35 47.7 -3.0
GRR **Gorron** 80.50 42 *e*P P 00 35 47.7 -3.0
FLN **La Foliniere** 80.67 42 *e*P P 00 35 48.7 -2.9
FLN *e*R
comp=Z,312nm,22.2s
FLN **La Foliniere** 80.67 42 *e*P P 00 35 48.7 -2.9
FLN **La Foliniere** 80.67 42 *e*P P 00 35 48.7 -2.9
BILL **Bilibino** 80.87 338 *e* P P 00 35 53.5 +1.2
BILL *i* 00 38 57.4
BILL *i* SS SS 00 51 23.3 +13
BILL pmax pmax
comp=Z,38nm,1.0s
BILL **Bilibino** 80.87 338 *e*P P 00 35 53.3 +1.0
comp=Z,35nm,0.7s
BILL *ep*P pP 00 36 06.5 -0.3
LDF **La Druitiere** 80.94 42 *e*P P 00 35 49.2 -3.8
comp=Z,56nm,1.2s
LDF **La Druitiere** 80.94 42 *e*P P 00 35 49.2 -3.8
LDF pmax pmax
comp=Z,56nm,1.2s
LDF **La Druitiere** 80.94 42 *e*P P 00 35 49.2 -3.8
comp=Z,56nm,1.2s
SJPF **Ste Jean** 81.27 48 *e*P P 00 35 51.4 -3.6
comp=Z,38nm,1.3s
SJPF **Ste Jean** 81.27 48 *e*P P 00 35 51.4 -3.6
SJPF pmax pmax
comp=Z,38nm,1.3s
SJPF **Ste Jean** 81.27 48 *e*P P 00 35 51.4 -3.6
comp=Z,38nm,1.3s
MFF **Saint Martin d** 81.32 44 *e*P P 00 35 52.1 -3.0
comp=Z,33nm,1.2s
MFF **Saint Martin d** 81.32 44 *e*P P 00 35 52.1 -3.0
MFF pmax pmax
comp=Z,33nm,1.2s
MFF **Saint Martin d** 81.32 44 *e*P P 00 35 52.1 -3.0
comp=Z,33nm,1.2s
ETSF **Etsaut** 81.79 48 *e*P P 00 35 55.1 -2.7
comp=Z,23nm,1.1s
ETSF **Etsaut** 81.79 48 *e*P P 00 35 55.1 -2.7
ETSF pmax pmax
comp=Z,23nm,1.1s
ETSF **Etsaut** 81.79 48 *e*P P 00 35 55.1 -2.7
comp=Z,23nm,1.1s
EPF **Esparros** 82.41 48 *e*P P 00 35 58.2 -2.8
comp=Z,28nm,1.3s
EPF **Esparros** 82.41 48 *e*P P 00 35 58.2 -2.8
EPF pmax pmax
comp=Z,28nm,1.3s
EPF **Esparros** 82.41 48 *e*P P 00 35 58.2 -2.8
comp=Z,28nm,1.3s
RJF **Les Rejaudoux** 82.73 45 *e*P P 00 35 59.5 -3.1
RJF *e*R
comp=Z,294nm,21.5s
RJF **Les Rejaudoux** 82.73 45 *e*P P 00 35 59.5 -3.1
RJF **Les Rejaudoux** 82.73 45 *e*P P 00 35 59.5 -3.1
TCF **Toulx Ste Croi** 82.98 44 *e*P P 00 36 01.5 -2.4
TCF **Toulx Ste Croi** 82.98 44 *e*P P 00 36 01.5 -2.4
TCF **Toulx Ste Croi** 82.98 44 *e*P P 00 36 01.5 -2.4
HYF **Humbligny** 83.04 43 *e*P P 00 36 01.4 -2.7
HYF **Humbligny** 83.04 43 *e*P P 00 36 01.4 -2.7
CAF **Calviac** 83.20 45 *e*P P 00 36 02.8 -2.2
comp=Z,11nm,1.0s
CAF **Calviac** 83.20 45 *e*P P 00 36 02.8 -2.2
CAF pmax pmax
comp=Z,11nm,1.0s
CAF **Calviac** 83.20 45 *e*P P 00 36 02.8 -2.2
comp=Z,11nm,1.0s
BGF **Bois d'Agland** 83.35 44 *e*P P 00 36 02.6 -3.1
comp=Z,29nm,1.0s
BGF **Bois d'Agland** 83.35 44 *e*P P 00 36 02.6 -3.1
BGF pmax pmax
comp=Z,29nm,1.0s
BGF **Bois d'Agland** 83.35 44 *e*P P 00 36 02.6 -3.1
comp=Z,29nm,1.0s
AVF **Avril sur Loir** 83.63 43 *e*P P 00 36 03.6 -3.5
comp=Z,13nm,0.9s
AVF **Avril sur Loir** 83.63 43 *e*P P 00 36 03.6 -3.5
AVF pmax pmax
comp=Z,13nm,0.9s
AVF **Avril sur Loir** 83.63 43 *e*P P 00 36 03.6 -3.5
comp=Z,13nm,0.9s
SSF **Saint Saulge** 83.66 43 *e*P P 00 36 04.1 -3.2
comp=Z,15nm,0.9s
SSF **Saint Saulge** 83.66 43 *e*P P 00 36 04.1 -3.2
SSF pmax pmax
comp=Z,15nm,0.9s
SSF **Saint Saulge** 83.66 43 *e*P P 00 36 04.1 -3.2
comp=Z,15nm,0.9s
MTLF **Montolieu** 83.68 47 *e*P P 00 36 04.6 -2.9
comp=Z,21nm,1.2s
MTLF **Montolieu** 83.68 47 *e*P P 00 36 04.6 -2.9
MTLF pmax pmax
comp=Z,21nm,1.2s
MTLF **Montolieu** 83.68 47 *e*P P 00 36 04.6 -2.9
comp=Z,21nm,1.2s
GIVF **Givet** 83.75 40 *e*P P 00 36 05.1 -2.6
GIVF **Givet** 83.75 40 *e*P P 00 36 05.1 -2.6
GIVF **Givet** 83.75 40 *e*P P 00 36 05.1 -2.6
LOR **Lormes** 83.85 43 *e*P P 00 36 05.3 -3.0
comp=Z,18nm,0.9s
LOR *e*R
comp=Z,225nm,22.0s
LOR **Lormes** 83.85 43 *e*P P 00 36 05.3 -3.0
comp=Z,18nm,0.9s
BCLA **Clavier** 83.96 40 P P 00 36 08.0 -0.8
comp=Z,11nm,1.8s
SMF **Signal de Mont** 83.99 44 *e*P P 00 36 05.6 -3.4
comp=Z,17nm,1.0s
SMF **Signal de Mont** 83.99 44 *e*P P 00 36 05.6 -3.4
SMF pmax pmax
comp=Z,17nm,1.0s
SMF **Signal de Mont** 83.99 44 *e*P P 00 36 05.6 -3.4
comp=Z,17nm,1.0s
NB2 **NORSAR Subarra** 84.05 28 P P 00 36 08.4 -0.6
comp=Z,1.2nm,0.7s,baz=290,slow=5.3
NOA **NORSAR Array B** 84.05 28 P P 00 36 08.8 -0.3
NOA **NORSAR Array B** 84.05 28 P P 00 36 08.8 -0.3
comp=Z,3.3nm,0.9s,baz=291,slow=5.0,SNR=5.4
NOA LR LR 01 11 09.4
comp=Z,183nm,20.6s,baz=310,slow=34
MEZF **Maizieres J'vi** 84.31 41 *e*P P 00 36 08.0 -2.5
comp=Z,16nm,0.7s
MEZF **Maizieres J'vi** 84.31 41 *e*P P 00 36 08.0 -2.5
comp=Z,16nm,0.7s
SFTF **Sexfontaines** 84.38 42 *e*P P 00 36 08.2 -2.7
SFTF **Sexfontaines** 84.38 42 *e*P P 00 36 08.2 -2.7
LASF **Ste Croix** 84.65 46 *e*P P 00 36 09.1 -3.3
comp=Z,26nm,1.1s
LASF **Ste Croix** 84.65 46 *e*P P 00 36 09.1 -3.3
comp=Z,26nm,1.1s
PAGF **Fort de Pagny** 84.72 41 *e*P P 00 36 10.3 -2.4
comp=Z,2.5nm,0.7s
PAGF **Fort de Pagny** 84.72 41 *e*P P 00 36 10.3 -2.4
comp=Z,2.5nm,0.7s
VIVF **Saint-Julien-l** 85.01 45 *e*P P 00 36 12.3 -1.9
comp=Z,25nm,1.1s
VIVF **Saint-Julien-l** 85.01 45 *e*P P 00 36 12.3 -1.9
VIVF pmax pmax
comp=Z,25nm,1.1s
VIVF **Saint-Julien-l** 85.01 45 *e*P P 00 36 12.3 -1.9
comp=Z,25nm,1.1s
HAU **Haudompre** 85.28 42 *e*P P 00 36 13.6 -1.9
comp=Z,10nm,0.7s
HAU *e*R
comp=Z,233nm,19.2s
HAU **Haudompre** 85.28 42 *e*P P 00 36 13.6 -1.9
HAU pmax pmax
comp=Z,10.0nm,0.7s
HAU **Haudompre** 85.28 42 *e*P P 00 36 13.6 -1.9
comp=Z,10nm,0.7s
CABF **La Chapelle** 85.49 43 *e*P P 00 36 14.3 -2.4
CABF **La Chapelle** 85.49 43 *e*P P 00 36 14.3 -2.4
CABF **La Chapelle** 85.49 43 *e*P P 00 36 14.3 -2.4
CDF **Champ du Feu** 85.75 41 *e*P P 00 36 15.3 -2.6
comp=Z,14nm,1.1s
CDF **Champ du Feu** 85.75 41 *e*P P 00 36 15.3 -2.6
CDF pmax pmax
comp=Z,15nm,1.1s
CDF **Champ du Feu** 85.75 41 *e*P P 00 36 15.3 -2.6
comp=Z,14nm,1.1s
ORIF **Oris-en-Rattie** 85.82 45 *e*P P 00 36 14.7 -3.7
ORIF *e*R
comp=Z,261nm,21.2s
ORIF **Oris-en-Rattie** 85.82 45 *e*P P 00 36 14.7 -3.7
ORIF **Oris-en-Rattie** 85.82 45 *e*P P 00 36 14.7 -3.7
SMRF **Simiane la Rot** 85.87 46 *e*P P 00 36 15.8 -2.8
comp=Z,59nm,1.3s
SMRF **Simiane la Rot** 85.87 46 *e*P P 00 36 15.8 -2.8
comp=Z,59nm,1.3s
ARCES **ARCESS Array B** 85.92 18 P P 00 36 16.8 -1.5
ARCES **ARCESS Array B** 85.92 18 P P 00 36 16.8 -1.5
comp=Z,4.6nm,0.9s,baz=269,slow=6.7,SNR=9.9
ARCES LR LR 01 14 46.2
comp=Z,277nm,18.4s,baz=284,slow=36
LIC **Lamto** 86.11 85 *e*P P 00 36 19.9 -0.3
comp=Z,23nm,0.7s,baz=256
LIC *e*R
comp=Z,251nm,22.9s
LIC **Lamto** 86.11 85 *e*P P 00 36 19.9 -0.3
comp=Z,23nm,0.7s
DBIC **Dimbokro** 86.17 84 P P 00 36 18.8 -1.7
DBIC **Dimbokro** 86.17 84 P P 00 36 18.8 -1.7
comp=Z,7.9nm,0.7s,baz=261,slow=6.5,SNR=12
DBIC LR LR 01 09 00.2
comp=Z,229nm,21.7s,baz=263,slow=32
LPL **La Plagne** 86.23 44 *e*P P 00 36 18.7 -1.8
LPL **La Plagne** 86.23 44 *e*P P 00 36 18.7 -1.8
LPL **La Plagne** 86.23 44 *e*P P 00 36 18.7 -1.8
LPG **La Plagne** 86.25 44 *e*P P 00 36 18.0 -2.7
comp=Z,21nm,1.3s
LPG **La Plagne** 86.25 44 *e*P P 00 36 18.0 -2.7
LPG pmax pmax
comp=Z,21nm,1.3s
LPG **La Plagne** 86.25 44 *e*P P 00 36 18.0 -2.7
comp=Z,21nm,1.3s
LMR **La Mourre** 86.70 46 *e*P P 00 36 19.2 -3.4
comp=Z,25nm,1.0s
LMR **La Mourre** 86.70 46 *e*P P 00 36 19.2 -3.4
LMR pmax pmax
comp=Z,25nm,1.0s
LMR **La Mourre** 86.70 46 *e*P P 00 36 19.2 -3.4
comp=Z,25nm,1.0s
FRF **La Foret Royal** 86.73 46 *e*P P 00 36 19.5 -3.2
comp=Z,28nm,1.0s
FRF **La Foret Royal** 86.73 46 *e*P P 00 36 19.5 -3.2
FRF pmax pmax
comp=Z,29nm,1.0s
FRF **La Foret Royal** 86.73 46 *e*P P 00 36 19.5 -3.2
comp=Z,28nm,1.0s
DAVA **Damuels** 87.77 42 ⇑*i*PcP P 00 36 27.6 -0.3
comp=Z,10.0nm,0.9s
GRF **Grafenberg Arr** 87.82 39 *e*P P 00 36 27.7 -0.2
comp=Z,5.0nm,1.2s
GRF **Grafenberg Arr** 87.82 39 *e*P P 00 36 27.7 -0.2

GRF					pmax	pmax		
	comp=Z,5.0nm,1.2s							
DAVOX	**Davos/Dischmat**	**87.93**	**42**		P	**P**	**00 36 28.4**	**-0.3**
DAVOX	**Davos/Dischmat**	**87.93**	**42**		P	**P**	**00 36 28.4**	**-0.3**
	comp=Z,6.0nm,0.9s,baz=302,slow=9.5,SNR=8.0							
SEY	**Seymchan**	**88.15**	**336**	*e*	*i*P	**P**	**00 36 29.8**	**+0.7**
RETA	**Reutte**	**88.27**	**41**	⇑	*i*PcP	**P**	**00 36 29.7**	**-0.5**
	comp=Z,8.1nm,1.0s							
CLL	**Collm**	**88.32**	**37**	*e*	P	**P**	**00 36 30.0**	**-0.2**
CLL	**Collm**	**88.32**	**37**	*e*	P	**P**	**00 36 30.0**	**-0.2**
CLL					LmV		01 16 00.0	
	comp=Z,100nm,21.8s							
FETA	**Feichten**	**88.40**	**42**	⇑	*i*P	**P**	**00 36 29.6**	**-1.3**
	comp=Z,6.2nm,1.0s							
GERES	**GERESS Array B**	**89.64**	**39**		P	**P**	**00 36 36.0**	**-0.6**
GERES	**GERESS Array B**	**89.64**	**39**		P	**P**	**00 36 36.0**	**-0.6**
	comp=Z,1.6nm,0.9s,baz=302,slow=3.0,SNR=10							
GERES					LR	LR	01 15 29.3	
	comp=Z,275nm,18.9s,baz=288,slow=35							
TIXI	**Tiksi**	**89.74**	**348**	*e*	P	**P**	**00 36 36.2**	**-0.2**
TIXI					pmax	pmax		
	comp=Z,8.0nm,0.8s							
PETK	**Petropavlovsk-**	**89.99**	**325**		P	**P**	**00 36 38.4**	**+0.4**
PETK	**Petropavlovsk-**	**89.99**	**325**		P	**P**	**00 36 38.4**	**+0.4**
PETK	**Petropavlovsk-**	**89.99**	**325**		P	**P**	**00 36 38.4**	**+0.4**
	comp=Z,3.4nm,1.0s,baz=38,slow=7.3,SNR=3.1							
FINES	**FINESS Array B**	**90.36**	**25**		P	**P**	**00 36 38.9**	**-0.6**
FINES	**FINESS Array B**	**90.36**	**25**		P	**P**	**00 36 38.9**	**-0.6**
	comp=Z,13nm,1.2s,baz=339,slow=3.4,SNR=3.1							
FINES					LR	LR	01 18 46.4	
	comp=Z,178nm,18.9s,baz=174,slow=37							
TORD	**Torodi Ar. Bea**	**90.82**	**76**		P	**P**	**00 36 40.4**	**-2.2**
TORD	**Torodi Ar. Bea**	**90.82**	**76**		P	**P**	**00 36 40.4**	**-2.2**
	comp=Z,1.2nm,0.8s,baz=297,slow=5.1,SNR=17							
TORD					LR	LR	01 14 57.8	
	comp=Z,240nm,19.0s,baz=200,slow=34							
KEST	**Kesra**	**91.09**	**53**		P	**P**	**00 36 42.6**	**-1.0**
KEST	**Kesra**	**91.09**	**53**		P	**P**	**00 36 42.6**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=243,slow=2.3,SNR=5.6							
VRAC	**Vranov**	**91.22**	**38**		P	**P**	**00 36 42.8**	**-1.0**
VRAC	**Vranov**	**91.22**	**38**		P	**P**	**00 36 42.8**	**-1.0**
	comp=Z,1.6nm,1.0s,baz=334,slow=4.5,SNR=4.1							
TAM	**Tamanrasset**	**91.76**	**66**	*e*	P	**P**	**00 36 46.4**	**-0.6**
TAM				*e*	*i*PP	**pP**	**00 36 58.6**	**-3.1**
TAM					pmax	pmax		
	comp=Z,2.0nm,1.0s							
TAM	**Tamanrasset**	**91.76**	**66**	*e*	P	**P**	**00 36 46.4**	**-0.6**
	comp=Z,2.0nm,1.0s							
TAM					*e*pP	**pP**	**00 36 58.6**	**-3.1**
VYHS	**Vyhne**	**92.90**	**38**	*e*	P	**P**	**00 36 51.7**	**+0.1**
VYHS					pmax	pmax		
	comp=Z,2.0nm,1.2s							
VYHS	**Vyhne**	**92.90**	**38**	*e*	P	**P**	**00 36 51.7**	**+0.1**
CRVS	**Cervenica-Dubn**	**94.28**	**37**	*e*	P	**P**	**00 36 56.6**	**-1.3**
CRVS	**Cervenica-Dubn**	**94.28**	**37**	*e*	P	**P**	**00 36 56.6**	**-1.3**
KOLS	**Kolonicke sedl**	**94.73**	**37**	*e*	P	**P**	**00 37 00.5**	**+0.5**
KOLS					pmax	pmax		
	comp=Z,11nm,2.1s							
KOLS	**Kolonicke sedl**	**94.73**	**37**	*e*	P	**P**	**00 37 00.5**	**+0.5**
KLMR	**Klimovskoe**	**95.87**	**21**		P	**P**	**00 37 02.8**	**-2.1**
KLMR					pmax	pmax		
	comp=Z,27nm,2.4s							
AKASG	**Malin Array Be**	**97.69**	**33**		LR	LR	01 26 20.1	
	comp=Z,121nm,18.3s,baz=320,slow=38							
OBN	**Obninsk**	**98.57**	**27**	*e*	P	Pdif	00 37 19.7	+2.5
OBN					pmax	pmax		
	comp=Z,6.0nm,1.3s							
OBN					MLR	MLR		
	comp=Z,200nm,19.0s							
MLR	**Muntele Rosu**	**98.60**	**39**		P	**P**	**00 37 17.3**	**-0.5**
MLR	**Muntele Rosu**	**98.60**	**39**		P	**P**	**00 37 17.3**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=308,slow=12							
DZM	**Mont Dzumac**	**105.28**	**251**	*e*	LR	LR	01 12 47.0	
	comp=Z,259nm,24.2s							
ZALV	**Zalesovo Beam**	**111.88**	**2**		PKIKP	**PKiKP**	**00 42 13.1**	**-0.2**
ZALV	**Zalesovo Beam**	**111.88**	**2**		PKiKP	**PKiKP**	**00 42 13.1**	**-0.2**
ZALV	**Zalesovo Beam**	**111.88**	**2**		PKiKP	**PKiKP**	**00 42 13.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=15,slow=2.3,SNR=3.2							
KURK	**Kurchatov**	**114.69**	**6**	*i*	PKIKP	PKPdf	00 42 20.7	+1.9
KURK					pmax	pmax		
	comp=Z,5.0nm,2.5s							
SONM	**Songino Array**	**115.76**	**346**		PKP	**PKPdf**	**00 42 20.6**	**-0.5**
SONM	**Songino Array**	**115.76**	**346**		PKP	**PKPdf**	**00 42 20.6**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=37,slow=2.0,SNR=10.0							
KSRS	**Korea Array**	**115.88**	**325**		PKP	**PKPdf**	**00 42 22.1**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=7.3,slow=1.8,SNR=4.5							
KSAR	**Wonju Array Be**	**115.91**	**325**		PKP	**PKPdf**	**00 42 22.1**	**+0.6**
MK31	**Makanchi Array**	**118.90**	**4**	*e*	PKIKP	**PKPdf**	**00 42 26.3**	**-0.7**
MK31	**Makanchi Array**	**118.90**	**4**	*e*	PKPdf	**PKPdf**	**00 42 26.3**	**-0.7**
MKAR	**Makanchi Array**	**118.90**	**4**		PKIKP	**PKPdf**	**00 42 26.8**	**-0.3**
MKAR	**Makanchi Array**	**118.90**	**4**		PKP	**PKPdf**	**00 42 26.8**	**-0.3**
MKAR	**Makanchi Array**	**118.90**	**4**		PKP	**PKPdf**	**00 42 26.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=11,slow=2.0,SNR=10							
HHC	**Hu-ho-hao-te**	**120.64**	**339**	*e*	PKP	PKPdf	00 42 37.0	+6.3
HHC					PP	PP	00 44 06.3	+8.9
HHC					AMB	AMB		
	comp=Z,180nm,5.2s							
HHC					LR	LR		
	comp=N,190nm,14.3s							
HHC					LR	LR		
	comp=E,210nm,15.5s							
HHC					LR	LR		
	comp=Z,260nm,16.7s							
BOSA	**Boshof**	**121.03**	**115**		PKP	**PKPdf**	**00 42 31.7**	**0.0**
BOSA	**Boshof**	**121.03**	**115**		PKP	**PKPdf**	**00 42 31.7**	**0.0**
	comp=Z,8.1nm,0.8s,baz=273,slow=3.9,SNR=11							
TKM2	**Tokmak 2**	**121.92**	**10**	*e*	PKIKP	**PKPdf**	**00 42 33.0**	**-0.2**
TKM2	**Tokmak 2**	**121.92**	**10**	*e*	PKPdf	**PKPdf**	**00 42 33.0**	**-0.2**
AAK	**Ala-Archa**	**122.00**	**11**	*i*	PKIKP	**PKPdf**	**00 42 35.0**	**+1.7**
AAK					pmax	pmax		
	comp=Z,9.0nm,1.7s							
AAK	**Ala-Archa**	**122.00**	**11**	*e*	PKPdf	**PKPdf**	**00 42 33.2**	**-0.2**
WMQ	**Urumqi**	**122.05**	**360**	*e*	PKP	**PKPdf**	**00 42 33.5**	**+0.2**
WMQ					LR	LR		
	comp=N,160nm,23.4s							
WMQ					LR	LR		
	comp=E,100nm,20.8s							
WMQ					LR	LR		
	comp=Z,170nm,22.0s							
MAW	**Mawson**	**124.49**	**169**		PKP	**PKPdf**	**00 42 37.2**	**+0.2**
MAW	**Mawson**	**124.49**	**169**		PKP	**PKPdf**	**00 42 37.2**	**+0.2**
	comp=Z,2.2nm,0.6s,baz=195,slow=2.9,SNR=12							
NJ2	**Nanjing**	**124.85**	**327**	*e*	PKP	**PKPdf**	**00 42 38.5**	**-0.3**
GTA	**Gaotai**	**125.22**	**348**	*e*	PKP	**PKPdf**	**00 42 42.3**	**+2.7**
GTA					sPKP		00 43 04.5	
LZH	**Lanzhou**	**127.43**	**343**	*e*	PKP	**PKPdf**	**00 42 44.5**	**+0.6**
XAN	**Xi'an**	**127.65**	**337**		PKP	**PKPdf**	**00 42 44.8**	**+0.6**
XAN					AMB	AMB		
	comp=Z,25nm,6.4s							
XAN					LR	LR		
	comp=N,100nm,19.3s							
XAN					LR	LR		
	comp=E,41nm,17.3s							
XAN					LR	LR		
	comp=Z,46nm,18.3s							
STKA	**Stephens Creek**	**127.77**	**241**		PKP	**PKPdf**	**00 42 44.6**	**+0.3**
STKA	**Stephens Creek**	**127.77**	**241**		PKP	**PKPdf**	**00 42 44.6**	**+0.3**
	comp=Z,6.2nm,0.8s,baz=88,slow=5.0,SNR=11							
ENH	**Enshi**	**130.75**	**335**	*e*	PKPdf	**PKPdf**	**00 42 49.9**	**-0.3**
CD2	**Chengdu**	**132.28**	**341**		PKP	**PKPdf**	**00 42 53.5**	**+0.4**
WRA	**Warramunga Arr**	**134.95**	**256**		PKP	**PKPdf**	**00 42 58.8**	**+0.5**
WRA	**Warramunga Arr**	**134.95**	**256**		PKP	**PKPdf**	**00 42 58.8**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=87,slow=2.1,SNR=12							
GYA	**Guiyang**	**135.27**	**335**	*e*	Pdif	**Pdif**	**00 40 01.0**	**-0.3**
GYA					PKP	**PKPdf**	**00 42 57.5**	**-1.4**
GYA					sPKP		00 43 25.8	
GYA					PP	**PP**	**00 45 38.5**	**+4.7**
GYA					PKS	**PKSdf**	**00 46 32.0**	**-3.5**
GYA					SKKS		00 52 20.8	
GYA					SS	**SS**	**01 03 23.5**	**-1.5**
GYA					AMB	AMB		
	comp=Z,110nm,7.6s							
GYA					LR	LR		
	comp=N,110nm,23.8s							
GYA					LR	LR		
	comp=E,90nm,25.5s							
GYA					LR	LR		
	comp=Z,120nm,23.8s							
ASAR	**Alice Springs**	**135.28**	**251**		PKPpre	PKPpre	00 42 49.4	
ASAR					PKP	**PKPdf**	**00 42 59.1**	**+0.2**
ASAR	**Alice Springs**	**135.28**	**251**		PKhKP	PKPpre	00 42 49.4	
	comp=Z,0.4nm,0.5s,baz=102,slow=3.9,SNR=6.6							
ASAR					PKP	**PKPdf**	**00 42 59.1**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=95,slow=2.3,SNR=9.1							
KMI	**Kunming**	**137.96**	**339**		PKP	**PKPdf**	**00 43 04.5**	**+0.4**
KMI					LR	LR		
	comp=N,240nm,19.6s							
KMI					LR	LR		
	comp=E,120nm,21.1s							
KMI					LR	LR		
	comp=Z,180nm,17.6s							
CHTO	**Chiang Mai**	**145.09**	**341**	*e*	PKP2	**PKPbc**	**00 43 15.4**	**-0.8**
CHTO	**Chiang Mai**	**145.09**	**341**	*e*	PKP	**PKPbc**	**00 43 15.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**145.42**	**340**		PKPbc	**PKPdf**	**00 43 18.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**145.42**	**340**		PKPbc	**PKPdf**	**00 43 18.1**	**+0.8**
	comp=Z,14nm,0.7s,baz=342,slow=3.7,SNR=64							
HYB	**Hyderabad**	**147.18**	**16**	*i*	PKP	**PKPdf**	**00 43 22.0**	**+1.7**
KSM	**Kuching**	**152.38**	**303**	*e*	PKPdf	**PKPdf**	**00 43 29.5**	**+0.8**
KSM				*e*	PKPbc	**PKiKP**	**00 43 37.1**	**+1.3**

NIED ***28*** *01:11:00.41˚.60N×142˚.10E.h53km,Mw3.8 Best double couple: M₀4.76000×10¹⁴ NP1:φ₀15.00000°,δ67.00000°, λ90.00000°. NP2:φ₀194.00000°,δ23.00000°,λ89.00000°.*

ISCJB ***28*** *01:11:22.1±0.4,41˚.56N±0˚.03×142˚.07E±0˚.05,h68km±4km, mb3.6/12,Error ellipse: s-maj=7.4km s-min=4.6km az=37.8*

JMA ***28*** *01:11:22.5±0.1,41˚.56N×142˚.06E,h64km±3km,M3.5*

JMA Felt I J1.

MOS ***28*** *01:11:23.8±1.2,41˚.59N×142˚.15E,h87km,mb3.9/8,Error ellipse: s-maj=19.1km s-min=12.4km az=84.0*

IDC ***28*** *01:11:24.4±1.7,41˚.62N×142˚.12E,h72km±14km,mb3.5/12, mb1 3.6/16,mb1mx3.5/29,mbtmp3.5/16,MS2.6/1, Ms1 2.6/1,ms1mx2.1/31,Error ellipse: s-maj=20.8km s-min=11.4km az=115.0*

ISC 28 01:11:22.8±0.9,41˚.55N±0˚.04×142˚.07E±0˚.04,h58km±9km, n33,σ0ᵇ67/39,mb3.7/12,1C-7D,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.79**	**258**	⇓	P	**Pn**	**01 11 38.1**	**+0.2**
JKB	**Kayabe**	**0.84**	**294**	⇓	P	**Pn**	**01 11 38.5**	**-0.2**
JNBK	**Urakawa-nobuka**	**0.89**	**35**		P	**Pn**	**01 11 38.9**	**-0.4**
JEM	**Erimo**	**0.94**	**60**	⇑	P	**Pn**	**01 11 39.9**	**0.0**
JEM					*e*S	**Sn**	**01 11 52.8**	**+0.3**
JTM	**Tenmabayashi**	**1.07**	**225**	⇓	P	**Pn**	**01 11 42.2**	**+0.5**
JTM					*e*S	**Sn**	**01 11 56.3**	**+0.6**
JNB	**Noboribetsu**	**1.20**	**320**	⇓	P	**Pn**	**01 11 42.9**	**-0.4**
JNB					*e*S	**Sn**	**01 11 57.8**	**-0.8**
JANG	**Nango**	**1.25**	**200**		P	**Pn**	**01 11 44.1**	**0.0**
JANG					*e*S	**Sn**	**01 11 59.7**	**-0.2**
JEW	**Eniwo**	**1.37**	**341**	⇓	P	**Pn**	**01 11 46.0**	**+0.4**
JEW					*e*S	**Sn**	**01 12 02.5**	**-0.2**
JCH	**Churui**	**1.43**	**42**	⇓	P	**Pn**	**01 11 47.3**	**+0.8**
JCH					*e*S	**Sn**	**01 12 05.2**	**+0.9**
JOSM	**Okushiri--Mats**	**2.01**	**286**		P	**Pn**	**01 11 54.0**	**-0.3**
JAR	**Ashorobuto**	**2.15**	**35**		P	**Pn**	**01 11 56.7**	**+0.5**
JAR					*e*S	**Sn**	**01 12 21.8**	**0.0**
JSK	**Shakotan**	**2.15**	**327**		P	**Pn**	**01 11 56.6**	**+0.4**
ASAJ	**Asahikawa**	**2.59**	**8**		P	**Pn**	**01 12 03.6**	**+1.3**
	5.7nm,0.3s,baz=201,slow=11,SNR=14							
ASAJ					S	**Sn**	**01 12 33.0**	**+0.4**
	4.6nm,0.3s,baz=232,slow=19,SNR=12							
YUK	**Yuzh-Kuril'sk**	**3.73**	**47**	*d*	*i*P	Pn	01 12 34.5	+17
YUK					*i* S	**Sn**	**01 12 58.6**	**-2.0**
YUK					pmax	pmax		
	comp=E,15nm,0.2s							
YUK					pmax	pmax		
	comp=Z,37nm,0.2s							
YUK					pmax	pmax		
	comp=N,23nm,0.2s							
YUK					smax	smax		
	comp=N,109nm,0.6s							
YUK					smax	smax		
	comp=E,219nm,0.6s							
MJAR	**Matsushiro Arr**	**5.83**	**212**		P	Pn	01 12 51.0	+4.3
	comp=E,0.6nm,0.3s,baz=29,slow=12,SNR=5.7							
USRK	**Ussuriysk Arra**	**7.85**	**293**		P	**Pn**	**01 13 15.5**	**+1.3**
	comp=E,0.4nm,0.3s,baz=1.4,slow=21,SNR=10							
USRK					LR	LR	01 16 10.3	
	comp=E,37nm,19.5s,baz=12,slow=36							
KSRS	**Korea Array**	**11.67**	**254**		P	Pn	01 14 10.4	+4.0
	comp=E,0.6nm,0.3s,baz=62,slow=14,SNR=5.1							
SONM	**Songino Array**	**25.96**	**296**		P	**P**	**01 16 49.8**	**-0.1**
	comp=E,0.9nm,0.6s,baz=85,slow=8.3,SNR=7.9							
ZALV	**Zalesovo Beam**	**39.38**	**308**		P	**P**	**01 18 46.3**	**-0.1**
ZALV					pmax	pmax		
	comp=Z,1.0nm,0.4s							
ZALV	**Zalesovo Beam**	**39.38**	**308**		P	**P**	**01 18 46.3**	**-0.1**
	comp=Z,1.0nm,0.4s,baz=85,slow=7.1,SNR=8.8							
MKAR	**Makanchi Array**	**42.29**	**298**		P	**P**	**01 19 10.1**	**-0.4**
MKAR					pmax	pmax		
	comp=Z,2.0nm,0.9s							
MKAR	**Makanchi Array**	**42.29**	**298**		P	**P**	**01 19 10.1**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=75,slow=9.3,SNR=8.4							
CMAR	**Chiang Mai Arr**	**43.29**	**251**		P	**P**	**01 19 20.1**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=41,slow=8.4,SNR=3.5							
ILAR	**Eielson Array**	**45.45**	**35**		P	**P**	**01 19 35.9**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=278,slow=7.7,SNR=13							
INK	**Inuvik**	**50.16**	**29**		P	**P**	**01 20 12.1**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=300,slow=8.5,SNR=6.0							
WRA	**Warramunga Arr**	**61.60**	**188**		P	**P**	**01 21 33.0**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=8.5,slow=6.9,SNR=4.9							
FINES	**FINESS Array B**	**65.07**	**332**		P	**P**	**01 21 55.9**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=38,slow=7.2,SNR=6.1							
ASAR	**Alice Springs**	**65.33**	**188**		P	**P**	**01 21 58.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=14,slow=14,SNR=4.7							
HFS	**Hagfors**	**70.19**	**335**		P	**P**	**01 22 28.8**	**-0.2**
	baz=49,slow=4.4							
NOA	**NORSAR Array B**	**70.23**	**337**		P	**P**	**01 22 29.0**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=44,slow=9.9,SNR=2.3							
AKASG	**Malin Array Be**	**71.05**	**322**		P	**P**	**01 22 34.1**	**-0.3**
AKASG	**Malin Array Be**	**71.05**	**322**		P	**P**	**01 22 34.1**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=56,slow=5.8,SNR=3.6							
BRTR	**Keskin Array B**	**76.25**	**311**		P	**P**	**01 23 05.6**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=22,slow=4.7,SNR=2.3							

ISCJB ***28*** *01:18:25.6±0.4,19˚.71N±0˚.05×145˚.4E±0˚.1,h147km, mb4.2/32,Error ellipse: s-maj=14.9km s-min=7.4km az=170.3*

IDC ***28*** *01:18:25.6±0.8,19˚.68N×145˚.38E,h131km±7km,mb4.0/24, mb1 4.1/26,mb1mx4.0/32,mbtmp4.0/26,Error ellipse: s-maj=15.3km s-min=9.5km az=78.0*

NEIC ***28*** *01:18:27.7±1.2,19˚.68N×145˚.36E,h152km±11km,mb4.5/8, Error ellipse: s-maj=12.7km s-min=6.6km az=77.0*

ISC 28 01:18:26.7±0.5,19˚.72N±0˚.07×145˚.5E±0˚.1,h147km,n76, σ1ᵇ24/87,mb4.3/32,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**6.13**	**186**	*e*	Pn	**Pn**	**01 19 55.0**	**-0.1**
MJAR	**Matsushiro Arr**	**17.94**	**341**		P	**P**	**01 22 24.9**	**-0.5**
MJAR					S	**Sn**	**01 25 46.1**	**-2.0**
MJAR	**Matsushiro Arr**	**17.94**	**341**		P	**P**	**01 22 24.9**	**-0.5**
	4.8nm,0.3s,baz=164,slow=9.5,SNR=24							
MJAR					S	**Sn**	**01 25 46.1**	**-2.0**
	0.5nm,0.3s,baz=154,slow=33,SNR=4.8							
MAJO	**Matsushiro**	**17.94**	**341**	*e*	P	**P**	**01 22 25.6**	**+0.2**
	34nm,0.4s							
MAT	**Matsushiro**	**17.94**	**341**		P	**P**	**01 22 25.7**	**+0.3**
JNU	**Nakatsue**	**18.67**	**319**		P	**P**	**01 22 33.3**	**-0.2**
JNU	**Nakatsue**	**18.67**	**319**		P	**P**	**01 22 33.3**	**-0.2**
	0.6nm,0.3s,baz=80,slow=11,SNR=2.9							
KSRS	**Korea Array**	**23.39**	**323**		P	**P**	**01 23 22.4**	**+0.2**
	15nm,0.7s,baz=149,slow=9.0,SNR=57							
KSAR	**Wonju Array Be**	**23.40**	**323**		P	**P**	**01 23 22.4**	**0.0**
ASAJ	**Asahikawa**	**24.45**	**355**		P	**P**	**01 23 33.5**	**+1.8**
ASAJ	**Asahikawa**	**24.45**	**355**		P	**P**	**01 23 33.5**	**+1.8**
	4.1nm,0.5s,baz=90,slow=9.1,SNR=3.7							
USRK	**Ussuriysk Arra**	**26.89**	**338**		P	**P**	**01 23 54.8**	**+1.1**
	1.6nm,0.6s,baz=140,slow=8.7,SNR=8.5							
PETK	**Petropavlovsk-**	**34.64**	**13**		P	**P**	**01 25 04.2**	**+2.4**
PETK	**Petropavlovsk-**	**34.64**	**13**		P	**P**	**01 25 04.2**	**+2.4**
	1.0nm,0.3s,baz=161,slow=9.7,SNR=5.1							
WRAB	**Tennant Creek**	**40.89**	**196**	*e*	P	**P**	**01 25 54.6**	**0.0**
	6.9nm,0.8s							
WRA	**Warramunga Arr**	**40.91**	**196**		P	**P**	**01 25 55.1**	**+0.4**
WRA	**Warramunga Arr**	**40.91**	**196**		P	**P**	**01 25 55.1**	**+0.4**
	5.2nm,0.7s,baz=18,slow=9.0,SNR=16							
ULN	**Ulaanbaatar**	**41.86**	**321**	*e*	P	**P**	**01 26 03.2**	**+0.8**
	3.1nm,0.6s							
SONM	**Songino Array**	**42.23**	**321**		P	**P**	**01 26 06.1**	**+0.7**
SONM	**Songino Array**	**42.23**	**321**		P	**P**	**01 26 06.1**	**+0.7**
	4.1nm,0.5s,baz=124,slow=6.8,SNR=44							
CMAR	**Chiang Mai Arr**	**43.91**	**276**		P	**P**	**01 26 19.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**43.91**	**276**		P	**P**	**01 26 19.2**	**+0.1**
	4.7nm,0.5s,baz=83,slow=5.1,SNR=12							
ASAR	**Alice Springs**	**44.58**	**195**		P	**P**	**01 26 24.6**	**+0.4**
ASAR	**Alice Springs**	**44.58**	**195**		P	**P**	**01 26 24.6**	**+0.4**
	1.5nm,0.5s,baz=17,slow=7.6,SNR=25							
DZM	**Mont Dzumac**	**46.31**	**153**		P	**P**	**01 26 38.2**	**+0.2**
DZM	**Mont Dzumac**	**46.31**	**153**		P	**P**	**01 26 38.2**	**+0.2**
	8.6nm,0.9s,baz=333,slow=6.0,SNR=8.6							
STKA	**Stephens Creek**	**51.44**	**184**		P	**P**	**01 27 16.4**	**-0.4**
STKA	**Stephens Creek**	**51.44**	**184**		P	**P**	**01 27 16.4**	**-0.4**
	0.8nm,0.3s,baz=32,slow=4.2,SNR=4.2							
ZAA0	**Zalesovo Array**	**57.09**	**322**	*e*	P	**P**	**01 27 57.3**	**-0.2**
ZALV	**Zalesovo Beam**	**57.09**	**322**		P	**P**	**01 27 57.6**	**+0.1**
ZALV	**Zalesovo Beam**	**57.09**	**322**		P	**P**	**01 27 57.6**	**+0.1**
	4.0nm,0.6s,baz=101,slow=6.8,SNR=22							
MK31	**Makanchi Array**	**57.62**	**313**	*e*	P	**P**	**01 28 02.4**	**+1.0**
MKAR	**Makanchi Array**	**57.62**	**313**		P	**P**	**01 28 02.5**	**+1.1**
MKAR	**Makanchi Array**	**57.62**	**313**		P	**P**	**01 28 02.5**	**+1.1**
	8.5nm,0.5s,baz=90,slow=9.4,SNR=75							
KURK	**Kurchatov**	**60.39**	**318**	*e*	P	**P**	**01 28 20.2**	**-0.1**
	5.6nm,0.6s							
ULHL	**Ulahol**	**61.81**	**308**		P	**P**	**01 28 31.5**	**+1.2**
	SNR=10							
TKM2	**Tokmak 2**	**62.26**	**309**	*e*	P	**P**	**01 28 33.6**	**+0.3**
	4.5nm,0.5s							
TKM2	**Tokmak 2**	**62.26**	**309**		P	**P**	**01 28 34.6**	**+1.3**
	SNR=9.0							
KZA	**Kyzart**	**62.55**	**308**		P	**P**	**01 28 37.4**	**+1.9**
	SNR=27							
KBK	**Karagaybulak**	**62.75**	**309**		P	**P**	**01 28 37.8**	**+1.2**
	SNR=5.4							
ILAR	**Eielson Array**	**62.82**	**26**		P	**P**	**01 28 36.6**	**+0.3**
ILAR						pP	**01 29 08.7**	**-2.7**
ILAR	**Eielson Array**	**62.82**	**26**		P	**P**	**01 28 36.6**	**+0.3**
	0.4nm,0.4s,baz=258,slow=5.9,SNR=9.6							
ILAR						pP	**01 29 08.7**	**-2.7**
	0.7nm,0.8s,baz=259,slow=5.4,SNR=3.4							
AAK	**Ala-Archa**	**63.08**	**309**	*e*	P	**P**	**01 28 39.6**	**+0.8**
	1.2nm,0.6s							
AML	**Almayashu**	**63.70**	**308**		P	**P**	**01 28 44.4**	**+1.3**
	SNR=13							
KKAR	**Karatay Array**	**65.97**	**309**	*e*	P	**P**	**01 28 57.8**	**+0.5**
	2.0nm,0.4s							
INK	**Inuvik**	**68.51**	**23**		P	**P**	**01 29 14.3**	**+1.6**
INK	**Inuvik**	**68.51**	**23**		P	**P**	**01 29 14.3**	**+1.6**
	0.9nm,0.5s,baz=297,slow=3.3,SNR=7.5							
ABKAR	**Akbulak array**	**72.47**	**317**	*e*	P	**P**	**01 29 37.3**	**+0.1**
	8.4nm,0.5s							
AKTO	**Aktyubinsk**	**73.48**	**318**		P	**P**	**01 29 43.2**	**+0.1**
AKTO	**Aktyubinsk**	**73.48**	**318**		P	**P**	**01 29 43.2**	**+0.1**
	4.8nm,0.6s,baz=102,slow=9.5,SNR=18							
YKA	**Yellowknife Ar**	**77.18**	**28**		P	**P**	**01 30 05.2**	**+1.2**
YKA						pP	**01 30 38.2**	**-2.0**
YKA	**Yellowknife Ar**	**77.18**	**28**		P	**P**	**01 30 05.2**	**+1.2**
	1.5nm,0.8s,baz=291,slow=5.5,SNR=17							
YKA						pP	**01 30 38.2**	**-2.0**
	0.4nm,0.6s,baz=290,slow=5.8,SNR=2.1							

ANKY eS Sn 01 23 30.6 +2.2
KYTH Kithira 0.64 36 P Pn 01 23 21.1 +1.1
KYTH Kithira 0.64 36 eP Pn 01 23 21.2 +1.2
KYTH Kithira 0.64 36 eP Pn 01 23 21.2 +1.2
KYTH Kithira 0.64 36 eP Pn 01 23 21.2 +1.2
VLI Veliai 1.00 17 P Pn 01 23 26.6 +1.9
VLI S Sn 01 23 39.2 +1.5
VLI Veliai 1.00 17 eP Pn 01 23 26.6 +1.9
VLI eS Sn 01 23 39.4 +1.7
VLI Veliai 1.00 17 eP Pn 01 23 26.6 +1.9
VLI eS Sn 01 23 39.4 +1.7
VLI Veliai 1.00 17 eP Pn 01 23 26.6 +1.9
VLI eS Sn 01 23 39.4 +1.7
DYR Agios Nikonas 1.02 349 P Pn 01 23 26.2 +1.2
DYR S Sn 01 23 38.8 +0.6
DYR Agios Nikonas 1.02 349 eP Pn 01 23 26.4 +1.4
DYR eS Sn 01 23 40.9 +2.7
DYR Agios Nikonas 1.02 349 eP Pn 01 23 26.4 +1.4
DYR eS Sn 01 23 40.9 +2.7
PYL PYLOS 1.32 329 P Pn 01 23 29.6 +0.6
PYL S Sn 01 23 46.8 +1.4
PYL PYLOS 1.32 329 eP Pn 01 23 29.8 +0.8
PYL eS Sn 01 23 47.9 +2.5
PYL PYLOS 1.32 329 eP Pn 01 23 29.8 +0.8
PYL eS Sn 01 23 47.9 +2.5
PYL PYLOS 1.32 329 eP Pn 01 23 29.8 +0.8
PYL S Sn 01 23 46.8 +1.4
VAM Vamos 1.37 105 eP Pn 01 23 32.2 +2.5
VAM Vamos 1.37 105 P Pn 01 23 32.0 +2.3
VAM S Sn 01 23 48.4 +1.7
VAM Vamos 1.37 105 eP Pn 01 23 32.2 +2.5
VAM Vamos 1.37 105 eP Pn 01 23 32.2 +2.5
VAM Vamos 1.37 105 P Pn 01 23 32.0 +2.3
VAM S Sn 01 23 48.4 +1.7
ITM Ithomi 1.51 340 P Pn 01 23 33.0 +1.4
ITM S Sn 01 23 52.4 +2.3
ITM Ithomi 1.51 340 eP Pn 01 23 32.8 +1.2
ITM eS Sn 01 23 52.1 +2.0
ITM Ithomi 1.51 340 eP Pn 01 23 32.8 +1.2
ITM eS Sn 01 23 52.1 +2.0
ITM Ithomi 1.51 340 eP Pn 01 23 32.8 +1.2
ITM eS Sn 01 23 52.1 +2.0
GVD Gavdhos 1.54 126 P Pn 01 23 33.9 +1.9
GVD S Sn 01 23 52.7 +1.8
GVD Gavdhos 1.54 126 ePn Pn 01 23 33.8 +1.8
GVD Gavdhos 1.54 126 eP Pn 01 23 34.1 +2.1
GVD Gavdhos 1.54 126 ePn Pn 01 23 33.8 +1.8
GVD S Sn 01 23 52.7 +1.8
VLX Vlachokerasia 1.61 354 P Pn 01 23 34.2 +1.1
VLX S Sn 01 23 53.6 +0.8
VLX Vlachokerasia 1.61 354 eP Pn 01 23 34.5 +1.4
VLX Vlachokerasia 1.61 354 eP Pn 01 23 34.5 +1.4
VLX Vlachokerasia 1.61 354 eP Pn 01 23 34.5 +1.4
VLX S Sn 01 23 53.6 +0.8
DID Didima 1.82 17 P Pn 01 23 36.9 +1.1
DID Didima 1.82 17 eP Pn 01 23 37.0 +1.1
DID Didima 1.82 17 eP Pn 01 23 37.0 +1.1
DID Didima 1.82 17 eP Pn 01 23 37.0 +1.1
AMT Artemida-Makis 1.90 339 eP Pn 01 23 38.1 +1.1
AMT Artemida-Makis 1.90 339 eP Pn 01 23 38.1 +1.1
IDI Anoyia 1.94 103 P Pn 01 23 39.2 +1.6
IDI Anoyia 1.94 103 ePn Pn 01 23 39.5 +1.9
IDI eS Sn 01 24 11.4 +11
IDI Anoyia 1.94 103 eP Pn 01 23 39.6 +1.9
IDI Anoyia 1.94 103 P Pn 01 23 39.2 +1.6
IDI Anoyia 1.94 103 ePn Pn 01 23 39.5 +1.9
SIVA Sivas 1.97 112 P Pn 01 23 40.1 +2.2
SIVA Sivas 1.97 112 eP Pn 01 23 39.6 +1.7
SIVA Sivas 1.97 112 eP Pn 01 23 39.6 +1.7
SIVA Sivas 1.97 112 eP Pn 01 23 39.6 +1.7
NAIG Nisos Aigina 2.12 20 eP Pn 01 23 41.6 +1.6
NAIG Nisos Aigina 2.12 20 eP Pn 01 23 41.6 +1.6
NAIG Nisos Aigina 2.12 20 eP Pn 01 23 41.6 +1.6
GUR Goura 2.18 355 P Pn 01 23 42.6 +1.8
GUR S Sn 01 24 08.1 +1.4
GUR Goura 2.18 355 eP Pn 01 23 43.2 +2.4
GUR Goura 2.18 355 eP Pn 01 23 43.2 +2.4
GUR Goura 2.18 355 P Pn 01 23 42.6 +1.8
GUR S Sn 01 24 08.1 +1.4
LTK Loutraki 2.28 8 P Pn 01 23 43.7 +1.6
LTK Loutraki 2.28 8 eP Pn 01 23 43.8 +1.6
LTK Loutraki 2.28 8 eP Pn 01 23 43.8 +1.6
LTK Loutraki 2.28 8 P Pn 01 23 43.7 +1.6
KLV Kalavryta, Ach 2.30 352 eP Pn 01 23 44.5 +2.0
KLV Kalavryta, Ach 2.30 352 eP Pn 01 23 44.5 +2.0
KLV Kalavryta, Ach 2.30 352 eP Pn 01 23 44.5 +2.0
ATH Athens Observa 2.39 22 eP Pn 01 23 45.0 +1.4
ATH Athens Observa 2.39 22 eP Pn 01 23 45.0 +1.4
ATH Athens Observa 2.39 22 eP Pn 01 23 45.0 +1.4
ATHU Athens Univers 2.40 23 P Pn 01 23 44.6 +0.8
ATHU Athens Univers 2.40 23 P Pn 01 23 44.6 +0.8
SANT Santorini 2.41 75 ePn Pn 01 23 45.5 +1.5
SANT Santorini 2.41 75 eP Pn 01 23 45.7 +1.7
SANT Santorini 2.41 75 eP Pn 01 23 45.7 +1.7
LAST Lasithi 2.44 103 P Pn 01 23 46.3 +1.9
LAST S Sn 01 24 15.8 +2.7
LAST Lasithi 2.44 103 eP Pn 01 23 46.7 +2.3
LAST Lasithi 2.44 103 eP Pn 01 23 46.7 +2.3
LAST Lasithi 2.44 103 P Pn 01 23 46.3 +1.9
LAST S Sn 01 24 15.8 +2.7
RLS Riolos of Patr 2.46 339 P Pn 01 23 46.8 +2.2
RLS Riolos of Patr 2.46 339 eP Pn 01 23 46.2 +1.6
RLS Riolos of Patr 2.46 339 eP Pn 01 23 46.2 +1.6
RLS Riolos of Patr 2.46 339 eP Pn 01 23 46.2 +1.6
PTL Penteli 2.50 24 P Pn 01 23 46.4 +1.2
PTL Penteli 2.50 24 eP Pn 01 23 46.1 +0.9
PTL Penteli 2.50 24 eP Pn 01 23 46.1 +0.9
PTL Penteli 2.50 24 P Pn 01 23 46.4 +1.2
LAKA Lakka 2.52 349 P Pn 01 23 47.6 +2.2
LAKA Lakka 2.52 349 eP Pn 01 23 47.6 +2.2
LAKA Lakka 2.52 349 eP Pn 01 23 47.6 +2.2
LAKA Lakka 2.52 349 eP Pn 01 23 47.6 +2.2
NPS Neapolis 2.53 100 P Pn 01 23 46.8 +1.3
NPS Neapolis 2.53 100 eP Pn 01 23 47.5 +2.0
NPS Neapolis 2.53 100 eP Pn 01 23 47.5 +2.0
NPS Neapolis 2.53 100 P Pn 01 23 46.8 +1.3
TRIZ Trizonia 2.63 351 eP Pn 01 23 49.2 +2.3
TRIZ Trizonia 2.63 351 eP Pn 01 23 49.2 +2.3
DSF Desfina 2.65 359 P Pn 01 23 48.6 +1.4
DSF Desfina 2.65 359 P Pn 01 23 48.6 +1.4
KALE Kalithea 2.65 353 P Pn 01 23 49.2 +2.0
KALE Kalithea 2.65 353 eP Pn 01 23 49.2 +2.0
KALE Kalithea 2.65 353 eP Pn 01 23 49.2 +2.0
KALE Kalithea 2.65 353 eP Pn 01 23 49.2 +2.0
EFP Efpalio 2.71 349 P Pn 01 23 50.5 +2.5
EFP Efpalio 2.71 349 eP Pn 01 23 50.6 +2.5
EFP Efpalio 2.71 349 eP Pn 01 23 50.6 +2.5
EFP Efpalio 2.71 349 P Pn 01 23 50.5 +2.5
APE Apeiranthos 2.72 60 eP Pn 01 23 49.2 +1.1
APE Apeiranthos 2.72 60 eP Pn 01 23 49.2 +1.1
APE Apeiranthos 2.72 60 eP Pn 01 23 49.2 +1.1
KFL Anninata 2.75 329 P Pn 01 23 50.0 +1.5
KFL Anninata 2.75 329 P Pn 01 23 50.0 +1.5
VLS Valsamata 2.89 327 P Pn 01 23 51.3 +0.8
VLS Valsamata 2.89 327 P Pn 01 23 51.3 +0.8
LKR Lokris 2.90 7 eP Pn 01 23 52.4 +1.7
LKR Lokris 2.90 7 eP Pn 01 23 52.4 +1.7
LKR Lokris 2.90 7 eP Pn 01 23 52.4 +1.7
ATAL Atalanti 2.95 7 P Pn 01 23 52.4 +1.1
ATAL Atalanti 2.95 7 P Pn 01 23 52.4 +1.1
AXAR Agios Charalam 3.00 1 P Pn 01 23 53.9 +1.9
AXAR Agios Charalam 3.00 1 P Pn 01 23 53.9 +1.9
ZKR Zakros 3.04 101 P Pn 01 23 55.4 +2.8
ZKR Zakros 3.04 101 eP Pn 01 23 55.6 +3.0
ZKR Zakros 3.04 101 eP Pn 01 23 55.6 +3.0
ZKR Zakros 3.04 101 P Pn 01 23 55.4 +2.8
EVR Evrytania 3.21 349 eP Pn 01 23 58.5 +3.6
EVR Evrytania 3.21 349 eP Pn 01 23 58.5 +3.6
EVR Evrytania 3.21 349 eP Pn 01 23 58.5 +3.6
AGG Agios Georgios 3.26 357 P Pn 01 23 57.2 +1.6
AGG Agios Georgios 3.26 357 P Pn 01 23 57.2 +1.6
LKD2 Lefkada island 3.39 334 P Pn 01 23 59.1 +1.8
LKD2 S Sn 01 24 38.3 +2.0
LKD2 Lefkada island 3.39 334 P Pn 01 23 59.1 +1.8
LKD2 S Sn 01 24 38.3 +2.0
SKIA Skiathos 3.47 11 P Pn 01 24 00.3 +1.8
SKIA Skiathos 3.47 11 P Pn 01 24 00.3 +1.8
XOR Xorichti 3.63 8 P Pn 01 24 02.1 +1.4
XOR Xorichti 3.63 8 P Pn 01 24 02.1 +1.4

KARP Karpathos 3.74 92 eP Pn 01 24 03.3 +1.1
KARP Karpathos 3.74 92 eP Pn 01 24 03.3 +1.1
KARP Karpathos 3.74 92 eP Pn 01 24 03.3 +1.1
THL Klokotos Trika 3.82 353 P Pn 01 24 04.9 +1.7
THL Klokotos Trika 3.82 353 P Pn 01 24 04.9 +1.7
LTBQ Tobrug 3.86 163 i P Pn 01 24 07.2 +3.4
SNR=45
LTBQ eS Sn 01 24 49.1 +1.2
SNR=45
JAN Janina 4.12 341 P Pn 01 24 09.4 +2.0
JAN Janina 4.12 341 P Pn 01 24 09.4 +2.0
PAIG Paliouri 4.25 12 P Pn 01 24 10.7 +1.6
PAIG Paliouri 4.25 12 P Pn 01 24 10.7 +1.6
ARG Arkhangelos 4.52 83 eP Pn 01 24 14.3 +1.4
ARG Arkhangelos 4.52 83 eP Pn 01 24 14.3 +1.4
ARG Arkhangelos 4.52 83 eP Pn 01 24 14.3 +1.4
ARG Arkhangelos 4.52 83 eP Pn 01 24 14.3 +1.4
SLUM 4.79 152 AMP 01 25 00.0
comp=E,170µm,0.2s,logA/T=6.0,baz=156
SLUM 4.79 152 P Pn 01 24 15.9 -0.7
NEST Nestorio 4.80 346 P Pn 01 24 19.0 +2.3
NEST Nestorio 4.80 346 P Pn 01 24 19.0 +2.3
TURN Turunc 4.99 75 i P Pn 01 24 18.0 -1.3
TURN eS Sn 01 25 00.6 -15
TURN Turunc 4.99 75 i P Pn 01 24 18.0 -1.3
KBN Korca 5.05 344 ePN Pn 01 24 33.1 +13
SOH Sokhos 5.09 7 P Pn 01 24 22.3 +1.6
SOH Sokhos 5.09 7 P Pn 01 24 22.3 +1.6
LJBD Adjabya 5.23 203 i P Pn 01 24 23.6 +1.0
SNR=45
SMTH Samothraki Isl 5.25 25 eP Pn 01 24 24.5 +1.7
SMTH Samothraki Isl 5.25 25 eP Pn 01 24 24.5 +1.7
SMTH Samothraki Isl 5.25 25 eP Pn 01 24 24.5 +1.7
VLO Vlora 5.29 334 ePN Pn 01 24 25.7 +2.3
VLO Vlora 5.29 334 ePn Pn 01 24 25.7 +2.3
BIA Bitola 5.34 350 i Pn Pn 01 24 25.2 +1.1
BIA Bitola 5.34 350 i Pn Pn 01 24 25.2 +1.1
VAY Valandovo 5.55 360 i Pn Pn 01 24 27.2 +0.3
VAY Valandovo 5.55 360 i Pn Pn 01 24 27.7 +0.8
AKAS Kas 5.72 83 i P Pn 01 24 30.2 +0.8
AKAS eS Sn 01 25 21.9 -12
AKAS Kas 5.72 83 i P Pn 01 24 30.2 +0.8
GOLH Golhisar 5.81 73 eP Pn 01 24 33.3 +2.6
GOLH eS Sn 01 25 34.8 -1.3
GOLH Golhisar 5.81 73 eP Pn 01 24 33.3 +2.6
MMB Musomiste 5.89 8 eP Pn 01 24 32.1 +0.5
MMB Musomiste 5.89 8 eP Pn 01 24 32.1 +0.5
CEL Celeste 5.90 297 ePn Pn 01 24 31.0 -0.8
comp=E,24nm,0.6s
CEL eS Sn 01 25 33.4 -4.7
CEL Celeste 5.90 297 ePn Pn 01 24 31.0 -0.8
comp=E,24nm,0.6s
TIR Tirane 5.97 340 ePN Pn 01 24 33.4 +0.7
TIR Tirane 5.97 340 eP Pn 01 24 32.8 +0.1
TIR eS Sn 01 25 38.1 -1.6
TIR Tirane 5.97 340 ePn Pn 01 24 32.8 +0.1
TIR eS Sn 01 25 38.1 -1.6
TIR Tirane 5.97 340 eP Pn 01 24 32.8 +0.1
HMAT Matruh 5.99 140 P Pn 01 24 32.9 -0.2
baz=143
HMAT S Sn 01 25 34.9 -5.5
baz=143
HMAT Matruh 5.99 140 P Pn 01 24 32.9 -0.2
KKB Krupnik 6.11 4 eP Pn 01 24 35.4 +0.8
KKB Krupnik 6.11 4 eP Pn 01 24 35.4 +0.8
PHP Peshkopia 6.14 345 ePN Pn 01 24 35.9 +0.7
PHP Peshkopia 6.14 345 ePn Pn 01 24 35.9 +0.7
RZN Rozhen 6.15 15 P Pn 01 24 35.1 -0.2
RZN Rozhen 6.15 15 P Pn 01 24 35.1 -0.2
SKO Skopje 6.26 352 i Pn Pn 01 24 37.7 +1.0
SKO Skopje 6.26 352 i Pn Pn 01 24 38.2 +1.5
KDZ Kurdzhali 6.28 20 P Pn 01 24 37.8 +0.8
KDZ Kurdzhali 6.28 20 P Pn 01 24 37.8 +0.8
KORT Korkueli 6.39 77 eP Pn 01 24 37.6 -1.1
KORT eS Sn 01 25 46.6 -3.8
PUK Puka 6.61 342 ePN Pn 01 24 43.2 +1.6
PUK Puka 6.61 342 ePn Pn 01 24 43.2 +1.6
LUJL Ujela 6.71 190 i P Pn 01 24 43.3 +0.4
SNR=43
ULC Ulcinj 6.72 338⇑ i Pn Pn 01 24 42.7 -0.3
ULC eSn Sn 01 25 51.0 -7.1
ULC Ulcinj 6.72 338⇑ i Pn Pn 01 24 42.7 -0.3
LSRT Sirt 6.80 228 i P Pn 01 24 44.1 0.0
SNR=43
CUC Castrocucco 6.81 310 ePn Pn 01 24 44.5 +0.2
comp=E,75nm,0.6s
CUC eS Sn 01 25 59.0 -1.5
CUC Castrocucco 6.81 310 ePn Pn 01 24 44.5 +0.2
comp=E,75nm,0.6s
CUC eS Sn 01 25 59.0 -1.5
VTS Vitosha 6.84 4⇓ i P Pn 01 24 45.8 +1.1
VTS Vitosha 6.84 4 P Pn 01 24 46.7 +2.0
VTS Vitosha 6.84 4 P Pn 01 24 46.7 +2.0
BCI Bajram Curri 6.88 344 ePN Pn 01 24 46.0 +0.8
BCI Bajram Curri 6.88 344 ePn Pn 01 24 46.0 +0.8
SWA2 6.94 159 P Pn 01 24 46.6 +0.6
baz=161
SWA2 6.94 159 P Pn 01 24 46.6 +0.6
BARS Barje 7.07 355⇑ i Pn Pn 01 24 47.6 -0.2
PVY Plav 7.12 344⇓ i Pn Pn 01 24 48.4 -0.2
PVY eSn Sn 01 26 00.8 -7.3
PVY Plav 7.12 344⇓ i Pn Pn 01 24 48.4 -0.2
BUM Brajici-Budva 7.13 337⇓ i Pn Pn 01 24 48.1 -0.6
BUM eSn Sn 01 26 00.6 -7.7
BUM Brajici-Budva 7.13 337⇓ i Pn Pn 01 24 48.1 -0.6
PDG Podgorica 7.14 340⇑ i Pn Pn 01 24 48.3 -0.4
TTG Podgorica 7.14 340⇑ i Pn Pn 01 24 48.3 -0.4
TTG eSn Sn 01 26 00.8 -7.7
LMSR Misrath 7.16 243 i P Pn 01 24 48.7 -0.4
SNR=43
HCY Herceg Novi 7.39 336⇑ i Pn Pn 01 24 52.6 +0.4
HCY eSn Sn 01 26 06.5 -8.1
HCY Herceg Novi 7.39 336⇑ i Pn Pn 01 24 52.6 +0.4
BEY Berane 7.40 344 ePn Pn 01 24 52.1 -0.3
IVA Berane 7.40 344 ePn Pn 01 24 52.1 -0.3
IVA eSn Sn 01 26 07.2 -7.7
MPEP Malo Peshtene 7.64 6 P Pn 01 24 56.7 +1.2
BRY Bratogost 7.79 338⇑ i Pn Pn 01 24 57.5 -0.2
BRY eSn Sn 01 26 16.7 -7.8
BRY Bratogost 7.79 338⇑ i Pn Pn 01 24 57.5 -0.2
GAZI Gazipasa 7.91 84 eP Pn 01 24 57.5 -1.8
GAZI eS Sn 01 26 15.2 -12
SZH Strazhica 7.93 18 P Pn 01 25 01.8 +2.2
SZH Strazhica 7.93 18 P Pn 01 25 01.8 +2.2
UPM Unac-Piva 7.95 340⇑ i Pn Pn 01 25 00.2 +0.1
UPM eSn Sn 01 26 20.5 -8.2
UPM Unac-Piva 7.95 340⇑ i Pn Pn 01 25 00.2 +0.1
STON Ston 8.04 333 ePn Pn 01 24 58.0 -3.0
STON eSn Sn 01 26 20.8 -10
GRUS Gruza 8.24 351 i Pn Pn 01 25 02.6 -0.2
ERMK Ermenek 8.40 81 eP Pn 01 25 06.3 +0.1
ERMK eS Sn 01 26 26.5 -13
ERMK Ermenek 8.40 81 eP Pn 01 25 06.3 +0.1
BBLS Lazići 8.45 344 ePn Pn 01 25 06.1 -0.7
GHAR Gharyan 8.68 248 i P Pn 01 25 09.6 -0.3
SNR=43
LJFR Jufra 8.76 223 i P Pn 01 25 10.1 -0.9
SNR=43
CSS Prodhromos 8.82 92 ePn Pn 01 25 11.6 -0.2
CSS Prodhromos 8.82 92 ePn Pn 01 25 09.4 -2.4
CSS Sn Sn 01 26 40.3 -10
ANTO Ankara 9.06 60 eP Pn 01 25 17.6 +2.4
ANTO pmax pmax
comp=Z,10.0nm,1.1s
ANTO Ankara 9.06 60 ePn Pn 01 25 17.6 +2.4
comp=Z,10nm,1.1s
ANTO Ankara 9.06 60 eP Pn 01 25 17.6 +2.4
comp=Z,10.0nm,1.1s
LSHF Shwairf 9.06 233 i P Pn 01 25 14.9 -0.3
SNR=43
TEKS Tekeris 9.08 346 ePn Pn 01 25 15.2 -0.1
BRTR Keskin Array B 9.61 62 Pn Pn 01 25 26.0 +3.3
BRTR Keskin Array B 9.61 62 Pn Pn 01 25 26.0 +3.3
comp=Z,0.2nm,0.3s,baz=241,slow=14,SNR=15
BRTR Keskin Array B 9.61 62 P Pn 01 25 26.0 +3.3
KOT Kottamia 9.71 124 P Pn 01 25 21.9 -2.2
baz=127
KOT S Sn 01 27 02.8 -9.0
baz=127
LOT Lotru 9.72 5⇑ i P Pn 01 25 24.0 -0.1
LOT Lotru 9.72 5⇑ i P Pn 01 25 24.0 -0.1
ARR Arges 9.72 9⇑ i P Pn 01 25 22.7 -1.4

HSAF As Saff 9.73 126 P Pn 01 25 22.6 -1.7
baz=129
TIRR Tirgusor 9.77 25 eP Pn 01 25 26.2 +1.6
TIRR pmax pmax
comp=Z,4.0nm,0.9s
TIRR Tirgusor 9.77 25 ePn Pn 01 25 26.2 +1.6
comp=Z,4.3nm,0.9s
TIRR Tirgusor 9.77 25⇑ i P Pn 01 25 17.5 -7.1
TIRR Tirgusor 9.77 25 eP Pn 01 25 26.2 +1.6
comp=Z,4.0nm,0.9s
GLL Jalalah 9.86 126 P Pn 01 25 23.6 -2.4
baz=129
HFRF Wahat Farafira 9.88 149 P Pn 01 25 26.1 -0.3
baz=151
HFRF Wahat Farafira 9.88 149 P Pn 01 25 26.1 -0.3
MLR Muntele Rosu 10.05 14 Pn Pn 01 25 31.8 +3.1
MLR Muntele Rosu 10.05 14⇑ i P Pn 01 25 26.3 -2.4
MLR Muntele Rosu 10.05 14 Pn Pn 01 25 31.8 +3.1
baz=250,slow=4.6
MLR Muntele Rosu 10.05 14 P Pn 01 25 31.8 +3.1
AMAG Maghara 10.26 117 P Pn 01 25 28.4 -3.1
baz=119
CFR Carcaliu 10.31 23⇑ i P Pn 01 25 25.8 -6.3
SUZ 10.45 122 P Pn 01 25 32.0 -2.1
baz=124
RSH 10.47 114 P Pn 01 25 31.6 -2.9
baz=116
PLOR Plostina 10.54 16⇑ i P Pn 01 25 31.8 -3.5
VRI Vrincioaia 10.57 16⇓ i P Pn 01 25 32.3 -3.4
HNTI Hanita 10.74 101 Sn Sn 01 27 26.4 -11
KEST Kesra 10.76 274 Pn Pn 01 25 38.1 -0.2
KEST Sn Sn 01 27 31.6 -5.6
KEST Kesra 10.76 274 Pn Pn 01 25 38.1 -0.2
comp=Z,0.1nm,0.3s,baz=78,slow=14,SNR=3.1
KEST Sn Sn 01 27 31.6 -5.6
comp=Z,0.2nm,0.3s,baz=28,slow=19,SNR=8.2
KEST Kesra 10.76 274 Pn Pn 01 25 38.1 -0.2
PKSM Moragy 10.85 345⇑ i P Pn 01 25 37.9 -1.6
SLTI Sal'it 10.92 105 Sn Sn 01 27 29.9 -11
MMA0 Mount Meron ar 10.95 101 Pn Pn 01 25 38.0 -2.9
MMA0 Sn Sn 01 27 31.6 -10
MMAI Mount Meron Ar 10.95 101 Pn Pn 01 25 36.9 -4.0
MMAI Sn Sn 01 27 33.1 -8.9
MMAI Mount Meron Ar 10.95 101 Pn Pn 01 25 36.9 -4.0
comp=Z,1.1nm,0.3s,baz=266,slow=12,SNR=8.0
MMAI Sn Sn 01 27 33.1 -8.9
comp=Z,2.9nm,0.3s,baz=297,slow=26,SNR=6.3
KZIT Kziot 11.01 113 Pn Pn 01 25 37.7 -4.0
KZIT Sn Sn 01 27 32.1 -11
KSDI Kefar Szold 11.10 100 Pn Pn 01 25 39.9 -3.0
KSDI Sn Sn 01 27 35.6 -10
MMLI Mount Malkishu 11.15 104 Pn Pn 01 25 40.2 -3.5
MMLI Sn Sn 01 27 35.9 -11
RTMI Retamim 11.16 111 Pn Pn 01 25 39.5 -4.3
RTMI Sn Sn 01 27 36.1 -11
BOJS Bojanci 11.20 333 i Pn Pn 01 25 43.1 -1.2
BOJS i Sn Sn 01 27 38.5 -10
BOJS Bojanci 11.20 333 i Pn Pn 01 25 43.1 -1.2
HNKL Nakhl 11.21 118 P Pn 01 25 42.0 -2.5
baz=120
HMDT Nahal Hemdat 11.30 104 Pn Pn 01 25 42.7 -3.0
HMDT Sn Sn 01 27 39.9 -11
ASUT 11.32 135 P Pn 01 25 44.9 -1.1
baz=137
ASUT 11.32 135 P Pn 01 25 44.9 -1.1
CRES Cresnjev 11.40 334 i Pn Pn 01 25 44.1 -2.9
CRES i Sn Sn 01 27 39.9 -13
RMNI Mount Ramon 11.43 113 Pn Pn 01 25 43.2 -4.4
DSI Dead Sea 11.46 108 Pn Pn 01 25 44.1 -3.7
DSI Sn Sn 01 27 43.6 -11
MZDA Masada 11.55 109 Pn Pn 01 25 46.2 -2.9
MZDA Sn Sn 01 27 45.9 -11
VISS Visnje 11.61 332 i Pn Pn 01 25 49.4 -0.6
VISS i Sn Sn 01 27 47.2 -11
VISS Visnje 11.61 332 i Pn Pn 01 25 49.3 -0.6
KRMI Paran Flat 11.65 115 Pn Pn 01 25 47.7 -2.8
KRMI Sn Sn 01 27 47.6 -12
SKDS Skadanscina 11.73 329 i Pn Pn 01 25 49.3 -2.3
SKDS i Sn Sn 01 27 50.3 -11
PRNI Paran 11.73 114 Pn Pn 01 25 47.8 -3.9
PRNI Sn Sn 01 27 50.1 -11
ZFRI Zfri 11.76 113 Sn Sn 01 27 49.6 -12
HRFI Mount Harif 11.92 115 Pn Pn 01 25 51.4 -2.9
HRFI Sn Sn 01 27 54.6 -11
MBRI Mt Berech 11.96 116 Pn Pn 01 25 51.0 -3.8
MBRI Sn Sn 01 27 55.1 -12
JAVS Javornik 11.99 330 i Pn Pn 01 25 53.5 -1.6
JAVS eSn Sn 01 27 55.6 -12
BURAR Bucovina Array 12.01 9⇑ i P Pn 01 25 53.7 -1.7
EIL Elat 12.06 117 Pn Pn 01 25 52.5 -3.5
EIL Sn Sn 01 27 54.7 -14
EIL Elat 12.06 117 Pn Pn 01 25 52.5 -3.5
comp=Z,0.6nm,0.3s,baz=350,slow=10.0,SNR=18
EIL Sn Sn 01 27 54.7 -14
comp=Z,0.5nm,0.3s,baz=347,slow=15,SNR=2.8
EIL Elat 12.06 117 Pn Pn 01 25 52.6 -3.5
PSZ Piszkesteto 12.31 352⇑ i P Pn 01 26 00.6 +1.1
PSZ Piszkesteto 12.31 352⇑ i P Pn 01 26 00.6 +1.1
ASF Jabal al Asfar 12.41 103 Pn Pn 01 25 57.1 -3.9
ASF Sn Sn 01 28 04.0 -14
ASF Jabal al Asfar 12.41 103 Pn Pn 01 25 57.1 -3.9
comp=Z,0.2nm,0.3s,baz=101,slow=5.5,SNR=5.5
ASF Sn Sn 01 28 04.0 -14
comp=Z,0.2nm,0.3s,baz=303,slow=17,SNR=2.0
VYHS Vyhne 13.02 349 eP P 01 26 16.0 -2.1
VYHS Vyhne 13.02 349 e P 01 26 16.0 -2.1
CRVS Cervenica-Dubn 13.16 357 eP Pn 01 26 12.8 +1.8
CRVS Cervenica-Dubn 13.16 357 ePN Pn 01 26 12.8 +1.8
CRVS Cervenica-Dubn 13.16 357 eP Pn 01 26 12.8 +1.8
KOLS Kolonicke sedl 13.16 359 eP Pn 01 26 11.1 0.0
KOLS Kolonicke sedl 13.16 359 ePN Pn 01 26 11.1 0.0
KOLS Kolonicke sedl 13.16 359 eP Pn 01 26 11.1 0.0
STHS Stebnicka Huta 13.68 356 eP Pn 01 26 17.6 -0.6
STHS Stebnicka Huta 13.68 356 ePN Pn 01 26 17.6 -0.6
STHS Stebnicka Huta 13.68 356 eP P 01 26 27.7 +2.2
STHS Stebnicka Huta 13.68 356 eP Pn 01 26 17.6 -0.6
KWP Kalwaria Pacla 13.86 0⇓ i P Pn 01 26 21.4 +0.8
VRAC Vranov 14.23 344 Pn Pn 01 26 27.9 +2.4
VRAC Vranov 14.23 344 ⇑ i P P 01 26 29.2 -2.4
VRAC Vranov 14.23 344 Pn Pn 01 26 27.9 +2.4
comp=Z,0.2nm,0.3s,baz=149,slow=18,SNR=2.9
VRAC Vranov 14.23 344 Pn Pn 01 26 27.9 +2.4
MOTA Moosalm 14.39 327 ⇓ i Pn Pn 01 26 26.1 -1.8
MOTA ⇓ i Sn Sn 01 28 58.0 -8.0
MOTA Moosalm 14.39 327 Pn Pn 01 26 26.1 -1.8
MORC Moravsky Berou 14.48 347⇑ i P P 01 26 32.5 -1.9
MORC Moravsky Berou 14.48 347⇑ i P P 01 26 32.5 -1.9
DAVOX Davos/Dischmat 14.55 323 Pn Pn 01 26 31.4 +1.5
DAVOX Sn Sn 01 29 00.7 -9.2
DAVOX Davos/Dischmat 14.55 323 Pn Pn 01 26 31.4 +1.5
comp=Z,0.3nm,0.3s,baz=152,slow=15,SNR=3.1
DAVOX Sn Sn 01 29 00.7 -9.2
comp=Z,0.5nm,0.3s,baz=326,slow=23,SNR=8.2
DAVOX Davos/Dischmat 14.55 323 Pn Pn 01 26 31.5 +1.5
GERES GERESS Array B 14.62 336 Pn Pn 01 26 29.3 -1.4
GERES Sn Sn 01 29 01.0 -10
GERES GERESS Array B 14.62 336 Pn Pn 01 26 29.3 -1.4
comp=Z,0.2nm,0.3s,baz=159,slow=14,SNR=5.6
GERES Sn Sn 01 29 01.0 -10
comp=Z,0.4nm,0.3s,baz=149,slow=23,SNR=5.4
GERES GERESS Array B 14.62 336 Pn Pn 01 26 29.3 -1.4
KHC Kasperske Hory 14.90 336 eP P 01 26 41.0 +1.9
KHC Kasperske Hory 14.90 336 eP P 01 26 41.0 +1.9
KHC ex x 01 27 07.0
KHC Kasperske Hory 14.90 336 eP P 01 26 41.0 +1.9
AK02 Malin Array Si 15.64 16 ePn Pn 01 26 41.0 -2.8
AK01 Malin Array Si 15.68 16 ePn Pn 01 26 42.1 -2.2
KIEV Kiev 15.68 16 eP Pn 01 26 42.1 -2.2
KIEV pmax pmax
comp=Z,22nm,0.8s
KIEV Kiev 15.68 16 ePn Pn 01 26 42.1 -2.2
comp=Z,22nm,0.8s
AKASG Malin Array Be 15.69 16 P Pn 01 26 42.0 -2.4
AKASG 01 29 41.7
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 15.69 16 Pn Pn 01 26 42.0 -2.4
AKASG Sn Sn 01 29 41.7 +4.6
AKASG Malin Array Be 15.69 16 Pn Pn 01 26 42.0 -2.4
comp=Z,1.8nm,0.3s,baz=208,slow=12,SNR=18
AKASG Sn Sn 01 29 41.7 +4.6
comp=Z,0.4nm,0.3s,baz=207,slow=24,SNR=3.2

BRG	**Berggiesshubel**	**16.34**	**340**	*eP*		**P**	**01 26 58.8**	**+3.9**
	comp=Z,49nm,2.1s								
BRG				*e*			01 27 08.4		
	comp=Z,7.1nm,1.3s								
BRG	**Berggiesshubel**	**16.34**	**340**	*eP*		**P**	**01 26 58.8**	**+3.9**
BRG					pmax	pmax			
	comp=Z,49nm,2.2s								
BRG					pmax	pmax			
	comp=Z,7.0nm,1.3s								
CLL	**Collm**	**17.00**	**339**	*eP*		pP	01 27 13.0	-0.6	
CLL	**Collm**	**17.00**	**339**	*epP*		**pP**	**01 27 13.0**	**-0.6**	
CLL				*e*			01 27 16.0		
CLL				*es*P		sP	01 27 20.0	0.0	
HAU	**Haudompre**	**17.15**	**320**	*eP*		**Pn**	**01 27 02.1**	**-0.9**	
HAU	**Haudompre**	**17.15**	**320**	*eP*		**Pn**	**01 27 02.1**	**-0.9**	
HAU	**Haudompre**	**17.15**	**320**	*eP*		**Pn**	**01 27 02.1**	**-0.9**	
HAU	**Haudompre**	**17.15**	**320**	*eP*		**Pn**	**01 27 02.1**	**-0.9**	
KIV	**Kislovodsk**	**17.44**	**56**	*eP*		**Pn**	**01 27 04.0**	**-2.7**	
KIV					pmax	pmax			
	comp=Z,3.0nm,0.6s								
KBZ	**Khabaz**	**17.51**	**57**	P		**P**	**01 27 09.5**	**+1.6**	
KBZ	**Khabaz**	**17.51**	**57**	Pn		**P**	**01 27 09.5**	**+1.6**	
KBZ	**Khabaz**	**17.51**	**57**	Pn		**P**	**01 27 09.5**	**+1.6**	
	comp=Z,0.1nm,0.3s,baz=268,slow=8.4,SNR=3.8								
KBZ	**Khabaz**	**17.51**	**57**	P		**P**	**01 27 09.5**	**+1.6**	
SMF	**Signal de Mont**	**17.76**	**313**	*eP*		**Pn**	**01 27 09.9**	**-0.5**	
SMF	**Signal de Mont**	**17.76**	**313**	*eP*		**Pn**	**01 27 09.9**	**-0.5**	
SMF	**Signal de Mont**	**17.76**	**313**	*eP*		**Pn**	**01 27 09.9**	**-0.5**	
SMF	**Signal de Mont**	**17.76**	**313**	*eP*		**Pn**	**01 27 09.9**	**-0.5**	
MEZF	**Maizieres J'vi**	**18.14**	**320**	*eP*		**P**	**01 27 14.6**	**-0.2**	
MEZF	**Maizieres J'vi**	**18.14**	**320**	*eP*		**P**	**01 27 14.6**	**-0.2**	
MEZF	**Maizieres J'vi**	**18.14**	**320**	*eP*		**P**	**01 27 14.6**	**-0.2**	
LFF	**La Frestale**	**18.95**	**306**	*eP*		**Pn**	**01 27 24.9**	**0.0**	
LFF	**La Frestale**	**18.95**	**306**	*eP*		**Pn**	**01 27 24.9**	**0.0**	
LFF	**La Frestale**	**18.95**	**306**	*eP*		**Pn**	**01 27 24.9**	**0.0**	
LFF	**La Frestale**	**18.95**	**306**	*eP*		**Pn**	**01 27 24.9**	**0.0**	
NACGM	**Naroch**	**19.36**	**7**	*e*		**P**	**01 27 25.0**	**-3.1**	
VSR	**Storozhevoye**	**19.51**	**33**	*eP*		**P**	**01 27 29.3**	**-0.5**	
VSR					pmax	pmax			
	comp=E,5.0nm,0.8s								
VSR					pmax	pmax			
	comp=Z,10.0nm,0.8s								
VSR					pmax	pmax			
	comp=N,2.0nm,0.4s								
VSR	**Storozhevoye**	**19.51**	**33**	*eP*		**P**	**01 27 29.3**	**-0.5**	
	comp=N,2.0nm,0.4s								
MFF	**Saint Martin d**	**20.17**	**309**	*eP*		Pn	01 27 38.7	-0.6	
	comp=N,8.6nm,0.8s								
MFF	**Saint Martin d**	**20.17**	**309**	*eP*		Pn	01 27 38.7	-0.6	
MFF					pmax	pmax			
	comp=Z,9.0nm,0.8s								
MFF	**Saint Martin d**	**20.17**	**309**	*eP*		Pn	01 27 38.7	-0.6	
	comp=Z,8.6nm,0.8s								
MFF	**Saint Martin d**	**20.17**	**309**	*eP*		Pn	01 27 38.7	-0.6	
	comp=Z,8.6nm,0.8s								
VRHR	**Novokhopersk**	**20.55**	**36**	*eP*		**P**	**01 27 41.5**	**+0.4**	
VRHR					pmax	pmax			
	comp=N,10.0nm,0.7s								
VRHR					pmax	pmax			
	comp=E,9.0nm,0.7s								
VRHR					pmax	pmax			
	comp=Z,10.0nm,0.7s								
VRHR	**Novokhopersk**	**20.55**	**36**	*eP*		**P**	**01 27 41.5**	**+0.4**	
LDF	**La Druitiere**	**21.05**	**315**	*eP*		**P**	**01 27 47.5**	**+0.9**	
	comp=Z,18nm,0.6s								
LDF	**La Druitiere**	**21.05**	**315**	*eP*		**P**	**01 27 47.5**	**+0.9**	
LDF					pmax	pmax			
	comp=Z,18nm,0.6s								
LDF	**La Druitiere**	**21.05**	**315**	*eP*		**P**	**01 27 47.5**	**+0.9**	
	comp=Z,18nm,0.6s								
LDF	**La Druitiere**	**21.05**	**315**	*eP*		**P**	**01 27 47.5**	**+0.9**	
	comp=Z,18nm,0.6s								
ESDC	**Sonseca Array**	**21.33**	**289**	P		**P**	**01 27 50.5**	**+0.8**	
ESDC	**Sonseca Array**	**21.33**	**289**	P		**P**	**01 27 50.5**	**+0.8**	
	comp=Z,0.9nm,0.5s,baz=86,slow=10,SNR=8.5								
ESDC	**Sonseca Array**	**21.33**	**289**	P		**P**	**01 27 50.5**	**+0.8**	
FLN	**La Foliniere**	**21.35**	**315**	*eP*		**P**	**01 27 50.3**	**+0.6**	
	comp=Z,18nm,0.7s								
FLN	**La Foliniere**	**21.35**	**315**	*eP*		**P**	**01 27 50.3**	**+0.6**	
FLN					pmax	pmax			
	comp=Z,19nm,0.7s								
FLN	**La Foliniere**	**21.35**	**315**	*eP*		**P**	**01 27 50.3**	**+0.6**	
	comp=Z,18nm,0.7s								
FLN	**La Foliniere**	**21.35**	**315**	*eP*		**P**	**01 27 50.3**	**+0.6**	
	comp=Z,18nm,0.7s								
GRR	**Gorron**	**21.39**	**313**	*eP*		**P**	**01 27 51.7**	**+1.6**	
	comp=Z,4.3nm,0.5s								
GRR	**Gorron**	**21.39**	**313**	*eP*		**P**	**01 27 51.7**	**+1.6**	
GRR					pmax	pmax			
	comp=Z,4.0nm,0.4s								
GRR	**Gorron**	**21.39**	**313**	*eP*		**P**	**01 27 51.7**	**+1.6**	
	comp=Z,4.3nm,0.4s								
GRR	**Gorron**	**21.39**	**313**	*eP*		**P**	**01 27 51.7**	**+1.6**	
	comp=Z,4.3nm,0.4s								
RST	**Umm Al-Ruwaisa**	**21.46**	**100**	*eP*		**P**	**01 27 51.2**	**+0.1**	
RST	**Umm Al-Ruwaisa**	**21.46**	**100**	*eP*		**P**	**01 27 51.2**	**+0.1**	
MIB	**Mutribah**	**21.62**	**99**	*eP*		**P**	**01 27 53.2**	**+0.4**	
MIB					AMb	AMB	01 27 54.2		
	comp=Z,42nm,0.6s								
MIB	**Mutribah**	**21.62**	**99**	*eP*		**P**	**01 27 53.2**	**+0.4**	
	comp=Z,42nm,0.6s								
NAY	**Al-Naaiem**	**21.76**	**100**	*eP*		**P**	**01 27 54.6**	**+0.3**	
NAY					AMb	AMB	01 27 55.8		
	comp=Z,16nm,0.9s								
NAY	**Al-Naaiem**	**21.76**	**100**	*eP*		**P**	**01 27 54.6**	**+0.3**	
	comp=Z,16nm,0.9s								
SGMF	**Saint Gilles**	**22.35**	**312**	*eP*		**P**	**01 28 00.8**	**+0.4**	
	comp=Z,45nm,0.9s								
SGMF	**Saint Gilles**	**22.35**	**312**	*eP*		**P**	**01 28 00.8**	**+0.4**	
SGMF					pmax	pmax			
	comp=Z,45nm,0.9s								
SGMF	**Saint Gilles**	**22.35**	**312**	*eP*		**P**	**01 28 00.8**	**+0.4**	
	comp=Z,45nm,0.9s								
SGMF	**Saint Gilles**	**22.35**	**312**	*eP*		**P**	**01 28 00.8**	**+0.4**	
	comp=Z,45nm,0.9s								
MOS	**Moscow**	**22.48**	**23**	*eP*		**P**	**01 28 01.2**	**-0.5**	
MOS					pmax	pmax			
	comp=Z,40nm,0.9s								
MOS	**Moscow**	**22.48**	**23**	*eP*		**P**	**01 28 01.2**	**-0.5**	
	comp=Z,40nm,0.9s								
QUIF	**Quistinic**	**22.58**	**310**	*eP*		**P**	**01 28 03.0**	**0.0**	
	comp=Z,11nm,0.8s								
QUIF	**Quistinic**	**22.58**	**310**	*eP*		**P**	**01 28 03.0**	**0.0**	
QUIF					pmax	pmax			
	comp=Z,11nm,0.8s								
QUIF	**Quistinic**	**22.58**	**310**	*eP*		**P**	**01 28 03.0**	**0.0**	
	comp=Z,11nm,0.8s								
QUIF	**Quistinic**	**22.58**	**310**	*eP*		**P**	**01 28 03.0**	**0.0**	
	comp=Z,11nm,0.8s								
ROSF	**Rostrenen**	**22.82**	**311**	*eP*		**P**	**01 28 05.5**	**+0.1**	
	comp=Z,16nm,0.7s								
ROSF	**Rostrenen**	**22.82**	**311**	*eP*		**P**	**01 28 05.5**	**+0.1**	
ROSF					pmax	pmax			
	comp=Z,16nm,0.7s								
ROSF	**Rostrenen**	**22.82**	**311**	*eP*		**P**	**01 28 05.5**	**+0.1**	
	comp=Z,16nm,0.7s								
ROSF	**Rostrenen**	**22.82**	**311**	*eP*		**P**	**01 28 05.5**	**+0.1**	
	comp=Z,16nm,0.7s								
HFS	**Hagfors**	**25.06**	**349**	P		**P**	**01 28 26.3**	**+0.1**	
HFS	**Hagfors**	**25.06**	**349**	P		**P**	**01 28 26.3**	**+0.1**	
	comp=Z,1.3nm,0.4s,baz=152,slow=13,SNR=13								
HFS	**Hagfors**	**25.06**	**349**	P		**P**	**01 28 26.3**	**+0.1**	
	comp=Z,1.0nm,0.4s								
FINES	**FINESS Array B**	**25.80**	**4**	P		**P**	**01 28 32.5**	**-0.4**	
FINES	**FINESS Array B**	**25.80**	**4**	P		**P**	**01 28 32.5**	**-0.4**	
	comp=Z,1.7nm,0.5s,baz=168,slow=9.8,SNR=7.7								
FINES	**FINESS Array B**	**25.80**	**4**	P		**P**	**01 28 32.5**	**-0.4**	
	comp=Z,2.0nm,0.5s								
NB2	**NORSAR Subarra**	**26.32**	**348**	P		**P**	**01 28 37.8**	**+0.1**	
	comp=Z,1.2nm,0.6s,baz=156,slow=11								
NB2	**NORSAR Subarra**	**26.32**	**348**	P		**P**	**01 28 37.8**	**+0.1**	
	comp=Z,1.2nm,0.6s,baz=156,slow=10,SNR=3.9								
NOA	**NORSAR Array B**	**26.32**	**348**	P		**P**	**01 28 36.4**	**-1.3**	
NOA	**NORSAR Array B**	**26.32**	**348**	P		**P**	**01 28 36.4**	**-1.3**	
	comp=Z,0.8nm,0.7s,baz=159,slow=10.0,SNR=3.0								
NOA	**NORSAR Array B**	**26.32**	**348**	P		**P**	**01 28 36.4**	**-1.3**	
	comp=Z,1.0nm,0.7s								
EKA	**Eskdalemuir Ar**	**26.35**	**326**	P		**P**	**01 28 38.4**	**+0.4**	
EKA	**Eskdalemuir Ar**	**26.35**	**326**	P		**P**	**01 28 38.4**	**+0.4**	
	comp=Z,0.7nm,0.4s,baz=129,slow=8.5,SNR=7.6								
EKA	**Eskdalemuir Ar**	**26.35**	**326**	P		**P**	**01 28 38.4**	**+0.4**	
	comp=Z,1.0nm,0.4s								
KAF	**Kangasniemi**	**26.48**	**4**	*eP*		**P**	**01 28 38.4**	**-0.7**	
KAF	**Kangasniemi**	**26.48**	**4**	*ep*		**P**	**01 28 38.4**	**-0.7**	
KAF	**Kangasniemi**	**26.48**	**4**	*eP*		**P**	**01 28 38.4**	**-0.7**	
JOF	**Joensuu**	**27.72**	**9**	*eP*		**P**	**01 28 46.9**	**-3.3**	
JOF	**Joensuu**	**27.72**	**9**	*ep*		**P**	**01 28 46.9**	**-3.3**	
TORD	**Torodi Ar. Bea**	**29.34**	**225**	P		**P**	**01 29 07.0**	**+2.0**	
TORD	**Torodi Ar. Bea**	**29.34**	**225**	P		**P**	**01 29 07.0**	**+2.0**	
	comp=Z,0.8nm,0.6s,baz=37,slow=10,SNR=15								
AKTK	**Aktyubinsk**	**29.42**	**49**	P		**P**	**01 29 04.7**	**-0.8**	
	comp=Z,1.0nm,0.5s								
AKTO	**Aktyubinsk**	**29.42**	**49**	P		**P**	**01 29 04.7**	**-0.8**	
AKTO					pmax	pmax			
	comp=Z,1.0nm,0.5s								
AKTO	**Aktyubinsk**	**29.42**	**49**	P		**P**	**01 29 04.7**	**-0.8**	
AKTO	**Aktyubinsk**	**29.42**	**49**	P		**P**	**01 29 04.7**	**-0.8**	
	comp=Z,1.0nm,0.5s,baz=262,slow=12,SNR=7.2								
AKTO	**Aktyubinsk**	**29.42**	**49**	P		**P**	**01 29 04.7**	**-0.8**	
ARU	**Arti**	**31.86**	**38**	*d iP*		P	01 29 35.2	+8.3	
ARU							01 29 52.3		
ARU							01 32 15.9		
ARU					pmax	pmax			
	comp=Z,5.0nm,0.6s								
SVE	**Sverdlovsk**	**33.06**	**38**	*eP*		**P**	**01 29 37.1**	**-0.3**	
SVE					pmax	pmax			
	comp=Z,15nm,0.8s								
SVE	**Sverdlovsk**	**33.06**	**38**	*eP*		**P**	**01 29 37.1**	**-0.3**	
	comp=Z,15nm,0.8s								
ARCES	**ARCESS Array B**	**33.87**	**2**	P		**P**	**01 29 44.3**	**0.0**	
ARCES	**ARCESS Array B**	**33.87**	**2**	P		**P**	**01 29 44.3**	**0.0**	
	comp=Z,2.0nm,0.6s,baz=189,slow=10,SNR=11								
ARCES	**ARCESS Array B**	**33.87**	**2**	P		**P**	**01 29 44.3**	**0.0**	
	comp=Z,2.0nm,0.6s								
MBAR	**Mbarara**	**36.97**	**166**	P		**P**	**01 30 13.3**	**+1.7**	
MBAR	**Mbarara**	**36.97**	**166**	P		**P**	**01 30 13.3**	**+1.7**	
	comp=Z,1.6nm,0.2s,baz=72,slow=13,SNR=2.4								
DBIC	**Dimbokro**	**38.36**	**228**	LR		LR	01 46 39.0		
	comp=Z,53nm,18.2s,baz=198,slow=37								
NVS	**Novosibirsk**	**45.16**	**45**	*eP*		**P**	**01 31 18.8**	**+0.5**	
MK31	**Makanchi Array**	**45.20**	**57**	*eP*		**P**	**01 31 18.9**	**0.0**	
MK31	**Makanchi Array**	**45.20**	**57**	*eP*		**P**	**01 31 18.9**	**0.0**	
MKAR	**Makanchi Array**	**45.20**	**57**	P		**P**	**01 31 19.1**	**+0.2**	
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.4s								
MKAR	**Makanchi Array**	**45.20**	**57**	P		**P**	**01 31 19.1**	**+0.2**	
MKAR	**Makanchi Array**	**45.20**	**57**	P		**P**	**01 31 19.1**	**+0.2**	
	comp=Z,1.7nm,0.4s,baz=266,slow=8.3,SNR=17								
ZAA0	**Zalesovo Array**	**46.12**	**47**	*eP*		**P**	**01 31 25.5**	**-0.4**	
ZALV	**Zalesovo Beam**	**46.12**	**47**	P		**P**	**01 31 25.5**	**-0.4**	
ZALV					pmax	pmax			
	comp=Z,3.0nm,0.4s								
ZALV	**Zalesovo Beam**	**46.12**	**47**	P		**P**	**01 31 25.5**	**-0.4**	
ZALV	**Zalesovo Beam**	**46.12**	**47**	P		**P**	**01 31 25.5**	**-0.4**	
	comp=Z,2.9nm,0.4s,baz=264,slow=9.8,SNR=13								
SONM	**Songino Array**	**60.73**	**50**	P		**P**	**01 33 13.8**	**+0.5**	
SONM	**Songino Array**	**60.73**	**50**	P		**P**	**01 33 13.8**	**+0.5**	
	comp=Z,0.4nm,0.5s,baz=277,slow=7.4,SNR=5.1								
YKA	**Yellowknife Ar**	**76.21**	**341**	P		**P**	**01 34 51.3**	**+1.8**	
YKA	**Yellowknife Ar**	**76.21**	**341**	P		**P**	**01 34 51.3**	**+1.8**	
	comp=Z,0.1nm,0.5s,baz=33,slow=5.4,SNR=3.7								
USRK	**Ussuriysk Array**	**77.89**	**44**	P		**P**	**01 34 58.4**	**-0.9**	
	comp=Z,1.0nm,0.6s,baz=275,slow=5.5,SNR=5.2								
ILAR	**Eielson Array**	**79.46**	**355**	P		**P**	**01 35 06.8**	**-0.7**	
ILAR	**Eielson Array**	**79.46**	**355**	P		**P**	**01 35 06.8**	**-0.7**	
	comp=Z,0.2nm,0.8s,baz=7.1,slow=5.7,SNR=3.1								
KSAR	**Wonju Array Be**	**79.55**	**51**	P		**P**	**01 35 09.3**	**+0.7**	
KSRS	**Korea Array**	**79.57**	**51**	P		**P**	**01 35 09.3**	**+0.7**	
	comp=Z,0.5nm,0.3s,baz=308,slow=4.4,SNR=3.2								

IDC 28 01:25:57.6±6.8, 15°.16S×176°.70W, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.7/19, mbtmp4.0/3, Error ellipse: s-maj=321.9km s-min=35.3km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.80**	**257**	P	P	01 34 28.9	-0.5
	0.2nm,0.3s,baz=84,slow=6.6,SNR=4.9						
ASAR	**Alice Springs**	**47.16**	**252**	P	P	01 34 32.3	+0.1
	6.5nm,0.6s,baz=85,slow=8.2,SNR=64						
ILAR	**Eielson Array**	**82.86**	**12**	P	P	01 38 23.6	0.0
	0.5nm,0.7s,baz=220,slow=6.0,SNR=6.2						
BRTR	**Keskin Array B**	**143.91**	**319**	PKP	PKPdf	01 45 35.2	-0.3
	0.3nm,0.7s,baz=42,slow=2.8,SNR=2.9						

*SKO **28** 01:33:55.8, 41°.41N×22°.69E, h20km, M1.5, ML2.0*
*ISCJB **28** 01:33:57.6±0.4, 41°.31N±0°.02×22°.69E±0°.03, h9km±3km, Error ellipse: s-maj=3.8km s-min=3.5km az=11.1*
*ATH **28** 01:33:57.7, 41°.29N×22°.69E, h18km±2km, MD2.8/6*
*THE **28** 01:33:58.2, 41°.30N×22°.70E, h1km±1km, ML1.9/7, Error ellipse: s-maj=1.7km s-min=0.5km az=288.0*
*BEO **28** 01:33:58.7±0.9, 41°.31N×22°.64E, h5km±3km, ML1.5/5*
*CSEM **28** 01:33:58.0±0.1, 41°.29N×22°.68E, h8km, ML1.5, Error ellipse: s-maj=3.0km s-min=2.7km az=75.0*

ISC 28 01:33:58.0±0.8, 41°.31N±0°.02×22°.68E±0°.02, h9km±5km, n46, σ0°.43/78, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.09**	**281**	S		**Sg**	**01 34 01.9**	**-0.2**
VAY	**Valandovo**	**0.09**	**281**	*e*Pg		**Pg**	**01 34 00.1**	**-0.3**
VAY				*i* Sg		**Sg**	**01 34 02.0**	**-0.1**
VAY				*e*Lg		Lg	01 34 02.1	
	comp=E,922nm,0.2s							
VAY				*e*Lg		Lg	01 34 02.1	
	comp=N,774nm,0.2s							
VAY	**Valandovo**	**0.09**	**281**	*e*Pg		**Pg**	**01 34 00.6**	**+0.2**
VAY				*e*Lg		Lg	01 34 01.6	
	comp=N,774nm,0.2s							
VAY				*e*Sg		**Sg**	**01 34 01.7**	**-0.4**
KNT	**Kendrikon**	**0.22**	**131**	P		**Pg**	**01 34 02.7**	**+0.2**
KNT				S		**Sg**	**01 34 05.5**	**0.0**
KNT	**Kendrikon**	**0.22**	**131**	P		**Pg**	**01 34 02.7**	**+0.2**
KNT				S		**Sg**	**01 34 05.5**	**0.0**
GRG	**Griva**	**0.41**	**211**	P		**Pg**	**01 34 06.3**	**+0.3**
GRG				S		**Sg**	**01 34 11.6**	**+0.2**
GRG	**Griva**	**0.41**	**211**	*e*PB		**Pg**	**01 34 05.9**	**-0.1**
GRG				*e*SB		**Sg**	**01 34 12.1**	**+0.7**
GRG	**Griva**	**0.41**	**211**	*e*Pb		**Pg**	**01 34 05.9**	**-0.1**
GRG	**Griva**	**0.41**	**211**	P		**Pg**	**01 34 06.3**	**+0.3**
GRG				S		**Sg**	**01 34 11.6**	**+0.2**
GRG				*e*Sb		**Sg**	**01 34 12.1**	**+0.7**
SOH	**Sokhos**	**0.70**	**133**	P		**Pg**	**01 34 11.2**	**-0.4**
SOH				S		**Sg**	**01 34 21.2**	**+0.5**
SOH	**Sokhos**	**0.70**	**133**	*e*PN		**Pg**	**01 34 11.0**	**-0.6**
SOH				*e*SN		**Sg**	**01 34 20.4**	**-0.3**
SOH	**Sokhos**	**0.70**	**133**	P		**Pg**	**01 34 11.2**	**-0.4**
SOH				*e*Sn		**Sg**	**01 34 20.4**	**-0.3**
SOH				S		**Sg**	**01 34 21.2**	**+0.5**
THE	**Thessaloniki**	**0.70**	**162**	P		**Pg**	**01 34 11.2**	**-0.4**
THE	**Thessaloniki**	**0.70**	**162**	P		**Pg**	**01 34 11.2**	**-0.4**
SRS	**Serrai**	**0.71**	**105**	P		**Pg**	**01 34 11.5**	**-0.3**
SRS				S		**Sg**	**01 34 21.6**	**+0.5**
SRS	**Serrai**	**0.71**	**105**	P		**Pg**	**01 34 11.5**	**-0.3**
SRS				S		**Sg**	**01 34 21.6**	**+0.5**
HORT	**Hortiatis**	**0.77**	**156**	P		**Pg**	**01 34 12.8**	**-0.2**
HORT				S		**Sb**	**01 34 24.4**	**+0.1**
HORT	**Hortiatis**	**0.77**	**156**	P		**Pg**	**01 34 12.8**	**-0.2**
HORT				S		**Sb**	**01 34 24.4**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**87**	P		**Pg**	**01 34 14.7**	**-0.5**
NVR				S		**Sg**	**01 34 26.9**	**+0.2**
NVR	**Nevrokopi**	**0.89**	**87**	*e*PN		**Pg**	**01 34 14.9**	**-0.3**
NVR				*e*SN		**Sg**	**01 34 26.8**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**87**	P		**Pg**	**01 34 14.7**	**-0.5**
NVR				S		**Sg**	**01 34 26.9**	**+0.2**
PLG	**Polygyros**	**1.10**	**148**	P		**Pg**	**01 34 18.2**	**-0.9**
PLG	**Polygyros**	**1.10**	**148**	*e*PN		**Pg**	**01 34 18.6**	**-0.5**
PLG				*e*SN		**Sg**	**01 34 32.4**	**-0.9**
PLG	**Polygyros**	**1.10**	**148**	P		**Pg**	**01 34 18.2**	**-0.9**
PLG	**Polygyros**	**1.10**	**148**	*e*Pn		**Pg**	**01 34 18.6**	**-0.5**
PLG				*e*Sn		**Sg**	**01 34 32.4**	**-0.9**
FNA	**Florina**	**1.12**	**243**	*e*PN		**Pg**	**01 34 18.9**	**-0.6**
FNA				*e*SN		**Sg**	**01 34 33.9**	**-0.1**
FNA	**Florina**	**1.12**	**243**	*e*Pn		**Pg**	**01 34 18.9**	**-0.6**
FNA				*e*Sn		**Sg**	**01 34 33.9**	**-0.1**
KZN	**Kozani**	**1.21**	**215**	*e*PN		**Pg**	**01 34 21.8**	**+0.5**
KZN	**Kozani**	**1.21**	**215**	*e*Pn		**Pg**	**01 34 21.8**	**+0.5**
VTS	**Vitosha**	**1.34**	**17**	P		**Pb**	**01 34 23.6**	**+0.1**
VTS	**Vitosha**	**1.34**	**17**	*e*Pg		**Pg**	**01 34 24.0**	**+0.1**
VTS				*e*Sg		**Sb**	**01 34 41.2**	**+0.4**
VTS	**Vitosha**	**1.34**	**17**	P		**Pb**	**01 34 23.6**	**+0.1**
VTS	**Vitosha**	**1.34**	**17**	*e*Pg		**Pg**	**01 34 24.0**	**+0.1**
VTS				*e*Sg		**Sb**	**01 34 41.2**	**+0.4**
OUR	**Ouranopolis**	**1.38**	**134**	P		**Pn**	**01 34 23.6**	**+0.2**
OUR	**Ouranopolis**	**1.38**	**134**	P		**Pn**	**01 34 23.6**	**+0.2**
KAVA	**Kavala**	**1.42**	**102**	P		**Pn**	**01 34 23.9**	**0.0**
KAVA				S		**Sg**	**01 34 44.4**	**+0.8**
KAVA	**Kavala**	**1.42**	**102**	P		**Pn**	**01 34 23.9**	**0.0**
KAVA				S		**Sg**	**01 34 44.4**	**+0.8**
PAIG	**Paliouri**	**1.57**	**151**	P		**Pn**	**01 34 26.4**	**+0.4**
PAIG	**Paliouri**	**1.57**	**151**	*e*PN		**Pn**	**01 34 26.0**	**0.0**
PAIG				*e*SN		**Sg**	**01 34 47.9**	**-0.7**
PAIG	**Paliouri**	**1.57**	**151**	*e*Pn		**Pn**	**01 34 26.0**	**0.0**
PAIG	**Paliouri**	**1.57**	**151**	P		**Pn**	**01 34 26.4**	**+0.4**
PAIG				*e*Sn		**Sg**	**01 34 47.9**	**-0.7**
BARS	**Barje**	**1.64**	**337**	*e*Pn		**Pn**	**01 34 26.5**	**-0.6**
BARS				*e*Sn		**Sn**	**01 34 48.6**	**+0.3**
BARS	**Barje**	**1.64**	**337**	*e*Pn		**Pn**	**01 34 26.5**	**-0.6**
BARS				*e*Sn		**Sn**	**01 34 48.6**	**+0.3**
PLD	**Plovdiv**	**1.71**	**61**	*e*Sg		**Sg**	**01 34 52.9**	**-0.1**
PLD	**Plovdiv**	**1.71**	**61**	*e*Sg		**Sg**	**01 34 52.9**	**-0.1**
ZAPS	**Zavoj**	**1.97**	**359**	*e*Pn		**Pb**	**01 34 34.2**	**+0.2**
ZAPS				*e*Sn		**Sb**	**01 34 57.8**	**-0.9**

*NNC **28** 01:38:38.0±3.4, 39°.89N×73°.38E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=31.7km s-min=16.6km az=177.0*

ISC 28 01:38:37.9±2.7, 39°.9N±0°.2×73°.61E±0°.07, h14km, n10, σ1§47/13, 3C-5D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.28**	**2**	P		**Pn**	**01 39 16.5**	**+1.1**
	SNR=20							
UCH	**Uchtor**	**2.47**	**16**	P		**Sg**	**01 39 58.1**	**+0.8**
	SNR=6.0							
KZA	**Kyzart**	**2.54**	**29**	P		**Pb**	**01 39 23.0**	**-0.6**
	SNR=23							
AAK	**Ala-Archa**	**2.86**	**13**	P		**Pb**	**01 39 26.8**	**-2.0**
	SNR=11							
KBK	**Karagaybulak**	**2.98**	**19**	P		**Pn**	**01 39 27.8**	**+2.9**
	SNR=7.8							
ULHL	**Ulahol**	**3.11**	**39**	P		**Pn**	**01 39 28.0**	**+1.3**
	SNR=7.0							
TKM2	**Tokmak 2**	**3.41**	**25**	⇑Pn		**Pn**	**01 39 31.8**	**+1.0**
	2.5nm,0.7s							
TKM2				⇓Pg		**Pg**	**01 39 43.0**	**-0.3**
	9.5nm,0.9s							
TKM2				⇓Lg		Lg	01 40 27.6	
	10nm,0.7s							
TKM2	**Tokmak 2**	**3.41**	**25**	P		**Pn**	**01 39 32.1**	**+1.2**
	SNR=6.3							
KK31	**Karatay Array**	**3.99**	**325**	⇓Pn		**Pn**	**01 39 39.5**	**+0.7**
	0.6nm,0.3s,baz=133,slow=13,SNR=19							
KK31				⇑Pg		**Pb**	**01 39 48.8**	**+0.7**
	1.8nm,0.4s,baz=159,slow=21,SNR=8.5				

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.38**	**60**	*eP*	Pn	01 57 26.2	+0.9
PLP				*i* S	Sn	01 57 43.4	+12
MSLP	**Maasin**	**0.86**	**166**	*eP*	Pb	01 57 32.4	-0.1
MSLP				*eS*	Sb	01 57 44.9	+1.1
CNP	**Catarman**	**1.53**	**1**	*eP*	Pn	01 57 41.9	+0.8
CNP				*eS*	Sn	01 57 56.2	-3.7

*CSEM **28** 02:04:08.7±0.1,41°.26N×22°.68E,h2km,ML1.8, Error ellipse: s-maj=3.0km s-min=2.8km az=47.0*
*SOF **28** 02:04:08.1,41°.29N×22°.70E,h6km,MD2.5*
*ISCJB **28** 02:04:08.5±0.3,41°.27N±0°.02×22°.69E±0°.03,h8km±3km, Error ellipse: s-maj=3.3km s-min=3.0km az=41.6*
*THE **28** 02:04:08.6,41°.29N×22°.70E,h0km±2km,ML2.2/6, Error ellipse: s-maj=2.1km s-min=0.5km az=1.0*
*SKO **28** 02:04:08.4,41°.30N×22°.70E,h9km,M1.7,ML2.0*
*ATH **28** 02:04:08.4,41°.28N×22°.69E,h22km±1km,MD2.8/8*
*BEO **28** 02:04:09.8±1.1,41°.28N×22°.62E,h1km±2km,ML1.8/5*

ISC 28 02:04:08.7±0.9,**41°.28N**±0°.02×**22°.69E**±0°.02,**h5**km±8km, **n62,σ0°56/95,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**296**	P	**Pg**	**02 04 10.5**	**-0.3**
VAY				S	**Sg**	**02 04 12.3**	**0.0**
VAY	**Valandovo**	**0.10**	**296**	*ePg*	**Pg**	**02 04 10.6**	**-0.3**
VAY				*i* Sg	**Sg**	**02 04 12.4**	**+0.2**
VAY				*eLg*	Lg	02 04 12.5	
	comp=N,2μm,0.2s						
VAY				*eLg*	Lg	02 04 12.6	
	comp=E,583nm,0.2s						
VAY	**Valandovo**	**0.10**	**296**	*ePg*	**Pg**	**02 04 10.5**	**-0.3**
VAY				*eSg*	**Sg**	**02 04 12.2**	**0.0**
VAY	**Valandovo**	**0.10**	**296**	P	**Pg**	**02 04 10.5**	**-0.3**
VAY	**Valandovo**	**0.10**	**296**	*ePg*	**Pg**	**02 04 11.0**	**+0.2**
VAY				*eSg*	**Sg**	**02 04 12.2**	**0.0**
VAY				*eLg*	Lg	02 04 13.1	
	comp=E,583nm,0.2s						
KNT	**Kendrikon**	**0.20**	**126**	P	**Pg**	**02 04 13.0**	**+0.5**
KNT				S	**Sg**	**02 04 16.1**	**+1.0**
KNT	**Kendrikon**	**0.20**	**126**	P	**Pg**	**02 04 13.0**	**+0.5**
KNT				S	**Sg**	**02 04 16.1**	**+1.0**
GRG	**Griva**	**0.39**	**214**	P	**Pg**	**02 04 16.4**	**+0.2**
GRG				S	**Sg**	**02 04 22.7**	**+1.4**
GRG	**Griva**	**0.39**	**214**	*ePB*	**Pg**	**02 04 16.5**	**+0.2**
GRG				*eSB*	**Sg**	**02 04 22.4**	**+1.1**
GRG	**Griva**	**0.39**	**214**	P	**Pg**	**02 04 16.4**	**+0.2**
GRG				*eSb*	**Sg**	**02 04 22.4**	**+1.1**
GRG				S	**Sg**	**02 04 22.7**	**+1.4**
KKB	**Krupnik**	**0.66**	**26**	Pg	**Pg**	**02 04 21.0**	**-0.4**
KKB	**Krupnik**	**0.66**	**26**	Pg	**Pg**	**02 04 21.0**	**-0.4**
THE	**Thessaloniki**	**0.68**	**162**	P	**Pg**	**02 04 21.6**	**-0.1**
THE				S	**Sb**	**02 04 31.6**	**-1.1**
THE	**Thessaloniki**	**0.68**	**162**	P	**Pg**	**02 04 21.6**	**-0.1**
THE				S	**Sb**	**02 04 31.6**	**-1.1**
SOH	**Sokhos**	**0.68**	**132**	P	**Pg**	**02 04 21.4**	**-0.3**
SOH				S	**Sb**	**02 04 32.2**	**-0.6**
SOH	**Sokhos**	**0.68**	**132**	*ePN*	**Pg**	**02 04 21.6**	**-0.1**
SOH				*eSN*	**Sg**	**02 04 31.2**	**+0.7**
SOH	**Sokhos**	**0.68**	**132**	*ePn*	**Pg**	**02 04 21.6**	**-0.1**
SOH				*eSn*	**Sg**	**02 04 31.2**	**+0.7**
SOH				S	**Sb**	**02 04 32.2**	**-0.6**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**02 04 21.9**	**-0.2**
SRS				S	**Sg**	**02 04 31.7**	**+0.5**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**02 04 21.9**	**-0.2**
SRS				S	**Sg**	**02 04 31.7**	**+0.5**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**02 04 23.1**	**+0.1**
HORT				S	**Sb**	**02 04 34.0**	**-0.8**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**02 04 23.1**	**+0.1**
HORT				S	**Sb**	**02 04 34.0**	**-0.8**
MMB	**Musomiste**	**0.84**	**68**	*eP*	**Pg**	**02 04 24.6**	**-0.3**
MMB	**Musomiste**	**0.84**	**68**	*eP*	**Pg**	**02 04 24.6**	**-0.3**
NVR	**Nevrokopi**	**0.89**	**85**	P	**Pg**	**02 04 25.5**	**-0.2**
NVR	**Nevrokopi**	**0.89**	**85**	*ePN*	**Pg**	**02 04 25.6**	**-0.2**
NVR				*eSN*	**Sg**	**02 04 37.6**	**+0.4**
NVR	**Nevrokopi**	**0.89**	**85**	P	**Pg**	**02 04 25.5**	**-0.2**
NVR				*eSn*	**Sg**	**02 04 37.6**	**+0.4**
BIA	**Bitola**	**1.06**	**256**	*i* Pg	**Pg**	**02 04 29.5**	**+0.4**
BIA				*i* Sg	**Sg**	**02 04 43.5**	**+0.6**
BIA	**Bitola**	**1.06**	**256**	*i* Pg	**Pg**	**02 04 29.5**	**+0.4**
BIA				*i* Sg	**Sg**	**02 04 43.4**	**+0.6**
PLG	**Polygyros**	**1.07**	**147**	P	**Pg**	**02 04 28.5**	**-0.7**
PLG	**Polygyros**	**1.07**	**147**	*ePN*	**Pg**	**02 04 29.2**	**0.0**
PLG				*eSN*	**Sb**	**02 04 43.5**	**-0.5**
PLG	**Polygyros**	**1.07**	**147**	P	**Pg**	**02 04 28.5**	**-0.7**
PLG	**Polygyros**	**1.07**	**147**	*ePn*	**Pg**	**02 04 29.2**	**0.0**
PLG				*eSn*	**Sb**	**02 04 43.5**	**-0.5**
FNA	**Florina**	**1.11**	**244**	P	**Pg**	**02 04 29.6**	**-0.4**
FNA	**Florina**	**1.11**	**244**	*ePN*	**Pg**	**02 04 29.9**	**-0.1**
FNA	**Florina**	**1.11**	**244**	P	**Pg**	**02 04 29.6**	**-0.4**
FNA	**Florina**	**1.11**	**244**	*ePn*	**Pg**	**02 04 29.9**	**-0.1**
SKO	**Skopje**	**1.17**	**307**	*ePn*	**Pn**	**02 04 31.7**	**0.0**
SKO				*i* Sg	**Sg**	**02 04 46.5**	**+0.3**
SKO				*eLg*	Lg	02 04 48.8	
	comp=E,16nm,0.8s						
SKO				*eLg*	Lg	02 04 50.7	
	comp=N,20nm,0.3s						
SKO	**Skopje**	**1.17**	**307**	*ePn*	**Pn**	**02 04 32.1**	**+0.4**
SKO				*i* Sg	**Sg**	**02 04 46.9**	**+0.7**
SKO				*eLg*	Lg	02 04 51.2	
	comp=N,20nm,0.3s						
KZN	**Kozani**	**1.19**	**216**	*ePN*	**Pb**	**02 04 31.6**	**-0.3**
KZN	**Kozani**	**1.19**	**216**	*ePn*	**Pb**	**02 04 31.6**	**-0.3**
VTS	**Vitosha**	**1.37**	**16**	P	**Pn**	**02 04 34.4**	**-0.3**
VTS	**Vitosha**	**1.37**	**16**	*ePg*	**Pn**	**02 04 34.4**	**-0.3**
VTS				*eSg*	**Sg**	**02 04 53.5**	**+0.7**
VTS	**Vitosha**	**1.37**	**16**	P	**Pn**	**02 04 34.6**	**-0.1**
VTS	**Vitosha**	**1.37**	**16**	P	**Pn**	**02 04 34.4**	**-0.3**
VTS				*eSg*	**Sg**	**02 04 53.5**	**+0.7**
PAIG	**Paliouri**	**1.54**	**150**	*ePN*	**Pn**	**02 04 36.5**	**-0.4**
PAIG	**Paliouri**	**1.54**	**150**	*ePn*	**Pn**	**02 04 36.5**	**-0.4**
RZN	**Rozhen**	**1.58**	**74**	*eP*	**Pg**	**02 04 38.8**	**-0.2**
RZN	**Rozhen**	**1.58**	**74**	*eP*	**Pg**	**02 04 38.8**	**-0.2**
BARS	**Barje**	**1.67**	**337**	*ePn*	**Pn**	**02 04 38.8**	**+0.1**
BARS				*eSn*	**Sb**	**02 05 01.1**	**-0.2**
BARS	**Barje**	**1.67**	**337**	*ePn*	**Pn**	**02 04 38.8**	**+0.1**
BARS				*eSn*	**Sb**	**02 05 01.1**	**-0.2**
PLD	**Plovdiv**	**1.72**	**61**	*eSg*	**Sg**	**02 05 05.6**	**+1.6**
PLD	**Plovdiv**	**1.72**	**61**	*eSg*	**Sg**	**02 05 05.6**	**+1.6**
THL	**Klokotos Trika**	**1.79**	**197**	*ePN*	**Pn**	**02 04 40.4**	**+0.2**
THL	**Klokotos Trika**	**1.79**	**197**	*ePn*	**Pn**	**02 04 40.4**	**+0.2**
ZAPS	**Zavoj**	**2.00**	**359**	*ePn*	**Pb**	**02 04 46.0**	**+0.5**
ZAPS				*eSn*	**Sb**	**02 05 10.6**	**-0.1**
KDZ	**Kurdzhali**	**2.08**	**79**	*eP*	**Pb**	**02 04 46.6**	**-0.4**
KDZ	**Kurdzhali**	**2.08**	**79**	*eP*	**Pb**	**02 04 46.6**	**-0.4**
MPEP	**Malo Peshtene**	**2.22**	**20**	P	**Pb**	**02 04 50.2**	**+0.9**
AGG	**Agios Georgios**	**2.27**	**187**	*ePN*	**Pn**	**02 04 46.9**	**0.0**
AGG	**Agios Georgios**	**2.27**	**187**	*ePn*	**Pn**	**02 04 46.9**	**0.0**
EVR	**Evrytania**	**2.45**	**196**	*ePN*	**Pn**	**02 04 48.9**	**-0.6**
EVR	**Evrytania**	**2.45**	**196**	*ePn*	**Pn**	**02 04 48.9**	**-0.6**

KRSC 28 02:04:55.8±0.0,**55°.95N**×**164°.74E**,**h12**km±11km,**ML3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.02**	**136**	P	Pg	02 05 15.6	+0.1
BKI				*i* S	Sn	02 05 29.5	-0.7
KBG	**Krutoberegovo**	**1.18**	**286**	P	Pn	02 05 16.9	-1.2
KBG				*i* S	Sb	02 05 32.0	-1.3
SMKR	**Semkarok**	**1.93**	**290**	P	Pn	02 05 28.7	+0.1
SMKR				*i* S	Sn	02 05 52.8	0.0
BDR	**Baidarnaya**	**2.07**	**289**	P	Pn	02 05 30.9	+0.5
BDR				*i* S	Sn	02 05 56.7	+0.6
SRKR	**Sorokina**	**2.11**	**291**	P	Pn	02 05 31.4	+0.4
SRKR				*i* S	Sn	02 05 57.5	+0.2
ZLN	**Zelenaya**	**2.21**	**273**	P	Pn	02 05 33.9	+1.4
ZLN				*i* S	Sn	02 06 01.5	+1.7
MKZ	**Mys Kozlova**	**2.22**	**232**	P	Pn	02 05 32.9	+0.6
MKZ				*i* S	Sn	02 05 58.9	-0.7
CIRR	**Tsirk**	**2.25**	**276**	P	Pn	02 05 34.3	+1.3
BZGR	**Bezymyannyi-Gr**	**2.27**	**271**	P	Pn	02 05 34.7	+1.4
LGNR	**Loginova**	**2.28**	**275**	P	Pn	02 05 34.9	+1.3
KLY	**Klyuchi**	**2.32**	**281**	P	Pn	02 05 33.1	-0.6
KLY				*i* S	Sn	02 06 00.8	-1.3
KRSR	**Krestovskiy**	**2.35**	**278**	P	Pn	02 05 35.5	+1.1
KRSR				*i* S	Sn	02 06 05.3	+2.0
BZWR	**Bezymyannyi-We**	**2.39**	**272**	P	Pn	02 05 36.5	+1.6
BZWR				*i* S	Sb	02 06 06.9	-1.6
BZMR	**Bezymyannaya**	**2.39**	**271**	P	Pn	02 05 36.2	+1.2
BZMR				*i* S	Sb	02 06 06.8	-1.7
KIRR	**Kirishev**	**2.47**	**272**	P	Pn	02 05 37.8	+1.7
KIRR				*i* S	Sn	02 06 07.6	+1.3
KPT	**Kopyto**	**2.54**	**272**	P	Pn	02 05 38.4	+1.5
KMNR	**Kamenistaya**	**2.55**	**267**	P	Pb	02 05 39.3	-2.2
TUMR	**Tumrok**	**2.69**	**258**	P	Pn	02 05 41.2	+2.2
TUMR				*i* S	Sn	02 06 13.9	+2.3
SRDR	**Sredinnyy**	**2.83**	**280**	P	Pn	02 05 42.5	+1.5
SRDR				*i* S	Sn	02 06 16.8	+1.7
ESO	**Esso**	**3.40**	**272**	P	Pn	02 05 51.4	+2.8
SPN	**Mys Shipunski**	**3.96**	**226**	P	Pn	02 05 56.9	+0.5
SPN				*i* S	Sn	02 06 40.9	-1.8
NLC	**Nalytchevo**	**4.20**	**231**	P	Pn	02 06 01.1	+1.6
NLC				*i* S	Sn	02 06 48.4	0.0
SDLR	**Sedlovina**	**4.33**	**234**	P	Pn	02 06 03.6	+2.0
SDLR				*i* S	Sn	02 06 53.4	+1.3
KRER	**Koryakskii**	**4.38**	**235**	P	Pn	02 06 04.2	+1.9
KRER				*i* S	Sn	02 06 53.7	+0.4
SMAR	**Somma**	**4.38**	**235**	P	Pn	02 06 04.4	+2.1
SMAR				*i* S	Sn	02 06 54.1	+0.7
UGLR	**Uglovaya**	**4.40**	**234**	P	Pn	02 06 02.6	+0.1
UGLR				*i* S	Sn	02 06 52.2	-1.6
AVH	**Avacha**	**4.41**	**235**	P	Pn	02 06 04.3	+1.8
AVH				*i* S	Sn	02 06 55.3	+1.5
KOK	**Koryaka**	**4.44**	**236**	P	Pn	02 06 04.2	+1.2
GNL	**Ganaly**	**4.53**	**243**	P	Pn	02 06 07.2	+2.8
TILK	**Tilichiki**	**4.57**	**9**	P	Pn	02 06 04.4	-0.2
ASAK	**Asacha**	**5.38**	**231**	P	Pn	02 06 18.6	+2.7

MEX 28 02:11:49.3±0.4,**16°.18N**×**95°.78W**,**h10**km±7km,**MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.52**	**218**	*eP*	Pg	02 11 58.5	-0.9
HUIG				*eS*	Sg	02 12 05.8	-0.4
VHO	**Vista Hermosa**	**1.28**	**314**	*i* P	Pn	02 12 10.3	-3.2
VHO				*i* S	Sb	02 12 24.7	-5.7
PNIG	**Pinotepa**	**2.27**	**276**	*i* P	Pn	02 12 24.1	-2.7
PNIG				*i* S	Sn	02 12 51.1	-3.9
PCIG		**2.51**	**100**	*i* P	Pn	02 12 27.6	-2.5
PCIG				*i* S	Sn	02 12 56.6	-4.2
UTMO	**Huajuapan**	**2.54**	**311**	*i* P	Pn	02 12 29.4	-1.5
UTMO				*i* S	Sn	02 12 57.5	-4.6

*TAP **28** 02:17:22.7,24°.14N×122°.93E,h72km±3km,ML3.1,D*
*JMA **28** 02:17:23.3±0.1,24°.38N×122°.94E,h57km±1km,M2.3*

ISC 28 02:17:23.7±1.5,**24°.10N**±0°.05×**122°.93E**±0°.03,**h34**km±3km, **n31,σ0°86/55,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.37**	**11**	P	**Pb**	**02 17 32.0**	**-0.5**
YOJ				S	**Sb**	**02 17 38.2**	**-0.3**
IRIF	**Iriomote-Funau**	**0.77**	**72**	P	**Pn**	**02 17 37.6**	**-0.6**
IRIF				S	**Sn**	**02 17 48.2**	**-0.4**
HATJ	**Hateruma jima**	**0.80**	**93**	P	**Pn**	**02 17 39.4**	**+0.8**
HATJ				*eS*	**Sb**	**02 17 51.3**	**+1.5**
JKRS	**Kuro-shima**	**1.00**	**82**	P	**Pn**	**02 17 41.6**	**+0.3**
JKRS				S	**Sn**	**02 17 55.4**	**+1.2**
TWC	**Suao**	**1.11**	**298**	P	**Pn**	**02 17 42.2**	**-0.7**
	baz=304						
TWC				S	**Sn**	**02 17 57.0**	**0.0**
	baz=304						
ENA	**Nanau**	**1.13**	**287**	*eP*	**Pn**	**02 17 42.7**	**-0.6**
	baz=285						
ENA				*eS*	**Sn**	**02 17 58.1**	**+0.5**
	baz=285						
JIJ	**Ishigaki jima**	**1.14**	**76**	P	**Pn**	**02 17 42.7**	**-0.6**
JIJ				S	**Sn**	**02 17 57.1**	**-0.6**
TWD	**Chiawan**	**1.22**	**270**	*eP*	**Pn**	**02 17 43.9**	**-0.4**
	baz=268						
TWE	**Neicheng**	**1.31**	**299**	P	**Pn**	**02 17 45.7**	**0.0**
	baz=307						
TWE				*eS*	**Sn**	**02 18 01.9**	**0.0**
	baz=307						
ENTT	**Nioudou**	**1.36**	**294**	P	**Pn**	**02 17 46.5**	**+0.2**
	baz=284						
ENTT				*eS*	**Sn**	**02 18 03.6**	**+0.5**
	baz=284						
ESL	**Shilin**	**1.40**	**259**	*eP*	**Pn**	**02 17 46.3**	**-0.5**
	baz=257						
ESL				*eS*	**Sn**	**02 18 03.2**	**-0.9**
	baz=257						
NNS	**Nan Shan**	**1.46**	**284**	*eP*	**Pn**	**02 17 47.4**	**-0.4**
	baz=282						
NNS				*eS*	**Sn**	**02 18 05.7**	**-0.2**
	baz=282						
WHF	**Hehuan Shan**	**1.52**	**272**	*eP*	**Pn**	**02 17 48.6**	**-0.4**
	baz=261						
WHF				*eS*	**Sn**	**02 18 07.0**	**-0.8**
	baz=261						
NSK	**Sanguang**	**1.54**	**292**	*eP*	**Pn**	**02 17 48.6**	**-0.4**
	baz=282						
NSK				*eS*	**Sn**	**02 18 07.8**	**-0.1**
	baz=282						
EHY	**Hungye**	**1.58**	**249**	*eP*	**Pn**	**02 17 49.8**	**+0.4**
	baz=258						
EHY				*eS*	**Sn**	**02 18 08.2**	**-0.6**
	baz=258						
TWT	**Tachien**	**1.61**	**276**	*eP*	**Pn**	**02 17 50.8**	**+0.9**
	baz=269						
TWF1	**Yuli**	**1.67**	**244**	*eP*	**Pn**	**02 17 50.3**	**-0.3**
	baz=236						
TWF1				*eS*	**Sn**	**02 18 10.2**	**-0.7**
	baz=236						
JTJ	**Tarama**	**1.71**	**71**	P	**Pn**	**02 17 50.7**	**-0.4**
JTJ				*eS*	**Sn**	**02 18 10.7**	**-1.0**
CHKT	**Chengkung**	**1.74**	**236**	*eP*	Pn	02 17 49.5	-2.1
	baz=228						
CHKT				*eS*	**Sn**	**02 18 11.6**	**-1.1**
	baz=228						
NSTT	**Nanjuang**	**1.84**	**287**	*eP*	**Pn**	**02 17 54.1**	**+1.2**
	baz=286						
NSTT				*eS*	**Sn**	**02 18 16.1**	**+1.1**
	baz=286						
SMLT	**Sun Moon Lake**	**1.87**	**264**	*eP*	**Pn**	**02 17 53.9**	**+0.5**
	baz=255						
TYC	**Yuchr**	**1.91**	**265**	*eP*	**Pn**	**02 17 53.8**	**-0.1**
	baz=264						
YUS	**Yu-Shan**	**1.91**	**252**	*eP*	**Pn**	**02 17 53.4**	**-0.9**
	baz=251						
YUS				*eS*	**Sn**	**02 18 16.7**	**-0.8**
	baz=251						
ELDTW	**Lidau**	**1.97**	**243**	*eP*	**Pn**	**02 17 53.5**	**-1.4**
	baz=242						
ELDTW				*eS*	**Sn**	**02 18 17.8**	**-0.7**
	baz=242						
ALS	**Alishan**	**2.03**	**254**	*eP*	**Pn**	**02 17 55.8**	**-0.1**
	baz=253						
ALS				*eS*	**Sn**	**02 18 19.1**	**-1.1**
	baz=253						
CHN5	**Tsauling**	**2.12**	**257**	*eP*	**Pn**	**02 17 58.6**	**+1.7**
	baz=250						
CHN5				*eS*	**Sn**	**02 18 23.2**	**+1.1**
	baz=250						
TWG	**Pinlang**	**2.13**	**234**	*eP*	**Pn**	**02 17 56.6**	**-0.3**
	baz=228						
TWG				*eS*	**Sn**	**02 18 21.0**	**-1.2**
	baz=228						
CHN4	**Tsaushan**	**2.27**	**251**	*eP*	**Pn**	**02 17 59.4**	**+0.6**
	baz=250						
CHN4				*eS*	**Sn**	**02 18 26.7**	**+1.1**
	baz=250						
WTP	**Ta-pu**	**2.29**	**249**	*eP*	**Pn**	**02 18 00.3**	**+1.2**
	baz=247						
WTP				*eS*	**Sn**	**02 18 28.0**	**+1.8**
	baz=247						
CHN1	**Nanshi**	**2.38**	**248**	*eP*	**Pn**	**02 17 60.0**	**-0.5**
	baz=247						
TWK	**Hsinying**	**2.39**	**250**	*eP*	**Pn**	**02 18 02.5**	**+2.0**
	baz=249						

SKHL 28 02:21:43.4±0.4,**55°.08N**×**122°.69E**,**h24**km±2km,**mb4.4**/7, **1C-1D,Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNDR	**Tynda**	**1.17**	**86**	*ePg*	Pb	02 22 05.6	+0.6
TNDR				*eSg*	Sb	02 22 20.9	+1.2
YKLR	**Yuktali**	**1.62**	**339**	*ePg*	Pb	02 22 13.7	+1.0
YKLR				*eSg*	Sb	02 22 34.5	+1.7
IENR	**Iengra**	**1.68**	**46**	*i* Pg	Pb	02 22 14.9	+1.2
IENR				*eSg*	Sb	02 22 36.8	+2.3
TUP	**Tupik**	**1.72**	**249**	*i* Pn	Pn	02 22 12.4	+0.6
TUP				*i* Pg	Pb	02 22 14.5	+0.2
TUP				AMB	AMB	02 22 14.8	
	311nm,0.3s						
TUP				*eSg*	Sb	02 22 37.3	+1.8
TUP				A	A	02 22 38.1	
	510nm,0.3s						
CLNS	**Chul'man**	**2.15**	**34**	*ePn*	Pn	02 22 18.7	+0.9
CLNS				*ePg*	Pb	02 22 22.9	+1.1
CLNS				AMB	AMB	02 22 25.3	
	34nm,0.2s						
CLNS				*eSn*	Sn	02 22 45.3	+1.5
CLNS				*eSg*	Sb	02 22 51.0	+2.9
CLNS				A	A	02 22 52.9	
	984nm,0.4s						
KHN	**Khani**	**2.46**	**320**	*ePn*	Pn	02 22 22.7	+0.6
KHN				*ePg*	Pb	02 22 27.2	+0.2
KHN				*eSn*	Sn	02 22 52.1	+0.7
KHN				*eSg*	Sb	02 22 58.4	+1.5
KROS	**Kirovskiy**	**2.56**	**103**	*ePn*	Pn	02 22 23.6	+0.2
KROS				*ePg*	Pb	02 22 30.0	+1.3
KROS				AMB	AMB	02 22 33.0	
	68nm,0.4s						
KROS				AMB	AMB	02 22 33.0	
	100nm,0.4s						
KROS				AMB	AMB	02 22 33.0	
	130nm,0.4s						
KROS				pPg		02 22 38.0	
KROS				*eSn*	Sn	02 22 52.3	-1.6
KROS				*eSg*	Sb	02 23 02.5	+2.7
KROS				A	A	02 23 07.8	
	370nm,0.5s						
KROS				A	A	02 23 07.8	
	440nm,0.5s						
ZEA	**Zeya**	**2.98**	**115**	*ePg*	Pb	02 22 38.5	+2.7
ZEA				AMB	AMB	02 22 39.7	
	37nm,0.3s						
ZEA				pPg	Pn	02 22 46.7	+18
ZEA				*eSg*	Sb	02 23 15.8	+4.0
ZEA				A	A	02 23 17.4	
	410nm,0.5s						
ZEA				A	A	02 23 17.4	
	190nm,0.5s						
CRS	**Chara**	**3.08**	**308**	*ePn*	Pn	02 22 32.8	+2.2
CRS				*ePg*	Pb	02 22 38.5	+0.9
CRS				AMB	AMB	02 22 47.6	
	77nm,0.6s						
CRS				*eSg*	Sb	02 23 19.2	+4.5
CRS				A	A	02 23 25.2	
	516nm,0.9s						
BMKR	**Bomnak**	**3.57**	**93**	*ePn*	Pn	02 22 36.9	-0.4
BMKR				pPn	Pb	02 22 44.3	-1.5
BMKR				*ePg*	Pb	02 22 47.5	+1.7
BMKR				AMB	AMB	02 22 48.4	
	38nm,0.4s						
BMKR				AMB	AMB	02 22 48.4	
	28nm,0.4s						
BMKR				*eSg*	Sb	02 23 35.0	+6.3
BMKR				A	A	02 23 39.0	
	176nm,0.4s						
NLYR	**Nelyaty**	**4.19**	**293**	*eSg*	Sb	02 23 55.0	+8.4
UKT	**Uakit**	**5.20**	**278**	*ePn*	Pn	02 23 00.6	+0.9
UKT				*ePg*	Pb	02 23 16.4	+2.8
UKT				*eSg*	Sb	02 24 24.8	+9.1
BOD	**Bodaibo**	**5.54**	**303**	*ePg*	Pb	02 23 23.9	+4.5
BOD				*eSg*	Sb	02 24 35.8	+10
EKMR	**Ekimchan**	**6.37**	**104**	*ePn*	Pn	02 23 16.1	+0.4
EKMR				AMB	AMB	02 23 16.5	
	10.0nm,0.4s						
EKMR				pPn	pPn	02 23 24.5	+3.4
EKMR				*eSg*	Sb	02 25 02.5	+13
EKMR				A	A	02 25 07.3	
	41nm,0.6s						
EKMR				A	A	02 25 07.3	
	15nm,0.6s						
YAK	**Yakutsk**	**7.87**	**25**	*eSg*	Sb	02 25 47.7	+16
KLR	**Kul'dur**	**8.08**	**133**	*erx*	rx	02 24 58.8	
KLR				*eSg*	Sb	02 25 56.2	+18

IDC 28 02:35:30.5±14.0,**1°.83N**×**127°.62E**,**h146**km±138km, **mb3.5**/4,**mb1 3.6**/6,**mb1mx3.3**/23,**mbtmp3.4**/6,**ML3.6**/2, **Error ellipse: s-maj=120.3km s-min=19.4km az=58.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**10.39**	**229**	P	Pn	02 37 56.1	+0.4
	0.7nm,0.3s,baz=18,slow=16,SNR=3.8						
FITZ	**Fitzroy Crossi**	**19.90**	**186**	P	P	02 39 50.4	-0.3
	0.1nm,0.3s,baz=11,slow=9.9,SNR=3.9						
WRA	**Warramunga Arr**	**22.62**	**163**	P	P	02 40 18.8	-0.3
	3.5nm,0.5s,baz=343,slow=10,SNR=16						
ASAR	**Alice Springs**	**26.07**	**167**	P	P	02 40 50.1	-0.4
	0.9nm,0.5s,baz=345,slow=9.0,SNR=13						
STKA	**Stephens Creek**	**36.05**	**160**	P	P	02 42 18.6	+0.7
	0.9nm,0.3s,baz=343,slow=11,SNR=2.9						
MKAR	**Makanchi Array**	**59.61**	**326**	P	P	02 45 18.9	-0.1
	0.4nm,0.3s,baz=115,slow=8.7,SNR=7.9						

IDC 28 02:36:55.3±3.3,**4°.82S**×**151°.48E**,**h0**km,**mb3.8**/2, **mb1 4.1**/3,**mb1mx3.6**/19,**mbtmp3.9**/3,**ML2.8**/1,**Error ellipse: s-maj=160.1km s-min=36.8km az=122.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.25**	**223**	Pn	P

ZALV	**Zalesovo Beam**	**65.76**	**345**	P		**P**	**02 56 24.4**	**-1.5**
	0.4nm,0.3s,baz=186,slow=4.3,SNR=3.2								
BRTR	**Keskin Array B**	**84.34**	**312**	P		**P**	**02 58 13.3**	**-0.4**
	0.2nm,0.4s,baz=90,slow=5.8,SNR=2.8								

NNC 28 02:48:32.6±4.5, 36°82N×70°57E, h142km±68km, mb2.8, mpv3.7, 2C-4D, Error ellipse: s-maj=39.0km s-min=25.7km az=27.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.27**	**360**	⇑P	Pn	02 50 01.9	-1.0
	1.0nm,0.3s,baz=177,slow=12,SNR=44						
KK31				⇓S	Sn	02 51 14.8	+1.4
	8.6nm,0.7s,baz=189,slow=21,SNR=8.8						
TKM2	**Tokmak 2**	**7.21**	**31**	⇓P	Pn	02 50 16.5	+0.9
	5.7nm,0.6s						
TKM2				⇑S	Sn	02 51 35.9	-0.6
	5.4nm,0.8s						
AB31	**Akbulak array**	**14.64**	**331**	⇓P	Pn	02 51 52.7	+0.1
	0.5nm,0.5s,baz=148,slow=13,SNR=16						
AB31				S	Sn	02 54 33.6	-1.1
	0.6nm,0.5s,baz=159,slow=24,SNR=6.0						
AKTO	**Aktyubinsk**	**16.33**	**330**	⇓P	P	02 52 14.1	+0.2
	0.6nm,1.1s						

JMA 28 03:01:21.7, 34°96N×135°45E, h10km, M3.4, 4C-5D Broadband fault plane solution: P waves. NP1: φs136.00000°, δ57.00000°, λ53.00000°. **NP2:** φs10.00000°, δ48.00000°, λ133.00000°. **Principal axes:** T Plg59.0000°, Azm350.0000°; N Plg30.0000°, Azm158.0000°; P Plg5.0000°, Azm251.0000°; **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.32**	**353**	⇑P	Pg	03 01 28.3	+0.1
JWT				S	Sg	03 01 32.6	0.0
JMIK	**Miki**	**0.36**	**245**	⇓P	Pg	03 01 29.0	+0.2
JMIK				S	Sg	03 01 34.0	+0.4
JHE	**Heguri**	**0.36**	**148**	⇑P	Pg	03 01 28.8	-0.1
JHE				S	Sg	03 01 34.0	+0.3
JKS	**Kasai**	**0.50**	**273**	⇓P	Pg	03 01 31.3	-0.1
JKS				S	Sg	03 01 37.8	-0.2
JAJ2	**Tsuna**	**0.71**	**221**	⇓P	Pg	03 01 35.1	-0.4
JAJ2				S	Sg	03 01 44.8	0.0
JKY	**Yasaka**	**0.72**	**337**	⇑P	Pg	03 01 35.5	-0.3
JKY				S	Sg	03 01 45.1	-0.2
JWY	**Kouya**	**0.75**	**171**	P	Pg	03 01 36.0	-0.3
JWY				S	Sg	03 01 45.7	-0.5
TSUJ	**Tsu 2**	**0.84**	**107**	⇓P	Pg	03 01 37.4	-0.4
TSUJ				S	Sg	03 01 48.2	-0.5
JKSM	**Kasumi**	**0.90**	**314**	⇑P	Pg	03 01 38.4	-0.6
JKSM				S	Sg	03 01 50.3	-0.4
JKN2	**Miekihoku**	**0.99**	**136**	P	Pg	03 01 40.4	-0.3
JKN2				S	Sg	03 01 52.9	-0.7
JAD	**Aida**	**1.05**	**269**	⇓P	Pg	03 01 40.8	-1.2
JAD				S	Sg	03 01 54.7	-1.0
MAT	**Matsushiro**	**2.74**	**54**	P	Pn	03 02 06.5	+0.7
MAT				S	Sn	03 02 38.5	-0.6

IDC 28 03:30:10.7±2.8, 5°22S×151°67E, h0km, mb4.0/5, mb1 4.2/6, mb1mx3.8/20, mbtmp4.0/6, ML2.7/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/20 Error ellipse: s-maj=77.4km s-min=23.9km az=111.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.10**	**227**	Pn	Pn	03 31 43.7	+1.4
	1.3nm,0.3s,baz=56,slow=15,SNR=5.4						
PMG				Sn	Sn	03 32 54.5	+1.6
	baz=221,slow=20,SNR=2.1						
DZM	**Mont Dzumac**	**22.03**	**141**	LR	LR	03 42 19.7	
	comp=Z,104nm,18.3s,baz=291,slow=33						
WRA	**Warramunga Arr**	**22.32**	**228**	P	P	03 35 10.8	+0.5
	0.9nm,0.6s,baz=52,slow=9.5,SNR=4.9						
ASAR	**Alice Springs**	**25.08**	**221**	P	P	03 35 37.0	-0.2
	6.2nm,1.0s,baz=55,slow=8.2,SNR=22						
FITZ	**Fitzroy Crossi**	**28.47**	**241**	P	P	03 36 06.8	-0.9
	2.6nm,1.0s,baz=95,slow=11,SNR=2.9						
CMAR	**Chiang Mai Arr**	**57.04**	**296**	P	P	03 39 59.0	0.0
	1.3nm,0.4s,baz=106,slow=6.7,SNR=4.7						
SONM	**Songino Array**	**66.08**	**328**	P	P	03 40 59.8	0.0
	0.5nm,0.5s,baz=142,slow=7.3,SNR=2.6						
TORD	**Torodi Ar. Bea**	**149.35**	**287**	PKPbc	PKPbc	03 50 02.6	-0.2
	0.3nm,0.9s,baz=89,slow=2.5,SNR=3.2						

*IDC **28** 03:36:54.5±4.0, 13°21N×91°75W, h0km, mb3.5/3, mb1 3.9/5, mb1mx3.6/24, mbtmp3.6/5, ML3.9/2, MS3.1/3, Ms1 3.1/3, ms1mx2.7/26, Error ellipse: s-maj=75.5km s-min=60.6km az=159.0*

*CASC **28** 03:36:56.6±2.0, 13°42N×92°52W, h34km±999km, MD3.9*

ISC 28 03:37:02.1±1.3, 13°5N±0°1×92°20W±0°07, h32km, n17, σ1s61/20, mb3.5/3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	**Jato**	**0.98**	**34**	*e*P	**Pn**	**03 37 18.1**	**-1.5**
JAT				*e*S	**Sb**	**03 37 33.6**	**+0.5**
FUG	**Fuego 3**	**1.62**	**55**	*e*P	**Pn**	**03 37 26.2**	**-2.3**
PCG	**Pacaya**	**1.78**	**60**	*e*P	**Pn**	**03 37 28.5**	**-2.3**
PCG				*e*S	**Sb**	**03 37 55.5**	**-0.8**
NBG	**Las Nubes**	**2.10**	**59**	*e*P	**Pn**	**03 37 34.8**	**-0.4**
NBG				*e*S	**Sb**	**03 38 05.0**	**-0.4**
RTR	**El Retiro**	**2.52**	**81**	*e*P	**Pn**	**03 37 40.0**	**-0.9**
RBDL	**Robledal**	**2.52**	**76**	*e*P	**Pn**	**03 37 39.6**	**-1.3**
SNJE	**San Jose**	**2.55**	**82**	*e*P	**Pn**	**03 37 40.7**	**-0.7**
MRL	**Marmol**	**2.89**	**57**	*e*P	**Pn**	**03 37 45.4**	**-0.6**
MRL				*e*S	**Sn**	**03 38 22.9**	**+3.1**
LFRS	**El Faro**	**3.06**	**87**	*e*P	**Pn**	**03 37 47.1**	**-1.2**
SNVI	**San Vicente**	**3.27**	**88**	*e*P	**Pn**	**03 37 50.5**	**-0.8**
TEIG	**Tepich**	**7.67**	**29**	Pn	**Pn**	**03 38 49.6**	**-2.0**
	3.5nm,0.3s,baz=225,slow=8.6,SNR=20						
TEIG				LR	LR	03 42 14.3	
	comp=Z,190nm,18.2s,baz=33,slow=41						
TXAR	**Lajitas Array**	**19.00**	**328**	P	**Pn**	**03 41 23.4**	**+1.2**
	0.1nm,0.3s,baz=153,slow=11,SNR=6.5						
TKL	**Tuckaleechee C**	**23.33**	**18**	LR	LR	03 51 52.1	
	comp=Z,37nm,18.1s,baz=322,slow=38						
ANMO	**Albuquerque**	**24.93**	**331**	P	**P**	**03 42 25.2**	**+2.5**
	0.7nm,0.6s,baz=139,slow=9.3,SNR=4.9						
NVAR	**Mina Array Bea**	**33.93**	**322**	LR	LR	03 59 31.1	
	comp=Z,20nm,20.6s,baz=182,slow=40						
YKA	**Yellowknife Ar**	**51.46**	**347**	P	**P**	**03 46 02.3**	**-1.7**
	0.5nm,0.7s,baz=147,slow=7.5,SNR=7.7						
YKA				PcP	**PcP**	**03 47 17.6**	**-0.4**
	0.3nm,0.8s,baz=144,slow=3.8,SNR=6.6						
ILAR	**Eielson Array**	**63.21**	**337**	P	**P**	**03 47 27.3**	**+0.3**
	0.2nm,0.5s,baz=123,slow=5.3,SNR=3.9						

*ISCJB **28** 03:53:28.4±0.5, 51°44N±0°03×16°12E±0°03, h0km, Error ellipse: s-maj=4.4km s-min=2.6km az=8.6*

*IPEC **28** 03:53:29.5±0.9, 51°54N×16°13E, h3km±4km, ML2.6/5, Error ellipse: s-maj=4.8km s-min=1.8km az=179.0*

*CSEM **28** 03:53:29.5±0.2, 51°49N×16°09E, h2km, ML3.6/10, Error ellipse: s-maj=4.5km s-min=3.0km az=175.0*

*WAR **28** 03:53:30.3, 51°52N×16°16E*

*PRU **28** 03:53:31.3, 51°45N×16°07E, h0km*

*VIE **28** 03:53:31.2±0.4, 51°31N×16°07E, h0km, mb2.5/3, ML3.0/4, Error ellipse: s-maj=2.6km s-min=2.1km az=4.0 70 km WNW of Wroclaw Suspected Mining induced.*

ISC 28 03:53:29.0±0.9, 51°53N±0°03×16°09E±0°02, h0km, n42, σ0s97/77, 3C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.70**	**169**	*e*Pg	**Pg**	**03 53 43.1**	**+0.7**
KSP				*e*Sg	**Sb**	**03 53 53.3**	**-1.0**
KSP	**Ksiaz**	**0.70**	**169**	*e*Sg	**Sg**	**03 53 51.9**	**+0.4**
UPC	**Upice**	**1.03**	**183**	*e*Pg	**Pb**	**03 53 49.2**	**-0.4**
UPC	**Upice**	**1.03**	**183**	Pg	**Pb**	**03 53 49.2**	**-0.4**
PVCC	**Panska Ves**	**1.39**	**224**	*e*Pg	**Pg**	**03 53 55.8**	**+0.2**
PVCC				*e*Sg	**Sb**	**03 54 14.2**	**+0.1**
	comp=Z,231nm,0.2s						
PVCC	**Panska Ves**	**1.39**	**224**	Pg	**Pg**	**03 53 55.8**	**+0.2**
PVCC				Sg	**Sb**	**03 54 14.2**	**+0.1**
	231nm,0.2s						
BRG	**Berggiesshubel**	**1.50**	**245**	PN	**Pn**	**03 53 56.9**	**-0.3**
BRG				PG	**Pg**	**03 53 58.4**	**+0.6**
BRG				SG	**Sn**	**03 54 18.9**	**+1.4**
	156nm,0.4s						
PRU	**Pruhonice**	**1.83**	**213**	*e*PN	**Pn**	**03 54 01.6**	**-0.1**
PRU				*e*PG	**Pb**	**03 54 03.6**	**+0.3**
PRU				*e*SG	**Sg**	**03 54 27.7**	**-0.1**
	comp=Z,74nm,0.3s						
PRU	**Pruhonice**	**1.83**	**213**	Pn	**Pn**	**03 54 01.6**	**-0.1**
CLL	**Collm**	**1.95**	**265**	*e*Pn	**Pn**	**03 54 03.0**	**-0.3**
CLL				*e*Pg	**Pg**	**03 54 07.0**	**+0.7**
CLL				*e*		03 54 08.0	
CLL				*e*Sg	**Sg**	**03 54 32.0**	**+0.5**
	comp=Z,71nm,0.8s						
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**03 54 03.5**	**-0.4**
MORC				*e*Sg	**Sb**	**03 54 31.6**	**+0.3**
	comp=Z,27nm,0.3s,baz=334						
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*PG	**Pb**	**03 54 09.4**	**+0.8**
OKC				*e*SG	**Sb**	**03 54 35.8**	**+0.1**
	comp=Z,21nm,0.4s						
OKC	**Ostrava-Krasne**	**2.14**	**142**	Pg	**Pb**	**03 54 09.4**	**+0.8**
OKC				Sg	**Sb**	**03 54 35.8**	**+0.1**
	comp=Z,21nm,0.4s						
VRAC	**Vranov**	**2.25**	**172**	*e*Pn	**Pn**	**03 54 08.1**	**+0.6**
	baz=353						
VRAC				*e*Sg	**Sg**	**03 54 40.0**	**-1.2**
	comp=Z,20nm,0.3s,baz=353						
TREC	**Trest**	**2.27**	**190**	*e*PN	**Pn**	**03 54 09.0**	**+1.2**
TREC				*e*PG	**Pg**	**03 54 11.8**	**-0.7**
TREC	**Trest**	**2.27**	**190**	Pn	**Pn**	**03 54 09.0**	**+1.2**
KRUC	**Moravsky**	**2.48**	**175**	*e*Pn	**Pn**	**03 54 10.9**	**+0.3**
	baz=356						
KRUC				*e*Sg	**Sg**	**03 54 47.4**	**-1.2**
	comp=Z,32nm,0.6s,baz=356						
NKC	**Novy Kostel**	**2.65**	**242**	*e*PN	**Pn**	**03 54 13.8**	**+0.8**
NKC				*e*PG	**Pg**	**03 54 19.6**	**-0.1**
NKC				*e*SG	**Sg**	**03 54 54.6**	**+0.6**
	comp=Z,86nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**242**	Pn	**Pn**	**03 54 13.8**	**+0.8**
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	**Pg**	**03 54 19.9**	**-0.6**
OJC				*e*Sg	**Sg**	**03 54 55.4**	**0.0**
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	**Pg**	**03 54 19.9**	**-0.6**
OJC				*e*Sg	**Sg**	**03 54 55.4**	**0.0**
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PN	**Pn**	**03 54 16.6**	**+0.3**
KHC				*e*PG	**Pb**	**03 54 22.9**	**+1.4**
KHC				*e*SN	**Sn**	**03 54 51.6**	**-0.2**
KHC				*e*SG	**Sg**	**03 55 00.4**	**-1.5**
	comp=Z,24nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**215**	Pn	**Pn**	**03 54 16.6**	**+0.3**
KHC	**Kasperske Hory**	**2.89**	**215**	Pg	**Pb**	**03 54 22.9**	**+1.4**
KHC				Sn	**Sn**	**03 54 51.6**	**-0.2**
KHC				Sg	**Sg**	**03 55 00.4**	**-1.5**
	comp=Z,24nm,0.3s						
SMOL	**Smolenice**	**3.14**	**164**	*e*PG	**Pg**	**03 54 28.6**	**-0.6**
SMOL	**Smolenice**	**3.14**	**164**	*e*Pg	**Pg**	**03 54 28.6**	**-0.6**
NIE	**Niedzica**	**3.43**	**126**	*e*P	**Pg**	**03 54 33.7**	**-0.9**
NIE				*e*S	**Sg**	**03 55 18.4**	**-0.6**
VYHS	**Vyhne**	**3.52**	**149**	*e*PN	**Pn**	**03 54 24.7**	**-0.2**
VYHS				*e*PG	**Pg**	**03 54 36.6**	**+0.2**
VYHS				*e*SG	**Sg**	**03 55 22.1**	**+0.2**
VYHS	**Vyhne**	**3.52**	**149**	*e*Pn	**Pn**	**03 54 24.7**	**-0.2**
CONA	**Conrad Observa**	**3.61**	**182**	⇑*i*Pn	**Pn**	**03 54 25.8**	**-0.4**
CONA				⇓*i*Sg	**Sg**	**03 55 23.3**	**-1.6**
	comp=Z,19nm,0.3s						
CONA	**Conrad Observa**	**3.61**	**182**	Pn	**Pn**	**03 54 25.8**	**-0.4**
CONA				Sg	**Sg**	**03 55 23.3**	**-1.6**
	comp=Z,19nm,0.3s						
BSD	**Bornholm Skovb**	**3.66**	**349**	*i* P	**Pn**	**03 54 26.7**	**-0.1**
BSD				*i* S	**Sn**	**03 55 06.8**	**-3.8**
MOA	**Molln**	**3.87**	**199**	⇑*i*Pn	**Pn**	**03 54 29.9**	**+0.1**
MOA				⇑*i*Sg	**Sg**	**03 55 32.5**	**-0.8**
	comp=Z,26nm,0.6s						
MOA	**Molln**	**3.87**	**199**	Pn	**Pn**	**03 54 29.9**	**+0.1**
MOA				Sg	**Sg**	**03 55 32.5**	**-0.8**
	comp=Z,26nm,0.6s						
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*PN	**Pn**	**03 54 30.8**	**+0.5**
STHS				*e*PG	**Pg**	**03 54 46.3**	**+2.4**
STHS				*e*SG	**Sg**	**03 55 38.3**	**+3.7**
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*Pn	**Pn**	**03 54 30.8**	**+0.5**
KECS	**Kecovo**	**4.16**	**135**	*e*PG	**Pg**	**03 54 49.6**	**+0.8**
KECS	**Kecovo**	**4.16**	**135**	*e*Pg	**Pg**	**03 54 49.6**	**+0.8**
CRVS	**Cervenica-Dubn**	**4.34**	**125**	*e*PG	**Pg**	**03 54 51.3**	**-0.8**
CRVS	**Cervenica-Dubn**	**4.34**	**125**	*e*Pg	**Pg**	**03 54 51.3**	**-0.8**
KOLS	**Kolonicke sedl**	**4.74**	**121**	*e*PN	**Pn**	**03 54 41.8**	**+0.1**
KOLS				*e*PG	**Pg**	**03 54 59.9**	**0.0**
KOLS	**Kolonicke sedl**	**4.74**	**121**	*e*Pn	**Pn**	**03 54 41.8**	**+0.1**

MEX 28 03:53:45.4±0.5, 15°19N×93°04W, h105km±6km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.54**	**341**	*e*P	Pn	03 54 00.8	-1.3
PCIG				*i* S	Sn	03 54 12.8	-1.8
THIG		**0.80**	**110**	*i* P	Pn	03 54 02.2	-2.0
THIG				*i* S	Sn	03 54 16.8	-1.6
CCIG	**Comitan**	**1.39**	**39**	*i* P	Pn	03 54 10.6	-0.3
CCIG				*e*S	Sn	03 54 28.3	-1.9
TGIG		**1.58**	**357**	*e*P	Pn	03 54 11.7	-1.4
TGIG				*i* S	Sn	03 54 32.6	-1.5
HUIG	**Huatulco**	**3.01**	**281**	*i* P	Pn	03 54 30.3	-1.1
HUIG				*i* S	Sn	03 55 04.5	-2.6

*IDC **28** 03:58:33.9±0.6, 42°88S×75°71W, h0km, mb4.4/15, mb1 4.6/16, mb1mx4.5/22, mbtmp4.4/16, ML4.5/1, MS3.8/9, Ms1 3.7/9, ms1mx3.4/22, Error ellipse: s-maj=22.2km s-min=14.8km az=101.0*

*ISCJB **28** 03:58:36.1±0.4, 42°83S±0°07×75°6W±0°1, h23km, mb4.5/31, MS3.8/8, Error ellipse: s-maj=11.0km s-min=10.6km az=2.1*

*NEIC **28** 03:58:39.2±0.3, 42°84S×75°61W, h35km, mb4.6/20, Error ellipse: s-maj=8.5km s-min=8.0km az=93.0*

ISC 28 03:58:37.9±0.5, 42°75S±0°08×75°45W±0°08, h23km, n305, σ0s84/311, mb4.6/31, MS3.7/8, 121C-108D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**4.18**	**63**	*e*Pn	**Pn**	**03 59 42.8**	**+2.5**
PLCA				Sn	**Sn**	**04 00 24.8**	**-3.7**
PLCA				*e*S	**Sn**	**04 00 25.0**	**-3.5**
PLCA	**Paso Flores**	**4.18**	**63**	Pn	**Pn**	**03 59 42.8**	**+2.5**
	6.0nm,0.3s,baz=229,slow=15,SNR=168						
PLCA				Sn	**Sn**	**04 00 24.8**	**-3.7**
	1.5nm,0.3s,baz=203,slow=15,SNR=3.0						
PLCA				LR	LR	04 01 14.5	
	comp=Z,598nm,20.1s,baz=246,slow=36						
TRQA	**Tornquist**	**11.29**	**70**	*e*Pn	**Pn**	**04 01 19.3**	**+1.6**
CFAA	**Coronel Fontan**	**12.51**	**30**	Pn	**Pn**	**04 01 32.2**	**-2.3**
CFAA	**Coronel Fontan**	**12.51**	**30**	Pn	**Pn**	**04 01 32.2**	**-2.3**
	0.1nm,0.3s,baz=198,slow=12,SNR=16						
LVC	**Limon Verde**	**20.80**	**17**	*e*P	**P**	**04 03 18.1**	**+0.2**
	3.1nm,1.0s						
CPUP	**Villa Florida**	**22.08**	**48**	P	**P**	**04 03 32.7**	**+1.5**
CPUP	**Villa Florida**	**22.08**	**48**	P	**P**	**04 03 32.7**	**+1.5**
	26nm,0.6s,baz=207,slow=12,SNR=46						
CPUP				LR	LR	04 12 35.6	
	comp=Z,193nm,18.6s,baz=106,slow=38						
PMSA	**Palmer Station**	**23.00**	**167**	LR	LR	04 11 07.5	
	comp=Z,137nm,18.1s,baz=308,slow=33						
LPAZ	**La Paz**	**27.10**	**16**	*e*P	**P**	**04 04 22.0**	**+2.4**
	17nm,1.6s						
LPAZ	**La Paz**	**27.10**	**16**	P	**P**	**04 04 22.2**	**+2.6**
	2.1nm,0.8s,baz=207,slow=6.1,SNR=5.3						
SIV	**San Ignacio**	**29.37**	**29**	P	**P**	**04 04 40.9**	**+1.7**
SIV	**San Ignacio**	**29.37**	**29**	P	**P**	**04 04 40.9**	**+1.7**
	1.4nm,0.7s,baz=204,slow=6.4,SNR=5.7						
SIV				LR	LR	04 16 31.4	
	comp=Z,90nm,18.3s,slow=36						
SAML	**Samuel**	**35.34**	**21**	*e*P	**P**	**04 05 31.1**	**-0.4**
	8.4nm,1.0s						
ATAH	**Atahualpa**	**35.56**	**355**	P	**P**	**04 05 35.6**	**+1.8**
ATAH	**Atahualpa**	**35.56**	**355**	P	**P**	**04 05 35.6**	**+1.8**
	10nm,0.9s,baz=190,slow=8.2,SNR=5.0						
BDFB	**Brasilia**	**35.80**	**49**	P	**P**	**04 05 38.4**	**+2.9**
BDFB				PcP	**PcP**	**04 08 03.5**	**+0.5**
BDFB	**Brasilia**	**35.80**	**49**	P	**P**	**04 05 38.4**	**+2.9**
	13nm,0.9s,baz=214,slow=5.9,SNR=17						
BDFB				PcP	**PcP**	**04 08 03.5**	**+0.5**
	2.7nm,0.8s,baz=356,slow=26,SNR=3.1						
BDFB				LR	LR	04 21 31.9	
	comp=Z,148nm,19.0s,baz=243,slow=38						
OTAV	**Otavalo**	**42.88**	**356**	*e*P	**P**	**04 06 35.9**	**+0.9**
	2.6nm,1.1s						
SNAA	**Sanae**	**44.67**	**155**	*e*P	**P**	**04 06 47.8**	**-0.5**
	8.5nm,1.1s						
SNAA	**Sanae**	**44.67**	**155**	P	**P**	**04 06 48.0**	**-0.4**
	2.4nm,1.0s,baz=276,slow=6.8,SNR=11						
QSPA	**South Pole Qui**	**47.50**	**180**	*e*P	**P**	**04 07 10.2**	**-0.7**
	90nm,2.7s						
QSPA				PcP	**PcP**	**04 08 40.4**	**-0.2**
QSPA	**South Pole Qui**	**47.50**	**180**	P	**P**	**04 07 10.0**	**-0.9**
	7.0nm,1.0s,baz=127,slow=6.1,SNR=18						
QSPA				PcP	**PcP**	**04 08 40.4**	**-0.2**
	1.8nm,0.7s,baz=156,slow=2.6,SNR=5.4						
RCBR	**Riachuelo**	**50.70**	**55**	P	**P**	**04 07 38.1**	**+2.3**
RCBR	**Riachuelo**	**50.70**	**55**	P	**P**	**04 07 38.1**	**+2.3**
	6.9nm,0.8s,baz=201,slow=7.1,SNR=2.4						
RKT	**Rikitea**	**52.55**	**272**	*e*LR	LR	04 22 42.4	
	216nm,27.2s						
VNDA	**Vanda**	**55.00**	**193**	P	**P**	**04 08 06.7**	**-0.1**
VNDA	**Vanda**	**55.00**	**193**	P	**P**	**04 08 06.7**	**-0.1**
	1.8nm,0.8s,baz=155,slow=5.7,SNR=6.6						
TGUH	**Tegucigalpa,Un**	**57.56**	**346**	*e*P	**P**	**04 08 24.8**	**-0.8**
	16nm,0.9s						
TBI	**Tubuai**	**63.06**	**262**	*e*LR	LR	04 27 34.5	
	87nm,26.0s						
PPT2	**Papeete2**	**66.71**	**267**	*e*S	S	04 18 09.4	-8.6
	156nm,22.5s						
PPT2				*e*LR	LR	04 29 07.0	
	64nm,26.8s						
PPT	**Papeete**	**66.73**	**267**	LR	LR	04 29 55.5	
	comp=Z,23nm,18.4s,baz=122,slow=28						
TIGA	**Tifton**	**74.20**	**353**	⇓P	**P**	**04 10 11.6**	**-0.8**
	baz=75						
732A	**Laxson Ranch,**	**74.62**	**338**	⇑P	**P**	**04 10 14.6**	**-0.3**
	baz=75,SNR=6.2						
632A	**Uvalde**	**75.30**	**338**	⇑P	**P**	**04 10 18.9**	**-0.1**
	baz=76,SNR=5.5						
631A	**Perdido Creek**	**75.43**	**337**	⇑P	**P**	**04 10 19.6**	**-0.1**
	baz=76						
532A	**Rocksprings**	**75.92**	**338**	⇓P	**P**	**04 10 22.2**	**-0.3**
	baz=76,SNR=5.5						
531A	**Rocksprings**	**76.14**	**338**	⇑P	**P**	**04 10 23.8**	**0.0**
	baz=76,SNR=8.9						
628A	**Black Gap, Mar**	**76.18**	**336**	⇑P	**P**	**04 10 24.0**	**0.0**
	baz=76						
JCT	**Junction City**	**76.23**	**339**	*e*P	**P**	**04 10 24.2**	**0.0**
	8.9nm,1.0s						
JCT	**Junction City**	**76.23**	**339**	⇑P	**P**	**04 10 24.0**	**-0.3**
	baz=77						
TXAR	**Lajitas Array**	**76.28**	**335**	P	**P**	**04 10 24.2**	**-0.4**
TXAR	**Lajitas Array**	**76.28**	**335**	P	**P**	**04 10 24.2**	**-0.4**
	2.8nm,0.9s,baz=149,slow=8.0,SNR=18						
627A	**Terlingua Ranc**	**76.30**	**335**	⇑P	**P**	**04 10 24.5**	**-0.2**
	baz=77						
530A	**J-C Ranch, Com**	**76.34**	**337**	⇓P	**P**	**04 10 24.9**	**0.0**
	baz=77,SNR=6.2						
529A	**Stev Forest Ra**	**76.58**	**336**	⇓P	**P**	**04 10 25.9**	**-0.4**
	baz=77						
432A	**Menard**	**76.60**	**339**	⇓P	**P**	**04 10 25.7**	**-0.7**
	baz=77						
626A	**Big Bend Ranch**	**76.63**	**335**	⇓P	**P**	**04 10 26.4**	**-0.2**
	baz=77						
431A	**Sonora**	**76.64**	**338**	⇓P	**P**	**04 10 26.0**	**-0.6**
	baz=77,SNR=6.2						
528A	**Cox Ranch, San**	**76.78**	**336**	⇑P	**P**	**04 10 26.9**	**-0.6**
	baz=77						
430A	**Baggett Ranch,**	**76.92**	**337**	⇓P	**P**	**04 10 27.7**	**-0.4**
	baz=77,SNR=11						
429A	**Davenport Ranc**	**76.95**	**337**	⇑P	**P**	**04 10 28.0**	**-0.4**
	baz=77,SNR=10						
527A	**Woodward Ranch**	**77.02**	**335**	⇓P	**P**	**04 10 28.6**	**-0.2**
	baz=77						
332A	**Millersview**	**77.07**	**339**	⇑P	**P**	**04 10 28.2**	**-0.7**
	baz=78,SNR=9.8						
WHTX	**Lake Whitney**	**77.07**	**341**	⇓P	**P**	**04 10 28.3**	**-0.6**
	baz=78						
526A	**Mary Lane Ranc**	**77.09**	**335**	⇓P	**P**	**04 10 28.9**	**-0.3**
	baz=78						
331A	**San Angelo**	**77.18**	**338**	⇓P	**P**	**04 10 28.9**	**-0.7**
	baz=78,SNR=6.4						
428A	**Kincaid Ranch,**	**77.28**	**336**	⇓P	**P**	**04 10 29.9**	**-0.3**
	baz=78						
330A	**Mertzon**	**77.48**	**338**	⇑P	**P**	**04 10 30.8**	**-0.5**
	baz=78						
232A	**Coleman**	**77.52**	**339**	⇑P	**P**	**04 10 30.9**	**-0.6**
	baz=78						
427A	**Hayter Ranch,**	**77.61**	**336**	⇓P	**P**	**04 10 32.0**	**-0.1**
	baz=78						
426A	**McDonald Obser**	**77.64**	**335**	⇓P	**P**	**04 10 32.2**	**-0.1**
	baz=78						
KMSC	**Kings Mountain**	**77.70**	**355**	⇑P	**P**	**04 10 31.5**	**-0.9**
	baz=78						
231A	**Bronte**	**77.75**	**339**	⇓P	**P**	**04 10 32.1**	**

319A	**Douglas** baz=80	80.04 331	⇑P	P	04 10 46.0	+0.5
Z26A	**Caprock** baz=80,SNR=8.0	80.04 336	⇑P	P	04 10 44.8	-0.6
X31A	**McDonald Ranch** baz=81	80.21 340	⇑P	P	04 10 45.8	-0.4
220A	**Playas Peak, P** baz=81	80.25 332	⇑P	P	04 10 46.8	+0.2
X30A	**Coker Ranch, T** baz=81	80.27 339	⇑P	P	04 10 46.1	-0.4
Z25A	**Roswell** baz=81	80.27 335	⇓P	P	04 10 46.3	-0.4
MSTX	**Muleshoe** baz=81,SNR=6.2	80.34 337	⇓P	P	04 10 46.5	-0.5
Y27A	**Causey** baz=81	80.37 337	⇑P	P	04 10 46.8	-0.4
TUL1	**Tulsa** baz=81	80.46 343	⇑P	P	04 10 46.7	-0.7
X29A	**Tulia** baz=81	80.49 338	⇓P	P	04 10 47.3	-0.4
DBIC	**Dimbokro**	80.50 72	*eP*	P	04 10 49.3	+1.1
DBIC			*e*	pP	04 10 55.5	-0.2
DBIC	**Dimbokro** 4.4nm,0.8s,baz=210,slow=8.2,SNR=4.3	80.50 72	P	P	04 10 48.5	+0.4
Z24A	**Sheeppen Canyo** baz=81	80.52 335	⇓P	P	04 10 48.5	+0.4
121A	**Cookes Peak, D** baz=81	80.57 333	⇑P	P	04 10 48.9	+0.6
Y26A	**Elida** baz=81	80.60 336	⇓P	P	04 10 48.4	0.0
X28A	**Dimmitt** baz=81	80.69 338	⇑P	P	04 10 48.7	-0.2
Y25A	**Mesa, Roswell** baz=81	80.86 336	⇓P	P	04 10 49.6	-0.3
120A	**U Bar Ranch, L** baz=81	80.87 332	⇓P	P	04 10 50.4	+0.5
AMTX	**Amarillo** 4.6nm,0.9s	80.90 338	*eP*	P	04 10 50.0	0.0
LBTB	**Lobatse** 71nm,1.8s	81.01 116	*eP*	P	04 10 50.7	-0.3
Y24A	**Capitan** baz=82	81.09 335	⇑P	P	04 10 51.3	+0.1
W29A	**Amraillo** baz=82	81.11 339	⇑P	P	04 10 51.0	0.0
X26A	**CR and CF Fran** baz=82	81.18 337	⇓P	P	04 10 51.7	+0.2
Z21A	**St. Cloud Mine** baz=82	81.24 333	⇓P	P	04 10 52.6	+0.6
V31A	**Spring Creek L** baz=82	81.26 340	⇓P	P	04 10 52.0	+0.2
Y23A	**Lovelace Mesa,** baz=82	81.29 335	⇓P	P	04 10 52.7	+0.5
Z20A	**Nine Sixteen R** baz=82	81.38 332	⇓P	P	04 10 53.1	+0.5
X25A	**Clemmons Ranch** baz=82	81.42 336	⇑P	P	04 10 52.4	-0.4
W27A	**Bowe Ranch, En** baz=82	81.45 337	⇑P	P	04 10 52.9	0.0
Y22A	**Socorro** baz=82	81.59 334	⇑P	P	04 10 54.3	+0.6
W26A	**Owens Ranch, T** baz=82	81.67 337	⇑P	P	04 10 54.3	+0.2
214A	**Organ Pipe Nat** baz=82	81.86 329	⇑P	P	04 10 55.9	+0.8
Y21A	**Point of Rocks** baz=82	81.89 333	⇓P	P	04 10 56.2	+0.8
W25A	**X Bar L Ranch,** baz=82,SNR=5.1	82.00 336	⇑P	P	04 10 55.6	-0.3
Y20A	**Horse Springs,** baz=82	82.03 333	⇓P	P	04 10 56.6	+0.5
LAZ	**Ladron** 1.6nm,1.1s	82.07 334	*eP*	P	04 10 57.0	+0.7
U30A	**WK&E Inc. Balk** baz=83	82.18 340	⇓P	P	04 10 56.5	-0.1
W24A	**Lazy 6 Ranch,** baz=83	82.27 336	⇑P	P	04 10 57.5	+0.1
X21A	**Alamocita Cree** baz=83	82.32 334	⇓P	P	04 10 58.2	+0.6
V26A	**Tequesquite Ra** baz=83	82.34 337	⇑P	P	04 10 57.6	0.0
ANMO	**Albuquerque** 6.7nm,0.9s	82.35 335	*eP*	P	04 10 58.2	+0.4
U28A	**Mallet** baz=83	82.45 338	⇓P	P	04 10 57.7	-0.4
W23A	**Werner Place,** baz=83	82.46 335	⇓P	P	04 10 58.5	+0.2
T31A	**Randall Ranch,** baz=83	82.48 341	⇑P	P	04 10 58.0	-0.1
V25A	**Rancho No Teng** baz=83	82.62 336	⇓P	P	04 10 58.8	-0.3
T30A	**Plains** baz=83	82.64 340	⇓P	P	04 10 59.2	+0.2
X20A	**Quemado** baz=83	82.65 333	⇑P	P	04 10 59.9	+0.6
U27A	**Thompson Grove** baz=83	82.65 338	⇑P	P	04 10 59.2	0.0
V24A	**Rampart Ranch,** baz=83	82.71 336	⇓P	P	04 10 59.9	+0.2
U26A	**Atchley Ranch,** baz=83	82.89 337	⇓P	P	04 11 00.3	-0.2
W21A	**San Fidel** baz=83	82.89 334	⇑P	P	04 11 01.4	+0.9
T29A	**Hugoton** baz=83	82.94 339	⇓P	P	04 11 00.5	-0.1
113A	**Mohawk Valley,** baz=83	82.95 328	⇑P	P	04 11 02.1	+1.4
V23A	**Ortiz Mt. (NFS** baz=83	83.01 335	⇓P	P	04 11 01.5	+0.4
U25A	**Circle Dot Ran** baz=84,SNR=7.2	83.08 337	⇑P	P	04 11 01.6	+0.1
T28A	**Walsh** baz=84	83.12 339	⇑P	P	04 11 01.3	-0.3
X18A	**Snowflake** baz=84	83.13 332	⇓P	P	04 11 02.5	+0.7
W20A	**Ramah** baz=84	83.18 333	⇓P	P	04 11 02.5	+0.4
S30A	**Montezuma** baz=84	83.19 340	⇑P	P	04 11 01.8	-0.1
T27A	**Campo** baz=84	83.23 338	⇑P	P	04 11 02.2	+0.1
S29A	**Ulysses** baz=84	83.33 340	⇑P	P	04 11 02.6	0.0
V22A	**San Miguel Ran** baz=84	83.39 335	⇑P	P	04 11 04.0	+0.9
S28A	**Manter** baz=84	83.50 339	⇓P	P	04 11 03.5	-0.1
U23A	**El Rito** baz=84	83.55 335	⇓P	P	04 11 04.5	+0.5
X16A	**Lo Mia Camp, P** baz=84	83.56 331	⇑P	P	04 11 04.6	+0.6
T26A	**Comanche Natio** baz=84	83.57 338	⇓P	P	04 11 04.2	+0.2
W18A	**Petrified Fore** baz=84	83.59 332	⇑P	P	04 11 04.5	+0.4
Y14A	**Wickenburg** baz=84	83.70 329	⇓P	P	04 11 05.4	+0.9
R30A	**Dighton** baz=84	83.75 341	⇓P	P	04 11 04.4	-0.3
T25A	**Trinidad** baz=84,SNR=7.8	83.77 337	⇓P	P	04 11 05.6	+0.5
V20A	**Brimhall** baz=84	83.78 334	⇓P	P	04 11 05.2	+0.1
DVTC	**Desert V Tower** baz=84	83.79 326	⇑P	P	04 11 06.3	+1.2
U22A	**Llaves** baz=84	83.80 335	⇓P	P	04 11 05.7	+0.4
T24A	**Torres, Weston** baz=84	83.90 337	⇑P	P	04 11 06.1	+0.3
S26A	**Kim** baz=84,SNR=5.8	83.96 338	⇓P	P	04 11 06.1	+0.2
R29A	**Marienthal** baz=84	84.10 340	⇓P	P	04 11 06.5	0.0
U21A	**Nageezi** baz=84	84.10 334	⇑P	P	04 11 07.2	+0.5
Y12C	**Blythe** baz=84	84.12 328	⇑P	P	04 11 07.8	+1.1
MONP	**Monument Peak** baz=84	84.12 326	⇓P	P	04 11 07.7	+0.8
R28A	**Tribune** baz=85	84.19 339	⇑P	P	04 11 07.0	0.0
S25A	**Robets Cordova** baz=85,SNR=8.8	84.26 337	⇓P	P	04 11 07.8	+0.2
R27A	**Eads** baz=85	84.40 339	⇓P	P	04 11 08.1	0.0
BC3	**Big Chuckawall** baz=85	84.40 327	⇓P	P	04 11 09.1	+0.9
T22A	**Edith** baz=85	84.40 335	⇑P	P	04 11 08.8	+0.5
S24A	**Houchin Ranch,** baz=85,SNR=8.2	84.47 337	⇓P	P	04 11 09.1	+0.4
WUAZ	**Wupatki** baz=85	84.52 331	⇓P	P	04 11 09.7	+0.9
T21A	**Navajo Lake** baz=85	84.57 335	⇓P	P	04 11 09.4	+0.2
R26A	**Arlington** baz=85	84.59 338	⇓P	P	04 11 09.0	0.0
SDCO	**Great Sand Dun** 2.4nm,0.9s	84.65 337	*eP*	P	04 11 09.4	-0.2
IRM	**Iron Mountain** baz=85	84.72 328	⇑P	P	04 11 10.8	+1.1
PFO	**Pinyon Flat Ob** baz=85	84.76 327	⇑P	P	04 11 10.9	+0.8
BELC	**Belle Mtn. Jos** baz=85	84.92 327	⇓P	P	04 11 11.9	+1.0
R24A	**Sanders Place,** baz=85,SNR=7.6	84.99 337	⇑P	P	04 11 11.6	+0.3
S22A	**4UR Ranch, Cre** baz=85	85.05 336	⇑P	P	04 11 11.8	+0.2
MURC	**Murrieta** baz=85	85.06 326	⇑P	P	04 11 12.6	+1.2
W13A	**Hualapai Mount** baz=85	85.06 329	⇓P	P	04 11 12.3	+0.7
SCI	**San Clemente I** baz=85	85.08 325	⇓P	P	04 11 12.5	+1.0
R23A	**Moffat** baz=86	85.16 336	⇓P	P	04 11 12.2	+0.1
Q26A	**Hugo** baz=86	85.19 338	⇑P	P	04 11 12.2	+0.1
S21A	**Coal Bank Pass** baz=86	85.27 335	⇓P	P	04 11 13.1	+0.3
Q25A	**Bedland, Calha** baz=86	85.38 338	⇑P	P	04 11 13.1	0.0
R22A	**Saguache, Gunn** baz=86	85.47 336	⇑P	P	04 11 14.1	+0.3
S20A	**Disappointment** baz=86	85.60 334	⇑P	P	04 11 14.9	+0.5
U15A	**North Rim** baz=86	85.66 331	⇑P	P	04 11 15.4	+0.7
Q24A	**Divide** baz=86	85.68 337	⇓P	P	04 11 14.8	0.0
HEC	**Hector,Ludlow** baz=86	85.77 327	⇑P	P	04 11 16.1	+1.0
R21A	**Cimarron** baz=86	85.84 335	⇓P	P	04 11 15.9	+0.4
R20A	**Redvale** baz=86	85.94 335	⇑P	P	04 11 16.3	+0.4
S18A	**Hurst Farm, Bl** baz=86	86.01 333	⇑P	P	04 11 16.9	+0.5
Q22A	**Crested Butte,** baz=86	86.10 336	⇓P	P	04 11 17.2	+0.4
TUQ	**Turquoise Moun** baz=86	86.14 328	⇓P	P	04 11 17.9	+1.0
P23A	**Jefferson** baz=87	86.26 337	⇑P	P	04 11 18.2	+0.5
Q21A	**Lamborn Mesa,** baz=87	86.28 335	⇓P	P	04 11 18.2	+0.6
PV10	**Paradox Valley**	86.32 334	*eP*	P	04 11 17.8	-0.1
O26A	**Horse Wrangler** baz=87	86.37 339	⇓P	P	04 11 17.9	0.0
SMCO	**Snowmass** 5.9nm,0.9s	86.41 336	*eP*	P	04 11 18.8	+0.3
EDW2	**Edards Air Fo** baz=87	86.49 326	⇓P	P	04 11 19.9	+1.3
Q20A	**Ridgley Place,** baz=87	86.61 335	⇑P	P	04 11 19.7	+0.5
P21A	**Newcastle** baz=87	86.87 336	⇑P	P	04 11 20.2	-0.3
LRMC	**Laurel Mountai** baz=87	86.88 327	⇑P	P	04 11 21.7	+1.2
P20A	**De Beque** baz=88	87.14 335	⇑P	P	04 11 22.2	+0.5
O22A	**Kremmling** baz=88	87.19 337	⇑P	P	04 11 22.5	+0.3
PKM	**Peak Mountain** baz=88	87.27 325	⇑P	P	04 11 23.9	+1.4
MPMC	**Manual Prospec** baz=88	87.31 327	⇓P	P	04 11 23.6	+0.9
N24A	**Carr** baz=88	87.34 338	⇑P	P	04 11 22.3	-0.4
ISA	**Isabella** 0.0nm,1.1s	87.36 326	*eP*	P	04 11 24.8	+2.0
ISA	**Isabella** baz=88	87.36 326	⇑P	P	04 11 24.1	+1.3
FURC	**Furnace Creek,** baz=88	87.41 328	⇑P	P	04 11 23.7	+0.8
P19A	**Cripple Cowboy** baz=88	87.45 335	⇑P	P	04 11 23.1	-0.2
SRU	**San Rafael** baz=88	87.47 333	⇑P	P	04 11 23.2	-0.2
Q16A	**Castle Valley** baz=88	87.51 333	⇓P	P	04 11 23.9	+0.3
O20A	**White River Ci** baz=88	87.68 335	⇑P	P	04 11 24.8	+0.4
N23A	**Red Feather La** baz=88	87.70 337	⇓P	P	04 11 24.7	+0.2
N22A	**Wattenberg Ran** baz=88	87.76 337	⇓P	P	04 11 24.4	-0.4
VES	**Vestal, Richgr** baz=88	87.77 326	⇓P	P	04 11 26.1	+1.4
P18A	**Preston Nutter** baz=88	87.85 334	⇑P	P	04 11 25.7	+0.4
N21A	**Black Mountain** baz=88	88.03 336	⇑P	P	04 11 26.7	+0.6
GRAC	**Grapevine Rang** baz=88	88.08 328	⇑P	P	04 11 27.3	+1.1
O19A	**Miners Draw (B** baz=88	88.10 335	⇓P	P	04 11 26.2	-0.1
ECSD	**EROS Data Cent** 10nm,0.8s	88.16 345	*eP*	P	04 11 25.6	-0.8
M23A	**Laramie** baz=89	88.17 338	⇑P	P	04 11 26.4	-0.3
N20A	**Spence Gulch,** baz=89	88.32 336	⇓P	P	04 11 28.0	+0.5
R11A	**Troy Canyon, C** baz=89	88.57 330	⇑P	P	04 11 29.3	+0.6
L23A	**Garrett** baz=89	88.76 338	⇑P	P	04 11 28.9	-0.6
M21A	**Separation Pea** baz=89	88.76 337	⇑P	P	04 11 29.8	+0.3
SPMN	**St. Paul** baz=89	88.94 348	⇓P	P	04 11 28.8	-1.1
L21A	**Rawlins** baz=90,SNR=7.0	89.09 337	⇓P	P	04 11 30.6	-0.5
MLAC	**Mammoth Lakes** baz=90	89.20 327	⇓P	P	04 11 32.7	+1.0
DUG	**Dugway** baz=90	89.21 332	⇓P	P	04 11 31.5	0.0
K23A	**Bowen Ranch, D** baz=90	89.33 338	⇑P	P	04 11 32.3	+0.3
L20A	**Wamsutter** baz=90	89.42 336	⇓P	P	04 11 32.4	-0.1
K22A	**Casper** baz=90,SNR=6.2	89.49 338	⇓P	P	04 11 32.6	-0.2
TORD	**Torodi Ar. Bea**	89.61 72	P	P	04 11 33.9	+0.1
TORD	**Torodi Ar. Bea** 0.9nm,0.8s,baz=223,slow=4.4,SNR=6.8	89.61 72	P	P	04 11 33.9	+0.1
TORD	comp=Z,95nm,18.6s,baz=305,slow=32		LR	LR	04 47 12.9	
NVAR	**Mina Array Bea**	89.68 328	P	P	04 11 34.7	+0.8
NVAR	**Mina Array Bea** 3.5nm,0.9s,baz=159,slow=5.8,SNR=19	89.68 328	P	P	04 11 34.7	+0.8
L19A	**Farson** baz=90	89.81 335	⇓P	P	04 11 34.5	+0.1
L18A	**Fontenelle, Gr** baz=90	89.86 335	⇑P	P	04 11 34.3	-0.3
K20A	**Yellowstone Ra** baz=90	90.02 336	⇑P	P	04 11 35.4	+0.1
HWUT	**Hardware Ranch** 5.9nm,1.1s	90.06 334	*eP*	P	04 11 34.9	-0.7
J22A	**Midwest** baz=91	90.18 338	⇓P	P	04 11 35.7	-0.3
K19A	**Absolon Red Bu** baz=91	90.32 336	⇓P	P	04 11 36.3	-0.4
J21A	**Lysite** baz=91,SNR=6.4	90.39 337	⇓P	P	04 11 36.8	-0.3
PDAR	**Pinedale Array**	90.48 336	P	P	04 11 36.5	-1.1
PDAR	**Pinedale Array** 1.3nm,0.8s,baz=148,slow=5.3,SNR=9.1	90.48 336	P	P	04 11 36.5	-1.1
J20A	**Shoshoni** baz=91,SNR=12	90.58 337	⇑P	P	04 11 38.0	+0.2
I22A	**9 Mile Ranch,** baz=91	90.62 338	⇑P	P	04 11 37.7	-0.3
I21A	**Big Trails, Te** baz=91,SNR=9.4	90.77 338	⇑P	P	04 11 37.8	-0.9
J19A	**Crowheart** baz=91,SNR=6.8	90.78 336	⇓P	P	04 11 38.3	-0.5
H24A	**Dirks Ranch, A** baz=91	90.91 340	⇓P	P	04 11 38.4	-0.8
I20A	**Worland** baz=92,SNR=6.2	91.14 337	⇓P	P	04 11 39.9	-0.5
I19A	**Meeteetse** baz=92	91.47 337	⇓P	P	04 11 41.8	-0.3
H20A	**Greybull** baz=92	91.59 337	⇓P	P	04 11 42.1	-0.4
F23A	**Volborg** baz=92	92.03 340	⇓P	P	04 11 43.8	-0.6
H19A	**Powell** baz=92	92.05 337	⇑P	P	04 11 44.4	-0.2
J14A	**Carey** baz=93	92.24 333	⇑P	P	04 11 45.8	+0.2
G20A	**Bridger** baz=93	92.33 337	⇓P	P	04 11 45.0	-0.9
G18A	**Lazy EL Ranch,** baz=93	92.80 337	⇓P	P	04 11 47.9	-0.2
I13A	**Wildhorse Cree** baz=93	92.97 333	⇑P	P	04 11 49.6	+0.6
H15A	**Lima** baz=94	93.11 334	⇑P	P	04 11 49.5	-0.1
F18A	**Big Timber** baz=94	93.38 337	⇓P	P	04 11 50.7	0.0
G15A	**Dillon** baz=94	93.55 335	⇑P	P	04 11 51.9	+0.2
D22A	**Cohagen** baz=94	93.56 340	⇑P	P	04 11 51.5	+0.1
E19A	**Rath Farm, Rou** baz=94	93.62 338	⇑P	P	04 11 51.6	-0.2
E18A	**Harlowton** baz=94	94.04 337	⇑P	P	04 11 53.6	-0.2
D17A	**Six Diamond Ra** baz=95	94.80 337	⇑P	P	04 11 57.2	0.0
C15A	**Salmond Ranch,** baz=96	95.93 336	⇓P	P	04 12 02.7	+0.3
OPO	**Ambohidratompo** comp=Z,82nm,18.7s,baz=186,slow=32	99.37 126	LR	LR	04 51 18.2	
GERES	**GERESS Array B**	120.03 50	PKP	**PKPdf**	04 17 24.9	-1.1
GERES	**GERESS Array B** 0.8nm,0.6s,baz=252,slow=0.3,SNR=7.1	120.03 50	PKP	**PKPdf**	04 17 24.9	-1.1
ILAR	**Eielson Array**	120.70 332	PKP	**PKPdf**	04 17 25.2	-1.5
ILAR	**Eielson Array** 0.9nm,0.9s,baz=139,slow=1.3,SNR=9.4	120.70 332	PKP	**PKPdf**	04 17 25.2	-1.5
BRTR	**Keskin Array B**	128.05 68	PKP	**PKPdf**	04 17 41.8	+0.1
BRTR	**Keskin Array B** 1.2nm,0.7s,baz=203,slow=3.0,SNR=7.0	128.05 68	PKP	**PKPdf**	04 17 41.8	+0.1
AKTO	**Aktyubinsk**	147.56 60	PKPbc	**PKPbc**	04 18 18.7	-0.8
AKTO	**Aktyubinsk** 6.1nm,0.8s,baz=295,slow=2.2,SNR=19	147.56 60	PKPbc	**PKPbc**	04 18 18.7	-0.8
ABKAR	**Akbulak array**	148.71 62	*e*PKPbc	**PKPbc**	04 18 22.4	-0.1
BVAR	**Borovoye Array**	155.12 54	PKP	**PKPdf**	04 18 28.0	-0.2
BVAR	**Borovoye Array** 2.0nm,0.8s,baz=318,slow=2.0,SNR=6.1	155.12 54	PKP	**PKPdf**	04 18 28.0	-0.2
KURBB	**Kurchatov Arra**	160.56 57	PKP	**PKPdf**	04 18 33.8	-1.2
KURBB	0.2nm,0.4s,baz=288,slow=1.3,SNR=5.0		PKPab	**PKPab**	04 19 16.1	-0.5
KURK	**Kurchatov** 0.9nm,0.9s,baz=282,slow=4.7,SNR=5.0	160.59 57	PKP	**PKPdf**	04 18 33.8	-1.2
KURK			PKPab	**PKPab**	04 19 16.1	-0.7
ZALV	**Zalesovo Beam**	162.81 42	PKP	**PKPdf**	04 18 36.1	-1.1
ZALV	**Zalesovo Beam** 0.6nm,0.3s,baz=294,slow=1.4,SNR=4.6	162.81 42	PKP	**PKPdf**	04 18 36.1	-1.1
MKAR	**Makanchi Array**	163.70 68	PKP	**PKPdf**	04 18 37.3	-1.0
MKAR			PKPab	**PKPab**	04 19 30.6	0.0
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=285,slow=2.8,SNR=4.2	163.70 68	PKP	**PKPdf**	04 18 37.3	-1.0
MKAR	1.7nm,1.0s,baz=272,slow=3.4,SNR=6.3		PKPab	**PKPab**	04 19 30.6	0.0

*ISCJB **28** 04:03:29.7±0.5,40°.03N±0°.03×27°.41E±0°.04,h7km±6km, Error ellipse: s-maj=6.2km s-min=4.3km az=43.4*
*ISK **28** 04:03:29.7,40°.05N×27°.42E,h10km,MD2.6*
*CSEM **28** 04:03:29.8±0.1,40°.02N×27°.41E,h10km,MD2.6, Error ellipse: s-maj=2.7km s-min=1.5km az=39.0*
*DDA **28** 04:03:30.0,40°.02N×27°.43E,h7km,MD2.9*

ISC 28 04:03:30.1±0.9,40°.03N±0°.03×27°.42E±0°.03,h12km±8km, n27,σ0°39/38,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
GONE	**Gonen-Balikesi**	**0.21**	**85**	*e*PG		**Pg**	**04 03 34.5**	**-0.1**
GONE				*e*SG		**Sg**	**04 03 37.9**	**+0.2**
GONE	**Gonen-Balikesi**	**0.21**	**85**	*e*Pg		**Pg**	**04 03 34.5**	**-0.1**
GONE				*e*Sg		**Sg**	**04 03 37.9**	**+0.2**
BALY	**Balya**	**0.33**	**152**	*i* P		**Pg**	**04 03 36.5**	**-0.3**
BALY				*i* S		**Sg**	**04 03 41.3**	**+0.1**
BALY	**Balya**	**0.33**	**152**	*i* P		**Pg**	**04 03 36.5**	**-0.3**
BALY				*i* S		**Sg**	**04 03 41.3**	**+0.1**
KRBG	**Karabiga-Canak**	**0.38**	**346**	*e*PG		**Pg**	**04 03 37.1**	**-0.6**
KRBG				*e*SG		**Sg**	**04 03 42.8**	**+0.1**
KRBG	**Karabiga-Canak**	**0.38**	**346**	*e*Pg		**Pg**	**04 03 37.1**	**-0.6**
KRBG				*e*Sg		**Sg**	**04 03 42.8**	**+0.1**
MRMT	**Marmara Adasi**	**0.59**	**13**	*e*PG		**Pg**	**04 03 41.3**	**-0.4**
MRMT				*e*SG		**Sg**	**04 03 49.4**	**-0.1**
MRMT	**Marmara Adasi**	**0.59**	**13**	*e*Pg		**Pg**	**04 03 41.3**	**-0.4**
MRMT				*e*Sg		**Sg**	**04 03 49.4**	**-0.1**
KCTX	**Karacabey (Bur**	**0.76**	**72**	*e*PG		**Pg**	**04 03 44.4**	**-0.4**
KCTX	**Karacabey (Bur**	**0.76**	**72**	*e*Pg		**Pg**	**04 03 44.4**	**-0.4**
GELI	**Tayfur-Gelibol**	**0.81**	**297**	*e*PG		**Pg**	**04 03 45.7**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.81**	**297**	*e*Pg		**Pg**	**04 03 45.7**	**-0.1**
DURS	**Dursunbey**	**0.92**	**117**	*i* P		**Pg**	**04 03 47.4**	**-0.5**
DURS				*i* S		**Sb**	**04 04 00.2**	**0.0**
DURS	**Dursunbey**	**0.92**	**117**	*i* P		**Pg**	**04 03 47.4**	**-0.5**
DURS				*i* S		**Sb**	**04 04 00.2**	**0.0**
ERIK	**Erikli-Kesan**	**0.94**	**313**	*e*PG		**Pg**	**04 03 47.8**	**-0.6**
ERIK	**Erikli-Kesan**	**0.94**	**313**	*e*Pg		**Pg**	**04 03 47.8**	**-0.6**
DST	**Dursunbey**	**1.02**	**114**	*e*PG		**Pg**	**04 03 49.0**	**-0.8**
DST	**Dursunbey**	**1.02**	**114**	*e*Pg		**Pg**	**04 03 49.0**	**-0.8**
BOZC	**Bozcaada**	**1.07**	**260**	*i* P		**Pb**	**04 03 50.7**	**+0.2**
BOZC				*i* S		**Sb**	**04 04 04.3**	**-0.1**
ENEZ	**Enez**	**1.20**	**307**	*e*PN		**Pn**	**04 03 52.7**	**0.0**
ENEZ	**Enez**	**1.20**	**307**	*e*Pn		**Pn**	**04 03 52.7**	**0.0**
ARMT	**Armutlu**	**1.23**	**64**	*e*PN		**Pn**	**04 03 53.3**	**+0.2**
ARMT	**Armutlu**	**1.23**	**64**	*e*Pn		**Pn**	**04 03 53.3**	**+0.2**
CTKS	**Kestanelik-??a**	**1.46**	**34**	*e*PN		**Pn**	**04 03 56.6**	**+0.3**
CTKS	**Kestanelik-??a**	**1.46**	**34**	*e*Pn		**Pn**	**04 03 56.6**	**+0.3**
EDRB	**Edirne**	**1.89**	**344**	*e*PN		**Pn**	**04 04 02.7**	**+0.6**
EDRB	**Edirne**	**1.89**	**344**	*e*Pn		**Pn**	**04 04 02.7**	**+0.6**

GUC 28 04:18:47.0±1.1,30°.53S×69°.43W,h0km±17km,ML3.6,3C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TLL	**Tololo Astrono**	**1.24**	**286**	⇑*i* P		Pg	04 19 10.9	-0.3
TLL				*i* S		Sb	04 19 28.5	0.0
TLL	comp=N,882nm,0.2s			AML		AML	04 19 29.4	
CMCH	**Combarbala**	**1.50**	**244**	⇑*i* P		Pn	04 19 14.1	-1.2
CMCH				*i* S		Sg	04 19 34.9	-0.6
CMCH	comp=N,3μm,0.4s			AML		AML	04 19 35.7	
LCO	**Las Campanas**	**1.87**	**323**	*e*P		Pn	04 19 20.9	+0.3
LCO				*i* S		Sb	04 19 46.3	-0.3
LCO	comp=E,704nm,0.7s			AML		AML	04 19 51.0	
CHNG	**Los Chungos**	**2.23**	**232**	*e*P		Pn	04 19 25.9	+0.7
CHNG				*i* S		Sb	04 19 55.7	-0.7
CHNG	comp=N,186nm,0.5s			AML		AML	04 20 03.2	
VACH	**Vallenar**	**2.26**	**329**	⇑*i* P		Pn	04 19 13.7	-12
VACH				*i* S		Sn	04 19 44.3	-10
VACH	comp=N,1μm,0.2s			AML		AML	04 19 47.3	

*ATH **28** 04:25:10.1,39°.94N×23°.57E,h24km±1km,MD3.0/7*
*CSEM **28** 04:25:10.7±0.1,39°.93N×23°.45E,h8km,MD3.0, Error ellipse: s-maj=4.5km s-min=2.5km az=88.0*
*ISCJB **28** 04:25:11.0±0.4,39°.92N±0°.02×23°.52E±0°.06,h21km±5km, Error ellipse: s-maj=8.0km s-min=3.5km az=173.7*
*THE **28** 04:25:11.0,39°.93N×23°.43E,h2km±22km,ML1.9/5, Error ellipse: s-maj=22.2km s-min=0.3km az=219.0*

ISC 28 04:25:11.0±0.9,39°.93N±0°.02×23°.46E±0°.04,h10km±8km, n31,σ0°47/54,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
PAIG	**Paliouri**	**0.17**	**90**	P		**Pg**	**04 25 14.5**	**-0.1**
PAIG				S		**Sg**	**04 25 17.5**	**+0.4**

PAIG	**Paliouri**	**0.17**	**90**	*e*PB	**Pg**	**04 25 14.6**	**-0.1**
PAIG				*e*SB	**Sg**	**04 25 17.5**	**+0.4**
PAIG	**Paliouri**	**0.17**	**90**	*e*Pb	**Pg**	**04 25 14.6**	**-0.1**
PAIG				S	**Sg**	**04 25 17.5**	**+0.4**
PLG	**Polygyros**	**0.45**	**359**	P	**Pg**	**04 25 19.3**	**-0.4**
PLG				S	**Sg**	**04 25 25.6**	**0.0**
PLG	**Polygyros**	**0.45**	**359**	*e*PB	**Pg**	**04 25 19.4**	**-0.3**
PLG				*e*SB	**Sg**	**04 25 25.9**	**+0.3**
PLG	**Polygyros**	**0.45**	**359**	*e*Pb	**Pg**	**04 25 19.4**	**-0.3**
PLG				S	**Sg**	**04 25 25.6**	**0.0**
PLG				*e*Sb	**Sg**	**04 25 25.9**	**+0.3**
OUR	**Ouranopolis**	**0.57**	**44**	P	**Pg**	**04 25 22.2**	**+0.2**
OUR				S	**Sb**	**04 25 30.8**	**-0.4**
OUR	**Ouranopolis**	**0.57**	**44**	P	**Pg**	**04 25 22.2**	**+0.2**
OUR				S	**Sb**	**04 25 30.8**	**-0.4**
XOR	**Xorichti**	**0.60**	**200**	P	**Pg**	**04 25 22.5**	**-0.1**
XOR	**Xorichti**	**0.60**	**200**	P	**Pg**	**04 25 22.5**	**-0.1**
NEO	**Neokhori**	**0.65**	**197**	*e*PN	**Pb**	**04 25 24.0**	**-0.4**
NEO				*e*SN	**Sb**	**04 25 33.9**	**+0.5**
NEO	**Neokhori**	**0.65**	**197**	*e*Pn	**Pb**	**04 25 24.0**	**-0.4**
HORT	**Hortiatis**	**0.72**	**338**	P	**Pg**	**04 25 24.4**	**-0.6**
HORT				S	**Sg**	**04 25 34.5**	**0.0**
HORT	**Hortiatis**	**0.72**	**338**	P	**Pg**	**04 25 24.4**	**-0.6**
HORT				S	**Sg**	**04 25 34.5**	**0.0**
SKIA	**Skiathos**	**0.76**	**180**	P	**Pg**	**04 25 25.4**	**-0.2**
SKIA				S	**Sb**	**04 25 36.1**	**-0.6**
SKIA	**Skiathos**	**0.76**	**180**	P	**Pg**	**04 25 25.4**	**-0.2**
SKIA				S	**Sb**	**04 25 36.1**	**-0.6**
AOS	**Alonnisos**	**0.82**	**157**	P	**Pg**	**04 25 26.4**	**-0.4**
AOS				S	**Sb**	**04 25 38.6**	**+0.1**
AOS	**Alonnisos**	**0.82**	**157**	*e*PN	**Pg**	**04 25 26.5**	**-0.4**
AOS				*e*SN	**Sg**	**04 25 37.7**	**+0.2**
AOS	**Alonnisos**	**0.82**	**157**	P	**Pg**	**04 25 26.4**	**-0.4**
AOS				*e*Sn	**Sg**	**04 25 37.7**	**+0.2**
AOS				S	**Sb**	**04 25 38.6**	**+0.1**
SOH	**Sokhos**	**0.90**	**355**	*e*PN	**Pg**	**04 25 28.0**	**-0.2**
SOH				*e*SN	**Sg**	**04 25 40.1**	**+0.2**
SOH	**Sokhos**	**0.90**	**355**	*e*Pn	**Pg**	**04 25 28.0**	**-0.2**
THL	**Klokotos Trika**	**1.17**	**252**	*e*PN	**Pn**	**04 25 33.8**	**+0.4**
THL	**Klokotos Trika**	**1.17**	**252**	*e*Pn	**Pn**	**04 25 33.8**	**+0.4**
AGG	**Agios Georgios**	**1.26**	**224**	*e*PB	**Pn**	**04 25 34.2**	**-0.4**
AGG	**Agios Georgios**	**1.26**	**224**	*e*Pb	**Pn**	**04 25 34.2**	**-0.4**
KNT	**Kendrikon**	**1.30**	**341**	P	**Pn**	**04 25 35.4**	**+0.1**
KNT				S	**Sn**	**04 25 54.3**	**+1.5**
KNT	**Kendrikon**	**1.30**	**341**	P	**Pn**	**04 25 35.4**	**+0.1**
KNT				S	**Sn**	**04 25 54.3**	**+1.5**
GRG	**Griva**	**1.31**	**322**	*e*PN	**Pb**	**04 25 35.6**	**0.0**
GRG				*e*SN	**Sn**	**04 25 53.2**	**+0.3**
GRG	**Griva**	**1.31**	**322**	*e*Pn	**Pb**	**04 25 35.6**	**0.0**
GRG				*e*Sn	**Sn**	**04 25 53.2**	**+0.3**
NVR	**Nevrokopi**	**1.45**	**12**	*e*PN	**Pn**	**04 25 36.4**	**-0.9**
NVR	**Nevrokopi**	**1.45**	**12**	*e*Pn	**Pn**	**04 25 36.4**	**-0.9**

*CSEM **28** 04:27:00.7±0.9, 36°.26°N×26°.91E, h2km±7km, MD3.0, Error ellipse: s-maj=14.1km s-min=8.1km az=143.0*
*ATH **28** 04:27:02.2, 36°.15N×27°.08E, h36km±17km, MD3.0/4*
ISC 28 04:27:00.2±1.7, 36°.28N±0°.07×26°.95E±0°.05, h7km±13km, n11, σ1s05/19, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.75**	**166**	*e*PN	**Pg**	**04 27 14.4**	**-0.1**
KARP				*e*SN	**Sg**	**04 27 24.6**	**-1.4**
KARP	**Karpathos**	**0.75**	**166**	*e*Pn	**Pg**	**04 27 14.4**	**-0.1**
KARP				*e*Sn	**Sg**	**04 27 24.6**	**-1.4**
ZKR	**Zakros**	**1.30**	**207**	*e*PN	**Pn**	**04 27 26.2**	**+1.4**
ZKR				*e*SN	**Sn**	**04 27 41.8**	**-0.6**
ZKR	**Zakros**	**1.30**	**207**	*e*Pn	**Pn**	**04 27 26.2**	**+1.4**
ZKR				*e*Sn	**Sn**	**04 27 41.8**	**-0.6**
TURN	**Turunc**	**1.46**	**65**	*i* P	**Pb**	**04 27 28.4**	**+0.7**
TURN				*i* S	**Sn**	**04 27 44.7**	**-1.7**
TURN	**Turunc**	**1.46**	**65**	*i* P	**Pb**	**04 27 28.4**	**+0.7**
AYDN	**Tasoluk**	**1.57**	**28**	*i* P	Pg	04 27 38.4	+8.0
AYDN				*i* S	Sg	04 28 03.9	+13
LAST	**Lasithi**	**1.63**	**227**	*e*PB	**Pg**	**04 27 31.3**	**-0.1**
LAST				*e*SN	**Sn**	**04 27 50.3**	**-0.4**
LAST	**Lasithi**	**1.63**	**227**	*e*Pb	**Pg**	**04 27 31.3**	**-0.1**
LAST				*e*Sn	**Sn**	**04 27 50.3**	**-0.4**
IDI	**Anoyia**	**1.94**	**240**	*e*PB	**Pg**	**04 27 36.0**	**-1.3**
IDI				*e*SB	**Sn**	**04 27 58.6**	**+0.3**
IDI	**Anoyia**	**1.94**	**240**	*e*Pb	**Pg**	**04 27 36.0**	**-1.3**
IDI				*e*Sb	**Sn**	**04 27 58.6**	**+0.3**

*ISCJB **28** 04:29:22.5±1.0, 36°.44N±0°.06×69°.0E±0°.1, h43km, Error ellipse: s-maj=13.7km s-min=6.1km az=155.3*
*NNC **28** 04:29:28.9±6.9, 36°.62N×69°.12E, h130km±121km, mb2.8, mpv3.9, Error ellipse: s-maj=55.2km s-min=41.7km az=27.0*
ISC 28 04:29:24.1±1.5, 36°.40N±0°.09×69°.0E±0°.1, h43km, n12, σ1s34/16, 5C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.52**	**136**	P	**Pn**	**04 30 17.4**	**+1.1**
CEP				S	**Sn**	**04 30 56.0**	**-0.7**
CHCP	**Chirah Chowk**	**4.45**	**127**	P	**Pn**	**04 30 29.3**	**+0.2**
AML	**Almayashu** SNR=17	**6.78**	**31**	P	**Pn**	**04 31 02.9**	**+1.5**
KK31	**Karatay Array** 1.5nm,0.4s,baz=203,slow=20,SNR=38	**6.79**	**9**	⇑P	**Pn**	**04 31 03.7**	**+2.5**
KK31				⇑S	**Sn**	**04 32 17.3**	**+0.1**
	9.4nm,0.7s,baz=200,slow=28,SNR=14						
KZA	**Kyzart** SNR=12	**7.46**	**39**	P	**Pn**	**04 31 11.7**	**+1.0**
AAK	**Ala-Archa** SNR=5.3	**7.54**	**33**	P	**Pn**	**04 31 13.2**	**+1.8**
CHMS	**Chumysh** SNR=6.1	**7.94**	**32**	P	**Pn**	**04 31 18.3**	**+1.4**
ULHL	**Ulahol** SNR=9.4	**8.10**	**42**	P	**Pn**	**04 31 20.1**	**+0.8**
TKM2	**Tokmak 2** 7.9nm,0.6s	**8.26**	**36**	⇑P	**Pn**	**04 31 22.1**	**+0.6**
TKM2				⇑S	**Sn**	**04 32 52.2**	**-1.4**
	3.6nm,0.9s						
TKM2	**Tokmak 2** SNR=17	**8.26**	**36**	P	**Pn**	**04 31 22.4**	**+0.9**
AB31	**Akbulak array** 0.1nm,0.2s,baz=168,slow=11,SNR=9.7	**14.44**	**336**	P	**Pn**	**04 32 44.9**	**-0.7**
AB31				S	**Sn**	**04 35 22.6**	**-1.6**
	0.4nm,0.4s,baz=158,slow=23,SNR=5.5						
AKTO	**Aktyubinsk** 0.1nm,0.5s	**16.10**	**334**	⇑P	**Pn**	**04 33 06.9**	**-0.4**

*IDC **28** 04:39:54.1±2.7, 8°.69S×108°.92E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/23, mbtmp3.8/5, ML3.1/1, Error ellipse: s-maj=148.5km s-min=23.8km az=49.0*
*ISCJB **28** 04:39:56.0±0.5, 9°.04S±0°.05×108°.58E±0°.05, h31km, mb3.7/4, Error ellipse: s-maj=7.6km s-min=6.4km az=154.9*
*AUST **28** 04:39:58.2±0.0, 9°.01S×108°.57E, h44km, Error ellipse: s-maj=2.4km s-min=0.8km az=335.0*
*DJA **28** 04:39:58.0±3.6, 9°.S±16°×10°.9E±°, h13km±23km, M3.9/8, MLv3.9/8*
ISC 28 04:39:56.7±0.8, 8°.94S±0°.06×108°.56E±0°.05, h31km, n20, σ1s37/20, mb3.8/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**1.29**	**20**	P	**Pb**	**04 40 19.8**	**-0.6**
CISI	**Cisompet, Garu**	**1.56**	**332**	P	**Pb**	**04 40 24.1**	**-0.9**
CISI	**Cisompet, Garu** baz=1.6,SNR=32	**1.56**	**332**	P	**Pb**	**04 40 23.6**	**-1.4**
CISI				S	**Sb**	**04 40 43.5**	**-0.9**
	baz=1.6,SNR=5.2						
BJII	**Banjamegara**	**1.96**	**36**	P	**Pn**	**04 40 28.5**	**+0.6**
TGJI	**Tegal**	**2.13**	**15**	P	**Pn**	**04 40 31.2**	**+1.0**
UGM	**Wanagama** baz=2.2,SNR=43	**2.19**	**63**	P	**Pn**	**04 40 30.0**	**-1.1**
LEM	**Lembang**	**2.29**	**336**	P	**Pb**	**04 40 36.1**	**-1.5**
LEM	**Lembang** baz=2.4,SNR=7.2	**2.29**	**336**	P	**Pb**	**04 40 36.9**	**-0.7**
SMRI	**Semarang**	**2.64**	**45**	P	**Pn**	**04 40 39.0**	**+1.8**
SMRI	**Semarang** baz=2.7,SNR=4.3	**2.64**	**45**	P	**Pn**	**04 40 39.2**	**+1.9**
XMI	**Christmas Isla** baz=3.2,SNR=4.6	**3.21**	**242**	P	**Pn**	**04 40 46.3**	**+1.2**
XMIS	**Christmas Isla** baz=3.2,SNR=4.5	**3.25**	**242**	P	**Pn**	**04 40 46.5**	**+0.8**
XMIS				S	**Sn**	**04 41 21.5**	**-1.9**
	baz=3.2,SNR=4.7						
PWJI	**Pagerwojo**	**3.33**	**74**	P	**Pn**	**04 40 46.1**	**-0.6**
JAGI	**Jajag, Banyuwa** baz=5.5,SNR=4.5	**5.55**	**86**	P	Pn	04 41 20.3	+3.1
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=281,slow=10,SNR=2.8	**18.92**	**121**	P	**P**	**04 44 12.9**	**-2.3**
MTN	**Manton Dam** baz=22,SNR=5.4	**22.50**	**102**	P	P	04 45 06.0	+12
WRA	**Warramunga Arr** 1.1nm,0.8s,baz=288,slow=11,SNR=5.4	**27.21**	**117**	P	**P**	**04 45 38.8**	**+0.7**
ASAR	**Alice Springs** 0.4nm,0.6s,baz=302,slow=9.0,SNR=6.8	**28.32**	**124**	P	**P**	**04 45 48.5**	**+0.6**
STKA	**Stephens Creek** 2.9nm,0.6s,baz=309,slow=9.0,SNR=9.8	**38.21**	**131**	P	**P**	**04 47 15.3**	**+1.4**
MKAR	**Makanchi Array** 0.6nm,0.4s,baz=144,slow=7.8,SNR=7.5	**60.23**	**339**	P	**P**	**04 50 03.2**	**+1.3**

IDC 28 04:43:39.3±9.0, 18°.11S×71°.01W, h196km±48km, mb3.7/3, mb1 3.6/5, mb1mx3.2/19, mbtmp3.6/5, Error ellipse: s-maj=172.2km s-min=20.1km az=16.0, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz** 91nm,0.3s,baz=304,slow=7.7,SNR=2907	**3.30**	**57**	P	Pn	04 44 33.1	0.0
LPAZ				S	Sn	04 45 03.1	-12
	14nm,0.3s,baz=190,slow=19,SNR=22						
NNA	**Nana** 1.9nm,0.3s,baz=138,slow=12,SNR=3.8	**8.29**	**316**	P	Pn	04 45 36.1	-0.3
NNA				S	Sn	04 46 58.5	-11
	2.5nm,0.3s,baz=238,slow=19,SNR=5.9						
SIV	**San Ignacio** 0.4nm,0.3s,baz=274,slow=14,SNR=6.5	**9.74**	**79**	P	Pn	04 45 55.2	0.0
SIV				S	Sn	04 47 44.2	0.0
	0.2nm,0.3s,baz=204,slow=20,SNR=3.9						
DBIC	**Dimbokro** 2.9nm,0.3s,baz=230,slow=8.1,SNR=15	**69.74**	**76**	P	P	04 54 28.8	+0.2
TORD	**Torodi Ar. Bea** 1.0nm,0.4s,baz=266,slow=5.1,SNR=46	**78.14**	**72**	P	P	04 55 17.1	-0.1
YKA	**Yellowknife Ar** 0.4nm,0.8s,baz=135,slow=5.1,SNR=7.1	**87.35**	**341**	P	P	04 56 03.8	+0.2
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=45,slow=0.4,SNR=2.7	**139.65**	**22**	PKhKP	PKPpre	05 02 37.6	
ZALV				PKP	PKPdf	05 02 42.0	-1.4
	1.1nm,0.3s,baz=309,slow=3.2,SNR=4.1						

IDC 28 04:53:06.1±1.6, 9°.53S×150°.58E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/17, mbtmp3.6/5, ML3.1/1, MS3.6/1, Ms1 3.6/1, ms1mx2.9/22, Error ellipse: s-maj=71.5km s-min=27.2km az=129.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=67,slow=12,SNR=3.8	**18.79**	**235**	P	Pn	04 57 28.0	+0.4
ASAR	**Alice Springs** 0.6nm,0.8s,baz=49,slow=11,SNR=4.0	**21.25**	**227**	P	P	04 57 53.8	-0.3
STKA	**Stephens Creek** 2.0nm,0.9s,baz=45,slow=11,SNR=3.0	**23.75**	**199**	P	P	04 58 20.2	+0.1
FITZ	**Fitzroy Crossi** 1.5nm,0.7s,baz=84,slow=9.9,SNR=2.8	**25.64**	**248**	P	P	04 58 37.2	-0.5
RPZ	**Rata Peaks** comp=Z,76nm,19.2s,baz=139,slow=33	**38.44**	**156**	LR	LR	05 14 03.0	
ILAR	**Eielson Array** 0.8nm,1.0s,baz=242,slow=5.4,SNR=3.7	**87.34**	**22**	P	P	05 05 54.5	-0.2
TORD	**Torodi Ar. Bea** 0.7nm,0.8s,baz=90,slow=1.4,SNR=4.1	**149.29**	**280**	PKPbc	PKPbc	05 12 57.8	-0.1

*BJI **28** 05:12:41.8, 24°.29S×179°.64W, h541km, mB4.9/17, mb4.6/27*
*IDC **28** 05:12:42.8±0.9, 23°.91S×179°.89W, h518km±9km, mb3.8/15, mb1 3.9/18, mb1mx3.8/22, mbtmp3.7/18, Error ellipse: s-maj=12.3km s-min=12.3km az=21.0*
*ISCJB **28** 05:12:42.8±0.5, 23°.99S±0°.05×179°.91W±0°.05, h528km±7km, mb4.4/39, Error ellipse: s-maj=9.0km s-min=6.5km az=141.6*
*NEIC **28** 05:12:43.8±0.5, 23°.96S×179°.86W, h534km±6km, mb4.8/14, Error ellipse: s-maj=7.7km s-min=6.8km az=154.0*
*AUST **28** 05:12:44.0±0.0, 23°.78S×179°.65W, h548km, Error ellipse: s-maj=1.8km s-min=1.1km az=295.0*
*BGS **28** 05:12:47.5±3.3, 23°.96S×179°.86W, h534km, mb4.8(NEIC)*
*DJA **28** 05:12:54.7±5.8, 24°.S±15°×17°.9E±5°.7, h637km±37km, M4.7/14, mb4.7/14*
ISC 28 05:12:43.9±0.4, 24°.08S±0°.05×179°.79W±0°.05, h536km±3km, h537km: pP-P, n187, σ1s29/238, mb4.5/38, 18C-12D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.42**	**162**	*e*P	**P**	**05 14 17.1**	**+0.6**
RAO				S	**S**	**05 15 28.3**	**-3.9**
RAO				*e*S	S	05 15 29.8	-2.4
RAO	**Raoul Island** 233nm,0.3s,baz=126,slow=18,SNR=10	**5.42**	**162**	P	**P**	**05 14 16.7**	**+0.3**
RAO				S	**S**	**05 15 28.3**	**-3.9**
	101nm,0.3s,baz=285,slow=20,SNR=2.9						
MSVF	**Nonsavu**	**6.63**	**342**	*e*P	**P**	**05 14 26.4**	**-1.6**
NIUE	**Niue** baz=10,SNR=5.8	**10.44**	**63**	P	**P**	**05 15 05.3**	**-0.9**
NIUE				S	**S**	**05 17 03.0**	**-0.3**
	baz=10,SNR=8.2						
AFI	**Afiamalu**	**12.63**	**38**	*e*P	P	05 15 24.4	-4.8
AFI				S	S	05 17 31.8	-14
AFI	**Afiamalu** 4.9nm,0.3s,baz=118,slow=1.8,SNR=10	**12.63**	**38**	P	P	05 15 23.9	-5.3
AFI				S	S	05 17 31.8	-14
	0.8nm,0.3s,baz=338,slow=18,SNR=2.9						
DZM	**Mont Dzumac** 223nm,25.4s	**12.83**	**276**	*e*LR	LR	05 17 41.7	
DZM	**Mont Dzumac**	**12.83**	**276**	P	**P**	**05 15 31.0**	**-0.1**
DZM				S	S	05 17 57.4	+8.5
DZM	**Mont Dzumac** 1.4nm,0.3s,baz=94,slow=19,SNR=15	**12.83**	**276**	P	**P**	**05 15 31.0**	**-0.1**
DZM				S	S	05 17 57.4	+8.5
	baz=324,slow=18,SNR=3.3						
URZ	**Urewera**	**14.38**	**190**	*e*P	**P**	**05 15 47.8**	**+0.8**
URZ				S	**S**	**05 18 16.9**	**-1.0**
URZ				*e*S	S	05 18 17.1	-0.8
URZ	**Urewera** 1.0nm,0.3s,baz=21,slow=8.6,SNR=7.2	**14.38**	**190**	P	**P**	**05 15 46.9**	**0.0**
URZ				S	**S**	**05 18 16.9**	**-1.0**
	0.9nm,0.3s,baz=270,slow=20,SNR=11						
FUNA	**Funafuti** 32nm,0.7s	**15.49**	**356**	*e*P	**P**	**05 15 57.9**	**-0.9**
RAR	**Rarotonga**	**18.70**	**85**	P	**P**	**05 16 28.3**	**-0.5**
RAR	**Rarotonga** 2.1nm,0.3s,baz=270,slow=11,SNR=6.1	**18.70**	**85**	P	**P**	**05 16 28.3**	**-0.5**
RPZ	**Rata Peaks**	**20.98**	**199**	P	P	**05 16 49.8**	**+0.5**
RPZ	**Rata Peaks** 4.1nm,0.5s,baz=175,slow=2.3,SNR=2.6	**20.98**	**199**	P	P	**05 16 49.8**	**+0.5**
ARMA	**Armidale** 12nm,0.6s	**26.14**	**250**	*e*P	**P**	**05 17 37.0**	**+1.4**
ARMA	**Armidale** baz=26,SNR=8.9	**26.14**	**250**	P	**P**	**05 17 37.1**	**+1.6**
EIDS	**Eidsvold** 23nm,0.6s	**26.47**	**261**	*e*P	**P**	**05 17 38.5**	**+0.2**
EIDS				*e*pP	**pP**	**05 19 09.7**	**+3.9**
EIDS	**Eidsvold** baz=27,SNR=17	**26.47**	**261**	P	**P**	**05 17 38.6**	**+0.2**
MGCD	**Mangrove Creek** baz=27,SNR=16	**27.04**	**244**	P	**P**	**05 17 45.1**	**+1.8**
TBI	**Tubuai** 283nm,33.2s	**27.76**	**95**	*e*LQ	LQ	05 23 16.4	
TBI				*e*LR	LR	05 24 32.1	
	154nm,25.8s						
RMQ	**Roma** baz=29,SNR=7.2	**28.50**	**258**	P	**P**	**05 17 57.5**	**+1.3**
CNB	**Canberra Magne** baz=29,SNR=7.8	**28.93**	**240**	P	**P**	**05 18 01.4**	**+1.5**
PPT2	**Papeete2** 368nm,31.2s	**28.93**	**83**	*e*LQ	LQ	05 23 51.1	
PPT2				*e*LR	LR	05 25 00.4	
	117nm,24.5s						
CAN	**Canberra** 8.7nm,0.6s	**29.22**	**240**	*e*P	**P**	**05 18 02.8**	**+0.5**
YNG	**Young** baz=30,SNR=6.5	**29.47**	**242**	P	**P**	**05 18 05.7**	**+1.2**
CMSA	**Cobar Meteorol** baz=32,SNR=26	**31.33**	**249**	P	**P**	**05 18 21.0**	**+0.5**
CTAO	**Charters Tower**	**31.67**	**270**	*e*P	**P**	**05 18 23.8**	**+0.3**
	64nm,0.6s						
CTAO				*e*pP	**pP**	**05 19 52.8**	**-0.8**
TOO	**Toolangi** baz=33,SNR=6.8	**32.51**	**237**	P	**P**	**05 18 31.6**	**+1.0**
QLP	**Quilpie** baz=33,SNR=16	**32.55**	**258**	P	**P**	**05 18 31.0**	**+0.1**
MTSU	**Mount Surprise** baz=34,SNR=82	**33.94**	**273**	P	**P**	**05 18 43.0**	**+0.2**
MTSU				S	**S**	**05 23 33.0**	**+3.1**
	baz=34,SNR=4.2						
PMG	**Port Moresby** 5.5nm,0.8s	**34.73**	**289**	*e*P	**P**	**05 18 47.5**	**-2.0**
PMG	**Port Moresby** 80nm,0.8s	**34.73**	**289**	P	**P**	**05 18 48.9**	**-0.6**
PMG	**Port Moresby** 71nm,0.8s,baz=120,slow=8.1,SNR=12	**34.73**	**289**	P	**P**	**05 18 47.5**	**-2.0**
STKA	**Stephens Creek**	**34.83**	**248**	P	**P**	**05 18 49.9**	**-0.2**
STKA				PcP	**PcP**	**05 21 08.8**	**+0.7**
STKA	**Stephens Creek** 6.2nm,0.5s,baz=95,slow=8.5,SNR=22	**34.83**	**248**	P	**P**	**05 18 49.9**	**-0.2**
STKA				PcP	**PcP**	**05 21 08.8**	**+0.7**
	1.5nm,0.6s,baz=92,slow=6.3,SNR=4.1						
STKA	**Stephens Creek** baz=35,SNR=14	**34.83**	**248**	P	**P**	**05 18 50.6**	**+0.5**
COEN	**Coen** 80nm,0.7s	**36.33**	**279**	*e*P	**P**	**05 19 02.5**	**-0.2**
COEN	**Coen** baz=36,SNR=13	**36.33**	**279**	P	**P**	**05 19 02.7**	**0.0**
QIS	**Mount Isa** baz=38,SNR=5.2	**37.63**	**267**	P	**P**	**05 19 12.9**	**-0.5**
BBOO	**Buckleboo** baz=40,SNR=35	**39.55**	**247**	P	**P**	**05 19 28.3**	**-0.4**
AS31	**Alice Springs**	**42.19**	**261**	*e*P	**P**	**05 19 49.6**	**-0.4**
ASAR	**Alice Springs**	**42.19**	**261**	P	**P**	**05 19 49.5**	**-0.5**
ASAR				ScP	**ScP**	**05 24 34.5**	**+3.1**
ASAR				S	**S**	**05 25 28.7**	**-2.9**
ASAR	**Alice Springs** 27nm,0.8s,baz=97,slow=7.2,SNR=181	**42.19**	**261**	P	**P**	**05 19 49.5**	**-0.5**
ASAR				ScP	**ScP**	**05 24 34.5**	**+3.1**
	4.4nm,0.8s,baz=111,slow=4.1,SNR=17						
ASAR				S	**S**	**05 25 28.7**	**-2.9**
	1.2nm,0.7s,baz=97,slow=15,SNR=5.3						
WRAB	**Tennant Creek** 41nm,0.8s	**42.58**	**266**	*e*P	**P**	**05 19 52.0**	**-0.9**
WRA	**Warramunga Arr**	**42.58**	**266**	P	**P**	**05 19 52.0**	**-1.1**
WRA				ScP	**ScP**	**05 24 36.4**	**+3.3**
WRA				S	**S**	**05 25 32.5**	**-4.7**
WRA	**Warramunga Arr** 45nm,0.5s,baz=103,slow=8.3,SNR=245	**42.58**	**266**	P	**P**	**05 19 52.0**	**-1.1**
WRA				ScP	**ScP**	**05 24 36.4**	**+3.3**
	4.0nm,0.9s,baz=98,slow=4.0,SNR=9.6						
WRA				S	**S**	**05 25 32.5**	**-4.7**
	0.9nm,0.7s,baz=96,slow=14,SNR=5.5						
JAY	**Jayapura** baz=44,SNR=3.6	**43.76**	**293**	P	**P**	**05 20 01.7**	**-0.6**
FORT	**Forrest** 98nm,0.6s	**46.43**	**250**	*e*P	**P**	**05 20 21.7**	**-0.8**
FORT	**Forrest** baz=47,SNR=51	**46.43**	**250**	P	**P**	**05 20 21.9**	**-0.6**
KDU	**Kakadu** baz=47,SNR=31	**46.49**	**275**	P	**P**	**05 20 22.0**	**-1.1**
MTN	**Manton Dam** baz=48,SNR=5.4	**47.66**	**274**	P	**P**	**05 20 30.9**	**-1.1**
KNRA	**Kununurra** baz=49,SNR=29	**48.88**	**270**	P	**P**	**05 20 40.5**	**-0.5**
FITZ	**Fitzroy Crossi** 22nm,0.6s	**51.00**	**266**	*e*P	**P**	**05 20 56.4**	**-0.1**
FITZ	**Fitzroy Crossi** baz=51,SNR=23	**51.00**	**266**	P	**P**	**05 20 56.5**	**-0.1**
KMBL	**Kambalda** baz=52,SNR=5.7	**51.63**	**248**	P	**P**	**05 21 00.5**	**-0.6**
KLBR	**Kellerberrin** baz=55,SNR=13	**55.09**	**247**	P	**P**	**05 21 25.3**	**-0.3**
MEEK	**Meekatharra** baz=55,SNR=6.6	**55.24**	**253**	P	**P**	**05 21 25.9**	**-0.8**
BLDU	**Balliduu** baz=56,SNR=23	**56.14**	**248**	P	**P**	**05 21 32.4**	**-0.4**
MORW	**Morawa** baz=57,SNR=11	**56.99**	**250**	P	**P**	**05 21 38.5**	**-0.3**
GIRL	**Giralia** baz=60,SNR=5.9	**60.06**	**257**	P	**P**	**05 22 00.4**	**+0.9**
KAPI	**Kappang** 9.0nm,0.7s	**61.04**	**278**	*e*P	**P**	**05 22 04.8**	**-1.2**
QSPA	**South Pole Qui**	**66.01**	**180**	P	**P**	**05 22 39.4**	**+2.3**
QSPA	**South Pole Qui** 1.6nm,0.8s,baz=293,slow=7.7,SNR=9.8	**66.01**	**180**	P	**P**	**05 22 39.4**	**+2.3**
UGM	**Wanagama** baz=68,SNR=5.2	**68.29**	**271**	P	**P**	**05 22 51.6**	**-0.3**
KKM	**Kota Kinabalu**	**69.14**	**287**	*e*P	**P**	**05 22 56.8**	**-0.3**
KKM	**Kota Kinabalu** baz=69,SNR=3.1	**69.14**	**287**	P	**P**	**05 22 57.3**	**+0.2**
MJAR	**Matsushiro Arr**	**72.15**	**326**	P	**P**	**05 23 13.3**	**-1.0**
MJAR	**Matsushiro Arr** 6.4nm,0.7s,baz=164,slow=6.8,SNR=15	**72.15**	**326**	P	**P**	**05 23 13.3**	**-1.0**
KSM	**Kuching**	**72.32**	**280**	*e*P	**P**	**05 23 15.3**	**-0.5**
NACB	**Ninganchiao**	**74.36**	**306**	*e*P	**P**	**05 23 26.3**	**-0.9**
MAW	**Mawson**	**77.65**	**200**	P	**P**	**05 23 46.3**	**+1.8**
MAW	**Mawson** 3.5nm,0.7s,baz=131,slow=6.6,SNR=10	**77.65**	**200**	P	**P**	**05 23 46.3**	**+1.8**
KSRS	**Korea Array** 5.4nm,0.6s,baz=135,slow=5.8,SNR=21	**78.50**	**320**	P	**P**	**05 23 50.1**	**+0.6**
KSAR	**Wonju Array Be**	**78.52**	**320**	P	**P**	**05 23 50.1**	**+0.5**
PETK	**Petropavlovsk-**	**79.32**	**346**	P	**P**	**05 23 53.2**	**-0.3**
PETK	**Petropavlovsk-** 6.6nm,0.6s,baz=134,slow=8.3,SNR=11	**79.32**	**346**	P	**P**	**05 23 53.2**	**-0.3**
QIZ	**Qiongzhong**	**80.85**	**296**	P	**P**	**05 24 00.5**	**-1.8**
QIZ				S	**S**	**05 33 26.8**	**-0.2**
QIZ				pmax	pmax		
	comp=Z,15nm,1.9s						
NJ2	**Nanjing**	**80.92**	**311**	*e*P	**P**	**05 24 02.5**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	**Ussuriysk Arra** comp=Z,6.9nm,0.6s,baz=154,slow=4.5,SNR=16	**81.01**	**327**	P	**P**	**05 24 02.9**	**+0.3**
MDJ	**Mudanjiang**	**82.52**	**326**	P	**P**	**05 24 10.5**	**+0.2**
MDJ

HHC					pmax	pmax			
	comp=Z,26nm,1.4s								
HHC					pmax	pmax			
	comp=Z,290nm,3.9s								
CD2	**Chengdu**	**91.33**	**303**		P	**P**	**05 24 52.5**	**-0.2**	
CD2					pP	**pP**	**05 26 52.0**	**+1.1**	
CD2					sP	**sP**	**05 27 45.0**	**+0.2**	
CD2					PP	**PP**	**05 28 42.5**	**+2.5**	
CD2					SKS	**SKSac**	**05 34 33.0**	**-0.8**	
CD2					S	**S**	**05 35 04.3**	**-1.7**	
CD2					sS	**sS**	**05 38 36.0**	**-1.8**	
CD2					SS	**SS**	**05 41 30.5**	**+2.2**	
CD2					pmax	pmax			
	comp=Z,10.0nm,0.5s								
CD2					pmax	pmax			
	comp=Z,80nm,5.2s								
ILAR	**Eielson Array**	**92.16**	**13**		P	**P**	**05 24 54.3**	**-1.3**	
ILAR	**Eielson Array**	**92.16**	**13**		P	**P**	**05 24 54.3**	**-1.3**	
	comp=Z,0.4nm,0.8s,baz=222,slow=6.0,SNR=5.3								
PDAR	**Pinedale Array**	**92.69**	**44**		P	**P**	**05 24 59.0**	**+0.2**	
PDAR	**Pinedale Array**	**92.69**	**44**		P	**P**	**05 24 59.0**	**+0.2**	
	comp=Z,0.6nm,0.8s,baz=216,slow=4.5,SNR=4.0								
LZH	**Lanzhou**	**93.63**	**308**	⇓	P	**P**	**05 25 05.0**	**+1.8**	
LZH					pP	**pP**	**05 27 05.0**	**+3.3**	
LZH					sP	**sP**	**05 27 59.0**	**+3.5**	
LZH					PP	PP	05 29 03.3	+5.5	
LZH					SKS	**SKSac**	**05 34 47.3**	**+0.9**	
LZH					S	**S**	**05 35 25.0**	**-1.1**	
LZH					sS	**sS**	**05 38 59.3**	**+0.2**	
LZH					pmax	pmax			
	comp=Z,27nm,1.5s								
LZH					pmax	pmax			
	comp=Z,110nm,6.3s								
CFAA	**Coronel Fontan**	**94.30**	**127**		P	**P**	**05 25 07.3**	**+1.0**	
CFAA	**Coronel Fontan**	**94.30**	**127**		P	**P**	**05 25 07.3**	**+1.0**	
	comp=Z,0.1nm,0.6s,baz=233,slow=7.9,SNR=4.6								
MK31	**Makanchi Array**	**112.41**	**313**	*e*	PKPdf	**PKiKP**	**05 30 17.9**	**-1.0**	
MKAR	**Makanchi Array**	**112.41**	**313**		PKiKP	**PKiKP**	**05 30 17.9**	**-1.0**	
MKAR					SKP		05 33 04.4		
MKAR	**Makanchi Array**	**112.41**	**313**		PKiKP	**PKiKP**	**05 30 17.9**	**-1.0**	
	comp=Z,0.8nm,0.6s,baz=80,slow=1.4,SNR=12								
MKAR					SKP		05 33 04.4		
	comp=Z,0.6nm,0.7s,baz=102,slow=3.4,SNR=4.8								
KURK	**Kurchatov**	**115.46**	**316**		PKP	**PKPdf**	**05 30 23.7**	**-0.9**	
KURK					SKP		05 33 09.8		
KURBB	**Kurchatov Arra**	**115.50**	**316**		PKP	**PKPdf**	**05 30 23.7**	**-1.0**	
	comp=Z,1.5nm,0.6s,baz=94,slow=1.8,SNR=15								
KURBB					SKP		05 33 09.8		
	comp=Z,0.5nm,0.7s,baz=103,slow=2.1,SNR=4.3								
BVAR	**Borovoye Array**	**120.70**	**319**		PKP	**PKPdf**	**05 30 34.0**	**-0.6**	
BVAR	**Borovoye Array**	**120.70**	**319**		PKP	**PKPdf**	**05 30 34.0**	**-0.6**	
	comp=Z,2.3nm,0.4s,baz=85,slow=1.2,SNR=11								
AKTO	**Aktyubinsk**	**128.56**	**316**		PKP	**PKPdf**	**05 30 49.9**	**+0.2**	
AKTO	**Aktyubinsk**	**128.56**	**316**		PKP	**PKPdf**	**05 30 49.9**	**+0.2**	
	comp=Z,2.3nm,0.7s,baz=333,slow=2.3,SNR=7.7								
ARCES	**ARCESS Array B**	**132.10**	**348**		PKP	**PKPdf**	**05 30 55.3**	**-0.6**	
ARCES					SKPbc	**SKPab**	**05 33 33.1**	**-0.8**	
ARCES	**ARCESS Array B**	**132.10**	**348**		PKP	**PKPdf**	**05 30 55.3**	**-0.6**	
	comp=Z,4.4nm,0.8s,baz=80,slow=1.1,SNR=10								
ARCES					SKPbc	**SKPab**	**05 33 33.1**	**-0.8**	
	comp=Z,2.9nm,0.7s,baz=35,slow=3.3,SNR=8.1								
FINES	**FINESS Array B**	**138.67**	**341**		PKPpre	PKPpre	05 31 00.1		
FINES					PKP	**PKPdf**	**05 31 08.4**	**+0.1**	
FINES					SKP		05 33 53.4		
FINES	**FINESS Array B**	**138.67**	**341**		PKhKP	PKPpre	05 31 00.1		
	comp=Z,4.6nm,0.9s,baz=38,slow=3.4,SNR=4.2								
FINES					PKP	**PKPdf**	**05 31 08.4**	**+0.1**	
	comp=Z,1.8nm,0.4s,baz=62,slow=3.3,SNR=6.7								
FINES					SKP		05 33 53.4		
	comp=Z,4.7nm,0.5s,baz=59,slow=4.1,SNR=9.9								
NB2	**NORSAR Subarra**	**142.28**	**351**		PKP	**PKPdf**	**05 31 11.0**	**-3.9**	
	comp=Z,1.8nm,0.8s,baz=12,slow=3.1								
NOA	**NORSAR Array B**	**142.28**	**351**		PKPpre	PKPpre	05 31 10.8		
NOA	**NORSAR Array B**	**142.28**	**351**		PKhKP	PKPpre	05 31 10.8		
	comp=Z,1.7nm,0.6s,baz=16,slow=4.7,SNR=23								
AKASG	**Malin Array Be**	**145.22**	**327**		PKPbc	**PKPdf**	**05 31 20.1**	**-0.1**	
AKASG					SKPbc	**SKiKP**	**05 34 10.7**	**+1.1**	
AKASG	**Malin Array Be**	**145.22**	**327**		PKPbc	**PKPdf**	**05 31 20.1**	**-0.1**	
	comp=Z,5.8nm,0.3s,baz=44,slow=4.1,SNR=30								
AKASG					SKPbc	**SKiKP**	**05 34 10.7**	**+1.1**	
	comp=Z,3.6nm,0.5s,baz=45,slow=2.8,SNR=14								
AK01	**Malin Array Si**	**145.23**	**327**	*e*	PKPbc	**PKPdf**	**05 31 20.4**	**+0.2**	
AK01				*e*	PKPab	**PKPbc**	**05 31 21.7**	**+0.5**	
KIEV	**Kiev**	**145.23**	**327**	*e*	PKPbc	**PKPdf**	**05 31 20.5**	**+0.3**	
KIEV				*e*	SKPbc	**SKiKP**	**05 34 10.8**	**+1.1**	
AK02	**Malin Array Si**	**145.26**	**327**	*e*	PKPbc	**PKPdf**	**05 31 20.6**	**+0.3**	
KAC	**Achnashellach**	**146.37**	**5**	*e*	P	**PKPbc**	**05 31 24.5**	**+0.2**	
KAC	**Achnashellach**	**146.37**	**5**	P		**PKPbc**	**05 31 24.5**	**+0.2**	
MCD	**Coleburn Disti**	**146.43**	**3**	*e*	P	**PKPbc**	**05 31 24.1**	**-0.4**	
MCD	**Coleburn Disti**	**146.43**	**3**	P		**PKPbc**	**05 31 24.1**	**-0.4**	
KPL	**Plockton**	**146.50**	**6**	*e*	P	**PKPbc**	**05 31 24.0**	**-0.6**	
KPL	**Plockton**	**146.50**	**6**	P		**PKPbc**	**05 31 24.0**	**-0.6**	
DRUM	**Mains of Drumt**	**147.14**	**3**	*e*	P	**PKPbc**	**05 31 26.1**	**-0.3**	
DRUM	**Mains of Drumt**	**147.14**	**3**	P		**PKPbc**	**05 31 26.1**	**-0.3**	
KIS	**Kishinev**	**147.67**	**322**	*e*	P	**PKPdf**	**05 31 23.0**	**-1.4**	
EAB	**Aberfoyle**	**147.75**	**5**	*e*	P	**PKPbc**	**05 31 27.7**	**-0.2**	
EAB	**Aberfoyle**	**147.75**	**5**	P		**PKPbc**	**05 31 27.7**	**-0.2**	
BRTR	**Keskin Array B**	**147.84**	**307**		PKPbc	**PKPbc**	**05 31 28.3**	**-0.6**	
BRTR	**Keskin Array B**	**147.84**	**307**		PKPbc	**PKPbc**	**05 31 28.3**	**-0.6**	
	comp=Z,4.0nm,0.6s,baz=90,slow=1.4,SNR=20								
EAU	**Auchinoon**	**148.15**	**4**	*e*	P	**PKPbc**	**05 31 29.1**	**+0.1**	
EAU	**Auchinoon**	**148.15**	**4**	P		**PKPbc**	**05 31 29.1**	**+0.1**	
EBL	**Broad Law**	**148.25**	**3**	*e*	P	**PKPbc**	**05 31 29.2**	**0.0**	
EBL	**Broad Law**	**148.25**	**3**	P		**PKPbc**	**05 31 29.2**	**0.0**	
ANTO	**Ankara**	**148.40**	**308**	*e*	PKPbc	**PKPbc**	**05 31 30.3**	**+0.1**	
ANTO				*e*	PKPab	**PKPab**	**05 31 36.2**	**+0.6**	
ANTO	**Ankara**	**148.40**	**308**	⇑	P	**PKPbc**	**05 31 30.2**	**0.0**	
TLCR		**148.68**	**319**	⇑	P	**PKPbc**	**05 31 31.1**	**+0.5**	
ECK	**Cauldkaine Hil**	**148.84**	**4**	*e*	P	**PKPbc**	**05 31 30.4**	**-0.3**	
ECK	**Cauldkaine Hil**	**148.84**	**4**	P		**PKPbc**	**05 31 30.4**	**-0.3**	
KWP	**Kalwaria Pacla**	**149.01**	**331**	*e*	PKP	**PKPbc**	**05 31 31.7**	**+0.4**	
CFR	**Carcaliu**	**149.09**	**320**	⇓	P	**PKPbc**	**05 31 31.7**	**+0.1**	
TESR	**Tescani**	**149.16**	**323**	⇑	P	**PKPbc**	**05 31 32.0**	**+0.2**	
BUR08	**Bucovina Ar. S**	**149.21**	**326**	*e*	PKPbc	**PKPbc**	**05 31 33.7**	**+1.7**	
BURAR	**Bucovina Array**	**149.22**	**326**	⇑	P	**PKPbc**	**05 31 33.5**	**+1.5**	
TIRR	**Tirgusor**	**149.31**	**318**	*e*	PKPbc	**PKPbc**	**05 31 32.3**	**+0.2**	
TIRR				*e*	PKPab	**PKPab**	**05 31 39.9**	**+0.8**	
TIRR	**Tirgusor**	**149.31**	**318**	⇓	P	**PKPbc**	**05 31 32.4**	**+0.2**	
HARR	**Harsova**	**149.48**	**319**	⇓	P	**PKPbc**	**05 31 33.2**	**+0.6**	
VRI	**Vrincioaia**	**149.50**	**322**	⇑	P	**PKPbc**	**05 31 32.9**	**+0.3**	
MANR	**Mangalia**	**149.54**	**317**	⇓	P	**PKPbc**	**05 31 33.5**	**+0.8**	
PLOR	**Plostina**	**149.56**	**322**	⇑	P	**PKPbc**	**05 31 32.7**	**-0.1**	
KOLS	**Kolonicke sedl**	**149.72**	**331**	*e*	PKP	**PKPbc**	**05 31 34.1**	**+1.1**	
STHS	**Stebnicka Huta**	**149.81**	**332**	*e*	PKP	**PKPbc**	**05 31 34.3**	**+1.0**	
CRVS	**Cervenica-Dubn**	**150.10**	**331**	*e*	PKP	**PKPbc**	**05 31 33.0**	**-0.9**	
MLR	**Muntele Rosu**	**150.17**	**322**	⇑	P	**PKPbc**	**05 31 34.0**	**-0.4**	
TRPA	**Tarpa**	**150.18**	**329**	⇓	P	**PKPbc**	**05 31 34.2**	**+0.1**	
DOPR	**Dopca**	**150.19**	**323**	⇓	P	**PKPbc**	**05 31 35.1**	**+0.8**	
NIE	**Niedzica**	**150.20**	**333**	*e*	PKP	**PKPbc**	**05 31 35.1**	**+0.9**	
SECR		**150.37**	**321**	⇑	P	**PKPbc**	**05 31 35.2**	**+0.5**	
KSP	**Ksiaz**	**150.52**	**339**	*e*	PKP	**PKPbc**	**05 31 35.4**	**+0.6**	
VOIR		**150.70**	**323**	⇑	P	**PKPbc**	**05 31 35.0**	**-0.5**	
OKC	**Ostrava-Krasne**	**150.72**	**336**	⇑	*e*PKP	**PKPbc**	**05 31 35.8**	**+0.5**	
UPC	**Upice**	**150.90**	**339**	⇑	*e*PKP	**PKPbc**	**05 31 36.3**	**+0.6**	
DPC	**Dobruska-Polom**	**150.93**	**339**	⇑	*e*PKP	**PKPbc**	**05 31 36.6**	**+0.7**	
DPC				*e*	PKPAB	**PKPab**	**05 31 46.5**	**+0.8**	
ARR	**Arges**	**150.97**	**323**	⇓	P	**PKPbc**	**05 31 37.2**	**+1.1**	
DRGR		**151.04**	**327**	⇑	P	**PKPbc**	**05 31 36.3**	**0.0**	
CLL	**Collm**	**151.08**	**343**	⇓	PKPbc	**PKPbc**	**05 31 36.3**	**+0.2**	
	comp=Z,17nm,0.7s								
CLL				⇑	PKPab	**PKPab**	**05 31 46.0**	**-0.2**	
	comp=Z,8.0nm,1.0s								
FOEL	**Foel Wylfa**	**151.11**	**4**	*e*	P	**PKPbc**	**05 31 35.7**	**-0.5**	
FOEL	**Foel Wylfa**	**151.11**	**4**	P		**PKPbc**	**05 31 35.7**	**-0.5**	
HUMR	**Humele**	**151.30**	**321**	⇓	P	**PKPbc**	**05 31 36.4**	**-0.4**	
PVCC	**Panska Ves**	**151.34**	**341**	⇑	*e*PKP	**PKPbc**	**05 31 37.3**	**+0.6**	
VRAC	**Vranov**	**151.72**	**337**	⇓	P	**PKPab**	**05 31 49.6**	**+0.6**	
KHC	**Kasperske Hory**	**152.87**	**341**	⇑	*e*PKP	**PKPbc**	**05 31 40.4**	**+0.2**	
KHC				*e*	PKPAB	**PKPab**	**05 31 54.2**	**+0.3**	
GERES	**GERESS Array B**	**153.09**	**340**		PKPbc	**PKPbc**	**05 31 40.7**	**-0.1**	
GERES					PKPab	**PKPab**	**05 31 54.5**	**-0.5**	
GERES	**GERESS Array B**	**153.09**	**340**		PKPbc	**PKPbc**	**05 31 40.7**	**-0.1**	
	comp=Z,0.8nm,0.4s,baz=73,slow=1.3,SNR=6.5								
GERES					PKPab	**PKPab**	**05 31 54.5**	**-0.5**	
	comp=Z,7.3nm,0.5s,baz=249,slow=37,SNR=31								
VTS	**Vitosha**	**153.49**	**320**	⇓	P	**PKPab**	**05 31 57.9**	**+0.9**	
TORD	**Torodi Ar. Bea**	**169.04**	**188**		PKP	**PKPdf**	**05 31 49.3**	**-1.0**	
TORD					PKPab	**PKPab**	**05 33 04.4**	**-0.8**	
TORD	**Torodi Ar. Bea**	**169.04**	**188**		PKP	**PKPdf**	**05 31 49.3**	**-1.0**	
	comp=Z,0.9nm,1.0s,baz=176,slow=2.0,SNR=3.5								
TORD					PKPab	**PKPab**	**05 33 04.4**	**-0.8**	
	comp=Z,0.4nm,0.7s,baz=166,slow=4.5,SNR=4.7								

ISK ***28*** *05:13:01.8,39˚.77N×41˚.34E,h3km,MD3.0*
ISCJB ***28*** *05:13:02.6±0.5,39˚.79N±0˚.02×41˚.36E±0˚.04,h5km±5km, Error ellipse: s-maj=4.7km s-min=3.8km az=9.8*
DDA ***28*** *05:13:02.4,39˚.81N×41˚.35E,h7km,ML3.4*
CSEM ***28*** *05:13:02.4±0.2,39˚.80N×41˚.38E,h2km,ML3.4, Error ellipse: s-maj=4.2km s-min=3.6km az=38.0*

ISC 28 05:13:03.0±0.9, 39.79N±0.02×41.37E±0.02, h12km±6km, n36, σ0.85/50, Turkey

Code	Station Name	Δ°	AZ°		Phase	ID	ISC	Time h m s	Res ISC
ERZM	**Erzurum**	**0.12**	**357**		*i*P		**Pg**	**05 13 05.4**	**-1.0**
ERZM					*i*S		**Sg**	**05 13 11.3**	**+2.4**
ERZM	**Erzurum**	**0.12**	**357**		*i*P		**Pg**	**05 13 05.4**	**-1.0**
EZM	**Erzurum**	**0.12**	**356**		PG		**Pg**	**05 13 05.3**	**-1.1**
HOMI	**Horasan**	**0.48**	**57**		*i*P		**Pg**	**05 13 12.8**	**+0.2**
VRTB	**Varto-Mus**	**0.63**	**174**	*e*	PG		**Pg**	**05 13 14.4**	**-0.8**
VRTB				*e*	SG		**Sb**	**05 13 24.5**	**-0.3**
VRTB	**Varto-Mus**	**0.63**	**174**	*e*	Pg		**Pg**	**05 13 14.4**	**-0.8**
VRTB				*e*	Sg		**Sb**	**05 13 24.5**	**-0.3**
KOPT	**Kop Dagi**	**0.71**	**289**	*i*	P		**Pg**	**05 13 16.0**	**-0.9**
KOPT				*e*	S		**Sb**	**05 13 27.9**	**+0.6**
KOPT	**Kop Dagi**	**0.71**	**289**	*i*	P		**Pg**	**05 13 16.0**	**-0.9**
KOPT				*e*	S		**Sb**	**05 13 28.0**	**+0.6**
BNGL	**BINGOL**	**0.85**	**192**	*i*	P		**Pg**	**05 13 19.2**	**-0.3**
BNGL				*i*	S		**Sb**	**05 13 31.8**	**+0.5**
BNGB	**Bing^¶l**	**0.96**	**214**	*e*	PG		**Pg**	**05 13 20.3**	**-1.2**
BNGB				*e*	SG		**Sg**	**05 13 33.6**	**-0.4**
BAYT	**Ayd¯–ntepe-Bay**	**1.12**	**303**	*e*	Pn		**Pb**	**05 13 23.9**	**-0.5**
BAYT	**Ayd¯–ntepe-Bay**	**1.12**	**303**	*e*	Pn		**Pb**	**05 13 23.9**	**-0.5**
BINT	**Bingol**	**1.14**	**217**	*e*	Pg		**Pb**	**05 13 20.3**	**-4.4**
DDEM	**Demirkent**	**1.14**	**15**	*i*	P		**Pb**	**05 13 24.2**	**-0.6**
DDEM				*i*	S		**Sb**	**05 13 37.8**	**-1.8**
DDEM	**Demirkent**	**1.14**	**15**	*i*	P		**Pb**	**05 13 24.2**	**-0.6**
DDEM				*i*	S		**Sb**	**05 13 37.8**	**-1.8**
TUTA	**Tutak**	**1.18**	**109**	*i*	P		**Pn**	**05 13 24.7**	**-0.8**
TUTA				*i*	S		**Sn**	**05 13 42.1**	**+0.5**
TUTA	**Tutak**	**1.18**	**109**	*i*	P		**Pn**	**05 13 24.7**	**-0.8**
TUTA				*i*	S		**Sn**	**05 13 42.1**	**+0.5**
ERZN	**Erzincan**	**1.29**	**262**	*e*	PN		**Pn**	**05 13 26.6**	**-0.3**
DAGI	**Agillar**	**1.35**	**18**	*i*	P		**Pn**	**05 13 28.0**	**+0.2**
DAGI				*i*	S		**Sb**	**05 13 45.2**	**-0.5**
ARTV	**Artvin**	**1.46**	**17**	*i*	P		**Pn**	**05 13 29.8**	**+0.4**
ARTV				*i*	S		**Sb**	**05 13 49.6**	**+0.7**
ARTV	**Artvin**	**1.46**	**17**	*i*	P		**Pn**	**05 13 29.8**	**+0.4**
ARTV				*i*	S		**Sb**	**05 13 49.6**	**+0.7**
KARS	**Kars**	**1.55**	**57**	*e*	PN		**Pb**	**05 13 31.5**	**-0.3**
KARS	**Kars**	**1.55**	**57**	*e*	Pn		**Pb**	**05 13 31.5**	**-0.3**
EZZC	**Erzincan**	**1.56**	**269**	*e*	Pn		**Pn**	**05 13 26.7**	**-3.9**
BTMT	**Batman**	**1.59**	**177**	*e*	PN		**Pb**	**05 13 32.5**	**+0.1**
BTMT	**Batman**	**1.59**	**177**	*e*	Pn		**Pb**	**05 13 32.5**	**+0.1**
GUMT	**Gumushane**	**1.60**	**296**	*e*	PN		**Pb**	**05 13 31.9**	**-0.6**
GUMT	**Gumushane**	**1.60**	**296**	*e*	Pn		**Pb**	**05 13 31.9**	**-0.6**
KELT	**Kelkit**	**1.67**	**283**	*e*	P		**Pb**	**05 13 33.0**	**-0.7**
KELT				*e*	S		**Sb**	**05 13 55.5**	**+0.7**
KELT	**Kelkit**	**1.67**	**283**	*e*	P		**Pb**	**05 13 33.0**	**-0.7**
KELT				*e*	S		**Sb**	**05 13 55.5**	**+0.7**
CLDR	**Caldiran**	**2.07**	**107**	*e*	PN		**Pn**	**05 13 38.4**	**+0.6**
CLDR	**Caldiran**	**2.07**	**107**	*e*	Pn		**Pn**	**05 13 38.4**	**+0.6**
SVRC	**Sivrice-ELAZID**	**2.14**	**230**	*e*	PN		**Pn**	**05 13 39.2**	**+0.6**
SVRC	**Sivrice-ELAZID**	**2.14**	**230**	*e*	Pn		**Pn**	**05 13 39.2**	**+0.6**
ESPY	**Espiye-Giresun**	**2.32**	**300**	*e*	PN		**Pn**	**05 13 42.0**	**+1.0**
ESPY	**Espiye-Giresun**	**2.32**	**300**	*e*	Pn		**Pn**	**05 13 42.0**	**+1.0**

ISK ***28*** *05:14:50.8,40˚.79N×37˚.77E,h8km,MD2.8*
ISCJB ***28*** *05:14:51.3±0.8,40˚.78N±0˚.04×37˚.80E±0˚.03,h6km±6km, Error ellipse: s-maj=7.3km s-min=4.1km az=6.0*
DDA ***28*** *05:14:51.7,40˚.73N×37˚.85E,h7km,MD3.0*
CSEM ***28*** *05:14:51.8±0.1,40˚.75N×37˚.81E,h10km,MD2.8, Error ellipse: s-maj=4.3km s-min=2.2km az=4.0*

ISC 28 05:14:51.8±1.1, 40.76N±0.04×37.80E±0.02, h9km±12km, n25, σ0.43/39, Turkey

Code	Station Name	Δ°	AZ°		Phase	ID	ISC	Time h m s	Res ISC
RSDY	**Resadiye-TOKAT**	**0.51**	**225**	*e*	PG		**Pg**	**05 15 01.3**	**-0.3**
RSDY				*e*	SG		**Sg**	**05 15 08.7**	**+0.3**
RSDY	**Resadiye-TOKAT**	**0.51**	**225**	*e*	Pg		**Pg**	**05 15 01.3**	**-0.3**
RSDY				*e*	Sg		**Sg**	**05 15 08.7**	**+0.3**
SUSE	**Susehri**	**0.63**	**151**	*i*	P		**Pg**	**05 15 03.7**	**-0.3**
SUSE				*i*	S		**Sg**	**05 15 12.1**	**-0.1**
SUSE	**Susehri**	**0.63**	**151**	*i*	P		**Pg**	**05 15 03.7**	**-0.3**
SUSE				*i*	S		**Sg**	**05 15 12.1**	**-0.1**
ESPY	**Espiye-Giresun**	**0.72**	**77**	*e*	PG		**Pg**	**05 15 05.8**	**+0.1**
ESPY				*e*	SG		**Sg**	**05 15 15.5**	**+0.4**
ESPY	**Espiye-Giresun**	**0.72**	**77**	*e*	Pg		**Pg**	**05 15 05.8**	**+0.1**
ESPY				*e*	Sg		**Sg**	**05 15 15.5**	**+0.4**
ERBA	**Erbaa**	**0.80**	**265**	*i*	P		**Pb**	**05 15 07.8**	**-0.1**
ERBA				*i*	S		**Sb**	**05 15 19.9**	**+1.1**
ERBA	**Erbaa**	**0.80**	**265**	*i*	P		**Pb**	**05 15 07.8**	**-0.1**
ERBA				*i*	S		**Sb**	**05 15 19.9**	**+1.1**
KELT	**Kelkit**	**1.27**	**118**	*i*	P		**Pn**	**05 15 15.2**	**-0.7**
KELT				*i*	S		**Sb**	**05 15 32.1**	**-0.4**
KELT	**Kelkit**	**1.27**	**118**	*i*	P		**Pn**	**05 15 15.2**	**-0.7**
KELT				*i*	S		**Sb**	**05 15 32.1**	**-0.4**
GUMT	**Gumushane**	**1.31**	**103**	*e*	PN		**Pn**	**05 15 16.4**	**-0.1**
GUMT	**Gumushane**	**1.31**	**103**	*e*	Pn		**Pn**	**05 15 16.4**	**-0.1**
KVT	**Kavak**	**1.37**	**284**	*e*	PN		**Pn**	**05 15 16.8**	**-0.4**
KVT				*e*	SN		**Sb**	**05 15 34.7**	**-0.5**
KVT	**Kavak**	**1.37**	**284**	*e*	Pn		**Pn**	**05 15 16.8**	**-0.4**
KVT				*e*	Sn		**Sb**	**05 15 34.7**	**-0.5**
KEMA	**Kemaliye**	**1.58**	**160**	*i*	P		**Pn**	**05 15 20.5**	**+0.4**
KEMA				*i*	S		**Sg**	**05 15 42.7**	**+0.1**
KEMA	**Kemaliye**	**1.58**	**160**	*i*	P		**Sg**	**05 15 20.5**	**+0.4**
KEMA				*i*	S		**Sg**	**05 15 42.7**	**+0.1**
BAYT	**Ayd¯–ntepe-Bay**	**1.82**	**101**	*e*	PN		**Pn**	**05 15 23.6**	**+0.1**
BAYT	**Ayd¯–ntepe-Bay**	**1.82**	**101**	*e*	Pn		**Pn**	**05 15 23.6**	**+0.1**
ERZN	**Erzincan**	**1.88**	**128**	*e*	PN		**Pn**	**05 15 24.9**	**+0.6**
DIKM	**Dikmen**	**2.12**	**296**	*e*	PN		**Pn**	**05 15 27.1**	**-0.3**
DIKM	**Dikmen**	**2.12**	**296**	*e*	Pn		**Pn**	**05 15 27.1**	**-0.3**
YOZ	**Yozgat**	**2.20**	**240**	*e*	PN		**Pn**	**05 15 28.9**	**+0.3**
YOZ	**Yozgat**	**2.20**	**240**	*e*	Pn		**Pn**	**05 15 29.0**	**+0.3**
CORM	**Corum**	**2.49**	**258**	*e*	PN		**Pn**	**05 15 32.6**	**0.0**
CORM	**Corum**	**2.49**	**258**	*e*	Pn		**Pn**	**05 15 32.6**	**0.0**

ISK ***28*** *05:42:27.2,37˚.26N×28˚.21E,h3km,MD2.5*
DDA ***28*** *05:42:28.7,37˚.23N×28˚.22E,h11km,MD2.8*
CSEM ***28*** *05:42:28.5±0.2,37˚.21N×28˚.19E,h8km,MD2.5, Error ellipse: s-maj=4.4km s-min=3.2km az=21.0*

ISC 28 05:42:28.4±0.9, 37.22N±0.03×28.20E±0.02, h8km±7km, n22, σ0.40/38, Turkey

Code	Station Name	Δ°	AZ°		Phase	ID	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.11**	**140**	*e*	PG		**Pg**	**05 42 30.6**	**-0.4**
YER				*e*	SG		**Sg**	**05 42 33.2**	**+0.4**
YER	**Yerkesik**	**0.11**	**140**	*e*	Pg		**Pg**	**05 42 30.6**	**-0.4**
YER				*e*	Sg		**Sg**	**05 42 33.2**	**+0.4**
MLSB	**Milas**	**0.34**	**283**	*e*	PG		**Pg**	**05 42 34.8**	**-0.4**
MLSB				*e*	SG		**Sg**	**05 42 40.1**	**+0.3**
MLSB	**Milas**	**0.34**	**283**	*e*	Pg		**Pg**	**05 42 34.8**	**-0.4**
MLSB				*e*	Sg		**Sg**	**05 42 40.1**	**+0.3**
TURN	**Turunc**	**0.47**	**137**	*i*	P		**Pg**	**05 42 37.8**	**+0.2**
TURN				*i*	S		**Sb**	**05 42 46.5**	**+0.4**
TURN	**Turunc**	**0.47**	**137**	*i*	P		**Pg**	**05 42 37.8**	**+0.2**
TURN				*i*	S		**Sb**	**05 42 46.5**	**+0.4**
AYDN	**Tasoluk**	**0.51**	**330**	*i*	P		**Pg**	**05 42 38.4**	**+0.1**
AYDN				*i*	S		**Sg**	**05 42 45.9**	**+0.9**
AYDN	**Tasoluk**	**0.51**	**330**	*i*	P		**Pg**	**05 42 38.4**	**+0.1**
AYDN				*i*	S		**Sg**	**05 42 45.9**	**+0.9**
BODT	**Bodrum**	**0.72**	**258**	*e*	PG		**Pg**	**05 42 42.2**	**-0.2**
BODT				*e*	SG		**Sb**	**05 42 53.2**	**-0.2**
BODT	**Bodrum**	**0.72**	**258**	*e*	Pg		**Pg**	**05 42 42.2**	**-0.2**
BODT				*e*	Sg		**Sb**	**05 42 53.2**	**-0.2**
DNZL	**Cakiroluk**	**0.82**	**55**	*i*	P		**Pb**	**05 42 45.2**	**+0.1**
DNZL				*i*	S		**Sg**	**05 42 55.4**	**+0.3**
DNZL	**Cakiroluk**	**0.82**	**55**	*i*	P		**Pb**	**05 42 45.2**	**+0.1**
DNZL				*i*	S		**Sg**	**05 42 55.4**	**+0.3**
GCAM	**G?zelcaml?**	**0.91**	**302**	*i*	P		**Pb**	**05 42 46.8**	**+0.5**
GCAM				*i*	S		**Sn**	**05 43 00.7**	**+0.1**
GCAM	**G?zelcaml?**	**0.91**	**302**	*i*	P		**Pb**	**05 42 46.8**	**+0.5**
GCAM				*i*	S		**Sn**	**05 43 00.7**	**+0.1**
FETY	**Fethiye**	**0.92**	**129**	*e*	PG		**Pg**	**05 42 46.1**	**0.0**
FETY	**Fethiye**	**0.92**	**129**	*e*	Pg		**Pg**	**05 42 46.1**	**0.0**
MANT	**Manisa**	**1.30**	**13**	*i*	P		**Pn**	**05 42 52.7**	**-0.4**
MANT				*i*	S		Sn	05 43 19.7	+8.8
MANT	**Manisa**	**1.30**	**13**	*i*	P		**Pn**	**05 42 52.7**	**-0.4**
KULA	**Kula-Manisa**	**1.34**	**16**	*e*	PN		**Pn**	**05 42 52.8**	**-0.8**
KULA	**Kula-Manisa**	**1.34**	**16**	*e*	Pn		**Pn**	**05 42 52.8**	**-0.8**
KHAL	**Karahalli**	**1.54**	**41**	*i*	P		**Pb**	**05 42 57.4**	**+0.1**
KHAL				*i*	S		**Sg**	**05 43 18.0**	**0.0**
KHAL	**Karahalli**	**1.54**	**41**	*i*	P		**Pb**	**05 42 57.4**	**+0.1**
KHAL				*i*	S		**Sg**	**05 43 18.0

SNR=10
TKM2 **Tokmak 2** 7.28 27 ⇓P Pn 06 06 43.7 +1.9
9.4nm,0.5s
TKM2 ⇓S Sn 06 08 02.0 -2.2
4.1nm,0.7s
TKM2 **Tokmak 2** 7.28 27 P Pn 06 06 44.6 +2.8
SNR=8.0
MKAR **Makanchi Array** 13.23 35 P Pn 06 07 59.1 +0.5
0.2nm,0.3s,baz=214,slow=14,SNR=12
KURBB **Kurchatov Array** 15.09 18 P Pn 06 08 20.9 -0.6
0.1nm,0.3s,baz=206,slow=10,SNR=5.4
AB31 **Akbulak array** 15.15 331 ⇑P P 06 08 24.0 +1.1
0.3nm,0.5s,baz=140,slow=11,SNR=8.3
AKTO **Aktyubinsk** 16.84 330 ⇓P Pn 06 08 42.9 +0.2
0.6nm,1.0s
AKTO **Aktyubinsk** 16.84 330 P Pn 06 08 42.4 -0.4
0.3nm,0.3s,baz=140,slow=7.3,SNR=4.6
ZALV **Zalesovo Beam** 19.87 24 P P 06 09 14.8 +0.3
0.2nm,0.3s,baz=201,slow=11,SNR=4.4
FINES **FINESS Array B** 37.55 326 P P 06 11 54.3 +0.7
1.9nm,0.7s,baz=116,slow=3.2,SNR=3.1
ARCES **ARCESS Array B** 41.20 338 P P 06 12 24.4 +0.7
3.4nm,0.9s,baz=97,slow=6.2,SNR=5.6
HFS **Hagfors** 43.14 322 P P 06 12 39.7 +0.3
2.0nm,0.5s,baz=95,slow=9.1,SNR=8.9
NB2 **NORSAR Subarra** 44.46 323 P P 06 12 49.7 -0.3
comp=Z,0.8nm,0.5s,baz=97,slow=7.9
NOA **NORSAR Array B** 44.46 323 P P 06 12 49.8 -0.1
comp=Z,1.0nm,0.6s,baz=97,slow=7.8,SNR=3.9
SPITS **Spitsbergen Ar** 47.53 347 P P 06 13 13.6 -0.1
comp=Z,2.2nm,0.7s,baz=184,slow=8.8,SNR=4.0
KMBO **Kilima Mbogo** 48.91 228 LR LR 06 35 14.4
comp=Z,39nm,18.9s,baz=275,slow=37
TORD **Torodi Ar. Bea** 65.83 269 P P 06 15 22.5 -0.9
comp=Z,0.9nm,0.8s,baz=47,slow=5.7,SNR=8.2
ILAR **Eielson Array** 74.75 16 P P 06 16 16.1 -0.6
comp=Z,0.3nm,0.8s,baz=343,slow=2.2,SNR=3.2
YKA **Yellowknife Ar** 81.25 3 P P 06 16 52.6 +0.1
comp=Z,0.3nm,0.5s,baz=350,slow=5.4,SNR=11
WRA **Warramunga Arr** 81.89 122 P P 06 16 55.4 -1.0
comp=Z,0.3nm,0.7s,baz=324,slow=4.5,SNR=3.5

IDC 28 06:57:10.8±1.9, 4°61S×151°72E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/19, mbtmp3.9/4, Error ellipse: s-maj=110.3km s-min=25.6km az=128.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.77	227	P		P	07 02 15.5	+0.4
	2.3nm,0.7s,baz=52,slow=9.7,SNR=23							
ASAR	**Alice Springs**	25.57	221	P		P	07 02 42.0	+0.2
	1.1nm,0.3s,baz=56,slow=8.6,SNR=14							
FITZ	**Fitzroy Crossi**	28.81	240	P		P	07 03 10.4	-0.5
	2.3nm,0.9s,baz=61,slow=8.5,SNR=10							
ILAR	**Eielson Array**	82.39	22	P		P	07 09 34.8	+0.3
	0.3nm,0.6s,baz=246,slow=6.0,SNR=7.1							
TORD	**Torodi Ar. Bea**	149.22	288	PKPbc		PKPbc	07 17 01.6	-0.9
	0.3nm,0.4s,baz=96,slow=1.7,SNR=4.8							

IDC 28 07:22:49.0±6.1, 20°.95S×178°.02W, h563km±67km, mb3.2/4, mb1 3.4/6, mb1mx3.1/20, mbtmp3.3/6, Error ellipse: s-maj=45.1km s-min=38.1km az=22.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	14.50	263	P		P	07 25 52.8	-0.6
	0.6nm,0.3s,baz=84,slow=18,SNR=10							
URZ	**Urewera**	17.75	193	P		P	07 26 23.6	-0.2
	0.8nm,0.3s,baz=345,slow=8.6,SNR=5.7							
STKA	**Stephens Creek**	37.57	245	P		P	07 29 17.2	+1.0
	1.3nm,0.6s,baz=124,slow=16,SNR=2.9							
ASAR	**Alice Springs**	44.40	257	P		P	07 30 10.4	0.0
	4.7nm,0.6s,baz=96,slow=7.6,SNR=76							
ASAR				S		S	07 35 59.1	-5.6
	0.8nm,0.8s,baz=96,slow=16,SNR=7.0							
WRA	**Warramunga Arr**	44.52	262	P		P	07 30 10.6	-0.8
	2.7nm,0.3s,baz=97,slow=7.6,SNR=10							
ILAR	**Eielson Array**	88.76	13	P		P	07 34 43.0	+0.4
	0.2nm,0.7s,baz=220,slow=5.7,SNR=4.1							
AKASG	**Malin Array Be**	143.40	331	PKP		PKPab	07 41 17.6	-0.3
	1.3nm,0.4s,baz=43,slow=4.1,SNR=6.2							
BRTR	**Keskin Array B**	147.12	312	PKPbc		PKPbc	07 41 29.2	-0.4
	0.5nm,0.5s,baz=99,slow=1.9,SNR=3.0							

*CSEM **28** 07:35:50.4±0.7, 37°.15N×35°.71E, h30km, MD2.6, Error ellipse: s-maj=22.5km s-min=9.5km az=96.0*
*ISK **28** 07:35:50.9, 37°.05N×35°.93E, h15km, MD2.6*
*ISCJB **28** 07:35:51.6±0.7, 37°.07N±0°.03×35°.97E±0°.06, h10km, Error ellipse: s-maj=6.9km s-min=4.6km az=11.4*
*DDA **28** 07:35:54.6, 37°.11N×36°.19E, h7km, MD3.0*
ISC 28 07:35:53.8±1.0, 37°.10N±0°.03×36°.11E±0°.05, h10km, n21, σ1°11/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	0.30	254	*e*Pg		Pg	07 35 55.1	-4.7
CEYT	**Ceyhan**	0.30	254	*e*Pg		Pg	07 35 55.1	-4.7
KOZT	**Kozan**	0.45	330	*e*PG		Pg	07 36 00.0	-2.5
KOZT	**Kozan**	0.45	330	*e*Pg		Pg	07 36 00.0	-2.5
ANDN	**Andirin**	0.52	21	*e*P		**Pg**	**07 36 04.4**	**+0.4**
ANDN				*i* S		**Sg**	**07 36 11.9**	**+1.0**
ANDN	**Andirin**	0.52	21	*e*P		**Pg**	**07 36 04.4**	**+0.4**
ANDN				*i* S		**Sg**	**07 36 11.9**	**+1.0**
COBT	**Iskenderun**	0.59	168	*e*P		**Pg**	**07 36 06.0**	**+0.8**
COBT	**Iskenderun**	0.59	168	*e*P		**Pg**	**07 36 06.0**	**+0.8**
AYKD	**Aykdinkavak**	0.64	60	*i* P		**Pb**	**07 36 07.6**	**+0.4**
AYKD				*i* S		**Sg**	**07 36 13.8**	**-0.9**
KMRS	**Kahramanmaras**	0.75	57	*e*PG		**Pg**	**07 36 08.8**	**+0.4**
KMRS	**Kahramanmaras**	0.75	57	*e*Pg		**Pg**	**07 36 08.8**	**+0.4**
KUZU	**Kuzuini**	0.84	112	*i* P		**Pg**	**07 36 10.4**	**+0.4**
KUZU				*i* S		**Sg**	**07 36 21.2**	**+0.2**
KUZU	**Kuzuini**	0.84	112	*i* P		**Pg**	**07 36 10.4**	**+0.4**
KUZU				*i* S		**Sg**	**07 36 21.2**	**+0.2**
GAZ	**Gaziantep**	0.89	85	*e*PG		**Pg**	**07 36 11.0**	**+0.1**
GAZ	**Gaziantep**	0.89	85	*e*Pg		**Pg**	**07 36 11.0**	**+0.1**
HTY	**Hatay**	0.97	178	*e*PG		Pg	07 36 09.6	-2.9
HTY				*e*SG		**Sg**	**07 36 23.2**	**-1.9**
HTY	**Hatay**	0.97	178	*e*Pg		Pg	07 36 09.6	-2.9
HTY				*e*Sg		**Sg**	**07 36 23.2**	**-1.9**
YAYL	**Yayladag**	1.06	180	*i* P		**Pb**	**07 36 15.5**	**+1.2**
YAYL				*i* S		**Sn**	**07 36 30.6**	**+1.0**
YAYL	**Yayladag**	1.06	180	*i* P		**Pb**	**07 36 15.5**	**+1.2**
YAYL				*i* S		**Sn**	**07 36 30.7**	**+1.0**
SARI	**SarD1z-Kayseri**	1.33	11	*e*PN		**Pn**	**07 36 16.7**	**-2.0**
SARI	**SarD1z-Kayseri**	1.33	11	*e*Pn		**Pn**	**07 36 16.7**	**-2.0**

*CSEM **28** 08:12:35.1, 40°.34N×21°.85E, h22km, MD2.8, After ATH*
ATH 28 08:12:35.1, 40°.34N×21°.85E, h22km, MD2.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	0.07	241	*e*PB		Pb	08 12 39.3	+0.1
KZN				*e*SB		Sb	08 12 42.3	+0.3
KZN	**Kozani**	0.07	241	*e*Pb		Pb	08 12 39.3	+0.1
KZN				*e*Sb		Sb	08 12 42.3	+0.3
FNA	**Florina**	0.57	321	*e*PN		Pb	08 12 46.5	-0.1
FNA	**Florina**	0.57	321	*e*Pn		Pb	08 12 46.5	-0.1
GRG	**Griva**	0.74	34	*e*PN		Pb	08 12 49.6	+0.1
GRG	**Griva**	0.74	34	*e*Pn		Pb	08 12 49.6	+0.1

*CASC **28** 08:24:41.3±1.3, 16°.85N×86°.40W, h0km±17km, ML6.6, mb6.7(NEIC)*
*MOS **28** 08:24:43.3±1.2, 16°.71N×86°.30W, h10km, mb6.8/96, MS7.1/83, Error ellipse: s-maj=10.1km s-min=4.8km az=121.7*
*IDC **28** 08:24:43.8±0.4, 16°.83N×86°.11W, h0km, mb5.5/25, mb1 5.7/26, mb1mx5.7/26, mbtmp5.5/26, MS7.0/22, Ms1 7.1/22, ms1mx6.9/36, Error ellipse: s-maj=16.7km s-min=10.2km az=64.0*
*NEIC **28** 08:24:45.0±0.0, 16°.78N×86°.17W, h15km*
*BJI **28** 08:24:45.3, 16°.70N×86°.20W, h10km, mB6.9/39, Ms7.6/47, Ms7 7.4/45*
*TEH **28** 08:24:46.0, 16°.78N×86°.17W, h10km, ML7.1*
*ISCJB **28** 08:24:46.2±0.1, 16°.74N±0°.02×86°.27W±0°.01, h29km, mb6.5/361, MS7.1/233, Error ellipse: s-maj=2.4km s-min=1.9km az=34.6*
*NEIC **28** 08:24:46.6±0.1, 16°.73N×86°.22W, h19km, mb6.7/267, ME8.1, MS7.2/141, MW7.2, MD7.2(SNET), MW7.3(USGS), Error ellipse: s-maj=3.2km s-min=2.2km az=41.0 Broadband fault plane solution: P waves. NP1: φs340.00000°, δ88.00000°, λ175.00000°. NP2: φs70.00000°, δ85.00000°, λ2.00000°. Principal axes: T Plg5.0000°, Azm295.0000°; N Plg0.0000°, Azm0.0000°; P Plg2.0000°, Azm25.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC At least 7 people killed, 40 injured and more than 130 buildings damaged or destroyed in northern Honduras, including the Islas de la Bahia. The central span of a major bridge at El Progreso was destroyed. Felt [VII] at El Progreso, Jose Santos Guardiola, La Lima, Omoa, Puerto Cortes and Utila; [VI] at French Harbor, La Ceiba, Roatan, Sambo Creek, San Pedro Sula, Sandy Bay and Tela; [V] at Arizona, Guanaja, Mateo, Santa Rosa de Copan, Siguatepeque, Tocoa and Villanueva. At least 5 buildings destroyed and 25 damaged in Belize. Felt [VI] at Dangriga; [V] at Belize City, Benque Viejo and Punta Gorda; [IV] at Belmopan, San Ignacio and San Pedro. Felt [V] at Colon and [IV] at Antiguo Cuscatlan, Mejicanos, San Miguel and San Salvador, El Salvador. Felt [VI] at Livingston and Puerto Barrios; [V] at Villa Canales; [IV] at Antigua Guatemala, Chichicastenango, Chimaltenango, Chiquimula, Coban, Fraijanes, Guatemala, Mixco and Villa Nueva, Guatemala. Felt [III] at Carmen, Chetumal, Merida and Villahermosa; [II] at Cancun and Mexico, Mexico. Also felt [II] at Havana, Cuba. Felt in much of Honduras and throughout Belize, El Salvador and Guatemala. Also felt in The Bahamas, Cayman Islands and Virgin Islands and in parts of Colombia, Costa Rica, Cuba, Jamaica, Mexico, Nicaragua and Panama. Seiches were reported in swimming pools at La Ceiba and Roatan, Honduras. Ground cracks and possible liquefaction were observed at Monkey River, Belize.
*BGS **28** 08:24:47.5±3.1, 17°.51N×85°.70W, h10km±999km, MS6.9*
*SZGRF **28** 08:24:49.7, 17°.64N×85°.29W, h33km, mb6.5, MS7.1, North of Honduras*
*GCMT **28** 08:25:04.8±0.1, 16°.50N×87°.17W, h12km, MW7.3, Moment Tensor Solution. s84,c163; s99,c295; Moment tensor: Scale 10²⁰Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mrφ0.00; Mθφ0.00; Best double couple: Mo1.30000×10²⁰ NP1:φs63.00000°, δ60.00000°, λ-7.00000°. NP2:φs156.00000°, δ84.00000°, λ-150.00000°. Principal axes: T 1.2000, Plg16.0000°, Azm286.0000°; N 0.1600, Plg59.0000°, Azm166.0000°; P -1.3700, Plg25.0000°, Azm24.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle wave period 150 sec. Mantle waves from 120 sta. Surface waves: sta=80, comp=157, per=50.*
*NEIC **28** 08:25:20.5±0.0, 16°.79N×86°.59W, h10km, Moment Tensor Solution. s164 Moment tensor: Scale 10¹⁹Nm; Mrr-0.69; Mθθ-6.09; Mφφ6.78; Mrθ-1.30; Mrφ5.18; Mθφ3.23; Best double couple: Mo9.00000×10¹⁹ NP1:φs64.00000°, δ67.00000°, λ0.00000°. NP2:φs155.00000°, δ89.00000°, λ-156.00000°. Principal axes: T 9.3100, Plg15.0000°, Azm287.0000°; N -0.6900, Plg66.0000°, Azm157.0000°; P -8.6200, Plg16.0000°, Azm22.0000°;*
ISC 28 08:24:48.4±0.2, 16°.81N±0°.02×86°.24W±0°.02, h29km, n1959, σ1°53/1975, mb6.6/359, MS7.1/235, 265C-313D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	2.91	200	*i*Pn		Pn	08 25 28.1	-4.7
TGUH				*e*Sn		Sn	08 25 48.7	-18
TGUH	**Tegucigalpa,Un**	2.91	200	*e*P		Pn	08 25 28.7	-4.0
CNCH	**Conchagua**	3.83	204	*e*P		Pn	08 25 40.8	-4.8
MTO2	**Montecristo 2**	3.84	232	*e*P		Pn	08 25 40.5	-5.3
VSM	**San Miguel**	3.89	211	*e*P		Pn	08 25 41.6	-4.8
TEIG	**Tepich**	3.91	331	*e*Pn		**Pn**	**08 25 44.7**	**-1.8**
TEIG				Sn		**Sn**	**08 26 28.8**	**-2.6**
TEIG				*e*Sn		Sb	08 26 32.4	-11
TEIG	**Tepich**	3.91	331	Pn		**Pn**	**08 25 44.6**	**-1.8**
	6μm,0.3s,baz=114,slow=0.6,SNR=1760							
TEIG				Sn		**Sn**	**08 26 28.8**	**-2.6**
	5μm,0.3s,baz=354,slow=19,SNR=5.6							
SNVI	**San Vicente**	4.05	219	*e*P		Pn	08 25 44.8	-3.7
LBRS	**Las Brisas**	4.08	222	*i*P		Pn	08 25 44.4	-4.5
LFRS	**El Faro**	4.17	221	*i*P		Pn	08 25 45.8	-4.4
BOQS	**Boqueron**	4.23	224	*e*P		Pn	08 25 46.7	-4.5
SNET	**Serv Nac Est T**	4.24	223	*e*P		Pn	08 25 46.9	-4.2
SNET				*e*S		**Sn**	**08 26 38.2**	**-1.5**
SNET				AML		AML	08 26 45.1	
	comp=Z,248μm,0.6s							
RBDL	**Robledal**	4.27	232	*e*P		Pn	08 25 46.4	-5.1
AIES	**Las Flores**	4.30	220	AML		AML	08 26 50.9	
	comp=Z,443μm,0.7s							
SNJE	**San Jose**	4.37	228	*e*P		Pn	08 25 48.2	-4.8
RTR	**El Retiro**	4.38	229	*e*P		Pn	08 25 48.6	-4.5
SBLS	**San Blas**	4.40	228	*e*P		Pn	08 25 49.0	-4.5
CCIG	**Comitan**	5.68	266	P		Pn	08 26 06.7	-4.3
THIG		6.10	253	P		Pn	08 26 12.8	-3.7
TGIG		6.59	271	P		Pn	08 26 18.3	-5.1
JTS	**JuntasAbangare**	6.60	169	Pn		Pn	08 26 19.0	-4.5
	comp=Z,2μm,0.4s,SNR=63							
JTS	**JuntasAbangare**	6.60	169	*e*Pn		Pn	08 26 19.6	-3.9
JTS				*e*Sg		Sb	08 28 14.1	+13
VCR	**Vista de Mar**	6.67	175	*e*P		**Pn**	**08 26 23.2**	**-1.3**
VCR	**Vista de Mar**	6.67	175	*e*P		**Pn**	**08 26 23.2**	**-1.3**
SOR	**Soroa**	6.69	27	*e*P		**Pn**	**08 26 23.2**	**-1.5**
SOR				*e*S		**Sn**	**08 27 39.9**	**0.0**
	comp=N,441μm,0.6s							
SOR				*e*				
	comp=E,406μm,0.5s							
PCIG		6.79	262	P		Pn	08 26 21.5	-4.6
CGA2	**Cerro Gallo 2**	6.97	165	*e*P		**Pn**	**08 26 26.6**	**-2.1**
CGA2	**Cerro Gallo 2**	6.97	165	*e*P		**Pn**	**08 26 26.6**	**-2.1**
SJS	**Escuela Geolog**	7.15	162	*e*P		**Pn**	**08 26 30.6**	**-0.6**
SJS	**Escuela Geolog**	7.15	162	*e*P		**Pn**	**08 26 30.6**	**-0.6**
BUS	**Buena Vista**	7.60	161	*e*P		**Pn**	**08 26 35.3**	**-2.4**
BUS	**Buena Vista**	7.60	161	*e*P		**Pn**	**08 26 35.3**	**-2.4**
QCR	**Quepos**	7.61	164	*e*P		**Pn**	**08 26 35.6**	**-1.8**
NEJ	**Negril**	7.69	78	*i*P		**Pn**	**08 26 39.6**	**+1.2**
TUIG	**Tuzandepetl**	7.90	280	P		Pn	08 26 35.8	-5.6
MGV	**Manicaragua**	7.92	47	*e*P		**Pn**	**08 26 38.9**	**-2.7**
MGV				*e*S		**Sb**	**08 28 40.6**	**+1.8**
	comp=N,389μm,11.5s							
MGV				*e*				
	comp=E,584μm,9.6s							
MBJ	**Montego Bay**	8.15	78	*i*P		**Pn**	**08 26 44.4**	**-0.4**
MCJ	**Malvern**	8.24	81	*i*P		**Pn**	**08 26 45.4**	**-0.8**
MTDJ	**Mount Denham**	8.43	79	*e*Pn		**Pn**	**08 26 46.4**	**-2.3**
ACR	**Cerro Adams**	8.64	159	*e*P		**Pn**	**08 26 49.9**	**-1.7**
ACR	**Cerro Adams**	8.64	159	*e*P		**Pn**	**08 26 49.9**	**-1.7**
BBJ	**Bamboo Saint A**	8.70	78	*i*P		**Pn**	**08 26 51.3**	**-1.1**
PCJ	**Portland Cotta**	8.73	83	*i*P		**Pn**	**08 26 51.9**	**-0.8**
STH	**Stony Hill**	9.09	81	*i*P		**Pn**	**08 26 57.0**	**-0.8**
HOJ	**Hope**	9.14	81	*i*P		**Pn**	**08 26 57.0**	**-1.4**
LMGC	**Las Mercedes**	9.35	68	*e*P		**Pn**	**08 27 00.2**	**-1.0**
LMGC				*e*S		**Sn**	**08 28 45.0**	**-0.4**
	comp=N,45μm,17.9s							
LMGC				*e*				
	comp=E,32μm,14.3s							
HUIG	**Huatulco**	9.53	265	P		Pn	08 26 56.7	-7.0
BCIP	**Isla Barro Col**	9.83	140	*e*Pn		Pn	08 27 02.8	-5.0
VHO	**Vista Hermosa**	10.04	273	P		Pn	08 27 06.1	-4.8
VHO				S		Sn	08 28 55.0	-7.8
LVIG	**Laguna Verde**	10.09	288	P		Pn	08 27 04.5	-6.9
RCC	**Rio Carpintero**	10.50	71	*e*P		**Pn**	**08 27 15.3**	**-1.7**
RCC				*e*S		Sn	08 29 05.9	-7.8
	comp=N,2μm,1.3s							
RCC				*e*				
	comp=E,1μm,1.8s							
TPIG	**Tehuac#an**	10.72	280	P		Pn	08 27 15.7	-4.6
GTBY	**Guantanamo Bay**	11.02	72	*e*Pn		**Pn**	**08 27 21.9**	**-2.2**
	comp=E,800nm,0.5s							
PNIG	**Pinotepa**	11.40	270	P		Pn	08 27 22.7	-6.7
MASC	**Masc**	11.88	72	*e*P		**Pn**	**08 27 35.4**	**-0.4**
MASC				*e*S		Sn	08 29 56.5	+9.0
PPM	**Popocatepetl**	12.00	283	P		Pn	08 27 34.7	-3.3
PPM	**Popocatepetl**	12.00	283	P		Pn	08 27 34.7	-3.3
DWPF	**Disney**	12.09	21	P		**Pn**	**08 27 37.6**	**-1.2**
YAIG	**Yautepec**	12.38	281	P		Pn	08 27 38.6	-4.3
UNM	**Universidad Na**	12.55	283	P		Pn	08 27 42.3	-3.1
UNM	**Universidad Na**	12.55	283	P		Pn	08 27 42.3	-3.1
DEIG	**Demacu**	12.62	288	P		Pn	08 27 41.8	-4.5
PLIG	**Platanillo**	12.74	279	P		Pn	08 27 42.9	-4.8
MEIG	**Mezcala**	12.82	277	P		Pn	08 27 43.7	-5.1
CAIG	**El Cayaco**	13.42	273	P		Pn	08 27 50.4	-6.6
SDDR	**Presa de Saban**	14.40	79	*e*Pn		**Pn**	**08 28 09.9**	**-0.4**
ZIIG	**Zihuatanejo**	14.57	275	P		Pn	08 28 05.3	-7.3
LNIG	**Linares**	14.74	305	P		Pn	08 28 08.9	-6.1
TIGA	**Tifton**	14.77	9	⇑P		Pn	08 28 11.3	-4.0
	baz=15,SNR=81							
HKT	**Hockley**	15.76	328	*e*P		**Pn**	**08 28 27.3**	**-0.9**
HKT				*e*			08 31 23.8	
HKT				pmax		pmax		
	comp=Z,7μm,1.2s							
HKT	**Hockley**	15.76	328	*e*Pn		**Pn**	**08 28 27.3**	**-0.9**
	comp=Z,7μm,1.2s							
HKT				*e*Sn		**Sn**	**08 31 23.8**	**+1.9**
VBMS	**Vicksburg**	15.82	347	*e*Pn		**Pn**	**08 28 28.2**	**-0.9**
	comp=Z,2μm,1.5s							
VBMS				*e*Sn		**Sn**	**08 31 24.8**	**+1.1**
LRAL	**Lakeview Retre**	16.17	358	*e*Pn		**Pn**	**08 28 32.1**	**-1.5**
	comp=Z,1μm,1.4s							
LRAL				*e*Sn		Sn	08 31 15.6	-17
MMIG	**Aquila**	16.38	278	P		**Pn**	**08 28 31.7**	**-4.6**
ZAIG	**Zacatecas**	16.46	294	P		**Pn**	**08 28 34.5**	**-3.1**
ROSC	**El Rosal**	16.66	134	*e*Pn		**Pn**	**08 28 39.3**	**-1.0**
ROSC	**El Rosal**	16.66	134	Pn		**Pn**	**08 28 39.2**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=314,slow=8.1,SNR=41							
ROSC				LR		LR	08 36 16.5	
	comp=Z,409μm,18.1s,baz=346,slow=42							
GOGA	**Godfrey**	16.72	8	*e*P		**Pn**	**08 28 39.2**	**-1.3**
GOGA				pmax		pmax		
	comp=Z,2μm,1.2s							
GOGA	**Godfrey**	16.72	8	*e*Pn		**Pn**	**08 28 39.2**	**-1.3**
	comp=Z,2μm,1.2s							
SDV	**Santo Domingo**	17.12	115	*e*Pn		**Pn**	**08 28 42.6**	**-3.3**
	comp=Z,8μm,1.8s							
NHSC	**New Hope**	17.13	18	*e*Pn		**Pn**	**08 28 42.5**	**-3.1**
	comp=Z,1μm,1.5s							
NHSC				*e*Sn		**Sn**	**08 31 53.4**	**-1.8**
732A	**Laxson Ranch,**	17.33	316	⇑P		Pn	08 28 42.5	-5.8
	baz=17,SNR=491							
632A	**Uvalde**	17.72	318	⇓P		Pn	08 28 48.2	-4.9
	baz=18,SNR=540							
ANIG	**Ahuacatlan**	17.80	287	P		**Pn**	**08 28 53.1**	**-1.1**
PAYG	**Puerto Ayora**	17.82	193	*e*Pn		**Pn**	**08 28 52.7**	**-1.7**
	comp=Z,6μm,1.5s							
OXF	**Oxford**	17.86	351	*e*P		**P**	**08 28 55.6**	**+0.4**
OXF				*e*			08 32 05.5	
OXF				pmax		pmax		
	comp=Z,448nm,1.3s							
OXF	**Oxford**	17.86	351	*e*P		**P**	**08 28 55.6**	**+0.4**
	comp=Z,448nm,1.3s							
OXF				*e*Sn		Sn	08 32 05.5	-7.4
CJM	**Chamela**	18.07	281	P		**Pn**	**08 28 53.8**	**-3.6**
OTAV	**Otavalo**	18.17	154	*e*Pn		**Pn**	**08 28 57.4**	**-1.7**
	comp=Z,2μm,2.6s							
631A	**Perdido Creek**	18.18	316	⇑P		Pn	08 28 53.5	-5.1
	baz=18,SNR=594							
532A	**Rocksprings**	18.22	319	⇓P		**Pn**	**08 28 55.4**	**-3.9**
	baz=18,SNR=457							
WHTX	**Lake Whitney**	18.22	328	⇓P		**Pn**	**08 28 56.8**	**-2.4**
	baz=18,SNR=288							
MPR	**Mayaguez**	18.27	83	*e*Pn		**Pn**	**08 29 00.9**	**+1.0**
	comp=Z,7μm,2.2s							
CRPR	**Cabo Rojo, PR**	18.30	83	*e*P		**P**	**08 28 59.2**	**-0.9**
	comp=Z,4μm,1.4s							
CRPR				*e*S		Sn	08 32 24.5	+0.6
AGPR	**Aguadilla, PR**	18.31	82	*e*P		**P**	**08 29 00.1**	**-0.2**
	comp=Z,16μm,1.9s							
LSP	**Las Mesas**	18.32	83	*e*P		**P**	**08 29 00.1**	**-0.4**
SWET	**Sewanee**	18.34	1	*e*P		**P**	**08 28 59.5**	**-0.9**
	comp=Z,16μm,2.2s							
SWET				*e*S		Sn	08 32 14.7	-10
JCT	**Junction City**	18.40	320	*e*P		**P**	**08 28 58.7**	**-2.6**
JCT				*e*S		**Sn**	**08 32 26.4**	**+0.2**
JCT				pmax		pmax		
	comp=Z,3μm,0.8s							
JCT	**Junction City**	18.40	320	*e*P		**P**	**08 28 58.7**	**-2.6**
	comp=Z,3μm,0.8s							
JCT				*e*S		**Sn**	**08 32 26.4**	**+0.2**
JCT	**Junction City**	18.40	320	⇓P		**P**	**08 28 58.1**	**-3.2**
	baz=18,SNR=116							
MET	**Memphis--Engin**	18.54	350	*e*P		**Pn**	**08 29 03.2**	**+0.2**
	comp=Z,4μm,1.1s							
MET				*e*S		**S**	**08 32 35.5**	**+3.0**
LRS	**Lares**	18.56	83	*e*P		**Pn**	**08 29 04.0**	**+0.6**
CPCT	**Cooper Cave**	18.63	4	*e*P		**P**	**08 29 03.1**	**-0.6**
CPCT				*e*S		**S**	**08 32 35.6**	**+1.2**
AOPR	**Arecibo Observ**	18.64	82	*e*Pn		**P**	**08 29 03.3**	**-0.7**
	comp=Z,8μm,2.1s							
531A	**Rocksprings**	18.65	318	⇓P		**P**	**08 29 01.5**	**-2.5**
	baz=19,SNR=262							
432A	**Menard**	18.68	321	⇑P		**P**	**08 29 01.8**	**-2.5**
	baz=19,SNR=82							
RFTA	**Plano**	18.69	332	*e*P		**P**	**08 29 03.6**	**-0.7**
RFTA				*e*S		Sn	08 32 23.9	-9.2
UALR	**University of**	18.71	344	P		**P**	**08 29 04.0**	**-0.5**
	comp=Z,2μm,0.8s							
UALR				*e*S		**S**	**08 32 38.3**	**+2.4**
OBIP	**Obispado Ponce**	18.78	83	*e*P		**P**	**08 29 05.3**	**-0.1**
	comp=Z,6μm,1.6s							
KMSC	**Kings Mountain**	18.78	13	⇓P		**P**	**08 29 03.7**	**-1.6**
	baz=19,SNR=83							
CELP	**Cerrillos**	18.80	83	*e*P

429A **Davenport Ranc** 19.83 317 ⇓P P 08 29 16.5 -0.4
baz=20,SNR=564
429A ⇑S S 08 32 57.1 -1.8
baz=20
429A ⇑S S 08 32 57.1 -1.8
baz=20
429A ⇑S S 08 32 57.1 -1.8
baz=20
ABTX **Abilene, Hawle** 19.87 325 ⇓P P 08 29 17.3 0.0
baz=20,SNR=141
330A **Mertzon** 19.89 320 ⇓P P 08 29 17.2 -0.4
baz=20,SNR=674
MAIG **Mazatlaan** 19.99 292 P P 08 29 17.7 -0.9
PARMO **Parma** 20.02 352 eP P 08 29 18.8 -0.1
PARMO eS Sn 08 33 07.3 +2.1
528A **Cox Ranch, San** 20.14 314 ⇑P P 08 29 19.6 -0.7
baz=20,SNR=199
627A **Terlingua Ranc** 20.14 312 ⇑P P 08 29 19.9 -0.5
baz=20,SNR=590
230A **Sterling City** 20.19 321 ⇑P P 08 29 20.5 -0.3
baz=20,SNR=487
TXAR **Lajitas Array** 20.27 311 P P 08 29 21.4 -0.5
TXAR S S 08 32 54.3 -14
TXAR e 09 03 39.2
TXAR **Lajitas Array** 20.27 311 P P 08 29 21.4 -0.5
comp=Z,72nm,0.7s,baz=127,slow=10,SNR=355
TXAR S S 08 32 54.3 -14
comp=Z,62nm,0.7s,baz=123,slow=22,SNR=3.6
TXAR LR LR 08 38 42.6
comp=Z,586µm,20.2s,baz=285,slow=41
TXAR P3KPbc 09 03 39.2
comp=Z,1.6nm,1.0s,baz=289,slow=3.8,SNR=4.0
Z32A **Haskell** 20.30 326 ⇑P P 08 29 22.0 0.0
baz=20,SNR=334
131A **Roby** 20.33 324 ⇓P P 08 29 22.0 -0.3
baz=20,SNR=346
STVI **Saint Thomas** 20.35 82 eP P 08 29 22.7 +0.1
comp=Z,8µm,1.4s
428A **Kincaid Ranch,** 20.42 316 ⇑P P 08 29 23.1 -0.3
baz=20,SNR=134
329A **Wagon Wheel Ra** 20.45 318 ⇑P P 08 29 22.8 -0.9
baz=21,SNR=235
CDVI **St. Croix** 20.53 84 eP P 08 29 24.6 0.0
comp=Z,3µm,1.1s
CDVI eS Sn 08 33 21.6 +3.9
130A **Snyder** 20.60 322 ⇑P P 08 29 24.9 -0.4
baz=21,SNR=313
HPIG 20.62 303 P P 08 29 25.4 -0.4
229A **Bryant Ranch,** 20.67 320 ⇓P P 08 29 25.4 -0.6
baz=21,SNR=205
Z31A **Sharp Cattle R** 20.67 325 ⇓P P 08 29 25.8 -0.3
baz=21,SNR=416
527A **Woodward Ranch** 20.70 313 ⇑P P 08 29 25.8 -0.7
baz=21,SNR=687
626A **Big Bend Ranch** 20.73 311 ⇑P P 08 29 26.6 -0.3
baz=21,SNR=1000
Y32A **R-V Farms, Ver** 20.83 328 ⇑P P 08 29 27.6 -0.1
baz=21,SNR=347
TUL1 **Tulsa** 20.84 338 ⇓P P 08 29 27.4 -0.4
baz=21,SNR=79
328A **Wristen Ranch,** 20.92 317 ⇓P P 08 29 27.8 -0.9
baz=21,SNR=280
BLA **Blacksburg** 20.97 13 eP P 08 29 29.8 +0.6
BLA eS S 08 33 21.8 +0.4
BLA MLR MLR
comp=Z,471µm,22.0s
BLA **Blacksburg** 20.97 13 eP P 08 29 29.8 +0.6
comp=Z,14µm,1.5s
BLA eS S 08 33 21.8 +0.4
BLA LR LR
comp=Z,471µm,22.0s
427A **Hayter Ranch,** 20.98 315 ⇓P P 08 29 28.7 -0.7
baz=21,SNR=250
526A **Mary Lane Ranc** 20.99 312 ⇓P P 08 29 29.1 -0.6
baz=21,SNR=332
SIUC **Southern Illin** 20.99 353 eP P 08 29 29.4 +0.1
comp=Z,4µm,1.0s
SIUC eS Sn 08 33 31.1 +2.6
WMOK **Wichita Mounta** 21.09 330 eP P 08 29 30.1 -0.4
WMOK eS Sn 08 33 27.8 -3.2
WMOK MLR MLR
comp=Z,197µm,22.0s
WMOK **Wichita Mounta** 21.09 330 eP P 08 29 30.1 -0.4
comp=Z,11µm,0.9s
WMOK eS Sn 08 33 27.8 -3.3
WMOK LR LR
comp=Z,197µm,22.0s
USIN **University of** 21.11 357 eP P 08 29 30.8 +0.1
comp=Z,7µm,1.0s
129A **Stewart Farms,** 21.16 321 ⇑P P 08 29 30.3 -1.1
baz=21,SNR=276
Z30A **Sanderson Ranc** 21.20 323 ⇑P P 08 29 30.7 -1.0
baz=21,SNR=507
Y31A **Rekieta Farm,** 21.22 326 ⇑P P 08 29 31.9 -0.1
baz=21,SNR=397
228A **UT Block 9, Go** 21.26 319 ⇓P P 08 29 31.1 -1.4
baz=21,SNR=310
426A **McDonald Obser** 21.30 314 ⇓P P 08 29 31.6 -1.5
baz=21,SNR=687
Y30A **Stafford Cattl** 21.50 325 ⇓P P 08 29 34.1 -0.9
baz=22,SNR=331
Z29A **Hungry Hill Ra** 21.51 322 ⇓P P 08 29 33.7 -1.4
baz=22,SNR=191
128A **Castleberry Fa** 21.53 320 ⇓P P 08 29 34.3 -1.1
baz=22,SNR=392
X31A **McDonald Ranch** 21.59 328 ⇑P P 08 29 35.3 -0.7
baz=22,SNR=120
227A **Bennet, Jal** 21.64 318 ⇑P P 08 29 35.5 -1.0
baz=22,SNR=355
326A **Caldwell Ranch** 21.65 315 ⇑P P 08 29 35.3 -1.4
baz=22,SNR=259
OLIL **Olney** 21.91 356 eP P 08 29 39.4 +0.2
comp=Z,10µm,1.4s
X30A **Coker Ranch, T** 21.92 326 ⇑P P 08 29 38.9 -0.6
baz=22,SNR=581
Y29A **Porterfield Fa** 21.92 324 ⇑P P 08 29 38.6 -0.9
baz=22,SNR=343
Z28A **Tucker Farm, M** 21.93 321 ⇑P P 08 29 38.6 -1.1
baz=22,SNR=202
W31A **Holland Ranch,** 22.02 329 ⇑P P 08 29 39.3 -1.2
baz=22,SNR=98
SLM **Saint Louis** 22.03 352 eP P 08 29 41.7 +1.2
SLM eS S 08 33 43.6 +1.6
SLM **Saint Louis** 22.03 352 eP P 08 29 41.7 +1.2
comp=Z,12µm,1.8s
SLM eS S 08 33 43.6 +1.6
425A **Indio Mountain** 22.04 313 ⇓P P 08 29 39.3 -1.5
baz=22,SNR=249
JSRW **J. Sargeant Re** 22.07 18 eP P 08 29 41.2 +0.3
127A **Arkansas Junct** 22.11 319 ⇓P P 08 29 39.8 -1.8
baz=22,SNR=205
CLNB **Carlsbad** 22.18 317 eP P 08 29 41.0 -1.3
comp=Z,11µm,1.0s
226B **Tecolote Peak,** 22.25 316 ⇓P P 08 29 42.0 -1.1
baz=22,SNR=377
BLO **Bloomington** 22.28 359 eP P 08 29 43.0 -0.3
BLO pmax pmax
comp=Z,7µm,1.2s
BLO **Bloomington** 22.28 359 eP P 08 29 43.0 -0.3
comp=Z,7µm,1.2s
Y28A **McKinney Farm,** 22.29 323 ⇑P P 08 29 42.1 -1.4
baz=22,SNR=267
W30A **Crocket Farms** 22.33 328 ⇑P P 08 29 43.3 -0.7
baz=22,SNR=82
325A **Bean Ranch, Si** 22.37 314 ⇑P P 08 29 42.6 -1.9
baz=22,SNR=272
X29A **Tulia** 22.37 325 ⇓P P 08 29 43.4 -1.0
baz=22,SNR=548
V31A **Spring Creek L** 22.44 330 ⇓P P 08 29 44.8 -0.2
baz=23,SNR=231
Z27A **Tatum** 22.45 320 ⇑P P 08 29 43.5 -1.8
baz=23,SNR=360
GDL2 **Guadalupe Moun** 22.46 316 eP P 08 29 43.9 -1.4
126A **Clayton Basin,** 22.52 318 ⇑P P 08 29 43.9 -2.1
baz=23,SNR=83
MSTX **Muleshoe** 22.64 322 ⇑P P 08 29 45.6 -1.7
baz=23,SNR=265
NEV **Hard Times** 22.64 86 eP P 08 29 48.3 +1.0
AMTX **Amarillo** 22.68 325 eP P 08 29 46.4 -1.3
comp=Z,1µm,1.0s
AMTX eS S 08 33 58.6 +4.2
AMTX LR LR
comp=Z,309µm,21.0s
CBN **Corbin** 22.70 18 eP P 08 29 48.2 +0.5
comp=Z,413nm,0.9s
CBN eS Sn 08 34 03.0 -6.4
CBN LR LR
comp=Z,411µm,19.0s
X28A **Dimmitt** 22.70 324 ⇓P P 08 29 46.4 -1.5
baz=23,SNR=316
225A **Deer Hill, Car** 22.71 316 ⇓P P 08 29 46.4 -1.7
baz=23,SNR=198
324A **Moseley Ranch,** 22.76 313 ⇑P P 08 29 46.8 -1.8
baz=23,SNR=321
Y27A **Causey** 22.81 321 ⇓P P 08 29 47.0 -2.0
baz=23,SNR=243
MNTX **Cornudas Mount** 22.84 314 eP P 08 29 47.1 -2.2
comp=Z,329nm,0.9s
MNTX LR LR
comp=Z,413µm,20.0s
V30A **Spur Ranch, Mi** 22.84 328 ⇑P P 08 29 48.6 -0.8
baz=23
W29A **Amarillo** 22.85 326 ⇓P P 08 29 48.2 -1.2
baz=23,SNR=212
Z26A **Caprock** 22.90 319 ⇓P P 08 29 48.2 -1.8
baz=23,SNR=256
U31A **Nine Bar Ranch** 22.92 331 ⇑P P 08 29 49.7 -0.5
baz=23,SNR=37
125A **Gardner Draw,** 22.94 317 ⇓P P 08 29 48.8 -1.6
baz=23,SNR=408
224A **Cornudas Mount** 23.16 315 ⇓P P 08 29 51.1 -1.6
baz=23,SNR=209
Y26A **Elida** 23.24 320 ⇓P P 08 29 51.8 -1.7
baz=23,SNR=234
W28A **Vega** 23.25 325 ⇓P P 08 29 52.3 -1.2
baz=23,SNR=61
X27A **F and S Farms,** 23.31 323 ⇓P P 08 29 52.3 -1.9
baz=23,SNR=293
BPA **Boggy Peak** 23.33 86 eP P 08 29 53.8 -0.6
V29A **Stinnett** 23.35 327 ⇑P P 08 29 53.8 -0.7
baz=24,SNR=64
Z25A **Roswell** 23.37 318 ⇓P P 08 29 52.9 -1.9
baz=24,SNR=483
ANWB **Willy Bob** 23.37 84 eP P 08 29 53.3 -1.5
comp=Z,2µm,1.2s
ANWB LR LR
comp=Z,217µm,21.0s
U30A **WK&E Inc. Balk** 23.43 330 ⇓P P 08 29 54.5 -0.8
baz=24,SNR=243
T31A **Randall Ranch,** 23.44 332 ⇑P P 08 29 55.1 -0.2
baz=24,SNR=221
LZG **Guadalupe-1** 23.47 88 eP P 08 29 56.6 +0.9
124A **Stringfield Ra** 23.49 316 ⇑P P 08 29 55.2 -0.9
baz=24,SNR=424
SFIN **Scholer Farm** 23.50 358 ⇓P P 08 29 55.2 -0.5
baz=24,SNR=75
ACSO **Alum Creek Sta** 23.51 6 eP P 08 29 56.4 +0.5
comp=Z,24µm,2.5s
ACSO LR LR
comp=Z,317µm,19.0s
HMG **Houelmont** 23.56 88 eP P 08 29 57.5 +0.9
SCG **Saint Claude** 23.57 88 eP P 08 29 57.7 +0.9
W27A **Bowe Ranch, En** 23.59 324 ⇑P P 08 29 55.6 -1.2
baz=24,SNR=146
PHG **Guadaloupe-2** 23.61 88 eP P 08 29 58.4 +1.2
TBG **Guadaloupe-3** 23.62 89 eP P 08 29 57.8 +0.6
BCG **Bois Riant Cap** 23.62 88 eP P 08 29 58.7 +1.4
V28A **Channing** 23.63 326 ⇓P P 08 29 56.2 -1.1
baz=24,SNR=373
DOG **Dongo Capester** 23.63 88 eP P 08 29 57.7 +0.3
X26A **CR and CF Fran** 23.66 322 ⇓P P 08 29 56.0 -1.5
baz=24,SNR=303
LPIG **La Paz** 23.66 292 P P 08 29 56.8 -0.7
U29A **Oasis Ranch, S** 23.67 329 ⇓P P 08 29 57.0 -0.7
baz=24,SNR=92
SEG **Port Louis** 23.71 87 eP P 08 29 57.4 -0.6
Y25A **Mesa, Roswell** 23.77 319 ⇑P P 08 29 57.3 -1.4
baz=24,SNR=233
S31A **Mullinville** 23.79 333 ⇓P P 08 29 58.8 +0.1
baz=24,SNR=12
T30A **Plains** 23.79 331 ⇑P P 08 29 58.3 -0.4
baz=24,SNR=161
Z24A **Sheeppen Canyo** 23.82 317 ⇓P P 08 29 58.3 -0.9
baz=24,SNR=320
MGG **Marie-Galante** 23.93 89 eP P 08 29 58.8 -1.3
DSHT **Scott's Head** 23.95 90 eP P 08 30 00.3 0.0
V27A **Dan Oppiter Fa** 23.96 325 ⇑P P 08 29 59.4 -1.1
baz=24,SNR=151
SDMD **Soldier's Deli** 23.97 18 eP P 08 30 01.1 +0.9
comp=Z,1µm,1.1s
SDMD eS S 08 34 11.5 -3.7
KSU1 **Kansas State U** 23.99 340 eP P 08 30 00.7 +0.2
comp=Z,39µm,2.8s
KSU1 LR LR
comp=Z,360µm,22.0s
123A **Bell Site, Whi** 24.00 315 ⇓P P 08 30 00.1 -0.6
baz=24,SNR=75
CGIG 24.00 308 P P 08 30 00.7 -0.2
W26A **Owens Ranch, T** 24.01 323 ⇓P P 08 29 59.9 -1.0
baz=24,SNR=153
U28A **Mallet** 24.11 327 ⇓P P 08 30 00.5 -1.2
baz=24
DEG **La Desirade** 24.14 88 eP P 08 30 00.6 -1.5
X25A **Clemmons Ranch** 24.16 320 ⇓P P 08 30 01.2 -1.1
baz=24,SNR=432
FDF **Fort de France** 24.23 91 eP P 08 30 02.7 -0.3
FDF eS S 08 34 21.9 +1.9
FDF pmax pmax
comp=Z,3µm,1.3s
FDF MLR MLR
comp=Z,370µm,20.0s
FDF **Fort de France** 24.23 91 eP P 08 30 02.6 -0.3
comp=Z,3µm,1.3s
FDF eS S 08 34 21.9 +1.9
FDF LR LR
comp=Z,370µm,20.0s
FDF **Fort de France** 24.23 91 eP P 08 30 03.3 +0.3
FDF **Fort de France** 24.23 91 eP P 08 30 03.4 +0.4
GRW **Mount Saint Ca** 24.24 98 eP P 08 30 05.0 +1.9
GRHS **Sauteurs** 24.24 98 eP P 08 30 03.6 +0.6
S30A **Montezuma** 24.24 332 ⇓P P 08 30 02.2 -0.7
baz=24,SNR=353
T29A **Hugoton** 24.24 330 ⇑P P 08 30 02.7 -0.3
baz=24,SNR=178
Y24A **Capitan** 24.25 318 ⇑P P 08 30 02.8 -0.3
baz=24,SNR=1000
GRGR **Grenville** 24.25 98 eP P 08 30 02.4 -0.7
comp=Z,9µm,1.5s
GRGR LR LR
comp=Z,212µm,20.0s
GRSS **Sisters** 24.25 97 e P 08 30 03.3 +0.2
222A **Williams Famil** 24.27 313 ⇓P P 08 30 02.6 -0.7
baz=24,SNR=36
Z23A **Rita Site, Whi** 24.35 316 ⇑P P 08 30 03.6 -0.4
baz=24,SNR=259
SVB **Belmont** 24.38 95 eP P 08 30 05.1 +0.8
SVV **Soufriere Volc** 24.41 95 eP P 08 30 06.3 +1.7
FCV **Fort Charlotte** 24.41 95 eP P 08 30 06.5 +1.9
U27A **Thompson Grove** 24.45 326 ⇑P P 08 30 04.2 -0.7
baz=25,SNR=651
SLDE **Delcer** 24.47 94 e P 08 30 07.4 +2.3
SLB **Belfond** 24.48 93 eP P 08 30 07.0 +1.7
BHS **Barnard House** 24.50 95 eP P 08 30 07.4 +2.0
MVM **Montagne Vaucl** 24.50 92 eP P 08 30 07.3 +1.9
W25A **X Bar L Ranch,** 24.50 322 ⇓P P 08 30 05.0 -0.4
baz=25,SNR=313
SLPE **Piton Saint Es** 24.52 93 e P 08 30 07.5 +1.8
V26A **Tequesquite Ra** 24.52 324 ⇓P P 08 30 05.2 -0.4
baz=25,SNR=716
S29A **Ulysses** 24.53 331 ⇓P P 08 30 05.2 -0.4
baz=25
122A **Conniff Cattle** 24.54 314 ⇑P P 08 30 05.7 -0.1
baz=25,SNR=202
SLW **Petit Monier** 24.55 93 e P 08 30 07.2 +1.4
MCLT **Moule a Chique** 24.60 94 eP P 08 30 10.0 +3.7
T28A **Walsh** 24.62 328 ⇓P P 08 30 05.7 -0.7
baz=25,SNR=142
Y23A **Lovelace Mesa,** 24.65 317 ⇑P P 08 30 06.1 -0.7
baz=25,SNR=198
MVL **Millersville** 24.66 18 eP P 08 30 07.7 +1.2
comp=Z,3µm,1.5s
X24A **Lazy VL Ranch,** 24.66 319 ⇑P P 08 30 06.1 -0.8
baz=25,SNR=200
R30A **Dighton** 24.69 333 ⇑P P 08 30 06.9 -0.1
baz=25,SNR=525
221A **Mesquite Ranch** 24.70 312 ⇑P P 08 30 06.9 -0.3
baz=25,SNR=73
ALNG **Atlantic LNG** 24.75 102 eP P 08 30 09.1 +1.4
BUAY **Buenos Aires** 24.78 102 eP P 08 30 10.6 +2.7
SSPA **Standing Stone** 24.82 15 eP P 08 30 09.3 +1.2
comp=Z,5µm,2.0s
Z22A **Elephant Butte** 24.84 315 ⇓P P 08 30 08.6 +0.1
baz=25,SNR=77
S28A **Manter** 24.88 329 ⇑P P 08 30 08.3 -0.4
baz=25,SNR=94
TRN **Trinidad (W)** 24.88 101 eP P 08 30 09.0 +0.1
TRN **Trinidad (W)** 24.88 101 e P 08 30 22.9 +14
T27A **Campo** 24.88 327 ⇓P P 08 30 07.9 -1.0
baz=25,SNR=64
320A **Kipp Ranch, An** 24.89 310 ⇑P P 08 30 09.0 0.0
baz=25,SNR=244
BBSR **BB Station** 24.91 48 eP P 08 30 10.0 +1.1
comp=Z,5µm,1.4s
BBSR LR LR
comp=Z,141µm,21.0s
U26A **Atchley Ranch,** 24.93 325 ⇑P P 08 30 09.0 -0.3
baz=25,SNR=608
TPP **Pointe-a-Pierr** 24.93 102 eP P 08 30 10.2 +0.8
TPP **Pointe-a-Pierr** 24.93 102 e P 08 30 25.1 +16
121A **Cookes Peak, D** 24.99 313 ⇓P P 08 30 10.4 +0.5
baz=25,SNR=306
ATAH **Atahualpa** 25.02 161 P P 08 30 11.6 +1.0
ATAH **Atahualpa** 25.02 161 P P 08 30 11.6 +1.0
comp=Z,214nm,1.1s,baz=356,slow=6.0,SNR=67
ATAH LR LR 08 39 41.0
comp=Z,777µm,18.4s,baz=146,slow=36
V25A **Rancho No Teng** 25.03 323 ⇑P P 08 30 10.5 +0.3
baz=25,SNR=792
W24A **Lazy 6 Ranch,** 25.07 321 ⇑P P 08 30 11.2 +0.6
baz=25,SNR=367
X23A **Hourglass Bar** 25.14 319 ⇓P P 08 30 11.5 +0.2
baz=25,SNR=145
BNM **Barren Site** 25.15 317 eP P 08 30 11.3 -0.1
comp=Z,2µm,0.7s
220A **Playas Peak, P** 25.18 311 ⇓P P 08 30 12.0 +0.4
baz=25,SNR=385
R29A **Marienthal** 25.19 332 ⇓P P 08 30 11.8 +0.3
baz=25,SNR=138
TBH **Brigand Hill** 25.24 101 eP P 08 30 12.2 +0.1
Y22A **Socorro** 25.25 316 ⇓P P 08 30 12.8 +0.6
baz=25,SNR=428
LPM **Los Pinos Moun** 25.26 317 eP P 08 30 11.0 -1.3
Y22D **IRIS PASSCAL I** 25.30 317 ⇑P P 08 30 13.3 +0.6
baz=25,SNR=13
U25A **Circle Dot Ran** 25.30 324 ⇓P P 08 30 12.8 +0.1
baz=25,SNR=410
ALLY **Alegheny Colle** 25.31 11 eP P 08 30 13.2 +0.7
comp=Z,1µm,0.6s
ALLY eS S 08 34 43.3 +6.6
TPR **Prospect** 25.32 99 eP P 08 30 06.4 -6.4
V24A **Rampart Ranch,** 25.33 322 ⇑P P 08 30 13.5 +0.5
baz=26,SNR=518
Z21A **St. Cloud Mine** 25.35 314 ⇓P P 08 30 13.8 +0.6
baz=25,SNR=169
LENM **Lemitar** 25.39 317 eP P 08 30 13.1 -0.4
T26A **Comanche Natio** 25.43 326 ⇑P P 08 30 13.7 -0.1
baz=26,SNR=197
R28A **Tribune** 25.43 331 ⇓P P 08 30 13.6 -0.1
baz=26,SNR=402
S27A **Las Animas** 25.45 328 ⇓P P 08 30 13.5 -0.4
baz=26,SNR=102
319A **Douglas** 25.47 309 ⇓P P 08 30 14.8 +0.5
baz=26,SNR=269
W23A **Werner Place,** 25.49 320 ⇓P P 08 30 15.1 +0.6
baz=26,SNR=144
TOSP **Speyside** 25.52 99 eP P 08 30 13.5 -1.1
ANMO **Albuquerque** 25.55 319 eP P 08 30 15.5 +0.6
comp=Z,11µm,1.9s
ANMO PKKKP 09 04 02.4
ANMO **Albuquerque** 25.55 319 P P 08 30 14.9 -0.1
comp=Z,86nm,0.7s,baz=142,slow=11,SNR=118
ANMO LR LR 08 42 17.9
comp=Z,352µm,21.2s,baz=282,slow=41
ANMO P3KP 09 04 02.4
comp=Z,5.5nm,1.1s,baz=17,slow=6.4,SNR=3.1
120A **U Bar Ranch, L** 25.60 312 ⇓P P 08 30 16.3 +0.9
baz=26,SNR=206
LAZ **Ladron** 25.64 317 eP P 08 30 15.8 0.0
comp=Z,678nm,0.4s
S26A **Kim** 25.70 327 ⇓P P 08 30 16.4 +0.2
baz=26,SNR=363
SCIA **State Center** 25.72 348 eP P 08 30 17.1 +0.9
SCIA LR LR
comp=Z,350µm,22.0s
HSIG 25.74 303 P P 08 30 15.6 -0.9
Y21A **Point of Rocks** 25.76 316 ⇑P P 08 30 17.8 +0.9
baz=26,SNR=192
ERPA **Erie** 25.79 11 eP P 08 30 17.6 +0.7
comp=Z,4µm,1.1s
ERPA LR LR
comp=Z,287µm,19.0s
U24A **Moreno Valley** 25.81 323 ⇑P P 08 30 18.1 +0.7
baz=26,SNR=157
T25A **Trinidad** 25.84 325 ⇓P P 08 30 18.4 +0.8
baz=26,SNR=194
BRNJ **Basking Ridge** 25.85 21 eP P 08 30 18.7 +1.4
comp=Z,85nm,0.6s
R27A **Eads** 25.86 329 ⇓P P 08 30 17.4 -0.3
baz=26,SNR=120
Z20A **Nine Sixteen R** 25.88 313 ⇑P P 08 30 18.9 +0.9
baz=26,SNR=140
W22A **Albuquerque** 25.88 319 ⇑P P 08 30 18.2 +0.2
baz=26,SNR=38
V23A **Ortiz Mt. (NFS** 25.90 321 ⇑P P 08 30 18.5 +0.4
baz=26,SNR=70
Q28A **Sharon Springs** 26.02 332 ⇓P P 08 30 19.2 +0.1
baz=26,SNR=139
BBGH **Gun Hill** 26.02 94 eP P 08 30 19.4 +0.2
comp=Z,2µm,1.1s
BBGH LR LR
comp=Z,560µm,20.0s
X21A **Alamocita Cree** 26.09 316 ⇑P P 08 30 20.6 +0.6
baz=26,SNR=296
T24A **Torres, Weston** 26.15 324 ⇓P P 08 30 21.1 +0.6
baz=26,SNR=293
CPNY **Central Park** 26.15 21 eP P 08 30 21.8 +1.7
comp=Z,2µm,1.5s
Y20A **Horse Springs,** 26.18 315 ⇑P P 08 30 21.4 +0.7
baz=26,SNR=262
R26A **Arlington** 26.20 328 ⇓P P 08 30 21.1 +0.3
baz=26,SNR=88
SRIG **Santa Rosalia** 26.21 298 P P 08 30 20.8 0.0
S25A **Robets Cordova** 26.23 326 ⇓P P 08 30 21.4 +0.2
baz=26,SNR=220
JFWS **Jewell Farm** 26.24 353 eP P 08 30 20.4 -0.6
JFWS pmax pmax
comp=Z,3µm,1.3s
JFWS MLR MLR
comp=Z,251µm,20.0s
JFWS **Jewell Farm** 26.24 353 eP P 08 30 20.4 -0.6
comp=Z,3µm,1.3s
JFWS LR LR
comp=Z,251µm,20.0s
U23A **El Rito** 26.29 322 ⇓P P 08 30 22.1 +0.4
baz=26,SNR=527
KSCO **Kaye Shedlock'** 26.35 330 ⇑P P 08 30 22.0 -0.2
baz=26,SNR=84
P28A **Saint Francis** 26.40 332 ⇑P P 08 30 22.8 +0.3
baz=26,SNR=156
W21A **San Fidel** 26.41 318 ⇑P P 08 30 23.0 +0.2
baz=26,SNR=111
V22A **San Miguel Ran** 26.45 320 ⇑P P 08 30 23.6 +0.4
baz=27,SNR=103
R25A **Fountain Ranch** 26.51 327 ⇑P P 08 30 23.9 +0.3
baz=27,SNR=142
BGNE **Belgrade** 26.58 340 ⇑P P 08 30 23.5 -0.5
baz=27,SNR=87
X20A **Quemado** 26.62 316 ⇓P P 08 30 25.4 +0.6
baz=27,SNR=215
S24A **Houchin Ranch,** 26.64 325 ⇓P P 08 30 25.7 +0.7
baz=27,SNR=143
T23A **Casias Ranch,** 26.68 323 ⇑P P 08 30 25.9 +0.6
baz=27,SNR=214
Q26A **Hugo** 26.71 329 ⇑P P 08 30 25.7 +0.3
baz=27,SNR=42
U22A **Llaves** 26.72 321 ⇑P P 08 30 25.8 +0.2
baz=27,SNR=216
N30A **Hueftle Ranch,** 26.74 336 ⇑P P 08 30 25.6 +0.1
baz=27,SNR=15
P27A **Ficken Ranch,** 26.76 331 ⇓P P 08 30 26.2 +0.4
baz=27,SNR=46
BINY **Binghamton** 26.79 17 eP P 08 30 21.3 -4.6
comp=Z,18µm,1.6s
BINY LR LR
comp=Z,263µm,20.0s
SDCO **Great Sand Dun** 26.88 325 eP P 08 30 27.7 +0.6
comp=Z,121nm,0.5s
SDCO LR LR
comp=Z,275µm,22.0s
N29A **Votaw Ranch, W** 26.97 335 ⇑P P 08 30 27.5 0.0
baz=27,SNR=57

W20A Ramah 26.97 317 ⇑P P 08 30 28.0 +0.1
baz=27,SNR=187
YLE Yale 26.98 22 eP P 08 30 27.5 0.0
comp=Z,3µm,1.0s
R24A Sanders Place, 27.01 326 ⇑P P 08 30 29.0 +0.8
baz=27,SNR=106
TUC Tucson 27.04 309 eP P 08 30 28.0 -0.4
TUC pmax pmax
comp=Z,655nm,1.1s
TUC MLR MLR
comp=Z,1093µm,19.0s
TUC Tucson 27.04 309 eP P 08 30 28.0 -0.4
comp=Z,655nm,1.1s
TUC LR LR
comp=Z,1093µm,19.0s
Q25A Bedland, Calha 27.07 328 ⇑P P 08 30 28.8 +0.1
baz=27,SNR=82
P26A Davis Ranch, A 27.13 330 ⇓P P 08 30 29.3 +0.2
baz=27,SNR=43
S23A Nye Farm, Mont 27.13 324 ⇑P P 08 30 30.3 +1.0
baz=27,SNR=33
T22A Edith 27.17 322 ⇓P P 08 30 30.3 +0.6
baz=27,SNR=125
O27A Beecher Island 27.23 332 ⇓P P 08 30 30.7 +0.8
baz=27,SNR=32
N28A Pribbeno Ranch 27.23 334 ⇑P P 08 30 30.0 +0.1
baz=27,SNR=91
U21A Nageezi 27.24 320 ⇑P P 08 30 30.8 +0.4
baz=27,SNR=145
V20A Brimhall 27.36 318 ⇑P P 08 30 31.9 +0.6
baz=28,SNR=35
R23A Moffat 27.38 325 ⇑P P 08 30 32.1 +0.6
baz=28,SNR=129
P25A Willow Gulch B 27.49 329 ⇑P P 08 30 32.9 +0.5
baz=28,SNR=43
M29A Burnside Ranch 27.52 336 ⇓P P 08 30 32.2 -0.4
baz=28,SNR=50
T21A Navajo Lake 27.54 321 ⇑P P 08 30 33.1 +0.2
baz=28,SNR=109
Q24A Divide 27.57 327 ⇓P P 08 30 33.3 0.0
baz=28,SNR=43
X18A Snowflake 27.60 314 ⇓P P 08 30 34.4 +0.9
baz=28,SNR=108
S22A 4UR Ranch, Cre 27.63 323 ⇓P P 08 30 34.4 +0.5
baz=28,SNR=193
O26A Horse Wrangler 27.65 331 ⇑P P 08 30 34.3 +0.5
baz=28,SNR=33
OGNE Ogallala 27.65 334 eP P 08 30 34.0 +0.3
comp=Z,1µm,0.8s
OGNE LR LR
comp=Z,398µm,21.0s
OGNE Ogallala 27.65 334 ⇑P P 08 30 34.2 +0.4
baz=28,SNR=60
U20A Newcomb 27.75 319 ⇓P P 08 30 34.6 -0.1
baz=28,SNR=14
M28A Bar X Bar Ranc 27.75 335 ⇓P P 08 30 34.2 -0.4
baz=28
N27A Anderson Farm, 27.75 333 ⇑P P 08 30 33.5 -1.2
baz=28,SNR=105
W18A Petrified Fore 27.79 315 ⇑P P 08 30 35.9 +0.8
baz=28,SNR=107
P24A Kohler Place, 27.86 328 ⇓P P 08 30 36.0 +0.2
baz=28
Q23A Hartsel 27.89 326 ⇑P P 08 30 36.4 +0.2
baz=28
R22A Saguache, Gunn 27.92 324 ⇑P P 08 30 37.1 +0.7
baz=28,SNR=115
O25A Wiggins 27.93 330 ⇑P P 08 30 37.0 +0.7
baz=28
TRY Troy 27.98 20 eP P 08 30 37.1 +0.6
comp=Z,1µm,1.1s
BRYW Bryant College 28.03 24 eP P 08 30 37.5 +0.5
comp=Z,1µm,2.0s
QUA2 Belchertown 28.04 22 eP P 08 30 37.5 +0.5
comp=Z,920nm,1.4s
N26A Koester Ranch, 28.08 332 ⇑P P 08 30 37.8 +0.2
baz=28
S21A Coal Bank Pass 28.13 322 ⇓P P 08 30 38.4 0.0
baz=28,SNR=71
GVA Apache Junctio 28.17 311 P P 08 30 38.9 +0.5
P23A Jefferson 28.24 327 ⇓P P 08 30 39.7 +0.4
baz=28,SNR=91
ECSD EROS Data Cent 28.25 344 eP P 08 30 37.5 -1.4
comp=Z,2µm,1.4s
ECSD LR LR
comp=Z,517µm,22.0s
MVCO Mesa Verde 28.26 320 eP P 08 30 39.3 -0.1
comp=Z,9µm,2.0s
MVCO Mesa Verde 28.26 320 ⇑P P 08 30 39.4 -0.1
baz=28,SNR=131
M27A Reverse DX Ran 28.28 334 ⇓P P 08 30 39.9 +0.5
baz=28
O24A Longmont 28.41 329 ⇑P P 08 30 41.0 +0.4
baz=28,SNR=10
214A Organ Pipe Nat 28.41 307 ⇑P P 08 30 40.9 +0.3
baz=28,SNR=65
Q22A Crested Butte, 28.45 325 ⇓P P 08 30 41.2 +0.1
baz=29,SNR=92
N25A Grover 28.46 331 ⇑P P 08 30 40.6 -0.4
baz=29
R21A Cimarron 28.47 323 ⇓P P 08 30 41.2 0.0
baz=29,SNR=24
SADO Sadowa 28.51 11 P P 08 30 41.4 +0.2
SADO Sadowa 28.51 11 P P 08 30 41.4 +0.2
comp=Z,32nm,0.8s,baz=213,slow=8.6,SNR=22
SADO LR LR 08 42 30.4
comp=Z,431µm,20.7s,baz=208,slow=38
WES Weston 28.51 24 eP P 08 30 41.8 +0.6
WES pmax pmax
comp=Z,5µm,1.0s
WES Weston 28.51 24 eP P 08 30 41.8 +0.6
comp=Z,3µm,1.0s
HRV Adam Dziewonsk 28.53 23 eP P 08 30 43.4 +2.0
HRV pmax pmax
comp=Z,277nm,1.1s
HRV Adam Dziewonsk 28.53 23 eP P 08 30 43.4 +2.0
comp=Z,277nm,1.1s
M26A McRoberts Ranc 28.56 333 ⇑P P 08 30 42.6 +0.7
baz=29
ACCN Adirondack Com 28.57 19 eP P 08 30 42.6 +0.9
comp=Z,5µm,2.6s
X16A Lo Mia Camp, P 28.58 313 ⇓P P 08 30 42.6 +0.4
baz=29,SNR=115
S20A Disappointment 28.58 321 ⇓P P 08 30 42.6 +0.3
baz=29,SNR=126
SMCO Snowmass 28.71 325 eP P 08 30 42.1 -1.4
comp=Z,2µm,1.4s
L27A T5 Ranch, Ells 28.71 335 ⇑P P 08 30 44.4 +1.2
baz=29,SNR=29
Q21A Lamborn Mesa, 28.80 324 ⇓P P 08 30 44.9 +0.8
baz=29,SNR=49
R20A Redvale 28.83 322 ⇑P P 08 30 45.0 +0.6
baz=29,SNR=95
N24A Carr 28.85 330 ⇑P P 08 30 45.3 +0.8
baz=29,SNR=39
SPMN St. Paul 28.86 350 ⇓P P 08 30 43.3 -1.0
baz=29,SNR=95
P22A Eagle 28.89 326 ⇓P P 08 30 45.2 +0.3
baz=29,SNR=122
O23A Lake Granby, G 28.90 328 ⇓P P 08 30 45.5 +0.4
baz=29,SNR=37
PV01 Paradox Valley 28.91 322 eP P 08 30 45.9 +0.8
comp=Z,12µm,1.7s
NCB Newcomb 28.93 18 eP P 08 30 45.3 +0.3
comp=Z,884nm,1.3s
NCB LR LR
comp=Z,255µm,19.0s
M25A Palm-Egli Farm 28.94 332 ⇑P P 08 30 46.1 +0.8
baz=29
WUAZ Wupatki 29.12 315 eP P 08 30 47.4 +0.5
comp=Z,7µm,1.1s
WUAZ LR LR
comp=Z,606µm,22.0s
WUAZ Wupatki 29.12 315 ⇓P P 08 30 47.5 +0.5
baz=29,SNR=80
Z14A Wintersburg 29.14 309 ⇑P P 08 30 47.3 +0.3
baz=29,SNR=23
O22A Kremmling 29.19 327 ⇓P P 08 30 47.4 -0.3
baz=29,SNR=40
K27A Flueckinger Fa 29.20 335 ⇑P P 08 30 47.1 -0.4
baz=29,SNR=72
P21A Newcastle 29.21 325 ⇓P P 08 30 48.5 +0.6
baz=29,SNR=39
PV04 Paradox Valley 29.27 322 eP P 08 30 48.4 +0.1
Q20A Ridgley Place, 29.29 323 ⇓P P 08 30 48.9 +0.4
baz=29,SNR=31
HNH Hanover 29.31 21 eP P 08 30 50.6 +2.2
comp=Z,136nm,1.4s

M24A Cheyenne 29.32 331 ⇑P P 08 30 49.2 +0.5
baz=30,SNR=15
FFD Franklin Falls 29.32 22 eP P 08 30 50.9 +2.4
comp=Z,1µm,1.4s
PV10 Paradox Valley 29.34 322 eP P 08 30 49.9 +0.9
comp=Z,8µm,0.9s
LONY Lake Ozonia 29.42 17 eP P 08 30 50.0 +0.6
comp=Z,1µm,1.0s
LONY LR LR
comp=Z,290µm,20.0s
N23A Red Feather La 29.42 329 ⇑P P 08 30 49.9 +0.1
baz=30,SNR=30
Y14A Wickenburg 29.46 310 ⇑P P 08 30 49.9 0.0
baz=30,SNR=56
L25A Engebretsen Ra 29.48 333 ⇑P P 08 30 50.1 +0.1
baz=30,SNR=15
113A Mohawk Valley, 29.49 308 ⇓P P 08 30 50.0 -0.1
baz=30,SNR=30
S18A Hurst Farm, Bl 29.49 320 ⇓P P 08 30 50.0 -0.3
baz=30,SNR=163
PHWY Pilot Hill 29.49 330 eP P 08 30 50.5 +0.1
comp=Z,6µm,2.6s
BRSD Miller 29.57 341 ⇑P P 08 30 49.0 -1.7
baz=30,SNR=116
K26A Motz Farm, Whi 29.58 334 ⇑P P 08 30 50.6 -0.3
baz=30
N22A Wattenberg Ran 29.61 328 ⇓P P 08 30 51.8 +0.4
baz=30,SNR=31
MSNY Massena 29.69 16 eP P 08 30 53.9 +2.3
O21A Pagoda 29.71 326 ⇑P P 08 30 52.9 +0.6
baz=30,SNR=19
P20A De Beque 29.72 324 ⇑P P 08 30 52.7 +0.4
baz=30,SNR=52
M23A Laramie 29.75 330 ⇓P P 08 30 52.8 +0.2
baz=30
L24A Wheatland 29.82 331 ⇑P P 08 30 53.7 +0.6
baz=30,SNR=21
FRNY Flat Rock 29.90 18 eP P 08 30 53.1 -0.4
comp=Z,1µm,1.3s
LBNH Lisbon 29.90 21 eP P 08 30 54.1 +0.5
LBNH MLR MLR
comp=Z,240µm,20.0s
LBNH Lisbon 29.90 21 eP P 08 30 54.1 +0.5
comp=Z,5µm,0.6s
LBNH LR LR
comp=Z,240µm,20.0s
O20A White River Ci 30.07 325 ⇑P P 08 30 56.2 +0.8
baz=30,SNR=66
NNA Nana 30.08 161 eP P 08 30 55.2 -0.3
comp=Z,667nm,1.3s
NNA LR LR
comp=Z,266µm,20.0s
NNA Nana 30.08 161 P P 08 30 56.9 +1.4
comp=Z,655nm,1.5s,SNR=6.4
M22A Cedar Creek Ra 30.13 329 ⇑P P 08 30 56.6 +0.7
baz=30
N21A Black Mountain 30.13 327 ⇓P P 08 30 56.7 +0.8
baz=30,SNR=42
P19A Cripple Cowboy 30.14 324 ⇓P P 08 30 56.1 0.0
baz=30,SNR=39
L23A Garrett 30.23 331 ⇑P P 08 30 57.2 +0.3
baz=30,SNR=38
U15A North Rim 30.24 315 ⇓P P 08 30 57.4 +0.4
baz=30,SNR=123
K24A Anderson Ranch 30.31 332 ⇑P P 08 30 57.8 +0.4
baz=30
GLA Glamis 30.42 307 eP P 08 30 58.3 -0.1
GLA pmax pmax
comp=Z,5µm,1.5s
GLA Glamis 30.42 307 eP P 08 30 58.3 -0.1
comp=Z,1µm,1.5s
GLA Glamis 30.42 307 ⇑P P 08 30 58.3 -0.1
baz=30,SNR=28
PDMCI Parker Dam,Lak 30.46 310 ⇑P P 08 30 59.0 +0.3
baz=30,SNR=68
Y12C Blythe 30.49 309 ⇑P P 08 30 59.5 +0.5
baz=31,SNR=22
L22A Ellis Ranch, M 30.52 330 ⇓P P 08 31 00.1 +0.7
baz=31,SNR=15
N20A Spence Gulch, 30.58 326 ⇓P P 08 31 00.2 +0.3
baz=31,SNR=178
W13A Hualapai Mount 30.66 312 ⇑P P 08 31 01.0 +0.3
baz=31,SNR=65
M21A Separation Pea 30.67 328 ⇓P P 08 31 00.9 +0.2
baz=31,SNR=38
O19A Miners Draw (B 30.68 324 ⇓P P 08 31 00.7 -0.1
baz=31,SNR=104
K23A Bowen Ranch, D 30.70 331 ⇑P P 08 31 01.5 +0.7
baz=31,SNR=16
SRU San Rafael 30.70 321 ⇓P P 08 31 01.0 0.0
baz=31,SNR=102
J24A Dixon Ranch, L 30.73 333 ⇑P P 08 31 02.4 +1.4
baz=31
P18A Preston Nutter 30.87 322 ⇓P P 08 31 02.8 +0.2
baz=31,SNR=221
L21A Rawlins 30.93 328 ⇑P P 08 31 02.8 -0.2
baz=31,SNR=26
Q16A Castle Valley 30.98 320 ⇓P P 08 31 03.5 +0.1
baz=31,SNR=74
WVL Waterville 31.00 23 eP P 08 31 03.0 -0.3
M20A Sweetwater, Wa 31.00 327 ⇑P P 08 31 03.8 +0.2
baz=31,SNR=45
NEE2 Needles Airpor 31.03 311 ⇓P P 08 31 03.8 +0.2
baz=31,SNR=7.0
K22A Casper 31.04 330 ⇓P P 08 31 04.0 +0.2
baz=31,SNR=28
RSSD Black Hills 31.11 335 eP P 08 31 05.4 +0.9
RSSD pmax pmax
comp=Z,214nm,1.3s
RSSD Black Hills 31.11 335 eP P 08 31 05.4 +0.9
comp=Z,53nm,1.3s
SWSC Sam W. Stewart 31.11 307 ⇑P P 08 31 04.4 0.0
baz=31,SNR=21
I24A Kuemmerle Ranc 31.14 334 ⇑P P 08 31 04.2 -0.5
baz=31
IRM Iron Mountain 31.14 309 ⇑P P 08 31 04.9 +0.2
baz=31,SNR=42
BC3 Big Chuckawall 31.15 308 ⇓P P 08 31 04.7 -0.2
baz=31,SNR=56
J23A Dilts Ranch, B 31.18 332 ⇑P P 08 31 05.4 +0.3
baz=31
DVTC Desert V Tower 31.23 306 ⇑P P 08 31 05.6 0.0
baz=31,SNR=41
EYMN Ely 31.35 353 eP P 08 31 04.9 -1.5
comp=Z,3µm,1.8s
EYMN LR LR
comp=Z,351µm,21.0s
MSU Marysvale 31.36 319 eP P 08 31 06.6 -0.2
MSU Marysvale 31.36 319 eP P 08 31 06.6 -0.2
MVU Marysvale 31.37 319 eP P 08 31 08.0 +1.0
comp=Z,7µm,2.1s
MVU LR LR
comp=Z,369µm,20.0s
L20A Wamsutter 31.46 328 ⇑P P 08 31 07.7 +0.1
baz=32,SNR=42
LDFC Landfair 31.53 311 eP P 08 31 10.4 +2.2
comp=Z,4µm,1.3s
M19A Rock Springs 31.53 326 ⇑P P 08 31 07.5 -0.7
baz=32,SNR=32
MONP Monument Peak 31.57 306 ⇓P P 08 31 08.7 0.0
baz=32,SNR=42
CCUT Cedar City 31.57 316 eP P 08 31 09.4 +0.7
comp=Z,6µm,2.4s
I23A Meade Ranch, G 31.58 333 ⇓P P 08 31 09.4 +0.8
baz=32
J22A Midwest 31.60 331 ⇑P P 08 31 08.7 -0.1
baz=32,SNR=63
BAR Barrett 31.69 306 eP P 08 31 09.2 -0.3
comp=Z,4µm,2.4s
BAR eS S 08 36 19.8 +2.4
BELC Belle Mtn. Jos 31.70 308 ⇑P P 08 31 09.7 -0.1
baz=32,SNR=76
ARUT Antelope Range 31.75 317 eP P 08 31 10.7 +0.4
ARUT Antelope Range 31.75 317 eP P 08 31 10.7 +0.4
comp=Z,3µm,0.6s
H24A Dirks Ranch, A 31.83 335 ⇑P P 08 31 10.8 0.0
baz=32,SNR=80
PFO Pinyon Flat Ob 31.89 307 P P 08 31 14.0 +2.6
comp=Z,2µm,1.0s,SNR=46
PFO Pinyon Flat Ob 31.89 307 eP P 08 31 11.6 +0.1
comp=Z,2µm,1.4s
PFO LR LR
comp=Z,763µm,21.0s
PFO Pinyon Flat Ob 31.89 307 ⇓P P 08 31 11.5 +0.1
baz=32,SNR=46
K20A Yellowstone Ra 31.93 328 ⇑P P 08 31 11.6 -0.1
baz=32,SNR=65
MPU Maple Canyon 31.94 322 eP P 08 31 12.8 +0.9
comp=Z,2µm,1.5s
DAU Daniels Canyon 31.97 322 eP P 08 31 13.6 +1.3
DAU Daniels Canyon 31.97 322 eP P 08 31 13.6 +1.3
I22A 9 Mile Ranch, 31.98 332 ⇑P P 08 31 13.0 +0.9
baz=32,SNR=29
EMMW East Machias 32.00 26 eP P 08 31 13.6 +1.6
comp=Z,430nm,1.0s
J21A Lysite 32.01 330 ⇑P P 08 31 13.1 +0.7
baz=32,SNR=84
H23A Clabaugh Cattl 32.03 334 ⇑P P 08 31 13.8 +1.2
baz=32,SNR=8.1
L19A Farson 32.05 327 ⇓P P 08 31 12.7 -0.2
baz=32,SNR=42
109C Camp Elliot, M 32.10 306 ⇓P P 08 31 13.1 -0.1
baz=32,SNR=8.9
JLU Jordanelle 32.20 323 eP P 08 31 14.7 +0.4
comp=Z,965nm,1.4s
G24A Alzada 32.26 336 ⇓P P 08 31 14.0 -0.5
baz=32,SNR=56
TUQ Turquoise Moun 32.28 311 ⇓P P 08 31 15.2 +0.3
baz=32,SNR=22
I21A Big Trails, Te 32.29 331 ⇓P P 08 31 14.5 -0.4
baz=32,SNR=41
L18A Fontenelle, Gr 32.29 326 ⇑P P 08 31 14.7 -0.2
baz=32,SNR=103
K19A Absolon Red Bu 32.31 328 ⇑P P 08 31 14.6 -0.4
baz=32,SNR=31
HEC Hector,Ludlow 32.31 310 ⇓P P 08 31 15.6 +0.5
baz=32,SNR=22
J20A Shoshoni 32.32 329 ⇓P P 08 31 15.9 +0.8
baz=32,SNR=60
M17A Scullys Gap (B 32.33 324 ⇑P P 08 31 14.9 -0.4
baz=32,SNR=60
AGMN Agassiz Nation 32.38 348 eP P 08 31 13.8 -1.6
comp=Z,1µm,1.0s
CTU Camp Tracy 32.44 322 eP P 08 31 16.9 +0.7
comp=Z,5µm,2.4s
MURC Murrieta 32.45 307 ⇑P P 08 31 16.7 +0.5
baz=32,SNR=38
H22A Clearmont 32.47 333 ⇑P P 08 31 17.2 +0.8
baz=33,SNR=62
BBRC Big Bear Solar 32.51 308 ⇓P P 08 31 17.8 +0.8
baz=33,SNR=21
G23A Biddle 32.55 334 ⇑P P 08 31 16.9 -0.1
baz=33,SNR=70
PDAR Pinedale Array 32.63 327 P P 08 31 17.4 -0.5
PDAR e 09 02 55.6
PDAR Pinedale Array 32.63 327 P P 08 31 17.4 -0.5
comp=Z,14nm,0.6s,baz=129,slow=12,SNR=60
PDAR P3KPbc 09 02 55.6
comp=Z,2.1nm,1.1s,baz=329,slow=1.7,SNR=8.1
BW06 Boulder Array 32.63 327 eP P 08 31 17.2 -0.7
comp=Z,1µm,1.4s
BW06 LR LR
comp=Z,433µm,20.0s
F24A Ekalaka 32.70 336 ⇑P P 08 31 17.2 -1.1
baz=33,SNR=33
J19A Crowheart 32.73 328 ⇑P P 08 31 18.6 -0.2
baz=33,SNR=28
SHOC Shoshone 32.76 311 ⇑P P 08 31 19.2 +0.3
baz=33,SNR=40
DUG Dugway 32.76 321 eP P 08 31 19.3 +0.3
DUG pmax pmax
comp=Z,1µm,1.3s
DUG MLR MLR
comp=Z,477µm,21.0s
DUG Dugway 32.76 321 eP P 08 31 19.3 +0.3
comp=Z,1µm,1.3s
DUG LR LR
comp=Z,477µm,21.0s
DUG Dugway 32.76 321 ⇑P P 08 31 19.1 +0.1
baz=33,SNR=133
I20A Worland 32.78 330 ⇑P P 08 31 19.4 +0.3
baz=33,SNR=55
H21A Big Horn, Sher 32.80 332 ⇓P P 08 31 19.6 +0.3
baz=33,SNR=34
RRX Edison Barstow 32.83 309 ⇓P P 08 31 19.9 +0.4
baz=33
MDND Maddock 32.85 343 ⇓P P 08 31 18.7 -0.8
baz=33,SNR=186
GSC Goldstone 32.87 310 eP P 08 31 20.3 +0.4
GSC eS S 08 36 37.3 +1.5
GSC pmax pmax
comp=Z,940nm,1.2s
GSC Goldstone 32.87 310 eP P 08 31 20.3 +0.4
comp=Z,226nm,1.2s
GSC eS S 08 36 37.3 +1.5
GSC Goldstone 32.87 310 ⇑P P 08 31 19.9 0.0
baz=33,SNR=13
HWUT Hardware Ranch 32.92 324 eP P 08 31 20.7 +0.2
comp=Z,1µm,1.3s
HWUT LR LR
comp=Z,637µm,20.0s
G22A Birney 32.94 334 ⇓P P 08 31 20.8 +0.4
baz=33,SNR=38
F23A Volborg 32.98 335 ⇓P P 08 31 20.5 -0.2
baz=33,SNR=208
BFSC Mount Baldy Ra 33.06 308 ⇑P P 08 31 21.5 -0.1
baz=33,SNR=22
H20A Greybull 33.13 331 ⇓P P 08 31 22.2 +0.1
baz=33,SNR=59
E24A Baker 33.24 337 ⇓P P 08 31 22.4 -0.7
baz=33,SNR=33
SCI San Clemente I 33.26 305 ⇓P P 08 31 23.6 +0.2
baz=33,SNR=11
I19A Meeteetse 33.27 329 ⇓P P 08 31 23.8 +0.3
baz=33,SNR=41
CIS Catalina Islan 33.31 306 ⇑P P 08 31 23.8 0.0
baz=33,SNR=17
FMP Fort Macarthur 33.34 306 ⇓P P 08 31 24.2 +0.3
baz=33
G21A Lodge Grass 33.34 333 ⇓P P 08 31 24.7 +0.7
baz=34
MWC Mount Wilson 33.35 307 eP P 08 31 24.2 -0.1
MWC eS S 08 36 47.5 +3.9
MWC pmax pmax
comp=Z,1µm,1.2s
MWC Mount Wilson 33.35 307 eP P 08 31 24.2 -0.1
comp=Z,1µm,1.2s
MWC eS S 08 36 47.5 +3.9
F22A Rosebud 33.37 334 ⇓P P 08 31 23.6 -0.6
baz=34,SNR=82
PQI Presque Isle 33.40 23 eP P 08 31 25.4 +1.1
comp=Z,1µm,0.8s
PQI eS S 08 36 39.6 -3.9
PASC Pasadena Art C 33.43 307 eP P 08 31 25.7 +1.0
comp=Z,2µm,1.5s
I18A Diamond G Ranc 33.43 328 ⇑P P 08 31 25.2 +0.2
baz=34,SNR=20
FURC Furnace Creek, 33.44 312 ⇑P P 08 31 25.1 +0.4
baz=34,SNR=118
AHID Auburn Hatcher 33.44 326 eP P 08 31 25.3 +0.3
comp=Z,1µm,1.3s
AHID LR LR
comp=Z,644µm,22.0s
R11A Troy Canyon, C 33.48 316 ⇑P P 08 31 26.1 +0.7
baz=34,SNR=87
EDW2 Edwards Air Fo 33.57 309 ⇓P P 08 31 25.9 -0.1
baz=34,SNR=47
DECC Green Verdugo 33.57 307 ⇑P P 08 31 26.3 +0.3
baz=34,SNR=8.2
E23A Ismay 33.57 336 ⇑P P 08 31 25.1 -0.8
baz=34,SNR=65
LRMC Laurel Mountai 33.59 310 ⇑P P 08 31 26.4 +0.1
baz=34,SNR=70
MPMC Manual Prospec 33.70 311 ⇓P P 08 31 27.1 -0.3
baz=34,SNR=82
D24A Glendive 33.72 338 ⇑P P 08 31 26.9 -0.3
baz=34,SNR=101
REDW Red Top Meadow 33.72 327 eP P 08 31 28.1 +0.6
comp=Z,78nm,1.3s
HVU Hansel Valley 33.73 323 eP P 08 31 27.6 +0.1
HVU pmax pmax
comp=Z,2µm,1.4s
HVU Hansel Valley 33.73 323 eP P 08 31 27.6 +0.1
comp=Z,2µm,1.4s
H19A Powell 33.73 330 ⇓P P 08 31 27.6 +0.1
baz=34,SNR=14
SNOW Snow King Moun 33.74 327 eP P 08 31 28.4 +0.7
comp=Z,4µm,1.2s
LOHW Long Hollow 33.77 327 eP P 08 31 26.9 -1.0
comp=Z,3µm,1.4s
F21A Absaloka Mine, 33.77 333 ⇑P P 08 31 27.9 +0.2
baz=34
E22A Miles City 33.78 335 ⇑P P 08 31 27.0 -0.7
baz=34,SNR=303
G20A Bridger 33.79 332 ⇑P P 08 31 27.4 -0.5
baz=34,SNR=36

TPAW **Teton Pass** 33.86 327 *e*P P 08 31 29.2 +0.4
comp=Z,5µm,1.4s
MOOW **Moose Ponds** 33.94 327 *e*P P 08 31 29.2 -0.1
comp=Z,5µm,1.6s
RRI2 **Red Ridge** 33.96 326 *e*P P 08 31 30.2 +0.6
comp=Z,4µm,1.3s
I17A **Pilgrim Ck.** 33.97 328 ⇓P P 08 31 30.0 +0.4
baz=34,SNR=23
OSI **Osito Adit** 34.01 308 *e*P P 08 31 31.1 +1.2
comp=Z,3µm,1.2s
OSI **Osito Adit** 34.01 308 ⇑P P 08 31 30.0 +0.1
baz=34,SNR=14
GRAC **Grapevine Rang** 34.04 312 ⇑P P 08 31 31.1 +1.0
baz=34,SNR=33
DCID1 **Drake Creek** 34.06 327⇑*e*P P 08 31 30.7 +0.4
comp=Z,6µm,1.7s
H18A **Shoshone NF, C** 34.06 330 ⇓P P 08 31 30.0 -0.4
baz=34,SNR=33
BLG **Laguna Peak** 34.08 307 ⇓P P 08 31 30.5 +0.1
baz=34,SNR=11
D23A **Lindsay** 34.09 337 ⇓P P 08 31 30.1 -0.3
baz=34,SNR=78
C24A **Savage** 34.11 338 ⇓P P 08 31 30.0 -0.5
baz=34,SNR=113
IMW **Indian Meadow** 34.14 327 *e*P P 08 31 31.5 +0.3
comp=Z,2µm,1.3s
RLMT **Red Lodge** 34.20 330 *e*P P 08 31 31.5 -0.1
comp=Z,941nm,0.7s
RLMT LR LR
comp=Z,269µm,21.0s
F20A **Billings** 34.20 332 ⇓P P 08 31 32.0 +0.6
baz=34,SNR=11
ISA **Isabella** 34.25 309 *e*P P 08 31 32.2 +0.2
ISA pmax pmax
comp=Z,1µm,1.3s
ISA **Isabella** 34.25 309 *e*P P 08 31 32.2 +0.2
comp=Z,350nm,1.3s
ISA **Isabella** 34.25 309 ⇑P P 08 31 32.4 +0.4
baz=34,SNR=38
ULM **Lac du Bonnet** 34.25 349 *e*P P 08 31 30.1 -1.6
comp=Z,2µm,1.1s
ULM **Lac du Bonnet** 34.25 349 P P 08 31 30.9 -0.8
comp=Z,190nm,1.1s,baz=167,slow=8.1,SNR=24
ULM LR LR 08 46 43.7
comp=Z,346µm,21.7s,baz=173,slow=38
SAML **Samuel** 34.28 137 *e*P P 08 31 29.3 -3.0
comp=Z,42nm,1.4s
SAML *e*S S 08 37 15.2 +17
SAML LR LR
comp=Z,433µm,19.0s
ARVC **Arvin** 34.30 308 ⇓P P 08 31 32.9 +0.6
baz=34,SNR=28
CWC **Cottonwood Cre** 34.30 311 ⇑P P 08 31 33.1 +0.6
baz=34,SNR=14
H17A **Grant Village** 34.31 328 ⇓P P 08 31 33.1 +0.6
baz=34,SNR=14
E21A **Keefer Ranch,** 34.32 334 ⇓P P 08 31 32.8 +0.4
baz=34,SNR=70
LKWY **Lake** 34.34 329 *e*P P 08 31 35.2 +2.3
LKWY pmax pmax
comp=Z,970nm,2.0s
LKWY MLR MLR
comp=Z,1210µm,20.0s
LKWY **Lake** 34.34 329 *e*P P 08 31 35.2 +2.3
comp=Z,970nm,2.0s
LKWY LR LR
comp=Z,1210µm,20.0s
I16A **Newdale** 34.41 327 ⇑P P 08 31 33.6 +0.3
baz=34,SNR=39
D22A **Cohagen** 34.45 336 ⇓P P 08 31 33.3 -0.2
baz=35,SNR=137
TPH **Tonopah** 34.45 314 P P 08 31 50.0 +16
TPH MLR MLR
comp=Z,590µm,22.0s
TPH **Tonopah** 34.45 314 PFAKE 08 31 40.0 +6.1
TPH LR LR
comp=Z,590µm,22.0s
BSC **Santa Cruz Isl** 34.48 306 ⇓P P 08 31 33.8 0.0
baz=34,SNR=13
G18A **Lazy EL Ranch,** 34.49 330 ⇑P P 08 31 34.0 -0.1
baz=35,SNR=80
ELK **Elko** 34.58 320 *e*P P 08 31 35.4 +0.5
comp=Z,668nm,1.0s
F19A **Roth Farm, Mol** 34.60 332 ⇓P P 08 31 34.5 -0.5
baz=35,SNR=46
C23A **Lambert** 34.61 337 ⇑P P 08 31 34.3 -0.6
baz=35,SNR=115
TIN **Tinemaha** 34.68 312 ⇑P P 08 31 36.4 +0.7
baz=35,SNR=9.5
YMR **Madison River** 34.70 328 *e*P P 08 31 36.8 +0.9
comp=Z,214nm,0.6s
SBC **Santa Barbara** 34.70 307 ⇓P P 08 31 36.0 +0.3
baz=35,SNR=7.7
D21A **La Casta Ranch** 34.71 335 ⇓P P 08 31 35.7 -0.1
baz=35,SNR=52
VES **Vestal, Richgr** 34.78 309 ⇑P P 08 31 37.0 +0.5
baz=35,SNR=68
DGMT **Dagmar** 34.83 339 *e*P P 08 31 35.8 -0.9
comp=Z,2µm,1.4s
DGMT LR LR
comp=Z,385µm,21.0s
DGMT **Dagmar** 34.83 339 ⇓P P 08 31 35.8 -0.9
baz=35,SNR=32
C22A **Vida** 34.83 337 ⇑P P 08 31 36.4 -0.3
baz=35,SNR=167
H16A **Russell Place,** 34.87 328 ⇑P P 08 31 37.8 +0.5
baz=35,SNR=29
GCMT **Greycliff** 34.89 331 *e*P P 08 31 38.6 +1.1
comp=Z,569nm,0.8s
PKM **Peak Mountain** 34.95 307 ⇑P P 08 31 38.0 -0.2
baz=35,SNR=43
E19A **Rath Farm, Rou** 35.00 332 ⇑P P 08 31 38.8 +0.6
baz=35,SNR=63
F18A **Big Timber** 35.00 331 ⇓P P 08 31 38.5 +0.1
baz=35,SNR=57
I15A **Monteview** 35.02 326 ⇓P P 08 31 39.1 +0.5
baz=35,SNR=14
QLMT **Earthquake Lak** 35.05 328 *e*P P 08 31 40.1 +1.2
MTUM **Tungsten Hills** 35.05 312 *e*P P 08 31 39.8 +0.8
G17A **Pierce Place,** 35.06 329 ⇑P P 08 31 39.2 +0.3
baz=35
RCTC **Rector, Farmer** 35.09 310 ⇓P P 08 31 39.0 -0.1
baz=35,SNR=38
B23A **Brockton** 35.10 338 ⇓P P 08 31 38.8 -0.3
baz=35,SNR=172
J14A **Carey** 35.14 324 ⇓P P 08 31 38.9 -0.8
baz=35,SNR=115
A24A **Westby** 35.15 340 ⇓P P 08 31 39.1 -0.4
baz=35,SNR=156
D20A **Manuel Ranch,** 35.20 334 ⇑P P 08 31 40.4 +0.4
baz=35,SNR=199
SMMC **Simmler** 35.25 308 ⇓P P 08 31 41.2 +0.7
baz=35,SNR=7.8
NV11 **Mina Array Sit** 35.27 314 *e*P P 08 31 41.8 +1.0
B22A **Reddig Ranch S** 35.33 337 ⇓P P 08 31 41.1 0.0
baz=36,SNR=77
C21A **Desert Coulee** 35.36 336 ⇓P P 08 31 41.0 -0.4
baz=36,SNR=139
NVAR **Mina Array Bea** 35.37 314 P P 08 31 42.5 +0.7
NVAR *e* 09 02 28.7
NVAR **Mina Array Bea** 35.37 314 P P 08 31 42.5 +0.7
comp=Z,34nm,0.8s,baz=123,slow=8.4,SNR=134
NVAR LR LR 08 49 08.4
comp=Z,1160µm,20.4s,baz=229,slow=41
NVAR P3KPbc 09 02 28.7
comp=Z,0.6nm,0.8s,baz=227,slow=4.2,SNR=3.7
MLAC **Mammoth Lakes** 35.37 312 ⇑P P 08 31 42.3 +0.5
baz=36,SNR=19
F17A **Fitzpatrick Pl** 35.44 330 ⇓P P 08 31 42.9 +0.7
baz=36,SNR=44
A23A **Redstone** 35.48 339 ⇑P P 08 31 42.3 -0.1
baz=36,SNR=9.4
I14A **Mackay** 35.50 325 ⇓P P 08 31 43.6 +0.8
baz=36,SNR=145
G16A **Moss Hill, Enn** 35.52 328 ⇑P P 08 31 43.8 +0.9
baz=36,SNR=46
H15A **Lima** 35.52 327 ⇑P P 08 31 44.2 +1.2
baz=36,SNR=93
PTRM **Twissleman Ran** 35.54 308 *e*P P 08 31 44.8 +1.7
J13A **Cove Ranch, Pi** 35.55 324 ⇓P P 08 31 43.3 +0.1
baz=36,SNR=169
D19A **Cripps Ranch,** 35.58 333 ⇑P P 08 31 44.5 +1.2
baz=36,SNR=91
E18A **Harlowton** 35.58 332 ⇑P P 08 31 43.6 +0.2
baz=36,SNR=35
C20A **Veseth Ranch,** 35.64 335 ⇑P P 08 31 43.8 0.0
baz=36,SNR=297
BMN **Battle Mountai** 35.66 318 *e*P P 08 31 44.7 +0.5
BMN pmax pmax
comp=Z,1µm,1.1s
BMN MLR MLR
comp=Z,484µm,20.0s
BMN **Battle Mountai** 35.66 318 *e*P P 08 31 44.7 +0.5
comp=Z,1µm,1.1s
BMN LR LR
comp=Z,484µm,20.0s
BOZ **Bozeman (W)** 35.73 329 *e*P P 08 31 46.1 +1.5
BOZ pmax pmax
comp=Z,4µm,1.5s
BOZ MLR MLR
comp=Z,246µm,19.0s
BOZ **Bozeman (W)** 35.73 329 *e*P P 08 31 46.1 +1.5
comp=Z,6µm,1.5s
BOZ LR LR
comp=Z,298µm,19.0s
MCMT **McKenzie Canyo** 35.77 327 *e*P P 08 31 46.9 +1.7
comp=Z,286nm,0.8s
HLID **Hailey** 35.79 324 *e*P P 08 31 45.6 +0.3
comp=Z,1µm,1.5s
HLID LR LR
comp=Z,473µm,19.0s
HLID **Hailey** 35.79 324 ⇑P P 08 31 45.5 +0.2
baz=36,SNR=120
B21A **Ellsworth Farm** 35.82 336 ⇑P P 08 31 44.8 -0.5
baz=36,SNR=23
G15A **Dillon** 35.82 328 ⇓P P 08 31 46.1 +0.6
baz=36,SNR=71
F16A **Kennard Place,** 35.82 329 ⇑P P 08 31 45.6 +0.2
baz=36,SNR=49
I13A **Wildhorse Cree** 35.85 325 ⇓P P 08 31 46.0 +0.1
baz=36,SNR=135
A22A **Carney Farms,** 35.88 338 ⇓P P 08 31 45.5 -0.2
baz=36,SNR=142
H14A **Leadore** 35.91 326 ⇓P P 08 31 47.1 +0.8
baz=36,SNR=143
E17A **Martinsdale** 35.94 331 ⇑P P 08 31 46.8 +0.3
baz=36,SNR=42
D18A **Linhart Farms,** 36.01 332 ⇑P P 08 31 47.8 +0.8
baz=36,SNR=20
DLMT **Dillon** 36.01 328 *e*P P 08 31 47.9 +0.7
comp=Z,2µm,1.2s
C19A **Slack Wire Ran** 36.09 334 ⇓P P 08 31 48.6 +0.9
baz=36,SNR=148
LRM **Limekiln Ridge** 36.26 329 *e*P P 08 31 49.9 +0.5
F15A **Butte** 36.29 329 ⇓P P 08 31 49.8 +0.2
baz=36,SNR=102
I12A **Atlanta** 36.34 324 ⇓P P 08 31 50.2 +0.2
baz=36,SNR=43
D17A **Six Diamond Ra** 36.37 332 ⇑P P 08 31 50.5 +0.3
baz=36,SNR=61
G14A **Jackson** 36.38 327 ⇓P P 08 31 50.6 +0.3
baz=36
E16A **East Helena** 36.38 330 ⇓P P 08 31 50.6 +0.3
baz=36,SNR=38
MFID **Camas Ranch** 36.51 323 *e*P P 08 31 51.8 +0.4
MFID **Camas Ranch** 36.51 323 ⇓P P 08 31 51.2 -0.2
baz=37,SNR=80
A20A **Cobblestone Ra** 36.54 336 ⇓P P 08 31 51.8 +0.4
baz=37,SNR=86
HRY **Holter Researc** 36.59 330 *e*P P 08 31 53.3 +1.4
B19A **Brinkman Farms** 36.61 334 ⇓P P 08 31 52.3 +0.2
baz=37,SNR=101
EGMT **Eagleton** 36.62 333 *e*P P 08 31 53.8 +1.6
comp=Z,4µm,1.6s
EGMT LR LR
comp=Z,238µm,20.0s
EGMT **Eagleton** 36.62 333 ⇓P P 08 31 53.1 +0.9
baz=37,SNR=13
CMB **Columbia Colle** 36.65 312 *e*P P 08 31 52.7 +0.1
CMB pmax pmax
comp=Z,2µm,1.6s
CMB **Columbia Colle** 36.65 312 *e*P P 08 31 52.7 +0.1
comp=Z,2µm,1.6s
H12A **Diamond D Ranc** 36.67 325 ⇓P P 08 31 52.8 +0.1
baz=37,SNR=52
D16A **Dana Ranch, Ca** 36.68 331 ⇑P P 08 31 53.0 +0.2
baz=37,SNR=101
G13A **Cobalt** 36.68 326 ⇓P P 08 31 52.7 -0.1
baz=37,SNR=23
F14A **Wisdom** 36.72 328 ⇑P P 08 31 53.2 +0.1
baz=37,SNR=22
C17A **Wham Farm,** 36.77 332 ⇑P P 08 31 53.7 +0.3
baz=37,SNR=49
E15A **Deer Lodge** 36.77 329 ⇑P P 08 31 53.5 -0.1
baz=37,SNR=58
SAO **San Andreas Ge** 36.90 310 *e*P P 08 31 54.2 -0.4
SAO pmax pmax
comp=Z,787nm,1.1s
SAO **San Andreas Ge** 36.90 310 *e*P P 08 31 54.2 -0.4
comp=Z,787nm,1.1s
A19A **Klindworth Far** 36.91 335 ⇓P P 08 31 54.3 -0.3
baz=37,SNR=150
B18A **Beardsley Farm** 36.91 334 ⇓P P 08 31 54.7 +0.1
baz=37,SNR=67
D15A **Lincoln** 37.15 330 ⇑P P 08 31 57.0 +0.2
baz=37,SNR=32
E14A **Clinton** 37.19 328 ⇓P P 08 31 57.2 0.0
baz=37,SNR=44
F13A **Darby** 37.20 327 ⇑P P 08 31 56.8 -0.4
baz=37,SNR=48
B17A **L&G Farms, Che** 37.28 333 ⇑P P 08 31 58.2 +0.4
baz=37,SNR=12
G12A **Big Creek, Yel** 37.30 325 ⇑P P 08 31 58.0 -0.1
baz=37
C16A **Fuhringer Ranc** 37.34 331 ⇑P P 08 31 58.7 +0.4
baz=38,SNR=34
A18A **Metzger Ranch,** 37.35 334 ⇓P P 08 31 58.2 -0.2
baz=38,SNR=118
CHMT **Chamberlain Mo** 37.42 329 *e*P P 08 31 60.0 +0.8
LPAZ **La Paz** 37.42 151 *e*P P 08 31 55.9 -4.0
comp=Z,196nm,1.2s
LPAZ P'P' 09 04 46.9
LPAZ **La Paz** 37.42 151 P P 08 31 59.1 -0.7
comp=Z,15nm,1.2s,baz=339,slow=8.1,SNR=23
LPAZ LR LR 08 49 00.7
comp=Z,332µm,20.8s,baz=315,slow=39
LPAZ PKPPKP P'P'df 09 04 46.9 +2.0
comp=Z,5.8nm,1.0s,baz=335,slow=1.0,SNR=5.5
BEKR **Beckworth** 37.46 315 *e*P P 08 32 00.1 +0.6
comp=Z,2µm,1.5s
E13A **Vigor** 37.56 328 ⇓P P 08 31 59.8 -0.5
baz=38,SNR=25
WVOR **Wild Horse Val** 37.63 319 *e*P P 08 32 01.0 +0.1
WVOR MLR MLR
comp=Z,576µm,20.0s
WVOR **Wild Horse Val** 37.63 319 *e*P P 08 32 01.0 +0.1
comp=Z,11µm,0.9s
WVOR LR LR
comp=Z,576µm,20.0s
D14A **Greenough** 37.66 329 ⇑P P 08 32 01.0 -0.1
baz=38,SNR=27
F12A **Elk City** 37.66 326 ⇓P P 08 32 00.9 -0.3
baz=38,SNR=53
MSO **Missoula** 37.70 329 *e*P P 08 32 01.3 -0.1
comp=Z,2µm,1.6s
MSO LR LR
comp=Z,313µm,20.0s
MSO **Missoula** 37.70 329 ⇓P P 08 32 01.4 0.0
baz=38,SNR=175
C15A **Salmond Ranch,** 37.72 331 ⇓P P 08 32 01.9 +0.3
baz=38,SNR=71
A17A **Triple J Farms** 37.73 334 ⇑P P 08 32 02.5 +0.9
baz=38,SNR=43
SLMT **Seeley Lake** 37.76 329 *e*P P 08 32 02.8 +0.8
B16A **M & M Farms, S** 37.77 332 ⇑P P 08 32 02.1 +0.1
baz=38,SNR=12
SAC **San Andreas** 37.93 310 *e*P P 08 32 05.4 +2.1
SAC pmax pmax
comp=Z,3µm,1.8s
SAC **San Andreas** 37.93 310 *e*P P 08 32 05.4 +2.1
comp=Z,3µm,1.8s
OHCM **Honcut** 37.99 313 *e*P P 08 32 04.1 +0.3
B15A **Bradely Ranch,** 38.09 331 ⇑P P 08 32 04.7 +0.1
baz=38,SNR=27
D13A **Huson** 38.14 328 ⇓P P 08 32 04.8 -0.3
baz=38,SNR=54
SWMT **Swartz Lake** 38.20 329 *e*P P 08 32 07.0 +1.4
BMO **Blue Mountains** 38.23 324 *e*P P 08 32 06.3 +0.5
comp=Z,1µm,0.8s
BMO LR LR
comp=Z,466µm,20.0s
C14A **Swan Lake** 38.26 330 ⇓P P 08 32 06.3 +0.2
baz=38
YBMT **Yellow Bay** 38.45 330 *e*P P 08 32 09.2 +1.4
comp=Z,622nm,0.7s
B14A **Marquette Ranc** 38.45 331 ⇓P P 08 32 07.9 +0.2
baz=39,SNR=20
MCCM **Marconi Confer** 38.49 311 *e*P P 08 32 08.4 +0.4
comp=Z,1µm,1.3s
JTMT **Jette** 38.50 329 *e*P P 08 32 09.9 +1.7
D12A **Red Ives Fores** 38.56 328 ⇑P P 08 32 08.3 -0.3
baz=39,SNR=30
C13A **Hot Springs** 38.60 329 ⇑P P 08 32 09.0 +0.1
baz=39,SNR=15
BLMT **Blacktail Moun** 38.72 330 *e*P P 08 32 11.0 +0.9
BSMT **Bassoo Peak** 38.82 329 *e*P P 08 32 11.8 +0.8
A14A **Double T Ranch** 38.96 331 ⇓P P 08 32 12.8 +0.8
baz=39,SNR=53
HOPS **Hopland** 38.96 312 *e*P P 08 32 12.4 +0.4
comp=Z,3µm,1.8s
B13A **Whitefish** 39.02 330 ⇓P P 08 32 13.1 +0.6
baz=39,SNR=36
C12B **Naegeli Ranch,** 39.06 328 ⇑P P 08 32 12.8 0.0
baz=39,SNR=14
WALA **Waterton Lakes** 39.24 331 *e*P P 08 32 15.0 +0.6
comp=Z,235nm,1.6s
WDC **Whiskeytown Da** 39.27 315 *e*P P 08 32 12.2 -2.3
WDC pmax pmax
comp=Z,626nm,1.6s
WDC **Whiskeytown Da** 39.27 315 *e*P P 08 32 12.2 -2.3
comp=Z,626nm,1.6s
MNMC **Minimini** 39.29 155 *e*P P 08 32 15.3 +0.2
MNMC **Minimini** 39.29 155 *e*P P 08 32 15.3 +0.2
A13A **Flathead Natio** 39.39 331 ⇓P P 08 32 16.1 +0.6
baz=40
PSGC **Pisagua** 39.49 156 ⇓*i*P P 08 32 16.8 +0.2
PSGC **Pisagua** 39.49 156 ⇓*i*P P 08 32 16.8 +0.2
KIPM **Iron Peak** 39.59 313 *e*P P 08 32 17.9 +0.5
comp=Z,2µm,1.5s
KCPM **Cahto Peak** 39.61 313 *e*P P 08 32 17.3 -0.2
comp=Z,2µm,1.5s
B12A **Libby** 39.63 329 ⇓P P 08 32 17.6 +0.1
baz=40
FFC **Flin Flon** 39.75 346 *i*P P 08 32 17.5 -0.8
FFC **Flin Flon** 39.75 346 *e*P P 08 32 17.0 -1.3
comp=Z,65nm,1.0s
FFC LR LR
comp=Z,622µm,21.0s
FFC **Flin Flon** 39.75 346 P P 08 32 17.7 -0.6
comp=Z,1µm,1.1s,SNR=23
NCOR **Newberry Crate** 39.86 320 P P 08 32 21.2 +1.5
YBH **Yreka Blue Hor** 39.90 316 *e*P P 08 32 18.0 -2.0
comp=Z,220nm,1.1s
VIPM **Ingram Point** 39.97 321 P P 08 32 21.7 +1.2
VIPM **Ingram Point** 39.97 321 P P 08 32 21.7 +1.2
A12A **Yaak River Ran** 39.98 330 ⇑P P 08 32 21.0 +0.6
baz=40
HMBC **Humberstone** 40.20 156 ⇓*i*P P 08 32 22.6 0.0
HMBC **Humberstone** 40.20 156 ⇓*i*P P 08 32 22.6 0.0
KHMM **Horse Mountain** 40.21 314 *e*P P 08 32 19.4 -3.1
comp=Z,7µm,2.6s
NEW **Newport** 40.26 328 *e*P P 08 32 21.9 -0.8
comp=Z,7µm,2.8s
NEW LR LR
comp=Z,397µm,20.0s
NEW **Newport** 40.26 328 ⇓P P 08 32 22.3 -0.4
baz=40,SNR=61
VTHM **Trough** 40.30 322 P P 08 32 24.7 +1.6
HAWA **Hanford** 40.40 324 *e*P P 08 32 23.0 -0.8
comp=Z,6µm,2.7s
HAWA LR LR
comp=Z,296µm,19.0s
WRD **Warden** 40.42 325 P P 08 32 26.5 +2.5
HUMO **Hull Mountain** 40.47 317 *e*P P 08 32 23.7 -0.9
comp=Z,405nm,1.4s
OD2 **Odessa Site #2** 40.54 326 P P 08 32 26.6 +1.5
SCHQ **Schefferville** 40.79 17 *e*P P 08 32 26.6 -0.3
comp=Z,30nm,0.6s
SCHQ **Schefferville** 40.79 17 P P 08 32 26.7 -0.3
comp=Z,145nm,1.0s,baz=213,slow=6.5,SNR=106
SCHQ LR LR 08 50 56.3
comp=Z,341µm,19.2s,baz=215,slow=39
VBEM **Beaver Butte** 40.85 321 P P 08 32 30.7 +2.9
TRW **Toppenish Ridg** 40.91 323 P P 08 32 30.2 +2.1
PB01 **Plate Boundary** 41.05 156 ⇑*i*P P 08 32 28.6 -1.0
PB01 **Plate Boundary** 41.05 156 ⇑*i*P P 08 32 28.6 -1.0
TDH **Tom, Dick, Har** 41.09 321 P P 08 32 32.5 +2.7
KBO **Bosley Butte** 41.13 316 *e*P P 08 32 30.8 +0.7
comp=Z,3µm,2.2s
SSOR **Sweet Springs** 41.27 320 P P 08 32 32.6 +1.4
SSOR **Sweet Springs** 41.27 320 P P 08 32 32.6 +1.4
WTV **Waterville** 41.40 325 P P 08 32 32.1 -0.1
KEBM **Edson Butte** 41.50 317 *e*P P 08 32 33.4 +0.3
comp=Z,4µm,1.1s
TWW **Teanaway** 41.58 324 P P 08 32 35.9 +2.2
RNO **Roman Nose** 41.60 318 P P 08 32 34.5 +0.7
COR **Corvallis** 41.65 320 *e*P P 08 32 36.1 +1.9
COR pmax pmax
comp=Z,4µm,1.5s
COR **Corvallis** 41.65 320 *e*P P 08 32 36.1 +1.9
comp=Z,612nm,1.5s
PB09 **Plate Boundary** 41.83 156 P P 08 32 35.6 -0.4
PB09 **Plate Boundary** 41.83 156 ⇑*i*P P 08 32 35.6 -0.4
LON **Longmire** 41.89 323 *e*P P 08 32 36.3 +0.1
LON pmax pmax
comp=Z,1µm,1.2s
LON **Longmire** 41.89 323 *e*P P 08 32 36.3 +0.1
comp=Z,1µm,1.2s
PB04 **Plate Boundary** 42.16 157 ⇑*i*P P 08 32 35.7 -2.7
PB04 **Plate Boundary** 42.16 157 ⇑*i*P P 08 32 35.7 -2.7
LVC **Limon Verde** 42.69 156 P P 08 32 42.7 -0.5
LVC **Limon Verde** 42.69 156 ⇑*i*P P 08 32 42.7 -0.5
CEN1 **Los Morros** 42.92 158 P P 08 32 46.0 +1.2
CEN1 **Los Morros** 42.92 158 *e*P P 08 32 46.0 +1.2
NLWA **Neilton Lookou** 43.42 323 *e*P P 08 32 50.0 +1.4
comp=Z,2µm,1.3s
NLWA LR LR
comp=Z,478µm,19.0s
PGC **Sidney** 43.86 325 *e*P P 08 32 51.4 -0.6
comp=Z,120nm,1.4s
LCO **Las Campanas** 47.96 162 ⇓*i*P P 08 33 21.6 -3.3
LCO **Las Campanas** 47.96 162 ⇓*i*P P 08 33 21.6 -3.3
TLL **Tololo Astrono** 49.02 162 ⇑*i*P P 08 33 29.1 -3.9
TLL **Tololo Astrono** 49.02 162 ⇑*i*P P 08 33 29.1 -3.9
TLL **Tololo Astrono** 49.02 162 ⇑*i*P P 08 33 29.1 -3.9
BDFB **Brasilia** 49.62 128 P P 08 33 36.1 -1.5
BDFB **Brasilia** 49.62 128 P P 08 33 36.1 -1.5
comp=Z,35nm,0.8s,baz=297,slow=11,SNR=36
BDFB LR LR 08 56 45.3
comp=Z,302µm,19.2s,baz=299,slow=39
YKA **Yellowknife Ar** 49.77 343 P P 08 33 37.0 -1.0
YKA P'P' 09 04 25.6
YKA *e* 09 11 13.9
YKA **Yellowknife Ar** 49.77 343 P P 08 33 37.0 -1.0
comp=Z,34nm,0.7s,baz=137,slow=7.8,SNR=270
YKA PKPPKP P'P'df 09 04 25.6 -10
comp=Z,1.5nm,0.9s,baz=339,slow=2.2,SNR=3.9
YKA P4KPbc 09 11 13.9
comp=Z,0.3nm,0.7s,baz=138,slow=4.5,SNR=6.7
YKW3 **Yellowknife Ar** 49.83 343 *e*P P 08 33 37.4 -1.1
comp=Z,1.1nm,1.0s
CMCH **Combarbala** 49.90 163 P P 08 33 38.6 -0.9
CMCH **Combarbala** 49.90 163 ⇑*i*P P 08 33 38.6 -0.9
CFAA **Coronel Fontan** 51.15 160 PKPPKP 09 04 13.8
comp=Z,0.2nm,0.9s,baz=179,slow=5.7,SNR=3.1
CPUP **Villa Florida** 51.27 146 P P 08 33 48.0 -1.7
CPUP P'P' 09 04 17.5
CPUP **Villa Florida** 51.27 146 P P 08 33 48.0 -1.7
comp=Z,14nm,0.8s,baz=315,slow=7.9,SNR=31
CPUP LR LR 08 55 49.1
comp=Z,117µm,19.9s,baz=305,slow=36
CPUP PKPPKP P'P'df 09 04 17.5 -10
comp=Z,2.0nm,0.7s,baz=12,slow=4.2,SNR=4.5
ROCH **El Roble** 51.60 164 *e*P P 08 33 51.4 -1.1
PEL **Peldehue** 51.85 163 ⇑*i*P P 08 33 52.0 -2.0
CLCH **Cerro Calan** 52.13 163 ⇑*i*P P 08 33 55.3 -0.9
CRAG **Craig** 52.48 328 *e*P P 08 33 58.9 +0.4
comp=Z,2µm,1.7s
DLBC **Dease Lake** 52.55 333 *e*P P 08 34 00.2 +1.1
WRAK **Wrangell Islan** 52.56 330 *e*P P 08 33 59.5 +0.4
comp=Z,2µm,1.8s
WRAK LR LR
comp=Z,387µm,19.0s
LMEL **Las Melosas** 52.64 163 P P 08 33 59.7 -0.4
LMEL **Las Melosas** 52.64 163 ⇓*i*P P 08 33 59.7 -0.4
RCBR **Riachuelo** 54.61 110 *e*P P 08 34 14.9 +0.2
comp=Z,183nm,1.3s
RCBR LR LR
comp=Z,148µm,21.0s
CCHI **Chillan** 54.78 166 P P 08 34 15.1 -0.4
CCHI **Chillan** 54.78 166 *e*P P 08 34 15.1 -0.4

SPB	**Sao Paulo**	**55.23**	**136**	*e*P		**P**	**08 34 19.2**	**+0.2**
	comp=Z,231nm,1.3s							
SPB				LR		LR		
	comp=Z,391µm,20.0s							
SFJD	**Kangerlussuaq**	**55.23**	**16**	*e*P		P	08 34 15.1	-3.3
	comp=Z,678nm,1.2s							
SFJD				*e*S		**S**	**08 41 58.5**	**-1.3**
SFJD				LR		LR		
	comp=Z,178µm,22.0s							
SFJD	**Kangerlussuaq**	**55.23**	**16**	⇓*i*P		**P**	**08 34 17.0**	**-1.4**
	comp=Z,128nm,0.9s							
SFJD								
	comp=Z,127µm,21.0s							
SKAG	**Skagway**	**55.43**	**332**	*e*P		**P**	**08 34 21.5**	**+1.6**
	comp=Z,1µm,1.6s							
CMLA	**Cha da Macela**	**56.87**	**56**	*e*P		**P**	**08 34 32.1**	**+1.4**
CMLA				pmax		pmax		
	comp=Z,404nm,1.1s							
CMLA				MLR		MLR		
	comp=Z,68µm,19.0s							
CMLA	**Cha da Macela**	**56.87**	**56**	*e*P		**P**	**08 34 32.1**	**+1.4**
	comp=Z,404nm,1.1s							
CMLA				LR		LR		
	comp=Z,68µm,19.0s							
CMLA	**Cha da Macela**	**56.87**	**56**	P		**P**	**08 34 33.3**	**+2.6**
	comp=Z,2µm,1.1s,SNR=5.4							
PNL	**Peninsula**	**57.38**	**331**	*e*P		**P**	**08 34 33.3**	**-0.5**
	comp=Z,177nm,0.7s							
LPA	**La Plata**	**58.04**	**153**	*ce*P		**P**	**08 34 38.0**	**-0.8**
LPA				pP		pP	08 34 42.0	-5.7
LPA				PCP		**PcP**	**08 35 30.0**	**-0.5**
LPA				PP		**PP**	**08 36 46.0**	**-1.8**
LPA				PPP		PPP	08 38 04.0	
LPA				PPP(2)			08 38 23.0	
LPA				SCP		**ScP**	**08 39 30.0**	**+1.3**
LPA				S		**S**	**08 42 38.0**	**+0.3**
LPA				SCS		**ScS**	**08 44 30.0**	**+3.6**
LPA				SS		**SS**	**08 46 28.0**	**-1.7**
LPA								
	comp=Z,72µm,20.0s							
PLCA	**Paso Flores**	**59.07**	**166**	*e*P		**P**	**08 34 44.2**	**-1.8**
	comp=Z,2µm,1.2s							
PLCA				⇑*e*			09 04 30.1	
PLCA	**Paso Flores**	**59.07**	**166**	P		**P**	**08 34 44.2**	**-1.8**
	comp=Z,88nm,1.1s,baz=341,slow=8.2,SNR=34							
PLCA				PKP2bc			09 04 30.1	
	comp=Z,4.8nm,1.0s,baz=166,slow=5.1,SNR=3.7							
TAOE	**Nuku Hiva Isla**	**59.09**	**249**	*e*S		**S**	**08 42 54.7**	**+2.3**
	comp=Z,149µm,24.4s							
TAOE				*e*LQ		LQ	08 49 41.8	
	comp=Z,1308µm,31.4s							
TAOE				*e*LR		LR	08 52 09.8	
	comp=Z,179µm,22.4s,baz=68							
TRQA	**Tornquist**	**59.14**	**158**	*e*P		**P**	**08 34 44.4**	**-2.0**
	comp=Z,617nm,1.4s							
TRQA				LR		LR		
	comp=Z,119µm,19.0s							
INK	**Inuvik**	**59.44**	**342**	PKP2bc		**P'P'bc**	**09 04 33.7**	**+1.7**
	comp=Z,8.4nm,1.0s,baz=268,slow=3.6,SNR=4.4							
SACV	**Santiago Islan**	**60.05**	**82**	*e*P		**P**	**08 34 53.3**	**+0.1**
	comp=Z,1µm,1.8s							
SACV				LR		LR		
	comp=Z,44µm,19.0s							
SACV	**Santiago Islan**	**60.05**	**82**	P		**P**	**08 34 54.2**	**+1.0**
	comp=Z,947nm,1.2s,SNR=6.3							
EGAK	**Eagle**	**60.29**	**336**	*e*P		**P**	**08 34 54.0**	**-0.1**
	comp=Z,723nm,0.6s							
EGAK				LR		LR		
	comp=Z,264µm,22.0s							
MENT	**Mentasta**	**60.59**	**334**	*e*P		**P**	**08 34 57.5**	**+1.4**
MID	**Middleton Isla**	**60.59**	**329**	*e*P		**P**	**08 34 56.9**	**+0.8**
MID				pmax		pmax		
	comp=Z,2µm,1.8s							
MID	**Middleton Isla**	**60.59**	**329**	*e*P		**P**	**08 34 56.9**	**+0.8**
	comp=Z,2µm,1.8s							
DIV	**Divide**	**60.86**	**331**	*e*P		**P**	**08 34 59.3**	**+1.3**
	comp=Z,892nm,1.3s							
DOT	**Dot Lake**	**61.00**	**334**	*e*P		**P**	**08 34 59.0**	**0.0**
	comp=Z,2µm,0.9s							
PAX	**Paxson**	**61.34**	**333**	*e*P		**P**	**08 35 01.6**	**+0.3**
PAX				pmax		pmax		
	comp=Z,612nm,1.0s							
PAX	**Paxson**	**61.34**	**333**	*e*P		**P**	**08 35 01.6**	**+0.3**
	comp=Z,612nm,1.0s							
RKT	**Rikitea**	**62.00**	**232**	*e*P		**P**	**08 35 06.3**	**+0.1**
	comp=Z,1µm,1.3s							
RKT				*e*S		**S**	**08 43 29.0**	**-0.1**
	comp=Z,123µm,31.8s							
RKT				*e*SS		**SS**	**08 47 34.9**	**+2.6**
	comp=Z,88µm,31.2s							
RKT				*e*LQ		LQ	08 50 48.4	
	comp=Z,795µm,36.0s							
RKT				*e*LR		LR	08 53 22.7	
	comp=Z,192µm,31.0s							
SUMG	**Summit**	**62.10**	**15**	⇓*i*P		**P**	**08 35 06.2**	**-0.4**
SUMG				pmax		pmax		
	comp=Z,410nm,1.0s							
SUMG				MLR		MLR		
	comp=Z,130µm,19.0s							
SUMG	**Summit**	**62.10**	**15**	*e*P		**P**	**08 35 05.7**	**-1.0**
	comp=Z,1µm,1.3s							
SUMG	**Summit**	**62.10**	**15**	⇓*i*P		**P**	**08 35 06.2**	**-0.4**
	comp=Z,412nm,1.0s							
SUMG								
	comp=Z,130µm,19.0s							
SML	**Sawmill**	**62.24**	**332**	*e*P		**P**	**08 35 06.7**	**-0.6**
SML				pmax		pmax		
	comp=Z,5µm,1.3s							
SML	**Sawmill**	**62.24**	**332**	*e*P		**P**	**08 35 06.7**	**-0.6**
	comp=Z,5µm,1.3s							
SEW	**Seward**	**62.29**	**330**	*e*P		**P**	**08 35 06.6**	**-1.0**
	comp=Z,1µm,1.6s							
PMR	**Palmer**	**62.54**	**331**	*e*P		**P**	**08 35 08.3**	**-0.9**
PMR				pmax		pmax		
	comp=Z,1µm,1.6s							
PMR	**Palmer**	**62.54**	**331**	*e*P		**P**	**08 35 08.3**	**-0.9**
	comp=Z,1µm,1.6s							
ILAR	**Eielson Array**	**62.55**	**335**	P		**P**	**08 35 08.7**	**-0.6**
ILAR				⇑*e*			09 04 17.6	
ILAR				*e*			09 12 28.9	
ILAR	**Eielson Array**	**62.55**	**335**	P		**P**	**08 35 08.7**	**-0.6**
	comp=Z,42nm,0.8s,baz=129,slow=2.9,SNR=154							
ILAR				PKP2bc			09 04 17.6	
	comp=Z,3.3nm,1.0s,baz=310,slow=3.8,SNR=9.3							
ILAR				P4KPbc			09 12 28.9	
	comp=Z,1.2nm,1.2s,baz=94,slow=2.0,SNR=5.0							
RC01	**Rabbit Creek A**	**62.68**	**331**	*e*P		**P**	**08 35 11.7**	**+1.4**
	comp=Z,1µm,1.2s							
COLA	**College**	**62.98**	**335**	*e*P		**P**	**08 35 11.5**	**-0.6**
COLA				pmax		pmax		
	comp=Z,871nm,1.3s							
COLA				MLR		MLR		
	comp=Z,209µm,21.0s							
COLA	**College**	**62.98**	**335**	*e*P		**P**	**08 35 11.5**	**-0.6**
	comp=Z,233nm,1.3s							
COLA				LR		LR		
	comp=Z,209µm,21.0s							
MCK	**McKinley**	**63.07**	**334**	*e*P		**P**	**08 35 12.3**	**-0.5**
MCK				pmax		pmax		
	comp=Z,732nm,0.9s							
MCK	**McKinley**	**63.07**	**334**	*e*P		**P**	**08 35 12.2**	**-0.5**
	comp=Z,732nm,0.9s							
KDAK	**Kodiak Island**	**63.35**	**327**	*e*P		**P**	**08 35 15.5**	**+0.9**
	comp=Z,364nm,1.0s							
KDAK				⇑*e*			09 04 29.7	
KDAK				LR		LR		
	comp=Z,283µm,20.0s							
KDAK	**Kodiak Island**	**63.35**	**327**	P		**P**	**08 35 16.0**	**+1.3**
	comp=Z,639nm,1.4s,SNR=6.0							
KDAK	**Kodiak Island**	**63.35**	**327**	PKP2bc		**P'P'ab**	**09 04 29.7**	**+0.8**
	comp=Z,20nm,1.1s,baz=294,slow=5.9,SNR=4.3							
COYC	**Coyhaique**	**63.40**	**169**	P		**P**	**08 35 14.7**	**-0.4**
COYC	**Coyhaique**	**63.40**	**169**	⇓*i*P		**P**	**08 35 14.7**	**-0.4**
TRF	**Thorofare Moun**	**63.57**	**333**	*e*P		**P**	**08 35 14.8**	**-1.5**
	comp=Z,35nm,0.8s							
OHAK	**Old Harbor**	**63.62**	**326**	*e*P		**P**	**08 35 16.4**	**-0.1**
	comp=Z,813nm,1.4s							
PMOZ	**Porto Moniz, M**	**63.68**	**61**	*e*P		P	08 35 20.6	+3.1
PMOZ				*e*S		S	08 43 57.1	+6.8
PMOZ				*e*LQ		LQ	08 51 18.1	
PMOZ				*e*LR		LR	08 54 47.9	
	comp=Z,62µm,28.9s							
RSO	**Redoubt South**	**63.97**	**330**	*e*P		**P**	**08 35 18.9**	**-0.1**
	comp=Z,1µm,1.1s							
PPLA	**Purkeypile**	**64.26**	**332**	*e*P		**P**	**08 35 19.6**	**-1.3**
	comp=Z,48µm,1.3s							
BORG	**Borgarnes**	**64.29**	**26**	*e*P		**P**	**08 35 22.3**	**+1.5**
	comp=Z,1µm,1.5s							
BORG				LR		LR		
	comp=Z,75µm,20.0s							
PMPST	**Porto Santo, M**	**64.38**	**61**	*e*P		**P**	**08 35 24.5**	**+2.5**
	comp=Z,2µm,1.9s							
COLD	**Coldfoot**	**64.63**	**337**	*e*P		**P**	**08 35 23.7**	**+0.7**
	comp=Z,4.7nm,0.8s							
STCH	**Steam Cracks**	**65.13**	**284**	*e*P		**P**	**08 35 28.2**	**+1.0**
	comp=Z,2µm,1.0s							
PUH	**Pauahi**	**65.22**	**284**	*e*P		**P**	**08 35 27.9**	**+0.2**
	comp=Z,4µm,1.3s							
SCO	**Scoresbysund**	**65.78**	**19**	⇓*i*P		**P**	**08 35 29.5**	**-0.8**
SCO				pmax		pmax		
	comp=Z,97nm,1.0s							
SCO				MLR		MLR		
	comp=Z,180µm,24.0s							
SCO	**Scoresbysund**	**65.78**	**19**	⇓*i*P		**P**	**08 35 29.5**	**-0.8**
	comp=Z,97nm,1.0s							
SCO								
	comp=Z,175µm,24.0s							
CHGN	**Chignik**	**66.29**	**325**	*e*P		**P**	**08 35 32.8**	**-1.0**
ALE	**Alert**	**66.43**	**3**	P		**P**	**08 35 33.0**	**-1.4**
	comp=Z,940nm,1.0s,SNR=55							
BBTS	**Babate**	**66.81**	**81**	PKP2bc		P'P'ab	09 04 27.5	+12
	comp=Z,41nm,0.9s,baz=130,slow=5.4,SNR=3.9							
SDPT	**Sand Point**	**67.39**	**323**	*e*P		**P**	**08 35 41.4**	**+0.5**
	comp=Z,2µm,1.1s							
KIP	**Kipapa**	**67.45**	**287**	*c i*P		**P**	**08 35 41.0**	**-0.9**
KIP				pmax		pmax		
	comp=Z,2µm,2.0s							
KIP	**Kipapa**	**67.45**	**287**	*e*P		P	08 35 37.8	-4.1
	comp=Z,3µm,1.8s							
KIP				LR		LR		
	comp=Z,276µm,22.0s							
HON	**Honolulu**	**67.45**	**287**	*e*P		**P**	**08 35 40.8**	**-1.1**
HON				*e*S		**S**	**08 44 40.8**	**+4.3**
HON	**Honolulu**	**67.45**	**287**	*e*P		**P**	**08 35 40.8**	**-1.1**
HON				*e*S		**S**	**08 44 40.8**	**+4.3**
VAL	**Valentia**	**68.34**	**40**	*e*P		P	08 35 43.3	-3.6
VAL	**Valentia**	**68.34**	**40**	⇓*i*S		S	08 44 54.1	+8.0
PMOR	**Pomariorio Ree**	**68.56**	**246**	*e*P		**P**	**08 35 50.4**	**+1.6**
	comp=Z,3µm,1.5s							
DAG	**Danmarks Havn**	**68.67**	**13**	⇓*i*P		**P**	**08 35 47.3**	**-1.3**
DAG				*i* S		S	08 44 39.4	-10
DAG				pmax		pmax		
	comp=Z,190nm,1.0s							
DAG				MLR		MLR		
	comp=Z,250µm,19.0s							
DAG	**Danmarks Havn**	**68.67**	**13**	⇓*i*P		**P**	**08 35 47.3**	**-1.3**
	comp=Z,188nm,1.0s							
DAG								
	comp=Z,238µm,19.0s							
FALS	**False Pass**	**69.06**	**323**	*e*P		**P**	**08 35 51.8**	**+0.5**
	comp=Z,3µm,1.1s							
PMAFR	**Mafra**	**69.61**	**54**	*e*P		**P**	**08 35 58.0**	**+2.9**
	comp=Z,1µm,1.3s							
LIS	**Lisbon**	**69.73**	**54**	*e*P		**P**	**08 35 56.0**	**+0.1**
LIS				*e*S		**S**	**08 45 06.3**	**+3.2**
LIS				A		A	09 12 29.7	
	comp=Z,70µm,22.0s							
LIS	**Lisbon**	**69.73**	**54**	*e*P		**P**	**08 35 56.0**	**+0.1**
LIS				*e*S		**S**	**08 45 06.3**	**+3.2**
LIS				AMS		AMS	09 12 29.7	
	comp=Z,70µm,22.0s							
LIS	**Lisbon**	**69.73**	**54**	*e*P		**P**	**08 35 55.9**	**+0.1**
LIS				*e*S		**S**	**08 45 06.3**	**+3.2**
MEH	**Mehetia**	**69.94**	**243**	*e*P		**P**	**08 35 58.6**	**+1.2**
	comp=Z,3µm,1.4s							
PGAV	**Gavieira, Arco**	**70.11**	**51**	*e*P		**P**	**08 35 58.0**	**-0.2**
	comp=Z,2µm,1.7s							
PGAV				*e*S		**S**	**08 45 12.9**	**+5.3**
PGAV				*e*LQ		LQ	08 54 06.8	
PGAV				*e*LR		LR	08 57 23.7	
	comp=Z,47µm,20.0s							
DCN	**Croghan**	**70.13**	**39**	*e*P		**P**	**08 36 00.7**	**+2.7**
PFVI	**Vila Bisbo**	**70.15**	**56**	*e*P		P	08 36 01.7	+3.2
	comp=Z,2µm,1.7s							
JMIC	**Jan Mayen**	**70.23**	**20**	*e*P		**P**	**08 35 57.7**	**-0.6**
JMIC				AMB		AMB	08 36 39.4	
	comp=Z,1µm,1.3s							
JMIC				*e*S		**S**	**08 45 08.3**	**+0.4**
JMIC				AMS		AMS	09 02 42.5	
	comp=Z,123µm,31.8s							
MORF	**Marmelete**	**70.27**	**56**	*e*P		**P**	**08 36 02.1**	**+2.8**
	comp=Z,2µm,1.0s							
MORF	**Marmelete**	**70.27**	**56**	*e*P		**P**	**08 35 59.8**	**+0.5**
MORF				*e*S		**S**	**08 45 12.1**	**+2.5**
SOFL	**Sornfelli, Far**	**70.28**	**29**	*e*P		**P**	**08 35 57.3**	**-1.6**
SOFL				AMS		AMS	09 02 07.5	
	comp=Z,69µm,22.9s							
SOFL	**Sornfelli, Far**	**70.28**	**29**	P		**P**	**08 35 57.3**	**-1.6**
SOFL				AMS		AMS	09 02 07.5	
	comp=Z,69µm,22.9s							
PNCL	**Nicolau / Gran**	**70.28**	**55**	*e*P		**P**	**08 36 01.9**	**+2.7**
	comp=Z,496nm,1.8s							
PMTG	**Montargil**	**70.42**	**54**	*e*P		**P**	**08 36 02.2**	**+2.1**
AKUT	**Akutan**	**70.44**	**322**	*e*P		**P**	**08 35 58.0**	**-1.8**
	comp=Z,2µm,1.6s							
POLO	**Lamas de Olo**	**70.51**	**51**	*e*P		**P**	**08 36 00.3**	**-0.5**
	comp=Z,525nm,2.2s							
EVOP	**Sao Brissos**	**70.55**	**54**	⇓*i*P		**P**	**08 36 01.2**	**+0.3**
EVOP				pmax		pmax		
	comp=Z,3µm,1.5s							
EVOP	**Sao Brissos**	**70.55**	**54**	⇓*i*P		**P**	**08 36 01.2**	**+0.3**
	comp=Z,3µm,1.5s							
MESJ	**Messejana**	**70.55**	**55**	*e*P		**P**	**08 36 01.2**	**+0.2**
MESJ				*e*S		**S**	**08 45 16.0**	**+3.2**
MESJ				AMS		AMS	09 08 16.9	
	comp=Z,75µm,19.4s							
MESJ	**Messejana**	**70.55**	**55**	*e*P		**P**	**08 36 01.2**	**+0.2**
MESJ				*e*S		**S**	**08 45 16.0**	**+3.2**
MESJ				A		A	09 08 16.9	
	comp=Z,75µm,19.4s							
MESJ	**Messejana**	**70.55**	**55**	*e*P		**P**	**08 36 01.1**	**+0.2**
MESJ				*e*S		**S**	**08 45 16.0**	**+3.2**
EVO	**Evora**	**70.64**	**54**	⇓*i*P		**P**	**08 36 01.2**	**-0.2**
	comp=Z,3µm,1.5s							
EVO				*e*R				
	comp=Z,103µm,20.0s							
EVO	**Evora**	**70.64**	**54**	*e*P		**P**	**08 36 02.0**	**+0.6**
	comp=Z,1µm,2.1s							
PCVE	**Castro Verde**	**70.72**	**55**	*e*P		**P**	**08 36 04.9**	**+2.9**
	comp=Z,833nm,1.8s							
MTE	**Manteigas**	**70.80**	**52**	*e*P		**P**	**08 36 03.3**	**+0.8**
	comp=Z,2µm,2.1s							
MTE				*e*S		**S**	**08 45 19.9**	**+4.2**
MTE				*e*LQ		LQ	08 54 18.5	
MTE				*e*LR		LR	08 58 22.5	
	comp=Z,76µm,25.4s							
MTE	**Manteigas**	**70.80**	**52**	*e*P		**P**	**08 36 02.1**	**-0.3**
	comp=Z,2µm,1.6s							
MTE				LR		LR		
	comp=Z,92µm,21.0s							
PBDV	**Barranco-do-Ve**	**70.85**	**56**	*e*P		**P**	**08 36 05.1**	**+2.3**
	comp=Z,1µm,1.3s							
UNV	**Unalaska Valle**	**70.88**	**322**	*e*P		**P**	**08 36 02.4**	**-0.1**
	comp=Z,959nm,0.9s							
GMM	**Mts of Mourne**	**70.89**	**38**	*e*P		**P**	**08 36 00.5**	**-2.1**
GMM	**Mts of Mourne**	**70.89**	**38**	P		**P**	**08 36 00.5**	**-2.1**
TIAR	**Tiarei**	**70.90**	**244**	*e*P		**P**	**08 36 04.3**	**+1.0**
	comp=Z,3µm,0.9s							
TVO	**Taravao**	**70.92**	**244**	*e*P		**P**	**08 36 04.6**	**+1.2**
	comp=Z,1µm,1.2s							
PESTR	**Estremoz**	**70.93**	**54**	*e*P		**P**	**08 36 03.3**	**+0.1**
	comp=Z,1µm,2.0s							
KPL	**Plockton**	**70.95**	**34**	*e*P		**P**	**08 36 00.8**	**-2.1**
KPL				AMS		AMS	09 01 27.7	
	comp=Z,66µm,23.4s							
KPL	**Plockton**	**70.95**	**34**	P		**P**	**08 36 00.8**	**-2.1**
KPL				AMS		AMS	09 01 27.7	
	comp=Z,66µm,23.4s							
PVAQ	**Vaqueiros**	**71.00**	**56**	*e*P		**P**	**08 36 03.5**	**-0.2**
	comp=Z,1µm,1.4s							
PVAQ				*e*S		S	08 45 25.6	+7.6
PVAQ				*e*LQ		LQ	08 54 21.4	
PVAQ				*e*LR		LR	08 57 56.0	
	comp=Z,62µm,23.6s							
PMRV	**Marv??o**	**71.02**	**53**	*e*P		**P**	**08 36 03.5**	**-0.3**
	comp=Z,2µm,1.0s							
PMRV				*e*S		S	08 45 24.3	+6.1
PMRV				*e*LQ		LQ	08 54 23.1	
PMRV				*e*LR		LR	08 58 16.7	
	comp=Z,67µm,21.8s							
KSB	**Sheil Bridge**	**71.08**	**35**	*e*P		**P**	**08 36 02.5**	**-1.2**
KSB	**Sheil Bridge**	**71.08**	**35**	P		**P**	**08 36 02.5**	**-1.2**
PPT	**Papeete**	**71.10**	**244**	P		**P**	**08 36 07.1**	**+2.6**
	comp=Z,32nm,0.8s,baz=54,slow=19,SNR=3.5							
PPT				LR		LR	09 00 44.7	
	comp=Z,164µm,18.7s,baz=235,slow=30							
MVO	**Moncorvo**	**71.11**	**52**	*e*P		**P**	**08 36 04.5**	**+0.2**
	comp=Z,895nm,2.4s							
MVO				*e*S		S	08 45 25.3	+6.0
MVO				*e*LQ		LQ	08 54 21.5	
MVO				*e*LR		LR	09 00 04.9	
	comp=Z,41µm,27.3s							
PPT2	**Papeete2**	**71.11**	**244**	*e*P		**P**	**08 36 05.9**	**+1.2**
	comp=Z,1µm,1.5s							
PPT2				*e*S		**S**	**08 45 21.7**	**+1.8**
	comp=Z,173µm,26.0s							
PPT2				*e*LQ		LQ	08 54 38.2	
	comp=Z,559µm,35.8s							
PPT2				*e*LR		LR	08 57 35.9	
	comp=Z,273µm,25.5s,baz=55							
KAC	**Achnashellach**	**71.14**	**34**	*e*P		**P**	**08 36 03.2**	**-0.9**
KAC	**Achnashellach**	**71.14**	**34**	P		**P**	**08 36 03.2**	**-0.9**
PAE	**Paea**	**71.15**	**244**	*e*P		**P**	**08 36 05.9**	**+1.1**
	comp=Z,380nm,1.1s							
TNA	**Tin City**	**71.40**	**334**	*e*P		**P**	**08 36 05.7**	**+0.2**
	comp=Z,1µm,1.6s							
XMAS	**Kiritimati**	**71.42**	**266**	*e*P		**P**	**08 36 06.9**	**+0.4**
	comp=Z,184nm,1.4s							
XMAS				LR		LR		
	comp=Z,248µm,21.0s							
PBAR	**Barrancos**	**71.44**	**55**	*e*P		**P**	**08 36 06.3**	**0.0**
	comp=Z,1µm,1.0s							
PBAR				*e*S		S	08 45 31.0	+7.9
PBAR				*e*LQ		LQ	08 54 27.4	
PBAR				*e*LR		LR	08 57 59.0	
	comp=Z,35µm,23.6s							
GAL1	**Galloway**	**71.58**	**37**	*e*P		**P**	**08 36 05.8**	**-0.9**
GAL1				AMS		AMS	09 16 15.1	
	comp=Z,93µm,20.1s							
GAL1	**Galloway**	**71.58**	**37**	P		**P**	**08 36 05.8**	**-0.9**
GAL1				AMS		AMS	09 16 15.1	
	comp=Z,93µm,20.1s							
MDO	**Dochfour**	**71.64**	**34**	*e*P		**P**	**08 36 05.1**	**-2.1**
MDO	**Dochfour**	**71.64**	**34**	P		**P**	**08 36 05.1**	**-2.1**
PGBU	**Glenifferbraes**	**71.66**	**36**	*e*P		**P**	**08 36 04.0**	**-3.2**
PGBU				AMS		AMS	09 07 07.4	
	comp=Z,64µm,21.3s							
PGBU	**Glenifferbraes**	**71.66**	**36**	P		**P**	**08 36 04.0**	**-3.2**
PGBU				AMS		AMS	09 07 07.4	
	comp=Z,64µm,21.3s							
EAB	**Aberfoyle**	**71.72**	**36**	*e*P		**P**	**08 36 07.9**	**+0.3**
EAB	**Aberfoyle**	**71.72**	**36**	P		**P**	**08 36 07.9**	**+0.3**
WLF1	**Llynfaes**	**71.86**	**39**	AMS		AMS	09 15 09.8	
	comp=Z,71µm,17.7s							
WLF1	**Llynfaes**	**71.86**	**39**	AMS		AMS	09 15 09.8	
	comp=Z,71µm,17.7s							
YRE	**Yr Eifl**	**71.86**	**39**	*e*P		**P**	**08 36 06.9**	**-1.6**
YRE	**Yr Eifl**	**71.86**	**39**	P		**P**	**08 36 06.9**	**-1.6**
WME	**Myndd Eilian**	**71.91**	**39**	*e*P		**P**	**08 36 09.0**	**+0.2**
WME	**Myndd Eilian**	**71.91**	**39**	P		**P**	**08 36 09.0**	**+0.2**
HTL	**Hartland**	**71.97**	**41**	AMS		AMS	09 08 57.2	
	comp=Z,65µm,20.6s							
HTL	**Hartland**	**71.97**	**41**	AMS		AMS	09 08 57.2	
	comp=Z,65µm,20.6s							
YLL	**Llanberis**	**72.00**	**39**	*e*P		**P**	**08 36 08.6**	**-0.8**
YLL	**Llanberis**	**72.00**	**39**	P		**P**	**08 36 08.6**	**-0.8**
GCD	**Castle Douglas**	**72.02**	**37**	*e*P		**P**	**08 36 07.2**	**-2.2**
GCD	**Castle Douglas**	**72.02**	**37**	P		**P**	**08 36 07.2**	**-2.2**
ELO	**Logie Almond**	**72.05**	**35**	*e*P		**P**	**08 36 08.5**	**-1.1**
ELO	**Logie Almond**	**72.05**	**35**	P		**P**	**08 36 08.5**	**-1.1**
RTC	**Rabat Centre**	**72.15**	**59**	PFAKE			08 36 20.0	+9.4
RTC				LR		LR		
	comp=Z,89µm,20.0s							
WPM1	**Penmaenmawr**	**72.15**	**39**	*e*P		**P**	**08 36 10.4**	**+0.1**
WPM1	**Penmaenmawr**	**72.15**	**39**	P		**P**	**08 36 10.4**	**+0.1**
MCD	**Coleburn Disti**	**72.23**	**34**	*e*P		**P**	**08 36 08.8**	**-1.9**
MCD	**Coleburn Disti**	**72.23**	**34**	P		**P**	**08 36 08.8**	**-1.9**
EAU	**Auchinoon**	**72.24**	**36**	*e*P		**P**	**08 36 11.0**	**+0.2**
EAU	**Auchinoon**	**72.24**	**36**	P		**P**	**08 36 11.0**	**+0.2**
DYA	**Yadsworthy**	**72.37**	**42**	AMS		AMS	09 22 43.0	
	comp=Z,50µm,16.3s							
DYA	**Yadsworthy**	**72.37**	**42**	AMS		AMS	09 22 43.0	
	comp=Z,50µm,16.3s							
EDI	**Edinburgh**	**72.38**	**36**	*e*P		**P**	**08 36 09.6**	**-1.9**
EDI				AMS		AMS	09 07 46.5	
	comp=Z,75µm,20.0s							
EDI	**Edinburgh**	**72.38**	**36**	P		**P**	**08 36 09.6**	**-1.9**
EDI				AMS		AMS	09 07 46.5	
	comp=Z,75µm,20.0s							
EDI	**Edinburgh**	**72.38**	**36**	AMS		AMS	03 52 11.8	
	comp=Z,3µm,18.4s							
HEX	**Exmoor**	**72.39**	**41**	*e*P		**P**	**08 36 09.4**	**-2.4**
HEX	**Exmoor**	**72.39**	**41**	P		**P**	**08 36 09.4**	**-2.4**
MME1	**Meikle Cairn**	**72.41**	**34**	*e*P		**P**	**08 36 10.6**	**-1.2**
MME1	**Meikle Cairn**	**72.41**	**34**	P		**P**	**08 36 10.6**	**-1.2**
BST	**Brest**	**72.48**	**44**	*e*P		**P**	**08 36 12.2**	**-0.2**
BST	**Brest**	**72.48**	**44**	*e*P		**P**	**08 36 12.2**	**-0.2**
EFI	**East Falkland**	**72.49**	**162**	⇓*e*P		**P**	**08 36 11.9**	**-0.2**
EFI				pmax		pmax		
	comp=Z,1µ

LRW	**Lerwick**	**73.14**	**31**	AMS	AMS	09 04 45.5		
	comp=Z,72µm,22.3s							
STNC	**Stoke**	**73.19**	**39**	*e*P	**P**	**08 36 13.8**	**-2.6**	
STNC				AMS	AMS	09 17 24.3		
	comp=Z,89µm,18.1s							
STNC	**Stoke**	**73.19**	**39**	P	**P**	**08 36 13.8**	**-2.6**	
STNC				AMS	AMS	09 17 24.3		
	comp=Z,89µm,18.1s							
PAB	**San Pablo**	**73.34**	**53**	*e*P	**P**	**08 36 18.1**	**+0.3**	
PAB				pmax	pmax			
	comp=Z,1µm,1.6s							
PAB				MLR	MLR			
	comp=Z,74µm,20.0s							
PAB	**San Pablo**	**73.34**	**53**	*e*P	**P**	**08 36 18.1**	**+0.3**	
	comp=Z,238nm,1.6s							
PAB				LR	LR			
	comp=Z,49µm,20.0s							
SGMF	**Saint Gilles**	**73.49**	**44**	*e*P	**P**	**08 36 16.9**	**-1.4**	
	comp=Z,1µm,1.6s							
SGMF	**Saint Gilles**	**73.49**	**44**	*e*P	**P**	**08 36 16.9**	**-1.4**	
SGMF				pmax	pmax			
	comp=Z,1µm,1.6s							
SGMF	**Saint Gilles**	**73.49**	**44**	*e*P	**P**	**08 36 16.9**	**-1.4**	
	comp=Z,1µm,1.6s							
TBI	**Tubuai**	**73.54**	**239**	*e*P	**P**	**08 36 19.9**	**+1.0**	
	comp=Z,2µm,1.1s							
TBI				*e*S	**S**	**08 45 46.9**	**-0.4**	
	comp=Z,70µm,25.8s							
TBI				*e*LQ	LQ	08 55 44.9		
	comp=Z,366µm,32.2s							
TBI				*e*LR	LR	08 58 41.2		
	comp=Z,187µm,24.2s,baz=63							
KBI1	**Birley Grange**	**73.58**	**39**	*e*P	**P**	**08 36 17.9**	**-0.9**	
KBI1	**Birley Grange**	**73.58**	**39**	P	**P**	**08 36 17.9**	**-0.9**	
SWN1	**Swindon**	**73.60**	**40**	AMS	AMS	09 14 48.5		
	comp=Z,61µm,17.9s							
SWN1	**Swindon**	**73.60**	**40**	AMS	AMS	09 14 48.5		
	comp=Z,61µm,17.9s							
ESDC	**Sonseca Array**	**73.62**	**53**	P	**P**	**08 36 19.6**	**+0.3**	
ESDC			⇑*e*			09 04 00.8		
ESDC	**Sonseca Array**	**73.62**	**53**	P	**P**	**08 36 19.6**	**+0.3**	
	comp=Z,20nm,0.7s,baz=288,slow=4.6,SNR=72							
ESDC				PKP2bc		09 04 00.8		
	comp=Z,0.2nm,0.3s,baz=38,slow=2.5,SNR=6.0							
ESLA	**Sonseca Array**	**73.62**	**53**	*e*P	**P**	**08 36 19.6**	**+0.2**	
	comp=Z,719nm,1.6s							
JSA	**Saint Aubin**	**73.63**	**43**	AMS	AMS	09 10 35.8		
	comp=Z,93µm,18.7s							
JSA	**Saint Aubin**	**73.63**	**43**	AMS	AMS	09 10 35.8		
	comp=Z,93µm,18.7s							
WOL	**Wolverton**	**73.98**	**41**	*e*P	**P**	**08 36 20.8**	**-0.4**	
WOL				AMS	AMS	09 03 22.0		
	comp=Z,61µm,23.6s							
WOL	**Wolverton**	**73.98**	**41**	P	**P**	**08 36 20.8**	**-0.4**	
WOL				AMS	AMS	09 03 22.0		
	comp=Z,61µm,23.6s							
GRR	**Gorron**	**74.60**	**44**	*e*P	**P**	**08 36 23.5**	**-1.3**	
	comp=Z,2µm,1.3s							
GRR	**Gorron**	**74.60**	**44**	*e*P	**P**	**08 36 23.5**	**-1.3**	
GRR				pmax	pmax			
	comp=Z,2µm,1.3s							
GRR	**Gorron**	**74.60**	**44**	*e*P	**P**	**08 36 23.5**	**-1.3**	
	comp=Z,2µm,1.3s							
FLN	**La Foliniere**	**74.79**	**43**	*e*P	**P**	**08 36 24.8**	**-1.1**	
	comp=Z,1µm,1.2s,baz=271							
FLN				*e*R				
	comp=Z,130µm,19.8s							
FLN	**La Foliniere**	**74.79**	**43**	*e*P	**P**	**08 36 24.8**	**-1.1**	
FLN				pmax	pmax			
	comp=Z,1µm,1.2s							
FLN	**La Foliniere**	**74.79**	**43**	*e*P	**P**	**08 36 24.8**	**-1.1**	
	comp=Z,1µm,1.2s							
LDF	**La Druitiere**	**75.05**	**43**	*e*P	**P**	**08 36 26.1**	**-1.3**	
	comp=Z,937nm,1.1s							
LDF	**La Druitiere**	**75.05**	**43**	*e*P	**P**	**08 36 26.1**	**-1.3**	
LDF				pmax	pmax			
	comp=Z,937nm,1.1s							
LDF	**La Druitiere**	**75.05**	**43**	*e*P	**P**	**08 36 26.1**	**-1.3**	
	comp=Z,937nm,1.1s							
OSSF	**Osses**	**75.08**	**49**	*e*P	**P**	**08 36 26.9**	**-0.8**	
SJPF	**Ste Jean**	**75.13**	**49**	*e*P	**P**	**08 36 27.7**	**-0.3**	
	comp=Z,2µm,1.3s							
SJPF	**Ste Jean**	**75.13**	**49**	*e*P	**P**	**08 36 27.7**	**-0.3**	
SJPF				pmax	pmax			
	comp=Z,2µm,1.3s							
SJPF	**Ste Jean**	**75.13**	**49**	*e*P	**P**	**08 36 27.7**	**-0.3**	
	comp=Z,2µm,1.3s							
ASCN	**Ascension**	**75.19**	**103**	*e*P	**P**	**08 36 30.4**	**+1.6**	
	comp=Z,515nm,1.1s							
ASCN				LR	LR			
	comp=Z,59µm,21.0s							
KBS	**Kingsbay**	**75.19**	**11**⇓	*i*P	**P**	**08 36 27.1**	**-0.6**	
KBS				AMB	AMB	08 37 08.8		
	comp=Z,2µm,1.5s							
KBS				*e*S	**S**	**08 46 06.4**	**+2.2**	
KBS	**Kingsbay**	**75.19**	**11**	*de*P	**P**	**08 36 28.8**	**+1.1**	
KBS				pmax	pmax			
	comp=Z,212nm,1.6s							
KBS				MLR	MLR			
	comp=Z,136µm,22.0s							
KBS	**Kingsbay**	**75.19**	**11**	*e*P	**P**	**08 36 28.1**	**+0.4**	
	comp=Z,2µm,1.5s							
KBS				LR	LR			
	comp=Z,128µm,20.0s							
AEU	**East Anglia Un**	**75.31**	**39**	*e*P	**P**	**08 36 28.9**	**+0.1**	
AEU	**East Anglia Un**	**75.31**	**39**	P	**P**	**08 36 28.9**	**+0.1**	
ORDF	**Ordiarp**	**75.32**	**49**	*e*P	**P**	**08 36 29.8**	**+0.7**	
MFF	**Saint Martin d**	**75.34**	**45**	*e*P	**P**	**08 36 27.9**	**-1.2**	
	comp=Z,883nm,1.3s							
MFF	**Saint Martin d**	**75.34**	**45**	*e*P	**P**	**08 36 27.9**	**-1.2**	
MFF				pmax	pmax			
	comp=Z,883nm,1.3s							
MFF	**Saint Martin d**	**75.34**	**45**	*e*P	**P**	**08 36 27.9**	**-1.2**	
	comp=Z,883nm,1.3s							
ELSH	**Elham, Standar**	**75.47**	**41**	*e*P	**P**	**08 36 27.0**	**-2.7**	
ELSH				AMS	AMS	09 18 54.5		
	comp=Z,60µm,19.5s							
ELSH	**Elham, Standar**	**75.47**	**41**	P	**P**	**08 36 27.0**	**-2.7**	
ELSH				AMS	AMS	09 18 54.5		
	comp=Z,60µm,19.5s							
ETSF	**Etsaut**	**75.65**	**49**	*e*P	**P**	**08 36 30.7**	**-0.4**	
	comp=Z,2µm,1.6s							
ETSF	**Etsaut**	**75.65**	**49**	*e*P	**P**	**08 36 30.7**	**-0.4**	
ETSF				pmax	pmax			
	comp=Z,2µm,1.6s							
ETSF	**Etsaut**	**75.65**	**49**	*e*P	**P**	**08 36 30.7**	**-0.4**	
	comp=Z,2µm,1.6s							
REYF	**Montagne du Re**	**75.74**	**49**	*e*P	**P**	**08 36 32.0**	**+0.4**	
VIEF	**Viey**	**76.07**	**49**	*e*P	**P**	**08 36 33.3**	**-0.2**	
LABF	**Labassere**	**76.08**	**49**	*e*P	**P**	**08 36 33.3**	**-0.2**	
LFF	**La Frestale**	**76.22**	**47**	*e*P	**P**	**08 36 33.1**	**-1.1**	
	comp=Z,1µm,1.3s							
LFF	**La Frestale**	**76.22**	**47**	*e*P	**P**	**08 36 33.1**	**-1.1**	
LFF				pmax	pmax			
	comp=Z,1µm,1.3s							
LFF	**La Frestale**	**76.22**	**47**	*e*P	**P**	**08 36 33.1**	**-1.1**	
	comp=Z,1µm,1.3s							
SPA0	**Spitsbergen Ar**	**76.23**	**12**	*e*P	**P**	**08 36 34.4**	**+0.7**	
SPA0				*e*S	**S**	**08 46 16.9**	**+1.2**	
ASK	**Askoy**	**76.25**	**31**	*e*P	**P**	**08 36 33.6**	**-0.4**	
EPF	**Esparros**	**76.28**	**49**	*e*P	**P**	**08 36 34.0**	**-0.6**	
	comp=Z,3µm,1.9s							
EPF	**Esparros**	**76.28**	**49**	*e*P	**P**	**08 36 34.0**	**-0.6**	
EPF				pmax	pmax			
	comp=Z,3µm,1.9s							
EPF	**Esparros**	**76.28**	**49**	*e*P	**P**	**08 36 34.0**	**-0.6**	
	comp=Z,3µm,1.9s							
RESF	**Ens**	**76.31**	**49**	*e*P	**P**	**08 36 35.8**	**+0.9**	
BER	**Bergen**	**76.33**	**31**	*e*P	**P**	**08 36 32.8**	**-1.6**	
MELF	**Melles**	**76.61**	**49**	*e*P	**P**	**08 36 38.0**	**+1.5**	
RJF	**Les Rejaudoux**	**76.70**	**46**	*e*P	**P**	**08 36 35.7**	**-1.2**	
	comp=Z,2µm,1.9s							
RJF				*e*R				
	comp=Z,114µm,21.5s							
RJF	**Les Rejaudoux**	**76.70**	**46**	*e*P	**P**	**08 36 35.7**	**-1.2**	
RJF				pmax	pmax			
	comp=Z,2µm,1.9s							
RJF	**Les Rejaudoux**	**76.70**	**46**	*e*P	**P**	**08 36 35.7**	**-1.2**	
	comp=Z,2µm,1.9s							
MLS	**Moulis**	**76.83**	**49**	*e*P	**P**	**08 36 37.2**	**-0.5**	
MOL	**Molde**	**76.97**	**28**	*e*P	**P**	**08 36 35.5**	**-2.5**	
MOL				AMB	AMB	08 37 20.8		
	comp=Z,1µm,1.6s							
MOL				*e*S	**S**	**08 46 27.3**	**+3.1**	
TCF	**Toulx Ste Croi**	**77.00**	**45**	*e*P	**P**	**08 36 37.2**	**-1.4**	
	comp=Z,972nm,1.5s							
TCF	**Toulx Ste Croi**	**77.00**	**45**	*e*P	**P**	**08 36 37.2**	**-1.4**	
TCF				pmax	pmax			
	comp=Z,972nm,1.5s							
TCF	**Toulx Ste Croi**	**77.00**	**45**	*e*P	**P**	**08 36 37.2**	**-1.4**	
	comp=Z,972nm,1.5s							
ODD1	**Odda**	**77.05**	**31**	*e*P	**P**	**08 36 36.8**	**-1.8**	
ODD1				AMB	AMB	08 37 05.3		
	comp=Z,922nm,1.2s							
HYF	**Humbligny**	**77.11**	**44**	*e*P	**P**	**08 36 37.7**	**-1.5**	
HYF	**Humbligny**	**77.11**	**44**	*e*P	**P**	**08 36 37.7**	**-1.5**	
CAF	**Calviac**	**77.15**	**47**	*e*P	**P**	**08 36 38.1**	**-1.4**	
	comp=Z,843nm,1.4s							
CAF	**Calviac**	**77.15**	**47**	*e*P	**P**	**08 36 38.1**	**-1.4**	
CAF				pmax	pmax			
	comp=Z,843nm,1.4s							
CAF	**Calviac**	**77.15**	**47**	*e*P	**P**	**08 36 38.1**	**-1.4**	
	comp=Z,843nm,1.4s							
BGF	**Bois d'Agland**	**77.38**	**45**	*e*P	**P**	**08 36 39.0**	**-1.7**	
	comp=Z,1µm,1.4s							
BGF	**Bois d'Agland**	**77.38**	**45**	*e*P	**P**	**08 36 39.0**	**-1.7**	
BGF				pmax	pmax			
	comp=Z,1µm,1.4s							
BGF	**Bois d'Agland**	**77.38**	**45**	*e*P	**P**	**08 36 39.0**	**-1.7**	
	comp=Z,1µm,1.4s							
SNF	**Seneffe**	**77.55**	**41**	P	**P**	**08 36 42.1**	**+0.5**	
MTLF	**Montolieu**	**77.57**	**48**	*e*P	**P**	**08 36 40.8**	**-1.0**	
	comp=Z,2µm,1.8s							
MTLF	**Montolieu**	**77.57**	**48**	*e*P	**P**	**08 36 40.8**	**-1.0**	
MTLF				pmax	pmax			
	comp=Z,2µm,1.8s							
MTLF	**Montolieu**	**77.57**	**48**	*e*P	**P**	**08 36 40.8**	**-1.0**	
	comp=Z,2µm,1.8s							
BAIF	**Baives**	**77.59**	**41**	*e*P	**P**	**08 36 40.5**	**-1.3**	
	comp=Z,1µm,1.7s							
BAIF	**Baives**	**77.59**	**41**	*e*P	**P**	**08 36 40.5**	**-1.3**	
BAIF				pmax	pmax			
	comp=Z,1µm,1.7s							
BAIF	**Baives**	**77.59**	**41**	*e*P	**P**	**08 36 40.5**	**-1.3**	
	comp=Z,1µm,1.7s							
VALF	**Valcebollere**	**77.61**	**49**	*e*P	**P**	**08 36 43.6**	**+1.3**	
PYM	**Petit Puy Mans**	**77.65**	**46**	*e*P	**P**	**08 36 44.8**	**+2.5**	
PYM	**Petit Puy Mans**	**77.65**	**46**	*e*P	**P**	**08 36 44.8**	**+2.5**	
PYM	**Petit Puy Mans**	**77.65**	**46**	*e*P	**P**	**08 36 44.8**	**+2.5**	
SNART	**Snartemo**	**77.66**	**33**	*e*P	**P**	**08 36 39.8**	**-2.2**	
AGO	**Saint Agoulin**	**77.67**	**45**	*e*P	**P**	**08 36 44.4**	**+2.0**	
AGO	**Saint Agoulin**	**77.67**	**45**	*e*P	**P**	**08 36 44.4**	**+2.0**	
AVF	**Avril sur Loir**	**77.68**	**45**	*e*P	**P**	**08 36 40.7**	**-1.6**	
	comp=Z,1µm,1.6s							
AVF	**Avril sur Loir**	**77.68**	**45**	*e*P	**P**	**08 36 40.7**	**-1.6**	
AVF				pmax	pmax			
	comp=Z,1µm,1.6s							
AVF	**Avril sur Loir**	**77.68**	**45**	*e*P	**P**	**08 36 40.7**	**-1.6**	
	comp=Z,1µm,1.6s							
SSF	**Saint Saulge**	**77.72**	**44**	*e*P	**P**	**08 36 40.7**	**-1.9**	
	comp=Z,544nm,1.3s							
SSF	**Saint Saulge**	**77.72**	**44**	*e*P	**P**	**08 36 40.7**	**-1.9**	
SSF				pmax	pmax			
	comp=Z,544nm,1.3s							
SSF	**Saint Saulge**	**77.72**	**44**	*e*P	**P**	**08 36 40.7**	**-1.9**	
	comp=Z,544nm,1.3s							
DOU	**Dourbes**	**77.83**	**41**	P	**P**	**08 36 42.7**	**-0.4**	
	comp=Z,171nm,1.2s							
LRDF	**Laroque-de-Fa**	**77.88**	**49**	*e*P	**P**	**08 36 44.4**	**+0.8**	
LBL	**Lubilhac**	**77.91**	**46**	*e*P	**P**	**08 36 46.0**	**+2.2**	
LBL	**Lubilhac**	**77.91**	**46**	*e*P	**P**	**08 36 46.0**	**+2.2**	
LBL	**Lubilhac**	**77.91**	**46**	*e*P	**P**	**08 36 46.0**	**+2.2**	
LOR	**Lormes**	**77.92**	**44**	*e*P	**P**	**08 36 42.3**	**-1.4**	
	comp=Z,2µm,1.5s,baz=273							
LOR				*e*R				
	comp=Z,125µm,22.5s							
LOR	**Lormes**	**77.92**	**44**	*e*P	**P**	**08 36 42.3**	**-1.4**	
	comp=Z,2µm,1.5s							
FILF	**Fillols**	**77.97**	**49**	*e*P	**P**	**08 36 44.6**	**+0.4**	
GIVF	**Givet**	**77.97**	**41**	*e*P	**P**	**08 36 42.7**	**-1.2**	
	comp=Z,848nm,1.3s							
GIVF	**Givet**	**77.97**	**41**	*e*P	**P**	**08 36 42.7**	**-1.2**	
GIVF				pmax	pmax			
	comp=Z,849nm,1.3s							
GIVF	**Givet**	**77.97**	**41**	*e*P	**P**	**08 36 42.7**	**-1.2**	
	comp=Z,848nm,1.3s							
BJO	**Bjornoya**	**77.98**	**15**	*e*P	**P**	**08 36 43.1**	**-0.4**	
SMF	**Signal de Mont**	**78.03**	**45**	*e*P	**P**	**08 36 42.3**	**-2.1**	
	comp=Z,678nm,1.3s							
SMF	**Signal de Mont**	**78.03**	**45**	*e*P	**P**	**08 36 42.3**	**-2.1**	
SMF				pmax	pmax			
	comp=Z,678nm,1.3s							
SMF	**Signal de Mont**	**78.03**	**45**	*e*P	**P**	**08 36 42.3**	**-2.1**	
	comp=Z,678nm,1.3s							
TBLU	**Trondheim**	**78.04**	**27**	*e*P	P	08 36 38.7	-5.4	
TBLU				AMB	AMB	08 37 22.0		
	comp=Z,1µm,3.1s							
LOF	**Lofoten**	**78.14**	**22**	*e*P	**P**	**08 36 42.7**	**-1.8**	
LOF				AMB	AMB	08 37 21.9		
	comp=Z,1µm,1.6s							
BCLA	**Clavier**	**78.21**	**41**	P	**P**	**08 36 45.8**	**+0.5**	
	comp=Z,332nm,1.9s							
SJAF	**Saint Jean de**	**78.22**	**49**	*e*P	**P**	**08 36 45.1**	**-0.4**	
EANR	**'Ain N'Sour**	**78.23**	**56**	P	**P**	**08 36 46.0**	**+0.3**	
HOMB	**Homborsund**	**78.34**	**33**	*e*P	**P**	**08 36 44.8**	**-1.0**	
BEBN	**Eben Emael**	**78.36**	**40**	P	**P**	**08 36 46.6**	**+0.6**	
	comp=Z,131nm,1.9s							
ECHA	**Ech Chlef**	**78.40**	**56**	P	**P**	**08 36 49.0**	**+2.5**	
STOK	**Stokkvaagen**	**78.42**	**24**	*e*P	P	08 36 53.0	+6.9	
MEZF	**Maizieres J'vi**	**78.45**	**43**	*e*P	**P**	**08 36 45.4**	**-1.2**	
	comp=Z,2µm,1.4s,baz=283							
MEZF	**Maizieres J'vi**	**78.45**	**43**	*e*P	**P**	**08 36 45.4**	**-1.2**	
	comp=Z,2µm,1.4s							
NSS	**Namsos**	**78.46**	**26**	*e*P	**P**	**08 36 45.7**	**-0.6**	
NSS				*e*S	**S**	**08 46 40.6**	**+0.3**	
EBNR	**Beni Rached**	**78.50**	**55**	P	**P**	**08 36 49.0**	**+1.8**	
SFTF	**Sexfontaines**	**78.50**	**43**	*e*P	**P**	**08 36 45.6**	**-1.3**	
	comp=Z,1µm,1.3s							
SFTF	**Sexfontaines**	**78.50**	**43**	*e*P	**P**	**08 36 45.6**	**-1.3**	
	comp=Z,1µm,1.3s							
ETRT	**Tiaret**	**78.51**	**56**	P	**P**	**08 36 49.7**	**+2.3**	
HGN	**Heimansgroeve**	**78.53**	**40**	*e*P	**P**	**08 36 45.7**	**-1.3**	
HGN				*e*PP	**PP**	**08 39 44.2**	**-0.2**	
HGN				*e*S	S	08 46 47.8	+6.4	
KONO	**Kongsberg**	**78.58**	**31**	*e*P	**P**	**08 36 46.6**	**-0.4**	
KONO				AMB	AMB	08 37 15.1		
	comp=Z,1µm,2.4s							
KONO				*e*S	**S**	**08 46 46.7**	**+5.0**	
KONO				*e*SS	**SS**	**08 51 47.3**	**+2.3**	
KONO	**Kongsberg**	**78.58**	**31**	*e*P	**P**	**08 36 48.3**	**+1.3**	
KONO				pmax	pmax			
	comp=Z,1µm,1.5s							
KONO				MLR	MLR			
	comp=Z,80µm,20.0s							
KONO	**Kongsberg**	**78.58**	**31**	*e*P	**P**	**08 36 48.3**	**+1.3**	
	comp=Z,252nm,1.5s							
KONO				LR	LR			
	comp=Z,80µm,20.0s							
LASF	**Ste Croix**	**78.58**	**47**	*e*P	**P**	**08 36 46.7**	**-0.8**	
	comp=Z,1µm,1.5s							
LASF	**Ste Croix**	**78.58**	**47**	*e*P	**P**	**08 36 46.7**	**-0.8**	
	comp=Z,1µm,1.5s							
MEM	**Membach**	**78.61**	**41**	P	**P**	**08 36 47.9**	**+0.5**	
	comp=Z,188nm,1.8s							
WTSB	**Winterswijk**	**78.79**	**39**	*e*P	**P**	**08 36 47.6**	**-0.8**	
SSB	**Saint Sauveur**	**78.80**	**46**	*e*P	**P**	**08 36 47.6**	**-1.1**	
SSB				pmax	pmax			
	comp=Z,204nm,1.2s							
SSB				MLR	MLR			
	comp=Z,69µm,20.0s							
SSB	**Saint Sauveur**	**78.80**	**46**	*e*P	**P**	**08 36 47.6**	**-1.1**	
	comp=Z,204nm,1.2s							
SSB				LR	LR			
	comp=Z,69µm,20.0s							
SSB	**Saint Sauveur**	**78.80**	**46**	*e*P	**P**	**08 36 47.5**	**-1.1**	
STEI	**Steigen**	**78.81**	**22**	*e*P	**P**	**08 36 46.9**	**-1.3**	
STEI				AMB	AMB	08 37 28.8		
	comp=Z,1µm,0.6s							
PAGF	**Fort de Pagny**	**78.88**	**43**	*e*P	**P**	**08 36 47.9**	**-1.1**	
	comp=Z,432nm,1.4s,baz=286							
PAGF	**Fort de Pagny**	**78.88**	**43**	*e*P	**P**	**08 36 47.9**	**-1.1**	
	comp=Z,432nm,1.4s							
WLF	**Walferdange**	**78.91**	**41**	P	**P**	**08 36 50.2**	**+1.1**	
	comp=Z,396nm,2.0s							
WLF	**Walferdange**	**78.91**	**41**	*e*P	**P**	**08 36 48.4**	**-0.7**	
	comp=Z,1µm,1.8s							
WLF				*e*L	L	09 21 00.7		
	comp=Z,119µm,21.4s							
WLF	**Walferdange**	**78.91**	**41**	*e*P	**P**	**08 36 48.2**	**-0.9**	
WLF				pmax	pmax			
	comp=Z,321nm,1.2s							
WLF				MLR	MLR			
	comp=Z,121µm,21.0s							
WLF	**Walferdange**	**78.91**	**41**	*e*P	**P**	**08 36 48.2**	**-0.9**	
	comp=Z,321nm,1.2s							
WLF				LR	LR			
	comp=Z,121µm,21.0s							
NAO01	**NORSAR Array S**	**78.91**	**30**	*e*P	**P**	**08 36 48.3**	**-0.6**	
	comp=Z,591nm,1.1s							
VIVF	**Saint-Julien-I**	**78.98**	**46**	*e*P	**P**	**08 36 48.9**	**-0.8**	
	comp=Z,3µm,1.9s							
VIVF	**Saint-Julien-I**	**78.98**	**46**	*e*P	**P**	**08 36 48.9**	**-0.8**	
VIVF				pmax	pmax			
	comp=Z,3µm,1.9s							
VIVF	**Saint-Julien-I**	**78.98**	**46**	*e*P	**P**	**08 36 48.9**	**-0.8**	
	comp=Z,3µm,1.9s							
NB2	**NORSAR Subarra**	**79.02**	**29**	P	**P**	**08 36 49.4**	**-0.1**	
	comp=Z,1µm,1.4s,baz=284,slow=5.9							
NB2	**NORSAR Subarra**	**79.02**	**29**	P	**P**	**08 36 49.4**	**-0.1**	
	baz=284,slow=5.9							
NOA	**NORSAR Array B**	**79.02**	**29**	P	**P**	**08 36 49.4**	**-0.1**	
NOA				P'P'		09 03 43.8		
NOA	**NORSAR Array B**	**79.02**	**29**	P	**P**	**08 36 49.4**	**-0.1**	
	comp=Z,122nm,1.1s,baz=284,slow=5.5,SNR=50							
NOA				PKPPKP	**P'P'df**	**09 03 43.8**	**-4.7**	
	comp=Z,1.7nm,0.9s,baz=342,slow=1.0,SNR=3.5							
NOA				LR	LR	09 08 07.2		
	comp=Z,51µm,21.9s,baz=285,slow=33							
MOR8	**Moi Rana**	**79.02**	**24**	*e*P	**P**	**08 36 49.8**	**+0.4**	
MUD	**Monsted U'grnd**	**79.11**	**34**⇓	*i*P	**P**	**08 36 50.0**	**0.0**	
MUD				*e*S	**S**	**08 46 51.5**	**+4.0**	
MUD				pmax	pmax			
	comp=Z,210nm,1.2s							
MUD				MLR	MLR			
	comp=Z,66µm,22.0s							
MUD	**Monsted U'grnd**	**79.11**	**34**⇓	*i*P	**P**	**08 36 50.0**	**0.0**	
	comp=Z,206nm,1.1s							
MUD								
	comp=Z,66µm,22.0s							
THEF	**They Montfort**	**79.12**	**43**	*e*P	**P**	**08 36 49.0**	**-1.3**	
THEF	**They Montfort**	**79.12**	**43**	*e*P	**P**	**08 36 49.0**	**-1.3**	
THEF	**They Montfort**	**79.12**	**43**	*e*P	**P**	**08 36 49.0**	**-1.3**	
BUG	**Bochum--Univer**	**79.20**	**39**	*e*P	**P**	**08 36 49.5**	**-1.1**	
	comp=Z,652nm,1.5s							
BUG				*e*L	L	09 19 58.8		
	comp=Z,86µm,19.4s							
NC602	**NORSAR Array S**	**79.25**	**30**⇓	*i*P	**P**	**08 36 50.1**	**-0.6**	
IBBN	**Ibbenburen**	**79.29**	**39**	*e*P	**P**	**08 36 50.3**	**-0.8**	
	comp=Z,1µm,1.7s							
IBBN				*e*L	L	09 17 02.8		
	comp=Z,87µm,20.8s							
HAU	**Haudompre**	**79.41**	**43**	*e*P	**P**	**08 36 50.5**	**-1.4**	
	comp=Z,570nm,1.1s							
HAU				*e*R				
	comp=Z,110µm,20.0s							
HAU	**Haudompre**	**79.41**	**43**	*e*P	**P**	**08 36 50.5**	**-1.4**	
HAU				pmax	pmax			
	comp=Z,570nm,1.1s							
HAU	**Haudompre**	**79.41**	**43**	*e*P	**P**	**08 36 50.5**	**-1.4**	
	comp=Z,570nm,1.1s							
RUP	**Ruppelstein**	**79.47**	**41**	*e*P	**P**	**08 36 51.4**	**-0.9**	
RUP	**Ruppelstein**	**79.47**	**41**	*e*P	**P**	**08 36 51.4**	**-0.9**	
OCF	**Saint Nazaire**	**79.48**	**47**	*e*P	**P**	**08 36 54.0**	**+1.6**	
OG26	**St.-Nazaire-De**	**79.48**	**47**	*e*P	**P**	**08 36 54.0**	**+1.6**	
TRO	**Tromso**	**79.55**	**20**⇓	*i*P	**P**	**08 36 51.4**	**-0.7**	
TRO				AMB	AMB	08 37 32.8		
	comp=Z,1µm,1.1s							
TRO				*e*S	**S**	**08 46 55.6**	**+4.0**	
TRO				*e*SS	**SS**	**08 52 05.8**	**+6.7**	
TRO				AMS	AMS	09 05 54.5		
	comp=Z,96µm,34.8s							
CABF	**La Chapelle**	**79.55**	**44**	*e*P	**P**	**08 36 51.7**	**-1.1**	
	comp=Z,1µm,1.6s							
CABF	**La Chapelle**	**79.55**	**44**	*e*P	**P**	**08 36 51.7**	**-1.1**	
CABF				pmax	pmax			
	comp=Z,1µm,1.6s							
CABF	**La Chapelle**	**79.55**	**44**	*e*P	**P**	**08 36 51.7**	**-1.1**	
	comp=Z,1µm,1.6s							
GRN	**Grenoble**	**79.64**	**46**	*e*P	**P**	**08 36 54.0**	**+0.7**	
GRN	**Grenoble**	**79.64**	**46**	*e*P	**P**	**08 36 54.0**	**+0.7**	
GRN	**Grenoble**	**79.64**	**46**	*e*P	**P**	**08 36 54.0**	**+0.7**	
EMHD	**Djebel Mahouad**	**79.64**	**55**	P	**P**	**08 36 55.0**	**+1.5**	
ABH	**Alteburg**	**79.73**	**41**	*e*P	**P**	**08 36 52.7**	**-1.0**	
HINF	**Hinteralfeld**	**79.78**	**43**	*e*P	**P**	**08 36 52.4**	**-1.6**	
	comp=Z,2µm,1.9s							
HINF	**Hinteralfeld**	**79.78**	**43**	*e*P	**P**	**08 36 52.4**	**-1.6**	
HINF				pmax	pmax			
	comp=Z,2µm,1.9s							
HINF	**Hinteralfeld**	**79.78**	**43**	*e*P	**P**	**08 36 52.4**	**-1.6**	
	comp=Z,2µm,1.9s							
AMKA	**Amchitka**	**79.79**	**321**	*e*P	**P**	**08 36 54.8**	**+1.0**	
	comp=Z,829nm,1.0s							
ORIF	**Oris-en-Rattie**	**79.80**	**46**	*e*P	**P**	**08 36 53.3**	**-0.9**	
	comp=Z,320nm,1.0s							
ORIF				*e*R				
	comp=Z,132µm,21.5s							
ORIF	**Oris-en-Rattie**	**79.80**	**46**	*e*P	**P**	**08 36 53.3**	**-0.9**	
ORIF				pmax	pmax			
	comp=Z,320nm,1.0s					

LPL	**La Plagne**	**80.25**	**45**	*e*P		**P**	**08 36 56.0**	**-0.8**
	comp=Z,846nm,1.4s							
LPL	**La Plagne**	**80.25**	**45**	*e*P		**P**	**08 36 56.0**	**-0.8**
LPL					pmax	pmax		
	comp=Z,846nm,1.4s							
LPL	**La Plagne**	**80.25**	**45**	*e*P		**P**	**08 36 56.0**	**-0.8**
	comp=Z,846nm,1.4s							
LPG	**La Plagne**	**80.26**	**45**	*e*P		**P**	**08 36 56.2**	**-0.7**
	comp=Z,2µm,1.8s							
LPG	**La Plagne**	**80.26**	**45**	*e*P		**P**	**08 36 56.2**	**-0.7**
LPG					pmax	pmax		
	comp=Z,2µm,1.8s							
LPG	**La Plagne**	**80.26**	**45**	*e*P		**P**	**08 36 56.2**	**-0.7**
	comp=Z,2µm,1.8s							
BBS	**Basel-Blauen**	**80.30**	**43**	*e*P		**P**	**08 36 55.3**	**-1.5**
BBS	**Basel-Blauen**	**80.30**	**43**	*e*P		**P**	**08 36 55.3**	**-1.5**
BNI	**Bardonecchia**	**80.32**	**46**	*e*P		**P**	**08 36 56.5**	**-0.6**
BNI					pmax	pmax		
	comp=Z,327nm,1.4s							
BNI					MLR	MLR		
	comp=Z,98µm,20.0s							
BNI	**Bardonecchia**	**80.32**	**46**	*e*P		**P**	**08 36 56.5**	**-0.6**
	comp=Z,327nm,1.4s							
BNI					LR	LR		
	comp=Z,98µm,20.0s							
BSEG	**Bad Segeberg**	**80.38**	**37**	*e*P		**P**	**08 36 56.6**	**-0.4**
	comp=Z,2µm,1.6s							
BSEG				*e*L		L	09 16 38.5	
	comp=Z,154µm,21.9s							
BSEG	**Bad Segeberg**	**80.38**	**37**	*e*P		**P**	**08 36 56.6**	**-0.4**
BSEG					pmax	pmax		
	comp=Z,2µm,1.6s							
BSEG					MLR	MLR		
	comp=Z,154µm,21.9s							
AKET	**Djebel Ketaf**	**80.41**	**55**	P		**P**	**08 36 56.8**	**-0.9**
MBDF	**Montbardon**	**80.47**	**46**	*e*P		**P**	**08 36 56.8**	**-1.1**
	comp=Z,555nm,1.3s							
MBDF	**Montbardon**	**80.47**	**46**	*e*P		**P**	**08 36 56.8**	**-1.1**
MBDF					pmax	pmax		
	comp=Z,555nm,1.3s							
MBDF	**Montbardon**	**80.47**	**46**	*e*P		**P**	**08 36 56.8**	**-1.1**
	comp=Z,555nm,1.3s							
FELD	**Feldberg im Sc**	**80.52**	**43**	*e*P		**P**	**08 36 56.8**	**-1.3**
FELD	**Feldberg im Sc**	**80.52**	**43**	*e*P		**P**	**08 36 56.8**	**-1.3**
SURF	**Saint Ours**	**80.55**	**46**	*e*P		**P**	**08 36 58.1**	**-0.3**
SURF	**Saint Ours**	**80.55**	**46**	*e*P		**P**	**08 36 58.1**	**-0.3**
TOD	**Tromm**	**80.59**	**41**	*e*P		**P**	**08 36 58.1**	**-0.2**
TOD	**Tromm**	**80.59**	**41**	*e*P		**P**	**08 36 58.1**	**-0.2**
BFO	**Black Forest**	**80.61**	**42**	*e*P		**P**	**08 36 57.1**	**-1.3**
	comp=Z,432nm,1.5s							
BFO				*e*L		L	09 23 19.5	
	comp=Z,96µm,19.8s							
BFO	**Black Forest**	**80.61**	**42**	*e*P		**P**	**08 36 57.6**	**-0.8**
BFO					pmax	pmax		
	comp=Z,274nm,1.3s							
BFO					MLR	MLR		
	comp=Z,91µm,19.0s							
BFO	**Black Forest**	**80.61**	**42**	*e*P		**P**	**08 36 57.6**	**-0.8**
	comp=Z,274nm,1.3s							
BFO					LR	LR		
	comp=Z,91µm,19.0s							
BFO	**Black Forest**	**80.61**	**42**	P		**P**	**08 36 58.2**	**-0.2**
	comp=Z,202nm1.6s,SNR=5.7							
LMR	**La Mourre**	**80.62**	**48**	*e*P		**P**	**08 36 57.4**	**-1.1**
	comp=Z,1µm,1.6s							
LMR	**La Mourre**	**80.62**	**48**	*e*P		**P**	**08 36 57.4**	**-1.1**
LMR					pmax	pmax		
	comp=Z,1µm,1.6s							
LMR	**La Mourre**	**80.62**	**48**	*e*P		**P**	**08 36 57.4**	**-1.1**
	comp=Z,1µm,1.6s							
NRDL	**Niedersach Rie**	**80.64**	**38**	*e*P		**P**	**08 36 57.7**	**-0.6**
	comp=Z,902nm,1.5s							
FRF	**La Foret Royal**	**80.66**	**47**	*e*P		**P**	**08 36 57.7**	**-1.1**
	comp=Z,1µm,1.5s							
FRF	**La Foret Royal**	**80.66**	**47**	*e*P		**P**	**08 36 57.7**	**-1.1**
FRF					pmax	pmax		
	comp=Z,1µm,1.5s							
FRF	**La Foret Royal**	**80.66**	**47**	*e*P		**P**	**08 36 57.7**	**-1.1**
	comp=Z,1µm,1.5s							
CALN	**Calern**	**80.79**	**47**	*e*P		**P**	**08 37 01.4**	**+1.8**
CALN	**Calern**	**80.79**	**47**	*e*P		**P**	**08 37 01.4**	**+1.8**
CALN	**Calern**	**80.79**	**47**	*e*P		**P**	**08 37 01.4**	**+1.8**
AKF	**Akfadou**	**80.80**	**55**	P		**P**	**08 36 56.8**	**-3.1**
BILL	**Bilibino**	**80.91**	**339**	*e*P		**P**	**08 36 58.8**	**-0.8**
BILL				*i*			08 37 05.5	
BILL				*i* S		**S**	**08 47 07.0**	**+0.9**
BILL					pmax	pmax		
	comp=Z,1µm,1.8s							
BILL					MLR	MLR		
	comp=Z,116µm,22.0s							
MVIF	**Mont Vial**	**80.94**	**47**	*e*P		**P**	**08 37 00.6**	**+0.2**
MVIF	**Mont Vial**	**80.94**	**47**	*e*P		**P**	**08 37 00.6**	**+0.2**
MVIF	**Mont Vial**	**80.94**	**47**	*e*P		**P**	**08 37 00.6**	**+0.2**
SPAK	**Spaichingen-Ko**	**80.97**	**47**	*e*P		**P**	**08 36 59.4**	**-1.0**
TOUF	**Mont Tournerai**	**80.97**	**47**	*e*P		**P**	**08 37 01.1**	**+0.4**
TOUF	**Mont Tournerai**	**80.97**	**47**	*e*P		**P**	**08 37 01.1**	**+0.4**
TOUF	**Mont Tournerai**	**80.97**	**47**	*e*P		**P**	**08 37 01.1**	**+0.4**
UBBA	**Unterbreizbach**	**81.02**	**40**	*e*P		**P**	**08 37 00.0**	**-0.4**
	comp=Z,879nm,1.9s							
UBBA				*e*L		L	09 15 59.5	
	comp=Z,79µm,19.4s							
STU	**Stuttgart**	**81.06**	**42**	*e*P		**P**	**08 36 59.6**	**-1.2**
	comp=Z,676nm,1.6s							
STU				*e*L		L	09 19 59.3	
	comp=Z,84µm,19.8s							
STU	**Stuttgart**	**81.06**	**42**	*e*P		**P**	**08 37 01.1**	**+0.4**
STU					pmax	pmax		
	comp=Z,2µm,1.8s							
STU	**Stuttgart**	**81.06**	**42**	*e*P		**P**	**08 37 01.1**	**+0.4**
	comp=Z,2µm,1.8s							
LLD	**Lille Linde**	**81.06**	**35**	*i* P		P	08 37 06.1	+5.5
LLD					pmax	pmax		
	comp=Z,150nm,0.8s							
LLD	**Lille Linde**	**81.06**	**35**	*i* P		P	08 37 06.1	+5.5
	comp=Z,149nm,0.7s							
COP	**Copenhagen**	**81.08**	**35**	*i* P		**P**	**08 36 59.7**	**-1.0**
COP				*e*S		S	08 47 20.2	+12
COP					pmax	pmax		
	comp=Z,72nm,0.9s							
COP					MLR	MLR		
	comp=Z,23µm,22.0s							
COP	**Copenhagen**	**81.08**	**35**	*i* P		**P**	**08 36 59.7**	**-1.0**
	comp=Z,72nm,0.9s							
COP					LR	LR		
	comp=Z,23µm,21.0s							
REVF	**Revere**	**81.12**	**47**	*e*P		**P**	**08 37 01.8**	**+0.5**
REVF	**Revere**	**81.12**	**47**	*e*P		**P**	**08 37 01.8**	**+0.5**
REVF	**Revere**	**81.12**	**47**	*e*P		**P**	**08 37 01.8**	**+0.5**
SBF	**Sospel**	**81.14**	**47**	*e*P		**P**	**08 37 00.0**	**-1.4**
	comp=Z,2µm,1.5s							
SBF	**Sospel**	**81.14**	**47**	*e*P		**P**	**08 37 00.0**	**-1.4**
SBF					pmax	pmax		
	comp=Z,2µm,1.5s							
SBF	**Sospel**	**81.14**	**47**	*e*P		**P**	**08 37 00.0**	**-1.4**
	comp=Z,2µm,1.5s							
SAOF	**Saorge**	**81.19**	**47**	*e*P		**P**	**08 37 01.9**	**+0.3**
SAOF	**Saorge**	**81.19**	**47**	*e*P		**P**	**08 37 01.9**	**+0.3**
SAOF	**Saorge**	**81.19**	**47**	*e*P		**P**	**08 37 01.9**	**+0.3**
KTK1	**Kautokeino**	**81.20**	**20**⇓	*i*P		**P**	**08 36 59.7**	**-1.4**
KTK1					AMB	AMB	08 37 41.8	
	comp=Z,3µm,1.6s							
KTK1				*e*S		**S**	**08 47 12.1**	**+3.0**
RAR	**Rarotonga**	**81.37**	**245**	*e*P		**P**	**08 37 02.7**	**-0.2**
	comp=Z,1µm,1.6s							
RAR	**Rarotonga**	**81.37**	**245**	LR		LR	09 05 38.1	
	comp=Z,112µm,20.2s,baz=271,slow=30							
SET	**Setif**	**81.56**	**55**	P		**P**	**08 37 06.0**	**+2.2**
CKHR	**Kef el Ahmar**	**81.69**	**55**	P		**P**	**08 37 06.6**	**+2.0**
ARCES	**ARCESS Array B**	**81.71**	**19**	P		**P**	**08 37 04.1**	**+0.3**
ARCES	**ARCESS Array B**	**81.71**	**19**	P		**P**	**08 37 04.1**	**+0.3**
	comp=Z,43nm,0.9s,baz=291,slow=3.8,SNR=37							
ARE0	**ARCESS Array S**	**81.71**	**19**	*e*P		**P**	**08 37 02.6**	**-1.2**
ARE0	**ARCESS Array S**	**81.71**	**19**	*e*P		**P**	**08 37 05.2**	**+1.4**
TUE	**Stuetta**	**81.77**	**44**	*e*P		**P**	**08 37 04.6**	**-0.2**
	comp=Z,466nm,1.3s							
TUE					LR	LR		
	comp=Z,86µm,19.0s							
DFRA	**Djebel Bou Aff**	**81.84**	**54**	P		**P**	**08 37 07.4**	**+2.1**
DAVA	**Damuels**	**81.90**	**43**⇓	*i*P		**P**	**08 37 04.6**	**-0.9**
	comp=Z,6µm,5.0s,SNR=23							
NEUB	**Neuenburg**	**81.99**	**39**	*e*P		**P**	**08 37 05.0**	**-0.6**
	comp=Z,762nm,1.6s							
MOX	**Moxa**	**82.05**	**40**	*e*P		**P**	**08 37 05.1**	**-0.9**
	comp=Z,556nm,1.6s							
MOX				*e*L		L	09 17 07.7	
	comp=Z,94µm,19.7s							
MOX	**Moxa**	**82.05**	**40**	*e*P		**P**	**08 37 05.1**	**-0.9**
MOX					pmax	pmax		
	comp=Z,556nm,1.6s							
MOX					MLR	MLR		
	comp=Z,94µm,19.7s							
KEV	**Kevo**	**82.08**	**19**	*e*P		**P**	**08 37 05.3**	**-0.4**
KEV					pmax	pmax		
	comp=Z,2µm,1.9s							
KEV					MLR	MLR		
	comp=Z,89µm,21.0s							
KEV	**Kevo**	**82.08**	**19**	*e*p		**P**	**08 37 05.2**	**-0.4**
	comp=Z,428nm,1.1s							
KEV	**Kevo**	**82.08**	**19**	*e*P		**P**	**08 37 05.3**	**-0.4**
	comp=Z,2µm,1.9s							
KEV					LR	LR		
	comp=Z,89µm,21.0s							
GRF	**Grafenberg Arr**	**82.08**	**41**	*e*P		**P**	**08 37 05.5**	**-0.7**
	comp=Z,757nm,1.5s							
GRF				*e*PKKPbc		PKKPbc	08 55 52.3	+16
GRF				*e*P'P'df		**P'P'df**	**09 03 47.4**	**+4.3**
GRF				*e*L		L	09 14 55.0	
	comp=Z,94µm,21.1s							
GRF	**Grafenberg Arr**	**82.08**	**41**	*e*P		**P**	**08 37 05.5**	**-0.7**
GRF					pmax	pmax		
	comp=Z,757nm,1.5s							
CTEI	**Djebel Teioual**	**82.38**	**55**	P		**P**	**08 37 08.6**	**+0.4**
CASM	**Ain Smara**	**82.40**	**55**	P		**P**	**08 37 09.9**	**+1.8**
RETA	**Reutte**	**82.42**	**43**	*i* P		**P**	**08 37 07.4**	**-0.6**
	comp=Z,9µm,6.0s,SNR=39							
PLN	**Plauen**	**82.43**	**40**	*e*P		**P**	**08 37 07.2**	**-0.8**
	comp=Z,4µm,1.6s							
FETA	**Feichten**	**82.53**	**43**⇓	*i*P		**P**	**08 37 07.9**	**-0.9**
	comp=Z,6µm,5.1s,SNR=9.4							
WERD	**Werda**	**82.53**	**40**	*e*P		**P**	**08 37 07.8**	**-0.7**
	comp=Z,447nm,1.5s							
CKFL	**Kef-Lekhel**	**82.54**	**54**	P		**P**	**08 37 09.2**	**+0.2**
CAEH	**'Ain El Ouahch**	**82.54**	**54**	P		**P**	**08 37 10.2**	**+1.4**
MANZ	**Manzenberg**	**82.55**	**40**	*e*P		**P**	**08 37 07.9**	**-0.7**
	comp=Z,424nm,1.7s							
FUR	**Furstenfeldbru**	**82.56**	**42**	*e*P		**P**	**08 37 07.9**	**-0.8**
	comp=Z,509nm,1.5s							
FUR				*e*L		L	09 23 02.4	
	comp=Z,67µm,21.6s							
FUR	**Furstenfeldbru**	**82.56**	**42**	*e*P		**P**	**08 37 07.9**	**-0.8**
FUR					pmax	pmax		
	comp=Z,509nm,1.5s							
GUNZ	**Gunzen**	**82.57**	**40**	*e*P		**P**	**08 37 08.1**	**-0.7**
	comp=Z,750nm,1.7s							
PGF	**Pioggiola**	**82.59**	**48**	*e*P		**P**	**08 37 07.6**	**-1.5**
	comp=Z,1µm,1.5s							
PGF	**Pioggiola**	**82.59**	**48**	*e*P		**P**	**08 37 07.6**	**-1.5**
PGF					pmax	pmax		
	comp=Z,1µm,1.5s							
PGF	**Pioggiola**	**82.59**	**48**	*e*P		**P**	**08 37 07.6**	**-1.5**
	comp=Z,1µm,1.5s							
BSD	**Bornholm Skovb**	**82.60**	**35**⇓	*i*P		**P**	**08 37 07.9**	**-0.8**
BSD					pmax	pmax		
	comp=Z,74nm,1.1s							
BSD					MLR	MLR		
	comp=Z,58µm,20.0s							
BSD	**Bornholm Skovb**	**82.60**	**35**⇓	*i*P		**P**	**08 37 07.9**	**-0.8**
	comp=Z,74nm,1.0s							
BSD								
	comp=Z,58µm,20.0s							
WERN	**Wernitzgruen**	**82.62**	**40**	*e*P		**P**	**08 37 08.3**	**-0.7**
	comp=Z,650nm,1.5s							
ROTZ	**Rotzenmuhle**	**82.67**	**40**	*e*P		**P**	**08 37 08.9**	**-0.4**
	comp=Z,569nm,1.6s							
ROTZ				*e*L		L	09 16 24.5	
	comp=Z,119µm,19.9s							
MOTA	**Moosalm**	**82.68**	**43**⇓	*i*P		**P**	**08 37 08.6**	**-1.0**
	comp=Z,3µm,2.5s,SNR=14							
NKC	**Novy Kostel**	**82.68**	**40**	*e*P		**P**	**08 37 08.6**	**-0.7**
NKC				*e*			08 40 22.1	
NKC					MLR	MLR		
	comp=Z,92µm,18.6s							
NKC	**Novy Kostel**	**82.68**	**40**⇓	*e*P		**P**	**08 37 08.6**	**-0.7**
NKC				*e*PP		**PP**	**08 40 22.1**	**+3.2**
NKC					AMS	AMS	09 16 50.0	
	comp=Z,92µm,18.6s							
CLL	**Collm**	**82.70**	**39**	*e*P		**P**	**08 37 08.6**	**-0.7**
	comp=Z,642nm,1.6s							
CLL				*e*L		L	09 22 51.7	
	comp=Z,76µm,19.5s							
CLL	**Collm**	**82.70**	**39**	*e*P		**P**	**08 37 08.0**	**-1.3**
CLL				*i*			08 37 15.1	
CLL				*e*S		**S**	**08 47 25.0**	**-0.1**
CLL					pmax	pmax		
	comp=Z,120nm,1.2s							
CLL	**Collm**	**82.70**	**39**	*e*P		**P**	**08 37 08.0**	**-1.3**
	comp=Z,120nm,1.2s							
CLL				*i* pP		**PcP**	**08 37 15.1**	**+0.9**
CLL				*e*sP		**sP**	**08 37 18.0**	**-4.0**
CLL				*i*			08 37 25.0	
	comp=Z,156nm,1.1s							
CLL				*i*			08 37 29.3	
CLL				*i* Pmax			08 37 34.6	
	comp=Z,642nm,1.6s							
CLL				*e*Pmax			08 37 41.0	
CLL				*i*			08 37 45.0	
	comp=Z,307nm,1.1s							
CLL				*e*			08 37 56.0	
CLL				*e*PP		**PP**	**08 40 24.0**	**+5.0**
CLL				*e*S		**S**	**08 47 25.0**	**-0.1**
CLL				*e*PPS		PPS	08 48 36.0	
CLL				*e*			08 49 05.0	
CLL				*e*SS		**SS**	**08 52 48.0**	**+1.1**
CLL				*e*			08 56 04.0	
CLL				*e*SSSS			08 58 59.0	
CLL				*e*PKPPKPd		**P'P'df**	**09 03 47.0**	**+5.1**
CLL					Lm	MLR	09 22 00.0	
	comp=N,47µm,20.6s							
CLL					Lm	MLR	09 22 00.0	
	comp=E,70µm,19.3s							
CLL					Lm	MLR	09 22 00.0	
	comp=Z,76µm,19.5s							
RUE	**Ruedersdorf**	**82.80**	**37**	*e*P		**P**	**08 37 09.0**	**-0.8**
	comp=Z,386nm,1.1s							
RUE	**Ruedersdorf**	**82.80**	**37**	*e*P		**P**	**08 37 11.1**	**+1.3**
	comp=Z,629nm,1.3s							
WATA	**Walderalm**	**82.99**	**43**⇑	*i*P		**P**	**08 37 10.2**	**-0.9**
	comp=Z,534nm,1.5s							
FX1	**Attu Island--F**	**83.00**	**323**	*e*P		**P**	**08 37 11.6**	**+0.8**
CMAH	**Djebel Manchou**	**83.02**	**54**	P		**P**	**08 37 12.1**	**+0.7**
FBE	**Freiberg**	**83.03**	**39**	*e*P		**P**	**08 37 10.8**	**-0.2**
	comp=Z,800nm,1.5s							
WTTA	**Wattenberg**	**83.05**	**43**	*i* P		**P**	**08 37 10.7**	**-0.8**
	comp=Z,9µm,5.2s,SNR=19							
PMSA	**Palmer Station**	**83.09**	**171**	P		**P**	**08 37 11.3**	**+0.6**
	comp=Z,797nm,1.6s							
PMSA					LR	LR		
	comp=Z,44µm,19.0s							
VLC	**Villacollemand**	**83.11**	**46**	*e*P		**P**	**08 37 11.8**	**+0.1**
	comp=Z,475nm,1.3s							
VLC					LR	LR		
	comp=Z,67µm,21.0s							
ABSA	**Djebel Ababsia**	**83.16**	**54**	P		**P**	**08 37 12.4**	**+0.2**
MIDW	**Midway**	**83.19**	**297**	*e*P		**P**	**08 37 13.1**	**+0.8**
	comp=Z,9µm,1.6s							
MIDW					LR	LR		
	comp=Z,109µm,20.0s							
WET	**Wettzell**	**83.28**	**41**	*e*P		**P**	**08 37 12.0**	**-0.4**
	comp=Z,888nm,1.6s							
WET				*e*L		L	09 14 35.3	
	comp=Z,75µm,21.7s							
WET	**Wettzell**	**83.28**	**41**	*e*P		**P**	**08 37 12.0**	**-0.4**
WET					pmax	pmax		
	comp=Z,888nm,1.6s							
WET					MLR	MLR		
	comp=Z,75µm,21.7s							
BRG	**Berggiesshubel**	**83.39**	**39**	*i* P		**P**	**08 37 12.5**	**-0.5**
	comp=Z,83nm,0.9s							
BRG				*i*			08 37 33.1	
	comp=Z,461nm,1.5s							
BRG				*i*			08 37 52.0	
BRG				S		S	08 47 44.0	+12
BRG				SS		SS	08 53 05.0	+7.7
BRG				*e*			08 55 17.0	
	comp=Z,147nm,2.9s							
BRG				*e*PKPPKP		**P'P'df**	**09 03 43.4**	**+2.8**
	comp=Z,7.2nm,1.0s							
BRG								
	comp=N,44µm,19.9s							
BRG								
	comp=E,43µm,20.2s							
BRG								
	comp=Z,59µm,20.5s							
BRG	**Berggiesshubel**	**83.39**	**39**	SG		**SS**	**08 52 52.3**	**-5.0**
	comp=Z,8.0nm,0.5s							
BRG	**Berggiesshubel**	**83.39**	**39**	*e*P		**P**	**08 37 12.4**	**-0.5**
	comp=Z,667nm,1.5s							
BRG				*e*L		L	09 23 12.4	
	comp=Z,85µm,19.8s							
BRG	**Berggiesshubel**	**83.39**	**39**	*i* P		**P**	**08 37 12.5**	**-0.5**
BRG				SS		SS	08 53 05.0	+7.7
BRG					pmax	pmax		
	comp=Z,83nm,0.9s							
RJOB	**Jochberg**	**83.66**	**42**	*e*P		**P**	**08 37 13.6**	**-0.9**
	comp=Z,625nm,1.6s							
RJOB				*e*L		L	09 25 22.5	
	comp=Z,86µm,19.9s							
VSL	**Villasalto**	**83.72**	**51**	*e*P		**P**	**08 37 13.4**	**-1.5**
	comp=Z,1µm,1.5s							
VSL					LR	LR		
	comp=Z,47µm,20.0s							
KHC	**Kasperske Hory**	**83.72**	**41**	*e*P		**P**	**08 37 14.3**	**-0.4**
KHC				*e*			08 37 20.0	
KHC				*e*			08 40 26.9	
KHC				*e*			08 47 40.4	
KHC					MLR	MLR		
	comp=Z,74µm,18.0s							
KHC	**Kasperske Hory**	**83.72**	**41**	*e*P		**P**	**08 37 14.2**	**-0.5**
	comp=Z,330nm,1.2s							
KHC	**Kasperske Hory**	**83.72**	**41**⇓	*e*P		**P**	**08 37 14.3**	**-0.4**
KHC				*e*PP		**PcP**	**08 37 20.0**	**+1.2**
KHC				*ex*		x	08 37 30.5	
KHC				*e*PP		**PP**	**08 40 26.9**	**-0.6**
KHC				*e*SKS		**S**	**08 47 40.4**	**+4.7**
KHC					AMS	AMS	09 19 10.0	
	comp=Z,74µm,18.0s							
ABTA	**Abfaltersbach**	**83.78**	**43**⇓	*i*P		**P**	**08 37 14.3**	**-0.8**
	comp=Z,5µm,4.0s,SNR=8.8							
PVCC	**Panska Ves**	**83.88**	**39**⇓	*i*P		**P**	**08 37 15.0**	**-0.5**
PVCC				*e*			08 40 25.3	
PVCC					MLR	MLR		
	comp=Z,74µm,18.3s							
PVCC	**Panska Ves**	**83.88**	**39**⇓	*i*P		**P**	**08 37 15.0**	**-0.5**
PVCC				*ex*		x	08 37 34.0	
PVCC				*e*PP		**PP**	**08 40 25.3**	**-3.4**
PVCC				*ex*		x	08 47 52.5	
PVCC					AMS	AMS	09 23 10.0	
	comp=Z,74µm,18.3s							
GEC2	**GERESS Array S**	**83.89**	**41**	*e*P		**P**	**08 37 15.0**	**-0.7**
	comp=Z,826nm,1.6s							
GEC2				*e*L		L	09 25 25.9	
	comp=Z,80µm,19.6s							
GEC2	**GERESS Array S**	**83.89**	**41**	*e*P		**P**	**08 37 15.0**	**-0.7**
GEC2					pmax	pmax		
	comp=Z,826nm,1.6s							
GERES	**GERESS Array B**	**83.89**	**41**	P		**P**	**08 37 14.8**	**-0.8**
GERES					PKKPbc	PKKPbc	08 55 44.5	+12
GERES					P'P'		09 03 34.8	
GERES	**GERESS Array B**	**83.89**	**41**	P		**P**	**08 37 14.8**	**-0.8**
	comp=Z,20nm,0.9s,baz=282,slow=2.6,SNR=62							
GERES					PKKPbc	PKKPbc	08 55 44.5	+12
	comp=Z,2.2nm,0.8s,baz=144,slow=2.5,SNR=4.2							
GERES					PKPPKP	**P'P'df**	**09 03 34.8**	**-5.1**
	comp=Z,0.3nm,0.3s,baz=74,slow=5.7,SNR=3.7							
GERES					LR	LR	09 10 32.6	
	comp=Z,62µm,21.6s,baz=299,slow=33							
PRA	**Prague**	**83.95**	**40**	⇓P		**P**	**08 37 16.0**	**+0.2**
PRA				*ex*		x	08 47 51.0	
PRA					AMS	AMS	09 18 00.0	
PRU	**Pruhonice**	**84.04**	**40**	*e*P		**P**	**08 37 15.6**	**-0.7**
PRU				*e*			08 40 30.9	
PRU				*e*			08 47 41.9	
PRU					MLR	MLR		
	comp=Z,93nm,18.2s							
PRU	**Pruhonice**	**84.04**	**40**⇓	*e*P		**P**	**08 37 15.6**	**-0.7**
PRU				*ex*		x	08 37 25.7	
PRU				*e*PP		**PP**	**08 40 30.9**	**+0.9**
PRU				*e*SKS		**S**	**08 47 41.9**	**+3.1**
PRU					AMS	AMS	09 17 40.0	
	comp=Z,93µm,18.2s							
KBA	**Koelnbreinsper**	**84.22**	**43**⇓	*i*P		**P**	**08 37 16.8**	**-0.7**
	comp=Z,7µm,4.7s,SNR=13							
TOA0	**Torodi Ar. Sit**	**84.34**	**78**	*e*P		**P**	**08 37 17.1**	**-1.4**
TORD	**Torodi Ar. Bea**	**84.34**	**78**	P		**P**	**08 37 17.1**	**-1.4**
TORD					PKKPbc	**PKKPbc**	**08 55 33.9**	**+3.8**
TORD					P'P'		09 03 38.0	
TORD	**Torodi Ar. Bea**	**84.34**	**78**	P		**P**	**08 37 17.1**	**-1.4**
	comp=Z,58nm,1.0s,baz=292,slow=4.1,SNR=96							
TORD					PKKPbc	**PKKPbc**	**08 55 33.9**	**+3.8**
	comp=Z,1.3nm,0.5s,baz=85,slow=1.0,SNR=15							
TORD					PKPPKP	**P'P'df**	**09 03 38.0**	**-0.9**
	comp=Z,2.5nm,1.1s,baz=144,slow=0.9,SNR=3.7							
TORD					LR	LR	09 11 59.1	
	comp=Z,51µm,20.1s,baz=290,slow=34							
GKP	**Gorka Klasztor**	**84.51**	**36**	*e*P		**P**	**08 37 18.5**	**0.0**
GKP				*e*S		S	08 47 52.3	+9.0
GKP					LMZ	LR	09 07 56.3	
MYKA	**Terra Mystica**	**84.55**	**43**⇓	*i*P		**P**	**08 37 18.0**	**-1.0**
	comp=Z,5µm,4.3s							
MOA	**Molln**	**84.56**	**42**⇓	*i*P		**P**	**08 37 18.0**	**-1.0**
	comp=Z,7µm,4.3s,SNR=17							
UPC	**Upice**	**84.76**	**39**	*e*P		**P**	**08 37 19.3**	**-0.6**
UPC	**Upice**	**84.76**	**39**⇓	*e*P		**P**	**08 37 19.3**	**-0.6**
UPC				*ex*		x	08 37 40.6	
KEST	**Kesra**	**84.77**	**54**	*e*P		**P**	**08 37 20.2**	**-0.2**
KEST	**Kesra**	**84.77**	**54**	P		**P**	**08 37 20.5**	**+0.1**
	comp=Z,36nm,1.0s,baz=203,slow=1.5,SNR=29							
KSP	**Ksiaz**	**84.81**	**38**⇓	*e*P		**P**	**08 37 19.7**	**-0.5

KRLC	Kraliky	85.37	39	⇓	*e*	P	P	08 37 23.5 +0.4
LVZ	Lovozero	85.42	19	⇓	*e*	P	P	08 37 23.4 +0.5
LVZ					pmax	pmax		
	comp=Z,420nm,1.3s							
LVZ	Lovozero	85.42	19		P	P	P	08 37 23.1 +0.2
	comp=Z,2µm,1.0s,SNR=9.2							
SOKA	Soboth	85.44	43	⇓	*i*	P	P	08 37 22.5 -1.1
	comp=Z,5µm,4.3s							
VRAC	Vranov	85.53	40	⇓	*i*	P	P	08 37 24.5 +0.7
CONA	Conrad Observa	85.55	41	⇓	*i*	P	P	08 37 23.5 -0.6
	comp=Z,9µm,4.6s,SNR=15							
ARSA	Arzberg	85.56	42	⇓	*i*	P	P	08 37 23.1 -1.0
	comp=Z,6µm,4.8s,SNR=8.6							
FINES	FINESS Array B	85.57	26		P	P	P	08 37 23.7 0.0
FINES					PKKPbc	PKKPbc		08 55 40.9 +12
FINES	FINESS Array B	85.57	26		P	P	P	08 37 23.7 0.0
	comp=Z,264nm,0.8s,baz=298,slow=4.1,SNR=88							
FINES					PKKPbc	PKKPbc		08 55 40.9 +12
	comp=Z,5.7nm,1.0s,baz=88,slow=6.5,SNR=3.9							
AQU	L'Aquila	85.76	47		*e*	P	P	08 37 26.2 +1.1
	comp=Z,568nm,1.3s							
AQU					LR	LR		
	comp=Z,86µm,21.0s							
AQU	L'Aquila	85.76	47	⇑	*i*	P	P	08 37 24.3 -0.9
SHEL	Horse Pasture	85.78	108		*e*	P	P	08 37 25.8 +0.2
SHEL					MLR	MLR		
	comp=Z,86µm,20.0s							
SHEL	Horse Pasture	85.78	108		*e*	P	P	08 37 25.8 +0.2
SHEL					LR	LR		
	comp=Z,86µm,20.0s							
GROS	Grobnik	85.82	43		*e*	P	P	08 37 24.1 -1.3
GROS					*e*			08 37 51.2
GROS					*e*	S	S	08 47 47.8 -8.9
MORC	Moravsky Berou	85.94	39		*e*	P	P	08 37 25.4 -0.5
MORC					pmax	pmax		
	comp=Z,958nm,1.6s							
MORC	Moravsky Berou	85.94	39		*e*	P	P	08 37 25.4 -0.5
	comp=Z,958nm,1.6s							
MORC	Moravsky Berou	85.94	39	⇑	*i*	P	P	08 37 25.8 -0.1
BOJS	Bojanci	85.98	44		*e*	P	P	08 37 25.7 -0.4
BOJS					*e*			08 37 47.8
BOJS					*e*	S	S	08 47 49.8 -8.4
NVLJ	Novalja	86.04	45		P	P	P	08 37 28.1 +1.7
SOP	Sopron	86.08	41	⇓	*e*	P	P	08 37 25.9 -0.6
RAC	Raciborz	86.22	39		*e*	P	P	08 37 27.5 +0.3
RAC					*e*			08 37 29.6
RAC					*e*			08 47 52.7
RAC					*e*	S	S	08 48 02.8 +2.5
RAC					MLR	MLR		
	comp=E,73µm,20.0s							
RAC					MLR	MLR		
	comp=Z,73µm,20.0s							
ZST	Bratislava	86.23	41		*e*	P	P	08 37 26.7 -0.6
ZST					pmax	pmax		
	comp=Z,315nm,1.4s							
ZST	Bratislava	86.23	41		*e*	P	P	08 37 26.7 -0.6
ZST	Bratislava	86.23	41		*e*	S	S	08 48 00.6 +0.1
OKC	Ostrava-Krasne	86.28	39	⇓	*i*	P	P	08 37 27.2 -0.3
OKC					*e*			08 47 53.6
OKC					MLR	MLR		
	comp=Z,92µm,20.6s							
OKC	Ostrava-Krasne	86.28	39	⇓	*i*	P	P	08 37 27.2 -0.3
OKC					*ex*		x	08 37 47.0
OKC					*e*	SKS	SKSac	08 47 53.6 +1.8
OKC					AMS	AMS		09 18 20.0
	comp=Z,92µm,20.6s							
SMOL	Smolenice	86.32	40		*e*	P	P	08 37 29.9 +2.1
SMOL	Smolenice	86.32	40		*e*	P	P	08 37 29.9 +2.1
BEHE	Becsehely	86.64	42	⇓	*e*	P	P	08 37 30.4 +1.1
SISC	Sisak	86.73	43		P	P	P	08 37 30.0 +0.2
JOF	Joensuu	86.98	24		*e*	P	P	08 37 31.3 +0.7
JOF					pmax	pmax		
	comp=Z,243nm,1.3s							
JOF	Joensuu	86.98	24		*ep*	P	P	08 37 31.3 +0.7
	comp=Z,243nm,1.3s							
BEL	Belsk	87.06	36		*e*	P	P	08 37 31.1 -0.1
BEL					*e*	S	S	08 48 18.0 +10
BEL					LMZ	LR		09 10 39.7
OJC	Ojcow	87.12	38		*e*	P	P	08 37 31.2 -0.4
OJC					*e*	S	S	08 48 07.5 -1.6
OJC	Ojcow	87.12	38		*e*	P	P	08 37 31.2 -0.4
OJC					*e*	S	S	08 48 07.5 -1.6
OJC					L	L	L	09 25 27.9
	comp=Z,120µm,18.7s							
PKST	T"s	87.16	41	⇓	*e*	P	P	08 37 31.1 -0.8
VYHS	Vyhne	87.20	40		*e*	P	P	08 37 31.5 -0.6
VYHS					pmax	pmax		
	comp=Z,412nm,2.5s							
VYHS	Vyhne	87.20	40		*e*	P	P	08 37 31.5 -0.6
VYHS	Vyhne	87.20	40		*e*	S	S	08 48 01.7 -8.3
VSU	Vasula	87.25	29	*d*	*i*	P	P	08 37 31.2 -0.8
VSU					pmax	pmax		
	comp=Z,391nm,1.7s							
CSKK	Cs˙ŧkako	87.27	41	⇓	*e*	P	P	08 37 33.2 +0.8
PKSG		87.34	41	⇓	*e*	P	P	08 37 32.1 -0.6
SUW	Suwalki	87.48	34		*e*	P	P	08 37 32.4 -0.8
SUW					pmax	pmax		
	comp=Z,256nm,1.0s							
SUW	Suwalki	87.48	34		*e*	P	P	08 37 32.4 -0.8
	comp=Z,256nm,1.0s							
SUW	Suwalki	87.48	34		*e*	P	P	08 37 32.3 -0.8
SUW					*e*	S	S	08 48 06.2 -6.1
SUW					LMZ	LR		09 14 07.5
PKS9	Tamasi	87.57	42	⇓	*e*	P	P	08 37 34.8 +1.0
BUD	Budapest	87.70	41	⇓	*e*	P	P	08 37 33.9 -0.5
NIE	Niedzica	87.74	39		*e*	P	P	08 37 34.9 +0.2
NIE					*e*	S	S	08 48 12.9 -2.3
NIE	Niedzica	87.74	39		*e*	P	P	08 37 34.9 +0.2
NIE					*e*	S	S	08 48 12.9 -2.3
PKSM	Moragy	87.94	42	⇑	*i*	P	P	08 37 34.9 -0.6
PKSM	Moragy	87.94	42	⇓	*e*	P	P	08 37 35.0 -0.6
PSZ	Piszkesteto	88.08	40		*e*	P	P	08 37 35.6 -0.7
PSZ					pmax	pmax		
	comp=Z,1µm,1.8s							
PSZ					MLR	MLR		
	comp=Z,63µm,20.0s							
PSZ	Piszkesteto	88.08	40		*e*	P	P	08 37 35.6 -0.7
	comp=Z,1µm,1.8s							
PSZ					LR	LR		
	comp=Z,63µm,20.0s							
PSZ	Piszkesteto	88.08	40	⇑	*i*	P	P	08 37 37.1 +0.8
PSZ	Piszkesteto	88.08	40	⇓	*e*	P	P	08 37 36.8 +0.5
KECS	Kecovo	88.22	40		*e*	P	P	08 37 37.1 +0.2
KECS	Kecovo	88.22	40		*e*	P	P	08 37 37.1 +0.2
CUC	Castrocucco	88.27	49		*e*	P	P	08 37 37.4 +0.1
	comp=Z,155nm,1.1s							
CUC					LR	LR		
	comp=Z,48µm,20.0s							
IZAR	Zarasai	88.29	32		*e*	P	P	08 37 36.7 -0.4
IZAR					AMB	AMB		08 38 11.8
	comp=Z,162nm,2.1s							
STHS	Stebnicka Huta	88.30	39		*e*	P	P	08 37 37.9 +0.6
STHS	Stebnicka Huta	88.30	39		*e*	P	P	08 37 37.9 +0.6
ISAL	Salakas	88.31	32		*e*	P	P	08 37 36.8 -0.4
ISAL					AMB	AMB		08 38 11.8
	comp=Z,132nm,2.1s							
SEY	Seymchan	88.43	337	⇑	*e*	P	P	08 37 36.2 -1.4
IIGN	Ignalina	88.46	32		*e*	P	P	08 37 37.5 -0.4
IIGN					AMB	AMB		08 38 12.6
	comp=Z,154nm,2.0s							
STON	Ston	88.56	46		P	P	P	08 37 39.6 +1.0
TIXI	Tiksi	88.60	350	⇑	*e*	P	P	08 37 37.0 -1.2
TIXI					pmax	pmax		
	comp=Z,204nm,1.2s							
TIXI					MLR	MLR		
	comp=Z,170µm,24.0s							
CRVS	Cervenica-Dubn	88.64	39		*e*	P	P	08 37 37.1 -1.8
CRVS					pmax	pmax		
	comp=Z,101nm,1.4s							
CRVS	Cervenica-Dubn	88.64	39		*e*	P	P	08 37 37.1 -1.8
CRVS	Cervenica-Dubn	88.64	39		*e*	S	S	08 48 30.0 +6.3
WDD	Wield Dalam	88.72	53		PFAKE			08 37 50.0 +10
WDD					LR	LR		
	comp=Z,46µm,20.0s							
CEL	Celeste	88.93	50		*e*	P	P	08 37 39.8 -0.8
	comp=Z,25nm,0.9s							
CEL					LR	LR		
	comp=Z,37µm,22.0s							
NACGM	Naroch	88.95	32		*e*	P	P	08 37 38.0 -2.2
KWP	Kalwaria Pacla	89.08	38		*e*	P	P	08 37 41.7 +0.7
KWP					pmax	pmax		
	comp=Z,842nm,1.8s							
KWP					MLR	MLR		
	comp=Z,58µm,20.0s							
KWP	Kalwaria Pacla	89.08	38		*e*	P	P	08 37 41.7 +0.7
	comp=Z,842nm,1.8s							
KWP					LR	LR		
	comp=Z,58µm,20.0s							
KWP	Kalwaria Pacla	89.08	38	⇓	*i*	P	P	08 37 41.2 +0.3
KWP	Kalwaria Pacla	89.08	38		*e*	P	P	08 37 40.9 0.0
KWP					*e*	S	S	08 48 29.6 +1.8
KWP					LMZ	LR		09 10 57.6
KOLS	Kolonicke sedl	89.11	39		*e*	P	P	08 37 40.9 -0.2
KOLS					pmax	pmax		
	comp=Z,163nm,1.5s							
KOLS	Kolonicke sedl	89.11	39		*e*	P	P	08 37 40.9 -0.2
KOLS	Kolonicke sedl	89.11	39		*e*	S	S	08 48 34.2 +6.1
BRY	Bratogost	89.12	45		*e*	P	P	08 37 41.8 +0.3
UZH	Uzhgorod	89.25	39		*e*	P	P	08 37 41.6 -0.1
UZH					*e*			08 41 16.5
UZH					*e*	PPP	PPP	08 43 16.7
UZH					*e*			08 48 06.0
UZH					*e*	S	S	08 48 31.4 +2.0
UZH					*e*	PS	PS	08 49 40.0 +2.7
UZH					MLR	MLR		
	comp=N,25µm,21.0s							
UZH					MLR	MLR		
	comp=E,74µm,21.0s							
UZH					MLR	MLR		
	comp=Z,12µm,21.0s							
UPM	Unac-Piva	89.25	45	⇓	*i*	P	P	08 37 42.8 +0.7
HCY	Herceg Novi	89.26	46	⇓	*i*	P	P	08 37 42.6 +0.7
BUM	Brajici-Budva	89.59	46	⇓	*i*	P	P	08 37 44.3 +0.7
TRPA	Tarpa	89.61	39	⇑	*i*	P	P	08 37 43.9 +0.5
TRPA	Tarpa	89.61	39	⇓	*e*	P	P	08 37 43.3 -0.1
DIVS	Divibare	89.64	44		P	P	P	08 37 43.6 -0.2
MNK	Minsk	89.68	32	*c*	*i*	P	P	08 37 41.0 -2.6
MNK					*e*			08 41 18.0
MNK					*e*	PPP	PPP	08 43 20.0
MNK					*e*			08 48 12.0
MNK					*e*	S	S	08 48 32.0 -1.1
MNK					*e*	SSS	SSS	08 58 12.0
MNK					pmax	pmax		
	comp=Z,380nm,1.6s							
MNK					pmax	pmax		
	comp=E,380nm,1.8s							
MICGM	Minsk	89.71	32	⇑	*i*	P	P	08 37 41.0 -2.7
LVV	L'vov	89.77	37		*e*	P	P	08 37 42.9 -1.3
LVV					*e*			08 41 22.3
LVV					*e*			08 43 21.3
LVV					*e*			08 48 09.7
LVV					*e*	S	S	08 48 34.1 -0.1
LVV					*e*			08 49 39.5
LVV					*e*			08 54 35.3
LVV					*e*			08 58 09.5
LVV					pmax	pmax		
	comp=Z,400nm,1.6s							
LVV					MLR	MLR		
	comp=N,41µm,19.0s							
LVV					MLR	MLR		
	comp=E,49µm,19.0s							
LVV					MLR	MLR		
	comp=Z,48µm,19.0s							
AFI	Afiamalu	89.78	255		*e*	P	P	08 37 45.7 +0.8
	comp=Z,490nm,1.1s							
AFI	Afiamalu	89.78	255		LR	LR		09 11 25.0
	comp=Z,100µm,20.1s,baz=67,slow=31							
TTG	Podgorica	89.79	46	⇓	*i*	P	P	08 37 44.3 -0.1
ULC	Ulcinj	89.96	46	⇓	*i*	P	P	08 37 46.6 +1.3
IVA	Berane	90.05	45		*e*	P	P	08 37 46.1 +0.4
BZS	Buzias	90.08	42	⇓	*i*	P	P	08 37 45.5 -0.2
PVY	Plav	90.20	45		*e*	P	P	08 37 47.2 +0.7
DRGR		90.28	41	⇑	*i*	P	P	08 37 46.2 -0.5
BCI	Bajram Curri	90.37	45		*i*	P	P	08 37 46.7 -0.4
TIR	Tirane	90.63	46		*i*	P	P	08 37 49.3 +1.0
TIR	Tirane	90.63	46		*e*	P	P	08 37 50.4 +2.0
TIR					pmax	pmax		
	comp=Z,479nm,1.4s							
TIR					MLR	MLR		
	comp=Z,63µm,20.0s							
TIR	Tirane	90.63	46		*e*	P	P	08 37 50.4 +2.0
	comp=Z,480nm,1.4s							
TIR					LR	LR		
	comp=Z,63µm,20.0s							
VLO	Vlora	90.71	47		*i*	P	P	08 37 49.9 +1.2
DEV	Deva	90.79	41	⇓	*i*	P	P	08 37 49.0 0.0
CJR	Cluj-Napoca	90.87	40	⇓	*i*	P	P	08 37 49.7 +0.3
PHP	Peshkopia	90.89	46		*i*	P	P	08 37 51.2 +1.6
PHP	Peshkopia	90.89	46		P	P	P	08 37 49.7 +0.1
PET	Petropavlovsk	90.94	327	*c*	*i*	P	P	08 37 49.4 -0.1
PET					*e*			08 48 18.1
PET					*i*	S	S	08 48 40.7 -4.1
PET					*e*	PS	PS	08 49 53.0 -2.8
PET					*e*	PPS	PPS	08 50 19.4
PET					*e*	SS	SS	08 54 43.2 -4.0
PET					pmax	pmax		
	comp=Z,2µm,10.5s							
PET					pmax	pmax		
	comp=Z,2µm,3.7s							
PET					pmax	pmax		
	comp=Z,226nm,1.2s							
PET					smax	smax		
	comp=E,15µm,15.2s							
PET					smax	smax		
	comp=E,15µm,15.1s							
KEK	Kerkira	91.22	48		P	P	P	08 37 51.2 +0.1
KLMR	Klimovskoe	91.34	23	*d*	*i*	P	P	08 37 50.6 -0.6
KLMR					*e*	*SP	sP	08 37 55.0 -8.9
KLMR					*i*			08 41 26.4
KLMR					*e*	S	SKSac	08 48 22.0 +0.6
KLMR								08 48 51.5
KLMR					*e*	SS	SS	08 54 48.1 -4.5
KLMR					pmax	pmax		
	comp=Z,234nm,1.4s							
KLMR					pmax	pmax		
	comp=Z,434nm,5.6s							
KLMR					MLR	MLR		
	comp=Z,53µm,17.0s							
PEA0B	Petropavlovsk-	91.40	327		*e*	P	P	08 37 52.6 +1.0
PETK	Petropavlovsk-	91.40	327		P	P	P	08 37 52.7 +1.0
PETK					MLR	MLR		
	comp=Z,55µm,21.1s							
PETK	Petropavlovsk-	91.40	327		P	P	P	08 37 52.7 +1.0
PETK	Petropavlovsk-	91.40	327		P	P	P	08 37 52.7 +1.0
	comp=Z,20nm,0.8s,baz=99,slow=9.2,SNR=11							
PETK					LR	LR		09 21 31.1
	comp=Z,55µm,21.1s,baz=270,slow=37							
BUR08	Bucovina Ar. S	91.44	39		*e*	P	P	08 37 51.2 -0.9
BURAR	Bucovina Array	91.46	39	⇓	*i*	P	P	08 37 52.0 -0.2
SKO	Skopje	91.46	45		P	P	P	08 37 52.5 +0.3
SKO	Skopje	91.46	45		*i*	P	P	08 37 51.6 -0.6
	comp=Z,880nm,2.3s							
LOT	Lotru	91.53	41	⇑	*i*	P	P	08 37 51.5 -1.1
KBN	Korca	91.56	47		*i*	P	P	08 37 53.7 +0.9
KBN	Korca	91.56	47		P	P	P	08 37 53.2 +0.4
IGT	Igoumenitsa	91.67	48		P	P	P	08 37 53.2 0.0
BIA	Bitola	91.77	46		P	P	P	08 37 54.4 +0.7
BIA	Bitola	91.77	46		*i*	P	P	08 37 52.9 -0.9
NEST	Nestorio	91.82	47		P	P	P	08 37 54.5 +0.5
FNA	Florina	91.90	46		P	P	P	08 37 54.0 -0.3
JAN	Janina	91.99	48		P	P	P	08 37 54.9 +0.2
ARR	Arges	92.11	41	⇓	*i*	P	P	08 37 55.7 +0.5
PRAR	RASCA	92.18	39	⇑	*i*	P	P	08 37 55.8 +0.3
LKD2	Lefkada island	92.20	48		P	P	P	08 37 55.5 -0.2
KIEV	Kiev	92.29	35		*e*	P	P	08 37 53.8 -2.0
KIEV					pmax	pmax		
	comp=Z,187nm,1.5s							
KIEV					MLR	MLR		
	comp=Z,66µm,20.0s							
KIEV	Kiev	92.29	35		*e*	P	P	08 37 53.8 -2.0
	comp=Z,187nm,1.5s							
KIEV					LR	LR		
	comp=Z,66µm,20.0s							
AK01	Malin Array Si	92.30	35		*e*	P	P	08 37 55.0 -0.8
AKASG	Malin Array Be	92.30	35		P	P	P	08 37 53.9 -2.0
AKASG								08 55 14.8
AKASG					MLR	MLR		
	comp=Z,58µm,21.3s							
AKASG	Malin Array Be	92.30	35		P	P	P	08 37 53.9 -2.0
AKASG					PKKPbc	PKKPbc	PKKPbc	08 55 14.8 +3.1
AKASG	Malin Array Be	92.30	35		P	P	P	08 37 53.9 -2.0
	comp=Z,4.5nm,0.7s,baz=282,slow=4.0,SNR=34							
AKASG					PKKPbc	PKKPbc	PKKPbc	08 55 14.8 +3.1
	comp=Z,2.4nm,0.6s,baz=85,slow=2.8,SNR=5.5							
AKASG					LR	LR		09 20 51.8
	comp=Z,58µm,21.3s,baz=300,slow=36							
AK02	Malin Array Si	92.31	35		*e*	P	P	08 37 55.7 -0.2
VOIR		92.34	41	⇑	*i*	P	P	08 37 56.0 -0.3
VTS	Vitosha	92.39	44		P	P	P	08 37 56.4 -0.2
VTS	Vitosha	92.39	44	⇓	*i*	P	P	08 37 56.0 -0.7
VTS	Vitosha	92.39	44		*e*	P	P	08 37 56.5 -0.2
VAY	Valandovo	92.50	46		P	P	P	08 37 55.7 -1.3
VAY	Valandovo	92.50	46		*i*	P	P	08 37 56.5 -0.5
	comp=Z,139nm,1.5s							
GRG	Griva	92.54	46		P	P	P	08 37 57.0 -0.2
KKB	Krupnik	92.62	45		*e*	P	P	08 37 58.1 +0.5
HUMR	Humele	92.70	42	⇑	*i*	P	P	08 37 58.1 +0.2
KNT	Kendrikon	92.79	46		P	P	P	08 37 58.3 -0.1
TESR	Tescani	92.84	40	⇓	*i*	P	P	08 37 58.8 +0.3
THL	Klokotos Trika	92.84	47		P	P	P	08 37 58.0 -0.6
MLR	Muntele Rosu	92.88	41	⇑	*i*	P	P	08 37 59.0 +0.2
PGB	Panagyurishte	93.05	44		*e*	P	P	08 38 00.5 +0.9
THE	Thessaloniki	93.06	46		P	P	P	08 37 58.8 -0.8
RLS	Riolos of Patr	93.07	49		P	P	P	08 37 59.7 0.0
PLOR	Plostina	93.15	40	⇓	*i*	P	P	08 37 59.6 -0.4
MAKR	Makrakomi, Fth	93.16	48		P	P	P	08 38 00.1 0.0
HORT	Hortiatis	93.17	46		P	P	P	08 37 59.7 -0.5
VRI	Vrincioaia	93.19	40	⇑	*i*	P	P	08 37 59.9 -0.2
EFP	Efpalio	93.24	48		P	P	P	08 38 01.0 +0.5
SOH	Sokhos	93.25	46		P	P	P	08 38 00.2 -0.3
SRS	Serrai	93.28	45		P	P	P	08 37 59.9 -0.8
AGG	Agios Georgios	93.29	48		P	P	P	08 38 00.4 -0.4
LAKA	Lakka	93.36	49		P	P	P	08 38 01.1 0.0
NVR	Nevrokopi	93.37	45		P	P	P	08 38 00.5 -0.6
TRIZ	Trizonia	93.38	48		P	P	P	08 38 01.5 +0.4
ISR	Istrita	93.42	41	⇓	*i*	P	P	08 38 00.4 -0.9
SKR	Severo-Kuril's	93.49	326		*e*	P	P	08 38 06.0 +4.7
SKR					*e*			08 48 32.0
SKR					*e*	S	S	08 49 02.0 -5.7
SKR					*i*			08 50 22.0
SKR					*e*	PPS	PPS	08 50 58.0
SKR					pmax	pmax		
	comp=N,640nm,1.5s							
SKR					pmax	pmax		
	comp=E,640nm,1.5s							
SKR					pmax	pmax		
	comp=Z,800nm,1.5s							
SKR					pmax	pmax		
	comp=N,2µm,6.0s							
SKR					pmax	pmax		
	comp=E,2µm,6.0s							
SKR					pmax	pmax		
	comp=Z,5µm,6.0s							
SKR					smax	smax		
	comp=N,11µm,20.0s							
SKR					smax	smax		
	comp=E,16µm,20.0s							
SKR					MLR	MLR		
	comp=N,36µm,22.0s							
SKR					MLR	MLR		
	comp=E,70µm,22.0s							
SKR					MLR	MLR		
	comp=Z,85µm,22.0s							
PLG	Polygyros	93.50	46		P	P	P	08 38 01.3 -0.4
PLD	Plovdiv	93.60	44		P	P	P	08 38 01.5 -0.6
OBN	Obninsk	93.61	29	⇑	*e*	P	P	08 38 01.2 -0.6
OBN					*i*			08 41 44.6
OBN					*i*	S	SKSac	08 48 38.9 +4.6
OBN					*i*	PS	PS	08 50 56.0 +31
OBN					pmax	pmax		
	comp=Z,340nm,1.7s							
AXAR	Agios Charalam	93.63	48		P	P	P	08 38 01.8 -0.5
DSF	Desfina	93.69	48		P	P	P	08 38 01.6 -1.0
MOS	Moscow	93.72	28		*e*	P	P	08 38 01.6 -0.7
MOS					*e*			08 41 46.6
MOS					*e*			08 48 32.7
MOS					*e*	PS	PS	08 50 30.5 +4.1
MOS					pmax	pmax		
	comp=Z,800nm,2.0s							
MOS					pmax	pmax		
	comp=Z,322nm,1.6s							
MOS					pmax	pmax		
	comp=N,133nm,1.2s							
PYL	PYLOS	93.74	50		P	P	P	08 38 01.9 -0.9
GUR	Goura	93.75	49		P	P	P	08 38 02.6 -0.4
XOR	Xorichti	93.76	47		P	P	P	08 38 01.8 -1.1
ITM	Ithomi	93.76	50		P	P	P	08 38 02.6 -0.4
RZN	Rozhen	93.80	45		*e*	P	P	08 38 03.2 0.0
PAIG	Paliouri	93.86	46		P	P	P	08 38 02.1 -1.2
SZH	Strazhica	93.89	43		*e*	P	P	08 38 03.1 -0.3
OUR	Ouranopolis	93.89	46		P	P	P	08 38 02.9 -0.5
KIS	Kishinev	93.91	38	*k*	*i*	P	P	08 38 02.0 -1.4
KIS					*i*			08 41 46.0
KIS					*i*			08 48 31.0
KIS					*i*	S	S	08 49 10.0 -1.6
KIS					pmax	pmax		
	comp=Z,400nm,2.0s							
KIS					pmax	pmax		
	comp=Z,2µm,5.0s							
KIS					pmax	pmax		
	comp=Z,3µm,12.0s							
KIS	Kishinev	93.91	38	⇓	*i*	P	P	08 38 02.0 -1.4
	comp=Z,2µm,5.0s							
KIS	Kishinev	93.91	38		*i*	PP	PP	08 41 46.0 -2.8
	comp=Z,3µm,12.0s							
KIS	Kishinev	93.91	38		*i*	PPP	PPP	08 44 20.0
KIS					*i*	SKS	SKSac	08 48 31.0 -5.3
KIS					*i*	SKKS	SKKS	08 48 46.0
KIS					*i*	S	S	08 49 10.0 -1.6
ATAL	Atalanti	93.92	48		P	P	P	08 38 02.0 -1.6
THAL	Thalero	93.94	48		P	P	P	08 38 02.9 -0.8
KAVA	Kavala	93.96	45		P	P	P	08 38 03.7 -0.1
SMIA	Simia	93.97	48		P	P	P	08 38 03.3 -0.6
VLX	Vlachokerasia	94.01	49		P	P	P	08 38 04.4 +0.2
SKIA	Skiathos	94.03	47		P	P	P	08 38 03.4 -0.7
LTK	Loutraki	94.16	48		P	P	P	08 38 03.7 -1.1
DIM	Dimitrovgrad	94.18	44		*e*	P	P	08 38 05.6 +0.9
DYR	Agios Nikonas	94.23	50		P	P	P	08 38 04.4 -0.7
MRKA	Markates	94.32	48		P	P	P	08 38 06.0 +0.5
AOS	Alonnisos	94.32	47		P	P	P	08 38 05.1 -0.3
CFR	Carcaliu	94.39	40	⇑	*i*	P	P	08 38 05.4 -0.2
HARR	Harsova	94.49	41	⇑	*i*	P	P	08 38 04.9 -1.2
DIDY	Didyma	94.57	49		P	P	P	08 38 05.6 -1.2
DID	Didima	94.58	49		P	P	P	08 38 05.1 -1.2
RDO	Rodhopi	94.59	45		P	P	P	08 38 06.1 -0.5
JMB	Yambol	94.68	43		P	P	P	08 38 07.0 0.0
JMB

FUNA Funafuti 96.76 263 PFAKE 08 38 30.0 +13
FUNA LR LR
comp=Z,180µm,22.0s
VOR Voronezh 96.91 31 P **P** **08 38 15.0 -2.0**
VOR pmax pmax
comp=Z,250nm,2.0s
ISK Istanbul-Kandi 96.98 44 P **P** **08 38 16.6 -0.9**
AKHS Akhisar 97.19 46 *i* P **P** **08 38 17.2 -1.3**
VSR Storozhevoye 97.22 31 *eP* **P** **08 38 16.9 -1.4**
VSR *e* 08 42 10.7
VSR *e* 08 48 52.8
VSR *eS* **S** **08 49 35.2 -4.8**
VSR pmax pmax
comp=N,40nm,1.6s
VSR pmax pmax
comp=E,50nm,1.6s
VSR pmax pmax
comp=Z,80nm,1.6s
VSR pmax pmax
comp=Z,580nm,2.4s
VSR pmax pmax
comp=N,140nm,1.2s
VSR pmax pmax
comp=E,360nm,2.3s
VSR smax smax
comp=N,2µm,5.6s
VSR smax smax
comp=E,4µm,5.6s
VSR smax smax
comp=Z,570nm,2.8s
VSR MLR MLR
comp=N,18µm,23.0s
VSR MLR MLR
comp=E,26µm,23.0s
VSR MLR MLR
comp=Z,61µm,23.0s
DURS Dursunbey 97.29 45 *i* P **P** **08 38 17.5 -1.6**
VORD Divnogorie 97.43 31 *eP* **P** **08 38 17.9 -1.4**
VORD *e* 08 42 17.6
VORD *e* 08 49 00.1
VORD *eS* **S** **08 49 40.7 -1.2**
VORD pmax pmax
comp=Z,70nm,1.5s
VORD pmax pmax
comp=N,70nm,0.8s
VORD pmax pmax
comp=E,30nm,0.8s
VORD pmax pmax
comp=N,340nm,3.0s
VORD pmax pmax
comp=E,430nm,3.0s
VORD pmax pmax
comp=Z,610nm,3.0s
VORD smax smax
comp=N,3µm,4.8s
VORD smax smax
comp=E,2µm,4.8s
VORD smax smax
comp=Z,720nm,4.8s
VORD MLR MLR
comp=N,26µm,22.0s
VORD MLR MLR
comp=E,15µm,22.0s
VORD MLR MLR
comp=Z,52µm,22.0s
AYDN Tasoluk 97.81 47 *i* P **P** **08 38 20.4 -1.0**
SIM Simferopol' 98.13 38 *eP* **P** **08 38 21.0 -1.6**
SIM *e* 08 42 25.0
SIM *eS* **S** **08 49 46.0 -2.1**
SIM pmax pmax
comp=Z,2µm,13.3s
SIM pmax pmax
comp=Z,2µm,12.0s
SOKR Solikamsk 98.15 18 *d* iP **P** **08 38 21.4 -0.9**
SOKR 08 42 29.5
SOKR S **SKSac** **08 48 54.0 -4.0**
SOKR pmax pmax
comp=Z,220nm,1.8s
GDZ Gediz 98.22 45 *i* P **P** **08 38 22.1 -1.2**
BORA Eskisehir 98.49 44 *i* P **P** **08 38 22.6 -1.8**
VRHR Novokhopersk 98.49 30 *eP* **P** **08 38 23.4 -0.7**
VRHR *e* 08 42 21.8
VRHR *eS* **S** **08 49 50.0 -0.9**
VRHR pmax pmax
comp=N,40nm,1.7s
VRHR pmax pmax
comp=E,50nm,1.7s
VRHR pmax pmax
comp=Z,90nm,1.7s
VRHR pmax pmax
comp=N,380nm,3.4s
VRHR pmax pmax
comp=Z,910nm,3.4s
VRHR pmax pmax
comp=E,60nm,1.1s
VRHR smax smax
comp=N,2µm,4.2s
VRHR smax smax
comp=E,2µm,4.2s
VRHR smax smax
comp=Z,620nm,4.2s
VRHR MLR MLR
comp=N,13µm,18.0s
VRHR MLR MLR
comp=E,15µm,18.0s
VRHR MLR MLR
comp=Z,23µm,18.0s
KHAL Karahalli 98.58 46 *i* P **P** **08 38 24.3 -0.6**
DNZL Cakiroluk 98.61 47 *i* P **P** **08 38 24.3 -0.8**
ALT Altintas 98.67 45 P **P** **08 38 23.5 -1.8**
TURN Turunc 98.69 47 *i* P **P** **08 38 22.4 -2.9**
GOLH Golhisar 99.18 47 *i* P **Pdif** **08 38 27.6 0.0**
BOLV Bolvadin 99.40 45 *i* P **Pdif** **08 38 26.9 -1.8**
RAO Raoul Island 99.45 242 LR LR 09 15 38.2
comp=Z,47µm,20.2s,baz=71,slow=31
AKAS Kas 99.70 48 *i* P **Pdif** **08 38 29.4 -0.6**
KORT Korkueli 99.85 47 *i* P **Pdif** **08 38 29.6 -1.1**
WAKE Wake Island 99.89 294 PFAKE 08 38 40.0 +9.0
WAKE LR LR
comp=Z,174µm,22.0s
TARA Tarawa 99.98 274 PFAKE 08 38 40.0 +8.5
TARA LR LR
comp=Z,181µm,20.0s
ILGA Ilgaz 100.00 42 *i* P **Pdif** **08 38 30.5 -0.9**
ANTO Ankara 100.04 43 PFAKE 08 38 40.0 +8.6
ANTO LR LR
comp=Z,33µm,21.0s
ELDT Eldivan 100.12 42 *i* P **Pdif** **08 38 30.3 -1.6**
ANN Anapa 100.15 37 *eP* **Pdif** **08 38 29.1 -2.5**
ANN *e**PP pP 08 38 32.3 -8.8
ANN *e* 08 42 36.7
ANN *e*PPP PPP 08 44 53.2
ANN *eS* **Sdif** **08 50 07.7 +2.6**
ANN pmax pmax
comp=Z,36nm,1.4s
ANN pmax pmax
comp=Z,1µm,7.2s
ANN pmax pmax
comp=N,220nm,7.3s
ANN pmax pmax
comp=E,120nm,7.3s
MSVF Nonsavu 100.24 255 PFAKE 08 38 40.0 +7.4
MSVF LR LR
comp=Z,163µm,22.0s
KDHN Kadinhani 100.29 45 *i* P **Pdif** **08 38 31.5 -1.1**
BBAL Bala 100.43 43 *i* P **Pdif** **08 38 34.1 +0.9**
BR131 Keskin Array S 100.67 43 *e*Pdif **Pdif** **08 38 34.6 +0.4**
comp=Z,17nm,1.1s
BRTR Keskin Array B 100.67 43 P **Pdif** **08 38 33.3 -1.0**
BRTR PP PP 08 42 35.3 -5.8
BRTR PKKPbc **PKKPdf** **08 54 53.8 +0.2**
BRTR P'P' 09 03 33.8
BRTR Keskin Array B 100.67 43 P **Pdif** **08 38 33.3 -1.0**
comp=Z,6.1nm,1.1s,baz=276,slow=4.5,SNR=18
BRTR PP PP 08 42 35.3 -5.8
comp=Z,10nm,1.2s,baz=286,slow=5.9,SNR=3.9
BRTR PKKPbc **PKKPdf** **08 54 53.8 +0.2**
comp=Z,3.0nm,0.8s,baz=146,slow=6.9,SNR=5.8
BRTR PKPPKP P'P'df 09 03 33.8 +25
comp=Z,1.6nm,1.1s,baz=198,slow=2.5,SNR=4.6
CDAG Cicekdag 101.20 43 *eP* **Pdif** **08 38 34.3 -2.3**
HAVZ Havza 101.26 41 *i* P **Pdif** **08 38 36.4 -0.3**
ARU Arti 101.30 19 P **Pdif** **08 38 35.8 -0.7**
ARU 08 42 46.1
ARU PPP PPP 08 44 51.3
ARU S **SKSac** **08 49 15.0 +1.3**
SVE Sverdlovsk 101.59 18 *eP* **Pdif** **08 38 38.6 +0.8**
SVE *e* 08 42 45.7
SVE *e*PPP PPP 08 44 56.6
SVE *eS* **SKSac** **08 49 15.1 -0.1**
SVE *e*SSS SSS 09 01 04.6
SVE pmax pmax
comp=Z,117nm,2.3s
SVE pmax pmax
comp=Z,2µm,14.3s
SVE smax smax
comp=N,9µm,16.0s
VNA1 Neumayer--Stat 101.80 161 *eP* **Pdif** **08 38 43.0 +4.8**
CLNS Chul'man 102.15 343 *eP* **Pdif** **08 38 45.4 +5.1**
CLNS pmax pmax
comp=N,3.0nm,0.9s
CLNS pmax pmax
comp=E,3.0nm,0.9s
CLNS pmax pmax
comp=Z,11nm,1.3s
CLNS MLR MLR
comp=E,124µm,24.0s
CLNS MLR MLR
comp=N,101µm,19.0s
CLNS MLR MLR
comp=Z,141µm,24.0s
SOC Sochi 102.20 37 *i* P **Pdif** **08 38 40.9 +0.1**
SOC *e* 08 42 48.0
SOC pmax pmax
comp=Z,22nm,0.9s
YSS Yuzh-Sakhalins 102.78 328 *eP* **Pdif** **08 38 40.0 -3.2**
YSS *e* 08 43 04.0
YSS *e* 08 49 24.0
YSS *eS* **Sdif** **08 50 20.0 -6.9**
YSS *e*SS SS 08 57 42.0 +7.8
YSS *e*SSS SSS 09 01 28.0
YSS MLR MLR
comp=Z,106µm,23.0s
YSS MLR MLR
comp=E,65µm,20.0s
CSS Prodhromos 102.96 47 PFAKE 08 38 50.0 +5.6
CSS LR LR
comp=Z,7µm,20.0s
PINB Pinarbasi 103.04 43 *i* P **Pdif** **08 38 44.2 -0.8**
ANDN Andirin 103.61 44 *i* P **Pdif** **08 38 47.3 -0.1**
KIV Kislovodsk 103.64 35 *eP* **Pdif** **08 38 44.9 -2.4**
KIV *i* 08 43 03.4
KIV *e*PS **PS** **08 52 13.8 -0.3**
KIV *e*SS SS 08 57 54.3 +7.6
KIV *e*SSS SSS 09 01 49.7
KIV pmax pmax
comp=Z,37nm,1.0s
SNAA Sanae 103.76 161 *e*Pdif **Pdif** **08 38 46.8 -0.2**
comp=Z,54nm,1.4s
KBZ Khabaz 103.91 35 P **Pdif** **08 38 48.8 +0.5**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KBZ Khabaz 103.91 35 Pdif **Pdif** **08 38 48.8 +0.5**
KBZ PKKP **PKKPdf** **08 54 44.4 -3.1**
KBZ P'P' 09 03 03.2
KBZ Khabaz 103.91 35 Pdiff **Pdif** **08 38 48.8 +0.5**
comp=Z,2.4nm,0.8s,baz=288,slow=5.7,SNR=5.0
KBZ PKKP **PKKPdf** **08 54 44.4 -3.1**
comp=Z,4.9nm,0.9s,baz=174,slow=1.9,SNR=5.7
KBZ PKPPKP **P'P'df** **09 03 03.2 +1.4**
comp=Z,0.6nm,0.4s,baz=194,slow=3.8,SNR=4.0
AYKD Aykdinkavak 104.01 43 *i* P **Pdif** **08 38 47.4 -1.6**
AKCD Akcadag 104.23 42 *eP* Pdif 08 39 00.1 +10
YAYL Yayladag 104.31 45 *eP* **Pdif** **08 38 50.5 0.0**
ONI Oni 104.95 36 P **Pdif** **08 38 52.9 -0.3**
ARTV Artvin 104.97 38 *i* P **Pdif** **08 38 53.2 -0.3**
BHL Bhannes 105.15 47 *eP* **Pdif** **08 38 49.3 -5.0**
HWQ Hawqa 105.15 47 *eP* **Pdif** **08 38 48.9 -5.4**
HABR Khabarovsk 105.33 333 *c*P **Pdif** **08 38 53.0 -1.6**
HABR *e* 08 43 13.4
HABR *e*PPP PPP 08 45 26.7
HABR *eS* **Sdif** **08 50 47.1 -1.0**
HABR *e*PS **PS** **08 52 29.7 -1.5**
HABR *e*SS **SKKPbc** **08 58 11.6 -2.5**
HABR MLR MLR
comp=E,85µm,22.0s
HABR MLR MLR
comp=Z,102µm,24.0s
HABR MLR MLR
comp=N,40µm,25.0s
MMAI Mount Meron Ar 105.45 48 PKKP **PKKPab** **08 54 50.8 -2.3**
comp=N,18nm,0.7s,baz=81,slow=5.2,SNR=11
GOR Gori 105.71 36 P **Pdif** **08 39 05.3 +8.8**
AKH Akhalkalaki 105.73 37 P **Pdif** **08 38 58.0 +1.2**
ERM Erimo 105.83 324 PFAKE 08 43 20.0
ERM LR LR
comp=Z,110µm,21.0s
AKTO Aktyubinsk 106.03 23 P **Pdif** **08 38 59.4 +1.7**
AKTO 08 43 17.3
AKTO pmax pmax
comp=Z,6.0nm,1.1s
AKTO pmax pmax
comp=Z,10.0nm,0.9s
AKTO Aktyubinsk 106.03 23 Pdif **Pdif** **08 38 59.4 +1.7**
AKTO PP **PP** **08 43 17.3 -3.1**
AKTO PKKPbc **PKKPbc** **08 54 37.2 +3.9**
AKTO Aktyubinsk 106.03 23 Pdiff **Pdif** **08 38 59.4 +1.7**
comp=Z,6.3nm,1.1s,baz=330,slow=4.0,SNR=13
AKTO PP **PP** **08 43 17.3 -3.1**
comp=Z,10nm,0.9s,baz=308,slow=15,SNR=4.1
AKTO PKKPbc **PKKPbc** **08 54 37.2 +3.9**
comp=Z,6.7nm,0.9s,baz=160,slow=4.2,SNR=5.4
KLR Kul'dur 106.13 335 *eP* **Pdif** **08 39 02.4 +4.3**
TBLG Delisi 106.24 36 *eP* **Pdif** **08 39 02.6 +3.8**
TBLG Delisi 106.24 36 P **Pdif** **08 39 02.6 +3.8**
KZR Kazreti 106.28 36 P **Pdif** **08 38 49.9 -9.2**
DIGO Kars 106.30 38 *i* P **Pdif** **08 38 59.8 +0.3**
QSPA South Pole Qui 106.75 180 *e*Pdif **Pdif** **08 39 04.0 +3.5**
comp=Z,322nm,2.0s
QSPA PP **PP** **08 43 30.8 +4.6**
QSPA PKKPbc **PKKPab** **08 54 40.4 -3.4**
QSPA LR LR
comp=Z,74µm,19.0s
QSPA South Pole Qui 106.75 180 PP PP 08 43 30.8 +4.5
comp=Z,16nm,1.1s,baz=169,slow=2.6,SNR=3.3
QSPA PKKPbc **PKKPab** **08 54 40.4 -3.4**
comp=Z,6.4nm,1.1s,baz=343,slow=3.2,SNR=3.7
DGRG David-gareji 106.78 36 P **Pdif** **08 39 09.2 +7.9**
MAK Makhachkala 106.92 34 *i* P **Pdif** **08 38 57.8 -4.0**
MAK *e* 08 43 27.5
MAK *e*PPP PPP 08 45 46.1
MAK *e* 08 50 23.1
MAK *eS* **PS** **08 52 47.2 -0.7**
MAK *e*SS SS 08 58 43.4 +12
GNI Garni 107.27 37 PFAKE 08 43 20.0
GNI LR LR
comp=Z,40µm,20.0s
BRVK Borovoye 107.53 15 *eP* **Pdif** **08 39 05.3 +1.0**
BRVK pmax pmax
comp=Z,149nm,1.8s
BRVK MLR MLR
comp=Z,122µm,20.0s
BRVK Borovoye 107.53 15 *e*Pdif **Pdif** **08 39 05.3 +1.0**
comp=Z,149nm,1.8s
BRVK LR LR
comp=Z,122µm,20.0s
BVAR Borovoye Array 107.58 15 P **Pdif** **08 39 06.3 +1.7**
BVAR pmax pmax
comp=Z,3.0nm,0.9s
BVAR Borovoye Array 107.58 15 Pdif **Pdif** **08 39 06.3 +1.7**
BVAR PP PKiKP 08 43 18.3 +5.8
BVAR PKKPbc **PKKPbc** **08 54 33.1 +4.5**
BVAR Borovoye Array 107.58 15 Pdiff **Pdif** **08 39 06.3 +1.7**
comp=Z,2.5nm,0.9s,baz=282,slow=2.7,SNR=11
BVAR PP PKiKP 08 43 18.3 +5.8
comp=Z,9.5nm,0.9s,baz=347,slow=6.1,SNR=3.6
BVAR PKKPbc **PKKPbc** **08 54 33.1 +4.5**
comp=Z,3.2nm,0.7s,baz=191,slow=1.5,SNR=6.0
SNZO South Karori 107.61 231 PFAKE 08 43 20.0
SNZO LR LR
comp=Z,111µm,21.0s
ABKAR Akbulak array 107.72 23 *e*Pdif **Pdif** **08 39 07.4 +2.2**
comp=Z,428nm,0.8s
TSUM Tsumeb 108.08 105 PFAKE 08 43 20.0
TSUM LR LR
comp=Z,58µm,20.0s
NVS Novosibirsk 108.08 6 *eP* **Pdif** **08 39 15.5 +8.8**
NVS pmax pmax
comp=Z,101nm,2.1s
MAIT Maitri 108.37 160 *eP* **Pdif** **08 39 03.8 -3.7**
ZALV Zalesovo Beam 109.12 6 P **Pdif** **08 39 18.4 +7.1**
ZALV pmax pmax
comp=Z,2.0nm,0.9s
ZALV Zalesovo Beam 109.12 6 Pdif **Pdif** **08 39 18.4 +7.1**
ZALV PP PKiKP 08 43 25.6 +10
ZALV PKKPbc **PKKPab** **08 54 35.6 -1.6**
ZALV Zalesovo Beam 109.12 6 Pdiff **Pdif** **08 39 18.4 +7.1**
comp=Z,2.2nm,0.8s,baz=358,slow=4.9,SNR=5.0
ZALV PP PKiKP 08 43 25.6 +10
comp=Z,8.0nm,0.9s,baz=102,slow=2.2,SNR=4.2
ZALV PKKPbc **PKKPab** **08 54 35.6 -1.6**
comp=Z,12nm,1.0s,baz=174,slow=3.0,SNR=5.5
SBA Scott Base 109.89 192 PFAKE 08 43 30.0
SBA LR LR
comp=Z,100µm,21.0s
USRK Ussuriysk Arra 109.97 332 PP PP 08 43 34.3 -15
comp=Z,8.0nm,1.0s,baz=7.4,slow=4.8,SNR=4.5
USRK PKKP **PKKPdf** **08 54 36.4 +0.1**
comp=Z,2.9nm,0.9s,baz=243,slow=2.1,SNR=4.3
HIA Hailar 110.30 342 PFAKE 08 43 30.0
HIA LR LR
comp=Z,102µm,19.0s
MDJ Mudanjiang 110.70 333 PFAKE 08 43 30.0
MDJ LR LR
comp=Z,76µm,20.0s
VNDA Vanda 110.99 192 PP PP 08 43 37.3 -19
VNDA Vanda 110.99 192 PP PP 08 43 37.3 -19
comp=Z,5.6nm,0.9s,baz=276,slow=1.7,SNR=6.3
TLY Talaya 111.26 353 *eP* Pdif 08 39 41.6 +21
TLY *i* 08 43 18.2
TLY *e* 08 53 34.1
TLY *eS* SS 08 59 23.7 -4.8
TLY pmax pmax
comp=Z,55nm,1.7s
BHD Baghdad 111.44 43 *ex* PP 08 43 45.0 -15
BHD *ex* x 08 56 51.0
KURK Kurchatov 111.47 10 ⇑*i*PKIKP **PKiKP** **08 43 19.9 +0.1**
KURK Kurchatov 111.47 10 *e*Pdif **Pdif** **08 39 22.7 +0.9**
KURK PP PKiKP 08 43 34.7 +15
KURK PKKPbc **PKKPbc** **08 54 14.9 -1.1**
KURK P'P' 09 02 57.2
KURK LR LR
comp=Z,89µm,20.0s
KURBB Kurchatov Arra 111.54 10 Pdiff **Pdif** **08 39 24.5 +2.3**
comp=Z,0.9nm,0.9s,baz=337,slow=4.9,SNR=6.7
KURBB PP PKiKP 08 43 34.7 +15
comp=Z,6.9nm,0.8s,baz=347,slow=4.0,SNR=6.1
KURBB PKKPbc **PKKPbc** **08 54 14.9 -0.9**
comp=Z,2.4nm,0.7s,baz=175,slow=2.3,SNR=8.3
KURBB PKPPKP P'P'df 09 02 57.2 +11
comp=Z,0.8nm,0.9s,baz=198,slow=2.2,SNR=4.6
DZM Mont Dzumac 111.82 253 *eP* **Pdif** **08 39 23.2 -0.9**
comp=Z,4µm,24.4s
DZM Mont Dzumac 111.82 253 *e*PP PP 08 43 59.8 -4.7
comp=Z,8µm,26.0s
DZM *e*SKSac **SKSac** **08 50 04.0 +2.4**
comp=Z,13µm,25.8s
DZM Mont Dzumac 111.82 253 *e*PS PS 08 53 35.3 -2.5
comp=Z,27µm,31.2s
DZM *e*SS SS 08 59 43.5 +3.5
comp=Z,143µm,32.1s
DZM *e*LQ LQ 09 11 55.8
comp=Z,416µm,38.0s
DZM *e*LR LR 09 16 40.7
comp=Z,175µm,23.3s
DZM Mont Dzumac 111.82 253 PP PP 08 43 39.3 -25
DZM Mont Dzumac 111.82 253 PP PP 08 43 39.3 -25
comp=Z,8.7nm,0.8s,baz=47,slow=23,SNR=5.4
MJAR Matsushiro Arr 112.35 322 PP PP 08 43 39.6 -27
MJAR Matsushiro Arr 112.35 322 PP PP 08 43 39.6 -27
comp=Z,6.4nm,1.0s,baz=93,slow=0.7,SNR=4.2
MJAR PKKPbc **PKKPab** **08 54 26.5 +4.0**
comp=Z,3.1nm,0.8s,baz=228,slow=5.9,SNR=4.0
MAJO Matsushiro 112.35 322 PFAKE 08 43 30.0
MAJO LR LR
comp=Z,124µm,21.0s
HVS Khovu-Aksy 112.35 0 ⇓*i*PKIKP **PKiKP** **08 43 19.9 -1.8**
ZAK Zakamensk 112.58 353 *eP* **Pdif** **08 39 23.8 -3.2**
ZAK *e* 08 44 08.9
ZAK pmax pmax
comp=Z,5.0nm,1.8s
SUR Sutherland 113.01 118 PKKPbc PKKPbc 08 54 26.9 +16
comp=Z,27nm,0.8s,baz=130,slow=4.1,SNR=9.1
CN2 Changchun 113.07 336 *e*Pdif **Pdif** **08 39 25.5 -3.6**
CN2 *e*PP **PP** **08 44 12.5 +1.0**
CN2 Changchun 113.07 336 *e*S **Sdif** **08 51 47.8 -5.2**
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=Z,51µm,26.0s
CN2 Changchun 113.07 336 *e*Pdif **Pdif** **08 39 25.5 -3.6**
CN2 *e*PP **PP** **08 44 12.5 +1.0**
CN2 Changchun 113.07 336 *e*S **Sdif** **08 51 47.8 -5.2**
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=Z,51µm,26.0s
CN2 Changchun 113.07 336 *e*Pdif **Pdif** **08 39 25.5 -3.6**
CN2 *e*PP **PP** **08 44 12.5 +1.0**
CN2 Changchun 113.07 336 *e*S **Sdif** **08 51 47.8 -5.2**
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=Z,51µm,26.0s
ULN Ulaanbaatar 114.53 350 PFAKE 08 43 40.0 +14
ULN LR LR
comp=Z,112µm,21.0s
SONM Songino Array 114.67 351 PKP PKPdf 08 43 27.2 +0.9
SONM PKKPbc **PKKPbc** **08 54 07.6 +2.0**
SONM Songino Array 114.67 351 PKP PKPdf 08 43 27.2 +0.9
comp=Z,3.7nm,0.7s,baz=10,slow=1.5,SNR=3.7
SONM PKKPbc **PKKPbc** **08 54 07.6 +2.0**
comp=Z,3.7nm,0.6s,baz=190,slow=3.6,SNR=7.7
HNR Honiara 115.36 267 PFAKE 08 43 40.0 +12
HNR LR LR
comp=Z,64µm,20.0s
MKAR Makanchi Array 115.86 9 PKIKP **PKPdf** **08 43 29.3 +0.9**
MKAR 08 54 01.9
MKAR Makanchi Array 115.86 9 PKP **PKPdf** **08 43 29.3 +0.9**
MKAR PKKPbc **PKKPbc** **08 54 01.9 +0.6**
MKAR Makanchi Array 115.86 9 PKP **PKPdf** **08 43 29.3 +0.9**
comp=Z,1.9nm,0.7s,baz=24,slow=5.4,SNR=3.7
MKAR PKKPbc **PKKPbc** **08 54 01.9 +0.6**
comp=Z,2.7nm,0.7s,baz=161,slow=3.7,SNR=8.6
MBAR Mbarara 115.95 82 *e*PKPdf **PKPdf** **08 43 28.0 -1.7**
MBAR PKKPbc PKKPab 08 54 12.0 +6.3
MBAR LR LR
comp=Z,591nm,19.0s
MBAR Mbarara 115.95 82 PKKPbc PKKPbc 08 54 12.0 +12
comp=Z,9.2nm,0.2s,baz=352,slow=1.5,SNR=5.5
LBTB Lobatse 116.37 110 *e*PKPdf **PKPdf** **08 43 29.1 -0.9**
LBTB PKKPbc **PKKPab** **08 54 06.0 +3.4**
LBTB Lobatse 116.37 110 PKKPbc PKKPbc 08 54 06.0 +7.3
comp=Z,6.1nm,0.9s,baz=80,slow=7.3,SNR=4.3
BOSA Boshof 116.46 114 PKP **PKPdf** **08 43 28.1 -2.0**
BOSA *e*PKPdf **PKiKP** **08 43 29.1 -1.0**
BOSA PKKPbc PKKPab 08 54 08.3 +6.1
BOSA Boshof 116.46 114 PKP **PKPdf** **08 43 28.1 -2.0**
comp=Z,5.6nm,0.8s,baz=277,slow=8.6,SNR=6.2
BOSA PKKPbc PKKPab 08 54 08.3 +6.1
comp=Z,12nm,1.1s,baz=183,slow=6.2,SNR=3.7
IZEF Zefreh 116.67 39 *eP* **PKPdf** **08 43 28.8 -1.9**
ISFR Sfrayin 116.70 32 *eP* **PKPdf** **08 43 30.6 -0.1**
IEMG Emamgholi 116.75 31 *eP* **PKPdf** **08 43 29.2 -1.6**
KSRS Korea Array 117.17 330 PKP **PKPdf** **08 43 29.9 -1.3**
comp=Z,4.6nm,0.7s,baz=19,slow=1.9,SNR=8.4
KSRS PKKPbc PKKPab 08 54 07.8 +6.5
comp=Z,3.1nm,0.8s,baz=203,slow=4.9,SNR=4.5
KSAR Wonju Array Be 117.20 330 PKP **PKPdf** **08 43 29.9 -1.4**
KSAR PKKPbc PKKPab 08 54 07.8 +6.7
LSZ Lusaka 117.23 99 *e*PKPdf **PKPdf** **08 43 29.1 -2.8**
LSZ PKKPbc PKKPab 08 54 08.2 +8.9
LSZ LR LR
comp=Z,67µm,20.0s
LSZ Lusaka 117.23 99 PKKPbc PKKPbc 08 54 08.2 +13
comp=Z,17nm,0.8s,baz=74,slow=8.0,SNR=12
IAKL Akhelmad 117.44 31 *eP* **PKPdf** **08 43 31.8 -0.3**
INCN Inchon 117.76 331 PFAKE 08 43 40.0 +7.6
INCN LR LR
comp=Z,70µm,21.0s
ISRO Mashad 118.02 31 *eP* **PKPdf** **08 43 37.5 +4.5**
EKS2 Erkin-Say 118.03 17 PFAKE 08 43 40.0 +7.1
EKS2 LR LR
comp=Z,96µm,20.0s

SYO Syowa Base 118.04 161⇑eP PKPdf 08 43 31.0 -0.8
SYO Syowa Base 118.04 161⇓eP PKPdf 08 43 46.4 +15
SYO Syowa Base 118.04 161⇑eP PKKPab 08 53 53.6 +0.1
IMOG Moghan 118.11 31 eP PKPdf 08 43 35.0 +1.6
ISAD Sadrabad 118.17 38 eP PKPdf 08 43 38.9 +5.2
AAK Ala-Archa 118.25 16⇓/PKIKP PKPdf 08 43 31.7 -1.6
AAK MLR MLR
comp=Z,221μm,26.0s
AAK Ala-Archa 118.25 16 ePKPdf PKPdf 08 43 31.7 -1.6
AAK PKKPbc PKKPab 08 53 55.0 -1.9
AAK LR LR
comp=Z,108μm,20.0s
AAK Ala-Archa 118.25 16 PKKPbc PKKPbc 08 53 55.0 +2.1
comp=Z,8.0nm,0.7s,baz=168,slow=4.7,SNR=9.6
TKM2 Tokmak 2 118.26 15 ePKIKP PKPdf 08 43 34.5 +1.1
TKM2 MLR MLR
comp=Z,92μm,20.0s
TKM2 Tokmak 2 118.26 15 ePKPdf PKPdf 08 43 34.5 +1.1
TKM2 LR LR
comp=Z,92μm,20.0s
IMYA Miami 118.30 31 eP PKPdf 08 43 40.6 +7.0
DL2 Dalian 118.74 335 Pdif Pdif 08 40 05.5 +11
DL2 PKP PKiKP 08 43 51.8 +18
DL2 PP PP 08 45 04.3 +13
DL2 Dalian 118.74 335 SS SKKSdf 09 01 39.0 +9.4
DL2 AMB AMB
comp=Z,6μm,8.2s
DL2 LR LR
comp=N,36μm,21.0s
DL2 LR LR
comp=E,19μm,20.7s
DL2 LR LR
comp=Z,45μm,22.0s
DL2 Dalian 118.74 335 SS SKKSdf 09 01 39.0 +9.4
DL2 AMB AMB
comp=Z,6μm,8.2s
DL2 LR LR
comp=N,36μm,21.0s
DL2 LR LR
comp=E,19μm,20.7s
DL2 LR LR
comp=Z,45μm,22.0s
DL2 Dalian 118.74 335 SS SKKSdf 09 01 39.0 +9.4
DL2 AMB AMB
comp=Z,6μm,8.2s
DL2 LR LR
comp=N,36μm,21.0s
DL2 LR LR
comp=E,19μm,20.7s
DL2 LR LR
comp=Z,45μm,22.0s
IPAR Pars 119.25 40 eP PKPdf 08 43 35.0 -0.8
WMQ Urumqi 119.41 5 PKP PKPdf 08 43 34.8 -0.6
WMQ PP PP 08 45 01.0 +5.4
WMQ PKS PKSdf 08 47 10.0 -2.1
WMQ SKS SKSdf 08 50 41.8 -3.9
WMQ SKKS SKKSac 08 51 49.3 -5.9
WMQ SS SS 09 01 17.8 +2.3
WMQ LR LR
comp=N,171μm,29.6s
WMQ LR LR
comp=E,137μm,29.6s
WMQ LR LR
comp=Z,180μm,27.8s
ISRV Sarvestan 119.61 41 eP PKPdf 08 43 36.0 -0.5
BJI Beijing 119.71 340 Pdif Pdif 08 40 16.3 +18
BJI Beijing 119.71 340 Pdif Pdif 08 40 16.3 +18
BJI Beijing 119.71 340 Pdif Pdif 08 40 16.3 +18
BJT Baijiatuau 119.73 340 PFAKE 08 43 50.0 +14
BJT LR LR
comp=Z,112μm,21.0s
FURI Furi 119.84 69 P PKPdf 08 43 25.6 -12
FURI S SKKSac 08 51 20.1 -40
HHC Hu-ho-hao-te 120.30 344 ePKP PKPdf 08 43 33.0 -4.3
HHC PKS PKSdf 08 47 07.8 -6.2
HHC AMB AMB
comp=Z,2μm,5.3s
HHC LR LR
comp=N,16μm,22.4s
HHC LR LR
comp=E,22μm,20.6s
HHC LR LR
comp=Z,19μm,22.9s
WNDE Wendo Genet 120.55 71 eP PKPdf 08 43 47.0 +8.4
GUMO Guam 121.17 298 ePKPdf PKPdf 08 43 40.6 +1.2
GUMO LR LR
comp=Z,70μm,22.0s
DRV Dumont d'Urvil 121.83 200 Pdif sS 08 41 01.0
DRV Dumont d'Urvil 121.83 200 PP PP 08 45 01.0 -12
DRV SP SP 08 54 53.0 -8.7
DRV SS SS 09 02 12.0 +25
KMBO Kilima Mbogo 122.28 80 PKKPbc PKKPbc 08 53 53.0 +16
comp=Z,14nm,1.2s,baz=62,slow=4.8,SNR=8.9
TIA Tai'an 122.82 338 Pdif Pdif 08 40 27.5 +15
TIA PKP PKPdf 08 43 32.5 -10
TIA PP PP 08 45 43.3 +24
TIA Tai'an 122.82 338 SKKS SKKSac 08 52 32.3 +15
TIA Tai'an 122.82 338 SS SS 09 02 04.0 +4.4
TIA LR LR
comp=N,59μm,42.8s
TIA LR LR
comp=E,35μm,57.1s
TIA LR LR
comp=Z,17μm,46.4s
TIA Tai'an 122.82 338 Pdif Pdif 08 40 27.5 +15
TIA PKP PKPdf 08 43 32.5 -10
TIA PP PP 08 45 43.3 +24
TIA Tai'an 122.82 338 SKKS SKKSac 08 52 32.3 +15
TIA Tai'an 122.82 338 SS SS 09 02 04.0 +4.4
TIA LR LR
comp=N,59μm,42.8s
TIA LR LR
comp=E,35μm,57.1s
TIA LR LR
comp=Z,17μm,46.4s
TIA Tai'an 122.82 338 Pdif Pdif 08 40 27.5 +15
TIA PKP PKPdf 08 43 32.5 -10
TIA PP PP 08 45 43.3 +24
TIA Tai'an 122.82 338 SKKS SKKSac 08 52 32.3 +15
TIA Tai'an 122.82 338 SS SS 09 02 04.0 +4.4
TIA LR LR
comp=N,59μm,42.8s
TIA LR LR
comp=E,35μm,57.1s
TIA LR LR
comp=Z,17μm,46.4s
TIY Taiyuan 122.99 342 ePKP PKPdf 08 43 44.5 +2.0
TIY PP PP 08 45 30.3 +10
TIY AMB AMB
comp=Z,2μm,6.4s
TIY LR LR
comp=N,21μm,21.9s
TIY LR LR
comp=E,13μm,16.3s
TIY LR LR
comp=Z,56μm,33.3s
IBND Bandar-abas 123.10 40 eP PKPdf 08 43 53.3 +10
KBL Kabul 123.78 25 ePKIKP PKPdf 08 43 49.1 +4.8
KBL Kabul 123.78 25 ePKPdf PKPdf 08 43 49.1 +4.8
GTA Gaotai 123.79 354 ePKP PKPdf 08 43 45.0 +0.9
GTA PP PP 08 45 31.0 +5.5
GTA PKS PKSdf 08 47 22.3 +1.5
GTA SKS SKSdf 08 50 58.8 +4.5
GTA SKKS SKKSac 08 52 23.5 -0.4
GTA SS SS 09 02 16.8 +5.2
GTA AMB AMB
comp=Z,2μm,13.8s
GTA LR LR
comp=N,41μm,26.6s
GTA LR LR
comp=E,68μm,21.4s
GTA LR LR
comp=Z,78μm,27.1s
MAW Mawson 125.48 166 ePKPdf PKPdf 08 43 47.0 +1.0
MAW PKP PKPdf 08 43 47.4 +1.3
MAW Mawson 125.48 166 PKP PKPdf 08 43 47.4 +1.3
comp=Z,18nm,1.2s,baz=232,slow=3.4,SNR=14
SSE Sheshan 125.56 331 PKP PKPdf 08 43 51.5 +4.0
SSE PP PP 08 45 45.0 +7.3
SSE SS SS 09 02 40.0 +5.5
SSE AMB AMB
comp=Z,750nm,12.0s
SSE LR LR
comp=N,26μm,23.4s
SSE LR LR
comp=E,65μm,23.5s
SSE LR LR
comp=Z,54μm,25.1s
ARMA Armidale 125.79 244 ePKPdf PKPdf 08 43 49.6 +1.6
NJ2 Nanjing 125.79 334 ePKP PKPdf 08 43 48.5 +0.6
NJ2 PP PP 08 45 48.0 +8.9
NJ2 PKS PKSdf 08 47 24.0 -0.6
NJ2 AMB AMB
comp=Z,5μm,11.1s
NJ2 LR LR
comp=N,19μm,22.2s
NJ2 LR LR
comp=E,26μm,21.2s
NJ2 LR LR
comp=Z,24μm,23.2s
EIDS Eidsvold 126.18 251 ePKPdf PKPdf 08 43 50.2 +1.5
LZH Lanzhou 126.53 350 ⇓PKP PKPdf 08 43 49.5 +0.1
LZH sPKP 08 43 53.3
LZH PP PP 08 45 49.5 +5.6
LZH PKS PKSdf 08 47 25.0 -1.3
LZH SKS SKSdf 08 50 58.0 -1.7
LZH SKKS SKKSac 08 52 41.0 -0.6
LZH SS SS 09 02 48.5 +2.3
LZH AMB AMB
comp=Z,5μm,7.0s
LZH LR LR
comp=N,44μm,19.8s
LZH LR LR
comp=E,53μm,19.9s
LZH LR LR
comp=Z,77μm,21.0s
XAN Xi'an 127.41 344 PKP PKPdf 08 43 51.3 +0.3
XAN PKS PKSdf 08 47 28.0 +0.3
XAN AMB AMB
comp=Z,900nm,7.8s
XAN LR LR
comp=N,70μm,24.4s
XAN LR LR
comp=E,34μm,22.4s
XAN LR LR
comp=Z,27μm,25.4s
PMG Port Moresby 127.60 271 PFAKE 08 44 00.0 +8.3
PMG LR LR
comp=Z,139μm,20.0s
CAN Canberra 127.73 238 ePKIKP PKPdf 08 43 50.6 -0.9
CAN MLR MLR
comp=Z,96μm,19.0s
CAN Canberra 127.73 238 ePKPdf PKPdf 08 43 50.6 -0.9
CAN LR LR
comp=Z,96μm,19.0s
TAU Tasmania Unive 127.80 228 ePKIKP PKPdf 08 43 51.6 +0.3
TAU MLR MLR
comp=Z,37μm,20.0s
TAU Tasmania Unive 127.80 228 ePKPdf PKPdf 08 43 51.6 +0.3
TAU LR LR
comp=Z,37μm,20.0s
THN Thein Dam 128.08 19 ePKP PKPdf 08 43 50.5 -1.7
THN ex x 08 48 27.0
DHRM DHARAMSHALA 128.43 19 ePKP PKPdf 08 43 52.2 -1.1
WHN Wuhan 128.92 337 ⇓PKP PKPdf 08 44 02.8 +8.9
WHN sPKP 08 44 15.5
WHN PP PP 08 46 14.8 +15
WHN Wuhan 128.92 337 SS SS 09 03 10.5 -5.5
WHN AMB AMB
comp=Z,11μm,6.2s
WHN LR LR
comp=N,77μm,21.5s
WHN LR LR
comp=E,104μm,21.3s
WHN LR LR
comp=Z,237μm,26.2s
WHN Wuhan 128.92 337 SS SS 09 03 10.5 -5.5
WHN AMB AMB
comp=Z,11μm,6.2s
WHN LR LR
comp=N,77μm,21.5s
WHN LR LR
comp=E,104μm,21.3s
WHN LR LR
comp=Z,237μm,26.2s
WHN Wuhan 128.92 337 SS SS 09 03 10.5 -5.5
WHN AMB AMB
comp=Z,11μm,6.2s
WHN LR LR
comp=N,77μm,21.5s
WHN LR LR
comp=E,104μm,21.3s
WHN LR LR
comp=Z,237μm,26.2s
CASY Casey 129.33 189 ePKPdf PKPdf 08 43 54.8 +1.3
CASY LR LR
comp=Z,178μm,22.0s
SMLA Simla 129.74 19 iP PKPdf 08 43 54.1 -1.3
SMLA ix x 08 47 28.8
CTAO Charters Tower 130.26 258 ePKIKP PKPdf 08 43 57.3 +0.6
CTAO MLR MLR
comp=Z,91μm,22.0s
CTAO Charters Tower 130.26 258 ePKPdf PKPdf 08 43 57.2 +0.6
CTAO LR LR
comp=Z,91μm,22.0s
TATO Taipei 130.45 326 PFAKE 08 44 10.0 +13
TATO LR LR
comp=Z,87μm,22.0s
YHNB Yeheng 130.75 326 PFAKE 08 44 10.0 +12
YHNB LR LR
comp=Z,105μm,22.0s
ENH Enshi 130.80 342 ePKPdf PKPdf 08 43 58.2 +0.7
ENH LR LR
comp=Z,77μm,21.0s
CD2 Chengdu 131.59 348 PKP PKPdf 08 43 58.5 -0.6
CD2 PP PP 08 46 21.3 +4.4
CD2 PKS PKSdf 08 47 33.5 -2.2
CD2 SKS SKSdf 08 51 07.3 -1.6
CD2 SKKS SKKSac 08 53 11.0 -2.0
CD2 SS SS 09 03 50.8 +2.3
CD2 AMB AMB
comp=Z,10μm,8.8s
CD2 LR LR
comp=N,92μm,24.0s
CD2 LR LR
comp=E,101μm,22.0s
CD2 LR LR
comp=Z,97μm,25.5s
SSLB Suanglung 131.69 326 ePKPdf PKPdf 08 44 01.8 +2.5
QZH Quanzhou 131.96 329 ePKPbc PKPdf 08 44 08.0 +8.2
QZH PP PP 08 46 39.0 +19
QZH Quanzhou 131.96 329 SS SS 09 04 08.0 +14
QZH AMB AMB
comp=Z,16μm,9.9s
QZH LR LR
comp=N,134μm,21.5s
QZH LR LR
comp=E,52μm,21.3s
QZH LR LR
comp=Z,194μm,25.5s
QZH Quanzhou 131.96 329 SS SS 09 04 08.0 +14
QZH AMB AMB
comp=Z,16μm,9.9s
QZH LR LR
comp=N,134μm,21.5s
QZH LR LR
comp=E,52μm,21.3s
QZH LR LR
comp=Z,194μm,25.5s
QZH Quanzhou 131.96 329 SS SS 09 04 08.0 +14
QZH AMB AMB
comp=Z,16μm,9.9s
QZH LR LR
comp=N,134μm,21.5s
QZH LR LR
comp=E,52μm,21.3s
QZH LR LR
comp=Z,194μm,25.5s
NDI New Delhi 132.03 20 ePKP PKPdf 08 44 00.9 +1.0
TPUB Ta-pu 132.26 326 ePKPdf PKPdf 08 44 04.3 +3.8
COEN Coen 132.36 266 ePKPdf PKPdf 08 44 03.4 +2.6
LSA Lhasa 133.69 3 PKP PKPdf 08 44 05.5 +1.9
LSA PKS PKSdf 08 47 41.0 +0.5
LSA LR LR
comp=E,79μm,23.8s
LSA LR LR
comp=Z,104μm,25.7s
LSA Lhasa 133.69 3 ePKIKP PKPdf 08 43 58.0 -5.6
LSA MLR MLR
comp=Z,98μm,21.0s
LSA Lhasa 133.69 3 ePKPdf PKPdf 08 43 58.0 -5.6
LSA LR LR
comp=Z,98μm,21.0s
DANN Dangsing 134.08 12 eP PKPdf 08 44 04.7 +0.6
comp=Z,292nm,0.7s
PYUN Piuthan 134.16 13 eP PKPdf 08 44 05.6 +1.4
comp=Z,2μm,2.1s
STKA Stephens Creek 134.27 242 ePKPdf PKPdf 08 44 04.5 +0.6
KOLN Koldanda 134.61 13 eP PKPdf 08 44 05.6 +0.6
comp=Z,142nm,1.1s
GUN Gumba 134.90 10 eP PKPdf 08 44 06.6 +0.9
comp=Z,511nm,0.9s
KKN Kakani 134.91 11 eP PKPdf 08 44 06.2 +0.6
comp=Z,231nm,1.0s
DMN Daman 135.06 11 eP PKPdf 08 44 06.6 +0.7
comp=Z,277nm,1.1s
PKIN Phulchoki 135.14 11 eP PKPdf 08 44 06.6 +0.5
comp=Z,67nm,0.8s
PKI Pulchoki 135.15 11 eP PKPdf 08 44 06.4 +0.2
comp=Z,302nm,1.0s
GYA Guiyang 135.20 343 Pdif Pdif 08 41 07.3 -0.8
GYA PKP PKiKP 08 44 07.5 0.0
GYA PP PP 08 46 44.8 +4.7
GYA PKS PKSdf 08 47 41.0 -1.6
GYA SKKS 08 53 33.8
GYA SS SS 09 04 35.3 +2.8
GYA AMB AMB
comp=Z,5μm,8.2s
GYA LR LR
comp=N,40μm,25.8s
GYA LR LR
comp=E,41μm,25.5s
GYA LR LR
comp=Z,40μm,25.8s
TAPN Taplejung 135.72 8 eP PKPdf 08 44 06.0 -1.2
comp=Z,317nm,1.3s
ABPO Ambohimpanom 135.77 100 ePKIKP PKPdf 08 44 08.6 +1.4
ABPO MLR MLR
comp=Z,59μm,21.0s
ABPO Ambohimpanom 135.77 100 ePKPdf PKPdf 08 44 08.6 +1.4
ABPO LR LR
comp=Z,59μm,21.0s
RAMN Ramite 135.95 9 eP PKPdf 08 44 07.2 -0.4
comp=Z,524nm,1.0s
GZH Guangzhou 135.97 334 SS SS 09 04 41.5 -0.4
GZH LR LR
comp=N,32μm,23.7s
GZH LR LR
comp=E,69μm,25.1s
GZH LR LR
comp=Z,106μm,24.6s
GZH Guangzhou 135.97 334 SS SS 09 04 41.5 -0.4
GZH LR LR
comp=N,32μm,23.7s
GZH LR LR
comp=E,69μm,25.1s
GZH LR LR
comp=Z,106μm,24.6s
GZH Guangzhou 135.97 334 SS SS 09 04 41.5 -0.4
GZH LR LR
comp=N,32μm,23.7s
GZH LR LR
comp=E,69μm,25.1s
GZH LR LR
comp=Z,106μm,24.6s
ODAN Odare 136.16 8 eP PKPdf 08 44 06.8 -1.2
comp=Z,534nm,1.5s
PIP Pasuquin 136.21 322⇑eP PKPdf 08 44 17.5 +10
HKC Hong Kong Obse 136.29 332 PKiKP PKPdf 08 44 08.0 0.0
KMI Kunming 137.41 348 Pdif Pdif 08 41 21.3 +3.2
KMI PKP PKiKP 08 44 13.5 +1.3
KMI PP PP 08 47 02.8 +8.7
KMI PKS PKSdf 08 47 48.0 +1.1
KMI SS SS 09 04 59.5 +0.4
KMI AMB AMB
comp=Z,5μm,11.6s
KMI LR LR
comp=N,42μm,20.1s
KMI LR LR
comp=E,88μm,21.4s
KMI LR LR
comp=Z,111μm,26.8s
SHL Shillong 137.84 3 ePKP PKPdf 08 44 10.0 -1.0
SHL ex x 08 48 10.0
BBOO Buckleboo 138.72 239 ePKPdf PKPdf 08 44 12.6 +0.5
BOK Bokaro 138.92 11 ePKP PKPdf 08 44 12.1 -0.7
BOK AMS AMS 09 37 51.3
comp=Z,26μm,44.3s
NGP Nagpur 139.61 21 ePKP PKPdf 08 44 13.4 -0.7
NGP ex x 08 59 37.5
NGP ex x 09 59 22.8
comp=Z,67μm,21.1s
POO Poona 139.79 30 ePKP PKPdf 08 44 11.0 -3.6
comp=Z,25nm,1.0s
POO iPKS PKSdf 08 47 51.0 +0.1
DAV Davao City (W) 140.59 304 PFAKE 08 44 30.0 +14
DAV LR LR
comp=Z,99μm,22.0s
DAV Davao City (W) 140.59 304⇓iP PKPdf 08 44 25.5 +9.5
MSEY Mahe Island 140.60 77 ePKPdf PKPdf 08 44 17.0 +0.8
MSEY LR LR
comp=Z,46μm,19.0s
QIZ Qiongzhong 141.03 335 PKPbc PKPdf 08 44 23.3 +6.5
QIZ PP PP 08 47 18.3 +1.9
QIZ Qiongzhong 141.03 335 SS SS 09 05 34.5 -7.2
QIZ LR LR
comp=N,23μm,28.1s
QIZ LR LR
comp=E,33μm,26.6s
QIZ LR LR
comp=Z,137μm,27.2s
QIZ Qiongzhong 141.03 335 PKPbc PKPdf 08 44 23.3 +6.5
QIZ PP PP 08 47 18.3 +1.9
QIZ Qiongzhong 141.03 335 SS SS 09 05 34.5 -7.2
QIZ LR LR
comp=N,23μm,28.1s
QIZ LR LR
comp=E,33μm,26.6s
QIZ LR LR
comp=Z,137μm,27.2s
QIZ Qiongzhong 141.03 335 PKPbc PKPdf 08 44 23.3 +6.5
QIZ PP PP 08 47 18.3 +1.9
QIZ Qiongzhong 141.03 335 SS SS 09 05 34.5 -7.2
QIZ LR LR
comp=N,23μm,28.1s
QIZ LR LR
comp=E,33μm,26.6s
QIZ LR LR
comp=Z,137μm,27.2s
QIZ Qiongzhong 141.03 335 ePKPdf PKPdf 08 44 18.7 +2.0
QIZ LR LR
comp=Z,68μm,21.0s
LATR Latur 141.12 27 ePKP PKPdf 08 44 15.1 -1.8
WRAB Tennant Creek 141.41 259 ePKHKP PKPdf 08 44 11.0 -6.4
WRAB MLR MLR
comp=Z,133μm,22.0s
WRAB Tennant Creek 141.41 259 ePKPdf PKPdf 08 44 10.9 -6.4
WRAB LR LR
comp=Z,133μm,22.0s
WRA Warramunga Arr 141.43 259 PKPpre PKPpre 08 44 10.2
WRA SKP 08 47 43.2
WRA SKKPbc SKKPbc 08 55 54.3 -21
WRA Warramunga Arr 141.43 259 PKhKP PKPpre 08 44 10.2
comp=Z,7.7nm,0.7s,baz=84,slow=3.5,SNR=44
WRA SKP 08 47 43.2
comp=Z,42nm,1.2s,baz=81,slow=6.3,SNR=5.4
WRA SKKPbc SKKPbc 08 55 54.3 -21
comp=Z,8.8nm,1.1s,baz=276,slow=3.1,SNR=5.1
CTBH Cotabato--PC H 141.54 306⇑eP PKPdf 08 44 19.4 +1.6
AS31 Alice Springs 141.81 253 ePKPdf PKPdf 08 44 12.6 -5.5
ASAR Alice Springs 141.81 253 PKPpre PKPpre 08 44 10.3
ASAR SKP 08 47 44.2
ASAR Alice Springs 141.81 253 PKhKP PKPpre 08 44 10.3
comp=Z,12nm,0.7s,baz=106,slow=3.3,SNR=53
ASAR SKP 08 47 44.2
comp=Z,18nm,1.0s,baz=104,slow=4.4,SNR=4.0
PAF Port-aux-Franc 142.34 155 PFAKE 08 44 30.0 +12
PAF LR LR
comp=Z,72μm,20.0s
GOA Goa 142.36 33⇓ePKP PKPdf 08 44 19.1 0.0
GOA AMS AMS 09 38 15.9
comp=Z,28μm,38.7s
HYB Hyderabad 142.84 24 iPKP PKPdf 08 44 19.0 -1.1
HYB e 08 44 23.0

HYB				*e*			08 44 41.5		
HYB				*e*			08 53 21.0		
HYB				LR	LR		10 13 00.0		
	comp=Z,70nm,24.0s								
HYB	**Hyderabad**	**142.84**	**24**	*e*PKP	**PKPdf**		**08 44 18.6**	**-1.4**	
AAI	**Ambon**	**143.77**	**287**	P	PKPdf		08 44 28.9	+7.1	
	comp=Z,411nm,1.9s,comp=Z,15µm								
RER	**Riviere de l'E**	**143.85**	**103**	PFAKE			08 44 30.0	+8.2	
RER				LR	LR				
	comp=Z,46µm,21.0s								
CHTO	**Chiang Mai**	**144.24**	**352**	PFAKE			08 44 30.0	+7.5	
CHTO				LR	LR				
	comp=Z,75µm,20.0s								
MNI	**Manado**	**144.38**	**298**	P	**PKPdf**		**08 44 23.7**	**+0.9**	
CMAR	**Chiang Mai Arr**	**144.59**	**351**	PKP	**PKPdf**		**08 44 23.6**	**+0.5**	
CMAR				SKKPbc	SKKPbc		08 55 38.4	-23	
CMAR	**Chiang Mai Arr**	**144.59**	**351**	PKP	**PKPdf**		**08 44 23.6**	**+0.5**	
	comp=Z,90nm,0.8s,baz=338,slow=3.8,SNR=6.8								
CMAR				SKKPbc	SKKPbc		08 55 38.4	-23	
	comp=Z,1.8nm,0.5s,baz=212,slow=5.0,SNR=4.4								
MRIV	**Mauritius Mete**	**145.49**	**101**	*e*PKPbc	**PKPdf**		**08 44 24.5**	**-0.1**	
FORT	**Forrest**	**145.82**	**240**	*e*PKPbc	**PKPdf**		**08 44 24.9**	**+0.1**	
UBPT	**Khong Chiam**	**146.09**	**339**	P	**PKPbc**		**08 44 26.3**	**-0.2**	
	comp=Z,1µm,2.4s,comp=Z,47µm								
MYLDM	**Lahad Datu**	**147.20**	**310**	P	**PKPab**		**08 44 33.0**	**+1.5**	
	comp=Z,582nm,2.4s,comp=Z,51µmcomp=Z,8.5nm								
MRSI	**Marisa**	**147.34**	**299**	P	**PKPab**		**08 44 31.5**	**-0.6**	
	comp=Z,877nm,0.9s,comp=Z,32µmcomp=Z,4.8nm								
KKM	**Kota Kinabalu**	**148.24**	**314**	*e*PKPdf	**PKPdf**		**08 44 30.5**	**+1.0**	
KKM				*e*PKPbc	**PKPbc**		**08 44 33.4**	**+0.7**	
KKM				*e*PKPab	**PKPab**		**08 44 36.9**	**+1.1**	
KKM				LR	LR				
	comp=Z,56µm,21.0s								
KKM	**Kota Kinabalu**	**148.24**	**314**	P	**PKPbc**		**08 44 33.5**	**+0.7**	
	comp=Z,273nm,2.0s,comp=Z,30µmcomp=Z,4.1nm								
SKSI	**Soroako, Sulaw**	**149.40**	**295**	P	**PKPbc**		**08 44 36.9**	**+1.1**	
	comp=Z,580nm,1.1s,comp=Z,24µmcomp=Z,5.0nm								
CHBT	**CHBT**	**149.43**	**343**	P	**PKPbc**		**08 44 36.1**	**+0.5**	
	comp=Z,413nm,1.6s,comp=Z,26µm								
FITZ	**Fitzroy Crossi**	**149.58**	**263**	*e*PKPbc	**PKPbc**		**08 44 35.0**	**-0.9**	
FITZ	**Fitzroy Crossi**	**149.58**	**263**	PKPbc	**PKPbc**		**08 44 36.4**	**+0.5**	
	comp=Z,32nm,0.6s,baz=188,slow=1.3,SNR=45								
TRD	**Trivandrum**	**149.85**	**35**⇑	*ex*	x		08 44 19.5		
DGPR	**DIGLIPUR**	**150.19**	**2**	*e*PKP	**PKPdf**		**08 44 30.4**	**-2.0**	
DGPR				AMS	AMS		09 45 26.9		
	comp=Z,39µm,40.0s								
MMRI	**Maumere**	**151.09**	**283**	P	**PKPab**		**08 44 48.2**	**+0.8**	
MMRI	**Maumere**	**151.09**	**283**	P	**PKPab**		**08 44 44.7**	**-2.6**	
SPSI	**Sidrap Palu**	**151.46**	**294**	P	**PKPbc**		**08 44 38.0**	**-2.6**	
BKSI	**Bulukumba**	**151.76**	**291**	P	**PKPbc**		**08 44 44.2**	**+2.9**	
	comp=Z,333nm,0.9s,comp=Z,13µmcomp=Z,3.0nm								
BSSI	**Bau Bau, Buton**	**151.78**	**289**	P	**PKPab**		**08 44 50.4**	**+0.2**	
	comp=Z,733nm,1.1s,comp=Z,27µmcomp=Z,5.3nm								
KAPI	**Kappang**	**151.96**	**292**	*e*PKPdf	**PKPdf**		**08 44 36.5**	**+1.3**	
KAPI				PKPbc	**PKPbc**		**08 44 40.8**	**-0.9**	
KAPI				*e*PKPbc	**PKiKP**		**08 44 41.0**	**-1.0**	
KAPI				*e*PKPab	**PKPab**		**08 44 52.0**	**+1.0**	
KAPI				LR	LR				
	comp=Z,47µm,22.0s								
KAPI	**Kappang**	**151.96**	**292**	PKPbc	**PKPbc**		**08 44 40.8**	**-0.9**	
	comp=Z,85nm,1.2s,baz=214,slow=1.1,SNR=9.5								
PALK	**Pallekele**	**152.81**	**29**	*e*PKPdf	**PKPdf**		**08 44 37.0**	**+0.5**	
PALK				*e*PKPbc	**PKPbc**		**08 44 43.3**	**-0.4**	
PALK				*e*PKPab	**PKPab**		**08 44 54.7**	**+0.3**	
WSI	**Waingapu**	**153.23**	**282**	P	**PKPab**		**08 44 55.9**	**-0.4**	
	comp=Z,1µm,1.8s,comp=Z,51µm								
NWAO	**Narrogin (SRO)**	**153.42**	**228**	*e*PKPdf	**PKPdf**		**08 44 38.5**	**+1.7**	
NWAO				*e*PKPbc	**PKPbc**		**08 44 44.0**	**-0.4**	
NWAO				PKPbc	**PKPbc**		**08 44 45.4**	**+0.9**	
NWAO				*e*PKPab	**PKPab**		**08 44 55.8**	**-0.9**	
NWAO				LR	LR				
	comp=Z,84µm,20.0s								
NWAO	**Narrogin (SRO)**	**153.42**	**228**	PKPbc	**PKPbc**		**08 44 45.4**	**+0.9**	
	comp=Z,44nm,0.9s,baz=153,slow=3.3,SNR=9.2								
MBWA	**Marble Bar**	**155.07**	**256**	*e*PKPdf	**PKPdf**		**08 44 40.6**	**+1.2**	
MBWA				*e*PKPbc	PKPab		08 44 49.3	-15	
MBWA				LR	LR				
	comp=Z,101µm,21.0s								
KSM	**Kuching**	**155.57**	**316**	*e*PKPdf	**PKPdf**		**08 44 42.2**	**+1.9**	
KSM				LR	LR				
	comp=Z,50µm,21.0s								
CMBY	**CAMPBELL BAY**	**156.33**	**360**	*e*PKP	**PKPdf**		**08 44 40.4**	**-0.9**	
CMBY				AMB	AMB		09 49 09.4		
	comp=Z,81µm,28.7s								
KULM	**Kulim**	**157.01**	**342**	*e*PKPdf	**PKPdf**		**08 44 44.1**	**+1.9**	
KULM				LR	LR				
	comp=Z,65µm,22.0s								
DGAR	**Diego Garcia**	**157.19**	**68**	*e*PKIKP	**PKPdf**		**08 44 42.9**	**+0.5**	
DGAR				MLR	MLR				
	comp=Z,76µm,21.0s								
DGAR	**Diego Garcia**	**157.19**	**68**	*e*PKPdf	**PKPdf**		**08 44 42.9**	**+0.5**	
DGAR				*e*PKPab	**PKPab**		**08 45 12.9**	**-0.3**	
DGAR				LR	LR				
	comp=Z,76µm,21.0s								
IPM	**Ipoh**	**157.66**	**341**	*e*PKPdf	**PKPdf**		**08 44 43.4**	**+0.3**	
COCO	**West Island**	**174.53**	**327**	PFAKE			08 45 10.0	+14	
COCO				LR	LR				
	comp=Z,44µm,20.0s								

*SKO **28** 08:28:39.4,41°.32N×22°.74E,h16km,M0.9,ML1.2*
*CSEM **28** 08:28:40.1±0.2,41°.31N×22°.77E,h5km,ML1.7/4,Error ellipse: s-maj=4.1km s-min=2.2km az=20.0*
THE 28 08:28:40.3,41°.29N×22°.75E,h8km±2km,ML1.7/4,2C, Error ellipse: s-maj=2.5km s-min=0.5km az=333.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.14**	**284**	P	Pg	08 28 43.0	-0.3
VAY				S	Sg	08 28 45.5	+0.2
VAY	**Valandovo**	**0.14**	**284**	⇑*i*Pg	Pg	08 28 43.1	-0.2
VAY				*e*Lg	Lg	08 28 45.5	
	comp=E,110nm,0.3s						
VAY				*i* Sg	Sg	08 28 45.5	+0.2
VAY				*e*Lg	Lg	08 28 45.6	
	comp=N,137nm,0.3s						
VAY	**Valandovo**	**0.14**	**284**	P	Pg	08 28 43.0	-0.3
VAY	**Valandovo**	**0.14**	**284**	⇑*i*Pg	Pg	08 28 43.6	+0.3
VAY				S	Sg	08 28 45.5	+0.2
VAY				*i* Sg	Sg	08 28 46.0	+0.7
VAY				*e*Lg	Lg	08 28 46.1	
	comp=N,137nm,0.3s						
KNT	**Kendrikon**	**0.17**	**138**	P	Pg	08 28 44.2	+0.3
KNT				S	Sg	08 28 46.7	+0.4
KNT	**Kendrikon**	**0.17**	**138**	P	Pg	08 28 44.2	+0.3
KNT				S	Sg	08 28 46.7	+0.4
GRG	**Griva**	**0.42**	**218**	P	Pg	08 28 48.6	0.0
GRG				S	Sg	08 28 54.6	+0.4
GRG	**Griva**	**0.42**	**218**	P	Pg	08 28 48.6	0.0
GRG				S	Sg	08 28 54.6	+0.4
SOH	**Sokhos**	**0.66**	**135**	P	Pg	08 28 52.8	-0.2
SOH				S	Sg	08 29 01.9	+0.3
SOH	**Sokhos**	**0.66**	**135**	P	Pg	08 28 52.8	-0.2
SOH				S	Sg	08 29 01.9	+0.3
SRS	**Serrai**	**0.66**	**105**	P	Pg	08 28 52.7	-0.4
SRS	**Serrai**	**0.66**	**105**	P	Pg	08 28 52.7	-0.4
HORT	**Hortiatis**	**0.74**	**159**	P	Pg	08 28 54.5	-0.2
HORT				S	Sg	08 29 04.9	+0.5
HORT	**Hortiatis**	**0.74**	**159**	P	Pg	08 28 54.5	-0.2
HORT				S	Sg	08 29 04.9	+0.5

ATH 28 08:29:37.0,36°.42N×21°.67E,h17km±15km,MD2.8/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.48**	**7**	*e*PB	Pg	08 29 46.4	-0.3
PYL				*e*SB	Sb	08 29 53.5	-0.3
DYR	**Agios Nikonas**	**0.63**	**57**	*e*PN	Pg	08 29 49.3	-0.3
DYR	**Agios Nikonas**	**0.63**	**57**	*e*Pn	Pg	08 29 49.3	-0.3
ITM	**Ithomi**	**0.79**	**15**	*e*PN	Pg	08 29 52.6	+0.2
VLX	**Vlachokerasia**	**1.11**	**31**	*e*PN	Pb	08 29 57.8	0.0

*SKO **28** 08:35:50.7,41°.30N×22°.67E,h8km,M1.1,ML1.5*
*ATH **28** 08:35:51.6,41°.23N×22°.71E,h18km,MD2.9/3*
CSEM 28 08:35:50.1±0.2,41°.31N×22°.77E,h5km±3km,MD2.9,Error ellipse: s-maj=5.2km s-min=2.5km az=71.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.15**	**276**	*i* Pg	Pg	08 35 52.9	-0.3
VAY				*e*Lg	Lg	08 35 54.8	
	comp=E,250nm,0.4s						
VAY				*i* Sg	Sg	08 35 54.8	-0.4
VAY				*e*Lg	Lg	08 35 54.9	
	comp=N,463nm,0.3s						
VAY	**Valandovo**	**0.15**	**276**	*i* Sg	Sg	08 35 55.3	+0.1
VAY				*e*Lg	Lg	08 35 55.4	
	comp=N,463nm,0.3s						
GRG	**Griva**	**0.45**	**219**	*e*PB	Pg	08 35 58.7	-0.1
GRG				*e*SB	Sg	08 36 04.8	+0.1
GRG	**Griva**	**0.45**	**219**	*e*Pb	Pg	08 35 58.7	-0.1
GRG				*e*Sb	Sg	08 36 04.8	+0.1
SOH	**Sokhos**	**0.66**	**138**	*e*PN	Pb	08 36 04.5	+0.4
SOH				*e*SN	Sb	08 36 12.7	-0.9
SOH	**Sokhos**	**0.66**	**138**	*e*Pn	Pb	08 36 04.5	+0.4
NVR	**Nevrokopi**	**0.82**	**87**	*e*PN	Pn	08 36 08.4	0.0
NVR	**Nevrokopi**	**0.82**	**87**	*e*Pn	Pn	08 36 08.4	0.0

*PLV **28** 08:41:46.4±1.7,21°.64N×101°.77E,h11km±12km,MD3.0*
*BJI **28** 08:41:47.3,21°.41N×101°.77E,h15km,ML4.1/5*
ISC 28 08:41:48.2±1.6,21°.50N±0°.07×101°.83E±0°.05,h12km±13km, n10,σ0°.96/18,Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBV	**Dienbien**	**1.12**	**95**	*e*Pg	**Pg**	**08 42 09.9**	**+0.1**
DBV				*e*Sg	**Sn**	**08 42 25.9**	**+0.6**
TGV	**Tuan Giao**	**1.48**	**86**	*e*Pn	**Pn**	**08 42 13.9**	**-0.8**
TGV				*e*Pg	**Pg**	**08 42 15.9**	**-0.8**
TGV				*e*Sg	**Sg**	**08 42 36.2**	**+0.2**
SLVN	**Son La**	**1.94**	**94**	*e*Pn	**Pn**	**08 42 19.0**	**-2.1**
SLVN				*e*Pg	**Pb**	**08 42 24.0**	**+0.4**
SLVN				*e*Sg	**Sg**	**08 42 51.7**	**+1.0**
TTVN	**Tram Tau**	**2.35**	**90**	*e*Pn	**Pn**	**08 42 26.8**	**0.0**
TTVN				*e*Pg	**Pg**	**08 42 33.7**	**+0.3**
TTVN				*e*Sg	**Sg**	**08 43 04.4**	**+0.4**
MCVV	**Moc Chau**	**2.72**	**104**	*e*Pn	**Pn**	**08 42 31.1**	**-0.8**
MCVV				*e*Sg	**Sg**	**08 43 15.9**	**+0.2**
KMI	**Kunming**	**3.71**	**13**	Pg	**Pg**	**08 42 59.3**	**0.0**
KMI				Sg	Sg	08 43 52.0	+4.6
KMI				smax	smax		
	comp=N,130nm,1.1s						
KMI				smax	smax		
	comp=E,98nm,1.3s						
CMMT	**Chiang Mai**	**3.80**	**226**	P	**Sb**	**08 43 43.0**	**+1.6**
	comp=E,10µmcomp=E,504nm,1.4s						
CHTO	**Chiang Mai**	**3.80**	**226**	P	**Sb**	**08 43 42.4**	**+1.0**
	comp=E,12µmcomp=E,570nm,1.4s						
PBKT	**Sadao Pong**	**4.97**	**190**	P	**Pb**	**08 43 14.3**	**-0.9**
	comp=E,44nm,0.7s,comp=E,20µm						
GZH	**Guangzhou**	**10.78**	**79**	PKP	**Pn**	**08 44 22.0**	**-0.4**
GZH				PP		08 46 59.5	

*IDC **28** 08:43:28.0±3.6,40°.73N×19°.84E,h0km,mb3.8/2,*
mb1 3.9/5,mb1mx3.7/29,mbtmp3.8/5,ML3.6/3,Error ellipse: s-maj=47.8km s-min=17.4km az=27.0
*ATH **28** 08:43:30.3,41°.42N×20°.16E,h8km±2km,MD3.7/26*
*BEO **28** 08:43:32.6±0.5,41°.06N×20°.27E,h0km,ML3.7/1*
*TIR **28** 08:43:32.8±1.0,41°.21N×20°.28E,h38km±544km,ML3.8*
*SKO **28** 08:43:32.9,41°.22N×20°.29E,h5km,M3.3,ML3.8*
*PDG **28** 08:43:33.9±0.5,41°.23N×20°.28E,h5km,MD3.8/3,ML3.7/8, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
*CSEM **28** 08:43:34.2±0.1,41°.21N×20°.28E,h2km,ML3.8,Error ellipse: s-maj=3.5km s-min=2.0km az=58.0*
*THE **28** 08:43:34.6,41°.23N×20°.34E,h0km±2km,ML3.5/3,Error ellipse: s-maj=2.2km s-min=0.8km az=288.0*
ISC 28 08:43:34.1±1.0,41°.22N±0°.01×20°.30E±0°.02,h4km±8km, n205,σ1°.26/290,24C-9D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.35**	**291**	*e*PG	**Pg**	**08 43 40.2**	**-0.8**
TIR				*i* SG	**Sg**	**08 43 45.3**	**-0.3**
TIR	**Tirane**	**0.35**	**291**	P	**Pg**	**08 43 41.1**	**+0.1**
TIR	**Tirane**	**0.35**	**291**	P	**Pg**	**08 43 41.1**	**+0.1**
TIR				*e*Sg	**Sg**	**08 43 45.0**	**-0.6**
PHP	**Peshkopia**	**0.47**	**12**	*e*PG	**Pg**	**08 43 43.3**	**0.0**
PHP				*i* SG	**Sg**	**08 43 50.1**	**+0.6**
PHP	**Peshkopia**	**0.47**	**12**	P	**Pg**	**08 43 43.1**	**-0.2**
PHP				S	**Sb**	**08 43 50.9**	**-1.5**
PHP	**Peshkopia**	**0.47**	**12**	P	**Pg**	**08 43 43.1**	**-0.2**
PHP				S	**Sb**	**08 43 50.9**	**-1.5**
KBN	**Korca**	**0.70**	**148**	*e*PG	**Pg**	**08 43 46.8**	**-0.8**
KBN				*i* SG	**Sg**	**08 43 57.5**	**+0.8**
KBN	**Korca**	**0.70**	**148**	P	**Pg**	**08 43 47.1**	**-0.5**
KBN				S	**Sg**	**08 43 57.7**	**+1.0**
KBN	**Korca**	**0.70**	**148**	P	**Pg**	**08 43 47.1**	**-0.5**
KBN				S	**Sg**	**08 43 57.7**	**+1.0**
BIA	**Bitola**	**0.80**	**104**	P	**Pg**	**08 43 48.2**	**-1.2**
BIA				S	**Sb**	**08 44 00.8**	**-0.9**
BIA	**Bitola**	**0.80**	**104**	*i* Pg	**Pg**	**08 43 48.4**	**-1.0**
BIA				*i* Sg	**Sb**	**08 44 01.3**	**-0.4**
BIA	**Bitola**	**0.80**	**104**	*i* Pg	**Pg**	**08 43 48.4**	**-1.0**
BIA				S	**Sb**	**08 44 00.8**	**-0.9**
BIA				*i* Sg	**Sb**	**08 44 01.3**	**-0.4**
PUK	**Puka**	**0.88**	**340**	*e*PG	**Pg**	**08 43 50.6**	**-0.4**
PUK				*i* SG	**Sb**	**08 44 03.6**	**-0.4**
PUK	**Puka**	**0.88**	**340**	*e*Pg	**Pg**	**08 43 50.6**	**-0.4**
	SNR=9.0						
PUK				*i* Sg	**Sb**	**08 44 03.6**	**-0.4**
	SNR=9.0						
FNA	**Florina**	**0.92**	**118**	P	**Pg**	**08 43 51.1**	**-0.7**
FNA				S	**Sb**	**08 44 05.8**	**+0.5**
FNA	**Florina**	**0.92**	**118**	*e*PG	**Pg**	**08 43 51.1**	**-0.7**
FNA				*e*SB	**Sn**	**08 44 06.8**	**-0.8**
FNA	**Florina**	**0.92**	**118**	P	**Pg**	**08 43 51.1**	**-0.7**
FNA				S	**Sb**	**08 44 05.8**	**+0.5**
FNA				*e*Sb	**Sn**	**08 44 06.8**	**-0.8**
NEST	**Nestorio**	**0.98**	**145**	P	**Pg**	**08 43 51.9**	**-1.1**
NEST				S	**Sb**	**08 44 06.9**	**-0.3**
NEST	**Nestorio**	**0.98**	**145**	P	**Pg**	**08 43 51.9**	**-1.1**
NEST				S	**Sb**	**08 44 06.9**	**-0.3**
ULC	**Ulcinj**	**1.09**	**313**	⇑*i*Pg	**Pg**	**08 43 52.9**	**-2.1**
ULC				*e*Sg	**Sb**	**08 44 11.0**	**+1.0**
ULC	**Ulcinj**	**1.09**	**313**	⇑*i*Pg	**Pg**	**08 43 52.9**	**-2.1**
ULC				*e*Sg	**Sb**	**08 44 11.0**	**+1.0**
SKO	**Skopje**	**1.13**	**48**	P	**Pn**	**08 43 56.5**	**-0.3**
SKO				S	**Sn**	**08 44 13.1**	**+0.3**
SKO	**Skopje**	**1.13**	**48**	*e*Pg	**Pg**	**08 43 55.1**	**-0.8**
SKO				*e*Sg	**Sn**	**08 44 12.8**	**+0.1**
SKO				*e*Lg	Lg	08 44 15.4	
	comp=N,3µm,0.5s						
SKO				*e*Lg	Lg	08 44 15.5	
	comp=E,2µm,0.8s						
SKO	**Skopje**	**1.13**	**48**	*e*Pg	**Pg**	**08 43 55.8**	**-0.1**
SKO				*e*Sg	**Sn**	**08 44 12.9**	**+0.1**
SKO	**Skopje**	**1.13**	**48**	*e*Pg	**Pg**	**08 43 55.8**	**-0.1**
SKO	**Skopje**	**1.13**	**48**	P	**Pn**	**08 43 56.5**	**-0.3**
SKO				*e*Sg	**Sn**	**08 44 12.9**	**+0.1**
SKO				*e*Lg	Lg	08 44 15.9	
	comp=E,2µm,0.8s						
BCI	**Bajram Curri**	**1.16**	**351**	*e*PG	**Pg**	**08 43 55.0**	**-1.3**
BCI				*i* SG	**Sn**	**08 44 13.5**	**+0.1**
PVY	**Plav**	**1.40**	**349**	⇑*i*Pg	**Pn**	**08 43 59.5**	**-1.0**
PVY				*e*Sg	**Sn**	**08 44 21.6**	**+2.2**
PVY	**Plav**	**1.40**	**349**	⇑*i*Pg	**Pn**	**08 43 59.5**	**-1.0**
PVY				*e*Sg	**Sn**	**08 44 21.6**	**+2.2**
PDG	**Podgorica**	**1.44**	**327**	*e*Pn	**Pg**	**08 44 00.4**	**-0.6**
PDG				*e*Sg	**Sg**	**08 44 22.6**	**+2.2**
PDG	**Podgorica**	**1.44**	**327**	*e*Pn	**Pn**	**08 44 00.4**	**-0.6**
PDG				*e*Sg	**Sg**	**08 44 22.6**	**+2.2**
TTG	**Podgorica**	**1.44**	**327**	⇑*i*Pg	**Pn**	**08 44 00.3**	**-0.7**
TTG				*e*Sg	**Sg**	**08 44 23.1**	**+2.7**
KZN	**Kozani**	**1.44**	**129**	*e*PG	**Pn**	**08 44 00.4**	**-0.7**
KZN				*e*SB	**Sn**	**08 44 24.2**	**+3.7**
KZN	**Kozani**	**1.44**	**129**	*e*Pg	**Pn**	**08 44 00.4**	**-0.7**
KZN				*e*Sb	**Sn**	**08 44 24.2**	**+3.7**
BUM	**Brajici-Budva**	**1.51**	**316**	⇑*i*Pg	**Pn**	**08 44 01.4**	**-0.6**
BUM				*e*Sg	**Sg**	**08 44 24.9**	**+2.3**
BUM	**Brajici-Budva**	**1.51**	**316**	⇑*i*Pg	**Pn**	**08 44 01.4**	**-0.6**
BUM				*e*Sg	**Sg**	**08 44 24.9**	**+2.3**
KEK	**Kerkira**	**1.56**	**195**	P	**Pb**	**08 44 03.6**	**+0.1**
KEK				S	**Sg**	**08 44 25.6**	**+1.5**
KEK	**Kerkira**	**1.56**	**195**	*e*PN	**Pn**	**08 44 02.8**	**+0.2**
KEK				*e*SN	**Sg**	**08 44 26.7**	**+2.6**
KEK	**Kerkira**	**1.56**	**195**	*e*Pn	**Pn**	**08 44 02.8**	**+0.2**
KEK	**Kerkira**	**1.56**	**195**	P	**Pb**	**08 44 03.6**	**+0.1**
KEK				S	**Sg**	**08 44 25.6**	**+1.5**
KEK				*e*Sn	**Sg**	**08 44 26.7**	**+2.6**
GRG	**Griva**	**1.61**	**99**	P	**Pn**	**08 44 03.6**	**+0.3**
GRG				S	**Sg**	**08 44 25.3**	**-0.5**
GRG	**Griva**	**1.61**	**99**	*e*PN	**Pn**	**08 44 03.6**	**+0.3**
GRG				*e*SN	**Sg**	**08 44 27.5**	**+1.7**
GRG	**Griva**	**1.61**	**99**	P	**Pn**	**08 44 03.6**	**+0.3**
GRG				S	**Sg**	**08 44 25.3**	**-0.5**
GRG				*e*Sn	**Sg**	**08 44 27.5**	**+1.7**
JAN	**Janina**	**1.62**	**165**	P	**Pn**	**08 44 04.0**	**+0.5**
JAN	**Janina**	**1.62**	**165**	*e*PG	**Pg**	**08 44 05.1**	**-0.1**
JAN				*e*SN	**Sg**	**08 44 28.3**	**+2.2**
JAN	**Janina**	**1.62**	**165**	P	**Pn**	**08 44 04.0**	**+0.5**
JAN	**Janina**	**1.62**	**165**	*e*Pg	**Pg**	**08 44 05.1**	**-0.1**
JAN				*e*Sn	**Sg**	**08 44 28.3**	**+2.2**
BEY	**Berane**	**1.68**	**350**	⇑*i*Pn	**Pn**	**08 44 04.5**	**+0.2**
BEY				*e*Sn	**Sg**	**08 44 29.9**	**+1.9**
IVA	**Berane**	**1.68**	**350**	⇑*i*Pn	**Pn**	**08 44 04.5**	**+0.2**
IVA				*e*Sn	**Sg**	**08 44 29.9**	**+1.9**
IGT	**Igoumenitsa**	**1.69**	**179**	P	**Pn**	**08 44 04.6**	**+0.2**
IGT	**Igoumenitsa**	**1.69**	**179**	P	**Pn**	**08 44 04.6**	**+0.2**
VAY	**Valandovo**	**1.71**	**86**	P	**Pn**	**08 44 04.3**	**-0.4**
VAY				S	**Sb**	**08 44 27.4**	**-0.6**
VAY	**Valandovo**	**1.71**	**86**	*e*Pn	**Pn**	**08 44 04.3**	**-0.4**
VAY				*e*Sg	**Sg**	**08 44 30.8**	**+1.7**
VAY				*e*Lg	Lg	08 44 32.0	
	comp=N,672nm,0.7s						
VAY				*e*Lg	Lg	08 44 33.5	
	comp=E,451nm,0.7s						
VAY	**Valandovo**	**1.71**	**86**	*e*Pn	**Pn**	**08 44 04.4**	**-0.3**
VAY				*e*Sg	**Sb**	**08 44 28.1**	**+0.1**
VAY	**Valandovo**	**1.71**	**86**	*e*Pn	**Pn**	**08 44 04.4**	**-0.3**
VAY				S	**Sb**	**08 44 27.4**	**-0.6**
VAY				*e*Sg	**Sb**	**08 44 28.1**	**+0.1**
VAY				*e*Lg	Lg	08 44 33.9	
	comp=E,451nm,0.7s						
HCY	**Herceg Novi**	**1.82**	**313**	⇓*i*Pn	**Pn**	**08 44 06.9**	**+0.6**
HCY				*e*Sn	**Sg**	**08 44 33.2**	**+0.4**
HCY	**Herceg Novi**	**1.82**	**313**	⇓*i*Pn	**Pn**	**08 44 06.9**	**+0.6**
HCY				*e*Sn	**Sg**	**08 44 33.2**	**+0.4**
BARS	**Barje**	**1.95**	**35**	*e*Pn	**Pn**	**08 44 08.5**	**+0.5**
SJES	**Sjenica**	**2.05**	**353**	⇑*i*Pn	**Pb**	**08 44 11.7**	**-0.3**
SJES				*e*Sg	**Sg**	**08 44 41.9**	**+1.8**
SELS	**Selova**	**2.09**	**17**	*e*Pn	**Pn**	**08 44 09.8**	**-0.1**
SELS				*e*Sg	**Sg**	**08 44 44.0**	**+2.9**
THL	**Klokotos Trika**	**2.11**	**141**	P	**Pn**	**08 44 10.4**	**+0.2**
THL	**Klokotos Trika**	**2.11**	**141**	*e*PN	**Pb**	**08 44 12.1**	**-0.8**
THL	**Klokotos Trika**	**2.11**	**141**	P	**Pn**	**08 44 10.4**	**+0.2**
THL	**Klokotos Trika**	**2.11**	**141**	*e*Pn	**Pb**	**08 44 12.1**	**-0.8**
BRY	**Bratogost**	**2.13**	**323**	*e*Pn	**Pn**	**08 44 11.2**	**+0.6**
BRY				*e*Sn	**Sb**	**08 44 40.5**	**+0.3**
BRY	**Bratogost**	**2.13**	**323**	*e*Pn	**Pn**	**08 44 11.2**	**+0.6**
BRY				*e*Sn	**Sb**	**08 44 40.5**	**+0.3**
KKB	**Krupnik**	**2.18**	**72**	*e*P	**Pn**	**08 44 12.2**	**+1.0**
KKB	**Krupnik**	**2.18**	**72**	*e*P	**Pn**	**08 44 12.2**	**+1.0**
UPM	**Unac-Piva**	**2.24**	**333**	*e*Pn	**Pn**	**08 44 13.5**	**+1.4**
UPM				*e*Sn	**Sb**	**08 44 43.1**	**-0.2**
UPM	**Unac-Piva**	**2.24**	**333**	*e*Pn	**Pn**	**08 44 13.5**	**+1.4**
UPM				*e*Sn	**Sb**	**08 44 43.1**	**-0.2**
SOH	**Sokhos**	**2.34**	**99**	*e*PN	**Pn**	**08 44 13.6**	**+0.2**
SOH	**Sokhos**	**2.34**	**99**	*e*Pn	**Pn**	**08 44 13.6**	**+0.2**
LKD2	**Lefkada island**	**2.45**	**174**	P	**Pn**	**08 44 15.3**	**+0.5**
LKD2	**Lefkada island**	**2.45**	**174**	*e*PN	**Pn**	**08 44 15.4**	**+0.6**
LKD2	**Lefkada island**	**2.45**	**174**	P	**Pn**	**08 44 15.3**	**+

BZS	**Buzias**	**4.50**	**12**	⇓*iP*	**Pn**	**08 44 42.9**	**-0.1**
BZS				*e*Sn	**Sn**	**08 45 36.5**	**+0.8**
DYR	**Agios Nikonas**	**4.73**	**160**	*e*PN	**Pn**	**08 44 47.5**	**+1.3**
DYR	**Agios Nikonas**	**4.73**	**160**	*e*Pn	**Pn**	**08 44 47.5**	**+1.3**
LOT	**Lotru**	**4.92**	**30**	⇑*iP*	**Pn**	**08 44 49.4**	**+0.5**
LOT	**Lotru**	**4.92**	**30**	⇑*iP*	**Pn**	**08 44 49.4**	**+0.5**
VLI	**Veliai**	**4.94**	**155**	*e*PN	**Pn**	**08 44 46.7**	**-2.4**
VLI	**Veliai**	**4.94**	**155**	*e*Pn	**Pn**	**08 44 46.7**	**-2.4**
NVLJ	**Novalja**	**5.20**	**312**	*i* Pn	**Pn**	**08 44 52.1**	**-0.5**
NVLJ				Sn	**Sn**	**08 45 52.2**	**-0.9**
NVLJ	**Novalja**	**5.20**	**312**	*i* Pn	**Pn**	**08 44 52.1**	**-0.5**
NVLJ				Sn	**Sn**	**08 45 52.1**	**-0.9**
ARR	**Arges**	**5.21**	**36**	⇑*iP*	**Pn**	**08 44 53.5**	**+0.6**
ARR	**Arges**	**5.21**	**36**	⇑*iP*	**Pn**	**08 44 53.5**	**+0.6**
KYTH	**Kithira**	**5.38**	**156**	*e*PN	**Pn**	**08 44 53.5**	**-1.6**
KYTH	**Kithira**	**5.38**	**156**	*e*Pn	**Pn**	**08 44 53.5**	**-1.6**
VOIR		**5.45**	**38**	⇑*iP*	**Pn**	**08 44 57.7**	**+1.5**
VOIR		**5.45**	**38**	⇑*iP*	**Pn**	**08 44 57.7**	**+1.5**
BOJS	**Bojanci**	**5.64**	**321**	*i* Pn	**Pn**	**08 44 58.7**	**-0.1**
BOJS				*i* Sn	**Sn**	**08 46 02.5**	**-1.5**
BOJS	**Bojanci**	**5.64**	**321**	*i* Pn	**Pn**	**08 44 58.7**	**-0.1**
BOJS				*i* Sn	**Sn**	**08 46 02.5**	**-1.5**
CRES	**Cresnjev**	**5.79**	**324**	*i* Pn	**Pn**	**08 45 00.9**	**+0.1**
CRES				*i* Sn	**Sn**	**08 46 06.3**	**-1.4**
CRES	**Cresnjev**	**5.79**	**324**	*i* Pn	**Pn**	**08 45 00.9**	**+0.1**
CRES				*i* Sn	**Sn**	**08 46 06.3**	**-1.4**
DRGR		**5.83**	**16**	*e*Pn	**Pn**	**08 45 02.3**	**+0.9**
DRGR		**5.83**	**16**	*e*Pn	**Pn**	**08 45 02.3**	**+0.9**
MLR	**Muntele Rosu**	**5.92**	**42**	⇓*iP*	**Pn**	**08 45 04.2**	**+1.5**
MLR	**Muntele Rosu**	**5.92**	**42**	Pn	Pn	08 45 06.6	+3.8
	comp=E,0.6nm,0.3s,baz=185,slow=4.7,SNR=13						
MLR	**Muntele Rosu**	**5.92**	**42**	⇓*iP*	**Pn**	**08 45 04.2**	**+1.5**
VISS	**Visnje**	**6.06**	**321**	*i* Pn	**Pn**	**08 45 04.5**	**0.0**
VISS				*i* Sn	**Sn**	**08 46 13.1**	**-1.2**
VISS	**Visnje**	**6.06**	**321**	*i* Pn	**Pn**	**08 45 04.5**	**0.0**
VISS				*i* Sn	**Sn**	**08 46 13.1**	**-1.2**
VRI	**Vrincioaia**	**6.58**	**43**	⇓*iP*	**Pn**	**08 45 12.4**	**+0.8**
VRI	**Vrincioaia**	**6.58**	**43**	⇓*iP*	**Pn**	**08 45 12.4**	**+0.8**
VOY	**Vojsko**	**6.69**	**318**	*e*Pn	**Pn**	**08 45 12.8**	**-0.4**
VOY				*e*Sn	**Sn**	**08 46 28.6**	**-1.2**
VOY	**Vojsko**	**6.69**	**318**	*e*Pn	**Pn**	**08 45 12.8**	**-0.4**
VOY				*e*Sn	**Sn**	**08 46 28.6**	**-1.2**
PSZ	**Piszkesteto**	**6.70**	**358**	⇑*iP*	**Pn**	**08 45 15.2**	**+1.9**
PSZ	**Piszkesteto**	**6.70**	**358**	⇑*iP*	**Pn**	**08 45 15.2**	**+1.9**
OBKA	**Obir**	**6.72**	**324**	⇑*iP*	**Pn**	**08 45 13.7**	**0.0**
OBKA				⇑*i*Sn	**Sn**	**08 46 32.5**	**+1.8**
OBKA	**Obir**	**6.72**	**324**	Pn	**Pn**	**08 45 13.7**	**0.0**
TRPA	**Tarpa**	**7.09**	**12**	⇑*iP*	**Pn**	**08 45 20.2**	**+1.7**
TRPA	**Tarpa**	**7.09**	**12**	⇑*iP*	**Pn**	**08 45 20.2**	**+1.7**
KECS	**Kecovo**	**7.26**	**1**	*e*PN	**Pn**	**08 45 23.3**	**+2.3**
KECS				*e*		08 46 48.6	
KECS				*e*		08 55 37.7	
KECS	**Kecovo**	**7.26**	**1**	*e*Pn	**Pn**	**08 45 23.3**	**+2.3**
VYHS	**Vyhne**	**7.34**	**352**	*e*PN	Pn	08 45 25.4	+3.3
VYHS				*e*		08 55 39.4	
VYHS				*e*		09 03 38.3	
CRVS	**Cervenica-Dubn**	**7.72**	**6**	*e*PN	**Pn**	**08 45 28.1**	**+0.8**
CRVS				*e*		08 55 36.7	
CRVS				*e*		09 03 33.5	
CRVS	**Cervenica-Dubn**	**7.72**	**6**	*e*Pn	**Pn**	**08 45 28.1**	**+0.8**
KOLS	**Kolonicke sedl**	**7.83**	**10**	*e*PN	Pn	08 45 32.2	+3.4
KOLS				*e*		08 55 36.1	
KOLS				*e*		09 03 29.8	
STHS	**Stebnicka Huta**	**8.22**	**4**	*e*PN	Pn	08 45 38.0	+3.9
STHS				*e*		08 55 49.0	
STHS				*e*		09 03 41.5	
GERES	**GERESS Array B**	**8.94**	**331**	Pn	**Pn**	**08 45 42.8**	**-1.2**
	comp=E,0.4nm,0.3s,baz=155,slow=14,SNR=3.8						
GERES				Sn	**Sn**	**08 47 26.9**	**+1.8**
	comp=E,0.2nm,0.3s,baz=150,slow=26,SNR=2.2						
DAVOX	**Davos/Dischmat**	**9.34**	**310**	Pn	**Pn**	**08 45 49.8**	**+0.2**
	comp=E,1.0nm,0.3s,baz=113,slow=17,SNR=4.0						
HFS	**Hagfors**	**19.37**	**350**	P	**P**	**08 48 00.5**	**-0.1**
	comp=E,0.3nm,0.3s,baz=169,slow=10,SNR=6.4						
FINES	**FINESS Array B**	**20.55**	**8**	P	**P**	**08 48 13.2**	**-0.2**
	comp=E,6.1nm,0.8s,baz=174,slow=8.3,SNR=4.0						
NB2	**NORSAR Subarra**	**20.61**	**347**	P	**P**	**08 48 12.9**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=158,slow=11						
NB2	**NORSAR Subarra**	**20.61**	**347**	P	**P**	**08 48 12.9**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=158,slow=11,SNR=2.7						
MKAR	**Makanchi Array**	**43.91**	**61**	P	**P**	**08 51 41.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=276,slow=7.4,SNR=6.2						

IDC 28 08:48:29.9±3.7, 15°.55N×86°.75W, h0km, mb3.7/6, mb1 4.2/7, mb1mx3.9/24, mbtmp3.8/7, ML4.6/1, Error ellipse: s-maj=77.9km s-min=58.1km az=74.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**4.88**	**343**	Pn	Pn	08 49 44.9	+0.3
	25nm,0.3s,baz=251,slow=23,SNR=11						
TEIG				Sn	Sn	08 50 43.2	+1.4
	4.7nm,0.3s,baz=280,slow=22,SNR=2.2						
TXAR	**Lajitas Array**	**20.77**	**314**	P	P	08 53 11.9	-0.8
	3.2nm,0.7s,baz=128,slow=11,SNR=13						
ANMO	**Albuquerque**	**26.19**	**321**	P	P	08 54 06.5	-0.2
	1.8nm,1.0s,baz=147,slow=12,SNR=2.2						
PDAR	**Pinedale Array**	**33.44**	**329**	P	P	08 55 11.1	+0.3
	0.6nm,0.7s,baz=112,slow=9.8,SNR=3.2						
NVAR	**Mina Array Bea**	**35.91**	**316**	P	P	08 55 32.3	0.0
	0.6nm,0.8s,baz=123,slow=6.6,SNR=2.8						
YKA	**Yellowknife Ar**	**50.84**	**344**	P	P	08 57 31.6	-0.4
	1.0nm,0.8s,baz=140,slow=7.5,SNR=7.2						
ILAR	**Eielson Array**	**63.49**	**335**	P	P	08 59 01.8	+0.2
	0.6nm,0.9s,baz=107,slow=4.8,SNR=3.2						

*HLW **28** 08:48:26.8, 26°.96N×38°.68E, h9km±19km, Md0.0, Ml3.3*
*CSEM **28** 08:48:56.5±0.5, 27°.43N×35°.90E, h2km, mb4.1/3, Error ellipse: s-maj=10.6km s-min=6.3km az=132.0*
ISC 28 08:48:39.2±4.1, 27°.4N±0°.1×37°.5E±0°.2, h10km, n17, σ1§90/24, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIL	**Elat**	**3.22**	**316**	Pn	**Pn**	**08 49 29.1**	**-0.7**
EIL				Sn	**Sn**	**08 50 06.9**	**-1.3**
HKAT	**Jabal Katrina**	**3.32**	**291**	P	**Pn**	**08 49 31.2**	**-0.2**
MBRI	**Mt Berech**	**3.33**	**317**	Pn	**Pn**	**08 49 31.3**	**-0.1**
MBRI				Sn	**Sn**	**08 50 09.9**	**-1.1**
HRFI	**Mount Harif**	**3.44**	**321**	Pn	**Pn**	**08 49 33.7**	**+0.9**
HRFI				Sn	**Sn**	**08 50 14.7**	**+1.1**
HHRG	**Al Ghardaqah**	**3.51**	**269**	P	**Pn**	**08 49 33.3**	**-0.5**
	baz=275						
HHRG				AMP		08 50 00.0	
	comp=E,20μm,0.1s,logA/T=5.2,baz=275						
HHRG	**Al Ghardaqah**	**3.51**	**269**	P	**Pn**	**08 49 33.3**	**-0.5**
KRMI	**Paran Flat**	**3.68**	**319**	Pn	**Pn**	**08 49 34.9**	**-1.2**
KRMI				Sn	**Sn**	**08 50 19.2**	**-0.3**
PRNI	**Paran**	**3.70**	**324**	Pn	**Pn**	**08 49 36.5**	**+0.1**
PRNI				Sn	**Sn**	**08 50 23.0**	**+2.9**
ZFRI	**Zfri**	**3.78**	**328**	Sn	**Sn**	**08 50 26.4**	**+4.4**
HNKL	**Nakhl**	**4.02**	**310**	P	**Pn**	**08 49 40.5**	**-0.3**
	baz=307						
HNKL				AMP		08 50 00.0	
	comp=E,210μm,0.4s,logA/T=5.7,baz=307						
HNKL				S	**Sn**	**08 50 31.7**	**+3.7**
	baz=307						
HNKL	**Nakhl**	**4.02**	**310**	P	**Pn**	**08 49 40.5**	**-0.3**
HNKL				S	**Sn**	**08 50 31.7**	**+3.7**
GRB	**Gharib**	**4.28**	**283**	P	**Pn**	**08 49 44.4**	**-0.1**
	baz=286						
GRB	**Gharib**	**4.28**	**283**	P	**Pn**	**08 49 44.4**	**-0.1**
MZDA	**Masada**	**4.36**	**335**	Sn	**Sb**	**08 50 44.7**	**-3.7**
RTMI	**Retamim**	**4.43**	**327**	Pn	**Pn**	**08 49 46.8**	**+0.4**
ZAF		**4.77**	**295**	P	**Pn**	**08 49 51.0**	**-0.2**
	baz=295						
ZAF		**4.77**	**295**	P	**Pn**	**08 49 51.0**	**-0.2**

IDC 28 08:51:17.9±7.4, 17°.62S×173°.31W, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.8/21, mbtmp3.8/4, ML2.4/1, Error ellipse: s-maj=249.9km s-min=32.7km az=128.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.97**	**22**	Pn	Pn	08 52 20.1	-0.1
	15nm,0.3s,baz=193,slow=3.2,SNR=34						
AFI				Sn	Sn	08 52 55.6	-12
	18nm,0.3s,baz=68,slow=22,SNR=11						
STKA	**Stephens Creek**	**43.04**	**242**	P	P	08 59 19.2	-0.5
	5.4nm,1.1s,baz=117,slow=9.0,SNR=2.4						
WRA	**Warramunga Arr**	**49.46**	**259**	P	P	09 00 10.4	0.0
	0.6nm,1.0s,baz=96,slow=7.5,SNR=2.4						
ASAR	**Alice Springs**	**49.54**	**254**	P	P	09 00 11.1	+0.1
	0.3nm,0.5s,baz=86,slow=8.6,SNR=6.6						

*IDC **28** 08:55:15.5±2.9, 27°.62N×138°.57E, h428km±42km, mb3.1/6, mb1 3.3/8, mb1mx3.1/27, mbtmp3.1/8, Error ellipse: s-maj=49.2km s-min=15.2km az=75.0*
*ISCJB **28** 08:55:17.2±0.6, 27°.96N±0°.04×139°.4E±0°.1, h507km, mb3.3/6, Error ellipse: s-maj=14.0km s-min=5.8km az=175.7*
*JMA **28** 08:55:17.6±0.2, 28°.09N×140°.12E, h542km, M4.3*
ISC 28 08:55:18.5±0.9, 28°.05N±0°.08×139°.4E±0°.2, h507km, n22, σ1§63/26, mb3.4/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.63**	**111**	P	**P**	**08 56 27.4**	**-0.3**
CBIJ				*e*S	**S**	**08 57 21.5**	**-2.4**
JHHJ	**Haha-jima-NKT**	**2.83**	**119**	*e*S	**S**	**08 57 25.6**	**-0.6**
BSO1	**Boso 1**	**6.72**	**11**	*e*S	**S**	**08 58 27.5**	**+1.8**
JIE	**Ise**	**6.74**	**340**	P	P	08 57 05.9	+3.8
BSO3	**Boso 3**	**6.80**	**8**	*e*S	**S**	**08 58 28.2**	**+0.5**
BSO4	**Boso 4**	**6.96**	**6**	*e*S	**S**	**08 58 32.0**	**+1.0**
JOD2	**Odawara 2**	**7.20**	**358**	P	**P**	**08 57 08.8**	**+2.1**
JHU	**Hanno**	**7.78**	**359**	P	**P**	**08 57 12.6**	**0.0**
JHU				*e*S	**S**	**08 58 44.8**	**-1.5**
JRY	**Ryogami san**	**7.96**	**357**	P	**P**	**08 57 15.3**	**+0.8**
JRY				*e*S	**S**	**08 58 49.0**	**-0.7**
JYT	**Yasato**	**8.18**	**4**	P	**P**	**08 57 17.2**	**+0.5**
JYT				*e*S	**S**	**08 58 52.4**	**-1.4**
JAG	**Ashikaga**	**8.35**	**0**	P	**P**	**08 57 18.4**	**-0.1**
JAG				*e*S	**S**	**08 58 52.0**	**-5.1**
MJAR	**Matsushiro Arr**	**8.53**	**353**	P	**P**	**08 57 20.9**	**+0.5**
	1.5nm,0.3s,baz=280,slow=28,SNR=12						
MAT	**Matsushiro**	**8.53**	**353**	P	**P**	**08 57 21.1**	**+0.7**
JHO	**Hitachi**	**8.59**	**6**	P	**P**	**08 57 21.8**	**+0.8**
JHO				*e*S	**S**	**08 58 59.3**	**-2.4**
JMK	**Ichinoseki**	**10.98**	**7**	P	**P**	**08 57 47.3**	**+1.3**
USRK	**Ussuriysk Arra**	**17.18**	**342**	P	**P**	**08 58 52.0**	**+1.3**
	0.6nm,0.3s,baz=149,slow=9.9,SNR=12						
FITZ	**Fitzroy Crossi**	**47.78**	**198**	P	**P**	**09 03 09.0**	**-0.4**
	0.9nm,0.5s,baz=348,slow=8.9,SNR=5.7						
WRA	**Warramunga Arr**	**47.96**	**186**	P	**P**	**09 03 09.7**	**-1.0**
	1.4nm,0.5s,baz=4.3,slow=7.7,SNR=24						
MKAR	**Makanchi Array**	**47.98**	**309**	P	**P**	**09 03 11.1**	**+0.5**
	0.6nm,0.9s,baz=100,slow=7.9,SNR=2.0						
KURBB	**Kurchatov Arra**	**50.62**	**314**	P	**P**	**09 03 30.9**	**+0.9**
	0.2nm,0.4s,baz=91,slow=8.0,SNR=4.4						
ASAR	**Alice Springs**	**51.69**	**186**	P	**P**	**09 03 36.8**	**-1.4**
	0.7nm,0.5s,baz=18,slow=12,SNR=19						
TXAR	**Lajitas Array**	**96.97**	**52**	P	P	09 08 04.8	+9.0
	0.6nm,0.7s,baz=286,slow=6.5,SNR=3.1						

IDC 28 08:57:21.8±5.3, 16°.08N×86°.80W, h0km, mb3.7/4, mb1 4.3/6, mb1mx3.9/24, mbtmp3.9/6, ML4.0/2, Error ellipse: s-maj=88.8km s-min=65.6km az=157.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**4.36**	**341**	Pn	Pn	08 58 28.1	-1.2
	40nm,0.3s,baz=303,slow=1.5,SNR=13						
TEIG				Sn	Sn	08 59 11.9	-8.9
	21nm,0.3s,baz=259,slow=23,SNR=7.1						
TKL	**Tuckaleechee C**	**19.69**	**7**	P	Pn	09 01 54.3	+0.4
	0.1nm,0.3s,baz=170,slow=17,SNR=3.0						
TXAR	**Lajitas Array**	**20.37**	**313**	P	Pn	09 02 02.0	-0.2
	2.2nm,0.8s,baz=133,slow=13,SNR=11						
PDAR	**Pinedale Array**	**32.96**	**328**	P	P	09 03 56.8	-1.7
	1.1nm,0.7s,baz=127,slow=9.5,SNR=4.0						
YKA	**Yellowknife Ar**	**50.31**	**344**	P	P	09 06 19.4	-0.5
	0.9nm,0.7s,baz=138,slow=7.7,SNR=12						
ILAR	**Eielson Array**	**62.99**	**335**	P	P	09 07 50.4	+0.2
	1.1nm,1.0s,baz=116,slow=5.9,SNR=6.4						

*IDC **28** 09:02:01.8±1.2, 21°.38N×119°.60E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, MS3.2/1, Ms1 3.2/1, ms1mx3.2/28, Error ellipse: s-maj=79.2km s-min=25.2km az=67.0*
*TAP **28** 09:02:05.3, 21°.62N×119°.50E, h42km±2km, ML3.8, D*
*ISCJB **28** 09:02:06.2±0.6, 21°.57N±0°.03×119°.54E±0°.04, h50km, mb3.5/4, MS3.2/1, Error ellipse: s-maj=5.7km s-min=4.6km az=26.3*
ISC 28 09:02:08.1±1.1, 21°.58N±0°.07×119°.58E±0°.07, h50km, n44, σ0§93/77, mb3.5/4, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWP	**Hsiaoliuchiu**	**1.06**	**43**	*e*P	**Pn**	**09 02 25.3**	**-1.3**
	baz=39						
TWP				*e*S	**Sn**	**09 02 40.1**	**-0.2**
	baz=39						
HEN	**Hengchun**	**1.16**	**68**	P	**Pn**	**09 02 26.9**	**-1.1**
	baz=71						
HEN				*e*S	**Sn**	**09 02 43.9**	**+1.2**
	baz=71						
TWK1	**Hengchun**	**1.20**	**72**	P	Pn	**09 02 27.4**	**-1.1**
	baz=75						
TWK1				S	**Sn**	**09 02 44.1**	**+0.4**
	baz=75						
SCZT	**Fangliau**	**1.25**	**51**	⇑*iP*	**Pn**	**09 02 28.0**	**-1.2**
	baz=54						
SCZT				S	**Sn**	**09 02 44.4**	**-0.5**
	baz=54						
TSEB	**Hengchuen, Pin**	**1.27**	**75**	P	**Pn**	**09 02 28.2**	**-1.3**
	baz=77						
TSEB				S	**Sn**	**09 02 44.3**	**-1.1**
	baz=77						
SGLT	**Jiouru**	**1.42**	**36**	*e*P	**Pn**	**09 02 30.8**	**-0.8**
	baz=40						
SGLT				*e*S	**Sn**	**09 02 48.6**	**-0.5**
	baz=40						
EAST	**Anshuo**	**1.43**	**56**	P	**Pn**	**09 02 30.5**	**-1.1**
	baz=59						
EAST				*e*S	**Sn**	**09 02 48.8**	**-0.5**
	baz=59						
TAW	**Tawu**	**1.45**	**57**	*e*P	**Pn**	**09 02 30.9**	**-1.0**
	baz=60						
TAW				*e*S	**Sn**	**09 02 49.0**	**-0.8**
	baz=60						
TWM1	**Shoushan**	**1.47**	**32**	*e*P	**Pn**	**09 02 31.6**	**-0.6**
	baz=36						
SSD	**Sandimen**	**1.52**	**40**	*e*P	**Pn**	**09 02 31.8**	**-1.1**
	baz=56						
SSD				*e*S	**Sn**	**09 02 51.1**	**-0.4**
	baz=56						
ECL	**Taimali**	**1.63**	**51**	*e*P	**Pn**	**09 02 33.4**	**-1.0**
	baz=54						
ECL				*e*S	**Sn**	**09 02 53.5**	**-0.7**
	baz=54						
SCLT	**Jiali**	**1.69**	**20**	*e*P	**Pn**	**09 02 35.3**	**+0.1**
	baz=23						
CHN1	**Nanshi**	**1.83**	**29**	*e*P	**Pn**	**09 02 35.5**	**-1.5**
	baz=31						
CHN1				*e*S	**Sn**	**09 02 58.6**	**-0.4**
	baz=31						
TWG	**Pinlang**	**1.86**	**48**	P	**Pn**	**09 02 36.8**	**-0.7**
	baz=39						
TWG				S	**Sn**	**09 02 59.4**	**-0.5**
	baz=39						
TTN	**Taitung**	**1.87**	**51**	*e*P	**Pn**	**09 02 36.8**	**-0.9**
	baz=42						
TTN				*e*S	**Sn**	**09 02 59.8**	**-0.2**
	baz=42						
TWK	**Hsinying**	**1.88**	**26**	*e*P	**Pn**	**09 02 37.4**	**-0.4**
	baz=29						
TWK				*e*S	**Sn**	**09 02 59.5**	**-1.0**
	baz=29						
LAY	**Lan-yu**	**1.89**	**76**	*e*P	**Pn**	**09 02 37.9**	**0.0**
	baz=66						
LAY				*e*S	**Sn**	**09 02 59.1**	**-1.5**
	baz=66						
WTP	**Ta-pu**	**1.92**	**30**	P	**Pn**	**09 02 37.3**	**-1.0**
	baz=33						
WTP				*e*S	**Sn**	**09 03 00.7**	**-0.7**
	baz=33						
PNG	**Penghu**	**1.98**	**359**	*e*P	**Pn**	**09 02 37.9**	**-1.3**
	baz=2.0						
PNG				*e*S	**Sn**	**09 03 00.9**	**-1.8**
	baz=2.0						
CHN4	**Tsaushan**	**2.00**	**28**	*e*P	**Pn**	**09 02 37.9**	**-1.5**
	baz=19						
CHN4				S	**Sn**	**09 03 02.5**	**-0.8**
	baz=19						
ELDTW	**Lidau**	**2.09**	**39**	*e*P	**Pn**	**09 02 40.3**	**-0.4**
	baz=42						
ELDTW				*e*S	**Sn**	**09 03 05.0**	**-0.6**
	baz=42						
ALS	**Alishan**	**2.23**	**30**	*e*P	**Pn**	**09 02 42.2**	**-0.7**
	baz=44						
ALS				*e*S	**Sn**	**09 03 09.1**	**-0.3**
	baz=44						
CHKT	**Chengkung**	**2.25**	**47**	*e*P	**Pn**	**09 02 43.3**	**+0.5**
	baz=60						
CHKT				*e*S	**Sn**	**09 03 09.4**	**+0.2**
	baz=60						
CHN5	**Tsauling**	**2.25**	**27**	P	**Pn**	**09 02 41.7**	**-1.3**
	baz=29						
CHN5				S	**Sn**	**09 03 08.7**	**-0.9**
	baz=29						
YUS	**Yu-Shan**	**2.29**	**33**	*e*P	**Pn**	**09 02 42.6**	**-1.3**
	baz=47						
YUS				*e*S	**Sn**	**09 03 09.8**	**-1.3**
	baz=47						
TWF1	**Yuli**	**2.38**	**42**	*e*P	**Pn**	**09 02 44.6**	**0.0**
	baz=44						
TWF1				S	**Sn**	**09 03 12.4**	**-0.2**
	baz=44						
EHY	**Hungye**	**2.51**	**40**	*e*P	**Pn**	**09 02 46.5**	**+0.1**
	baz=42						
EHY				*e*S	**Sn**	**09 03 16.1**	**+0.3**
	baz=42						
SMLT	**Sun Moon Lake**	**2.60**	**28**	P	**Pn**	**09 02 47.1**	**-0.6**
	baz=30						
SMLT				*e*S	**Sn**	**09 03 17.1**	**-1.1**
	baz=30						
TYC	**Yuchr**	**2.60**	**27**	*e*P	**Pn**	**09 02 46.4**	**-1.3**
	baz=20						
TYC				*e*S	**Sn**	**09 03 17.6**	**-0.4**
	baz=20						
ESL	**Shilin**	**2.81**	**37**	*e*P	**Pn**	**09 02 51.3**	**+0.8**
	baz=39						
ESL				*e*S	**Sn**	**09 03 23.0**	**-0.2**
	baz=39						
TWQ1	**Liyutan**	**2.97**	**22**	*e*P	**Pn**	**09 02 51.2**	**-1.5**
	baz=23						
TWQ1				*e*S	**Sn**	**09 03 28.3**	**+1.2**
	baz=23						
WHF	**Hehuan Shan**	**2.99**	**31**	*e*P	**Pn**	**09 02 53.5**	**+0.1**
	baz=33						
WHF				*e*S	**Sn**	**09 03 28.9**	**+0.6**
	baz=33						
TWT	**Tachien**	**3.04**	**29**	*e*P	**Pn**	**09 02 53.6**	**-0.3**
	baz=30						
TWT				*e*S	**Sn**	**09 03 28.9**	**-0.3**
	baz=30						
NNS	**Nan Shan**	**3.30**	**30**	*e*P	**Pn**	**09 02 55.8**	**-1.5**
	baz=32						
NNS				*e*S	**Sn**	**09 03 35.6**	**+0.3**
	baz=32						
NSTT	**Nanjuang**	**3.31**	**23**	*e*P	**Pn**	**09 02 57.0**	**-0.4**
	baz=25						
NSTT				*e*S	**Sn**	**09 03 34.7**	**-0.8**
	baz=25						
NSK	**Sanguang**	**3.49**	**28**	P	**Pn**	**09 02 59.2**	**-0.8**
	baz=18						
NSK				*e*S	**Sn**	**09 03 39.9**	**-0.2**
	baz=18						
ENTT	**Nioudou**	**3.56**	**31**	*e*P	**Pn**	**09 03 01.0**	**+0.2**
	baz=32						
TWC	**Suao**	**3.67**	**34**	*e*P	**Pn**	**09 03 02.6**	**+0.2**
	baz=45						
TWE	**Neicheng**	**3.67**	**31**	*e*P	**Pn**	**09 03 02.9**	**+0.5**
	baz=20						
MKAR	**Makanchi Array**	**39.24**	**319**	P	**P**	**09 09 33.0**	**+1.3**
	0.7nm,0.8s,baz=123,slow=8.8,SNR=5.6						
WRA	**Warramunga Arr**	**43.72**	**160**	P	**P**	**09 10 07.0**	**-1.6**
	0.4nm,0.4s,baz=342,slow=9.1,SNR=6.7						
ASAR	**Alice Springs**	**47.08**	**162**	P	**P**	**09 10 34.2**	**-0.9**
	0.3nm,0.5s,baz=346,slow=7.2,SNR=6.2						
CTA	**Charters Tower**	**48.94**	**146**	LR	LR	09 32 21.3	
	comp=Z,29nm,21.8s,baz=88,slow=37						
YKA	**Yellowknife Ar**	**85.93**	**22**	P	**P**	**09 14 44.7**	**+2.1**
	0.4nm,0.9s,baz=311,slow=4.6,SNR=4.0						

*CSEM **28** 09:06:14.6, 42°.25N×1°.33E, h0km, ML1.0, After MDD*
MDD 28 09:06:14.6±0.3, 42°.25N×1°.33E, h0km, mbLg1.0/4, 1C, Error ellipse: s-maj=5.6km s-min=2.4km az=45.0, PRXIMO SIN SOLUCIN, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSOR	**Sort**	**0.20**	**311**	⇑Pg	Pg	09 06 18.1	-0.4
	5.0nm,0.1s,SNR=18						
CSOR				Lg	Lg	09 06 21.7	
	20nm,0.3s,SNR=20						
CSOR	**Sort**	**0.20**	**311**	Pg	Pg	09 06 18.1	-0.5
	5.0nm,0.1s,SNR=18						
CSOR				Lg	Lg	09 06 21.7	
	20nm,0.3s,SNR=20						
EMIR	**Miracle**	**0.36**	**157**	Pg	Pg	09 06 20.8	-0.8
	1.2nm,0.2s,SNR=7.9						
EMIR				Lg	Lg	09 06 26.6	
	4.7nm,0.2s,

LFRS **El Faro** 3.19 210 *e*P P 09 07 14.2 -0.6
BOQS **Boqueron** 3.20 215 *e*P P 09 07 16.3 +1.1
SNET **Serv Nac Est T** 3.22 213 *e*P P 09 07 15.2 -0.1
SNET AML AML 09 08 11.8
comp=Z,4µm,0.8s
SNJE **San Jose** 3.29 220 *e*P P 09 07 17.6 +1.3
RTR **El Retiro** 3.29 221 *e*P P 09 07 17.5 +1.1
SBLS **San Blas** 3.32 220 *e*P P 09 07 18.0 +1.2
TEIG **Tepich** 3.90 348 *e*Pn P 09 07 24.3 -0.2
TEIG Sn Sn 09 08 08.2 -2.1
TEIG **Tepich** 3.90 348 Pn P 09 07 24.3 -0.2
comp=Z,82nm,0.3s,baz=330,slow=6.0,SNR=40
TEIG Sn Sn 09 08 08.2 -2.1
comp=Z,184nm,0.3s,baz=241,slow=22,SNR=16
JTS **JuntasAbangare** 6.52 158 *e*Pn Pn 09 08 03.5 +2.8
comp=Z,2µm,1.4s
BCIP **Isla Barro Col** 10.30 133 *e*Pn P 09 08 52.0 -0.6
HKT **Hockley** 15.54 332 *e*P P 09 10 04.0 +0.2
HKT pmax pmax
comp=Z,26nm,1.1s
HKT **Hockley** 15.54 332 *e*Pn P 09 10 04.0 +0.2
comp=Z,26nm,1.1s
SDDR **Presa de Saban** 15.58 78 Pn P 09 10 05.6 +1.1
VBMS **Vicksburg** 16.00 350 *e*Pn P 09 10 11.3 +1.5
comp=Z,34nm,0.7s
LRAL **Lakeview Retre** 16.57 1 *e*Pn P 09 10 17.8 +0.8
comp=Z,11nm,0.6s
732A **Laxson Ranch,** 16.87 319 ⇑P Pn 09 10 14.9 -5.9
baz=17
ROSC **El Rosal** 17.21 130 *e*Pn P 09 10 25.1 -0.6
632A **Uvalde** 17.30 321 ⇑P Pn 09 10 21.4 -4.9
baz=17,SNR=16
GOGA **Godfrey** 17.31 11 *e*P P 09 10 26.3 0.0
GOGA **Godfrey** 17.31 11 *e*Pn P 09 10 26.3 0.0
631A **Perdido Creek** 17.72 319 ⇑P Pn 09 10 26.3 -5.2
baz=18,SNR=15
532A **Rocksprings** 17.83 322 ⇓P P 09 10 28.9 -4.0
baz=18,SNR=15
NHSC **New Hope** 17.88 20 *e*Pn P 09 10 33.9 +0.5
comp=Z,115nm,1.4s
WHTX **Lake Whitney** 18.01 331 ⇑P P 09 10 32.9 -2.1
baz=18,SNR=19
JCT **Junction City** 18.03 323 *e*P P 09 10 36.6 +0.8
JCT pmax pmax
comp=Z,26nm,0.8s
JCT **Junction City** 18.03 323 *e*Pn P 09 10 36.6 +0.8
comp=Z,26nm,0.8s
JCT **Junction City** 18.03 323 ⇓P P 09 10 32.0 -3.3
baz=18
531A **Rocksprings** 18.23 321 ⇑P P 09 10 34.8 -3.1
baz=18
432A **Menard** 18.32 324 ⇑P P 09 10 37.6 -1.3
baz=18,SNR=17
OTAV **Otavalo** 18.33 150 *e*Pn P 09 10 40.2 +0.6
comp=Z,19nm,1.4s
PLAL **Pickwick Lake** 18.52 358 *e*P P 09 10 43.5 +2.2
comp=Z,35nm,1.5s
431A **Sonora** 18.64 322 ⇓P P 09 10 40.0 -2.6
baz=19,SNR=13
332A **Millersview** 18.68 325 ⇑P P 09 10 40.9 -2.0
baz=19,SNR=11
530A **J-C Ranch, Com** 18.71 319 ⇓P P 09 10 40.4 -2.9
baz=19
SWET **Sewanee** 18.79 4 *e*Pn P 09 10 44.9 +0.3
comp=Z,137nm,2.2s
UALR **University of** 18.83 347 *e*P P 09 10 46.9 +1.9
comp=Z,20nm,0.7s
331A **San Angelo** 19.00 324 ⇑P P 09 10 44.4 -2.1
baz=19,SNR=5.6
232A **Coleman** 19.01 326 ⇓P P 09 10 44.4 -2.3
baz=19
430A **Baggett Ranch,** 19.09 321 ⇑P P 09 10 46.4 -1.1
baz=19,SNR=13
CPCT **Cooper Cave** 19.15 7 *e*Pn P 09 10 50.9 +2.0
529A **Stev Forest Ra** 19.25 318 ⇓P P 09 10 48.6 -0.7
baz=19
628A **Black Gap, Mar** 19.28 315 ⇓P P 09 10 49.1 -0.5
baz=19,SNR=13
429A **Davenport Ranc** 19.39 319 ⇓P P 09 10 50.1 -0.7
baz=20,SNR=9.5
231A **Bronte** 19.41 325 ⇓P P 09 10 51.0 0.0
baz=20,SNR=12
KMSC **Kings Mountain** 19.44 15 ⇑P P 09 10 50.8 -0.5
baz=20
TKL **Tuckaleechee C** 19.45 9 P P 09 10 52.5 +1.1
TKL S Sn 09 14 18.9 -12
TKL **Tuckaleechee C** 19.45 9 P P 09 10 52.5 +1.1
comp=Z,0.4nm,0.3s,baz=181,slow=11,SNR=8.5
TKL S Sn 09 14 18.9 -12
comp=Z,0.1nm,0.3s,baz=205,slow=10,SNR=3.3
AGPR **Aguadilla, PR** 19.48 81 P Pn 09 10 52.5 -0.5
330A **Mertzon** 19.50 322 ⇓P P 09 10 51.5 -0.5
baz=20,SNR=12
ABTX **Abilene, Hawle** 19.59 328 ⇑P P 09 10 52.8 -0.1
baz=20,SNR=8.1
627A **Terlingua Ranc** 19.60 314 ⇓P P 09 10 53.3 +0.1
baz=20,SNR=17
528A **Cox Ranch, San** 19.65 317 ⇓P P 09 10 53.0 -0.7
baz=20
WVT **Waverly** 19.66 359 *e*P Pn 09 10 55.2 +0.2
WVT pmax pmax
comp=Z,11nm,0.6s
WVT **Waverly** 19.66 359 *e*P Pn 09 10 55.2 +0.2
comp=Z,11nm,0.6s
TXAR **Lajitas Array** 19.72 314 P P 09 10 54.6 +0.1
TXAR S S 09 14 25.7 -11
TXAR **Lajitas Array** 19.72 314 P P 09 10 54.6 +0.1
comp=Z,0.3nm,0.3s,baz=127,slow=10,SNR=52
TXAR S S 09 14 25.7 -11
comp=Z,0.3nm,0.3s,baz=148,slow=11,SNR=6.2
230A **Sterling City** 19.82 324 ⇓P P 09 10 54.7 -0.8
baz=20,SNR=12
UTMT **University of** 19.91 357 *e*P Pn 09 10 57.9 -0.1
comp=Z,54nm,0.8s
428A **Kincaid Ranch,** 19.95 318 ⇑P P 09 10 57.0 0.0
baz=20
131A **Roby** 20.02 326 ⇑P P 09 10 57.7 +0.1
baz=20,SNR=7.0
329A **Wagon Wheel Ra** 20.04 321 ⇓P P 09 10 57.1 -0.8
baz=20,SNR=6.0
Z32A **Haskell** 20.05 329 ⇑P P 09 10 58.4 +0.4
baz=20,SNR=26
626A **Big Bend Ranch** 20.18 313 ⇓P P 09 10 59.2 -0.2
baz=20,SNR=25
527A **Woodward Ranch** 20.18 316 ⇑P P 09 10 58.9 -0.6
baz=20,SNR=14
130A **Snyder** 20.27 325 ⇓P P 09 10 59.9 -0.4
baz=20,SNR=8.6
229A **Bryant Ranch,** 20.28 322 ⇑P P 09 10 59.9 -0.6
baz=20
TZTN **Tazewell** 20.36 9 *e*P Pn 09 11 03.2 -0.1
comp=Z,40nm,1.1s
Z31A **Sharp Cattle R** 20.39 328 ⇑P P 09 11 01.6 -0.1
baz=20,SNR=12
526A **Mary Lane Ranc** 20.45 315 ⇓P P 09 11 02.4 -0.1
baz=21,SNR=17
328A **Wristen Ranch,** 20.48 320 ⇓P P 09 11 02.7 +0.1
baz=21,SNR=17
427A **Hayter Ranch,** 20.50 317 ⇓P P 09 11 02.5 -0.4
baz=21
Y32A **R-V Farms, Ver** 20.60 331 ⇑P P 09 11 04.2 +0.2
baz=21,SNR=8.1
CBYP **Canovanas** 20.66 82 *e*Pn Pn 09 11 05.6 -1.4
426A **McDonald Obser** 20.79 316 ⇑P P 09 11 05.7 -0.6
baz=21,SNR=13
129A **Stewart Farms,** 20.80 324 ⇑P P 09 11 05.5 -0.6
baz=21,SNR=16
TUL1 **Tulsa** 20.82 341 ⇓P P 09 11 05.5 -0.7
baz=21
228A **UT Block 9, Go** 20.85 321 ⇓P P 09 11 05.7 -1.0
baz=21
Z30A **Sanderson Ranc** 20.88 326 ⇑P P 09 11 06.1 -0.9
baz=21,SNR=10
Y31A **Rekieta Farm,** 20.97 329 ⇑P P 09 11 07.6 -0.3
baz=21,SNR=13
128A **Castleberry Fa** 21.15 323 ⇓P P 09 11 08.7 -1.3
baz=21,SNR=28
326A **Caldwell Ranch** 21.18 317 ⇓P P 09 11 08.8 -1.4
baz=21,SNR=18
Z29A **Hungry Hill Ra** 21.18 325 ⇓P P 09 11 09.0 -1.2
baz=21,SNR=12
227A **Bennet, Jal** 21.20 320 ⇑P P 09 11 09.5 -1.1
baz=21,SNR=12
Y30A **Stafford Cattl** 21.22 328 ⇓P P 09 11 10.0 -0.6
baz=21,SNR=8.4
SIUC **Southern Illin** 21.30 356 *e*P P 09 11 13.0 +1.7
comp=Z,36nm,0.8s

X31A **McDonald Ranch** 21.37 331 ⇓P P 09 11 12.1 -0.2
baz=22,SNR=19
USIN **University of** 21.49 359 *e*P P 09 11 14.5 +1.1
comp=Z,81nm,1.1s
425A **Indio Mountain** 21.51 315 ⇓P P 09 11 13.0 -0.9
baz=22,SNR=14
STVI **Saint Thomas** 21.52 82 *e*P P 09 11 14.7 +0.8
Z28A **Tucker Farm, M** 21.58 324 ⇓P P 09 11 13.3 -1.2
baz=22,SNR=18
Y29A **Porterfield Fa** 21.61 326 ⇓P P 09 11 14.1 -0.8
baz=22,SNR=15
BLA **Blacksburg** 21.64 15 *e*P P 09 11 16.6 +1.5
BLA pmax pmax
comp=Z,60nm,1.4s
BLA **Blacksburg** 21.64 15 *e*P P 09 11 16.6 +1.5
comp=Z,60nm,1.4s
X30A **Coker Ranch, T** 21.66 329 ⇓P P 09 11 14.9 -0.5
baz=22,SNR=12
127A **Arkansas Junct** 21.70 321 ⇓P P 09 11 14.5 -1.4
baz=22,SNR=11
226B **Tecolote Peak,** 21.80 319 ⇑P P 09 11 16.0 -0.8
baz=22,SNR=22
W31A **Holland Ranch,** 21.81 331 ⇑P P 09 11 16.3 -0.7
baz=22
325A **Bean Ranch, Si** 21.86 316 ⇑P P 09 11 16.2 -1.5
baz=22,SNR=20
Y28A **McKinney Farm,** 21.96 325 ⇑P P 09 11 17.3 -1.3
baz=22,SNR=13
GDL2 **Guadalupe Moun** 22.00 319 *e*P P 09 11 19.2 +0.1
Z27A **Tatum** 22.07 323 P P 09 11 18.2 -1.6
baz=22,SNR=19
X29A **Tulia** 22.08 327 ⇑P P 09 11 19.0 -0.9
baz=22,SNR=14
126A **Clayton Basin,** 22.09 320 ⇓P P 09 11 18.6 -1.5
baz=22
W30A **Crocket Farms** 22.10 330 ⇑P P 09 11 19.2 -1.0
baz=22
225A **Deer Hill, Car** 22.24 318 ⇓P P 09 11 20.6 -1.1
baz=22,SNR=20
324A **Moseley Ranch,** 22.25 316 ⇑P P 09 11 20.2 -1.6
baz=22
V31A **Spring Creek L** 22.25 332 ⇑P P 09 11 20.9 -0.8
baz=22,SNR=15
OLIL **Olney** 22.26 359 *e*P P 09 11 23.3 +1.6
comp=Z,132nm,1.3s
MSTX **Muleshoe** 22.30 325 ⇓P P 09 11 20.8 -1.5
baz=22,SNR=13
X28A **Dimmitt** 22.40 326 ⇓P P 09 11 21.9 -1.5
baz=22,SNR=18
Y27A **Causey** 22.45 324 ⇑P P 09 11 22.4 -1.6
baz=23,SNR=13
125A **Gardner Draw,** 22.49 319 ⇓P P 09 11 22.7 -1.7
baz=23,SNR=14
Z26A **Caprock** 22.49 321 ⇓P P 09 11 22.7 -1.7
baz=23
W29A **Amarillo** 22.58 328 ⇓P P 09 11 23.7 -1.6
baz=23
V30A **Spur Ranch, Mi** 22.63 331 ⇑P P 09 11 24.3 -1.5
baz=23
224A **Cornudas Mount** 22.67 317 ⇑P P 09 11 24.8 -1.5
baz=23,SNR=21
BLO **Bloomington** 22.70 2 *e*P P 09 11 27.6 +1.2
BLO pmax pmax
comp=Z,57nm,1.2s
BLO **Bloomington** 22.70 2 *e*P P 09 11 27.6 +1.2
comp=Z,57nm,1.2s
U31A **Nine Bar Ranch** 22.76 333 ⇓P P 09 11 25.8 -1.3
baz=23
JSRW **J. Sargeant Re** 22.82 20 *e*P P 09 11 27.8 +0.1
Y26A **Elida** 22.86 323 ⇓P P 09 11 26.6 -1.7
baz=23,SNR=11
Z25A **Roswell** 22.95 320 ⇑P P 09 11 27.4 -1.8
baz=23,SNR=11
W28A **Vega** 22.97 328 ⇑P P 09 11 28.1 -1.3
baz=23
X27A **F and S Farms,** 22.98 325 ⇓P P 09 11 27.9 -1.6
baz=23,SNR=7.8
124A **Stringfield Ra** 23.02 318 ⇓P P 09 11 29.0 -1.2
baz=23,SNR=30
U30A **WK&E Inc. Balk** 23.25 332 ⇓P P 09 11 31.8 -0.4
baz=23,SNR=10
W27A **Bowe Ranch, En** 23.27 326 ⇓P P 09 11 31.0 -1.5
baz=23,SNR=8.1
T31A **Randall Ranch,** 23.30 335 ⇓P P 09 11 31.6 -1.1
baz=24,SNR=6.9
X26A **CR and CF Fran** 23.31 324 ⇓P P 09 11 31.2 -1.7
baz=23,SNR=16
V28A **Channing** 23.36 328 ⇑P P 09 11 32.1 -1.3
baz=24,SNR=7.6
Y25A **Mesa, Roswell** 23.37 321 ⇓P P 09 11 32.2 -1.4
baz=24,SNR=9.8
Z24A **Sheeppen Canyo** 23.38 319 ⇑P P 09 11 32.7 -1.0
baz=24,SNR=23
U29A **Oasis Ranch, S** 23.46 331 ⇓P P 09 11 33.8 -0.6
baz=24,SNR=14
123A **Bell Site, Whi** 23.51 317 ⇑P P 09 11 33.9 -1.0
baz=24,SNR=15
T30A **Plains** 23.63 333 ⇓P P 09 11 35.4 -0.5
baz=24
W26A **Owens Ranch, T** 23.68 325 ⇓P P 09 11 35.3 -1.3
baz=24,SNR=13
V27A **Dan Oppiter Fa** 23.68 327 ⇑P P 09 11 35.5 -1.1
baz=24
222A **Williams Famil** 23.75 315 ⇓P P 09 11 35.7 -1.5
baz=24
X25A **Clemmons Ranch** 23.78 323 ⇓P P 09 11 36.3 -1.3
baz=24,SNR=14
Y24A **Capitan** 23.82 320 ⇓P P 09 11 37.7 -0.4
baz=24,SNR=48
U28A **Mallet** 23.86 329 ⇑P P 09 11 37.0 -1.3
baz=24
Z23A **Rita Site, Whi** 23.89 318 ⇓P P 09 11 38.3 -0.3
baz=24,SNR=15
SFIN **Scholer Farm** 23.90 1 ⇑P P 09 11 38.0 -0.4
baz=24
KSU1 **Kansas State U** 24.01 342 *e*P P 09 11 40.4 +0.9
comp=Z,16nm,0.7s
122A **Conniff Cattle** 24.04 316 ⇑P P 09 11 39.4 -0.6
baz=24,SNR=13
T29A **Hugoton** 24.05 332 ⇓P P 09 11 39.9 -0.1
baz=24,SNR=19
ACSO **Alum Creek Sta** 24.06 8 *e*P P 09 11 40.9 +0.9
comp=Z,58nm,1.4s
S30A **Montezuma** 24.09 334 ⇓P P 09 11 40.0 -0.5
baz=24,SNR=15
221A **Mesquite Ranch** 24.15 314 ⇓P P 09 11 40.0 -1.1
baz=24,SNR=5.8
W25A **X Bar L Ranch,** 24.16 324 ⇑P P 09 11 40.3 -0.9
baz=24,SNR=15
U27A **Thompson Grove** 24.19 328 ⇓P P 09 11 40.8 -0.7
baz=24,SNR=7.8
Y23A **Lovelace Mesa,** 24.21 320 ⇑P P 09 11 41.3 -0.4
baz=24,SNR=31
V26A **Tequesquite Ra** 24.21 326 ⇑P P 09 11 40.9 -0.7
baz=24,SNR=16
X24A **Lazy VL Ranch,** 24.26 322 ⇓P P 09 11 41.9 -0.3
baz=24,SNR=13
320A **Kipp Ranch, An** 24.31 312 ⇑P P 09 11 42.9 +0.3
baz=24
Z22A **Elephant Butte** 24.36 317 ⇑P P 09 11 43.1 +0.1
baz=24,SNR=35
S29A **Ulysses** 24.36 333 ⇑P P 09 11 43.0 +0.1
baz=24,SNR=5.2
T28A **Walsh** 24.40 331 ⇓P P 09 11 43.0 -0.3
baz=24
121A **Cookes Peak, D** 24.46 315 ⇑P P 09 11 43.8 -0.3
baz=25,SNR=22
R30A **Dighton** 24.56 335 ⇓P P 09 11 45.0 +0.3
baz=25,SNR=20
220A **Playas Peak, P** 24.62 313 ⇓P P 09 11 45.1 -0.3
baz=25,SNR=12
U26A **Atchley Ranch,** 24.64 327 ⇓P P 09 11 45.6 0.0
baz=25
T27A **Campo** 24.64 330 ⇑P P 09 11 45.9 +0.4
baz=25
S28A **Manter** 24.68 332 ⇑P P 09 11 46.3 +0.5
baz=25
W24A **Lazy 6 Ranch,** 24.69 323 ⇑P P 09 11 46.4 +0.3
baz=25,SNR=14
V25A **Rancho No Teng** 24.70 325 ⇑P P 09 11 46.8 +0.7
baz=25,SNR=8.7
BNM **Barren Site** 24.71 319 *e*P P 09 11 47.2 +0.9
comp=Z,76nm,1.6s
Y22A **Socorro** 24.79 318 ⇓P P 09 11 47.6 +0.7
baz=25,SNR=46
LPM **Los Pinos Moun** 24.82 320 *e*P P 09 11 48.0 +0.8
comp=Z,6.3nm,0.9s
Y22D **IRIS PASSCAL I** 24.85 319 ⇑P P 09 11 48.4 +1.0
baz=25,SNR=6.2
Z21A **St. Cloud Mine** 24.85 316 ⇓P P 09 11 48.6 +1.0
baz=25,SNR=14
319A **Douglas** 24.87 311 ⇓P P 09 11 47.7 0.0
baz=25
LENM **Lemitar** 24.94 319 *e*P P 09 11 49.7 +1.4
V24A **Rampart Ranch,** 24.98 324 ⇓P P 09 11 49.8 +1.0
baz=25,SNR=7.8
U25A **Circle Dot Ran** 25.00 326 ⇑P P 09 11 49.8 +1.0
baz=25,SNR=9.2
R29A **Marienthal** 25.04 334 ⇓P P 09 11 49.8 +0.8
baz=25,SNR=6.6
120A **U Bar Ranch, L** 25.05 314 ⇑P P 09 11 49.9 +0.5
baz=25,SNR=6.5
W23A **Werner Place,** 25.10 322 ⇑P P 09 11 50.0 +0.3
baz=25,SNR=15
ANMO **Albuquerque** 25.14 321 *e*P P 09 11 51.2 +1.2
ANMO **Albuquerque** 25.14 321 P P 09 11 51.1 +1.0
comp=Z,8.7nm,1.1s,baz=142,slow=9.9,SNR=13
T26A **Comanche Natio** 25.16 328 ⇓P P 09 11 51.5 +1.2
baz=25
LAZ **Ladron** 25.20 319 *e*P P 09 11 52.0 +1.4
comp=Z,19nm,1.6s
S27A **Las Animas** 25.22 330 ⇓P P 09 11 51.4 +0.7
baz=25
R28A **Tribune** 25.26 333 ⇓P P 09 11 51.6 +0.5
baz=25,SNR=11
Y21A **Point of Rocks** 25.29 318 ⇑P P 09 11 52.2 +0.7
baz=25,SNR=63
Z20A **Nine Sixteen R** 25.35 315 ⇓P P 09 11 52.0 -0.1
baz=26,SNR=6.9
S26A **Kim** 25.45 329 ⇓P P 09 11 53.6 +0.8
baz=26
W22A **Albuquerque** 25.47 321 ⇓P P 09 11 53.5 +0.4
baz=26
U24A **Moreno Valley** 25.48 325 ⇓P P 09 11 53.5 +0.3
baz=26,SNR=11
V23A **Ortiz Mt. (NFS** 25.52 323 ⇓P P 09 11 54.7 +1.2
baz=26,SNR=7.4
T25A **Trinidad** 25.55 327 ⇑P P 09 11 54.9 +1.0
baz=26
X21A **Alamocita Cree** 25.64 318 ⇑P P 09 11 55.0 +0.3
baz=26,SNR=25
R27A **Eads** 25.66 331 ⇓P P 09 11 55.3 +0.6
baz=26,SNR=5.7
Y20A **Horse Springs,** 25.68 317 ⇑P P 09 11 55.5 +0.4
baz=26,SNR=20
T24A **Torres, Weston** 25.84 326 ⇑P P 09 11 57.4 +0.8
baz=26
Q28A **Sharon Springs** 25.87 334 ⇑P P 09 11 57.7 +1.1
baz=26,SNR=6.5
U23A **El Rito** 25.93 324 ⇓P P 09 11 57.9 +0.5
baz=26,SNR=14
S25A **Robets Cordova** 25.96 328 ⇓P P 09 11 58.7 +1.2
baz=26
R26A **Arlington** 25.98 330 ⇑P P 09 11 59.1 +1.5
baz=26
W21A **San Fidel** 25.98 320 ⇓P P 09 11 58.2 +0.5
baz=26,SNR=10
V22A **San Miguel Ran** 26.06 322 ⇓P P 09 11 59.8 +1.2
baz=26
X20A **Quemado** 26.15 318 ⇑P P 09 12 00.6 +1.3
baz=26,SNR=39
KSCO **Kaye Shedlock'** 26.17 332 ⇑P P 09 12 00.6 +1.2
baz=26,SNR=6.3
R25A **Fountain Ranch** 26.26 329 ⇑P P 09 12 00.6 +0.4
baz=26
P28A **Saint Francis** 26.27 334 ⇓P P 09 12 01.1 +0.9
baz=26
U22A **Llaves** 26.35 323 ⇓P P 09 12 02.4 +1.3
baz=26
S24A **Houchin Ranch,** 26.35 327 ⇑P P 09 12 02.1 +0.9
baz=26
T23A **Casias Ranch,** 26.35 325 ⇑P P 09 12 02.6 +1.4
baz=26
Q26A **Hugo** 26.51 331 ⇑P P 09 12 03.5 +1.0
baz=27
W20A **Ramah** 26.52 319 ⇑P P 09 12 03.2 +0.5
baz=27,SNR=8.9
JFWS **Jewell Farm** 26.54 355 *e*P P 09 12 01.5 -1.0
JFWS pmax pmax
comp=Z,81nm,1.8s
JFWS **Jewell Farm** 26.54 355 *e*P P 09 12 01.5 -1.0
comp=Z,82nm,1.8s
SDCO **Great Sand Dun** 26.58 327 *e*P P 09 12 05.0 +1.8
comp=Z,14nm,1.2s
P27A **Ficken Ranch,** 26.60 333 ⇓P P 09 12 04.3 +1.1
baz=27
R24A **Sanders Place,** 26.74 328 ⇓P P 09 12 05.4 +0.8
baz=27
S23A **Nye Farm, Mont** 26.82 326 ⇓P P 09 12 06.7 +1.3
baz=27
T22A **Edith** 26.82 324 ⇓P P 09 12 06.6 +1.3
baz=27
Q25A **Bedland, Calha** 26.84 330 ⇑P P 09 12 07.1 +1.6
baz=27
U21A **Nageezi** 26.86 322 ⇑P P 09 12 06.9 +1.2
baz=27
V20A **Brimhall** 26.93 320 ⇓P P 09 12 07.9 +1.6
baz=27
P26A **Davis Ranch, A** 26.94 332 ⇓P P 09 12 07.6 +1.3
baz=27
R23A **Moffat** 27.09 327 ⇑P P 09 12 08.8 +1.0
baz=27
X18A **Snowflake** 27.10 316 ⇑P P 09 12 09.0 +1.1
baz=27
N28A **Pribbeno Ranch** 27.12 336 ⇓P P 09 12 09.1 +1.2
baz=27
T21A **Navajo Lake** 27.17 323 ⇓P P 09 12 09.7 +1.3
baz=27
P25A **Willow Gulch B** 27.28 331 ⇓P P 09 12 10.5 +1.1
baz=27
S22A **4UR Ranch, Cre** 27.30 325 ⇓P P 09 12 10.5 +0.7
baz=27
W18A **Petrified Fore** 27.31 317 ⇑P P 09 12 10.9 +1.2
baz=27
U20A **Newcomb** 27.34 321 ⇓P P 09 12 11.0 +1.0
baz=28
OGNE **Ogallala** 27.54 336 ⇓P P 09 12 13.3 +1.7
baz=28
R22A **Saguache, Gunn** 27.61 326 ⇓P P 09 12 14.0 +1.5
baz=28
M28A **Bar X Bar Ranc** 27.67 337 ⇓P P 09 12 15.1 +2.3
baz=28
S21A **Coal Bank Pass** 27.78 324 ⇓P P 09 12 14.7 +0.7
baz=28
MVCO **Mesa Verde** 27.88 322 *e*P P 09 12 16.8 +1.9
comp=Z,186nm,2.6s
MVCO **Mesa Verde** 27.88 322 P P 09 12 15.7 +0.9
baz=28
P23A **Jefferson** 27.98 329 ⇓P P 09 12 16.8 +0.9
baz=28
X16A **Lo Mia Camp, P** 28.05 314 ⇓P P 09 12 17.6 +1.2
baz=28
Q22A **Crested Butte,** 28.15 326 ⇑P P 09 12 19.0 +1.6
baz=28
S20A **Disappointment** 28.22 323 ⇑P P 09 12 19.2 +1.2
baz=28
SMCO **Snowmass** 28.42 327 *e*P P 09 12 21.3 +1.4
comp=Z,63nm,2.2s
R20A **Redvale** 28.48 324 ⇑P P 09 12 21.2 +1.0
baz=29
PV01 **Paradox Valley** 28.55 323 *e*P P 09 12 23.4 +2.5
comp=Z,824nm,1.3s
Z14A **Wintersburg** 28.55 311 ⇑P P 09 12 21.4 +0.7
baz=29
P22A **Eagle** 28.62 328 ⇑P P 09 12 22.6 +1.2
baz=29
WUAZ **Wupatki** 28.62 316 *e*P P 09 12 22.6 +1.1
comp=Z,21nm,1.6s
WUAZ **Wupatki** 28.62 316 ⇓P P 09 12 22.4 +0.9
baz=29
Y14A **Wickenburg** 28.89 312 ⇑P P 09 12 25.1 +1.4
baz=29
P21A **Newcastle** 28.92 327 ⇓P P 09 12 25.7 +1.6
baz=29
O22A **Kremmling** 28.94 329 ⇓P P 09 12 25.7 +1.4
baz=29
Q20A **Ridgley Place,** 28.97 325 ⇑P P 09 12 25.7 +1.2
baz=29
S18A **Hurst Farm, Bl** 29.09 321 ⇓P P 09 12 26.6 +0.9
baz=29
SPMN **St. Paul** 29.09 352 ⇓P P 09 12 26.8 +1.5
baz=29
K27A **Fluecklinger Fa** 29.12 337 ⇓P P 09 12 27.4 +1.7
baz=29
SADO **Sadowa** 29.13 12 P P 09 12 26.1 +0.4
SADO **Sadowa** 29.13 12 P P 09 12 26.1 +0.4

comp=Z,5.8nm,0.9s,baz=189,slow=7.6,SNR=4.3
M24A Cheyenne 29.15 332 ⇓P P 09 12 27.3 +1.3
baz=29
N23A Red Feather La 29.21 330 ⇑P P 09 12 28.1 +1.4
baz=29
N22A Wattenberg Ran 29.38 330 ⇑P P 09 12 29.9 +1.7
baz=30
P20A De Beque 29.41 326 ⇓P P 09 12 29.6 +1.2
baz=30
K26A Motz Farm, Whi 29.48 336 ⇓P P 09 12 30.6 +1.7
baz=30
U15A North Rim 29.76 317 ⇓P P 09 12 33.2 +1.5
baz=30
O20A White River Ci 29.79 327 ⇑P P 09 12 32.7 +1.0
baz=30
P19A Cripple Cowboy 29.82 325 ⇑P P 09 12 33.3 +1.2
baz=30
N21A Black Mountain 29.87 328 ⇓P P 09 12 33.7 +1.1
baz=30
PDMCI Parker Dam,Lak 29.88 312 ⇓P P 09 12 33.3 +0.9
baz=30
Y12C Blythe 29.89 310 ⇑P P 09 12 33.0 +0.5
baz=30
M22A Cedar Creek Ra 29.91 330 ⇑P P 09 12 34.4 +1.5
baz=30
L23A Garrett 30.06 332 ⇑P P 09 12 35.5 +1.3
baz=30
W13A Hualapai Mount 30.11 313 ⇓P P 09 12 35.3 +0.6
baz=30
LONY Lake Ozonia 30.15 18 *e*P P 09 12 35.4 +0.7
comp=Z,18nm,0.9s
N20A Spence Gulch, 30.31 328 ⇓P P 09 12 37.7 +1.3
baz=30
SRU San Rafael 30.34 323 ⇑P P 09 12 37.5 +0.9
baz=30
O19A Miners Draw (B 30.37 326 ⇑P P 09 12 38.5 +1.6
baz=30
M21A Separation Pea 30.44 330 ⇓P P 09 12 39.4 +1.9
baz=31
P18A Preston Nutter 30.52 324 ⇓P P 09 12 39.0 +0.5
baz=31
BC3 Big Chuckawall 30.53 309 ⇑P P 09 12 39.0 +0.7
baz=31
IRM Iron Mountain 30.54 311 ⇑P P 09 12 38.5 +0.1
baz=31
Q16A Castle Valley 30.59 322 ⇑P P 09 12 40.0 +1.1
baz=31
M20A Sweetwater, Wa 30.75 329 ⇓P P 09 12 41.9 +1.6
baz=31
MONP Monument Peak 30.92 307 ⇑P P 09 12 42.5 +0.6
baz=31
BELC Belle Mtn. Jos 31.09 310 ⇓P P 09 12 43.7 +0.4
baz=31
CCUT Cedar City 31.11 318 *e*P P 09 12 45.9 +2.4
comp=Z,75nm,2.9s
PFO Pinyon Flat Ob 31.26 309 P P 09 12 44.0 -0.7
PFO Pinyon Flat Ob 31.26 309 P P 09 12 44.0 -0.7
comp=Z,3.3nm,1.1s,baz=120,slow=8.1,SNR=3.3
PFO Pinyon Flat Ob 31.26 309 ⇓P P 09 12 45.3 +0.5
baz=31
ARUT Antelope Range 31.30 318 *e*P P 09 12 45.4 +0.3
ARUT pmax pmax
comp=Z,7.0nm,0.8s
ARUT Antelope Range 31.30 318 *e*P P 09 12 45.4 +0.3
comp=Z,6.9nm,0.8s
J22A Midwest 31.44 333 ⇓P P 09 12 47.9 +1.6
baz=32
109C Camp Elliot, M 31.44 307 ⇓P P 09 12 47.1 +0.9
baz=32
MPU Maple Canyon 31.58 323 *e*P P 09 12 49.8 +2.2
comp=Z,16nm,1.2s
EYMN Ely 31.64 355 *e*P P 09 12 46.5 -1.3
comp=Z,13nm,1.0s
K20A Yellowstone Ra 31.71 330 ⇑P P 09 12 50.0 +1.3
baz=32
HEC Hector,Ludlow 31.72 311 ⇓P P 09 12 49.5 +0.7
baz=32
MURC Murrieta 31.81 308 ⇓P P 09 12 50.6 +1.0
baz=32
J21A Lysite 31.82 332 ⇓P P 09 12 51.2 +1.6
baz=32
BBRC Big Bear Solar 31.89 309 ⇓P P 09 12 50.8 +0.4
baz=32
L18A Fontenelle, Gr 32.02 327 ⇑P P 09 12 52.9 +1.4
baz=32
M17A Scullys Gap (B 32.03 326 ⇑P P 09 12 52.7 +1.2
baz=32
I21A Big Trails, Te 32.11 332 ⇑P P 09 12 53.6 +1.4
baz=32
J20A Shoshoni 32.12 331 ⇑P P 09 12 53.6 +1.4
baz=32
G24A Alzada 32.18 337 ⇑P P 09 12 54.5 +1.8
baz=32
SHOC Shoshone 32.20 313 ⇓P P 09 12 54.0 +1.2
baz=32
GSC Goldstone 32.28 311 ⇓P P 09 12 54.7 +0.9
baz=32
H22A Clearmont 32.34 334 ⇓P P 09 12 55.5 +1.5
baz=32
DUG Dugway 32.38 322 *e*P P 09 12 56.2 +1.6
DUG pmax pmax
comp=Z,12nm,1.4s
DUG Dugway 32.38 322 *e*P P 09 12 56.2 +1.6
comp=Z,12nm,1.4s
DUG Dugway 32.38 322 ⇓P P 09 12 55.6 +1.0
baz=32
PDAR Pinedale Array 32.38 329 P P 09 12 55.2 +0.5
PDAR Pinedale Array 32.38 329 P P 09 12 55.2 +0.5
comp=Z,0.5nm,0.8s,baz=128,slow=5.8,SNR=3.0
BFSC Mount Baldy Ra 32.43 309 ⇓P P 09 12 55.9 +0.8
baz=32
G23A Biddle 32.45 336 ⇓P P 09 12 56.3 +1.3
baz=33
SCI San Clemente I 32.59 306 ⇓P P 09 12 57.2 +0.9
baz=33
I20A Worland 32.60 332 ⇑P P 09 12 58.0 +1.6
baz=33
HWUT Hardware Ranch 32.61 325 *e*P P 09 12 57.4 +0.8
comp=Z,58nm,2.0s
F24A Ekalaka 32.63 338 ⇑P P 09 12 57.8 +1.2
baz=33
G22A Birney 32.82 335 ⇓P P 09 12 59.5 +1.2
baz=33
FURC Furnace Creek, 32.88 313 ⇓P P 09 12 59.7 +0.9
baz=33
F23A Volborg 32.89 337 ⇓P P 09 13 00.3 +1.4
baz=33
EDW2 Edwards Air Fo 32.96 310 ⇑P P 09 13 00.3 +0.7
baz=33
H20A Greybull 32.96 332 ⇓P P 09 13 00.6 +1.0
baz=33
LRMC Laurel Mountai 33.00 311 ⇓P P 09 13 00.9 +0.8
baz=33
R11A Troy Canyon, C 33.01 317 ⇓P P 09 13 01.3 +1.2
baz=33
I19A Meeteetse 33.06 331 ⇑P P 09 13 01.8 +1.3
baz=33
MPMC Manual Prospec 33.13 312 ⇑P P 09 13 02.1 +0.8
baz=33
E24A Baker 33.20 339 ⇓P P 09 13 03.4 +1.8
baz=33
F22A Rosebud 33.27 336 ⇑P P 09 13 02.9 +0.8
baz=33
REDW Red Top Meadow 33.47 328 *e*P P 09 13 04.2 0.0
comp=Z,0.4nm,1.1s
SNOW Snow King Moun 33.49 328 *e*P P 09 13 04.7 +0.3
comp=Z,30nm,0.9s
GRAC Grapevine Rang 33.50 314 ⇑P P 09 13 05.3 +1.0
baz=34
E23A Ismay 33.51 337 ⇓P P 09 13 05.1 +0.9
baz=34,SNR=5.4
LOHW Long Hollow 33.52 329 *e*P P 09 13 04.5 -0.1
comp=Z,17nm,1.1s
H19A Powell 33.55 332 ⇓P P 09 13 05.9 +1.2
baz=34
TPAW Teton Pass 33.61 328 *e*P P 09 13 06.3 +0.8
comp=Z,24nm,1.1s
G20A Bridger 33.63 333 ⇓P P 09 13 06.5 +1.1
baz=34
ISA Isabella 33.66 311 ⇑P P 09 13 06.4 +0.6
baz=34
MOOW Moose Ponds 33.69 329 *e*P P 09 13 05.9 -0.2
comp=Z,29nm,1.8s
RRI2 Red Ridge 33.69 328 *e*P P 09 13 07.1 +0.9
comp=Z,21nm,1.1s
E22A Miles City 33.70 337 ⇑P P 09 13 07.2 +1.3
baz=34
DCID1 Drake Creek 33.80 328 *e*P P 09 13 08.3 +1.3
comp=Z,203nm,2.8s
H18A Shoshone NF, C 33.86 331 ⇑P P 09 13 09.0 +1.4
baz=34
IMW Indian Meadow 33.90 329 *e*P P 09 13 08.8 +0.8
comp=Z,21nm,1.5s
D23A Lindsay 34.04 338 ⇑P P 09 13 10.3 +1.4
baz=34
C24A Savage 34.08 339 ⇑P P 09 13 10.2 +1.1
baz=34
ELK Elko 34.17 321 *e*P P 09 13 11.9 +1.6
comp=Z,492nm,1.6s
E21A Keefer Ranch, 34.22 336 ⇑P P 09 13 11.0 +0.6
baz=34,SNR=6.6
G18A Lazy EL Ranch, 34.30 332 ⇓P P 09 13 12.1 +0.8
baz=34
PKM Peak Mountain 34.32 309 ⇑P P 09 13 11.9 +0.3
baz=34
D22A Cohagen 34.38 337 ⇑P P 09 13 13.1 +1.3
baz=34
F19A Roth Farm, Mol 34.45 333 ⇑P P 09 13 13.2 +0.8
baz=35
YMR Madison River 34.47 330 P P 09 13 19.0 +6.1
comp=Z,11nm,1.1s
RCTC Rector, Farmer 34.50 311 ⇓P P 09 13 13.7 +0.8
baz=35
C23A Lambert 34.57 339 ⇑P P 09 13 15.1 +1.7
baz=35
D21A La Casta Ranch 34.62 336 ⇓P P 09 13 15.5 +1.6
baz=35
H16A Russell Place, 34.64 330 ⇑P P 09 13 15.7 +1.4
baz=35
NV11 Mina Array Sit 34.76 315 *e*P P 09 13 16.4 +1.1
C22A Vida 34.77 338 ⇓P P 09 13 16.3 +1.2
baz=35
DGMT Dagmar 34.82 340 *e*P P 09 13 16.3 +0.8
comp=Z,338nm,2.6s
DGMT Dagmar 34.82 340 ⇓P P 09 13 16.6 +1.1
baz=35
F18A Big Timber 34.83 332 ⇑P P 09 13 17.2 +1.5
baz=35
J14A Carey 34.83 326 ⇑P P 09 13 16.9 +1.0
baz=35
E19A Rath Farm, Rou 34.85 334 ⇑P P 09 13 16.6 +0.7
baz=35
NVAR Mina Array Bea 34.86 315 P P 09 13 15.4 -0.9
NVAR Mina Array Bea 34.86 315 P P 09 13 15.4 -0.9
comp=Z,5.0nm,1.1s,baz=127,slow=8.9,SNR=15
D20A Manuel Ranch, 35.09 335 ⇓P P 09 13 18.8 +0.8
baz=35,SNR=6.0
A24A Westby 35.16 341 ⇓P P 09 13 20.0 +1.6
baz=35
I14A Mackay 35.21 327 ⇑P P 09 13 20.3 +1.1
baz=35
BMN Battle Mountai 35.22 319 *e*P P 09 13 20.2 +0.9
BMN pmax pmax
comp=Z,14nm,1.1s
BMN Battle Mountai 35.22 319 *e*P P 09 13 20.2 +0.9
comp=Z,14nm,1.1s
J13A Cove Ranch, Pi 35.24 325 ⇑P P 09 13 20.7 +1.3
baz=35
F17A Fitzpatrick Pl 35.25 331 ⇑P P 09 13 21.1 +1.6
baz=35
H15A Lima 35.27 328 ⇑P P 09 13 21.3 +1.6
baz=35
B22A Reddig Ranch S 35.28 338 ⇑P P 09 13 21.6 +2.0
baz=35
C21A Desert Coulee 35.29 337 ⇓P P 09 13 20.7 +1.1
baz=35
G16A Moss Hill, Enn 35.29 330 ⇓P P 09 13 21.1 +1.2
baz=35
E18A Harlowton 35.42 333 ⇑P P 09 13 22.0 +1.1
baz=36
D19A Cripps Ranch, 35.45 334 ⇓P P 09 13 22.4 +1.3
baz=36
BOZ Bozeman (W) 35.51 330 *e*P P 09 13 23.7 +2.0
BOZ pmax pmax
comp=Z,9.0nm,1.1s
BOZ Bozeman (W) 35.51 330 *e*P P 09 13 23.7 +2.0
comp=Z,9.0nm,1.1s
MCMT McKenzie Canyo 35.52 328 *e*P P 09 13 23.3 +1.4
comp=Z,8.3nm,1.2s
C20A Veseth Ranch, 35.54 336 ⇓P P 09 13 23.3 +1.5
baz=36
I13A Wildhorse Cree 35.55 326 ⇑P P 09 13 23.6 +1.4
baz=36
G15A Dillon 35.58 329 ⇑P P 09 13 23.5 +1.2
baz=36
F16A Kennard Place, 35.61 330 ⇓P P 09 13 23.7 +1.1
baz=36
H14A Leadore 35.64 328 ⇓P P 09 13 24.2 +1.4
baz=36
E17A Martinsdale 35.76 332 ⇓P P 09 13 25.1 +1.2
baz=36
DLMT Dillon 35.77 329 *e*P P 09 13 24.8 +0.8
comp=Z,17nm,1.3s
A22A Carney Farms, 35.84 339 ⇓P P 09 13 26.0 +1.6
baz=36
D18A Linhart Farms, 35.87 334 ⇑P P 09 13 25.4 +0.7
baz=36
C19A Slack Wire Ran 35.98 335 ⇓P P 09 13 27.0 +1.4
baz=36
I12A Atlanta 36.02 325 ⇓P P 09 13 26.8 +0.6
baz=36
LRM Limekiln Ridge 36.03 330 *e*P P 09 13 28.1 +1.8
F15A Butte 36.07 330 ⇑P P 09 13 27.7 +1.1
baz=36
MFID Camas Ranch 36.17 324 *e*P P 09 13 28.1 +0.8
comp=Z,40nm,2.8s
MFID Camas Ranch 36.17 324 ⇓P P 09 13 28.3 +1.0
baz=36
E16A East Helena 36.19 331 ⇑P P 09 13 28.8 +1.3
baz=36
D17A Six Diamond Ra 36.21 333 ⇑P P 09 13 29.4 +1.7
baz=36
H12A Diamond D Ranc 36.37 326 ⇓P P 09 13 30.1 +1.0
baz=36
G13A Cobalt 36.41 327 ⇓P P 09 13 30.8 +1.4
baz=36
A20A Cobblestone Ra 36.47 337 ⇑P P 09 13 31.5 +1.7
baz=37
F14A Wisdom 36.48 329 ⇑P P 09 13 31.5 +1.5
baz=37
D16A Dana Ranch, Ca 36.50 332 ⇓P P 09 13 31.6 +1.4
baz=37
B19A Brinkman Farms 36.51 336 ⇑P P 09 13 31.5 +1.3
baz=37
E15A Deer Lodge 36.56 330 ⇑P P 09 13 31.9 +1.2
baz=37
B18A Beardsley Farm 36.80 335 ⇑P P 09 13 34.1 +1.5
baz=37
A19A Klindworth Far 36.82 336 ⇑P P 09 13 33.9 +1.2
baz=37
F13A Darby 36.94 328 ⇑P P 09 13 34.9 +0.9
baz=37
D15A Lincoln 36.96 331 ⇑P P 09 13 34.9 +0.8
baz=37
E14A Clinton 36.97 330 ⇓P P 09 13 35.5 +1.3
baz=37
G12A Big Creek, Yel 37.01 327 ⇓P P 09 13 35.1 +0.6
baz=37
B17A L&G Farms, Che 37.14 334 ⇑P P 09 13 36.6 +1.1
baz=37
C16A Fuhringer Ranc 37.17 333 ⇓P P 09 13 36.8 +0.9
baz=37
WVOR Wild Horse Val 37.23 321 *e*P P 09 13 36.6 +0.2
WVOR pmax pmax
comp=Z,8.0nm,1.0s
WVOR Wild Horse Val 37.23 321 *e*P P 09 13 36.6 +0.2
comp=Z,7.8nm,1.0s
A18A Metzger Ranch, 37.24 335 ⇑P P 09 13 37.4 +1.0
baz=37
E13A Victor 37.32 329 ⇓P P 09 13 38.5 +1.3
baz=37
F12A Elk City 37.39 327 ⇑P P 09 13 38.9 +1.1
baz=38
MSO Missoula 37.48 330 P P 09 13 38.5 +0.1
comp=Z,10nm,1.4s
C15A Salmond Ranch, 37.54 332 ⇓P P 09 13 40.0 +1.0
baz=38
A17A Triple J Farms 37.61 335 ⇓P P 09 13 40.1 +0.6
baz=38
BMO Blue Mountains 37.90 325 *e*P P 09 13 44.5 +2.4
comp=Z,156nm,3.0s
D13A Huson 37.91 330 ⇑P P 09 13 43.1 +1.0
baz=38
B15A Bradely Ranch, 37.92 333 ⇓P P 09 13 43.2 +1.0
baz=38
B14A Marquette Ranc 38.27 332 ⇓P P 09 13 45.9 +0.7
baz=38
D12A Red Ives Fores 38.32 329 ⇓P P 09 13 46.9 +1.3
baz=38
C13A Hot Springs 38.38 330 ⇓P P 09 13 47.0 +1.0
baz=38
A14A Double T Ranch 38.79 333 ⇑P P 09 13 50.5 +1.0
baz=39
B13A Whitefish 38.83 331 ⇓P P 09 13 50.7 +0.9
baz=39
WALA Waterton Lakes 39.07 332 *e*P P 09 13 52.2 +0.3
comp=Z,1.1nm,1.6s
LON Longmire 41.56 324 *e*P P 09 14 11.5 -0.9
LON pmax pmax
comp=Z,85nm,2.8s
LON Longmire 41.56 324 *e*P P 09 14 11.5 -0.9
comp=Z,85nm,2.8s
YKA Yellowknife Ar 49.84 344 P P 09 15 16.5 -1.1
YKA Yellowknife Ar 49.84 344 P P 09 15 16.5 -1.1
comp=Z,0.8nm,0.6s,baz=139,slow=7.6,SNR=14
DLBC Dease Lake 52.40 333 *e*P P 09 15 38.0 +1.0
PLCA Paso Flores 58.96 165 P P 09 16 34.4 +10
comp=Z,5.0nm,1.0s,baz=347,slow=11,SNR=4.5
DOT Dot Lake 60.89 335 *e*P P 09 16 42.0 +4.8
comp=Z,0.6nm,0.4s
ILAR Eielson Array 62.46 335 P P 09 16 47.0 -0.8
ILAR Eielson Array 62.46 335 P P 09 16 47.0 -0.8
comp=Z,4.1nm,1.1s,baz=97,slow=5.2,SNR=5.7
SUMG Summit 62.78 15 *i* P P 09 16 59.0 +8.7
SUMG pmax pmax
comp=Z,11nm,1.0s
SUMG Summit 62.78 15 *i* P P 09 16 59.0 +8.7
comp=Z,11nm,1.0s
TRF Thorofare Moun 63.43 333 *e*P P 09 16 53.7 -0.7
comp=Z,13nm,1.0s
COLD Coldfoot 64.58 337 *e*P P 09 17 05.5 +3.8
comp=Z,12nm,1.1s
ESDC Sonseca Array 74.76 53 P P 09 18 08.8 +3.7
ESDC Sonseca Array 74.76 53 P P 09 18 08.8 +3.7
comp=Z,0.8nm,0.5s,baz=35,slow=39,SNR=3.0
KBS Kingsbay 75.81 11⇑ *e*P P 09 18 10.9 +0.5
KBS pmax pmax
comp=Z,22nm,1.7s
NB2 NORSAR Subarra 79.92 29 P P 09 18 39.1 +5.5
comp=Z,1.1nm,0.7s,baz=286,slow=5.9
NOA NORSAR Array B 79.92 29 P P 09 18 34.4 +0.8
NOA NORSAR Array B 79.92 29 P P 09 18 34.4 +0.8
comp=Z,1.4nm,0.8s,baz=283,slow=5.4,SNR=2.4
BILL Bilibino 80.88 339 *e*P P 09 18 37.0 -1.6
BILL pmax pmax
comp=Z,11nm,1.2s
TORD Torodi Ar. Bea 85.53 78 P P 09 19 08.6 +5.0
TORD Torodi Ar. Bea 85.53 78 P P 09 19 08.6 +5.0
comp=Z,0.7nm,0.9s,baz=295,slow=5.7,SNR=5.9
LVZ Lovozero 86.17 19⇑ *e*P P 09 19 03.9 -1.9
LVZ pmax pmax
comp=Z,31nm,1.4s
VSU Vasula 88.15 29⇑ *e*P P 09 19 16.9 +1.4
VSU pmax pmax
comp=Z,33nm,1.7s
WMQ Urumqi 119.91 4 *e*PKP PKPdf 09 25 12.5 -3.1
KSH Kashi 122.25 15 *e*PKP PKPdf 09 25 24.0 +3.6
KSH *e*SKS SKSdf 09 32 30.8 -2.0
NJ2 Nanjing 125.64 332 *e*PKP PKPdf 09 25 26.8 -0.1
TAU Tasmania Unive 126.69 228 *e*PKIKP PKPdf 09 25 27.9 -0.5
TAU Tasmania Unive 126.69 228 *e*PKPdf PKPdf 09 25 27.9 -0.5
LZH Lanzhou 126.73 349 *e*PKP PKPdf 09 25 26.5 -2.6
LZH sPKP 09 25 31.0
LZH LR LR
comp=N,150nm,17.9s
LZH LR LR
comp=E,160nm,18.8s
LZH LR LR
comp=Z,180nm,20.1s
CD2 Chengdu 131.75 347 PKP PKPdf 09 25 38.3 -0.3
GYA Guiyang 135.26 342 *e*Pdif Pdif 09 22 47.0 -0.5
GYA PKP PKPdf 09 25 44.8 -0.6
GYA PP PP 09 28 23.8 +4.2
GYA AMB AMB
comp=Z,90nm,7.7s
KMI Kunming 137.56 346 PKP PKPdf 09 25 50.8 +0.9
WRA Warramunga Arr 140.25 258 PKPpre PKPpre 09 25 54.0
WRA Warramunga Arr 140.25 258 PKhKP PKPpre 09 25 54.0
comp=Z,1.1nm,1.0s,baz=83,slow=3.5,SNR=5.1
ASAR Alice Springs 140.62 253 PKPpre PKPpre 09 25 54.0
ASAR Alice Springs 140.62 253 PKhKP PKPpre 09 25 54.0
comp=Z,0.9nm,0.7s,baz=106,slow=3.1,SNR=11
CMAR Chiang Mai Arr 144.80 350 PKP PKPdf 09 26 06.8 +4.1
CMAR Chiang Mai Arr 144.80 350 PKP PKPdf 09 26 06.8 +4.1
comp=Z,0.9nm,0.3s,baz=340,slow=3.1,SNR=4.4
FITZ Fitzroy Crossi 148.41 262 PKPbc PKPab 09 26 17.5 +2.0
FITZ Fitzroy Crossi 148.41 262 PKPbc PKPab 09 26 17.5 +2.0
comp=Z,3.6nm,0.9s,baz=153,slow=22,SNR=5.5

IDC 28 09:11:02.8±7.6, 16°.52N×86°.26W, h0km, mb3.6/3, mb1 4.2/4, mb1mx3.7/23, mbtmp3.9/4, ML4.8/1, Error ellipse: s-maj=143.1km s-min=91.6km az=16.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**4.15**	**333**	Pn	Pn	09 12 07.6	+0.1
	60nm,0.3s,baz=240,slow=0.8,SNR=6.1						
TEIG				Sn	Sn	09 12 51.0	-5.7
	22nm,0.3s,baz=244,slow=23,SNR=5.1						
TXAR	**Lajitas Array**	**20.45**	**312**	P	P	09 15 42.4	+0.3
	2.9nm,1.0s,baz=130,slow=14,SNR=1.7						
PDAR	**Pinedale Array**	**32.86**	**328**	P	P	09 17 37.5	-1.2
	0.9nm,0.6s,baz=122,slow=11,SNR=3.8						
YKA	**Yellowknife Ar**	**50.04**	**343**	P	P	09 19 59.3	+0.5
	0.4nm,0.6s,baz=138,slow=7.7,SNR=6.8						

IDC 28 09:12:06.4±9.1, 21°.12S×173°.39W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.8/20, mbtmp3.9/3, Error ellipse: s-maj=400.9km s-min=39.2km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**48.58**	**257**	P	P	09 20 51.0	-0.9
	2.8nm,0.7s,baz=88,slow=8.4,SNR=40						
WRA	**Warramunga Arr**	**48.78**	**262**	P	P	09 20 54.3	+0.7
	0.9nm,1.0s,baz=102,slow=6.2,SNR=4.4						
ILAR	**Eielson Array**	**88.02**	**11**	P	P	09 24 58.1	+0.1
	1.0nm,1.0s,baz=207,slow=5.3,SNR=6.4						

*IDC **28** 09:18:16.7±2.3, 8°.67S×106°.66E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.8/24, mbtmp4.0/9, Error ellipse: s-maj=116.6km s-min=16.0km az=50.0*
*AUST **28** 09:18:18.7±1.6, 8°.245S×106°.41E, h106km, Error ellipse: s-maj=2.7km s-min=0.8km az=305.0*
*ISCJB **28** 09:18:20.9±0.5, 8°.55S±0°.05×106°.82E±0°.06, h33km, mb3.9/8, Error ellipse: s-maj=10.3km s-min=5.2km az=37.7*
*DJA **28** 09:18:27.6±1.5, 8°S±8°×10°7E±°, h18km±15km, M4.0/8, ML4.0/8*

ISC 28 09:18:22.5±0.8, 8°.56S±0°.06×106°.84E±0°.08, h35km, n28, σ1°69/22, mb4.0/8, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.39**	**44**	P	**Pn**	**09 18 45.0**	**-0.5**
CISI				S	**Sn**	**09 19 01.6**	**-1.1**
CISI	**Cisompet, Garu**	**1.39**	**44**	P	**Pn**	**09 18 44.5**	**-1.0**
	baz=1.5,SNR=17						
CISI				S	**Sn**	**09 19 00.9**	**-1.8**
	baz=1.5,SNR=7.9						
SKJI	**Sukabumi**	**1.57**	**350**	P	Pn	09 18 54.4	+6.5
LEM	**Lembang**	**1.89**	**24**	P	Pn	09 18 56.5	+4.1
LEM	**Lembang**	**1.89**	**24**	P	**Pn**	**09 18 53.8**	**+1.4**
	baz=1.9,SNR=23						
DBJI	**Dramaga**	**1.99**	**358**	P	Pn	09 18 56.8	+3.0
XMI	**Christmas Isla**	**2.19**	**211**	P	Pn	09 18 57.3	+0.7
	baz=2.3,SNR=11						
XMI				S	**Sn**	**09 19 24.6**	**+2.1**
	baz=2.3,SNR=5.0						
XMIS	**Christmas Isla**	**2.24**	**211**	P	**Pn**	**09 18 57.6**	**+0.5**
	baz=2.4,SNR=3.0						
XMIS				S	**Sn**	**09 19 22.0**	**-1.7**
	baz=2.4,SNR=7.8						
TGJI	**Tegal**	**2.82**	**54**	P	**Pn**	**09 19 07.0**	**+1.9**
BJII	**Banjamegara**	**3.10**	**67**	P	**Pn**	**09 19 10.9**	**+1.9**
UGM	**Wanagama**	**3.71**	**80**	P	**Pn**	**09 19 16.4**	**-1.0**
	baz=4.1,SNR=10						

PWJI	**Pagerwojo**	**4.95**	**84**	P		Pn	09 19 37.9	+3.5
JAGI	**Jajag, Banyuwa**	**7.24**	**90**	P		**Pn**	**09 20 07.4**	**+1.5**
	baz=7.7,SNR=4.5							
GIRL	**Giralia**	**15.71**	**154**	P		**Pn**	**09 21 59.6**	**-1.6**
	baz=16,SNR=3.2							
LUWI	**Luwuk**	**17.54**	**66**	P		Pn	09 22 19.2	-5.3
	baz=18,SNR=4.3							
LUWI				S		**S**	**09 25 50.7**	**+4.8**
	baz=18,SNR=4.6							
FITZ	**Fitzroy Crossi**	**20.59**	**119**	P		Pn	09 22 59.5	-1.6
	4.1nm,0.8s,baz=266,slow=7.0,SNR=7.5							
FITZ	**Fitzroy Crossi**	**20.59**	**119**	P		Pn	09 22 59.7	-1.5
	baz=21,SNR=3.2							
MTN	**Manton Dam**	**24.24**	**102**	P		P	09 23 46.7	+10
	baz=25,SNR=4.2							
KDU	**Kakadu**	**25.52**	**101**	P		P	09 23 39.6	-8.4
	baz=26,SNR=5.4							
WRA	**Warramunga Arr**	**28.91**	**116**	P		**P**	**09 24 18.5**	**0.0**
	0.6nm,0.7s,baz=290,slow=10,SNR=4.8							
ASAR	**Alice Springs**	**29.95**	**123**	P		**P**	**09 24 28.0**	**+0.3**
	0.5nm,0.9s,baz=299,slow=8.4,SNR=3.9							
PALU	**Palau**	**31.76**	**61**	S		S	09 29 40.8	-11
	baz=32,SNR=10							
STKA	**Stephens Creek**	**39.74**	**131**	P		**P**	**09 25 50.7**	**-1.3**
	1.8nm,0.7s,baz=258,slow=7.2,SNR=5.1							
SONM	**Songino Array**	**56.15**	**360**	P		**P**	**09 27 58.8**	**0.0**
	0.3nm,0.4s,baz=153,slow=4.5,SNR=2.5							
MKAR	**Makanchi Array**	**59.29**	**341**	P		**P**	**09 28 19.9**	**-0.8**
	0.6nm,0.4s,baz=153,slow=8.4,SNR=20							
KURBB	**Kurchatov Arra**	**63.85**	**340**	P		**P**	**09 28 51.6**	**+0.2**
	1.7nm,0.5s,baz=156,slow=5.8,SNR=16							
ZALV	**Zalesovo Beam**	**64.99**	**346**	P		**P**	**09 28 58.1**	**-0.6**
	1.0nm,0.4s,baz=145,slow=11,SNR=3.5							
BVAR	**Borovoye Array**	**68.73**	**337**	P		**P**	**09 29 23.3**	**+0.6**
	3.8nm,0.5s,baz=144,slow=9.2,SNR=20							

*IDC **28** 09:22:57.0±1.6,38°.22N×22°.12E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.4/28, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=113.4km s-min=23.6km az=141.0*
*ISCJB **28** 09:23:00.7±0.2, 37°.90N±0°.01×22°.55E±0°.02, h24km±2km, mb3.5/4, Error ellipse: s-maj=2.5km s-min=2.4km az=37.7*
*THE **28** 09:23:00.9, 37°.91N×22°.57E, h12km, ML3.4/7, Error ellipse: s-maj=0.5km s-min=0.3km az=282.0*
*ATH **28** 09:23:00.0, 37°.91N×22°.57E, h25km, MD3.3/36, ML3.3*
*CSEM **28** 09:23:00.5±0.1, 37°.91N×22°.57E, h15km, ML3.4/7, Error ellipse: s-maj=2.0km s-min=1.8km az=61.0*

ISC 28 09:23:00.2±0.8, 37°.91N±0°.01×22°.56E±0°.01, h20km±2km, n128, σ0$88/192, mb3.6/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THAL	**Thalero**	**0.15**	**33**	P	**Pg**	**09 23 04.6**	**-0.1**
THAL				S	**Sg**	**09 23 07.2**	**-0.5**
THAL	**Thalero**	**0.15**	**33**	P	**Pg**	**09 23 04.6**	**-0.1**
THAL				S	**Sg**	**09 23 07.2**	**-0.5**
GUR	**Goura**	**0.17**	**279**	P	**Pg**	**09 23 05.1**	**+0.1**
GUR				S	**Sg**	**09 23 08.0**	**-0.3**
GUR	**Goura**	**0.17**	**279**	*e*PB	**Pg**	**09 23 05.2**	**+0.2**
GUR				*e*SB	**Sg**	**09 23 08.4**	**+0.1**
GUR	**Goura**	**0.17**	**279**	*e*Pb	**Pg**	**09 23 05.2**	**+0.2**
GUR				S	**Sg**	**09 23 08.0**	**-0.3**
GUR				*e*Sb	**Sg**	**09 23 08.4**	**+0.1**
LTK	**Loutraki**	**0.34**	**70**	P	**Pb**	**09 23 07.6**	**-0.1**
LTK				S	**Sb**	**09 23 12.3**	**-0.5**
LTK	**Loutraki**	**0.34**	**70**	*e*PB	**Pb**	**09 23 07.7**	**0.0**
LTK				*e*SB	**Sb**	**09 23 12.7**	**-0.1**
LTK	**Loutraki**	**0.34**	**70**	P	**Pb**	**09 23 07.7**	**0.0**
LTK				S	**Sb**	**09 23 12.3**	**-0.5**
LTK				*e*Sb	**Sb**	**09 23 12.7**	**-0.1**
KLV	**Kalavryta, Ach**	**0.35**	**293**	*e*PB	**Pb**	**09 23 07.8**	**0.0**
KLV				*e*SB	**Sb**	**09 23 13.5**	**+0.5**
KLV	**Kalavryta, Ach**	**0.35**	**293**	*e*Pb	**Pb**	**09 23 07.8**	**0.0**
KLV				*e*Sb	**Sb**	**09 23 13.5**	**+0.5**
DSF	**Desfina**	**0.50**	**357**	P	**Pb**	**09 23 10.4**	**0.0**
DSF				S	**Sb**	**09 23 17.9**	**+0.5**
DSF	**Desfina**	**0.50**	**357**	P	**Pb**	**09 23 10.4**	**0.0**
DSF				S	**Sb**	**09 23 17.9**	**+0.5**
VLX	**Vlachokerasia**	**0.56**	**195**	P	**Pb**	**09 23 11.5**	**+0.3**
VLX				S	**Sn**	**09 23 19.5**	**+0.7**
VLX	**Vlachokerasia**	**0.56**	**195**	*e*PN	**Pb**	**09 23 11.6**	**+0.3**
VLX				*e*SN	**Sb**	**09 23 19.5**	**+0.7**
VLX	**Vlachokerasia**	**0.56**	**195**	P	**Pb**	**09 23 11.5**	**+0.3**
VLX				S	**Sb**	**09 23 18.5**	**-0.3**
VLX				*e*Sn	**Sb**	**09 23 19.5**	**+0.7**
LAKA	**Lakka**	**0.56**	**306**	P	**Pb**	**09 23 11.5**	**+0.1**
LAKA				S	**Sb**	**09 23 19.7**	**+0.7**
LAKA	**Lakka**	**0.56**	**306**	*e*PN	**Pb**	**09 23 11.6**	**+0.1**
LAKA				*e*SN	**Sb**	**09 23 19.9**	**+0.9**
LAKA	**Lakka**	**0.56**	**306**	P	**Pb**	**09 23 11.5**	**+0.1**
LAKA				S	**Sb**	**09 23 19.7**	**+0.7**
KALE	**Kalithea**	**0.58**	**326**	P	**Pn**	**09 23 12.2**	**-1.3**
KALE				S	**Sb**	**09 23 20.2**	**+0.6**
KALE	**Kalithea**	**0.58**	**326**	*e*PN	**Pn**	**09 23 12.2**	**-1.3**
KALE				*e*SN	**Sb**	**09 23 20.4**	**+0.8**
KALE	**Kalithea**	**0.58**	**326**	P	**Pn**	**09 23 12.2**	**-1.3**
KALE				S	**Sb**	**09 23 20.2**	**+0.6**
TRIZ	**Trizonia**	**0.59**	**320**	P	**Pn**	**09 23 12.2**	**-1.3**
TRIZ				S	**Sn**	**09 23 21.1**	**-1.6**
TRIZ	**Trizonia**	**0.59**	**320**	*e*PN	**Pn**	**09 23 12.5**	**-1.0**
TRIZ				*e*SN	**Sn**	**09 23 20.8**	**-1.9**
TRIZ	**Trizonia**	**0.59**	**320**	P	**Pn**	**09 23 12.3**	**-1.3**
TRIZ				S	**Sb**	**09 23 20.0**	**+0.1**
TRIZ				*e*Sn	**Sn**	**09 23 20.8**	**-1.9**
VIL2	**Platees**	**0.64**	**61**	P	**Pn**	**09 23 13.1**	**-1.1**
VIL2				S	**Sn**	**09 23 22.1**	**-1.7**
DID	**Didima**	**0.67**	**126**	P	**Pg**	**09 23 13.3**	**-0.2**
DID				S	**Sn**	**09 23 23.1**	**-1.5**
DID	**Didima**	**0.67**	**126**	*e*PN	**Pn**	**09 23 13.4**	**-1.2**
DID				*e*SN	**Sn**	**09 23 23.3**	**-1.3**
DID	**Didima**	**0.67**	**126**	P	**Pg**	**09 23 13.3**	**-0.2**
DID				S	**Sg**	**09 23 22.4**	**-0.1**
DID				*e*Sn	**Sn**	**09 23 23.3**	**-1.3**
UPR	**University Cam**	**0.71**	**302**	P	**Pn**	**09 23 14.7**	**-0.5**
EFP	**Efpalio**	**0.73**	**315**	P	**Pn**	**09 23 14.6**	**-0.6**
EFP				S	**Sn**	**09 23 26.0**	**0.0**
EFP	**Efpalio**	**0.73**	**315**	*e*PN	**Pn**	**09 23 14.8**	**-0.6**
EFP	**Efpalio**	**0.73**	**315**	P	**Pn**	**09 23 14.7**	**-0.6**
EFP				S	**Sn**	**09 23 24.9**	**-1.1**
NAIG	**Nisos Aigina**	**0.75**	**101**	*e*PN	**Pn**	**09 23 15.2**	**-0.5**
NAIG	**Nisos Aigina**	**0.75**	**101**	*e*Pn	**Pn**	**09 23 15.2**	**-0.5**
AMT	**Artemida-Makis**	**0.77**	**241**	*e*PN	**Pn**	**09 23 15.3**	**-0.7**
AMT	**Artemida-Makis**	**0.77**	**241**	P	**Pn**	**09 23 15.2**	**-0.7**
AMT				S	**Sn**	**09 23 25.9**	**-1.1**
LKR	**Lokris**	**0.82**	**25**	*e*PN	**Pn**	**09 23 15.7**	**-0.9**
LKR				*e*SN	**Sn**	**09 23 27.6**	**-0.6**
LKR	**Lokris**	**0.82**	**25**	*e*Pn	**Pn**	**09 23 15.7**	**-0.9**
LKR				*e*Sn	**Sn**	**09 23 27.6**	**-0.6**
AXAR	**Agios Charalam**	**0.86**	**5**	P	**Pn**	**09 23 16.8**	**-0.4**
AXAR	**Agios Charalam**	**0.86**	**5**	P	**Pn**	**09 23 16.8**	**-0.4**
AXAR				S	**Sn**	**09 23 29.6**	**+0.3**
ATAL	**Atalanti**	**0.86**	**25**	P	**Pn**	**09 23 16.6**	**-0.7**
ATAL				S	**Sn**	**09 23 30.2**	**+0.9**
ATAL	**Atalanti**	**0.86**	**25**	P	**Pn**	**09 23 16.6**	**-0.7**
ATAL				S	**Sn**	**09 23 28.4**	**-0.9**
RLS	**Riolos of Patr**	**0.88**	**280**	P	**Pn**	**09 23 17.1**	**-0.3**
RLS				S	**Sn**	**09 23 30.7**	**+1.2**
RLS	**Riolos of Patr**	**0.88**	**280**	*e*PN	**Pn**	**09 23 17.1**	**-0.3**
RLS				*e*SN	**Sn**	**09 23 30.5**	**+1.0**
RLS	**Riolos of Patr**	**0.88**	**280**	P	**Pn**	**09 23 17.1**	**-0.3**
RLS				S	**Sn**	**09 23 29.3**	**-0.2**
RLS				*e*Sn	**Sn**	**09 23 30.5**	**+1.0**
ITM	**Ithomi**	**0.88**	**215**	P	**Pn**	**09 23 17.2**	**-0.3**
ITM	**Ithomi**	**0.88**	**215**	*e*PN	**Pn**	**09 23 17.3**	**-0.3**
ITM	**Ithomi**	**0.88**	**215**	P	**Pn**	**09 23 17.2**	**-0.3**
ITM				S	**Sn**	**09 23 30.0**	**+0.2**
ATH	**Athens Observa**	**0.92**	**86**	*e*PN	**Pn**	**09 23 17.9**	**-0.1**
ATH				*e*SN	**Sn**	**09 23 31.2**	**+0.6**
ATH	**Athens Observa**	**0.92**	**86**	*e*Pn	**Pn**	**09 23 17.9**	**-0.1**
ATH				*e*Sn	**Sn**	**09 23 31.2**	**+0.6**
ATHU	**Athens Univers**	**0.97**	**86**	P	**Pg**	**09 23 19.1**	**0.0**
ATHU				S	**Sn**	**09 23 32.9**	**+0.9**
ATHU	**Athens Univers**	**0.97**	**86**	P	**Pg**	**09 23 19.1**	**0.0**
ATHU				S	**Sn**	**09 23 32.9**	**+0.9**
PTL	**Penteli**	**1.04**	**82**	P	**Pg**	**09 23 20.3**	**-0.2**
PTL				S	**Sg**	**09 23 34.9**	**+0.7**
PTL	**Penteli**	**1.04**	**82**	*e*PN	**Pg**	**09 23 20.4**	**-0.1**
PTL				*e*SN	**Sg**	**09 23 34.0**	**-0.2**
PTL	**Penteli**	**1.04**	**82**	*e*Pn	**Pg**	**09 23 20.4**	**-0.1**
PTL				*e*Sn	**Sg**	**09 23 34.0**	**-0.2**
PTL				S	**Sg**	**09 23 34.9**	**+0.7**
AGG	**Agios Georgios**	**1.13**	**351**	P	**Pg**	**09 23 21.6**	**-0.5**
AGG				S	**Sg**	**09 23 37.6**	**+0.7**
AGG	**Agios Georgios**	**1.13**	**351**	*e*PN	**Pg**	**09 23 21.2**	**-0.9**
AGG	**Agios Georgios**	**1.13**	**351**	*e*Pn	**Pg**	**09 23 21.2**	**-0.9**
AGG	**Agios Georgios**	**1.13**	**351**	P	**Pg**	**09 23 21.6**	**-0.5**
AGG				S	**Sg**	**09 23 37.6**	**+0.7**
MRKA	**Markates**	**1.14**	**45**	P	**Pg**	**09 23 21.6**	**-0.6**
MRKA				S	**Sg**	**09 23 37.7**	**+0.5**
MRKA	**Markates**	**1.14**	**45**	P	**Pg**	**09 23 21.6**	**-0.6**
MRKA				S	**Sg**	**09 23 37.7**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.15**	**343**	P	**Pg**	**09 23 22.4**	**-0.2**
MAKR				S	**Sg**	**09 23 37.8**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.15**	**343**	P	**Pg**	**09 23 22.4**	**-0.2**
MAKR				S	**Sg**	**09 23 37.8**	**+0.1**
DYR	**Agios Nikonas**	**1.16**	**189**	P	**Pg**	**09 23 21.9**	**-0.7**
DYR	**Agios Nikonas**	**1.16**	**189**	*e*PN	**Pg**	**09 23 22.0**	**-0.7**
DYR	**Agios Nikonas**	**1.16**	**189**	*e*Pn	**Pg**	**09 23 22.0**	**-0.7**
EVR	**Evrytania**	**1.17**	**330**	*e*PN	**Pg**	**09 23 23.2**	**+0.4**
EVR	**Evrytania**	**1.17**	**330**	*e*Pn	**Pg**	**09 23 23.2**	**+0.4**
PYL	**PYLOS**	**1.20**	**213**	P	**Pg**	**09 23 22.9**	**-0.6**
PYL	**PYLOS**	**1.20**	**213**	*e*PN	**Pg**	**09 23 23.3**	**-0.2**
PYL	**PYLOS**	**1.20**	**213**	P	**Pg**	**09 23 22.9**	**-0.6**
PYL	**PYLOS**	**1.20**	**213**	*e*Pn	**Pg**	**09 23 23.3**	**-0.2**
PYL				S	**Sg**	**09 23 40.0**	**+0.8**
VLI	**Veliai**	**1.23**	**166**	P	**Pg**	**09 23 22.9**	**-1.0**
VLI				S	**Sg**	**09 23 40.0**	**0.0**
VLI	**Veliai**	**1.23**	**166**	*e*PN	**Pg**	**09 23 23.1**	**-0.8**
VLI	**Veliai**	**1.23**	**166**	P	**Pg**	**09 23 22.9**	**-1.0**
VLI				S	**Sg**	**09 23 40.0**	**0.0**
SKIA	**Skiathos**	**1.44**	**29**	P	**Pb**	**09 23 26.3**	**-0.1**
SKIA				S	**Sg**	**09 23 45.6**	**-1.3**
SKIA	**Skiathos**	**1.44**	**29**	P	**Pb**	**09 23 26.3**	**-0.1**
SKIA				S	**Sg**	**09 23 45.6**	**-1.3**
NEO	**Neokhori**	**1.49**	**20**	*e*PN	**Pb**	**09 23 26.7**	**-0.5**
NEO	**Neokhori**	**1.49**	**20**	*e*Pn	**Pb**	**09 23 26.7**	**-0.5**
XOR	**Xorichti**	**1.54**	**19**	P	**Pb**	**09 23 27.4**	**-0.6**
XOR	**Xorichti**	**1.54**	**19**	P	**Pb**	**09 23 27.4**	**-0.6**
VLS	**Valsamata**	**1.58**	**280**	*e*PN	**Pg**	**09 23 29.6**	**-1.0**
VLS	**Valsamata**	**1.58**	**280**	*e*Pn	**Pg**	**09 23 29.6**	**-1.0**
AOS	**Alonnisos**	**1.63**	**39**	P	**Pb**	**09 23 28.3**	**-1.3**
AOS	**Alonnisos**	**1.63**	**39**	*e*PB	**Pb**	**09 23 28.2**	**-1.3**
AOS	**Alonnisos**	**1.63**	**39**	P	**Pb**	**09 23 28.3**	**-1.3**
KYTH	**Kithira**	**1.67**	**167**	P	**Pb**	**09 23 30.4**	**+0.2**
KYTH	**Kithira**	**1.67**	**167**	*e*PN	**Pb**	**09 23 30.5**	**+0.2**
KYTH	**Kithira**	**1.67**	**167**	P	**Pb**	**09 23 30.4**	**+0.2**
THL	**Klokotos Trika**	**1.71**	**346**	*e*PN	**Pb**	**09 23 30.8**	**-0.1**
THL	**Klokotos Trika**	**1.71**	**346**	*e*Pn	**Pb**	**09 23 30.8**	**-0.1**
LKD2	**Lefkada Island**	**1.73**	**301**	*e*PN	**Pb**	**09 23 30.9**	**-0.5**
LKD2	**Lefkada Island**	**1.73**	**301**	*e*Pn	**Pb**	**09 23 30.9**	**-0.5**
ANKY	**Antikythira Is**	**2.12**	**163**	*e*PB	**Pb**	**09 23 36.4**	**-1.6**
ANKY	**Antikythira Is**	**2.12**	**163**	*e*Pb	**Pb**	**09 23 36.4**	**-1.6**
JAN	**Janina**	**2.20**	**323**	*e*PB	**Pb**	**09 23 37.9**	**-1.4**
JAN	**Janina**	**2.20**	**323**	*e*Pb	**Pb**	**09 23 37.9**	**-1.4**
PAIG	**Paliouri**	**2.20**	**23**	*e*PN	**Pn**	**09 23 36.3**	**+0.7**
PAIG	**Paliouri**	**2.20**	**23**	*e*Pn	**Pn**	**09 23 36.3**	**+0.7**
KZN	**Kozani**	**2.47**	**346**	*e*PN	**Pn**	**09 23 40.8**	**+1.4**
KZN	**Kozani**	**2.47**	**346**	*e*Pn	**Pn**	**09 23 40.8**	**+1.4**
APE	**Apeiranthos**	**2.51**	**109**	*e*PN	**Pn**	**09 23 40.5**	**+0.6**
APE	**Apeiranthos**	**2.51**	**109**	*e*Pn	**Pn**	**09 23 40.5**	**+0.6**
PLG	**Polygyros**	**2.56**	**15**	*e*PN	**Pn**	**09 23 41.4**	**+0.8**
PLG	**Polygyros**	**2.56**	**15**	*e*Pn	**Pn**	**09 23 41.4**	**+0.8**
CHOS	**Chios island**	**2.80**	**79**	*e*PN	**Pn**	**09 23 44.8**	**+0.9**
CHOS	**Chios island**	**2.80**	**79**	*e*Pn	**Pn**	**09 23 44.8**	**+0.9**
KEK	**Kerkira**	**2.81**	**311**	*e*PB	**Pb**	**09 23 47.0**	**-2.7**
KEK	**Kerkira**	**2.81**	**311**	*e*Pb	**Pb**	**09 23 47.0**	**-2.7**
VAM	**Vamos**	**2.82**	**152**	*e*PN	**Pn**	**09 23 45.3**	**+1.1**
VAM	**Vamos**	**2.82**	**152**	*e*Pn	**Pn**	**09 23 45.3**	**+1.1**
SOH	**Sokhos**	**2.97**	**12**	*e*PN	**Pn**	**09 23 47.5**	**+1.2**
SOH	**Sokhos**	**2.97**	**12**	*e*Pn	**Pn**	**09 23 47.5**	**+1.2**
FNA	**Florina**	**3.01**	**343**	*e*PN	**Pn**	**09 23 49.2**	**+2.3**
FNA	**Florina**	**3.01**	**343**	*e*Pn	**Pn**	**09 23 49.2**	**+2.3**
GRG	**Griva**	**3.05**	**358**	*e*PN	**Pn**	**09 23 49.1**	**+1.8**
GRG	**Griva**	**3.05**	**358**	*e*Pn	**Pn**	**09 23 49.1**	**+1.8**
IDI	**Anoyia**	**3.22**	**144**	*e*PN	**Pn**	**09 23 51.2**	**+1.5**
IDI	**Anoyia**	**3.22**	**144**	*e*Pn	**Pn**	**09 23 51.2**	**+1.5**
NVR	**Nevrokopi**	**3.58**	**16**	*e*PN	**Pn**	**09 23 56.2**	**+1.5**
NVR	**Nevrokopi**	**3.58**	**16**	*e*Pn	**Pn**	**09 23 56.2**	**+1.5**
LAST	**Lasithi**	**3.61**	**138**	*e*PN	**Pn**	**09 23 56.3**	**+1.2**
LAST	**Lasithi**	**3.61**	**138**	*e*Pn	**Pn**	**09 23 56.3**	**+1.2**
BRTR	**Keskin Array B**	**8.84**	**75**	Pn	Pn	09 25 10.1	+3.2
	0.3nm,0.3s,baz=262,slow=12,SNR=7.7						
TORD	**Torodi Ar. Bea**	**30.88**	**223**	P	**P**	**09 29 15.2**	**-0.2**
	0.2nm,0.7s,baz=30,slow=8.9,SNR=2.5						
KURBB	**Kurchatov Arra**	**41.10**	**53**	P	**P**	**09 30 43.7**	**+1.3**
	0.7nm,0.5s,baz=282,slow=8.6,SNR=5.9						
MKAR	**Makanchi Array**	**44.07**	**59**	P	**P**	**09 31 06.9**	**+0.2**
	0.3nm,0.4s,baz=274,slow=7.4,SNR=9.6						
ZALV	**Zalesovo Beam**	**44.67**	**48**	P	**P**	**09 31 11.5**	**+0.1**
	1.4nm,0.5s,baz=267,slow=7.8,SNR=4.4						

IDC 28 09:30:21.5±4.4, 16°.94N×87°.03W, h0km, mb3.1/2, mb1 3.7/4, mb1mx3.4/23, mbtmp3.3/4, ML4.4/2, MS4.6/1, Ms1 4.6/1, ms1mx4.4/14, Error ellipse: s-maj=68.4km s-min=62.2km az=90.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**3.48**	**340**	Pn	Pn	09 31 16.5	-0.4
	107nm,0.3s,baz=22,slow=0.7,SNR=188						
TEIG				Sn	Sn	09 32 00.2	+1.4
	29nm,0.3s,baz=217,slow=23,SNR=24						
TEIG				LR	LR	09 32 12.9	
	comp=Z,8μm,20.0s,baz=330,slow=32						
TKL	**Tuckaleechee C**	**18.87**	**8**	P	P	09 34 43.5	+0.2
	0.3nm,0.3s,baz=218,slow=16,SNR=5.1						
TXAR	**Lajitas Array**	**19.62**	**312**	P	P	09 34 52.1	+0.3
	0.0nm,0.3s,baz=128,slow=11,SNR=5.5						
PDAR	**Pinedale Array**	**32.12**	**328**	P	P	09 36 50.4	-0.5
	0.1nm,0.4s,baz=106,slow=8.5,SNR=2.2						
YKA	**Yellowknife Ar**	**49.43**	**344**	P	P	09 39 13.2	+0.2
	0.1nm,0.5s,baz=139,slow=7.4,SNR=2.8						

*AUST **28** 09:42:25.3±4.2, 0°.71S×126°.66E, h557km, Error ellipse: s-maj=3.0km s-min=1.6km az=303.0*

IDC 28 09:41:22.7±11.0, 3.78N×125°.49E, h223km±114km, mb2.9/4, mb1 3.2/5, mb1mx3.0/25, mbtmp3.0/5, Error ellipse: s-maj=107.1km s-min=18.5km az=60.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**5.50**	**210**	P	S	09 43 47.3	-1.2
	baz=3.9,SNR=7.5						
PALU	**Palau**	**9.62**	**68**	P	S	09 44 55.6	-29
	baz=11,SNR=6.7						
KAPI	**Kappang**	**10.44**	**213**	P	Pn	09 43 47.1	-0.3
	0.8nm,0.3s,baz=183,slow=23,SNR=5.9						
WSI	**Waingapu**	**14.32**	**201**	P	P	09 44 52.3	+16
	baz=11,SNR=4.9						
MTN	**Manton Dam**	**17.44**	**161**	P	Pn	09 45 13.3	+0.2
	baz=13,SNR=4.3						
KDU	**Kakadu**	**17.77**	**157**	P	Pn	09 45 16.2	-0.8
	baz=13,SNR=6.4						
KNRA	**Kununurra**	**19.60**	**171**	P	Pn	09 45 37.0	-1.5
	baz=15,SNR=12						
FITZ	**Fitzroy Crossi**	**21.74**	**180**	P	P	09 45 57.4	+0.8
	1.3nm,0.4s,baz=11,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**21.74**	**180**	P	P	09 45 57.6	+1.0
	baz=17,SNR=9.0						
WRA	**Warramunga Arr**	**25.12**	**160**	P	P	09 46 26.6	-0.9
	0.2nm,0.4s,baz=335,slow=11,SNR=14						
ASAR	**Alice Springs**	**28.48**	**164**	P	P	09 46 57.5	0.0
	0.3nm,0.3s,baz=338,slow=7.0,SNR=18						
MKAR	**Makanchi Array**	**56.81**	**326**	P	P	09 50 43.9	-0.1
	0.2nm,0.5s,baz=123,slow=5.4,SNR=3.6						

IDC 28 09:43:12.9±7.2, 15°.63N×87°.76W, h0km, mb3.4/4, mb1 3.9/5, mb1mx3.6/24, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=117.2km s-min=72.2km az=146.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**4.59**	**354**	Pn	Pn	09 44 23.6	0.0
	1.2nm,0.3s,baz=345,slow=23,SNR=1.4						
TXAR	**Lajitas Array**	**20.02**	**316**	P	P	09 47 46.8	-0.7
	0.4nm,0.6s,baz=136,slow=9.1,SNR=13						
ANMO	**Albuquerque**	**25.52**	**322**	P	P	09 48 44.1	+0.7
	0.5nm,0.6s,baz=133,slow=6.0,SNR=4.3						
NVAR	**Mina Array Bea**	**35.17**	**316**	P	P	09 50 08.6	-0.3
	0.5nm,0.6s,baz=128,slow=9.0,SNR=6.2						
YKA	**Yellowknife Ar**	**50.48**	**344**	P	P	09 52 12.2	-0.1
	0.9nm,0.6s,baz=142,slow=7.6,SNR=20						

*ISCJB **28** 10:04:00.6±1.2, 23°.76S±0°.09×67°.1W±0°.2, h238km±23km, mb3.4/1, Error ellipse: s-maj=31.7km s-min=12.9km az=10.8*
*GUC **28** 10:04:01.1±0.4, 23°.66S×67°.25W, h235km±6km, ML4.6*
*IDC **28** 10:04:04.8±10.0, 23°.46S×66°.70W, h240km±70km, mb3.3/1, mb1 3.3/3, mb1mx3.0/17, mbtmp3.2/3, Error ellipse: s-maj=110.6km s-min=41.2km az=27.0*

ISC 28 10:04:01.1±1.6, 23°.7S±0°.1×67°.0W±0°.2, h227km±25km, n9, σ1$01/14, 5C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.06**	**302**	⇑*i*P	**Pn**	**10 04 42.9**	**+0.3**
LVC				*i* S	**S**	**10 05 14.7**	**-0.1**
PB04	**Plate Boundary**	**2.69**	**302**	⇑*i*P	Pn	10 04 55.0	+6.2
PB04				*i* S	S	10 05 35.8	+10
PB04				AML	AML	10 05 39.6	
	comp=N,427nm,0.5s						
CEN1	**Los Morros**	**2.93**	**276**	⇑*i*P	**Pn**	**10 04 52.5**	**+1.0**
CEN1				*i* S	**S**	**10 05 32.2**	**+1.2**
ANCH	**Antofagasta**	**3.10**	**270**	⇑*i*P	**Pn**	**10 04 53.6**	**+0.2**
ANCH				*i* S	**S**	**10 05 32.9**	**-1.3**
PB01	**Plate Boundary**	**3.50**	**319**	⇑*i*P	**Pn**	**10 04 58.8**	**+0.7**
PB01				*i* S	**S**	**10 05 42.5**	**-0.4**
PB01				AML	AML	10 05 46.1	
	comp=E,367nm,0.3s						
HMBC	**Humberstone**	**4.33**	**322**	*e*P	**Pn**	**10 05 08.2**	**0.0**
HMBC				*i* S	**S**	**10 05 59.4**	**-1.6**
HMBC				AML	AML	10 06 01.6	
	comp=N,251nm,0.2s						
LPAZ	**La Paz**	**7.46**	**352**	P	**Pn**	**10 05 49.4**	**+1.2**
	comp=N,0.6nm,0.3s,baz=167,slow=9.7,SNR=13						
LPAZ				S	**S**	**10 07 13.7**	**+0.1**
	comp=N,0.1nm,0.3s,baz=321,slow=13,SNR=3.3						
BDFB	**Brasilia**	**19.60**	**69**	P	**P**	**10 08 11.6**	**-1.1**
	comp=N,0.7nm,0.3s,baz=229,slow=11,SNR=4.6						
TORD	**Torodi Ar. Bea**	**76.49**	**69**	P	**P**	**10 15 26.8**	**+0.2**
	comp=N,0.5nm,0.5s,baz=255,slow=5.8,SNR=17						

IDC 28 10:12:16.0±5.2, 17°.86N×87°.57W, h0km, mb3.1/2, mb1 3.7/4, mb1mx3.5/22, mbtmp3.3/4, Error ellipse: s-maj=98.5km s-min=84.5km az=69.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**2.45**	**344**	Pn	Pn	10 12 57.2	0.0
	19nm,0.3s,baz=113,slow=0.8,SNR=22						
TEIG				Sn	Sg	10 13 40.4	+5.7
	28nm

	baz=20								
230A	Sterling City	20.03	322	⇑P		P	10 22 35.2	-0.5	
	baz=20								
TXAR	Lajitas Array	20.03	312	P		P	10 22 36.0	+0.2	
TXAR				S		S	10 26 05.3	-15	
TXAR	Lajitas Array	20.03	312	P		P	10 22 36.0	+0.2	
	comp=Z,2.6nm,0.8s,baz=129,slow=10,SNR=26								
TXAR				S		S	10 26 05.4	-15	
	comp=Z,0.2nm,0.6s,baz=215,slow=41,SNR=4.9								
TZTN	Tazewell	20.07	8	ePn		Pn	10 22 38.7	+0.7	
	comp=Z,30nm,1.4s								
131A	Roby	20.19	325	⇑P		P	10 22 37.4	-0.1	
	baz=20								
Z32A	Haskell	20.20	328	⇑P		P	10 22 38.4	+0.8	
	baz=20,SNR=11								
428A	Kincaid Ranch,	20.21	317	⇓P		P	10 22 37.1	-0.7	
	baz=20								
130A	Snyder	20.46	324	⇑P		P	10 22 40.2	-0.3	
	baz=21								
527A	Woodward Ranch	20.47	314	⇑P		P	10 22 40.5	-0.2	
	baz=21,SNR=15								
626A	Big Bend Ranch	20.49	312	⇑P		P	10 22 41.3	+0.4	
	baz=21,SNR=19								
229A	Bryant Ranch,	20.50	321	⇓P		P	10 22 41.4	+0.5	
	baz=21								
Z31A	Sharp Cattle R	20.55	327	⇓P		P	10 22 41.7	+0.3	
	baz=21								
328A	Wristen Ranch,	20.72	318	⇑P		P	10 22 43.0	-0.3	
	baz=21,SNR=5.4								
Y32A	R-V Farms, Ver	20.73	329	⇓P		P	10 22 43.7	+0.3	
	baz=21,SNR=5.0								
526A	Mary Lane Ranc	20.75	313	⇓P		P	10 22 43.6	-0.1	
	baz=21,SNR=6.7								
427A	Hayter Ranch,	20.77	316	⇓P		P	10 22 43.2	-0.6	
	baz=21,SNR=8.3								
TUL1	Tulsa	20.84	339	⇓P		P	10 22 44.8	+0.3	
	baz=21								
129A	Stewart Farms,	21.00	322	⇑P		P	10 22 46.1	-0.2	
	baz=21								
Z30A	Sanderson Ranc	21.06	325	⇑P		P	10 22 46.9	-0.1	
	baz=21,SNR=5.7								
426A	McDonald Obser	21.08	315	⇓P		P	10 22 47.3	-0.1	
	baz=21								
228A	UT Block 9, Go	21.08	320	⇑P		P	10 22 47.2	-0.1	
	baz=21								
Y31A	Rekieta Farm,	21.11	327	⇑P		P	10 22 48.0	+0.5	
	baz=21,SNR=7.0								
SIUC	Southern Illin	21.14	355	eP		P	10 22 49.5	+1.8	
	comp=Z,16nm,0.8s								
USIN	University of	21.29	358	eP		P	10 22 51.0	+1.7	
	comp=Z,66nm,0.9s								
128A	Castleberry Fa	21.36	321	⇑P		P	10 22 50.0	-0.3	
	baz=22,SNR=8.5								
Z29A	Hungry Hill Ra	21.37	324	⇑P		P	10 22 50.7	+0.4	
	baz=22								
Y30A	Stafford Cattl	21.38	326	⇑P		P	10 22 50.5	+0.1	
	baz=22								
227A	Bennet, Jal	21.45	319	⇓P		P	10 22 50.7	-0.5	
	baz=22								
X31A	McDonald Ranch	21.50	329	⇑P		P	10 22 51.8	+0.2	
	baz=22								
Z28A	Tucker Farm, M	21.78	323	⇑P		P	10 22 54.0	-0.7	
	baz=22								
Y29A	Porterfield Fa	21.79	325	⇑P		P	10 22 54.1	-0.7	
	baz=22								
425A	Indio Mountain	21.80	314	⇓P		P	10 22 54.4	-0.7	
	baz=22,SNR=9.3								
X30A	Coker Ranch, T	21.81	327	⇑P		P	10 22 54.6	-0.4	
	baz=22								
127A	Arkansas Junct	21.93	320	⇑P		P	10 22 54.9	-1.5	
	baz=22								
226B	Tecolote Peak,	22.05	317	⇓P		P	10 22 55.2	-2.4	
	baz=22								
OLIL	Olney	22.08	357	eP		P	10 22 59.2	+1.5	
	comp=Z,40nm,0.9s								
325A	Bean Ranch, Si	22.14	315	⇑P		P	10 22 55.8	-3.0	
	baz=22								
X29A	Tulia	22.25	326	⇓P		P	10 22 58.7	-1.1	
	baz=22								
GDL2	Guadalupe Moun	22.26	317	eP		P	10 23 00.6	+0.7	
	comp=Z,6.1nm,1.0s								
Z27A	Tatum	22.29	321	⇓P		P	10 22 59.2	-1.0	
	baz=22								
V31A	Spring Creek L	22.36	331	⇓P		P	10 23 00.2	-0.7	
	baz=22								
JSRW	J. Sargeant Re	22.43	19	P		P	10 23 03.6	+2.2	
BLO	Bloomington	22.49	1	eP		P	10 23 03.1	+1.0	
	comp=Z,11nm,0.6s								
MSTX	Muleshoe	22.49	323	⇓P		P	10 23 01.7	-0.7	
	baz=23,SNR=5.7								
225A	Deer Hill, Car	22.50	317	⇓P		P	10 23 01.2	-1.4	
	baz=23								
324A	Moseley Ranch,	22.54	314	⇓P		P	10 23 01.6	-1.3	
	baz=23								
X28A	Dimmitt	22.57	325	⇓P		P	10 23 02.1	-1.1	
	baz=23								
MNTX	Cornudas Mount	22.62	315	eP		P	10 23 02.5	-1.2	
	comp=Z,7.4nm,1.2s								
Y27A	Causey	22.66	322	⇓P		P	10 23 03.7	-0.5	
	baz=23,SNR=5.4								
Z26A	Caprock	22.72	320	⇑P		P	10 23 03.8	-1.0	
	baz=23								
125A	Gardner Draw,	22.74	318	⇓P		P	10 23 03.6	-1.4	
	baz=23								
224A	Cornudas Mount	22.95	316	⇓P		P	10 23 05.8	-1.4	
	baz=23								
Y26A	Elida	23.07	322	⇓P		P	10 23 07.3	-1.2	
	baz=23								
X27A	F and S Farms,	23.17	324	⇓P		P	10 23 09.0	-0.5	
	baz=23								
Z25A	Roswell	23.19	319	⇓P		P	10 23 08.9	-0.7	
	baz=23								
124A	Stringfield Ra	23.29	317	⇑P		P	10 23 10.1	-0.7	
	baz=23								
U30A	WK&E Inc. Balk	23.36	331	⇑P		P	10 23 10.9	-0.4	
	baz=24								
T31A	Randall Ranch,	23.39	333	⇓P		P	10 23 11.2	-0.3	
	baz=24								
W27A	Bowe Ranch, En	23.45	325	⇑P		P	10 23 11.7	-0.6	
	baz=24								
X26A	CR and CF Fran	23.51	323	⇓P		P	10 23 12.3	-0.5	
	baz=24								
V28A	Channing	23.52	327	⇓P		P	10 23 12.3	-0.6	
	baz=24								
U29A	Oasis Ranch, S	23.59	330	⇑P		P	10 23 13.0	-0.5	
	baz=24								
Y25A	Mesa, Roswell	23.60	320	⇑P		P	10 23 13.1	-0.6	
	baz=24								
Z24A	Sheeppen Canyo	23.63	318	⇑P		P	10 23 13.2	-0.9	
	baz=24								
SFIN	Scholer Farm	23.69	359	⇑P		P	10 23 13.6	-0.7	
	baz=24,SNR=5.1								
ACSO	Alum Creek Sta	23.77	7	eP		P	10 23 16.7	+1.6	
	comp=Z,16nm,0.6s								
123A	Bell Site, Whi	23.78	316	⇓P		P	10 23 13.9	-1.6	
	baz=24								
222A	Williams Famil	24.04	314	⇓P		P	10 23 16.4	-1.6	
	baz=24								
Y24A	Capitan	24.06	319	⇑P		P	10 23 17.3	-0.9	
	baz=24,SNR=12								
Z23A	Rita Site, Whi	24.15	317	⇓P		P	10 23 18.0	-0.9	
	baz=24								
T29A	Hugoton	24.16	331	⇓P		P	10 23 18.4	-0.6	
	baz=24,SNR=6.6								
S30A	Montezuma	24.18	333	⇑P		P	10 23 18.5	-0.7	
	baz=24,SNR=5.3								
U27A	Thompson Grove	24.34	327	⇑P		P	10 23 20.2	-0.5	
	baz=24								
W25A	X Bar L Ranch,	24.36	323	⇑P		P	10 23 20.7	-0.2	
	baz=24								
V26A	Tequesquite Ra	24.39	325	⇑P		P	10 23 20.9	-0.3	
	baz=24								
Y23A	Lovelace Mesa,	24.46	318	⇓P		P	10 23 21.7	-0.1	
	baz=25								
S29A	Ulysses	24.46	332	⇑P		P	10 23 21.7	0.0	
	baz=25								
Z22A	Elephant Butte	24.62	316	⇓P		P	10 23 23.4	0.0	
	baz=25								
320A	Kipp Ranch, An	24.64	310	⇑P		P	10 23 23.4	-0.1	
	baz=25								
R30A	Dighton	24.64	334	⇓P		P	10 23 23.8	+0.4	
	baz=25,SNR=11								
121A	Cookes Peak, D	24.76	314	⇑P		P	10 23 24.7	+0.1	
	baz=25,SNR=6.2								
S28A	Manter	24.80	330	⇓P		P	10 23 23.8	-1.0	
	baz=25								
U26A	Atchley Ranch,	24.81	326	⇑P		P	10 23 24.3	-0.7	
	baz=25								
W24A	Lazy 6 Ranch,	24.91	322	⇑P		P	10 23 25.5	-0.4	
	baz=25								
220A	Playas Peak, P	24.93	312	⇑P		P	10 23 26.6	+0.5	
	baz=25,SNR=9.7								
BNM	Barren Site	24.96	318	eP		P	10 23 28.2	+1.7	
	comp=Z,2.1nm,0.9s								
X23A	Hourglass Bar	24.96	319	⇑P		P	10 23 26.5	+0.1	
	baz=25								
ATAH	Atahualpa	25.00	160	LR		LR	10 33 36.8		
	comp=Z,6µm,18.2s,baz=214,slow=37								
Y22A	Socorro	25.05	317	⇓P		P	10 23 27.7	+0.6	
	baz=25,SNR=8.7								
R29A	Marienthal	25.13	333	⇑P		P	10 23 28.7	+0.9	
	baz=25								
Z21A	St. Cloud Mine	25.13	315	⇑P		P	10 23 28.8	+0.8	
	baz=25								
U25A	Circle Dot Ran	25.17	325	⇑P		P	10 23 28.5	+0.2	
	baz=25								
V24A	Rampart Ranch,	25.18	323	⇓P		P	10 23 28.0	-0.4	
	baz=25								
319A	Douglas	25.21	310	⇓P		P	10 23 28.3	-0.3	
	baz=25								
T26A	Comanche Natio	25.32	327	⇓P		P	10 23 29.1	-0.5	
	baz=26								
120A	U Bar Ranch, L	25.36	313	⇓P		P	10 23 30.0	0.0	
	baz=26								
R28A	Tribune	25.36	332	⇓P		P	10 23 29.9	0.0	
	baz=26,SNR=6.5								
ANMO	Albuquerque	25.37	320	P		P	10 23 30.4	+0.3	
ANMO	Albuquerque	25.37	320	P		P	10 23 30.4	+0.3	
	comp=Z,0.6nm,0.6s,baz=175,slow=16,SNR=4.1								
LAZ	Ladron	25.45	318	eP		P	10 23 32.4	+1.5	
	comp=Z,3.9nm,1.3s								
Y21A	Point of Rocks	25.55	317	⇓P		P	10 23 31.5	-0.3	
	baz=26,SNR=5.6								
S26A	Kim	25.59	328	⇓P		P	10 23 31.8	-0.2	
	baz=26								
Z20A	Nine Sixteen R	25.65	314	⇑P		P	10 23 32.7	+0.1	
	baz=26								
T25A	Trinidad	25.72	326	⇓P		P	10 23 33.2	-0.1	
	baz=26								
X21A	Alamocita Cree	25.89	317	⇑P		P	10 23 35.6	+0.7	
	baz=26								
Y20A	Horse Springs,	25.96	316	⇑P		P	10 23 35.7	+0.2	
	baz=26								
Q28A	Sharon Springs	25.96	332	⇑P		P	10 23 35.6	+0.3	
	baz=26								
R26A	Arlington	26.11	329	⇓P		P	10 23 36.7	+0.1	
	baz=26								
S25A	Robets Cordova	26.12	327	⇓P		P	10 23 37.3	+0.4	
	baz=26								
U23A	El Rito	26.14	322	⇑P		P	10 23 37.7	+0.6	
	baz=26								
P28A	Saint Francis	26.35	333	⇓P		P	10 23 39.3	+0.5	
	baz=26								
JFWS	Jewell Farm	26.39	354	eP		P	10 23 43.0	+4.0	
	comp=Z,18nm,0.9s								
R25A	Fountain Ranch	26.41	328	⇑P		P	10 23 40.2	+0.8	
	baz=27								
X20A	Quemado	26.42	317	⇓P		P	10 23 40.6	+0.9	
	baz=26								
S24A	Houchin Ranch,	26.52	326	⇓P		P	10 23 41.9	+1.3	
	baz=27								
U22A	Lukes	26.56	322	⇓P		P	10 23 42.1	+1.2	
	baz=27								
Q26A	Hugo	26.63	330	⇑P		P	10 23 42.5	+1.0	
	baz=27								
W20A	Ramah	26.77	318	⇑P		P	10 23 43.9	+1.1	
	baz=27								
TUC	Tucson	26.78	310	eP		P	10 23 45.6	+2.9	
	comp=Z,2.0nm,1.4s								
R24A	Sanders Place,	26.90	327	⇓P		P	10 23 45.3	+1.4	
	baz=27								
Q25A	Bedland, Calha	26.98	329	⇑P		P	10 23 45.6	+0.9	
	baz=27								
P26A	Davis Ranch, A	27.05	331	⇓P		P	10 23 46.9	+1.6	
	baz=27								
R23A	Moffat	27.25	326	⇑P		P	10 23 48.6	+1.4	
	baz=27								
P25A	Willow Gulch B	27.41	330	⇑P		P	10 23 49.5	+1.1	
	baz=28								
S22A	4UR Ranch, Cre	27.49	324	⇑P		P	10 23 50.2	+0.8	
	baz=28								
N27A	Anderson Farm,	27.71	334	⇑P		P	10 23 53.0	+1.9	
	baz=28								
R22A	Saguache, Gunn	27.79	325	⇑P		P	10 23 53.5	+1.4	
	baz=28								
N24A	Carr	28.77	331	⇓P		P	10 24 02.1	+1.4	
	baz=29								
P22A	Eagle	28.77	327	⇓P		P	10 24 01.8	+1.1	
	baz=29								
SADO	Sadowa	28.81	11	P		P	10 24 01.4	+0.7	
SADO	Sadowa	28.81	11	P		P	10 24 01.4	+0.7	
	comp=Z,11nm,0.7s,baz=226,slow=9.4,SNR=9.1								
WUAZ	Wupatki	28.90	315	eP		P	10 24 05.7	+3.9	
	comp=Z,5.0nm,0.9s								
M24A	Cheyenne	29.25	332	⇑P		P	10 24 05.9	+1.1	
	baz=29								
N23A	Red Feather La	29.34	329	⇑P		P	10 24 06.8	+1.0	
	baz=30								
N22A	Wattenberg Ran	29.52	329	⇑P		P	10 24 08.7	+1.4	
	baz=30								
K26A	Motz Farm, Whi	29.55	335	⇑P		P	10 24 09.1	+1.7	
	baz=30								
N20A	Spence Gulch,	30.46	327	⇑P		P	10 24 16.8	+1.1	
	baz=31								
SRU	San Rafael	30.55	322	⇑P		P	10 24 17.7	+1.3	
	baz=31								
M21A	Separation Pea	30.57	329	⇑P		P	10 24 18.2	+1.5	
	baz=31								
P18A	Preston Nutter	30.72	323	⇓P		P	10 24 19.2	+1.1	
	baz=31								
L21A	Rawlins	30.84	329	⇓P		P	10 24 19.6	+0.6	
	baz=31								
DVTC	Desert V Tower	30.94	307	⇑P		P	10 24 19.9	+0.1	
	baz=31								
K22A	Casper	30.96	331	⇑P		P	10 24 21.1	+1.1	
	baz=31								
MSU	Marysvale	31.18	319	eP		P	10 24 30.5	+8.5	
L20A	Wamsutter	31.36	328	⇓P		P	10 24 24.4	+0.9	
	baz=32								
ARUT	Antelope Range	31.55	317	eP		P	10 24 27.4	+2.1	
	comp=Z,3.2nm,0.8s								
I22A	9 Mile Ranch,	31.92	333	⇑P		P	10 24 29.5	+1.2	
	baz=32								
J21A	Lysite	31.93	331	⇑P		P	10 24 29.6	+1.1	
	baz=32								
L19A	Farson	31.95	327	⇑P		P	10 24 28.8	+0.1	
	baz=32								
I21A	Big Trails, Te	32.22	332	⇓P		P	10 24 31.4	+0.4	
	baz=32								
J20A	Shoshoni	32.24	330	⇓P		P	10 24 32.0	+0.9	
	baz=32								
PDAR	Pinedale Array	32.53	328	P		P	10 24 33.9	0.0	
PDAR	Pinedale Array	32.53	328	P		P	10 24 33.9	0.0	
	comp=Z,1.7nm,0.9s,baz=129,slow=12,SNR=9.2								
DUG	Dugway	32.60	321	eP		P	10 24 36.0	+1.7	
	comp=Z,2.5nm,1.0s								
J19A	Crowheart	32.64	329	⇑P		P	10 24 35.0	+0.3	
	baz=33								
I20A	Worland	32.71	331	⇑P		P	10 24 36.2	+0.9	
	baz=33								
G22A	Birney	32.90	334	⇓P		P	10 24 37.3	+0.4	
	baz=33								
H20A	Greybull	33.06	332	⇑P		P	10 24 38.9	+0.5	
	baz=33								
I19A	Meeteetse	33.19	330	⇑P		P	10 24 39.6	+0.1	
	baz=33								
FURC	Furnace Creek,	33.19	312	⇓P		P	10 24 39.8	+0.4	
	baz=33								
I18A	Diamond G Ranc	33.34	329	⇓P		P	10 24 41.8	+0.9	
	baz=34								
SNOW	Snow King Moun	33.64	328	eP		P	10 24 44.7	+1.2	
	comp=Z,25nm,1.0s								
G20A	Bridger	33.73	332	⇓P		P	10 24 44.7	+0.6	
	baz=34								
TPAW	Teton Pass	33.76	328	eP		P	10 24 45.6	+1.0	
	comp=Z,10nm,1.0s								
MOOW	Moose Ponds	33.84	328	eP		P	10 24 45.7	+0.5	
	comp=Z,3.1nm,0.9s								
RRI2	Red Ridge	33.85	327	eP		P	10 24 46.6	+1.1	
	comp=Z,32nm,1.6s								
I17A	Pilgrim Ck.	33.88	328	⇑P		P	10 24 46.2	+0.7	
	baz=34								
H18A	Shoshone NF, C	33.98	330	⇓P		P	10 24 47.5	+1.0	
	baz=34								
ISA	Isabella	33.99	310	⇓P		P	10 24 47.3	+0.8	
	baz=34								
IMW	Indian Meadow	34.04	328	eP		P	10 24 47.8	+0.7	
	comp=Z,14nm,1.5s								
D23A	Lindsay	34.08	337	⇓P		P	10 24 47.6	+0.5	
	baz=34								
C24A	Savage	34.10	339	⇑P		P	10 24 47.7	+0.4	
	baz=34								
I16A	Newdale	34.31	328	⇑P		P	10 24 50.5	+1.3	
	baz=34								
G18A	Lazy EL Ranch,	34.42	331	⇓P		P	10 24 50.4	+0.2	
	baz=35								
F19A	Roth Farm, Mol	34.54	332	⇓P		P	10 24 51.5	+0.3	
	baz=35								
C23A	Lambert	34.61	338	⇑P		P	10 24 52.2	+0.6	
	baz=35								
YMR	Madison River	34.61	329	eP		P	10 24 53.1	+1.1	
	comp=Z,6.5nm,0.8s								
H16A	Russell Place,	34.77	329	⇓P		P	10 24 54.3	+1.0	
	baz=35								
C22A	Vida	34.81	337	⇓P		P	10 24 54.5	+1.1	
	baz=35								
F18A	Big Timber	34.93	332	⇓P		P	10 24 55.1	+0.5	
	baz=35								
B23A	Brockton	35.10	339	⇓P		P	10 24 56.3	+0.5	
	baz=35								
NVAR	Mina Array Bea	35.15	314	P		P	10 24 58.6	+1.9	
NVAR	Mina Array Bea	35.15	314	P		P	10 24 58.6	+1.9	
	comp=Z,0.7nm,0.8s,baz=123,slow=9.8,SNR=3.7								
A24A	Westby	35.16	340	⇓P		P	10 24 57.5	+1.1	
	baz=35								
D20A	Manuel Ranch,	35.16	334	⇓P		P	10 24 57.0	+0.5	
	baz=35								
B22A	Reddig Ranch S	35.32	338	⇓P		P	10 24 58.5	+0.7	
	baz=36								
F17A	Fitzpatrick Pl	35.37	331	⇑P		P	10 24 59.2	+0.8	
	baz=36								
I14A	Mackay	35.38	326	⇓P		P	10 24 59.6	+1.1	
	baz=36								
J13A	Cove Ranch, Pi	35.42	325	⇑P		P	10 24 59.2	+0.3	
	baz=36								
E18A	Harlowton	35.52	332	⇑P		P	10 25 00.5	+0.9	
	baz=36								
D19A	Cripps Ranch,	35.53	334	⇓P		P	10 25 00.5	+0.8	
	baz=36								
C20A	Veseth Ranch,	35.61	335	⇓P		P	10 25 01.3	+1.0	
	baz=36								
HLID	Hailey	35.66	325	⇓P		P	10 25 01.5	+0.5	
	baz=36								
MCMT	McKenzie Canyo	35.67	328	eP		P	10 25 02.8	+1.7	
	comp=Z,6.3nm,1.3s								
G15A	Dillon	35.72	328	⇑P		P	10 25 01.9	+0.5	
	baz=36								
I13A	Wildhorse Cree	35.73	325	⇓P		P	10 25 02.2	+0.6	
	baz=36								
F16A	Kennard Place,	35.74	330	⇓P		P	10 25 02.6	+1.1	
	baz=36								
H14A	Leadore	35.80	327	⇑P		P	10 25 03.2	+1.1	
	baz=36								
A22A	Carney Farms,	35.87	338	⇑P		P	10 25 03.6	+1.0	
	baz=36								
E17A	Martinsdale	35.87	331	⇓P		P	10 25 03.6	+0.9	
	baz=36								
DLMT	Dillon	35.91	328	eP		P	10 25 04.4	+1.3	
	comp=Z,4.4nm,0.8s								
D18A	Linhart Farms,	35.95	333	⇓P		P	10 25 04.7	+1.4	
	baz=36								
C19A	Slack Wire Ran	36.05	334	⇓P		P	10 25 04.9	+0.8	
	baz=36								
LRM	Limekiln Ridge	36.17	329	eP		P	10 25 06.3	+1.0	
E16A	East Helena	36.31	331	⇑P		P	10 25 07.1	+0.7	
	baz=36								
D17A	Six Diamond Ra	36.31	332	⇓P		P	10 25 07.0	+0.6	
	baz=36								
H12A	Diamond D Ranc	36.54	326	⇓P		P	10 25 09.0	+0.5	
	baz=37								
D16A	Dana Ranch, Ca	36.61	331	⇑P		P	10 25 09.8	+0.8	
	baz=37								
F14A	Wisdom	36.62	328	⇑P		P	10 25 09.9	+0.8	
	baz=37								
A19A	Klindworth Far	36.88	336	⇓P		P	10 25 11.6	+0.4	
	baz=37								
D15A	Lincoln	37.08	330	⇑P		P	10 25 13.6	+0.6	
	baz=37								
F13A	Darby	37.09	328	⇓P		P	10 25 13.5	+0.5	
	baz=37								
E14A	Clinton	37.10	329	⇑P		P	10 25 14.0	+0.8	
	baz=37								
G12A	Big Creek, Yel	37.17	326	⇑P		P	10 25 14.5	+0.6	
	baz=37								
A18A	Metzger Ranch,	37.31	335	⇓P		P	10 25 15.5	+0.7	
	baz=38								
CHMT	Chamberlain Mo	37.33	330	eP		P	10 25 15.0	-0.2	
WVOR	Wild Horse Val	37.46	320	eP		P	10 25 22.4	+6.1	
	comp=Z,9.7nm,1.5s								
E13A	Victor	37.47	328	⇑P		P	10 25 16.7	+0.5	
	baz=38								
D14A	Greenough	37.58	330	⇓P		P	10 25 17.6	+0.5	
	baz=38								
MSO	Missoula	37.61	329	⇓P		P	10 25 17.9	+0.5	
	baz=38								
C15A	Salmond Ranch,	37.65	331	⇑P		P	10 25 18.0	+0.2	
	baz=38								
A17A	Triple J Farms	37.69	334	⇓P		P	10 25 18.3	+0.2	
	baz=38								
D13A	Huson	38.05	329	⇓P		P	10 25 21.5	+0.4	
	baz=38								
BMO	Blue Mountains	38.09	324	eP		P	10 25 22.4	+0.9	
	comp=Z,4.1nm,1.1s								
B14A	Marquette Ranc	38.38	331	⇓P		P	10 25 24.5	+0.6	
	baz=38								
D12A	Red Ives Fores	38.47	328	⇑P		P	10 25 24.8	+0.2	
	baz=39								
C13A	Hot Springs	38.51	330	⇑P		P	10 25 25.4	+0.4	
	baz=39								
A14A	Double T Ranch	38.89	332	⇑P		P	10 25 28.9	+0.7	
	baz=39								
B13A	Whitefish	38.95	330	⇓P		P	10 25 29.4	+0.8	
	baz=39								
YBH	Yreka Blue Hor	39.70	317	P		P	10 25 35.3	+0.2	
YBH	Yreka Blue Hor	39.70	317	P		P	10 25 35.3	+0.2	
	comp=Z,4.4nm,0.9s,baz=135,slow=5.7,SN

comp=Z,0.6nm,0.8s,baz=73,slow=2.1,SNR=4.1

ASAR	**Alice Springs**	**141.27 253**	PKPpre	PKPpre	10 37 31.5	
ASAR	**Alice Springs**	**141.27 253**	PKhKP	PKPpre	10 37 31.5	
	comp=Z,0.4nm,0.8s,baz=117,slow=3.5,SNR=4.3					
CMAR	**Chiang Mai Arr**	**144.71 351**	PKP	**PKPab**	**10 37 38.6**	**-0.3**
CMAR	**Chiang Mai Arr**	**144.71 351**	PKP	**PKPab**	**10 37 38.6**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=341,slow=1.9,SNR=3.4					

*ISCJB **28** 10:19:32.8±0.5, 40°.14N±0'.02×23°.93E±0'.05, h16km±6km, Error ellipse: s-maj=6.3km s-min=4.0km az=6.0*
*ATH **28** 10:19:32.2, 40°.15N×23°.98E, h19km±2km, MD2.9/9*
*THE **28** 10:19:32.7, 40°.16N×23°.94E, h6km±1km, ML2.2/8, Error ellipse: s-maj=1.0km s-min=0.5km az=186.0*
*CSEM **28** 10:19:32.2±0.2, 40°.15N×23°.96E, h8km, ML2.2/8, Error ellipse: s-maj=4.1km s-min=3.0km az=91.0*

ISC 28 10:19:32.6±0.9, 40°.15N±0'.02×23°.95E±0'.03, h12km±6km, n35, σ0°.42/61, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.19**	**8**	P	**Pg**	**10 19 36.5**	**-0.2**
OUR				S	**Sg**	**10 19 39.6**	**+0.1**
OUR	**Ouranopolis**	**0.19**	**8**	P	**Pg**	**10 19 36.5**	**-0.2**
OUR				S	**Sg**	**10 19 39.6**	**+0.1**
PAIG	**Paliouri**	**0.30**	**223**	P	**Pg**	**10 19 38.7**	**-0.1**
PAIG				S	**Sg**	**10 19 43.0**	**+0.1**
PAIG	**Paliouri**	**0.30**	**223**	*e*PB	**Pg**	**10 19 38.7**	**-0.1**
PAIG				*e*SB	**Sg**	**10 19 43.5**	**+0.6**
PAIG	**Paliouri**	**0.30**	**223**	P	**Pg**	**10 19 38.7**	**-0.1**
PAIG				S	**Sg**	**10 19 43.0**	**+0.1**
PAIG				*e*Sb	**Sg**	**10 19 43.5**	**+0.6**
PLG	**Polygyros**	**0.45**	**300**	P	**Pg**	**10 19 41.2**	**-0.2**
PLG				S	**Sg**	**10 19 47.2**	**-0.1**
PLG	**Polygyros**	**0.45**	**300**	*e*PB	**Pg**	**10 19 41.2**	**-0.2**
PLG				*e*SB	**Sg**	**10 19 47.6**	**+0.3**
PLG	**Polygyros**	**0.45**	**300**	P	**Pg**	**10 19 41.2**	**-0.2**
PLG				S	**Sg**	**10 19 47.2**	**-0.1**
PLG				*e*Sb	**Sg**	**10 19 47.6**	**+0.3**
HORT	**Hortiatis**	**0.79**	**305**	P	**Pg**	**10 19 47.1**	**-0.8**
HORT				S	**Sg**	**10 19 58.3**	**+0.1**
HORT	**Hortiatis**	**0.79**	**305**	P	**Pg**	**10 19 47.1**	**-0.8**
HORT				S	**Sg**	**10 19 58.3**	**+0.1**
SOH	**Sokhos**	**0.81**	**326**	P	**Pg**	**10 19 47.9**	**-0.4**
SOH				S	**Sg**	**10 19 58.9**	**0.0**
SOH	**Sokhos**	**0.81**	**326**	*e*PN	**Pg**	**10 19 48.4**	**+0.1**
SOH				*e*SN	**Sb**	**10 19 59.5**	**-0.1**
SOH	**Sokhos**	**0.81**	**326**	P	**Pg**	**10 19 47.9**	**-0.4**
SOH	**Sokhos**	**0.81**	**326**	*e*Pn	**Pg**	**10 19 48.4**	**+0.1**
SOH				S	**Sg**	**10 19 58.9**	**0.0**
SOH				*e*Sn	**Sb**	**10 19 59.5**	**-0.1**
KAVA	**Kavala**	**0.95**	**27**	P	**Pg**	**10 19 50.3**	**-0.6**
KAVA				S	**Sb**	**10 20 03.5**	**-0.1**
KAVA	**Kavala**	**0.95**	**27**	P	**Pg**	**10 19 50.3**	**-0.6**
KAVA				S	**Sb**	**10 20 03.5**	**-0.1**
AOS	**Alonnisos**	**0.98**	**183**	P	**Pg**	**10 19 51.2**	**-0.2**
AOS				S	**Sn**	**10 20 05.4**	**-0.6**
AOS	**Alonnisos**	**0.98**	**183**	*e*PN	**Pg**	**10 19 51.3**	**-0.2**
AOS	**Alonnisos**	**0.98**	**183**	P	**Pg**	**10 19 51.2**	**-0.2**
AOS				S	**Sn**	**10 20 05.4**	**-0.6**
NEO	**Neokhori**	**1.01**	**214**	*e*PN	**Pb**	**10 19 52.0**	**-0.1**
NEO	**Neokhori**	**1.01**	**214**	*e*Pn	**Pb**	**10 19 52.0**	**-0.1**
NVR	**Nevrokopi**	**1.20**	**357**	P	**Pn**	**10 19 55.2**	**-0.1**
NVR				S	**Sn**	**10 20 12.2**	**+0.6**
NVR	**Nevrokopi**	**1.20**	**357**	*e*PN	**Pg**	**10 19 55.6**	**-0.1**
NVR				*e*SN	**Sb**	**10 20 10.6**	**-0.3**
NVR	**Nevrokopi**	**1.20**	**357**	P	**Pn**	**10 19 55.2**	**-0.1**
NVR	**Nevrokopi**	**1.20**	**357**	*e*Pn	**Pg**	**10 19 55.6**	**-0.1**
NVR				*e*Sn	**Sb**	**10 20 10.6**	**-0.3**
NVR				S	**Sn**	**10 20 12.2**	**+0.6**
KNT	**Kendrikon**	**1.29**	**322**	P	**Pn**	**10 19 56.1**	**-0.4**
KNT				S	**Sg**	**10 20 14.5**	**+0.4**
KNT	**Kendrikon**	**1.29**	**322**	P	**Pn**	**10 19 56.1**	**-0.4**
KNT				S	**Sg**	**10 20 14.5**	**+0.4**
GRG	**Griva**	**1.43**	**305**	*e*PN	**Pb**	**10 19 59.3**	**+0.1**
GRG				*e*SN	**Sg**	**10 20 19.9**	**+1.3**
GRG	**Griva**	**1.43**	**305**	*e*Pn	**Pb**	**10 19 59.3**	**+0.1**
GRG				*e*Sn	**Sg**	**10 20 19.9**	**+1.3**
THL	**Klokotos Trika**	**1.60**	**249**	*e*PN	Pn	10 19 57.5	-3.2
THL	**Klokotos Trika**	**1.60**	**249**	*e*Pn	Pn	10 19 57.5	-3.2
AGG	**Agios Georgios**	**1.68**	**229**	*e*PB	**Pn**	**10 20 02.1**	**+0.2**
AGG	**Agios Georgios**	**1.68**	**229**	*e*Pb	**Pn**	**10 20 02.1**	**+0.2**
ALN	**Alexandroupoli**	**1.76**	**64**	*e*PN	**Pn**	**10 20 03.5**	**+0.5**
ALN	**Alexandroupoli**	**1.76**	**64**	*e*Pn	**Pn**	**10 20 03.5**	**+0.5**

*SOF **28** 10:23:50.6, 41°.96N×23°.38E, h5km, MD2.9*
*ISCJB **28** 10:23:50.6±0.5, 41°.96N±0'.02×23°.25E±0'.03, h9km±5km, Error ellipse: s-maj=4.2km s-min=3.8km az=141.5*
*ATH **28** 10:23:51.8, 41°.89N×23°.30E, h19km±2km, MD3.0/5*
*CSEM **28** 10:23:51.2±0.1, 41°.94N×23°.26E, h8km, ML2.4, Error ellipse: s-maj=2.9km s-min=2.1km az=73.0*
*THE **28** 10:23:51.4, 41°.92N×23°.29E, h2km±1km, ML2.4/7, Error ellipse: s-maj=1.6km s-min=0.6km az=41.0*
*BEO **28** 10:23:52.2±0.4, 41°.93N×23°.23E, h12km±6km, ML2.4/8*
*SKO **28** 10:23:52.5, 41°.92N×23°.26E, h3km, M2.2, ML2.6*

ISC 28 10:23:51.4±1.0, 41°.94N±0'.02×23°.29E±0'.02, h9km±8km, n48, σ0°.53/82, 2C, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KKB	**Krupnik**	**0.17**	**246**	Pg	**Pg**	**10 23 55.2**	**+0.2**
KKB	**Krupnik**	**0.17**	**246**	Pg	**Pg**	**10 23 55.2**	**+0.2**
VTS	**Vitosha**	**0.66**	**355**	P	**Pg**	**10 24 04.0**	**-0.2**
VTS				S	**Sg**	**10 24 13.5**	**+0.7**
VTS	**Vitosha**	**0.66**	**355**	↑*i*Pg	**Pg**	**10 24 03.9**	**-0.2**
VTS				*e*Sg	**Sg**	**10 24 13.5**	**+0.7**
VTS	**Vitosha**	**0.66**	**355**	Pg	**Pg**	**10 24 03.9**	**-0.2**
VTS	**Vitosha**	**0.66**	**355**	↑*i*Pg	**Pg**	**10 24 03.9**	**-0.2**
VTS				S	**Sg**	**10 24 13.5**	**+0.7**
NVR	**Nevrokopi**	**0.72**	**144**	P	**Pg**	**10 24 05.1**	**-0.2**
NVR				S	**Sg**	**10 24 14.7**	**-0.1**
NVR	**Nevrokopi**	**0.72**	**144**	*e*PN	**Pg**	**10 24 05.2**	**-0.1**
NVR				*e*SN	**Sg**	**10 24 14.8**	**-0.1**
NVR	**Nevrokopi**	**0.72**	**144**	P	**Pg**	**10 24 05.1**	**-0.2**
NVR				S	**Sg**	**10 24 14.7**	**-0.1**
VAY	**Valandovo**	**0.82**	**222**	P	**Pg**	**10 24 06.8**	**-0.3**
VAY				S	**Sg**	**10 24 17.9**	**+0.1**
VAY	**Valandovo**	**0.82**	**222**	*i* Pg	**Pg**	**10 24 06.6**	**-0.5**
VAY				*i* Sg	**Sg**	**10 24 17.7**	**0.0**
VAY				*e*Lg	Lg	10 24 17.8	
	comp=E,117nm,0.3s						
VAY				*e*Lg	Lg	10 24 17.9	
	comp=N,154nm,0.5s						
VAY	**Valandovo**	**0.82**	**222**	P	**Pg**	**10 24 06.8**	**-0.3**
VAY				*e*Sg	**Sg**	**10 24 17.5**	**-0.3**
VAY				S	**Sg**	**10 24 17.9**	**+0.1**
VAY				*e*Lg	Lg	10 24 18.4	
	comp=N,154nm,0.5s						
KNT	**Kendrikon**	**0.83**	**201**	P	**Pg**	**10 24 07.0**	**-0.3**
KNT				S	**Sg**	**10 24 17.8**	**-0.3**
KNT	**Kendrikon**	**0.83**	**201**	P	**Pg**	**10 24 07.0**	**-0.3**
KNT				S	**Sg**	**10 24 17.8**	**-0.3**
SRS	**Serrai**	**0.85**	**165**	P	**Pg**	**10 24 07.4**	**-0.3**
SRS				S	**Sb**	**10 24 19.1**	**-0.6**
SRS	**Serrai**	**0.85**	**165**	P	**Pg**	**10 24 07.4**	**-0.3**
SRS				S	**Sb**	**10 24 19.1**	**-0.6**
PLD	**Plovdiv**	**1.06**	**80**	*e*Pg	**Pn**	**10 24 12.8**	**+0.4**
PLD				*e*Sg	**Sn**	**10 24 27.3**	**0.0**
PLD	**Plovdiv**	**1.06**	**80**	*e*Pg	**Pn**	**10 24 12.8**	**+0.4**
PLD				*e*Sg	**Sn**	**10 24 27.3**	**0.0**
RZN	**Rozhen**	**1.09**	**103**	*e*Pg	**Pg**	**10 24 11.6**	**-0.8**
RZN	**Rozhen**	**1.09**	**103**	*e*Pg	**Pg**	**10 24 11.6**	**-0.8**
SOH	**Sokhos**	**1.11**	**178**	P	**Pg**	**10 24 12.3**	**-0.5**
SOH				S	**Sb**	**10 24 27.9**	**+0.5**
SOH	**Sokhos**	**1.11**	**178**	*e*PN	**Pg**	**10 24 12.3**	**-0.5**
SOH				*e*SN	**Sg**	**10 24 26.8**	**-0.4**
SOH	**Sokhos**	**1.11**	**178**	P	**Pg**	**10 24 12.3**	**-0.5**
SOH				*e*Sn	**Sg**	**10 24 26.8**	**-0.4**
SOH				S	**Sb**	**10 24 27.9**	**+0.5**
GRG	**Griva**	**1.19**	**215**	P	**Pg**	**10 24 13.6**	**-0.5**
GRG				S	**Sb**	**10 24 29.9**	**+0.5**
GRG	**Griva**	**1.19**	**215**	*e*PN	**Pg**	**10 24 13.7**	**-0.4**
GRG				*e*SN	**Sb**	**10 24 29.9**	**+0.5**
GRG	**Griva**	**1.19**	**215**	*e*Pn	**Pg**	**10 24 13.7**	**-0.4**
GRG				S	**Sb**	**10 24 29.9**	**+0.5**
KAVA	**Kavala**	**1.31**	**135**	P	**Pn**	**10 24 15.6**	**-0.2**
KAVA				S	**Sn**	**10 24 34.8**	**+1.4**
KAVA	**Kavala**	**1.31**	**135**	P	**Pn**	**10 24 15.6**	**-0.2**
KAVA				S	**Sn**	**10 24 34.8**	**+1.4**
HORT	**Hortiatis**	**1.34**	**186**	P	**Pn**	**10 24 16.5**	**+0.2**
HORT				S	**Sn**	**10 24 35.0**	**+0.7**
HORT	**Hortiatis**	**1.34**	**186**	P	**Pn**	**10 24 16.5**	**+0.2**
HORT				S	**Sn**	**10 24 35.0**	**+0.7**
BARS	**Barje**	**1.40**	**309**	*e*Pg	**Pn**	**10 24 17.6**	**+0.5**
BARS				*e*Sg	**Sb**	**10 24 35.0**	**-0.7**
BARS	**Barje**	**1.40**	**309**	*e*Pg	**Pn**	**10 24 17.6**	**+0.5**
BARS				*e*Sg	**Sb**	**10 24 35.0**	**-0.7**
ZAPS	**Zavoj**	**1.42**	**340**	*e*Pg	**Pg**	**10 24 18.7**	**+0.1**
ZAPS				*e*Sg	**Sg**	**10 24 37.6**	**+0.5**
MPEP	**Malo Peshtene**	**1.46**	**13**	P	**Pn**	**10 24 18.2**	**+0.4**
PLG	**Polygyros**	**1.56**	**176**	P	**Pn**	**10 24 19.1**	**-0.2**
PLG	**Polygyros**	**1.56**	**176**	*e*PN	**Pn**	**10 24 19.1**	**-0.2**
PLG				*e*SN	**Sn**	**10 24 40.3**	**+0.6**
PLG	**Polygyros**	**1.56**	**176**	P	**Pn**	**10 24 19.1**	**-0.2**
PLG				*e*Sn	**Sn**	**10 24 40.3**	**+0.6**
RDO	**Rodhopi**	**1.86**	**114**	*e*PN	**Pb**	**10 24 25.4**	**-0.1**
RDO	**Rodhopi**	**1.86**	**114**	*e*Pn	**Pb**	**10 24 25.4**	**-0.1**
PAIG	**Paliouri**	**2.03**	**172**	*e*PB	**Pn**	**10 24 25.4**	**-0.2**
PAIG	**Paliouri**	**2.03**	**172**	*e*Pb	**Pn**	**10 24 25.4**	**-0.2**
SELS	**Selova**	**2.05**	**309**	*e*Sg	**Sg**	**10 24 56.9**	**-0.5**
ALN	**Alexandroupoli**	**2.32**	**116**	*e*PB	**Pn**	**10 24 30.4**	**+0.8**
ALN	**Alexandroupoli**	**2.32**	**116**	*e*Pb	**Pn**	**10 24 30.4**	**+0.8**
GRUS	**Gruza**	**2.72**	**317**	*e*Sg	**Sg**	**10 25 17.9**	**-0.8**
GRUS	**Gruza**	**2.72**	**317**	*e*Sg	**Sg**	**10 25 17.9**	**-0.8**
BZS	**Buzias**	**3.87**	**342**	*e*Pn	**Pn**	**10 24 50.5**	**-0.5**
BZS				*e*Sg	**Sg**	**10 25 54.6**	**-1.1**
BZS	**Buzias**	**3.87**	**342**	*e*Pn	**Pn**	**10 24 50.5**	**-0.5**
BZS				*e*Sg	**Sg**	**10 25 54.6**	**-1.1**

*CASC **28** 10:30:14.2±1.4, 16°.53N×86°.06W, h35km±999km, MD4.4, ML4.5, mb4.2(NEIC)*
*IDC **28** 10:30:16.1±2.4, 16°.13N×86°.81W, h0km, mb3.8/7, mb1 4.2/9, mb1mx4.0/24, mbtmp3.9/9, ML4.3/2, Error ellipse: s-maj=58.5km s-min=31.1km az=34.0*
*NEIC **28** 10:30:18.7±0.4, 16°.28N×86°.72W, h10km, mb4.2/8, Error ellipse: s-maj=15.1km s-min=6.7km az=70.0*
*ISCJB **28** 10:30:19.7±0.5, 16°.32N±0'.03×86°.55W±0'.08, h33km, mb4.1/14, Error ellipse: s-maj=10.6km s-min=4.8km az=8.7*

ISC 28 10:30:21.1±0.7, 16°.42N±0'.04×86°.8W±0'.1, h22km, n158, σ1°.19/154, mb4.0/14, 51C-67D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**2.39**	**190**	*e*Pn	**Pn**	**10 30 57.4**	**-1.5**
TGUH				*e*Sn	**Sn**	**10 31 23.8**	**-3.7**
TGUH	**Tegucigalpa,Un**	**2.39**	**190**	*e*P	Pn	10 30 54.8	-4.1
TGUH				*e*S	**Sn**	**10 31 28.0**	**+0.5**
MTO2	**Montecristo 2**	**3.16**	**231**	*e*P	**Pn**	**10 31 10.4**	**+0.8**
LFRS	**El Faro**	**3.52**	**218**	*e*P	**Pn**	**10 31 15.4**	**+0.9**
BOQS	**Boqueron**	**3.56**	**222**	*e*P	**Pn**	**10 31 17.0**	**+1.8**
SNET	**Serv Nac Est T**	**3.57**	**221**	AML	AML	10 32 11.1	
	comp=Z,1μm,0.5s						
RBDL	**Robledal**	**3.58**	**230**	*e*P	**Pn**	**10 31 16.7**	**+1.2**
SNJE	**San Josse**	**3.69**	**227**	*e*P	**Pn**	**10 31 18.3**	**+1.3**
SBLS	**San Blas**	**3.72**	**227**	*e*P	**Pn**	**10 31 18.4**	**+1.0**
TEIG	**Tepich**	**4.02**	**340**	Pn	**Pn**	**10 31 21.3**	**-0.1**
TEIG				Sn	**Sn**	**10 32 05.7**	**-2.1**
TEIG	**Tepich**	**4.02**	**340**	Pn	**Pn**	**10 31 21.3**	**-0.1**
	comp=Z,61nm,0.3s,baz=327,slow=0.8,SNR=48						
TEIG				Sn	**Sn**	**10 32 05.7**	**-2.1**
	comp=Z,28nm,0.3s,baz=252,slow=23,SNR=8.2						
JTS	**JuntasAbangare**	**6.37**	**163**	Pn	Pn	10 31 49.5	-4.2
	comp=Z,194nm,0.8s						
BCIP	**Isla Barro Col**	**9.93**	**136**	*e*Pn	Pn	10 32 39.0	-3.6
LRAL	**Lakeview Retre**	**16.54**	**360**	*e*Pn	**P**	**10 34 13.5**	**-0.7**
732A	**Laxson Ranch,**	**17.21**	**318**	⇓P	**Pn**	**10 34 17.7**	**-2.5**
	baz=17						
632A	**Uvalde**	**17.63**	**320**	⇓P	**Pn**	**10 34 22.9**	**-2.6**
	baz=18						
631A	**Perdido Creek**	**18.07**	**318**	⇓P	**Pn**	**10 34 27.7**	**-3.1**
	baz=18,SNR=9.0						
532A	**Rocksprings**	**18.15**	**321**	⇑P	**Pn**	**10 34 29.1**	**-2.7**
	baz=18						
WHTX	**Lake Whitney**	**18.25**	**330**	⇓P	**P**	**10 34 33.6**	**+0.5**
	baz=18,SNR=8.2						
JCT	**Junction City**	**18.34**	**322**	*e*P	**Pn**	**10 34 35.8**	**+1.6**
	comp=Z,7.0nm,0.6s						
531A	**Rocksprings**	**18.56**	**320**	⇓P	**P**	**10 34 34.7**	**-1.9**
	baz=19						
432A	**Menard**	**18.62**	**323**	⇑P	**P**	**10 34 35.9**	**-1.3**
	baz=19						
431A	**Sonora**	**18.97**	**321**	⇑P	**P**	**10 34 39.7**	**-1.3**
	baz=19						
332A	**Millersview**	**18.97**	**324**	⇑P	**P**	**10 34 40.1**	**-1.0**
	baz=19						
530A	**J-C Ranch, Com**	**19.05**	**318**	⇓P	**P**	**10 34 40.1**	**-1.8**
	baz=19,SNR=9.5						
232A	**Coleman**	**19.30**	**325**	⇑P	**P**	**10 34 43.5**	**-1.1**
	baz=20,SNR=10.0						
TKL	**Tuckaleechee C**	**19.35**	**8**	P	**Pn**	**10 34 46.9**	**+0.6**
TKL	**Tuckaleechee C**	**19.35**	**8**	P	**Pn**	**10 34 46.9**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=179,slow=12,SNR=4.6						
430A	**Baggett Ranch,**	**19.42**	**320**	⇓P	**P**	**10 34 44.5**	**-1.5**
	baz=20						
529A	**Stev Forest Ra**	**19.61**	**317**	⇓P	**P**	**10 34 46.7**	**-1.3**
	baz=20						
628A	**Black Gap, Mar**	**19.65**	**314**	⇑P	**P**	**10 34 47.0**	**-1.6**
	baz=20						
231A	**Bronte**	**19.71**	**324**	⇑P	**P**	**10 34 49.7**	**+0.6**
	baz=20,SNR=8.2						
429A	**Davenport Ranc**	**19.73**	**318**	⇓P	**P**	**10 34 48.7**	**-0.6**
	baz=20						
330A	**Mertzon**	**19.82**	**321**	⇓P	**P**	**10 34 50.8**	**+0.4**
	baz=20						
ABTX	**Abilene, Hawle**	**19.86**	**327**	⇑P	**Pn**	**10 34 52.3**	**-0.2**
	baz=20						
627A	**Terlingua Ranc**	**19.98**	**313**	⇑P	**P**	**10 34 51.3**	**-0.9**
	baz=20						
528A	**Cox Ranch, San**	**20.00**	**316**	⇓P	**P**	**10 34 51.9**	**-0.6**
	baz=20						
TXAR	**Lajitas Array**	**20.10**	**313**	P	Pn	10 34 54.8	-0.6
TXAR				S	S	10 38 25.6	-13
TXAR	**Lajitas Array**	**20.10**	**313**	P	Pn	10 34 54.8	-0.6
	comp=Z,1.4nm,0.7s,baz=128,slow=11,SNR=19						
TXAR				S	S	10 38 25.6	-13
	comp=Z,0.3nm,0.4s,baz=136,slow=18,SNR=6.9						
428A	**Kincaid Ranch,**	**20.30**	**317**	⇑P	**P**	**10 34 55.0**	**-0.7**
	baz=20						
131A	**Roby**	**20.30**	**325**	⇑P	**P**	**10 34 56.2**	**+0.6**
	baz=20,SNR=6.6						
Z32A	**Haskell**	**20.32**	**328**	⇓P	**P**	**10 34 56.0**	**+0.3**
	baz=20,SNR=9.5						
329A	**Wagon Wheel Ra**	**20.37**	**320**	⇑P	**P**	**10 34 55.5**	**-0.8**
	baz=21						
527A	**Woodward Ranch**	**20.55**	**315**	⇓P	**P**	**10 34 57.5**	**-0.9**
	baz=21,SNR=8.4						
626A	**Big Bend Ranch**	**20.56**	**312**	⇓P	**P**	**10 34 57.7**	**-0.8**
	baz=21,SNR=5.2						
130A	**Snyder**	**20.57**	**324**	⇓P	**P**	**10 34 58.2**	**-0.3**
	baz=21						
Z31A	**Sharp Cattle R**	**20.67**	**327**	⇓P	**P**	**10 34 59.9**	**+0.4**
	baz=21,SNR=8.9						
328A	**Wristen Ranch,**	**20.81**	**319**	⇓P	**P**	**10 35 00.6**	**-0.5**
	baz=21						
526A	**Mary Lane Ranc**	**20.83**	**314**	⇑P	**P**	**10 35 00.5**	**-1.0**
	baz=21						
427A	**Hayter Ranch,**	**20.85**	**316**	⇓P	**P**	**10 35 00.9**	**-0.7**
	baz=21						
Y32A	**R-V Farms, Ver**	**20.86**	**329**	⇑P	**P**	**10 35 02.4**	**+0.8**
	baz=21						
TUL1	**Tulsa**	**20.98**	**339**	⇑P	**P**	**10 35 04.1**	**+1.2**
	baz=21						
129A	**Stewart Farms,**	**21.11**	**323**	⇓P	**P**	**10 35 04.4**	**+0.1**
	baz=21						
WMOK	**Wichita Mounta**	**21.15**	**332**	*e*P	**P**	**10 35 05.2**	**+0.5**
	comp=Z,3.6nm,0.5s						
426A	**McDonald Obser**	**21.16**	**315**	⇑P	**P**	**10 35 03.9**	**-1.2**
	baz=21						
Z30A	**Sanderson Ranc**	**21.17**	**325**	⇓P	**P**	**10 35 05.1**	**+0.1**
	baz=21,SNR=6.7						
228A	**UT Block 9, Go**	**21.18**	**320**	⇑P	**P**	**10 35 04.7**	**-0.4**
	baz=21						
Y31A	**Rekieta Farm,**	**21.23**	**328**	⇓P	**P**	**10 35 06.8**	**+1.2**
	baz=22,SNR=7.6						
128A	**Castleberry Fa**	**21.46**	**322**	⇓P	**P**	**10 35 08.1**	**-0.1**
	baz=22,SNR=12						
USIN	**University of**	**21.47**	**358**	*e*P	**P**	**10 35 09.1**	**+1.0**
	comp=Z,27nm,0.9s						
Z29A	**Hungry Hill Ra**	**21.47**	**324**	⇑P	**P**	**10 35 08.1**	**-0.1**
	baz=22						
Y30A	**Stafford Cattl**	**21.50**	**327**	⇑P	**P**	**10 35 08.8**	**+0.2**
	baz=22						
326A	**Caldwell Ranch**	**21.53**	**317**	⇓P	**P**	**10 35 07.8**	**-1.1**
	baz=22						
227A	**Bennet, Jal**	**21.54**	**319**	⇑P	**P**	**10 35 09.0**	**0.0**
	baz=22						
X31A	**McDonald Ranch**	**21.62**	**329**	⇑P	**P**	**10 35 11.1**	**+1.3**
	baz=22,SNR=9.6						
425A	**Indio Mountain**	**21.88**	**314**	⇓P	**P**	**10 35 11.7**	**-1.1**
	baz=22						
Z28A	**Tucker Farm, M**	**21.88**	**323**	⇑P	**P**	**10 35 12.7**	**0.0**
	baz=22						
X30A	**Coker Ranch, T**	**21.93**	**328**	⇑P	**P**	**10 35 13.7**	**+0.6**
	baz=22						
127A	**Arkansas Junct**	**22.03**	**320**	⇑P	**P**	**10 35 14.3**	**0.0**
	baz=22						
W31A	**Holland Ranch,**	**22.06**	**330**	⇑P	**P**	**10 35 15.0**	**+0.5**
	baz=22						
X29A	**Tulia**	**22.36**	**326**	⇓P	**P**	**10 35 18.1**	**+0.3**
	baz=23						
Z27A	**Tatum**	**22.39**	**322**	⇓P	**P**	**10 35 17.3**	**-0.8**
	baz=23						
V31A	**Spring Creek L**	**22.49**	**331**	⇓P	**P**	**10 35 19.6**	**+0.5**
	baz=23						
MSTX	**Muleshoe**	**22.60**	**324**	⇑P	**P**	**10 35 20.4**	**0.0**
	baz=23						
324A	**Moseley Ranch,**	**22.62**	**315**	⇑P	**P**	**10 35 19.0**	**-1.6**
	baz=23						
AMTX	**Amarillo**	**22.68**	**327**	*e*P	**P**	**10 35 21.4**	**+0.1**
	comp=Z,7.2nm,0.9s						
Y27A	**Causey**	**22.76**	**323**	⇓P	**P**	**10 35 21.7**	**-0.4**
	baz=23,SNR=7.1						
Z26A	**Caprock**	**22.82**	**320**	⇑P	**P**	**10 35 22.0**	**-0.7**
	baz=23						
125A	**Gardner Draw,**	**22.83**	**318**	⇓P	**P**	**10 35 22.5**	**-0.4**
	baz=23						
224A	**Cornudas Mount**	**23.03**	**316**	⇑P	**P**	**10 35 23.4**	**-1.6**
	baz=23						
Y26A	**Elida**	**23.18**	**322**	⇑P	**P**	**10 35 25.4**	**-1.0**
	baz=23						
Z25A	**Roswell**	**23.28**	**319**	⇓P	**P**	**10 35 26.0**	**-1.4**
	baz=24						
U30A	**WK&E Inc. Balk**	**23.48**	**331**	⇑P	**P**	**10 35 29.8**	**+0.4**
	baz=24						
T31A	**Randall Ranch,**	**23.52**	**334**	⇓P	**P**	**10 35 30.1**	**+0.4**
	baz=24						
Y24A	**Capitan**	**24.16**	**320**	⇑P	**P**	**10 35 35.2**	**-0.7**
	baz=24						
T29A	**Hugoton**	**24.29**	**331**	⇑P	**P**	**10 35 38.0**	**+1.0**
	baz=24						
S30A	**Montezuma**	**24.32**	**333**	⇑P	**P**	**10 35 37.5**	**+0.3**
	baz=25						
W25A	**X Bar L Ranch,**	**24.46**	**323**	⇓P	**P**	**10 35 38.7**	**+0.1**
	baz=25						
V26A	**Tequesquite Ra**	**24.50**	**325**	⇑P	**P**	**10 35 39.4**	**+0.4**
	baz=25						
R30A	**Dighton**	**24.78**	**334**	⇑P	**P**	**10 35 42.7**	**+1.4**
	baz=25,SNR=6.8						
S28A	**Manter**	**24.92**	**331**	⇓P	**P**	**10 35 44.2**	**+1.5**
	baz=25						
R28A	**Tribune**	**25.49**	**332**	⇓P	**P**	**10 35 48.9**	**+1.0**
	baz=26						
U23A	**El Rito**	**26.24**	**323**	⇓P	**P**	**10 35 55.6**	**+0.7**
	baz=26						
SADO	**Sadowa**	**29.00**	**11**	P	**P**	**10 36 21.2**	**+2.1**
SADO	**Sadowa**	**29.00**	**11**	P	**P**	**10 36 21.2**	**+2.1**
	comp=Z,7.9nm,0.8s,baz=198,slow=11,SNR=5.0						
J22A	**Midwest**	**31.67**	**332**	⇓P	**P**	**10 36 44.5**	**+1.5**
	baz=32						
J21A	**Lysite**	**32.06**	**331**	⇓P	**P**	**10 36 48.0**	**+1.5**
	baz=32						
I21A	**Big Trails, Te**	**32.35**	**332**	⇓P	**P**	**10 36 50.0**	**+1.0**
	baz=33						
J20A	**Shoshoni**	**32.36**	**330**

baz=38
D12A **Red Ives Fores** 38.59 328 ⇓P P 10 37 43.7 +1.2
baz=39
A14A **Double T Ranch** 39.02 332 ⇓P P 10 37 47.0 +0.8
baz=39
B13A **Whitefish** 39.07 331 ⇑P P 10 37 46.8 +0.3
baz=39
YKA **Yellowknife Ar** 49.97 344 P P 10 39 13.3 +0.1
YKA **Yellowknife Ar** 49.97 344 P P 10 39 13.3 +0.1
comp=Z,1.4nm,0.9s,baz=138,slow=7.7,SNR=20
INK **Inuvik** 59.63 342 P P 10 40 23.4 +0.3
INK **Inuvik** 59.63 342 P P 10 40 23.4 +0.3
comp=Z,0.8nm,0.9s,baz=160,slow=7.6,SNR=3.2
ILAR **Eielson Array** 62.66 335 P P 10 40 44.0 +0.3
ILAR **Eielson Array** 62.66 335 P P 10 40 44.0 +0.3
comp=Z,0.7nm,0.9s,baz=105,slow=4.3,SNR=8.5
TORD **Torodi Ar. Bea** 84.98 78 P P 10 42 54.2 -1.2
TORD **Torodi Ar. Bea** 84.98 78 P P 10 42 54.2 -1.2
comp=Z,0.3nm,0.9s,baz=266,slow=4.3,SNR=2.2

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*IDC **28** 10:37:40.9±2.6, 16°46N×87°29W, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.9/23, mbtmp3.9/7, ML4.2/2, Error ellipse: s-maj=46.7km s-min=45.0km az=38.0*
*NEIC **28** 10:37:42.6±0.5, 16°31N×87°46W, h10km, mb4.1/7, Error ellipse: s-maj=18.4km s-min=7.2km az=62.0*
*CASC **28** 10:37:42.9±3.6, 16°31N×87°75W, h20km±999km, MD4.6, ML4.7, mb4.1(NEIC)*
*ISCJB **28** 10:37:43.4±0.4, 16°28N±0°03×87°57W±0°06, h33km, mb3.9/11, Error ellipse: s-maj=8.0km s-min=3.7km az=179.7*
ISC 28 10:37:45.4±0.6**, 16°31N**±0°04×**87°60W**±0°08**, h35**km**, n128,**
σ1§**33**/128**, mb3.9**/11**, 36C-49D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**2.26**	**172**	*e*Pn	**Pn**	**10 38 18.4**	**-1.9**
TGUH				*e*Sn	**Sn**	**10 38 47.1**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.26**	**172**	*e*P	**Pn**	**10 38 18.5**	**-1.8**
TGUH				*e*S	**Sn**	**10 38 45.8**	**-1.1**
MRL	**Marmol**	**2.37**	**239**	*e*P	Pn	10 38 17.0	-5.0
MTO2	**Montecristo 2**	**2.55**	**222**	*e*P	**Pn**	**10 38 23.0**	**-1.5**
MTO2				*e*S	**Sn**	**10 38 52.9**	**-1.5**
SNVI	**San Vicente**	**2.93**	**204**	*e*P	**Pn**	**10 38 29.0**	**-0.8**
RBDL	**Robledal**	**2.97**	**223**	*e*P	**Pn**	**10 38 29.4**	**-0.9**
LFRS	**El Faro**	**3.02**	**208**	*e*P	**Pn**	**10 38 30.6**	**-0.3**
BOQS	**Boqueron**	**3.03**	**213**	*e*P	**Pn**	**10 38 30.9**	**-0.2**
SNET	**Serv Nac Est T**	**3.05**	**211**	*e*P	**Pn**	**10 38 30.7**	**-0.5**
SNET				AML	AML	10 39 19.8	
	comp=Z,5μm,0.6s						
NBG	**Las Nubes**	**3.15**	**238**	*e*P	Pn	10 38 29.0	-3.9
FUG	**Fuego 3**	**3.64**	**240**	*e*P	Pn	10 38 35.2	-4.2
TEIG	**Tepich**	**3.95**	**351**	*e*Pn	**Pn**	**10 38 42.9**	**-0.7**
TEIG				Sn	**Sn**	**10 39 29.0**	**+0.2**
TEIG				Lg	Lg	10 39 52.0	
TEIG	**Tepich**	**3.95**	**351**	Pn	**Pn**	**10 38 43.2**	**-0.5**
	comp=Z,19nm,0.3s,baz=323,slow=0.8,SNR=19						
TEIG				Sn	**Sn**	**10 39 29.0**	**+0.2**
	comp=Z,36nm,0.3s,baz=54,slow=22,SNR=10						
TEIG				Lg	Lg	10 39 52.0	
	comp=Z,62nm,0.3s,baz=96,slow=20,SNR=5.7						
JAT	**Jato**	**4.37**	**244**	*e*P	**Pn**	**10 38 47.0**	**-2.4**
JTS	**JuntasAbangare**	**6.51**	**156**	*e*Pn	**Pn**	**10 39 19.1**	**+0.3**
	comp=Z,133nm,0.7s						
BCIP	**Isla Barro Col**	**10.37**	**132**	*e*Pn	**Pn**	**10 40 10.0**	**-1.8**
HKT	**Hockley**	**15.54**	**332**	*e*Pn	**Pn**	**10 41 23.8**	**+1.9**
	comp=Z,3.9nm,0.8s						
732A	**Laxson Ranch,**	**16.82**	**319**	⇓P	**Pn**	**10 41 37.6**	**-0.7**
	baz=17						
632A	**Uvalde**	**17.27**	**322**	⇑P	**Pn**	**10 41 42.6**	**-1.3**
	baz=17						
ROSC	**El Rosal**	**17.29**	**130**	*e*Pn	**Pn**	**10 41 43.7**	**-1.0**
631A	**Perdido Creek**	**17.68**	**320**	⇓P	**Pn**	**10 41 46.9**	**-2.0**
	baz=18						
532A	**Rocksprings**	**17.79**	**323**	⇓P	**P**	**10 41 51.1**	**+0.2**
	baz=18						
WHTX	**Lake Whitney**	**18.00**	**332**	⇑P	**P**	**10 41 57.0**	**+3.8**
	baz=18,SNR=5.5						
531A	**Rocksprings**	**18.20**	**322**	⇓P	**P**	**10 41 55.3**	**-0.1**
	baz=18						
432A	**Menard**	**18.29**	**325**	⇑P	**Pn**	**10 41 57.2**	**+0.7**
	baz=18						
431A	**Sonora**	**18.61**	**323**	⇑P	**P**	**10 42 00.0**	**+0.1**
	baz=19						
332A	**Millersview**	**18.65**	**326**	⇑P	**Pn**	**10 42 01.3**	**+0.4**
	baz=19						
530A	**J-C Ranch, Com**	**18.66**	**320**	⇑P	**P**	**10 42 00.8**	**+0.2**
	baz=19						
331A	**San Angelo**	**18.97**	**324**	⇑P	**P**	**10 42 04.3**	**+0.4**
	baz=19						
232A	**Coleman**	**18.99**	**327**	⇓P	**Pn**	**10 42 04.9**	**-0.1**
	baz=19						
430A	**Baggett Ranch,**	**19.05**	**322**	⇓P	**P**	**10 42 04.7**	**-0.2**
	baz=19						
529A	**Stev Forest Ra**	**19.20**	**318**	⇓P	**P**	**10 42 06.6**	**+0.1**
	baz=19						
628A	**Black Gap, Mar**	**19.22**	**316**	⇓P	**Pn**	**10 42 07.5**	**-0.3**
	baz=19,SNR=7.6						
429A	**Davenport Ranc**	**19.34**	**320**	⇓P	**P**	**10 42 08.4**	**+0.4**
	baz=20						
231A	**Bronte**	**19.39**	**326**	⇑P	**Pn**	**10 42 09.8**	**0.0**
	baz=20						
330A	**Mertzon**	**19.47**	**323**	⇓P	**P**	**10 42 09.9**	**+0.5**
	baz=20						
627A	**Terlingua Ranc**	**19.54**	**315**	⇓P	**Pn**	**10 42 11.5**	**-0.2**
	baz=20,SNR=8.0						
ABTX	**Abilene, Hawle**	**19.57**	**328**	⇓P	**Pn**	**10 42 12.4**	**+0.5**
	baz=20						
TKL	**Tuckaleechee C**	**19.57**	**9**	P	**P**	**10 42 11.5**	**+1.1**
TKL				S	**S**	**10 45 45.9**	**-3.6**
TKL	**Tuckaleechee C**	**19.57**	**9**	P	**P**	**10 42 11.5**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=190,slow=11,SNR=5.8						
TKL				S	**S**	**10 45 45.9**	**-3.6**
	comp=Z,0.2nm,0.3s,baz=100,slow=11,SNR=2.6						
528A	**Cox Ranch, San**	**19.59**	**317**	⇓P	**P**	**10 42 11.1**	**+0.3**
	baz=20						
TXAR	**Lajitas Array**	**19.66**	**314**	P	**Pn**	**10 42 12.6**	**-0.5**
TXAR				S	S	10 45 41.5	-10
TXAR	**Lajitas Array**	**19.66**	**314**	P	**Pn**	**10 42 12.6**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=131,slow=9.5,SNR=26						
TXAR				S	S	10 45 41.5	-10
	comp=Z,0.1nm,0.3s,baz=96,slow=16,SNR=5.1						
230A	**Sterling City**	**19.79**	**324**	⇑P	**P**	**10 42 13.9**	**+1.1**
	baz=20						
131A	**Roby**	**20.00**	**327**	⇑P	Pn	10 42 16.4	-0.6
	baz=20						
Z32A	**Haskell**	**20.04**	**330**	⇑P	Pn	10 42 18.1	+0.6
	baz=20						
626A	**Big Bend Ranch**	**20.11**	**314**	⇓P	**P**	**10 42 17.5**	**+1.1**
	baz=20,SNR=8.1						
527A	**Woodward Ranch**	**20.13**	**316**	⇓P	**P**	**10 42 17.2**	**+0.5**
	baz=20,SNR=9.0						
130A	**Snyder**	**20.24**	**326**	⇑P	**P**	**10 42 18.8**	**+1.0**
	baz=20						
Z31A	**Sharp Cattle R**	**20.38**	**329**	⇓P	Pn	10 42 21.1	-0.4
	baz=20						
526A	**Mary Lane Ranc**	**20.39**	**315**	⇓P	**P**	**10 42 19.6**	**+0.1**
	baz=20						
328A	**Wristen Ranch,**	**20.43**	**320**	⇓P	**P**	**10 42 20.0**	**+0.1**
	baz=21						
427A	**Hayter Ranch,**	**20.45**	**318**	⇑P	**P**	**10 42 19.8**	**-0.3**
	baz=21						
426A	**McDonald Obser**	**20.74**	**316**	⇓P	**P**	**10 42 23.4**	**+0.1**
	baz=21						
129A	**Stewart Farms,**	**20.77**	**324**	⇑P	**P**	**10 42 24.4**	**+0.9**
	baz=21						
Z30A	**Sanderson Ranc**	**20.86**	**327**	⇑P	**P**	**10 42 25.0**	**+0.5**
	baz=21						
WMOK	**Wichita Mounta**	**20.92**	**333**	*e*P	**P**	**10 42 26.2**	**+1.1**
	comp=Z,3.0nm,1.0s						
Y31A	**Rekieta Farm,**	**20.95**	**329**	⇑P	Pn	10 42 27.8	-0.4
	baz=21						
128A	**Castleberry Fa**	**21.11**	**323**	⇓P	**P**	**10 42 27.2**	**0.0**
	baz=21,SNR=7.2						
Z29A	**Hungry Hill Ra**	**21.15**	**326**	⇓P	**P**	**10 42 28.3**	**+0.6**
	baz=21						
227A	**Bennet, Jal**	**21.16**	**320**	⇓P	**P**	**10 42 27.5**	**-0.2**
	baz=21						
Y30A	**Stafford Cattl**	**21.20**	**328**	⇑P	**P**	**10 42 29.6**	**+1.4**
	baz=21						
X31A	**McDonald Ranch**	**21.36**	**331**	⇑P	**P**	**10 42 32.1**	**+2.2**
	baz=22						
425A	**Indio Mountain**	**21.45**	**315**	⇓P	**P**	**10 42 30.7**	**-0.2**
	baz=22						
Z28A	**Tucker Farm, M**	**21.55**	**324**	⇓P	**P**	**10 42 32.7**	**+0.8**
	baz=22						
USIN	**University of**	**21.58**	**360**	*e*P	**P**	**10 42 32.6**	**+0.5**
	comp=Z,59nm,0.9s						
Y29A	**Porterfield Fa**	**21.59**	**327**	⇓P	**P**	**10 42 33.6**	**+1.2**
	baz=22						
X30A	**Coker Ranch, T**	**21.64**	**329**	⇓P	**P**	**10 42 34.6**	**+1.7**
	baz=22						
127A	**Arkansas Junct**	**21.67**	**322**	⇑P	**P**	**10 42 33.4**	**+0.2**
	baz=22						
226B	**Tecolote Peak,**	**21.75**	**319**	⇑P	**P**	**10 42 34.4**	**+0.3**
	baz=22,SNR=6.4						
325A	**Bean Ranch, Si**	**21.81**	**317**	⇑P	**P**	**10 42 34.5**	**-0.3**
	baz=22						
Y28A	**McKinney Farm,**	**21.94**	**326**	⇑P	**P**	**10 42 36.5**	**+0.4**
	baz=22						
Z27A	**Tatum**	**22.04**	**323**	⇓P	**P**	**10 42 37.0**	**-0.2**
	baz=22						
X29A	**Tulia**	**22.06**	**328**	⇓P	**P**	**10 42 38.3**	**+0.9**
	baz=22						
225A	**Deer Hill, Car**	**22.19**	**318**	⇓P	**P**	**10 42 38.5**	**-0.4**
	baz=22,SNR=8.7						
324A	**Moseley Ranch,**	**22.19**	**316**	⇑P	**P**	**10 42 38.6**	**-0.3**
	baz=22,SNR=6.4						
MSTX	**Muleshoe**	**22.27**	**325**	⇓P	**P**	**10 42 39.8**	**+0.1**
	baz=22						
MNTX	**Cornudas Mount**	**22.28**	**317**	*e*P	**P**	**10 42 39.4**	**-0.4**
	comp=Z,6.0nm,1.2s						
AMTX	**Amarillo**	**22.39**	**328**	*e*P	**P**	**10 42 44.9**	**+3.9**
	comp=Z,5.5nm,0.9s						
Y27A	**Causey**	**22.42**	**324**	⇑P	**P**	**10 42 41.2**	**-0.2**
	baz=22						
125A	**Gardner Draw,**	**22.45**	**320**	⇓P	**P**	**10 42 40.8**	**-0.8**
	baz=23,SNR=6.8						
224A	**Cornudas Mount**	**22.62**	**317**	⇓P	**P**	**10 42 42.9**	**-0.5**
	baz=23,SNR=9.4						
Y26A	**Elida**	**22.83**	**323**	⇓P	**P**	**10 42 45.4**	**-0.3**
	baz=23						
Z25A	**Roswell**	**22.91**	**321**	⇑P	**P**	**10 42 45.8**	**-0.6**
	baz=23						
X27A	**F and S Farms,**	**22.95**	**326**	⇓P	**P**	**10 42 47.0**	**+0.1**
	baz=23						
124A	**Stringfield Ra**	**22.98**	**319**	⇑P	**P**	**10 42 46.9**	**-0.3**
	baz=23,SNR=15						
W27A	**Bowe Ranch, En**	**23.25**	**326**	⇓P	**P**	**10 42 50.8**	**+0.9**
	baz=23						
X26A	**CR and CF Fran**	**23.28**	**324**	⇓P	**P**	**10 42 50.6**	**+0.4**
	baz=23						
Z24A	**Sheeppen Canyo**	**23.34**	**320**	⇓P	**P**	**10 42 50.8**	**-0.1**
	baz=24,SNR=12						
Y24A	**Capitan**	**23.78**	**321**	⇓P	**P**	**10 42 55.9**	**+0.7**
	baz=24,SNR=16						
T29A	**Hugoton**	**24.05**	**332**	⇓P	**P**	**10 43 00.3**	**+2.8**
	baz=24						
W25A	**X Bar L Ranch,**	**24.13**	**324**	⇓P	**P**	**10 42 59.3**	**+1.0**
	baz=24						
Y23A	**Lovelace Mesa,**	**24.17**	**320**	⇓P	**P**	**10 42 59.8**	**+1.1**
	baz=24,SNR=12						
V26A	**Tequesquite Ra**	**24.19**	**326**	⇓P	**P**	**10 42 60.0**	**+1.1**
	baz=24						
320A	**Kipp Ranch, An**	**24.24**	**312**	⇓P	**P**	**10 43 00.1**	**+0.8**
	baz=24						
Z22A	**Elephant Butte**	**24.30**	**318**	⇑P	**P**	**10 43 00.5**	**+0.6**
	baz=24,SNR=5.7						
121A	**Cookes Peak, D**	**24.40**	**315**	⇑P	**P**	**10 43 01.2**	**+0.3**
	baz=24						
220A	**Playas Peak, P**	**24.55**	**313**	⇑P	**P**	**10 43 02.8**	**+0.6**
	baz=25						
W24A	**Lazy 6 Ranch,**	**24.66**	**323**	⇑P	**P**	**10 43 03.9**	**+0.7**
	baz=25,SNR=5.3						
BNM	**Barren Site**	**24.67**	**320**	*e*P	**P**	**10 43 05.0**	**+1.7**
	comp=Z,15nm,1.6s						
V25A	**Rancho No Teng**	**24.67**	**325**	⇓P	**P**	**10 43 05.0**	**+1.7**
	baz=25						
X23A	**Hourglass Bar**	**24.68**	**321**	⇓P	**P**	**10 43 04.6**	**+1.2**
	baz=25						
Y22A	**Socorro**	**24.74**	**319**	⇓P	**P**	**10 43 04.5**	**+0.6**
	baz=25,SNR=24						
319A	**Douglas**	**24.80**	**311**	⇑P	**P**	**10 43 05.7**	**+1.2**
	baz=25						
V24A	**Rampart Ranch,**	**24.95**	**324**	⇑P	**P**	**10 43 07.7**	**+1.9**
	baz=25						
120A	**U Bar Ranch, L**	**24.99**	**314**	⇑P	**P**	**10 43 07.6**	**+1.4**
	baz=25						
W23A	**Werner Place,**	**25.06**	**322**	⇓P	**P**	**10 43 08.9**	**+2.1**
	baz=25						
ANMO	**Albuquerque**	**25.09**	**321**	P	**P**	**10 43 08.3**	**+1.2**
ANMO	**Albuquerque**	**25.09**	**321**	P	**P**	**10 43 08.3**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=148,slow=15,SNR=3.1						
Y21A	**Point of Rocks**	**25.24**	**318**	⇑P	**P**	**10 43 10.7**	**+2.2**
	baz=25,SNR=17						
X21A	**Alamocita Cree**	**25.59**	**319**	⇑P	**P**	**10 43 13.9**	**+2.2**
	baz=26,SNR=11						
Y20A	**Horse Springs,**	**25.63**	**317**	⇓P	**P**	**10 43 13.9**	**+1.9**
	baz=26,SNR=6.8						
U23A	**El Rito**	**25.90**	**324**	⇓P	**P**	**10 43 16.8**	**+2.3**
	baz=26						
X20A	**Quemado**	**26.10**	**318**	⇑P	**P**	**10 43 19.1**	**+2.8**
	baz=26,SNR=11						
TUC	**Tucson**	**26.38**	**311**	P	**P**	**10 43 19.1**	**+0.5**
	comp=Z,0.2nm,0.8s						
WUAZ	**Wupatki**	**28.57**	**317**	*e*P	**P**	**10 43 40.0**	**+1.6**
	comp=Z,6.4nm,1.4s						
NVAR	**Mina Array Bea**	**34.80**	**315**	P	**P**	**10 44 34.2**	**+1.1**
NVAR	**Mina Array Bea**	**34.80**	**315**	P	**P**	**10 44 34.2**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=119,slow=8.4,SNR=5.0						
SCHQ	**Schefferville**	**41.66**	**18**	P	**P**	**10 45 28.7**	**-1.7**
SCHQ	**Schefferville**	**41.66**	**18**	P	**P**	**10 45 28.7**	**-1.7**
	comp=Z,6.3nm,1.1s,baz=225,slow=5.4,SNR=5.2						
YKA	**Yellowknife Ar**	**49.88**	**344**	P	**P**	**10 46 35.4**	**+0.2**
YKA	**Yellowknife Ar**	**49.88**	**344**	P	**P**	**10 46 35.3**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=140,slow=7.6,SNR=13						
ILAR	**Eielson Array**	**62.47**	**335**	P	**P**	**10 48 05.3**	**+0.4**
ILAR	**Eielson Array**	**62.47**	**335**	P	**P**	**10 48 05.3**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=136,slow=5.0,SNR=10						
WRA	**Warramunga Arr**	**140.06**	**258**	PKP	**PKPdf**	**10 57 13.9**	**+2.8**
WRA	**Warramunga Arr**	**140.06**	**258**	PKP	**PKPdf**	**10 57 13.9**	**+2.8**
	comp=Z,0.6nm,0.8s,baz=80,slow=2.0,SNR=7.3						
ASAR	**Alice Springs**	**140.43**	**252**	PKP	**PKPdf**	**10 57 14.5**	**+2.8**
ASAR	**Alice Springs**	**140.43**	**252**	PKP	**PKPdf**	**10 57 14.5**	**+2.8**
	comp=Z,0.5nm,0.7s,baz=95,slow=2.6,SNR=4.8						

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*IDC **28** 10:59:43.1±0.5, 4°95S×151°22E, h0km, mb4.6/23, mb1 4.8/24, mb1mx4.8/25, mbtmp4.7/24, ML4.7/1, MS4.9/2, Ms1 4.9/2, ms1mx3.4/31, Error ellipse: s-maj=15.4km s-min=9.6km az=111.0*
*ISCJB **28** 10:59:46.9±0.8, 5°00S±0°03×151°34E±0°04, h33km±7km, mb5.0/68, MS5.0/6, Error ellipse: s-maj=7.7km s-min=5.0km az=26.1*
*MOS **28** 10:59:47.2±1.1, 4°96S×151°23E, h36km, mb5.4/15, Error ellipse: s-maj=11.3km s-min=7.6km az=95.2*
*AUST **28** 10:59:48.2, 4°72S×151°58E, h60km*
*BJI **28** 10:59:48.9, 5°10S×151°20E, h48km, mB5.3/11, mb5.0/43, Ms5.3/23, Ms7 5.0/22*
*NEIC **28** 10:59:50.7±1.1, 5°03S×151°23E, h53km±11km, mb5.2/21, Error ellipse: s-maj=8.0km s-min=7.2km az=95.0*
*DJA **28** 11:00:01.4±2.5, 5°S±12°×15°1E±1°7, h92km±16km, M5.2/17, mB5.7/7, mb5.1/17, MLv5.2/1, Mw(mB)5.2/7*
ISC 28 10:59:50.7±0.4**, 5°01S**±0°04×**151°39E**±0°05**, h51**km±2km**, h51**km**:pP-P, n200,** σ1§**55**/232**, mb4.9**/68**, MS5.1**/6**, 6C-4D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.12**	**44**	P	Pn	11 00 04.5	-5.6
	baz=0.8,SNR=246						
RABL				S	**Sn**	**11 00 21.5**	**-3.0**
	baz=0.8,SNR=5.1						
PMG	**Port Moresby**	**6.06**	**224**	*e*Pn	**Pn**	**11 01 16.5**	**-1.2**
PMG				*e*Sn	**Sn**	**11 02 22.5**	**-3.3**
PMG				Sn		11 02 24.8	
PMG	**Port Moresby**	**6.06**	**224**	P	**Pn**	**11 01 17.0**	**-0.8**
	741nm,1.0s,6μm2.2nm						
PMG	**Port Moresby**	**6.06**	**224**	Pn	**Pn**	**11 01 16.6**	**-1.2**
	26nm,0.3s,baz=42,slow=6.7,SNR=68						
PMG				Sn	**Sn**	**11 02 24.8**	**-1.0**
	baz=121,slow=5.9,SNR=1.6						
PMG				LR	LR	11 03 26.7	
	comp=Z,4μm,20.5s,baz=24,slow=37						
HNR	**Honiara**	**9.56**	**118**	*e*Pn	**Pn**	**11 02 07.2**	**+1.4**
HNR	**Honiara**	**9.56**	**118**	Pn	**Pn**	**11 02 06.4**	**+0.6**
	7.6nm,0.3s,baz=230,slow=4.0,SNR=7.2						
JAY	**Jayapura**	**10.94**	**283**	P	Pn	11 02 27.7	+2.9
	baz=11,SNR=4.5						
COEN	**Coen**	**12.02**	**222**	*e*Pn	**Pn**	**11 02 37.7**	**-1.8**
COEN	**Coen**	**12.02**	**222**	P	Pn	11 02 43.5	+4.0
	baz=12,SNR=5.2						
MTSU	**Mount Surprise**	**14.76**	**207**	P	**Pn**	**11 03 16.5**	**-0.1**
	baz=15,SNR=12						
BAKI	**Biak**	**15.72**	**283**	P	**P**	**11 03 32.2**	**+0.1**
	116nm,0.9s,2μm						
CTAO	**Charters Tower**	**15.80**	**198**	*e*P	**Pn**	**11 03 29.4**	**-0.6**
CTAO				pmax	pmax		
	comp=Z,50nm,1.3s						
CTAO	**Charters Tower**	**15.80**	**198**	*e*Pn	**Pn**	**11 03 29.4**	**-0.6**
	comp=Z,50nm,1.3s						
RKPI	**Ransiki, Papua**	**17.52**	**281**	P	**P**	**11 03 52.7**	**+0.6**
	comp=Z,119nm,1.6s,comp=Z,10μm						
FAKI	**Fak Fak**	**19.20**	**275**	P	**Pn**	**11 04 15.5**	**+3.6**
	baz=19,SNR=3.1						
QIS	**Mount Isa**	**19.24**	**215**	P	**P**	**11 04 10.5**	**-0.4**
	baz=20,SNR=16						
KDU	**Kakadu**	**20.17**	**247**	P	**P**	**11 04 17.6**	**-3.5**
	baz=20,SNR=18						
EIDS	**Eidsvold**	**20.25**	**181**	*e*P	**P**	**11 04 22.4**	**+0.5**
	comp=Z,74nm,0.9s						
EIDS	**Eidsvold**	**20.25**	**181**	P	Pn	11 04 23.4	-0.8
	baz=21,SNR=28						
SWI	**Sorong**	**20.51**	**281**	P	**P**	**11 04 23.8**	**-1.0**
	comp=Z,126nm,1.3s,comp=Z,2μm						
SWI	**Sorong**	**20.51**	**281**	P	**P**	**11 04 23.8**	**-1.0**
	baz=21,SNR=4.0						
PALU	**Palau**	**20.86**	**306**	P	**P**	**11 04 27.7**	**-1.0**
	baz=21,SNR=5.1						
RMQ	**Roma**	**21.51**	**186**	P	**P**	**11 04 36.2**	**+0.8**
	baz=22,SNR=50						
WRAB	**Tennant Creek**	**22.25**	**227**	*e*P	**P**	**11 04 40.7**	**-2.8**
WRAB				pmax	pmax		
	comp=Z,46nm,0.8s						
WRAB	**Tennant Creek**	**22.25**	**227**	*e*P	**P**	**11 04 40.7**	**-2.8**
	comp=Z,46nm,0.8s						
WRAB	**Tennant Creek**	**22.25**	**227**	P	**P**	**11 04 41.0**	**-2.5**
	comp=Z,328nm,0.8s,SNR=16						
WRA	**Warramunga Arr**	**22.27**	**227**	P	**P**	**11 04 41.0**	**-2.7**
WRA				S	**S**	**11 08 48.5**	**+2.8**
WRA	**Warramunga Arr**	**22.27**	**227**	P	**P**	**11 04 41.0**	**-2.7**
	comp=Z,34nm,0.8s,baz=50,slow=10.0,SNR=106						
WRA				S	**S**	**11 08 48.5**	**+2.8**
	comp=Z,12nm,1.1s,baz=45,slow=16,SNR=9.0						
DZM	**Mont Dzumac**	**22.37**	**141**	P	**P**	**11 04 44.6**	**-0.2**
DZM	**Mont Dzumac**	**22.37**	**141**	P	**P**	**11 04 44.6**	**-0.2**
	comp=Z,4.1nm,0.7s,baz=27,slow=4.5,SNR=6.5						
QLP	**Quilpie**	**22.52**	**197**	P	**P**	**11 04 46.4**	**+0.1**
	baz=23,SNR=54						
LBMI	**Labuha**	**24.24**	**280**	P	**P**	**11 05 03.0**	**-0.1**
	comp=Z,165nm,1.3s,comp=Z,3μm						
GAMI	**Galela, Maluku**	**24.54**	**286**	P	sP	11 05 22.1	-2.9
KNRA	**Kununurra**	**24.62**	**243**	P	**P**	**11 05 04.2**	**-2.4**
	baz=25,SNR=18						
TNTI	**Ternate**	**24.67**	**283**	P	**P**	**11 05 08.9**	**+1.9**
	comp=Z,118nm,1.3s,comp=Z,2μm						
AS31	**Alice Springs**	**25.06**	**221**	*e*P	**P**	**11 05 09.3**	**-1.3**
ASAR	**Alice Springs**	**25.06**	**221**	P	**P**	**11 05 09.4**	**-1.2**
ASAR				S	**S**	**11 09 35.1**	**+3.5**
ASAR				ScP	**ScP**	**11 12 22.9**	**+3.6**
ASAR	**Alice Springs**	**25.06**	**221**	P	**P**	**11 05 09.4**	**-1.2**
	comp=Z,108nm,1.1s,baz=58,slow=8.1,SNR=411						
ASAR				S	**S**	**11 09 35.1**	**+3.5**
	comp=Z,1.0nm,0.8s,baz=36,slow=21,SNR=2.6						
ASAR				ScP	**ScP**	**11 12 22.9**	**+3.6**
	comp=Z,0.8nm,1.1s,baz=88,slow=2.2,SNR=4.5						
ARMA	**Armidale**	**25.28**	**180**	*e*P	**P**	**11 05 13.5**	**+1.0**
	comp=Z,1nm,1.3s						
ARMA	**Armidale**	**25.28**	**180**	P	**P**	**11 05 13.1**	**+0.7**
	baz=26,SNR=13						
CMSA	**Cobar Meteorol**	**26.93**	**191**	P	**P**	**11 05 30.2**	**+3.0**
	baz=27,SNR=7.5						
MNI	**Manado**	**27.28**	**283**	P	**P**	**11 05 31.6**	**+0.9**
	comp=Z,151nm,1.2s						
KMSI	**Cibinong**	**27.93**	**281**	P	**P**	**11 05 39.4**	**+2.9**
	comp=Z,247nm,1.2s,comp=Z,5μm						
STKA	**Stephens Creek**	**28.26**	**198**	P	**P**	**11 05 38.1**	**-1.1**
STKA	**Stephens Creek**	**28.26**	**198**	P	**P**	**11 05 38.1**	**-1.1**
	comp=Z,10nm,0.8s,baz=356,slow=8.3,SNR=13						
STKA	**Stephens Creek**	**28.26**	**198**	P	**P**	**11 05 39.6**	**+0.4**
	baz=29,SNR=5.5						
FITZ	**Fitzroy Crossi**	**28.33**	**241**	P	**P**	**11 05 37.3**	**-2.6**
FITZ	**Fitzroy Crossi**	**28.33**	**241**	P	**P**	**11 05 37.3**	**-2.6**
	comp=Z,57nm,0.9s,baz=91,slow=7.4,SNR=47						
FITZ	**Fitzroy Crossi**	**28.33**	**241**	P	**P**	**11 05 37.7**	**-2.2**
	baz=29,SNR=44						
LUWI	**Luwuk**	**28.84**	**277**	P	**P**	**11 05 46.8**	**+2.2**
ARPS	**Mount Arapiles**	**32.80**	**194**	P	**P**	**11 06 19.9**	**+0.7**
	baz=33,SNR=6.0						
**FOR

GYA S **S** **11 16 35.0 +0.3**
GYA sS **sS** **11 16 57.8 -0.3**
GYA SS **SS** **11 20 13.5 -2.0**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,560nm,19.8s
GYA LR LR
comp=E,1µm,20.5s
GYA LR LR
comp=Z,540nm,19.8s
CN2 Changchun 53.92 337 *e*P **P** **11 09 11.0 +1.9**
CN2 *e*sP **sP** **11 09 31.0 +2.1**
CN2 *e*S **S** **11 16 41.5 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,18.0s
CN2 LR LR
comp=E,500nm,18.0s
CN2 LR LR
comp=Z,600nm,19.0s
HABR Khabarovsk 55.15 347 *c*e**P** **P** **11 09 16.3 -1.5**
HABR *e* 11 10 15.9
HABR *e* 11 11 20.5
HABR *e*PPP PPP 11 12 33.6
HABR S **S** **11 16 53.4 -3.7**
HABR *e* 11 18 56.1
HABR *e*SS **SS** **11 20 39.7 -2.2**
HABR pmax pmax
comp=Z,104nm,1.5s
HABR pmax pmax
comp=N,46nm,1.6s
HABR pmax pmax
comp=E,15nm,0.9s
HABR MLR MLR
comp=Z,1µm,16.0s
BJI Beijing 55.30 327 P **P** **11 09 18.8 -0.3**
BJI pmax pmax
comp=Z,11nm,1.1s
XAN Xi'an 55.81 317 P **P** **11 09 22.5 -0.5**
XAN pmax pmax
comp=Z,4.0nm,1.3s
KMI Kunming 55.94 305 P **P** **11 09 25.3 +1.0**
KMI pP **pP** **11 09 38.8 +0.5**
KMI sP **sP** **11 09 44.5 +0.3**
KMI pmax pmax
comp=Z,31nm,1.5s
KLR Kul'dur 56.66 345 *e*P P 11 09 24.2 -4.5
KLR pmax pmax
comp=E,34nm,1.6s
KLR pmax pmax
comp=Z,62nm,1.6s
CM31 Chiang Mai Arr 56.69 296 *e*P **P** **11 09 29.6 0.0**
comp=Z,44nm,1.1s
CMAR Chiang Mai Arr 56.69 296 P **P** **11 09 29.4 -0.1**
CMAR Chiang Mai Arr 56.69 296 P **P** **11 09 29.4 -0.1**
comp=Z,19nm,1.0s,baz=114,slow=5.3,SNR=36
CHTO Chiang Mai 56.81 296 *e*P **P** **11 09 30.9 +0.6**
CHTO pmax pmax
comp=Z,55nm,1.3s
CHTO Chiang Mai 56.81 296 *e*P **P** **11 09 30.9 +0.6**
comp=Z,55nm,1.3s
CD2 Chengdu 57.81 311 P **P** **11 09 39.0 +1.8**
CD2 pP **pP** **11 09 52.5 +1.2**
CD2 sP **sP** **11 09 58.3 +1.1**
CD2 PcP **PcP** **11 10 30.8 +1.4**
CD2 PP **PP** **11 11 49.3 +3.4**
CD2 PcS **PcS** **11 14 30.8 -0.1**
CD2 S **S** **11 17 33.0 -0.1**
CD2 sS **sS** **11 17 56.0 -0.8**
CD2 SS **SS** **11 21 25.8 +1.1**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,5.4s
PETK Petropavlovsk- 58.14 4 P **P** **11 09 38.7 -0.4**
PETK Petropavlovsk- 58.14 4 P **P** **11 09 38.7 -0.4**
PETK Petropavlovsk- 58.14 4 P **P** **11 09 38.7 -0.4**
comp=Z,7.2nm,0.8s,baz=162,slow=10,SNR=7.6
HHC Hu-ho-hao-te 58.40 325 *e*P **P** **11 09 41.5 +0.2**
HHC pP **pP** **11 09 53.3 -2.1**
HHC sP **sP** **11 09 59.8 -1.4**
HHC PP **PP** **11 11 52.5 +1.4**
HHC S **S** **11 17 38.8 -1.9**
HHC sS **sS** **11 18 01.0 -3.3**
HHC SS **SS** **11 21 33.8 0.0**
HHC pmax pmax
comp=Z,46nm,0.8s
HHC LR LR
comp=N,840nm,14.3s
HHC LR LR
comp=E,690nm,14.3s
HHC LR LR
comp=Z,740nm,13.1s
BTO Baotou 59.13 324 *e*P **P** **11 09 47.0 +0.7**
LZH Lanzhou 60.40 317 ⇓P **P** **11 09 56.0 +0.8**
LZH pP **pP** **11 10 09.5 +0.1**
LZH sP **sP** **11 10 14.5 -0.8**
LZH PP **PP** **11 12 12.3 +3.3**
LZH *e*S **S** **11 18 06.3 -0.5**
LZH sS **sS** **11 18 28.0 -2.6**
LZH SS **SS** **11 22 04.5 -1.0**
LZH pmax pmax
comp=Z,58nm,1.3s
LZH pmax pmax
comp=Z,250nm,8.2s
LZH LR LR
comp=N,860nm,16.5s
LZH LR LR
comp=E,1µm,17.0s
LZH LR LR
comp=Z,2µm,19.2s
HIA Hailar 60.66 337 *e*P **P** **11 09 56.2 -0.3**
comp=Z,32nm,0.8s
GTA Gaotai 64.86 318 *e*P **P** **11 10 25.5 +0.7**
GTA pP **pP** **11 10 39.5 +0.3**
GTA sP **sP** **11 10 44.5 -0.4**
GTA pmax pmax
comp=Z,5.0nm,1.1s
CLNS Chul'man 65.32 344 *e*P **P** **11 10 27.4 +0.1**
CLNS *e* 11 11 00.5
CLNS *e* 11 12 48.9
CLNS *e*S S 11 19 01.0 -6.3
CLNS *e**SS **sS** **11 19 35.5 +4.2**
CLNS *e* 11 20 11.0
CLNS pmax pmax
comp=N,9.0nm,1.0s
CLNS pmax pmax
comp=Z,18nm,0.8s
CLNS pmax pmax
comp=E,4.0nm,0.9s
CLNS pmax pmax
comp=E,2.0nm,0.7s
CLNS pmax pmax
comp=N,4.0nm,0.8s
CLNS pmax pmax
comp=Z,2.0nm,0.7s
CLNS smax smax
comp=N,3.0nm,0.8s
CLNS smax smax
comp=E,2.0nm,0.8s
ULN Ulaanbaatar 65.43 329 *e*P **P** **11 10 28.3 -0.1**
comp=E,42nm,1.6s
SONM Songino Array 65.75 329 P **P** **11 10 30.6 +0.1**
SONM Songino Array 65.75 329 P **P** **11 10 30.6 +0.1**
comp=E,6.0nm,0.7s,baz=144,slow=5.2,SNR=22
LSA Lhasa 67.20 305 *e*P **P** **11 10 41.1 +0.6**
LSA pmax pmax
comp=Z,73nm,1.6s
LSA Lhasa 67.20 305 *e*P **P** **11 10 41.1 +0.6**
comp=Z,73nm,1.6s
SEY Seymchan 67.75 0 *c*e**P** **P** **11 10 40.7 -2.0**
SEY *i**PP **PcP** **11 11 06.1 -3.0**
YAK Yakutsk 68.91 349 *e*P **P** **11 10 50.8 +0.9**
YAK pmax pmax
comp=Z,16nm,1.2s
YAK pmax pmax
comp=N,5.0nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.3s

ZAK Zakamensk 68.94 329 ⇑*i*P **P** **11 10 50.2 -0.4**
ZAK pmax pmax
comp=Z,11nm,1.8s
TLY Talaya 69.56 331 *e*P **P** **11 10 56.2 +2.0**
TLY pmax pmax
comp=Z,23nm,1.8s
VNDA Vanda 72.68 178 P **P** **11 11 12.8 +0.1**
VNDA Vanda 72.68 178 P **P** **11 11 12.8 +0.1**
comp=Z,3.9nm,0.9s,baz=330,slow=6.4,SNR=5.7
BILL Bilibino 73.63 6 ⇑*i*P **P** **11 11 19.5 +1.1**
BILL *i* 11 11 31.2
BILL *i* 11 14 00.9
BILL pmax pmax
comp=Z,7.0nm,1.0s
BILL Bilibino 73.63 6 *e*P **P** **11 11 18.7 +0.4**
comp=Z,7.8nm,1.1s
HVS Khovu-Aksy 74.44 326 ⇓*e*P **P** **11 11 23.6 0.0**
HVS pmax pmax
comp=Z,108nm,1.7s
WMQ Urumqi 74.94 318 *e*P **P** **11 11 28.0 +1.4**
TIXI Tiksi 77.92 353 ⇓*e*P **P** **11 11 40.7 -2.1**
TIXI pmax pmax
comp=Z,5.0nm,0.9s
MK31 Makanchi Array 79.56 319 *e*P **P** **11 11 51.9 -0.5**
MK31 Makanchi Array 79.56 319 *e*P **P** **11 11 51.9 -0.5**
MKAR Makanchi Array 79.56 319 P **P** **11 11 50.2 -2.2**
MKAR Makanchi Array 79.56 319 P **P** **11 11 50.2 -2.2**
MKAR Makanchi Array 79.56 319 P **P** **11 11 50.2 -2.2**
comp=Z,1.8nm,0.9s,baz=99,slow=7.5,SNR=14
ZALV Zalesovo Beam 80.55 327 P **P** **11 11 55.8 -1.6**
ZALV Zalesovo Beam 80.55 327 P **P** **11 11 55.8 -1.6**
ZALV Zalesovo Beam 80.55 327 P **P** **11 11 55.8 -1.6**
comp=Z,3.9nm,0.7s,baz=113,slow=6.9,SNR=16
MID Middleton Isla 80.65 27 *e*P **P** **11 11 58.1 +0.2**
MID Middleton Isla 80.65 27 *e*P **P** **11 11 58.0 +0.2**
comp=Z,62nm,0.4s
NVS Novosibirsk 81.73 327 *e*P P 11 11 54.6 -9.2
ILAR Eielson Array 82.88 22 P **P** **11 12 09.2 -0.4**
ILAR Eielson Array 82.88 22 P **P** **11 12 09.2 -0.4**
comp=Z,5.5nm,0.9s,baz=260,slow=4.5,SNR=9.1
KURK Kurchatov 83.07 322 *e*P **P** **11 12 09.8 -1.0**
KURK pmax pmax
comp=Z,9.0nm,1.0s
KURK Kurchatov 83.07 322 *e*P **P** **11 12 09.8 -1.0**
comp=Z,9.4nm,1.0s
KURK Kurchatov 83.07 322 P **P** **11 12 09.5 -1.3**
comp=Z,51nm,0.9s,SNR=6.0
KURBB Kurchatov Arra 83.09 322 P **P** **11 12 10.2 -0.7**
comp=Z,3.6nm,0.9s,baz=113,slow=4.4,SNR=20
AAK Ala-Archa 83.79 314 P **P** **11 12 14.8 -0.1**
AAK Ala-Archa 83.79 314 P **P** **11 12 14.8 -0.1**
AAK Ala-Archa 83.79 314 P **P** **11 12 14.8 -0.1**
comp=Z,3.2nm,0.8s,baz=76,slow=6.6,SNR=6.7
MAW Mawson 84.84 203 P **P** **11 12 18.7 -0.8**
MAW Mawson 84.84 203 P **P** **11 12 18.7 -0.8**
comp=Z,5.0nm,0.8s,baz=91,slow=8.5,SNR=8.5
SKAG Skagway 85.88 29 *e*P **P** **11 12 26.1 +1.3**
comp=Z,10nm,0.4s
BVAR Borovoye Array 88.56 323 P **P** **11 12 36.2 -1.8**
BVAR Borovoye Array 88.56 323 P **P** **11 12 36.2 -1.8**
BVAR Borovoye Array 88.56 323 P **P** **11 12 36.2 -1.8**
comp=Z,3.6nm,0.7s,baz=101,slow=7.7,SNR=13
BRVK Borovoye 88.63 323 ⇓*e*P **P** **11 12 36.6 -1.7**
BRVK pmax pmax
comp=Z,10.0nm,1.4s
NVAR Mina Array Bea 93.32 52 P **P** **11 13 01.4 +0.7**
NVAR Mina Array Bea 93.32 52 P **P** **11 13 01.4 +0.7**
comp=Z,5.5nm,0.9s,baz=257,slow=7.2,SNR=15
BFSC Mount Baldy Ra 93.57 56 P **P** **11 13 01.2 -0.7**
baz=94
LRMC Laurel Mountai 93.62 55 P **P** **11 13 02.8 +0.8**
baz=94
MPMC Manual Prospec 93.82 54 P **P** **11 13 03.1 0.0**
baz=94
BBRC Big Bear Solar 94.19 56 P **P** **11 13 05.2 +0.4**
baz=94
GSC Goldstone 94.34 55 P **P** **11 13 06.0 +0.7**
baz=94
FURC Furnace Creek, 94.35 54 P **P** **11 13 06.0 +0.8**
baz=94
MONP Monument Peak 94.53 58 P **P** **11 13 08.0 +1.6**
baz=95
PFO Pinyon Flat Ob 94.54 57 P **P** **11 13 07.7 +1.4**
PFO Pinyon Flat Ob 94.54 57 P **P** **11 13 07.7 +1.4**
comp=Z,4.7nm,1.0s,baz=289,slow=3.9,SNR=4.3
PFO Pinyon Flat Ob 94.54 57 P **P** **11 13 07.0 +0.6**
baz=95
HEC Hector,Ludlow 94.70 56 P **P** **11 13 07.7 +0.7**
baz=95
DVTC Desert V Tower 94.78 58 P **P** **11 13 08.8 +1.4**
baz=95
SHOC Shoshone 94.79 54 P **P** **11 13 08.0 +0.7**
baz=95
BELC Belle Mtn. Jos 94.94 56 P **P** **11 13 08.5 +0.4**
baz=95
TUQ Turquoise Moun 95.06 55 P **P** **11 13 09.3 +0.6**
baz=95
BC3 Big Chuckawall 95.37 57 P **P** **11 13 11.7 +1.6**
baz=96
R11A Troy Canyon, C 95.45 52 P **P** **11 13 11.3 +0.9**
baz=96
IRM Iron Mountain 95.65 56 P **P** **11 13 12.4 +1.2**
baz=96
YKA Yellowknife Ar 96.27 28 P **P** **11 13 13.8 +0.5**
YKA Yellowknife Ar 96.27 28 P **P** **11 13 13.8 +0.5**
comp=Z,0.3nm,0.7s,baz=270,slow=5.0,SNR=6.4
PDMCI Parker Dam,Lak 96.49 56 P **P** **11 13 15.8 +0.8**
baz=97
B14A Marquette Ranc 97.27 42 P Pdif 11 13 19.2 +0.7
baz=97
U15A North Rim 98.03 54 P Pdif 11 13 22.2 -0.2
baz=98
I16A Newdale 98.58 47 P Pdif 11 13 24.7 +0.2
baz=99
WUAZ Wupatki 98.78 55 P Pdif 11 13 25.5 0.0
baz=99
D17A Six Diamond Ra 99.04 43 P **Pdif** **11 13 27.0 +0.5**
baz=99
F18A Big Timber 99.77 44 P **Pdif** **11 13 28.6 -1.1**
baz=100
PDAR Pinedale Array 100.03 48 P **Pdif** **11 13 31.0 0.0**
PDAR Pinedale Array 100.03 48 P **Pdif** **11 13 31.0 0.0**
comp=Z,0.9nm,0.9s,baz=217,slow=2.3,SNR=3.7
L19A Farson 100.20 48 P **Pdif** **11 13 31.9 +0.1**
baz=100
F19A Roth Farm, Mol 100.31 44 P **Pdif** **11 13 32.4 +0.4**
baz=100
V20A Brimhall 101.14 55 P **Pdif** **11 13 36.9 +0.8**
baz=101
S20A Disappointment 101.15 53 P **Pdif** **11 13 36.4 +0.3**
baz=101
N21A Black Mountain 101.66 50 P **Pdif** **11 13 38.5 +0.2**
baz=102
VYHS Vyhne 120.85 325 *e*PKIKP **PKPdf** **11 18 36.4 -1.1**
VYHS Vyhne 120.85 325 *e*PKP **PKPdf** **11 18 36.4 -1.1**
VYHS Vyhne 120.85 325 *e*PKIKP **PKPdf** **11 18 36.4 -1.1**
GERES GERESS Array B 123.48 328 PKP **PKPdf** **11 18 41.1 -1.5**
GERES GERESS Array B 123.48 328 PKP **PKPdf** **11 18 41.1 -1.5**
comp=Z,2.0nm,0.3s,baz=0.8,slow=9.6,SNR=6.0
LPAZ La Paz 135.56 119 PKP **PKPdf** **11 19 07.0 -0.1**
LPAZ La Paz 135.56 119 PKP **PKPdf** **11 19 07.0 -0.1**
comp=Z,1.9nm,0.9s,baz=14,slow=1.4,SNR=6.4
SIV San Ignacio 141.70 124 PKPpre PKPpre 11 19 14.1
SIV San Ignacio 141.70 124 PKiKP PKPpre 11 19 14.1
comp=Z,1.6nm,0.8s,baz=239,slow=3.5,SNR=4.6
TORD Torodi Ar. Bea 149.03 287 PKPbc **PKPbc** **11 19 32.1 -2.1**
TORD Torodi Ar. Bea 149.03 287 PKPbc **PKPbc** **11 19 32.1 -2.1**
comp=Z,5.1nm,0.9s,baz=68,slow=2.7,SNR=17

*IDC **28** 11:05:12.3±1.3, 16°.43N×86°.76W, h0km, mb3.9/8, mb1 4.2/9, mb1mx4.0/25, mbtmp4.0/9, ML5.2/2, Error ellipse: s-maj=39.4km s-min=21.9km az=57.0*
*NEIC **28** 11:05:14.0±0.3, 16°.41N×86°.76W, h10km, mb4.3/27, Error ellipse: s-maj=8.0km s-min=5.1km az=59.0*
*ISCJB **28** 11:05:14.0±0.5, 16°.46N±0°.06×86°.74W±0°.07, h22km, mb4.2/25, Error ellipse: s-maj=10.4km s-min=7.4km az=148.9*

ISC 28 11:05:15.2±0.6, 16°.46N±0°.08×86°.9W±0°.1, h22km, n241, σ1°.28/207, mb4.3/25, 87C-95D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**2.42**	**190**	*e*Pn	**Pn**	**11 05 52.8**	**-0.7**
TEIG	**Tepich**	**3.98**	**340**	*e*Pn	**Pn**	**11 06 14.7**	**-0.2**
TEIG					Sn		**Sn**	11 06 57.5	-3.4
TEIG					*e*Sn	Sb	11 07 00.3	-12
TEIG	**Tepich**	**3.98**	**340**		Pn	**Pn**	**11 06 14.5**	**-0.4**
	275nm,0.3s,baz=335,slow=1.2,SNR=342							
TEIG					Sn		**Sn**	11 06 57.5	-3.4
	203nm,0.3s,baz=246,slow=19,SNR=15							
MTDJ	**Mount Denham**	**9.07**	**77**	*e*Pn		**Pn**	**11 07 24.5**	**-0.5**
BCIP	**Isla Barro Col**	**9.97**	**136**	*e*Pn		**Pn**	**11 07 34.5**	**-2.7**
HKT	**Hockley**	**15.75**	**330**	*e*Pn		**P**	**11 08 57.2**	**-2.2**
	29nm,0.9s							
VBMS	**Vicksburg**	**16.04**	**349**	*e*Pn		**P**	**11 09 00.0**	**-2.7**
LRAL	**Lakeview Retre**	**16.50**	**360**	*e*Pn		**P**	**11 09 05.7**	**-2.1**
	7.3nm,0.4s							
GOGA	**Godfrey**	**17.15**	**10**	*e*Pn		**P**	**11 09 14.2**	**-0.8**
	9.6nm,0.6s							
732A	**Laxson Ranch,**	**17.18**	**318**	⇓P		**Pn**	**11 09 10.0**	**-3.8**
	baz=17							
SDV	**Santo Domingo**	**17.52**	**113**	*e*Pn		**P**	**11 09 18.9**	**-0.5**
	11nm,0.9s							
632A	**Uvalde**	**17.60**	**320**	⇑P		**Pn**	**11 09 15.7**	**-3.4**
	baz=18							
631A	**Perdido Creek**	**18.03**	**318**	⇓P		**Pn**	**11 09 21.7**	**-2.7**
	baz=18,SNR=5.1							
532A	**Rocksprings**	**18.11**	**321**	⇓P		**Pn**	**11 09 22.4**	**-3.1**
	baz=18,SNR=7.4							
WHTX	**Lake Whitney**	**18.22**	**330**	⇓P		**Pn**	**11 09 25.3**	**-1.4**
	baz=18,SNR=69							
JCT	**Junction City**	**18.30**	**322**	*e*Pn		**Pn**	**11 09 30.9**	**+3.1**
	15nm,0.9s							
JCT	**Junction City**	**18.30**	**322**	⇓P		**P**	**11 09 25.8**	**-2.0**
	baz=18							
PLAL	**Pickwick Lake**	**18.48**	**357**	*e*Pn		**Pn**	**11 09 32.7**	**+2.8**
	4.6nm,0.7s							
531A	**Rocksprings**	**18.53**	**320**	⇑P		**P**	**11 09 29.1**	**-1.2**
	baz=19							
432A	**Menard**	**18.59**	**323**	⇑P		**P**	**11 09 29.7**	**-1.2**
	baz=19,SNR=6.7							
SWET	**Sewanee**	**18.70**	**2**	*e*Pn		**Pn**	**11 09 32.3**	**-0.3**
	12nm,1.1s							
UALR	**University of**	**18.89**	**346**	*e*P		**Pn**	**11 09 35.4**	**+0.5**
	19nm,1.0s							
431A	**Sonora**	**18.93**	**321**	⇓P		**P**	**11 09 33.8**	**-0.9**
	baz=19							
332A	**Millersview**	**18.93**	**324**	⇑P		**Pn**	**11 09 35.0**	**-0.4**
	baz=19,SNR=5.6							
530A	**J-C Ranch, Com**	**19.01**	**318**	⇓P		**Pn**	**11 09 35.6**	**-0.8**
	baz=19							
CPCT	**Cooper Cave**	**19.03**	**6**	*e*Pn		**Pn**	**11 09 36.7**	**+0.2**
232A	**Coleman**	**19.26**	**325**	⇓P		**Pn**	**11 09 38.6**	**-0.8**
	baz=19,SNR=7.3							
331A	**San Angelo**	**19.27**	**323**	⇑P		**P**	**11 09 37.9**	**-0.6**
	baz=19							
TKL	**Tuckaleechee C**	**19.32**	**8**	P		**Pn**	**11 09 40.6**	**+0.6**
TKL				S		Sn	11 13 04.9	-11
TKL	**Tuckaleechee C**	**19.32**	**8**	P		**Pn**	**11 09 40.6**	**+0.6**
	4.0nm,0.3s,baz=177,slow=9.8,SNR=22							
TKL				S		Sn	11 13 04.9	-11
	0.6nm,0.3s,baz=308,slow=18,SNR=3.4							
430A	**Baggett Ranch,**	**19.39**	**320**	⇓P		**Pn**	**11 09 39.9**	**-1.1**
	baz=20,SNR=7.8							
529A	**Stev Forest Ra**	**19.57**	**317**	⇑P		**Pn**	**11 09 42.6**	**-0.6**
	baz=20,SNR=7.1							
628A	**Black Gap, Mar**	**19.62**	**314**	⇓P		**Pn**	**11 09 42.0**	**-1.7**
	baz=20,SNR=5.6							
231A	**Bronte**	**19.67**	**324**	⇓P		**Pn**	**11 09 43.0**	**-1.3**
	baz=20,SNR=8.7							
429A	**Davenport Ranc**	**19.69**	**318**	⇑P		**Pn**	**11 09 43.1**	**-1.4**
	baz=20,SNR=9.4							
330A	**Mertzon**	**19.78**	**321**	⇓P		**Pn**	**11 09 45.1**	**-0.6**
	baz=20,SNR=9.4							
ABTX	**Abilene, Hawle**	**19.83**	**327**	⇓P		**Pn**	**11 09 45.6**	**-0.5**
	baz=20,SNR=6.1							
627A	**Terlingua Ranc**	**19.94**	**313**	⇑P		Pn	11 09 46.9	-0.7
	baz=20							
528A	**Cox Ranch, San**	**19.97**	**316**	⇑P		Pn	11 09 47.0	-0.9
	baz=20							
TXAR	**Lajitas Array**	**20.07**	**313**	P		Pn	11 09 49.7	+0.6
TXAR				S		S	11 13 18.6	-13
TXAR	**Lajitas Array**	**20.07**	**313**	P		Pn	11 09 49.7	+0.6
	2.4nm,0.8s,baz=131,slow=10,SNR=28							
TXAR				S		S	11 13 18.5	-13
	0.4nm,0.7s,baz=125,slow=17,SNR=6.5							
230A	**Sterling City**	**20.09**	**322**	⇑P		Pn	11 09 48.5	-0.8
	baz=20,SNR=8.6							
428A	**Kincaid Ranch,**	**20.27**	**317**	⇓P		Pn	11 09 50.1	-1.3
	baz=20							
131A	**Roby**	**20.27**	**325**	⇓P		Pn	11 09 50.6	-0.7
	baz=20,SNR=14							
Z32A	**Haskell**	**20.28**	**328**	⇓P		Pn	11 09 51.7	+0.3
	baz=20,SNR=21							
329A	**Wagon Wheel Ra**	**20.33**	**320**	⇑P		Pn	11 09 50.9	-1.2
	baz=20							
527A	**Woodward Ranch**	**20.52**	**315**	⇑P		Pn	11 09 54.1	-0.4
	baz=21,SNR=12							
130A	**Snyder**	**20.53**	**324**	⇓P		Pn	11 09 53.5	-0.9
	baz=21,SNR=6.0							
626A	**Big Bend Ranch**	**20.53**	**312**	⇓P		Pn	11 09 54.8	+0.3
	baz=21,SNR=26							
229A	**Bryant Ranch,**	**20.56**	**321**	⇑P		Pn	11 09 53.8	-1.1
	baz=21							
Z31A	**Sharp Cattle R**	**20.63**	**327**	⇓P		Pn	11 09 54.9	-0.7
	baz=21,SNR=20							
328A	**Wristen Ranch,**	**20.78**	**318**	⇓P		Pn	11 09 55.8	-1.6
	baz=21							
526A	**Mary Lane Ranc**	**20.80**	**314**	⇓P		Pn	11 09 57.2	-0.5
	baz=21,SNR=8.5							
427A	**Hayter Ranch,**	**20.82**	**316**	⇓P		Pn	11 09 56.1	-1.7
	baz=21							
Y32A	**R-V Farms, Ver**	**20.82**	**329**	⇓P		Pn	11 09 57.0	-0.7
	baz=21,SNR=9.2							
TUL1	**Tulsa**	**20.95**	**339**	⇓P		**P**	**11 09 57.8**	**+1.3**
	baz=21							
129A	**Stewart Farms,**	**21.07**	**323**	⇓P		**P**	**11 09 58.9**	**+0.8**
	baz=21,SNR=5.7							
WMOK	**Wichita Mounta**	**21.11**	**332**	*e*P		**P**	**11 09 59.5**	**+1.1**
	8.6nm,0.6s							
426A	**McDonald Obser**	**21.12**	**315**	⇓P		**P**	**11 10 00.5**	**+1.7**
	baz=21,SNR=6.3							
Z30A	**Sanderson Ranc**	**21.13**	**325**	⇓P		**P**	**11 09 59.7**	**+1.0**
	baz=21,SNR=8.8							
228A	**UT Block 9, Go**	**21.14**	**320**	⇑P		**P**	**11 09 59.4**	**+0.5**
	baz=21							
Y31A	**Rekieta Farm,**	**21.19**	**328**	⇓P		**P**	**11 10 01.1**	**+1.7**
	baz=21,SNR=21							
SIUC	**Southern Illin**	**21.28**	**355**	*e*P		**P**	**11 10 01.3**	**+1.2**
	18nm,0.7s							
128A	**Castleberry Fa**	**21.43**	**322**	⇓P		**P**	**11 10 03.0**	**+1.1**
	baz=22,SNR=13							
Z29A	**Hungry Hill Ra**	**21.44**	**324**	⇑P		**P**	**11 10 02.4**	**+0.5**
	baz=22							
Y30A	**Stafford Cattl**	**21.46**	**327**	⇑P		**P**	**11 10 03.7**	**+1.5**
	baz=22							
326A	**Caldwell Ranch**	**21.49**	**317**	⇓P		**P**	**11 10 03.9**	**+1.3**
	baz=22							
227A	**Bennet, Jal**	**21.50**	**319**	⇑P		**P**	**11 10 03.4**	**+0.7**
	baz=22							
X31A	**McDonald Ranch**	**21.59**	**329**	⇑P		**P**	**11 10 05.1**	**+1.6**
	baz=22,SNR=14							
Z28A	**Tucker Farm, M**	**21.85**	**323**	⇓P		**P**	**11 10 07.0**	**+0.6**
	baz=22,SNR=5.4							
425A	**Indio Mountain**	**21.85**	**314**	⇑P		**P**	**11 10 07.3**	**+0.8**
	baz=22,SNR=6.6							
Y29A	**Porterfield Fa**	**21.86**	**325**	⇓P		**P**	**11 10 07.4**	**+0.9**
	baz=22							
X30A	**Coker Ranch, T**	**21.89**	**328**	⇑P		**P**	**11 10 08.1**	**+1.3**
	baz=22,SNR=8.2							
W31A	**Holland Ranch,**	**22.02**	**330**	⇓P		**P**	**11 10 09.0**	**+0.8**
	baz=22							
226B	**Tecolote Peak,**	**22.10**	**318**	⇓P		**P**	**11 10 10.5**	**+1.4**
	baz=22,SNR=6.8							
325A	**Bean Ranch, Si**	**22.19**	**315**	⇑P		**P**	**11 10 11.4**	**+1.1**
	baz=22,SNR=11							
OLIL	**Olney**	**22.22**	**357**	*e*P		**P**	**11 10 11.8**	**+1.6**
	36nm,1.2s							
Y28A	**McKinney Farm,**	**22.22**	**324**	⇑P		**P**	**11 10 10.7**	**+0.3**
	baz=22							
W30A	**Crocket Farms**	**22.32**	**329**	⇑P		**P**	**11 10 12.3**	**+0.8**
	baz=22							
X29A	**Tulia**	**22.32**	**326**	⇓P		**P**	**11 10 12.0**	**+0.5**
	baz=22							
Z27A	**Tatum**	**22.35**	**322**	⇓P		**P**	**11 10 11.9**	**+0.1**
	baz=22,SNR=6.0							
126A	**Clayton Basin,**	**22.39**	**319**	⇑P		**P**	**11 10 11.7**	**-0.5**
	baz=22							
V31A	**Spring Creek L**	**22.45**	**331**	⇓P		**P**	**11 10 13.3**	**+0.4**
	baz=23							
225A	**Deer Hill, Car**	**22.55**	**317**	⇑P		**P**	**11 10 14.5**	**+0.4**
	baz=23							

MSTX	Muleshoe baz=23,SNR=5.6	22.56	324	⇓P	P	11 10 14.3	+0.3
324A	Moseley Ranch, baz=23,SNR=5.5	22.58	315	⇑P	P	11 10 15.2	+0.8
BLO	Bloomington 31nm,0.8s	22.63	1	*e*P	P	11 10 15.5	+0.8
X28A	Dimmitt baz=23	22.64	325	⇑P	P	11 10 15.4	+0.4
AMTX	Amarillo 19nm,0.5s	22.65	327	*e*P	P	11 10 15.6	+0.6
MNTX	Cornudas Mount 3.7nm,0.9s	22.67	315	*e*P	P	11 10 16.2	+1.0
Y27A	Causey baz=23,SNR=8.2	22.72	323	⇓P	P	11 10 15.7	-0.1
Z26A	Caprock baz=23	22.78	320	⇑P	P	11 10 16.3	-0.1
125A	Gardner Draw, baz=23,SNR=6.5	22.80	318	⇓P	P	11 10 16.7	+0.1
W29A	Amarillo baz=23	22.81	327	⇑P	P	11 10 16.7	0.0
224A	Cornudas Mount baz=23	22.99	316	⇑P	P	11 10 17.5	-1.2
Y26A	Elida baz=23,SNR=6.6	23.14	322	⇓P	P	11 10 19.0	-1.1
X27A	F and S Farms, baz=23	23.24	324	⇑P	P	11 10 20.4	-0.7
Z25A	Roswell baz=23	23.24	319	⇓P	P	11 10 20.5	-0.7
124A	Stringfield Ra baz=24,SNR=8.7	23.34	317	⇓P	P	11 10 22.7	+0.5
U30A	WK&E Inc. Balk baz=24	23.44	331	⇓P	P	11 10 23.2	+0.1
T31A	Randall Ranch, baz=24	23.48	334	⇑P	P	11 10 23.7	+0.3
W27A	Bowe Ranch, En baz=24	23.52	325	⇑P	P	11 10 24.1	+0.1
X26A	CR and CF Fran baz=24,SNR=8.1	23.57	323	P	P	11 10 24.7	+0.2
V28A	Channing baz=24	23.60	327	⇑P	P	11 10 25.1	+0.5
Y25A	Mesa, Roswell baz=24	23.66	321	⇓P	P	11 10 25.6	+0.3
Z24A	Sheeppen Canyo baz=24,SNR=5.3	23.68	319	⇓P	P	11 10 25.7	+0.1
SFIN	Scholer Farm baz=24	23.84	360	⇑P	P	11 10 27.5	+0.8
V27A	Dan Oppiter Fa baz=24	23.92	326	⇑P	P	11 10 27.5	-0.2
W26A	Owens Ranch, T baz=24	23.93	324	⇓P	P	11 10 27.5	-0.4
KSU1	Kansas State U 12nm,0.8s	24.12	341	*e*P	P	11 10 29.8	+0.4
Y24A	Capitan baz=24,SNR=11	24.12	320	⇓P	P	11 10 29.8	+0.1
T29A	Hugoton baz=24,SNR=5.5	24.25	331	⇓P	P	11 10 31.2	+0.4
S30A	Montezuma baz=24,SNR=5.1	24.28	333	⇑P	P	11 10 31.1	+0.1
W25A	X Bar L Ranch, baz=25,SNR=5.7	24.42	323	⇑P	P	11 10 32.4	0.0
V26A	Tequesquite Ra baz=25,SNR=12	24.46	325	⇓P	P	11 10 33.7	+0.9
Y23A	Lovelace Mesa, baz=25	24.51	319	⇓P	P	11 10 34.1	+0.8
X24A	Lazy VL Ranch, baz=25	24.55	321	⇓P	P	11 10 34.7	+1.0
S29A	Ulysses baz=25	24.55	332	⇑P	P	11 10 34.8	+1.3
T28A	Walsh baz=25	24.61	330	⇓P	P	11 10 35.1	+1.1
320A	Kipp Ranch, An baz=25,SNR=7.0	24.67	311	⇑P	P	11 10 35.5	+0.8
Z22A	Elephant Butte baz=25	24.68	316	⇑P	P	11 10 35.8	+1.1
R30A	Dighton baz=25,SNR=7.3	24.74	334	P	P	11 10 36.9	+1.7
121A	Cookes Peak, D baz=25	24.80	314	⇑P	P	11 10 36.8	+0.9
T27A	Campo baz=25	24.86	329	⇑P	P	11 10 36.8	+0.4
U26A	Atchley Ranch, baz=25,SNR=12	24.88	326	⇑P	P	11 10 38.0	+1.3
S28A	Manter baz=25	24.89	331	⇓P	P	11 10 37.0	+0.5
V25A	Rancho No Teng baz=25	24.95	324	⇓P	P	11 10 38.0	+0.7
220A	Playas Peak, P baz=25	24.97	312	⇓P	P	11 10 37.9	+0.5
W24A	Lazy 6 Ranch, baz=25,SNR=5.7	24.97	322	⇑P	P	11 10 38.7	+1.2
X23A	Hourglass Bar baz=25	25.02	320	⇑P	P	11 10 38.5	+0.6
Y22A	Socorro baz=25,SNR=6.4	25.10	318	⇑P	P	11 10 39.0	+0.4
Z21A	St. Cloud Mine baz=25	25.18	316	⇓P	P	11 10 40.4	+1.1
319A	Douglas baz=25,SNR=7.5	25.24	310	⇑P	P	11 10 41.8	+2.0
U25A	Circle Dot Ran baz=25	25.25	325	⇑P	P	11 10 41.3	+1.4
V24A	Rampart Ranch, baz=25	25.25	323	⇓P	P	11 10 41.3	+1.3
W23A	Werner Place, baz=26	25.38	321	⇓P	P	11 10 42.3	+1.1
T26A	Comanche Natio baz=26,SNR=5.6	25.39	328	⇓P	P	11 10 41.9	+0.6
120A	U Bar Ranch, L baz=26	25.40	313	⇑P	P	11 10 42.3	+0.9
ANMO	Albuquerque 2.8nm,1.0s	25.43	320	*e*P	P	11 10 43.1	+1.5
ANMO	Albuquerque 1.8nm,0.9s,baz=155,slow=8.4,SNR=8.3	25.43	320	P	P	11 10 43.0	+1.5
R28A	Tribune baz=26,SNR=8.4	25.45	332	⇓P	P	11 10 42.4	+0.8
Y21A	Point of Rocks baz=26	25.60	317	⇓P	P	11 10 43.1	-0.2
S26A	Kim baz=26,SNR=9.0	25.68	328	⇑P	P	11 10 44.1	+0.4
Z20A	Nine Sixteen R baz=26	25.69	314	⇓P	P	11 10 44.6	+0.7
T25A	Trinidad baz=26,SNR=8.6	25.80	326	⇓P	P	11 10 45.2	+0.2
R27A	Eads baz=26	25.87	330	⇑P	P	11 10 46.0	+0.5
X21A	Alamocita Cree baz=26	25.95	318	⇑P	P	11 10 47.0	+0.7
Y20A	Horse Springs, baz=26	26.01	316	⇑P	P	11 10 47.2	+0.3
T24A	Torres, Weston baz=26	26.09	325	⇑P	P	11 10 48.3	+0.6
R26A	Arlington baz=26	26.19	329	⇓P	P	11 10 49.0	+0.6
S25A	Robets Cordova baz=26	26.20	327	⇓P	P	11 10 49.1	+0.6
U23A	El Rito baz=26	26.20	323	⇑P	P	11 10 49.0	+0.3
V22A	San Miguel Ran baz=26	26.34	321	⇓P	P	11 10 50.8	+0.8
KSCO	Kaye Shedlock' baz=26	26.37	332	⇓P	P	11 10 51.1	+1.0
X20A	Quemado baz=27	26.47	317	⇑P	P	11 10 52.1	+1.1
R25A	Fountain Ranch baz=27	26.49	328	⇓P	P	11 10 52.3	+1.2
S24A	Houchin Ranch, baz=27	26.59	326	⇑P	P	11 10 53.6	+1.3
U22A	Llaves baz=27	26.62	322	⇓P	P	11 10 53.6	+1.1
Q26A	Hugo baz=27	26.72	330	⇑P	P	11 10 54.5	+1.4
TUC	Tucson 1.1nm,0.9s	26.82	310	*e*P	P	11 10 56.0	+2.0
SDCO	Great Sand Dun 4.8nm,1.3s	26.83	326	*e*P	P	11 10 55.2	+0.9
W20A	Ramah baz=27	26.83	318	⇓P	P	11 10 55.3	+0.9
R24A	Sanders Place, baz=27	26.98	327	⇑P	P	11 10 57.2	+1.6
V20A	Brimhall baz=27	27.23	319	⇑P	P	11 10 59.0	+1.1
R23A	Moffat baz=28	27.33	326	⇑P	P	11 11 00.2	+1.4
S22A	4UR Ranch, Cre baz=28	27.56	324	⇑P	P	11 11 02.5	+1.6
OGNE	Ogallala baz=28	27.71	335	⇑P	P	11 11 03.6	+1.7
R22A	Saguache, Gunn baz=28	27.86	325	⇑P	P	11 11 05.2	+1.6
ECSD	EROS Data Cent 6.0nm,0.9s	28.42	345	*e*P	P	11 11 08.0	-0.2
P22A	Eagle baz=29	28.85	327	⇑P	P	11 11 13.8	+1.5
SADO	Sadowa	28.96	11	P	P	11 11 14.1	+1.2
SADO	Sadowa 1.6nm,0.6s,baz=209,slow=13,SNR=3.7	28.96	11	P	P	11 11 14.1	+1.2
O22A	Kremmling baz=29	29.16	328	⇓P	P	11 11 16.9	+1.7
N20A	Spence Gulch, baz=31,SNR=6.3	30.54	327	⇑P	P	11 11 29.0	+1.6
SRU	San Rafael baz=31	30.61	322	⇑P	P	11 11 29.5	+1.6
M21A	Separation Pea baz=31	30.66	329	⇓P	P	11 11 30.3	+1.9
L21A	Rawlins baz=31	30.93	329	⇓P	P	11 11 32.0	+1.4
L20A	Wamsutter baz=32	31.44	328	⇓P	P	11 11 36.7	+1.5
K20A	Yellowstone Ra baz=32	31.92	329	⇓P	P	11 11 40.7	+1.3
J21A	Lysite baz=32	32.02	331	⇑P	P	11 11 41.6	+1.4
L18A	Fontenelle, Gr baz=32	32.25	327	⇑P	P	11 11 43.5	+1.2
M17A	Scullys Gap (B baz=32	32.28	325	⇑P	P	11 11 43.8	+1.2
K19A	Absolon Red Bu baz=32	32.30	329	⇑P	P	11 11 43.8	+1.1
J20A	Shoshoni baz=32	32.32	330	⇑P	P	11 11 44.6	+1.7
PDAR	Pinedale Array	32.61	328	P	P	11 11 46.5	+0.9
PDAR	Pinedale Array 1.6nm,0.8s,baz=140,slow=9.4,SNR=9.4	32.61	328	P	P	11 11 46.5	+0.9
GSC	Goldstone 7.7nm,1.1s	32.64	311	*e*P	P	11 11 46.5	+0.8
GSC	Goldstone baz=33	32.64	311	⇑P	P	11 11 46.9	+1.1
DUG	Dugway baz=33	32.66	322	⇓P	P	11 11 47.5	+1.6
J19A	Crowheart baz=33	32.72	329	⇓P	P	11 11 47.7	+1.3
I20A	Worland baz=33	32.80	331	⇑P	P	11 11 48.7	+1.7
R11A	Troy Canyon, C baz=33	33.33	317	⇓P	P	11 11 53.3	+1.6
SNOW	Snow King Moun 14nm,0.8s	33.72	328	*e*P	P	11 11 57.2	+2.0
LOHW	Long Hollow 5.3nm,1.0s	33.75	328	*e*P	P	11 11 57.4	+1.9
TPAW	Teton Pass 9.1nm,0.7s	33.84	328	*e*P	P	11 11 57.9	+1.6
MOOW	Moose Ponds 2.7nm,0.8s	33.92	328	*e*P	P	11 11 58.6	+1.7
I17A	Pilgrim Ck. baz=34	33.96	329	⇓P	P	11 11 59.1	+1.8
IMW	Indian Meadow 4.5nm,0.8s	34.12	328	*e*P	P	11 12 00.5	+1.8
I16A	Newdale baz=34	34.39	328	⇓P	P	11 12 02.3	+1.4
G18A	Lazy EL Ranch, baz=35	34.50	331	⇑P	P	11 12 03.3	+1.4
J14A	Carey baz=35	35.08	325	⇑P	P	11 12 08.5	+1.6
D20A	Manuel Ranch, baz=35	35.26	335	⇑P	P	11 12 10.0	+1.8
I14A	Mackay baz=36,SNR=5.5	35.45	326	⇑P	P	11 12 11.8	+1.7
J13A	Cove Ranch, Pi baz=36	35.49	325	⇓P	P	11 12 11.9	+1.4
H15A	Lima baz=36,SNR=6.1	35.50	328	⇓P	P	11 12 12.2	+1.7
G16A	Moss Hill, Enn baz=36	35.51	329	⇓P	P	11 12 12.6	+2.0
C20A	Veseth Ranch, baz=36	35.71	335	⇑P	P	11 12 12.9	+0.8
HLID	Hailey	35.73	325	*e*P	P	11 12 13.6	+1.1
HLID	Hailey baz=36	35.73	325	⇓P	P	11 12 14.2	+1.7
MCMT	McKenzie Canyo 3.6nm,0.9s	35.75	328	*e*P	P	11 12 15.1	+2.4
I13A	Wildhorse Cree baz=36,SNR=5.4	35.80	326	⇓P	P	11 12 14.8	+1.6
G15A	Dillon baz=36	35.80	328	⇑P	P	11 12 15.1	+2.0
F16A	Kennard Place, baz=36	35.82	330	⇓P	P	11 12 15.3	+2.1
H14A	Leadore baz=36,SNR=9.0	35.87	327	⇓P	P	11 12 15.6	+1.9
A22A	Carney Farms, baz=36	35.98	339	⇓P	P	11 12 16.4	+2.0
LRM	Limekiln Ridge	36.25	329	*e*P	P	11 12 19.1	+2.1
F15A	Butte baz=36	36.28	329	⇓P	P	11 12 19.1	+1.9
E16A	East Helena baz=36	36.39	331	⇓P	P	11 12 20.0	+1.9
D17A	Six Diamond Ra baz=36	36.40	332	⇑P	P	11 12 20.1	+2.0
MFID	Camas Ranch baz=37	36.43	324	⇓P	P	11 12 20.3	+1.8
H12A	Diamond D Ranc baz=37	36.62	326	⇓P	P	11 12 22.2	+2.1
G13A	Cobalt baz=37	36.65	327	⇑P	P	11 12 21.9	+1.6
E15A	Deer Lodge baz=37	36.77	330	⇑P	P	11 12 23.0	+1.6
G12A	Big Creek, Yel baz=37	37.25	326	⇑P	P	11 12 26.9	+1.5
E13A	Victor baz=38	37.55	329	⇑P	P	11 12 29.6	+1.8
F12A	Elk City baz=38	37.63	327	⇓P	P	11 12 29.9	+1.3
D14A	Greenough baz=38	37.66	330	⇓P	P	11 12 30.5	+1.6
BMO	Blue Mountains 1.5nm,0.9s	38.16	324	*e*P	P	11 12 33.7	+0.6
D12A	Red Ives Fores baz=39	38.55	328	⇑P	P	11 12 37.8	+1.5
SIV	San Ignacio	41.07	140	P	P	11 12 57.2	-0.3
SIV	San Ignacio 1.7nm,0.8s,baz=322,slow=12,SNR=5.7	41.07	140	P	P	11 12 57.2	-0.3
SCHQ	Schefferville	41.30	17	P	P	11 12 59.4	+0.4
SCHQ	Schefferville 0.9nm,0.6s,baz=238,slow=15,SNR=2.9	41.30	17	P	P	11 12 59.4	+0.4
YKA	Yellowknife Ar	49.93	344	P	P	11 14 07.0	0.0
YKA	Yellowknife Ar 0.9nm,0.6s,baz=138,slow=7.8,SNR=20	49.93	344	P	P	11 14 07.0	0.0
ILAR	Eielson Array	62.62	335	P	P	11 15 38.2	+0.6
ILAR	Eielson Array 0.6nm,0.8s,baz=123,slow=7.1,SNR=4.8	62.62	335	P	P	11 15 38.2	+0.6
WRA	Warramunga Arr	140.78	259	PKP	PKPdf	11 24 45.3	+1.1
WRA	Warramunga Arr 0.4nm,0.8s,baz=92,slow=4.3,SNR=3.8	140.78	259	PKP	PKPdf	11 24 45.3	+1.1
ASAR	Alice Springs	141.15	253	PKP	PKPdf	11 24 47.2	+2.4
ASAR	Alice Springs 0.5nm,1.0s,baz=88,slow=2.8,SNR=5.3	141.15	253	PKP	PKPdf	11 24 47.2	+2.4

IDC ***28*** *11:09:56.9±6.0,58˚.71N×155˚.21W,h112km±47km, mb3.5/5, mb1 3.8/6,mb1mx3.3/27,mbtmp3.6/6,Error ellipse: s-maj=57.0km s-min=20.4km az=172.0*

ISCJB ***28*** *11:09:58.1±0.3,58˚.63N±0˚.03×155˚.09W±0˚.07, h151km±3km,mb3.7/4,Error ellipse: s-maj=7.0km s-min=3.5km az=42.7*

NEIC ***28*** *11:10:00.8,58˚.58N×155˚.05W,h139km,MG3.7(AEIC), After AEIC.*

ISC 28 11:09:59.2±0.8,58˚.62N±0˚.05×155˚.08W±0˚.05, h148km±6km,n88,σ1§02/98,mb4.0/4,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAHC	Katmai Hardscr	0.05	58	P		P	Pn	11 10 18.7	-0.5
KAWH	Katmai	0.28	148	P		P	Pn	11 10 19.1	-0.5
KAKN	Katmai Knife C	0.33	178	P		P	Pn	11 10 19.4	-0.3
KAKN				S		S	Sn	11 10 34.9	-0.4
KABU	Katmai Buttres	0.37	197	P		P	Pn	11 10 19.7	-0.2
KABU				S		S	Sn	11 10 35.0	-0.5
FONW	Fourpeaked Sta	0.64	70	P		P	Pn	11 10 21.3	+0.1
MCNL	McNeil River	0.68	34	P		P	Pn	11 10 21.3	0.0
FOSS	Fourpeaked Sta	0.75	76	P		P	Pn	11 10 21.8	0.0
AUI	Augustine Isla	1.12	50	P		P	Pn	11 10 25.2	+0.4
AUI				S		S	Sn	11 10 43.6	-0.7
AUW	Augustine West	1.12	47	P		P	Pn	11 10 25.5	+0.7
AUNW	Augustine NWes	1.12	47	P		P	Pn	11 10 25.5	+0.6
AUP	Augustine Pinn	1.14	49	P		P	Pn	11 10 25.6	+0.5
AUL	Augustine Lava	1.14	48	P		P	Pn	11 10 25.7	+0.7
OPT	Oil Point	1.41	42	P		P	Pn	11 10 28.2	+0.6
KDAK	Kodiak Island	1.57	121	P		P	Pn	11 10 28.8	-0.5
KDAK				S		S	Sn	11 10 51.3	-1.0
OHAK	Old Harbor	1.70	145	P		P	Pn	11 10 30.1	-0.7
OHAK				S		S	Sn	11 10 53.2	-1.7
IVE	Iliamna Volcan	1.75	36	P		P	Pn	11 10 31.9	+0.5
ILIM	Iliamna	1.82	36	P		P	Pn	11 10 32.9	+0.7
RSO	Redoubt South	2.19	32	*e*Pn		P	Pn	11 10 37.1	+0.4
RSO				*e*Sn		S	Sn	11 11 05.6	+0.2
REF	Redoubt East F	2.23	32	P		P	Pn	11 10 37.5	+0.4
REF				S		S	Sn	11 11 05.7	-0.5
DFR	Drift River	2.32	31	P		P	Pn	11 10 38.5	+0.5
ANNW	Aniakchak Nort	2.36	227	P		P	Pn	11 10 39.0	+0.5
ANPK	Aniakchak Peak	2.42	224	P		P	Pn	11 10 39.0	-0.3
BRLK	Bradley Lake	2.44	60	P		P	Pn	11 10 39.3	-0.2
BRLK				S		S	Sn	11 11 09.0	-1.6
SVW2	Sparrevohn	2.49	354	P		P	Pn	11 10 40.2	+0.1
CKL	Chakachamna La	2.93	27	P		P	Pn	11 10 46.2	+0.6
CHGN	Chignik	2.94	219	*e*Pn		P	Pn	11 10 44.9	-0.8
BGL	Barrier Glacie	2.97	26	P		P	Pn	11 10 47.1	+0.9
SPU	Mount Spurr	2.98	29	P		P	Pn	11 10 46.6	+0.3
SLKM	Skilak Lake	3.11	51	P		P	Pn	11 10 49.0	+1.2
SEW	Seward	3.24	60	P		P	Pn	11 10 49.4	-0.1
VNHG	Veniaminof 1	3.27	224	P		P	Pn	11 10 50.4	+0.5
STLK	Strandline Lak	3.31	28	P		P	Pn	11 10 51.6	+1.1
VNFG	Veniaminof 2	3.37	228	P		P	Pn	11 10 51.3	0.0
VNWF	Veniaminof 8	3.47	226	P		P	Pn	11 10 53.0	+0.5
VNSW	Veniaminof 7	3.52	225	P		P	Pn	11 10 52.9	-0.4
SUA	Susitna One	3.58	36	P		P	Pn	11 10 54.3	+0.2
RC01	Rabbit Creek A	3.66	45	P		P	Pn	11 10 54.8	-0.1
RC01				S		S	Sn	11 11 36.5	-1.6
SKT	Skwentna	3.80	26	P		P	Pn	11 10 57.2	+0.4
PMR	Palmer	4.21	42	P		P	Pn	11 11 00.7	-1.3
TT01	Tatalina	4.32	354	P		P	Pn	11 11 03.9	+0.3
CUT	Chulitna	4.48	30	P		P	Pn	11 11 05.3	-0.3
PPLA	Purkeypile	4.52	17	P		P	Pn	11 11 07.1	+0.9
MID	Middleton Isla	4.59	76	P		P	Pn	11 11 07.3	+0.2
SML	Sawmill	4.64	44	P		P	Pn	11 11 06.5	-1.3
VLZ	Valdez	5.08	57	P		P	Pn	11 11 13.9	+0.5
EYAK	Cordova Ski Ar	5.12	64	P		P	Pn	11 11 14.0	0.0
DT1	Dutton Round H	5.29	231	P		P	Pn	11 11 16.2	-0.1
DIV	Divide	5.32	58	P		P	Pn	11 11 16.9	+0.1
TRF	Thorofare Moun	5.37	24	P		P	Pn	11 11 16.7	-0.8
DRIA	Deer Island	5.38	230	P		P	Pn	11 11 16.8	-0.9
KLU	Klutina	5.42	54	P		P	Pn	11 11 17.7	-0.4
CHUM	Lake Minchumin	5.44	13	P		P	Pn	11 11 18.9	+0.6
RAGM	Ragged Mountai	5.59	67	P		P	Pn	11 11 20.6	+0.2
DHY	Denali Highway	5.84	37	P		P	Pn	11 11 22.6	-1.2
MCK	McKinley	5.92	28	P		P	Pn	11 11 24.0	-0.8
FALS	False Pass	5.94	234	P		P	Pn	11 11 25.3	+0.3
HARP	HAARP	6.20	48	P		P	Pn	11 11 29.0	+0.6
VRDI	Verde Repeater	6.40	61	P		P	Pn	11 11 32.0	+0.6
NEA	Nenana	6.62	23	P		P	Pn	11 11 32.6	-1.4
MCARA	McCarthy VSAT	6.65	60	P		P	Pn	11 11 34.5	0.0
WRH	Wood River Hil	6.75	27	P		P	Pn	11 11 33.8	-2.0
MLY	Manley	6.75	16	P		P	Pn	11 11 34.4	-1.4
KIAG	Kiagna River	6.83	65	P		P	Pn	11 11 36.9	0.0
BALM	Baldy	6.86	64	P		P	Pn	11 11 37.6	+0.2
CCB	Clear Creek Bu	6.96	27	P		P	Pn	11 11 36.6	-1.9
HDA	Harding Lake	6.98	30	P		P	Pn	11 11 37.4	-1.4
MENT	Mentasta	7.04	47	*e*Pn		P	Pn	11 11 40.2	+0.5
GRNC	Granite Creek	7.07	67	P		P	Pn	11 11 40.6	+0.4
MDM	Murphy Dome	7.13	24	P		P	Pn	11 11 38.9	-2.0
COLA	College	7.14	26	P		P	Pn	11 11 39.1	-1.9
BARN	Barnard Glacie	7.19	64	P		P	Pn	11 11 42.4	+0.6
IL1	Eielson Array	7.29	29	P		P	Pn	11 11 40.9	-2.1
ILAR	Eielson Array 11nm,0.3s,baz=217,slow=13,SNR=1021	7.29	29	P		P	Pn	11 11 40.9	-2.0
ILAR				S		S	Sn	11 12 59.9	-4.5
DOT	Dot Lake 2.2nm,0.3s,baz=221,slow=23,SNR=5.2	7.33	42	P		P	Pn	11 11 42.9	-0.7
IM3	Indian Mountai	7.41	4	P		P	Pn	11 11 44.3	-0.3
SAMH	Samovar Hills	7.46	72	P		P	Pn	11 11 46.2	+0.8
BCA3	Beaver Creek A	7.87	50	P		P	Pn	11 11 51.3	+0.6
MTBL	Makushin Table	7.96	239	P		P	Pn	11 11 51.5	-0.5
UNV	Unalaska Valle	7.96	238	P		P	Pn	11 11 51.2	-0.7
PNL	Peninsula	8.13	76	P		P	Pn	11 11 55.0	+0.7
COLD	Coldfoot	8.91	12	P		P	Pn	11 12 02.6	-2.0
EGAK	Eagle 5.0nm,0.3s	9.03	41	*e*Pn		P	Pn	11 12 04.5	-1.6
DLBC	Dease Lake	13.07	80	*e*Pn		P	Pn	11 13 01.3	+2.1
YKA	Yellowknife Ar 3.9nm,0.5s,baz=274,slow=9.9,SNR=50	20.02	62	P		P	P	11 14 21.3	+1.2
PETK	Petropavlovsk- 2.3nm,0.6s,baz=84,slow=13,SNR=3.7	26.60	279	P		P	P	11 15 22.9	-0.5
SCHQ	Schefferville 1.6nm,0.4s,baz=296,slow=9.8,SNR=12	45.22	55	P		P	P	11 18 01.8	+0.6
SONM	Songino Array 0.9nm,0.5s,baz=50,slow=7.0,SNR=7.3	54.72	305	P		P	P	11 19 13.6	+0.6
MKAR	Makanchi Array 0.1nm,0.4s,baz=24,slow=6.5,SNR=2.7	64.82	320	P		P	P	11 20 23.1	+1.3

ISCJB ***28*** *11:13:15.5±0.9,36˚.75N±0˚.04×71˚.3E±0˚.2,h114km, mb3.3/2,Error ellipse: s-maj=21.8km s-min=5.2km az=2.1*

NNC ***28*** *11:13:20.0±4.5,37˚.21N×71˚.46E,h0km,mb3.8,mpv3.7, Error ellipse: s-maj=37.7km s-min=32.7km az=168.0*

IDC ***28*** *11:13:19.6±6.9,37˚.00N×70˚.99E,h159km±45km,mb2.9/2, mb1 3.0/5,mb1mx2.8/29,mbtmp2.9/5,MS3.8/1,Ms1 3.8/1, ms1mx3.6/13,Error ellipse: s-maj=122.5km s-min=32.7km az=139.0*

ISC 28 11:13:15.8±0.8,36˚.71N±0˚.06×71˚.2E±0˚.1,h114km,n11, σ1§81/15,4C,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.94	169	⇑P		P	Pn	11 14 02.5	+1.3
CEP				⇑S		S	Sn	11 14 36.0	-0.1
CHCP	Chirah Chowk	3.48	151	P		P	Pn	11 14 09.9	+1.7
THW	Thamme Wali	3.93	174	P		P	Pn	11 14 15.1	+0.8
KK31	Karatay Array 7.3nm,0.5s,baz=182,slow=14,SNR=52	6.41	355	P		P	Pn	11 14 49.9	+2.3
KK31				⇑S		S	Sn	11 15 59.3	0.0
AAK	Ala-Archa 3.1nm,0.4s,baz=180,slow=23,SNR=12	6.43	22	P		P	Pn	11 14 49.8	+1.7
AAK				⇑S		S	Sn	11 16 00.4	+0.3
AAK				LR		LR		11 17 10.0	
TKM2	Tokmak 2 3.8nm,1.3s	7.06	27	⇑P		P	Pn	11 14 57.7	+1.1
TKM2				⇑S		S	Sn	11 16 13.3	-2.1
MKAR	Makanchi Array 0.1nm,0.3s,baz=220,slow=13,SNR=2.8	13.02	36	P		P	Pn	11 16 16.6	+0.3
AB31	Akbulak array 0.3nm,0.5s,baz=166,slow=9.5,SNR=5.4	14.99	330	⇑P		P		11 16 46.5	+2.3
ZALV	Zalesovo Beam 0.5nm,0.3s,baz=229,slow=8.8,SNR=3.7	19.65	24	P		P		11 17 34.6	-0.7
TORD	Torodi Ar. Bea 0.2nm,0.4s,baz=52,slow=6.2,SNR=4.4	65.90	269	P		P		11 23 47.5	-2.2
YKA	Yellowknife Ar 0.2nm,0.5s,baz=350,slow=5.2,SNR=4.3	81.03	3	P		P	P	11 25 14.4	-3.1

CSEM ***

CSEM 28 11:25:27.0±0.6, 48°08N×21°17E, h15km, ML2.0/5, Error ellipse: s-maj=12.6km s-min=8.2km az=168.0, Hungary

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KECS	**Kecovo**	**0.61**	**312**	*e*Pg	Pn	11 25 40.3	-0.8
KECS				*e*SG	Sb	11 25 47.9	+0.2
KECS	**Kecovo**	**0.61**	**312**	*e*Pg	Pn	11 25 40.3	-0.8
KECS				*e*Sg	Sb	11 25 47.9	+0.2
CRVS	**Cervenica-Dubn**	**0.84**	**13**	*e*PG	Pb	11 25 42.6	-0.8
CRVS				*e*SG	Sg	11 25 50.5	-4.1
CRVS	**Cervenica-Dubn**	**0.84**	**13**	*e*Pg	Pb	11 25 42.6	-0.8
CRVS				*e*Sg	Sg	11 25 50.5	-4.1
PSZ	**Piszkesteto**	**0.87**	**260**	*e*Pg	Pb	11 25 42.9	-1.0
PSZ				*e*Sg	Sn	11 26 02.7	+5.4
PSZ	**Piszkesteto**	**0.87**	**260**	*e*Pg	Pb	11 25 42.9	-1.0
TRPA	**Tarpa**	**0.92**	**87**	*e*Pg	Pn	11 25 45.6	+0.2
TRPA				*e*SKSdf	Sn	11 25 59.9	+1.6
TRPA	**Tarpa**	**0.92**	**87**	*e*Pg	Pn	11 25 45.6	+0.2
KOLS	**Kolonicke sedl**	**1.12**	**40**	*e*PG	Pn	11 25 48.5	+0.3
KOLS				*e*SG	Sb	11 26 02.7	0.0
KOLS	**Kolonicke sedl**	**1.12**	**40**	*e*Pg	Pn	11 25 48.5	+0.3
KOLS				*e*Sg	Sb	11 26 02.7	0.0
STHS	**Stebnicka Huta**	**1.33**	**2**	*e*PG	Pg	11 25 53.1	+0.3
STHS				*e*SG	Sb	11 26 09.0	+0.2
STHS	**Stebnicka Huta**	**1.33**	**2**	*e*Pg	Pg	11 25 53.1	+0.3
STHS				*e*Sg	Sb	11 26 09.0	+0.2
VYHS	**Vyhne**	**1.61**	**286**	*e*SN	Sg	11 26 21.5	+2.5
VYHS	**Vyhne**	**1.61**	**286**	*e*Sn	Sg	11 26 21.5	+2.5

IDC 28 11:27:02.9±12.0, 16°91N×88°28W, h0km, mb3.2/3, mb1 3.7/4, mb1mx3.5/21, mbtmp3.2/4, ML4.1/1, Error ellipse: s-maj=264.7km s-min=86.3km az=2.0, Belize

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**18.77**	**314**	P	Pn	11 31 25.7	+1.6
	0.1nm,0.3s,baz=130,slow=10,SNR=12						
NVAR	**Mina Array Bea**	**33.91**	**315**	P	P	11 33 45.9	-2.1
	0.1nm,0.5s,baz=118,slow=9.4,SNR=2.3						
YKA	**Yellowknife Ar**	**49.12**	**344**	P	P	11 35 51.1	-0.9
	0.2nm,0.7s,baz=138,slow=7.8,SNR=3.8						
ILAR	**Eielson Array**	**61.65**	**335**	P	P	11 37 23.9	+1.7
	0.3nm,1.0s,baz=130,slow=5.3,SNR=4.2						

*CSEM **28** 11:28:50.9±0.2, 41°29N×22°73E, h10km, ML1.8, Error ellipse: s-maj=4.1km s-min=3.2km az=61.0*
*ISCJB **28** 11:28:50.7±0.4, 41°31N±0°02×22°69E±0°04, h10km±4km, Error ellipse: s-maj=4.6km s-min=3.9km az=10.4*
*ATH **28** 11:28:51.2, 41°27N×22°75E, h13km±2km, MD2.8/6*
*SKO **28** 11:28:51.1, 41°29N×22°70E, h10km, M1.2, ML1.6*
*THE **28** 11:28:51.9, 41°27N×22°71E, h2km±4km, ML2.2/4, Error ellipse: s-maj=4.4km s-min=0.6km az=183.0*
*BEO **28** 11:28:53.7±1.1, 41°33N×22°63E, h0km±8km, ML1.8/5*
ISC 28 11:28:51.1±0.9, 41°28N±0°02×22°71E±0°02, h9km±7km, n33, σ0°68/56, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**292**	P	**Pg**	**11 28 53.4**	**-0.3**
VAY				S	**Sg**	**11 28 55.7**	**+0.1**
VAY	**Valandovo**	**0.11**	**292**	*e*Pg	**Pg**	**11 28 53.6**	**-0.1**
VAY				*e*Lg	Lg	11 28 55.6	
	comp=E,360nm,0.6s						
VAY				*i* Sg	**Sg**	**11 28 55.6**	**+0.1**
VAY				*e*Lg	Lg	11 28 55.7	
	comp=N,440nm,0.2s						
VAY	**Valandovo**	**0.11**	**292**	*e*Pg	**Pg**	**11 28 53.6**	**-0.1**
VAY				*e*Sg	**Sg**	**11 28 55.5**	**-0.1**
VAY	**Valandovo**	**0.11**	**292**	*e*Pg	**Pg**	**11 28 53.6**	**-0.1**
VAY				*e*Sg	**Sg**	**11 28 55.5**	**-0.1**
VAY				*e*Lg	Lg	11 28 56.2	
	comp=N,440nm,0.2s						
KNT	**Kendrikon**	**0.19**	**129**	P	**Pg**	**11 28 55.4**	**+0.4**
KNT				S	**Sg**	**11 28 58.0**	**+0.4**
KNT	**Kendrikon**	**0.19**	**129**	P	**Pg**	**11 28 55.4**	**+0.4**
KNT				S	**Sg**	**11 28 58.0**	**+0.4**
GRG	**Griva**	**0.40**	**216**	P	**Pg**	**11 28 59.2**	**+0.4**
GRG				S	**Sg**	**11 29 05.1**	**+1.0**
GRG	**Griva**	**0.40**	**216**	*e*PB	**Pg**	**11 28 59.3**	**+0.4**
GRG				*e*SB	**Sg**	**11 29 05.2**	**+1.1**
GRG	**Griva**	**0.40**	**216**	P	**Pg**	**11 28 59.2**	**+0.4**
GRG				S	**Sg**	**11 29 05.1**	**+1.0**
SOH	**Sokhos**	**0.67**	**133**	P	**Pg**	**11 29 04.0**	**0.0**
SOH				S	**Sg**	**11 29 13.7**	**+0.9**
SOH	**Sokhos**	**0.67**	**133**	*e*PB	**Pg**	**11 29 04.1**	**0.0**
SOH				*e*SB	**Sg**	**11 29 12.1**	**-0.7**
SOH	**Sokhos**	**0.67**	**133**	*e*Pb	**Pg**	**11 29 04.1**	**0.0**
SOH				*e*Sb	**Sg**	**11 29 12.1**	**-0.7**
SOH				S	**Sg**	**11 29 13.7**	**+0.9**
SRS	**Serrai**	**0.69**	**103**	P	**Pb**	**11 29 05.1**	**-0.2**
SRS				S	**Sb**	**11 29 14.0**	**-0.5**
HORT	**Hortiatis**	**0.74**	**156**	P	**Pg**	**11 29 05.6**	**+0.2**
HORT	**Hortiatis**	**0.74**	**156**	P	**Pg**	**11 29 05.6**	**+0.2**
NVR	**Nevrokopi**	**0.87**	**85**	P	**Pg**	**11 29 08.1**	**+0.2**
NVR				S	**Sb**	**11 29 20.4**	**+0.1**
NVR	**Nevrokopi**	**0.87**	**85**	*e*PB	**Pg**	**11 29 08.1**	**+0.2**
NVR				*e*SB	**Sg**	**11 29 18.3**	**-1.0**
NVR	**Nevrokopi**	**0.87**	**85**	*e*Pb	**Pg**	**11 29 08.1**	**+0.2**
NVR				*e*Sb	**Sg**	**11 29 18.3**	**-1.0**
NVR				S	**Sb**	**11 29 20.4**	**+0.1**
PLG	**Polygyros**	**1.06**	**148**	*e*PB	**Pg**	**11 29 10.1**	**-1.4**
PLG				*e*SB	**Sg**	**11 29 24.9**	**-0.4**
PLG	**Polygyros**	**1.06**	**148**	*e*Pb	**Pg**	**11 29 10.1**	**-1.4**
PLG				*e*Sb	**Sg**	**11 29 24.9**	**-0.4**
FNA	**Florina**	**1.12**	**244**	*e*PB	**Pb**	**11 29 12.8**	**+0.1**
FNA	**Florina**	**1.12**	**244**	*e*Pb	**Pb**	**11 29 12.8**	**+0.1**
VTS	**Vitosha**	**1.36**	**16**	P	**Pg**	**11 29 17.9**	**+0.6**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pg**	**11 29 17.8**	**+0.5**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pg**	**11 29 17.8**	**+0.5**
PAIG	**Paliouri**	**1.54**	**151**	*e*PB	**Pb**	**11 29 19.6**	**-0.2**
PAIG	**Paliouri**	**1.54**	**151**	*e*Pb	**Pb**	**11 29 19.6**	**-0.2**
BARS	**Barje**	**1.67**	**337**	*e*Pg	**Pg**	**11 29 22.9**	**-0.3**
BARS				*e*Sg	**Sg**	**11 29 44.7**	**-0.2**
BARS	**Barje**	**1.67**	**337**	*e*Pg	**Pg**	**11 29 22.9**	**-0.3**
BARS				*e*Sg	**Sg**	**11 29 44.7**	**-0.2**
PLD	**Plovdiv**	**1.71**	**60**	*e*Sg	**Sg**	**11 29 48.9**	**+2.9**
THL	**Klokotos Trika**	**1.79**	**197**	*e*PN	**Pb**	**11 29 23.9**	**-0.2**
THL	**Klokotos Trika**	**1.79**	**197**	*e*Pn	**Pb**	**11 29 23.9**	**-0.2**
ZAPS	**Zavoj**	**1.99**	**358**	*e*Pg	**Pg**	**11 29 28.9**	**-0.4**
ZAPS				*e*Sg	**Sg**	**11 29 55.3**	**+0.1**

*SKO **28** 11:31:00.7, 41°28N×22°71E, h15km, M1.1, ML1.5*
*ISCJB **28** 11:31:00.7±0.4, 41°31N±0°03×22°69E±0°03, h14km±3km, Error ellipse: s-maj=4.5km s-min=4.0km az=144.7*
*CSEM **28** 11:31:00.9±0.2, 41°29N×22°65E, h8km, ML1.7, Error ellipse: s-maj=5.7km s-min=3.9km az=79.0*
*ATH **28** 11:31:01.3, 41°27N×22°69E, h22km±3km, MD2.8/5*
*THE **28** 11:31:02.0, 41°29N×22°71E, h2km±19km, ML2.3/2, Error ellipse: s-maj=19.8km s-min=0.5km az=0.0*
*BEO **28** 11:31:03.6±1.2, 41°31N×22°63E, h2km±7km, ML1.7/5*
ISC 28 11:31:01.4±0.8, 41°26N±0°02×22°65E±0°03, h9km±6km, n30, σ0°63/50, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.08**	**315**	P	**Pg**	**11 31 03.8**	**+0.2**
VAY				S	**Sg**	**11 31 06.2**	**+1.0**
VAY	**Valandovo**	**0.08**	**315**	*i* Pg	**Pg**	**11 31 04.1**	**+0.5**
VAY				*e*Sg	**Sg**	**11 31 06.1**	**+1.0**
VAY				*e*Lg	Lg	11 31 06.2	
	comp=E,155nm,0.3s						
VAY				*e*Lg	Lg	11 31 06.3	
	comp=N,332nm,0.2s						
VAY	**Valandovo**	**0.08**	**315**	*i* Pg	**Pg**	**11 31 01.5**	**-2.1**
VAY				*e*Sg	**Pg**	**11 31 01.6**	**-2.1**
VAY				*e*Lg	Lg	11 31 01.8	
	comp=N,332nm,0.2s						
VAY	**Valandovo**	**0.08**	**315**	P	**Pg**	**11 31 03.8**	**+0.2**
VAY				S	**Sg**	**11 31 06.2**	**+1.0**
KNT	**Kendrikon**	**0.21**	**118**	P	**Pg**	**11 31 05.8**	**0.0**
KNT				S	**Sg**	**11 31 08.5**	**-0.2**
KNT	**Kendrikon**	**0.21**	**118**	P	**Pg**	**11 31 05.8**	**0.0**
KNT				S	**Sg**	**11 31 08.5**	**-0.2**
GRG	**Griva**	**0.36**	**211**	P	**Pb**	**11 31 09.6**	**-0.4**
GRG				S	**Sb**	**11 31 15.4**	**-0.4**
GRG	**Griva**	**0.36**	**211**	*e*PB	**Pb**	**11 31 09.7**	**-0.3**
GRG				*e*SB	**Sb**	**11 31 15.4**	**-0.4**
GRG	**Griva**	**0.36**	**211**	P	**Pb**	**11 31 09.6**	**-0.4**
GRG				S	**Sb**	**11 31 15.4**	**-0.4**
THE	**Thessaloniki**	**0.67**	**159**	P	**Pg**	**11 31 14.7**	**+0.3**
THE	**Thessaloniki**	**0.67**	**159**	P	**Pg**	**11 31 14.7**	**+0.3**
SOH	**Sokhos**	**0.69**	**129**	P	**Pg**	**11 31 14.4**	**-0.3**
SOH	**Sokhos**	**0.69**	**129**	*e*PN	**Pg**	**11 31 14.5**	**-0.3**
SOH				*e*SN	**Sg**	**11 31 23.4**	**-0.4**
SOH	**Sokhos**	**0.69**	**129**	P	**Pg**	**11 31 14.4**	**-0.3**
SOH				*e*Sn	**Sg**	**11 31 23.4**	**-0.4**
HORT	**Hortiatis**	**0.75**	**153**	P	**Pg**	**11 31 16.0**	**+0.2**
HORT	**Hortiatis**	**0.75**	**153**	P	**Pg**	**11 31 16.0**	**+0.2**
NVR	**Nevrokopi**	**0.92**	**84**	*e*PN	**Pg**	**11 31 18.9**	**-0.2**
NVR				*e*SN	**Sg**	**11 31 30.4**	**-0.6**
NVR	**Nevrokopi**	**0.92**	**84**	*e*Pn	**Pg**	**11 31 18.9**	**-0.2**
PLG	**Polygyros**	**1.07**	**145**	*e*PN	**Pg**	**11 31 21.6**	**-0.4**
PLG				*e*SN	**Sb**	**11 31 36.3**	**-0.1**
FNA	**Florina**	**1.07**	**244**	*e*PN	**Pb**	**11 31 22.6**	**+0.3**
FNA				*e*SN	**Sb**	**11 31 36.9**	**+0.5**
FNA	**Florina**	**1.07**	**244**	*e*Pn	**Pb**	**11 31 22.6**	**+0.3**
FNA				*e*Sn	**Sb**	**11 31 36.9**	**+0.5**
VTS	**Vitosha**	**1.39**	**17**	*e*Pg	**Pg**	**11 31 28.1**	**-0.1**
VTS				*e*Sg	**Sg**	**11 31 45.8**	**-0.4**
VTS	**Vitosha**	**1.39**	**17**	*e*Pg	**Pg**	**11 31 28.1**	**-0.1**
VTS				*e*Sg	**Sg**	**11 31 45.8**	**-0.4**
PAIG	**Paliouri**	**1.55**	**149**	*e*PN	**Pn**	**11 31 29.4**	**+0.2**
PAIG	**Paliouri**	**1.55**	**149**	*e*Pn	**Pn**	**11 31 29.4**	**+0.2**
BARS	**Barje**	**1.67**	**338**	*e*Pg	**Pg**	**11 31 33.4**	**-0.1**
BARS				*e*Sg	**Sg**	**11 31 54.7**	**-0.5**
BARS	**Barje**	**1.67**	**338**	*e*Pg	**Pg**	**11 31 33.4**	**-0.1**
BARS				*e*Sg	**Sg**	**11 31 54.7**	**-0.5**
PLD	**Plovdiv**	**1.75**	**61**	*e*Sg	**Sg**	**11 31 58.9**	**+1.1**
PLD	**Plovdiv**	**1.75**	**61**	*e*Sg	**Sg**	**11 31 58.9**	**+1.1**
ZAPS	**Zavoj**	**2.01**	**360**	*e*Pg	**Pb**	**11 31 38.3**	**+0.1**
ZAPS				*e*Sg	**Sg**	**11 32 06.1**	**+0.1**

*NSSC **28** 11:45:37.2±2.0, 33°81N×35°61E, h19km±20km, ML1.7*
*ISCJB **28** 11:45:38.3±1.4, 33°79N±0°04×35°7E±0°1, h20km±7km, Error ellipse: s-maj=18.9km s-min=6.1km az=170.0*
*CSEM **28** 11:45:38.2±0.3, 33°78N×35°68E, h15km, ML2.9, Error ellipse: s-maj=9.9km s-min=3.9km az=77.0*
*GRAL **28** 11:45:40.2±0.3, 33°79N×35°77E, h0km, 23km, MD2.9*
ISC 28 11:45:38.7±1.0, 33°79N±0°03×35°73E±0°07, h15km±8km, n13, σ0°49/26, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	**Bhannes**	**0.13**	**329**	*e*P	**Pb**	**11 45 42.9**	**0.0**
BHL				*e*S	**Sg**	**11 45 44.9**	**-0.1**
BHL	**Bhannes**	**0.13**	**329**	*e*P	**Pb**	**11 45 42.9**	**0.0**
BHL				*e*S	**Sg**	**11 45 44.9**	**-0.1**
RCY	**Rachaya**	**0.31**	**164**	*e*P	**Pg**	**11 45 45.5**	**+0.2**
RCY				*e*S	**Sg**	**11 45 49.4**	**-0.4**
RCY	**Rachaya**	**0.31**	**164**	*e*P	**Pg**	**11 45 45.5**	**+0.2**
RCY				*e*S	**Sg**	**11 45 49.4**	**-0.4**
BRBR	**Barbar**	**0.42**	**155**	*i* P	**Pg**	**11 45 47.5**	**+0.2**
BRBR				*e*S	**Sg**	**11 45 53.2**	**0.0**
BRBR				AML	AML	11 45 57.0	
	comp=N,149nm,0.3s						
BRBR				AML	AML	11 45 57.9	
	comp=E,112nm,0.4s						
BRBR	**Barbar**	**0.42**	**155**	*i* P	**Pg**	**11 45 47.5**	**+0.2**
	SNR=92						
BRBR				*e*S	**Sg**	**11 45 53.2**	**0.0**
	comp=E,112nm,0.4s,SNR=98						
HWQ	**Hawqa**	**0.51**	**20**	*e*P	**Pb**	**11 45 49.5**	**-0.1**
HWQ				*e*S	**Sg**	**11 45 56.2**	**+0.3**
HWQ	**Hawqa**	**0.51**	**20**	*e*P	**Pb**	**11 45 49.5**	**-0.1**
HWQ				*e*S	**Sg**	**11 45 56.2**	**+0.3**
TOTH	**TOTAH**	**0.72**	**126**	*i*	**Pg**	**11 45 52.8**	**0.0**
TOTH				*e*S	**Sb**	**11 46 03.9**	**+1.2**
SALA	**Sala**	**1.37**	**142**	*i* P	**Pn**	**11 46 03.6**	**+0.2**
SALA				*e*S	**Sb**	**11 46 22.0**	**+0.6**
SALA				AML	AML	11 46 30.3	
	comp=N,21nm,0.3s						
SALA				AML	AML	11 46 34.3	
	comp=E,2.4nm,0.7s						
SALA	**Sala**	**1.37**	**142**	*i* P	**Pn**	**11 46 03.6**	**+0.2**
	SNR=66						
SALA				*e*S	**Sb**	**11 46 22.0**	**+0.6**
	comp=E,2.4nm,0.7s,SNR=62						
ZALF	**Zalf**	**1.60**	**123**	*i* P	**Pn**	**11 46 05.3**	**-1.1**
ZALF				*e*S	**Sn**	**11 46 26.6**	**-0.2**
ZALF				AML	AML	11 46 32.0	
	comp=N,16nm,0.4s						
ZALF				AML	AML	11 46 34.5	
	comp=E,9.8nm,0.8s						
ZALF	**Zalf**	**1.60**	**123**	*i* P	**Pn**	**11 46 05.3**	**-1.1**
	SNR=51						
ZALF				*e*S	**Sn**	**11 46 26.6**	**-0.2**
	comp=E,9.8nm,0.8s,SNR=49						

IDC 28 11:52:50.4±3.5, 17°56S×167°73E, h0km, mb3.5/3, mb1 3.6/4, mb1mx3.5/20, mbtmp3.5/4, ML3.0/1, Error ellipse: s-maj=74.5km s-min=32.7km az=96.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.65**	**195**	Pn	Pn	11 54 03.0	+0.9
	0.7nm,0.3s,baz=252,slow=23,SNR=31						
DZM				Sn	Sn	11 54 55.0	-1.9
	4.1nm,0.3s,baz=133,slow=24,SNR=11						
WRA	**Warramunga Arr**	**31.68**	**260**	P	P	11 59 16.1	+0.2
	0.3nm,0.8s,baz=76,slow=6.4,SNR=3.4						
ASAR	**Alice Springs**	**32.19**	**253**	P	P	11 59 20.1	-0.3
	0.4nm,0.5s,baz=81,slow=8.5,SNR=15						
SONM	**Songino Array**	**85.03**	**324**	P	P	12 05 27.8	-0.2
	0.6nm,0.7s,baz=138,slow=5.4,SNR=4.4						

JMA 28 11:52:58.3±0.1, 37°62N×142°81E, h25km±3km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**1.42**	**306**	P	Pn	11 53 23.0	+0.5
JIO				*e*S	Sn	11 53 40.9	+0.4
JFK	**Kawauchi**	**1.56**	**261**	P	Pn	11 53 25.2	+0.7
JFK				*e*S	Sn	11 53 44.8	+0.8
JMM	**Marumori**	**1.62**	**279**	P	Pn	11 53 25.8	+0.6
JMM				*e*S	Sn	11 53 46.0	+0.7
JMK	**Ichinoseki**	**1.83**	**317**	P	Pn	11 53 29.1	+1.0
JMK				*e*S	Sn	11 53 51.6	+1.2
JOU	**Okura**	**1.85**	**294**	P	Pn	11 53 29.9	+1.4
JFT	**Otama**	**1.97**	**268**	P	Pn	11 53 31.4	+1.3
JFT				*e*S	Sn	11 53 55.6	+1.6
JOM	**Ohasama**	**2.20**	**328**	P	Pn	11 53 34.7	+1.4
JOM				*e*S	Sn	11 54 01.9	+2.2
JYK	**Kaneyama**	**2.32**	**305**	P	Pn	11 53 36.8	+1.8
JYK				*e*S	Sn	11 54 04.9	+2.2
JANG	**Nango**	**2.93**	**340**	P	Pn	11 53 44.7	+1.4
JAG	**Ashikaga**	**2.94**	**247**	P	Pn	11 53 45.4	+2.0
JAG				*e*S	Sn	11 54 19.7	+1.8

IDC 28 11:59:47.0±4.8, 5°02S×151°48E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.6/20, mbtmp3.9/5, ML3.1/1, Error ellipse: s-maj=102.4km s-min=35.8km az=101.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.12**	**224**	Pn	Pn	12 01 21.0	+2.2
	3.2nm,0.3s,baz=36,slow=7.2,SNR=8.8						
PMG				Sn	Sn	12 02 33.2	+3.8
	0.0nm,0.3s,baz=157,slow=14,SNR=2.3						
WRA	**Warramunga Arr**	**22.33**	**227**	P	P	12 04 45.8	-0.8
	1.8nm,0.8s,baz=50,slow=10,SNR=11						
ASAR	**Alice Springs**	**25.12**	**221**	P	P	12 05 13.9	+0.1
	2.5nm,0.8s,baz=57,slow=8.3,SNR=29						
FITZ	**Fitzroy Crossi**	**28.41**	**241**	P	P	12 05 42.2	-1.3
	2.2nm,0.8s,baz=90,slow=6.1,SNR=2.6						
CMAR	**Chiang Mai Arr**	**56.79**	**296**	P	P	12 09 34.3	+0.8
	0.4nm,0.6s,baz=116,slow=6.1,SNR=4.4						

IDC 28 12:23:11.8±7.1, 18°63S×175°77W, h135km±53km, mb3.3/4, mb1 3.6/5, mb1mx3.3/20, mbtmp3.3/5, MS4.1/1, Ms1 4.1/1, ms1mx2.4/17, Error ellipse: s-maj=141.8km s-min=17.3km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.06**	**40**	P	Pn	12 24 40.5	+1.1
	0.9nm,0.3s,baz=210,slow=20,SNR=3.9						
AFI				S	Sn	12 25 47.1	-0.6
	2.4nm,0.3s,baz=127,slow=20,SNR=7.9						
RAO	**Raoul Island**	**10.75**	**190**	LR	LR	12 29 07.0	
	comp=Z,961nm,20.4s,baz=212,slow=33						
WRA	**Warramunga Arr**	**46.97**	**260**	P	P	12 31 28.9	-0.5
	0.2nm,0.3s,baz=96,slow=7.5,SNR=20						
ASAR	**Alice Springs**	**47.01**	**255**	P	P	12 31 29.9	+0.1
	1.3nm,0.7s,baz=95,slow=8.3,SNR=19						
NVAR	**Mina Array Bea**	**78.23**	**43**	P	P	12 34 57.6	+0.7
	0.6nm,0.7s,baz=230,slow=8.1,SNR=6.1						
TXAR	**Lajitas Array**	**84.28**	**57**	P	P	12 35 28.2	-0.6
	0.5nm,0.9s,baz=193,slow=3.7,SNR=3.7						

*SKO **28** 12:29:56.6, 41°28N×22°71E, h15km, M1.7, ML2.1*
*ISCJB **28** 12:29:56.7±0.4, 41°29N±0°02×22°66E±0°02, h1km±4km, Error ellipse: s-maj=3.1km s-min=2.7km az=145.9*
*CSEM **28** 12:29:57.4±0.1, 41°29N×22°66E, h5km, ML2.2, Error ellipse: s-maj=2.8km s-min=2.4km az=57.0*
*ATH **28** 12:29:57.4, 41°27N×22°72E, h22km±2km, MD2.9/8*
*SOF **28** 12:29:57.5, 41°30N×22°69E, h9km, MD2.8*
*BEO **28** 12:29:58.7±0.8, 41°30N×22°60E, h7km±4km, ML2.2/6*
*THE **28** 12:29:58.0, 41°27N×22°71E, h2km±1km, ML2.6/12, Error ellipse: s-maj=1.2km s-min=0.5km az=209.0*
ISC 28 12:29:57.5±0.8, 41°28N±0°02×22°68E±0°02, h9km±5km, n65, σ0°56/113, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.09**	**295**	P	**Pg**	**12 30 00.0**	**+0.1**
VAY				S	**Sg**	**12 30 02.1**	**+0.4**
VAY	**Valandovo**	**0.09**	**295**	*i* Pg	**Pg**	**12 29 60.0**	**+0.1**
VAY				*e*Sg	**Sg**	**12 30 02.0**	**+0.4**
VAY				*e*Lg	Lg	12 30 02.0	
	comp=E,763nm,0.3s						
VAY				*e*Lg	Lg	12 30 02.2	
	comp=N,1μm,0.2s						
VAY	**Valandovo**	**0.09**	**295**	*e*Pg	**Pg**	**12 29 59.6**	**-0.3**
VAY				*e*Sg	**Sg**	**12 30 01.9**	**+0.3**
VAY	**Valandovo**	**0.09**	**295**	*e*Pg	**Pg**	**12 29 59.6**	**-0.3**
VAY	**Valandovo**	**0.09**	**295**	P	**Pg**	**12 30 00.0**	**+0.1**
VAY				*e*Sg	**Sg**	**12 30 01.5**	**-0.1**
VAY				*e*Lg	Lg	12 30 01.6	
	comp=N,1μm,0.2s						
VAY				S	**Sg**	**12 30 02.1**	**+0.4**
KNT	**Kendrikon**	**0.20**	**126**	P	**Pg**	**12 30 01.7**	**0.0**
KNT				S	**Sg**	**12 30 04.4**	**-0.1**
KNT	**Kendrikon**	**0.20**	**126**	P	**Pg**	**12 30 01.7**	**0.0**
KNT				S	**Sg**	**12 30 04.4**	**-0.1**
GRG	**Griva**	**0.39**	**213**	P	**Pg**	**12 30 05.6**	**+0.5**
GRG				S	**Sg**	**12 30 10.7**	**+0.4**
GRG	**Griva**	**0.39**	**213**	*e*PB	**Pg**	**12 30 05.6**	**+0.5**
GRG				*e*SB	**Sg**	**12 30 11.4**	**+1.1**
GRG	**Griva**	**0.39**	**213**	P	**Pg**	**12 30 05.6**	**+0.5**
GRG				S	**Sg**	**12 30 10.7**	**+0.4**
GRG				*e*Sb	**Sg**	**12 30 11.4**	**+1.1**
KKB	**Krupnik**	**0.66**	**27**	Pg	**Pg**	**12 30 10.2**	**0.0**
KKB	**Krupnik**	**0.66**	**27**	Pg	**Pg**	**12 30 10.2**	**0.0**
THE	**Thessaloniki**	**0.68**	**162**	P	**Pg**	**12 30 10.5**	**-0.2**
THE				S	**Sg**	**12 30 20.1**	**+0.5**
THE	**Thessaloniki**	**0.68**	**162**	P	**Pg**	**12 30 10.5**	**-0.2**
THE				S	**Sg**	**12 30 20.1**	**+0.5**
SOH	**Sokhos**	**0.68**	**132**	P	**Pg**	**12 30 10.3**	**-0.4**
SOH				S	**Sg**	**12 30 19.4**	**-0.3**
SOH	**Sokhos**	**0.68**	**132**	*e*PN	**Pg**	**12 30 10.1**	**-0.6**
SOH				*e*SN	**Sg**	**12 30 19.0**	**-0.7**
SOH	**Sokhos**	**0.68**	**132**	P	**Pg**	**12 30 10.3**	**-0.4**
SOH				*e*Sn	**Sg**	**12 30 19.0**	**-0.7**
SOH				S	**Sg**	**12 30 19.4**	**-0.3**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**12 30 10.8**	**-0.3**
SRS				S	**Sg**	**12 30 20.9**	**+0.6**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**12 30 10.8**	**-0.3**
SRS				S	**Sg**	**12 30 20.9**	**+0.6**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**12 30 11.8**	**-0.2**
HORT				S	**Sg**	**12 30 22.6**	**+0.8**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**12 30 11.8**	**-0.2**
HORT				S	**Sg**	**12 30 22.6**	**+0.8**
NVR	**Nevrokopi**	**0.89**	**85**	P	**Pg**	**12 30 14.5**	**-0.1**
NVR				S	**Sb**	**12 30 27.2**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**85**	*e*PN	**Pg**	**12 30 14.6**	**-0.1**
NVR				*e*SN	**Sg**	**12 30 25.6**	**-0.6**
NVR	**Nevrokopi**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.56**	**358**	Pn	Pn	12 33 43.0	+0.3
	2.4nm,0.3s,baz=67,slow=3.5,SNR=6.9						
TEIG				Pg	Pg	12 33 57.2	-2.7
	5.2nm,0.3s,baz=239,slow=4.1,SNR=7.4						
TEIG				Sn	Sn	12 34 33.8	-2.7
	7.9nm,0.3s,baz=175,slow=4.7,SNR=4.0						
TEIG				Lg	Lg	12 34 55.9	
	10nm,0.3s,baz=270,slow=20,SNR=4.2						
TXAR	**Lajitas Array**	**19.79**	**316**	P	Pn	12 37 05.4	-0.7
	0.0nm,0.3s,baz=139,slow=9.1,SNR=10						
TKL	**Tuckaleechee C**	**20.30**	**10**	LR	LR	12 46 28.0	
	comp=Z,431nm,18.9s,baz=315,slow=41						
SCHQ	**Schefferville**	**42.43**	**18**	P	P	12 40 29.3	+0.4
	1.7nm,0.7s,baz=215,slow=12,SNR=2.7						
YKA	**Yellowknife Ar**	**50.38**	**344**	P	P	12 41 31.2	-0.1
	1.2nm,0.8s,baz=139,slow=7.9,SNR=18						
DLBC	**Dease Lake**	**52.78**	**334**	LR	LR	13 05 52.0	
	comp=Z,203nm,21.1s,baz=222,slow=38						
INK	**Inuvik**	**59.99**	**342**	P	P	12 42 39.1	-1.4
	0.5nm,0.9s,baz=138,slow=7.0,SNR=3.6						
WRA	**Warramunga Arr**	**139.46**	**258**	PKP	PKPdf	12 52 02.4	-0.5
	0.9nm,1.1s,baz=86,slow=2.3,SNR=4.2						

NEIC 28 12:39:49.2,54.01N×164.49W,h56km,ML3.5(AEIC), After AEIC.,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESE	**West Dahl East**	**0.46**	**353**	P	Pn	12 40 00.2	-0.3
AKUT	**Akutan**	**0.77**	**280**	P	Pn	12 40 03.5	-0.5
AKUT				S	Sn	12 40 15.3	+0.4
SSLW	**Shishaldin Wes**	**0.79**	**16**	P	Pn	12 40 03.6	-0.8
AKLV	**Akutan Long Va**	**0.88**	**280**	P	Pn	12 40 04.6	-0.9
AKLV				S	Sn	12 40 17.2	-0.3
AKGG	**Akutan Green G**	**0.91**	**282**	P	Pn	12 40 05.2	-0.7
AKRB	**Akutan Reef Bi**	**0.94**	**278**	P	Pn	12 40 05.6	-0.7
FALS	**False Pass**	**1.05**	**36**	P	Pn	12 40 07.1	-0.6
FALS				S	Sn	12 40 22.0	+0.6
UNV	**Unalaska Valle**	**1.20**	**263**	P	Pn	12 40 08.5	-1.3
UNV				S	Sn	12 40 23.9	-1.2
MTBL	**Makushin Table**	**1.29**	**269**	P	Pn	12 40 10.2	-0.9
MREP	**Makushin Rep't**	**1.35**	**262**	P	Pn	12 40 11.6	-0.3
MSW	**Makushin Switc**	**1.36**	**267**	P	Pn	12 40 10.8	-1.1
MSW				S	Sn	12 40 28.4	-0.6
MCIR	**Makushin Cirqu**	**1.42**	**268**	P	Pn	12 40 12.3	-0.5
DRIA	**Deer Island**	**1.61**	**53**	P	Pn	12 40 14.8	-0.5
DT1	**Dutton Round H**	**1.69**	**49**	P	Pn	12 40 15.7	-0.6
DOL	**Dolgoi Island**	**1.90**	**52**	P	Pn	12 40 18.9	-0.4
OKFG	**Magazine Ridge**	**2.12**	**255**	P	Pn	12 40 22.0	-0.2
OKRE	**Okmok R'deer P**	**2.24**	**259**	P	Pn	12 40 23.3	-0.6
OKSO	**Okmok South**	**2.28**	**255**	P	Pn	12 40 23.9	-0.6
SDPT	**Sand Point**	**2.69**	**58**	P	Pn	12 40 29.8	-0.1
VNSS	**Veniaminof 8**	**3.64**	**50**	P	Pn	12 40 43.1	-0.2
CHGN	**Chignik**	**4.17**	**54**	*e*Pn	Pn	12 40 49.9	-0.3
CHGN				*e*Sn	Sn	12 41 36.7	-0.8
SPIA	**Saint Paul Isl**	**4.55**	**316**	P	Pn	12 40 54.9	-0.6
ANNW	**Aniakchak Nort**	**4.63**	**48**	P	Pn	12 40 56.1	-0.5
KOFP	**Korovin Flat P**	**6.04**	**257**	P	Pn	12 41 14.9	-1.0
CAHL	**Cahill**	**6.55**	**48**	P	Pn	12 41 21.2	-1.7
OHAK	**Old Harbor**	**7.11**	**59**	P	Pn	12 41 28.1	-2.3

*IDC **28** 12:44:06.0±2.1,31°.56N×48°.80E,h0km,mb3.6/4, mb1 3.6/5,mb1mx3.4/28,mbtmp3.6/5,ML3.1/1,Error ellipse: s-maj=75.3km s-min=25.3km az=159.0*
*THR **28** 12:44:09.9±0.8,32°.45N×48°.21E,h18km±9km,ML3.5*
*CSEM **28** 12:44:10.8±0.1,32°.49N×48°.31E,h2km,ML3.5,Error ellipse: s-maj=3.0km s-min=2.3km az=67.0*
*TEH **28** 12:44:12.7,32°.51N×48°.30E,h12km,ML3.6*
ISC 28 12:44:10.7±1.3,32.49N±0.03×48.33E±0.04,h8km±10km, n61,σ1.921/70,mb3.6/4,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.55**	**133**	*e*Pg	**Pg**	**12 44 21.8**	**+0.5**
SHGR	**Shooshtar-Gavs**	**0.55**	**133**	*e*Pg	**Pg**	**12 44 21.8**	**+0.5**
IKOM	**Komasi**	**1.82**	**338**	*e*Pn	**Pn**	**12 44 43.4**	**+1.0**
IKOM				*e*Sg	**Sg**	**12 45 08.6**	**-0.6**
IKOM				*e*		12 45 11.8	
	comp=Z,9μm,0.4s						
IKOM	**Komasi**	**1.82**	**338**	*e*Pn	**Pn**	**12 44 43.4**	**+1.0**
IKOM				*e*Sg	**Sg**	**12 45 08.6**	**-0.6**
IGHG	**Ghaleghazi**	**2.36**	**322**	*e*Pn	**Pn**	**12 44 50.9**	**+1.0**
IGHG				*e*Sg	**Sg**	**12 45 26.0**	**-0.4**
IGHG				*e*		12 45 37.0	
	comp=Z,4μm,0.4s						
IGHG	**Ghaleghazi**	**2.36**	**322**	*e*Pn	**Pn**	**12 44 50.9**	**+1.0**
IGHG				*e*Sg	**Sg**	**12 45 26.0**	**-0.4**
IVIS	**Veis**	**2.38**	**329**	*e*Pn	**Pn**	**12 44 51.2**	**+1.1**
IVIS				*e*		12 45 32.7	
	comp=E,2μm,0.3s						
IVIS	**Veis**	**2.38**	**329**	*e*Pn	**Pn**	**12 44 51.2**	**+1.1**
ILIN	**Lien**	**2.68**	**335**	*e*Pn	**Pn**	**12 44 55.4**	**+1.0**
ILIN				*e*Sg	**Sb**	**12 45 34.3**	**+2.1**
ILIN				*e*		12 45 39.5	
	comp=Z,3μm,0.3s						
ILIN	**Lien**	**2.68**	**335**	*e*Pn	**Pn**	**12 44 55.4**	**+1.0**
ILIN				*e*Sg	**Sb**	**12 45 34.3**	**+2.1**
SNGE	**Sanandaj**	**2.73**	**343**	*e*Pn	**Pn**	**12 44 55.3**	**+0.3**
SNGE				AML	AML	12 45 44.0	
	comp=N,228nm,0.6s						
SNGE				AML	AML	12 45 44.3	
	comp=E,155nm,0.6s						
SNGE	**Sanandaj**	**2.73**	**343**	*e*Pn	**Pn**	**12 44 55.3**	**+0.3**
IDHR	**Dehrash**	**2.74**	**324**	*e*Pn	**Pn**	**12 44 55.8**	**+0.7**
IDHR				*e*		12 45 41.3	
	comp=Z,3μm,0.2s						
IDHR	**Dehrash**	**2.74**	**324**	*e*Pn	**Pn**	**12 44 55.8**	**+0.7**
MIB	**Mutribah**	**2.81**	**198**	*e*P	**Pn**	**12 44 56.7**	**+0.9**
MIB				AML	AML	12 45 45.7	
	comp=Z,106nm,0.5s						
MIB	**Mutribah**	**2.81**	**198**	*e*P	**Pn**	**12 44 56.7**	**+0.9**
IKLH	**Kolahrood**	**2.86**	**72**	*e*Pn	**Pn**	**12 44 58.3**	**+1.5**
IKLH				*e*		12 45 48.9	
	comp=Z,2μm,0.3s						
IKLH	**Kolahrood**	**2.86**	**72**	*e*Pn	**Pn**	**12 44 58.3**	**+1.5**
IGAR	**Gharneh**	**3.14**	**90**	*e*Pn	**Pn**	**12 45 02.2**	**+1.5**
IGAR				*e*		12 45 43.1	
	comp=Z,1μm,0.1s						
GHVR	**GHOM**	**3.18**	**50**	*e*Pn	**Pn**	**12 45 02.4**	**+1.3**
GHVR				AML	AML	12 46 01.7	
	comp=N,126nm,0.6s						
GHVR				AML	AML	12 46 04.8	
	comp=E,96nm,0.8s						
GHVR	**GHOM**	**3.18**	**50**	*e*Pn	**Pn**	**12 45 02.4**	**+1.3**
IRAZ	**Razeghan**	**3.20**	**24**	*e*		12 45 07.7	
	comp=Z,2μm,0.2s						
IRAZ				*e*Pn	**Pn**	**12 45 02.9**	**+1.4**
IR5	**Iran Long-Peri**	**3.30**	**34**	*e*Pn	**Pn**	**12 45 04.8**	**+2.0**
IR5	**Iran Long-Peri**	**3.30**	**34**	*e*Pn	**Pn**	**12 45 04.8**	**+2.0**
KBD	**Kabd**	**3.34**	**190**	*e*P	**Pn**	**12 45 04.5**	**+1.2**
KBD	**Kabd**	**3.34**	**190**	*e*P	**Pn**	**12 45 04.5**	**+1.2**
NAY	**Al-Naaiem**	**3.36**	**196**	*e*P	**Pn**	**12 45 03.9**	**+0.4**
NAY	**Al-Naaiem**	**3.36**	**196**	*e*P	**Pn**	**12 45 03.9**	**+0.4**
IZEF	**Zefreh**	**3.40**	**82**	*e*		12 45 07.1	
	comp=Z,1μm,0.2s						
IZEF				*e*Pn	**Pn**	**12 45 05.8**	**+1.5**
RDF	**Al-Radifah**	**3.61**	**191**	*e*P	**Pn**	**12 45 07.8**	**+0.9**
RDF				AML	AML	12 45 54.4	
	comp=Z,67nm,0.6s						
RDF	**Al-Radifah**	**3.61**	**191**	*e*P	**Pn**	**12 45 07.8**	**+0.9**
IR3	**Iran Long-Peri**	**3.73**	**36**	*e*Pn	**Pn**	**12 45 09.5**	**+0.9**
IR3				*e*Sg	**Sg**	**12 46 09.4**	**-1.1**
IR3	**Iran Long-Peri**	**3.73**	**36**	*e*Pn	**Pn**	**12 45 09.6**	**+0.9**
IR3				*e*Sg	**Sg**	**12 46 09.4**	**-1.1**
IMHD	**Mahdasht**	**3.74**	**31**	*e*		12 45 25.3	
	comp=Z,673nm,0.2s						
IMHD				*e*Pn	**Pn**	**12 45 09.8**	**+1.0**
IVRN	**Varamin**	**3.78**	**48**	*e*Pn	**Pn**	**12 45 10.5**	**+1.2**
IVRN				*e*		12 45 31.1	
	comp=Z,714nm,0.2s						
IVRN	**Varamin**	**3.78**	**48**	*e*Pn	**Pn**	**12 45 10.5**	**+1.2**
NASN	**Na'in**	**3.79**	**84**	*e*Pn	**Pn**	**12 45 11.1**	**+1.3**
NASN	**Na'in**	**3.79**	**84**	*e*Pn	**Pn**	**12 45 11.1**	**+1.3**
ZNJK	**Zanjan**	**4.18**	**4**	*e*Pn	**Pn**	**12 45 15.9**	**+0.8**
ZNJK	**Zanjan**	**4.18**	**4**	*e*Pn	**Pn**	**12 45 15.9**	**+0.8**
IGZV	**Ghazvin**	**4.19**	**21**	*e*Pn	**Pn**	**12 45 15.9**	**+0.7**
IGZV				*e*		12 45 33.9	
	comp=Z,479nm,0.2s						
IGZV	**Ghazvin**	**4.19**	**21**	*e*Pn	**Pn**	**12 45 15.9**	**+0.7**
IDMV	**Damavand**	**4.36**	**44**	*e*Pn	**Pn**	**12 45 18.4**	**+1.0**
IDMV				*e*		12 45 19.0	
	comp=Z,426nm,0.2s						
IDMV	**Damavand**	**4.36**	**44**	*e*Pn	**Pn**	**12 45 18.4**	**+1.0**
DAMV	**Damavand**	**4.36**	**43**	*e*Pn	**Pn**	**12 45 18.4**	**+1.0**
DAMV				*e*Sg	**Sg**	**12 46 28.1**	**-2.6**
DAMV	**Damavand**	**4.36**	**43**	*e*Pn	**Pn**	**12 45 18.4**	**+1.0**
ISAD	**Sadrabad**	**4.58**	**96**	*e*Pn	**Pn**	**12 45 21.9**	**+1.4**
ISAD				*e*		12 46 44.3	
	comp=Z,410nm,0.3s						
ISAD	**Sadrabad**	**4.58**	**96**	*e*Pn	**Pn**	**12 45 21.9**	**+1.4**
IPAR	**Pars**	**4.83**	**122**	*e*Pn	**Pn**	**12 45 25.0**	**+1.0**
IPAR				*e*		12 46 30.1	
	comp=Z,274nm,0.2s						
IPAR	**Pars**	**4.83**	**122**	*e*Pn	**Pn**	**12 45 25.0**	**+1.0**
ISRV	**Sarvestan**	**5.14**	**126**	*e*Pn	**Pn**	**12 45 29.9**	**+1.6**
ISRV				*e*		12 46 51.5	
	comp=Z,361nm,0.3s						
ISRV	**Sarvestan**	**5.14**	**126**	*e*Pn	**Pn**	**12 45 29.9**	**+1.6**
ICHK	**Chekchek**	**5.15**	**91**	*e*Pn	**Pn**	**12 45 28.5**	**+0.2**
ICHK				*e*		12 46 32.2	
	comp=Z,249nm,0.3s						
ICHK	**Chekchek**	**5.15**	**91**	*e*Pn	**Pn**	**12 45 28.5**	**+0.2**
IMEH	**Mehriz**	**5.45**	**100**	*e*Pn	**Pn**	**12 45 33.7**	**+1.2**
IMEH				*e*		12 47 03.8	
	comp=Z,90nm,0.2s						
IMEH	**Mehriz**	**5.45**	**100**	*e*Pn	**Pn**	**12 45 33.7**	**+1.2**
BRTR	**Keskin Array B**	**13.89**	**305**	Pn	**P**	**12 47 36.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=123,slow=16,SNR=3.3						
MKAR	**Makanchi Array**	**29.54**	**51**	P	**P**	**12 50 14.6**	**-1.1**
	comp=Z,0.7nm,0.5s,baz=246,slow=11,SNR=11						
SONM	**Songino Array**	**45.88**	**53**	P	**P**	**12 52 32.3**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=268,slow=7.7,SNR=2.7						
TORD	**Torodi Ar. Bea**	**46.67**	**257**	P	**P**	**12 52 38.1**	**-2.0**
	comp=Z,0.4nm,0.6s,baz=65,slow=8.3,SNR=2.9						
INK	**Inuvik**	**79.50**	**1**	P	**P**	**12 56 19.0**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=18,slow=1.8,SNR=3.5						

*ISCJB **28** 12:54:47.0±0.7,9°.19N±0°.05×121°.91E±0°.06,h10km, mb3.7/8,MS3.8/1,Error ellipse: s-maj=8.8km s-min=6.7km az=2.6*
*MAN **28** 12:54:47,9°.22N×121°.90E,h14km,mb5.0,ML4.0,MS4.1*
*IDC **28** 12:54:48.8±0.9,8°.71N×121°.39E,h0km,mb3.8/8, mb1 4.0/8,mb1mx3.7/26,mbtmp3.8/8,MS3.9/1,Ms1 3.9/1, ms1mx1.9/36,Error ellipse: s-maj=42.8km s-min=19.0km az=64.0*
ISC 28 12:54:48.3±0.9,9°.22N±0°.06×121°.93E±0°.08,h10km,n20, σ0.994/17,mb3.8/8,2C-3D,Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.30**	**84**	*e*P	Pn	12 54 56.9	-16
SNPH				*e*S	Sb	12 55 17.7	-12
DCPH	**Dipolog City**	**1.54**	**114**	*e*P	**Pn**	**12 55 14.1**	**-1.8**
GUIM	**Jordan**	**1.54**	**25**	*e*P	**Pn**	**12 55 14.4**	**-1.5**
GUIM				*e*S	**Sn**	**12 55 35.4**	**-0.7**
TBP	**Tagbilaran**	**1.97**	**76**	*e*P	**Pn**	**12 55 21.5**	**-0.2**
PAGZ	**Pagadian**	**1.98**	**133**	*e*P	**Pn**	**12 55 21.7**	**-0.2**
LLP	**Lapu-Lapu**	**2.29**	**61**	*e*P	**Pn**	**12 55 25.7**	**-0.5**
LLP				*e*S	**Sn**	**12 55 54.4**	**0.0**
RCP	**Roxas**	**2.46**	**19**	*e*P	**Pn**	**12 55 28.8**	**+0.2**
CGP	**Cagayan de Oro**	**2.84**	**105**	*e*P	**Pn**	**12 55 34.3**	**+0.5**
MSLP	**Maasin**	**3.03**	**72**	*e*P	**Pn**	**12 55 37.4**	**+1.1**
CTBH	**Cotabato--PC H**	**3.03**	**131**	*i*P	**Pn**	**12 55 36.2**	**-0.2**
SJMP	**San Jose**	**3.32**	**346**	*e*P	**Pn**	**12 55 39.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**24.11**	**295**	P	**P**	**13 00 05.2**	**+0.7**
	1.0nm,0.7s,baz=93,slow=7.4,SNR=6.5						
JHJ	**Hachijo jima 2**	**28.94**	**32**	LR	LR	13 10 55.5	
	comp=Z,242nm,20.9s,baz=19,slow=33						
WRA	**Warramunga Arr**	**31.45**	**157**	P	**P**	**13 01 09.0**	**-1.2**
	0.6nm,0.8s,baz=335,slow=9.8,SNR=5.5						
ASAR	**Alice Springs**	**34.72**	**160**	P	**P**	**13 01 38.6**	**-0.1**
	0.7nm,0.6s,baz=340,slow=7.4,SNR=11						
STKA	**Stephens Creek**	**44.98**	**156**	P	**P**	**13 03 03.9**	**-0.1**
	1.6nm,0.7s,baz=342,slow=16,SNR=3.3						
MKAR	**Makanchi Array**	**50.36**	**325**	P	**P**	**13 03 47.0**	**+1.4**
	0.9nm,0.6s,baz=129,slow=8.2,SNR=14						
ILAR	**Eielson Array**	**82.24**	**26**	P	P	13 07 14.8	+5.2
	0.2nm,0.7s,baz=261,slow=4.5,SNR=3.3						
INK	**Inuvik**	**86.82**	**21**	P	P	13 07 39.2	+6.5
	0.3nm,0.4s,baz=299,slow=3.7,SNR=3.3						
YKA	**Yellowknife Ar**	**96.42**	**23**	P	P	13 08 23.4	+5.9
	0.4nm,0.8s,baz=294,slow=4.9,SNR=4.2						

MAN 28 12:59:01,9°.24N×121°.85E,h33km,mb4.4,ML3.3,MS3.2, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.56**	**28**	*e*P	Pn	12 59 27.3	+0.9
GUIM				*e*S	Sn	12 59 43.9	-1.6
IPIL	**Ipil**	**1.61**	**154**	*e*P	Pb	12 59 47.1	+17
PAGZ	**Pagadian**	**2.05**	**132**	*e*P	Pn	12 59 34.6	+1.3
PAGZ				*e*S	Sn	12 59 55.5	-2.2

IDC 28 13:06:37.9±5.4,16.05N×86.87W,h0km,mb3.4/3, mb1 3.9/4,mb1mx3.6/23,mbtmp3.5/4,ML3.4/1,Error ellipse: s-maj=110.4km s-min=88.3km az=40.0,North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.37**	**342**	Pn	Pn	13 07 45.5	0.0
	2.0nm,0.3s,baz=150,slow=20,SNR=9.2						
TEIG				Sn	Sn	13 08 32.1	-5.0
	5.9nm,0.3s,baz=197,slow=19,SNR=4.9						
TXAR	**Lajitas Array**	**20.34**	**313**	P	P	13 11 15.9	-0.1
	1.2nm,0.8s,baz=145,slow=11,SNR=10						
YKA	**Yellowknife Ar**	**50.32**	**344**	P	P	13 15 35.9	-0.3
	0.2nm,0.5s,baz=136,slow=8.1,SNR=5.9						
ILAR	**Eielson Array**	**62.99**	**335**	P	P	13 17 06.4	+0.1
	0.3nm,0.9s,baz=90,slow=8.1,SNR=3.5						

IDC 28 13:15:36.6±2.6,16.15N×87.11W,h0km,mb3.7/3, mb1 4.2/4,mb1mx3.8/23,mbtmp3.8/4,ML3.7/1,Error ellipse: s-maj=94.6km s-min=51.5km az=65.0,North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.21**	**345**	Pn	Pn	13 16 41.9	-0.1
	4.6nm,0.3s,baz=157,slow=14,SNR=14						
TEIG				Pg	Pb	13 16 49.6	-1.9
	13nm,0.3s,baz=148,slow=2.7,SNR=21						
TEIG				Sn	Sn	13 17 28.6	-3.4
	14nm,0.3s,baz=237,slow=22,SNR=12						
TEIG				Lg	Lg	13 17 46.1	
	14nm,0.3s,baz=240,slow=20,SNR=3.5						
SOR	**Soroa**	**7.66**	**30**	*e*P	Pn	13 17 35.5	+6.0
	baz=205						
SOR				*e*S	Sn	13 18 48.9	-8.1
TXAR	**Lajitas Array**	**20.11**	**314**	P	P	13 20 12.2	+0.1
	4.7nm,0.8s,baz=133,slow=10,SNR=29						
YKA	**Yellowknife Ar**	**50.17**	**344**	P	P	13 24 33.4	-0.2
	0.7nm,0.6s,baz=139,slow=7.7,SNR=14						
ILAR	**Eielson Array**	**62.81**	**335**	P	P	13 26 03.7	0.0
	0.8nm,0.9s,baz=110,slow=5.5,SNR=9.4						
WRA	**Warramunga Arr**	**140.48**	**258**	PKhKP	PKPpre	13 35 00.6	
	0.8nm,1.0s,baz=81,slow=3.6,SNR=4.9						
WRA				PKP	PKPdf	13 35 08.1	-0.6
	0.6nm,0.6s,baz=85,slow=2.0,SNR=11						
ASAR	**Alice Springs**	**140.82**	**252**	PKhKP	PKPpre	13 35 00.7	
	0.3nm,0.9s,baz=82,slow=2.9,SNR=3.7						
ASAR				PKP	PKPdf	13 35 08.2	-1.1
	0.6nm,0.7s,baz=88,slow=2.5,SNR=9.7						
CMAR	**Chiang Mai Arr**	**145.10**	**350**	PKPbc	PKPbc	13 35 15.7	-0.6
	1.0nm,0.7s,baz=0.0,slow=2.9,SNR=4.3						

*AUST **28** 13:15:51.8±0.0,4°.34S×129°.44E,h247km±1km,Error ellipse: s-maj=2.3km s-min=1.4km az=327.0*
IDC 28 13:16:16.4±2.1,7°.15S×129°.66E,h0km,mb3.3/1, mb1 3.4/4,mb1mx3.3/20,mbtmp3.3/4,ML3.2/3,Error ellipse: s-maj=85.5km s-min=27.9km az=77.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**4.93**	**32**	S	Pn	13 17 32.4	+0.6
	baz=3.1,SNR=3.1						
MTN	**Manton Dam**	**5.84**	**166**	P	Pb	13 17 52.2	-7.1
	baz=8.7,SNR=3.8						
KDU	**Kakadu**	**6.16**	**154**	P	Pn	13 17 55.5	+6.7
	baz=8.9,SNR=37						
KNRA	**Kununurra**	**8.52**	**186**	P	Pn	13 18 26.2	+5.0
	baz=11,SNR=5.3						
WSI	**Waingapu**	**9.60**	**254**	P	Pn	13 18 16.9	-19
	baz=10,SNR=4.4						
FITZ	**Fitzroy Crossi**	**11.57**	**199**	Pn	Pn	13 19 03.3	+0.3
	0.1nm,0.3s,baz=20,slow=12,SNR=12						
FITZ				Sn	Sn	13 21 07.9	-5.1
	0.1nm,0.3s,baz=72,slow=20,SNR=2.7						
FITZ	**Fitzroy Crossi**	**11.57**	**199**	P	Pn	13 19 07.0	+4.0
	baz=14,SNR=4.8						
WRA	**Warramunga Arr**	**13.51**	**161**	Pn	Pn	13 19 29.3	-0.2
	0.1nm,0.3s,baz=343,slow=13,SNR=10						
WRA				Sn	Sn	13 21 53.5	-7.0
	0.1nm,0.3s,baz=337,slow=22,SNR=6.2						
ASAR	**Alice Springs**	**16.92**	**167**	Pn	Pn	13 20 14.6	-0.3
	0.1nm,0.3s,baz=342,slow=9.0,SNR=8.0						
MKAR	**Makanchi Array**	**68.16**	**327**	P	P	13 27 18.6	0.0
	0.1nm,0.5s,baz=115,slow=7.2,SNR=3.1						

*ISK **28** 13:23:21.3,37°.97N×27°.07E,h22km,MD2.6*
*DDA **28** 13:23:21.9,37°.95N×27°.12E,h7km,MD2.6*
*ISCJB **28** 13:23:22.1±0.6,37°.95N±0°.03×27°.11E±0°.07,h9km±7km, Error ellipse: s-maj=9.9km s-min=4.1km az=157.8*
*CSEM **28** 13:23:22.2±0.3,37°.95N×27°.11E,h10km,MD2.6,Error ellipse: s-maj=8.9km s-min=4.5km az=75.0*
ISC 28 13:23:21.9±0.9,37.95N±0°.02×27.12E±0°.04,h15km±7km, n20,σ0.940/35,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.26**	**159**	*i*P	**Pg**	**13 23 27.6**	**0.0**
GCAM				*i*S	**Sg**	**13 23 31.4**	**0.0**
GCAM	**G?zelcaml?**	**0.26**	**159**	*i*P	**Pg**	**13 23 27.6**	**0.0**
GCAM				*i*S	**Sg**	**13 23 31.4**	**0.0**
BLCB	**Balcova**	**0.44**	**352**	*e*PG	**Pg**	**13 23 30.6**	**-0.1**
BLCB				*e*SG	**Sg**	**13 23 37.1**	**+0.4**
BLCB	**Balcova**	**0.44**	**352**	*e*Pg	**Pg**	**13 23 30.6**	**-0.1**
BLCB				*e*Sg	**Sg**	**13 23 37.1**	**+0.4**
IZM	**Izmir**	**0.46**	**14**	*e*PG	**Pg**	**13 23 31.2**	**0.0**
IZM				*e*SG	**Sb**	**13 23 38.4**	**-0.1**
IZM	**Izmir**	**0.46**	**14**	*e*Pg	**Pg**	**13 23 31.2**	**0.0**
IZM				*e*Sg	**Sb**	**13 23 38.4**	**-0.1**
URLA	**Izmir**	**0.58**	**315**	*i*P	**Pg**	**13 23 33.0**	**-0.4**
URLA				*i*S	**Sb**	**13 23 42.2**	**+0.3**
URLA	**Izmir**	**0.58**	**315**	*i*P	**Pg**	**13 23 33.0**	**-0.4**
URLA				*i*S	**Sb**	**13 23 42.2**	**+0.3**
MLSB	**Milas**	**0.84**	**141**	*e*PG	**Pn**	**13 23 38.9**	**-0.3**
MLSB				*e*SG	**Sn**	**13 23 51.5**	**+0.3**
MLSB	**Milas**	**0.84**	**141**	*e*Pg	**Pn**	**13 23 38.9**	**-0.3**
MLSB				*e*Sg	**Sn**	**13 23 51.5**	**+0.3**
BODT	**Bodrum**	**0.90**	**170**	*e*PG	**Pg**	**13 23 39.4**	**+0.1**
BODT	**Bodrum**	**0.90**	**170**	*e*Pg	**Pg**	**13 23 39.4**	**+0.1**
AKHS	**Akhisar**	**1.08**	**30**	*i*P	**Pb**	**13 23 42.1**	**-0.2**
AKHS				*i*S	**Sn**	**13 23 57.7**	**+0.5**
AKHS	**Akhisar**	**1.08**	**30**	*i*P	**Pb**	**13 23 42.1**	**-0.2**
AKHS				*i*S	**Sn**	**13 23 57.7**	**+0.5**
MANT	**Manisa**	**1.26**	**64**	*i*P	**Pg**	**13 23 46.6**	**+0.4**
MANT				*i*S	**Sb**	**13 24 00.3**	**-1.2**
MANT	**Manisa**	**1.26**	**64**	*i*P	**Pg**	**13 23 46.6**	**+0.4**
KULA	**Kula-Manisa**	**1.34**	**65**	*e*PN	**Pn**	**13 23 45.5**	**-0.7**
KULA	**Kula-Manisa**	**1.34**	**65**	*e*Pn	**Pn**	**13 23 45.5**	**-0.7**
BALY	**Balya**	**1.83**	**12**	*i*P	**Pb**	**13 23 55.6**	**+0.4**
BALY				*i*S	**Sb**	**13 24 18.0**	**+0.1**
BALY	**Balya**	**1.83**	**12**	*i*P	**Pb**	**13 23 55.6**	**+0.4**
BALY				*i*S	**Sb**	**13 24 18.0**	**+0.1**

IDC 28 13:26:50.7±1.9,2.98N×76.32W,h0km,mb3.3/2, mb1 3.7/3,mb1mx3.4/23,mbtmp3.4/3,ML2.7/1,Error ellipse: s-maj=55.7km s-min=19.5km az=143.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.72**	**47**	Pn	Pn	13 27 37.5	+1.3
	26nm,0.3s,baz=263,slow=

MANT				*i* S	**Sb**	13 31 45.8	-0.3
MANT	**Manisa**	**1.31**	**146**	*i* P	**Pg**	13 31 30.1	0.0
MANT				*i* S	**Sb**	13 31 45.8	-0.3
KULA	**Kula-Manisa**	**1.34**	**142**	*e*PN	**Pn**	13 31 29.2	+0.1
KULA	**Kula-Manisa**	**1.34**	**142**	*e*Pn	**Pn**	13 31 29.2	+0.1
ARMT	**Armutlu**	**1.37**	**44**	*e*PN	**Pb**	13 31 30.2	0.0
ARMT	**Armutlu**	**1.37**	**44**	*e*Pn	**Pb**	13 31 30.2	0.0
ERIK	**Erikli-Kesan**	**1.38**	**323**	*e*PN	**Pb**	13 31 30.7	+0.5
ERIK	**Erikli-Kesan**	**1.38**	**323**	*e*Pn	**Pb**	13 31 30.7	+0.5
TVSB	**Tavsanli**	**1.44**	**95**	*e*PN	**Pn**	13 31 30.7	+0.3
TVSB	**Tavsanli**	**1.44**	**95**	*e*Pn	**Pn**	13 31 30.7	+0.3
GDZ	**Gediz**	**1.53**	**108**	*i* P	**Pn**	13 31 32.3	+0.6
GDZ				*i* S	**Sn**	13 31 51.8	+0.3
GDZ	**Gediz**	**1.53**	**108**	*i* P	**Pn**	13 31 32.3	+0.6
GDZ				*i* S	**Sn**	13 31 51.8	+0.3

IDC 28 13:37:41.6±0.8, 2°70'N×75°91'W, h0km, mb3.7/9, mb1 4.0/10, mb1mx3.9/23, mbtmp3.7/10, ML3.2/1, MS3.0/2, Ms1 3.0/2, ms1mx2.9/31, Error ellipse: s-maj=19.9km s-min=18.1km az=114.0, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**2.66**	**36**	Pn	Pn	13 38 27.1	+0.8
	85nm,0.3s,baz=283,slow=9.2,SNR=51						
ROSC				Lg	Lg	13 39 06.9	
	165nm,0.3s,baz=89,slow=20,SNR=9.6						
ROSC				LR	LR	13 39 46.2	
	comp=Z,224nm,19.3s,baz=208,slow=47						
ATAH	**Atahualpa**	**10.08**	**194**	Pn	Pn	13 40 12.8	+4.6
	1.3nm,0.3s,baz=10,slow=6.6,SNR=18						
ATAH				LR	LR	13 43 54.1	
	comp=Z,132nm,21.4s,baz=102,slow=37						
SIV	**San Ignacio**	**23.66**	**142**	P	P	13 42 55.7	+0.6
	1.0nm,0.6s,baz=325,slow=15,SNR=4.3						
SIV				Lg	Lg	13 50 09.3	
	19nm,1.2s,baz=238,slow=24,SNR=9.7						
BDFB	**Brasilia**	**33.06**	**124**	Lg	Lg	13 55 10.0	
	1.2nm,0.4s,baz=18,slow=19,SNR=2.2						
TXAR	**Lajitas Array**	**37.38**	**318**	P	P	13 44 56.1	-0.5
	0.1nm,0.3s,baz=153,slow=8.6,SNR=4.0						
ANMO	**Albuquerque**	**42.83**	**322**	P	P	13 45 43.0	+1.1
	2.0nm,0.7s,baz=148,slow=8.5,SNR=4.8						
PDAR	**Pinedale Array**	**49.91**	**328**	P	P	13 46 37.6	+0.1
	0.5nm,0.5s,baz=132,slow=6.5,SNR=3.4						
SCHQ	**Schefferville**	**52.50**	**7**	P	P	13 46 56.5	+0.2
	1.7nm,0.8s,baz=203,slow=13,SNR=2.9						
NVAR	**Mina Array Bea**	**52.53**	**318**	P	P	13 46 56.2	-1.0
	0.5nm,0.7s,baz=148,slow=7.1,SNR=4.8						
NVAR				PcP	PcP	13 48 09.7	+2.0
	0.8nm,0.6s,baz=138,slow=4.4,SNR=5.8						
YKA	**Yellowknife Ar**	**66.21**	**342**	P	P	13 48 29.2	-1.9
	0.4nm,0.5s,baz=134,slow=6.1,SNR=7.7						
TORD	**Torodi Ar. Bea**	**77.32**	**77**	P	P	13 49 37.8	-1.1
	0.4nm,0.6s,baz=283,slow=5.1,SNR=4.3						
ILAR	**Eielson Array**	**79.53**	**336**	P	P	13 49 50.5	+0.3
	0.5nm,0.6s,baz=111,slow=4.0,SNR=18						
MKAR	**Makanchi Array**	**127.11**	**19**	PKP	PKPdf	13 56 47.6	-0.6
	0.2nm,0.6s,baz=347,slow=1.9,SNR=2.6						
SONM	**Songino Array**	**129.64**	**358**	PKP	PKPdf	13 56 54.0	+0.8
	0.4nm,0.9s,baz=20,slow=5.1,SNR=2.2						
ASAR	**Alice Springs**	**144.42**	**232**	PKP	PKPab	13 57 18.7	-0.4
	2.0nm,0.8s,baz=120,slow=3.8,SNR=19						
WRA	**Warramunga Arr**	**145.86**	**238**	PKPbc	PKPdf	13 57 23.4	0.0
	0.9nm,0.6s,baz=115,slow=3.0,SNR=12						

IDC 28 13:48:00.7±2.9, 16°44N×86°69W, h0km, mb3.1/3, mb1 3.6/4, mb1mx3.5/23, mbtmp3.3/4, ML3.6/1, Error ellipse: s-maj=109.3km s-min=42.4km az=69.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**4.06**	**338**	Pn	Pn	13 49 05.5	+1.4
	3.5nm,0.3s,baz=128,slow=1.9,SNR=9.0						
TEIG				Pg	Pb	13 49 15.8	+2.7
	5.5nm,0.3s,baz=131,slow=3.4,SNR=8.0						
TEIG				Sn	Sn	13 49 52.3	0.0
	13nm,0.3s,baz=210,slow=20,SNR=14						
TEIG				Lg	Lg	13 50 14.1	
	8.4nm,0.3s,baz=252,slow=20,SNR=3.3						
TXAR	**Lajitas Array**	**20.20**	**312**	P	P	13 52 36.5	-0.8
	0.4nm,0.7s,baz=141,slow=12,SNR=4.2						
YKA	**Yellowknife Ar**	**50.00**	**344**	P	P	13 56 55.2	-1.3
	0.2nm,0.6s,baz=138,slow=7.6,SNR=4.6						
ILAR	**Eielson Array**	**62.71**	**335**	P	P	13 58 27.5	+0.3
	0.2nm,0.8s,baz=132,slow=5.0,SNR=3.9						
WRA	**Warramunga Arr**	**140.94**	**258**	PKP	PKPdf	14 07 35.5	+1.8
	0.2nm,0.8s,baz=92,slow=2.4,SNR=2.6						

*SKO **28** 13:53:29.7, 41°37'N×22°72'E, h20km, M1.3, ML1.7*
*ISCJB **28** 13:53:31.1±0.4, 41°33'N±0°02×22°70'E±0°04, MD2.6/3*
Error ellipse: s-maj=4.9km s-min=3.7km az=177.1
*ATH **28** 13:53:31.6, 41°28'N×22°74'E, h15km±8km, MD2.6/3*
*BEO **28** 13:53:31.8±0.9, 41°28'N×22°61'E, h9km±3km, ML1.6/5*
*CSEM **28** 13:53:31.5±0.2, 41°31'N×22°72'E, h8km, ML1.6, Error ellipse: s-maj=3.8km s-min=3.3km az=62.0*
*THE **28** 13:53:32.3, 41°29'N×22°74'E, h0km±2km, ML1.9/4, Error ellipse: s-maj=2.6km s-min=0.8km az=245.0*

ISC 28 13:53:31.8±0.9, 41°28N±0°02×22°72E±0°02, h8km±7km, n31, σ0°973/58, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**291**	P	**Pg**	13 53 34.3	-0.2
VAY	**Valandovo**	**0.12**	**291**	*e*Pg	**Pg**	13 53 34.1	-0.4
VAY				*e*Sg	**Sg**	13 53 36.1	-0.2
VAY				*e*Lg	Lg	13 53 36.2	
	comp=E,372nm,0.3s						
VAY				*e*Lg	Lg	13 53 36.2	
	comp=N,762nm,0.5s						
VAY	**Valandovo**	**0.12**	**291**	P	**Pg**	13 53 34.3	-0.2
VAY	**Valandovo**	**0.12**	**291**	*e*Pg	**Pg**	13 53 34.6	+0.1
VAY				*e*Sg	**Sg**	13 53 36.0	-0.4
VAY				*e*Lg	Lg	13 53 36.7	
	comp=N,762nm,0.5s						
KNT	**Kendrikon**	**0.18**	**131**	P	**Pg**	13 53 35.9	+0.4
KNT				S	**Sg**	13 53 38.8	+0.9
KNT	**Kendrikon**	**0.18**	**131**	P	**Pg**	13 53 35.9	+0.4
KNT				S	**Sg**	13 53 38.8	+0.9
GRG	**Griva**	**0.40**	**217**	P	**Pg**	13 53 40.2	+0.6
GRG	**Griva**	**0.40**	**217**	*e*PB	**Pg**	13 53 39.8	+0.2
GRG				*e*SB	**Sg**	13 53 45.8	+0.9
GRG	**Griva**	**0.40**	**217**	*e*Pb	**Pg**	13 53 39.8	+0.2
GRG	**Griva**	**0.40**	**217**	P	**Pg**	13 53 40.2	+0.6
GRG				*e*Sb	**Sg**	13 53 45.8	+0.9
SOH	**Sokhos**	**0.66**	**133**	P	**Pg**	13 53 44.5	-0.1
SOH				S	**Sb**	13 53 54.4	-0.6
SOH	**Sokhos**	**0.66**	**133**	*e*PN	**Pg**	13 53 44.4	-0.1
SOH				*e*SN	**Sg**	13 53 53.3	+0.1
SOH	**Sokhos**	**0.66**	**133**	P	**Pg**	13 53 44.5	-0.1
SOH				*e*Sn	**Sg**	13 53 53.3	+0.1
SOH				S	**Sb**	13 53 54.4	-0.6
SRS	**Serrai**	**0.68**	**103**	P	**Pb**	13 53 45.6	-0.3
SRS				S	**Sg**	13 53 54.4	+0.7
SRS	**Serrai**	**0.68**	**103**	P	**Pb**	13 53 45.6	-0.3
SRS				S	**Sg**	13 53 54.4	+0.7
HORT	**Hortiatis**	**0.74**	**157**	P	**Pg**	13 53 46.2	+0.2
HORT				S	**Sb**	13 53 57.2	-0.1
HORT	**Hortiatis**	**0.74**	**157**	P	**Pg**	13 53 46.2	+0.2
HORT				S	**Sb**	13 53 57.2	-0.1
NVR	**Nevrokopi**	**0.86**	**85**	P	**Pg**	13 53 48.1	-0.3
NVR				S	**Sg**	13 54 00.1	+0.5
NVR	**Nevrokopi**	**0.86**	**85**	*e*PN	**Pg**	13 53 47.6	-0.8
NVR				*e*SN	**Sg**	13 53 59.8	+0.2
NVR	**Nevrokopi**	**0.86**	**85**	*e*Pn	**Pg**	13 53 47.6	-0.8
NVR	**Nevrokopi**	**0.86**	**85**	P	**Pg**	13 53 48.1	-0.3
NVR				*e*Sn	**Sg**	13 53 59.8	+0.2
NVR				S	**Sg**	13 54 00.1	+0.5
PLG	**Polygyros**	**1.06**	**148**	P	**Pg**	13 53 52.1	0.0
PLG				S	**Sn**	13 54 08.0	+0.1
PLG	**Polygyros**	**1.06**	**148**	P	**Pg**	13 53 52.1	0.0
PLG				S	**Sn**	13 54 08.0	+0.1
VTS	**Vitosha**	**1.36**	**15**	P	**Pb**	13 53 57.8	0.0
VTS				S	**Sg**	13 54 18.0	+2.3
VTS	**Vitosha**	**1.36**	**15**	*e*Pg	**Pb**	13 53 57.7	0.0
VTS				*e*Sg	**Sb**	13 54 15.3	0.0
VTS	**Vitosha**	**1.36**	**15**	*e*Pg	**Pb**	13 53 57.7	0.0
VTS				*e*Sg	**Sb**	13 54 15.3	0.0
VTS				S	**Sg**	13 54 18.0	+2.3

BARS	**Barje**	**1.68**	**337**	*e*Pn	**Pn**	13 54 01.5	0.0
BARS				*e*Sg	**Sb**	13 54 24.5	+0.2
BARS	**Barje**	**1.68**	**337**	*e*Pn	**Pn**	13 54 01.5	0.0
BARS				*e*Sg	**Sb**	13 54 24.5	+0.2
PLD	**Plovdiv**	**1.70**	**60**	*e*Sg	**Sg**	13 54 28.2	+1.8
PLD	**Plovdiv**	**1.70**	**60**	*e*Sg	**Sg**	13 54 28.2	+1.8
ZAPS	**Zavoj**	**2.00**	**358**	*e*Pn	**Pn**	13 54 04.4	-1.5
ZAPS				*e*Sg	**Sg**	13 54 35.4	-0.5

IDC 28 13:56:13.9±2.2, 16°76N×86°26W, h0km, mb3.4/4, mb1 4.0/5, mb1mx3.8/23, mbtmp3.6/5, ML4.3/1, MS3.0/1, Ms1 3.0/1, ms1mx2.8/21, Error ellipse: s-maj=112.3km s-min=29.4km az=60.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**3.95**	**331**	Pn	Pn	13 57 16.6	+0.9
	21nm,0.3s,baz=63,slow=2.3,SNR=17						
TEIG				Sn	Sn	13 58 02.2	-0.6
	23nm,0.3s,baz=60,slow=20,SNR=8.2						
TEIG				Lg	Lg	13 58 19.0	
	28nm,0.3s,baz=94,slow=21,SNR=3.6						
TEIG				LR	LR	13 59 06.2	
	comp=Z,190nm,19.1s,baz=246,slow=44						
SOR	**Soroa**	**6.74**	**26**	*e*P	Pn	13 58 01.9	+7.8
	baz=215						
SOR				*e*S	Sn	13 59 11.9	+0.2
TXAR	**Lajitas Array**	**20.30**	**311**	P	P	14 00 51.0	-0.6
	1.3nm,0.7s,baz=138,slow=11,SNR=3.5						
PDAR	**Pinedale Array**	**32.66**	**327**	P	P	14 02 48.0	-0.1
	0.3nm,0.5s,baz=170,slow=8.8,SNR=2.4						
NVAR	**Mina Array Bea**	**35.39**	**314**	P	P	14 03 12.3	+0.5
	0.1nm,0.4s,baz=123,slow=6.6,SNR=3.8						
ILAR	**Eielson Array**	**62.59**	**335**	P	P	14 06 39.5	-0.1
	0.6nm,0.8s,baz=134,slow=5.2,SNR=5.7						
CMAR	**Chiang Mai Arr**	**144.63**	**351**	PKP	PKPbc	14 15 52.3	+0.1
	0.4nm,0.6s,baz=347,slow=2.8,SNR=4.9						

*BJI **28** 13:57:28.4, 66°30N×135°10W, h10km, mB4.7/3, mb4.7/6, Ms4.6/3, Ms7 4.2/3*
*IDC **28** 13:57:30.4±0.6, 66°33N×135°33W, h0km, mb3.9/11, mb1 4.1/15, mb1mx4.0/33, mbtmp3.9/15, ML3.9/3, Error ellipse: s-maj=11.1km s-min=8.5km az=89.0*
*NEIC **28** 13:57:32.0, 66°30N×135°11W, h20km, mb4.0/16, ML4.3(PGC), MW3.9(SLM), After PGC.*
*PGC **28** 13:57:32.5±2.8, 66°30N×135°12W, h20km, ML4.3/2, 130km Ssw of Fort McPherson, Nt Northern Yukon Territory, Canada*

ISC 28 13:57:31.2±0.8, 66°20N±0°04×134°91W±0°04, h16km±5km, n94, σ1°888/109, mb4.0/28, 3C-10D, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	**Inuvik**	**2.18**	**14**	Pn	**Pn**	13 58 06.6	-0.2
INK				S	**Sn**	13 58 33.1	-0.4
INK				Lg	Lg	13 58 37.7	
INK	**Inuvik**	**2.18**	**14**	Pn	**Pn**	13 58 06.7	-0.2
INK				⇓Sn	**Sn**	13 58 30.7	-2.7
INK	**Inuvik**	**2.18**	**14**	Pn	**Pn**	13 58 06.6	-0.2
	52nm,0.3s,baz=190,slow=17,SNR=217						
INK				Lg	Lg	13 58 37.7	
	314nm,0.3s,baz=104,slow=30,SNR=21						
DAWY	**Dawson**	**2.86**	**223**	P	**Pn**	13 58 16.6	+0.4
DAWY	**Dawson**	**2.86**	**223**	Pn	**Pn**	13 58 17.4	+1.1
DAWY				⇓Sn	**Sn**	13 58 48.9	-1.5
DAWY				⇓Sg	**Sg**	13 59 01.9	-1.2
EGAK	**Eagle**	**2.97**	**244**	*e*Pn	**Pn**	13 58 16.9	-0.8
EGAK				*e*Sn	**Sn**	13 58 51.5	-1.5
BM3	**Burnt Mountain**	**4.03**	**292**	P	**Pn**	13 58 31.3	-0.9
BCA3	**Beaver Creek A**	**4.32**	**226**	P	**Pn**	13 58 36.4	+0.1
BCA3				S	**Sn**	13 59 28.8	+2.5
PRP	**Porcupine Dome**	**4.41**	**266**	P	**Pn**	13 58 36.5	-1.2
DOT	**Dot Lake**	**4.66**	**241**	*e*Pn	**Pn**	13 58 39.7	-1.3
DOT				*e*Sn	**Sn**	13 59 32.4	-2.3
MENT	**Mentasta**	**5.01**	**233**	*e*Pn	**Pn**	13 58 45.1	-0.7
IL1	**Eielson Array**	**5.19**	**259**	P	**Pn**	13 58 47.0	-1.1
ILAR	**Eielson Array**	**5.19**	**259**	Pn	**Pn**	13 58 46.9	-1.3
ILAR				Lg	Lg	14 00 10.7	
ILAR	**Eielson Array**	**5.19**	**259**	Pn	**Pn**	13 58 46.9	-1.3
	1.3nm,0.3s,baz=71,slow=13,SNR=66						
ILAR				Lg	Lg	14 00 10.7	
	11nm,0.3s,baz=69,slow=29,SNR=6.6						
HDA	**Harding Lake**	**5.36**	**256**	P	**Pn**	13 58 50.9	+0.3
HYT	**Haines Junctio**	**5.52**	**193**	⇓Pn	**Pn**	13 58 54.8	+2.0
HYT				Sg	**Sg**	14 00 25.4	-2.9
HYT	**Haines Junctio**	**5.52**	**193**	⇓Pn	**Pn**	13 58 54.8	+2.0
HYT				⇓Sg	**Sg**	14 00 25.4	-2.9
COLA	**College**	**5.54**	**262**	P	**Pn**	13 58 52.1	-0.8
WHY	**Whitehorse**	**5.57**	**180**	⇑Pn	**Pn**	13 58 55.2	+1.7
WHY	**Whitehorse**	**5.57**	**180**	⇑Pn	**Pn**	13 58 55.2	+1.7
PAX	**Paxson**	**5.58**	**239**	P	**Pn**	13 58 54.2	+0.5
CCB	**Clear Creek Bu**	**5.61**	**260**	P	**Pn**	13 58 52.5	-1.4
MDM	**Murphy Dome**	**5.67**	**263**	P	**Pn**	13 58 53.6	-1.1
WRH	**Wood River Hil**	**5.79**	**259**	P	**Pn**	13 58 55.3	-1.1
MCARA	**McCarthy VSAT**	**6.02**	**220**	P	**Pn**	13 59 00.1	+0.5
COLD	**Coldfoot**	**6.15**	**287**	P	**Pn**	13 59 01.0	-0.3
DHY	**Denali Highway**	**6.20**	**245**	P	**Pn**	13 59 02.2	0.0
KIAG	**Kiagna River**	**6.25**	**216**	P	**Pn**	13 59 04.3	+1.4
VRDI	**Verde Repeater**	**6.27**	**221**	P	**Pn**	13 59 04.2	+1.1
MCK	**McKinley**	**6.45**	**254**	*e*Pn	**Pn**	13 59 03.3	-2.1
SKAG	**Skagway**	**6.77**	**182**	*e*Pn	**Pn**	13 59 10.0	+0.2
SKAG				*e*Sn	**Sn**	14 00 27.5	+0.9
PNL	**Peninsula**	**6.87**	**199**	*e*Pn	**Pn**	13 59 10.7	-0.5
TRF	**Thorofare Moun**	**7.11**	**254**	P	**Pn**	13 59 13.9	-0.8
SML	**Sawmill**	**7.36**	**239**	*e*Pn	Pn	13 59 13.8	-4.1
IM3	**Indian Mountai**	**7.65**	**277**	P	**Pn**	13 59 20.2	-1.7
GALN	**Gameti Lake**	**7.69**	**98**	⇑Pn	**Pn**	13 59 22.7	+0.2
GALN				Sn	**Sn**	14 00 46.0	-3.1
GALN	**Gameti Lake**	**7.69**	**98**	⇑Pn	**Pn**	13 59 22.7	+0.2
GALN				⇑Sn	**Sn**	14 00 46.0	-3.1
PMR	**Palmer**	**7.78**	**240**	*e*Pn	**Pn**	13 59 21.8	-1.9
CTLN	**Castor Lake**	**8.10**	**94**	⇓Pn	**Pn**	13 59 27.3	-0.7
CTLN				Sn	**Sn**	14 00 54.9	-4.2
CTLN	**Castor Lake**	**8.10**	**94**	⇓Pn	**Pn**	13 59 27.3	-0.7
CTLN				⇑Sn	**Sn**	14 00 54.9	-4.2
DLBC	**Dease Lake**	**8.12**	**162**	*e*Pn	**Pn**	13 59 29.0	+0.6
DLBC				Lg	Lg	14 01 44.0	
DLBC	**Dease Lake**	**8.12**	**162**	⇓Pn	**Pn**	13 59 29.8	+1.4
DLBC				⇑Sg	Sb	14 01 49.4	+22
DLBC	**Dease Lake**	**8.12**	**162**	Pn	**Pn**	13 59 29.9	+1.6
	1.4nm,0.3s,baz=7.4,slow=10,SNR=12						
DLBC				Lg	Lg	14 01 44.0	
	1.6nm,0.3s,baz=288,slow=20,SNR=3.0						
PPLA	**Purkeypile**	**8.14**	**254**	*e*Pn	**Pn**	13 59 29.1	+0.4
	8.7nm,0.5s						
RC01	**Rabbit Creek A**	**8.34**	**239**	*e*Pn	**Pn**	13 59 30.1	-1.3
ILKN	**Indian Lake**	**8.53**	**94**	⇑Pn	**Pn**	13 59 34.1	+0.2
ILKN				Sn	**Sn**	14 01 05.1	-4.6
ILKN	**Indian Lake**	**8.53**	**94**	⇑Pn	**Pn**	13 59 34.1	+0.2
ILKN				⇓Sn	**Sn**	14 01 05.1	-4.6
JERN	**Jeri Cho Mine,**	**9.49**	**80**	⇑Pn	**Pn**	13 59 45.8	-1.3
JERN				⇓Sn	Sn	14 01 26.7	-6.6
YKW3	**Yellowknife Ar**	**9.50**	**103**	*e*Pn	**Pn**	13 59 46.2	-0.9
YKW3	**Yellowknife Ar**	**9.50**	**103**	⇑Pn	**Pn**	13 59 47.3	+0.1
YKW3				⇑Sn	**Sn**	14 01 28.3	-5.1
YKA	**Yellowknife Ar**	**9.54**	**103**	Pn	**Pn**	13 59 47.8	+0.1
YKA				Sn	**Sn**	14 01 28.6	-5.8
YKA	**Yellowknife Ar**	**9.54**	**103**	Pn	**Pn**	13 59 47.8	+0.1
	1.0nm,0.3s,baz=297,slow=13,SNR=24						
YKA				Sn	**Sn**	14 01 28.6	-5.8
	1.5nm,0.3s,baz=295,slow=23,SNR=4.8						
FFC	**Flin Flon**	**19.60**	**110**	*e*P	**Pn**	14 01 59.5	-0.4
	4.6nm,0.9s						
LON	**Longmire**	**20.71**	**154**	*e*P	**P**	14 02 10.7	+0.1
	9.6nm,1.1s						
BSMT	**Bassoo Peak**	**21.22**	**140**	*e*P	**P**	14 02 16.8	+0.5
	11nm,1.5s						
YBMT	**Yellow Bay**	**21.41**	**139**	*e*P	**P**	14 02 19.1	+0.8
	3.2nm,0.9s						
JTMT	**Jette**	**21.45**	**139**	*e*P	**P**	14 02 18.9	+0.2
	2.3nm,0.7s						
SLMT	**Seeley Lake**	**22.12**	**139**	*e*P	**P**	14 02 25.8	-0.1
	7.1nm,1.2s						
BILL	**Bilibino**	**22.20**	**302**	*e*P	**P**	14 02 24.4	-2.0
	3.8nm,0.5s						
EGMT	**Eagleton**	**22.48**	**132**	*e*P	**P**	14 02 30.4	+0.7
	4.1nm,0.8s						
CHMT	**Chamberlain Mo**	**22.49**	**139**	*e*P	**P**	14 02 31.9	+2.0
	3.1nm,1.1s						

BMO	**Blue Mountains**	**23.43**	**147**	*e*P	**P**	14 02 40.5	+1.0
	8.2nm,0.8s						
LRM	**Limekiln Ridge**	**23.71**	**138**	*e*P	**P**	14 02 42.4	0.0
	30nm,1.1s						
LRM				*e*		14 02 49.4	
DLMT	**Dillon**	**24.10**	**139**	*e*P	**P**	14 02 46.7	+0.7
	4.2nm,0.9s						
DLMT				*e*		14 02 53.5	
MFID	**Camas Ranch**	**25.13**	**146**	*e*P	**P**	14 02 55.6	+0.3
	4.3nm,0.9s						
PDAR	**Pinedale Array**	**27.33**	**137**	P	**P**	14 03 19.8	+4.4
PDAR	**Pinedale Array**	**27.33**	**137**	P	**P**	14 03 19.8	+4.4
	2.8nm,0.9s,baz=350,slow=6.0,SNR=14						
ELK	**Elko**	**27.80**	**147**	P	P	14 03 24.6	+5.0
ELK	**Elko**	**27.80**	**147**	P	P	14 03 24.6	+5.0
	2.6nm,0.9s,baz=342,slow=8.4,SNR=8.9						
NVAR	**Mina Array Bea**	**29.41**	**153**	P	P	14 03 38.5	+4.6
NVAR	**Mina Array Bea**	**29.41**	**153**	P	P	14 03 38.5	+4.6
	2.9nm,1.1s,baz=331,slow=7.2,SNR=4.0						
PETK	**Petropavlovsk-**	**34.59**	**281**	P	**P**	14 04 19.4	+0.5
PETK	**Petropavlovsk-**	**34.59**	**281**	P	**P**	14 04 19.4	+0.5
	1.9nm,0.5s,baz=74,slow=12,SNR=6.0						
ANMO	**Albuquerque**	**35.49**	**138**	*e*P	P	14 04 31.4	+4.3
	7.5nm,0.9s						
ANMO				*e*		14 04 35.1	
WMOK	**Wichita Mounta**	**37.97**	**128**	*e*P	**P**	14 04 50.1	+2.2
	1.7nm,0.7s						
WMOK				*e*		14 04 55.0	
TXAR	**Lajitas Array**	**41.55**	**137**	P	**P**	14 05 20.8	+3.0
TXAR	**Lajitas Array**	**41.55**	**137**	P	**P**	14 05 20.8	+3.0
	0.7nm,0.8s,baz=1.4,slow=7.2,SNR=2.9						
FINES	**FINESS Array B**	**51.89**	**11**	P	**P**	14 06 38.2	0.0
FINES	**FINESS Array B**	**51.89**	**11**	P	**P**	14 06 38.2	0.0
	2.9nm,0.6s,baz=359,slow=9.8,SNR=10						
ZALV	**Zalesovo Beam**	**56.44**	**333**	P	**P**	14 07 11.7	+0.2
ZALV	**Zalesovo Beam**	**56.44**	**333**	P	**P**	14 07 11.7	+0.2
	0.8nm,0.5s,baz=34,slow=9.0,SNR=4.1						
KURK	**Kurchatov**	**60.63**	**336**	P	**P**	14 07 41.5	+0.8
KURBB	**Kurchatov Arra**	**60.73**	**336**	P	**P**	14 07 41.5	+0.1
	0.8nm,0.9s,baz=11,slow=6.5,SNR=10						
AKASG	**Malin Array Be**	**62.80**	**11**	P	**P**	14 07 55.8	+0.5
AKASG	**Malin Array Be**	**62.80**	**11**	P	**P**	14 07 55.8	+0.5
	0.6nm,0.4s,baz=345,slow=5.9,SNR=2.3						
MKAR	**Makanchi Array**	**63.77**	**332**	P	**P**	14 08 01.4	-0.4
MKAR	**Makanchi Array**	**63.77**	**332**	P	**P**	14 08 01.4	-0.4
	0.3nm,0.6s,baz=32,slow=5.7,SNR=5.1						
ABKAR	**Akbulak array**	**64.31**	**349**	*e*P	**P**	14 08 05.2	-0.1
	1.0nm,0.5s						
WMQ	**Urumqi**	**65.52**	**327**	*e*P	**P**	14 08 14.3	+0.9
ESDC	**Sonseca Array**	**67.92**	**39**	P	**P**	14 08 29.9	+1.1
ESDC	**Sonseca Array**	**67.92**	**39**	P	**P**	14 08 29.8	+1.1
	0.3nm,0.3s,baz=350,slow=4.5,SNR=3.2						
LZH	**Lanzhou**	**68.56**	**312**	*e*P	**P**	14 08 33.5	+0.5
LZH				pP	**pP**	14 08 38.3	+0.2
LZH				sP	**sP**	14 08 40.5	+0.6
LZH				*e*PP	**PP**	14 11 06.0	+2.2
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,49nm,7.0s						
LZH				LR	LR		
	comp=N,120nm,15.2s						
LZH				LR	LR		
	comp=E,120nm,16.0s						
LZH				LR	LR		
	comp=Z,140nm,19.0s						
GYA	**Guiyang**	**76.59**	**306

s-maj=96.7km s-min=42.7km az=168.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**6.47**	**42**	P	Pn	14 08 17.9	-0.4
	29nm,0.3s,baz=210,slow=14,SNR=44						
TEIG				S	Sn	14 09 31.8	+1.0
	5.5nm,0.3s,baz=132,slow=19,SNR=3.3						
TXAR	**Lajitas Array**	**16.98**	**326**	P	Pn	14 10 36.4	-0.2
	baz=153,slow=14,SNR=7.2						
ANMO	**Albuquerque**	**22.89**	**330**	P	P	14 11 38.6	-1.5
	0.5nm,0.3s,baz=158,slow=11,SNR=3.8						
NVAR	**Mina Array Bea**	**31.97**	**321**	P	P	14 13 02.6	+1.2
	0.8nm,0.8s,baz=132,slow=9.0,SNR=6.0						
YKA	**Yellowknife Ar**	**49.40**	**347**	P	P	14 15 23.3	-0.4
	0.5nm,0.6s,baz=152,slow=7.2,SNR=8.2						
ILAR	**Eielson Array**	**61.14**	**337**	P	P	14 16 48.0	0.0
	0.4nm,0.5s,baz=139,slow=5.2,SNR=12						

NIED ***28*** *14:18:00,41˚.90N×140˚.80E,h125km,Mw3.9 Best double couple: M0 8.87000×10^14 NP1:φs196.00000°, δ70.00000°, λ100.00000°. NP2:φs349.00000°, δ23.00000°, λ65.00000°.*

MOS ***28*** *14:18:33.2±0.8,41˚.71N×140˚.71E,h122km,mb4.1/14, Error ellipse: s-maj=13.7km s-min=11.0km az=83.9*

IDC ***28*** *14:18:35.3±1.1,41˚.89N×140˚.85E,h125km±9km,mb3.7/15, mb1 3.8/19,mb1mx3.7/32,mbtmp3.7/19,Error ellipse: s-maj=14.1km s-min=9.6km az=140.0*

JMA ***28*** *14:18:36.2±0.1,41˚.87N×140˚.84E,h127km±1km,M3.5*

ISC 28 14:18:35.8±0.6,41˚.85N±0˚.04×140˚.84E±0˚.04,h130km±5km, n56,σ0°76/71,mb4.1/21,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKB	**Kayabe**	**0.15**	**75**	P	Pn	14 18 53.8	+0.3
JKB				eS	Sn	14 19 06.8	0.0
JYM2	**Yakumo 2**	**0.44**	**307**	P	Pn	14 18 54.8	+0.3
JSR	**Shiriuchi**	**0.45**	**225**	P	Pn	14 18 54.8	+0.2
JSR				eS	Sn	14 19 08.5	-0.2
JOT	**Ohata**	**0.49**	**162**	P	Pn	14 18 55.2	+0.4
JOT				eS	Sn	14 19 09.5	+0.4
JNB	**Noboribetsu**	**0.64**	**13**	P	Pn	14 18 55.7	0.0
JNB				eS	Sn	14 19 10.2	-0.6
JSH	**Shimam**	**0.99**	**323**	P	Pn	14 18 58.9	+0.3
JOSM	**Okushiri--Mats**	**1.05**	**283**	P	Pn	14 18 58.9	-0.2
JOSM				eS	Sn	14 19 15.9	-0.9
JEW	**Eniwo**	**1.09**	**24**	P	Pn	14 19 00.0	+0.5
JEW				eS	Sn	14 19 17.7	+0.1
JNBK	**Urakawa-nobuka**	**1.49**	**73**	P	Pn	14 19 04.0	+0.3
JNBK				eS	Sn	14 19 25.6	+0.6
JSK	**Shakotan**	**1.53**	**350**	P	Pn	14 19 04.6	+0.5
JSK				eS	Sn	14 19 25.8	0.0
JANG	**Nango**	**1.56**	**161**	P	Pn	14 19 04.3	-0.3
JANG				eS	Sn	14 19 25.4	-1.1
JFR	**Furan**	**1.84**	**44**	P	Pn	14 19 07.5	-0.4
JHR	**Hokuryu**	**2.00**	**19**	P	Pn	14 19 11.2	+1.5
JCH	**Churui**	**2.02**	**67**	P	Pn	14 19 10.5	+0.5
JCH				eS	Sn	14 19 35.5	-0.7
ASAJ	**Asahikawa**	**2.60**	**29**	P	Pn	14 19 17.9	+0.6
	8.2nm,0.3s,baz=209,slow=13,SNR=309						
ASAJ				S	Sn	14 19 46.9	-2.3
	23nm,0.3s,baz=162,slow=20,SNR=28						
YUK	**Yuzh-Kuril'sk**	**4.28**	**58**	*i* P	Pn	14 19 39.7	+0.5
YUK				*i* S	Sn	14 20 26.7	-1.8
YUK				pmax	pmax		
	comp=E,58nm,0.2s						
YUK				pmax	pmax		
	comp=Z,118nm,0.2s						
YUK				pmax	pmax		
	comp=N,30nm,0.2s						
YUK				smax	smax		
	comp=E,156nm,0.5s						
YUK				smax	smax		
	comp=N,275nm,0.4s						
YSS	**Yuzh-Sakhalins**	**5.28**	**14**	*e*P	Pn	14 19 54.2	+1.6
MJAR	**Matsushiro Arr**	**5.68**	**202**	P	Pn	14 20 00.0	+1.9
	comp=N,0.9nm,0.3s,baz=28,slow=12,SNR=11						
KUR	**Kuril'sk**	**6.12**	**54**	*e*P	Pn	14 20 04.5	+0.6
KUR				S	Sn	14 21 12.5	-0.1
KUR				smax	smax		
	comp=E,50nm,0.3s						
KUR				smax	smax		
	comp=N,70nm,0.5s						
USRK	**Ussuriysk Arra**	**6.89**	**293**	P	Pn	14 20 15.1	+0.9
	comp=N,2.8nm,0.3s,baz=105,slow=14,SNR=45						
KSRS	**Korea Array**	**10.88**	**250**	P	Pn	14 21 09.6	+1.7
	comp=N,0.1nm,0.3s,baz=66,slow=13,SNR=7.1						
SONM	**Songino Array**	**25.00**	**296**	P	P	14 23 45.4	-2.1
	comp=N,0.8nm,0.4s,baz=87,slow=7.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**38.47**	**308**	P	P	14 25 44.6	-0.2
ZALV						14 27 54.8	
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.4s						
ZALV	**Zalesovo Beam**	**38.47**	**308**	P	P	14 25 44.6	-0.2
	comp=Z,5.2nm,0.4s,baz=87,slow=9.3,SNR=22						
ZALV				PcP	PcP	14 27 54.8	-0.3
	comp=Z,0.8nm,0.5s,baz=113,slow=2.7,SNR=3.8						
NVS	**Novosibirsk**	**39.31**	**310**	*e*P	P	14 25 51.9	+0.1
MK31	**Makanchi Array**	**41.34**	**297**	*e*P	P	14 26 08.2	-0.5
MK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	**Makanchi Array**	**41.34**	**297**	P	P	14 26 08.3	-0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**41.34**	**297**	P	P	14 26 08.3	-0.4
	comp=Z,2.8nm,0.7s,baz=83,slow=9.9,SNR=28						
MKAR				ScP	ScP	14 31 41.1	-1.2
	comp=Z,0.3nm,0.8s,baz=90,slow=5.8,SNR=3.4						
CMAR	**Chiang Mai Arr**	**42.52**	**250**	P	P	14 26 19.1	+0.6
	comp=Z,1.2nm,0.8s,baz=42,slow=7.2,SNR=8.3						
KURK	**Kurchatov**	**42.74**	**304**	P	P	14 26 19.9	0.0
KURK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KURBB	**Kurchatov Arra**	**42.82**	**304**	P	P	14 26 19.9	-0.7
	comp=Z,5.2nm,0.5s,baz=78,slow=8.9,SNR=14						
KDAK	**Kodiak Island**	**43.91**	**45**	P	P	14 26 29.7	+0.5
	comp=Z,2.0nm,0.5s,baz=315,slow=2.9,SNR=4.1						
TAPN	**Taplejung**	**45.38**	**269**	*e*P	P	14 26 41.3	-0.3
	comp=Z,5.4nm,0.5s						
ILAR	**Eielson Array**	**45.73**	**35**	P	P	14 26 43.8	+0.3
	comp=Z,1.8nm,0.5s,baz=279,slow=6.8,SNR=49						
ODAN	**Odare**	**45.88**	**269**	*e*P	P	14 26 46.0	+0.5
RAMN	**Ramite**	**46.42**	**269**	*e*P	P	14 26 50.0	+0.3
	comp=Z,18nm,0.8s						
GUN	**Gumba**	**46.44**	**271**	*e*P	P	14 26 50.0	0.0
	comp=Z,17nm,0.4s						
VOSK	**Vostochnaya**	**46.84**	**308**	P	P	14 26 52.1	-0.3
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKN	**Kakani**	**46.95**	**271**	*e*P	P	14 26 53.8	0.0
	comp=Z,4.5nm,0.3s						
PKI	**Pulchoki**	**46.98**	**271**	*e*P	P	14 26 54.3	+0.2
BVA0	**Borovoye Array**	**47.10**	**309**	*i* P	P	14 26 53.8	-0.6
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BVAR	**Borovoye Array**	**47.10**	**309**	P	P	14 26 54.4	0.0
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BVAR	**Borovoye Array**	**47.10**	**309**	P	P	14 26 54.4	0.0
	comp=Z,4.3nm,0.4s,baz=77,slow=9.0,SNR=22						
DMN	**Daman**	**47.18**	**271**	*e*P	P	14 26 55.4	-0.3
DANN	**Dangsing**	**47.79**	**273**	*e*P	P	14 27 00.7	+0.3
	comp=Z,44nm,0.5s						
ZRNK	**Zerenda**	**47.92**	**309**	P	P	14 27 00.5	-0.2
ZRNK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AAK	**Ala-Archa**	**47.95**	**294**	P	P	14 27 01.3	0.0
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AAK	**Ala-Archa**	**47.95**	**294**	P	P	14 27 01.3	0.0
	comp=Z,1.6nm,0.4s,baz=147,slow=9.7,SNR=5.6						
KOLN	**Koldanda**	**48.22**	**272**	*e*P	P	14 27 03.7	+0.1
	comp=Z,7.2nm,0.5s						
KK31	**Karatay Array**	**50.45**	**297**	*i* P	P	14 27 19.5	-0.6
KK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	**Yellowknife Ar**	**59.90**	**31**	P	P	14 28 26.9	-0.6
	comp=Z,0.3nm,0.4s,baz=307,slow=6.1,SNR=7.5						
WRA	**Warramunga Arr**	**61.77**	**187**	P	P	14 28 39.7	-0.9
	comp=Z,1.1nm,0.5s,baz=6.5,slow=6.9,SNR=26						
ASAR	**Alice Springs**	**65.50**	**187**	P	P	14 29 04.5	-0.6
	comp=Z,0.4nm,0.5s,baz=8.7,slow=8.1,SNR=9.3						
NVAR	**Mina Array Bea**	**72.49**	**54**	P	P	14 29 49.5	+1.0
	comp=Z,0.7nm,0.6s,baz=299,slow=6.0,SNR=6.4						
PDAR	**Pinedale Array**	**74.62**	**46**	P	P	14 30 00.9	-0.1
	comp=Z,1.3nm,0.7s,baz=289,slow=5.6,SNR=5.8						
TXAR	**Lajitas Array**	**87.52**	**52**	P	P	14 31 09.9	+0.7
	comp=Z,0.3nm,0.5s,baz=310,slow=3.8,SNR=3.5						

TAP 28 14:43:07.6,23˚.21N×120˚.96E,h6km,ML1.5,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.06**	**107**	P	Pg	14 43 09.8	+0.5
	baz=106						
ELDTW				S	Sg	14 43 10.8	+0.5
	baz=106						
WTP	**Ta-pu**	**0.32**	**277**	P	Pg	14 43 14.8	+0.9
	baz=277						
ALS	**Alishan**	**0.34**	**335**	*e*P	Pg	14 43 15.2	+0.6
	baz=336						
ALS				*e*S	Sg	14 43 20.1	+0.8
	baz=336						
TWF1	**Yuli**	**0.34**	**65**	P	Pg	14 43 15.0	+0.7
	baz=65						
TWF1				S	Sg	14 43 19.4	+0.5
	baz=65						
CHN4	**Tsaushan**	**0.37**	**293**	*i* P	Pb	14 43 15.9	-0.7
	baz=302						
CHN5	**Tsauling**	**0.47**	**326**	*e*P	Pg	14 43 17.6	+0.8
	baz=327						

NEIC 28 14:47:17.0,24˚.16S×65˚.06W,h22km,MD4.0(SJA),After SJA.,Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**3.86**	**293**	*e*Pn	Pn	14 48 14.7	-0.8
LPAZ	**La Paz**	**8.35**	**339**	*e*Pn	Pn	14 49 16.5	-1.0
LPAZ				*e*Sn	Sn	14 50 45.6	-6.1
NNA	**Nana**	**16.48**	**315**	*e*Pn	Pn	14 51 06.6	-0.5
PLCA	**Paso Flores**	**17.16**	**194**	*e*Pn	Pn	14 51 14.9	-0.6
SDV	**Santo Domingo**	**33.29**	**350**	*e*P	P	14 53 49.7	-3.7
ANWB	**Willy Bob**	**41.70**	**5**	P	P	14 55 01.9	-2.4

MOS ***28*** *14:59:41.8±1.0,35˚.31N×71˚.85E,h33km,mb4.3/18,Error ellipse: s-maj=13.0km s-min=5.0km az=84.6*

BJI ***28*** *14:59:42.3,35˚.54N×71˚.68E,h48km,mB4.5/2,mb4.1/7, ML3.9/4,Ms3.8/2*

ISCJB ***28*** *14:59:44.1±0.2,35˚.29N±0˚.02×72˚.09E±0˚.04,h68km, mb4.2/28,Error ellipse: s-maj=5.1km s-min=3.2km az=163.4*

IDC ***28*** *14:59:47.8±3.5,35˚.42N×71˚.89E,h74km±31km,mb3.8/16, mb1 4.0/21,mb1mx3.8/33,mbtmp3.9/21,Error ellipse: s-maj=17.6km s-min=14.6km az=169.0*

NNC ***28*** *14:59:48.1±4.9,35˚.51N×71˚.65E,h89km±42km,mb4.0, mpv4.2,Error ellipse: s-maj=45.4km s-min=25.2km az=39.0*

ISC 28 14:59:45.8±0.4,35˚.30N±0˚.04×72˚.03E±0˚.05,h68km,n105, σ1°84/110,mb4.3/28,20C-7D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.47**	**184**	⇑P	Pn	15 00 07.6	-2.8
CEP				S	Sn	15 00 31.0	+2.0
CHCP	**Chirah Chowk**	**1.92**	**148**	⇑P	Pn	15 00 17.4	+1.0
THW	**Thamme Wali**	**2.51**	**186**	⇑P	Pn	15 00 24.8	+0.5
SARP	**Sargodha**	**3.41**	**171**	⇑P	Pn	15 00 36.2	-0.3
THN	**Thein Dam**	**4.19**	**132**	*e*PKP	Pn	15 00 47.0	-0.1
THN				*ex*	Sn	15 01 54.0	+19
DLH	**Dalhousie**	**4.27**	**129**	*e*PKP	Pn	15 00 49.0	+0.5
DLH				*e*S	Sn	15 01 42.0	+4.8
KSH	**Kashi**	**5.25**	**35**	P	Pn	15 00 58.3	-3.5
KSH				smax	smax		
	comp=N,170nm,0.4s						
KSH				smax	smax		
	comp=E,180nm,0.5s						
BHK	**Bhakra**	**5.33**	**135**	*e*PKP	Pn	15 01 05.6	+2.8
BHK				*ex*	Sn	15 02 09.2	+6.4
SDNR	**Sundarnagar**	**5.60**	**131**	*e*PKP	Pn	15 01 07.0	+0.5
SDNR				*ex*	Sn	15 02 09.0	-0.5
SMLA	**Simla**	**5.98**	**133**	*i* P	Pn	15 01 12.7	+1.0
SMLA				*i* S	Sn	15 02 21.5	+2.8
KKR	**Kurukshetra**	**6.68**	**141**	*ex*	x	15 02 40.3	
KKR				AML	AML	15 03 16.4	
	comp=Z,184nm,0.4s						
AML	**Almayashu**	**6.95**	**10**	*i* PN	Pn	15 01 25.7	+0.5
AML	**Almayashu**	**6.95**	**10**	P	Pn	15 01 25.7	+0.5
	SNR=36						
UCH	**Uchtor**	**7.19**	**15**	P	Sn	15 02 50.6	+1.7
	SNR=7.0						
KZA	**Kyzart**	**7.22**	**19**	*i* P	Pn	15 01 29.5	+0.5
KZA	**Kyzart**	**7.22**	**19**	P	Pn	15 01 29.5	+0.5
	SNR=14						
EKS2	**Erkin-Say**	**7.48**	**10**	P	Pn	15 01 33.4	+1.2
	SNR=7.6						
AAK	**Ala-Archa**	**7.57**	**14**	⇑*i*P	Pn	15 01 34.1	+0.5
AAK	**Ala-Archa**	**7.57**	**14**	P	Pn	15 01 34.1	+0.5
	SNR=23						
AAK	**Ala-Archa**	**7.57**	**14**	P	Pn	15 01 34.5	+1.0
	comp=Z,6.0nm,0.3s,baz=148,slow=4.4,SNR=38						
AAK				S	Sn	15 02 58.8	+0.8
	comp=Z,2.8nm,0.3s,baz=135,slow=20,SNR=13						
ULHL	**Ulahol**	**7.68**	**24**	*i* P	Pn	15 01 36.2	+1.2
ULHL	**Ulahol**	**7.68**	**24**	P	Pn	15 01 36.2	+1.2
	SNR=16						
KHET	**Khetri**	**7.88**	**155**	*e*PKP	Pn	15 01 36.4	-1.4
KHET				*e*S	Sn	15 03 01.9	-3.5
KHET				AML	AML	15 03 06.3	
KHET				AML	AML	15 03 06.5	
	comp=E,584nm,0.7s						
KK31	**Karatay Array**	**7.89**	**352**	⇑P	Pn	15 01 36.9	-0.8
	comp=E,7.4nm,0.3s,baz=177,slow=12,SNR=205						
KK31				⇓S	Sn	15 03 02.6	-2.8
	comp=E,7.7nm,0.5s,baz=171,slow=22,SNR=4.5						
KK31	**Karatay Array**	**7.89**	**352**	*ce*P	Pn	15 01 36.9	-0.8
KK31				pmax	pmax		
	comp=Z,13nm,0.2s						
CHMS	**Chumysh**	**7.98**	**15**	*i* P	Pn	15 01 40.4	+1.4
CHMS	**Chumysh**	**7.98**	**15**	P	Pn	15 01 40.4	+1.4
	SNR=11						
TKM2	**Tokmak 2**	**8.10**	**19**	⇓P	Pn	15 01 41.9	+1.1
	comp=Z,4.6nm,0.5s						
TKM2	**Tokmak 2**	**8.10**	**19**	*i* P	Pn	15 01 41.3	+0.5
TKM2	**Tokmak 2**	**8.10**	**19**	P	Pn	15 01 41.4	+0.5
	SNR=18						
USP	**Ospenovka**	**8.19**	**13**	*i* P	Pn	15 01 42.0	+0.2
USP	**Ospenovka**	**8.19**	**13**	P	Pn	15 01 42.0	+0.2
	SNR=5.3						
AJM	**Ajmer**	**9.07**	**165**	*e*PKP	Pn	15 01 53.0	-1.0
AJM				*ex*	x	15 03 29.0	
AGRA	**Agra**	**9.49**	**146**	*e*PKP	Pn	15 01 59.8	+0.1
AGRA				*e*S	Sn	15 03 41.6	-3.3
AGRA				AML	AML	15 04 52.0	
	comp=N,74nm,0.3s						
AGRA				AML	AML	15 05 01.3	
	comp=E,82nm,0.9s						
PYUN	**Piuthan**	**11.76**	**125**	*e*P	Pn	15 02 28.1	-2.8
	comp=E,44nm,0.3s						
DANN	**Dangsing**	**12.13**	**122**	*e*P	Pn	15 02 33.5	-2.5
	comp=E,30nm,0.3s						
DMN	**Daman**	**13.53**	**121**	*e*P	Pn	15 02 52.0	-2.8
KKN	**Kakani**	**13.54**	**120**	*e*P	Pn	15 02 51.6	-3.4
	comp=E,24nm,0.5s						
PKIN	**Phulchoki**	**13.75**	**120**	*e*S	Sn	15 05 23.2	-5.8
PKI	**Pulchoki**	**13.76**	**120**	*e*P	Pn	15 02 55.5	-2.6
	comp=E,48nm,0.5s						
MK31	**Makanchi Array**	**13.84**	**31**	⇓P	Pn	15 02 56.9	-1.7
	comp=E,3.7nm,0.6s,baz=208,slow=12,SNR=42						
MK31	**Makanchi Array**	**13.84**	**31**	*ce*P	Pn	15 02 56.9	-1.7
MK31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	**Makanchi Array**	**13.84**	**31**	P	Pn	15 02 57.9	-0.7
MKAR	**Makanchi Array**	**13.84**	**31**	P	Pn	15 02 57.9	-0.7
	comp=Z,0.3nm,0.3s,baz=209,slow=14,SNR=34						
GUN	**Gumba**	**13.90**	**118**	*e*P	Pn	15 02 56.2	-3.7
	comp=Z,22nm,0.3s						
JBP	**Jabalpur**	**13.93**	**148**	⇑*i*P	Pn	15 02 59.9	0.0
JBP				*ex*	x	15 05 24.1	
WMQ	**Urumqi**	**14.76**	**50**	P	Pn	15 03 10.0	-0.7
RAMN	**Ramite**	**14.98**	**120**	*e*P	Pn	15 03 10.4	-3.5
	comp=Z,20nm,0.3s						
TAPN	**Taplejung**	**15.55**	**116**	*e*P	Pn	15 03 17.7	-3.5
	comp=Z,23nm,0.4s						
ODAN	**Odare**	**15.60**	**118**	*e*P	Pn	15 03 18.8	-3.0
KUR16	**Kurchatov Arra**	**16.03**	**15**	⇑P	P	15 03 28.4	-0.6
	comp=Z,7.7nm,0.6s						
KURBB	**Kurchatov Arra**	**16.03**	**15**	P	P	15 03 28.6	-0.4
	comp=Z,1.1nm,0.3s,baz=205,slow=10,SNR=128						
KURBB				S	S	15 06 30.7	-2.8
	baz=199,slow=19,SNR=4.4						
KURK	**Kurchatov**	**16.14**	**15**	⇓P	P	15 03 29.5	-0.7
	comp=Z,18nm,0.7s						
KURK	**Kurchatov**	**16.14**	**15**	*c* P	P	15 03 29.5	-0.7
KURK				pmax	pmax		
	comp=Z,28nm,1.0s						
AB31	**Akbulak array**	**16.54**	**331**	⇓P	Pn	15 03 29.8	-3.4
	comp=Z,3.6nm,0.5s,baz=140,slow=11,SNR=146						
AB31				S	Sn	15 06 26.9	-9.1
	comp=Z,3.4nm,0.6s,baz=155,slow=22,SNR=6.5						
AB31	**Akbulak array**	**16.54**	**331**	*ce*P	Pn	15 03 30.4	-2.8
AB31				pmax	pmax		
	comp=Z,3.0nm,0.2s						
VOSK	**Vostochnaya**	**17.44**	**358**	⇑P	Pn	15 03 40.9	-3.4
	comp=Z,5.1nm,0.7s						
VOSK	**Vostochnaya**	**17.44**	**358**	P	Pn	15 03 40.9	-3.4
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BVA0	**Borovoye Array**	**17.76**	**357**	⇑P	P	15 03 46.5	-1.7
	comp=Z,6.5nm,0.8s,baz=159,slow=12,SNR=14						
BVA0	**Borovoye Array**	**17.76**	**357**	*i* P	P	15 03 46.5	-1.7
BVA0				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BVAR	**Borovoye Array**	**17.76**	**357**	P	P	15 03 48.0	-0.2
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	**Borovoye Array**	**17.76**	**357**	P	P	15 03 48.0	-0.2
	comp=Z,1.2nm,0.3s,baz=171,slow=12,SNR=13						
ZRNK	**Zerenda**	**17.78**	**354**	⇑P	P	15 03 47.5	-0.9
	comp=Z,5.6nm,0.7s						
ZRNK	**Zerenda**	**17.78**	**354**	*i* P	P	15 03 47.5	-0.9
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRVK	**Borovoye**	**17.80**	**357**	⇑*e*P	P	15 03 47.4	-1.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKTO	**Aktyubinsk**	**18.24**	**330**	⇓P	P	15 03 51.0	-2.4
	comp=Z,17nm,0.8s						
AKTO	**Aktyubinsk**	**18.24**	**330**	*i* P	Pn	15 03 53.6	-0.4
AKTO				pmax	pmax		
	comp=Z,17nm,0.8s						
AKTO	**Aktyubinsk**	**18.24**	**330**	P	P	15 03 52.7	-0.8
	comp=Z,0.9nm,0.3s,baz=127,slow=9.8,SNR=17						
ZALV	**Zalesovo Beam**	**20.69**	**22**	P	P	15 04 20.1	0.0
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ZALV	**Zalesovo Beam**	**20.69**	**22**	P	P	15 04 20.1	0.0
	comp=Z,8.6nm,0.4s,baz=218,slow=10,SNR=61						
NVS	**Novosibirsk**	**21.03**	**18**	⇑*i*P	P	15 04 24.0	+0.3
NVS				pmax	pmax		
	comp=Z,12nm,0.5s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.4s						
MIB	**Mutribah**	**21.50**	**262**	*e*P	P	15 04 28.9	0.0
MIB				AMb	AMB	15 04 29.9	
	comp=Z,42nm,0.8s						
RDF	**Al-Radifah**	**21.66**	**260**	*e*P	P	15 04 30.6	-0.1
RDF				AMb	AMB	15 04 33.6	
	comp=Z,43nm,1.3s						
DGRG	**David-gareji**	**21.74**	**294**	P	P	15 04 32.3	+0.8
NAY	**Al-Naaiem**	**21.79**	**261**	*e*P	P	15 04 31.5	-0.5
NAY				AMb	AMB	15 04 34.8	
	comp=Z,16nm,0.9s						
RST	**Umm Al-Ruwaisa**	**21.89**	**262**	*e*P	P	15 04 32.4	-0.7
HVS	**Khovu-Aksy**	**22.23**	**38**	*d* P	P	15 04 37.0	+0.2
HVS				pmax	pmax		
	comp=Z,54nm,1.0s						
GTA	**Gaotai**	**22.42**	**71**	*e*P	P	15 04 40.8	+1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SVE	**Sverdlovsk**	**22.88**	**344**	*e*P	P	15 04 42.0	-1.4
SVE				pmax	pmax		
	comp=Z,14nm,1.5s						
ARU	**Arti**	**23.04**	**341**	*c* P	P	15 04 43.0	-2.0
ARU						15 05 09.9	
ARU				S	S	15 08 56.4	+6.1
ARU				SS	SnSn	15 09 28.7	-0.5
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
KBZ	**Khabaz**	**23.91**	**299**	P	P	15 04 53.1	-0.1
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KBZ	**Khabaz**	**23.91**	**299**	P	P	15 04 53.1	-0.1
	comp=Z,0.9nm,0.5s,baz=117,slow=11,SNR=2.9						
KIV	**Kislovodsk**	**24.10**	**300**	*e*P	P	15 04 50.4	-4.7
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	**Songino Array**	**28.36**	**53**	P	P	15 05 35.7	+2.3
	comp=Z,1.1nm,0.8s,baz=248,slow=10.0,SNR=7.0						
BRTR	**Keskin Array B**	**30.62**	**290**	P	P	15 05 53.5	0.0
	comp=Z,0.7nm,0.6s,baz=99,slow=7.6,SNR=4.1						
AKASG	**Malin Array Be**	**34.36**	**310**	P	P	15 06 25.6	-0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**34.36**	**310**	P	P	15 06 25.6	-0.3
	comp=Z,0.9nm,0.3s,baz=81,slow=7.7,SNR=4.4						
QIZ	**Qiongzhong**	**37.08**	**106**	P	P	15 06 39.3	-10
QIZ				S	S	15 12 26.3	-4.5
QIZ				pmax	pmax		
	comp=Z,21nm,1.9s						
JOF	**Joensuu**	**37.33**	**331**	*e*P	P	15 06 52.8	+1.7
JOF				pmax	pmax		
	comp=Z,7.0nm,0.3s						

4.2nm,0.3s,baz=305,slow=9.8,SNR=66
SIV S S 15 08 52.2 -0.2
0.6nm,0.3s,baz=316,slow=17,SNR=7.1
CPUP Villa Florida 21.18 144 P P 15 08 11.4 -0.5
1.1nm,0.4s,baz=314,slow=9.8,SNR=5.8
CFAA Coronel Fontan 22.06 173 P P 15 08 19.5 -0.3
0.6nm,0.5s,baz=358,slow=5.5,SNR=9.6
BDFB Brasilia 23.37 107 P P 15 08 32.7 +1.0
1.7nm,0.4s,baz=201,slow=6.6,SNR=3.3
PLCA Paso Flores 31.00 179 P P 15 09 37.6 -0.1
4.5nm,0.5s,baz=346,slow=10,SNR=21
PLCA PcP PcP 15 12 13.9 0.0
1.8nm,0.9s,baz=284,slow=4.2,SNR=3.3
USHA Ushuaia 45.16 178 P P 15 11 31.4 -0.1
7.1nm,0.7s,baz=345,slow=12,SNR=4.4
PDAR Pinedale Array 62.80 329 P P 15 13 35.6 0.0
1.0nm,0.4s,baz=124,slow=11,SNR=7.9
PDAR PcP PcP 15 14 06.8 -0.2
0.4nm,0.4s,baz=140,slow=4.7,SNR=3.0
ULM Lac du Bonnet 63.38 343 P P 15 13 38.1 -0.7
7.4nm,0.4s,baz=148,slow=4.5,SNR=10
SCHQ Schefferville 64.30 3 P P 15 13 43.9 -0.6
2.5nm,0.9s,baz=197,slow=11,SNR=5.2
NVAR Mina Array Bea 64.89 321 P P 15 13 50.1 +1.1
0.5nm,0.6s,baz=144,slow=6.2,SNR=6.4
NVAR pP pP 15 15 51.8 +1.8
0.6nm,0.6s,baz=123,slow=5.4,SNR=4.0
DBIC Dimbokro 68.02 79 P P 15 14 08.8 +0.4
2.0nm,0.4s,baz=135,slow=19,SNR=3.6
TORD Torodi Ar. Bea 75.79 74 P P 15 14 53.5 +0.2
5.0nm,0.7s,baz=238,slow=4.4,SNR=39
TORD pP pP 15 17 00.3 +0.6
2.1nm,0.8s,baz=264,slow=5.9,SNR=9.5
YKA Yellowknife Ar 79.30 341 P P 15 15 11.1 +0.1
3.4nm,0.7s,baz=136,slow=5.5,SNR=50
YKA pP pP 15 17 18.3 -0.9
0.6nm,0.8s,baz=134,slow=6.3,SNR=6.1
VNDA Vanda 88.12 190 P P 15 15 54.6 +0.3
1.6nm,0.8s,baz=157,slow=3.7,SNR=7.3
ILAR Eielson Array 92.61 335 P P 15 16 14.9 -0.3
0.3nm,0.5s,baz=88,slow=4.0,SNR=4.9
STKA Stephens Creek 128.19 216 PKP PKPdf 15 22 06.2 -0.3
2.8nm,0.6s,baz=63,slow=4.3,SNR=11
ZALV Zalesovo Beam 131.78 19 PKP PKPdf 15 22 12.8 +0.2
2.3nm,0.5s,baz=299,slow=2.9,SNR=14
ZALV pPKP pPKPdf 15 24 32.8 -1.5
2.5nm,0.9s,baz=318,slow=2.0,SNR=5.9
ZALV SKPbc SKPbc 15 24 41.5 -0.5
0.7nm,0.4s,baz=343,slow=3.9,SNR=4.0
MKAR Makanchi Array 136.61 27 PKP PKPdf 15 22 21.9 +0.1
1.1nm,0.7s,baz=344,slow=1.7,SNR=11
MKAR pPKP pPKPdf 15 24 41.2 -2.4
0.6nm,0.8s,baz=20,slow=1.8,SNR=5.1
MKAR SKP 15 24 57.2
0.4nm,0.6s,baz=348,slow=4.7,SNR=4.2
ASAR Alice Springs 138.83 216 PKhKP PKPpre 15 22 16.6
0.3nm,0.4s,baz=140,slow=3.4,SNR=13
ASAR PKP PKPdf 15 22 25.5 -1.2
1.2nm,0.4s,baz=126,slow=2.0,SNR=20
ASAR pPKP pPKPdf 15 24 48.5 0.0
0.5nm,0.8s,baz=159,slow=2.3,SNR=4.1
ASAR SKPbc SKPbc 15 25 03.3 -1.5
1.0nm,0.7s,baz=129,slow=3.7,SNR=8.3
WRA Warramunga Arr 141.36 220 PKhKP PKPpre 15 22 25.7
1.4nm,0.3s,baz=135,slow=2.7,SNR=28
WRA SKPbc SKPbc 15 25 10.3 -1.1
0.4nm,0.3s,baz=130,slow=2.8,SNR=7.8
SONM Songino Array 141.84 3 PKhKP PKPpre 15 22 28.3
0.6nm,0.3s,baz=318,slow=2.5,SNR=21
SONM SKPbc SKPbc 15 25 11.5 -0.4
0.4nm,0.5s,baz=282,slow=1.0,SNR=3.8
MJAR Matsushiro Arr 142.21 320 PKP PKPdf 15 22 29.3 -3.0
1.7nm,0.7s,baz=98,slow=1.1,SNR=4.7
KSRS Korea Array 147.35 331 PKP PKPdf 15 22 41.0 -0.1
7.8nm,0.7s,baz=35,slow=2.5,SNR=4.8
KSRS PKPbc PKPbc 15 22 45.0 +0.5
7.7nm,0.7s,baz=22,slow=2.5,SNR=28
KSRS pPKP pPKPdf 15 25 04.7 +1.6
0.5nm,0.5s,baz=60,slow=3.5,SNR=4.5
FITZ Fitzroy Crossi 147.85 211 PKPbc PKPbc 15 22 46.2 -0.1
8.9nm,0.5s,baz=200,slow=1.7,SNR=43
FITZ pPKPbc pPKPbc 15 25 05.1 -1.0
4.8nm,1.0s,baz=184,slow=6.6,SNR=4.3
DANN Dangsing 149.96 48 *eP* PKPbc 15 22 52.1 +0.6
42nm,0.7s
DMN Daman 151.36 48 *eP* PKPbc 15 22 54.3 -0.4
KKN Kakani 151.38 48 *eP* PKPbc 15 22 54.8 +0.1
PKIN Phulchoki 151.59 48 *eP* PKPbc 15 22 54.4 -0.8
3.1nm,0.3s
PKI Pulchoki 151.60 48 *eP* PKPbc 15 22 55.3 -0.1
GUN Gumba 151.75 47 *eP* PKPbc 15 22 55.9 +0.2
8.0nm,0.3s
RAMN Ramite 152.82 48 *eP* PKPbc 15 22 57.5 -0.4
14nm,0.4s
TAPN Taplejung 153.38 46 *eP* PKPbc 15 22 57.8 -1.4
5.8nm,0.6s
ODAN Odare 153.45 47 *eP* PKPbc 15 22 57.1 -2.2
CMAR Chiang Mai Arr 166.99 46 PKP PKPdf 15 23 05.5 0.0
0.9nm,0.9s,baz=270,slow=1.8,SNR=6.3

*IDC **28** 15:05:03.4±0.7, 1°.34S×101°.03E, h0km, mb4.1/12, mb1 4.2/14, mb1mx4.0/30, mbtmp4.1/14, ML3.9/2, Error ellipse: s-maj=27.1km s-min=13.1km az=52.0*
*ISCJB **28** 15:05:24.7±0.3, 1°.17S±0°.05×101°.43E±0°.07, h200km, mb4.0/15, Error ellipse: s-maj=10.8km s-min=4.1km az=149.0*
*AUST **28** 15:05:25.8±0.0, 1°.05S×101°.69E, h186km, Error ellipse: s-maj=3.4km s-min=0.9km az=244.0*
*DJA **28** 15:05:27.6±0.4, 1°.S±3°×10°.1E±°, h162km±6km, M4.1/14, mb4.4/4, mB5.5/1, MLv3.9/14, Mw(mB)5.0/1*
ISC 28 15:05:25.6±0.6, **1°.11S**±0°.07×**101°.50E**±0°.09, **h200**km, **n44,** σ1°.43/41, **mb4.0**/15, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RGRI	**Rengat**	**1.13**	**48**	P		**Pn**	**15 05 56.6**	**+0.3**
PPI	**Padang Panjang**	**1.28**	**301**	P		**Pn**	**15 05 56.5**	**-1.0**
PPI				S		**Sn**	**15 06 18.4**	**-3.7**
PPI	**Padang Panjang** baz=1.4,SNR=6.5	**1.28**	**301**	P		**Pn**	**15 05 56.4**	**-1.0**
BKNI	**Bangkinang**	**1.50**	**342**	P		**Pn**	**15 05 58.9**	**-0.4**
BKNI				S		**Sn**	**15 06 23.1**	**-2.5**
BKNI	**Bangkinang** baz=1.5,SNR=20	**1.50**	**342**	P		**Pn**	**15 05 59.0**	**-0.4**
MASI	**Maura Aman, Be**	**2.15**	**160**	P		**Pn**	**15 06 05.9**	**+0.1**
KSI	**Kapahiang**	**2.75**	**157**	P		**Pn**	**15 06 12.4**	**-0.1**
KSI				S		**Sn**	**15 06 47.5**	**-1.6**
BTDF	**Bukit Timah Da**	**3.35**	**43**	P		Pn	15 06 20.9	+1.4
MNAI	**Manna**	**3.54**	**156**	P		**Pn**	**15 06 21.2**	**-0.6**
MNAI	**Manna** baz=3.5,SNR=17	**3.54**	**156**	P		**Pn**	**15 06 21.2**	**-0.6**
MNAI				S		**Sn**	**15 07 04.1**	**-1.8**
MYKOM	**Kota Tinggi** baz=3.5,SNR=11	**3.72**	**39**	P		Pn	15 06 25.7	+1.7
LWLI	**Liwa**	**4.65**	**147**	P		**Pn**	**15 06 36.5**	**+0.8**
PSI	**Prapat**	**4.66**	**327**	P		**Pn**	**15 06 35.6**	**-0.3**
PSI	**Prapat** baz=4.7,SNR=7.3	**4.66**	**327**	P		**Pn**	**15 06 35.7**	**-0.2**
KASI	**Kota Agung**	**5.31**	**146**	P		**Pn**	**15 06 42.7**	**-1.3**
TSI	**Tuntungan** 49nm,0.8s,0.3nm	**5.44**	**327**	P		**Pn**	**15 06 47.3**	**+1.6**
IPM	**Ipoh** 20nm,0.8s,0.1nm	**5.57**	**355**	P		**Pn**	**15 06 49.0**	**+1.5**
SNSI	**Sinabang, Aceh** 121nm,0.6s,6μm	**6.24**	**304**	P		**Pn**	**15 06 56.6**	**+0.6**
KULM	**Kulim**	**6.41**	**352**	P		**Pn**	**15 06 59.4**	**+1.1**
LHMI	**Lhok Sumawe** baz=7.9,SNR=7.5	**7.77**	**324**	P		**Pn**	**15 07 15.2**	**-0.7**
CISI	**Cisompet, Garu** baz=8.9,SNR=3.9	**8.98**	**136**	S		**Sn**	**15 09 09.8**	**-2.8**
KAPI	**Kappang** 0.3nm,0.3s,baz=311,slow=10.0,SNR=2.2	**18.63**	**102**	P		**Pn**	**15 09 27.9**	**-3.3**
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=186,slow=9.9,SNR=11	**19.61**	**353**	P		**P**	**15 09 36.8**	**-2.1**
FITZ	**Fitzroy Crossi** 2.1nm,0.8s,baz=23,slow=2.5,SNR=6.8	**29.11**	**127**	P		**P**	**15 11 08.2**	**+0.2**
FITZ	**Fitzroy Crossi** baz=29,SNR=4.3	**29.11**	**127**	P		**P**	**15 11 08.4**	**+0.5**
KNRA	**Kununurra** baz=30,SNR=5.4	**30.54**	**120**	P		P	15 11 16.7	-4.0
MORW	**Morawa** baz=31,SNR=4.0	**31.07**	**155**	P		P	15 11 28.6	+3.4
WRA	**Warramunga Arr** 1.8nm,0.4s,baz=306,slow=8.6,SNR=24	**37.18**	**122**	P		**P**	**15 12 18.5**	**+0.7**
ASAR	**Alice Springs**	**38.59**	**128**	P		**P**	**15 12 30.4**	**+0.7**
	2.3nm,0.5s,baz=304,slow=8.1,SNR=45							
STKA	**Stephens Creek** 1.8nm,0.5s,baz=325,slow=6.6,SNR=9.4	**48.64**	**133**	P		**P**	**15 13 50.6**	**+1.1**
STKA	**Stephens Creek** baz=49,SNR=7.8	**48.64**	**133**	P		**P**	**15 13 51.2**	**+1.6**
SONM	**Songino Array** 1.1nm,0.5s,baz=188,slow=9.3,SNR=15	**48.93**	**4**	P		P	15 13 54.1	+2.5
MKAR	**Makanchi Array** 0.9nm,0.4s,baz=159,slow=9.1,SNR=18	**50.60**	**343**	P		**P**	**15 14 05.0**	**+0.9**
CMSA	**Cobar Meteorol** baz=52,SNR=12	**51.53**	**131**	P		P	15 14 13.1	+1.9
KURBB	**Kurchatov Arra** 1.3nm,0.7s,baz=160,slow=6.8,SNR=11	**55.14**	**342**	P		**P**	**15 14 37.5**	**+0.3**
OPO	**Ambohidratompo** 2.4nm,0.3s,baz=59,slow=2.2,SNR=10	**55.98**	**248**	P		P	15 14 40.6	-3.4
ZALV	**Zalesovo Beam** 1.0nm,0.3s,baz=165,slow=6.2,SNR=8.1	**56.59**	**348**	P		**P**	**15 14 48.0**	**+0.6**
BVAR	**Borovoye Array** 2.6nm,0.6s,baz=140,slow=9.4,SNR=15	**59.88**	**339**	P		**P**	**15 15 10.8**	**+0.5**
NAY	**Al-Naaiem**	**59.93**	**305**	*eP*		**P**	**15 15 12.5**	**+1.5**
NAY					AMb	AMB	15 15 15.9	
	comp=Z,2.9nm,0.5s							
MIB	**Mutribah**	**60.04**	**306**	*eP*		**P**	**15 15 13.0**	**+1.2**
MIB					AMb	AMB	15 15 14.8	
	comp=Z,10nm,0.8s							
RST	**Umm Al-Ruwaisa**	**60.22**	**305**	*eP*		**P**	**15 15 14.5**	**+1.5**
RST					AMb	AMB	15 15 15.5	
	comp=Z,83nm,0.8s							
AKTO	**Aktyubinsk** comp=Z,0.4nm,0.3s,baz=35,slow=2.8,SNR=4.1	**63.31**	**330**	P		**P**	**15 15 33.6**	**+0.4**
BRTR	**Keskin Array B** comp=Z,1.1nm,0.7s,baz=129,slow=8.2,SNR=6.0	**73.84**	**312**	P		**P**	**15 16 39.5**	**+0.8**
CFAA	**Coronel Fontan** comp=Z,0.3nm,0.5s,baz=153,slow=1.7,SNR=4.2	**146.04**	**196**	PKPbc		**PKPab**	**15 24 45.1**	**+1.6**

GUC 28 15:06:53.4±0.5, **23°.48S**×**67°.33W**, **h240**km, **ML4.3, 4C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB04	**Plate Boundary**	**2.33**	**301**	*eP*		Pn	15 07 45.8	+7.6
PB04				*eS*		S	15 08 25.8	+12
PB04					AML	AML	15 08 28.9	
	comp=N,410nm,0.4s							
PB09	**Plate Boundary**	**2.44**	**313**	↓*iP*		Pn	15 07 41.9	+2.3
PB09				*i S*		S	15 08 19.4	+3.5
PB09					AML	AML	15 08 21.9	
	comp=N,719nm,0.2s							
CEN1	**Los Morros**	**2.64**	**271**	↑*iP*		Pn	15 07 43.6	+2.0
CEN1				*i S*		S	15 08 22.8	+3.3
ANCH	**Antofagasta**	**2.84**	**265**	↑*iP*		Pn	15 07 45.3	+1.8
ANCH				*i S*		S	15 08 24.6	+1.8
PB01	**Plate Boundary**	**3.15**	**320**	↑*iP*		Pn	15 07 48.8	+1.7
PB01				*i S*		S	15 08 31.6	+2.2
PB01					AML	AML	15 08 34.3	
	comp=E,213nm,0.2s							
HMBC	**Humberstone**	**3.98**	**323**	↑*iP*		Pn	15 07 59.0	+2.2
HMBC				*i S*		S	15 08 48.1	+1.3
PSGC	**Pisagua**	**4.66**	**326**	*eP*		Pn	15 08 05.5	+0.6
PSGC				*eS*		S	15 09 02.0	+0.4

*AUST **28** 15:15:30.8±99.0, 4°.60S×130°.03E, h0km, Error ellipse: s-maj=6.1km s-min=1.4km az=38.0*
IDC 28 15:15:46.1±2.4, **5°.96S**×**130°.58E**, **h0**km, **mb3.4**/1, **mb1 3.4**/4, **mb1mx3.2**/19, **mbtmp3.2**/4, **ML3.0**/3, **Error ellipse: s-maj=96.3km s-min=30.0km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FAKI	**Fak Fak** baz=2.8,SNR=7.2	**3.44**	**29**	S		Pn	15 16 55.1	+14
SWI	**Sorong** baz=3.9,SNR=3.1	**5.10**	**8**	S		Pn	15 17 17.9	+14
MTN	**Manton Dam** baz=8.3,SNR=6.9	**6.87**	**176**	P		Pn	15 17 33.3	+5.2
KDU	**Kakadu** baz=8.4,SNR=9.8	**6.94**	**165**	P		Pn	15 17 34.4	+5.2
KNRA	**Kununurra** baz=11,SNR=4.6	**9.83**	**190**	P		Pn	15 18 10.9	+2.2
KNRA				S		Sn	15 19 53.2	-6.6
	baz=11,SNR=3.4							
FITZ	**Fitzroy Crossi** 0.2nm,0.3s,baz=22,slow=11,SNR=22	**13.00**	**201**	Pn		Pn	15 18 52.1	-0.1
FITZ				Sn		Sn	15 21 04.3	-13
	0.1nm,0.3s,baz=117,slow=16,SNR=2.6							
FITZ	**Fitzroy Crossi** baz=14,SNR=6.1	**13.00**	**201**	P		Pn	15 18 52.9	+0.6
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=349,slow=13,SNR=4.0	**14.38**	**166**	Pn		Pn	15 19 10.6	-0.5
WRA				Sn		Sn	15 21 35.9	-15
	0.1nm,0.3s,baz=343,slow=24,SNR=5.2							
ASAR	**Alice Springs** 0.1nm,0.3s,baz=343,slow=9.0,SNR=7.9	**17.90**	**170**	Pn		P	15 19 57.0	-0.3
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=108,slow=7.7,SNR=5.0	**67.68**	**326**	P		P	15 26 45.2	0.0

*KRSC **28** 15:20:47.6±0.1, 55°.32N×162°.83E, h21km±21km, ML4.0*
*ISCJB **28** 15:20:48.2±0.7, 55°.29N±0°.02×162°.82E±0°.04, h18km±5km, mb3.4/8, Error ellipse: s-maj=4.2km s-min=3.4km az=166.4*
*IDC **28** 15:20:48.5±0.8, 54°.93N×162°.96E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.5/28, mbtmp3.5/9, ML3.1/1, Error ellipse: s-maj=31.9km s-min=17.0km az=140.0*
*MOS **28** 15:20:50.3±1.1, 55°.04N×162°.84E, h24km, mb4.2/4, Error ellipse: s-maj=31.3km s-min=17.3km az=56.2*
ISC 28 15:20:48.1±2.0, **55°.32N**±0°.03×**162°.80E**±0°.04, **h12**km±14km, **n47,** σ0°.99/67, **mb3.5**/8, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.94**	**357**	*eP*		**Pb**	**15 21 05.4**	**-0.9**
KBG				*i S*		**Sg**	**15 21 19.8**	**+1.3**
MKZ	**Mys Kozlova**	**0.98**	**219**	*eP*		**Pb**	**15 21 05.7**	**-1.3**
MKZ				*i S*		**Sb**	**15 21 19.9**	**0.0**
ZLN	**Zelenaya**	**1.33**	**303**	*eP*		**Pn**	**15 21 12.0**	**-0.6**
ZLN				*i S*		**Sn**	**15 21 30.2**	**0.0**
BZGR	**Bezymyannyi-Gr**	**1.35**	**298**	*eP*		**Pn**	**15 21 12.2**	**-0.6**
BZGR				*i S*		**Sn**	**15 21 29.9**	**-0.7**
CIRR	**Tsirk**	**1.41**	**305**	*eP*		**Pn**	**15 21 12.6**	**-1.1**
CIRR				*i S*		**Sn**	**15 21 31.0**	**-1.2**
LGNR	**Loginova**	**1.42**	**304**	*eP*		**Pn**	**15 21 13.3**	**-0.7**
LGNR				*i S*		**Sn**	**15 21 32.7**	**0.0**
BZMR	**Bezymyannaya**	**1.45**	**296**	*eP*		**Pn**	**15 21 14.1**	**-0.1**
BZMR				*i S*		**Sn**	**15 21 33.3**	**+0.1**
BZWR	**Bezymyannyi-We**	**1.46**	**297**	*eP*		**Pn**	**15 21 13.7**	**-0.7**
BZWR				*i S*		**Sn**	**15 21 33.4**	**-0.1**
SMKR	**Semkarok**	**1.47**	**330**	*eP*		**Pn**	**15 21 13.6**	**-0.9**
TUMR	**Tumrok**	**1.52**	**270**	*eP*		**Pn**	**15 21 14.9**	**-0.3**
TUMR				*i S*		**Sn**	**15 21 33.9**	**-1.0**
KMNR	**Kamenistaya**	**1.52**	**288**	P		**Pn**	**15 21 15.1**	**-0.1**
KMNR				*i S*		**Sn**	**15 21 35.5**	**+0.5**
KIRR	**Kirishev**	**1.53**	**296**	*eP*		**Pn**	**15 21 15.3**	**-0.1**
KIRR				*i S*		**Sn**	**15 21 35.4**	**+0.1**
BDR	**Baidarnaya**	**1.54**	**325**	*eP*		**Pn**	**15 21 15.1**	**-0.3**
BDR				*i S*		**Sn**	**15 21 35.9**	**+0.5**
KRSR	**Krestovskiy**	**1.55**	**306**	*eP*		**Pn**	**15 21 15.2**	**-0.4**
KRSR				*i S*		**Sn**	**15 21 35.5**	**-0.2**
KLY	**Klyuchi**	**1.57**	**310**	*eP*		Pn	15 21 13.5	-2.2
KLY				*i S*		**Sn**	**15 21 32.6**	**-3.4**
KPT	**Kopyto**	**1.60**	**295**	*eP*		**Pn**	**15 21 16.2**	**-0.1**
KPT				*i S*		**Sn**	**15 21 36.4**	**-0.5**
SRKR	**Sorokina**	**1.62**	**326**	*eP*		**Pn**	**15 21 16.2**	**-0.4**
SRKR				*i S*		**Sn**	**15 21 37.3**	**-0.1**
KOZ	**Kozyrevsk**	**1.82**	**295**	*eP*		**Pn**	**15 21 19.8**	**+0.6**
KOZ				*i S*		**Sn**	**15 21 43.5**	**+1.4**
BKI	**Bering**	**1.82**	**92**	*eP*		**Pn**	**15 21 18.3**	**-0.8**
SRDR	**Sredinnyy**	**2.01**	**301**	*eP*		**Pn**	**15 21 22.4**	**+0.6**
SRDR				*i S*		**Sn**	**15 21 47.1**	**+0.2**
ESO	**Esso**	**2.40**	**286**	*eP*		**Pn**	**15 21 27.4**	**+0.2**
ESO				*i S*		**Sn**	**15 21 56.2**	**-0.4**
SPN	**Mys Shipunski**	**2.76**	**217**	*eP*		**Pn**	**15 21 31.6**	**-0.5**
SPN				*i S*		**Sn**	**15 22 02.7**	**-2.6**
NLC	**Nalytchevo**	**2.96**	**225**	*eP*		**Pn**	**15 21 34.8**	**0.0**
NLC				*i S*		**Sn**	**15 22 08.5**	**-1.6**
SDLR	**Sedlovina**	**3.07**	**230**	P		**Pn**	**15 21 36.9**	**+0.4**
SDLR				*i S*		**Sn**	**15 22 13.1**	**-0.1**
KRER	**Koryakskii**	**3.12**	**231**	*eP*		**Pn**	**15 21 38.3**	**+1.1**
SMAR	**Somma**	**3.12**	**230**	*eP*		**Pn**	**15 21 36.6**	**-0.7**
SMAR				*i S*		**Sn**	**15 22 13.7**	**-0.8**
AVH	**Avacha**	**3.15**	**231**	*eP*		**Pn**	**15 21 38.3**	**+0.8**
AVH				*i S*		**Sn**	**15 22 15.8**	**+0.8**
UGLR	**Uglovaya**	**3.15**	**229**	*eP*		**Pn**	**15 21 38.0**	**+0.5**
UGLR				*i S*		**Sn**	**15 22 16.2**	**+1.2**
KOK	**Koryaka**	**3.17**	**232**	*eP*		**Pn**	**15 21 38.8**	**+0.9**
GNL	**Ganaly**	**3.27**	**242**	*eP*		**Pn**	**15 21 39.7**	**+0.5**
GNL				*i S*		**Sn**	**15 22 18.9**	**+0.9**
PET	**Petropavlovsk**	**3.35**	**228**	*e*PN		**Pn**	**15 21 40.6**	**+0.4**
PET				*eS*		**Sn**	**15 22 21.3**	**+1.4**
PET				pmax		pmax		
	comp=Z,50nm,0.6s							
PET				smax		smax		
	comp=N,61nm,0.8s							
PET				smax		smax		
	comp=E,83nm,0.7s							
PET	**Petropavlovsk**	**3.35**	**228**	*eP*		**Pn**	**15 21 40.4**	**+0.2**
PET				*i S*		**Sn**	**15 22 20.4**	**+0.5**
PETK	**Petropavlovsk-**	**3.73**	**236**	PN		**Pn**	**15 21 46.1**	**+0.7**
PETK							15 22 36.1	
PETK				pmax		pmax		
	comp=Z,2.0nm,0.3s							
PETK	**Petropavlovsk-**	**3.73**	**236**	Pn		**Pn**	**15 21 46.1**	**+0.7**
	comp=Z,1.5nm,0.3s,baz=79,slow=15,SNR=23							
PETK				Sn		**Sb**	**15 22 36.1**	**-2.8**
	baz=86,slow=18,SNR=2.3							
RUS	**Russkaya**	**3.85**	**223**	*eP*		**Pn**	**15 21 47.9**	**+0.9**
MTVR	**Mutnovka**	**3.94**	**226**	*eP*		Pn	15 21 50.5	+2.0
APC	**Apacha**	**4.10**	**236**	*eP*		Pn	15 21 52.5	+2.1
FX1	**Attu Island--F** comp=Z,0.6nm,0.3s,baz=304,slow=2.6,SNR=4.5	**6.56**	**108**	Pn		Pn	15 22 26.3	+1.9
FX1				Sn		**Sn**	**15 23 39.7**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=127,slow=20,SNR=2.5							
MJAR	**Matsushiro Arr** comp=Z,1.1nm,0.6s,baz=19,slow=6.3,SNR=3.8	**25.18**	**232**	P		**P**	**15 26 13.7**	**+0.5**
ILAR	**Eielson Array** comp=Z,0.6nm,0.8s,baz=270,slow=8.5,SNR=8.3	**26.13**	**48**	P		**P**	**15 26 23.6**	**+2.1**
YKA	**Yellowknife Ar** comp=Z,0.1nm,0.4s,baz=300,slow=8.5,SNR=3.4	**40.45**	**45**	P		P	15 28 30.7	+4.9
MKAR	**Makanchi Array**	**48.63**	**295**	P		P	15 29 34.6	+3.2
MKAR	**Makanchi Array** comp=Z,0.1nm,0.4s,baz=62,slow=6.2,SNR=3.2	**48.63**	**295**	P		P	15 29 34.6	+3.2
FINES	**FINESS Array B** comp=Z,1.3nm,0.5s,baz=39,slow=9.0,SNR=7.5	**58.69**	**337**	P		P	15 30 50.7	+5.9
TXAR	**Lajitas Array** comp=Z,0.2nm,0.4s,baz=324,slow=4.5,SNR=2.9	**68.33**	**70**	P		P	15 31 52.3	+3.1
WRA	**Warramunga Arr** comp=Z,0.3nm,0.8s,baz=16,slow=5.7,SNR=2.5	**78.78**	**207**	P		P	15 32 51.6	+1.2
ASAR	**Alice Springs** comp=Z,0.8nm,1.1s,baz=0.9,slow=5.8,SNR=3.3	**82.45**	**207**	P		**P**	**15 33 10.4**	**+0.4**

*IDC **28** 15:38:43.4±3.3, 6°.61S×130°.38E, h52km±33km, mb3.9/10, mb1 4.2/13, mb1mx4.1/20, mbtmp4.1/13, ML4.6/3, MS3.3/2, Ms1 3.3/2, ms1mx2.6/24, Error ellipse: s-maj=33.1km s-min=15.9km az=76.0*
*ISCJB **28** 15:38:45.2±0.3, 6°.65S±0°.02×130°.60E±0°.04, h90km, mb4.2/12, Error ellipse: s-maj=5.0km s-min=3.5km az=8.7*
*AUST **28** 15:38:48.2±0.0, 6°.69S×130°.39E, h102km, Error ellipse: s-maj=0.8km s-min=0.6km az=234.0*
*DJA **28** 15:38:48.7±0.3, 7°.S±3°×13°.1E±°, h194km±21km, M5.6/6, mB5.6/3, mb4.8/6, MLv6.0/1, Mw(mB)5.2/3*
ISC 28 15:38:46.8±0.5, **6°.66S**±0°.04×**130°.50E**±0°.05, **h90**km, **n53,** σ2°.34/53, **mb4.2**/12, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**3.64**	**334**	P		Pn	15 39 44.3	+3.3
AAI	**Ambon**	**3.74**	**322**	P		Pn	15 39 51.8	+10
AAI	**Ambon** baz=3.7,SNR=3.5	**3.74**	**322**	P		**Pn**	**15 39 45.2**	**+2.9**
FAKI	**Fak Fak**	**4.10**	**25**	P		**Pn**	**15 39 48.4**	**+1.2**
FAKI				S		**Sn**	**15 40 31.3**	**-2.8**
FAKI	**Fak Fak** baz=4.2,SNR=103	**4.10**	**25**	P		**Pn**	**15 39 48.4**	**+1.2**
FAKI				S		**Sn**	**15 40 33.1**	**-1.0**
	baz=4.2,SNR=16							
SWI	**Sorong** 85nm,0.6s,6μm	**5.80**	**8**	P		**Pn**	**15 40 10.5**	**+0.1**
SWI				S		**Sn**	**15 41 10.6**	**-5.0**
	85nm,0.6s,6μm							
SWI	**Sorong** baz=5.9,SNR=46	**5.80**	**8**	P		**Pn**	**15 40 10.6**	**+0.2**
SWI				S		**Sn**	**15 41 10.6**	**-5.0**
	baz=5.9,SNR=11							
MTN	**Manton Dam** baz=6.2,SNR=340	**6.18**	**174**	P		**Pn**	**15 40 17.2**	**+1.7**
MTN				S		**Sn**	**15 41 26.0**	**+1.3**
	baz=6.2,SNR=13							
RKPI	**Ransiki, Papua** 203nm,0.7s,20μm7.8nm	**6.29**	**36**	P		**Pn**	**15 40 19.3**	**+2.3**
RKPI				S		**Sn**	**15 41 26.1**	**-1.4**
	203nm,0.7s,20μm7.8nm							
KDU	**Kakadu** baz=6.3,SNR=232	**6.30**	**162**	P		**Pn**	**15 40 18.8**	**+1.7**
KDU				S		**Sn**	**15 41 28.0**	**+0.3**
	baz=6.3,SNR=6.4							
LBMI	**Labuha** 122nm,0.9s	**6.68**	**333**	P		**Pn**	**15 40 25.2**	**+2.8**
LBMI				S		**Sn**	**15 41 36.5**	**-0.6**
	122nm,0.9s							
SRPI	**Serui, Papua**	**7.44**	**51**	S		**Sn**	**15 41 54.0**	**-1.6**
BAKI	**Biak**	**7.79**	**46**	S		**Sn**	**15 42 02.2**	**-2.0**
BBSI	**Bau Bau**	**7.97**	**278**	P		Pn	15 40 45.0	+5.1
TNTI	**Ternate** 108nm,0.8s	**8.01**	**337**	P		**Pn**	**15 40 42.1**	**+1.6**
MMRI	**Maumere**	**8.42**	**256**	P		**Pn**	**15 40 48.5**	**+2.4**
MMRI				S		**Sn**	**15 42 24.0**	**+4.5**
WAMI	**Wamena**	**8.63**	**72**	P		Pn	15 41 00.0	+11
KNRA	**Kununurra** baz=9.1,SNR=153	**9.13**

baz=23,SNR=4.8
MORW Morawa 26.14 210 S S 15 49 11.0 +33
baz=26,SNR=5.0
STKA Stephens Creek 27.15 159 P **P** **15 44 23.4 +1.7**
1.2nm,0.5s,baz=339,slow=11,SNR=4.7
JNU Nakatsue 39.56 0 P **P** **15 46 09.7 +0.5**
6.7nm,0.8s,baz=225,slow=5.5,SNR=2.6
JNU LR LR 16 02 27.0
comp=Z,110nm,18.5s,baz=112,slow=36
CMAR Chiang Mai Arr 39.90 309 P **P** **15 46 11.9 -0.3**
1.3nm,0.5s,baz=135,slow=6.9,SNR=13
MJAR Matsushiro Art 43.57 9 P **P** **15 46 40.8 -1.1**
4.0nm,0.7s,baz=190,slow=10.0,SNR=9.7
KSRS Korea Array 43.95 357 P **P** **15 46 45.4 +0.5**
0.7nm,0.6s,baz=162,slow=8.9,SNR=3.5
USRK Ussuriysk Arra 50.64 1 P **P** **15 47 36.4 -0.3**
2.4nm,0.6s,baz=203,slow=8.5,SNR=6.1
SONM Songino Array 58.28 341 P **P** **15 48 32.6 +0.4**
1.2nm,0.6s,baz=159,slow=6.5,SNR=8.4
PETK Petropavlovsk- 63.84 18 P **P** **15 49 10.6 +1.0**
3.5nm,0.6s,baz=181,slow=4.4,SNR=5.6
MKAR Makanchi Array 68.21 327 P **P** **15 49 37.6 -0.1**
1.8nm,0.5s,baz=117,slow=7.7,SNR=38
ZALV Zalesovo Beam 71.50 334 P **P** **15 49 56.6 -1.0**
0.9nm,0.6s,baz=104,slow=6.3,SNR=5.8
ILAR Eielson Array 92.83 25 P **P** **15 51 47.5 -1.5**
0.5nm,0.8s,baz=273,slow=4.2,SNR=5.5
TORD Torodi Ar. Bea 129.23 281 PKP **PKPdf** **15 57 45.9 +0.2**
0.8nm,1.1s,baz=70,slow=2.5,SNR=3.3
LPAZ La Paz 150.68 141 PKPbc **PKPbc** **15 58 31.9 +1.7**
0.9nm,0.4s,baz=103,slow=1.3,SNR=3.0

IDC 28 15:52:26.7±12.0, 2°03N×99°04E, h160km±118km, mb3.1/5, mb1 3.2/6, mb1mx3.0/26, mbtmp3.1/6, Error ellipse: s-maj=65.1km s-min=21.4km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.33 360**		P	P	15 56 06.8	-0.3
	0.1nm,0.3s,baz=189,slow=9.8,SNR=8.3						
WRA	**Warramunga Arr**	**40.94 124**		P	P	15 59 53.8	-0.1
	0.2nm,0.3s,baz=302,slow=9.1,SNR=5.8						
SONM	**Songino Array**	**46.07** 7		P	P	16 00 34.2	-0.5
	0.3nm,0.5s,baz=190,slow=8.9,SNR=3.1						
MKAR	**Makanchi Array**	**46.92 344**		P	P	16 00 41.4	+0.2
	0.5nm,0.5s,baz=154,slow=8.9,SNR=10						
ZALV	**Zalesovo Beam**	**53.06 350**		P	P	16 01 27.3	+0.1
	0.9nm,0.5s,baz=171,slow=7.0,SNR=6.5						
BRTR	**Keskin Array B**	**69.93 312**		P	P	16 03 20.7	-0.2
	0.3nm,0.5s,baz=132,slow=8.0,SNR=2.7						

IDC 28 15:58:48.9±1.8, 9°27S×125°74E, h0km, mb3.6/1, mb1 4.0/4, mb1mx3.6/20, mbtmp3.8/4, ML3.9/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/25, Error ellipse: s-maj=97.5km s-min=26.8km az=67.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**8.78 181**		Pn	Pn	16 00 57.1	-0.1
	0.9nm,0.3s,baz=10,slow=9.7,SNR=74						
FITZ				Sn	Sn	16 02 27.8	-9.1
	2.4nm,0.3s,baz=301,slow=13,SNR=13						
FITZ				LR	LR	16 04 47.8	
	comp=Z,57nm,20.6s,baz=71,slow=41						
WRA	**Warramunga Arr**	**13.48 143**		Pn	Pn	16 02 01.6	0.0
	0.5nm,0.3s,baz=325,slow=14,SNR=15						
WRA				Sn	Sn	16 04 24.4	-7.8
	1.1nm,0.3s,baz=321,slow=24,SNR=10						
ASAR	**Alice Springs**	**16.30 152**		Pn	Pn	16 02 39.5	0.0
	0.6nm,0.3s,baz=321,slow=11,SNR=15						
ASAR				Sn	Sn	16 05 33.6	-7.6
	0.4nm,0.3s,baz=315,slow=20,SNR=9.0						
MKAR	**Makanchi Array**	**67.91 329**		P	P	16 09 49.5	0.0
	0.2nm,0.4s,baz=128,slow=8.1,SNR=8.0						

IDC 28 16:18:26.0±1.9, 4°91N×126°57E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.7/4, 1C, Error ellipse: s-maj=150.2km s-min=24.4km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**3.26 315**	⇑	*iP*	Pg	16 19 28.9	+0.4
WRA	**Warramunga Arr**	**25.85 163**		P	P	16 23 58.9	-0.6
	0.9nm,0.4s,baz=343,slow=10,SNR=19						
ASAR	**Alice Springs**	**29.29 166**		P	P	16 24 31.2	+0.9
	0.3nm,0.4s,baz=345,slow=6.9,SNR=6.6						
STKA	**Stephens Creek**	**39.28 160**		P	P	16 25 56.3	-0.4
	0.8nm,0.5s,baz=319,slow=9.3,SNR=2.9						
MKAR	**Makanchi Array**	**56.50 325**		P	P	16 28 10.0	-0.1
	0.2nm,0.4s,baz=124,slow=6.7,SNR=7.2						

*TRN **28** 16:28:07.8, 15°.09N×60°.42W, h53km, MD4.1, M4.6(FDF) TRN Felt II, III, Martinique.*
*ISCJB **28** 16:28:08.6±0.4, 15°.09N±0°.02×60°.45W±0°.05, h66km±3km, mb4.4/49, Error ellipse: s-maj=7.7km s-min=2.9km az=164.6*
*NEIC **28** 16:28:08.9, 15°.05N×60°.45W, h61km, mb4.6/29, MD4.1(TRN), After TRN.*
NEIC Felt [III] at Fort-de-France and Le Lamentin. Also felt at Ducos, La Trinite, Le Marin, Le Robert, Saint-Joseph, Sainte-Luce and Schoelcher. Felt [II] at Gros Islet, Saint Lucia. Also felt at Castries and Choc. Felt at Canefield, Dominica and at Oistins, Barbados.
*IDC **28** 16:28:08.9±0.6, 15°.13N×60°.39W, h49km±5km, mb4.0/22, mb1 4.2/23, mb1mx4.1/30, mbtmp4.0/23, MS3.9/3, Ms1 3.8/10, ms1mx3.4/40, Error ellipse: s-maj=13.5km s-min=10.9km az=95.0*
*BJI **28** 16:28:08.5, 15°.10N×60°.50W, h60km, mB5.2/3, Ms5.1/1, Ms7 4.6/2*
ISC 28 16:28:08.9±0.5, 15°10N±0°03×60°41W±0°05, h51km±3km, n421, σ0.97/472, mb4.5/49, MS3.8/11, 118C-141D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MVM	**Montagne Vaucl**	**0.71 221**		*eP*	**Pn**	**16 28 22.2**	**-0.7**
FDF	**Fort de France**	**0.80 243**		*e*Pn	**Pn**	**16 28 23.4**	**-0.6**
FDF				*e*Sn	**Sn**	**16 28 34.0**	**-1.0**
FDF	**Fort de France**	**0.80 243**	⇓	*eP*	**Pn**	**16 28 23.4**	**-0.6**
FDF			⇓	*eS*	**Sn**	**16 28 34.4**	**-0.6**
FDF			⇓	*eS*	**Sn**	**16 28 34.5**	**-0.6**
DBCT	**Belle View Cho**	**0.92 281**	⇑	*iP*	**Pn**	**16 28 26.4**	**+0.8**
DBCT	**Belle View Cho**	**0.92 281**	⇑	*iP*	**Pn**	**16 28 26.4**	**+0.8**
DSHT	**Scott's Head**	**0.94 277**	⇓	*iP*	**Pn**	**16 28 26.7**	**+0.9**
DSHT	**Scott's Head**	**0.94 277**	⇓	*iP*	**Pn**	**16 28 26.7**	**+0.9**
MDN	**Morne-Daniel**	**0.97 283**	⇓	*iP*	**Pn**	**16 28 27.4**	**+1.2**
MDN	**Morne-Daniel**	**0.97 283**	⇓	*iP*	**Pn**	**16 28 27.4**	**+1.2**
DWS	**Wesley**	**0.98 299**		*eP*	**Pn**	**16 28 28.2**	**+1.8**
DWS				*eS*	**Sn**	**16 28 41.5**	**+2.1**
DWS	**Wesley**	**0.98 299**		*eP*	**Pn**	**16 28 27.9**	**+1.5**
DWS				*eS*	**Sn**	**16 28 41.5**	**+2.1**
DVCT	**Vielle Casse P**	**1.09 298**		*eP*	**Pn**	**16 28 29.3**	**+1.5**
SLW	**Petit Monier**	**1.19 205**		*i* P	**Pn**	**16 28 29.4**	**+0.2**
SLW	**Petit Monier**	**1.19 205**		*i* P	**Pn**	**16 28 29.4**	**+0.2**
MGG	**Marie-Galante**	**1.19 313**	⇓	*eP*	**Pn**	**16 28 28.9**	**-0.4**
SLPA	**Patience**	**1.33 202**		*eP*	**Pn**	**16 28 31.6**	**+0.5**
SLPA	**Patience**	**1.33 202**		*eP*	**Pn**	**16 28 31.6**	**+0.5**
SLPE	**Piton Saint Es**	**1.37 204**		*eP*	**Pn**	**16 28 31.8**	**+0.1**
SLPE	**Piton Saint Es**	**1.37 204**		*eP*	**Pn**	**16 28 31.8**	**+0.1**
SFG	**Saint Francois**	**1.38 327**		*eP*	**Pn**	**16 28 31.3**	**-0.4**
SLB	**Belfond**	**1.40 206**	⇓	*iP*	**Pn**	**16 28 32.6**	**+0.5**
SLB	**Belfond**	**1.40 206**	⇓	*iP*	**Pn**	**16 28 32.6**	**+0.5**
TBG	**Guadaloupe-3**	**1.41 302**	⇓	*eP*	**Pn**	**16 28 31.9**	**-0.2**
SLDE	**Delcer**	**1.43 206**		*eP*	**Pn**	**16 28 33.1**	**+0.6**
SLDE	**Delcer**	**1.43 206**		*eP*	**Pn**	**16 28 33.1**	**+0.6**
MCLT	**Moule a Chique**	**1.47 200**		*eP*	**Pn**	**16 28 33.9**	**+0.9**
MCLT				*eS*	**Sn**	**16 28 52.5**	**+1.3**
MCLT	**Moule a Chique**	**1.47 200**		*eP*	**Pn**	**16 28 33.9**	**+0.9**
MCLT				*eS*	**Sn**	**16 28 52.5**	**+1.3**
DOG	**Dongo Capester**	**1.49 309**	⇓	*eP*	**Pn**	**16 28 33.4**	**+0.1**
PHG	**Guadaloupe-2**	**1.50 308**	⇓	*eP*	**Pn**	**16 28 33.6**	**+0.1**
HMG	**Houelmont**	**1.52 306**	⇓	*eP*	**Pn**	**16 28 34.0**	**+0.3**
BCG	**Bois Riant Cap**	**1.52 310**	⇓	*eP*	**Pn**	**16 28 33.9**	**+0.2**
SCG	**Saint Claude**	**1.53 307**	⇓	*eP*	**Pn**	**16 28 34.1**	**+0.1**
SEG	**Port Louis**	**1.67 321**	⇓	*eP*	**Pn**	**16 28 36.2**	**+0.4**
LZG	**Guadaloupe-1**	**1.67 309**	⇓	*eP*	**Pn**	**16 28 35.9**	**+0.1**
SFAN	**Fancy Village**	**1.86 203**		*eP*	**Pn**	**16 28 39.5**	**+1.2**
SFAN				*eS*	**Sn**	**16 28 39.5**	**+1.2**
SFAN				*eS*	**Sn**	**16 29 01.2**	**+0.6**
SFAN	**Fancy Village**	**1.86 203**		*eP*	**Pn**	**16 28 39.5**	**+1.2**
SFAN				*eS*	**Sn**	**16 29 01.2**	**+0.6**
BHS	**Barnard House**	**1.92 201**		*eP*	**Pn**	**16 28 40.2**	**+1.1**
BHS				*eS*	**Sn**	**16 29 02.7**	**+0.5**
BHS	**Barnard House**	**1.92 201**		*eP*	**Pn**	**16 28 40.2**	**+1.1**
BHS				*eS*	**Sn**	**16 29 02.7**	**+0.5**
SVV	**Soufriere Volc**	**1.93 204**		*eP*	**Pn**	**16 28 40.8**	**+1.4**
SVV				*eS*	**Sn**	**16 29 03.2**	**+0.7**
SVV	**Soufriere Volc**	**1.93 204**		*eP*	**Pn**	**16 28 40.8**	**+1.4**
SVV				*eS*	**Sn**	**16 29 03.2**	**+0.7**
SVB	**Belmont**	**1.99 204**		*eP*	**Pn**	**16 28 40.2**	**+0.1**
SVB				*eS*	**Sn**	**16 29 03.9**	**0.0**
SVB	**Belmont**	**1.99 204**		*eP*	**Pn**	**16 28 40.2**	**+0.1**
SVB				*eS*	**Sn**	**16 29 03.9**	**0.0**
FCV	**Fort Charlotte**	**2.09 203**		*eP*	**Pn**	**16 28 42.5**	**+0.9**
FCV				*eS*	**Sn**	**16 29 06.7**	**+0.3**
FCV	**Fort Charlotte**	**2.09 203**		*eP*	**Pn**	**16 28 42.5**	**+0.9**
FCV				*eS*	**Sn**	**16 29 06.7**	**+0.3**
BBGH	**Gun Hill**	**2.11 157**		*e*Pn	**Pn**	**16 28 42.4**	**+0.6**
BBGH	**Gun Hill**	**2.11 157**		*eP*	**Pn**	**16 28 43.1**	**+1.3**
BPA	**Boggy Peak**	**2.38 325**		*eP*	**Pn**	**16 28 47.8**	**+2.3**
BPA	**Boggy Peak**	**2.38 325**		*eP*	**Pn**	**16 28 47.4**	**+1.8**
ANWB	**Willy Bob**	**2.88 333**		*e*Pn	**Pn**	**16 28 52.0**	**-0.3**
NEV	**Hard Times**	**2.90 315**		*eP*	**Pn**	**16 28 54.9**	**+2.3**
NEV	**Hard Times**	**2.90 315**		*eP*	**Pn**	**16 28 53.2**	**+0.6**
GRSS	**Sisters**	**3.02 203**		*eP*	**Pn**	**16 28 55.0**	**+0.8**
GRSS	**Sisters**	**3.02 203**		*eP*	**Pn**	**16 28 55.0**	**+0.8**
GRHS	**Sauteurs**	**3.10 203**	⇑	*i*P	**Pn**	**16 28 56.4**	**+1.1**
GRHS	**Sauteurs**	**3.10 203**	⇑	*i*P	**Pn**	**16 28 56.4**	**+1.1**
GRW	**Mount Saint Ca**	**3.16 203**		*eP*	**Pn**	**16 28 56.6**	**+0.3**
GRW	**Mount Saint Ca**	**3.16 203**		*eP*	**Pn**	**16 28 56.6**	**+0.3**
GRGR	**Grenville**	**3.19 202**		*e*Pn	**Pn**	**16 28 56.8**	**+0.3**
GRGR				*e*Sn	**Sn**	**16 29 30.9**	**-2.4**
TOSP	**Speyside**	**3.78 182**		*eP*	**Pn**	**16 29 05.3**	**+0.7**
TOSP				*eS*	**Sn**	**16 29 47.4**	**-0.4**
TPR	**Prospect**	**3.90 185**		*eP*	**Pn**	**16 29 06.5**	**+0.1**
TPR				*eS*	**Sn**	**16 29 50.6**	**-0.4**
TPR	**Prospect**	**3.90 185**		*eP*	**Pn**	**16 29 06.5**	**+0.1**
TPR				*eS*	**Sn**	**16 29 50.6**	**-0.4**
BOT	**Bacolet**	**3.92 184**		*eP*	**Pn**	**16 29 06.9**	**+0.3**
BOT	**Bacolet**	**3.92 184**		*eP*	**Pn**	**16 29 06.9**	**+0.3**
TRN	**Trinidad (W)**	**4.53 192**		*eP*	**Pn**	**16 29 15.1**	**+0.2**
TRN				*eS*	**Sn**	**16 30 03.9**	**-2.4**
TRN	**Trinidad (W)**	**4.53 192**		*eP*	**Pn**	**16 29 15.1**	**+0.2**
TRN				*eS*	**Sn**	**16 30 06.5**	**+0.2**
TBH	**Brigand Hill**	**4.63 188**		*eP*	**Pn**	**16 29 17.9**	**+1.5**
TBH				*eS*	**Sn**	**16 30 07.4**	**-1.5**
TBH	**Brigand Hill**	**4.63 188**		*eP*	**Pn**	**16 29 17.9**	**+1.5**
TBH				*eS*	**Sn**	**16 30 07.4**	**-1.5**
CDVI	**St. Croix**	**4.94 303**		*e*Pn	**Pn**	**16 29 19.3**	**-1.3**
STVI	**Saint Thomas**	**5.42 307**		*e*Pn	**Pn**	**16 29 28.0**	**+0.8**
	71nm,0.6s						
STVI				*e*Sn	**Sn**	**16 30 30.1**	**+1.8**
MTP	**Monte Pirata**	**5.76 302**		*e*Pn	**Pn**	**16 29 32.9**	**+1.0**
	92nm,0.6s						
CBYP	**Canovanas**	**6.10 302**		*e*Pn	**Pn**	**16 29 37.9**	**+1.4**
	115nm,0.6s						
SJG	**San Juan**	**6.26 299**		*e*Pn	**Pn**	**16 29 39.5**	**+0.8**
	108nm,0.6s						
CELP	**Cerrillos**	**6.61 297**		*e*Pn	**Pn**	**16 29 43.9**	**+0.4**
CELP				*e*Sn	**Sn**	**16 30 54.7**	**-2.9**
OBIP	**Obispado Ponce**	**6.62 297**		*e*Pn	**Pn**	**16 29 43.9**	**+0.3**
	77nm,0.4s						
OBIP				*e*Sn	**Sn**	**16 30 56.4**	**-1.4**
LRS	**Lares**	**6.93 298**		*e*Pn	**Pn**	**16 29 48.8**	**+0.8**
CRPR	**Cabo Rojo, PR**	**7.04 295**		*e*Pn	**Pn**	**16 29 49.9**	**+0.4**
	105nm,0.3s						
CRPR				*e*Sn	**Sn**	**16 31 03.7**	**-4.5**
LSP	**Las Mesas**	**7.09 296**		*e*Pn	**Pn**	**16 29 50.8**	**+0.7**
LSP				*e*Sn	**Sn**	**16 31 04.7**	**-4.7**
AGPR	**Aguadilla, PR**	**7.24 299**		*e*Pn	**Pn**	**16 29 52.5**	**+0.4**
SDDR	**Presa de Saban**	**11.09 292**		*e*Pn	**Pn**	**16 30 46.6**	**+1.6**
	98nm,0.7s						
GTBY	**Guantanamo Bay**	**14.82 291**		*e*Pn	**Pn**	**16 31 37.2**	**+1.8**
MTDJ	**Mount Denham**	**16.70 283**		Pn	**Pn**	**16 31 59.9**	**+0.4**
ROSC	**El Rosal**	**17.06 235**		P	**P**	**16 32 06.4**	**+0.9**
ROSC				S	**S**	**16 35 23.6**	**+2.6**
ROSC	**El Rosal**	**17.06 235**		P	**P**	**16 32 06.4**	**+0.9**
	2.7nm,0.3s,baz=101,slow=19,SNR=14						
ROSC				S	**S**	**16 35 23.6**	**+2.6**
	0.9nm,0.3s,baz=112,slow=19,SNR=3.4						
ROSC				LR	LR	16 38 49.8	
	comp=Z,211nm,21.2s,baz=27,slow=38						
BBSR	**BB Station**	**17.63 348**		Pn	Pn	16 32 05.7	-5.2
BCIP	**Isla Barro Col**	**19.88 255**		*eP*	**P**	**16 32 36.8**	**+0.7**
OTAV	**Otavalo**	**23.15 232**		*eP*	**P**	**16 33 11.5**	**0.0**
	30nm,0.9s						
SAML	**Samuel**	**24.05 187**		*eP*	**P**	**16 33 19.6**	**+0.2**
	10nm,0.9s						
ATAH	**Atahualpa**	**28.38 220**		P	**P**	**16 33 59.4**	**+0.3**
ATAH	**Atahualpa**	**28.38 220**		P	**P**	**16 33 59.4**	**+0.3**
	5.8nm,0.6s,baz=9.5,slow=6.1,SNR=2.9						
ATAH				LR	LR	16 46 49.3	
	comp=Z,278nm,21.0s,baz=47,slow=39						
TKL	**Tuckaleechee C**	**29.27 319**		LR	LR	16 44 29.0	
	comp=Z,116nm,21.8s,baz=245,slow=34						
SIV	**San Ignacio**	**30.90 181**		P	**P**	**16 34 22.0**	**+1.2**
SIV	**San Ignacio**	**30.90 181**		P	**P**	**16 34 22.0**	**+1.2**
	2.7nm,0.5s,baz=352,slow=7.7,SNR=10.0						
LPAZ	**La Paz**	**32.10 194**		*eP*	**P**	**16 34 32.1**	**0.0**
	6.4nm,0.8s						
LPAZ	**La Paz**	**32.10 194**		P	**P**	**16 34 32.6**	**+0.5**
	6.4nm,0.8s,baz=21,slow=8.7,SNR=14						
LPAZ				LR	LR	16 47 17.4	
	comp=Z,93nm,20.8s,baz=178,slow=36						
PAYG	**Puerto Ayora**	**33.44 245**		P	**P**	**16 34 41.6**	**-1.6**
SADO	**Sadowa**	**33.56 336**		P	**P**	**16 34 43.6**	**-0.4**
SADO	**Sadowa**	**33.56 336**		P	**P**	**16 34 43.6**	**-0.4**
	2.3nm,0.5s,baz=170,slow=5.6,SNR=4.1						
TUL1	**Tulsa**	**37.77 310**	⇓	P	**P**	**16 35 18.9**	**-1.2**
	baz=38						
LVC	**Limon Verde**	**38.39 193**		*eP*	**P**	**16 35 24.9**	**-0.8**
	16nm,0.8s						
732A	**Laxson Ranch,**	**38.94 297**	⇑	P	**P**	**16 35 29.2**	**-0.9**
	baz=39						
JCT	**Junction City**	**39.19 300**		*eP*	**P**	**16 35 31.0**	**-1.2**
	35nm,0.6s						
JCT	**Junction City**	**39.19 300**	⇑	P	**P**	**16 35 31.6**	**-0.6**
	baz=39						
532A	**Rocksprings**	**39.19 299**	⇑	P	**P**	**16 35 31.8**	**-0.4**
	baz=39,SNR=7.4						
432A	**Menard**	**39.28 300**	⇓	P	**P**	**16 35 32.3**	**-0.7**
	baz=39,SNR=7.1						
332A	**Millersview**	**39.36 301**	⇑	P	**P**	**16 35 32.5**	**-1.1**
	baz=39						
232A	**Coleman**	**39.42 302**	⇓	P	**P**	**16 35 33.1**	**-1.0**
	baz=39						
631A	**Perdido Creek**	**39.60 298**	⇓	P	**P**	**16 35 35.4**	**-0.2**
	baz=40						
WMOK	**Wichita Mounta**	**39.60 307**		*eP*	**P**	**16 35 34.3**	**-1.3**
	5.0nm,0.5s						
ABTX	**Abilene, Hawle**	**39.62 303**	⇑	P	**P**	**16 35 34.9**	**-0.9**
	baz=40						
Z32A	**Haskell**	**39.69 304**	⇓	P	**P**	**16 35 35.2**	**-1.2**
	baz=40						
531A	**Rocksprings**	**39.74 299**	⇑	P	**P**	**16 35 36.6**	**-0.2**
	baz=40						
Y32A	**R-V Farms, Ver**	**39.88 305**	⇑	P	**P**	**16 35 37.1**	**-0.8**
	baz=40						
431A	**Sonora**	**39.91 300**	⇓	P	**P**	**16 35 37.7**	**-0.5**
	baz=40						
331A	**San Angelo**	**39.91 301**	⇓	P	**P**	**16 35 37.8**	**-0.4**
	baz=40						
SCHQ	**Schefferville**	**39.96 354**		*eP*	**P**	**16 35 38.9**	**+0.7**
	13nm,1.2s						
SCHQ	**Schefferville**	**39.96 354**		P	**P**	**16 35 38.9**	**+0.7**
	2.5nm,0.6s,baz=158,slow=12,SNR=7.0						
Z31A	**Sharp Cattle R**	**40.23 304**	⇓	P	**P**	**16 35 39.8**	**-1.0**
	baz=40						
X31A	**McDonald Ranch**	**40.50 306**	⇓	P	**P**	**16 35 41.5**	**-1.5**
	baz=40						
Y31A	**Rekieta Farm,**	**40.51 305**	⇑	P	**P**	**16 35 42.4**	**-0.7**
	baz=40						
330A	**Mertzon**	**40.55 301**	⇑	P	**P**	**16 35 42.7**	**-0.8**
	baz=40,SNR=6.1						
130A	**Snyder**	**40.69 303**	⇑	P	**P**	**16 35 43.5**	**-1.1**
	baz=41						
V31A	**Spring Creek L**	**40.77 308**	⇓	P	**P**	**16 35 44.8**	**-0.5**
	baz=41						
Z30A	**Sanderson Ranc**	**41.01 304**	⇓	P	**P**	**16 35 46.1**	**-1.1**
	baz=41						
529A	**Stev Forest Ra**	**41.15 299**	⇓	P	**P**	**16 35 48.1**	**-0.4**
	baz=41						
229A	**Bryant Ranch,**	**41.22 301**	⇑	P	**P**	**16 35 48.3**	**-0.7**
	baz=41						
329A	**Wagon Wheel Ra**	**41.24 301**	⇑	P	**P**	**16 35 48.9**	**-0.3**
	baz=41						
CPUP	**Villa Florida**	**41.29 176**		P	**P**	**16 35 48.9**	**-0.5**
CPUP	**Villa Florida**	**41.29 176**		P	**P**	**16 35 48.9**	**-0.5**
	1.4nm,0.5s,baz=336,slow=7.8,SNR=5.7						
628A	**Black Gap, Mar**	**41.59 298**	⇓	P	**P**	**16 35 52.2**	**+0.1**
	baz=42						
528A	**Cox Ranch, San**	**41.63 299**	⇓	P	**P**	**16 35 52.2**	**-0.3**
	baz=42,SNR=7.5						
428A	**Kincaid Ranch,**	**41.66 299**	⇓	P	**P**	**16 35 53.0**	**+0.2**
	baz=42,SNR=6.5						
X29A	**Tulia**	**41.79 305**	⇓	P	**P**	**16 35 52.8**	**-0.9**
	baz=42						
228A	**UT Block 9, Go**	**41.90 301**	⇑	P	**P**	**16 35 53.9**	**-0.7**
	baz=42						
328A	**Wristen Ranch,**	**41.91 300**	⇓	P	**P**	**16 35 54.0**	**-0.7**
	baz=42						
128A	**Castleberry Fa**	**41.93 302**	⇑	P	**P**	**16 35 54.4**	**-0.5**
	baz=42						
W29A	**Amraillo**	**41.95 306**	⇓	P	**P**	**16 35 54.5**	**-0.5**
	baz=42						
ECSD	**EROS Data Cent**	**41.99 320**		*eP*	**P**	**16 35 54.8**	**-0.2**
R30A	**Dighton**	**42.00 311**	⇓	P	**P**	**16 35 54.4**	**-0.9**
	baz=42						
627A	**Terlingua Ranc**	**42.01 297**	⇓	P	**P**	**16 35 54.9**	**-0.8**
	baz=42						
TXAR	**Lajitas Array**	**42.23 297**		P	**P**	**16 35 57.0**	**-0.4**
TXAR				pP	**pP**	**16 36 10.5**	**-0.4**
TXAR				PcP	**PcP**	**16 37 52.4**	**+1.6**
TXAR	**Lajitas Array**	**42.23 297**		P	**P**	**16 35 57.0**	**-0.4**
	1.0nm,0.5s,baz=114,slow=8.5,SNR=9.1						
TXAR				pP	**pP**	**16 36 10.5**	**-0.4**
	0.9nm,0.5s,baz=99,slow=7.7,SNR=5.5						
TXAR				PcP	**PcP**	**16 37 52.4**	**+1.6**
	2.6nm,0.7s,baz=121,slow=5.7,SNR=12						
TXAR				LR	LR	16 55 00.9	
	comp=Z,81nm,21.6s,baz=180,slow=38						
427A	**Hayter Ranch,**	**42.29 299**	⇓	P	**P**	**16 35 57.3**	**-0.6**
	baz=42,SNR=6.0						
527A	**Woodward Ranch**	**42.33 298**	⇑	P	**P**	**16 35 58.0**	**-0.3**
	baz=42,SNR=5.9						
W28A	**Vega**	**42.43 306**	⇓	P	**P**	**16 35 59.0**	**+0.1**
	baz=42						
MSTX	**Muleshoe**	**42.51 304**	⇓	P	**P**	**16 35 59.1**	**-0.6**
	baz=42,SNR=5.7						
127A	**Arkansas Junct**	**42.66 302**	⇓	P	**P**	**16 36 00.0**	**-0.8**
	baz=43						
626A	**Big Bend Ranch**	**42.67 297**	⇑	P	**P**	**16 36 00.9**	**0.0**
	baz=43						
Z27A	**Tatum**	**42.70 303**	⇓	P	**P**	**16 36 00.6**	**-0.6**
	baz=43						
526A	**Mary Lane Ranc**	**42.72 298**	⇓	P	**P**	**16 36 01.6**	**+0.1**
	baz=43						
426A	**McDonald Obser**	**42.78 299**	⇑	P	**P**	**16 36 02.0**	**0.0**
	baz=43,SNR=9.0						
Y27A	**Causey**	**42.80 304**	⇓	P	**P**	**16 36 01.5**	**-0.4**
	baz=43						
326A	**Caldwell Ranch**	**42.87 300**	⇓	P	**P**	**16 36 02.4**	**-0.2**
	baz=43						
S28A	**Manter**	**42.94 309**	⇓	P	**P**	**16 36 02.6**	**-0.4**
	baz=43						
T28A	**Walsh**	**42.95 309**	⇑	P	**P**	**16 36 02.2**	**-0.9**
	baz=43						
W27A	**Bowe Ranch, En**	**43.05 305**	⇓	P	**P**	**16 36 03.2**	**-0.7**
	baz=43						
V27A	**Dan Oppiter Fa**	**43.07 307**	⇑	P	**P**	**16 36 03.3**	**-0.8**
	baz=43						
O29A	**4D Ranch, Culb**	**43.09 313**	⇓	P	**P**	**16 36 04.0**	**-0.1**
	baz=43						
R28A	**Tribune**	**43.14 310**	⇓	P	**P**	**16 36 03.5**	**-1.2**
	baz=43						
226B	**Tecolote Peak,**	**43.19 301**	⇑	P	**P**	**16 36 04.5**	**-0.6**
	baz=43						
126A	**Clayton Basin,**	**43.20 302**	⇓	P	**P**	**16 36 04.7**	**-0.5**
	baz=43						
Z26A	**Caprock**	**43.31 303**	⇑	P	**P**	**16 36 06.1**	**

	baz=46,SNR=6.1							
V22A	San Miguel Ran	46.30	305	⇑P	P	16 36 29.8	-0.1	
	baz=46							
Z21A	St. Cloud Mine	46.33	302	⇓P	P	16 36 30.5	+0.2	
	baz=46							
M24A	Cheyenne	46.42	313	⇓P	P	16 36 30.9	+0.1	
	baz=46							
Y21A	Point of Rocks	46.48	303	⇑P	P	16 36 32.1	+0.7	
	baz=46,SNR=10							
T22A	Edith	46.57	307	⇑P	P	16 36 31.6	-0.5	
	baz=47							
X21A	Alamocita Cree	46.66	303	⇓P	P	16 36 33.0	+0.1	
	baz=47							
320A	Kipp Ranch, An	46.70	299	⇓P	P	16 36 34.2	+1.1	
	baz=47							
S22A	4UR Ranch, Cre	46.71	308	⇓P	P	16 36 33.1	-0.2	
	baz=47							
R22A	Saguache, Gunn	46.79	309	⇓P	P	16 36 33.7	-0.3	
	baz=47							
220A	Playas Peak, P	46.79	300	⇑P	P	16 36 34.5	+0.7	
	baz=47,SNR=8.5							
V21A	Milan	46.84	305	⇓P	P	16 36 34.2	0.0	
	baz=47							
120A	U Bar Ranch, L	46.99	301	⇓P	P	16 36 35.9	+0.5	
	baz=47							
U21A	Nageezi	47.01	306	⇓P	P	16 36 35.8	+0.2	
	baz=47							
J24A	Dixon Ranch, L	47.01	316	⇑P	P	16 36 36.1	+0.8	
	baz=47							
Y20A	Horse Springs,	47.03	302	⇑P	P	16 36 36.2	+0.5	
	baz=47							
CFAA	Coronel Fontan	47.04	189	P	P	16 36 34.8	-0.6	
CFAA	Coronel Fontan	47.04	189	P	P	16 36 34.8	-0.6	
	0.6nm,0.7s,baz=343,slow=8.4,SNR=7.0							
I24A	Kuemmerle Ranc	47.19	317	⇑P	P	16 36 37.3	+0.6	
	baz=47							
O22A	Kremmling	47.22	311	⇓P	P	16 36 36.9	-0.2	
	baz=47							
X20A	Quemado	47.25	303	⇓P	P	16 36 38.1	+0.7	
	baz=47							
319A	Douglas	47.35	299	⇑P	P	16 36 38.9	+0.8	
	baz=47							
N22A	Wattenberg Ran	47.35	312	⇑P	P	16 36 38.2	0.0	
	baz=47							
H24A	Dirks Ranch, A	47.50	318	⇓P	P	16 36 39.0	-0.1	
	baz=48							
G24A	Alzada	47.66	318	⇑P	P	16 36 40.9	+0.6	
	baz=48							
P21A	Newcastle	47.68	310	⇑P	P	16 36 40.5	-0.2	
	baz=48							
S20A	Disappointment	47.90	308	⇑P	P	16 36 42.7	+0.2	
	baz=48							
K22A	Casper	48.03	314	⇑P	P	16 36 43.5	+0.2	
	baz=48							
N21A	Black Mountain	48.11	312	⇓P	P	16 36 44.3	+0.3	
	baz=48							
PV01	Paradox Valley	48.14	308	eP	P	16 36 44.4	+0.1	
	177nm,0.6s							
M21A	Separation Pea	48.26	313	⇑P	P	16 36 45.0	-0.2	
	baz=48							
D24A	Glendive	48.37	321	⇑P	P	16 36 45.8	+0.1	
	baz=48							
P20A	De Beque	48.37	310	⇑P	P	16 36 45.8	-0.3	
	baz=48							
L21A	Rawlins	48.38	313	⇓P	P	16 36 46.5	+0.4	
	baz=48							
X18A	Snowflake	48.43	303	⇑P	P	16 36 47.0	+0.4	
	baz=48							
I22A	9 Mile Ranch,	48.45	316	⇓P	P	16 36 45.9	-0.5	
	baz=48							
F23A	Volborg	48.45	319	⇓P	P	16 36 46.6	+0.2	
	baz=48							
K21A	Alcova	48.53	314	⇑P	P	16 36 47.3	+0.1	
	baz=48							
PV10	Paradox Valley	48.56	308	eP	P	16 36 46.6	-1.0	
H22A	Clearmont	48.62	317	⇑P	P	16 36 48.0	+0.2	
	baz=49							
N20A	Spence Gulch,	48.67	311	⇓P	P	16 36 48.5	+0.2	
	baz=49							
M20A	Sweetwater, Wa	48.81	312	⇑P	P	16 36 49.2	-0.2	
	baz=49							
G22A	Birney	48.82	318	⇓P	P	16 36 49.1	-0.1	
	baz=49							
P19A	Cripple Cowboy	48.85	310	⇑P	P	16 36 49.2	-0.5	
	baz=49							
J21A	Lysite	48.91	315	⇓P	P	16 36 50.1	+0.1	
	baz=49							
DGMT	Dagmar	48.91	322	⇓P	P	16 36 50.2	+0.5	
	baz=49							
D23A	Lindsay	48.94	320	⇓P	P	16 36 50.4	+0.4	
	baz=49							
A24A	Westby	49.00	323	⇑P	P	16 36 51.7	+1.2	
	baz=49							
L20A	Wamsutter	49.08	313	⇓P	P	16 36 51.8	+0.3	
	baz=49							
E22A	Miles City	49.09	319	⇑P	P	16 36 52.1	+0.9	
	baz=49							
H21A	Big Horn, Sher	49.09	317	⇑P	P	16 36 51.5	+0.1	
	baz=49							
S18A	Hurst Farm, Bl	49.12	307	⇑P	P	16 36 51.8	-0.1	
	baz=49							
O19A	Miners Draw (B	49.14	311	⇓P	P	16 36 51.8	-0.1	
	baz=49							
C23A	Lambert	49.20	321	⇑P	P	16 36 53.1	+1.1	
	baz=49							
K20A	Yellowstone Ra	49.29	314	⇑P	P	16 36 52.5	-0.5	
	baz=49							
J20A	Shoshoni	49.34	315	⇑P	P	16 36 53.7	+0.4	
	baz=49							
B23A	Brockton	49.38	322	⇑P	P	16 36 54.3	+0.9	
	baz=49							
D22A	Cohagen	49.53	320	⇑P	P	16 36 55.1	+0.6	
	baz=50							
I20A	Worland	49.58	315	⇓P	P	16 36 55.2	+0.1	
	baz=50							
C22A	Vida	49.60	321	⇓P	P	16 36 56.3	+1.2	
	baz=50							
X16A	Lo Mia Camp, P	49.62	302	⇑P	P	16 36 56.0	+0.3	
	baz=50							
H20A	Greybull	49.68	316	⇓P	P	16 36 55.8	0.0	
	baz=50							
K19A	Absolon Red Bu	49.70	314	⇑P	P	16 36 56.2	+0.1	
	baz=50							
WUAZ	Wupatki	49.76	304	eP	P	16 36 57.2	+0.5	
	10nm,1.0s							
WUAZ	Wupatki	49.76	304	⇑P	P	16 36 57.3	+0.7	
	baz=50,SNR=5.2							
P18A	Preston Nutter	49.79	309	⇓P	P	16 36 56.4	-0.6	
	baz=50							
L19A	Farson	49.83	313	⇓P	P	16 36 57.3	+0.1	
	baz=50							
SRU	San Rafael	49.87	309	⇑P	P	16 36 57.3	-0.1	
	baz=50							
B22A	Reddig Ranch S	49.90	321	⇑P	P	16 36 58.6	+1.2	
	baz=50							
J19A	Crowheart	49.98	314	⇓P	P	16 36 58.4	+0.1	
	baz=50,SNR=15							
D21A	La Casta Ranch	50.00	320	⇓P	P	16 36 58.6	+0.4	
	baz=50							
G20A	Bridger	50.08	317	⇓P	P	16 36 59.0	+0.1	
	baz=50							
PDAR	Pinedale Array	50.18	314	P	P	16 36 59.8	-0.1	
PDAR				pP	pP	16 37 13.8	+0.2	
PDAR	Pinedale Array	50.18	314	P	P	16 36 59.8	-0.1	
	5.1nm,0.8s,baz=117,slow=9.5,SNR=14							
PDAR				pP	pP	16 37 13.8	+0.2	
	3.8nm,0.9s,baz=113,slow=12,SNR=5.3							
PDAR				LR	LR	16 56 53.2		
	comp=Z,96nm,19.8s,baz=112,slow=34							
F20A	Billings	50.25	318	⇓P	P	16 37 00.5	+0.3	
	baz=50							
L18A	Fontenelle, Gr	50.26	312	⇑P	P	16 37 00.1	-0.4	
	baz=50							
Q16A	Castle Valley	50.31	308	⇓P	P	16 37 00.5	-0.4	
	baz=50							
C21A	Desert Coulee	50.37	320	⇓P	P	16 37 01.9	+0.9	
	baz=50							
H19A	Powell	50.40	316	⇓P	P	16 37 01.5	+0.1	
	baz=50							
214A	Organ Pipe Nat	50.41	299	⇓P	P	16 37 02.6	+1.1	
	baz=50							
E20A	Meyer Farm, Mu	50.50	319	⇑P	P	16 37 02.7	+0.7	
	baz=50							
B21A	Ellsworth Farm	50.57	321	⇓P	P	16 37 03.4	+1.0	
	baz=51							
M17A	Scullys Gap (B	50.59	312	⇑P	P	16 37 02.7	-0.3	
	baz=51							
I18A	Diamond G Ranc	50.65	315	⇓P	P	16 37 03.5	+0.1	
	baz=51							
U15A	North Rim	50.66	305	⇑P	P	16 37 03.9	+0.3	
	baz=51							
Z14A	Wintersburg	50.70	301	⇑P	P	16 37 04.3	+0.8	
	baz=51							
D20A	Manuel Ranch,	50.73	319	⇑P	P	16 37 04.7	+1.0	
	baz=51							
DAU	Daniels Canyon	50.74	310	eP	P	16 37 04.6	+0.4	
	6.3nm,0.9s							
RLMT	Red Lodge	50.75	316	eP	P	16 37 05.0	+1.0	
	6.8nm,0.9s							
F19A	Roth Farm, Mol	50.79	317	⇓P	P	16 37 04.3	+0.1	
	baz=51							
Y14A	Wickenburg	50.83	302	⇓P	P	16 37 05.1	+0.5	
	baz=51							
H18A	Shoshone NF, C	50.86	316	⇑P	P	16 37 05.3	+0.4	
	baz=51							
C20A	Veseth Ranch,	50.89	320	⇓P	P	16 37 05.8	+0.9	
	baz=51							
E19A	Rath Farm, Rou	50.91	318	⇓P	P	16 37 05.7	+0.6	
	baz=51							
MSU	Marysvale	50.99	308	eP	P	16 37 06.4	+0.4	
	16nm,1.5s							
G18A	Lazy EL Ranch,	51.01	317	⇑P	P	16 37 06.0	+0.1	
	baz=51							
B20A	Solberg Farm,	51.19	321	⇓P	P	16 37 06.7	-0.4	
	baz=51							
HWUT	Hardware Ranch	51.27	312	eP	P	16 37 06.2	-1.8	
	6.5nm,1.0s							
113A	Mohawk Valley,	51.31	300	⇓P	P	16 37 08.9	+0.7	
	baz=51							
F18A	Big Timber	51.31	317	⇑P	P	16 37 08.5	+0.4	
	baz=51							
C19A	Slack Wire Ran	51.55	320	⇑P	P	16 37 10.7	+0.9	
	baz=52							
E18A	Harlowton	51.67	318	⇓P	P	16 37 11.5	+0.7	
	baz=52							
W13A	Hualapai Mount	51.71	303	⇑P	P	16 37 12.4	+0.9	
	baz=52							
PDMCI	Parker Dam,Lak	51.81	302	⇑P	P	16 37 12.9	+1.0	
	baz=52							
ARUT	Antelope Range	51.81	306	eP	P	16 37 12.4	+0.3	
	4.3nm,0.6s							
D18A	Linhart Farms,	51.82	319	⇑P	P	16 37 12.9	+1.0	
	baz=52							
DUG	Dugway	51.84	309	eP	P	16 37 12.6	+0.4	
	5.4nm,0.9s							
DUG	Dugway	51.84	309	⇑P	P	16 37 12.4	+0.2	
	baz=52,SNR=6.8							
F17A	Fitzpatrick Pl	51.93	317	⇓P	P	16 37 13.5	+0.7	
	baz=52							
H16A	Russell Place,	51.94	315	⇓P	P	16 37 13.7	+0.7	
	baz=52							
EGMT	Eagleton	52.10	320	eP	P	16 37 14.2	+0.3	
	9.4nm,1.0s							
EGMT	Eagleton	52.10	320	⇑P	P	16 37 15.0	+1.1	
	baz=52							
E17A	Martinsdale	52.25	318	⇓P	P	16 37 16.1	+0.9	
	baz=52							
B18A	Beardsley Farm	52.25	320	⇓P	P	16 37 16.2	+1.2	
	baz=52							
G16A	Moss Hill, Enn	52.48	316	⇑P	P	16 37 17.4	+0.5	
	baz=52							
A18A	Metzger Ranch,	52.49	321	⇑P	P	16 37 17.2	+0.4	
	baz=52,SNR=5.3							
BOZ	Bozeman (W)	52.49	316	eP	P	16 37 17.1	+0.1	
	2.2nm,0.8s							
I15A	Monteview	52.58	314	⇑P	P	16 37 18.4	+0.8	
	baz=53							
C17A	Wharram Farm,	52.59	319	⇑P	P	16 37 18.4	+0.9	
	baz=53							
IRM	Iron Mountain	52.62	302	⇑P	P	16 37 18.4	+0.5	
	baz=53,SNR=8.5							
E16A	East Helena	52.80	317	⇓P	P	16 37 20.0	+0.7	
	baz=53							
BC3	Big Chuckawall	52.81	301	⇑P	P	16 37 20.3	+0.8	
	baz=53							
B17A	L&G Farms, Che	52.85	320	⇓P	P	16 37 20.8	+1.4	
	baz=53							
D16A	Dana Ranch, Ca	52.89	318	⇑P	P	16 37 20.8	+0.9	
	baz=53							
A17A	Triple J Farms	53.02	321	⇓P	P	16 37 21.1	+0.3	
	baz=53,SNR=5.4							
SWSC	Sam W. Stewart	53.02	300	⇓P	P	16 37 22.0	+1.1	
	baz=53							
J14A	Carey	53.12	313	⇑P	P	16 37 21.9	+0.2	
	baz=53							
F15A	Butte	53.13	316	⇑P	P	16 37 21.9	+0.2	
	baz=53							
C16A	Fuhringer Ranc	53.27	319	⇓P	P	16 37 23.2	+0.6	
	baz=53							
BELC	Belle Mtn. Jos	53.30	301	⇑P	P	16 37 23.6	+0.5	
	baz=53							
H14A	Leadore	53.36	315	⇓P	P	16 37 23.4	-0.1	
	baz=53							
B16A	M & M Farms, S	53.46	320	⇓P	P	16 37 24.2	+0.2	
	baz=54,SNR=5.1							
D15A	Lincoln	53.52	318	⇑P	P	16 37 25.0	+0.4	
	baz=54							
MONP	Monument Peak	53.54	300	⇓P	P	16 37 25.8	+0.8	
	baz=54							
A16A	West Butte Ran	53.58	320	⇑P	P	16 37 25.6	+0.7	
	baz=54,SNR=7.1							
R11A	Troy Canyon, C	53.58	307	⇑P	P	16 37 25.6	+0.4	
	baz=54							
J13A	Cove Ranch, Pi	53.60	313	⇑P	P	16 37 25.6	+0.4	
	baz=54							
PFO	Pinyon Flat Ob	53.64	301	⇓P	P	16 37 26.2	+0.6	
	baz=54							
HEC	Hector,Ludlow	53.67	302	⇓P	P	16 37 26.6	+0.9	
	baz=54							
I13A	Wildhorse Cree	53.69	314	⇑P	P	16 37 26.4	+0.5	
	baz=54							
C15A	Salmond Ranch,	53.81	319	⇓P	P	16 37 27.0	+0.3	
	baz=54,SNR=12							
HLID	Hailey	53.81	313	eP	P	16 37 25.6	-1.1	
	3.4nm,0.9s							
HLID	Hailey	53.81	313	⇑P	P	16 37 26.9	+0.2	
	baz=54							
B15A	Bradely Ranch,	53.96	319	⇑P	P	16 37 28.3	+0.6	
	baz=54							
E14A	Clinton	53.96	317	⇑P	P	16 37 28.3	+0.5	
	baz=54							
GSC	Goldstone	54.11	303	⇑P	P	16 37 30.0	+1.1	
	baz=54							
D14A	Greenough	54.17	318	⇓P	P	16 37 30.0	+0.8	
	baz=54							
SLMT	Seeley Lake	54.21	318	eP	P	16 37 30.2	+0.6	
	6.1nm,1.0s							
A15A	Johnson Ranch,	54.29	320	⇑P	P	16 37 30.2	+0.2	
	baz=54,SNR=8.9							
F13A	Darby	54.34	316	⇑P	P	16 37 31.0	+0.5	
	baz=54							
E13A	Victor	54.43	317	⇓P	P	16 37 31.6	+0.5	
	baz=54							
C14A	Swan Lake	54.54	318	⇓P	P	16 37 32.5	+0.7	
	baz=54							
A14A	Double T Ranch	54.71	320	⇑P	P	16 37 33.9	+0.7	
	baz=55							
YBMT	Yellow Bay	54.74	318	eP	P	16 37 33.4	0.0	
	5.9nm,0.8s							
MPMC	Manual Prospec	54.76	304	⇓P	P	16 37 34.5	+0.8	
	baz=55							
MFID	Camas Ranch	54.77	313	⇑P	P	16 37 34.1	+0.4	
	baz=55							
D13A	Husson	54.80	317	⇓P	P	16 37 34.1	+0.4	
	baz=55							
LRMC	Laurel Mountai	54.85	303	⇓P	P	16 37 34.9	+0.5	
	baz=55							
EDW2	Edwards Air Fo	55.03	302	⇑P	P	16 37 35.6	0.0	
	baz=55							
C13A	Hot Springs	55.04	318	⇑P	P	16 37 36.3	+0.8	
	baz=55							
DBIC	Dimbokro	55.07	92	P	P	16 37 35.9	-0.2	
DBIC	Dimbokro	55.07	92	P	P	16 37 35.9	-0.2	
	4.3nm,1.1s,baz=259,slow=8.7,SNR=4.2							
DBIC				LR	LR	16 56 22.9		
	comp=Z,114nm,19.3s,baz=166,slow=31							
B13A	Whitefish	55.18	319	⇓P	P	16 37 37.2	+0.7	
	baz=55							
BSMT	Bassoo Peak	55.23	318	eP	P	16 37 37.5	+0.6	
	2.1nm,0.8s							
NV11	Mina Array Sit	55.59	306	eP	P	16 37 39.0	-0.7	
NVAR	Mina Array Bea	55.70	306	P	P	16 37 40.8	+0.2	
NVAR	Mina Array Bea	55.70	306	P	P	16 37 40.8	+0.2	
	3.2nm,0.7s,baz=97,slow=6.6,SNR=27							
C11A	Tepee Creek (N	56.18	318	⇑P	P	16 37 44.3	+0.7	
	baz=56							
PLCA	Paso Flores	56.34	189	eP	P	16 37 44.9	+0.2	
PLCA	Paso Flores	56.34	189	P	P	16 37 45.4	+0.7	
	5.0nm,0.7s,baz=6.4,slow=7.6,SNR=14							
PKM	Peak Mountain	56.53	302	⇓P	P	16 37 47.6	+1.1	
	baz=56							
NEW	Newport	56.85	318	eP	P	16 37 47.5	-0.8	
	5.2nm,0.7s							
NEW	Newport	56.85	318	⇑P	P	16 37 48.7	+0.3	
	baz=57,SNR=5.8							
BEKR	Beckworth	57.48	308	eP	P	16 37 52.0	-1.1	
	1.4nm,0.9s							
SUMG	Summit	58.89	8	eP	P	16 38 03.2	+0.6	
	3.8nm,0.4s							
TOA0	Torodi Ar. Sit	60.09	83	eP	P	16 38 11.1	-0.3	
TORD	Torodi Ar. Bea	60.09	83	P	P	16 38 11.1	-0.3	
TORD	Torodi Ar. Bea	60.09	83	P	P	16 38 11.1	-0.3	
	2.4nm,0.6s,baz=280,slow=6.3,SNR=21							
TORD				LR	LR	17 00 27.0		
	comp=Z,153nm,20.0s,baz=160,slow=32							
YKA	Yellowknife Ar	60.55	334	P	P	16 38 13.2	-0.6	
YKA				pP	pP	16 38 27.6	-0.4	
YKA	Yellowknife Ar	60.55	334	P	P	16 38 13.1	-0.6	
	3.8nm,0.7s,baz=106,slow=7.4,SNR=51							
YKA				pP	pP	16 38 27.5	-0.4	
	2.5nm,0.6s,baz=106,slow=7.3,SNR=8.3							
NLWA	Neilton Lookou	61.10	316	eP	P	16 38 14.4	-3.5	
KEST	Kesra	65.02	57	P	P	16 38 44.5	+0.5	
KEST	Kesra	65.02	57	P	P	16 38 44.5	+0.5	
	1.5nm,0.9s,baz=354,slow=2.4,SNR=2.1							
DLBC	Dease Lake	66.60	328	P	P	16 38 54.7	+0.8	
NB2	NORSAR Subarra	68.02	30	P	P	16 39 04.0	+1.3	
	comp=Z,1.6nm,0.7s,baz=260,slow=6.5							
NOA	NORSAR Array B	68.02	30	P	P	16 39 03.9	+1.1	
NOA				sP	sP	16 39 21.6	-1.3	
NOA	NORSAR Array B	68.02	30	P	P	16 39 03.9	+1.1	
	comp=Z,2.0nm,0.8s,baz=262,slow=6.4,SNR=6.9							
NOA				sP	sP	16 39 21.6	-1.3	
	comp=Z,1.0nm,0.7s,baz=262,slow=6.2,SNR=2.2							
NOA				LR	LR	17 01 13.9		
	comp=Z,37nm,21.1s,baz=205,slow=29							
GERES	GERESS Array B	68.35	43	P	P	16 39 05.0	-0.1	
GERES	GERESS Array B	68.35	43	P	P	16 39 05.0	-0.1	
	comp=Z,0.6nm,0.7s,baz=273,slow=5.2,SNR=4.0							
ILAR	Eielson Array	74.97	334	P	P	16 39 44.1	-0.3	
ILAR				pP	pP	16 39 59.4	+0.4	
ILAR	Eielson Array	74.97	334	P	P	16 39 44.1	-0.3	
	comp=Z,1.3nm,0.7s,baz=104,slow=4.7,SNR=21							
ILAR				pP	pP	16 39 59.4	+0.4	
	comp=Z,1.0nm,0.6s,baz=78,slow=4.8,SNR=5.4							
FINES	FINESS Array B	75.20	30	P	P	16 39 46.0	+0.2	
FINES	FINESS Array B	75.20	30	P	P	16 39 46.0	+0.2	
	comp=Z,2.3nm,0.7s,baz=272,slow=5.5,SNR=6.9							
MCK	McKinley	75.94	333	P	P	16 39 49.0	-1.1	
TRF	Thorofare Moun	76.57	332	eP	P	16 39 53.4	-0.5	
	comp=Z,7.3nm,0.7s							
BR131	Keskin Array S	83.56	51	eP	P	16 40 32.0	0.0	
	comp=Z,1.8nm,0.8s							
BRTR	Keskin Array B	83.56	51	P	P	16 40 32.5	+0.4	
BRTR	Keskin Array B	83.56	51	P	P	16 40 32.5	+0.4	
	comp=Z,1.5nm,0.8s,baz=250,slow=4.4,SNR=9.8							
KBZ	Khabaz	89.02	45	P	P	16 40 58.2	-0.3	
KBZ	Khabaz	89.02	45	P	P	16 40 58.2	-0.3	
	comp=Z,1.3nm,0.6s,baz=282,slow=7.3,SNR=5.0							
PPT	Papeete	93.68	253	LR	LR	17 14 54.3		
	comp=Z,80nm,19.9s,baz=150,slow=30							
WMQ	Urumqi	114.52	25	ePKP	PKPdf	16 46 46.0	+2.4	
CN2	Changchun	121.14	355	ePKP	PKPdf	16 46 59.0	+2.7	
HHC	Hu-ho-hao-te	123.84	7	ePKP	PKPdf	16 46 59.0	-2.7	
HHC				PP	PP	16 48 46.8	+3.0	
HHC				PKS	PKSdf	16 50 34.5	-4.0	
HHC				SKS	SKSdf	16 54 06.5	-3.2	
HHC				SKKS	SKKSac	16 55 34.5	-5.2	
HHC				SS	SS	17 05 29.8	+1.5	
HHC				AMB	AMB			
	comp=Z,200nm,4.2s							
HHC				LR	LR			
	comp=Z,93nm,16.7s							
MJAR	Matsushiro Arr	125.71	342	PKP	PKPdf	16 47 04.7	-0.6	
MJAR	Matsushiro Arr	125.71	342	PKP	PKPdf	16 47 04.7	-0.6	
	comp=Z,1.6nm,0.6s,baz=118,slow=0.8,SNR=6.5							
LZH	Lanzhou	126.96	16	ePKP	PKPdf	16 47 01.5	-6.4	
LZH				sPKP		16 47 26.0		
LZH				LR	LR			
	comp=N,130nm,18.3s							
LZH				LR	LR			
	comp=E,140nm,18.0s							
LZH				LR	LR			
	comp=Z,160nm,20.0s							
CD2	Chengdu	131.79	18	PKP	PKPdf	16 47 15.3	-1.8	
NJ2	Nanjing	133.12	1	ePKP	PKPdf	16 47 17.5	-1.9	
KMI	Kunming	136.78	23	PKP	PKPdf	16 47 21.8	-5.0	
GYA	Guiyang	136.82	17	ePdif	Pdif	16 44 30.8	-2.3	
GYA				PKP	PKPdf	16 47 25.5	-1.2	
GYA				sPKP		16 47 48.5		
GYA				PP	PP	16 50 11.0	+2.8	
GYA				AMB	AMB			
	comp=Z,80nm,7.6s							
CMAR	Chiang Mai Arr	140.94	32	PKP	PKPdf	16 47 34.8	+0.5	
CMAR	Chiang Mai Arr	140.94	32	PKP	PKPdf	16 47 34.7	+0.5	
	comp=Z,0.5nm,0.8s,baz=336,slow=2.0,SNR=3.9							
ASAR	Alice Springs	164.04	236	PKP	PKPdf	16 48 07.3	0.0	
ASAR				PKPab	PKPab	16 49 01.5	+0.8	
ASAR	Alice Springs	164.04	236	PKP	PKPdf	16 48 07.3	0.0	
	comp=Z,0.5nm,0.8s,baz=118,slow=1.4,SNR=5.5							
ASAR				PKPab	PKPab	16 49 01.5	+0.8	
	comp=Z,0.3nm,0.5s,baz=108,slow=4.1,SNR=6.1							
WRA	Warramunga Arr	165.13	249	PKP	PKPdf	16 48 08.3	0.0	
WRA				PKPab	PKPab	16 49 05.8	+0.2	
WRA	Warramunga Arr	165.13	249	PKP	PKPdf	16 48 08.3	0.0	
	comp=Z,0.8nm,1.0s,baz=78,slow=0.7,SNR=3.5							
WRA				PKPab	PKPab	16 49 05.8	+0.2	
	comp=Z,1.9nm,0.7s,baz=97,slow=4.4,SNR=23							

*IDC **28** 16:31:00.5±1.9, 36.30N×141.37E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=40.3km s-min=20.3km az=24.0*
*JMA **28** 16:31:03.7±0.1, 36.71N×141.27E, h46km±2km, M3.4*
*ISCJB **28** 16:31:04.0±1.5, 36.73N±0.05×141.28E±0.09, h28km±5km, mb3.2/3, Error ellipse: s-maj=13.7

PETK	**Petropavlovsk-**	**6.09**	**7**	Pn	Pn	16 44 30.6	-2.1
	0.4nm,0.3s,baz=189,slow=16,SNR=8.7						
PETK				Sn	Sn	16 45 40.9	-2.3
	0.3nm,0.3s,baz=214,slow=18,SNR=2.7						
ASAJ	**Asahikawa**	**10.13**	**258**	Pn	Pn	16 45 28.8	+0.7
	0.3nm,0.3s,baz=87,slow=18,SNR=4.0						
FX1	**Attu Island--F**	**12.23**	**55**	Pn	Pn	16 45 56.0	-0.8
	0.5nm,0.3s,baz=34,slow=22,SNR=6.4						
FX1				Sn	Sn	16 48 01.4	-12
	1.9nm,0.3s,baz=111,slow=13,SNR=8.2						
ZALV	**Zalesovo Beam**	**44.25**	**307**	P	P	16 51 13.0	+0.7
	0.3nm,0.4s,baz=66,slow=6.7,SNR=3.4						
MKAR	**Makanchi Array**	**48.79**	**299**	P	P	16 51 47.6	-0.4
	0.5nm,0.7s,baz=68,slow=7.9,SNR=6.2						
CMAR	**Chiang Mai Arr**	**54.66**	**259**	P	P	16 52 33.4	+1.2
	0.4nm,0.7s,baz=43,slow=9.3,SNR=3.3						
FINES	**FINESS Array B**	**64.69**	**336**	P	P	16 53 39.6	-1.1
	1.5nm,0.8s,baz=20,slow=8.9,SNR=3.4						
ASAR	**Alice Springs**	**73.29**	**202**	P	P	16 54 33.2	-1.3
	0.2nm,0.7s,baz=12,slow=6.7,SNR=3.4						
TXAR	**Lajitas Array**	**75.34**	**63**	P	P	16 54 47.9	+1.1
	0.4nm,0.6s,baz=298,slow=4.7,SNR=6.4						

IDC 28 16:53:59.6±2.0, 42.63S×72.89W, h0km, mb3.9/3, mb1 3.8/4, mb1mx3.7/19, mbtmp3.8/4, ML3.1/1, MS3.1/1, Ms1 3.0/1, ms1mx2.5/24, Error ellipse: s-maj=54.1km s-min=15.6km az=120.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.58**	**44**	Pn	Pn	16 54 41.0	-1.8
	0.8nm,0.3s,baz=221,slow=14,SNR=10						
PLCA				Pg	Pb	16 54 47.8	+0.9
	6.1nm,0.3s,baz=222,slow=17,SNR=93						
PLCA				Lg	Lg	16 55 22.2	
	25nm,0.3s,baz=102,slow=7.7,SNR=16						
PLCA				LR	LR	16 55 57.0	
	comp=Z,346nm,20.3s,baz=67,slow=46						
SNAA	**Sanae**	**43.96**	**155**	P	P	17 02 07.7	-0.3
	1.3nm,1.1s,baz=264,slow=10,SNR=2.7						
QSPA	**South Pole Qui**	**47.62**	**180**	P	P	17 02 37.5	+0.4
	7.2nm,1.2s,baz=155,slow=5.7,SNR=5.6						
TORD	**Torodi Ar. Bea**	**87.79**	**70**	P	P	17 06 50.4	-0.4
	0.4nm,0.8s,baz=224,slow=4.0,SNR=3.1						
MKAR	**Makanchi Array**	**161.90**	**68**	PKPab	PKPab	17 14 48.0	-0.2
	0.4nm,0.9s,baz=256,slow=4.2,SNR=3.5						

*CSEM **28** 17:00:24.6±1.2, 36.78N×21.64E, h20km, MD2.9, Error ellipse: s-maj=27.4km s-min=11.1km az=63.0*
ATH 28 17:00:25.4, 36.80N×21.63E, h12km, MD2.9/5, 2D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.13**	**43**	*i*Pg	Pg	17 00 28.9	+0.2
PYL				*e*SG	Sg	17 00 31.1	0.0
PYL	**PYLOS**	**0.13**	**43**	*i*Pg	Pg	17 00 28.9	+0.2
PYL				*e*Sg	Sg	17 00 31.1	0.0
ITM	**Ithomi**	**0.45**	**32**	*e*PB	Pg	17 00 34.1	-0.2
ITM				*e*SB	Sg	17 00 40.6	+0.3
ITM	**Ithomi**	**0.45**	**32**	*e*Pb	Pg	17 00 34.1	-0.2
ITM				*e*Sb	Sg	17 00 40.6	+0.3
DYR	**Agios Nikonas**	**0.57**	**94**	*e*PB	Pg	17 00 36.4	-0.1
DYR	**Agios Nikonas**	**0.57**	**94**	*e*Pb	Pg	17 00 36.4	-0.1
KLV	**Kalavryta, Ach**	**1.31**	**18**	*e*PB	Pb	17 00 49.9	-0.1
KLV				*e*SB	Sg	17 01 08.3	+0.5
KLV	**Kalavryta, Ach**	**1.31**	**18**	*e*Pb	Pb	17 00 49.9	-0.1
DID	**Didima**	**1.47**	**61**	*e*PB	Pb	17 00 52.9	+0.2

*ISK **28** 17:01:23.6, 39.48N×26.10E, h15km, MD2.8*
*ATH **28** 17:01:23.9, 39.47N×26.20E, h20km±1km, MD2.9/4*
*DDA **28** 17:01:23.9, 39.44N×26.17E, h7km, MD2.8*
*ISCJB **28** 17:01:24.0±0.8, 39.46N±0.03×26.12E±0.05, h12km±5km, Error ellipse: s-maj=7.1km s-min=4.1km az=168.6*
*CSEM **28** 17:01:24.3±0.1, 39.45N×26.11E, h15km, MD2.9, Error ellipse: s-maj=4.7km s-min=2.2km az=78.0*
ISC 28 17:01:23.7±1.2, 39.46N±0.02×26.13E±0.04, h13km±10km, n31, σ0§42/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	**Paraskevi**	**0.24**	**153**	*e*PB	**Pb**	**17 01 29.5**	**-0.4**
PRK				*e*SB	**Sb**	**17 01 33.3**	**-0.7**
PRK	**Paraskevi**	**0.24**	**153**	*e*Pb	**Pb**	**17 01 29.5**	**-0.4**
PRK				*e*Sb	**Sb**	**17 01 33.3**	**-0.7**
BOZC	**Bozcaada**	**0.38**	**351**	*i* P	**Pb**	**17 01 33.0**	**+0.6**
BOZC				*i* S	**Sb**	**17 01 37.9**	**-0.2**
LIA	**Limnos Island**	**0.85**	**301**	*e*PN	**Pn**	**17 01 41.2**	**-0.1**
LIA				*e*SN	**Sn**	**17 01 53.5**	**-0.1**
LIA	**Limnos Island**	**0.85**	**301**	*e*Pn	**Pn**	**17 01 41.2**	**-0.1**
LIA				*e*Sn	**Sn**	**17 01 53.5**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.97**	**16**	*e*PG	**Pb**	**17 01 42.0**	**-0.3**
GELI				*e*SG	**Sn**	**17 01 56.6**	**0.0**
GELI	**Tayfur-Gelibol**	**0.97**	**16**	*e*Pg	**Pb**	**17 01 42.0**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.97**	**16**	*e*Sg	**Sn**	**17 01 56.6**	**0.0**
CHOS	**Chios island**	**1.08**	**183**	*e*PN	**Pg**	**17 01 45.0**	**+0.6**
CHOS				*e*SN	**Sn**	**17 01 59.5**	**+0.2**
CHOS	**Chios island**	**1.08**	**183**	*e*Pn	**Pg**	**17 01 45.0**	**+0.6**
CHOS				*e*Sn	**Sn**	**17 01 59.5**	**+0.2**
URLA	**Izmir**	**1.16**	**162**	*i* P	**Pn**	**17 01 45.5**	**-0.1**
URLA				*i* S	**Sn**	**17 02 01.3**	**0.0**
URLA	**Izmir**	**1.16**	**162**	*i* P	**Pn**	**17 01 45.5**	**-0.1**
URLA				*i* S	**Sn**	**17 02 01.3**	**0.0**
BALY	**Balya**	**1.18**	**76**	*i* P	**Pb**	**17 01 46.0**	**0.0**
BALY				*i* S	**Sg**	**17 02 01.8**	**0.0**
ERIK	**Erikli-Kesan**	**1.24**	**14**	*e*PN	**Pg**	**17 01 47.2**	**-0.4**
ERIK				*e*SN	**Sn**	**17 02 03.3**	**+0.1**
ERIK	**Erikli-Kesan**	**1.24**	**14**	*e*Pn	**Pg**	**17 01 47.2**	**-0.4**
ERIK				*e*Sn	**Sn**	**17 02 03.3**	**+0.1**
ENEZ	**Enez**	**1.27**	**1**	*e*PN	**Pb**	**17 01 47.5**	**+0.1**
ENEZ	**Enez**	**1.27**	**1**	*e*Pn	**Pb**	**17 01 47.5**	**+0.1**
BLCB	**Balcova**	**1.29**	**146**	*e*PN	**Pb**	**17 01 47.8**	**0.0**
BLCB	**Balcova**	**1.29**	**146**	*e*Pn	**Pb**	**17 01 47.8**	**0.0**
KRBG	**Karabiga-Canak**	**1.29**	**44**	*e*PN	**Pb**	**17 01 47.5**	**-0.3**
KRBG	**Karabiga-Canak**	**1.29**	**44**	*e*Pn	**Pb**	**17 01 47.5**	**-0.3**
GONE	**Gonen-Balikesi**	**1.33**	**64**	*e*PN	**Pb**	**17 01 48.5**	**0.0**
GONE	**Gonen-Balikesi**	**1.33**	**64**	*e*Pn	**Pb**	**17 01 48.5**	**0.0**
ALN	**Alexandroupoli**	**1.43**	**357**	*e*PN	**Pg**	**17 01 50.9**	**-0.3**
ALN				*e*SN	**Sg**	**17 02 09.9**	**0.0**
ALN	**Alexandroupoli**	**1.43**	**357**	*e*Pn	**Pg**	**17 01 50.9**	**-0.3**
ALN				*e*Sn	**Sg**	**17 02 09.9**	**0.0**
MRMT	**Marmara Adasi**	**1.60**	**44**	*e*PN	**Pb**	**17 01 52.5**	**-0.6**
MRMT	**Marmara Adasi**	**1.60**	**44**	*e*Pn	**Pb**	**17 01 52.5**	**-0.6**
KCTX	**Karacabey (Bur**	**1.89**	**64**	*e*PN	**Pn**	**17 01 56.5**	**+0.8**
KCTX	**Karacabey (Bur**	**1.89**	**64**	*e*Pn	**Pn**	**17 01 56.5**	**+0.8**
EDRB	**Edirne**	**2.43**	**11**	*e*PN	**Pn**	**17 02 03.9**	**+0.9**
EDRB	**Edirne**	**2.43**	**11**	*e*Pn	**Pn**	**17 02 03.9**	**+0.9**

*ISCJB **28** 17:08:43.9±0.6, 66.98N±0.03×20.8E±0.1, h0km, Error ellipse: s-maj=6.0km s-min=4.1km az=21.3*
*IDC **28** 17:08:47.0±0.8, 67.03N×21.25E, h0km, mb1 3.2/5, mb1mx3.0/30, mbtmp3.2/5, ML2.3/5, Error ellipse: s-maj=15.8km s-min=7.4km az=112.0*
*HEL **28** 17:08:46.2±0.2, 67.05N×20.88E, h0km, ML1.6, Explosion*
ISC 28 17:08:45.1±0.9, 67.00N±0.04×20.95E±0.05, h0km, n12, σ1§63/23, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HEF	**Hetta**	**1.75**	**35**	*e*P	**Pn**	**17 09 16.1**	**-0.7**
HEF				*e*S	**Sn**	**17 09 39.8**	**0.0**
KIF	**Kilpisjarvi**	**2.02**	**358**	*e*P	**Pn**	**17 09 21.3**	**+1.0**
KIF				*e*SG	**Sb**	**17 09 47.9**	**-0.3**
RNF	**Rovaniemi**	**2.04**	**99**	*e*P	**Pn**	**17 09 22.1**	**+1.4**
RNF				*e*SG	**Sg**	**17 09 50.4**	**-0.2**
SGF	**Sodankyl**	**2.22**	**76**	*e*P	**Pn**	**17 09 24.6**	**+1.5**
SGF				*e*SB	**Sb**	**17 09 53.6**	**-0.3**
OUL	**Oulu**	**2.79**	**131**	*e*PB	**Pb**	**17 09 34.8**	**-0.9**
OUL				*e*SB	**Sb**	**17 10 10.4**	**+0.1**
ARCES	**ARCESS Array B**	**3.06**	**32**	Pn	**Pn**	**17 09 34.5**	**-0.2**
	0.3nm,0.3s,baz=218,slow=13,SNR=7.6						
ARCES				Sn	**Sn**	**17 10 13.8**	**+1.8**
	0.7nm,0.3s,baz=213,slow=26,SNR=6.3						
VRF	**Varrio**	**3.43**	**73**	*e*P	**Pn**	**17 09 40.6**	**+0.8**
KEF	**Keuruu**	**5.14**	**159**	*e*P	**Pn**	**17 10 05.9**	**+2.8**
KEF				*e*S	**Sn**	**17 11 03.9**	**+0.8**
KEF				*e*SG	**Sg**	**17 11 25.3**	**-4.6**
KEF				MSG		17 11 26.1	
	comp=Z,0.5nm,0.1s						
FINES	**FINESS Array B**	**6.01**	**156**	Pn	**Pn**	**17 10 17.2**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=344,slow=12,SNR=5.5						
FINES				Sn	**Sn**	**17 11 26.1**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=342,slow=24,SNR=4.8						
NOA	**NORSAR Array B**	**7.34**	**220**	Pn	**Pn**	**17 10 34.9**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=35,slow=11,SNR=2.2						
NOA				Sn	**Sn**	**17 11 58.6**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=18,slow=16,SNR=2.1						
HFS	**Hagfors**	**7.61**	**209**	Pn	**Pn**	**17 10 38.0**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=4.2						
HFS				Sn	**Sn**	**17 12 02.6**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=25,slow=24,SNR=3.3						
SPITS	**Spitsbergen Ar**	**11.32**	**355**	Pn	**Pn**	**17 11 27.3**	**-0.4**
	baz=166,slow=18,SNR=2.7						

*ISK **28** 17:22:57.4, 39.30N×36.40E, h8km, MD2.8*
*DDA **28** 17:22:59.5, 39.25N×36.36E, h10km, MD3.0*
*CSEM **28** 17:22:59.3±0.3, 39.26N×36.29E, h5km, MD3.0, Error ellipse: s-maj=7.3km s-min=6.9km az=168.0*
ISC 28 17:22:59.6±1.1, 39.28N±0.03×36.31E±0.02, h9km±11km, n26, σ1§17/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINB	**Pinarbasi**	**0.60**	**173**	*i* P	**Pg**	**17 23 10.3**	**-1.0**
PINB				*i* S	**Sg**	**17 23 19.6**	**+0.3**
PINB	**Pinarbasi**	**0.60**	**173**	*i* P	**Pg**	**17 23 10.3**	**-1.0**
PINB				*i* S	**Sg**	**17 23 19.6**	**+0.3**
SARI	**SarD1z-Kayseri**	**0.67**	**153**	*e*PG	**Pn**	**17 23 15.9**	**+0.4**
SARI				*e*SG	**Sn**	**17 23 27.6**	**+1.5**
SARI	**SarD1z-Kayseri**	**0.67**	**153**	*e*Pg	**Pn**	**17 23 15.9**	**+0.4**
YOZ	**Yozgat**	**0.85**	**296**	*e*PG	**Pg**	**17 23 15.2**	**-0.7**
YOZ				*e*SG	**Sb**	**17 23 28.0**	**-0.2**
YOZ	**Yozgat**	**0.85**	**296**	*e*Pg	**Pg**	**17 23 15.2**	**-0.7**
YOZ				*e*Sg	**Sb**	**17 23 28.0**	**-0.2**
SCER	**sogukcermik**	**0.86**	**47**	*i* P	**Pg**	**17 23 16.2**	**+0.1**
SCER				*i* S	**Sb**	**17 23 27.9**	**-0.6**
SCER	**sogukcermik**	**0.86**	**47**	*i* P	**Pg**	**17 23 16.2**	**+0.1**
SCER				*i* S	**Sb**	**17 23 27.9**	**-0.6**
AVNT	**Avonos**	**1.24**	**247**	*i* P	**Pb**	**17 23 23.4**	**+0.1**
AVNT				*i* S	**Sb**	**17 23 39.2**	**-0.2**
AVNT	**Avonos**	**1.24**	**247**	*i* P	**Pb**	**17 23 23.4**	**+0.1**
AVNT				*i* S	**Sb**	**17 23 39.2**	**-0.2**
RSDY	**Resadiye-TOKAT**	**1.36**	**35**	*e*PN	**Pn**	**17 23 22.1**	**-2.8**
RSDY	**Resadiye-TOKAT**	**1.36**	**35**	*e*Pn	**Pn**	**17 23 22.1**	**-2.8**
CORM	**Corum**	**1.58**	**305**	*e*PN	**Pn**	**17 23 27.4**	**-0.4**
CORM	**Corum**	**1.58**	**305**	*e*Pn	**Pn**	**17 23 27.5**	**-0.4**
KEMA	**Kemaliye**	**1.69**	**90**	*i* P	**Pb**	**17 23 30.6**	**-0.4**
KEMA				*i* S	**Sg**	**17 23 54.5**	**+0.5**
KEMA	**Kemaliye**	**1.69**	**90**	*i* P	**Pb**	**17 23 30.6**	**-0.4**
KEMA				*i* S	**Sg**	**17 23 54.5**	**+0.5**
CTKT	**Corum**	**1.78**	**319**	*i* P	**Pb**	**17 23 33.1**	**+0.5**
CTKT				*i* S	**Sg**	**17 23 60.0**	**+3.1**
CTKT	**Corum**	**1.78**	**319**	*i* P	**Pb**	**17 23 33.1**	**+0.5**
KVT	**Kavak**	**1.81**	**354**	*e*PN	**Pn**	**17 23 29.4**	**-1.7**
KVT	**Kavak**	**1.81**	**354**	*e*Pn	**Pn**	**17 23 29.4**	**-1.7**
KMRS	**Kahramanmaras**	**1.83**	**165**	*e*PN	**Pn**	**17 23 30.6**	**-0.7**
KMRS	**Kahramanmaras**	**1.83**	**165**	*e*Pn	**Pn**	**17 23 30.6**	**-0.7**
KOZT	**Kozan**	**1.83**	**192**	*e*PN	**Pn**	**17 23 30.6**	**-0.7**
KOZT	**Kozan**	**1.83**	**192**	*e*Pn	**Pn**	**17 23 30.6**	**-0.7**
KELT	**Kelkit**	**2.43**	**68**	*i* P	**Pn**	**17 23 41.1**	**+1.4**
KELT				*i* S	**Sg**	**17 24 19.4**	**+1.6**
KELT	**Kelkit**	**2.43**	**68**	*i* P	**Pn**	**17 23 41.1**	**+1.4**

*IDC **28** 17:23:14.9±0.7, 34.15N×93.17E, h0km, mb3.8/14, mb1 4.0/18, mb1mx3.9/32, mbtmp3.9/18, ML3.7/4, MS3.7/12, Ms1 3.7/12, ms1mx3.4/42, Error ellipse: s-maj=21.4km s-min=15.3km az=37.0*
*BJI **28** 17:23:17.0, 34.35N×93.17E, h15km, mB4.7/7, mb4.4/12, ML3.9/5, Ms4.2/8, Ms7 4.1/6*
*ISCJB **28** 17:23:18.2±0.3, 34.36N±0.04×93.19E±0.04, h33km, mb3.9/16, MS3.8/11, Error ellipse: s-maj=6.8km s-min=4.5km az=152.1*
ISC 28 17:23:20.7±0.5, 34.39N±0.07×93.14E±0.05, h35km, n46, σ1§98/41, mb3.8/16, MS3.7/11, Qinghai

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**4.97**	**200**	Pn	**Pn**	**17 24 34.5**	**+1.2**
LSA				Sn	**Sn**	**17 25 33.8**	**+4.0**
GTA	**Gaotai**	**7.33**	**45**	*e*Pn	**Pn**	**17 25 06.5**	**+1.2**
GTA				Sn	Sn	17 26 32.8	+5.5
TAPN	**Taplejung**	**8.43**	**215**	*e*P	**Pn**	**17 25 21.1**	**+0.5**
	26nm,0.9s						
LZH	**Lanzhou**	**8.92**	**76**	*e*P	**Pn**	**17 25 26.3**	**-0.9**
LZH				pP		17 25 29.5	
LZH				sP		17 25 32.0	
LZH				PP	**PnPn**	**17 25 40.3**	**+5.6**
LZH				*e*S	**Sn**	**17 27 08.0**	**+1.5**
LZH				SS	**SnSn**	**17 27 22.5**	**+4.6**
LZH				pmax	pmax		
	comp=Z,45nm,1.3s						
LZH				pmax	pmax		
	comp=Z,150nm,4.0s						
LZH				LR	LR		
	comp=N,1μm,8.5s						
LZH				LR	LR		
	comp=E,540nm,7.4s						
LZH				LR	LR		
	comp=Z,730nm,9.5s						
GUN	**Gumba**	**8.96**	**226**	*e*P	**Pn**	**17 25 28.8**	**+0.8**
	comp=Z,30nm,0.8s						
ODAN	**Odare**	**8.99**	**215**	*e*P	**Pn**	**17 25 28.7**	**+0.4**
	comp=Z,28nm,0.8s						
RAMN	**Ramite**	**9.31**	**219**	*e*P	**Pn**	**17 25 33.7**	**+1.1**
KKN	**Kakani**	**9.41**	**228**	*e*P	**Pn**	**17 25 34.5**	**+0.4**
	comp=Z,31nm,0.9s						
PKI	**Pulchoki**	**9.50**	**226**	*e*P	**Pn**	**17 25 36.3**	**+1.0**
	comp=Z,76nm,1.0s						
PKIN	**Phulchoki**	**9.50**	**226**	*e*P	**Pn**	**17 25 36.7**	**+1.4**
	comp=Z,29nm,0.9s						
DMN	**Daman**	**9.65**	**228**	*e*P	**Pn**	**17 25 37.8**	**+0.4**
	comp=Z,38nm,0.9s						
DANN	**Dangsing**	**10.02**	**236**	*e*P	**Pn**	**17 25 43.0**	**+0.5**
	comp=Z,27nm,0.9s						
KOLN	**Koldanda**	**10.51**	**234**	*e*P	**Pn**	**17 25 49.0**	**0.0**
	comp=Z,32nm,1.0s						
SMLA	**Simla**	**13.83**	**261**	*e*PKP	**P**	**17 26 41.6**	**-0.6**
SMLA				AMB	AMB	17 26 42.7	
	comp=Z,21nm,1.0s						
DHRM	**DHARAMSHALA**	**14.25**	**266**	*e*PKP	Pn	17 26 36.3	-3.8
DHRM				AMB	AMB	17 26 46.9	
	comp=Z,8.0nm,0.9s						
MKAR	**Makanchi Array**	**14.87**	**330**	Pn	**Pn**	**17 26 46.1**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=136,slow=14,SNR=14						
CMAR	**Chiang Mai Arr**	**16.69**	**160**	Pn	**Pn**	**17 27 10.1**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=336,slow=11,SNR=16						
SONM	**Songino Array**	**16.70**	**32**	Pn	**Pn**	**17 27 11.5**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=214,slow=12,SNR=22						
SONM				LR	LR	17 34 30.1	
	comp=Z,172nm,21.6s,baz=220,slow=40						
AAK	**Ala-Archa**	**16.73**	**305**	Pn	**Pn**	**17 27 13.2**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=148,slow=6.6,SNR=4.6						
AAK				LR	LR	17 34 58.2	
	comp=Z,372nm,18.2s,baz=105,slow=42						
WHN	**Wuhan**	**18.30**	**96**	P	**P**	**17 27 29.5**	**-2.1**
WHN				*e*S	**Sn**	**17 30 50.3**	**-4.7**
WHN				LR	LR		
	comp=N,800nm,9.4s						
WHN				LR	LR		
	comp=E,2μm,10.8s						
WHN				LR	LR		
	comp=Z,2μm,11.2s						
KURBB	**Kurchatov Arra**	**19.42**	**331**	P	**P**	**17 27 43.2**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=139,slow=11,SNR=45						
ZALV	**Zalesovo Beam**	**20.42**	**346**	P	Pn	17 27 55.7	-1.1
	comp=Z,1.9nm,0.7s,baz=181,slow=12,SNR=10						
NJ2	**Nanjing**	**21.62**	**89**	*e*P	P	17 28 00.3	-7.4
NJ2				S	S	17 31 53.0	-12
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				LR	LR		
	comp=N,490nm,16.0s						
NJ2				LR	LR		
	comp=E,560nm,34.7s						
NJ2				LR	LR		
	comp=Z,750nm,20.6s						
BVAR	**Borovoye Array**	**24.67**	**326**	P	**P**	**17 28 38.7**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=128,slow=9.6,SNR=12						
KSRS	**Korea Array**	**28.24**	**74**	P	**P**	**17 29 10.6**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=270,slow=9.9,SNR=6.4						
KSRS				LR	LR	17 41 39.3	
	comp=Z,118nm,18.6s,baz=245,slow=39						
USRK	**Ussuriysk Arra**	**31.37**	**60**	LR	LR	17 43 04.8	
	comp=Z,165nm,20.2s,baz=255,slow=38						
MIB	**Mutribah**	**38.82**	**276**	*e*P	**P**	**17 30 40.9**	**-1.5**
MIB				AMb	AMB	17 30 42.1	
	comp=Z,12nm,1.0s						
NAY	**Al-Naaiem**	**39.08**	**275**	*e*P	**P**	**17 30 43.1**	**-1.4**
NAY				AMb	AMB	17 30 44.6	
	comp=Z,5.9nm,0.8s						
KBZ	**Khabaz**	**39.59**	**299**	P	**P**	**17 30 48.7**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=119,slow=13,SNR=3.5						
KBZ				LR	LR	17 50 22.9	
	comp=Z,104nm,18.6s,baz=33,slow=41						
ASF	**Jabal al Asfar**	**46.56**	**284**	P	**P**	**17 31 45.5**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=111,slow=4.1,SNR=3.2						
ASF				LR	LR	17 54 31.5	
	comp=Z,69nm,18.2s,baz=110,slow=40						
BRTR	**Keskin Array B**	**47.03**	**295**	P	**P**	**17 31 48.2**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=105,slow=8.1,SNR=5.0						
PETK	**Petropavlovsk-**	**48.49**	**47**	LR	LR	17 54 35.4	
	comp=Z,69nm,18.6s,baz=273,slow=39						
FINES	**FINESS Array B**	**49.62**	**324**	LR	LR	17 54 14.4	
	comp=Z,93nm,19.9s,baz=78,slow=37						
MLR	**Muntele Rosu**	**51.31**	**304**	P	**P**	**17 32 23.5**	**+2.0**
	comp=Z,0.5nm,0.7s,baz=126,slow=14,SNR=6.1						
SPITS	**Spitsbergen Ar**	**53.90**	**346**	LR	LR	18 01 15.7	
	comp=Z,62nm,20.1s,baz=145,slow=42						
NOA	**NORSAR Array B**	**56.80**	**325**	LR	LR	18 00 00.3	
	comp=Z,38nm,21.6s,baz=100,slow=39						
KMBO	**Kilima Mbogo**	**63.08**	**248**	P	**P**	**17 33 44.6**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=30,slow=20,SNR=3.1						
WRA	**Warramunga Arr**	**66.75**	**138**	P	**P**	**17 34 06.1**	**-2.5**
	comp=Z,0.4nm,0.5s,baz=335,slow=7.1,SNR=7.3						
ASAR	**Alice Springs**	**69.52**	**140**	P	**P**	**17 34 24.2**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=322,slow=6.1,SNR=15						
ILAR	**Eielson Array**	**70.68**	**23**	P	**P**	**17 34 31.9**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=285,slow=4.8,SNR=5.3						
YKA	**Yellowknife Ar**	**80.90**	**13**	P	**P**	**17 35 33.2**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=340,slow=5.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**83.88**	**282**	P	**P**	**17 35 46.1**	**-1.1**
	comp=Z,1.6nm,0.9s,baz=44,slow=5.5,SNR=4.8						
BBB	**Bella Bella**	**86.55**	**24**	LR	LR	18 19 45.1	
	comp=Z,53nm,18.6s,baz=279,slow=39						
SCHQ	**Schefferville**	**89.48**	**349**	P	**P**	**17 36 16.6**	**+2.7**
	comp=Z,2.5nm,0.9s,baz=300,slow=16,SNR=3.8						
YBH	**Yreka Blue Hor**	**97.41**	**26**	LR	LR	18 21 46.4	
	comp=Z,48nm,18.4s,baz=359,slow=36						
SIV	**San Ignacio**	**150.47**	**302**	PKPbc	**PKPbc**	**17 43 09.4**	**+0.2**
	comp=Z,1.4nm,1.0s,baz=112,slow=5.3,SNR=2.9						

*ISCJB **28** 17:26:45.6±0.3, 29.48N±0.07×43.02W±0.06, h14km, mb4.2/39, MS3.8/25, Error ellipse: s-maj=10.2km s-min=7.5km az=162.5*
*IDC **28** 17:26:45.2±0.5, 29.49N×43.00W, h0km, mb4.0/25, mb1 4.2/25, mb1mx4.1/33, mbtmp4.0/25, MS3.8/25, Ms1 3.8/25, ms1mx3.6/51, Error ellipse: s-maj=15.9km s-min=13.4km az=156.0*
*NEIC **28** 17:26:46.7±0.2, 29.47N×43.00W, h10km, mb4.6/14, Error ellipse: s-maj=6.6km s-min=4.9km az=161.0*
ISC 28 17:26:47.5±0.5, 29.49N±0.09×43.01W±0.08, h14km, n99, σ0§70/88, mb4.2/39, MS3.8/25, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBTS	**Babate**	**28.54**	**115**	LR	LR	17 41 41.3	
	comp=Z,226nm,18.1s,baz=128,slow=31						
SCHQ	**Schefferville**	**30.58**	**333**	P	**P**	**17 32 59.9**	**-0.8**
SCHQ	**Schefferville**	**30.58**	**333**	P	**P**	**17 32 59.9**	**-0.8**
	4.2nm,1.1s,baz=177,slow=8.0,SNR=4.9						
SCHQ				LR	LR	17 44 07.6	
	comp=Z,168nm,19.9s,baz=299,slow=34						
MDT	**Midelt**	**32.91**	**74**	LR	LR	17 43 42.8	
	comp=Z,119

SIV	San Ignacio	48.46	203	P	P	17 35 28.9	-0.8
	1.1nm,0.6s,baz=61,slow=7.4,SNR=5.0						
SIV				LR	LR	17 54 26.5	
	comp=Z,59nm,19.9s,slow=34						
FFC	Flin Flon	48.73	319	*eP*	P	17 35 31.3	-0.2
	3.6nm,0.7s						
ATAH	Atahualpa	49.84	229	LR	LR	17 56 40.4	
	comp=Z,86nm,19.0s,baz=190,slow=36						
LPAZ	La Paz	51.56	211	P	P	17 35 53.1	-0.9
LPAZ	La Paz	51.56	211	P	P	17 35 53.1	-0.9
	2.1nm,0.9s,baz=38,slow=7.0,SNR=5.3						
LPAZ				LR	LR	17 55 25.6	
	comp=Z,62nm,20.9s,baz=55,slow=33						
TXAR	Lajitas Array	52.28	286	P	P	17 35 58.9	0.0
TXAR	Lajitas Array	52.28	286	P	P	17 35 58.9	0.0
	1.0nm,0.9s,baz=96,slow=6.4,SNR=6.5						
TXAR				LR	LR	17 56 55.5	
	comp=Z,73nm,21.3s,baz=185,slow=35						
EGMT	Eagleton	53.55	310	*eP*	P	17 36 07.9	0.0
	14nm,1.3s						
PDAR	Pinedale Array	54.07	303	P	P	17 36 11.7	-0.2
PDAR	Pinedale Array	54.07	303	P	P	17 36 11.7	-0.2
	3.3nm,0.8s,baz=87,slow=7.7,SNR=22						
PDAR				LR	LR	17 57 42.2	
	comp=Z,215nm,18.7s,baz=110,slow=34						
FINES	FINESS Array B	54.62	33	P	P	17 36 14.4	-0.9
FINES	FINESS Array B	54.62	33	P	P	17 36 14.4	-0.9
	1.6nm,0.8s,baz=261,slow=7.9,SNR=2.2						
IMW	Indian Meadow	54.88	305	*eP*	P	17 36 18.3	+0.3
	5.6nm,1.0s						
TPAW	Teton Pass	54.96	305	*eP*	P	17 36 18.7	+0.3
	7.6nm,1.0s						
MLR	Muntele Rosu	55.37	53	P	P	17 36 21.1	-0.1
MLR	Muntele Rosu	55.37	53	P	P	17 36 21.1	-0.1
	1.2nm,1.1s,baz=297,slow=4.5						
HWUT	Hardware Ranch	55.73	302	*eP*	P	17 36 24.8	+0.8
	7.2nm,1.3s						
YKA	Yellowknife Ar	55.84	328	P	P	17 36 23.2	-0.9
YKA				PcP	PcP	17 37 24.7	+1.8
YKA	Yellowknife Ar	55.84	328	P	P	17 36 23.2	-0.9
	0.8nm,0.8s,baz=86,slow=7.5,SNR=11						
YKA				PcP	PcP	17 37 24.7	+1.8
	0.4nm,0.8s,baz=94,slow=5.2,SNR=4.3						
AKASG	Malin Array Be	56.83	46	P	P	17 36 30.2	-1.2
AKASG	Malin Array Be	56.83	46	P	P	17 36 30.2	-1.2
	0.9nm,0.5s,baz=284,slow=5.8,SNR=6.2						
CPUP	Villa Florida	57.17	195	LR	LR	18 01 22.6	
	comp=Z,73nm,18.1s,baz=240,slow=36						
NVAR	Mina Array Bea	61.51	300	P	P	17 37 04.0	-0.3
NVAR	Mina Array Bea	61.51	300	P	P	17 37 04.0	-0.3
	0.8nm,0.8s,baz=71,slow=6.6,SNR=4.9						
BRTR	Keskin Array B	62.16	58	P	P	17 37 08.2	-0.3
BRTR	Keskin Array B	62.16	58	P	P	17 37 08.2	-0.3
	2.1nm,0.9s,baz=284,slow=5.0,SNR=10						
KBZ	Khabaz	67.52	51	P	P	17 37 43.9	+0.8
KBZ	Khabaz	67.52	51	P	P	17 37 43.9	+0.8
	0.6nm,0.4s,baz=276,slow=9.2,SNR=2.8						
ILAR	Eielson Array	69.34	334	P	P	17 37 54.4	+0.1
ILAR	Eielson Array	69.34	334	P	P	17 37 54.4	+0.1
	0.9nm,0.9s,baz=72,slow=4.4,SNR=9.2						
AKTO	Aktyubinsk	74.34	41	LR	LR	18 06 19.0	
	comp=Z,56nm,22.0s,baz=113,slow=32						
PLCA	Paso Flores	74.39	201	P	P	17 38 25.1	+0.3
PLCA	Paso Flores	74.39	201	P	P	17 38 25.1	+0.3
	2.3nm,0.8s,baz=230,slow=2.0,SNR=3.7						
KDAK	Kodiak Island	75.10	329	LR	LR	18 12 37.5	
	comp=Z,275nm,18.3s,baz=99,slow=37						
ABKAR	Akbulak array	76.00	41	*eP*	P	17 38 34.6	+0.5
BVAR	Borovoye Array	79.56	34	P	P	17 38 54.5	+0.6
BVAR	Borovoye Array	79.56	34	P	P	17 38 54.5	+0.6
	1.0nm,0.9s,baz=316,slow=4.1,SNR=5.0						
KMBO	Kilima Mbogo	82.08	96	LR	LR	18 16 43.1	
	comp=Z,122nm,19.5s,baz=94,slow=36						
KURK	Kurchatov	84.99	33	P	P	17 39 22.6	+0.2
KURBB	Kurchatov Arra	85.01	33	P	P	17 39 22.6	+0.1
	1.7nm,0.9s,baz=311,slow=5.1,SNR=15						
ZALV	Zalesovo Beam	85.47	28	P	P	17 39 25.3	+0.6
ZALV	Zalesovo Beam	85.47	28	P	P	17 39 25.3	+0.6
	0.3nm,0.2s,baz=291,slow=6.0,SNR=3.7						
BOSA	Boshof	87.10	125	LR	LR	18 11 07.0	
	comp=Z,161nm,19.1s,baz=141,slow=31						
MKAR	Makanchi Array	89.45	34	P	P	17 39 44.0	-0.1
MKAR	Makanchi Array	89.45	34	P	P	17 39 44.0	-0.1
	0.7nm,0.9s,baz=313,slow=6.1,SNR=5.4						
PETK	Petropavlovsk-	95.80	348	LR	LR	18 28 51.4	
	comp=Z,30nm,18.6s,baz=142,slow=39						
VNDA	Vanda	130.55	187	PKP	PKPdf	17 45 57.0	+0.3
VNDA	Vanda	130.55	187	PKP	PKPdf	17 45 57.0	+0.3
	1.5nm,1.0s,baz=186,slow=9.2,SNR=4.9						

DDA 28 17:37:07.4,37.55N×35.70E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	Kozan	0.12	124	PG	Pg	17 37 09.8	-0.3
KOZT				SG	Sg	17 37 12.1	+0.3
ANDN	Andirin	0.51	86	*i* P	Pb	17 37 25.8	-0.9
ANDN				*i* S	Sb	17 37 25.8	-0.9
GULE	Gulek	0.78	251	*i* P	Pb	17 37 23.5	-0.1
GULE				*i* S	Sb	17 37 34.9	+0.4
KMRS	Kahramanmaras	0.95	92	*e*PG	Pg	17 37 24.0	-1.8
SARI	SarD1z-Kayseri	1.03	33	*e*PG	Pg	17 37 24.8	-2.6

*ISCJB **28** 17:40:05.3±0.4, 14.81N±0.04×61.5W±0.1, h173km±2km, mb3.7/14, Error ellipse: s-maj=20.1km s-min=4.9km az=168.6*
*TRN **28** 17:40:05.3, 14.87N×61.34W, h170km, MD3.9, M3.8(FDF)*
*IDC **28** 17:40:13.2±8.5, 14.78N×61.62W, h234km±86km, mb3.4/14, mb1 3.5/14, mb1mx3.4/29, mbtmp3.4/14, Error ellipse: s-maj=20.2km s-min=13.4km az=69.0*

ISC 28 17:40:06.3±0.7, 14.83N±0.04×61.5W±0.1, h166km±5km, n43, σ066/51, mb3.7/14, 9C-13D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FDF	Fort de France	0.38	105	↓*i*P	Pn	17 40 29.0	-0.1
FDF	Fort de France	0.38	105	↓*e*P	Pn	17 40 29.0	-0.1
FDF				↓↓eS	Sn	17 40 45.9	-0.6
FDF				↓↓*e*S	Sn	17 40 46.2	-0.3
MVM	Montagne Vaucl	0.67	114	↓↓*i*P	Pn	17 40 30.5	0.0
DWS	Wesley	0.76	16	↓↓*i*P	Pn	17 40 31.1	+0.1
DVCT	Vielle Casse P	0.79	8	↓↓*i*P	Pn	17 40 31.5	+0.4
SLW	Petit Monier	0.98	145	↓↓*i*P	Pn	17 40 33.2	+0.6
SLW				*e*S	Sn	17 40 52.5	-0.3
TBG	Guadaloupe-3	1.02	353	↑↑*i*P	Pn	17 40 33.1	+0.3
MGG	Marie-Galante	1.10	10	↑↑*i*P	Pn	17 40 33.2	-0.2
SLPE	Piton Saint Es	1.11	152	*e*P	Pn	17 40 34.3	+0.7
SLPE				*e*S	Sn	17 40 55.1	+0.5
SLDE	Delcer	1.12	156	↓↓*i*P	Pn	17 40 34.6	+0.9
SLDE				*e*S	Sn	17 40 55.4	+0.6
SLPA	Patience	1.14	149	*e*P	Pn	17 40 34.8	+1.0
HMG	Houelmont	1.16	352	*e*P	Pn	17 40 34.4	+0.4
PHG	Guadaloupe-2	1.18	354	↑↑*i*P	Pn	17 40 34.8	+0.5
DOG	Dongo Capester	1.20	356	↑↑*i*P	Pn	17 40 34.7	+0.3
SCG	Saint Claude	1.20	353	↑↑*i*P	Pn	17 40 34.8	+0.4
MCLT	Moule a Chique	1.25	153	↑↑*i*P	Pn	17 40 34.7	-0.1
MCLT				*e*S	Sn	17 40 55.5	-1.2
BCG	Bois Riant Cap	1.25	356	*e*P	Pn	17 40 35.0	+0.1
LZG	Guadaloupe-1	1.32	350	↑↑*i*P	Pn	17 40 35.9	+0.4
SFG	Saint Francois	1.45	13	*e*P	Pn	17 40 36.1	-0.5
SVV	Soufriere Volc	1.53	169	↑↑*i*P	Pn	17 40 37.9	+0.3
DEG	La Desirade	1.54	17	*e*P	Pn	17 40 36.5	-1.2
SEG	Port Louis	1.56	1	↑↑*i*P	Pn	17 40 37.7	-0.1
SVB	Belmont	1.57	170	↓↓*i*P	Pn	17 40 38.3	+0.4
SVB				*e*S	Sn	17 41 01.7	-0.6
BHS	Barnard House	1.57	166	↓↓*i*P	Pn	17 40 38.0	0.0
FCV	Fort Charlotte	1.69	171	↓↓*i*P	Pn	17 40 39.0	-0.1
BPA	Boggy Peak	2.23	352	↓↓*e*P	Pn	17 40 45.5	+0.4
BPA				*e*S	Sn	17 41 14.2	-0.9
TOSP	Speyside	3.64	165	*e*P	Pn	17 41 02.6	+0.1
TOSP				*e*S	Sn	17 41 44.0	-2.2
ROSC	El Rosal	16.03	233	P	P	17 43 49.3	+5.9
	1.6nm,0.3s,baz=93,slow=19,SNR=5.4						
SIV	San Ignacio	30.63	179	P	P	17 46 05.9	+0.8
	2.8nm,0.5s,baz=2.6,slow=9.6,SNR=14						
SCHQ	Schefferville	40.13	355	P	P	17 47 26.4	+0.7
	1.0nm,0.5s,baz=195,slow=19,SNR=3.3						
CPUP	Villa Florida	41.12	174	P	P	17 47 33.5	-0.6
	0.6nm,0.4s,baz=343,slow=11,SNR=3.1						
FRB	Frobisher Bay	49.10	356	P	P	17 48 36.7	+0.2
	8.9nm,0.9s,baz=153,slow=6.8,SNR=2.8						
PDAR	Pinedale Array	49.59	314	P	P	17 48 40.7	-0.2
	1.0nm,0.5s,baz=120,slow=8.9,SNR=6.0						
MDT	Midelt	54.42	60	P	P	17 49 17.8	+1.2
	1.7nm,0.6s,baz=286,slow=7.4,SNR=3.5						
PLCA	Paso Flores	55.91	188	P	P	17 49 26.0	-0.9
	2.8nm,1.1s,baz=213,slow=14,SNR=3.2						
YKA	Yellowknife Ar	60.33	335	P	P	17 49 56.9	-0.4
	1.0nm,0.6s,baz=108,slow=7.3,SNR=13						
TORD	Torodi Ar. Bea	61.19	83	P	P	17 50 03.7	-0.2
	0.3nm,0.6s,baz=274,slow=7.1,SNR=3.0						
NB2	NORSAR Subarra	68.79	30	P	P	17 50 52.6	+0.4
	comp=Z,0.7nm,0.7s,baz=262,slow=6.5						
NOA	NORSAR Array B	68.79	30	P	P	17 50 51.6	-0.6
	comp=Z,1.1nm,0.8s,baz=262,slow=6.3,SNR=4.2						
HFS	Hagfors	69.90	31	P	P	17 50 59.9	+0.9
	comp=Z,3.6nm,1.0s,baz=220,slow=8.8,SNR=4.0						
ILAR	Eielson Array	74.73	334	P	P	17 51 27.4	-0.2
	comp=Z,0.4nm,0.6s,baz=90,slow=4.3,SNR=9.8						
FINES	FINESS Array B	75.97	30	P	P	17 51 34.5	-0.2
	comp=Z,0.5nm,0.5s,baz=275,slow=6.8,SNR=3.7						
BRTR	Keskin Array B	84.56	50	P	P	17 52 21.6	+0.4
	comp=Z,0.5nm,0.8s,baz=305,slow=5.1,SNR=3.0						

*IDC **28** 18:11:11.4±3.4, 53.97N×161.41W, h0km, mb3.4/4, mb1 3.5/7, mb1mx3.3/31, mbtmp3.4/7, ML3.4/3, Error ellipse: s-maj=79.5km s-min=18.5km az=158.0*
*NEIC **28** 18:11:19.1, 54.44N×161.47W, h10km, ML3.2(AEIC), After AEIC.*

ISC 28 18:11:16.9±2.1, 54.32N±0.09×161.35W±0.04, h16km±11km, n23, σ136/26, mb3.6/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	Deer Island	0.84	321	P	Pg	18 11 33.0	-0.2
DRIA				S	Sb	18 11 43.1	-0.9
DOL	Dolgoi Island	0.88	341	P	Pg	18 11 33.7	-0.3
DT1	Dutton Round H	0.96	326	P	Pg	18 11 34.6	-0.8
PS4A	Pavlof South-4	1.07	344	P	Pg	18 11 37.0	-0.5
PVV	Pavlof Volcano	1.09	347	P	Pg	18 11 37.4	-0.5
PVV				S	Sn	18 11 51.6	-0.6
SDPT	Sand Point	1.15	26	P	Pg	18 11 38.9	-0.1
SDPT				S	Sb	18 11 54.4	+1.4
FALS	False Pass	1.32	295	P	Pb	18 11 41.3	+0.1
FALS				S	Sn	18 11 58.2	+0.5
SSLS	Shishaldin Sou	1.59	285	P	Pn	18 11 45.9	+1.4
SSLS				S	Sb	18 12 06.0	+0.2
SSLW	Shishaldin Wes	1.68	287	P	Pn	18 11 46.8	+1.3
VNWF	Veniaminof 8	2.10	28	P	Pn	18 11 54.2	+2.8
VNFG	Veniaminof 2	2.22	27	P	Pn	18 11 55.2	+2.1
VNHG	Veniaminof 1	2.28	32	P	Pn	18 11 55.8	+1.9
CHGN	Chignik	2.60	39	*e*P	Pn	18 11 59.7	+1.6
AKUT	Akutan	2.60	268	*e*P	Pn	18 12 00.6	+2.4
AKLV	Akutan Long Va	2.71	269	P	Pn	18 12 01.8	+2.1
MTBL	Makushin Table	3.15	266	P	Pn	18 12 06.8	+0.9
KDAK	Kodiak Island	6.01	51	Pn	Pn	18 12 45.1	+0.1
	0.7nm,0.3s,baz=166,slow=5.5,SNR=12						
KDAK				Sn	Sn	18 13 52.5	-0.9
	baz=147,slow=23,SNR=1.0						
KDAK				Lg	Lg	18 14 19.7	
	1.0nm,0.3s,baz=328,slow=22,SNR=6.9						
ILAR	Eielson Array	12.75	29	Pn	Pn	18 14 14.8	-2.5
	0.1nm,0.3s,baz=221,slow=14,SNR=2.9						
INK	Inuvik	19.10	32	P	P	18 15 37.7	-0.8
	0.1nm,0.3s,baz=211,slow=5.9,SNR=3.3						
PETK	Petropavlovsk-	24.03	284	P	P	18 16 29.5	-1.2
	1.6nm,0.3s,baz=86,slow=13,SNR=21						
YKA	Yellowknife Ar	25.29	52	P	P	18 16 41.2	-0.8
	0.2nm,0.5s,baz=269,slow=9.2,SNR=6.0						
SONM	Songino Array	34.31	304	P	P	18 20 40.0	-2.3
	0.3nm,0.6s,baz=38,slow=7.3,SNR=2.5						
MKAR	Makanchi Array	65.79	318	P	P	18 21 58.7	-2.1
	0.6nm,1.1s,baz=35,slow=5.3,SNR=3.0						

IDC 28 18:11:57.4±5.1, 4.32S×142.76E, h109km±51km, mb3.3/5, mb1 3.5/7, mb1mx3.3/19, mbtmp3.4/7, Error ellipse: s-maj=39.6km s-min=25.2km az=127.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.67	139	P	Pn	18 13 33.4	+0.4
	0.7nm,0.3s,baz=337,slow=7.7,SNR=3.3						
WRA	Warramunga Arr	17.56	207	P	P	18 15 54.1	-0.9
	0.8nm,0.3s,baz=29,slow=11,SNR=40						
ASAR	Alice Springs	21.05	203	P	P	18 16 32.9	+0.1
	0.8nm,0.6s,baz=36,slow=13,SNR=14						
ASAR				pP	pP	18 16 52.2	-1.1
	1.4nm,0.6s,baz=33,slow=10,SNR=6.1						
FITZ	Fitzroy Crossi	21.64	229	P	P	18 16 38.3	-0.8
	1.6nm,0.5s,baz=44,slow=12,SNR=13						
STKA	Stephens Creek	27.43	182	P	P	18 17 33.6	+0.6
	2.0nm,0.6s,baz=18,slow=11,SNR=7.6						
MKAR	Makanchi Array	73.55	321	P	P	18 23 19.6	+1.0
	0.4nm,0.6s,baz=105,slow=7.4,SNR=6.1						
MKAR				pP	pP	18 23 46.7	+0.5
	0.3nm,0.7s,baz=103,slow=6.4,SNR=3.4						
ILAR	Eielson Array	85.64	24	P	P	18 24 22.6	-1.0
	0.4nm,0.6s,baz=257,slow=4.5,SNR=6.9						

IDC 28 18:20:42.5±2.8, 16.46N×87.26W, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.7/23, mbtmp3.6/5, ML4.0/1, MS3.4/1, Ms1 3.5/1, ms1mx2.7/31, Error ellipse: s-maj=71.3km s-min=34.0km az=37.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	Tepich	3.87	346	Pn	Pn	18 21 44.4	+1.0
	11nm,0.3s,baz=172,slow=7.1,SNR=25						
TEIG				Sn	Sn	18 22 30.0	+0.4
	19nm,0.3s,baz=206,slow=23,SNR=9.0						
TXAR	Lajitas Array	19.79	313	P	Pn	18 25 16.2	+0.1
	baz=138,slow=13,SNR=4.8						
LPAZ	La Paz	37.61	149	LR	LR	18 44 42.2	
	comp=Z,49nm,19.9s,baz=60,slow=38						
YKA	Yellowknife Ar	49.83	344	P	P	18 29 36.3	-0.8
	0.4nm,0.4s,baz=139,slow=7.5,SNR=8.5						
ILAR	Eielson Array	62.47	335	P	P	18 31 06.5	-1.0
	0.5nm,0.8s,baz=104,slow=5.5,SNR=4.7						
ESDC	Sonseca Array	74.61	53	P	P	18 32 24.4	+0.5
	0.5nm,0.5s,baz=272,slow=7.0,SNR=2.6						

*ISCJB **28** 18:37:46.7±1.1, 24.08S±0.08×64.76W±0.09, h33km, mb3.9/1, Error ellipse: s-maj=13.1km s-min=10.0km az=136.5*
*NEIC **28** 18:37:48.7±1.3, 24.21S×64.91W, h50km±19km, MD4.1(SJA), Error ellipse: s-maj=22.4km s-min=12.4km az=207.0*
NEIC Felt [III] at San Salvador de Jujuy.
*IDC **28** 18:37:48.4±6.5, 24.15S×64.78W, h35km±40km, mb3.8/1, mb1 3.9/4, mb1mx3.6/18, mbtmp3.8/4, ML4.0/3, Error ellipse: s-maj=66.5km s-min=23.3km az=48.0*

ISC 28 18:37:48.4±1.3, 24.17S±0.10×64.84W±0.09, h35km, n9, σ106/13, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	4.05	292	P	Pn	18 38 47.7	-0.5
CPUP	Villa Florida	7.13	109	Pn	Pn	18 39 31.2	+1.0
CPUP				Lg	Lg	18 41 33.2	
CPUP	Villa Florida	7.13	109	Pn	Pn	18 39 31.2	+1.0
	2.0nm,0.3s,baz=263,slow=15,SNR=6.5						
CPUP				Lg	Lg	18 41 33.2	
	1.6nm,0.3s,baz=219,slow=15,SNR=1.8						
LPAZ	La Paz	8.43	338	*e*P	Pn	18 39 49.4	+0.8
LPAZ				Sn	Sn	18 41 22.9	+0.1
LPAZ	La Paz	8.43	338	Pn	Pn	18 39 50.5	+1.9
	0.3nm,0.3s,baz=150,slow=10,SNR=7.0						
LPAZ				Sn	Sn	18 41 22.9	+0.1
	0.1nm,0.3s,baz=145,slow=9.2,SNR=2.0						
SIV	San Ignacio	8.87	24	Pn	Pn	18 39 54.9	+0.8
SIV				Sn	Sn	18 41 31.9	-1.0
SIV	San Ignacio	8.87	24	Pn	Pn	18 39 54.9	+0.8
	0.7nm,0.3s,baz=220,slow=11,SNR=20						
SIV				Sn	Sn	18 41 31.9	-1.0
	1.2nm,0.3s,baz=222,slow=17,SNR=2.4						
TORD	Torodi Ar. Bea	74.79	68	P	P	18 49 24.6	-0.9
TORD	Torodi Ar. Bea	74.79	68	P	P	18 49 24.6	-0.9
	1.2nm,0.7s,baz=259,slow=5.5,SNR=12						

*CASC **28** 18:46:08.8±3.3, 16.04N×87.89W, h0km±42km, MD3.7*
*IDC **28** 18:46:12.1±2.2, 15.67N×87.43W, h0km, mb3.5/2, ML4.0/1, Error ellipse: s-maj=88.4km s-min=28.1km az=81.0*

ISC 28 18:46:13.8±3.3, 15.99N±0.06×88.26W±0.09, h17km±19km, n20, σ128/23, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	Marmol	1.66	236	*e*P	Pn	18 46 41.2	-1.2
MTO2	Montecristo 2	1.91	214	*e*P	Pn	18 46 45.2	-0.6
MTO2				*e*S	Sn	18 47 06.5	-3.1
CAHU	Cacacuatique	2.21	179	*e*P	Pn	18 46 50.5	+0.5
CAHU				*e*S	Sn	18 47 16.4	-0.7
RBDL	Robledal	2.32	217	*e*P	Pn	18 46 51.2	-0.3
LBRS	Las Brisas	2.37	199	*e*P	Pn	18 46 52.0	0.0
LFU	La Fuente	2.38	200	*e*P	Pn	18 46 52.3	+0.1
SNVI	San Vicente	2.43	193	*e*P	Pn	18 46 53.4	+0.4
NBG	Las Nubes	2.45	236	*e*P	Pn	18 46 54.0	+0.7
NBG				*e*S	Sg	18 47 32.1	-0.7
BOQS	Boqueron	2.45	204	*e*P	Pn	18 46 53.6	+0.3
BOQS				*e*S	Sn	18 47 21.2	-1.8
LFRS	El Faro	2.48	198	*e*P	Pn	18 46 54.0	+0.4
SBLS	San Blas	2.51	212	*e*P	Pn	18 46 54.9	+0.7
IXG	Ixpaco	2.79	230	*e*P	Pn	18 46 58.1	+0.3
IXG				*e*S	Sb	18 47 38.9	+1.6
FUG	Fuego 3	2.93	239	*e*P	Pn	18 47 00.8	+0.9
JAT	Jato	3.66	243	*e*P	Pn	18 47 12.0	+2.2
TEIG	Tepich	4.21	360	Pn	Pb	18 47 24.2	-3.3
	7.7nm,0.3s,baz=198,slow=9.6,SNR=10.0						
TEIG				Sn	Sb	18 48 16.6	-1.4
	12nm,0.3s,baz=301,slow=19,SNR=3.8						
TEIG				Lg	Lg	18 48 37.6	
	15nm,0.3s,baz=272,slow=23,SNR=4.2						
TXAR	Lajitas Array	19.42	316	P	Pn	18 50 49.0	+8.2
	2.3nm,1.0s,baz=140,slow=9.9,SNR=9.3						
YKA	Yellowknife Ar	50.01	344	P	P	18 55 11.8	+4.8
	0.7nm,0.8s,baz=138,slow=7.5,SNR=11						
WRA	Warramunga Arr	139.37	258	PKP	PKPdf	19 05 41.5	+0.5
	0.4nm,0.7s,baz=87,slow=2.2,SNR=4.7						
ASAR	Alice Springs	139.72	252	PKhKP	PKPpre	19 05 34.4	
	0.1nm,0.5s,baz=105,slow=4.0,SNR=4.5						
ASAR				PKP	PKPdf	19 05 42.2	+0.5
	0.3nm,0.6s,baz=116,slow=3.2,SNR=6.1						
CMAR	Chiang Mai Arr	145.04	348	PKPbc	PKPdf	19 05 52.8	+1.5
	0.3nm,0.6s,baz=321,slow=2.4,SNR=4.5						

*AUST **28** 18:48:40.9, 2.00N×127.50E, h100km*
*ISCJB **28** 18:48:42.8±0.4, 1.88N±0.04×127.43E±0.04, h123km±3km, mb4.4/12, Error ellipse: s-maj=6.6km s-min=5.1km az=139.5*
*IDC **28** 18:48:45.0±3.0, 1.86N×127.55E, h136km±29km, mb4.0/12, mb1 4.2/14, mb1mx4.0/24, mbtmp4.1/14, MS2.9/1, Ms1 2.9/1, ms1mx2.1/34, Error ellipse: s-maj=26.2km s-min=9.0km az=79.0*
*DJA **28** 18:48:45.2±0.3, 2.7N±3×12.7E±°, h101km±3km, M4.5/4, mb4.5/4*

ISC 28 18:48:43.6±0.7, 1.86N±0.05×127.45E±0.05, h115km±7km, n68, σ142/73, mb4.3/12, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	0.34	94	P	Pn	18 49 00.1	-0.1
GAMI				S	Sn	18 49 13.5	+0.9
TNTI	Ternate	1.09	185	P	Pn	18 49 07.1	+0.9
TNTI				S	Sn	18 49 22.7	-0.5
LBMI	Labuha	2.48	179	P	Pn	18 49 24.6	+1.5
LBMI				S	Sn	18 49 54.1	+0.8
MNI	Manado	2.65	261	P	Pn	18 49 24.4	-0.7
MNI				S	Sn	18 49 56.4	-0.7
KMSI	Cibinong	3.70	250	P	Pn	18 49 40.1	+1.0
KMSI				S	Sn	18 50 21.8	-0.2
SWI	Sorong	4.67	125	P	Pn	18 49 54.4	+2.3
SWI	Sorong	4.67	125	P	Pn	18 49 54.1	+2.1
	baz=4.7,SNR=7.2						
MSAI	Masohi	5.38	164	P	Pn	18 50 03.7	+2.0
LUWI	Luwuk	5.50	238	P	Sn	18 51 07.2	+1.9
LUWI	Luwuk	5.50	238	P	Pn	18 50 03.3	0.0
	baz=5.6,SNR=15						
LUWI				S	Sn	18 51 06.9	+1.6
	baz=5.6,SNR=4.6						
DAV	Davao City (W)	5.50	340	P	Sn	18 51 08.1	+2.7
DAV	Davao City (W)	5.50	340	LR	LR	18 51 50.9	
	comp=Z,117nm,21.6s,baz=275,slow=34						
AAI	Ambon	5.56	172	P	Pn	18 50 05.5	+1.4
AAI	Ambon	5.56	172	P	Pn	18 50 06.6	+2.5
	baz=5.7,SNR=5.7						
MRSI	Marisa	5.68	256	P	Pn	18 50 06.8	+1.1
CTBH	Cotabato--PC H	6.21	329	↑*i*P	Pn	18 50 11.4	-1.5
FAKI	Fak Fak	6.75	135	P	Pn	18 50 22.9	+2.7
	baz=6.8,SNR=6.5

KKN	**Kakani**	**47.84**	**307**	*e*P	**P**	**18 57 10.3**	**0.0**
DMN	**Daman**	**47.90**	**306**	*e*P	**P**	**18 57 11.2**	**+0.4**
ULN	**Ulaanbaatar**	**49.11**	**342**	P	**P**	**18 57 20.7**	**+1.1**
KOLN	**Koldanda**	**49.19**	**306**	*e*P	**P**	**18 57 20.6**	**0.0**
SONM	**Songino Array**	**49.29**	**341**	P	**P**	**18 57 21.2**	**+0.3**
	2.0nm,0.8s,baz=155,slow=8.3,SNR=14						
DANN	**Dangsing**	**49.29**	**307**	*e*P	**P**	**18 57 21.9**	**+0.4**
	23nm,0.8s						
PYUN	**Piuthan**	**49.81**	**306**	*e*P	**P**	**18 57 26.1**	**+0.8**
MKAR	**Makanchi Array**	**59.49**	**326**	P	**P**	**18 58 34.7**	**0.0**
	7.9nm,0.7s,baz=120,slow=8.4,SNR=60						
ZALV	**Zalesovo Beam**	**62.57**	**333**	P	**P**	**18 58 54.0**	**-1.3**
	0.9nm,0.7s,baz=99,slow=9.2,SNR=5.7						
VNDA	**Vanda**	**81.50**	**173**	P	**P**	**19 00 47.5**	**-0.2**
	1.5nm,0.6s,baz=312,slow=4.3,SNR=7.5						

*NIED **28** 18:49:00,46˚.70N×152˚.40E,h32km,Mw3.9 Best double couple: M0 6.70000×10^14 NP1:φs307.00000°,δ85.00000°, λ28.00000°. NP2:φs215.00000°,δ63.00000°,λ174.00000°.*
*ISCJB **28** 18:49:17.3±0.5,46˚.57N±0˚.08×152˚.34E±0˚.10,h52km, mb3.7/16,Error ellipse: s-maj=14.3km s-min=3.7km az=139.0*
*JMA **28** 18:49:17.3±0.8,46˚.74N×152˚.37E,h30km,M4.5*
*IDC **28** 18:49:20.7±0.8,46˚.57N×152˚.22E,h71km±6km,mb3.5/16, mb1 3.7/18,mb1mx3.6/28,mbtmp3.5/18,MS2.6/2, Ms1 2.6/2,ms1mx2.3/39,Error ellipse: s-maj=18.1km s-min=13.4km az=138.0*
*MOS **28** 18:49:20.8±1.1,46˚.65N×152˚.20E,h87km,mb4.3/10,Error ellipse: s-maj=13.8km s-min=8.7km az=65.3*

ISC 28 18:49:18.9±0.6,46˚.48N±0˚.08×152˚.43E±0˚.08,h52km,n53, σ25 07/65,mb3.8/16,2C-2D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.42**	**250**	⇑*i*	PN		**Pn**	**18 50 11.2**	**+1.5**
KUR				*e*	S		**Sn**	**18 50 51.3**	**+2.4**
KUR					pmax		pmax		
	comp=Z,100nm,0.4s								
KUR					pmax		pmax		
	comp=N,50nm,0.5s								
KUR					pmax		pmax		
	comp=E,40nm,0.7s								
KUR					smax		smax		
	comp=N,320nm,0.5s								
KUR					smax		smax		
	comp=E,480nm,0.7s								
SKR	**Severo-Kuril's**	**4.87**	**29**	*e*	PN		**Pn**	**18 50 29.9**	**+0.4**
SKR				*e*	S		**Sn**	**18 51 23.8**	**-0.7**
SKR					smax		smax		
	comp=N,80nm,0.5s								
SKR					smax		smax		
	comp=E,90nm,0.5s								
YUK	**Yuzh-Kuril'sk**	**5.24**	**245**	*i*	PN		**Pn**	**18 50 36.2**	**+1.6**
YUK				*i*	S		**Sn**	**18 51 38.9**	**+5.3**
YUK					pmax		pmax		
	comp=N,28nm,0.3s								
YUK					pmax		pmax		
	comp=Z,66nm,0.3s								
YUK					pmax		pmax		
	comp=E,24nm,0.3s								
YUK					smax		smax		
	comp=N,69nm,0.6s								
YUK					smax		smax		
	comp=E,134nm,0.6s								
NEM2	**Nemuro 2**	**5.67**	**239**	P			**Pn**	**18 50 39.8**	**-0.7**
NEM2				*e*	S		**Sn**	**18 51 41.2**	**-3.1**
JRA	**Rausu**	**5.75**	**246**	P			**Pn**	**18 50 43.8**	**+2.2**
JNK	**Nakash**	**6.18**	**245**	P			**Pn**	**18 50 48.7**	**+1.2**
JNK				*e*	S		**Sn**	**18 51 57.4**	**+0.6**
JAK	**Akkeshi**	**6.51**	**241**	P			**Pn**	**18 50 51.6**	**-0.4**
JAK				*e*	S		**Sn**	**18 52 01.9**	**-3.0**
JTKR	**Abashiri--Toko**	**6.52**	**250**	P			**Pn**	**18 50 54.4**	**+2.3**
YSS	**Yuzh-Sakhalins**	**6.67**	**278**	*e*	PN		**Pn**	**18 50 57.0**	**+2.8**
JMP	**Maruseppu**	**6.86**	**252**	P			**Pn**	**18 50 59.0**	**+2.1**
JAR	**Ashorobuto**	**6.92**	**246**	P			**Pn**	**18 50 58.7**	**+1.0**
JAR				*e*	S		**Sn**	**18 52 16.6**	**+1.6**
JOB	**Onbets**	**7.09**	**243**	P			**Pn**	**18 51 00.7**	**+0.8**
JOB				*e*	S		**Sn**	**18 52 17.8**	**-1.3**
JKK2	**Kamakawa 2**	**7.32**	**253**	P			**Pn**	**18 51 05.5**	**+2.4**
ASAJ	**Asahikawa**	**7.33**	**255**	P			**Pn**	**18 51 06.7**	**+3.5**
ASAJ	**Asahikawa**	**7.33**	**255**	P			Pn	18 51 06.7	+3.5
	comp=E,1.9nm,0.3s,baz=83,slow=15,SNR=22								
ASAJ					LR		LR	18 53 48.1	
	comp=E,58nm,18.3s,baz=167,slow=37								
PETK	**Petropavlovsk-**	**7.46**	**25**		PN		**Pn**	**18 51 07.3**	**+2.3**
PETK					pmax		pmax		
	comp=Z,1.0nm,0.3s								
PETK	**Petropavlovsk-**	**7.46**	**25**	P			**Pn**	**18 51 07.3**	**+2.3**
	comp=Z,0.9nm,0.3s,baz=193,slow=14,SNR=14								
PETK					LR		LR	18 53 59.2	
	comp=Z,38nm,19.0s,baz=219,slow=37								
JCH	**Churui**	**7.54**	**242**	P			**Pn**	**18 51 06.0**	**-0.1**
JCH				*e*	S		**Sn**	**18 52 26.8**	**-3.3**
JFR	**Furan**	**7.74**	**248**	P			**Pn**	**18 51 11.2**	**+2.4**
JEM	**Erimo**	**8.01**	**240**	P			**Pn**	**18 51 13.3**	**+0.8**
JBT2	**Biratori 2**	**8.07**	**246**	P			**Pn**	**18 51 14.5**	**+1.1**
JNBK	**Urakawa-nobuka**	**8.10**	**242**	*e*	S		**Sn**	**18 52 39.7**	**-4.2**
JNB	**Noboribetsu**	**9.07**	**248**	P			**Pn**	**18 51 27.6**	**+0.5**
JNB				*e*	S		**Sn**	**18 53 05.5**	**-2.3**
JKB	**Kayabe**	**9.38**	**245**	P			**Pn**	**18 51 30.0**	**-1.3**
JKB				*e*	S		Sn	18 53 08.9	-6.4
JYM2	**Yakumo 2**	**9.68**	**248**	P			**Pn**	**18 51 35.3**	**-0.1**
JANG	**Nango**	**10.01**	**236**	P			Pn	18 51 36.6	-3.3
JANG				*e*	S		Sn	18 53 20.0	-11
JTH	**Tanohata**	**10.10**	**233**	*e*	S		Sn	18 53 22.2	-11
JOSM	**Okushiri--Mats**	**10.27**	**249**	P			**Pn**	**18 51 43.1**	**-0.4**
MAJO	**Matsushiro**	**14.54**	**232**	⇓*e*	P		**Pn**	**18 52 44.1**	**+2.6**
MJAR	**Matsushiro Arr**	**14.54**	**232**	P			**P**	**18 52 47.7**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=34,slow=8.6,SNR=8.6								
USRK	**Usurisyk Arra**	**14.55**	**268**				**Pn**	**18 52 41.0**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=74,slow=12,SNR=6.6								
SEY	**Seymchan**	**16.49**	**360**	⇓*e*	P		**Pn**	**18 53 07.8**	**+1.4**
KSRS	**Korea Array**	**20.27**	**252**	P			**P**	**18 53 51.2**	**+1.3**
	comp=Z,2.9nm,0.7s,baz=56,slow=9.9,SNR=9.4								
YAK	**Yakutsk**	**20.30**	**328**	⇑*e*	P		**P**	**18 53 48.0**	**-2.1**
BILL	**Bilibino**	**22.77**	**13**	*e*	P		**P**	**18 54 15.6**	**-0.9**
BILL					pmax		pmax		
	comp=Z,4.0nm,1.6s								
SONM	**Songino Array**	**30.98**	**290**	P			**P**	**18 55 29.4**	**-1.7**
	comp=Z,0.5nm,1.1s,baz=5.7,slow=19,SNR=3.1								
ILAR	**Eielson Array**	**37.06**	**38**	P			**P**	**18 56 23.2**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=128,slow=36,SNR=3.5								
INK	**Inuvik**	**42.14**	**32**	P			**P**	**18 57 04.6**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=272,slow=9.1,SNR=3.8								
MKAR	**Makanchi Array**	**46.65**	**297**	P			**P**	**18 57 39.6**	**-2.3**
MKAR				*PP			**pP**	**18 57 59.9**	**+4.1**
MKAR					pmax		pmax		
	comp=Z,1.0nm,0.5s								
MKAR	**Makanchi Array**	**46.65**	**297**	P			**P**	**18 57 39.5**	**-2.3**
	comp=Z,0.7nm,0.5s,baz=67,slow=6.8,SNR=10								
MKAR					pP		**pP**	**18 57 59.9**	**+4.1**
	comp=Z,0.2nm,0.6s,baz=65,slow=7.3,SNR=1.6								
YKA	**Yellowknife Ar**	**51.42**	**36**	P			**P**	**18 58 19.1**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=299,slow=7.1,SNR=2.8								
CMAR	**Chiang Mai Arr**	**51.85**	**256**	P			**P**	**18 58 21.0**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=42,slow=6.6,SNR=7.6								
FINES	**FINESS Array B**	**64.09**	**335**	P			**P**	**18 59 45.2**	**-1.7**
	comp=Z,1.2nm,0.4s,baz=38,slow=6.0,SNR=12								
PDAR	**Pinedale Array**	**65.29**	**53**	P			**P**	**18 59 55.8**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=270,slow=1.5,SNR=4.0								
WRA	**Warramunga Arr**	**68.10**	**198**	P			**P**	**19 00 13.7**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=17,slow=6.9,SNR=4.7								
WRA					pP		**pP**	**19 00 30.3**	**+2.6**
	comp=Z,0.3nm,0.4s,baz=17,slow=6.9,SNR=3.4								
NB2	**NORSAR Subarra**	**68.33**	**341**	P			**P**	**19 00 12.4**	**-1.8**
	comp=Z,0.9nm,0.5s,baz=28,slow=6.5								
NOA	**NORSAR Array B**	**68.33**	**341**	P			**P**	**19 00 12.8**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=29,slow=6.4,SNR=8.4								
AKASG	**Malin Array Be**	**71.51**	**326**	P			**P**	**19 00 31.9**	**-1.9**
AKASG					pmax		pmax		
	comp=Z,1.0nm,0.3s								
AKASG	**Malin Array Be**	**71.51**	**326**	P			**P**	**19 00 31.9**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=36,slow=6.3,SNR=4.0								
ASAR	**Alice Springs**	**71.80**	**198**	P			**P**	**19 00 35.9**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=16,slow=6.0,SNR=6.9								
ASAR					pP		**PcP**	**19 00 53.8**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=11,slow=6.7,SNR=4.0								
TXAR	**Lajitas Array**	**78.04**	**60**	P			**P**	**19 01 12.7**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=292,slow=4.1,SNR=7.8								
BRTR	**Keskin Array B**	**78.27**	**316**	P			**P**	**19 01 12.6**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=115,slow=3.6,SNR=6.7								
BRTR					pP		**pP**	**19 01 31.9**	**+3.9**
	comp=Z,0.3nm,0.6s,baz=49,slow=4.4,SNR=1.7								
GERES	**GERESS Array B**	**78.49**	**334**	P			**P**	**19 01 12.9**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=46,slow=5.8,SNR=4.3								

*CASC **28** 18:58:29.4±3.8, 17˚.18N×87˚.30W, h162km±172km, MD4.3*
*IDC **28** 18:58:39.2±1.3, 16˚.78N×86˚.67W, h40km±6km, mb3.4/9, mb1 3.8/12,mb1mx3.7/25,mbtmp3.6/12, ML4.1/3, MS3.4/1, Ms1 3.5/1,ms1mx2.5/35, Error ellipse: s-maj=32.0km s-min=14.5km az=47.0*

ISC 28 18:58:37.9±1.2,16.6N±0.2×86.9W±0.1,h35km,n148, σ18 48/130,mb3.7/10,66C-84D,North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAHU	**Cacacuatique**	**3.11**	**205**	*e*	P		Pn	18 59 23.3	-1.5
MRL	**Marmol**	**3.12**	**241**	*e*	P		Pn	18 59 18.4	-6.4
MRL				*e*	S		Sn	18 59 59.1	-1.8
MTO2	**Montecristo 2**	**3.26**	**228**	*e*	P		Pn	18 59 25.1	-1.7
MTO2				*e*	S		Sn	19 00 00.3	-4.3
CNCH	**Conchagua**	**3.45**	**196**	*e*	P		Pn	18 59 29.4	+0.1
RBDL	**Robledal**	**3.68**	**228**	*e*	P		Pn	18 59 32.0	-0.5
TEIG	**Tepich**	**3.82**	**340**	P			**Pn**	**18 59 33.9**	**-0.3**
	23nm,0.3s,baz=312,slow=1.8,SNR=68								
TEIG					S		**Sn**	**19 00 17.5**	**-0.5**
	73nm,0.3s,baz=256,slow=24,SNR=42								
NBG	**Las Nubes**	**3.91**	**239**	*e*	P		Pn	18 59 30.2	-5.6
NBG				*e*	S		Sn	19 00 19.0	-1.5
IXG	**Ixpaco**	**4.22**	**235**	*e*	P		Pn	18 59 32.1	-7.9
IXG				*e*	S		Sn	19 00 25.6	-2.6
FUG	**Fuego 3**	**4.39**	**241**	*e*	P		Pn	18 59 36.8	-5.5
732A	**Laxson Ranch,**	**17.04**	**317**	⇑	P		Pn	19 02 28.6	-5.0
	baz=15								
732A				⇓	S		Sn	19 05 20.7	-21
	baz=15								
732A	**Laxson Ranch,**	**17.04**	**317**	⇑	P		Pn	19 02 28.6	-5.0
	baz=15								
732A				⇓	S		Sn	19 05 20.7	-21
	baz=15								
632A	**Uvalde**	**17.46**	**320**	⇓	P		Pn	19 02 34.6	-4.1
	baz=16								
632A				⇓	S		Sn	19 05 31.3	-21
	baz=16								
632A	**Uvalde**	**17.46**	**320**	⇓	P		Pn	19 02 34.6	-4.1
	baz=16								
632A				⇓	S		Sn	19 05 31.3	-21
	baz=16								
631A	**Perdido Creek**	**17.89**	**318**	⇑	P		Pn	19 02 39.6	-4.5
	baz=16								
631A				⇓	S		Sn	19 05 41.2	-21
	baz=16								
631A	**Perdido Creek**	**17.89**	**318**	⇑	P		Pn	19 02 39.6	-4.5
	baz=16								
631A				⇓	S		Sn	19 05 41.2	-21
	baz=16								
532A	**Rocksprings**	**17.97**	**321**	⇓	P		**Pn**	**19 02 43.0**	**-2.0**
	baz=16								
532A				⇓	S		Sn	19 05 44.7	-20
	baz=16								
532A	**Rocksprings**	**17.97**	**321**	⇓	P		**Pn**	**19 02 43.0**	**-2.0**
	baz=16								
532A				⇓	S		Sn	19 05 44.7	-20
	baz=16								
WHTX	**Lake Whitney**	**18.06**	**330**	⇓	P		**Pn**	**19 02 46.7**	**+0.6**
	baz=17								
WHTX				⇑	S		Sn	19 05 50.3	-16
	baz=17								
WHTX	**Lake Whitney**	**18.06**	**330**	⇓	P		**Pn**	**19 02 46.7**	**+0.6**
	baz=17								
WHTX				⇑	S		Sn	19 05 50.3	-16
	baz=17								
531A	**Rocksprings**	**18.39**	**320**	⇑	P		**P**	**19 02 47.3**	**-2.6**
	baz=17,SNR=5.9								
531A				⇑	S		Sn	19 05 53.4	-21
	baz=17								
531A	**Rocksprings**	**18.39**	**320**	⇑	P		**P**	**19 02 47.3**	**-2.6**
	baz=17,SNR=5.9								
531A				⇑	S		Sn	19 05 53.4	-21
	baz=17								
432A	**Menard**	**18.44**	**323**	⇑	P		**P**	**19 02 48.7**	**-1.8**
	baz=17								
432A				⇑	S		Sn	19 05 56.1	-20
	baz=17								
432A	**Menard**	**18.44**	**323**	⇑	P		**P**	**19 02 48.7**	**-1.8**
	baz=17								
432A				⇑	S		Sn	19 05 56.1	-20
	baz=17								
332A	**Millersview**	**18.79**	**324**	⇓	P		**P**	**19 02 53.9**	**-0.5**
	baz=17,SNR=6.5								
332A				⇓	S		Sn	19 06 05.5	-19
	baz=17								
332A	**Millersview**	**18.79**	**324**	⇓	P		**P**	**19 02 53.9**	**-0.5**
	baz=17,SNR=6.5								
332A				⇓	S		Sn	19 06 05.5	-19
	baz=17								
431A	**Sonora**	**18.79**	**321**	⇑	P		**P**	**19 02 53.4**	**-0.9**
	baz=17								
431A	**Sonora**	**18.79**	**321**	⇑	P		**P**	**19 02 53.4**	**-0.9**
	baz=17								
530A	**J-C Ranch, Com**	**18.88**	**318**	⇑	P		**P**	**19 02 53.6**	**-1.7**
	baz=17,SNR=7.4								
530A				⇓	S		Sn	19 06 05.1	-21
	baz=17								
530A	**J-C Ranch, Com**	**18.88**	**318**	⇑	P		**P**	**19 02 53.6**	**-1.7**
	baz=17,SNR=7.4								
530A				⇓	S		Sn	19 06 05.1	-21
	baz=17								
232A	**Coleman**	**19.11**	**325**	⇓	P		**P**	**19 02 58.2**	**+0.3**
	baz=18								
232A				⇑	S		Sn	19 06 13.3	-19
	baz=18								
232A	**Coleman**	**19.11**	**325**	⇓	P		**P**	**19 02 58.2**	**+0.3**
	baz=18								
232A				⇑	S		Sn	19 06 13.3	-19
	baz=18								
331A	**San Angelo**	**19.13**	**322**	⇑	S		Sn	19 06 12.8	-20
	baz=18								
331A	**San Angelo**	**19.13**	**322**	⇑	S		Sn	19 06 12.8	-20
	baz=18								
TKL	**Tuckaleechee C**	**19.16**	**8**	P			**Pn**	**19 02 58.6**	**-0.8**
	0.1nm,0.3s,baz=184,slow=11,SNR=3.5								
TKL					S		Sn	19 06 21.3	-12
	0.2nm,0.3s,baz=94,slow=17,SNR=1.5								
430A	**Baggett Ranch,**	**19.25**	**320**	⇑	P		**P**	**19 02 58.7**	**-0.7**
	baz=18								
430A				⇓	S		Sn	19 06 15.3	-20
	baz=18								
430A	**Baggett Ranch,**	**19.25**	**320**	⇑	P		**P**	**19 02 58.7**	**-0.7**
	baz=18								
430A				⇓	S		Sn	19 06 15.3	-20
	baz=18								
529A	**Stev Forest Ra**	**19.43**	**316**	⇓	P		**P**	**19 03 00.6**	**-0.9**
	baz=18,SNR=5.4								
529A	**Stev Forest Ra**	**19.43**	**316**	⇓	P		**P**	**19 03 00.6**	**-0.9**
	baz=18,SNR=5.4								
628A	**Black Gap, Mar**	**19.49**	**314**	⇓	P		**P**	**19 03 00.2**	**-1.8**
	baz=18,SNR=6.4								
628A	**Black Gap, Mar**	**19.49**	**314**	⇓	P		**P**	**19 03 00.2**	**-1.8**
	baz=18,SNR=6.4								
429A	**Davenport Ranc**	**19.55**	**318**	⇑	P		**P**	**19 03 02.9**	**+0.2**
	baz=18,SNR=8.4								
429A	**Davenport Ranc**	**19.55**	**318**	⇑	P		**P**	**19 03 02.9**	**+0.2**
	baz=18,SNR=8.4								
330A	**Mertzon**	**19.64**	**321**	⇓	P		**P**	**19 03 03.9**	**+0.2**
	baz=18,SNR=5.9								
330A	**Mertzon**	**19.64**	**321**	⇓	P		**P**	**19 03 03.9**	**+0.2**
	baz=18,SNR=5.9								
ABTX	**Abilene, Hawle**	**19.68**	**326**	⇓	S		S	19 06 28.1	-16
	baz=18								
ABTX	**Abilene, Hawle**	**19.68**	**326**	⇓	S		S	19 06 28.1	-16
	baz=18								
528A	**Cox Ranch, San**	**19.84**	**316**	⇑	P		**P**	**19 03 05.2**	**-0.7**
	baz=18								
528A	**Cox Ranch, San**	**19.84**	**316**	⇑	P		**P**	**19 03 05.2**	**-0.7**
	baz=18								
TXAR	**Lajitas Array**	**19.94**	**312**	P			**P**	**19 03 08.0**	**+1.0**
	0.3nm,0.3s,baz=126,slow=10,SNR=18								
TXAR					S		S	19 06 36.6	-13
	0.2nm,0.3s,baz=243,slow=20,SNR=4.0								
230A	**Sterling City**	**19.95**	**322**	⇑	P		**P**	**19 03 07.7**	**+0.6**
	baz=18								
230A	**Sterling City**	**19.95**	**322**	⇑	P		**P**	**19 03 07.7**	**+0.6**
	baz=18								
131A	**Roby**	**20.12**	**325**	⇑	S		S	19 06 38.3	-15
	baz=19								
131A	**Roby**	**20.12**	**325**	⇑	S		S	19 06 38.3	-15
	baz=19								
Z32A	**Haskell**	**20.13**	**328**	⇑	P		Pn	19 03 10.9	-0.1
	baz=19,SNR=5.8								
Z32A				⇓	S		S	19 06 39.6	-14
	baz=19								
Z32A	**Haskell**	**20.13**	**328**	⇑	P		Pn	19 03 10.9	-0.1
	baz=19,SNR=5.8								
Z32A				⇓	S		S	19 06 39.6	-14
	baz=19								
428A	**Kincaid Ranch,**	**20.13**	**317**	⇓	P		**P**	**19 03 08.5**	**-0.6**
	baz=18								
428A	**Kincaid Ranch,**	**20.13**	**317**	⇓	P		**P**	**19 03 08.5**	**-0.6**
	baz=18								
329A	**Wagon Wheel Ra**	**20.19**	**320**	⇑	P		**P**	**19 03 09.7**	**0.0**
	baz=19								
329A	**Wagon Wheel Ra**	**20.19**	**320**	⇑	P		**P**	**19 03 09.7**	**0.0**
	baz=19								
527A	**Woodward Ranch**	**20.39**	**314**	⇓	P		**P**	**19 03 11.8**	**-0.1**
	baz=19,SNR=22								
527A	**Woodward Ranch**	**20.39**	**314**	⇓	P		**P**	**19 03 11.8**	**-0.1**
	baz=19,SNR=22								
626A	**Big Bend Ranch**	**20.40**	**312**	⇓	P		**P**	**19 03 12.0**	**0.0**
	baz=19,SNR=37								
626A	**Big Bend Ranch**	**20.40**	**312**	⇓	P		**P**	**19 03 12.0**	**0.0**
	baz=19,SNR=37								
Z31A	**Sharp Cattle R**	**20.48**	**327**	⇓	P		**P**	**19 03 14.1**	**+1.3**
	baz=19								
Z31A	**Sharp Cattle R**	**20.48**	**327**	⇓	P		**P**	**19 03 14.1**	**+1.3**
	baz=19								
328A	**Wristen Ranch,**	**20.64**	**318**	⇓	P		**P**	**19 03 14.6**	**+0.1**
	baz=19								
328A	**Wristen Ranch,**	**20.64**	**318**	⇓	P		**P**	**19 03 14.6**	**+0.1**
	baz=19								
427A	**Hayter Ranch,**	**20.68**	**316**	⇑	P		**P**	**19 03 14.0**	**-1.1**
	baz=19								
427A	**Hayter Ranch,**	**20.68**	**316**	⇑	P		**P**	**19 03 14.0**	**-1.1**
	baz=19								
Z30A	**Sanderson Ranc**	**20.99**	**325**	⇑	P		**P**	**19 03 18.9**	**+0.6**
	baz=20								
Z30A	**Sanderson Ranc**	**20.99**	**325**	⇑	P		**P**	**19 03 18.9**	**+0.6**
	baz=20								
Y31A	**Rekieta Farm,**	**21.04**	**328**	⇓	P		**P**	**19 03 20.6**	**+1.8**
	baz=20								
Y31A	**Rekieta Farm,**	**21.04**	**328**	⇓	P		**P**	**19 03 20.6**	**+1.8**
	baz=20								
326A	**Caldwell Ranch**	**21.36**	**316**	⇑	P		**P**	**19 03 22.2**	**-0.1**
	baz=20,SNR=5.4								
326A	**Caldwell Ranch**	**21.36**	**316**	⇑	P		**P**	**19 03 22.2**	**-0.1**
	baz=20,SNR=5.4								
X31A	**McDonald Ranch**	**21.43**	**329**	⇓	P		**P**	**19 03 25.0**	**+1.9**
	baz=20								
X31A	**McDonald Ranch**	**21.43**	**329**	⇓	P		**P**	**19 03 25.0**	**+1.9**
	baz=20								
425A	**Indio Mountain**	**21.72**	**314**	⇓	P		**P**	**19 03 25.4**	**-0.9**
	baz=20,SNR=9.1								
425A	**Indio Mountain**	**21.72**	**314**	⇓	P		**P**	**19 03 25.4**	**-0.9**
	baz=20,SNR=9.1								
226B	**Tecolote Peak,**	**21.97**	**318**	⇓	P		**P**	**19 03 28.7**	**-0.2**
	baz=20								
226B	**Tecolote Peak,**	**21.97**	**318**	⇓	P		**P**	**19 03 28.7**	**-0.2**
	baz=20								
325A	**Bean Ranch, Si**	**22.06**	**315**	⇑	P		**P**	**19 03 29.4**	**-0.6**
	baz=20,SNR=12								
325A	**Bean Ranch, Si**	**22.06**	**315**	⇑	P		**P**	**19 03 29.4**	**-0.6**
	baz=20,SNR=12								
Z27A	**Tatum**	**22.21**	**321**	⇓	P		**P**	**19 03 31.6**	**+0.1**
	baz=21,SNR=5.3								
Z27A	**Tatum**	**22.21**	**321**	⇓	P		**P**	**19 03 31.6**	**+0.1**
	baz=21,SNR=5.3								
MSTX	**Muleshoe**	**22.41**	**323**	⇑	P		**P**	**19 03 35.2**	**+1.5**
	baz=21								
MSTX	**Muleshoe**	**22.41**	**323**	⇑	P		**P**	**19 03 35.2**	**+1.5**
	baz=21								
225A	**Deer Hill, Car**	**22.42**	**317**	⇓	P		**P**	**19 03 33.8**	**0.0**
	baz=21								
225A	**Deer Hill, Car**	**22.42**	**317**	⇓	P		**P**	**19 03 33.8**	**0.0**
	baz=21								
324A	**Moseley Ranch,**	**22.45**	**314**	⇓	P		**P**	**19 03 33.8**	**-0.3**
	baz=21								
324A	**Moseley Ranch,**	**22.45**	**314**	⇓	P		**P**	**19 03 33.8**	**-0.3**
	baz=21								
Y27A	**Causey**	**22.58**	**323**	⇓	P		**P**	**19 03 35.8**	**+0.3**
	baz=21								
Y27A	**Causey**	**22.58**	**323**	⇓	P		**P**	**19 03 35.8**

T25A	**Trinidad** baz=24	**25.65**	**326**	⇓P	**P**	**19**	**04**	**08.7 +4.1**
Y20A	**Horse Springs,** baz=24	**25.87**	**316**	⇑P	**P**	**19**	**04**	**09.5 +2.7**
Y20A	**Horse Springs,** baz=24	**25.87**	**316**	⇑P	**P**	**19**	**04**	**09.5 +2.7**
PDAR	**Pinedale Array** 0.5nm,0.4s,baz=145,slow=13,SNR=4.5	**32.46**	**328**	P	**P**	**19**	**05**	**05.3 +0.1**
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=120,slow=5.5,SNR=6.0	**35.06**	**315**	P	**P**	**19**	**05**	**28.8 +1.0**
NVAR	0.6nm,0.6s,baz=133,slow=7.2,SNR=3.1			pP	**pP**	**19**	**05**	**41.2 +3.2**
LPAZ	**La Paz** comp=Z,53nm,18.8s,baz=161,slow=36	**37.57**	**150**	LR	LR	19	21	13.6
SCHQ	**Schefferville** 2.8nm,0.9s,baz=204,slow=10.0,SNR=3.3	**41.15**	**18**	P	**P**	**19**	**06**	**18.2 -0.5**
YKA	**Yellowknife Ar** 0.5nm,0.7s,baz=140,slow=7.6,SNR=8.7	**49.77**	**344**	P	**P**	**19**	**07**	**26.3 -0.4**
YKA	0.9nm,0.8s,baz=140,slow=7.6,SNR=6.7			pP	**pP**	**19**	**07**	**39.7 +2.5**
ILAR	**Eielson Array** 0.4nm,0.8s,baz=86,slow=4.6,SNR=3.4	**62.47**	**335**	P	**P**	**19**	**08**	**58.6 +1.2**
ILAR	0.3nm,0.6s,baz=121,slow=4.6,SNR=4.5			pP	**pP**	**19**	**09**	**08.1 -0.1**
EKA	**Eskdalemuir Ar** 0.7nm,0.7s,baz=306,slow=4.8,SNR=3.7	**72.95**	**36**	P	**P**	**19**	**10**	**01.5 -2.1**
ESDC	**Sonseca Array** 0.2nm,0.3s,baz=277,slow=6.0,SNR=3.7	**74.22**	**53**	P	**P**	**19**	**10**	**11.9 +0.4**
ESDC	0.5nm,0.6s,baz=282,slow=6.3,SNR=1.9			pP	**pP**	**19**	**10**	**22.5 +0.1**
ARCES	**ARCESS Array B** 14nm,1.1s,baz=330,slow=7.0,SNR=3.5	**82.08**	**19**	P	**P**	**19**	**10**	**54.6 +0.2**
TORD	**Torodi Ar. Bea** 0.4nm,0.7s,baz=282,slow=5.1,SNR=2.6	**84.98**	**78**	P	**P**	**19**	**11**	**08.5 -1.9**

MAN 28 18:59:51,9.15N×123.59E,h13km,mb5.5,ML4.5,MS4.1, 3C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**0.60**	**203**	⇓*i*P	Pg	19 00 02.8	-0.1
TBP	**Tagbilaran**	**0.61**	**27**	*e*P	Pb	19 00 03.5	0.0
TBP				*e*S	Sb	19 00 12.2	+0.2
LLP	**Lapu-Lapu**	**1.22**	**18**	*e*P	Pn	19 00 13.2	-0.6
LLP				*e*S	Sg	19 00 30.9	+0.3
CGP	**Cagayan de Oro**	**1.29**	**122**	⇑*i*P	Pn	19 00 14.7	-0.1
CGP				*i* S	Sg	19 00 32.4	-0.4
PAGZ	**Pagadian**	**1.30**	**189**	*e*P	Pb	19 00 15.6	+0.2
MSLP	**Maasin**	**1.59**	**52**	*e*P	Pb	19 00 20.7	+0.4
MSLP				*e*S	Sg	19 00 46.0	+3.6
IPIL	**Ipil**	**1.68**	**217**	*e*P	Pb	19 00 21.1	-0.8
GUIM	**Jordan**	**1.77**	**326**	*e*P	Pn	19 00 21.9	+0.5
GUIM				*e*S	Sb	19 00 45.0	-0.5
CTBH	**Cotabato--PC H**	**2.02**	**161**	⇑*i*P	Pb	19 00 26.4	-1.2
OCLP	**Ormoc**	**2.15**	**28**	*e*P	Pn	19 00 27.7	+1.2
RCP	**Roxas**	**2.54**	**341**	⇑*e*P	Pb	19 00 34.9	-1.6
MATI	**Mati**	**3.43**	**129**	*e*P	Pn	19 00 47.0	+2.8

IDC 28 19:15:28.2±2.6,0.64S×133.38E,h0km,mb3.6/2, mb1 3.7/4,mb1mx3.4/22,mbtmp3.5/4,ML3.4/2,Error ellipse: s-maj=103.9km s-min=26.3km az=79.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=43,slow=14,SNR=3.8	**18.95**	**203**	P	P	19	19	50.8 -0.3
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=357,slow=11,SNR=7.9	**19.21**	**177**	P	P	19	19	53.7 -0.3
ASAR	**Alice Springs** 1.0nm,0.4s,baz=359,slow=12,SNR=33	**22.90**	**179**	P	P	19	20	34.2 +0.4
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=110,slow=6.7,SNR=4.5	**64.94**	**324**	P	P	19	26	09.7 -0.1

IDC 28 19:18:44.1±7.0,11.80N×88.36W,h0km,mb3.6/5, mb1 4.0/5,mb1mx3.7/23,mbtmp3.6/5,MS2.6/1,Ms1 2.6/1, ms1mx2.4/29,Error ellipse: s-maj=131.5km s-min=59.3km az=169.0,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array** 1.4nm,0.6s,baz=143,slow=11,SNR=15	**22.54**	**323**	P	P	19	23	45.1 -0.9
TKL	**Tuckaleechee C** 5.0nm,0.8s,baz=188,slow=11,SNR=7.4	**24.12**	**9**	P	P	19	24	02.5 +0.8
NVAR	**Mina Array Bea** 0.2nm,0.4s,baz=134,slow=6.4,SNR=2.8	**37.62**	**320**	P	P	19	26	02.2 +1.1
CFAA	**Coronel Fontan** comp=Z,6.7nm,18.5s,baz=256,slow=31	**47.27**	**156**	LR	LR	19	43	29.5
YKA	**Yellowknife Ar** 0.6nm,0.8s,baz=140,slow=7.9,SNR=8.9	**54.01**	**345**	P	P	19	28	09.4 -0.4
ILAR	**Eielson Array** 0.3nm,0.8s,baz=126,slow=4.6,SNR=3.0	**66.26**	**336**	P	P	19	29	33.3 -0.6

*ISCJB **28** 19:21:36.6±1.2,51.50N±0.05×16.14E±0.05,h0km,Error ellipse: s-maj=7.9km s-min=3.8km az=24.2*
*WAR **28** 19:21:38.4,51.55N×16.10E*
*CSEM **28** 19:21:39.4±0.8,51.44N×16.16E,h2km,ML2.9/5,Error ellipse: s-maj=12.8km s-min=6.4km az=18.0*
*PRU **28** 19:21:40.2,51.44N×16.16E,h0km*
ISC 28 19:21:38.6±1.7,51.52N±0.08×16.10E±0.04,h0km,n17, σ0.68/34,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**170**	*e*Pg	**Pg**	**19**	**21**	**51.8 0.0**
KSP				*e*Sg	**Sg**	**19**	**22**	**00.7 0.0**
UPC	**Upice**	**1.02**	**183**	*e*PG	**Pg**	**19**	**21**	**57.6 -0.4**
UPC				*e*SG	**Sg**	**19**	**22**	**10.1 -1.1**
	comp=Z,6.1nm,0.3s							
UPC	**Upice**	**1.02**	**183**	Pg	**Pg**	**19**	**21**	**57.6 -0.4**
UPC				Sg	**Sg**	**19**	**22**	**10.1 -1.1**
	6.1nm,0.3s							
PVCC	**Panska Ves**	**1.39**	**225**	*e*PG	**Pb**	**19**	**22**	**05.3 0.0**
PVCC				*e*SG	**Sg**	**19**	**22**	**23.5 +0.5**
	comp=Z,31nm,0.3s							
PVCC	**Panska Ves**	**1.39**	**225**	Pg	**Pb**	**19**	**22**	**05.3 0.0**
PVCC				Sg	**Sg**	**19**	**22**	**23.5 +0.5**
	31nm,0.3s							
BRG	**Berggiesshubel**	**1.50**	**245**	PG	**Pb**	**19**	**22**	**07.0 -0.3**
BRG				SG	**Sn**	**19**	**22**	**27.3 +0.2**
	12nm,0.4s							
PRU	**Pruhonice**	**1.82**	**213**	*e*PG	**Pb**	**19**	**22**	**12.9 +0.1**
PRU				*e*SG	**Sb**	**19**	**22**	**36.8 +0.6**
	comp=Z,8.1nm,0.3s							
PRU	**Pruhonice**	**1.82**	**213**	Pg	**Pb**	**19**	**22**	**12.9 +0.1**
PRU				Sg	**Sb**	**19**	**22**	**36.8 +0.6**
	8.1nm,0.3s							
CLL	**Collm**	**1.95**	**265**	*e*Pg	**Pb**	**19**	**22**	**15.0 +0.1**
CLL				*e*		19	22	19.0
CLL				*e*Sg	**Sg**	**19**	**22**	**42.0 +0.8**
MORC	**Moravsky Berou**	**1.97**	**152**	*e*Sg	**Sb**	**19**	**22**	**40.0 -0.5**
OKC	**Ostrava-Krasne**	**2.13**	**141**	*e*PG	**Pb**	**19**	**22**	**18.2 +0.2**
OKC				*e*SG	**Sb**	**19**	**22**	**45.5 +0.5**
	comp=Z,7.7nm,0.7s							
OKC	**Ostrava-Krasne**	**2.13**	**141**	Pg	**Pb**	**19**	**22**	**18.2 +0.2**
OKC				Sg	**Sb**	**19**	**22**	**45.5 +0.5**
	7.7nm,0.7s							
VRAC	**Vranov**	**2.24**	**172**	*e*Sg	**Sb**	**19**	**22**	**49.0 +0.9**
NKC	**Novy Kostel**	**2.65**	**242**	*e*PN	**Pb**	**19**	**22**	**25.1 -1.7**
NKC				*e*PG	**Pg**	**19**	**22**	**28.8 -0.5**
NKC				*e*SG	**Sg**	**19**	**23**	**04.6 +1.0**
	comp=Z,7.3nm,0.2s							
NKC	**Novy Kostel**	**2.65**	**242**	Pn	**Pb**	**19**	**22**	**25.1 -1.7**
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PN	**Pn**	**19**	**22**	**26.1 +0.3**
KHC				*e*PG	**Pb**	**19**	**22**	**31.4 +0.5**
KHC				*e*SN	**Sn**	**19**	**23**	**01.4 +0.2**
KHC				*e*SG	**Sg**	**19**	**23**	**11.2 0.0**
	comp=Z,1.9nm,0.3s							
KHC	**Kasperske Hory**	**2.89**	**215**	Pn	**Pn**	**19**	**22**	**25.5 -0.3**
KHC				Sn	**Sn**	**19**	**23**	**01.5 +0.2**

*ISCJB **28** 19:33:42.2±0.4,0.25S±0.04×122.84E±0.04,h80km±7km, mb3.5/3,Error ellipse: s-maj=7.7km s-min=5.2km az=35.0*
*IDC **28** 19:33:42.4±1.0,0.32S×122.94E,h70km±9km,mb3.3/3, mb1 3.7/4,mb1mx3.2/23,mbtmp3.5/4,Error ellipse: s-maj=25.2km s-min=15.1km az=92.0*
*DJA **28** 19:33:43.7±0.5,0°S±2°×12°3E±°,h37km±7km,M5.3/3, mB5.3/3,mb5.4/3,MLv5.3/2,Mw(mB)4.8/3*
*AUST **28** 19:33:44.3,0.50S×123.00E,h60km*
ISC 28 19:33:43.2±1.0,0.27S±0.07×122.81E±0.06,h72km±11km, n30,σ1.39/28,mb3.6/3,1C,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.77**	**183**	P	**Pn**	**19**	**33**	**58.3 -0.8**
LUWI				S	**Sn**	**19**	**34**	**09.8 -1.0**
LUWI	**Luwuk** baz=0.6,SNR=1000	**0.77**	**183**	P	**Pn**	**19**	**33**	**58.9 -0.2**
MRSI	**Marisa**	**1.14**	**310**	P	Pn	19	34	05.3 +1.8
MRSI				S	Sn	19	34	17.3 -1.4
KMSI	**Cibinong**	**1.44**	**55**	P	**Pn**	**19**	**34**	**05.9 -1.5**
KMSI				S	**Sn**	**19**	**34**	**25.7 +0.1**
MNI	**Manado**	**2.65**	**50**	P	**Pn**	**19**	**34**	**23.5 -0.2**
SKSI	**Soroako, Sulaw**	**2.69**	**213**	P	**Pn**	**19**	**34**	**24.7 +0.4**
SKSI				S	**Sn**	**19**	**34**	**58.1 +2.3**
TTSI	**Tana Toraja**	**4.07**	**227**	P	**Pn**	**19**	**34**	**44.7 +1.7**
LBMI	**Labuha**	**4.71**	**95**	P	**Pn**	**19**	**34**	**52.1 +0.4**
LBMI				S	**Sn**	**19**	**35**	**46.0 +0.9**
BBSI	**Bau Bau**	**5.19**	**183**	P	**Pn**	**19**	**34**	**59.4 +1.0**
BBSI				S	**Sn**	**19**	**35**	**58.3 +1.3**
KAPI	**Kappang**	**5.62**	**213**	P	**Pn**	**19**	**35**	**04.9 +0.6**
KAPI	**Kappang** 16nm,0.3s,baz=9.8,slow=6.7,SNR=36	**5.62**	**213**	P	**Pn**	**19**	**35**	**04.8 +0.6**
KAPI	2.7nm,0.3s,baz=232,slow=21,SNR=2.1			S	**Sn**	**19**	**36**	**06.1 -1.3**
BKSI	**Bulukumba**	**5.69**	**208**	P	**Pn**	**19**	**35**	**06.4 +1.1**
BSSI	**Bau Bau, Buton** 187nm,0.7s,2μm	**6.28**	**202**	P	**Pn**	**19**	**35**	**15.5 +2.2**
AAI	**Ambon** 93nm,0.7s,1μm0.4nm	**6.37**	**122**	P	**Pn**	**19**	**35**	**15.6 +1.2**
AAI	**Ambon** baz=6.1,SNR=10	**6.37**	**122**	P	**Pn**	**19**	**35**	**13.2 -1.2**
MYLDM	**Lahad Datu**	**6.91**	**322**	P	Pn	19	35	32.1 +10
CTBH	**Cotabato--PC H**	**7.57**	**11**	⇑*i*P	Pn	19	35	31.1 +0.1
DAV	**Davao City (W)**	**7.79**	**21**	P	**Pn**	**19**	**35**	**34.6 +0.6**
DAV	**Davao City (W)** 225nm,0.3s,baz=50,slow=3.0,SNR=7.3	**7.79**	**21**	P	Pn	19	35	33.1 -0.8
SWI	**Sorong**	**8.47**	**94**	P	**Pn**	**19**	**35**	**45.5 +2.3**
SWI	**Sorong** baz=8.3,SNR=4.8	**8.47**	**94**	P	**Pn**	**19**	**35**	**43.2 -0.1**
KKM	**Kota Kinabalu** baz=9.4,SNR=3.3	**9.09**	**314**	S	Sn	19	37	45.7 +13
WSI	**Waingapu** baz=9.6,SNR=5.1	**9.67**	**195**	P	Pn	19	36	15.4 +16
FAKI	**Fak Fak** baz=9.6,SNR=18	**9.80**	**106**	P	Pn	19	35	56.5 -4.9
FAKI	baz=9.6,SNR=3.9			S	Sn	19	37	38.9 -11
SBUM	**Sibu**	**10.92**	**284**	P	Pn	19	36	25.3 +8.6
MTN	**Manton Dam** baz=15,SNR=5.6	**14.98**	**147**	P	**Pn**	**19**	**37**	**11.8 +0.9**
KNRA	**Kununurra** baz=16,SNR=4.3	**16.40**	**159**	P	**Pn**	**19**	**37**	**29.7 +0.7**
WRA	**Warramunga Arr** 1.8nm,0.6s,baz=337,slow=10.0,SNR=16	**22.58**	**151**	P	**P**	**19**	**38**	**34.9 -3.1**
ASAR	**Alice Springs** 0.7nm,0.4s,baz=344,slow=15,SNR=15	**25.64**	**156**	P	**P**	**19**	**39**	**04.7 -1.6**
ASAR	1.0nm,0.8s,baz=337,slow=8.8,SNR=5.4			pP	**pP**	**19**	**39**	**22.7 -0.4**
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=129,slow=8.9,SNR=5.0	**58.74**	**329**	P	P	19	43	34.1 +0.4
MKAR	0.1nm,0.3s,baz=142,slow=7.2,SNR=2.2			pP	pP	19	43	53.0 +0.8
MKAR	0.3nm,0.6s,baz=135,slow=8.9,SNR=3.4			sP	sP	19	43	58.5 -1.7

*AUST **28** 19:36:04.8,5.59S×155.13E,h100km*
*IDC **28** 19:36:12.7±0.5,5.75S×154.37E,h141km±3km,mb4.2/27, mb1 4.3/29,mb1mx4.3/31,mbtmp4.2/29,MS3.8/2, Ms1 3.8/2,ms1mx3.1/21,Error ellipse: s-maj=10.7km s-min=7.7km az=97.0*
*ISCJB **28** 19:36:13.4±0.9,5.74S±0.04×154.48E±0.05,h162km±8km, mb4.4/45,Error ellipse: s-maj=7.6km s-min=6.4km az=178.9*
*NEIC **28** 19:36:15.2±1.0,5.76S×154.49E,h167km±9km,mb4.7/21, Error ellipse: s-maj=6.6km s-min=6.1km az=68.0*
*DJA **28** 19:36:21.8±2.8,6°S±11°×15°4E±2°0,h214km±18km, M4.8/3,mB5.0/2,mb4.8/3,Mw(mB)4.4/2*
ISC 28 19:36:12.6±0.4,5.73S±0.05×154.44E±0.05,h141km±3km, h141km:pP-P,n156,σ1.15/193,mb4.5/45,1D, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul** baz=3.3,SNR=9.1	**2.74**	**304**	P	**Pn**	**19**	**36**	**57.4 +1.1**
HNR	**Honiara**	**6.58**	**124**	P	**Pn**	**19**	**37**	**47.6 +0.5**
HNR	**Honiara** 5.8nm,0.3s,baz=151,slow=7.9,SNR=4.6	**6.58**	**124**	P	**Pn**	**19**	**37**	**47.6 +0.5**
PMG	**Port Moresby**	**8.09**	**243**	P	Pn	19	38	11.9 +4.6
PMG				S	**Sn**	**19**	**39**	**40.0 +2.7**
PMG	**Port Moresby**	**8.09**	**243**	P	Pn	19	38	11.9 +4.6
PMG	**Port Moresby** 23nm,0.3s,baz=52,slow=6.4,SNR=45	**8.09**	**243**	P	Pn	19	38	11.9 +4.6
PMG	4.4nm,0.3s,baz=181,slow=14,SNR=1.7			S	**Sn**	**19**	**39**	**40.0 +2.7**
COEN	**Coen** baz=14,SNR=4.7	**13.78**	**233**	P	**P**	**19**	**39**	**24.9 -1.1**
JAY	**Jayapura** baz=15,SNR=4.4	**14.07**	**283**	P	**Pn**	**19**	**39**	**26.7 +0.7**
MTSU	**Mount Surprise** baz=16,SNR=43	**15.80**	**218**	P	**P**	**19**	**39**	**49.9 +1.4**
CTAO	**Charters Tower** 56nm,0.8s	**16.34**	**208**	*e*P	**P**	**19**	**39**	**55.9 +1.5**
SRPI	**Serui, Papua** 54nm,1.1s	**18.56**	**281**	P	**Pn**	**19**	**40**	**21.4 +0.7**
EIDS	**Eidsvold** 41nm,0.9s	**19.79**	**189**	*e*P	**P**	**19**	**40**	**33.0 +0.9**
EIDS	**Eidsvold** baz=20,SNR=15	**19.79**	**189**	P	**P**	**19**	**40**	**33.2 +1.1**
DZM	**Mont Dzumac**	**19.96**	**146**	*e*P	**P**	**19**	**40**	**34.2 +0.1**
DZM	**Mont Dzumac**	**19.96**	**146**	P	**P**	**19**	**40**	**34.6 +0.5**
DZM				pP	**pP**	**19**	**41**	**00.2 +1.1**
DZM	**Mont Dzumac** 3.8nm,0.3s,baz=311,slow=12,SNR=31	**19.96**	**146**	P	**P**	**19**	**40**	**34.6 +0.5**
DZM	0.9nm,0.3s,baz=340,slow=13,SNR=3.4			pP	**pP**	**19**	**41**	**00.2 +1.1**
QIS	**Mount Isa** baz=21,SNR=5.9	**20.61**	**223**	P	**P**	**19**	**40**	**41.9 +1.0**
RKPI	**Ransiki, Papua** 49nm,0.8s,848nm	**20.65**	**281**	P	Pn	19	40	47.4 +2.1
RMQ	**Roma** baz=22,SNR=38	**21.34**	**194**	P	**P**	**19**	**40**	**49.5 +0.8**
FAKI	**Fak Fak** baz=23,SNR=3.9	**22.30**	**276**	P	**P**	**19**	**40**	**58.9 +0.1**
KDU	**Kakadu** baz=23,SNR=11	**22.75**	**251**	P	**P**	**19**	**41**	**02.9 -0.2**
QLP	**Quilpie** baz=23,SNR=34	**22.91**	**204**	P	**P**	**19**	**41**	**04.5 +0.1**
SWI	**Sorong**	**23.64**	**281**	P	**P**	**19**	**41**	**11.8 +0.5**
SWI	**Sorong** baz=24,SNR=10	**23.64**	**281**	P	**P**	**19**	**41**	**12.0 +0.8**
PALU	**Palau** baz=24,SNR=7.1	**23.78**	**303**	P	**P**	**19**	**41**	**14.2 +1.6**
MTN	**Manton Dam** baz=25,SNR=7.1	**24.05**	**251**	P	**P**	**19**	**41**	**16.1 +1.1**
WRAB	**Tennant Creek** 12nm,0.6s	**24.10**	**232**	*e*P	**P**	**19**	**41**	**15.7 +0.3**
WRA	**Warramunga Arr**	**24.11**	**232**	P	**P**	**19**	**41**	**15.9 +0.3**
WRA				S	**S**	**19**	**45**	**22.8 -0.5**
WRA	**Warramunga Arr** 12nm,0.6s,baz=58,slow=10.0,SNR=32	**24.11**	**232**	P	**P**	**19**	**41**	**15.9 +0.3**
WRA	2.4nm,1.1s,baz=68,slow=19,SNR=4.6			S	**S**	**19**	**45**	**22.8 -0.5**
ARMA	**Armidale** baz=25,SNR=6.7	**24.70**	**186**	P	**P**	**19**	**41**	**22.0 +1.1**
AS31	**Alice Springs**	**26.62**	**226**	*e*P	**P**	**19**	**41**	**38.0 -0.3**
ASAR	**Alice Springs**	**26.62**	**226**	P	**P**	**19**	**41**	**38.1 -0.1**
ASAR				pP	**pP**	**19**	**42**	**07.4 -0.5**
ASAR				PcP	**PcP**	**19**	**44**	**59.2 +0.3**
ASAR				S	**S**	**19**	**45**	**59.0 -4.0**
ASAR	**Alice Springs** 5.8nm,0.4s,baz=57,slow=9.2,SNR=151	**26.62**	**226**	P	**P**	**19**	**41**	**38.1 -0.1**
ASAR	2.6nm,0.7s,baz=54,slow=7.2,SNR=4.0			pP	**pP**	**19**	**42**	**07.4 -0.5**
ASAR	1.6nm,0.6s,baz=62,slow=2.9,SNR=6.6			PcP	**PcP**	**19**	**44**	**59.2 +0.3**
ASAR	1.7nm,0.8s,baz=53,slow=15,SNR=5.6			S	**S**	**19**	**45**	**59.0 -4.0**

CMSA	**Cobar Meteorol** baz=27,SNR=8.6	**26.95**	**197**	P	**P**	**19**	**41**	**44.8 +3.8**
KNRA	**Kununurra** baz=28,SNR=19	**27.06**	**247**	P	**P**	**19**	**41**	**42.2 0.0**
LBMI	**Labuha**	**27.36**	**280**	P	**P**	**19**	**41**	**46.0 +1.1**
STKA	**Stephens Creek**	**28.65**	**203**	P	**P**	**19**	**41**	**55.7 -0.5**
STKA				pP	**pP**	**19**	**42**	**27.4 +1.3**
STKA	**Stephens Creek** 3.1nm,0.4s,baz=35,slow=10,SNR=15	**28.65**	**203**	P	**P**	**19**	**41**	**55.7 -0.5**
STKA	4.8nm,0.7s,baz=32,slow=11,SNR=3.6			pP	**pP**	**19**	**42**	**27.4 +1.3**
STKA	**Stephens Creek** baz=29,SNR=12	**28.65**	**203**	P	**P**	**19**	**41**	**55.8 -0.5**
FITZ	**Fitzroy Crossi**	**30.68**	**244**	P	**P**	**19**	**42**	**13.7 -0.6**
FITZ				pP	**pP**	**19**	**42**	**44.9 +0.5**
FITZ	**Fitzroy Crossi** 16nm,0.7s,baz=84,slow=7.5,SNR=50	**30.68**	**244**	P	**P**	**19**	**42**	**13.7 -0.6**
FITZ	4.1nm,0.6s,baz=120,slow=3.8,SNR=2.6			pP	**pP**	**19**	**42**	**44.9 +0.5**
FITZ	**Fitzroy Crossi** baz=31,SNR=19	**30.68**	**244**	P	**P**	**19**	**42**	**13.7 -0.6**
BBOO	**Buckleboo** baz=32,SNR=9.3	**31.93**	**210**	P	**P**	**19**	**42**	**24.6 -0.5**
LUWI	**Luwuk** baz=33,SNR=8.1	**31.95**	**277**	P	**P**	**19**	**42**	**26.5 +1.0**
CTBH	**Cotabato--PC H**	**32.76**	**293**	⇓*i*P	**P**	**19**	**42**	**33.5 +1.0**
AFI	**Afiamalu** comp=Z,491nm,19.0s,baz=259,slow=31	**34.23**	**106**	LR	LR	19	53	55.1
KAPI	**Kappang**	**34.54**	**269**	P	**P**	**19**	**42**	**47.1 -0.8**
KAPI				pP	**pP**	**19**	**43**	**17.5 -0.9**
KAPI	**Kappang** 8.5nm,0.5s,baz=114,slow=6.5,SNR=5.6	**34.54**	**269**	P	**P**	**19**	**42**	**47.2 -0.8**
KAPI	3.2nm,0.3s,baz=210,slow=20,SNR=1.9			pP	**pP**	**19**	**43**	**17.5 -0.9**
FORT	**Forrest** baz=36,SNR=10	**35.14**	**222**	P	**P**	**19**	**42**	**52.7 -0.2**
MYLDM	**Lahad Datu**	**37.49**	**286**	P	**P**	**19**	**43**	**15.2 +2.1**
MYLDM	**Lahad Datu**	**37.49**	**286**	P	**P**	**19**	**43**	**14.9 +1.8**
TSM	**Tawau**	**37.85**	**284**	P	**P**	**19**	**43**	**16.9 +0.8**
URZ	**Urewera**	**38.37**	**151**	P	**P**	**19**	**43**	**20.7 +0.6**
URZ	**Urewera** 4.7nm,0.3s,baz=118,slow=1.6,SNR=8.8	**38.37**	**151**	P	**P**	**19**	**43**	**20.7 +0.6**
SDKM	**Sandakan**	**38.86**	**286**	P	**P**	**19**	**43**	**24.2 -0.5**
KMBL	**Kambalda** baz=40,SNR=6.7	**39.75**	**226**	P	**P**	**19**	**43**	**31.4 -0.4**
KKM	**Kota Kinabalu** 40nm,0.8s	**39.91**	**286**	*e*P	**P**	**19**	**43**	**33.5 +0.1**
KKM	**Kota Kinabalu**	**39.91**	**286**	P	**P**	**19**	**43**	**34.1 +0.7**
KKM	**Kota Kinabalu**	**39.91**	**286**	P	**P**	**19**	**43**	**33.7 +0.3**
KKM	**Kota Kinabalu** baz=40,SNR=21	**39.91**	**286**	P	**P**	**19**	**43**	**33.8 +0.4**
MEEK	**Meekatharra** baz=41,SNR=16	**39.97**	**235**	P	**P**	**19**	**43**	**33.3 -0.3**
JAGI	**Jajag, Banyuwa** baz=41,SNR=5.2	**40.06**	**264**	P	**P**	**19**	**43**	**35.4 +0.9**
RPZ	**Rata Peaks**	**40.56**	**161**	P	**P**	**19**	**43**	**37.6 -0.6**
RPZ	**Rata Peaks** 5.1nm,0.5s,baz=8.9,slow=4.8,SNR=3.8	**40.56**	**161**	P	**P**	**19**	**43**	**37.6 -0.6**
BTM	**Bintulu**	**42.25**	**281**	P	**P**	**19**	**43**	**54.3 +1.8**
KLBR	**Kellerberrin** baz=44,SNR=15	**42.89**	**229**	P	**P**	**19**	**43**	**56.4 -1.0**
SBUM	**Sibu**	**42.94**	**280**	P	**P**	**19**	**43**	**59.6 +1.5**
SBUM	**Sibu**	**42.94**	**280**	P	**P**	**19**	**43**	**59.2 +1.2**
MORW	**Morawa** baz=44,SNR=8.8	**43.06**	**233**	P	**P**	**19**	**43**	**58.2 -0.6**
BLDU	**Ballidu** baz=44,SNR=11	**43.22**	**230**	P	**P**	**19**	**43**	**59.2 -0.8**
UGM	**Wanagama** baz=44,SNR=4.2	**43.65**	**265**	P	**P**	**19**	**44**	**04.4 +0.7**
TPUB	**Ta-pu** 23nm,0.6s	**43.85**	**312**	*e*P	**P**	**19**	**44**	**05.2 0.0**
SSLB	**Suanglung** 9.7nm,0.6s	**43.91**	**313**	*e*P	**P**	**19**	**44**	**06.0 +0.3**
JNU	**Nakatsue**	**44.65**	**331**	P	**P**	**19**	**44**	**11.4 0.0**
JNU	**Nakatsue** 33nm,0.7s,baz=106,slow=2.5,SNR=20	**44.65**	**331**	P	**P**	**19**	**44**	**11.4 0.0**
KSM	**Kuching** 54nm,0.6s	**44.65**	**278**	*e*P	**P**	**19**	**44**	**12.1 +0.3**
KSM	**Kuching**	**44.65**	**278**	P	**P**	**19**	**44**	**12.4 +0.7**
KSM	**Kuching**	**44.65**	**278**	P	**P**	**19**	**44**	**12.0 +0.3**
KSM	**Kuching** baz=45,SNR=48	**44.65**	**278**	P	**P**	**19**	**44**	**12.4 +0.7**
MJAR	**Matsushiro Arr**	**44.72**	**341**	P	**P**	**19**	**44**	**10.9 -0.9**
MJAR	**Matsushiro Arr** 1.9nm,0.5s,baz=168,slow=7.3,SNR=14	**44.72**	**341**	P	**P**	**19**	**44**	**11.0 -0.9**
CISI	**Cisompet, Garu** baz=47,SNR=7.4	**46.33**	**265**	P	**P**	**19**	**44**	**24.4 -0.6**
KSRS	**Korea Array** 9.4nm,0.7s,baz=148,slow=8.0,SNR=35	**49.57**	**332**	P	**P**	**19**	**44**	**49.8 +0.3**
KSRS	comp=Z,22nm,19.0s,baz=195,slow=35			LR	LR	20	05	10.5
KSAR	**Wonju Array Be**	**49.58**	**332**	P	**P**	**19**	**44**	**49.8 +0.3**
INCN	**Inchon** 11nm,0.4s	**50.21**	**331**	*e*P	**P**	**19**	**44**	**54.5 +0.3**
ASAJ	**Asahikawa**	**50.76**	**349**	P	**P**	**19**	**44**	**59.4 +1.1**
ASAJ	**Asahikawa** 3.8nm,0.6s,baz=6.8,slow=31,SNR=3.7	**50.76**	**349**	P	**P**	**19**	**44**	**59.4 +1.1**
KGM	**Kluang**	**51.63**	**277**	P	**P**	**19**	**45**	**06.0 +0.6**
USRK	**Ussuriysk Arra** 2.4nm,0.5s,baz=147,slow=5.3,SNR=9.9	**53.66**	**340**	P	**P**	**19**	**45**	**20.0 +0.3**
KULM	**Kulim** 11nm,0.5s	**54.81**	**281**	*e*P

	7.8nm,0.8s							
MK31	**Makanchi Array**	**82.10**	**319**	*e*P	**P**	**19 48 17.4**	**-0.1**
MKAR	**Makanchi Array**	**82.10**	**319**	P	**P**	**19 48 17.5**	**-0.1**
MKAR				p*P*	**pP**	**19 48 51.4**	**-1.5**
MKAR	**Makanchi Array**	**82.10**	**319**	P	**P**	**19 48 17.5**	**-0.1**
	1.7nm,0.4s,baz=91,slow=8.5,SNR=42						
MKAR				p*P*	**pP**	**19 48 51.4**	**-1.5**
	0.8nm,0.7s,baz=110,slow=6.3,SNR=2.0						
ILAR	**Eielson Array**	**82.41**	**22**	P	**P**	**19 48 17.8**	**-1.0**
ILAR				p*P*	**pP**	**19 48 52.5**	**-1.6**
ILAR	**Eielson Array**	**82.41**	**22**	P	**P**	**19 48 17.8**	**-1.0**
	2.6nm,0.8s,baz=248,slow=6.1,SNR=21						
ILAR				p*P*	**pP**	**19 48 52.5**	**-1.6**
	1.0nm,0.8s,baz=256,slow=5.4,SNR=3.2						
ZAA0	**Zalesovo Array**	**82.83**	**326**	*e*P	**P**	**19 48 20.1**	**-1.1**
ZALV	**Zalesovo Beam**	**82.83**	**326**	P	**P**	**19 48 20.1**	**-1.1**
ZALV	**Zalesovo Beam**	**82.83**	**326**	P	**P**	**19 48 20.1**	**-1.1**
	2.7nm,0.6s,baz=121,slow=5.1,SNR=15						
DOT	**Dot Lake**	**82.93**	**23**	*e*P	**P**	**19 48 21.4**	**-0.1**
	4.0nm,0.8s						
EGAK	**Eagle**	**84.58**	**23**	*e*P	**P**	**19 48 30.1**	**+0.3**
	4.6nm,0.8s						
MAW	**Mawson**	**85.34**	**203**	*e*P	**P**	**19 48 33.5**	**-0.1**
	2.8nm,0.6s						
MAW	**Mawson**	**85.34**	**203**	P	**P**	**19 48 33.5**	**-0.1**
	13nm,0.6s,baz=93,slow=6.3,SNR=20						
MAW	**Mawson**	**85.34**	**203**	P	**P**	**19 48 34.1**	**+0.5**
	baz=86,SNR=5.2						
KURK	**Kurchatov**	**85.51**	**322**	P	**P**	**19 48 34.2**	**-0.5**
KURK				p*P*	**pP**	**19 49 08.5**	**-1.8**
KURBB	**Kurchatov Arra**	**85.54**	**322**	P	**P**	**19 48 34.2**	**-0.7**
	1.2nm,0.5s,baz=99,slow=4.9,SNR=32						
KURBB				p*P*	**pP**	**19 49 08.5**	**-2.0**
	0.3nm,0.4s,baz=96,slow=5.7,SNR=1.9						
TKM2	**Tokmak 2**	**85.75**	**314**	*e*P	**P**	**19 48 36.2**	**-0.3**
	2.6nm,0.6s						
AAK	**Ala-Archa**	**86.49**	**313**	P	**P**	**19 48 40.1**	**+0.1**
AAK	**Ala-Archa**	**86.49**	**313**	P	**P**	**19 48 40.1**	**+0.1**
	1.2nm,0.4s,baz=50,slow=0.4,SNR=5.6						
INK	**Inuvik**	**88.74**	**21**	P	**P**	**19 48 49.6**	**-0.3**
INK	**Inuvik**	**88.74**	**21**	P	**P**	**19 48 49.6**	**-0.3**
	0.8nm,0.6s,baz=252,slow=6.4,SNR=2.6						
KKAR	**Karatay Array**	**89.45**	**313**	P	**P**	**19 48 54.7**	**+0.8**
	1.2nm,0.8s						
BVAR	**Borovoye Array**	**90.96**	**323**	P	**P**	**19 48 59.2**	**-1.4**
BVAR	**Borovoye Array**	**90.96**	**323**	P	**P**	**19 48 59.2**	**-1.4**
	1.3nm,0.5s,baz=133,slow=6.3,SNR=7.8						
NVAR	**Mina Array Bea**	**91.38**	**52**	P	**P**	**19 49 04.3**	**+1.1**
NVAR				p*P*	**pP**	**19 49 40.4**	**+1.3**
NVAR	**Mina Array Bea**	**91.38**	**52**	P	**P**	**19 49 04.3**	**+1.1**
	1.7nm,0.9s,baz=248,slow=6.1,SNR=8.6						
NVAR				p*P*	**pP**	**19 49 40.4**	**+1.3**
	0.4nm,0.6s,baz=268,slow=3.9,SNR=2.6						
YKA	**Yellowknife Ar**	**95.49**	**28**	P	**P**	**19 49 21.3**	**0.0**
YKA				p*P*	**pP**	**19 49 56.3**	**-0.9**
YKA	**Yellowknife Ar**	**95.49**	**28**	P	**P**	**19 49 21.3**	**0.0**
	0.6nm,0.9s,baz=268,slow=4.7,SNR=6.2						
YKA				p*P*	**pP**	**19 49 56.3**	**-0.9**
	0.3nm,0.6s,baz=269,slow=4.9,SNR=2.9						
BDFB	**Brasilia**	**149.25**	**134**	PKPbc	**PKPbc**	**19 55 45.1**	**-0.8**
BDFB	**Brasilia**	**149.25**	**134**	PKPbc	**PKPbc**	**19 55 45.1**	**-0.8**
	3.7nm,0.5s,baz=134,slow=2.0,SNR=5.8						
TORD	**Torodi Ar. Bea**	**152.15**	**287**	PKPbc	**PKPbc**	**19 55 51.3**	**-1.4**
TORD				PKPab	**PKPab**	**19 56 02.5**	**-0.3**
TORD				pPKPbc	**pPKPbc**	**19 56 26.2**	**-3.7**
TORD				PP	**PP**	**19 59 32.0**	**-3.5**
TORD	**Torodi Ar. Bea**	**152.15**	**287**	PKPbc	**PKPbc**	**19 55 51.3**	**-1.4**
	2.1nm,0.7s,baz=60,slow=2.5,SNR=8.8						
TORD				PKPab	**PKPab**	**19 56 02.5**	**-0.3**
	3.2nm,0.6s,baz=80,slow=3.6,SNR=14						
TORD				pPKPbc	**pPKPbc**	**19 56 26.2**	**-3.7**
	1.7nm,0.7s,baz=48,slow=2.4,SNR=3.2						
TORD				PP	**PP**	**19 59 32.0**	**-3.5**
	1.1nm,1.1s,baz=46,slow=6.2,SNR=3.2						
DBIC	**Dimbokro**	**159.40**	**274**	PKPab	**PKPab**	**19 56 33.4**	**-0.5**
DBIC	**Dimbokro**	**159.40**	**274**	PKPab	**PKPab**	**19 56 33.4**	**-0.5**
	2.2nm,0.6s,baz=60,slow=9.6,SNR=5.3						

*ISCJB **28** 19:36:12.4±0.7,51°41′N±0′.04×16°11′E±0′.03,h0km, Error ellipse: s-maj=5.3km s-min=2.9km az=13.5*
*WAR **28** 19:36:12.9,51°53′N×16°08′E*
*IPEC **28** 19:36:12.9±0.5,51°50′N×16°27′E,h0km±2km,ML1.9/3, Error ellipse: s-maj=4.9km s-min=1.9km az=51.0*
*CSEM **28** 19:36:13.7±0.5,51°43′N×16°10′E,h2km,ML3.1/9, Error ellipse: s-maj=7.8km s-min=4.3km az=5.0*
*PRU **28** 19:36:14.6,51°42′N×16°10′E,h0km*

ISC 28 19:36:14.2±1.1,51°45′N±0′.05×16°08′E±0′.02,h0km,n28, σ0s81/54,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.62**	**167**	*e*Pg	**Pg**	**19 36 26.0**	**-0.1**
KSP				*e*Sg	**Sg**	**19 36 35.1**	**+1.0**
KSP	**Ksiaz**	**0.62**	**167**	*e*Pg	**Pg**	**19 36 26.0**	**-0.1**
KSP				*e*Sg	**Sg**	**19 36 34.7**	**+0.6**
UPC	**Upice**	**0.94**	**183**	*e*PG	**Pg**	**19 36 31.8**	**-0.5**
UPC				*e*SG	**Sg**	**19 36 44.1**	**-0.3**
	comp=Z,24nm,0.4s						
UPC	**Upice**	**0.94**	**183**	Pg	**Pg**	**19 36 31.8**	**-0.5**
UPC				Sg	**Sg**	**19 36 44.1**	**-0.3**
	24nm,0.4s						
PVCC	**Panska Ves**	**1.32**	**227**	*e*PG	**Pg**	**19 36 39.2**	**-0.4**
PVCC				*e*SG	**Sg**	**19 36 57.3**	**+0.6**
	comp=Z,64nm,0.3s						
PVCC	**Panska Ves**	**1.32**	**227**	Pg	**Pg**	**19 36 39.2**	**-0.4**
PVCC				Sg	**Sg**	**19 36 57.3**	**+0.6**
	64nm,0.3s						
KRLC	**Kraliky**	**1.44**	**162**	*e*PG	**Pn**	**19 36 40.5**	**-1.2**
KRLC				*e*SG	**Sg**	**19 37 00.0**	**-0.6**
KRLC	**Kraliky**	**1.44**	**162**	Pg	**Pn**	**19 36 40.5**	**-1.2**
KRLC				Sg	**Sg**	**19 37 00.0**	**-0.6**
BRG	**Berggiesshubel**	**1.46**	**248**	PG	**Pb**	**19 36 41.8**	**-0.5**
BRG				SG	**Sn**	**19 37 02.0**	**+0.3**
	25nm,0.4s						
PRU	**Pruhonice**	**1.76**	**214**	*e*PG	**Pb**	**19 36 46.8**	**-0.5**
PRU				*e*SG	**Sb**	**19 37 10.4**	**+0.5**
	comp=Z,18nm,0.4s						
PRU	**Pruhonice**	**1.76**	**214**	Pg	**Pb**	**19 36 46.8**	**-0.5**
PRU				Sg	**Sb**	**19 37 10.4**	**+0.5**
	18nm,0.4s						
MORC	**Moravsky Berou**	**1.92**	**150**	*e*Pn	**Pn**	**19 36 46.6**	**-1.5**
MORC				*e*Sg	**Sn**	**19 37 12.6**	**-0.4**
	10nm,0.4s,baz=335						
CLL	**Collm**	**1.93**	**267**	*e*Pn	**Pn**	**19 36 47.0**	**-1.3**
CLL				*e*(Pg)	**Pb**	**19 36 49.0**	**-1.3**
CLL				*i*		19 36 51.9	
CLL				*i* Sg	**Sg**	**19 37 16.6**	**+0.3**
	comp=Z,7.0nm,0.5s						
OKC	**Ostrava-Krasne**	**2.08**	**140**	*e*PG	**Pb**	**19 36 52.6**	**-0.2**
OKC				*e*SG	**Sb**	**19 37 19.8**	**+0.6**
	comp=Z,10.0nm,0.4s						
OKC	**Ostrava-Krasne**	**2.08**	**140**	Pg	**Pb**	**19 36 52.6**	**-0.2**
OKC				Sg	**Sb**	**19 37 19.8**	**+0.6**
	comp=Z,10.0nm,0.4s						
VRAC	**Vranov**	**2.17**	**171**	*e*Pn	**Pn**	**19 36 50.6**	**-1.0**
	baz=355						
VRAC				*e*Sg	**Sb**	**19 37 22.1**	**+0.4**
	comp=Z,8.0nm,0.3s,baz=355						
TREC	**Trest**	**2.19**	**190**	*e*SG	**Sb**	**19 37 23.8**	**+1.5**
	comp=Z,11nm,0.2s						
TREC	**Trest**	**2.19**	**190**	Sg	**Sb**	**19 37 23.8**	**+1.5**
	comp=Z,11nm,0.2s						
KRUC	**Moravsky**	**2.40**	**175**	*e*Pn	**Pn**	**19 36 54.2**	**-0.5**
	baz=358						
KRUC				*e*Sg	**Sb**	**19 37 29.3**	**+1.0**
	comp=Z,3.5nm,0.3s,baz=358						
NKC	**Novy Kostel**	**2.60**	**244**	*e*PN	**Pn**	**19 36 58.7**	**+1.1**
NKC				*e*PG	**Pb**	**19 37 02.5**	**+0.8**
NKC				*e*SG	**Sg**	**19 37 38.5**	**+0.7**
	comp=Z,13nm,0.3s						
NKC	**Novy Kostel**	**2.60**	**244**	Pn	**Pn**	**19 36 58.7**	**+1.1**
OJC	**Ojcow**	**2.66**	**116**	*e*Pg	**Pg**	**19 37 04.6**	**-0.6**
OJC				*e*Sg	**Sg**	**19 37 40.0**	**+0.4**
OJC	**Ojcow**	**2.66**	**116**	*e*Pg	**Pg**	**19 37 04.6**	**-0.6**
OJC				*e*Sg	**Sg**	**19 37 40.0**	**+0.4**
KHC	**Kasperske Hory**	**2.82**	**216**	*e*PN	**Pn**	**19 37 00.2**	**-0.4**
KHC				*e*PG	**Pb**	**19 37 05.6**	**+0.1**
KHC				*e*SN	**Sn**	**19 37 34.9**	**-0.3**
KHC				*e*SG	**Sg**	**19 37 44.2**	**-0.5**
	comp=Z,3.1nm,0.2s						
KHC	**Kasperske Hory**	**2.82**	**216**	Pg	**Pb**	**19 37 05.5**	**+0.1**
KHC				Sg	**Sg**	**19 37 45.0**	**+0.3**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*	**Pg**	**19 37 29.4**	**+0.9**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*SG	**Sg**	**19 38 20.5**	**+1.8**
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*Sg	**Sg**	**19 38 20.5**	**+1.8**

*SKO **28** 19:49:40.8,41°29′N×22°68′E,h15km,M2.4,ML2.7*
*ISCJB **28** 19:49:41.6±0.4,41°29′N±0°.02×22°67′E±0°.02,h6km±3km, Error ellipse: s-maj=3.0km s-min=2.7km az=168.3*
*ATH **28** 19:49:41.4,41°30′N×22°67′E,h20km±1km,MD3.2/12*
*THE **28** 19:49:42.3,41°29′N×22°69′E,h2km±1km,ML2.4/10, Error ellipse: s-maj=1.2km s-min=0.5km az=210.0*
*CSEM **28** 19:49:42.3±0.1,41°27′N×22°69′E,h5km,ML2.3, Error ellipse: s-maj=2.8km s-min=2.3km az=74.0*
*BEO **28** 19:49:43.9±0.5,41°33′N×22°63′E,h0km,ML2.3/6*

ISC 28 19:49:42.4±0.8,41°29′N±0°.02×22°68′E±0°.02,h7km±5km, n87,σ0s67/139,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.09**	**293**	P	**Pg**	**19 49 44.2**	**-0.3**
VAY				S	**Sg**	**19 49 46.0**	**+0.2**
VAY	**Valandovo**	**0.09**	**293**	*i* Pg	**Pg**	**19 49 44.1**	**-0.3**
VAY				*i* Sg	**Sg**	**19 49 46.0**	**+0.2**
VAY				*e*Lg	Lg	19 49 46.0	
	comp=E,3μm,0.2s						
VAY				*e*Lg	Lg	19 49 46.1	
	comp=N,9μm,0.2s						
VAY	**Valandovo**	**0.09**	**293**	*e*Pg	**Pg**	**19 49 44.1**	**-0.3**
VAY				*e*Sg	**Sg**	**19 49 45.9**	**+0.2**
VAY	**Valandovo**	**0.09**	**293**	*e*Pg	**Pg**	**19 49 44.1**	**-0.3**
VAY				S	**Sg**	**19 49 46.0**	**+0.2**
VAY				*e*Lg	Lg	19 49 46.5	
	comp=N,9μm,0.2s						
KNT	**Kendrikon**	**0.21**	**126**	P	**Pg**	**19 49 46.6**	**+0.1**
KNT				S	**Sg**	**19 49 49.7**	**+0.3**
KNT	**Kendrikon**	**0.21**	**126**	P	**Pg**	**19 49 46.6**	**+0.1**
KNT				S	**Sg**	**19 49 49.7**	**+0.3**
GRG	**Griva**	**0.39**	**212**	P	**Pg**	**19 49 49.9**	**0.0**
GRG				S	**Sg**	**19 49 54.9**	**-0.1**
GRG	**Griva**	**0.39**	**212**	*e*PB	**Pg**	**19 49 49.9**	**0.0**
GRG				*e*SB	**Sg**	**19 49 55.7**	**+0.7**
GRG	**Griva**	**0.39**	**212**	P	**Pg**	**19 49 49.9**	**0.0**
GRG				S	**Sg**	**19 49 54.9**	**-0.1**
GRG				*e*Sb	**Sg**	**19 49 55.7**	**+0.7**
THE	**Thessaloniki**	**0.69**	**161**	P	**Pg**	**19 49 54.9**	**-0.7**
THE				S	**Sg**	**19 50 05.2**	**+0.6**
THE	**Thessaloniki**	**0.69**	**161**	P	**Pg**	**19 49 54.9**	**-0.7**
THE				S	**Sg**	**19 50 05.2**	**+0.6**
SOH	**Sokhos**	**0.69**	**132**	P	**Pg**	**19 49 55.2**	**-0.5**
SOH				S	**Sg**	**19 50 04.9**	**+0.2**
SOH	**Sokhos**	**0.69**	**132**	*e*PN	**Pg**	**19 49 55.1**	**-0.6**
SOH				*e*SN	**Sg**	**19 50 04.6**	**-0.1**
SOH	**Sokhos**	**0.69**	**132**	P	**Pg**	**19 49 55.2**	**-0.5**
SOH				*e*Sn	**Sg**	**19 50 04.6**	**-0.1**
SOH				S	**Sg**	**19 50 04.9**	**+0.2**
SRS	**Serrai**	**0.71**	**103**	P	**Pg**	**19 49 55.5**	**-0.6**
SRS	**Serrai**	**0.71**	**103**	P	**Pg**	**19 49 55.5**	**-0.6**
HORT	**Hortiatis**	**0.76**	**155**	P	**Pg**	**19 49 56.6**	**-0.4**
HORT				S	**Sg**	**19 50 07.6**	**+0.8**
HORT	**Hortiatis**	**0.76**	**155**	P	**Pg**	**19 49 56.6**	**-0.4**
HORT				S	**Sg**	**19 50 07.6**	**+0.8**
NVR	**Nevrokopi**	**0.90**	**86**	P	**Pg**	**19 49 59.0**	**-0.6**
NVR				S	**Sg**	**19 50 11.0**	**-0.2**
NVR	**Nevrokopi**	**0.90**	**86**	*e*PN	**Pg**	**19 49 59.0**	**-0.6**
NVR				*e*SN	**Sg**	**19 50 11.0**	**-0.2**
NVR	**Nevrokopi**	**0.90**	**86**	P	**Pg**	**19 49 59.0**	**-0.6**
NVR				S	**Sg**	**19 50 11.0**	**-0.2**
PLG	**Polygyros**	**1.08**	**147**	P	**Pg**	**19 50 02.8**	**-0.3**
PLG				S	**Sb**	**19 50 18.0**	**+0.2**
PLG	**Polygyros**	**1.08**	**147**	*e*PN	**Pg**	**19 50 02.8**	**-0.3**
PLG				*e*SN	**Sg**	**19 50 17.5**	**+0.3**
PLG	**Polygyros**	**1.08**	**147**	*e*Pn	**Pg**	**19 50 02.3**	**-0.8**
PLG	**Polygyros**	**1.08**	**147**	P	**Pg**	**19 50 02.8**	**-0.3**
PLG				*e*Sn	**Sg**	**19 50 17.5**	**+0.3**
PLG				S	**Sb**	**19 50 18.0**	**+0.2**
FNA	**Florina**	**1.10**	**243**	P	**Pg**	**19 50 02.9**	**-0.6**
FNA				S	**Sb**	**19 50 18.8**	**+0.4**
FNA	**Florina**	**1.10**	**243**	*e*PN	**Pg**	**19 50 02.8**	**-0.7**
FNA				*e*SN	**Sg**	**19 50 17.5**	**-0.3**
FNA	**Florina**	**1.10**	**243**	P	**Pg**	**19 50 02.9**	**-0.6**
FNA				*e*Sn	**Sg**	**19 50 17.5**	**-0.3**
FNA				S	**Sb**	**19 50 18.8**	**+0.4**
KZN	**Kozani**	**1.20**	**215**	P	**Pg**	**19 50 05.4**	**+0.1**
KZN	**Kozani**	**1.20**	**215**	*e*PN	**Pg**	**19 50 04.2**	**-1.1**
KZN				*e*SN	**Sg**	**19 50 20.4**	**-0.4**
KZN	**Kozani**	**1.20**	**215**	*e*Pn	**Pg**	**19 50 04.2**	**-1.1**
KZN	**Kozani**	**1.20**	**215**	P	**Pg**	**19 50 05.4**	**+0.1**
KZN				*e*Sn	**Sg**	**19 50 20.4**	**-0.4**
VTS	**Vitosha**	**1.36**	**17**	P	**Pn**	**19 50 08.1**	**+0.1**
VTS				S	**Sn**	**19 50 26.8**	**+0.4**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg	**Pn**	**19 50 07.8**	**-0.2**
VTS				*e*Sg	**Sb**	**19 50 26.1**	**+0.1**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg	**Pn**	**19 50 07.8**	**-0.2**
VTS	**Vitosha**	**1.36**	**17**	P	**Pn**	**19 50 08.1**	**+0.1**
VTS				*e*Sg	**Sb**	**19 50 26.1**	**+0.1**
VTS				S	**Sn**	**19 50 26.8**	**+0.4**
OUR	**Ouranopolis**	**1.38**	**133**	P	**Pn**	**19 50 07.8**	**-0.2**
OUR				S	**Sn**	**19 50 27.1**	**+0.7**
OUR	**Ouranopolis**	**1.38**	**133**	P	**Pn**	**19 50 07.8**	**-0.2**
OUR				S	**Sn**	**19 50 27.1**	**+0.7**
KAVA	**Kavala**	**1.42**	**101**	P	**Pn**	**19 50 08.0**	**-0.6**
KAVA				S	**Sb**	**19 50 27.8**	**+0.4**
KAVA	**Kavala**	**1.42**	**101**	P	**Pn**	**19 50 08.0**	**-0.6**
KAVA				S	**Sb**	**19 50 27.8**	**+0.4**
NEST	**Nestorio**	**1.51**	**235**	P	**Pn**	**19 50 09.9**	**0.0**
NEST	**Nestorio**	**1.51**	**235**	P	**Pn**	**19 50 09.9**	**0.0**
PAIG	**Paliouri**	**1.56**	**150**	P	**Pn**	**19 50 09.2**	**-1.3**
PAIG				S	**Sn**	**19 50 31.4**	**+0.4**
PAIG	**Paliouri**	**1.56**	**150**	*e*PN	**Pn**	**19 50 10.3**	**-0.2**
PAIG				*e*SN	**Sn**	**19 50 31.0**	**0.0**
PAIG	**Paliouri**	**1.56**	**150**	P	**Pn**	**19 50 09.2**	**-1.3**
PAIG	**Paliouri**	**1.56**	**150**	*e*Pn	**Pn**	**19 50 10.3**	**-0.2**
PAIG				*e*Sn	**Sn**	**19 50 31.0**	**0.0**
PAIG				S	**Sn**	**19 50 31.4**	**+0.4**
BARS	**Barje**	**1.66**	**338**	*e*Pn	**Pn**	**19 50 12.5**	**+0.6**
BARS				*e*Sg	**Sb**	**19 50 34.5**	**+0.2**
BARS	**Barje**	**1.66**	**338**	*e*Pn	**Pn**	**19 50 12.5**	**+0.6**
BARS				*e*Sg	**Sb**	**19 50 34.5**	**+0.2**
PLD	**Plovdiv**	**1.73**	**61**	*e*Sg	**Sg**	**19 50 39.2**	**+1.4**
PLD	**Plovdiv**	**1.73**	**61**	*e*Sg	**Sg**	**19 50 39.2**	**+1.4**
THL	**Klokotos Trika**	**1.79**	**197**	*e*PN	**Pn**	**19 50 13.3**	**-0.4**
THL				*e*SN	**Sn**	**19 50 37.7**	**+1.0**
THL	**Klokotos Trika**	**1.79**	**197**	*e*Pn	**Pn**	**19 50 13.3**	**-0.4**
THL				*e*Sn	**Sn**	**19 50 37.7**	**+1.0**
ZAPS	**Zavoj**	**1.99**	**359**	*e*Pn	**Pb**	**19 50 18.6**	**-0.3**
ZAPS				*e*Sg	**Sg**	**19 50 45.9**	**-0.3**
NEO	**Neokhori**	**2.02**	**168**	*e*PB	**Pn**	**19 50 16.0**	**-0.9**
NEO	**Neokhori**	**2.02**	**168**	*e*Pb	**Pn**	**19 50 16.0**	**-0.9**
RDO	**Rodhopi**	**2.16**	**93**	P	**Pn**	**19 50 18.1**	**-0.7**
RDO	**Rodhopi**	**2.16**	**93**	*e*PB	**Pn**	**19 50 17.9**	**-0.9**
RDO				*e*SN	**Sn**	**19 50 46.8**	**+0.9**
RDO	**Rodhopi**	**2.16**	**93**	P	**Pn**	**19 50 18.1**	**-0.7**
RDO				*e*Sn	**Sn**	**19 50 46.8**	**+0.9**
SELS	**Selova**	**2.25**	**330**	*e*Pn	**Pb**	**19 50 22.1**	**-1.3**
AGG	**Agios Georgios**	**2.28**	**187**	P	**Pn**	**19 50 20.4**	**0.0**
AGG	**Agios Georgios**	**2.28**	**187**	*e*PN	**Pn**	**19 50 19.8**	**-0.6**
AGG	**Agios Georgios**	**2.28**	**187**	*e*Pn	**Pn**	**19 50 19.8**	**-0.6**
AGG	**Agios Georgios**	**2.28**	**187**	P	**Pn**	**19 50 20.4**	**0.0**
AOS	**Alonnisos**	**2.31**	**156**	*e*PN	**Pn**	**19 50 20.3**	**-0.5**
AOS	**Alonnisos**	**2.31**	**156**	*e*Pn	**Pn**	**19 50 20.3**	**-0.5**
MAKR	**Makrakomi, Fth**	**2.31**	**191**	P	**Pn**	**19 50 21.8**	**+0.9**
MAKR	**Makrakomi, Fth**	**2.31**	**191**	P	**Pn**	**19 50 21.8**	**+0.9**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*PN	**Pn**	**19 50 20.7**	**-0.2**
SMTH	**Samothraki Isl**	**2.31**	**110**	*e*Pn	**Pn**	**19 50 20.7**	**-0.2**
EVR	**Evrytania**	**2.46**	**196**	*e*PB	**Pn**	**19 50 23.7**	**+0.7**
EVR	**Evrytania**	**2.46**	**196**	*e*Pb	**Pn**	**19 50 23.7**	**+0.7**
ALN	**Alexandroupoli**	**2.58**	**98**	P	**Pn**	**19 50 24.4**	**-0.1**
ALN	**Alexandroupoli**	**2.58**	**98**	*e*PB	**Pn**	**19 50 25.2**	**+0.7**
ALN	**Alexandroupoli**	**2.58**	**98**	P	**Pn**	**19 50 24.4**	**-0.1**
ALN	**Alexandroupoli**	**2.58**	**98**	*e*Pb	**Pn**	**19 50 25.2**	**+0.7**
EFP	**Efpalio**	**2.92**	**192**	*e*PN	**Pn**	**19 50 29.6**	**+0.4**
EFP	**Efpalio**	**2.92**	**192**	*e*Pn	**Pn**	**19 50 29.6**	**+0.4**
KALE	**Kalithea**	**2.92**	**188**	*e*PB	**Pn**	**19 50 30.3**	**+1.0**
KALE	**Kalithea**	**2.92**	**188**	*e*Pb	**Pn**	**19 50 30.3**	**+1.0**
GRUS	**Gruza**	**2.98**	**332**	*e*Pn	**Pn**	**19 50 31.6**	**+1.6**
GRUS				*e*Sg	**Sg**	**19 51 16.1**	**-1.8**
GRUS	**Gruza**	**2.98**	**332**	*e*Pn	**Pn**	**19 50 31.6**	**+1.6**
GRUS				*e*Sg	**Sg**	**19 51 16.1**	**-1.8**
LAKA	**Lakka**	**3.09**	**190**	*e*PN	**Pn**	**19 50 31.0**	**-0.6**
LAKA	**Lakka**	**3.09**	**190**	*e*Pn	**Pn**	**19 50 31.0**	**-0.6**
KLV	**Kalavryta, Ach**	**3.26**	**187**	*e*PN	**Pn**	**19 50 34.3**	**+0.3**
KLV	**Kalavryta, Ach**	**3.26**	**187**	*e*Pn	**Pn**	**19 50 34.3**	**+0.3**
DIVS	**Divibare**	**3.44**	**326**	*e*PN	**Pn**	**19 50 38.1**	**+1.7**
DIVS	**Divibare**	**3.44**	**326**	*e*Pn	**Pn**	**19 50 38.1**	**+1.7**

*SKO **28** 19:51:24.7,41°37′N×22°71′E,h22km,M0.7,ML1.3*
*ISCJB **28** 19:51:25.5±0.8,41°29′N±0°.07×22°76′E±0°.05,h12km±7km, Error ellipse: s-maj=12.6km s-min=6.3km az=167.9*
*CSEM **28** 19:51:25.7±0.6,41°28′N×22°77′E,h10km,MD2.8, Error ellipse: s-maj=14.4km s-min=8.7km az=10.0*
*ATH **28** 19:51:26.1,41°28′N×22°71′E,h18km±1km,MD2.8/7*

ISC 28 19:51:25.9±1.0,41°28′N±0°.04×22°70′E±0°.03,h17km±7km, n24,σ0s76/35,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**291**	*i* Pg	**Pb**	**19 51 29.1**	**-0.4**
VAY				*i* Sg	**Sb**	**19 51 31.0**	**-0.8**
VAY				*e*Lg	Lg	19 51 31.0	
	comp=E,99nm,0.3s						
VAY				*e*Lg	Lg	19 51 31.1	
	comp=N,143nm,0.4s						
VAY	**Valandovo**	**0.10**	**291**	*i* Pg	**Pg**	**19 51 29.5**	**+0.1**
VAY				*i* Sg	**Sg**	**19 51 31.5**	**-0.3**
VAY				*e*Lg	Lg	19 51 31.6	
	comp=N,143nm,0.4s						
GRG	**Griva**	**0.40**	**215**	*e*PB	**Pb**	**19 51 34.7**	**+0.2**
GRG				*e*SB	**Sg**	**19 51 39.9**	**+0.4**
GRG	**Griva**	**0.40**	**215**	*e*Pb	**Pb**	**19 51 34.7**	**+0.2**
SOH	**Sokhos**	**0.68**	**133**	*e*PN	**Pb**	**19 51 39.2**	**0.0**
SOH				*e*SN	**Sg**	**19 51 48.3**	**+0.1**
SOH	**Sokhos**	**0.68**	**133**	*e*Pn	**Pb**	**19 51 39.2**	**0.0**
NVR	**Nevrokopi**	**0.88**	**85**	*e*PN	**Pb**	**19 51 42.8**	**+0.1**
NVR				*e*SN	**Sg**	**19 51 55.0**	**+0.5**
NVR	**Nevrokopi**	**0.88**	**85**	*e*Pn	**Pb**	**19 51 42.8**	**+0.1**
NVR				*e*Sn	**Sg**	**19 51 55.0**	**+0.5**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pn**	**19 51 46.3**	**+0.2**
PLG				*e*SN	**Sg**	**19 52 01.1**	**+0.5**
PLG	**Polygyros**	**1.07**	**148**	*e*Pn	**Pn**	**19 51 46.3**	**+0.2**
PLG				*e*Sn	**Sg**	**19 52 01.1**	**+0.5**
FNA	**Florina**	**1.12**	**244**	*e*PN	**Pg**	**19 51 47.7**	**+0.2**
FNA				*e*SN	**Sg**	**19 52 02.9**	**+0.7**
FNA	**Florina**	**1.12**	**244**	*e*Pn	**Pg**	**19 51 47.7**	**+0.2**
FNA				*e*Sn	**Sg**	**19 52 02.9**	**+0.7**
KZN	**Kozani**	**1.21**	**216**	*e*PN	**Pb**	**19 51 48.8**	**+0.5**
KZN	**Kozani**	**1.21**	**216**	*e*Pn	**Pb**	**19 51 48.8**	**+0.5**
PAIG	**Paliouri**	**1.55**	**151**	*e*PN	**Pb**	**19 51 54.7**	**+0.7**
PAIG				*e*SN	**Sg**	**19 52 16.1**	**+0.3**
PAIG	**Paliouri**	**1.55

comp=Z,33nm,21.2s,baz=260,slow=33
CMAR Chiang Mai Arr 57.23 296 P P 20 14 21.7 +0.5
1.7nm,1.0s,baz=111,slow=5.2,SNR=9.0
PETK Petropavlovsk- 58.31 4 LR LR 20 39 51.8
comp=Z,32nm,19.1s,baz=329,slow=36
SONM Songino Array 66.19 328 P P 20 15 22.3 +1.1
1.4nm,0.5s,baz=146,slow=5.2,SNR=15
VNDA Vanda 72.45 178 P P 20 15 58.4 -0.7
0.7nm,0.9s,baz=337,slow=7.7,SNR=3.2
MKAR Makanchi Array 80.04 319 P P 20 16 41.6 -1.1
0.3nm,0.5s,baz=108,slow=6.9,SNR=5.6
ZALV Zalesovo Beam 80.99 327 P P 20 16 46.9 -0.7
1.3nm,0.6s,baz=117,slow=6.8,SNR=9.6
ILAR Eielson Array 82.89 22 P P 20 16 56.8 -0.6
0.6nm,0.5s,baz=267,slow=5.2,SNR=11
NVAR Mina Array Bea 93.06 52 P P 20 17 48.9 +1.6
0.6nm,0.7s,baz=268,slow=5.0,SNR=4.6
GERES GERESS Array B 123.92 328 PKP PKPdf 20 23 31.6 +0.5
0.6nm,0.5s,baz=48,slow=2.0,SNR=6.1
TORD Torodi Ar. Bea 149.56 287 PKPbc PKPbc 20 24 23.2 0.0
6.0nm,0.6s,baz=91,slow=2.4,SNR=80

GUC 28 20:25:31.6±0.5, 22.04S×68.69W, h121km±3km, ML3.6, 6C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**Plate Boundary**	**0.56**	**295**	⇑*iP*	Pn	20 25 51.3	+1.0
PB09				*i* S	Sn	20 26 06.0	+1.5
PB09				AML	AML	20 26 08.1	
	comp=E,3μm,0.2s						
LVC	**Limon Verde**	**0.60**	**200**	⇓*iP*	Pn	20 25 51.3	+0.5
LVC				*i* S	Sn	20 26 06.0	+0.9
PB04	**Plate Boundary**	**0.77**	**253**	⇑*iP*	Pn	20 25 58.8	+7.2
PB04				*i* S	Sn	20 26 18.9	+12
PB04				AML	AML	20 26 21.0	
	comp=N,770nm,0.2s						
MACH	**Maria Elena**	**1.00**	**261**	⇑*iP*	Pn	20 25 54.9	+0.9
MACH				*i* S	Sn	20 26 12.5	+1.5
PB07	**Plate Boundary**	**1.15**	**285**	⇑*iP*	Pn	20 25 56.2	+0.7
PB07				*i* S	Sn	20 26 14.6	+1.0
PB07				AML	AML	20 26 15.5	
	comp=E,1μm,0.1s						
PB01	**Plate Boundary**	**1.24**	**323**	⇑*iP*	Pn	20 25 56.5	+0.2
PB01				*i* S	Sn	20 26 15.8	+0.8
PB01				AML	AML	20 26 18.2	
	comp=E,1μm,0.2s						
CEN1	**Los Morros**	**1.94**	**226**	*eP*	Pn	20 26 08.9	+4.4
CEN1				*eS*	Sn	20 26 35.4	+5.8
HMBC	**Humberstone**	**2.08**	**327**	⇑*iP*	Pn	20 26 05.6	-0.7
HMBC				*i* S	Sn	20 26 32.6	-0.2
HMBC				AML	AML	20 26 35.2	
	comp=E,704nm,0.6s						
ANCH	**Antofagasta**	**2.28**	**224**	⇓*iP*	Pn	20 26 09.4	+0.9
ANCH				*i* S	Sn	20 26 37.9	+1.0

*DJA **28** 20:35:52.1±0.2, 8.5S×12.0E±, h10km, M4.7/12, mb4.8/6, mB5.6/3, MLv4.7/12, Mw(mB)5.1/3*
*ISCJB **28** 20:35:54.2±0.4, 7.84S±0.02×120.42E±0.03, h41km±4km, mb4.5/28, MS3.6/2, Error ellipse: s-maj=4.8km s-min=3.5km az=160.7*
*AUST **28** 20:35:54.1, 8.00S×120.48E, h20km*
*NEIC **28** 20:35:55.5±0.6, 7.87S×120.39E, h41km±6km, mb4.6/12, Error ellipse: s-maj=13.1km s-min=5.6km az=62.0*
*IDC **28** 20:35:56.1±0.5, 7.89S×120.33E, h43km±4km, mb4.2/18, mb1 4.3/20, mb1mx4.2/26, mbtmp4.2/20, ML4.3/2, MS3.5/5, Ms1 3.6/5, ms1mx3.1/39, Error ellipse: s-maj=19.6km s-min=10.5km az=71.0*

ISC 28 20:35:55.8±0.4, 7.86S±0.03×120.45E±0.04, h43km±4km, h43km:pP-P, n147, σ1s62/166, mb4.5/28, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSSI	**Bau Bau, Buton**	**1.71**	**1**	P	**Pn**	**20 36 20.7**	**-2.4**
BSSI				S	**Sn**	**20 36 42.1**	**-1.6**
WSI	**Waingapu**	**1.80**	**185**	P	**Pn**	**20 36 24.6**	**+0.2**
WSI	**Waingapu**	**1.80**	**185**	P	**Pn**	**20 36 24.9**	**+0.6**
	baz=1.7,SNR=63						
BMNI	**Bima**	**1.86**	**249**	P	**Pn**	**20 36 26.4**	**+1.2**
MMRI	**Maumere**	**1.93**	**114**	P	**Pn**	**20 36 25.9**	**-0.3**
MMRI				S	**Sn**	**20 36 50.9**	**+1.6**
WBSI	**Waikabubak, Su**	**2.05**	**210**	P	**Pn**	**20 36 26.9**	**-1.0**
WBSI				S	**Sn**	**20 36 54.7**	**+2.4**
BASI	**Baing, Sumba**	**2.35**	**177**	P	**Pn**	**20 36 32.0**	**+0.1**
BASI				S	**Sn**	**20 37 01.5**	**+2.0**
BKSI	**Bulukumba**	**2.54**	**353**	P	**Pn**	**20 36 32.8**	**-1.8**
BKSI				S	**Sn**	**20 37 03.6**	**-0.7**
KAPI	**Kappang**	**2.91**	**346**	P	**Pn**	**20 36 37.3**	**-2.4**
KAPI				S	**Sn**	**20 37 10.3**	**-3.1**
KAPI	**Kappang**	**2.91**	**346**	P	**Pn**	**20 36 37.1**	**-2.5**
KAPI	**Kappang**	**2.91**	**346**	P	**Pn**	**20 36 37.3**	**-2.4**
	73nm,0.3s,baz=197,slow=9.8,SNR=186						
KAPI				S	**Sn**	**20 37 10.3**	**-3.1**
	21nm,0.3s,baz=224,slow=22,SNR=7.2						
KAPI				LR	LR	20 37 45.7	
	comp=Z,1μm,18.7s,baz=192,slow=38						
BBSI	**Bau Bau**	**3.16**	**42**	P	**Pn**	**20 36 43.8**	**+0.7**
BBSI				S	**Sn**	**20 37 20.8**	**+1.2**
KKSI	**Kolaka, Sulawe**	**3.86**	**18**	P	**Pn**	**20 36 53.4**	**+0.8**
KHKI	**Kahang-Kahang**	**4.82**	**264**	P	**Pn**	**20 37 05.5**	**-0.3**
TTSI	**Tana Toraja**	**4.83**	**353**	P	**Pn**	**20 37 06.9**	**+1.0**
DNP	**Denpasar**	**5.25**	**261**	P	**Pn**	**20 37 11.3**	**-0.4**
	381nm,0.5s,10μm						
IGBI	**Denpasar**	**5.33**	**259**	P	**Pn**	**20 37 13.3**	**+0.4**
	41nm,0.4s,24μm0.3nm						
SKSI	**Soroako, Sulaw**	**5.37**	**10**	P	**Pn**	**20 37 15.5**	**+2.0**
	75nm,0.8s,713nm						
JAGI	**Jajag, Banyuwa**	**6.26**	**264**	P	**Pn**	**20 37 24.4**	**-1.3**
JAGI	**Jajag, Banyuwa**	**6.26**	**264**	P	**Pn**	**20 37 24.4**	**-1.3**
	baz=6.3,SNR=15						
KMMI	**Kalianget**	**6.48**	**277**	P	**Pn**	**20 37 27.7**	**-0.9**
BLJI	**Banyuglugur**	**6.79**	**271**	P	**Pn**	**20 37 33.2**	**+0.3**
BBKI	**Banjar Baru**	**7.08**	**308**	P	**Pn**	**20 37 37.0**	**0.0**
LUWI	**Luwuk**	**7.16**	**19**	P	**Pn**	**20 37 38.4**	**+0.4**
LUWI	**Luwuk**	**7.16**	**19**	P	**Pn**	**20 37 38.9**	**+0.9**
	baz=7.3,SNR=7.2						
SMKI	**Samarinda**	**8.04**	**336**	P	**Pn**	**20 37 50.1**	**0.0**
MRSI	**Marisa**	**8.42**	**10**	P	**Pn**	**20 37 55.8**	**+0.6**
LBMI	**Labuha**	**10.05**	**45**	P	**Pn**	**20 38 17.6**	**0.0**
KNRA	**Kununurra**	**11.25**	**134**	P	**Pn**	**20 38 32.7**	**-1.3**
	baz=11,SNR=59						
KNRA				S	**Sn**	**20 40 33.2**	**-5.2**
	baz=11,SNR=6.1						
FITZ	**Fitzroy Crossi**	**11.37**	**154**	*eP*	**Pn**	**20 38 34.5**	**-1.1**
	14nm,0.8s						
FITZ				S	**Sn**	**20 40 36.9**	**-4.4**
FITZ	**Fitzroy Crossi**	**11.37**	**154**	P	**Pn**	**20 38 35.0**	**-0.6**
	1.0nm,0.3s,baz=338,slow=6.5,SNR=30						
FITZ				S	**Sn**	**20 40 36.9**	**-4.4**
	1.4nm,0.3s,baz=152,slow=8.3,SNR=6.8						
FITZ				LR	LR	20 43 41.4	
	comp=Z,142nm,21.9s,baz=335,slow=41						
FITZ	**Fitzroy Crossi**	**11.37**	**154**	P	**Pn**	**20 38 35.0**	**-0.6**
	baz=11,SNR=29						
FITZ				S	**Sn**	**20 40 38.3**	**-3.0**
	baz=11,SNR=4.9						
MTN	**Manton Dam**	**11.62**	**116**	P	**Pn**	**20 38 39.5**	**+0.4**
	baz=12,SNR=12						
MTN				S	**Sn**	**20 40 47.5**	**0.0**
	baz=12,SNR=4.6						
STKI	**Sintang**	**11.91**	**311**	P	Pn	20 38 46.6	+3.4
FAKI	**Fak Fak**	**12.73**	**68**	P	P	20 39 01.3	-3.2
	baz=13,SNR=5.6						
KDU	**Kakadu**	**12.77**	**113**	P	**Pn**	**20 38 54.1**	**-0.7**
	baz=13,SNR=14						
MYLDM	**Lahad Datu**	**13.10**	**351**	P	**Pn**	**20 39 02.0**	**+2.7**
SBUM	**Sibu**	**13.12**	**321**	P	**Pn**	**20 39 00.1**	**+0.4**
KSM	**Kuching**	**13.72**	**312**	P	**Pn**	**20 39 10.5**	**+2.7**
KKM	**Kota Kinabalu**	**14.44**	**343**	*eP*	**Pn**	**20 39 19.2**	**+1.5**
	16nm,1.0s						
KKM	**Kota Kinabalu**	**14.44**	**343**	P	**P**	**20 39 24.8**	**+1.1**
WRA	**Warramunga Arr**	**18.04**	**133**	P	**Pn**	**20 40 02.5**	**-0.8**
WRA				S	Sn	20 43 11.1	-13
WRA	**Warramunga Arr**	**18.04**	**133**	P	**Pn**	**20 40 02.5**	**-0.8**
	1.5nm,0.3s,baz=306,slow=12,SNR=52						
WRA				S	Sn	20 43 11.1	-13
	0.2nm,0.3s,baz=308,slow=26,SNR=3.8						
WRA				LR	LR	20 48 41.0	
	comp=Z,238nm,18.8s,baz=270,slow=42						
WRAB	**Tennant Creek**	**18.04**	**133**	*eP*	**Pn**	**20 40 02.7**	**-0.7**
	9.1nm,0.6s						
MEEK	**Meekatharra**	**18.75**	**185**	P	**Pn**	**20 40 12.0**	**0.0**
	baz=19,SNR=14						
MEEK				S	Sn	20 43 27.3	-14
	baz=19,SNR=6.9						
AS31	**Alice Springs**	**20.34**	**142**	*eP*	Pn	20 40 29.8	-1.1
ASAR	**Alice Springs**	**20.34**	**142**	P	**P**	**20 40 29.6**	**+1.1**
ASAR				S	**S**	**20 44 07.5**	**-6.7**
ASAR	**Alice Springs**	**20.34**	**142**	P	**P**	**20 40 29.6**	**+1.1**
	10.0nm,0.6s,baz=327,slow=12,SNR=82						
ASAR				S	**S**	**20 44 07.5**	**-6.7**
	2.2nm,0.8s,baz=318,slow=23,SNR=5.0						
MORW	**Morawa**	**21.50**	**191**	P	**P**	**20 40 41.2**	**+0.2**
	baz=22,SNR=9.8						
MORW				S	**S**	**20 44 31.1**	**-6.0**
	baz=22,SNR=5.3						
QIS	**Mount Isa**	**22.42**	**126**	P	**P**	**20 40 52.1**	**+1.1**
	baz=22,SNR=18						
BLDU	**Ballidu**	**22.91**	**188**	P	**P**	**20 40 55.5**	**-0.4**
	baz=23,SNR=16						
COEN	**Coen**	**23.11**	**107**	P	**P**	**20 40 58.6**	**+0.4**
	baz=23,SNR=13						
KULM	**Kulim**	**23.68**	**303**	*eP*	**P**	**20 41 03.6**	**-0.1**
	25nm,1.0s						
KULM	**Kulim**	**23.68**	**303**	P	**P**	**20 41 05.5**	**+1.8**
	17nm,1.4s						
KLBR	**Kellerberrin**	**23.74**	**186**	P	**P**	**20 41 04.1**	**0.0**
	baz=24,SNR=20						
PSI	**Prapat**	**23.94**	**295**	P	**P**	**20 41 07.4**	**+1.2**
	53nm,1.1s						
PSI	**Prapat**	**23.94**	**295**	P	**P**	**20 41 07.5**	**+1.2**
	baz=24,SNR=9.5						
NWAO	**Narrogin (SRO)**	**25.12**	**186**	P	**P**	**20 41 16.3**	**-0.4**
NWAO	**Narrogin (SRO)**	**25.12**	**186**	P	**P**	**20 41 16.3**	**-0.4**
	8.8nm,0.7s,baz=354,slow=13,SNR=4.2						
KCSI	**Kotacane, Aceh**	**25.29**	**296**	P	pP	20 41 31.5	+1.5
MTSU	**Mount Surprise**	**25.37**	**116**	P	**P**	**20 41 21.2**	**+2.1**
	baz=25,SNR=22						
BBOO	**Buckleboo**	**28.74**	**152**	P	**P**	**20 41 47.2**	**-2.1**
	baz=29,SNR=8.1						
STKA	**Stephens Creek**	**30.96**	**143**	*eP*	**P**	**20 42 10.2**	**+1.3**
	2.6nm,0.7s						
STKA	**Stephens Creek**	**30.96**	**143**	P	**P**	**20 42 09.9**	**+0.9**
	14nm,0.7s,baz=313,slow=8.9,SNR=47						
STKA	**Stephens Creek**	**30.96**	**143**	P	**P**	**20 42 10.4**	**+1.5**
	baz=31,SNR=32						
CMSA	**Cobar Meteorol**	**33.29**	**138**	P	**P**	**20 42 31.4**	**+2.0**
	baz=33,SNR=22						
CMAR	**Chiang Mai Arr**	**33.68**	**321**	P	**P**	**20 42 34.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**33.68**	**321**	P	**P**	**20 42 34.2**	**+1.3**
	0.9nm,0.8s,baz=164,slow=6.5,SNR=3.5						
CMAR				LR	LR	20 55 29.4	
	comp=Z,52nm,21.7s,baz=140,slow=35						
ARPS	**Mount Arapiles**	**34.74**	**149**	P	**P**	**20 42 43.9**	**+2.0**
	baz=35,SNR=12						
YNG	**Young**	**36.80**	**140**	P	**P**	**20 43 02.1**	**+2.5**
	baz=37,SNR=13						
ARMA	**Armidale**	**36.81**	**132**	P	P	20 43 03.3	+3.4
	baz=37,SNR=4.7						
MGCD	**Mangrove Creek**	**37.95**	**136**	P	P	20 43 12.9	+3.5
	baz=38,SNR=7.8						
LHI	**Lord Howe Isla**	**42.96**	**129**	P	P	20 44 00.2	+9.4
	baz=43,SNR=3.2						
KSAR	**Wonju Array Be**	**45.60**	**8**	P	**P**	**20 44 13.5**	**+1.8**
KSRS	**Korea Array**	**45.62**	**8**	P	**P**	**20 44 13.5**	**+1.6**
	1.8nm,0.7s,baz=188,slow=7.4,SNR=6.4						
DZM	**Mont Dzumac**	**46.44**	**113**	P	**P**	**20 44 19.3**	**+0.5**
DZM	**Mont Dzumac**	**46.44**	**113**	P	**P**	**20 44 19.3**	**+0.5**
	3.7nm,0.8s,baz=36,slow=16,SNR=2.7						
LSA	**Lhasa**	**46.78**	**324**	*eP*	**P**	**20 44 21.7**	**-0.1**
	4.9nm,0.6s						
ODAN	**Odare**	**47.10**	**318**	*eP*	**P**	**20 44 24.6**	**+0.6**
	16nm,1.0s						
MJAR	**Matsushiro Arr**	**47.21**	**20**	P	**P**	**20 44 25.8**	**+1.4**
MJAR	**Matsushiro Arr**	**47.21**	**20**	P	**P**	**20 44 25.8**	**+1.4**
	2.1nm,0.9s,baz=332,slow=16,SNR=5.3						
TAPN	**Taplejung**	**47.22**	**319**	*eP*	**P**	**20 44 25.9**	**+0.9**
	21nm,1.0s						
RAMN	**Ramite**	**47.68**	**318**	*eP*	**P**	**20 44 29.7**	**+1.1**
GUN	**Gumba**	**48.80**	**318**	*eP*	**P**	**20 44 38.1**	**+0.8**
PKI	**Pulchoki**	**48.89**	**317**	*eP*	**P**	**20 44 38.2**	**+0.3**
	13nm,0.7s						
PKIN	**Phulchoki**	**48.90**	**317**	*eP*	**P**	**20 44 38.0**	**0.0**
	10nm,0.7s						
DMN	**Daman**	**49.12**	**317**	*eP*	**P**	**20 44 39.9**	**+0.3**
KOLN	**Koldanda**	**50.24**	**316**	*eP*	**P**	**20 44 48.1**	**0.0**
DANN	**Dangsing**	**50.50**	**317**	*eP*	**P**	**20 44 50.3**	**+0.1**
	50nm,0.6s						
USRK	**Ussuriysk Arra**	**52.86**	**10**	P	**P**	**20 45 09.3**	**+2.3**
	3.7nm,0.7s,baz=191,slow=7.3,SNR=11						
ULN	**Ulaanbaatar**	**56.74**	**349**	*eP*	**P**	**20 45 35.4**	**+0.1**
	6.0nm,1.0s						
SONM	**Songino Array**	**56.83**	**349**	P	**P**	**20 45 36.1**	**+0.1**
SONM	**Songino Array**	**56.83**	**349**	P	**P**	**20 45 36.1**	**+0.1**
	3.5nm,0.9s,baz=169,slow=8.5,SNR=22						
MK31	**Makanchi Array**	**64.12**	**332**	*eP*	**P**	**20 46 25.4**	**-0.2**
MKAR	**Makanchi Array**	**64.12**	**332**	P	**P**	**20 46 25.8**	**+0.1**
MKAR				pP	**pP**	**20 46 39.3**	**+1.1**
MKAR	**Makanchi Array**	**64.12**	**332**	P	**P**	**20 46 25.7**	**+0.1**
	4.9nm,0.6s,baz=140,slow=7.4,SNR=63						
MKAR				pP	**pP**	**20 46 39.3**	**+1.1**
	4.7nm,0.5s,baz=146,slow=7.0,SNR=15						
KBL	**Kabul**	**64.31**	**314**	*eP*	**P**	**20 46 25.8**	**-1.6**
	16nm,0.8s						
KBL	**Kabul**	**64.31**	**314**	P	**P**	**20 46 26.4**	**-1.0**
	baz=65,SNR=8.5						
KZA	**Kyzart**	**64.59**	**324**	P	**P**	**20 46 30.1**	**+0.8**
	SNR=6.5						
KBK	**Karagaybulak**	**65.13**	**325**	P	**P**	**20 46 33.6**	**+1.1**
	SNR=5.5						
AAK	**Ala-Archa**	**65.38**	**324**	*eP*	**P**	**20 46 34.2**	**+0.1**
	8.0nm,1.3s						
AML	**Almayashu**	**65.54**	**323**	P	**P**	**20 46 36.6**	**+1.2**
	SNR=14						
USP	**Ospenovka**	**65.77**	**325**	P	**P**	**20 46 36.4**	**0.0**
	SNR=5.8						
EKS2	**Erkin-Say**	**65.81**	**324**	*eP*	**P**	**20 46 37.1**	**+0.3**
	9.0nm,1.2s						
EKS2	**Erkin-Say**	**65.81**	**324**	P	**P**	**20 46 37.7**	**+0.9**
	SNR=9.3						
KKAR	**Karatay Array**	**68.00**	**323**	*eP*	**P**	**20 46 50.3**	**-0.4**
	1.0nm,0.7s						
KKAR				*e*		20 47 04.4	
PETK	**Petropavlovsk-**	**68.47**	**23**	P	**P**	**20 46 54.0**	**+0.7**
PETK	**Petropavlovsk-**	**68.47**	**23**	P	**P**	**20 46 54.0**	**+0.7**
	1.2nm,0.4s,baz=195,slow=8.5,SNR=3.5						
ZAA0	**Zalesovo Array**	**68.51**	**338**	*eP*	**P**	**20 46 52.6**	**-0.8**
ZAA0				*e*		20 47 06.3	
ZALV	**Zalesovo Beam**	**68.51**	**338**	P	**P**	**20 46 52.5**	**-1.0**
ZALV				pP	**pP**	**20 47 06.3**	**+0.2**
ZALV	**Zalesovo Beam**	**68.51**	**338**	P	**P**	**20 46 52.5**	**-1.0**
	7.9nm,0.8s,baz=142,slow=4.5,SNR=47						
ZALV				pP	**pP**	**20 47 06.3**	**+0.2**
	8.3nm,0.6s,baz=141,slow=4.7,SNR=15						
KURK	**Kurchatov**	**68.63**	**333**	*eP*	**P**	**20 46 54.1**	**-0.2**
	7.9nm,0.9s						
KURK				*e*		20 47 08.3	
MAW	**Mawson**	**70.79**	**200**	P	**P**	**20 47 09.0**	**+1.6**
MAW	**Mawson**	**70.79**	**200**	P	**P**	**20 47 09.0**	**+1.6**
	3.3nm,0.7s,baz=32,slow=8.7,SNR=5.1						
OPO	**Ambohidratompo**	**71.72**	**253**	P	**P**	**20 47 14.1**	**-0.1**
OPO	**Ambohidratompo**	**71.72**	**253**	P	**P**	**20 47 14.1**	**-0.1**
	5.0nm,0.8s,baz=86,slow=6.9,SNR=11						
VNDA	**Vanda**	**72.89**	**171**	P	**P**	**20 47 20.6**	**+0.8**
VNDA	**Vanda**	**72.89**	**171**	P	**P**	**20 47 20.6**	**+0.8**
	1.3nm,0.5s,baz=309,slow=6.2,SNR=17						
ABKAR	**Akbulak array**	**77.47**	**324**	*eP*	**P**	**20 47 45.5**	**-1.1**
	4.7nm,0.8s						
ABKAR				*e*		20 47 59.7	
AKTO	**Aktyubinsk**	**79.12**	**325**	P	**P**	**20 47 55.0**	**-0.7**
AKTO				pP	**pP**	**20 48 08.3**	**-0.4**
AKTO	**Aktyubinsk**	**79.12**	**325**	P	**P**	**20 47 55.0**	**-0.7**
	4.3nm,0.8s,baz=110,slow=5.6,SNR=17						
AKTO				pP	**pP**	**20 48 08.3**	**-0.4**
	5.6nm,0.8s,baz=87,slow=3.9,SNR=10						
KMBO	**Kilima Mbogo**	**83.11**	**270**	pP	pP	20 48 30.5	-0.6
KMBO	**Kilima Mbogo**	**83.11**	**270**	pP	pP	20 48 30.5	-0.6
	1.8nm,0.8s,baz=58,slow=12,SNR=3.8						
KBZ	**Khabaz**	**86.49**	**315**	P	**P**	**20 48 33.1**	**-1.0**
KBZ				pP	**pP**	**20 48 47.3**	**+0.1**
KBZ	**Khabaz**	**86.49**	**315**	P	**P**	**20 48 33.1**	**-1.0**
	1.8nm,0.8s,baz=90,slow=4.1,SNR=4.8						
KBZ				pP	**pP**	**20 48 47.3**	**+0.1**
	2.3nm,0.8s,baz=52,slow=0.5,SNR=4.0						
ASF	**Jabal al Asfar**	**88.72**	**303**	LR	LR	21 34 54.6	
	comp=Z,48nm,18.7s,baz=163,slow=40						
BOSA	**Boshof**	**90.81**	**241**	P	**P**	**20 48 55.1**	**-0.1**
BOSA	**Boshof**	**90.81**	**241**	P	**P**	**20 48 55.1**	**-0.1**
	1.8nm,0.7s,baz=135,slow=5.5,SNR=4.1						
COLD	**Coldfoot**	**96.94**	**23**	*eP*	**P**	**20 49 23.5**	**+1.2**
	4.9nm,1.1s						
COLD				*e*		20 49 36.6	
YKA	**Yellowknife Ar**	**112.57**	**24**	PKiKP	**PKiKP**	**20 54 25.6**	**-1.4**
YKA				*e*		20 54 39.5	
YKA	**Yellowknife Ar**	**112.57**	**24**	PKiKP	**PKiKP**	**20 54 25.6**	**-1.4**
	0.2nm,0.5s,baz=304,slow=1.7,SNR=4.7						
YKA				pPKiKP	**pPKiKP**	**20 54 39.5**	**-1.1**
	0.4nm,0.6s,baz=299,slow=1.8,SNR=5.3						
TORD	**Torodi Ar. Bea**	**119.67**	**281**	PKP	**PKPdf**	**20 54 40.0**	**-2.1**
TORD				pPKP	**pPKPdf**	**20 54 53.6**	**-2.0**
TORD	**Torodi Ar. Bea**	**119.67**	**281**	PKP	**PKPdf**	**20 54 40.0**	**-2.1**
	0.9nm,0.6s,baz=52,slow=1.7,SNR=14						
TORD				pPKP	**pPKPdf**	**20 54 53.7**	**-2.0**
	0.7nm,0.5s,baz=60,slow=1.6,SNR=5.0						
SFJD	**Kangerlussuaq**	**120.64**	**356**	PKP	**PKPdf**	**20 54 41.1**	**-1.3**
SFJD	**Kangerlussuaq**	**120.64**	**356**	PKP	**PKPdf**	**20 54 41.1**	**-1.3**
	6.3nm,1.0s,baz=172,slow=8.3,SNR=3.3						
ESDC	**Sonseca Array**	**121.23**	**312**	PKP	**PKPdf**	**20 54 43.8**	**-0.7**
ESDC	**Sonseca Array**	**121.23**	**312**	PKP	**PKPdf**	**20 54 43.8**	**-0.7**
	0.1nm,0.3s,baz=105,slow=1.2,SNR=3.0						
TXAR	**Lajitas Array**	**133.42**	**57**	PKP	**PKPdf**	**20 55 08.5**	**+0.4**
TXAR				pPKP	**pPKPdf**	**20 55 22.1**	**+0.4**
TXAR	**Lajitas Array**	**133.42**	**57**	PKP	**PKPdf**	**20 55 08.5**	**+0.4**
	0.3nm,0.7s,baz=36,slow=6.7,SNR=3.0						
TXAR				pPKP	**pPKPdf**	**20 55 22.1**	**+0.4**
	0.1nm,0.5s,baz=24,slow=23,SNR=1.9						
SADO	**Sadowa**	**139.48**	**22**	PKP	**PKPdf**	**20 55 17.5**	**-1.2**
SADO	**Sadowa**	**139.48**	**22**	PKP	**PKPdf**	**20 55 17.5**	**-1.2**
	2.6nm,0.6s,baz=317,slow=19,SNR=3.0						
CPUP	**Villa Florida**	**145.94**	**184**	PKPbc	**PKPab**	**20 55 31.8**	**-0.1**
CPUP	**Villa Florida**	**145.94**	**184**	PKPbc	**PKPab**	**20 55 31.8**	**-0.1**
	2.8nm,0.6s,baz=160,slow=5.1,SNR=8.1						
BDFB	**Brasilia**	**154.00**	**206**	PKPab	**PKPab**	**20 56 05.2**	**+0.1**
BDFB	**Brasilia**	**154.00**	**206**	PKPab	**PKPab**	**20 56 05.2**	**+0.1**
	1.4nm,0.4s,baz=101,slow=5.2,SNR=2.5						
LPAZ	**La Paz**	**154.55**	**161**	PKPab	**PKPab**	**20 56 09.5**	**+1.5**
LPAZ	**La Paz**	**154.55**	**161**	PKPab	**PKPab**	**20 56 09.5**	**+1.5**
	3.1nm,0.8s,baz=174,slow=3.1,SNR=9.0						

GUC 28 20:41:43.8±0.5, 23.91S×67.51W, h216km±8km, ML3.8, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.82**	**315**	⇑*iP*	Pn	20 42 23.4	+1.3
LVC				*i* S	S	20 42 53.8	+2.1
PB04	**Plate Boundary**	**2.45**	**312**	⇓*iP*	Pn	20 42 35.4	+7.3
PB04				*i* S	S	20 43 14.4	+12
PB04				AML	AML	20 43 16.6	
	comp=N,74nm,0.7s						
CEN1	**Los Morros**	**2.52**	**281**	⇓*iP*	Pn	20 42 30.0	+0.9
CEN1				*i* S	S	20 43 05.7	+1.7
PB09	**Plate Boundary**	**2.64**	**323**	*eP*	Pn	20 42 33.1	+2.6
PB09				*i* S	S	20 43 10.2	+3.5
PB09				AML	AML	20 43 12.7	
	comp=N,245nm,0.3s						
PB07	**Plate Boundary**	**3.08**	**314**	⇑*iP*	Pn	20 42 37.5	+2.0
PB07				*i* S	S	20 43 18.0	+2.3
PB07				AML	AML	20 43 20.0	
	comp=N,96nm,0.8s						
PB01	**Plate Boundary**	**3.39**	**327**	*eP*	Pn	20 42 41.0	+2.0
PB01				*i* S	S	20 43 24.5	+2.6
PB01				AML	AML	20 43 25.1	
	comp=E,78nm,0.2s						

*IDC **28** 20:42:44.2±4.5, 16.77N×87.96W, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.6/23, mbtmp3.5/4, ML3.8/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/23, Error ellipse: s-maj=96.2km s-min=55.2km az=100.0*

ISC 28 20:42:45.6±2.1, 16.7N±0.2×87.2W±0.1, h35km, n8, σ2s68/7, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**3.67**	**345**	Pn	**Pn**	**20 43 37.9**	**-1.9**
	4.8nm,0.3s,baz=325,slow=3.7,SNR=14						

ISC 28 21:07:42.8±0.3, 55°84S±0.08, 28°15W±0.07, h54km, n186, σ1°76/216, mb5.1/21, MS4.3/17, 1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.20**	**157**	*e*Pn	**P**	**21 11 41.5**	**+1.7**
VNA1	**Neumayer--Stat**	**17.20**	**157**	*e*P	**ScP**	**21 19 47.4**	**-2.0**
EFI	**East Falkland**	**18.09**	**271**	*e*P	**Pn**	**21 11 51.3**	**+1.3**
	193nm,1.3s						
SNAA	**Sanae**	**19.16**	**156**	*e*Pn	**P**	**21 12 02.1**	**+0.7**
SNAA	**Sanae**	**19.16**	**156**	*e*P	**P**	**21 12 01.9**	**+0.5**
	338nm,1.6s						
SNAA				ScP	**ScP**	**21 19 50.6**	**-3.1**
SNAA	**Sanae**	**19.16**	**156**	P	**P**	**21 12 02.1**	**+0.7**
	2.2nm,0.3s,baz=309,slow=9.2,SNR=440						
SNAA				ScP	**ScP**	**21 19 50.6**	**-3.1**
	0.1nm,0.3s,baz=313,slow=3.4,SNR=11						
PMSA	**Palmer Station**	**19.63**	**228**	*e*Pn	**Pn**	**21 12 08.8**	**+0.5**
	453nm,2.0s						
PMSA	**Palmer Station**	**19.63**	**228**	P	**Pn**	**21 12 08.8**	**+0.5**
	0.7nm,0.3s,baz=88,slow=12,SNR=2.9						
USHA	**Ushuaia**	**22.71**	**256**	P	**P**	**21 12 40.6**	**+0.9**
USHA	**Ushuaia**	**22.71**	**256**	P	**P**	**21 12 40.6**	**+0.9**
	32nm,1.0s,baz=74,slow=6.2,SNR=8.9						
USHA				LR	LR	21 19 12.4	
	comp=Z,696nm,20.2s,baz=59,slow=30						
TRQA	**Tornquist**	**28.74**	**294**	*e*P	**P**	**21 13 36.2**	**+1.3**
	42nm,0.8s						
PLCA	**Paso Flores**	**31.43**	**281**	LR	LR	21 25 35.9	
	comp=Z,328nm,19.8s,baz=284,slow=34						
SYO	**Syowa Base**	**32.09**	**141**	*e*P	**P**	**21 14 02.6**	**-1.5**
QSPA	**South Pole Qui**	**34.41**	**180**	P	**P**	**21 14 26.2**	**+1.6**
QSPA				ScP	**ScP**	**21 20 34.0**	**-5.1**
QSPA	**South Pole Qui**	**34.41**	**180**	P	**P**	**21 14 26.2**	**+1.6**
	16nm,0.7s,baz=203,slow=4.2,SNR=79						
QSPA				ScP	**ScP**	**21 20 34.0**	**-5.1**
	1.3nm,0.3s,baz=219,slow=1.8,SNR=18						
SPB	**Sao Paulo**	**35.20**	**328**	*e*P	**P**	**21 14 33.2**	**+1.6**
	83nm,1.2s						
CPUP	**Villa Florida**	**36.26**	**312**	P	**P**	**21 14 41.1**	**+0.5**
CPUP				PcP	**PcP**	**21 17 04.4**	**-0.3**
CPUP				ScP	**ScP**	**21 20 42.4**	**-3.7**
CPUP	**Villa Florida**	**36.26**	**312**	P	**P**	**21 14 41.1**	**+0.5**
	62nm,0.6s,baz=133,slow=7.3,SNR=120						
CPUP				PcP	**PcP**	**21 17 04.4**	**-0.3**
	1.3nm,0.5s,baz=176,slow=4.6,SNR=3.5						
CPUP				ScP	**ScP**	**21 20 42.4**	**-3.7**
	4.3nm,0.6s,baz=186,slow=2.3,SNR=8.9						
CPUP				LR	LR	21 28 25.3	
	comp=Z,412nm,20.6s,baz=141,slow=34						
MAW	**Mawson**	**40.64**	**144**	P	**P**	**21 15 17.0**	**+0.1**
MAW				ScP	**ScP**	**21 20 58.9**	**-3.3**
MAW	**Mawson**	**40.64**	**144**	P	**P**	**21 15 17.0**	**+0.1**
	11nm,0.6s,baz=235,slow=8.4,SNR=20						
MAW				ScP	**ScP**	**21 20 58.9**	**-3.3**
	5.2nm,0.8s,baz=262,slow=7.7,SNR=6.1						
MAW				LR	LR	21 29 24.8	
	comp=Z,480nm,19.4s,baz=277,slow=32						
BDFB	**Brasilia**	**42.91**	**331**	P	**P**	**21 15 37.4**	**+1.3**
BDFB	**Brasilia**	**42.91**	**331**	P	**P**	**21 15 37.4**	**+1.3**
	13nm,0.7s,baz=145,slow=4.9,SNR=21						
BDFB				LR	LR	21 30 54.6	
	comp=Z,430nm,20.8s,baz=190,slow=32						
LVC	**Limon Verde**	**44.72**	**301**	*e*P	**P**	**21 15 52.2**	**+1.4**
	16nm,0.8s						
SBA	**Scott Base**	**46.25**	**184**	*e*P	**P**	**21 16 04.3**	**+2.3**
	100nm,2.6s						
BOSA	**Boshof**	**46.45**	**77**	P	**P**	**21 16 04.0**	**-0.2**
BOSA	**Boshof**	**46.45**	**77**	P	**P**	**21 16 04.0**	**-0.2**
	2.4nm,0.5s,baz=212,slow=9.0,SNR=10						
BOSA				LR	LR	21 32 34.0	
	comp=Z,310nm,18.8s,baz=213,slow=32						
VNDA	**Vanda**	**46.76**	**183**	*e*P	**P**	**21 16 07.5**	**+1.6**
	8.1nm,0.6s						
VNDA				ScP	**ScP**	**21 21 23.4**	**-3.7**
VNDA	**Vanda**	**46.76**	**183**	P	**P**	**21 16 07.6**	**+1.6**
	10nm,0.7s,baz=188,slow=6.3,SNR=103						
VNDA				ScP	**ScP**	**21 21 23.4**	**-3.7**
	1.3nm,0.8s,baz=181,slow=2.2,SNR=4.7						
VNDA				LR	LR	21 35 55.1	
	comp=Z,117nm,20.4s,baz=160,slow=36						
LPAZ	**La Paz**	**49.81**	**306**	*e*P	**P**	**21 16 32.0**	**+1.1**
	70nm,1.0s						
LPAZ	**La Paz**	**49.81**	**306**	P	**P**	**21 16 32.1**	**+1.3**
	34nm,0.6s,baz=152,slow=5.5,SNR=99						
LPAZ				LR	LR	21 35 44.7	
	comp=Z,164nm,20.5s,baz=119,slow=34						
SAML	**Samuel**	**54.27**	**316**	*e*P	**P**	**21 17 03.2**	**0.0**
	62nm,0.9s						
LSZ	**Lusaka**	**58.80**	**70**	*e*P	**P**	**21 17 35.8**	**+0.1**
	16nm,1.3s						
LSZ	**Lusaka**	**58.80**	**70**	P	**P**	**21 17 35.7**	**0.0**
	3.0nm,0.6s,baz=224,slow=9.2,SNR=8.5						
DBIC	**Dimbokro**	**65.20**	**26**	P	**P**	**21 18 18.5**	**+0.2**
DBIC	**Dimbokro**	**65.20**	**26**	P	**P**	**21 18 18.5**	**+0.2**
	9.0nm,0.5s,baz=173,slow=8.5,SNR=24						
DBIC				LR	LR	21 39 13.3	
	comp=Z,126nm,19.8s,baz=158,slow=29						
OTAV	**Otavalo**	**69.09**	**305**	*e*P	**P**	**21 18 44.2**	**+0.7**
	5.9nm,1.4s						
TOA0	**Torodi Ar. Sit**	**73.14**	**30**	*e*P	**P**	**21 19 07.9**	**+0.4**
TORD	**Torodi Ar. Bea**	**73.14**	**30**	P	**P**	**21 19 07.8**	**+0.4**
TORD	**Torodi Ar. Bea**	**73.14**	**30**	P	**P**	**21 19 07.8**	**+0.4**
	13nm,0.5s,baz=200,slow=6.6,SNR=166						
TORD				LR	LR	21 44 41.6	
	comp=Z,145nm,19.7s,baz=175,slow=30						
SDV	**Santo Domingo**	**73.48**	**316**	*e*P	**P**	**21 19 09.4**	**-0.3**
	22nm,0.8s						
KMBO	**Kilima Mbogo**	**75.47**	**70**	LR	LR	21 49 46.1	
	comp=Z,110nm,18.0s,baz=317,slow=33						
TAM	**Tamanrasset**	**83.38**	**31**	*e*P	**P**	**21 20 05.5**	**+1.4**
	9.5nm,1.2s						
MDT	**Midelt**	**90.56**	**20**	P	**P**	**21 20 41.1**	**+2.5**
MDT	**Midelt**	**90.56**	**20**	P	**P**	**21 20 41.1**	**+2.5**
	7.7nm,0.7s,baz=187,slow=2.5,SNR=10						
TEIG	**Tepich**	**91.14**	**305**	P	**P**	**21 20 42.3**	**+0.8**
TEIG	**Tepich**	**91.14**	**305**	P	**P**	**21 20 42.3**	**+0.8**
	4.8nm,0.4s,baz=318,slow=16,SNR=3.9						
ESDC	**Sonseca Array**	**97.35**	**19**	P	Pdif	21 21 10.9	+1.3
ESDC	**Sonseca Array**	**97.35**	**19**	P	Pdif	21 21 10.9	+1.3
	0.8nm,0.6s,baz=192,slow=4.5,SNR=5.7						
ASAR	**Alice Springs**	**99.35**	**163**	P	**Pdif**	**21 21 18.7**	**-0.5**
ASAR				PP	**PP**	**21 25 18.8**	**-3.0**
ASAR	**Alice Springs**	**99.35**	**163**	P	**Pdif**	**21 21 18.7**	**-0.5**
	0.4nm,0.6s,baz=186,slow=4.5,SNR=6.4						
ASAR				PP	**PP**	**21 25 18.7**	**-3.0**
	0.6nm,0.8s,baz=179,slow=5.6,SNR=3.8						
S25A	**Robets Cordova**	**113.34**	**303**	P		21 26 13.4	
	baz=114						
R26A	**Arlington**	**113.39**	**304**	P		21 26 13.2	
	baz=114						
W13A	**Hualapai Mount**	**115.99**	**295**	P	**PKPdf**	**21 26 17.4**	**-1.8**
	baz=116						
U15A	**North Rim**	**116.21**	**297**	P	**PKPdf**	**21 26 19.0**	**-0.7**
	baz=116						
BELC	**Belle Mtn. Jos**	**116.23**	**292**	P	**PKPdf**	**21 26 18.7**	**-0.9**
	baz=116						
N22A	**Wattenberg Ran**	**116.78**	**304**	P	**PKPdf**	**21 26 20.0**	**-0.6**
	baz=117						
SRU	**San Rafael**	**117.42**	**300**	P	**PKPdf**	**21 26 20.8**	**-1.0**
	baz=118						
P18A	**Preston Nutter**	**117.68**	**300**	P	**PKPdf**	**21 26 21.8**	**-0.6**
	baz=118						
M21A	**Separation Pea**	**117.84**	**304**	P	**PKPdf**	**21 26 21.4**	**-1.2**
	baz=118						
EDW2	**Edwards Air Fo**	**117.95**	**291**	P	**PKPdf**	**21 26 22.5**	**-0.2**
	baz=118						
J22A	**Midwest**	**118.83**	**305**	P	**PKPdf**	**21 26 22.5**	**-1.8**
	baz=119						
H24A	**Dirks Ranch, A**	**119.00**	**308**	P	**PKPdf**	**21 26 22.6**	**-1.9**
	baz=119						
J21A	**Lysite**	**119.23**	**305**	P	**PKPdf**	**21 26 23.3**	**-1.9**
	baz=120						
DUG	**Dugway**	**119.38**	**299**	*e*PKPdf	**PKPdf**	**21 26 25.0**	**-0.5**
DUG	**Dugway**	**119.38**	**299**	P	**PKPdf**	**21 26 24.4**	**-1.1**
	baz=120						
K19A	**Absolon Red Bu**	**119.48**	**303**	P	**PKPdf**	**21 26 23.9**	**-1.7**
	baz=120						
I21A	**Big Trails, Te**	**119.52**	**305**	P	**PKPdf**	**21 26 23.4**	**-2.2**
	baz=120						
J20A	**Shoshoni**	**119.53**	**304**	P	**PKPdf**	**21 26 24.8**	**-0.9**
	baz=120						
PDAR	**Pinedale Array**	**119.77**	**303**	PKP	**PKPdf**	**21 26 24.6**	**-1.6**
PDAR	**Pinedale Array**	**119.77**	**303**	PKP	**PKPdf**	**21 26 24.6**	**-1.6**
	0.9nm,0.6s,baz=153,slow=4.5,SNR=4.3						
J19A	**Crowheart**	**119.92**	**304**	P	**PKPdf**	**21 26 25.4**	**-1.0**
	baz=120						
I20A	**Worland**	**120.01**	**305**	P	**PKPdf**	**21 26 25.6**	**-0.9**
	baz=120						
E24A	**Baker**	**120.30**	**309**	P	**PKPdf**	**21 26 26.0**	**-0.9**
	baz=121						
H20A	**Greybull**	**120.36**	**305**	P	**PKPdf**	**21 26 25.6**	**-1.6**
	baz=121						
I18A	**Diamond G Ranc**	**120.61**	**304**	P	**PKPdf**	**21 26 26.2**	**-1.6**
	baz=121						
D24A	**Glendive**	**120.73**	**310**	P	**PKPdf**	**21 26 27.2**	**-0.5**
	baz=121						
NVAR	**Mina Array Bea**	**120.81**	**294**	PKP	**PKPdf**	**21 26 28.3**	**-0.1**
NVAR	**Mina Array Bea**	**120.81**	**294**	PKP	**PKPdf**	**21 26 28.3**	**-0.1**
	1.8nm,0.6s,baz=139,slow=3.3,SNR=8.6						
ELK	**Elko**	**121.00**	**298**	PKP	**PKPdf**	**21 26 28.7**	**0.0**
ELK	**Elko**	**121.00**	**298**	PKP	**PKPdf**	**21 26 28.7**	**0.0**
	1.0nm,0.8s,baz=197,slow=1.5,SNR=8.9						
G20A	**Bridger**	**121.02**	**306**	P	**PKPdf**	**21 26 26.6**	**-1.8**
	baz=121						
MOOW	**Moose Ponds**	**121.08**	**303**	*e*PKPdf	**PKPdf**	**21 26 28.0**	**-0.7**
D22A	**Cohagen**	**121.57**	**308**	P	**PKPdf**	**21 26 28.9**	**-0.5**
	baz=122						
D21A	**La Casta Ranch**	**121.87**	**308**	P	**PKPdf**	**21 26 29.3**	**-0.6**
	baz=122						
C22A	**Vida**	**121.90**	**309**	P	**PKPdf**	**21 26 29.0**	**-0.9**
	baz=122						
E20A	**Meyer Farm, Mu**	**121.95**	**307**	P	**PKPdf**	**21 26 29.6**	**-0.5**
	baz=122						
J14A	**Carey**	**122.09**	**301**	P	**PKPdf**	**21 26 30.9**	**+0.3**
	baz=122						
E19A	**Rath Farm, Rou**	**122.22**	**306**	P	**PKPdf**	**21 26 30.1**	**-0.5**
	baz=122						
F18A	**Big Timber**	**122.23**	**305**	P	**PKPdf**	**21 26 30.3**	**-0.4**
	baz=122						
B22A	**Reddig Ranch S**	**122.37**	**309**	P	**PKPdf**	**21 26 30.5**	**-0.3**
	baz=123						
J13A	**Cove Ranch, Pi**	**122.46**	**300**	P	**PKPdf**	**21 26 31.4**	**+0.2**
	baz=123						
I14A	**Mackay**	**122.51**	**301**	P	**PKPdf**	**21 26 31.0**	**-0.4**
	baz=123						
F17A	**Fitzpatrick Pl**	**122.66**	**305**	P	**PKPdf**	**21 26 31.6**	**+0.1**
	baz=123						
G16A	**Moss Hill, Enn**	**122.69**	**303**	P	**PKPdf**	**21 26 31.2**	**-0.5**
	baz=123						
HLID	**Hailey**	**122.70**	**300**	P	**PKPdf**	**21 26 31.7**	**0.0**
	baz=123						
C20A	**Veseth Ranch,**	**122.81**	**308**	P	**PKPdf**	**21 26 30.7**	**-1.0**
	baz=123						
I13A	**Wildhorse Cree**	**122.82**	**301**	P	**PKPdf**	**21 26 31.5**	**-0.5**
	baz=123						
G15A	**Dillon**	**122.97**	**303**	P	**PKPdf**	**21 26 32.2**	**0.0**
	baz=123						
H14A	**Leadore**	**122.98**	**302**	P	**PKPdf**	**21 26 32.4**	**+0.1**
	baz=123						
F16A	**Kennard Place,**	**123.02**	**304**	P	**PKPdf**	**21 26 32.1**	**-0.1**
	baz=123						
E17A	**Martinsdale**	**123.17**	**305**	P	**PKPdf**	**21 26 32.3**	**-0.3**
	baz=123						
I12A	**Atlanta**	**123.22**	**300**	P	**PKPdf**	**21 26 32.9**	**+0.2**
	baz=124						
C19A	**Slack Wire Ran**	**123.29**	**307**	P	**PKPdf**	**21 26 32.0**	**-0.7**
	baz=124						
F15A	**Butte**	**123.47**	**303**	P	**PKPdf**	**21 26 32.5**	**-0.7**
	baz=124						
D17A	**Six Diamond Ra**	**123.60**	**306**	P	**PKPdf**	**21 26 32.3**	**-1.0**
	baz=124						
H12A	**Diamond D Ranc**	**123.65**	**301**	P	**PKPdf**	**21 26 32.5**	**-1.1**
	baz=124						
B19A	**Brinkman Farms**	**123.78**	**308**	P	**PKPdf**	**21 26 33.0**	**-0.6**
	baz=124						
EGMT	**Eagleton**	**123.83**	**307**	P	**PKPdf**	**21 26 32.8**	**-0.8**
	baz=124						
D16A	**Dana Ranch, Ca**	**123.91**	**305**	P	**PKPdf**	**21 26 33.4**	**-0.5**
	baz=124						
WVOR	**Wild Horse Val**	**123.96**	**297**	*e*PKPdf	**PKPdf**	**21 26 34.5**	**+0.3**
C17A	**Wharram Farm,**	**123.99**	**306**	P	**PKPdf**	**21 26 33.3**	**-0.6**
	baz=124						
A19A	**Klindworth Far**	**124.05**	**308**	P	**PKPdf**	**21 26 33.6**	**-0.5**
	baz=124						
B18A	**Beardsley Farm**	**124.11**	**307**	P	**PKPdf**	**21 26 33.5**	**-0.6**
	baz=124						
G12A	**Big Creek, Yel**	**124.30**	**301**	P	**PKPdf**	**21 26 34.0**	**-0.8**
	baz=124						
F13A	**Darby**	**124.31**	**302**	P	**PKPdf**	**21 26 33.8**	**-0.9**
	baz=125						
D15A	**Lincoln**	**124.37**	**304**	P	**PKPdf**	**21 26 34.5**	**-0.4**
	baz=125						
B17A	**L&G Farms, Che**	**124.50**	**307**	P	**PKPdf**	**21 26 33.6**	**-1.3**
	baz=125						
C16A	**Fuhringer Ranc**	**124.57**	**306**	P	**PKPdf**	**21 26 34.1**	**-1.0**
	baz=125						
CHMT	**Chamberlain Mo**	**124.62**	**304**	*e*PKPdf	**PKPdf**	**21 26 34.5**	**-0.9**
E13A	**Victor**	**124.71**	**303**	P	**PKPdf**	**21 26 34.9**	**-0.6**
	baz=125						
D14A	**Greenough**	**124.86**	**304**	P	**PKPdf**	**21 26 34.8**	**-0.9**
	baz=125						
MSO	**Missoula**	**124.88**	**303**	*e*PKPdf	**PKPdf**	**21 26 35.3**	**-0.5**
A17A	**Triple J Farms**	**124.93**	**307**	P	**PKPdf**	**21 26 35.2**	**-0.5**
	baz=125						
C15A	**Salmond Ranch,**	**124.94**	**305**	P	**PKPdf**	**21 26 34.8**	**-1.1**
	baz=125						
BMO	**Blue Mountains**	**125.06**	**300**	*e*PKPdf	**PKPdf**	**21 26 35.6**	**-0.5**
D13A	**Ilson**	**125.31**	**303**	P	**PKPdf**	**21 26 35.7**	**-0.8**
	baz=126						
B15A	**Bradely Ranch,**	**125.32**	**305**	P	**PKPdf**	**21 26 35.0**	**-1.5**
	baz=126						
A16A	**West Butte Ran**	**125.34**	**307**	P	**PKPdf**	**21 26 35.5**	**-1.0**
	baz=126						
C14A	**Swan Lake**	**125.47**	**304**	P	**PKPdf**	**21 26 36.0**	**-0.8**
	baz=126						
YBH	**Yreka Blue Hor**	**125.53**	**294**	PKP	**PKPdf**	**21 26 36.6**	**-0.5**
YBH	**Yreka Blue Hor**	**125.53**	**294**	PKP	**PKPdf**	**21 26 36.6**	**-0.5**
	2.2nm,0.6s,baz=87,slow=7.3,SNR=6.0						
CMAR	**Chiang Mai Arr**	**125.65**	**111**	PKP	**PKPdf**	**21 26 37.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**125.65**	**111**	PKP	**PKPdf**	**21 26 37.8**	**-0.2**
	2.0nm,0.8s,baz=226,slow=4.1,SNR=11						
B14A	**Marquette Ranc**	**125.68**	**305**	P	**PKPdf**	**21 26 37.1**	**-0.2**
	baz=126						
D12A	**Red Ives Fores**	**125.71**	**303**	P	**PKPdf**	**21 26 36.2**	**-1.1**
	baz=126						
C13A	**Hot Springs**	**125.79**	**304**	P	**PKPdf**	**21 26 36.3**	**-1.1**
	baz=126						
A15A	**Johnson Ranch,**	**125.88**	**306**	P	**PKPdf**	**21 26 36.7**	**-0.9**
	baz=126						
A14A	**Double T Ranch**	**126.19**	**306**	P	**PKPdf**	**21 26 37.7**	**-0.5**
	baz=126						
B13A	**Whitefish**	**126.24**	**304**	P	**PKPdf**	**21 26 37.5**	**-0.7**
	baz=126						
HUMO	**Hull Mountain**	**126.28**	**294**	*e*PKPdf	**PKPdf**	**21 26 38.2**	**-0.3**
KSH	**Kashi**	**129.03**	**75**	*e*PKP	**PKPdf**	**21 26 42.3**	**-1.7**
KSH				*e*SKS	**SKSdf**	**21 33 49.0**	**-1.7**
KSH				AMB	AMB		
	comp=Z,210nm,5.9s						
KSH				LR	LR		
	comp=N,94nm,4.9s						
KSH				LR	LR		
	comp=E,98nm,5.0s						
KSH				LR	LR		
	comp=Z,93nm,6.3s						
ARCES	**ARCESS Array B**	**130.95**	**22**	PKP	**PKPdf**	**21 26 44.8**	**-1.6**
ARCES	**ARCESS Array B**	**130.95**	**22**	PKP	**PKPdf**	**21 26 44.8**	**-1.6**
	comp=Z,4.2nm,0.9s,baz=241,slow=1.9,SNR=6.3						
KMI	**Kunming**	**133.11**	**110**	PKP	**PKPdf**	**21 26 54.0**	**+1.7**
KMI				PP	PP	21 29 25.0	+5.8
KMI				AMB	AMB		
	comp=Z,130nm,4.6s						
KMI				LR	LR		
	comp=N,88nm,19.0s						
KMI				LR	LR		
	comp=E,190nm,15.8s						
KMI				LR	LR		
	comp=Z,210nm,19.7s						
YKA	**Yellowknife Ar**	**135.65**	**318**	PKP	**PKPdf**	**21 26 54.4**	**-1.0**
YKA				SKPbc	**SKPbc**	**21 30 17.8**	**-4.2**
YKA	**Yellowknife Ar**	**135.65**	**318**	PKP	**PKPdf**	**21 26 54.4**	**-1.0**
	comp=Z,4.8nm,0.6s,baz=129,slow=2.3,SNR=47						
YKA				SKPbc	**SKPbc**	**21 30 17.7**	**-4.2**
	comp=Z,2.1nm,0.7s,baz=133,slow=4.0,SNR=17						
YKW3	**Yellowknife Ar**	**135.69**	**319**	*e*PKPdf	**PKPdf**	**21 26 54.2**	**-1.4**
GYA	**Guiyang**	**136.25**	**113**	Pdif	**Pdif**	**21 24 03.3**	**+0.2**
GYA				PKP	**PKiKP**	**21 27 00.5**	**+0.9**
GYA				PP	**PP**	**21 29 43.5**	**+4.6**
GYA				PKS	**PKSdf**	**21 30 33.3**	**-1.1**
GYA				AMB	AMB		
	comp=Z,130nm,7.9s						
GYA				LR	LR		
	comp=N,180nm,21.8s						
GYA				LR	LR		
	comp=E,160nm,22.5s						
GYA				LR	LR		
	comp=Z,190nm,20.4s						
SPITS	**Spitsbergen Ar**	**136.47**	**12**	SKPbc	**SKPbc**	**21 30 19.8**	**-4.3**
SPITS	**Spitsbergen Ar**	**136.47**	**12**	SKPbc	**SKPbc**	**21 30 19.8**	**-4.3**
	comp=Z,5.1nm,0.9s,baz=131,slow=26,SNR=2.7						
MKAR	**Makanchi Array**	**137.33**	**72**	PKP	**PKPdf**	**21 26 57.9**	**-1.3**
MKAR				SKPbc	**SKPbc**	**21 30 23.3**	**-4.3**
MKAR	**Makanchi Array**	**137.33**	**72**	PKP	**PKPdf**	**21 26 57.9**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=251,slow=2.6,SNR=5.6						
MKAR				SKPbc	**SKPbc**	**21 30 23.3**	**-4.3**
	comp=Z,1.6nm,0.8s,baz=268,slow=3.2,SNR=8.8						
CD2	**Chengdu**	**138.24**	**106**	PKP	**PKPdf**	**21 27 02.8**	**+1.4**
CD2				PP	**PP**	**21 29 56.5**	**+5.2**
CD2				PKS	**PKSdf**	**21 30 37.5**	**-0.1**
CD2				AMB	AMB		
	comp=Z,160nm,6.4s						
CD2				LR	LR		
	comp=N,220nm,19.1s						
CD2				LR	LR		
	comp=E,300nm,18.6s						
CD2				LR	LR		
	comp=Z,430nm,16.6s						
WMQ	**Urumqi**	**138.39**	**79**	*e*PKP	**PKPdf**	**21 27 03.0**	**+1.7**
WMQ				LR	LR		
	comp=N,260nm,27.0s						
WMQ				LR	LR		
	comp=E,150nm,28.6s						
WMQ				LR	LR		
	comp=Z,320nm,23.0s						
DLBC	**Dease Lake**	**139.75**	**307**	PKP	**PKPdf**	**21 27 04.0**	**+0.7**
DLBC				SKPbc	**SKPbc**	**21 30 31.0**	**-3.1**
DLBC	**Dease Lake**	**139.75**	**307**	PKP	**PKPdf**	**21 27 04.0**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=308,slow=11,SNR=4.7						
DLBC				SKPbc	**SKPbc**	**21 30 31.0**	**-3.1**
	comp=Z,1.9nm,0.6s,baz=242,slow=26,SNR=4.4						
LZH	**Lanzhou**	**142.18**	**101**	*e*PKP	**PKPdf**	**21 27 12.0**	**+3.5**
LZH				*e*PP	PP	21 30 22.5	+6.9
LZH				AMB	AMB		
	comp=Z,100nm,7.1s						
LZH				LR	LR		
	comp=N,220nm,18.5s						
LZH				LR	LR		
	comp=E,160nm,18.2s						
LZH				LR	LR		
	comp=Z,310nm,21.0s						
ZALV	**Zalesovo Beam**	**142.76**	**64**	PKP	**PKPdf**	**21 27 09.6**	**+0.9**
ZALV				SKPbc	**SKPbc**	**21 30 37.1**	**-4.7**
ZALV	**Zalesovo Beam**	**142.76**	**64**	PKP	**PKPdf**	**21 27 09.6**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=228,slow=3.6,SNR=5.5						
ZALV				SKPbc	**SKPbc**	**21 30 37.1**	**-4.7**
	comp=Z,0.9nm,0.5s,baz=255,slow=4.3,SNR=4.4						
PNL	**Peninsula**	**144.60**	**305**	*e*PKPdf	**PKPab**	**21 27 10.3**	**-0.3**
INK	**Inuvik**	**145.29**	**321**	PKP	**PKPbc**	**21 27 12.1**	**-0.5**
INK				SKPbc	**SKPbc**	**21 30 43.9**	**-3.5**
INK	**Inuvik**	**145.29**	**321**	PKP	**PKPbc**	**21 27 12.1**	**-0.5**
	comp=Z,8.0nm,0.5s,baz=103,slow=4.5						
INK				SKPbc	**SKPbc**	**21 30 43.9**	**-3.5**
	comp=Z,4.2nm,0.9s,baz=107,slow=3.7,SNR=5.7						
NJ2	**Nanjing**	**146.91**	**122**	*e*PKPbc	**PKPbc**	**21 27 19.5**	**+0.9**
EGAK	**Eagle**	**147.19**	**313**	*e*PKPbc	**PKPbc**	**21 27 17.6**	**-0.8**
DIV	**Divide**	**148.09**	**306**	*e*PKPbc	**PKPbc**	**21 27 20.5**	**-0.5**
DOT	**Dot Lake**	**148.09**	**311**	*e*PKPbc	**PKPbc**	**21 27 20.6**	**-0.4**
DOT				*e*SKPdf	**SKPdf**	**21 30 49.7**	**+3.1**
PAX	**Paxson**	**148.51**	**309**	*e*PKPbc	**PKPbc**	**21 27 21.6**	**-0.5**
SML	**Sawmill**	**149.47**	**306**	*e*PKPbc	**PKPbc**	**21 27 23.9**	**-0.6**
SEW	**Seward**	**149.47**	**303**	*e*PKPbc	**PKPbc**	**21 27 24.1**	**-0.3**
ILAR	**Eielson Array**	**149.57**	**312**	PKPbc	**PKPbc**	**21 27 24.0**	**-0.6**
ILAR	**Eielson Array**	**149.57**	**312**	PKPbc	**PKPbc**	**21 27 24.0**	**-0.6**
	comp=Z,26nm,0.8s,baz=131,slow=1.9,SNR=141						
PMR	**Palmer**	**149.77**	**305**	*e*PKPbc	**PKPbc**	**21 27 24.7**	**-0.4**
HHC	**Hu-ho-hao-te**	**149.82**	**103**	*e*PKPbc	**PKPdf**	**21 27 22.3**	**+1.0**
HHC				PKS	**PKSdf**	**21 30 55.5**	**-0.6**
HHC				PP	**PP**	**21 31 05.0**	**+4.2**
HHC				AMB	AMB		
	comp=Z,190nm,4.5s						
HHC				LR	LR		
	comp=N,290nm,21.4s						
HHC				LR	LR		
	comp=E,340nm,16.7s						
HHC				LR	LR		
	comp=Z,380nm,14.3s						
COLA	**College**	**149.99**	**312**	*e*PKPbc	**PKPbc**	**21 27 24.8**	**-0.7**
MCK	**McKinley**	**150.22**	**310**	*e*PKPbc	**PKPbc**	**21 27

comp=N,742nm,0.5s
UPC Upice 1.03 185 *e*PG **Pg** **21 20 42.7 +0.1**
UPC *e*SG **Sg** **21 20 55.3 -0.7**
comp=N,742nm,0.5s
UPC Upice 1.03 185 Pg **Pg** **21 20 42.7 +0.1**
UPC Sg **Sg** **21 20 55.3 -0.7**
comp=N,742nm,0.5s
PVCC Panska Ves 1.41 225 *e*P **Pn** **21 20 50.0 +0.1**
PVCC *e* 21 21 08.7
PVCC smax smax
comp=N,2µm,0.6s
PVCC Panska Ves 1.41 225 *e*PG **Pn** **21 20 50.0 +0.1**
PVCC *e*SG **Sb** **21 21 08.7 0.0**
comp=N,2µm,0.6s
PVCC Panska Ves 1.41 225 Pg **Pn** **21 20 50.0 +0.1**
PVCC Sg **Sb** **21 21 08.7 0.0**
comp=N,2µm,0.6s
KRLC Kraliky 1.51 164 *e*P **Pn** **21 20 51.2 -0.1**
KRLC *e* 21 21 11.1
KRLC Kraliky 1.51 164 *e*PG **Pn** **21 20 51.2 -0.1**
KRLC *e*SG **Sg** **21 21 11.1 -0.4**
KRLC Kraliky 1.51 164 Pg **Pn** **21 20 51.2 -0.1**
KRLC Sg **Sg** **21 21 11.1 -0.4**
BRG Berggiesshubel 1.53 245 PN **Pn** **21 20 51.2 -0.3**
BRG PG **Pg** **21 20 53.3 +1.0**
BRG SG **Sn** **21 21 12.9 +0.7**
comp=N,750nm,0.6s
BRG Berggiesshubel 1.53 245 *e*Pn **Pn** **21 20 51.1 -0.4**
SNR=9.1
BRG *e*Sg **Sn** **21 21 13.3 +1.1**
BRG Berggiesshubel 1.53 245 *e*P **Pn** **21 20 51.1 -0.4**
BRG *e* 21 21 13.3
BRG Berggiesshubel 1.53 245 *e*Pn **Pn** **21 20 51.1 -0.4**
BRG *e*Sg **Sn** **21 21 13.3 +1.1**
BRG Berggiesshubel 1.53 245 Pn **Pn** **21 20 51.1 -0.4**
SNR=9.1
BRG Sg **Sn** **21 21 13.3 +1.1**
RUE Ruedersdorf 1.74 304 *e*Pn **Pn** **21 20 54.4 0.0**
SNR=6.8
RUE *e*Sg **Sg** **21 21 21.3 +2.5**
RUE Ruedersdorf 1.74 304 *e*Pn **Pn** **21 20 53.8 -0.6**
RUE *e*Sn **Sn** **21 21 14.7 -2.6**
RUE Ruedersdorf 1.74 304 *e*Pn **Pn** **21 20 53.8 -0.6**
RUE *e*Sn **Sn** **21 21 14.7 -2.6**
RUE Sg **Sg** **21 21 21.3 +2.5**
PRU Pruhonice 1.85 214 *e*Pn **Pn** **21 20 55.7 -0.2**
SNR=22
PRU Pruhonice 1.85 214 *e*P **Pn** **21 20 55.7 -0.2**
PRU Pruhonice 1.85 214 *e*Pn **Pn** **21 20 55.7 -0.2**
PRU Pruhonice 1.85 214 *e*PG **Pb** **21 20 57.9 +0.3**
PRU *e*SG **Sg** **21 21 22.3 0.0**
comp=N,619nm,0.5s
PRU Pruhonice 1.85 214 Pn **Pn** **21 20 55.7 -0.2**
SNR=22
PRU Pruhonice 1.85 214 Pg **Pb** **21 20 57.9 +0.3**
PRU Sg **Sg** **21 21 22.3 0.0**
comp=N,619nm,0.5s
FBE Freiberg 1.86 252 *e*Pn **Pn** **21 20 55.8 -0.2**
SNR=7.9
FBE *e*Sg **Sg** **21 21 23.5 +0.9**
FBE Freiberg 1.86 252 Pn **Pn** **21 20 55.8 -0.2**
SNR=7.9
FBE Sg **Sg** **21 21 23.5 +0.9**
GKP Gorka Klasztor 1.86 21 *e*Pn **Pb** **21 20 57.7 -0.1**
GKP *e*Pg Pg 21 21 01.8 +3.2
GKP *e*PP PnPn 21 21 05.6 +2.2
GKP *e*Sg **Sg** **21 21 26.7 +3.9**
GKP Gorka Klasztor 1.86 21 *e*Pn **Pb** **21 20 57.8 -0.1**
RAC Raciborz 1.95 137 *e*P **Pn** **21 20 56.1 -1.1**
RAC *e* 21 21 27.2
RAC Raciborz 1.95 137 *e*P **Pn** **21 20 56.1 -1.1**
RAC Raciborz 1.95 137 *e*Pg **Pg** **21 21 00.4 +0.2**
RAC *e*Sg **Sg** **21 21 27.2 +1.7**
MORC Moravsky Berou 1.97 153 *e*Pn **Pn** **21 20 57.3 -0.3**
SNR=291
MORC *e*Sg **Sg** **21 21 26.8 +0.6**
MORC Moravsky Berou 1.97 153 *e*P **Pn** **21 20 57.1 -0.5**
MORC *e* 21 21 25.1
MORC Moravsky Berou 1.97 153 *e*Pn **Pn** **21 20 57.1 -0.5**
MORC *e*Sn **Sb** **21 21 25.1 +0.3**
MORC Moravsky Berou 1.97 153⇑ *i*P **Pn** **21 20 57.6 0.0**
MORC Moravsky Berou 1.97 153⇓ *i*Pn **Pn** **21 20 57.3 -0.3**
MORC Moravsky Berou 1.97 153⇑ *i*P **Pn** **21 20 57.6 0.0**
MORC *e*Sg **Sb** **21 21 25.0 +0.3**
CLL Collm 1.98 265 *e*Pn **Pn** **21 20 57.3 -0.4**
SNR=56
CLL *e*Sg **Sg** **21 21 27.4 +0.9**
CLL Collm 1.98 265 *i*P **Pn** **21 20 57.3 -0.4**
CLL *i* 21 21 27.3
CLL Collm 1.98 265 *i*Pn **Pn** **21 20 57.3 -0.4**
CLL Lmax 21 21 00.0
CLL *e*Pg **Pg** **21 21 01.0 +0.2**
CLL *e* 21 21 04.0
CLL *e* 21 21 05.0
CLL *i*Sg **Sg** **21 21 27.3 +0.9**
comp=Z,1µm,0.6s
CLL Collm 1.98 265 Pn **Pn** **21 20 57.3 -0.4**
SNR=56
CLL Sg **Sg** **21 21 27.4 +0.9**
OKC Ostrava-Krasne 2.12 142 *e*Pn **Pn** **21 20 59.1 -0.5**
SNR=13
OKC Ostrava-Krasne 2.12 142 *e*P **Pn** **21 20 59.1 -0.5**
OKC Ostrava-Krasne 2.12 142 *e*Pn **Pn** **21 20 59.1 -0.5**
OKC Ostrava-Krasne 2.12 142 *e*PG **Pg** **21 21 03.2 -0.4**
OKC *e*SG **Sg** **21 21 30.3 -0.7**
comp=Z,642nm,0.7s
OKC Ostrava-Krasne 2.12 142 Pn **Pn** **21 20 59.1 -0.5**
SNR=13
OKC Ostrava-Krasne 2.12 142 Pg **Pg** **21 21 03.2 -0.4**
OKC Sg **Sg** **21 21 30.3 -0.7**
comp=Z,642nm,0.7s
VRAC Vranov 2.25 172 Pn **Pn** **21 21 01.4 +0.1**
VRAC Lg Lg 21 21 34.3
VRAC Vranov 2.25 172⇑ *i*P **Pn** **21 21 01.7 +0.4**
VRAC Vranov 2.25 172 Pn **Pn** **21 21 01.4 +0.1**
comp=Z,11nm,0.3s,baz=356,slow=15,SNR=74
VRAC Lg Lg 21 21 34.3
comp=Z,68nm,0.3s,baz=71,slow=21,SNR=15
VRAC Vranov 2.25 172⇓ *i*Pn **Pn** **21 21 01.3 0.0**
baz=354
VRAC Vranov 2.25 172⇑ *i*P **Pn** **21 21 01.7 +0.4**
VRAC *e*Sg **Sb** **21 21 33.7 +1.0**
comp=Z,473nm,0.7s,baz=354
VRAC Lg Lg 21 21 34.3
TREC Trest 2.28 191 *e*P **Pn** **21 21 02.0 +0.2**
TREC *e* 21 21 35.1
TREC smax smax
comp=N,550nm,0.6s
TREC Trest 2.28 191 *e*PN **Pn** **21 21 02.0 +0.2**
TREC *e*PG **Pb** **21 21 05.3 +0.4**
TREC *e*SG **Sg** **21 21 35.1 -1.0**
comp=N,550nm,0.6s
TREC Trest 2.28 191 Pn **Pn** **21 21 02.0 +0.2**
TREC Trest 2.28 191 Pg **Pb** **21 21 05.3 +0.4**
TREC Sg **Sg** **21 21 35.1 -1.0**
comp=N,550nm,0.6s
KRUC Moravsky 2.48 176⇓ *i*Pn **Pn** **21 21 04.5 0.0**
baz=357
KRUC *e*Sg **Sg** **21 21 41.4 -1.1**
comp=N,410nm,0.7s,baz=357
SCHF Schoenfels 2.51 252 *e*Pn **Pn** **21 21 05.1 +0.2**
SNR=9.4
SCHF *e*Pg **Pg** **21 21 12.3 +1.3**
SNR=15
SCHF *e*Sg **Sg** **21 21 44.1 +0.6**
SCHF Schoenfels 2.51 252 Pn **Pn** **21 21 05.1 +0.2**
SNR=9.4
HKWD Heukewalde 2.54 255 *e*Pn **Pn** **21 21 05.9 +0.6**
SNR=11
HKWD Heukewalde 2.54 255 Pn **Pn** **21 21 05.9 +0.6**
SNR=11
WERD Werda 2.66 247 *e*Pn **Pn** **21 21 07.5 +0.5**
SNR=20
WERD Werda 2.66 247 Pn **Pn** **21 21 07.5 +0.5**
SNR=20
OJC Ojcow 2.66 118 *e*Pn **Pn** **21 21 05.7 -1.3**
SNR=13
OJC Ojcow 2.66 118 *e*P **Pn** **21 21 05.5 -1.6**
OJC *e* 21 21 48.6
OJC Ojcow 2.66 118 *e*Pn **Pn** **21 21 05.5 -1.6**
OJC *e*Pg **Pg** **21 21 13.7 -0.2**
OJC *e*Sg **Sg** **21 21 48.6 +0.2**
OJC Ojcow 2.66 118 *e*P **Pn** **21 21 05.5 -1.6**
NKC Novy Kostel 2.68 242 *e*Pn **Pn** **21 21 07.9 +0.6**
SNR=43
NKC Novy Kostel 2.68 242 *e*P **Pn** **21 21 07.7 +0.4**
NKC Novy Kostel 2.68 242 *e*PN **Pn** **21 21 07.7 +0.4**
NKC *e*PG **Pg** **21 21 13.6 -0.6**
NKC *e*SG **Sg** **21 21 49.7 +0.8**
comp=N,1µm,0.7s
NKC Novy Kostel 2.68 242 Pn **Pn** **21 21 07.7 +0.4**
NKC Novy Kostel 2.68 242 Pg **Pg** **21 21 13.6 -0.6**
NKC Sg **Sg** **21 21 49.7 +0.8**
comp=N,1µm,0.7s
GUNZ Gunzen 2.68 246 *e*Pn **Pn** **21 21 07.9 +0.6**
SNR=10
GUNZ Gunzen 2.68 246 Pn **Pn** **21 21 07.9 +0.6**
SNR=10
WERN Wernitzgruen 2.69 244 *e*Pn **Pn** **21 21 08.1 +0.6**
SNR=38
WERN Wernitzgruen 2.69 244 Pn **Pn** **21 21 08.1 +0.6**
SNR=38
PLN Plauen 2.73 249 *e*Pn **Pn** **21 21 08.4 +0.4**
SNR=30
PLN *e*Pg **Pg** **21 21 15.5 +0.3**
SNR=2.5
PLN Plauen 2.73 249 Pn **Pn** **21 21 08.4 +0.4**
SNR=30
ROHR Rohrbach 2.75 243 *e*Pn **Pn** **21 21 08.8 +0.5**
SNR=19
ROHR *e*Pg **Pg** **21 21 16.5 +0.9**
SNR=5.2
ROHR Rohrbach 2.75 243 Pn **Pn** **21 21 08.8 +0.5**
SNR=19
NEUB Neuenburg 2.76 265 *e*Pn **Pn** **21 21 09.3 +1.0**
SNR=4.4
NEUB *e*Pg **Pg** **21 21 16.4 +0.7**
SNR=21
NEUB Neuenburg 2.76 265 Pn **Pn** **21 21 09.3 +1.0**
SNR=4.4
TRIB Obertriebel 2.80 247 *e*Pn **Pn** **21 21 09.4 +0.5**
SNR=28
TRIB Obertriebel 2.80 247 Pn **Pn** **21 21 09.4 +0.5**
SNR=28
TAUT Tautenburg 2.84 261 *e*Pn **Pn** **21 21 10.0 +0.5**
SNR=5.6
TAUT *e*Pg **Pg** **21 21 18.6 +1.3**
SNR=12
TAUT Tautenburg 2.84 261 Pn **Pn** **21 21 10.0 +0.5**
SNR=5.6
JAVC Velka Javorina 2.85 159 *e*Pn **Pn** **21 21 10.9 +1.2**
JAVC *e*Sg **Sg** **21 21 57.8 +3.4**
comp=N,803nm,1.8s
WIMM Wimmelburg 2.90 272 Pn **Pn** **21 21 10.7 +0.4**
SNR=17
WIMM Wimmelburg 2.90 272 Pg **Pg** **21 21 17.8 -0.6**
SNR=5.6
BEL Belsk 2.91 82 *e*Pn **Pn** **21 21 13.1 +2.7**
BEL *e*PP **PbPb** **21 21 20.7 +1.9**
BEL *e*Pg Pg 21 21 22.9 +4.3
BEL *e*Sg Sg 21 22 08.6 +12
BEL Belsk 2.91 82 *e*Pn **Pn** **21 21 13.1 +2.7**
BEL Belsk 2.91 82 *e*Pg **Pg** 21 21 23.0 +4.3
KHC Kasperske Hory 2.91 215 *e*P **Pn** **21 21 10.0 -0.5**
KHC *e* 21 21 43.5
KHC Kasperske Hory 2.91 215 *e*PN **Pn** **21 21 10.4 -0.1**
KHC *e*PG **Pb** **21 21 15.8 +0.1**
KHC *e*SN **Sn** **21 21 45.7 -0.5**
KHC *e*SG **Sg** **21 21 54.4 -2.0**
comp=N,301nm,0.6s
KHC Kasperske Hory 2.91 215 Pn **Pn** **21 21 10.0 -0.5**
KHC Kasperske Hory 2.91 215 Pg **Pb** **21 21 16.5 +0.8**
KHC Sn **Sn** **21 21 43.5 -2.7**
KHC Sg **Sb** **21 21 52.5 +0.6**
MOX Moxa 2.99 254 *e*Pn **Pn** **21 21 11.7 +0.1**
SNR=16
MOX *e*Pg **Pg** **21 21 20.0 -0.2**
SNR=9.6
MOX *e*Sg **Sg** **21 22 00.8 +1.9**
MOX Moxa 2.99 254 *e*P **Pn** **21 21 11.7 +0.1**
MOX Moxa 2.99 254 Pn **Pn** **21 21 11.7 +0.1**
SNR=16
MOX Moxa 2.99 254 Pg **Pg** **21 21 20.0 -0.2**
SNR=9.6
MOX Sg **Sg** **21 22 00.8 +1.9**
MANZ Manzenberg 2.99 240 *e*Pn **Pn** **21 21 12.2 +0.5**
SNR=46
MANZ Manzenberg 2.99 240 Pn **Pn** **21 21 12.2 +0.5**
SNR=46
ROTZ Rotzenmuhle 3.07 236 *e*Pn **Pn** **21 21 13.1 +0.5**
SNR=59
ROTZ Rotzenmuhle 3.07 236 Pn **Pn** **21 21 13.1 +0.5**
SNR=59
GEC2 GERESS Array S 3.12 211 *e*Pn **Pn** **21 21 13.4 0.0**
SNR=67
GEC2 GERESS Array S 3.12 211 *e*P **Pn** **21 21 13.4 0.0**
GEC2 GERESS Array S 3.12 211 Pn **Pn** **21 21 13.4 0.0**
SNR=67
GERES GERESS Array B 3.12 211 Pn **Pn** **21 21 13.1 -0.3**
GERES Pg **Pb** **21 21 21.1 +1.9**
GERES Sn **Sn** **21 21 50.8 -0.5**
GERES Lg Lg 21 22 01.6
GERES GERESS Array B 3.12 211 Pn **Pn** **21 21 13.1 -0.3**
comp=N,1.0nm,0.3s,baz=31,slow=12,SNR=32
GERES Pg **Pb** **21 21 21.2 +1.9**
comp=N,27nm,0.3s,baz=32,slow=16,SNR=81
GERES Sn **Sn** **21 21 50.8 -0.5**
comp=N,22nm,0.3s,baz=34,slow=25,SNR=6.7
GERES Lg Lg 21 22 01.6
comp=N,44nm,0.3s,baz=34,slow=27,SNR=8.5
GERES GERESS Array B 3.12 211 P **Pn** **21 21 13.1 -0.3**
comp=N,1.0nm,0.3s
GERES GERESS Array B 3.12 211 Pg **Pb** **21 21 21.1 +1.9**
SMOL Smolenice 3.13 164 *e*P **Pn** **21 21 15.5 +2.0**
SMOL Smolenice 3.13 164 *e*PN **Pn** **21 21 15.5 +2.0**
SMOL *e* 21 21 22.7
SMOL Smolenice 3.13 164 *e*P **Pn** **21 21 15.5 +2.0**
SMOL *e*Sg **Sg** **21 22 03.4 -0.1**
WET Wettzell 3.18 222 *e*Pn **Pn** **21 21 14.5 +0.3**
SNR=23
WET Wettzell 3.18 222 *e*P **Pn** **21 21 14.5 +0.3**
WET Wettzell 3.18 222 Pn **Pn** **21 21 14.5 +0.3**
SNR=23
ZST Bratislava 3.40 169 *e*P **Pn** **21 21 17.3 +0.1**
ZST pmax pmax
comp=N,496nm,1.6s
ZST Bratislava 3.40 169 *e*PN **Pn** **21 21 17.2 +0.1**
ZST *e* 21 21 27.5
ZST Bratislava 3.40 169 *e*P **Pn** **21 21 17.3 +0.1**
comp=N,496nm,1.6s
ZST *e*Sg **Sg** **21 22 10.1 -1.9**
NIE Niedzica 3.40 127 *e*P **Pg** **21 21 27.9 -0.2**
NIE Niedzica 3.40 127 *e*P **Pg** **21 21 27.9 -0.2**
NIE *e*S **Sg** **21 22 12.3 +0.2**
VYHS Vyhne 3.50 149 *e*P **Pn** **21 21 18.8 +0.2**
VYHS pmax pmax
comp=N,104nm,1.5s
VYHS Vyhne 3.50 149 *e*PN **Pn** **21 21 18.8 +0.2**
VYHS *e* 21 21 31.5
VYHS Vyhne 3.50 149 *e*P **Pn** **21 21 18.8 +0.2**
comp=N,104nm,1.5s
VYHS *e*Sg **Sb** **21 22 11.6 +2.8**
CONA Conrad Observa 3.61 183⇑ *i*Pn **Pn** **21 21 20.3 +0.1**
SNR=32
CONA ⇑ *i*Sg **Sg** **21 22 17.1 -1.9**
comp=N,332nm,0.5s
CONA Conrad Observa 3.61 183 Pn **Pn** **21 21 20.3 +0.1**
SNR=32
CONA Sg **Sg** **21 22 17.1 -1.9**
comp=N,332nm,0.5s
GRA1 Grafenberg Arr 3.64 241 Pn **Pn** **21 21 21.2 +0.7**
SNR=20
GRA1 Sg **Sg** **21 22 19.8 +0.1**
GRF Grafenberg Arr 3.64 241 *e*Pn **Pn** **21 21 21.2 +0.7**
SNR=20
GRF *e*Sg **Sg** **21 22 19.8 +0.1**
GRF Grafenberg Arr 3.64 241 *e*P **Pn** **21 21 21.2 +0.7**
GRFO Grafenberg 3.64 241 *e*P **Pn** **21 21 21.1 +0.6**
GRFO Grafenberg 3.64 241 *e*Pn **Pn** **21 21 21.1 +0.6**
GRFO *e*Pg **Pg** **21 21 33.8 +1.2**
GRFO *e*Sn **Sg** **21 22 20.8 +1.1**
GRFO Grafenberg 3.64 241 *e*P **Pn** **21 21 21.1 +0.6**
BSD Bornholm Skovb 3.66 349 *i*P **Pn** **21 21 20.3 -0.5**
SNR=49
NRDL Niedersach Rie 3.85 287 *e*Pn **Pn** **21 21 24.7 +1.4**
SNR=12
NRDL Niedersach Rie 3.85 287 Pn **Pn** **21 21 24.7 +1.4**
SNR=12
SOP Sopron 3.86 176⇑ *e*Pn **Pn** **21 21 24.1 +0.6**
MOA Molln 3.88 199⇓ *i*Pn **Pn** **21 21 24.0 +0.2**
SNR=39
MOA ⇓ *i*Sg **Sg** **21 22 27.0 -0.6**
comp=N,503nm,0.8s
MOA Molln 3.88 199 Pn **Pn** **21 21 24.0 +0.2**
SNR=39
MOA Sg **Sg** **21 22 27.0 -0.6**
comp=N,503nm,0.8s
STHS Stebnicka Huta 3.88 121 *e*P **Pn** **21 21 25.1 +1.2**
STHS pmax pmax
comp=N,290nm,0.8s
STHS Stebnicka Huta 3.88 121 *e*PN **Pn** **21 21 25.1 +1.2**
STHS *e* 21 21 39.0
STHS *e* 21 22 32.0
STHS Stebnicka Huta 3.88 121 *e*P **Pn** **21 21 25.1 +1.2**
comp=N,290nm,0.8s
UBBA Unterbreizbach 3.93 262 *e*Pn **Pn** **21 21 25.2 +0.8**
SNR=3.7
UBBA Unterbreizbach 3.93 262 Pn **Pn** **21 21 25.2 +0.8**
SNR=3.7
KECS Kecovo 4.14 136 *e*P **Pn** **21 21 27.4 0.0**
KECS pmax pmax
comp=N,33nm,0.7s
KECS Kecovo 4.14 136 *e*PN **Pn** **21 21 27.4 0.0**
KECS *e* 21 21 41.4
KECS Kecovo 4.14 136 *e*P **Pn** **21 21 27.4 0.0**
comp=N,33nm,0.7s
KECS *e*Sg **Sg** **21 22 35.7 -0.2**
BSEG Bad Segeberg 4.28 306 *e*Pn **Pn** **21 21 28.7 -0.6**
SNR=11
BSEG Bad Segeberg 4.28 306 *e*P **Pn** **21 21 28.7 -0.6**
BSEG Bad Segeberg 4.28 306 Pn **Pn** **21 21 28.7 -0.6**
SNR=11
ARSA Arzberg 4.30 186⇑ *i*Pn **Pn** **21 21 29.5 -0.2**
SNR=12
ARSA ⇑ *i*Sg **Sg** **21 22 40.9 -0.3**
comp=N,253nm,0.6s
ARSA Arzberg 4.30 186 Pn **Pn** **21 21 29.5 -0.2**
SNR=12
ARSA Sg **Sg** **21 22 40.9 -0.3**
comp=N,253nm,0.6s
CRVS Cervenica-Dubn 4.31 126 *e*P **Pn** **21 21 28.6 -1.1**
CRVS pmax pmax
comp=N,313nm,1.8s
CRVS Cervenica-Dubn 4.31 126 *e*PN **Pn** **21 21 28.6 -1.1**
CRVS *e* 21 21 45.2
CRVS Cervenica-Dubn 4.31 126 *e*P **Pn** **21 21 28.6 -1.1**
comp=N,313nm,1.8s
CRVS *e*Sg **Sg** **21 22 40.9 -0.4**
PSZ Piszkesteto 4.36 145 *e*P **Pn** **21 21 30.9 +0.5**
PSZ Piszkesteto 4.36 145 *e*Pn **Pn** **21 21 30.9 +0.5**
PSZ Piszkesteto 4.36 145⇑ *i*P **Pn** **21 21 31.2 +0.8**
PSZ Piszkesteto 4.36 145⇑ *e*Pn **Pn** **21 21 31.3 +0.8**
PSZ Piszkesteto 4.36 145 *e*Pn **Pn** **21 21 30.9 +0.5**
PSZ Piszkesteto 4.36 145⇑ *i*P **Pn** **21 21 31.2 +0.8**
RJOB Jochberg 4.38 211 *e*Pn **Pn** **21 21 31.6 +0.9**
SNR=23
RJOB Jochberg 4.38 211 Pn **Pn** **21 21 31.6 +0.9**
SNR=23
CSKK Cs˘ˇtkako 4.40 161⇓⇓ *e*Pn **Pn** **21 21 31.4 +0.5**
PKSG 4.40 160⇑⇑ *e*Pn **Pn** **21 21 31.3 +0.4**
PKST T˘ˇs 4.45 163⇓⇓ *e*Pn **Pn** **21 21 31.9 +0.2**
LLD Lille Linde 4.47 330 *e*P **Pn** **21 21 30.8 -1.1**
LLD *i* S **Sn** **21 22 24.1 -0.5**
LLD Lille Linde 4.47 330 *i*P **Pn** **21 21 30.8 -1.1**
LLD *i* S **Sn** **21 22 24.1 -0.5**
LLD Lille Linde 4.47 330 *e*P **Pn** **21 21 30.8 -1.1**
LLD *i* S **Sn** **21 22 24.1 -0.5**
KWP Kalwaria Pacla 4.59 112 *e*P **Pn** **21 21 33.7 +0.1**
KWP Kalwaria Pacla 4.59 112 *e*Pn **Pn** **21 21 33.6 +0.1**
KWP *e*Pg Pb 21 21 47.9 +3.6
KWP Kalwaria Pacla 4.59 112⇓⇓ *i*P **Pn** **21 21 34.0 +0.4**
KWP Kalwaria Pacla 4.59 112 *e*Pn **Pn** **21 21 33.8 +0.1**
KWP *e*Pb Pb 21 21 40.6 -3.8
KWP *e*Pg **Pg** **21 21 48.3 -2.6**
KWP *e*Sn **Sn** **21 22 33.3 +5.6**
KWP *e*Sg Sg 21 22 56.5 +6.1
KWP Kalwaria Pacla 4.59 112 *e*Pn **Pn** **21 21 33.8 +0.1**
KWP Kalwaria Pacla 4.59 112⇓⇓ *i*P **Pn** **21 21 34.0 +0.4**
FUR Furstenfeldbru 4.61 225 *e*Pn **Pn** **21 21 34.5 +0.6**
SNR=14
FUR Furstenfeldbru 4.61 225 *e*P **Pn** **21 21 34.5 +0.6**
FUR Furstenfeldbru 4.61 225 Pn **Pn** **21 21 34.5 +0.6**
SNR=14
COP Copenhagen 4.71 333 *e*P **Pn** **21 21 35.0 -0.1**
COP *e*S **Sn** **21 22 28.1 -2.3**
COP Copenhagen 4.71 333 *i*P **Pn** **21 21 35.0 -0.1**
COP *e*S **Sn** **21 22 28.1 -2.3**
COP Copenhagen 4.71 333 *e*P **Pn** **21 21 35.0 -0.1**
COP *e*S **Sn** **21 22 28.1 -2.3**
KOLS Kolonicke sedl 4.72 121 *e*P **Pn** **21 21 35.5 +0.2**
KOLS pmax pmax
comp=N,468nm,2.1s
KOLS Kolonicke sedl 4.72 121 *e*PN **Pn** **21 21 35.5 +0.2**
KOLS *e*SG **Sg** **21 22 52.1 -2.2**
KOLS Kolonicke sedl 4.72 121 *e*P **Pn** **21 21 35.5 +0.2**
comp=N,468nm,2.1s
KOLS *e*Sg **Sg** **21 22 52.1 -2.2**
KBA Koelnbreinsper 4.82 203⇓ *i*Pn **Pn** **21 21 37.5 +0.6**
SNR=36
KBA ⇓ *i*Pg **Pg** **21 21 54.1 -1.1**
KBA ⇑ *i*Sg **Sg** **21 22 57.0 -0.7**
comp=N,148nm,0.7s
KBA Koelnbreinsper 4.82 203 Pn **Pn** **21 21 37.5 +0.6**
SNR=36
KBA Koelnbreinsper 4.82 203 Pg **Pg** **21 21 54.1 -1.1**
KBA Sg **Sg** **21 22 57.0 -0.7**
comp=N,148nm,0.7s
UZH Uzhgorod 4.91 124 *e*P **Pn** **21 21 37.5 -0.4**
UZH *e*S **Sn** **21 22 33.5 -1.9**
UZH smax smax
comp=N,80nm,0.8s
UZH smax smax
comp=E,140nm,0.8s
UZH smax smax
comp=Z,60nm,0.8s
UZH Uzhgorod 4.91 124 *e*P **Pn** **21 21 37.5 -0.4**
UZH *e*S **Sn** **21 22 33.5 -1.9**
SOKA Soboth 4.91 189⇓⇓ *i*Pn **Pn** **21 21 39.0 +1.0**
SOKA ⇓ *i*Sg **Sg** **21 22 59.1 -1.6**
comp=Z,69nm,0.7s
SOKA Soboth 4.91 189 Pn **Pn** **21 21 39.0 +1.0**
SOKA Sg **Sg** **21 22 59.1 -1.6**
comp=Z,69nm,0.7s
SUW Suwalki 4.94 57 *e*P **Pn** **21 21 38.5 +0.2**
SUW Suwalki 4.94 57 *e*Pn **Pn** **21 21 38.5 +0.2**
SUW *e*Pg Pg 21 22 00.8 +3.2
SUW *e*Sn **Sg** **21 22 59.8 -1.7**
SUW Suwalki 4.94 57 *e*Pn **Pn** **21 21 38.5 +0.5**
SUW *e*Pg **Pg** **21 21 58.6 +1.0**
SUW *e*Sg Sg 21 23 14.8 +1.3
SUW Suwalki 4.94 57 *e*P **Pn** **21 21 38.5 +0.2**
TNS Taunus Mts 5.05 258 *e*Pn **Pn** **21 21 40.2 +0.3**
SNR=36
TNS Taunus Mts 5.05 258 *e*P **Pn** **21 21 40.2 +0.3**
TNS Taunus Mts 5.05 258 Pn **Pn** **21 21 40.2 +0.3**
SNR=36
TOD Tromm 5.06 250 P **Pn** **21 21 39.7 -0.3**
TOD S **Sn** **21 22 37.4 -1.7**
TOD Tromm 5.06 250 P **Pn** **21 21 39.7 -0.3**
TOD S **Sn** **21 22 37.4 -1.7**
TOD Tromm 5.06 250 P **Pn** **21 21 39.7 -0.3**
TOD S **Sn** **21 22 37.4 -1.7**
BEHE Becsehely 5.08 175⇑⇑ *e*Pn **Pn** **21 21 42.0 +1.7**
KOGS Kog 5.09 179 *e*Pn **Pn** **21 21 41.4 +1.0**
KOGS *e*Sn **Sb** **21 22 50.8 -3.6**
KOGS Kog 5.09 179 *e*Pn **Pn** **21 21 41.4 +1.0**
GROS Grobnik 5.09 185⇑ *i*Pn **Pn** **21 21 41.9 +1.4**
GROS Grobnik 5.09 185⇑ *i*Pn **Pn** **21 21 41.9 +1.4**
OBKA Obir 5.14 192⇓ *i*Pn **Pn** **21 21 40.5 -0.6**
OBKA ⇑ *i*Sg **Sg** **21 23 08.6 +0.7**
comp=Z,175nm,0.9s
OBKA Obir 5.14 192 Pn **Pn** **21 21 40.5 -0.6**
OBKA Sg **Sg** **21 23 08.6 +0.7**
comp=Z,175nm,0.9s
PKS9 Tamasi 5.14 163⇓⇓ *e*Pn **Pn** **21 21 43.1 +1.9**
WATA Walderalm 5.15 217⇑ *i*Pn **Pn** **21 21 41.9 +0.5**
SNR=40
WATA Walderalm 5.15 217 Pn **Pn** **21 21 41.9 +0.5**
SNR=40
MYKA Terra Mystica 5.17 199⇑ *i*Pn **Pn** **21 21 42.0 +0.3**
MYKA ⇑ *i*Sg **Sg** **21 23 09.6 +0.5**
comp=Z,107nm,0.6s
MYKA Terra Mystica 5.17 199 Pn **Pn** **21 21 42.0 +0.3**

MYKA Sg **Sg** **21 23 09.6 +0.5**
comp=Z,107nm,0.6s
WTTA **Wattenberg** **5.19 216** ⇓*i*Pn **Pn** **21 21 42.3 +0.4**
SNR=19
WTTA ⇓*i*Sg **Sg** **21 23 10.2 +0.7**
comp=Z,159nm,0.7s
WTTA **Wattenberg** **5.19 216** Pn **Pn** **21 21 42.3 +0.4**
SNR=19
WTTA Sg **Sg** **21 23 10.2 +0.7**
comp=Z,159nm,0.7s
IBBN **Ibbenburen** **5.25 282** *e*Pn **Pn** **21 21 43.5 +0.9**
SNR=5.7
IBBN **Ibbenburen** **5.25 282** Pn **Pn** **21 21 43.5 +0.9**
SNR=5.7
STU **Stuttgart** **5.25 241** *e*Pn **Pn** **21 21 42.9 +0.2**
SNR=2.6
STU **Stuttgart** **5.25 241** *e*P **Pn** **21 21 42.9 +0.2**
STU **Stuttgart** **5.25 241** *e*Pn **Pn** **21 21 42.1 -0.5**
comp=Z,47nm,0.6s
STU *e*Sg **Sg** **21 23 12.2 +0.7**
STU **Stuttgart** **5.25 241** *e*Pn **Pn** **21 21 42.1 -0.5**
comp=Z,47nm,0.6s
STU *e*Sg **Sg** **21 23 12.2 +0.7**
LVV **L'vov** **5.30 106** *e*P **Pn** **21 21 43.0 -0.3**
LVV *e*S **Sn** **21 22 45.0 0.0**
LVV MLR MLR
comp=N,400nm,6.0s
LVV MLR MLR
comp=E,400nm,6.0s
LVV MLR MLR
comp=Z,400nm,6.0s
LVV **L'vov** **5.30 106** *e*P **Pn** **21 21 43.0 -0.3**
LVV *e*S **Sn** **21 22 45.0 0.0**
MOTA **Moosalm** **5.33 220** *i* Pn **Pn** **21 21 44.3 +0.5**
SNR=30
MOTA ⇑*i*Sg **Sg** **21 23 14.6 +0.7**
comp=Z,177nm,0.8s
MOTA **Moosalm** **5.33 220** Pn **Pn** **21 21 44.3 +0.5**
SNR=30
MOTA Sg **Sg** **21 23 14.6 +0.7**
comp=Z,177nm,0.8s
ABTA **Abfaltersbach** **5.35 208** ⇓*i*Pn **Pn** **21 21 43.9 -0.1**
SNR=15
ABTA ⇑*i*Sg **Sg** **21 23 14.4 -0.2**
comp=Z,229nm,0.7s
ABTA **Abfaltersbach** **5.35 208** Pn **Pn** **21 21 43.9 -0.1**
SNR=15
ABTA Sg **Sg** **21 23 14.4 -0.2**
comp=Z,229nm,0.7s
RETA **Reutte** **5.36 223** ⇑*i*Pn **Pn** **21 21 44.4 +0.3**
SNR=15
RETA ⇓*i*Sg **Sg** **21 23 13.7 -1.2**
comp=Z,202nm,0.7s
RETA **Reutte** **5.36 223** Pn **Pn** **21 21 44.4 +0.3**
SNR=15
RETA Sg **Sg** **21 23 13.7 -1.2**
comp=Z,202nm,0.7s
TRPA **Tarpa** **5.36 127** ⇑*i*P **Pn** **21 21 44.2 +0.1**
TRPA **Tarpa** **5.36 127** ⇑*e*Pn **Pn** **21 21 44.1 0.0**
TRPA **Tarpa** **5.36 127** ⇑*i*P **Pn** **21 21 44.2 +0.1**
PKS6 **Bocsa** **5.42 154** ⇓*e*Pn **Pn** **21 21 44.4 -0.6**
KOE **Koeppel** **5.43 262** *e*Pn **Pn** **21 21 45.7 +0.6**
KOE **Koeppel** **5.43 262** Pn **Pn** **21 21 45.7 +0.6**
PKS2 **Kecel** **5.43 157** *e*Pn **Pn** **21 21 46.6 +1.5**
HOBG **Hohbusch** **5.56 268** *e*Pn **Pn** **21 21 47.1 +0.3**
HOBG **Hohbusch** **5.56 268** Pn **Pn** **21 21 47.1 +0.3**
PKSM **Moragy** **5.57 162** ⇓*i*P **Pn** **21 21 47.5 +0.5**
PKSM **Moragy** **5.57 162** ⇓*e*Pn **Pn** **21 21 47.8 +0.8**
PKSM **Moragy** **5.57 162** ⇑*i*P **Pn** **21 21 47.5 +0.5**
KTD **Kalmit** **5.61 250** P **Pn** **21 21 47.7 +0.2**
KTD **Kalmit** **5.61 250** P **Pn** **21 21 47.7 +0.2**
KTD **Kalmit** **5.61 250** P **Pn** **21 21 47.7 +0.2**
BNS **Bensberg** **5.66 268** *e*Pn **Pn** **21 21 48.3 +0.1**
BNS **Bensberg** **5.66 268** Pn **Pn** **21 21 48.3 +0.1**
HLG **Helgoland** **5.67 301** *e*Pn **Pn** **21 21 48.9 +0.6**
SNR=3.6
HLG **Helgoland** **5.67 301** Pn **Pn** **21 21 48.9 +0.6**
SNR=3.6
VOY **Vojsko** **5.70 196** *e*Pn **Pn** **21 21 49.2 +0.3**
VOY *e* 21 22 15.0
VOY *e* 21 23 25.0
VOY **Vojsko** **5.70 196** *e*Pn **Pn** **21 21 49.2 +0.3**
FETA **Feichten** **5.74 220** ⇓*i*Pn **Pn** **21 21 49.5 0.0**
SNR=12
FETA ⇓*i*Sg **Sg** **21 23 27.3 +0.1**
comp=Z,68nm,0.8s
FETA **Feichten** **5.74 220** Pn **Pn** **21 21 49.5 0.0**
SNR=12
FETA Sg **Sg** **21 23 27.3 +0.1**
comp=Z,68nm,0.8s
LAUG **Laupendahl** **5.76 272** *e*Pn **Pn** **21 21 49.3 -0.2**
LAUG **Laupendahl** **5.76 272** Pn **Pn** **21 21 49.3 -0.2**
WTSB **Winterswijk** **5.82 278** *e*P **Pn** **21 21 51.3 +0.9**
WTSB *e*S Sg 21 23 37.8 +8.0
WTSB **Winterswijk** **5.82 278** *e*P **Pn** **21 21 51.3 +0.9**
SPAK **Spaichingen-Ko** **5.87 237** P **Pn** **21 21 51.3 +0.1**
SPAK S **Sn** **21 22 58.9 -0.3**
SPAK **Spaichingen-Ko** **5.87 237** P **Pn** **21 21 51.3 +0.1**
SPAK S **Sn** **21 22 58.9 -0.3**
DAVA **Damuels** **5.89 226** ⇑*i*Pn **Pn** **21 21 51.4 -0.2**
SNR=20
DAVA ⇑*i*Sg **Sg** **21 23 34.3 +2.1**
comp=Z,221nm,0.7s
DAVA **Damuels** **5.89 226** Pn **Pn** **21 21 51.4 -0.2**
SNR=20
DAVA Sg **Sg** **21 23 34.3 +2.1**
comp=Z,221nm,0.7s
LANF **Langenberg** **5.93 248** P **Pn** **21 21 51.0 -0.9**
LANF **Langenberg** **5.93 248** P **Pn** **21 21 51.0 -0.9**
LANF **Langenberg** **5.93 248** P **Pn** **21 21 51.0 -0.9**
LANF **Langenberg** **5.93 248** P **Pn** **21 21 51.0 -0.9**
STB **Steinbach** **5.94 265** *e*Pn **Pn** **21 21 52.7 +0.6**
STB *e*Sn **Sn** **21 22 58.0 -2.8**
comp=Z,65nm,0.8s
STB **Steinbach** **5.94 265** Pn **Pn** **21 21 52.7 +0.6**
BFO **Black Forest** **5.98 241** *e*P **Pn** **21 21 51.4 -1.2**
BFO pmax pmax
comp=Z,43nm,0.6s
BFO **Black Forest** **5.98 241** *e*Pn **Pn** **21 21 51.4 -1.2**
comp=Z,43nm,0.6s
BFO *e*Pg **Pg** **21 22 18.0 +0.6**
BFO *e*Sg **Sg** **21 23 35.2 +0.4**
BFO **Black Forest** **5.98 241** *e*P **Pn** **21 21 51.4 -1.2**
comp=Z,43nm,0.6s
BFO **Black Forest** **5.98 241** *e*Pg **Pg** **21 22 18.0 +0.6**
RUP **Ruppelstein** **6.07 256** P **Pn** **21 21 53.8 -0.1**
RUP **Ruppelstein** **6.07 256** P **Pn** **21 21 53.8 -0.1**
RUP **Ruppelstein** **6.07 256** P **Pn** **21 21 53.8 -0.1**
HILG **Hillesheim** **6.12 262** *e*Pn **Pn** **21 21 55.2 +0.7**
HILG **Hillesheim** **6.12 262** Pn **Pn** **21 21 55.2 +0.7**
KLL **Kalltalsperre** **6.26 266** *e*Pn **Pn** **21 21 56.6 +0.1**
KLL **Kalltalsperre** **6.26 266** Pn **Pn** **21 21 56.6 +0.1**
DAVOX **Davos/Dischmat** **6.28 223** Pn **Pn** **21 21 57.7 +0.7**
DAVOX Lg Lg 21 23 39.7
DAVOX **Davos/Dischmat** **6.28 223** Pn **Pn** **21 21 57.7 +0.7**
comp=Z,3.1nm,0.3s,baz=18,slow=11,SNR=27
DAVOX Lg Lg 21 23 39.7
comp=Z,2.1nm,0.3s,baz=196,slow=22,SNR=3.6
DAVOX **Davos/Dischmat** **6.28 223** P **Pn** **21 21 57.7 +0.7**
comp=Z,3.0nm,0.3s
DREG **Dreilaegerbach** **6.30 266** *e*Pn **Pn** **21 21 57.1 0.0**
DREG **Dreilaegerbach** **6.30 266** Pn **Pn** **21 21 57.1 0.0**
DRGR **6.41 135** ⇑*i*P **Pn** **21 21 59.4 +0.8**
DRGR **6.41 135** ⇑*i*P **Pn** **21 21 59.4 +0.8**
MUD **Monsted U'grnd** **6.42 323** *e*P Pn 21 22 03.8 +5.2
MUD **Monsted U'grnd** **6.42 323** *i* P Pn 21 22 03.8 +5.2
HGN **Heimansgroeve** **6.47 267** *e*P **Pn** **21 22 00.8 +1.5**
comp=Z,11nm,0.9s
HGN *e*S **Sg** **21 23 49.6 -1.1**
HGN **Heimansgroeve** **6.47 267** *e*P **Pn** **21 22 00.8 +1.5**
comp=Z,11nm,0.9s
CDF **Champ du Feu** **6.52 245** *e*Pn **Pn** **21 21 58.8 -1.3**
CDF **Champ du Feu** **6.52 245** *e*Pg **Pg** **21 22 27.9 +0.2**
CDF *e*Sg **Sg** **21 23 50.7 -1.4**
comp=Z,213nm,0.8s
CDF **Champ du Feu** **6.52 245** *e*P **Pn** **21 21 58.8 -1.3**
CDF **Champ du Feu** **6.52 245** *e*Pn **Pn** **21 21 58.8 -1.3**
CDF *e*Pg **Pg** **21 22 27.9 +0.2**
CDF *e*Sg **Sg** **21 23 50.7 -1.4**
CDF **Champ du Feu** **6.52 245** *e*Pn **Pn** **21 21 58.8 -1.3**
CDF **Champ du Feu** **6.52 245** *e*Pg **Pg** **21 22 27.9 +0.2**
CDF *e*Sg **Sg** **21 23 50.7 -1.4**
comp=Z,107nm,0.8s
WLF **Walferdange** **6.63 258** PN **Pn** **21 22 02.9 +1.3**
WLF **Walferdange** **6.63 258** *e*P **Pn** **21 22 01.2 -0.4**
WLF pmax pmax
comp=Z,17nm,0.7s
WLF **Walferdange** **6.63 258** *e*Pn **Pn** **21 22 01.2 -0.4**
comp=Z,18nm,0.7s
WLF *e*Sg **Sg** **21 23 54.0 -1.7**
WLF **Walferdange** **6.63 258** *e*P **Pn** **21 22 01.2 -0.4**
comp=Z,17nm,0.7s
ECH **Echery** **6.69 244** P **Pn** **21 22 01.8 -0.6**
ECH **Echery** **6.69 244** P **Pn** **21 22 01.8 -0.6**
ECH **Echery** **6.69 244** P **Pn** **21 22 01.8 -0.6**
ECH **Echery** **6.69 244** P **Pn** **21 22 01.8 -0.6**
TUE **Stuetta** **6.75 224** *e*Pn **Pn** **21 22 04.0 +0.5**
comp=Z,13nm,0.6s
TUE *e*Sg Sb 21 23 48.8 +6.3
TUE **Stuetta** **6.75 224** *e*Pn **Pn** **21 22 04.0 +0.5**
comp=Z,13nm,0.6s
BCLA **Clavier** **6.94 265** PN **Pn** **21 22 06.5 +0.7**
BCLA **Clavier** **6.94 265** Pn **Pn** **21 22 06.4 +0.7**
BZS **Buzias** **6.94 146** ⇑*i*P **Pn** **21 22 07.4 +1.6**
BZS **Buzias** **6.94 146** ⇑*i*P **Pn** **21 22 07.4 +1.6**
NVLJ **Novalja** **7.03 187** *e*Pn **Pn** **21 22 07.7 +0.8**
NVLJ **Novalja** **7.03 187** *e*Pn **Pn** **21 22 07.7 +0.8**
SLIT **Slitere, Latvi** **7.07 28** *e*P **Pn** **21 22 07.5 -0.1**
SNR=47
BURAR **Bucovina Array** **7.08 120** ⇑*i*P **Pn** **21 22 08.7 +0.9**
BURAR **Bucovina Array** **7.08 120** ⇑*i*P **Pn** **21 22 08.7 +0.9**
HINF **Hinteralfeld** **7.08 242** *e*Pn **Pn** **21 22 07.2 -0.6**
HINF **Hinteralfeld** **7.08 242** *e*Pg **Pg** **21 22 36.4 -2.1**
HINF *e*Sg **Sg** **21 24 08.5 -1.7**
comp=Z,197nm,0.8s
HINF **Hinteralfeld** **7.08 242** *e*P **Pn** **21 22 07.2 -0.6**
HINF **Hinteralfeld** **7.08 242** *e*Pn **Pn** **21 22 07.2 -0.6**
HINF *e*Pg **Pg** **21 22 36.4 -2.1**
HINF *e*Sg **Sg** **21 24 08.5 -1.7**
HINF **Hinteralfeld** **7.08 242** *e*Pn **Pn** **21 22 07.2 -0.6**
HINF *e*Sg **Sg** **21 24 08.5 -1.7**
comp=Z,98nm,0.8s
IIGN **Ignalina** **7.13 54** *e*P **Pg** **21 22 37.5 -1.9**
IIGN AMB AMB 21 24 34.7
comp=Z,34nm,1.6s
IIGN **Ignalina** **7.13 54** *e*P **Pg** **21 22 37.5 -1.9**
comp=Z,34nm,1.6s,SNR=70
ISAL **Salakas** **7.19 52** *e*P Pg 21 22 38.0 -2.6
ISAL AMB AMB 21 24 39.5
comp=Z,29nm,1.1s
ISAL **Salakas** **7.19 52** *e*P Pg 21 22 38.0 -2.6
comp=Z,29nm,1.1s,SNR=62
NACGM **Naroch** **7.22 58** *e*P **Pn** **21 22 09.0 -0.6**
NACGM **Naroch** **7.22 58** *e*P **Pn** **21 22 09.0 -0.6**
HAU **Haudompre** **7.26 245** *e*Pn **Pn** **21 22 10.0 -0.2**
HAU **Haudompre** **7.26 245** *e*Pg **Pg** **21 22 40.1 -1.8**
HAU *e*Sg **Sg** **21 24 13.6 -2.3**
comp=Z,201nm,0.8s
HAU **Haudompre** **7.26 245** *e*P **Pn** **21 22 10.0 -0.2**
HAU **Haudompre** **7.26 245** *e*Pn **Pn** **21 22 10.0 -0.2**
HAU *e*Pg **Pg** **21 22 40.1 -1.8**
HAU *e*Sg **Sg** **21 24 13.6 -2.3**
HAU **Haudompre** **7.26 245** *e*Pn **Pn** **21 22 10.0 -0.2**
GIVF **Givet** **7.32 263** *e*Pn **Pn** **21 22 11.3 +0.4**
GIVF *e*Sg **Sg** **21 24 16.8 -0.9**
comp=Z,123nm,0.8s
GIVF **Givet** **7.32 263** *e*P **Pn** **21 22 11.3 +0.4**
GIVF **Givet** **7.32 263** *e*Pn **Pn** **21 22 11.3 +0.4**
GIVF *e*Sg **Sg** **21 24 16.8 -0.9**
GIVF **Givet** **7.32 263** *e*Pn **Pn** **21 22 11.3 +0.4**
GIVF *e*Sg **Sg** **21 24 16.8 -0.9**
comp=Z,62nm,0.8s
IZAR **Zarasai** **7.34 51** *e*P Pg 21 22 40.1 -3.3
IZAR AMB AMB 21 24 29.8
comp=Z,40nm,1.0s
IZAR **Zarasai** **7.34 51** *e*P Pg 21 22 40.1 -3.3
comp=Z,40nm,1.0s,SNR=62
PAGF **Fort de Pagny** **7.34 250** *e*Pn **Pn** **21 22 11.3 0.0**
PAGF **Fort de Pagny** **7.34 250** *e*Pg **Pg** **21 22 42.8 -0.7**
PAGF *e*Sg **Sg** **21 24 16.6 -1.9**
comp=Z,39nm,0.8s
PAGF **Fort de Pagny** **7.34 250** *e*Pn **Pn** **21 22 11.3 0.0**
PAGF *e*Pg **Pg** **21 22 42.8 -0.7**
PAGF *e*Sg **Sg** **21 24 16.6 -1.9**
PAGF **Fort de Pagny** **7.34 250** *e*Pn **Pn** **21 22 11.3 0.0**
THEF **They Montfort** **7.35 247** P **Pn** **21 22 10.7 -0.7**
THEF **They Montfort** **7.35 247** P **Pn** **21 22 10.7 -0.7**
THEF **They Montfort** **7.35 247** P **Pn** **21 22 10.7 -0.7**
THEF **They Montfort** **7.35 247** P **Pn** **21 22 10.7 -0.7**
IDID **Didziasalis** **7.38 55** *e*P Pg 21 22 39.9 -4.3
IDID AMB AMB 21 24 43.3
comp=Z,24nm,1.5s
IDID **Didziasalis** **7.38 55** *e*P Pg 21 22 39.8 -4.3
comp=Z,24nm,1.5s,SNR=62
DOU **Dourbes** **7.46 263** PN **Pn** **21 22 14.2 +1.3**
DOU **Dourbes** **7.46 263** Pn **Pn** **21 22 14.2 +1.3**
MICGM **Minsk** **7.68 63** ⇓*e*P Pg 21 22 44.0 -5.9
BAIF **Baives** **7.71 264** *e*Pn **Pn** **21 22 16.9 +0.6**
BAIF *e*Sg **Sg** **21 24 28.6 -1.7**
comp=Z,218nm,1.3s
BAIF **Baives** **7.71 264** *e*P **Pn** **21 22 16.9 +0.6**
BAIF **Baives** **7.71 264** *e*Pn **Pn** **21 22 16.9 +0.6**
BAIF *e*Sg **Sg** **21 24 28.6 -1.7**
BAIF **Baives** **7.71 264** *e*Pn **Pn** **21 22 16.9 +0.6**
MEZF **Maizieres J'vi** **7.76 251** *e*Pn **Pn** **21 22 17.8 +0.7**
MEZF *e*Sg **Sg** **21 24 30.5 -1.5**
comp=Z,124nm,0.8s
MEZF **Maizieres J'vi** **7.76 251** *e*Pn **Pn** **21 22 17.8 +0.7**
MEZF *e*Sg **Sg** **21 24 30.5 -1.5**
MEZF **Maizieres J'vi** **7.76 251** *e*Pn **Pn** **21 22 17.8 +0.7**
MEZF *e*Sg **Sg** **21 24 30.5 -1.5**
comp=Z,62nm,0.8s
SFTF **Sexfontaines** **7.91 249** *e*Pn **Pn** **21 22 18.1 -1.0**
SFTF *e*Sg **Sg** **21 24 35.0 -1.8**
comp=Z,120nm,0.9s
SFTF **Sexfontaines** **7.91 249** *e*Pn **Pn** **21 22 18.1 -1.0**
SFTF *e*Sg **Sg** **21 24 35.0 -1.8**
SFTF **Sexfontaines** **7.91 249** *e*Pn **Pn** **21 22 18.1 -1.0**
SFTF *e*Sg **Sg** **21 24 35.0 -1.8**
comp=Z,60nm,0.9s
LOT **Lotru** **7.92 137** ⇓*i*P **Pn** **21 22 20.4 +1.1**
LOT **Lotru** **7.92 137** ⇓*i*P **Pn** **21 22 20.4 +1.1**
BBLS **Lazići** **7.98 163** *e*Pn **Pn** **21 22 22.2 +2.1**
CABF **La Chapelle** **8.23 237** *e*Pn **Pn** **21 22 24.8 +1.2**
CABF *e*Sg **Sg** **21 24 44.2 -3.0**
comp=Z,194nm,0.9s
CABF **La Chapelle** **8.23 237** *e*P **Pn** **21 22 24.8 +1.2**
CABF **La Chapelle** **8.23 237** *e*Pn **Pn** **21 22 24.8 +1.2**
CABF *e*Sg **Sg** **21 24 44.2 -3.0**
CABF **La Chapelle** **8.23 237** *e*Pn **Pn** **21 22 24.8 +1.2**
GRUS **Gruza** **8.24 156** *e*Pn **Pn** **21 22 25.7 +2.0**
AK01 **Malin Array Si** **8.27 91** *e*Pn **Pn** **21 22 24.3 +0.3**
AK01 **Malin Array Si** **8.27 91** *e*Pn **Pn** **21 22 24.3 +0.3**
AKASG **Malin Array Be** **8.28 91** P **Pn** **21 22 22.2 -1.9**
AKASG 21 23 54.4
AKASG pmax pmax
comp=Z,5.0nm,0.3s
AKASG smax smax
comp=N,4.0nm,0.3s
AKASG **Malin Array Be** **8.28 91** Pn **Pn** **21 22 22.2 -1.9**
AKASG Sn **Sn** **21 23 54.4 -3.8**
AKASG Lg Lg 21 24 51.7
AKASG **Malin Array Be** **8.28 91** Pn **Pn** **21 22 22.2 -1.9**
comp=N,4.5nm,0.3s,baz=280,slow=12,SNR=16
AKASG Sn **Sn** **21 23 54.4 -3.8**
comp=N,3.9nm,0.3s,baz=266,slow=24,SNR=6.0
AKASG Lg Lg 21 24 51.7
baz=274,slow=28,SNR=3.6
AKASG **Malin Array Be** **8.28 91** P **Pn** **21 22 22.2 -1.9**
comp=N,5.0nm,0.3s
LPL **La Plagne** **8.67 230** *e*Pn **Pn** **21 22 30.1 +0.4**
LPL *e*Sg **Sg** **21 24 57.7 -3.5**
comp=N,53nm,1.1s
LPL **La Plagne** **8.67 230** *e*P **Pn** **21 22 30.1 +0.4**
LPL **La Plagne** **8.67 230** *e*Pn **Pn** **21 22 30.1 +0.4**
LPL *e*Sg **Sg** **21 24 57.7 -3.5**
LPL **La Plagne** **8.67 230** *e*Pn **Pn** **21 22 30.1 +0.4**
LPG **La Plagne** **8.68 230** *e*Pn **Pn** **21 22 29.7 -0.2**
LPG *e*Sg **Sg** **21 24 58.1 -3.2**
comp=N,72nm,0.9s
LPG **La Plagne** **8.68 230** *e*P **Pn** **21 22 29.7 -0.2**
LPG **La Plagne** **8.68 230** *e*Pn **Pn** **21 22 29.7 -0.2**
LPG *e*Sg **Sg** **21 24 58.1 -3.2**
LPG **La Plagne** **8.68 230** *e*Pn **Pn** **21 22 29.7 -0.2**
HFS **Hagfors** **8.73 352** Pn **Pn** **21 22 29.9 -0.4**
HFS Sn **Sn** **21 24 06.2 -3.1**
HFS Lg Lg 21 25 00.7
comp=N,0.4nm,0.3s,baz=160,slow=14,SNR=14
HFS Sn **Sn** **21 24 06.2 -3.1**
comp=N,0.9nm,0.3s,baz=158,slow=23,SNR=4.2
HFS Lg Lg 21 25 00.7
comp=N,0.7nm,0.3s,baz=181,slow=30,SNR=2.5
HFS **Hagfors** **8.73 352** P **Pn** **21 22 29.9 -0.4**
comp=N,1.0nm,0.3s
BNI **Bardonecchia** **9.04 228** *e*P **Pn** **21 22 34.5 -0.2**
BNI pmax pmax
comp=Z,6.0nm,0.7s
BNI **Bardonecchia** **9.04 228** *e*Pn **Pn** **21 22 34.5 -0.2**
comp=Z,5.6nm,0.7s
BNI **Bardonecchia** **9.04 228** *e*P **Pn** **21 22 34.5 -0.2**
comp=Z,6.0nm,0.7s
LOR **Lormes** **9.07 247** *e*Pn **Pn** **21 22 33.5 -1.6**
LOR **Lormes** **9.07 247** *e*Pg Pn 21 23 13.8 +39
LOR *e*Sg Sn 21 25 10.9 +53
comp=Z,74nm,0.9s
LOR **Lormes** **9.07 247** *e*Pn **Pn** **21 22 33.5 -1.6**
LOR *e*Pg 21 23 13.8
LOR *e*Sg Sn 21 25 10.9 +53
LOR **Lormes** **9.07 247** *e*Pn **Pn** **21 22 33.5 -1.6**
VSU **Vasula** **9.22 37** ⇓*e*P **Pn** **21 22 37.8 +0.8**
VSU **Vasula** **9.22 37** *e*P **Pn** **21 22 37.8 +0.8**
MBDF **Montbardon** **9.25 226** *e*Pn **Pn** **21 22 38.7 +1.1**
MBDF *e*Sg Sn 21 25 15.5 +53
comp=Z,31nm,0.8s
MBDF **Montbardon** **9.25 226** *e*P **Pn** **21 22 38.7 +1.1**
MBDF **Montbardon** **9.25 226** *e*Pn **Pn** **21 22 38.7 +1.1**
MBDF *e*Sg Sn 21 25 15.5 +53
MBDF **Montbardon** **9.25 226** *e*Pn **Pn** **21 22 38.7 +1.1**
SSF **Saint Saulge** **9.39 246** *e*Pn **Pn** **21 22 38.1 -1.3**
SSF **Saint Saulge** **9.39 246** *e*Pn **Pn** **21 22 38.1 -1.3**
SSF *e*Pg 21 23 19.3
SSF *e*Sg Sn 21 25 20.8 +55
SSF **Saint Saulge** **9.39 246** *e*Pn **Pn** **21 22 38.1 -1.3**
comp=Z,68nm,0.8s
SSF **Saint Saulge** **9.39 246** *e*P **Pn** **21 22 38.1 -1.3**
SSF **Saint Saulge** **9.39 246** *e*Pn **Pn** **21 22 38.1 -1.3**
SSF *e*Pg 21 23 19.3
SSF *e*Sg Sn 21 25 20.8 +55
SSF **Saint Saulge** **9.39 246** *e*Pn **Pn** **21 22 38.1 -1.3**
SMF **Signal de Mont** **9.43 244** *e*Pn **Pn** **21 22 39.4 -0.6**
SMF **Signal de Mont** **9.43 244** *e*Pg Pn 21 23 21.1 +41
SMF *e*Sg Sn 21 25 22.3 +56
comp=Z,67nm,0.8s
SMF **Signal de Mont** **9.43 244** *e*P **Pn** **21 22 39.4 -0.6**
SMF **Signal de Mont** **9.43 244** *e*Pn **Pn** **21 22 39.4 -0.6**
SMF *e*Pg 21 23 21.1
SMF *e*Sg Sn 21 25 22.3 +56
SMF **Signal de Mont** **9.43 244** *e*Pn **Pn** **21 22 39.4 -0.6**
SAOF **Saorge** **9.51 221** P **Pn** **21 22 40.8 -0.2**
SAOF **Saorge** **9.51 221** P **Pn** **21 22 40.8 -0.2**
SAOF **Saorge** **9.51 221** P **Pn** **21 22 40.8 -0.2**
SAOF **Saorge** **9.51 221** P **Pn** **21 22 40.8 -0.2**
ORIF **Oris-en-Rattie** **9.52 230** *e*Pn **Pn** **21 22 41.2 0.0**
ORIF *e*Sg Sn 21 25 24.0 +55
comp=Z,159nm,1.4s
ORIF **Oris-en-Rattie** **9.52 230** *e*P **Pn** **21 22 41.2 0.0**
ORIF **Oris-en-Rattie** **9.52 230** *e*Pn **Pn** **21 22 41.2 0.0**
ORIF *e*Sg Sn 21 25 24.0 +55
ORIF **Oris-en-Rattie** **9.52 230** *e*Pn **Pn** **21 22 41.2 0.0**
AUTN **L'Aution** **9.55 221** P **Pn** **21 22 41.9 +0.1**
AUTN **L'Aution** **9.55 221** P **Pn** **21 22 41.9 +0.1**
AUTN **L'Aution** **9.55 221** P **Pn** **21 22 41.9 +0.1**
AUTN **L'Aution** **9.55 221** P **Pn** **21 22 41.9 +0.1**
TOUF **Mont Tournerai** **9.61 222** P **Pn** **21 22 43.1 +0.5**
TOUF **Mont Tournerai** **9.61 222** P **Pn** **21 22 43.1 +0.5**
TOUF **Mont Tournerai** **9.61 222** P **Pn** **21 22 43.1 +0.5**
TOUF **Mont Tournerai** **9.61 222** P **Pn** **21 22 43.1 +0.5**
AVF **Avril sur Loir** **9.63 245** *e*Pn **Pn** **21 22 40.8 -1.8**
AVF **Avril sur Loir** **9.63 245** *e*Pg Pn 21 23 23.5 +41
AVF *e*Sg Sn 21 25 27.6 +56
comp=Z,73nm,1.0s
AVF **Avril sur Loir** **9.63 245** *e*P **Pn** **21 22 40.8 -1.8**
AVF **Avril sur Loir** **9.63 245** *e*Pn **Pn** **21 22 40.8 -1.8**
AVF *e*Pg 21 23 23.5
AVF *e*Sg Sn 21 25 27.6 +56
AVF **Avril sur Loir** **9.63 245** *e*Pn **Pn** **21 22 40.8 -1.8**
SBF **Sospel** **9.65 221** *e*Pn **Pn** **21 22 43.4 +0.3**
SBF **Sospel** **9.65 221** *e*Pn **Pn** **21 22 43.4 +0.3**
SBF **Sospel** **9.65 221** *e*Pn **Pn** **21 22 43.4 +0.3**
SBF **Sospel** **9.65 221** *e*Pn **Pn** **21 22 43.4 +0.3**
HYF **Humbligny** **9.78 249** *e*Sg Sn 21 25 32.4 +57
MEF **Metsahovi** **9.85 25** *e*P **Pn** **21 22 45.6 0.0**
SNR=47
NB2 **NORSAR Subarra** **9.91 346** Pn **Pn** **21 22 45.1 -1.4**
comp=Z,1.9nm,0.8s,baz=162,slow=14
NB2 **NORSAR Subarra** **9.91 346** Pn **Pn** **21 22 45.1 -1.4**
comp=Z,1.9nm,0.8s,baz=162,slow=14,SNR=8.9
NOA **NORSAR Array B** **9.91 346** Pn **Pn** **21 22 44.5 -2.0**
NOA **NORSAR Array B** **9.91 346** Pn **Pn** **21 22 44.5 -2.0**
comp=Z,0.4nm,0.3s,baz=174,slow=13,SNR=8.1
CALN **Calern** **9.97 222** P **Pn** **21 22 48.8 +1.3**
CALN **Calern** **9.97 222** P **Pn** **21 22 48.8 +1.3**
CALN **Calern** **9.97 222** P **Pn** **21 22 48.8 +1.3**
CALN **Calern** **9.97 222** P **Pn** **21 22 48.8 +1.3**
BGF **Bois d'Agland** **10.04 245** *e*Pn **Pn** **21 22 46.8 -1.6**
BGF **Bois d'Agland** **10.04 245** *e*Pg Pn 21 23 33.1 +45
BGF *e*Sg Sn 21 25 41.2 +59
comp=Z,52nm,0.6s
BGF **Bois d'Agland** **10.04 245** *e*P **Pn** **21 22 46.8 -1.6**
BGF **Bois d'Agland** **10.04 245** *e*Pn **Pn** **21 22 46.8 -1.6**
BGF *e*Pg 21 23 33.1
BGF *e*Sg Sn 21 25 41.2 +59
BGF **Bois d'Agland** **10.04 245** *e*Pn **Pn** **21 22 46.8 -1.6**
VIVF **Saint-Julien-l** **10.15 233** *e*Pn **Pn** **21 22 48.0 -1.9**
VIVF *e*Sg Sn 21 25 44.0 +59
comp=Z,71nm,1.3s
VIVF **Saint-Julien-l** **10.15 233** *e*P **Pn** **21 22 48.0 -1.9**
VIVF **Saint-Julien-l** **10.15 233** *e*Pn **Pn** **21 22 48.0 -1.9**
VIVF *e*Sg Sn 21 25 44.0 +59
VIVF **Saint-Julien-l** **10.15 233** *e*Pn **Pn** **21 22 48.0 -1.9**
FRF **La Foret Royal** **10.23 222** *e*Pn **Pn** **21 22 51.8 +0.9**
FRF **La Foret Royal** **10.23 222** *e*P **Pn** **21 22 51.8 +0.9**
FRF **La Foret Royal** **10.23 222** *e*Pn **Pn** **21 22 51.8 +0.9**
FRF **La Foret Royal** **10.23 222** *e*Pn **Pn** **21 22 51.8 +0.9**
SMRF **Simiane la Rot** **10.37 227** *e*Pn **Pn** **21 22 52.7 -0.2**
SMRF *e*Sg 21 25 50.7
comp=Z,6.8nm,0.8s
SMRF **Simiane la Rot** **10.37 227** *e*Pn **Pn** **21 22 52.7 -0.2**
SMRF *e*Sg 21 25 50.7
SMRF **Simiane la Rot** **10.37 227** *e*Pn **Pn** **21 22 52.7 -0.2**
LMR **La Mourre** **10.47 222** *e*Pn **Pn** **21 22 54.4 +0.2**
LMR **La Mourre** **10.47 222** *e*P **Pn** **21 22 54.4 +0.2**
LMR **La Mourre** **10.47 222** *e*Pn **Pn** **21 22 54.4 +0.2**
LMR **La Mourre** **10.47 222** *e*Pn **Pn** **21 22 54.4 +0.2**
TCF **Toulx Ste Croi** **10.56 246** *e*Pn **Pn** **21 22 53.6 -1.9**
TCF *e*Sg 21 25 57.2
comp=Z,26nm,0.7s
TCF **Toulx Ste Croi** **10.56 246** *e*P **Pn** **21 22 53.6 -1.9**
TCF **Toulx Ste Croi** **10.56 246** *e*Pn **Pn** **21 22 53.6 -1.9**
TCF *e*Sg 21 25 57.2
TCF **Toulx Ste Croi** **10.56 246** *e*Pn **Pn** **21 22 53.6 -1.9**
LDF **La Druitiere** **10.86 261** *e*Pn **Pn** **21 23 00.4 +0.9**
LDF *e*Sg 21 26 07.2
comp=Z,87nm,1.4s
LDF **La Druitiere** **10.86 261** *e*P **Pn** **21 23 00.4 +0.9**
LDF **La Druitiere** **10.86 261** *e*Pn **Pn** **21 23 00.4 +0.9**
LDF *e*Sg 21 26 07.2
LDF **La Druitiere** **10.86 261** *e*Pn **Pn** **21 23 00.4 +0.9**
FLN **La Foliniere** **11.02 262** *e*Pn **Pn** **21 23 02.7 +1.0**
FLN *e*Sg 21 26 11.8
comp=Z,50nm,1.1s
FLN **La Foliniere** **11.02 262** *e*P **Pn** **21 23 02.7 +1.0**
FLN **La Foliniere** **11.02 262** *e*Pn **Pn** **21 23 02.7 +1.0**
FLN *e*Sg 21 26 11.8
FLN **La Foliniere** **11.02 262** *e*Pn **

GRR					*e*Sg			21 26 23.5	
	comp=Z,68nm,1.3s								
GRR	**Gorron**	**11.39**	**261**		*e*P	**Pn**		**21 23 07.4**	**+0.6**
GRR	**Gorron**	**11.39**	**261**		*e*Pn	**Pn**		**21 23 07.4**	**+0.6**
GRR					*e*Sg			21 26 23.5	
GRR	**Gorron**	**11.39**	**261**		*e*Pn	**Pn**		**21 23 07.4**	**+0.6**
CAF	**Calviac**	**11.47**	**240**		*e*Sg			21 26 25.4	
	comp=Z,23nm,0.8s								
RJF	**Les Rejaudoux**	**11.54**	**243**		*e*Sg			21 26 27.6	
	comp=Z,150nm,1.7s								
MFF	**Saint Martin d**	**11.76**	**252**		*e*Sg			21 26 34.7	
	comp=Z,95nm,1.6s								
KAF	**Kangasniemi**	**11.96**	**24**		*e*P	Pn		21 23 11.3	-3.1
KAF	**Kangasniemi**	**11.96**	**24**		*e*p	Pn		21 23 11.3	-3.1
EKA	**Eskdalemuir Ar**	**12.12**	**296**		Pn	Pn		21 23 13.2	-3.4
EKA					Sn	Sn		21 25 22.9	-9.4
EKA	**Eskdalemuir Ar**	**12.12**	**296**		Pn	Pn		21 23 13.2	-3.4
	baz=101,slow=13,SNR=18								
EKA					Sn	Sn		21 25 22.9	-9.4
	baz=102,slow=25,SNR=4.4								
LFF	**La Frestale**	**12.19**	**243**		*e*Sg			21 26 47.8	
	comp=Z,45nm,0.8s								
OBN	**Obninsk**	**12.71**	**66**⇑		*e*P	**Pn**		**21 23 24.2**	**-0.6**
OBN					pmax	pmax			
	comp=Z,9.0nm,1.1s								
OBN	**Obninsk**	**12.71**	**66**		*e*P	**Pn**		**21 23 24.2**	**-0.6**
MOS	**Moscow**	**13.40**	**63**		*e*P	P		21 23 49.0	+5.1
JOF	**Joensuu**	**14.01**	**30**		*e*P	Pn		21 23 38.9	-3.5
JOF	**Joensuu**	**14.01**	**30**		*e*p	Pn		21 23 38.9	-3.5
VSR	**Storozhevoye**	**14.37**	**82**		*e*P	Pn		21 23 43.2	-4.3
VSR					pmax	pmax			
	comp=E,4.0nm,0.4s								
VSR					pmax	pmax			
	comp=Z,2.0nm,0.4s								
VSR					pmax	pmax			
	comp=N,1.0nm,0.2s								
VORD	**Divnogorie**	**14.50**	**83**		*e*P	**Pn**		**21 23 47.0**	**-2.2**
VORD					pmax	pmax			
	comp=N,8.0nm,0.6s								
VORD					pmax	pmax			
	comp=E,4.0nm,0.6s								
VORD					pmax	pmax			
	comp=Z,4.0nm,0.6s								
VRHR	**Novokhopersk**	**15.92**	**82**		*e*P	Pn		21 24 02.5	-5.5
VRHR					pmax	pmax			
	comp=N,5.0nm,1.0s								
VRHR					pmax	pmax			
	comp=E,20nm,1.0s								
VRHR					pmax	pmax			
	comp=Z,20nm,1.0s								
KLMR	**Klimovskoe**	**15.92**	**45**		*e*P	Pn		21 24 01.0	-7.0
KLMR					pmax	pmax			
	comp=Z,31nm,1.7s								
BRTR	**Keskin Array B**	**16.95**	**127**		Pn	**Pn**		**21 24 22.3**	**+0.8**
BRTR	**Keskin Array B**	**16.95**	**127**		Pn	**Pn**		**21 24 22.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=333,slow=11,SNR=3.2								
BRTR	**Keskin Array B**	**16.95**	**127**		P	**Pn**		**21 24 22.3**	**+0.8**
ARCES	**ARCESS Array B**	**18.60**	**10**		Pn	**P**		**21 24 38.6**	**-2.7**
ARCES	**ARCESS Array B**	**18.60**	**10**		Pn	**P**		**21 24 38.6**	**-2.7**
	comp=Z,0.7nm,0.3s,baz=192,slow=13,SNR=15								
KIV	**Kislovodsk**	**19.32**	**103**		*e*P	**P**		**21 24 48.0**	**-1.5**
KIV					*e*S	**Sn**		**21 28 25.0**	**-2.5**
KIV					pmax	pmax			
	comp=Z,4.0nm,1.1s								
KIV					MLR	MLR			
	comp=Z,30nm,14.0s								
KIV	**Kislovodsk**	**19.32**	**103**		*e*P	**P**		**21 24 48.0**	**-1.5**
	comp=Z,4.0nm,1.1s								
KBZ	**Khabaz**	**19.57**	**103**		P	**P**		**21 24 52.9**	**+0.8**
KBZ	**Khabaz**	**19.57**	**103**		P	**P**		**21 24 52.9**	**+0.8**
KBZ	**Khabaz**	**19.57**	**103**		P	**P**		**21 24 52.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=357,slow=10,SNR=2.9								
KBZ	**Khabaz**	**19.57**	**103**		P	**P**		**21 24 52.8**	**+0.7**
ARU	**Arti**	**25.11**	**62**	*c*	*i*P	**P**		**21 25 48.6**	**-0.4**
ARU								21 26 19.3	
ARU					S	**S**		**21 30 13.1**	**-1.3**
ARU					pmax	pmax			
	comp=Z,7.0nm,0.7s								
ARU	**Arti**	**25.11**	**62**	*i*	P	**P**		**21 25 48.6**	**-0.4**
	comp=Z,7.0nm,0.7s								
ARU					S	**S**		**21 30 13.1**	**-1.3**
AKTK	**Aktyubinsk**	**26.13**	**76**		P	**P**		**21 25 58.6**	**+0.2**
	comp=Z,5.0nm,0.6s								
AKTO	**Aktyubinsk**	**26.13**	**76**		P	**P**		**21 25 58.6**	**+0.2**
AKTO					pmax	pmax			
	comp=Z,5.0nm,0.6s								
AKTO	**Aktyubinsk**	**26.13**	**76**		P	**P**		**21 25 58.6**	**+0.2**
AKTO	**Aktyubinsk**	**26.13**	**76**		P	**P**		**21 25 58.6**	**+0.2**
	comp=Z,4.5nm,0.6s,baz=289,slow=9.0,SNR=7.4								
AKTO	**Aktyubinsk**	**26.13**	**76**		P	**P**		**21 25 58.6**	**+0.2**
SVE	**Sverdlovsk**	**26.20**	**61**		*e*P	**P**		**21 25 59.6**	**+0.7**
SVE					pmax	pmax			
	comp=Z,17nm,1.4s								
SVE	**Sverdlovsk**	**26.20**	**61**		*e*P	**P**		**21 25 59.6**	**+0.7**
	comp=Z,17nm,1.4s								
SPITS	**Spitsbergen Ar**	**26.76**	**0**		P	**P**		**21 26 04.7**	**+0.9**
SPITS	**Spitsbergen Ar**	**26.76**	**0**		P	**P**		**21 26 04.7**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=162,slow=26,SNR=4.0								
SPITS	**Spitsbergen Ar**	**26.76**	**0**		P	**P**		**21 26 04.7**	**+0.9**
	comp=Z,2.0nm,0.7s								
BRVK	**Borovoye**	**32.49**	**66**	*ce*	P	P		21 26 57.9	+3.1
BRVK					pmax	pmax			
	comp=Z,5.0nm,1.2s								
BRVK	**Borovoye**	**32.49**	**66**		*e*P	P		21 26 57.9	+3.1
	comp=Z,5.0nm,1.2s								
KURK	**Kurchatov**	**38.16**	**66**	*de*	P	**P**		**21 27 44.2**	**+0.6**
KURK					pmax	pmax			
	comp=Z,3.0nm,0.7s								
KURK	**Kurchatov**	**38.16**	**66**		*e*P	**P**		**21 27 44.2**	**+0.6**
	comp=Z,3.0nm,0.7s								
AAK	**Ala-Archa**	**39.75**	**79**	*ce*	P	P		21 28 00.9	+3.6
AAK					pmax	pmax			
	comp=Z,23nm,1.7s								
AAK	**Ala-Archa**	**39.75**	**79**		P	**P**		**21 27 59.2**	**+1.9**
AAK	**Ala-Archa**	**39.75**	**79**		P	**P**		**21 27 59.2**	**+1.9**
	comp=Z,2.3nm,0.7s,baz=250,slow=3.2,SNR=5.3								
AAK	**Ala-Archa**	**39.75**	**79**		P	**P**		**21 27 59.2**	**+1.9**
TORD	**Torodi Ar. Bea**	**40.03**	**202**		P	**P**		**21 27 59.5**	**-0.1**
TORD	**Torodi Ar. Bea**	**40.03**	**202**		P	**P**		**21 27 59.5**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=9.5,slow=8.9,SNR=14								
TORD	**Torodi Ar. Bea**	**40.03**	**202**		P	**P**		**21 27 59.5**	**-0.1**
ZALV	**Zalesovo Beam**	**40.17**	**59**		P	**P**		**21 28 02.5**	**+2.1**
ZALV					pmax	pmax			
	comp=Z,1.0nm,0.6s								
ZALV	**Zalesovo Beam**	**40.17**	**59**		P	**P**		**21 28 02.5**	**+2.1**
ZALV	**Zalesovo Beam**	**40.17**	**59**		P	**P**		**21 28 02.5**	**+2.1**
	comp=Z,0.9nm,0.6s,baz=270,slow=5.9,SNR=4.1								
ZALV	**Zalesovo Beam**	**40.17**	**59**		P	**P**		**21 28 02.5**	**+2.1**
	comp=Z,1.0nm,0.6s								
KSH	**Kashi**	**42.46**	**82**		*e*PKPbc	PKKPdf		21 52 02.3	+9.1
KSH					*es*PKP			21 52 16.5	
KSH					*e*PP	PKKSdf		21 55 18.5	-6.6
KSH					*e*SKS			21 59 06.0	
SCHQ	**Schefferville**	**47.07**	**308**		P	**P**		**21 28 55.1**	**-0.9**
SCHQ	**Schefferville**	**47.07**	**308**		P	**P**		**21 28 55.1**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=67,slow=7.2,SNR=5.0								
SCHQ	**Schefferville**	**47.07**	**308**		P	**P**		**21 28 55.1**	**-0.9**
SONM	**Songino Array**	**54.88**	**55**		P	**P**		**21 29 56.2**	**+1.2**
SONM	**Songino Array**	**54.88**	**55**		P	**P**		**21 29 56.2**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=296,slow=9.5,SNR=4.8								
SONM	**Songino Array**	**54.88**	**55**		P	**P**		**21 29 56.2**	**+1.2**
	comp=Z,1.0nm,0.7s								
BILL	**Bilibino**	**58.68**	**13**		*e*P	**P**		**21 30 22.9**	**+1.4**
BILL					*i*			21 32 31.7	
BILL					pmax	pmax			
	comp=Z,14nm,1.1s								
BILL	**Bilibino**	**58.68**	**13**		*e*P	**P**		**21 30 22.9**	**+1.4**
	comp=Z,14nm,1.1s								
YKA	**Yellowknife Ar**	**59.84**	**336**		P	**P**		**21 30 30.8**	**+1.2**
YKA	**Yellowknife Ar**	**59.84**	**336**		P	**P**		**21 30 30.8**	**+1.2**
	comp=Z,2.7nm,0.7s,baz=28,slow=6.6,SNR=21								
YKA	**Yellowknife Ar**	**59.84**	**336**		P	**P**		**21 30 30.8**	**+1.2**
	comp=Z,3.0nm,0.7s								
SEY	**Seymchan**	**60.79**	**21**	*ce*	P	P		21 30 40.5	+4.4
HHC	**Hu-ho-hao-te**	**62.35**	**58**		*e*P	**P**		**21 30 48.5**	**+1.4**
HHC					PcP	**PcP**		**21 31 27.8**	**+1.0**
HHC					PP	PP		21 33 09.0	+5.2
HHC					S	**S**		**21 39 12.8**	**-1.7**
HHC					ScS	**SKKSac**		**21 40 37.3**	**-3.2**
HHC	**Hu-ho-hao-te**	**62.35**	**58**		SS	SS		21 43 17.8	+0.6
HHC					pmax	pmax			
	comp=Z,30nm,0.6s								
HHC					pmax	pmax			
	comp=Z,190nm,6.9s								
HHC					LR	LR			
	comp=N,180nm,14.3s								
HHC					LR	LR			
	comp=E,100nm,15.5s								
HHC					LR	LR			
	comp=Z,160nm,14.3s								
ILAR	**Eielson Array**	**63.29**	**352**		P	**P**		**21 30 54.1**	**+1.2**
ILAR	**Eielson Array**	**63.29**	**352**		P	**P**		**21 30 54.1**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=344,slow=9.2,SNR=4.4								
ILAR	**Eielson Array**	**63.29**	**352**		P	**P**		**21 30 54.1**	**+1.2**
	comp=Z,1.0nm,0.8s								
CMAR	**Chiang Mai Arr**	**71.33**	**84**		P	**P**		**21 31 45.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**71.33**	**84**		P	**P**		**21 31 45.3**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=307,slow=6.8,SNR=5.6								
CMAR	**Chiang Mai Arr**	**71.33**	**84**		P	**P**		**21 31 45.3**	**+0.8**
	comp=Z,1.0nm,0.6s								
NEW	**Newport**	**72.85**	**329**		P	**P**		**21 31 54.6**	**+1.4**
NEW	**Newport**	**72.85**	**329**		P	**P**		**21 31 54.6**	**+1.4**
	comp=Z,0.7nm,0.4s,baz=98,slow=9.4,SNR=3.5								
NEW	**Newport**	**72.85**	**329**		P	**P**		**21 31 54.6**	**+1.4**
	comp=Z,1.0nm,0.4s								
PDAR	**Pinedale Array**	**74.94**	**322**		P	**P**		**21 32 06.9**	**+1.1**
PDAR	**Pinedale Array**	**74.94**	**322**		P	**P**		**21 32 06.9**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=60,slow=5.3,SNR=6.3								
PDAR	**Pinedale Array**	**74.94**	**322**		P	**P**		**21 32 06.9**	**+1.1**
ELK	**Elko**	**78.81**	**324**		P	**P**		**21 32 30.3**	**+2.6**
ELK	**Elko**	**78.81**	**324**		P	**P**		**21 32 30.3**	**+2.6**
	comp=Z,1.5nm,0.8s,baz=340,slow=6.2,SNR=7.9								
ELK	**Elko**	**78.81**	**324**		P	**P**		**21 32 30.3**	**+2.6**
	comp=Z,2.0nm,0.8s								
BOSA	**Boshof**	**80.20**	**172**		P	**P**		**21 32 36.3**	**+1.3**
BOSA	**Boshof**	**80.20**	**172**		P	**P**		**21 32 36.3**	**+1.3**
	comp=Z,2.2nm,0.7s,baz=45,slow=1.4,SNR=5.1								
BOSA	**Boshof**	**80.20**	**172**		P	**P**		**21 32 36.3**	**+1.3**
	comp=Z,2.0nm,0.7s								
ASAR	**Alice Springs**	**125.34**	**84**		PKP	**PKPdf**		**21 39 25.5**	**-0.1**
ASAR	**Alice Springs**	**125.34**	**84**		PKP	**PKPdf**		**21 39 25.5**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=343,slow=2.9,SNR=4.0								

*SKO **28** 21:21:12.5,41.32N×22.74E,h17km,M1.4,ML1.5*
*ISCJB **28** 21:21:12.9±0.4,41.30N±0.02×22.72E±0.03,h11km±3km, Error ellipse: s-maj=4.0km s-min=3.5km az=23.8*
*ATH **28** 21:21:12.7,41.28N×22.76E,h20km±1km,MD2.8/6*
*CSEM **28** 21:21:13.5±0.2,41.28N×22.73E,h8km,ML1.5, Error ellipse: s-maj=3.4km s-min=3.0km az=44.0*
*THE **28** 21:21:13.9,41.28N×22.75E,h1km±1km,ML1.8/6, Error ellipse: s-maj=1.7km s-min=0.6km az=223.0*
*BEO **28** 21:21:14.9±0.8,41.29N×22.72E,h0km,ML1.5/5*

ISC 28 21:21:13.5±0.8, 41°27N±0.02×22°74E±0.02, h11km±5km, n53, σ0°847/87, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.14**	**293**	P		**Pg**	**21 21 16.4**	**-0.3**
VAY				S		**Sg**	**21 21 19.0**	**-0.1**
VAY	**Valandovo**	**0.14**	**293**	*i* Pg		**Pg**	**21 21 16.4**	**-0.3**
VAY				*i* Lg		Lg	21 21 18.9	
	comp=E,246nm,0.2s							
VAY				*i* Sg		**Sg**	**21 21 18.9**	**-0.1**
VAY				*i* Lg		Lg	21 21 19.0	
	comp=N,299nm,0.3s							
VAY	**Valandovo**	**0.14**	**293**	P		**Pg**	**21 21 16.4**	**-0.3**
VAY	**Valandovo**	**0.14**	**293**	*i* Pg		**Pg**	**21 21 16.8**	**+0.1**
VAY				*e*Sg		**Sg**	**21 21 18.9**	**-0.1**
VAY				*i* Lg		Lg	21 21 19.4	
	comp=N,299nm,0.3s							
KNT	**Kendrikon**	**0.16**	**131**	P		**Pg**	**21 21 17.4**	**+0.3**
KNT				S		**Sg**	**21 21 19.8**	**+0.2**
KNT	**Kendrikon**	**0.16**	**131**	P		**Pg**	**21 21 17.4**	**+0.3**
KNT				S		**Sg**	**21 21 19.8**	**+0.2**
GRG	**Griva**	**0.40**	**220**	P		**Pg**	**21 21 21.9**	**+0.4**
GRG				S		**Sg**	**21 21 27.1**	**+0.3**
GRG	**Griva**	**0.40**	**220**	*e*PB		**Pg**	**21 21 21.8**	**+0.3**
GRG				*e*SB		**Sg**	**21 21 27.3**	**+0.5**
GRG	**Griva**	**0.40**	**220**	P		**Pg**	**21 21 21.9**	**+0.4**
GRG				*e*Sb		**Sg**	**21 21 27.3**	**+0.5**
SOH	**Sokhos**	**0.64**	**134**	P		**Pg**	**21 21 26.1**	**+0.1**
SOH				S		**Sb**	**21 21 35.3**	**-0.5**
SOH	**Sokhos**	**0.64**	**134**	*e*PN		**Pg**	**21 21 25.9**	**-0.1**
SOH				*e*SN		**Sg**	**21 21 34.1**	**-0.4**
SOH	**Sokhos**	**0.64**	**134**	P		**Pg**	**21 21 26.1**	**+0.1**
SOH				*e*Sn		**Sg**	**21 21 34.1**	**-0.4**
SOH				S		**Sb**	**21 21 35.3**	**-0.5**
THE	**Thessaloniki**	**0.66**	**165**	P		**Pg**	**21 21 26.0**	**-0.2**
THE				S		**Sb**	**21 21 36.0**	**-0.1**
THE	**Thessaloniki**	**0.66**	**165**	P		**Pg**	**21 21 26.0**	**-0.2**
THE				S		**Sb**	**21 21 36.0**	**-0.1**
SRS	**Serrai**	**0.66**	**103**	P		**Pg**	**21 21 26.1**	**-0.2**
SRS	**Serrai**	**0.66**	**103**	P		**Pg**	**21 21 26.1**	**-0.2**
NVR	**Nevrokopi**	**0.85**	**84**	P		**Pg**	**21 21 29.5**	**-0.4**
NVR				S		**Sb**	**21 21 41.7**	**-0.1**
NVR	**Nevrokopi**	**0.85**	**84**	*e*PN		**Pg**	**21 21 28.8**	**-1.1**
NVR				*e*SN		**Sg**	**21 21 40.1**	**-0.9**
NVR	**Nevrokopi**	**0.85**	**84**	*e*Pn		**Pg**	**21 21 28.8**	**-1.1**
NVR	**Nevrokopi**	**0.85**	**84**	P		**Pg**	**21 21 29.5**	**-0.4**
NVR				*e*Sn		**Sg**	**21 21 40.1**	**-0.9**
NVR				S		**Sb**	**21 21 41.7**	**-0.1**
PLG	**Polygyros**	**1.04**	**149**	P		**Pb**	**21 21 33.5**	**-0.1**
PLG				S		**Sn**	**21 21 48.9**	**+0.2**
PLG	**Polygyros**	**1.04**	**149**	*e*PN		**Pb**	**21 21 33.1**	**-0.5**
PLG				*e*SN		**Sg**	**21 21 46.6**	**-0.5**
PLG	**Polygyros**	**1.04**	**149**	*e*Pn		**Pb**	**21 21 33.1**	**-0.5**
PLG	**Polygyros**	**1.04**	**149**	P		**Pb**	**21 21 33.5**	**-0.1**
PLG				*e*Sn		**Sg**	**21 21 46.6**	**-0.5**
PLG				S		**Sn**	**21 21 48.9**	**+0.2**
FNA	**Florina**	**1.14**	**245**	*e*PN		**Pb**	**21 21 34.7**	**-0.6**
FNA				*e*SN		**Sg**	**21 21 50.6**	**+0.4**
FNA	**Florina**	**1.14**	**245**	*e*Pn		**Pb**	**21 21 34.7**	**-0.6**
FNA				*e*Sn		**Sg**	**21 21 50.6**	**+0.4**
OUR	**Ouranopolis**	**1.33**	**134**	P		**Pg**	**21 21 39.2**	**+0.2**
OUR	**Ouranopolis**	**1.33**	**134**	P		**Pg**	**21 21 39.2**	**+0.2**
KAVA	**Kavala**	**1.37**	**101**	P		**Pb**	**21 21 39.3**	**+0.2**
KAVA				S		**Sg**	**21 21 58.4**	**+0.9**
KAVA	**Kavala**	**1.37**	**101**	P		**Pb**	**21 21 39.3**	**+0.2**
KAVA				S		**Sg**	**21 21 58.4**	**+0.9**
VTS	**Vitosha**	**1.37**	**15**	P		**Pb**	**21 21 39.6**	**+0.3**
VTS				S		**Sg**	**21 21 58.6**	**+1.0**
VTS	**Vitosha**	**1.37**	**15**	*e*Pg		**Pb**	**21 21 39.4**	**+0.1**
VTS				*e*Sg		**Sg**	**21 21 58.6**	**+1.0**
VTS	**Vitosha**	**1.37**	**15**	⇓*i*P		**Pg**	**21 21 40.4**	**+0.6**
VTS	**Vitosha**	**1.37**	**15**	*e*Pg		**Pb**	**21 21 39.4**	**+0.1**
VTS				S		**Sg**	**21 21 58.6**	**+1.0**
PAIG	**Paliouri**	**1.52**	**152**	P		**Pb**	**21 21 41.7**	**0.0**
PAIG	**Paliouri**	**1.52**	**152**	*e*PN		**Pb**	**21 21 41.4**	**-0.3**
PAIG				*e*SN		**Sg**	**21 22 02.0**	**-0.3**
PAIG	**Paliouri**	**1.52**	**152**	*e*Pn		**Pb**	**21 21 41.4**	**-0.3**
PAIG	**Paliouri**	**1.52**	**152**	P		**Pb**	**21 21 41.7**	**0.0**
PAIG				*e*Sn		**Sg**	**21 22 02.0**	**-0.3**
PLD	**Plovdiv**	**1.69**	**60**	*e*Sg		**Sg**	**21 22 08.1**	**+0.2**
PLD	**Plovdiv**	**1.69**	**60**	*e*Sg		**Sg**	**21 22 08.1**	**+0.2**
BARS	**Barje**	**1.69**	**336**	*e*Pn		**Pb**	**21 21 44.9**	**+0.2**
BARS				*e*Sg		**Sg**	**21 22 07.3**	**-0.7**
BARS	**Barje**	**1.69**	**336**	*e*Pn		**Pb**	**21 21 44.9**	**+0.2**
BARS				*e*Sg		**Sg**	**21 22 07.3**	**-0.7**
THL	**Klokotos Trika**	**1.79**	**198**	*e*PB		**Pn**	**21 21 44.4**	**+0.1**
THL	**Klokotos Trika**	**1.79**	**198**	*e*Pb		**Pn**	**21 21 44.4**	**+0.1**
NEO	**Neokhori**	**1.99**	**169**	*e*PB		**Pn**	**21 21 47.2**	**0.0**
NEO	**Neokhori**	**1.99**	**169**	*e*Pb		**Pn**	**21 21 47.2**	**0.0**
ZAPS	**Zavoj**	**2.01**	**358**	*e*Pn		**Pg**	**21 21 51.1**	**-0.9**
ZAPS				*e*Sg		**Sg**	**21 22 17.4**	**-0.6**
RDO	**Rodhopi**	**2.12**	**92**	P		**Pn**	**21 21 49.0**	**+0.2**
RDO	**Rodhopi**	**2.12**	**92**	*e*PN		**Pn**	**21 21 49.3**	**+0.5**
RDO	**Rodhopi**	**2.12**	**92**	P		**Pn**	**21 21 49.0**	**+0.2**
RDO	**Rodhopi**	**2.12**	**92**	*e*Pn		**Pn**	**21 21 49.3**	**+0.5**
ALN	**Alexandroupoli**	**2.53**	**97**	*e*PN		**Pn**	**21 21 55.1**	**+0.6**
ALN	**Alexandroupoli**	**2.53**	**97**	*e*Pn		**Pn**	**21 21 55.1**	**+0.6**

*ISCJB **28** 21:21:54.4±1.2,39.03N±0.09×71.4E±0.1,h10km,mb3.4/2, Error ellipse: s-maj=13.7km s-min=10.6km az=150.3*
*IDC **28** 21:21:55.7±2.9,39.40N×71.24E,h0km,mb3.4/2, mb1 3.5/5,mb1mx3.3/30,mbtmp3.4/5,ML2.9/2, Error ellipse: s-maj=106.6km s-min=15.5km az=141.0*
*NNC **28** 21:21:58.3±2.6,39.25N×71.63E,h2km±9km,mb3.6, mpv3.3,Error ellipse: s-maj=20.3km s-min=12.0km az=10.0*

ISC 28 21:21:56.5±1.8, 39°0N±0.1×71°53E±0.09, h10km, n16, σ0°91/19, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.54**	**27**	P		**Pn**	**21 22 52.4**	**+0.6**
	SNR=38							
EKS2	**Erkin-Say**	**4.04**	**24**	P		**Pn**	**21 22 58.4**	**-0.1**
	SNR=19							
KK31	**Karatay Array**	**4.18**	**350**	⇑Pn		**Pn**	**21 23 00.1**	**-0.2**
	1.9nm,0.2s,baz=167,slow=12,SNR=115							
KK31				⇓Pg		**Pb**	**21 23 11.2**	**+1.1**
	2.4nm,0.4s,baz=165,slow=18,SNR=6.5							
KK31				⇑Sn		**Sn**	**21 23 47.9**	**-1.2**
	6.2nm,0.5s,baz=176,slow=22,SNR=4.2							
KK31				⇑Lg		Lg	21 24 02.3	
	18nm,0.8s,baz=165,slow=29,SNR=5.9							
KZA	**Kyzart**	**4.18**	**41**	P		**Pn**	**21 23 02.2**	**+1.5**
	SNR=9.5							
AAK	**Ala-Archa**	**4.27**	**31**	P		**Pn**	**21 23 02.6**	**+0.8**
	SNR=9.7							
AAK	**Ala-Archa**	**4.27**	**31**	P		**Pn**	**21 23 02.5**	**+0.8**
	2.9nm,0.3s,baz=181,slow=8.8,SNR=5.5							
AAK				S		**Sn**	**21 23 52.7**	**+1.0**
	0.9nm,0.3s,baz=119,slow=19,SNR=3.0							
KBK	**Karagaybulak**	**4.48**	**34**	P		**Pn**	**21 23 05.7**	**+1.1**
	SNR=13							
CHMS	**Chumysh**	**4.68**	**30**	P		**Pn**	**21 23 08.0**	**+0.7**
	SNR=22							
ULHL	**Ulahol**	**4.83**	**46**	P		**Pn**	**21 23 09.6**	**+0.1**
	SNR=8.8							
TKM2	**Tokmak 2**	**4.98**	**37**	⇑Pn		**Pn**	**21 23 11.5**	**-0.1**
	2.4nm,0.5s							
TKM2				⇑Pg		**Pb**	**21 23 24.1**	**+0.1**
	3.5nm,0.6s							
TKM2				⇓Sn		**Sn**	**21 24 07.5**	**-1.8**
	2.7nm,0.7s							
TKM2				⇓Lg		Lg	21 24 28.3	
	4.4nm,0.8s							
TKM2	**Tokmak 2**	**4.98**	**37**	P		**Pn**	**21 23 11.9**	**+0.3**
	SNR=12							
MKAR	**Makanchi Array**	**11.08**	**42**	Pn		**Pn**	**21 24 35.0**	**0.0**
	0.0nm,0.3s,baz=230,slow=15,SNR=2.6							
AB31	**Akbulak array**	**13.19**	**325**	P		Pn	21 25 01.1	-2.7
	0.3nm,0.5s,baz=136,slow=14,SNR=11							
ZALV	**Zalesovo Beam**	**17.49**	**27**	P		**Pn**	**21 25 59.5**	**-0.7**
	0.3nm,0.3s,baz=208,slow=11,SNR=6.8							
TORD	**Torodi Ar. Bea**	**66.22**	**268**	P		**P**	**21 32 44.6**	**-0.3**
	0.2nm,0.5s,baz=58,slow=5.6,SNR=4.3							
YKA	**Yellowknife Ar**	**78.74**	**3**	P		P	21 33 57.0	-1.7
	0.2nm,0.4s,baz=350,slow=5.5,SNR=4.3							

*AUST **28** 21:29:12.3,9.22S×160.53E,h20km*
*IDC **28** 21:29:17.4±0.7,9.69S×159.43E,h0km,mb4.2/10, mb1 4.3/10,mb1mx4.2/17,mbtmp4.2/10,Error ellipse: s-maj=21.6km s-min=13.8km az=142.0*
*ISCJB **28** 21:29:19.8±0.6,9.60S±0.08×159.41E±0.10,h26km, mb4.1/11,Error ellipse: s-maj=15.0km s-min=9.8km az=30.5*

ISC 28 21:29:21.7±0.7, 9°6S±0.1×159°5E±0.1, h26km, n25, σ1°815/21, mb4.2/11, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.52**	**67**	Pn		**Pb**	**21 29 32.5**	**+0.2**
	4μm,0.3s,baz=232,slow=3.1,SNR=693							
MTSU	**Mount Surprise**	**16.94**	**238**	P		**P**	**21 33 22.0**	**+3.1**

ZAIG	Zacatecas	5.51	38	*e*P	Pn	21 33 45.4	-2.1	
ZAIG				*i* S	Sn	21 34 50.1	-1.1	
ZAIG	Zacatecas	5.51	38	*e*P	Pn	21 33 45.4	-2.1	
ZAIG				*i* S	Sn	21 34 50.1	-1.1	
LPIG	La Paz	6.83	327	*e*P	Pn	21 34 01.3	-4.1	
LPIG				*i* S	Sn	21 35 19.2	-4.1	
LPIG	La Paz	6.83	327	*e*P	Pn	21 34 01.3	-4.1	
LPIG				*i* S	Sn	21 35 19.2	-4.1	
TXAR	Lajitas Array	11.12	12	Pn	Pn	21 35 07.0	+2.8	
TXAR	Lajitas Array	11.12	12	Pn	Pn	21 35 07.0	+2.8	
	0.1nm,0.3s,baz=192,slow=14,SNR=16							
626A	Big Bend Ranch	11.25	9	⇑P	Pn	21 35 08.4	+2.3	
	baz=11,SNR=22							
626A				⇓S	Sn	21 37 15.6	+3.5	
	baz=11							
626A				⇓S	Sn	21 37 15.6	+3.5	
	baz=11							
627A	Terlingua Ranc	11.29	13	⇑P	Pn	21 35 08.8	+2.2	
	baz=11							
628A	Black Gap, Mar	11.43	15	⇓P	Pn	21 35 11.1	+2.6	
	baz=11							
732A	Laxson Ranch,	11.75	28	⇓P	Pn	21 35 15.8	+2.9	
	baz=12							
526A	Mary Lane Ranc	11.76	9	⇓P	Pn	21 35 15.3	+2.3	
	baz=12,SNR=38							
527A	Woodward Ranch	11.92	11	⇑P	Pn	21 35 17.8	+2.5	
	baz=12,SNR=7.8							
631A	Perdido Creek	12.10	24	⇓P	Pn	21 35 20.5	+3.0	
	baz=12							
528A	Cox Ranch, San	12.11	14	⇑P	Pn	21 35 20.8	+3.0	
	baz=12							
529A	Stev Forest Ra	12.21	17	⇓P	Pn	21 35 22.6	+3.4	
	baz=12,SNR=5.9							
426A	McDonald Obser	12.36	9	⇓P	Pn	21 35 23.8	+2.3	
	baz=12,SNR=20							
425A	Indio Mountain	12.37	5	⇑P	Pn	21 35 23.7	+2.2	
	baz=12,SNR=20							
530A	J-C Ranch, Com	12.50	20	⇓P	Pn	21 35 26.1	+3.0	
	baz=12							
632A	Uvalde	12.50	27	⇓P	Pn	21 35 25.9	+2.8	
	baz=12							
427A	Hayter Ranch,	12.64	11	⇑P	Pn	21 35 27.6	+2.4	
	baz=13,SNR=5.3							
428A	Kincaid Ranch,	12.67	14	⇑P	Pn	21 35 28.3	+2.8	
	baz=13							
429A	Davenport Ranc	12.78	17	⇓P	Pn	21 35 30.0	+3.1	
	baz=13							
531A	Rocksprings	12.79	23	⇓P	Pn	21 35 30.0	+3.0	
	baz=13							
325A	Bean Ranch, Si	12.95	5	⇓P	Pn	21 35 31.1	+1.7	
	baz=13,SNR=8.8							
324A	Moseley Ranch,	12.99	3	⇑P	Pn	21 35 31.5	+1.5	
	baz=13,SNR=25							
532A	Rocksprings	13.00	25	⇑P	Pn	21 35 33.4	+3.5	
	baz=13,SNR=13							
326A	Caldwell Ranch	13.01	8	⇓P	Pn	21 35 32.2	+2.1	
	baz=13							
320A	Kipp Ranch, An	13.04	351	⇓P	Pn	21 35 31.4	+0.8	
	baz=13							
430A	Baggett Ranch,	13.12	19	⇓P	Pn	21 35 34.3	+2.7	
	baz=13,SNR=28							
327A	Balmorhea Ranc	13.13	10	⇓P	Pn	21 35 34.0	+2.2	
	baz=13							
319A	Douglas	13.21	348	⇑P	Pn	21 35 33.7	+0.9	
	baz=13							
431A	Sonora	13.23	22	⇓P	Pn	21 35 36.0	+2.9	
	baz=13,SNR=14							
MNTX	Cornudas Mount	13.25	3	*e*Pn	Pn	21 35 34.7	+1.3	
	65nm,1.6s							
328A	Wristen Ranch,	13.28	13	⇓P	Pn	21 35 36.2	+2.4	
	baz=13							
JCT	Junction City	13.35	25	*e*Pn	Pn	21 35 38.6	+3.9	
JCT	Junction City	13.35	25	⇓P	Pn	21 35 37.7	+3.0	
	baz=13,SNR=5.6							
329A	Wagon Wheel Ra	13.57	16	⇓P	Pn	21 35 40.2	+2.4	
	baz=14,SNR=6.3							
220A	Playas Peak, P	13.60	352	⇑P	Pn	21 35 38.9	+0.7	
	baz=14,SNR=14							
221A	Mesquite Ranch	13.62	354	⇓P	Pn	21 35 39.2	+0.8	
	baz=14							
224A	Cornudas Mount	13.62	2	⇑P	Pn	21 35 39.4	+0.9	
	baz=14							
222A	Williams Famil	13.66	357	⇑P	Pn	21 35 40.0	+1.0	
	baz=14							
225A	Deer Hill, Car	13.70	5	⇓P	Pn	21 35 41.7	+2.1	
	baz=14							
432A	Menard	13.71	24	⇓P	Pn	21 35 41.9	+2.3	
	baz=14							
330A	Mertzon	13.72	18	⇓P	Pn	21 35 41.4	+1.7	
	baz=14,SNR=5.4							
226B	Tecolote Peak,	13.73	7	⇓P	Pn	21 35 42.8	+2.8	
	baz=14,SNR=13							
227A	Bennet, Jal	13.80	10	⇑P	Pn	21 35 42.8	+2.0	
	baz=14							
GDL2	Guadalupe Moun	13.83	7	*e*Pn	Pn	21 35 44.5	+3.1	
331A	San Angelo	13.87	21	⇓P	Pn	21 35 44.2	+2.4	
	baz=14,SNR=6.0							
CLNB	Carlsbad	13.95	8	*e*Pn	Pn	21 35 44.2	+1.1	
	6.3nm,0.6s							
228A	UT Block 9, Go	14.03	13	⇓P	Pn	21 35 46.6	+2.6	
	baz=14							
229A	Bryant Ranch,	14.07	16	⇑P	Pn	21 35 46.5	+1.9	
	baz=14							
121A	Cookes Peak, D	14.13	355	⇓P	Pn	21 35 46.3	+0.7	
	baz=14							
123A	Bell Site, Whi	14.17	360	⇑P	Pn	21 35 47.2	+1.3	
	baz=14							
332A	Millersview	14.18	23	⇓P	Pn	21 35 48.1	+2.1	
	baz=14							
230A	Sterling City	14.19	18	⇓P	Pn	21 35 47.9	+1.8	
	baz=14							
120A	U Bar Ranch, L	14.25	352	⇑P	Pn	21 35 47.6	+0.6	
	baz=14							
124A	Stringfield Ra	14.25	3	⇑P	Pn	21 35 48.7	+1.6	
	baz=14,SNR=37							
122A	Conniff Cattle	14.25	357	⇑P	Pn	21 35 49.1	+2.0	
	baz=14							
125A	Gardner Draw,	14.26	5	⇓P	Pn	21 35 48.9	+1.7	
	baz=14,SNR=21							
126A	Clayton Basin,	14.31	7	⇑P	Pn	21 35 49.7	+1.8	
	baz=14							
127A	Arkansas Junct	14.44	10	⇓P	Pn	21 35 51.4	+1.8	
	baz=14							
231A	Bronte	14.48	20	⇑P	Pn	21 35 51.6	+1.5	
	baz=14							
232A	Coleman	14.67	23	⇓P	Pn	21 35 54.4	+1.7	
	baz=15							
129A	Stewart Farms,	14.69	15	⇑P	Pn	21 35 54.1	+1.0	
	baz=15							
214A	Organ Pipe Nat	14.75	337	⇓P	Pn	21 35 53.3	-0.5	
	baz=15							
Z23A	Rita Site, Whi	14.79	360	⇑P	Pn	21 35 55.1	+0.6	
	baz=15							
Z20A	Nine Sixteen R	14.80	352	⇑P	Pn	21 35 54.3	-0.3	
	baz=15							
Z22A	Elephant Butte	14.80	358	⇑P	Pn	21 35 54.8	+0.2	
	baz=15							
Z25A	Roswell	14.87	5	⇑P	Pn	21 35 56.7	+1.2	
	baz=15							
HKT	Hockley	14.87	37	*e*Pn	Pn	21 35 57.1	+1.7	
	105nm,1.7s							
Z24A	Sheeppen Canyo	14.88	3	⇑P	Pn	21 35 56.7	+1.0	
	baz=15							
130A	Snyder	14.89	17	⇑P	Pn	21 35 56.9	+1.1	
	baz=15							
Z21A	St. Cloud Mine	14.90	355	⇓P	Pn	21 35 56.3	+0.4	
	baz=15							
Z26A	Caprock	14.93	7	⇓P	Pn	21 35 57.2	+0.8	
	baz=15							
Z27A	Tatum	15.08	10	⇑P	Pn	21 35 58.2	-0.2	
	baz=15,SNR=19							
131A	Roby	15.14	19	⇑P	Pn	21 35 60.0	+0.9	
	baz=15							
Z28A	Tucker Farm, M	15.21	12	⇑P	Pn	21 36 00.9	+0.9	
	baz=15							
Z29A	Hungry Hill Ra	15.33	14	⇑P	Pn	21 36 02.7	+1.1	
	baz=15							
ABTX	Abilene, Hawle	15.34	21	⇑P	Pn	21 36 02.3	+0.6	
	baz=15							
Y23A	Lovelace Mesa,	15.46	0	⇑P	Pn	21 36 03.9	+0.5	
	baz=15							
Y24A	Capitan	15.47	2	⇓P	Pn	21 36 05.0	+1.4	
	baz=15,SNR=9.4							
Y22A	Socorro	15.48	358	⇓P	Pn	21 36 03.9	+0.2	
	baz=15							
Z30A	Sanderson Ranc	15.50	16	⇑P	Pn	21 36 04.1	+0.3	
	baz=15,SNR=21							
Y25A	Mesa, Roswell	15.51	5	⇓P	Pn	21 36 05.7	+1.6	
	baz=15,SNR=17							
Y20A	Horse Springs,	15.56	353	⇓P	Pn	21 36 05.3	+0.6	
	baz=16,SNR=11							
Y21A	Point of Rocks	15.59	355	⇑P	Pn	21 36 05.8	+0.6	
	baz=16							
Y26A	Elida	15.60	7	⇑P	Pn	21 36 05.5	+0.4	
	baz=16							
Y22D	IRIS PASSCAL I	15.61	358	⇓P	P	21 36 07.1	-2.6	
	baz=16							
Y27A	Causey	15.65	9	⇑P	Pn	21 36 06.7	+0.8	
	baz=16							
WHTX	Lake Whitney	15.66	29	⇑P	Pn	21 36 06.5	+0.7	
	baz=16							
LENM	Lemitar	15.71	358	*e*Pn	P	21 36 10.4	-0.3	
MSTX	Muleshoe	15.80	11	⇓P	Pn	21 36 08.4	+0.6	
	baz=16,SNR=20							
Z31A	Sharp Cattle R	15.81	19	⇓P	Pn	21 36 07.7	-0.1	
	baz=16							
113A	Mohawk Valley,	15.83	336	⇑P	Pn	21 36 07.2	-0.9	
	baz=16							
Y28A	McKinney Farm,	15.84	12	⇓P	Pn	21 36 08.1	-0.2	
	baz=16							
LPM	Los Pinos Moun	15.84	359	*e*Pn	P	21 36 09.9	-2.3	
Y29A	Porterfield Fa	15.91	14	⇓P	Pn	21 36 09.4	+0.2	
	baz=16							
LAZ	Ladron	15.95	357	*e*Pn	Pn	21 36 05.4	-4.4	
	25nm,1.6s							
Z32A	Haskell	16.01	21	⇓P	Pn	21 36 11.7	+1.2	
	baz=16,SNR=7.0							
X21A	Alamocita Cree	16.03	355	⇑P	Pn	21 36 10.6	-0.3	
	baz=16,SNR=8.1							
X22A	Bernardo	16.05	358	⇑P	Pn	21 36 11.0	0.0	
	baz=16							
Z14A	Wintersburg	16.07	339	⇑P	Pn	21 36 09.8	-1.4	
	baz=16							
X24A	Lazy VL Ranch,	16.11	2	⇑P	Pn	21 36 12.1	+0.3	
	baz=16							
X23A	Hourglass Bar	16.11	0	⇑P	Pn	21 36 12.3	+0.5	
	baz=16,SNR=9.3							
X25A	Clemmons Ranch	16.11	5	⇓P	Pn	21 36 12.6	+0.7	
	baz=16							
Y30A	Stafford Cattl	16.12	16	⇓P	Pn	21 36 11.4	-0.5	
	baz=16,SNR=12							
X20A	Quemado	16.20	353	⇑P	Pn	21 36 12.7	-0.3	
	baz=16,SNR=16							
X26A	CR and CF Fran	16.22	7	⇓P	Pn	21 36 13.7	+0.5	
	baz=16							
Y31A	Rekieta Farm,	16.37	18	⇓P	Pn	21 36 15.8	+0.7	
	baz=16,SNR=19							
X18A	Snowflake	16.40	349	⇑P	Pn	21 36 15.6	0.0	
	baz=16							
X27A	F and S Farms,	16.41	9	⇓P	Pn	21 36 15.8	+0.2	
	baz=16							
X28A	Dimmitt	16.44	12	⇓P	Pn	21 36 16.8	+0.8	
	baz=16							
X29A	Tulia	16.47	13	⇑P	Pn	21 36 16.6	+0.2	
	baz=16							
ANMO	Albuquerque	16.47	359	*e*Pn	P	21 36 18.2	-1.0	
	104nm,2.1s							
ANMO				Sn	Sn	21 39 22.8	+3.3	
ANMO	Albuquerque	16.47	359	Pn	P	21 36 18.1	-1.2	
	0.1nm,0.3s,baz=174,slow=14,SNR=13							
ANMO				Sn	Sn	21 39 22.8	+3.3	
	0.1nm,0.3s,baz=180,slow=9.6,SNR=2.0							
ANMO				LR	LR	21 42 23.3		
	comp=Z,3µm,20.9s,baz=188,slow=37							
GLA	Glamis	16.51	334	*e*Pn	Pn	21 36 16.1	-0.7	
	45nm,1.4s							
GLA	Glamis	16.51	334	⇑P	Pn	21 36 15.5	-1.3	
	baz=16							
W22A	Albuquerque	16.61	358	⇓P	Pn	21 36 17.8	-0.4	
	baz=16							
X16A	La Mia Camp, P	16.61	345	⇑P	Pn	21 36 17.2	-1.1	
	baz=16							
Y14A	Wickenburg	16.62	340	⇑P	Pn	21 36 16.5	-1.7	
	baz=16							
X30A	Coker Ranch, T	16.66	16	⇓P	Pn	21 36 19.5	+0.7	
	baz=17,SNR=14							
Y32A	R-V Farms, Ver	16.66	20	⇑P	Pn	21 36 19.3	+0.5	
	baz=17							
W23A	Werner Place,	16.68	0	⇓P	Pn	21 36 19.4	+0.2	
	baz=17							
W21A	San Fidel	16.69	356	⇓P	Pn	21 36 19.3	0.0	
	baz=17							
W24A	Lazy 6 Ranch,	16.75	2	⇑P	Pn	21 36 19.8	-0.2	
	baz=17,SNR=12							
W26A	Owens Ranch, T	16.75	7	⇓P	Pn	21 36 19.7	-0.3	
	baz=17							
W20A	Ramah	16.77	353	⇑P	Pn	21 36 19.6	-0.8	
	baz=17							
W25A	X Bar L Ranch,	16.81	5	⇓P	Pn	21 36 19.9	-0.9	
	baz=17							
W27A	Bowe Ranch, En	16.82	9	⇑P	Pn	21 36 20.0	-0.8	
	baz=17,SNR=11							
SWSC	Sam W. Stewart	16.84	331	⇑P	Pn	21 36 18.4	-2.6	
	baz=17,SNR=5.4							
RFTA	Plano	16.86	29	Pn	P	21 36 26.6	+3.2	
AMTX	Amarillo	16.89	13	*e*Pn	P	21 36 23.3	-0.5	
	119nm,1.4s							
W18A	Petrified Fore	16.94	350	⇓P	Pn	21 36 21.9	-0.4	
	baz=17							
Y12C	Blythe	17.00	336	⇓P	Pn	21 36 20.9	-2.0	
	baz=17							
TEIG	Tepich	17.02	81	LR	LR	21 43 37.1		
	comp=Z,1µm,20.2s,baz=61,slow=39							
BAR	Barrett	17.05	328	*e*Pn	Pn	21 36 22.9	-0.7	
	97nm,2.1s							
X31A	McDonald Ranch	17.08	18	⇑P	Pn	21 36 24.3	+0.3	
	baz=17,SNR=8.3							
MONP	Monument Peak	17.09	329	⇑P	Pn	21 36 22.5	-1.9	
	baz=17,SNR=7.2							
W29A	Amraillo	17.13	13	⇑P	P	21 36 26.3	-0.1	
	baz=17							
W28A	Vega	17.15	11	⇑P	P	21 36 25.9	-0.8	
	baz=17							
V23A	Ortiz Mt. (NFS	17.27	0	⇑P	P	21 36 27.6	-0.5	
	baz=17							
V24A	Rampart Ranch,	17.27	3	⇓P	Pn	21 36 25.6	-1.0	
	baz=17,SNR=9.5							
BC3	Big Chuckawall	17.29	333	⇓P	Pn	21 36 24.6	-2.2	
	baz=17,SNR=6.7							
PDMCI	Parker Dam,Lak	17.34	337	⇑P	Pn	21 36 26.5	-0.7	
	baz=17							
V21A	Milan	17.38	356	⇑P	Pn	21 36 27.5	-0.4	
	baz=17							
V25A	Rancho No Teng	17.42	4	⇓P	Pn	21 36 28.3	-0.1	
	baz=17,SNR=11							
109C	Camp Elliot, M	17.43	328	⇓P	Pn	21 36 27.2	-1.2	
	baz=17							
W30A	Crocket Farms	17.44	16	⇓P	P	21 36 30.3	+0.5	
	baz=17							
V20A	Brimhall	17.44	354	⇓P	Pn	21 36 28.5	-0.1	
	baz=17							
V22A	San Miguel Ran	17.45	358	⇑P	P	21 36 29.5	-0.6	
	baz=17,SNR=10							
V26A	Tequesquite Ra	17.45	7	⇓P	P	21 36 29.2	-0.8	
	baz=17,SNR=20							
V27A	Dan Doppiter Fa	17.54	9	⇓P	Pn	21 36 29.8	0.0	
	baz=18							
WMOK	Wichita Mounta	17.55	21	*e*Pn	P	21 36 30.6	-0.4	
	103nm,1.9s							
IRM	Iron Mountain	17.60	335	⇑P	Pn	21 36 29.3	-1.3	
	baz=18,SNR=7.4							
W31A	Holland Ranch,	17.61	17	⇑P	P	21 36 31.2	-0.5	
	baz=18,SNR=6.0							
V28A	Channing	17.63	11	⇓P	Pn	21 36 30.9	0.0	
	baz=18							
WUAZ	Wupatki	17.65	346	*e*Pn	P	21 36 31.9	-0.3	
	50nm,1.4s							
WUAZ	Wupatki	17.65	346	⇑P	Pn	21 36 30.8	-0.4	
	baz=18,SNR=8.4							
PFO	Pinyon Flat Ob	17.70	331	*e*Pn	P	21 36 31.9	-0.9	
	48nm,1.8s							
PFO	Pinyon Flat Ob	17.70	331	P	Pn	21 36 31.2	-0.8	
	0.2nm,0.3s,baz=160,slow=14,SNR=14							
PFO				LR	LR	21 42 23.6		
	comp=Z,3µm,19.1s,baz=159,slow=34							
PFO	Pinyon Flat Ob	17.70	331	⇑P	Pn	21 36 31.1	-0.8	
	baz=18							
BELC	Belle Mtn. Jos	17.82	333	⇑P	Pn	21 36 31.9	-1.5	
	baz=18,SNR=6.3							
U23A	El Rito	17.85	0	⇑P	P	21 36 34.2	-0.3	
	baz=18							
V29A	Stinnett	17.88	12	⇑P	P	21 36 35.7	+1.0	
	baz=18							
U22A	Llaves	17.91	358	⇓P	P	21 36 35.3	+0.2	
	baz=18							
NEE2	Needles Airpor	17.93	337	⇓P	Pn	21 36 33.8	-0.8	
	baz=18							
U24A	Moreno Valley	17.95	2	⇓P	P	21 36 36.5	+0.9	
	baz=18							
V30A	Spur Ranch, Mi	17.96	15	⇓P	P	21 36 35.2	-0.4	
	baz=18							
W13A	Hualapai Mount	17.97	339	⇓P	Pn	21 36 34.5	-0.8	
	baz=18							
U25A	Circle Dot Ran	17.99	5	⇑P	P	21 36 35.9	-0.1	
	baz=18,SNR=12							
U21A	Nageezi	18.00	356	⇓P	P	21 36 36.0	-0.1	
	baz=18,SNR=9.9							
U20A	Newcomb	18.01	354	⇑P	P	21 36 35.5	-0.7	
	baz=18							
U26A	Atchley Ranch,	18.05	6	⇑P	P	21 36 36.9	+0.3	
	baz=18							
MURC	Murrieta	18.05	329	⇓P	Pn	21 36 34.6	-1.5	
	baz=18							
U27A	Thompson Grove	18.19	9	⇑P	P	21 36 39.1	+1.0	
	baz=18							
V31A	Spring Creek L	18.19	17	⇓P	P	21 36 39.2	+1.1	
	baz=18							
U28A	Mallet	18.24	10	⇓P	P	21 36 39.3	+0.6	
	baz=18							
SCI	San Clemente I	18.26	325	⇓P	Pn	21 36 37.5	-1.1	
	baz=18							
BBRC	Big Bear Solar	18.46	331	⇑P	Pn	21 36 40.8	-0.5	
	baz=18							
U29A	Oasis Ranch, S	18.49	13	⇑P	P	21 36 42.5	+1.1	
	baz=18							
CIS	Catalina Islan	18.51	326	⇓P	Pn	21 36 40.5	-1.1	
	baz=18							
T22A	Edith	18.54	358	⇑P	Pn	21 36 43.4	+1.1	
	baz=18,SNR=14							
T21A	Navajo Lake	18.55	357	⇓P	Pn	21 36 43.3	+0.9	
	baz=18							
T23A	Casias Ranch,	18.56	0	⇓P	Pn	21 36 43.1	+0.6	
	baz=18							
HEC	Hector,Ludlow	18.67	333	⇑P	P	21 36 42.9	-0.5	
	baz=19							
FMP	Fort Macarthur	18.69	327	⇓P	P	21 36 42.6	-0.9	
	baz=19							
U30A	WK&E Inc. Balk	18.70	14	⇓P	Pn	21 36 45.0	+0.9	
	baz=19							
T25A	Trinidad	18.73	4	⇓P	Pn	21 36 45.0	+0.5	
	baz=19							
U15A	North Rim	18.74	345	⇓P	Pn	21 36 44.7	0.0	
	baz=19							
U31A	Nine Bar Ranch	18.75	16	⇑P	Pn	21 36 46.2	+1.5	
	baz=19							
BFSC	Mount Baldy Ra	18.79	329	⇑P	P	21 36 44.0	-0.7	
	baz=19							
T27A	Campo	18.83	9	⇑P	Pn	21 36 46.7	+1.0	
	baz=19							
T26A	Comanche Natio	18.84	6	⇓P	Pn	21 36 46.7	+0.9	
	baz=19							
MWC	Mount Wilson	18.97	328	*e*P	Pn	21 36 48.5	+1.0	
	28nm,1.4s							
T28A	Walsh	18.98	10	⇓P	Pn	21 36 47.6	0.0	
	baz=19							
PASC	Pasadena Art C	18.99	328	*e*Pn	Pn	21 36 49.0	+1.5	
RRX	Edison Barstow	19.01	332	⇑P	P	21 36 46.7	-0.4	
	baz=19							
TUQ	Turquoise Moun	19.02	335	⇓P	P	21 36 47.0	-0.4	
	baz=19							
DECC	Green Verdugo	19.13	328	⇓P	P	21 36 47.4	-1.0	
	baz=19							
T29A	Hugoton	19.17	12	⇑P	Pn	21 36 50.0	+0.3	
	baz=19							
S24A	Houchin Ranch,	19.18	2	⇑P	Pn	21 36 49.8	-0.3	
	baz=19,SNR=8.6							
S23A	Nye Farm, Mont	19.23	0	⇓P	Pn	21 36 50.5	-0.1	
	baz=19							
S21A	Coal Bank Pass	19.23	356	⇓P	Pn	21 36 50.1	-0.6	
	baz=19,SNR=9.9							
T30A	Plains	19.23	14	⇓P	Pn	21 36 51.4	+0.9	
	baz=19							
S25A	Robets Cordova	19.24	4	⇓P	Pn	21 36 50.4	-0.3	
	baz=19,SNR=6.7							
S22A	4UR Ranch, Cre	19.27	358	⇓P	Pn	21 36 51.5	+0.3	
	baz=19,SNR=16							
SDCO	Great Sand Dun	19.27	2	*e*P	Pn	21 36 52.6	+1.4	
	64nm,1.8s							
GSC	Goldstone	19.28	333	*e*P	P	21 36 49.6	-0.4	
	26nm,1.4s							
GSC	Goldstone	19.28	333	⇑P	P	21 36 49.3	-0.8	
	baz=19							
S26A	Kim	19.29	7	⇑P	Pn	21 36 51.5	+0.3	
	baz=19,SNR=12							
BLG	Laguna Peak	19.40	326	⇓P	P	21 36 50.7	-0.6	
	baz=19							
S27A	Las Animas	19.42	8	⇑P	Pn	21 36 53.0	+0.2	
	baz=19							
S20A	Disappointment	19.44	355	⇑P	Pn	21 36 52.3	-0.8	
	baz=19,SNR=16							
EDW2	Edwards Air Fo	19.47	330	⇑P	P	21 36 50.9	-1.2	
	baz=19							
S28A	Manter	19.48	10	⇑P	Pn	21 36 53.0	-0.5	
	baz=19							
T31A	Randall Ranch,	19.48	16	⇓P	Pn	21 36 54.4	+1.0	
	baz=19							
S18A	Hurst Farm, Bl	19.50	351	⇑P	Pn	21 36 53.4	-0.5	
	baz=19							
SHOC	Shoshone	19.57	335	⇑P	P	21 36 52.9	-0.3	
	baz=20							
OSI	Osito Adit	19.62	328	P	Pn	21 36 56.3	+1.2	
OSI	Osito Adit	19.62	328	⇑P	P	21 36 52.8	-0.9	
	baz=20							
BSC	Santa Cruz Isl	19.62	325	⇑P	P	21 36 53.1	-0.6	
	baz=20							
S29A	Ulysses	19.65	12	⇑P	Pn	21 36 55.6	+0.1	
	baz=20							
R23A	Moffat	19.71	1	⇑P	Pn	21 36 56.2	-0.2	
	baz=20,SNR=9.8							
TUL1	Tulsa	19.72	26	⇓P	Pn	21 36 56.3	+0.1	
	baz=20							
R25A	Fountain Ranch	19.74	4	⇑P	Pn	21 36 56.9	+0.3	
	baz=20,SNR=9.3							
R22A

Q24A **Divide** 20.50 2 ⇓P Pn 21 37 04.6 -1.3
baz=20
Q25A **Bedland, Calha** 20.50 4 ⇓P Pn 21 37 04.6 -1.2
baz=20
Q20A **Ridgley Place,** 20.55 355 ⇓P Pn 21 37 04.7 -1.6
baz=20
Q26A **Hugo** 20.57 6 ⇓P Pn 21 37 05.1 -1.4
baz=20
MSU **Marysvale** 20.70 347 eP Pn 21 37 06.7 -1.4
MVU **Marysvale** 20.70 347 eP Pn 21 37 06.5 -1.6
46nm,1.5s
SMCO **Snowmass** 20.70 358 eP Pn 21 37 07.9 -0.4
74nm,1.8s
KSCO **Kaye Shedlock'** 20.76 8 ⇓P Pn 21 37 07.1 -1.6
baz=21
VES **Vestal, Richgr** 20.77 329 ⇑P P 21 37 05.2 -1.0
baz=21
CWC **Cottonwood Cre** 20.79 332 ⇓P P 21 37 06.0 -0.7
baz=21
SMMC **Simmler** 20.81 327 ⇓P P 21 37 05.6 -1.1
baz=21
Q16A **Castle Valley** 20.89 349 ⇑P P 21 37 07.3 -0.4
baz=21,SNR=17
P23A **Jefferson** 20.89 1 ⇑P P 21 37 08.4 +0.5
baz=21
Q28A **Sharon Springs** 20.93 10 ⇑P P 21 37 08.7 +0.7
baz=21
GRAC **Grapevine Rang** 20.96 334 ⇑P P 21 37 08.0 -0.3
baz=21
SRU **San Rafael** 20.97 351 ⇑P P 21 37 08.4 -0.2
baz=21,SNR=5.9
P24A **Kohler Place,** 21.06 3 ⇑P P 21 37 10.2 +0.6
baz=21
P21A **Newcastle** 21.07 357 ⇑P P 21 37 09.9 +0.2
baz=21
P20A **De Beque** 21.10 355 ⇑P P 21 37 09.9 0.0
baz=21,SNR=9.5
P25A **Willow Gulch B** 21.10 4 ⇑P 21 37 12.1
baz=21
P22A **Eagle** 21.12 359 ⇑P 21 37 11.9
baz=21,SNR=6.6
RCTC **Rector, Farmer** 21.22 330 ⇑P P 21 37 10.3 -0.7
baz=21
P26A **Davis Ranch, A** 21.22 6 ⇑P P 21 37 11.9 +0.7
baz=21
P19A **Cripple Cowboy** 21.29 354 ⇑P P 21 37 12.1 +0.1
baz=21,SNR=18
P27A **Ficken Ranch,** 21.30 8 ⇑P P 21 37 13.6 +1.5
baz=21
ISCO **Idaho Springs** 21.32 1 eP P 21 37 14.2 +1.7
65nm,1.8s
ISCO **Idaho Springs** 21.32 1 ⇓P P 21 37 13.2 +0.7
baz=21,SNR=13
TIN **Tinemaha** 21.37 333 ⇑P P 21 37 13.0 +0.2
baz=21
P18A **Preston Nutter** 21.43 351 ⇓P P 21 37 13.4 -0.2
baz=21,SNR=23
P28A **Saint Francis** 21.44 9 ⇓P P 21 37 14.6 +1.1
baz=21
R11A **Troy Canyon, C** 21.49 340 ⇓P P 21 37 13.4 -0.7
baz=21,SNR=17
O24A **Longmont** 21.66 2 ⇓P P 21 37 17.0 +1.0
baz=22
O22A **Kremmling** 21.68 359 ⇑P P 21 37 16.9 +0.6
baz=22,SNR=11
O25A **Wiggins** 21.70 4 ⇓P P 21 37 17.3 +0.9
baz=22
O20A **White River Ci** 21.72 356 ⇓P P 21 37 17.2 +0.6
baz=22
O23A **Lake Granby, G** 21.73 1 ⇑P P 21 37 17.6 +0.8
baz=22
O21A **Pagoda** 21.76 357 ⇓P P 21 37 17.7 +0.6
baz=22
O26A **Horse Wrangler** 21.90 6 ⇓P P 21 37 19.1 +0.6
baz=22
HBAR **Harrisburg** 21.94 36 eP P 21 37 21.2 +2.4
O27A **Beecher Island** 21.94 8 ⇓P P 21 37 19.6 +0.6
baz=22
O19A **Miners Draw (B** 21.96 354 ⇑P P 21 37 19.4 +0.3
baz=22
MPU **Maple Canyon** 22.04 349 eP P 21 37 21.4 +1.4
MLAC **Mammoth Lakes** 22.12 333 ⇑P P 21 37 20.5 -0.5
baz=22
KSU1 **Kansas State U** 22.24 20 eP P 21 37 24.5 +2.5
56nm,1.0s
N21A **Black Mountain** 22.30 357 ⇑P P 21 37 23.6 +0.7
baz=22
N22A **Wattenberg Ran** 22.32 359 ⇑P P 21 37 23.5 +0.4
baz=22
DAU **Daniels Canyon** 22.36 350 eP P 21 37 24.1 +0.5
N24A **Carr** 22.37 3 ⇓P P 21 37 24.2 +0.6
baz=22
N25A **Grover** 22.40 4 ⇑P P 21 37 24.3 +0.4
baz=22
N23A **Red Feather La** 22.41 1 ⇑P P 21 37 24.5 +0.4
baz=22,SNR=12
N20A **Spence Gulch,** 22.42 356 ⇑P P 21 37 24.2 0.0
baz=22
DUG **Dugway** 22.45 347 eP P 21 37 23.9 -0.4
82nm,1.8s
DUG **Dugway** 22.45 347 ⇓P P 21 37 23.8 -0.6
baz=22,SNR=11
N26A **Koester Ranch,** 22.49 6 ⇑P P 21 37 25.5 +0.7
baz=22
NV11 **Mina Array Sit** 22.51 335 eP P 21 37 25.0 -0.1
N27A **Anderson Farm,** 22.54 7 ⇓P P 21 37 25.8 +0.5
baz=22
LRAL **Lakeview Retre** 22.56 46 eP P 21 37 28.2 +2.7
119nm,1.6s
N28A **Pribbeno Ranch** 22.56 9 ⇓P P 21 37 25.8 +0.3
baz=22
NVAR **Mina Array Bea** 22.57 335 P P 21 37 26.4 +0.7
NVAR **Mina Array Bea** 22.57 335 P P 21 37 26.4 +0.7
7.7nm,1.1s,baz=146,slow=6.6,SNR=12
NVAR LR LR 21 45 05.2
comp=Z,2µm,21.6s,baz=206,slow=34
JLU **Jordanelle** 22.57 350 eP P 21 37 26.9 +1.0
79nm,1.7s
OGNE **Ogallala** 22.74 8 ⇓P P 21 37 28.0 +0.5
baz=23
PHWY **Pilot Hill** 22.82 1 eP P 21 37 29.5 +0.9
46nm,1.7s
N29A **Votaw Ranch, W** 22.84 11 ⇑P P 21 37 29.2 +0.8
baz=23
M22A **Cedar Creek Ra** 22.92 359 ⇓P P 21 37 29.6 +0.2
baz=23
N30A **Hueftle Ranch,** 22.92 12 ⇓P P 21 37 30.5 +1.2
baz=23
M23A **Laramie** 22.99 1 ⇑P P 21 37 30.5 +0.4
baz=23
M24A **Cheyenne** 23.01 3 ⇑P P 21 37 30.4 0.0
baz=23
M25A **Palm-Egli Farm** 23.02 4 ⇑P P 21 37 30.5 +0.1
baz=23
M20A **Sweetwater, Wa** 23.07 356 ⇓P P 21 37 30.8 -0.2
baz=23
M26A **McRoberts Ranc** 23.13 6 ⇑P P 21 37 32.0 +0.5
baz=23
M21A **Separation Pea** 23.14 358 ⇑P P 21 37 31.6 -0.2
baz=23
CMB **Columbia Colle** 23.15 331 eP P 21 37 31.8 +0.2
M19A **Rock Springs** 23.16 354 ⇓P P 21 37 31.7 -0.2
baz=23
M27A **Reverse DX Ran** 23.27 7 ⇓P P 21 37 33.7 +0.7
baz=23
M28A **Bar X Bar Ranc** 23.28 9 ⇑P P 21 37 33.6 +0.5
baz=23
M17A **Scullys Gap (B** 23.30 352 ⇑P P 21 37 33.0 -0.4
baz=23
M29A **Burnside Ranch** 23.44 10 ⇓P P 21 37 35.0 +0.4
baz=23
L21A **Rawlins** 23.50 358 ⇑P P 21 37 34.8 -0.5
baz=23
L22A **Ellis Ranch, M** 23.55 360 ⇑P P 21 37 35.3 -0.5
baz=24
HWUT **Hardware Ranch** 23.57 350 eP P 21 37 36.1 +0.1
18nm,1.4s
ELK **Elko** 23.58 343 eP P 21 37 36.4 +0.2
65nm,2.0s
ELK S S 21 41 54.7 +4.1
ELK **Elko** 23.58 343 P P 21 37 35.4 -0.7
2.7nm,0.9s,baz=164,slow=9.3,SNR=13
ELK S S 21 41 54.7 +4.1
0.3nm,0.3s,baz=193,slow=19,SNR=2.2
ELK LR LR 21 45 55.2
comp=Z,2µm,20.0s,baz=161,slow=35
L24A **Wheatland** 23.58 2 ⇓P P 21 37 36.3 +0.3
baz=24

L20A **Wamsutter** 23.59 356 ⇑P P 21 37 35.9 -0.3
baz=24,SNR=10
L23A **Garrett** 23.63 1 ⇑P P 21 37 36.6 0.0
baz=24
L18A **Fontenelle, Gr** 23.67 353 ⇑P P 21 37 35.8 -1.2
baz=24
L26A **Underwood Farm** 23.70 6 ⇓P P 21 37 37.7 +0.5
baz=24
L25A **Engebretsen Ra** 23.75 4 ⇑P P 21 37 38.1 +0.5
baz=24
L19A **Farson** 23.77 354 ⇓P P 21 37 37.9 -0.1
baz=24
L27A **T5 Ranch, Ells** 23.83 7 ⇑P P 21 37 38.4 -0.1
baz=24
WCN **Washoe City** 23.91 333 eP P 21 37 40.6 +1.3
36nm,1.5s
BMN **Battle Mountai** 23.91 339 eP P 21 37 40.5 +1.2
78nm,1.7s
BGNE **Belgrade** 23.94 15 ⇑P P 21 37 39.8 +0.4
baz=24
HVU **Hansel Valley** 23.96 348 eP P 21 37 41.5 +1.8
62nm,1.7s
K22A **Casper** 24.17 359 ⇓P P 21 37 41.8 +0.1
baz=24,SNR=9.7
TIGA **Tifton** 24.21 53 ⇑P P 21 37 42.4 +0.5
baz=24
K25A **Mc Ranch, Ha** 24.21 4 ⇓P P 21 37 42.2 +0.2
baz=24
K20A **Yellowstone Ra** 24.24 356 ⇑P P 21 37 41.9 -0.5
baz=24,SNR=5.8
K24A **Anderson Ranch** 24.27 2 ⇑P P 21 37 42.0 -0.6
baz=24
K23A **Bowen Ranch, D** 24.27 1 ⇑P P 21 37 42.0 -0.7
baz=24
SIUC **Southern Illin** 24.31 34 eP P 21 37 44.8 +2.0
80nm,1.3s
K26A **Motz Farm, Whi** 24.35 5 ⇑P P 21 37 42.7 -0.6
baz=24
K19A **Absolon Red Bu** 24.44 355 ⇑P P 21 37 43.6 -0.7
baz=24,SNR=8.0
BW06 **Boulder Array** 24.45 354 eP P 21 37 44.8 +0.5
31nm,1.8s
PDAR **Pinedale Array** 24.45 354 P P 21 37 44.1 -0.2
PDAR **Pinedale Array** 24.45 354 P P 21 37 44.1 -0.2
1.3nm,0.6s,baz=160,slow=9.5,SNR=5.8
PDAR LR LR 21 46 40.7
comp=Z,1µm,21.2s,baz=188,slow=35
K27A **Flueckinger Fa** 24.45 7 ⇑P P 21 37 44.2 0.0
baz=24
SLM **Saint Louis** 24.48 31 eP P 21 37 46.5 +2.1
152nm,1.4s
OHCM **Honcut** 24.70 331 eP P 21 37 46.8 +0.4
J24A **Dixon Ranch, L** 24.88 3 ⇓P P 21 37 48.5 +0.5
baz=25
J21A **Lysite** 24.88 358 ⇓P P 21 37 48.0 -0.2
baz=25
J19A **Crowheart** 24.89 355 ⇓P P 21 37 47.9 -0.4
baz=25
J20A **Shoshoni** 24.92 357 ⇑P P 21 37 48.9 +0.5
baz=25
J23A **Dilts Ranch, B** 24.92 1 ⇓P P 21 37 48.8 +0.3
baz=25
REDW **Red Top Meadow** 25.18 352 eP P 21 37 50.5 -0.4
RRI2 **Red Ridge** 25.23 351 eP P 21 37 52.4 +0.9
92nm,1.8s
SNOW **Snow King Moun** 25.27 352 eP P 21 37 53.0 +1.2
34nm,0.9s
TPAW **Teton Pass** 25.32 352 eP P 21 37 52.5 +0.2
82nm,1.7s
I21A **Big Trails, Te** 25.34 358 ⇑P P 21 37 52.4 0.0
baz=25,SNR=14
I18A **Diamond G Ranc** 25.40 354 ⇓P P 21 37 52.8 -0.1
baz=25
LOHW **Long Hollow** 25.40 353 eP P 21 37 54.6 +1.7
27nm,0.9s
I22A **9 Mile Ranch,** 25.41 360 ⇓P P 21 37 52.2 -0.6
baz=25
I24A **Kuemmerle Ranc** 25.41 3 ⇓P P 21 37 52.1 -0.8
baz=25
I23A **Meade Ranch, G** 25.48 1 ⇑P P 21 37 53.5 -0.1
baz=25
I20A **Worland** 25.51 357 ⇓P P 21 37 54.5 +0.7
baz=26,SNR=20
MOOW **Moose Ponds** 25.55 352 eP P 21 37 56.8 +2.5
14nm,1.0s
J14A **Carey** 25.59 348 ⇓P P 21 37 55.1 +0.5
baz=26,SNR=8.4
I19A **Meeteetse** 25.66 355 ⇓P P 21 37 55.9 +0.6
baz=26,SNR=9.1
I17A **Pilgrim Ck.** 25.70 353 ⇓P P 21 37 56.9 +1.2
baz=26
IMW **Indian Meadow** 25.72 352 eP P 21 37 57.3 +1.3
53nm,1.9s
I16A **Newdale** 25.78 351 ⇓P P 21 37 57.0 +0.7
baz=26
J13A **Cove Ranch, Pi** 25.81 347 ⇑P P 21 37 56.5 -0.1
baz=26
SCIA **State Center** 25.91 23 P P 21 37 58.5 +1.2
45nm,1.5s
HLID **Hailey** 26.02 346 eP P 21 37 59.1 +0.6
21nm,1.5s
HLID **Hailey** 26.02 346 P P 21 37 59.3 +0.8
baz=26,SNR=8.0
H20A **Greybull** 26.04 357 ⇑P P 21 37 59.0 +0.4
baz=26
I15A **Monteview** 26.05 350 ⇓P P 21 37 59.6 +0.8
baz=26
H23A **Clabaugh Cattl** 26.08 1 ⇑P P 21 37 59.8 +0.8
baz=26
H22A **Clearmont** 26.11 360 ⇓P P 21 37 59.5 +0.3
baz=26
H21A **Big Horn, Sher** 26.15 359 ⇑P P 21 38 00.7 +1.1
baz=26
I14A **Mackay** 26.16 348 ⇑P P 21 38 00.0 +0.2
baz=26
H17A **Grant Village** 26.17 353 ⇓P P 21 38 00.5 +0.6
baz=26
WVOR **Wild Horse Val** 26.18 339 eP P 21 37 59.6 -0.3
8.8nm,1.0s
MFID **Camas Ranch** 26.22 344 eP P 21 38 01.1 +0.9
33nm,1.7s
MFID **Camas Ranch** 26.22 344 ⇓P P 21 38 00.8 +0.6
baz=26
TKL **Tuckaleechee C** 26.25 45 P P 21 38 02.9 +2.4
TKL **Tuckaleechee C** 26.25 45 P P 21 38 02.9 +2.4
3.8nm,0.6s,baz=203,slow=15,SNR=2.2
TKL LR LR 21 50 21.7
comp=Z,1µm,18.9s,baz=238,slow=41
I13A **Wildhorse Cree** 26.29 347 ⇑P P 21 38 01.6 +0.6
baz=26,SNR=15
H19A **Powell** 26.29 356 ⇓P P 21 38 01.4 +0.6
baz=26
H24A **Dirks Ranch, A** 26.30 3 ⇓P P 21 38 02.1 +1.2
baz=26
H18A **Shoshone NF, C** 26.35 354 ⇓P P 21 38 02.2 +0.7
baz=26
I12A **Atlanta** 26.40 345 ⇑P P 21 38 02.7 +0.7
baz=26
HDIL **Hopedale** 26.43 30 eP P 21 38 03.3 +1.3
52nm,1.0s
ECSD **EROS Data Cent** 26.51 16 P P 21 38 06.2 +3.5
169nm,3.0s
H16A **Russell Place,** 26.55 352 ⇑P P 21 38 04.0 +0.6
baz=26
BRSD **Miller** 26.66 12 ⇓P P 21 38 05.5 +1.5
baz=27
H15A **Lima** 26.68 350 ⇓P P 21 38 05.8 +1.3
baz=27,SNR=6.0
QLMT **Earthquake Lak** 26.70 352 eP P 21 38 05.4 +0.7
QLMT eP PcP PcP 21 41 30.6 +2.4
G23A **Biddle** 26.72 1 ⇑P P 21 38 05.9 +1.2
baz=27
G22A **Birney** 26.73 360 ⇓P P 21 38 06.5 +1.6
baz=27
G21A **Lodge Grass** 26.75 358 ⇑P P 21 38 06.3 +1.3
baz=27
G20A **Bridger** 26.79 357 ⇓P P 21 38 05.7 +0.4
baz=27,SNR=8.9
H14A **Leadore** 26.81 349 ⇑P P 21 38 06.4 +0.7
baz=27
G24A **Alzada** 26.88 3 ⇓P P 21 38 07.2 +1.0
baz=27
MCMT **McKenzie Canyo** 26.92 350 eP P 21 38 07.2 +0.5
8.6nm,1.3s
G18A **Lazy EL Ranch,** 26.98 355 ⇓P P 21 38 07.4 +0.3
baz=27
H12A **Diamond D Ranc** 27.05 346 ⇓P P 21 38 07.7 -0.1
baz=27

G17A **Pierce Place,** 27.10 353 ⇑P P 21 38 08.9 +0.7
baz=27
G16A **Moss Hill, Enn** 27.15 351 ⇓P P 21 38 09.9 +1.2
baz=27,SNR=11
YBH **Yreka Blue Hor** 27.19 332 P P 21 38 10.6 +1.6
YBH **Yreka Blue Hor** 27.19 332 P P 21 38 10.6 +1.6
0.7nm,0.4s,baz=158,slow=3.8,SNR=3.1
YBH LR LR 21 48 25.4
comp=Z,2µm,19.2s,baz=160,slow=36
G15A **Dillon** 27.19 350 ⇑P P 21 38 09.8 +0.8
baz=27
F22A **Rosebud** 27.29 360 ⇑P P 21 38 11.0 +1.2
baz=27
F21A **Absaloka Mine,** 27.35 359 ⇑P P 21 38 10.2 -0.1
baz=27
F20A **Billings** 27.36 357 ⇑P P 21 38 11.2 +0.7
baz=27
SFIN **Scholer Farm** 27.39 33 ⇓P P 21 38 12.4 +1.8
baz=27
F24A **Ekalaka** 27.40 3 ⇑P P 21 38 12.3 +1.5
baz=27
DLMT **Dillon** 27.40 350 eP P 21 38 12.3 +1.5
30nm,1.5s
G14A **Jackson** 27.43 349 ⇓P P 21 38 12.0 +0.7
baz=27
G13A **Cobalt** 27.44 348 ⇑P P 21 38 11.6 +0.4
baz=27
GCMT **Greycliff** 27.45 355 eP P 21 38 12.3 +0.9
6.2nm,0.8s
F19A **Roth Farm, Mol** 27.46 356 ⇓P P 21 38 12.0 +0.6
baz=27
BOZ **Bozeman (W)** 27.53 352 eP P 21 38 12.3 +0.3
13nm,1.4s
F18A **Big Timber** 27.57 355 ⇑P P 21 38 13.0 +0.6
baz=28
KMSC **Kings Mountain** 27.65 48 ⇑P P 21 38 14.9 +1.8
baz=28
F16A **Kennard Place,** 27.67 352 ⇓P P 21 38 13.9 +0.7
baz=28
F17A **Fitzpatrick Pl** 27.67 353 ⇑P P 21 38 13.6 +0.4
baz=28,SNR=7.3
G12A **Big Creek, Yel** 27.71 346 ⇓P P 21 38 14.3 +0.6
baz=28
LRM **Limekiln Ridge** 27.82 351 eP P 21 38 14.6 -0.2
F15A **Butte** 27.85 351 ⇑P P 21 38 15.3 +0.3
baz=28
E22A **Miles City** 27.95 0 ⇑P P 21 38 16.4 +0.7
baz=28
F14A **Wisdom** 27.97 349 ⇑P P 21 38 16.6 +0.6
baz=28
E23A **Ismay** 28.02 1 ⇓P P 21 38 17.7 +1.4
baz=28
E19A **Rath Farm, Rou** 28.05 356 ⇓P P 21 38 16.7 0.0
baz=28,SNR=16
E20A **Meyer Farm, Mu** 28.06 357 ⇑P P 21 38 17.3 +0.6
baz=28
E21A **Keefer Ranch,** 28.06 359 ⇑P P 21 38 17.0 +0.3
baz=28
E24A **Baker** 28.12 3 ⇑P P 21 38 18.2 +1.0
baz=28
F13A **Darby** 28.12 348 ⇓P P 21 38 17.0 -0.4
baz=28,SNR=13
E17A **Martinsdale** 28.24 353 ⇓P P 21 38 18.6 +0.2
baz=28,SNR=8.6
E18A **Harlowton** 28.25 355 ⇑P P 21 38 18.5 0.0
baz=28,SNR=12
F12A **Elk City** 28.29 347 ⇓P P 21 38 18.6 -0.2
baz=28,SNR=15
E16A **East Helena** 28.41 352 ⇓P P 21 38 20.1 +0.2
baz=28
E15A **Deer Lodge** 28.44 351 ⇓P P 21 38 20.5 +0.4
baz=28,SNR=7.2
E14A **Clinton** 28.57 349 ⇓P P 21 38 21.7 +0.3
baz=28
D21A **La Casta Ranch** 28.59 359 ⇓P P 21 38 22.2 +0.8
baz=28
D20A **Manuel Ranch,** 28.65 357 ⇑P P 21 38 22.4 +0.5
baz=29
D22A **Cohagen** 28.66 0 ⇓P P 21 38 23.2 +1.2
baz=29,SNR=10
D24A **Glendive** 28.67 3 ⇑P P 21 38 22.7 +0.6
baz=29
E13A **Victor** 28.72 348 ⇑P P 21 38 22.5 -0.2
baz=29
D19A **Cripps Ranch,** 28.76 356 ⇓P P 21 38 23.5 +0.5
baz=29,SNR=16
D18A **Linhart Farms,** 28.86 355 ⇓P P 21 38 24.6 +0.7
baz=29
D16A **Dana Ranch, Ca** 28.88 352 ⇓P P 21 38 24.5 +0.5
baz=29
D17A **Six Diamond Ra** 28.90 354 ⇑P P 21 38 25.0 +0.7
baz=29,SNR=11
SPMN **St. Paul** 28.98 20 ⇓P P 21 38 25.7 +0.9
baz=29
CHMT **Chamberlain Mo** 29.01 350 eP P 21 38 26.4 +1.1
D15A **Lincoln** 29.02 351 ⇑P P 21 38 25.9 +0.5
baz=29
MSO **Missoula** 29.05 349 eP P 21 38 26.1 +0.5
31nm,1.4s
C24A **Savage** 29.08 2 ⇓P P 21 38 26.4 +0.7
baz=29
D14A **Greenough** 29.22 350 ⇓P P 21 38 27.0 0.0
baz=29,SNR=5.7
C22A **Vida** 29.26 0 ⇑P P 21 38 28.4 +1.1
baz=29
C20A **Veseth Ranch,** 29.26 358 ⇑P P 21 38 28.6 +1.3
baz=29,SNR=12
C23A **Lambert** 29.33 1 ⇓P P 21 38 29.1 +1.1
baz=29
C19A **Slack Wire Ran** 29.34 356 ⇓P P 21 38 29.0 +0.9
baz=29
C21A **Desert Coulee** 29.35 359 ⇑P P 21 38 29.7 +1.5
baz=29
SLMT **Seeley Lake** 29.37 350 eP P 21 38 30.1 +1.6
D13A **Huson** 29.40 348 ⇑P P 21 38 29.2 +0.6
baz=29
C16A **Fuhringer Ranc** 29.66 352 ⇑P P 21 38 32.0 +1.0
baz=30
EGMT **Eagleton** 29.68 355 eP P 21 38 32.4 +1.3
34nm,1.4s
SWMT **Swartz Lake** 29.72 349 eP P 21 38 30.9 -0.6
B22A **Reddig Ranch S** 29.82 0 ⇑P P 21 38 33.3 +1.1
baz=30
MDND **Maddock** 29.85 9 ⇑P P 21 38 33.2 +0.7
baz=30
C14A **Swan Lake** 29.93 350 ⇓P P 21 38 33.7 +0.4
baz=30
B21A **Ellsworth Farm** 29.95 359 ⇓P P 21 38 34.1 +0.7
baz=30
C13A **Hot Springs** 29.99 349 ⇓P P 21 38 34.2 +0.4
baz=30
B20A **Solberg Farm,** 29.99 358 ⇓P P 21 38 34.8 +1.0
baz=30,SNR=7.3
DGMT **Dagmar** 30.03 3 ⇑P P 21 38 35.3 +1.2
baz=30
B17A **L&G Farms, Che** 30.04 354 ⇓P P 21 38 35.2 +1.0
baz=30
B18A **Beardsley Farm** 30.05 355 ⇓P P 21 38 35.6 +1.2
baz=30
B19A **Brinkman Farms** 30.05 356 ⇓P P 21 38 35.3 +1.0
baz=30
B15A **Bradely Ranch,** 30.27 352 ⇓P P 21 38 37.1 +0.7
baz=30
B14A **Marquette Ranc** 30.42 351 ⇑P P 21 38 38.5 +0.7
baz=30
A22A **Carney Farms,** 30.51 0 ⇓P P 21 38 39.3 +1.0
baz=30
A21A **Bergtoll Ranch** 30.51 359 ⇓P P 21 38 39.6 +1.2
baz=30
A19A **Klindworth Far** 30.51 357 ⇓P P 21 38 39.5 +1.1
baz=30
A18A **Metzger Ranch,** 30.58 355 ⇓P P 21 38 39.6 +0.7
baz=30
B13A **Whitefish** 30.64 349 ⇓P P 21 38 39.5 0.0
baz=31
A17A **Triple J Farms** 30.68 354 ⇑P P 21 38 40.8 +1.0
baz=31,SNR=8.0
A15A **Johnson Ranch,** 30.95 352 ⇓P P 21 38 43.4 +1.1
baz=31
COWI **Conover** 31.02 23 eP P 21 38 43.5 +0.7
9.7nm,0.8s
A14A **Double T Ranch** 31.04 351 ⇓P P 21 38 44.4 +1.2
baz=31
NEW **Newport** 31.08 346 eP P 21 38 44.0 +0.7
36nm,1.8s
NEW **Newport** 31.08 346 P P 21 38 44.9 +1.5
3.4nm,0.8s,baz=187,slow=5.1,SNR=5.5
NEW **Newport** 31.08 346 ⇓P P 21 38 44.4 +1.0

baz=31
WALA Waterton Lakes 31.20 350 eP P 21 38 47.2 +2.6
ULM Lac du Bonnet 32.83 12 P P 21 39 01.6 +2.9
ULM Lac du Bonnet 32.83 12 P P 21 39 01.5 +2.9
2.6nm,0.6s,baz=203,slow=3.6,SNR=2.7
ULM LR LR 21 52 37.5
comp=Z,3µm,18.3s,baz=219,slow=37
SADO Sadowa 34.66 35 P P 21 39 15.9 +1.3
SADO Sadowa 34.66 35 P P 21 39 15.9 +1.3
6.7nm,0.6s,baz=310,slow=21,SNR=8.9
FFC Flin Flon 36.39 4 eP P 21 39 30.1 +0.6
6.8nm,1.0s
ATAH Atahualpa 37.38 130 P P 21 39 45.0 +6.2
ATAH Atahualpa 37.38 130 P P 21 39 45.0 +6.2
3.1nm,0.6s,baz=65,slow=15,SNR=3.5
TAOE Nuku Hiva Isla 43.08 234 eT T 22 25 55.7
254nm,0.3s
DLBC Dease Lake 43.63 342 P P 21 40 32.0 +2.4
DLBC Dease Lake 43.63 342 P P 21 40 32.0 +2.4
0.8nm,0.3s,baz=180,slow=16,SNR=3.5
YKA Yellowknife Ar 44.43 354 P P 21 40 35.2 -0.6
YKA Yellowknife Ar 44.43 354 P P 21 40 35.2 -0.6
1.8nm,0.8s,baz=169,slow=7.2,SNR=22
SCHQ Schefferville 47.10 30 LR LR 22 01 56.6
comp=Z,542nm,18.0s,baz=77,slow=38
RKT Rikitea 49.94 215 eS S 21 48 24.9 -4.9
326nm,25.5s
RKT eLR LR 21 55 29.7
2µm,25.8s,baz=28
RKT eT T 22 34 43.7
12nm,0.3s
LPAZ La Paz 50.93 130 P P 21 41 32.1 +4.5
LPAZ La Paz 50.93 130 P P 21 41 32.1 +4.5
1.7nm,0.9s,baz=340,slow=4.9,SNR=2.6
LPAZ LR LR 22 00 41.7
comp=Z,634nm,20.9s,baz=62,slow=33
PAX Paxson 52.04 338 eP P 21 41 34.4 -0.4
4.5nm,0.9s
INK Inuvik 52.77 348 P P 21 41 40.0 +0.1
INK Inuvik 52.77 348 P P 21 41 40.0 +0.1
4.8nm,1.0s,baz=141,slow=8.4,SNR=8.4
ILAR Eielson Array 53.69 340 LR LR 22 05 11.9
comp=Z,361nm,19.9s,baz=324,slow=37
TRF Thorofare Moun 54.06 337 eP P 21 41 48.9 -0.9
25nm,1.4s
PPT Papeete 55.65 233 LR LR 21 59 01.6
comp=Z,605nm,20.1s,baz=11,slow=29
PPT2 Papeete2 55.67 232 eS S 21 49 43.3 -5.2
395nm,24.5s
PPT2 eLR LR 21 57 59.0
2µm,26.2s,baz=42
COLD Coldfoot 56.29 341 eP P 21 42 05.3 -0.2
5.1nm,1.1s
TBI Tubuai 59.22 227 eS S 21 50 27.4 -7.4
512nm,28.8s
TBI eLR LR 21 59 32.7
2µm,27.5s,baz=47
CPUP Villa Florida 65.04 132 LR LR 22 09 49.0
comp=Z,421nm,21.1s,baz=308,slow=34
PLCA Paso Flores 67.53 151 P P 21 43 24.1 +2.5
PLCA Paso Flores 67.53 151 P P 21 43 24.1 +2.5
1.2nm,0.7s,baz=339,slow=9.5,SNR=3.2
PLCA LR LR 22 07 07.5
comp=Z,932nm,18.7s,baz=353,slow=31
BILL Bilibino 72.17 337 eP P 21 43 49.8 +0.1
20nm,1.6s
PETK Petropavlovsk- 79.07 322 LR LR 22 12 13.0
comp=Z,184nm,21.9s,baz=84,slow=30
ARCES ARCESS Array B 85.89 15 LR LR 22 25 59.0
comp=Z,352nm,18.2s,baz=110,slow=38
NOA NORSAR Array B 86.48 26 LR LR 22 25 28.1
comp=Z,231nm,18.9s,baz=295,slow=37
ESDC Sonseca Array 87.46 49 LR LR 22 22 52.2
comp=Z,184nm,19.5s,baz=220,slow=35
URZ Urewera 91.23 230 LR LR 22 16 24.5
comp=Z,489nm,21.2s,baz=110,slow=29
FINES FINESS Array B 91.81 21 LR LR 22 27 11.6
comp=Z,528nm,19.4s,baz=314,slow=36
PVCC Panska Ves 93.92 33 AMS AMS 22 31 00.0
comp=Z,500nm,20.3s
KHC Kasperske Hory 94.19 35 AMS AMS 22 32 10.0
comp=Z,300nm,13.4s
PRU Pruhonice 94.22 34 AMS AMS 22 31 00.0
comp=Z,400nm,15.9s
DZM Mont Dzumac 94.39 248 eLR LR 22 16 07.1
2µm,26.6s
DZM Mont Dzumac 94.39 248 LR LR 22 18 51.0
comp=Z,620nm,19.7s,baz=28,slow=30
GERES GERESS Array B 94.42 35 LR LR 22 32 15.0
comp=Z,279nm,18.3s,baz=283,slow=38
TREC Trest 95.12 34 AMS AMS 22 31 40.0
comp=Z,400nm,17.5s
OKC Ostrava-Krasne 96.18 33 AMS AMS 22 32 30.0
comp=Z,300nm,16.4s
HNR Honiara 96.55 262 LR LR 22 18 01.4
comp=Z,235nm,21.5s,baz=236,slow=28
RPZ Rata Peaks 97.42 226 LR LR 22 23 11.3
comp=Z,318nm,18.0s,baz=32,slow=31
MJAR Matsushiro Arr 98.29 313 LR LR 22 20 05.8
comp=Z,307nm,21.5s,baz=75,slow=29
DBIC Dimbokro 98.59 80 LR LR 22 27 17.7
comp=Z,190nm,21.9s,baz=276,slow=33
KEST Kesra 98.67 48 LR LR 22 31 14.1
comp=Z,87nm,19.4s,baz=288,slow=36
JHJ Hachijo jima 2 98.83 309 LR LR 22 25 46.9
comp=Z,514nm,18.8s,baz=88,slow=32
CN2 Changchun 102.12 324 eP Pdif 21 46 20.0 -0.1
HHC Hu-ho-hao-te 111.40 330 ePKP PKiKP 21 50 55.3 -4.6
HHC PKS PKSdf 21 54 30.0 -6.7
HHC AMB AMB
comp=Z,220nm,5.0s
HHC LR LR
comp=N,470nm,16.7s
HHC LR LR
comp=E,370nm,17.8s
HHC LR LR
comp=Z,410nm,19.0s
WMQ Urumqi 116.78 349 ePKP PKPdf 21 51 06.0 -4.1
WMQ LR LR
comp=N,240nm,21.8s
WMQ LR LR
comp=E,95nm,19.0s
WMQ LR LR
comp=Z,240nm,24.2s
LZH Lanzhou 118.79 332 ePKP PKPdf 21 51 16.5 +2.2
LZH sPKP 21 51 21.0
LZH LR LR
comp=N,150nm,18.0s
LZH LR LR
comp=E,170nm,18.3s
LZH LR LR
comp=Z,180nm,20.3s
CD2 Chengdu 123.13 329 PKP PKPdf 21 51 21.5 -1.2
CD2 PP PP 21 53 04.5 +3.4
CD2 PKS PKSdf 21 54 57.0 -2.5
CD2 SKS SKSdf 21 58 31.0 -4.1
CD2 SKKS SKKSac 21 59 55.3 -6.4
CD2 SS SS 22 09 44.5 -1.0
CD2 AMB AMB
comp=Z,80nm,8.4s
GYA Guiyang 125.15 323 ePdif Pdif 21 48 01.3 -1.8
GYA PKP PKPdf 21 51 25.8 -0.9
GYA PP PP 21 53 18.0 +3.0
GYA PKS PKSdf 21 55 01.0 -2.7
GYA SKKS 22 00 08.8
GYA SS SS 22 10 09.5 -2.1
GYA AMB AMB
comp=Z,110nm,7.5s
GYA LR LR
comp=N,120nm,23.8s
GYA LR LR
comp=E,110nm,24.5s
GYA LR LR
comp=Z,130nm,23.4s
KMI Kunming 128.36 326 PKP PKPdf 21 51 33.5 +0.5

PGC 28 21:33:11.6±0.5, 50.53N×130.41W, h10km, ML3.1/11, Mw3.7, 6D, 212km west of Pt. Hardy, Bc Vancouver Island Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.46	85	⇓Pn	Pn	21 33 36.0	-2.0
HOLB				⇑Sn	Sn	21 33 52.8	-4.4
BPBC	Brooks Peninsu	1.73	101	⇑Pn	Pn	21 33 39.5	-2.3
PHC	Port Hardy	1.91	83	Pn	Pn	21 33 42.4	-1.7
PHC				⇑Sn	Sn	21 34 03.5	-4.6
MAYB	Maynard	2.07	92	⇑Pn	Pn	21 33 44.8	-1.8
MAYB				⇓Sn	Sn	21 34 08.0	-4.7
BBB	Bella Bella	2.20	40	Pn	Pn	21 33 46.5	-1.6
BBB				⇓Sn	Sn	21 34 11.8	-3.5
EDB	Eliza Dome	2.21	106	⇑Pn	Pn	21 33 46.4	-1.9
BNB	Barry Inlet	2.22	338	⇓Pn	Pn	21 33 46.6	-1.9
BNB				⇑Sn	Sn	21 34 11.8	-4.2
WOSB	Woss	2.49	97	Pn	Pn	21 33 51.1	-1.2
ETB	Estevan Point	2.75	113	⇑Pn	Pn	21 33 54.3	-1.4
MOBC	Moresby Island	2.79	340	⇑Pn	Pn	21 33 54.5	-1.9
MOBC				⇓Sn	Sn	21 34 26.9	-3.3
GDR	Gold River	2.91	103	⇓Pn	Pn	21 33 56.6	-1.4
DIB	Dawson Inlet,	2.97	335	⇑Pn	Pn	21 33 57.4	-1.4

JSN 28 21:35:12.3±1.0, 19.65N×76.47W, h28km±325km, MD3.7, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GWJ	Greenwich	1.58	189	iP	Pn	21 35 37.6	-1.1
STH	Stony Hill	1.59	192	iP	Pn	21 35 37.7	-1.0
STH				iS	Sn	21 35 56.5	-1.9
HOJ	Hope	1.65	189	iP	Pn	21 35 37.7	-1.8
MBJ	Montego Bay	1.81	227	iS	Sn	21 36 01.7	-2.0
PCJ	Portland Cotta	2.00	199	iP	Pn	21 35 44.0	-0.3
MCJ	Malvern	2.06	214	iP	Pn	21 35 44.5	-0.8

IDC 28 21:36:14.0±2.9, 15.10S×173.24W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/21, mbtmp3.6/3, Error ellipse: s-maj=207.0km s-min=26.2km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.85	50	Pn	Pn	21 36 47.0	0.0
	28nm,0.3s,baz=274,slow=20,SNR=4.8						
AFI				Sn	Sn	21 37 06.3	-4.9
	91nm,0.3s,baz=220,slow=24,SNR=10.0						
STKA	Stephens Creek	44.32	240	P	P	21 44 26.2	+0.2
	2.1nm,1.0s,baz=105,slow=12,SNR=3.1						
WRA	Warramunga Arr	50.06	257	P	P	21 45 10.3	-0.7
	0.1nm,0.3s,baz=94,slow=7.0,SNR=4.2						
ASAR	Alice Springs	50.35	252	P	P	21 45 13.3	+0.2
	0.7nm,0.5s,baz=87,slow=8.1,SNR=14						

IDC 28 21:43:42.3±2.3, 13.18N×51.07E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/25, mbtmp3.4/3, MS3.7/2, Ms1 3.9/2, ms1mx3.1/20, Error ellipse: s-maj=86.5km s-min=32.6km az=170.0, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	42.53	32	P	P	21 51 39.5	-0.2
	0.2nm,0.5s,baz=220,slow=8.6,SNR=4.6						
CMAR	Chiang Mai Arr	46.25	77	P	P	21 52 09.8	-0.1
	1.0nm,0.7s,baz=272,slow=8.4,SNR=8.8						
CMAR				LR	LR	22 09 08.7	
	comp=Z,98nm,20.1s,baz=156,slow=33						
TORD	Torodi Ar. Bea	48.02	276	P	P	21 52 23.5	-0.1
	0.4nm,0.9s,baz=88,slow=7.5,SNR=3.1						
KSRS	Korea Array	71.73	55	LR	LR	22 26 40.2	
	comp=Z,55nm,20.6s,baz=55,slow=36						

IDC 28 21:52:07.5±0.9, 13.94N×145.16E, h98km±8km, mb3.7/16, mb1 3.9/16, mb1mx3.8/27, mbtmp3.7/16, Error ellipse: s-maj=21.0km s-min=10.5km az=89.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	23.35	346	P	P	21 57 07.1	-0.1
	2.5nm,0.7s,baz=179,slow=11,SNR=7.1						
HNR	Honiara	27.47	147	P	P	21 57 43.6	-1.0
	34nm,0.4s,baz=185,slow=12,SNR=2.5						
USRK	Ussuriysk Arra	32.19	342	P	P	21 58 26.6	+0.7
	1.6nm,0.7s,baz=150,slow=11,SNR=4.8						
WRA	Warramunga Arr	35.32	198	P	P	21 58 52.2	-1.2
	0.8nm,0.7s,baz=21,slow=9.3,SNR=4.6						
WRA				pP	pP	21 59 15.4	-0.3
	1.3nm,0.8s,baz=19,slow=9.5,SNR=4.2						
WRA				PcP	PcP	22 01 22.8	+0.9
	0.4nm,0.6s,baz=12,slow=3.3,SNR=6.4						
FITZ	Fitzroy Crossi	37.21	212	P	P	21 59 08.3	-1.2
	2.6nm,0.9s,baz=26,slow=11,SNR=7.9						
ASAR	Alice Springs	38.97	197	P	P	21 59 24.2	-0.1
	0.3nm,0.4s,baz=22,slow=12,SNR=6.2						
ASAR				pP	pP	21 59 47.8	+0.9
	0.4nm,0.5s,baz=17,slow=12,SNR=2.0						
ASAR				PcP	PcP	22 01 34.1	+1.2
	0.7nm,0.6s,baz=17,slow=4.5,SNR=5.5						
PETK	Petropavlovsk-	40.32	12	P	P	21 59 35.6	+0.4
	2.5nm,0.9s,baz=159,slow=12,SNR=2.9						
DZM	Mont Dzumac	41.43	149	P	P	21 59 45.3	+0.6
	3.5nm,0.8s,baz=260,slow=11,SNR=3.4						
CMAR	Chiang Mai Arr	44.52	282	PcP	PcP	22 01 53.0	+1.5
	0.3nm,0.6s,baz=46,slow=3.9,SNR=4.3						
STKA	Stephens Creek	45.69	184	P	P	22 00 18.5	-0.1
	2.2nm,0.4s,baz=23,slow=12,SNR=11						
MKAR	Makanchi Array	61.44	316	P	P	22 02 14.2	+0.6
	0.8nm,0.5s,baz=87,slow=8.9,SNR=16						
ZALV	Zalesovo Beam	61.50	324	P	P	22 02 13.7	-0.1
	0.2nm,0.4s,baz=69,slow=7.9,SNR=2.5						
ZALV				pP	pP	22 02 37.9	-0.3
	0.5nm,0.5s,baz=99,slow=8.9,SNR=2.6						
KDAK	Kodiak Island	63.62	32	P	P	22 02 28.1	+0.3
	4.7nm,0.7s,baz=276,slow=9.2,SNR=4.8						
ILAR	Eielson Array	68.13	25	P	P	22 02 55.1	-1.6
	0.8nm,0.5s,baz=250,slow=6.0,SNR=10						
YKA	Yellowknife Ar	82.42	27	P	P	22 04 18.1	-0.4
	0.5nm,0.5s,baz=287,slow=5.1,SNR=8.1						
NVAR	Mina Array Bea	86.48	51	P	P	22 04 40.4	+0.4
	2.0nm,0.8s,baz=269,slow=4.1,SNR=5.4						
FINES	FINESS Array B	90.96	335	P	P	22 04 58.4	-1.9
	1.7nm,0.9s,baz=30,slow=8.7,SNR=4.9						
PDAR	Pinedale Array	91.51	45	P	P	22 05 03.5	-0.1
	0.8nm,0.6s,baz=236,slow=4.0,SNR=7.5						
TORD	Torodi Ar. Bea	134.90	305	PKP	PKPdf	22 11 15.6	-0.4
	0.4nm,0.5s,baz=43,slow=2.0,SNR=7.0						
LPAZ	La Paz	147.79	98	PKPbc	PKPbc	22 11 43.6	+0.9
	1.2nm,0.3s,baz=179,slow=3.4,SNR=5.3						

IDC 28 22:14:31.2±54.0, 12.88S×171.66E, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/19, mbtmp4.2/3, Error ellipse: s-maj=942.3km s-min=119.5km az=66.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	33.45	231	P	P	22 21 11.9	-0.1
	3.0nm,0.4s,baz=48,slow=8.3,SNR=18						
WRA	Warramunga Arr	36.42	254	P	P	22 21 38.4	+0.4
	0.6nm,0.3s,baz=86,slow=8.5,SNR=4.2						
ASAR	Alice Springs	37.32	248	P	P	22 21 45.1	-0.5
	1.7nm,0.4s,baz=76,slow=9.3,SNR=20						

*IDC **28** 22:40:21.1±1.4, 33.71N×25.99E, h0km, mb3.6/4, ML3.5/3/5, Error ellipse: s-maj=29.8km s-min=20.8km az=178.0*
*ATH **28** 22:40:28.6, 34.28N×25.70E, h74km±6km*
*CSEM **28** 22:40:29.0±0.6, 34.18N×25.75E, h60km, Error ellipse: s-maj=16.2km s-min=5.0km az=174.0*

ISC 28 22:40:25.8±2.0, 34.0N±0.1×25.81E±0.04, h42km±35km, n47, σ1°48/56, mb3.6/4, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	Zakros	1.19	16	eP	Pn	22 40 47.8	+1.9
ZKR				eS	Sn	22 41 00.9	0.0
ZKR	Zakros	1.19	16	eP	Pn	22 40 47.8	+1.9
ZKR				eS	Sn	22 41 00.9	0.0
LAST	Lasithi	1.22	347	eP	Pn	22 40 46.5	+0.1
LAST				eS	Sn	22 40 59.9	-1.8
LAST	Lasithi	1.22	347	eP	Pn	22 40 46.5	+0.1
LAST				eS	Sn	22 40 59.9	-1.8
NPS	Neapolis	1.30	353	eP	Pn	22 40 48.5	+1.1
NPS	Neapolis	1.30	353	eP	Pn	22 40 48.5	+1.1
SIVA	Sivas	1.33	322	eP	Pn	22 40 48.4	+0.5
SIVA	Sivas	1.33	322	eP	Pn	22 40 48.4	+0.5
IDI	Anoyia	1.52	330	eP	Pn	22 40 51.8	+1.3
IDI	Anoyia	1.52	330	eP	Pn	22 40 51.8	+1.3
GVD	Gavdhos	1.67	302	eP	Pn	22 40 53.0	+0.5
GVD				eS	Sn	22 41 12.4	-0.3
GVD	Gavdhos	1.67	302	eP	Pn	22 40 53.0	+0.5
GVD				eS	Sn	22 41 12.4	-0.3
KARP	Karpathos	1.92	35	eP	Pn	22 40 58.0	+1.9
KARP	Karpathos	1.92	35	eP	Pn	22 40 58.0	+1.9
VAM	Vamos	1.95	318	eP	Pn	22 40 57.7	+1.3
VAM	Vamos	1.95	318	eP	Pn	22 40 57.7	+1.3
SANT	Santorini	2.41	353	eP	Pn	22 41 02.9	+0.2
SANT	Santorini	2.41	353	eP	Pn	22 41 02.9	+0.2
ARG	Arkhangelos	2.93	40	eP	Pn	22 41 12.1	+2.2
ARG				eS	Sn	22 41 44.3	+0.4
ARG	Arkhangelos	2.93	40	eP	Pn	22 41 12.1	+2.2
ARG				eS	Sn	22 41 44.3	+0.4
KYTH	Kithira	3.23	316	eP	Pn	22 41 15.5	+1.4
KYTH	Kithira	3.23	316	eP	Pn	22 41 15.5	+1.4
VLI	Veliai	3.61	320	eP	Pn	22 41 19.6	+0.4
VLI	Veliai	3.61	320	eP	Pn	22 41 19.6	+0.4
AKAS	Kas	3.84	53	iP	Pn	22 41 23.1	+0.6
AKAS				iS	Sn	22 42 05.1	-1.4
AKAS	Kas	3.84	53	iP	Pn	22 41 23.1	+0.6
AKAS				iS	Sn	22 42 05.1	-1.4
AYDN	Tasoluk	4.04	24	iP	Pn	22 41 25.7	+0.5
AYDN	Tasoluk	4.04	24	iP	Pn	22 41 25.7	+0.5
GOLH	Golhisar	4.46	42	iP	Pn	22 41 33.4	+2.4
GOLH				iS	Sn	22 42 18.9	-2.9
GOLH	Golhisar	4.46	42	iP	Pn	22 41 33.4	+2.4
GOLH				iS	Sn	22 42 18.9	-2.9
ITM	Ithomi	4.50	316	eP	Pn	22 41 32.7	+1.3
ITM	Ithomi	4.50	316	eP	Pn	22 41 32.7	+1.3
DNZL	Cakiroluk	4.54	34	iP	Pn	22 41 34.3	+2.1
DNZL	Cakiroluk	4.54	34	iP	Pn	22 41 34.3	+2.1
KHAL	Karahalli	5.30	33	iP	Pn	22 41 43.6	+1.1
KHAL				iS	Sn	22 42 40.1	-2.3
KHAL	Karahalli	5.30	33	iP	Pn	22 41 43.6	+1.1
KHAL				iS	Sn	22 42 40.1	-2.3
GAZI	Gazipasa	5.79	65	iP	Pn	22 41 47.7	-1.4
GAZI				iS	Sn	22 42 48.6	-5.7
ERMK	Ermenek	6.39	63	iP	Pn	22 41 58.2	+0.7
ERMK				iS	Sn	22 43 06.5	-2.8
MMAI	Mount Meron Ar	8.07	94	Pn	Pn	22 42 16.4	-4.1
	1.0nm,0.3s,baz=274,slow=11,SNR=11						
MMAI				Sn	Sn	22 43 48.6	-1.9
	1.3nm,0.3s,baz=266,slow=25,SNR=8.2						
BRTR	Keskin Array B	8.50	45	Pn	Pn	22 42 26.9	+0.4
	0.1nm,0.3s,baz=211,slow=16,SNR=4.3						
EIL	Elat	8.88	116	Pn	Pn	22 42 28.5	-3.0
	0.1nm,0.3s,baz=341,slow=18,SNR=2.2						
EIL				Sn	Sn	22 44 05.3	-5.0
	0.3nm,0.3s,baz=356,slow=14,SNR=3.0						
ASF	Jabal al Asfar	9.47	98	Pn	Pn	22 42 36.6	-3.1
	0.1nm,0.3s,baz=241,slow=19,SNR=2.8						
ASF				Sn	Sn	22 44 24.4	-0.6
	0.1nm,0.3s,baz=270,slow=19,SNR=2.3						
GERES	GERESS Array B	17.38	332	P	P	22 44 29.2	+3.2
	0.1nm,0.3s,baz=163,slow=14,SNR=4.4						
TORD	Torodi Ar. Bea	30.16	232	P	P	22 46 32.6	+0.6
	0.2nm,0.6s,baz=17,slow=8.9,SNR=4.3						
MKAR	Makanchi Array	43.99	56	P	P	22 48 30.6	+1.7
	0.6nm,0.6s,baz=273,slow=7.2,SNR=9.2						
ZALV	Zalesovo Beam	45.45	45	P	P	22 48 41.5	+1.1
	0.9nm,0.4s,baz=278,slow=9.4,SNR=5.1						
SONM	Songino Array	59.83	50	P	P	22 50 28.8	+1.9
	0.3nm,0.5s,baz=316,slow=4.0,SNR=2.5						

*IDC **28** 22:57:17.9±0.6, 18.49N×106.62W, h0km, mb4.2/21, mb1 4.4/25, mb1mx4.4/35, mbtmp4.3/25, ML3.6/4, MS4.9/34, Ms1 4.9/34, ms1mx4.9/37, Error ellipse: s-maj=25.4km s-min=11.0km az=62.0*
*MEX **28** 22:57:19.9±0.7, 18.55N×106.51W, h20km±105km, MD5.1*
*NEIC **28** 22:57:19.4±2.2, 18.45N×106.46W, h10km±13km, mb5.0/91, MW5.3, MD5.0(MEX), Error ellipse: s-maj=8.3km s-min=3.5km az=220.0, Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.21; $M_{\theta\theta}$-0.28; $M_{\phi\phi}$0.49; $M_{r\theta}$-0.07; $M_{\theta\phi}$-1.03; $M_{\phi r}$-0.46; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s101.00000°, δ66.00000°, λ-175.00000°. NP2:ϕ_s9.00000°, δ85.00000°, λ-24.00000°. Principal axes: T 1.2800, Plg13.0000°, Azm57.0000°; N -0.1700, Plg65.0000°, Azm177.0000°; P -1.1100, Plg20.0000°, Azm322.0000°;*
NEIC Felt at Zihuatanejo.
*ISCJB **28** 22:57:20.3±1.2, 18.54N±0.03×106.30W±0.02, h24km±8km, mb4.8/97, MS5.0/48 Error ellipse: s-maj=6.0km s-min=3.0km az=27.6*
*MOS **28** 22:57:21.6±0.9, 18.55N×106.42W, h33km, mb5.1/24, Error ellipse: s-maj=9.5km s-min=5.1km az=93.0*
*GCMT **28** 22:57:22.5±0.1, 18.63N×106.54W, h13km, MW5.4, Moment Tensor Solution. s84,c138; s87,c164; Moment tensor: Scale 10^{17}Nm; M_{rr}0.06±.02; $M_{\theta\theta}$-0.79±.03; $M_{\phi\phi}$0.73±.03; $M_{r\theta}$-0.20±.05; $M_{\theta\phi}$-1.46±.02; $M_{\phi r}$-0.05±.05; Best double couple: $M_0$1.70000×10^{17} NP1:ϕ_s14.00000°, δ84.00000°, λ-3.00000°. NP2:ϕ_s104.00000°, δ87.00000°, λ-174.00000°. Principal axes: T 1.6200, Plg2.0000°, Azm239.0000°; N 0.0800, Plg83.0000°; Azm129.0000°; P -1.7000, Plg7.0000°, Azm329.0000°; Data Used: II IU CN IC G. Surface waves: sta= 94, comp=186, per= 50.*
*BJI **28** 22:57:24.1, 18.50N×106.40W, h40km, mB5.3/10, mb5.3/5, Ms5.3/12, Ms7 5.0/12*

ISC 28 22:57:22.3±0.3, 18.58N±0.04×106.41W±0.04, h27km, n720, σ1°22/728, mb4.9/97, MS5.0/49, 202C-217D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUVA	Puert Vallarta	2.33	29	iP	Pn	22 57 55.6	-3.2
PUVA				iS	Sn	22 58 23.3	-3.3
R15V		2.38	75	ePdif	Pn	22 57 56.1	-3.4
R15V				iS	Sn	22 58 25.1	-2.8
EZ5V		2.81	71	eP	Pn	22 58 03.7	-1.9
EZ5V				iS	Sn	22 58 35.9	-2.9
MMIG	Aquila	2.93	95	eP	Pn	22 58 03.8	-3.2
MMIG				iS	Sn	22 58 38.0	-3.4
MMIG	Aquila	2.93	95	eP	Pn	22 58 03.8	-3.2
MMIG				iS	Sn	22 58 38.0	-3.4
ANIG	Ahuacatlan	3.04	36	eP	Pn	22 58 05.1	-3.7
ANIG				iS	Sn	22 58 42.2	-2.1
ANIG	Ahuacatlan	3.04	36	eP	Pn	22 58 05.1	-3.7
ANIG				iS	Sn	22 58 42.2	-2.1
ZIIG	Zihuatanejo	4.80	101	eP	Pn	22 58 31.1	-1.8
ZIIG				iS	Sn	22 59 25.9	-1.8
ZIIG	Zihuatanejo	4.80	101	eP	Pn	22 58 31.1	-1.8
ZIIG				iS	Sn	22 59 25.9	-1.8
ZAIG	Zacatecas	5.51	40	iP	Pn	22 58 40.4	-2.4
ZAIG				iS	Sn	22 59 43.2	-2.3
ZAIG	Zacatecas	5.51	40	iP	Pn	22 58 40.4	-2.4
ZAIG				iS	Sn	22 59 43.2	-2.3
ARIG	Puente Sto Nin	5.77	92	eP	Pn	22 58 45.2	-0.9
ARIG				iS	Sn	22 59 50.4	-1.1
CAIG	El Cayaco	6.05	104	eP	Pn	22 58 46.6	-3.3
CAIG				iS	Sn	22 59 55.7	-2.7
CAIG	El Cayaco	6.05	104	eP	Pn	22 58 46.6	-3.3
CAIG				iS	Sn	22 59 55.7	-2.7
ACX	Acapulco	6.47	104	iP	Pn	22 58 53.8	-2.0
ACX	Acapulco	6.47	104	iP	Pn	22 58 53.8	-2.0
PLIG	Platanillo	6.56	91	eP	Pn	22 58 56.9	-0.2
PLIG				iS	Sn	23 00 09.9	-1.2
PLIG	Platanillo	6.56	91	eP	Pn	22 58 56.9	-0.2
PLIG				iS	Sn	23 00 09.9	-1.2
LPIG	La Paz	6.59	327	eP	Pn	22 58 54.5	-2.9
LPIG				iS	Sn	23 00 07.0	-4.6
LPIG	La Paz	6.59	327	eP	Pn	22 58 54.5	-2.9
LPIG				iS	Sn	23 00 07.0	-4.6
YAIG	Yautepec	6.97	86	iP	Pn	22 59 01.4	-1.4
YAIG				iS	Sn	23 00 19.4	-1.8
YAIG	Yautepec	6.97	86	iP	Pn	22 59 01.4	-1.4
YAIG				iS	Sn	23 00 19.4	-1.8
PPM	Popocatepetl	7.39	85	eP	Pn	22 59 10.6	+1.7
PPM	Popocatepetl	7.39	85	eP	Pn	22 59 10.6	+1.7
PPM	Popocatepetl	7.39	85	eP	Pn	22 59 10.6	+1.7
PNIG	Pinotepa	8.20	104	iP	Pn	22 59 18.3	-1.3
PNIG				eS	Sn	23 00 50.5	-0.9
PNIG	Pinotepa	8.20	104	iP	Pn	22 59 18.3	-1.3
PNIG				eS	Sn	23 00 50.5	-0.9
HPIG		8.35	5	iP	Pn	22 59 19.9	-1.8
HPIG				iS	Sn	23 00 52.6	-2.7

LNIG	Linares	9.01	45	*i* P	Pn	22 59 30.0	-0.7	
LNIG	Linares	9.01	45	*i* P	Pn	22 59 30.0	-0.7	
VHO	Vista Hermosa	9.34	98	*e*P	Pn	22 59 36.2	+0.8	
VHO	Vista Hermosa	9.34	98	*e*P	Pn	22 59 36.2	+0.8	
LVIG	Laguna Verde	9.52	82	*e*P	Pn	22 59 38.3	+0.7	
LVIG				*i* S	Sn	23 01 23.4	-0.3	
LVIG	Laguna Verde	9.52	82	*e*P	Pn	22 59 38.3	+0.7	
LVIG				*i* S	Sn	23 01 23.4	-0.3	
SRIG	Santa Rosalia	10.22	329	*e*P	Pn	22 59 46.1	-1.2	
SRIG	Santa Rosalia	10.22	329	*e*P	Pn	22 59 46.1	-1.2	
HUIG	Huatulco	10.24	104	*e*P	Pn	22 59 46.0	-1.6	
HUIG	Huatulco	10.24	104	*e*P	Pn	22 59 46.0	-1.6	
TXAR	Lajitas Array	11.00	13	Pn	Pn	23 00 00.2	+2.3	
TXAR	Lajitas Array	11.00	13	Pn	Pn	23 00 00.2	+2.3	
	0.2nm,0.3s,baz=195,slow=13,SNR=42							
626A	Big Bend Ranch	11.12	10	⇑P	Pn	23 00 02.4	+2.7	
	baz=11							
626A				⇑S	Sn	23 02 04.4	+1.2	
	baz=11							
626A				⇑S	Sn	23 02 04.4	+1.2	
	baz=11							
627A	Terlingua Ranc	11.17	14	⇑P	Pn	23 00 02.8	+2.4	
	baz=11							
HSIG		11.19	339	*e*P	Pn	22 59 58.1	-2.5	
HSIG		11.19	339	*e*P	Pn	22 59 58.1	-2.5	
628A	Black Gap, Mar	11.33	16	⇓P	Pn	23 00 04.3	+1.9	
	baz=12							
526A	Mary Lane Ranc	11.63	10	⇑P	Pn	23 00 08.9	+2.3	
	baz=12							
732A	Laxson Ranch,	11.70	29	⇑P	Pn	23 00 09.5	+2.0	
	baz=12							
527A	Woodward Ranch	11.80	12	⇓P	Pn	23 00 10.8	+1.9	
	baz=12							
CGIG		11.82	353	*e*P	Pn	23 00 10.6	+1.3	
CGIG		11.82	353	*e*P	Pn	23 00 10.6	+1.3	
528A	Cox Ranch, San	12.00	15	⇑P	Pn	23 00 13.8	+2.2	
	baz=12							
631A	Perdido Creek	12.03	25	⇓P	Pn	23 00 13.3	+1.3	
	baz=12							
529A	Stev Forest Ra	12.11	18	⇓P	Pn	23 00 14.8	+1.6	
	baz=12							
425A	Indio Mountain	12.23	6	⇓P	Pn	23 00 16.7	+1.9	
	baz=12,SNR=47							
426A	McDonald Obser	12.23	10	⇑P	Pn	23 00 17.4	+2.5	
	baz=12							
530A	J-C Ranch, Com	12.41	21	⇑P	Pn	23 00 19.6	+2.4	
	baz=13							
632A	Uvalde	12.45	28	⇑P	Pn	23 00 20.0	+2.2	
	baz=13							
427A	Hayter Ranch,	12.52	12	⇓P	Pn	23 00 20.6	+1.8	
	baz=13							
428A	Kincaid Ranch,	12.56	15	⇑P	Pn	23 00 21.3	+2.0	
	baz=13							
429A	Davenport Ranc	12.68	18	⇑P	Pn	23 00 22.7	+1.7	
	baz=13							
531A	Rocksprings	12.71	24	⇓P	Pn	23 00 22.8	+1.5	
	baz=13							
TGIG		12.79	96	*i* P	Pn	23 00 21.1	-1.4	
TGIG		12.79	96	*i* P	Pn	23 00 21.1	-1.4	
325A	Bean Ranch, Si	12.81	6	⇑P	Pn	23 00 23.9	+1.1	
	baz=13							
324A	Moseley Ranch,	12.84	4	⇓P	Pn	23 00 24.3	+1.2	
	baz=13							
320A	Kipp Ranch, An	12.85	352	⇓P	Pn	23 00 24.5	+1.2	
	baz=13							
326A	Caldwell Ranch	12.88	9	⇑P	Pn	23 00 25.7	+2.1	
	baz=13							
PCIG		12.93	101	*e*P	Pn	23 00 24.8	+0.5	
PCIG		12.93	101	*e*P	Pn	23 00 24.8	+0.5	
532A	Rocksprings	12.94	26	⇑P	Pn	23 00 26.3	+1.9	
	baz=13							
319A	Douglas	13.01	349	⇓P	Pn	23 00 26.5	+1.1	
	baz=13							
327A	Balmorhea Ranc	13.01	11	⇓P	Pn	23 00 27.4	+2.0	
	baz=13							
430A	Baggett Ranch,	13.03	20	⇓P	Pn	23 00 27.4	+1.6	
	baz=13							
MNTX	Cornudas Mount	13.10	4	*e*Pn	Pn	23 00 28.2	+1.6	
	50nm,1.2s							
431A	Sonora	13.15	23	⇑P	Pn	23 00 28.9	+1.5	
	baz=13							
328A	Wristen Ranch,	13.16	14	⇓P	Pn	23 00 28.4	+0.9	
	baz=13							
JCT	Junction City	13.29	26	*e*P	Pn	23 00 31.9	+2.7	
JCT	Junction City	13.29	26	*e*Pn	Pn	23 00 31.9	+2.7	
JCT	Junction City	13.29	26	⇑P	Pn	23 00 31.1	+1.9	
	baz=14,SNR=13							
223A	Chaparral, Ant	13.37	360	⇓P	Pn	23 00 31.5	+1.1	
	baz=14							
220A	Playas Peak, P	13.41	352	⇓P	Pn	23 00 32.3	+1.4	
	baz=14,SNR=45							
221A	Mesquite Ranch	13.43	355	⇓P	Pn	23 00 32.8	+1.5	
	baz=14							
329A	Wagon Wheel Ra	13.46	16	⇓P	Pn	23 00 33.1	+1.4	
	baz=14							
224A	Cornudas Mount	13.47	3	⇓P	Pn	23 00 32.9	+1.2	
	baz=14							
222A	Williams Famil	13.48	357	⇑P	Pn	23 00 33.5	+1.5	
	baz=14							
225A	Deer Hill, Car	13.55	6	⇑P	Pn	23 00 35.0	+2.0	
	baz=14							
226B	Tecolote Peak,	13.60	8	⇑P	Pn	23 00 36.0	+2.5	
	baz=14							
330A	Mertzon	13.62	19	⇑P	Pn	23 00 35.8	+2.0	
	baz=14							
432A	Menard	13.64	25	⇓P	Pn	23 00 36.1	+2.1	
	baz=14							
227A	Bennet, Jal	13.67	11	⇑P	Pn	23 00 37.0	+2.5	
	baz=14							
GDL2	Guadalupe Moun	13.69	7	*e*Pn	Pn	23 00 35.5	+0.7	
331A	San Angelo	13.79	22	⇓P	Pn	23 00 38.2	+2.1	
	baz=14,SNR=20							
CCIG	Comitan	13.81	97	*i* P	Pn	23 00 37.5	+0.9	
CCIG	Comitan	13.81	97	*i* P	Pn	23 00 37.5	+0.9	
CLNB	Carlsbad	13.82	9	*e*Pn	Pn	23 00 39.5	+3.0	
228A	UT Block 9, Go	13.92	14	⇓P	Pn	23 00 39.7	+1.9	
	baz=14							
121A	Cookes Peak, D	13.95	355	⇓P	Pn	23 00 40.3	+1.8	
	baz=14							
229A	Bryant Ranch,	13.96	16	⇑P	Pn	23 00 40.0	+1.5	
	baz=14							
123A	Bell Site, Whi	14.00	1	⇓P	Pn	23 00 40.3	+1.3	
	baz=14							
120A	U Bar Ranch, L	14.05	352	⇓P	Pn	23 00 40.5	+0.7	
	baz=14,SNR=9.1							
122A	Conniff Cattle	14.07	358	⇑P	Pn	23 00 41.1	+1.0	
	baz=14							
124A	Stringfield Ra	14.09	3	⇓P	Pn	23 00 41.8	+1.5	
	baz=14,SNR=63							
230A	Sterling City	14.09	19	⇑P	Pn	23 00 41.5	+1.3	
	baz=14							
332A	Millersview	14.11	24	⇓P	Pn	23 00 41.4	+1.0	
	baz=14							
125A	Gardner Draw,	14.11	6	⇑P	Pn	23 00 42.1	+1.6	
	baz=14							
126A	Clayton Basin,	14.18	8	⇑P	Pn	23 00 42.0	+0.6	
	baz=14							
127A	Arkansas Junct	14.31	10	⇓P	Pn	23 00 44.3	+1.1	
	baz=14							
231A	Bronte	14.39	21	⇑P	Pn	23 00 45.4	+1.1	
	baz=15							
214A	Organ Pipe Nat	14.52	338	⇓P	Pn	23 00 46.6	+0.6	
	baz=15							
129A	Stewart Farms,	14.58	15	⇑P	Pn	23 00 47.8	+0.9	
	baz=15							
232A	Coleman	14.59	23	⇓P	Pn	23 00 47.8	+0.8	
	baz=15							
Z20A	Nine Sixteen R	14.61	353	⇑P	Pn	23 00 48.3	+1.0	
	baz=15							
Z23A	Rita Site, Whi	14.63	1	⇑P	Pn	23 00 48.4	+0.8	
	baz=15							
Z22A	Elephant Butte	14.63	358	⇓P	Pn	23 00 48.7	+1.1	
	baz=15							
Z21A	St. Cloud Mine	14.71	356	⇑P	Pn	23 00 49.6	+0.8	
	baz=15							
Z25A	Roswell	14.72	6	⇓P	Pn	23 00 50.0	+1.2	
	baz=15							
Z24A	Sheeppen Canyo	14.72	3	⇑P	Pn	23 00 49.7	+0.7	
	baz=15							
130A	Snyder	14.80	18	⇓P	Pn	23 00 51.1	+1.3	
	baz=15							
Z26A	Caprock	14.80	8	⇓P	Pn	23 00 50.5	+0.7	
	baz=15							
HKT	Hockley	14.86	38	*e*P	Pn	23 00 50.5	-0.1	
HKT	Hockley	14.86	38	*e*P	Pn	23 00 50.5	-0.1	
Z27A	Tatum	14.96	10	⇑P	Pn	23 00 52.7	+0.7	
	baz=15							
131A	Roby	15.05	20	⇑P	Pn	23 00 53.5	+0.4	
	baz=15,SNR=14							
Z28A	Tucker Farm, M	15.09	13	⇑P	Pn	23 00 54.0	+0.2	
	baz=15							
Z29A	Hungry Hill Ra	15.22	15	⇓P	Pn	23 00 55.7	+0.2	
	baz=15							
ABTX	Abilene, Hawle	15.26	22	⇓P	Pn	23 00 55.9	0.0	
	baz=15							
Y23A	Lovelace Mesa,	15.30	1	⇓P	Pn	23 00 56.1	-0.4	
	baz=16							
Y22A	Socorro	15.31	358	⇑P	Pn	23 00 56.8	+0.1	
	baz=16							
Y24A	Capitan	15.31	3	⇑P	Pn	23 00 57.5	+0.7	
	baz=16							
Y25A	Mesa, Roswell	15.36	5	⇑P	Pn	23 00 58.4	+1.0	
	baz=16							
Y20A	Horse Springs,	15.37	354	⇓P	Pn	23 00 58.9	+1.3	
	baz=16,SNR=24							
Z30A	Sanderson Ranc	15.40	17	⇑P	Pn	23 00 58.2	+0.4	
	baz=16,SNR=26							
Y21A	Point of Rocks	15.41	356	⇓P	Pn	23 00 59.2	+1.1	
	baz=16							
Y22D	IRIS PASSCAL I	15.44	358	⇑P	Pn	23 00 59.4	+0.9	
	baz=16							
Y26A	Elida	15.46	8	⇓P	Pn	23 00 59.0	+0.4	
	baz=16							
BNM	Barren Site	15.51	359	*e*Pn	Pn	23 01 00.1	+0.7	
	52nm,1.4s							
Y27A	Causey	15.52	10	⇓P	Pn	23 00 59.6	+0.1	
	baz=16							
LENM	Lemitar	15.54	358	*e*Pn	Pn	23 01 00.2	+0.6	
113A	Mohawk Valley,	15.60	336	⇓P	Pn	23 01 00.9	+0.6	
	baz=16							
WHTX	Lake Whitney	15.61	29	⇓P	Pn	23 01 01.4	+0.9	
	baz=16							
MSTX	Muleshoe	15.67	11	⇑P	Pn	23 01 02.8	+1.4	
	baz=16							
LPM	Los Pinos Moun	15.67	359	*e*Pn	Pn	23 01 03.1	+1.6	
Y28A	McKinney Farm,	15.72	13	⇑P	Pn	23 01 03.5	+1.5	
	baz=16							
Z31A	Sharp Cattle R	15.72	20	⇓P	Pn	23 01 02.9	+0.9	
	baz=16							
LAZ	Ladron	15.78	358	*e*Pn	P	23 01 05.0	-1.5	
	18nm,0.7s							
Y29A	Porterfield Fa	15.80	15	⇓P	Pn	23 01 03.8	+0.8	
	baz=16							
Z14A	Wintersburg	15.85	340	⇓P	Pn	23 01 03.9	+0.4	
	baz=16							
X21A	Alamocita Cree	15.85	356	⇓P	Pn	23 01 04.5	+0.7	
	baz=16							
X22A	Bernardo	15.88	358	⇓P	Pn	23 01 04.9	+0.9	
	baz=16							
Z32A	Haskell	15.93	22	⇑P	Pn	23 01 05.1	+0.4	
	baz=16							
X23A	Hourglass Bar	15.94	1	⇓P	Pn	23 01 06.2	+1.2	
	baz=16							
X24A	Lazy VL Ranch,	15.95	3	⇑P	Pn	23 01 06.0	+1.0	
	baz=16							
X25A	Clemmons Ranch	15.96	5	⇓P	Pn	23 01 06.1	+0.9	
	baz=16,SNR=8.8							
X20A	Quemado	16.01	354	⇓P	Pn	23 01 07.0	+1.2	
	baz=16							
Y30A	Stafford Cattl	16.02	17	⇓P	Pn	23 01 06.2	+0.4	
	baz=16,SNR=11							
X26A	CR and CF Fran	16.08	8	⇓P	Pn	23 01 07.5	+0.8	
	baz=16							
X18A	Snowflake	16.20	349	⇓P	Pn	23 01 08.7	+0.5	
	baz=16							
GLA	Glamis	16.27	334	*e*P	Pn	23 01 10.1	+1.0	
GLA				pmax	pmax			
	comp=Z,86nm,1.3s							
GLA	Glamis	16.27	334	*e*Pn	Pn	23 01 10.1	+1.0	
	comp=Z,86nm,1.3s							
GLA	Glamis	16.27	334	⇑P	Pn	23 01 09.1	+0.1	
	baz=16,SNR=6.6							
X27A	F and S Farms,	16.28	10	⇓P	Pn	23 01 09.5	+0.3	
	baz=16							
Y31A	Rekieta Farm,	16.28	19	⇑P	Pn	23 01 09.2	+0.2	
	baz=16,SNR=29							
ANMO	Albuquerque	16.30	360	*e*Pn	Pn	23 01 11.1	+1.5	
	comp=Z,144nm,2.0s							
ANMO	Albuquerque	16.30	360	Pn	Pn	23 01 11.2	+1.6	
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=14							
ANMO				LR	LR	23 07 16.7		
	comp=Z,5µm,20.8s,baz=188,slow=36							
X28A	Dimmitt	16.32	12	⇑P	Pn	23 01 10.7	+1.1	
	baz=16							
X29A	Tulia	16.35	14	⇑P	Pn	23 01 10.7	+0.6	
	baz=16							
Y14A	Wickenburg	16.39	340	⇓P	Pn	23 01 10.9	+0.3	
	baz=17							
X16A	Lo Mia Camp, P	16.40	345	⇑P	Pn	23 01 11.1	+0.3	
	baz=17,SNR=8.2							
W22A	Albuquerque	16.44	359	⇓P	Pn	23 01 12.1	+0.8	
	baz=17							
W21A	San Fidel	16.51	356	⇑P	Pn	23 01 12.9	+0.7	
	baz=17							
W23A	Werner Place,	16.52	1	⇑P	Pn	23 01 13.3	+0.9	
	baz=17							
X30A	Coker Ranch, T	16.56	16	⇑P	Pn	23 01 12.9	+0.2	
	baz=17,SNR=38							
Y32A	R-V Farms, Ver	16.58	21	⇑P	Pn	23 01 13.1	+0.3	
	baz=17							
W20A	Ramah	16.59	354	⇓P	Pn	23 01 13.7	+0.5	
	baz=17							
W24A	Lazy 6 Ranch,	16.59	3	⇓P	P	23 01 14.9	-0.6	
	baz=17,SNR=18							
SWSC	Sam W. Stewart	16.60	331	⇓P	Pn	23 01 13.4	+0.3	
	baz=17,SNR=7.3							
W26A	Owens Ranch, T	16.61	8	⇑P	Pn	23 01 13.6	+0.2	
	baz=17							
W25A	X Bar L Ranch,	16.67	6	⇑P	Pn	23 01 14.4	+0.3	
	baz=17							
W27A	Bowe Ranch, En	16.69	10	⇓P	Pn	23 01 14.7	+0.3	
	baz=17							
W18A	Petrified Fore	16.74	351	⇓P	Pn	23 01 15.3	+0.2	
	baz=17							
Y12C	Blythe	16.76	336	⇑P	Pn	23 01 15.5	+0.4	
	baz=17							
AMTX	Amarillo	16.78	14	*e*Pn	P	23 01 17.1	-0.3	
	comp=Z,803nm,2.1s							
BAR	Barrett	16.80	329	*e*Pn	Pn	23 01 16.9	+1.2	
	comp=Z,58nm,1.4s							
RFTA	Plano	16.82	29	*e*Pn	Pn	23 01 16.5	+0.6	
MONP	Monument Peak	16.85	330	⇑P	Pn	23 01 16.8	+0.3	
	baz=17,SNR=9.7							
X31A	McDonald Ranch	16.98	18	⇑P	Pn	23 01 18.5	+0.5	
	baz=17,SNR=11							
W29A	Amraillo	17.01	13	⇓P	Pn	23 01 19.2	+0.8	
	baz=17							
W28A	Vega	17.03	12	⇑P	Pn	23 01 18.9	+0.3	
	baz=17							
BC3	Big Chuckawall	17.06	333	⇓P	Pn	23 01 19.2	+0.2	
	baz=17,SNR=7.8							
V23A	Ortiz Mt. (NFS	17.10	1	⇓P	Pn	23 01 20.1	+0.4	
	baz=17							
PDMCI	Parker Dam,Lak	17.11	338	⇑P	Pn	23 01 19.8	+0.3	
	baz=17							
V24A	Rampart Ranch,	17.11	3	⇓P	P	23 01 20.9	-0.4	
	baz=17,SNR=17							
109C	Camp Elliot, M	17.18	328	⇑P	Pn	23 01 20.4	0.0	
	baz=17							
TEIG	Tepich	17.19	82	*e*Pn	Pn	23 01 18.6	-2.0	
	comp=Z,23nm,0.8s							
TEIG	Tepich	17.19	82	Pn	P	23 01 23.7	+1.7	
	comp=Z,0.2nm,0.3s,baz=315,slow=10.0,SNR=4.9							
TEIG				LR	LR	23 08 33.2		
	comp=Z,2µm,19.6s,baz=56,slow=39							
V21A	Milan	17.20	357	⇓P	Pn	23 01 21.5	+0.6	
	baz=17							
V20A	Brimhall	17.25	354	⇓P	Pn	23 01 22.3	+0.7	
	baz=17							
V25A	Rancho No Teng	17.27	5	⇓P	P	23 01 22.9	-0.1	
	baz=18,SNR=28							
V22A	San Miguel Ran	17.28	359	⇓P	Pn	23 01 22.8	+1.0	
	baz=18,SNR=8.1							
V26A	Tequesquite Ra	17.31	7	⇓P	Pn	23 01 22.9	+0.7	
	baz=18							
W30A	Crocket Farms	17.33	16	⇑P	P	23 01 23.5	-0.1	
	baz=18							
IRM	Iron Mountain	17.37	335	⇑P	Pn	23 01 22.8	0.0	
	baz=18,SNR=11							
V27A	Dan Oppiter Fa	17.40	10	⇓P	Pn	23 01 23.8	+0.5	
	baz=18							
WUAZ	Wupatki	17.44	346	*e*Pn	Pn	23 01 24.6	+0.8	
	comp=Z,60nm,1.3s							
WUAZ	Wupatki	17.44	346	⇑P	Pn	23 01 24.1	+0.3	
	baz=18,SNR=18							
PFO	Pinyon Flat Ob	17.46	331	Pn	P	23 01 25.1	0.0	
	comp=Z,156nm,1.4s,SNR=13							
PFO	Pinyon Flat Ob	17.46	331	*e*Pn	P	23 01 25.1	0.0	
	comp=Z,75nm,1.6s							
PFO	Pinyon Flat Ob	17.46	331	Pn	P	23 01 25.6	+0.6	
	comp=Z,0.2nm,0.3s,baz=155,slow=11,SNR=15							
PFO				LR	LR	23 07 16.2		
	comp=Z,7µm,19.1s,baz=156,slow=34							
PFO	Pinyon Flat Ob	17.46	331	⇓P	Pn	23 01 24.1	0.0	
	baz=18							
WMOK	Wichita Mounta	17.47	21	*e*P	Pn	23 01 23.7	-0.4	
WMOK				pmax	pmax			
	comp=Z,218nm,1.9s							
WMOK	Wichita Mounta	17.47	21	*e*Pn	Pn	23 01 23.7	-0.4	
	comp=Z,218nm,1.9s							
V28A	Channing	17.50	11	⇓P	Pn	23 01 25.2	+0.6	
	baz=18							
W31A	Holland Ranch,	17.51	18	⇓P	Pn	23 01 24.3	-0.3	
	baz=18,SNR=7.6							
BELC	Belle Mtn. Jos	17.59	333	⇓P	Pn	23 01 26.2	+0.6	
	baz=18							
U23A	El Rito	17.69	1	⇓P	P	23 01 27.6	0.0	
	baz=18							
NEE2	Needles Airpor	17.70	337	⇑P	Pn	23 01 27.2	+0.3	
	baz=18							
U22A	Llaves	17.74	359	⇑P	P	23 01 28.4	+0.2	
	baz=18							
W13A	Hualapai Mount	17.75	340	⇓P	Pn	23 01 28.0	+0.4	
	baz=18							
V29A	Stinnett	17.77	13	⇓P	P	23 01 28.8	+0.4	
	baz=18							
U24A	Moreno Valley	17.79	3	⇑P	P	23 01 29.7	+0.8	
	baz=18							
MURC	Murrieta	17.80	329	⇑P	Pn	23 01 28.1	-0.1	
	baz=18							
U21A	Nageezi	17.82	357	⇓P	P	23 01 29.5	+0.4	
	baz=18,SNR=17							
U20A	Newcomb	17.83	354	⇓P	Pn	23 01 29.2	+0.6	
	baz=18							
U25A	Circle Dot Ran	17.84	5	⇓P	Pn	23 01 28.9	0.0	
	baz=18,SNR=31							
V30A	Spur Ranch, Mi	17.85	15	⇓P	P	23 01 29.7	+0.4	
	baz=18							
U26A	Atchley Ranch,	17.91	7	⇓P	P	23 01 30.2	+0.2	
	baz=18							
SCI	San Clemente I	18.01	325	⇓P	Pn	23 01 30.8	+0.1	
	baz=18							
U27A	Thompson Grove	18.06	9	⇑P	Pn	23 01 31.6	+0.3	
	baz=18							
V31A	Spring Creek L	18.09	17	⇑P	Pn	23 01 31.9	+0.2	
	baz=18,SNR=20							
U28A	Mallet	18.12	11	⇑P	P	23 01 32.9	+0.6	
	baz=18							
LDFC	Landfair	18.16	337	*e*Pn	P	23 01 34.5	+1.7	
	comp=Z,144nm,1.4s							
BBRC	Big Bear Solar	18.22	331	⇓P	P	23 01 34.2	+0.7	
	baz=18							
CIS	Catalina Islan	18.26	326	⇑P	Pn	23 01 34.0	+0.2	
	baz=18							
T21A	Navajo Lake	18.37	357	⇓P	Pn	23 01 36.6	+1.3	
	baz=19							
T22A	Edith	18.37	359	⇓P	Pn	23 01 36.7	+1.4	
	baz=19,SNR=14							
U29A	Oasis Ranch, S	18.38	13	⇑P	Pn	23 01 36.0	+0.8	
	baz=19							
T23A	Casias Ranch,	18.39	1	⇑P	Pn	23 01 36.8	+1.2	
	baz=19							
HEC	Hector,Ludlow	18.43	333	⇓P	P	23 01 36.0	+0.3	
	baz=19							
FMP	Fort Macarthur	18.44	327	⇓P	P	23 01 36.0	+0.2	
	baz=19							
U15A	North Rim	18.52	345	⇑P	Pn	23 01 37.9	+0.6	
	baz=19							
BFSC	Mount Baldy Ra	18.54	329	⇑P	Pn	23 01 37.6	+0.3	
	baz=19							
T25A	Trinidad	18.58	5	⇑P	Pn	23 01 38.4	+0.5	
	baz=19							
U30A	WK&E Inc. Balk	18.59	15	⇑P	Pn	23 01 38.3	+0.4	
	baz=19							
U31A	Nine Bar Ranch	18.65	17	⇓P	Pn	23 01 39.2	+0.7	
	baz=19							
T26A	Comanche Natio	18.69	7	⇓P	P	23 01 39.3	+0.6	
	baz=19							
T27A	Campo	18.70	9	⇑P	P	23 01 39.0	+0.2	
	baz=19							
MWC	Mount Wilson	18.73	329	*e*P	Pn	23 01 40.9	+1.2	
MWC				pmax	pmax			
	comp=Z,531nm,2.9s							
MWC	Mount Wilson	18.73	329	*e*P	Pn	23 01 40.9	+1.2	
	comp=Z,531nm,2.9s							
PASC	Pasadena Art C	18.75	328	*e*P	Pn	23 01 41.3	+1.6	
	comp=Z,56nm,1.4s							
RRX	Edison Barstow	18.77	332	⇑P	P	23 01 39.8	+0.5	
	baz=19							
TUQ	Turquoise Moun	18.79	335	⇓P	P	23 01 40.2	+0.5	
	baz=19,SNR=18							
T28A	Walsh	18.86	11	⇓P	P	23 01 40.8	+0.4	
	baz=19							
DECC	Green Verdugo	18.88	328	⇓P	P	23 01 40.4	-0.2	
	baz=19							
S24A	Houchin Ranch,	19.02	3	⇑P	Pn	23 01 43.5	+0.2	
	baz=19							
GSC	Goldstone	19.04	333	*e*P	P	23 01 43.0	+0.6	
GSC				pmax	pmax			
	comp=Z,42nm,1.4s							
GSC	Goldstone	19.04	333	*e*P	P	23 01 43.0	+0.6	
	comp=Z,42nm,1.4s							
GSC	Goldstone	19.04	333	⇓P	P	23 01 42.6	+0.2	
	baz=19							
T29A	Hugoton	19.05	13	⇑P	Pn	23 01 43.7	+0.3	
	baz=19							
S21A	Coal Bank Pass	19.05	357	⇑P	Pn	23 01 43.8	+0.1	
	baz=19,SNR=18							
S23A	Nye Farm, Mont	19.06	1

baz=20
R26A **Arlington** 19.82 7 ⇓P P 23 01 52.0 +1.0
baz=20
ARVC **Arvin** 19.83 329 ⇓P P 23 01 50.7 -0.3
baz=20
CCUT **Cedar City** 19.86 344 eP P 23 01 52.6 +1.1
comp=Z,163nm,2.2s
PV04 **Paradox Valley** 19.86 354 eP P 23 01 52.7 +1.2
R27A **Eads** 19.89 8 ⇓P P 23 01 52.6 +0.9
baz=20
S31A **Mullinville** 19.92 16 ⇓P P 23 01 51.7 -0.3
baz=20
MPMC **Manual Prospec** 19.98 333 ⇑P P 23 01 52.6 -0.2
baz=20,SNR=31
FURC **Furnace Creek,** 20.06 335 ⇑P P 23 01 54.3 +0.9
baz=20
ISA **Isabella** 20.09 330 eP P 23 01 54.9 +1.0
ISA pmax pmax
comp=Z,25nm,1.1s
ISA **Isabella** 20.09 330 eP P 23 01 54.9 +1.0
comp=Z,25nm,1.1s
ISA **Isabella** 20.09 330 ⇑P P 23 01 54.2 +0.3
baz=20,SNR=7.2
R28A **Tribune** 20.10 11 ⇑P P 23 01 54.8 +0.8
baz=20
ARUT **Antelope Range** 20.10 344 eP P 23 01 54.9 +0.8
ARUT pmax pmax
comp=Z,83nm,1.6s
ARUT **Antelope Range** 20.10 344 eP P 23 01 54.9 +0.8
comp=Z,83nm,1.6s
PKM **Peak Mountain** 20.15 326 ⇓P P 23 01 54.8 +0.1
baz=20
Q21A **Lamborn Mesa,** 20.21 357 ⇓P P 23 01 56.3 +1.0
baz=20,SNR=16
Q22A **Crested Butte,** 20.22 359 ⇑P P 23 01 56.5 +1.0
baz=20
Q23A **Hartsel** 20.26 1 ⇑P P 23 01 57.0 +1.0
baz=20
R29A **Marienthal** 20.30 12 ⇑P P 23 01 57.5 +1.3
baz=20
Q24A **Divide** 20.34 3 ⇓P P 23 01 57.8 +0.9
baz=20
Q25A **Bedland, Calha** 20.35 5 ⇑P P 23 01 57.4 +0.5
baz=21
R30A **Dighton** 20.35 14 ⇓P P 23 01 57.7 +0.9
baz=21
Q20A **Ridgley Place,** 20.37 356 ⇓P P 23 01 57.7 +0.7
baz=21
UALR **University of** 20.42 35 eP P 23 01 58.6 +1.2
comp=Z,70nm,1.2s
Q26A **Hugo** 20.43 6 ⇓P P 23 01 58.1 +0.5
baz=21
MVU **Marysvale** 20.49 347 eP P 23 01 59.5 +1.1
comp=Z,50nm,1.3s
MSU **Marysvale** 20.49 347 eP Pn 23 02 00.3 -0.3
MSU pmax pmax
comp=Z,41nm,1.1s
MSU **Marysvale** 20.49 347 eP Pn 23 02 00.3 -0.3
comp=Z,40nm,1.1s
VES **Vestal, Richgr** 20.52 329 ⇓P P 23 01 58.8 +0.3
baz=21
SMCO **Snowmass** 20.54 359 eP P 23 02 00.2 +1.2
comp=Z,118nm,1.5s
CWC **Cottonwood Cre** 20.55 332 ⇑P P 23 01 58.9 -0.1
baz=21
SMMC **Simmler** 20.57 327 ⇑P P 23 01 59.3 +0.3
baz=21
KSCO **Kaye Shedlock'** 20.63 8 ⇑P P 23 02 00.5 +0.7
baz=21
Q16A **Castle Valley** 20.69 349 ⇑P P 23 02 01.3 +0.8
baz=21
GRAC **Grapevine Rang** 20.73 335 ⇓P P 23 02 01.6 +0.8
baz=21
P23A **Jefferson** 20.73 1 ⇑P P 23 02 01.6 +0.5
baz=21,SNR=20
SRU **San Rafael** 20.77 351 ⇓P P 23 02 02.0 +0.6
baz=21
Q28A **Sharon Springs** 20.80 10 ⇓P P 23 02 02.3 +0.8
baz=21
P21A **Newcastle** 20.89 358 ⇑P P 23 02 02.6 -0.1
baz=21
P24A **Kohler Place,** 20.91 3 ⇓P P 23 02 03.9 +1.0
baz=21
P20A **De Beque** 20.92 356 ⇑P P 23 02 03.5 +0.5
baz=21
P22A **Eagle** 20.95 359 ⇓P P 23 02 03.6 +0.2
baz=21
P25A **Willow Gulch B** 20.95 5 ⇓P P 23 02 03.6 +0.3
baz=21,SNR=5.6
RCTC **Rector, Farmer** 20.98 330 ⇓P P 23 02 03.1 -0.2
baz=21
P26A **Davis Ranch, A** 21.08 7 ⇑P P 23 02 05.0 +0.4
baz=21
P19A **Cripple Cowboy** 21.10 354 ⇑P P 23 02 04.8 -0.1
baz=21
TIN **Tinemaha** 21.13 333 ⇑P P 23 02 06.1 +0.9
baz=21
ISCO **Idaho Springs** 21.16 2 eP P 23 02 07.0 +1.3
ISCO pmax pmax
comp=Z,163nm,1.8s
ISCO **Idaho Springs** 21.16 2 eP P 23 02 07.0 +1.3
comp=Z,162nm,1.8s
ISCO **Idaho Springs** 21.16 2 ⇑P P 23 02 06.4 +0.7
baz=21,SNR=25
P27A **Ficken Ranch,** 21.17 8 ⇓P P 23 02 06.0 +0.4
baz=21
P18A **Preston Nutter** 21.24 352 ⇑P P 23 02 06.9 +0.4
baz=21
R11A **Troy Canyon, C** 21.26 340 ⇓P P 23 02 06.8 +0.1
baz=21
P28A **Saint Francis** 21.31 10 ⇓P P 23 02 07.2 +0.2
baz=22
O24A **Longmont** 21.50 3 ⇓P P 23 02 09.9 +0.7
baz=22
O22A **Kremmling** 21.51 360 ⇓P P 23 02 10.3 +0.8
baz=22,SNR=32
MTUM **Tungsten Hills** 21.53 333 eP P 23 02 11.3 +1.8
O20A **White River Ci** 21.54 356 ⇑P P 23 02 10.3 +0.6
baz=22,SNR=15
O25A **Wiggins** 21.55 5 ⇓P P 23 02 10.3 +0.6
baz=22
O23A **Lake Granby, G** 21.57 1 ⇑P P 23 02 10.6 +0.6
baz=22
O21A **Pagoda** 21.58 358 ⇓P P 23 02 10.5 +0.3
baz=22
O26A **Horse Wrangler** 21.76 6 ⇓P P 23 02 11.8 -0.1
baz=22
O19A **Miners Draw (B** 21.77 354 ⇑P P 23 02 12.3 +0.2
baz=22
O27A **Beecher Island** 21.81 8 ⇑P P 23 02 12.8 +0.4
baz=22
MLAC **Mammoth Lakes** 21.88 333 ⇓P P 23 02 13.5 +0.2
baz=22
HBAR **Harrisburg** 21.92 36 eP P 23 02 13.9 +0.4
OXF **Oxford** 21.93 40 eP P 23 02 14.2 +0.5
OXF pmax pmax
comp=Z,49nm,1.1s
OXF **Oxford** 21.93 40 eP P 23 02 14.2 +0.5
comp=Z,49nm,1.1s
N21A **Black Mountain** 22.13 358 ⇑P P 23 02 16.7 +0.7
baz=22
KSU1 **Kansas State U** 22.15 21 eP P 23 02 16.3 +0.3
comp=Z,51nm,1.0s
N22A **Wattenberg Ran** 22.15 360 ⇑P P 23 02 16.1 -0.2
baz=22,SNR=22
N24A **Carr** 22.21 3 ⇑P P 23 02 16.9 0.0
baz=22
N20A **Spence Gulch,** 22.24 356 ⇑P P 23 02 17.0 -0.2
baz=22
DUG **Dugway** 22.24 347 ⇓P P 23 02 17.2 +0.1
baz=22
N23A **Red Feather La** 22.25 1 ⇑P P 23 02 16.2 -1.1
baz=22
N25A **Grover** 22.25 5 ⇑P P 23 02 16.7 -0.6
baz=22
NV11 **Mina Array Sit** 22.27 335 eP P 23 02 17.7 +0.2
NVAR **Mina Array Bea** 22.33 335 P P 23 02 18.7 +0.5
NVAR **Mina Array Bea** 22.33 335 P P 23 02 18.7 +0.5
comp=Z,17nm,1.1s,baz=154,slow=10,SNR=11
NVAR LR LR 23 09 58.0
comp=Z,5µm,21.6s,baz=206,slow=34
N26A **Koester Ranch,** 22.35 6 ⇑P P 23 02 17.6 -0.6
baz=23
N27A **Anderson Farm,** 22.41 8 ⇑P P 23 02 18.1 -0.8
baz=23
N28A **Pribbeno Ranch** 22.43 10 ⇓P P 23 02 18.0 -1.1
baz=23
GNAR **Gosnell** 22.58 37 eP P 23 02 21.6 +1.0
comp=Z,979nm,1.1s
LRAL **Lakeview Retre** 22.59 47 eP P 23 02 21.2 +0.5
comp=Z,52nm,0.8s
OGNE **Ogallala** 22.61 9 eP P 23 02 21.6 +0.6
comp=Z,159nm,1.6s
OGNE **Ogallala** 22.61 9 ⇓P P 23 02 19.5 -1.5
baz=23
PHWY **Pine Hill** 22.66 2 eP P 23 02 23.1 +1.4
comp=Z,78nm,1.4s
N29A **Votaw Ranch, W** 22.72 11 ⇓P P 23 02 21.5 -0.6
baz=23
M22A **Cedar Creek Ra** 22.75 360 ⇓P P 23 02 22.3 -0.3
baz=23
N30A **Hueftle Ranch,** 22.80 12 ⇑P P 23 02 22.6 -0.4
baz=23
M23A **Laramie** 22.82 1 ⇑P P 23 02 23.1 -0.3
baz=23,SNR=23
M24A **Cheyenne** 22.86 3 ⇑P P 23 02 22.6 -1.1
baz=23
M25A **Palm-Egli Farm** 22.87 5 ⇓P P 23 02 23.5 -0.3
baz=23
M20A **Sweetwater, Wa** 22.89 357 ⇓P P 23 02 23.6 -0.4
baz=23
CMB **Columbia Colle** 22.91 331 eP P 23 02 24.2 +0.1
CMB pmax pmax
comp=Z,25nm,1.1s
CMB **Columbia Colle** 22.91 331 eP P 23 02 24.2 +0.1
comp=Z,25nm,1.1s
M21A **Separation Pea** 22.97 358 ⇓P P 23 02 24.6 -0.3
baz=23,SNR=5.9
M19A **Rock Springs** 22.97 355 ⇑P P 23 02 25.0 +0.1
baz=23
M26A **McRoberts Ranc** 22.99 6 ⇓P P 23 02 25.1 +0.1
baz=23
PLAL **Pickwick Lake** 23.07 41 eP P 23 02 25.7 0.0
comp=Z,44nm,1.2s
M17A **Scullys Gap (B** 23.11 352 ⇓P P 23 02 26.7 +0.3
baz=23
M27A **Reverse DX Ran** 23.13 8 ⇑P P 23 02 26.0 -0.4
baz=23
M28A **Bar X Bar Ranc** 23.15 10 ⇓P P 23 02 26.2 -0.4
baz=23
PARMO **Parma** 23.23 36 eP P 23 02 29.1 +1.8
M29A **Burnside Ranch** 23.31 11 ⇑P P 23 02 27.5 -0.7
baz=24
L21A **Rawlins** 23.33 358 ⇓P P 23 02 28.1 -0.4
baz=24,SNR=7.3
ELK **Elko** 23.36 343 eP P 23 02 28.6 -0.3
ELK eP pP 23 02 29.9 -6.6
ELK **Elko** 23.36 343 P P 23 02 29.4 +0.6
comp=Z,5.4nm,0.8s,baz=164,slow=8.2,SNR=14
ELK LR LR 23 10 48.1
comp=Z,5µm,20.1s,baz=160,slow=35
L22A **Ellis Ranch, M** 23.38 360 ⇑P P 23 02 29.7 +0.7
baz=24
L20A **Wamsutter** 23.41 356 ⇓P P 23 02 29.4 +0.1
baz=24
L24A **Wheatland** 23.43 3 ⇑P P 23 02 29.1 -0.3
baz=24
L23A **Garrett** 23.47 1 ⇑P P 23 02 29.8 -0.1
baz=24
L18A **Fontenelle, Gr** 23.48 353 ⇑P P 23 02 29.9 -0.1
baz=24
UTMT **University of** 23.50 38 eP P 23 02 31.3 +1.3
comp=Z,299nm,1.2s
L26A **Underwood Farm** 23.56 6 ⇓P P 23 02 30.6 0.0
baz=24
L19A **Farson** 23.58 355 ⇑P P 23 02 30.7 -0.3
baz=24
L25A **Engebretsen Ra** 23.59 5 ⇑P P 23 02 31.4 +0.3
baz=24
WCN **Washoe City** 23.67 334 eP P 23 02 32.9 +1.1
WCN pmax pmax
comp=Z,283nm,2.2s
WCN **Washoe City** 23.67 334 eP P 23 02 32.9 +1.1
comp=Z,283nm,2.2s
BMN **Battle Mountai** 23.69 339 eP P 23 02 32.8 +0.8
BMN pmax pmax
comp=Z,123nm,1.7s
BMN **Battle Mountai** 23.69 339 eP P 23 02 32.8 +0.8
comp=Z,123nm,1.7s
L27A **T5 Ranch, Ells** 23.69 8 ⇑P P 23 02 31.2 -0.7
baz=24
BGNE **Belgrade** 23.83 16 ⇑P P 23 02 33.0 -0.2
baz=24
WVT **Waverly** 23.97 39 eP P 23 02 33.9 -0.6
WVT pmax pmax
comp=Z,32nm,1.1s
WVT **Waverly** 23.97 39 eP P 23 02 33.9 -0.6
comp=Z,32nm,1.1s
K22A **Casper** 24.00 360 ⇓P P 23 02 34.4 -0.5
baz=24,SNR=13
K20A **Yellowstone Ra** 24.06 357 ⇓P P 23 02 35.5 0.0
baz=24
K24A **Anderson Ranch** 24.11 3 ⇓P P 23 02 35.9 0.0
baz=24
K23A **Bowen Ranch, D** 24.11 1 ⇓P P 23 02 36.2 +0.3
baz=24
K26A **Motz Farm, Whi** 24.21 6 ⇓P P 23 02 37.3 +0.6
baz=24
K19A **Absolon Red Bu** 24.26 356 ⇓P P 23 02 37.2 -0.2
baz=24
PDAR **Pinedale Array** 24.26 354 P P 23 02 36.9 -0.6
PDAR **Pinedale Array** 24.26 354 P P 23 02 36.9 -0.6
comp=Z,2.7nm,0.8s,baz=169,slow=8.6,SNR=9.1
PDAR LR LR 23 11 34.2
comp=Z,3µm,21.7s,baz=189,slow=35
TIGA **Tifton** 24.27 54 ⇑P P 23 02 37.0 -0.2
baz=24
SIUC **Southern Illin** 24.29 35 eP P 23 02 38.5 +1.1
comp=Z,110nm,1.6s
K27A **Fluckinger Fa** 24.31 7 ⇓P P 23 02 38.3 +0.6
baz=24
BEKR **Beckworth** 24.40 333 eP P 23 02 38.8 +0.2
comp=Z,9.5nm,1.0s
AHID **Auburn Hatcher** 24.44 352 P P 23 02 38.8 -0.2
SLM **Saint Louis** 24.45 32 eP P 23 02 39.1 +0.2
SLM pmax pmax
comp=Z,390nm,2.1s
SLM **Saint Louis** 24.45 32 eP P 23 02 39.1 +0.2
comp=Z,390nm,2.1s
OHCM **Honcut** 24.46 331 eP P 23 02 39.8 +0.8
SWET **Sewnee** 24.58 44 eP P 23 02 41.6 +1.4
comp=Z,69nm,1.4s
J21A **Lysite** 24.71 358 ⇑P P 23 02 42.0 +0.6
baz=25
J19A **Crowheart** 24.71 355 ⇑P P 23 02 41.8 +0.3
baz=25
J24A **Dixon Ranch, L** 24.72 3 ⇓P P 23 02 42.0 +0.6
baz=25
J20A **Shoshoni** 24.74 357 ⇓P P 23 02 42.0 +0.4
baz=25
J23A **Dilts Ranch, B** 24.76 1 ⇓P P 23 02 42.7 +0.9
baz=25
REDW **Red Top Meadow** 24.99 352 eP P 23 02 44.9 +0.8
comp=Z,1.4nm,1.4s
RRI2 **Red Ridge** 25.04 352 eP P 23 02 44.7 +0.2
comp=Z,86nm,1.3s
SNOW **Snow King Moun** 25.08 353 eP P 23 02 45.6 +0.8
comp=Z,77nm,1.1s
TPAW **Teton Pass** 25.13 352 eP P 23 02 47.2 +1.9
comp=Z,87nm,1.3s
I21A **Big Trails, Te** 25.17 359 ⇓P P 23 02 44.6 -1.0
baz=25
LOHW **Long Hollow** 25.21 353 eP P 23 02 47.4 +1.4
LOHW eP pP 23 02 47.9 -6.0
I18A **Diamond G Ranc** 25.21 354 ⇑P P 23 02 44.7 -1.3
baz=25,SNR=6.5
I22A **9 Mile Ranch,** 25.24 360 ⇓P P 23 02 44.8 -1.3
baz=25,SNR=6.8
I24A **Kuemmerle Ranc** 25.25 3 ⇓P P 23 02 46.6 +0.4
baz=26
DCID1 **Drake Creek** 25.26 352 eP P 23 02 47.3 +0.8
comp=Z,110nm,1.3s
GOGA **Godfrey** 25.29 50 eP P 23 02 46.6 +0.1
GOGA pmax pmax
comp=Z,37nm,1.0s
GOGA **Godfrey** 25.29 50 eP P 23 02 46.6 +0.1
comp=Z,37nm,1.0s
I23A **Meade Ranch, G** 25.32 2 ⇑P P 23 02 46.1 -0.8
baz=26
USIN **University of** 25.32 36 eP P 23 02 47.5 +0.8
comp=Z,190nm,1.6s
I20A **Worland** 25.34 357 ⇑P P 23 02 45.4 -1.7
baz=26,SNR=26
MOOW **Moose Ponds** 25.36 353 eP P 23 02 47.4 +0.1
comp=Z,102nm,1.5s
J14A **Carey** 25.39 348 ⇓P P 23 02 48.0 +0.5
baz=26,SNR=6.4
I19A **Meeteetse** 25.48 356 ⇓P P 23 02 48.6 +0.2
baz=26
I17A **Pilgrim Ck.** 25.51 353 ⇓P P 23 02 48.4 -0.3
baz=26
IMW **Indian Meadow** 25.53 352 eP P 23 02 49.6 +0.7
comp=Z,26nm,1.1s
I16A **Newdale** 25.58 351 ⇑P P 23 02 49.6 +0.4
baz=26
J13A **Cove Ranch, Pi** 25.60 347 ⇓P P 23 02 49.6 +0.2
baz=26,SNR=5.3
OLIL **Olney** 25.63 35 eP P 23 02 50.9 +1.3
comp=Z,32nm,0.8s
CPCT **Cooper Cave** 25.65 45 eP P 23 02 50.9 +1.1
HLID **Hailey** 25.81 347 eP P 23 02 52.1 +0.7
comp=Z,96nm,2.0s
HLID **Hailey** 25.81 347 ⇑P P 23 02 52.0 +0.7
baz=26,SNR=9.3
SCIA **State Center** 25.84 23 P P 23 02 54.3 +2.9
comp=Z,141nm,1.9s
I15A **Monteview** 25.86 350 ⇑P P 23 02 52.0 +0.2
baz=26
H20A **Greybull** 25.87 357 ⇓P P 23 02 51.8 0.0
baz=26,SNR=9.2
H23A **Clabaugh Cattl** 25.92 2 ⇓P P 23 02 52.3 0.0
baz=26
H22A **Clearmont** 25.94 0 ⇓P P 23 02 52.7 +0.2
baz=26
WVOR **Wild Horse Val** 25.95 339 eP P 23 02 52.9 +0.3
WVOR pmax pmax
comp=Z,26nm,0.9s
WVOR **Wild Horse Val** 25.95 339 eP P 23 02 52.9 +0.3
comp=Z,26nm,0.9s
I14A **Mackay** 25.96 348 ⇑P P 23 02 53.3 +0.5
baz=26,SNR=11
H17A **Grant Village** 25.98 353 ⇓P P 23 02 53.4 +0.4
baz=26
H21A **Big Horn, Sher** 25.98 359 ⇓P P 23 02 52.8 0.0
baz=26
MFID **Camas Ranch** 26.01 344 eP P 23 02 53.3 +0.2
comp=Z,18nm,1.3s
I13A **Wildhorse Cree** 26.08 347 ⇓P P 23 02 54.5 +0.6
baz=26
H19A **Powell** 26.11 356 ⇑P P 23 02 54.5 +0.5
baz=26,SNR=12
H24A **Dirks Ranch, A** 26.14 3 ⇑P P 23 02 53.9 -0.4
baz=26
H18A **Shoshone NF, C** 26.17 355 ⇑P P 23 02 54.8 +0.2
baz=26
I12A **Atlanta** 26.19 346 ⇑P P 23 02 55.1 +0.3
baz=26
TKL **Tuckaleechee C** 26.27 45 eP P 23 02 57.8 +2.4
TKL **Tuckaleechee C** 26.27 45 P P 23 02 56.8 +1.4
comp=Z,7.8nm,0.9s,baz=195,slow=12,SNR=12
TKL LR LR 23 15 16.4
comp=Z,2µm,20.0s,baz=242,slow=41
YMR **Madison River** 26.29 353 eP P 23 02 58.6 +2.8
comp=Z,47nm,1.7s
H16A **Russell Place,** 26.36 352 ⇑P P 23 02 56.7 +0.3
baz=27
HDIL **Hopedale** 26.39 30 eP P 23 02 57.9 +1.4
comp=Z,59nm,1.0s
ECSD **EROS Data Cent** 26.40 16 eP P 23 03 00.3 +3.8
comp=Z,70nm,1.8s
H15A **Lima** 26.48 350 ⇓P P 23 02 58.5 +1.0
baz=27
QLMT **Earthquake Lak** 26.51 352 eP P 23 02 58.7 +0.9
BRSD **Miller** 26.54 12 ⇓P P 23 02 59.9 +2.2
baz=27
G23A **Biddle** 26.56 2 ⇑P P 23 02 59.2 +1.1
baz=27
G22A **Birney** 26.57 0 ⇑P P 23 02 58.6 +0.5
baz=27
RLMT **Red Lodge** 26.58 355 eP P 23 03 00.1 +1.7
comp=Z,51nm,1.5s
G21A **Lodge Grass** 26.58 359 ⇓P P 23 02 58.6 +0.3
baz=27
H14A **Leadore** 26.61 349 ⇑P P 23 02 59.5 +0.9
baz=27,SNR=9.5
G20A **Bridger** 26.61 357 ⇑P P 23 02 58.2 -0.3
baz=27
MCMT **McKenzie Canyo** 26.72 350 eP P 23 03 00.8 +1.1
comp=Z,13nm,1.2s
G24A **Alzada** 26.73 3 ⇓P P 23 02 59.2 -0.4
baz=27
G18A **Lazy EL Ranch,** 26.79 355 ⇓P P 23 03 00.5 +0.3
baz=27,SNR=10
BLO **Bloomington** 26.80 36 eP P 23 03 01.5 +1.3
BLO pmax pmax
comp=Z,11nm,0.6s
BLO **Bloomington** 26.80 36 eP P 23 03 01.4 +1.3
comp=Z,12nm,0.6s
H12A **Diamond D Ranc** 26.84 347 ⇓P P 23 03 00.9 +0.2
baz=27
G17A **Pierce Place,** 26.91 353 ⇑P P 23 03 02.0 +0.8
baz=27
TZTN **Tazewell** 26.93 44 eP P 23 03 02.0 +0.7
comp=Z,35nm,1.2s
YBH **Yreka Blue Hor** 26.95 332 P P 23 02 60.0 -1.6
YBH **Yreka Blue Hor** 26.95 332 P P 23 02 60.0 -1.6
comp=Z,2.7nm,0.9s,baz=135,slow=6.4,SNR=5.2
YBH LR LR 23 13 18.1
comp=Z,4µm,19.5s,baz=160,slow=36
G16A **Moss Hill, Enn** 26.95 352 ⇓P P 23 03 02.8 +1.1
baz=27
G15A **Dillon** 26.99 351 ⇓P P 23 03 03.1 +1.1
baz=27,SNR=6.1
F23A **Volborg** 27.08 2 ⇓P P 23 03 02.4 -0.3
baz=27
F22A **Rosebud** 27.13 0 ⇑P P 23 03 02.9 -0.2
baz=27
F20A **Billings** 27.19 357 ⇓P P 23 03 03.8 +0.1
baz=27
DLMT **Dillon** 27.20 350 eP P 23 03 04.7 +0.9
comp=Z,34nm,1.2s
G14A **Jackson** 27.23 349 ⇑P P 23 03 03.4 -0.9
baz=27
G13A **Cobalt** 27.23 348 ⇑P P 23 03 04.5 +0.3
baz=27
F24A **Ekalaka** 27.24 3 ⇑P P 23 03 04.3 +0.1
baz=27
GCMT **Greycliff** 27.27 355 eP P 23 03 03.8 -0.7
comp=Z,45nm,1.6s
F19A **Roth Farm, Mol** 27.28 356 ⇓P P 23 03 04.5 0.0
baz=28
BOZ **Bozeman (W)** 27.34 352 eP P 23 03 05.2 +0.1
BOZ pmax pmax
comp=Z,42nm,1.6s
BOZ **Bozeman (W)** 27.34 352 eP P 23 03 05.2 +0.1
comp=Z,42nm,1.6s
SFIN **Scholer Farm** 27.36 33 ⇑P P 23 03 05.1 -0.1
baz=28
F18A **Big Timber** 27.39 355 ⇓P P 23 03 05.6 +0.1
baz=28
F16A **Kennard Place,** 27.47 352 ⇓P P 23 03 07.1 +0.8
baz=28,SNR=5.5
F17A **Fitzpatrick Pl** 27.48 354 ⇑P P 23 03 07.1 +0.8
baz=28,SNR=7.6
G12A **Big Creek, Yel** 27.50 346 ⇑P P 23 03 06.1 -0.5
baz=28
NHSC **New Hope** 27.59 53 eP P 23 03 09.4 +2.1
comp=Z,113nm,1.3s
LRM **Limekiln Ridge** 27.63 351 eP P 23 03 08.3 +0.5
F15A **Butte** 27.65 351 ⇓P P 23 03 08.3 +0.3
baz=28,SNR=12
KMSC **Kings Mountain** 27.68 48 ⇑P P 23 03 08.7 +0.5
baz=28,SNR=7.2
BMO **Blue Mountains** 27.74 343 eP P 23 03 07.6 -1.0
comp=Z,29nm,1.7s
F14A **Wisdom** 27.77 350 ⇓P P 23 03 09.5 +0.5
baz=28
E22A **Miles City** 27.79 1 ⇓P P 23 03 08.9 -0.1
baz=28
JFWS **Jewell Farm** 27.86 26 eP P 23 03 10.3 +0.7
JFWS pmax pmax
comp=Z,39nm,1.0s
JFWS **Jewell Farm** 27.86 26 eP P 23 03 10.3 +0.7
comp=Z,39nm,1.0s
E23A **Ismay** 27.86 2 ⇓P P 23 03 09.2 -0.4
baz=28
E19A **Rath Farm, Rou** 27.88 356 ⇓P P 23 03 10.1 +0.2
baz=28,SNR=12
E20A **Meyer Farm, Mu** 27.89 357 ⇓P P 23 03 09.9 0.0
baz=28,SNR=5.8
E21A **Keefer Ranch,** 27.89 359 ⇓P P 23 03 10.6 +0.7
baz=28
F13A **Darby** 27.92 348 ⇑P P 23 03 10.4 +0.1
baz=28

E24A **Baker** 27.96 3 ⇑P P 23 03 11.0 +0.4
baz=28
E17A **Martinsdale** 28.05 353 ⇓P P 23 03 12.0 +0.5
baz=28,SNR=6.6
E18A **Harlowton** 28.06 355 ⇓P P 23 03 11.6 0.0
baz=28,SNR=15
F12A **Elk City** 28.08 347 ⇓P P 23 03 11.8 +0.1
baz=28
E16A **East Helena** 28.22 352 ⇓P P 23 03 13.4 +0.5
baz=28,SNR=5.2
E15A **Deer Lodge** 28.24 351 ⇑P P 23 03 13.2 0.0
baz=28,SNR=12
E14A **Clinton** 28.37 350 ⇑P P 23 03 14.6 +0.2
baz=29,SNR=6.9
HRY **Holter Researc** 28.41 352 *e*P P 23 03 15.2 +0.6
D21A **La Casta Ranch** 28.42 359 ⇑P P 23 03 14.9 +0.3
baz=29
D20A **Manuel Ranch,** 28.47 358 ⇑P P 23 03 14.6 -0.5
baz=29
D22A **Cohagen** 28.50 0 ⇑P P 23 03 15.2 -0.1
baz=29
D24A **Glendive** 28.51 3 ⇓P P 23 03 15.0 -0.4
baz=29
E13A **Victor** 28.52 349 ⇑P P 23 03 15.5 -0.1
baz=29,SNR=12
D23A **Lindsay** 28.54 2 ⇑P P 23 03 16.2 +0.5
baz=29
D19A **Cripps Ranch,** 28.58 356 ⇓P P 23 03 16.2 +0.1
baz=29,SNR=24
D18A **Linhart Farms,** 28.68 355 ⇑P P 23 03 17.1 +0.1
baz=29,SNR=6.9
D16A **Dana Ranch, Ca** 28.69 353 ⇓P P 23 03 17.0 -0.1
baz=29
D17A **Six Diamond Ra** 28.71 354 ⇑P P 23 03 17.5 +0.1
baz=29
CHMT **Chamberlain Mo** 28.82 350 *e*P P 23 03 18.7 +0.4
D15A **Lincoln** 28.83 351 ⇓P P 23 03 17.9 -0.5
baz=29,SNR=8.6
MSO **Missoula** 28.85 349 *e*P P 23 03 18.4 -0.1
comp=Z,52nm,1.4s
MSO **Missoula** 28.85 349 ⇓P P 23 03 18.7 +0.1
baz=29,SNR=20
SPMN **St. Paul** 28.89 20 ⇓P P 23 03 18.2 -0.6
baz=29
C24A **Savage** 28.92 3 ⇓P P 23 03 18.2 -0.9
baz=29
D14A **Greenough** 29.02 350 ⇓P P 23 03 19.1 -1.0
baz=29,SNR=25
C20A **Veseth Ranch,** 29.09 358 ⇓P P 23 03 20.5 -0.1
baz=29,SNR=11
C19A **Slack Wire Ran** 29.16 356 ⇑P P 23 03 21.0 -0.2
baz=29
C23A **Lambert** 29.17 2 ⇑P P 23 03 20.4 -0.8
baz=29
SLMT **Seeley Lake** 29.17 350 *e*P P 23 03 21.8 +0.3
D13A **Huson** 29.20 349 ⇑P P 23 03 20.3 -1.3
baz=29
BLA **Blacksburg** 29.38 45 *e*P P 23 03 24.1 +0.8
BLA pmax pmax
comp=Z,22nm,1.1s
BLA **Blacksburg** 29.38 45 *e*P P 23 03 24.1 +0.8
comp=Z,22nm,1.1s
C16A **Fuhringer Ranc** 29.47 353 ⇓P P 23 03 23.1 -0.9
baz=30,SNR=5.7
EGMT **Eagleton** 29.50 355 *e*P P 23 03 25.2 +0.9
comp=Z,94nm,1.5s
EGMT **Eagleton** 29.50 355 ⇓P P 23 03 24.1 -0.1
baz=30
SWMT **Swartz Lake** 29.52 350 *e*P P 23 03 23.7 -0.8
ACSO **Alum Creek Sta** 29.54 38 P P 23 03 25.1 +0.4
C15A **Salmond Ranch,** 29.56 352 ⇑P P 23 03 24.5 -0.4
baz=30
B22A **Reddig Ranch S** 29.65 1 ⇑P P 23 03 25.3 -0.2
baz=30
B21A **Ellsworth Farm** 29.78 359 ⇑P P 23 03 26.4 -0.3
baz=30
C13A **Hot Springs** 29.79 349 ⇑P P 23 03 26.6 -0.2
baz=30
JTMT **Jette** 29.80 349 *e*P P 23 03 27.1 +0.2
B20A **Solberg Farm,** 29.82 358 ⇑P P 23 03 26.8 -0.2
baz=30
B23A **Brockton** 29.84 2 ⇑P P 23 03 26.5 -0.7
baz=30
B17A **L&Q Farms, Che** 29.86 354 ⇑P P 23 03 26.9 -0.5
baz=30
B18A **Beardsley Farm** 29.87 355 ⇑P P 23 03 27.5 0.0
baz=30,SNR=9.1
B19A **Brinkman Farms** 29.88 357 ⇓P P 23 03 27.3 -0.2
baz=30
BSMT **Bassoo Peak** 29.99 349 *e*P P 23 03 28.3 -0.4
BLMT **Blacktail Moun** 30.07 349 *e*P P 23 03 31.4 +1.9
B15A **Bradely Ranch,** 30.08 352 ⇓P P 23 03 29.2 -0.2
baz=30,SNR=12
B14A **Marquette Ranc** 30.23 351 ⇑P P 23 03 31.0 +0.2
baz=30
A20A **Cobblestone Ra** 30.25 358 ⇑P P 23 03 30.8 -0.1
baz=30
A23A **Redstone** 30.33 2 ⇑P P 23 03 31.1 -0.4
baz=30
A19A **Klindworth Far** 30.34 357 ⇑P P 23 03 31.1 -0.5
baz=30
A22A **Carney Farms,** 30.34 1 ⇑P P 23 03 31.7 0.0
baz=30
A18A **Metzger Ranch,** 30.40 356 ⇑P P 23 03 31.9 -0.2
baz=31
B13A **Whitefish** 30.44 349 ⇓P P 23 03 32.2 -0.3
baz=31,SNR=18
A17A **Triple J Farms** 30.49 354 ⇓P P 23 03 33.0 0.0
baz=31
B12A **Libby** 30.74 348 ⇓P P 23 03 34.5 -0.7
baz=31
A15A **Johnson Ranch,** 30.75 352 ⇑P P 23 03 35.1 -0.2
baz=31,SNR=7.3
LON **Longmire** 30.82 339 *e*P P 23 03 36.6 +0.6
LON pmax pmax
comp=Z,8.0nm,1.0s
LON **Longmire** 30.82 339 *e*P P 23 03 36.6 +0.6
comp=Z,7.6nm,1.0s
A14A **Double T Ranch** 30.85 351 ⇓P P 23 03 35.8 -0.4
baz=31
NEW **Newport** 30.87 346 *e*P P 23 03 36.3 0.0
comp=Z,70nm,1.9s
NEW **Newport** 30.87 346 P P 23 03 36.5 +0.2
comp=Z,2.9nm,0.6s,baz=170,slow=9.7,SNR=8.4
NEW LR LR 23 15 49.8
comp=Z,2μm,18.6s,baz=161,slow=36
NEW **Newport** 30.87 346 ⇑P P 23 03 35.0 -1.3
baz=31
COWI **Conover** 30.95 24 *e*P P 23 03 36.8 -0.2
comp=Z,16nm,0.8s
WALA **Waterton Lakes** 31.01 350 *e*P P 23 03 37.7 +0.1
comp=Z,2.3nm,1.8s
EYMN **Ely** 31.72 19 *e*P P 23 03 43.5 -0.3
comp=Z,13nm,0.9s
CBN **Corbin** 31.97 46 *e*P P 23 03 47.2 +1.2
comp=Z,39nm,1.0s
NLWA **Neilton Lookou** 32.10 337 *e*P P 23 03 49.3 +2.1
comp=Z,26nm,1.4s
ALLY **Alegheny Colle** 32.10 39 *e*P P 23 03 47.8 +0.6
ULM **Lac du Bonnet** 32.71 13 *e*P P 23 03 53.5 +1.2
comp=Z,49nm,1.6s
ULM **Lac du Bonnet** 32.71 13 P P 23 03 51.8 -0.6
comp=Z,5.3nm,0.8s,baz=196,slow=4.6,SNR=3.4
ULM LR LR 23 17 31.3
comp=Z,5μm,18.3s,baz=200,slow=37
SSPA **Standing Stone** 32.90 42 *e*P P 23 03 54.9 +0.7
comp=Z,107nm,2.5s
SDMD **Soldier's Deli** 32.93 45 *e*P P 23 03 55.5 +1.0
OTAV **Otavalo** 32.95 120 *e*P P 23 03 57.6 +2.2
comp=Z,9.2nm,1.4s
SDDR **Presa de Saban** 33.23 84 *e*P P 23 03 55.7 -1.7
comp=Z,26nm,1.1s
BINY **Binghamton** 34.95 41 *e*P P 23 04 13.1 +1.0
comp=Z,20nm,1.0s
SDV **Santo Domingo** 36.00 101 *e*P P 23 04 24.0 +2.4
comp=Z,20nm,0.8s
FFC **Flin Flon** 36.24 4 *i*P P 23 04 22.4 -0.5
FFC **Flin Flon** 36.24 4 *e*P P 23 04 21.9 -1.0
comp=Z,77nm,1.6s
ACCN **Adirondack Com** 37.02 41 P P 23 04 29.6 -0.1
LONY **Lake Ozonia** 37.14 39 *e*P P 23 04 30.9 +0.1
comp=Z,190nm,2.8s
BBB **Bella Bella** 37.61 338 P P 23 04 32.9 -1.7
BBB **Bella Bella** 37.61 338 P P 23 04 32.9 -1.7
comp=Z,7.5nm,0.9s,baz=57,slow=17,SNR=7.9
BBB LR LR 23 19 52.9
comp=Z,2μm,19.8s,baz=161,slow=36
ATAH **Atahualpa** 37.64 130 P P 23 04 37.0 +1.3
comp=Z,4.2nm,0.8s,baz=258,slow=9.8,SNR=2.6
ATAH LR LR 23 15 11.5
comp=Z,490nm,21.9s,baz=313,slow=28
MTP **Monte Pirata** 38.73 84 *e*P P 23 04 45.7 +1.2
TAOE **Nuku Hiva Isla** 43.02 234 *e*T T 23 50 41.7
comp=Z,70nm,0.2s
DLBC **Dease Lake** 43.41 342 *e*P P 23 05 23.4 +0.8
DLBC **Dease Lake** 43.41 342 P P 23 05 23.4 +0.8
comp=Z,4.7nm,1.0s,baz=146,slow=4.1,SNR=5.4
YKA **Yellowknife Ar** 44.24 355 P P 23 05 28.1 -0.9
YKA PcP PcP 23 07 13.4 +0.2
YKA **Yellowknife Ar** 44.24 355 P P 23 05 28.1 -0.9
comp=Z,4.9nm,0.9s,baz=169,slow=7.1,SNR=44
YKA PcP PcP 23 07 13.4 +0.2
comp=Z,1.3nm,0.7s,baz=164,slow=3.0,SNR=7.4
YKW3 **Yellowknife Ar** 44.31 355 *e*P P 23 05 28.8 -0.8
comp=Z,1.7nm,1.9s
SCHQ **Schefferville** 47.06 30 *e*P P 23 05 53.9 +2.4
comp=Z,15nm,1.3s
SCHQ **Schefferville** 47.06 30 P P 23 05 50.6 -0.8
comp=Z,3.8nm,0.9s,baz=228,slow=5.3,SNR=4.4
SCHQ LR LR 23 24 31.2
comp=Z,720nm,19.3s,baz=243,slow=35
KIP **Kipapa** 48.40 282 *e*P P 23 06 03.6 +1.3
KIP pmax pmax
comp=Z,62nm,1.7s
RKT **Rikitea** 49.96 215 *e*S S 23 13 22.1 -1.0
comp=Z,2μm,15.5s
RKT *e*LR LR 23 20 35.1
comp=Z,5μm,25.2s,baz=31
RKT *e*T T 23 59 36.0
comp=Z,8.7nm,0.3s
SAML **Samuel** 50.66 119 *e*P P 23 06 17.9 -1.8
comp=Z,6.3nm,1.6s
LPAZ **La Paz** 51.19 130 P P 23 06 25.4 +1.2
LPAZ **La Paz** 51.19 130 P P 23 06 25.4 +1.2
comp=Z,2.1nm,0.8s,baz=335,slow=9.9,SNR=4.6
LPAZ LR LR 23 25 37.9
comp=Z,1μm,21.0s,baz=314,slow=33
EGAK **Eagle** 51.68 342 *e*P P 23 06 25.4 -1.2
comp=Z,9.7nm,0.8s
OHAK **Old Harbor** 51.80 330 P P 23 06 27.2 -0.3
comp=Z,184nm,2.4s
SML **Sawmill** 52.13 336 *e*P P 23 06 29.6 -0.4
SML **Sawmill** 52.13 336 *e*P P 23 06 29.6 -0.4
comp=Z,2.2nm,0.9s
INK **Inuvik** 52.56 348 P P 23 06 32.8 -0.3
INK **Inuvik** 52.56 348 P P 23 06 32.8 -0.3
comp=Z,12nm,1.1s,baz=155,slow=8.2,SNR=15
ILAR **Eielson Array** 53.46 340 P P 23 06 40.5 +0.7
ILAR **Eielson Array** 53.46 340 P P 23 06 40.5 +0.7
comp=Z,1.7nm,0.9s,baz=128,slow=5.8,SNR=3.7
ILAR LR LR 23 30 04.6
comp=Z,886nm,18.1s,baz=134,slow=37
TRF **Thorofare Moun** 53.83 337 P P 23 06 41.3 -1.4
comp=Z,142nm,2.0s
CHGN **Chignik** 53.96 327 *e*P P 23 06 42.9 -0.5
PPT **Papeete** 55.60 232 LR LR 23 24 04.8
comp=Z,1μm,19.9s,baz=3.8,slow=29
PPT2 **Papeete2** 55.61 232 *e*S S 23 14 42.3 +1.6
comp=Z,630nm,17.0s
PPT2 *e*LR LR 23 22 51.8
comp=Z,5μm,26.8s,baz=43
COLD **Coldfoot** 56.07 341 *e*P P 23 06 58.6 0.0
comp=Z,51nm,1.9s
SIV **San Ignacio** 56.32 125 P P 23 07 00.4 -0.7
SIV **San Ignacio** 56.32 125 P P 23 07 00.4 -0.7
comp=Z,2.8nm,0.9s,baz=318,slow=7.1,SNR=5.9
TBI **Tubuai** 59.18 227 *e*S S 23 15 28.6 +1.3
comp=Z,1μm,20.8s
TBI *e*LR LR 23 24 40.5
comp=Z,4μm,26.0s,baz=46
CFAA **Coronel Fontan** 61.89 143 P P 23 07 39.9 +0.3
CFAA **Coronel Fontan** 61.89 143 P P 23 07 39.9 +0.3
comp=Z,1.0nm,0.9s,baz=328,slow=6.5,SNR=5.1
CPUP **Villa Florida** 65.30 132 P P 23 08 02.2 +0.1
CPUP **Villa Florida** 65.30 132 P P 23 08 02.2 +0.1
comp=Z,3.2nm,0.8s,baz=294,slow=19,SNR=3.9
CPUP LR LR 23 36 01.6
comp=Z,691nm,18.6s,baz=307,slow=36
RAR **Rarotonga** 65.53 235 LR LR 23 28 46.3
comp=Z,1μm,19.6s,baz=268,slow=29
SUMG **Summit** 65.85 18 *e*P P 23 08 05.7 +0.3
SUMG pmax pmax
comp=Z,33nm,1.2s
SUMG **Summit** 65.85 18 *e*P P 23 08 06.4 +1.0
SUMG pmax pmax
comp=Z,12nm,0.9s
SUMG **Summit** 65.85 18 *e*P P 23 08 05.7 +0.3
comp=Z,33nm,1.2s
SUMG **Summit** 65.85 18 *i*P P 23 08 06.4 +1.0
comp=Z,12nm,0.9s
PLCA **Paso Flores** 67.77 151 *e*P P 23 08 17.7 0.0
comp=Z,12nm,0.9s
PLCA **Paso Flores** 67.77 151 P P 23 08 17.8 0.0
comp=Z,3.9nm,0.8s,baz=345,slow=6.4,SNR=6.2
PLCA LR LR 23 32 03.0
comp=Z,2μm,18.3s,baz=349,slow=31
BILL **Bilibino** 71.93 337 *e*P P 23 08 43.9 +1.0
BILL pmax pmax
comp=Z,36nm,1.5s
BILL **Bilibino** 71.93 337 *e*P P 23 08 43.9 +1.0
comp=Z,36nm,1.5s
AFI **Afiamalu** 72.04 248 LR LR 23 32 37.4
comp=Z,810nm,18.0s,baz=88,slow=30
SEY **Seymchan** 78.62 339 *e*P P 23 09 21.5 +0.1
PETK **Petropavlovsk-** 78.81 322 P P 23 09 22.9 +0.2
PETK **Petropavlovsk-** 78.81 322 P P 23 09 22.9 +0.2
PETK **Petropavlovsk-** 78.81 322 P P 23 09 22.9 +0.2
comp=Z,4.6nm,1.0s,baz=82,slow=11,SNR=3.8
PETK LR LR 23 37 16.4
comp=Z,337nm,20.9s,baz=77,slow=30
TIXI **Tiksi** 82.58 345 *e*P P 23 09 41.3 -1.1
TIXI pmax pmax
comp=Z,7.0nm,1.2s
RAO **Raoul Island** 83.74 236 LR LR 23 37 24.8
comp=Z,769nm,21.1s,baz=21,slow=29
ARCES **ARCESS Array B** 85.78 15 LR LR 23 51 31.2
comp=Z,728nm,20.0s,baz=214,slow=38
NOA **NORSAR Array B** 86.42 26 P P 23 10 00.4 -1.8
NOA **NORSAR Array B** 86.42 26 P P 23 10 00.4 -1.8
comp=Z,1.0nm,1.0s,baz=303,slow=4.8,SNR=2.2
NOA LR LR 23 50 13.0
comp=Z,465nm,19.1s,baz=300,slow=37
ESDC **Sonseca Array** 87.50 49 P P 23 10 10.4 +2.4
ESDC **Sonseca Array** 87.50 49 P P 23 10 10.4 +2.4
comp=Z,0.1nm,0.2s,baz=288,slow=5.3,SNR=3.2
ESDC LR LR 23 47 47.3
comp=Z,343nm,19.5s,baz=300,slow=34
YAK **Yakutsk** 88.29 337 *e*P P 23 10 09.6 -1.5
YAK *e* 23 10 20.0
YAK *e**PP pP 23 10 23.4 +3.5
YAK *e*S SKSac 23 20 33.5 -4.5
YAK *e* 23 22 03.4
YAK *e*SSS SSS 23 30 17.6
YAK pmax pmax
comp=Z,7.0nm,0.8s
YAK smax smax
comp=E,181nm,11.3s
YAK smax smax
comp=N,43nm,9.1s
YAK MLR MLR
comp=N,370nm,23.0s
YAK MLR MLR
comp=Z,584nm,23.0s
YAK MLR MLR
comp=E,259nm,17.0s
YUK **Yuzh-Kuril'sk** 89.37 317 *d i*P P 23 10 09.1 -7.4
YUK MLR MLR
comp=Z,264nm,21.0s
YSS **Yuzh-Sakhalins** 90.02 320 *e*P P 23 10 25.0 +5.5
YSS *e*S S 23 21 14.0 +3.1
YSS *e*PS PnS 23 22 20.0 +0.3
YSS *e*PPS PPS 23 22 52.0
YSS *e*SS SS 23 27 23.0 +14
URZ **Urewera** 91.18 230 LR LR 23 41 17.5
comp=Z,861nm,21.9s,baz=19,slow=29
FINES **FINESS Array B** 91.73 21 LR LR 23 52 04.8
comp=Z,866nm,18.7s,baz=313,slow=36
ERM **Erimo** 92.04 316 *e*P P 23 10 30.4 +1.4
ERM pmax pmax
comp=Z,41nm,1.2s
CLL **Collm** 92.63 33 *e*P P 23 10 29.0 -2.6
CLL MLR MLR
comp=Z,700nm,18.4s
NKC **Novy Kostel** 92.94 34 AMS AMS 23 55 10.0
comp=Z,700nm,15.9s
PVCC **Panska Ves** 93.89 33 AMS AMS 23 55 20.0
comp=Z,700nm,16.9s
KHC **Kasperske Hory** 94.17 35 AMS AMS 23 54 10.0
comp=Z,700nm,18.8s
PRU **Pruhonice** 94.19 34 AMS AMS 23 55 50.0
comp=Z,800nm,22.0s
DZM **Mont Dzumac** 94.27 248 *e*LR LR 23 41 05.6
comp=Z,2μm,20.7s
DZM **Mont Dzumac** 94.27 248 LR LR 23 43 33.1
comp=Z,1μm,20.5s,baz=41,slow=30
GERES **GERESS Array B** 94.40 35 LR LR 23 55 25.9
comp=Z,409nm,18.3s,baz=300,slow=37
TREC **Trest** 95.09 34 AMS AMS 23 56 30.0
comp=Z,900nm,18.9s
OKC **Ostrava-Krasne** 96.15 32 AMS AMS 23 57 10.0
comp=Z,600nm,22.6s
KLMR **Klimovskoe** 96.23 16 P P 23 10 46.7 -1.1
KLMR pmax pmax
comp=Z,32nm,2.3s
RPZ **Rata Peaks** 97.39 226 LR LR 23 47 36.9
comp=Z,628nm,18.7s,baz=18,slow=31
USRK **Ussuriysk Arra** 97.90 322 LR LR 23 48 56.3
comp=Z,311nm,21.6s,baz=39,slow=32
MJAR **Matsushiro Arr** 98.03 313 LR LR 23 46 04.7
comp=Z,511nm,20.9s,baz=70,slow=30
KEST **Kesra** 98.70 48 LR LR 23 56 55.3
comp=Z,110nm,20.0s,baz=227,slow=36
DBIC **Dimbokro** 98.76 80 LR LR 23 57 12.7
comp=Z,244nm,19.3s,baz=271,slow=36
MDJ **Mudanjiang** 99.04 323 P Pdif 23 11 00.8 -0.1
MDJ pmax pmax
comp=Z,3.0nm,0.8s
MDJ pmax pmax
comp=Z,32nm,4.4s
MDJ LR LR
comp=N,83nm,9.1s
MDJ LR LR
comp=E,180nm,12.4s
MDJ LR LR
comp=Z,240nm,10.2s
CN2 **Changchun** 101.87 324 *e*P Pdif 23 11 14.5 +1.0
CN2 *e*PP PP 23 15 27.5 +3.6
CN2 *e*S Sdif 23 22 48.0 -5.9
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,22.0s
CN2 LR LR
comp=E,500nm,22.0s
CN2 LR LR
comp=Z,800nm,23.0s
BJI **Beijing** 109.47 327 Pdif Pdif 23 11 34.0 -13
BJI PP PP 23 16 15.8 -4.2
BJI **Beijing** 109.47 327 SS SS 23 31 44.8 +5.0
BJI LR LR
comp=N,220nm,21.7s
BJI LR LR
comp=E,410nm,22.2s
BJI LR LR
comp=Z,450nm,22.2s
HHC **Hu-ho-hao-te** 111.16 330 *e*PKP PKiKP 23 15 54.5 +0.6
HHC sPKP 23 16 08.0
HHC PP PP 23 16 36.8 +4.6
HHC PKS PKSdf 23 19 30.3 -0.3
HHC SKS SKSdf 23 23 02.0 -2.5
HHC SKKS SKKSac 23 23 26.8 -7.6
HHC SS SS 23 32 01.0 -1.5
HHC AMB AMB
comp=Z,160nm,5.0s
HHC LR LR
comp=N,470nm,17.8s
HHC LR LR
comp=E,380nm,15.5s
HHC LR LR
comp=Z,570nm,19.0s
MKAR **Makanchi Array** 114.47 353 PKIKP PKPdf 23 15 59.8 -0.1
MKAR **Makanchi Array** 114.47 353 PKP PKPdf 23 15 59.8 -0.2
MKAR **Makanchi Array** 114.47 353 PKP PKPdf 23 15 59.8 -0.2
comp=Z,0.3nm,0.7s,baz=28,slow=1.7,SNR=4.6
WMQ **Urumqi** 116.58 349 *e*PKP PKPdf 23 16 05.5 +1.4
WMQ LR LR
comp=N,500nm,29.6s
WMQ LR LR
comp=E,320nm,28.4s
WMQ LR LR
comp=Z,640nm,23.8s
LZH **Lanzhou** 118.55 332 *e*PKP PKPdf 23 16 09.0 +0.7
LZH sPKP 23 16 28.3
LZH LR LR
comp=N,160nm,17.8s
LZH LR LR
comp=E,150nm,18.1s
LZH LR LR
comp=Z,180nm,20.2s
CD2 **Chengdu** 122.89 329 PKP PKPdf 23 16 15.8 -0.8
CD2 sPKP 23 16 34.8
CD2 PP PP 23 17 57.8 +3.8
CD2 PKS PKSdf 23 19 51.0 -2.4
CD2 SKS SKSdf 23 23 21.3 -5.8
CD2 SKKS SKKSac 23 24 44.3 -8.4
CD2 SS SS 23 34 33.0 -2.3
CD2 AMB AMB
comp=Z,120nm,8.2s
CD2 LR LR
comp=N,380nm,20.6s
CD2 LR LR
comp=E,500nm,16.6s
CD2 LR LR
comp=Z,540nm,20.1s
WRA **Warramunga Arr** 122.91 258 PKP PKPdf 23 16 16.0 -0.8
WRA **Warramunga Arr** 122.91 258 PKP PKPdf 23 16 16.0 -0.8
comp=Z,1.7nm,0.9s,baz=79,slow=2.0,SNR=4.0
ASAR **Alice Springs** 123.85 254 PKP PKPdf 23 16 16.8 -1.7
ASAR **Alice Springs** 123.85 254 PKP PKPdf 23 16 16.8 -1.7
comp=Z,1.3nm,0.8s,baz=91,slow=1.9,SNR=4.0
GYA **Guiyang** 124.90 323 Pdif Pdif 23 12 55.8 -0.7
GYA PKP PKPdf 23 16 19.5 -1.2
GYA sPKP 23 16 40.5
GYA PP PP 23 18 11.3 +3.4
GYA PKS PKSdf 23 19 55.5 -2.1
GYA SKKS 23 24 58.0
GYA AMB AMB
comp=Z,110nm,7.8s
GYA LR LR
comp=N,120nm,25.8s
GYA LR LR
comp=E,110nm,24.5s
GYA LR LR
comp=Z,130nm,23.4s
KMI **Kunming** 128.11 326 PKP PKPdf 23 16 29.0 +2.0
KMI sPKP 23 16 45.0
KMI PP PP 23 18 33.5 +4.3
KMI SS SS 23 35 39.0 -2.6
KMI LR LR
comp=N,220nm,24.8s
KMI LR LR
comp=E,310nm,19.7s
KMI LR LR
comp=Z,370nm,17.7s
CMAR **Chiang Mai Arr** 135.56 325 PKP PKPdf 23 16 40.3 -0.6
CMAR **Chiang Mai Arr** 135.56 325 PKP PKPdf 23 16 40.3 -0.6
comp=Z,0.6nm,0.3s,baz=336,slow=2.0,SNR=3.7
HYB **Hyderabad** 143.90 352 *i*P PKPdf 23 16 55.5 -0.6

IDC 28 23:18:00.6±63.0, 20°.11S×176°.88E, h0km, mb4.1/3, mb1 4.2/3, mb1mx3.8/18, mbtmp4.1/3, Error ellipse: s-maj=1104.0km s-min=141.1km az=80.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	33.66	242	P	P	P	23 24 43.0	-0.3
	1.0nm,0.5s,baz=86,slow=12,SNR=5.9							
WRA	**Warramunga Arr**	39.88	263	P	P	P	23 25 36.8	+0.3
	0.9nm,0.2s,baz=96,slow=7.9,SNR=6.9							
ASAR	**Alice Springs**	39.92	257	P	P	P	23 25 36.5	-0.3
	1.3nm,0.4s,baz=96,slow=7.9,SNR=18							

IDC 28 23:18:19.9±1.9, 0°.91N×125°.89E, h0km, mb3.5/3,

mb1 3.8/3, mb1mx3.4/22, mbtmp3.5/3, Error ellipse: s-maj=171.1km s-min=24.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.32**	**159**	P	P	23 23 17.4	-1.9
	0.8nm,0.5s,baz=337,slow=11,SNR=4.6						
ASAR	**Alice Springs**	**25.64**	**163**	P	P	23 23 52.9	+1.4
	0.5nm,0.3s,baz=346,slow=11,SNR=8.1						
MKAR	**Makanchi Array**	**59.41**	**327**	P	P	23 28 24.2	-0.1
	0.3nm,0.4s,baz=118,slow=7.7,SNR=9.3						

WEL 28 23:22:12.1±0.5, 37.84S×176.11E, h172km±4km, ML3.6/18, 4C-2D, Error ellipse: s-maj=4.7km s-min=4.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**0.90**	**118**	PN	Pn	23 22 38.2	0.0
URZ				SN	Sn	23 22 57.8	-0.5
MWZ	**Matawai**	**1.23**	**114**	PN	Pn	23 22 40.8	0.0
RAHZ	**Arahi**	**1.32**	**145**	⇓PN	Pn	23 22 42.1	+0.4
RAHZ				SN	Sn	23 23 04.4	-0.2
BKZ	**Black Stump Fm**	**1.36**	**167**	⇑PN	Pn	23 22 41.9	-0.3
NMHZ	**Naumai**	**1.37**	**157**	PN	Pn	23 22 42.5	+0.3
TUVZ	**Tukino**	**1.47**	**194**	PN	Pn	23 22 43.6	+0.4
FWVZ	**Far West T-bar**	**1.48**	**197**	PN	Pn	23 22 43.7	+0.3
WNVZ	**Wahianoa**	**1.54**	**195**	⇑PN	Pn	23 22 44.1	+0.2
MTVZ	**Mangateitei**	**1.62**	**198**	⇓PN	Pn	23 22 44.9	+0.3
BHHZ	**Black Hill Sta**	**1.65**	**181**	⇑PN	Pn	23 22 44.4	-0.5
MCHZ	**McNeill Hill**	**1.67**	**164**	PN	Pn	23 22 45.3	+0.3
KNZ	**Kokohu**	**1.71**	**134**	PN	Pn	23 22 45.1	-0.2
MXZ	**Matakaoa Point**	**1.77**	**82**	PN	Pn	23 22 46.0	0.0
CNGZ	**Carnagh Statio**	**1.78**	**112**	PN	Pn	23 22 46.6	+0.5
MHGZ	**Mahia Peninsul**	**1.93**	**133**	PN	Pn	23 22 47.5	-0.2
KAHZ	**Kahuranaki**	**2.04**	**163**	⇑PN	Pn	23 22 48.6	-0.5
PNHZ	**Pukenui**	**2.07**	**178**	PN	Pn	23 22 48.5	-0.9
TSZ	**Takapari Road**	**2.22**	**183**	PN	Pn	23 22 49.8	-1.2
WPHZ	**Waipukurau**	**2.24**	**173**	PN	Pn	23 22 50.1	-1.1
PXZ	**Pawanui**	**2.27**	**165**	PN	Pn	23 22 50.2	-1.3
DVHZ	**Dannevirke**	**2.46**	**179**	PN	Pn	23 22 52.1	-1.7
PRHZ	**Porangahau**	**2.46**	**171**	PN	Pn	23 22 52.5	-1.3
POWZ	**Post Office Ro**	**2.56**	**186**	PN	Pn	23 22 53.4	-1.6
BFZ	**Birch Farm**	**2.84**	**178**	PN	Pn	23 22 56.2	-2.1
MRZ	**Mangatainoka R**	**2.85**	**188**	PN	Pn	23 22 56.2	-2.2
TIWZ	**Tintock**	**2.94**	**183**	PN	Pn	23 22 57.4	-2.2
OGWZ	**Otaki Gorge**	**3.06**	**193**	PN	Pn	23 22 58.9	-2.1
HOWZ	**Holdsworth Sta**	**3.09**	**188**	PN	Pn	23 22 58.7	-2.7
KIW	**Kapiti Island**	**3.16**	**197**	PN	Pn	23 22 59.8	-2.5
TMWZ	**Te Maipa**	**3.27**	**183**	PN	Pn	23 23 01.0	-2.7
MTW	**Mount Morrison**	**3.35**	**188**	PN	Pn	23 23 01.4	-3.2
CAW	**Cannon Point**	**3.36**	**194**	PN	Pn	23 23 01.9	-2.9
TRWZ	**Traveller**	**3.57**	**185**	PN	Pn	23 23 04.4	-3.0
MSWZ	**Moikau Station**	**3.63**	**190**	PN	Pn	23 23 04.7	-3.5
TCW	**Tory Channel**	**3.66**	**202**	PN	Pn	23 23 05.6	-2.8
BHW	**Baring Head**	**3.69**	**195**	PN	Pn	23 23 05.3	-3.6
PLWZ	**Palliser**	**3.79**	**190**	PN	Pn	23 23 06.5	-3.7
TUWZ	**Tuamarina**	**3.96**	**204**	PN	Pn	23 23 09.2	-3.0
QRZ	**Quartz Range**	**4.08**	**191**	PN	Pn	23 23 10.8	-3.0
THZ	**Tophouse**	**4.63**	**211**	PN	Pn	23 23 18.5	-2.5
KHZ	**Kahutara**	**4.98**	**202**	PN	Pn	23 23 21.7	-3.7
LTZ	**Lake Taylor**	**5.74**	**210**	PN	Pn	23 23 31.4	-4.2

*IDC **28** 23:33:40.8±18.0, 22.93S×179.76W, h273km±188km, mb3.7/4, mb1 3.9/5, mb1mx3.5/19, mbtmp3.7/5, Error ellipse: s-maj=107.2km s-min=29.1km az=6.0*
*ISCJB **28** 23:34:02.2±0.7, 24.1S±0.2×180.0E±0.1, h518km, mb4.0/4, Error ellipse: s-maj=24.3km s-min=9.8km az=159.0*
*AUST **28** 23:34:04.8±11.0, 23.67S×179.96W, h535km±1km, Error ellipse: s-maj=6.5km s-min=2.3km az=340.0*

ISC 28 23:34:02.8±0.9, 24.1S±0.2×179.9W±0.1, h518km, n15, σ0.98/14, mb3.9/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**10.53**	**63**	S	**S**	**23 38 24.0**	**+0.4**
	baz=10,SNR=6.3						
URZ	**Urewera**	**14.33**	**190**	P	**P**	**23 37 05.6**	**0.0**
	2.4nm,0.3s,baz=7.0,slow=10,SNR=10						
LHI	**Lord Howe Isla**	**20.01**	**244**	S	S	23 40 58.1	-16
	baz=20,SNR=4.0						
EIDS	**Eidsvold**	**26.39**	**261**	P	**P**	**23 38 58.2**	**+0.6**
	baz=26,SNR=4.1						
CMSA	**Cobar Meteorol**	**31.24**	**249**	P	**P**	**23 39 40.4**	**+0.6**
	baz=31,SNR=7.7						
MTSU	**Mount Surprise**	**33.86**	**273**	P	**P**	**23 40 02.6**	**+0.4**
	baz=34,SNR=14						
STKA	**Stephens Creek**	**34.75**	**248**	P	**P**	**23 40 09.7**	**+0.2**
	1.0nm,0.4s,baz=81,slow=8.2,SNR=7.6						
ASAR	**Alice Springs**	**42.11**	**261**	P	**P**	**23 41 09.2**	**-0.3**
	4.7nm,0.7s,baz=96,slow=7.8,SNR=31						
WRA	**Warramunga Arr**	**42.51**	**266**	P	**P**	**23 41 11.7**	**-0.9**
	9.3nm,0.5s,baz=102,slow=8.2,SNR=36						
KDU	**Kakadu**	**46.42**	**275**	P	**P**	**23 41 41.8**	**-1.1**
	baz=46,SNR=4.5						
KNRA	**Kununurra**	**48.80**	**270**	P	**P**	**23 42 00.3**	**-0.4**
	baz=49,SNR=7.0						
FITZ	**Fitzroy Crossi**	**50.92**	**266**	P	**P**	**23 42 16.0**	**-0.3**
	baz=51,SNR=7.6						
MORW	**Morawa**	**56.91**	**250**	P	**P**	**23 42 58.1**	**-0.4**
	baz=57,SNR=3.7						
TXAR	**Lajitas Array**	**90.45**	**58**	P	**P**	**23 46 08.2**	**-1.1**
	0.5nm,0.7s,baz=212,slow=6.0,SNR=7.9						
BRTR	**Keskin Array B**	**147.80**	**307**	PKPbc	**PKPbc**	**23 52 52.0**	**+2.4**
	0.4nm,0.6s,baz=92,slow=5.1,SNR=3.6						

IDC 28 23:42:60.0±5.8, 5.59S×133.73E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/17, mbtmp3.4/3, ML3.4/1, Error ellipse: s-maj=328.4km s-min=33.5km az=78.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.28**	**178**	Pn	Pn	23 46 21.5	-2.1
	0.2nm,0.3s,baz=356,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**17.97**	**179**	P	P	23 47 12.8	+0.7
	0.1nm,0.3s,baz=3.1,slow=12,SNR=7.3						
MKAR	**Makanchi Array**	**69.15**	**325**	P	P	23 54 08.3	0.0
	0.4nm,0.8s,baz=114,slow=7.7,SNR=3.7						

GUC 28 23:48:51.3±0.6, 28.48S×71.42W, h15km±11km, ML4.2, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VACH	**Vallenar**	**0.59**	**99**	⇓*iP*	Pg	23 48 49.3	-14
VACH				*i* S	Sg	23 48 56.8	-14
VACH				AML	AML	23 48 57.4	
	comp=N,40μm,0.1s						
LCO	**Las Campanas**	**0.82**	**130**	*eP*	Pb	23 49 05.3	-2.3
LCO				*i* S	Sg	23 49 16.0	-2.8
CPCH	**Copiapo**	**1.47**	**40**	⇓*iP*	Pn	23 49 14.9	-2.3
CPCH				*i* S	Sn	23 49 33.1	-3.1
CPCH				AML	AML	23 49 34.7	
	comp=N,4μm,0.1s						
CDCH	**Caldera**	**1.51**	**21**	*eP*	Pn	23 49 15.8	-1.9
CDCH				*i* S	Sn	23 49 33.5	-3.6

IDC 29 00:06:36.3±35.0, 60.51S×23.52W, h0km, mb3.9/1, mb1 3.9/1, mb1mx3.5/16, mbtmp3.9/1, Error ellipse: s-maj=2460.0km s-min=78.3km az=137.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TORD	**Torodi Ar. Bea**	**76.13**	**25**	P	P	00 18 25.8	0.0
	1.0nm,0.8s,baz=212,slow=5.8,SNR=5.2						
YKA	**Yellowknife Ar**	**140.72**	**313**	PKP	PKPdf	00 26 06.2	0.0
	0.5nm,0.7s,baz=125,slow=2.4,SNR=8.5						
ILAR	**Eielson Array**	**154.40**	**304**	PKPbc	PKPbc	00 26 36.9	-0.1
	1.0nm,0.9s,baz=132,slow=1.0,SNR=11						

*ISK **29** 00:14:16.6, 37.42N×26.78E, h12km, MD2.5*
*ISCJB **29** 00:14:18.9±1.3, 37.42N±0.04×26.88E±0.08, h10km±8km, Error ellipse: s-maj=11.7km s-min=6.1km az=161.2*
*DDA **29** 00:14:20.0, 37.39N×26.98E, h7km, MD2.8*

*CSEM **29** 00:14:19.1±0.8, 37.42N×26.91E, h10km, MD2.5, Error ellipse: s-maj=17.5km s-min=8.4km az=61.0*

ISC 29 00:14:19.7±1.4, 37.43N±0.03×27.02E±0.06, h8km±11km, n13, σ0.63/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.31**	**32**	*i* Pg	**Pb**	**00 14 27.7**	**+0.2**
GCAM				*i* Sg	**Sb**	**00 14 33.3**	**+0.5**
BODT	**Bodrum**	**0.44**	**148**	*e*PG	**Pg**	**00 14 28.0**	**-0.2**
BODT				*e*SG	**Sb**	**00 14 36.3**	**0.0**
BODT	**Bodrum**	**0.44**	**148**	*e*Pg	**Pg**	**00 14 28.0**	**-0.2**
BODT				*e*Sg	**Sb**	**00 14 36.3**	**0.0**
MLSB	**Milas**	**0.62**	**103**	*e*PG	**Pb**	**00 14 32.5**	**-0.2**
MLSB				*e*SG	**Sn**	**00 14 44.3**	**-0.5**
MLSB	**Milas**	**0.62**	**103**	*e*Pg	**Pb**	**00 14 32.5**	**-0.2**
MLSB				*e*Sg	**Sn**	**00 14 44.3**	**-0.5**
AYDN	**Tasoluk**	**0.72**	**71**	*e*P	**Pb**	**00 14 34.7**	**+0.3**
AYDN				*e*S	**Sb**	**00 14 45.3**	**+0.8**
AYDN	**Tasoluk**	**0.72**	**71**	*e*P	**Pb**	**00 14 34.7**	**+0.3**
AYDN				*e*S	**Sb**	**00 14 45.3**	**+0.8**
IZM	**Izmir**	**0.98**	**11**	*e*PG	**Pg**	**00 14 37.2**	**-1.3**
IZM				*e*SG	**Sg**	**00 14 52.2**	**+0.9**
IZM	**Izmir**	**0.98**	**11**	*e*Pg	**Pg**	**00 14 37.2**	**-1.3**
IZM				*e*Sg	**Sg**	**00 14 52.2**	**+0.9**
URLA	**Izmir**	**0.98**	**340**	*e*P	**Pb**	**00 14 39.3**	**+0.3**
URLA				*e*S	**Sn**	**00 14 54.0**	**+0.1**
URLA	**Izmir**	**0.98**	**340**	*e*P	**Pb**	**00 14 39.3**	**+0.3**
URLA				*e*S	**Sn**	**00 14 54.0**	**+0.1**
YER	**Yerkesik**	**1.05**	**106**	*e*PN	**Pn**	**00 14 40.6**	**-0.1**
YER	**Yerkesik**	**1.05**	**106**	*e*Pn	**Pn**	**00 14 40.6**	**-0.1**

IDC 29 00:18:07.5±1.4, 42.72S×72.73W, h0km, mb3.8/2, mb1 4.2/3, mb1mx3.9/17, mbtmp3.9/3, ML3.8/1, MS3.1/1, Ms1 3.1/1, ms1mx2.9/23, Error ellipse: s-maj=39.5km s-min=16.8km az=127.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.57**	**40**	Pn	Pn	00 18 51.5	+1.0
	3.9nm,0.3s,baz=218,slow=17,SNR=109						
PLCA				Pg	Pb	00 18 54.2	-0.3
	10nm,0.3s,baz=222,slow=16,SNR=81						
PLCA				Lg	Lg	00 19 29.2	
	21nm,0.3s,baz=136,slow=12,SNR=12						
PLCA				LR	LR	00 20 02.8	
	comp=Z,389nm,21.1s,baz=192,slow=45						
VNDA	**Vanda**	**55.47**	**192**	P	P	00 27 43.6	+0.2
	3.9nm,1.3s,baz=131,slow=7.7,SNR=4.2						
TXAR	**Lajitas Array**	**77.15**	**333**	P	P	00 30 03.3	+0.4
	0.4nm,0.8s,baz=165,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**161.82**	**68**	PKPab	PKPab	00 38 54.0	-1.7
	0.2nm,0.5s,baz=260,slow=4.8,SNR=4.2						

KRSC 29 00:22:13.9±0.1, 55.82N×163.13E, h22km±22km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.43**	**336**	P	Pb	00 22 23.6	+0.9
KBTR				*e*S	Sn	00 22 31.0	-0.9
KBG	**Krutoberegovo**	**0.50**	**331**	*e*P	Pb	00 22 24.5	+0.6
KBG				*e*S	Sn	00 22 32.6	-0.8
SMKR	**Semkarok**	**1.20**	**310**	*e*S	Sb	00 22 52.6	+1.3
BDR	**Baidarnaya**	**1.31**	**306**	*e*P	Pb	00 22 37.8	-0.1
BDR				*e*S	Sb	00 22 55.1	+0.7
ZLN	**Zelenaya**	**1.32**	**280**	*e*P	Pb	00 22 37.9	-0.3
ZLN				*e*S	Sb	00 22 54.6	-0.2
CIRR	**Tsirk**	**1.37**	**283**	*e*P	Pb	00 22 38.7	-0.3
BZGR	**Bezymyannyi-Gr**	**1.38**	**276**	*e*P	Pb	00 22 38.6	-0.5
BZGR				*e*S	Sb	00 22 57.3	+1.0
SRKR	**Sorokina**	**1.38**	**308**	*e*P	Pb	00 22 39.3	+0.2
SRKR				*e*S	Sb	00 22 58.0	+1.7
LGNR	**Loginova**	**1.40**	**282**	*e*P	Pn	00 22 38.1	-0.3
KLY	**Klyuchi**	**1.48**	**291**	*e*P	Pn	00 22 38.7	-0.4
KLY				*e*S	Sn	00 22 56.6	-1.1
BZWR	**Bezymyannyi-We**	**1.49**	**277**	*e*P	Pb	00 22 40.6	-0.5
BZMR	**Bezymyannaya**	**1.49**	**276**	*e*P	Pn	00 22 40.2	+0.6
KRSR	**Krestovskiy**	**1.49**	**287**	*e*P	Pn	00 22 40.1	+0.6
KRSR				*e*S	Sb	00 22 59.3	-0.4
MKZ	**Mys Kozlova**	**1.50**	**213**	P	Pn	00 22 40.1	+0.7
MKZ				*e*S	Sb	00 22 59.3	-0.2
KIRR	**Kirishev**	**1.58**	**276**	*e*P	Pb	00 22 41.9	-0.6
KIRR				*e*S	Sb	00 23 03.1	+0.9
KMNR	**Kamenistaya**	**1.64**	**269**	*e*P	Pb	00 22 42.5	-1.0
KMNR				*e*S	Sb	00 23 03.7	-0.1
KPT	**Kopyto**	**1.65**	**276**	*e*P	Pb	00 22 42.9	-0.7
BKI	**Bering**	**1.73**	**110**	*e*P	Pb	00 22 44.3	-0.6
BKI				*e*S	Sb	00 23 06.6	+0.4
TUMR	**Tumrok**	**1.78**	**254**	*e*P	Pb	00 22 45.3	-0.6
TUMR				*e*S	Sb	00 23 07.4	-0.5
KOZ	**Kozyrevsk**	**1.85**	**279**	*e*P	Pb	00 22 46.7	-0.3
KOZ				*e*S	Sb	00 23 09.9	+0.2
SRDR	**Sredinnyy**	**1.98**	**286**	*e*P	Pb	00 22 48.0	-1.3
SRDR				*e*S	Sb	00 23 13.7	+0.2
ESO	**Esso**	**2.50**	**274**	*e*P	Pn	00 22 54.9	+1.7
SPN	**Mys Shipunski**	**3.27**	**215**	*e*P	Pn	00 23 04.6	+0.8
SPN				*e*S	Sn	00 23 41.5	-0.6
NLC	**Nalytchevo**	**3.45**	**221**	*e*P	Pn	00 23 07.2	+2.0
NLC				*e*S	Sn	00 23 47.8	+1.4
SDLR	**Sedlovina**	**3.55**	**226**	*e*P	Pn	00 23 10.2	+2.4
SDLR				*e*S	Sn	00 23 51.2	+2.0
KRER	**Koryakskii**	**3.59**	**227**	*e*P	Pn	00 23 10.9	+2.5
SMAR	**Somma**	**3.59**	**226**	P	Pn	00 23 11.3	+2.8
AVH	**Avacha**	**3.62**	**227**	*e*P	Pn	00 23 11.5	+2.8
AVH				*e*S	Sn	00 23 53.4	+2.6
UGLR	**Uglovaya**	**3.62**	**226**	*e*P	Pn	00 23 11.2	+2.4
UGLR				*e*S	Sn	00 23 53.2	+2.2
KOK	**Koryaka**	**3.64**	**228**	*e*P	Pn	00 23 12.0	+3.0
GNL	**Ganaly**	**3.68**	**237**	*e*P	Pn	00 23 12.7	+3.1
MTVR	**Mutnovka**	**4.43**	**223**	P	Pn	00 23 22.3	+2.4
MTVR				S	Sn	00 24 11.5	+0.6

*AUST **29** 00:29:53.1, 4.75S×149.58E, h300km*
*ISCJB **29** 00:30:01.3±0.4, 5.15S±0.05×149.50E±0.08, h400km, mb4.2/28, Error ellipse: s-maj=11.1km s-min=5.1km az=22.0*
*IDC **29** 00:30:01.1±1.2, 5.21S×149.57E, h386km±11km, mb3.8/14, mb1 3.9/15, mb1mx3.9/19, mbtmp3.8/15, Error ellipse: s-maj=17.2km s-min=8.1km az=105.0*
*NEIC **29** 00:30:01.5±1.0, 5.19S×149.60E, h395km±10km, mb4.5/18, Error ellipse: s-maj=10.9km s-min=7.3km az=100.0*

ISC 29 00:30:02.3±0.5, 5.21S±0.06×149.55E±0.10, h400km, n102, σ1.09/112, mb4.4/27, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.79**	**210**	*e*Pn	**Pn**	**00 31 21.0**	**-1.2**
PMG				*e*Sn	**S**	**00 32 25.4**	**-1.7**
PMG	**Port Moresby**	**4.79**	**210**	P	**Pn**	**00 31 21.2**	**-1.0**
	8.2nm,0.3s,baz=51,slow=6.5,SNR=15						
PMG				S	**S**	**00 32 24.3**	**-2.8**
	3.0nm,0.3s,baz=68,slow=16,SNR=7.2						
MMPI	**Meraukе**	**9.66**	**250**	P	**P**	**00 32 14.6**	**-1.5**
	baz=9.9,SNR=3.6						
COEN	**Coen**	**10.72**	**215**	P	**Pn**	**00 32 30.3**	**+1.6**
	baz=11,SNR=6.3						
MTSU	**Mount Surprise**	**13.82**	**201**	P	**Pn**	**00 33 04.5**	**-0.1**
	baz=14,SNR=12						
KDU	**Kakadu**	**18.42**	**245**	P	**P**	**00 33 50.4**	**-1.0**
	baz=19,SNR=18						
KDU				S	**S**	**00 37 06.0**	**+5.6**
	baz=19,SNR=4.3						
EIDS	**Eidsvold**	**20.10**	**176**	*e*Pn	**P**	**00 34 09.1**	**+1.5**
	20nm,0.9s						
EIDS	**Eidsvold**	**20.10**	**176**	P	**P**	**00 34 09.5**	**+1.9**
	baz=21,SNR=3.4						
WRAB	**Tennant Creek**	**20.81**	**224**	*e*Pn	**P**	**00 34 14.4**	**+0.2**
	22nm,0.5s						
WRAB				*e*Sn	**S**	**00 37 40.8**	**+1.1**
WRA	**Warramunga Arr**	**20.82**	**224**	P	**P**	**00 34 14.6**	**+0.2**
WRA				S	**S**	**00 37 43.4**	**+3.4**
WRA				PcP	**PcP**	**00 38 06.5**	**+0.5**
WRA	**Warramunga Arr**	**20.82**	**224**	P	**P**	**00 34 14.6**	**+0.2**
	16nm,0.4s,baz=51,slow=9.7,SNR=91						
WRA				S	**S**	**00 37 43.4**	**+3.4**
	7.3nm,1.0s,baz=44,slow=18,SNR=8.7						
WRA				PcP	**PcP**	**00 38 06.5**	**+0.5**
	2.1nm,0.5s,baz=46,slow=2.0,SNR=7.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RMQ	**Roma**	**21.17**	**182**	P	**P**	**00 34 20.3**	**+2.9**
	baz=22,SNR=4.7						
KNRA	**Kununurra**	**22.91**	**241**	P	**P**	**00 34 33.3**	**0.0**
	baz=23,SNR=23						
AS31	**Alice Springs**	**23.75**	**218**	*e*P	**P**	**00 34 40.6**	**-0.2**
ASAR	**Alice Springs**	**23.75**	**218**	P	**P**	**00 34 40.9**	**+0.1**
ASAR				PcP	**PcP**	**00 38 12.9**	**+0.9**
ASAR				S	**S**	**00 38 26.1**	**-0.4**
ASAR	**Alice Springs**	**23.75**	**218**	P	**P**	**00 34 40.9**	**+0.1**
	2.9nm,0.4s,baz=51,slow=8.3,SNR=56						
ASAR				PcP	**PcP**	**00 38 12.9**	**+0.9**
	1.4nm,0.7s,baz=24,slow=2.7,SNR=5.2						
ASAR				S	**S**	**00 38 26.1**	**-0.4**
	1.1nm,0.6s,baz=52,slow=14,SNR=6.3						
FITZ	**Fitzroy Crossi**	**26.64**	**239**	*e*P	**P**	**00 35 06.2**	**-0.4**
	40nm,0.4s						
FITZ	**Fitzroy Crossi**	**26.64**	**239**	P	**P**	**00 35 06.3**	**-0.4**
	12nm,0.4s,baz=52,slow=10,SNR=96						
FITZ	**Fitzroy Crossi**	**26.64**	**239**	P	**P**	**00 35 06.3**	**-0.4**
	baz=27,SNR=22						
MEEK	**Meekatharra**	**36.41**	**231**	P	**P**	**00 36 30.7**	**-0.2**
	baz=37,SNR=35						
GIRL	**Giralia**	**38.25**	**240**	P	**P**	**00 36 47.0**	**+0.7**
	baz=38,SNR=5.7						
MORW	**Morawa**	**39.59**	**229**	P	**P**	**00 36 56.8**	**-0.3**
	baz=40,SNR=3.3						
KLBR	**Kellerberrin**	**39.70**	**225**	P	**P**	**00 36 57.2**	**-0.8**
	baz=40,SNR=6.6						
BLDU	**Ballidu**	**39.91**	**227**	P	**P**	**00 36 59.2**	**-0.5**
	baz=40,SNR=9.8						
CISI	**Cisompet, Garu**	**41.53**	**265**	P	**P**	**00 37 11.7**	**-1.3**
	baz=42,SNR=4.1						
MJAR	**Matsushiro Arr**	**42.87**	**347**	P	**P**	**00 37 23.1**	**-0.2**
MJAR	**Matsushiro Arr**	**42.87**	**347**	P	**P**	**00 37 23.0**	**-0.2**
	1.2nm,0.3s,baz=171,slow=9.0,SNR=8.3						
KSRS	**Korea Array**	**46.99**	**336**	P	**P**	**00 37 55.5**	**+0.2**
	2.5nm,0.7s,baz=157,slow=8.0,SNR=7.5						
KSAR	**Wonju Array Be**	**47.00**	**336**	P	**P**	**00 37 55.5**	**+0.2**
USRK	**Ussuriysk Arra**	**51.66**	**344**	P	**P**	**00 38 30.8**	**+0.8**
	1.6nm,0.4s,baz=156,slow=9.1,SNR=6.1						
CMAR	**Chiang Mai Arr**	**55.14**	**297**	P	**P**	**00 38 56.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**55.14**	**297**	P	**P**	**00 38 56.0**	**+0.6**
	2.8nm,0.5s,baz=121,slow=5.8,SNR=11						
CHTO	**Chiang Mai**	**55.27**	**297**	*e*P	**P**	**00 38 55.7**	**-0.7**
PETK	**Petropavlovsk-**	**58.51**	**6**	P	**P**	**00 39 18.3**	**+0.2**
PETK	**Petropavlovsk-**	**58.51**	**6**	P	**P**	**00 39 18.3**	**+0.2**
	4.7nm,0.7s,baz=168,slow=7.4,SNR=10						
FX1	**Attu Island--F**	**61.23**	**16**	*e*P	**P**	**00 39 37.1**	**+0.6**
ULN	**Ulaanbaatar**	**64.68**	**330**	*e*P	**P**	**00 39 59.8**	**+0.7**
	5.2nm,0.8s						
SONM	**Songino Array**	**64.99**	**329**	P	**P**	**00 40 01.7**	**+0.6**
SONM				PcP	**PcP**	**00 40 30.4**	**0.0**
SONM	**Songino Array**	**64.99**	**329**	P	**P**	**00 40 01.7**	**+0.6**
	4.7nm,0.5s,baz=136,slow=5.1,SNR=28						
SONM				PcP	**PcP**	**00 40 30.4**	**0.0**
	1.1nm,0.4s,baz=142,slow=5.4,SNR=4.3						
LSA	**Lhasa**	**65.82**	**306**	*e*P	**P**	**00 40 07.9**	**+0.7**
	7.2nm,0.6s						
TAPN	**Taplejung**	**67.86**	**302**	*e*P	**P**	**00 40 19.9**	**+0.1**
	18nm,0.6s						
ODAN	**Odare**	**67.98**	**302**	*e*P	**P**	**00 40 20.5**	**+0.1**
	32nm,0.6s						
RAMN	**Ramite**	**68.68**	**301**	*e*P	**P**	**00 40 24.7**	**0.0**
	9.4nm,0.4s						
UNV	**Unalaska Valle**	**69.38**	**26**	*e*P	**P**	**00 40 27.6**	**-0.4**
	7.3nm,0.6s						
GUN	**Gumba**	**69.58**	**302**	*e*P	**P**	**00 40 30.4**	**+0.1**
	33nm,0.4s						
PKI	**Pulchoki**	**69.88**	**302**	*e*P	**P**	**00 40 31.5**	**-0.6**
	7.1nm,0.3s						
PKIN	**Phulchoki**	**69.89**	**302**	*e*P	**P**	**00 40 31.5**	**-0.6**
	4.8nm,0.4s						
KKN	**Kakani**	**70.05**	**302**	*e*P	**P**	**00 40 32.9**	**-0.1**
	16nm,0.4s						
DMN	**Daman**	**70.14**	**302**	*e*P	**P**	**00 40 33.7**	**+0.1**
	25nm,0.5s						
KOLN	**Koldanda**	**71.47**	**301**	*e*P	**P**	**00 40 41.2**	**-0.2**
	15nm,0.4s						
DANN	**Dangsing**	**71.50**	**302**	*e*P	**P**	**00 40 40.9**	**-0.8**
	17nm,0.5s						
VNDA	**Vanda**	**72.56**	**177**	P	**P**	**00 40 47.4**	**+0.8**
VNDA	**Vanda**	**72.56**	**177**	P	**P**	**00 40 47.4**	**+0.8**
	1.7nm,0.5s,baz=332,slow=7.1,SNR=17						
BILL	**Bilibino**	**74.03**	**6**	*e*P	**P**	**00 40 55.5**	**+0.3**
	9.1nm,1.0s						
CHGN	**Chignik**	**74.54**	**27**	*e*P	**P**	**00 40 57.4**	**-0.8**
MK31	**Makanchi Array**	**78.53**	**320**	*e

Error ellipse: s-maj=5.8km s-min=4.5km az=43.4
*BUC **29** 00:30:52.2±1.2, 45°.76N×26°.67E, h131km±10km, MD3.6/2, Error ellipse: s-maj=9.5km s-min=6.9km az=322.0*
*CSEM **29** 00:30:52.2, 45°.76N×26°.67E, h131km, MD3.6/2, After BUC*
ISC 29 00:30:51.9±1.5, **45°.75N**±0°.03×**26°.69E**±0°.03, **h134**km±8km, **n90**, σ0s.70/121, **56C-9D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	Plostina	0.10	343	⇑iP	Pn	00 31 10.1	0.0
PLOR				iS	Sn	00 31 23.6	-0.4
PLOR	Plostina	0.10	343	⇑iP	Pn	00 31 10.1	0.0
PLOR	Plostina	0.10	343	⇑iP	Pn	00 31 10.1	0.0
PLOR				iS	Sn	00 31 23.6	-0.4
VRI	Vrincioaia	0.12	12	⇑iP	Pn	00 31 10.2	+0.1
VRI				iS	Sn	00 31 23.6	-0.4
VRI	Vrincioaia	0.12	12	⇑iP	Pn	00 31 10.2	+0.1
VRI	Vrincioaia	0.12	12	⇑iP	Pn	00 31 10.2	+0.1
VRI				iS	Sn	00 31 23.6	-0.4
ODBI	Odobesti	0.25	87	⇑iP	Pn	00 31 11.2	+0.8
ODBI	Odobesti	0.25	87	⇑iP	Pn	00 31 11.2	+0.8
ODBI	Odobesti	0.25	87	⇑iP	Pn	00 31 11.2	+0.8
PETR	Petresti	0.38	94	⇑iP	Pn	00 31 11.2	+0.4
PETR				iS	Sn	00 31 25.0	-0.1
PETR	Petresti	0.38	94	⇑iP	Pn	00 31 11.2	+0.4
PETR	Petresti	0.38	94	⇑iP	Pn	00 31 11.2	+0.4
PETR				iS	Sn	00 31 25.0	-0.1
GRER		0.42	152	⇑iP	Pn	00 31 12.0	+0.9
GRER		0.42	152	⇑iP	Pn	00 31 12.0	+0.9
GRER		0.42	152	⇑iP	Pn	00 31 12.0	+0.9
MLR	Muntele Rosu	0.59	244	⇑iP	Pn	00 31 12.4	+0.3
MLR				iS	Sn	00 31 26.3	-1.1
MLR	Muntele Rosu	0.59	244	⇑iP	Pn	00 31 12.4	+0.3
MLR	Muntele Rosu	0.59	244	⇑iP	Pn	00 31 12.4	+0.3
MLR				iS	Sn	00 31 26.3	-1.1
ISR	Istrita	0.64	190	⇑iP	Pn	00 31 12.9	+0.5
ISR				iS	Sn	00 31 28.2	+0.3
ISR	Istrita	0.64	190	⇑iP	Pn	00 31 12.9	+0.5
ISR	Istrita	0.64	190	⇑iP	Pn	00 31 12.9	+0.5
ISR				iS	Sn	00 31 28.2	+0.3
TESR	Tescani	0.76	358	⇑iP	Pn	00 31 13.2	0.0
TESR	Tescani	0.76	358	⇑iP	Pn	00 31 13.2	0.0
TESR	Tescani	0.76	358	⇑iP	Pn	00 31 13.2	0.0
SECR		0.84	212	⇑iP	Pn	00 31 14.6	+0.8
SECR				iS	Sn	00 31 30.8	+0.4
SECR		0.84	212	⇑iP	Pn	00 31 14.6	+0.8
SECR		0.84	212	⇑iP	Pn	00 31 14.6	+0.8
SECR				iS	Sn	00 31 30.8	+0.4
PGOR	Pogoanele	0.87	166	⇑iP	Pn	00 31 14.5	+0.5
PGOR				iS	Sn	00 31 29.6	-1.2
PGOR	Pogoanele	0.87	166	⇑iP	Pn	00 31 14.5	+0.5
PGOR	Pogoanele	0.87	166	⇑iP	Pn	00 31 14.5	+0.5
PGOR				iS	Sn	00 31 29.6	-1.2
DOPR	Dopca	0.94	284	⇑iP	Pn	00 31 15.0	+0.4
DOPR				iS	Sn	00 31 31.1	-0.8
DOPR	Dopca	0.94	284	⇑iP	Pn	00 31 15.0	+0.4
DOPR	Dopca	0.94	284	⇑iP	Pn	00 31 15.0	+0.4
DOPR				iS	Sn	00 31 31.1	-0.8
PLAR	PLOIESTI	0.96	210	iS	Sn	00 31 33.0	+0.8
PLAR	PLOIESTI	0.96	210	S	Sn	00 31 33.0	+0.8
PLAR	PLOIESTI	0.96	210	iS	Sn	00 31 33.0	+0.8
SULR		1.12	196	⇑iP	Pn	00 31 16.9	+0.6
SULR				iS	Sn	00 31 35.0	+0.2
SULR		1.12	196	⇑iP	Pn	00 31 16.9	+0.6
SULR		1.12	196	⇑iP	Pn	00 31 16.9	+0.6
SULR				iS	Sn	00 31 35.0	+0.2
VOIR		1.20	255	⇑iP	Pn	00 31 17.3	+0.2
VOIR				iS	Sn	00 31 35.2	-1.1
VOIR		1.20	255	⇑iP	Pn	00 31 17.3	+0.2
VOIR		1.20	255	⇑iP	Pn	00 31 17.3	+0.2
VOIR				iS	Sn	00 31 35.2	-1.1
AMRR	Amara	1.23	158	⇑iP	Pn	00 31 17.8	+0.4
AMRR				iS	Sn	00 31 36.3	-0.4
AMRR	Amara	1.23	158	⇑iP	Pn	00 31 17.8	+0.4
AMRR	Amara	1.23	158	⇑iP	Pn	00 31 17.8	+0.4
AMRR				iS	Sn	00 31 36.3	-0.4
LEOM	Leova	1.30	56	⇑iP	Pn	00 31 18.9	+0.8
LEOM				iS	Sn	00 31 38.0	0.0
LEOM	Leova	1.30	56	⇑iP	Pn	00 31 18.9	+0.8
LEOM	Leova	1.30	56	⇑iP	Pn	00 31 18.9	+0.8
LEOM				iS	Sn	00 31 38.0	0.0
INCR	INCERC-Sediu C	1.36	196	iS	Sn	00 31 38.5	-0.7
INCR	INCERC-Sediu C	1.36	196	S	Sn	00 31 38.5	-0.7
INCR	INCERC-Sediu C	1.36	196	iS	Sn	00 31 38.5	-0.7
HARR	Harsova	1.38	140	⇑iP	Pn	00 31 19.1	+0.2
HARR	Harsova	1.38	140	⇑iP	Pn	00 31 19.1	+0.2
HARR	Harsova	1.38	140	⇑iP	Pn	00 31 19.1	+0.2
BUC	Bucharest	1.40	198	iS	Sn	00 31 39.3	-0.7
BUC	Bucharest	1.40	198	S	Sn	00 31 39.3	-0.7
CIOR	Ciorogarla	1.42	204	iS	Sn	00 31 39.8	-0.6
CIOR	Ciorogarla	1.42	204	S	Sn	00 31 39.8	-0.6
CIOR	Ciorogarla	1.42	204	iS	Sn	00 31 39.8	-0.6
BUC1	Bucharest	1.48	199	iS	Sn	00 31 39.3	-2.2
GOLR		1.52	234	iS	Sn	00 31 42.2	-0.2
GOLR		1.52	234	S	Sn	00 31 42.2	-0.2
GOLR		1.52	234	iS	Sn	00 31 42.2	-0.2
IAS	Iasi	1.56	22	iS	Sn	00 31 42.3	-0.8
IAS	Iasi	1.56	22	S	Sn	00 31 42.3	-0.8
IAS	Iasi	1.56	22	iS	Sn	00 31 42.3	-0.8
TLCR		1.60	110	⇑iP	Pn	00 31 22.0	+0.7
TLCR				iS	Sn	00 31 42.8	-1.0
TLCR		1.60	110	⇑iP	Pn	00 31 22.0	+0.7
TLCR		1.60	110	⇑iP	Pn	00 31 22.0	+0.7
TLCR				iS	Sn	00 31 42.8	-1.0
HUMR	Humele	1.72	225	⇓iP	Pn	00 31 22.9	+0.1
HUMR				iS	Sn	00 31 45.2	-1.2
HUMR	Humele	1.72	225	⇓iP	Pn	00 31 22.9	+0.1
HUMR	Humele	1.72	225	⇓iP	Pn	00 31 22.9	+0.1
HUMR				iS	Sn	00 31 45.2	-1.2
TIRR	Tirgusor	1.78	136	⇓iP	Pn	00 31 23.6	+0.2
TIRR	Tirgusor	1.78	136	⇓iP	Pn	00 31 23.6	+0.2
TIRR	Tirgusor	1.78	136	⇓iP	Pn	00 31 23.6	+0.2
KIS	Kishinev	1.93	49	eP	Pn	00 31 26.0	+0.8
KIS				iS	Sn	00 31 50.0	-0.6
	400nm,0.6s						
KIS	Kishinev	1.93	49	⇓iP	Pn	00 31 26.0	+0.8
KIS				iS	Sn	00 31 50.1	-0.6
KIS	Kishinev	1.93	49	⇓iP	Pn	00 31 26.0	+0.8
KIS	Kishinev	1.93	49	⇓iP	Pn	00 31 26.0	+0.8
KIS				iS	Sn	00 31 50.1	-0.6
LOT	Lotru	2.08	263	⇑iP	Pn	00 31 28.3	+1.2
LOT	Lotru	2.08	263	⇑iP	Pn	00 31 28.3	+1.2
LOT	Lotru	2.08	263	⇑iP	Pn	00 31 28.3	+1.2
EFOR	EFORIE	2.17	140	iS	Sn	00 31 55.4	-0.4
EFOR	EFORIE	2.17	140	S	Sn	00 31 55.4	-0.4
EFOR	EFORIE	2.17	140	iS	Sn	00 31 55.4	-0.4
ZIMR		2.30	205	⇑iP	Pn	00 31 30.6	+0.9
ZIMR		2.30	205	⇑iP	Pn	00 31 30.6	+0.9
MANR	Mangalia	2.36	144	iS	Sn	00 31 58.8	-1.3
MANR	Mangalia	2.36	144	S	Sn	00 31 58.8	-1.3
MANR	Mangalia	2.36	144	iS	Sn	00 31 58.8	-1.3

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*ISCJB **29** 00:41:24.7±0.3, 38°.57N±0°.02×1°.43W±0°.02, h0km±2km, Error ellipse: s-maj=2.8km s-min=2.0km az=151.4*
*CSEM **29** 00:41:26.3±0.1, 38°.48N×1°.31W, h8km, ML3.6/37, Error ellipse: s-maj=2.2km s-min=1.4km az=138.0*
*SFS **29** 00:41:26.0, 38°.46N×1°.25W, h1km, ML3.2*
*INMG **29** 00:41:27.1±1.7, 38°.47N×1°.26W, h5km±3km, ML3.2, Error ellipse: s-maj=2.4km s-min=1.7km az=118.0*
*MDD **29** 00:41:27.0±0.2, 38°.47N×1°.27W, h0km, mbLg3.0/58, Error ellipse: s-maj=2.5km s-min=2.1km az=118.0, PRXIMO*
MDD EMS: IV INTENSIDAD MAXIMA.
*LDG **29** 00:41:27.3±0.1, 38°.43N×1°.23W, h2km, Ml3.2/9, Error ellipse: s-maj=2.9km s-min=1.5km az=130.0*
ISC 29 00:41:26.2±1.0, **38°.48N**±0°.02×**1°.27W**±0°.02, **h10**km±8km, **n181**, σ1s.19/295, **5C-4D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETOB	Tobarra	0.27	307	⇓Pg	Pg	00 41 32.1	+0.4
	811nm,0.4s,SNR=18						
ETOB				Lg	Lg	00 41 36.0	
	2μm,0.3s,SNR=7.9						
ETOB	Tobarra	0.27	307	Pg	Pg	00 41 32.1	+0.4
	811nm,0.4s,SNR=18						
ETOB				Lg	Lg	00 41 36.0	
	2μm,0.3s,SNR=7.9						
EMUR	La Murta	0.64	178	⇑Pg	Pg	00 41 37.7	-0.9
	45nm,0.4s,SNR=18						
EMUR				Lg	Lg	00 41 46.4	
	866nm,0.5s,SNR=20						
EMUR	La Murta	0.64	178	Pg	Pg	00 41 37.7	-0.9
	45nm,0.4s,SNR=18						
EMUR				Lg	Lg	00 41 46.4	
	866nm,0.5s,SNR=20						
EBEN	Beniarda	0.85	75	⇓Pg	Pg	00 41 43.2	+0.6
	41nm,0.6s,SNR=18						
EBEN				Lg	Lg	00 41 55.7	
	284nm,0.5s,SNR=7.9						
EBEN	Beniarda	0.85	75	Pg	Pg	00 41 43.2	+0.6
	41nm,0.6s,SNR=18						
EBEN				Lg	Lg	00 41 55.7	
	284nm,0.5s,SNR=7.9						
CART	Cartagena	0.92	166	⇓Pg	Pg	00 41 43.4	-0.6
CART				Lg	Lg	00 41 56.2	
CART	Cartagena	0.92	166	iP	Pg	00 41 43.4	-0.6
CART				iS	Sg	00 41 56.2	+0.3
CART				Lg	Lg	00 41 56.2	
EVIA	Vianos	0.97	279	Pg	Pg	00 41 44.6	-0.4
	65nm,0.3s,SNR=255						
EVIA				Lg	Lg	00 42 00.2	
	SNR=7.9						
EVIA	Vianos	0.97	279	Pg	Pg	00 41 44.6	-0.4
	65nm,0.3s,SNR=255						
EVIA				Lg	Lg	00 42 00.2	
	SNR=7.9						
ECHE	Chera	1.13	12	Pg	Pg	00 41 48.3	+0.3
	30nm,0.3s,SNR=18						
ECHE				Lg	Lg	00 42 04.9	
	204nm,0.4s,SNR=7.9						
ECHE	Chera	1.13	12	Pg	Pg	00 41 48.3	+0.3
	30nm,0.3s,SNR=18						
ECHE				Lg	Lg	00 42 04.9	
	204nm,0.4s,SNR=7.9						
EHUE	Huescar	1.24	238	⇑Pg	Pb	00 41 50.1	+0.4
	8.7nm,0.3s,SNR=18						
EHUE				Lg	Lg	00 42 08.5	
	195nm,0.4s,SNR=7.9						
EHUE	Huescar	1.24	238	Pg	Pb	00 41 50.1	+0.4
	8.7nm,0.3s,SNR=18						
EHUE				Lg	Lg	00 42 08.5	
	195nm,0.4s,SNR=7.9						
EQES	Quesada	1.57	245	Pn	Pn	00 41 54.7	+0.5
	4.2nm,0.2s,SNR=4.0						
EQES				Pg	Pb	00 41 56.1	+0.7
	36nm,0.2s,SNR=7.9						
EQES				Lg	Lg	00 42 18.4	
	273nm,0.3s,SNR=8.2						
EQES	Quesada	1.57	245	Pn	Pn	00 41 54.7	+0.5
	4.2nm,0.2s,SNR=4.0						
ENIJ	Nijar	1.68	206	Pn	Pn	00 41 55.6	-0.1
	14nm,0.4s,SNR=7.9						
ENIJ				Pg	Pb	00 41 57.9	+0.6
	22nm,0.4s,SNR=7.9						
ENIJ				Lg	Lg	00 42 18.8	
	161nm,0.7s,SNR=7.9						
ENIJ	Nijar	1.68	206	Pn	Pn	00 41 55.6	-0.1
	14nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	1.98	18	Pn	Pn	00 41 60.0	+0.1
	0.7nm,0.2s,SNR=14						
EMOS				Pg	Pg	00 42 04.2	0.0
	10nm,0.3s,SNR=7.9						
EMOS				Sn	Sn	00 42 25.8	+1.0
	14nm,0.5s,SNR=7.9						
EMOS				Lg	Lg	00 42 30.1	
	82nm,0.5s,SNR=7.9						
EMOS	Mosqueruela	1.98	18	Pn	Pn	00 42 00.0	+0.1
	0.7nm,0.2s,SNR=14						
EBER	Berja	2.04	219	Pn	Pn	00 42 01.9	+1.2
	7.8nm,0.3s,SNR=17						
EBER				Pg	Pb	00 42 04.5	+1.1
	32nm,0.4s,SNR=7.9						
EBER				Lg	Lg	00 42 32.0	
	202nm,0.6s,SNR=7.9						
EBER	Berja	2.04	219	Pn	Pn	00 42 01.9	+1.2
	7.8nm,0.3s,SNR=17						
EIBI	Ibiza	2.12	74	Pn	Pn	00 42 01.3	-0.3
	1.2nm,0.2s,SNR=11						
EIBI				Pg	Pb	00 42 04.0	-0.7
	8.7nm,0.3s,SNR=7.9						
EIBI				Sn	Sn	00 42 28.5	+0.5
	6.9nm,0.2s,SNR=7.9						
EIBI	Ibiza	2.12	74	Pn	Pn	00 42 01.3	-0.3
	1.2nm,0.2s,SNR=11						
EIBI				Sn	Sn	00 42 28.5	+0.5
	6.9nm,0.2s,SNR=7.9						
EQUE	Quentar	2.14	234	Pg	Pb	00 42 06.9	+1.9
	34nm,0.3s,SNR=7.9						
EQUE				Lg	Lg	00 42 36.1	
	198nm,0.6s,SNR=7.9						
EQUE	Quentar	2.14	234	Pg	Pb	00 42 06.9	+1.9
	34nm,0.3s,SNR=7.9						
EQUE				Lg	Lg	00 42 36.1	
	198nm,0.6s,SNR=7.9						
ECOG	Cogollos-Vega	2.18	237	Pn	Pn	00 42 04.3	+1.7
	3.2nm,0.2s,SNR=9.3						
ECOG				Pg	Pg	00 42 07.8	-0.1
	38nm,0.4s,SNR=7.9						
ECOG				Lg	Lg	00 42 36.1	
	177nm,0.6s,SNR=7.9						
ECOG	Cogollos-Vega	2.18	237	Pn	Pn	00 42 04.3	+1.7
	3.2nm,0.2s,SNR=9.3						
ESDC	Sonseca Array	2.41	300	⇓Pn	Pn	00 42 05.5	-0.2
	5.0nm,0.1s,baz=114,slow=14,SNR=18						
ESDC				Pg	Pb	00 42 11.3	+1.6
	32nm,0.2s,baz=117,slow=18,SNR=7.9						
ESDC				Lg	Lg	00 42 43.0	
	15nm,0.6s,baz=119,slow=30,SNR=4.6						
ESDC	Sonseca Array	2.41	300	Pn	Pn	00 42 05.5	-0.2
	5.0nm,0.1s,slow=14,SNR=18						
ETOR	Torete	2.41	346	Pn	Pn	00 42 07.1	+1.3
	3.9nm,0.2s,SNR=15						
ETOR				Pg	Pg	00 42 12.0	-0.4
	123nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	00 42 44.5	
	176nm,0.4s,SNR=7.1						
ETOR	Torete	2.41	346	Pn	Pn	00 42 07.1	+1.3
	3.9nm,0.2s,SNR=15						
ETOR	Torete	2.41	346	Pg	Pg	00 42 12.0	-0.4
	123nm,0.2s,SNR=7.9						
ETOR				Lg	Lg	00 42 44.5	
	176nm,0.4s,SNR=7.1						
EGUA	Guajares	2.45	229	Pn	Pn	00 42 08.5	+2.2
	4.5nm,0.3s,SNR=7.9						
EGUA				Pg	Pb	00 42 12.2	+1.8
	50nm,0.4s,SNR=7.9						
EGUA				Lg	Lg	00 42 47.4	
	645nm,0.9s,SNR=7.9						
EGUA	Guajares	2.45	229	Pn	Pn	00 42 08.5	+2.2
	4.5nm,0.3s,SNR=7.9						
ERON	Agron	2.48	235	Pn	Pn	00 42 08.7	+1.9
	1.3nm,0.2s,SNR=7.9						
ERON				Pg	Pg	00 42 13.8	-0.1
	5.9nm,0.3s,SNR=7.9						
ERON				Lg	Lg	00 42 47.8	
	22nm,0.4s,SNR=7.9						
ERON	Agron	2.48	235	Pn	Pn	00 42 08.7	+1.9
	1.3nm,0.2s,SNR=7.9						
ELUQ	Luque	2.54	250	Pn	Pn	00 42 08.5	+1.0
	8.7nm,0.2s,SNR=7.9						
ELUQ				Pg	Pg	00 42 14.8	-0.1
	18nm,0.2s,SNR=7.9						
ELUQ				Lg	Lg	00 42 49.5	
	25nm,0.2s,SNR=7.9						
ELUQ	Luque	2.54	250	Pn	Pn	00 42 08.5	+1.0
	8.7nm,0.2s,SNR=7.9						
EADA	Adamuz	2.62	264	Pn	Pn	00 42 07.8	-0.7
	4.3nm,0.3s,SNR=42						
EADA				Pg	Pg	00 42 15.7	-0.6
	12nm,0.2s,SNR=7.9						
EADA				Lg	Lg	00 42 51.0	
	26nm,0.2s,SNR=7.9						
EADA	Adamuz	2.62	264	Pn	Pn	00 42 07.8	-0.7
	4.3nm,0.3s,SNR=42						
EADA	Adamuz	2.62	264	Pg	Pg	00 42 15.7	-0.6
	12nm,0.2s,SNR=7.9						
EADA				Lg	Lg	00 42 51.0	
	26nm,0.2s,SNR=7.9						
ELOJ	Sierra Loja	2.64	241	Pn	Pn	00 42 10.6	+1.7
	6.0nm,0.2s,SNR=7.9						
ELOJ				Pg	Pb	00 42 15.8	+2.2
	25nm,0.4s,SNR=7.9						
ELOJ				Lg	Lg	00 42 54.1	
	81nm,0.6s,SNR=7.9						
ELOJ	Sierra Loja	2.64	241	Pn	Pn	00 42 10.6	+1.7
	6.0nm,0.2s,SNR=7.9						
ERTA	Horta de San J	2.76	26	Pn	Pn	00 42 11.2	+0.7
	2.5nm,0.1s,SNR=7.9						
ERTA				Pg	Pg	00 42 19.1	-0.1
	4.1nm,0.3s,SNR=7.9						
ERTA				Sn	Sn	00 42 46.3	+2.3
	9.0nm,0.3s,SNR=5.4						
ERTA	Horta de San J	2.76	26	Pn	Pn	00 42 11.2	+0.7
	2.5nm,0.1s,SNR=7.9						
EMAL	Malaga-Limoner	3.04	237	Pn	Pn	00 42 17.2	+2.9
EMAL				Sn	Sb	00 42 58.4	+0.9
EMAL	Malaga-Limoner	3.04	237	eP	Pn	00 42 17.2	+2.9
GUD	Guadarrama	3.10	315	Pn	Pn	00 42 15.4	+0.2
	2.2nm,0.3s,SNR=7.9						
GUD				Pg	Pg	00 42 24.4	-1.2
	25nm,0.4s,SNR=30						
GUD				Sn	Sn	00 42 54.2	+1.8
	19nm,0.3s,SNR=7.9						
GUD				Lg	Lg	00 43 06.1	
	121nm,0.6s,SNR=16						
GUD	Guadarrama	3.10	315	Pn	Pn	00 42 15.4	+0.2
	2.2nm,0.3s,SNR=7.9						
ESAC	San Caprasio	3.29	11	Pn	Pn	00 42 19.6	+1.8
	11nm,0.3s,SNR=7.9						
ESAC				Pg	Pg	00 42 28.8	-0.4
	17nm,0.2s,SNR=7.9						
ESAC				Sn	Sn	00 42 58.6	+1.5
	26nm,0.3s,SNR=7.9						
ESAC				Lg	Lg	00 43 11.2	
	184nm,0.4s,SNR=7.9						
ESAC	San Caprasio	3.29	11	Pn	Pn	00 42 19.6	+1.8
	11nm,0.3s,SNR=7.9						
EMIJ	Mijas	3.38	237	Pn	Pn	00 42 20.3	+1.3
	2.2nm,0.2s,SNR=7.9						
EMIJ				Pg	Pg	00 42 31.2	+0.3
	13nm,0.5s,SNR=7.9						
EMIJ				Sn	Sn	00 43 03.1	+4.0
	18nm,0.5s,SNR=4.0						
EMIJ				Lg	Lg	00 43 17.1	
	148nm,1.0s,SNR=7.9						
EMIJ	Mijas	3.38	237	Pn	Pn	00 42 20.3	+1.3
	2.2nm,0.2s,SNR=7.9						
EPOB	Poblet	3.39	32	Pn	Pn	00 42 19.6	+0.4
	1.9nm,0.3s,SNR=7.9						
EPOB				Pg	Pg	00 42 30.6	-0.5
	2.6nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	00 42 59.4	0.0
	3.1nm,0.3s,SNR=7.9						
EPOB				Lg	Lg	00 43 14.9	
	6.8nm,0.3s,SNR=7.9						
EPOB	Poblet	3.39	32	Pn	Pn	00 42 19.6	+0.4
	1.9nm,0.3s,SNR=7.9						
EJIF	Jimena Fronter	3.91	240	Pn	Pn	00 42 28.3	+2.1
	1.7nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	3.91	240	Pn	Pn	00 42 28.3	+2.1
	1.7nm,0.2s,SNR=7.9						
ESPR	Espera	3.98	247	Pn	Pn	00 42 28.2	+1.0
	1.7nm,0.1s,SNR=6.7						
ESPR				Lg	Lg	00 43 36.3	
	6.7nm,0.3s,SNR=4.0						
ESPR	Espera	3.98	247	Pn	Pn	00 42 28.2	+1.0
	1.7nm,0.1s,SNR=6.7						
ESPR				Lg	Lg	00 43 36.3	
	6.7nm,0.3s,SNR=4.0						
EMIR	Miracle	4.04	31	⇑Pn	Pn	00 42 28.7	+0.6
	2.9nm,0.2s,SNR=18						
EMIR	Miracle	4.04	31	Pn	Pn	00 42 28.7	+0.6
	2.9nm,0.2s,SNR=18						
EPLA	Plasencia	4.05	294	⇑Pn	Pn	00 42 28.1	-0.1
	5.7nm,0.1s,SNR=18						
EPLA				Lg	Lg	00 43 34.9	
	30nm,0.9s,SNR=7.9						
EPLA	Plasencia	4.05	294	Pn	Pn	00 42 28.1	-0.1
	5.7nm,0.1s,SNR=18						
EPLA				Lg	Lg	00 43 34.9	
	30nm,0.9s,SNR=7.9						
IUNC	Unciti	4.27	358	Pn	Pn	00 42 33.6	+2.3
	1.4nm,0.2s,SNR=7.9						
IUNC				Lg	Lg	00 43 45.5	
	23nm,0.5s,SNR=7.9						
IUNC	Unciti	4.27	358	Pn	Pn	00 42 33.6	+2.3
	1.4nm,0.2s,SNR=7.9						
IUNC				Lg	Lg	00 43 45.5	
	23nm,0.5s,SNR=7.9						
IEPA	Eparoz	4.29	0	Pn	Pn	00 42 34.4	+2.9
	1.5nm,0.2s,SNR=7.9						
IEPA				Pg	Pg	00 42 50.5	+2.2
	6.6nm,0.5s,SNR=7.9						
IEPA				Sn	Sn	00 43 24.9	+3.2
	8.7nm,0.4s,SNR=4.0						
IEPA				Lg	Lg	00 43 46.1	
	8.3nm,0.3s,SNR=7.9						
CSOR	Sort	4.30	25	Pn	Pn	00 42 32.5	+0.8
	1.8nm,0.2s,SNR=15						
CSOR				Sn	Sn	00 43 22.3	+0.3
	7.1nm,0.4s,SNR=4.0						
CSOR				Lg	Lg	00 43 43.9	
	36nm,0.9s,SNR=7.9						
CSOR	Sort	4.30	25	Pn	Pn	00 42 32.5	+0.8
	1.8nm,0.2s,SNR=15						
CSOR				Sn	Sn	00 43 22.3	+0.3
	7.1nm,0.4s,SNR=4.0						
CSOR				Lg	Lg	00 43 43.9	
	36nm,0.9s,SNR=7.9						
EMIN	Mina Concepcio	4.32	262	Pn	Pn	00 42 31.1	-0.7
	1.7nm,0.2s,SNR=13						
EMIN				Sn	Sn	00 43 21.2	-1.0
	4.2nm,0.3s,SNR=7.9						
EMIN				Lg	Lg	00 43 44.0	
	16nm,0.6s,SNR=7.9						
EMIN	Mina Concepcio	4.32	262	Pn	Pn	00 42 31.1	-0.7
	1.7nm,0.2s,SNR=13						
EMIN				Sn	Sn	00 43 21.2	-1.0
	4.2nm,0.3s,SNR=7.9						
EMIN				Lg	Lg	00 43 44.0	
	16nm,0.6s,SNR=7.9						
CFON	Fontmartina	4.34	40	Pn	Pn	00 42 32.0	-0.2
	4.5nm,0.3s,SNR=8.5						
CFON				Sn	Sn	00 43 23.2	+0.4
	3.5nm,0.2s,SNR=4.0						
CFON	Fontmartina	4.34	40	Pn	Pn	00 42 32.0	-0.2
	4.5nm,0.3s,SNR=8.5						
CFON				Sn	Sn	00 43 23.2	+0.4
	3.5nm,0.2s,SNR=4.0						
IELO	Elcoad	4.36	0	Pn	Pn	00 42 34.6	+2.2
	1.7nm,0.3s,SNR=4.0						
IELO				Lg	Lg	00 43 45.9	
	38nm,1.0s,SNR=7.9						
IELO	Elcoad	4.36	0	Pn	Pn	00 42 34.6	+2.2
	1.7nm,0.3s,SNR=4.0						
IELO				Lg	Lg	00 43 45.9	
	38nm,1.0s,SNR=7.9						
ETSF	Etsaut	4.44	7	ePn	Pn	00 42 34.9	+1.2
ETSF				eSg	Sg	00 43 48.1	-0.8
	15nm,0.6s						
ETSF	Etsaut	4.44	7	Pn	Pn	00 42 34.9	+1.2
ETSF				eSg	Sg	00 43 48.1	-0.8
	7.6nm,0.6s						
IUSE	Utxeti	4.46	357	Pn	Pn	00 42 35.5	+1.5
	1.3nm,0.2s,SNR=7.9						
IUSE				Lg	Lg	00 43 51.2	
	29nm,0.9s,SNR=7.9						
IUSE	Utxeti	4.46	357	Pn	Pn	00 42 35.5	+1.5
	1.3nm,0.2s,SNR=7.9						
IUSE				Lg	Lg	00 43 51.2	
	29nm,0.9s,SNR=7.9						
EBAD	Badajoz	4.50	275	⇑Pn	Pn	00 42 33.4	-1.0
	2.4nm,0.1s,SNR=18						
EBAD				Sn	Sn	00 43 26.0	-0.8
	3.7nm,0.3s,SNR=7.9						
EBAD				Lg	Lg	00 43 50.3	
	30nm,0.3s,SNR=7.9						
EBAD	Badajoz	4.50	275	Pn	Pn	00 42 33.4	-1.0
	2.4nm,0.1s,SNR=18						
EBAD				Sn	Sn	00 43 26.0	-0.8
	3.7nm,0.3s,SNR=7.9						
EBAD				Lg	Lg	00 43 50.3	
	30nm,0.3s,SNR=7.9						
PBAR	Barrancos	4.54	268	ePn	Pn	00 42 34.1	-0.9
PBAR				eSn	Sn	00 43 27.2	-0.6
PBAR				eSg	Sg	00 43 51.1	-1.0
PBAR				A	A	00 44 08.5	
	35nm,0.5s						
PBAR	Barrancos	4.54	268	Pn	Pn	00 42 34.1	-0.9
PBAR				Sn	Sn	00 43 27.2	-0.6
PBAR				Lg	Lg	00 43 51.1	
	35nm,0.5s						
PBAR	Barrancos	4.54	268	Pn	Pn	00 42 34.1	-0.9

PBAR				Sn	**Sn**	00 43 27.2	-0.6	
PBAR				Lg	Lg	00 43 51.1		
	35nm,0.5s							
PBAR				*e*Sg	**Sg**	**00 43 51.1**	**-1.0**	
	35nm,0.5s							
SJPF	**Ste Jean**	**4.62**	**0**	*e*Pn	**Pn**	**00 42 37.4**	**+1.3**	
SJPF				*e*Sg	**Sg**	**00 43 53.6**	**-1.1**	
	35nm,0.8s							
SJPF	**Ste Jean**	**4.62**	**0**	Pn	**Pn**	**00 42 37.4**	**+1.3**	
SJPF				*e*Sg	**Sg**	**00 43 53.6**	**-1.1**	
	17nm,0.8s							
ELIZ	**Elizondo**	**4.68**	**358**	Pn	**Pn**	**00 42 39.4**	**+2.6**	
	3.8nm,0.3s,SNR=7.9							
ELIZ	**Elizondo**	**4.68**	**358**	Pn	**Pn**	**00 42 39.4**	**+2.6**	
	3.8nm,0.3s,SNR=7.9							
CLLI	**Llivia**	**4.70**	**31**	Pn	**Pn**	**00 42 38.1**	**+0.9**	
	0.6nm,0.2s,SNR=10							
CLLI	**Llivia**	**4.70**	**31**	Pn	**Pn**	**00 42 38.1**	**+0.9**	
	0.6nm,0.2s,SNR=10							
EPF	**Esparros**	**4.70**	**15**	*e*Pn	**Pn**	**00 42 38.4**	**+1.2**	
EPF				*e*Sg	**Sg**	**00 43 55.8**	**-1.4**	
	28nm,0.7s							
EPF	**Esparros**	**4.70**	**15**	Pn	**Pn**	**00 42 38.4**	**+1.2**	
EPF				*e*Sg	**Sg**	**00 43 55.8**	**-1.4**	
	14nm,0.7s							
PMRV	**Marv??o**	**4.86**	**283**	*e*Pn	**Pn**	**00 42 39.2**	**-0.2**	
PMRV				*e*Sg	**Sg**	**00 44 03.4**	**+1.1**	
PMRV				A	A	00 44 16.0		
	31nm,0.6s							
PMRV	**Marv??o**	**4.86**	**283**	Pn	**Pn**	**00 42 39.2**	**-0.2**	
PMRV				Lg	Lg	00 44 03.4		
	31nm,0.6s							
PMRV	**Marv??o**	**4.86**	**283**	Pn	**Pn**	**00 42 39.2**	**-0.2**	
PMRV				Lg	Lg	00 44 03.4		
	31nm,0.6s							
PMRV				*e*Sg	**Sg**	**00 44 03.4**	**+1.1**	
	31nm,0.6s							
PESTR	**Estremoz**	**4.96**	**276**	*e*Pn	**Pn**	**00 42 39.7**	**-1.0**	
PESTR				*e*Sg	**Sg**	**00 44 04.5**	**-0.9**	
PESTR				A	A	00 44 15.8		
	31nm,0.6s							
PESTR	**Estremoz**	**4.96**	**276**	Pn	**Pn**	**00 42 39.7**	**-1.0**	
PESTR				Lg	Lg	00 44 04.5		
	31nm,0.6s							
PESTR	**Estremoz**	**4.96**	**276**	Pn	**Pn**	**00 42 39.7**	**-1.0**	
PESTR				Lg	Lg	00 44 04.5		
	31nm,0.6s							
PESTR				*e*Sg	**Sg**	**00 44 04.5**	**-0.9**	
	31nm,0.6s							
EGRO	**El Granado**	**5.00**	**261**	Pn	**Pn**	**00 42 40.9**	**-0.3**	
	2.4nm,0.3s,SNR=7.9							
EGRO				Sn	**Sn**	**00 43 37.9**	**-1.0**	
	0.3nm,0.1s,SNR=4.0							
EGRO				Lg	Lg	00 44 07.5		
	16nm,0.4s,SNR=7.9							
EGRO	**El Granado**	**5.00**	**261**	Pn	**Pn**	**00 42 40.9**	**-0.3**	
	2.4nm,0.3s,SNR=7.9							
EGRO				Sn	**Sn**	**00 43 37.9**	**-1.0**	
	0.3nm,0.1s,SNR=4.0							
EGRO				Lg	Lg	00 44 07.5		
	16nm,0.4s,SNR=7.9							
PCBR	**Castelo Branco**	**5.01**	**288**	*e*Pn	**Pn**	**00 42 41.6**	**+0.2**	
PCBR				*e*Sn	**Sn**	**00 43 39.3**	**0.0**	
PCBR				*e*Sg	**Sg**	**00 44 06.2**	**-0.8**	
PCBR				A	A	00 44 19.5		
	16nm,0.7s							
PCBR	**Castelo Branco**	**5.01**	**288**	Pn	**Pn**	**00 42 41.6**	**+0.2**	
PCBR				Sn	**Sn**	**00 43 39.3**	**0.0**	
PCBR				Lg	Lg	00 44 06.2		
	8.1nm,0.7s							
PCBR	**Castelo Branco**	**5.01**	**288**	Pn	**Pn**	**00 42 41.6**	**+0.2**	
PCBR				Sn	**Sn**	**00 43 39.3**	**0.0**	
PCBR				*e*Sg	**Sg**	**00 44 06.2**	**-0.8**	
	16nm,0.7s							
MVO	**Moncorvo**	**5.18**	**303**	*e*Pn	**Pn**	**00 42 43.9**	**+0.2**	
MVO				*e*Sg	**Sg**	**00 44 13.1**	**+0.7**	
MVO				A	A	00 44 22.9		
	46nm,0.6s							
MVO	**Moncorvo**	**5.18**	**303**	Pn	**Pn**	**00 42 43.6**	**-0.1**	
	4.0nm,0.2s,SNR=26							
MVO				Sn	**Sn**	**00 43 43.3**	**-0.2**	
	7.8nm,0.4s,SNR=7.9							
MVO				Lg	Lg	00 44 12.6		
	68nm,0.8s,SNR=7.9							
MVO	**Moncorvo**	**5.18**	**303**	Pn	**Pn**	**00 42 43.6**	**-0.1**	
	4.0nm,0.2s,SNR=26							
MVO				Sn	**Sn**	**00 43 43.3**	**-0.2**	
	7.8nm,0.4s,SNR=7.9							
MVO				Lg	Lg	00 44 12.6		
	68nm,0.8s,SNR=7.9							
MVO				*e*Sg	**Sg**	**00 44 13.1**	**+0.7**	
	46nm,0.6s							
PVAQ	**Vaqueiros**	**5.21**	**260**	*e*Pn	**Pn**	**00 42 43.6**	**-0.5**	
PVAQ				*e*Sn	**Sn**	**00 43 43.7**	**-0.5**	
PVAQ				*e*Sg	**Sg**	**00 44 13.0**	**-0.3**	
PVAQ				A	A	00 44 20.0		
	20nm,0.6s							
PVAQ	**Vaqueiros**	**5.21**	**260**	Pn	**Pn**	**00 42 43.6**	**-0.5**	
PVAQ				Sn	**Sn**	**00 43 43.7**	**-0.5**	
PVAQ				Lg	Lg	00 44 13.0		
	20nm,0.6s							
PVAQ	**Vaqueiros**	**5.21**	**260**	Pn	**Pn**	**00 42 43.6**	**-0.5**	
PVAQ				Sn	**Sn**	**00 43 43.7**	**-0.5**	
PVAQ				Lg	Lg	00 44 13.0		
	20nm,0.6s							
PVAQ				*e*Sg	**Sg**	**00 44 13.0**	**-0.3**	
	20nm,0.6s							
PBEJ	**Beja**	**5.21**	**267**	*e*Pn	**Pn**	**00 42 43.8**	**-0.3**	
PBEJ				*e*Sn	**Sn**	**00 43 44.6**	**+0.4**	
PBEJ				*e*Sg	**Sg**	**00 44 14.3**	**+0.9**	
PBEJ				A	A	00 44 27.4		
	18nm,0.7s							
PBEJ	**Beja**	**5.21**	**267**	Pn	**Pn**	**00 42 43.8**	**-0.3**	
PBEJ				Sn	**Sn**	**00 43 44.6**	**+0.4**	
PBEJ				Lg	Lg	00 44 14.3		
	9.2nm,0.7s							
PBEJ	**Beja**	**5.21**	**267**	Pn	**Pn**	**00 42 43.8**	**-0.3**	
PBEJ				Sn	**Sn**	**00 43 44.6**	**+0.4**	
PBEJ				*e*Sg	**Sg**	**00 44 14.3**	**+0.9**	
	18nm,0.7s							
MTE	**Manteigas**	**5.22**	**293**	*i* Pn	**Pn**	**00 42 44.6**	**+0.3**	
MTE				*e*Sg	**Sg**	**00 44 11.9**	**-1.8**	
MTE				A	A	00 44 26.2		
	34nm,0.6s							
MTE	**Manteigas**	**5.22**	**293**	Pn	**Pn**	**00 42 44.6**	**+0.3**	
MTE				Lg	Lg	00 44 11.9		
	17nm,0.6s							
MTE	**Manteigas**	**5.22**	**293**	Pn	**Pn**	**00 42 44.6**	**+0.3**	
MTE				*e*Sg	**Sg**	**00 44 11.9**	**-1.8**	
	34nm,0.6s							
EVO	**Évora**	**5.29**	**273**	*e*Pn	**Pn**	**00 42 46.5**	**+1.3**	
EVO	**Évora**	**5.29**	**273**	*e*P	Pn	00 42 51.4	+6.2	
EVO				*e*Sn	**Sn**	**00 43 45.8**	**-0.3**	
EVO				*e*Sg	**Sg**	**00 44 16.5**	**+0.5**	
	43nm,0.4s							
EVO	**Évora**	**5.29**	**273**	*e*Pn	**Pn**	**00 42 43.7**	**-1.5**	
EVO				*e*Sn	**Sn**	**00 43 44.2**	**-1.9**	
EVO				*e*Sg	**Sg**	**00 44 16.4**	**+0.5**	
EVO				A	A	00 44 30.5		
	19nm,0.8s							
EVO	**Évora**	**5.29**	**273**	Pn	**Pn**	**00 42 43.7**	**-1.5**	
EVO				Sn	**Sn**	**00 43 44.2**	**-1.9**	
EVO				Lg	Lg	00 44 16.4		
	19nm,0.8s							
EVO	**Évora**	**5.29**	**273**	Pn	**Pn**	**00 42 43.7**	**-1.5**	
EVO				Sn	**Sn**	**00 43 44.2**	**-1.9**	
EVO				Lg	Lg	00 44 16.4		
	19nm,0.8s							
EVO				*e*Sg	**Sg**	**00 44 16.4**	**+0.5**	
	19nm,0.8s							
PBRG	**Braganca**	**5.34**	**310**	*e*Pn	**Pn**	**00 42 46.3**	**+0.3**	
PBRG				*e*Sn	**Sn**	**00 43 45.5**	**-2.1**	
PBRG				*e*Sg	**Sg**	**00 44 17.3**	**-0.4**	
PBRG				A	A	00 44 25.1		
	43nm,0.6s							
PBRG	**Braganca**	**5.34**	**310**	Pn	**Pn**	**00 42 46.3**	**+0.3**	
PBRG				Sn	**Sn**	**00 43 45.5**	**-2.1**	
PBRG				Lg	Lg	00 44 17.3		
	22nm,0.6s							
PBRG	**Braganca**	**5.34**	**310**	Pn	**Pn**	**00 42 46.3**	**+0.3**	
PBRG				Sn	**Sn**	**00 43 45.5**	**-2.1**	
PBRG				*e*Sg	**Sg**	**00 44 17.3**	**-0.4**	
	43nm,0.6s							
EVOP	**Sao Brissos**	**5.37**	**273**	*e*Pn	**Pn**	**00 42 46.5**	**+0.1**	
EVOP				*e*Sn	**Sn**	**00 43 45.8**	**-2.4**	
EVOP				*e*Sg	**Sg**	**00 44 16.5**	**-2.2**	
	22nm,0.4s							
PCVE	**Castro Verde**	**5.41**	**263**	*e*Pn	**Pn**	**00 42 46.6**	**-0.2**	
PCVE				*e*Sg	**Sg**	**00 44 17.4**	**-2.4**	
PCVE				A	A	00 44 40.0		
	14nm,0.6s							
PCVE	**Castro Verde**	**5.41**	**263**	Pn	**Pn**	**00 42 46.6**	**-0.2**	
PCVE				Lg	Lg	00 44 17.4		
	14nm,0.6s							
PCVE	**Castro Verde**	**5.41**	**263**	Pn	**Pn**	**00 42 46.6**	**-0.2**	
PCVE				*e*Sg	**Sg**	**00 44 17.4**	**-2.4**	
	14nm,0.6s							
PCVE				Lg	Lg	00 44 17.4		
	14nm,0.6s							
PBDV	**Barranco-do-Ve**	**5.41**	**259**	*e*Pn	**Pn**	**00 42 47.0**	**+0.1**	
PBDV	**Barranco-do-Ve**	**5.41**	**259**	Pn	**Pn**	**00 42 47.0**	**+0.1**	
PBDV	**Barranco-do-Ve**	**5.41**	**259**	Pn	**Pn**	**00 42 47.0**	**+0.1**	
ECAL	**Calabor**	**5.42**	**311**	Pn	**Pn**	**00 42 47.1**	**0.0**	
	7.6nm,0.3s,SNR=7.3							
ECAL				Lg	Lg	00 44 21.2		
	52nm,0.5s,SNR=7.9							
ECAL	**Calabor**	**5.42**	**311**	Pn	**Pn**	**00 42 47.1**	**0.0**	
	7.6nm,0.3s,SNR=7.3							
ECAL				Lg	Lg	00 44 21.2		
	52nm,0.5s,SNR=7.9							
PMTG	**Montargil**	**5.46**	**278**	*e*Pn	**Pn**	**00 42 47.3**	**-0.3**	
PMTG				*e*Sg	**Sg**	**00 44 21.4**	**-0.2**	
PMTG				A	A	00 44 34.1		
	24nm,0.7s							
PMTG	**Montargil**	**5.46**	**278**	*e*Pn	**Pn**	**00 42 47.3**	**-0.3**	
PMTG				*e*Sg	**Sg**	**00 44 21.4**	**-0.2**	
	24nm,0.7s							
MTLF	**Montolieu**	**5.53**	**27**	*e*Pn	**Pn**	**00 42 48.1**	**-0.4**	
MTLF				*e*Sg	**Sg**	**00 44 20.2**	**-3.3**	
	13nm,0.9s							
MTLF	**Montolieu**	**5.53**	**27**	Pn	**Pn**	**00 42 48.1**	**-0.4**	
MTLF				Lg	Lg	00 44 20.2		
	3.2nm,0.9s							
MOE	**Montemor**	**5.55**	**273**	*e*Sn	**Sn**	**00 43 52.3**	**-0.4**	
MOE				*e*Sg	**Sg**	**00 44 25.3**	**+0.9**	
MOE	**Montemor**	**5.55**	**273**	Sn	**Sn**	**00 43 52.3**	**-0.4**	
MOE				Lg	Lg	00 44 25.3		
MOE	**Montemor**	**5.55**	**273**	Sn	**Sn**	**00 43 52.3**	**-0.4**	
MOE				Lg	Lg	00 44 25.3		
MOE				*e*Sg	**Sg**	**00 44 25.3**	**+0.9**	
PVIS	**Viseu**	**5.58**	**296**	*e*Pn	**Pn**	**00 42 49.2**	**0.0**	
PVIS				*e*Sg	**Sg**	**00 44 24.8**	**-0.4**	
PVIS				A	A	00 44 41.1		
	19nm,0.7s							
PVIS	**Viseu**	**5.58**	**296**	Pn	**Pn**	**00 42 49.2**	**0.0**	
PVIS				Lg	Lg	00 44 24.8		
	9.5nm,0.7s							
PVIS	**Viseu**	**5.58**	**296**	Pn	**Pn**	**00 42 49.2**	**0.0**	
PVIS				*e*Sg	**Sg**	**00 44 24.8**	**-0.4**	
	19nm,0.7s							
EARI	**Arriondas**	**5.66**	**329**	Pn	**Pn**	**00 42 51.8**	**+1.4**	
	8.6nm,0.7s,SNR=14							
EARI				Lg	Lg	00 44 27.8		
	3.2nm,0.4s,SNR=7.9							
EARI	**Arriondas**	**5.66**	**329**	Pn	**Pn**	**00 42 51.8**	**+1.4**	
	8.6nm,0.7s,SNR=14							
EARI				Lg	Lg	00 44 27.8		
	3.2nm,0.4s,SNR=7.9							
PTOM	**Tomar**	**5.67**	**284**	*e*Pn	**Pn**	**00 42 50.4**	**0.0**	
PTOM				*e*Sg	**Sg**	**00 44 25.6**	**-2.6**	
PTOM				A	A	00 44 38.5		
	35nm,0.7s							
PTOM	**Tomar**	**5.67**	**284**	Pn	**Pn**	**00 42 50.4**	**0.0**	
PTOM				Lg	Lg	00 44 25.6		
	18nm,0.7s							
PTOM	**Tomar**	**5.67**	**284**	Pn	**Pn**	**00 42 50.4**	**0.0**	
PTOM				*e*Sg	**Sg**	**00 44 25.6**	**-2.6**	
	35nm,0.7s							
PVRL	**Vila Real**	**5.69**	**301**	*e*Pn	**Pn**	**00 42 50.8**	**+0.1**	
PVRL				*e*Sg	**Sg**	**00 44 28.4**	**-0.3**	
PVRL				A	A	00 44 36.7		
	16nm,0.5s							
PVRL	**Vila Real**	**5.69**	**301**	Pn	**Pn**	**00 42 50.8**	**+0.1**	
PVRL				Lg	Lg	00 44 28.4		
	7.8nm,0.5s							
PVRL	**Vila Real**	**5.69**	**301**	Pn	**Pn**	**00 42 50.8**	**+0.1**	
PVRL				*e*Sg	**Sg**	**00 44 28.4**	**-0.3**	
	16nm,0.5s							
PNCL	**Nicolau / Gran**	**5.72**	**269**	*e*Pn	**Pn**	**00 42 50.9**	**-0.2**	
PNCL				*e*Sn	**Sn**	**00 43 55.9**	**-0.9**	
PNCL				*e*Sg	**Sg**	**00 44 30.1**	**+0.3**	
PNCL				A	A	00 44 35.8		
	10nm,0.6s							
PNCL	**Nicolau / Gran**	**5.72**	**269**	Pn	**Pn**	**00 42 50.9**	**-0.2**	
PNCL				*e*Sn	**Sn**	**00 43 55.9**	**-0.9**	
PNCL				*e*Sg	**Sg**	**00 44 30.1**	**+0.3**	
	10nm,0.6s							
POLO	**Lamas de Olo**	**5.78**	**302**	*e*Pn	**Pn**	**00 42 52.0**	**-0.1**	
POLO				*e*Sg	**Sg**	**00 44 31.6**	**-0.2**	
POLO				A	A	00 44 40.7		
	5.2nm,0.5s							
POLO	**Lamas de Olo**	**5.78**	**302**	*e*Pn	**Pn**	**00 42 52.0**	**-0.1**	
POLO				*e*Sg	**Sg**	**00 44 31.6**	**-0.2**	
	5.2nm,0.5s							
ERUA	**La Rua**	**5.94**	**313**	Pn	**Pn**	**00 42 54.7**	**+0.5**	
	6.3nm,0.4s,SNR=4.0							
ERUA				Lg	Lg	00 44 37.2		
	24nm,0.6s,SNR=7.9							
ERUA	**La Rua**	**5.94**	**313**	Pn	**Pn**	**00 42 54.7**	**+0.5**	
	6.3nm,0.4s,SNR=4.0							
ERUA				Lg	Lg	00 44 37.2		
	24nm,0.6s,SNR=7.9							
PTEO	**Sao Teotonio**	**5.96**	**263**	*e*Sg	**Sg**	**00 44 35.0**	**-2.4**	
PTEO				A	A	00 44 47.3		
	27nm,0.7s							
PTEO	**Sao Teotonio**	**5.96**	**263**	Lg	Lg	00 44 35.0		
	13nm,0.7s							
PTEO	**Sao Teotonio**	**5.96**	**263**	*e*Sg	**Sg**	**00 44 35.0**	**-2.4**	
	27nm,0.7s							
PCAB	**Cabril**	**6.10**	**304**	*e*Sg	**Sg**	**00 44 42.8**	**+0.9**	
PCAB				A	A	00 44 47.6		
	17nm,0.7s							
PCAB	**Cabril**	**6.10**	**304**	Lg	Lg	00 44 42.8		
	8.5nm,0.7s							
PCAB	**Cabril**	**6.10**	**304**	*e*Sg	**Sg**	**00 44 42.8**	**+0.9**	
	17nm,0.7s							
PFVI	**Vila Bisbo**	**6.13**	**260**	*e*Pn	**Pn**	**00 42 56.7**	**-0.1**	
PFVI	**Vila Bisbo**	**6.13**	**260**	*e*Pn	**Pn**	**00 42 56.7**	**-0.1**	
PMAFR	**Mafra**	**6.28**	**277**	*e*Pn	**Pn**	**00 42 58.3**	**-0.6**	
PMAFR				*e*Sg	**Sg**	**00 44 51.1**	**+3.3**	
PMAFR				A	A	00 45 04.1		
	28nm,0.6s							
PMAFR	**Mafra**	**6.28**	**277**	Pn	**Pn**	**00 42 58.2**	**-0.6**	
	3.9nm,0.2s,SNR=11							
PMAFR				Sn	**Sn**	**00 44 09.0**	**-1.6**	
	7.3nm,0.4s,SNR=7.9							
PMAFR				Lg	Lg	00 44 50.3		
	104nm,0.7s,SNR=7.9							
PMAFR	**Mafra**	**6.28**	**277**	*e*Pn	**Pn**	**00 42 58.3**	**-0.6**	
PMAFR				Sn	**Sn**	**00 44 09.0**	**-1.6**	
	7.3nm,0.4s,SNR=7.9							
PMAFR				Lg	Lg	00 44 50.3		
	104nm,0.7s,SNR=7.9							
PGAV	**Gavieira, Arco**	**6.38**	**305**	*e*Pn	**Pn**	**00 43 00.3**	**0.0**	
PGAV				*e*Sg	**Sg**	**00 44 50.5**	**-0.5**	
PGAV				A	A	00 44 56.2		
	18nm,0.6s							
PGAV	**Gavieira, Arco**	**6.38**	**305**	*e*Pn	**Pn**	**00 43 00.3**	**0.0**	
PGAV				*e*Sg	**Sg**	**00 44 50.5**	**-0.5**	
	18nm,0.6s							
LFF	**La Frestale**	**6.62**	**12**	*e*Pn	**Pn**	**00 43 03.5**	**0.0**	
LFF				*e*Sg	**Sg**	**00 44 55.3**	**-3.4**	
	20nm,0.9s							
LFF	**La Frestale**	**6.62**	**12**	Pn	**Pn**	**00 43 03.5**	**0.0**	
LFF				Lg	Lg	00 44 55.3		
	4.9nm,0.9s							
CAF	**Calviac**	**6.90**	**20**	*e*Pn	**Pn**	**00 43 07.1**	**-0.3**	
CAF				*e*Sn	**Sn**	**00 44 22.5**	**-3.5**	
	2.5nm,0.5s							
CAF	**Calviac**	**6.90**	**20**	Pn	**Pn**	**00 43 07.1**	**-0.3**	
STS	**Santiago**	**7.06**	**311**	Pn	**Pn**	**00 43 10.6**	**+1.0**	
	2.2nm,0.3s,SNR=7.9							
STS	**Santiago**	**7.06**	**311**	Pn	**Pn**	**00 43 10.6**	**+1.0**	
	2.2nm,0.3s,SNR=7.9							
RJF	**Les Rejaudoux**	**7.12**	**16**	*e*Pn	**Pn**	**00 43 10.6**	**+0.2**	
RJF				*e*Sn	**Sn**	**00 44 27.9**	**-3.5**	
	8.7nm,1.0s							
RJF	**Les Rejaudoux**	**7.12**	**16**	Pn	**Pn**	**00 43 10.6**	**+0.2**	
EMAZ	**Mazaricos**	**7.36**	**310**	Pn	**Pn**	**00 43 14.1**	**+0.5**	
	1.2nm,0.2s,SNR=4.7							
EMAZ				Lg	Lg	00 45 21.5		
	1.9nm,0.2s,SNR=7.9							
EMAZ	**Mazaricos**	**7.36**	**310**	Pn	**Pn**	**00 43 14.1**	**+0.5**	
	1.2nm,0.2s,SNR=4.7							
EMAZ				Lg	Lg	00 45 21.5		
	1.9nm,0.2s,SNR=7.9							
TCF	**Toulx Ste Croi**	**8.21**	**17**	*e*Pn	**Pn**	**00 43 25.5**	**+0.1**	
TCF				*e*Sn	Sn	00 44 53.0	-5.2	
	0.6nm,0.4s							
TCF	**Toulx Ste Croi**	**8.21**	**17**	Pn	**Pn**	**00 43 25.5**	**+0.1**	

*ISCJB **29** 00:55:21.4±1.0, 9.°72S±0.°05×119.°30E±0.°09, h39km±7km, mb3.3/1, Error ellipse: s-maj=16.0km s-min=8.2km az=163.2*
*DJA **29** 00:55:24.3±0.4, 9.°S±7.°×11.°9E±.°, h10km, M4.0/4, MLv4.0/4*
*IDC **29** 00:55:25.1±4.7, 9.57S×119.67E, h46km±48km, mb3.2/1, mb1 3.5/5, mb1mx3.3/21, mbtmp3.4/5, ML3.6/4, Error ellipse: s-maj=93.0km s-min=15.7km az=70.0*
ISC 29 00:55:23.0±1.1, 9.71S±0.°08×119.°37E±0.°09, h30km±6km, n10, σ1°27/15, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.07**	**19**	P	**Pb**	**00 55 28.4**	**+0.1**
WBSI				S	**Sb**	**00 55 31.6**	**-0.4**
WSI	**Waingapu**	**0.92**	**88**	P	**Pb**	**00 55 39.9**	**-0.5**
WSI				S	**Sb**	**00 55 52.3**	**0.0**
BASI	**Baing, Sumba**	**1.29**	**113**	P	**Pb**	**00 55 47.7**	**+0.9**
BSSI	**Bau Bau, Buton**	**3.71**	**18**	P	**Pn**	**00 56 20.1**	**+1.8**
BSSI				S	**Sn**	**00 57 00.9**	**-0.1**
BKSI	**Bulukumba**	**4.42**	**10**	P	**Pn**	**00 56 30.0**	**+1.9**
BKSI				S	**Sn**	**00 57 17.8**	**-0.7**
KAPI	**Kappang**	**4.68**	**5**	P	**Pn**	**00 56 32.6**	**+1.0**
	4.6nm,0.3s,baz=180,slow=7.5,SNR=44						
KAPI				S	**Sn**	**00 57 22.7**	**-2.1**
	5.5nm,0.3s,baz=175,slow=22,SNR=7.8						
FITZ	**Fitzroy Crossi**	**10.33**	**145**	P	**Pn**	**00 57 48.5**	**-0.6**
	0.2nm,0.3s,baz=329,slow=11,SNR=14						
FITZ				S	Sn	00 59 35.5	-8.5
	0.6nm,0.3s,baz=164,slow=18,SNR=8.6						
WRA	**Warramunga Arr**	**17.68**	**127**	P	**Pn**	**00 59 25.5**	**-1.6**
	0.3nm,0.3s,baz=303,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**19.63**	**137**	P	**Pn**	**00 59 50.2**	**-0.6**
	0.1nm,0.3s,baz=323,slow=13,SNR=9.5						
MKAR	**Makanchi Array**	**65.25**	**333**	P	**P**	**01 06 01.7**	**0.0**
	0.1nm,0.3s,baz=129,slow=6.1,SNR=3.6						

*BJI **29** 00:58:29.6, 4.°58S×128.°03E, h53km, mB5.7/35, mb5.6/66, Ms5.0/65, Ms7 4.8/61*
*MOS **29** 00:58:34.7±1.0, 3.°78S×127.°42E, h33km, mb6.0/96, Error ellipse: s-maj=9.4km s-min=4.7km az=113.3*
*IDC **29** 00:58:35.6±1.5, 3.°90S×127.°40E, h33km±10km, mb5.5/34, mb1 5.5/37, mb1mx5.5/37, mbtmp5.5/37, ML5.2/3, MS4.7/24, Ms1 4.7/24, ms1mx4.5/43, Error ellipse: s-maj=15.0km s-min=8.9km az=71.0*
*ISCJB **29** 00:58:35.5±0.3, 3.°84S±0.°02×127.°59E±0.°02, h46km±3km, mb5.8/186, MS4.8/52, Error ellipse: s-maj=3.0km s-min=2.8km az=142.2*
*DJA **29** 00:58:36.8±0.3, 4.°S±2.°×12.°8E±.°, h28km±3km, M5.7/10, mB6.1/7, mb5.8/10, MLv5.5/1, Mw(mB)5.8/7*
*GCMT **29** 00:58:36.2±0.1, 3.°88S×127.°57E, h16km, MW5.4, Moment Tensor Solution. s93,c157; s2,c3; Moment tensor: Scale 10^17 Nm; Mrr 1.84±.03; Mθθ -1.72±.02; Mφφ -0.11±.02; Mrθ 0.37±.06; Mθφ 0.15±.02; Mrφ 0.21±.07; Best double couple: M0 1.80000×10^17 NP1: φ282.00000°, δ40.00000°, λ100.00000°. NP2: φ88.00000°, δ51.00000°, λ81.00000°. Principal axes: T 1.9000, Plg81.0000°, Azm314.0000°; N -0.1300, Plg7.0000°, Azm94.0000°; P -1.7700, Plg6.0000°, Azm184.0000°; Data Used: II IU IC G CN. Surface waves: sta=111, comp=214, per= 50.*
*NEIC **29** 00:58:36.4±0.5, 3.°91S×127.°46E, h41km±4km, mb5.8/87 Error ellipse: s-maj=4.1km s-min=2.7km az=62.0*
NEIC Felt [IV] on Ambon.
*AUST **29** 00:58:36.6±0.5, 3.°96S×127.°60E, h34km, Error ellipse: s-maj=0.5km s-min=0.4km az=29.0*
*TEH **29** 00:58:38.0, 3.°86S×127.°54E, h56km, ML5.7*
ISC 29 00:58:37.5±0.2, 3.°91S±0.°03×127.°55E±0.°03, h51km±1km, h51km:pP-P, n1430, σ1°29/1525, mb5.8/196, MS4.8/53, 304C-217D, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.80**	**326**	P	Pn	00 58 47.9	-4.7
MSAI	**Masohi**	**1.48**	**68**	P	**Pn**	**00 58 59.3**	**-2.5**
LBMI	**Labuha**	**3.25**	**359**	P	**Pn**	**00 59 25.5**	**-0.5**
LBMI				S	**Sn**	**01 00 03.8**	**+0.3**
TNTI	**Ternate**	**4.65**	**358**	P	**Pn**	**00 59 44.1**	**-1.2**
SWI	**Sorong**	**4.78**	**51**	P	**Pn**	**00 59 45.2**	**-1.8**
SWI				S	**Sn**	**01 00 39.8**	**-1.4**
SWI	**Sorong**	**4.78**	**51**	P	**Pn**	**00 59 45.5**	**-1.5**
	baz=4.8,SNR=69						
SWI				S	**Sn**	**01 00 39.8**	**-1.4**
	baz=4.8,SNR=9.7						
FAKI	**Fak Fak**	**4.79**	**78**	P	**Pn**	**00 59 46.7**	**-0.4**
FAKI	**Fak Fak**	**4.79**	**78**	P	**Pn**	**00 59 46.2**	**-0.9**
	baz=4.8,SNR=187						

MYLDM **Lahad Datu** 12.78 315 P Pn 01 01 39.4 +2.9
SRBI **Singaraja** 12.95 251 P Pn 01 01 41.6 +2.7
MTKI **Muara Teweh, K** 12.98 283 P P 01 01 51.9 +3.5
PALU **Palau** 13.14 32 P Pn 01 01 41.9 +0.4
baz=13,SNR=3.0
JAY **Jayapura** 13.21 84 P P 01 01 54.7 +3.8
JAY **Jayapura** 13.21 84 P Pn 01 01 40.5 -2.0
baz=13,SNR=8.8
BYJI **Banyuwangi** 13.80 251 P P 01 01 55.9 -1.6
KMMI **Kalianget** 13.88 256 P P 01 01 55.5 -2.8
SDKM **Sandakan** 14.04 312 P Pn 01 01 57.0 +3.2
JAGI **Jajag, Banyuwa** 14.07 251 P Pn 01 01 56.1 +2.0
JAGI **Jajag, Banyuwa** 14.07 251 P P 01 01 58.6 -1.9
baz=14,SNR=7.6
MSLP **Maasin** 14.21 349 eP Pn 01 01 52.7 -3.3
FITZ **Fitzroy Crossi** 14.23 187 ePn Pn 01 01 53.2 -3.0
22nm,1.4s
FITZ Sn Sn 01 04 28.0 -4.7
FITZ **Fitzroy Crossi** 14.23 187 Pn Pn 01 01 53.5 -2.7
1.8nm,0.3s,baz=15,slow=16,SNR=30
FITZ Sn Sn 01 04 28.0 -4.7
3.1nm,0.3s,baz=90,slow=20,SNR=4.2
FITZ LR LR 01 07 29.9
comp=Z,3µm,20.1s,baz=17,slow=38
FITZ **Fitzroy Crossi** 14.23 187 P Pn 01 01 53.5 -2.7
baz=14,SNR=25
BLJI **Banyuglugur** 14.39 254 P P 01 02 06.5 +2.4
GMJI **Gumukmas** 14.68 252 P P 01 02 05.5 -1.8
KKM **Kota Kinabalu** 15.03 311 ePn Pn 01 02 05.6 -1.3
336nm,1.4s
KKM eSn Sn 01 04 51.6 -0.8
KKM **Kota Kinabalu** 15.03 311 P Pn 01 02 08.4 +1.5
KKM **Kota Kinabalu** 15.03 311 P Pn 01 02 08.1 +1.2
KKM **Kota Kinabalu** 15.03 311 P Pn 01 02 08.3 +1.4
baz=15,SNR=9.0
KDM **Kudat** 15.17 315 P P 01 02 11.6 -1.1
KRKI **Karangkates** 15.59 254 P P 01 02 17.9 +0.5
PBKI **Pangkalan Bun** 15.90 274 P P 01 02 22.8 +1.9
BTM **Bintulu** 16.09 296 P P 01 02 22.3 -0.7
RCP **Roxas** 16.09 343|| eP Pn 01 02 18.7 -1.7
SJI **Sawahan** 16.15 256 P P 01 02 24.4 +0.6
PWJI **Pagerwojo** 16.18 255 P P 01 02 24.3 +0.3
STKI **Sintang** 16.54 283 P P 01 02 28.4 +0.4
CNP **Catarman** 16.56 350 eP Pn 01 02 24.9 -1.4
SBUM **Sibu** 16.57 292 P P 01 02 29.8 +1.5
SBUM **Sibu** 16.57 292 P P 01 02 27.9 -0.4
PCJI **Pacitan** 16.83 255 P P 01 02 30.9 -0.2
WOJI **Wonogiri, Jawa** 16.99 256 P P 01 02 33.4 +0.4
OTRP **Odiongan** 17.07 341 eP P 01 02 35.9 +2.1
WRAB **Tennant Creek** 17.25 158 eP Pn 01 02 31.9 -3.0
WRAB pmax pmax
comp=Z,537nm,1.1s
WRAB **Tennant Creek** 17.25 158 ePn Pn 01 02 31.9 -3.0
comp=Z,537nm,1.1s
WRAB **Tennant Creek** 17.25 158 Pn Pn 01 02 32.0 -3.0
comp=Z,2µm,1.3s,SNR=55
WRA **Warramunga Arr** 17.26 158 Pn Pn 01 02 32.1 -2.9
WRA Sn S 01 05 53.3 +0.3
WRA e 01 37 34.0
WRA **Warramunga Arr** 17.26 158 Pn Pn 01 02 32.1 -2.9
comp=Z,4.1nm,0.3s,baz=340,slow=12,SNR=82
WRA Sn S 01 05 53.3 +0.3
baz=340,slow=19,SNR=6.5
WRA LR LR 01 08 38.0
comp=Z,4µm,19.5s,baz=340,slow=35
WRA P3KPbc 01 37 34.0
baz=151,slow=4.5,SNR=8.9
SMRI **Semarang** 17.31 259 P P 01 02 39.0 +2.5
SMRI **Semarang** 17.31 259 P P 01 02 39.4 +2.9
baz=17,SNR=5.0
UGM **Wanagama** 17.39 256 P P 01 02 38.0 +0.5
UGM **Wanagama** 17.39 256 P P 01 02 39.8 +2.4
baz=17,SNR=24
YOGI **Yogyakarta** 17.60 256 P P 01 02 42.1 +2.4
KSM **Kuching** 18.04 287 ePn P 01 02 43.5 -1.1
comp=Z,229nm,0.8s
KSM **Kuching** 18.04 287 P Pn 01 02 47.7 +3.0
KSM **Kuching** 18.04 287 P Pn 01 02 46.4 +1.7
KSM **Kuching** 18.04 287 P Pn 01 02 46.1 +1.4
baz=18,SNR=34
KSM S S 01 06 15.0 +6.1
baz=18,SNR=4.2
BJII **Banjamegara** 18.08 258 P Pn 01 02 47.7 +2.5
COEN **Coen** 18.37 124 eP Pn 01 02 48.5 -0.1
comp=Z,3µm,0.9s
COEN **Coen** 18.37 124 P P 01 02 48.3 +0.2
baz=18,SNR=108
TGJI **Tegal** 18.58 260 P Pn 01 02 52.3 +1.1
MBWA **Marble Bar** 18.76 203 eP Pn 01 02 53.3 0.0
comp=Z,323nm,1.1s
MBWA **Marble Bar** 18.76 203 P Pn 01 02 53.6 +0.4
SNR=26
CLJI **Cilicap** 18.82 258 P P 01 02 52.4 -0.7
TGY **Tagaytay City** 19.06 340 P P 01 02 56.4 +0.6
TGY **Tagaytay City** 19.06 340 P P 01 02 56.4 +0.6
comp=Z,32nm,0.3s,baz=193,slow=21,SNR=6.8
TPI **Tanjungpandan** 19.90 273 P Pn 01 03 06.5 -0.4
CISI **Cisompet, Garu** 19.96 259 P P 01 03 05.4 -0.3
CISI **Cisompet, Garu** 19.96 259 P P 01 03 06.0 +0.3
baz=20,SNR=8.5
CISI S S 01 06 48.6 +0.8
baz=20,SNR=5.4
LEM **Lembang** 20.05 261 P Pn 01 03 08.3 -0.7
LEM **Lembang** 20.05 261 P Pn 01 03 09.0 0.0
baz=20,SNR=10
PMG **Port Moresby** 20.22 107 eP P 01 03 09.3 +0.9
comp=Z,432nm,0.9s
PMG **Port Moresby** 20.22 107 P P 01 03 09.1 +0.7
PMG **Port Moresby** 20.22 107 P P 01 03 08.6 +0.2
comp=Z,323nm,0.9s,baz=307,slow=5.4,SNR=20
QIS **Mount Isa** 20.29 146 P Pn 01 03 10.3 -1.2
baz=20,SNR=28
BALP **Baler** 20.40 343 eP P 01 03 09.0 -1.3
BALP eS pP 01 03 20.9 -1.1
AS31 **Alice Springs** 20.58 163 eP Pn 01 03 13.8 -1.1
ASAR **Alice Springs** 20.58 163 P Pn 01 03 13.9 -1.0
ASAR ScS ScS 01 14 36.7 -1.0
ASAR PKiKP **PKiKP** 01 15 09.2 -1.0
ASAR e 01 37 19.3
ASAR **Alice Springs** 20.58 163 P Pn 01 03 13.9 -1.0
comp=Z,969nm,0.9s,baz=342,slow=10,SNR=2186
ASAR LR LR 01 10 29.7
comp=Z,2µm,21.3s,baz=332,slow=35
ASAR ScS ScS 01 14 36.7 -1.0
comp=Z,1.2nm,0.8s,baz=336,slow=2.0,SNR=4.9
ASAR PKiKP **PKiKP** 01 15 09.2 -1.0
comp=Z,1.9nm,0.8s,baz=45,slow=0.7,SNR=6.8
ASAR P3KPbc 01 37 19.3
comp=Z,0.9nm,0.8s,baz=156,slow=4.7,SNR=7.0
CBJI **Citeko** 20.77 262 P P 01 03 15.1 +0.8
DBJI **Dramaga** 20.88 262 P P 01 03 15.8 +0.2
comp=Z,642nm,1.1s,comp=Z,8µm
TNG **Tangerang** 20.94 263 P P 01 03 13.4 -2.8
SCZP **Santa Cruz** 20.97 339 eP P 01 03 13.8 -2.6
SKJI **Sukabumi** 21.12 261 P P 01 03 17.1 -1.1
BCPH **Baguio City Da** 21.31 341 ↑P P 01 03 21.2 +0.9
SBJI **Serang** 21.45 263 P P 01 03 22.3 +0.6
comp=Z,520nm,1.2s,comp=Z,8µm
PPBI **Pangkal Pinang** 21.45 274 P P 01 03 22.7 +1.0
comp=Z,197nm,1.1s
CAUP **Cauayan** 21.48 345 eP P 01 03 23.2 +1.3
BOLP **Bolinao** 21.53 340 eP P 01 03 18.6 -3.8
MTSU **Mount Surprise** 21.66 132 P P 01 03 24.4 +0.5
baz=22,SNR=71
BLSI **Bandar Lampung** 22.28 265 P P 01 03 31.6 +1.0
comp=Z,263nm,0.9s
XMI **Christmas Isla** 22.63 252 P P 01 03 32.8 -1.6
baz=23,SNR=11
GIRL **Giralia** 22.65 214 P P 01 03 35.6 +1.1
baz=23,SNR=47
XMIS **Christmas Isla** 22.68 252 eP P 01 03 32.7 -2.1
comp=Z,3µm,0.8s
XMIS **Christmas Isla** 22.68 252 P P 01 03 33.0 -1.8
baz=23,SNR=32
KASI **Kota Agung** 23.03 265 P P 01 03 36.3 -2.2
LWLI **Liwa** 23.45 266 P P 01 03 42.1 -0.6
MEEK **Meekatharra** 24.17 200 P P 01 03 49.3 +0.2
baz=24,SNR=158
CTA **Charters Tower** 24.31 133 P P 01 03 51.5 +1.0
CTA **Charters Tower** 24.31 133 P P 01 03 51.5 +1.0
comp=Z,174nm,1.1s,baz=307,slow=14,SNR=67
CTAO **Charters Tower** 24.31 133 eP P 01 03 51.6 +1.2
CTAO pmax pmax
comp=Z,692nm,1.4s
CTAO **Charters Tower** 24.31 133 eP P 01 03 51.6 +1.2
comp=Z,692nm,1.4s
BTDF **Bukit Timah Da** 24.33 282 P P 01 03 52.4 +1.7
baz=24,SNR=8.1
BTDF P P 01 03 52.4 +1.7
baz=24,SNR=8.1
MYKOM **Kota Tinggi** 24.35 283 P P 01 03 53.4 +2.5
MYKOM **Kota Tinggi** 24.35 283 P P 01 03 52.2 +1.3
MNAI **Manna** 24.54 268 P P 01 03 51.3 -1.3
MNAI **Manna** 24.54 268 P P 01 03 53.8 +1.3
baz=25,SNR=8.4
KSI **Kapahiang** 24.91 270 P P 01 03 54.9 -1.1
KGM **Kluang** 24.92 283 P P 01 03 58.2 +2.1
KTGM **Kuala Trenggan** 26.06 290 P P 01 04 08.9 +2.6
FORT **Forrest** 26.73 179 eP P 01 04 13.4 +1.2
comp=Z,750nm,0.9s
FORT **Forrest** 26.73 179 P P 01 04 13.4 +1.2
baz=27,SNR=60
BKNI **Bangkinang** 26.82 278 P P 01 04 14.0 +0.7
BKNI **Bangkinang** 26.82 278 P P 01 04 14.8 +1.5
baz=27,SNR=10
MORW **Morawa** 27.30 202 P P 01 04 17.8 +0.3
baz=27,SNR=18
TWG **Pinlang** 27.31 347 eP P 01 04 15.8 -1.7
comp=Z,238nm,0.8s
PPI **Padang Panjang** 27.35 277 P P 01 04 18.1 +0.1
baz=27,SNR=8.8
QLP **Quilpie** 27.63 146 P P 01 04 21.3 +0.9
baz=28,SNR=34
IPM **Ipoh** 27.78 287 eP P 01 04 22.7 +0.8
comp=Z,262nm,0.7s
IPM ePcP PcP 01 07 38.0 +0.5
IPM **Ipoh** 27.78 287 P P 01 04 23.4 +1.5
YULB **Yu-li** 27.81 348 eP P 01 04 22.7 +0.6
comp=Z,53nm,0.9s
KMBL **Kambalda** 27.83 190 P P 01 04 22.9 +0.8
baz=28,SNR=42
TPUB **Ta-pu** 27.88 346 eP P 01 04 21.8 -0.8
comp=Z,324nm,1.1s
SSLB **Suanglung** 28.27 347 eP P 01 04 24.4 -1.8
comp=Z,166nm,1.1s
SSLB ePcP PcP 01 07 38.5 0.0
KULM **Kulim** 28.38 289 eP P 01 04 27.8 +0.6
comp=Z,264nm,1.0s
KULM ePcP PcP 01 07 38.9 -0.1
KULM **Kulim** 28.38 289 P P 01 04 28.8 +1.5
BLDU **Ballidu** 28.47 200 P P 01 04 28.4 +0.6
baz=29,SNR=64
NACB **Ninganchiao** 28.51 349 eP P 01 04 26.8 -1.4
comp=Z,271nm,1.8s
QIZ **Qiongzhong** 28.70 323 P P 01 04 31.0 +1.1
QIZ pP pP 01 04 43.3 +0.2
QIZ sP sP 01 04 50.5 +1.3
QIZ S S 01 09 17.8 +2.2
QIZ pmax pmax
comp=Z,51nm,1.9s
QIZ pmax pmax
comp=Z,470nm,5.6s
QIZ LR LR
comp=N,1µm,16.0s
QIZ LR LR
comp=Z,2µm,15.4s
QIZ **Qiongzhong** 28.70 323 eP P 01 04 30.4 +0.5
comp=Z,72nm,1.1s
YHNB **Yeheng** 29.04 348 eP P 01 04 32.3 -0.7
comp=Z,155nm,1.1s
KLBR **Kellerberrin** 29.04 197 P P 01 04 33.7 +0.8
baz=29,SNR=103
PSI **Prapat** 29.38 283 P P 01 04 36.2 0.0
baz=29,SNR=60
BBOO **Buckleboo** 29.84 165 eP P 01 04 40.7 +0.8
comp=Z,4µm,1.0s
BBOO **Buckleboo** 29.84 165 P P 01 04 40.6 +0.8
baz=30,SNR=53
QZH **Quanzhou** 29.97 344 ↑↑ iP P 01 04 43.0 +1.9
QZH sP sP 01 05 02.5 +2.1
QZH S S 01 09 37.8 +2.3
QZH pmax pmax
comp=Z,270nm,1.2s
QZH LR LR
comp=N,1µm,13.5s
QZH LR LR
comp=E,1µm,11.4s
QZH LR LR
comp=Z,3µm,25.0s
RMQ **Roma** 30.27 140 P P 01 04 44.6 +0.7
baz=30,SNR=45
NWAO **Narrogin (SRO)** 30.44 197 eP P 01 04 46.2 +0.9
comp=Z,357nm,1.0s
NWAO **Narrogin (SRO)** 30.44 197 P P 01 04 46.0 +0.8
SNR=18
NWAO **Narrogin (SRO)** 30.44 197 P P 01 04 45.7 +0.4
comp=Z,315nm,0.9s,baz=23,slow=11,SNR=82
NWAO LR LR 01 16 48.6
comp=Z,1µm,20.8s,baz=357,slow=36
JOW **Kunigami** 30.57 1 eP P 01 04 47.4 +1.0
comp=Z,83nm,0.8s
STKA **Stephens Creek** 30.79 156 eP P 01 04 49.3 +1.0
comp=Z,67nm,1.1s
STKA **Stephens Creek** 30.79 156 P P 01 04 49.0 +0.6
comp=Z,200nm,1.1s,baz=331,slow=10,SNR=139
STKA LR LR 01 16 56.6
comp=Z,2µm,19.7s,baz=326,slow=36
STKA **Stephens Creek** 30.79 156 P P 01 04 49.3 +1.0
baz=31,SNR=55
EIDS **Eidsvold** 31.09 136 eP P 01 04 51.0 -0.1
comp=Z,95nm,1.3s
EIDS **Eidsvold** 31.09 136 P P 01 04 51.3 +0.3
baz=31,SNR=9.7
LHMI **Lhok Sumawe** 31.89 286 P P 01 04 59.3 +1.1
baz=32,SNR=6.3
RKGY **Rocky Gully** 32.09 197 P P 01 05 02.2 +2.5
baz=32,SNR=74
CMSA **Cobar Meteorol** 32.35 150 P P 01 05 03.4 +1.4
baz=32,SNR=88
HNR **Honiara** 32.63 101 eP P 01 05 04.3 -0.4
comp=Z,186nm,0.9s
HNR **Honiara** 32.63 101 LR LR 01 17 36.8
comp=Z,553nm,21.4s,baz=170,slow=35
ARMA **Armidale** 34.82 142 eP P 01 05 25.3 +1.5
comp=Z,101nm,0.9s
ARMA **Armidale** 34.82 142 P P 01 05 25.2 +1.5
baz=35,SNR=34
ARPS **Mount Arapiles** 35.24 160 P P 01 05 28.9 +1.7
baz=35,SNR=36
SSE **Sheshan** 35.34 351 P P 01 05 28.3 +0.4
SSE S S 01 11 01.5 +2.8
SSE sS sS 01 11 27.5 +6.3
SSE pmax pmax
comp=Z,63nm,1.1s
SSE pmax pmax
comp=Z,400nm,5.3s
SSE LR LR
comp=N,490nm,20.7s
SSE LR LR
comp=E,530nm,20.7s
SSE LR LR
comp=Z,820nm,15.3s
CM31 **Chiang Mai Arr** 35.90 309 eP P 01 05 33.2 +0.2
comp=Z,11nm,0.6s
CMAR **Chiang Mai Arr** 35.90 309 P P 01 05 33.7 +0.7
CMAR PcP PcP 01 08 00.1 +0.7
CMAR ScP ScP 01 11 45.0 +3.5
CMAR PKiKP PKiKP 01 15 19.2 -0.5
CMAR **Chiang Mai Arr** 35.90 309 P P 01 05 33.7 +0.7
comp=Z,26nm,0.8s,baz=139,slow=6.9,SNR=70
CMAR PcP PcP 01 08 00.1 +0.7
comp=Z,25nm,0.9s,baz=168,slow=2.7,SNR=14
CMAR ScP ScP 01 11 45.0 +3.5
comp=Z,4.7nm,1.0s,baz=154,slow=2.9,SNR=6.7
CMAR PKiKP PKiKP 01 15 19.2 -0.5
comp=Z,1.3nm,0.7s,baz=289,slow=0.7,SNR=5.0
YNG **Young** 35.91 150 P P 01 05 34.8 +1.8
baz=36,SNR=64
CHTO **Chiang Mai** 36.10 310 eP P 01 05 35.5 +0.8
CHTO e 01 08 01.1
CHTO pmax pmax
comp=Z,40nm,0.8s
CHTO **Chiang Mai** 36.10 310 eP P 01 05 35.5 +0.8
comp=Z,40nm,0.8s
CHTO ePcP PcP 01 08 01.1 +1.1
CHTO **Chiang Mai** 36.10 310 P P 01 05 36.1 +1.4
SNR=21
GYA **Guiyang** 36.33 327 ↑ iP P 01 05 38.0 +1.3
GYA pP pP 01 05 50.0 -0.1
GYA sP sP 01 05 55.5 -0.6
GYA PP PP 01 07 01.5 +1.3
GYA PcP PcP 01 08 01.5 +0.8
GYA S S 01 11 15.5 +1.1
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,320nm,4.8s
GYA LR LR
comp=N,510nm,14.9s
GYA LR LR
comp=E,620nm,12.1s
GYA LR LR
comp=Z,800nm,12.1s
WHN **Wuhan** 36.51 341 P P 01 05 39.3 +1.3
WHN S S 01 11 20.8 +4.1
WHN LR LR
comp=N,2µm,12.8s
WHN LR LR
comp=E,3µm,18.1s
WHN LR LR
comp=Z,3µm,12.4s
MGCD **Mangrove Creek** 36.52 146 P P 01 05 40.6 +2.5
baz=37,SNR=4.8
NJ2 **Nanjing** 36.71 348 eP P 01 05 40.8 +1.1
NJ2 pP pP 01 05 50.5 -2.5
NJ2 sP sP 01 05 55.0 -4.1
NJ2 S S 01 11 22.0 +2.3
NJ2 sS ScP 01 11 49.0 +4.8
NJ2 pmax pmax
comp=Z,110nm,1.2s
NJ2 pmax pmax
comp=Z,400nm,6.7s
NJ2 LR LR
comp=N,860nm,16.2s
NJ2 LR LR
comp=E,600nm,14.7s
NJ2 LR LR
comp=Z,1µm,17.6s
JNU **Nakatsue** 36.96 5 eP P 01 05 41.9 0.0
JNU **Nakatsue** 36.96 5 LR LR 01 19 38.2
comp=Z,2µm,20.8s,baz=183,slow=34
CAN **Canberra** 37.03 150 eP P 01 05 44.3 +1.8
CAN pmax pmax
comp=Z,234nm,0.8s
CAN **Canberra** 37.03 150 eP P 01 05 44.3 +1.8
comp=Z,234nm,0.8s
CNB **Canberra Magne** 37.20 150 P P 01 05 45.9 +1.9
baz=37,SNR=32
TOO **Toolangi** 37.31 156 P P 01 05 47.3 +2.4
baz=37,SNR=9.4
KMI **Kunming** 37.60 321 P P 01 05 49.5 +1.9
KMI pP pP 01 06 05.3 +4.3
KMI sP sP 01 06 11.5 +4.5
KMI PP PnPn 01 07 18.5 +2.9
KMI S S 01 11 35.5 +1.6
KMI sS sS 01 12 00.5 +4.0
KMI SS SnSn 01 14 16.0 -0.5
KMI pmax pmax
comp=Z,45nm,1.2s
KMI LR LR
comp=N,960nm,13.1s
KMI LR LR
comp=E,800nm,13.6s
KMI LR LR
comp=Z,1µm,16.1s
ENH **Enshi** 38.13 334 eP P 01 05 52.3 +0.5
comp=Z,198nm,1.2s
ENH ePcP PcP 01 08 07.1 +1.1
MILA **Mila** 38.49 152 P P 01 05 57.3 +2.5
baz=38,SNR=5.6
JHJ **Hachijo jima 2** 38.61 17 LR LR 01 20 00.1
comp=Z,1µm,18.2s,baz=204,slow=33
LHI **Lord Howe Isla** 40.39 136 S sS 01 12 45.9 +7.8
baz=40,SNR=4.5
KSAR **Wonju Array Be** 41.14 0 P P 01 06 17.2 +0.5
KSAR PcP PcP 01 08 16.7 +1.4
KSAR ScP ScP 01 12 04.6 +3.5
KSRS **Korea Array** 41.15 0 P P 01 06 17.2 +0.4
comp=Z,37nm,0.7s,baz=179,slow=9.9,SNR=86
KSRS PcP PcP 01 08 16.7 +1.3
comp=Z,15nm,0.9s,baz=186,slow=3.0,SNR=6.5
KSRS ScP ScP 01 12 04.6 +3.4
comp=Z,3.4nm,0.8s,baz=198,slow=3.5,SNR=6.5
KSRS LR LR 01 21 58.4
comp=Z,1µm,20.8s,baz=182,slow=34
INCN **Inchon** 41.19 359 eP P 01 06 17.5 +0.4
comp=Z,46nm,0.7s
INCN **Inchon** 41.19 359 P P 01 06 17.6 +0.4
SNR=6.9
CD2 **Chengdu** 41.41 328 P P 01 06 19.5 +0.4
CD2 pP pP 01 06 34.0 +1.4
CD2 sP sP 01 06 40.5 +1.9
CD2 PP PnPn 01 07 59.5 -1.1
CD2 PcP PcP 01 08 17.0 +0.5
CD2 PcS PcS 01 12 07.0 -0.9
CD2 S S 01 12 31.0 +0.4
CD2 sS sS 01 12 55.5 +2.1
CD2 pmax pmax
comp=Z,160nm,0.6s
CD2 pmax pmax
comp=Z,560nm,5.0s
CD2 LR LR
comp=N,980nm,13.2s
CD2 LR LR
comp=E,2µm,10.8s
CD2 LR LR
comp=Z,970nm,16.6s
MJAR **Matsushiro Arr** 41.45 13 P P 01 06 18.7 -0.6
MJAR PcP PcP 01 08 16.1 -0.3
MJAR **Matsushiro Arr** 41.45 13 P P 01 06 18.7 -0.6
comp=Z,57nm,0.8s,baz=191,slow=10,SNR=25
MJAR PcP PcP 01 08 16.1 -0.3
comp=Z,14nm,1.0s,baz=214,slow=4.1,SNR=4.7
MJAR LR LR 01 23 32.3
comp=Z,973nm,18.1s,baz=200,slow=36
MAJO **Matsushiro** 41.46 13 eP P 01 06 18.7 -0.6
MAJO pmax pmax
comp=Z,125nm,0.9s
MAJO **Matsushiro** 41.46 13 eP P 01 06 18.7 -0.6
comp=Z,125nm,0.9s
XAN **Xi'an** 41.64 336 P P 01 06 20.3 -0.6
XAN PP PnPn 01 08 02.0 -1.2
XAN S S 01 12 33.0 -0.9
XAN ScS ScS 01 16 16.0 -4.0
XAN pmax pmax
comp=Z,25nm,1.0s
XAN pmax pmax
comp=Z,88nm,5.6s
XAN LR LR
comp=N,600nm,13.2s
XAN LR LR
comp=E,250nm,12.2s
XAN LR LR
comp=Z,240nm,15.3s
NOUC **Port Laguerre** 41.68 119 eP P 01 06 21.0 -0.4
DZM **Mont Dzumac** 41.79 119 eP P 01 06 24.0 +1.6
comp=Z,161nm,1.4s
DZM eS S 01 12 37.7 +1.1
comp=Z,544nm,27.5s
DZM eLR LR 01 17 55.0
comp=Z,1µm,24.9s
DZM **Mont Dzumac** 41.79 119 eP P 01 06 21.5 -0.9
DL2 **Dalian** 42.95 353 ↑P P 01 06 31.3 -0.1
DL2 PP PP 01 08 15.3 +3.3
DL2 PcP PcP 01 08 22.5 +1.2
DL2 S S 01 12 48.5 -4.5
DL2 pmax pmax
comp=Z,60nm,0.9s
DL2 pmax pmax
comp=Z,280nm,5.4s
DL2 LR LR
comp=N,350nm,17.9s
DL2 LR LR
comp=E,380nm,13.7s
DL2 LR LR
comp=Z,490nm,13.7s
AGT **Agartala** 44.87 310 ePKP P 01 06 49.0 +1.9
AGT ex x 01 07 19.0
BJT **Baijiatuau** 44.95 348 eP P 01 06 47.4 0.0
comp=Z,117nm,0.9s
BJI **Beijing** 44.97 348 P P 01 06 47.0 -0.6
BJI sP sP 01 07 06.0 -1.2
BJI PcP PcP 01 08 29.5 +1.4
BJI S S 01 13 19.3 -3.0
BJI pmax pmax
comp=Z,89nm,1.1s
BJI LR LR
comp=N,440nm,13.7s

BJI					LR	LR		
	comp=E,480nm,18.0s							
BJI					LR	LR		
	comp=E,630nm,39.0s							
LZH	**Lanzhou**	**45.55**	**333**	⇑P	**P**		**01 06 53.5**	**+1.0**
LZH				pP	**pP**		**01 07 05.8**	**-0.4**
LZH				sP	**sP**		**01 07 11.0**	**-1.2**
LZH				S	**S**		**01 13 32.5**	**+1.2**
LZH				sS	**sS**		**01 13 54.0**	**-0.3**
LZH				pmax	pmax			
	comp=Z,130nm,1.3s							
LZH				pmax	pmax			
	comp=Z,750nm,6.0s							
LZH				LR	LR			
	comp=N,2μm,11.8s							
LZH				LR	LR			
	comp=E,2μm,13.6s							
LZH				LR	LR			
	comp=Z,2μm,15.7s							
SNY	**Shenyang**	**45.66**	**356**	⇑P	**P**		**01 06 52.8**	**-0.3**
SNY				pP	**pP**		**01 07 08.0**	**+1.2**
SNY				S	**S**		**01 13 28.5**	**-3.8**
SNY				pmax	pmax			
	comp=Z,33nm,2.4s							
SNY				pmax	pmax			
	comp=Z,450nm,6.7s							
SNY				LR	LR			
	comp=N,1μm,20.1s							
SNY				LR	LR			
	comp=E,570nm,20.8s							
SNY				LR	LR			
	comp=Z,1μm,19.6s							
HHC	**Hu-ho-hao-te**	**46.88**	**343**	*e*P	**P**		**01 07 03.0**	**+0.2**
HHC				pP	**pP**		**01 07 15.5**	**-1.1**
HHC				sP	**sP**		**01 07 20.8**	**-1.7**
HHC				PP	**PP**		**01 08 55.3**	**+1.5**
HHC				S	**S**		**01 13 52.8**	**+2.7**
HHC				ScS	**ScS**		**01 16 50.0**	**-3.1**
HHC				pmax	pmax			
	comp=Z,110nm,1.1s							
HHC				pmax	pmax			
	comp=Z,1μm,5.4s							
HHC				LR	LR			
	comp=N,1μm,16.5s							
HHC				LR	LR			
	comp=E,790nm,13.2s							
HHC				LR	LR			
	comp=Z,2μm,14.2s							
VLA	**Vladivostok**	**46.98**	**4**	⇑*i*P	**P**		**01 07 03.6**	**+0.3**
VLA				*e*S	**S**		**01 13 50.9**	**-0.2**
VLA				pmax	pmax			
	comp=Z,336nm,2.7s							
BTO	**Baotou**	**47.12**	**342**	*e*P	**P**		**01 07 03.0**	**-1.7**
CN2	**Changchun**	**47.53**	**358**	*e*P	**P**		**01 07 07.0**	**-0.7**
CN2				*e*pP	**pP**		**01 07 21.5**	**+0.1**
CN2				*e*PcP	**PcP**		**01 08 38.3**	**+1.2**
CN2				*e*S	**S**		**01 13 57.5**	**-1.5**
CN2				pmax	pmax			
	comp=Z,30nm,1.2s							
CN2				pmax	pmax			
	comp=Z,200nm,5.0s							
CN2				LR	LR			
	comp=N,600nm,20.0s							
CN2				LR	LR			
	comp=E,900nm,20.0s							
CN2				LR	LR			
	comp=Z,800nm,20.0s							
ERM	**Erimo**	**47.86**	**16**	*e*P	**P**		**01 07 11.5**	**+1.2**
ERM				pmax	pmax			
	comp=Z,180nm,1.7s							
ERM	**Erimo**	**47.86**	**16**	*e*P	**P**		**01 07 11.4**	**+1.2**
	comp=Z,180nm,1.7s							
PALK	**Pallekele**	**48.05**	**283**	*e*P	**P**		**01 07 11.5**	**-0.8**
	comp=Z,244nm,1.9s							
USRK	**Ussuriysk Arra**	**48.06**	**4**	P	**P**		**01 07 12.0**	**+0.3**
	comp=Z,75nm,0.7s,baz=187,slow=7.4,SNR=79							
USRK				ScP	**ScP**		**01 12 31.7**	**+2.3**
	comp=Z,8.2nm,1.1s,baz=207,slow=2.2,SNR=7.9							
USRK				LR	LR		01 28 25.5	
	comp=Z,693nm,18.8s,baz=153,slow=37							
LSA	**Lhasa**	**48.29**	**316**	P	**P**		**01 07 15.8**	**+1.4**
LSA				S	S		01 14 04.5	-6.7
LSA				pmax	pmax			
	comp=Z,190nm,0.8s							
LSA	**Lhasa**	**48.29**	**316**	*e*P	**P**		**01 07 15.8**	**+1.4**
LSA				pmax	pmax			
	comp=Z,154nm,0.8s							
LSA	**Lhasa**	**48.29**	**316**	*e*P	**P**		**01 07 15.8**	**+1.4**
	comp=Z,154nm,0.8s							
MDJ	**Mudanjiang**	**48.34**	**2**	P	**P**		**01 07 14.8**	**+0.9**
MDJ				pP	**pP**		**01 07 26.3**	**-1.4**
MDJ				sP	**sP**		**01 07 31.3**	**-2.4**
MDJ				PP	**PP**		**01 09 06.8**	**-0.2**
MDJ				S	**S**		**01 14 10.0**	**-0.5**
MDJ				sS	**sS**		**01 14 31.3**	**-2.3**
MDJ				ScS	**ScS**		**01 17 01.5**	**-0.8**
MDJ				SS	**SS**		**01 17 44.0**	**+3.2**
MDJ				pmax	pmax			
	comp=Z,120nm,1.2s							
MDJ				LR	LR			
	comp=N,720nm,24.5s							
MDJ				LR	LR			
	comp=E,360nm,14.0s							
MDJ				LR	LR			
	comp=Z,750nm,24.5s							
MDJ	**Mudanjiang**	**48.34**	**2**	*e*P	**P**		**01 07 14.5**	**+0.6**
	comp=Z,152nm,1.0s							
ODAN	**Odare**	**49.41**	**311**	*e*P	**P**		**01 07 23.2**	**+0.5**
	comp=Z,482nm,0.8s							
TAPN	**Taplejung**	**49.42**	**311**	*e*P	**P**		**01 07 23.4**	**+0.5**
	comp=Z,518nm,1.0s							
ASAJ	**Asahikawa**	**49.69**	**14**	*e*P	**P**		**01 07 25.1**	**+0.9**
	comp=Z,27nm,0.8s							
ASAJ	**Asahikawa**	**49.69**	**14**	P	**P**		**01 07 24.6**	**+0.4**
	comp=Z,71nm,0.9s,baz=225,slow=8.6,SNR=20							
ASAJ				LR	LR		01 26 54.8	
	comp=Z,561nm,20.8s,baz=109,slow=34							
RAMN	**Ramite**	**50.05**	**310**	*e*P	**P**		**01 07 28.4**	**+0.8**
	comp=Z,969nm,0.7s							
GTA	**Gaotai**	**50.11**	**332**	⇑P	**P**		**01 07 28.3**	**+0.6**
GTA				pP	**pP**		**01 07 44.0**	**+2.4**
GTA				sP	**sP**		**01 07 50.8**	**+3.3**
GTA				PcP	**PcP**		**01 08 48.0**	**+1.3**
GTA				S	**S**		**01 14 35.5**	**-0.3**
GTA				sS	**sS**		**01 15 02.5**	**+3.5**
GTA				SS	**SS**		**01 18 06.3**	**-3.4**
GTA				pmax	pmax			
	comp=Z,83nm,1.1s							
GTA				pmax	pmax			
	comp=Z,450nm,5.7s							
GTA				LR	LR			
	comp=N,440nm,18.3s							
GTA				LR	LR			
	comp=E,500nm,15.0s							
GTA				LR	LR			
	comp=Z,540nm,20.0s							
GUN	**Gumba**	**51.10**	**311**	*e*P	**P**		**01 07 36.1**	**+0.5**
	comp=Z,757nm,0.9s							
PKI	**Pulchoki**	**51.28**	**310**	*e*P	**P**		**01 07 36.9**	**-0.1**
	comp=Z,292nm,1.0s							
PKIN	**Phulchoki**	**51.29**	**310**	*e*P	**P**		**01 07 37.0**	**0.0**
	comp=Z,89nm,0.7s							
MSVF	**Nonsavu**	**51.29**	**110**	*e*P	**P**		**01 07 37.7**	**+0.7**
MSVF				pmax	pmax			
	comp=Z,67nm,1.0s							
MSVF	**Nonsavu**	**51.29**	**110**	*e*P	**P**		**01 07 37.7**	**+0.7**
	comp=Z,67nm,1.0s							
MSVF	**Nonsavu**	**51.29**	**110**	P	**P**		**01 07 38.0**	**+1.1**
	comp=Z,395nm,1.2s,SNR=7.3							
KKN	**Kakani**	**51.49**	**310**	*e*P	**P**		**01 07 38.6**	**+0.2**
	comp=Z,306nm,0.8s							
FUNA	**Funafuti**	**51.51**	**98**	*e*P	**P**		**01 07 38.4**	**-0.2**
	comp=Z,861nm,1.9s							
DMN	**Daman**	**51.53**	**310**	*e*P	**P**		**01 07 39.2**	**+0.4**
	comp=Z,471nm,0.9s							
TRD	**Trivandrum**	**51.94**	**284**	⇓*e*PKP	**PKiKP**		**01 15 34.5**	**-0.4**
YSS	**Yuzh-Sakhalins**	**52.40**	**13**	*ex*eP	P		01 07 47.8	+3.3
YSS				*e*			01 08 56.0	
YSS				*e*S	**S**		**01 15 06.0**	**-0.7**
YSS				*e*PS	PKiKP		01 15 16.0	-18
YSS				pmax	pmax			
	comp=Z,30nm,1.0s							
YSS				pmax	pmax			
	comp=Z,300nm,5.0s							
YSS				MLR	MLR			
	comp=Z,500nm,18.0s							
HABR	**Khabarovsk**	**52.58**	**6**	*e*P	**P**		**01 07 44.8**	**-1.0**
HABR				*e**PP	**pP**		**01 07 58.8**	**-0.9**
HABR				*e*			01 08 53.3	
HABR				*e*PPP	PPP		01 10 47.9	
HABR				*e*S	**S**		**01 15 08.7**	**-0.4**
HABR				*e*			01 17 28.3	
HABR				*e*SS	**SS**		**01 18 47.8**	**-0.3**
HABR				*e*SSS	SSS		01 20 36.6	
HABR				pmax	pmax			
	comp=Z,93nm,1.1s							
HABR				pmax	pmax			
	comp=E,20nm,0.5s							
HABR				pmax	pmax			
	comp=N,30nm,1.1s							
HABR				pmax	pmax			
	comp=Z,612nm,2.8s							
HABR				MLR	MLR			
	comp=Z,639nm,18.0s							
OUZ	**Omahuta**	**52.71**	**132**	*e*P	**P**		**01 07 48.9**	**+1.8**
KOLN	**Koldanda**	**52.77**	**309**	*e*P	**P**		**01 07 48.4**	**+0.5**
	comp=Z,532nm,0.8s							
HYB	**Hyderabad**	**52.79**	**295**	⇑*i*P	**P**		**01 07 46.5**	**-1.5**
	comp=Z,130nm,1.0s							
HYB				*e*S	**S**		**01 15 12.0**	**-1.1**
DANN	**Dangsing**	**52.93**	**310**	*e*P	**P**		**01 07 49.1**	**-0.1**
	comp=Z,955nm,0.8s							
KLR	**Kul'dur**	**53.05**	**3**	*e*P	P		01 07 45.7	-3.6
KLR				*e*S	**S**		**01 15 12.8**	**-2.7**
KLR				pmax	pmax			
	comp=N,63nm,2.0s							
KLR				pmax	pmax			
	comp=Z,180nm,2.0s							
KLR				smax	smax			
	comp=N,85nm,1.8s							
KLR				smax	smax			
	comp=E,64nm,1.8s							
HIA	**Hailar**	**53.39**	**354**	*e*P	**P**		**01 07 52.3**	**+0.4**
	comp=E,65nm,1.3s							
HIA				*e*PcP	**PcP**		**01 08 58.3**	**-0.3**
PYUN	**Piuthan**	**53.40**	**309**	*e*P	**P**		**01 07 53.2**	**+0.7**
	comp=E,1μm,1.0s							
ULN	**Ulaanbaatar**	**54.61**	**343**	*e*P	**P**		**01 08 01.1**	**+0.2**
	comp=E,84nm,1.0s							
ULN				*e*PcP	**PcP**		**01 09 02.7**	**-0.8**
ULN				*e*ScP	**ScP**		**01 13 01.2**	**+3.4**
ULN	**Ulaanbaatar**	**54.61**	**343**	P	**P**		**01 08 01.7**	**+0.8**
	SNR=43							
SONM	**Songino Array**	**54.77**	**343**	P	**P**		**01 08 02.2**	**+0.1**
SONM				PcP	**PcP**		**01 09 04.8**	**+0.8**
SONM				ScP	**ScP**		**01 13 00.9**	**+2.4**
SONM	**Songino Array**	**54.77**	**343**	P	**P**		**01 08 02.2**	**+0.1**
	comp=E,51nm,1.0s,baz=158,slow=6.9,SNR=141							
SONM				PcP	**PcP**		**01 09 04.8**	**+0.8**
	comp=E,21nm,0.9s,baz=146,slow=2.8,SNR=4.1							
SONM				ScP	**ScP**		**01 13 00.9**	**+2.4**
	comp=E,3.3nm,0.9s,baz=161,slow=5.7,SNR=4.7							
SONM				LR	LR		01 33 04.2	
	comp=E,493nm,19.6s,baz=146,slow=38							
LATR	**Latur**	**54.90**	**296**	*e*PKP	**P**		**01 08 02.5**	**-0.9**
RPZ	**Rata Peaks**	**55.16**	**143**	*e*P	**P**		**01 08 06.0**	**+1.2**
	comp=E,392nm,1.1s							
RPZ	**Rata Peaks**	**55.16**	**143**	LR	LR		01 30 26.2	
	comp=E,626nm,19.6s,baz=307,slow=35							
ODZ	**Otahua Downs**	**55.65**	**144**	*e*P	**P**		**01 08 08.4**	**+0.1**
	comp=E,18nm,1.5s							
KHZ	**Kahutara**	**56.02**	**140**	*e*P	**P**		**01 08 11.4**	**+0.3**
	comp=E,127nm,0.9s							
SNZO	**South Karori**	**56.24**	**138**	*e*P	**P**		**01 08 12.8**	**+0.2**
	comp=E,120nm,1.0s							
URZ	**Urewera**	**56.55**	**134**	*e*P	**P**		**01 08 15.1**	**+0.2**
	comp=E,76nm,0.8s							
CIT	**Chita**	**56.98**	**350**	*e*P	**P**		**01 08 17.7**	**0.0**
CIT				*e*			01 08 26.6	
CIT				*e*			01 09 13.8	
CIT				pmax	pmax			
	comp=Z,181nm,2.3s							
AGRA	**Agra**	**56.98**	**306**	*e*PKP	**P**		**01 08 16.9**	**-1.2**
AGRA				AMB	AMB		01 08 17.4	
	comp=Z,395nm,1.0s							
POO	**Poona**	**57.38**	**295**	⇑*i*x	x		01 08 16.0	
	comp=Z,20nm,1.0s							
BISR	**Bishrakh**	**57.96**	**307**	*ex*	x		01 08 16.0	
ZAK	**Zakamensk**	**57.98**	**342**	⇓*i*P	**P**		**01 08 24.0**	**-0.8**
ZAK				*e*			01 09 16.8	
ZAK				pmax	pmax			
	comp=Z,22nm,1.2s							
AYAN	**Aya Nagar**	**58.17**	**307**	*e*PKP	**P**		**01 08 24.9**	**-1.6**
AYAN				AMB	AMB		01 08 25.6	
	comp=Z,154nm,1.1s							
DDI	**Dehra Dun**	**58.24**	**309**	*e*PKP	**P**		**01 08 26.5**	**-0.6**
KUDL	**Kundal**	**58.54**	**306**	*e*PKP	**P**		**01 08 27.4**	**-1.6**
KUDL				AMB	AMB		01 08 28.3	
	comp=Z,244nm,0.3s							
TLY	**Talaya**	**59.01**	**343**	*c i*P	**P**		**01 08 32.3**	**+0.4**
TLY				*e*			01 10 46.0	
TLY				*e*S	**S**		**01 16 36.9**	**+2.2**
TLY				pmax	pmax			
	comp=Z,42nm,1.5s							
TLY				MLR	MLR			
	comp=Z,173nm,17.0s							
KKR	**Kurukshetra**	**59.04**	**308**	*e*PKP	**P**		**01 08 31.6**	**-1.0**
KKR				AMB	AMB		01 08 33.6	
	comp=Z,386nm,1.0s							
SMLA	**Simla**	**59.29**	**310**	*i* P	**P**		**01 08 34.9**	**+0.8**
SMLA				*e*S	**S**		**01 16 40.0**	**+1.0**
IRK	**Irkutsk**	**59.33**	**344**	⇑*i*P	**P**		**01 08 33.8**	**-0.3**
IRK				*e*			01 10 48.6	
IRK				pmax	pmax			
	comp=Z,130nm,2.5s							
WMQ	**Urumqi**	**59.49**	**327**	P	**P**		**01 08 36.0**	**+0.5**
WMQ				pP	**pP**		**01 08 48.5**	**-1.1**
WMQ				sP	**sP**		**01 08 54.0**	**-1.5**
WMQ				PcP	**PcP**		**01 09 23.0**	**+0.4**
WMQ				PP	**PP**		**01 10 49.0**	**+1.6**
WMQ				S	**S**		**01 16 39.8**	**-1.6**
WMQ				SKS	**ScS**		**01 18 18.5**	**-3.0**
WMQ				pmax	pmax			
	comp=Z,140nm,0.8s							
WMQ				LR	LR			
	comp=N,570nm,12.0s							
WMQ				LR	LR			
	comp=E,440nm,9.2s							
WMQ				LR	LR			
	comp=Z,390nm,24.8s							
SKR	**Severo-Kuril's**	**59.66**	**21**	*e*P	**P**		**01 08 34.5**	**-1.8**
MOY	**Mondy**	**59.81**	**341**	*e*P	**P**		**01 08 38.3**	**+0.7**
MOY				pmax	pmax			
	comp=Z,160nm,2.5s							
CLNS	**Chul'man**	**60.58**	**358**	*e*P	**P**		**01 08 43.3**	**+0.7**
CLNS				*e**PP	**pP**		**01 08 55.5**	**-1.3**
CLNS				*e*			01 09 28.5	
CLNS				*e*			01 10 55.6	
CLNS				*e*S	**S**		**01 16 54.2**	**-0.6**
CLNS				*e*			01 18 28.1	
CLNS				*e*SSS	SSS		01 23 26.6	
CLNS				pmax	pmax			
	comp=Z,28nm,0.9s							
CLNS				pmax	pmax			
	comp=N,20nm,1.1s							
CLNS				pmax	pmax			
	comp=E,9.0nm,0.9s							
CLNS				pmax	pmax			
	comp=N,17nm,1.1s							
CLNS				pmax	pmax			
	comp=E,7.0nm,1.2s							
CLNS				pmax	pmax			
	comp=Z,11nm,1.1s							
CLNS				smax	smax			
	comp=N,153nm,10.3s							
CLNS				smax	smax			
	comp=E,160nm,11.9s							
CLNS				MLR	MLR			
	comp=Z,582nm,19.0s							
THN	**Thein Dam**	**60.97**	**311**	*e*PKP	**P**		**01 08 42.7**	**-3.0**
THN				*ex*	x		01 13 27.5	
PEA0B	**Petropavlovsk-**	**62.22**	**20**	*e*P	**P**		**01 08 54.5**	**+0.7**
PETK	**Petropavlovsk-**	**62.22**	**20**	P	**P**		**01 08 54.6**	**+0.9**
PETK							01 09 33.0	
PETK				pmax	pmax			
	comp=Z,61nm,0.8s							
PETK	**Petropavlovsk-**	**62.22**	**20**	P	**P**		**01 08 54.6**	**+0.9**
PETK				PcP	**PcP**		**01 09 33.0**	**-0.3**
PETK	**Petropavlovsk-**	**62.22**	**20**	P	**P**		**01 08 54.6**	**+0.9**
	comp=Z,61nm,0.8s,baz=194,slow=5.3,SNR=43							
PETK				PcP	**PcP**		**01 09 33.0**	**-0.3**
	comp=Z,26nm,0.7s,baz=177,slow=5.8,SNR=6.8							
PET	**Petropavlovsk**	**62.48**	**21**	*e*P	**P**		**01 08 56.0**	**+0.6**
PET				*e*S	**S**		**01 17 22.5**	**+3.7**
PET				*e*SS	SS		01 21 31.4	+7.7
PET				pmax	pmax			
	comp=Z,142nm,1.1s							
PET				pmax	pmax			
	comp=Z,300nm,8.1s							
DRV	**Dumont d'Urvil**	**63.24**	**174**	P	**P**		**01 09 03.0**	**+2.7**
DRV	**Dumont d'Urvil**	**63.24**	**174**	PP	PP		01 11 26.0	+6.2
DRV				S	S		01 17 20.0	-8.0
DRV				SS	SS		01 21 23.0	-12
DRV				L	L		01 24 00.0	
DRV				R			01 28 00.0	
CASY	**Casey**	**63.39**	**188**	*e*P	**P**		**01 09 02.0**	**+0.7**
	comp=Z,160nm,1.0s							
KSH	**Kashi**	**64.11**	**318**	⇑*i*P	**P**		**01 09 07.3**	**+0.6**
KSH				sP	**sP**		**01 09 30.5**	**+3.7**
KSH				*i* PcP	**PcP**		**01 09 41.3**	**-0.2**
KSH				PP	**PP**		**01 11 30.3**	**+2.0**
KSH				ScP			01 13 37.8	
KSH				PcS			01 13 44.5	
KSH				S	**S**		**01 17 35.8**	**-4.2**
KSH				sS	**sS**		**01 18 04.3**	**+0.3**
KSH				ScS	**SKSac**		**01 18 51.0**	**-5.6**
KSH				pmax	pmax			
	comp=Z,130nm,0.9s							
KSH				LR	LR			
	comp=N,700nm,13.1s							
KSH				LR	LR			
	comp=E,1μm,17.6s							
KSH				LR	LR			
	comp=Z,760nm,15.8s							
MK31	**Makanchi Array**	**64.32**	**327**	*c e*P	**P**		**01 09 07.6**	**-0.2**
MK31				pmax	pmax			
	comp=Z,106nm,0.8s							
MK31	**Makanchi Array**	**64.32**	**327**	*e*P	**P**		**01 09 07.7**	**-0.2**
MKAR	**Makanchi Array**	**64.32**	**327**	*e*P	**P**		**01 09 07.9**	**+0.1**
MKAR							01 09 42.6	
MKAR	**Makanchi Array**	**64.32**	**327**	*e*P	**P**		**01 09 07.9**	**+0.1**
MKAR				PcP	**PcP**		**01 09 42.6**	**+0.5**
MKAR				P'P'			01 37 51.6	
MKAR	**Makanchi Array**	**64.32**	**327**	P	**P**		**01 09 07.7**	**-0.1**
	comp=Z,58nm,0.7s,baz=130,slow=7.8,SNR=570							
MKAR				PcP	**PcP**		**01 09 42.6**	**+0.5**
	comp=Z,38nm,0.8s,baz=122,slow=4.7,SNR=8.5							
MKAR				PKPPKP	**P'P'df**		**01 37 51.6**	**-5.1**
	comp=Z,1.7nm,1.0s,baz=298,slow=3.1,SNR=5.3							
ULHL	**Ulahol**	**65.31**	**320**	P	**P**		**01 09 14.8**	**+0.2**
	SNR=32							
YAK	**Yakutsk**	**65.78**	**1**	*e*P	**P**		**01 09 17.2**	**+0.4**
YAK				*e**PP	**pP**		**01 09 30.8**	**-0.4**
YAK				*e*			01 09 48.1	
YAK				*e*			01 11 43.8	
YAK				*e*PPP	PPP		01 13 16.1	
YAK				*e*S	**S**		**01 18 00.8**	**+1.5**
YAK				*e**SS	**sS**		**01 18 21.5**	**-1.9**
YAK				*e*			01 19 08.5	
YAK				pmax	pmax			
	comp=Z,191nm,0.9s							
YAK				pmax	pmax			
	comp=N,67nm,1.1s							
YAK				pmax	pmax			
	comp=E,25nm,1.0s							
YAK				smax	smax			
	comp=N,249nm,2.2s							
YAK				smax	smax			
	comp=E,39nm,9.3s							
KZA	**Kyzart**	**65.86**	**320**	P	**P**		**01 09 19.1**	**+0.7**
	SNR=64							
TKM2	**Tokmak 2**	**66.06**	**321**	*i* P	**P**		**01 09 19.6**	**+0.2**
TKM2	**Tokmak 2**	**66.06**	**321**	*e*P	**P**		**01 09 19.6**	**+0.2**
	comp=E,56nm,0.8s							
TKM2	**Tokmak 2**	**66.06**	**321**	P	**P**		**01 09 19.6**	**+0.2**
	SNR=80							
KBK	**Karagaybulak**	**66.34**	**320**	P	**P**		**01 09 21.5**	**+0.3**
	SNR=30							
UCH	**Uchtor**	**66.41**	**320**	P	**P**		**01 09 22.7**	**+0.7**
	SNR=9.4							
AAK	**Ala-Archa**	**66.62**	**320**	*i* P	**P**		**01 09 23.4**	**+0.5**
AAK				pmax	pmax			
	comp=Z,293nm,2.0s							
AAK	**Ala-Archa**	**66.62**	**320**	*e*P	**P**		**01 09 23.4**	**+0.5**
	comp=Z,14nm,1.0s							
AAK	**Ala-Archa**	**66.62**	**320**	P	**P**		**01 09 23.5**	**+0.5**
	SNR=39							
AAK	**Ala-Archa**	**66.62**	**320**	P	**P**		**01 09 23.4**	**+0.5**
	SNR=38							
AAK	**Ala-Archa**	**66.62**	**320**	P	**P**		**01 09 23.0**	**+0.1**
	comp=Z,332nm,1.0s,SNR=23							
CHMS	**Chumysh**	**66.64**	**320**	P	**P**		**01 09 22.3**	**-0.5**
	SNR=13							
FRU	**Bishkek**	**66.64**	**320**	*e*P	P		01 09 17.5	-5.4
FRU				*e*			01 09 50.0	
FRU				pmax	pmax			
	comp=Z,280nm,2.5s							
AML	**Almayashu**	**66.89**	**319**	P	**P**		**01 09 25.4**	**+0.4**
	SNR=127							
KBL	**Kabul**	**66.92**	**310**	*e*P	**P**		**01 09 24.5**	**-0.6**
KBL				pmax	pmax			
	comp=Z,94nm,0.9s							
KBL	**Kabul**	**66.92**	**310**	*e*P	**P**		**01 09 24.5**	**-0.6**
	comp=Z,94nm,0.9s							
USP	**Ospenovka**	**66.93**	**321**	P	**P**		**01 09 24.8**	**0.0**
	SNR=95							
MIR	**Mirnyy**	**66.98**	**194**	⇓*i*P	**P**		**01 09 26.0**	**+1.5**
MIR				*i*			01 09 44.0	
MIR				*i*			01 09 51.0	
MIR				pmax	pmax			
	comp=Z,210nm,1.0s							
EKS2	**Erkin-Say**	**67.10**	**320**	*e*P	**P**		**01 09 26.4**	**+0.5**
EKS2				pmax	pmax			
	comp=Z,83nm,0.9s							
EKS2	**Erkin-Say**	**67.10**	**320**	*e*P	**P**		**01 09 26.4**	**+0.5**
	comp=Z,83nm,0.9s							
EKS2	**Erkin-Say**	**67.10**	**320**	P	**P**		**01 09 26.4**	**+0.5**
	SNR=71							
ZAA0	**Zalesovo Array**	**67.75**	**334**	*e*P	**P**		**01 09 28.5**	**-1.1**
ZALV	**Zalesovo Beam**	**67.75**	**334**	P	**P**		**01 09 28.7**	**-1.0**
ZALV				pmax	pmax			
	comp=Z,69nm,0.9s							
ZALV	**Zalesovo Beam**	**67.75**	**334**	P	**P**		**01 09 28.6**	**-1.0**
ZALV				P'P'			01 37 50.9	
ZALV	**Zalesovo Beam**	**67.75**	**334**	P	**P**		**01 09 28.6**	**-1.0**
	comp=Z,69nm,0.9s,baz=117,slow=5.9,SNR=219							
ZALV				PKPPKP	**P'P'df**		**01 37 50.9**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=316,slow=4.0,SNR=6.5							
FX1	**Attu Island--F**	**68.34**	**28**	*e*P	**P**		**01 09 34.8**	**+1.4**
KURBB	**Kurchatov Arra**	**68.62**	**329**	P	**P**		**01 09 34.6**	**-0.5**
	comp=Z,92nm,0.8s,baz=133,slow=5.6,SNR=707							
KURBB				PP	**PP**		**01 12 04.3**	**-2.9**
	comp=Z,11nm,1.1s,baz=130,slow=8.5,SNR=4.5							
KURBB				S	**S**		**01 18 32.8**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=139,slow=10,SNR=6.8							
KURK	**Kurchatov**	**68.63**	**329**	P	**P**		**01 09 34.6**	**-0.6**
KURK							01 12 04.4	
KURK				S	**S**		**01 18 32.8**	**-1.3**
KURK				pmax	pmax			
	comp=Z,92nm,0.8s							
KURK				pmax	pmax			
	comp=Z,11nm,1.1s							
KURK				smax	smax			
	comp=N,2.0nm,0.9s							
KURK	**Kurchatov**	**68.63**	**329**	*c i*P	**P**		**01 09 34.9**	**-0.3**
KURK				pmax	pmax			
	comp=Z,293nm,1.2s							
KURK	**Kurchatov**	**68.63**	**329**	*e*P	**P**		**01 09 34.9

NVS pmax pmax
comp=N,6.0nm,0.7s
NVS pmax pmax
comp=E,4.0nm,0.7s
NVS smax smax
comp=N,63nm,2.2s
NVS smax smax
comp=E,67nm,2.3s
SEY Seymchan 69.27 12 *c iP* **P 01 09 40.4 +1.5**
KK31 Karatay Array 69.42 319 *ce*P **P 01 09 39.7 -0.6**
KK31 pmax pmax
comp=Z,96nm,1.2s
KKAR Karatay Array 69.42 319 *e*P **P 01 09 39.9 -0.5**
KKAR Karatay Array 69.42 319 *e*P **P 01 09 39.9 -0.5**
MRIV Mauritius Mete 69.95 250 *e*P **P 01 09 43.2 -0.8**
RER Riviere de l'E 71.63 249 *e*P **P 01 09 54.2 -0.1**
comp=Z,71nm,0.9s
WBK Wadi Bani Khal 71.89 295 P **P 01 09 56.0 +0.2**
SNR=5.0
JMDO Jabal Madar 72.63 295 P **P 01 09 59.8 -0.4**
SNR=11
SMDO Samad 72.82 295 P **P 01 10 01.0 -0.4**
SNR=13
BSY Bisya 73.52 295 P **P 01 10 05.1 -0.4**
SNR=8.2
HOQ Hoqain 73.59 296 P **P 01 10 05.7 -0.1**
SNR=31
VOSK Vostochnaya 73.71 328 P **P 01 10 04.9 -1.0**
VOSK pmax pmax
comp=Z,54nm,0.6s
BVA0 Borovoye Array 74.17 328 *i* P **P 01 10 07.9 -0.7**
BVA0 pmax pmax
comp=Z,161nm,1.2s
BVAR Borovoye Array 74.17 328 P **P 01 10 08.0 -0.6**
BVAR pmax pmax
comp=Z,50nm,1.0s
BVAR Borovoye Array 74.17 328 P **P 01 10 08.0 -0.6**
BVAR Borovoye Array 74.17 328 P **P 01 10 08.0 -0.6**
comp=Z,50nm,0.9s,baz=131,slow=6.6,SNR=174
BRVK Borovoye 74.24 328 *e*P **P 01 10 08.3 -0.7**
BRVK pmax pmax
comp=Z,97nm,1.1s
BRVK Borovoye 74.24 328 *e*P **P 01 10 08.3 -0.7**
comp=Z,97nm,1.1s
BRVK Borovoye 74.24 328 P **P 01 10 09.0 0.0**
SNR=31
BRVK Borovoye 74.24 328 P **P 01 10 08.1 -0.9**
comp=Z,475nm,1.0s,SNR=21
ARQ Araqi 74.25 295 P **P 01 10 09.3 -0.4**
SNR=14
ATKA Atka Island 74.35 33 *e*P **P 01 10 10.5 +0.9**
comp=Z,231nm,1.5s
UOSS Wadi Hilu 74.85 297 P **P 01 10 12.0 -1.2**
comp=Z,480nm,0.8s,SNR=13
ZRNK Zerenda 74.86 328 *i* P **P 01 10 11.7 -0.9**
ZRNK pmax pmax
comp=Z,204nm,1.3s
HATD Hatta, Dubai 74.89 297 P **P 01 10 13.3 -0.1**
SNR=17
ASHO Ashiyiah 74.93 297 P **P 01 10 13.5 -0.1**
SNR=16
BANOM Banah 74.97 298 P **P 01 10 14.2 +0.4**
SNR=9.2
IBND Bandar-abas 75.08 300 *e*P **P 01 10 14.8 +0.4**
IBND *e*P **P 01 10 15.5 +1.1**
NAZ Nazwa, Dubai 75.34 297 P **P 01 10 15.6 -0.3**
SNR=14
TIXI Tiksi 75.42 0 *c iP* **P 01 10 15.0 -0.4**
TIXI pmax pmax
comp=Z,128nm,1.2s
IAKL Akhelmad 75.51 309 *e*P **P 01 10 16.9 -0.2**
ASUD Al Ashush, Dub 75.57 297 P **P 01 10 17.5 +0.2**
SNR=20
VNDA Vanda 75.80 173 *e*P **P 01 10 17.5 -0.1**
comp=Z,32nm,0.8s
VNDA Vanda 75.80 173 P **P 01 10 17.5 -0.1**
comp=Z,29nm,0.8s,baz=310,slow=7.4,SNR=147
VNDA LR LR 01 40 47.0
comp=Z,1μm,19.6s,baz=0.0,slow=33
IEMG Emamgholi 75.82 310 *e*P **P 01 10 19.0 +0.2**
ABTO Aybut 76.20 289 P **P 01 10 20.4 -0.6**
SNR=9.1
ISFR Sfrayin 76.22 309 *e*P **P 01 10 21.5 +0.4**
ABKT Ailbek 76.37 310 P **P 01 10 21.1 -0.5**
comp=Z,654nm,0.9s,SNR=16
BILL Bilibino 76.70 14 ⇓ *i* P **P 01 10 23.4 +0.6**
BILL *e*S **S 01 20 08.2 +2.7**
BILL pmax pmax
comp=Z,146nm,1.4s
SBA Scott Base 76.71 172 *e*P **P 01 10 23.5 +0.8**
SBA pmax pmax
comp=Z,68nm,1.1s
SBA Scott Base 76.71 172 *e*P **P 01 10 23.4 +0.8**
comp=Z,68nm,1.1s
MAW Mawson 76.94 201 P **P 01 10 24.5 +0.4**
MAW Mawson 76.94 201 P **P 01 10 24.5 +0.4**
comp=Z,28nm,1.0s,baz=52,slow=4.0,SNR=12
MAW LR LR 01 37 14.8
comp=Z,405nm,22.0s,baz=54,slow=30
MAW Mawson 76.94 201 P **P 01 10 24.5 +0.4**
baz=77,SNR=10
KIP Kipapa 77.01 67 ⇓ *i* P **P 01 10 27.2 +1.7**
KIP pmax pmax
comp=Z,232nm,2.5s
KIP Kipapa 77.01 67 *e*P **P 01 10 26.4 +1.0**
comp=Z,104nm,1.1s
IMEH Mehriz 77.57 303 *e*P **P 01 10 27.6 -1.2**
ICHK Chekchek 77.92 304 *e*P **P 01 10 29.7 -1.0**
ISRV Sarvestan 78.43 301 *e*P **P 01 10 32.4 -1.3**
ISAD Sadrabad 78.45 304 *e*P **P 01 10 32.7 -1.0**
AB31 Akbulak array 78.59 322 *ce*P **P 01 10 33.0 -0.7**
AB31 pmax pmax
comp=Z,67nm,0.8s
ABKAR Akbulak array 78.59 322 *e*P **P 01 10 33.1 -0.6**
IANJ Anjilo 79.03 307 *e*P **P 01 10 36.1 -0.6**
POHA Pohakuloa 79.05 69 *e*P **P 01 10 37.2 +0.1**
comp=Z,126nm,1.1s
UNV Unalaska Valle 79.26 33 *e*P **P 01 10 38.3 +1.1**
comp=Z,219nm,1.7s
ISHM Shahmirzad 79.60 307 *e*P **P 01 10 39.4 -0.5**
OPO Ambohidratompo 79.64 252 LR LR 01 46 04.9
comp=Z,172nm,18.5s,baz=97,slow=36
AKUT Akutan 79.77 33 *e*P **P 01 10 40.8 +0.8**
comp=Z,269nm,1.1s
ILAS Lasjerd 79.77 307 *e*P **P 01 10 40.1 -0.7**
IZEF Zefreh 79.78 304 *e*P **P 01 10 39.3 -1.6**
IGAR Gharneh 79.92 304 *e*P **P 01 10 41.0 -0.6**
IFIR Firoozkooh 79.99 307 *e*P **P 01 10 41.4 -0.6**
AKTO Aktyubinsk 80.15 323 P **P 01 10 42.2 0.0**
AKTO pmax pmax
comp=Z,121nm,0.9s
AKTO Aktyubinsk 80.15 323 P **P 01 10 42.2 0.0**
AKTO Aktyubinsk 80.15 323 P **P 01 10 42.2 0.0**
comp=Z,121nm,0.9s,baz=103,slow=7.5,SNR=170
IKLH Kolahrood 80.48 305 *e*P **P 01 10 44.3 -0.4**
IVRN Varamin 80.68 306 *e*P **P 01 10 45.0 -0.5**
SVE Sverdlovsk 80.88 329 *d iP* **P 01 10 45.4 -0.5**
SVE *e* 01 13 54.6
SVE *e*PPP PPP 01 15 46.2
SVE *e*S **S 01 20 50.8 +0.3**
SVE pmax pmax
comp=Z,232nm,1.2s
GAMB Gambell 81.03 23 *e*P **P 01 10 48.1 +1.5**
comp=Z,71nm,0.9s
IR3 Iran Long-Peri 81.34 307 *e*P **P 01 10 48.8 -0.2**
IR5 Iran Long-Peri 81.64 306 *e*P **P 01 10 52.2 +1.5**
IMHD Mahdasht 81.66 307 *e*P **P 01 10 50.8 +0.1**
ARU Arti 81.81 328 *c iP* **P 01 10 49.8 -1.1**
ARU *PP **pP** 01 11 06.0 +0.3
ARU 01 13 57.1
ARU PPP PPP 01 15 45.4
ARU S **S 01 21 00.0 -0.1**
ARU SS **SS 01 26 13.4 -5.8**
ARU pmax pmax
comp=Z,164nm,1.0s
ARU Arti 81.81 328 P **P 01 10 50.9 0.0**
comp=Z,849nm,0.9s,SNR=27
TBI Tubuai 82.03 113 *e*P **P 01 10 55.2 +2.4**
comp=Z,236nm,1.0s
PAE Paea 82.04 107 *e*P **P 01 10 55.0 +2.1**
comp=Z,17nm,1.0s
PPT2 Papeete2 82.04 107 *e*P **P 01 10 55.4 +2.4**
comp=Z,113nm,1.1s
PPT Papeete 82.05 107 P **P 01 10 55.3 +2.3**
PPT Papeete 82.05 107 P **P 01 10 55.3 +2.3**
comp=Z,96nm,0.9s,baz=288,slow=9.6,SNR=5.5
IRAZ Razeghan 82.20 306 *e*P **P 01 10 53.6 -0.1**
TIAR Tiarei 82.27 107 *e*P **P 01 10 56.2 +2.1**
comp=Z,120nm,1.3s
TVO Taravao 82.35 107 *e*P **P 01 10 57.0 +2.4**
comp=Z,114nm,1.0s
KBD Kabd 83.06 300 *e*P **P 01 10 57.5 -0.6**
KBD AMb AMB 01 11 00.7
comp=Z,137nm,1.4s
SDPT Sand Point 83.06 33 *e*P **P 01 10 57.7 +0.3**
comp=Z,282nm,0.8s
UMR Umm Al-Rimmam 83.10 300 *e*P **P 01 10 57.7 -0.5**
UMR AMb AMB 01 10 59.1
comp=Z,316nm,1.1s
RDF Al-Radifah 83.15 300 *e*P **P 01 10 58.0 -0.5**
RDF AMb AMB 01 10 58.9
comp=Z,213nm,0.9s
TNA Tin City 83.28 22 *e*P **P 01 10 59.7 +1.4**
comp=Z,80nm,1.0s
MIB Mutribah 83.46 300 *e*P **P 01 10 59.5 -0.5**
MIB AMb AMB 01 11 00.9
comp=Z,408nm,1.0s
NAY Al-Naaiem 83.46 300 *e*P **P 01 10 59.3 -0.8**
NAY AMb AMB 01 11 00.8
comp=Z,192nm,0.9s
RST Umm Al-Ruwaisa 83.71 300 *e*P **P 01 11 00.6 -0.8**
RST *e*P **PcP 01 11 01.0 -4.4**
RST AMb AMB 01 11 01.9
comp=Z,4μm,0.8s
PMOR Pomariorio Ree 83.75 105 *e*P **P 01 11 03.9 +2.1**
comp=Z,173nm,1.1s
SOKR Solikamsk 83.75 331 *c iP* **P 01 11 00.6 -0.2**
SOKR pmax pmax
comp=Z,200nm,1.2s
RAYN Ar Rayn 84.27 294 P **P 01 11 04.5 +0.1**
comp=Z,815nm,0.9s,SNR=77
RAYN Ar Rayn 84.27 294 *e*P **P 01 11 04.2 -0.2**
comp=Z,144nm,1.0s
ISRB Sarab 84.41 308 *e*P **P 01 11 05.4 +0.4**
CHGN Chignik 84.45 33 *e*P **P 01 11 04.3 -0.1**
ILIN Lien 84.52 305 *e*P **P 01 11 04.4 -1.3**
IGHG Ghaleghazi 84.76 305 *e*P **P 01 11 05.5 -1.4**
IDHR Dehrash 84.96 305 *e*P **P 01 11 06.2 -1.6**
IHRS Heris 84.97 309 *e*P **P 01 11 07.4 -0.5**
MAK Makhachkala 85.38 313 *e*P **P 01 11 09.4 0.0**
MAK *e* 01 11 16.3
MAK *e* 01 14 23.3
MAK *e*S S 01 21 27.6 -9.0
MAK pmax pmax
comp=Z,267nm,2.0s
SYO Syowa Base 85.64 201 ⇓ *e*P **P 01 11 09.4 -0.8**
ITBZ Tabriz 85.66 309 *e*P **P 01 11 11.1 -0.1**
IAZR Azarshahr 85.71 308 *e*P **P 01 11 11.9 +0.3**
QSPA South Pole Qui 86.05 180 LR LR 01 49 36.6
comp=Z,678nm,20.1s,baz=162,slow=36
IMRD Marand 86.07 309 *e*P **P 01 11 13.7 +0.4**
ISHB Shabestar 86.08 309 *e*P **P 01 11 13.9 +0.5**
DGRG David-gareji 86.71 312 P **P 01 11 17.6 +1.4**
GNI Garni 87.01 310 *e*P **P 01 11 18.4 +0.6**
comp=Z,96nm,0.9s
GNI Garni 87.01 310 P **P 01 11 19.0 +1.2**
SNR=29
GNI Garni 87.01 310 P **P 01 11 18.7 +0.9**
comp=Z,51nm,0.8s,baz=182,slow=4.9,SNR=34
TBLG Delisi 87.22 312 *e*P **P 01 11 19.4 +0.8**
TBLG Delisi 87.22 312 P **P 01 11 19.5 +0.8**
OHAK Old Harbor 87.41 32 *e*P **P 01 11 19.8 +0.8**
comp=Z,196nm,0.9s
KZR Kazreti 87.41 312 P **P 01 11 20.8 +1.2**
HAKT HAKKARI 87.48 308 *i* P **P 01 11 20.7 +0.5**
GOR Gori 87.72 312 P **P 01 11 22.4 +1.4**
DYDN Diyadin 87.73 310 *i* P **P 01 11 22.8 +1.4**
KDAK Kodiak Island 87.89 32 *e*P **P 01 11 22.4 +1.1**
comp=Z,206nm,1.3s
KDAK Kodiak Island 87.89 32 P **P 01 11 22.5 +1.1**
comp=Z,659nm,1.0s,SNR=11
KDAK Kodiak Island 87.89 32 P **P 01 11 22.4 +1.1**
comp=Z,111nm,1.1s,baz=319,slow=6.8,SNR=27
KDAK LR LR 01 45 07.5
comp=Z,1μm,20.9s,baz=222,slow=32
DIGO Kars 88.08 311 *i* P **P 01 11 23.8 +0.8**
GEVA Gevas 88.08 308 *i* P **P 01 11 24.0 +1.0**
AKH Akhalkalaki 88.11 312 P **P 01 11 24.5 +1.5**
ONI Oni 88.28 313 P **P 01 11 24.7 +1.0**
RSO Redoubt South 88.30 29 *e*P **P 01 11 23.4 -0.1**
TUTA Tutak 88.39 309 *i* P **P 01 11 25.6 +1.1**
SIRN S¯¯rnak 88.50 308 *i* P **P 01 11 25.4 +0.5**
TATV Tatvan 88.72 309 *i* P **P 01 11 27.1 +1.1**
SPU Mount Spurr 88.77 29 *e*P **P 01 11 25.3 -0.3**
KBZ Khabaz 88.81 314 P **P 01 11 26.3 +0.2**
KBZ pmax pmax
comp=Z,92nm,0.9s
KBZ Khabaz 88.81 314 P **P 01 11 26.3 +0.2**
KBZ Khabaz 88.81 314 P **P 01 11 26.3 +0.2**
comp=Z,92nm,0.8s,baz=110,slow=3.7,SNR=166
KIV Kislovodsk 88.99 314 ⇑ *i* P **P 01 11 25.8 -1.3**
KIV *i* 01 11 34.3
KIV *e* 01 14 56.1
KIV pmax pmax
comp=Z,72nm,1.0s
KIV Kislovodsk 88.99 314 P **P 01 11 27.5 +0.4**
comp=Z,324nm,1.1s,SNR=22
PPLA Purkeypile 89.02 27 *e*P **P 01 11 26.6 -0.3**
comp=Z,18nm,0.7s
HOMI Horasan 89.16 310 *i* P **P 01 11 28.9 +0.8**
ARTV Artvin 89.25 311 *i* P **P 01 11 28.9 +0.4**
DAGI Agillar 89.25 311 *i* P **P 01 11 29.3 +0.9**
CHVG Ch'k'valeri 89.29 313 P **P 01 11 28.9 +0.5**
DDEM Demirkent 89.36 311 *i* P **P 01 11 29.7 +0.9**
DBAD Bademkaya 89.41 311 *i* P **P 01 11 30.1 +1.0**
BNGL BINGOL 89.63 309 *i* P **P 01 11 31.6 +1.3**
MARD Mardin 89.78 307 *i* P **P 01 11 31.4 +0.4**
SEW Seward 89.87 30 *e*P **P 01 11 31.3 +0.6**
comp=Z,55nm,1.0s
TRF Thorofare Moun 89.96 26 *e*P **P 01 11 30.2 -1.1**
comp=Z,202nm,2.3s
KMBO Kilima Mbogo 90.22 269 *e*P **P 01 11 33.0 -0.7**
comp=Z,57nm,2.1s
KMBO Kilima Mbogo 90.22 269 P **P 01 11 35.4 +1.7**
SNR=5.2
KMBO Kilima Mbogo 90.22 269 P **P 01 11 32.0 -1.6**
comp=Z,2.8nm,0.8s,baz=78,slow=6.3,SNR=8.4
PMR Palmer 90.23 28 *e*P **P 01 11 32.0 -0.3**
PMR pmax pmax
comp=Z,65nm,1.2s
PMR Palmer 90.23 28 *e*P **P 01 11 32.0 -0.3**
comp=Z,65nm,1.2s
KOPT Kop Dagi 90.23 310 *i* P **P 01 11 34.4 +1.2**
VRHR Novokhopersk 90.45 321 *e*P **P 01 11 32.3 -1.3**
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR pmax pmax
comp=Z,70nm,0.9s
VRHR pmax pmax
comp=N,2.0nm,0.4s
VRHR pmax pmax
comp=E,20nm,0.9s
COLD Coldfoot 90.57 23 *e*P **P 01 11 34.6 +0.8**
comp=E,35nm,1.0s
MCK McKinley 90.60 26 *e*P **P 01 11 33.6 -0.5**
MCK pmax pmax
comp=Z,39nm,1.0s
MCK McKinley 90.60 26 *e*P **P 01 11 33.5 -0.5**
comp=Z,39nm,1.0s
SML Sawmill 90.63 28 *e*P **P 01 11 34.4 +0.1**
SML pmax pmax
comp=Z,25nm,0.9s
SML Sawmill 90.63 28 *e*P **P 01 11 34.4 +0.1**
comp=Z,24nm,0.9s
SOC Sochi 91.10 313 *c iP* **P 01 11 35.8 -1.0**
SOC *e*PP **pP 01 11 50.1 -1.6**
SOC *e* 01 15 12.5
SOC *e*S **SKSac 01 22 03.0 -1.8**
SOC *e* 01 22 28.6
SOC pmax pmax
comp=Z,75nm,1.0s
KELT Kelkit 91.19 310 *i* P **P 01 11 38.3 +0.8**
COLA College 91.21 25 *e*P **P 01 11 35.6 -1.2**
COLA pmax pmax
comp=Z,24nm,0.9s
COLA College 91.21 25 *e*P **P 01 11 35.6 -1.2**
comp=Z,24nm,0.9s
ILAR Eielson Array 91.61 25 P **P 01 11 37.2 -1.4**
ILAR PP **PP 01 15 14.7 -2.8**
ILAR PKKP **PKKPdf 01 28 58.1 +0.2**
comp=Z,13nm,0.7s,baz=271,slow=4.3,SNR=153
ILAR PP **PP 01 15 14.7 -2.8**
comp=Z,2.1nm,1.0s,baz=263,slow=6.6,SNR=4.4
ILAR PKKP **PKKPdf 01 28 58.1 +0.2**
comp=Z,4.1nm,0.9s,baz=48,slow=1.5,SNR=27
KEMA Kemaliye 91.72 309 *i* P **P 01 11 40.6 +0.7**
ATAB Bozova 91.76 307 *i* P **P 01 11 40.5 +0.5**
DIV Divide 91.78 29 *e*P **P 01 11 40.5 +0.8**
comp=Z,113nm,0.9s
VORD Divnogorie 91.91 321 *e*P **P 01 11 39.2 -1.1**
VORD pmax pmax
comp=N,50nm,1.2s
VORD pmax pmax
comp=E,100nm,1.2s
VORD pmax pmax
comp=Z,140nm,1.2s
SUSE Susehri 92.00 310 *i* P **P 01 11 41.6 +0.3**
VSR Storozhevoye 92.00 321 *e*P **P 01 11 39.6 -1.2**
VSR *e*PP **pP 01 11 51.2 -4.5**
VSR *e* 01 22 10.2
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,80nm,1.2s
VSR pmax pmax
comp=Z,100nm,1.2s
VSR pmax pmax
comp=N,20nm,1.8s
VSR pmax pmax
comp=E,150nm,1.8s
VSR pmax pmax
comp=Z,190nm,1.8s
PAX Paxson 92.08 27 *e*P **P 01 11 41.3 +0.3**
PAX pmax pmax
comp=Z,71nm,1.2s
PAX Paxson 92.08 27 *e*P **P 01 11 41.3 +0.3**
comp=Z,71nm,1.2s
KLMR Klimovskoe 92.42 331 *d iP* **P 01 11 40.1 -2.4**
KLMR *e* 01 15 21.4
KLMR *e*S **SKSac 01 22 08.4 -3.1**
KLMR *e*SS **SS 01 28 51.6 -2.3**
KLMR pmax pmax
comp=Z,71nm,1.5s
KLMR pmax pmax
comp=Z,70nm,5.8s
ASF Jabal al Asfar 92.61 302 P **P 01 11 44.2 0.0**
ASF Jabal al Asfar 92.61 302 P **P 01 11 44.2 0.0**
comp=Z,32nm,1.1s,baz=100,slow=1.1,SNR=40
DOT Dot Lake 92.76 27 *e*P **P 01 11 44.3 +0.2**
comp=Z,61nm,0.8s
ANN Anapa 92.81 315 *c iP* **P 01 11 43.3 -1.3**
ANN *e*PP **pP 01 11 59.7 +0.1**
ERBA Erbaa 93.12 310 *i* P **P 01 11 46.3 0.0**
MOS Moscow 93.16 325 *e*P **P 01 11 44.2 -1.8**
MOS *e* 01 11 59.8
MOS *e* 01 15 28.1
MOS *e* 01 22 48.5
MOS pmax pmax
comp=Z,54nm,1.1s
PINB Pinarbasi 93.31 308 *i* P **P 01 11 47.4 -0.1**
ANDN Andirin 93.31 307 *i* P **P 01 11 47.4 +0.1**
YAYL Yayladag 93.44 306 *i* P **P 01 11 47.8 -0.1**
OBN Obninsk 93.74 325 ⇑ *i* P **P 01 11 47.2 -1.5**
OBN *e* 01 15 35.4
OBN *e*S **SKSac 01 22 21.1 +2.2**
OBN pmax pmax
comp=Z,54nm,0.9s
MMAI Mount Meron Ar 93.91 303 P **P 01 11 50.4 +0.3**
MMAI Mount Meron Ar 93.91 303 P **P 01 11 50.4 +0.3**
comp=Z,39nm,1.0s,baz=79,slow=7.5,SNR=30
HAVZ Havza 93.92 311 *i* P **P 01 11 50.1 +0.2**
EGAK Eagle 94.06 25 *e*P **P 01 11 50.1 +0.1**
comp=Z,45nm,1.0s
EIL Elat 94.17 299 P **P 01 11 50.5 -0.8**
EIL Elat 94.17 299 P **P 01 11 50.5 -0.8**
comp=Z,16nm,1.0s,baz=46,slow=3.3,SNR=14
EIL Elat 94.17 299 P **P 01 11 51.0 -0.2**
baz=94,SNR=12
AVNT Avonos 94.53 308 *i* P **P 01 11 52.5 -0.5**
PNL Peninsula 94.89 31 *e*P **P 01 11 54.6 +0.7**
comp=Z,25nm,0.8s
CDAG Cicekdag 94.92 309 *i* P **P 01 11 53.8 -0.9**
SIM Simferopol' 95.17 315 *e*P **P 01 11 54.9 -0.6**
SIM *e* 01 15 47.0
SIM *e* 01 22 29.0
SIM pmax pmax
comp=Z,98nm,0.9s
APA Apatity 95.18 337 ⇑ *e*P **P 01 11 55.4 +0.4**
APA *i* 01 22 34.0
APA *i*S **S 01 23 02.0 -4.0**
APA *i*PS **PS 01 24 29.0 -0.7**
APA MLR MLR
comp=Z,1μm,24.0s
BRTR Keskin Array B 95.49 309 P **P 01 11 55.9 -1.4**
BRTR PP **PP 01 15 45.7 -2.9**
BRTR PKKP **PKKPbc 01 28 48.1 -2.1**
BRTR P'P' 01 37 02.5
BRTR Keskin Array B 95.49 309 P **P 01 11 55.9 -1.4**
comp=Z,23nm,1.0s,baz=118,slow=4.0,SNR=75
BRTR PP **PP 01 15 45.7 -2.9**
comp=Z,5.7nm,0.9s,baz=141,slow=7.1,SNR=7.7
BRTR PKKP **PKKPbc 01 28 48.1 -2.1**
comp=Z,1.7nm,0.9s,baz=211,slow=0.8,SNR=5.8
BRTR PKPPKP **P'P'df 01 37 02.5 +0.3**
comp=Z,0.3nm,0.7s,baz=242,slow=3.1,SNR=3.5
CSS Prodhromos 95.68 305 *e*P **P 01 11 57.2 -0.9**
comp=Z,47nm,1.0s
BBAL Bala 95.88 309 *i* P **P 01 12 00.1 +1.0**
ERMK Ermenek 96.03 306 *i* P **P 01 11 58.9 -1.0**
ANTO Ankara 96.14 310 *e*P **P 01 11 59.6 -0.6**
ANTO pmax pmax
comp=Z,28nm,1.3s
ANTO Ankara 96.14 310 *e*P **P 01 11 59.5 -0.6**
comp=Z,28nm,1.3s
JOF Joensuu 96.31 333 *e*P **P 01 11 57.4 -2.8**
JOF pmax pmax
comp=Z,18nm,0.7s
JOF Joensuu 96.31 333 *ep* **P 01 11 57.4 -2.8**
comp=Z,18nm,0.7s
MBAR Mbarara 96.76 269 LR LR 01 51 48.0
comp=Z,306nm,20.4s,baz=73,slow=33
INK Inuvik 96.92 22 P **P 01 12 02.6 -0.2**
INK PKKP **PKKPbc 01 28 43.1 -3.9**
INK Inuvik 96.92 22 P **P 01 12 02.6 -0.2**
comp=Z,25nm,1.0s,baz=273,slow=4.8,SNR=55
INK PKKP **PKKPbc 01 28 43.1 -3.9**
comp=Z,6.0nm,0.8s,baz=89,slow=3.8,SNR=9.9
SKAG Skagway 96.97 31 *e*P **P 01 12 04.2 +0.8**
comp=Z,31nm,1.0s
KEV Kevo 97.30 340 *e*P **P 01 12 02.7 -1.9**
KEV pmax pmax
comp=Z,10.0nm,0.7s
KEV Kevo 97.30 340 *ep* **P 01 12 02.7 -1.9**
comp=Z,10nm,0.7s
BOLV Bolvadin 97.58 308 *i* P **P 01 12 05.9 -0.9**
ARCES ARCESS Array B 97.85 340 P **P 01 12 06.0 -1.2**
ARCES ARCESS Array B 97.85 340 P **P 01 12 06.0 -1.2**
comp=Z,44nm,0.9s,baz=72,slow=4.2,SNR=33
ISP Isparta 97.93 307 ⇓ *i* P **P 01 12 07.8 -0.6**
BORA Eskisehir 97.94 310 *i* P **P 01 12 07.0 -1.3**
SNAA Sanae 98.06 194 *e*Pdiff Pdif 01 12 08.5 +0.3
SNAA Sanae 98.06 194 *e*PP PP 01 16 07.6 +0.4
SNAA Sanae 98.06 194 *e*P Pdif 01 12 08.5 +0.3
comp=Z,11nm,1.0s
SNAA PKKP PKKPbc 01 28 38.2 -5.8
SNAA Sanae 98.06 194 PKKP PKKPbc 01 28 38.2 -5.8
comp=Z,1.5nm,0.9s,baz=311,slow=2.9,SNR=8.3
SPITS Spitsbergen Ar 98.08 349 P **P 01 12 07.3 -0.8**
SPITS Spitsbergen Ar 98.08 349 P **P 01 12 07.3 -0.8**
comp=Z,50nm,0.8s,baz=134,slow=8.4,SNR=37
AKASG Malin Array Be 98.29 321 P **P 01 12 08.1 -1.4**
AKASG 01 16 09.5
AKASG pmax pmax
comp=Z,9.0nm,0.7s
AKASG Malin Array Be 98.29 321 P **P 01 12 08.1 -1.4**
AKASG PP **PP 01 16 09.5 -0.2**
AKASG Malin Array Be 98.29 321 P **P 01 12 08.1 -1.4**
comp=Z,9.4nm,0.7s,baz=74,slow=4.8,SNR=32
AKASG PP **PP 01 16 09.5 -0.2**
comp=Z,0.4nm,0.3s,baz=75,slow=6.7,SNR=4.4
AKASG LR LR 02 04 46.8
comp=Z,241nm,19.2s,baz=0.0,slow=40
AK01 Malin Array Si 98.30 321 *e*P **P 01 12 08.1 -1.5**
KIEV Kiev 98.30 321 *e*P **P 01 12 08.3 -1.2**

KIEV pmax pmax
comp=Z,12nm,0.8s
KIEV Kiev 98.30 321 *e*P **P 01 12 08.3 -1.2**
comp=Z,12nm,0.8s
AK02 Malin Array Si 98.30 320 *e*P **P 01 12 08.4 -1.1**
KBS Kingsbay 98.62 350⇑*i*P **P 01 12 08.6 -1.8**
KBS pmax pmax
comp=Z,23nm,1.4s
KAF Kangasniemi 98.70 332 *e*P **P 01 12 08.1 -2.9**
KAF pmax pmax
comp=Z,11nm,0.8s
KAF Kangasniemi 98.70 332 *e*p **P 01 12 08.1 -2.9**
comp=Z,10nm,0.8s
KIS Kishinev 98.80 317 *e*P **P 01 12 11.0 -0.9**
KIS *e* 01 16 18.0
KIS *e* 01 25 06.0
KIS *e* 01 25 50.0
KIS Kishinev 98.80 317 *e*P **P 01 12 11.0 -0.9**
KIS LRM MLR 02 06 56.0
comp=Z,600nm,20.0s
BOSA Boshof 98.89 240 P **P 01 12 11.8 -1.1**
BOSA Boshof 98.89 240 P **P 01 12 11.8 -1.1**
comp=Z,2.9nm,0.8s,baz=103,slow=4.5,SNR=6.3
BOSA LR LR 01 57 18.1
comp=Z,390nm,18.1s,baz=147,slow=36
FINES FINESS Array B 98.90 332 P **P 01 12 10.5 -1.5**
FINES PKiKP **PKiKP 01 16 42.6 0.0**
FINES FINESS Array B 98.90 332 P **P 01 12 10.5 -1.5**
comp=Z,6.1nm,0.8s,baz=90,slow=5.6,SNR=12
FINES PKiKP **PKiKP 01 16 42.6 0.0**
comp=Z,5.2nm,0.8s,baz=116,slow=3.2,SNR=5.9
TIRR Tirgusor 99.25 314 *e*P **Pdif 01 12 13.3 -0.6**
TIRR pmax pmax
comp=Z,47nm,1.0s
TIRR Tirgusor 99.25 314 *e*P **Pdif 01 12 13.2 -0.6**
comp=Z,48nm,1.0s
TIRR Tirgusor 99.25 314⇑*i*P **Pdif 01 12 13.3 -0.6**
NACGM Naroch 99.38 325 *e* **Pdif 01 12 12.0 -2.3**
PSN Preselentsi 99.46 313 P **Pdif 01 12 14.0 -0.9**
HARR Harsova 99.58 315⇑*i*P **Pdif 01 12 15.6 +0.2**
DLBC Dease Lake 99.82 31 LR LR 01 55 16.0
comp=Z,439nm,18.5s,baz=315,slow=34
PETR Petresti 99.99 316⇓*i*P **Pdif 01 12 18.6 +1.4**
VNA1 Neumayer--Stat 100.06 194 *e*PP PP 01 16 23.0 +0.8
PRD Provadia 100.07 313 P **Pdif 01 12 17.3 -0.3**
TESR Tescani 100.33 316⇑*i*P **Pdif 01 12 18.5 -0.2**
VRI Vrinciioaia 100.33 316⇑*i*P **Pdif 01 12 18.9 +0.1**
PLOR Plostina 100.39 316⇓*i*P **Pdif 01 12 19.4 +0.4**
ISR Istrita 100.53 315⇓*i*P **Pdif 01 12 20.4 +0.7**
MLR Muntele Rosu 100.91 315 P **Pdif 01 12 21.2 -0.3**
MLR PP **PP 01 16 26.9 -3.0**
MLR Muntele Rosu 100.91 315⇑*i*P **Pdif 01 12 21.1 -0.4**
MLR Muntele Rosu 100.91 315 P **Pdif 01 12 21.2 -0.3**
comp=Z,7.9nm,0.9s,baz=62,slow=4.9,SNR=44
MLR PP **PP 01 16 26.9 -3.0**
comp=Z,2.7nm,1.1s,baz=81,slow=5.4,SNR=5.1
SZH Strazhica 101.13 313 P **Pdif 01 12 20.8 -1.5**
DOPR Dopca 101.25 316⇑*i*P **Pdif 01 12 23.3 +0.4**
SUW Suwalki 101.58 324 *e*P **Pdif 01 12 23.6 -0.5**
SUW Suwalki 101.58 324 *e*Pdif **Pdif 01 12 23.6 -0.5**
SUW Suwalki 101.58 324 *e*P **Pdif 01 12 23.3 -0.8**
LVV L'vov 101.69 320 *e*P **Pdif 01 12 23.6 -1.1**
RZN Rozhen 102.17 312 P **Pdif 01 12 26.0 -1.3**
CJR Cluj-Napoca 102.40 317⇓*i*P **Pdif 01 12 29.2 +1.2**
LOT Lotru 102.44 316⇑*i*P **Pdif 01 12 28.1 -0.2**
PGB Panagyurishte 102.49 313 P **Pdif 01 12 27.7 -0.8**
KWP Kalwaria Pacla 102.57 320 *e*P **Pdif 01 12 28.6 0.0**
KWP pmax pmax
comp=Z,45nm,1.1s
KWP Kalwaria Pacla 102.57 320 *e*Pdif **Pdif 01 12 28.6 0.0**
comp=Z,45nm,1.1s
KWP Kalwaria Pacla 102.57 320⇓*i*P **Pdif 01 12 29.1 +0.5**
KWP Kalwaria Pacla 102.57 320 *e*P **Pdif 01 12 29.3 +0.7**
MPEP Malo Peshtene 102.71 313 P **Pdif 01 12 28.9 -0.5**
MMB Musomiste 102.92 312 P **Pdif 01 12 28.5 -1.9**
KOLS Kolonicke sedl 102.96 319 *e*P **Pdif 01 12 30.8 +0.4**
KOLS pmax pmax
comp=Z,20nm,1.1s
KOLS Kolonicke sedl 102.96 319 PDIF **Pdif 01 12 30.8 +0.4**
KOLS *e* 01 16 50.1
DEV Deva 102.98 316⇑*i*P **Pdif 01 12 31.8 +1.3**
DRGR 102.99 317⇑*i*P **Pdif 01 12 31.8 +1.2**
UZH Uzhgorod 103.00 319*c i*P **Pdif 01 12 31.4 +0.9**
UZH *e* 01 22 59.8
UZH *e*S **Sdif 01 24 08.2 -4.7**
UZH *e*PS PS 01 25 42.2 -12
UZH *e*SS SS 01 31 36.4 +13
VTS Vitosha 103.19 313⇑*i*P **Pdif 01 12 30.9 -0.8**
VTS Vitosha 103.19 313 P **Pdif 01 12 30.7 -1.0**
KKB Krupnik 103.37 312 P **Pdif 01 12 30.5 -1.9**
CRVS Cervenica-Dubn 103.49 319 *e*P **Pdif 01 12 31.7 -1.1**
CRVS *e* 01 16 50.1
CRVS pmax pmax
comp=Z,39nm,1.2s
CRVS Cervenica-Dubn 103.49 319 PDIF **Pdif 01 12 31.7 -1.1**
CRVS *e* 01 16 50.0
STHS Stebnicka Huta 103.55 320 *e*P **Pdif 01 12 34.0 +1.0**
STHS pmax pmax
comp=Z,10.0nm,1.0s
STHS Stebnicka Huta 103.55 320 PDIF **Pdif 01 12 34.0 +1.0**
BZS Buzias 103.92 316⇓*i*P **Pdif 01 12 34.5 -0.2**
KECS Kecovo 104.20 319 *e*P **Pdif 01 12 35.7 -0.2**
KECS pmax pmax
comp=Z,7.0nm,0.9s
KECS Kecovo 104.20 319 PDIF **Pdif 01 12 35.7 -0.2**
PSZ Piszkesteto 104.69 318 *e*P **Pdif 01 12 38.0 -0.2**
PSZ pmax pmax
comp=Z,31nm,1.4s
PSZ Piszkesteto 104.69 318 *e*Pdif **Pdif 01 12 38.0 -0.2**
comp=Z,31nm,1.4s
PSZ *e*PKPdf **PKiKP 01 16 51.5 -2.2**
PSZ Piszkesteto 104.69 318⇑*i*P **Pdif 01 12 38.2 0.0**
PSZ Piszkesteto 104.69 318⇓*e*Pdiff **Pdif 01 12 38.2 0.0**
HFS Hagfors 105.11 332 Pdif **Pdif 01 12 38.2 -1.5**
HFS Hagfors 105.11 332 Pdiff **Pdif 01 12 38.2 -1.5**
comp=Z,4.1nm,0.7s,baz=66,slow=4.9,SNR=11
VYHS Vyhne 105.28 319 *e*P **Pdif 01 12 40.5 -0.2**
VYHS Vyhne 105.28 319 PDIF **Pdif 01 12 40.5 -0.2**
VYHS *e* 01 16 55.2
OKC Ostrava-Krasne 105.44 321 *e*P **Pdif 01 12 42.1 +0.8**
OKC MLR MLR
comp=Z,600nm,20.8s
OKC Ostrava-Krasne 105.44 321 *e*PDIFF **Pdif 01 12 42.1 +0.8**
OKC *ex* x 01 17 12.2
OKC AMS AMS 02 04 30.0
comp=Z,600nm,20.8s
PKSG 105.79 318⇓*e*Pdiff **Pdif 01 12 43.2 +0.2**
MORC Moravsky Berou 105.83 321 *e*PKPdf **PKiKP 01 16 54.8 -0.8**
MORC Moravsky Berou 105.83 321⇑*i*P **Pdif 01 12 43.6 +0.4**
PKSM Moragy 105.86 317⇓*i*P **Pdif 01 12 43.6 +0.3**
PKSM Moragy 105.86 317⇓*e*Pdiff **Pdif 01 12 43.6 +0.3**
NB2 NORSAR Subarra 105.94 333 P **Pdif 01 12 41.8 -1.6**
comp=Z,14nm,1.1s,baz=72,slow=4.6
NB2 NORSAR Subarra 105.94 333 P **Pdif 01 12 41.8 -1.6**
baz=72,slow=4.6
NOA NORSAR Array B 105.94 333 Pdif **Pdif 01 12 41.6 -1.8**
NOA PKiKP **PKiKP 01 16 55.5 0.0**
NOA NORSAR Array B 105.94 333 Pdiff **Pdif 01 12 41.6 -1.8**
comp=Z,6.1nm,0.9s,baz=78,slow=4.4,SNR=14
NOA PKiKP **PKiKP 01 16 55.4 0.0**
comp=Z,3.0nm,0.8s,baz=75,slow=5.3,SNR=5.7
YKW3 Yellowknife Ar 106.01 25 *e*Pdif **Pdif 01 12 43.8 +0.2**
comp=Z,1.1nm,1.8s
YKW3 *e*PKPdf **PKiKP 01 16 55.4 0.0**
YKA Yellowknife Ar 106.04 25 Pdif **Pdif 01 12 44.0 +0.2**
YKA PKiKP **PKiKP 01 16 55.3 -0.2**
YKA PKKPbc **PKKPbc 01 28 16.7 -3.7**
YKA Yellowknife Ar 106.04 25 Pdiff **Pdif 01 12 43.9 +0.2**
comp=Z,2.8nm,0.9s,baz=293,slow=4.8,SNR=23
YKA PKiKP **PKiKP 01 16 55.3 -0.2**
comp=Z,8.2nm,0.9s,baz=297,slow=1.8,SNR=48
YKA PKKPbc **PKKPbc 01 28 16.7 -3.7**
comp=Z,2.5nm,0.8s,baz=111,slow=2.7,SNR=23
VRAC Vranov 106.55 320 Pdif **Pdif 01 12 47.4 +1.0**
VRAC Vranov 106.55 320 Pdiff **Pdif 01 12 47.4 +1.0**
comp=Z,3.9nm,1.0s,baz=46,slow=1.5,SNR=6.2
UPC Upice 106.62 322 *e*P **Pdif 01 12 47.4 +0.8**
UPC Upice 106.62 322 *e*PDIFF **Pdif 01 12 47.4 +0.8**
UPC *es*P 01 13 04.8
UPC *e*PKP **PKiKP 01 16 56.6 -0.4**
UPC *e*PP **PP 01 17 08.8 -3.3**
TREC Trest 107.25 321 AMS AMS 02 03 40.0
comp=Z,900nm,17.4s

CSNA Conrad Observa 107.34 319⇑*i*Pdiff **Pdif 01 12 49.9 -0.1**
comp=Z,5.5nm,1.5s
CSNA ⇑*i*PP **PP 01 17 18.2 +0.6**
comp=Z,14nm,1.2s
PVCC Panska Ves 107.50 322 AMS AMS 02 02 50.0
comp=Z,700nm,19.1s
PRU Pruhonice 107.67 321 *e*P **Pdif 01 12 51.3 +0.1**
PRU MLR MLR
comp=Z,800nm,16.5s
PRU Pruhonice 107.67 321 *e*PDIFF **Pdif 01 12 51.3 +0.1**
PRU *e*PP **PP 01 17 19.5 -0.3**
PRU *ex* x 01 17 29.5
PRU *ex* x 01 27 01.5
PRU AMS AMS 02 03 00.0
comp=Z,800nm,16.5s
BRG Berggiesshubel 107.79 322 *e*P **Pdif 01 12 52.1 +0.3**
comp=Z,5.5nm,1.1s
BRG
comp=N,379nm,18.9s
BRG
comp=E,491nm,17.7s
BRG
comp=Z,763nm,15.8s
BRG Berggiesshubel 107.79 322 *e*PKiKP **PKiKP 01 16 59.9 +0.7**
BRG *e*L L 02 03 17.9
comp=Z,847nm,18.9s
BRG Berggiesshubel 107.79 322 *e*P **Pdif 01 12 52.1 +0.3**
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG MLR MLR
comp=N,379nm,18.9s
BRG MLR MLR
comp=E,491nm,17.7s
BRG MLR MLR
comp=Z,763nm,15.8s
GCIS Gornji Cirnik 107.98 317 *e*Pdiff **Pdif 01 12 53.1 +0.3**
SOKA Soboth 108.19 318⇑*i*Pdiff **Pdif 01 12 53.6 -0.2**
comp=Z,7.2nm,1.2s
SOKA ⇑*i*PKiKP **PKiKP 01 16 59.8 -0.4**
comp=Z,8.0nm,1.0s
CLL Collm 108.23 323 *e*L L 01 58 43.5
comp=Z,696nm,20.2s
CLL Collm 108.23 323 *e*PKiKP **PKiKP 01 17 01.0 +1.0**
CLL *e*PP **PP 01 17 23.0 -0.8**
CLL *e*PPP PPP 01 19 42.0
CLL *e*SP SP 01 26 36.0 -5.8
CLL *e*PPS PPS 01 27 48.0
CLL *e* 01 37 18.0
CLL LmV 02 06 00.0
comp=Z,500nm,20.2s
MOA Molln 108.40 319⇓*i*Pdiff **Pdif 01 12 55.0 +0.4**
comp=Z,9.4nm,1.4s
GEC2 GERESS Array S 108.50 320 *e*PKiKP **PKiKP 01 17 01.0 +0.3**
GEC2 *e*L L 02 02 26.2
comp=Z,464nm,18.8s
GERES GERESS Array B 108.50 320 Pdif **Pdif 01 12 54.7 -0.5**
GERES PKiKP **PKiKP 01 16 59.6 -1.0**
GERES PKKPbc **PKKPbc 01 28 10.9 -1.5**
GERES PKKPab **PKKPab 01 28 25.0 +0.9**
GERES GERESS Array B 108.50 320 Pdiff **Pdif 01 12 54.7 -0.5**
comp=Z,0.7nm,0.7s,baz=67,slow=5.4,SNR=6.7
GERES PKiKP **PKiKP 01 16 59.6 -1.0**
comp=Z,3.4nm,0.8s,baz=70,slow=1.1,SNR=13
GERES PKKPbc **PKKPbc 01 28 10.9 -1.5**
comp=Z,0.6nm,0.8s,baz=220,slow=2.3,SNR=4.5
GERES PKKPab **PKKPab 01 28 25.0 +0.9**
comp=Z,1.4nm,1.0s,baz=255,slow=2.6,SNR=5.8
KHC Kasperske Hory 108.50 321 *e*PDIFF **Pdif 01 12 55.3 +0.2**
KHC *e*PKP **PKiKP 01 17 00.6 0.0**
KHC *e*PP PP 01 17 16.5 -9.4
KHC AMS AMS 02 02 00.0
comp=Z,600nm,18.1s
NKC Novy Kostel 108.89 322 *ex* x 01 17 18.8
NKC *e*PP PP 01 17 36.2 +7.5
NKC *ex* x 01 27 45.4
NKC AMS AMS 02 02 20.0
comp=Z,700nm,15.5s
WET Wettzell 108.94 321 *e*PKiKP **PKiKP 01 17 02.0 +0.6**
WET *e*L L 02 04 45.2
comp=Z,585nm,18.1s
BSEG Bad Segeberg 108.94 326 *e*PKiKP **PKiKP 01 17 02.4 +1.2**
BSEG *e*L L 01 59 04.0
comp=Z,873nm,18.2s
ROTZ Rotzenmuhle 109.18 322 *e*L L 02 04 24.9
comp=Z,548nm,21.3s
MOX Moxa 109.27 323 *e*L L 02 01 53.1
comp=Z,736nm,18.7s
RJOB Jochberg 109.39 319 *e*PKiKP **PKiKP 01 17 02.4 +0.1**
RJOB *e*L L 02 00 40.3
comp=Z,630nm,21.4s
NRDL Niedersach Rie 109.56 325 *e*PKiKP **PKiKP 01 17 03.4 +1.1**
NRDL *e*L L 02 01 30.1
comp=Z,721nm,19.6s
NEW Newport 109.61 40 *e*PKPdf **PKiKP 01 17 02.5 -0.2**
NEW Newport 109.61 40 PKiKP **PKiKP 01 17 03.0 +0.3**
comp=Z,1.5nm,0.5s,baz=264,slow=3.0,SNR=6.1
NEW Newport 109.61 40 ⇑P 01 17 03.1
baz=110
GRF Grafenberg Arr 109.81 322 *e*PKiKP **PKiKP 01 17 03.4 +0.4**
GRF *e*PP PP 01 17 25.2 -10
GRF *e*L L 02 02 09.4
comp=Z,602nm,18.3s
ABTA Abfaltersbach 109.85 319⇑*i*PKiKP **PKiKP 01 17 02.5 -0.8**
comp=Z,15nm,0.9s
WVOR Wild Horse Val 110.11 46 *e*PKiKP **PKiKP 01 17 05.0 +1.0**
WVOR *e* 01 28 06.3
WVOR *e* 01 28 16.1
WVOR Wild Horse Val 110.11 46 *e*PKPdf **PKiKP 01 17 05.0 +1.0**
WVOR *e*PKKPbc **PKKPbc 01 28 06.2 -0.8**
WVOR *e*PKKPab **PKKPab 01 28 16.1 -1.0**
UBBA Unterbreizbach 110.19 323 *e*L L 01 56 35.4
comp=Z,550nm,21.3s
FUR Furstenfeldbru 110.24 320 *e*PKiKP **PKiKP 01 17 04.4 +0.5**
FUR *e*L L 02 02 19.3
comp=Z,647nm,19.1s
FUR Furstenfeldbru 110.24 320 *i* PKiKP **PKiKP 01 17 04.4 +0.5**
FUR MLR MLR
comp=Z,600nm,19.1s
WTTA Wattenberg 110.28 319⇑*i*PKiKP **PKiKP 01 17 04.0 -0.1**
comp=Z,30nm,1.1s
C11A Tepee Creek (N 110.29 40 ⇓P 01 17 04.9
baz=110
BMO Blue Mountains 110.43 43 *e*PKiKP **PKiKP 01 17 04.3 -0.2**
BMO Blue Mountains 110.43 43 *e*PKPdf **PKiKP 01 17 04.2 -0.2**
MOTA Moosalm 110.60 319⇓*i*PKiKP **PKiKP 01 17 04.4 -0.3**
comp=Z,11nm,0.9s
SCO Scoresbysund 110.65 349 *i* P PKiKP 01 17 14.5 +11
comp=Z,2μm,1.4s
PKM Peak Mountain 110.74 54 ⇓P 01 17 06.5
baz=111
SUMG Summit 110.87 356 *i* P **PKiKP 01 17 05.1 +0.2**
comp=Z,8.2nm,1.0s
SUMG
comp=Z,2μm,14.0s
FETA Feichten 110.94 319⇑*i*PKiKP **PKiKP 01 17 05.5 +0.1**
comp=Z,10nm,1.1s
IBBN Ibbenburen 110.97 325 *e*L L 02 00 39.7
comp=Z,738nm,19.1s
BSC Santa Cruz Isl 111.05 55 ⇑P 01 17 06.9
baz=111
A13A Flathead Natio 111.11 39 ⇑P 01 17 06.6
baz=111
D12A Red Ives Fores 111.11 41 ⇓P 01 17 05.5
baz=111
BSMT Bassoo Peak 111.22 40 *e*PKPdf **PKiKP 01 17 06.3 +0.3**
NVAR Mina Array Bea 111.25 50 Pdif **Pdif 01 13 08.7 +0.9**
NVAR PKiKP **PKiKP 01 17 07.3 +0.9**
NVAR Mina Array Bea 111.25 50 Pdiff **Pdif 01 13 08.7 +0.9**
comp=Z,2.1nm,1.0s,baz=251,slow=5.6,SNR=3.7
NVAR PKiKP **PKiKP 01 17 07.3 +0.9**
comp=Z,1.7nm,0.7s,baz=287,slow=0.7,SNR=7.6
B13A Whitefish 111.26 39 ⇓P 01 17 05.9
baz=111
TNS Taunus Mts 111.32 323 *e*PKiKP **PKiKP 01 17 06.6 +0.7**
TNS *e*L L 02 01 02.1
comp=Z,595nm,18.1s
TNS Taunus Mts 111.32 323 *i* PKiKP **PKiKP 01 17 06.6 +0.7**
STU Stuttgart 111.36 321 *e*PKiKP **PKiKP 01 17 06.4 +0.4**
STU *e*L L 01 58 20.0
comp=Z,489nm,22.0s
DAVA Damuels 111.41 320⇑*i*PKiKP **PKiKP 01 17 06.0 -0.3**
comp=Z,16nm,0.8s
C13A Hot Springs 111.42 40 ⇑P 01 17 06.1
baz=111,SNR=6.8
ARVC Arvin 111.50 54 ⇓P 01 17 07.7
baz=112

F12A Elk City 111.57 42 ⇑P 01 17 06.5
baz=112
DAVOX Davos/Dischmat 111.57 319 Pdif **Pdif 01 13 08.1 -0.8**
DAVOX PKiKP **PKiKP 01 17 06.6 -0.1**
DAVOX Davos/Dischmat 111.57 319 Pdiff **Pdif 01 13 08.1 -0.8**
comp=Z,1.1nm,0.3s,baz=113,slow=18,SNR=4.4
DAVOX PKiKP **PKiKP 01 17 06.6 -0.1**
comp=Z,9.0nm,0.9s,baz=66,slow=5.1,SNR=7.6
BUG Bochum--Univer 111.57 324 *e*L L 01 57 03.8
comp=Z,698nm,18.6s
D13A Huson 111.68 40 ⇑P 01 17 06.7
baz=112,SNR=8.5
ISA Isabella 111.68 53 ⇓P 01 17 07.8
baz=112
G12A Big Creek, Yel 111.70 43 ⇓P 01 17 07.7
baz=112
A14A Double T Ranch 111.71 38 ⇑P 01 17 07.5
baz=112
SWMT Swartz Lake 111.84 40 *e*PKPdf **PKiKP 01 17 07.1 0.0**
MFID Camas Ranch 111.85 45 *e*PKPdf **PKiKP 01 17 08.5 +1.3**
MFID Camas Ranch 111.85 45 ⇓P 01 17 08.3
baz=112,SNR=6.9
C14A Swan Lake 111.92 40 ⇓P 01 17 07.7
baz=112
TUE Stuetta 112.01 319 *e*PKPdf **PKiKP 01 17 06.5 -1.0**
B14A Marquette Ranc 112.02 39 ⇑P 01 17 07.7
baz=112
BFO Black Forest 112.05 321 *e*PKiKP **PKiKP 01 17 07.3 0.0**
BFO *e*L L 01 58 35.0
comp=Z,566nm,20.6s
BFO Black Forest 112.05 321 *i* PKiKP **PKiKP 01 17 07.3 0.0**
E13A Victor 112.06 41 ⇑P 01 17 08.2
baz=112,SNR=6.6
MSO Missoula 112.10 41 *e*PKPdf **PKiKP 01 17 07.5 -0.1**
MSO Missoula 112.10 41 ⇓P 01 17 07.5
baz=112,SNR=9.9
A15A Johnson Ranch, 112.14 38 ⇓P 01 17 07.6
baz=112
F13A Darby 112.17 42 ⇑P 01 17 07.5
baz=112
FMP Fort Macarthur 112.19 55 ⇓P 01 17 08.6
baz=112
H12A Diamond D Ranc 112.20 43 ⇑P 01 17 08.7
baz=112,SNR=7.4
EDW2 Edwards Air Fo 112.22 54 ⇓P 01 17 09.0
baz=112
I12A Atlanta 112.23 44 ⇓P 01 17 09.1
baz=112
SLMT Seeley Lake 112.25 40 *e*PKPdf **PKiKP 01 17 07.9 0.0**
GRAC Grapevine Rang 112.28 52 ⇑P 01 17 09.0
baz=112
MWC Mount Wilson 112.29 55 *e*PKiKP **PKiKP 01 17 09.1 +0.7**
MWC Mount Wilson 112.29 55 *e*PKPdf **PKiKP 01 17 09.1 +0.7**
D14A Greenough 112.30 40 ⇑P 01 17 08.4
baz=112,SNR=10
LRMC Laurel Mountai 112.34 53 ⇑P 01 17 09.3
baz=112
MPMC Manual Prospec 112.38 53 ⇑P 01 17 09.7
baz=112
B15A Bradely Ranch, 112.48 39 ⇓P 01 17 08.5
baz=112
CHMT Chamberlain Mo 112.52 40 *e*PKPdf **PKiKP 01 17 08.5 0.0**
E14A Clinton 112.53 41 ⇓P 01 17 09.1
baz=112,SNR=7.6
BFSC Mount Baldy Ra 112.61 55 ⇑P 01 17 09.9
baz=113
C15A Salmond Ranch, 112.64 39 ⇑P 01 17 09.0
baz=113
CDF Champ du Feu 112.68 321 *e*PKiKP **PKiKP 01 17 07.9 -0.7**
comp=Z,13nm,1.1s
CDF Champ du Feu 112.68 321 *e*PKiKP **PKiKP 01 17 07.9 -0.7**
CDF Champ du Feu 112.68 321 *e*PKPdf **PKiKP 01 17 07.9 -0.7**
HLID Hailey 112.79 44 *e*PKPdf **PKiKP 01 17 10.5 +1.4**
HLID Hailey 112.79 44 ⇓P 01 17 10.6
baz=113,SNR=23
FURC Furnace Creek, 112.80 52 ⇑P 01 17 10.9
baz=113
F14A Wisdom 112.80 42 ⇑P 01 17 09.6
baz=113
ECH Echery 112.83 321 *e*PKiKP **PKiKP 01 17 07.6 -1.2**
ECH Echery 112.83 321 *e*PKPdf **PKiKP 01 17 07.6 -1.2**
A16A West Butte Ran 112.84 38 ⇑P 01 17 09.4
baz=113
I13A Wildhorse Cree 112.89 44 ⇑P 01 17 10.8
baz=113,SNR=24
WLF Walferdange 112.91 323 *e*PKiKP **PKiKP 01 17 10.1 +1.2**
WLF *e*L L 02 00 05.0
comp=Z,724nm,20.3s
D15A Lincoln 112.94 40 ⇑P 01 17 09.6
baz=113,SNR=6.2
B16A M & M Farms, S 112.97 38 ⇑P 01 17 09.6
baz=113
ELK Elko 113.00 47 *e*PKPdf **PKiKP 01 17 10.4 +0.8**
ELK PKKPbc **PKKPbc 01 27 56.5 -1.2**
ELK Elko 113.00 47 PKiKP **PKiKP 01 17 10.6 +0.9**
comp=Z,7.6nm,1.0s,baz=285,slow=1.3,SNR=22
ELK PKKPbc **PKKPbc 01 27 56.5 -1.2**
comp=Z,0.5nm,0.3s,baz=131,slow=4.3,SNR=4.4
J13A Cove Ranch, Pi 113.01 44 ⇑P 01 17 10.9
baz=113,SNR=22
E15A Deer Lodge 113.08 41 ⇓P 01 17 09.9
baz=113,SNR=6.4
GSC Goldstone 113.09 53 *e*PKiKP **PKiKP 01 17 11.2 +1.4**
GSC Goldstone 113.09 53 *e*PKPdf **PKiKP 01 17 11.2 +1.4**
GSC Goldstone 113.09 53 ⇑P 01 17 11.3
baz=113
MURC Murrieta 113.11 55 ⇑P 01 17 10.5
baz=113
BCLA Clavier 113.12 324 PKP **PKiKP 01 17 09.7 +0.5**
HINF Hinteralfeld 113.16 321 *e*PKiKP **PKiKP 01 17 08.9 -0.6**
comp=Z,29nm,1.0s
HINF Hinteralfeld 113.16 321 *e*PKiKP **PKiKP 01 17 08.9 -0.6**
HINF Hinteralfeld 113.16 321 *e*PKPdf **PKiKP 01 17 08.9 -0.6**
C16A Fuhringer Ranc 113.17 39 ⇓P 01 17 09.8
baz=113
H14A Leadore 113.19 43 ⇓P 01 17 11.0
baz=113,SNR=5.1
I14A Mackay 113.35 43 ⇓P 01 17 11.0
baz=113,SNR=9.5
R11A Troy Canyon, C 113.35 50 ⇑P 01 17 11.5
baz=113
F15A Butte 113.37 41 ⇓P 01 17 10.7
baz=113,SNR=10.0
SHOC Shoshone 113.38 53 ⇓P 01 17 11.7
baz=113
A17A Triple J Farms 113.39 38 ⇑P 01 17 11.1
baz=113
LRM Limekiln Ridge 113.41 41 *e*PKPdf **PKiKP 01 17 10.5 +0.2**
HAU Haudompre 113.41 321⇑*i*PKiKP **PKiKP 01 17 09.7 -0.2**
comp=Z,35nm,1.1s
HAU Haudompre 113.41 321⇑*i*PKiKP **PKiKP 01 17 09.7 -0.2**
HAU Haudompre 113.41 321⇑*i*PKiKP **PKiKP 01 17 09.7 -0.2**
PGF Pioggiola 113.45 315⇑*i*PKiKP **PKiKP 01 17 10.1 -0.2**
PGF Pioggiola 113.45 315⇑*i*PKiKP **PKiKP 01 17 10.1 -0.2**
PGF Pioggiola 113.45 315⇑*i*PKPdf **PKiKP 01 17 10.1 -0.2**
DLMT Dillon 113.46 42 *e*PKPdf **PKiKP 01 17 11.6 +1.3**
MCMT McKenzie Canyo 113.47 42 *e*PKPdf **PKiKP 01 17 11.5 +1.0**
J14A Carey 113.49 44 ⇓P 01 17 11.9
baz=114,SNR=9.2
GIVF Givet 113.53 324 *e*PKiKP **PKiKP 01 17 10.3 +0.3**
GIVF Givet 113.53 324 *e*PKiKP **PKiKP 01 17 10.3 +0.3**
GIVF Givet 113.53 324 *e*PKPdf **PKiKP 01 17 10.3 +0.3**
HEC Hector,Ludlow 113.57 54 ⇓P 01 17 11.7
baz=114
D16A Dana Ranch, Ca 113.57 40 ⇑P 01 17 10.9
baz=114,SNR=14
B17A L&G Farms, Che 113.58 38 ⇑P 01 17 10.8
baz=114
PAGF Fort de Pagny 113.59 322 *e*PKiKP **PKiKP 01 17 10.2 0.0**
PAGF Fort de Pagny 113.59 322 *e*PKPdf **PKiKP 01 17 10.2 0.0**
G15A Dillon 113.60 42 ⇓P 01 17 11.8
baz=114
E16A East Helena 113.67 40 ⇓P 01 17 11.0
baz=114
H15A Lima 113.68 43 ⇑P 01 17 12.0
baz=114
PFO Pinyon Flat Ob 113.72 55 *e*PKPdf **PKiKP 01 17 12.1 +1.0**
PFO Pinyon Flat Ob 113.72 55 PKiKP **PKiKP 01 17 11.3 +0.2**
comp=Z,12nm,1.1s,baz=222,slow=0.3,SNR=14
PFO Pinyon Flat Ob 113.72 55 ⇓P 01 17 12.4
baz=114
TUQ Turquoise Moun 113.76 53 ⇑P 01 17 12.3
baz=114
C17A Wharram Farm, 113.85 39 ⇓P 01 17 11.0
baz=114
MONP Monument Peak 113.89 56 ⇓P 01 17 13.1

baz=114
BAIF Baives 113.91 324 ePKIKP PKiKP 01 17 11.0 +0.3
comp=Z,16nm,0.9s
BAIF Baives 113.91 324 ePKIKP PKiKP 01 17 11.0 +0.3
BAIF Baives 113.91 324 ePKPdf PKiKP 01 17 11.0 +0.3
A18A Metzger Ranch, 113.92 37 ⇓P 01 17 11.5
baz=114,SNR=6.9
F16A Kennard Place, 113.96 41 ⇑P 01 17 12.2
baz=114,SNR=18
I15A Monteview 113.98 43 ⇓P 01 17 12.9
baz=114
BOZ Bozeman (W) 114.01 41 ePKIKP PKiKP 01 17 12.0 +0.7
BOZ Bozeman (W) 114.01 41 ePKPdf PKiKP 01 17 12.0 +0.7
BELC Belle Mtn. Jos 114.01 55 ⇑P PKPdf 01 17 12.9 +1.3
baz=114
MEZF Maizieres J'vi 114.02 322 ePKIKP PKiKP 01 17 11.1 +0.1
MEZF Maizieres J'vi 114.02 322 ePKPdf PKiKP 01 17 11.1 +0.1
G16A Moss Hill, Enn 114.03 42 ⇓P PKPdf 01 17 12.5 +1.1
baz=114,SNR=12
LPG La Plagne 114.04 319⇑iPKIKP PKiKP 01 17 11.6 0.0
comp=Z,19nm,0.9s
LPG La Plagne 114.04 319⇑iPKIKP PKiKP 01 17 11.6 0.0
LPG La Plagne 114.04 319⇑iPKPdf PKPdf 01 17 11.6 0.0
LPL La Plagne 114.05 319⇑iPKIKP PKPdf 01 17 11.4 -0.1
comp=Z,24nm,0.9s
LPL La Plagne 114.05 319⇑iPKIKP PKPdf 01 17 11.4 -0.1
LPL La Plagne 114.05 319⇑iPKPdf PKPdf 01 17 11.4 -0.1
D17A Six Diamond Ra 114.08 39 ⇑P PKPdf 01 17 11.7 +0.3
baz=114,SNR=12
CABF La Chapelle 114.08 320⇑iPKIKP PKPdf 01 17 11.4 +0.1
comp=Z,75nm,1.2s
CABF La Chapelle 114.08 320⇑iPKIKP PKPdf 01 17 11.4 +0.1
CABF La Chapelle 114.08 320⇑iPKPdf PKPdf 01 17 11.4 +0.1
SBF Sospel 114.13 317 ePKIKP PKPdf 01 17 11.1 -0.4
comp=Z,43nm,1.0s
SBF Sospel 114.13 317 ePKIKP PKPdf 01 17 11.1 -0.4
SBF Sospel 114.13 317 ePKPdf PKPdf 01 17 11.1 -0.4
SFTF Sexfontaines 114.15 322 ePKIKP PKPdf 01 17 11.2 -0.1
comp=Z,16nm,1.0s
SFTF Sexfontaines 114.15 322 ePKPdf PKPdf 01 17 11.2 -0.1
B18A Beardsley Farm 114.17 38 ⇑P PKPdf 01 17 12.1 +0.7
baz=114,SNR=9.7
E17A Martinsdale 114.22 40 ⇓P PKPdf 01 17 12.3 +0.6
baz=114,SNR=6.1
BNI Bardonecchia 114.25 318 ePKIKP PKPdf 01 17 11.3 -0.5
BNI Bardonecchia 114.25 318 ePKPdf PKPdf 01 17 11.3 -0.4
MBDF Montbardon 114.30 318 ePKIKP PKPdf 01 17 11.3 -0.6
comp=Z,12nm,0.8s
MBDF Montbardon 114.30 318 ePKIKP PKPdf 01 17 11.3 -0.6
MBDF Montbardon 114.30 318 ePKPdf PKPdf 01 17 11.3 -0.6
EGMT Eagleton 114.33 38 ePKPdf PKPdf 01 17 11.8 +0.1
EGMT Eagleton 114.33 38 ⇑P PKPdf 01 17 12.5 +0.8
baz=114,SNR=22
SWSC Sam W. Stewart 114.39 56 ⇑P PKPdf 01 17 13.9 +1.7
baz=114
LDFC Landfair 114.49 53 ePKPdf PKPdf 01 17 14.1 +1.6
BC3 Big Chuckawall 114.53 55 ⇑P PKPdf 01 17 14.4 +1.8
baz=115
F17A Fitzpatrick Pl 114.55 41 ⇓P PKPdf 01 17 13.7 +1.4
baz=115,SNR=27
A19A Klindworth Far 114.59 37 ⇑P PKPdf 01 17 12.9 +0.7
baz=115,SNR=10
H16A Russell Place, 114.59 42 ⇓P PKPdf 01 17 13.6 +1.1
baz=115,SNR=5.9
D18A Linhart Farms, 114.62 39 ⇑P PKPdf 01 17 12.9 +0.6
baz=115,SNR=7.1
B19A Brinkman Farms 114.66 38 ⇑P PKPdf 01 17 13.0 +0.7
baz=115,SNR=9.1
IRM Iron Mountain 114.66 54 ⇑P PKPdf 01 17 14.2 +1.4
baz=115
G17A Pierce Place, 114.71 41 ⇓P PKPdf 01 17 14.6 +1.9
baz=115
I16A Newdale 114.71 43 ⇑P PKPdf 01 17 14.2 +1.5
baz=115,SNR=8.0
FRF La Foret Royal 114.77 317 ePKIKP PKPdf 01 17 12.5 -0.1
comp=Z,47nm,1.2s
FRF La Foret Royal 114.77 317 ePKIKP PKPdf 01 17 12.5 -0.1
FRF La Foret Royal 114.77 317 ePKPdf PKPdf 01 17 12.5 -0.1
E18A Harlowton 114.79 40 ⇓P PKPdf 01 17 13.5 +0.8
baz=115,SNR=10
YMR Madison River 114.79 42 ePKPdf PKPdf 01 17 14.3 +1.4
ORIF Oris-en-Rattie 114.82 318⇑iPKIKP PKPdf 01 17 12.7 -0.1
comp=Z,12nm,0.8s
ORIF Oris-en-Rattie 114.82 318⇑iPKIKP PKPdf 01 17 12.7 -0.1
ORIF Oris-en-Rattie 114.82 318⇑iPKPdf PKPdf 01 17 12.7 -0.1
DUG Dugway 114.93 47 ePKIKP PKPdf 01 17 14.1 +0.9
DUG Dugway 114.93 47 ePKPdf PKPdf 01 17 14.1 +0.9
DUG Dugway 114.93 47 ⇑P PKPdf 01 17 14.6 +1.3
baz=115
LMR La Mourre 114.94 316 ePKIKP PKPdf 01 17 12.8 -0.1
comp=Z,36nm,1.4s
LMR La Mourre 114.94 316 ePKIKP PKPdf 01 17 12.8 -0.1
LMR La Mourre 114.94 316 ePKPdf PKPdf 01 17 12.8 -0.1
RRI2 Red Ridge 115.00 44 ePKPdf PKPdf 01 17 14.2 +0.7
DCID1 Drake Creek 115.01 43 ePKPdf PKPdf 01 17 14.6 +1.2
KEST Kesra 115.03 308 ePKPdf PKPdf 01 17 13.6 +0.2
KEST Kesra 115.03 308 PKP PKPdf 01 17 13.8 +0.3
comp=Z,4.2nm,1.1s,baz=237,slow=3.2,SNR=5.0
IMW Indian Meadow 115.07 43 ePKPdf PKPdf 01 17 14.5 +0.9
H17A Grant Village 115.14 42 ⇑P PKPdf 01 17 16.4 +2.8
baz=115
F18A Big Timber 115.16 40 ⇓P PKPdf 01 17 14.9 +1.4
baz=115,SNR=15
GLA Glamis 115.17 55 ePKIKP PKPdf 01 17 15.1 +1.4
GLA Glamis 115.17 55 ePKPdf PKPdf 01 17 15.1 +1.4
GLA Glamis 115.17 55 ⇑P PKPdf 01 17 15.2 +1.4
baz=115
TPAW Teton Pass 115.20 43 ePKPdf PKPdf 01 17 14.6 +0.8
D19A Cripps Ranch, 115.21 39 ⇑P PKPdf 01 17 14.2 +0.7
baz=115,SNR=5.4
B20A Solberg Farm, 115.22 37 ⇓P PKPdf 01 17 14.5 +1.0
baz=115
GCMT Greycliff 115.24 41 ePKPdf PKPdf 01 17 14.8 +1.1
LOR Lormes 115.25 321⇑iPKIKP PKPdf 01 17 13.4 -0.1
comp=Z,33nm,1.2s
LOR Lormes 115.25 321⇑iPKPdf PKPdf 01 17 13.4 -0.1
CCUT Cedar City 115.25 50 ePKPdf PKPdf 01 17 15.2 +1.2
MOOW Moose Ponds 115.25 43 ePKPdf PKPdf 01 17 14.1 +0.3
Y12C Blythe 115.26 54 ⇓P PKPdf 01 17 15.6 +1.7
baz=115
EKA Eskdalemuir Ar 115.30 331 PKP PKPdf 01 17 12.4 -0.8
EKA Eskdalemuir Ar 115.30 331 PKP PKPdf 01 17 12.4 -0.8
comp=Z,3.6nm,0.6s,baz=40,slow=3.7,SNR=12
I17A Pilgrim Ck. 115.31 43 ⇓P PKPdf 01 17 15.8 +1.8
baz=115
REDW Red Top Meadow 115.31 43 ePKPdf PKPdf 01 17 15.5 +1.5
ESK Eskdalemuir 115.33 331 ePKPdf PKPdf 01 17 13.5 +0.2
SNOW Snow King Moun 115.35 43 ePKPdf PKPdf 01 17 15.5 +1.4
SMRF Simiane la Rot 115.36 317 ePKIKP PKPdf 01 17 14.1 +0.3
comp=Z,67nm,1.4s
SMRF Simiane la Rot 115.36 317 ePKPdf PKPdf 01 17 14.1 +0.3
HWUT Hardware Ranch 115.39 45 ePKPdf PKPdf 01 17 14.0 -0.1
LOHW Long Hollow 115.40 43 ePKPdf PKPdf 01 17 15.2 +1.0
PDMCI Parker Dam,Lak 115.45 54 ⇓P PKPdf 01 17 15.7 +1.5
baz=116
W13A Hualapai Mount 115.46 53 ⇓P PKPdf 01 17 16.1 +1.6
baz=116
G18A Lazy EL Ranch, 115.48 41 ⇑P PKPdf 01 17 15.5 +1.3
baz=116
SMF Signal de Mont 115.50 321 ePKIKP PKPdf 01 17 13.7 -0.3
comp=Z,37nm,1.3s
SMF Signal de Mont 115.50 321 ePKPdf PKPdf 01 17 13.7 -0.3
SMF Signal de Mont 115.50 321 ePKPdf PKPdf 01 17 13.7 -0.3
FFC Flin Flon 115.52 29 iPKIKP PKPdf 01 17 13.9 +0.2
FFC Flin Flon 115.52 29 ePKPdf PKPdf 01 17 13.6 -0.1
C20A Veseth Ranch, 115.53 38 ⇓P PKPdf 01 17 15.1 +1.0
baz=116
E19A Rath Farm, Rou 115.55 40 ⇑P PKPdf 01 17 14.8 +0.7
baz=116,SNR=14
SSF Saint Saulge 115.55 321⇑iPKIKP PKPdf 01 17 14.1 +0.1
comp=Z,47nm,1.0s
SSF Saint Saulge 115.55 321⇑iPKIKP PKPdf 01 17 14.1 +0.1
SSF Saint Saulge 115.55 321⇑iPKPdf PKPdf 01 17 14.1 +0.1
SSB Saint Sauveur 115.58 319 ePKIKP PKPdf 01 17 12.7 -1.5
SSB e 01 18 15.1
SSB Saint Sauveur 115.58 319 ePKPdf PKPdf 01 17 12.7 -1.5
SSB ePP PP 01 18 15.1 -1.5
A21A Bergtoll Ranch 115.64 36 ⇓P PKPdf 01 17 14.9 +0.7
baz=116
VIVF Saint-Julien-l 115.65 319⇑iPKIKP PKPdf 01 17 14.2 -0.1
comp=Z,27nm,1.0s
VIVF Saint-Julien-l 115.65 319⇑iPKIKP PKPdf 01 17 14.2 -0.1
VIVF Saint-Julien-l 115.65 319⇑iPKPdf PKPdf 01 17 14.2 -0.1
H18A Shoshone NF, C 115.65 42 ⇑P PKPdf 01 17 15.5 +0.9
baz=116
F19A Roth Farm, Mol 115.68 40 ⇑P PKPdf 01 17 15.0 +0.5
baz=116,SNR=7.7
D20A Manuel Ranch, 115.70 39 ⇑P PKPdf 01 17 15.0 +0.6
baz=116,SNR=7.9
RLMT Red Lodge 115.75 41 ePKPdf PKPdf 01 17 15.6 +0.8
AVF Avril sur Loir 115.75 321⇑iPKIKP PKPdf 01 17 14.1 -0.3
comp=Z,23nm,0.9s
AVF Avril sur Loir 115.75 321⇑iPKIKP PKPdf 01 17 14.1 -0.3
AVF Avril sur Loir 115.75 321⇑iPKPdf PKPdf 01 17 14.1 -0.3
JLU Jordanelle 115.80 46 ePKPdf PKPdf 01 17 15.7 +0.7
B21A Ellsworth Farm 115.83 37 ⇑P PKPdf 01 17 15.4 +0.8
baz=116
MPU Maple Canyon 115.84 47 ePKPdf PKPdf 01 17 15.4 +0.4
MVU Marysvale 115.86 49 ePKPdf PKPdf 01 17 16.6 +1.4
MSU Marysvale 115.89 49 ePKIKP PKPdf 01 17 17.0 +1.7
MSU Marysvale 115.89 49 ePKPdf PKPdf 01 17 16.9 +1.7
I18A Diamond G Ranc 115.90 43 ⇑P PKPdf 01 17 16.4 +1.3
baz=116
E20A Meyer Farm, Mu 115.95 39 ⇑P PKPdf 01 17 15.6 +0.7
baz=116
HYF Humbligny 116.00 322 ePKIKP PKPdf 01 17 15.3 +0.4
HYF Humbligny 116.00 322 ePKPdf PKPdf 01 17 15.3 +0.4
C21A Desert Coulee 116.04 38 ⇓P PKPdf 01 17 15.8 +0.8
baz=116
M17A Scullys Gap (B 116.08 45 ⇓P PKPdf 01 17 16.0 +0.5
baz=116,SNR=5.5
113A Mohawk Valley, 116.10 55 ⇑P PKPdf 01 17 16.3 +0.8
baz=116
H19A Powell 116.10 42 ⇑P PKPdf 01 17 16.5 +1.2
baz=116,SNR=6.0
BGF Bois d'Agland 116.17 321⇑iPKIKP PKPdf 01 17 15.4 +0.2
comp=Z,56nm,0.9s
BGF Bois d'Agland 116.17 321⇑iPKIKP PKPdf 01 17 15.4 +0.2
BGF Bois d'Agland 116.17 321⇑iPKPdf PKPdf 01 17 15.4 +0.2
F20A Billings 116.21 40 ⇑P PKPdf 01 17 16.4 +0.9
baz=116
A22A Carney Farms, 116.24 36 ⇑P PKPdf 01 17 16.4 +1.0
baz=116
I19A Meeteetse 116.33 42 ⇑P PKPdf 01 17 16.6 +0.7
baz=116
L18A Fontenelle, Gr 116.37 45 ⇓P PKPdf 01 17 17.2 +1.1
baz=116,SNR=24
U15A North Rim 116.38 51 ⇑P PKPdf 01 17 18.0 +1.6
baz=116
G20A Bridger 116.40 41 ⇑P PKPdf 01 17 16.8 +0.9
baz=116,SNR=26
BW06 Boulder Array 116.41 44 ePKPdf PKPdf 01 17 16.1 -0.1
PDAR Pinedale Array 116.41 44 PKP PKPdf 01 17 15.6 -0.5
PDAR PKKPbc PKKPbc 01 27 43.2 -2.7
PDAR Pinedale Array 116.41 44 PKP PKPdf 01 17 15.6 -0.5
comp=Z,7.3nm,0.9s,baz=298,slow=1.9,SNR=30
PDAR PKKPbc PKKPbc 01 27 43.2 -2.7
comp=Z,1.5nm,0.8s,baz=133,slow=3.8,SNR=6.1
D21A La Casta Ranch 116.43 38 ⇓P PKPdf 01 17 16.5 +0.7
baz=116
Y14A Wickenburg 116.45 54 ⇑P PKPdf 01 17 17.2 +1.0
baz=116
LASF Ste Croix 116.48 318⇑iPKIKP PKPdf 01 17 16.0 +0.1
comp=Z,45nm,1.3s
LASF Ste Croix 116.48 318⇑iPKPdf PKPdf 01 17 16.0 +0.1
B22A Reddig Ranch S 116.50 37 ⇑P PKPdf 01 17 17.0 +1.1
baz=116
Q16A Castle Valley 116.52 48 ⇓P PKPdf 01 17 17.6 +1.2
baz=116
J19A Crowheart 116.58 43 ⇑P PKPdf 01 17 17.3 +1.0
baz=117,SNR=22
E21A Keefer Ranch, 116.59 39 ⇑P PKPdf 01 17 17.5 +1.3
baz=117
Z14A Wintersburg 116.63 55 ⇓P PKPdf 01 17 17.8 +1.3
baz=117
TCF Toulx Ste Croi 116.68 321⇑iPKIKP PKPdf 01 17 16.3 0.0
comp=Z,45nm,1.1s
TCF Toulx Ste Croi 116.68 321⇑iPKIKP PKPdf 01 17 16.3 0.0
TCF Toulx Ste Croi 116.68 321⇑iPKPdf PKPdf 01 17 16.3 0.0
L19A Farson 116.78 44 ⇓P PKPdf 01 17 18.1 +1.2
baz=117,SNR=10
C22A Vida 116.81 37 ⇑P PKPdf 01 17 17.6 +1.1
baz=117
H20A Greybull 116.83 41 ⇑P PKPdf 01 17 17.3 +0.6
baz=117,SNR=8.2
K19A Absolon Red Bu 116.88 43 ⇓P PKPdf 01 17 17.6 +0.7
baz=117,SNR=26
D22A Cohagen 116.89 38 ⇓P PKPdf 01 17 18.3 +1.6
baz=117
SRU San Rafael 116.94 48 ⇓P PKPdf 01 17 18.0 +0.8
baz=117
I20A Worland 116.94 42 ⇑P PKPdf 01 17 17.8 +0.8
baz=117,SNR=26
P18A Preston Nutter 116.98 47 ⇓P PKPdf 01 17 18.3 +0.9
baz=117
SFJD Kangerlussuaq 117.01 359 PKP PKPdf 01 17 15.6 -0.6
SFJD Kangerlussuaq 117.01 359 iP PKPdf 01 17 15.3 -0.9
comp=Z,9.6nm,0.8s
SFJD
comp=Z,2μm,17.0s
SFJD Kangerlussuaq 117.01 359 PKP PKPdf 01 17 15.6 -0.6
comp=Z,8.5nm,0.8s,baz=72,slow=4.7,SNR=4.2
B23A Brockton 117.03 36 ⇑P PKPdf 01 17 18.0 +1.1
baz=117
G21A Lodge Grass 117.05 40 ⇑P PKPdf 01 17 17.7 +0.6
baz=117
214A Organ Pipe Nat 117.07 56 ⇓P PKPdf 01 17 18.3 +0.9
baz=117
LDF La Druitiere 117.09 324 ePKIKP PKPdf 01 17 16.9 0.0
comp=Z,35nm,1.1s
LDF La Druitiere 117.09 324 ePKPdf PKPdf 01 17 16.9 0.0
M19A Rock Springs 117.13 45 ⇓P PKPdf 01 17 18.5 +1.0
baz=117,SNR=10
J20A Shoshoni 117.20 43 ⇑P PKPdf 01 17 18.6 +1.1
baz=117,SNR=21
C23A Lambert 117.21 37 ⇓P PKPdf 01 17 18.6 +1.4
baz=117
FLN La Foliniere 117.23 324 ePKIKP PKPdf 01 17 17.0 -0.2
comp=Z,33nm,1.2s
FLN La Foliniere 117.23 324 ePKPdf PKPdf 01 17 17.0 -0.2
K20A Yellowstone Ra 117.28 43 ⇑P PKPdf 01 17 18.2 +0.4
baz=117,SNR=17
CAF Calviac 117.33 319⇑iPKIKP PKPdf 01 17 17.9 +0.3
comp=Z,39nm,1.1s
CAF Calviac 117.33 319⇑iPKIKP PKPdf 01 17 17.9 +0.3
CAF Calviac 117.33 319⇑iPKPdf PKPdf 01 17 17.9 +0.3
WUAZ Wupatki 117.34 52 ePKPdf PKPdf 01 17 19.2 +1.2
WUAZ Wupatki 117.34 52 ⇑P PKPdf 01 17 19.3 +1.2
baz=117
E22A Miles City 117.34 39 ⇑P PKPdf 01 17 18.5 +0.9
baz=117
A24A Westby 117.39 36 ⇓P PKPdf 01 17 18.7 +1.2
baz=117
H21A Big Horn, Sher 117.40 41 ⇑P PKPdf 01 17 18.4 +0.5
baz=117
F22A Rosebud 117.43 40 ⇑P PKPdf 01 17 18.7 +0.9
baz=117
D23A Lindsay 117.48 38 ⇑P PKPdf 01 17 19.4 +1.6
baz=118
DGMT Dagmar 117.49 36 ePKPdf PKPdf 01 17 17.7 -0.1
DGMT Dagmar 117.49 36 ⇓P PKPdf 01 17 18.8 +1.0
baz=118
L20A Wamsutter 117.53 44 ⇓P PKPdf 01 17 19.0 +0.7
baz=118,SNR=9.1
RJF Les Rejaudoux 117.53 320 ePKIKP PKPdf 01 17 18.2 +0.3
comp=Z,63nm,1.5s
RJF Les Rejaudoux 117.53 320 ePKIKP PKPdf 01 17 18.2 +0.3
RJF Les Rejaudoux 117.53 320 ePKPdf PKPdf 01 17 18.2 +0.3
I21A Big Trails, Te 117.56 42 ⇓P PKPdf 01 17 18.3 +0.1
baz=118,SNR=18
O19A Miners Draw (B 117.57 46 ⇑P PKPdf 01 17 18.7 +0.4
baz=118,SNR=11
X16A Lo Mia Camp, P 117.58 53 ⇓P PKPdf 01 17 20.0 +1.4
baz=118
GRR Gorron 117.62 324 ePKIKP PKPdf 01 17 18.2 +0.3
comp=Z,26nm,1.1s
GRR Gorron 117.62 324 ePKPdf PKPdf 01 17 18.2 +0.3
J21A Lysite 117.64 42 ⇓P PKPdf 01 17 19.0 +0.5
baz=118,SNR=13
G22A Birney 117.64 40 ⇑P PKPdf 01 17 19.1 +0.8
baz=118
E23A Ismay 117.72 38 ⇑P PKPdf 01 17 19.5 +1.2
baz=118
S18A Hurst Farm, Bl 117.77 49 ⇑P PKPdf 01 17 20.0 +1.1
baz=118
C24A Savage 117.79 37 ⇓P PKPdf 01 17 19.7 +1.4
baz=118
M20A Sweetwater, Wa 117.82 45 ⇓P PKPdf 01 17 19.6 +0.7
baz=118
MTLF Montolieu 117.86 318 ePKIKP PKPdf 01 17 18.5 -0.1
comp=Z,52nm,1.2s
MTLF Montolieu 117.86 318 ePKIKP PKPdf 01 17 18.5 -0.1
MTLF Montolieu 117.86 318 ePKPdf PKPdf 01 17 18.5 -0.1
H22A Clearmont 117.86 41 ⇑P PKPdf 01 17 19.1 +0.4
baz=118
P19A Cripple Cowboy 117.90 47 ⇓P PKPdf 01 17 20.4 +1.3
baz=118,SNR=10
F23A Volborg 118.00 39 ⇓P PKPdf 01 17 19.5 +0.6
baz=118
N20A Spence Gulch, 118.00 45 ⇓P PKPdf 01 17 20.2 +0.9
baz=118,SNR=19
MFF Saint Martin d 118.02 322⇑iPKIKP PKPdf 01 17 18.7 -0.1
comp=Z,46nm,0.9s
MFF Saint Martin d 118.02 322⇑iPKPdf PKPdf 01 17 18.7 -0.1
K21A Alcova 118.04 43 ⇑P PKPdf 01 17 19.9 +0.6
baz=118
D24A Glendive 118.04 38 ⇑P PKPdf 01 17 20.0 +1.1
baz=118
I22A 9 Mile Ranch, 118.06 42 ⇑P PKPdf 01 17 19.5 +0.4
baz=118
LFF La Frestale 118.18 320⇑iPKIKP PKPdf 01 17 19.5 +0.4
comp=Z,45nm,1.1s
LFF La Frestale 118.18 320⇑iPKIKP PKPdf 01 17 19.5 +0.4
LFF La Frestale 118.18 320⇑iPKPdf PKPdf 01 17 19.5 +0.4
L21A Rawlins 118.21 44 ⇑P PKPdf 01 17 20.1 +0.5
baz=118,SNR=22
G23A Biddle 118.23 40 ⇓P PKPdf 01 17 20.1 +0.7
baz=118
J22A Midwest 118.26 42 ⇓P PKPdf 01 17 19.8 +0.2
baz=118
O20A White River Ci 118.26 46 ⇓P PKPdf 01 17 21.0 +1.3
baz=118,SNR=25
E24A Baker 118.31 38 ⇑P PKPdf 01 17 20.5 +1.0
baz=118
M21A Separation Pea 118.35 44 ⇓P PKPdf 01 17 20.3 +0.4
baz=118,SNR=29
PV04 Paradox Valley 118.37 48 ePKPdf PKPdf 01 17 21.1 +1.1
P20A De Beque 118.37 47 ⇓P PKPdf 01 17 20.9 +0.9
baz=118,SNR=16
H23A Clabaugh Cattl 118.49 40 ⇓P PKPdf 01 17 20.0 +0.1
baz=118
K22A Casper 118.53 43 ⇑P PKPdf 01 17 20.3 +0.2
baz=118,SNR=17
N21A Black Mountain 118.55 45 ⇑P PKPdf 01 17 21.5 +1.1
baz=119,SNR=7.4
Q20A Ridgley Place, 118.63 47 ⇑P PKPdf 01 17 21.9 +1.4
baz=119,SNR=16
SGMF Saint Gilles 118.68 324 ePKIKP PKPdf 01 17 19.7 -0.3
comp=Z,57nm,1.1s
SGMF Saint Gilles 118.68 324 ePKPdf PKPdf 01 17 19.7 -0.3
PV01 Paradox Valley 118.70 48 ePKPdf PKPdf 01 17 21.8 +1.1
X18A Snowflake 118.74 53 ⇓P PKPdf 01 17 22.5 +1.7
baz=119
W18A Petrified Fore 118.74 52 ⇑P PKPdf 01 17 22.5 +1.7
baz=119
O21A Pagoda 118.79 46 ⇑P PKPdf 01 17 21.8 +1.0
baz=119,SNR=12
G24A Alzada 118.79 39 ⇑P PKPdf 01 17 20.9 +0.5
baz=119
R20A Redvale 118.82 48 ⇓P PKPdf 01 17 22.0 +1.1
baz=119,SNR=9.0
L22A Ellis Ranch, M 118.83 43 ⇑P PKPdf 01 17 21.6 +0.8
baz=119,SNR=8.1
J23A Dilts Ranch, B 118.88 42 ⇓P PKPdf 01 17 21.0 +0.2
baz=119
S20A Disappointment 118.96 49 ⇓P PKPdf 01 17 22.6 +1.4
baz=119,SNR=11
H24A Dirks Ranch, A 118.96 40 ⇑P PKPdf 01 17 21.0 +0.2
baz=119
M22A Cedar Creek Ra 118.96 44 ⇑P PKPdf 01 17 22.0 +0.9
baz=119,SNR=9.3
P21A Newcastle 119.05 46 ⇓P PKPdf 01 17 22.3 +1.0
baz=119
MVCO Mesa Verde 119.05 49 ePKPdf PKPdf 01 17 22.6 +1.2
MVCO Mesa Verde 119.05 49 ⇓P PKPdf 01 17 22.8 +1.4
baz=119
ROSF Rostrenen 119.06 325 ePKIKP PKPdf 01 17 20.4 -0.3
comp=Z,41nm,1.1s
ROSF Rostrenen 119.06 325 ePKPdf PKPdf 01 17 20.4 -0.3
K23A Bowen Ranch, D 119.09 42 ⇑P PKPdf 01 17 21.4 +0.2
baz=119
Q21A Lamborn Mesa, 119.20 47 ⇑P PKPdf 01 17 23.1 +1.5
baz=119,SNR=12
QUIF Quistinic 119.20 324 ePKIKP PKPdf 01 17 20.9 -0.1
QUIF Quistinic 119.20 324 ePKPdf PKPdf 01 17 20.9 -0.1
EPF Esparros 119.24 318⇑iPKIKP PKPdf 01 17 21.4 +0.1
comp=Z,30nm,1.1s
EPF Esparros 119.24 318⇑iPKIKP PKPdf 01 17 21.4 +0.1
EPF Esparros 119.24 318⇑iPKPdf PKPdf 01 17 21.4 +0.1
N22A Wahsberg Ran 119.29 45 ⇓P PKPdf 01 17 22.7 +1.0
baz=119,SNR=14
I24A Kuemmerle Ranc 119.30 41 ⇓P PKPdf 01 17 21.4 -0.1
baz=119
L23A Garrett 119.30 43 ⇓P PKPdf 01 17 21.8 +0.1
baz=119,SNR=6.4
U20A Newcomb 119.30 50 ⇓P PKPdf 01 17 22.8 +1.0
baz=119
R21A Cimarron 119.38 48 ⇓P PKPdf 01 17 23.4 +1.4
baz=119,SNR=7.0
S21A Coal Bank Pass 119.44 49 ⇑P PKPdf 01 17 23.9 +1.7
baz=120,SNR=26
O22A Kremmling 119.46 45 ⇓P PKPdf 01 17 22.7 +0.5
baz=120
J24A Dixon Ranch, L 119.50 41 ⇑P PKPdf 01 17 22.4 +0.5
baz=120
SMCO Snowmass 119.52 47 ePKPdf PKPdf 01 17 23.7 +1.2
P22A Eagle 119.52 46 ⇓P PKPdf 01 17 23.7 +1.5
baz=120,SNR=14
V20A Brimhall 119.52 51 ⇓P PKPdf 01 17 23.5 +1.2
baz=120
M23A Laramie 119.54 44 ⇑P PKPdf 01 17 22.7 +0.5
baz=120,SNR=5.3
RSSD Black Hills 119.57 40 ePKIKP PKPdf 01 17 21.9 -0.2
RSSD Black Hills 119.57 40 ePKPdf PKPdf 01 17 21.9 -0.2
N23A Red Feather La 119.61 44 ⇓P PKPdf 01 17 23.2 +0.8
baz=120,SNR=5.4
K24A Anderson Ranch 119.65 42 ⇑P PKPdf 01 17 22.4 +0.2
baz=120
Q22A Crested Butte, 119.67 47 ⇑P PKPdf 01 17 24.5 +1.9
baz=120,SNR=18
W20A Ramah 119.70 52 ⇑P PKPdf 01 17 24.2 +1.5
baz=120
PHWY Pilot Hill 119.79 44 ePKPdf PKPdf 01 17 22.9 +0.2
L24A Wheatland 119.85 43 ⇓P PKPdf 01 17 23.3 +0.7
baz=120
T21A Navajo Lake 119.85 49 ⇑P PKPdf 01 17 24.6 +1.7
baz=120,SNR=9.2
O23A Lake Granby, G 119.89 45 ⇑P PKPdf 01 17 24.1 +1.2
baz=120,SNR=25
ETSF Etsaut 119.89 318 ePKIKP PKPdf 01 17 23.3 +0.7
comp=Z,64nm,1.3s
ETSF Etsaut 119.89 318 ePKPdf PKPdf 01 17 23.3 +0.7
U21A Nageezi 119.94 50 ⇑P PKPdf 01 17 24.8 +1.6
baz=120,SNR=25
R22A Saguache, Gunn 120.01 48 ⇓P PKPdf 01 17 25.4 +2.1
baz=120,SNR=21
S22A 4UR Ranch, Cre 120.13 48 ⇑P PKPdf 01 17 25.5 +2.0
baz=120,SNR=26
319A Douglas 120.13 56 ⇑P PKPdf 01 17 25.3 +1.8
baz=120
M24A Cheyenne 120.16 44 ⇑P PKPdf 01 17 23.9 +0.6
baz=120
V21A Milan 120.16 51 ⇓P PKPdf 01 17 24.9 +1.4
baz=120,SNR=10
Y20A Horse Springs, 120.16 53 ⇓P PKPdf 01 17 25.3 +1.7
baz=120
Z20A Nine Sixteen R 120.22 54 ⇓P PKPdf 01 17 25.4 +1.8
baz=120
SJPF Ste Jean 120.24 319 ePKIKP PKPdf 01 17 23.8 +0.6
comp=Z,29nm,1.1s
SJPF Ste Jean 120.24 319 ePKPdf PKPdf 01 17 23.8 +0.6
ISCO Idaho Springs 120.26 46 ePKIKP PKPdf 01 17 24.5 +0.7
ISCO Idaho Springs 120.26 46 ePKPdf PKPdf 01 17 24.5 +0.7
ISCO Idaho Springs 120.26 46 ⇓P PKPdf 01 17 25.0 +1.2
baz=120,SNR=16
P23A Jefferson 120.26 46 ⇑P PKPdf 01 17 25.2 +1.4
baz=120
T22A Edith 120.32 49 ⇓P PKPdf 01 17 25.6 +1.8
baz=120,SNR=14
K25A Mack Ranch, Ha 120.33 42 ⇓P PKPdf 01 17 23.9 +0.3
baz=120
120A U Bar Ranch, L 120.35 54 ⇑P PKPdf 01 17 25.5 +1.6
baz=120
W21A San Fidel 120.37 51 ⇑P PKPdf 01 17 25.6 +1.6
baz=120,SNR=7.6
N24A Carr 120.38 44 ⇑P PKPdf 01 17 24.8 +1.1
baz=120,SNR=6.5
Q23A Hartsel 120.44 47 ⇓P PKPdf 01 17 25.6 +1.5
baz=120

L25A	Engebretsen Ra baz=120	120.46	42	⇓P		PKPdf	01 17 25.0 +1.2
MDND	Maddock baz=120	120.47	35	⇑P		PKPdf	01 17 24.3 +0.9
X21A	Alamocita Cree baz=120	120.47	52	⇓P		PKPdf	01 17 25.8 +1.6
O24A	Longmont baz=120	120.52	45	⇑P		PKPdf	01 17 25.1 +1.1
U22A	Llaves baz=121,SNR=18	120.57	50	⇓P		PKPdf	01 17 26.1 +1.8
220A	Playas Peak, P baz=121	120.61	55	⇓P		PKPdf	01 17 25.9 +1.5
V22A	San Miguel Ran baz=121,SNR=19	120.69	50	⇑P		PKPdf	01 17 26.4 +1.9
Y21A	Point of Rocks baz=121	120.69	53	⇓P		PKPdf	01 17 26.6 +1.9
M25A	Palm-Egli Farm baz=121	120.70	43	⇑P		PKPdf	01 17 25.7 +1.4
R23A	Moffat baz=121,SNR=14	120.71	47	⇑P		PKPdf	01 17 26.0 +1.4
K26A	Motz Farm, Whi baz=121	120.75	42	⇑P		PKPdf	01 17 24.7 +0.4
S23A	Nye Farm, Mont baz=121	120.75	48	⇓P		PKPdf	01 17 26.6 +1.9
320A	Kipp Ranch, An baz=121	120.76	56	⇓P		PKPdf	01 17 26.6 +1.9
P24A	Kohler Place, baz=121	120.88	46	⇑P		PKPdf	01 17 26.0 +1.3
Z21A	St. Cloud Mine baz=121	120.90	53	⇑P		PKPdf	01 17 26.5 +1.5
Q24A	Divide baz=121	120.91	46	⇑P		PKPdf	01 17 26.6 +1.6
N25A	Grover baz=121	120.94	44	⇑P		PKPdf	01 17 26.1 +1.3
TAM	Tamanrasset	120.95	294	ePKIKP		PKPdf	01 17 26.1 +0.8
TAM	Tamanrasset	120.95	294	ePKPdf		PKPdf	01 17 26.1 +0.8
T23A	Casias Ranch, baz=121,SNR=7.7	120.97	49	⇑P		PKPdf	01 17 27.0 +1.8
LAZ	Ladron	120.99	52	ePKPdf		PKPdf	01 17 26.2 +1.1
W22A	Albuquerque baz=121	120.99	51	⇓P		PKPdf	01 17 27.0 +1.9
121A	Cookes Peak, D baz=121	121.04	54	⇑P		PKPdf	01 17 27.0 +1.7
X22A	Bernardo baz=121,SNR=11	121.06	52	⇓P		PKPdf	01 17 27.0 +1.8
U23A	El Rito baz=121,SNR=11	121.09	50	⇑P		PKPdf	01 17 26.8 +1.5
L26A	Underwood Farm baz=121	121.11	42	⇑P		PKPdf	01 17 27.1 +2.0
SDCO	Great Sand Dun	121.11	48	ePKPdf		PKPdf	01 17 26.2 +0.8
ULM	Lac du Bonnet	121.14	31	PKP		PKPdf	01 17 24.3 -0.4
ULM	Lac du Bonnet comp=Z,22nm,0.9s,baz=316,slow=3.8,SNR=14	121.14	31	PKP		PKPdf	01 17 24.3 -0.4
221A	Mesquite Ranch baz=121	121.19	55	⇓P		PKPdf	01 17 26.9 +1.4
O25A	Wiggins baz=121,SNR=9.4	121.20	45	⇑P		PKPdf	01 17 26.3 +1.0
R24A	Sanders Place, baz=121	121.22	47	⇑P		PKPdf	01 17 26.7 +1.2
Y22D	IRIS PASSCAL I baz=121	121.27	52	⇓P		PKPdf	01 17 27.3 +1.7
Y22A	Socorro baz=121,SNR=21	121.27	52	⇓P		PKPdf	01 17 27.1 +1.4
V23A	Ortiz Mt. (NFS baz=121,SNR=9.0	121.30	50	⇑P		PKPdf	01 17 28.0 +2.2
M26A	McRoberts Ranc baz=121	121.31	43	⇓P		PKPdf	01 17 27.2 +1.8
ANMO	Albuquerque	121.35	51	PKP		PKPdf	01 17 26.6 +0.8
ANMO				ePKPdf		PKiKP	01 17 27.0 +1.1
ANMO	Albuquerque comp=Z,20nm,1.0s,baz=216,slow=3.5,SNR=43	121.35	51	PKP		PKPdf	01 17 26.6 +0.8
S24A	Houchin Ranch, baz=121,SNR=8.6	121.36	48	⇓P		PKPdf	01 17 27.5 +1.6
K27A	Fluecknger Fa baz=121	121.37	41	⇓P		PKPdf	01 17 26.0 +0.5
P25A	Willow Gulch B baz=121,SNR=26	121.40	45	⇑P		PKPdf	01 17 27.2 +1.4
LPM	Los Pinos Moun	121.42	52	ePKPdf		PKPdf	01 17 27.0 +1.1
BNM	Barren Site	121.47	52	ePKPdf		PKPdf	01 17 27.3 +1.2
Z22A	Elephant Butte baz=122,SNR=27	121.48	53	⇓P		PKPdf	01 17 27.3 +1.3
W23A	Werner Place, baz=122,SNR=13	121.52	51	⇓P		PKPdf	01 17 27.5 +1.4
N26A	Koester Ranch, baz=122	121.53	44	⇑P		PKPdf	01 17 26.9 +1.0
Q25A	Bedland, Calha baz=122	121.58	46	⇓P		PKPdf	01 17 27.3 +1.1
L27A	T5 Ranch, Ells baz=122	121.60	42	⇑P		PKPdf	01 17 26.9 +0.9
122A	Conniff Cattle baz=122	121.62	54	⇑P		PKPdf	01 17 28.1 +1.8
X23A	Hourglass Bar baz=122,SNR=18	121.68	51	⇓P		PKPdf	01 17 27.6 +1.1
O26A	Horse Wrangler baz=122,SNR=6.5	121.71	44	⇑P		PKPdf	01 17 26.9 +0.6
222A	Williams Famil baz=122	121.72	54	⇓P		PKPdf	01 17 27.9 +1.4
U24A	Moreno Valley baz=122	121.76	49	⇑P		PKPdf	01 17 28.7 +2.0
M27A	Reverse DX Ran baz=122	121.79	43	⇓P		PKPdf	01 17 26.9 +0.5
R25A	Fountain Ranch baz=122,SNR=19	121.85	47	⇓P		PKPdf	01 17 27.6 +1.0
S25A	Robets Cordova baz=122,SNR=10	121.93	47	⇑P		PKPdf	01 17 27.7 +0.8
P26A	Davis Ranch, A baz=122,SNR=13	121.97	45	⇑P		PKPdf	01 17 27.7 +0.9
Y23A	Lovelace Mesa, baz=122,SNR=19	121.99	52	⇑P		PKPdf	01 17 28.1 +1.0
V24A	Rampart Ranch, baz=122,SNR=20	122.00	50	⇓P		PKPdf	01 17 28.6 +1.5
N27A	Anderson Farm, baz=122	122.01	43	⇑P		PKPdf	01 17 27.8 +1.0
Z23A	Rita Site, Whi baz=122,SNR=5.2	122.06	53	⇑P		PKPdf	01 17 28.7 +1.5
W24A	Lazy 6 Ranch, baz=122,SNR=28	122.07	50	⇓P		PKPdf	01 17 28.6 +1.4
T25A	Trinidad baz=122,SNR=16	122.14	48	⇑P		PKPdf	01 17 28.7 +1.4
123A	Bell Site, Whi baz=122	122.23	54	⇑P		PKPdf	01 17 29.3 +1.8
X24A	Lazy VL Ranch, baz=122	122.27	51	⇑P		PKPdf	01 17 28.7 +1.1
OGNE	Ogallala baz=122	122.29	43	⇑P		PKPdf	01 17 28.2 +0.9
O27A	Beecher Island baz=122	122.31	44	⇑P		PKPdf	01 17 28.6 +1.2
R26A	Arlington baz=122,SNR=12	122.40	46	⇓P		PKPdf	01 17 28.6 +0.9
U25A	Circle Dot Ran baz=122,SNR=12	122.41	49	⇑P		PKPdf	01 17 29.0 +1.1
V25A	Rancho No Teng baz=122,SNR=30	122.46	50	⇓P		PKPdf	01 17 29.2 +1.3
Y24A	Capitan baz=122,SNR=34	122.48	52	⇓P		PKPdf	01 17 29.1 +1.1
P27A	Ficken Ranch, baz=122,SNR=6.5	122.51	45	⇓P		PKPdf	01 17 28.5 +0.7
M28A	Bar X Bar Ranc baz=122	122.54	42	⇓P		PKPdf	01 17 28.6 +0.8
BRSD	Miller baz=123	122.62	38	⇓P		PKPdf	01 17 28.1 +0.3
S26A	Kim baz=123,SNR=15	122.65	47	⇑P		PKPdf	01 17 28.9 +0.8
KSCO	Kaye Shedlock' baz=123,SNR=6.8	122.70	45	⇑P		PKPdf	01 17 29.0 +0.8
T26A	Comanche Natio baz=123,SNR=36	122.73	48	⇓P		PKPdf	01 17 29.4 +1.0
Z24A	Sheeppen Canyo baz=123,SNR=29	122.73	53	⇓P		PKPdf	01 17 29.8 +1.3
N28A	Pribbeno Ranch baz=123	122.74	43	⇑P		PKPdf	01 17 28.9 +0.8
W25A	X Bar L Ranch, baz=123,SNR=14	122.80	50	⇑P		PKPdf	01 17 29.6 +1.1
124A	Stringfield Ra baz=123,SNR=26	122.86	53	⇑P		PKPdf	01 17 30.1 +1.3
R27A	Eads baz=123,SNR=13	122.87	46	⇓P		PKPdf	01 17 29.2 +0.7
X25A	Clemmons Ranch baz=123	122.88	51	⇑P		PKPdf	01 17 29.5 +0.8
U26A	Atchley Ranch, baz=123,SNR=8.3	122.91	49	⇓P		PKPdf	01 17 29.9 +1.1
224A	Cornudas Mount baz=123,SNR=11	123.00	54	⇓P		PKPdf	01 17 30.1 +1.1
S27A	Las Animas baz=123,SNR=13	123.04	47	⇓P		PKPdf	01 17 30.0 +1.1
Y25A	Mesa, Roswell baz=123,SNR=32	123.06	52	⇓P		PKPdf	01 17 30.0 +0.9
P28A	Saint Francis baz=123	123.08	44	⇓P		PKPdf	01 17 29.8 +1.0
V26A	Tequesquite Ra baz=123,SNR=11	123.10	49	⇓P		PKPdf	01 17 29.8 +0.7
324A	Moseley Ranch, baz=123,SNR=26	123.23	55	⇑P		PKPdf	01 17 30.2 +0.7
MNTX	Cornudas Mount	123.23	54	ePKPdf		PKPdf	01 17 30.2 +1.0
Q28A	Sharon Springs baz=123,SNR=17	123.24	45	⇑P		PKPdf	01 17 30.3 +1.1
Z25A	Roswell baz=123,SNR=17	123.26	52	⇑P		PKPdf	01 17 30.2 +0.8
N29A	Votaw Ranch, W baz=123	123.30	43	⇓P		PKPdf	01 17 29.6 +0.4
W26A	Owens Ranch, T baz=123,SNR=9.8	123.38	50	⇓P		PKPdf	01 17 30.6 +0.9
T27A	Campo baz=123,SNR=8.2	123.42	47	⇑P		PKPdf	01 17 30.8 +1.1
125A	Gardner Draw, baz=124,SNR=8.9	123.51	53	⇑P		PKPdf	01 17 30.8 +0.9
X26A	CR and CF Fran baz=124,SNR=14	123.53	51	⇑P		PKPdf	01 17 30.7 +0.8
225A	Deer Hill, Car baz=124,SNR=13	123.56	54	⇑P		PKPdf	01 17 31.4 +1.3
R28A	Tribune baz=124,SNR=18	123.56	46	⇑P		PKPdf	01 17 30.6 +0.8
U27A	Thompson Grove baz=124,SNR=14	123.59	48	⇓P		PKPdf	01 17 30.8 +0.8
ESDC	Sonseca Array	123.60	316	PKP		PKPdf	01 17 29.6 -0.3
ESDC				PP		PP	01 19 10.9 -1.0
ESDC				PKKPbc		PKKPbc	01 27 20.6 +1.6
ESDC	Sonseca Array comp=Z,0.7nm,0.4s,baz=95,slow=1.4,SNR=20	123.60	316	PKP		PKPdf	01 17 29.5 -0.3
ESDC				PP		PP	01 19 10.9 -1.0
ESDC	comp=Z,3.0nm,0.9s,baz=63,slow=7.4,SNR=6.1			PKKPbc		PKKPbc	01 27 20.6 +1.6
325A	comp=Z,0.3nm,0.4s,baz=270,slow=1.5,SNR=5.5 Bean Ranch, Si baz=124,SNR=16	123.67	55	⇓P		PKPdf	01 17 31.0 +0.7
N30A	Hueftle Ranch, baz=124	123.67	42	⇓P		PKPdf	01 17 30.7 +0.8
Y26A	Elida baz=124,SNR=9.0	123.74	51	⇑P		PKPdf	01 17 31.3 +0.9
S28A	Manter baz=124,SNR=8.4	123.81	47	⇓P		PKPdf	01 17 31.2 +0.9
425A	Indio Mountain baz=124,SNR=14	123.83	55	⇑P		PKPdf	01 17 31.6 +0.9
V27A	Dan Oppiter Fa baz=124	123.83	49	⇑P		PKPdf	01 17 31.3 +0.8
Z26A	Caprock baz=124,SNR=6.5	123.84	52	⇓P		PKPdf	01 17 31.1 +0.5
GDL2	Guadalupe Moun	123.89	54	ePKPdf		PKPdf	01 17 31.7 +1.0
W27A	Bowe Ranch, En baz=124,SNR=12	123.92	50	⇓P		PKPdf	01 17 31.5 +0.8
R29A	Marienthal baz=124	124.00	45	⇓P		PKPdf	01 17 31.7 +1.1
126A	Clayton Basin, baz=124,SNR=10.0	124.02	53	⇑P		PKPdf	01 17 31.6 +0.7
226B	Tecolote Peak, baz=124,SNR=13	124.09	54	⇓P		PKPdf	01 17 31.8 +0.8
CLNB	Carlsbad	124.26	53	ePKPdf		PKPdf	01 17 32.1 +0.7
Y27A	Causey baz=124,SNR=23	124.27	51	⇓P		PKPdf	01 17 32.4 +1.0
V28A	Channing baz=124	124.30	49	⇑P		PKPdf	01 17 32.3 +1.0
S29A	Ulysses baz=124	124.36	46	⇑P		PKPdf	01 17 32.5 +1.2
T29A	Hudson baz=124,SNR=8.4	124.42	47	⇑P		PKPdf	01 17 32.4 +0.9
Z27A	Tatum baz=124,SNR=27	124.43	52	⇑P		PKPdf	01 17 32.2 +0.5
ECSD	EROS Data Cent	124.43	38	ePKPdf		PKPdf	01 17 31.0 -0.3
PBRG	Braganca	124.46	320	ePKP		PKPdf	01 17 32.3 +0.9
W28A	Vega baz=124	124.50	49	⇓P		PKPdf	01 17 32.9 +1.2
127A	Arkansas Junct baz=125,SNR=6.1	124.54	53	⇑P		PKPdf	01 17 32.8 +0.9
MSTX	Muleshoe baz=125,SNR=17	124.55	51	⇑P		PKPdf	01 17 32.5 +0.7
426A	McDonald Obser baz=125,SNR=5.7	124.65	55	⇑P		PKPdf	01 17 32.9 +0.6
BGNE	Belgrade baz=125	124.66	41	⇑P		PKPdf	01 17 32.2 +0.5
R30A	Dighton baz=125	124.67	45	⇓P		PKPdf	01 17 32.9 +1.0
U29A	Oasis Ranch, S baz=125	124.73	48	⇑P		PKPdf	01 17 32.9 +0.8
V29A	Stinnett baz=125,SNR=7.1	124.78	48	⇓P		PKPdf	01 17 33.3 +1.1
X28A	Dimmitt baz=125,SNR=15	124.79	50	⇓P		PKPdf	01 17 33.4 +1.1
526A	Mary Lane Ranc baz=125,SNR=22	124.79	56	⇓P		PKPdf	01 17 33.5 +1.0
227A	Bennet, Jal baz=125	124.81	53	⇑P		PKPdf	01 17 33.8 +1.4
S30A	Montezuma baz=125	124.82	46	⇑P		PKPdf	01 17 33.5 +1.3
EYMN	Ely	124.83	31	ePKPdf		PKPdf	01 17 31.7 -0.2
626A	Big Bend Ranch baz=125,SNR=5.5	124.90	56	⇑P		PKPdf	01 17 33.4 +0.7
MVO	Moncorvo	124.97	319	ePKP		PKPdf	01 17 33.7 +1.3
MVO				eLR		LR	01 45 08.1
Y28A	comp=Z,289nm,20.0s McKinney Farm, baz=125,SNR=7.4	124.97	51	⇑P		PKPdf	01 17 33.6 +0.9
W29A	Amarillo baz=125	124.97	49	⇓P		PKPdf	01 17 33.7 +1.1
T30A	Plains baz=125	125.02	47	⇑P		PKPdf	01 17 33.9 +1.3
AMTX	Amarillo	125.04	50	ePKPdf		PKPdf	01 17 33.4 +0.6
Z28A	Tucker Farm, M baz=125	125.09	52	⇓P		PKPdf	01 17 33.6 +0.7
427A	Hayter Ranch, baz=125,SNR=14	125.11	55	⇓P		PKPdf	01 17 34.2 +1.2
U30A	WK&E Inc. Balk baz=125	125.15	47	⇑P		PKPdf	01 17 34.3 +1.4
527A	Woodward Ranch baz=125,SNR=24	125.16	56	⇓P		PKPdf	01 17 34.0 +0.8
X29A	Tulia baz=125,SNR=9.0	125.19	50	⇓P		PKPdf	01 17 34.0 +0.9
228A	UT Block 9, Go baz=125	125.34	53	⇑P		PKPdf	01 17 34.3 +0.9
TXAR	Lajitas Array	125.36	57	PKP		PKPdf	01 17 33.8 +0.3
TXAR				PKKPab		PKKPbc	01 27 14.1 +2.3
TXAR	Lajitas Array comp=Z,7.9nm,0.9s,baz=304,slow=1.6,SNR=31	125.36	57	PKP		PKPdf	01 17 33.8 +0.3
TXAR				PKKPab		PKKPbc	01 27 14.1 +2.3
PVRL	comp=Z,0.7nm,0.8s,baz=124,slow=6.8,SNR=3.9 Vila Real	125.36	319	ePKP		PKPdf	01 17 34.4 +1.3
PGAV	Gavieira, Arco	125.36	320	ePKP		PKPdf	01 17 34.1 +0.9
PGAV				eLR		LR	01 44 51.9
POLO	comp=Z,374nm,20.0s Lamas de Olo	125.36	320	ePKP		PKPdf	01 17 34.1 +0.9
328A	Wristen Ranch, baz=125,SNR=18	125.41	54	⇓P		PKPdf	01 17 34.3 +0.8
Y29A	Porterfield Fa baz=126,SNR=14	125.44	51	⇓P		PKPdf	01 17 34.9 +1.3
V30A	Spur Ranch, Mi baz=126,SNR=5.9	125.44	48	⇑P		PKPdf	01 17 34.8 +1.4
627A	Terlingua Ranc baz=126,SNR=11	125.55	56	⇓P		PKPdf	01 17 34.9 +0.9
T31A	Randall Ranch, baz=126	125.62	46	⇓P		PKPdf	01 17 34.7 +1.0
Z29A	Hungry Hill Ra baz=126,SNR=17	125.63	51	⇓P		PKPdf	01 17 34.7 +0.8
MTE	Manteigas	125.69	318	ePKP		PKPdf	01 17 34.9 +1.1
MTE				eLR		LR	01 45 01.4
MTE	comp=Z,441nm,18.0s Manteigas	125.69	318	ePKPdf		PKPdf	01 17 34.6 +0.8
428A	Kincaid Ranch, baz=126,SNR=13	125.73	55	⇑P		PKPdf	01 17 35.4 +1.2
129A	Stewart Farms, baz=126,SNR=13	125.73	52	⇑P		PKPdf	01 17 34.8 +0.7
PVIS	Viseu	125.76	319	ePKP		PKPdf	01 17 34.9 +1.0
TOA0	Torodi Ar. Sit	125.77	283	ePKPdf		PKPdf	01 17 34.0 -0.5
TORD	Torodi Ar. Bea	125.77	283	PKP		PKPdf	01 17 34.0 -0.5
TORD				PKKPab		PKKPbc	01 27 10.2 +0.5
TORD				SKKPbc		SKKPbc	01 30 55.5 -1.3
TORD	Torodi Ar. Bea comp=Z,43nm,0.9s,baz=72,slow=2.0,SNR=134	125.77	283	PKP		PKPdf	01 17 34.0 -0.5
TORD				PKKPab		PKKPbc	01 27 10.2 +0.5
TORD	comp=Z,3.1nm,1.0s,baz=288,slow=3.9,SNR=8.0			SKKPbc		SKKPbc	01 30 55.5 -1.3
U31A	comp=Z,3.5nm,1.2s,baz=271,slow=4.8,SNR=4.5 Nine Bar Ranch baz=126	125.81	47	⇑P		PKPdf	01 17 35.5 +1.4
SPMN	St. Paul baz=126	125.82	34	⇑P		PKPdf	01 17 34.3 +0.5
X30A	Coker Ranch, T	125.82	50	⇑P		PKPdf	01 17 35.1 +0.9
528A	Cox Ranch, San baz=126,SNR=10.0	125.83	55	⇓P		PKPdf	01 17 35.4 +0.9
PCBR	Castelo Branco	125.92	318	ePKP		PKPdf	01 17 35.0 +0.8
628A	Black Gap, Mar baz=126,SNR=5.9	125.96	56	⇑P		PKPdf	01 17 35.6 +1.0
229A	Bryant Ranch, baz=126,SNR=9.6	126.01	53	⇓P		PKPdf	01 17 35.6 +0.9
Y30A	Stafford Cattl baz=126,SNR=14	126.03	50	⇓P		PKPdf	01 17 35.6 +0.9
329A	Wagon Wheel Ra baz=126,SNR=18	126.04	53	⇑P		PKPdf	01 17 35.8 +1.0
V31A	Spring Creek L baz=126	126.06	48	⇓P		PKPdf	01 17 36.1 +1.5
PMRV	Marv??o	126.06	317	ePKP		PKPdf	01 17 35.4 +0.9
PMRV				eLR		LR	01 45 10.1
Z30A	comp=Z,414nm,20.0s Sanderson Ranc baz=126,SNR=15	126.07	51	⇓P		PKPdf	01 17 35.3 +0.6
W31A	Holland Ranch, baz=126	126.23	48	⇓P		PKPdf	01 17 36.1 +1.1
529A	Stev Forest Ra baz=126,SNR=20	126.31	55	⇓P		PKPdf	01 17 36.3 +1.0
429A	Davenport Ranc baz=126,SNR=20	126.41	54	⇓P		PKPdf	01 17 36.3 +0.9
PBAR	Barrancos	126.42	316	ePKP		PKPdf	01 17 36.0 +0.8
X31A	McDonald Ranch baz=126,SNR=20	126.43	49	⇓P		PKPdf	01 17 36.6 +1.3
130A	Snyder baz=126,SNR=5.9	126.45	52	⇓P		PKPdf	01 17 36.4 +0.9
PESTR	Estremoz	126.47	317	ePKP		PKPdf	01 17 36.1 +0.8
Y31A	Rekieta Farm, baz=126,SNR=6.1	126.48	50	⇓P		PKPdf	01 17 36.3 +0.9
230A	Sterling City baz=127,SNR=6.4	126.60	53	⇓P		PKPdf	01 17 36.7 +0.9
PTOM	Tomar	126.66	318	ePKP		PKPdf	01 17 36.9 +1.3
330A	Mertzon baz=127,SNR=8.7	126.72	53	⇓P		PKPdf	01 17 36.7 +0.6
PMTG	Montargil	126.80	317	ePKP		PKPdf	01 17 36.9 +1.0
Z31A	Sharp Cattle R baz=127,SNR=10	126.82	51	⇓P		PKPdf	01 17 37.0 +0.8
KSU1	Kansas State U	126.83	43	ePKPdf		PKPdf	01 17 36.1 +0.2
131A	Roby baz=127,SNR=7.2	126.88	52	⇑P		PKPdf	01 17 37.1 +0.8
430A	Baggett Ranch, baz=127,SNR=25	126.88	54	⇓P		PKPdf	01 17 37.2 +0.9
EVO	Evora comp=Z,120nm,1.4s	126.92	317	⇑iPKIKP		PKPdf	01 17 36.8 +0.7
EVO				eR			
EVO	comp=Z,308nm,22.2s Evora	126.92	317	ePKP		PKPdf	01 17 37.5 +1.4
EVOP	Sao Brissos	127.00	317	⇑iPKIKP		PKPdf	01 17 36.8 +0.6
EVOP	Sao Brissos	127.00	317	⇑iPKPdf		PKPdf	01 17 36.8 +0.6
530A	J-C Ranch, Com baz=127,SNR=22	127.02	55	⇑P		PKPdf	01 17 37.9 +1.2
PBEJ	Beja	127.07	316	ePKP		PKPdf	01 17 37.7 +1.3
Y32A	R-V Farms, Ver baz=127	127.09	50	⇑P		PKPdf	01 17 37.5 +0.9
231A	Bronte baz=127,SNR=14	127.21	52	⇑P		PKPdf	01 17 37.5 +0.5
COWI	Conover	127.25	31	ePKPdf		PKPdf	01 17 37.0 +0.4
PVAQ	Vaqueiros comp=Z,332nm,18.0s	127.26	315	eLR		LR	01 45 16.7
WMOK	Wichita Mounta	127.28	48	ePKIKP		PKPdf	01 17 37.1 +0.1
WMOK	Wichita Mounta	127.28	48	ePKPdf		PKPdf	01 17 37.1 +0.1
Z32A	Haskell baz=127,SNR=17	127.34	50	⇑P		PKPdf	01 17 38.1 +1.0
331A	San Angelo baz=127,SNR=9.4	127.35	53	⇓P		PKPdf	01 17 38.1 +0.9
PCVE	Castro Verde	127.37	316	ePKP		PKPdf	01 17 38.6 +1.6
431A	Sonora baz=128,SNR=16	127.43	54	⇑P		PKPdf	01 17 38.4 +1.0
ABTX	Abilene, Hawle baz=128,SNR=8.1	127.48	51	⇓P		PKPdf	01 17 38.5 +1.1
PNCL	Nicolau / Gran	127.48	316	ePKP		PKPdf	01 17 38.7 +1.5
SCIA	State Center	127.53	38	ePKPdf		PKPdf	01 17 36.9 -0.2
531A	Rocksprings baz=128,SNR=19	127.66	55	⇓P		PKPdf	01 17 39.0 +1.1
232A	Coleman baz=128,SNR=8.6	127.75	52	⇓P		PKPdf	01 17 39.0 +1.0
332A	Millersview baz=128,SNR=16	127.87	53	⇓P		PKPdf	01 17 39.2 +1.0
631A	Perdido Creek baz=128,SNR=20	127.89	55	⇑P		PKPdf	01 17 39.3 +1.0
SCHQ	Schefferville	127.91	10	PKP		PKPdf	01 17 37.6 +0.1
SCHQ				ePKPdf		PKiKP	01 17 37.7 -0.4
SCHQ	Schefferville comp=Z,25nm,0.9s,baz=349,slow=2.3,SNR=27	127.91	10	PKP		PKPdf	01 17 37.6 +0.1
432A	Menard baz=128,SNR=6.5	128.01	53	⇑P		PKPdf	01 17 39.4 +0.9
JCT	Junction City	128.15	54	ePKIKP		PKPdf	01 17 39.6 +0.8
JCT	Junction City	128.15	54	ePKPdf		PKPdf	01 17 39.6 +0.8
JCT	Junction City baz=128,SNR=28	128.15	54	⇓P		PKPdf	01 17 39.9 +1.1
PFVI	Vila Bisbo	128.16	315	ePKP		PKPdf	01 17 40.2 +1.7
532A	Rocksprings baz=128,SNR=14	128.19	54	⇑P		PKPdf	01 17 39.5 +0.6
632A	Uvalde baz=128,SNR=20	128.50	55	⇓P		PKPdf	01 17 40.6 +1.1
732A	Laxson Ranch, baz=129,SNR=15	128.62	56	⇓P		PKPdf	01 17 41.0 +1.4
JFWS	Jewell Farm	128.69	35	ePKIKP		PKPdf	01 17 38.9 -0.5
JFWS	Jewell Farm	128.69	35	ePKPdf		PKPdf	01 17 38.9 -0.5
TUL1	Tulsa baz=129	128.94	46	⇓P		PKPdf	01 17 41.3 +1.3
WHTX	Lake Whitney baz=129	129.43	51	⇓P		PKPdf	01 17 42.3 +1.2
RFTA	Plano	129.59	50	ePKPdf		PKPdf	01 17 42.7 +1.3
HDIL	Hopedale	130.71	37	ePKPdf		PKPdf	01 17 43.2 0.0
HKT	Hockley	131.53	53	ePKIKP		PKPdf	01 17 46.4 +1.4
HKT	Hockley	131.53	53	ePKPdf		PKPdf	01 17 46.4 +1.4
HKT				eSKPbc		SKPab	01 21 08.2 +1.4
HKT				eSKPdf		SKiKP	01 21 18.8 +0.8
UALR	University of	131.96	45	ePKPdf		PKPdf	01 17 47.1 +1.3
SFIN	Scholer Farm baz=132	132.12	36	⇓P		PKPdf	01 17 47.1 +1.2
SIUC	Southern Illin	132.46	40	ePKPdf		PKPdf	01 17 47.3 +0.6
SIUC				eSKPdf		SKPdf	01 21 17.9 +0.1
DBIC	Dimbokro	132.54	275	PKP		PKPdf	01 17 47.2 -0.3
DBIC				SKPbc		SKPab

TZTN	**Tazewell**	**136.73**	**37**	*e*PKPdf	**PKPdf**	**01 17 53.9**	**-0.8**
SSPA	**Standing Stone**	**136.85**	**29**	*e*PKPdf	**PKPdf**	**01 17 54.6**	**-0.2**
TRY	**Troy**	**136.98**	**23**	*e*PKPdf	**PKPdf**	**01 17 56.0**	**+1.0**
TKL	**Tuckaleechee C**	**137.17**	**39**	PKPpre	PKPpre	01 17 50.6	
TKL				PKP	**PKiKP**	**01 17 56.5**	**-0.9**
TKL	**Tuckaleechee C**	**137.17**	**39**	PKhKP	PKPpre	01 17 50.6	
	comp=Z,14nm,0.8s,baz=235,slow=2.5,SNR=8.1						
TKL				PKP	**PKiKP**	**01 17 56.5**	**-0.9**
	comp=Z,49nm,0.9s,baz=283,slow=3.9,SNR=14						
TRQA	**Tornquist**	**137.32**	**169**	*e*PKPdf	**PKPdf**	**01 17 55.2**	**-0.6**
BLA	**Blacksburg**	**138.10**	**34**	*e*PKiKP	**PKPdf**	**01 17 56.8**	**-0.5**
BLA	**Blacksburg**	**138.10**	**34**	*e*PKPdf	**PKPdf**	**01 17 56.8**	**-0.5**
SDMD	**Soldier's Deli**	**138.31**	**29**	*e*PKPdf	**PKPdf**	**01 17 57.5**	**0.0**
CBN	**Corbin**	**138.98**	**30**	*e*PKPdf	**PKPdf**	**01 17 59.4**	**+0.6**
KMSC	**Kings Mountain**	**139.00**	**37**	⇓P	**PKPdf**	**01 17 60.0**	**+1.0**
	baz=139						
JSRW	**J. Sargeant Re**	**139.11**	**31**	*e*PKPdf	**PKPdf**	**01 17 56.9**	**-2.2**
TIGA	**Tifton**	**139.91**	**43**	⇑P	**PKPdf**	**01 18 03.2**	**+2.6**
	baz=140						
TEIG	**Tepich**	**141.53**	**62**	PKP	**PKPdf**	**01 18 03.0**	**-0.9**
TEIG	**Tepich**	**141.53**	**62**	PKP	**PKPdf**	**01 18 03.0**	**-0.9**
	comp=Z,27nm,1.0s,baz=136,slow=2.4,SNR=5.7						
CFAA	**Coronel Fontan**	**141.62**	**158**	PKPpre	PKPpre	01 17 57.5	
CFAA				PKP	**PKPdf**	**01 18 03.5**	**-0.3**
CFAA	**Coronel Fontan**	**141.62**	**158**	PKhKP	PKPpre	01 17 57.5	
	comp=Z,3.1nm,0.9s,baz=217,slow=4.6,SNR=11						
CFAA				PKP	**PKPdf**	**01 18 03.5**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=238,slow=3.3,SNR=30						
LCO	**Las Campanas**	**142.87**	**153**	*e*PKPdf	**PKPdf**	**01 18 02.3**	**-4.2**
BBTS	**Babate**	**143.04**	**289**	PKPpre	PKPpre	01 18 03.0	
BBTS	**Babate**	**143.04**	**289**	PKhKP	PKPpre	01 18 03.0	
	comp=Z,43nm,0.9s,baz=346,slow=0.8,SNR=4.9						
TGUH	**Tegucigalpa,Un**	**144.21**	**71**	*e*PKPdf	PKPbc	01 18 07.7	+0.7
JTS	**JuntasAbangare**	**147.15**	**77**	*e*PKPdf	**PKPdf**	**01 18 13.7**	**-0.1**
JTS				*e*PKPbc	**PKPbc**	**01 18 16.8**	**+0.7**
JTS				*ep*PKPdf	**pPKPdf**	**01 18 27.7**	**-1.7**
LVC	**Limon Verde**	**149.12**	**149**	*e*PKPdf	**PKPdf**	**01 18 18.5**	**+1.3**
LVC				*e*PKPbc	**PKiKP**	**01 18 22.6**	**0.0**
LVC				*ep*PKPdf	**pPKPdf**	**01 18 31.5**	**-1.2**
BBSR	**BB Station**	**149.45**	**21**	*e*PKPdf	**PKPdf**	**01 18 17.0**	**0.0**
BBSR				*e*PKPbc	**PKiKP**	**01 18 22.2**	**-0.5**
BBSR				*e*PKPab	**PKPab**	**01 18 27.1**	**+0.8**
SACV	**Santiago Islan**	**149.55**	**293**	*e*PKPbc	**PKPbc**	**01 18 22.2**	**0.0**
CPUP	**Villa Florida**	**149.57**	**171**	PKP	**PKPdf**	**01 18 17.0**	**-0.4**
CPUP				PKPbc	**PKPbc**	**01 18 22.4**	**+0.3**
CPUP	**Villa Florida**	**149.57**	**171**	PKP	**PKPdf**	**01 18 17.0**	**-0.4**
	comp=Z,59nm,0.9s,baz=187,slow=2.4,SNR=17						
CPUP				PKPbc	**PKPbc**	**01 18 22.4**	**+0.3**
	comp=Z,49nm,0.9s,baz=183,slow=1.4,SNR=34						
NNA	**Nana**	**151.06**	**123**	*e*PKPdf	**PKPdf**	**01 18 21.1**	**+0.9**
NNA				*e*PKPbc	**PKiKP**	**01 18 26.7**	**+0.1**
ATAH	**Atahualpa**	**151.88**	**113**	PKP	**PKPdf**	**01 18 22.8**	**+0.8**
ATAH				PKPbc	**PKiKP**	**01 18 29.9**	**+1.2**
ATAH	**Atahualpa**	**151.88**	**113**	PKP	**PKPdf**	**01 18 22.8**	**+0.8**
	comp=Z,19nm,1.0s,baz=324,slow=3.8,SNR=12						
ATAH				PKPbc	**PKiKP**	**01 18 29.9**	**+1.2**
	comp=Z,121nm,0.8s,baz=253,slow=1.9,SNR=56						
SPB	**Sao Paulo**	**152.23**	**190**	*e*PKPdf	**PKPdf**	**01 18 22.1**	**+0.4**
SPB				*e*PKPbc	**PKiKP**	**01 18 28.7**	**0.0**
BCIP	**Isla Barro Col**	**152.30**	**78**	*e*PKPdf	**PKPdf**	**01 18 21.8**	**-0.2**
BCIP				*e*PKPbc	**PKPbc**	**01 18 28.5**	**-0.3**
GTBY	**Guantanamo Bay**	**152.77**	**52**	*e*PKPbc	**PKPbc**	**01 18 29.9**	**+0.2**
OTAV	**Otavalo**	**153.76**	**97**	*e*PKPdf	**PKPdf**	**01 18 25.6**	**+0.8**
ROSC	**El Rosal**	**158.16**	**87**	*e*PKPdf	**PKPdf**	**01 18 30.6**	**+0.2**
ROSC				PKP	**PKPdf**	**01 18 31.4**	**+0.9**
ROSC				*e*PKPab	**PKPab**	**01 19 05.5**	**+1.1**
ROSC				PKPab	PKPab	01 19 06.2	+1.8
ROSC	**El Rosal**	**158.16**	**87**	PKP	**PKPdf**	**01 18 31.4**	**+0.9**
	comp=Z,22nm,0.9s,baz=47,slow=0.1,SNR=12						
ROSC				PKPab	**PKPab**	**01 19 06.2**	**+1.8**
	comp=Z,29nm,0.9s,baz=32,slow=1.2,SNR=7.0						
SIV	**San Ignacio**	**158.47**	**157**	PKP	**PKPdf**	**01 18 30.2**	**-0.1**
SIV				PKPab	**PKPab**	**01 19 03.7**	**-1.2**
SIV	**San Ignacio**	**158.47**	**157**	PKP	**PKPdf**	**01 18 30.2**	**-0.1**
	comp=Z,13nm,0.9s,baz=179,slow=2.1,SNR=26						
SIV				PKPab	**PKPab**	**01 19 03.7**	**-1.2**
	comp=Z,4.8nm,0.7s,baz=222,slow=5.8,SNR=3.0						
BDFB	**Brasilia**	**160.09**	**193**	PKP	**PKPdf**	**01 18 31.8**	**-0.5**
BDFB				PKPab	**PKPab**	**01 19 10.4**	**-1.5**
BDFB	**Brasilia**	**160.09**	**193**	PKP	**PKPdf**	**01 18 31.8**	**-0.5**
	comp=Z,11nm,1.0s,baz=169,slow=2.8,SNR=10						
BDFB				PKPab	**PKPab**	**01 19 10.4**	**-1.5**
	comp=Z,10nm,1.0s,baz=198,slow=3.2,SNR=6.0						
CELP	**Cerrillos**	**160.26**	**43**	*e*PKPdf	**PKPdf**	**01 18 32.1**	**-0.1**
CELP				*e*PKPab	**PKPab**	**01 19 13.3**	**+0.6**
OBIP	**Obispado Ponce**	**160.27**	**44**	*e*PKPdf	**PKPdf**	**01 18 32.1**	**-0.2**
OBIP				*e*PKPab	**PKPab**	**01 19 13.4**	**+0.6**
SJG	**San Juan**	**160.53**	**43**	*e*PKPdf	**PKPdf**	**01 18 32.2**	**-0.4**
SJG				*e*PKPab	**PKPab**	**01 19 14.9**	**+1.0**
MTP	**Monte Pirata**	**160.94**	**41**	*e*PKPdf	**PKPdf**	**01 18 32.3**	**-0.7**
MTP				*e*PKPab	**PKPab**	**01 19 16.1**	**+0.5**
STVI	**Saint Thomas**	**161.14**	**40**	*e*PKPdf	**PKPdf**	**01 18 32.6**	**-0.6**
STVI				*e*PKPab	**PKPab**	**01 19 16.1**	**-0.4**
CDVI	**St. Croix**	**161.70**	**40**	*e*PKPdf	**PKPdf**	**01 18 33.4**	**-0.4**
SAML	**Samuel**	**163.34**	**140**	*e*PKPdf	**PKPdf**	**01 18 36.2**	**+0.6**
SAML				*e*PKPab	**PKPab**	**01 19 26.2**	**0.0**

BJI ***29*** *01:04:36.3, 18°.30N×106°.70W, h10km, mB5.9/6, mb5.7/2, Ms5.4/12, Ms7 5.0/12*

ISCJB ***29*** *01:04:37.9±0.4, 18°.55N±0°.04×106°.35W±0°.02, h10km, mb4.8/82, MS5.0/174, Error ellipse: s-maj=6.0km s-min=2.3km az=25.3*

IDC ***29*** *01:04:38.9±0.8, 18°.80N×106°.95W, h0km, mb4.1/16, mb1 4.2/19, mb1mx4.2/32, mbtmp4.0/19, ML3.4/3, MS4.9/31, Ms1 4.9/31, ms1mx4.8/38, Error ellipse: s-maj=27.9km s-min=13.8km az=67.0*

NEIC ***29*** *01:04:38.4±0.5, 18°.37N×106°.54W, h11km, mb5.0/92, MS5.0/140, MW5.3, MD5.3(MEX), Error ellipse: s-maj=9.0km s-min=3.7km az=212.0, Moment Tensor Solution. s16 Moment tensor: Scale 10¹⁷Nm; Mrr=0.00; Mθθ=0.00; Mφφ=0.00; Mrθ=0.00; Mrφ=0.00; Mθφ=0.00; Best double couple: M₀1.00000×10¹⁷ NP1:φ₁=100.00000°, δ54.00000°, λ-173.00000°. NP2:φ₂=6.00000°, δ85.00000°, λ-36.00000°. Principal axes: T 1.0800, Plg20.0000°, Azm58.0000°; N -0.1000, Plg53.0000°, Azm179.0000°; P -0.9900, Plg28.0000°, Azm317.0000°;*

NEIC Felt at Armeria.

MEX ***29*** *01:04:39.4±2.4, 18°.69N×106°.55W, h13km±14km, MD5.3*

GCMT ***29*** *01:04:41.7±0.2, 18°.67N×106°.64W, h15km, MW5.5, Moment Tensor Solution. s81,c124; s4,c4; Moment tensor: Scale 10¹⁷Nm; Mrr=0.01±.03; Mθθ=0.91±.03; Mφφ=0.92±.03; Mrθ=0.43±.09; Mrφ=-1.61±.03; Mθφ=0.21±.09; Best double couple: M₀1.90000×10¹⁷ NP1:φ₁=15.00000°, δ76.00000°, λ2.00000°. NP2:φ₂=285.00000°, δ88.00000°, λ166.00000°. Principal axes: T 1.9400, Plg12.0000°, Azm239.0000°; N -0.0600, Plg76.0000°, Azm95.0000°; P -1.8800, Plg8.0000°, Azm331.0000°; Data Used: II IU CN IC G. Surface waves: sta= 95, comp=181, per= 50.*

MOS ***29*** *01:04:42.5±1.5, 18°.68N×106°.59W, h33km, mb5.2/24, MS4.7/17 Error ellipse: s-maj=11.5km s-min=5.1km az=94.1*

ISC 29 01:04:37.5±0.4, 18°.38N±0°.05×106°.59W±0°.05, h10km, n811, σ1♀26/693, mb5.0/82, MS5.0/174, 229C-204D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.84**	**53**	*e*P		Pn	01 05 04.4	-4.8
CJM				*i*S		Sn	01 05 24.6	-8.0
CJM	**Chamela**	**1.84**	**53**	*e*P		Pn	01 05 04.4	-4.8
CJM				*i*S		Sn	01 05 24.6	-8.0
PUVA	**Puert Vallarta**	**2.58**	**30**	*i*S		Sn	01 05 40.4	-10
R15V		**2.59**	**72**	*i*P		Pn	01 05 15.8	-3.8
R15V				*e*S		**Sn**	**01 05 45.9**	**-5.4**
EZ5V		**3.04**	**68**	*e*P		Pn	01 05 22.4	-3.4
MMIG	**Aquila**	**3.09**	**91**	*i*P		**Pn**	**01 05 25.1**	**-1.1**
MMIG				*i*S		**Sn**	**01 06 01.1**	**-2.2**
MMIG	**Aquila**	**3.09**	**91**	*i*P		**Pn**	**01 05 25.1**	**-1.1**
MMIG				*i*S		**Sn**	**01 06 01.1**	**-2.2**
ANIG	**Ahuacatlan**	**3.30**	**36**	*e*P		Pn	01 05 25.4	-4.0
ANIG				*i*S		Sn	01 06 00.2	-8.5
ANIG	**Ahuacatlan**	**3.30**	**36**	*e*P		Pn	01 05 25.4	-4.0
ANIG				*i*S		Sn	01 06 00.2	-8.5
ZIIG	**Zihuatanejo**	**4.94**	**98**	*e*P		**Pn**	**01 05 52.1**	**+0.3**
ZIIG				*i*S		**Sn**	**01 06 48.3**	**-0.8**
ZIIG	**Zihuatanejo**	**4.94**	**98**	*e*P		**Pn**	**01 05 52.1**	**+0.3**
ZIIG				*i*S		**Sn**	**01 06 48.3**	**-0.8**
MOIG	**Morelia**	**5.27**	**75**	*e*P		**Pn**	**01 05 55.6**	**-1.0**
MOIG	**Morelia**	**5.27**	**75**	*e*P		**Pn**	**01 05 55.6**	**-1.0**
ZAIG	**Zacatecas**	**5.77**	**40**	*e*P		Pn	01 05 59.3	-4.2
ZAIG				*i*S		Sn	01 07 01.9	-8.1
ZAIG	**Zacatecas**	**5.77**	**40**	*e*P		Pn	01 05 59.3	-4.2
ZAIG				*i*S		Sn	01 07 01.9	-8.1
ARIG	**Puente Sto Nin**	**5.93**	**90**	*e*P		**Pn**	**01 06 04.2**	**-1.3**
ARIG				*i*S		**Sn**	**01 07 10.4**	**-3.2**
CAIG	**El Cayaco**	**6.17**	**101**	*e*P		**Pn**	**01 06 08.9**	**+0.2**
CAIG				*i*S		**Sn**	**01 07 17.3**	**-2.1**
CAIG	**El Cayaco**	**6.17**	**101**	*e*P		**Pn**	**01 06 08.9**	**+0.2**
CAIG				*i*S		**Sn**	**01 07 17.3**	**-2.1**
ACX	**Acapulco**	**6.60**	**102**	*i*P		**Pn**	**01 06 14.5**	**-0.1**
ACX	**Acapulco**	**6.60**	**102**	*i*P		**Pn**	**01 06 14.5**	**-0.1**
MEIG	**Mezcala**	**6.65**	**93**	*i*P		**Pn**	**01 06 15.6**	**+0.2**
MEIG				*i*S		**Sn**	**01 07 29.0**	**-2.2**
MEIG	**Mezcala**	**6.65**	**93**	*i*P		**Pn**	**01 06 15.6**	**+0.2**
MEIG				*i*S		**Sn**	**01 07 29.0**	**-2.2**
LPIG	**La Paz**	**6.66**	**329**	*e*P		Pn	01 06 12.2	-3.3
LPIG				*i*S		Sn	01 07 23.9	-7.6
LPIG	**La Paz**	**6.66**	**329**	*e*P		Pn	01 06 12.2	-3.3
LPIG				*i*S		Sn	01 07 23.9	-7.6
PLIG	**Platanillo**	**6.73**	**89**	*i*P		**Pn**	**01 06 16.6**	**0.0**
PLIG				*i*S		**Sn**	**01 07 30.3**	**-3.1**
PLIG	**Platanillo**	**6.73**	**89**	*i*P		**Pn**	**01 06 16.6**	**0.0**
PLIG				*i*S		**Sn**	**01 07 30.3**	**-3.1**
YAIG	**Yautepec**	**7.15**	**85**	*i*P		**Pn**	**01 06 20.7**	**-1.7**
YAIG				*i*S		**Sn**	**01 07 39.4**	**-4.5**
YAIG	**Yautepec**	**7.15**	**85**	*i*P		**Pn**	**01 06 20.7**	**-1.7**
YAIG				*i*S		**Sn**	**01 07 39.4**	**-4.5**
PPM	**Popocatepetl**	**7.58**	**84**	*i*P		**Pn**	**01 06 26.1**	**-2.5**
PPM				*i*S		**Sn**	**01 07 51.4**	**-3.5**
PPM	**Popocatepetl**	**7.58**	**84**	*i*P		**Pn**	**01 06 26.1**	**-2.5**
PPM				*i*S		**Sn**	**01 07 51.4**	**-3.5**
PPM	**Popocatepetl**	**7.58**	**84**	*i*P		**Pn**	**01 06 26.1**	**-2.5**
PPM				*i*S		**Sn**	**01 07 51.4**	**-3.5**
PNIG	**Pinotepa**	**8.32**	**102**	*i*P		**Pn**	**01 06 37.8**	**-0.5**
PNIG				*i*S		**Sn**	**01 08 12.2**	**-0.2**
PNIG	**Pinotepa**	**8.32**	**102**	*i*P		**Pn**	**01 06 37.8**	**-0.5**
PNIG				*i*S		**Sn**	**01 08 12.2**	**-0.2**
UTMO	**Huajuapan**	**8.38**	**92**	*e*P		**Pn**	**01 06 39.9**	**+0.7**
UTMO	**Huajuapan**	**8.38**	**92**	*e*P		**Pn**	**01 06 39.9**	**+0.7**
HPIG		**8.56**	**6**	*e*P		Pn	01 06 37.1	-4.6
HPIG				*i*S		Sn	01 08 10.4	-8.0
HPIG		**8.56**	**6**	*e*P		Pn	01 06 37.1	-4.6
HPIG				*i*S		Sn	01 08 10.4	-8.0
LNIG	**Linares**	**9.27**	**44**	*e*P		**Pn**	**01 06 49.4**	**-1.9**
LNIG				*i*S		**Sn**	**01 08 30.4**	**-5.4**
LNIG	**Linares**	**9.27**	**44**	*e*P		**Pn**	**01 06 49.4**	**-1.9**
LNIG				*i*S		**Sn**	**01 08 30.4**	**-5.4**
VHO	**Vista Hermosa**	**9.49**	**96**	*i*P		**Pn**	**01 06 54.3**	**-0.2**
VHO				*i*S		**Sn**	**01 08 40.0**	**-1.3**
VHO	**Vista Hermosa**	**9.49**	**96**	*i*P		**Pn**	**01 06 54.3**	**-0.2**
VHO				*i*S		**Sn**	**01 08 40.0**	**-1.3**
LVIG	**Laguna Verde**	**9.72**	**80**	*i*P		**Pn**	**01 06 54.9**	**-2.5**
LVIG	**Laguna Verde**	**9.72**	**80**	*i*P		**Pn**	**01 06 54.9**	**-2.5**
SRIG	**Santa Rosalia**	**10.31**	**331**	*i*P		Pn	01 07 02.9	-2.6
SRIG	**Santa Rosalia**	**10.31**	**331**	*i*P		Pn	01 07 02.9	-2.6
HUIG	**Huatulco**	**10.36**	**103**	*i*P		**Pn**	**01 07 06.6**	**+0.4**
HUIG				*i*P		**Pn**	**01 07 06.6**	**+0.4**
TXAR	**Lajitas Array**	**11.23**	**13**	Pn		**Pn**	**01 07 19.2**	**+1.0**
TXAR	**Lajitas Array**	**11.23**	**13**	Pn		**Pn**	**01 07 19.2**	**+1.0**
	0.1nm,0.3s,baz=197,slow=12,SNR=9.8							
HSIG		**11.32**	**340**	*i*P		Pn	01 07 16.5	-2.8
HSIG				*i*S		Sn	01 09 18.8	-7.1
HSIG		**11.32**	**340**	*i*P		Pn	01 07 16.5	-2.8
HSIG				*i*S		Sn	01 09 18.8	-7.1
626A	**Big Bend Ranch**	**11.35**	**11**	⇑P		**Pn**	**01 07 21.3**	**+1.5**
	baz=11,SNR=19							
627A	**Terlingua Ranc**	**11.40**	**14**	⇑P		**Pn**	**01 07 22.1**	**+1.5**
	baz=11,SNR=15							
627A				⇑S		**Sn**	**01 09 28.3**	**+0.1**
	baz=11							
627A				⇑S		**Sn**	**01 09 28.3**	**+0.1**
	baz=11							
627A				⇑S		**Sn**	**01 09 28.3**	**+0.1**
	baz=11							
628A	**Black Gap, Mar**	**11.56**	**16**	⇓P		**Pn**	**01 07 24.2**	**+1.5**
	baz=12,SNR=19							
526A	**Mary Lane Ranc**	**11.85**	**11**	⇓P		**Pn**	**01 07 28.7**	**+1.9**
	baz=12,SNR=44							
732A	**Laxson Ranch,**	**11.96**	**29**	⇓P		**Pn**	**01 07 29.6**	**+1.6**
	baz=12,SNR=7.8							
527A	**Woodward Ranch**	**12.02**	**12**	⇑P		**Pn**	**01 07 30.5**	**+1.3**
	baz=12							
528A	**Cox Ranch, San**	**12.23**	**16**	⇑P		**Pn**	**01 07 33.2**	**+1.3**
	baz=12							
631A	**Perdido Creek**	**12.28**	**25**	⇑P		**Pn**	**01 07 33.6**	**+1.1**
	baz=12,SNR=13							
529A	**Stev Forest Ra**	**12.35**	**18**	⇑P		**Pn**	**01 07 34.6**	**+1.1**
	baz=12,SNR=12							
425A	**Indio Mountain**	**12.44**	**6**	⇑P		**Pn**	**01 07 36.1**	**+1.3**
	baz=12,SNR=25							
426A	**McDonald Obser**	**12.46**	**10**	⇑P		**Pn**	**01 07 36.3**	**+1.3**
	baz=12,SNR=19							
530A	**J-C Ranch, Com**	**12.66**	**21**	⇓P		**Pn**	**01 07 39.2**	**+1.5**
	baz=13,SNR=10							
632A	**Uvalde**	**12.70**	**28**	⇑P		**Pn**	**01 07 39.5**	**+1.2**
	baz=13,SNR=13							
427A	**Hayter Ranch,**	**12.75**	**13**	⇓P		**Pn**	**01 07 41.4**	**+2.4**
	baz=13,SNR=10							
428A	**Kincaid Ranch,**	**12.79**	**15**	⇓P		**Pn**	**01 07 41.7**	**+2.1**
	baz=13,SNR=12							
429A	**Davenport Ranc**	**12.92**	**18**	⇑P		**Pn**	**01 07 43.1**	**+1.9**
	baz=13,SNR=8.9							
TGIG		**12.95**	**95**	*i*P		**Pn**	**01 07 40.6**	**-1.1**
TGIG				*i*S		**Sn**	**01 10 02.6**	**-3.4**
TGIG		**12.95**	**95**	*i*P		**Pn**	**01 07 40.6**	**-1.1**
TGIG				*i*S		**Sn**	**01 10 02.6**	**-3.4**
531A	**Rocksprings**	**12.96**	**24**	⇓P		**Pn**	**01 07 43.4**	**+1.6**
	baz=13							
325A	**Bean Ranch, Si**	**13.02**	**6**	⇑P		**Pn**	**01 07 43.8**	**+1.0**
	baz=13,SNR=29							
320A	**Kipp Ranch, An**	**13.02**	**353**	⇓P		**Pn**	**01 07 44.0**	**+1.2**
	baz=13,SNR=8.7							
324A	**Moseley Ranch,**	**13.04**	**4**	⇑P		**Pn**	**01 07 44.0**	**+0.9**
	baz=13,SNR=26							
PCIG		**13.06**	**100**	*i*P		Pn	01 07 42.2	-1.0
PCIG		**13.06**	**100**	*i*P		Pn	01 07 42.2	-1.0
319A	**Douglas**	**13.17**	**350**	⇓P		**Pn**	**01 07 46.0**	**+1.3**
	baz=13,SNR=12							
532A	**Rocksprings**	**13.19**	**26**	⇓P		**Pn**	**01 07 46.6**	**+1.7**
	baz=13,SNR=37							
327A	**Balmorhea Ranc**	**13.23**	**12**	⇓P		**Pn**	**01 07 47.4**	**+1.8**
	baz=13							
430A	**Baggett Ranch,**	**13.28**	**20**	⇑P		**Pn**	**01 07 48.3**	**+2.2**
	baz=13,SNR=20							
MNTX	**Cornudas Mount**	**13.31**	**4**	*e*Pn		**Pn**	**01 07 46.9**	**+0.4**
	178nm,1.8s							
328A	**Wristen Ranch,**	**13.39**	**14**	⇑P		**Pn**	**01 07 48.8**	**+1.1**
	baz=13							
431A	**Sonora**	**13.40**	**23**	⇑P		**Pn**	**01 07 49.8**	**+1.9**
	baz=13,SNR=16							
JCT	**Junction City**	**13.54**	**26**	*e*P		**Pn**	**01 07 52.0**	**+2.3**
JCT	**Junction City**	**13.54**	**26**	*e*Pn		**Pn**	**01 07 52.0**	**+2.3**
JCT	**Junction City**	**13.54**	**26**	⇑P		**Pn**	**01 07 51.4**	**+1.7**
	baz=14,SNR=13							
223A	**Chaparral, Ant**	**13.57**	**1**	⇓P		**Pn**	**01 07 50.7**	**+0.5**
	baz=14							
220A	**Playas Peak, P**	**13.58**	**353**	⇑P		**Pn**	**01 07 50.8**	**+0.4**
	baz=14,SNR=16							
221A	**Mesquite Ranch**	**13.61**	**356**	⇑P		**Pn**	**01 07 51.8**	**+1.0**
	baz=14							
224A	**Cornudas Mount**	**13.67**	**4**	⇑P		**Pn**	**01 07 52.7**	**+1.0**
	baz=14,SNR=14							
222A	**Williams Famil**	**13.67**	**358**	⇑P		**Pn**	**01 07 52.5**	**+0.8**
	baz=14							
329A	**Wagon Wheel Ra**	**13.70**	**17**	⇓P		**Pn**	**01 07 53.5**	**+1.5**
	baz=14							
225A	**Deer Hill, Car**	**13.77**	**6**	⇑P		**Pn**	**01 07 53.9**	**+0.9**
	baz=14,SNR=7.4							
226B	**Tecolote Peak,**	**13.81**	**9**	⇓P		**Pn**	**01 07 55.1**	**+1.5**
	baz=14,SNR=31							
330A	**Mertzon**	**13.87**	**20**	⇓P		**Pn**	**01 07 56.3**	**+2.0**
	baz=14							
432A	**Menard**	**13.89**	**25**	⇓P		**Pn**	**01 07 55.7**	**+1.2**
	baz=14,SNR=12							
227A	**Bennet, Jal**	**13.90**	**12**	⇓P		**Pn**	**01 07 56.1**	**+1.5**
	baz=14							
GDL2	**Guadalupe Moun**	**13.91**	**8**	*e*Pn		**Pn**	**01 07 56.9**	**+2.1**
CCIG	**Comitan**	**13.96**	**96**	*e*P		**Pn**	**01 07 56.0**	**+0.3**
CCIG				*i*S		**Sn**	**01 10 32.1**	**+1.2**
CCIG	**Comitan**	**13.96**	**96**	*e*P		**Pn**	**01 07 56.0**	**+0.3**
CCIG				*i*S		**Sn**	**01 10 32.1**	**+1.2**
331A	**San Angelo**	**14.03**	**22**	⇑P		**Pn**	**01 07 57.9**	**+1.5**
	baz=14,SNR=12							
CLNB	**Carlsbad**	**14.04**	**10**	*e*Pn		Pn	01 07 59.2	+2.6
	61nm,1.8s							
121A	**Cookes Peak, D**	**14.13**	**356**	⇓P		**Pn**	**01 07 58.7**	**+0.7**
	baz=14							
228A	**UT Block 9, Go**	**14.15**	**14**	⇑P		**Pn**	**01 07 59.9**	**+1.8**
	baz=14,SNR=7.6							
123A	**Bell Site, Whi**	**14.20**	**1**	⇓P		**Pn**	**01 07 59.6**	**+0.7**
	baz=14							
229A	**Bryant Ranch,**	**14.20**	**17**	⇓P		**Pn**	**01 07 60.0**	**+1.1**
	baz=14							
120A	**U Bar Ranch, L**	**14.23**	**353**	⇑P		**Pn**	**01 08 00.0**	**+0.8**
	baz=14,SNR=10							
122A	**Conniff Cattle**	**14.27**	**359**	⇓P		**Pn**	**01 08 00.5**	**+0.8**
	baz=14							
124A	**Stringfield Ra**	**14.30**	**4**	⇑P		**Pn**	**01 08 01.1**	**+0.8**
	baz=14,SNR=34							
125A	**Gardner Draw,**	**14.33**	**7**	⇓P		**Pn**	**01 08 01.5**	**+1.0**
	baz=14,SNR=32							
230A	**Sterling City**	**14.33**	**19**	⇓P		**Pn**	**01 08 01.5**	**+0.9**
	baz=14							
332A	**Millersview**	**14.36**	**24**	⇓P		**Pn**	**01 08 01.5**	**+0.6**
	baz=14,SNR=18							
126A	**Clayton Basin,**	**14.39**	**9**	⇓P		**Pn**	**01 08 02.4**	**+0.9**
	baz=14,SNR=6.8							
127A	**Arkansas Junct**	**14.53**	**11**	⇓P		**Pn**	**01 08 04.3**	**+0.9**
	baz=15,SNR=8.6							
214A	**Organ Pipe Nat**	**14.64**	**339**	⇓P		**Pn**	**01 08 05.5**	**+0.7**
	baz=15,SNR=14							
231A	**Bronte**	**14.64**	**22**	⇓P		**Pn**	**01 08 05.0**	**+0.2**
	baz=15							
128A	**Castleberry Fa**	**14.66**	**14**	⇓P		**Pn**	**01 08 06.4**	**+1.3**
	baz=15,SNR=7.5							
Z20A	**Nine Sixteen R**	**14.78**	**353**	⇑P		**Pn**	**01 08 07.9**	**+1.0**
	baz=15,SNR=9.2							
129A	**Stewart Farms,**	**14.81**	**16**	⇑P		**Pn**	**01 08 08.6**	**+1.4**
	baz=15							
Z22A	**Elephant Butte**	**14.82**	**359**	⇑P		**Pn**	**01 08 08.4**	**+1.0**
	baz=15,SNR=19							
Z23A	**Rita Site, Whi**	**14.82**	**1**	⇑P		**Pn**	**01 08 08.1**	**+0.7**
	baz=15							
232A	**Coleman**	**14.84**	**24**	⇑P		**Pn**	**01 08 08.5**	**+1.0**
	baz=15							
Z21A	**St. Cloud Mine**	**14.90**	**356**	⇑P		**Pn**	**01 08 09.0**	**+0.6**
	baz=15,SNR=12							

Y32A **R-V Farms, Ver** 16.82 21 ⇑P Pn 01 08 33.4 +0.2
baz=17
W26A **Owens Ranch, T** 16.83 8 ⇓P Pn 01 08 33.9 +0.5
baz=17,SNR=8.8
Y12C **Blythe** 16.87 337 ⇓P Pn 01 08 33.8 0.0
baz=17
W25A **X Bar L Ranch,** 16.88 6 ⇑P Pn 01 08 34.2 +0.2
baz=17
BAR **Barrett** 16.88 329 *e*Pn Pn 01 08 35.6 +1.7
comp=Z,235nm,1.9s
W18A **Petrified Fore** 16.90 351 ⇑P Pn 01 08 34.2 -0.2
baz=17
W27A **Bowe Ranch, En** 16.91 10 ⇓P Pn 01 08 35.4 +1.0
baz=17,SNR=7.1
MONP **Monument Peak** 16.93 330 ⇓P Pn 01 08 35.8 +0.9
baz=17,SNR=17
AMTX **Amarillo** 17.01 14 *e*Pn Pn 01 08 35.4 -0.3
comp=Z,413nm,1.8s
BC3 **Big Chuckawall** 17.16 334 ⇑P Pn 01 08 37.6 +0.1
baz=17,SNR=16
X31A **McDonald Ranch** 17.23 19 ⇓P Pn 01 08 38.5 +0.3
baz=17,SNR=10
PDMCI **Parker Dam,Lak** 17.23 338 ⇑P Pn 01 08 38.8 +0.6
baz=17
W29A **Amraillo** 17.25 14 ⇓P Pn 01 08 39.5 +0.9
baz=17
W28A **Vega** 17.26 12 ⇓P Pn 01 08 39.6 +0.8
baz=17
109C **Camp Elliot, M** 17.26 329 ⇓P Pn 01 08 38.5 -0.2
baz=17
V23A **Ortiz Mt. (NFS** 17.30 1 ⇑P Pn 01 08 39.9 +0.5
baz=17
V24A **Rampart Ranch,** 17.32 4 ⇑P Pn 01 08 40.3 +0.6
baz=17,SNR=14
V21A **Milan** 17.38 357 ⇓P Pn 01 08 41.0 +0.5
baz=18
TEIG **Tepich** 17.39 81 LR LR 01 15 55.4
comp=Z,2µm,20.7s,baz=134,slow=38
V20A **Brimhall** 17.43 355 ⇓P Pn 01 08 41.4 +0.4
baz=18
V22A **San Miguel Ran** 17.47 359 ⇑P Pn 01 08 42.2 +0.7
baz=18
IRM **Iron Mountain** 17.48 336 ⇑P Pn 01 08 41.9 +0.5
baz=18,SNR=15
V25A **Rancho No Teng** 17.48 5 ⇑P Pn 01 08 41.8 +0.2
baz=18,SNR=17
V26A **Tequesquite Ra** 17.53 8 ⇓P Pn 01 08 42.1 -0.1
baz=18,SNR=29
PFO **Pinyon Flat Ob** 17.55 332 Pn P 01 08 44.5 +1.0
comp=Z,353nm,1.4s,SNR=14
PFO **Pinyon Flat Ob** 17.55 332 *e*Pn Pn 01 08 43.1 +0.7
comp=Z,129nm,1.5s
PFO **Pinyon Flat Ob** 17.55 332 Pn Pn 01 08 41.3 -1.1
comp=Z,0.1nm,0.3s,baz=145,slow=11,SNR=23
PFO LR LR 01 14 33.9
comp=Z,8µm,19.4s,baz=147,slow=35
PFO **Pinyon Flat Ob** 17.55 332 ⇓P Pn 01 08 43.7 +1.3
baz=18,SNR=13
W30A **Crocket Farms** 17.57 17 ⇓P P 01 08 43.8 +0.1
baz=18
WUAZ **Wupatki** 17.59 347 *e*Pn P 01 08 44.3 +0.3
comp=Z,166nm,1.8s
WUAZ **Wupatki** 17.59 347 ⇓P Pn 01 08 43.9 +1.0
baz=18,SNR=11
V27A **Dan Oppiter Fa** 17.63 10 ⇑P P 01 08 44.5 +0.1
baz=18
BELC **Belle Mtn. Jos** 17.68 333 ⇓P Pn 01 08 45.4 +1.3
baz=18,SNR=7.3
WMOK **Wichita Mounta** 17.71 22 *e*P Pn 01 08 42.8 -1.6
WMOK pmax pmax
comp=Z,249nm,2.1s
WMOK **Wichita Mounta** 17.71 22 *e*P Pn 01 08 42.8 -1.6
comp=Z,249nm,2.1s
V28A **Channing** 17.73 12 ⇓P Pn 01 08 45.4 +0.7
baz=18
W31A **Holland Ranch,** 17.75 18 ⇑P P 01 08 45.8 +0.2
baz=18
NEE2 **Needles Airpor** 17.82 338 ⇑P Pn 01 08 45.8 +0.2
baz=18
W13A **Hualapai Mount** 17.87 340 ⇓P Pn 01 08 46.8 +0.3
baz=18
U23A **El Rito** 17.88 1 ⇑P Pn 01 08 47.2 +0.6
baz=18
MURC **Murrieta** 17.89 330 ⇑P P 01 08 47.8 +0.6
baz=18,SNR=6.6
U22A **Llaves** 17.93 359 ⇓P Pn 01 08 48.2 +0.9
baz=18
V29A **Stinnett** 18.00 13 ⇓P P 01 08 48.8 +0.4
baz=18
U24A **Moreno Valley** 18.00 3 ⇓P Pn 01 08 48.7 +0.6
baz=18
U21A **Nageezi** 18.00 357 ⇑P P 01 08 49.5 +0.9
baz=18,SNR=12
U20A **Newcomb** 18.01 355 ⇑P Pn 01 08 48.4 +0.3
baz=18
U25A **Circle Dot Ran** 18.05 6 ⇓P Pn 01 08 49.3 +0.6
baz=18,SNR=12
SCI **San Clemente I** 18.07 326 ⇓P Pn 01 08 48.9 +0.2
baz=18
V30A **Spur Ranch, Mi** 18.09 16 ⇓P Pn 01 08 49.2 +0.2
baz=18
U26A **Atchley Ranch,** 18.12 7 ⇓P Pn 01 08 49.9 +0.3
baz=18,SNR=5.7
LDFC **Landfair** 18.27 337 *e*P P 01 08 53.9 +2.4
comp=Z,161nm,1.2s
U27A **Thompson Grove** 18.28 10 ⇑P P 01 08 52.1 +0.6
baz=18
BBRC **Big Bear Solar** 18.31 332 ⇓P Pn 01 08 51.2 -0.6
baz=18
CIS **Catalina Islan** 18.33 327 ⇑P Pn 01 08 52.1 +0.2
baz=18
V31A **Spring Creek L** 18.33 18 ⇓P P 01 08 52.8 +0.8
baz=18,SNR=5.1
U28A **Mallet** 18.34 11 ⇓P P 01 08 53.2 +1.0
baz=18
FMP **Fort Macarthur** 18.51 328 ⇑P P 01 08 53.8 -0.2
baz=19
HEC **Hector,Ludlow** 18.53 334 ⇑P P 01 08 54.3 0.0
baz=19
T21A **Navajo Lake** 18.56 358 ⇑P P 01 08 54.9 +0.2
baz=19
T22A **Edith** 18.57 359 ⇑P Pn 01 08 55.6 +0.6
baz=19
T23A **Casias Ranch,** 18.59 1 ⇑P P 01 08 55.3 +0.2
baz=19
U29A **Oasis Ranch, S** 18.61 14 ⇑P Pn 01 08 55.7 +0.4
baz=19
BFSC **Mount Baldy Ra** 18.63 330 ⇑P P 01 08 55.7 +0.3
baz=19
U15A **North Rim** 18.67 346 ⇑P P 01 08 56.8 +0.8
baz=19,SNR=8.9
T25A **Trinidad** 18.79 5 ⇑P P 01 08 57.9 +0.7
baz=19
MWC **Mount Wilson** 18.81 329 *e*P P 01 08 58.1 +0.7
MWC pmax pmax
comp=Z,224nm,1.8s
MWC **Mount Wilson** 18.81 329 *e*P P 01 08 58.1 +0.7
comp=Z,224nm,1.8s
PASC **Pasadena Art C** 18.83 329 *e*P P 01 08 58.0 +0.5
comp=Z,137nm,1.8s
U30A **WK&E Inc. Balk** 18.83 15 ⇑P P 01 08 58.0 +0.5
baz=19
MVCO **Mesa Verde** 18.84 355 *e*P Pn 01 08 58.8 +0.6
comp=Z,120nm,1.8s
MVCO **Mesa Verde** 18.84 355 ⇓P P 01 08 58.0 +0.2
baz=19
RRX **Edison Barstow** 18.86 333 ⇓P P 01 08 57.8 -0.1
baz=19
U31A **Nine Bar Ranch** 18.88 17 ⇑P P 01 08 58.4 +0.3
baz=19
TUQ **Turquoise Moun** 18.90 336 ⇓P P 01 08 58.3 0.0
baz=19
T26A **Comanche Natio** 18.91 7 ⇓P Pn 01 08 59.5 +0.4
baz=19,SNR=6.2
T27A **Campo** 18.92 10 ⇓P P 01 08 58.9 +0.3
baz=19
DECC **Green Verdugo** 18.96 329 ⇑P P 01 08 58.9 -0.1
baz=19
TGUH **Tegucigalpa,Un** 19.04 100 *e*P Pn 01 09 01.1 +0.4
comp=Z,116nm,0.6s
T28A **Walsh** 19.08 11 ⇓P P 01 08 59.4 -0.9
baz=19
GSC **Goldstone** 19.14 334 *e*P P 01 09 02.0 +1.0
GSC pmax pmax
comp=Z,102nm,1.7s
GSC **Goldstone** 19.14 334 *e*P P 01 09 02.0 +1.0
comp=Z,102nm,1.7s
GSC **Goldstone** 19.14 334 ⇑P P 01 08 59.5 -1.4
baz=19
BLG **Laguna Peak** 19.22 327 ⇑P P 01 09 00.7 -1.1
baz=19
S24A **Houchin Ranch,** 19.23 3 ⇑P P 01 09 02.6 +0.4
baz=19
S21A **Coal Bank Pass** 19.24 357 ⇓P P 01 09 02.7 +0.4
baz=19,SNR=9.4
S23A **Nye Farm, Mont** 19.26 1 ⇓P P 01 09 02.7 +0.2
baz=19
T29A **Hugoton** 19.28 13 ⇓P P 01 09 03.0 +0.5
baz=19
S22A **4UR Ranch, Cre** 19.30 359 ⇓P P 01 09 02.8 -0.1
baz=19
S25A **Robets Cordova** 19.30 5 ⇑P P 01 09 02.6 -0.3
baz=19
EDW2 **Edwards Air Fo** 19.31 331 ⇑P P 01 09 03.0 +0.2
baz=19
SDCO **Great Sand Dun** 19.32 3 *e*P P 01 09 04.2 +1.1
comp=Z,100nm,1.7s
T30A **Plains** 19.35 15 ⇓P P 01 09 03.7 +0.4
baz=19
S26A **Kim** 19.36 7 ⇓P P 01 09 04.1 +0.7
baz=19,SNR=18
BSC **Santa Cruz Isl** 19.43 326 ⇓P P 01 09 03.6 -0.5
baz=20
S20A **Disappointment** 19.44 356 ⇓P P 01 09 05.2 +0.7
baz=20,SNR=8.7
SHOC **Shoshone** 19.44 336 ⇓P P 01 09 03.7 -0.6
baz=20
OSI **Osito Adit** 19.45 329 ⇑P P 01 09 03.9 -0.4
baz=20
S18A **Hurst Farm, Bl** 19.47 352 ⇓P P 01 09 05.6 +0.9
baz=20,SNR=12
S27A **Las Animas** 19.50 9 ⇑P P 01 09 05.0 0.0
baz=20
S28A **Manter** 19.58 11 ⇑P P 01 09 05.1 -0.6
baz=20
T31A **Randall Ranch,** 19.61 17 ⇑P P 01 09 06.4 +0.3
baz=20
LRMC **Laurel Mountai** 19.67 332 ⇓P P 01 09 05.8 -1.0
baz=20
R23A **Moffat** 19.75 2 ⇓P P 01 09 08.7 +0.8
baz=20,SNR=9.3
PV01 **Paradox Valley** 19.76 355 *e*P P 01 09 08.6 +0.7
S29A **Ulysses** 19.76 13 ⇓P P 01 09 08.8 +1.0
baz=20
R22A **Saguache, Gunn** 19.78 360 ⇑P P 01 09 09.0 +0.9
baz=20,SNR=15
R20A **Redvale** 19.80 356 ⇓P P 01 09 08.7 +0.4
baz=20,SNR=11
R25A **Fountain Ranch** 19.80 5 ⇓P P 01 09 08.6 +0.4
baz=20
SBC **Santa Barbara** 19.82 326 ⇑P P 01 09 08.6 +0.3
baz=20
R24A **Sanders Place,** 19.82 3 ⇑P P 01 09 09.0 +0.4
baz=20
TUL1 **Tulsa** 19.91 27 ⇑P P 01 09 09.8 +0.5
baz=20
ARVC **Arvin** 19.91 329 ⇓P P 01 09 08.8 -0.5
baz=20
S30A **Montezuma** 19.93 14 ⇓P P 01 09 10.5 +0.9
baz=20
R21A **Cimarron** 19.93 358 ⇓P P 01 09 11.1 +1.3
baz=20,SNR=7.7
CCUT **Cedar City** 20.00 344 *e*P P 01 09 12.1 +1.5
comp=Z,140nm,1.9s
R26A **Arlington** 20.04 7 ⇓P P 01 09 11.6 +0.8
baz=20,SNR=32
PV04 **Paradox Valley** 20.04 355 *e*P P 01 09 11.8 +0.8
MPMC **Manual Prospec** 20.07 333 ⇑P P 01 09 11.7 +0.4
baz=20,SNR=30
R27A **Eads** 20.11 9 ⇑P P 01 09 12.2 +0.6
baz=20,SNR=8.0
S31A **Mullinville** 20.16 17 ⇓P P 01 09 13.0 +0.9
baz=20
FURC **Furnace Creek,** 20.17 335 ⇑P P 01 09 12.2 +0.1
baz=20,SNR=9.8
ISA **Isabella** 20.18 331 *e*P P 01 09 14.0 +1.7
ISA pmax pmax
comp=Z,31nm,1.3s
ISA **Isabella** 20.18 331 *e*P P 01 09 13.9 +1.7
comp=Z,31nm,1.3s
ISA **Isabella** 20.18 331 ⇑P P 01 09 12.4 +0.1
baz=20
PKM **Peak Mountain** 20.22 327 ⇓P P 01 09 12.0 -1.0
baz=20
R28A **Tribune** 20.32 11 ⇑P P 01 09 13.5 -0.4
baz=20
Q21A **Lamborn Mesa,** 20.40 358 ⇑P P 01 09 15.2 +0.3
baz=20,SNR=8.1
Q22A **Crested Butte,** 20.41 359 ⇓P P 01 09 14.8 -0.3
baz=20
Q23A **Hartsel** 20.46 2 ⇓P P 01 09 15.8 +0.1
baz=20
R29A **Marienthal** 20.53 12 ⇓P P 01 09 16.5 +0.4
baz=21
Q24A **Divide** 20.55 3 ⇑P P 01 09 16.4 -0.2
baz=21
Q20A **Ridgley Place,** 20.55 356 ⇓P P 01 09 16.7 +0.2
baz=21
Q25A **Beaind, Calha** 20.56 5 ⇑P P 01 09 16.3 -0.3
baz=21
R30A **Dighton** 20.59 14 ⇓P P 01 09 17.1 +0.4
baz=21
VES **Vestal, Richgr** 20.61 330 ⇓P P 01 09 16.7 -0.2
baz=21
SMMC **Simmler** 20.64 327 ⇑P P 01 09 17.1 -0.2
baz=21
MVU **Marysvale** 20.64 347 *e*P P 01 09 16.7 -0.8
MVU LR LR
comp=Z,6µm,19.0s
MSU **Marysvale** 20.64 347 *e*P Pn 01 09 19.5 -0.4
MSU **Marysvale** 20.64 347 *e*P Pn 01 09 19.5 -0.4
Q26A **Hugo** 20.64 7 ⇓P P 01 09 17.7 +0.3
baz=21
CWC **Cottonwood Cre** 20.65 333 ⇑P P 01 09 16.7 -0.8
baz=21
UALR **University of** 20.67 35 *e*P Pn 01 09 19.3 -0.6
comp=Z,110nm,1.3s
SMCO **Snowmass** 20.73 359 *e*P P 01 09 19.5 +0.9
comp=Z,61nm,1.4s
GRAC **Grapevine Rang** 20.83 335 ⇑P P 01 09 19.1 -0.3
baz=21
KSCO **Kaye Shedlock'** 20.84 9 ⇓P P 01 09 18.2 -1.4
baz=21
Q16A **Castle Valley** 20.85 350 ⇓P P 01 09 19.7 0.0
baz=21
P23A **Jefferson** 20.93 2 ⇓P P 01 09 20.1 -0.7
baz=21
SRU **San Rafael** 20.94 351 ⇑P P 01 09 21.0 +0.3
baz=21,SNR=8.4
Q28A **Sharon Springs** 21.02 10 ⇑P P 01 09 21.8 +0.4
baz=21
RCTC **Rector, Farmer** 21.06 331 ⇑P P 01 09 21.5 -0.3
baz=21
P21A **Newcastle** 21.08 358 ⇑P P 01 09 23.2 +0.9
baz=21,SNR=12
P20A **De Beque** 21.10 356 ⇓P P 01 09 22.7 +0.3
baz=21,SNR=7.8
P24A **Kohler Place,** 21.11 4 ⇓P P 01 09 22.3 -0.2
baz=21
P22A **Eagle** 21.14 360 ⇑P P 01 09 22.1 -0.8
baz=21
P25A **Willow Gulch B** 21.16 5 ⇓P P 01 09 22.4 -0.7
baz=21
TIN **Tinemaha** 21.23 334 ⇓P P 01 09 22.8 -0.9
baz=21
P19A **Cripple Cowboy** 21.28 355 ⇑P P 01 09 24.9 +0.5
baz=21,SNR=10
P26A **Davis Ranch, A** 21.29 7 ⇑P P 01 09 25.1 +0.6
baz=21
ISCO **Idaho Springs** 21.36 2 *e*P P 01 09 26.5 +1.1
ISCO pmax pmax
comp=Z,68nm,1.4s
ISCO MLR MLR
comp=Z,6µm,22.0s
ISCO **Idaho Springs** 21.36 2 *e*P P 01 09 26.5 +1.1
comp=Z,68nm,1.4s
ISCO LR LR
comp=Z,6µm,22.0s
ISCO **Idaho Springs** 21.36 2 ⇓P P 01 09 24.8 -0.6
baz=21,SNR=15
P27A **Ficken Ranch,** 21.39 9 ⇑P P 01 09 25.5 +0.1
baz=22
R11A **Troy Canyon, C** 21.39 340 ⇓P P 01 09 26.1 +0.6
baz=22,SNR=20
P18A **Preston Nutter** 21.41 352 ⇑P P 01 09 25.6 -0.3
baz=22,SNR=17
P28A **Saint Francis** 21.53 10 ⇑P P 01 09 27.2 +0.2
baz=22
MTUM **Tungsten Hills** 21.62 333 *e*P P 01 09 29.8 +1.8
O22A **Kremmling** 21.71 0 ⇑P P 01 09 28.7 -0.4
baz=22,SNR=21
O24A **Longmont** 21.71 3 ⇑P P 01 09 28.6 -0.3
baz=22
TPH **Tonopah** 21.71 337 PFAKE 01 09 40.0 +11
TPH LR LR
comp=Z,4µm,22.0s
O20A **White River Ci** 21.73 357 ⇑P P 01 09 29.2 +0.1
baz=22,SNR=16
O23A **Lake Granby, G** 21.76 1 ⇑P P 01 09 29.1 -0.6
baz=22
O25A **Wiggins** 21.76 5 ⇑P P 01 09 29.4 -0.1
baz=22
O21A **Pagoda** 21.77 358 ⇑P P 01 09 29.5 -0.2
baz=22
O19A **Miners Draw (B** 21.95 355 ⇑P P 01 09 31.1 -0.4
baz=22
O26A **Horse Wrangler** 21.97 7 ⇓P P 01 09 32.1 +0.4
baz=22,SNR=8.8
MLAC **Mammoth Lakes** 21.98 333 ⇓P P 01 09 30.8 -1.1
baz=22
MPU **Maple Canyon** 22.00 350 *e*P P 01 09 32.7 +0.7
comp=Z,211nm,1.7s
O27A **Beecher Island** 22.02 8 ⇑P P 01 09 32.5 +0.3
baz=22
OXF **Oxford** 22.19 40 *e*P P 01 09 35.7 +1.8
OXF pmax pmax
comp=Z,98nm,1.6s
OXF MLR MLR
comp=Z,3µm,21.0s
OXF **Oxford** 22.19 40 *e*P P 01 09 35.7 +1.8
comp=Z,98nm,1.6s
OXF LR LR
comp=Z,3µm,21.0s
N21A **Black Mountain** 22.32 358 ⇑P P 01 09 35.4 -0.1
baz=22
DAU **Daniels Canyon** 22.32 351 *e*P P 01 09 37.0 +1.4
DAU **Daniels Canyon** 22.32 351 *e*P P 01 09 37.0 +1.4
N22A **Wattenberg Ran** 22.35 0 ⇓P P 01 09 36.1 +0.3
baz=22,SNR=16
NV11 **Mina Array Sit** 22.38 336 *e*P P 01 09 37.1 +1.0
DUG **Dugway** 22.39 347 *e*P P 01 09 37.7 +1.5
DUG pmax pmax
comp=Z,166nm,1.8s
DUG MLR MLR
comp=Z,5µm,19.0s
DUG **Dugway** 22.39 347 *e*P P 01 09 37.7 +1.5
comp=Z,166nm,1.8s
DUG LR LR
comp=Z,5µm,19.0s
DUG **Dugway** 22.39 347 ⇓P P 01 09 36.5 +0.3
baz=22,SNR=38
KSU1 **Kansas State U** 22.40 21 *e*P P 01 09 37.6 +1.5
comp=Z,94nm,1.3s
KSU1 LR LR
comp=Z,2µm,19.0s
N24A **Carr** 22.42 3 ⇓P P 01 09 36.6 0.0
baz=22
N20A **Spence Gulch,** 22.43 357 ⇑P P 01 09 36.4 -0.3
baz=22,SNR=14
NVAR **Mina Array Bea** 22.44 335 P P 01 09 35.7 -1.1
NVAR **Mina Array Bea** 22.44 335 P P 01 09 35.7 -1.1
comp=Z,3.5nm,0.8s,baz=156,slow=11,SNR=5.5
NVAR LR LR 01 17 26.3
comp=Z,5µm,20.9s,baz=206,slow=35
JTS **JuntasAbangare** 22.44 108 PFAKE 01 09 50.0 +13
JTS LR LR
comp=Z,5µm,19.0s
N23A **Red Feather La** 22.45 1 ⇓P P 01 09 37.0 0.0
baz=22,SNR=10
N25A **Grover** 22.46 5 ⇑P P 01 09 36.2 -0.8
baz=22
SAO **San Andreas Ge** 22.50 327 *e*P P 01 09 38.6 +1.3
SAO pmax pmax
comp=Z,143nm,1.9s
SAO **San Andreas Ge** 22.50 327 *e*P P 01 09 38.5 +1.3
comp=Z,142nm,1.9s
JLU **Jordanelle** 22.54 350 *e*P P 01 09 39.6 +1.7
comp=Z,130nm,1.7s
N26A **Koester Ranch,** 22.56 7 ⇓P P 01 09 37.4 -0.6
baz=23
N27A **Anderson Farm,** 22.62 8 ⇓P P 01 09 37.3 -1.3
baz=23
N28A **Pribbeno Ranch** 22.65 10 ⇓P P 01 09 37.9 -1.0
baz=23
OGNE **Ogallala** 22.83 9 *e*P P 01 09 41.1 +0.3
comp=Z,26nm,0.9s
OGNE LR LR
comp=Z,6µm,20.0s
OGNE **Ogallala** 22.83 9 ⇑P P 01 09 40.0 -0.8
baz=23
LRAL **Lakeview Retre** 22.85 47 *e*P P 01 09 42.8 +1.8
comp=Z,71nm,1.4s
LRAL LR LR
comp=Z,2µm,20.0s
PHWY **Pilot Hill** 22.87 2 *e*P P 01 09 42.7 +1.3
comp=Z,42nm,1.3s
N29A **Votaw Ranch, W** 22.95 12 ⇑P P 01 09 41.1 -0.9
baz=23
M22A **Cedar Creek Ra** 22.95 360 ⇑P P 01 09 41.1 -1.1
baz=23
CMB **Columbia Colle** 23.00 331 *e*P P 01 09 43.4 +0.9
CMB pmax pmax
comp=Z,94nm,1.6s
CMB **Columbia Colle** 23.00 331 *e*P P 01 09 43.4 +0.9
comp=Z,94nm,1.6s
M23A **Laramie** 23.02 2 ⇑P P 01 09 42.7 -0.3
baz=23,SNR=8.0
N30A **Hueftle Ranch,** 23.03 13 ⇓P P 01 09 42.2 -0.6
baz=23
M24A **Cheyenne** 23.06 3 ⇑P P 01 09 42.6 -0.7
baz=23
M20A **Sweetwater, Wa** 23.07 357 ⇓P P 01 09 43.2 -0.3
baz=23
M25A **Palm-Egli Farm** 23.08 5 ⇓P P 01 09 42.7 -0.8
baz=23
M19A **Rock Springs** 23.15 355 ⇑P P 01 09 43.2 -1.1
baz=23
M21A **Separation Pea** 23.16 359 ⇑P P 01 09 43.8 -0.5
baz=23
M26A **McRoberts Ranc** 23.20 7 ⇓P P 01 09 43.7 -0.9
baz=23
M17A **Scullys Gap (B** 23.28 352 ⇓P P 01 09 44.2 -1.3
baz=23
PLAL **Pickwick Lake** 23.33 41 *e*P P 01 09 46.9 +1.1
comp=Z,193nm,2.1s
M27A **Reverse DX Ran** 23.35 8 ⇑P P 01 09 45.6 -0.6
baz=23
M28A **Bar X Bar Ranc** 23.37 10 ⇑P P 01 09 45.8 -0.5
baz=23
PARMO **Parma** 23.49 36 *e*P P 01 09 49.4 +1.9
ELK **Elko** 23.50 343 *e*P P 01 09 47.8 0.0
comp=Z,5µm,2.1s
ELK **Elko** 23.50 343 P P 01 09 46.2 -1.6
comp=Z,3.8nm,0.9s,baz=160,slow=10.0,SNR=18
ELK LR LR 01 18 06.3
comp=Z,5µm,20.2s,baz=161,slow=35
L21A **Rawlins** 23.52 359 ⇓P P 01 09 47.0 -0.9
baz=24
HWUT **Hardware Ranch** 23.54 351 *e*P P 01 09 47.3 -0.8
comp=Z,224nm,2.1s
HWUT LR LR
comp=Z,5µm,19.0s
M29A **Burnside Ranch** 23.54 11 ⇑P P 01 09 47.5 -0.5
baz=24
L22A **Ellis Ranch, M** 23.57 0 ⇑P P 01 09 48.7 +0.2
baz=24,SNR=16
L20A **Wamsutter** 23.60 357 ⇓P P 01 09 47.7 -1.0
baz=24,SNR=5.4
L24A **Wheatland** 23.63 3 ⇓P P 01 09 48.1 -0.9
baz=24
L18A **Fontenelle, Gr** 23.65 354 ⇓P P 01 09 48.7 -0.6
baz=24,SNR=14
L23A **Garrett** 23.67 2 ⇑P P 01 09 49.3 -0.1
baz=24,SNR=13
L19A **Farson** 23.76 355 ⇓P P 01 09 49.7 -0.6
baz=24,SNR=5.9
UTMT **University of** 23.76 38 *e*P P 01 09 52.2 +2.0
L26A **Underwood Farm** 23.77 7 ⇑P P 01 09 49.6 -0.7
baz=24
WCN **Washoe City** 23.77 334 *e*P P 01 09 51.3 +0.9
WCN pmax pmax
comp=Z,51nm,1.3s
WCN **Washoe City** 23.77 334 *e*P P 01 09 51.3 +0.9

comp=Z,51nm,1.3s
L25A Engebretsen Ra 23.80 5 ⇑P P 01 09 49.1 -1.5
baz=24
BMN Battle Mountai 23.81 340 eP P 01 09 52.6 +1.9
BMN pmax pmax
comp=Z,252nm,1.8s
BMN MLR MLR
comp=Z,2µm,20.0s
BMN Battle Mountai 23.81 340 eP P 01 09 52.6 +1.9
comp=Z,252nm,1.8s
BMN LR LR
comp=Z,2µm,20.0s
L27A T5 Ranch, Ells 23.91 8 ⇑P P 01 09 50.6 -1.0
baz=24
HVU Hansel Valley 23.91 349 eP P 01 09 52.8 +1.1
HVU pmax pmax
comp=Z,231nm,1.8s
HVU Hansel Valley 23.91 349 eP P 01 09 52.8 +1.1
comp=Z,231nm,1.8s
BGNE Belgrade 24.07 16 ⇓P P 01 09 52.3 -0.7
baz=24
K21A Alcova 24.18 359 ⇓P P 01 09 52.9 -1.4
baz=24
K22A Casper 24.19 0 ⇓P P 01 09 53.4 -1.0
baz=24,SNR=10.0
WVT Waverly 24.23 39 eP P 01 09 54.5 -0.1
WVT pmax pmax
comp=Z,76nm,1.7s
WVT Waverly 24.23 39 eP P 01 09 54.5 -0.1
comp=Z,76nm,1.7s
K20A Yellowstone Ra 24.25 357 ⇑P P 01 09 53.7 -1.2
baz=24,SNR=13
K25A Mack Ranch, Ha 24.27 5 ⇓P P 01 09 54.2 -0.8
baz=24
K23A Bowen Ranch, D 24.31 2 ⇓P P 01 09 54.2 -1.2
baz=24
K24A Anderson Ranch 24.31 3 ⇑P P 01 09 54.0 -1.5
baz=24
K26A Motz Farm, Whi 24.42 6 ⇓P P 01 09 55.5 -0.9
baz=24
BW06 Boulder Array 24.44 355 eP P 01 09 55.9 -0.8
comp=Z,47nm,1.8s
BW06 LR LR
comp=Z,5µm,20.0s
PDAR Pinedale Array 24.44 355 P P 01 09 56.1 -0.6
PDAR PcP PcP 01 13 34.4 -1.2
PDAR Pinedale Array 24.44 355 P P 01 09 56.1 -0.6
comp=Z,2.7nm,0.8s,baz=174,slow=10.0,SNR=15
PDAR PcP PcP 01 13 34.4 -1.2
comp=Z,0.8nm,0.9s,baz=175,slow=4.3,SNR=3.1
PDAR LR LR 01 18 27.7
comp=Z,2µm,21.3s,baz=189,slow=34
K19A Absolon Red Bu 24.44 356 ⇓P P 01 09 55.7 -1.0
baz=24
BEKR Beckworth 24.50 334 eP P 01 09 57.4 +0.2
comp=Z,23nm,1.4s
TIGA Tifton 24.52 54 ⇑P P 01 09 55.8 -1.5
baz=24
K27A Flueckinger Fa 24.53 8 ⇑P P 01 09 55.9 -1.5
baz=25
AHID Auburn Hatcher 24.61 352 PFAKE 01 10 10.0 +12
AHID LR LR
comp=Z,4µm,19.0s
SLM Saint Louis 24.70 32 eP P 01 10 00.9 +2.1
SLM pmax pmax
comp=Z,119nm,1.3s
SLM Saint Louis 24.70 32 eP P 01 10 00.9 +2.1
comp=Z,119nm,1.3s
PAYG Puerto Ayora 24.81 138 PFAKE 01 10 10.0 +10
PAYG LR LR
comp=Z,6µm,22.0s
SWET Sewanee 24.84 43 eP P 01 10 00.9 +0.7
comp=Z,186nm,1.9s
J19A Crowheart 24.89 356 ⇓P P 01 10 00.7 -0.1
baz=25,SNR=16
J21A Lysite 24.90 359 ⇑P P 01 10 01.2 +0.5
baz=25,SNR=8.9
J24A Dixon Ranch, L 24.93 3 ⇑P P 01 10 00.7 -0.3
baz=25
J20A Shoshoni 24.93 357 ⇑P P 01 10 01.6 +0.6
baz=25,SNR=8.6
J22A Midwest 24.96 0 ⇓P P 01 10 01.1 -0.1
baz=25
J23A Dilts Ranch, B 24.96 2 ⇑P P 01 10 01.2 0.0
baz=25
RRI2 Red Ridge 25.21 352 eP P 01 10 04.8 +1.1
comp=Z,203nm,1.9s
SNOW Snow King Moun 25.25 353 eP P 01 10 04.0 0.0
comp=Z,107nm,1.4s
TPAW Teton Pass 25.30 353 eP P 01 10 05.5 +1.0
comp=Z,120nm,1.5s
I21A Big Trails, Te 25.36 359 ⇓P P 01 10 05.1 +0.2
baz=25,SNR=15
LOHW Long Hollow 25.38 353 eP P 01 10 06.0 +0.9
comp=Z,127nm,1.8s
I18A Diamond G Ranc 25.39 355 ⇑P P 01 10 04.0 -1.3
baz=26
DCID1 Drake Creek 25.43 352 eP P 01 10 08.2 +2.5
comp=Z,129nm,1.4s
I22A 9 Mile Ranch, 25.43 0 ⇑P P 01 10 06.6 +1.1
baz=26,SNR=14
I24A Kuemmerle Ranc 25.46 3 ⇓P P 01 10 05.7 0.0
baz=26
I23A Meade Ranch, G 25.52 2 ⇑P P 01 10 06.8 +0.5
baz=26
I20A Worland 25.52 357 ⇑P P 01 10 06.7 +0.3
baz=26,SNR=31
MOOW Moose Ponds 25.53 353 eP P 01 10 06.9 +0.3
comp=Z,119nm,1.9s
J14A Carey 25.55 348 ⇓P P 01 10 07.1 +0.5
baz=26,SNR=9.4
GOGA Godfrey 25.55 50 eP P 01 10 06.9 +0.4
GOGA pmax pmax
comp=Z,75nm,1.6s
GOGA Godfrey 25.55 50 eP P 01 10 06.9 +0.4
comp=Z,74nm,1.6s
USIN University of 25.58 36 eP P 01 10 09.1 +2.3
comp=Z,128nm,1.4s
I19A Meeteetse 25.66 356 ⇓P P 01 10 07.9 +0.2
baz=26,SNR=6.1
I17A Pilgrim Ck. 25.68 353 ⇓P P 01 10 08.8 +0.9
baz=26
IMW Indian Meadow 25.70 353 eP P 01 10 08.5 +0.4
comp=Z,144nm,2.2s
I16A Newdale 25.75 352 ⇓P P 01 10 08.6 +0.1
baz=26
J13A Cove Ranch, Pi 25.75 347 ⇑P P 01 10 09.3 +0.8
baz=26
RSSD Black Hills 25.75 4 eP P 01 10 09.5 +1.0
RSSD pmax pmax
comp=Z,34nm,1.8s
RSSD Black Hills 25.75 4 eP P 01 10 09.5 +1.0
comp=Z,34nm,1.8s
KIPM Iron Peak 25.87 329 eP P 01 10 10.9 +1.4
comp=Z,131nm,1.8s
OLIL Olney 25.89 35 eP P 01 10 10.8 +1.3
comp=Z,38nm,1.3s
CPCT Cooper Cave 25.91 45 eP P 01 10 16.0 +6.1
HLID Hailey 25.96 347 eP P 01 10 11.2 +0.9
comp=Z,55nm,1.6s
HLID LR LR
comp=Z,3µm,20.0s
HLID Hailey 25.96 347 ⇑P P 01 10 10.2 -0.2
baz=26,SNR=20
I15A Monteview 26.02 350 ⇑P P 01 10 11.4 +0.5
baz=26
WDC Whiskeytown Da 26.04 332 eP P 01 10 10.7 -0.2
WDC pmax pmax
comp=Z,14nm,1.2s
WDC Whiskeytown Da 26.04 332 eP P 01 10 10.7 -0.2
comp=Z,14nm,1.2s
H20A Greybull 26.06 358 ⇓P P 01 10 10.9 -0.3
baz=26,SNR=7.7
WVOR Wild Horse Val 26.07 339 eP P 01 10 11.3 0.0
WVOR pmax pmax
comp=Z,59nm,1.3s
WVOR MLR MLR
comp=Z,2µm,19.0s
WVOR Wild Horse Val 26.07 339 eP P 01 10 11.3 0.0
comp=Z,58nm,1.3s
WVOR LR LR
comp=Z,2µm,19.0s
SCIA State Center 26.08 23 PFAKE 01 10 20.0 +8.7
SCIA LR LR
comp=Z,2µm,19.0s
I14A Mackay 26.12 349 ⇓P P 01 10 11.5 -0.3
baz=26
H23A Clabaugh Cattl 26.12 2 ⇑P P 01 10 11.0 -0.7
baz=26
H22A Clearmont 26.14 0 ⇓P P 01 10 11.3 -0.6
baz=26
MFID Camas Ranch 26.15 345 eP P 01 10 14.8 +2.8
comp=Z,62nm,1.6s
MFID Camas Ranch 26.15 345 ⇓P P 01 10 11.8 -0.2
baz=26
H17A Grant Village 26.15 354 ⇑P P 01 10 11.5 -0.7
baz=26
H21A Big Horn, Sher 26.17 359 ⇓P P 01 10 11.7 -0.6
baz=26
I13A Wildhorse Cree 26.23 348 ⇑P P 01 10 13.3 +0.4
baz=26,SNR=11
H19A Powell 26.29 356 ⇑P P 01 10 13.7 +0.4
baz=26,SNR=10.0
LKWY Lake 26.30 354 PFAKE 01 10 30.0 +16
LKWY LR LR
comp=Z,2µm,21.0s
I12A Atlanta 26.34 346 ⇑P P 01 10 12.9 -0.9
baz=26
H18A Shoshone NF, C 26.34 355 ⇓P P 01 10 13.4 -0.5
baz=26
H24A Dirks Ranch, A 26.34 3 ⇑P P 01 10 13.1 -0.7
baz=26
YMR Madison River 26.47 353 eP P 01 10 17.1 +2.1
comp=Z,12nm,0.8s
TKL Tuckaleechee C 26.53 45 P P 01 10 17.0 +1.6
TKL Tuckaleechee C 26.53 45 P P 01 10 17.0 +1.6
comp=Z,5.3nm,0.9s,baz=212,slow=10,SNR=5.2
TKL LR LR 01 22 26.2
comp=Z,1µm,19.9s,baz=242,slow=40
H16A Russell Place, 26.53 353 ⇑P P 01 10 15.2 -0.4
baz=27
ECSD EROS Data Cent 26.64 16 eP P 01 10 18.0 +1.7
comp=Z,15nm,1.2s
ECSD LR LR
comp=Z,2µm,20.0s
HDIL Hopedale 26.65 30 eP P 01 10 17.8 +1.4
comp=Z,94nm,1.4s
HDIL LR LR
comp=Z,2µm,20.0s
H15A Lima 26.65 350 ⇓P P 01 10 16.4 -0.2
baz=27
QLMT Earthquake Lak 26.68 352 eP P 01 10 18.1 +1.2
RLMT Red Lodge 26.76 356 eP P 01 10 18.1 +0.5
comp=Z,84nm,1.9s
RLMT LR LR
comp=Z,3µm,21.0s
G22A Birney 26.76 0 ⇓P P 01 10 16.8 -0.8
baz=27
G23A Biddle 26.76 2 ⇓P P 01 10 16.9 -0.6
baz=27
BRSD Miller 26.76 12 ⇑P P 01 10 17.1 -0.3
baz=27
H14A Leadore 26.77 349 ⇑P P 01 10 18.1 +0.4
baz=27,SNR=7.9
G20A Bridger 26.80 357 ⇑P P 01 10 17.4 -0.5
baz=27,SNR=12
KHMM Horse Mountain 26.82 330 eP P 01 10 18.5 +0.4
comp=Z,13nm,0.9s
MCMT McKenzie Canyo 26.89 350 eP P 01 10 19.8 +1.0
comp=Z,17nm,1.4s
G24A Alzada 26.93 3 ⇓P P 01 10 18.0 -1.1
baz=27
G18A Lazy EL Ranch, 26.97 355 ⇓P P 01 10 18.1 -1.4
baz=27
H12A Diamond D Ranc 27.00 347 ⇑P P 01 10 18.3 -1.5
baz=27
YBH Yreka Blue Hor 27.04 333 P P 01 10 16.5 -3.6
YBH Yreka Blue Hor 27.04 333 P P 01 10 16.5 -3.6
comp=Z,2.7nm,0.8s,baz=130,slow=6.5,SNR=6.9
YBH LR LR 01 20 35.7
comp=Z,4µm,19.8s,baz=160,slow=36
G17A Pierce Place, 27.09 354 ⇓P P 01 10 19.1 -1.4
baz=27
G16A Moss Hill, Enn 27.12 352 ⇑P P 01 10 21.4 +0.5
baz=27,SNR=6.7
G15A Dillon 27.16 351 ⇓P P 01 10 20.9 -0.3
baz=27
TZTN Tazewell 27.19 44 eP P 01 10 23.8 +2.4
comp=Z,36nm,1.4s
F23A Volborg 27.28 2 ⇓P P 01 10 22.2 0.0
baz=27
F22A Rosebud 27.32 1 ⇓P P 01 10 22.3 -0.2
baz=27
DLMT Dillon 27.37 351 eP P 01 10 24.6 +1.6
comp=Z,41nm,1.4s
F21A Absaloka Mine, 27.37 359 ⇑P P 01 10 22.6 -0.4
baz=28
F20A Billings 27.37 358 ⇑P P 01 10 22.5 -0.5
baz=28
G13A Cobalt 27.39 348 ⇓P P 01 10 23.3 +0.1
baz=28,SNR=6.7
G14A Jackson 27.39 349 ⇑P P 01 10 23.1 -0.2
baz=28
F24A Ekalaka 27.45 3 ⇑P P 01 10 23.9 +0.3
baz=28
GCMT Greycliff 27.45 355 eP P 01 10 24.1 +0.4
comp=Z,24nm,1.5s
F19A Roth Farm, Mol 27.47 356 ⇑P P 01 10 23.2 -0.7
baz=28
BOZ Bozeman (W) 27.51 352 eP P 01 10 23.9 -0.4
BOZ pmax pmax
comp=Z,47nm,1.7s
BOZ MLR MLR
comp=Z,3µm,21.0s
BOZ Bozeman (W) 27.51 352 eP P 01 10 23.9 -0.4
comp=Z,48nm,1.7s
BOZ LR LR
comp=Z,3µm,21.0s
BCIP Isla Barro Col 27.52 106 eP P 01 10 26.3 +1.8
BCIP LR LR
comp=Z,1µm,20.0s
F18A Big Timber 27.57 355 ⇓P P 01 10 25.4 +0.6
baz=28,SNR=8.3
MTDJ Mount Denham 27.58 86 PFAKE 01 10 40.0 +15
MTDJ LR LR
comp=Z,1µm,21.0s
SFIN Scholer Farm 27.61 33 ⇑P P 01 10 26.4 +1.3
baz=28
F16A Kennard Place, 27.64 352 ⇑P P 01 10 26.1 +0.6
baz=28,SNR=7.9
G12A Big Creek, Yel 27.65 347 ⇑P P 01 10 26.2 +0.6
baz=28
F17A Fitzpatrick Pl 27.66 354 ⇑P P 01 10 26.7 +1.1
baz=28,SNR=5.7
LRM Limekiln Ridge 27.79 351 eP P 01 10 27.8 +0.8
F15A Butte 27.82 351 ⇓P P 01 10 27.6 +0.5
baz=28,SNR=9.8
NHSC New Hope 27.85 53 PFAKE 01 10 40.0 +13
NHSC LR LR
comp=Z,2µm,22.0s
BMO Blue Mountains 27.87 344 eP P 01 10 27.2 -0.3
comp=Z,36nm,1.7s
BMO LR LR
comp=Z,4µm,19.0s
F14A Wisdom 27.93 350 ⇑P P 01 10 28.4 +0.3
baz=28
KMSC Kings Mountain 27.94 48 ⇓P P 01 10 28.6 +0.4
baz=28
E22A Miles City 27.99 1 ⇑P P 01 10 28.7 +0.3
baz=28
E23A Ismay 28.06 2 ⇓P P 01 10 29.4 +0.3
baz=28
E19A Rath Farm, Rou 28.06 357 ⇑P P 01 10 29.4 +0.2
baz=28,SNR=19
E20A Meyer Farm, Mu 28.07 358 ⇓P P 01 10 29.2 0.0
baz=28,SNR=9.1
F13A Darby 28.08 348 ⇑P P 01 10 29.7 +0.3
baz=28,SNR=9.4
E21A Keefer Ranch, 28.09 359 ⇑P P 01 10 29.2 -0.1
baz=28
JFWS Jewell Farm 28.11 26 eP P 01 10 31.6 +2.1
JFWS pmax pmax
comp=Z,41nm,1.1s
JFWS MLR MLR
comp=Z,2µm,20.0s
JFWS Jewell Farm 28.11 26 eP P 01 10 31.6 +2.1
comp=Z,41nm,1.1s
JFWS LR LR
comp=Z,2µm,20.0s
E24A Baker 28.17 3 ⇑P P 01 10 30.8 +0.7
baz=28
E17A Martinsdale 28.23 354 ⇓P P 01 10 31.1 +0.4
baz=28
F12A Elk City 28.23 347 ⇑P P 01 10 30.3 -0.4
baz=28,SNR=9.5
E18A Harlowton 28.24 355 ⇑P P 01 10 30.4 -0.4
baz=28,SNR=11
E16A East Helena 28.39 353 ⇑P P 01 10 32.2 +0.1
baz=28
E15A Deer Lodge 28.41 351 ⇑P P 01 10 32.0 -0.3
baz=28,SNR=10
E14A Clinton 28.54 350 ⇑P P 01 10 34.1 +0.6
baz=29,SNR=9.4
D21A La Casta Ranch 28.61 359 ⇓P P 01 10 34.0 0.0
baz=29
D20A Manuel Ranch, 28.66 358 ⇑P P 01 10 34.5 0.0
baz=29
E13A Victor 28.68 349 ⇑P P 01 10 34.2 -0.5
baz=29,SNR=6.5
D22A Cohagen 28.70 1 ⇓P P 01 10 34.4 -0.3
baz=29,SNR=9.3
D24A Glendive 28.72 3 ⇑P P 01 10 35.5 +0.6
baz=29
D23A Lindsay 28.74 2 ⇑P P 01 10 35.3 +0.2
baz=29
D19A Cripps Ranch, 28.77 357 ⇑P P 01 10 35.5 +0.1
baz=29
D18A Linhart Farms, 28.86 355 ⇑P P 01 10 36.2 -0.1
baz=29
D16A Dana Ranch, Ca 28.86 353 ⇓P P 01 10 36.0 -0.3
baz=29
D17A Six Diamond Ra 28.89 354 ⇓P P 01 10 36.7 +0.1
baz=29,SNR=9.2
D15A Lincoln 29.00 352 ⇑P P 01 10 37.1 -0.5
baz=29,SNR=6.0
MSO Missoula 29.01 350 eP P 01 10 37.8 +0.2
comp=Z,57nm,1.4s
MSO LR LR
comp=Z,2µm,20.0s
MSO Missoula 29.01 350 ⇑P P 01 10 37.0 -0.6
baz=29,SNR=10
C24A Savage 29.13 3 ⇑P P 01 10 39.3 +0.7
baz=29
SPMN St. Paul 29.13 20 ⇑P P 01 10 39.5 +1.0
baz=29
D14A Greenough 29.18 350 ⇓P P 01 10 38.7 -0.5
baz=29,SNR=15
C20A Veseth Ranch, 29.28 358 ⇓P P 01 10 39.9 0.0
baz=29,SNR=13
C22A Vida 29.30 1 ⇓P P 01 10 39.7 -0.3
baz=29
SLMT Seeley Lake 29.34 350 eP P 01 10 40.1 -0.5
C19A Slack Wire Ran 29.35 357 ⇑P P 01 10 40.5 0.0
baz=29
D13A Huson 29.36 349 ⇑P P 01 10 40.4 -0.3
baz=29,SNR=9.3
C23A Lambert 29.37 2 ⇑P P 01 10 40.7 0.0
baz=29
C21A Desert Coulee 29.37 359 ⇑P P 01 10 41.0 +0.3
baz=30
C17A Wharam Farm, 29.38 354 ⇓P P 01 10 40.4 -0.4
baz=30
D12A Red Ives Fores 29.49 348 ⇑P P 01 10 41.1 -0.8
baz=30
BLA Blacksburg 29.64 45 PFAKE 01 11 00.0 +17
BLA LR LR
comp=Z,3µm,22.0s
C16A Fuhringer Ranc 29.65 353 ⇓P P 01 10 43.4 +0.1
baz=30
EGMT Eagleton 29.68 356 eP P 01 10 44.5 +1.0
comp=Z,220nm,2.0s
EGMT LR LR
comp=Z,2µm,19.0s
EGMT Eagleton 29.68 356 ⇑P P 01 10 43.7 +0.2
baz=30
SWMT Swartz Lake 29.68 350 eP P 01 10 44.0 +0.5
C15A Salmond Ranch, 29.73 352 ⇑P P 01 10 44.1 0.0
baz=30
GTBY Guantanamo Bay 29.76 82 PFAKE 01 11 00.0 +16
GTBY LR LR
comp=Z,2µm,22.0s
ACSO Alum Creek Sta 29.80 38 PFAKE 01 11 00.0 +15
ACSO LR LR
comp=Z,2µm,21.0s
B22A Reddig Ranch S 29.85 1 ⇓P P 01 10 45.4 +0.4
baz=30
C14A Swan Lake 29.89 350 ⇓P P 01 10 45.5 +0.1
baz=30
HAWA Hanford 29.91 342 PFAKE 01 11 00.0 +14
HAWA LR LR
comp=Z,4µm,19.0s
MDND Maddock 29.94 9 ⇑P P 01 10 46.3 +0.5
baz=30
C13A Hot Springs 29.94 349 ⇑P P 01 10 45.8 -0.1
baz=30
JTMT Jette 29.96 350 eP P 01 10 45.8 -0.2
B21A Ellsworth Farm 29.97 359 ⇑P P 01 10 46.1 +0.1
baz=30
B20A Solberg Farm, 30.00 358 ⇑P P 01 10 46.1 -0.2
baz=30
B17A L&G Farms, Che 30.03 354 ⇑P P 01 10 46.3 -0.3
baz=30
B23A Brockton 30.04 2 ⇓P P 01 10 46.7 +0.1
baz=30
B18A Beardsley Farm 30.05 356 ⇑P P 01 10 46.4 -0.4
baz=30,SNR=6.4
B19A Brinkman Farms 30.06 357 ⇑P P 01 10 47.0 +0.1
baz=30
DGMT Dagmar 30.08 3 PFAKE 01 11 00.0 +13
DGMT LR LR
comp=Z,3µm,21.0s
DGMT Dagmar 30.08 3 ⇑P P 01 10 46.6 -0.4
baz=30
C12B Naegeli Ranch, 30.14 348 ⇓P P 01 10 47.3 -0.3
baz=30
B16A M & M Farms, S 30.24 353 ⇓P P 01 10 48.3 -0.2
baz=30
B15A Bradely Ranch, 30.25 352 ⇓P P 01 10 48.1 -0.5
baz=30
B14A Marquette Ranc 30.39 351 ⇓P P 01 10 49.4 -0.5
baz=30
C11A Tepee Creek (N 30.43 347 ⇓P P 01 10 49.0 -1.1
baz=30
A20A Cobblestone Ra 30.44 358 ⇓P P 01 10 49.7 -0.5
baz=30
CNNC Cliffs of the 30.48 51 PFAKE 01 11 00.0 +9.4
CNNC LR LR
comp=Z,2µm,22.0s
A19A Klindworth Far 30.52 357 ⇑P P 01 10 50.3 -0.7
baz=31
A21A Bergtoll Ranch 30.54 360 ⇑P P 01 10 51.1 0.0
baz=31
A24A Westby 30.54 3 ⇑P P 01 10 50.5 -0.5
baz=31
A22A Carney Farms, 30.54 1 ⇑P P 01 10 50.3 -0.8
baz=31,SNR=5.4
A18A Metzger Ranch, 30.58 356 ⇓P P 01 10 51.1 -0.3
baz=31
B13A Whitefish 30.60 350 ⇑P P 01 10 51.4 -0.2
baz=31
A17A Triple J Farms 30.67 355 ⇑P P 01 10 51.2 -1.1
baz=31,SNR=8.8
AAM Ann Arbor 30.80 34 PFAKE 01 11 10.0 +17
AAM LR LR
comp=Z,2µm,19.0s
B12A Libby 30.89 348 ⇓P P 01 10 53.9 -0.3
baz=31
A15A Johnson Ranch, 30.93 352 ⇓P P 01 10 54.6 +0.1
baz=31
LON Longmire 30.95 339 eP P 01 10 56.2 +1.5
LON pmax pmax
comp=Z,12nm,1.4s
LON Longmire 30.95 339 eP P 01 10 56.2 +1.5
comp=Z,12nm,1.4s
A14A Double T Ranch 31.01 351 ⇑P P 01 10 54.8 -0.6
baz=31
NEW Newport 31.02 346 eP P 01 10 55.0 -0.3
comp=Z,37nm,1.5s
NEW LR LR
comp=Z,3µm,19.0s
NEW Newport 31.02 346 P P 01 10 53.6 -1.7
comp=Z,2.4nm,0.8s,baz=165,slow=10,SNR=8.2
NEW Newport 31.02 346 ⇑P P 01 10 54.9 -0.3
baz=31
WALA Waterton Lakes 31.17 351 eP P 01 10 58.3 +1.5
COWI Conover 31.19 24 eP P 01 10 56.9 +0.1
comp=Z,42nm,1.6s
COWI LR LR
comp=Z,2µm,19.0s
A12A Yaak River Ran 31.35 348 ⇑P P 01 10 58.2 -0.1
baz=31
EYMN Ely 31.96 19 eP P 01 11 06.1 +2.5
comp=Z,25nm,1.4s
EYMN LR LR

comp=Z,2µm,19.0s
NLWA Neilton Lookou 32.21 338 *e*P **P 01 11 07.2 +1.4**
comp=Z,32nm,1.4s
NLWA LR LR
comp=Z,4µm,19.0s
ERPA Erie 32.74 38 PFAKE 01 11 20.0 +10
ERPA LR LR
comp=Z,1µm,19.0s
ULM Lac du Bonnet 32.93 13 *e*P **P 01 11 15.2 +3.1**
comp=Z,34nm,1.4s
ULM Lac du Bonnet 32.93 13 P **P 01 11 12.6 +0.5**
comp=Z,2.4nm,0.6s,baz=202,slow=9.3,SNR=2.9
ULM LR LR 01 24 50.4
comp=Z,6µm,18.2s,baz=200,slow=37
OTAV Otavalo 33.00 120 *e*P **P 01 11 15.6 +2.0**
comp=Z,56nm,2.8s
OTAV LR LR
comp=Z,2µm,19.0s
SDDR Presa de Saban 33.42 83 PFAKE 01 11 30.0 +13
SDDR LR LR
comp=Z,978nm,22.0s
GRTK Grand Turk 33.44 79 PFAKE 01 11 30.0 +13
GRTK LR LR
comp=Z,1µm,19.0s
SADO Sadowa 34.89 35 P **P 01 11 31.1 +2.0**
SADO Sadowa 34.89 35 P **P 01 11 31.1 +2.0**
comp=Z,3.1nm,0.8s,baz=243,slow=11,SNR=3.7
BINY Binghamton 35.21 41 PFAKE 01 11 40.0 +8.0
BINY LR LR
comp=Z,2µm,21.0s
SDV Santo Domingo 36.13 100 *e*P P 01 11 45.7 +5.3
comp=Z,31nm,1.1s
FFC Flin Flon 36.45 5 *e*P **P 01 11 42.0 -0.4**
FFC pmax pmax
comp=Z,70nm,1.6s
FFC MLR MLR
comp=Z,2µm,19.0s
FFC Flin Flon 36.45 5 *e*P **P 01 11 42.0 -0.4**
comp=Z,70nm,1.6s
FFC LR LR
comp=Z,2µm,19.0s
FFC Flin Flon 36.45 5 P **P 01 11 42.9 +0.5**
comp=Z,64nm,0.9s,SNR=5.2
NCB Newcomb 37.26 40 PFAKE 01 12 00.0 +11
NCB LR LR
comp=Z,2µm,21.0s
LONY Lake Ozonia 37.40 39 PFAKE 01 12 00.0 +9.4
LONY LR LR
comp=Z,2µm,19.0s
ATAH Atahualpa 37.64 130 LR LR 01 22 31.9
comp=Z,526nm,21.1s,baz=313,slow=28
BBB Bella Bella 37.73 338 LR LR 01 27 10.8
comp=Z,3µm,19.7s,baz=155,slow=36
SJG San Juan 38.35 84 PFAKE 01 12 10.0 +11
SJG LR LR
comp=Z,717nm,22.0s
LBNH Lisbon 38.81 41 PFAKE 01 12 10.0 +7.5
LBNH LR LR
comp=Z,2µm,20.0s
BBSR BB Station 40.08 61 PFAKE 01 12 30.0 +17
BBSR LR LR
comp=Z,645nm,19.0s
NNA Nana 42.10 134 PFAKE 01 12 40.0 +10
NNA LR LR
comp=Z,2µm,20.0s
ANWB Willy Bob 42.53 84 PFAKE 01 12 50.0 +16
ANWB LR LR
comp=Z,823nm,21.0s
WRAK Wrangell Islan 42.62 339 PFAKE 01 12 40.0 +6.2
WRAK LR LR
comp=Z,2µm,21.0s
TAOE Nuku Hiva Isla 42.77 234 *e*T T 01 58 00.8
comp=Z,570nm,0.3s
DLBC Dease Lake 43.54 342 *e*P **P 01 12 42.9 +1.6**
DLBC Dease Lake 43.54 342 LR LR 01 31 08.2
comp=Z,5µm,18.9s,baz=145,slow=37
FDF Fort de France 43.63 88 PFAKE 01 12 50.0 +7.4
FDF LR LR
comp=Z,746nm,21.0s
GRGR Grenville 43.71 92 PFAKE 01 13 00.0 +17
GRGR LR LR
comp=Z,564nm,21.0s
BBGH Gun Hill 45.47 89 PFAKE 01 13 10.0 +13
BBGH LR LR
comp=Z,2µm,21.0s
SCHQ Schefferville 47.31 30 *e*P **P 01 13 12.3 +1.1**
comp=Z,9.9nm,1.2s
SCHQ Schefferville 47.31 30 P **P 01 13 11.4 +0.2**
comp=Z,1.7nm,0.9s,baz=237,slow=8.7,SNR=2.7
RKT Rikitea 49.70 215 *e*S **S 01 20 34.7 -4.2**
comp=Z,2µm,17.5s
RKT *e*LQ LQ 01 25 25.5
comp=Z,2µm,18.5s
RKT *e*LR LR 01 27 42.0
comp=Z,4µm,17.8s,baz=32
SAML Samuel 50.72 119 *e*P **P 01 13 38.2 +0.4**
comp=Z,5.7nm,1.2s
SAML LR LR
comp=Z,607nm,20.0s
LPAZ La Paz 51.19 130 LR LR 01 34 04.2
comp=Z,1µm,18.3s,baz=284,slow=34
EGAK Eagle 51.81 342 PFAKE 01 14 00.0 +15
EGAK LR LR
comp=Z,2µm,21.0s
KDAK Kodiak Island 51.82 331 PFAKE 01 14 00.0 +15
KDAK LR LR
comp=Z,1µm,22.0s
OHAK Old Harbor 51.88 330 *e*P **P 01 13 46.5 +0.6**
comp=Z,188nm,1.8s
XMAS Kiritimati 52.39 258 PFAKE 01 14 00.0 +10
XMAS LR LR
comp=Z,2µm,19.0s
INK Inuvik 52.72 348 P **P 01 13 51.0 -1.0**
INK Inuvik 52.72 348 P **P 01 13 51.0 -1.0**
comp=Z,5.7nm,1.0s,baz=133,slow=6.7,SNR=3.2
INK LR LR 01 36 02.6
comp=Z,1µm,18.5s,baz=153,slow=36
ILAR Eielson Array 53.59 340 P **P 01 13 58.0 -0.4**
ILAR Eielson Array 53.59 340 P **P 01 13 58.0 -0.4**
comp=Z,0.9nm,0.8s,baz=141,slow=7.9,SNR=4.7
ILAR LR LR 01 37 14.3
comp=Z,755nm,19.8s,baz=135,slow=37
MCK McKinley 53.63 338 *e*P **P 01 13 59.4 +0.6**
MCK pmax pmax
comp=Z,39nm,1.5s
MCK McKinley 53.63 338 *e*P **P 01 13 59.4 +0.6**
comp=Z,39nm,1.5s
TRF Thorofare Moun 53.95 337 *e*P **P 01 14 03.1 +1.7**
comp=Z,57nm,1.2s
COLA College 53.97 340 PFAKE 01 14 10.0 +8.8
COLA LR LR
comp=Z,837nm,19.0s
LVC Limon Verde 54.93 136 PFAKE 01 14 20.0 +11
LVC LR LR
comp=Z,1µm,20.0s
PPT Papeete 55.34 232 LR LR 01 31 22.8
comp=Z,1µm,19.6s,baz=360,slow=29
PPT2 Papeete2 55.35 232 *e*S **S 01 21 52.7 -4.0**
comp=Z,701nm,24.0s
PPT2 *e*LR LR 01 30 09.6
comp=Z,5µm,27.0s,baz=43
COLD Coldfoot 56.20 341 *e*P **P 01 14 18.9 +1.5**
comp=Z,38nm,1.7s
SIV San Ignacio 56.35 124 P P 01 14 27.7 +8.5
SIV San Ignacio 56.35 124 P P 01 14 27.7 +8.5
comp=Z,2.2nm,0.9s,baz=312,slow=9.6,SNR=5.1
SIV LR LR 01 36 14.0
comp=Z,2µm,20.0s,slow=33
UNV Unalaska Valle 57.68 323 *e*P **P 01 14 28.8 +0.8**
comp=Z,42nm,1.2s
LCO Las Campanas 58.49 143 PFAKE 01 14 50.0 +16
LCO LR LR
comp=Z,875nm,19.0s
TBI Tubuai 58.92 227 *e*S **S 01 22 39.5 -4.0**
comp=Z,2µm,18.5s
TBI *e*LR LR 01 31 59.1
comp=Z,4µm,25.8s,baz=47
SFJD Kangerlussuaq 60.20 22 PFAKE 01 15 00.0 +15
SFJD LR LR
comp=Z,1µm,20.0s
CFAA Coronel Fontan 61.84 143 P P 01 15 02.8 +5.8
CFAA Coronel Fontan 61.84 143 P P 01 15 02.8 +5.8
comp=Z,0.7nm,1.0s,baz=306,slow=5.5,SNR=3.7
MIDW Midway 64.95 293 PFAKE 01 15 30.0 +12
MIDW LR LR
comp=Z,522nm,21.0s
RAR Rarotonga 65.27 235 PFAKE 01 15 30.0 +10
RAR LR LR
comp=Z,2µm,22.0s
CPUP Villa Florida 65.30 132 P P 01 15 26.1 +6.2
CPUP Villa Florida 65.30 132 P P 01 15 26.1 +6.2
comp=Z,1.2nm,0.6s,baz=256,slow=4.2,SNR=2.9
CPUP LR LR 01 43 32.7
comp=Z,808nm,18.4s,baz=302,slow=36
SUMG Summit 66.08 18 *e*P **P 01 15 25.9 +1.1**
SUMG pmax pmax
comp=Z,11nm,0.9s
SUMG Summit 66.08 18 *e*P **P 01 15 25.9 +1.1**
comp=Z,11nm,0.9s
PLCA Paso Flores 67.68 151 *e*P **P 01 15 37.2 +2.2**
comp=Z,64nm,1.9s
PLCA Paso Flores 67.68 151 P P 01 15 41.2 +6.2
comp=Z,5.3nm,1.1s,baz=333,slow=6.6,SNR=4.7
PLCA LR LR 01 39 24.4
comp=Z,2µm,18.5s,baz=280,slow=31
TRQA Tornquist 70.05 144 PFAKE 01 16 00.0 +10
TRQA LR LR
comp=Z,1µm,19.0s
SPB Sao Paulo 71.22 124 PFAKE 01 16 10.0 +13
SPB LR LR
comp=Z,656nm,19.0s
AFI Afiamalu 71.81 248 PFAKE 01 16 10.0 +9.0
AFI LR LR
comp=Z,1µm,20.0s
BILL Bilibino 72.05 337 PFAKE 01 16 10.0 +8.6
BILL LR LR
comp=Z,410nm,22.0s
RCBR Riachuelo 73.69 102 LR LR 01 48 05.8
comp=Z,415nm,20.3s,baz=294,slow=35
KBS Kingsbay 77.30 10 PFAKE 01 16 40.0 +8.3
KBS LR LR
comp=Z,1µm,19.0s
PETK Petropavlovsk- 78.87 322 P **P 01 16 40.5 -0.4**
PETK Petropavlovsk- 78.87 322 P **P 01 16 40.5 -0.4**
PETK Petropavlovsk- 78.87 322 P **P 01 16 40.5 -0.4**
comp=Z,1.2nm,0.4s,baz=72,slow=4.7,SNR=4.9
SACV Santiago Islan 78.90 78 PFAKE 01 16 50.0 +8.2
SACV LR LR
comp=Z,442nm,21.0s
USHA Ushuaia 79.84 159 LR LR 01 45 31.8
comp=Z,2µm,18.2s,baz=98,slow=30
WAKE Wake Island 81.16 287 PFAKE 01 17 10.0 +16
WAKE LR LR
comp=Z,575nm,21.0s
EFI East Falkland 81.58 152 PFAKE 01 17 10.0 +15
EFI LR LR
comp=Z,1µm,20.0s
MSVF Nonsavu 82.30 249 PFAKE 01 17 10.0 +10
MSVF LR LR
comp=Z,1µm,19.0s
ESK Eskdalemuir 82.45 34 PFAKE 01 17 10.0 +10
ESK LR LR
comp=Z,915nm,20.0s
MTE Manteigas 84.94 49 PFAKE 01 17 20.0 +6.8
MTE LR LR
comp=Z,405nm,22.0s
BBTS Babate 85.53 76 LR LR 01 50 07.1
comp=Z,706nm,21.7s,baz=97,slow=32
KEV Kevo 86.22 15 PFAKE 01 17 30.0 +11
KEV LR LR
comp=Z,1µm,19.0s
NOA NORSAR Array B 86.67 26 LR LR 01 57 32.6
comp=Z,408nm,19.2s,baz=300,slow=37
KONO Kongsberg 86.72 27 PFAKE 01 17 30.0 +8.5
KONO LR LR
comp=Z,1µm,22.0s
PAB San Pablo 87.53 49 *e*P P 01 17 30.2 +4.2
comp=Z,31nm,1.3s
PAB LR LR
comp=Z,385nm,21.0s
RTC Rabat Centre 87.65 55 PFAKE 01 17 40.0 +13
RTC LR LR
comp=Z,380nm,19.0s
ESDC Sonseca Array 87.76 49 LR LR 01 54 57.3
comp=Z,284nm,18.3s,baz=300,slow=34
WLF Walferdange 90.02 37 PFAKE 01 17 50.0 +13
WLF LR LR
comp=Z,739nm,20.0s
URZ Urewera 90.93 230 LR LR 01 48 24.2
comp=Z,1µm,21.4s,baz=115,slow=29
SSB Saint Sauveur 91.13 41 PFAKE 01 17 50.0 +7.2
SSB LR LR
comp=Z,574nm,22.0s
ECH Echery 91.31 38 PFAKE 01 18 00.0 +16
ECH LR LR
comp=Z,834nm,19.0s
ASAJ Asahikawa 91.47 318 LR LR 01 51 07.9
comp=Z,367nm,21.9s,baz=46,slow=31
BFO Black Forest 91.93 37 PFAKE 01 18 00.0 +14
BFO LR LR
comp=Z,608nm,20.0s
ERM Erimo 92.06 316 PFAKE 01 18 00.0 +13
ERM LR LR
comp=Z,605nm,21.0s
BNI Bardonecchia 92.57 41 PFAKE 01 18 00.0 +10
BNI LR LR
comp=Z,589nm,19.0s
CLL Collm 92.89 33 *e*SS SS 01 35 12.0 +3.0
CLL *e*SSSS 01 42 12.0
CLL LmV 01 58 00.0
comp=Z,700nm,20.1s
TUE Stuetta 93.47 39 PFAKE 01 18 10.0 +16
TUE LR LR
comp=Z,916nm,22.0s
SNZO South Karori 93.78 228 PFAKE 01 18 10.0 +15
SNZO LR LR
comp=Z,1µm,19.0s
DZM Mont Dzumac 94.04 248 *e*LR LR 01 48 14.6
comp=Z,3µm,26.9s
GERES GERESS Array B 94.66 35 LR LR 02 05 21.4
comp=Z,448nm,18.4s,baz=308,slow=38
VLC Villacollemand 95.31 40 PFAKE 01 18 10.0 +8.0
VLC LR LR
comp=Z,545nm,19.0s
HNR Honiara 96.17 262 PFAKE 01 18 20.0 +14
HNR LR LR
comp=Z,498nm,19.0s
VSL Villasalto 97.08 45 PFAKE 01 18 20.0 +10
VSL LR LR
comp=Z,398nm,20.0s
USRK Ussuriysk Arra 97.95 322 LR LR 01 56 34.8
comp=Z,299nm,19.8s,baz=33,slow=32
MJAR Matsushiro Arr 98.04 313 LR LR 01 52 37.9
comp=Z,574nm,21.6s,baz=75,slow=30
MAJO Matsushiro 98.04 313 PFAKE 01 18 30.0 +15
MAJO LR LR
comp=Z,1µm,22.0s
AQU L'Aquila 98.14 40 PFAKE 01 18 30.0 +15
AQU LR LR
comp=Z,854nm,20.0s
PSZ Piszkesteto 98.51 33 PFAKE 01 18 30.0 +13
PSZ LR LR
comp=Z,664nm,19.0s
KWP Kalwaria Pacla 98.80 31 PFAKE 01 18 30.0 +12
KWP LR LR
comp=Z,652nm,20.0s
DBIC Dimbokro 98.96 80 LR LR 02 06 36.8
comp=Z,316nm,18.3s,baz=264,slow=38
KEST Kesra 98.96 48 LR LR 02 07 44.9
comp=Z,120nm,18.6s,baz=157,slow=38
MDJ Mudanjiang 99.09 323 PFAKE 01 18 30.0 +11
MDJ LR LR
comp=Z,316nm,21.0s
UZH Uzhgorod 99.26 32 *e*P **Pdif 01 18 18.9 -0.8**
CUC Castrocucco 100.97 41 PFAKE 01 18 40.0 +12
CUC LR LR
comp=Z,330nm,19.0s
KIEV Kiev 101.02 27 PFAKE 01 18 40.0 +13
KIEV LR LR
comp=Z,652nm,22.0s
HIA Hailar 101.11 331 PFAKE 01 18 40.0 +12
HIA LR LR
comp=Z,483nm,19.0s
CEL Celeste 102.02 43 PFAKE 01 18 40.0 +7.7
CEL LR LR
comp=Z,269nm,20.0s
TAM Tamanrasset 102.08 61 PFAKE 01 18 40.0 +7.0
TAM LR LR
comp=Z,455nm,21.0s
WDD Wield Dalam 102.46 45 PFAKE 01 18 50.0 +16
WDD LR LR
comp=Z,341nm,20.0s
TIR Tirane 102.63 38 PFAKE 01 18 50.0 +15
TIR LR LR
comp=Z,690nm,19.0s
INCN Inchon 105.21 319 PFAKE 01 23 10.0
INCN LR LR
comp=Z,441nm,20.0s
ULN Ulaanbaatar 107.49 337 PFAKE 01 23 20.0
ULN LR LR
comp=Z,537nm,22.0s
PMG Port Moresby 108.24 266 PFAKE 01 23 20.0
PMG LR LR
comp=Z,566nm,21.0s
BRVK Borovoye 108.81 2 PFAKE 01 23 20.0
BRVK LR LR
comp=Z,1µm,20.0s
SANT Santorini 109.17 39 PFAKE 01 23 20.0
SANT LR LR
comp=Z,276nm,19.0s
BJT Baijiatuau 109.55 326 PFAKE 01 23 20.0
BJT LR LR
comp=Z,549nm,22.0s
ANTO Ankara 110.78 32 PFAKE 01 23 20.0
ANTO LR LR
comp=Z,437nm,21.0s
KURK Kurchatov 111.06 356 PFAKE 01 23 20.0
KURK LR LR
comp=Z,871nm,22.0s
ISP Isparta 111.08 35 PFAKE 01 23 20.0
ISP LR LR
comp=Z,343nm,20.0s
HHC Hu-ho-hao-te 111.24 330 *e*PKP **PKiKP 01 23 11.3 -0.8**
HHC PP **PP 01 23 54.3 +3.7**
HHC PKS **PKSdf 01 26 46.8 -2.0**
HHC SKS **SKSdf 01 30 22.5 -2.1**
HHC SKKS SKKSac 01 30 48.0 -6.8
HHC SS **SS 01 39 23.5 +0.4**
HHC LR LR
comp=N,440nm,20.1s
HHC LR LR
comp=E,640nm,19.0s
HHC LR LR
comp=Z,770nm,18.1s
CTAO Charters Tower 111.73 255 PFAKE 01 23 30.0
CTAO LR LR
comp=Z,574nm,20.0s
CAN Canberra 111.94 239 PFAKE 01 23 30.0
CAN LR LR
comp=Z,646nm,19.0s
NJ2 Nanjing 113.59 319 *e*P **Pdif 01 19 23.3 -0.5**
NJ2 Nanjing 113.59 319 *e*P **Pdif 01 19 23.3 -0.5**
TAU Tasmania Unive 113.95 231 PFAKE 01 23 30.0
TAU LR LR
comp=Z,685nm,19.0s
CSS Prodhromos 114.71 36 PFAKE 01 23 30.0 +11
CSS LR LR
comp=Z,463nm,20.0s
GNI Garni 115.94 24 PFAKE 01 23 30.0 +8.8
GNI LR LR
comp=Z,438nm,20.0s
TATO Taipei 116.37 311 PFAKE 01 23 30.0 +7.9
TATO LR LR
comp=Z,712nm,20.0s
YHNB Yeheng 116.64 311 PFAKE 01 23 40.0 +17
YHNB LR LR
comp=Z,736nm,22.0s
WMQ Urumqi 116.73 348 *e*PKP **PKPdf 01 23 20.0 -2.5**
WMQ LR LR
comp=N,1µm,11.8s
WMQ LR LR
comp=E,450nm,14.0s
WMQ LR LR
comp=Z,410nm,19.6s
LZH Lanzhou 118.65 332 *e*PKP PKPdf 01 23 20.5 -6.0
LZH sPKP 01 23 26.0
LZH LR LR
comp=N,490nm,16.4s
LZH LR LR
comp=E,310nm,13.2s
LZH LR LR
comp=Z,500nm,19.0s
TKM2 Tokmak 2 118.97 358 PFAKE 01 23 40.0 +13
TKM2 LR LR
comp=Z,919nm,19.0s
EKS2 Erkin-Say 119.26 360 PFAKE 01 23 40.0 +13
EKS2 LR LR
comp=Z,1µm,19.0s
AAK Ala-Archa 119.28 359 PFAKE 01 23 40.0 +12
AAK LR LR
comp=Z,1µm,21.0s
ENH Enshi 120.45 324 PFAKE 01 23 40.0 +10
ENH LR LR
comp=Z,502nm,21.0s
DAV Davao City (W) 122.66 291 PFAKE 01 23 50.0 +15
DAV LR LR
comp=Z,161nm,19.0s
WRAB Tennant Creek 122.69 258 PFAKE 01 23 50.0 +16
WRAB LR LR
comp=Z,432nm,20.0s
WRA Warramunga Arr 122.70 258 PKP **PKPdf 01 23 37.1 +2.7**
WRA Warramunga Arr 122.70 258 PKP **PKPdf 01 23 37.1 +2.7**
comp=Z,0.6nm,0.6s,baz=63,slow=1.9,SNR=4.7
CD2 Chengdu 122.97 329 PKP **PKPdf 01 23 34.3 -0.5**
CD2 PP **PP 01 25 16.5 +4.1**
CD2 PKS **PKSdf 01 27 09.8 -1.8**
CD2 SKS **SKSdf 01 30 43.8 -3.4**
CD2 SKKS **SKKSac 01 32 07.3 -5.7**
CD2 SS **SS 01 41 56.0 +0.1**
CD2 AMB AMB
comp=Z,160nm,5.8s
CD2 LR LR
comp=N,430nm,15.7s
CD2 LR LR
comp=E,350nm,14.7s
CD2 LR LR
comp=Z,510nm,15.6s
ASAR Alice Springs 123.63 253 PKP **PKPdf 01 23 40.8 +4.7**
ASAR Alice Springs 123.63 253 PKP **PKPdf 01 23 40.8 +4.7**
comp=Z,0.7nm,0.7s,baz=101,slow=1.9,SNR=3.6
GYA Guiyang 124.96 323 *e*Pdif **Pdif 01 20 12.8 -1.8**
GYA PKP **PKPdf 01 23 38.0 -0.8**
GYA PP **PP 01 25 28.5 +2.4**
GYA PKS **PKSdf 01 27 11.3 -4.4**
GYA SKKS 01 32 20.0
GYA SS **SS 01 42 19.5 -2.1**
GYA AMB AMB
comp=Z,140nm,7.8s
GYA LR LR
comp=N,210nm,23.9s
GYA LR LR
comp=E,180nm,24.1s
GYA LR LR
comp=Z,200nm,22.1s
SYO Syowa Base 125.22 166 *e*P Pdif 01 20 40.0 +26
CASY Casey 126.36 198 PFAKE 01 23 50.0 +10
CASY LR LR
comp=Z,1µm,19.0s
TSUM Tsumeb 127.34 100 PFAKE 01 24 00.0 +17
TSUM LR LR
comp=Z,562nm,20.0s
KMI Kunming 128.18 326 PKP **PKPdf 01 23 47.0 +1.9**
KMI LR LR
comp=N,340nm,18.2s
KMI LR LR
comp=E,160nm,19.9s
KMI LR LR
comp=Z,300nm,22.5s
QIZ Qiongzhong 128.40 314 PFAKE 01 24 00.0 +15
QIZ LR LR
comp=Z,295nm,19.0s
LSA Lhasa 129.23 340 PFAKE 01 24 00.0 +13
LSA LR LR
comp=Z,310nm,19.0s
KKM Kota Kinabalu 131.31 296 PFAKE 01 24 00.0 +8.8
KKM LR LR
comp=Z,132nm,20.0s
KAPI Kappang 132.87 280 PFAKE 01 24 10.0 +16
KAPI LR LR
comp=Z,239nm,21.0s
CHTO Chiang Mai 135.33 324 PFAKE 01 24 10.0 +12
CHTO LR LR
comp=Z,251nm,20.0s
MBWA Marble Bar 136.43 258 PFAKE 01 24 10.0 +10
MBWA LR LR
comp=Z,485nm,20.0s
NWAO Narrogin (SRO) 138.22 241 PFAKE 01 24 20.0 +17
NWAO LR LR

comp=Z,532nm,21.0s
KSM Kuching 138.69 295 PFAKE 01 24 20.0 +15
KSM LR LR
comp=Z,162nm,20.0s
KMBO Kilima Mbogo 140.60 68 PFAKE 01 24 20.0 +11
KMBO LR LR
comp=Z,447nm,20.0s
ABPO Ambohimpanom 155.20 96 PFAKE 01 24 40.0 +7.9
ABPO LR LR
comp=Z,443nm,19.0s
MSEY Mahe Island 157.81 54 PFAKE 01 24 50.0 +15
MSEY LR LR
comp=Z,429nm,21.0s

*IDC **29** 01:14:56.2±0.6,9.°14N×122.°06E,h0km,mb4.1/21, mb1 4.2/21,mb1mx4.2/31,mbtmp4.1/21,MS4.4/5, Ms1 4.4/5,ms1mx3.7/36,Error ellipse: s-maj=32.7km s-min=12.7km az=66.0*
*MAN **29** 01:14:58,9.°19N×121.°90E,h32km,mb5.5,ML4.5,MS4.8*
*ISCJB **29** 01:15:00.1±0.2,9.°12N±0.°03×122.°03E±0.°03,h37km, mb4.4/43,MS4.4/9,Error ellipse: s-maj=4.0km s-min=3.9km az=172.1*
*NEIC **29** 01:15:02.0±0.8,9.°17N×121.°99E,h37km±7km,mb4.6/15, Error ellipse: s-maj=9.0km s-min=5.2km az=64.0*
*DJA **29** 01:15:05.9±4.0,9.°N±7.°×12.°1E±.°,h12km±29km,M4.5/9, mB6.5/1,mb4.5/9,MLv4.5/2,Mw(mB)6.3/1*
ISC 29 01:15:01.5±0.3,9.°11N±0.°03×122.°05E±0.°04,h37km,n140, σ1§84/167,mb4.5/43,MS4.4/9,3C-3D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**1.19**	**79**	⇓*e*P	Pn	01 15 05.9	-16
SNPH				*i* S	Sn	01 15 27.5	-9.1
IPIL	**Ipil**	**1.41**	**159**	*e*P	**Pn**	**01 15 23.4**	**-1.3**
PAGZ	**Pagadian**	**1.82**	**134**	*e*P	**Pn**	**01 15 30.3**	**+0.1**
TBP	**Tagbilaran**	**1.87**	**72**	*e*P	**Pn**	**01 15 30.6**	**-0.5**
LLP	**Lapu-Lapu**	**2.23**	**57**	*e*P	**Pn**	**01 15 35.1**	**-0.8**
LLP				*e*S	**Sn**	**01 16 02.2**	**0.0**
RCP	**Roxas**	**2.52**	**16**	⇑*e*P	**Pn**	**01 15 37.9**	**-2.1**
RCP				*e*S	**Sn**	**01 16 10.1**	**+0.5**
CGP	**Cagayan de Oro**	**2.69**	**104**	⇓*e*P	**Pn**	**01 15 43.5**	**+1.3**
CTBH	**Cotabato--PC H**	**2.87**	**131**	⇓*i*P	**Pn**	**01 15 45.1**	**+0.4**
MSLP	**Maasin**	**2.95**	**70**	*e*P	**Pn**	**01 15 46.5**	**+0.7**
OCLP	**Ormoc**	**3.17**	**52**	*e*P	**Pn**	**01 15 48.5**	**-0.3**
OTRP	**Odiongan**	**3.23**	**359**	*e*P	**Pn**	**01 15 47.3**	**-2.4**
SJMP	**San Jose**	**3.45**	**345**	*e*P	Pn	01 15 49.4	-3.3
PLP	**Palo**	**3.53**	**54**	⇑*i*P	**Pn**	**01 15 52.8**	**-1.0**
DAV	**Davao City (W)**	**4.04**	**120**	Pn	**Pn**	**01 16 02.9**	**+2.1**
DAV	**Davao City (W)** 89nm,0.3s,baz=66,slow=12,SNR=2.6	**4.04**	**120**	Pn	**Pn**	**01 16 02.9**	**+2.1**
DAV				LR	LR	01 17 56.7	
	comp=Z,7μm,19.8s,baz=82,slow=45						
CNP	**Catarman**	**4.24**	**37**	*e*P	**Pn**	**01 16 02.4**	**-1.2**
TGY	**Tagaytay City**	**5.08**	**348**	Pn	**Pn**	**01 16 16.2**	**+1.0**
TGY	**Tagaytay City** 50nm,0.3s,baz=162,slow=14,SNR=3.1	**5.08**	**348**	Pn	**Pn**	**01 16 16.2**	**+1.0**
MYLDM	**Lahad Datu**	**5.26**	**222**	P	**Pn**	**01 16 18.2**	**+0.6**
MYLDM	**Lahad Datu**	**5.26**	**222**	P	**Pn**	**01 16 18.5**	**+0.9**
KDM	**Kudat**	**5.61**	**247**	P	**Pn**	**01 16 23.0**	**+0.6**
SDKM	**Sandakan**	**5.93**	**235**	P	**Pn**	**01 16 25.8**	**-0.9**
TSM	**Tawau**	**6.34**	**221**	P	**Pn**	**01 16 32.4**	**0.0**
KKM	**Kota Kinabalu**	**6.54**	**243**	*e*Pn	**Pn**	**01 16 35.4**	**+0.1**
KKM	**Kota Kinabalu**	**6.54**	**243**	P	**Pn**	**01 16 34.4**	**-0.9**
KKM	**Kota Kinabalu** 52nm,1.0s,0.2nm	**6.54**	**243**	P	Pn	01 16 31.7	-3.6
LBMI	**Labuha**	**11.10**	**150**	P	Pn	01 17 54.5	+17
SBUM	**Sibu**	**11.81**	**236**	P	**Pn**	**01 17 46.8**	**-0.6**
SBUM	**Sibu** 14nm,1.0s	**11.81**	**236**	P	**Pn**	**01 17 48.2**	**+0.8**
KSM	**Kuching**	**13.94**	**238**	P	**Pn**	**01 18 15.9**	**-0.6**
KSM	**Kuching**	**13.94**	**238**	P	P	01 18 30.3	+6.3
TPUB	**Ta-pu**	**14.17**	**355**	*e*Pn	**Pn**	**01 18 18.7**	**-1.1**
KAPI	**Kappang**	**14.22**	**189**	*e*Pn	**Pn**	**01 18 18.3**	**-2.1**
KAPI	**Kappang**	**14.22**	**189**	P	P	01 18 32.7	+5.5
KAPI	**Kappang** 0.7nm,0.3s,baz=49,slow=15,SNR=2.3	**14.22**	**189**	Pn	**P**	**01 18 24.6**	**-2.6**
QIZ	**Qiongzhong**	**15.40**	**311**	P	**Pn**	**01 18 36.3**	**+0.1**
QIZ				S	**Sn**	**01 21 26.5**	**+0.8**
QIZ	**Qiongzhong**	**15.40**	**311**	P	**Pn**	**01 18 36.3**	**+0.1**
QIZ				S	**Sn**	**01 21 26.5**	**+0.8**
FAKI	**Fak Fak** 65nm,1.0s	**15.69**	**139**	P	P	01 18 49.3	+5.8
UBPT	**Khong Chiam** 31nm,1.0s	**17.32**	**292**	P	**Pn**	**01 19 01.0**	**+0.4**
MYKOM	**Kota Tinggi**	**19.52**	**249**	P	**Pn**	**01 19 30.6**	**+3.3**
KGM	**Kluang**	**19.92**	**250**	P	**Pn**	**01 19 35.7**	**+3.6**
BJII	**Banjamegara** 75nm,1.5s	**20.45**	**217**	P	Pn	01 19 40.1	+1.7
IPM	**Ipoh**	**21.38**	**259**	*e*P	**P**	**01 19 46.3**	**+0.3**
KULM	**Kulim** 36nm,1.2s	**21.57**	**261**	*e*P	**P**	**01 19 46.0**	**-2.1**
PBKT	**Sadao Pong** 11nm,1.2s	**21.84**	**292**	P	**P**	**01 19 51.7**	**+0.8**
JAY	**Jayapura** 131nm,0.7s,18μm	**21.88**	**121**	P	P	01 20 05.3	+14
GYA	**Guiyang**	**22.59**	**322**	*e*P	**P**	**01 20 01.5**	**+2.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA	**Guiyang**	**22.59**	**322**	*e*P	**P**	**01 20 01.5**	**+2.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2	**Nanjing**	**23.02**	**353**	*e*P	**P**	**01 20 06.0**	**+2.7**
NJ2				pP	**pP**	**01 20 08.3**	**-4.8**
NJ2				sP	sP	01 20 11.5	-6.2
NJ2				S	**S**	**01 24 15.5**	**+4.1**
NJ2				sS	sS	01 24 22.0	-6.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,360nm,8.5s						
NJ2				LR	LR		
	comp=N,800nm,17.9s						
NJ2				LR	LR		
	comp=E,630nm,20.2s						
NJ2				LR	LR		
	comp=Z,620nm,12.7s						
NJ2	**Nanjing**	**23.02**	**353**	*e*P	**P**	**01 20 06.0**	**+2.7**
NJ2				pP	**pP**	**01 20 08.3**	**-4.8**
NJ2				sP	sP	01 20 11.5	-6.2
NJ2				S	**S**	**01 24 15.5**	**+4.1**
NJ2				sS	sS	01 24 22.0	-6.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,360nm,8.5s						
NJ2				LR	LR		
	comp=N,800nm,17.9s						
NJ2				LR	LR		
	comp=E,630nm,20.2s						
NJ2				LR	LR		
	comp=Z,620nm,12.7s						
ENH	**Enshi**	**24.11**	**333**	*e*P	**P**	**01 20 13.2**	**-0.7**
	comp=Z,6.3nm,0.4s						
CMAR	**Chiang Mai Arr**	**24.27**	**295**	P	**P**	**01 20 15.4**	**0.0**
CMAR	**Chiang Mai Arr**	**24.27**	**295**	P	**P**	**01 20 15.4**	**0.0**
	comp=Z,7.3nm,1.0s,baz=121,slow=8.2,SNR=24						
CMAR				LR	LR	01 29 58.9	
	comp=Z,801nm,19.3s,baz=145,slow=37						
KMI	**Kunming**	**24.32**	**313**	P	**P**	**01 20 17.3**	**+1.2**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI	**Kunming**	**24.32**	**313**	P	**P**	**01 20 17.3**	**+1.2**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
CMMT	**Chiang Mai**	**24.38**	**296**	P	**P**	**01 20 16.6**	**+0.1**
	comp=Z,14nm,1.7s						
CHTO	**Chiang Mai**	**24.38**	**296**	*e*P	**P**	**01 20 16.0**	**-0.6**
	comp=Z,23nm,1.3s						
CHTO	**Chiang Mai**	**24.38**	**296**	P	**P**	**01 20 15.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**27.27**	**173**	*e*P	**P**	**01 20 43.4**	**+0.9**
FITZ	**Fitzroy Crossi**	**27.27**	**173**	P	**P**	**01 20 43.5**	**+0.9**
	comp=Z,2.0nm,0.7s,baz=342,slow=9.6,SNR=3.9						
CD2	**Chengdu**	**27.59**	**324**	P	**P**	**01 20 47.0**	**+1.6**
CD2				pP	**pP**	**01 20 54.3**	**-1.5**
CD2				sP	**sP**	**01 20 58.0**	**-2.3**
CD2				PP	**PnPn**	**01 21 35.3**	**+3.8**
CD2				PcP	**PcP**	**01 24 04.5**	**+1.9**
CD2				S	**S**	**01 25 25.0**	**+0.5**
CD2				sS	**sS**	**01 25 37.3**	**-4.6**
CD2				SS	**SnSn**	**01 26 43.8**	**+6.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2	**Chengdu**	**27.59**	**324**	P	**P**	**01 20 47.0**	**+1.6**
CD2				pP	**pP**	**01 20 54.3**	**-1.5**
CD2				sP	**sP**	**01 20 58.0**	**-2.3**
CD2				PP	**PnPn**	**01 21 35.3**	**+3.8**
CD2				PcP	**PcP**	**01 24 04.5**	**+1.9**
CD2				S	**S**	**01 25 25.0**	**+0.5**
CD2				sS	**sS**	**01 25 37.3**	**-4.6**
CD2				SS	**SnSn**	**01 26 43.8**	**+6.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
JHJ	**Hachijo jima 2**	**28.96**	**32**	LR	LR	01 31 58.2	
	comp=Z,455nm,20.0s,baz=18,slow=35						
PMG	**Port Moresby**	**31.04**	**126**	LR	LR	01 33 56.6	
	comp=Z,296nm,19.4s,baz=117,slow=37						
WRAB	**Tennant Creek**	**31.30**	**157**	*e*P	**P**	**01 21 21.0**	**+2.7**
	comp=Z,58nm,2.0s						
WRA	**Warramunga Arr**	**31.30**	**157**	P	**P**	**01 21 17.6**	**-0.8**
WRA	**Warramunga Arr**	**31.30**	**157**	P	**P**	**01 21 17.6**	**-0.8**
	comp=Z,3.3nm,0.9s,baz=336,slow=9.8,SNR=5.8						
LZH	**Lanzhou**	**31.56**	**331**	*e*P	P	01 21 26.3	+5.7
LZH				pP	pP	01 21 33.0	+1.8
LZH				sP	sP	01 21 37.5	+1.9
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				LR	LR		
	comp=N,630nm,11.8s						
LZH				LR	LR		
	comp=E,720nm,13.6s						
LZH				LR	LR		
	comp=Z,830nm,20.7s						
LZH	**Lanzhou**	**31.56**	**331**	*e*P	P	01 21 26.3	+5.7
LZH				pP	pP	01 21 33.0	+1.8
LZH				sP	sP	01 21 37.5	+1.9
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				LR	LR		
	comp=N,630nm,11.8s						
LZH				LR	LR		
	comp=E,720nm,13.6s						
LZH				LR	LR		
	comp=Z,830nm,20.7s						
HHC	**Hu-ho-hao-te**	**32.95**	**345**	*e*P	**P**	**01 21 34.0**	**+1.3**
HHC				pP	**pP**	**01 21 43.5**	**+0.2**
HHC				sP	**sP**	**01 21 47.5**	**-0.2**
HHC				PP	**PnPn**	**01 22 44.5**	**+2.0**
HHC				S	**S**	**01 26 50.0**	**+1.5**
HHC				sS	**sS**	**01 27 05.3**	**-0.6**
HHC				SS	**SnSn**	**01 28 49.0**	**+1.1**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,390nm,6.1s						
HHC				LR	LR		
	comp=N,840nm,13.1s						
HHC				LR	LR		
	comp=E,2μm,17.6s						
HHC				LR	LR		
	comp=Z,1μm,16.2s						
HHC	**Hu-ho-hao-te**	**32.95**	**345**	*e*P	**P**	**01 21 34.0**	**+1.3**
HHC				pP	**pP**	**01 21 43.5**	**+0.2**
HHC				sP	**sP**	**01 21 47.5**	**-0.2**
HHC				PP	**PnPn**	**01 22 44.5**	**+2.0**
HHC				S	**S**	**01 26 50.0**	**+1.5**
HHC				sS	**sS**	**01 27 05.3**	**-0.6**
HHC				SS	**SnSn**	**01 28 49.0**	**+1.1**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,390nm,6.1s						
HHC				LR	LR		
	comp=N,840nm,13.1s						
HHC				LR	LR		
	comp=E,2μm,17.6s						
HHC				LR	LR		
	comp=Z,1μm,16.2s						
AS31	**Alice Springs**	**34.58**	**161**	*e*P	**P**	**01 21 48.1**	**+1.2**
ASAR	**Alice Springs**	**34.58**	**161**	P	**P**	**01 21 47.2**	**+0.3**
ASAR	**Alice Springs**	**34.58**	**161**	P	**P**	**01 21 47.2**	**+0.3**
	comp=Z,1.7nm,0.4s,baz=340,slow=6.8,SNR=19						
CN2	**Changchun**	**34.68**	**4**	*e*P	**P**	**01 21 50.3**	**+2.7**
CN2	**Changchun**	**34.68**	**4**	*e*P	**P**	**01 21 50.3**	**+2.7**
USRK	**Ussuriysk Arra**	**36.01**	**12**	P	**P**	**01 21 59.7**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=189,slow=7.3,SNR=3.7						
GTA	**Gaotai**	**36.13**	**330**	*e*P	**P**	**01 22 00.8**	**+0.5**
GTA				pP	**pP**	**01 22 08.0**	**-3.0**
GTA				sP	**sP**	**01 22 11.5**	**-3.9**
GTA				S	**S**	**01 27 38.5**	**+0.8**
GTA				sS	sS	01 27 49.5	-5.7
GTA				SS	**SnSn**	**01 30 01.3**	**-3.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,150nm,5.2s						
GTA				LR	LR		
	comp=N,410nm,14.7s						
GTA				LR	LR		
	comp=E,650nm,16.6s						
GTA				LR	LR		
	comp=Z,710nm,16.9s						
GTA	**Gaotai**	**36.13**	**330**	*e*P	**P**	**01 22 00.8**	**+0.5**
GTA				pP	**pP**	**01 22 08.0**	**-3.0**
GTA				sP	**sP**	**01 22 11.5**	**-3.9**
GTA				S	**S**	**01 27 38.5**	**+0.8**
GTA				sS	sS	01 27 49.5	-5.7
GTA				SS	**SnSn**	**01 30 01.3**	**-3.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,150nm,5.2s						
GTA				LR	LR		
	comp=N,410nm,14.7s						
GTA				LR	LR		
	comp=E,650nm,16.6s						
GTA				LR	LR		
	comp=Z,710nm,16.9s						
FORT	**Forrest**	**40.08**	**172**	*e*P	**P**	**01 22 35.4**	**+1.9**
	comp=Z,25nm,0.7s						
ULN	**Ulaanbaatar**	**40.66**	**344**	*e*P	**P**	**01 22 38.0**	**-0.2**
SONM	**Songino Array**	**40.81**	**344**	P	**P**	**01 22 38.0**	**-1.4**
SONM	**Songino Array**	**40.81**	**344**	P	**P**	**01 22 38.0**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=165,slow=7.4,SNR=3.6						
BBOO	**Buckleboo**	**43.77**	**163**	*e*P	**P**	**01 23 04.5**	**+0.9**
	comp=Z,476nm,1.2s						
STKA	**Stephens Creek**	**44.84**	**156**	*e*P	**P**	**01 23 13.6**	**+1.5**
	comp=Z,2.5nm,1.0s						
STKA	**Stephens Creek**	**44.84**	**156**	P	**P**	**01 23 12.4**	**+0.3**
	comp=Z,7.4nm,1.0s,baz=336,slow=9.2,SNR=7.1						
WMQ	**Urumqi**	**45.68**	**325**	*e*P	**P**	**01 23 19.0**	**+0.2**
WMQ				LR	LR		
	comp=N,520nm,24.2s						
WMQ				LR	LR		
	comp=E,320nm,25.4s						
WMQ				LR	LR		
	comp=Z,640nm,24.4s

*IDC **29** 01:26:34.4±0.8, 52°.42N×167°.28W, h0km, mb4.1/22, mb1 4.3/23, mb1mx4.2/34, mbtmp4.1/23, ML3.8/1, Error ellipse: s-maj=22.6km s-min=14.1km az=178.0*
*ISCJB **29** 01:26:35.6±1.0, 52°.28N±0°.04×167°.18W±0°.04, h20km±6km, mb4.2/57, MS4.4/1, Error ellipse: s-maj=6.3km s-min=4.2km az=161.2*
*BJI **29** 01:26:37.4, 53°.41N×167°.59W, h10km, mB4.8/1, mb4.7/8, Ms4.6/3, Ms7 4.3/2*
*NEIC **29** 01:26:37.3, 52°.22N×167°.13W, h19km, mb4.2/34, ML4.0(AEIC), After AEIC.*

ISC 29 01:26:36.1±0.8, 52°.39N±0°.05×167°.18W±0°.04, h10km±3km, n151, σ1$2 1/21/167, mb4.3/57, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OKSP	**Okmok Steeple**	**1.10**	**323**	P		**Pn**	**01 26 58.1**	**+0.5**
OKFG	**Magazine Ridge**	**1.12**	**337**	P		**Pn**	**01 26 58.2**	**+0.4**
OKFG				S		**Sn**	**01 27 14.7**	**+1.4**
OKSO	**Okmok South**	**1.14**	**329**	P		**Pn**	**01 26 58.3**	**+0.2**
OKSO				S		**Sn**	**01 27 14.6**	**+0.7**
OKCE	**Okmok Cone E**	**1.20**	**331**	P		**Pg**	**01 26 59.6**	**+0.4**
OKCE				S		**Sn**	**01 27 17.6**	**+2.2**
MGOD	**Makushin Gods**	**1.42**	**7**	P		**Pb**	**01 27 02.6**	**-0.2**
MREP	**Makushin Rep't**	**1.45**	**10**	P		**Pb**	**01 27 03.4**	**+0.1**
UNV	**Unalaska Valle**	**1.52**	**15**	P		**Pn**	**01 27 03.1**	**-0.2**
UNV				S		**Sn**	**01 27 23.3**	**+0.1**
MCIR	**Makushin Cirqu**	**1.58**	**6**	P		**Pb**	**01 27 05.5**	**0.0**
MTBL	**Makushin Table**	**1.61**	**11**	P		**Pb**	**01 27 05.6**	**-0.5**
AKRB	**Akutan Reef Bi**	**1.87**	**21**	P		**Pn**	**01 27 09.0**	**+0.8**
AKRB				S		**Sb**	**01 27 33.7**	**-0.2**
AKLV	**Akutan Long Va**	**1.93**	**22**	P		**Pn**	**01 27 09.2**	**+0.2**
AKLV				S		**Sn**	**01 27 34.1**	**+0.8**
AKUT	**Akutan**	**1.95**	**25**	P		**Pn**	**01 27 09.4**	**+0.1**
AKUT				S		**Sn**	**01 27 34.4**	**+0.7**
AKGG	**Akutan Green G**	**1.95**	**21**	P		**Pn**	**01 27 09.8**	**+0.4**
SSLW	**Shishaldin Wes**	**3.01**	**36**	P		**Pn**	**01 27 24.7**	**+0.8**
FALS	**False Pass**	**3.34**	**41**	P		**Pn**	**01 27 29.0**	**+0.6**
FALS				S		**Sn**	**01 28 08.4**	**+0.3**
DRIA	**Deer Island**	**3.90**	**47**	P		**Pn**	**01 27 36.5**	**+0.3**
DT1	**Dutton Round H**	**3.99**	**45**	P		**Pn**	**01 27 37.9**	**+0.6**
KOSE	**Korovin Southe**	**4.21**	**272**	P		**Pn**	**01 27 40.7**	**+0.3**
KOFP	**Korovin Flat P**	**4.24**	**271**	P		**Pn**	**01 27 41.4**	**+0.6**
ATKA	**Atka Island**	**4.31**	**270**	P		**Pn**	**01 27 42.0**	**+0.3**
SDPT	**Sand Point**	**4.96**	**51**	P		**Pn**	**01 27 50.7**	**+0.2**
SPIA	**Saint Paul Isl**	**5.12**	**341**	P		**Pn**	**01 27 54.7**	**+1.9**
VNHG	**Veniaminof 1**	**6.07**	**48**	P		**Pn**	**01 28 06.8**	**+0.9**
CHGN	**Chignik**	**6.45**	**49**	*e*Pn		**Pn**	**01 28 11.1**	**0.0**
CHGN				*e*Sn		**Sn**	**01 29 21.4**	**-3.3**
CERAA	**Semis' Rag'd T**	**8.10**	**272**	P		**Pn**	**01 28 33.5**	**-0.1**
CEAP	**Semis' Anvil P**	**8.15**	**273**	P		**Pn**	**01 28 34.2**	**-0.2**
AMKA	**Amchitka**	**8.43**	**268**	P		**Pn**	**01 28 37.8**	**-0.4**
LSSA	**Little Sitkin**	**8.81**	**273**	P		**Pn**	**01 28 42.8**	**-0.6**
KABR	**Katmai Barrier**	**9.04**	**46**	P		**Pn**	**01 28 46.6**	**0.0**
OHAK	**Old Harbor**	**9.37**	**53**	P		**Pn**	**01 28 49.3**	**-1.7**
KDAK	**Kodiak Island**	**9.96**	**51**	P		**Pn**	**01 28 56.9**	**-2.2**
KDAK	**Kodiak Island**	**9.96**	**51**	P		**Pn**	**01 28 57.8**	**-1.3**
	2.9nm,0.3s,baz=249,slow=12,SNR=42							
KDAK				Sn		Sn	01 30 42.4	-8.4
	0.2nm,0.3s,baz=323,slow=20,SNR=3.1							
PPLA	**Purkeypile**	**13.20**	**31**	*e*Pn		**Pn**	**01 29 42.1**	**-1.5**
	22nm,1.0s							
DIV	**Divide**	**14.58**	**45**	*e*Pn		**Pn**	**01 29 59.2**	**-3.2**
	8.0nm,0.6s							
MCK	**McKinley**	**14.84**	**33**	*e*Pn		**Pn**	**01 30 04.5**	**-1.4**
	4.5nm,0.8s							
PAX	**Paxson**	**15.63**	**39**	*e*Pn		**Pn**	**01 30 14.2**	**-2.1**
	7.1nm,0.7s							
COLA	**College**	**15.96**	**31**	*e*Pn		**Pn**	**01 30 19.9**	**-0.6**
ILAR	**Eielson Array**	**16.20**	**32**	Pn		**Pn**	**01 30 20.9**	**-2.8**
ILAR	**Eielson Array**	**16.20**	**32**	Pn		**Pn**	**01 30 20.9**	**-2.8**
	0.2nm,0.3s,baz=227,slow=12,SNR=12							
DOT	**Dot Lake**	**16.53**	**38**	*e*Pn		**Pn**	**01 30 27.0**	**-0.8**
	4.7nm,0.8s							
PNL	**Peninsula**	**17.05**	**54**	*e*Pn		**Pn**	**01 30 34.1**	**-0.4**
	23nm,0.9s							
COLD	**Coldfoot**	**17.06**	**23**	*e*Pn		**P**	**01 30 35.6**	**-0.6**
	11nm,0.7s							
EGAK	**Eagle**	**18.21**	**37**	*e*P		**Pn**	**01 30 48.5**	**-0.2**
	5.5nm,0.7s							
SKAG	**Skagway**	**19.05**	**56**	*e*P		**Pn**	**01 31 00.6**	**+1.6**
	22nm,0.9s							
BILL	**Bilibino**	**20.22**	**331**	*e*P		**P**	**01 31 11.0**	**+0.1**
	10nm,0.8s							
PETK	**Petropavlovsk-**	**21.15**	**286**	P		**P**	**01 31 20.1**	**-0.9**
PETK	**Petropavlovsk-**	**21.15**	**286**	P		**P**	**01 31 20.1**	**-0.9**
	9.1nm,1.0s,baz=93,slow=12,SNR=2.6							
DLBC	**Dease Lake**	**21.73**	**59**	*e*P		**P**	**01 31 31.7**	**+4.4**
DLBC	**Dease Lake**	**21.73**	**59**	P		**P**	**01 31 26.9**	**-0.4**
	3.4nm,0.6s,baz=270,slow=11,SNR=6.9							
INK	**Inuvik**	**22.61**	**32**	P		**P**	**01 31 35.1**	**-1.4**
INK	**Inuvik**	**22.61**	**32**	P		**P**	**01 31 35.1**	**-1.4**
	6.1nm,0.6s,baz=243,slow=9.4,SNR=21							
YKA	**Yellowknife Ar**	**29.22**	**49**	P		**P**	**01 32 36.8**	**-0.8**
YKA	**Yellowknife Ar**	**29.22**	**49**	P		**P**	**01 32 36.8**	**-0.8**
	1.3nm,0.6s,baz=272,slow=7.7,SNR=22							
NEW	**Newport**	**31.70**	**77**	*e*P		**P**	**01 32 59.6**	**-0.2**
	2.1nm,0.7s							
WVOR	**Wild Horse Val**	**33.74**	**87**	*e*P		**P**	**01 33 18.8**	**+1.0**
	4.5nm,0.9s							
MCMT	**McKenzie Canyo**	**35.96**	**80**	*e*P		**P**	**01 33 37.3**	**+0.3**
	1.2nm,0.9s							
BOZ	**Bozeman (W)**	**36.26**	**78**	*e*P		**P**	**01 33 39.9**	**+0.4**
	1.8nm,1.1s							
NVAR	**Mina Array Bea**	**36.33**	**93**	P		**P**	**01 33 41.4**	**+1.2**
NVAR	**Mina Array Bea**	**36.33**	**93**	P		**P**	**01 33 41.4**	**+1.2**
	1.7nm,0.7s,baz=302,slow=8.4,SNR=9.9							
ELK	**Elko**	**36.79**	**87**	*e*P		**P**	**01 33 44.9**	**+0.7**
	1.8nm,0.8s							
TPAW	**Teton Pass**	**37.83**	**81**	*e*P		**P**	**01 33 53.1**	**+0.1**
	1.6nm,0.9s							
HWUT	**Hardware Ranch**	**38.53**	**83**	*e*P		**P**	**01 33 58.6**	**-0.2**
	1.8nm,0.8s							
DUG	**Dugway**	**38.61**	**86**	*e*P		**P**	**01 33 58.3**	**-1.1**
	2.4nm,1.0s							
BW06	**Boulder Array**	**39.08**	**81**	*e*P		**P**	**01 34 03.6**	**+0.1**
	3.3nm,1.1s							
PDAR	**Pinedale Array**	**39.08**	**81**	P		**P**	**01 34 04.0**	**+0.5**
PDAR	**Pinedale Array**	**39.08**	**81**	P		**P**	**01 34 04.0**	**+0.5**
	2.3nm,0.8s,baz=297,slow=4.8,SNR=13							
GSC	**Goldstone**	**39.26**	**95**	*e*P		**P**	**01 34 05.9**	**+1.0**
	7.3nm,0.9s							
RSSD	**Black Hills**	**41.62**	**75**	*e*P		**P**	**01 34 24.4**	**0.0**
	1.2nm,0.6s							
MVCO	**Mesa Verde**	**43.10**	**87**	*e*P		**P**	**01 34 37.0**	**+0.4**
	6.7nm,0.6s							
CN2	**Changchun**	**44.29**	**287**	*e*P		**P**	**01 34 47.3**	**+1.5**
SDCO	**Great Sand Dun**	**44.59**	**84**	*e*P		**P**	**01 34 49.0**	**+0.4**
	1.4nm,0.8s							
BNM	**Barren Site**	**46.26**	**88**	*e*P		**P**	**01 35 02.2**	**+0.4**
MNTX	**Cornudas Mount**	**48.70**	**90**	*e*P		**P**	**01 35 21.5**	**+0.9**
	1.4nm,1.2s							
AMTX	**Amarillo**	**48.79**	**84**	*e*P		**P**	**01 35 21.0**	**-0.3**
	5.8nm,0.9s							
WMOK	**Wichita Mounta**	**50.65**	**82**	*e*P		**P**	**01 35 35.0**	**-0.5**
	2.2nm,0.8s							
TXAR	**Lajitas Array**	**51.41**	**91**	P		**P**	**01 35 41.3**	**+0.1**
TXAR	**Lajitas Array**	**51.41**	**91**	P		**P**	**01 35 41.3**	**+0.1**
	1.2nm,0.8s,baz=317,slow=6.2,SNR=6.7							
ULN	**Ulaanbaatar**	**52.07**	**302**	*e*P		**P**	**01 35 45.5**	**-0.5**
	2.1nm,0.6s							
SONM	**Songino Array**	**52.43**	**302**	P		**P**	**01 35 48.8**	**+0.1**
SONM	**Songino Array**	**52.43**	**302**	P		**P**	**01 35 48.8**	**+0.1**
	0.9nm,0.6s,baz=76,slow=6.1,SNR=3.3							
HHC	**Hu-ho-hao-te**	**54.16**	**292**	*e*P		**P**	**01 35 59.8**	**-1.7**
HHC				pP		**pP**	**01 36 04.5**	**0.0**
HHC				sP		**sP**	**01 36 07.0**	**+1.3**
HHC				PP		**PP**	**01 38 03.8**	**+1.0**
HHC				S		**S**	**01 43 33.8**	**-4.4**
HHC				sS		**sS**	**01 43 41.5**	**-1.8**
HHC				SS		**SKiKP**	**01 47 14.5**	**+1.6**
HHC				pmax		pmax		
	comp=Z,38nm,0.8s							
HHC				LR		LR		
	comp=N,250nm,17.1s							
HHC				LR		LR		
	comp=E,240nm,17.1s							
HHC				LR		LR		
	comp=Z,230nm,17.6s							
SCHQ	**Schefferville**	**54.49**	**44**	P		**P**	**01 36 03.1**	**-0.5**
SCHQ	**Schefferville**	**54.49**	**44**	P		**P**	**01 36 03.1**	**-0.5**
	comp=Z,3.4nm,0.9s,baz=286,slow=11,SNR=5.9							
ARCES	**ARCESS Array B**	**58.04**	**355**	P		**P**	**01 36 28.5**	**-0.2**
ARCES	**ARCESS Array B**	**58.04**	**355**	P		**P**	**01 36 28.5**	**-0.2**
	comp=Z,4.5nm,0.7s,baz=17,slow=6.6,SNR=6.3							
ZALV	**Zalesovo Beam**	**58.30**	**319**	P		**P**	**01 36 29.9**	**-0.8**
ZALV	**Zalesovo Beam**	**58.30**	**319**	P		**P**	**01 36 29.9**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=46,slow=7.3,SNR=3.4							
KURK	**Kurchatov**	**63.24**	**320**	*e*P		**P**	**01 37 03.9**	**-0.4**
	comp=Z,3.4nm,0.5s							
KURBB	**Kurchatov Arra**	**63.35**	**319**	P		**P**	**01 37 04.4**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=47,slow=7.2,SNR=12							
JOF	**Joensuu**	**64.12**	**351**	*e*p		**P**	**01 37 10.5**	**+0.6**
	comp=Z,2.0nm,0.6s							
BRVK	**Borovoye**	**64.47**	**326**	*e*P		**P**	**01 37 11.6**	**-0.8**
	comp=Z,4.8nm,0.8s							
WMQ	**Urumqi**	**64.57**	**309**	*e*P		**P**	**01 37 15.0**	**+1.7**
MK31	**Makanchi Array**	**64.76**	**315**	*e*P		**P**	**01 37 13.4**	**-1.0**
MKAR	**Makanchi Array**	**64.76**	**315**	P		**P**	**01 37 13.3**	**-1.1**
MKAR	**Makanchi Array**	**64.76**	**315**	P		**P**	**01 37 13.3**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=48,slow=7.3,SNR=10							
KAF	**Kangasniemi**	**65.35**	**353**	*e*p		**P**	**01 37 17.9**	**-0.1**
	comp=Z,1.9nm,0.5s							
FINES	**FINESS Array B**	**66.03**	**353**	P		**P**	**01 37 21.0**	**-1.3**
FINES	**FINESS Array B**	**66.03**	**353**	P		**P**	**01 37 21.0**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=357,slow=5.5,SNR=13							
GYA	**Guiyang**	**67.23**	**284**	*e*P		**P**	**01 37 32.8**	**+2.0**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
TKM2	**Tokmak 2**	**70.72**	**316**	*e*P		**P**	**01 37 52.5**	**+0.1**
	comp=Z,16nm,1.4s							
ABKAR	**Akbulak array**	**71.11**	**330**	*e*P		**P**	**01 37 54.6**	**+0.2**
	comp=Z,2.3nm,0.6s							
AAK	**Ala-Archa**	**71.42**	**317**	*e*P		**P**	**01 37 57.0**	**+0.4**
	comp=Z,1.1nm,1.1s							
EKA	**Eskdalemuir Ar**	**71.83**	**10**	P		**P**	**01 37 59.0**	**+0.5**
EKA	**Eskdalemuir Ar**	**71.83**	**10**	P		**P**	**01 37 59.0**	**+0.5**
	comp=Z,1.3nm,0.6s,baz=355,slow=4.3,SNR=8.2							
KKAR	**Karatay Array**	**72.66**	**320**	*e*P		**P**	**01 38 03.8**	**0.0**
	comp=Z,4.4nm,0.7s							
KSH	**Kashi**	**73.34**	**314**	*e*P		**P**	**01 38 05.3**	**-2.7**
KSH				*e*PP		**PP**	**01 40 48.5**	**-2.3**
KSH				*e*S		S	01 47 28.0	-8.8
KSH				*e*SKS		SKSac	01 48 04.3	-10
KSH				pmax		pmax		
	comp=Z,6.0nm,0.6s							
KSH				LR		LR		
	comp=N,130nm,4.2s							
KSH				LR		LR		
	comp=E,140nm,3.5s							
KSH				LR		LR		
	comp=Z,89nm,3.5s							
AKASG	**Malin Array Be**	**76.35**	**349**	P		**P**	**01 38 24.7**	**-0.4**
AKASG	**Malin Array Be**	**76.35**	**349**	P		**P**	**01 38 24.7**	**-0.4**
	comp=Z,8.4nm,0.6s,baz=12,slow=5.7,SNR=12							
KIEV	**Kiev**	**76.36**	**349**	*e*P		**P**	**01 38 25.1**	**0.0**
	comp=Z,3.2nm,0.5s							
AK01	**Malin Array Si**	**76.36**	**349**	*e*P		**P**	**01 38 24.3**	**-0.8**
AK02	**Malin Array Si**	**76.40**	**349**	*e*P		**P**	**01 38 25.1**	**-0.2**
BAIF	**Baives**	**77.67**	**6**	*e*P		**P**	**01 38 32.8**	**+0.3**
	comp=Z,9.1nm,0.9s							
BAIF	**Baives**	**77.67**	**6**	*e*P		**P**	**01 38 32.8**	**+0.3**
	comp=Z,9.1nm,0.9s							
MORC	**Moravsky Berou**	**78.13**	**357**	*e*P		**P**	**01 38 35.4**	**+0.2**
	comp=Z,2.7nm,0.8s							
STHS	**Stebnicka Huta**	**78.32**	**354**	*e*P		**P**	**01 38 37.9**	**+1.8**
KOLS	**Kolonicke sedl**	**78.74**	**354**	*e*P		**P**	**01 38 41.6**	**+3.2**
LDF	**La Druitiere**	**78.80**	**9**	*e*P		**P**	**01 38 39.9**	**+1.2**
LDF	**La Druitiere**	**78.80**	**9**	*e*P		**P**	**01 38 39.9**	**+1.2**
GERES	**GERESS Array B**	**79.14**	**359**	P		**P**	**01 38 41.2**	**+0.4**
GERES	**GERESS Array B**	**79.14**	**359**	P		**P**	**01 38 41.2**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=23,slow=5.3,SNR=9.4							
PAGF	**Fort de Pagny**	**79.25**	**5**	*e*P		**P**	**01 38 41.9**	**+0.6**
PAGF	**Fort de Pagny**	**79.25**	**5**	*e*P		**P**	**01 38 41.9**	**+0.6**
KECS	**Kecovo**	**79.30**	**355**	*e*P		**P**	**01 38 43.4**	**+1.9**
VYHS	**Vyhne**	**79.37**	**356**	*e*P		**P**	**01 38 43.2**	**+1.3**
BUR08	**Bucovina Ar. S**	**79.79**	**352**	*e*P		**P**	**01 38 44.3**	**0.0**
LOR	**Lormes**	**80.43**	**6**	*e*P		**P**	**01 38 47.8**	**+0.1**
LOR	**Lormes**	**80.43**	**6**	*e*P		**P**	**01 38 47.8**	**+0.1**
KBL	**Kabul**	**80.52**	**316**	*e*P		**P**	**01 38 49.3**	**+0.7**
	comp=Z,3.5nm,0.7s							
SSF	**Saint Saulge**	**80.61**	**6**	*e*P		**P**	**01 38 49.3**	**+0.7**
	comp=Z,2.3nm,0.5s							
SSF	**Saint Saulge**	**80.61**	**6**	*e*P		**P**	**01 38 49.3**	**+0.7**
	comp=Z,2.3nm,0.5s							
AVF	**Avril sur Loir**	**80.87**	**7**	*e*P		**P**	**01 38 50.6**	**+0.6**
AVF	**Avril sur Loir**	**80.87**	**7**	*e*P		**P**	**01 38 50.6**	**+0.6**
SMF	**Signal de Mont**	**81.05**	**6**	*e*P		**P**	**01 38 50.9**	**-0.1**
SMF	**Signal de Mont**	**81.05**	**6**	*e*P		**P**	**01 38 50.9**	**-0.1**
DAVOX	**Davos/Dischmat**	**81.18**	**2**	P		**P**	**01 38 53.1**	**+1.2**
DAVOX	**Davos/Dischmat**	**81.18**	**2**	P		**P**	**01 38 53.1**	**+1.2**
	comp=Z,1.9nm,0.8s,baz=349,slow=5.2,SNR=5.5							
TCF	**Toulx Ste Croi**	**81.28**	**7**	*e*P		**P**	**01 38 53.5**	**+1.2**
TCF	**Toulx Ste Croi**	**81.28**	**7**	*e*P		**P**	**01 38 53.5**	**+1.2**
VIVF	**Saint-Julien-l**	**82.88**	**6**	*e*P		**P**	**01 39 01.3**	**+0.6**
	comp=Z,4.1nm,0.7s							
VIVF	**Saint-Julien-l**	**82.88**	**6**	*e*P		**P**	**01 39 01.3**	**+0.6**
	comp=Z,4.1nm,0.7s							
MBDF	**Montbardon**	**83.12**	**4**	*e*P		**P**	**01 39 04.5**	**+2.4**
	comp=Z,9.3nm,0.6s							
MBDF	**Montbardon**	**83.12**	**4**	*e*P		**P**	**01 39 04.5**	**+2.4**
	comp=Z,9.3nm,0.6s							
BR131	**Kekin Array S**	**86.49**	**344**	*e*P		**P**	**01 39 20.4**	**+1.3**
	comp=Z,1.5nm,0.6s							
BRTR	**Keskin Array B**	**86.49**	**344**	P		**P**	**01 39 20.3**	**+1.1**
BRTR	**Keskin Array B**	**86.49**	**344**	P		**P**	**01 39 20.3**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=356,slow=4.1,SNR=16							
ESDC	**Sonseca Array**	**87.16**	**13**	P		**P**	**01 39 23.9**	**+1.5**
ESDC	**Sonseca Array**	**87.16**	**13**	P		**P**	**01 39 23.9**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=348,slow=5.7,SNR=4.1							
WRA	**Warramunga Arr**	**88.08**	**233**	P		**P**	**01 39 24.7**	**-2.0**
WRA	**Warramunga Arr**	**88.08**	**233**	P		**P**	**01 39 24.7**	**-2.0**
	comp=Z,0.9nm,0.7s,baz=36,slow=6.3,SNR=4.4							
ASAR	**Alice Springs**	**91.44**	**232**	P		**P**	**01 39 41.2**	**-1.2**
ASAR	**Alice Springs**	**91.44**	**232**	P		**P**	**01 39 41.2**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=40,slow=5.3,SNR=8.3							

IDC 29 01:33:35.7±1.1, 10°.34S×14°.14E, h0km, mb3.9/6, mb1 3.9/9, mb1mx3.8/26, mbtmp3.9/9, ML3.1/1, MS3.3/2, Ms1 3.3/2, ms1mx3.1/30, Error ellipse: s-maj=44.6km s-min=12.3km az=60.0, Angola

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TSUM	**Tsumeb**	**9.42**	**160**	Pn		Pn	01 35 54.2	+1.3
	0.2nm,0.3s,baz=336,slow=11,SNR=3.8							
TSUM				Sn		Sn	01 37 47.9	+8.1
	1.8nm,0.3s,baz=291,slow=17,SNR=3.9							
TSUM				Lg		Lg	01 38 29.4	
	7.1nm,0.3s,baz=219,slow=20,SNR=12							
TSUM				LR		LR	01 40 08.1	
	comp=Z,121nm,20.9s,baz=227,slow=42							
LSZ	**Lusaka**	**14.55**	**111**	Pn		Pn	01 37 04.7	+1.5
	0.2nm,0.3s,baz=311,slow=14,SNR=3.3							
LSZ				Sn		Sn	01 39 52.5	+7.1
	1.0nm,0.3s,baz=30,slow=19,SNR=3.4							
LSZ				Lg		Lg	01 41 14.8	
	1.0nm,0.3s,baz=19,slow=14,SNR=12							
LSZ				LR		LR	01 41 42.9	
	comp=Z,199nm,20.4s,baz=296,slow=34							
LBTB	**Lobatse**	**18.20**	**145**	P		P	01 37 51.0	+0.5
	0.1nm,0.3s,baz=27,slow=6.8,SNR=2.1							
LBTB				S		Sn	01 41 15.0	+0.8
	0.2nm,0.3s,baz=327,slow=17,SNR=2.1							
LBTB				Lg		Lg	01 43 08.3	
	0.4nm,0.3s,baz=263,slow=18,SNR=4.5							
MBAR	**Mbarara**	**19.13**	**61**	Lg		Lg	01 43 38.0	
	0.4nm,0.3s,baz=106,slow=22,SNR=4.7							
BOSA	**Boshof**	**20.96**	**152**	P		P	01 38 19.3	-1.3
	4.3nm,1.0s,baz=331,slow=11,SNR=3.1							
BOSA				Lg		Lg	01 44 40.5	
	22nm,1.1s,baz=53,slow=20,SNR=2.9							
SUR	**Sutherland**	**22.78**	**165**	Lg		Lg	01 45 40.3	
	20nm,0.8s,baz=279,slow=6.4,SNR=4.3							
KMBO	**Kilima Mbogo**	**24.73**	**70**	Lg		Lg	01 46 36.4	
	7.7nm,1.0s,baz=164,slow=20,SNR=4.0							
DBIC	**Dimbokro**	**25.37**	**311**	P		P	01 39 05.2	+0.4
	6.8nm,1.1s,baz=124,slow=8.5,SNR=4.2							
TORD	**Torodi Ar. Bea**	**26.41**	**332**	P		P	01 39 13.9	-0.3
	1.1nm,0.6s,baz=157,slow=9.3,SNR=9.9							
BRTR	**Keskin Array B**	**53.00**	**19**	P		P	01 42 54.2	-0.3
	0.6nm,0.8s,baz=183,slow=7.1,SNR=4.7							
GERES	**GERESS Array B**	**58.93**	**360**	P		P	01 43 36.6	-0.2
	0.5nm,0.7s,baz=198,slow=6.2,SNR=4.8							
MKAR	**Makanchi Array**	**82.99**	**40**	P		P	01 46 03.1	+0.2
	1.1nm,0.7s,baz=250,slow=6.2,SNR=10							

*NEIC **29** 01:51:44.6, 41°.94S×174°.03E, h20km, ML3.5(WEL), After WEL.*
NEIC Felt [IV] in Marlborough.

WEL 29 01:51:44.6±0.2, 41°.94S×174°.03E, h20km±1km, ML3.5/26, 7C-6D, Error ellipse: s-maj=1.7km s-min=1.5km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.24**	**36**	⇑P*		Pb	01 51 50.1	-0.1
CMWZ	**Cape Campbell**	**0.24**	**36**	P*		Pb	01 51 50.1	-0.1
BSWZ	**Blackbirch Sta**	**0.26**	**334**	⇑P*		Pb	01 51 49.7	-0.8
BSWZ				S*		Sb	01 51 53.9	-0.6
BSWZ	**Blackbirch Sta**	**0.26**	**334**	P*		Pb	01 51 49.7	-0.8
BSWZ				S*		Sb	01 51 53.9	-0.6
TUWZ	**Tuamarina**	**0.52**	**353**	⇑P*		Pb	01 51 54.6	-0.4
TUWZ				S*		Sb	01 52 01.8	-0.2
TUWZ	**Tuamarina**	**0.52**	**353**	P*		Pb	01 51 54.6	-0.4
TUWZ				S*		Sb	01 52 01.8	-0.2
KHZ	**Kahutara**	**0.60**	**217**	⇓P*		Pg	01 51 57.0	+0.4
KHZ				S*		Sn	01 52 05.9	-1.2
KHZ	**Kahutara**	**0.60**	**217**	⇑*i*P		Pg	01 51 57.0	+0.5
TCW	**Tory Channel**	**0.75**	**14**	⇑P*		Pb	01 51 58.6	-0.4
TCW				S*		Sg	01 52 09.6	+0.2
TCW	**Tory Channel**	**0.75**	**14**	P*		Pb	01 51 58.6	-0.4
TCW				S*		Sg	01 52 09.6	+0.2
SNZO	**South Karori**	**0.81**	**39**	⇓P*		Pg	01 52 00.3	-0.2
SNZO	**South Karori**	**0.81**	**39**	*e*P		Pb	01 52 00.2	+0.2
SNZO				*e*S		Sn	01 52 14.0	+1.7
BHW	**Baring Head**	**0.83**	**50**	⇓P*		Pn	01 52 00.9	-0.1
BHW				S*		Sn	01 52 12.8	+0.1
BHW	**Baring Head**	**0.83**	**50**	P*		Pn	01 52 00.9	-0.1
BHW				S*		Sn	01 52 12.8	+0.1
THZ	**Tophouse**	**0.86**	**282**	⇓P*		Pb	01 52 01.1	+0.2
THZ				S*		Sb	01 52 12.0	-0.1
THZ	**Tophouse**	**0.86**	**282**	P*		Pb	01 52 01.1	+0.2
THZ				S*		Sb	01 52 12.0	-0.1
WEL	**Wellington**	**0.86**	**40**	⇑P*		Pg	01 52 01.4	0.0
WEL	**Wellington**	**0.86**	**40**	P*		Pg	01 52 01.4	0.0
NNZ	**Nelson**	**0.87**	**326**	P*		Pb	01 52 00.8	-0.2
PLWZ	**Palliser**	**0.99**	**68**	P*		Pb	01 52 02.8	-0.4
MSWZ	**Moikau Station**	**1.06**	**60**	⇓P*		Pb	01 52 03.9	-0.4
DUWZ	**D'Urville Isla**	**1.14**	**356**	P*		Pn	01 52 05.3	-0.1
DUWZ	**D'Urville Isla**	**1.14**	**356**	P*		Pn	01 52 05.3	-0.2
CAW	**Cannon Point**	**1.14**	**43**	P*		Pn	01 52 05.5	0.0
CAW	**Cannon Point**	**1.14**

AGG	**Agios Georgios**	**1.81**	**110**	P		**Pn**	**02 05 17.3**	**+0.7**
AGG				*e*Sn		**Sb**	**02 05 42.1**	**+0.7**
EFP	**Efpalio**	**1.84**	**131**	*e*PG		**Pn**	**02 05 18.3**	**+1.3**
EFP	**Efpalio**	**1.84**	**131**	*e*Pg		**Pn**	**02 05 18.3**	**+1.3**
RLS	**Riolos of Patr**	**1.91**	**147**	*e*PG		**Pb**	**02 05 19.7**	**-0.3**
RLS	**Riolos of Patr**	**1.91**	**147**	*e*Pg		**Pb**	**02 05 19.7**	**-0.3**
TRIZ	**Trizonia**	**1.98**	**130**	*e*PN		**Pn**	**02 05 19.4**	**+0.5**
TRIZ	**Trizonia**	**1.98**	**130**	*e*Pn		**Pn**	**02 05 19.4**	**+0.5**
KALE	**Kalithea**	**2.01**	**129**	*e*PN		**Pn**	**02 05 20.3**	**+1.0**
KALE	**Kalithea**	**2.01**	**129**	*e*Pn		**Pn**	**02 05 20.3**	**+1.0**
LAKA	**Lakka**	**2.02**	**134**	*e*PG		**Pn**	**02 05 20.7**	**+1.3**
LAKA	**Lakka**	**2.02**	**134**	*e*Pg		**Pn**	**02 05 20.7**	**+1.3**
GRG	**Griva**	**2.16**	**52**	*e*PN		**Pn**	**02 05 22.9**	**+1.6**
GRG				*e*SN		**Sb**	**02 05 51.9**	**+0.6**
GRG	**Griva**	**2.16**	**52**	*e*Pn		**Pn**	**02 05 22.9**	**+1.6**
GRG				*e*Sn		**Sb**	**02 05 51.9**	**+0.6**
KLV	**Kalavryta, Ach**	**2.25**	**135**	*e*PN		**Pn**	**02 05 24.1**	**+1.5**
KLV	**Kalavryta, Ach**	**2.25**	**135**	*e*Pn		**Pn**	**02 05 24.1**	**+1.5**
NEO	**Neokhori**	**2.41**	**97**	*e*PN		**Pn**	**02 05 26.3**	**+1.5**
NEO	**Neokhori**	**2.41**	**97**	*e*Pn		**Pn**	**02 05 26.3**	**+1.5**
GUR	**Goura**	**2.43**	**134**	*e*PN		**Pn**	**02 05 26.7**	**+1.5**
GUR	**Goura**	**2.43**	**134**	*e*Pn		**Pn**	**02 05 26.7**	**+1.5**
LKR	**Lokris**	**2.44**	**114**	*e*PN		**Pn**	**02 05 26.3**	**+1.1**
LKR	**Lokris**	**2.44**	**114**	*e*Pn		**Pn**	**02 05 26.3**	**+1.1**
AMT	**Artemida-Makis**	**2.45**	**149**	*e*PN		**Pn**	**02 05 26.3**	**+0.9**
AMT	**Artemida-Makis**	**2.45**	**149**	*e*Pn		**Pn**	**02 05 26.3**	**+0.9**
PLG	**Polygyros**	**2.63**	**73**	*e*PB		**Pn**	**02 05 28.4**	**+0.5**
PLG				*e*SN		**Sn**	**02 06 01.4**	**+1.2**
PLG	**Polygyros**	**2.63**	**73**	*e*Pb		**Pn**	**02 05 28.4**	**+0.5**
PLG				*e*Sn		**Sn**	**02 06 01.4**	**+1.2**
SOH	**Sokhos**	**2.72**	**64**	*e*PB		**Pn**	**02 05 29.9**	**+0.8**
SOH	**Sokhos**	**2.72**	**64**	*e*Pb		**Pn**	**02 05 29.9**	**+0.8**
PAIG	**Paliouri**	**2.74**	**83**	*e*PB		**Pn**	**02 05 29.9**	**+0.6**
PAIG				*e*SN		**Sn**	**02 06 04.3**	**+1.7**
PAIG	**Paliouri**	**2.74**	**83**	*e*Pb		**Pn**	**02 05 29.9**	**+0.6**
PAIG				*e*Sn		**Sn**	**02 06 04.3**	**+1.7**
LTK	**Loutraki**	**2.75**	**126**	*e*PN		**Pn**	**02 05 30.5**	**+1.1**
LTK	**Loutraki**	**2.75**	**126**	*e*Pn		**Pn**	**02 05 30.5**	**+1.1**
ITM	**Ithomi**	**2.85**	**150**	*e*PB		**Pn**	**02 05 31.5**	**+0.7**
ITM	**Ithomi**	**2.85**	**150**	*e*Pb		**Pn**	**02 05 31.5**	**+0.7**
VLX	**Vlachokerasia**	**2.88**	**142**	*e*PB		**Pn**	**02 05 31.5**	**+0.2**
VLX	**Vlachokerasia**	**2.88**	**142**	*e*Pb		**Pn**	**02 05 31.5**	**+0.2**
AOS	**Alonnisos**	**2.94**	**98**	*e*PB		**Pn**	**02 05 33.4**	**+1.4**
AOS	**Alonnisos**	**2.94**	**98**	*e*Pb		**Pn**	**02 05 33.4**	**+1.4**
PYL	**PYLOS**	**3.03**	**155**	*e*PN		**Pn**	**02 05 33.5**	**+0.2**
PYL	**PYLOS**	**3.03**	**155**	*e*Pn		**Pn**	**02 05 33.5**	**+0.2**
DID	**Didima**	**3.24**	**131**	*e*PN		**Pn**	**02 05 36.8**	**+0.6**
DID	**Didima**	**3.24**	**131**	*e*Pn		**Pn**	**02 05 36.8**	**+0.6**
VLI	**Veliai**	**3.67**	**142**	*e*PN		**Pn**	**02 05 42.6**	**+0.5**
VLI	**Veliai**	**3.67**	**142**	*e*Pn		**Pn**	**02 05 42.6**	**+0.5**
STON	**Ston**	**3.70**	**331**	*e*PN		**Pn**	**02 05 41.1**	**-1.3**
STON				Sn		**Sn**	**02 06 24.9**	**-1.3**
STON	**Ston**	**3.70**	**331**	*e*Pn		**Pn**	**02 05 41.1**	**-1.3**
STON				Sn		**Sn**	**02 06 24.9**	**-1.3**
NVLJ	**Novalja**	**6.27**	**323**	*e*Pn		**Pn**	**02 06 17.1**	**-0.7**
NVLJ				Sn		**Sn**	**02 07 26.9**	**-2.9**
NVLJ	**Novalja**	**6.27**	**323**	*e*Pn		**Pn**	**02 06 17.1**	**-0.7**
NVLJ				Sn		**Sn**	**02 07 26.8**	**-2.9**

ISCJB ***29*** *02:06:53.9±1.1,40°.41N±0°.04×25°.91E±0°.08,h10km±5km, Error ellipse: s-maj=10.2km s-min=5.8km az=11.6*
ISK ***29*** *02:06:54.1,40°.42N×25°.97E,h17km,MD2.6*
CSEM ***29*** *02:06:54.2±0.5,40°.42N×25°.91E,h12km,MD2.6, Error ellipse: s-maj=9.8km s-min=6.0km az=75.0*
DDA ***29*** *02:06:55.3,40°.36N×26°.05E,h7km,MD2.7*

ISC 29 02:06:53.7±1.9, 40°.43N±0°.03×25°.95E±0°.07, h10km±14km, n19, σ0s56/32, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENEZ	**Enez**	**0.35**	**27**	*e*PG	**Pb**	**02 07 01.9**	**-0.1**
ENEZ				*e*SG	**Sb**	**02 07 07.3**	**-0.3**
ENEZ	**Enez**	**0.35**	**27**	*e*Pg	**Pb**	**02 07 01.9**	**-0.1**
ENEZ				*e*Sg	**Sb**	**02 07 07.3**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.41**	**94**	*e*PG	**Pb**	**02 07 02.5**	**-0.5**
GELI				*e*SG	**Sb**	**02 07 08.4**	**-0.7**
GELI	**Tayfur-Gelibol**	**0.41**	**94**	*e*Pg	**Pb**	**02 07 02.5**	**-0.5**
GELI				*e*Sg	**Sb**	**02 07 08.5**	**-0.7**
ERIK	**Erikli-Kesan**	**0.50**	**60**	*e*PG	**Pb**	**02 07 04.2**	**-0.3**
ERIK				*e*SG	**Sb**	**02 07 11.8**	**-0.1**
ERIK	**Erikli-Kesan**	**0.50**	**60**	*e*Pg	**Pb**	**02 07 04.2**	**-0.3**
ERIK				*e*Sg	**Sb**	**02 07 11.8**	**-0.1**
BOZC	**Bozcaada**	**0.59**	**172**	*i* P	**Pb**	**02 07 05.7**	**-0.4**
BOZC				*i* S	**Sb**	**02 07 13.4**	**-1.0**
SART	**Tekirdag**	**0.98**	**74**	*i* P	**Pn**	**02 07 13.8**	**+0.3**
SART				*i* S	**Sn**	**02 07 27.0**	**-0.5**
SART	**Tekirdag**	**0.98**	**74**	*i* P	**Pn**	**02 07 13.8**	**+0.3**
SART				*i* S	**Sn**	**02 07 27.0**	**-0.5**
MRMT	**Marmara Adasi**	**1.27**	**81**	*e*PN	**Pn**	**02 07 17.3**	**-0.3**
MRMT	**Marmara Adasi**	**1.27**	**81**	*e*Pn	**Pn**	**02 07 17.3**	**-0.3**
GONE	**Gonen-Balikesi**	**1.39**	**105**	*e*PN	**Pn**	**02 07 19.0**	**-0.1**
GONE	**Gonen-Balikesi**	**1.39**	**105**	*e*Pn	**Pn**	**02 07 19.0**	**-0.1**
BALY	**Balya**	**1.46**	**117**	*i* P	**Pg**	**02 07 21.9**	**+0.2**
BALY				*i* S	**Sb**	**02 07 39.3**	**-0.2**
BALY	**Balya**	**1.46**	**117**	*i* P	**Pg**	**02 07 21.9**	**+0.2**
BALY				*i* S	**Sb**	**02 07 39.3**	**-0.2**
EDRB	**Edirne**	**1.54**	**23**	*e*PN	**Pn**	**02 07 21.4**	**+0.2**
EDRB	**Edirne**	**1.54**	**23**	*e*Pn	**Pn**	**02 07 21.5**	**+0.2**
DURS	**Dursunbey**	**2.11**	**112**	*i* P	**Pn**	**02 07 30.3**	**+1.2**
DURS				*i* S	**Sn**	**02 07 56.4**	**+1.0**
DURS	**Dursunbey**	**2.11**	**112**	*i* P	**Pn**	**02 07 30.3**	**+1.2**
DURS				*i* S	**Sn**	**02 07 56.4**	**+1.0**

GUC 29 02:14:17.6±0.8, 21°.81S×68°.55W, h129km±7km, ML3.6, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**0.65**	**271**	⇑*i* P	Pn	02 14 38.5	+0.8
PB09				*i* S	Sn	02 14 54.1	+1.2
PB09				AML	AML	02 14 55.3	
	comp=N,2μm,0.3s						
LVC	**Limon Verde**	**0.86**	**203**	⇑*i* P	Pn	02 14 39.8	+0.2
LVC				*i* S	Sn	02 14 56.0	-0.2
PB04	**Plate Boundary**	**0.98**	**243**	*e*P	Pn	02 14 47.6	+7.4
PB04				*i* S	Sn	02 15 10.0	+13
PB04				AML	AML	02 15 14.8	
	comp=N,320nm,0.4s						
PB01	**Plate Boundary**	**1.16**	**311**	⇑*i* P	Pn	02 14 42.8	+0.6
PB01				*i* S	Sn	02 15 01.4	+0.6
CEN1	**Los Morros**	**2.19**	**224**	*i* S	Sn	02 15 28.2	+6.3
CEN1				AML	AML	02 15 34.9	
	comp=N,200nm,0.6s						
ANCH	**Antofagasta**	**2.53**	**222**	⇑*i* P	Pn	02 15 01.9	+3.7
ANCH				*i* S	Sn	02 15 33.6	+4.2
PSGC	**Pisagua**	**2.65**	**326**	*e*P	Pn	02 14 59.8	-0.1
PSGC				*i* S	Sn	02 15 32.3	-0.1
PSGC				AML	AML	02 15 41.5	
	comp=N,251nm,0.3s						
MNMC	**Minimini**	**2.84**	**340**	⇓*i* P	Pn	02 15 03.8	+1.2
MNMC				*i* S	Sn	02 15 39.1	+1.9
MNMC				AML	AML	02 15 48.0	
	comp=E,312nm,0.2s						

ISCJB ***29*** *02:15:29.4±0.5,24°.81N±0°.03×122°.15E±0°.02,h2km±4km, Error ellipse: s-maj=4.6km s-min=2.9km az=170.7*
TAP ***29*** *02:15:30.1,24°.83N×122°.06E,h12km,ML2.9,C*
JMA ***29*** *02:15:30.9±0.2,24°.95N×122°.12E,h42km,M2.5*

ISC 29 02:15:30.0±0.9, 24°.84N±0°.03×122°.10E±0°.02, h14km±6km, n32, σ0s59/60, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.15**	**271**	⇓*i* P	**Pg**	**02 15 33.6**	**-0.1**
	baz=275						
EGS				*i* S	**Sg**	**02 15 35.9**	**-0.3**
	baz=275						
TWB1	**Santiao Chiao**	**0.19**	**329**	⇓*i* P	**Pg**	**02 15 34.7**	**+0.4**
	baz=336						
TWB1				*i* S	**Sg**	**02 15 37.9**	**+0.5**
	baz=336						
TWC	**Suao**	**0.32**	**224**	P	**Pg**	**02 15 36.2**	**-0.4**
	baz=216						
TWC				*e*S	**Sg**	**02 15 39.8**	**-1.3**
	baz=216						
ILA	**Ilan**	**0.33**	**257**	*e*P	**Pg**	**02 15 36.8**	**+0.2**
	baz=255						
ILA				*e*S	**Sg**	**02 15 41.8**	**+0.6**
	baz=255						
NWF	**Wu-fen Shan**	**0.37**	**309**	*i* P	**Pb**	**02 15 38.1**	**-0.2**
	baz=304						
NWF				*i* S	**Sb**	**02 15 43.3**	**-0.6**
	baz=304						
TWE	**Neicheng**	**0.41**	**253**	P	**Pg**	**02 15 38.2**	**+0.1**
	baz=250						
TWE				S	**Sg**	**02 15 43.6**	**-0.1**
	baz=250						
ENTT	**Nioudou**	**0.52**	**247**	P	**Pg**	**02 15 40.4**	**+0.1**
	baz=245						
ENTT				S	**Sg**	**02 15 47.6**	**+0.4**
	baz=245						
ENA	**Nanau**	**0.52**	**218**	*e*P	**Pg**	**02 15 40.1**	**-0.2**
	baz=214						
ENA				*e*S	**Sb**	**02 15 48.0**	**-0.4**
	baz=214						
TWY	**Chenhua**	**0.62**	**314**	*e*P	**Pb**	**02 15 43.0**	**+0.4**
	baz=315						
TWS1	**Kuangyinshan**	**0.67**	**293**	*e*P	**Pn**	**02 15 44.8**	**-0.3**
	baz=294						
NSK	**Sanguang**	**0.69**	**256**	P	**Pg**	**02 15 43.1**	**-0.4**
	baz=249						
NSK				S	**Sg**	**02 15 51.3**	**-1.3**
	baz=249						
NNS	**Nan Shan**	**0.77**	**239**	P	**Pg**	**02 15 45.0**	**0.0**
	baz=240						
NNS				*e*S	**Sg**	**02 15 55.6**	**+0.5**
	baz=240						
TWD	**Chiawan**	**0.89**	**211**	P	**Pb**	**02 15 47.1**	**0.0**
	baz=198						
TWD				*e*S	**Sb**	**02 15 57.7**	**-1.1**
	baz=198						
YOJ	**Yonaguni jima**	**0.91**	**114**	P	**Pg**	**02 15 48.0**	**+0.3**
YOJ				*e*S	**Sg**	**02 16 00.3**	**+0.7**
NSTT	**Nanjuang**	**1.02**	**258**	*e*P	**Pn**	**02 15 50.4**	**+0.6**
	baz=256						
NSTT				*e*S	**Sn**	**02 16 03.9**	**0.0**
	baz=256						
TWT	**Tachien**	**1.02**	**235**	*e*P	**Pg**	**02 15 50.5**	**+0.7**
	baz=222						
TWT				*e*S	**Sg**	**02 16 03.7**	**+0.6**
	baz=222						
WHF	**Hehuan Shan**	**1.03**	**228**	⇓*i* P	**Pb**	**02 15 49.5**	**-0.3**
	baz=223						
WHF				S	**Sb**	**02 16 03.6**	**+0.3**
	baz=223						
ESL	**Shilin**	**1.19**	**211**	*e*P	**Pb**	**02 15 52.3**	**0.0**
	baz=212						
ESL				*e*S	**Sn**	**02 16 07.9**	**-0.3**
	baz=212						
TWQ1	**Liyutan**	**1.30**	**248**	*e*P	**Pb**	**02 15 54.0**	**-0.2**
	baz=237						
TWQ1				*e*S	**Sg**	**02 16 11.8**	**-0.2**
	baz=237						
SMLT	**Sun Moon Lake**	**1.45**	**229**	*e*P	**Pn**	**02 15 56.3**	**+0.4**
	baz=215						
SMLT				*e*S	**Sg**	**02 16 17.4**	**+0.7**
	baz=215						
TYC	**Yuchr**	**1.47**	**231**	*e*P	**Pn**	**02 15 56.1**	**+0.1**
	baz=218						
TYC				*e*S	**Sg**	**02 16 16.9**	**-0.3**
	baz=218						
EHY	**Hungye**	**1.51**	**208**	*e*P	**Pn**	**02 15 57.1**	**+0.5**
	baz=210						
EHY				*e*S	**Sb**	**02 16 16.8**	**+0.1**
	baz=210						
IRIF	**Iriomote-Funau**	**1.57**	**108**	P	**Pn**	**02 15 57.0**	**-0.4**
IRIF				*e*S	**Sn**	**02 16 16.5**	**-1.1**
TWF1	**Yuli**	**1.65**	**206**	*e*P	**Pn**	**02 15 59.1**	**+0.5**
	baz=208						
TWF1				*e*S	**Sb**	**02 16 20.7**	**-0.3**
	baz=208						
YUS	**Yu-Shan**	**1.71**	**218**	*e*P	**Pb**	**02 16 01.9**	**+0.5**
	baz=194						
YUS				*e*S	**Sb**	**02 16 23.8**	**+0.9**
	baz=194						
HATJ	**Hateruma jima**	**1.74**	**116**	P	**Pn**	**02 16 00.0**	**+0.2**
HATJ				*e*S	**Sn**	**02 16 21.3**	**-0.5**
CHN5	**Tsauling**	**1.79**	**227**	*e*P	**Pb**	**02 16 03.0**	**+0.3**
	baz=222						
CHN5				*e*S	**Sg**	**02 16 27.4**	**-0.3**
	baz=222						
JKRS	**Kuro-shima**	**1.84**	**109**	P	**Pn**	**02 16 01.4**	**+0.2**
JKRS				*e*S	**Sn**	**02 16 24.1**	**-0.2**
JIJ	**Ishigaki jima**	**1.92**	**104**	P	**Pn**	**02 16 02.5**	**+0.2**
CHN4	**Tsaushan**	**2.02**	**223**	*e*P	**Pb**	**02 16 05.2**	**-1.4**
	baz=216						
CHN4				*e*S	**Sg**	**02 16 35.3**	**+0.2**
	baz=216						
WTP	**Ta-pu**	**2.09**	**221**	*e*P	**Pn**	**02 16 05.8**	**+1.2**
	baz=199						
WTP				*e*S	**Sb**	**02 16 33.0**	**-0.5**
	baz=199						
CHN1	**Nanshi**	**2.19**	**221**	*e*P	**Pn**	**02 16 07.4**	**+1.5**
	baz=215						

IDC ***29*** *02:45:42.5±0.8,16°.18N×87°.46W,h0km,mb4.3/17, mb1 4.5/20,mb1mx4.3/28,mbtmp4.3/20,ML4.3/3,MS3.3/3, Ms1 3.3/3,ms1mx3.1/28,Error ellipse: s-maj=23.1km s-min=16.1km az=56.0*
NEIC ***29*** *02:45:44.4±0.3,16°.10N×87°.58W,h10km,mb4.5/61,Error ellipse: s-maj=7.7km s-min=5.3km az=59.0*
NEIC Felt [IV] at Roatan, [III] at La Ceiba and [II] at San Pedro Sula and Utila. Also felt at La Lima, Omoa, Sandy Bay and Valle de Angeles. Felt [III] at Belize City, Belize. Also felt at Dangriga and San Ignacio.
BJI ***29*** *02:45:44.7,16°.10N×87°.60W,h10km,mB5.3/2,Ms4.6/1, Ms7 4.4/2*
ISCJB ***29*** *02:45:45.6±1.3,16°.27N±0°.02×87°.53W±0°.04,h23km±11km, mb4.5/62,MS4.2/3,Error ellipse: s-maj=6.6km s-min=3.6km az=14.5*
CASC ***29*** *02:45:45.1±1.5,16°.36N×87°.66W,h15km±120km,ML4.5, mb4.5(NEIC)*

ISC 29 02:45:44.5±1.5, 16°.08N±0°.03×87°.57W±0°.05, h16km±9km, n355, σ1$24/361, mb4.5/63, MS4.1/3, 101C-112D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**2.03**	**172**	*e*Pn	**Pn**	**02 46 18.4**	**+0.4**
TGUH				*e*Sg	**Sg**	**02 46 50.5**	**+0.6**
CAHU	**Cacacuatique**	**2.38**	**195**	*e*P	**Pb**	**02 46 26.1**	**-1.0**
CAHU				*e*S	**Sg**	**02 46 59.9**	**-1.2**
MTO2	**Montecristo 2**	**2.41**	**226**	*e*P	**Pn**	**02 46 25.2**	**+1.8**
MTO2				*e*S	**Sb**	**02 46 56.4**	**-0.7**
VSM	**San Miguel**	**2.72**	**195**	*e*P	**Pb**	**02 46 31.5**	**-1.5**
SNVI	**San Vicente**	**2.74**	**207**	*e*P	**Pb**	**02 46 31.6**	**-1.7**
LFU	**La Fuente**	**2.76**	**213**	*e*P	**Pb**	**02 46 31.2**	**-2.2**
CNCH	**Conchagua**	**2.80**	**185**	*e*P	**Pb**	**02 46 33.0**	**-1.1**
BOQS	**Boqueron**	**2.86**	**216**	*e*P	**Pn**	**02 46 32.5**	**+2.9**
SNET	**Serv Nac Est T**	**2.87**	**214**	*e*S	**Sb**	**02 47 10.5**	**+0.1**
SNET				AML	AML	02 47 21.6	
	comp=Z,3μm,0.4s						
SNJE	**San Jose**	**2.95**	**222**	*e*P	**Pb**	**02 46 34.6**	**-2.3**
RTR	**El Retiro**	**2.96**	**223**	*e*P	**Pb**	**02 46 34.5**	**-2.4**
RTR				*e*S	**Sb**	**02 47 12.3**	**-0.6**
SBLS	**San Blas**	**2.98**	**222**	*e*P	Pn	02 46 34.8	+3.4
CNGN	**Cerro Negro**	**3.65**	**167**	*e*P	Pb	02 46 45.5	-3.2
TEIG	**Tepich**	**4.18**	**351**	*e*Pn	**Pn**	**02 46 45.6**	**-2.1**
TEIG				*e*Pg	**Pb**	**02 46 58.6**	**+0.9**
TEIG				Lg	Lg	02 47 55.1	
TEIG	**Tepich**	**4.18**	**351**	Pn	**Pn**	**02 46 45.3**	**-2.3**
	comp=Z,50nm,0.3s,baz=176,slow=1.3,SNR=274						
TEIG				Sn	**Sn**	**02 47 31.3**	**-4.8**
	comp=Z,165nm,0.3s,baz=287,slow=19,SNR=13						
TEIG				LR	LR	02 47 45.3	
	comp=Z,127nm,22.0s,baz=303,slow=30						
TEIG				Lg	Lg	02 47 55.1	
	comp=Z,143nm,0.3s,baz=97,slow=21,SNR=5.0						
SOR	**Soroa**	**7.94**	**32**	*e*P	**Pn**	**02 47 39.3**	**0.0**
	baz=207						
SOR				*e*S	**Sn**	**02 49 03.8**	**-5.1**
MGV	**Manicaragua**	**9.35**	**49**	*e*	**Pn**	**02 47 57.1**	**-1.5**
HKT	**Hockley**	**15.76**	**333**	*e*Pn	**Pn**	**02 49 26.1**	**+0.3**
	comp=Z,11nm,0.8s						
LRAL	**Lakeview Retre**	**16.89**	**2**	*e*Pn	**Pn**	**02 49 39.5**	**-0.8**
	comp=Z,16nm,0.9s						
LRAL				*e*Sn	Sn	02 52 36.7	-11
732A	**Laxson Ranch,**	**17.01**	**320**	⇑P	**Pn**	**02 49 37.3**	**-4.6**
	baz=17						
ROSC	**El Rosal**	**17.12**	**129**	Pn	**P**	**02 49 46.8**	**+1.5**
ROSC	**El Rosal**	**17.12**	**129**	Pn	**P**	**02 49 46.8**	**+1.5**
	comp=Z,1.5nm,0.3s,baz=302,slow=15,SNR=6.2						
632A	**Uvalde**	**17.46**	**322**	⇓P	**Pn**	**02 49 43.9**	**-3.6**
	baz=18						
GOGA	**Godfrey**	**17.65**	**11**	*e*Pn	**Pn**	**02 49 48.4**	**-1.3**
	comp=Z,20nm,0.7s						
631A	**Perdido Creek**	**17.87**	**320**	⇑P	**Pn**	**02 49 50.9**	**-1.6**
	baz=18						
532A	**Rocksprings**	**17.99**	**323**	⇑P	**Pn**	**02 49 52.7**	**-1.3**
	baz=18						
SDV	**Santo Domingo**	**18.00**	**111**	*e*P	**P**	**02 49 57.9**	**+3.1**
	comp=Z,46nm,1.6s						
OTAV	**Otavalo**	**18.13**	**149**	*e*P	**P**	**02 49 58.5**	**+2.0**
	comp=Z,5.9nm,1.0s						
JCT	**Junction City**	**18.19**	**324**	*e*P	**P**	**02 49 58.6**	**+1.8**
	comp=Z,9.5nm,0.5s						
WHTX	**Lake Whitney**	**18.22**	**332**	⇓P	**P**	**02 49 58.5**	**+1.6**
	baz=18,SNR=19						
NHSC	**New Hope**	**18.23**	**20**	*e*P	**P**	**02 49 58.5**	**+1.5**
	comp=Z,58nm,1.0s						
531A	**Rocksprings**	**18.39**	**322**	⇓P	**Pn**	**02 49 58.7**	**-0.2**
	baz=18						
OXF	**Oxford**	**18.43**	**355**	*e*P	**P**	**02 49 59.0**	**-0.2**
	comp=Z,28nm,0.6s						
PLAL	**Pickwick Lake**	**18.83**	**359**	*e*Pn	**Pn**	**02 50 04.8**	**+0.6**
	comp=Z,7.5nm,0.8s						
332A	**Millersview**	**18.85**	**326**	⇓P	**Pn**	**02 50 04.5**	**0.0**
	baz=19						
530A	**J-C Ranch, Com**	**18.86**	**320**	⇓P	**P**	**02 50 04.0**	**-0.1**
	baz=19						
UALR	**University of**	**19.11**	**348**	*e*Pn	**Pn**	**02 50 08.4**	**+0.9**
	comp=Z,11nm,0.8s						
SWET	**Sewanee**	**19.12**	**4**	*e*P	**Pn**	**02 50 07.8**	**+0.1**
	comp=Z,24nm,0.6s						
331A	**San Angelo**	**19.17**	**325**	⇑P	**Pn**	**02 50 08.1**	**-0.3**
	baz=19						
232A	**Coleman**	**19.20**	**327**	⇓P	**P**	**02 50 07.9**	**+0.2**
	baz=19						
430A	**Baggett Ranch,**	**19.25**	**322**	⇓P	**P**	**02 50 08.8**	**+0.4**
	baz=19						
529A	**Stev Forest Ra**	**19.39**	**319**	⇑P	**P**	**02 50 09.8**	**-0.1**
	baz=19						
628A	**Black Gap, Mar**	**19.41**	**316**	⇓P	**Pn**	**02 50 10.8**	**-0.5**
	baz=19,SNR=14						
CPCT	**Cooper Cave**	**19.48**	**7**	*e*P	**P**	**02 50 11.0**	**+0.2**
429A	**Davenport Ranc**	**19.53**	**320**	⇑P	**P**	**02 50 11.5**	**0.0**
	baz=20						
231A	**Bronte**	**19.59**	**326**	⇑P	**P**	**02 50 12.2**	**+0.2**
	baz=20						
330A	**Mertzon**	**19.67**	**323**	⇓P	**P**	**02 50 13.4**	**+0.5**
	baz=20						
627A	**Terlingua Ranc**	**19.72**	**315**	⇓P	**Pn**	**02 50 14.4**	**-0.6**
	baz=20,SNR=22						
528A	**Cox Ranch, San**	**19.78**	**318**	⇓P	**P**	**02 50 14.5**	**+0.3**
	baz=20						
ABTX	**Abilene, Hawle**	**19.78**	**329**	⇑P	**P**	**02 50 14.6**	**+0.5**
	baz=20						
KMSC	**Kings Mountain**	**19.79**	**15**	⇑P	**Pn**	**02 50 15.1**	**-0.6**
	baz=20,SNR=8.9						
TKL	**Tuckaleechee C**	**19.79**	**9**	P	**P**	**02 50 14.6**	**+0.4**
TKL				S	S	02 53 49.9	-6.8
TKL	**Tuckaleechee C**	**19.79**	**9**	P	**P**	**02 50 14.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=180,slow=14,SNR=16						
TKL				S	S	02 53 49.9	-6.8
	comp=Z,0.3nm,0.3s,baz=80,slow=19,SNR=2.9						
TKL				LR	LR	02 59 11.7	
	comp=Z,83nm,18.4s,baz=0.5,slow=41						
TXAR	**Lajitas Array**	**19.84**	**314**	P	**P**	**02 50 15.5**	**+0.7**
TXAR				S	S	02 53 47.8	-10
TXAR	**Lajitas Array**	**19.84**	**314**	P	**P**	**02 50 15.5**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=131,slow=11,SNR=41						
TXAR				S	S	02 53 47.8	-10
	comp=Z,0.3nm,0.3s,baz=168,slow=31,SNR=5.6						
WVT	**Waverly**	**19.97**	**359**	*e*P	**P**	**02 50 16.6**	**+0.5**
	comp=Z,25nm,0.8s						
230A	**Sterling City**	**19.99**	**324**	⇑P	**P**	**02 50 16.7**	**+0.3**
	baz=20						
428A	**Kincaid Ranch,**	**20.09**	**319**	⇓P	**P**	**02 50 17.6**	**0.0**
	baz=20						
329A	**Wagon Wheel Ra**	**20.20**	**322**	⇓P	**P**	**02 50 18.4**	**-0.3**
	baz=20						
131A	**Roby**	**20.20**	**327**	⇓P	**P**	**02 50 18.9**	**+0.2**
	baz=20						
Z32A	**Haskell**	**20.25**	**330**	⇑P	Pn	02 50 20.4	-0.8
	baz=20,SNR=16						
626A	**Big Bend Ranch**	**20.29**	**314**	⇑P	Pn	02 50 20.9	-0.9
	baz=20,SNR=14						
527A	**Woodward Ranch**	**20.31**	**316**	⇓P	**P**	**02 50 20.3**	**+0.3**
	baz=20,SNR=9.8						
229A	**Bryant Ranch,**	**20.45**	**323**	⇓

Y27A	Causey	22.62	324	⇓P	P	02 50 44.8	-0.1
	baz=23						
125A	Gardner Draw,	22.64	320	⇓P	P	02 50 45.1	+0.1
	baz=23,SNR=13						
Z26A	Caprock	22.65	322	⇑P	P	02 50 45.5	+0.4
	baz=23						
224A	Cornudas Mount	22.80	318	⇑P	P	02 50 46.6	-0.2
	baz=23,SNR=15						
BLO	Bloomington	23.03	2	*e*P	P	02 50 49.9	+1.1
	comp=Z,57nm,1.0s						
Z25A	Roswell	23.10	321	⇓P	P	02 50 49.9	+0.1
	baz=23,SNR=12						
124A	Stringfield Ra	23.16	319	⇑P	P	02 50 51.4	+0.8
	baz=23,SNR=36						
JSRW	J. Sargeant Re	23.17	20	*e*P	P	02 50 51.5	+1.1
W27A	Bowe Ranch, En	23.45	327	⇓P	P	02 50 52.8	-0.7
	baz=24						
U30A	WK&E Inc. Balk	23.46	333	⇑P	P	02 50 53.8	+0.4
	baz=24,SNR=7.1						
X26A	CR and CF Fran	23.48	325	⇓P	P	02 50 53.6	-0.1
	baz=24						
Z24A	Sheeppen Canyo	23.53	320	⇓P	P	02 50 54.9	+0.7
	baz=24,SNR=23						
T31A	Randall Ranch,	23.53	335	⇑P	P	02 50 53.9	-0.1
	baz=24						
Y25A	Mesa, Roswell	23.53	322	⇓P	P	02 50 54.3	+0.2
	baz=24						
V28A	Channing	23.56	329	⇑P	P	02 50 55.0	+0.6
	baz=24						
123A	Bell Site, Whi	23.64	318	⇓P	P	02 50 55.8	+0.5
	baz=24						
U29A	Oasis Ranch, S	23.67	332	⇑P	P	02 50 56.4	+0.9
	baz=24						
CBN	Corbin	23.80	20	*e*P	P	02 50 58.5	+2.0
	comp=Z,67nm,1.1s						
T30A	Plains	23.84	334	⇓P	P	02 50 57.6	+0.6
	baz=24						
W26A	Owens Ranch, T	23.85	326	⇓P	P	02 50 57.6	+0.3
	baz=24						
V27A	Dan Oppiter Fa	23.87	328	⇑P	P	02 50 58.2	+0.7
	baz=24						
X25A	Clemmons Ranch	23.94	323	⇑P	P	02 50 59.4	+1.2
	baz=24						
Y24A	Capitan	23.98	321	⇓P	P	02 50 59.7	+1.1
	baz=24,SNR=32						
Z23A	Rita Site, Whi	24.02	319	⇓P	P	02 50 59.9	+1.0
	baz=24,SNR=9.6						
SFIN	Scholer Farm	24.22	1	⇓P	P	02 51 00.2	-0.2
	baz=24,SNR=13						
T29A	Hugoton	24.26	333	⇓P	P	02 51 01.6	+0.6
	baz=24						
KSU1	Kansas State U	24.27	343	*e*P	P	02 51 00.3	-0.7
	comp=Z,11nm,0.8s						
221A	Mesquite Ranch	24.27	314	⇑P	P	02 51 01.5	+0.3
	baz=24						
S30A	Montezuma	24.32	335	⇓P	P	02 51 01.8	+0.3
	baz=24,SNR=5.4						
W25A	X Bar L Ranch,	24.33	325	⇓P	P	02 51 02.2	+0.4
	baz=24						
Y23A	Lovelace Mesa,	24.36	320	⇓P	P	02 51 02.5	+0.4
	baz=24,SNR=16						
U27A	Thompson Grove	24.39	329	⇑P	P	02 51 02.5	+0.3
	baz=24						
ACSO	Alum Creek Sta	24.39	9	*e*P	P	02 51 03.5	+1.4
	comp=Z,22nm,0.8s						
V26A	Tequesquite Ra	24.39	327	⇑P	P	02 51 02.6	+0.2
	baz=24,SNR=9.9						
320A	Kipp Ranch, An	24.41	312	⇑P	P	02 51 02.6	+0.1
	baz=24						
X24A	Lazy VL Ranch,	24.42	322	⇓P	P	02 51 03.0	+0.3
	baz=24						
Z22A	Elephant Butte	24.49	318	⇓P	P	02 51 03.9	+0.7
	baz=24,SNR=15						
S29A	Ulysses	24.57	333	⇓P	P	02 51 04.9	+1.1
	baz=25						
121A	Cookes Peak, D	24.58	315	⇑P	P	02 51 04.8	+0.7
	baz=25,SNR=6.0						
220A	Playas Peak, P	24.73	313	⇑P	P	02 51 05.5	+0.1
	baz=25,SNR=8.3						
R30A	Dighton	24.79	336	⇓P	P	02 51 06.6	+0.8
	baz=25						
U26A	Atchley Ranch,	24.83	328	⇓P	P	02 51 06.9	+0.6
	baz=25						
BNM	Barren Site	24.86	320	*e*P	P	02 51 08.0	+1.4
	comp=Z,20nm,1.4s						
W24A	Lazy 6 Ranch,	24.86	323	⇑P	P	02 51 08.6	+2.0
	baz=25,SNR=9.6						
V25A	Rancho No Teng	24.87	325	⇓P	P	02 51 07.5	+0.8
	baz=25						
S28A	Manter	24.89	332	⇓P	P	02 51 08.1	+1.3
	baz=25						
Y22A	Socorro	24.93	319	⇑P	P	02 51 08.7	+1.4
	baz=25,SNR=27						
LPM	Los Pinos Moun	24.97	320	*e*P	P	02 51 08.6	+1.0
319A	Douglas	24.97	311	⇓P	P	02 51 08.2	+0.6
	baz=25						
Z21A	St. Cloud Mine	24.98	317	⇓P	P	02 51 09.1	+1.4
	baz=25						
Y22D	IRIS PASSCAL I	24.99	319	⇓P	P	02 51 09.4	+1.6
	baz=25						
SDMD	Soldier's Deli	25.07	20	*e*P	P	02 51 10.1	+1.9
	comp=Z,31nm,1.0s						
LENM	Lemitar	25.08	319	*e*P	P	02 51 10.4	+1.7
120A	U Bar Ranch, L	25.17	314	⇓P	P	02 51 10.2	+0.8
	baz=25,SNR=5.2						
U25A	Circle Dot Ran	25.18	327	⇓P	P	02 51 10.7	+1.2
	baz=25						
W23A	Werner Place,	25.25	322	⇓P	P	02 51 11.4	+1.2
	baz=25,SNR=7.0						
R29A	Marienthal	25.26	334	⇑P	P	02 51 11.8	+1.8
	baz=25						
ANMO	Albuquerque	25.29	321	*e*P	P	02 51 12.6	+2.1
	comp=Z,3.2nm,0.9s						
ANMO	Albuquerque	25.29	321	P	P	02 51 11.6	+1.1
	comp=Z,2.5nm,0.9s,baz=137,slow=13,SNR=8.0						
X22A	Bernardo	25.33	320	⇑P	P	02 51 12.3	+1.5
	baz=25						
LAZ	Ladron	25.34	320	*e*P	P	02 51 12.0	+1.0
	comp=Z,3.7nm,1.0s						
Y21A	Point of Rocks	25.42	318	⇓P	P	02 51 13.7	+1.9
	baz=25,SNR=30						
S27A	Las Animas	25.43	331	⇑P	P	02 51 13.0	+1.4
	baz=26						
Z20A	Nine Sixteen R	25.48	316	⇑P	P	02 51 13.2	+1.0
	baz=26,SNR=6.7						
R28A	Tribune	25.48	333	⇑P	P	02 51 12.9	+0.9
	baz=26						
S26A	Kim	25.65	330	⇑P	P	02 51 15.0	+1.4
	baz=26						
V23A	Ortiz Mt. (NFS	25.68	323	⇑P	P	02 51 16.1	+2.0
	baz=26						
T25A	Trinidad	25.74	328	⇑P	P	02 51 16.6	+2.0
	baz=26						
MVL	Millersville	25.76	20	*e*P	P	02 51 17.1	+2.7
	comp=Z,25nm,1.3s						
X21A	Alamocita Cree	25.77	319	⇓P	P	02 51 16.7	+1.8
	baz=26,SNR=27						
Y20A	Horse Springs,	25.82	317	⇑P	P	02 51 16.8	+1.5
	baz=26,SNR=18						
R27A	Eads	25.87	332	⇓P	P	02 51 17.7	+2.0
	baz=26						
SSPA	Standing Stone	25.87	17	*e*P	P	02 51 16.9	+1.4
	comp=Z,15nm,1.0s						
Q28A	Sharon Springs	26.09	334	⇑P	P	02 51 19.9	+2.3
	baz=26						
U23A	El Rito	26.10	324	⇑P	P	02 51 19.9	+2.0
	baz=26						
W21A	San Fidel	26.13	320	⇓P	P	02 51 20.6	+2.4
	baz=26						
S25A	Robets Cordova	26.16	329	⇓P	P	02 51 21.2	+2.9
	baz=26						
R26A	Arlington	26.18	331	⇑P	P	02 51 21.1	+2.6
	baz=26						
V22A	San Miguel Ran	26.22	323	⇓P	P	02 51 21.0	+2.0
	baz=26						
X20A	Quemado	26.29	318	⇑P	P	02 51 21.6	+2.0
	baz=26,SNR=14						
TUC	Tucson	26.55	312	*e*P	P	02 51 21.9	0.0
	comp=Z,4.2nm,1.0s						
W20A	Ramah	26.66	319	⇓P	P	02 51 24.7	+1.8
	baz=27						
Q26A	Hugo	26.72	332	⇑P	P	02 51 25.1	+1.7
	baz=27						
ERPA	Erie	26.76	13	*e*P	P	02 51 24.8	+1.4
	comp=Z,43nm,1.0s						
SDCO	Great Sand Dun	26.77	327	*e*P	P	02 51 24.7	+0.8
	comp=Z,8.3nm,1.5s						
JFWS	Jewell Farm	26.84	356	*e*P	P	02 51 24.1	-0.2
	comp=Z,16nm,0.8s						
U21A	Nageezi	27.02	322	⇓P	P	02 51 28.4	+2.2
	baz=27						
X18A	Snowflake	27.23	317	⇑P	P	02 51 29.4	+1.4
	baz=27						
W18A	Petrified Fore	27.44	318	⇓P	P	02 51 30.9	+0.9
	baz=27						
S22A	4UR Ranch, Cre	27.48	325	⇑P	P	02 51 31.4	+1.1
	baz=28						
U20A	Newcomb	27.49	321	⇑P	P	02 51 30.9	+0.5
	baz=28						
Q24A	Divide	27.52	329	⇓P	P	02 51 32.3	+1.5
	baz=28						
X16A	Lo Mia Camp, P	28.16	315	⇓P	P	02 51 38.1	+1.7
	baz=28						
ISCO	Idaho Springs	28.40	330	⇑P	P	02 51 39.1	+0.5
	baz=28						
ECSD	EROS Data Cent	28.62	346	*e*P	P	02 51 38.4	-1.7
	comp=Z,3.8nm,0.9s						
WUAZ	Wupatki	28.75	317	*e*P	P	02 51 42.8	+1.2
	comp=Z,7.0nm,1.1s						
WUAZ	Wupatki	28.75	317	⇓P	P	02 51 43.5	+1.9
	baz=29						
N24A	Carr	28.87	332	⇑P	P	02 51 44.7	+2.1
	baz=29						
TRY	Troy	29.11	21	*e*P	P	02 51 46.0	+1.5
	comp=Z,36nm,1.0s						
S18A	Hurst Farm, Bl	29.25	322	⇑P	P	02 51 46.9	+0.8
	baz=29						
SADO	Sadowa	29.47	12	P	P	02 51 47.5	-0.1
SADO	Sadowa	29.47	12	P	P	02 51 47.5	-0.1
	comp=Z,12nm,0.5s,baz=208,slow=10,SNR=18						
ACCN	Adirondack Com	29.68	21	*e*P	P	02 51 50.4	+0.8
	comp=Z,14nm,0.9s						
COWI	Conover	29.96	358	*e*P	P	02 51 51.1	-1.0
	comp=Z,10nm,0.7s						
PDMCI	Parker Dam,Lak	29.98	312	⇓P	P	02 51 53.3	+0.9
	baz=30						
L23A	Garrett	30.27	333	⇑P	P	02 51 56.6	+1.6
	baz=30						
LONY	Lake Ozonia	30.50	18	*e*P	P	02 51 58.1	+1.3
	comp=Z,22nm,0.8s						
N20A	Spence Gulch,	30.50	328	⇓P	P	02 51 58.5	+1.5
	baz=30						
M21A	Separation Pea	30.64	330	⇑P	P	02 51 59.2	+0.9
	baz=31						
L21A	Rawlins	30.91	331	⇑P	P	02 52 01.7	+0.9
	baz=31						
MONP	Monument Peak	31.00	308	⇓P	P	02 52 01.6	+0.1
	baz=31						
LDFC	Landfair	31.06	313	*e*P	P	02 52 03.7	+1.7
	comp=Z,4.9nm,0.8s						
BELC	Belle Mtn. Jos	31.18	310	⇓P	P	02 52 03.2	0.0
	baz=31						
CCUT	Cedar City	31.24	318	*e*P	P	02 52 11.2	+7.5
	comp=Z,3.0nm,1.1s						
PFO	Pinyon Flat Ob	31.34	309	*e*P	P	02 52 04.5	0.0
	comp=Z,4.8nm,1.2s						
PFO	Pinyon Flat Ob	31.34	309	⇓P	P	02 52 04.9	+0.4
	baz=31						
J22A	Midwest	31.65	333	⇓P	P	02 52 08.8	+1.6
	baz=32						
HEC	Hector,Ludlow	31.81	311	⇓P	P	02 52 09.5	+0.9
	baz=32						
EYMN	Ely	31.94	355	*e*P	P	02 52 08.5	-1.0
	comp=Z,6.3nm,0.8s						
J21A	Lysite	32.03	332	⇓P	P	02 52 11.8	+1.3
	baz=32						
J20A	Shoshoni	32.32	331	⇓P	P	02 52 14.0	+1.0
	baz=32						
I21A	Big Trails, Te	32.33	333	⇑P	P	02 52 14.3	+1.2
	baz=32						
DUG	Duway	32.54	323	*e*P	P	02 52 15.2	+0.2
	comp=Z,6.6nm,1.3s						
PDAR	Pinedale Array	32.58	329	P	P	02 52 16.3	+0.9
PDAR	Pinedale Array	32.58	329	P	P	02 52 16.3	+0.9
	comp=Z,0.6nm,0.8s,baz=130,slow=8.4,SNR=3.6						
G23A	Biddle	32.68	336	⇓P	P	02 52 17.0	+0.9
	baz=33						
I20A	Worland	32.81	332	⇑P	P	02 52 17.5	+0.3
	baz=33						
F24A	Ekalaka	32.87	338	⇓P	P	02 52 18.7	+0.9
	baz=33						
EDW2	Edwards Air Fo	33.05	310	⇓P	P	02 52 19.6	+0.2
	baz=33						
G22A	Birney	33.05	335	⇓P	P	02 52 20.2	+0.9
	baz=33						
R11A	Troy Canyon, C	33.14	317	⇓P	P	02 52 21.0	+0.7
	baz=33						
H20A	Greybull	33.17	333	⇑P	P	02 52 21.7	+1.3
	baz=33						
MPMC	Manual Prospec	33.23	312	⇑P	P	02 52 21.9	+0.7
	baz=33						
E24A	Baker	33.44	339	⇑P	P	02 52 23.4	+0.7
	baz=34						
F22A	Rosebud	33.50	336	⇑P	P	02 52 24.1	+0.9
	baz=34						
SNOW	Snow King Moun	33.69	329	*e*P	P	02 52 25.9	+0.9
	comp=Z,3.7nm,0.8s						
LOHW	Long Hollow	33.72	329	*e*P	P	02 52 26.2	+0.9
	comp=Z,1.6nm,0.7s						
E23A	Ismay	33.74	338	⇓P	P	02 52 25.1	-0.2
	baz=34,SNR=6.2						
TPAW	Teton Pass	33.80	329	*e*P	P	02 52 27.1	+0.9
	comp=Z,2.5nm,0.8s						
G20A	Bridger	33.85	333	⇑P	P	02 52 27.0	+0.6
	baz=34						
MOOW	Moose Ponds	33.89	329	*e*P	P	02 52 27.8	+0.9
	comp=Z,1.6nm,0.6s						
D24A	Glendive	33.93	339	⇑P	P	02 52 27.7	+0.9
	baz=34						
E22A	Miles City	33.93	337	⇑P	P	02 52 27.5	+0.6
	baz=34,SNR=5.5						
D23A	Lindsay	34.28	338	⇓P	P	02 52 31.3	+1.3
	baz=34						
PKM	Peak Mountain	34.41	309	⇓P	P	02 52 32.1	+0.7
	baz=34						
G18A	Lazy EL Ranch,	34.52	332	⇑P	P	02 52 33.3	+1.2
	baz=34						
D22A	Cohagen	34.61	337	⇓P	P	02 52 33.9	+1.1
	baz=35						
SAML	Samuel	34.66	134	*e*P	P	02 52 32.8	-0.6
	comp=Z,4.1nm,1.2s						
F19A	Roth Farm, Mol	34.66	333	⇑P	P	02 52 34.2	+0.9
	baz=35						
ULM	Lac du Bonnet	34.74	351	P	P	02 52 31.7	-2.1
ULM	Lac du Bonnet	34.74	351	P	P	02 52 31.7	-2.1
	comp=Z,4.0nm,0.7s,baz=178,slow=9.1,SNR=3.1						
C23A	Lambert	34.81	339	⇑P	P	02 52 35.8	+1.2
	baz=35						
E20A	Meyer Farm, Mu	34.84	335	⇑P	P	02 52 36.2	+1.3
	baz=35,SNR=7.5						
NVAR	Mina Array Bea	34.98	316	P	P	02 52 37.8	+1.5
NVAR	Mina Array Bea	34.98	316	P	P	02 52 37.8	+1.5
	comp=Z,1.1nm,0.6s,baz=125,slow=7.8,SNR=11						
C22A	Vida	35.01	338	⇓P	P	02 52 37.6	+1.3
	baz=35						
F18A	Big Timber	35.04	333	⇓P	P	02 52 37.3	+0.7
	baz=35,SNR=5.4						
E19A	Rath Farm, Rou	35.08	334	⇓P	P	02 52 37.8	+0.9
	baz=35						
D20A	Manuel Ranch,	35.32	335	⇑P	P	02 52 40.0	+1.1
	baz=35,SNR=6.9						
B23A	Brockton	35.32	340	⇑P	P	02 52 40.1	+1.2
	baz=35						
A24A	Westby	35.41	341	⇓P	P	02 52 40.4	+0.8
	baz=35						
F17A	Fitzpatrick Pl	35.46	332	⇑P	P	02 52 41.2	+0.9
	baz=36						
C21A	Desert Coulee	35.52	337	⇑P	P	02 52 41.6	+0.9
	baz=36						
B22A	Reddig Ranch S	35.52	339	⇑P	P	02 52 41.6	+0.9
	baz=36						
E18A	Harlowton	35.64	333	⇓P	P	02 52 42.8	+1.0
	baz=36						
MCMT	McKenzie Canyo	35.71	329	*e*P	P	02 52 43.6	+1.0
	comp=Z,1.0nm,0.9s						
BOZ	Bozeman (W)	35.72	331	*e*P	P	02 52 43.2	+0.7
	comp=Z,3.2nm,1.0s						
C20A	Veseth Ranch,	35.77	336	⇓P	P	02 52 43.7	+0.9
	baz=36,SNR=7.2						
F16A	Kennard Place,	35.82	331	⇓P	P	02 52 43.7	+0.4
	baz=36						
E17A	Martinsdale	35.97	332	⇓P	P	02 52 46.1	+1.4
	baz=36						
A22A	Carney Farms,	36.09	339	⇑P	P	02 52 46.9	+1.4
	baz=36						
C19A	Slack Wire Ran	36.20	335	⇑P	P	02 52 47.7	+1.2
	baz=36						
LRM	Limekiln Ridge	36.23	330	*e*P	P	02 52 47.3	+0.2
F15A	Butte	36.27	330	⇑P	P	02 52 48.6	+1.3
	baz=36						
B20A	Solberg Farm,	36.38	337	⇑P	P	02 52 48.7	+0.8
	baz=36,SNR=8.2						
E16A	East Helena	36.40	332	⇑P	P	02 52 49.6	+1.3
	baz=36						
D17A	Six Diamond Ra	36.43	333	⇑P	P	02 52 49.0	+0.4
	baz=36,SNR=6.2						
A21A	Bergtoll Ranch	36.44	338	⇓P	P	02 52 49.5	+1.0
	baz=36						
D16A	Dana Ranch, Ca	36.72	332	⇓P	P	02 52 51.9	+0.9
	baz=37						
EGMT	Eagleton	36.72	335	*e*P	P	02 52 52.0	+1.0
	comp=Z,12nm,1.4s						
EGMT	Eagleton	36.72	335	⇑P	P	02 52 52.4	+1.4
	baz=37						
E15A	Deer Lodge	36.77	331	⇓P	P	02 52 52.6	+1.1
	baz=37						
C17A	Wharram Farm,	36.83	334	⇓P	P	02 52 52.7	+0.8
	baz=37,SNR=6.5						
B18A	Beardsley Farm	37.02	335	⇓P	P	02 52 54.6	+1.1
	baz=37						
A19A	Klindworth Far	37.05	337	⇑P	P	02 52 55.2	+1.5
	baz=37						
F13A	Darby	37.13	329	⇑P	P	02 52 56.0	+1.5
	baz=37						
D15A	Lincoln	37.16	331	⇑P	P	02 52 55.8	+1.0
	baz=37						
E14A	Clinton	37.16	330	⇓P	P	02 52 56.2	+1.3
	baz=37						
G12A	Big Creek, Yel	37.19	327	⇓P	P	02 52 55.7	+0.6
	baz=37						
CHMT	Chamberlain Mo	37.41	331	*e*P	P	02 52 57.4	+0.4
A18A	Metzger Ranch,	37.47	336	⇑P	P	02 52 57.8	+0.5
	baz=38,SNR=6.4						
F12A	Elk City	37.58	328	⇓P	P	02 52 59.0	+0.7
	baz=38						
D14A	Greenough	37.65	331	⇑P	P	02 52 59.5	+0.5
	baz=38						
C15A	Salmond Ranch,	37.75	332	⇓P	P	02 53 00.4	+0.7
	baz=38,SNR=5.6						
A17A	Triple J Farms	37.83	335	⇓P	P	02 53 01.2	+0.8
	baz=38						
D13A	Huson	38.11	330	⇑P	P	02 53 04.0	+1.2
	baz=38						
B15A	Bradely Ranch,	38.13	333	⇑P	P	02 53 04.2	+1.2
	baz=38						
A16A	West Butte Ran	38.20	334	⇓P	P	02 53 04.4	+0.8
	baz=38						
B14A	Marquette Ranc	38.48	332	⇑P	P	02 53 07.1	+1.1
	baz=38						
D12A	Red Ives Fores	38.52	329	⇓P	P	02 53 07.1	+0.9
	baz=38						
A15A	Johnson Ranch,	38.71	333	⇑P	P	02 53 09.0	+1.2
	baz=39						
A14A	Double T Ranch	39.01	333	⇑P	P	02 53 10.8	+0.5
	baz=39,SNR=6.5						
B13A	Whitefish	39.04	331	⇓P	P	02 53 11.7	+1.2
	baz=39						
C11A	Tepee Creek (N	39.51	329	⇑P	P	02 53 15.5	+1.0
	baz=40						
SIV	San Ignacio	41.22	139	P	P	02 53 29.9	+1.0
SIV	San Ignacio	41.22	139	P	P	02 53 29.9	+1.0
	comp=Z,0.7nm,0.6s,baz=305,slow=7.1,SNR=3.1						
SCHQ	Schefferville	41.87	18	*e*P	P	02 53 33.5	-0.2
	comp=Z,15nm,0.8s						
SCHQ	Schefferville	41.87	18	P	P	02 53 33.4	-0.4
	comp=Z,14nm,0.6s,baz=216,slow=8.6,SNR=41						
YKA	Yellowknife Ar	50.11	344	P	P	02 54 37.6	-1.0
YKA	Yellowknife Ar	50.11	344	P	P	02 54 37.6	-1.0
	comp=Z,3.0nm,0.6s,baz=141,slow=7.6,SNR=69						
BDFB	Brasilia	50.18	127	LR	LR	03 19 38.4	
	comp=Z,109nm,18.5s,baz=128,slow=41						
DLBC	Dease Lake	52.62	333	*e*P	P	02 54 58.9	+1.3
SFJD	Kangerlussuaq	56.28	16	P	P	02 55 23.0	-1.0
SFJD	Kangerlussuaq	56.28	16	P	P	02 55 23.0	-1.0
	comp=Z,4.0nm,0.7s,baz=210,slow=5.8,SNR=3.8						
INK	Inuvik	59.74	342	P	P	02 55 47.2	-0.9
INK	Inuvik	59.74	342	P	P	02 55 47.2	-0.9
	comp=Z,1.3nm,0.7s,baz=150,slow=5.9,SNR=4.3						
DOT	Dot Lake	61.11	335	*e*P	P	02 55 58.5	+0.8
	comp=Z,14nm,0.7s						
ILAR	Eielson Array	62.68	335	P	P	02 56 07.8	-0.4
ILAR	Eielson Array	62.68	335	P	P	02 56 07.8	-0.4
	comp=Z,2.5nm,0.8s,baz=122,slow=4.7,SNR=35						
SUMG	Summit	63.13	15	*e*P	P	02 56 11.3	-0.2
	comp=Z,22nm,1.2s						
SUMG	Summit	63.13	15	*i* P	P	02 56 09.9	-1.6
	comp=Z,13nm,0.8s						
TRF	Thorofare Moun	63.65	334	*e*P	P	02 56 14.7	-0.2
	comp=Z,6.5nm,0.8s						
POHA	Pohakuloa	64.39	285	*e*P	P	02 56 22.8	+2.2
	comp=Z,71nm,1.2s						
COLD	Coldfoot	64.81	338	*e*P	P	02 56 24.2	+1.9
	comp=Z,5.9nm,1.3s						
ESDC	Sonseca Array	75.07	53	P	P	02 57 26.6	+0.8
ESDC	Sonseca Array	75.07	53	P	P	02 57 26.6	+0.8
	comp=Z,1.5nm,0.6s,baz=292,slow=5.6,SNR=9.5						
NB2	NORSAR Subarra	80.27	29	P	P	02 57 55.0	+0.6
	comp=Z,1.8nm,0.8s,baz=286,slow=5.6						
NOA	NORSAR Array B	80.27	29	P	P	02 57 54.5	0.0
NOA	NORSAR Array B	80.27	29	P	P	02 57 54.4	0.0
	comp=Z,4.4nm,0.9s,baz=285,slow=5.3,SNR=8.4						
BILL	Bilibino	81.12	339	*e*P	P	02 57 58.8	0.0
	comp=Z,8.3nm,1.3s						
ARCES	ARCESS Array B	82.81	19	P	P	02 58 08.1	+0.4
ARCES	ARCESS Array B	82.81	19	P	P	02 58 08.1	+0.4
	comp=Z,2.0nm,0.6s,baz=283,slow=4.4,SNR=8.4						
CLL	Collm	84.06	38	*e*P	P	02 58 14.0	-0.4
GERES	GERESS Array B	85.27	41	P	P	02 58 20.6	-0.1
GERES	GERESS Array B	85.27	41	P	P	02 58 20.6	-0.1
	comp=Z,2.3nm,1.0s,baz=318,slow=4.1,SNR=11						
TORD	Torodi Ar. Bea	85.74	78	P	P	02 58 22.9	-0.6
TORD	Torodi Ar. Bea	85.74	78	P	P	02 58 22.9	-0.6
	comp=Z,0.3nm,0.6s,baz=291,slow=5.5,SNR=8.0						
FINES	FINESS Array B	86.78	26	P	P	02 58 28.2	+0.4
FINES	FINESS Array B	86.78	26	P	P	02 58 28.2	+0.4
	comp=Z,1.0nm,0.6s,baz=312,slow=7.3,SNR=3.2						
WMQ	Urumqi	120.24	4	*e*PKP	PKPdf	03 04 35.0	-0.2
WMQ				LR	LR		
	comp=N,58nm,24.0s						
WMQ				LR	LR		
	comp=E,96nm,30.0s						
WM

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNL	**Peninsula**	**1.57**	**348**	P	Pn	03 04 48.3	-2.4
PNL				S	Sn	03 05 08.2	-2.8
BESE	**Bessie Mountai**	**2.09**	**76**	P	Pn	03 04 56.2	-1.7
SIT	**Sitka**	**2.14**	**119**	P	Pn	03 04 56.5	-1.9
SIT				S	Sn	03 05 22.8	-2.1
SKAG	**Skagway**	**2.21**	**52**	*e*Pn	Pn	03 04 57.7	-1.8
SKAG				*e*Pg	Pb	03 05 02.8	0.0
SKAG				*e*Sn	Sn	03 05 25.6	-1.2
SAMH	**Samovar Hills**	**2.25**	**333**	P	Pn	03 04 59.0	-1.1
CHX	**Chaix Hills**	**2.28**	**329**	P	Pn	03 04 59.1	-1.5
HYT	**Haines Junctio**	**2.76**	**13**	P	Pn	03 05 06.0	-1.2
HYT	**Haines Junctio**	**2.76**	**13**	⇑Pn	Pn	03 05 05.9	-1.4
HYT				⇑Sg	Sn	03 05 42.8	+2.1
WHY	**Whitehorse**	**3.20**	**36**	P	Pn	03 05 11.9	-1.3
WHY				S	Sn	03 05 48.4	-3.2
WHY	**Whitehorse**	**3.20**	**36**	⇓Pn	Pn	03 05 11.7	-1.6
WHY				⇓Sn	Sn	03 05 46.6	-4.9
WHY				⇓Sg	Sb	03 05 56.6	-2.4
BARN	**Barnard Glacie**	**3.28**	**334**	P	Pn	03 05 13.6	-0.8
RAGM	**Ragged Mountai**	**3.79**	**309**	P	Pn	03 05 19.8	-1.4
MCARA	**McCarthy VSAT**	**3.91**	**328**	P	Pn	03 05 21.7	-1.0
DLBC	**Dease Lake**	**4.61**	**83**	P	Pn	03 05 31.0	-1.5
DLBC	**Dease Lake**	**4.61**	**83**	⇓Pn	Pn	03 05 31.5	-0.9
DLBC				⇓Sg	Sb	03 06 41.3	+2.0
BCA3	**Beaver Creek A**	**5.16**	**344**	P	Pn	03 05 39.4	-0.7
NDB	**Naden**	**5.31**	**140**	⇑Pn	Pn	03 05 41.0	-1.1
DAWY	**Dawson**	**5.95**	**357**	P	Pn	03 05 50.5	-0.4
DAWY	**Dawson**	**5.95**	**357**	⇑Pn	Pn	03 05 50.7	-0.2
DAWY				⇑Sg	Sg	03 07 27.8	-6.0
DIB	**Dawson Inlet,**	**6.09**	**142**	⇑Pn	Pn	03 05 51.9	-0.8
DIB				⇓Sn	Sn	03 06 58.2	-4.0
DOT	**Dot Lake**	**6.10**	**337**	P	Pn	03 05 52.6	-0.3
MOBC	**Moresby Island**	**6.30**	**140**	P	Pn	03 05 53.5	-2.2
MOBC	**Moresby Island**	**6.30**	**140**	⇑Pn	Pn	03 05 56.7	+1.0
MOBC				⇑Sn	Sn	03 07 04.0	-3.8
DHY	**Denali Highway**	**6.52**	**323**	P	Pn	03 05 58.0	-0.8
BNB	**Barry Inlet**	**6.85**	**142**	⇓Pn	Pn	03 06 02.4	-0.9
IL1	**Eielson Array**	**7.70**	**333**	P	Pn	03 06 13.8	-1.0
TRF	**Thorofare Moun**	**7.75**	**318**	P	Pn	03 06 14.7	-1.0

NEIC ***29*** *03:06:17.1, 19.°14N×63.°99W, h15*km*, MD3.5(RSPR), After RSPR.*

RSPR 29 03:06:17.1, 19.°14N×63.°99W, h15km**±1**km**, MD3.5/9, 8C-7D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.52**	**219**	⇓*e*P	Pg	03 06 26.9	-0.5
ABV	**Anegada**	**0.52**	**219**	*e*S	Sg	03 06 34.0	-0.3
ABVI	**Anegada Island**	**0.52**	**219**	⇓*e*P	Pg	03 06 26.9	-0.5
ABVI				*e*S	Sg	03 06 34.0	-0.3
TBVI	**Tortola**	**0.93**	**220**	⇑*e*P	Pb	03 06 32.5	-2.5
TBVI	**Tortola**	**0.93**	**220**	⇑*e*P	Pb	03 06 32.5	-2.5
STVI	**Saint Thomas**	**1.20**	**230**	⇓*e*P	Pn	03 06 36.3	-3.1
STVI	**Saint Thomas**	**1.20**	**230**	*e*S	Sb	03 06 51.5	-3.5
STVI	**Saint Thomas**	**1.20**	**230**	⇓*e*P	Pn	03 06 36.3	-3.1
STVI				*e*S	Sb	03 06 51.5	-3.5
CDVI	**St. Croix**	**1.56**	**208**	*e*Pn	Pn	03 06 43.7	-0.7
CDVI				*e*Sn	Sn	03 07 04.7	+0.3
MTP	**Monte Pirata**	**1.81**	**235**	⇑*e*P	Pn	03 06 45.2	-2.5
MTP	**Monte Pirata**	**1.81**	**235**	*e*S	Sn	03 07 06.7	-3.7
MTP	**Monte Pirata**	**1.81**	**235**	⇑*e*P	Pn	03 06 45.2	-2.5
MTP				*e*S	Sn	03 07 06.7	-3.7
CBYP	**Canovanas**	**1.97**	**244**	⇑*e*P	Pn	03 06 47.4	-2.7
CBYP	**Canovanas**	**1.97**	**244**	⇑*e*P	Pn	03 06 47.4	-2.7
CPD	**Cerro la Pandu**	**2.13**	**239**	⇓*e*P	Pn	03 06 50.0	-2.2
CPD	**Cerro la Pandu**	**2.13**	**239**	⇓*e*P	Pn	03 06 50.0	-2.2
SJG	**San Juan**	**2.29**	**244**	⇑*e*P	Pn	03 06 51.7	-2.6
SJG	**San Juan**	**2.29**	**244**	⇓*i*P	Pn	03 06 51.6	-2.7
SJG	**San Juan**	**2.29**	**244**	⇑*e*P	Pn	03 06 51.7	-2.6
CELP	**Cerrillos**	**2.67**	**247**	⇑*i*P	Pn	03 06 56.9	-2.8
CELP				*e*S	Sn	03 07 28.9	-3.0
CELP	**Cerrillos**	**2.67**	**247**	*i* Pu	Pn	03 06 56.9	-2.8
CELP				*e*S	Sn	03 07 28.9	-3.0
OBIP	**Obispado Ponce**	**2.71**	**247**	*e*Pn	Pn	03 06 57.6	-2.6
CRPR	**Cabo Rojo, PR**	**3.17**	**250**	*e*Pn	Pn	03 07 04.6	-1.8
LZG	**Guadaloupe-1**	**3.65**	**144**	*e*P	Pn	03 07 19.3	+1.1
SDDR	**Presa de Saban** 26nm,0.6s	**6.91**	**270**	*e*Pn	Pn	03 07 54.5	-3.4

NEIC ***29*** *03:35:15.1±2.2, 40.°36N×127.°07W, h10*km*, mb3.6/5, MW4.0(BRK), Error ellipse: s-maj=26.9km s-min=6.9km az=81.0*

ISC 29 03:35:15.6±1.7, 40.°36N±0.°07×127.°1W±0.°1, h16km**, n93, σ1$39/106, 23C-31D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHMM	**Horse Mountain**	**2.58**	**77**	*e*Pn	**Pn**	**03 35 55.5**	**-1.3**
KHMM				*e*Sn	**Sn**	**03 36 25.7**	**-2.2**
KCPM	**Cahto Peak**	**2.74**	**103**	*e*Pn	**Pn**	**03 35 58.4**	**-0.7**
KCPM				*e*Sn	**Sn**	**03 36 29.5**	**-2.5**
KIPM	**Iron Peak**	**2.79**	**100**	*e*Pn	**Pn**	**03 35 59.2**	**-0.5**
KIPM				*e*Sn	**Sn**	**03 36 31.2**	**-2.0**
KSXB	**Camp Six Broad**	**2.81**	**57**	P	**Pn**	**03 35 58.7**	**-1.2**
KBO	**Bosley Butte**	**2.82**	**48**	P	**Pn**	**03 35 58.6**	**-1.5**
KTRM	**Thompson Ridge**	**3.18**	**60**	P	**Pn**	**03 36 04.3**	**-0.7**
KEBM	**Edson Butte**	**3.23**	**38**	*e*Pn	**Pn**	**03 36 04.3**	**-1.4**
HOPS	**Hopland**	**3.36**	**113**	*e*Pn	**Pn**	**03 36 06.3**	**-1.1**
HOPS				*e*Sn	**Sn**	**03 36 46.1**	**-0.7**
WDC	**Whiskeytown Da**	**3.44**	**85**	*e*Pn	**Pn**	**03 36 08.5**	**0.0**
WDC				*e*Sn	**Sn**	**03 36 46.0**	**-3.1**
YBH	**Yreka Blue Hor**	**3.56**	**66**	*e*Pn	**Pn**	**03 36 10.2**	**0.0**
YBH				*e*Sn	**Sn**	**03 36 52.2**	**+0.3**
LAMM	**Antelope Mount**	**3.57**	**68**	P	**Pn**	**03 36 10.1**	**-0.4**
HUMO	**Hull Mountain**	**3.81**	**52**	*e*Pn	**Pn**	**03 36 12.9**	**-0.6**
LHEM	**Herd Peak**	**3.87**	**69**	P	**Pn**	**03 36 15.4**	**+0.8**
DBO	**Dodson Butte**	**3.96**	**45**	P	**Pn**	**03 36 15.1**	**-0.7**
UMPQ	**Umpqua Communi**	**4.04**	**42**	P	**Pn**	**03 36 16.0**	**-0.6**
TAKO	**Tahkenitch**	**4.04**	**32**	P	**Pn**	**03 36 16.1**	**-0.6**
BBOR	**Butler Butte**	**4.14**	**51**	P	**Pn**	**03 36 18.1**	**-0.1**
SAC	**San Andreas**	**4.55**	**126**	*e*Pn	**Pn**	**03 36 22.8**	**-0.9**
IRO	**Indian Ridge**	**5.10**	**43**	P	**Pn**	**03 36 33.6**	**+2.2**
BEKR	**Beckworth** 21nm,0.4s	**5.15**	**93**	*e*Pn	**Pn**	**03 36 34.1**	**+1.9**
BEKR				*e*Sn	**Sn**	**03 37 33.6**	**+2.2**
SAO	**San Andreas Ge** 30nm,0.4s	**5.67**	**127**	*e*Pn	**Pn**	**03 36 38.0**	**-1.2**
SAO				*e*Sn	**Sn**	**03 37 41.8**	**-2.1**
CMB	**Columbia Colle** 30nm,0.5s	**5.67**	**112**	*e*Pn	**Pn**	**03 36 41.2**	**+2.0**
CMB				*e*Sn	**Sn**	**03 37 44.3**	**+0.3**
WCN	**Washoe City** 4.5nm,0.4s	**5.71**	**98**	*e*Pn	**Pn**	**03 36 41.8**	**+1.9**
WCN				*e*Sn	**Sn**	**03 37 46.2**	**+1.1**
WVOR	**Wild Horse Val** 2.8nm,0.4s	**6.66**	**69**	*e*Pn	**Pn**	**03 36 52.1**	**-0.7**
MLAC	**Mammoth Lakes** baz=7.0	**6.95**	**110**	⇑P	**Pn**	**03 36 57.8**	**+0.8**
RCTC	**Rector, Farmer** baz=7.4	**7.35**	**121**	⇓P	**Pn**	**03 37 03.6**	**+1.5**
LON	**Longmire** 3.8nm,0.4s	**7.43**	**29**	*e*Pn	**Pn**	**03 37 04.5**	**+1.1**
VES	**Vestal, Richgr** baz=7.7,SNR=10	**7.73**	**123**	⇓P	**Pn**	**03 37 07.5**	**+0.1**
VES	baz=7.7			⇓S	**Sn**	**03 38 33.7**	**-0.8**
PKM	**Peak Mountain** baz=7.9,SNR=13	**7.91**	**131**	⇓P	**Pn**	**03 37 09.8**	**-0.2**
PKM	baz=7.9			⇓S	**Sn**	**03 38 37.8**	**-1.6**
CWC	**Cottonwood Cre** baz=8.1	**8.05**	**116**	⇑P	**Pn**	**03 37 13.6**	**+1.6**
ISA	**Isabella** 19nm,0.4s	**8.23**	**122**	*e*Pn	**Pn**	**03 37 15.3**	**+1.0**
ISA	**Isabella** baz=8.2,SNR=40	**8.23**	**122**	⇓P	**Pn**	**03 37 15.3**	**+1.0**
ISA	baz=8.2			⇓S	**Sn**	**03 38 47.2**	**+0.2**
GRAC	**Grapevine Rang** baz=8.3	**8.28**	**111**	⇓P	**Pn**	**03 37 17.0**	**+2.0**
BMO	**Blue Mountains** 7.6nm,0.7s	**8.47**	**55**	*e*Pn	**Pn**	**03 37 18.9**	**+1.3**
MPMC	**Manual Prospec** baz=8.7	**8.66**	**117**	⇓P	**Pn**	**03 37 19.8**	**-0.5**
ETW	**Entiat**	**8.71**	**32**	P	**Pn**	**03 37 22.6**	**+1.6**
LRMC	**Laurel Mountai** baz=8.9	**8.85**	**120**	⇑P	**Pn**	**03 37 23.5**	**+0.5**
FURC	**Furnace Creek,** baz=8.9	**8.89**	**113**	⇑P	**Pn**	**03 37 25.2**	**+2.0**
BLG	**Laguna Peak** baz=8.9	**8.91**	**132**	⇑P	**Pn**	**03 37 22.9**	**-0.7**
MFID	**Camas Ranch** baz=8.9	**8.91**	**66**	⇓P	**Pn**	**03 37 26.0**	**+2.3**
EDW2	**Edwards Air Fo** baz=9.0	**9.03**	**124**	⇓P	**Pn**	**03 37 25.4**	**+0.1**
EDW2	baz=9.0			⇑S	**Sn**	**03 39 05.7**	**-1.0**
R11A	**Troy Canyon, C** baz=9.1	**9.10**	**99**	⇑P	**Pn**	**03 37 27.9**	**+1.4**
I12A	**Atlanta** baz=9.5	**9.50**	**65**	⇑P	**Pn**	**03 37 34.0**	**+2.1**
GSC	**Goldstone** 7.4nm,0.4s	**9.54**	**119**	*e*Pn	**Pn**	**03 37 33.1**	**+0.8**
GSC	**Goldstone** baz=9.5	**9.54**	**119**	⇑P	**Pn**	**03 37 33.2**	**+0.8**
SHOC	**Shoshone** baz=9.6	**9.58**	**114**	⇓P	**Pn**	**03 37 34.5**	**+1.7**
G12A	**Big Creek, Yel** baz=9.8	**9.85**	**57**	⇓P	**Pn**	**03 37 38.5**	**+1.9**
H12A	**Diamond D Ranc** baz=9.9	**9.94**	**61**	⇑P	**Pn**	**03 37 40.0**	**+2.2**
HLID	**Hailey** 4.0nm,1.1s	**9.94**	**67**	*e*Pn	**Pn**	**03 37 39.7**	**+1.9**
HLID	**Hailey** baz=9.9	**9.94**	**67**	⇑P	**Pn**	**03 37 40.1**	**+2.2**
SCI	**San Clemente I** baz=10.0	**10.04**	**135**	⇓P	**Pn**	**03 37 38.9**	**-0.1**
TUQ	**Turquoise Moun** baz=10	**10.07**	**116**	⇓P	**Pn**	**03 37 41.4**	**+1.8**
HEC	**Hector,Ludlow** baz=10,SNR=19	**10.13**	**120**	⇑P	**Pn**	**03 37 40.8**	**+0.4**
F12A	**Elk City** baz=10	**10.18**	**54**	⇑P	**Pn**	**03 37 43.2**	**+2.2**
I13A	**Wildhorse Cree** baz=10	**10.24**	**65**	⇑P	**Pn**	**03 37 43.7**	**+1.7**
F13A	**Darby** baz=11	**10.77**	**56**	⇑P	**Pn**	**03 37 50.9**	**+1.7**
D12A	**Red Ives Fores** baz=11	**10.79**	**48**	⇑P	**Pn**	**03 37 50.3**	**+1.0**
LDFC	**Landfair** 3.3nm,0.5s	**10.82**	**115**	*e*Pn	**Pn**	**03 37 50.8**	**+0.9**
BELC	**Belle Mtn. Jos** baz=11	**10.86**	**122**	⇑P	**Pn**	**03 37 50.6**	**+0.2**
DUG	**Dugway** 3.0nm,1.0s	**10.88**	**86**	*e*Pn	**Pn**	**03 37 51.8**	**+1.1**
DUG	**Dugway** baz=11	**10.88**	**86**	⇓P	**Pn**	**03 37 52.7**	**+2.0**
H14A	**Leadore** baz=11	**10.96**	**63**	⇓P	**Pn**	**03 37 54.2**	**+2.3**
E13A	**Victor** baz=11	**11.15**	**53**	⇓P	**Pn**	**03 37 56.1**	**+1.7**
IRM	**Iron Mountain** baz=11	**11.31**	**119**	⇓P	**Pn**	**03 37 57.3**	**+0.7**
MONP	**Monument Peak** baz=11	**11.33**	**128**	⇓P	**Pn**	**03 37 57.2**	**+0.2**
MCMT	**McKenzie Canyo** 1.4nm,0.8s	**11.38**	**62**	*e*Pn	**Pn**	**03 37 59.4**	**+1.7**
F14A	**Wisdom** baz=11	**11.39**	**57**	⇑P	**Pn**	**03 37 58.3**	**+0.6**
BC3	**Big Chuckawall** baz=11	**11.43**	**122**	⇑P	**Pn**	**03 37 57.9**	**-0.2**
MSO	**Missoula** 1.6nm,0.8s	**11.49**	**51**	*e*Pn	**Pn**	**03 38 00.9**	**+1.9**
MSO	**Missoula** baz=12	**11.49**	**51**	⇓P	**Pn**	**03 38 01.0**	**+2.0**
B12A	**Libby** baz=12	**11.52**	**41**	⇓P	**Pn**	**03 38 01.4**	**+2.0**
E14A	**Clinton** baz=12	**11.57**	**54**	⇑P	**Pn**	**03 38 01.0**	**+0.9**
G15A	**Dillon** baz=12	**11.73**	**61**	⇓P	**Pn**	**03 38 05.2**	**+2.8**
D14A	**Greenough** baz=12,SNR=6.7	**11.87**	**51**	⇓P	**Pn**	**03 38 05.6**	**+1.3**
PDMCI	**Parker Dam,Lak** baz=12	**11.92**	**116**	⇑P	**Pn**	**03 38 06.3**	**+1.5**
CHMT	**Chamberlain Mo** 2.1nm,0.9s	**11.94**	**52**	*e*Pn	**Pn**	**03 38 06.6**	**+1.3**
Y12C	**Blythe** baz=12	**11.98**	**119**	⇓P	**Pn**	**03 38 05.6**	**0.0**
U15A	**North Rim** baz=12,SNR=13	**12.22**	**104**	⇓P	Pn	03 38 14.6	+5.4
H16A	**Russell Place,** baz=12	**12.44**	**64**	⇑P	**Pn**	**03 38 13.7**	**+1.7**
D15A	**Lincoln** baz=12	**12.45**	**53**	⇓P	**Pn**	**03 38 12.9**	**+0.8**
BOZ	**Bozeman (W)**	**12.46**	**60**	*e*Pn	**Pn**	**03 38 14.7**	**+2.5**
C15A	**Salmond Ranch,** baz=13	**12.75**	**50**	⇓P	**Pn**	**03 38 16.2**	**0.0**
E16A	**East Helena** baz=13,SNR=6.6	**12.75**	**56**	⇑P	**Pn**	**03 38 16.3**	**0.0**
Y14A	**Wickenburg** baz=13	**12.90**	**115**	⇓P	**Pn**	**03 38 18.4**	**+0.1**
D16A	**Dana Ranch, Ca** baz=13	**13.04**	**54**	⇓P	**Pn**	**03 38 21.2**	**+1.0**
D17A	**Six Diamond Ra** baz=14	**13.62**	**55**	⇓P	**Pn**	**03 38 28.0**	**-0.2**
EGMT	**Eagleton** 8.2nm,1.1s	**14.56**	**53**	*e*Pn	**Pn**	**03 38 41.4**	**+0.5**
TUC	**Tucson**	**15.36**	**116**	*e*Pn	**Pn**	**03 38 52.5**	**+0.9**
SDCO	**Great Sand Dun** 1.4nm,1.1s	**16.94**	**92**	*e*Pn	**Pn**	**03 39 12.3**	**+0.2**
MNTX	**Cornudas Mount** 1.9nm,1.1s	**19.50**	**109**	*e*P	**P**	**03 39 43.1**	**+1.1**
AMTX	**Amarillo** 3.9nm,0.8s	**20.79**	**97**	*e*P	**P**	**03 39 57.8**	**+1.7**
FFC	**Flin Flon** 3.6nm,1.0s	**22.04**	**41**	*e*P	**P**	**03 40 09.5**	**+0.3**
JCT	**Junction City** 9.1nm,0.6s	**24.21**	**105**	*e*P	**P**	**03 40 32.2**	**+0.7**

IDC 29 03:41:09.0±1.7, 3.°51S×144.°40E, h0km**, mb3.5/3, mb1 3.8/4, mb1mx3.5/18, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=88.6km s-min=26.2km az=122.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=33,slow=11,SNR=5.8	**19.05**	**210**	P	Pn	03 45 33.5	-0.3
ASAR	**Alice Springs** 0.2nm,0.3s,baz=31,slow=8.2,SNR=2.8	**22.46**	**206**	P	P	03 46 10.3	+0.3
FITZ	**Fitzroy Crossi** 1.2nm,0.5s,baz=47,slow=11,SNR=12	**23.41**	**230**	P	P	03 46 19.0	-0.8
ILAR	**Eielson Array** 0.8nm,0.9s,baz=254,slow=4.7,SNR=7.0	**84.24**	**24**	P	P	03 53 42.5	+0.2

IDC 29 03:52:24.7±13.0, 2.°32S×125.°79E, h0km**, mb3.9/2, mb1 4.0/3, mb1mx3.6/22, mbtmp3.8/3, ML4.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.1/29, Error ellipse: s-maj=197.7km s-min=159.4km az=135.0, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=333,slow=11,SNR=23	**19.41**	**155**	P	P	03 56 51.9	-0.8
PMG	**Port Moresby** comp=Z,122nm,18.7s,baz=229,slow=36	**22.38**	**109**	LR	LR	04 05 41.3	
ASAR	**Alice Springs** 1.5nm,0.5s,baz=347,slow=12,SNR=21	**22.63**	**160**	P	P	03 57 27.2	-0.3
STKA	**Stephens Creek** 1.3nm,0.5s,baz=330,slow=8.1,SNR=6.6	**32.96**	**155**	P	P	03 59 01.9	+0.6

ISK ***29*** *03:53:00.9, 38.°69N×39.°60E, h7*km*, MD2.7*
DDA ***29*** *03:53:01.9, 38.°71N×39.°44E, h18*km*, MD2.8*
CSEM ***29*** *03:53:01.6±0.3, 38.°71N×39.°53E, h2*km*, MD2.8, Error ellipse: s-maj=6.9km s-min=4.7km az=104.0*

ISC 29 03:53:02.2±1.1, 38.°71N±0.°02×39.°48E±0.°03, h9km**±11**km**, n29, σ0$76/44, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.44**	**241**	*i* P	**Pg**	**03 53 10.6**	**-0.3**
ELZG				*i* S	**Sg**	**03 53 17.7**	**+0.9**
ELZG	**Elazig**	**0.44**	**241**	*i* P	**Pg**	**03 53 10.6**	**-0.3**
ELZG				*i* S	**Sg**	**03 53 17.7**	**+0.9**
ERZN	**Erzincan**	**0.89**	**12**	*e*PG	**Pg**	**03 53 18.6**	**-0.8**
ERZN				*e*SG	**Sg**	**03 53 31.5**	**+0.4**
MYA	**Malataya**	**0.91**	**245**	*e*PG	**Pb**	**03 53 20.3**	**0.0**
MYA	**Malataya**	**0.91**	**245**	*e*Pg	**Pb**	**03 53 20.3**	**0.0**
DIYA	**Diyarbakir**	**0.93**	**147**	*i* P	**Pg**	**03 53 19.2**	**-1.0**
DIYA				*i* S	**Sn**	**03 53 34.5**	**-0.6**
DIYA	**Diyarbakir**	**0.93**	**147**	*i* P	**Pg**	**03 53 19.2**	**-1.0**
KEMA	**Kemaliye**	**0.95**	**306**	*i* P	**Pg**	**03 53 19.4**	**-1.1**
KEMA				*i* S	**Sg**	**03 53 31.5**	**-1.3**
KEMA	**Kemaliye**	**0.95**	**306**	*i* P	**Pg**	**03 53 19.4**	**-1.1**
KEMA				*i* S	**Sg**	**03 53 31.5**	**-1.3**
EZC	**Erzincan**	**1.04**	**355**	*e*PG	**Pg**	**03 53 21.9**	**-0.4**
EZC				*e*SG	**Sb**	**03 53 37.1**	**+0.7**
EZC	**Erzincan**	**1.04**	**355**	*e*Pg	**Pg**	**03 53 21.9**	**-0.4**
EZC				*e*Sg	**Sb**	**03 53 37.1**	**+0.7**
BNGL	**BINGOL**	**1.32**	**79**	*i* P	**Pg**	**03 53 28.2**	**+0.6**
URFA	**Urfa**	**1.37**	**203**	*e*PN	**Pn**	**03 53 27.4**	**-0.2**
URFA	**Urfa**	**1.37**	**203**	*e*Pn	**Pn**	**03 53 27.4**	**-0.2**
KELT	**Kelkit**	**1.45**	**353**	*i* P	**Pg**	**03 53 29.8**	**-0.2**
KELT				*i* S	**Sg**	**03 53 48.7**	**0.0**
KELT	**Kelkit**	**1.45**	**353**	*i* P	**Pg**	**03 53 29.8**	**-0.2**
KELT				*i* S	**Sg**	**03 53 48.7**	**0.0**
ATAB	**Bozova**	**1.55**	**217**	*i* P	**Pb**	**03 53 30.9**	**-0.2**
ATAB				*i* S	**Sg**	**03 53 53.3**	**+1.2**
ATAB	**Bozova**	**1.55**	**217**	*i* P	**Pb**	**03 53 30.9**	**-0.2**
ATAB				*i* S	**Sg**	**03 53 53.3**	**+1.2**
BEST	**Besiri**	**1.63**	**120**	*i* P	**Pb**	**03 53 32.5**	**+0.1**
BEST				*i* S	**Sg**	**03 53 55.1**	**+0.5**
MARD	**Mardin**	**1.73**	**143**	*i* P	**Pg**	**03 53 35.7**	**+0.4**
MARD				*i* S	**Sb**	**03 53 56.0**	**-0.1**
GUMT	**Gumushane**	**1.75**	**360**	*e*PN	**Pn**	**03 53 32.9**	**+0.1**
GUMT	**Gumushane**	**1.75**	**360**	*e*Pn	**Pn**	**03 53 32.9**	**+0.1**
BAYT	**Ayd¨–ntepe-Bay**	**1.75**	**17**	*e*PN	**Pn**	**03 53 32.4**	**-0.6**
BAYT	**Ayd¨–ntepe-Bay**	**1.75**	**17**	*e*Pn	**Pn**	**03 53 32.4**	**-0.6**
SUSE	**Susehri**	**1.79**	**327**	*i* P	**Pb**	**03 53 36.0**	**+0.7**
SUSE				*i* S	**Sg**	**03 54 01.4**	**+1.5**
SUSE	**Susehri**	**1.79**	**327**	*i* P	**Pb**	**03 53 36.0**	**+0.7**
EZM	**Erzurum**	**1.88**	**50**	*e*PN	**Pn**	**03 53 33.4**	**-1.4**
ESPY	**Espiye-Giresun**	**2.28**	**345**	*e*PN	**Pn**	**03 53 40.7**	**+0.7**
ESPY	**Espiye-Giresun**	**2.28**	**345**	*e*Pn	**Pn**	**03 53 40.7**	**+0.7**

CRAAG ***29*** *03:53:36.0, 35.°62N×5.°13E, Ml3.9*
IDC ***29*** *03:53:36.8±1.4, 35.°67N×5.°09E, h0*km*, mb3.2/2, mb1 3.3/5, mb1mx3.2/30, mbtmp3.3/5, ML3.5/3, Error ellipse: s-maj=34.1km s-min=20.4km az=163.0*
ISCJB ***29*** *03:53:37.8±0.5, 35.°76N±0.°04×5.°00E±0.°03, h10*km*, mb3.3/2, Error ellipse: s-maj=6.0km s-min=3.8km az=172.1*
MDD ***29*** *03:53:39.5±0.9, 35.°71N×5.°05E, h0*km*, mb4.4/16, Error ellipse: s-maj=11.6km s-min=5.3km az=167.0, PRXIMO*
CSEM ***29*** *03:53:39.2±0.4, 35.°75N×5.°02E, h5*km*, mb4.4/16, Error ellipse: s-maj=10.1km s-min=5.1km az=161.0*
SFS ***29*** *03:53:41.0, 35.°60N×4.°80E, h0*km*, ML4.4*

ISC 29 03:53:38.1±0.8, 35.°75N±0.°05×5.°09E±0.°03, h10km**, n114, σ1$68/124, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CKHR	**Kef el Ahmar**	**0.43**	**52**	P	**Pg**	**03 53 45.0**	**-1.6**
CKHR	**Kef el Ahmar**	**0.43**	**52**	P	**Pg**	**03 53 45.0**	**-1.6**
CKHR	**Kef el Ahmar**	**0.43**	**52**	P	**Pg**	**03 53 45.0**	**-1.6**
SET	**Setif**	**0.51**	**29**	P	**Pb**	**03 53 49.0**	**-0.3**
SET	**Setif**	**0.51**	**29**	P	**Pb**	**03 53 49.0**	**-0.3**
SET	**Setif**	**0.51**	**29**	P	**Pb**	**03 53 49.0**	**-0.3**
ATAF	**Djebel Tarf**	**0.67**	**281**	P	Sn	03 54 13.5	+9.1
ATAF	**Djebel Tarf**	**0.67**	**281**	P	Sn	03 54 13.5	+9.1
ATAF	**Djebel Tarf**	**0.67**	**281**	P	Sn	03 54 13.5	+9.1
AKF	**Akfadou**	**0.97**	**334**	P	**Pg**	**03 53 57.5**	**+0.6**
AKF	**Akfadou**	**0.97**	**334**	P	**Pg**	**03 53 57.5**	**+0.6**
AKF	**Akfadou**	**0.97**	**334**	P	**Pg**	**03 53 57.5**	**+0.6**
AKET	**Djebel Ketaf**	**1.02**	**287**	P	**Sn**	**03 54 13.5**	**+0.3**
AKET	**Djebel Ketaf**	**1.02**	**287**	P	**Sn**	**03 54 13.5**	**+0.3**
AKET	**Djebel Ketaf**	**1.02**	**287**	P	**Sn**	**03 54 13.5**	**+0.3**
CASM	**Ain Smara**	**1.24**	**66**	P	**Pg**	**03 54 03.0**	**+1.0**
CASM	**Ain Smara**	**1.24**	**66**	P	**Pg**	**03 54 03.0**	**+1.0**
CASM	**Ain Smara**	**1.24**	**66**	P	**Pg**	**03 54 03.0**	**+1.0**
ADJB	**Djebel Djouab**	**1.40**	**287**	P	**Pg**	**03 54 04.9**	**-0.1**
ADJB	**Djebel Djouab**	**1.40**	**287**	P	**Pg**	**03 54 04.9**	**-0.1**
ADJB	**Djebel Djouab**	**1.40**	**287**	P	**Pg**	**03 54 04.9**	**-0.1**
CKFL	**Kef-Lekhel**	**1.47**	**63**	P	**Pg**	**03 54 07.0**	**+0.7**
CKFL	**Kef-Lekhel**	**1.47**	**63**	P	**Pg**	**03 54 07.0**	**+0.7**
CKFL	**Kef-Lekhel**	**1.47**	**63**	P	**Pg**	**03 54 07.0**	**+0.7**
CAEH	**'Ain El Ouahch**	**1.75**	**54**	P	**Pg**	**03 54 11.0**	**-0.7**
CAEH	**'Ain El Ouahch**	**1.75**	**54**	P	**Pg**	**03 54 11.0**	**-0.7**
CAEH	**'Ain El Ouahch**	**1.75**	**54**	P	**Pg**	**03 54 11.0**	**-0.7**
EMHD	**Djebel Mahouad**	**1.79**	**285**	P	**Pb**	**03 54 10.7**	**-0.4**
EMHD	**Djebel Mahouad**	**1.79**	**285**	P

ERTA	**Horta de San J**	**6.40**	**326**	S		**Sn**	**03 56 22.7**	**-2.8**
	1.1nm,0.4s,SNR=7.9							
ERTA	**Horta de San J**	**6.40**	**326**	S		**Sn**	**03 56 22.7**	**-2.8**
	1.1nm,0.4s,SNR=7.9							
EPOB	**Poblet**	**6.41**	**332**	P		**Pn**	**03 55 14.1**	**+1.4**
	0.6nm,0.2s,SNR=7.9							
EPOB				S		**Sn**	**03 56 22.3**	**-3.6**
	4.9nm,0.3s,SNR=7.9							
EPOB	**Poblet**	**6.41**	**332**	P		**Pn**	**03 55 14.1**	**+1.4**
	0.6nm,0.2s,SNR=7.9							
EPOB				S		**Sn**	**03 56 22.3**	**-3.6**
	4.9nm,0.3s,SNR=7.9							
EHUE	**Huescar**	**6.50**	**291**	P		Pn	03 55 16.1	+2.2
	14nm,0.4s,SNR=7.9							
EHUE				S		**Sn**	**03 56 30.4**	**+2.3**
	6.3nm,0.8s,SNR=7.9							
EHUE	**Huescar**	**6.50**	**291**	P		Pn	03 55 16.1	+2.2
	14nm,0.4s,SNR=7.9							
EHUE				S		**Sn**	**03 56 30.4**	**+2.3**
	6.3nm,0.8s,SNR=7.9							
EBER	**Berja**	**6.54**	**282**	P		**Pn**	**03 55 15.1**	**+0.5**
	17nm,0.6s,SNR=11							
EBER				S		**Sn**	**03 56 29.0**	**-0.3**
	4.2nm,0.4s							
EBER	**Berja**	**6.54**	**282**	P		**Pn**	**03 55 15.1**	**+0.5**
	17nm,0.6s,SNR=11							
EBER				S		**Sn**	**03 56 29.0**	**-0.3**
	4.2nm,0.4s							
EMIR	**Miracle**	**6.75**	**337**	P		**Pn**	**03 55 19.3**	**+2.0**
	0.4nm,0.1s,SNR=7.9							
EMIR	**Miracle**	**6.75**	**337**	P		**Pn**	**03 55 19.3**	**+2.0**
	0.4nm,0.1s,SNR=7.9							
EQES	**Quesada**	**6.86**	**290**	P		Pn	03 55 21.2	+2.4
	13nm,0.4s,SNR=20							
EQES				S		**Sn**	**03 56 32.4**	**-4.7**
	6.4nm,0.4s,SNR=4.0							
EQES	**Quesada**	**6.86**	**290**	P		Pn	03 55 21.2	+2.4
	13nm,0.4s,SNR=20							
EQES				S		**Sn**	**03 56 32.4**	**-4.7**
	6.4nm,0.4s,SNR=4.0							
EJON	**La Jonquera**	**6.90**	**346**	P		**Pn**	**03 55 21.0**	**+1.7**
	1.8nm,0.4s,SNR=7.9							
EJON	**La Jonquera**	**6.90**	**346**	P		**Pn**	**03 55 21.0**	**+1.7**
	1.8nm,0.4s,SNR=7.9							
EQUE	**Quentar**	**7.02**	**284**	P		**Pn**	**03 55 22.6**	**+1.5**
	9.6nm,0.3s,SNR=7.9							
EQUE	**Quentar**	**7.02**	**284**	P		**Pn**	**03 55 22.6**	**+1.5**
	9.6nm,0.3s,SNR=7.9							
EGUA	**Guajares**	**7.07**	**281**	P		**Pn**	**03 55 22.7**	**+1.0**
	3.9nm,0.2s,SNR=7.9							
EGUA	**Guajares**	**7.07**	**281**	P		**Pn**	**03 55 22.7**	**+1.0**
	3.9nm,0.2s,SNR=7.9							
ECOG	**Cogollos-Vega**	**7.13**	**285**	P		**Pn**	**03 55 24.0**	**+1.4**
	13nm,0.4s,SNR=8.7							
ECOG	**Cogollos-Vega**	**7.13**	**285**	P		**Pn**	**03 55 24.0**	**+1.4**
	13nm,0.4s,SNR=8.7							
CLLI	**Llivia**	**7.14**	**341**	P		**Pn**	**03 55 25.1**	**+2.4**
	0.1nm,0.1s,SNR=6.9							
CLLI				S		**Sn**	**03 56 42.9**	**-1.0**
	2.4nm,0.5s,SNR=7.9							
CLLI	**Llivia**	**7.14**	**341**	P		**Pn**	**03 55 25.1**	**+2.4**
	0.1nm,0.1s,SNR=6.9							
CLLI				S		**Sn**	**03 56 42.9**	**-1.0**
	2.4nm,0.5s,SNR=7.9							
ERON	**Agron**	**7.29**	**283**	P		**Pn**	**03 55 26.5**	**+1.8**
	3.4nm,0.5s,SNR=7.9							
ERON	**Agron**	**7.29**	**283**	P		**Pn**	**03 55 26.5**	**+1.8**
	3.4nm,0.5s,SNR=7.9							
CSOR	**Sort**	**7.29**	**336**	P		Pn	03 55 28.0	+3.2
	2.1nm,0.4s,SNR=6.7							
CSOR				S		**Sn**	**03 56 44.5**	**-3.2**
	7.9nm,0.8s,SNR=7.9							
CSOR	**Sort**	**7.29**	**336**	P		Pn	03 55 28.0	+3.2
	2.1nm,0.4s,SNR=6.7							
CSOR				S		**Sn**	**03 56 44.5**	**-3.2**
	7.9nm,0.8s,SNR=7.9							
ETOR	**Torete**	**7.56**	**314**	P		Pn	03 55 32.4	+4.0
	2.2nm,0.2s,SNR=6.8							
ETOR	**Torete**	**7.56**	**314**	P		Pn	03 55 32.4	+4.0
	2.2nm,0.2s,SNR=6.8							
ELOJ	**Sierra Loja**	**7.58**	**283**	P		Pn	03 55 31.6	+2.9
	8.2nm,0.4s,SNR=9.7							
ELOJ	**Sierra Loja**	**7.58**	**283**	P		Pn	03 55 31.6	+2.9
	8.2nm,0.4s,SNR=9.7							
EMIJ	**Mijas**	**8.02**	**279**	P		**Pn**	**03 55 35.6**	**+0.9**
	1.3nm,0.3s,SNR=7.9							
EMIJ	**Mijas**	**8.02**	**279**	P		**Pn**	**03 55 35.6**	**+0.9**
	1.3nm,0.3s,SNR=7.9							
EADA	**Adamuz**	**8.11**	**290**	P		**Pn**	**03 55 36.9**	**+1.0**
	1.3nm,0.4s,SNR=7.9							
EADA	**Adamuz**	**8.11**	**290**	P		**Pn**	**03 55 36.9**	**+1.0**
	1.3nm,0.4s,SNR=7.9							
ESDC	**Sonseca Array**	**8.17**	**301**	P		Pn	03 55 39.6	+2.8
	0.8nm,0.5s,baz=116,slow=14,SNR=4.4							
ESDC	**Sonseca Array**	**8.17**	**301**	Pn		**Pn**	**03 55 37.8**	**+1.0**
	0.7nm,0.3s,baz=117,slow=14,SNR=4.4							
ESDC	**Sonseca Array**	**8.17**	**301**	P		Pn	03 55 39.6	+2.8
	0.8nm,0.5s,baz=116,slow=14,SNR=4.4							
MDT	**Midelt**	**8.55**	**253**	Pn		**Pn**	**03 55 41.7**	**-0.3**
	0.2nm,0.3s,baz=71,slow=17,SNR=10							
MDT				Sn		**Sn**	**03 57 19.4**	**+0.8**
	0.3nm,0.3s,baz=205,slow=19,SNR=2.5							
MDT				Lg		Lg	03 58 16.5	
	0.4nm,0.3s,baz=270,slow=20,SNR=3.3							
EMIN	**Mina Concepcio**	**9.65**	**285**	P		**Pn**	**03 55 57.1**	**+0.1**
	1.2nm,0.5s,SNR=7.9							
EMIN	**Mina Concepcio**	**9.65**	**285**	P		**Pn**	**03 55 57.1**	**+0.1**
	1.2nm,0.5s,SNR=7.9							
EBAD	**Badajoz**	**10.10**	**291**	P		Pn	03 56 05.6	+2.4
	0.3nm,0.3s,SNR=4.0							
EBAD	**Badajoz**	**10.10**	**291**	P		Pn	03 56 05.6	+2.4
	0.3nm,0.3s,SNR=4.0							
ECAL	**Calabor**	**11.10**	**307**	P		**Pn**	**03 56 18.8**	**+1.9**
	2.7nm,0.3s,SNR=5.3							
ECAL	**Calabor**	**11.10**	**307**	P		**Pn**	**03 56 18.8**	**+1.9**
	2.7nm,0.3s,SNR=5.3							
GERES	**GERESS Array B**	**14.54**	**23**	Pn		**P**	**03 57 12.1**	**+1.6**
	baz=202,slow=10,SNR=3.4							
TORD	**Torodi Ar. Bea**	**22.72**	**189**	P		**P**	**03 58 39.4**	**-0.8**
	0.6nm,0.6s,baz=10,slow=9.1,SNR=8.1							
MKAR	**Makanchi Array**	**56.87**	**53**	P		**P**	**04 03 23.3**	**+0.3**
	0.2nm,0.5s,baz=282,slow=6.8,SNR=3.0							

*ATH **29** 03:57:24.0, 38.40N×20.00E, h17km±1km, MD3.3/9*
*CSEM **29** 03:57:25.9±0.5, 38.07N×20.13E, h2km, ML2.7/2, Error ellipse: s-maj=11.0km s-min=5.7km az=40.0*
*THE **29** 03:57:28.5, 38.14N×20.28E, h1km±2km, ML2.7/2, Error ellipse: s-maj=3.9km s-min=1.4km az=221.0*
ISC 29 03:57:24.0±1.7, 38.04N±0.05×20.05E±0.05, h1km±11km, n47, σ1°03/73, Greece

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.45**	**72**	P		**Pg**	**03 57 32.7**	**+0.1**
VLS				S		**Sg**	**03 57 36.3**	**-2.2**
VLS	**Valsamata**	**0.45**	**72**	P		**Pg**	**03 57 32.7**	**+0.1**
KFL	**Anninata**	**0.59**	**83**	P		**Pg**	**03 57 35.5**	**+0.2**
KFL				S		**Sg**	**03 57 41.7**	**-1.2**
KFL	**Anninata**	**0.59**	**83**	P		**Pg**	**03 57 35.5**	**+0.2**
KFL				S		**Sg**	**03 57 41.7**	**-1.2**
LKD2	**Lefkada island**	**0.89**	**33**	P		**Pb**	**03 57 42.6**	**+0.3**
LKD2				S		**Sg**	**03 57 52.9**	**+0.4**
LKD2	**Lefkada island**	**0.89**	**33**	P		**Pb**	**03 57 42.6**	**+0.3**
LKD2				S		**Sg**	**03 57 52.9**	**+0.4**
RLS	**Riolos of Patr**	**1.12**	**89**	P		**Pn**	**03 57 46.9**	**0.0**
RLS	**Riolos of Patr**	**1.12**	**89**	*e*PN		**Pn**	**03 57 47.1**	**+0.2**
RLS				*e*SN		**Sn**	**03 58 03.0**	**0.0**
RLS	**Riolos of Patr**	**1.12**	**89**	*e*Pn		**Pn**	**03 57 47.1**	**+0.2**
RLS				*e*Sn		**Sn**	**03 58 03.0**	**0.0**
AMT	**Artemida-Makis**	**1.41**	**111**	*e*PN		**Pb**	**03 57 53.8**	**+2.6**
AMT	**Artemida-Makis**	**1.41**	**111**	*e*Pn		**Pb**	**03 57 53.8**	**+2.6**
IGT	**Igoumenitsa**	**1.51**	**8**	P		**Pg**	**03 57 53.8**	**+0.9**
IGT				S		**Sn**	**03 58 13.4**	**+0.9**
IGT	**Igoumenitsa**	**1.51**	**8**	P		**Pg**	**03 57 53.8**	**+0.9**
IGT				S		**Sn**	**03 58 13.4**	**+0.9**
EFP	**Efpalio**	**1.52**	**75**	P		**Pg**	**03 57 53.7**	**+0.7**
EFP				S		**Sn**	**03 58 13.4**	**+0.7**
EFP	**Efpalio**	**1.52**	**75**	*e*PN		**Pn**	**03 57 52.3**	**0.0**
EFP				*e*SN		**Sn**	**03 58 13.6**	**+0.9**
EFP	**Efpalio**	**1.52**	**75**	*e*Pn		**Pn**	**03 57 52.3**	**0.0**
EFP	**Efpalio**	**1.52**	**75**	P		**Pg**	**03 57 53.7**	**+0.7**
EFP				*e*Sn		**Sn**	**03 58 13.6**	**+0.9**
LAKA	**Lakka**	**1.54**	**82**	P		**Pn**	**03 57 52.7**	**+0.1**
LAKA				S		**Sn**	**03 58 12.6**	**-0.7**
LAKA	**Lakka**	**1.54**	**82**	*e*PB		**Pn**	**03 57 52.0**	**-0.6**
LAKA				*e*SN		**Sn**	**03 58 14.6**	**+1.3**
LAKA	**Lakka**	**1.54**	**82**	*e*Pb		**Pn**	**03 57 52.0**	**-0.6**
LAKA	**Lakka**	**1.54**	**82**	P		**Pn**	**03 57 52.7**	**+0.1**
LAKA				S		**Sn**	**03 58 12.6**	**-0.7**
LAKA				*e*Sn		**Sn**	**03 58 14.6**	**+1.3**
TRIZ	**Trizonia**	**1.63**	**78**	P		**Pn**	**03 57 54.1**	**+0.3**
TRIZ	**Trizonia**	**1.63**	**78**	*e*PN		**Pn**	**03 57 53.3**	**-0.5**
TRIZ	**Trizonia**	**1.63**	**78**	*e*Pn		**Pn**	**03 57 53.3**	**-0.5**
TRIZ	**Trizonia**	**1.63**	**78**	P		**Pn**	**03 57 54.1**	**+0.3**
KLV	**Kalavryta, Ach**	**1.66**	**89**	*e*PN		**Pn**	**03 57 54.8**	**+0.4**
KLV				*e*SN		**Sg**	**03 58 18.6**	**+1.2**
KLV	**Kalavryta, Ach**	**1.66**	**89**	*e*Pn		**Pn**	**03 57 54.8**	**+0.4**
KLV				*e*Sn		**Sg**	**03 58 18.6**	**+1.2**
KEK	**Kerkira**	**1.68**	**354**	P		**Pg**	**03 57 56.7**	**+0.5**
KEK	**Kerkira**	**1.68**	**354**	P		**Pg**	**03 57 56.7**	**+0.5**
KALE	**Kalithea**	**1.69**	**77**	P		**Pg**	**03 57 56.1**	**-0.2**
KALE				S		**Sg**	**03 58 17.3**	**-0.9**
KALE	**Kalithea**	**1.69**	**77**	*e*PN		**Pb**	**03 57 55.2**	**-0.7**
KALE				*e*SN		**Sg**	**03 58 17.8**	**-0.4**
KALE	**Kalithea**	**1.69**	**77**	*e*Pn		**Pb**	**03 57 55.2**	**-0.7**
KALE	**Kalithea**	**1.69**	**77**	P		**Pg**	**03 57 56.1**	**-0.2**
KALE				S		**Sg**	**03 58 17.3**	**-0.9**
KALE				*e*Sn		**Sg**	**03 58 17.8**	**-0.4**
GUR	**Goura**	**1.82**	**93**	P		**Pg**	**03 57 58.6**	**-0.2**
GUR	**Goura**	**1.82**	**93**	*e*PN		**Pb**	**03 57 57.7**	**-0.4**
GUR				*e*SN		**Sg**	**03 58 22.1**	**-0.3**
GUR	**Goura**	**1.82**	**93**	*e*Pn		**Pb**	**03 57 57.7**	**-0.4**
GUR	**Goura**	**1.82**	**93**	P		**Pg**	**03 57 58.6**	**-0.2**
GUR				*e*Sn		**Sg**	**03 58 22.1**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.90**	**59**	P		**Pb**	**03 57 58.9**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.90**	**59**	P		**Pb**	**03 57 58.9**	**-0.6**
AGG	**Agios Georgios**	**2.04**	**61**	P		**Pb**	**03 58 01.1**	**-0.8**
AGG	**Agios Georgios**	**2.04**	**61**	P		**Pb**	**03 58 01.1**	**-0.8**
THL	**Klokotos Trika**	**2.16**	**45**	P		**Pn**	**03 58 02.2**	**+1.0**
THL	**Klokotos Trika**	**2.16**	**45**	P		**Pn**	**03 58 02.2**	**+1.0**
KYTH	**Kithira**	**2.97**	**125**	*e*PN		**Pb**	**03 58 16.4**	**-1.2**
KYTH	**Kithira**	**2.97**	**125**	*e*Pn		**Pb**	**03 58 16.4**	**-1.2**
STON	**Ston**	**5.15**	**340**	*e*Pn		**Pn**	**03 58 43.1**	**+0.9**
STON				Sn		**Sn**	**03 59 38.9**	**-3.4**
STON	**Ston**	**5.15**	**340**	*e*Pn		**Pn**	**03 58 43.0**	**+0.9**
STON				Sn		**Sn**	**03 59 38.8**	**-3.4**

*ISCJB **29** 03:59:28.8±0.6, 51.49N±0.03×16.18E±0.03, h0km, Error ellipse: s-maj=4.6km s-min=2.7km az=18.4*
*IPEC **29** 03:59:29.6±0.5, 51.57N×16.26E, h1km±2km, ML2.4/3, Error ellipse: s-maj=2.8km s-min=1.5km az=26.0*
*IDC **29** 03:59:31.0±1.0, 51.51N×16.24E, h0km, mb1 3.6/5, mb1mx3.3/26, mbtmp3.4/5, ML3.1/5, Error ellipse: s-maj=18.0km s-min=8.8km az=119.0*
*PRU **29** 03:59:30.5, 51.54N×16.18E, h0km*
*CSEM **29** 03:59:30.3±0.3, 51.49N×16.15E, h2km, ML3.4/9, Error ellipse: s-maj=6.0km s-min=3.5km az=1.0*
*WAR **29** 03:59:31.6, 51.49N×16.09E*
*VIE **29** 03:59:32.0±0.4, 51.34N×16.14E, h0km, mb2.5/4, ML2.9/4, Error ellipse: s-maj=3.4km s-min=2.7km az=70.0 66 km WNW of Wroclaw Suspected Mining induced.*
ISC 29 03:59:30.1±1.1, 51.54N±0.05×16.14E±0.02, h0km, n51, σ1°00/80, 3C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.70**	**172**	*e*Pg		**Pg**	**03 59 43.9**	**+0.4**
KSP				*e*Sg		**Sg**	**03 59 53.1**	**+0.5**
KSP	**Ksiaz**	**0.70**	**172**	⇓*i*Pg		**Pg**	**03 59 43.9**	**+0.4**
KSP				*i* Sg		**Sg**	**03 59 53.0**	**+0.5**
UPC	**Upice**	**1.03**	**185**	*e*PG		**Pg**	**03 59 50.0**	**+0.2**
UPC	**Upice**	**1.03**	**185**	Pg		**Pg**	**03 59 50.0**	**+0.2**
DPC	**Dobruska-Polom**	**1.19**	**174**	*e*SG		**Sg**	**04 00 07.2**	**-1.1**
	comp=Z,33nm,0.3s							
DPC	**Dobruska-Polom**	**1.19**	**174**	Sg		**Sg**	**04 00 07.2**	**-1.1**
	33nm,0.3s							
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG		**Pg**	**03 59 56.7**	**-0.5**
PVCC				*e*SG		**Sn**	**04 00 16.6**	**+0.2**
	comp=Z,100nm,0.3s							
PVCC	**Panska Ves**	**1.42**	**225**	Pg		**Pg**	**03 59 56.7**	**-0.5**
PVCC				Sg		**Sn**	**04 00 16.6**	**+0.2**
	100nm,0.3s							
KRLC	**Kraliky**	**1.52**	**164**	*e*PG		**Pn**	**03 59 57.7**	**-0.8**
KRLC				*e*SG		**Sg**	**04 00 17.9**	**-0.9**
KRLC	**Kraliky**	**1.52**	**164**	Pg		**Pn**	**03 59 57.7**	**-0.8**
KRLC				Sg		**Sg**	**04 00 17.9**	**-0.9**
BRG	**Berggiesshubel**	**1.53**	**245**	PN		**Pn**	**03 59 58.6**	**-0.1**
BRG				PG		**Pg**	**03 59 59.6**	**+0.2**
BRG				SG		**Sn**	**04 00 19.9**	**+0.6**
	84nm,0.4s							
PRU	**Pruhonice**	**1.85**	**214**	*e*PN		**Pn**	**04 00 02.4**	**-0.7**
PRU				*e*PG		**Pb**	**04 00 04.6**	**-0.2**
PRU				*e*SG		**Sg**	**04 00 29.9**	**+0.4**
	comp=Z,35nm,0.5s							
PRU	**Pruhonice**	**1.85**	**214**	Pn		**Pn**	**04 00 02.4**	**-0.7**
MORC	**Moravsky Berou**	**1.97**	**153**	*e*Pn		**Pn**	**04 00 03.9**	**-0.9**
MORC				*e*Sg		**Sn**	**04 00 31.3**	**+1.1**
	24nm,0.5s,baz=336							
CLL	**Collm**	**1.98**	**265**	*i* Pn		**Pn**	**04 00 04.0**	**-0.8**
	comp=Z,7.0nm,0.4s							
CLL				*i* Pg		**Pg**	**04 00 07.8**	**-0.2**
CLL				*i*			04 00 10.2	
CLL				*i* Sg		**Sg**	**04 00 34.4**	**+0.8**
	comp=Z,33nm,0.7s							
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PG		**Pb**	**04 00 09.5**	**+0.1**
OKC				*e*SG		**Sb**	**04 00 35.7**	**-0.6**
	comp=Z,27nm,0.5s							
OKC	**Ostrava-Krasne**	**2.12**	**142**	Pg		**Pb**	**04 00 09.5**	**+0.1**
OKC				Sg		**Sb**	**04 00 35.7**	**-0.6**
	comp=Z,27nm,0.5s							
VRAC	**Vranov**	**2.25**	**172**	Pn		**Pn**	**04 00 08.3**	**-0.2**
	comp=Z,4.2nm,0.3s,baz=347,slow=18,SNR=13							
VRAC				Lg		Lg	04 00 40.8	
	comp=Z,5.0nm,0.3s,baz=253,slow=19,SNR=7.9							
VRAC	**Vranov**	**2.25**	**172**	*e*Pn		**Pn**	**04 00 08.3**	**-0.2**
	baz=355							
VRAC				*e*Sg		**Sb**	**04 00 40.7**	**+0.8**
	comp=Z,18nm,0.3s,baz=355							
TREC	**Trest**	**2.28**	**191**	*e*PG		**Pb**	**04 00 12.4**	**+0.3**
TREC	**Trest**	**2.28**	**191**	Pg		**Pb**	**04 00 12.4**	**+0.3**
KRUC	**Moravsky**	**2.48**	**176**	*e*Pn		**Pn**	**04 00 11.6**	**-0.1**
	baz=358							
KRUC				*e*Sg		**Sg**	**04 00 48.0**	**-1.7**
	comp=Z,17nm,0.5s,baz=358							
OJC	**Ojcow**	**2.67**	**118**	*e*Pg		**Pb**	**04 00 19.5**	**+0.9**
OJC				*e*Sg		**Sg**	**04 00 55.3**	**-0.3**
OJC	**Ojcow**	**2.67**	**118**	*e*Sg		**Sg**	**04 00 55.3**	**-0.3**
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN		**Pn**	**04 00 14.4**	**-0.1**
NKC				*e*PG		**Pg**	**04 00 20.5**	**-0.9**
NKC				*e*SG		**Sg**	**04 00 57.9**	**+1.8**
	comp=Z,42nm,0.3s							
NKC	**Novy Kostel**	**2.68**	**242**	Pn		**Pn**	**04 00 14.4**	**-0.1**
NKC	**Novy Kostel**	**2.68**	**242**	Pg		**Pg**	**04 00 20.5**	**-0.9**
NKC				Sg		**Sg**	**04 00 57.9**	**+1.8**
	comp=Z,42nm,0.3s							
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN		**Pn**	**04 00 17.5**	**-0.2**
KHC				*e*PG		**Pb**	**04 00 23.0**	**+0.1**
KHC				*e*SN		**Sn**	**04 00 52.6**	**-0.8**
KHC				*e*SG		**Sg**	**04 01 01.2**	**-2.4**
KHC	**Kasperske Hory**	**2.91**	**215**	Pn		**Pn**	**04 00 17.5**	**-0.2**
KHC	**Kasperske Hory**	**2.91**	**215**	Pg		**Pb**	**04 00 23.5**	**+0.6**
KHC				Sn		**Sn**	**04 00 52.0**	**-1.4**
KHC				Sg		**Sg**	**04 01 04.5**	**+0.9**
GERES	**GERESS Array B**	**3.12**	**211**	Pn		**Pn**	**04 00 21.1**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=32,slow=12,SNR=25							
GERES				Pg		**Pg**	**04 00 29.5**	**-0.3**
	comp=Z,2.4nm,0.3s,baz=38,slow=15,SNR=26							
GERES				Lg		Lg	04 01 07.5	
	comp=Z,3.6nm,0.3s,baz=42,slow=27,SNR=9.5							
SMOL	**Smolenice**	**3.14**	**164**	*e*SG		**Sg**	**04 01 13.8**	**+3.0**
SMOL	**Smolenice**	**3.14**	**164**	*e*Sg		**Sg**	**04 01 13.8**	**+3.0**
ZST	**Bratislava**	**3.40**	**169**	*e*SG		**Sg**	**04 01 21.8**	**+2.6**
ZST	**Bratislava**	**3.40**	**169**	*e*Sg		**Sg**	**04 01 21.8**	**+2.6**
VYHS	**Vyhne**	**3.50**	**149**	*e*PN		**Pn**	**04 00 25.2**	**-0.6**
VYHS				*e*			04 00 37.6	
VYHS	**Vyhne**	**3.50**	**149**	*e*Pn		**Pn**	**04 00 25.2**	**-0.6**
VYHS				*e*Sg		**Sg**	**04 01 24.5**	**+1.9**
CONA	**Conrad Observa**	**3.62**	**183**	⇑*i*Pn		**Pn**	**04 00 27.0**	**-0.4**
CONA				⇑*i*Sg		**Sg**	**04 01 25.3**	**-0.9**
	comp=Z,12nm,0.4s							
CONA	**Conrad Observa**	**3.62**	**183**	Pn		**Pn**	**04 00 27.0**	**-0.4**
CONA				Sg		**Sg**	**04 01 25.3**	**-0.9**
	comp=Z,12nm,0.4s							
MOA	**Molln**	**3.88**	**199**	⇓*i*Pn		**Pn**	**04 00 31.2**	**+0.1**
MOA				⇑*i*Sg		**Sg**	**04 01 34.4**	**-0.5**
	comp=Z,14nm,0.5s							
MOA	**Molln**	**3.88**	**199**	Pn		**Pn**	**04 00 31.2**	**+0.1**
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*PN		**Pn**	**04 00 31.6**	**+0.5**
STHS				*e*			04 00 44.2	
STHS	**Stebnicka Huta**	**3.89**	**121**	*e*Pn		**Pn**	**04 00 31.6**	**+0.5**
STHS				*e*Sg		**Sg**	**04 01 33.4**	**-1.5**
KECS	**Kecovo**	**4.14**	**136**	*e*PN		**Pn**	**04 00 34.4**	**-0.2**
KECS				*e*			04 00 50.4	
KECS	**Kecovo**	**4.14**	**136**	*e*Pn		**Pn**	**04 00 34.4**	**-0.2**
CRVS	**Cervenica-Dubn**	**4.31**	**126**	*e*		**Pg**	**04 00 52.2**	**-0.5**
KOLS	**Kolonicke sedl**	**4.72**	**121**	*e*PN		**Pn**	**04 00 42.2**	**-0.3**
KOLS				*e*			04 01 01.0	
KOLS	**Kolonicke sedl**	**4.72**	**121**	*e*Pn		**Pn**	**04 00 42.2**	**-0.3**
AKASG	**Malin Array Be**	**8.28**	**91**	Pn		Pn	04 01 28.3	-2.9
	comp=Z,1.6nm,0.3s,baz=283,slow=12,SNR=3.9							
FINES	**FINESS Array B**	**18.59**	**10**	Pn		P	04 02 08.8	-4.2
	comp=Z,0.2nm,0.3s,baz=224,slow=15,SNR=3.6							
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn		P	04 03 44.6	-3.9
	comp=Z,0.1nm,0.3s,baz=193,slow=11,SNR=3.5							

*IDC **29** 04:35:09.7±1.6, 2.77S×134.24E, h0km, mb4.1/5, mb1 4.2/6, mb1mx3.9/20, mbtmp4.1/6, ML3.6/1, MS2.8/1, Ms1 2.8/1, ms1mx1.8/23, Error ellipse: s-maj=63.0km s-min=20.8km az=64.0*
*AUST **29** 04:35:09.7, 2.47S×134.51E, h60km*
ISC 29 04:35:11.7±1.0, 2.62S±0.07×134.5E±0.1, h30km, n15, σ2°45/14, mb4.0/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**2.29**	**263**	P		**Pn**	**04 35 47.3**	**-0.1**
	baz=2.3,SNR=26							
PALU	**Palau**	**9.90**	**360**	S		**Sn**	**04 39 18.5**	**-3.7**
	baz=9.8,SNR=4.5							
KDU	**Kakadu**	**10.20**	**191**	P		**Pn**	**04 37 36.3**	**+0.1**
	baz=10,SNR=7.0							
KDU				S		**Sn**	**04 39 25.9**	**-3.8**
	baz=10,SNR=3.8							
MTN	**Manton Dam**	**10.70**	**198**	P		**Pn**	**04 37 45.1**	**+2.2**
	baz=11,SNR=4.4							
MTN				S		**Sn**	**04 39 41.6**	**-0.2**
	baz=11,SNR=4.3							
COEN	**Coen**	**14.14**	**143**	P		**Pn**	**04 38 31.3**	**+1.2**
	baz=14,SNR=5.3							
KNRA	**Kununurra**	**14.16**	**203**	P		**Pn**	**04 38 29.5**	**-0.8**
	baz=14,SNR=4.6							
KAPI	**Kappang**	**14.93**	**260**	LR		LR	04 43 23.7	
	comp=Z,37nm,20.4s,baz=191,slow=34							
WRA	**Warramunga Arr**	**17.22**	**181**	Pn		**Pn**	**04 39 06.0**	**-4.1**
	0.1nm,0.3s,baz=3.2,slow=13,SNR=3.1							
WRA				Sn		Sn	04 42 08.1	-13
	0.2nm,0.3s,baz=4.0,slow=23,SNR=5.9							
FITZ	**Fitzroy Crossi**	**17.68**	**209**	Pn		**Pn**	**04 39 13.7**	**-2.2**
	0.1nm,0.3s,baz=38,slow=14,SNR=5.3							
FITZ				Sn		Sn	04 42 17.8	-14
	0.1nm,0.3s,baz=141,slow=12,SNR=4.1							
FITZ

128A	Castleberry Fa	21.03	323	⇓P		P	04 43 02.9	-0.2	
	baz=21								
Z29A	Hungry Hill Ra	21.08	326	⇓P		P	04 43 04.2	+0.7	
	baz=21								
227A	Bennet, Jal	21.08	321	⇓P		P	04 43 03.1	-0.4	
	baz=21								
Y30A	Stafford Cattl	21.13	328	⇓P		P	04 43 05.5	+1.3	
	baz=21								
X31A	McDonald Ranch	21.30	331	⇑P		P	04 43 07.9	+2.0	
	baz=21								
425A	Indio Mountain	21.36	316	⇓P		P	04 43 06.1	-0.5	
	baz=21								
Z28A	Tucker Farm, M	21.47	325	⇑P		P	04 43 08.8	+0.9	
	baz=22								
Y29A	Porterfield Fa	21.52	327	⇑P		P	04 43 09.2	+0.8	
	baz=22								
X30A	Coker Ranch, T	21.58	329	⇑P		P	04 43 10.9	+2.0	
	baz=22								
USIN	University of	21.58	0	eP		P	04 43 08.8	0.0	
	32nm,0.9s								
226B	Tecolote Peak,	21.66	319	⇓P		P	04 43 10.2	+0.3	
	baz=22								
325A	Bean Ranch, Si	21.71	317	⇓P		P	04 43 09.6	-0.9	
	baz=22								
Z27A	Tatum	21.96	323	⇓P		P	04 43 13.5	+0.5	
	baz=22								
324A	Moseley Ranch,	22.10	316	⇑P		P	04 43 13.8	-0.8	
	baz=22								
MNTX	Cornudas Mount	22.19	317	eP		P	04 43 14.7	-0.8	
	2.2nm,0.9s								
MSTX	Muleshoe	22.19	325	⇑P		P	04 43 16.3	+0.7	
	baz=22								
AMTX	Amarillo	22.32	329	eP		P	04 43 16.7	-0.3	
	5.8nm,0.8s								
Y27A	Causey	22.35	324	⇑P		P	04 43 17.9	+0.6	
	baz=22								
125A	Gardner Draw,	22.36	320	⇑P		P	04 43 17.2	-0.2	
	baz=22								
Z26A	Caprock	22.37	322	⇓P		P	04 43 16.9	-0.6	
	baz=22								
224A	Cornudas Mount	22.52	317	⇓P		P	04 43 18.1	-1.1	
	baz=23								
Z25A	Roswell	22.82	321	⇑P		P	04 43 22.4	+0.1	
	baz=23								
124A	Stringfield Ra	22.89	319	⇑P		P	04 43 22.9	-0.2	
	baz=23,SNR=12								
W27A	Bowe Ranch, En	23.18	327	⇑P		P	04 43 28.3	+2.4	
	baz=23								
U30A	WK&E Inc. Balk	23.18	333	⇓P		P	04 43 28.7	+2.8	
	baz=23								
Z24A	Sheeppen Canyo	23.25	320	⇑P		P	04 43 28.4	+1.6	
	baz=23,SNR=18								
Y25A	Mesa, Roswell	23.25	322	⇑P		P	04 43 28.1	+1.4	
	baz=23								
W26A	Owens Ranch, T	23.57	326	⇓P		P	04 43 31.3	+1.5	
	baz=24								
Y24A	Capitan	23.70	321	⇓P		P	04 43 32.4	+1.3	
	baz=24,SNR=15								
Z23A	Rita Site, Whi	23.75	319	⇑P		P	04 43 32.2	+0.7	
	baz=24								
T29A	Hugoton	23.99	333	⇑P		P	04 43 37.5	+3.9	
	baz=24								
Y23A	Lovelace Mesa,	24.08	320	⇓P		P	04 43 36.4	+1.7	
	baz=24,SNR=13								
U27A	Thompson Grove	24.11	329	⇓P		P	04 43 37.4	+2.6	
	baz=24								
V26A	Tequesquite Ra	24.12	327	⇓P		P	04 43 36.6	+1.7	
	baz=24								
Z22A	Elephant Butte	24.21	318	⇓P		P	04 43 36.3	+0.5	
	baz=24								
121A	Cookes Peak, D	24.31	315	⇑P		P	04 43 36.8	+0.1	
	baz=24								
220A	Playas Peak, P	24.45	313	⇓P		P	04 43 38.3	+0.3	
	baz=24								
W24A	Lazy 6 Ranch,	24.58	323	⇓P		P	04 43 39.9	+0.6	
	baz=25,SNR=9.0								
V25A	Rancho No Teng	24.59	325	⇓P		P	04 43 41.0	+1.7	
	baz=25								
S28A	Manter	24.62	332	⇑P		P	04 43 42.4	+3.0	
	baz=25								
Y22A	Socorro	24.65	319	⇑P		P	04 43 40.6	+0.8	
	baz=25,SNR=11								
319A	Douglas	24.70	311	⇓P		P	04 43 40.4	+0.2	
	baz=25								
LENM	Lemitar	24.80	319	eP		P	04 43 42.3	+1.0	
	2.7nm,0.7s								
V24A	Rampart Ranch,	24.87	324	⇑P		P	04 43 43.5	+1.5	
	baz=25								
U25A	Circle Dot Ran	24.90	327	⇑P		P	04 43 44.4	+2.3	
	baz=25								
W23A	Werner Place,	24.98	322	⇓P		P	04 43 44.4	+1.5	
	baz=25								
ATAH	Atahualpa	25.06	158	LR		LR	04 51 56.5		
	comp=Z,59nm,21.8s,baz=250,slow=33								
LAZ	Ladron	25.06	320	eP		P	04 43 44.5	+0.8	
	2.1nm,0.9s								
Y21A	Point of Rocks	25.15	318	⇑P		P	04 43 44.0	-0.4	
	baz=25,SNR=13								
X21A	Alamocita Cree	25.50	319	⇑P		P	04 43 47.7	+0.1	
	baz=26,SNR=8.6								
Y20A	Horse Springs,	25.54	317	⇓P		P	04 43 48.0	+0.1	
	baz=26								
U23A	El Rito	25.82	324	⇓P		P	04 43 52.4	+1.9	
	baz=26								
X20A	Quemado	26.01	318	⇓P		P	04 43 53.6	+1.3	
	baz=26,SNR=6.2								
TUC	Tucson	26.28	312	eP		P	04 43 54.1	-0.4	
	1.9nm,1.0s								
SDCO	Great Sand Dun	26.49	327	eP		P	04 43 57.3	+0.7	
	1.8nm,1.0s								
SADO	Sadowa	29.29	13	P		P	04 44 21.2	0.0	
SADO	Sadowa	29.29	13	P		P	04 44 21.2	0.0	
	3.6nm,0.8s,baz=207,slow=8.3,SNR=3.8								
SADO				LR		LR	04 56 04.4		
	comp=Z,41nm,19.6s,baz=69,slow=37								
TPAW	Teton Pass	33.52	329	eP		P	04 44 58.5	-0.3	
	1.4nm,0.7s								
NVAR	Mina Array Bea	34.70	315	P		P	04 45 10.2	+1.1	
NVAR	Mina Array Bea	34.70	315	P		P	04 45 10.2	+1.1	
	0.4nm,0.8s,baz=134,slow=2.11,SNR=4.4								
SAML	Samuel	34.93	134	eP		P	04 45 12.0	+1.1	
	4.3nm,1.4s								
WVOR	Wild Horse Val	37.10	321	eP		P	04 45 30.8	+1.4	
	1.4nm,0.8s								
SCHQ	Schefferville	41.71	18	P		P	04 46 06.3	-1.2	
SCHQ	Schefferville	41.71	18	P		P	04 46 06.3	-1.2	
	3.3nm,0.9s,baz=188,slow=7.2,SNR=4.8								
YKA	Yellowknife Ar	49.85	344	P		P	04 47 10.8	-0.8	
YKA	Yellowknife Ar	49.85	344	P		P	04 47 10.8	-0.8	
	0.5nm,0.6s,baz=141,slow=7.5,SNR=12								
ILAR	Eielson Array	62.41	335	P		P	04 48 41.0	-0.3	
ILAR	Eielson Array	62.41	335	P		P	04 48 41.0	-0.3	
	0.7nm,0.8s,baz=135,slow=4.0,SNR=8.2								
TRF	Thorofare Moun	63.38	334	eP		P	04 48 47.3	-0.7	
	2.4nm,0.8s								
RAO	Raoul Island	97.95	242	LR		LR	05 28 03.9		
	comp=Z,85nm,21.5s,baz=275,slow=30								
WRA	Warramunga Arr	139.92	258	PKP		PKPdf	04 57 50.1	+2.5	
WRA	Warramunga Arr	139.92	258	PKP		PKPdf	04 57 50.1	+2.5	
	0.4nm,0.6s,baz=86,slow=2.7,SNR=4.7								
ASAR	Alice Springs	140.29	252	PKP		PKPdf	04 57 50.0	+1.8	
ASAR	Alice Springs	140.29	252	PKP		PKPdf	04 57 50.0	+1.8	
	0.2nm,0.5s,baz=100,slow=2.6,SNR=2.9								

IDC ***29*** *05:10:53.2±0.8, 12°.62N×88°.44W, h0km, mb4.4/10, mb1 4.6/10, mb1mx4.3/23, mbtmp4.4/10, MS3.7/15, Ms1 3.7/15, ms1mx3.5/37, Error ellipse: s-maj=34.7km s-min=16.9km az=66.0*

ISCJB ***29*** *05:10:57.9±0.6, 12°.40N±0°.05×88°.72W±0°.05, h54km±4km, mb4.4/54, MS3.8/16, Error ellipse: s-maj=10.7km s-min=4.7km az=44.1*

CASC ***29*** *05:10:57.7±3.2, 12°.34N×88°.75W, h43km±365km, MD4.1, ML4.0, mb4.5(NEIC)*

BJI ***29*** *05:10:59.0, 12°.50N×88°.60W, h78km, mB5.1/2, Ms4.8/1, Ms7 4.4/2*

NEIC ***29*** *05:11:02.7±1.1, 12°.57N×88°.49W, h79km±10km, mb4.5/45, Error ellipse: s-maj=14.0km s-min=6.3km az=59.0*

ISC 29 05:10:58.2±0.5, 12°.38N±0°.06×88°.78W±0°.06, h40km, n404, σ1§13/411, mb4.5/54, MS3.8/16, 129C-146D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	1.15	25	eP	Pn	05 11 18.2	+0.2
SNVI	San Vicente	1.23	357	eP	Pn	05 11 18.3	-0.7
LFRS	El Faro	1.27	347	eP	Pn	05 11 18.5	-1.0
CNCH	Conchagua	1.28	46	eP	Pn	05 11 19.2	-0.5
SNET	Serv Nac Est T	1.37	341	eS	Sn	05 11 40.7	+2.8
SNET				AML	AML	05 11 46.8	
	comp=Z,2μm,0.5s						
LBRS	Las Brisas	1.37	349	eP	Pn	05 11 20.4	-0.5
LFU	La Fuente	1.40	347	eP	Pn	05 11 20.8	-0.5
LFU				eS	Sn	05 11 41.0	+2.4
BOQS	Boqueron	1.43	340	eP	Pn	05 11 21.2	-0.7
SBLS	San Blas	1.67	331	eP	Pn	05 11 24.4	-0.7
SNJE	San Jose	1.68	332	eP	Pn	05 11 24.4	-0.9
RTR	El Retiro	1.73	331	eP	Pn	05 11 25.3	-0.6
RBDL	Robledal	1.94	333	eP	Pn	05 11 28.6	-0.1
MTO2	Montecristo 2	2.08	344	eP	Pn	05 11 31.1	+0.2
MTO2				eS	Sn	05 11 59.3	+3.6
TGUH	Tegucigalpa,Un	2.22	41	ePn	Pn	05 11 33.5	+1.0
NBG	Las Nubes	2.67	325	eP	Pn	05 11 38.3	-0.7
NBG				eS	Sn	05 12 19.2	+9.0
MRL	Marmol	2.81	342	eP	Pn	05 11 42.3	+1.5
MRL				eS	Sn	05 12 25.2	+12
FUG	Fuego 3	2.87	316	eP	Pn	05 11 42.1	+0.4
JAT	Jato	3.38	305	eP	Pn	05 11 49.5	+1.0
JAT				eS	Sn	05 12 30.8	+3.4
JTS	JuntasAbangare	4.29	119	ePn	Pn	05 12 01.2	+0.2
CGA2	Cerro Gallo 2	4.84	119	eP	Pn	05 12 09.8	+1.1
QCR	Quepos	5.40	123	eP	Pn	05 12 17.1	+0.8
BUS	Buena Vista	5.67	119	eP	Pn	05 12 22.5	+2.1
ACR	Cerro Adams	6.65	123	eP	Pn	05 12 33.6	+0.2
TEIG	Tepich	7.82	3	ePn	Pn	05 12 51.9	+2.5
TEIG	Tepich	7.82	3	Pn	Pn	05 12 51.6	+2.2
	comp=Z,3.2nm,0.3s,baz=157,slow=15,SNR=15						
TEIG				LR	LR	05 16 09.8	
	comp=Z,750nm,18.6s,baz=88,slow=42						
BCIP	Isla Barro Col	9.35	109	ePn	Pn	05 13 13.4	+2.9
HKT	Hockley	18.67	341	eP	Pn	05 15 14.2	+0.7
	comp=Z,6.3nm,0.9s						
732A	Laxson Ranch,	19.32	329	⇓P	P	05 15 19.9	-0.2
	baz=19,SNR=13						
TIGA	Tifton	19.56	13	⇓P	P	05 15 22.8	+0.2
	baz=19						
VBMS	Vicksburg	19.81	356	eP	Pn	05 15 26.4	-0.7
	comp=Z,33nm,0.6s						
632A	Uvalde	19.88	331	⇓P	P	05 15 25.1	-1.0
	baz=20,SNR=30						
631A	Perdido Creek	20.19	329	⇓P	P	05 15 28.9	-0.6
	baz=20,SNR=11						
532A	Rocksprings	20.45	331	⇓P	P	05 15 32.4	0.0
	baz=20,SNR=24						
LRAL	Lakeview Retre	20.62	4	eP	P	05 15 35.2	+1.0
	comp=Z,12nm,0.8s						
JCT	Junction City	20.70	332	eP	P	05 15 35.1	0.0
	comp=Z,48nm,0.8s						
JCT	Junction City	20.70	332	⇓P	P	05 15 34.6	-0.5
	baz=21,SNR=16						
531A	Rocksprings	20.79	330	⇑P	P	05 15 35.4	-0.7
	baz=21						
432A	Menard	21.03	333	⇓P	P	05 15 38.4	-0.3
	baz=21,SNR=43						
WHTX	Lake Whitney	21.09	339	⇑P	P	05 15 38.5	-0.7
	baz=21,SNR=22						
530A	J-C Ranch, Com	21.17	329	⇓P	P	05 15 40.0	-0.2
	baz=21,SNR=6.3						
431A	Sonora	21.25	331	⇑P	P	05 15 40.6	-0.3
	baz=21,SNR=30						
332A	Millersview	21.44	334	⇓P	P	05 15 42.3	-0.8
	baz=22,SNR=24						
628A	Black Gap, Mar	21.49	325	⇓P	P	05 15 44.1	+0.6
	baz=22,SNR=30						
529A	Stev Forest Ra	21.61	327	⇓P	P	05 15 44.4	-0.5
	baz=22,SNR=7.0						
430A	Baggett Ranch,	21.64	330	⇓P	P	05 15 44.8	-0.4
	baz=22,SNR=17						
331A	San Angelo	21.69	332	⇓P	P	05 15 44.5	-1.2
	baz=22,SNR=52						
627A	Terlingua Ranc	21.75	324	⇑P	P	05 15 47.3	+0.9
	baz=22,SNR=64						
RFTA	Plano	21.78	342	eP	P	05 15 47.0	+0.5
TXAR	Lajitas Array	21.82	323	P	P	05 15 48.2	+1.0
TXAR				PcP	PcP	05 19 49.5	+3.2
TXAR	Lajitas Array	21.82	323	P	P	05 15 48.2	+1.0
	comp=Z,15nm,0.7s,baz=148,slow=11,SNR=110						
TXAR				PcP	PcP	05 19 49.5	+3.2
	comp=Z,0.8nm,0.8s,baz=176,slow=4.8,SNR=4.6						
TXAR				LR	LR	05 26 13.9	
	comp=Z,89nm,19.6s,baz=130,slow=42						
429A	Davenport Ranc	21.84	328	⇓P	P	05 15 46.5	-0.8
	baz=22,SNR=25						
232A	Coleman	21.84	334	⇓P	P	05 15 46.1	-1.2
	baz=22,SNR=33						
528A	Cox Ranch, San	21.95	326	⇓P	P	05 15 48.1	-0.5
	baz=22,SNR=5.6						
ATAH	Atahualpa	21.97	151	LR	LR	05 23 34.3	
	comp=Z,114nm,18.8s,baz=126,slow=35						
NHSC	New Hope	22.08	20	eP	P	05 15 51.6	+1.8
	comp=Z,33nm,0.8s						
330A	Mertzon	22.12	331	⇓P	P	05 15 48.6	-1.8
	baz=22,SNR=19						
231A	Bronte	22.17	333	⇑P	P	05 15 49.4	-1.4
	baz=22,SNR=25						
626A	Big Bend Ranch	22.26	322	⇓P	P	05 15 51.9	0.0
	baz=22,SNR=15						
527A	Woodward Ranch	22.39	324	⇓P	P	05 15 53.1	-0.3
	baz=22,SNR=13						
ABTX	Abilene, Hawle	22.48	335	⇑P	P	05 15 52.9	-1.2
	baz=22,SNR=17						
230A	Sterling City	22.49	332	⇓P	P	05 15 52.9	-1.4
	baz=22						
PLAL	Pickwick Lake	22.51	2	eP	P	05 15 53.4	-1.0
UALR	University of	22.53	352	eP	P	05 15 55.2	+0.6
	comp=Z,52nm,0.8s						
329A	Wagon Wheel Ra	22.57	329	⇓P	P	05 15 53.9	-1.4
	baz=23,SNR=14						
526A	Mary Lane Ranc	22.61	323	⇓P	P	05 15 54.8	-0.8
	baz=23,SNR=16						
427A	Hayter Ranch,	22.81	326	⇓P	P	05 15 56.5	-1.3
	baz=23						
131A	Roby	22.83	334	⇓P	P	05 15 55.9	-2.0
	baz=23,SNR=12						
SWET	Sewanee	22.88	6	eP	P	05 15 58.0	-0.3
	comp=Z,9.5nm,0.7s						
229A	Bryant Ranch,	22.88	330	⇑P	P	05 15 57.2	-1.2
	baz=23,SNR=5.9						
328A	Wristen Ranch,	22.91	328	⇑P	P	05 15 57.7	-1.0
	baz=23,SNR=21						
Z32A	Haskell	23.01	337	⇓P	P	05 15 58.5	-1.3
	baz=23,SNR=46						
130A	Snyder	23.02	333	⇑P	P	05 15 58.3	-1.5
	baz=23,SNR=9.7						
426A	McDonald Obser	23.02	325	⇑P	P	05 15 58.8	-1.3
	baz=23,SNR=14						
Z31A	Sharp Cattle R	23.29	335	⇑P	P	05 16 00.9	-1.6
	baz=23,SNR=28						
CPCT	Cooper Cave	23.29	9	eP	P	05 16 01.8	-0.7
228A	UT Block 9, Go	23.39	329	⇓P	P	05 16 02.1	-1.5
	baz=23						
129A	Stewart Farms,	23.46	331	⇑P	P	05 16 02.6	-1.6
	baz=24,SNR=22						
TKL	Tuckaleechee C	23.61	10	P	P	05 16 04.9	-0.7
TKL	Tuckaleechee C	23.61	10	P	P	05 16 04.9	-0.7
	comp=Z,20nm,0.8s,baz=202,slow=11,SNR=30						
TKL				LR	LR	05 26 50.4	
	comp=Z,103nm,18.1s,baz=265,slow=41						
Y32A	R-V Farms, Ver	23.62	337	⇓P	P	05 16 03.9	-1.7
	baz=24,SNR=6.6						
KMSC	Kings Mountain	23.64	15	⇑P	P	05 16 04.3	-1.5
	baz=24						
227A	Bennet, Jal	23.66	328	⇑P	P	05 16 04.1	-2.1
	baz=24						
WVT	Waverly	23.66	2	eP	P	05 16 05.0	-0.9
	comp=Z,3.1nm,0.6s						
425A	Indio Mountain	23.66	323	⇓P	P	05 16 04.6	-1.6
	baz=24						
Z30A	Sanderson Ranc	23.68	334	⇑P	P	05 16 04.1	-2.1
	baz=24,SNR=20						
128A	Castleberry Fa	23.75	330	⇑P	P	05 16 05.3	-1.6
	baz=24,SNR=7.7						
Y31A	Rekieta Farm,	23.90	336	⇓P	P	05 16 07.0	-1.3
	baz=24,SNR=30						
Z29A	Hungry Hill Ra	23.91	332	⇑P	P	05 16 06.6	-1.8
	baz=24,SNR=20						
WMOK	Wichita Mounta	24.04	339	eP	P	05 16 07.6	-2.0
	comp=Z,13nm,1.0s						
Y30A	Stafford Cattl	24.08	335	⇓P	P	05 16 09.0	-1.1
	baz=24,SNR=17						
325A	Bean Ranch, Si	24.09	324	⇓P	P	05 16 09.5	-0.8
	baz=24,SNR=8.4						
226B	Tecolote Peak,	24.17	327	⇑P	P	05 16 10.2	-0.7
	baz=24,SNR=6.6						
PARMO	Parma	24.19	358	eP	P	05 16 11.3	+0.4
127A	Arkansas Junct	24.22	329	⇓P	P	05 16 10.2	-1.2
	baz=24						
Z28A	Tucker Farm, M	24.25	331	⇓P	P	05 16 10.4	-1.1
	baz=24,SNR=7.3						
TUL1	Tulsa	24.27	346	⇑P	P	05 16 10.3	-1.4
	baz=24,SNR=9.4						
X31A	McDonald Ranch	24.38	337	⇓P	P	05 16 11.8	-0.9
	baz=24,SNR=20						
Y29A	Porterfield Fa	24.40	333	⇓P	P	05 16 12.1	-0.8
	baz=24,SNR=13						
324A	Moseley Ranch,	24.43	324	⇑P	P	05 16 12.7	-0.7
	baz=24,SNR=11						
TZTN	Tazewell	24.52	10	eP	P	05 16 12.7	-1.2
	comp=Z,19nm,1.2s						
126A	Clayton Basin,	24.54	328	⇑P	P	05 16 13.7	-0.6
	baz=25						
225A	Deer Hill, Car	24.56	326	⇑P	P	05 16 13.9	-0.6
	baz=25						
MNTX	Cornudas Mount	24.56	324	eP	P	05 16 13.6	-0.8
	comp=Z,2.6nm,0.8s						
X30A	Coker Ranch, T	24.57	335	⇑P	P	05 16 14.1	-0.4
	baz=25,SNR=19						
Z27A	Tatum	24.66	330	⇓P	P	05 16 14.4	-1.0
	baz=25,SNR=7.9						
Y28A	McKinney Farm,	24.70	332	⇓P	P	05 16 14.9	-0.8
	baz=25,SNR=15						
W31A	Holland Ranch,	24.86	338	⇑P	P	05 16 15.9	-1.1
	baz=25						
125A	Gardner Draw,	24.89	327	⇓P	P	05 16 16.8	-0.6
	baz=25,SNR=7.1						
X29A	Tulia	24.91	334	⇑P	P	05 16 16.9	-0.7
	baz=25,SNR=16						
224A	Cornudas Mount	24.92	325	⇓P	P	05 16 17.1	-0.7
	baz=25,SNR=7.7						
MSTX	Muleshoe	24.99	332	⇓P	P	05 16 17.4	-0.9
	baz=25,SNR=23						
Z26A	Caprock	25.01	329	⇓P	P	05 16 17.6	-0.9
	baz=25,SNR=5.6						
W30A	Crocket Farms	25.09	337	⇑P	P	05 16 18.9	-0.3
	baz=25						
Y27A	Causey	25.10	331	⇓P	P	05 16 18.2	-1.2
	baz=25,SNR=18						
X28A	Dimmitt	25.19	333	⇓P	P	05 16 18.8	-1.3
	baz=25						
SIUC	Southern Illin	25.23	359	eP	P	05 16 19.9	-0.4
	comp=Z,16nm,0.6s						
AMTX	Amarillo	25.28	335	eP	P	05 16 20.5	-0.4
	comp=Z,32nm,0.9s						
V31A	Spring Creek L	25.34	339	⇓P	P	05 16 21.0	-0.5
	baz=25,SNR=11						
124A	Stringfield Ra	25.35	326	⇓P	P	05 16 21.7	-0.1
	baz=25,SNR=9.5						
Z25A	Roswell	25.40	328	⇑P	P	05 16 21.6	-0.4
	baz=26,SNR=8.4						
Y26A	Elida	25.45	330	⇓P	P	05 16 22.2	-0.4
	baz=26						
W29A	Amraillo	25.47	335	⇓P	P	05 16 22.1	-0.5
	baz=26						
USIN	University of	25.50	2	eP	P	05 16 22.0	-0.7
	comp=Z,16nm,0.7s						
X27A	F and S Farms,	25.70	332	⇑P	P	05 16 24.6	-0.3
	baz=26,SNR=5.8						
Z24A	Sheeppen Canyo	25.78	327	⇓P	P	05 16 25.3	-0.4
	baz=26,SNR=8.1						
W28A	Vega	25.82	334	⇓P	P	05 16 25.6	-0.3
	baz=26						
Y25A	Mesa, Roswell	25.89	329	⇓P	P	05 16 25.7	-0.8
	baz=26,SNR=16						
X26A	CR and CF Fran	25.96	331	⇑P	P	05 16 26.6	-0.6
	baz=26,SNR=9.9						
W27A	Bowe Ranch, En	26.03	333	⇑P	P	05 16 27.4	-0.4
	baz=26,SNR=12						
320A	Kipp Ranch, An	26.22	319	⇑P	P	05 16 29.5	-0.1
	baz=26						
V28A	Channing	26.25	335	⇑P	P	05 16 29.4	-0.3
	baz=26,SNR=14						
OLIL	Olney	26.25	1	eP	P	05 16 29.1	-0.5
	comp=Z,15nm,0.9s						
Y24A	Capitan	26.28	327	⇑P	P	05 16 30.1	0.0
	baz=26,SNR=7.6						
U30A	WK&E Inc. Balk	26.31	338	⇑P	P	05 16 29.9	-0.4
	baz=26,SNR=6.4						
X25A	Clemmons Ranch	26.35	329	⇓P	P	05 16 30.3	-0.4
	baz=26						
T31A	Randall Ranch,	26.48	340	⇑P	P	05 16 30.8	-0.9
	baz=26,SNR=6.0						
121A	Cookes Peak, D	26.57	322	⇓P	P	05 16 32.8	+0.1
	baz=27						
220A	Playas Peak, P	26.60	320	⇓P	P	05 16 33.4	+0.4
	baz=27						
Y23A	Lovelace Mesa,	26.61	327	⇑P	P	05 16 32.9	-0.2
	baz=27,SNR=7.8						
Z22A	Elephant Butte	26.61	324	⇑P	P	05 16 33.4	+0.3
	baz=27						
319A	Douglas	26.73	318	⇓P	P	05 16 33.9	-0.3
	baz=27						
T30A	Plains	26.73	339	⇓P	P	05 16 33.4	-0.6
	baz=27						
W25A	X Bar L Ranch,	26.81	331	⇓P	P	05 16 34.1	-0.7
	baz=27,SNR=9.9						
V26A	Tequesquite Ra	26.97	332	⇑P	P	05 16 35.8	-0.4
	baz=27,SNR=14						
U27A	Thompson Grove	27.07	335	⇑P	P	05 16 36.7	-0.5
	baz=27,SNR=15						
BNM	Barren Site	27.09	326	eP	P	05 16 37.4	-0.1
	comp=Z,6.2nm,1.1s						
T29A	Hugoton	27.10	338	⇑P	P	05 16 36.0	-1.4
	baz=27						
S30A	Montezuma	27.24	339	⇑P	P	05 16 38.0	-0.6
	baz=27,SNR=5.2						
W24A	Lazy 6 Ranch,	27.27	329	⇓P	P	05 16 38.0	-1.0
	baz=27						
T28A	Walsh

	baz=29							
Q28A	**Sharon Springs**	28.99	339	⇓P	P	05 16 54.3	+0.1	
	baz=29							
T23A	**Casias Ranch,**	29.03	331	⇑P	P	05 16 54.7	-0.1	
	baz=29							
S24A	**Houchin Ranch,**	29.13	333	⇓P	P	05 16 56.4	+0.6	
	baz=29							
R25A	**Fountain Ranch**	29.15	334	⇓P	P	05 16 56.0	+0.3	
	baz=29,SNR=5.4							
KSCO	**Kaye Shedlock'**	29.23	338	⇓P	P	05 16 56.3	-0.2	
	baz=29							
SDCO	**Great Sand Dun**	29.35	332	*eP*	P	05 16 58.5	+0.8	
	comp=Z,4.1nm,1.1s							
U21A	**Nageezi**	29.36	328	⇓P	P	05 16 58.0	+0.3	
	baz=29							
P28A	**Saint Francis**	29.42	339	⇓P	P	05 16 58.0	0.0	
	baz=29,SNR=9.1							
214A	**Organ Pipe Nat**	29.45	315	⇑P	P	05 16 59.0	+0.6	
	baz=30							
Q26A	**Hugo**	29.50	336	⇑P	P	05 16 58.9	+0.1	
	baz=30							
P27A	**Ficken Ranch,**	29.69	338	⇓P	P	05 16 59.8	-0.7	
	baz=30							
Q25A	**Bedland, Calha**	29.78	335	⇓P	P	05 17 00.2	-1.3	
	baz=30							
R23A	**Moffat**	29.86	332	⇑P	P	05 17 02.5	+0.3	
	baz=30,SNR=8.5							
S22A	**4UR Ranch, Cre**	29.97	331	⇑P	P	05 17 03.3	+0.1	
	baz=30,SNR=8.5							
P26A	**Davis Ranch, A**	29.98	337	⇓P	P	05 17 03.2	+0.1	
	baz=30							
BGNE	**Belgrade**	30.06	346	⇓P	P	05 17 02.2	-1.4	
	baz=30							
X16A	**Lo Mia Camp, P**	30.09	321	⇓P	P	05 17 04.7	+0.6	
	baz=30							
O27A	**Beecher Island**	30.22	339	⇓P	P	05 17 05.3	+0.1	
	baz=30,SNR=8.8							
P25A	**Willow Gulch B**	30.26	336	⇓P	P	05 17 06.2	+0.6	
	baz=30							
JFWS	**Jewell Farm**	30.45	358	*eP*	P	05 17 05.9	-1.0	
	comp=Z,7.3nm,0.7s							
OGNE	**Ogallala**	30.74	340	⇑P	P	05 17 10.3	+0.6	
	baz=31							
M29A	**Burnside Ranch**	30.77	342	⇑P	P	05 17 10.2	+0.3	
	baz=31							
WUAZ	**Wupatki**	30.79	322	⇓P	P	05 17 11.6	+1.3	
	baz=31							
Q22A	**Crested Butte,**	30.90	332	⇑P	P	05 17 12.3	+0.9	
	baz=31							
R20A	**Redvale**	31.08	329	⇑P	P	05 17 13.4	+0.5	
	baz=31							
ISCO	**Idaho Springs**	31.10	334	*eP*	P	05 17 15.2	+2.1	
	comp=Z,2.6nm,0.8s							
ISCO	**Idaho Springs**	31.10	334	⇑P	P	05 17 13.6	+0.5	
	baz=31							
PV01	**Paradox Valley**	31.13	329	*eP*	P	05 17 15.3	+1.9	
	comp=Z,150nm,0.8s							
SMCO	**Snowmass**	31.18	332	*eP*	P	05 17 16.0	+1.9	
	comp=Z,8.4nm,1.1s							
PV04	**Paradox Valley**	31.50	329	*eP*	P	05 17 17.6	+1.1	
S18A	**Hurst Farm, Bl**	31.54	327	⇑P	P	05 17 18.1	+1.1	
	baz=32							
PV10	**Paradox Valley**	31.55	329	*eP*	P	05 17 17.1	0.0	
	comp=Z,83nm,0.8s							
O23A	**Lake Granby, G**	31.57	334	⇓P	P	05 17 18.3	+1.1	
	baz=32							
N24A	**Carr**	31.67	336	⇑P	P	05 17 18.6	+0.6	
	baz=32							
PDMCI	**Parker Dam,Lak**	31.74	318	⇑P	P	05 17 20.4	+1.9	
	baz=32							
O22A	**Kremmling**	31.80	334	⇓P	P	05 17 20.3	+1.1	
	baz=32							
ECSD	**EROS Data Cent**	31.96	349	*eP*	P	05 17 19.0	-1.4	
	comp=Z,9.1nm,1.0s							
M24A	**Cheyenne**	32.20	337	⇑P	P	05 17 24.0	+1.4	
	baz=32							
BC3	**Big Chuckawall**	32.25	315	⇑P	P	05 17 24.6	+1.5	
	baz=32							
N22A	**Wattenberg Ran**	32.29	334	⇓P	P	05 17 24.9	+1.3	
	baz=32							
PHWY	**Pilot Hill**	32.30	336	*eP*	P	05 17 24.7	+1.0	
	comp=Z,12nm,1.3s							
K27A	**Flueckinger Fa**	32.39	341	⇑P	P	05 17 25.5	+1.3	
	baz=32							
MONP	**Monument Peak**	32.50	313	⇑P	P	05 17 27.2	+1.8	
	baz=33							
O20A	**White River Ci**	32.54	332	⇑P	P	05 17 25.9	+0.3	
	baz=33,SNR=6.8							
M23A	**Laramie**	32.55	336	⇑P	P	05 17 26.8	+1.1	
	baz=33							
N21A	**Black Mountain**	32.71	333	⇓P	P	05 17 27.6	+0.4	
	baz=33,SNR=7.1							
BELC	**Belle Mtn. Jos**	32.82	315	⇑P	P	05 17 29.6	+1.5	
	baz=33							
LDFC	**Landfair**	32.85	318	*eP*	P	05 17 30.4	+2.0	
	comp=Z,4.8nm,0.7s							
SRU	**San Rafael**	32.87	328	⇓P	P	05 17 29.9	+1.3	
	baz=33							
SPMN	**St. Paul**	32.91	355	⇑P	P	05 17 27.4	-1.2	
	baz=33,SNR=30							
PFO	**Pinyon Flat Ob**	32.91	314	LR	LR	05 33 34.0		
	comp=Z,192nm,18.1s,baz=125,slow=41							
O19A	**Miners Draw (B**	33.08	331	⇓P	P	05 17 31.1	+0.7	
	baz=33							
L23A	**Garrett**	33.09	337	⇑P	P	05 17 30.7	+0.2	
	baz=33							
N20A	**Spence Gulch,**	33.10	332	⇓P	P	05 17 31.5	+0.8	
	baz=33,SNR=9.6							
SAML	**Samuel**	33.11	129	*eP*	P	05 17 30.6	0.0	
	comp=Z,4.3nm,0.9s							
P18A	**Preston Nutter**	33.12	329	⇑P	P	05 17 31.7	+0.9	
	baz=33							
BRSD	**Miller**	33.12	347	⇓P	P	05 17 30.6	+0.1	
	baz=33							
SADO	**Sadowa**	33.31	13	P	P	05 17 30.6	-1.6	
SADO	**Sadowa**	33.31	13	P	P	05 17 30.6	-1.6	
	comp=Z,3.8nm,0.6s,baz=203,slow=7.7							
M21A	**Separation Pea**	33.34	334	⇑P	P	05 17 34.6	+1.9	
	baz=33							
HEC	**Hector,Ludlow**	33.52	316	⇓P	P	05 17 36.4	+2.3	
	baz=34							
M20A	**Sweetwater, Wa**	33.60	333	⇓P	P	05 17 36.3	+1.4	
	baz=34							
K23A	**Bowen Ranch, D**	33.61	337	⇑P	P	05 17 36.2	+1.3	
	baz=34							
COWI	**Conover**	33.61	360	*eP*	P	05 17 32.4	-2.3	
	comp=Z,6.5nm,0.8s							
L21A	**Rawlins**	33.63	335	⇓P	P	05 17 35.5	+0.3	
	baz=34,SNR=8.9							
J24A	**Dixon Ranch, L**	33.76	339	⇑P	P	05 17 36.9	+0.8	
	baz=34							
K22A	**Casper**	33.87	336	⇑P	P	05 17 38.0	+0.8	
	baz=34							
L20A	**Wamsutter**	34.09	334	⇓P	P	05 17 39.7	+0.6	
	baz=34							
K21A	**Alcova**	34.14	335	⇑P	P	05 17 40.7	+1.1	
	baz=34							
I24A	**Kuemmerle Ranc**	34.21	339	⇓P	P	05 17 40.3	+0.2	
	baz=34							
RSSD	**Black Hills**	34.24	340	*eP*	P	05 17 41.9	+1.5	
	comp=Z,6.6nm,1.1s							
J22A	**Midwest**	34.49	337	⇑P	P	05 17 42.6	0.0	
	baz=34							
L19A	**Farson**	34.61	333	⇓P	P	05 17 43.2	-0.5	
	baz=35							
EDW2	**Edwards Air Fo**	34.67	315	⇓P	P	05 17 45.1	+1.0	
	baz=35							
M17A	**Scullys Gap (B**	34.73	331	⇓P	P	05 17 44.8	+0.1	
	baz=35							
L18A	**Fontenelle, Gr**	34.78	332	⇓P	P	05 17 45.0	-0.2	
	baz=35							
J21A	**Lysite**	34.81	336	⇑P	P	05 17 45.5	+0.1	
	baz=35,SNR=12							
FURC	**Furnace Creek,**	34.82	318	⇓P	P	05 17 45.7	+0.5	
	baz=35							
I22A	**9 Mile Ranch,**	34.91	337	⇑P	P	05 17 45.9	-0.2	
	baz=35,SNR=6.5							
H24A	**Dirks Ranch, A**	34.97	340	⇑P	P	05 17 46.3	-0.3	
	baz=35,SNR=14							
K19A	**Absolon Red Bu**	34.97	334	⇓P	P	05 17 46.7	0.0	
	baz=35							
J20A	**Shoshoni**	35.08	335	⇑P	P	05 17 47.9	+0.3	
	baz=35							
I21A	**Big Trails, Te**	35.15	336	⇓P	P	05 17 49.0	+0.8	
	baz=35							
R11A	**Troy Canyon, C**	35.18	322	⇑P	P	05 17 50.1	+1.4	
	baz=35							
PDAR	**Pinedale Array**	35.23	333	P	P	05 17 49.8	+0.7	
PDAR				PcP	PcP	05 20 20.4	+1.1	
PDAR	**Pinedale Array**	35.23	333	P	P	05 17 49.8	+0.7	
	comp=Z,1.5nm,0.8s,baz=131,slow=10,SNR=9.7							
PDAR				PcP	PcP	05 20 20.4	+1.1	
	comp=Z,0.7nm,0.5s,baz=157,slow=4.9,SNR=4.4							
HWUT	**Hardware Ranch**	35.27	330	*eP*	P	05 17 49.5	+0.2	
	comp=Z,1.2nm,0.4s							
J19A	**Crowheart**	35.41	334	⇑P	P	05 17 51.9	+1.4	
	baz=36							
H22A	**Clearmont**	35.46	338	⇓P	P	05 17 51.9	+1.0	
	baz=36							
EYMN	**Ely**	35.53	357	*eP*	P	05 17 49.2	-2.1	
	comp=Z,12nm,0.7s							
G23A	**Biddle**	35.65	340	⇑P	P	05 17 52.6	+0.2	
	baz=36							
H21A	**Big Horn, Sher**	35.74	337	⇑P	P	05 17 53.5	+0.2	
	baz=36							
F24A	**Ekalaka**	35.91	341	⇑P	P	05 17 55.1	+0.4	
	baz=36							
VES	**Vestal, Richgr**	35.95	316	⇑P	P	05 17 56.8	+1.8	
	baz=36							
PKM	**Peak Mountain**	35.96	314	⇑P	P	05 17 56.3	+1.0	
	baz=36							
G22A	**Birney**	35.98	339	⇓P	P	05 17 55.7	+0.5	
	baz=36							
H20A	**Greybull**	35.99	336	⇓P	P	05 17 55.2	-0.2	
	baz=36,SNR=5.9							
I19A	**Meeteetse**	36.02	335	⇓P	P	05 17 56.8	+1.0	
	baz=36							
F23A	**Volborg**	36.11	340	⇓P	P	05 17 56.8	+0.5	
	baz=36							
SNOW	**Snow King Moun**	36.32	333	*eP*	P	05 17 58.8	+0.4	
	comp=Z,18nm,1.0s							
LOHW	**Long Hollow**	36.37	333	*eP*	P	05 18 00.4	+1.7	
	comp=Z,3.2nm,0.7s							
TPAW	**Teton Pass**	36.43	332	*eP*	P	05 18 00.5	+1.2	
	comp=Z,6.9nm,0.9s							
RRI2	**Red Ridge**	36.48	332	*eP*	P	05 18 00.6	+0.8	
	comp=Z,13nm,1.4s							
MDND	**Maddock**	36.50	348	⇑P	P	05 17 58.7	-0.9	
	baz=36,SNR=20							
E24A	**Baker**	36.51	342	⇑P	P	05 17 59.2	-0.6	
	baz=36,SNR=7.8							
MOOW	**Moose Ponds**	36.54	333	*eP*	P	05 18 01.9	+1.7	
	comp=Z,3.0nm,0.9s							
G20A	**Bridger**	36.69	337	⇑P	P	05 18 01.3	0.0	
	baz=37							
E23A	**Ismay**	36.76	341	⇓P	P	05 18 01.2	-0.7	
	baz=37,SNR=7.7							
H18A	**Shoshone NF, C**	36.82	335	⇑P	P	05 18 02.8	+0.2	
	baz=37							
NVAR	**Mina Array Bea**	36.91	320	P	P	05 18 05.2	+1.7	
NVAR				PcP	PcP	05 20 25.2	+0.8	
NVAR	**Mina Array Bea**	36.91	320	P	P	05 18 05.2	+1.7	
	comp=Z,2.0nm,0.8s,baz=130,slow=8.4,SNR=18							
NVAR				PcP	PcP	05 20 25.2	+0.8	
	comp=Z,0.9nm,0.7s,baz=120,slow=3.2,SNR=5.8							
NVAR				LR	LR	05 34 15.8		
	comp=Z,112nm,18.3s,baz=14,slow=38							
E22A	**Miles City**	36.92	340	⇓P	P	05 18 04.3	+1.0	
	baz=37							
H17A	**Grant Village**	36.98	334	⇑P	P	05 18 04.7	+0.7	
	baz=37							
D24A	**Glendive**	37.01	342	⇓P	P	05 18 04.7	+0.7	
	baz=37							
G18A	**Lazy EL Ranch,**	37.30	336	⇑P	P	05 18 06.3	-0.3	
	baz=37							
D23A	**Lindsay**	37.33	341	⇓P	P	05 18 07.4	+0.7	
	baz=37							
F19A	**Roth Farm, Mol**	37.50	337	⇓P	P	05 18 07.4	-0.8	
	baz=38,SNR=5.8							
J14A	**Carey**	37.51	330	⇓P	P	05 18 08.5	+0.1	
	baz=38							
H16A	**Russell Place,**	37.51	333	⇑P	P	05 18 09.5	+1.0	
	baz=38							
D22A	**Cohagen**	37.62	340	⇓P	P	05 18 08.6	-0.5	
	baz=38,SNR=15							
GCMT	**Greycliff**	37.73	336	*eP*	P	05 18 09.4	-0.8	
	comp=Z,3.7nm,1.1s							
E20A	**Meyer Farm, Mu**	37.74	338	⇑P	P	05 18 09.7	-0.5	
	baz=38,SNR=9.8							
F18A	**Big Timber**	37.84	336	⇑P	P	05 18 10.8	-0.3	
	baz=38							
C23A	**Lambert**	37.89	342	⇓P	P	05 18 11.3	-0.1	
	baz=38							
J13A	**Cove Ranch, Pi**	37.89	329	⇑P	P	05 18 11.7	+0.1	
	baz=38							
I14A	**Mackay**	37.93	331	⇑P	P	05 18 12.3	+0.3	
	baz=38							
E19A	**Rath Farm, Rou**	37.95	337	⇑P	P	05 18 12.7	+0.8	
	baz=38							
C22A	**Vida**	38.05	341	⇑P	P	05 18 12.6	-0.2	
	baz=38,SNR=17							
H15A	**Lima**	38.07	332	⇓P	P	05 18 13.3	+0.2	
	baz=38,SNR=6.5							
HLID	**Hailey**	38.13	329	⇓P	P	05 18 13.7	+0.1	
	baz=38							
G16A	**Moss Hill, Enn**	38.17	333	⇓P	P	05 18 14.7	+0.8	
	baz=38							
DGMT	**Dagmar**	38.20	343	*eP*	P	05 18 14.2	+0.2	
	comp=Z,6nm,0.8s							
DGMT	**Dagmar**	38.20	343	⇓P	P	05 18 13.8	-0.2	
	baz=38,SNR=9.6							
ULM	**Lac du Bonnet**	38.21	353	*eP*	P	05 18 12.2	-1.7	
	comp=Z,11nm,1.0s							
ULM	**Lac du Bonnet**	38.21	353	P	P	05 18 11.9	-2.0	
	comp=Z,9.5nm,0.7s,baz=161,slow=10,SNR=7.1							
ULM				LR	LR	05 35 31.2		
	comp=Z,142nm,18.9s,baz=188,slow=39							
F17A	**Fitzpatrick Pl**	38.23	335	⇑P	P	05 18 14.9	+0.5	
	baz=38							
I13A	**Wildhorse Cree**	38.24	330	⇑P	P	05 18 14.9	+0.3	
	baz=38							
D20A	**Manuel Ranch,**	38.24	339	⇓P	P	05 18 14.3	-0.1	
	baz=38,SNR=13							
MCMT	**McKenzie Canyo**	38.33	332	*eP*	P	05 18 15.9	+0.5	
	comp=Z,4.0nm,1.1s							
H14A	**Leadore**	38.41	331	⇓P	P	05 18 15.7	-0.3	
	baz=38							
B23A	**Brockton**	38.42	343	⇑P	P	05 18 15.7	-0.2	
	baz=38,SNR=7.7							
G15A	**Dillon**	38.42	333	⇓P	P	05 18 16.3	+0.2	
	baz=38							
BOZ	**Bozeman (W)**	38.42	334	*eP*	P	05 18 16.1	0.0	
	comp=Z,3.1nm,1.0s							
E18A	**Harlowton**	38.47	336	⇑P	P	05 18 16.3	-0.1	
	baz=38							
C21A	**Desert Coulee**	38.52	340	⇓P	P	05 18 16.1	-0.5	
	baz=38,SNR=5.3							
F16A	**Kennard Place,**	38.53	334	⇓P	P	05 18 16.9	0.0	
	baz=39							
A24A	**Westby**	38.56	344	⇓P	P	05 18 16.5	-0.5	
	baz=39,SNR=9.2							
D19A	**Cripps Ranch,**	38.57	338	⇓P	P	05 18 17.1	-0.2	
	baz=39,SNR=6.7							
B22A	**Reddig Ranch S**	38.58	342	⇑P	P	05 18 17.1	-0.1	
	baz=39							
DLMT	**Dillon**	38.62	333	*eP*	P	05 18 16.8	-1.0	
	comp=Z,2.6nm,0.9s							
I12A	**Atlanta**	38.66	329	⇑P	P	05 18 18.4	+0.3	
	baz=39							
C20A	**Veseth Ranch,**	38.73	339	⇓P	P	05 18 18.4	-0.1	
	baz=39							
E17A	**Martinsdale**	38.76	335	⇓P	P	05 18 19.0	+0.1	
	baz=39							
LRM	**Limekiln Ridge**	38.92	333	*eP*	P	05 18 19.8	-0.5	
D18A	**Linhart Farms,**	38.94	337	⇓P	P	05 18 20.5	+0.2	
	baz=39							
F15A	**Butte**	38.95	333	⇓P	P	05 18 21.3	+0.7	
	baz=39							
H12A	**Diamond D Ranc**	39.07	330	⇑P	P	05 18 21.8	+0.3	
	baz=39							
C19A	**Slack Wire Ran**	39.12	338	⇑P	P	05 18 21.3	-0.5	
	baz=39,SNR=14							
E16A	**East Helena**	39.15	335	⇓P	P	05 18 21.8	-0.3	
	baz=39							
A22A	**Carney Farms,**	39.17	342	⇑P	P	05 18 21.6	-0.6	
	baz=39,SNR=5.0							
D17A	**Six Diamond Ra**	39.25	336	⇑P	P	05 18 22.8	-0.1	
	baz=39							
SIV	**San Ignacio**	39.32	135	P	P	05 18 23.9	+0.2	
SIV	**San Ignacio**	39.32	135	P	P	05 18 23.9	+0.2	
	comp=Z,2.5nm,0.8s,baz=323,slow=9.4,SNR=9.4							
B20A	**Solberg Farm,**	39.36	340	⇓P	P	05 18 23.6	-0.1	
	baz=39							
A21A	**Bergtoll Ranch**	39.48	341	⇓P	P	05 18 25.4	+0.7	
	baz=40							
D16A	**Dana Ranch, Ca**	39.50	335	⇑P	P	05 18 24.9	-0.1	
	baz=40							
EGMT	**Eagleton**	39.62	338	*eP*	P	05 18 25.9	-0.1	
	comp=Z,7.8nm,0.7s							
EGMT	**Eagleton**	39.62	338	⇑P	P	05 18 25.7	-0.3	
	baz=40,SNR=5.6							
C17A	**Wharram Farm,**	39.67	337	⇑P	P	05 18 26.6	+0.2	
	baz=40							
B19A	**Brinkman Farms**	39.69	339	⇓P	P	05 18 26.4	-0.1	
	baz=40,SNR=11							
G12A	**Big Creek, Yel**	39.72	330	⇑P	P	05 18 27.2	+0.3	
	baz=40							
F13A	**Darby**	39.74	332	⇓P	P	05 18 27.8	+0.8	
	baz=40							
D15A	**Lincoln**	39.91	335	⇓P	P	05 18 28.6	+0.2	
	baz=40							
B18A	**Beardsley Farm**	39.94	338	⇑P	P	05 18 28.7	+0.2	
	baz=40							
A19A	**Klindworth Far**	40.02	340	⇑P	P	05 18 29.4	+0.1	
	baz=40							
CHMT	**Chamberlain Mo**	40.12	334	*eP*	P	05 18 31.8	+1.5	
F12A	**Elk City**	40.14	331	⇓P	P	05 18 30.3	-0.1	
	baz=40,SNR=5.4							
E13A	**Victor**	40.17	333	⇓P	P	05 18 30.8	+0.3	
	baz=40							
C16A	**Fuhringer Ranc**	40.20	336	⇓P	P	05 18 30.7	-0.1	
	baz=40							
B17A	**L&G Farms, Che**	40.23	337	⇑P	P	05 18 31.5	+0.5	
	baz=40							
MSO	**Missoula**	40.35	333	*eP*	P	05 18 32.0	-0.1	
	comp=Z,1.6nm,1.0s							
MSO	**Missoula**	40.35	333	⇑P	P	05 18 32.1	-0.1	
	baz=40							
D14A	**Greenough**	40.36	334	⇑P	P	05 18 32.1	-0.1	
	baz=40							
A18A	**Metzger Ranch,**	40.40	339	⇑P	P	05 18 32.6	+0.2	
	baz=40							
C15A	**Salmond Ranch,**	40.52	335	⇑P	P	05 18 33.7	+0.1	
	baz=41							
A17A	**Triple J Farms**	40.73	338	⇓P	P	05 18 35.0	-0.1	
	baz=41							
D13A	**Huson**	40.78	333	⇑P	P	05 18 35.6	0.0	
	baz=41							
B15A	**Bradely Ranch,**	40.93	336	⇓P	P	05 18 36.0	-0.9	
	baz=41							
A16A	**West Butte Ran**	41.07	337	⇑P	P	05 18 37.3	-0.7	
	baz=41							
D12A	**Red Ives Fores**	41.15	332	⇓P	P	05 18 38.4	-0.3	
	baz=41							
C13A	**Hot Springs**	41.28	334	⇓P	P	05 18 39.9	+0.3	
	baz=41							
A15A	**Johnson Ranch,**	41.53	336	⇑P	P	05 18 41.7	-0.1	
	baz=42							
YBH	**Yreka Blue Hor**	41.58	321	LR	LR	05 40 15.2		
	comp=Z,127nm,18.1s,baz=144,slow=42							
A14A	**Double T Ranch**	41.80	336	⇓P	P	05 18 43.7	-0.3	
	baz=42,SNR=8.0							
C11A	**Tepee Creek (N**	42.15	332	⇑P	P	05 18 47.0	+0.3	
	baz=42							
FFC	**Flin Flon**	43.50	349	*eP*	P	05 18 56.6	-0.9	
	comp=Z,6.7nm,1.0s							
SCHQ	**Schefferville**	45.73	18	*eP*	P	05 19 12.8	-2.5	
	comp=Z,9.5nm,0.8s							
SCHQ	**Schefferville**	45.73	18	P	P	05 19 13.2	-2.2	
	comp=Z,11nm,0.8s,baz=216,slow=6.6,SNR=20							
CFAA	**Coronel Fontan**	47.97	156	P	P	05 19 34.4	+1.3	
CFAA	**Coronel Fontan**	47.97	156	P	P	05 19 34.4	+1.3	
	comp=Z,0.1nm,0.5s,baz=311,slow=9.3,SNR=2.3							
BBB	**Bella Bella**	50.72	330	LR	LR	05 44 29.6		
	comp=Z,71nm,18.1s,baz=203,slow=40							
YKA	**Yellowknife Ar**	53.34	345	P	P	05 20 12.2	-1.0	
YKA				PcP	PcP	05 21 20.2	0.0	
YKA				ScP	ScP	05 25 18.9	+4.0	
YKA	**Yellowknife Ar**	53.34	345	P	P	05 20 12.2	-1.0	
	comp=Z,6.1nm,0.9s,baz=142,slow=7.5,SNR=42							
YKA				PcP	PcP	05 21 20.2	0.0	
	comp=Z,0.5nm,0.6s,baz=149,slow=4.0,SNR=5.6							
YKA				ScP	ScP	05 25 18.9	+4.0	
	comp=Z,0.3nm,0.9s,baz=140,slow=4.4,SNR=3.6							
YKW3	**Yellowknife Ar**	53.40	345	*eP*	P	05 20 12.1	-1.5	
	comp=Z,0.1nm,0.8s							
DLBC	**Dease Lake**	55.42	335	*eP*	P	05 20 28.2	-0.2	
DLBC	**Dease Lake**	55.42	335	LR	LR	05 49 24.7		
	comp=Z,66nm,18.4s,baz=162,slow=42							
PLCA	**Paso Flores**	55.48	163	LR	LR	05 40 05.5		
	comp=Z,66nm,19.2s,baz=172,slow=32							
INK	**Inuvik**	62.88	343	LR	LR	05 49 30.6		
	comp=Z,20nm,19.6s,baz=108,slow=37							
ILAR	**Eielson Array**	65.56	336	P	P	05 21 36.3	-1.2	
ILAR				PP	PP	05 24 00.5	-1.4	
ILAR	**Eielson Array**	65.56	336	P	P	05 21 36.3	-1.2	
	comp=Z,1.8nm,1.0s,baz=124,slow=4.6,SNR=9.8							
ILAR				PP	PP	05 24 00.5	-1.4	
	comp=Z,0.5nm,0.9s,baz=123,slow=5.7,SNR=5.1							
ILAR				LR	LR	05 52 46.0		
	comp=Z,72nm,19.1s,baz=124,slow=38							
PPT2	**Papeete2**	67.00	245	*e*LR	LR	05 41 37.9		
	comp=Z,63nm,28.0s							
TBI	**Tubuai**	69.16	239	*e*LR	LR	05 42 52.6		
	comp=Z,60nm,27.8s							
FX1	**Attu Island--F**	85.04	323	LR	LR	05 58 35.1		
	comp=Z,37nm,20.5s,baz=65,slow=34							
ARCES	**ARCESS Array B**	86.67	19	LR	LR	06 01 35.1		
	comp=Z,36nm,18.0s,baz=256,slow=35							
MKAR	**Makanchi Array**	120.55	7	PKP	PKPdf	05 29 44.1	-1.6	
MKAR	**Makanchi Array**	120.55	7	PKP	PKPdf	05 29 44.1	-1.6	

CNCH	Conchagua	3.32	202	eP		Pb	05 18 14.7 +0.4
MTO2	Montecristo 2	3.34	234	eP		Pn	05 18 10.1 +2.3
VSM	San Miguel	3.37	210	eP		Pb	05 18 14.3 -0.9
SNVI	San Vicente	3.52	219	eP		Pn	05 18 14.3 +4.2
LBRS	Las Brisas	3.56	223	eP		Pn	05 18 14.4 +3.8
LFU	La Fuente	3.60	224	eP		Pn	05 18 15.3 +4.2
LFRS	El Faro	3.66	222	eP		Pn	05 18 16.0 +4.0
BOQS	Boqueron	3.72	225	eP		Pn	05 18 17.2 +4.3
SNET	Serv Nac Est T	3.72	224	eS		Sg	05 19 06.3 -8.3
SNET					AML	AML	05 19 19.8
	comp=Z,536nm,0.9s						
RBDL	Robledal	3.77	234	eP		Pn	05 18 15.8 +2.2
RBDL				eS		Sg	05 19 06.2 -10
CNGN	Cerro Negro	3.86	182	eS		Sg	05 19 15.4 -3.7
SNJE	San Jose	3.86	230	eP		Pn	05 18 18.6 +3.7
RTR	El Retiro	3.87	231	eP		Pn	05 18 18.0 +3.0
SBLS	San Blas	3.89	230	eP		Pn	05 18 19.7 +4.4
NBG	Las Nubes	4.07	245	eP		Pn	05 18 14.3 -3.4
NBG				eS		Sg	05 19 24.9 -0.9
TEIG	Tepich	4.16	337	ePn		Pn	05 18 16.9 -1.9
TEIG	Tepich	4.16	337	Pn		Pn	05 18 17.3 -1.5
	comp=Z,14nm,0.3s,baz=302,slow=0.6,SNR=48						
TEIG				Sn		Sn	05 19 02.3 -5.3
	comp=Z,20nm,0.3s,baz=87,slow=24,SNR=20						
JTS	JuntasAbangare	6.25	165	ePn		Pb	05 18 57.5 -6.7
	comp=Z,346nm,0.9s						
JTS				eS		Sg	05 20 29.9 -5.9
SOR	Soroa	7.20	27	eP		Pn	05 19 03.0 +2.4
	baz=196						
SOR				eS		Sn	05 20 22.9 +0.3
HKT	Hockley	15.97	329	eP		Pn	05 21 00.3 +0.4
	comp=Z,10nm,1.0s						
632A	Uvalde	17.85	319	⇑P		P	05 21 23.5 -1.0
	baz=18						
631A	Perdido Creek	18.28	318	⇑P		Pn	05 21 27.9 -1.2
	baz=18						
WHTX	Lake Whitney	18.43	329	⇓P		P	05 21 33.1 +2.3
	baz=18,SNR=9.1						
432A	Menard	18.83	322	⇓P		P	05 21 34.4 -0.9
	baz=19						
332A	Millersview	19.17	324	⇓P		Pn	05 21 39.8 -0.1
	baz=19,SNR=6.7						
431A	Sonora	19.18	320	⇑P		P	05 21 38.5 -0.6
	baz=19						
530A	J-C Ranch, Com	19.27	318	⇑P		P	05 21 39.4 -0.7
	baz=19						
TKL	Tuckaleechee C	19.36	7	P		Pn	05 21 42.7 +0.5
TKL	Tuckaleechee C	19.36	7	P		Pn	05 21 42.7 +0.5
	comp=Z,0.3nm,0.3s,baz=185,slow=9.6,SNR=3.7						
232A	Coleman	19.49	325	⇑P		Pn	05 21 43.1 -0.7
	baz=20,SNR=7.3						
430A	Baggett Ranch,	19.64	320	⇑P		P	05 21 43.0 -1.1
	baz=20						
628A	Black Gap, Mar	19.88	314	⇑P		P	05 21 44.7 -2.2
	baz=20						
231A	Bronte	19.91	324	⇑P		Pn	05 21 47.2 -1.5
	baz=20,SNR=5.3						
429A	Davenport Ranc	19.94	318	⇑P		P	05 21 45.5 -2.0
	baz=20						
330A	Mertzon	20.03	321	⇓P		P	05 21 48.5 +0.1
	baz=20,SNR=5.6						
ABTX	Abilene, Hawle	20.05	326	⇑P		Pn	05 21 49.2 -1.3
	baz=20,SNR=7.3						
627A	Terlingua Ranc	20.21	313	⇑P		P	05 21 49.1 -1.4
	baz=20						
230A	Sterling City	20.33	322	⇑P		P	05 21 50.7 -1.0
	baz=20						
TXAR	Lajitas Array	20.34	312	P		Pn	05 21 52.4 -1.5
TXAR	Lajitas Array	20.34	312	P		Pn	05 21 52.4 -1.5
	comp=Z,2.8nm,1.1s,baz=129,slow=11,SNR=8.7						
131A	Roby	20.50	325	⇓P		P	05 21 53.8 +0.2
	baz=20,SNR=7.6						
Z32A	Haskell	20.50	328	⇓P		Pn	05 21 54.4 -1.3
	baz=20,SNR=13						
329A	Wagon Wheel Ra	20.58	320	⇑P		P	05 21 53.3 -1.1
	baz=21						
527A	Woodward Ranch	20.78	314	⇑P		P	05 21 55.2 -1.5
	baz=21						
626A	Big Bend Ranch	20.80	312	⇓P		P	05 21 55.7 -1.1
	baz=21,SNR=17						
229A	Bryant Ranch,	20.81	321	⇓P		P	05 21 56.0 -0.9
	baz=21						
Z31A	Sharp Cattle R	20.86	326	⇓P		Pn	05 21 57.8 -2.0
	baz=21,SNR=9.5						
328A	Wristen Ranch,	21.03	318	⇑P		P	05 21 58.6 -0.8
	baz=21						
526A	Mary Lane Ranc	21.06	313	⇑P		P	05 21 58.2 -1.5
	baz=21						
129A	Stewart Farms,	21.31	322	⇓P		P	05 22 02.1 -0.3
	baz=21						
WMOK	Wichita Mounta	21.32	331	eP		P	05 22 01.7 -0.6
	comp=Z,16nm,1.4s						
Z30A	Sanderson Ranc	21.37	325	⇑P		P	05 22 02.0 -0.9
	baz=21,SNR=5.6						
Y31A	Rekieta Farm,	21.42	327	⇓P		P	05 22 03.3 -0.1
	baz=21,SNR=8.3						
128A	Castleberry Fa	21.67	321	⇑P		P	05 22 05.5 -0.7
	baz=22,SNR=7.2						
Z29A	Hungry Hill Ra	21.67	324	⇓P		P	05 22 05.9 -0.3
	baz=22						
Y30A	Stafford Cattl	21.69	326	⇓P		P	05 22 05.9 -0.4
	baz=22						
X31A	McDonald Ranch	21.80	329	⇑P		P	05 22 07.7 +0.1
	baz=22,SNR=11						
Z28A	Tucker Farm, M	22.09	323	⇓P		P	05 22 09.9 -0.8
	baz=22						
Y29A	Porterfield Fa	22.10	325	⇑P		P	05 22 11.0 +0.2
	baz=22						
425A	Indio Mountain	22.11	314	⇓P		P	05 22 09.0 -2.0
	baz=22						
X30A	Coker Ranch, T	22.11	327	⇓P		P	05 22 10.9 0.0
	baz=22,SNR=6.7						
OLIL	Olney	22.31	357	eP		P	05 22 13.9 +0.9
	comp=Z,38nm,1.3s						
226B	Tecolote Peak,	22.36	318	⇑P		P	05 22 12.3 -1.4
	baz=22						
325A	Bean Ranch, Si	22.45	315	⇓P		P	05 22 13.2 -1.5
	baz=22,SNR=8.8						
Y28A	McKinney Farm,	22.45	324	⇑P		P	05 22 14.1 -0.5
	baz=22						
X29A	Tulia	22.55	326	⇑P		P	05 22 15.6 -0.1
	baz=22						
Z27A	Tatum	22.59	321	⇑P		P	05 22 15.1 -1.1
	baz=23						
V31A	Spring Creek L	22.66	331	⇓P		P	05 22 17.8 +1.1
	baz=23						
MSTX	Muleshoe	22.80	323	⇓P		P	05 22 17.8 -0.5
	baz=23						
225A	Deer Hill, Car	22.81	317	⇑P		P	05 22 17.1 -1.4
	baz=23						
324A	Moseley Ranch,	22.84	314	⇑P		P	05 22 17.0 -1.9
	baz=23						
X28A	Dimmitt	22.88	325	⇑P		P	05 22 18.6 -0.5
	baz=23						
MNTX	Cornudas Mount	22.93	315	eP		P	05 22 19.1 -0.5
	comp=Z,6.9nm,1.5s						
Y27A	Causey	22.96	322	⇑P		P	05 22 19.0 -1.1
	baz=23						
W29A	Amraillo	23.04	327	⇑P		P	05 22 20.6 -0.2
	baz=23						
125A	Gardner Draw,	23.05	318	⇑P		P	05 22 19.6 -1.4
	baz=23						
224A	Cornudas Mount	23.25	316	⇓P		P	05 22 20.8 -2.3
	baz=23						
Y26A	Elida	23.38	322	⇓P		P	05 22 23.0 -1.3
	baz=23						
Z25A	Roswell	23.49	319	⇓P		P	05 22 24.4 -1.0
	baz=24						
124A	Stringfield Ra	23.59	317	⇑P		P	05 22 25.6 -1.0
	baz=24,SNR=6.0						
T31A	Randall Ranch,	23.68	333	⇓P		P	05 22 27.2 +0.1
	baz=24						
X26A	CR and CF Fran	23.81	323	⇓P		P	05 22 27.5 -1.1
	baz=24						
Y25A	Mesa, Roswell	23.91	320	⇑P		P	05 22 27.7 -1.8
	baz=24,SNR=5.2						
SFIN	Scholer Farm	23.92	359	⇓P		P	05 22 31.0 +1.6
	baz=24						
Z24A	Sheeppen Canyo	23.94	318	⇓P		P	05 22 28.5 -1.3
	baz=24						
Y24A	Capitan	24.37	319	⇑P		P	05 22 32.8 -1.1
	baz=24,SNR=5.8						
U27A	Thompson Grove	24.65	327	⇑P		P	05 22 36.0 -0.2
	baz=25						
W25A	X Bar L Ranch,	24.66	323	⇓P		P	05 22 35.3 -1.1
	baz=25,SNR=5.7						
V26A	Tequesquite Ra	24.70	325	⇑P		P	05 22 37.5 +0.8
	baz=25,SNR=8.5						
S29A	Ulysses	24.76	332	⇓P		P	05 22 38.2 +1.0
	baz=25						
Y23A	Lovelace Mesa,	24.76	319	⇓P		P	05 22 35.8 -1.6
	baz=25						
R30A	Dighton	24.94	334	⇑P		P	05 22 39.2 +0.4
	baz=25						
U26A	Atchley Ranch,	25.11	326	⇓P		P	05 22 39.7 -0.9
	baz=25,SNR=5.9						
V25A	Rancho No Teng	25.19	324	⇑P		P	05 22 40.5 -0.7
	baz=25						
W24A	Lazy 6 Ranch,	25.21	322	⇑P		P	05 22 40.2 -1.3
	baz=25						
U25A	Circle Dot Ran	25.48	325	⇑P		P	05 22 42.9 -0.9
	baz=26						
V24A	Rampart Ranch,	25.49	323	⇑P		P	05 22 43.1 -0.9
	baz=26						
R28A	Tribune	25.66	331	⇑P		P	05 22 45.5 +0.1
	baz=26						
ANMO	Albuquerque	25.68	320	eP		P	05 22 45.5 -0.2
	comp=Z,2.4nm,1.1s						
ANMO	Albuquerque	25.68	320	P		P	05 22 46.1 +0.4
	comp=Z,1.2nm,1.0s,baz=151,slow=14,SNR=4.3						
S26A	Kim	25.90	328	⇑P		P	05 22 47.3 -0.3
	baz=26						
T25A	Trinidad	26.02	326	⇓P		P	05 22 48.5 -0.4
	baz=26						
X21A	Alamocita Cree	26.20	317	⇑P		P	05 22 48.7 -1.8
	baz=26						
R25A	Fountain Ranch	26.71	328	⇑P		P	05 22 54.5 -0.4
	baz=27						
S24A	Houchin Ranch,	26.82	326	⇑P		P	05 22 55.9 -0.3
	baz=27						
Q26A	Hugo	26.93	330	⇓P		P	05 22 57.0 0.0
	baz=27						
SDCO	Great Sand Dun	27.06	326	eP		P	05 22 58.5 +0.2
	comp=Z,1.2nm,1.2s						
S22A	4UR Ranch, Cre	27.79	324	⇑P		P	05 23 03.8 -1.0
	baz=28						
R22A	Saguache, Gunn	28.09	325	⇓P		P	05 23 06.7 -0.8
	baz=28						
ISCO	Idaho Springs	28.64	328	⇑P		P	05 23 12.3 -0.1
	baz=29						
P22A	Eagle	29.08	327	⇓P		P	05 23 15.8 -0.4
	baz=29						
N20A	Spence Gulch,	30.77	327	⇑P		P	05 23 30.9 -0.3
	baz=31						
L21A	Rawlins	31.14	329	⇑P		P	05 23 34.6 +0.1
	baz=31						
PDAR	Pinedale Array	32.83	328	P		P	05 23 48.3 -1.0
PDAR	Pinedale Array	32.83	328	P		P	05 23 48.3 -1.0
	comp=Z,0.8nm,0.8s,baz=137,slow=9.4,SNR=4.9						
SNOW	Snow King Moun	33.94	328	eP		P	05 23 59.3 +0.3
	comp=Z,10nm,1.1s						
TPAW	Teton Pass	34.06	328	eP		P	05 24 00.2 +0.2
	comp=Z,7.1nm,1.1s						
SAML	Samuel	34.18	136	eP		P	05 24 01.4 +0.4
	comp=Z,2.7nm,0.8s						
E19A	Rath Farm, Rou	35.24	333	⇓P		P	05 24 10.8 +0.8
	baz=35						
J14A	Carey	35.32	325	⇑P		P	05 24 11.1 +0.3
	baz=35						
NVAR	Mina Array Bea	35.45	315	P		P	05 24 12.9 +0.8
NVAR	Mina Array Bea	35.45	315	P		P	05 24 12.9 +0.8
	comp=Z,0.7nm,0.7s,baz=123,slow=8.0,SNR=7.0						
F17A	Fitzpatrick Pl	35.67	331	⇓P		P	05 24 14.4 +0.7
	baz=36						
I14A	Mackay	35.68	326	⇓P		P	05 24 13.8 -0.1
	baz=36						
H15A	Lima	35.72	327	⇓P		P	05 24 15.0 +0.7
	baz=36						
J13A	Cove Ranch, Pi	35.73	325	⇑P		P	05 24 14.3 0.0
	baz=36						
D19A	Cripps Ranch,	35.83	334	⇑P		P	05 24 15.4 +0.3
	baz=36						
HLID	Hailey	35.97	325	⇑P		P	05 24 15.7 -0.6
	baz=36						
MCMT	McKenzie Canyo	35.97	328	eP		P	05 24 17.4 +0.8
	comp=Z,2.3nm,1.1s						
I13A	Wildhorse Cree	36.03	325	⇑P		P	05 24 17.0 0.0
	baz=36						
H14A	Leadore	36.10	327	⇓P		P	05 24 17.9 +0.4
	baz=36						
B20A	Solberg Farm,	36.49	336	⇓P		P	05 24 22.0 +1.3
	baz=36						
F15A	Butte	36.50	329	⇓P		P	05 24 21.2 +0.2
	baz=36						
D17A	Six Diamond Ra	36.61	332	⇑P		P	05 24 22.5 +0.7
	baz=37						
H12A	Diamond D Ranc	36.85	326	⇓P		P	05 24 24.1 +0.2
	baz=37						
D16A	Dana Ranch, Ca	36.91	331	⇓P		P	05 24 24.8 +0.4
	baz=37						
G12A	Big Creek, Yel	37.48	326	⇓P		P	05 24 29.2 -0.1
	baz=38						
F12A	Elk City	37.85	327	⇑P		P	05 24 32.4 +0.1
	baz=38						
A16A	West Butte Ran	38.37	333	⇓P		P	05 24 37.1 +0.5
	baz=38						
SIV	San Ignacio	40.82	141	P		P	05 24 58.3 +1.0
SIV	San Ignacio	40.82	141	P		P	05 24 58.3 +1.0
	comp=Z,1.8nm,0.8s,baz=320,slow=7.2,SNR=5.8						
SCHQ	Schefferville	41.29	17	eP		P	05 25 01.1 +0.3
	comp=Z,4.1nm,1.0s						
SCHQ	Schefferville	41.29	17	P		P	05 25 00.8 +0.1
	comp=Z,4.4nm,1.0s,baz=184,slow=2.9,SNR=4.6						
YKA	Yellowknife Ar	50.09	343	P		P	05 26 09.7 -0.5
YKA				PcP		PcP	05 27 29.6 -0.2
YKA	Yellowknife Ar	50.09	343	P		P	05 26 09.6 -0.5
	comp=Z,0.9nm,0.9s,baz=135,slow=8.1,SNR=14						
YKA				PcP		PcP	05 27 29.5 -0.2
	comp=Z,0.5nm,0.8s,baz=150,slow=4.1,SNR=5.6						
PLCA	Paso Flores	58.73	166	P		P	05 27 13.9 +0.6
PLCA	Paso Flores	58.73	166	P		P	05 27 13.9 +0.6
	comp=Z,3.4nm,0.9s,baz=332,slow=8.5,SNR=6.4						
ILAR	Eielson Array	62.82	335	P		P	05 27 40.3 -0.5
ILAR	Eielson Array	62.82	335	P		P	05 27 40.3 -0.5
	comp=Z,1.1nm,1.0s,baz=116,slow=5.5,SNR=10						
ESDC	Sonseca Array	74.12	53	P		P	05 28 52.2 +0.1
ESDC	Sonseca Array	74.12	53	P		P	05 28 52.2 +0.1
	comp=Z,0.3nm,0.3s,baz=293,slow=4.5,SNR=5.6						
TORD	Torodi Ar. Bea	84.73	78	P		P	05 29 51.2 +1.0
TORD	Torodi Ar. Bea	84.73	78	P		P	05 29 51.2 +1.0
	comp=Z,0.7nm,1.0s,baz=276,slow=5.8,SNR=3.7						
WRA	Warramunga Arr	141.05	258	PKP		PKPdf	05 36 46.3 -0.4
WRA	Warramunga Arr	141.05	258	PKP		PKPdf	05 36 46.3 -0.4
	comp=Z,1.1nm,0.9s,baz=96,slow=1.8,SNR=6.5						
ASAR	Alice Springs	141.40	252	PKP		PKPdf	05 36 46.7 -0.6
ASAR	Alice Springs	141.40	252	PKP		PKPdf	05 36 46.7 -0.6
	comp=Z,0.5nm,0.7s,baz=90,slow=1.9,SNR=4.0						
CMAR	Chiang Mai Arr	144.96	351	PKP		PKPab	05 36 52.3 -0.5
CMAR	Chiang Mai Arr	144.96	351	PKP		PKPab	05 36 52.3 -0.5
	comp=Z,1.7nm,0.8s,baz=333,slow=3.9,SNR=8.0						

NIED ***29*** *05:39:00,36˚.10N×139˚.90E,h59km,Mw4.1 Best double couple: M₀1.51000×10¹⁵ NP1:φ₀44.00000°,δ63.00000°, λ,72.00000°. NP2:φ₀259.00000°,δ32.00000°,λ,121.00000°.*

ISCJB ***29*** *05:39:37.4±0.5,36˚.06N±0˚.04×139˚.92E±0˚.05,h57km±4km, mb3.8/9,MS2.2/1,Error ellipse: s-maj=7.3km s-min=6.2km az=177.2*

JMA ***29*** *05:39:38.6±0.1,36˚.08N×139˚.89E,h47km±1km,M3.9 Broadband fault plane solution: P waves. NP1: φ₀40.00000°,δ74.00000°,λ,93.00000°. NP2:φ₀211.00000°, δ16.00000°,λ,81.00000°. Principal axes: T Plg61.0000°, Azm314.0000°; N Plg3.0000°, Azm219.0000°; P Plg29.0000°, Azm128.0000°;*

JMA Felt III J1.

IDC ***29*** *05:39:39.5±1.7,36˚.00N×139˚.85E,h61km±17km,mb3.5/9, mb1 3.8/11,mb1mx3.6/28,mbtmp3.6/11,MS2.7/2, Ms1 2.7/2,ms1mx2.3/34 Error ellipse: s-maj=20.6km s-min=8.6km az=64.0*

ISC 29 05:39:38.5±0.8,36˚.07N±0˚.04×139˚.90E±0˚.05,h49km±7km, n23,σ0°64/30,mb3.9/9,2C-4D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYT	Yasato	0.28	57	⇑P			Pn	05 39 47.3	0.0
JYT				S			Sn	05 39 53.5	-0.1
JAG	Ashikaga	0.50	314	⇓P			Pn	05 39 49.7	0.0
JAG				S			Sn	05 39 57.4	-0.3
JHU	Hanno	0.55	246	⇑P			Pn	05 39 49.9	-0.3
JHU				S			Sn	05 39 58.1	-0.6
JRY	Ryogami san	0.81	266	⇓P			Pn	05 39 53.5	-0.1
JRY				S			Sn	05 40 04.1	-0.6
JKT	Katashina	0.87	323	⇓P			Pn	05 39 54.2	-0.3
JKT				S			Sn	05 40 06.0	-0.2
JOD2	Odawara 2	1.04	219	P			Pn	05 39 57.5	+0.7
JOD2				S			Sn	05 40 11.1	+0.8
JHK	Hiroka	1.37	329	⇓P			Pn	05 40 01.4	+0.2
MJAR	Matsushiro Arr	1.44	289	P			Pn	05 40 02.4	+0.2
	65nm,0.3s,baz=89,slow=9.4,SNR=354								
MJAR				S			Sn	05 40 20.6	+0.6
	37nm,0.3s,baz=93,slow=21,SNR=12								
MAT	Matsushiro	1.45	289	P			Pn	05 40 01.9	-0.3
MAT				S			Sn	05 40 20.8	+0.8
JHJ	Hachijo jima 2	2.95	182	P			Pn	05 40 23.1	+0.2
	60nm,0.3s,baz=25,slow=5.7,SNR=13								
JHJ				S			Sn	05 40 56.2	-0.7
	57nm,0.3s,baz=265,slow=24,SNR=1.9								
KSRS	Korea Array	9.71	282	LR			LR	05 45 22.5	
	comp=Z,79nm,20.2s,baz=160,slow=35								
USRK	Ussuriysk Arra	10.12	326	P			Pn	05 42 02.8	+1.8
	0.1nm,0.3s,baz=135,slow=15,SNR=3.4								
PETK	Petropavlovsk-	21.13	31	LR			LR	05 52 14.3	
	comp=Z,11nm,19.5s,baz=103,slow=36								
ZALV	Zalesovo Beam	41.67	313	P			P	05 47 21.1	-0.8
	4.5nm,0.6s,baz=92,slow=6.7,SNR=14								
MKAR	Makanchi Array	43.60	303	P			P	05 47 37.2	-0.5
	1.2nm,0.6s,baz=88,slow=9.5,SNR=14								
ILAR	Eielson Array	50.95	32	P			P	05 48 35.0	+0.3
	0.9nm,0.7s,baz=266,slow=5.6,SNR=17								
INK	Inuvik	55.79	27	P			P	05 49 10.4	+0.4
	0.9nm,0.7s,baz=281,slow=7.5,SNR=4.7								
WRA	Warramunga Arr	55.96	186	P			P	05 49 11.2	-0.5
	0.6nm,0.5s,baz=2.5,slow=7.7,SNR=14								
ASAR	Alice Springs	59.69	186	P			P	05 49 37.7	-0.2
	0.2nm,0.5s,baz=9.6,slow=7.8,SNR=3.2								
YKA	Yellowknife Ar	65.25	30	P			P	05 50 14.6	0.0
	0.3nm,0.6s,baz=306,slow=6.7,SNR=4.9								
NB2	NORSAR Subarra	74.59	337	P			P	05 51 11.3	-0.7
	comp=Z,1.2nm,0.6s,baz=42,slow=5.9								
NOA	NORSAR Array B	74.59	337	P			P	05 51 11.1	-0.9
	comp=Z,1.7nm,1.0s,baz=45,slow=5.3,SNR=2.9								
NVAR	Mina Array Bea	76.54	52	P			P	05 51 24.5	+0.7
	comp=Z,0.6nm,0.7s,baz=305,slow=5.2,SNR=5.2								

IDC ***29*** *05:47:15.2±0.6,12˚.55N×88˚.46W,h0km,mb4.3/16, mb1 4.5/16,mb1mx4.4/26,mbtmp4.3/16,MS3.9/9, Ms1 3.8/9,ms1mx3.6/32,Error ellipse: s-maj=27.7km s-min=12.3km az=55.0*

CASC ***29*** *05:47:18.3±2.4,12˚.36N×88˚.80W,h8km±13km,MD4.3, ML4.0,mb4.6(NEIC)*

ISCJB ***29*** *05:47:20.4±0.5,12˚.40N±0˚.04×88˚.69W±0˚.05,h54km±3km, mb4.5/70,MS3.9/9,Error ellipse: s-maj=9.9km s-min=3.2km az=136.2*

BJI ***29*** *05:47:23.9,12˚.50N×88˚.60W,h66km,mB5.1/1,Ms5.3/1, Ms7 4.9/1*

NEIC ***29*** *05:47:24.0±0.9,12˚.50N×88˚.55W,h70km±9km,mb4.6/52, Error ellipse: s-maj=11.0km s-min=4.6km az=57.0*

NEIC Felt at San Salvador.

ISC 29 05:47:20.9±0.9,12˚.42N±0˚.06×88˚.70W±0˚.06,h44km±7km, n468,σ1°815/491,mb4.5/70,MS3.9/9,169C-142D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VSM	San Miguel	1.09	22	*i* P			Pn	05 47 41.2	+1.2
SNVI	San Vicente	1.20	353	*i* P			Pn	05 47 41.3	-0.1
SNVI				eS			Sn	05 47 59.6	+3.1
CNCH	Conchagua	1.20	45	eP			Pn	05 47 42.3	+0.9
LFRS	El Faro	1.25	344	eP			Pn	05 47 40.9	-1.2
LBRS	Las Brisas	1.36	346	eP			Pn	05 47 42.9	-0.6
SNET	Serv Nac Est T	1.36	338	⇑*i*P			Pn	05 47 42.3	-1.3
SNET				eS			Sn	05 48 01.6	+1.0
SNET				AML			AML	05 48 08.3	
	comp=Z,3μm,0.8s								
LFU	La Fuente	1.38	343	eP			Pn	05 47 43.3	-0.6
LFU				eS			Sn	05 48 02.5	+1.4
BOQS	Boqueron	1.43	337	eP			Pn	05 47 43.9	-0.7
SBLS	San Blas	1.68	328	⇑*i*P			Pn	05 47 46.9	-1.2
SNJE	San Jose	1.69	329	⇑*i*P			Pn	05 47 47.2	-1.1
RTR	El Retiro	1.74	328	⇑*i*P			Pn	05 47 47.9	-1.0
RBDL	Robledal	1.94	330	⇑*i*P			Pn	05 47 51.2	-0.4
MTO2	Montecristo 2	2.07	342	eP			Pn	05 47 53.5	0.0
TGUH	Tegucigalpa,Un	2.14	40	ePn			Pn	05 47 52.5	-1.7
NBG	Las Nubes	2.69	324	eP			Pn	05 48 03.2	+1.2
MRL	Marmol	2.80	340	eP			Pn	05 48 05.0	+1.5
FUG	Fuego 3	2.90	314	eP			Pn	05 48 05.1	+0.2
JAT	Jato	3.43	304	eP			Pn	05 48 11.5	-0.4
JAT				eS			Sn	05 48 55.4	+4.1
NY14	Universidad de	3.56	119	*i* P			Pn	05 48 14.3	+0.5
NY14				*i* S			Sn	05 48 57.0	+2.3
GPS2	Hotel Rinc˜‡n	3.67	116	*i* P			Pn	05 48 15.5	+0.2
LIM1	Limonal	3.79	116	*i* P			Pn	05 48 17.1	+0.2
HORNC	Hornillas	3.84	116	*i* P			Pn	05 48 18.1	+0.4
CUI	Cuipilapa	3.88	116	*i* P			Pn	05 48 18.7	+0.5
AMAS	Alto Masis	4.05	116	*i* P			Pn	05 48 20.9	+0.3
JTS	Juntasabangare	4.24	120	ePn			Pn	05 48 22.7	-0.3
FORC	Fortuna	4.40	116	eP			Pn	05 48 26.4	+1.1
CGA2	Cerro Gallo 2	4.79	119	eP			Pn	05 48 32.6	+1.9
SJS	Escuela Geolog	5.18	118	eP			Pn	05 48 39.2	+3.1
QCR	Quepos	5.35	123	eP			Pn	05 48 39.5	+1.2
BUS	Buena Vista	5.62	120	eP			Pn

comp=Z,15nm,0.9s
JCT Junction City 20.71 332 eP P 05 51 58.0 +0.4
comp=Z,62nm,0.6s
JCT Junction City 20.71 332 ⇓P P 05 51 57.8 +0.2
baz=21,SNR=34
531A Rocksprings 20.80 330 ⇑P P 05 51 58.7 +0.1
baz=21,SNR=9.0
432A Menard 21.04 333 ⇑P P 05 52 01.2 -0.1
baz=21,SNR=90
WHTX Lake Whitney 21.08 339 ⇓P P 05 52 01.7 +0.1
baz=21,SNR=36
530A J-C Ranch, Com 21.18 328 ⇓P P 05 52 03.2 +0.5
baz=21,SNR=13
431A Sonora 21.25 331 ⇑P P 05 52 03.9 +0.3
baz=21,SNR=58
332A Millersview 21.45 333 ⇓P P 05 52 06.1 +0.5
baz=22,SNR=33
628A Black Gap, Mar 21.50 324 ⇓P P 05 52 06.9 +0.7
baz=22,SNR=50
529A Stev Forest Ra 21.62 327 ⇓P P 05 52 07.7 +0.2
baz=22,SNR=14
430A Baggett Ranch, 21.65 330 ⇓P P 05 52 07.7 -0.1
baz=22,SNR=32
331A San Angelo 21.69 332 ⇑P P 05 52 08.0 -0.2
baz=22,SNR=98
627A Terlingua Ranc 21.77 323 ⇑P P 05 52 10.4 +1.3
baz=22,SNR=80
RFTA Plano 21.77 342 eP P 05 52 10.1 +1.1
232A Coleman 21.84 334 ⇓P P 05 52 09.3 -0.6
baz=22,SNR=58
TXAR Lajitas Array 21.84 323 P P 05 52 10.8 +0.9
TXAR Lajitas Array 21.84 323 P P 05 52 10.8 +0.9
comp=Z,21nm,0.7s,baz=146,slow=11,SNR=175
TXAR LR LR 06 02 37.9
comp=Z,95nm,20.6s,baz=185,slow=42
429A Davenport Ranc 21.85 328 ⇑P P 05 52 09.5 -0.4
baz=22,SNR=33
ATAH Atahualpa 21.96 152 P P 05 52 11.5 -0.1
ATAH Atahualpa 21.96 152 P P 05 52 11.5 -0.1
comp=Z,3.2nm,0.6s,baz=349,slow=5.2,SNR=3.3
ATAH LR LR 05 59 11.2
comp=Z,182nm,20.2s,baz=160,slow=33
528A Cox Ranch, San 21.96 326 ⇑P P 05 52 10.7 -0.5
baz=22
NHSC New Hope 22.02 19 eP P 05 52 13.6 +1.9
comp=Z,66nm,1.1s
330A Mertzon 22.12 331 ⇑P P 05 52 12.2 -0.7
baz=22,SNR=22
231A Bronte 22.17 333 ⇑P P 05 52 12.3 -1.1
baz=22,SNR=50
626A Big Bend Ranch 22.28 322 ⇓P P 05 52 15.0 +0.3
baz=22,SNR=20
527A Woodward Ranch 22.41 324 ⇑P P 05 52 16.0 -0.1
baz=22,SNR=16
PLAL Pickwick Lake 22.47 1 eP P 05 52 16.6 +0.1
comp=Z,11nm,0.8s
ABTX Abilene, Hawle 22.48 335 ⇓P P 05 52 15.6 -1.0
baz=22,SNR=25
230A Sterling City 22.50 331 ⇓P P 05 52 15.7 -1.1
baz=23,SNR=7.0
UALR University of 22.50 352 eP P 05 52 17.4 +0.6
comp=Z,74nm,0.8s
329A Wagon Wheel Ra 22.59 329 ⇓P P 05 52 16.8 -1.0
baz=23,SNR=18
526A Mary Lane Ranc 22.63 323 ⇓P P 05 52 18.0 -0.4
baz=23,SNR=19
427A Hayter Ranch, 22.83 326 ⇑P P 05 52 20.3 -0.2
baz=23,SNR=5.7
131A Roby 22.84 334 ⇑P P 05 52 19.8 -0.6
baz=23,SNR=14
SWET Sewanee 22.84 6 eP P 05 52 20.8 +0.4
comp=Z,11nm,0.7s
229A Bryant Ranch, 22.89 330 ⇑P P 05 52 19.9 -1.1
baz=23,SNR=7.0
328A Wristen Ranch, 22.93 328 ⇓P P 05 52 20.6 -0.7
baz=23,SNR=29
Z32A Haskell 23.01 336 ⇓P P 05 52 21.4 -0.8
baz=23,SNR=70
130A Snyder 23.02 333 ⇓P P 05 52 20.8 -1.6
baz=23,SNR=21
HBAR Harrisburg 23.11 356 eP P 05 52 23.6 +0.6
CPCT Cooper Cave 23.24 9 eP P 05 52 24.9 +0.5
Z31A Sharp Cattle R 23.29 335 ⇑P P 05 52 23.9 -1.0
baz=23,SNR=49
228A UT Block 9, Go 23.40 329 ⇓P P 05 52 24.8 -1.3
baz=24
129A Stewart Farms, 23.47 331 ⇓P P 05 52 25.6 -1.2
baz=24
GNAR Gosnell 23.48 357 eP P 05 52 27.6 +1.0
comp=Z,360nm,0.8s
TKL Tuckaleechee C 23.56 10 P P 05 52 27.7 +0.2
TKL Tuckaleechee C 23.56 10 P P 05 52 27.7 +0.2
comp=Z,26nm,0.8s,baz=191,slow=11,SNR=44
TKL LR LR 06 02 47.7
comp=Z,179nm,18.3s,baz=6.5,slow=40
KMSC Kings Mountain 23.59 15 ⇓P P 05 52 26.6 -1.2
baz=24,SNR=6.4
Y32A R-V Farms, Ver 23.61 337 ⇑P P 05 52 27.0 -1.0
baz=24,SNR=19
WVT Waverly 23.62 2 eP P 05 52 27.5 -0.6
comp=Z,6.5nm,0.6s
227A Bennet, Jal 23.67 328 ⇑P P 05 52 27.5 -1.2
baz=24
Z30A Sanderson Ranc 23.68 333 ⇑P P 05 52 27.5 -1.2
baz=24,SNR=33
425A Indio Mountain 23.68 323 ⇑P P 05 52 27.5 -1.3
baz=24,SNR=8.1
128A Castleberry Fa 23.75 330 ⇓P P 05 52 28.1 -1.4
baz=24,SNR=17
Y31A Rekieta Farm, 23.90 336 ⇑P P 05 52 30.0 -0.7
baz=24,SNR=39
Z29A Hungry Hill Ra 23.91 332 ⇑P P 05 52 29.5 -1.4
baz=24,SNR=26
WMOK Wichita Mounta 24.03 339 eP P 05 52 30.6 -1.4
comp=Z,7.7nm,0.6s
Y30A Stafford Cattl 24.09 334 ⇑P P 05 52 31.7 -0.8
baz=24,SNR=28
325A Bean Ranch, Si 24.10 324 ⇓P P 05 52 32.0 -0.8
baz=24,SNR=12
PARMO Parma 24.16 358 eP P 05 52 33.6 +0.6
226B Tecolote Peak, 24.19 326 ⇑P P 05 52 33.5 +0.1
baz=24,SNR=8.9
127A Arkansas Junct 24.23 329 ⇓P P 05 52 32.9 -1.0
baz=24
TUL1 Tulsa 24.25 346 ⇑P P 05 52 33.3 -0.7
baz=24,SNR=16
Z28A Tucker Farm, M 24.25 331 ⇑P P 05 52 33.0 -1.1
baz=24,SNR=16
X31A McDonald Ranch 24.38 337 ⇑P P 05 52 34.3 -0.7
baz=24,SNR=25
GDL2 Guadalupe Moun 24.39 326 eP P 05 52 38.4 +3.1
Y29A Porterfield Fa 24.41 333 ⇓P P 05 52 35.1 -0.3
baz=24,SNR=20
324A Moseley Ranch, 24.45 323 ⇓P P 05 52 35.7 -0.3
baz=24,SNR=20
TZTN Tazewell 24.47 10 eP P 05 52 36.4 +0.5
comp=Z,13nm,1.0s
126A Clayton Basin, 24.55 328 ⇓P P 05 52 36.2 -0.6
baz=25
X30A Coker Ranch, T 24.57 335 ⇓P P 05 52 36.8 0.0
baz=25,SNR=40
225A Deer Hill, Car 24.57 325 ⇓P P 05 52 37.0 -0.1
baz=25,SNR=14
MNTX Cornudas Mount 24.58 324 eP P 05 52 36.2 -0.8
comp=Z,9.4nm,1.1s
Z27A Tatum 24.67 330 ⇓P P 05 52 36.7 -1.2
baz=25,SNR=16
Y28A McKinney Farm, 24.70 332 ⇑P P 05 52 37.6 -0.6
baz=25,SNR=23
W31A Holland Ranch, 24.85 338 ⇑P P 05 52 38.6 -0.9
baz=25,SNR=7.0
125A Gardner Draw, 24.90 327 ⇑P P 05 52 39.9 -0.1
baz=25,SNR=9.2
X29A Tulia 24.91 334 ⇑P P 05 52 39.9 -0.2
baz=25,SNR=12
224A Cornudas Mount 24.94 324 ⇑P P 05 52 39.5 -0.9
baz=25,SNR=12
MSTX Muleshoe 25.00 331 ⇑P P 05 52 40.1 -0.7
baz=25,SNR=24
Z26A Caprock 25.02 329 ⇓P P 05 52 40.4 -0.7
baz=25,SNR=10
W30A Crocket Farms 25.09 337 ⇑P P 05 52 41.5 -0.2
baz=25
Y27A Causey 25.11 331 ⇓P P 05 52 41.1 -0.8
baz=25,SNR=20
X28A Dimmitt 25.19 333 ⇑P P 05 52 41.9 -0.7
baz=25,SNR=7.2
SIUC Southern Illin 25.20 359 eP P 05 52 42.5 +0.1

AMTX Amarillo 25.28 334 eP P 05 52 43.3 -0.1
comp=Z,44nm,0.8s
V31A Spring Creek L 25.34 338 ⇑P P 05 52 44.0 +0.1
baz=25,SNR=9.9
124A Stringfield Ra 25.37 325 ⇑P P 05 52 43.9 -0.5
baz=25,SNR=12
Z25A Roswell 25.41 327 ⇑P P 05 52 44.2 -0.5
baz=26,SNR=17
USIN University of 25.46 2 eP P 05 52 44.8 0.0
comp=Z,22nm,0.6s
Y26A Elida 25.46 330 ⇑P P 05 52 44.9 -0.2
baz=26,SNR=6.2
W29A Amraillo 25.47 335 ⇑P P 05 52 45.0 -0.1
baz=26,SNR=8.6
X27A F and S Farms, 25.71 332 ⇑P P 05 52 47.5 +0.2
baz=26,SNR=8.8
BLA Blacksburg 25.78 15 eP P 05 52 47.8 -0.1
comp=Z,9.1nm,0.9s
Z24A Sheeppen Canyo 25.80 327 ⇓P P 05 52 48.4 +0.2
baz=26,SNR=12
W28A Vega 25.82 334 ⇑P P 05 52 48.1 -0.2
baz=26,SNR=7.6
U31A Nine Bar Ranch 25.88 339 ⇑P P 05 52 48.6 -0.1
baz=26
Y25A Mesa, Roswell 25.90 328 ⇑P P 05 52 49.1 0.0
baz=26,SNR=17
X26A CR and CF Fran 25.96 331 ⇓P P 05 52 49.8 +0.1
baz=26,SNR=19
W27A Bowe Ranch, En 26.04 332 ⇓P P 05 52 50.4 +0.2
baz=26,SNR=44
V29A Stinnett 26.07 336 ⇑P P 05 52 50.2 -0.3
baz=26
OLIL Olney 26.21 1 eP P 05 52 51.8 +0.1
comp=Z,17nm,0.7s
320A Kipp Ranch, An 26.25 319 ⇑P P 05 52 52.7 +0.5
baz=26
V28A Channing 26.25 335 ⇓P P 05 52 52.1 -0.1
baz=26
Y24A Capitan 26.29 327 ⇓P P 05 52 52.7 +0.1
baz=26,SNR=10.0
U30A WK&E Inc. Balk 26.31 338 ⇑P P 05 52 52.4 -0.3
baz=26,SNR=7.6
W26A Owens Ranch, T 26.38 331 ⇓P P 05 52 53.7 +0.3
baz=26
U29A Oasis Ranch, S 26.47 337 ⇑P P 05 52 54.5 +0.3
baz=26
T31A Randall Ranch, 26.48 340 ⇑P P 05 52 53.7 -0.4
baz=26,SNR=10
V27A Dan Oppiter Fa 26.52 334 ⇑P P 05 52 54.6 0.0
baz=27
121A Cookes Peak, D 26.59 322 ⇑P P 05 52 55.7 +0.3
baz=27
220A Playas Peak, P 26.62 320 ⇑P P 05 52 56.1 +0.5
baz=27
Y23A Lovelace Mesa, 26.62 326 ⇑P P 05 52 56.2 +0.6
baz=27,SNR=13
Z22A Elephant Butte 26.63 324 ⇑P P 05 52 55.5 -0.1
baz=27
T30A Plains 26.73 339 ⇑P P 05 52 56.8 +0.4
baz=27
319A Douglas 26.76 318 ⇑P P 05 52 57.4 +0.6
baz=27
X24A Lazy V/L Ranch, 26.78 328 ⇓P P 05 52 57.4 +0.3
baz=27
U28A Mallet 26.79 335 ⇑P P 05 52 57.2 +0.2
baz=27
W25A X Bar L Ranch, 26.82 330 ⇑P P 05 52 57.8 +0.5
baz=27,SNR=13
V26A Tequesquite Ra 26.97 332 ⇓P P 05 52 58.4 -0.3
baz=27,SNR=20
U27A Thompson Grove 27.07 334 ⇓P P 05 52 59.6 0.0
baz=27,SNR=14
BNM Barren Site 27.10 326 eP P 05 53 00.9 +0.9
comp=Z,6.9nm,1.1s
T29A Hugoton 27.10 338 ⇓P P 05 52 59.8 0.0
baz=27
120A U Bar Ranch, L 27.12 321 ⇑P P 05 53 00.3 +0.2
baz=27
Y22A Socorro 27.13 325 ⇑P P 05 53 00.4 +0.2
baz=27
X23A Hourglass Bar 27.19 327 ⇑P P 05 53 00.7 -0.1
baz=27
S30A Montezuma 27.23 339 ⇑P P 05 53 00.4 -0.5
baz=27,SNR=8.9
W24A Lazy 6 Ranch, 27.28 329 ⇓P P 05 53 01.3 -0.2
baz=27,SNR=7.1
T28A Walsh 27.39 336 ⇓P P 05 53 01.8 -0.6
baz=28
V25A Rancho No Teng 27.39 331 ⇑P P 05 53 02.5 -0.1
baz=28,SNR=15
S29A Ulysses 27.45 338 ⇑P P 05 53 03.0 +0.1
baz=28,SNR=9.0
U26A Atchley Ranch, 27.45 333 ⇓P P 05 53 03.0 -0.1
baz=28,SNR=11
Z20A Nine Sixteen R 27.49 322 ⇓P P 05 53 03.3 0.0
baz=28
KSU1 Kansas State U 27.49 347 eP P 05 53 02.8 -0.4
comp=Z,26nm,1.0s
LAZ Ladron 27.57 326 eP P 05 53 05.4 +1.2
comp=Z,1.4nm,0.9s
T27A Campo 27.58 335 ⇑P P 05 53 04.2 0.0
baz=28
Y21A Point of Rocks 27.58 324 ⇓P P 05 53 04.1 -0.3
baz=28
ANMO Albuquerque 27.61 327 eP P 05 53 05.1 +0.6
comp=Z,1.9nm,0.9s
ANMO Albuquerque 27.61 327 P P 05 53 05.7 +1.2
comp=Z,1.2nm,0.7s,baz=142,slow=11,SNR=6.8
W23A Werner Place, 27.62 328 ⇑P P 05 53 04.6 0.0
baz=28
V24A Rampart Ranch, 27.62 330 ⇑P P 05 53 04.8 +0.1
baz=28,SNR=7.5
S28A Manter 27.71 337 ⇓P P 05 53 04.8 -0.4
baz=28
R30A Dighton 27.75 340 ⇑P P 05 53 05.7 +0.1
baz=28,SNR=11
U25A Circle Dot Ran 27.75 332 ⇓P P 05 53 06.1 +0.3
baz=28,SNR=11
SFIN Scholer Farm 27.89 3 ⇓P P 05 53 05.6 -1.1
baz=28,SNR=5.5
Y20A Horse Springs, 27.91 323 ⇑P P 05 53 07.1 -0.3
baz=28
X21A Alamocita Cree 27.96 325 ⇑P P 05 53 07.4 -0.4
baz=28
T26A Comanche Natio 28.04 334 ⇑P P 05 53 07.9 -0.4
baz=28,SNR=5.7
V23A Ortiz Mt. (NFS 28.09 329 ⇓P P 05 53 08.5 -0.3
baz=28
ACSO Alum Creek Sta 28.16 9 eP P 05 53 09.3 +0.1
comp=Z,19nm,0.8s
R29A Marienthal 28.17 339 ⇓P P 05 53 09.6 +0.2
baz=28
TUC Tucson 28.34 318 eP P 05 53 16.2 +5.3
comp=Z,3.4nm,0.8s
R28A Tribune 28.34 338 ⇓P P 05 53 10.6 -0.3
baz=28,SNR=12
T25A Trinidad 28.36 333 ⇑P P 05 53 11.4 +0.2
baz=28,SNR=8.1
S26A Kim 28.37 335 ⇑P P 05 53 10.9 -0.2
baz=28
U23A El Rito 28.55 329 ⇓P P 05 53 13.2 +0.3
baz=29
V22A San Miguel Ran 28.59 328 ⇓P P 05 53 14.1 +0.8
baz=29
S25A Robets Cordova 28.81 333 ⇑P P 05 53 15.6 +0.5
baz=29
U22A Llaves 28.92 329 ⇓P P 05 53 16.4 +0.1
baz=29
R26A Arlington 28.94 336 ⇑P P 05 53 16.4 +0.2
baz=29
T23A Casias Ranch, 29.03 331 ⇑P P 05 53 17.4 +0.1
baz=29
S24A Houchin Ranch, 29.14 332 ⇓P P 05 53 17.9 -0.3
baz=29
R25A Fountain Ranch 29.15 334 ⇑P P 05 53 17.9 -0.2
baz=29
KSCO Kaye Shedlock' 29.23 337 ⇓P P 05 53 18.9 0.0
baz=29,SNR=6.0
SDCO Great Sand Dun 29.36 332 eP P 05 53 21.3 +1.2
comp=Z,15nm,1.6s
U21A Nageezi 29.37 328 ⇓P P 05 53 19.9 -0.4
baz=29
P28A Saint Francis 29.41 339 ⇑P P 05 53 20.4 +0.1
baz=30,SNR=5.8
T22A Edith 29.44 329 ⇓P P 05 53 20.8 0.0
baz=30
214A Organ Pipe Nat 29.48 315 ⇑P P 05 53 20.8 -0.2
baz=30

Q26A Hugo 29.50 336 ⇑P P 05 53 20.9 -0.4
baz=30
P27A Ficken Ranch, 29.69 338 ⇑P P 05 53 23.2 +0.3
baz=30
Q25A Bedland, Calha 29.79 335 ⇑P P 05 53 24.1 +0.3
baz=30
R23A Moffat 29.87 332 ⇓P P 05 53 24.7 +0.1
baz=30,SNR=7.0
S22A 4UR Ranch, Cre 29.98 330 ⇓P P 05 53 25.5 -0.2
baz=30,SNR=11
P26A Davis Ranch, A 29.98 337 ⇑P P 05 53 25.7 +0.2
baz=30
BGNE Belgrade 30.04 346 ⇑P P 05 53 25.8 0.0
baz=30
X16A Lo Mia Camp, P 30.11 320 ⇑P P 05 53 27.5 +0.8
baz=30
N29A Votaw Ranch, W 30.17 342 ⇑P P 05 53 27.6 +0.6
baz=30
O27A Beecher Island 30.21 339 ⇓P P 05 53 27.9 +0.4
baz=30,SNR=7.8
P25A Willow Gulch B 30.26 336 ⇓P P 05 53 28.5 +0.5
baz=30
R22A Saguache, Gunn 30.33 331 ⇓P P 05 53 29.2 +0.4
baz=30
N28A Pribbeno Ranch 30.34 340 ⇓P P 05 53 28.9 +0.3
baz=30
MVCO Mesa Verde 30.40 328 ⇓P P 05 53 30.1 +0.7
baz=30
JFWS Jewell Farm 30.42 358 eP P 05 53 28.8 -0.3
comp=Z,13nm,0.6s
O26A Horse Wrangler 30.56 338 ⇑P P 05 53 31.1 +0.5
baz=31
113A Mohawk Valley, 30.61 315 ⇓P P 05 53 31.8 +0.8
baz=31
M29A Burnside Ranch 30.76 342 ⇓P P 05 53 32.8 +0.6
baz=31
N27A Anderson Farm, 30.78 339 ⇑P P 05 53 33.2 +0.7
baz=31
S20A Disappointment 30.80 329 ⇓P P 05 53 33.4 +0.5
baz=31
WUAZ Wupatki 30.81 322 eP P 05 53 34.3 +1.5
comp=Z,2.9nm,0.9s
WUAZ Wupatki 30.81 322 ⇓P P 05 53 33.4 +0.5
baz=31
Q22A Crested Butte, 30.91 332 ⇑P P 05 53 34.4 +0.5
baz=31
R20A Redvale 31.09 329 ⇓P P 05 53 36.0 +0.6
baz=31
ISCO Idaho Springs 31.10 334 eP P 05 53 36.2 +0.6
comp=Z,7.0nm,1.1s
ISCO Idaho Springs 31.10 334 ⇑P P 05 53 35.9 +0.3
baz=31
PV01 Paradox Valley 31.14 329 eP P 05 53 37.2 +1.3
comp=Z,402nm,1.3s
SMCO Snowmass 31.19 332 eP P 05 53 37.7 +1.2
comp=Z,12nm,1.1s
P22A Eagle 31.43 333 ⇑P P 05 53 39.1 +0.8
baz=32
GLA Glamis 31.51 315 ⇑P P 05 53 39.3 +0.4
baz=32
PV04 Paradox Valley 31.51 329 eP P 05 53 40.0 +1.0
S18A Hurst Farm, Bl 31.55 327 ⇑P P 05 53 39.7 +0.2
baz=32
PV10 Paradox Valley 31.57 329 eP P 05 53 39.7 +0.1
comp=Z,94nm,0.8s
O23A Lake Granby, G 31.57 334 ⇓P P 05 53 40.2 +0.6
baz=32
Y12C Blythe 31.70 316 ⇓P P 05 53 41.5 +0.9
baz=32
PDMCI Parker Dam,Lak 31.77 318 ⇑P P 05 53 42.1 +1.0
baz=32
ECSD EROS Data Cent 31.94 349 eP P 05 53 41.5 -1.1
comp=Z,9.0nm,1.0s
SWSC Sam W. Stewart 32.12 314 ⇑P P 05 53 45.1 +0.9
baz=32
N23A Red Feather La 32.15 335 ⇓P P 05 53 45.6 +0.8
baz=32
M24A Cheyenne 32.20 337 ⇓P P 05 53 45.9 +0.9
baz=32
BC3 Big Chuckawall 32.28 315 ⇑P P 05 53 46.2 +0.4
baz=32,SNR=7.8
N22A Wattenberg Ran 32.29 334 ⇑P P 05 53 45.3 -0.7
baz=32
PHWY Pilot Hill 32.30 336 eP P 05 53 47.5 +1.5
K27A Flueckinger Fa 32.38 341 ⇑P P 05 53 46.6 0.0
baz=32
MONP Monument Peak 32.53 313 ⇓P P 05 53 48.2 0.0
baz=33
O20A White River Ci 32.54 332 ⇑P P 05 53 48.6 +0.5
baz=33,SNR=11
M23A Laramie 32.55 336 ⇓P P 05 53 48.6 +0.5
baz=33
N21A Black Mountain 32.72 333 ⇑P P 05 53 50.9 +1.2
baz=33,SNR=6.4
BELC Belle Mtn. Jos 32.85 315 ⇑P P 05 53 51.0 +0.2
baz=33
LDFC Landfair 32.88 318 eP P 05 53 53.2 +2.2
comp=Z,5.9nm,0.8s
SPMN St. Paul 32.88 355 ⇑P P 05 53 50.4 -0.4
baz=33,SNR=41
SRU San Rafael 32.88 328 ⇑P P 05 53 51.3 +0.2
baz=33
PFO Pinyon Flat Ob 32.95 314 ⇓P P 05 53 52.1 +0.5
baz=33
SAML Samuel 33.07 129 eP P 05 53 52.3 -0.4
comp=Z,6.4nm,0.8s
L23A Garrett 33.09 337 ⇓P P 05 53 53.3 +0.5
baz=33,SNR=6.7
O19A Miners Draw (B 33.09 331 ⇓P P 05 53 53.2 +0.4
baz=33
BRSD Miller 33.11 346 ⇑P P 05 53 52.6 -0.2
baz=33
N20A Spence Gulch, 33.11 332 ⇓P P 05 53 54.2 +1.1
baz=33,SNR=10
P18A Preston Nutter 33.13 329 ⇑P P 05 53 54.1 +0.7
baz=33,SNR=5.1
L22A Ellis Ranch, M 33.31 336 ⇑P P 05 53 55.3 +0.5
baz=33
M21A Separation Pea 33.34 334 ⇑P P 05 53 55.8 +0.7
baz=33,SNR=7.3
CCUT Cedar City 33.36 323 eP P 05 53 56.6 +1.4
comp=Z,3.4nm,1.2s
ARUT Antelope Range 33.56 323 eP P 05 53 59.0 +2.0
comp=Z,14nm,1.2s
COWI Conover 33.57 359 eP P 05 53 55.5 -1.2
comp=Z,9.3nm,0.6s
M20A Sweetwater, Wa 33.60 333 ⇑P P 05 53 57.7 +0.3
baz=34
K23A Bowen Ranch, D 33.60 337 ⇓P P 05 53 57.5 +0.2
baz=34
L21A Rawlins 33.64 334 ⇓P P 05 53 58.1 +0.5
baz=34,SNR=9.4
K22A Casper 33.87 336 ⇓P P 05 54 00.1 +0.5
baz=34
L20A Wamsutter 34.09 333 ⇓P P 05 54 02.5 +1.0
baz=34
BFSC Mount Baldy Ra 34.13 314 ⇑P P 05 54 02.2 +0.3
baz=34
I24A Kuemmerle Ranc 34.20 339 ⇑P P 05 54 03.1 +0.7
baz=34
DAU Daniels Canyon 34.23 329 eP P 05 54 05.0 +2.1
RSSD Black Hills 34.23 340 eP P 05 54 03.5 +0.7
comp=Z,5.2nm,0.6s
J22A Midwest 34.49 337 ⇓P P 05 54 06.0 +1.0
baz=35
L19A Farson 34.62 332 ⇓P P 05 54 06.6 +0.4
baz=35
K20A Yellowstone Ra 34.62 334 ⇓P P 05 54 06.5 +0.4
baz=35
EDW2 Edwards Air Fo 34.70 315 ⇓P P 05 54 07.3 +0.5
baz=35
M17A Scullys Gap (B 34.74 330 ⇓P P 05 54 07.0 -0.2
baz=35,SNR=5.9
L18A Fontenelle, Gr 34.79 332 ⇓P P 05 54 07.6 -0.1
baz=35
J21A Lysite 34.82 336 ⇓P P 05 54 08.5 +0.7
baz=35,SNR=11
LRMC Laurel Mountai 34.83 316 ⇓P P 05 54 08.1 +0.1
baz=35
FURC Furnace Creek, 34.85 318 ⇑P P 05 54 08.2 +0.3
baz=35
I22A 9 Mile Ranch, 34.90 337 ⇓P P 05 54 09.0 +0.5
baz=35,SNR=9.8
H24A Dirks Ranch, A 34.96 340 ⇓P P 05 54 09.3 +0.3
baz=35,SNR=13
K19A Absolon Red Bu 34.97 334 ⇑P P 05 54 09.5 +0.3
baz=35
MPMC Manual Prospec 35.02 317 ⇑P P 05 54 10.2 +0.4

	baz=35							
J20A	**Shoshoni**	35.08	335	⇓P		P	05 54 10.7	+0.6
	baz=35							
I21A	**Big Trails, Te**	35.15	336	⇓P		P	05 54 11.2	+0.6
	baz=35							
R11A	**Troy Canyon, C**	35.20	322	⇑P		P	05 54 11.8	+0.5
	baz=35							
PDAR	**Pinedale Array**	35.24	333	P		P	05 54 11.3	-0.2
PDAR				PcP		PcP	05 56 43.0	+1.3
PDAR				ScP		ScP	06 00 30.5	+6.4
PDAR	**Pinedale Array**	35.24	333	P		P	05 54 11.3	-0.2
	comp=Z,1.5nm,0.7s,baz=134,slow=8.5,SNR=10							
PDAR				PcP		PcP	05 56 43.0	+1.3
	comp=Z,1.1nm,0.6s,baz=153,slow=5.0,SNR=7.0							
PDAR				ScP		ScP	06 00 30.5	+6.4
	comp=Z,0.5nm,0.8s,baz=134,slow=6.4,SNR=3.5							
HWUT	**Hardware Ranch**	35.28	330	*e*P		P	05 54 11.6	-0.3
	comp=Z,8.4nm,1.2s							
J19A	**Crowheart**	35.42	334	⇑P		P	05 54 12.8	-0.2
	baz=36,SNR=6.2							
G24A	**Alzada**	35.43	341	⇓P		P	05 54 13.3	+0.3
	baz=36,SNR=6.3							
H22A	**Clearmont**	35.45	338	⇑P		P	05 54 13.4	+0.2
	baz=36							
ISA	**Isabella**	35.46	316	⇑P		P	05 54 13.9	+0.6
	baz=36							
GRAC	**Grapevine Rang**	35.49	319	⇓P		P	05 54 14.0	+0.5
	baz=36							
EYMN	**Ely**	35.50	357	*e*P		P	05 54 11.7	-1.7
	comp=Z,19nm,0.6s							
G23A	**Biddle**	35.64	340	⇓P		P	05 54 14.7	0.0
	baz=36,SNR=5.2							
SBC	**Santa Barbara**	35.69	313	⇓P		P	05 54 15.3	+0.2
	baz=36							
H21A	**Big Horn, Sher**	35.74	337	⇑P		P	05 54 15.9	+0.3
	baz=36							
F24A	**Ekalaka**	35.90	341	⇑P		P	05 54 17.1	+0.1
	baz=36,SNR=9.2							
AHID	**Auburn Hatcher**	35.94	331	*e*P		P	05 54 17.5	0.0
	comp=Z,6.9nm,0.8s							
G22A	**Birney**	35.97	339	⇓P		P	05 54 17.6	-0.1
	baz=36							
VES	**Vestal, Richgr**	35.98	316	⇑P		P	05 54 17.3	-0.3
	baz=36							
H20A	**Greybull**	35.99	336	⇑P		P	05 54 18.1	+0.3
	baz=36,SNR=7.8							
PKM	**Peak Mountain**	35.99	314	⇓P		P	05 54 18.0	0.0
	baz=36							
I19A	**Meeteetse**	36.02	335	⇑P		P	05 54 17.8	-0.3
	baz=36							
F23A	**Volborg**	36.10	340	⇑P		P	05 54 18.6	-0.2
	baz=36,SNR=7.7							
SNOW	**Snow King Moun**	36.32	333	*e*P		P	05 54 21.0	+0.2
	comp=Z,15nm,0.8s							
LOHW	**Long Hollow**	36.37	333	*e*P		P	05 54 21.2	-0.1
	comp=Z,12nm,1.2s							
TPAW	**Teton Pass**	36.43	332	*e*P		P	05 54 21.9	+0.1
	comp=Z,22nm,1.3s							
MDND	**Maddock**	36.48	348	⇑P		P	05 54 21.6	-0.2
	baz=36,SNR=15							
E24A	**Baker**	36.50	342	⇓P		P	05 54 21.9	-0.2
	baz=37,SNR=7.5							
H19A	**Powell**	36.53	335	⇓P		P	05 54 22.5	0.0
	baz=37							
G20A	**Bridger**	36.69	337	⇓P		P	05 54 23.6	-0.1
	baz=37							
IMW	**Indian Meadow**	36.75	333	*e*P		P	05 54 26.5	+2.0
	comp=Z,9.7nm,1.0s							
E23A	**Ismay**	36.76	341	⇓P		P	05 54 24.0	-0.3
	baz=37,SNR=12							
H18A	**Shoshone NF, C**	36.82	335	⇓P		P	05 54 25.1	+0.1
	baz=37							
NV11	**Mina Array Sit**	36.84	320	*e*P		P	05 54 26.5	+1.3
E22A	**Miles City**	36.91	340	⇑P		P	05 54 26.2	+0.6
	baz=37							
NVAR	**Mina Array Bea**	36.93	320	P		P	05 54 27.8	+1.7
NVAR				PcP		PcP	05 56 48.9	+2.0
NVAR				ScP		ScP	06 00 36.1	+5.8
NVAR	**Mina Array Bea**	36.93	320	P		P	05 54 27.8	+1.7
	comp=Z,2.4nm,0.7s,baz=129,slow=7.1,SNR=24							
NVAR				PcP		PcP	05 56 48.9	+2.0
	comp=Z,1.7nm,0.6s,baz=145,slow=2.2,SNR=9.9							
NVAR				ScP		ScP	06 00 36.2	+5.8
	comp=Z,0.6nm,0.6s,baz=130,slow=3.6,SNR=5.9							
H17A	**Grant Village**	36.98	334	⇑P		P	05 54 26.3	-0.2
	baz=37							
D24A	**Glendive**	37.00	342	⇓P		P	05 54 26.4	+0.1
	baz=37,SNR=5.2							
RLMT	**Red Lodge**	37.02	336	*e*P		P	05 54 26.8	+0.1
	comp=Z,4.7nm,0.9s							
G18A	**Lazy EL Ranch,**	37.30	336	⇓P		P	05 54 28.6	-0.4
	baz=37							
D23A	**Lindsay**	37.32	341	⇓P		P	05 54 29.3	+0.2
	baz=37,SNR=6.1							
E21A	**Keefer Ranch,**	37.39	339	⇑P		P	05 54 29.5	-0.2
	baz=38							
F19A	**Roth Farm, Mol**	37.50	337	⇑P		P	05 54 30.4	-0.2
	baz=38,SNR=6.9							
H16A	**Russell Place,**	37.52	333	⇓P		P	05 54 30.1	-0.9
	baz=38							
J14A	**Carey**	37.52	330	⇑P		P	05 54 30.7	-0.2
	baz=38,SNR=7.6							
D22A	**Cohagen**	37.62	340	⇑P		P	05 54 31.6	+0.1
	baz=38,SNR=15							
GCMT	**Greycliff**	37.73	336	*e*P		P	05 54 31.9	-0.8
	comp=Z,2.0nm,0.6s							
E20A	**Meyer Farm, Mu**	37.74	338	⇓P		P	05 54 32.8	+0.2
	baz=38,SNR=12							
G17A	**Pierce Place,**	37.79	334	⇑P		P	05 54 33.0	-0.2
	baz=38							
D21A	**La Casta Ranch**	37.81	340	⇓P		P	05 54 33.0	-0.2
	baz=38							
F18A	**Big Timber**	37.84	336	⇓P		P	05 54 33.3	-0.2
	baz=38,SNR=6.4							
C23A	**Lambert**	37.88	342	⇑P		P	05 54 33.7	0.0
	baz=38,SNR=8.2							
J13A	**Cove Ranch, Pi**	37.90	329	⇑P		P	05 54 33.6	-0.4
	baz=38							
I14A	**Mackay**	37.94	331	⇓P		P	05 54 34.3	-0.1
	baz=38,SNR=5.9							
E19A	**Rath Farm, Rou**	37.94	337	⇓P		P	05 54 34.0	-0.3
	baz=38							
C22A	**Vida**	38.05	341	⇓P		P	05 54 35.5	+0.3
	baz=38,SNR=11							
H15A	**Lima**	38.08	332	⇓P		P	05 54 36.0	+0.4
	baz=38,SNR=6.8							
HLID	**Hailey**	38.14	329	*e*P		P	05 54 36.6	+0.5
	comp=Z,1.2nm,0.8s							
HLID	**Hailey**	38.14	329	⇓P		P	05 54 36.1	0.0
	baz=38							
G16A	**Moss Hill, Enn**	38.17	333	⇑P		P	05 54 36.4	0.0
	baz=38							
ULM	**Lac du Bonnet**	38.18	353	P		P	05 54 35.0	-1.2
ULM	**Lac du Bonnet**	38.18	353	P		P	05 54 35.0	-1.2
	comp=Z,24nm,1.0s,baz=162,slow=9.2,SNR=7.3							
ULM				LR		LR	06 11 44.7	
	comp=Z,156nm,21.0s,baz=231,slow=39							
DGMT	**Dagmar**	38.19	343	*e*P		P	05 54 36.5	+0.2
	comp=Z,24nm,0.7s							
DGMT	**Dagmar**	38.19	343	⇑P		P	05 54 36.8	+0.5
	baz=38,SNR=9.1							
F17A	**Fitzpatrick Pl**	38.23	335	⇓P		P	05 54 37.0	+0.2
	baz=38							
D20A	**Manuel Ranch,**	38.24	338	⇑P		P	05 54 37.2	+0.4
	baz=38,SNR=10							
I13A	**Wildhorse Cree**	38.25	330	⇑P		P	05 54 36.9	-0.2
	baz=38							
MCMT	**McKenzie Canyo**	38.33	332	*e*P		P	05 54 39.0	+1.2
	comp=Z,4.0nm,0.8s							
H14A	**Leadore**	38.41	331	⇓P		P	05 54 38.6	+0.1
	baz=38							
B23A	**Brockton**	38.41	343	⇑P		P	05 54 38.4	+0.2
	baz=38,SNR=11							
BOZ	**Bozeman (W)**	38.43	334	*e*P		P	05 54 38.4	-0.1
	comp=Z,11nm,1.4s							
G15A	**Dillon**	38.43	333	⇑P		P	05 54 38.5	-0.1
	baz=38							
E18A	**Harlowton**	38.47	336	⇓P		P	05 54 38.8	0.0
	baz=38							
C21A	**Desert Coulee**	38.51	340	⇑P		P	05 54 39.2	+0.2
	baz=39,SNR=6.9							
F16A	**Kennard Place,**	38.53	334	⇑P		P	05 54 39.0	-0.4
	baz=39							
A24A	**Westby**	38.55	344	⇓P		P	05 54 39.9	+0.6
	baz=39,SNR=12							
D19A	**Cripps Ranch,**	38.57	338	⇓P		P	05 54 39.7	+0.2
	baz=39							
B22A	**Reddig Ranch S**	38.57	341	⇑P		P	05 54 39.9	+0.3
	baz=39							
DLMT	**Dillon**	38.63	333	*e*P		P	05 54 40.9	+0.6
	comp=Z,10nm,1.4s							
I12A	**Atlanta**	38.67	329	⇓P		P	05 54 40.3	-0.3
	baz=39							
C20A	**Veseth Ranch,**	38.72	339	⇑P		P	05 54 40.9	+0.1
	baz=39							
E17A	**Martinsdale**	38.76	335	⇑P		P	05 54 41.2	-0.1
	baz=39							
LRM	**Limekiln Ridge**	38.92	333	*e*P		P	05 54 42.7	-0.1
	comp=Z,28nm,0.7s							
D18A	**Linhart Farms,**	38.94	337	⇑P		P	05 54 42.6	-0.1
	baz=39							
H12A	**Diamond D Ranc**	39.08	330	⇑P		P	05 54 44.0	0.0
	baz=39							
C19A	**Slack Wire Ran**	39.11	338	⇓P		P	05 54 44.1	0.0
	baz=39,SNR=12							
A22A	**Carney Farms,**	39.16	342	⇑P		P	05 54 44.6	+0.2
	baz=39							
G13A	**Cobalt**	39.18	331	⇓P		P	05 54 44.8	0.0
	baz=39							
D17A	**Six Diamond Ra**	39.25	336	⇓P		P	05 54 45.4	+0.1
	baz=39							
SIV	**San Ignacio**	39.29	135	P		P	05 54 46.1	+0.2
SIV	**San Ignacio**	39.29	135	P		P	05 54 46.1	+0.2
	comp=Z,11nm,0.8s,baz=318,slow=8.8,SNR=37							
B20A	**Solberg Farm,**	39.35	340	⇑P		P	05 54 46.1	0.0
	baz=39,SNR=9.1							
A21A	**Bergtoll Ranch**	39.47	341	⇑P		P	05 54 47.2	+0.2
	baz=40							
E15A	**Deer Lodge**	39.48	334	⇓P		P	05 54 47.2	-0.1
	baz=40							
D16A	**Dana Ranch, Ca**	39.50	335	⇓P		P	05 54 47.5	+0.1
	baz=40							
EGMT	**Eagleton**	39.61	338	*e*P		P	05 54 48.2	-0.1
	comp=Z,9.7nm,0.8s							
EGMT	**Eagleton**	39.61	338	⇑P		P	05 54 48.3	0.0
	baz=40,SNR=11							
WVOR	**Wild Horse Val**	39.62	325	*e*P		P	05 54 48.6	+0.2
	comp=Z,1.6nm,0.6s							
C17A	**Wharram Farm,**	39.67	337	⇑P		P	05 54 48.9	+0.1
	baz=40							
B19A	**Brinkman Farms**	39.68	339	⇓P		P	05 54 48.9	0.0
	baz=40,SNR=11							
A20A	**Cobblestone Ra**	39.70	340	⇑P		P	05 54 48.9	-0.1
	baz=40							
G12A	**Big Creek, Yel**	39.73	330	⇑P		P	05 54 49.0	-0.4
	baz=40							
F13A	**Darby**	39.74	332	⇓P		P	05 54 49.3	-0.2
	baz=40							
E14A	**Clinton**	39.84	333	⇑P		P	05 54 49.7	-0.6
	baz=40							
D15A	**Lincoln**	39.91	334	⇑P		P	05 54 50.3	-0.6
	baz=40							
B18A	**Beardsley Farm**	39.93	338	⇑P		P	05 54 51.1	+0.1
	baz=40,SNR=6.7							
A19A	**Klindworth Far**	40.02	339	⇑P		P	05 54 51.4	-0.2
	baz=40							
CHMT	**Chamberlain Mo**	40.12	334	*e*P		P	05 54 50.9	-1.8
	comp=Z,2.2nm,1.0s							
F12A	**Elk City**	40.15	331	⇑P		P	05 54 52.4	-0.5
	baz=40							
E13A	**Victor**	40.17	333	⇓P		P	05 54 52.7	-0.3
	baz=40							
C16A	**Fuhringer Ranc**	40.20	336	⇑P		P	05 54 52.8	-0.4
	baz=40							
B17A	**L&G Farms, Che**	40.23	337	⇑P		P	05 54 53.0	-0.4
	baz=40							
MSO	**Missoula**	40.36	333	*e*P		P	05 54 54.3	-0.2
	comp=Z,4.4nm,1.3s							
MSO	**Missoula**	40.36	333	⇑P		P	05 54 54.2	-0.3
	baz=40							
D14A	**Greenough**	40.36	334	⇑P		P	05 54 54.4	-0.2
	baz=40							
A18A	**Metzger Ranch,**	40.40	338	⇓P		P	05 54 54.8	0.0
	baz=40							
C15A	**Salmond Ranch,**	40.52	335	⇓P		P	05 54 55.3	-0.6
	baz=41							
A17A	**Triple J Farms**	40.73	338	⇑P		P	05 54 57.3	-0.3
	baz=41,SNR=13							
D13A	**Huson**	40.79	333	⇑P		P	05 54 57.6	-0.4
	baz=41							
B15A	**Bradely Ranch,**	40.93	336	⇓P		P	05 54 58.7	-0.6
	baz=41							
A16A	**West Butte Ran**	41.07	337	⇓P		P	05 55 00.2	-0.2
	baz=41							
A15A	**Johnson Ranch,**	41.53	336	⇑P		P	05 55 04.2	+0.1
	baz=42							
YBH	**Yreka Blue Hor**	41.60	321	P		P	05 55 04.0	-0.8
YBH	**Yreka Blue Hor**	41.60	321	P		P	05 55 04.1	-0.8
	comp=Z,1.9nm,0.6s,baz=128,slow=5.0,SNR=4.5							
A14A	**Quine T Ranch**	41.80	336	⇓P		P	05 55 05.8	-0.6
	baz=42,SNR=10							
FFC	**Flin Flon**	43.48	349	*e*P		P	05 55 19.3	-0.5
	comp=Z,12nm,0.9s							
SCHQ	**Schefferville**	45.67	18	*e*P		P	05 55 35.8	-1.4
	comp=Z,14nm,0.7s							
SCHQ	**Schefferville**	45.67	18	P		P	05 55 36.0	-1.2
	comp=Z,15nm,0.7s,baz=218,slow=6.7,SNR=46							
SCHQ				LR		LR	06 15 48.2	
	comp=Z,296nm,18.4s,baz=22,slow=38							
CFAA	**Coronel Fontan**	47.97	156	P		P	05 55 55.4	-0.2
CFAA	**Coronel Fontan**	47.97	156	P		P	05 55 55.4	-0.2
	comp=Z,0.3nm,0.8s,baz=328,slow=4.9,SNR=2.2							
BDFB	**Brasilia**	48.97	124	P		P	05 56 03.2	-0.3
BDFB	**Brasilia**	48.97	124	P		P	05 56 03.2	-0.3
	comp=Z,2.8nm,0.7s,baz=302,slow=12,SNR=5.5							
BDFB				LR		LR	06 18 30.2	
	comp=Z,179nm,18.6s,baz=149,slow=38							
YKA	**Yellowknife Ar**	53.33	345	P		P	05 56 34.5	-0.9
YKA				PcP		PcP	05 57 43.3	+0.8
YKA				ScP		ScP	06 01 42.0	+5.2
YKA	**Yellowknife Ar**	53.33	345	P		P	05 56 34.5	-0.9
	comp=Z,3.5nm,0.9s,baz=140,slow=7.7,SNR=55							
YKA				PcP		PcP	05 57 43.3	+0.8
	comp=Z,0.7nm,0.5s,baz=145,slow=4.0,SNR=8.7							
YKA				ScP		ScP	06 01 42.0	+5.2
	comp=Z,0.6nm,0.9s,baz=144,slow=4.0,SNR=9.5							
YKW3	**Yellowknife Ar**	53.39	345	*e*P		P	05 56 34.7	-1.2
DLBC	**Dease Lake**	55.42	335	*e*P		P	05 56 51.2	+0.3
PLCA	**Paso Flores**	55.49	163	LR		LR	06 14 59.2	
	comp=Z,100nm,19.9s,baz=345,slow=30							
RCBR	**Riachuelo**	55.52	106	P		P	05 56 52.5	+0.3
RCBR	**Riachuelo**	55.52	106	P		P	05 56 52.5	+0.3
	comp=Z,9.0nm,0.8s,baz=281,slow=6.8,SNR=5.2							
ILAR	**Eielson Array**	65.56	336	P		P	05 57 59.2	-0.6
ILAR				PP		PP	06 00 24.6	+0.3
ILAR	**Eielson Array**	65.56	336	P		P	05 57 59.2	-0.6
	comp=Z,1.2nm,1.0s,baz=128,slow=4.3,SNR=12							
ILAR				PP		PP	06 00 24.6	+0.3
	comp=Z,0.6nm,0.9s,baz=112,slow=7.2,SNR=5.1							
SUMG	**Summit**	66.92	15	*e*P		P	05 58 09.2	+0.3
	comp=Z,14nm,1.4s							
ESDC	**Sonseca Array**	78.17	52	P		P	05 59 14.3	-1.7
ESDC	**Sonseca Array**	78.17	52	P		P	05 59 14.3	-1.7
	comp=Z,0.2nm,0.3s,baz=270,slow=6.4,SNR=4.6							
ESDC				LR		LR	06 30 40.1	
	comp=Z,72nm,18.1s,baz=325,slow=33							
TORD	**Torodi Ar. Bea**	87.61	77	P		P	06 00 03.4	-1.9
TORD	**Torodi Ar. Bea**	87.61	77	P		P	06 00 03.4	-1.9
	comp=Z,0.3nm,0.6s,baz=289,slow=2.8,SNR=3.3							
SONM	**Songino Array**	118.53	348	PKP		PKPdf	06 06 05.4	+1.1
SONM	**Songino Array**	118.53	348	PKP		PKPdf	06 06 05.4	+1.1
	comp=Z,0.8nm,0.6s,baz=17,slow=1.5,SNR=2.5							
KSRS	**Korea Array**	119.64	327	PKP		PKPdf	06 06 07.2	+0.7
	comp=Z,1.9nm,0.8s,baz=100,slow=0.7,SNR=5.0							
KSAR	**Wonju Array Be**	119.67	327	PKP		PKPdf	06 06 07.2	+0.6
MKAR	**Makanchi Array**	120.51	7	PKP		PKPdf	06 06 07.7	-0.3
MKAR	**Makanchi Array**	120.51	7	PKP		PKPdf	06 06 07.7	-0.3
	comp=Z,0.2nm,0.5s,baz=345,slow=2.1,SNR=3.5							
HHC	**Hu-ho-hao-te**	123.78	342	*e*PKP		PKPdf	06 06 10.5	-4.1
HHC				PP		PP	06 07 57.5	+1.1
HHC				PKS		PKSdf	06 09 45.8	-5.5
HHC				SKS		SKSdf	06 13 16.5	-6.8
HHC				SKKS		SKKSac	06 14 46.0	-7.0
HHC				SS		SS	06 24 39.3	-2.0
HHC				AMB		AMB		
	comp=Z,120nm,7.4s							
HHC				LR		LR		
	comp=N,290nm,21.3s							
HHC				LR		LR		
	comp=E,280nm,20.6s							
HHC				LR		LR		
	comp=Z,270nm,20.6s							
WMQ	**Urumqi**	123.94	3	*e*PKP		PKPdf	06 06 14.3	-0.4
GTA	**Gaotai**	127.83	352	*e*PKP		PKPdf	06 06 24.8	+2.4
LZH	**Lanzhou**	130.33	347	*e*PKP		PKPdf	06 06 27.5	+0.2

CD2	**Chengdu**	135.29	345	PKP		PKPdf	06 06 35.5	-1.1
WRA	**Warramunga Arr**	138.09	254	PKP		PKPdf	06 06 40.8	-1.2
WRA	**Warramunga Arr**	138.09	254	PKP		PKPdf	06 06 40.8	-1.2
	comp=Z,1.2nm,1.0s,baz=87,slow=1.9,SNR=4.6							
ASAR	**Alice Springs**	138.12	248	PKP		PKPdf	06 06 42.4	+0.4
ASAR	**Alice Springs**	138.12	248	PKP		PKPdf	06 06 42.4	+0.4
	comp=Z,0.4nm,0.6s,baz=94,slow=2.8,SNR=3.7							
GYA	**Guiyang**	138.57	339	*e*Pdif		Pdif	06 03 50.5	-3.3
GYA				PKP		PKPdf	06 06 40.3	-2.6
GYA				PP		PP	06 09 35.5	+3.4
FITZ	**Fitzroy Crossi**	146.43	256	PKPbc		PKPab	06 06 58.7	-0.4
FITZ	**Fitzroy Crossi**	146.43	256	PKPbc		PKPab	06 06 58.7	-0.4
	comp=Z,2.6nm,0.8s,baz=108,slow=3.2,SNR=6.9							
CHTO	**Chiang Mai**	148.07	346	*e*PKPbc		PKPbc	06 07 02.6	-0.1
CMAR	**Chiang Mai Arr**	148.41	346	PKP		PKPdf	06 07 00.3	+0.1
CMAR				PKPbc		PKiKP	06 07 05.0	-0.3
CMAR	**Chiang Mai Arr**	148.41	346	PKP		PKPdf	06 07 00.3	+0.1
	comp=Z,7.9nm,0.7s,baz=318,slow=1.2,SNR=11							
CMAR				PKPbc		PKiKP	06 07 05.0	-0.3
	comp=Z,9.6nm,0.7s,baz=339,slow=3.5,SNR=28							

MEX 29 05:54:01.5±0.7, 15°.62N×93°.59W, h85^{km}±8^{km}, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCIG		**0.37**	**77**	*e*P			Pn	05 54 12.9	-1.9
PCIG				*e*S			Sn	05 54 23.1	-1.5
TGIG		**1.23**	**21**	*i* P			Pn	05 54 22.5	-1.3
TGIG				*i* S			Sn	05 54 38.5	-2.0
THIG		**1.47**	**119**	*i* P			Pn	05 54 25.8	-0.8
THIG				*i* S			Sn	05 54 43.6	-2.0
CCIG	**Comitan**	**1.55**	**65**	*e*P			Pn	05 54 26.3	-1.6
CCIG				*e*S			Sn	05 54 47.1	-0.7
HUIG	**Huatulco**	**2.43**	**274**	*i* P			Pn	05 54 38.7	-0.6
HUIG				*e*S			Sn	05 55 06.9	-1.2

*ISCJB **29** 06:09:02.0±0.4, 38°.07N±0°.03×23°.47E±0°.03, h13^{km}±4^{km}, Error ellipse: s-maj=5.3km s-min=3.9km az=32.9*
*THE **29** 06:09:01.8, 38°.09N×23°.49E, h14^{km}±1^{km}, ML2.0/4, Error ellipse: s-maj=1.4km s-min=0.6km az=218.0*
*CSEM **29** 06:09:01.6±0.2, 38°.08N×23°.47E, h18^{km}±2^{km}, MD2.6, Error ellipse: s-maj=4.0km s-min=3.8km az=36.0*
*ATH **29** 06:09:03.9, 37°.77N×23°.78E, h6^{km}, MD2.6/5, ML2.1*

ISC 29 06:09:01.7±0.9, 38°.09N±0°.02×23°.48E±0°.02, h15^{km}±8^{km}, n25, σ0^{s}.950/45, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VIL2	**Platees**	**0.21**	**306**	P			**Pg**	06 09 06.6	**+0.1**
VIL2				S			**Sg**	06 09 10.0	**+0.2**
ATH	**Athens Observa**	**0.22**	**122**	*e*PG			**Pb**	06 09 07.7	**+0.3**
ATH				*e*SG			**Sb**	06 09 10.9	**-0.3**
ATH	**Athens Observa**	**0.22**	**122**	*e*Pg			**Pb**	06 09 07.7	**+0.3**
ATH				*e*Sg			**Sb**	06 09 10.9	**-0.3**
ATHU	**Athens Univers**	**0.27**	**117**	P			**Pg**	06 09 07.4	**0.0**
ATHU				S			**Sg**	06 09 10.8	**-0.5**
ATHU	**Athens Univers**	**0.27**	**117**	P			**Pg**	06 09 07.4	**0.0**
ATHU				S			**Sg**	06 09 10.8	**-0.5**
PTL	**Penteli**	**0.30**	**97**	*e*PG			**Pb**	06 09 09.3	**+0.4**
PTL	**Penteli**	**0.30**	**97**	*e*Pg			**Pb**	06 09 09.3	**+0.4**
NAIG	**Nisos Aigina**	**0.33**	**179**	*e*PG			**Pg**	06 09 08.3	**-0.2**
NAIG	**Nisos Aigina**	**0.33**	**179**	*e*Pg			**Pg**	06 09 08.3	**-0.2**
LTK	**Loutraki**	**0.41**	**261**	P			**Pg**	06 09 10.3	**+0.2**
LTK				S			**Sg**	06 09 16.4	**+0.7**
LTK	**Loutraki**	**0.41**	**261**	P			**Pg**	06 09 10.3	**+0.2**
LTK				S			**Sg**	06 09 16.4	**+0.7**
DID	**Didima**	**0.61**	**199**	P			**Pg**	06 09 13.4	**-0.4**
DID				S			**Sb**	06 09 22.9	**+0.2**
DID	**Didima**	**0.61**	**199**	*e*PB			**Pg**	06 09 13.4	**-0.4**
DID				*e*SB			**Sg**	06 09 21.0	**-0.9**
DID	**Didima**	**0.61**	**199**	P			**Pg**	06 09 13.4	**-0.4**
DID				*e*Sb			**Sg**	06 09 21.0	**-0.9**
DID				S			**Sb**	06 09 22.9	**+0.2**
MRKA	**Markates**	**0.62**	**7**	P			**Pg**	06 09 13.7	**-0.3**
MRKA				S			**Sb**	06 09 23.6	**+0.7**
MRKA	**Markates**	**0.62**	**7**	P			**Pg**	06 09 13.7	**-0.3**
MRKA				S			**Sb**	06 09 23.6	**+0.7**
LKR	**Lokris**	**0.68**	**326**	P			**Pg**	06 09 14.3

DZM Mont Dzumac 5.32 201 Pn **Pn 06 21 33.5 -0.7**
53nm,0.3s,baz=51,slow=16,SNR=160
DZM Sn **Sn 06 22 36.1 +1.4**
30nm,0.3s,baz=311,slow=23,SNR=3.0
DZM LR LR 06 23 04.0
comp=Z,23μm,20.6s,baz=335,slow=32
NOUC Port Laguerre 5.40 202 *e*P **Pn 06 21 34.1 -1.1**
NOUC *e*S **Sn 06 22 38.5 +2.0**
NOUC AMP 06 22 41.6
comp=Z,94nm,0.0s
MVNO Noumea 5.51 200 *e*P **Pn 06 21 36.8 +0.1**
MSVF Nonsavu 9.15 95 *e*P **Pn 06 22 28.0 +1.2**
MSVF Nonsavu 9.15 95 *e*Pn **Pn 06 22 28.0 +1.2**
MSVF Nonsavu 9.15 95 Pn **Pn 06 22 28.1 +1.2**
comp=Z,671nm,1.3s,SNR=9.3
HNR Honiara 11.26 311 Pn **Pn 06 22 56.7 +1.0**
HNR Honiara 11.26 311 Pn **Pn 06 22 56.7 +1.0**
comp=Z,10nm,0.3s,baz=255,slow=4.8,SNR=5.6
NFK Norfolk Island 11.91 182 P **Pn 06 23 07.2 +2.6**
baz=12,SNR=5.4
FUNA Funafuti 13.46 52 *e*Pn **Pn 06 23 27.9 +2.1**
RAO Raoul Island 17.39 137 LR LR 06 29 29.3
comp=Z,10μm,18.6s,baz=129,slow=32
EIDS Eidsvold 18.18 240 *e*P **P 06 24 28.3 +1.1**
comp=Z,178nm,1.5s
EIDS Eidsvold 18.18 240 P **P 06 24 29.1 +2.0**
baz=18,SNR=13
OUZ Omahuta 18.63 167 *e*P **Pn 06 24 32.7 +0.3**
comp=Z,551nm,2.2s
TARA Tarawa 18.84 14 *e*P **P 06 24 34.0 -0.3**
comp=Z,532nm,1.6s
AFI Afiamalu 19.28 83 *e*P **Pn 06 24 42.4 +1.9**
comp=Z,82nm,1.1s
AFI Afiamalu 19.28 83 P **Pn 06 24 42.1 +1.6**
comp=Z,0.6nm,0.3s,baz=288,slow=18,SNR=4.2
AFI LR LR 06 30 36.8
comp=Z,3μm,19.1s,baz=83,slow=32
ARMA Armidale 20.32 226 *e*P Pn 06 24 52.3 -0.5
comp=Z,30nm,0.8s
ARMA Armidale 20.32 226 P Pn 06 24 52.8 0.0
baz=20,SNR=10
RMQ Roma 20.55 240 P Pn 06 24 55.0 -0.3
baz=20,SNR=38
CTA Charters Tower 21.28 258 P **P 06 25 01.9 +0.9**
CTA Charters Tower 21.28 258 P **P 06 25 01.9 +0.9**
comp=Z,22nm,0.6s,baz=87,slow=13,SNR=26
CTAO Charters Tower 21.28 258 *e*P **P 06 25 02.3 +1.3**
CTAO pmax pmax
comp=Z,108nm,1.2s
CTAO MLR MLR
comp=Z,6μm,20.0s
CTAO Charters Tower 21.28 258 *e*P **P 06 25 02.3 +1.3**
comp=Z,108nm,1.2s
CTAO LR LR
comp=Z,6μm,20.0s
PMG Port Moresby 22.10 287 *e*P **P 06 25 10.8 +1.0**
comp=Z,546nm,2.1s
PMG Port Moresby 22.10 287 P **P 06 25 14.5 +4.7**
comp=Z,85nm,2.6s,comp=Z,3μm
PMG Port Moresby 22.10 287 P **P 06 25 09.9 +0.1**
comp=Z,42nm,1.0s,baz=113,slow=9.8,SNR=7.7
PMG LR LR 06 32 41.1
comp=Z,18μm,19.6s,baz=104,slow=34
URZ Urewera 22.41 162 *e*P **P 06 25 14.7 +1.7**
comp=Z,112nm,1.3s
URZ Urewera 22.41 162 P **P 06 25 13.6 +0.6**
comp=Z,34nm,0.8s,baz=22,slow=7.7,SNR=17
URZ LR LR 06 31 57.8
comp=Z,11μm,22.0s,baz=342,slow=31
MTSU Mount Surprise 23.06 264 P **P 06 25 20.4 +0.4**
baz=23,SNR=23
QLP Quilpie 24.38 243 P **P 06 25 32.8 +0.3**
baz=24,SNR=32
COEN Coen 24.58 274 *e*P **P 06 25 35.7 +1.3**
comp=Z,234nm,1.0s
COEN Coen 24.58 274 P **P 06 25 37.0 +2.5**
baz=24,SNR=5.8
SNZO South Karori 24.73 169 *e*P **P 06 25 36.0 +0.5**
comp=Z,81nm,1.1s
SNZO LR LR
comp=Z,16μm,20.0s
YNG Young 24.85 223 P **P 06 25 39.3 +2.5**
baz=25,SNR=4.7
CNB Canberra Magne 24.90 220 P **P 06 25 38.7 +1.5**
baz=25,SNR=7.0
CAN Canberra 25.13 220 *e*P **P 06 25 41.0 +1.7**
CAN pmax pmax
comp=Z,76nm,1.4s
CAN MLR MLR
comp=Z,12μm,20.0s
CAN Canberra 25.13 220 *e*P **P 06 25 41.0 +1.7**
comp=Z,76nm,1.4s
CAN LR LR
comp=Z,12μm,20.0s
CMSA Cobar Meteorol 25.20 231 P **P 06 25 40.0 +0.1**
baz=25,SNR=22
KHZ Kahutara 25.62 171 *e*P **P 06 25 43.8 +0.3**
comp=Z,37nm,0.7s
PATS Pohnpei 25.81 336 P **P 06 25 49.4 +3.9**
baz=26,SNR=3.7
RPZ Rata Peaks 26.64 176 *e*P **P 06 25 53.6 +0.8**
comp=Z,32nm,0.8s
RPZ Rata Peaks 26.64 176 P **P 06 25 52.6 -0.2**
comp=Z,23nm,0.7s,baz=316,slow=0.6,SNR=17
RPZ LR LR 06 35 39.7
comp=Z,8μm,18.2s,baz=347,slow=35
QIS Mount Isa 27.54 258 P **P 06 26 02.9 +1.8**
baz=27,SNR=11
STKA Stephens Creek 28.46 234 *e*P **P 06 26 08.7 -0.6**
comp=Z,9.7nm,1.1s
STKA Stephens Creek 28.46 234 P **P 06 26 09.0 -0.2**
comp=Z,24nm,0.7s,baz=59,slow=7.8,SNR=44
STKA LR LR 06 37 05.3
comp=Z,6μm,18.4s,baz=58,slow=36
STKA Stephens Creek 28.46 234 P **P 06 26 09.2 -0.1**
baz=28,SNR=17
RAR Rarotonga 30.24 103 LR LR 06 35 46.1
comp=Z,5μm,21.7s,baz=45,slow=31
ARPS Mount Arapiles 30.64 225 P **P 06 26 30.6 +2.1**
baz=31,SNR=5.2
JAY Jayapura 30.89 295 P **P 06 26 33.2 +2.1**
baz=31,SNR=5.2
TAU Tasmania Unive 31.42 211 PFAKE 06 26 50.0 +15
TAU LR LR
comp=Z,10μm,20.0s
WRAB Tennant Creek 32.46 260 *e*P **P 06 26 43.2 -1.6**
WRAB pmax pmax
comp=Z,56nm,1.4s
WRAB MLR MLR
comp=Z,6μm,19.0s
WRAB Tennant Creek 32.46 260 *e*P **P 06 26 43.2 -1.6**
comp=Z,56nm,1.4s
WRAB LR LR
comp=Z,6μm,19.0s
WRAB Tennant Creek 32.46 260 P **P 06 26 43.2 -1.6**
comp=Z,167nm,1.3s,SNR=8.7
WRA Warramunga Arr 32.47 260 P **P 06 26 42.8 -2.1**
WRA ScP **ScP 06 33 18.7 +4.8**
WRA Warramunga Arr 32.47 260 P **P 06 26 42.8 -2.1**
comp=Z,6.2nm,0.7s,baz=81,slow=6.0,SNR=64
WRA ScP **ScP 06 33 18.7 +4.8**
comp=Z,5.2nm,1.4s,baz=74,slow=3.6,SNR=4.7
WRA LR LR 06 38 23.1
comp=Z,4μm,19.5s,baz=90,slow=34
AS31 Alice Springs 33.01 253 *e*P **P 06 26 48.1 -1.5**
ASAR Alice Springs 33.02 253 P **P 06 26 47.8 -1.9**
ASAR ScP **ScP 06 33 20.6 +4.8**
ASAR Alice Springs 33.02 253 P **P 06 26 47.8 -1.9**
comp=Z,41nm,0.8s,baz=78,slow=8.8,SNR=198
ASAR ScP **ScP 06 33 20.6 +4.8**
comp=Z,1.7nm,1.1s,baz=110,slow=2.2,SNR=6.1
BBOO Buckleboo 33.14 236 *e*P **P 06 26 50.2 -0.5**
BBOO Buckleboo 33.14 236 P **P 06 26 50.1 -0.5**
baz=33,SNR=20
KDU Kakadu 35.05 272 P **P 06 27 05.3 -1.9**
baz=35,SNR=3.2
BAKI Biak 35.55 293 P P 06 27 17.0 +5.4
WAKE Wake Island 36.18 357 PFAKE 06 27 30.0 +13
WAKE LR LR
comp=Z,7μm,21.0s
KNRA Kununurra 38.09 266 P **P 06 27 31.3 -2.0**
baz=38,SNR=23
FAKI Fak Fak 38.26 288 P **P 06 27 36.8 +2.1**
FAKI Fak Fak 38.26 288 P **P 06 27 37.1 +2.4**
baz=38,SNR=4.7
GUMO Guam 38.38 321 PFAKE 06 27 50.0 +14
GUMO LR LR
comp=Z,5μm,21.0s
XMAS Kiritimati 38.61 64 PFAKE 06 27 50.0 +12
XMAS LR LR
comp=Z,3μm,20.0s
FORT Forrest 39.17 242 *e*P **P 06 27 42.0 -0.2**
comp=Z,34nm,0.8s
FORT Forrest 39.17 242 P **P 06 27 42.0 -0.2**
baz=39,SNR=17
TBI Tubuai 39.85 106 *e*S **S 06 33 48.4 -2.6**
comp=Z,2μm,28.5s
TBI *e*LQ LQ 06 36 52.9
comp=Z,5μm,25.5s
TBI *e*LR LR 06 38 34.4
comp=Z,10μm,26.8s,baz=282
PPT2 Papeete2 39.98 97 *e*S **S 06 33 49.9 -3.3**
comp=Z,928nm,24.5s
PPT2 *e*LQ LQ 06 36 56.3
comp=Z,11μm,30.8s
PPT2 *e*LR LR 06 38 37.2
comp=Z,12μm,25.2s,baz=252
PPT Papeete 39.98 97 LR LR 06 40 25.6
comp=Z,2μm,20.6s,baz=260,slow=30
FITZ Fitzroy Crossi 40.79 262 *e*P **P 06 27 54.5 -1.3**
comp=Z,120nm,1.2s
FITZ Fitzroy Crossi 40.79 262 P **P 06 27 54.5 -1.3**
baz=41,SNR=24
NLAI Namlea 42.88 284 P P 06 28 18.0 +5.1
MBWA Marble Bar 46.11 257 *e*P **P 06 28 38.1 -0.5**
comp=Z,47nm,0.9s
MBWA LR LR
comp=Z,4μm,19.0s
MEEK Meekatharra 47.01 249 P **P 06 28 44.6 -1.1**
baz=47,SNR=35
MIDW Midway 47.07 17 PFAKE 06 29 00.0 +14
MIDW LR LR
comp=Z,3μm,22.0s
KLBR Kellerberrin 48.02 243 P **P 06 28 52.1 -1.4**
baz=48,SNR=12
SKSI Soroako, Sulaw 48.50 282 P P 06 28 51.9 -5.5
NWAO Narrogin (SRO) 48.59 241 *e*P **P 06 28 56.8 -1.1**
comp=Z,76nm,1.4s
NWAO LR LR
comp=Z,3μm,20.0s
BKSI Bulukumba 48.73 278 P P 06 28 52.8 -6.3
DAV Davao City (W) 48.73 296 LR LR 06 46 51.0
comp=Z,3μm,20.2s,baz=276,slow=33
KAPI Kappang 49.17 278 *e*P **P 06 29 00.4 -2.1**
comp=Z,46nm,1.0s
KAPI LR LR
comp=Z,3μm,21.0s
KAPI Kappang 49.17 278 P **P 06 29 01.1 -1.4**
comp=Z,220nm,1.2s,SNR=6.5
KAPI Kappang 49.17 278 P **P 06 29 00.5 -2.0**
comp=Z,10nm,0.4s,baz=159,slow=14,SNR=9.7
MORW Morawa 49.35 246 P **P 06 29 02.4 -1.3**
baz=49,SNR=6.4
KIP Kipapa 50.42 42 PFAKE 06 29 20.0 +8.2
KIP LR LR
comp=Z,6μm,20.0s
KHKI Kahang-Kahang 52.17 273 P **P 06 29 22.4 -2.7**
comp=Z,55nm,2.3s,comp=Z,1μmcomp=Z,0.3nm
IGBI Denpasar 52.49 272 P **P 06 29 30.4 +2.9**
comp=Z,56nm,1.0s,comp=Z,71μmcomp=Z,0.7nm
RKT Rikitea 53.17 106 *e*S **S 06 36 59.1 -2.7**
comp=Z,2μm,29.2s
RKT *e*LQ LQ 06 42 32.1
comp=Z,1μm,25.5s
RKT *e*LR LR 06 44 44.7
comp=Z,8μm,30.2s,baz=266
JAGI Jajag, Banyuwa 53.53 272 P **P 06 29 33.2 -2.0**
comp=Z,65nm,2.4s,comp=Z,0.4nm
MYLDM Lahad Datu 54.10 290 P **P 06 29 40.6 +1.3**
MYLDM Lahad Datu 54.10 290 P **P 06 29 40.3 +0.9**
comp=Z,34nm,2.6s,comp=Z,1μmcomp=Z,0.2nm
TSM Tawau 54.30 288 P P 06 29 46.3 +5.5
SDKM Sandakan 55.48 290 P **P 06 29 52.3 +2.9**
PWJI Pagerwojo 55.89 272 P P 06 29 48.8 -3.5
comp=Z,69nm,1.0s
SJI Sawahan 56.00 272 P P 06 29 48.0 -5.2
comp=Z,85nm,2.4s,comp=Z,0.5nm
PCJI Pacitan 56.45 271 P **P 06 29 56.2 -0.1**
comp=Z,164nm,1.3s
KKM Kota Kinabalu 56.53 289 *e*P **P 06 29 57.0 0.0**
comp=Z,138nm,1.7s
KKM LR LR
comp=Z,1μm,20.0s
KKM Kota Kinabalu 56.53 289 P **P 06 29 56.0 -1.0**
KKM Kota Kinabalu 56.53 289 P **P 06 29 55.3 -1.7**
comp=Z,35nm,2.1s,comp=Z,953nm
KKM Kota Kinabalu 56.53 289 P **P 06 29 57.6 +0.6**
KKM Kota Kinabalu 56.53 289 P P 06 30 00.5 +3.5
baz=56,SNR=15
WOJI Wonogiri, Jawa 56.78 272 P **P 06 29 57.0 -1.7**
comp=Z,187nm,1.1s,comp=Z,6μm
SMRI Semarang 57.45 272 P P 06 29 57.4 -6.1
comp=Z,139nm,1.2s
BJII Banjamegara 58.08 272 P **P 06 30 06.1 -1.8**
comp=Z,76nm,1.9s
BTM Bintulu 58.26 285 P P 06 30 13.0 +3.9
TGJI Tegal 58.76 272 P **P 06 30 10.0 -2.6**
comp=Z,113nm,1.2s,comp=Z,3μm
SBUM Sibu 58.78 284 P **P 06 30 11.5 -1.3**
SBUM Sibu 58.78 284 P **P 06 30 12.6 -0.2**
KSM Kuching 60.22 282 *e*P **P 06 30 21.5 -1.2**
comp=Z,51nm,1.0s
KSM LR LR
comp=Z,1μm,20.0s
KSM Kuching 60.22 282 P **P 06 30 22.0 -0.7**
KSM Kuching 60.22 282 P **P 06 30 22.5 -0.2**
KSM Kuching 60.22 282 P **P 06 30 22.4 -0.3**
baz=60,SNR=6.3
MJAR Matsushiro Arr 60.52 332 P **P 06 30 22.3 -2.0**
MJAR Matsushiro Arr 60.52 332 P **P 06 30 22.3 -2.0**
comp=Z,20nm,0.9s,baz=166,slow=6.9,SNR=10.0
MJAR LR LR 06 52 39.3
comp=Z,2μm,19.2s,baz=170,slow=32
MAJO Matsushiro 60.52 332 *e*P **P 06 30 22.1 -2.2**
MAJO pmax pmax
comp=Z,29nm,0.9s
MAJO MLR MLR
comp=Z,2μm,19.0s
MAJO Matsushiro 60.52 332 *e*P **P 06 30 22.1 -2.2**
comp=Z,28nm,0.9s
MAJO LR LR
comp=Z,2μm,19.0s
MAT Matsushiro 60.52 332 P **P 06 30 21.7 -2.6**
MAT S **S 06 38 39.2 +0.8**
VNDA Vanda 60.55 182 P **P 06 30 22.9 -1.0**
VNDA Vanda 60.55 182 P **P 06 30 22.9 -1.0**
comp=Z,1.7nm,0.7s,baz=1.3,slow=8.1,SNR=18
VNDA LR LR 06 53 03.6
comp=Z,3μm,20.4s,baz=20,slow=32
SBA Scott Base 60.80 180 *e*P **P 06 30 25.3 -0.3**
SBA pmax pmax
comp=Z,18nm,1.0s
SBA MLR MLR
comp=Z,3μm,20.0s
SBA Scott Base 60.80 180 *e*P **P 06 30 25.2 -0.3**
comp=Z,18nm,1.0s
SBA LR LR
comp=Z,3μm,20.0s
JNU Nakatsue 61.51 324 P **P 06 30 28.5 -2.6**
JNU Nakatsue 61.51 324 P **P 06 30 28.5 -2.6**
comp=Z,27nm,0.9s,baz=89,slow=1.7,SNR=3.5
CASY Casey 61.81 203 PFAKE 06 30 50.0 +17
CASY LR LR
comp=Z,3μm,21.0s
YHNB Yeheng 61.90 311 PFAKE 06 30 50.0 +16
YHNB LR LR
comp=Z,2μm,19.0s
TATO Taipei 62.00 311 PFAKE 06 30 50.0 +15
TATO LR LR
comp=Z,3μm,22.0s
ERM Erimo 63.29 339 PFAKE 06 30 50.0 +7.3
ERM LR LR
comp=Z,6μm,21.0s
QZH Quanzhou 64.09 309⇑ *i*P P 06 30 56.3 +7.9
QZH S **S 06 39 29.0 +5.3**
QZH pmax pmax
comp=Z,2μm,3.8s
QZH LR LR
comp=N,1μm,13.6s
QZH LR LR
comp=E,2μm,16.6s
QZH LR LR
comp=Z,2μm,15.0s
ASAJ Asahikawa 65.34 340 P **P 06 30 56.1 0.0**
comp=Z,3.9nm,0.3s,baz=264,slow=25,SNR=5.5
ASAJ LR LR 06 54 05.0
comp=Z,7μm,21.8s,baz=170,slow=31
SSE Sheshan 66.02 316 P **P 06 31 03.8 +3.0**
SSE pP **pP 06 31 13.0 +3.6**
SSE sP **sP 06 31 16.8 +4.2**
SSE S **S 06 39 51.0 +3.8**
SSE pmax pmax
comp=Z,31nm,0.8s
SSE pmax pmax
comp=Z,220nm,5.7s
SSE LR LR
comp=N,980nm,15.4s
SSE LR LR
comp=E,1μm,15.4s
SSE LR LR
comp=Z,1μm,20.0s
KSRS Korea Array 66.33 326 P **P 06 31 01.6 -1.0**
comp=Z,4.7nm,1.0s,baz=152,slow=7.0,SNR=8.5
KSRS LR LR 06 56 52.9
comp=Z,1μm,18.1s,baz=134,slow=33
KSAR Wonju Array Be 66.34 326 P **P 06 31 01.6 -1.1**
MYKOM Kota Tinggi 66.39 280 P **P 06 31 04.4 +0.8**
KGM Kluang 66.97 280 P **P 06 31 08.1 +0.8**
INCN Inchon 67.06 325 PFAKE 06 31 20.0 +13
INCN LR LR
comp=Z,2μm,19.0s
YSS Yuzh-Sakhalins 67.82 341 *e*P **P 06 31 12.1 +0.2**
YSS *e**SP **sP 06 31 24.9 +1.2**
YSS *e* 06 33 44.0
YSS *e*PPP PPP 06 35 16.0
YSS *e*S **S 06 40 04.0 -4.3**
YSS *e*PPS PPS 06 40 38.0
YSS *e* 06 40 50.0
YSS MLR MLR
comp=Z,2μm,17.0s
YSS MLR MLR
comp=N,1μm,18.0s
YSS MLR MLR
comp=E,1μm,18.0s
QIZ Qiongzhong 67.90 299 P **P 06 31 14.8 +1.8**
QIZ S **S 06 40 13.3 +3.0**
QIZ pmax pmax
comp=Z,17nm,1.6s
QIZ LR LR
comp=N,820nm,24.4s
QIZ LR LR
comp=Z,2μm,34.6s
QIZ Qiongzhong 67.90 299 PFAKE 06 31 20.0 +7.0
QIZ LR LR
comp=Z,1μm,20.0s
NJ2 Nanjing 68.17 316 *e*P **P 06 31 17.3 +2.9**
NJ2 pP **pP 06 31 21.0 -2.0**
NJ2 sP **sP 06 31 26.0 -0.2**
NJ2 S **S 06 40 17.0 +3.9**
NJ2 sS **sS 06 40 25.5 -1.7**
NJ2 pmax pmax
comp=Z,20nm,1.1s
NJ2 pmax pmax
comp=Z,430nm,4.6s
NJ2 LR LR
comp=N,1μm,18.0s
NJ2 LR LR
comp=E,2μm,22.6s
NJ2 LR LR
comp=Z,2μm,21.1s
SKR Severo-Kuril's 68.34 352 *e*P P 06 31 03.0 -12
SKR *e* 06 31 20.0
SKR *e*S **S 06 40 13.0 -1.3**
SKR *e*PS **PnS 06 40 43.0 +2.5**
SKR *e* 06 40 57.0
SKR *e*SS **SS 06 44 34.0 -4.5**
SKR smax smax
comp=E,2μm,12.0s
SKR MLR MLR
comp=N,2μm,18.0s
SKR MLR MLR
comp=E,2μm,18.0s
SKR MLR MLR
comp=Z,3μm,18.0s
MIR Mirnyy 68.68 205⇓ *i*P **sP 06 31 30.0 +1.1**
MIR *i* 06 31 44.0
MIR pmax pmax
comp=Z,81nm,1.5s
VLA Vladivostok 68.69 332⇑ *i*P **P 06 31 16.3 -1.1**
VLA *e* 06 31 40.5
VLA *e*S **S 06 40 16.7 -2.1**
VLA pmax pmax
comp=Z,38nm,0.8s
COCO West Island 69.17 263 PFAKE 06 31 30.0 +8.9
COCO LR LR
comp=Z,3μm,19.0s
USRK Ussuriysk Arra 69.50 333 P **P 06 31 21.2 -1.2**
comp=Z,7.1nm,0.8s,baz=142,slow=4.3,SNR=23
USRK LR LR 06 58 03.9
comp=Z,2μm,19.1s,baz=138,slow=33
IPM Ipoh 69.95 281 P **P 06 31 26.2 +0.3**
IPM Ipoh 69.95 281 P sP 06 31 36.1 -1.6
PET Petropavlovsk 70.33 354 *e*P P 06 31 32.9 +5.6
PET *e*S **S 06 40 41.7 +4.0**
PET *e*PS **PnS 06 41 09.5 +2.3**
PET *e*SS **SS 06 45 13.7 +4.6**
PET pmax pmax
comp=Z,300nm,14.9s
WHN Wuhan 70.38 312 *e*P **P 06 31 29.3 +1.1**
WHN S **S 06 40 40.8 +1.6**
WHN LR LR
comp=Z,6μm,22.3s
PETK Petropavlovsk- 70.52 353 P **P 06 31 27.9 -0.6**
PETK pmax pmax
comp=Z,5.0nm,1.0s
PETK Petropavlovsk- 70.52 353 P **P 06 31 27.9 -0.6**
PETK Petropavlovsk- 70.52 353 P **P 06 31 27.9 -0.6**
comp=Z,4.7nm,1.0s,baz=328,slow=5.3,SNR=4.4
PETK LR LR 06 57 53.8
comp=Z,3μm,19.6s,baz=161,slow=32
KULM Kulim 70.58 282 PFAKE 06 31 40.0 +10
KULM LR LR
comp=Z,1μm,19.0s
KULM Kulim 70.58 282 P P 06 31 33.3 +3.5
DL2 Dalian 70.87 323 P **P 06 31 32.3 +1.3**
DL2 PP **PP 06 34 09.5 +1.0**
DL2 S **S 06 40 47.0 +2.4**
DL2 pmax pmax
comp=Z,47nm,1.1s
DL2 pmax pmax
comp=Z,230nm,3.9s
DL2 LR LR
comp=N,1μm,17.0s
DL2 LR LR
comp=E,450nm,18.0s
DL2 LR LR
comp=Z,770nm,18.6s
MDJ Mudanjiang 70.90 332 P **P 06 31 30.0 -1.0**
MDJ pP **pP 06 31 36.5 -3.1**
MDJ sP **sP 06 31 39.0 -3.8**
MDJ PcP **PcP 06 31 51.3 -0.1**
MDJ PP **PP 06 34 05.5 -3.1**
MDJ S **S 06 40 45.8 +1.1**
MDJ sS **sS 06 40 54.5 -4.4**
MDJ ScS **ScS 06 41 33.0 0.0**
MDJ SS **SS 06 45 12.0 -6.2**
MDJ pmax pmax
comp=Z,22nm,1.3s
MDJ pmax pmax
comp=Z,160nm,4.0s
MDJ LR LR
comp=N,1μm,19.8s
MDJ LR LR
comp=E,1μm,18.2s
MDJ LR LR
comp=Z,2μm,21.0s
MDJ Mudanjiang 70.90 332 *e*P **P 06 31 30.4 -0.6**
comp=Z,39nm,1.0s
MDJ LR LR
comp=Z,2μm,20.0s
PSI Prapat 71.37 279 P **P 06 31 34.9 +0.1**
PSI Prapat 71.37 279 P **P 06 31 33.9 -0.9**
baz=71,SNR=5.1
HABR Khabarovsk 71.75 337 *de*P **P 06 31 35.1 -0.9**
HABR *e**PP **pP 06 31 44.9 +0.2**
HABR *e* 06 31 53.3
HABR *e* 06 34 13.5
HABR *e*S **S 06 40 53.0 -1.3**

HABR e 06 41 37.0
HABR eSS SS 06 45 28.9 -2.1
HABR pmax pmax
comp=Z,72nm,1.7s
HABR pmax pmax
comp=N,29nm,1.7s
HABR pmax pmax
comp=E,15nm,0.7s
HABR MLR MLR
comp=Z,846nm,22.0s
CN2 Changchun 72.25 329 ⇑P P 06 31 38.5 -0.7
CN2 eSP sP 06 31 51.3 +0.2
CN2 eS S 06 40 59.3 -1.1
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,19.0s
CN2 LR LR
comp=E,2µm,19.0s
CN2 LR LR
comp=Z,2µm,18.0s
QSPA South Pole Qui 72.96 180 eP P 06 31 42.8 -0.5
comp=Z,47nm,1.4s
QSPA LR LR
comp=Z,3µm,20.0s
KLR Kul'dur 73.62 336 eP P 06 31 42.0 -5.2
KLR eS S 06 41 20.0 +4.2
KLR pmax pmax
comp=Z,130nm,2.0s
ENH Enshi 73.76 309 PFAKE 06 32 00.0 +12
ENH LR LR
comp=Z,2µm,21.0s
GYA Guiyang 74.01 305 eP P 06 31 52.0 +1.8
GYA pP pP 06 32 01.0 +2.2
GYA PP PP 06 34 40.3 +4.5
GYA S S 06 41 22.0 +0.7
GYA pmax pmax
comp=Z,50nm,1.0s
GYA LR LR
comp=N,710nm,19.9s
GYA LR LR
comp=E,680nm,20.1s
GYA LR LR
comp=Z,800nm,19.6s
LHMI Lhok Sumawe 74.03 281 P P 06 31 58.4 +8.1
baz=74,SNR=4.2
BJT Baijiatuau 74.81 321 PFAKE 06 32 10.0 +16
BJT LR LR
comp=Z,2µm,22.0s
BJI Beijing 74.82 321 P P 06 31 54.0 -0.4
BJI S S 06 41 34.5 +4.9
BJI SS SS 06 46 10.5 -7.8
BJI pmax pmax
comp=Z,15nm,1.2s
BJI pmax pmax
comp=Z,460nm,3.7s
BJI LR LR
comp=N,2µm,20.0s
BJI LR LR
comp=E,1µm,21.4s
BJI LR LR
comp=Z,2µm,28.5s
XAN Xi'an 76.14 312 P P 06 32 00.5 -1.7
XAN pP pP 06 32 09.5 -1.3
XAN PP PP 06 34 52.5 -1.1
XAN S S 06 41 39.5 -5.0
XAN pmax pmax
comp=Z,3.0nm,1.5s
XAN pmax pmax
comp=Z,59nm,5.3s
XAN LR LR
comp=N,1µm,22.4s
XAN LR LR
comp=E,510nm,24.4s
XAN LR LR
comp=Z,630nm,25.5s
KMI Kunming 76.53 302 P P 06 32 07.3 +2.5
KMI pP PcP 06 32 15.5 -0.9
KMI sP sP 06 32 18.5 +1.8
KMI PP PP 06 34 56.0 -1.3
KMI pmax pmax
comp=Z,10.0nm,1.3s
KMI pmax pmax
comp=Z,300nm,4.1s
KMI LR LR
comp=N,980nm,21.4s
KMI LR LR
comp=E,1µm,23.6s
KMI LR LR
comp=Z,2µm,22.9s
CMAR Chiang Mai Arr 76.97 294 P P 06 32 07.1 -0.1
CMAR Chiang Mai Arr 76.97 294 P P 06 32 07.1 -0.1
comp=Z,0.8nm,0.4s,baz=113,slow=4.2,SNR=4.5
CMAR LR LR 07 03 10.8
comp=Z,940nm,21.0s,baz=271,slow=34
CHTO Chiang Mai 77.11 294 PFAKE 06 32 20.0 +12
CHTO LR LR
comp=Z,728nm,19.0s
HHC Hu-ho-hao-te 78.13 319 eP P 06 32 13.5 +0.2
HHC pP PcP 06 32 24.0 +1.2
HHC sP sP 06 32 28.0 +2.8
HHC PP PP 06 35 13.0 +2.8
HHC S S 06 42 05.8 -0.3
HHC sS SKSac 06 42 23.5 -2.4
HHC ScS SKKSac 06 42 28.5 +1.6
HHC pmax pmax
comp=Z,48nm,1.0s
HHC pmax pmax
comp=Z,440nm,6.4s
HHC LR LR
comp=N,3µm,16.7s
HHC LR LR
comp=E,1µm,18.4s
HHC LR LR
comp=Z,3µm,18.1s
CD2 Chengdu 78.36 307 P P 06 32 16.0 +1.3
CD2 pP PcP 06 32 25.0 +1.0
CD2 sP sP 06 32 28.5 +1.9
CD2 PP PP 06 35 15.3 +2.9
CD2 S S 06 42 08.5 -0.4
CD2 sS sS 06 42 23.5 +0.2
CD2 SS SS 06 47 14.5 +2.1
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,400nm,4.7s
CD2 LR LR
comp=N,2µm,24.0s
CD2 LR LR
comp=E,2µm,20.6s
CD2 LR LR
comp=Z,2µm,24.0s
HIA Hailar 78.90 330 PFAKE 06 32 30.0 +13
HIA LR LR
comp=Z,2µm,21.0s
BTO Baotou 78.96 319 eP P 06 32 13.8 -4.1
MAW Mawson 80.15 202 P P 06 32 24.3 +0.5
MAW Mawson 80.15 202 P P 06 32 24.3 +0.5
comp=Z,4.1nm,0.8s,baz=92,slow=9.5,SNR=4.7
MAW LR LR 07 02 35.8
comp=Z,4µm,21.2s,baz=97,slow=32
OHAK Old Harbor 80.58 20 eP P 06 32 25.6 -0.4
comp=Z,549nm,2.4s
SEY Seymchan 80.75 353 eP P 06 32 26.2 -0.7
LZH Lanzhou 80.76 312 eP P 06 32 29.0 +1.2
LZH pP pP 06 32 38.0 +1.4
LZH sP sP 06 32 42.0 +2.3
LZH S S 06 42 33.0 -1.3
LZH pmax pmax
comp=Z,89nm,1.5s
LZH pmax pmax
comp=Z,380nm,6.2s
LZH LR LR
comp=N,520nm,15.4s
LZH LR LR
comp=E,1µm,16.2s
LZH LR LR
comp=Z,3µm,17.7s
KDAK Kodiak Island 81.26 20 PFAKE 06 32 40.0 +10
KDAK LR LR
comp=Z,2µm,19.0s
SEW Seward 84.09 20 eP P 06 32 45.3 +1.0
comp=Z,31nm,1.2s
TNA Tin City 84.31 10 eP P 06 32 47.3 +1.9
comp=Z,26nm,1.2s
YAK Yakutsk 84.61 343 eP P 06 32 47.0 0.0
YAK e*PP pP 06 32 56.3 +0.5
YAK e 06 36 02.3
YAK eS S 06 43 07.2 -4.9
YAK e*SS sS 06 43 58.9 +32
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=Z,8.0nm,0.5s
YAK smax smax
comp=E,695nm,14.4s
YAK smax smax
comp=N,115nm,14.6s
ULN Ulaanbaatar 84.72 324 eP P 06 32 47.1 -1.0
comp=N,116nm,1.6s
ULN LR LR
comp=Z,1µm,19.0s
ULN Ulaanbaatar 84.72 324 P P 06 32 47.3 -0.8
KIPM Iron Peak 84.87 46 eP P 06 32 51.1 +2.1
comp=Z,152nm,1.5s
BILL Bilibino 84.90 359 *d* iP P 06 32 47.7 -0.6
BILL *i* 06 32 53.4
BILL *e* 06 36 02.4
BILL pmax pmax
comp=Z,16nm,1.2s
SAO San Andreas Ge 84.96 49 eP P 06 32 51.0 +1.6
SAO pmax pmax
comp=Z,49nm,1.4s
SAO San Andreas Ge 84.96 49 eP P 06 32 51.0 +1.6
comp=Z,49nm,1.4s
SONM Songino Array 85.07 323 P P 06 32 48.3 -1.5
SONM Songino Array 85.07 323 P P 06 32 48.3 -1.5
comp=Z,8.7nm,1.0s,baz=116,slow=3.4,SNR=17
SONM LR LR 07 08 30.4
comp=Z,1µm,20.5s,baz=118,slow=34
GTA Gaotai 85.13 314 eP P 06 32 50.3 -0.1
GTA pP pP 06 32 57.5 -1.6
GTA sP sP 06 33 01.5 -0.8
GTA SKS SKSac 06 43 09.8 -3.7
GTA S S 06 43 18.5 -0.1
GTA sS ScS 06 43 31.0 +2.0
GTA SS SS 06 48 54.0 +0.9
GTA pmax pmax
comp=Z,27nm,1.6s
GTA pmax pmax
comp=Z,260nm,5.9s
GTA LR LR
comp=N,1µm,18.5s
GTA LR LR
comp=E,1µm,23.3s
GTA LR LR
comp=Z,2µm,25.2s
BSC Santa Cruz Isl 85.14 52 ⇓P P 06 32 51.7 +1.3
baz=85
KHMM Horse Mountain 85.19 45 eP P 06 32 52.4 +1.7
comp=Z,73nm,1.4s
SBC Santa Barbara 85.27 52 ⇑P P 06 32 52.6 +1.6
baz=86
PMR Palmer 85.33 19 eP P 06 32 51.5 +0.9
PMR pmax pmax
comp=Z,87nm,2.0s
PMR Palmer 85.33 19 eP P 06 32 51.5 +0.9
comp=Z,87nm,2.0s
PKM Peak Mountain 85.37 52 ⇑P P 06 32 53.0 +1.2
baz=86
SCI San Clemente I 85.57 54 ⇓P P 06 32 53.0 +0.5
baz=86
BLG Laguna Peak 85.62 53 ⇑P P 06 32 53.7 +0.9
baz=86
CIS Catalina Islan 85.85 53 ⇑P P 06 32 54.7 +0.8
baz=86
WDC Whiskeytown Da 85.86 45 eP P 06 32 55.0 +1.2
WDC pmax pmax
comp=Z,60nm,1.5s
WDC Whiskeytown Da 85.86 45 eP P 06 32 55.0 +1.2
comp=Z,60nm,1.5s
FMP Fort Macarthur 86.05 53 ⇓P P 06 32 56.0 +1.2
baz=86
DIV Divide 86.06 20 eP P 06 32 55.6 +1.2
comp=Z,13nm,1.1s
OSI Osito Adit 86.08 52 ⇑P P 06 32 56.3 +1.2
baz=86
ARVC Arvin 86.21 52 ⇑P P 06 32 56.7 +1.1
baz=86
DECC Green Verdugo 86.24 53 ⇑P P 06 32 57.2 +1.4
baz=86
YBH Yreka Blue Hor 86.26 44 eP P 06 32 56.2 +0.4
comp=Z,40nm,1.3s
CMB Columbia Colle 86.26 48 eP P 06 32 56.6 +0.7
CMB pmax pmax
comp=Z,45nm,1.3s
CMB Columbia Colle 86.26 48 eP P 06 32 56.6 +0.7
comp=Z,45nm,1.3s
VES Vestal, Richgr 86.31 51 ⇑P P 06 32 57.1 +1.0
baz=86
DIB Dawson Inlet, 86.40 31 T T 08 08 13.1
SNR=89
TRF Thorofare Moun 86.42 17 eP P 06 32 56.3 +0.1
comp=Z,62nm,1.8s
MWC Mount Wilson 86.43 53 eP P 06 32 57.9 +0.9
MWC pmax pmax
comp=Z,111nm,1.7s
MWC Mount Wilson 86.43 53 eP P 06 32 57.9 +0.9
comp=Z,111nm,1.7s
HUMO Hull Mountain 86.49 44 eP P 06 32 55.2 -1.7
comp=Z,45nm,1.4s
109C Camp Elliot, M 86.65 54 ⇑P P 06 32 58.9 +1.1
baz=87
ISA Isabella 86.69 51 eP P 06 32 57.8 -0.3
ISA pmax pmax
comp=Z,112nm,1.7s
ISA Isabella 86.69 51 eP P 06 32 57.8 -0.3
comp=Z,112nm,1.7s
ISA Isabella 86.69 51 ⇓P P 06 32 59.1 +1.0
baz=87,SNR=23
BFSC Mount Baldy Ra 86.74 53 ⇓P P 06 32 59.4 +1.0
baz=87,SNR=11
EDW2 Edwards Air Fo 86.74 52 ⇑P P 06 32 59.3 +0.9
baz=87,SNR=22
SYO Syowa Base 86.79 196 ⇓eX P 06 32 55.0 -2.9
SYO Syowa Base 86.79 196 ⇑eP P 06 33 22.4 +24
MURC Murrieta 86.85 54 ⇑P P 06 33 00.2 +1.3
baz=87
BAR Barrett 86.90 55 eP P 06 33 00.4 +1.2
comp=Z,48nm,1.7s
MCK McKinley 87.03 18 eP P 06 32 59.3 +0.3
MCK pmax pmax
comp=Z,43nm,1.8s
MCK McKinley 87.03 18 eP P 06 32 59.3 +0.3
comp=Z,43nm,1.8s
BEKR Beckworth 87.06 47 eP P 06 33 00.9 +1.0
comp=Z,56nm,1.8s
MONP Monument Peak 87.18 54 ⇑P P 06 33 02.0 +1.3
baz=87,SNR=14
LRMC Laurel Mountai 87.20 52 ⇑P P 06 33 02.2 +1.5
baz=87
MLAC Mammoth Lakes 87.22 49 ⇓P P 06 33 02.1 +1.3
baz=87
WCN Washoe City 87.24 48 eP P 06 33 02.0 +1.2
WCN pmax pmax
comp=Z,292nm,2.3s
WCN Washoe City 87.24 48 eP P 06 33 02.0 +1.2
comp=Z,292nm,2.3s
CWC Cottonwood Cre 87.29 51 ⇓P P 06 33 02.3 +1.2
baz=88
BBRC Big Bear Solar 87.32 53 ⇓P P 06 33 02.2 +0.8
baz=88
PFO Pinyon Flat Ob 87.42 54 eP P 06 33 03.2 +1.4
comp=Z,128nm,2.2s
PFO LR LR
comp=Z,4µm,20.0s
PFO Pinyon Flat Ob 87.42 54 ⇓P P 06 33 02.9 +1.1
baz=88
TIN Tinemaha 87.43 50 ⇓P P 06 33 03.0 +1.3
baz=88
RRX Edison Barstow 87.49 52 ⇓P P 06 33 02.9 +1.0
baz=88
MPMC Manual Prospec 87.58 51 ⇑P P 06 33 03.2 +0.6
baz=88,SNR=20
SWSC Sam W. Stewart 87.69 55 ⇑P P 06 33 03.8 +0.9
baz=88
LSA Lhasa 87.79 302 P P 06 33 04.0 -0.1
LSA PP PP 06 36 33.0 +2.7
LSA S S 06 43 36.0 -10
LSA LR LR
comp=E,2µm,30.1s
LSA LR LR
comp=Z,1µm,27.7s
LSA Lhasa 87.79 302 PFAKE 06 33 10.0 +5.9
LSA LR LR
comp=Z,978nm,22.0s
GSC Goldstone 87.80 52 eP P 06 33 04.8 +1.3
GSC pmax pmax
comp=Z,102nm,1.8s
GSC Goldstone 87.80 52 eP P 06 33 04.8 +1.3
comp=Z,102nm,1.8s
GSC Goldstone 87.80 52 ⇓P P 06 33 04.6 +1.1
baz=88,SNR=19
NVAR Mina Array Bea 87.92 49 P P 06 33 01.9 -2.3
NVAR Mina Array Bea 87.92 49 P P 06 33 01.9 -2.3
comp=Z,15nm,1.1s,baz=230,slow=7.2,SNR=17
NVAR LR LR 07 09 42.0
comp=Z,1µm,18.2s,baz=108,slow=34
BELC Belle Mtn. Jos 87.92 54 ⇓P P 06 33 05.2 +1.0
baz=88,SNR=16
HEC Hector,Ludlow 87.98 53 ⇓P P 06 33 05.6 +1.2
baz=88
NV11 Mina Array Sit 88.03 49 eP P 06 33 04.7 +0.1
GRAC Grapevine Rang 88.04 50 ⇑P P 06 33 06.0 +1.4
baz=88
BMW Boistfort Moun 88.08 40 P P 06 33 06.2 +1.7
BMW Boistfort Moun 88.08 40 P P 06 33 06.2 +1.7
NLWA Neilton Lookou 88.11 39 eP P 06 33 05.2 +0.5
comp=Z,277nm,2.4s
NLWA LR LR
comp=Z,2µm,20.0s
ZAK Zakamensk 88.14 324 eP P 06 33 03.4 -1.4
ZAK pmax pmax
comp=Z,12nm,1.9s
COLA College 88.20 17 eP P 06 33 03.0 -1.5
COLA pmax pmax
comp=Z,12nm,1.0s
COLA MLR MLR
comp=Z,2µm,19.0s
COLA College 88.20 17 eP P 06 33 03.0 -1.5
comp=Z,12nm,1.0s
COLA LR LR
comp=Z,2µm,19.0s
FURC Furnace Creek, 88.21 51 ⇓P P 06 33 06.8 +1.5
baz=88,SNR=21
BC3 Big Chuckawall 88.22 54 ⇑P P 06 33 06.7 +1.1
baz=88
WRAK Wrangell Islan 88.30 29 PFAKE 06 33 20.0 +15
WRAK LR LR
comp=Z,3µm,21.0s
ILAR Eielson Array 88.40 18 P P 06 33 03.0 -2.5
ILAR Eielson Array 88.40 18 P P 06 33 03.0 -2.5
comp=Z,2.8nm,0.7s,baz=238,slow=4.8,SNR=35
ILAR LR LR 07 09 11.6
comp=Z,2µm,18.7s,baz=242,slow=33
SHOC Shoshone 88.43 52 ⇑P P 06 33 07.4 +1.1
baz=89
GLA Glamis 88.48 55 eP P 06 33 08.5 +1.8
GLA pmax pmax
comp=Z,129nm,1.9s
GLA Glamis 88.48 55 eP P 06 33 08.5 +1.8
comp=Z,129nm,1.9s
GLA Glamis 88.48 55 ⇓P P 06 33 08.3 +1.5
baz=89
TUQ Turquoise Moun 88.52 52 ⇑P P 06 33 08.1 +1.1
baz=89,SNR=11
TPH Tonopah 88.56 49 PFAKE 06 33 20.0 +13
TPH LR LR
comp=Z,2µm,19.0s
TLY Talaya 88.59 326 eP P 06 33 06.5 -0.2
TLY eS S 06 43 45.6 -5.7
TLY *e* 06 44 49.4
TLY eSS SS 06 49 37.6 -5.3
TLY pmax pmax
comp=Z,24nm,2.2s
TLY MLR MLR
comp=Z,756nm,18.0s
IRM Iron Mountain 88.64 54 ⇓P P 06 33 09.2 +1.7
baz=89,SNR=13
VFP Flag Point 88.66 42 P P 06 33 09.2 +1.8
PGC Sidney 88.94 38 eP P 06 33 09.4 +1.0
comp=Z,4.4nm,1.5s
Y12C Blythe 88.97 54 ⇑P P 06 33 10.3 +1.4
baz=89
LDFC Landfair 89.00 53 eP P 06 33 10.7 +1.4
comp=Z,121nm,1.6s
LON Longmire 89.08 40 eP P 06 33 10.0 +0.8
LON pmax pmax
comp=Z,43nm,1.6s
LON Longmire 89.08 40 eP P 06 33 10.0 +0.8
comp=Z,43nm,1.6s
PMSA Palmer Station 89.17 160 PFAKE 06 33 20.0 +11
PMSA LR LR
comp=Z,2µm,19.0s
113A Mohawk Valley, 89.21 55 ⇓P P 06 33 11.2 +1.1
baz=89
NEE2 Needles Airpor 89.27 53 ⇓P P 06 33 11.5 +1.1
baz=90
WVOR Wild Horse Val 89.30 45 eP P 06 33 10.3 -0.2
WVOR pmax pmax
comp=Z,80nm,1.4s
WVOR MLR MLR
comp=Z,2µm,21.0s
WVOR Wild Horse Val 89.30 45 eP P 06 33 10.3 -0.2
comp=Z,80nm,1.4s
WVOR LR LR
comp=Z,2µm,21.0s
COLD Coldfoot 89.39 15 eP P 06 33 12.0 +1.9
comp=Z,8.3nm,1.2s
PDMCI Parker Dam,Lak 89.47 54 ⇓P P 06 33 12.4 +1.1
baz=90,SNR=12
BMN Battle Mountai 89.48 47 eP P 06 33 12.6 +1.2
BMN pmax pmax
comp=Z,75nm,1.4s
BMN MLR MLR
comp=Z,2µm,19.0s
BMN Battle Mountai 89.48 47 eP P 06 33 12.6 +1.2
comp=Z,75nm,1.4s
BMN LR LR
comp=Z,2µm,19.0s
CMW Cultus Mountai 89.63 39 P P 06 33 13.8 +2.0
214A Organ Pipe Nat 89.69 56 ⇓P P 06 33 13.8 +1.4
baz=90
R11A Troy Canyon, C 89.86 50 ⇓P P 06 33 14.1 +0.9
baz=90
W13A Hualapai Mount 89.95 53 ⇓P P 06 33 15.1 +1.3
baz=90
MOY Mondy 90.02 325 eP P 06 33 16.1 +2.5
Z14A Wintersburg 90.07 55 ⇑P P 06 33 15.8 +1.7
baz=90
EGAK Eagle 90.13 19 PFAKE 06 33 30.0 +16
EGAK LR LR
comp=Z,2µm,19.0s
Y14A Wickenburg 90.22 55 ⇑P P 06 33 16.0 +1.1
baz=90
HAWA Hanford 90.34 41 eP P 06 33 15.3 +0.3
comp=Z,87nm,1.5s
HAWA LR LR
comp=Z,1µm,20.0s
ETW Entiat 90.36 40 P P 06 33 15.7 +0.4
DLBC Dease Lake 90.47 28 eP P 06 33 16.6 +1.2
ELK Elko 91.00 48 eP P 06 33 20.2 +1.6
comp=Z,86nm,2.1s
BMO Blue Mountains 91.15 43 eP P 06 33 19.4 +0.4
BMO pmax pmax
comp=Z,129nm,2.2s
BMO MLR MLR
comp=Z,2µm,20.0s
BMO Blue Mountains 91.15 43 eP P 06 33 19.4 +0.4
comp=Z,128nm,2.2s
BMO LR LR
comp=Z,2µm,20.0s
CCUT Cedar City 91.21 51 eP P 06 33 21.2 +1.6
comp=Z,84nm,2.1s
ARUT Antelope Range 91.23 51 eP P 06 33 19.9 +0.2
ARUT pmax pmax
comp=Z,36nm,1.8s
ARUT Antelope Range 91.23 51 eP P 06 33 19.9 +0.2
comp=Z,36nm,1.8s
OD2 Odessa Site #2 91.27 40 P P 06 33 20.8 +1.4
SNAA Sanae 91.27 183 eP P 06 33 18.3 -0.8
SNAA Sanae 91.27 183 epP pP 06 33 30.6 +2.6
SNAA Sanae 91.27 183 eP P 06 33 17.1 -2.0
comp=Z,24nm,1.3s

TUC	**Tucson**	**91.42**	**57**	*e*P		**P**	**06 33 22.0**	**+1.5**
TUC	comp=Z,72nm,2.1s			pmax		pmax		
TUC	comp=Z,921nm,19.0s			MLR		MLR		
TUC	**Tucson**	**91.42**	**57**	*e*P		**P**	**06 33 22.0**	**+1.5**
TUC	comp=Z,72nm,2.1s			LR		LR		
MFID	**Camas Ranch**	**91.58**	**45**	*e*P		**P**	**06 33 22.7**	**+1.6**
X16A	comp=Z,29nm,1.4s **Lo Mia Camp, P**	**91.60**	**55**	⇓P		**P**	**06 33 23.3**	**+1.8**
U15A	baz=92 **North Rim**	**91.63**	**52**	⇓P		**P**	**06 33 23.3**	**+1.6**
WUAZ	baz=92 **Wupatki**	**92.02**	**54**	*e*P		**P**	**06 33 25.8**	**+2.5**
WUAZ	comp=Z,44nm,1.8s			LR		LR		
WUAZ	comp=Z,3μm,20.0s **Wupatki**	**92.02**	**54**	⇓P		**P**	**06 33 24.7**	**+1.4**
VNA2	baz=92 **Neumayer--Watz**	**92.17**	**181**	*e*P		**P**	**06 33 23.1**	**-0.1**
I12A	**Atlanta**	**92.19**	**45**	⇑P		**P**	**06 33 25.1**	**+1.1**
319A	baz=92 **Douglas**	**92.33**	**58**	⇑P		**P**	**06 33 26.4**	**+1.5**
MVU	baz=92 **Marysvale**	**92.39**	**51**	*e*P		**P**	**06 33 27.0**	**+1.9**
MVU	comp=Z,11nm,1.4s			LR		LR		
MSU	comp=Z,4μm,20.0s **Marysvale**	**92.42**	**51**	*e*P		**P**	**06 33 27.5**	**+2.3**
MSU	comp=Z,8.0nm,0.6s			pmax		pmax		
MSU	**Marysvale**	**92.42**	**51**	*e*P		**P**	**06 33 27.5**	**+2.3**
VNA1	comp=Z,7.9nm,0.6s **Neumayer--Stat**	**92.47**	**181**	*e*P		**P**	**06 33 24.3**	**-0.2**
VNA1	**Neumayer--Stat**	**92.47**	**181**	*e*pP		pP	06 33 34.3	+0.9
TIXI	**Tiksi**	**92.50**	**348**	⇑*i*P		**P**	**06 33 24.1**	**-0.3**
TIXI	comp=Z,8.0nm,2.4s			pmax		pmax		
DUG	**Dugway**	**92.53**	**49**	*e*P		**P**	**06 33 28.2**	**+2.6**
DUG	comp=Z,18nm,1.7s			pmax		pmax		
DUG	comp=Z,3μm,22.0s			MLR		MLR		
DUG	**Dugway**	**92.53**	**49**	*e*P		**P**	**06 33 28.2**	**+2.6**
DUG	comp=Z,18nm,1.7s			LR		LR		
DUG	comp=Z,3μm,22.0s **Dugway**	**92.53**	**49**	⇑P		**P**	**06 33 26.5**	**+0.9**
G12A	baz=93 **Big Creek, Yel**	**92.56**	**43**	⇑P		**P**	**06 33 26.5**	**+0.9**
HLID	baz=93 **Hailey**	**92.59**	**45**	*e*P		**P**	**06 33 26.4**	**+0.6**
HLID	comp=Z,59nm,2.3s			LR		LR		
HLID	comp=Z,4μm,19.0s **Hailey**	**92.59**	**45**	⇑P		**P**	**06 33 26.8**	**+0.9**
NEW	baz=93 **Newport**	**92.59**	**40**	*e*P		**P**	**06 33 26.5**	**+0.9**
NEW	comp=Z,27nm,1.7s			LR		LR		
NEW	comp=Z,1μm,21.0s **Newport**	**92.59**	**40**	⇓P		**P**	**06 33 26.8**	**+1.3**
H12A	baz=93 **Diamond D Ranc**	**92.66**	**44**	⇓P		**P**	**06 33 26.8**	**+0.7**
J13A	baz=93 **Cove Ranch, Pi**	**92.70**	**45**	⇑P		**P**	**06 33 27.5**	**+1.2**
X18A	baz=93 **Snowflake**	**92.80**	**55**	⇑P		**P**	**06 33 28.3**	**+1.3**
F12A	baz=93 **Elk City**	**92.83**	**43**	⇑P		**P**	**06 33 27.6**	**+0.8**
I13A	baz=93 **Wildhorse Cree**	**92.92**	**45**	⇓P		**P**	**06 33 28.6**	**+1.3**
320A	baz=93 **Kipp Ranch, An**	**92.93**	**58**	⇓P		**P**	**06 33 29.1**	**+1.5**
220A	baz=93 **Playas Peak, P**	**93.11**	**58**	⇓P		**P**	**06 33 29.7**	**+1.2**
J14A	baz=93 **Carey**	**93.12**	**46**	⇑P		**P**	**06 33 29.6**	**+1.3**
W18A	baz=93 **Petrified Fore**	**93.16**	**54**	⇑P		**P**	**06 33 29.9**	**+1.3**
120A	baz=93 **U Bar Ranch, L**	**93.22**	**57**	⇓P		**P**	**06 33 30.2**	**+1.2**
D12A	baz=93 **Red Ives Fores**	**93.25**	**42**	⇑P		**P**	**06 33 29.8**	**+1.1**
G13A	baz=94 **Cobalt**	**93.26**	**44**	⇑P		**P**	**06 33 30.1**	**+1.3**
Q16A	baz=94 **Castle Valley**	**93.30**	**50**	⇑P		**P**	**06 33 30.1**	**+0.9**
I14A	baz=94 **Mackay**	**93.38**	**45**	⇓P		**P**	**06 33 30.4**	**+0.9**
C12B	baz=94 **Naegeli Ranch,**	**93.41**	**41**	⇓P		**P**	**06 33 30.4**	**+1.1**
Z20A	baz=94 **Nine Sixteen R**	**93.43**	**57**	⇓P		**P**	**06 33 30.8**	**+0.9**
F13A	baz=94 **Darby**	**93.45**	**43**	⇓P		**P**	**06 33 30.6**	**+0.9**
DGAR	baz=94 **Diego Garcia**	**93.57**	**261**	PFAKE			06 33 40.0	+9.2
DGAR	comp=Z,2μm,20.0s			LR		LR		
H14A	**Leadore**	**93.67**	**44**	⇓P		**P**	**06 33 31.7**	**+0.9**
221A	baz=94 **Mesquite Ranch**	**93.75**	**58**	⇓P		**P**	**06 33 32.8**	**+1.5**
E13A	baz=94 **Victor**	**93.77**	**43**	⇓P		**P**	**06 33 32.5**	**+1.4**
D13A	baz=94 **Huson**	**93.83**	**42**	⇓P		**P**	**06 33 32.7**	**+1.4**
SRU	baz=94 **San Rafael**	**93.84**	**50**	⇓P		**P**	**06 33 33.0**	**+1.4**
Y20A	baz=94 **Horse Springs,**	**93.85**	**56**	⇑P		**P**	**06 33 33.2**	**+1.3**
HWUT	baz=94 **Hardware Ranch**	**93.90**	**48**	PFAKE			06 33 40.0	+8.1
HWUT	comp=Z,2μm,22.0s			LR		LR		
121A	**Cookes Peak, D**	**93.90**	**57**	⇓P		**P**	**06 33 33.3**	**+1.2**
HVS	baz=94 **Khovu-Aksy**	**93.93**	**322**	*c i*P		**P**	**06 33 31.1**	**-0.6**
X20A	**Quemado**	**93.94**	**55**	⇓P		**P**	**06 33 32.9**	**+0.6**
C13A	baz=94 **Hot Springs**	**93.97**	**41**	⇑P		**P**	**06 33 33.3**	**+1.4**
I15A	baz=94 **Monteview**	**94.06**	**45**	⇓P		**P**	**06 33 33.7**	**+1.2**
MSO	baz=94 **Missoula**	**94.07**	**42**	PFAKE			06 33 40.0	+7.5
MSO	comp=Z,970nm,21.0s			LR		LR		
F14A	**Wisdom**	**94.08**	**43**	⇓P		**P**	**06 33 34.0**	**+1.3**
MCMT	baz=94 **McKenzie Canyo**	**94.09**	**44**	*e*P		**P**	**06 33 33.5**	**+0.7**
W20A	comp=Z,2.3nm,1.3s **Ramah**	**94.12**	**55**	⇓P		**P**	**06 33 34.3**	**+1.2**
H15A	baz=94 **Lima**	**94.16**	**45**	⇑P		**P**	**06 33 34.3**	**+1.3**
P18A	baz=94 **Preston Nutter**	**94.21**	**50**	⇓P		**P**	**06 33 34.6**	**+1.1**
E14A	baz=94 **Clinton**	**94.21**	**43**	⇑P		**P**	**06 33 35.0**	**+1.8**
Z21A	baz=94 **St. Cloud Mine**	**94.22**	**57**	⇓P		**P**	**06 33 34.7**	**+1.0**
222A	baz=94 **Williams Famil**	**94.32**	**58**	⇓P		**P**	**06 33 34.8**	**+0.8**
V20A	baz=94 **Brimhall**	**94.35**	**54**	⇑P		**P**	**06 33 34.6**	**+0.5**
Y21A	baz=95 **Point of Rocks**	**94.43**	**56**	⇑P		**P**	**06 33 36.2**	**+1.6**
D14A	baz=95 **Greenough**	**94.44**	**42**	⇓P		**P**	**06 33 35.3**	**+1.1**
DLMT	baz=95 **Dillon**	**94.44**	**44**	*e*P		**P**	**06 33 35.1**	**+0.9**
X21A	comp=Z,7.3nm,1.4s **Alamocita Cree**	**94.48**	**55**	⇓P		**P**	**06 33 36.2**	**+1.4**
U20A	baz=95 **Newcomb**	**94.49**	**53**	⇓P		**P**	**06 33 35.8**	**+1.0**
A13A	baz=95 **Flathead Natio**	**94.51**	**40**	⇑P		**P**	**06 33 35.5**	**+1.1**
AHID	baz=95 **Auburn Hatcher**	**94.60**	**47**	PFAKE			06 33 50.0	+15
AHID	comp=Z,2μm,21.0s			LR		LR		
I16A	**Newdale**	**94.70**	**46**	⇓P		**P**	**06 33 37.1**	**+1.6**
PV10	baz=95 **Paradox Valley**	**94.71**	**51**	*e*P		**P**	**06 33 38.9**	**+3.2**
MVCO	comp=Z,46nm,0.9s **Mesa Verde**	**94.76**	**53**	PFAKE			06 33 50.0	+14
MVCO				LR		LR		
	comp=Z,3μm,22.0s							
E15A	**Deer Lodge**	**94.77**	**43**	⇓P		**P**	**06 33 36.6**	**+0.9**
Z22A	baz=95 **Elephant Butte**	**94.78**	**57**	⇓P		**P**	**06 33 37.2**	**+1.1**
Y22A	baz=95 **Socorro**	**94.97**	**56**	⇓P		**P**	**06 33 37.8**	**+0.8**
PV01	baz=95 **Paradox Valley**	**94.98**	**52**	*e*P		**P**	**06 33 39.3**	**+2.3**
S20A	comp=Z,570nm,1.5s **Disappointment**	**95.05**	**52**	⇑P		**P**	**06 33 38.4**	**+1.1**
IMW	baz=95 **Indian Meadow**	**95.08**	**46**	*e*P		**P**	**06 33 38.6**	**+1.3**
H16A	comp=Z,2.1nm,0.6s **Russell Place,**	**95.13**	**45**	⇓P		**P**	**06 33 38.9**	**+1.4**
P19A	baz=95 **Cripple Cowboy**	**95.14**	**50**	⇓P		**P**	**06 33 38.6**	**+0.9**
A14A	baz=95 **Double T Ranch**	**95.14**	**40**	⇓P		**P**	**06 33 39.1**	**+1.8**
R20A	baz=95 **Redvale**	**95.14**	**52**	⇓P		**P**	**06 33 39.1**	**+1.4**
U21A	baz=95 **Nageezi**	**95.17**	**54**	⇓P		**P**	**06 33 39.2**	**+1.3**
BOZ	baz=95 **Bozeman (W)**	**95.18**	**44**	PFAKE			06 33 50.0	+12
BOZ	comp=Z,2μm,22.0s			LR		LR		
WMQ	**Urumqi**	**95.20**	**314**	P		**P**	**06 33 37.3**	**-0.4**
WMQ				pP		**pP**	**06 33 45.3**	**-1.2**
WMQ				sP		**sP**	**06 33 48.5**	**-1.2**
WMQ				PP		**PP**	**06 37 29.0**	**+1.0**
WMQ				SKS		**SKSac**	**06 44 10.0**	**-1.8**
WMQ				S		**S**	**06 44 47.5**	**-3.9**
WMQ				sS		**sS**	**06 45 01.5**	**-4.6**
WMQ				SS		**SS**	**06 51 17.5**	**-1.1**
WMQ	comp=Z,37nm,1.3s			pmax		pmax		
WMQ	comp=N,1μm,19.0s			LR		LR		
WMQ	comp=E,1μm,17.2s			LR		LR		
	comp=Z,1μm,21.4s							
F16A	**Kennard Place,**	**95.22**	**44**	⇑P		**P**	**06 33 39.4**	**+1.6**
O19A	baz=95 **Miners Draw (B**	**95.23**	**50**	⇓P		**P**	**06 33 38.9**	**+0.9**
C15A	baz=95 **Salmond Ranch,**	**95.25**	**42**	⇓P		**P**	**06 33 38.9**	**+1.0**
E16A	baz=95 **East Helena**	**95.44**	**43**	⇓P		**P**	**06 33 40.1**	**+1.3**
324A	baz=96 **Moseley Ranch,**	**95.45**	**59**	⇓P		**P**	**06 33 40.2**	**+1.0**
B15A	baz=96 **Bradely Ranch,**	**95.45**	**41**	⇑P		**P**	**06 33 40.2**	**+1.4**
P20A	baz=96 **De Beque**	**95.53**	**51**	⇑P		**P**	**06 33 40.5**	**+1.1**
A15A	baz=96 **Johnson Ranch,**	**95.57**	**40**	⇑P		**P**	**06 33 40.7**	**+1.4**
224A	baz=96 **Cornudas Mount**	**95.60**	**58**	⇓P		**P**	**06 33 41.2**	**+1.4**
MNTX	baz=96 **Cornudas Mount**	**95.61**	**59**	*e*P		**P**	**06 33 40.4**	**+0.6**
MNTX	comp=Z,10nm,1.8s			LR		LR		
L19A	comp=Z,563nm,19.0s **Farson**	**95.62**	**48**	⇑P		**P**	**06 33 40.8**	**+1.0**
LKWY	baz=96 **Lake**	**95.66**	**45**	PFAKE			06 33 50.0	+10
LKWY	comp=Z,6μm,20.0s			LR		LR		
ANMO	**Albuquerque**	**95.67**	**55**	*e*P		**P**	**06 33 42.0**	**+1.8**
ANMO	comp=Z,3.8nm,1.3s **Albuquerque**	**95.67**	**55**	LR		LR	07 06 45.2	
425A	comp=Z,1μm,21.9s,baz=254,slow=29 **Indio Mountain**	**95.67**	**60**	⇓P		**P**	**06 33 40.6**	**+0.4**
BW06	baz=96 **Boulder Array**	**95.68**	**47**	PFAKE			06 33 50.0	+10
BW06	comp=Z,1μm,20.0s			LR		LR		
PDAR	**Pinedale Array**	**95.68**	**47**	P		**P**	**06 33 40.4**	**+0.3**
PDAR				PP		**PP**	**06 37 32.4**	**+0.4**
PDAR	**Pinedale Array**	**95.68**	**47**	P		**P**	**06 33 40.4**	**+0.3**
PDAR	comp=Z,0.5nm,0.7s,baz=266,slow=6.0,SNR=2.6			PP		**PP**	**06 37 32.4**	**+0.4**
PDAR	comp=Z,0.3nm,0.5s,baz=220,slow=3.9,SNR=3.8			LR		LR	07 16 12.6	
X23A	comp=Z,1μm,18.1s,baz=290,slow=35 **Hourglass Bar**	**95.78**	**56**	⇓P		**P**	**06 33 41.7**	**+1.0**
C16A	baz=96 **Fuhringer Ranc**	**95.80**	**42**	⇓P		**P**	**06 33 41.7**	**+1.4**
124A	baz=96 **Stringfield Ra**	**95.83**	**58**	⇑P		**P**	**06 33 41.7**	**+0.7**
325A	baz=96 **Bean Ranch, Si**	**95.85**	**59**	⇑P		**P**	**06 33 42.1**	**+1.1**
F17A	baz=96 **Fitzpatrick Pl**	**95.90**	**44**	⇑P		**P**	**06 33 41.9**	**+1.0**
N20A	baz=96 **Spence Gulch,**	**96.02**	**49**	⇑P		**P**	**06 33 43.3**	**+1.6**
J19A	baz=96 **Crowheart**	**96.18**	**47**	⇓P		**P**	**06 33 44.1**	**+1.8**
526A	baz=96 **Mary Lane Ranc**	**96.22**	**61**	⇑P		**P**	**06 33 44.1**	**+1.4**
A16A	baz=96 **West Butte Ran**	**96.27**	**41**	⇓P		**P**	**06 33 43.7**	**+1.2**
U23A	baz=96 **El Rito**	**96.27**	**54**	⇓P		**P**	**06 33 43.6**	**+0.6**
L20A	baz=96 **Wamsutter**	**96.31**	**48**	⇑P		**P**	**06 33 44.1**	**+1.2**
TXAR	baz=96 **Lajitas Array**	**96.37**	**61**	P		**P**	**06 33 44.4**	**+1.0**
TXAR	**Lajitas Array**	**96.37**	**61**	P		**P**	**06 33 44.4**	**+1.0**
TXAR	comp=Z,0.6nm,0.8s,baz=224,slow=6.4,SNR=6.3 comp=Z,729nm,19.1s,baz=305,slow=32			LR		LR	07 11 50.4	
426A	**McDonald Obser**	**96.43**	**60**	⇓P		**P**	**06 33 45.0**	**+1.2**
SMCO	baz=97 **Snowmass**	**96.49**	**51**	*e*P		**P**	**06 33 44.8**	**+0.7**
F18A	comp=Z,2.2nm,1.1s **Big Timber**	**96.53**	**44**	⇓P		**P**	**06 33 45.1**	**+1.4**
N21A	baz=97 **Black Mountain**	**96.54**	**49**	⇓P		**P**	**06 33 45.4**	**+1.3**
B17A	baz=97 **L&G Farms, Che**	**96.56**	**42**	⇓P		**P**	**06 33 45.8**	**+2.0**
W24A	baz=97 **Lazy 6 Ranch,**	**96.57**	**55**	⇓P		**P**	**06 33 45.8**	**+1.5**
Z25A	baz=97 **Roswell**	**96.59**	**57**	⇓P		**P**	**06 33 45.6**	**+1.3**
T23A	baz=97 **Casias Ranch,**	**96.59**	**53**	⇑P		**P**	**06 33 45.6**	**+1.2**
RLMT	baz=97 **Red Lodge**	**96.59**	**45**	PFAKE			06 34 00.0	+16
RLMT	comp=Z,5μm,20.0s			LR		LR		
E18A	**Harlowton**	**96.60**	**43**	⇑P		**P**	**06 33 46.1**	**+2.0**
627A	baz=97 **Terlingua Ranc**	**96.64**	**61**	⇑P		**P**	**06 33 45.8**	**+1.2**
527A	baz=97 **Woodward Ranch**	**96.64**	**61**	⇓P		**P**	**06 33 46.0**	**+1.4**
V24A	baz=97 **Rampart Ranch,**	**96.82**	**55**	⇓P		**P**	**06 33 46.8**	**+1.3**
F19A	baz=97 **Roth Farm, Mol**	**97.03**	**44**	⇑P		Pdif	06 33 47.9	+1.8
R23A	baz=97 **Moffat**	**97.07**	**52**	⇓P		Pdif	06 33 48.0	+1.3
O22A	baz=97 **Kremmling**	**97.08**	**50**	⇓P		Pdif	06 33 48.3	+1.6
EGMT	baz=97 **Eagleton**	**97.14**	**42**	PFAKE			06 34 00.0	+13
EGMT	comp=Z,1μm,21.0s			LR		LR		
EGMT	**Eagleton**	**97.14**	**42**	⇓P		Pdif	06 33 48.7	+2.2
SDCO	baz=97 **Great Sand Dun**	**97.20**	**53**	PFAKE			06 34 00.0	+13
SDCO	comp=Z,2μm,20.0s			LR		LR		
B18A	**Beardsley Farm**	**97.24**	**42**	⇑P		Pdif	06 33 49.2	+2.3
E19A	baz=97 **Rath Farm, Rou**	**97.31**	**44**	⇑P		Pdif	06 33 49.4	+2.1
N22A	baz=98 **Wattenberg Ran**	**97.33**	**50**	⇑P		Pdif	06 33 48.4	+0.7
J21A	baz=98 **Lysite**	**97.33**	**47**	⇓P		Pdif	06 33 48.6	+1.0
I21A	baz=98 **Big Trails, Te**	**97.57**	**47**	⇑P		Pdif	06 33 50.0	+1.4
ISCO	baz=98 **Idaho Springs**	**97.67**	**51**	PFAKE			06 34 00.0	+11
ISCO	comp=Z,3μm,20.0s			LR		LR		
YKA	**Yellowknife Ar**	**99.09**	**27**	P		**Pdif**	**06 33 54.7**	**0.0**
YKA	**Yellowknife Ar**	**99.09**	**27**	P		**Pdif**	**06 33 54.7**	**0.0**
YKW3	comp=Z,1.6nm,1.0s,baz=252,slow=4.7,SNR=16 **Yellowknife Ar**	**99.11**	**27**	*e*P		**Pdif**	**06 33 54.2**	**-0.5**
AMTX	comp=Z,0.4nm,1.6s **Amarillo**	**99.44**	**56**	PFAKE			06 34 10.0	+13
AMTX	comp=Z,1μm,22.0s			LR		LR		
MK31	**Makanchi Array**	**99.70**	**316**	*e*P		**Pdif**	**06 33 57.2**	**-0.6**
MK31	**Makanchi Array**	**99.70**	**316**	*e*P		**Pdif**	**06 33 57.2**	**-0.6**
MKAR	**Makanchi Array**	**99.70**	**316**	P		**Pdif**	**06 33 56.3**	**-1.5**
MKAR	comp=Z,3.0nm,0.9s			pmax		pmax		
MKAR	comp=Z,732nm,19.7s			MLR		MLR		
MKAR	**Makanchi Array**	**99.70**	**316**	P		**Pdif**	**06 33 56.3**	**-1.5**
MKAR				PKKPbc		**PKKPbc**	**06 50 17.4**	**-3.1**
MKAR	**Makanchi Array**	**99.70**	**316**	P		**Pdif**	**06 33 56.3**	**-1.5**
MKAR	comp=Z,3.4nm,0.9s,baz=98,slow=5.4,SNR=18			PKKPbc		**PKKPbc**	**06 50 17.4**	**-3.1**
	comp=Z,0.4nm,0.7s,baz=271,slow=3.0,SNR=3.7							
MKAR	comp=Z,732nm,19.7s,baz=359,slow=35			LR		LR	07 18 38.8	
JCT	**Junction City**	**99.91**	**61**	PFAKE			06 34 10.0	+11
JCT	comp=Z,632nm,21.0s			LR		LR		
ZAA0	**Zalesovo Array**	**99.97**	**323**	*e*P		**Pdif**	**06 33 56.0**	**-2.7**
ZALV	**Zalesovo Beam**	**99.97**	**323**	P		**Pdif**	**06 33 57.1**	**-1.7**
ZALV	comp=Z,5.0nm,0.9s			pmax		pmax		
ZALV	comp=Z,1μm,20.8s			MLR		MLR		
ZALV	**Zalesovo Beam**	**99.97**	**323**	P		**Pdif**	**06 33 57.1**	**-1.7**
ZALV	**Zalesovo Beam**	**99.97**	**323**	P		**Pdif**	**06 33 57.1**	**-1.7**
ZALV	comp=Z,4.6nm,0.9s,baz=107,slow=5.0,SNR=12			LR		LR	07 17 56.4	
EFI	comp=Z,1μm,20.8s,baz=257,slow=35 **East Falkland**	**100.44**	**153**	PFAKE			06 34 10.0	+9.0
EFI	comp=Z,1μm,19.0s			LR		LR		
PAYG	**Puerto Ayora**	**100.53**	**94**	PFAKE			06 34 10.0	+7.7
PAYG	comp=Z,862nm,20.0s			LR		LR		
OGNE	**Ogallala**	**100.61**	**50**	PFAKE			06 34 10.0	+7.9
OGNE	comp=Z,2μm,20.0s			LR		LR		
DGMT	**Dagmar**	**100.84**	**43**	PFAKE			06 34 10.0	+7.1
DGMT	comp=Z,1μm,22.0s			LR		LR		
NVS	**Novosibirsk**	**101.09**	**324**	*e*P		**Pdif**	**06 34 01.9**	**-1.8**
WMOK	**Wichita Mounta**	**101.72**	**57**	PFAKE			06 34 20.0	+13
WMOK	comp=Z,822nm,19.0s			LR		LR		
KSH	**Kashi**	**102.56**	**308**	*e*P		**Pdif**	**06 34 13.0**	**+2.1**
KSH				*es*P			06 34 27.3	
KSH				*e*PP		**PKiKP**	**06 38 28.8**	**-3.2**
KSH				*e*SKS		**SKSac**	**06 44 49.3**	**+0.3**
KSH				*e*S		SKKSac	06 45 50.8	+22
KSH				*es*S		sS	06 46 09.3	+0.1
KSH				*e*SS		**SS**	**06 53 03.0**	**+0.9**
KSH	comp=Z,2.0nm,0.5s			pmax		pmax		
KSH	comp=Z,66nm,4.3s			pmax		pmax		
KSH	comp=N,190nm,4.0s			LR		LR		
KSH	comp=E,130nm,4.4s			LR		LR		
KSH	comp=Z,120nm,4.9s			LR		LR		
KURK	**Kurchatov**	**102.94**	**319**	P		**Pdif**	**06 34 10.9**	**-1.2**
KURK							06 38 28.6	
KURK	comp=Z,1.0nm,1.0s			pmax		pmax		
KURK	**Kurchatov**	**102.94**	**319**	P		**Pdif**	**06 34 10.8**	**-1.2**
KURK				PP		**PP**	**06 38 28.6**	**+1.8**
KURK	comp=Z,1μm,21.0s			LR		LR		
KURBB	**Kurchatov Arra**	**102.98**	**319**	P		**Pdif**	**06 34 10.8**	**-1.4**
KURBB	comp=Z,0.9nm,1.0s,baz=98,slow=3.8,SNR=6.4			PP		**PP**	**06 38 28.6**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=99,slow=7.5,SNR=8.8							
FFC	**Flin Flon**	**103.49**	**37**	PFAKE			06 34 30.0	+16
FFC	comp=Z,3μm,19.0s			LR		LR		
TKM2	**Tokmak 2**	**103.50**	**311**	PFAKE			06 34 30.0	+15
TKM2	comp=Z,1μm,21.0s			LR		LR		
RER	**Riviere de l'E**	**103.91**	**242**	PFAKE			06 34 30.0	+13
RER	comp=Z,1μm,20.0s			LR		LR		
AAK	**Ala-Archa**	**104.25**	**311**	PFAKE			06 34 30.0	+12
AAK	comp=Z,977nm,19.0s			LR		LR		
KSU1	**Kansas State U**	**104.30**	**53**	PFAKE			06 34 30.0	+12
KSU1	comp=Z,2μm,20.0s			LR		LR		
EKS2	**Erkin-Say**	**104.78**	**311**	PFAKE			06 34 30.0	+9.3
EKS2	comp=Z,1μm,20.0s			LR		LR		
ECSD	**EROS Data Cent**	**105.09**	**48**	PFAKE			06 38 50.0	
ECSD	comp=Z,2μm,19.0s			LR		LR		
LCO	**Las Campanas**	**106.75**	**128**	PFAKE			06 38 50.0	
LCO	comp=Z,1μm,20.0s			LR		LR		
KKAR	**Karatay Array**	**107.22**	**311**	*e*PKPdf		**PKiKP**	**06 38 41.5**	**+1.1**
SCIA	**State Center**	**107.30**	**51**	PFAKE			06 38 50.0	
SCIA	comp=Z,3μm,20.0s			LR		LR		
TGUH	**Tegucigalpa,Un**	**107.39**	**80**	PFAKE			06 38 50.0	
TGUH	comp=Z,492nm,20.0s			LR		LR		
TRQA	**Tornquist**	**107.54**	**140**	PFAKE			06 38 50.0	
TRQA	comp=Z,1μm,21.0s			LR		LR		
TEIG	**Tepich**	**107.82**	**74**	PFAKE			06 38 50.0	
TEIG	comp=Z,526nm,20.0s			LR		LR		
VBMS	**Vicksburg**	**108.03**	**61**	PFAKE			06 38 50.0	
VBMS	comp=Z,751nm,20.0s			LR		LR		
BRVK	**Borovoye**	**108.37**	**321**	PFAKE			06 38 50.0	
BRVK	comp=Z,1μm,21.0s			LR		LR		
JTS	**JuntasAbangare**	**108.67**	**85**	PFAKE			06 39 00.0	
JTS	comp=Z,955nm,19.0s			LR		LR		
EYMN	**Ely**	**109.15**	**44**	PFAKE			06 39 00.0	
EYMN	comp=Z,3μm,19.0s			LR		LR		
OXF	**Oxford**	**109.29**	**59**	PFAKE			06 39 00.0	
OXF	comp=Z,1μm,20.0s			LR		LR		
NNA	**Nana**	**109.29**	**110**	PFAKE			06 39 00.0	
NNA	comp=Z,737nm,20.0s			LR		LR		
JFWS	**Jewell Farm**	**109.59**	**50**	PFAKE			06 39 00.0	
JFWS	comp=Z,4μm,21.0s			LR		LR		
MSEY	**Mahe Island**	**110.42**	**258**	PFAKE			06 39 00.0	
MSEY	comp=Z,1μm,19.0s			LR		LR		
COWI	**Conover**	**110.63**	**47**	PFAKE			06 39 00.0	
COWI	comp=Z,4μm,22.0s			LR		LR		
LRAL	**Lakeview Retre**	**111.09**	**61**	PFAKE			06 39 00.0	
LRAL	comp=Z,596nm,19.0s			LR		LR		
LVC	**Limon Verde**	**111.38**	**123**	PFAKE			06 39 00.0	
LVC	comp=Z,1μm,20.0s			LR		LR		
ABPO	**Ambohimpanom**	**112.02**	**241**	PFAKE			06 39 00.0	
ABPO	comp=Z,1μm,21.0s			LR		LR		
OTAV	**Otavalo**	**112.08**	**97**	PFAKE			06 39 00.0	
OTAV	comp=Z,1μm,22.0s			LR		LR		
BCIP	**Isla Barro Col**	**113.27**	**87**	PFAKE			06 39 00.0	
BCIP	comp=Z,499nm,19.0s			LR		LR		
ACSO	**Alum Creek Sta**	**114.87**	**53**	PFAKE			06 39 10.0	+15
ACSO	comp=Z,2μm,20.0s			LR		LR		
ARU	**Arti**	**115.08**	**325**	*i* PKIKP		**PKPdf**	**06 38 53.9**	**-0.9**

ARU 06 45 37.7
AKTO Aktyubinsk 116.00 318 PKIKP PKPdf 06 38 55.7 -1.1
AKTO pmax pmax
comp=Z,3.0nm,0.9s
AKTO Aktyubinsk 116.00 318 PKP PKPdf 06 38 55.6 -1.1
AKTO Aktyubinsk 116.00 318 PKP PKPdf 06 38 55.6 -1.1
comp=Z,3.0nm,0.9s,baz=274,slow=2.1,SNR=5.3
BLA Blacksburg 116.78 57 PFAKE 06 39 10.0 +11
BLA LR LR
comp=Z,1μm,20.0s
NHSC New Hope 116.80 61 PFAKE 06 39 10.0 +11
NHSC LR LR
comp=Z,1μm,19.0s
KBS Kingsbay 117.14 355 PFAKE 06 39 10.0 +12
KBS LR LR
comp=Z,825nm,19.0s
ERPA Erie 117.14 51 PFAKE 06 39 10.0 +11
ERPA LR LR
comp=Z,1μm,19.0s
SPITS Spitsbergen Ar 117.39 354 PKP PKPdf 06 38 56.5 -2.2
SPITS Spitsbergen Ar 117.39 354 PKP PKPdf 06 38 56.5 -2.2
comp=Z,3.2nm,0.7s,baz=126,slow=4.2,SNR=6.0
MTDJ Mount Denham 117.40 78 PFAKE 06 39 10.0 +10
MTDJ LR LR
comp=Z,371nm,21.0s
CNNC Cliffs of the 118.78 59 PFAKE 06 39 10.0 +7.5
CNNC LR LR
comp=Z,992nm,20.0s
CBN Corbin 119.21 55 PFAKE 06 39 20.0 +17
CBN LR LR
comp=Z,2μm,22.0s
GTBY Guantanamo Bay 119.94 77 PFAKE 06 39 20.0 +15
GTBY LR LR
comp=Z,453nm,19.0s
BINY Binghamton 120.11 51 PFAKE 06 39 20.0 +15
BINY LR LR
comp=Z,1μm,20.0s
LONY Lake Ozonia 120.91 48 PFAKE 06 39 20.0 +14
LONY LR LR
comp=Z,2μm,20.0s
NCB Newcomb 121.24 49 PFAKE 06 39 20.0 +13
NCB LR LR
comp=Z,4μm,20.0s
APA Apatity 121.97 341⇑ *i*PKIKP **PKPdf 06 39 10.0 +2.3**
APA *e*PS PP 06 40 48.0 +6.1
APA pmax pmax
comp=Z,800nm,3.0s
APA MLR MLR
comp=Z,5μm,20.0s
SDV Santo Domingo 122.00 90 PFAKE 06 39 20.0 +10
SDV LR LR
comp=Z,5.0nm,21.0s
KEV Kevo 122.29 345 PFAKE 06 39 20.0 +12
KEV LR LR
comp=Z,1μm,20.0s
SAML Samuel 122.75 113 PFAKE 06 39 20.0 +9.2
SAML LR LR
comp=Z,655nm,20.0s
ARCES ARCESS Array B 122.81 345 PKP PKPdf 06 39 07.5 -1.9
ARCES ARCESS Array B 122.81 345 PKP PKPdf 06 39 07.5 -1.9
comp=Z,5.4nm,0.6s,baz=98,slow=2.5,SNR=14
LBNH Lisbon 122.85 48 PFAKE 06 39 20.0 +10
LBNH LR LR
comp=Z,3μm,20.0s
KLMR Klimovskoe 123.30 333 *e*PKIKP **PKPdf 06 39 07.7 -2.7**
KLMR pmax pmax
comp=Z,33nm,1.1s
KLMR MLR MLR
comp=Z,2μm,22.0s
SDDR Presa de Saban 123.37 78 PFAKE 06 39 20.0 +8.1
SDDR LR LR
comp=Z,678nm,19.0s
MAK Makhachkala 124.03 311 *i* PKIKP **PKPdf 06 39 12.3 -0.1**
MAK *e* 06 41 03.8
MAK *e*SS SS 06 57 40.9 -4.6
SFJD Kangerlussuaq 124.07 17 PFAKE 06 39 20.0 +8.3
SFJD LR LR
comp=Z,2μm,19.0s
TBLG Delisi 126.25 309 *e*PKHKP PKPpre 06 38 52.2
SPB Sao Paulo 126.47 138 PFAKE 06 39 30.0 +12
SPB LR LR
comp=Z,1μm,22.0s
MOS Moscow 126.49 328 *i* PKIKP **PKPdf 06 39 15.6 -1.1**
MOS pmax pmax
comp=Z,44nm,0.9s
MOS MLR MLR
comp=Z,1μm,20.0s
GNI Garni 126.49 308 PFAKE 06 39 30.0 +13
GNI LR LR
comp=Z,852nm,21.0s
KIV Kislovodsk 127.30 313⇓ *i*PKIKP **PKPdf 06 39 18.6 -0.2**
KIV *i* 06 39 24.0
KIV pmax pmax
comp=Z,16nm,1.3s
OBN Obninsk 127.31 327⇑ *i*PKIKP **PKPdf 06 39 18.7 +0.4**
OBN *e* 06 41 19.1
OBN *i* SS SS 06 58 23.8 -1.6
OBN pmax pmax
comp=Z,19nm,1.3s
OBN MLR MLR
comp=Z,2μm,20.0s
VSR Storozhevoye 127.46 322 *e*PKIKP **PKPdf 06 39 17.7 -1.0**
VSR pmax pmax
comp=E,10.0nm,1.0s
VSR pmax pmax
comp=Z,20nm,1.0s
VSR pmax pmax
comp=N,6.0nm,0.7s
VSR MLR MLR
comp=N,970nm,23.0s
VSR MLR MLR
comp=E,550nm,23.0s
VSR MLR MLR
comp=Z,2μm,23.0s
SJG San Juan 128.07 80 PFAKE 06 39 30.0 +9.2
SJG LR LR
comp=Z,363nm,20.0s
FINES FINESS Array B 128.33 338 PKP PKPdf 06 39 20.4 +0.4
FINES FINESS Array B 128.33 338 PKP PKPdf 06 39 20.4 +0.4
comp=Z,9.8nm,1.0s,baz=221,slow=1.8,SNR=5.6
KMBO Kilima Mbogo 128.65 254 PFAKE 06 39 30.0 +7.5
KMBO LR LR
comp=Z,969nm,19.0s
LSZ Lusaka 129.33 233 PFAKE 06 39 40.0 +16
LSZ LR LR
comp=Z,2μm,22.0s
BBSR BB Station 129.84 62 PFAKE 06 39 40.0 +16
BBSR LR LR
comp=Z,737nm,19.0s
GRGR Grenville 131.33 89 PFAKE 06 39 40.0 +13
GRGR LR LR
comp=Z,440nm,19.0s
ANWB Willy Bob 132.14 81 PFAKE 06 39 40.0 +11
ANWB LR LR
comp=Z,450nm,21.0s
FDF Fort de France 132.31 85 PFAKE 06 39 40.0 +11
FDF LR LR
comp=Z,449nm,20.0s
NB2 NORSAR Subarra133.19 345 PKPdf PKPdf 06 39 30.9 +1.5
comp=Z,17nm,2.0s,baz=31,slow=1.9
NB2 NORSAR Subarra133.19 345 PKPdf PKPdf 06 39 30.9 +1.5
baz=31,slow=1.9
NOA NORSAR Array B133.19 345 PKP PKPdf 06 39 29.2 -0.1
NOA NORSAR Array B133.19 345 PKP PKPdf 06 39 29.3 -0.1
comp=Z,1.3nm,0.7s,baz=33,slow=2.0,SNR=5.7
HFS Hagfors 133.30 343 PKP PKPdf 06 39 29.7 +0.2
HFS Hagfors 133.30 343 PKP PKPdf 06 39 29.7 +0.2
comp=Z,4.0nm,0.9s,baz=180,slow=1.2,SNR=4.3
AKASG Malin Array Be 133.33 325 PKIKP PKPdf 06 39 29.4 -0.5
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 133.33 325 PKP PKPdf 06 39 29.4 -0.5
AKASG Malin Array Be 133.33 325 PKP PKPdf 06 39 29.4 -0.5
comp=Z,3.9nm,0.8s,baz=74,slow=2.2,SNR=14
AK01 Malin Array Si 133.34 325 *e*PKPdf **PKPdf 06 39 30.2 +0.3**
KIEV Kiev 133.34 325 *e*PKIKP **PKPdf 06 39 30.2 +0.3**
KIEV MLR MLR
comp=Z,2μm,21.0s
KIEV Kiev 133.34 325 *e*PKPdf **PKPdf 06 39 30.2 +0.3**
KIEV LR LR
comp=Z,2μm,21.0s
AK02 Malin Array Si 133.36 325 *e*PKPdf **PKPdf 06 39 30.1 +0.2**
ASF Jabal al Asfar 133.88 298 PKP PKPdf 06 39 32.6 +1.0
ASF Jabal al Asfar 133.88 298 PKP PKPdf 06 39 32.6 +1.0
comp=Z,3.2nm,0.8s,baz=360,slow=4.1,SNR=6.0

TSUM Tsumeb 133.97 220 PFAKE 06 39 40.0 +7.7
TSUM LR LR
comp=Z,2μm,19.0s
KONO Kongsberg 134.80 345 PFAKE 06 39 40.0 +7.7
KONO LR LR
comp=Z,2μm,21.0s
MBAR Mbarara 134.82 251 PFAKE 06 39 50.0 +16
MBAR LR LR
comp=Z,545nm,22.0s
BR131 Keskin Array S 134.91 309 *e*PKPdf **PKPdf 06 39 34.1 +0.7**
BRTR Keskin Array B 134.91 309 PKP PKPdf 06 39 34.0 +0.5
BRTR Keskin Array B 134.91 309 PKP PKPdf 06 39 34.0 +0.5
comp=Z,3.2nm,0.9s,baz=45,slow=1.9,SNR=11
KIS Kishinev 135.39 321 *e*PKP **PP 06 42 10.0 -0.3**
ANTO Ankara 135.49 310 PFAKE 06 39 50.0 +16
ANTO LR LR
comp=Z,617nm,22.0s
CSS Prodhromos 136.35 303 PFAKE 06 39 50.0 +14
CSS LR LR
comp=Z,733nm,22.0s
KWP Kalwaria Pacla 137.40 327 PFAKE 06 39 50.0 +12
KWP LR LR
comp=Z,2μm,19.0s
ISP Isparta 137.80 308 PFAKE 06 39 50.0 +11
ISP LR LR
comp=Z,618nm,20.0s
KOLS Kolonicke sedl 138.04 327 *e*PKIKP **PKPdf 06 39 40.4 +1.6**
KOLS Kolonicke sedl 138.04 327 *e*PKP **PKPdf 06 39 40.4 +1.6**
UZH Uzhgorod 138.22 326 *e*PKIKP PKPdf 06 39 33.6 -5.4
UZH *e* 06 39 45.0
UZH *e*PPP PPP 06 45 32.8
STHS Stebnicka Huta 138.28 328 *e*PKIKP **PKPdf 06 39 39.4 +0.2**
STHS Stebnicka Huta 138.28 328 *e*PKP **PKPdf 06 39 39.4 +0.2**
CRVS Cervenica-Dubn 138.49 327 *e*PKIKP **PKPdf 06 39 39.7 +0.1**
CRVS Cervenica-Dubn 138.49 327 *e*PKP **PKPdf 06 39 39.7 +0.1**
BSEG Bad Segeberg 139.50 340 *e*L L 07 40 08.8
comp=Z,3μm,21.6s
OKC Ostrava-Krasne 139.52 330 AMS AMS 07 38 10.0
comp=Z,1μm,22.1s
MORC Moravsky Berou 139.84 331 *e*PKIKP **PKPdf 06 39 43.6 +1.6**
MORC Moravsky Berou 139.84 331 *e*PKPdf **PKPdf 06 39 43.6 +1.6**
PSZ Piszkesteto 139.92 327 *e*PKIKP **PKPdf 06 39 42.2 -0.1**
PSZ MLR MLR
comp=Z,2μm,20.0s
PSZ Piszkesteto 139.92 327 *e*PKPdf **PKPdf 06 39 42.2 -0.1**
PSZ LR LR
comp=Z,2μm,20.0s
DPC Dobruska-Polom 140.00 332 *e*PKIKP **PKPdf 06 39 43.6 +1.3**
DPC MLR MLR
comp=Z,3μm,29.1s
DPC Dobruska-Polom 140.00 332 *e*PKPdf **PKPdf 06 39 43.6 +1.3**
DPC AMS AMS 07 36 10.0
comp=Z,3μm,29.1s
UPC Upice 140.02 333 *e*PKIKP **PKPdf 06 39 42.3 0.0**
UPC Upice 140.02 333 *e*PKPdf **PKPdf 06 39 42.3 0.0**
VYHS Vyhne 140.09 328 *e*PKIKP **PKPdf 06 39 43.1 +0.6**
VYHS Vyhne 140.09 328 *e*PKP **PKPdf 06 39 43.1 +0.6**
VRAC Vranov 140.62 331 PKP PKPdf 06 39 43.1 -0.3
VRAC Vranov 140.62 331 PKP PKPdf 06 39 43.1 -0.3
comp=Z,2.2nm,0.3s,baz=83,slow=17,SNR=4.4
BRG Berggiesshubel 140.63 335 *e*PKP **PKPdf 06 39 47.7 +4.3**
comp=Z,35nm,1.8s
BRG *i* 06 39 51.2
comp=Z,30nm,1.5s
BRG Berggiesshubel 140.63 335 *e*PKPdf **PKPdf 06 39 45.7 +2.3**
BRG *e*L L 07 50 42.5
comp=Z,936nm,19.4s
BRG Berggiesshubel 140.63 335 *e*PKIKP **PKPdf 06 39 47.7 +4.3**
BRG pmax pmax
comp=Z,35nm,1.0s
PVCC Panska Ves 140.63 334 AMS AMS 07 39 10.0
comp=Z,2μm,25.7s
CLL Collm 140.67 336 *e*L L 07 38 25.1
comp=Z,840nm,21.2s
CLL Collm 140.67 336 *e*PKIKP **PKPdf 06 39 43.0 -0.4**
CLL pmax pmax
comp=Z,18nm,1.2s
CLL MLR MLR
comp=Z,1μm,24.0s
CLL Collm 140.67 336 *e*PKPdf **PKPdf 06 39 43.0 -0.4**
comp=Z,18nm,1.2s
CLL *e*PP **PP 06 42 42.0 -0.6**
CLL *e*PPP PPP 06 46 00.0
CLL *e*SSS SSS 07 06 08.0
NRDL Niedersach Rie 140.78 339 *e*L L 07 40 30.3
comp=Z,1μm,22.0s
PRU Pruhonice 141.04 333 *e*PKIKP **PKPdf 06 39 42.6 -1.5**
PRU MLR MLR
comp=Z,2μm,22.0s
PRU Pruhonice 141.04 333 *e*PKPdf **PKPdf 06 39 42.6 -1.5**
PRU AMS AMS 07 38 50.0
comp=Z,2μm,22.0s
TREC Trest 141.13 332 AMS AMS 07 36 50.0
comp=Z,2μm,25.4s
ZST Bratislava 141.15 329 *e*PKIKP **PKPdf 06 39 44.7 +0.3**
ZST Bratislava 141.15 329 *e*PKP **PKPdf 06 39 44.7 +0.3**
ESK Eskdalemuir 141.31 352 PFAKE 06 40 00.0 +16
ESK LR LR
comp=Z,666nm,19.0s
IBBN Ibbenburen 141.70 341 *e*PKPdf **PKPdf 06 39 46.3 +1.1**
IBBN *e*L L 07 45 58.3
comp=Z,1μm,21.1s
NKC Novy Kostel 141.73 335 AMS AMS 07 49 10.0
comp=Z,1μm,18.9s
MOX Moxa 141.73 336 *e*L L 07 46 21.7
comp=Z,1μm,20.2s
CONA Conrad Observa 141.93 330⇑ *i*PKPdf **PKPdf 06 39 42.2 -3.8**
comp=Z,22nm,1.3s
KHC Kasperske Hory 142.10 333 *e*PKIKP **PKPdf 06 39 44.2 -2.0**
KHC Kasperske Hory 142.10 333 *e*PKPdf **PKPdf 06 39 44.1 -2.0**
KHC Kasperske Hory 142.10 333 *e*PKPdf **PKPdf 06 39 43.1 -3.0**
KHC *ex* x 06 39 47.1
KHC *ep*PKP **PKiKP 06 39 50.5 +1.4**
KHC AMS AMS 07 38 40.0
comp=Z,2μm,24.6s
SANT Santorini 142.10 308 PFAKE 06 40 00.0 +13
SANT LR LR
comp=Z,531nm,20.0s
ROTZ Rotzenmuhle 142.19 335 *e*PKPdf **PKPdf 06 39 43.6 -2.6**
ROTZ *e*L L 07 46 06.2
comp=Z,1μm,20.5s
UBBA Unterbreizbach 142.20 338 *e*L L 07 43 01.1
comp=Z,1μm,22.0s
GEC2 GERESS Array S 142.26 333 *e*PKPdf **PKPdf 06 39 43.2 -3.3**
GEC2 *e*L L 07 47 30.0
comp=Z,1μm,19.1s
GEC2 GERESS Array S 142.26 333 *e*PKIKP **PKPdf 06 39 43.2 -3.3**
GERES GERESS Array B 142.26 333 PKPpre PKPpre 06 39 42.9
GERES GERESS Array B 142.26 333 PKhKP PKPpre 06 39 42.9
comp=Z,1.0nm,0.5s,baz=64,slow=3.1,SNR=6.5
WET Wettzell 142.39 334 *e*PKPdf **PKPdf 06 39 44.5 -2.1**
WET *e*L L 07 44 43.1
comp=Z,835nm,20.9s
WET Wettzell 142.39 334 *e*PKIKP **PKPdf 06 39 44.5 -2.1**
WET MLR MLR
comp=Z,800nm,20.9s
BUG Bochum--Univer 142.60 341 *e*L L 07 45 07.1
comp=Z,1μm,21.1s
GRF Grafenberg Arr 142.64 336 *e*PKPdf **PKPdf 06 39 45.0 -2.1**
GRF *e*L L 07 43 23.3
comp=Z,839nm,20.9s
GRF Grafenberg Arr 142.64 336 *e*PKIKP **PKPdf 06 39 45.0 -2.1**
GRF MLR MLR
comp=Z,800nm,20.9s
MOA Molln 142.74 331⇑ *i*PKPdf **PKPdf 06 39 42.8 -4.5**
comp=Z,24nm,1.4s
SOKA Soboth 143.21 329⇑ *i*PKPdf PKPab 06 39 44.5 +0.5
comp=Z,23nm,1.3s
TNS Taunus Mts 143.25 339 *e*PKPdf PKPbc 06 39 45.6 +0.4
TNS *e*L L 07 43 11.1
comp=Z,1μm,21.3s
TNS Taunus Mts 143.25 339 *e*PKIKP PKPbc 06 39 45.6 +0.4
TNS MLR MLR
comp=Z,1μm,21.3s
RJOB Jochberg 143.49 332 *e*PKPdf PKPbc 06 39 46.5 +0.6
RJOB *e*L L 07 42 43.1
comp=Z,1μm,21.2s
PDKS Podkum 143.66 328 *e*PKPdf **PKPdf 06 39 49.3 +0.3**
KBA Koelnbreinsper 143.73 331⇑ *i*PKPdf PKPab 06 39 45.5 -0.6
comp=Z,28nm,1.1s
TIR Tirane 143.80 318 PFAKE 06 40 00.0 +11
TIR LR LR
comp=Z,2μm,22.0s
FUR Furstenfeldbru 143.82 334 *e*PKPdf **PKPdf 06 39 49.3 +0.1**
FUR *e*L L 07 47 44.2
comp=Z,843nm,20.2s
FUR Furstenfeldbru 143.82 334 *e*PKIKP **PKPdf 06 39 49.3 +0.1**
BCLA Clavier 144.10 342 PKP PKPdf 06 39 48.9 -0.7
RUP Ruppelstein 144.16 339 PKIKP PKPab 06 39 46.7 -0.8
RUP Ruppelstein 144.16 339 PKP PKPab 06 39 46.7 -0.8
STU Stuttgart 144.17 336 *e*PKPdf PKPbc 06 39 48.4 +0.5
STU *e*L L 07 47 42.9
comp=Z,1μm,20.1s
JAVS Javornik 144.24 329 *e*PKPdf PKPbc 06 39 48.9 +0.6
ROBS Robic 144.26 330 *e*PKPdf PKPbc 06 39 48.5 +0.3
ABTA Abfaltersbach 144.36 331⇑ *i*PKPdf **PKPab 06 39 47.1 -1.2**
comp=Z,34nm,1.0s,SNR=11
WTTA Wattenberg 144.36 333⇑ *i*PKPdf **PKPab 06 39 48.3 -0.1**
comp=Z,61nm,1.3s,SNR=13
WLF Walferdange 144.50 340 PKP PKPdf 06 39 49.6 -0.6
WLF Walferdange 144.50 340 *e*PKPdf **PKPdf 06 39 49.8 -0.5**
WLF *e*L L 07 46 52.4
comp=Z,1μm,20.2s
WLF Walferdange 144.50 340 *e*PKIKP **PKPdf 06 39 49.8 -0.5**
WLF MLR MLR
comp=Z,1μm,19.0s
WLF Walferdange 144.50 340 *e*PKPdf **PKPdf 06 39 49.8 -0.5**
WLF LR LR
comp=Z,1μm,19.0s
LANF Langenberg 144.52 338 PKIKP PKPab 06 39 48.4 -0.3
LANF Langenberg 144.52 338 PKP PKPab 06 39 48.4 -0.3
LANF Langenberg 144.52 338 PKP PKPab 06 39 48.4 -0.3
MOTA Moosalm 144.53 333⇓ *i*PKPdf **PKPab 06 39 48.6 -0.4**
comp=Z,67nm,1.6s,SNR=8.2
BFO Black Forest 144.87 337 *e*PKPdf **PKPdf 06 39 50.6 -0.4**
BFO *e*L L 07 42 39.9
comp=Z,923nm,21.7s
BFO Black Forest 144.87 337 *e*PKIKP **PKPab 06 39 49.8 -0.2**
BFO MLR MLR
comp=Z,877nm,21.0s
BFO Black Forest 144.87 337 *e*PKPdf **PKPab 06 39 49.8 -0.2**
BFO LR LR
comp=Z,877nm,21.0s
SPAK Spaichingen-Ko 144.88 336 PKP PKPab 06 39 48.6 -1.6
FETA Feichten 144.95 333⇑ *i*PKPab **PKPab 06 39 49.3 -1.3**
comp=Z,53nm,1.0s,SNR=18
DAVA Damuels 145.10 334⇑ *i*PKPbc **PKPbc 06 39 49.5 -1.6**
comp=Z,93nm,1.4s,SNR=24
LIBD Limburg 145.28 337 PKP2 PKPbc 06 39 50.1 -1.3
LIBD Limburg 145.28 337 PKP PKPbc 06 39 50.1 -1.3
FELD Feldberg im Sc 145.36 337 PKP PKPbc 06 39 50.3 -1.6
FELD Feldberg im Sc 145.36 337 PKP PKPbc 06 39 50.3 -1.6
ECH Echery 145.39 338 *e*PKP2 **PKPbc 06 39 50.5 -1.3**
ECH MLR MLR
comp=Z,933nm,22.0s
ECH Echery 145.39 338 *e*PKPdf **PKPbc 06 39 50.5 -1.3**
ECH LR LR
comp=Z,933nm,22.0s
ECH Echery 145.39 338 PKP PKPbc 06 39 49.7 -2.1
DAVOX Davos/Dischmat 145.50 334 PKPbc PKPdf 06 39 51.5 -0.9
DAVOX Davos/Dischmat 145.50 334 PKPbc PKPdf 06 39 51.5 -0.9
baz=11,slow=1.0
MOF Molkenrain 145.71 338 PKIKP PKPdf 06 39 50.8 -1.8
MOF Molkenrain 145.71 338 PKP PKPdf 06 39 50.8 -1.8
MOF Molkenrain 145.71 338 PKP PKPdf 06 39 50.8 -1.8
THEF They Montfort 145.79 339 PKIKP PKPdf 06 39 51.6 -1.0
THEF They Montfort 145.79 339 PKP PKPdf 06 39 51.6 -1.0
THEF They Montfort 145.79 339 PKP PKPdf 06 39 51.6 -1.0
BBS Basel-Blauen 145.89 337 PKP2 PKPdf 06 39 52.5 -0.3
BBS Basel-Blauen 145.89 337 PKP PKPdf 06 39 52.5 -0.3
TUE Stuetta 145.97 334 *e*PKPdf **PKPdf 06 39 52.9 -0.3**
TUE LR LR
comp=Z,2μm,22.0s
LOMF Lomont 146.24 337 PKP2 PKPdf 06 39 53.4 -0.1
LOMF Lomont 146.24 337 PKP PKPdf 06 39 53.4 -0.1
LOMF Lomont 146.24 337 PKP PKPdf 06 39 53.4 -0.1
RCBR Riachuelo 146.85 131 *e*PKPdf **PKPdf 06 39 55.7 +0.2**
RCBR LR LR
comp=Z,824nm,20.0s
AQU L'Aquila 147.03 325 *e*PKPbc **PKPbc 06 39 57.0 0.0**
AQU LR LR
comp=Z,3μm,22.0s
CUC Castrocucco 147.10 320 *e*PKPdf **PKPbc 06 39 56.5 -0.8**
CUC LR LR
comp=Z,2μm,22.0s
VLC Villacollemand 147.29 330 PFAKE 06 40 10.0 +11
VLC LR LR
comp=Z,932nm,21.0s
CEL Celeste 148.04 317 *e*PKPdf **PKPbc 06 39 58.6 -1.3**
CEL LR LR
comp=Z,1μm,21.0s
BNI Bardonecchia 148.21 335 *e*PKP2 **PKPbc 06 40 00.0 -0.2**
BNI MLR MLR
comp=Z,2μm,22.0s
BNI Bardonecchia 148.21 335 *e*PKPbc **PKPbc 06 39 60.0 -0.2**
BNI LR LR
comp=Z,2μm,22.0s
GDM Grand'Maison 148.31 336 PKP PKPbc 06 39 59.7 -0.8
GDM Grand'Maison 148.31 336 PKP PKPbc 06 39 59.7 -0.8
GRN Grenoble 148.42 336 PKP2 PKPbc 06 40 00.1 -0.6
GRN Grenoble 148.42 336 PKP PKPbc 06 40 00.1 -0.6
GRN Grenoble 148.42 336 PKP PKPbc 06 40 00.1 -0.6
SURF Saint Ours 148.63 334 PKP PKPdf 06 39 58.0 +0.3
SURF Saint Ours 148.63 334 PKP PKPdf 06 39 58.0 +0.3
AGO Saint Agoulin 148.65 340 PKP PKPbc 06 40 01.3 +0.1
AGO Saint Agoulin 148.65 340 PKP PKPbc 06 40 01.3 +0.1
SAOF Saorge 148.71 333 PKIKP PKPdf 06 39 59.5 +1.9
SAOF Saorge 148.71 333 PKP PKPdf 06 39 59.5 +1.9
SAOF Saorge 148.71 333 PKP PKPdf 06 39 59.5 +1.9
AUTN L'Aution 148.76 333 PKIKP PKPdf 06 39 59.7 +1.8
AUTN L'Aution 148.76 333 PKP PKPdf 06 39 59.7 +1.8
AUTN L'Aution 148.76 333 PKP PKPdf 06 39 59.7 +1.8
TOUF Mont Tournerai 148.82 333 PKP2 PKPbc 06 40 00.1 -1.8
TOUF Mont Tournerai 148.82 333 PKP PKPbc 06 40 00.1 -1.8
TOUF Mont Tournerai 148.82 333 PKP PKPbc 06 40 00.1 -1.8
SSB Saint Sauveur 148.84 338 *e*PKP2 **PKPbc 06 40 01.3 -0.4**
SSB MLR MLR
comp=Z,904nm,20.0s
SSB Saint Sauveur 148.84 338 *e*PKPbc **PKPbc 06 40 01.3 -0.4**
SSB LR LR
comp=Z,904nm,20.0s
PYM Petit Puy Mans 148.95 340 PKP2 PKPbc 06 40 01.1 -0.9
PYM Petit Puy Mans 148.95 340 PKP PKPbc 06 40 01.1 -0.9
PYM Petit Puy Mans 148.95 340 PKP PKPbc 06 40 01.1 -0.9
MVIF Mont Vial 148.96 333 PKP2 PKPbc 06 40 00.5 -1.7
MVIF Mont Vial 148.96 333 PKP PKPbc 06 40 00.5 -1.7
MVIF Mont Vial 148.96 333 PKP PKPbc 06 40 00.5 -1.7
CALN Calern 149.19 333 PKP2 PKPbc 06 40 01.6 -1.2
CALN Calern 149.19 333 PKP PKPbc 06 40 01.6 -1.2
CALN Calern 149.19 333 PKP PKPbc 06 40 01.6 -1.2
LBL Lubilhac 149.33 339 PKP2 PKPbc 06 40 02.0 -1.0
LBL Lubilhac 149.33 339 PKP PKPbc 06 40 02.0 -1.0
LBL Lubilhac 149.33 339 PKP PKPbc 06 40 02.0 -1.0
WDD Wield Dalam 150.26 314 *e*PKPbc **PKPbc 06 40 05.6 +0.2**
WDD LR LR
comp=Z,880nm,21.0s
VSL Villasalto 151.21 325 PFAKE 06 40 10.0 +2.4
VSL LR LR
comp=Z,945nm,20.0s
KEST Kesra 153.75 319 *e*PKPbc **PKPbc 06 40 13.7 +0.1**
KEST *e*PKPab **PKPab 06 40 26.3 0.0**
KEST Kesra 153.75 319 PKPbc **PKPbc 06 40 14.8 +1.2**
comp=Z,6.5nm,1.1s,baz=310,slow=5.0,SNR=6.8
KEST PKPab **PKPab 06 40 26.8 +0.4**
comp=Z,11nm,1.0s,baz=319,slow=4.6,SNR=9.5
ASCN Ascension 154.99 173 PFAKE 06 40 20.0 +3.4
ASCN LR LR
comp=Z,304nm,20.0s
CMLA Cha da Macela 155.99 28 PFAKE 06 40 20.0 +11
CMLA LR LR
comp=Z,1μm,20.0s
MTE Manteigas 156.51 352 PFAKE 06 40 20.0 +11
MTE LR LR
comp=Z,2μm,20.0s
ESDC Sonseca Array 156.55 345 PKPab PKPab 06 40 38.6 +0.6
ESDC Sonseca Array 156.55 345 PKPab PKPab 06 40 38.6 +0.6
comp=Z,0.8nm,0.5s,baz=59,slow=3.2,SNR=6.2
PAB San Pablo 156.76 346 PFAKE 06 40 20.0 +10
PAB LR LR
comp=Z,1μm,20.0s
RTC Rabat Centre 162.65 347 PFAKE 06 40 30.0 +14
RTC LR LR
comp=Z,1μm,22.0s
TAM Tamanrasset 163.01 292 PFAKE 06 40 30.0 +13
TAM LR LR
comp=Z,2μm,22.0s
TOA0 Torodi Ar. Sit 166.66 255 *e*PKPdf **PKPdf 06 40 19.1 -1.3**
TORD Torodi Ar. Bea 166.66 255 PKP PKPdf 06 40 18.7 -1.7

TORD					PKPab	**PKPab**	**06 41 22.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**166.66**	**255**		PKP	**PKPdf**	**06 40 18.7**	**-1.7**
	comp=Z,3.6nm,0.9s,baz=321,slow=0.3,SNR=8.8							
TORD					PKPab	**PKPab**	**06 41 22.9**	**-0.2**
	comp=Z,3.0nm,1.0s,baz=104,slow=4.1,SNR=2.9							
SACV	**Santiago Islan**	**168.18**	**99**		PFAKE		06 40 30.0	+8.5
SACV					LR	LR		
	comp=Z,1μm,20.0s							

IDC ***29*** *06:25:49.6±0.8,25°.16N×125°.78E,h0km,mb3.7/8, mb1 3.9/8,mb1mx3.7/25,mbtmp3.7/8,Error ellipse: s-maj=37.8km s-min=19.5km az=69.0*
ISCJB ***29*** *06:25:56.2±0.6,25°.26N±0°.08×126°.12E±0°.08,h66km±5km, mb3.6/8, Error ellipse: s-maj=17.4km s-min=4.7km az=139.0*
JMA ***29*** *06:25:56.4±0.2,25°.28N×126°.09E,h67km±3km,M3.2*
ISC 29 06:25:56.5±1.1,25°.15N±0°.09×126°.24E±0°.07,h55km±11km, n21,σ1§32/28,mb3.7/8,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JOGS	**Gusukube**	**0.85**	**243**	P		**Pn**	**06 26 12.4**	**+0.1**
JOGS				S		**Sn**	**06 26 24.7**	**+0.8**
JMJ	**Miyako jima 2**	**0.92**	**249**	P		**Pn**	**06 26 13.2**	**0.0**
JMJ				S		**Sn**	**06 26 25.8**	**+0.2**
JKE	**Kume jima 2**	**1.27**	**23**	P		**Pn**	**06 26 17.7**	**-0.3**
JKE				S		**Sn**	**06 26 33.6**	**-0.4**
JTJ	**Tarama**	**1.48**	**250**	P		**Pn**	**06 26 20.7**	**-0.1**
JTJ				S		**Sn**	**06 26 38.0**	**-1.1**
JAGN	**Aguni-jima**	**1.70**	**32**	P		**Pn**	**06 26 24.3**	**+0.6**
JAGN				S		**Sn**	**06 26 45.1**	**+0.8**
JIJ	**Ishigaki jima**	**2.06**	**248**	P		**Pn**	**06 26 28.7**	**+0.1**
JIJ				*e*S		**Sn**	**06 26 51.9**	**-1.3**
JKRS	**Kuro-shima**	**2.22**	**246**	P		**Pn**	**06 26 31.1**	**+0.3**
IRIF	**Iriomote-Funau**	**2.42**	**251**	P		**Pn**	**06 26 34.1**	**+0.5**
IRIF				*e*S		**Sn**	**06 27 01.6**	**-0.4**
JIH	**Iheya**	**2.44**	**39**	P		**Pn**	**06 26 35.4**	**+1.6**
JAMN	**Amaminishikomi**	**4.05**	**40**	P		**Pn**	**06 26 54.7**	**-1.2**
JAM	**Amami Oshima**	**4.43**	**42**	P		**Pn**	**06 27 00.3**	**-0.8**
JMZ	**Minamidaito 2**	**4.55**	**81**	P		**Pn**	**06 27 00.7**	**-2.1**
JMZ				S		Sn	06 27 48.3	-6.2
JZK	**Kikaishima**	**4.59**	**46**	P		Pn	06 26 59.0	-4.4
MKAR	**Makanchi Array**	**40.94**	**313**	P		**P**	**06 33 31.7**	**-1.9**
	0.5nm,0.5s,baz=95,slow=10,SNR=9.7							
ZALV	**Zalesovo Beam**	**42.04**	**324**	P		**P**	**06 33 40.6**	**-1.9**
	1.1nm,0.5s,baz=113,slow=7.7,SNR=5.3							
KURBB	**Kurchatov Arra**	**44.41**	**318**	P		**P**	**06 34 00.6**	**-1.1**
	0.7nm,0.5s,baz=108,slow=9.0,SNR=7.2							
KURBB				PcP		**PcP**	**06 35 42.1**	**-2.4**
	0.2nm,0.3s,baz=111,slow=5.2,SNR=4.0							
WRA	**Warramunga Arr**	**45.51**	**169**	P		**P**	**06 34 11.4**	**+0.8**
	1.1nm,0.6s,baz=350,slow=8.4,SNR=9.9							
ASAR	**Alice Springs**	**49.09**	**171**	P		**P**	**06 34 40.1**	**+1.6**
	0.4nm,0.5s,baz=355,slow=14,SNR=6.1							
ILAR	**Eielson Array**	**66.23**	**28**	P		**P**	**06 36 40.9**	**+2.6**
	0.5nm,0.9s,baz=260,slow=5.4,SNR=3.5							
FINES	**FINESS Array B**	**72.91**	**330**	P		**P**	**06 37 18.6**	**-1.0**
	0.6nm,0.4s,baz=80,slow=4.6,SNR=5.4							
YKA	**Yellowknife Ar**	**80.25**	**24**	P		**P**	**06 38 02.5**	**+1.6**
	0.2nm,0.6s,baz=306,slow=4.9,SNR=7.5							

ISCJB ***29*** *06:37:52.7±0.3,59°.70N±0°.03×23°.03E±0°.04,h0km, Error ellipse: s-maj=3.9km s-min=3.0km az=155.5*
CSEM ***29*** *06:37:53.8±0.2,59°.70N×23°.03E,h2km,ML2.2, Error ellipse: s-maj=4.2km s-min=3.3km az=169.0,Mining explosion.*
NAO ***29*** *06:37:53.7±1.1,59°.67N×23°.10E,ML2.2*
HEL ***29*** *06:37:54.0±0.1,59°.67N×22°.99E,h0km,ML1.9, ML2.0(UPP),Explosion*
BER ***29*** *06:37:54.7±4.4,59°.68N×23°.04E,h0km±23km, ML2.2(NAO)*
IDC ***29*** *06:37:56.1±1.7,59°.86N×22°.97E,h0km,mb1 3.3/4, mb1mx3.0/29,mbtmp3.2/4,ML2.5/3,Error ellipse: s-maj=23.5km s-min=5.7km az=159.0*
UPP ***29*** *06:37:57.6,59°.71N×22°.48E,h0km,ML2.0,Suspected Mining explosion.*
ISC 29 06:37:52.3±0.6,59°.69N±0°.02×23°.03E±0°.02,h0km,n68, σ1§44/96,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MEF	**Metsahovi**	**0.87**	**52**	*e*P		**Pg**	**06 38 09.8**	**+0.9**
MEF				*e*S		**Sg**	**06 38 21.2**	**+1.1**
MEF				*e*RG		Rg	06 38 22.5	
MEF	**Metsahovi**	**0.87**	**52**	*e*P		**Pg**	**06 38 09.8**	**+0.9**
	SNR=90							
MEF				S		**Sg**	**06 38 21.2**	**+1.1**
MTSE	**Matsula**	**1.06**	**157**	*e*P		**Pg**	**06 38 12.8**	**+0.3**
MTSE				*e*S		**Sg**	**06 38 26.5**	**+0.3**
MTSE	**Matsula**	**1.06**	**157**	P		**Pg**	**06 38 12.8**	**+0.3**
MTSE				S		**Sg**	**06 38 26.5**	**+0.3**
RAF	**Rauma**	**1.48**	**335**	*e*P		**Pn**	**06 38 20.8**	**+0.7**
	baz=157							
RAF				*e*SN		**Sn**	**06 38 41.4**	**+1.2**
RAF				MSG			06 38 41.4	
	comp=Z,8.3nm,0.1s							
RAF				*e*RG		Rg	06 38 45.3	
RAF	**Rauma**	**1.48**	**335**	*e*P		**Pn**	**06 38 20.8**	**+0.7**
	SNR=50							
RAF				*e*S		**Sg**	**06 38 40.1**	**+0.3**
	comp=Z,22nm,0.1s,SNR=50							
RAF				Sn		**Sn**	**06 38 41.4**	**+1.2**
	comp=Z,8.3nm,0.1s							
AAL	**Aland**	**1.61**	**289**	*e*PG		**Pb**	**06 38 22.7**	**-0.2**
AAL				*e*SN		**Sg**	**06 38 44.2**	**+0.3**
AAL	**Aland**	**1.61**	**289**	P		**Pn**	**06 38 22.3**	**+0.4**
AAL	**Aland**	**1.61**	**289**	Pg		**Pb**	**06 38 22.6**	**-0.2**
AAL				Sn		**Sg**	**06 38 44.2**	**+0.3**
PVF	**Pernaja**	**1.66**	**58**	*e*P		**Pn**	**06 38 24.0**	**+1.4**
PVF				*e*SN		**Sg**	**06 38 47.0**	**+1.5**
PVF				MSG			06 38 47.0	
	comp=Z,9.4nm,0.2s							
PVF				*e*RG		Rg	06 38 50.1	
PVF	**Pernaja**	**1.66**	**58**	P		**Pn**	**06 38 23.9**	**+1.4**
PVF				Sn		**Sg**	**06 38 46.9**	**+1.5**
	comp=Z,9.4nm,0.2s							
SLIT	**Slitere, Latvi**	**2.10**	**191**	*e*P		**Pn**	**06 38 30.4**	**+1.7**
	SNR=50							
SLIT				*e*S		**Sg**	**06 38 59.2**	**-0.6**
	comp=Z,173nm,0.5s,SNR=50							
NRTU	**Norrtaelje**	**2.23**	**272**	*e*P		**Pn**	**06 38 31.5**	**+1.0**
NRTU	**Norrtaelje**	**2.23**	**272**	P		**Pn**	**06 38 31.5**	**+1.0**
VSU	**Vasula**	**2.27**	**121**	Pn		**Pn**	**06 38 32.4**	**+1.4**
VSU				Lg		Lg	06 39 03.3	
VSU	**Vasula**	**2.27**	**121**	Pn		**Pn**	**06 38 32.4**	**+1.4**
VSU				Lg		Lg	06 39 03.3	
VSU	**Vasula**	**2.27**	**121**	Pn		**Pn**	**06 38 32.4**	**+1.4**
	SNR=50							
VSU	**Vasula**	**2.27**	**121**	*e*P		**Pb**	**06 38 33.7**	**-0.4**
	SNR=50							
VSU				Lg		Lg	06 39 03.3	
FIA0	**FINESS Array S**	**2.31**	**39**	Pn		**Pb**	**06 38 34.1**	**-0.8**
	baz=221,slow=16							
FIA0				Lg		Lg	06 39 05.2	
	baz=223,slow=28							
FIA0	**FINESS Array S**	**2.31**	**39**	Pn		**Pb**	**06 38 34.1**	**-0.8**
	baz=221,slow=16							
FIA0				Lg		Lg	06 39 05.2	
	baz=223,slow=28							
FIA0	**FINESS Array S**	**2.31**	**39**	Pn		**Pb**	**06 38 34.1**	**-0.8**
	baz=221,slow=14,SNR=50							
FIA0				Lg		Lg	06 39 05.2	
	baz=223,slow=25,SNR=70							
FINES	**FINESS Array B**	**2.31**	**39**	Pn		**Pb**	**06 38 34.6**	**-0.3**
	comp=Z,2.4nm,0.3s,baz=226,slow=14,SNR=102							
FINES				Pg		**Pg**	**06 38 36.0**	**-0.6**
	comp=Z,2.0nm,0.3s,baz=225,slow=15,SNR=109							
FINES				Lg		Lg	06 39 04.8	
	comp=Z,5.7nm,0.3s,baz=227,slow=26,SNR=33							
VJF	**Virojoki**	**2.42**	**67**	*e*PB		**Pb**	**06 38 36.5**	**-0.1**
VJF				*e*S		**Sb**	**06 39 06.7**	**-0.3**
VJF				MSG			06 39 06.7	
	comp=Z,3.1nm,0.1s							
VJF	**Virojoki**	**2.42**	**67**	Pb		**Pb**	**06 38 36.5**	**-0.1**
VJF				S		**Sb**	**06 39 06.7**	**-0.3**
	comp=Z,3.1nm,0.1s							
FLYU	**Flymyra**	**2.63**	**282**	*e*P		**Pn**	**06 38 37.6**	**+1.6**
FLYU	**Flymyra**	**2.63**	**282**	P		**Pn**	**06 38 37.5**	**+1.6**
KEF	**Keuruu**	**2.64**	**19**	*e*PB		**Pb**	**06 38 40.4**	**-0.1**
KEF				*e*SG		**Sb**	**06 39 15.5**	**+2.1**
KEF				MSG			06 39 15.5	
	comp=Z,7.0nm,0.1s							
KEF	**Keuruu**	**2.64**	**19**	Pb		**Pb**	**06 38 40.4**	**-0.1**
KEF				Sg		**Sb**	**06 39 15.5**	**+2.1**
	comp=Z,7.0nm,0.1s							
NYNU	**Nynaeshamn**	**2.67**	**257**	*e*P		**Pn**	**06 38 38.1**	**+1.6**
NYNU	**Nynaeshamn**	**2.67**	**257**	P		**Pn**	**06 38 38.0**	**+1.6**
KAF	**Kangasniemi**	**2.91**	**32**	*e*PB		**Pb**	**06 38 44.0**	**-1.1**
KAF				MSG		**Sb**	**06 39 20.9**	**-0.3**
	comp=Z,5.8nm,0.2s							
KAF				*e*SB		**Sb**	**06 39 20.9**	**-0.3**
KAF	**Kangasniemi**	**2.91**	**32**	Pb		**Pb**	**06 38 43.9**	**-1.1**
KAF				Sb		**Sb**	**06 39 20.8**	**-0.3**
BACU	**Backbrunna**	**3.00**	**276**	*e*P		**Pn**	**06 38 42.4**	**+1.4**
BACU	**Backbrunna**	**3.00**	**276**	P		**Pn**	**06 38 42.4**	**+1.4**
IGGU	**Iggoen**	**3.09**	**295**	*e*P		**Pn**	**06 38 43.9**	**+1.6**
IGGU	**Iggoen**	**3.09**	**295**	P		**Pn**	**06 38 43.8**	**+1.6**
SUF	**Sumiainen**	**3.39**	**25**	*e*P		Pn	06 38 50.1	+3.7
SUF				*e*SB		**Sb**	**06 39 36.0**	**+1.0**
SUF				MSG			06 39 36.0	
	comp=Z,2.8nm,0.4s							
SUF	**Sumiainen**	**3.39**	**25**	P		Pn	06 38 50.1	+3.7
SUF				Sb		**Sb**	**06 39 36.0**	**+1.0**
	comp=Z,2.8nm,0.4s							
ESKU	**Eskilstuna**	**3.42**	**265**	*e*P		**Pn**	**06 38 48.4**	**+1.6**
ESKU	**Eskilstuna**	**3.42**	**265**	P		**Pn**	**06 38 48.4**	**+1.6**
ARNU	**Arnoeviken**	**3.43**	**308**	*e*P		**Pn**	**06 38 48.6**	**+1.7**
ARNU	**Arnoeviken**	**3.43**	**308**	P		**Pn**	**06 38 48.6**	**+1.7**
FALU	**Falun**	**3.70**	**286**	*e*P		**Pn**	**06 38 52.0**	**+1.4**
FALU	**Falun**	**3.70**	**286**	P		**Pn**	**06 38 52.0**	**+1.4**
HEMU	**Hemsoen**	**3.85**	**323**	*e*P		**Pn**	**06 38 55.6**	**+2.9**
HEMU	**Hemsoen**	**3.85**	**323**	P		**Pn**	**06 38 55.6**	**+2.9**
ROTU	**Roteberg**	**3.96**	**299**	*e*P		**Pn**	**06 38 55.3**	**+1.0**
ROTU	**Roteberg**	**3.96**	**299**	P		**Pn**	**06 38 55.3**	**+1.0**
HASU	**Hassela**	**3.99**	**311**	*e*P		**Pn**	**06 38 56.5**	**+1.8**
HASU	**Hassela**	**3.99**	**311**	P		**Pn**	**06 38 56.4**	**+1.8**
NRAU	**Nora**	**4.06**	**272**	*e*P		**Pn**	**06 38 56.3**	**+0.7**
NRAU	**Nora**	**4.06**	**272**	P		**Pn**	**06 38 56.3**	**+0.7**
LNKU	**Linkoeping**	**4.17**	**253**	*e*P		**Pn**	**06 38 59.1**	**+2.0**
LNKU	**Linkoeping**	**4.17**	**253**	P		**Pn**	**06 38 59.1**	**+2.0**
ASKU	**Askersund**	**4.28**	**263**	*e*P		**Pn**	**06 39 00.3**	**+1.7**
ASKU	**Askersund**	**4.28**	**263**	P		**Pn**	**06 39 00.3**	**+1.7**
HFS	**Hagfors**	**4.72**	**279**	Pn		**Pn**	**06 39 06.3**	**+1.6**
	baz=101,slow=12							
HFS				Sn		**Sn**	**06 40 00.1**	**0.0**
	baz=79,slow=37							
HFS				Lg		Lg	06 40 17.3	
	baz=93,slow=37							
HFS	**Hagfors**	**4.72**	**279**	Pn		**Pn**	**06 39 06.3**	**+1.6**
	baz=101,slow=12							
HFS				Sn		**Sn**	**06 40 00.1**	**0.0**
	baz=79,slow=37							
HFS				Lg		Lg	06 40 17.3	
	baz=93,slow=37							
HFS	**Hagfors**	**4.72**	**279**	Pn		**Pn**	**06 39 06.6**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=96,slow=12,SNR=15							
HFS				Pg		**Pb**	**06 39 17.6**	**+1.8**
	comp=Z,0.4nm,0.3s,baz=95,slow=18,SNR=13							
HFS				Sn		**Sn**	**06 40 02.4**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=99,slow=28,SNR=5.6							
HFS				Lg		Lg	06 40 19.3	
	comp=Z,0.8nm,0.3s,baz=93,slow=31,SNR=7.0							
HFS	**Hagfors**	**4.72**	**279**	Pn		**Pn**	**06 39 06.3**	**+1.6**
	baz=101,slow=12,SNR=50							
HFS				Sn		**Sn**	**06 40 00.1**	**0.0**
	baz=79,slow=31,SNR=50							
HFS				Lg		Lg	06 40 17.3	
	baz=93,slow=30,SNR=50							
NB2	**NORSAR Subarra**	**6.02**	**288**	Pn		**Pn**	**06 39 23.3**	**+0.8**
	baz=95,slow=14							
NB2	**NORSAR Subarra**	**6.02**	**288**	Pn		**Pn**	**06 39 23.3**	**+0.8**
	baz=95,slow=14							
NB2	**NORSAR Subarra**	**6.02**	**288**	Pn		**Pn**	**06 39 23.3**	**+0.8**
	baz=95,slow=13,SNR=50							
NOA	**NORSAR Array B**	**6.02**	**288**	Pn		**Pn**	**06 39 22.8**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=205,slow=18,SNR=5.1							
NOA				Sn		**Sn**	**06 40 29.1**	**-3.0**
	comp=Z,0.2nm,0.3s,baz=320,slow=4.7,SNR=2.9							
NOA				Lg		Lg	06 41 00.4	
	comp=Z,0.4nm,0.3s,baz=152,slow=17,SNR=4.5							
ARA0	**ARCESS Array S**	**9.94**	**5**	Pn		**Pn**	**06 40 16.1**	**-0.2**
	baz=195,slow=11							
ARA0				Sn		**Sn**	**06 42 03.6**	**-4.8**
	baz=172,slow=22							
ARA0	**ARCESS Array S**	**9.94**	**5**	Pn		**Pn**	**06 40 16.1**	**-0.2**
	baz=195,slow=11							
ARA0				Sn		**Sn**	**06 42 03.6**	**-4.8**
	baz=172,slow=22							
ARA0	**ARCESS Array S**	**9.94**	**5**	Pn		**Pn**	**06 40 16.1**	**-0.2**
	baz=195,slow=11,SNR=50							
ARCES	**ARCESS Array B**	**9.94**	**5**	Pn		**Pn**	**06 40 15.9**	**-0.3**
	baz=187,slow=14,SNR=4.4							

ISCJB ***29*** *06:42:30.1±0.3,59°.70N±0°.03×22°.97E±0°.04,h0km, Error ellipse: s-maj=4.0km s-min=2.8km az=153.8*
IDC ***29*** *06:42:30.8±1.8,59°.61N×23°.18E,h0km,mb1 3.3/4, mb1mx3.1/28,mbtmp3.3/4,ML2.9/4,Error ellipse: s-maj=21.4km s-min=6.0km az=156.0*
HEL ***29*** *06:42:30.9±0.1,59°.64N×23°.05E,h0km,ML2.1, ML2.3(UPP),Explosion*
CSEM ***29*** *06:42:31.4±0.1,59°.69N×22°.99E,h2km,ML2.3,Error ellipse: s-maj=4.0km s-min=2.8km az=152.0,Mining explosion.*
NAO ***29*** *06:42:32.1±1.3,59°.79N×22°.97E,ML2.4*
BER ***29*** *06:42:33.5±4.2,59°.82N×22°.91E,h0km±46km, ML2.4(NAO)*
UPP ***29*** *06:42:33.5,59°.71N×22°.68E,h0km,ML2.3,Suspected Mining explosion.*
ISC 29 06:42:29.9±0.7,59°.68N±0°.02×22°.94E±0°.02,h0km,n97, σ1§70/125,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MEF	**Metsahovi**	**0.91**	**53**	*e*P		**Pg**	**06 42 47.1**	**-0.2**
MEF				*e*S		**Sg**	**06 42 58.4**	**-0.7**
MEF				*e*RG		Rg	06 43 03.8	
MEF	**Metsahovi**	**0.91**	**53**	P		**Pg**	**06 42 47.1**	**-0.2**
MEF				S		**Sg**	**06 42 58.4**	**-0.7**
MTSE	**Matsula**	**1.07**	**155**	*e*P		**Pg**	**06 42 49.0**	**-1.4**
MTSE				*e*S		**Sg**	**06 43 02.1**	**-2.2**
MTSE	**Matsula**	**1.07**	**155**	P		**Pg**	**06 42 49.0**	**-1.4**
MTSE				S		**Sg**	**06 43 02.1**	**-2.2**
RAF	**Rauma**	**1.46**	**337**	*e*P		**Pn**	**06 42 58.1**	**+0.6**
RAF				*e*S		**Sg**	**06 43 14.1**	**-2.8**
RAF				MSG			06 43 14.1	
	comp=Z,6.3nm,0.4s							
RAF				*e*RG		Rg	06 43 22.4	
RAF	**Rauma**	**1.46**	**337**	*e*P		**Pn**	**06 42 58.2**	**+0.7**
	SNR=50							
RAF				S		**Sg**	**06 43 14.1**	**-2.8**
	comp=Z,6.3nm,0.4s							
AAL	**Aland**	**1.56**	**290**	*e*P		**Pn**	**06 42 59.7**	**+0.9**
AAL				*e*S		**Sn**	**06 43 20.9**	**+1.1**
AAL	**Aland**	**1.56**	**290**	P		**Pn**	**06 42 59.8**	**+0.9**
AAL				S		**Sn**	**06 43 20.9**	**+1.1**
PVF	**Pernaja**	**1.70**	**58**	*e*PN		**Pn**	**06 43 01.2**	**+0.4**
PVF				*e*SN		**Sg**	**06 43 25.1**	**+0.6**
PVF				MSG			06 43 25.1	
	comp=Z,17nm,0.2s							
PVF	**Pernaja**	**1.70**	**58**	Pn		**Pn**	**06 43 01.2**	**+0.4**
SLIT	**Slitere, Latvi**	**2.09**	**190**	*e*P		**Pn**	**06 43 07.4**	**+1.3**
	SNR=50							
SLIT				*e*S		**Sn**	**06 43 35.0**	**+2.3**
	comp=Z,211nm,0.4s,SNR=50							
NRTU	**Norrtaelje**	**2.18**	**272**	*e*P		**Pn**	**06 43 08.9**	**+1.5**
NRTU	**Norrtaelje**	**2.18**	**272**	P		**Pn**	**06 43 08.9**	**+1.5**
VSU	**Vasula**	**2.31**	**120**	Pn		**Pn**	**06 43 11.0**	**+1.9**
VSU				Sn		**Sb**	**06 43 41.0**	**-0.5**
VSU	**Vasula**	**2.31**	**120**	Pn		**Pn**	**06 43 11.0**	**+1.9**
VSU				Sn		**Sb**	**06 43 41.0**	**-0.5**
VSU	**Vasula**	**2.31**	**120**	*e*P		**Pn**	**06 43 10.6**	**+1.4**
	SNR=50							
VSU	**Vasula**	**2.31**	**120**	Pn		**Pn**	**06 43 11.0**	**+1.9**
	SNR=50							
VSU				Sn		**Sb**	**06 43 41.0**	**-0.5**
	SNR=50							
FIA0	**FINESS Array S**	**2.35**	**40**	Pn		**Pn**	**06 43 11.6**	**+1.9**
	baz=219,slow=16							
FIA0				Lg		Lg	06 43 42.2	
	baz=232,slow=28							
FIA0	**FINESS Array S**	**2.35**	**40**	Pn		**Pn**	**06 43 11.6**	**+1.9**
	baz=219,slow=15,SNR=50							
FIA0				Lg		Lg	06 43 42.2	
	baz=232,slow=24,SNR=50							
FINES	**FINESS Array B**	**2.35**	**40**	Pn		**Pn**	**06 43 11.6**	**+1.9**
	comp=Z,6.7nm,0.3s,baz=222,slow=14,SNR=168							
FINES				Pg		**Pb**	**06 43 12.2**	**-0.9**
	comp=Z,5.6nm,0.3s,baz=222,slow=14,SNR=257							
FINES				Lg		Lg	06 43 42.5	
	comp=Z,11nm,0.3s,baz=236,slow=25,SNR=16							
VJF	**Virojoki**	**2.47**	**68**	*e*P		**Pn**	**06 43 11.3**	**0.0**
VJF				*e*SB		**Sn**	**06 43 43.0**	**+0.9**
VJF				MSG			06 43 43.0	
	comp=Z,12nm,0.2s							
VJF	**Virojoki**	**2.47**	**68**	P		**Pn**	**06 43 11.3**	**0.0**
VJF				Sb		**Sn**	**06 43 42.9**	**+0.9**
	comp=Z,12nm,0.2s							
FORU	**Forsmark**	**2.49**	**289**	*e*P		**Pn**	**06 43 14.3**	**+2.7**
FORU	**Forsmark**	**2.49**	**289**	P		**Pn**	**06 43 14.2**	**+2.7**
FLYU	**Flymyra**	**2.58**	**282**	*e*P		**Pn**	**06 43 14.8**	**+1.8**
FLYU	**Flymyra**	**2.58**	**282**	P		**Pn**	**06 43 14.7**	**+1.8**
NYNU	**Nynaeshamn**	**2.62**	**257**	*e*P		**Pn**	**06 43 15.5**	**+2.1**
NYNU	**Nynaeshamn**	**2.62**	**257**	P		**Pn**	**06 43 15.4**	**+2.1**
KEF	**Keuruu**	**2.67**	**20**	*e*PB		**Pb**	**06 43 17.8**	**-0.6**
KEF				*e*SB		**Sb**	**06 43 52.1**	**+0.5**
KEF				MSG			06 43 52.1	
	comp=Z,13nm,0.4s							
KEF	**Keuruu**	**2.67**	**20**	Pb		**Pb**	**06 43 17.8**	**-0.6**
KEF				Sb		**Sb**	**06 43 52.1**	**+0.5**
	comp=Z,13nm,0.4s							
KAF	**Kangasniemi**	**2.94**	**33**	*e*P		**Pn**	**06 43 20.3**	**+2.5**
KAF				*e*SB		**Sb**	**06 43 58.0**	**-1.6**
KAF				MSG			06 43 58.0	
	comp=Z,6.8nm,0.4s							
KAF	**Kangasniemi**	**2.94**	**33**	P		**Pn**	**06 43 20.3**	**+2.5**
KAF				Sb		**Sb**	**06 43 58.0**	**-1.6**
	comp=Z,6.8nm,0.4s							
BACU	**Backbrunna**	**2.95**	**276**	*e*P		**Pn**	**06 43 19.7**	**+1.8**
BACU	**Backbrunna**	**2.95**	**276**	P		**Pn**	**06 43 19.7**	**+1.8**
IGGU	**Iggoen**	**3.04**	**295**	*e*P		**Pn**	**06 43 21.2**	**+1.9**
IGGU	**Iggoen**	**3.04**	**295**	P		**Pn**	**06 43 21.1**	**+1.9**
ESKU	**Eskilstuna**	**3.37**	**265**	*e*P		**Pn**	**06 43 25.6**	**+1.9**
ESKU	**Eskilstuna**	**3.37**	**265**	P		**Pn**	**06 43 25.6**	**+1.9**
ARNU	**Arnoeviken**	**3.40**	**309**	*e*P		**Pn**	**06 43 26.0**	**+2.0**
ARNU	**Arnoeviken**	**3.40**	**309**	P		**Pn**	**06 43 26.0**	**+2.0**
SUF	**Sumiainen**	**3.42**	**26**	*e*P		**Pn**	**06 43 27.2**	**+2.8**
SUF	**Sumiainen**	**3.42**	**26**	P		**Pn**	**06 43 27.2**	**+2.8**
VIKU	**Vikbolandet**	**3.43**	**252**	*e*P		**Pn**	**06 43 26.1**	**+1.6**
VIKU	**Vikbolandet**	**3.43**	**252**	P		**Pn**	**06 43 26.1**	**+1.6**
HUDU	**Hudiksvall**	**3.52**	**308**	*e*P		**Pn**	**06 43 27.6**	**+1.8**
HUDU	**Hudiksvall**	**3.52**	**308**	P		**Pn**	**06 43 27.6**	**+1.8**
FALU	**Falun**	**3.65**	**286**	*e*P		**Pn**	**06 43 29.4**	**+1.9**
FALU	**Falun**	**3.65**	**286**	P		**Pn**	**06 43 29.4**	**+1.9**
HEMU	**Hemsoen**	**3.83**	**324**	*e*P		**Pn**	**06 43 32.3**	**+2.3**
HEMU	**Hemsoen**	**3.83**	**324**	P		**Pn**	**06 43 32.2**	**+2.3**
ROTU	**Roteberg**	**3.92**	**299**	*e*P		**Pn**	**06 43 32.3**	**+1.0**
ROTU	**Roteberg**	**3.92**	**299**	P		**Pn**	**06 43 32.2**	**+1.0**
HASU	**Hassela**	**3.96**	**311**	*e*P		**Pn**	**06 43 33.8**	**+2.1**
HASU	**Hassela**	**3.96**	**311**	P		**Pn**	**06 43 33.8**	**+2.1**
NRAU	**Nora**	**4.01**	**272**	*e*P		**Pn**	**06 43 33.9**	**+1.3**
NRAU	**Nora**	**4.01**	**272**	P		**Pn**	**06 43 33.8**	**+1.3**
ASPU	**Aespoe**	**4.02**	**238**	*e*P		**Pn**	**06 43 34.2**	**+1.6**
ASPU	**Aespoe**	**4.02**	**238**	P		**Pn**	**06 43 34.2**	**+1.6**
LNKU	**Linkoeping**	**4.12**	**252**	*e*P		**Pn**	**06 43 35.9**	**+1.9**
LNKU	**Linkoeping**	**4.12**	**252**	P		**Pn**	**06 43 35.9**	**+1.9**
ASKU	**Askersund**	**4.23**	**263**	*e*P		**Pn**	**06 43 37.8**	**+2.2**
ASKU	**Askersund**	**4.23**	**263**	P		**Pn**	**06 43 37.7**	**+2.2**
UMAU	**Umeaa**	**4.35**	**347**	*e*P		**Pn**	**06 43 39.3**	**+2.2**
UMAU	**Umeaa**	**4.35**	**347**	P		**Pn**	**06 43 39.3**	**+2.2**
OSKU	**Oskarshamn**	**4.37**	**238**	*e*P		**Pn**	**06 43

az=83.0
*MAN **29** 06:51:47, 13.66N×120.98E, h15km, mb4.8, ML3.7, MS3.7*
MAN INTENSITY II - PUERTO GALERA ORIENTAL MINDORO; BATANGAS CITY.
*ISCJB **29** 06:51:49.1±0.5, 13.68N±0.04×120.97E±0.06, h33km, mb3.8/9, MS4.6/1, Error ellipse: s-maj=8.4km s-min=5.5km az=152.8*

ISC 29 06:51:51.3±0.7, 13.62N±0.06×120.94E±0.07, h35km, n22, σ2§00/21, mb3.7/9, 4C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.48**	**360**	⇓*iP*	Pn	06 51 56.8	-4.9
TGY				*i* S	**Sn**	**06 52 04.7**	**-4.2**
TGY	**Tagaytay City**	**0.48**	**360**	Pg	Pn	06 51 56.7	-4.9
TGY	1µm,0.3s,baz=180,slow=5.0,SNR=110			Lg	Lg	06 52 04.7	
LQP	5µm,0.3s,baz=147,slow=18,SNR=36 **Lukban**	**0.76**	**50**	⇑*eP*	Pn	06 52 00.9	-4.8
BOAC	**Boac**	**0.90**	**100**	*eP*	Pn	06 52 03.6	-3.8
BOAC				*eS*	**Sn**	**06 52 17.4**	**-1.7**
SJMP	**San Jose**	**1.17**	**171**	*eP*	**Pn**	**06 52 09.8**	**-1.4**
SJMP				*eS*	**Sn**	**06 52 25.6**	**-0.3**
GQP	**Guinayangan**	**1.49**	**79**	⇑*eP*	**Pn**	**06 52 12.8**	**-2.8**
GQP				*i* S	**Sn**	**06 52 34.9**	**+1.0**
GQP	**Guinayangan**	**1.49**	**79**	⇑*eP*	**Sn**	**06 52 34.9**	**+1.0**
OTRP	**Odiongan**	**1.64**	**140**	*eP*	**Pn**	**06 52 14.9**	**-2.7**
AUQP	**San Andres**	**1.72**	**100**	*eP*	**Pn**	**06 52 18.2**	**-0.4**
RCP	**Roxas**	**2.71**	**139**	⇑*eP*	**Pn**	**06 52 32.5**	**+0.2**
DAV	**Davao City (W)**	**7.95**	**145**	LR	LR	06 57 56.0	
	comp=Z,941nm,19.0s,baz=237,slow=47						
CMAR	**Chiang Mai Arr**	**21.67**	**286**	P	**P**	**06 56 38.9**	**-0.3**
	1.1nm,0.4s,baz=91,slow=7.7,SNR=6.1						
WRA	**Warramunga Arr**	**35.87**	**158**	P	**P**	**06 58 45.2**	**-2.9**
	1.6nm,0.5s,baz=337,slow=9.6,SNR=26						
SONM	**Songino Array**	**36.20**	**343**	P	**P**	**06 58 50.5**	**-0.2**
	3.0nm,0.7s,baz=157,slow=10,SNR=5.0						
ASAR	**Alice Springs**	**39.11**	**161**	P	**P**	**06 59 13.3**	**-2.7**
	1.1nm,0.7s,baz=335,slow=7.3,SNR=9.0						
MKAR	**Makanchi Array**	**46.23**	**324**	P	**P**	**07 00 13.3**	**+0.2**
	0.2nm,0.5s,baz=120,slow=7.2,SNR=4.3						
ZALV	**Zalesovo Beam**	**49.23**	**333**	P	**P**	**07 00 36.9**	**+0.8**
	0.9nm,0.6s,baz=94,slow=4.3,SNR=2.3						
ZALV				PcP	**PcP**	**07 01 59.4**	**+0.5**
	0.9nm,0.5s,baz=186,slow=2.7,SNR=3.9						
BVAR	**Borovoye Array**	**55.97**	**326**	P	**P**	**07 01 28.2**	**+2.1**
	0.6nm,0.4s,baz=101,slow=7.5,SNR=3.6						
ILAR	**Eielson Array**	**78.72**	**26**	P	**P**	**07 03 52.1**	**+2.3**
	0.6nm,0.8s,baz=230,slow=5.9,SNR=9.7						
MMAI	**Mount Meron Ar**	**79.02**	**301**	LR	LR	07 39 09.9	
	comp=Z,316nm,21.2s,baz=75,slow=36						
YKA	**Yellowknife Ar**	**92.76**	**23**	P	**P**	**07 05 02.1**	**+2.4**
	0.2nm,0.7s,baz=300,slow=4.5,SNR=3.1						
TXAR	**Lajitas Array**	**119.36**	**45**	PKP	**PKPdf**	**07 10 38.1**	**+0.3**
	0.4nm,0.9s,baz=343,slow=2.6,SNR=3.9						

*IDC **29** 06:54:43.4±2.7, 12.58N×88.41W, h0km, mb3.8/6, mb1 4.2/6, mb1mx3.9/21, mbtmp3.8/6, Error ellipse: s-maj=55.9km s-min=45.8km az=172.0*
*CASC **29** 06:54:49.5±0.6, 12.52N×88.84W, h33km±36km, MD3.9, mb4.3(NEIC)*
*NEIC **29** 06:54:50.9±2.1, 12.55N×88.55W, h56km±21km, mb4.3/6, Error ellipse: s-maj=29.7km s-min=15.0km az=61.0*

ISC 29 06:54:48.5±0.8, 12.52N±0.08×88.66W±0.07, h35km, n98, σ1§06/99, mb4.0/10, 35C-36D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.98**	**22**	⇑*eP*	**Pn**	**06 55 08.4**	**+2.4**
CNCH	**Conchagua**	**1.10**	**47**	*eP*	**Pn**	**06 55 10.3**	**+2.7**
BOQS	**Boqueron**	**1.36**	**333**	*eP*	**Pn**	**06 55 11.6**	**+0.4**
SNJE	**San Jose**	**1.63**	**326**	*eP*	**Pn**	**06 55 14.8**	**-0.2**
RTR	**El Retiro**	**1.68**	**325**	*eP*	**Pn**	**06 55 15.5**	**-0.1**
TGUH	**Tegucigalpa,Un**	**2.04**	**41**	*e*Pn	Pn	06 55 23.5	+3.1
TGUH				*e*Sn	**Sn**	**06 55 40.9**	**-3.7**
JTS	**JuntasAbangare**	**4.25**	**121**	*e*Pn	**Pn**	**06 55 50.9**	**0.0**
JTS				*e*Sn	**Sn**	**06 56 37.2**	**-2.1**
732A	**Laxson Ranch,**	**19.27**	**329**	⇑P	**P**	**06 59 10.2**	**-0.1**
	baz=19						
632A	**Uvalde**	**19.82**	**330**	⇓P	**P**	**06 59 15.8**	**-0.4**
	baz=20,SNR=6.2						
631A	**Perdido Creek**	**20.14**	**328**	⇓P	**P**	**06 59 20.1**	**+0.4**
	baz=20						
532A	**Rocksprings**	**20.39**	**331**	⇓P	**P**	**06 59 22.6**	**+0.1**
	baz=20,SNR=11						
JCT	**Junction City**	**20.64**	**332**	*eP*	**P**	**06 59 25.3**	**+0.1**
	11nm,0.7s						
JCT	**Junction City**	**20.64**	**332**	⇑P	**P**	**06 59 25.1**	**-0.1**
	baz=21,SNR=10						
531A	**Rocksprings**	**20.73**	**330**	⇑P	**P**	**06 59 25.7**	**-0.5**
	baz=21						
432A	**Menard**	**20.97**	**332**	⇑P	**P**	**06 59 28.9**	**+0.1**
	baz=21,SNR=24						
WHTX	**Lake Whitney**	**21.00**	**339**	⇓P	**P**	**06 59 27.0**	**-2.0**
	baz=21						
431A	**Sonora**	**21.19**	**330**	⇑P	**P**	**06 59 31.5**	**+0.4**
	baz=21,SNR=9.3						
332A	**Millersview**	**21.38**	**333**	⇑P	**P**	**06 59 32.6**	**-0.6**
	baz=22						
628A	**Black Gap, Mar**	**21.45**	**324**	⇑P	**P**	**06 59 35.3**	**+1.4**
	baz=22,SNR=9.2						
430A	**Baggett Ranch,**	**21.58**	**329**	⇑P	**P**	**06 59 36.1**	**+0.8**
	baz=22,SNR=7.3						
331A	**San Angelo**	**21.62**	**332**	⇑P	**P**	**06 59 36.1**	**+0.3**
	baz=22,SNR=15						
627A	**Terlingua Ranc**	**21.71**	**323**	⇑P	**P**	**06 59 38.5**	**+1.6**
	baz=22,SNR=17						
232A	**Coleman**	**21.77**	**334**	⇑P	**P**	**06 59 37.0**	**-0.3**
	baz=22,SNR=8.2						
429A	**Davenport Ranc**	**21.79**	**328**	⇓P	**P**	**06 59 38.0**	**+0.5**
	baz=22,SNR=5.8						
TXAR	**Lajitas Array**	**21.79**	**322**	P	**P**	**06 59 38.7**	**+1.0**
TXAR	**Lajitas Array**	**21.79**	**322**	P	**P**	**06 59 38.7**	**+1.0**
	4.2nm,0.7s,baz=148,slow=11,SNR=62						
528A	**Cox Ranch, San**	**21.91**	**325**	⇑P	**P**	**06 59 39.1**	**+0.2**
	baz=22						
330A	**Mertzon**	**22.06**	**330**	⇑P	**P**	**06 59 39.5**	**-1.0**
	baz=22						
231A	**Bronte**	**22.10**	**333**	⇑P	**P**	**06 59 41.1**	**+0.2**
	baz=22,SNR=5.9						
626A	**Big Bend Ranch**	**22.23**	**322**	⇓P	**P**	**06 59 42.9**	**+0.6**
	baz=22						
527A	**Woodward Ranch**	**22.36**	**324**	⇑P	**P**	**06 59 43.9**	**+0.1**
	baz=22						
ABTX	**Abilene, Hawle**	**22.41**	**335**	⇓P	**P**	**06 59 42.3**	**-1.9**
	baz=22						
UALR	**University of**	**22.41**	**352**	*eP*	**P**	**06 59 44.5**	**+0.4**
	11nm,0.8s						
329A	**Wagon Wheel Ra**	**22.52**	**329**	⇑P	**P**	**06 59 45.1**	**-0.4**
	baz=23						
526A	**Mary Lane Ranc**	**22.57**	**323**	⇓P	**P**	**06 59 46.5**	**+0.4**
	baz=23						
427A	**Hayter Ranch,**	**22.77**	**326**	⇓P	**P**	**06 59 48.1**	**0.0**
	baz=23						
328A	**Wristen Ranch,**	**22.86**	**327**	⇓P	**P**	**06 59 49.6**	**+0.6**
	baz=23,SNR=5.1						
Z32A	**Haskell**	**22.94**	**336**	⇑P	**P**	**06 59 48.3**	**-1.5**
	baz=23,SNR=12						
130A	**Snyder**	**22.95**	**333**	⇓P	**P**	**06 59 48.6**	**-1.4**
	baz=23						
426A	**McDonald Obser**	**22.99**	**324**	⇓P	**P**	**06 59 50.4**	**-0.1**
	baz=23						
Z31A	**Sharp Cattle R**	**23.22**	**335**	⇓P	**P**	**06 59 51.0**	**-1.6**
	baz=23,SNR=8.8						
129A	**Stewart Farms,**	**23.40**	**331**	⇓P	**P**	**06 59 53.5**	**-0.9**
	baz=24,SNR=5.7						
TKL	**Tuckaleechee C**	**23.46**	**10**	P	**P**	**06 59 55.2**	**+0.3**
TKL	**Tuckaleechee C**	**23.46**	**10**	P	**P**	**06 59 55.2**	**+0.3**
	4.9nm,0.9s,baz=187,slow=11,SNR=6.3						
Y32A	**R-V Farms, Ver**	**23.54**	**337**	⇓P	**P**	**06 59 54.0**	**-1.7**
	baz=24						
Z30A	**Sanderson Ranc**	**23.61**	**333**	⇑P	**P**	**06 59 55.7**	**-0.7**
	baz=24,SNR=5.4						
Y31A	**Rekieta Farm,**	**23.82**	**336**	⇓P	**P**	**06 59 57.4**	**-1.0**
	baz=24,SNR=7.9						
Z29A	**Hungry Hill Ra**	**23.85**	**332**	⇓P	**P**	**06 59 57.9**	**-0.8**
	baz=24						
WMOK	**Wichita Mounta**	**23.96**	**339**	*eP*	**P**	**06 59 59.7**	**+0.1**
	1.3nm,0.7s						
Y30A	**Stafford Cattl**	**24.01**	**334**	⇓P	**P**	**07 00 00.0**	**-0.2**
	baz=24,SNR=5.6						
325A	**Bean Ranch, Si**	**24.05**	**324**	⇑P	**P**	**07 00 01.2**	**+0.5**
	baz=24						
226B	**Tecolote Peak,**	**24.13**	**326**	⇑P	**P**	**07 00 01.3**	**0.0**
	baz=24						
X31A	**McDonald Ranch**	**24.30**	**337**	⇓P	**P**	**07 00 01.4**	**-1.5**
	baz=24						
324A	**Moseley Ranch,**	**24.40**	**323**	⇑P	**P**	**07 00 03.6**	**-0.3**
	baz=24						
X30A	**Coker Ranch, T**	**24.50**	**335**	⇑P	**P**	**07 00 03.1**	**-1.6**
	baz=25,SNR=5.9						
225A	**Deer Hill, Car**	**24.52**	**325**	⇓P	**P**	**07 00 04.9**	**-0.1**
	baz=25						
Z27A	**Tatum**	**24.61**	**330**	⇓P	**P**	**07 00 04.8**	**-1.0**
	baz=25						
Y28A	**McKinney Farm,**	**24.64**	**332**	⇑P	**P**	**07 00 05.0**	**-1.0**
	baz=25						
125A	**Gardner Draw,**	**24.84**	**326**	⇓P	**P**	**07 00 07.8**	**-0.1**
	baz=25						
X29A	**Tulia**	**24.84**	**334**	⇑P	**P**	**07 00 06.5**	**-1.4**
	baz=25						
224A	**Cornudas Mount**	**24.88**	**324**	⇓P	**P**	**07 00 08.2**	**-0.1**
	baz=25						
MSTX	**Muleshoe**	**24.93**	**331**	⇓P	**P**	**07 00 07.5**	**-1.1**
	baz=25						
Y27A	**Causey**	**25.05**	**331**	⇓P	**P**	**07 00 09.2**	**-0.5**
	baz=25						
AMTX	**Amarillo**	**25.21**	**334**	*eP*	**P**	**07 00 11.1**	**0.0**
	10.0nm,1.0s						
V31A	**Spring Creek L**	**25.27**	**338**	⇓P	**P**	**07 00 10.1**	**-1.5**
	baz=25						
Z25A	**Roswell**	**25.35**	**327**	⇑P	**P**	**07 00 12.4**	**-0.1**
	baz=25						
W29A	**Amraillo**	**25.40**	**335**	⇓P	**P**	**07 00 12.3**	**-0.5**
	baz=26						
Z24A	**Sheeppen Canyo**	**25.73**	**326**	⇓P	**P**	**07 00 16.9**	**+0.8**
	baz=26						
W28A	**Vega**	**25.75**	**334**	⇑P	**P**	**07 00 15.7**	**-0.4**
	baz=26						
Y25A	**Mesa, Roswell**	**25.84**	**328**	⇑P	**P**	**07 00 17.5**	**+0.6**
	baz=26						
X26A	**CR and CF Fran**	**25.90**	**330**	⇓P	**P**	**07 00 17.8**	**+0.4**
	baz=26						
W27A	**Bowe Ranch, En**	**25.97**	**332**	⇓P	**P**	**07 00 17.9**	**-0.2**
	baz=26						
V28A	**Channing**	**26.18**	**334**	⇓P	**P**	**07 00 19.6**	**-0.4**
	baz=26						
Y24A	**Capitan**	**26.23**	**327**	⇓P	**P**	**07 00 21.2**	**+0.7**
	baz=26						
T31A	**Randall Ranch,**	**26.40**	**340**	⇑P	**P**	**07 00 20.7**	**-1.1**
	baz=26						
Y23A	**Lovelace Mesa,**	**26.57**	**326**	⇑P	**P**	**07 00 24.3**	**+0.7**
	baz=27						
220A	**Playas Peak, P**	**26.57**	**320**	⇑P	**P**	**07 00 24.5**	**+0.9**
	baz=27						
Z22A	**Elephant Butte**	**26.57**	**324**	⇓P	**P**	**07 00 24.1**	**+0.5**
	baz=27						
W25A	**X Bar L Ranch,**	**26.75**	**330**	⇑P	**P**	**07 00 24.9**	**-0.3**
	baz=27						
V26A	**Tequesquite Ra**	**26.91**	**332**	⇓P	**P**	**07 00 25.8**	**-0.8**
	baz=27						
T29A	**Hugoton**	**27.03**	**337**	⇑P	**P**	**07 00 26.1**	**-1.5**
	baz=27						
V25A	**Rancho No Teng**	**27.33**	**331**	⇓P	**P**	**07 00 30.5**	**+0.1**
	baz=27						
KSU1	**Kansas State U**	**27.40**	**346**	*eP*	**P**	**07 00 30.2**	**-0.6**
	6.8nm,0.8s						
R28A	**Tribune**	**28.26**	**338**	⇑P	**P**	**07 00 37.4**	**-1.2**
	baz=28						
U23A	**El Rito**	**28.48**	**329**	⇑P	**P**	**07 00 41.2**	**+0.4**
	baz=29						
S22A	**4UR Ranch, Cre**	**29.91**	**330**	⇓P	**P**	**07 00 52.7**	**-0.8**
	baz=30						
NVAR	**Mina Array Bea**	**36.88**	**320**	P	**P**	**07 01 55.5**	**+1.4**
NVAR	**Mina Array Bea**	**36.88**	**320**	P	**P**	**07 01 55.5**	**+1.4**
	6.8nm,0.8s,baz=131,slow=6.6,SNR=5.5						
SCHQ	**Schefferville**	**45.56**	**18**	*eP*	**P**	**07 03 03.3**	**-1.6**
	5.5nm,0.9s						
SCHQ	**Schefferville**	**45.56**	**18**	P	**P**	**07 03 03.6**	**-1.3**
	3.3nm,0.8s,baz=225,slow=11,SNR=6.6						
YKA	**Yellowknife Ar**	**53.24**	**345**	P	**P**	**07 04 02.1**	**-1.3**
YKA	**Yellowknife Ar**	**53.24**	**345**	P	**P**	**07 04 02.1**	**-1.3**
	0.8nm,0.7s,baz=142,slow=7.4,SNR=16						
ILAR	**Eielson Array**	**65.49**	**336**	P	**P**	**07 05 28.3**	**+0.4**
ILAR	**Eielson Array**	**65.49**	**336**	P	**P**	**07 05 28.3**	**+0.4**
	0.4nm,0.9s,baz=112,slow=4.4,SNR=4.2						
WRA	**Warramunga Arr**	**138.16**	**254**	PKP	**PKPdf**	**07 14 13.1**	**+2.3**
WRA	**Warramunga Arr**	**138.16**	**254**	PKP	**PKPdf**	**07 14 13.1**	**+2.3**
	0.4nm,0.6s,baz=89,slow=2.0,SNR=8.4						
CMAR	**Chiang Mai Arr**	**148.32**	**346**	PKPbc	**PKPbc**	**07 14 32.1**	**0.0**
CMAR	**Chiang Mai Arr**	**148.32**	**346**	PKPbc	**PKPbc**	**07 14 32.1**	**0.0**
	0.7nm,0.3s,baz=347,slow=4.3,SNR=6.5						

*ISCJB **29** 07:08:14.6±0.3, 59.73N±0.03×23.04E±0.05, h0km, Error ellipse: s-maj=4.1km s-min=3.1km az=155.5*
*NAO **29** 07:08:15.8±1.2, 59.80N×22.90E, ML2.2*
*HEL **29** 07:08:15.7±0.1, 59.65N×23.02E, h0km, ML2.2, ML2.2(UPP), Explosion*
*CSEM **29** 07:08:15.9±0.2, 59.75N×23.00E, h2km, ML2.4, Error ellipse: s-maj=4.5km s-min=3.1km az=163.0, Mining explosion.*
*IDC **29** 07:08:17.3±0.8, 59.86N×23.05E, h0km, mb1 3.5/5, mb1mx3.2/30, mbtmp3.4/5, ML3.2/5, Error ellipse: s-maj=11.3km s-min=5.9km az=154.0*
*BER **29** 07:08:17.1±4.3, 59.77N×22.87E, h0km, ML2.2(NAO), Suspected explosion*
*UPP **29** 07:08:20.8, 59.64N×22.25E, h0km, ML2.2, Suspected Mining explosion.*

ISC 29 07:08:14.2±0.6, 59.72N±0.03×22.93E±0.02, h0km, n61, σ1§64/91, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**0.89**	**55**	*eP*	**Pg**	**07 08 31.2**	**-0.1**
MEF				*eS*	**Sg**	**07 08 40.2**	**-2.6**
MEF				*e*Rg	Rg	07 08 42.6	
MEF	**Metsahovi**	**0.89**	**55**	P	**Pg**	**07 08 31.2**	**-0.1**
MEF				*eS*	**Sg**	**07 08 42.3**	**-0.5**
	50nm,0.2s,SNR=90						
MTSE	**Matsula**	**1.10**	**155**	*e*PB	**Pg**	**07 08 34.6**	**-0.7**
MTSE				*eS*	**Sg**	**07 08 47.6**	**-1.9**
MTSE	**Matsula**	**1.10**	**155**	Pb	**Pg**	**07 08 34.6**	**-0.7**
MTSE				S	**Sg**	**07 08 47.6**	**-1.9**
RAF	**Rauma**	**1.43**	**337**	*eP*	**Pn**	**07 08 42.3**	**+0.9**
RAF				*e*SB	**Sn**	**07 09 03.0**	**+2.1**
RAF				MSG		07 09 03.0	
	comp=Z,10nm,0.4s						
RAF	**Rauma**	**1.43**	**337**	*eP*	**Pn**	**07 08 42.3**	**+0.9**
	SNR=51						
RAF				*eS*	**Sg**	**07 09 00.8**	**+0.6**
	comp=Z,45nm,0.3s,SNR=51						
RAF				Sb	**Sn**	**07 09 03.0**	**+2.1**
	comp=Z,10nm,0.4s						
AAL	**Aland**	**1.55**	**289**	*eP*	**Pn**	**07 08 44.3**	**+1.4**
AAL				*eS*	**Sn**	**07 09 05.0**	**+1.3**
AAL	**Aland**	**1.55**	**289**	P	**Pn**	**07 08 44.3**	**+1.4**
AAL				S	**Sn**	**07 09 05.0**	**+1.3**
PVF	**Pernaja**	**1.69**	**59**	*eP*	**Pn**	**07 08 45.3**	**+0.4**
PVF				MSG	**Sn**	**07 09 07.8**	**+0.7**
	comp=Z,6.1nm,0.1s						
PVF				*e*SG	**Sn**	**07 09 07.8**	**+0.7**
PVF	**Pernaja**	**1.69**	**59**	P	**Pn**	**07 08 45.2**	**+0.4**
PVF				Sg	**Sn**	**07 09 07.8**	**+0.7**
SLIT	**Slitere, Latvi**	**2.12**	**189**	*eP*	**Pn**	**07 08 52.4**	**+1.6**
	SNR=51						
SLIT				*eS*	**Sb**	**07 09 20.6**	**+0.4**
	comp=Z,265nm,0.3s,SNR=51						
NRTU	**Norrtaelje**	**2.18**	**271**	*eP*	**Pn**	**07 08 53.9**	**+2.3**
NRTU	**Norrtaelje**	**2.18**	**271**	P	**Pn**	**07 08 53.9**	**+2.3**
	baz=84						
FIA0	**FINESS Array S**	**2.33**	**41**	Pn	**Pn**	**07 08 55.7**	**+2.0**
	baz=220,slow=14						
FIA0				Lg	Lg	07 09 25.7	
	baz=222,slow=28						
FIA0	**FINESS Array S**	**2.33**	**41**	Pn	**Pn**	**07 08 55.7**	**+2.0**
	baz=220,slow=14						
FIA0				Lg	Lg	07 09 25.7	
	baz=222,slow=28						
FIA0	**FINESS Array S**	**2.33**	**41**	Pn	**Pn**	**07 08 55.7**	**+2.0**
	baz=220,slow=14,SNR=50						
FIA0				Lg	Lg	07 09 25.7	
	baz=222,slow=26,SNR=50						
FINES	**FINESS Array B**	**2.33**	**41**	Pn	**Pn**	**07 08 55.7**	**+2.0**
	comp=Z,7.2nm,0.3s,baz=227,slow=14,SNR=96						
FINES				Pg	**Pb**	**07 08 56.4**	**-0.5**
	comp=Z,6.0nm,0.3s,baz=229,slow=14,SNR=130						
FINES				Lg	Lg	07 09 25.5	
	comp=Z,15nm,0.3s,baz=229,slow=28,SNR=38						
VSU	**Vasula**	**2.33**	**121**	Pn	**Pn**	**07 08 55.0**	**+1.3**
VSU				Sn	**Sn**	**07 09 25.4**	**+2.4**
VSU	**Vasula**	**2.33**	**121**	Pn	**Pn**	**07 08 55.0**	**+1.3**
VSU				Sn	**Sn**	**07 09 25.4**	**+2.4**
VSU	**Vasula**	**2.33**	**121**	Pn	**Pn**	**07 08 55.0**	**+1.3**
	SNR=50						
VSU	**Vasula**	**2.33**	**121**	*eP*	**Pn**	**07 08 55.3**	**+1.6**
	SNR=51						
VSU				*eS*	**Sn**	**07 09 25.1**	**+2.1**
	comp=Z,54nm,0.2s,SNR=51						
VSU				Sn	**Sn**	**07 09 25.4**	**+2.4**
	SNR=50						
VJF	**Virojoki**	**2.46**	**68**	*eP*	**Pn**	**07 08 55.5**	**0.0**
VJF				*eS*	**Sn**	**07 09 26.9**	**+0.7**
VJF				MSG		07 09 26.9	
	comp=Z,11nm,0.2s						
VJF	**Virojoki**	**2.46**	**68**	P	**Pn**	**07 08 55.4**	**0.0**
VJF				S	**Sn**	**07 09 26.8**	**+0.7**
	comp=Z,11nm,0.2s						
FORU	**Forsmark**	**2.48**	**288**	*eP*	**Pb**	**07 08 59.1**	**-0.3**
FORU	**Forsmark**	**2.48**	**288**	P	**Pb**	**07 08 59.1**	**-0.3**
FLYU	**Flymyra**	**2.57**	**281**	*eP*	**Pn**	**07 08 59.7**	**+2.6**
FLYU	**Flymyra**	**2.57**	**281**	P	**Pn**	**07 08 59.6**	**+2.6**
NYNU	**Nynaeshamn**	**2.62**	**256**	*eP*	**Pn**	**07 08 59.9**	**+2.2**
NYNU	**Nynaeshamn**	**2.62**	**256**	P	**Pn**	**07 08 59.9**	**+2.2**
KEF	**Keuruu**	**2.64**	**20**	*e*PB	**Pb**	**07 09 01.7**	**-0.5**
KEF				*e*SB	**Sb**	**07 09 35.5**	**+0.4**
KEF				MSG		07 09 35.5	
	comp=Z,17nm,0.4s						
KEF	**Keuruu**	**2.64**	**20**	Pb	**Pb**	**07 09 01.7**	**-0.5**
KEF				Sb	**Sb**	**07 09 35.5**	**+0.4**
	comp=Z,17nm,0.4s						
KAF	**Kangasniemi**	**2.92**	**33**	*eP*	**Pn**	**07 09 04.6**	**+2.8**
KAF				MSG	**Sb**	**07 09 41.7**	**-1.5**
	comp=Z,16nm,0.4s						
KAF				*e*SB	**Sb**	**07 09 41.7**	**-1.5**
KAF	**Kangasniemi**	**2.92**	**33**	P	**Pn**	**07 09 04.6**	**+2.8**
KAF				Sb	**Sb**	**07 09 41.7**	**-1.5**
BACU	**Backbrunna**	**2.95**	**275**	*eP*	**Pn**	**07 09 04.3**	**+2.1**
BACU	**Backbrunna**	**2.95**	**275**	P	**Pn**	**07 09 04.2**	**+2.1**
IGGU	**Iggoen**	**3.02**	**295**	*eP*	**Pn**	**07 09 05.7**	**+2.4**
IGGU	**Iggoen**	**3.02**	**295**	P	**Pn**	**07 09 05.6**	**+2.4**
ESKU	**Eskilstuna**	**3.37**	**265**	*eP*	**Pn**	**07 09 09.8**	**+1.8**
ESKU	**Eskilstuna**	**3.37**	**265**	P	**Pn**	**07 09 09.8**	**+1.8**
SUF	**Sumiainen**	**3.39**	**26**	*eP*	Pn	07 09 11.4	+3.1
SUF	**Sumiainen**	**3.39**	**26**	P	Pn	07 09 11.4	+3.1
VIKU	**Vikbolandet**	**3.44**	**252**	*eP*	**Pn**	**07 09 10.3**	**+1.4**
VIKU	**Vikbolandet**	**3.44**	**252**	P	**Pn**	**07 09 10.3**	**+1.4**
FALU	**Falun**	**3.64**	**285**	*eP*	**Pn**	**07 09 13.5**	**+1.9**
FALU	**Falun**	**3.64**	**285**	P	**Pn**	**07 09 13.5**	**+1.9**
HFS	**Hagfors**	**4.67**	**279**	Pn	**Pn**	**07 09 27.7**	**+1.9**
	baz=107,slow=12						
HFS				Sn	**Sn**	**07 10 17.0**	**-3.6**
	baz=114,slow=22						
HFS				Lg	Lg	07 10 36.6	
	baz=89,slow=28						
HFS	**Hagfors**	**4.67**	**279**	Pn	**Pn**	**07 09 27.7**	**+1.9**
	baz=107,slow=12						
HFS				Sn	**Sn**	**07 10 17.0**	**-3.6**
	baz=114,slow=22						
HFS				Lg	Lg	07 10 36.6	
	baz=89,slow=28						
HFS	**Hagfors**	**4.67**	**279**	Pn	**Pn**	**07 09 28.5**	**+2.7**
	comp=Z,0.7nm,0.3s,baz=83,slow=12,SNR=25						
HFS				Pg	**Pb**	**07 09 38.6**	**+1.9**
	comp=Z,2.1nm,0.3s,baz=96,slow=16,SNR=26						
HFS				Sn	**Sn**	**07 10 22.1**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=89,slow=28,SNR=7.2						
HFS				Lg	Lg	07 10 39.5	
	comp=Z,2.5nm,0.3s,baz=93,slow=32,SNR=9.4						
HFS	**Hagfors**	**4.67**	**279**	Pn	**Pn**	**07 09 27.7**	**+1.9**
	baz=107,slow=12,SNR=50						
HFS				Lg	Lg	07 10 36.7	
	baz=89,slow=27,SNR=50						
NB2	**NORSAR Subarra**	**5.96**	**288**	Pn	**Pn**	**07 09 44.1**	**+0.5**
	baz=96,slow=14						
NB2				Sn	**Sn**	**07 10 51.2**	**-1.3**
	baz=100,slow=28						
NB2				Lg	Lg	07 11 20.4	
NB2	**NORSAR Subarra**	**5.96**	**288**	Pn	**Pn**	**07 09 44.1**	**+0.5**
	baz=96,slow=14						
NB2				Sn	**Sn**	**07 10 51.2**	**-1.3**
	baz=100,slow=28						
NB2				Lg	Lg	07 11 20.4	
NB2	**NORSAR Subarra**	**5.96**	**288**	Pn	**Pn**	**07 09 44.1**	**+0.5**
	baz=96,slow=12,SNR=50						
NB2				Lg	Lg	07 11 20.4	
NOA	**NORSAR Array B**	**5.96**	**288**	Pn	**Pn**	**07 09 44.0**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=98,slow=14,SNR=16						
NOA			

LAST	Lasithi	1.31	78	*e*Pb	Pn	07 11 30.8	-0.2		
NPS	Neapolis	1.44	75	*e*PB	Pb	07 11 33.2	-0.3		
NPS	Neapolis	1.44	75	*e*Pb	Pb	07 11 33.2	-0.3		
XRY	Khrisi	1.46	90	*e*PB	Pb	07 11 33.9	+0.1		
XRY	Khrisi	1.46	90	*e*Pb	Pb	07 11 33.9	+0.1		
KYTH	Kithira	1.56	333	*e*PB	Pb	07 11 35.4	-0.2		
KYTH	Kithira	1.56	333	*e*Pb	Pb	07 11 35.4	-0.2		
ZKR	Zakros	1.90	83	*e*PN	Pg	07 11 42.6	-0.4		
ZKR	Zakros	1.90	83	*e*Pn	Pg	07 11 42.6	-0.4		
VLI	Veliai	1.99	337	*e*PG	Pb	07 11 42.1	-0.8		
VLI	Veliai	1.99	337	*e*Pg	Pb	07 11 42.1	-0.8		
DYR	Agios Nikonas	2.27	326	*e*PN	Pb	07 11 47.0	-0.6		
DYR	Agios Nikonas	2.27	326	*e*Pn	Pb	07 11 47.0	-0.6		
APE	Apeiranthos	2.53	31	*e*PN	Pb	07 11 51.2	-1.0		
APE	Apeiranthos	2.53	31	*e*Pn	Pb	07 11 51.2	-1.0		
PYL	PYLOS	2.67	319	*e*PN	Pb	07 11 52.5	-1.9		
PYL	PYLOS	2.67	319	*e*Pn	Pb	07 11 52.5	-1.9		
KARP	Karpathos	2.73	75	P	Pn	07 11 50.0	-0.6		
KARP	Karpathos	2.73	75	*e*PN	Pn	07 11 52.8	+2.2		
KARP	Karpathos	2.73	75	P	Pn	07 11 50.0	-0.6		
KARP	Karpathos	2.73	75	*e*Pn	Pn	07 11 52.8	+2.2		
VLX	Vlachokerasia	2.77	334	*e*PN	Pb	07 11 54.8	-1.4		
VLX	Vlachokerasia	2.77	334	*e*Pn	Pb	07 11 54.8	-1.4		
LTK	Loutraki	3.21	346	*e*PB	Pn	07 11 59.5	+2.3		
LTK	Loutraki	3.21	346	*e*Pb	Pn	07 11 59.5	+2.3		
KALE	Kalithea	3.77	338	*e*PB	Pn	07 12 09.0	+4.1		
KALE	Kalithea	3.77	338	*e*Pb	Pn	07 12 09.0	+4.1		

ISCJB ***29*** *07:15:32.4±0.7, 42°.80S×0°.09×72°.1W±0°.2, h10km, mb3.8/7, Error ellipse: s-maj=28.0km s-min=7.4km az=23.9*
IDC ***29*** *07:15:32.4±0.9, 42°.83S×72°.37W, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/18, mbtmp3.9/7, ML3.7/1, MS3.3/1, Ms1 3.3/1, ms1mx3.0/26, Error ellipse: s-maj=39.1km s-min=13.6km az=113.0*
NEIC ***29*** *07:15:34.0±0.5, 42°.83S×72°.24W, h10km, mb4.5/2, Error ellipse: s-maj=24.7km s-min=11.5km az=102.0*

ISC 29 07:15:34.1±0.8, 42°.8S±0°.1×72°.2W±0°.2, h10km, n22, σ0s74/25, mb3.9/7, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.43	31	*e*Pn	Pn	07 16 15.4	+1.5
PLCA				Pg	Pb	07 16 18.1	+0.2
PLCA				*e*Sg	Sg	07 16 51.7	-0.5
PLCA				Lg	Lg	07 16 53.2	
PLCA	Paso Flores	2.43	31	Pn	Pn	07 16 15.1	+1.2
	3.8nm,0.3s,baz=218,slow=15,SNR=40						
PLCA				Pg	Pb	07 16 18.1	+0.2
	6.9nm,0.3s,baz=221,slow=16,SNR=102						
PLCA				Lg	Lg	07 16 53.2	
	21nm,0.3s,baz=118,slow=5.8,SNR=16						
PLCA				LR	LR	07 16 59.2	
	comp=Z,559nm,18.3s,baz=228,slow=35						
SIV	San Ignacio	28.39	23	P	P	07 21 28.1	-0.6
SIV	San Ignacio	28.39	23	P	P	07 21 28.1	-0.6
	0.2nm,0.3s,baz=243,slow=11,SNR=3.7						
SNAA	Sanae	43.58	155	P	P	07 23 37.5	-0.3
SNAA	Sanae	43.58	155	P	P	07 23 37.5	-0.3
	2.6nm,1.2s,baz=254,slow=8.2,SNR=4.8						
QSPA	South Pole Qui	47.43	180	*e*P	P	07 24 08.1	-0.4
	7.5nm,1.2s						
QSPA	South Pole Qui	47.43	180	P	P	07 24 08.3	-0.2
	2.1nm,1.0s,baz=148,slow=5.5,SNR=8.0						
VNDA	Vanda	55.45	192	P	P	07 25 09.7	+1.4
VNDA	Vanda	55.45	192	P	P	07 25 09.7	+1.4
	3.1nm,1.2s,baz=158,slow=7.2,SNR=3.9						
TXAR	Lajitas Array	77.41	332	P	P	07 27 29.1	-0.2
TXAR	Lajitas Array	77.41	332	P	P	07 27 29.1	-0.2
	0.4nm,0.9s,baz=149,slow=8.3,SNR=4.0						
ANMO	Albuquerque	83.48	332	*e*P	P	07 28 02.2	+0.2
	4.2nm,1.6s						
TORD	Torodi Ar. Bea	87.39	70	P	P	07 28 20.9	-0.7
TORD	Torodi Ar. Bea	87.39	70	P	P	07 28 20.9	-0.7
	0.4nm,1.0s,baz=251,slow=4.4,SNR=2.0						
ILAR	Eielson Array	121.91	331	PKP	PKPdf	07 34 26.6	-0.8
ILAR	Eielson Array	121.91	331	PKP	PKPdf	07 34 26.6	-0.8
	0.5nm,1.1s,baz=188,slow=2.6,SNR=4.3						
AKTO	Aktyubinsk	145.55	60	PKPbc	PKPdf	07 35 11.3	-0.4
AKTO	Aktyubinsk	145.55	60	PKPbc	PKPdf	07 35 11.3	-0.4
	1.5nm,0.7s,baz=294,slow=4.9,SNR=5.7						
ABKAR	Akbulak array	146.64	62	*e*PKPdf	PKPdf	07 35 13.6	0.0
MKAR	Makanchi Array	161.51	69	PKPab	PKPab	07 36 19.5	+0.2
MKAR	Makanchi Array	161.51	69	PKPab	PKPab	07 36 19.5	+0.2
	0.1nm,0.3s,baz=274,slow=4.2,SNR=3.6						

IDC ***29*** *07:20:37.4±1.3, 62°.39N×149°.89W, h45km±14km, mb3.6/7, mb1 3.7/11, mb1mx3.5/30, mbtmp3.5/11, ML3.2/4, Error ellipse: s-maj=19.2km s-min=9.1km az=107.0*
ISCJB ***29*** *07:20:38.6±0.2, 62°.38N±0°.02×149°.53W±0°.05, h74km±4km, mb3.7/7, Error ellipse: s-maj=3.9km s-min=3.1km az=23.6*
NEIC ***29*** *07:20:40.5, 62°.37N×149°.51W, h55km, ML3.5(AEIC), After AEIC.*

ISC 29 07:20:39.7±0.8, 62°.38N±0°.03×149°.59W±0°.03, h65km±7km, n86, σ0s98/103, mb3.6/7, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRAP	Trapper Creek	0.31	263	P	Pn	07 20 50.1	-0.2
HUR	Hurricane	0.60	358	P	Pn	07 20 53.0	-0.1
PMR	Palmer	0.82	165	P	Pn	07 20 54.7	-0.8
PMR				S	Sn	07 21 06.8	-0.4
SML	Sawmill	0.82	133	P	Pn	07 20 54.8	-0.9
SML				S	Sn	07 21 07.3	-0.2
SKT	Skwentna	0.99	247	P	Pn	07 20 58.0	+0.2
SKT				S	Sn	07 21 12.3	+1.0
SUA	Susitna One	1.07	211	P	Pn	07 20 59.1	+0.2
RND	Reindeer	1.09	18	P	Pn	07 20 59.0	-0.1
TRF	Thorofare Moun	1.13	344	P	Pn	07 20 59.3	-0.3
TRF				S	Sn	07 21 14.5	0.0
DHY	Denali Highway	1.24	54	P	Pn	07 21 00.4	-0.7
DHY				S	Sn	07 21 17.3	+0.2
RC01	Rabbit Creek A	1.29	183	P	Pn	07 21 01.7	0.0
RC01				S	Sn	07 21 19.1	+0.9
PPLA	Purkeypile	1.31	295	P	Pn	07 21 02.3	+0.3
PPLA				S	Sn	07 21 19.3	+0.5
STLK	Strandline Lak	1.38	231	P	Pn	07 21 03.1	+0.2
MCK	McKinley	1.39	12	P	Pn	07 21 03.3	+0.2
MCK				S	Sn	07 21 21.1	+0.5
CGLM	Capps Glacier	1.57	228	P	Pn	07 21 05.9	+0.5
SPU	Mount Spurr	1.68	225	P	Pn	07 21 07.2	+0.4
BGL	Barrier Glacie	1.74	231	P	Pn	07 21 08.6	+0.9
CKL	Chakachamna La	1.76	229	P	Pn	07 21 09.4	+1.3
SLKM	Skilak Lake	1.90	190	P	Pn	07 21 10.3	+0.5
KLU	Klutina	1.95	115	P	Pn	07 21 10.1	-0.4
CHUM	Lake Minchumin	1.96	322	P	Pn	07 21 11.1	+0.6
VLZ	Valdez	1.99	127	P	Pn	07 21 10.1	-0.9
PAX	Paxson	1.99	71	P	Pn	07 21 11.8	+0.7
HARP	HAARP	2.06	87	P	Pn	07 21 12.7	+0.7
DIV	Divide	2.20	123	P	Pn	07 21 13.0	-0.9
WRH	Wood River Hil	2.21	17	P	Pn	07 21 13.8	-0.1
NEA	Nenana	2.22	6	P	Pn	07 21 14.2	+0.1
SEW	Seward	2.28	178	P	Pn	07 21 15.9	+0.9
DFR	Drift River	2.33	221	P	Pn	07 21 16.8	+1.1
HDA	Harding Lake	2.36	29	P	Pn	07 21 16.3	+0.3
CCB	Clear Creek Bu	2.42	19	P	Pn	07 21 16.5	-0.3
RSO	Redoubt South	2.45	220	*e*Pn	Pn	07 21 18.1	+0.6
EYAK	Cordova Ski Ar	2.60	133	P	Pn	07 21 19.0	-0.2
COLA	College	2.62	16	P	Pn	07 21 19.6	0.0
MDM	Murphy Dome	2.66	13	P	Pn	07 21 20.2	+0.1
IL1	Eielson Array	2.69	25	P	Pn	07 21 20.3	-0.2
ILAR	Eielson Array	2.69	25	P	Pn	07 21 20.2	-0.3
ILAR				S	Sn	07 21 50.5	-1.4
ILAR	Eielson Array	2.69	25	P	Pn	07 21 20.2	-0.3
	6.5nm,0.3s,baz=207,slow=14,SNR=132						
ILAR				S	Sn	07 21 50.5	-1.4
	23nm,0.3s,baz=214,slow=23,SNR=23						
BRLK	Bradley Lake	2.70	194	P	Pn	07 21 20.7	+0.1
MLY	Manley	2.71	350	P	Pn	07 21 20.9	0.0
MENT	Mentasta	2.77	76	*e*Pn	Pn	07 21 22.1	+0.5
MENT				*e*Sn	Sn	07 21 58.5	+4.7
DOT	Dot Lake	2.82	61	P	Pn	07 21 23.1	+0.8
TT01	Tatalina	3.02	283	P	Pn	07 21 24.8	-0.2
VRDI	Verde Repeater	3.13	109	P	Pn	07 21 26.3	-0.4
OPT	Oil Point	3.26	215	P	Pn	07 21 28.8	+0.5
MCARA	McCarthy VSAT	3.26	105	P	Pn	07 21 29.2	+0.9
MID	Middleton Isla	3.36	150	*e*Pn	Pn	07 21 31.1	+1.6
AUW	Augustine West	3.56	214	P	Pn	07 21 33.5	+1.1
BCA3	Beaver Creek A	3.66	76	P	Pn	07 21 34.0	+0.3
BALM	Baldy	3.70	108	P	Pn	07 21 33.7	-0.7
KIAG	Kiagna River	3.74	110	P	Pn	07 21 33.8	-1.2
BARN	Barnard Glacie	4.00	106	P	Pn	07 21 38.4	-0.1
IM3	Indian Mountai	4.05	335	P	Pn	07 21 39.4	+0.3
GRNC	Granite Creek	4.09	110	P	Pn	07 21 39.0	-0.8
EGAK	Eagle	4.47	54	*e*Pn	Pn	07 21 44.6	-0.2
SAMH	Samovar Hills	4.81	114	P	Pn	07 21 50.0	+0.4
KDAK	Kodiak Island	4.85	199	P	Pn	07 21 48.8	-1.1
KDAK				S	Sn	07 22 41.9	-2.7
KDAK	Kodiak Island	4.85	199	P	Pn	07 21 47.5	-2.4
	2.2nm,0.3s,baz=39,slow=9.0,SNR=45						
KDAK				S	Sn	07 22 41.9	-2.7
	5.4nm,0.3s,baz=264,slow=20,SNR=10.0						
COLD	Coldfoot	4.88	357	P	Pn	07 21 50.9	+0.5
DAWY	Dawson	4.91	65	P	Pn	07 21 51.1	+0.2
KAKN	Katmai Knife C	4.91	216	P	Pn	07 21 51.3	+0.4
KCE	Katmai Mt Cerb	4.99	216	P	Pn	07 21 53.2	+1.2
KABU	Katmai Buttres	5.00	217	P	Pn	07 21 52.8	+0.7
KABR	Katmai Barrier	5.03	215	P	Pn	07 21 52.7	+0.2
BM3	Burnt Mountain	5.49	21	P	Pn	07 21 58.8	0.0
OHAK	Old Harbor	5.50	202	P	Pn	07 21 57.5	-1.3
PNL	Peninsula	5.65	114	*e*Pn	Pn	07 22 01.0	+0.1
	12nm,0.4s						
HYT	Haines Junctio	5.97	100	P	Pn	07 22 05.1	-0.3
SKAG	Skagway	7.54	106	*e*Pn	Pn	07 22 25.9	-0.7
	14nm,1.1s						
INK	Inuvik	8.95	41	P	Pn	07 22 46.5	+0.7
INK				S	Sn	07 24 26.5	+1.6
INK	Inuvik	8.95	41	P	Pn	07 22 46.5	+0.7
	0.2nm,0.3s,baz=242,slow=18,SNR=10						
INK				S	Sn	07 24 26.5	+1.6
	0.6nm,0.3s,baz=271,slow=21,SNR=3.9						
YKA	Yellowknife Ar	16.07	74	P	Pn	07 24 20.3	-0.9
YKA				PcP	PcP	07 29 12.7	-0.4
YKA	Yellowknife Ar	16.07	74	P	Pn	07 24 20.3	-0.9
	0.1nm,0.3s,baz=285,slow=10,SNR=6.3						
YKA				PcP	PcP	07 29 12.7	-0.4
	0.0nm,0.3s,baz=312,slow=2.0,SNR=4.2						
NEW	Newport	22.93	113	P	P	07 25 37.6	-0.4
NEW	Newport	22.93	113	P	P	07 25 37.6	-0.4
	1.1nm,0.5s,baz=307,slow=13,SNR=3.7						
NVAR	Mina Array Bea	30.63	127	P	P	07 26 48.9	+1.3
NVAR	Mina Array Bea	30.63	127	P	P	07 26 48.9	+1.3
	0.8nm,0.6s,baz=315,slow=9.2,SNR=9.9						
SPITS	Spitsbergen Ar	39.42	5	P	P	07 28 02.1	-0.4
SPITS	Spitsbergen Ar	39.42	5	P	P	07 28 02.1	-0.4
	4.1nm,1.1s,baz=22,slow=7.3,SNR=7.2						
TXAR	Lajitas Array	44.41	116	P	P	07 28 44.4	+0.6
TXAR	Lajitas Array	44.41	116	P	P	07 28 44.4	+0.6
	0.3nm,0.6s,baz=326,slow=6.5,SNR=4.2						
ARCES	ARCESS Array B	48.33	2	P	P	07 29 14.2	+0.3
ARCES	ARCESS Array B	48.33	2	P	P	07 29 14.2	+0.3
	3.8nm,0.9s,baz=8.5,slow=7.3,SNR=3.5						
ZALV	Zalesovo Beam	56.41	325	P	P	07 30 13.1	-0.7
ZALV	Zalesovo Beam	56.41	325	P	P	07 30 13.1	-0.7
	0.4nm,0.4s,baz=28,slow=6.5,SNR=2.2						
MKAR	Makanchi Array	63.57	323	P	P	07 31 01.4	-1.6
MKAR	Makanchi Array	63.57	323	P	P	07 31 01.4	-1.6
	0.3nm,0.5s,baz=46,slow=7.5,SNR=3.6						

ISCJB ***29*** *07:27:06.2±0.4, 37°.83N±0°.01×23°.02E±0°.02, h9km±2km, mb3.6/8, Error ellipse: s-maj=2.2km s-min=2.0km az=165.6*
THE ***29*** *07:27:06.6, 37°.84N×23°.02E, h1km±1km, ML3.7/12, Error ellipse: s-maj=1.8km s-min=0.6km az=153.0*
ATH ***29*** *07:27:06.3, 37°.86N×23°.02E, h23km, MD3.4/31, ML3.5*
CSEM ***29*** *07:27:06.3±0.1, 37°.84N×23°.00E, h2km, MD3.4, Error ellipse: s-maj=2.2km s-min=2.1km az=47.0*
IDC ***29*** *07:27:13.8±3.1, 37°.80N×22°.96E, h75km±29km, mb3.5/8, mb1 3.5/10, mb1mx3.4/29, mbtmp3.4/10, Error ellipse: s-maj=23.7km s-min=18.2km az=151.0*

ISC 29 07:27:07.0±0.8, 37°.86N±0°.01×23°.01E±0°.01, h14km±5km, n168, σ0s90/257, mb3.8/8, 2C-7D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LTK	Loutraki	0.17	347	P	Pg	07 27 10.6	-0.4
LTK				S	Sg	07 27 13.6	-0.2
LTK	Loutraki	0.17	347	*e*PB	Pg	07 27 10.9	-0.1
LTK				*e*SB	Sb	07 27 15.0	-0.3
LTK	Loutraki	0.17	347	P	Pg	07 27 10.6	-0.4
LTK	Loutraki	0.17	347	*e*Pb	Pg	07 27 10.9	-0.1
LTK				S	Sg	07 27 13.6	-0.2
LTK				*e*Sb	Sb	07 27 15.0	-0.3
THAL	Thalero	0.33	303	P	Pg	07 27 13.3	+0.3
THAL				S	Sg	07 27 14.7	+0.4
THAL	Thalero	0.33	303	P	Pg	07 27 13.4	-0.3
THAL				S	Sg	07 27 18.7	+0.4
NAIG	Nisos Aigina	0.39	105	*e*PB	Pg	07 27 14.9	+0.1
NAIG	Nisos Aigina	0.39	105	*e*Pb	Pg	07 27 14.9	+0.1
DID	Didima	0.39	153	P	Pg	07 27 14.2	-0.7
DID				S	Sg	07 27 20.5	+0.3
DID	Didima	0.39	153	*e*PB	Pg	07 27 14.2	-0.7
DID				*e*SB	Sb	07 27 21.0	-0.7
DID	Didima	0.39	153	P	Pg	07 27 14.2	-0.7
DID				S	Sg	07 27 20.5	+0.3
DID				*e*Sb	Sb	07 27 21.0	-0.7
VIL2	Platees	0.41	29	P	Pg	07 27 14.6	-0.5
VIL2				S	Sg	07 27 20.3	-0.4
GUR	Goura	0.54	279	P	Pg	07 27 16.8	-0.8
GUR				S	Sg	07 27 24.0	-0.8
GUR	Goura	0.54	279	*e*PN	Pg	07 27 17.1	-0.5
GUR				*e*SN	Sg	07 27 25.1	+0.3
GUR	Goura	0.54	279	P	Pg	07 27 16.8	-0.8
GUR	Goura	0.54	279	*e*Pn	Pg	07 27 17.1	-0.5
GUR				S	Sg	07 27 24.0	-0.8
GUR				*e*Sn	Sg	07 27 25.1	+0.3
ATH	Athens Observa	0.57	78	P	Pg	07 27 17.6	-0.5
ATH				S	Sg	07 27 25.8	+0.1
ATH	Athens Observa	0.57	78	*e*PN	Pg	07 27 18.1	0.0
ATH				*e*SN	Sg	07 27 25.9	+0.2
ATH	Athens Observa	0.57	78	P	Pg	07 27 17.6	-0.5
ATH	Athens Observa	0.57	78	*e*Pn	Pg	07 27 18.1	0.0
ATH				S	Sg	07 27 25.8	+0.1
ATHU	Athens Univers	0.62	80	P	Pg	07 27 18.6	-0.5
ATHU				S	Sg	07 27 27.0	-0.3
ATHU	Athens Univers	0.62	80	P	Pg	07 27 18.6	-0.5
ATHU				S	Sg	07 27 27.0	-0.3
DSF	Desfina	0.67	325	P	Pg	07 27 19.4	-0.7
DSF				S	Sg	07 27 29.4	+0.4
DSF	Desfina	0.67	325	P	Pg	07 27 19.4	-0.7
DSF				S	Sg	07 27 29.4	+0.4
PTL	Penteli	0.70	74	P	Pg	07 27 19.9	-0.7
PTL				S	Sg	07 27 29.6	-0.2
PTL	Penteli	0.70	74	*e*PN	Pg	07 27 19.6	-1.0
PTL				*e*SN	Sg	07 27 29.6	-0.2
PTL	Penteli	0.70	74	*e*Pn	Pg	07 27 19.6	-1.0
PTL	Penteli	0.70	74	P	Pg	07 27 19.9	-0.7
PTL				S	Sg	07 27 29.6	-0.2
VLX	Vlachokerasia	0.70	226	P	Pg	07 27 19.7	-0.9
VLX				S	Sb	07 27 30.1	-0.5
VLX	Vlachokerasia	0.70	226	*e*PN	Pg	07 27 19.9	-0.7
VLX				*e*SN	Sb	07 27 30.2	-0.4
VLX	Vlachokerasia	0.70	226	P	Pg	07 27 19.7	-0.9
VLX				S	Sb	07 27 30.1	-0.5
KLV	Kalavryta, Ach	0.71	285	*e*PN	Pg	07 27 20.2	-0.6
KLV	Kalavryta, Ach	0.71	285	*e*Pn	Pg	07 27 20.2	-0.6
LKR	Lokris	0.79	359	P	Pg	07 27 21.1	-1.3
LKR				S	Sn	07 27 34.5	+1.0
LKR	Lokris	0.79	359	*e*PN	Pg	07 27 21.5	-0.9
LKR				*e*SN	Sg	07 27 32.6	-0.2
LKR	Lokris	0.79	359	P	Pg	07 27 21.1	-1.3
LKR				*e*Sn	Sg	07 27 32.6	-0.2
LKR				S	Sn	07 27 34.5	-1.0
ATAL	Atalanti	0.83	0	P	Pg	07 27 22.0	-1.2
ATAL				S	Sn	07 27 36.0	-0.5
ATAL	Atalanti	0.83	0	P	Pg	07 27 22.0	-1.2
ATAL				S	Sn	07 27 36.0	-0.5
KALE	Kalithea	0.87	308	P	Pg	07 27 23.1	-0.8
KALE				S	Sg	07 27 34.5	-0.8
KALE	Kalithea	0.87	308	*e*PN	Pg	07 27 23.5	-0.4
KALE				*e*SN	Sb	07 27 35.7	+0.2
KALE	Kalithea	0.87	308	P	Pg	07 27 23.1	-0.8
KALE	Kalithea	0.87	308	*e*Pn	Pg	07 27 23.5	-0.4
KALE				S	Sg	07 27 34.5	-0.8
KALE				*e*Sn	Sb	07 27 35.7	+0.2
TRIZ	Trizonia	0.90	305	P	Pb	07 27 24.0	-0.4
TRIZ				S	Sn	07 27 37.3	-0.8
TRIZ	Trizonia	0.90	305	*e*PN	Pb	07 27 23.7	-0.7
TRIZ				*e*SN	Sg	07 27 35.9	-0.3
TRIZ	Trizonia	0.90	305	*e*Pn	Pb	07 27 23.7	-0.7
TRIZ	Trizonia	0.90	305	P	Pb	07 27 24.0	-0.4
TRIZ				S	Sn	07 27 37.3	-0.8
LAKA	Lakka	0.90	295	P	Pb	07 27 23.9	-0.6
LAKA				S	Sb	07 27 36.5	+0.1
LAKA	Lakka	0.90	295	*e*PN	Pb	07 27 24.2	-0.3
LAKA				*e*SN	Sb	07 27 36.4	+0.1
LAKA	Lakka	0.90	295	P	Pb	07 27 23.9	-0.6
LAKA	Lakka	0.90	295	*e*Pn	Pb	07 27 24.2	-0.3
LAKA				S	Sb	07 27 36.5	+0.1
AXAR	Agios Charalam	0.95	343	P	Pb	07 27 24.2	-1.1
AXAR				S	Sn	07 27 39.8	+0.4
AXAR	Agios Charalam	0.95	343	P	Pb	07 27 24.2	-1.1
AXAR				S	Sn	07 27 39.8	+0.4
MRKA	Markates	0.96	28	P	Pb	07 27 24.4	-1.1
MRKA				S	Sn	07 27 39.9	+0.3
MRKA	Markates	0.96	28	P	Pb	07 27 24.4	-1.1
MRKA				S	Sn	07 27 39.9	+0.3
SMIA	Simia	1.03	8	P	Pb	07 27 25.8	-0.9
SMIA				S	Sn	07 27 42.1	+0.7
SMIA	Simia	1.03	8	P	Pb	07 27 25.8	-0.9
SMIA				S	Sn	07 27 42.1	+0.7
EFP	Efpalio	1.04	303	P	Pb	07 27 26.4	-0.4
EFP				S	Sn	07 27 41.8	+0.2
EFP	Efpalio	1.04	303	*e*PN	Pb	07 27 26.3	-0.5
EFP				*e*SN	Sn	07 27 41.2	-0.4
EFP	Efpalio	1.04	303	P	Pb	07 27 26.4	-0.4
EFP				*e*Sn	Sn	07 27 41.2	-0.4
EFP				S	Sn	07 27 41.8	+0.2
AMT	Artemida-Makis	1.08	253	*e*PN	Pg	07 27 27.8	-0.1
AMT				*e*SN	Sn	07 27 42.8	+0.1
AMT	Artemida-Makis	1.08	253	*e*Pn	Pg	07 27 27.8	-0.1
AMT				*e*Sn	Sn	07 27 42.8	+0.1
MRMA	Marmari	1.10	79	P	Pb	07 27 27.2	-0.6
MRMA				S	Sb	07 27 41.6	-0.4
MRMA	Marmari	1.10	79	P	Pb	07 27 27.2	-0.6
MRMA				S	Sb	07 27 41.6	-0.4
ITM	Ithomi	1.10	232	P	Pb	07 27 26.9	-0.9
ITM				S	Sn	07 27 42.6	-0.4
ITM	Ithomi	1.10	232	*e*PN	Pb	07 27 27.0	-0.9
ITM				*e*SN	Sn	07 27 43.0	0.0
ITM	Ithomi	1.10	232	P	Pb	07 27 26.9	-0.9
ITM				S	Sn	07 27 42.6	-0.4
ITM				*e*Sn	Sn	07 27 43.0	0.0
VLI	Veliai	1.14	183	P	Pb	07 27 27.2	-1.3
VLI				S	Sn	07 27 43.9	0.0
VLI	Veliai	1.14	183	*e*PN	Pb	07 27 28.1	-0.4
VLI				*e*SN	Sn	07 27 44.0	0.0
VLI	Veliai	1.14	183	P	Pb	07 27 27.2	-1.3
VLI	Veliai	1.14	183	*e*Pn	Pb	07 27 28.1	-0.4
VLI				*e*Sn	Sn	07 27 44.0	0.0
DYR	Agios Nikonas	1.22	207	P	Pn	07 27 28.9	-0.8
DYR				S	Sb	07 27 45.2	-0.3
DYR	Agios Nikonas	1.22	207	*e*PN	Pn	07 27 29.0	-0.8
DYR	Agios Nikonas	1.22	207	P	Pn	07 27 28.9	-0.8
DYR				S	Sb	07 27 45.2	-0.3
RLS	Riolos of Patr	1.24	280	P	Pn	07 27 29.6	-0.3
RLS				S	Sg	07 27 48.0	+1.0
RLS	Riolos of Patr	1.24	280	*e*PN	Pn	07 27 29.6	-0.3
RLS	Riolos of Patr	1.24	280	P	Pn	07 27 29.6	-0.3
RLS				S	Sg	07 27 48.0	+1.0
AGG	Agios Georgios	1.28	335	P	Pb	07 27 30.9	0.0
AGG				S	Sg	07 27 48.7	+0.4
AGG	Agios Georgios	1.28	335	*e*PN	Pb	07 27 31.0	0.0
AGG				*e*SN	Sg	07 27 48.9	+0.6
AGG	Agios Georgios	1.28	335	P	Pb	07 27 31.0	0.0
AGG				*e*Sn	Sg	07 27 48.9	+0.6
MAKR	Makrakomi, Fth	1.35	329	P	Pb	07 27 32.2	+0.1
MAKR				S	Sb	07 27 49.7	+0.5
MAKR	Makrakomi, Fth	1.35	329	P	Pb	07 27 32.2	+0.1
MAKR				S	Sb	07 27 49.7	+0.5
SKIA	Skiathos	1.35	15	P

VOIR		7.72	11	⇓	iP	Pn	07 29 00.4	+1.3
VOIR		7.72	11	⇓	iP	Pn	07 29 00.4	+1.3
MLR	Muntele Rosu	7.94	15	⇓	iP	Pn	07 29 06.4	+4.3
MLR	Muntele Rosu	7.94	15		P	Pn	07 29 07.9	+5.8
	0.2nm,0.3s,baz=340,slow=7.4,SNR=7.9							
MLR					S	Sn	07 30 37.1	+5.4
	0.1nm,0.3s,baz=74,slow=23,SNR=2.7							
PLOR	Plostina	8.43	18	⇓	iP	Pn	07 29 11.2	+2.4
PLOR	Plostina	8.43	18	⇑	iP	Pn	07 29 11.2	+2.4
VRI	Vrincioaia	8.47	18	⇓	iP	Pn	07 29 12.2	+3.0
VRI	Vrincioaia	8.47	18	⇓	iP	Pn	07 29 12.2	+3.0
BRTR	Keskin Array B	8.50	74		P	Pn	07 29 14.7	+4.8
	0.2nm,0.3s,baz=252,slow=13,SNR=4.8							
ESDC	Sonseca Array	21.09	283		P	P	07 31 52.7	+1.7
	0.9nm,0.5s,baz=78,slow=8.5,SNR=4.9							
HFS	Hagfors	23.07	348		P	P	07 32 11.9	0.0
	2.3nm,0.9s,baz=159,slow=13,SNR=6.1							
EKA	Eskdalemuir Ar	24.85	323		P	P	07 32 28.7	-0.1
	2.4nm,0.8s,baz=120,slow=9.8,SNR=7.9							
TORD	Torodi Ar. Bea	31.08	223		P	P	07 33 23.9	-1.0
	1.2nm,0.8s,baz=33,slow=9.0,SNR=8.4							
MKAR	Makanchi Array	43.79	59		P	P	07 35 11.7	-0.5
	0.3nm,0.4s,baz=268,slow=7.5,SNR=6.4							
ZALV	Zalesovo Beam	44.44	48		P	P	07 35 18.6	+1.3
	0.6nm,0.4s,baz=260,slow=8.6,SNR=3.3							
SCHQ	Schefferville	60.02	318		P	P	07 37 12.8	-0.2
	2.0nm,0.5s,baz=54,slow=6.3,SNR=11							
YKA	Yellowknife Ar	74.35	341		P	P	07 38 43.0	-0.8
	0.1nm,0.4s,baz=33,slow=5.2,SNR=5.8							

CSEM ***29*** *07:28:18.3±0.2, 42°.42N×13°.35E, h2km, ML1.8/6, Error ellipse: s-maj=3.8km s-min=3.4km az=77.0*
ROM 29 07:28:17.2±0.1, 42°.41N×13°.38E, h10km, Md1.9/8, Ml1.5/5, 2D, Error ellipse: s-maj=1.4km s-min=1.1km az=118.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	163	⇓ iP	Pg	07 28 19.6	+0.2
AQU	L'Aquila	0.06	163	Pg	Pg	07 28 19.7	+0.3
AQU				Sg	Sg	07 28 21.2	+0.2
	295nm,0.3s						
AQU	L'Aquila	0.06	163	⇓ iP	Pg	07 28 19.6	+0.2
AQU				Sg	Sg	07 28 21.2	+0.2
	295nm,0.3s						
CAMP	Campotosto	0.13	10	Pg	Pg	07 28 20.8	+0.4
CAMP				Sg	Sg	07 28 23.1	+0.4
	64nm,0.5s						
CAMP	Campotosto	0.13	10	Pg	Pg	07 28 20.8	+0.4
CAMP				Sg	Sg	07 28 23.1	+0.4
	64nm,0.5s						
FAGN	Fagnano	0.21	134	Pg	Pg	07 28 23.1	+1.4
FAGN				Sg	Sg	07 28 26.2	+1.5
FAGN	Fagnano	0.21	134	Pg	Pg	07 28 23.1	+1.4
FAGN				Sg	Sg	07 28 26.2	+1.5
FIAM	Fiamignano	0.24	234	Pg	Pg	07 28 22.8	+0.5
FIAM				Sg	Sg	07 28 26.8	+1.1
	87nm,0.5s						
FIAM	Fiamignano	0.24	234	Pg	Pg	07 28 22.8	+0.5
FIAM				Sg	Sg	07 28 26.8	+1.1
	87nm,0.5s						
TERO	Teramo	0.27	38	Pg	Pg	07 28 23.1	+0.3
TERO				Sg	Sg	07 28 27.5	+1.0
	57nm,0.5s						
TERO	Teramo	0.27	38	Pg	Pg	07 28 23.1	+0.3
TERO				Sg	Sg	07 28 27.5	+1.0
	57nm,0.5s						
LNSS	Leonessa	0.32	308	Pg	Pg	07 28 24.1	+0.4
LNSS				Sg	Sb	07 28 29.6	-0.8
	66nm,0.5s						
LNSS	Leonessa	0.32	308	Pg	Pg	07 28 24.1	+0.4
LNSS				Sg	Sb	07 28 29.6	-0.8
	66nm,0.5s						
NRCA	Norcia	0.47	335	Pg	Pg	07 28 26.7	+0.2
NRCA				Sg	Sb	07 28 34.0	-0.7
	28nm,0.1s						
NRCA	Norcia	0.47	335	Pg	Pg	07 28 26.7	+0.2
NRCA				Sg	Sb	07 28 34.0	-0.7
	28nm,0.1s						

TAP ***29*** *07:32:54.6, 24°.70N×122°.58E, h119km, ML3.9, C*
ISCJB ***29*** *07:32:55.1±0.6, 24°.65N±0°.03×122°.62E±0°.02, h108km±5km, Error ellipse: s-maj=5.4km s-min=2.9km az=172.4*
JMA ***29*** *07:32:55.4±0.2, 24°.82N×122°.67E, h109km±3km, M3.4*
ISC 29 07:32:55.3±1.6, 24°.66N±0°.05×122°.61E±0°.03, h111km±10km, n44, σ0.67/85, 4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.41	118	P	Pn	07 33 11.9	+0.2
YOJ				S	Sn	07 33 24.8	+0.8
TWB1	Santiao Chiao	0.67	302	*i* P	Pn	07 33 13.6	+0.1
	baz=300						
TWB1				*i* S	Sn	07 33 27.3	+0.2
	baz=300						
TWC	Suao	0.69	266	*i* P	Pn	07 33 13.4	-0.3
	baz=258						
TWC				S	Sn	07 33 27.1	-0.5
	baz=258						
ENA	Nanau	0.82	254	⇓ P	Pn	07 33 15.1	+0.2
	baz=250						
ENA				*e*S	Sn	07 33 29.8	+0.2
	baz=250						
NWF	Wu-fen Shan	0.86	299	*i* P	Pn	07 33 15.4	+0.1
	baz=292						
NWF				S	Sn	07 33 30.4	0.0
	baz=292						
TWE	Neicheng	0.86	275	⇓ *i* P	Pn	07 33 15.3	+0.1
	baz=270						
TWE				*e*S	Sn	07 33 29.7	-0.5
	baz=270						
ENTT	Nioudou	0.95	269	P	Pn	07 33 16.3	+0.2
	baz=270						
ENTT				*e*S	Sn	07 33 31.9	+0.1
	baz=270						
TAP1	Taipei	1.06	291	*e*P	Pn	07 33 17.3	+0.1
	baz=289						
TAP1				*e*S	Sn	07 33 32.5	-1.1
	baz=289						
IRIF	Iriomote-Funau	1.07	107	P	Pn	07 33 17.4	+0.1
IRIF				S	Sn	07 33 33.2	-0.7
TWD	Chiawan	1.09	238	*i* P	Pn	07 33 17.1	-0.3
	baz=233						
TWD				S	Sn	07 33 34.2	0.0
	baz=233						
TWY	Chenhua	1.11	304	P	Pn	07 33 17.4	-0.3
	baz=296						
TWY				S	Sn	07 33 34.4	-0.3
	baz=296						
HWA	Hwalien	1.14	234	P	Pn	07 33 17.8	-0.2
	baz=225						
HWA				S	Sn	07 33 35.8	+0.6
	baz=225						
NSK	Sanguang	1.14	271	⇓ *i* P	Pn	07 33 18.3	+0.2
	baz=274						
NSK				S	Sn	07 33 35.3	-0.1
	baz=274						
NNS	Nan Shan	1.15	260	P	Pn	07 33 18.4	+0.1
	baz=253						
NNS				*e*S	Sn	07 33 35.7	+0.1
	baz=253						
TWS1	Kuangyinshan	1.17	293	P	Pn	07 33 18.2	-0.1
	baz=285						
TWS1				*e*S	Sn	07 33 35.3	-0.5
	baz=285						
HATJ	Hateruma jima	1.24	118	P	Pn	07 33 19.7	+0.5
HATJ				S	Sn	07 33 38.5	+1.3
WHF	Hehuan Shan	1.33	248	⇓ *i* P	Pn	07 33 20.7	+0.1
	baz=245						
WHF				*e*S	Sn	07 33 39.2	-0.5
	baz=245						
JKRS	Kuro-shima	1.34	108	P	Pn	07 33 20.8	+0.5
JKRS				S	Sn	07 33 40.0	+0.8
ESL	Shilin	1.36	232	P	Pn	07 33 20.0	-0.6
	baz=226						
ESL				S	Sn	07 33 39.0	-0.7
	baz=226						
TWT	Tachien	1.37	253	*e*P	Pn	07 33 21.4	+0.6
	baz=245						
TWT				*e*S	Sn	07 33 40.5	+0.4
	baz=245						
JIJ	Ishigaki jima	1.43	101	P	Pn	07 33 21.2	-0.1
JIJ				S	Sn	07 33 40.3	-0.7
NSTT	Nanjuang	1.47	269	P	Pn	07 33 21.6	-0.2
	baz=267						
NSTT				*e*S	Sn	07 33 41.4	-0.5
	baz=267						
HSN	Hsinchu	1.50	276	*e*P	Pn	07 33 21.9	-0.2
	baz=275						
HSN				*e*S	Sn	07 33 41.7	-0.9
	baz=275						
EHY	Hungye	1.64	226	*e*P	Pn	07 33 23.4	-0.5
	baz=224						
EHY				*e*S	Sn	07 33 44.8	-0.9
	baz=224						
NSY	Sanyi	1.70	262	*e*P	Pn	07 33 25.2	+0.5
	baz=261						
NSY				*e*S	Sn	07 33 47.5	+0.5
	baz=261						
TWQ1	Liyutan	1.70	260	P	Pn	07 33 24.7	+0.1
	baz=258						
TWQ1				S	Sn	07 33 46.8	-0.2
	baz=258						
SMLT	Sun Moon Lake	1.74	244	*e*P	Pn	07 33 26.1	+0.9
	baz=238						
SMLT				*e*S	Sn	07 33 48.6	+0.6
	baz=238						
TYC	Yuchr	1.77	245	P	Pn	07 33 26.0	+0.6
	baz=246						
TYC				*e*S	Sn	07 33 48.9	+0.6
	baz=246						
TWF1	Yuli	1.77	223	P	Pn	07 33 25.0	-0.4
	baz=230						
TWF1				*e*S	Sn	07 33 47.4	-1.0
	baz=230						
JTJ	Tarama	1.90	90	P	Pn	07 33 27.2	+0.1
JTJ				S	Sn	07 33 50.3	-1.0
YUS	Yu-Shan	1.91	233	*e*P	Pn	07 33 27.5	-0.2
	baz=227						
YUS				*e*S	Sn	07 33 51.6	-0.7
	baz=227						
CHKT	Chengkung	1.92	217	*e*P	Pn	07 33 26.9	-0.5
	baz=210						
CHKT				*e*S	Sn	07 33 50.9	-0.9
	baz=210						
ALS	Alishan	2.01	236	P	Pn	07 33 29.7	+1.0
	baz=230						
ALS				*e*S	Sn	07 33 55.2	+1.0
	baz=230						
CHN5	Tsauling	2.06	240	P	Pn	07 33 29.7	+0.5
	baz=248						
CHN5				*e*S	Sn	07 33 55.9	+0.9
	baz=248						
ELDTW	Lidau	2.06	225	P	Pn	07 33 29.3	0.0
	baz=224						
ELDTW				*e*S	Sn	07 33 54.4	-0.8
	baz=224						
CHN4	Tsaushan	2.26	235	P	Pn	07 33 32.2	+0.6
	baz=234						
CHN4				*e*S	Sn	07 34 00.1	+0.7
	baz=234						
WTP	Ta-pu	2.30	233	*e*P	Pn	07 33 32.5	+0.2
	baz=231						
TWG	Pinlang	2.31	218	*e*P	Pn	07 33 31.8	-0.5
	baz=222						
TWG				*e*S	Sn	07 33 59.2	-1.4
	baz=222						
TWK	Hsinying	2.38	235	*e*P	Pn	07 33 34.8	+1.4
	baz=233						
TWK				*e*S	Sn	07 34 02.9	+0.4
	baz=233						
CHN1	Nanshi	2.40	233	*e*P	Pn	07 33 34.0	+0.5
	baz=232						
CHN1				*e*S	Sn	07 34 02.7	-0.2
	baz=232						
JMJ	Miyako jima 2	2.44	86	*e*S	Sn	07 34 03.0	-0.7
JOGS	Gusukube	2.54	87	*e*S	Sn	07 34 05.9	-0.2
SSD	Sandimen	2.63	224	*e*P	Pn	07 33 37.6	+1.1
	baz=223						
SSD				*e*S	Sn	07 34 08.4	+0.4
	baz=223						
LAY	Lan-yu	2.78	201	*e*P	Pn	07 33 39.4	+0.9
	baz=193						
LAY				*e*S	Sn	07 34 09.1	-2.6
	baz=193						

IDC ***29*** *07:42:21.6±1.4, 16°.92S×168°.37E, h0km, mb4.0/5, mb1 4.3/6, mb1mx3.9/20, mbtmp4.0/6, ML3.9/1, MS3.9/3, Ms1 3.9/3, ms1mx3.3/32, Error ellipse: s-maj=49.4km s-min=23.2km az=133.0*
ISCJB ***29*** *07:42:24.7±1.0, 16°.99S±0°.08×168°.3E±0°.2, h33km, mb3.9/5, MS4.0/2, Error ellipse: s-maj=28.8km s-min=8.8km az=15.2*
ISC 29 07:42:26.6±1.2, 17°.0S±0°.1×168°.4E±0°.2, h35km, n11, σ1.990/11, mb3.9/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.39	199	*e*P	Pn	07 43 41.9	-2.8
DZM				*e*S	Sn	07 44 47.7	+2.1
DZM	Mont Dzumac	5.39	199	Pn	Pn	07 43 42.9	-1.8
	3.7nm,0.3s,baz=48,slow=18,SNR=34						
DZM				Sn	Sn	07 44 48.5	+2.8
	5.0nm,0.3s,baz=305,slow=22,SNR=10						
NOUC	Port Laguerre	5.47	201	*e*P	Pn	07 43 43.9	-1.7
NOUC				*e*S	Sn	07 44 46.9	-0.4
HNR	Honiara	11.10	311	LR	LR	07 48 51.0	
	comp=Z,214nm,18.3s,baz=91,slow=35						
URZ	Urewera	22.56	162	LR	LR	07 54 15.5	
	comp=Z,158nm,20.0s,baz=142,slow=32						
STKA	Stephens Creek	28.44	234	P	P	07 48 18.8	+0.5
	2.6nm,0.9s,baz=55,slow=8.2,SNR=2.9						
WRA	Warramunga Arr	32.38	259	P	P	07 48 53.0	-0.3
	0.8nm,0.7s,baz=76,slow=7.0,SNR=8.1						
ASAR	Alice Springs	32.94	253	P	P	07 48 58.8	+0.6
	2.9nm,0.7s,baz=78,slow=8.6,SNR=22						
NVAR	Mina Array Bea	87.93	49	P	P	07 55 14.5	+1.2
	0.5nm,0.7s,baz=232,slow=7.3,SNR=4.1						
ILAR	Eielson Array	88.32	18	P	P	07 55 13.6	-0.6
	0.6nm,0.8s,baz=236,slow=5.9,SNR=6.3						
ZALV	Zalesovo Beam	99.81	323	LR	LR	08 42 05.3	
	comp=Z,177nm,18.4s,baz=341,slow=36						

AUST ***29*** *07:47:55.6±0.0, 22°.09S×179°.39W, h583km, Error ellipse: s-maj=1.1km s-min=0.9km az=319.0*
ISCJB ***29*** *07:47:55.5±0.5, 22°.27S±0°.05×179°.58W±0°.03, h590km±7km, mb4.8/123, Error ellipse: s-maj=7.2km s-min=4.0km az=161.1*
IDC ***29*** *07:47:56.8±0.8, 22°.17S×179°.61W, h589km±8km, mb4.2/25, mb1 4.3/26, mb1mx4.3/27, mbtmp4.2/26, Error ellipse: s-maj=9.8km s-min=7.9km az=165.0*
BJI ***29*** *07:47:56.1, 21°.585×179°.13W, h589km, mB4.8/16, mb4.9/28*
NEIC ***29*** *07:47:57.0±0.5, 22°.23S×179°.59W, h596km±6km, mb4.7/78, Error ellipse: s-maj=6.9km s-min=4.3km az=157.0*
DJA ***29*** *07:47:57.6±0.6, 22°.S±11°×17°.9W±1°.0, h651km±21km, M5.0/11, mB5.3/7, mb5.3/11, Mw(mB)4.8/7*
ISC 29 07:47:56.9±0.3, 22°.29S±0°.05×179°.52W±0°.04, h595km±3km, h596km; pP-P, n643, σ1.901/712, mb4.8/122, 164C-175D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.08	333	*e*Pn	P	07 49 30.1	-0.2
RAO	Raoul Island	7.08	169	*e*Pn	P	07 49 47.0	-0.3
RAO				S	S	07 51 17.8	0.0
RAO	Raoul Island	7.08	169	P	P	07 49 46.7	-0.6
	254nm,0.3s,baz=248,slow=3.1,SNR=15						
RAO				S	S	07 51 17.8	0.0
	67nm,0.3s,baz=122,slow=22,SNR=5.7						
NIUE	Niue	9.53	72	P	P	07 50 09.8	-1.2
	baz=9.4,SNR=13						
NIUE				S	S	07 52 07.4	+6.5
	baz=9.4,SNR=7.0						
AFI	Afiamalu	11.11	43	*e*Pn	P	07 50 23.1	-3.8
AFI				*e*S	S	07 52 18.7	-11
AFI				S	S	07 52 19.7	-10
AFI	Afiamalu	11.11	43	P	P	07 50 23.1	-3.8
	7.4nm,0.3s,baz=64,slow=15,SNR=8.6						
AFI				S	S	07 52 19.7	-10
	13nm,0.3s,baz=29,slow=21,SNR=7.1						
DZM	Mont Dzumac	13.01	268	*e*P	P	07 50 48.8	+2.8
	119nm,0.7s						
DZM	Mont Dzumac	13.01	268	*e*P	P	07 50 48.0	+2.0
DZM	Mont Dzumac	13.01	268	P	P	07 50 48.9	+2.9
DZM				S	S	07 53 06.2	+1.2
DZM				ScP	ScP	07 58 08.5	+2.8
DZM	Mont Dzumac	13.01	268	P	P	07 50 48.9	+2.9
	10nm,0.3s,baz=114,slow=20,SNR=109						
DZM				S	S	07 53 06.2	+1.2
	baz=124,slow=13,SNR=2.5						
DZM				ScP	ScP	07 58 08.5	+2.8
	0.4nm,0.3s,baz=132,slow=5.2,SNR=11						
OUZ	Omahuta	14.22	204	*e*Pn	P	07 50 59.6	+1.8
URZ	Urewera	16.18	190	*e*P	P	07 51 13.5	-2.3
	18nm,0.8s						
URZ				S	S	07 53 54.4	-3.6
URZ	Urewera	16.18	190	PN	P	07 51 13.2	-2.6
URZ				SN	S	07 53 52.1	-5.9
URZ	Urewera	16.18	190	P	P	07 51 14.2	-1.7
	5.0nm,0.3s,baz=327,slow=3.0,SNR=40						
URZ				S	S	07 53 54.4	-3.6
	1.8nm,0.3s,baz=32,slow=23,SNR=13						
BKZ	Black Stump Fm	17.17	191	PN	P	07 51 22.8	-2.2
BKZ				SN	S	07 54 07.7	-6.5
RAR	Rarotonga	18.37	90	*e*P	P	07 51 35.5	-0.6
	140nm,1.5s						
RAR	Rarotonga	18.37	90	P	P	07 51 35.9	-0.3
	3.3nm,0.3s,baz=240,slow=0.0,SNR=7.5						
BFZ	Birch Farm	18.68	190	PN	P	07 51 38.4	-0.3
MRZ	Mangatainoka R	18.78	192	PN	P	07 51 38.3	-1.3
OGWZ	Otaki Gorge	19.01	192	PN	P	07 51 40.5	-1.2
THZ	Tophouse	20.43	196	PN	P	07 51 54.7	+0.1
KHZ	Kahutara	20.89	195	*e*P	P	07 51 57.3	-1.3
	153nm,2.4s						
KHZ	Kahutara	20.89	195	PN	P	07 51 57.5	-1.1
LHI	Lord Howe Isla	21.17	240	S	S	07 54 53.0	-25
	baz=21,SNR=3.4						
LTZ	Lake Taylor	21.55	197	PN	P	07 52 03.3	-1.4
RPZ	Rata Peaks	22.75	198	P	P	07 52 16.4	+1.2
RPZ	Rata Peaks	22.75	198	P	P	07 52 16.5	+1.2
	5.8nm,0.5s,baz=236,slow=6.0,SNR=5.3						
JCZ	Jackson Bay	23.79	201	PN	P	07 52 24.8	+0.2
ARMA	Armidale	27.04	247	*e*P	P	07 52 55.1	+1.7
	72nm,0.8s						
ARMA	Armidale	27.04	247	P	P	07 52 54.9	+1.5
	baz=27,SNR=4.7						
EIDS	Eidsvold	27.05	258	*e*P	P	07 52 53.8	+0.5
	33nm,0.4s						
EIDS	Eidsvold	27.05	258	P	P	07 52 53.9	+0.5
	baz=27,SNR=47						
EIDS				S	S	07 56 51.0	+0.3
	baz=27,SNR=5.6						
TBI	Tubuai	27.70	98	*e*P	P	07 52 59.7	+0.6
	118nm,0.9s						
MGCD	Mangrove Creek	28.09	241	P	P	07 53 04.2	+1.8
	baz=28,SNR=52						
PAE	Paea	28.48	86	*e*P	P	07 53 05.9	0.0
	14nm,1.1s						
PPT2	Papeete2	28.50	86	*e*P	P	07 53 06.1	-0.1
	79nm,1.2s						
PPT	Papeete	28.51	86	P	P	07 53 06.7	+0.5
PPT	Papeete	28.51	86	P	P	07 53 06.7	+0.5
	52nm,0.7s,baz=28,slow=5.1,SNR=8.4						
TVO	Taravao	28.76	87	*e*P	P	07 53 08.0	-0.4
	65nm,0.7s						
RMQ	Roma	29.16	255	P	P	07 53 13.2	+1.6
	baz=29,SNR=47						
RMQ				S	S	07 57 26.4	+3.0
	baz=29,SNR=3.7						
CNB	Canberra Magne	30.07	238	P	P	07 53 21.1	+1.6
	baz=30,SNR=66						
CAN	Canberra	30.35	238	*e*P	P	07 53 23.0	+1.1
	69nm,1.0s						
YNG	Young	30.55	240	P	P	07 53 24.9	+1.3
	baz=31,SNR=19						
PMOR	Pomariorio Ree	30.78	82	*e*P	P	07 53 25.5	-0.2
	205nm,1.0s						
CTA	Charters Tower	31.95	267	P	P	07 53 36.0	+0.3
CTA				ScP	ScP	07 58 56.8	+1.7
CTA	Charters Tower	31.95	267	P	P	07 53 36.0	+0.3
	114nm,0.5s,baz=96,slow=11,SNR=276						
CTA				ScP	ScP	07 58 56.8	+1.7
	11nm,0.8s,baz=26,slow=1.2,SNR=8.9						
CTAO	Charters Tower	31.95	267	*e*P	P	07 53 36.0	+0.3
	115nm,0.5s						
CMSA	Cobar Meteorol	32.25	246	P	P	07 53 38.9	+0.9
	baz=32,SNR=61						
QLP	Quilpie	33.21	255	P	P	07 53 46.6	+0.4
	baz=33,SNR=50						
TOO	Toolangi	33.71	235	P	P	07 53 51.3	+1.0
	baz=34,SNR=34						
MTSU	Mount Surprise	34.14	270	P	P	07 53 54.2	+0.1
	baz=34,SNR=11						
PMG	Port Moresby	34.43	286	*e*P	P	07 53 55.9	-0.6
	175nm,0.9s						
PMG	Port Moresby	34.43	286	P	P	07 53 56.0	-0.6
	221nm,0.9s						
PMG	Port Moresby	34.43	286	P	P	07 53 56.2	-0.3
	167nm,0.8s,baz=96,slow=5.7,SNR=29						
STKA	Stephens Creek	35.76	246	*e*P	P	07 54 08.2	+0.9
	18nm,1.1s						
STKA				ScP	ScP	07 59 10.3	+1.8
STKA	Stephens Creek	35.76	246	P	P	07 54 08.2	+0.9
	46nm,0.5s,baz=91,slow=9.7,SNR=145						
STKA				ScP	ScP	07 59 10.3	+1.8
	10nm,1.0s,baz=47,slow=6.4,SNR=6.8						
STKA	Stephens Creek	35.76	246	P	P	07 54 08.2	+0.9
	baz=36,SNR=69						
STKA				S	S	07 59 10.9	+7.6
	baz=36,SNR=4.9						
ARPS	Mount Arapiles	36.33	238	P	P	07 54 12.8	+0.9
	baz=36,SNR=10						
COEN	Coen	36.34	277	*e*P	P	07 54 12.4	+0.1
	296nm,0.8s						
COEN	Coen	36.34	277	P	P	07 54 12.5	+0.3
	baz=36,SNR=21						
QIS	Mount Isa	38.01	265	P	P	07 54 25.3	-0.6
	baz=38,SNR=16						
QIS				S	S	07 59 19.9	-17
	baz=38,SNR=4.7						
BBOO	Buckleboo	40.50	245	*e*P	P	07 54 45.6	0.0
	834nm,0.8s						
BBOO	Buckleboo	40.50	245	P	P	07 54 45.6	0.0
	baz=41,SNR=77						
RKT	Rikitea	40.98	100	*e*P	P	07 54 50.0	+0.5
	48nm,1.1s						
AS31	Alice Springs	42.76	259	*e*P	P	07 55 03.3	-0.2
ASAR	Alice Springs	42.76	259	P	P	07 55 03.5	0.0
ASAR				PcP	PcP	07 56 41.1	0.0
ASAR				ScP	ScP	07 59 38.7	+2.6
ASAR				S	S	08 00 43.4	-2.2
ASAR	Alice Springs	42.76	259	P	P	07 55 03.5	0.0
	132nm,0.8s,baz=101,slow=7.9,SNR=1345						
ASAR				PcP	PcP	07 56 41.1	0.0
	6.2nm,0.6s,baz=111,slow=3.9,SNR=4.2						
ASAR				ScP	ScP	07 59 38.7	+2.6
	4.7nm,1.0s,baz=110,slow=4.1,SNR=6.9						
ASAR				S	S	08 00 43.4	-2.2
	7.3nm,0.9s,baz=95,slow=16,SNR=19						
WRAB	Tennant Creek	42.98	264	*e*P	P	07 55 04.4	-0.9
	151nm,0.9s						
WRA	Warramunga Arr	42.98	264	P	P	07 55 04.3	-1.0
WRA				PcP	PcP	07 56 41.3	-0.6
WRA				ScP	ScP	07 59 39.1	+2.1
WRA				S	S	08 00 46.0	-2.8
WRA	Warramunga Arr	42.98	264	P	P	07 55 04.3	-1.0
	90nm,0.6s,baz=97,slow=7.8,SNR=922						
WRA				PcP	PcP	07 56 41.3	-0.6
	3.5nm,0.7s,baz=94,slow=4.2,SNR=4.3						
WRA				ScP	ScP	07 59 39.1	+2.1
	14nm,1.0s,baz=99,slow=4.2,SNR=16						
WRA				S	S	08 00 46.0	-2.8
	2.0nm,0.8s,baz=98,slow=14,SNR=4.8						
JAY	Jayapura	43.32	291	P	P	07 55 07.4	-0.6
JAY	Jayapura	43.32	291	P

	baz=51,SNR=12									
FITZ	Fitzroy Crossi	51.42	264	eP		P	07 56 08.1	-0.3		
	48nm,0.8s									
FITZ	Fitzroy Crossi	51.42	264	P		P	07 56 08.4	0.0		
	baz=52,SNR=127									
KMBL	Kambalda	52.55	247	P		P	07 56 15.9	-0.4		
	baz=53,SNR=5.7									
PALU	Palau	53.83	298	P		P	07 56 25.3	-0.3		
	baz=54,SNR=3.1									
AAI	Ambon	53.88	282	P		P	07 56 25.1	-0.9		
	baz=54,SNR=6.1									
MEEK	Meekatharra	56.01	252	P		P	07 56 39.8	-0.8		
	baz=56,SNR=20									
VNDA	Vanda	56.01	185	P		P	07 56 42.0	+2.2		
VNDA	Vanda	56.01	185	P		P	07 56 42.0	+2.2		
	1.2nm,0.5s,baz=352,slow=7.9,SNR=13									
KLBR	Kellerberrin	56.03	246	P		P	07 56 40.5	-0.2		
	baz=56,SNR=30									
MBWA	Marble Bar	56.10	259	eP		P	07 56 40.9	-0.5		
	94nm,0.8s									
NWAO	Narrogin (SRO)	56.32	244	eP		P	07 56 41.8	-0.9		
	22nm,0.9s									
RKGY	Rocky Gully	56.36	242	P		P	07 56 43.3	+0.4		
	baz=56,SNR=8.8									
BLDU	Ballidu	57.05	247	P		P	07 56 47.4	-0.3		
	baz=57,SNR=30									
MORW	Morawa	57.86	249	P		P	07 56 52.7	-0.4		
	baz=58,SNR=37									
WSI	Waingapu	58.87	272	P		P	07 56 58.5	-1.7		
	baz=59,SNR=3.4									
WBSI	Waikabubak, Su	59.72	272	P		P	07 57 05.7	-0.2		
	81nm,1.0s									
GIRL	Giralia	60.73	256	P		P	07 57 13.2	+0.9		
	baz=61,SNR=15									
KAPI	Kappang	61.06	277	eP		P	07 57 12.6	-2.0		
	17nm,0.8s									
KAPI	Kappang	61.06	277	P		P	07 57 13.1	-1.6		
	9.4nm,0.5s,baz=149,slow=4.8,SNR=7.3									
CTBH	Cotabato--PC H	62.38	291⇑	eP		P	07 57 22.3	-0.9		
KHKI	Kahang-Kahang	63.67	272	P		P	07 57 30.4	-1.0		
	65nm,0.9s									
IGBI	Denpasar	63.94	271	P		P	07 57 33.2	+0.1		
	137nm,1.2s									
SRBI	Singaraja	64.13	272	P		P	07 57 33.8	-0.6		
JAGI	Jajag, Banyuwa	64.98	271	P		P	07 57 38.2	-1.5		
JAGI	Jajag, Banyuwa	64.98	271	P		P	07 57 38.3	-1.5		
	baz=65,SNR=7.1									
GMJI	Gumukmas	65.70	271	P		P	07 57 44.1	-0.1		
	71nm,1.0s									
BLJI	Banyuglugur	65.75	271	P		P	07 57 45.0	+0.5		
	134nm,0.8s,15µm									
MYLDM	Lahad Datu	66.46	286	P		P	07 57 52.0	+3.1		
TSM	Tawau	66.62	285	P		P	07 57 50.5	+0.6		
PWJI	Pagerwojo	67.31	270	P		P	07 57 53.8	-0.3		
	122nm,1.2s									
SJI	Sawahan	67.44	271	P		P	07 57 55.0	-0.1		
	114nm,0.9s									
QSPA	South Pole Qui	67.78	180	eP		P	07 57 57.8	+1.5		
	8.9nm,0.9s									
QSPA	South Pole Qui	67.78	180	P		P	07 57 57.8	+1.5		
	11nm,0.8s,baz=9.8,slow=1.3,SNR=71									
SDKM	Sandakan	67.82	286	P		P	07 57 57.5	+0.2		
PCJI	Pacitan	67.83	270	P		P	07 57 57.2	-0.1		
WOJI	Wonogiri, Jawa	68.19	270	P		P	07 58 00.8	+1.3		
	204nm,1.0s									
UGM	Wanagama	68.53	270	P		P	07 58 01.3	-0.3		
	baz=69,SNR=11									
KDM	Kudat	68.72	287	P		P	07 58 03.4	+0.8		
KKM	Kota Kinabalu	68.87	286	eP		P	07 58 03.3	-0.4		
	40nm,0.6s									
KKM	Kota Kinabalu	68.87	286	P		P	07 58 03.5	-0.3		
KKM	Kota Kinabalu	68.87	286	P		P	07 58 03.4	-0.3		
	baz=69,SNR=14									
BTM	Bintulu	70.46	282	P		P	07 58 13.8	+0.8		
MJAR	Matsushiro Arr	70.83	325	P		P	07 58 14.0	-0.7		
MJAR	Matsushiro Arr	70.83	325	P		P	07 58 14.0	-0.7		
	14nm,0.7s,baz=165,slow=6.2,SNR=37									
MAJO	Matsushiro	70.83	325	eP		P	07 58 13.6	-1.1		
	19nm,0.8s									
MAT	Matsushiro	70.83	325	P		P	07 58 13.8	-0.9		
SBUM	Sibu	70.93	281	P		P	07 58 16.0	+0.2		
CISI	Cisompet, Garu	71.17	269	P		P	07 58 16.1	-1.2		
	baz=71,SNR=3.2									
LEM	Lembang	71.61	270	P		P	07 58 20.1	+0.1		
	201nm,0.8s,2µm									
KSM	Kuching	72.28	279	eP		P	07 58 23.3	-0.3		
	82nm,0.9s									
KSM	Kuching	72.28	279	P		P	07 58 23.7	0.0		
KSM	Kuching	72.28	279	P		P	07 58 23.6	0.0		
	baz=72,SNR=17									
DBJI	Dramaga	72.51	270	P		P	07 58 24.6	-0.4		
JNU	Nakatsue	72.63	318	P		P	07 58 24.9	-0.3		
JNU	Nakatsue	72.63	318	P		P	07 58 24.9	-0.3		
	18nm,0.9s,baz=120,slow=8.0,SNR=4.9									
TWG	Pinlang	73.18	304	eP		P	07 58 26.4	-2.1		
	148nm,0.4s									
YULB	Yu-li	73.32	305	eP		P	07 58 27.6	-1.7		
	14nm,0.6s									
NACB	Ninganchiao	73.53	305	eP		P	07 58 29.3	-1.2		
	108nm,1.0s									
TPUB	Ta-pu	73.78	304	eP		P	07 58 29.9	-2.1		
	75nm,0.7s									
SSLB	Suanglung	73.80	305	eP		P	07 58 30.3	-1.8		
	45nm,0.7s									
YHNB	Yeheng	73.97	306	eP		P	07 58 32.2	-0.9		
	34nm,0.8s									
ASAJ	Asahikawa	74.64	333	eP		P	07 58 37.4	+1.1		
	4.3nm,0.8s									
ASAJ	Asahikawa	74.64	333	P		P	07 58 37.5	+1.1		
	15nm,0.7s,baz=206,slow=8.8,SNR=15									
KSRS	Korea Array	77.31	320	P		P	07 58 51.4	+0.2		
	6.0nm,0.9s,baz=135,slow=5.5,SNR=14									
KSAR	Wonju Array Be	77.33	320	P		P	07 58 51.4	+0.1		
PETK	Petropavlovsk-	77.65	346	P		P	07 58 52.0	-0.6		
PETK	Petropavlovsk-	77.65	346	P		P	07 58 52.0	-0.6		
	17nm,0.7s,baz=140,slow=5.8,SNR=38									
MYKOM	Kota Tinggi	78.33	277	P		P	07 58 57.1	-0.1		
KGM	Kluang	78.91	277	P		P	07 59 00.6	+0.4		
MAW	Mawson	79.41	200	P		P	07 59 02.9	+1.0		
MAW	Mawson	79.41	200	P		P	07 59 02.9	+1.0		
	2.4nm,0.6s,baz=183,slow=3.2,SNR=4.6									
USRK	Ussuriysk Arra	79.66	327	P		P	07 59 04.2	+0.7		
	14nm,1.0s,baz=137,slow=3.4,SNR=18									
BSC	Santa Cruz Isl	79.85	47	⇑P		P	07 59 05.3	+0.6		
	baz=80									
NJ2	Nanjing	79.95	311	eP		P	07 59 05.5	+0.2		
NJ2				pmax		pmax				
	comp=Z,40nm,1.0s									
SCI	San Clemente I	80.01	48	⇑P		P	07 59 06.3	+0.7		
	baz=80									
SBC	Santa Barbara	80.05	46	⇓P		P	07 59 06.9	+1.1		
	baz=80									
PKM	Peak Mountain	80.25	46	⇓P		P	07 59 08.0	+1.0		
	baz=80									
SAO	San Andreas Ge	80.29	44	eP		P	07 59 07.3	+0.3		
	comp=Z,12nm,0.9s									
CIS	Catalina Islan	80.35	48	⇓P		P	07 59 08.1	+0.7		
	baz=80									
KTGM	Kuala Trenggan	80.38	280	P		P	07 59 08.5	+0.6		
PASC	Pasadena Art C	80.94	47	eP		P	07 59 10.3	-0.1		
	comp=Z,7.7nm,1.0s									
109C	Camp Elliot, M	80.96	49	⇓P		P	07 59 10.8	+0.3		
	baz=81									
ARVC	Arvin	81.04	46	⇓P		P	07 59 11.7	+0.9		
	baz=81									
MWC	Mount Wilson	81.05	47	eP		P	07 59 11.2	0.0		
	comp=Z,12nm,0.9s									
MDJ	Mudanjiang	81.19	326	eP		P	07 59 11.6	+0.2		
	comp=Z,14nm,0.8s									
VES	Vestal, Richgr	81.29	46	⇑P		P	07 59 12.2	+0.1		
	baz=82,SNR=9.7									
MURC	Murrieta	81.29	48	⇑P		P	07 59 12.6	+0.3		
	baz=82,SNR=5.0									
BFSC	Mount Baldy Ra	81.33	48	⇑P		P	07 59 12.4	-0.1		
	baz=82,SNR=7.0									
KHMM	Horse Mountain	81.43	39	eP		P	07 59 14.0	+1.1		
	comp=Z,34nm,1.1s									
MONP	Monument Peak	81.44	49	⇓P		P	07 59 13.9	+0.7		
	baz=82,SNR=32									
RCTC	Rector, Farmer	81.45	45	⇓P		P	07 59 12.9	-0.1		
	baz=82									
EDW2	Edwards Air Fo	81.47	47	⇑P		P	07 59 13.6	+0.4		
	baz=82,SNR=17									
ISA	Isabella	81.59	46	eP		P	07 59 14.0	+0.3		
	comp=Z,19nm,0.8s									
ISA	Isabella	81.59	46	⇑P		P	07 59 14.3	+0.6		
	baz=82,SNR=27									
CMB	Columbia Colle	81.73	43	eP		P	07 59 14.6	+0.2		
	comp=Z,17nm,0.9s									
PFO	Pinyon Flat Ob	81.81	49	P		P	07 59 15.4	+0.4		
PFO	Pinyon Flat Ob	81.81	49	P		P	07 59 15.4	+0.4		
	comp=Z,6.0nm,0.9s,baz=230,slow=3.3,SNR=13									
PFO	Pinyon Flat Ob	81.81	49	⇓P		P	07 59 15.4	+0.4		
	baz=82,SNR=6.2									
BBRC	Big Bear Solar	81.85	48	⇓P		P	07 59 15.7	+0.4		
	baz=82									
SWSC	Sam W. Stewart	81.91	50	⇑P		P	07 59 16.2	+0.9		
	baz=82									
WDC	Whiskeytown Da	81.95	40	eP		P	07 59 15.9	+0.6		
	comp=Z,26nm,1.2s									
IPM	Ipoh	81.97	278	eP		P	07 59 16.1	0.0		
	comp=Z,38nm,0.8s									
IPM	Ipoh	81.97	278	P		P	07 59 16.4	+0.2		
LRMC	Laurel Mountai	82.01	47	⇑P		P	07 59 16.3	+0.4		
	baz=82,SNR=8.7									
CWC	Cottonwood Cre	82.30	46	⇓P		P	07 59 17.9	+0.5		
	baz=82									
BELC	Belle Mtn. Jos	82.35	49	⇓P		P	07 59 18.4	+0.6		
	baz=82,SNR=17									
WHN	Wuhan	82.38	307	P		P	07 59 18.8	+1.0		
MPMC	Manual Prospec	82.47	46	⇑P		P	07 59 18.9	+0.6		
	baz=83									
MLAC	Mammoth Lakes	82.48	44	⇑P		P	07 59 18.9	+0.5		
	baz=83									
GSC	Goldstone	82.51	47	eP		P	07 59 18.6	+0.1		
	comp=Z,21nm,1.3s									
GSC	Goldstone	82.51	47	⇓P		P	07 59 18.8	+0.3		
	baz=83,SNR=12									
BC3	Big Chuckawall	82.54	49	⇓P		P	07 59 19.4	+0.8		
	baz=83,SNR=8.4									
YBH	Yreka Blue Hor	82.56	39	eP		P	07 59 19.3	+0.7		
	comp=Z,9.1nm,0.8s									
YBH	Yreka Blue Hor	82.56	39	P		P	07 59 19.6	+1.0		
	comp=Z,12nm,0.7s,baz=214,slow=2.2,SNR=36									
HEC	Hector,Ludlow	82.57	48	⇓P		P	07 59 19.0	+0.3		
	baz=83,SNR=16									
KULM	Kulim	82.63	279	eP		P	07 59 19.6	+0.1		
	comp=Z,14nm,0.8s									
KULM	Kulim	82.63	279	P		P	07 59 19.8	+0.4		
GLA	Glamis	82.66	50	eP		P	07 59 20.1	+1.0		
	comp=Z,31nm,1.0s									
GLA	Glamis	82.66	50	⇑P		P	07 59 20.0	+0.9		
	baz=83,SNR=8.9									
LBCM	Butte Creek Ri	82.82	41	P		P	07 59 20.5	+0.6		
BEKR	Beckworth	82.84	42	eP		P	07 59 20.0	-0.1		
	comp=Z,3.2nm,0.7s									
CN2	Changchun	82.87	323	⇓P		P	07 59 20.0	+0.1		
CN2				eS		S	08 08 49.8	-0.1		
CN2				pmax		pmax				
	comp=Z,30nm,1.0s									
WCN	Washoe City	82.88	42	eP		P	07 59 20.5	+0.2		
	comp=Z,16nm,1.0s									
LTIM	Timbered Crate	82.94	40	P		P	07 59 21.2	+0.7		
HUMO	Hull Mountain	82.97	38	eP		P	07 59 21.4	+0.9		
	comp=Z,22nm,1.0s									
IRM	Iron Mountain	83.02	49	⇓P		P	07 59 21.6	+0.7		
	baz=83,SNR=14									
GRAC	Grapevine Rang	83.08	45	⇓P		P	07 59 22.1	+0.9		
	baz=83									
FURC	Furnace Creek,	83.12	46	⇓P		P	07 59 22.1	+0.7		
	baz=83,SNR=7.3									
TUQ	Turquoise Moun	83.18	47	⇑P		P	07 59 22.2	+0.3		
	baz=83,SNR=6.0									
Y12C	Blythe	83.24	49	⇑P		P	07 59 22.6	+0.6		
	baz=83,SNR=6.3									
PSI	Prapat	83.25	276	P		P	07 59 22.1	-0.6		
	baz=83,SNR=6.3									
113A	Mohawk Valley,	83.26	51	⇑P		P	07 59 22.8	+0.7		
	baz=83,SNR=5.6									
NVAR	Mina Array Bea	83.29	44	P		P	07 59 22.7	+0.2		
NVAR				pP		pP	08 01 30.8	+1.9		
NVAR	Mina Array Bea	83.29	44	P		P	07 59 22.7	+0.2		
	comp=Z,12nm,0.9s,baz=224,slow=8.6,SNR=61									
NVAR				pP		pP	08 01 30.8	+1.9		
	comp=Z,1.3nm,0.7s,baz=224,slow=8.8,SNR=6.5									
NV11	Mina Array Sit	83.39	44	eP		P	07 59 22.7	-0.1		
214A	Organ Pipe Nat	83.53	52	⇓P		P	07 59 24.4	+0.9		
	baz=84									
LDFC	Landfair	83.55	48	eP		P	07 59 24.2	+0.6		
	comp=Z,36nm,0.9s									
NEE2	Needles Airpor	83.72	49	⇑P		P	07 59 25.8	+1.4		
	baz=84									
PDMCI	Parker Dam,Lak	83.80	49	⇑P		P	07 59 25.4	+0.6		
	baz=84,SNR=14									
Z14A	Wintersburg	84.16	51	⇑P		P	07 59 27.5	+1.0		
	baz=84,SNR=7.2									
W13A	Hualapai Mount	84.41	49	⇓P		P	07 59 28.5	+0.5		
	baz=85,SNR=8.1									
Y14A	Wickenburg	84.42	50	⇓P		P	07 59 28.3	+0.5		
	baz=85,SNR=11									
BPO	Bald Peter	84.96	37	P		P	07 59 31.2	+0.8		
R11A	Troy Canyon, C	85.01	45	⇑P		P	07 59 31.2	+0.3		
	baz=85									
TUC	Tucson	85.19	52	eP		P	07 59 32.5	+0.8		
	comp=Z,15nm,0.8s									
NLWA	Neilton Lookou	85.50	34	eP		P	07 59 33.1	+0.4		
	comp=Z,6.9nm,0.8s									
OOW	Octopus West	85.56	34	P		P	07 59 34.3	+1.3		
X16A	Lo Mia Camp, P	85.77	50	⇑P		P	07 59 35.4	+0.8		
	baz=86,SNR=9.8									
319A	Douglas	85.84	54	⇑P		P	07 59 36.3	+1.4		
	baz=86									
ENH	Enshi	85.89	305	eP		P	07 59 35.4	+0.4		
	comp=Z,38nm,0.9s									
CCUT	Cedar City	86.06	47	eP		P	07 59 36.2	+0.3		
	comp=Z,6.4nm,0.9s									
GLK	Glacier Lake	86.18	36	P		P	07 59 36.9	+0.8		
LON	Longmire	86.19	36	eP		P	07 59 35.9	-0.2		
	comp=Z,2.7nm,0.7s									
U15A	North Rim	86.20	48	⇑P		P	07 59 37.6	+0.9		
	baz=86,SNR=35									
SNAA	Sanae	86.26	179	eP		P	07 59 35.6	-0.5		
GYA	Guiyang	86.32	300	⇓P		P	07 59 37.5	+0.3		
GYA				pP		pP	08 01 45.8	+0.9		
GYA				sP		sP	08 02 44.5	0.0		
GYA				PP		PP	08 03 13.8	+3.8		
GYA				SKS		SKSac	08 09 07.0	-0.7		
GYA				S		S	08 09 23.5	-0.7		
GYA				pmax		pmax				
	comp=Z,10.0nm,0.9s									
GYA				pmax		pmax				
	comp=Z,70nm,5.4s									
WUAZ	Wupatki	86.38	49	eP		P	07 59 38.0	+0.6		
	comp=Z,13nm,1.2s									
WUAZ	Wupatki	86.38	49	⇑P		P	07 59 37.9	+0.6		
	baz=87,SNR=7.1									
320A	Kipp Ranch, An	86.39	54	⇑P		P	07 59 39.1	+1.7		
	baz=87									
ELK	Elko	86.55	43	eP		P	07 59 38.0	-0.1		
	comp=Z,3.1nm,0.8s									
TRW	Toppenish Ridg	86.60	37	P		P	07 59 38.9	+0.9		
220A	Playas Peak, P	86.66	54	⇑P		P	07 59 39.9	+1.1		
	baz=87,SNR=12									
120A	U Bar Ranch, L	86.89	53	⇑P		P	07 59 41.1	+1.2		
	baz=87									
X18A	Snowflake	86.89	51	⇑P		P	07 59 40.6	+0.7		
	baz=87,SNR=6.1									
TWW	Teanaway	86.94	36	P		P	07 59 40.8	+1.2		
EBG	Ellensburg	86.96	36	P		P	07 59 40.3	+0.6		
PMR	Palmer	87.08	14	eP		P	07 59 39.1	-0.7		
	comp=Z,2.0nm,0.4s									
Z20A	Nine Sixteen R	87.19	53	⇑P		P	07 59 42.1	+0.8		
	baz=87,SNR=10									
221A	Mesquite Ranch	87.27	54	⇑P		P	07 59 42.8	+1.2		
	baz=87,SNR=7.3									
W18A	Petrified Fore	87.34	50	⇑P		P	07 59 42.5	+0.6		
	baz=88									
121A	Cookes Peak, D	87.51	53	⇑P		P	07 59 43.8	+1.0		
	baz=88,SNR=8.5									
ETW	Entiat	87.51	36	P		P	07 59 42.8	+0.4		
BMO	Blue Mountains	87.59	39	eP		P	07 59 42.6	-0.1		
	comp=Z,3.2nm,0.6s									
MFID	Camas Ranch	87.66	41	eP		P	07 59 43.3	+0.2		
	comp=Z,19nm,1.0s									
Y20A	Horse Springs,	87.73	52	⇓P		P	07 59 44.8	+0.9		
	baz=88,SNR=8.9									
WTV	Waterville	87.77	36	P		P	07 59 43.6	+0.2		
DUG	Dugway	87.81	45	⇑P		P	07 59 44.3	+0.4		
	baz=88									
222A	Williams Famil	87.82	54	⇑P		P	07 59 45.1	+0.9		
	baz=88									
X20A	Quemado	87.95	51	⇑P		P	07 59 45.8	+0.9		
	baz=88									
Z21A	St. Cloud Mine	87.96	53	⇑P		P	07 59 45.8	+0.9		
	baz=88,SNR=8.1									
XAN	Xi'an	88.10	308	P		P	07 59 46.0	+0.7		
XAN				pmax		pmax				
	comp=Z,7.0nm,0.9s									
122A	Conniff Cattle	88.17	54	⇑P		P	07 59 46.8	+1.0		
	baz=88									
W20A	Ramah	88.23	51	⇓P		P	07 59 46.7	+0.5		
	baz=88,SNR=17									
Q16A	Castle Valley	88.24	47	⇑P		P	07 59 47.0	+0.9		
	baz=88									
OD2	Odessa Site #2	88.27	36	P		P	07 59 46.0	+0.3		
223A	Chaparral, Ant	88.28	54	⇓P		P	07 59 47.3	+1.0		
	baz=88									
I12A	Atlanta	88.29	41	⇓P		P	07 59 46.5	+0.4		
	baz=88,SNR=12									
Y21A	Point of Rocks	88.29	52	⇓P		P	07 59 47.4	+0.9		
	baz=88,SNR=6.5									
X21A	Alamocita Cree	88.42	52	⇑P		P	07 59 47.7	+0.7		
	baz=89,SNR=12									
S18A	Hurst Farm, Bl	88.43	48	⇓P		P	07 59 47.4	+0.3		
	baz=89									
Z22A	Elephant Butte	88.46	53	⇓P		P	07 59 47.9	+0.7		
	baz=89,SNR=32									
TRF	Thorofare Moun	88.49	13	eP		P	07 59 44.4	-2.1		
	comp=Z,5.4nm,0.7s									
V20A	Brimhall	88.57	50	⇓P		P	07 59 48.0	+0.3		
	baz=89									
HLID	Hailey	88.60	41	eP		P	07 59 48.0	+0.4		
	comp=Z,8.9nm,1.0s									
HLID	Hailey	88.60	41	⇑P		P	07 59 48.2	+0.6		
	baz=89,SNR=20									
J13A	Cove Ranch, Pi	88.66	41	⇓P		P	07 59 48.4	+0.6		
	baz=89,SNR=35									
HVU	Hansel Valley	88.67	43	eP		P	07 59 48.1	+0.2		
	comp=Z,23nm,1.2s									
123A	Bell Site, Whi	88.70	54	⇓P		P	07 59 49.0	+0.8		
	baz=89									
324A	Moseley Ranch,	88.74	55	⇑P		P	07 59 49.0	+0.6		
	baz=89,SNR=35									
SRU	San Rafael	88.77	47	⇓P		P	07 59 48.8	+0.2		
	baz=89									
Y22A	Socorro	88.78	52	⇓P		P	07 59 49.3	+0.6		
	baz=89,SNR=17									
425A	Indio Mountain	88.82	56	⇓P		P	07 59 49.7	+0.8		
	baz=89,SNR=26									
W21A	San Fidel	88.83	51	⇑P		P	07 59 49.4	+0.5		
	baz=89									
H12A	Diamond D Ranc	88.87	40	⇑P		P	07 59 49.0	+0.2		
	baz=89,SNR=15									
G12A	Big Creek, Yel	88.91	40	⇑P		P	07 59 49.1	+0.2		
	baz=89									
KMI	Kunming	88.91	298	P		P	07 59 51.0	+1.5		
KMI				pmax		pmax				
	comp=Z,18nm,1.2s									
JLU	Jordanelle	88.92	45	eP		P	07 59 49.0	-0.2		
	comp=Z,17nm,1.4s									
MNTX	Cornudas Mount	88.93	55	eP		P	07 59 49.8	+0.6		
	comp=Z,13nm,0.8s									
626A	Big Bend Ranch	88.94	57	⇑P		P	07 59 50.2	+0.8		
	baz=89,SNR=23									
DAU	Daniels Canyon	88.94	45	eP		P	07 59 50.4	+1.0		
	comp=Z,11nm,1.1s									
I13A	Wildhorse Cree	88.97	41	⇑P		P	07 59 49.9	+0.5		
	baz=89,SNR=6.2									
224A	Cornudas Mount	89.00	55	⇓P		P	07 59 50.5	+0.8		
	baz=89									
Z23A	Rita Site, Whi	89.01	53	⇑P		P	07 59 50.4	+0.7		
	baz=89,SNR=7.1									
X22A	Bernardo	89.01	52	⇑P		P	07 59 50.2	+0.5		
	baz=89									
J14A	Carey	89.02	42	⇓P		P	07 59 50.5	+1.0		
	baz=89,SNR=25									
PLCA	Paso Flores	89.06	134	eP		P	07 59 51.0	+1.2		
	comp=Z,6.0nm,0.7s									
PLCA	Paso Flores	89.06	134	P		P	07 59 51.3	+1.5		
	comp=Z,6.1nm,0.8s,baz=219,slow=6.1,SNR=15									
325A	Bean Ranch, Si	89.10	56	⇓P		P	07 59 50.6	+0.4		
	baz=89,SNR=22									
BNM	Barren Site	89.12	52	eP		P	07 59 50.4	+0.1		
	comp=Z,8.0nm,1.2s									
526A	Mary Lane Ranc	89.19	57	⇑P		P	07 59 51.4	+0.7		
	baz=89,SNR=20									
LPM	Los Pinos Moun	89.20	52	eP		P	07 59 51.0	+0.4		
	comp=Z,11nm,1.1s									
TXAR	Laj

GDL2	Guadalupe Moun	89.93	55	eP		P	07 59 54.8	+0.8	
	comp=Z,12nm,0.8s								
S21A	Coal Bank Pass	89.94	49	⇑P		P	07 59 54.1	0.0	
	baz=90								
W23A	Werner Place,	89.94	52	⇑P		P	07 59 54.1	+0.1	
	baz=90,SNR=5.7								
D12A	Red Ives Fores	89.95	38	⇑P		P	07 59 53.3	-0.4	
	baz=90								
U22A	Llaves	90.00	50	⇓P		P	07 59 54.3	0.0	
	baz=90								
I15A	Monteview	90.01	42	⇓P		P	07 59 54.5	+0.4	
	baz=90								
226B	Tecolote Peak,	90.03	55	⇓P		P	07 59 54.6	+0.2	
	baz=90,SNR=26								
427A	Hayter Ranch,	90.07	57	⇓P		P	07 59 55.3	+0.7	
	baz=90,SNR=49								
P19A	Cripple Cowboy	90.07	47	⇑P		P	07 59 54.4	-0.2	
	baz=90,SNR=7.6								
Z25A	Roswell	90.14	54	⇑P		P	07 59 55.3	+0.4	
	baz=90,SNR=7.7								
V23A	Ortiz Mt. (NFS	90.19	51	⇑P		P	07 59 55.8	+0.6	
	baz=90								
Q20A	Ridgley Place,	90.21	48	⇑P		P	07 59 55.1	0.0	
	baz=90								
MCMT	McKenzie Canyo	90.22	41	eP		P	07 59 55.4	+0.3	
	comp=Z,4.3nm,1.0s								
H15A	Lima	90.24	41	⇓P		P	07 59 55.5	+0.3	
	baz=90,SNR=6.4								
C12B	Naegeli Ranch,	90.25	37	⇓P		P	07 59 54.9	0.0	
	baz=90								
528A	Cox Ranch, San	90.25	57	⇓P		P	07 59 56.0	+0.6	
	baz=90,SNR=8.5								
T22A	Edith	90.26	50	⇓P		P	07 59 54.9	-0.7	
	baz=90								
E13A	Victor	90.29	39	⇑P		P	07 59 55.2	-0.1	
	baz=90								
O19A	Miners Draw (B	90.30	46	⇑P		P	07 59 55.5	0.0	
	baz=90,SNR=13								
ILAR	Eielson Array	90.37	13	P		P	07 59 53.8	-1.2	
ILAR				pP		pP	08 02 06.5	+2.5	
ILAR	Eielson Array	90.37	13	P		P	07 59 53.8	-1.2	
	comp=Z,0.4nm,0.4s,baz=225,slow=4.1,SNR=13								
ILAR				pP		pP	08 02 06.5	+2.5	
	comp=Z,0.7nm,0.9s,baz=235,slow=5.8,SNR=4.3								
126A	Clayton Basin,	90.39	55	⇓P		P	07 59 55.6	-0.4	
	baz=91								
P20A	De Beque	90.41	47	⇑P		P	07 59 56.1	0.0	
	baz=91,SNR=10								
F14A	Wisdom	90.43	40	⇓P		P	07 59 55.9	-0.2	
	baz=91								
R21A	Cimarron	90.44	48	⇓P		P	07 59 56.5	+0.1	
	baz=91,SNR=11								
U23A	El Rito	90.45	51	⇑P		P	07 59 56.6	+0.2	
	baz=91,SNR=12								
Y25A	Mesa, Roswell	90.45	53	⇓P		P	07 59 56.3	-0.1	
	baz=91,SNR=11								
L18A	Fontenelle, Gr	90.50	44	⇓P		P	07 59 56.3	-0.2	
	baz=91,SNR=5.5								
W24A	Lazy 6 Ranch,	90.50	52	⇑P		P	07 59 56.4	-0.2	
	baz=91,SNR=10								
I16A	Newdale	90.57	42	⇑P		P	07 59 57.0	+0.3	
	baz=91,SNR=8.0								
CD2	Chengdu	90.57	303	P		P	07 59 57.5	+0.6	
CD2				pP		pP	08 02 06.0	+0.2	
CD2				sP		sP	08 03 03.8	-1.2	
CD2				PP		PP	08 03 46.0	+2.8	
CD2				SKS		SKSac	08 09 32.8	+0.6	
CD2				S		S	08 10 02.0	-0.7	
CD2				sS		sS	08 13 50.0	-3.2	
CD2				SS		SS	08 16 26.5	+3.1	
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
CD2				pmax		pmax			
	comp=Z,80nm,5.8s								
B12A	Libby	90.61	37	⇓P		P	07 59 56.8	+0.2	
	baz=91								
DCID1	Drake Creek	90.61	42	eP		P	07 59 56.9	0.0	
	comp=Z,4.9nm,0.6s								
G15A	Dillon	90.62	41	⇑P		P	07 59 57.0	+0.1	
	baz=91,SNR=7.0								
Q21A	Lamborn Mesa,	90.65	48	⇑P		P	07 59 57.1	-0.1	
	baz=91								
S22A	4UR Ranch, Cre	90.65	49	⇑P		P	07 59 57.4	0.0	
	baz=91,SNR=17								
DLMT	Dillon	90.66	40	eP		P	07 59 56.9	-0.1	
	comp=Z,6.6nm,1.3s								
529A	Stev Forest Ra	90.68	58	⇑P		P	07 59 57.4	0.0	
	baz=91,SNR=6.6								
E14A	Clinton	90.68	39	⇑P		P	07 59 56.9	-0.3	
	baz=91								
Z26A	Caprock	90.69	54	⇓P		P	07 59 57.3	-0.1	
	baz=91,SNR=13								
TPAW	Teton Pass	90.70	43	eP		P	07 59 57.7	+0.3	
	comp=Z,6.0nm,0.8s								
BSMT	Bassoo Peak	90.71	38	eP		P	07 59 56.4	-0.9	
	comp=Z,12nm,0.5s								
X25A	Clemmons Ranch	90.74	53	⇓P		P	07 59 57.7	0.0	
	baz=91								
328A	Wristen Ranch,	90.76	56	⇓P		P	07 59 57.6	-0.1	
	baz=91								
O20A	White River Ci	90.81	47	⇓P		P	07 59 57.9	-0.1	
	baz=91,SNR=6.4								
SNOW	Snow King Moun	90.81	43	eP		P	07 59 58.0	+0.1	
	comp=Z,12nm,0.8s								
V24A	Rampart Ranch,	90.84	52	⇓P		P	07 59 58.4	+0.2	
	baz=91,SNR=6.6								
M19A	Rock Springs	90.87	45	⇓P		P	07 59 57.9	-0.3	
	baz=91								
T23A	Casias Ranch,	90.88	50	⇑P		P	07 59 58.5	+0.1	
	baz=91								
127A	Arkansas Junct	90.90	55	⇓P		P	07 59 58.2	-0.2	
	baz=91,SNR=6.9								
IMW	Indian Meadow	90.92	42	eP		P	07 59 58.5	0.0	
	comp=Z,10nm,1.1s								
R22A	Saguache, Gunn	90.93	49	⇑P		P	07 59 58.9	+0.2	
	baz=91,SNR=8.5								
F15A	Butte	90.97	40	⇓P		P	07 59 58.8	+0.2	
	baz=91								
D14A	Greenough	91.03	39	⇓P		P	07 59 57.6	-1.1	
	baz=91								
L19A	Farson	91.03	44	⇑P		P	07 59 59.0	+0.1	
	baz=91,SNR=16								
P21A	Newcastle	91.06	47	⇑P		P	07 59 59.2	+0.1	
	baz=91								
G16A	Moss Hill, Enn	91.07	41	⇓P		P	07 59 59.1	+0.2	
	baz=91								
Y26A	Elida	91.10	54	⇑P		P	07 59 58.7	-0.7	
	baz=91								
Q22A	Crested Butte,	91.12	48	⇓P		P	07 59 59.4	-0.1	
	baz=91,SNR=8.6								
N20A	Spence Gulch,	91.13	46	⇓P		P	07 59 59.5	+0.1	
	baz=91,SNR=15								
H16A	Russell Place,	91.14	41	⇓P		P	07 59 60.0	+0.6	
	baz=91,SNR=9.2								
429A	Davenport Ranc	91.15	57	⇓P		P	07 59 59.6	0.0	
	baz=91,SNR=39								
B13A	Whitefish	91.18	37	⇑P		P	07 59 58.5	-0.7	
	baz=91								
E15A	Deer Lodge	91.19	40	⇑P		P	07 59 59.2	-0.2	
	baz=91								
W25A	X Bar L Ranch,	91.20	52	⇑P		P	07 59 59.3	-0.5	
	baz=91,SNR=13								
S23A	Nye Farm, Mont	91.22	50	⇓P		P	08 00 00.2	+0.2	
	baz=91								
SMCO	Snowmass	91.22	48	eP		P	07 59 59.9	-0.2	
	comp=Z,5.6nm,0.7s								
BW06	Boulder Array	91.23	44	eP		P	07 59 59.1	-0.7	
	comp=Z,9.0nm,1.1s								
PDAR	Pinedale Array	91.23	44	P		P	07 59 59.6	-0.2	
PDAR	Pinedale Array	91.23	44	P		P	07 59 59.6	-0.2	
	comp=Z,4.1nm,0.8s,baz=204,slow=3.3,SNR=29								
228A	UT Block 9, Go	91.25	56	⇓P		P	08 00 00.0	0.0	
	baz=91								
C14A	Swan Lake	91.26	38	⇑P		P	07 59 59.3	-0.4	
	baz=92								
Z27A	Tatum	91.29	54	⇑P		P	08 00 00.1	-0.1	
	baz=92,SNR=5.4								
V25A	Rancho No Teng	91.36	52	⇓P		P	08 00 00.5	-0.1	
	baz=92,SNR=9.7								
530A	J-C Ranch, Com	91.38	58	⇑P		P	08 00 00.7	+0.1	
	baz=92,SNR=5.4								
X26A	CR and CF Fran	91.38	53	⇓P		P	08 00 00.4	-0.2	
	baz=92								
BOZ	Bozeman (W)	91.39	41	eP		P	08 00 00.1	-0.3	
	comp=Z,3.7nm,0.9s								
H17A	Grant Village	91.39	42	⇓P		P	08 00 02.2	+1.6	
	baz=92								
329A	Wagon Wheel Ra	91.44	57	⇓P		P	08 00 00.7	-0.2	
	baz=92,SNR=5.4								
F16A	Kennard Place,	91.46	40	⇑P		P	08 00 00.5	-0.2	
	baz=92								
M20A	Sweetwater, Wa	91.50	45	⇑P		P	08 00 00.9	-0.2	
	baz=92								
I18A	Diamond G Ranc	91.52	43	⇓P		P	08 00 01.1	-0.1	
	baz=92								
128A	Castleberry Fa	91.54	55	⇓P		P	08 00 00.7	-0.7	
	baz=92								
R23A	Moffat	91.56	49	⇓P		P	08 00 01.1	-0.5	
	baz=92								
P22A	Eagle	91.56	48	⇑P		P	08 00 01.1	-0.4	
	baz=92								
Y27A	Causey	91.58	54	⇑P		P	08 00 01.1	-0.4	
	baz=92,SNR=5.6								
D15A	Lincoln	91.58	39	⇑P		P	08 00 01.2	0.0	
	baz=92								
SDCO	Great Sand Dun	91.59	50	eP		P	08 00 01.2	-0.4	
	comp=Z,4.7nm,0.8s								
N21A	Black Mountain	91.59	46	⇑P		P	08 00 01.8	+0.2	
	baz=92,SNR=7.9								
L20A	Wamsutter	91.65	45	⇓P		P	08 00 01.9	+0.1	
	baz=92,SNR=6.8								
W26A	Owens Ranch, T	91.65	53	⇓P		P	08 00 01.9	+0.1	
	baz=92								
631A	Perdido Creek	91.67	59	⇓P		P	08 00 02.0	0.0	
	baz=92,SNR=29								
430A	Baggett Ranch,	91.73	57	⇓P		P	08 00 02.0	-0.2	
	baz=92								
S24A	Houchin Ranch,	91.74	50	⇓P		P	08 00 02.4	0.0	
	baz=92,SNR=6.9								
G17A	Pierce Place,	91.76	41	⇑P		P	08 00 02.7	+0.6	
	baz=92								
U25A	Circle Dot Ran	91.76	51	⇓P		P	08 00 02.1	-0.3	
	baz=92,SNR=9.5								
229A	Bryant Ranch,	91.78	56	⇓P		P	08 00 02.4	0.0	
	baz=92								
J19A	Crowheart	91.79	44	⇓P		P	08 00 01.9	-0.5	
	baz=92,SNR=5.6								
B14A	Marquette Ranc	91.84	38	⇑P		P	08 00 01.9	-0.5	
	baz=92								
732A	Laxson Ranch,	91.88	60	⇑P		P	08 00 02.6	-0.3	
	baz=92,SNR=9.3								
Z28A	Tucker Farm, M	91.90	55	⇑P		P	08 00 02.6	-0.4	
	baz=92								
MSTX	Muleshoe	91.91	54	⇑P		P	08 00 02.8	-0.3	
	baz=92,SNR=6.8								
C15A	Salmond Ranch,	91.91	38	⇓P		P	08 00 02.3	-0.4	
	baz=92								
V26A	Tequesquite Ra	91.95	52	⇑P		P	08 00 02.8	-0.4	
	baz=92								
X27A	F and S Farms,	91.95	53	⇓P		P	08 00 03.0	-0.2	
	baz=92								
K20A	Yellowstone Ra	91.96	44	⇑P		P	08 00 02.6	-0.6	
	baz=92								
O22A	Kremmling	91.97	47	⇓P		P	08 00 03.2	-0.2	
	baz=92,SNR=5.9								
531A	Rocksprings	92.01	58	⇓P		P	08 00 03.3	-0.2	
	baz=92,SNR=12								
129A	Stewart Farms,	92.02	56	⇑P		P	08 00 03.1	-0.4	
	baz=92								
330A	Mertzon	92.03	57	⇓P		P	08 00 03.4	-0.2	
	baz=92								
A14A	Double T Ranch	92.08	37	⇓P		P	08 00 03.1	-0.3	
	baz=92								
R24A	Sanders Place,	92.08	49	⇓P		P	08 00 03.9	0.0	
	baz=92,SNR=5.7								
T25A	Trinidad	92.09	51	⇓P		P	08 00 03.5	-0.4	
	baz=92,SNR=6.6								
M21A	Separation Pea	92.10	46	⇓P		P	08 00 03.5	-0.4	
	baz=92,SNR=9.7								
F17A	Fitzpatrick Pl	92.10	41	⇑P		P	08 00 03.6	-0.1	
	baz=92								
D16A	Dana Ranch, Ca	92.14	39	⇓P		P	08 00 03.8	0.0	
	baz=92								
W27A	Bowe Ranch, En	92.16	53	⇓P		P	08 00 03.5	-0.6	
	baz=92								
431A	Sonora	92.18	58	⇑P		P	08 00 03.1	-1.2	
	baz=92								
I19A	Meeteetse	92.21	43	⇑P		P	08 00 04.0	-0.2	
	baz=92								
B15A	Bradely Ranch,	92.22	38	⇑P		P	08 00 03.3	-0.8	
	baz=92								
U26A	Atchley Ranch,	92.24	52	⇑P		P	08 00 04.1	-0.5	
	baz=92								
L21A	Rawlins	92.26	45	⇓P		P	08 00 04.3	-0.3	
	baz=92								
230A	Sterling City	92.28	57	⇓P		P	08 00 04.4	-0.3	
	baz=92,SNR=6.8								
S25A	Robets Cordova	92.30	50	⇓P		P	08 00 04.6	-0.2	
	baz=92,SNR=12								
N22A	Wattenberg Ran	92.33	47	⇓P		P	08 00 05.1	+0.1	
	baz=92,SNR=8.9								
632A	Uvalde	92.34	59	⇑P		P	08 00 05.1	+0.1	
	baz=92,SNR=13								
Z29A	Hungry Hill Ra	92.41	55	⇓P		P	08 00 05.1	-0.2	
	baz=93								
O23A	Lake Granby, G	92.42	47	⇑P		P	08 00 05.5	0.0	
	baz=93								
C16A	Furinger Ranc	92.42	39	⇓P		P	08 00 04.4	-0.6	
	baz=93								
ISCO	Idaho Springs	92.44	48	eP		P	08 00 05.4	-0.2	
	comp=Z,1.6nm,0.6s								
ISCO	Idaho Springs	92.44	48	⇓P		P	08 00 05.6	0.0	
	baz=93								
J20A	Shoshoni	92.45	44	⇓P		P	08 00 05.3	0.0	
	baz=93,SNR=9.1								
A15A	Johnson Ranch,	92.47	37	⇑P		P	08 00 04.8	-0.4	
	baz=93								
532A	Rocksprings	92.50	59	⇓P		P	08 00 05.7	0.0	
	baz=93,SNR=9.1								
M22A	Cedar Creek Ra	92.51	46	⇑P		P	08 00 05.9	+0.1	
	baz=93								
H19A	Powell	92.52	42	⇑P		P	08 00 05.9	+0.3	
	baz=93								
X28A	Dimmitt	92.57	54	⇓P		P	08 00 05.6	-0.4	
	baz=93								
331A	San Angelo	92.58	57	⇑P		P	08 00 05.6	-0.5	
	baz=93								
R25A	Fountain Ranch	92.63	50	⇑P		P	08 00 05.8	-0.4	
	baz=93,SNR=9.7								
V27A	Dan Oppiter Fa	92.63	52	⇓P		P	08 00 06.6	+0.3	
	baz=93								
K21A	Alcova	92.65	45	⇓P		P	08 00 06.2	-0.1	
	baz=93								
Y29A	Porterfield Fa	92.69	55	⇓P		P	08 00 05.9	-0.7	
	baz=93								
T26A	Comanche Natio	92.69	51	⇓P		P	08 00 05.9	-0.7	
	baz=93								
130A	Snyder	92.69	56	⇑P		P	08 00 06.4	-0.2	
	baz=93								
D17A	Six Diamond Ra	92.71	40	⇑P		P	08 00 06.3	-0.1	
	baz=93								
N23A	Red Feather La	92.72	47	⇓P		P	08 00 06.7	0.0	
	baz=93								
JCT	Junction City	92.73	58	⇑P		P	08 00 06.3	-0.5	
	baz=93								
LZH	Lanzhou	92.74	308	eP		P	08 00 07.5	+0.6	
LZH				pP		pP	08 02 16.0	0.0	
LZH				sP		sP	08 03 15.5	+0.4	
LZH				pmax		pmax			
	comp=Z,19nm,1.0s								
B16A	M & M Farms, S	92.76	38	⇑P		P	08 00 05.6	-1.0	
	baz=93								
Z30A	Sanderson Ranc	92.86	55	⇑P		P	08 00 07.1	-0.2	
	baz=93								
J21A	Lysite	92.86	44	⇑P		P	08 00 06.9	-0.4	
	baz=93,SNR=5.3								
E18A	Harlowton	92.88	40	⇑P		P	08 00 07.4	+0.2	
	baz=93								
432A	Menard	92.89	58	⇓P		P	08 00 07.0	-0.6	
	baz=93,SNR=18								
C17A	Wharram Farm,	92.91	39	⇓P		P	08 00 07.1	-0.1	
	baz=93								
L22A	Ellis Ranch, M	92.91	46	⇑P		P	08 00 07.5	-0.1	
	baz=93								
X29A	Tulia	92.91	54	⇓P		P	08 00 07.1	-0.5	
	baz=93								
231A	Bronte	92.92	57	⇑P		P	08 00 07.1	-0.6	
	baz=93,SNR=15								
U27A	Thompson Grove	92.92	52	⇑P		P	08 00 07.0	-0.6	
	baz=93								
O24A	Longmont	92.96	48	⇓P		P	08 00 07.8	0.0	
	baz=93								
S26A	Kim	92.97	51	⇑P		P	08 00 07.7	-0.2	
	baz=93,SNR=11								
M23A	Laramie	93.12	46	⇑P		P	08 00 08.6	0.0	
	baz=93								
K22A	Casper	93.14	45	⇓P		P	08 00 08.5	0.0	
	baz=93								
332A	Millersview	93.14	57	⇓P		P	08 00 08.1	-0.5	
	baz=93,SNR=16								
131A	Roby	93.17	56	⇑P		P	08 00 08.2	-0.6	
	baz=93,SNR=6.7								
I21A	Big Trails, Te	93.18	44	⇓P		P	08 00 08.5	-0.2	
	baz=93								
B17A	L&G Farms, Che	93.22	39	⇓P		P	08 00 08.0	-0.6	
	baz=93								
R26A	Arlington	93.29	50	⇓P		P	08 00 08.8	-0.5	
	baz=94,SNR=15								
P25A	Willow Gulch B	93.31	49	⇑P		P	08 00 09.4	-0.1	
	baz=94,SNR=5.4								
N24A	Carr	93.40	47	⇑P		P	08 00 09.9	+0.1	
	baz=94								
L23A	Garrett	93.43	46	⇑P		P	08 00 09.8	-0.1	
	baz=94								
Q26A	Hugo	93.51	49	⇓P		P	08 00 10.0	-0.3	
	baz=94,SNR=6.4								
E19A	Rath Farm, Rou	93.51	41	⇓P		P	08 00 10.0	0.0	
	baz=94								
J22A	Midwest	93.52	44	⇓P		P	08 00 10.4	+0.1	
	baz=94								
A17A	Triple J Farms	93.61	38	⇓P		P	08 00 09.9	-0.5	
	baz=94								
Z31A	Sharp Cattle R	93.62	56	⇓P		P	08 00 10.1	-0.7	
	baz=94								
EGMT	Eagleton	93.69	39	⇑P		P	08 00 10.6	-0.2	
	baz=94								
ABTX	Abilene, Hawle	93.72	56	⇓P		P	08 00 11.0	-0.2	
	baz=94								
M24A	Cheyenne	93.73	47	⇓P		P	08 00 11.2	0.0	
	baz=94								
I22A	9 Mile Ranch,	93.73	44	⇑P		P	08 00 10.8	-0.4	
	baz=94								
T28A	Walsh	93.73	51	⇑P		P	08 00 10.5	-0.9	
	baz=94								
R27A	Eads	93.74	50	⇑P		P	08 00 10.7	-0.6	
	baz=94								
D19A	Cripps Ranch,	93.79	40	⇑P		P	08 00 11.7	+0.4	
	baz=94								
B18A	Beardsley Farm	93.86	39	⇑P		P	08 00 11.4	-0.2	
	baz=94								
P26A	Davis Ranch, A	93.90	49	⇓P		P	08 00 12.0	-0.1	
	baz=94								
C19A	Slack Wire Ran	93.97	40	⇑P		P	08 00 11.9	-0.2	
	baz=94								
A18A	Metzger Ranch,	94.08	38	⇓P		P	08 00 12.2	-0.3	
	baz=94								
S28A	Manter	94.09	51	⇑P		P	08 00 13.0	+0.1	
	baz=94								
Z32A	Haskell	94.12	56	⇓P		P	08 00 12.8	-0.2	
	baz=94								
KSCO	Kaye Shedlock'	94.17	50	⇑P		P	08 00 13.4	+0.1	
	baz=94								
D20A	Manuel Ranch,	94.20	40	⇑P		P	08 00 13.1	0.0	
	baz=94								
B19A	Brinkman Farms	94.38	39	⇓P		P	08 00 13.7	-0.2	
	baz=95								
Y32A	R-V Farms, Ver	94.43	55	⇑P		P	08 00 14.2	-0.2	
	baz=95								
P27A	Ficken Ranch,	94.44	49	⇑P		P	08 00 14.4	-0.1	
	baz=95								
R28A	Tribune	94.47	50	⇓P		P	08 00 14.4	-0.2	
	baz=95								
C20A	Veseth Ranch,	94.58	40	⇓P		P	08 00 14.6	-0.2	
	baz=95								
S29A	Ulysses	94.67	51	⇓P		P	08 00 15.7	+0.2	
	baz=95								
A19A	Klindworth Far	94.72	39	⇓P		P	08 00 14.5	-0.9	
	baz=95								
Q28A	Sharon Springs	94.75	50	⇓P		P	08 00 15.5	-0.4	
	baz=95								
O27A	Beecher Island	94.78	49	⇑P		P	08 00 16.0	0.0	
	baz=95								
V31A	Spring Creek L	94.85	53	⇓P		P	08 00 15.9	-0.4	
	baz=95								
D21A	La Casta Ranch	94.88	41	⇓P		P	08 00 15.9	-0.3	
	baz=95								
I24A	Kuemmerle Ranc	94.92	45	⇓P		P	08 00 16.6	0.0	
	baz=95								
N27A	Anderson Farm,	95.00	48	⇓P		P	08 00 17.3	+0.3	
	baz=95								
P28A	Saint Francis	95.02	49	⇓P		P	08 00 17.2	+0.2	
	baz=95								
C21A	Desert Coulee	95.17	40	⇓P		P	08 00 17.6	+0.1	
	baz=95								
F23A	Volborg	95.25	43	⇑P		P	08 00 17.8	-0.1	
	baz=95								
H24A	Dirks Ranch, A	95.36	44	⇑P		P	08 00 18.3	-0.2	
	baz=96								
K26A	Motz Farm, Whi	95.37	46	⇑P		P	08 00 18.7	+0.2	
	baz=96								
D22A	Cohagen	95.41	41	⇑P		P	08 00 19.0	+0.4	
	baz=96								
RSSD	Black Hills	95.42	44	eP		P	08 00 18.8	-0.1	
	comp=Z,2.9nm,0.8s								
B21A	Ellsworth Farm	95.50	40	⇑P		P	08 00 18.9	0.0	
	baz=96								
R30A	Dighton	95.54	51	⇓P		P	08 00 19.8	+0.4	
	baz=96								
N28A	Pribbeno Ranch	95.63	48	⇓P		P	08 00 20.2	+0.5	
	baz=96								
E23A	Ismay	95.66	42	⇓P		P	08 00 20.0	+0.3	
	baz=96								
F24A	Ekalaka	95.91	43	⇑P		P	08 00 20.8	-0.1	
	baz=96								
D23A	Lindsay	96.02	41	⇓Pdiff		P	08 00 21.9	+0.5	
	baz=96								
B22A	Reddig Ranch S	96.04	40	⇑Pdiff		P	08 00 21.7	+0.3	
	baz=96								
C23A	Lambert	96.31	41	⇓Pdiff		P	08 00 23.3	+0.7	
	baz=96								
M29A	Burnside Ranch	96.53	48	⇓Pdiff		P	08 00 24.1	+0.3	
	baz=97								
B23A	Brockton	96.72	40	⇑Pdiff		P	08 00 25.1	+0.7	
	baz=97								
A24A	Westby	97.51	40	⇓Pdiff		P	08 00 28.2	+0.3

comp=Z,1.3nm,0.5s,baz=75,slow=1.9,SNR=6.8
ARCES SKPbc **SKPbc** **08 08 28.3 -0.2**
comp=Z,7.5nm,0.8s,baz=32,slow=4.7,SNR=7.1
FINES FINESS Array B 137.06 342 PKP **PKPdf** **08 06 11.7 -0.8**
FINES SKPbc **SKPbc** **08 08 49.5 -0.8**
FINES FINESS Array B 137.06 342 PKP **PKPdf** **08 06 11.7 -0.8**
comp=Z,1.0nm,0.4s,baz=12,slow=2.0,SNR=4.8
FINES SKPbc **SKPbc** **08 08 49.5 -0.8**
comp=Z,5.3nm,0.7s,baz=62,slow=4.5,SNR=8.8
KMBO Kilima Mbogo 137.26 242 SKPbc **SKPbc** **08 08 53.5 +0.7**
KMBO Kilima Mbogo 137.26 242 SKPbc **SKPbc** **08 08 53.5 +0.7**
comp=Z,1.6nm,0.3s,baz=174,slow=3.1,SNR=8.0
NB2 NORSAR Subarra1 140.56 352 PKP **SKPbc** **08 09 00.0 +0.1**
comp=Z,2.2nm,0.7s,baz=16,slow=2.7
NOA NORSAR Array B 140.56 352 PKPpre PKPpre 08 06 12.5
NOA SKPbc **SKPbc** **08 09 00.1 +0.1**
NOA NORSAR Array B 140.56 352 PKhKP PKPpre 08 06 12.5
comp=Z,0.7nm,0.6s,baz=358,slow=3.6,SNR=3.8
NOA SKPbc **SKPbc** **08 09 00.1 +0.1**
comp=Z,3.3nm,0.7s,baz=14,slow=4.3,SNR=9.2
HFS Hagfors 141.06 350 PKPpre PKPpre 08 06 13.8
HFS Hagfors 141.06 350 PKhKP PKPpre 08 06 13.8
baz=66,slow=3.6
AKASG Malin Array Be 143.85 329 PKP PKPbc 08 06 23.0 -1.3
AKASG SKPbc **SKiKP** **08 09 08.4 -0.6**
AKASG Malin Array Be 143.85 329 PKP PKPbc 08 06 23.0 -1.3
comp=Z,7.4nm,0.4s,baz=40,slow=4.3,SNR=50
AKASG SKPbc **SKiKP** **08 09 08.4 -0.6**
comp=Z,5.1nm,0.8s,baz=43,slow=2.1,SNR=12
AK01 Malin Array Si 143.86 329 *e*PKPdf PKPbc 08 06 22.8 -1.6
AK02 Malin Array Si 143.89 329 *e*PKPdf PKPbc 08 06 23.1 -1.4
SUW Sualki 143.97 337 *e*PKP PKPbc 08 06 24.1 -0.5
BEL Belsk 146.58 337 *e*PKP **PKPbc** **08 06 32.6 +0.3**
BR131 Keskin Array S 146.94 309 *e*PKPdf **PKPbc** **08 06 32.8 -1.0**
BRTR Keskin Array B 146.94 309 PKPbc **PKPbc** **08 06 33.0 -0.8**
BRTR Keskin Array B 146.94 309 PKPbc **PKPbc** **08 06 33.0 -0.8**
comp=Z,6.0nm,0.5s,baz=131,slow=4.3,SNR=32
TLCR 147.47 321 ⇓*i*P **PKPbc** **08 06 34.4 -0.4**
ANTO Ankara 147.48 310 *e*PKPbc **PKPbc** **08 06 35.2 0.0**
KWP Kalwaria Pacla 147.56 333 ⇓*i*P **PKPbc** **08 06 34.8 -0.2**
KWP Kalwaria Pacla 147.56 333 *e*PKP **PKPbc** **08 06 34.8 -0.2**
KWP *e* 08 06 39.1
BUR08 Bucovina Ar. S 147.86 328 *e*PKPbc **PKPbc** **08 06 36.2 +0.3**
TESR Tescani 147.87 325 ⇓*i*P **PKPbc** **08 06 35.2 -0.6**
BURAR Bucovina Array 147.87 328 ⇑*i*P **PKPbc** **08 06 36.5 +0.6**
TIRR Tirgusor 148.13 321 ⇑*i*P **PKPbc** **08 06 36.4 -0.1**
VRI Vrincioaia 148.24 324 ⇓*i*P **PKPbc** **08 06 36.1 -0.7**
OJC Ojcow 148.26 336 PKiKP **PKPbc** **08 06 36.3 -0.4**
HARR Harsova 148.27 321 ⇓*i*P **PKPbc** **08 06 36.8 -0.1**
KOLS Kolonicke sedl 148.28 332 *e*PKP **PKPbc** **08 06 37.3 +0.5**
PLOR Plostina 148.29 324 ⇑*i*P **PKPbc** **08 06 36.5 -0.5**
STHS Stebnicka Huta 148.34 334 *e*PKP **PKPbc** **08 06 37.4 +0.5**
STHS *e* 08 06 43.5
CRVS Cervenica-Dubn 148.65 333 *e*PKP **PKPbc** **08 06 35.9 -1.8**
CRVS *e* 08 06 42.0
CSS Prodhromos 148.67 301 *e*PKPbc **PKPbc** **08 06 37.6 -0.6**
CSS *e*PKPab **PKPab** **08 06 44.1 -0.3**
DOPR Dopca 148.89 325 ⇓*i*P **PKPbc** **08 06 38.7 +0.3**
MLR Muntele Rosu 148.90 324 ⇑*i*P **PKPbc** **08 06 37.5 -1.1**
KSP Ksiaz 148.94 340 *e*PKP **PKPbc** **08 06 38.5 +0.2**
KSP *e* 08 06 45.2
OKC Ostrava-Krasne 149.18 337 ⇑*i*PKP **PKPbc** **08 06 38.8 -0.1**
UPC Upice 149.32 340 ⇑*i*PKP **PKPbc** **08 06 39.1 -0.2**
UPC *e*PKPAB **PKPab** **08 06 46.8 +0.3**
DPC Dobruska-Polom 149.36 340 ⇑*i*PKP **PKPbc** **08 06 39.7 +0.3**
DPC *e*PKPAB **PKPab** **08 06 47.0 +0.3**
DPC *ex* x 08 09 03.5
KECS Kecovo 149.38 333 *e*PKP **PKPab** **08 06 46.7 -0.1**
VOIR 149.41 325 ⇑*i*P **PKPbc** **08 06 39.6 -0.2**
CLL Collm 149.44 344 *e*PKPdf **PKPdf** **08 06 34.0 -0.3**
CLL *i* PKPbc **PKPbc** **08 06 38.9 -0.6**
comp=Z,18nm,0.9s
CLL *i* PKPab **PKPab** **08 06 46.1 -0.8**
comp=Z,17nm,0.8s
CLL *e*PKPbc **pPKPbc** **08 08 53.0 -3.0**
CLL *e*PKPab **pPKPab** **08 08 56.0 -2.4**
MORC Moravsky Berou 149.45 338 ⇓*i*P **PKPbc** **08 06 39.3 -0.3**
BRG Berggiesshubel 149.59 343 *e*PKP **PKPbc** **08 06 39.6 -0.2**
comp=Z,13nm,0.6s
BRG *e* 08 06 47.2
comp=Z,7.0nm,0.7s
BRG *e*pPKP **pPKPdf** **08 08 59.2 +6.4**
comp=Z,4.5nm,1.1s
DRGR 149.66 329 ⇑*i*P **PKPbc** **08 06 40.0 -0.3**
ARR Arges 149.68 325 ⇓*i*P **PKPbc** **08 06 41.1 +0.7**
PVCC Panska Ves 149.73 342 ⇑*i*PKP **PKPbc** **08 06 40.2 0.0**
PVCC *e*PKPAB **PKPab** **08 06 48.2 0.0**
VYHS Vyhne 150.03 335 *e*PKP **PKPbc** **08 06 40.7 -0.3**
VYHS *e* 08 06 49.7
PRU Pruhonice 150.22 342 ⇑*e*PKP **PKPbc** **08 06 41.0 -0.4**
PRU *e*PKPAB **PKPab** **08 06 50.5 +0.3**
PRU *ep*PKP pPKPdf 08 09 02.6 +8.8
BZS Buzias 151.04 328 ⇓*i*P **PKPbc** **08 06 42.8 -0.6**
KHC Kasperske Hory 151.27 342 *e*PKPbc **PKPbc** **08 06 43.1 -0.8**
KHC *e*PKPab **PKPab** **08 06 54.4 -0.3**
KHC Kasperske Hory 151.27 342 ⇑*e*PKP **PKPbc** **08 06 43.3 -0.6**
KHC *e*PKPAB **PKPab** **08 06 54.4 -0.3**
KHC *ep*PKP pPKPdf 08 09 05.8 +10
GERES GERESS Array B 151.49 342 PKPbc **PKPbc** **08 06 43.3 -1.1**
GERES PKPab **PKPab** **08 06 54.4 -1.4**
GERES GERESS Array B 151.49 342 PKPbc **PKPbc** **08 06 43.3 -1.1**
comp=Z,1.0nm,0.4s,baz=70,slow=1.6,SNR=10
GERES PKPab **PKPab** **08 06 54.4 -1.4**
comp=Z,1.6nm,0.6s,baz=34,slow=5.0,SNR=9.1
PKSM Moragy 151.94 333 ⇓*i*P **PKPbc** **08 06 44.9 -0.5**
VTS Vitosha 152.27 322 ⇓*i*P **PKPbc** **08 06 45.2 -1.2**
KBA Koelnbreinsper 153.18 340 ⇓*i*PKPab **PKPab** **08 07 02.2 -0.9**
comp=Z,7.4nm,0.8s
WTTA Wattenberg 153.51 343 ⇓*i*PKPab **PKPab** **08 07 03.4 -1.1**
comp=Z,8.6nm,0.5s
RETA Reutte 153.53 344 ⇓*i*PKPab **PKPab** **08 07 03.0 -1.5**
comp=Z,11nm,1.2s
MOTA Moosalm 153.58 344 ⇑*i*PKPab **PKPab** **08 07 03.8 -1.0**
comp=Z,5.5nm,0.8s
TORD Torodi Ar. Bea 170.83 187 PKP **PKPdf** **08 06 57.6 -0.7**
TORD PKPab **PKPab** **08 08 21.6 +0.7**
TORD Torodi Ar. Bea 170.83 187 PKP **PKPdf** **08 06 57.6 -0.7**
comp=Z,0.6nm,0.9s,baz=323,slow=0.8,SNR=3.7
TORD PKPab **PKPab** **08 08 21.6 +0.7**
comp=Z,0.8nm,0.6s,baz=180,slow=3.3,SNR=4.1

IDC 29 08:10:45.4±49.0, **19.16S**×**177.17W, h0**km, **mb3.9**/3, **mb1 4.1**/3, **mb1mx3.6**/19, **mbtmp3.9**/3, **Error ellipse: s-maj=913.5km s-min=163.8km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.08**	**243**	P	P	08 18 14.1	-0.4
	2.7nm,1.0s,baz=76,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**45.58**	**261**	P	P	08 19 07.8	+0.3
	0.6nm,0.3s,baz=96,slow=7.5,SNR=62						
ASAR	**Alice Springs**	**45.60**	**255**	P	P	08 19 07.3	-0.4
	0.9nm,0.6s,baz=90,slow=8.4,SNR=9.3						

NIED ***29*** *08:26:00, 38.00N×142.10E, h50km, Mw3.6 Best double couple: M0 3.21000×10^14 NP1:φs=57.00000°, δ78.00000°, λ125.00000°. NP2:φs=163.00000°, δ36.00000°, λ20.00000°.*
ISCJB ***29*** *08:26:10.8±1.5, 37.94N×0.05×142.25E×0.07, h22km±9km, mb3.5/6, Error ellipse: s-maj=10.6km s-min=6.7km az=33.7*
JMA ***29*** *08:26:13.4±0.1, 38.01N×142.11E, h39km±1km, M3.5*
IDC ***29*** *08:26:17.6±3.8, 37.87N×142.16E, h70km±35km, mb3.2/6, mb1 3.4/8, mb1mx3.2/26, mbtmp3.2/8, ML2.5/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/14, Error ellipse: s-maj=30.7km s-min=17.8km az=106.0*
ISC 29 08:26:12.6±2.5, **37.99N**×**0.06**×**142.17E**×**0.09, h24**km±**16**km, **n21**, σ**1**°**19**/**27, mb3.5/6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.80**	**306**	P	**Pb**	**08 26 27.8**	**0.0**
JIO				S	**Sb**	**08 26 37.6**	**-0.5**
JMM	**Marumori**	**1.10**	**264**	P	**Pn**	**08 26 31.9**	**-0.6**
JMM				S	**Sn**	**08 26 45.1**	**-1.8**
JFK	**Kawauchi**	**1.21**	**239**	P	**Pn**	**08 26 33.2**	**-0.8**
JFK				S	**Sn**	**08 26 47.3**	**-2.3**
JMK	**Ichinoseki**	**1.22**	**322**	P	**Pn**	**08 26 33.9**	**-0.2**
JOU	**Okura**	**1.25**	**288**	P	**Pn**	**08 26 34.6**	**0.0**
JFT	**Otama**	**1.53**	**253**	P	**Pn**	**08 26 39.0**	**+0.6**
JFT				*e*S	**Sn**	**08 26 57.5**	**-0.1**
JOM	**Ohasama**	**1.63**	**335**	P	**Pn**	**08 26 39.9**	**+0.1**
JOM				S	**Sn**	**08 26 59.5**	**-0.6**
JYS	**Shirataka**	**1.68**	**279**	P	**Pn**	**08 26 40.6**	**+0.1**
JYS				*e*S	**Sn**	**08 27 02.2**	**+0.9**
JYK	**Kaneyama**	**1.70**	**304**	P	**Pn**	**08 26 41.0**	**+0.3**
JRG	**Rokugo**	**1.85**	**320**	P	**Pn**	**08 26 43.7**	**+0.9**
JYA	**Atsumi**	**2.03**	**288**	P	**Pn**	**08 26 45.7**	**+0.5**
MJAR	**Matsushiro Arr**	**3.48**	**247**	P	**Pn**	**08 27 07.7**	**+2.5**
	0.9nm,0.3s,baz=332,slow=38,SNR=4.8						
MJAR				S	**Sn**	**08 27 48.3**	**+2.6**
	1.2nm,0.3s,baz=78,slow=13,SNR=4.3						
MAT	**Matsushiro**	**3.48**	**247**	P	**Pn**	**08 27 06.7**	**+1.5**
MAT				S	**Sn**	**08 27 45.0**	**-0.7**
ASAJ	**Asahikawa**	**6.13**	**3**	LR	LR	08 30 34.7	
	comp=Z,64nm,20.2s,baz=10.0,slow=41						
USRK	**Ussuriysk Arra**	**9.87**	**312**	P	Pn	08 28 37.9	+5.1
	0.3nm,0.3s,baz=121,slow=13,SNR=4.2						
ZALV	**Zalesovo Beam**	**41.73**	**312**	P	**P**	**08 33 59.1**	**-0.3**
	0.6nm,0.3s,baz=77,slow=9.3,SNR=3.9						
MKAR	**Makanchi Array**	**44.13**	**301**	P	**P**	**08 34 19.6**	**+0.6**
	0.5nm,0.6s,baz=89,slow=9.4,SNR=7.6						
ILAR	**Eielson Array**	**48.36**	**33**	P	**P**	**08 34 52.3**	**+0.3**
	0.3nm,0.7s,baz=264,slow=6.2,SNR=5.7						
WRA	**Warramunga Arr**	**58.09**	**189**	P	**P**	**08 36 03.6**	**-0.4**
	0.6nm,0.7s,baz=7.0,slow=7.3,SNR=6.3						
ASAR	**Alice Springs**	**61.82**	**189**	P	**P**	**08 36 27.8**	**-1.8**
	0.1nm,0.3s,baz=229,slow=38,SNR=3.1						
YKA	**Yellowknife Ar**	**62.68**	**31**	P	**P**	**08 36 35.7**	**+0.8**
	0.1nm,0.6s,baz=304,slow=7.1,SNR=3.7						

CASC 29 08:35:14.8±3.2, **14.93N**×**88.05W, h0**km±**17**km, **MD3.9, ML3.4, Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MTO2	**Montecristo 2**	**1.38**	**248**	*e*P	Pg	08 35 40.1	-1.4
MTO2				*e*S	Sb	08 35 59.9	-0.2
VSM	**San Miguel**	**1.51**	**188**	*e*P	Pn	08 35 43.2	-0.3
SNVI	**San Vicente**	**1.52**	**210**	*e*P	Pn	08 35 43.5	+0.1
SNVI				*e*S	Sn	08 36 04.3	+0.2
LBRS	**Las Brisas**	**1.53**	**219**	*e*P	Pb	08 35 43.9	-0.3
MRL	**Marmol**	**1.59**	**275**	*e*P	Pn	08 35 40.8	-3.7
MRL				*e*S	Sg	08 36 07.5	+1.1
CNCH	**Conchagua**	**1.66**	**173**	*e*P	Pn	08 35 45.0	-0.3
BOQS	**Boqueron**	**1.68**	**225**	*e*P	Pb	08 35 46.5	-0.5
SNET	**Serv Nac Est T**	**1.69**	**223**	AML	AML	08 36 15.0	
	comp=Z,454nm,0.3s						
RBDL	**Robledal**	**1.78**	**243**	*e*P	Pn	08 35 46.4	-0.7
RBDL				*e*S	Sn	08 36 10.8	+0.2
SNJE	**San Jose**	**1.84**	**235**	*e*P	Pn	08 35 48.1	+0.1
RTR	**El Retiro**	**1.86**	**237**	*e*P	Pn	08 35 48.7	+0.5
SBLS	**San Blas**	**1.87**	**235**	*e*P	Pn	08 35 48.0	-0.4
NBG	**Las Nubes**	**2.25**	**262**	*e*P	Pn	08 35 51.1	-2.2
NBG				*e*S	Sg	08 36 28.2	+0.5
FUG	**Fuego 3**	**2.75**	**260**	*e*P	Pn	08 35 59.1	-1.3
FUG				*e*S	Sb	08 36 39.0	-0.4
JAT	**Jato**	**3.53**	**261**	*e*P	Pn	08 36 08.1	-2.8
JAT				*e*S	Sn	08 36 54.9	+1.6

ISCJB ***29*** *08:54:38.7±0.8, 35.83N±0.05×143.74E±0.06, h33km, mb3.5/4, Error ellipse: s-maj=7.2km s-min=6.6km az=179.1*
IDC ***29*** *08:54:38.9±1.7, 35.51N×143.59E, h0km, mb3.3/4, mb1 3.6/7, mb1mx3.4/28, mbtmp3.5/7, ML3.4/3, Error ellipse: s-maj=37.9km s-min=21.3km az=64.0*
JMA ***29*** *08:54:40.5±0.3, 35.86N×143.67E, h63km, M4.0*
ISC 29 08:54:40.8±1.5, **35.80N**±**0.06**×**143.7E**±**0.1, h35**km, **n19, σ1°36/28, mb3.6/4, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**2.53**	**244**	P	**Pn**	**08 55 18.9**	**0.0**
JHO	**Hitachi**	**2.69**	**288**	P	**Pn**	**08 55 21.1**	**-0.4**
JHO				*e*S	**Sn**	**08 55 51.5**	**-1.3**
ONAJ	**Iwakimizuishiy**	**2.70**	**300**	P	**Pn**	**08 55 21.3**	**-0.4**
ONAJ				*e*S	**Sn**	**08 55 52.5**	**-0.7**
JFT	**Otama**	**3.23**	**303**	P	**Pn**	**08 55 29.3**	**+0.4**
JFT				*e*S	**Sn**	**08 56 06.1**	**0.0**
JMK	**Ichinoseki**	**3.73**	**328**	P	**Pn**	**08 55 34.9**	**-0.9**
JMK				*e*S	**Sn**	**08 56 16.3**	**-2.2**
JOD2	**Odawara 2**	**3.83**	**263**	P	**Pn**	**08 55 37.6**	**+0.4**
JOD2				*e*S	**Sn**	**08 56 21.0**	**0.0**
JRY	**Ryogami san**	**3.93**	**275**	P	**Pn**	**08 55 39.2**	**+0.6**
JRY				*e*S	**Sn**	**08 56 23.4**	**-0.1**
JHJ2	**Mitsune**	**4.21**	**231**	P	**Pn**	**08 55 41.6**	**-0.8**
JHJ2				*e*S	**Sn**	**08 56 27.9**	**-2.4**
JHJ	**Hachijo jima 2**	**4.22**	**232**	Pn	**Pn**	**08 55 41.7**	**-0.9**
	18nm,0.3s,baz=236,slow=23,SNR=15						
JHJ				Sn	**Sn**	**08 56 27.7**	**-3.0**
	120nm,0.3s,baz=68,slow=22,SNR=15						
MJAR	**Matsushiro Arr**	**4.53**	**281**	Pn	**Pn**	**08 55 47.3**	**+0.5**
	4.7nm,0.3s,baz=114,slow=8.6,SNR=35						
MJAR				Sn	**Sn**	**08 56 39.8**	**+1.5**
	2.3nm,0.3s,baz=303,slow=7.5,SNR=5.2						
MAT	**Matsushiro**	**4.53**	**281**	P	**Pn**	**08 55 48.3**	**+1.4**
MAT				S	**Sn**	**08 56 38.1**	**-0.3**
JOT	**Ohata**	**5.96**	**340**	P	**Pn**	**08 56 05.5**	**-0.9**
JKB	**Kayabe**	**6.43**	**342**	P	**Pn**	**08 56 12.6**	**-0.3**
ASAJ	**Asahikawa**	**8.35**	**354**	Pn	**Pn**	**08 56 38.8**	**-0.5**
	1.9nm,0.3s,baz=166,slow=14,SNR=8.7						
ASAJ				Sn	**Sn**	**08 58 10.2**	**-2.1**
	1.2nm,0.3s,baz=192,slow=31,SNR=6.3						
USRK	**Ussuriysk Arra**	**12.29**	**317**	Pn	**Pn**	**08 57 35.7**	**+2.5**
	0.3nm,0.3s,baz=115,slow=14,SNR=6.3						
ZALV	**Zalesovo Beam**	**44.12**	**313**	P	P	09 02 49.3	+3.8
	0.4nm,0.3s,baz=79,slow=7.5,SNR=2.2						
MKAR	**Makanchi Array**	**46.36**	**303**	P	P	09 03 07.9	+4.5
	0.1nm,0.4s,baz=84,slow=5.9,SNR=2.2						
WRA	**Warramunga Arr**	**56.15**	**191**	P	**P**	**09 04 16.6**	**-0.3**
	0.4nm,0.6s,baz=13,slow=7.5,SNR=7.5						
ASAR	**Alice Springs**	**59.87**	**190**	P	**P**	**09 04 45.3**	**+2.3**
	0.8nm,1.1s,baz=199,slow=25,SNR=3.2						

GUC 29 09:05:21.4±0.7, **31.32S**×**69.19W, h150**km, **MD4.2, ML4.1, 7C-5D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**1.56**	**275**	⇑*i*P	Pn	09 05 52.2	+0.5
CMCH				*i* S	Sn	09 06 15.6	+0.7
JACH	**Jahuel**	**1.81**	**221**	⇑*i*P	Pn	09 05 55.2	+0.8
CHNG	**Los Chungos**	**2.05**	**253**	⇓*i*P	Pn	09 05 57.3	+0.2
CHNG				*i* S	Sn	09 06 24.2	-0.3
CHNG				AML	AML	09 06 33.7	
	comp=E,528nm,0.4s						
PEL	**Peldehue**	**2.22**	**214**	⇑*i*P	Pn	09 05 59.3	+0.1
PEL				*i* S	Sn	09 06 28.7	+0.4
PEL				AML	AML	09 06 30.7	
	comp=N,1μm,0.4s						
ROCH	**El Roble**	**2.26**	**223**	⇓*i*P	Pn	09 05 59.9	0.0
ROCH				*i* S	Sn	09 06 30.1	+0.5
ROCH				AML	AML	09 06 32.5	
	comp=N,1μm,0.4s						
CLCH	**Cerro Calan**	**2.36**	**208**	⇑*i*P	Pn	09 06 01.4	+0.4
CLCH				*i* S	Sn	09 06 32.0	+0.5
CLCH				AML	AML	09 06 35.2	
	comp=E,977nm,0.4s						
FSR	**Penalolen**	**2.43**	**207**	⇓*i*P	Pn	09 06 02.8	+1.0
FSR				*i* S	Sn	09 06 33.2	+0.3
STL	**Santa Lucia**	**2.44**	**210**	⇑*i*P	Pn	09 06 02.6	+0.7
STL				*i* S	Sn	09 06 33.4	+0.3
SJCH	**San Jose de Ma**	**2.52**	**203**	*e*P	Pn	09 06 02.4	-0.4
SJCH				*e*S	Sn	09 06 34.8	+0.1
ANTU	**Antumapu**	**2.55**	**208**	⇑*i*P	Pn	09 06 03.8	+0.5
ANTU				*i* S	Sn	09 06 36.0	+0.4
ANTU				AML	AML	09 06 38.1	
	comp=E,614nm,0.3s						
PCH	**Pirque**	**2.55**	**206**	*e*P	Pn	09 06 03.9	+0.6
PCH				*i* S	Sn	09 06 36.2	+0.5
LMEL	**Las Melosas**	**2.66**	**198**	⇓*i*P	Pn	09 06 05.0	+0.3
LMEL				*e*S	Sn	09 06 39.2	+0.9
LMEL				AML	AML	09 06 50.5	
	comp=N,416nm,0.3s						
TACH	**Talagante**	**2.76**	**212**	*e*P	Pn	09 06 06.0	+0.2
TACH				*i* S	Sn	09 06 39.9	-0.1
CHCH	**Chadas Angostu**	**2.88**	**205**	⇑*i*P	Pn	09 06 07.8	+0.4
CHCH				*i* S	Sn	09 06 43.0	+0.1
CACH	**El Canelo**	**3.03**	**203**	⇓*i*P	Pn	09 06 10.2	+0.8
CACH				*i* S	Sn	09 06 47.7	+1.2
CDCH	**Caldera**	**4.47**	**341**	*e*P	Pn	09 06 28.5	+0.7

ROM ***29*** *09:08:49.0±1.0, 45.13N×14.51E, h10km, Md2.6/1, Ml2.3/3, Error ellipse: s-maj=33.5km s-min=9.0km az=56.0*
ISCJB ***29*** *09:08:50.7±0.6, 45.28N±0.03×14.41E±0.04, h7km±7km, Error ellipse: s-maj=5.9km s-min=4.0km az=135.7*
CSEM ***29*** *09:08:50.9±0.3, 45.27N×14.43E, h10km, ML2.8/7, Error ellipse: s-maj=5.8km s-min=4.2km az=40.0*
VIE ***29*** *09:08:51.7±0.4, 45.33N×14.43E, h9km±1km, ML2.5/2, Error ellipse: s-maj=2.4km s-min=1.1km az=3.0 2 km SE of Rijeka*
LJU ***29*** *09:08:51.3, 45.31N×14.44E, h13km, ML2.0*
ISC 29 09:08:50.6±1.3, **45.28N**±**0.03**×**14.51E**±**0.03, h4**km±**9**km, **n40**, σ**0°55/76, 10C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDS	**Knezji Dol**	**0.27**	**340**	*i* Pg	**Pg**	**09 08 56.0**	**+0.2**
KNDS				*e*Sg	**Sg**	**09 08 59.7**	**+0.3**
KNDS							
	comp=Z,174nm,0.3s						
KNDS	**Knezji Dol**	**0.27**	**340**	*i* Pg	**Pg**	**09 08 56.0**	**+0.2**
KNDS				*e*Sg	**Sg**	**09 08 59.7**	**+0.3**
	comp=Z,174nm,0.3s						
GBRS	**Gornja Briga**	**0.33**	**40**	*i* Pg	**Pb**	**09 08 58.4**	**-0.7**
GBRS				*i* Sg	**Sb**	**09 09 04.1**	**-0.7**
	comp=Z,73nm,0.1s						
SKDS	**Skadanscina**	**0.44**	**308**	*i* Pg	**Pg**	**09 08 58.4**	**-0.7**
SKDS				*i* Sg	**Sg**	**09 09 04.5**	**-0.3**
SKDS							
	comp=Z,65nm,0.1s						
SKDS	**Skadanscina**	**0.44**	**308**	*i* Pg	**Pg**	**09 08 58.4**	**-0.7**
SKDS				*i* Sg	**Sg**	**09 09 04.6**	**-0.3**
	comp=Z,65nm,0.1s						
CEY	**Cerknica**	**0.47**	**353**	*i* Pg	**Pg**	**09 08 59.4**	**-0.3**
CEY				*i* Sg	**Sg**	**09 09 06.2**	**+0.6**
CEY							
	comp=Z,38nm,0.1s						
CEY	**Cerknica**	**0.47**	**353**	*i* Pg	**Pg**	**09 08 59.3**	**-0.3**
CEY				*i* Sg	**Sg**	**09 09 06.2**	**+0.6**
	comp=Z,38nm,0.1s						
NVLJ	**Novalja**	**0.76**	**160**	*e*Pg	**Pb**	**09 09 06.9**	**+0.4**
NVLJ				Sg	**Sn**	**09 09 19.2**	**-0.8**
NVLJ	**Novalja**	**0.76**	**160**	*e*Pg	**Pb**	**09 09 06.8**	**+0.4**
VNDS	**Vrh nad Dolski**	**0.83**	**9**	*e*Pg	**Pb**	**09 09 07.6**	**-0.2**
VOJS	**Vojsko**	**0.87**	**330**	*i* Pg	**Pg**	**09 09 06.2**	**-1.2**
VOJS	**Vojsko**	**0.87**	**330**	*i* Pg	**Pg**	**09 09 06.2**	**-1.2**
SABO	**M.te Sabotino**	**0.95**	**318**	*e*Pg	**Pg**	**09 09 08.4**	**-0.5**
SABO				*e*Sg	**Sg**	**09 09 21.7**	**+0.5**
SABO	**M.te Sabotino**	**0.95**	**318**	Pg	**Pg**	**09 09 07.8**	**-1.1**
SABO				Sg	**Sb**	**09 09 22.1**	**-0.5**
SABO	**M.te Sabotino**	**0.95**	**318**	*e*Pg	**Pg**	**09 09 08.4**	**-0.5**
SABO				*e*Sg	**Sg**	**09 09 21.7**	**+0.5**
DRE	**Drenchia**	**1.08**	**326**	⇑*e*Pg	**Pg**	**09 09 10.6**	**-0.8**
DRE				*e*Sg	**Sb**	**09 09 26.8**	**+0.3**
DRE	**Drenchia**	**1.08**	**326**	⇑*e*Pg	**Pg**	**09 09 10.6**	**-0.8**
DRE				*e*Sg	**Sb**	**09 09 26.8**	**+0.3**
COLI	**Coloredo**	**1.17**	**318**	⇓*e*Pg	**Pn**	**09 09 13.7**	**0.0**
COLI				*e*Sg	**Sb**	**09 09 29.0**	**+0.2**
COLI	**Coloredo**	**1.17**	**318**	⇓*e*Pg	**Pn**	**09 09 13.7**	**0.0**
COLI				*e*Sg	**Sb**	**09 09 29.0**	**+0.2**
OBKA	**Obir**	**1.23**	**1**	⇑*i*Pg	**Pn**	**09 09 14.8**	**0.0**
OBKA				⇑*i*Sg	**Sb**	**09 09 31.1**	**+0.2**
	comp=Z,24nm,0.3s						
OBKA	**Obir**	**1.23**	**1**	⇑*i*Pg	**Pn**	**09 09 14.8**	**0.0**
OBKA				Sg	**Sb**	**09 09 31.1**	**+0.2**
	comp=Z,24nm,0.3s						
VINO	**Villanova**	**1.30**	**319**	*e*Pg	**Pg**	**09 09 15.7**	**+0.1**
VINO				*e*Sg	**Sb**	**09 09 32.8**	**0.0**
VINO	**Villanova**	**1.30**	**319**	Pg	**Pg**	**09 09 15.7**	**+0.1**
VINO				Sg	**Sn**	**09 09 34.1**	**+0.6**
	comp=Z,27nm,0.4s						
VINO	**Villanova**	**1.30**	**319**	*e*Pg	**Pg**	**09 09 15.7**	**+0.1**
VINO				*e*Sg	**Sb**	**09 09 32.8**	**0.0**
BAD	**Bernadia**	**1.31**	**318**	⇑*e*Pg	**Pb**	**09 09 15.7**	**-0.1**
BAD				*e*Sg	**Sn**	**09 09 34.2**	**+0.6**
BAD	**Bernadia**	**1.31**	**318**	⇑*e*Pg	**Pb**	**09 09 15.7**	**-0.1**
BAD				*e*Sg	**Sn**	**09 09 34.2**	**+0.6**
LSR	**Lussari**	**1.38**	**331**	*e*Pg	**Pg**	**09 09 17.5**	**+0.4**
LSR	**Lussari**	**1.38**	**331**	*e*Pg	**Pg**	**09 09 17.5**	**+0.4**
PTCC	**Patocco-Chiusa**	**1.39**	**325**	Pg	**Pn**	**09 09 15.9**	**-1.0**
PTCC				Sg	**Sn**	**09 09 36.5**	**+0.8**
	comp=Z,22nm,0.4s						
PTCC	**Patocco-Chiusa**	**1.39**	**325**	Pg	**Pn

NNZ				SN	Sn	09 16 22.7	-1.1
QRZ	**Quartz Range**	**0.71**	**243**	⇓PN	Pn	09 16 04.6	-0.3
QRZ				SN	Sn	09 16 22.0	-1.6
TCW	**Tory Channel**	**0.99**	**136**	PN	Pn	09 16 07.2	+0.5
TCW				SN	Sn	09 16 25.9	-1.2
TUWZ	**Tuamarina**	**1.02**	**155**	PN	Pn	09 16 07.3	+0.3
TUWZ				SN	Sn	09 16 26.5	-1.1
KIW	**Kapiti Island**	**1.23**	**107**	PN	Pn	09 16 08.8	0.0
BSWZ	**Blackbirch Sta**	**1.27**	**162**	PN	Pn	09 16 09.4	+0.3
BSWZ				SN	Sn	09 16 30.3	-1.1
SNZO	**South Karori**	**1.29**	**129**	⇑PN	Pn	09 16 09.4	0.0
SNZO				SN	Sn	09 16 29.8	-1.9
THZ	**Tophouse**	**1.30**	**195**	⇓PN	Pn	09 16 09.2	-0.3
THZ				SN	Sn	09 16 30.3	-1.8
DFE	**Dawson Falls**	**1.31**	**26**	PN	Pn	09 16 09.4	-0.3
WEL	**Wellington**	**1.32**	**127**	PN	Pn	09 16 09.7	+0.1
NEZ	**North Egmont**	**1.36**	**25**	PN	Pn	09 16 09.6	-0.5
PKE	**Pukeiti**	**1.40**	**20**	PN	Pn	09 16 10.1	-0.4
OGWZ	**Otaki Gorge**	**1.41**	**103**	PN	Pn	09 16 10.6	+0.1
CAW	**Cannon Point**	**1.43**	**115**	PN	Pn	09 16 10.7	+0.1
BHW	**Baring Head**	**1.45**	**129**	PN	Pn	09 16 10.8	-0.1
WAZ	**Wanganui**	**1.45**	**59**	⇑PN	Pn	09 16 11.2	+0.3
HOWZ	**Holdsworth Sta**	**1.68**	**104**	PN	Pn	09 16 13.0	-0.2
MSWZ	**Moikau Station**	**1.69**	**123**	PN	Pn	09 16 13.1	-0.2
MRZ	**Mangatainoka R**	**1.69**	**96**	⇑PN	Pn	09 16 13.1	-0.3
MTW	**Mount Morrison**	**1.75**	**113**	⇑PN	Pn	09 16 13.7	-0.2
VRZ	**Vera Road**	**1.75**	**38**	PN	Pn	09 16 13.1	-0.9
PLWZ	**Palliser**	**1.78**	**127**	PN	Pn	09 16 13.9	-0.4
PAWZ	**Paruwai Farm**	**1.79**	**120**	PN	Pn	09 16 14.1	-0.3
POWZ	**Post Office Ro**	**1.84**	**87**	PN	Pn	09 16 14.5	-0.4
KHZ	**Kahutara**	**1.91**	**176**	⇓PN	Pn	09 16 15.2	-0.4
TIWZ	**Tintock**	**1.94**	**99**	⇑PN	Pn	09 16 15.8	-0.2
PKVZ	**Pokaka**	**1.95**	**52**	PN	Pn	09 16 15.6	-0.6
MTVZ	**Mangateitei**	**1.97**	**56**	PN	Pn	09 16 15.8	-0.6
TMWZ	**Te Maipa**	**2.01**	**108**	⇑PN	Pn	09 16 16.6	-0.2
TSZ	**Takapari Road**	**2.04**	**78**	PN	Pn	09 16 16.5	-0.6
TRVZ	**Turoa**	**2.07**	**55**	PN	Pn	09 16 16.7	-1.1
WNVZ	**Wahianoa**	**2.08**	**56**	PN	Pn	09 16 16.9	-0.9
FWVZ	**Far West T-bar**	**2.10**	**54**	PN	Pn	09 16 17.1	-1.0
WPVZ	**Whakapapa**	**2.13**	**53**	PN	Pn	09 16 17.4	-0.9
DVHZ	**Dannevirke**	**2.15**	**85**	PN	Pn	09 16 17.7	-0.7
TUVZ	**Tukino**	**2.15**	**56**	⇓PN	Pn	09 16 17.8	-0.9
BFZ	**Birch Farm**	**2.20**	**95**	⇓PN	Pn	09 16 18.6	-0.4
OTVZ	**Oturere**	**2.22**	**54**	PN	Pn	09 16 18.4	-1.0
PNHZ	**Pukenui**	**2.25**	**76**	PN	Pn	09 16 18.8	-0.8
HIZ	**Hauiti**	**2.30**	**31**	PN	Pn	09 16 18.3	-1.9
BHHZ	**Black Hill Sta**	**2.31**	**65**	PN	Pn	09 16 19.0	-1.3
WPHZ	**Waipukurau**	**2.40**	**80**	PN	Pn	09 16 20.8	-0.5
LTZ	**Lake Taylor**	**2.42**	**199**	PN	Pn	09 16 20.4	-1.1
PRHZ	**Porangahau**	**2.51**	**86**	PN	Pn	09 16 22.3	-0.3
PXZ	**Pawanui**	**2.72**	**81**	PN	Pn	09 16 24.5	-0.6
MCHZ	**McNeill Hill**	**2.77**	**69**	PN	Pn	09 16 25.3	-0.5
KAHZ	**Kahuranaki**	**2.79**	**76**	PN	Pn	09 16 25.5	-0.5
WVZ	**Waitaha Valley**	**3.23**	**217**	PN	Pn	09 16 29.5	-1.8
MQZ	**McQueen's Vall**	**3.24**	**189**	PN	Pn	09 16 29.1	-2.3
FOZ	**Fox Glacier**	**4.10**	**221**	PN	Pn	09 16 39.0	-3.4

IDC 29 09:40:20.4±1.5, 4°11S×130°15E, h0km, mb3.5/2, mb1 3.5/5, mb1mx3.4/21, mbtmp3.4/5, ML3.0/3, Error ellipse: s-maj=67.3km s-min=23.9km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.60**	**197**	Pn	Pn	09 43 48.7	+0.4
	0.1nm,0.3s,baz=45,slow=8.6,SNR=2.7						
WRA	**Warramunga Arr**	**16.26**	**166**	Pn	Pn	09 44 08.4	-2.0
	0.0nm,0.3s,baz=351,slow=13,SNR=3.1						
ASAR	**Alice Springs**	**19.78**	**170**	P	P	09 44 52.6	+0.2
	0.1nm,0.3s,baz=348,slow=11,SNR=10						
CTA	**Charters Tower**	**22.33**	**137**	P	P	09 45 20.4	+0.4
	1.6nm,0.5s,baz=305,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**65.91**	**326**	P	P	09 51 08.2	-0.1
	0.2nm,0.5s,baz=126,slow=6.4,SNR=2.6						

IDC 29 10:12:07.1±4.0, 22°44S×12°43W, h0km, mb4.3/5, mb1 4.3/5, mb1mx4.0/19, mbtmp4.3/5, MS3.8/13, Ms1 3.8/13, ms1mx3.7/20, Error ellipse: s-maj=111.2km s-min=37.5km az=67.0, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**29.87**	**15**	P	P	10 18 15.6	-0.9
	4.1nm,0.7s,baz=185,slow=12,SNR=3.3						
DBIC				LR	LR	10 27 13.5	
	comp=Z,175nm,20.0s,baz=170,slow=30						
BDFB	**Brasilia**	**34.25**	**275**	LR	LR	10 30 01.7	
	comp=Z,194nm,19.2s,baz=71,slow=31						
BOSA	**Boshof**	**34.46**	**108**	P	P	10 18 56.5	-0.5
	7.3nm,1.1s,baz=286,slow=8.0,SNR=3.4						
BOSA				LR	LR	10 30 01.6	
	comp=Z,190nm,19.2s,baz=259,slow=31						
BBTS	**Babate**	**37.09**	**353**	LR	LR	10 31 52.7	
	comp=Z,146nm,18.6s,baz=247,slow=32						
TORD	**Torodi Ar. Bea**	**37.98**	**23**	P	P	10 19 26.8	-0.2
	6.0nm,0.6s,baz=200,slow=8.5,SNR=59						
TORD				LR	LR	10 32 48.8	
	comp=Z,175nm,18.3s,baz=175,slow=33						
PLCA	**Paso Flores**	**51.83**	**235**	LR	LR	10 39 36.3	
	comp=Z,130nm,18.1s,baz=174,slow=32						
LPAZ	**La Paz**	**52.66**	**266**	LR	LR	10 42 14.5	
	comp=Z,67nm,21.9s,baz=170,slow=34						
KEST	**Kesra**	**61.42**	**20**	LR	LR	10 47 10.9	
	comp=Z,42nm,20.1s,baz=226,slow=34						
MAW	**Mawson**	**63.86**	**156**	LR	LR	10 43 23.7	
	comp=Z,74nm,20.2s,baz=90,slow=29						
ROSC	**El Rosal**	**66.28**	**286**	LR	LR	10 50 33.2	
	comp=Z,77nm,19.4s,baz=1.5,slow=35						
GERES	**GERESS Array B**	**74.71**	**18**	LR	LR	10 56 37.6	
	comp=Z,50nm,19.2s,baz=267,slow=36						
BRTR	**Keskin Array B**	**75.32**	**35**	P	P	10 23 53.5	+1.1
	2.7nm,1.0s,baz=211,slow=6.3,SNR=9.5						
AKASG	**Malin Array Be**	**81.57**	**25**	P	P	10 24 26.6	+0.1
	0.4nm,0.3s,baz=216,slow=6.2,SNR=4.2						
NOA	**NORSAR Array B**	**85.36**	**11**	LR	LR	10 59 18.4	
	comp=Z,19nm,18.9s,baz=200,slow=33						
ARCES	**ARCESS Array B**	**95.66**	**13**	LR	LR	11 05 48.2	
	comp=Z,52nm,19.7s,baz=237,slow=34						
MJAR	**Matsushiro Arr**	**150.97**	**54**	PKPbc	PKPbc	10 32 01.5	-0.7
	2.8nm,0.9s,baz=298,slow=2.4,SNR=3.1						

IDC 29 10:24:45.1±1.8, 18°58S×177°01E, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.6/18, mbtmp3.5/5, MS3.3/4, Ms1 3.3/4, ms1mx2.9/16, Error ellipse: s-maj=156.9km s-min=27.0km az=155.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.51**	**249**	*e*LR	LR	10 29 38.2	
	144nm,26.5s						
HNR	**Honiara**	**18.88**	**296**	LR	LR	10 34 11.7	
	comp=Z,15nm,18.1s,baz=229,slow=30						
RPZ	**Rata Peaks**	**25.56**	**190**	LR	LR	10 38 00.5	
	comp=Z,130nm,20.7s,baz=173,slow=31						
TBI	**Tubuai**	**31.62**	**104**	*e*LR	LR	10 39 06.3	
	158nm,30.5s						
PPT2	**Papeete2**	**31.75**	**94**	*e*S	S	10 36 10.8	-12
	48nm,27.5s						
PPT2				*e*LR	LR	10 39 12.1	
	204nm,27.5s						
PPT	**Papeete**	**31.75**	**94**	LR	LR	10 42 31.9	
	comp=Z,99nm,18.5s,baz=193,slow=34						
STKA	**Stephens Creek**	**34.50**	**241**	P	P	10 31 35.6	+0.4
	1.3nm,0.8s,baz=103,slow=14,SNR=1.9						
WRA	**Warramunga Arr**	**40.23**	**261**	P	P	10 32 24.2	+0.3
	0.7nm,1.1s,baz=96,slow=8.7,SNR=2.7						
ASAR	**Alice Springs**	**40.42**	**255**	P	P	10 32 24.7	-0.8
	0.5nm,0.7s,baz=82,slow=8.5,SNR=9.6						
ASAR				LR	LR	10 48 05.0	
	comp=Z,70nm,21.5s,baz=280,slow=35						
NVAR	**Mina Array Bea**	**82.96**	**46**	P	P	10 37 12.9	+0.5
	0.1nm,0.4s,baz=249,slow=2.5,SNR=2.3						
TXAR	**Lajitas Array**	**90.05**	**59**	P	P	10 37 46.8	-0.6
	0.1nm,0.7s,baz=248,slow=4.8,SNR=2.4						

*HEL **29** 10:25:43.1±0.7, 67°.63N×34°.33E, h0km, ML2.0, Explosion*
*CSEM **29** 10:25:44.7±0.5, 67°.83N×33°.89E, h2km, ML2.3, Error ellipse: s-maj=9.4km s-min=6.6km az=77.0, Mining explosion.*

*NAO **29** 10:25:45.5±1.2, 67°.63N×33°.97E, ML2.3*

ISC 29 10:25:44.4±1.7, 67°.63N±0°.04×34°.00E±0°.09, h0km, n25, σ1840/44, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.39**	**267**	Pg	**Pg**	**10 25 52.6**	**+0.9**
	baz=86,slow=16						
APA0				Lg	Lg	10 25 58.0	
	baz=84,slow=37						
APA0				Rg	Rg	10 26 00.3	
	baz=84,slow=37						
APA0	**Apatity Array**	**0.39**	**267**	Pg	**Pg**	**10 25 52.6**	**+0.9**
	baz=86,slow=16						
APA0				Lg	Lg	10 25 58.0	
	baz=84,slow=37						
APA0				Rg	Rg	10 26 00.3	
	baz=84,slow=37						
APA0	**Apatity Array**	**0.39**	**267**	Pg	**Pg**	**10 25 52.6**	**+0.9**
	baz=86,slow=15,SNR=90						
APA0				Lg	Lg	10 25 58.0	
	baz=84,slow=37,SNR=93						
VRF	**Varrio**	**1.68**	**276**	PN	**Pn**	**10 26 15.5**	**+0.5**
	baz=97						
VRF				SG	**Sn**	**10 26 37.2**	**+0.1**
VRF				MSG		10 26 37.2	
	comp=Z,5.7nm,0.2s						
VRF	**Varrio**	**1.68**	**276**	Pn	**Pn**	**10 26 15.5**	**+0.5**
VRF				Sg	**Sn**	**10 26 37.2**	**+0.1**
MSF	**Maaselka**	**2.62**	**231**	SG	**Sb**	**10 27 05.7**	**+1.0**
MSF				MSG	**Sb**	**10 27 05.7**	**+1.0**
	comp=Z,2.7nm,0.4s						
MSF				SG	**Sb**	**10 27 05.7**	**+1.0**
MSF				MSG		10 27 05.7	
	comp=Z,2.7nm,0.4s						
SGF	**Sodankyl**	**2.88**	**270**	SG	**Sb**	**10 27 11.6**	**-0.5**
SGF				MSG		10 27 11.6	
	comp=Z,3.6nm,0.4s						
SGF	**Sodankyl**	**2.88**	**270**	Sg	**Sb**	**10 27 11.6**	**-0.5**
RNF	**Rovaniemi**	**3.28**	**255**	PN	**Pn**	**10 26 38.0**	**+1.0**
RNF	**Rovaniemi**	**3.28**	**255**	Pn	**Pn**	**10 26 38.0**	**+1.0**
KEV	**Kevo**	**3.33**	**313**	PN	**Pn**	**10 26 38.9**	**+1.4**
KEV				SG	**Sb**	**10 27 25.9**	**+0.8**
KEV				MSG		10 27 25.9	
	comp=Z,4.6nm,0.2s						
KEV	**Kevo**	**3.33**	**313**	Pn	**Pn**	**10 26 38.9**	**+1.4**
KEV				Sg	**Sb**	**10 27 25.9**	**+0.8**
ARA0	**ARCESS Array S**	**3.65**	**305**	Pn	**Pn**	**10 26 42.8**	**+0.7**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**10 26 50.9**	**+1.2**
	baz=118,slow=16						
ARA0				Sn	**Sn**	**10 27 24.6**	**-1.2**
	baz=109,slow=28						
ARA0				Lg	Lg	10 27 35.2	
	baz=110,slow=28						
ARA0	**ARCESS Array S**	**3.65**	**305**	Pn	**Pn**	**10 26 42.8**	**+0.7**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**10 26 50.9**	**+1.2**
	baz=118,slow=16						
ARA0				Sn	**Sn**	**10 27 24.6**	**-1.2**
	baz=109,slow=28						
ARA0				Lg	Lg	10 27 35.2	
	baz=110,slow=28						
ARA0	**ARCESS Array S**	**3.65**	**305**	PN	**Pn**	**10 26 42.3**	**+0.2**
	baz=119						
ARA0				SG	**Sb**	**10 27 36.0**	**+1.5**
ARA0				MSG	**Sb**	**10 27 36.0**	**+1.5**
	comp=Z,6.5nm,0.3s						
ARA0				SG	**Sb**	**10 27 36.0**	**+1.5**
ARA0				MSG	**Sb**	**10 27 36.0**	**+1.5**
	comp=Z,6.5nm,0.3s						
ARA0				SG	**Sb**	**10 27 36.0**	**+1.5**
ARA0				MSG		10 27 36.0	
	comp=Z,6.5nm,0.3s						
ARA0	**ARCESS Array S**	**3.65**	**305**	Pn	**Pn**	**10 26 42.3**	**+0.2**
ARA0	**ARCESS Array S**	**3.65**	**305**	Pg	**Pb**	**10 26 50.9**	**+1.2**
	baz=118,slow=14,SNR=90						
ARA0				Sn	**Sn**	**10 27 24.6**	**-1.2**
	baz=109,slow=24,SNR=7.7						
ARA0				Lg	Lg	10 27 35.2	
	baz=110,slow=24,SNR=5.6						
ARA0				Sg	**Sb**	**10 27 36.0**	**+1.5**
HEF	**Hetta**	**3.96**	**286**	SG	**Sg**	**10 27 49.1**	**-2.4**
HEF				MSG		10 27 49.1	
	comp=Z,3.1nm,0.4s						
HEF	**Hetta**	**3.96**	**286**	Sg	**Sg**	**10 27 49.1**	**-2.4**
FIA0	**FINESS Array S**	**7.08**	**212**	Pn	**Pn**	**10 27 30.0**	**+0.9**
FIA0				Sn	**Sn**	**10 28 48.2**	**-2.0**
FIA0				Lg	Lg	10 29 21.7	
	baz=32,slow=22						
FIA0	**FINESS Array S**	**7.08**	**212**	Pn	**Pn**	**10 27 30.0**	**+0.9**
FIA0				Sn	**Sn**	**10 28 48.2**	**-2.0**
FIA0				Lg	Lg	10 29 21.7	
	baz=32,slow=22						
FIA0	**FINESS Array S**	**7.08**	**212**	Pn	**Pn**	**10 27 30.0**	**+0.9**
	SNR=50						
FIA0				Lg	Lg	10 29 21.7	
	baz=32,slow=21,SNR=90						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	Pn	**Pn**	**10 28 29.6**	**-2.7**
	baz=145,slow=14						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	P	**Pn**	**10 28 29.6**	**-2.7**
	baz=145,slow=14						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	P	**Pn**	**10 28 29.6**	**-2.7**
	baz=145,slow=13,SNR=47						

WEL 29 10:39:51.1±0.4, 38°37S×175°94E, h168km±3km, ML4.0/19, 33C-4D, Error ellipse: s-maj=1.6km s-min=1.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HRRZ	**Handcock Road**	**0.27**	**96**	⇑PN	Pn	10 40 13.7	0.0
WHTZ	**Whakaora**	**0.30**	**178**	PN	Pn	10 40 14.0	+0.1
ALRZ	**Allen Road**	**0.37**	**122**	PN	Pn	10 40 13.7	-0.3
RRRZ	**Republican Roa**	**0.45**	**87**	⇑PN	Pn	10 40 14.2	-0.2
TARZ	**Mount Tarawera**	**0.46**	**74**	⇑PN	Pn	10 40 14.5	0.0
RATZ	**Rangitukua**	**0.52**	**195**	⇑PN	Pn	10 40 14.5	-0.1
HATZ	**Hinemaiaia**	**0.54**	**167**	PN	Pn	10 40 14.4	-0.3
RITZ	**Rihia Road**	**0.62**	**186**	⇓PN	Pn	10 40 15.4	+0.3
MARZ	**Manawahe**	**0.69**	**57**	⇑PN	Pn	10 40 15.6	0.0
OPRZ	**Ohinepanea**	**0.71**	**43**	PN	Pn	10 40 15.2	-0.4
OPRZ				SN	Sn	10 40 33.9	-0.5
TOZ	**Tahuroa Road**	**0.72**	**331**	⇑PN	Pn	10 40 15.9	+0.3
TOZ				SN	Sn	10 40 34.4	-0.1
KRVZ	**Karewarewa**	**0.77**	**198**	⇑PN	Pn	10 40 15.9	-0.2
WTVZ	**West Tongariro**	**0.80**	**200**	⇑PN	Pn	10 40 16.2	-0.1
TWVZ	**Taurewa**	**0.81**	**209**	⇑PN	Pn	10 40 16.3	-0.1
OTVZ	**Oturere**	**0.83**	**195**	PN	Pn	10 40 16.6	0.0
NGZ	**Ngauruhoe**	**0.85**	**198**	PN	Pn	10 40 16.5	-0.2
HIZ	**Hauiti**	**0.87**	**260**	PN	Pn	10 40 16.7	+0.1
HIZ				SN	Sn	10 40 36.1	-0.1
WPVZ	**Whakapapa**	**0.89**	**200**	⇑PN	Pn	10 40 16.9	0.0
BKZ	**Black Stump Fm**	**0.91**	**152**	PN	Pn	10 40 16.4	-0.6
URZ	**Urewera**	**0.93**	**84**	PN	Pn	10 40 16.2	-0.9
TUVZ	**Tukino**	**0.93**	**194**	⇑PN	Pn	10 40 17.2	-0.1
FWVZ	**Far West T-bar**	**0.94**	**199**	PN	Pn	10 40 17.0	-0.4
TRVZ	**Turoa**	**0.98**	**198**	⇓PN	Pn	10 40 17.6	-0.2
NMHZ	**Naumai**	**1.00**	**138**	PN	Pn	10 40 18.3	+0.6
WNVZ	**Wahianoa**	**1.00**	**195**	⇑PN	Pn	10 40 17.7	-0.1
PKVZ	**Pokaka**	**1.03**	**207**	⇑PN	Pn	10 40 17.9	-0.1
MOVZ	**Moawhango**	**1.05**	**188**	⇑PN	Pn	10 40 17.7	-0.4
RAHZ	**Arahi**	**1.05**	**122**	⇑PN	Pn	10 40 18.4	+0.4
MTVZ	**Mangateitei**	**1.08**	**200**	PN	Pn	10 40 18.3	-0.1
BHHZ	**Black Hill Sta**	**1.13**	**175**	⇑PN	Pn	10 40 18.3	-0.4
VRZ	**Vera Road**	**1.20**	**230**	PN	Pn	10 40 19.3	0.0
MCHZ	**McNeill Hill**	**1.23**	**152**	⇑PN	Pn	10 40 20.2	+0.7
MWZ	**Matawai**	**1.25**	**89**	⇑PN	Pn	10 40 19.5	-0.3
KNZ	**Kokohu**	**1.50**	**116**	⇑PN	Pn	10 40 22.1	+0.1
PNHZ	**Pukenui**	**1.56**	**173**	⇑PN	Pn	10 40 22.3	-0.4
CKHZ	**Cape Kidnapper**	**1.57**	**146**	⇑PN	Pn	10 40 23.1	+0.4
WAZ	**Wanganui**	**1.58**	**208**	PN	Pn	10 40 22.6	-0.2
KAHZ	**Kahuranaki**	**1.60**	**153**	⇑PN	Pn	10 40 23.4	+0.2
PRGZ	**Paritu Road**	**1.62**	**111**	PN	Pn	10 40 23.6	+0.2
TSZ	**Takapari Road**	**1.69**	**179**	⇑PN	Pn	10 40 23.6	-0.5
NEZ	**North Egmont**	**1.70**	**237**	PN	Pn	10 40 24.7	+0.4
MHGZ	**Mahia Peninsul**	**1.73**	**118**	⇑PN	Pn	10 40 24.7	+0.3
DFE	**Dawson Falls**	**1.73**	**236**	PN	Pn	10 40 24.9	+0.5
PKE	**Pukeiti**	**1.74**	**241**	PN	Pn	10 40 25.3	+0.7
WPHZ	**Waipukurau**	**1.74**	**167**	⇑PN	Pn	10 40 24.2	-0.3
CNGZ	**Carnagh Statio**	**1.78**	**95**	PN	Pn	10 40 25.4	+0.4
PXZ	**Pawanui**	**1.81**	**157**	⇑PN	Pn	10 40 25.1	-0.2
NRZ	**Ngariki Road**	**1.84**	**238**	PN	Pn	10 40 25.3	-0.3
PUZ	**Puketiti**	**1.85**	**82**	PN	Pn	10 40 25.3	-0.4
DVHZ	**Dannevirke**	**1.94**	**175**	⇑PN	Pn	10 40 25.9	-0.8
PRHZ	**Porangahau**	**1.98**	**164**	PN	Pn	10 40 26.6	-0.5
POWZ	**Post Office Ro**	**2.03**	**184**	⇑PN	Pn	10 40 26.8	-0.9
MXZ	**Matakaoa Point**	**2.03**	**68**	⇑PN	Pn	10 40 27.8	+0.1
MRZ	**Mangatainoka R**	**2.31**	**187**	⇑PN	Pn	10 40 29.6	-1.3
BFZ	**Birch Farm**	**2.33**	**174**	PN	Pn	10 40 30.0	-1.1
TIWZ	**Tintock**	**2.41**	**181**	⇑PN	Pn	10 40 30.8	-1.3
OGWZ	**Otaki Gorge**	**2.52**	**193**	PN	Pn	10 40 32.0	-1.3
HOWZ	**Holdsworth Sta**	**2.55**	**187**	PN	Pn	10 40 32.1	-1.7
KIW	**Kapiti Island**	**2.62**	**197**	PN	Pn	10 40 32.8	-1.7
TMWZ	**Te Maipa**	**2.74**	**181**	PN	Pn	10 40 34.2	-1.8
MTW	**Mount Morrison**	**2.81**	**187**	⇑PN	Pn	10 40 34.8	-2.0
CAW	**Cannon Point**	**2.82**	**194**	PN	Pn	10 40 35.1	-1.8
DUWZ	**D'Urville Isla**	**2.89**	**212**	⇓PN	Pn	10 40 36.0	-1.8
TRWZ	**Traveller**	**3.04**	**184**	⇓PN	Pn	10 40 37.7	-1.9
PAWZ	**Paruwai Farm**	**3.04**	**187**	PN	Pn	10 40 37.5	-2.2
SNZO	**South Karori**	**3.09**	**198**	PN	Pn	10 40 37.9	-2.3
MSWZ	**Moikau Station**	**3.09**	**190**	PN	Pn	10 40 38.0	-2.3
TCW	**Tory Channel**	**3.12**	**204**	PN	Pn	10 40 38.6	-2.1
BHW	**Baring Head**	**3.15**	**195**	PN	Pn	10 40 38.6	-2.4
PLWZ	**Palliser**	**3.25**	**189**	PN	Pn	10 40 39.8	-2.5
TUWZ	**Tuamarina**	**3.43**	**206**	PN	Pn	10 40 42.3	-2.2
NNZ	**Nelson**	**3.47**	**214**	PN	Pn	10 40 42.4	-2.6
QRZ	**Quartz Range**	**3.60**	**226**	PN	Pn	10 40 43.8	-3.0
THZ	**Tophouse**	**4.12**	**214**	⇑PN	Pn	10 40 50.6	-2.8
KHZ	**Kahutara**	**4.44**	**204**	PN	Pn	10 40 54.9	-2.6
LTZ	**Lake Taylor**	**5.22**	**211**	PN	Pn	10 41 03.9	-3.8
MQZ	**McQueen's Vall**	**5.89**	**204**	PN	Pn	10 41 11.8	-4.6

NDI 29 11:01:40.7±2.5, 34°.64N×73°.05E, h10km, ML3.9, 1C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.13**	**134**	*e*PKP	Pn	11 02 30.5	+0.4
THN				*ex*	x	11 03 10.3	
DLH	**Dalhousie**	**3.21**	**130**	*e*PKP	Pn	11 02 31.0	-0.5
DLH				*e*S	Sn	11 03 10.0	-0.1
SDNR	**Sundarnagar**	**4.54**	**133**	*ex*	x	11 02 43.6	
SDNR				*ex*	Sb	11 03 54.0	-1.5
SMLA	**Simla**	**4.93**	**134**	*ex*	Pn	11 02 54.1	-0.7
SMLA				*e*S	Sn	11 03 46.7	-5.1
KHET	**Khetri**	**6.96**	**159**	*e*S	Sn	11 04 36.7	-5.3
KHET				AML	AML	11 05 24.0	
	comp=N,94nm,0.1s						
KHET				AML	AML	11 05 24.2	
	comp=E,106nm,0.1s						
AGRA	**Agra**	**8.50**	**149**	*e*S	Sn	11 05 12.6	-7.2
AGRA				AML	AML	11 05 47.1	
	comp=N,110nm,0.2s						
AGRA				AML	AML	11 05 50.8	
	comp=E,77nm,0.3s						
KK31	**Karatay Array**	**8.68**	**348**	⇑P	Pn	11 03 50.4	+4.1
	comp=E,0.3nm,0.2s,baz=154,slow=12,SNR=10						
KK31				⇓S	Sn	11 05 23.1	-1.1
	comp=E,1.8nm,0.5s,baz=154,slow=22,SNR=8.3						

DDA 29 11:02:00.8, 40°.19N×28°.32E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.60**	**169**	*i* P	Pg	11 02 12.7	+0.1
DURS				*i* S	Sb	11 02 21.6	-1.0
BALY	**Balya**	**0.70**	**230**	*i* P	Pg	11 02 14.1	-0.3
BALY				*i* S	Sb	11 02 24.7	-0.7
DEMI	**Demirci**	**1.19**	**165**	*i* P	Pg	11 02 23.7	-0.1
DEMI				*i* S	Sn	11 02 40.2	-0.3

*IDC **29** 11:18:15.3±1.4, 17°.87S×178°.53W, h546km±17km, mb3.2/11, mb1 3.5/13, mb1mx3.3/23, mbtmp3.2/13, Error ellipse: s-maj=19.5km s-min=11.9km az=149.0*
*AUST **29** 11:18:16.0, 17°.51S×177°.98W, h600km*
*ISCJB **29** 11:18:16.1±0.4, 17°.9S±0°.1×178°.47W±0°.08, h579km, mb3.7/11, Error ellipse: s-maj=

MKAR	**Makanchi Array**	**109.17**	**314**	PKiKP	**PKiKP**		**11 35 41.4**	**-0.2**
	0.4nm,0.5s,baz=210,slow=0.8,SNR=5.9							
ARCES	**ARCESS Array B**	**126.35**	**350**	PKP	**PKPdf**		**11 36 15.1**	**+1.3**
	3.3nm,0.9s,baz=40,slow=2.9,SNR=2.9							
BRTR	**Keskin Array B**	**144.82**	**315**	PKP	**PKPab**		**11 36 50.0**	**-0.4**
	1.9nm,0.7s,baz=114,slow=1.9,SNR=7.4							
TORD	**Torodi Ar. Bea**	**175.23**	**181**	PKPab	**PKPab**		**11 39 03.1**	**+1.3**
	0.2nm,0.6s,baz=190,slow=3.7,SNR=2.7							

IDC 29 11:19:46.4±1.3, 15.73S×69.20W, h180km±21km, mb3.2/2, mb1 3.4/4, mb1mx3.1/22, mbtmp3.3/4, Error ellipse: s-maj=109.7km s-min=18.6km az=13.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LPAZ	**La Paz**	**1.17**	**119**	P		Pn	11 20 15.1	-1.0
	15nm,0.3s,baz=309,slow=6.3,SNR=395							
LPAZ				S		Sn	11 20 39.3	+0.2
	6.0nm,0.3s,baz=334,slow=18,SNR=18							
SIV	**San Ignacio**	**7.82**	**93**	P		Pn	11 21 36.0	-1.5
	0.5nm,0.3s,baz=273,slow=12,SNR=7.2							
SIV				S		Sn	11 23 06.4	+1.0
	0.2nm,0.3s,baz=349,slow=16,SNR=4.0							
NNA	**Nana**	**8.30**	**296**	P		Pn	11 21 42.5	-1.3
	5.5nm,0.3s,baz=129,slow=12,SNR=8.3							
TORD	**Torodi Ar. Bea**	**75.74**	**72**	P		P	11 31 12.4	-0.5
	0.7nm,1.0s,baz=244,slow=5.2,SNR=3.4							
YKA	**Yellowknife Ar**	**85.68**	**341**	P		P	11 32 05.9	+1.4
	0.2nm,0.5s,baz=130,slow=5.0,SNR=8.1							

IDC 29 11:21:36.2±4.5, 30.65S×138.50E, h0km, mb1 3.2/3, mb1mx3.2/16, mbtmp3.0/3, ML2.9/3, Error ellipse: s-maj=108.1km s-min=15.9km az=39.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**2.92**	**115**	Pn		Pn	11 22 24.4	+0.5
	0.9nm,0.3s,baz=286,slow=7.4,SNR=2.7							
STKA				Pg		Pb	11 22 30.1	+0.9
	2.3nm,0.3s,baz=294,slow=10.0,SNR=7.7							
STKA				Sn		Sn	11 23 01.3	+1.5
	2.1nm,0.3s,baz=352,slow=11,SNR=4.1							
STKA				Lg		Lg	11 23 07.6	
	4.2nm,0.3s,baz=200,slow=23,SNR=7.5							
ASAR	**Alice Springs**	**8.07**	**328**	Pn		Pn	11 23 35.4	+0.5
	0.2nm,0.3s,baz=151,slow=12,SNR=12							
ASAR				Sn		Sn	11 25 05.3	-1.6
	0.2nm,0.3s,baz=155,slow=22,SNR=7.4							
WRA	**Warramunga Arr**	**11.31**	**340**	Pn		Pn	11 24 19.0	-0.2
	0.1nm,0.3s,baz=158,slow=11,SNR=8.3							

*SKO **29** 11:23:40.5, 41.24N×23.26E, h19km, M1.3, ML1.8*
*ISCJB **29** 11:23:41.4±0.4, 41.20N±0.02×23.22E±0.03, h14km±3km, Error ellipse: s-maj=3.9km s-min=3.4km az=16.3*
*ATH **29** 11:23:41.0, 41.20N×23.21E, h25km±1km, MD3.0/7*
*CSEM **29** 11:23:41.7±0.1, 41.18N×23.22E, h15km, ML2.1/6, Error ellipse: s-maj=2.5km s-min=2.2km az=39.0*
*THE **29** 11:23:42.0, 41.19N×23.22E, h2km±24km, ML2.1/6, Error ellipse: s-maj=24.2km s-min=0.4km az=0.0*
*BEO **29** 11:23:44.2±1.1, 41.19N×23.14E, h6km±9km, ML1.8/4*

ISC 29 11:23:41.9±0.9, 41.16N±0.02×23.21E±0.02, h13km±7km, n37, σ0.960/68, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KNT	**Kendrikon**	**0.23**	**270**	P		**Pg**	**11 23 47.1**	**+0.2**
KNT				S		**Sg**	**11 23 50.5**	**+0.2**
KNT	**Kendrikon**	**0.23**	**270**	P		**Pg**	**11 23 47.1**	**+0.2**
KNT				S		**Sg**	**11 23 50.5**	**+0.2**
SRS	**Serrai**	**0.29**	**98**	P		**Pg**	**11 23 47.6**	**-0.3**
SRS				S		**Sg**	**11 23 52.0**	**0.0**
SRS	**Serrai**	**0.29**	**98**	P		**Pg**	**11 23 47.6**	**-0.3**
SRS				S		**Sg**	**11 23 52.0**	**0.0**
SOH	**Sokhos**	**0.35**	**162**	P		**Pb**	**11 23 49.5**	**-0.5**
SOH				S		**Sg**	**11 23 54.6**	**+0.7**
SOH	**Sokhos**	**0.35**	**162**	*e*PB		**Pb**	**11 23 49.6**	**-0.5**
SOH				*e*SB		**Sb**	**11 23 55.5**	**-0.1**
SOH	**Sokhos**	**0.35**	**162**	*e*Pb		**Pb**	**11 23 49.6**	**-0.5**
SOH				S		**Sg**	**11 23 54.6**	**+0.7**
SOH				*e*Sb		**Sb**	**11 23 55.5**	**-0.1**
VAY	**Valandovo**	**0.51**	**289**	P		**Pg**	**11 23 51.3**	**-0.5**
VAY				S		**Sg**	**11 23 58.9**	**+0.3**
VAY	**Valandovo**	**0.51**	**289**	*i* Pg		**Pg**	**11 23 51.4**	**-0.5**
VAY				*i* Sg		**Sg**	**11 23 58.9**	**+0.3**
VAY				*e*Lg		Lg	11 24 00.3	
	comp=E,28nm,0.4s							
VAY				*e*Lg		Lg	11 24 01.1	
	comp=N,41nm,0.3s							
VAY	**Valandovo**	**0.51**	**289**	P		**Pg**	**11 23 51.3**	**-0.5**
VAY	**Valandovo**	**0.51**	**289**	*i* Pg		**Pg**	**11 23 51.8**	**-0.1**
VAY				S		**Sg**	**11 23 58.9**	**+0.3**
VAY				*i* Sg		**Sb**	**11 23 59.3**	**-0.6**
VAY				*e*Lg		Lg	11 24 01.6	
	comp=N,41nm,0.3s							
NVR	**Nevrokopi**	**0.53**	**69**	P		**Pg**	**11 23 51.8**	**-0.4**
NVR				S		**Sg**	**11 23 59.1**	**-0.2**
NVR	**Nevrokopi**	**0.53**	**69**	*e*PN		**Pg**	**11 23 51.9**	**-0.3**
NVR				*e*SN		**Sg**	**11 23 58.8**	**-0.5**
NVR	**Nevrokopi**	**0.53**	**69**	*e*Pn		**Pg**	**11 23 51.9**	**-0.3**
NVR				*e*Sn		**Sg**	**11 23 58.8**	**-0.5**
NVR				S		**Sg**	**11 23 59.1**	**-0.2**
THE	**Thessaloniki**	**0.56**	**199**	P		**Pb**	**11 23 53.5**	**0.0**
THE				S		**Sb**	**11 24 01.5**	**+0.1**
THE	**Thessaloniki**	**0.56**	**199**	P		**Pb**	**11 23 53.5**	**0.0**
THE				S		**Sb**	**11 24 01.5**	**+0.1**
HORT	**Hortiatis**	**0.57**	**188**	P		**Pb**	**11 23 53.7**	**0.0**
HORT				S		**Sb**	**11 24 02.1**	**+0.4**
HORT	**Hortiatis**	**0.57**	**188**	P		**Pb**	**11 23 53.7**	**0.0**
HORT				S		**Sb**	**11 24 02.1**	**+0.4**
GRG	**Griva**	**0.64**	**252**	P		**Pb**	**11 23 54.7**	**-0.3**
GRG				S		**Sb**	**11 24 04.2**	**+0.3**
GRG	**Griva**	**0.64**	**252**	*e*PN		**Pb**	**11 23 54.9**	**-0.1**
GRG				*e*SN		**Sb**	**11 24 04.2**	**+0.3**
GRG	**Griva**	**0.64**	**252**	P		**Pb**	**11 23 54.7**	**-0.3**
GRG				S		**Sb**	**11 24 04.2**	**+0.3**
PLG	**Polygyros**	**0.81**	**167**	*e*PN		**Pb**	**11 23 57.6**	**-0.1**
PLG				*e*SN		**Sb**	**11 24 08.9**	**+0.4**
PLG	**Polygyros**	**0.81**	**167**	*e*Pn		**Pb**	**11 23 57.6**	**-0.1**
PLG				*e*Sn		**Sb**	**11 24 08.9**	**+0.4**
KAVA	**Kavala**	**1.00**	**99**	P		**Pb**	**11 24 00.4**	**-0.6**
KAVA	**Kavala**	**1.00**	**99**	P		**Pb**	**11 24 00.4**	**-0.6**
PAIG	**Paliouri**	**1.28**	**164**	*e*PN		**Pg**	**11 24 06.1**	**-0.4**
PAIG				*e*SN		**Sg**	**11 24 23.5**	**+0.3**
PAIG	**Paliouri**	**1.28**	**164**	*e*Pn		**Pg**	**11 24 06.1**	**-0.4**
PAIG				*e*Sn		**Sg**	**11 24 23.5**	**+0.3**
VTS	**Vitosha**	**1.43**	**360**	*e*Pg		**Pg**	**11 24 09.0**	**-0.4**
VTS				*e*Sg		**Sg**	**11 24 28.5**	**+0.5**
VTS	**Vitosha**	**1.43**	**360**	*e*Pg		**Pg**	**11 24 09.0**	**-0.4**
VTS				*e*Sg		**Sg**	**11 24 28.5**	**+0.5**
FNA	**Florina**	**1.44**	**255**	*e*PN		**Pn**	**11 24 07.4**	**-0.3**
FNA	**Florina**	**1.44**	**255**	*e*Pn		**Pn**	**11 24 07.4**	**-0.3**
PLD	**Plovdiv**	**1.46**	**49**	*e*Sg		**Sg**	**11 24 31.7**	**+2.7**
PLD	**Plovdiv**	**1.46**	**49**	*e*Sg		**Sg**	**11 24 31.7**	**+2.7**
RDO	**Rodhopi**	**1.76**	**90**	*e*PN		**Pn**	**11 24 12.3**	**+0.3**
RDO	**Rodhopi**	**1.76**	**90**	*e*Pn		**Pn**	**11 24 12.3**	**+0.3**
BARS	**Barje**	**1.95**	**328**	*e*Pg		**Pg**	**11 24 19.0**	**-0.3**
BARS				*e*Sg		**Sg**	**11 24 45.0**	**+0.3**
BARS	**Barje**	**1.95**	**328**	*e*Pg		**Pg**	**11 24 19.0**	**-0.3**
BARS				*e*Sg		**Sg**	**11 24 45.0**	**+0.3**

*ROM **29** 11:26:37.5±0.8, 44.92N×14.83E, h10km, Md2.6/3, Ml2.4/4, Error ellipse: s-maj=27.1km s-min=7.7km az=51.0*

ISC 29 11:26:37.4±1.4, 45.09N±0.05×14.89E±0.05, h3km±14km, n14, σ0.970/22, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BOJS	**Bojanci**	**0.48**	**32**	*i* Pg		**Pg**	**11 26 46.8**	**+0.1**
BOJS				*i* Sg		**Sg**	**11 26 53.8**	**+0.8**
BOJS								
	comp=Z,68nm,0.1s							
NVLJ	**Novalja**	**0.53**	**181**	*e*Pg		**Pb**	**11 26 48.8**	**-0.5**
NVLJ				Sg		**Sb**	**11 26 57.7**	**+0.5**
NVLJ	**Novalja**	**0.53**	**181**	Sg		**Sb**	**11 26 57.7**	**+0.4**
KNDS	**Knezji Dol**	**0.56**	**321**	*i* Pg		**Pg**	**11 26 47.6**	**-0.6**
KNDS								
	comp=Z,22nm,0.1s							
VISS	**Visnje**	**0.71**	**357**	*i* Pg		**Pg**	**11 26 50.5**	**-0.6**
VISS				*e*Sg		**Sg**	**11 26 59.5**	**-0.7**
VISS								
	comp=Z,40nm,0.2s							
VISS	**Visnje**	**0.71**	**357**	*e*Sg		**Sg**	**11 26 59.5**	**-0.8**
	comp=Z,40nm,0.2s							
CEY	**Cerknica**	**0.72**	**334**	*e*Pg		**Pg**	**11 26 50.7**	**-0.6**
CRES	**Cresnjev**	**0.84**	**29**	*i* Pg		**Pg**	**11 26 53.4**	**-0.1**
CRES				*e*Sg		**Sg**	**11 27 04.4**	**+0.2**
CRES								
	comp=Z,42nm,0.3s							
PDKS	**Podkum**	**0.97**	**5**	*i* Pg		**Pg**	**11 26 56.5**	**+0.5**
PDKS								
	comp=Z,13nm,0.1s							
SABO	**M.te Sabotino**	**1.27**	**315**	Pg		**Pn**	**11 27 02.2**	**+0.2**
SABO				Sg		**Sn**	**11 27 19.7**	**+0.2**
CADS	**Cadrg**	**1.39**	**325**	*i* Pg		**Pn**	**11 27 03.0**	**-0.8**
VINO	**Villanova**	**1.62**	**317**	Pg		**Pb**	**11 27 07.7**	**-0.2**
VINO				Sg		**Sg**	**11 27 30.3**	**+0.9**
	comp=Z,22nm,0.5s							
PTCC	**Patocco-Chiusa**	**1.69**	**321**	Pg		**Pb**	**11 27 08.8**	**-0.4**
PTCC				Sg		**Sg**	**11 27 33.1**	**+1.2**
	comp=Z,13nm,0.4s							
ACOM	**Acomizza, Ital**	**1.74**	**327**	Pg		**Pb**	**11 27 10.1**	**0.0**
ACOM				Sg		**Sg**	**11 27 34.8**	**+1.4**
	comp=Z,49nm,0.7s							

IDC 29 11:27:17.9±5.2, 14.77S×167.24E, h127km±45km, mb3.1/5, mb1 3.4/6, mb1mx3.2/21, mbtmp3.2/6, Error ellipse: s-maj=36.4km s-min=30.9km az=20.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.30**	**186**	*e*P		Pn	11 29 01.8	-0.3
DZM				*e*S		Sn	11 30 21.7	-1.8
DZM	**Mont Dzumac**	**7.30**	**186**	P		Pn	11 29 02.3	+0.3
	3.6nm,0.3s,baz=17,slow=19,SNR=45							
DZM				S		Sn	11 30 23.4	-0.2
	1.1nm,0.3s,baz=0.0,slow=12,SNR=2.2							
WRA	**Warramunga Arr**	**31.79**	**256**	P		P	11 33 30.2	-0.3
	0.3nm,0.7s,baz=85,slow=9.1,SNR=3.1							
ASAR	**Alice Springs**	**32.63**	**249**	P		P	11 33 38.0	+0.2
	0.3nm,0.5s,baz=79,slow=8.9,SNR=8.6							
FITZ	**Fitzroy Crossi**	**39.98**	**259**	P		P	11 34 40.1	-0.3
	1.5nm,0.9s,baz=120,slow=8.1,SNR=2.8							
VNDA	**Vanda**	**62.82**	**181**	P		P	11 37 29.5	0.0
	0.5nm,0.7s,baz=344,slow=6.4,SNR=5.9							
ILAR	**Eielson Array**	**86.57**	**18**	P		P	11 39 46.3	-0.1
	0.2nm,0.6s,baz=240,slow=4.9,SNR=4.5							

*IDC **29** 11:52:22.1±1.4, 6.99S×107.39E, h0km, mb4.2/7, mb1 4.3/7, mb1mx3.9/23, mbtmp4.2/7, Error ellipse: s-maj=40.2km s-min=26.3km az=44.0*
*ISCJB **29** 11:52:36.2±0.4, 7.57S±0.05×107.48E±0.04, h109km±4km, mb3.9/7, Error ellipse: s-maj=7.7km s-min=5.9km az=179.5*
*AUST **29** 11:52:36.3±0.0, 7.45S×107.38E, h106km, Error ellipse: s-maj=1.2km s-min=0.8km az=333.0*
*DJA **29** 11:52:38.2±0.4, 7°S±8'×10°8E±°, h95km±6km, M4.1/15, MLv4.1/15*

ISC 29 11:52:37.5±0.8, 7.54S±0.05×107.48E±0.04, h105km±7km, n38, σ1.903/40, mb3.9/7, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.33**	**94**	P		**Pn**	**11 52 52.8**	**0.0**
CISI	**Cisompet, Garu**	**0.33**	**94**	P		**Pn**	**11 52 52.6**	**-0.2**
	baz=0.4,SNR=183							
CISI				S		**Sn**	**11 53 05.3**	**+1.0**
	baz=0.4,SNR=5.8							
LEM	**Lembang**	**0.72**	**11**	P		**Pn**	**11 52 54.6**	**-1.1**
LEM				S		**Sn**	**11 53 09.0**	**-0.3**
LEM	**Lembang**	**0.72**	**11**	P		**Pn**	**11 52 54.4**	**-1.3**
	baz=0.7,SNR=253							
SKJI	**Sukabumi**	**1.06**	**300**	P		**Pn**	**11 52 58.3**	**-0.6**
SKJI				S		**Sn**	**11 53 15.6**	**+0.6**
DBJI	**Dramaga**	**1.22**	**323**	P		**Pn**	**11 53 00.2**	**-0.5**
DBJI				S		**Sn**	**11 53 18.5**	**+0.3**
CLJI	**Cilicap**	**1.53**	**97**	P		**Pn**	**11 53 05.3**	**+1.0**
TGJI	**Tegal**	**1.75**	**68**	P		**Pn**	**11 53 05.8**	**-1.3**
SBJI	**Serang**	**1.94**	**316**	P		**Pn**	**11 53 10.0**	**+0.5**
BJII	**Banjamegara**	**2.22**	**85**	P		**Pn**	**11 53 12.1**	**-1.0**
SMRI	**Semarang**	**2.97**	**81**	P		**Pn**	**11 53 22.4**	**-0.6**
SMRI	**Semarang**	**2.97**	**81**	P		**Pn**	**11 53 22.4**	**-0.6**
	baz=3.1,SNR=7.1							
UGM	**Wanagama**	**3.04**	**97**	P		**Pn**	**11 53 22.6**	**-1.3**
	baz=3.1,SNR=39							
BLSI	**Bandar Lampung**	**3.10**	**314**	P		**Pn**	**11 53 24.3**	**-0.3**
XMI	**Christmas Isla**	**3.40**	**211**	P		**Pn**	**11 53 28.7**	**0.0**
	baz=3.4,SNR=6.9							
XMI				S		**Sn**	**11 54 06.9**	**-1.2**
	baz=3.4,SNR=8.2							
WOJI	**Wonogiri, Jawa**	**3.42**	**95**	P		**Pn**	**11 53 29.2**	**+0.2**
XMIS	**Christmas Isla**	**3.44**	**212**	P		**Pn**	**11 53 29.0**	**-0.2**
	baz=3.5,SNR=14							
XMIS				S		**Sn**	**11 54 06.1**	**-3.2**
	baz=3.5,SNR=3.8							
KASI	**Kota Agung**	**3.58**	**304**	P		**Pn**	**11 53 31.1**	**0.0**
LWLI	**Liwa**	**4.22**	**306**	P		Pn	11 53 49.2	+9.3
SJI	**Sawahan**	**4.25**	**93**	P		**Pn**	**11 53 40.0**	**-0.2**
PWJI	**Pagerwojo**	**4.31**	**97**	P		**Pn**	**11 53 40.3**	**-0.6**
MNAI	**Manna**	**5.50**	**305**	P		Pn	11 53 52.4	-4.6
	baz=5.4,SNR=3.5							
KSI	**Kapahiang**	**6.21**	**308**	P		**Pn**	**11 54 04.1**	**-2.6**
JAGI	**Jajag, Banyuwa**	**6.67**	**98**	P		**Pn**	**11 54 13.2**	**+0.3**
	baz=6.8,SNR=8.7							
LHMI	**Lhok Sumawe**	**16.47**	**320**	S		**S**	**11 59 29.6**	**-0.6**
	baz=16,SNR=3.7							
FITZ	**Fitzroy Crossi**	**20.56**	**122**	P		**P**	**11 57 08.1**	**+0.1**
	2.2nm,0.7s,baz=310,slow=7.6,SNR=7.7							
FITZ	**Fitzroy Crossi**	**20.56**	**122**	P		**P**	**11 57 08.1**	**+0.1**
	baz=21,SNR=4.5							
MEEK	**Meekatharra**	**21.75**	**152**	S		S	12 01 23.1	+7.9
	baz=22,SNR=5.4							
KNRA	**Kununurra**	**22.34**	**113**	P		**P**	**11 57 25.7**	**-1.2**
	baz=22,SNR=6.1							
MTN	**Manton Dam**	**23.86**	**105**	P		**P**	**11 57 40.9**	**-0.5**
	baz=24,SNR=5.2							
NWAO	**Narrogin (SRO)**	**26.84**	**162**	P		**P**	**11 58 09.2**	**+1.0**
	9.7nm,1.1s,baz=337,slow=7.7,SNR=4.2							
WRA	**Warramunga Arr**	**28.80**	**118**	P		**P**	**11 58 24.9**	**-1.0**
	0.5nm,0.3s,baz=307,slow=9.3,SNR=14							
ASAR	**Alice Springs**	**29.99**	**125**	P		**P**	**11 58 35.7**	**-0.7**
	1.2nm,0.7s,baz=303,slow=9.2,SNR=18							
STKA	**Stephens Creek**	**39.93**	**132**	P		**P**	**12 00 01.9**	**+0.3**
	5.5nm,0.4s,baz=301,slow=7.5,SNR=32							
STKA	**Stephens Creek**	**39.93**	**132**	P		**P**	**12 00 01.9**	**+0.3**
	baz=40,SNR=27							
MKAR	**Makanchi Array**	**58.55**	**340**	P		P	12 02 16.7	-6.4
	0.1nm,0.5s,baz=156,slow=6.9,SNR=2.9							
MAW	**Mawson**	**67.00**	**197**	P		**P**	**12 03 20.2**	**+1.5**
	1.8nm,0.5s,baz=34,slow=7.3,SNR=3.7							
VNDA	**Vanda**	**75.36**	**169**	P		**P**	**12 04 09.7**	**+0.7**
	0.8nm,0.4s,baz=307,slow=6.1,SNR=11							

*ISCJB **29** 11:57:06.2±0.8, 35.77N±0.07×0.95W±0.06, h17km±17km, Error ellipse: s-maj=13.4km s-min=5.7km az=146.5*
*CSEM **29** 11:57:07.8, 35.76N×1.01W, h10km, ML2.3, After MDD*
*MDD **29** 11:57:07.8±1.7, 35.76N×1.01W, h10km±18km, mbLg2.3/13, Error ellipse: s-maj=18.9km s-min=7.8km az=141.0, PRXIMO*
*CRAAG **29** 11:58:05.7, 35.55N×0.78W, Ml2.6*

ISC 29 11:57:05.7±1.4, 35.69N±0.05×0.95W±0.04, h16km±12km, n39, σ1.945/63, 3C, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
USTO	**Oran**	**0.33**	**82**	P		**Pg**	**11 57 12.0**	**-0.6**
OLHC	**Oulhaca**	**0.58**	**222**	P		**Pb**	**11 57 18.0**	**+0.5**
ODJA	**Bouhanifia**	**0.74**	**118**	P		**Pn**	**11 57 22.0**	**+0.4**
ENIJ	**Nijar**	**1.64**	**322**	P		**Pn**	**11 57 32.6**	**-1.2**
	11nm,0.2s,SNR=7.9							
ENIJ				S		**Sn**	**11 57 52.7**	**-1.9**
	23nm,0.2s,SNR=7.9							
ENIJ	**Nijar**	**1.64**	**322**	P		**Pn**	**11 57 32.6**	**-1.2**
	11nm,0.2s,SNR=7.9							
ENIJ				S		**Sn**	**11 57 52.7**	**-1.9**
	23nm,0.2s,SNR=7.9							
MELI	**Melilla**	**1.67**	**257**	P		**Pn**	**11 57 35.2**	**+1.0**
	56nm,0.2s,SNR=7.9							
MELI				S		**Sb**	**11 57 57.1**	**+0.4**
	123nm,0.1s,SNR=7.9							
MELI	**Melilla**	**1.67**	**257**	P		**Pn**	**11 57 35.2**	**+1.0**
	56nm,0.2s,SNR=7.9							
MELI				S		**Sb**	**11 57 57.1**	**+0.4**
	123nm,0.1s,SNR=7.9							
EBER	**Berja**	**1.98**	**308**	⇑P		**Pn**	**11 57 37.3**	**-1.4**
	6.2nm,0.2s,SNR=18							
EBER				S		**Sn**	**11 58 04.3**	**+1.0**
	10nm,0.3s,SNR=4.0							
EBER	**Berja**	**1.98**	**308**	P		**Pn**	**11 57 37.3**	**-1.4**
	6.2nm,0.2s,SNR=18							
EBER				S		**Sn**	**11 58 04.3**	**+1.0**
	10nm,0.3s,SNR=4.0							
EMUR	**La Murta**	**2.17**	**354**	P		**Pn**	**11 57 40.3**	**-0.8**
	0.8nm,0.1s,SNR=4.0							
EMUR				S		**Sn**	**11 58 05.1**	**-2.5**
	9.3nm,0.2s,SNR=7.9							
EMUR	**La Murta**	**2.17**	**354**	P		**Pn**	**11 57 40.3**	**-0.8**
	0.8nm,0.1s,SNR=4.0							
EMUR				S		**Sn**	**11 58 05.1**	**-2.5**
	9.3nm,0.2s,SNR=7.9							
EGUA	**Guajares**	**2.40**	**299**	P		**Pn**	**11 57 42.3**	**-2.1**
	10nm,0.2s,SNR=7.9							
EGUA				S		**Sn**	**11 58 12.5**	**-1.0**
	14nm,0.3s,SNR=7.9							
EGUA	**Guajares**	**2.40**	**299**	P		**Pn**	**11 57 42.3**	**-2.1**
	10nm,0.2s,SNR=7.9							
EGUA				S		**Sn**	**11 58 12.5**	**-1.0**
	14nm,0.3s,SNR=7.9							
EHUE	**Huescar**	**2.50**	**329**	P		**Pn**	**11 57 46.9**	**+1.1**
	2.9nm,0.2s,SNR=7.9							
EHUE				S		**Sn**	**11 58 15.1**	**-0.9**
	1.5nm,0.2s,SNR=7.9							
EHUE	**Huescar**	**2.50**	**329**	P		**Pn**	**11 57 46.9**	**+1.1**
	2.9nm,0.2s,SNR=7.9							
EHUE				S		**Sn**	**11 58 15.1**	**-0.9**
	1.5nm,0.2s,SNR=7.9							
EQUE	**Quentar**	**2.52**	**308**	P		**Pn**	**11 57 46.6**	**+0.6**
	17nm,0.3s,SNR=7.9							
EQUE	**Quentar**	**2.52**	**308**	P		**Pn**	**11 57 46.6**	**+0.6**
	17nm,0.3s,SNR=7.9							
ECOG	**Cogollos-Vega**	**2.64**	**308**	P		**Pn**	**11 57 48.7**	**+0.9**
	6.3nm,0.2s,SNR=7.9							
ECOG	**Cogollos-Vega**	**2.64**	**308**	P		**Pn**	**11 57 48.7**	**+0.9**
	6.3nm,0.2s,SNR=7.9							
ERON	**Agron**	**2.66**	**301**	⇑P		**Pn**	**11 57 47.7**	**-0.3**
	13nm,0.3s,SNR=18							
ERON				S		**Sn**	**11 58 19.2**	**-0.8**
	3.1nm,0.3s,SNR=7.9							
ERON	**Agron**	**2.66**	**301**	P		**Pn**	**11 57 47.7**	**-0.3**
	13nm,0.3s,SNR=18							
ERON				S		**Sn**	**11 58 19.2**	**-0.8**
	3.1nm,0.3s,SNR=7.9							
EQES	**Quesada**	**2.71**	**322**	⇑P		**Pn**	**11 57 50.5**	**+1.7**
	30nm,0.4s,SNR=18							
EQES				S		**Sn**	**11 58 22.9**	**+1.6**
	5.6nm,0.2s,SNR=38							
EQES	**Quesada**	**2.71**	**322**	P		**Pn**	**11 57 50.5**	**+1.7**
	30nm,0.4s,SNR=18							
EQES				S		**Sn**	**11 58 22.9**	**+1.6**
	5.6nm,0.2s,SNR=38							
ETOB	**Tobarra**	**2.99**	**351**	P		**Pn**	**11 57 53.6**	**+1.1**
	2.6nm,0.2s,SNR=10							
ETOB				S		**Sn**	**11 58 27.6**	**-0.5**
	8.5nm,0.4s,SNR=5.6							
ETOB	**Tobarra**	**2.99**	**351**	P		**Pn**	**11 57 53.6**	**+1.1**
	2.6nm,0.2s,SNR=10							
ETOB				S		**Sn**	**11 58 27.6**	**-0.5**
	8.5nm,0.4s,SNR=5.6							
EBEN	**Beniarda**	**3.07**	**11**	P		**Pn**	**11 57 54.6**	**+1.0**
	0.3nm,0.2s,SNR=6.3							
EBEN				S		**Sn**	**11 58 28.3**	**-1.6**
	3.5nm,0.3s,SNR=7.9							
EBEN	**Beniarda**	**3.07**	**11**	P		**Pn**	**11 57 54.6**	**+1.0**
	0.3nm,0.2s,SNR=6.3							
EBEN				S		**Sn**	**11 58 28.3**	**-1.6**
	3.5nm,0.3s,SNR=7.9							
EVIA	**Vianos**	**3.20**	**338**	P		**Pn**	**11 57 57.2**	**+1.8**
	5.1nm,0.3s,SNR=7.9							
EVIA				S		**Sn**	**11 58 33.7**	**+0.5**
	7.4nm,0.4s,SNR=7.9							
EVIA	**Vianos**	**3.20**	**338**	P		**Pn**	**11 57 57.2**	**+1.8**
	5.1nm,0.3s,SNR=7.9							
EVIA				S		**Sn**	**11 58 33.7**	**+0.5**

YKA	Yellowknife Ar	76.51	28	P		P	12 32 30.6	+0.4	
	0.6nm,0.6s,baz=292,slow=5.9,SNR=12								
ARCES	ARCESS Array B	78.96	341	P		P	12 32 43.9	+0.3	
	2.5nm,0.8s,baz=68,slow=8.0,SNR=5.5								
NVAR	Mina Array Bea	83.19	51	P		P	12 33 07.0	+0.4	
	0.2nm,0.5s,baz=270,slow=5.1,SNR=3.6								
FINES	FINESS Array B	83.22	334	P		P	12 33 05.1	-0.8	
	1.0nm,0.5s,baz=64,slow=4.4,SNR=7.2								

IDC 29 12:34:16.5±0.8, 13°09N×145°78E, h0km, mb3.8/11, mb1 4.0/11, mb1mx3.9/25, mbtmp3.8/11, MS3.3/1, Ms1 3.5/1, ms1mx2.4/32, Error ellipse: s-maj=28.5km s-min=19.5km az=99.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
MJAR	Matsushiro Arr	24.32	345	P		P	12 39 35.0		-1.0
	1.4nm,0.7s,baz=167,slow=11,SNR=6.1								
WRA	Warramunga Arr	34.70	199	P		P	12 41 07.5		-0.8
	0.9nm,0.8s,baz=20,slow=9.4,SNR=6.2								
ASAR	Alice Springs	38.33	198	P		P	12 41 39.0		-0.3
	0.5nm,1.0s,baz=22,slow=8.0,SNR=3.3								
CMAR	Chiang Mai Arr	45.30	283	P		P	12 42 36.8		+0.3
	1.2nm,0.7s,baz=82,slow=6.9,SNR=8.1								
CMAR				LR		LR	13 02 52.9		
	comp=Z,33nm,18.3s,baz=175,slow=38								
SONM	Songino Array	47.65	325	P		P	12 42 54.9		+0.2
	0.6nm,0.6s,baz=136,slow=5.1,SNR=4.4								
MKAR	Makanchi Array	62.47	316	P		P	12 44 42.6		+0.9
	3.0nm,0.7s,baz=93,slow=8.8,SNR=33								
ZALV	Zalesovo Beam	62.55	324	P		P	12 44 41.3		-0.8
	0.5nm,0.6s,baz=91,slow=5.8,SNR=3.3								
ILAR	Eielson Array	68.64	25	P		P	12 45 20.2		-1.1
	0.3nm,0.5s,baz=248,slow=6.1,SNR=9.7								
YKA	Yellowknife Ar	82.89	27	P		P	12 46 42.8		-0.1
	0.2nm,0.6s,baz=285,slow=5.2,SNR=4.3								
NVAR	Mina Array Bea	86.54	52	P		P	12 47 03.9		+1.8
	0.2nm,0.5s,baz=265,slow=6.2,SNR=2.2								
FINES	FINESS Array B	91.99	335	P		P	12 47 26.0		-1.0
	1.2nm,0.7s,baz=86,slow=6.0,SNR=4.7								
TORD	Torodi Ar. Bea	135.88	305	PKP		PKPdf	12 53 41.9		+1.5
	0.4nm,0.7s,baz=15,slow=4.5,SNR=2.8								
DBIC	Dimbokro	144.84	302	PKP		PKPbc	12 53 55.8		+0.2
	6.0nm,0.9s,baz=354,slow=4.9,SNR=4.2								

CASC 29 12:38:06.2±2.8, 15°11N×88°86W, h0km±6km, MD3.6, ML3.2, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
MRL	Marmol	0.81	267	eP		Pg	12 38 19.0		-3.0
MRL				eS		Sn	12 38 37.7		-0.3
MTO2	Montecristo 2	0.86	215	eP		Pg	12 38 22.7		-0.4
MTO2				eS		Sb	12 38 36.4		-0.3
RBDL	Robledal	1.28	219	eP		Pg	12 38 29.9		-1.0
RBDL				eS		Sb	12 38 48.8		+0.2
LBRS	Las Brisas	1.38	188	eP		Pg	12 38 32.3		-0.5
LBRS				eS		Sn	12 38 51.7		-0.2
LFU	La Fuente	1.38	191	eP		Pg	12 38 32.5		-0.2
LFU				eS		Sn	12 38 51.7		-0.1
BOQS	Boqueron	1.43	197	eP		Pn	12 38 33.0		-0.7
BOQS				eS		Sn	12 38 53.6		+0.2
RTR	El Retiro	1.43	212	eP		Pn	12 38 32.9		-0.8
RTR				eS		Sb	12 38 52.8		-0.1
SNJE	San Jose	1.43	211	eP		Pn	12 38 32.8		-0.9
SNET	Serv Nac Est T	1.46	194	AML		AML	12 38 59.8		
	comp=Z,337nm,0.2s								
SBLS	San Blas	1.47	211	eP		Pn	12 38 33.6		-0.6
SBLS				eS		Sn	12 38 54.6		+0.2
SNVI	San Vicente	1.49	179	eP		Pn	12 38 34.6		+0.1
LFRS	El Faro	1.49	188	eP		Pn	12 38 34.5		0.0
LFRS				eS		Sn	12 38 55.5		+0.7
NBG	Las Nubes	1.53	250	eP		Pn	12 38 33.5		-1.7
NBG				eS		Sg	12 38 59.3		+3.1
TGUH	Tegucigalpa,Un	1.86	124	eP		Pn	12 38 38.9		-0.3
TGUH				eS		Sb	12 39 04.5		-0.3
FUG	Fuego 3	2.03	251	eP		Pn	12 38 34.8		-7.2
FUG				eS		Sb	12 39 10.4		+0.1
CNCH	Conchagua	2.08	151	eP		Pn	12 38 43.3		+0.8

IDC 29 12:51:01.4±0.6, 15°39N×86°37W, h0km, mb4.2/15, mb1 4.5/16, mb1mx4.4/24, mbtmp4.3/16, ML5.0/1, MS3.5/13, Ms1 3.5/13, ms1mx3.4/25, Error ellipse: s-maj=26.9km s-min=12.8km az=61.0

SSS 29 12:51:01.9, 15°04N×85°81W, h6km, ML4.6

CASC 29 12:51:02.1±1.2, 14°99N×85°86W, h0km±17km, ML4.2, mb4.5(NEIC)

NEIC 29 12:51:03.3±0.3, 15°38N×86°39W, h10km, mb4.5/53, Error ellipse: s-maj=7.8km s-min=4.6km az=63.0

NEIC Felt at San Pedro Sula and Savannah Bight. Also felt at Dangriga, Belize.

BJI 29 12:51:03.7, 15°40N×86°40W, h10km, mB5.3/2, Ms5.1/1, Ms7 4.6/1

ISC 29 12:51:03.1±1.5, 15°44N±0°04×86°47W±0°04, h13km±9km, n337, σ1°49/347, mb4.5/62, MS3.6/12, 89C-112D, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
TGUH	Tegucigalpa,Un	1.58	210	ePn		Pn	12 51 31.2		+0.3
TGUH				eSg		Sg	12 51 54.3		+0.1
TGUH	Tegucigalpa,Un	1.58	210	eP		Pn	12 51 31.5		+0.6
TGUH				eS		Sg	12 51 55.1		+0.9
CNCH	Conchagua	2.53	212	eP		Pn	12 51 45.8		+1.8
VSM	San Miguel	2.66	221	eP		Pn	12 51 48.4		+2.4
SNVI	San Vicente	2.93	232	eP		Pb	12 51 54.3		-1.1
SNVI				eS		Sb	12 52 34.8		+3.5
LBRS	Las Brisas	3.02	236	eP		Pb	12 51 55.8		-1.0
LFU	La Fuente	3.07	237	eP		Pb	12 51 55.7		-2.0
LFU				eS		Sb	12 52 39.4		+4.3
LFRS	El Faro	3.10	235	eP		Pb	12 51 56.6		-1.5
SNET	Serv Nac Est T	3.20	237	eS		Sb	12 52 41.9		+3.1
SNET				AML		AML	12 52 56.4		
	comp=Z,1μm,1.0s								
BOQS	Boqueron	3.21	238	eP		Pb	12 51 58.2		-2.0
RBDL	Robledal	3.38	247	eP		Pb	12 52 02.2		-0.9
RBDL				eS		Sg	12 52 49.4		-2.5
SNJE	San Jose	3.42	243	eP		Pb	12 52 03.3		-1.4
RTR	El Retiro	3.44	244	eP		Pb	12 52 02.1		-1.9
SBLS	San Blas	3.45	243	eP		Pb	12 52 03.1		-1.1
TEIG	Tepich	5.06	340	ePn		Pn	12 52 17.7		-1.0
TEIG				eSn		Sn	12 53 13.3		-3.7
TEIG	Tepich	5.06	340	Pn		Pn	12 52 17.7		-1.0
	comp=Z,61nm,0.3s,baz=130,slow=1.1,SNR=260								
TEIG				Sn		Sn	12 53 13.3		-3.7
	comp=Z,110nm,0.3s,baz=274,slow=23,SNR=12								
TEIG				LR		LR	12 54 34.7		
	comp=Z,566nm,20.9s,baz=61,slow=42								
JTS	JuntasAbangare	5.33	164	ePn		Pn	12 52 23.0		+0.5
JTS				eSg		Sg	12 53 49.8		-4.6
MTDJ	Mount Denham	8.99	71	ePn		Pn	12 53 12.6		-0.2
BCIP	Isla Barro Col	8.99	133	ePn		Pn	12 53 12.0		-0.7
ROSC	El Rosal	15.91	130	Pn		P	12 54 51.7		+0.8
ROSC	El Rosal	15.91	130	Pn		P	12 54 51.7		+0.8
	comp=Z,1.1nm,0.3s,baz=113,slow=22,SNR=7.5								
ROSC				LR		LR	13 01 38.8		
	comp=Z,214nm,19.2s,baz=4.9,slow=40								
HKT	Hockley	16.81	331	ePn		Pn	12 54 58.5		+0.3
	comp=Z,49nm,1.0s								
HKT				eSn		Sn	12 58 01.5		-3.5
LRAL	Lakeview Retre	17.52	359	ePn		Pn	12 55 08.0		+0.8
	comp=Z,32nm,0.9s								
GOGA	Godfrey	18.09	8	ePn		Pn	12 55 14.2		0.0
	comp=Z,16nm,0.8s								
732A	Laxson Ranch,	18.18	319	⇑P		Pn	12 55 13.3		-2.1
	baz=18,SNR=13								
NHSC	New Hope	18.49	17	eP		Pn	12 55 20.1		+1.1
	comp=Z,109nm,1.2s								
632A	Uvalde	18.61	321	⇓P		P	12 55 18.7		-1.7
	baz=19,SNR=8.1								
631A	Perdido Creek	19.04	319	⇑P		P	12 55 24.2		-0.8
	baz=19,SNR=8.3								
532A	Rocksprings	19.13	322	⇑P		P	12 55 26.7		+0.6
	baz=19,SNR=16								
WHTX	Lake Whitney	19.28	331	⇓P		Pn	12 55 31.7		+3.1
	baz=19,SNR=36								
JCT	Junction City	19.33	323	eP		Pn	12 55 29.9		+0.6
	comp=Z,28nm,1.1s								
JCT	Junction City	19.33	323	⇓P		Pn	12 55 30.0		+0.6
	baz=20								
PLAL	Pickwick Lake	19.51	356	ePn		Pn	12 55 34.1		+2.7
	comp=Z,13nm,0.9s								
531A	Rocksprings	19.54	321	⇓P		P	12 55 32.0		+1.4
	baz=20								
432A	Menard	19.62	324	⇑P		P	12 55 32.8		+1.4
	baz=20,SNR=6.1								
SWET	Sewanee	19.70	1	eP		P	12 55 29.6		-2.6
	comp=Z,21nm,1.0s								
SWET				eS		Sn	12 59 16.4		+1.6
431A	Sonora	19.95	322	⇑P		P	12 55 36.5		+1.4
	baz=20,SNR=7.8								
UALR	University of	19.96	346	eP		P	12 55 36.2		+1.1
	comp=Z,45nm,1.3s								
332A	Millersview	19.97	325	⇑P		P	12 55 36.7		+1.4
	baz=20,SNR=17								
CPCT	Cooper Cave	20.00	5	eP		Pn	12 55 38.2		+1.0
530A	J-C Ranch, Com	20.02	320	⇑P		P	12 55 37.6		+1.7
	baz=20,SNR=16								
KMSC	Kings Mountain	20.15	12	⇑P		Pn	12 55 38.7		-0.3
	baz=20,SNR=6.0								
TKL	Tuckaleechee C	20.27	6	P		Pn	12 55 43.5		+3.0
TKL				S		S	12 59 11.8		-14
TKL	Tuckaleechee C	20.27	6	P		Pn	12 55 43.5		+3.0
	comp=Z,42nm,1.1s,baz=180,slow=11,SNR=8.5								
TKL				S		S	12 59 11.8		-14
	comp=Z,11nm,0.8s,baz=99,slow=19,SNR=4.1								
TKL				LR		LR	13 02 47.6		
	comp=Z,74nm,21.2s,baz=192,slow=35								
331A	San Angelo	20.30	323	⇓P		P	12 55 40.5		+1.6
	baz=20,SNR=8.1								
232A	Coleman	20.31	326	⇓P		P	12 55 40.1		+1.2
	baz=20,SNR=35								
430A	Baggett Ranch,	20.40	321	⇓P		P	12 55 41.7		+1.6
	baz=20								
529A	Stev Forest Ra	20.57	318	⇓P		P	12 55 42.6		+0.8
	baz=21,SNR=15								
628A	Black Gap, Mar	20.59	316	⇑P		P	12 55 43.8		+1.7
	baz=21,SNR=21								
429A	Davenport Ranc	20.70	320	⇓P		P	12 55 44.5		+1.3
	baz=21,SNR=12								
231A	Bronte	20.71	325	⇑P		P	12 55 44.6		+1.3
	baz=21,SNR=6.9								
330A	Mertzon	20.81	322	⇓P		P	12 55 45.8		+1.4
	baz=21								
ABTX	Abilene, Hawle	20.88	327	⇑P		Pn	12 55 47.5		-0.2
	baz=21,SNR=25								
627A	Terlingua Ranc	20.91	315	⇓P		P	12 55 47.6		+2.0
	baz=21,SNR=28								
528A	Cox Ranch, San	20.96	317	⇓P		P	12 55 47.6		+1.5
	baz=21								
TXAR	Lajitas Array	21.03	314	P		P	12 55 49.2		+2.3
TXAR				S		S	12 59 39.0		-2.0
TXAR	Lajitas Array	21.03	314	P		P	12 55 49.2		+2.3
	comp=Z,19nm,0.9s,baz=133,slow=10,SNR=71								
TXAR				S		S	12 59 39.0		-2.0
	comp=Z,0.2nm,0.3s,baz=127,slow=24,SNR=3.5								
TXAR				LR		LR	13 06 46.9		
	comp=Z,90nm,18.1s,baz=230,slow=45								
230A	Sterling City	21.12	323	⇓P		P	12 55 49.1		+1.3
	baz=21								
TZTN	Tazewell	21.18	7	eP		P	12 55 50.1		+1.8
	comp=Z,37nm,1.1s								
131A	Roby	21.31	326	⇓P		P	12 55 51.9		+2.1
	baz=22,SNR=7.4								
Z32A	Haskell	21.34	329	⇑P		P	12 55 51.8		+1.8
	baz=22,SNR=34								
329A	Wagon Wheel Ra	21.35	321	⇓P		P	12 55 51.3		+1.0
	baz=22								
626A	Big Bend Ranch	21.49	314	⇓P		P	12 55 53.6		+1.8
	baz=22,SNR=61								
527A	Woodward Ranch	21.50	316	⇓P		P	12 55 53.8		+1.9
	baz=22,SNR=12								
130A	Snyder	21.57	325	⇓P		P	12 55 53.6		+1.0
	baz=22,SNR=5.2								
229A	Bryant Ranch,	21.59	322	⇓P		P	12 55 54.7		+1.9
	baz=22								
Z31A	Sharp Cattle R	21.68	328	⇓P		P	12 55 55.0		+1.3
	baz=22								
526A	Mary Lane Ranc	21.77	315	⇑P		P	12 55 55.9		+1.1
	baz=22,SNR=15								
328A	Wristen Ranch,	21.79	320	⇓P		P	12 55 56.3		+1.4
	baz=22,SNR=16								
427A	Hayter Ranch,	21.81	318	⇓P		P	12 55 55.6		+0.4
	baz=22								
Y32A	R-V Farms, Ver	21.88	330	⇑P		P	12 55 57.2		+1.3
	baz=22								
TUL1	Tulsa	22.02	339	⇓P		P	12 55 59.0		+1.7
	baz=22								
129A	Stewart Farms,	22.10	323	⇓P		P	12 55 58.4		+0.1
	baz=22								
426A	McDonald Obser	22.11	316	⇓P		P	12 56 00.2		+1.7
	baz=22,SNR=12								
228A	UTblock 9, Go	22.16	321	⇓P		P	12 55 58.7		-0.3
	baz=22								
WMOK	Wichita Mounta	22.18	332	eP		P	12 55 59.5		+0.5
	comp=Z,8.3nm,0.7s								
Z30A	Sanderson Ranc	22.18	326	⇑P		P	12 56 01.5		+2.4
	baz=22,SNR=20								
Y31A	Rekieta Farm,	22.25	328	⇓P		P	12 56 01.4		+1.5
	baz=22,SNR=9.7								
SIUC	Southern Illin	22.32	354	eP		P	12 56 03.6		+3.2
	comp=Z,25nm,0.8s								
BLA	Blacksburg	22.34	13	eP		P	12 56 04.2		+3.5
	comp=Z,48nm,1.3s								
128A	Castleberry Fa	22.45	322	⇑P		P	12 56 02.7		+0.6
	baz=23,SNR=9.0								
USIN	University of	22.46	358	eP		P	12 56 03.1		+1.1
	comp=Z,214nm,1.9s								
Z29A	Hungry Hill Ra	22.48	325	⇑P		P	12 56 02.5		+0.2
	baz=23								
Y30A	Stafford Cattl	22.51	327	⇓P		P	12 56 03.3		+0.7
	baz=23								
227A	Bennet, Jal	22.52	320	⇓P		P	12 56 03.0		+0.2
	baz=23								
X31A	McDonald Ranch	22.65	330	⇑P		P	12 56 04.4		+0.3
	baz=23,SNR=9.5								
WCI	Wyandotte Cave	22.70	0	eP		P	12 56 06.4		+1.9
	comp=Z,49nm,1.0s								
425A	Indio Mountain	22.82	315	⇓P		P	12 56 05.6		-0.5
	baz=23,SNR=16								
Z28A	Tucker Farm, M	22.88	324	⇑P		P	12 56 06.5		-0.1
	baz=23								
Y29A	Porterfield Fa	22.91	326	⇓P		P	12 56 07.0		+0.1
	baz=23,SNR=13								
X30A	Coker Ranch, T	22.94	328	⇑P		P	12 56 07.3		+0.1
	baz=23,SNR=16								
127A	Arkansas Junct	23.01	321	⇓P		P	12 56 07.6		-0.4
	baz=23								
W31A	Holland Ranch,	23.08	331	⇓P		P	12 56 09.0		+0.4
	baz=23								
226B	Tecolote Peak,	23.11	319	⇓P		P	12 56 09.4		+0.4
	baz=23,SNR=23								
325A	Bean Ranch, Si	23.18	316	⇑P		P	12 56 09.3		-0.5
	baz=23,SNR=18								
Y28A	McKinney Farm,	23.26	325	⇑P		P	12 56 09.8		-0.7
	baz=23								
X29A	Tulia	23.37	327	⇓P		P	12 56 11.4		-0.2
	baz=24								
Z27A	Tatum	23.38	323	⇑P		P	12 56 11.3		-0.5
	baz=24,SNR=12								
V31A	Spring Creek L	23.52	332	⇓P		P	12 56 13.3		+0.3
	baz=24								
225A	Deer Hill, Car	23.55	318	⇑P		P	12 56 13.5		0.0
	baz=24								
324A	Moseley Ranch,	23.56	316	⇑P		P	12 56 13.0		-0.7
	baz=24,SNR=10								
MSTX	Muleshoe	23.60	324	⇑P		P	12 56 13.4		-0.5
	baz=24								
MNTX	Cornudas Mount	23.65	316	eP		P	12 56 14.7		+0.3
	comp=Z,12nm,1.1s								
X28A	Dimmitt	23.69	326	⇑P		P	12 56 14.0		-0.8
	baz=24								
AMTX	Amarillo	23.70	328	eP		P	12 56 17.3		+2.4
	comp=Z,41nm,1.1s								
Y27A	Causey	23.76	324	⇑P		P	12 56 15.3		-0.2
	baz=24								
Z26A	Caprock	23.80	321	⇓P		P	12 56 15.7		-0.2
	baz=24								
125A	Gardner Draw,	23.80	319	⇓P		P	12 56 16.0		+0.1
	baz=24,SNR=9.2								
ATAH	Atahualpa	23.82	160	LR		LR	13 04 40.3		
	comp=Z,272nm,21.0s,baz=354,slow=34								
W29A	Amraillo	23.87	328	⇓P		P	12 56 16.0		-0.4
	baz=24								
224A	Cornudas Mount	23.98	317	⇓P		P	12 56 17.1		-0.6
	baz=24								
Y26A	Elida	24.17	323	⇑P		P	12 56 18.8		-0.6
	baz=24								
Z25A	Roswell	24.26	320	⇑P		P	12 56 19.2		-1.0
	baz=24								
124A	Stringfield Ra	24.34	318	⇑P		P	12 56 22.8		+1.8
	baz=24,SNR=17								
U30A	WK&E Inc. Balk	24.51	332	⇑P		P	12 56 23.2		+0.9
	baz=25								
T31A	Randall Ranch,	24.55	334	⇑P		P	12 56 23.6		+0.8
	baz=25								
W27A	Bowe Ranch, En	24.57	326	⇑P		P	12 56 23.1		+0.1
	baz=25								
X26A	CR and CF Fran	24.61	324	⇑P		P	12 56 24.2		+0.8
	baz=25,SNR=12								
Y25A	Mesa, Roswell	24.68	321	⇓P		P	12 56 24.9		+0.9
	baz=25,SNR=6.5								
Z24A	Sheeppen Canyo	24.69	320	⇑P		P	12 56 25.2		+1.0
	baz=25								
U29A	Oasis Ranch, S	24.74	331	⇓P		P	12 56 26.0		+1.6
	baz=25								
123A	Bell Site, Whi	24.82	317	⇑P		P	12 56 26.3		+1.0
	baz=25								
ACSO	Alum Creek Sta	24.88	6	eP		P	12 56 27.3		+1.7
	comp=Z,16nm,0.9s								
W26A	Owens Ranch, T	24.98	325	⇓P		P	12 56 27.3		+0.6
	baz=25								
222A	Williams Famil	25.06	315	⇓P		P	12 56 27.8		+0.4
	baz=25								
X25A	Clemmons Ranch	25.08	323	⇓P		P	12 56 28.7		+1.1
	baz=25								
Y24A	Capitan	25.14	320	⇑P		P	12 56 30.0		+1.8
	baz=25,SNR=10								
Z23A	Rita Site, Whi	25.20	318	⇑P		P	12 56 30.3		+1.6
	baz=25								
W25A	X Bar L Ranch,	25.46	324	⇑P		P	12 56 31.9		+0.9
	baz=26,SNR=5.6								
U27A	Thompson Grove	25.48	328	⇓P		P	12 56 31.7		+0.5
	baz=26,SNR=11								
V26A	Tequesquite Ra	25.51	326	⇓P		P	12 56 32.4		+0.9
	baz=26,SNR=15								
Y23A	Lovelace Mesa,	25.52	320	⇓P		P	12 56 31.9		+0.2
	baz=26,SNR=8.1								
X24A	Lazy VL Ranch,	25.57	322	⇓P		P	12 56 33.0		+0.8
	baz=26								
320A	Kipp Ranch, An	25.62	312	⇓P		P	12 56 33.7		+1.1
	baz=26,SNR=7.5								
Z22A	Elephant Butte	25.67	317	⇑P		P	12 56 34.7		+1.6
	baz=26,SNR=15								
121A	Cookes Peak, D	25.78	315	⇓P		P	12 56 36.1		+2.0
	baz=26,SNR=13								
R30A	Dighton	25.81	334	⇓P		P	12 56 35.7		+1.6
	baz=26								
220A	Playas Peak, P	25.93	313	⇑P		P	12 56 37.0		+1.6
	baz=26								
U26A	Atchley Ranch,	25.93	327	⇑P		P	12 56 35.9		+0.5
	baz=26,SNR=12								
S28A	Manter	25.95	331	⇑P		P	12 56 36.3		+0.9
	baz=26								
V25A	Rancho No Teng	26.00	325	⇑P		P	12 56 36.9		+0.9
	baz=26,SNR=11								
W24A	Lazy 6 Ranch,	26.00	323	⇑P		P	12 56 36.4		+0.4
	baz=26								
BNM	Barren Site	26.02	319	eP		P	12 56 37.8		+1.4
	comp=Z,6.8nm,1.3s								
X23A	Hourglass Bar	26.04	321	⇓P		P	12 56 36.8		+0.4
	baz=26								
Y22A	Socorro	26.10	319	⇑P		P	12 56 38.5		+1.5
	baz=26,SNR=9.6								
Z21A	St. Cloud Mine	26.17	317	⇓P		P	12 56 39.4		+1.8
	baz=26								
319A	Douglas	26.18	311	⇓P		P	12 56 38.3		+0.6
	baz=26								
SSPA	Standing Stone	26.19	15	eP		P	12 56 39.2		+1.8
	comp=Z,5nm,1.5s								
V24A	Rampart Ranch,	26.28	324	⇑P		P	12 56 40.8		+2.1
	baz=26,SNR=7.1								
U25A	Circle Dot Ran	26.29	326	⇑P		P	12 56 40.0		+1.3
	baz=26								
120A	U Bar Ranch, L	26.37	314	⇓P		P	12 56 41.5		+2.1
	baz=26,SNR=11								
W23A	Werner Place,	26.40	322	⇑P		P	12 56 41.4		+1.7
	baz=26								
ANMO	Albuquerque	26.44	321	eP		P	12 56 41.7		+1.6
	comp=Z,20nm,2.1s								
ANMO	Albuquerque	26.44	321	P		P	12 56 41.6		+1.6
	comp=Z,1.2nm,0.8s,baz=126,slow=9.4,SNR=4.8								
ANMO				LR		LR	13 09 17.1		
	comp=Z,74nm,20.6s,baz=222,slow=41								
T26A	Comanche Natio	26.45	328	⇓P		P	12 56 41.0		+0.9
	baz=27								
LAZ	Ladron	26.51	319	eP		P	12 56 43.8		+3.1
	comp=Z,5.3nm,1.4s								
R28A	Tribune	26.52	332	⇓P		P	12 56 41.8		+1.1
	baz=27								
Y21A	Point of Rocks	26.60	318	⇓P		P	12 56 42.7		+1.2
	baz=27,SNR=6.1								
Z20A	Nine Sixteen R	26.67	315	⇑P		P	12 56 42.6		+0.6
	baz=27								
S26A	Kim	26.73	329	⇓P		P	12 56 43.5		+0.9
	baz=27,SNR=12								
T25A	Trinidad	26.84	327	⇓P		P	12 56 44.7		+1.0
	baz=27,SNR=11								
X21A	Alamocita Cree

M21A **Separation Pea** 31.71 329 ⇑P P 12 57 28.7 +1.7
baz=32
P18A **Preston Nutter** 31.83 324 ⇑P P 12 57 28.8 +0.7
baz=32,SNR=8.0
Q16A **Castle Valley** 31.90 322 ⇑P P 12 57 30.4 +1.9
baz=32
L21A **Rawlins** 31.99 330 ⇓P P 12 57 30.9 +1.6
baz=32
K22A **Casper** 32.12 332 ⇑P P 12 57 31.9 +1.5
baz=32
MSU **Marysvale** 32.25 320 eP P 12 57 34.8 +3.2
MVU **Marysvale** 32.27 320 eP P 12 57 33.9 +2.1
comp=Z,17nm,1.7s
CCUT **Cedar City** 32.42 318 eP P 12 57 35.4 +2.2
comp=Z,42nm,2.7s
EYMN **Ely** 32.68 354 eP P 12 57 41.6 +6.6
comp=Z,5.1nm,1.1s
DAU **Daniels Canyon** 32.93 324 eP P 12 57 39.9 +2.2
K20A **Yellowstone Ra** 32.98 330 ⇓P P 12 57 39.5 +1.5
baz=33
L18A **Fontenelle, Gr** 33.30 327 ⇓P P 12 57 42.4 +1.5
baz=34
M17A **Scullys Gap (B** 33.32 326 ⇑P P 12 57 42.7 +1.7
baz=34
K19A **Absolon Red Bu** 33.36 329 ⇑P P 12 57 43.0 +1.7
baz=34
I21A **Big Trails, Te** 33.38 332 ⇓P P 12 57 43.1 +1.7
baz=34
J20A **Shoshoni** 33.39 331 ⇑P P 12 57 43.3 +1.8
baz=34
SAML **Samuel** 33.46 135 eP P 12 57 40.7 -1.5
comp=Z,11nm,1.0s
BW06 **Boulder Array** 33.67 329 eP P 12 57 44.5 +0.5
comp=Z,10nm,1.4s
PDAR **Pinedale Array** 33.67 329 P P 12 57 44.3 +0.3
PDAR **Pinedale Array** 33.67 329 P P 12 57 44.3 +0.3
comp=Z,2.4nm,1.0s,baz=132,slow=10,SNR=12
PDAR LR LR 13 16 34.2
comp=Z,84nm,18.0s,baz=317,slow=45
DUG **Dugway** 33.69 322 eP P 12 57 46.1 +2.0
comp=Z,10nm,1.4s
DUG **Dugway** 33.69 322 ⇑P P 12 57 44.7 +0.6
baz=34,SNR=6.4
J19A **Crowheart** 33.78 330 ⇑P P 12 57 46.2 +1.2
baz=34
HWUT **Hardware Ranch** 33.91 325 eP P 12 57 47.6 +1.5
comp=Z,17nm,1.3s
FURC **Furnace Creek,** 34.20 313 ⇓P P 12 57 49.1 +0.7
baz=34
R11A **Troy Canyon, C** 34.32 317 ⇑P P 12 57 50.5 +0.8
baz=34
I19A **Meeteetse** 34.34 331 ⇑P P 12 57 51.5 +1.7
baz=34
MPMC **Manual Prospec** 34.44 312 ⇓P P 12 57 51.8 +1.0
baz=35
HVU **Hansel Valley** 34.69 324 eP P 12 57 54.4 +1.5
comp=Z,6.9nm,1.1s
SNOW **Snow King Moun** 34.77 328 eP P 12 57 55.9 +2.3
comp=Z,33nm,1.4s
LOHW **Long Hollow** 34.81 329 eP P 12 57 55.3 +1.4
comp=Z,6.6nm,1.1s
G20A **Bridger** 34.89 333 ⇓P P 12 57 55.6 +1.1
baz=35
TPAW **Teton Pass** 34.89 328 eP P 12 57 56.1 +1.4
comp=Z,33nm,1.5s
MOOW **Moose Ponds** 34.98 329 eP P 12 57 56.7 +1.4
comp=Z,5.0nm,1.0s
RRI2 **Red Ridge** 34.98 328 eP P 12 57 57.2 +1.7
comp=Z,27nm,1.3s
IMW **Indian Meadow** 35.18 329 eP P 12 57 58.3 +1.1
comp=Z,12nm,1.4s
ELK **Elko** 35.48 321 eP P 12 58 02.3 +2.5
comp=Z,140nm,1.1s
ULM **Lac du Bonnet** 35.55 350 P P 12 57 58.5 -1.4
ULM **Lac du Bonnet** 35.55 350 P P 12 57 58.5 -1.4
comp=Z,3.7nm,0.7s,baz=182,slow=7.9,SNR=4.8
ULM LR LR 13 14 02.1
comp=Z,38nm,19.7s,baz=326,slow=39
G18A **Lazy EL Ranch,** 35.57 332 ⇑P P 12 58 01.5 +1.1
baz=36
F19A **Roth Farm, Mol** 35.70 333 ⇑P P 12 58 02.4 +1.0
baz=36
C23A **Lambert** 35.79 338 ⇓P P 12 58 03.1 +1.1
baz=36
F18A **Big Timber** 36.09 332 ⇓P P 12 58 05.7 +1.0
baz=36
E19A **Rath Farm, Rou** 36.11 334 ⇑P P 12 58 06.0 +1.2
baz=36
NVAR **Mina Array Bea** 36.17 315 P P 12 58 08.2 +2.5
NVAR PcP PcP 13 00 32.1 +0.9
NVAR **Mina Array Bea** 36.17 315 P P 12 58 08.2 +2.5
comp=Z,3.9nm,1.0s,baz=122,slow=8.1,SNR=16
NVAR PcP PcP 13 00 32.1 +0.9
comp=Z,1.1nm,0.8s,baz=121,slow=3.9,SNR=4.5
PTRM **Twissleman Ran** 36.23 310 eP P 12 58 07.9 +1.8
B23A **Brockton** 36.28 339 ⇓P P 12 58 07.9 +1.6
baz=36
D20A **Manuel Ranch,** 36.33 335 ⇑P P 12 58 08.2 +1.5
baz=36
A24A **Westby** 36.35 340 ⇓P P 12 58 08.5 +1.6
baz=36
LPAZ **La Paz** 36.35 149 P P 12 58 07.9 +0.1
LPAZ **La Paz** 36.35 149 P P 12 58 07.9 +0.1
comp=Z,1.5nm,0.8s,baz=327,slow=9.6,SNR=4.0
LPAZ LR LR 13 13 12.4
comp=Z,101nm,20.1s,baz=118,slow=37
B22A **Reddig Ranch S** 36.50 338 ⇑P P 12 58 09.2 +1.0
baz=37
I14A **Mackay** 36.50 327 ⇓P P 12 58 09.3 +0.9
baz=37
BMN **Battle Mountai** 36.53 319 eP P 12 58 11.1 +2.4
comp=Z,14nm,1.0s
J13A **Cove Ranch, Pi** 36.54 325 ⇓P P 12 58 09.2 +0.6
baz=37,SNR=6.6
H15A **Lima** 36.55 328 ⇓P P 12 58 10.2 +1.3
baz=37
G16A **Moss Hill, Enn** 36.57 329 ⇓P P 12 58 10.1 +1.2
baz=37
HLID **Hailey** 36.78 325 eP P 12 58 12.0 +1.3
comp=Z,7.3nm,1.3s
HLID **Hailey** 36.78 325 ⇓P P 12 58 11.1 +0.4
baz=37,SNR=9.3
C20A **Veseth Ranch,** 36.78 336 ⇓P P 12 58 12.0 +1.5
baz=37
BOZ **Bozeman (W)** 36.79 330 eP P 12 58 11.8 +1.0
comp=Z,4.7nm,1.1s
MCMT **McKenzie Canyo** 36.80 328 eP P 12 58 13.6 +2.5
comp=Z,5.5nm,1.1s
I13A **Wildhorse Cree** 36.85 326 ⇓P P 12 58 12.4 +1.0
baz=37,SNR=9.9
G15A **Dillon** 36.86 329 ⇓P P 12 58 12.3 +0.9
baz=37
F16A **Kennard Place,** 36.89 330 ⇓P P 12 58 12.7 +1.1
baz=37
H14A **Leadore** 36.92 327 ⇑P P 12 58 12.8 +0.8
baz=37
E17A **Martinsdale** 37.03 332 ⇓P P 12 58 13.8 +1.0
baz=37
DLMT **Dillon** 37.05 329 eP P 12 58 15.1 +2.0
comp=Z,5.3nm,0.9s
C19A **Slack Wire Ran** 37.22 335 ⇓P P 12 58 15.6 +1.3
baz=37
LRM **Limekiln Ridge** 37.31 330 eP P 12 58 16.7 +1.4
I12A **Atlanta** 37.32 325 ⇓P P 12 58 16.4 +1.0
baz=38
F15A **Butte** 37.34 330 ⇑P P 12 58 16.3 +0.7
baz=38,SNR=9.4
E16A **East Helena** 37.46 331 ⇑P P 12 58 17.2 +0.8
baz=38
MFID **Camas Ranch** 37.47 324 eP P 12 58 19.8 +3.3
comp=Z,8.0nm,1.0s
D17A **Six Diamond Ra** 37.47 333 ⇓P P 12 58 17.5 +0.9
baz=38
H12A **Diamond D Ranc** 37.66 326 ⇓P P 12 58 18.9 +0.7
baz=38
G13A **Cobalt** 37.70 327 ⇑P P 12 58 19.3 +0.7
baz=38
D16A **Dana Ranch, Ca** 37.77 332 ⇑P P 12 58 19.9 +0.9
baz=38
E15A **Deer Lodge** 37.84 330 ⇓P P 12 58 20.1 +0.5
baz=38
C17A **Wharram Farm,** 37.87 333 ⇑P P 12 58 21.0 +1.1
baz=38
G12A **Big Creek, Yel** 38.30 327 ⇓P P 12 58 24.3 +0.7
baz=38
C16A **Fuhringer Ranc** 38.43 332 ⇓P P 12 58 25.5 +0.9
baz=39
CHMT **Chamberlain Mo** 38.48 330 eP P 12 58 26.7 +1.6

A18A **Metzger Ranch,** 38.48 335 ⇓P P 12 58 26.0 +1.1
baz=39
WVOR **Wild Horse Val** 38.54 321 eP P 12 58 27.2 +1.6
comp=Z,16nm,1.1s
E13A **Victor** 38.60 329 ⇑P P 12 58 26.9 +0.8
baz=39
F12A **Elk City** 38.68 327 ⇓P P 12 58 27.2 +0.5
baz=39,SNR=10
D14A **Greenough** 38.72 330 ⇑P P 12 58 27.9 +0.8
baz=39
MSO **Missoula** 38.75 330 eP P 12 58 29.5 +2.2
comp=Z,8.3nm,1.4s
MSO **Missoula** 38.75 330 P P 12 58 28.4 +1.1
baz=39
C15A **Salmond Ranch,** 38.80 332 ⇓P P 12 58 28.7 +1.0
baz=39
A17A **Triple J Farms** 38.85 334 ⇓P P 12 58 29.5 +1.4
baz=39
B15A **Bradely Ranch,** 39.18 332 ⇓P P 12 58 31.8 +0.9
baz=39
D13A **Huson** 39.19 330 ⇑P P 12 58 31.9 +1.0
baz=39
BMO **Blue Mountains** 39.20 325 eP P 12 58 31.4 +0.3
comp=Z,9.1nm,1.3s
D12A **Red Ives Fores** 39.61 329 ⇓P P 12 58 35.1 +0.7
baz=40
C13A **Hot Springs** 39.66 330 ⇓P P 12 58 35.4 +0.6
baz=40
A15A **Johnson Ranch,** 39.75 333 ⇓P P 12 58 36.3 +0.7
baz=40
A14A **Double T Ranch** 40.05 332 ⇓P P 12 58 39.4 +1.2
baz=40
SIV **San Ignacio** 40.05 140 P P 12 58 37.6 -0.8
SIV **San Ignacio** 40.05 140 P P 12 58 37.6 -0.8
comp=Z,16nm,0.9s,baz=321,slow=9.5,SNR=36
LVC **Limon Verde** 41.55 155 eP P 12 58 52.1 +1.2
SCHQ **Schefferville** 42.15 17 P P 12 58 56.8 +1.6
SCHQ **Schefferville** 42.15 17 P P 12 58 56.8 +1.6
comp=Z,7.2nm,0.9s,baz=206,slow=6.3,SNR=9.2
LON **Longmire** 42.86 324 eP P 12 59 02.1 +0.9
comp=Z,8.3nm,1.2s
LCO **Las Campanas** 46.75 161 eP P 12 59 33.7 +1.1
comp=Z,11nm,0.8s
BDFB **Brasilia** 48.95 127 LR LR 13 18 55.6
comp=Z,87nm,20.4s,baz=0.4,slow=34
CFAA **Coronel Fontan** 49.94 160 P P 12 59 56.9 0.0
CFAA **Coronel Fontan** 49.94 160 P P 12 59 56.9 0.0
comp=Z,0.3nm,0.6s,baz=330,slow=7.5,SNR=5.6
YKA **Yellowknife Ar** 51.01 344 P P 13 00 04.3 -0.2
YKA PcP PcP 13 01 20.4 0.0
YKA **Yellowknife Ar** 51.01 344 P P 13 00 04.3 -0.2
comp=Z,7.2nm,1.0s,baz=137,slow=7.8,SNR=61
YKA PcP PcP 13 01 20.4 0.0
comp=Z,0.5nm,0.8s,baz=144,slow=5.4,SNR=4.4
PLCA **Paso Flores** 57.81 166 P P 13 00 54.0 -0.3
PLCA **Paso Flores** 57.81 166 P P 13 00 54.0 -0.3
comp=Z,6.9nm,1.0s,baz=339,slow=8.1,SNR=7.5
SUMG **Summit** 63.47 14 eP P 13 01 32.8 -0.1
comp=Z,22nm,1.2s
ILAR **Eielson Array** 63.70 335 P P 13 01 34.0 -0.1
ILAR **Eielson Array** 63.70 335 P P 13 01 34.0 -0.1
comp=Z,1.5nm,1.0s,baz=114,slow=5.2,SNR=15
ILAR LR LR 13 33 45.9
comp=Z,42nm,18.1s,baz=100,slow=40
TRF **Thorofare Moun** 64.69 334 eP P 13 01 40.4 -0.4
comp=Z,18nm,1.6s
ESDC **Sonseca Array** 74.61 53 P P 13 02 42.8 +0.4
ESDC **Sonseca Array** 74.61 53 P P 13 02 42.8 +0.4
comp=Z,2.1nm,0.8s,baz=289,slow=6.2,SNR=8.5
NOA **NORSAR Array B** 80.30 29 P P 13 03 14.8 +1.1
NOA **NORSAR Array B** 80.30 29 P P 13 03 14.8 +1.1
comp=Z,2.6nm,1.0s,baz=284,slow=5.4,SNR=3.0
TORD **Torodi Ar. Bea** 84.84 78 P P 13 03 37.1 -1.1
TORD **Torodi Ar. Bea** 84.84 78 P P 13 03 37.1 -1.1
comp=Z,1.3nm,1.0s,baz=302,slow=5.0,SNR=5.0
KHC **Kasperske Hory** 84.89 40 eP P 13 03 38.0 +0.1
GERES **GERESS Array B** 85.05 41 P P 13 03 38.7 -0.1
GERES **GERESS Array B** 85.05 41 P P 13 03 38.7 -0.1
comp=Z,1.0nm,0.8s,baz=318,slow=3.8,SNR=8.1
GERES LR LR 13 37 17.0
comp=Z,32nm,18.7s,baz=346,slow=33
KEST **Kesra** 85.73 54 LR LR 13 34 10.0
comp=Z,23nm,21.3s,baz=193,slow=30
DPC **Dobruska-Polom** 86.19 39 eP P 13 03 44.5 +0.1
CN2 **Changchun** 114.22 335 ePKP PKPdf 13 09 39.8 -2.8
TKM2 **Tokmak 2** 119.63 15 ePKPdf PKPdf 13 09 53.5 +0.1
WMQ **Urumqi** 120.78 5 ePKP PKPdf 13 09 52.0 -3.4
HHC **Hu-ho-hao-te** 121.55 344 ePKP PKPdf 13 09 56.5 -0.5
HHC PP PP 13 11 32.5 +4.9
HHC PKS PKSdf 13 13 32.0 -1.8
HHC SKS SKSdf 13 17 07.0 -2.1
HHC SKKS SKKSac 13 18 23.8 -4.6
HHC SS SS 13 28 04.0 +2.0
HHC AMB AMB
comp=Z,140nm,12.0s
HHC LR LR
comp=N,140nm,19.8s
HHC LR LR
comp=E,180nm,20.0s
HHC LR LR
comp=Z,160nm,21.0s
LZH **Lanzhou** 127.83 349 ePKP PKPdf 13 10 07.5 -1.8
LZH sPKP 13 10 12.0
CD2 **Chengdu** 132.88 348 PKP PKPdf 13 10 18.5 -0.3
GYA **Guiyang** 136.44 343 ePdif Pdif 13 07 30.0 -0.9
GYA PKP PKPdf 13 10 25.5 -0.2
GYA PP PP 13 13 10.5 +5.4
GYA AMB AMB
comp=Z,90nm,7.6s
KMI **Kunming** 138.69 347 PKP PKPdf 13 10 30.0 0.0
WRA **Warramunga Arr** 140.94 257 PKP PKPdf 13 10 33.7 -0.2
WRA **Warramunga Arr** 140.94 257 PKP PKPdf 13 10 33.7 -0.2
comp=Z,2.5nm,0.9s,baz=93,slow=2.0,SNR=3.4
CMAR **Chiang Mai Arr** 145.89 351 PKPbc PKPdf 13 10 43.0 +0.3
CMAR **Chiang Mai Arr** 145.89 351 PKPbc PKPdf 13 10 43.0 +0.3
comp=Z,7.1nm,0.9s,baz=343,slow=4.0,SNR=32

ISCJB ***29*** *12:57:53.9±1.9, 6.˚10S±0.˚04×142.˚04E±0.˚04, h5km±12km, mb4.5/26, MS3.8/6, Error ellipse: s-maj=7.6km s-min=6.1km az=155.4*
IDC ***29*** *12:57:54.1±0.6, 6.˚15S×142.˚53E, h0km, mb4.2/15, mb1 4.3/17, mb1mx4.3/18, mbtmp4.2/17, ML3.7/2, MS3.9/7, Ms1 3.9/7, ms1mx3.4/18, Error ellipse: s-maj=23.8km s-min=13.5km az=84.0*
AUST ***29*** *12:57:57.3, 6.˚34S×142.˚09E, h0km*
DJA ***29*** *12:57:58.2±0.7, 6.˚5S±3.˚4×142.˚2E±.˚1, h98km±8km, M4.9/14, mB5.2/5, mb4.6/14, MLv5.2/2, Mw(mB)4.6/5*
NEIC ***29*** *12:57:59.4±0.4, 6.˚24S×142.˚44E, h35km, mb5.1/12, Error ellipse: s-maj=14.0km s-min=8.8km az=93.0*
ISC 29 12:57:58.3±0.5, 6.˚16S±0.˚04×142.˚30E±0.˚05, h28km, n85,
σ2s 12/74, mb4.5/25, MS3.9/6, New Guinea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MMPI	**Merauke**	**2.98**	**220**	P	P		Pb	12 58 55.6	+5.0
MMPI				S	S		**Sb**	**12 59 30.7**	**+4.1**
MMPI	**Merauke**	**2.98**	**220**	P	P		**Pb**	**12 58 51.1**	**+0.5**
baz=2.7,SNR=6.5									
JAY	**Jayapura**	**3.95**	**336**	P	Pn			12 59 00.7	+3.6
JAY				S	Sn			12 59 34.5	-8.1
JAY	**Jayapura**	**3.95**	**336**	P	**Pn**			**12 58 59.6**	**+2.4**
baz=4.1,SNR=6.5									
JAY				S			**Sb**	**12 59 55.2**	**+0.5**
baz=4.1,SNR=3.5									
PMG	**Port Moresby**	**5.80**	**124**	ePn	Pn			12 59 17.8	-4.6
PMG				Sn	**Sn**			**13 00 25.0**	**-3.1**
PMG	**Port Moresby**	**5.80**	**124**	P	**Pn**			**12 59 20.4**	**-2.1**
PMG	**Port Moresby**	**5.80**	**124**	Pn	**Pn**			**12 59 21.0**	**-1.5**
3.9nm,0.3s,baz=304,slow=11,SNR=13									
PMG				Sn			**Sn**	**13 00 25.0**	**-3.1**
2.5nm,0.3s,baz=115,slow=18,SNR=3.2									
SRPI	**Serui, Papua**	**7.39**	**305**	P	Pn			12 59 40.3	-4.1
122nm,0.4s,11μm1.3nm									
COEN	**Coen**	**7.80**	**174**	ePn	Pn			12 59 53.6	+3.6
COEN	**Coen**	**7.80**	**174**	P	**Pn**			**12 59 51.4**	**+1.5**
baz=7.7,SNR=4.7									
BAKI	**Biak**	**7.91**	**308**	P	Pn			12 59 47.2	-4.2
39nm,0.9s,0.2nm									
BAKI				S			**Sn**	**13 01 16.4**	**-3.6**
39nm,0.9s,0.2nm									
RKPI	**Ransiki, Papua**	**9.32**	**299**	P	**Pn**			**13 00 08.5**	**-2.4**
32nm,0.9s,4μm									
FAKI	**Fak Fak**	**10.52**	**287**	P	**Pn**			**13 00 26.3**	**-1.0**
29nm,0.9s									
FAKI	**Fak Fak**	**10.52**	**287**	P	**Pn**			**13 00 27.7**	**+0.4**
baz=10,SNR=4.5									
FAKI				S	**Sn**			**13 02 22.9**	**-1.4**
baz=10,SNR=3.4									
KDU	**Kakadu**	**11.66**	**235**	P	**Pn**			**13 00 42.5**	**-0.4**
baz=11,SNR=7.5									
MTSU	**Mount Surprise**	**12.06**	**171**	P	**Pn**			**13 00 51.4**	**+2.9**
baz=12,SNR=3.8									
SWI	**Sorong**	**12.20**	**295**	P	**Pn**			**13 00 47.8**	**-2.6**
37nm,0.7s									
MTN	**Manton Dam**	**12.85**	**238**	P	**Pn**			**13 00 58.4**	**-0.9**
baz=13,SNR=21									
MSAI	**Masohi**	**13.61**	**281**	P	Pn			13 01 13.8	+4.2
CTA	**Charters Tower**	**14.37**	**165**	Pn	Pn			13 01 22.9	+2.9
CTA				Lg	Lg			13 05 28.1	
CTA	**Charters Tower**	**14.37**	**165**	Pn	Pn			13 01 22.9	+2.9
0.2nm,0.3s,baz=351,slow=12,SNR=3.0									
CTA				Lg	Lg			13 05 28.1	
0.3nm,0.3s,baz=240,slow=23,SNR=3.1									
WRAB	**Tennant Creek**	**15.72**	**209**	ePn	**Pn**			**13 01 35.6**	**-2.3**
76nm,1.4s									
WRA	**Warramunga Arr**	**15.73**	**209**	Pn	**Pn**			**13 01 35.4**	**-2.6**
WRA				Sn	Sn			13 04 22.9	-8.8
WRA				Lg	Lg			13 06 16.8	
WRA	**Warramunga Arr**	**15.73**	**209**	Pn	**Pn**			**13 01 35.4**	**-2.6**
0.7nm,0.3s,baz=29,slow=13,SNR=42									
WRA				Sn	Sn			13 04 22.9	-8.8
0.8nm,0.3s,baz=25,slow=23,SNR=6.6									
WRA				Lg	Lg			13 06 16.8	
0.8nm,0.3s,baz=30,slow=27,SNR=6.1									
KNRA	**Kununurra**	**16.30**	**233**	P	**Pn**			**13 01 43.3**	**-2.1**
baz=16,SNR=20									
MNI	**Manado**	**19.00**	**293**	P	P			13 02 09.2	-8.7
73nm,0.8s									
AS31	**Alice Springs**	**19.19**	**204**	eP	**Pn**			**13 02 20.8**	**-0.3**
ASAR	**Alice Springs**	**19.19**	**204**	P	**Pn**			**13 02 21.1**	**+0.1**
ASAR				Lg	Lg			13 08 10.3	
ASAR	**Alice Springs**	**19.19**	**204**	P	**Pn**			**13 02 21.1**	**+0.1**
1.7nm,0.3s,baz=33,slow=9.6,SNR=178									
ASAR				Lg	Lg			13 08 10.3	
0.2nm,0.3s,baz=18,slow=30,SNR=3.8									
ASAR				LR	LR			13 10 31.5	
comp=Z,1μm,18.3s,baz=29,slow=39									
MMRI	**Maumere**	**20.04**	**262**	P	**P**			**13 02 26.0**	**-3.4**
49nm,1.8s									
FITZ	**Fitzroy Crossi**	**20.13**	**232**	eP	Pn			13 02 31.6	-0.6
0.8nm,1.5s									
FITZ				eS	**S**			**13 06 08.8**	**-6.3**
FITZ				Lg	Lg			13 08 40.2	
FITZ	**Fitzroy Crossi**	**20.13**	**232**	P	Pn			13 02 31.6	-0.6
11nm,0.6s,baz=58,slow=10,SNR=34									
FITZ				S	**S**			**13 06 07.9**	**-7.1**
14nm,1.0s,baz=41,slow=23,SNR=4.6									
FITZ				Lg	Lg			13 08 40.2	
48nm,1.0s,baz=153,slow=14,SNR=4.6									
FITZ	**Fitzroy Crossi**	**20.13**	**232**	P	Pn			13 02 31.8	-0.4
baz=20,SNR=21									
QLP	**Quilpie**	**20.39**	**175**	P	Pn			13 02 35.3	+0.1
baz=20,SNR=12									
EIDS	**Eidsvold**	**20.87**	**157**	eP	**P**			**13 02 36.8**	**-1.4**
215nm,2.3s									
EIDS	**Eidsvold**	**20.87**	**157**	P	Pn			13 02 43.2	+2.4
baz=21,SNR=6.9									
RMQ	**Roma**	**21.13**	**164**	P	**P**			**13 02 42.9**	**+1.8**
baz=21,SNR=8.7									
BKSI	**Bulukumba**	**22.08**	**271**	P	**P**			**13 02 47.2**	**-4.1**
26nm,1.0s,392nm									
KAPI	**Kappang**	**22.47**	**272**	P	**P**			**13 02 56.9**	**+1.3**
KAPI	**Kappang**	**22.47**	**272**	P	**P**			**13 02 56.9**	**+1.3**
6.5nm,0.3s,baz=94,slow=12,SNR=5.3									
KAPI				LR	LR			13 13 17.6	
comp=Z,70nm,19.0s,baz=102,slow=41									
SPSI	**Sidrap Palu**	**22.54**	**274**	P	**P**			**13 02 51.6**	**-4.7**
32nm,2.1s,562nm									
TTSI	**Tana Toraja**	**22.61**	**277**	P	P			13 02 50.0	-7.1
CMSA	**Cobar Meteorol**	**25.45**	**173**	P	**P**			**13 03 26.4**	**+2.6**
baz=25,SNR=4.6									
STKA	**Stephens Creek**	**25.59**	**181**	P	**P**			**13 03 24.8**	**-0.4**
STKA	**Stephens Creek**	**25.59**	**181**	P	**P**			**13 03 24.8**	**-0.4**
6.2nm,0.9s,baz=333,slow=13,SNR=11									
STKA				LR	LR			13 14 43.2	
comp=Z,462nm,18.3s,baz=6.8,slow=39									
STKA	**Stephens Creek**	**25.59**	**181**	P	**P**			**13 03 27.1**	**+1.8**
baz=26,SNR=6.8									
MJAR	**Matsushiro Arr**	**42.65**	**355**	P	**P**			**13 05 51.1**	**-1.3**
MJAR	**Matsushiro Arr**	**42.65**	**355**	P	**P**			**13 05 51.1**	**-1.3**
2.7nm,0.9s,baz=174,slow=10.0,SNR=4.2									
MJAR				LR	LR			13 21 53.4	
comp=Z,87nm,18.4s,baz=210,slow=34									
KSAR	**Wonju Array Be**	**45.41**	**344**	P	**P**			**13 06 15.7**	**+1.1**
KSRS	**Korea Array**	**45.41**	**344**	P	**P**			**13 06 15.7**	**+1.1**
3.2nm,0.8s,baz=164,slow=9.3,SNR=9.6									
CMAR	**Chiang Mai Arr**	**49.25**	**301**	P	**P**			**13 06 47.3**	**+2.4**
CMAR	**Chiang Mai Arr**	**49.25**	**301**	P	**P**			**13 06 47.3**	**+2.4**
0.4nm,0.4s,baz=115,slow=6.1,SNR=3.1									
USRK	**Ussuriysk Arra**	**50.98**	**350**	P	**P**			**13 06 58.4**	**+1.0**
4.2nm,0.8s,baz=164,slow=7.9,SNR=7.7									
USRK				LR	LR			13 25 31.0	
comp=Z,98nm,20.9s,baz=306,slow=32									
PETK	**Petropavlovsk-**	**60.47**	**11**	P	**P**			**13 08 04.8**	**-0.6**
PETK	**Petropavlovsk-**	**60.47**	**11**	P	**P**			**13 08 04.8**	**-0.6**
5.9nm,0.8s,baz=186,slow=6.8,SNR=4.7									
ULN	**Ulaanbaatar**	**62.10**	**334**	eP	**P**			**13 08 19.0**	**+2.3**
29nm,2.1s									
SONM	**Songino Array**	**62.36**	**334**	P	**P**			**13 08 19.7**	**+1.2**
SONM	**Songino Array**	**62.36**	**334**	P	**P**			**13 08 19.7**	**+1.2**
0.8nm,1.0s,baz=142,slow=3.6,SNR=8.4									
VNDA	**Vanda**	**72.07**	**176**	P	**P**			**13 09 20.4**	**+1.0**
VNDA	**Vanda**	**72.07**	**176**	P	**P**			**13 09 20.4**	**+1.0**
0.7nm,0.7s,baz=355,slow=12,SNR=5.5									
VNDA				LR	LR			13 40 40.7	
comp=Z,80nm,19.0s,baz=341,slow=36									
SBA	**Scott Base**	**72.79**	**175**	eP	P			13 09 18.0	-5.7
120nm,2.7s									
MKAR	**Makanchi Array**	**74.69**	**322**	P	**P**			**13 09 37.0**	**+1.6**
MKAR	**Makanchi Array**	**74.69**	**322**	P	**P**			**13 09 37.0**	**+1.6**
1.3nm,0.7s,baz=116,slow=5.4,SNR=17									
ZALV	**Zalesovo Beam**	**76.70**	**329**	P	**P**			**13 09 47.0**	**+0.3**
ZALV	**Zalesovo Beam**	**76.70**	**329**	P	**P**			**13 09 47.0**	**+0.3**
0.3nm,0.3s,baz=125,slow=7.6,SNR=3.2									
MAW	**Mawson**	**80.31**	**202**	P	**P**			**13 10 06.5**	**+0.2**
MAW	**Mawson**	**80.31**	**202**	P	**P**			**13 10 06.5**	**+0.2**
1.5nm,0.6s,baz=315,slow=4.5,SNR=3.5									
QSPA	**South Pole Qui**	**83.81**	**180**	eP	**P**			**13 10 25.3**	**+0.3**
36nm,1.8s									
QSPA	**South Pole Qui**	**83.81**	**180**	P	**P**			**13 10 24.9**	**-0.1**
1.8nm,0.7s,baz=74,slow=1.4,SNR=12									
BRVK	**Borovoye**	**84.24**	**325**	eP	**P**			**13 10 29.2**	**+1.9**
4.8nm,0.7s									
PPLA	**Purkeypile**	**84.61**	**25**	eP	**P**			**13 10 29.7**	**+0.6**
33nm,1.7s									
PMR	**Palmer**	**85.41**	**27**	eP	**P**			**13 10 32.9**	**+0.1**
54nm,2.2s									
SML	**Sawmill**	**85.84**	**26**	eP	**P**			**13 10 35.0**	**-0.1**
1.7nm,0.9s									
MCK	**McKinley**	**86.29**	**25**	eP	**P**			**13 10 37.0**	**-0.3**
64nm,2.2s									
COLD	**Coldfoot**	**87.14**	**21**	eP	**P**			**13 10 42.7**	**+1.4**
12nm,1.5s									
ILAR	**Eielson Array**	**87.49**	**24**	P	**P**			**13 10 41.9**	**-1.2**
ILAR	**Eielson Array**	**87.49**	**24**	P	**P**			**13 10 41.9**	**-1.2**
2.6nm,0.8s,baz=255,slow=5.0,SNR=30									
ILAR				LR	LR			13 50 46.5	
comp=Z,43nm,18.6s,baz=253,slow=36									
DOT	**Dot Lake**	**88.30**	**25**	eP	**P**			**13 10 48.1**	**+1.0**
EGAK	**Eagle**	**89.84**	**25**	eP	**P**			**13 10 55.0**	**+0.9**
12nm,1.4s									
TORD	**Torodi Ar. Bea**	**140.58**	**283**	PKPpre	PKPpre			13 17 20.0	
TORD	**Torodi Ar. Bea**	**140.58**	**283**	PKhKP	PKPpre			13 17 20.0	
0.7nm,0.9s,baz=61,slow=2.7,SNR=2.4									
DBIC	**Dimbokro**	**147.36**	**273**	PKPbc	**PKPbc**			**13 17 41.3**	**+0.8**
DBIC	**Dimbokro**	**147.36**	**273**	PKPbc	**PKPbc**			**13 17 41.3**	**+0.8**
5.6nm,0.8s,baz=180,slow=4.0,SNR=5.1									
BDFB	**Brasilia**	**156.05**	**155**	PKPab	**PKPab**			**13 18 18.1**	**-0.3**
BDFB	**Brasilia**	**156.05**	**155**	PKPab	**PKPab**			**13 18 18.1**	**-0.3**
1.2nm,0.4s,baz=252,slow=3.2,SNR=3.5									

**IDC 29 13:00:49.6±1.5, 3.˚61S×126.˚79E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.8/22, mbtmp4.1/4, ML4

KAPI				Sn	Sn	13 03 52.3	-5.3	
	1.2nm,0.3s,baz=54,slow=19,SNR=2.4							
ASAR	**Alice Springs**	**21.09**	**162**	P	P	13 05 36.0	0.0	
	6.1nm,0.8s,baz=337,slow=9.8,SNR=9.2							
MKAR	**Makanchi Array**	**63.66**	**327**	P	P	13 11 23.5	+0.7	
	1.0nm,0.4s,baz=114,slow=8.3,SNR=7.0							
MKAR				PcP	PcP	13 11 58.7	-0.4	
	0.8nm,0.6s,baz=146,slow=4.3,SNR=3.9							
ZALV	**Zalesovo Beam**	**67.16**	**335**	P	P	13 11 44.6	-0.6	
	1.0nm,0.5s,baz=119,slow=5.1,SNR=4.8							

GUC 29 13:01:58.3±0.5, 23°69S × 67°27W, h248km±8km, ML3.9, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.85**	**305**	⇓*i*P	Pn	13 02 41.1	+1.4
LVC				*i*S	S	13 03 14.0	+1.9
PB04	**Plate Boundary**	**2.49**	**304**	⇑*i*P	Pn	13 02 53.0	+7.7
PB04				*i*S	S	13 03 34.5	+12
PB04				AML	AML	13 03 37.7	
	comp=N,58nm,0.1s						
CEN1	**Los Morros**	**2.71**	**276**	*e*P	Pn	13 02 51.0	+3.3
CEN1				*i*S	S	13 03 30.5	+3.9
CEN1				AML	AML	13 03 33.6	
	comp=N,59nm,0.2s						
ANCH	**Antofagasta**	**2.88**	**269**	⇓*i*P	Pn	13 02 51.4	+2.1
ANCH				*i*S	S	13 03 31.3	+1.6
PB01	**Plate Boundary**	**3.34**	**322**	⇑*i*P	Pn	13 02 56.7	+2.2
PB01				*e*S	S	13 03 41.4	+2.3
PB01				AML	AML	13 03 44.9	
	comp=N,44nm,0.3s						
MNMC	**Minimini**	**5.02**	**334**	*e*P	Pn	13 03 17.6	+2.8
MNMC				*e*S	S	13 04 18.7	+3.1
MNMC				AML	AML	13 04 22.2	
	comp=E,68nm,0.4s						

IDC 29 13:20:11.8±2.3, 4°16S × 129°88E, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.4/21, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=110.9km s-min=28.6km az=74.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.46**	**196**	Pn	Pn	13 23 37.5	-0.4
	0.1nm,0.3s,baz=11,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**16.28**	**165**	Pn	Pn	13 23 60.0	-2.0
	0.0nm,0.3s,baz=348,slow=13,SNR=3.2						
WRA				Sn	Sn	13 26 59.7	-3.6
	0.0nm,0.3s,baz=350,slow=24,SNR=3.3						
ASAR	**Alice Springs**	**19.77**	**169**	P	Pn	13 24 44.8	-0.4
	0.1nm,0.3s,baz=350,slow=11,SNR=8.2						
MKAR	**Makanchi Array**	**65.81**	**326**	P	P	13 30 58.9	0.0
	0.3nm,0.5s,baz=132,slow=6.4,SNR=4.2						

IDC 29 13:37:30.4±1.7, 1°61N × 127°43E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.4/22, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=101.7km s-min=22.7km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.66**	**185**	P	Pn	13 42 01.8	-0.6
	0.1nm,0.3s,baz=7.2,slow=12,SNR=3.4						
WRA	**Warramunga Arr**	**22.46**	**163**	P	P	13 42 31.3	0.0
	0.3nm,0.4s,baz=340,slow=10,SNR=12						
ASAR	**Alice Springs**	**25.90**	**166**	P	P	13 43 03.8	-0.5
	0.2nm,0.3s,baz=355,slow=8.4,SNR=4.8						
STKA	**Stephens Creek**	**35.91**	**159**	P	P	13 44 32.2	-0.3
	2.0nm,1.0s,baz=329,slow=5.9,SNR=3.2						
MKAR	**Makanchi Array**	**59.69**	**326**	P	P	13 47 36.9	+0.1
	0.1nm,0.4s,baz=114,slow=10,SNR=2.9						

IDC 29 13:57:01.2±0.8, 42°82S × 72°49W, h0km, mb4.0/8, mb1 4.2/9, mb1mx4.1/19, mbtmp4.0/9, ML4.1/1, MS2.9/1, Ms1 2.8/1, ms1mx2.4/23, Error ellipse: s-maj=32.2km s-min=13.1km az=111.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.54**	**35**	Pn	Pn	13 57 45.7	+1.9
	8.1nm,0.3s,baz=219,slow=16,SNR=78						
PLCA				Pg	Pb	13 57 47.9	+0.1
	8.1nm,0.3s,baz=223,slow=17,SNR=126						
PLCA				LR	LR	13 58 18.5	
	comp=Z,234nm,21.7s,baz=260,slow=30						
PLCA				Lg	Lg	13 58 22.6	
	49nm,0.3s,baz=118,slow=20,SNR=23						
SIV	**San Ignacio**	**28.47**	**24**	P	P	14 02 57.1	-0.9
	1.0nm,0.8s,baz=237,slow=17,SNR=4.0						
SNAA	**Sanae**	**43.66**	**155**	P	P	14 05 07.4	+0.2
	2.2nm,1.2s,baz=289,slow=5.8,SNR=4.2						
QSPA	**South Pole Qui**	**47.43**	**180**	P	P	14 05 37.7	+0.5
	5.2nm,1.1s,baz=163,slow=5.7,SNR=7.5						
VNDA	**Vanda**	**55.41**	**192**	P	P	14 06 37.7	+1.1
	2.7nm,1.1s,baz=139,slow=7.2,SNR=4.5						
MAW	**Mawson**	**64.85**	**163**	P	P	14 07 40.4	-1.0
	1.5nm,0.7s,baz=240,slow=8.1,SNR=3.4						
TXAR	**Lajitas Array**	**77.32**	**332**	P	P	14 08 57.5	-0.1
	0.5nm,0.7s,baz=144,slow=6.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**87.58**	**70**	P	P	14 09 50.4	-0.9
	0.5nm,0.8s,baz=214,slow=4.7,SNR=3.2						
PDAR	**Pinedale Array**	**91.48**	**334**	P	P	14 10 08.9	-0.4
	0.4nm,0.4s,baz=140,slow=5.8,SNR=4.8						
ILAR	**Eielson Array**	**121.81**	**331**	PKP	PKPdf	14 15 56.2	+0.3
	0.3nm,0.8s,baz=157,slow=2.0,SNR=4.7						
MKAR	**Makanchi Array**	**161.70**	**69**	PKPab	PKPab	14 17 48.2	-0.6
	0.4nm,0.7s,baz=256,slow=3.6,SNR=5.1						

*ISCJB **29** 13:57:54.7±0.3, 39°.00N±0°.02 × 22°.29E±0°.02, h11km±2km, Error ellipse: s-maj=2.9km s-min=2.6km az=137.8*
*THE **29** 13:57:54.8, 39°.00N × 22°.28E, h9km, ML3.1/9, Error ellipse: s-maj=0.9km s-min=0.5km az=162.0*
*CSEM **29** 13:57:54.5±0.1, 39°.01N × 22°.29E, h8km, MD2.8, Error ellipse: s-maj=2.5km s-min=2.1km az=108.0*
*ATH **29** 13:57:54.4, 39°.01N × 22°.32E, h20km, MD2.8/15*

ISC 29 13:57:54.9±0.8, 39°.01N±0°.01 × 22°.29E±0°.01, h13km±4km, n101, σ0°66/155, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGG	**Agios Georgios**	**0.03**	**73**	P	**Pg**	**13 57 57.2**	**-0.2**
AGG				S	**Sg**	**13 57 58.3**	**-0.8**
AGG	**Agios Georgios**	**0.03**	**73**	*e*PB	**Pg**	**13 57 57.4**	**0.0**
AGG				*e*SB	**Sg**	**13 58 00.8**	**+1.7**
AGG	**Agios Georgios**	**0.03**	**73**	P	**Pg**	**13 57 57.2**	**-0.2**
AGG				S	**Sg**	**13 57 58.3**	**-0.8**
MAKR	**Makrakomi, Fth**	**0.12**	**270**	P	**Pg**	**13 57 58.1**	**-0.2**
MAKR				S	**Sg**	**13 57 59.6**	**-1.0**
MAKR	**Makrakomi, Fth**	**0.12**	**270**	P	**Pg**	**13 57 58.1**	**-0.2**
MAKR				S	**Sg**	**13 57 59.6**	**-1.0**
AXAR	**Agios Charalam**	**0.38**	**130**	P	**Pg**	**13 58 02.5**	**0.0**
AXAR				S	**Sg**	**13 58 08.1**	**+0.4**
AXAR	**Agios Charalam**	**0.38**	**130**	P	**Pg**	**13 58 02.5**	**0.0**
AXAR				S	**Sg**	**13 58 08.1**	**+0.4**
EVR	**Evrytania**	**0.39**	**256**	P	**Pg**	**13 58 02.2**	**-0.5**
EVR				S	**Sg**	**13 58 07.6**	**-0.4**
EVR	**Evrytania**	**0.39**	**256**	*e*PB	**Pg**	**13 58 03.3**	**-0.3**
EVR				*e*SB	**Sb**	**13 58 09.7**	**+0.2**
EVR	**Evrytania**	**0.39**	**256**	P	**Pg**	**13 58 02.2**	**-0.5**
EVR	**Evrytania**	**0.39**	**256**	*e*Pb	**Pb**	**13 58 03.3**	**-0.3**
EVR				S	**Sg**	**13 58 07.6**	**-0.4**
THL	**Klokotos Trika**	**0.59**	**339**	P	**Pg**	**13 58 05.7**	**-0.8**
THL				S	**Sb**	**13 58 14.9**	**-0.4**
THL	**Klokotos Trika**	**0.59**	**339**	*e*PB	**Pg**	**13 58 05.7**	**-0.8**
THL				*e*SN	**Sb**	**13 58 15.0**	**-0.4**
THL	**Klokotos Trika**	**0.59**	**339**	P	**Pg**	**13 58 05.7**	**-0.8**
THL				S	**Sb**	**13 58 14.9**	**-0.4**
DSF	**Desfina**	**0.63**	**163**	P	**Pg**	**13 58 06.0**	**-1.2**
DSF				S	**Sg**	**13 58 14.9**	**-0.6**
DSF	**Desfina**	**0.63**	**163**	P	**Pg**	**13 58 06.0**	**-1.2**
DSF				S	**Sg**	**13 58 14.9**	**-0.6**
KALE	**Kalithea**	**0.63**	**191**	P	**Pg**	**13 58 06.1**	**-1.1**
KALE				S	**Sb**	**13 58 16.3**	**-0.2**
KALE	**Kalithea**	**0.63**	**191**	*e*PB	**Pg**	**13 58 06.4**	**-0.8**
KALE				*e*SN	**Sb**	**13 58 16.5**	**0.0**
KALE	**Kalithea**	**0.63**	**191**	P	**Pg**	**13 58 06.1**	**-1.1**
KALE	**Kalithea**	**0.63**	**191**	*e*Pb	**Pg**	**13 58 06.4**	**-0.8**
KALE				S	**Sb**	**13 58 16.3**	**-0.2**
ATAL	**Atalanti**	**0.66**	**119**	P	**Pg**	**13 58 07.1**	**-0.6**
ATAL				S	**Sb**	**13 58 16.7**	**-0.4**
ATAL	**Atalanti**	**0.66**	**119**	P	**Pg**	**13 58 07.1**	**-0.6**
ATAL				S	**Sb**	**13 58 16.7**	**-0.4**
EFP	**Efpalio**	**0.66**	**207**	P	**Pg**	**13 58 06.8**	**-0.9**
EFP				S	**Sg**	**13 58 16.1**	**-0.3**
EFP	**Efpalio**	**0.66**	**207**	*e*PB	**Pg**	**13 58 07.0**	**-0.7**
EFP				*e*SN	**Sb**	**13 58 17.0**	**-0.2**
EFP	**Efpalio**	**0.66**	**207**	*e*Pb	**Pg**	**13 58 07.0**	**-0.7**
EFP				S	**Sg**	**13 58 16.1**	**-0.3**
EFP				*e*Sn	**Sb**	**13 58 17.0**	**-0.2**
LKR	**Lokris**	**0.66**	**123**	P	**Pg**	**13 58 06.9**	**-0.9**
LKR				S	**Sb**	**13 58 16.8**	**-0.5**
LKR	**Lokris**	**0.66**	**123**	*e*PN	**Pg**	**13 58 07.1**	**-0.7**
LKR				*e*SN	**Sg**	**13 58 16.3**	**-0.2**
LKR	**Lokris**	**0.66**	**123**	P	**Pg**	**13 58 06.9**	**-0.9**
LKR				*e*Sn	**Sg**	**13 58 16.3**	**-0.2**
LKR				S	**Sb**	**13 58 16.8**	**-0.5**
TRIZ	**Trizonia**	**0.67**	**195**	P	**Pg**	**13 58 06.8**	**-1.1**
TRIZ				S	**Sg**	**13 58 16.2**	**-0.5**
TRIZ	**Trizonia**	**0.67**	**195**	*e*PB	**Pg**	**13 58 07.1**	**-0.8**
TRIZ				*e*SN	**Sg**	**13 58 16.6**	**-0.1**
TRIZ	**Trizonia**	**0.67**	**195**	P	**Pg**	**13 58 06.8**	**-1.1**
TRIZ	**Trizonia**	**0.67**	**195**	*e*Pb	**Pg**	**13 58 07.1**	**-0.8**
TRIZ				S	**Sg**	**13 58 16.2**	**-0.5**
TRIZ				*e*Sn	**Sg**	**13 58 16.6**	**-0.1**
SMIA	**Simia**	**0.73**	**100**	P	**Pg**	**13 58 08.8**	**-0.3**
SMIA				S	**Sb**	**13 58 19.3**	**0.0**
SMIA	**Simia**	**0.73**	**100**	P	**Pg**	**13 58 08.8**	**-0.3**
SMIA				S	**Sb**	**13 58 19.3**	**0.0**
NEO	**Neokhori**	**0.78**	**68**	P	**Pb**	**13 58 10.2**	**-0.2**
NEO	**Neokhori**	**0.78**	**68**	*e*PN	**Pg**	**13 58 09.2**	**-0.9**
NEO				*e*SN	**Sg**	**13 58 20.1**	**-0.3**
NEO	**Neokhori**	**0.78**	**68**	P	**Pb**	**13 58 10.2**	**-0.2**
NEO				*e*Sn	**Sg**	**13 58 20.1**	**-0.3**
XOR	**Xorichti**	**0.79**	**63**	P	**Pg**	**13 58 09.8**	**-0.3**
XOR				S	**Sb**	**13 58 21.6**	**+0.6**
XOR	**Xorichti**	**0.79**	**63**	P	**Pg**	**13 58 09.8**	**-0.3**
XOR				S	**Sb**	**13 58 21.6**	**+0.6**
LAKA	**Lakka**	**0.81**	**198**	P	**Pg**	**13 58 10.3**	**-0.3**
LAKA				S	**Sb**	**13 58 21.5**	**-0.1**
LAKA	**Lakka**	**0.81**	**198**	*e*PB	**Pg**	**13 58 09.7**	**-0.9**
LAKA				*e*SN	**Sb**	**13 58 22.1**	**+0.5**
LAKA	**Lakka**	**0.81**	**198**	*e*Pb	**Pg**	**13 58 09.7**	**-0.9**
LAKA	**Lakka**	**0.81**	**198**	P	**Pg**	**13 58 10.3**	**-0.3**
LAKA				S	**Sb**	**13 58 21.5**	**-0.1**
LAKA				*e*Sn	**Sb**	**13 58 22.1**	**+0.5**
SKIA	**Skiathos**	**0.93**	**80**	P	**Pb**	**13 58 12.7**	**-0.1**
SKIA				S	**Sb**	**13 58 26.0**	**+0.9**
SKIA	**Skiathos**	**0.93**	**80**	P	**Pb**	**13 58 12.7**	**-0.1**
SKIA				S	**Sb**	**13 58 26.0**	**+0.9**
THAL	**Thalero**	**1.02**	**163**	P	**Pg**	**13 58 13.8**	**-0.7**
THAL	**Thalero**	**1.02**	**163**	P	**Pg**	**13 58 13.8**	**-0.7**
GUR	**Goura**	**1.07**	**178**	P	**Pb**	**13 58 15.4**	**0.0**
GUR				S	**Sb**	**13 58 30.2**	**+0.8**
GUR	**Goura**	**1.07**	**178**	*e*PN	**Pg**	**13 58 15.0**	**-0.6**
GUR	**Goura**	**1.07**	**178**	*e*Pn	**Pg**	**13 58 15.0**	**-0.6**
GUR	**Goura**	**1.07**	**178**	P	**Pb**	**13 58 15.4**	**0.0**
GUR				S	**Sb**	**13 58 30.2**	**+0.8**
LTK	**Loutraki**	**1.12**	**152**	P	**Pb**	**13 58 15.7**	**-0.4**
LTK				S	**Sn**	**13 58 32.4**	**+0.9**
LTK	**Loutraki**	**1.12**	**152**	*e*PN	**Pb**	**13 58 16.0**	**-0.1**
LTK	**Loutraki**	**1.12**	**152**	P	**Pb**	**13 58 15.7**	**-0.4**
LTK	**Loutraki**	**1.12**	**152**	*e*Pn	**Pb**	**13 58 16.0**	**-0.1**
LTK				S	**Sn**	**13 58 32.4**	**+0.9**
RLS	**Riolos of Patr**	**1.15**	**214**	P	**Pb**	**13 58 16.1**	**-0.5**
RLS	**Riolos of Patr**	**1.15**	**214**	*e*PN	**Pb**	**13 58 16.1**	**-0.5**
RLS				*e*SN	**Sn**	**13 58 32.7**	**+0.5**
RLS	**Riolos of Patr**	**1.15**	**214**	P	**Pb**	**13 58 16.1**	**-0.5**
RLS				*e*Sn	**Sn**	**13 58 32.7**	**+0.5**
AOS	**Alonnisos**	**1.25**	**82**	P	**Pn**	**13 58 17.0**	**-1.0**
AOS	**Alonnisos**	**1.25**	**82**	P	**Pn**	**13 58 17.0**	**-1.0**
JAN	**Janina**	**1.29**	**300**	P	**Pb**	**13 58 19.0**	**0.0**
JAN				S	**Sn**	**13 58 36.0**	**+0.3**
JAN	**Janina**	**1.29**	**300**	*e*PN	**Pg**	**13 58 19.2**	**-0.5**
JAN	**Janina**	**1.29**	**300**	P	**Pb**	**13 58 19.0**	**0.0**
JAN				S	**Sn**	**13 58 36.0**	**+0.3**
LKD2	**Lefkada island**	**1.29**	**261**	*e*PN	**Pg**	**13 58 19.8**	**0.0**
LKD2	**Lefkada island**	**1.29**	**261**	*e*Pn	**Pg**	**13 58 19.8**	**0.0**
KZN	**Kozani**	**1.35**	**343**	P	**Pn**	**13 58 19.2**	**-0.3**
KZN	**Kozani**	**1.35**	**343**	*e*PN	**Pb**	**13 58 20.3**	**+0.2**
KZN				*e*SN	**Sg**	**13 58 39.3**	**+0.7**
KZN	**Kozani**	**1.35**	**343**	P	**Pn**	**13 58 19.2**	**-0.3**
KZN	**Kozani**	**1.35**	**343**	*e*Pn	**Pb**	**13 58 20.3**	**+0.2**
KZN				*e*Sn	**Sg**	**13 58 39.3**	**+0.7**
PAIG	**Paliouri**	**1.41**	**49**	P	**Pn**	**13 58 19.2**	**-1.0**
PAIG	**Paliouri**	**1.41**	**49**	P	**Pn**	**13 58 19.2**	**-1.0**
NAIG	**Nisos Aigina**	**1.57**	**143**	*e*PN	**Pn**	**13 58 22.4**	**0.0**
NAIG	**Nisos Aigina**	**1.57**	**143**	*e*Pn	**Pn**	**13 58 22.4**	**0.0**
VLS	**Valsamata**	**1.57**	**238**	*e*PN	**Pg**	**13 58 24.6**	**-0.5**
VLS	**Valsamata**	**1.57**	**238**	*e*Pn	**Pg**	**13 58 24.6**	**-0.5**
PLG	**Polygyros**	**1.63**	**33**	P	**Pn**	**13 58 22.4**	**-0.8**
PLG	**Polygyros**	**1.63**	**33**	*e*PN	**Pn**	**13 58 23.5**	**+0.3**
PLG	**Polygyros**	**1.63**	**33**	P	**Pn**	**13 58 22.4**	**-0.8**
PLG	**Polygyros**	**1.63**	**33**	*e*Pn	**Pn**	**13 58 23.5**	**+0.3**
VLX	**Vlachokerasia**	**1.64**	**178**	*e*PN	**Pn**	**13 58 24.2**	**+0.7**
VLX	**Vlachokerasia**	**1.64**	**178**	*e*Pn	**Pn**	**13 58 24.2**	**+0.7**
DID	**Didima**	**1.68**	**153**	P	**Pn**	**13 58 24.2**	**+0.3**
DID	**Didima**	**1.68**	**153**	*e*PN	**Pn**	**13 58 24.1**	**+0.2**
DID	**Didima**	**1.68**	**153**	P	**Pn**	**13 58 24.2**	**+0.3**
NEST	**Nestorio**	**1.70**	**326**	P	**Pn**	**13 58 24.5**	**+0.2**
NEST	**Nestorio**	**1.70**	**326**	P	**Pn**	**13 58 24.5**	**+0.2**
OUR	**Ouranopolis**	**1.86**	**44**	P	**Pn**	**13 58 25.8**	**-0.6**
OUR	**Ouranopolis**	**1.86**	**44**	P	**Pn**	**13 58 25.8**	**-0.6**
SOH	**Sokhos**	**1.98**	**24**	P	**Pn**	**13 58 27.6**	**-0.6**
SOH	**Sokhos**	**1.98**	**24**	*e*PN	**Pn**	**13 58 28.6**	**+0.4**
SOH	**Sokhos**	**1.98**	**24**	P	**Pn**	**13 58 27.6**	**-0.6**
SOH	**Sokhos**	**1.98**	**24**	*e*Pn	**Pn**	**13 58 28.6**	**+0.4**
DYR	**Agios Nikonas**	**2.25**	**179**	*e*PN	**Pn**	**13 58 33.3**	**+1.5**
DYR	**Agios Nikonas**	**2.25**	**179**	*e*Pn	**Pn**	**13 58 33.3**	**+1.5**
VLI	**Veliai**	**2.35**	**167**	*e*PN	**Pn**	**13 58 34.0**	**+0.9**
VLI	**Veliai**	**2.35**	**167**	*e*Pn	**Pn**	**13 58 34.0**	**+0.9**
NVR	**Nevrokopi**	**2.63**	**27**	*e*PN	**Pn**	**13 58 38.0**	**+1.0**
NVR	**Nevrokopi**	**2.63**	**27**	*e*Pn	**Pn**	**13 58 38.0**	**+1.0**
KYTH	**Kithira**	**2.79**	**168**	P	**Pn**	**13 58 40.6**	**+1.4**
KYTH	**Kithira**	**2.79**	**168**	*e*PN	**Pn**	**13 58 40.8**	**+1.6**
KYTH	**Kithira**	**2.79**	**168**	P	**Pn**	**13 58 40.6**	**+1.4**

IDC 29 13:58:23.3±3.5, 0°87S × 133°26E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/21, mbtmp3.6/3, Error ellipse: s-maj=190.4km s-min=28.8km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.99**	**177**	P	P	14 02 46.8	+0.2
	0.2nm,0.3s,baz=356,slow=12,SNR=2.5						
ASAR	**Alice Springs**	**22.67**	**178**	P	P	14 03 26.6	0.0
	0.8nm,0.5s,baz=1.9,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**65.05**	**324**	P	P	14 09 05.5	-0.1
	0.3nm,0.5s,baz=116,slow=6.2,SNR=4.0						

*ISCJB **29** 13:58:28.6±0.6, 38°.99N±0°.03 × 22°.27E±0°.04, h14km±4km, Error ellipse: s-maj=6.1km s-min=5.2km az=141.5*
*THE **29** 13:58:28.9, 38°.97N × 22°.29E, h10km±1km, ML2.9/4, Error ellipse: s-maj=1.8km s-min=0.6km az=346.0*
*CSEM **29** 13:58:28.9, 38°.97N × 22°.29E, h10km, ML2.9/4, After THE*

ISC 29 13:58:28.6±1.4, 38°.99N±0°.03 × 22°.28E±0°.03, h12km±7km, n26, σ0°34/40, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AGG	**Agios Georgios**	**0.06**	**50**	P	**Pg**	**13 58 31.0**	**-0.1**
AGG				S	**Sg**	**13 58 32.5**	**-0.4**
AGG	**Agios Georgios**	**0.06**	**50**	P	**Pg**	**13 58 31.0**	**-0.1**
AGG				S	**Sg**	**13 58 32.5**	**-0.4**
MAKR	**Makrakomi, Fth**	**0.12**	**283**	P	**Pg**	**13 58 31.7**	**-0.1**
MAKR				S	**Sg**	**13 58 34.5**	**+0.5**
MAKR	**Makrakomi, Fth**	**0.12**	**283**	P	**Pg**	**13 58 31.7**	**-0.1**
MAKR				S	**Sg**	**13 58 34.5**	**+0.5**
AXAR	**Agios Charalam**	**0.37**	**126**	P	**Pg**	**13 58 36.3**	**+0.2**
AXAR				S	**Sg**	**13 58 41.8**	**+0.8**
AXAR	**Agios Charalam**	**0.37**	**126**	P	**Pg**	**13 58 36.3**	**+0.2**
AXAR				S	**Sg**	**13 58 41.8**	**+0.8**
KALE	**Kalithea**	**0.60**	**190**	P	**Pg**	**13 58 40.2**	**-0.2**
KALE	**Kalithea**	**0.60**	**190**	P	**Pg**	**13 58 40.2**	**-0.2**
DSF	**Desfina**	**0.61**	**161**	P	**Pg**	**13 58 40.2**	**-0.3**
DSF				S	**Sg**	**13 58 48.3**	**-0.2**
DSF	**Desfina**	**0.61**	**161**	P	**Pg**	**13 58 40.2**	**-0.3**
DSF				S	**Sg**	**13 58 48.3**	**-0.2**
THL	**Klokotos Trika**	**0.61**	**341**	P	**Pg**	**13 58 40.3**	**-0.3**
THL	**Klokotos Trika**	**0.61**	**341**	P	**Pg**	**13 58 40.3**	**-0.3**
EFP	**Efpalio**	**0.63**	**208**	P	**Pg**	**13 58 40.6**	**-0.3**
EFP				S	**Sg**	**13 58 49.5**	**+0.3**
EFP	**Efpalio**	**0.63**	**208**	P	**Pg**	**13 58 40.6**	**-0.3**
EFP				S	**Sg**	**13 58 49.5**	**+0.3**
TRIZ	**Trizonia**	**0.64**	**194**	P	**Pg**	**13 58 40.6**	**-0.5**
TRIZ	**Trizonia**	**0.64**	**194**	P	**Pg**	**13 58 40.6**	**-0.5**
ATAL	**Atalanti**	**0.65**	**117**	P	**Pg**	**13 58 40.9**	**-0.4**
ATAL	**Atalanti**	**0.65**	**117**	P	**Pg**	**13 58 40.9**	**-0.4**
LKR	**Lokris**	**0.66**	**120**	P	**Pg**	**13 58 40.9**	**-0.5**
LKR				S	**Sg**	**13 58 50.2**	**+0.2**
LKR	**Lokris**	**0.66**	**120**	P	**Pg**	**13 58 40.9**	**-0.5**
LKR				S	**Sg**	**13 58 50.2**	**+0.2**
SMIA	**Simia**	**0.73**	**98**	P	**Pg**	**13 58 42.8**	**-0.1**
SMIA				S	**Sg**	**13 58 52.5**	**0.0**
SMIA	**Simia**	**0.73**	**98**	P	**Pg**	**13 58 42.8**	**-0.1**
SMIA				S	**Sg**	**13 58 52.5**	**0.0**
LAKA	**Lakka**	**0.78**	**197**	P	**Pg**	**13 58 43.9**	**+0.2**
LAKA	**Lakka**	**0.78**	**197**	P	**Pg**	**13 58 43.9**	**+0.2**
XOR	**Xorichti**	**0.81**	**62**	P	**Pg**	**13 58 44.4**	**+0.2**
XOR	**Xorichti**	**0.81**	**62**	P	**Pg**	**13 58 44.4**	**+0.2**

IDC 29 14:29:48.2±2.6, 19°58S × 68°98W, h78km±22km, mb3.7/4, mb1 3.7/7, mb1mx3.5/21, mbtmp3.5/7, MS3.1/5, Ms1 3.1/5, ms1mx2.9/28, Error ellipse: s-maj=36.4km s-min=22.2km az=102.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.37**	**14**	P	Pn	14 30 39.1	-0.2
	4.1nm,0.3s,baz=196,slow=6.8,SNR=42						
LPAZ				S	Sn	14 31 33.4	+15
	1.8nm,0.3s,baz=127,slow=20,SNR=1.5						
LPAZ				LR	LR	14 32 13.3	
	comp=Z,263nm,18.6s,baz=14,slow=43						
SIV	**San Ignacio**	**8.33**	**66**	P	Pn	14 31 45.9	-0.5
	0.8nm,0.3s,baz=272,slow=9.4,SNR=12						
SIV				LR	LR	14 35 19.3	
	comp=Z,47nm,21.8s,slow=40						
CFAA	**Coronel Fontan**	**11.99**	**177**	P	Pn	14 32 37.7	+1.5
	0.1nm,0.3s,baz=350,slow=11,SNR=2.6						
CFAA				S	Sn	14 34 54.6	+6.4
	0.0nm,0.3s,baz=142,slow=18,SNR=1.9						
ATAH	**Atahualpa**	**15.38**	**322**	LR	LR	14 39 15.0	
	comp=Z,79nm,20.4s,baz=118,slow=37						
PLCA	**Paso Flores**	**21.13**	**183**	P	P	14 34 25.6	-1.2
	2.5nm,0.9s,baz=4.7,slow=14,SNR=3.0						
PLCA				LR	LR	14 42 54.6	
	comp=Z,103nm,18.4s,baz=180,slow=37						
ROSC	**El Rosal**	**24.85**	**347**	LR	LR	14 45 41.5	
	comp=Z,62nm,20.5s,baz=184,slow=38						
DBIC	**Dimbokro**	**68.26**	**74**	P	P	14 40 42.0	+0.7
	2.3nm,0.6s,baz=233,slow=8.9,SNR=2.2						
TORD	**Torodi Ar. Bea**	**76.78**	**71**	P	P	14 41 31.2	-0.7
	0.5nm,0.4s,baz=241,slow=5.2,SNR=6.2						
YKA	**Yellowknife Ar**	**89.36**	**341**	P	P	14 42 35.3	-0.3
	0.9nm,0.7s,baz=133,slow=4.7,SNR=20						
ZALV	**Zalesovo Beam**	**140.24**	**24**	PKP	PKPdf	14 49 11.4	+3.6
	0.3nm,0.2s,baz=270,slow=2.9,SNR=2.6						
SONM	**Songino Array**	**151.56**	**7**	PKPbc	PKPbc	14 49 34.2	+0.5
	0.4nm,0.4s,baz=304,slow=2.6,SNR=4.3						

*ISCJB **29** 14:45:08.1±0.7, 30°.86S±

FUNA	Funafuti	10.14	325	ePn	Pn	14 50 56.6	-7.2		
RAO	Raoul Island	12.59	192	S	S	14 53 48.5	-5.0		
	49nm,0.3s,baz=87,slow=22,SNR=3.8								
RAR	Rarotonga	14.90	109	eP	P	14 51 58.8	-1.8		
RAR	Rarotonga	14.90	109	P	Pn	14 52 01.6	+0.1		
	1.5nm,0.3s,baz=42,slow=0.0,SNR=5.6								
DZM	Mont Dzumac	18.34	251	eP	P	14 52 38.7	+0.8		
	44nm,0.8s								
DZM	Mont Dzumac	18.34	251	eP	P	14 52 33.6	-4.3		
DZM	Mont Dzumac	18.34	251	P	P	14 52 36.3	-1.6		
DZM				S	S	14 55 54.8	+2.3		
DZM	Mont Dzumac	18.34	251	P	P	14 52 36.3	-1.6		
	1.6nm,0.3s,baz=81,slow=17,SNR=16								
DZM				S	S	14 55 54.8	+2.3		
	0.0nm,0.3s,baz=18,slow=20,SNR=3.4								
NFK	Norfolk Island	19.87	230	P	P	14 52 55.3	+1.2		
	baz=20,SNR=11								
OUZ	Omahuta	20.93	207	eP	P	14 53 01.8	-3.1		
	63nm,1.3s								
MXZ	Matakaoa Point	21.43	195	PN	P	14 53 09.8	+0.3		
MXZ				SN	S	14 56 50.3	+3.0		
PUZ	Puketiti	21.93	195	PN	P	14 53 15.2	+1.1		
PUZ				SN	S	14 56 59.1	+3.8		
MWZ	Matawai	22.36	196	PN	P	14 53 17.6	-0.5		
URZ	Urewera	22.40	197	eP	P	14 53 16.3	-2.0		
	86nm,0.5s								
URZ				S	S	14 57 03.6	+0.7		
URZ	Urewera	22.40	197	PN	P	14 53 17.7	-0.7		
URZ				SN	S	14 57 03.3	+0.3		
URZ	Urewera	22.40	197	P	P	14 53 17.6	-0.7		
	17nm,0.4s,baz=350,slow=5.1,SNR=27								
URZ				S	S	14 57 03.6	+0.7		
	11nm,0.7s,baz=90,slow=18,SNR=4.3								
KNZ	Kokohu	22.97	195	PN	P	14 53 26.7	+3.2		
BKZ	Black Stump Fm	23.42	197	PN	P	14 53 27.2	-0.5		
PAE	Paea	24.16	96	eP	P	14 53 35.3	+0.7		
	17nm,1.1s								
PPT2	Papeete2	24.17	95	eP	P	14 53 34.8	0.0		
	60nm,1.1s								
PPT	Papeete	24.17	95	P	P	14 53 35.5	+0.7		
PPT	Papeete	24.17	95	P	P	14 53 35.5	+0.7		
	56nm,0.9s,baz=204,slow=18,SNR=3.5								
TVO	Taravao	24.47	96	eP	P	14 53 38.4	+0.9		
	183nm,1.3s								
BFZ	Birch Farm	24.90	196	PN	P	14 53 40.7	-0.3		
QRZ	Quartz Range	26.20	202	PN	P	14 53 53.8	+1.2		
NNZ	Nelson	26.25	200	PN	P	14 53 51.9	-1.1		
THZ	Tophouse	26.90	200	PN	P	14 53 58.6	-0.3		
KHZ	Kahutara	27.28	199	eP	P	14 54 00.8	-1.4		
	117nm,1.7s								
RPZ	Rata Peaks	29.26	201	eP	P	14 54 17.2	-2.5		
	197nm,1.9s								
RPZ	Rata Peaks	29.26	201	P	P	14 54 18.6	-1.1		
	19nm,0.6s,baz=355,slow=1.5,SNR=21								
JCZ	Jackson Bay	30.41	204	PN	P	14 54 28.5	-1.4		
EIDS	Eidsvold	32.77	249	eP	P	14 54 48.6	-2.1		
	26nm,0.6s								
EIDS	Eidsvold	32.77	249	P	P	14 54 49.2	-1.4		
	baz=33,SNR=16								
ARMA	Armidale	33.35	240	eP	P	14 54 54.2	-1.6		
	21nm,0.6s								
ARMA	Armidale	33.35	240	P	P	14 54 55.9	+0.2		
	baz=33,SNR=41								
MGCD	Mangrove Creek	34.63	236	P	P	14 55 07.1	+0.7		
	baz=35,SNR=7.2								
RMQ	Roma	35.00	248	P	P	14 55 09.5	-0.2		
	baz=35,SNR=31								
CNB	Canberra Magne	36.71	233	P	P	14 55 24.4	+0.2		
	baz=37,SNR=8.7								
CTA	Charters Tower	36.94	259	P	P	14 55 24.8	-1.4		
CTA	Charters Tower	36.94	259	P	P	14 55 24.8	-1.4		
	7.3nm,0.5s,baz=94,slow=8.8,SNR=15								
CTAO	Charters Tower	36.94	259	eP	P	14 55 23.5	-2.7		
	9.9nm,0.7s								
YNG	Young	37.12	235	P	P	14 55 27.7	+0.2		
	baz=37,SNR=9.8								
PMG	Port Moresby	37.66	277	P	P	14 55 31.3	-1.0		
PMG	Port Moresby	37.66	277	P	P	14 55 31.3	-1.0		
	14nm,0.8s,baz=45,slow=5.7,SNR=2.6								
CMSA	Cobar Meteorol	38.57	240	P	P	14 55 39.3	-0.3		
	baz=39,SNR=67								
MTSU	Mount Surprise	38.88	262	P	P	14 55 41.1	-1.2		
	baz=39,SNR=12								
QLP	Quilpie	39.03	249	P	P	14 55 42.7	-0.8		
	baz=39,SNR=120								
WAKE	Wake Island	40.29	332	eP	P	14 55 53.5	-0.3		
	203nm,1.2s								
TOO	Toolangi	40.41	231	P	P	14 55 54.7	0.0		
	baz=40,SNR=23								
COEN	Coen	40.49	268	eP	P	14 55 55.6	0.0		
	138nm,1.0s								
COEN	Coen	40.49	268	P	P	14 55 55.5	0.0		
	baz=40,SNR=15								
KIP	Kipapa	41.53	24	eP	P	14 56 00.7	-3.2		
STKA	Stephens Creek	42.06	241	eP	P	14 56 05.8	-2.3		
	15nm,0.9s								
STKA				PcP	PcP	14 57 58.4	+1.2		
STKA	Stephens Creek	42.06	241	P	P	14 56 07.9	-0.2		
	60nm,0.8s,baz=90,slow=9.4,SNR=88								
STKA				PcP	PcP	14 57 58.4	+1.2		
	3.7nm,0.8s,baz=49,slow=7.2,SNR=3.5								
STKA	Stephens Creek	42.06	241	P	P	14 56 08.3	+0.3		
	baz=42,SNR=57								
ARPS	Mount Arapiles	42.95	234	P	P	14 56 14.7	-0.4		
	baz=43,SNR=10.0								
BBOO	Buckleboo	46.83	241	eP	P	14 56 44.9	-0.7		
	841nm,0.6s								
BBOO	Buckleboo	46.83	241	P	P	14 56 45.5	-0.2		
	baz=47,SNR=13								
WRAB	Tennant Creek	48.12	258	eP	P	14 56 51.2	-4.5		
WRA	Warramunga Arr	48.13	258	P	P	14 56 54.1	-1.6		
WRA				PcP	PcP	14 58 18.8	+0.3		
WRA				S	S	15 03 34.2	+1.6		
WRA	Warramunga Ar	48.13	258	P	P	14 56 54.1	-1.6		
	6.5nm,0.4s,baz=92,slow=7.1,SNR=232								
WRA				PcP	PcP	14 58 18.8	+0.3		
	8.6nm,0.8s,baz=90,slow=3.6,SNR=12								
WRA				S	S	15 03 34.2	+1.6		
	1.3nm,1.0s,baz=93,slow=15,SNR=5.5								
AS31	Alice Springs	48.30	253	eP	P	14 56 55.9	-1.2		
ASAR	Alice Springs	48.30	253	P	P	14 56 56.3	-0.8		
ASAR				PcP	PcP	14 58 19.4	+0.2		
ASAR				S	S	15 03 32.8	-2.3		
ASAR	Alice Springs	48.30	253	P	P	14 56 56.3	-0.8		
	86nm,0.6s,baz=88,slow=8.4,SNR=882								
ASAR				PcP	PcP	14 58 19.4	+0.2		
	9.1nm,0.7s,baz=102,slow=3.6,SNR=9.8								
ASAR				S	S	15 03 32.8	-2.3		
	0.8nm,0.8s,baz=92,slow=16,SNR=5.7								
KDU	Kakadu	50.96	267	P	P	14 57 16.4	-0.6		
	baz=51,SNR=15								
MTN	Manton Dam	52.21	267	P	P	14 57 25.5	-0.8		
	baz=52,SNR=11								
FORT	Forrest	53.47	244	eP	P	14 57 34.0	-1.2		
	91nm,0.8s								
FORT	Forrest	53.47	244	P	P	14 57 34.4	-0.9		
	baz=54,SNR=20								
FAKI	Fak Fak	53.72	279	P	P	14 57 37.0	-0.3		
	baz=54,SNR=5.2								
KNRA	Kununurra	53.95	263	P	P	14 57 38.1	-0.8		
	baz=54,SNR=20								
SWI	Sorong	55.33	281	P	P	14 57 49.1	+0.4		
	baz=55,SNR=5.7								
FITZ	Fitzroy Crossi	56.52	259	P	P	14 57 56.5	-0.6		
FITZ	Fitzroy Crossi	56.52	259	P	P	14 57 56.5	-0.6		
	4.4nm,0.4s,baz=115,slow=6.1,SNR=32								
FITZ	Fitzroy Crossi	56.52	259	P	P	14 57 56.9	-0.2		
	baz=57,SNR=26								
KMBL	Kambalda	58.77	243	P	P	14 58 11.7	-0.9		
	baz=59,SNR=6.9								
MBWA	Marble Bar	61.58	255	eP	P	14 58 29.7	-2.0		
	114nm,1.4s								
SBA	Scott Base	61.64	184	eP	P	14 58 30.2	-0.8		
	24nm,0.8s								
VNDA	Vanda	61.73	186	P	P	14 58 34.0	+2.3		
VNDA	Vanda	61.73	186	P	P	14 58 34.0	+2.3		
	18nm,0.9s,baz=9.3,slow=6.5,SNR=85								
MEEK	Meekatharra	61.93	248	P	P	14 58 33.3	-0.6		
	baz=62,SNR=22								
KLBR	Kellerberrin	62.28	243	P	P	14 58 35.9	-0.3		
	baz=62,SNR=41								
NWAO	Narrogin (SRO)	62.65	241	P	P	14 58 38.0	-0.5		
NWAO	Narrogin (SRO)	62.65	241	P	P	14 58 38.0	-0.5		
	13nm,0.5s,baz=81,slow=6.3,SNR=24								
RKGY	Rocky Gully	62.78	239	P	P	14 58 40.0	+0.6		
	baz=63,SNR=9.0								
BLDU	Ballidu	63.24	244	P	P	14 58 42.1	-0.4		
	baz=63,SNR=38								
WSI	Waingapu	63.27	268	P	P	14 58 43.5	+0.6		
	baz=63,SNR=3.1								
LUWI	Luwuk	63.30	278	P	P	14 58 47.6	+4.6		
	baz=63,SNR=12								
MORW	Morawa	63.96	246	P	P	14 58 46.8	-0.4		
	baz=64,SNR=7.7								
KAPI	Kappang	65.00	272	P	P	14 58 52.8	-1.3		
KAPI	Kappang	65.00	272	P	P	14 58 52.8	-1.3		
	2.1nm,0.3s,baz=122,slow=15,SNR=5.0								
GIRL	Giralia	66.41	252	P	P	14 59 04.3	+1.4		
	baz=66,SNR=9.5								
MJAR	Matsushiro Arr	69.19	321	P	P	14 59 18.5	-1.4		
MJAR	Matsushiro Arr	69.19	321	P	P	14 59 18.5	-1.4		
	2.9nm,1.0s,baz=169,slow=7.8,SNR=4.6								
MYLDM	Lahad Datu	69.37	282	P	P	14 59 23.5	+2.1		
MYLDM	Lahad Datu	69.37	282	P	P	14 59 22.6	+1.2		
	27nm,1.4s								
JAGI	Jajag, Banyuwa	69.44	267	P	P	14 59 20.6	-1.3		
	baz=70,SNR=6.0								
TSM	Tawau	69.66	281	P	P	14 59 24.0	+0.8		
FX1	Attu Island--F	70.27	352	P	P	14 59 26.4	+0.3		
FX1	Attu Island--F	70.27	352	P	P	14 59 26.4	+0.3		
	7.7nm,0.6s,baz=207,slow=4.5,SNR=4.3								
SDKM	Sandakan	70.74	282	P	P	14 59 30.8	+1.0		
KKM	Kota Kinabalu	71.80	282	eP	P	14 59 35.2	-1.0		
	18nm,0.9s								
KKM	Kota Kinabalu	71.80	282	P	P	14 59 36.5	+0.3		
KKM	Kota Kinabalu	71.80	282	P	P	14 59 34.9	-1.3		
	28nm,1.0s								
KKM	Kota Kinabalu	71.80	282	P	P	14 59 36.4	+0.2		
	baz=72,SNR=7.3								
BSC	Santa Cruz Isl	73.00	46	⇓P	P	14 59 43.5	+0.8		
	baz=73,SNR=10								
UGM	Wanagama	73.06	267	P	P	14 59 43.7	+0.2		
	baz=73,SNR=10								
SCI	San Clemente I	73.18	47	⇓P	P	14 59 44.4	+0.6		
	baz=73,SNR=5.5								
SBC	Santa Barbara	73.19	45	⇑P	P	14 59 45.0	+1.2		
	baz=74								
PKM	Peak Mountain	73.38	45	⇓P	P	14 59 46.0	+0.8		
	baz=74,SNR=10								
SAO	San Andreas Ge	73.40	42	eP	P	14 59 44.2	-0.7		
	31nm,1.0s								
BLG	Laguna Peak	73.45	46	⇑P	P	14 59 45.7	+0.4		
	baz=74								
SMMC	Simmler	73.50	44	⇓P	P	14 59 46.5	+0.9		
	baz=74,SNR=7.8								
CIS	Catalina Islan	73.52	47	⇓P	P	14 59 46.3	+0.6		
	baz=74								
PETK	Petropavlovsk-	73.65	343	P	P	14 59 45.8	-0.2		
PETK	Petropavlovsk-	73.65	343	P	P	14 59 45.8	-0.2		
	4.0nm,0.6s,baz=120,slow=10.0,SNR=17								
HOPS	Hopland	73.74	40	eP	P	14 59 46.1	-0.7		
	44nm,1.2s								
FMP	Fort Macarthur	73.76	46	⇓P	P	14 59 47.8	+0.7		
	baz=74								
OSI	Osito Adit	73.97	45	⇑P	P	14 59 49.1	+0.7		
	baz=74								
KIPM	Iron Peak	74.00	39	eP	P	14 59 47.3	-1.2		
	18nm,1.2s								
DECC	Green Verdugo	74.03	46	⇑P	P	14 59 49.0	+0.3		
	baz=74								
ARVC	Arvin	74.18	45	⇓P	P	14 59 50.1	+0.6		
	baz=74								
MWC	Mount Wilson	74.20	46	eP	P	14 59 49.3	-0.6		
	25nm,0.9s								
SBUM	Sibu	74.40	277	P	P	14 59 52.3	+1.1		
SBUM	Sibu	74.40	277	P	P	14 59 51.1	-0.1		
	10nm,0.9s								
VES	Vestal, Richgr	74.42	44	⇑P	P	14 59 51.1	+0.3		
	baz=75,SNR=7.6								
MURC	Murrieta	74.46	47	⇓P	P	14 59 51.7	+0.5		
	baz=75								
BFSC	Mount Baldy Ra	74.49	46	⇑P	P	14 59 51.6	+0.2		
	baz=75,SNR=6.9								
KHMM	Horse Mountain	74.52	38	eP	P	14 59 51.7	+0.2		
	26nm,1.2s								
EDW2	Edwards Air Fo	74.61	46	⇑P	P	14 59 52.7	+0.6		
	baz=75,SNR=34								
MONP	Monument Peak	74.63	48	⇓P	P	14 59 53.0	+0.6		
	baz=75,SNR=17								
ISA	Isabella	74.72	45	eP	P	14 59 53.4	+0.7		
	26nm,1.1s								
ISA	Isabella	74.72	45	⇓P	P	14 59 53.3	+0.7		
	baz=75,SNR=22								
CMB	Columbia Colle	74.83	42	eP	P	14 59 53.3	+0.1		
	16nm,0.9s								
OHCM	Honcut	74.92	40	eP	P	14 59 53.5	-0.1		
PFO	Pinyon Flat Ob	74.99	47	eP	P	14 59 54.2	-0.1		
	16nm,1.3s								
PFO	Pinyon Flat Ob	74.99	47	⇓P	P	14 59 54.7	+0.4		
	baz=75,SNR=7.1								
BBRC	Big Bear Solar	75.01	47	⇓P	P	14 59 55.2	+0.6		
	baz=75								
WDC	Whiskeytown Da	75.04	39	eP	P	14 59 51.1	-3.2		
SWSC	Sam W. Stewart	75.10	48	⇑P	P	14 59 55.4	+0.6		
	baz=75								
LRMC	Laurel Mountai	75.15	45	⇓P	P	14 59 55.7	+0.5		
	baz=75,SNR=9.0								
RRX	Edison Barstow	75.30	46	⇓P	P	14 59 56.6	+0.7		
	baz=76								
CWC	Cottonwood Cre	75.42	44	⇑P	P	14 59 57.3	+0.5		
	baz=76,SNR=10								
BELC	Bee Mtn. Jos	75.52	47	⇓P	P	14 59 57.9	+0.6		
	baz=76,SNR=14								
MLAC	Mammoth Lakes	75.60	43	⇑P	P	14 59 58.5	+0.6		
	baz=76								
MPMC	Manual Prospec	75.61	45	⇑P	P	14 59 58.6	+0.8		
	baz=76,SNR=32								
MTUM	Tungsten Hills	75.62	43	eP	P	14 59 58.0	+0.1		
GSC	Goldstone	75.66	46	⇑P	P	14 59 58.5	+0.5		
	baz=76								
YBH	Yreka Blue Hor	75.66	38	eP	P	14 59 57.0	-0.9		
	41nm,1.4s								
TIN	Tinemaha	75.67	44	⇓P	P	14 59 58.8	+0.7		
	baz=76								
BC3	Big Chuckawall	75.72	48	⇑P	P	14 59 59.2	+0.8		
	baz=76,SNR=12								
HEC	Hector,Ludlow	75.73	46	⇓P	P	14 59 58.8	+0.4		
	baz=76,SNR=7.8								
CISI	Cisompet, Garu	75.74	266	P	P	14 59 58.0	-0.9		
	baz=76,SNR=3.1								
GLA	Glamis	75.86	49	eP	P	14 59 59.5	+0.3		
	36nm,1.3s								
GLA	Glamis	75.86	49	⇓P	P	14 59 60.0	+0.9		
	baz=76,SNR=6.0								
KSM	Kuching	75.92	276	eP	P	15 00 00.7	+0.8		
	57nm,1.1s								
KSM	Kuching	75.92	276	P	P	15 00 01.1	+1.2		
KSM	Kuching	75.92	276	P	P	14 59 59.8	-0.1		
	51nm,1.0s,528nm								
KSM	Kuching	75.92	276	P	P	15 00 00.8	+0.9		
	baz=76,SNR=14								
BEKR	Beckworth	75.94	40	eP	P	14 59 58.3	-1.3		
	14nm,1.4s								
WCN	Washoe City	75.98	41	eP	P	14 59 59.0	-0.9		
	25nm,1.1s								
HUMO	Hull Mountain	76.06	37	eP	P	14 59 60.0	-0.1		
	21nm,1.1s								
LEM	Lembang	76.12	267	P	P	15 00 02.0	+0.8		
	baz=76,SNR=3.7								
IRM	Iron Mountain	76.20	48	⇓P	P	15 00 01.8	+0.8		
	baz=76,SNR=21								
GRAC	Grapevine Rang	76.21	44	⇑P	P	15 00 02.0	+1.0		
	baz=76,SNR=17								
KSRS	Korea Array	76.26	316	P	P	15 00 02.5	+1.3		
	7.7nm,1.0s,baz=128,slow=6.7,SNR=16								
FURC	Furnace Creek,	76.26	45	⇓P	P	15 00 01.9	+0.7		
	baz=76								
KSAR	Wonju Array Be	76.28	316	P	P	15 00 02.5	+1.2		
TUQ	Turquoise Moun	76.34	46	⇑P	P	15 00 02.4	+0.5		
	baz=77,SNR=12								
SHOC	Shoshone	76.34	45	⇑P	P	15 00 02.2	+0.5		
	baz=77								
NVAR	Mina Array Bea	76.40	42	P	P	15 00 02.6	+0.3		
NVAR				pP	pP	15 01 07.6	-0.7		
NVAR	Mina Array Bea	76.40	42	P	P	15 00 02.6	+0.3		
	9.9nm,0.8s,baz=226,slow=9.2,SNR=73								
NVAR				pP	pP	15 01 07.6	-0.7		
	2.7nm,0.9s,baz=226,slow=9.3,SNR=4.0								
Y12C	Blythe	76.43	48	⇓P	P	15 00 03.1	+0.8		
	baz=77								
113A	Mohawk Valley,	76.48	49	⇓P	P	15 00 03.3	+0.8		
	baz=77,SNR=6.1								
KDAK	Kodiak Island	76.69	12	P	P	15 00 03.2	+0.1		
	4.9nm,0.6s,baz=265,slow=3.1,SNR=7.2								
LDFC	Landfair	76.71	47	eP	P	15 00 04.3	+0.4		
	75nm,1.3s								
214A	Organ Pipe Nat	76.77	50	⇓P	P	15 00 05.0	+0.8		
	baz=77,SNR=7.6								
NEE2	Needles Airpor	76.89	47	⇓P	P	15 00 05.5	+0.7		
	baz=77								
PDMCI	Parker Dam,Lak	76.99	48	⇓P	P	15 00 06.3	+0.9		
	baz=77,SNR=8.4								
Z14A	Wintersburg	77.37	49	⇓P	P	15 00 08.5	+1.0		
	baz=78								
W13A	Hualapai Mount	77.58	47	⇑P	P	15 00 09.6	+0.7		
	baz=78,SNR=10								
Y14A	Wickenburg	77.61	49	⇑P	P	15 00 09.6	+0.7		
	baz=78,SNR=9.5								
USRK	Usuriysk Arra	77.75	324	P	P	15 00 10.5	+1.2		
	2.1nm,0.8s,baz=57,slow=7.0,SNR=4.8								
R11A	Troy Canyon, C	78.13	44	⇑P	P	15 00 12.1	+0.2		
	baz=78,SNR=14								
BMN	Battle Mountai	78.22	41	eP	P	15 00 12.9	+0.6		
	16nm,1.0s								
TUC	Tucson	78.44	51	eP	P	15 00 13.4	-0.1		
	19nm,1.0s								
WVOR	Wild Horse Val	78.50	39	eP	P	15 00 12.9	-0.7		
	16nm,1.0s								
NLWA	Neilton Lookou	78.64	33	eP	P	15 00 15.3	+1.1		
	20nm,1.1s								
X16A	Lo Mia Camp, P	78.98	49	⇑P	P	15 00 17.7	+1.2		
	baz=79,SNR=9.1								
OSD	Olympics--Snow	79.00	32	P	P	15 00 17.5	+1.1		
319A	Douglas	79.14	52	⇓P	P	15 00 18.5	+1.2		
	baz=79,SNR=11								
CCUT	Cedar City	79.20	45	eP	P	15 00 17.9	+0.2		
	11nm,1.1s								
LON	Longmire	79.31	34	eP	P	15 00 18.2	+0.4		
	18nm,1.6s								
MDJ	Mudanjiang	79.37	323	P	P	15 00 20.5	+2.4		
MDJ				pP	pP	15 01 24.8	+0.1		
MDJ				sP	sP	15 01 55.3	+0.6		
MDJ				PP	PP	15 03 21.3	-1.5		
MDJ				S	S	15 09 54.5	-0.1		
MDJ				sS	sS	15 11 54.0	+2.1		
MDJ				pmax	pmax				
	comp=Z,6.0nm,1.0s								
MDJ				pmax	pmax				
	comp=Z,69nm,5.7s								
U15A	North Rim	79.37	47	⇓P	P	15 00 19.8	+1.1		
	baz=80,SNR=25								
SEW	Seward	79.47	13	eP	P	15 00 18.2	-0.1		
	comp=Z,14nm,0.9s								
WUAZ	Wupatki	79.56	48	eP	P	15 00 18.3	-1.3		
	comp=Z,22nm,1.3s								
WUAZ	Wupatki	79.56	48	⇑P	P	15 00 20.7	+1.0		
	baz=80,SNR=7.0								
ELK	Elko	79.65	42	eP	P	15 00 19.2	-0.8		
	comp=Z,108nm,0.9s								
320A	Kipp Ranch, An	79.69	53	⇓P	P	15 00 21.3	+0.9		
	baz=80								
TRW	Toppenish Ridg	79.71	35	P	P	15 00 20.9	+0.9		
SPU	Mount Spurr	79.95	11	eP	P	15 00 19.7	-1.3		
220A	Playas Peak, P	79.95	52	⇓P	P	15 00 23.1	+1.4		
	baz=80,SNR=26								
X18A	Snowflake	80.11	49	⇑P	P	15 00 23.5	+0.9		
	baz=80								
120A	U Bar Ranch, L	80.16	52	⇑P	P	15 00 24.2	+1.3		
	baz=80,SNR=8.3								
HAWA	Hanford	80.33	35	eP	P	15 00 23.7	+0.5		
	comp=Z,36nm,1.3s								
Z20A	Nine Sixteen R	80.45	51	⇓P	P	15 00 25.8	+1.4		
	baz=81,SNR=25								
MVU	Marysvale	80.47	45	eP	P	15 00 25.7	+1.2		
	comp=Z,101nm,2.8s								
MSU	Marysvale	80.50	45	eP	P	15 00 25.0	+0.4		
W18A	Petrified Fore	80.55	49	⇑P	P	15 00 25.8	+0.9		
	baz=81								
221A	Mesquite Ranch	80.57	52	⇑P	P	15 00 26.4	+1.4		
	baz=81,SNR=7.2								
BMO	Blue Mountains	80.69	37	eP	P	15 00 25.1	-0.2		
	comp=Z,21nm,1.4s								
MFID	Camas Ranch	80.75	39	eP	P	15 00 24.6	-1.1		
	comp=Z,16nm,1.2s								
121A	Cookes Peak, D	80.80	52	⇓P	P	15 00 27.4	+1.2		
	baz=81,SNR=12								
PMR	Palmer	80.89	12	eP	P	15 00 25.4	-0.4		
	comp=Z,22nm,1.4s								
DUG	Dugway	80.93	43	eP	P	15 00 26.3	-0.5		
	comp=Z,19nm,1.5s								
DUG	Dugway	80.93	43	⇓P	P	15 00 27.0	+0.2		
	baz=81								
Y20A	Horse Springs,	80.98	51	⇓P	P	15 00 28.8	+1.5		
	baz=81,SNR=28								
222A	Williams Famil	81.12	53	⇑P	P	15 00 28.8	+0.8		
	baz=81								
X20A	Quemado	81.18	50	⇓P	P	15 00 29.7	+1.5		
	baz=81,SNR=12								
DIV	Divide	81.19	14	eP	P	15 00 27.5	0.0		
	comp=Z,22nm

V21A	Milan	82.38	49	⇑P	P	15 00 35.3	+0.8
	baz=83,SNR=8.7						
BNM	Barren Site	82.38	51	eP	P	15 00 32.0	-2.6
	comp=Z,17nm,1.2s						
F12A	Elk City	82.39	38	⇓P	P	15 00 34.3	+0.1
	baz=83,SNR=33						
325A	Bean Ranch, Si	82.44	54	⇑P	P	15 00 35.5	+0.6
	baz=83,SNR=24						
LPM	Los Pinos Moun	82.45	51	eP	P	15 00 34.7	-0.1
HWUT	Hardware Ranch	82.47	43	eP	P	15 00 34.7	-0.1
	comp=Z,8.9nm,1.0s						
I14A	Mackay	82.48	40	⇑P	P	15 00 35.5	+0.7
	baz=83,SNR=10						
526A	Mary Lane Ranc	82.59	56	⇓P	P	15 00 36.7	+1.1
	baz=83,SNR=7.0						
W22A	Albuquerque	82.61	50	⇓P	P	15 00 37.1	+1.4
	baz=83						
SKAG	Skagway	82.63	19	eP	P	15 00 35.9	+1.0
	comp=Z,21nm,1.3s						
TXAR	Lajitas Array	82.63	56	P	P	15 00 36.8	+1.0
TXAR				pP	pP	15 01 41.3	-1.5
TXAR	Lajitas Array	82.63	56	P	P	15 00 36.8	+1.0
	comp=Z,7.7nm,1.1s,baz=224,slow=5.2,SNR=40						
TXAR				pP	pP	15 01 41.3	-1.5
	comp=Z,1.0nm,0.9s,baz=251,slow=3.8,SNR=2.5						
124A	Stringfield Ra	82.64	53	⇑P	P	15 00 37.2	+1.3
	baz=83,SNR=14						
U21A	Nageezi	82.65	49	⇑P	P	15 00 36.8	+1.0
	baz=83,SNR=42						
PV04	Paradox Valley	82.68	46	eP	P	15 00 35.9	0.0
Y23A	Lovelace Mesa,	82.71	51	⇓P	P	15 00 37.0	+0.8
	baz=83,SNR=7.9						
KGM	Kluang	82.74	274	P	P	15 00 37.7	+1.1
NEW	Newport	82.75	35	eP	P	15 00 34.9	-1.0
	comp=Z,5.9nm,0.8s						
PV01	Paradox Valley	82.79	47	eP	P	15 00 36.0	-0.6
	comp=Z,2µm,1.0s						
S20A	Disappointment	82.80	47	⇓P	P	15 00 37.2	+0.6
	baz=83,SNR=19						
ANMO	Albuquerque	82.86	50	eP	P	15 00 36.6	-0.3
	comp=Z,28nm,1.2s						
225A	Deer Hill, Car	82.87	54	⇑P	P	15 00 38.2	+1.2
	baz=83,SNR=14						
MCK	McKinley	82.87	11	eP	P	15 00 35.7	-0.4
426A	McDonald Obser	82.89	55	⇓P	P	15 00 38.4	+1.1
	baz=83,SNR=22						
H14A	Leadore	82.89	39	⇓P	P	15 00 37.6	+0.7
	baz=83						
X23A	Hourglass Bar	82.90	51	⇑P	P	15 00 37.9	+0.7
	baz=83						
627A	Terlingua Ranc	82.90	56	⇑P	P	15 00 38.5	+1.3
	baz=83,SNR=22						
F13A	Darby	82.95	38	⇑P	P	15 00 37.0	-0.1
	baz=83,SNR=10						
R20A	Redvale	82.95	47	⇓P	P	15 00 37.9	+0.5
	baz=83						
V22A	San Miguel Ran	82.96	49	⇓P	P	15 00 38.0	+0.5
	baz=83,SNR=5.3						
Z24A	Sheeppen Canyo	82.97	52	⇓P	P	15 00 38.4	+0.9
	baz=83,SNR=8.3						
M17A	Scullys Gap (B	82.98	43	⇑P	P	15 00 37.3	-0.2
	baz=83,SNR=6.4						
C11A	Tepee Creek (N	82.99	35	⇑P	P	15 00 37.4	+0.3
	baz=83,SNR=19						
T21A	Navajo Lake	82.99	48	⇑P	P	15 00 38.5	+0.9
	baz=83						
527A	Woodward Ranch	83.00	56	⇑P	P	15 00 38.6	+0.9
	baz=83,SNR=16						
D12A	Red Ives Fores	83.05	36	⇑P	P	15 00 37.3	-0.2
	baz=83						
I15A	Monteview	83.11	40	⇓P	P	15 00 38.9	+1.0
	baz=83,SNR=5.0						
S21A	Coal Bank Pass	83.12	47	⇑P	P	15 00 38.9	+0.5
	baz=83,SNR=26						
G14A	Jackson	83.17	39	⇓P	P	15 00 38.8	+0.5
	baz=83						
Y24A	Capitan	83.17	52	⇓P	P	15 00 39.4	+0.8
	baz=83,SNR=13						
W23A	Werner Place,	83.18	50	⇑P	P	15 00 39.2	+0.5
	baz=83,SNR=8.4						
326A	Caldwell Ranch	83.19	55	⇓P	P	15 00 39.2	+0.6
	baz=83,SNR=7.5						
U22A	Llaves	83.20	49	⇑P	P	15 00 39.4	+0.7
	baz=83						
P19A	Cripple Cowboy	83.21	45	⇑P	P	15 00 39.1	+0.4
	baz=84,SNR=9.2						
125A	Gardner Draw,	83.23	53	⇑P	P	15 00 39.6	+0.8
	baz=83,SNR=13						
GDL2	Guadalupe Moun	83.26	54	eP	P	15 00 39.1	+0.1
628A	Black Gap, Mar	83.31	57	⇓P	P	15 00 40.3	+1.1
	baz=84,SNR=11						
H15A	Lima	83.33	40	⇑P	P	15 00 39.9	+0.8
	baz=84,SNR=13						
C12B	Naegeli Ranch,	83.35	36	⇓P	P	15 00 38.9	0.0
	baz=84						
226B	Tecolote Peak,	83.36	54	⇑P	P	15 00 40.4	+1.0
	baz=84,SNR=27						
Q20A	Ridgley Place,	83.36	46	⇓P	P	15 00 39.9	+0.5
	baz=84,SNR=20						
E13A	Victor	83.39	37	⇑P	P	15 00 38.8	-0.4
	baz=84,SNR=6.8						
V23A	Ortiz Mt. (NFS	83.41	50	⇑P	P	15 00 41.1	+1.4
	baz=84,SNR=5.2						
O19A	Miners Draw (B	83.43	45	⇓P	P	15 00 39.8	+0.1
	baz=84,SNR=11						
Z25A	Roswell	83.44	52	⇓P	P	15 00 40.9	+1.1
	baz=84,SNR=10						
X24A	Lazy VL Ranch,	83.45	51	⇑P	P	15 00 40.1	+0.1
	baz=84						
T22A	Edith	83.45	48	⇑P	P	15 00 40.4	+0.4
	baz=84,SNR=8.9						
427A	Hayter Ranch,	83.45	55	⇑P	P	15 00 41.2	+1.2
	baz=84,SNR=19						
RRI2	Red Ridge	83.50	41	eP	P	15 00 39.9	-0.3
	comp=Z,26nm,1.0s						
F14A	Wisdom	83.53	38	⇓P	P	15 00 40.1	+0.1
	baz=84						
P20A	De Beque	83.55	46	⇓P	P	15 00 41.1	+0.8
	baz=84						
D13A	Huson	83.59	37	⇓P	P	15 00 39.7	-0.5
	baz=84,SNR=14						
R21A	Cimarron	83.61	47	⇑P	P	15 00 41.7	+0.9
	baz=84,SNR=20						
L18A	Fontenelle, Gr	83.62	43	⇓P	P	15 00 40.8	+0.2
	baz=84						
DLBC	Dease Lake	83.63	22	eP	P	15 00 38.3	-1.8
U23A	El Rito	83.66	49	⇑P	P	15 00 41.8	+0.7
	baz=84						
528A	Cox Ranch, San	83.66	56	⇑P	P	15 00 42.2	+1.2
	baz=84,SNR=14						
I16A	Newdale	83.67	41	⇑P	P	15 00 41.8	+1.0
	baz=84,SNR=11						
126A	Clayton Basin,	83.71	53	⇑P	P	15 00 41.9	+0.7
	baz=84,SNR=8.2						
B12A	Libby	83.71	35	⇑P	P	15 00 41.0	+0.2
	baz=84						
G15A	Dillon	83.72	39	⇑P	P	15 00 41.5	+0.5
	baz=84,SNR=16						
Y25A	Mesa, Roswell	83.73	52	⇑P	P	15 00 41.9	+0.5
	baz=84,SNR=20						
MSO	Missoula	83.74	37	eP	P	15 00 40.6	-0.4
MSO	Missoula	83.74	37	⇑P	P	15 00 40.7	-0.4
	baz=84						
W24A	Lazy 6 Ranch,	83.75	50	⇑P	P	15 00 41.9	+0.4
	baz=84,SNR=14						
DLMT	Dillon	83.75	39	eP	P	15 00 41.0	-0.1
	comp=Z,18nm,1.1s						
E14A	Clinton	83.78	38	⇑P	P	15 00 41.2	-0.1
	baz=84,SNR=9.9						
DOT	Dot Lake	83.79	13	eP	P	15 00 41.0	+0.3
	comp=Z,20nm,1.0s						
TPAW	Teton Pass	83.81	41	eP	P	15 00 42.6	+0.9
	comp=Z,20nm,1.0s						
Q21A	Lamborn Mesa,	83.81	46	⇑P	P	15 00 42.3	+0.6
	baz=84,SNR=6.0						
BSMT	Bassoo Peak	83.81	36	eP	P	15 00 41.3	-0.2
S22A	4UR Ranch, Cre	83.84	48	⇑P	P	15 00 42.8	+0.8
	baz=84,SNR=28						
C13A	Hot Springs	83.84	36	⇑P	P	15 00 41.1	-0.4
	baz=84,SNR=5.9						
SNOW	Snow King Moun	83.92	41	eP	P	15 00 43.3	+1.1
	comp=Z,18nm,0.8s						
O20A	White River Ci	83.95	45	⇑P	P	15 00 42.7	+0.3
	baz=84,SNR=6.0						
M19A	Rock Springs	83.99	44	⇑P	P	15 00 42.5	0.0
	baz=84						
Z26A	Caprock	84.00	53	⇓P	P	15 00 43.2	+0.6
	baz=84,SNR=25						
X25A	Clemmons Ranch	84.01	51	⇓P	P	15 00 42.9	+0.1
	baz=84						
227A	Bennet, Jal	84.01	54	⇓P	P	15 00 43.2	+0.5
	baz=84						
IMW	Indian Meadow	84.02	41	eP	P	15 00 42.3	-0.5
	comp=Z,19nm,1.0s						
F15A	Butte	84.06	39	⇓P	P	15 00 42.9	+0.1
	baz=84,SNR=8.0						
MOOW	Moose Ponds	84.06	41	eP	P	15 00 43.5	+0.6
	comp=Z,14nm,1.4s						
V24A	Rampart Ranch,	84.07	50	⇓P	P	15 00 43.6	+0.4
	baz=84,SNR=5.5						
LRM	Limekiln Ridge	84.08	39	eP	P	15 00 42.8	-0.1
T23A	Casias Ranch,	84.08	49	⇑P	P	15 00 43.5	+0.3
	baz=84						
LOHW	Long Hollow	84.09	41	eP	P	15 00 43.7	+0.7
529A	Stev Forest Ra	84.10	56	⇓P	P	15 00 43.8	+0.7
	baz=84						
R22A	Saguache, Gunn	84.10	47	⇓P	P	15 00 44.2	+0.8
	baz=84						
COLA	College	84.11	11	eP	P	15 00 42.0	-0.3
	comp=Z,35nm,0.8s						
D14A	Greenough	84.13	37	⇓P	P	15 00 42.4	-0.6
	baz=84,SNR=7.6						
328A	Wristen Ranch,	84.13	55	⇑P	P	15 00 43.8	+0.5
	baz=84,SNR=9.2						
L19A	Farson	84.14	43	⇓P	P	15 00 43.5	+0.2
	baz=84,SNR=8.1						
G16A	Moss Hill, Enn	84.16	39	⇓P	P	15 00 43.6	+0.3
	baz=84,SNR=6.1						
CHMT	Chamberlain Mo	84.19	37	eP	P	15 00 43.2	-0.2
QLMT	Earthquake Lak	84.19	40	eP	P	15 00 43.5	0.0
ILAR	Eielson Array	84.20	12	P	P	15 00 42.1	-0.7
ILAR				pP	pP	15 01 49.0	-1.2
ILAR	Eielson Array	84.20	12	P	P	15 00 42.1	-0.7
	comp=Z,11nm,1.0s,baz=218,slow=5.6,SNR=51						
ILAR				pP	pP	15 01 49.0	-1.2
	comp=Z,4.4nm,1.1s,baz=222,slow=5.2,SNR=4.5						
P21A	Newcastle	84.21	46	⇓P	P	15 00 44.1	+0.4
	baz=84						
127A	Arkansas Junct	84.23	54	⇓P	P	15 00 44.3	+0.4
	baz=84						
H16A	Russell Place,	84.23	40	⇓P	P	15 00 44.9	+1.2
	baz=84,SNR=22						
N20A	Spence Gulch,	84.27	44	⇓P	P	15 00 44.3	+0.3
	baz=84,SNR=14						
B13A	Whitefish	84.28	36	⇑P	P	15 00 43.3	-0.3
	baz=85						
Q22A	Crested Butte,	84.28	47	⇑P	P	15 00 44.7	+0.6
	baz=84,SNR=7.0						
E15A	Deer Lodge	84.28	38	⇑P	P	15 00 44.0	+0.2
	baz=85,SNR=7.8						
BW06	Boulder Array	84.34	42	eP	P	15 00 41.6	-2.7
	comp=Z,11nm,1.0s						
PDAR	Pinedale Array	84.34	42	P	P	15 00 44.2	-0.1
PDAR				pP	pP	15 01 50.3	-1.3
PDAR	Pinedale Array	84.34	42	P	P	15 00 44.2	-0.1
	comp=Z,8.4nm,1.0s,baz=204,slow=3.3,SNR=39						
PDAR				pP	pP	15 01 50.3	-1.3
	comp=Z,2.8nm,0.9s,baz=204,slow=3.3,SNR=4.4						
SMCO	Snowmass	84.38	46	eP	P	15 00 45.1	+0.3
	comp=Z,16nm,1.2s						
Y26A	Elida	84.39	52	⇓P	P	15 00 44.9	+0.3
	baz=85,SNR=14						
W25A	X Bar L Ranch,	84.45	51	⇓P	P	15 00 45.1	+0.1
	baz=85,SNR=12						
H17A	Grant Village	84.49	40	⇑P	P	15 00 46.6	+1.5
	baz=85,SNR=5.9						
O21A	Pagoda	84.51	45	⇓P	P	15 00 45.5	+0.3
	baz=85						
429A	Davenport Ranc	84.56	56	⇑P	P	15 00 46.2	+0.8
	baz=85,SNR=35						
F16A	Kennard Place,	84.56	39	⇓P	P	15 00 45.6	+0.5
	baz=85,SNR=6.0						
228A	UT Block 9, Go	84.60	54	⇓P	P	15 00 46.3	+0.6
	baz=85,SNR=5.6						
V25A	Rancho No Teng	84.60	50	⇓P	P	15 00 46.0	+0.3
	baz=85,SNR=10						
Z27A	Tatum	84.60	53	⇓P	P	15 00 46.0	+0.3
	baz=85,SNR=11						
A13A	Flathead Natio	84.62	35	⇓P	P	15 00 45.6	+0.2
	baz=85						
M20A	Sweetwater, Wa	84.62	44	⇓P	P	15 00 46.0	+0.3
	baz=85,SNR=7.8						
X26A	CR and CF Fran	84.66	52	⇓P	P	15 00 45.9	0.0
	baz=85,SNR=5.1						
D15A	Lincoln	84.68	37	⇓P	P	15 00 45.9	+0.2
	baz=85,SNR=11						
N21A	Black Mountain	84.73	45	⇑P	P	15 00 46.8	+0.5
	baz=85,SNR=11						
R23A	Moffat	84.74	48	⇑P	P	15 00 46.9	+0.4
	baz=85,SNR=5.7						
L20A	Wamsutter	84.77	43	⇑P	P	15 00 46.8	+0.4
	baz=85,SNR=7.8						
SDCO	Great Sand Dun	84.78	48	eP	P	15 00 46.3	-0.3
	comp=Z,5.6nm,1.2s						
530A	J-C Ranch, Com	84.81	57	⇑P	P	15 00 47.5	+0.8
	baz=85,SNR=13						
K19A	Absolon Red Bu	84.82	42	⇓P	P	15 00 46.2	-0.4
	baz=85						
329A	Wagon Wheel Ra	84.83	55	⇑P	P	15 00 47.4	+0.6
	baz=85,SNR=13						
Y27A	Causey	84.87	52	⇑P	P	15 00 47.3	+0.3
	baz=85,SNR=10.0						
128A	Castleberry Fa	84.88	54	⇓P	P	15 00 47.7	+0.7
	baz=85,SNR=12						
J19A	Crowheart	84.90	42	⇑P	P	15 00 46.9	-0.1
	baz=85,SNR=14						
E16A	East Helena	84.91	38	⇑P	P	15 00 47.0	+0.1
	baz=85,SNR=9.3						
HRY	Holter Researc	84.91	38	eP	P	15 00 46.6	-0.3
W26A	Owens Ranch, T	84.92	51	⇓P	P	15 00 47.5	+0.3
	baz=85						
S24A	Houchin Ranch,	84.94	48	⇑P	P	15 00 47.5	0.0
	baz=85						
B14A	Marquette Ranc	84.94	36	⇑P	P	15 00 46.7	-0.4
	baz=85,SNR=16						
WALA	Waterton Lakes	84.96	35	eP	P	15 00 43.2	-3.9
U25A	Circle Dot Ran	84.99	50	⇓P	P	15 00 47.7	0.0
	baz=85						
C15A	Salmond Ranch,	85.01	37	⇑P	P	15 00 47.1	-0.3
	baz=85,SNR=12						
Q23A	Hartsel	85.05	47	⇑P	P	15 00 48.1	+0.1
	baz=85						
K20A	Yellowstone Ra	85.07	43	⇓P	P	15 00 47.4	-0.5
	baz=85,SNR=5.7						
O22A	Kremmling	85.12	46	⇑P	P	15 00 48.5	+0.2
	baz=85,SNR=6.3						
430A	Baggett Ranch,	85.14	56	⇓P	P	15 00 48.9	+0.6
	baz=85,SNR=8.1						
631A	Perdido Creek	85.14	57	⇑P	P	15 00 49.2	+0.9
	baz=85,SNR=22						
229A	Bryant Ranch,	85.15	55	⇓P	P	15 00 48.8	+0.4
	baz=85,SNR=5.4						
A14A	Double T Ranch	85.19	36	⇓P	P	15 00 48.1	-0.1
	baz=86						
F17A	Fitzpatrick Pl	85.20	39	⇓P	P	15 00 49.1	+0.7
	baz=86,SNR=6.1						
MSTX	Muleshoe	85.20	53	⇓P	P	15 00 48.9	+0.3
	baz=85,SNR=6.8						
M21A	Separation Pea	85.22	44	⇑P	P	15 00 48.6	-0.1
	baz=85						
Z28A	Tucker Farm, M	85.22	53	⇑P	P	15 00 48.7	0.0
	baz=85						
D16A	Dana Ranch, Ca	85.24	38	⇓P	P	15 00 48.7	+0.2
	baz=86,SNR=10.0						
R24A	Sanders Place,	85.27	48	⇑P	P	15 00 49.3	+0.3
	baz=86						
T25A	Trinidad	85.30	49	⇑P	P	15 00 49.2	0.0
	baz=86						
I19A	Meeetse	85.31	41	⇑P	P	15 00 49.4	+0.4
	baz=86						
B15A	Bradely Ranch,	85.32	36	⇑P	P	15 00 49.0	+0.1
	baz=86						
E17A	Martinsdale	85.36	39	⇑P	P	15 00 49.5	+0.3
	baz=86						
129A	Stewart Farms,	85.36	54	⇑P	P	15 00 50.2	+0.8
	baz=86						
732A	Laxson Ranch,	85.38	58	⇑P	P	15 00 50.3	+0.8
	baz=86,SNR=10						
L21A	Rawlins	85.39	44	⇓P	P	15 00 49.7	+0.2
	baz=86						
EGAK	Eagle	85.42	14	eP	P	15 00 48.1	-0.7
	comp=Z,20nm,1.0s						
330A	Mertzon	85.43	55	⇑P	P	15 00 49.8	+0.1
	baz=86,SNR=6.0						
W27A	Bowe Ranch, En	85.43	51	⇓P	P	15 00 49.4	-0.3
	baz=86						
531A	Rocksprings	85.45	57	⇓P	P	15 00 50.8	+1.0
	baz=86,SNR=31						
N22A	Wattenberg Ran	85.47	45	⇓P	P	15 00 50.2	+0.3
	baz=86,SNR=6.6						
U26A	Atchley Ranch,	85.47	50	⇓P	P	15 00 49.8	-0.3
	baz=86						
BJI	Beijing	85.48	314	P	P	15 00 50.5	+0.8
BJI				PP	PP	15 04 12.3	-0.5
BJI				S	S	15 10 58.5	+1.9
BJI				sS	sS	15 12 50.0	-5.7
BJI				SS	SS	15 16 43.5	+3.8
BJI				pmax	pmax		
	comp=Z,13nm,1.1s						
BJI				pmax	pmax		
	comp=Z,69nm,3.8s						
S25A	Robets Cordova	85.51	49	⇑P	P	15 00 49.9	-0.2
	baz=86						
C16A	Fuhringer Ranc	85.52	37	⇓P	P	15 00 49.6	-0.3
	baz=86,SNR=9.7						
Q24A	Divide	85.56	47	⇑P	P	15 00 50.4	-0.1
	baz=86						
J20A	Shoshoni	85.56	42	⇓P	P	15 00 50.3	+0.1
	baz=86,SNR=7.8						
O23A	Lake Granby, G	85.57	46	⇓P	P	15 00 50.3	-0.2
	baz=86						
A15A	Johnson Ranch,	85.58	36	⇓P	P	15 00 50.0	-0.1
	baz=86						
G18A	Lazy EL Ranch,	85.58	40	⇑P	P	15 00 50.7	+0.5
	baz=86						
431A	Sonora	85.60	56	⇑P	P	15 00 50.5	-0.1
	baz=86						
ISCO	Idaho Springs	85.60	46	⇑P	P	15 00 50.5	-0.2
	baz=86						
H19A	Powell	85.62	41	⇓P	P	15 00 50.7	+0.3
	baz=86						
IPM	Ipoh	85.66	276	eP	P	15 00 51.5	+0.3
IPM	Ipoh	85.66	276	P	P	15 00 52.4	+1.2
IPM	Ipoh	85.66	276	P	P	15 00 51.4	+0.3
	comp=Z,37nm,1.0s						
230A	Sterling City	85.66	55	⇑P	P	15 00 51.3	+0.4
	baz=86,SNR=5.1						
Z29A	Hungry Hill Ra	85.74	54	⇑P	P	15 00 51.8	+0.6
	baz=86						
F18A	Big Timber	85.77	39	⇑P	P	15 00 51.5	+0.3
	baz=86						
D17A	Six Diamond Ra	85.81	38	⇑P	P	15 00 51.8	+0.5
	baz=86,SNR=20						
632A	Uvalde	85.82	58	⇑P	P	15 00 52.9	+1.3
	baz=86,SNR=12						
R25A	Fountain Ranch	85.82	48	⇓P	P	15 00 51.6	0.0
	baz=86						
BILL	Bilibino	85.82	353	eP	P	15 00 46.9	-3.8
N23A	Red Feather La	85.86	45	⇑P	P	15 00 52.1	+0.2
	baz=86						
B16A	M & M Farms, S	85.86	37	⇑P	P	15 00 50.9	-0.6
	baz=86						
MAW	Mawson	85.91	199	P	P	15 00 52.3	+1.0
MAW	Mawson	85.91	199	P	P	15 00 52.3	+1.0
	comp=Z,23nm,0.8s,baz=129,slow=6.7,SNR=34						
532A	Rocksprings	85.95	57	⇑P	P	15 00 53.0	+0.7
	baz=86,SNR=18						
J21A	Lysite	85.97	42	⇓P	P	15 00 52.3	0.0
	baz=86,SNR=9.5						
E18A	Harlowton	85.98	39	⇑P	P	15 00 52.7	+0.6
	baz=86,SNR=8.2						
331A	San Angelo	85.98	56	⇓P	P	15 00 52.8	+0.3
	baz=86						
C17A	Wharram Farm,	86.01	38	⇑P	P	15 00 52.3	+0.1
	baz=86,SNR=7.4						
L22A	Ellis Ranch, M	86.04	44	⇓P	P	15 00 52.9	+0.2
	baz=86						
130A	Snyder	86.05	54	⇑P	P	15 00 53.0	+0.3
	baz=86						
JCT	Junction City	86.17	57	eP	P	15 00 53.6	+0.3
	comp=Z,16nm,1.0s						
JCT	Junction City	86.17	57	⇑P	P	15 00 53.4	+0.1
	baz=86,SNR=6.4						
S26A	Kim	86.18	49	⇑P	P	15 00 53.2	-0.2
	baz=86						
Z30A	Sanderson Ranc	86.19	54	⇑P	P	15 00 53.4	0.0
	baz=86,SNR=7.9						
A16A	West Butte Ran	86.20	36	⇓P	P	15 00 53.4	+0.2
	baz=86						
F19A	Roth Farm, Mol	86.22	40	⇑P	P	15 00 53.6	+0.3
	baz=86						
KULM	Kulim	86.25	277	P	P	15 00 55.1	+1.0
K22A	Casper	86.26	43	⇑P	P	15 00 54.1	+0.5
	baz=86						
M23A	Laramie	86.26	45	⇑P	P	15 00 53.7	-0.1
	baz=86						
I21A	Big Trails, Te	86.29	42	⇑P	P	15 00 53.8	+0.1
	baz=86						
231A	Bronte	86.31	55	⇓P	P	15 00 54.1	+0.1
	baz=86,SNR=11						
B17A	L&G Farms, Che	86.32	37	⇓P	P	15 00 54.0	+0.3
	baz=87						
432A	Menard	86.32	56	⇓P	P	15 00 54.4	+0.3
	baz=86,SNR=16						
D18A	Linhart Farms,	86.35	38	⇑P	P	15 00 54.6	+0.7
	baz=87						
G20A	Bridger	86.36	41	⇓P	P	15 00 54.3	+0.2
	baz=87						
P25A	Willow Gulch B	86.48	47	⇓P	P	15 00 54.8	0.0
	baz=87,SNR=6.5						
R26A	Arlington	86.48	48	⇑P	P	15 00 54.8	0.0
	baz=87						
T27A	Campo	86.50	50	⇓P	P	15 00 55.0	+0.1
	baz=87						
W29A	Amraillo	86.52	52	⇓P	P	15 00 54.9	-0.1
	baz=87						
131A	Roby	86.53	55	⇑P	P	15 00 55.2	+0.1
	baz=87,SNR=5.6						
ENH	Enshi	86.53	303	eP	P	15 00 54.4	-0.8
	comp=Z,14nm,0.9s						
332A	Millersview	86.55	56	⇑P	P	15 00 55.6	+0.4
	baz=87,SNR=25						
N24A	Carr	86.55	46	⇑P	P	15 00 55.5	+0.4
	baz=87						
L23A	Garrett	86.56	44	⇓P	P	15 00 54.9	-0.3
	baz=87,SNR=5.4						
E19A	Rath Farm, Rou	86.61	39	⇑P	P	15 00 55.5	+0.3
	baz=87,SNR=5.7						
Q26A	Hugo	86.69	48	⇓P	P	15 00 55.8	0.0
	baz=87						
A17A	Triple J Farms	86.71	36	⇑P	P	15 00 56.1	+0.6
	baz=87						
EGMT	Eagleton	86.79	38	⇓P	P	15 00 56.5	+0.5
	baz=87						
232A	Coleman	86.81	55	⇓P	P	15 00 56.8	+0.3

GYA SKS **SKSac** **15 10 58.0 -2.5**
GYA S **S** **15 11 15.5 -1.3**
GYA sS **sS** **15 13 18.8 +2.3**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,5.1s
G22A Birney **87.57 41** ⇑P **P** **15 01 00.2 +0.4**
baz=88
X31A McDonald Ranch **87.59 53** ⇓P **P** **15 01 00.2 +0.1**
baz=88
C20A Veseth Ranch, **87.67 38** ⇑P **P** **15 01 01.1 +1.0**
baz=88
R28A Tribune **87.67 49** ⇑P **P** **15 01 00.7 +0.3**
baz=88
L25A Engebretsen Ra **87.74 45** ⇓P **P** **15 01 01.2 +0.5**
baz=88
Y32A R-V Farms, Ver **87.77 54** ⇓P **P** **15 01 00.9 0.0**
baz=88
W31A Holland Ranch, **87.83 52** ⇓P **P** **15 01 01.5 +0.3**
baz=88
D21A La Casta Ranch **87.98 39** ⇑P **P** **15 01 02.2 +0.6**
baz=88
B20A Solberg Farm, **88.01 38** ⇑P **P** **15 01 01.9 +0.2**
baz=88
V31A Spring Creek L **88.13 52** ⇑P **P** **15 01 03.3 +0.7**
baz=88
C21A Desert Coulee **88.27 39** ⇑P **P** **15 01 03.7 +0.7**
baz=88
F23A Volborg **88.35 41** ⇓P **P** **15 01 04.1 +0.7**
baz=89
XAN Xi'an **88.37 306** P **P** **15 01 04.8 +1.1**
XAN pmax pmax
comp=Z,4.0nm,1.2s
XAN LR LR
comp=N,77nm,15.3s
XAN LR LR
comp=Z,36nm,12.2s
H24A Dirks Ranch, A **88.47 42** ⇓P **P** **15 01 04.5 +0.4**
baz=89
K26A Motz Farm, Whi **88.50 44** ⇑P **P** **15 01 04.3 +0.1**
baz=89
D22A Cohagen **88.51 40** ⇓P **P** **15 01 05.0 +0.9**
baz=89
RSSD Black Hills **88.53 43** *eP* **P** **15 01 04.5 0.0**
comp=Z,6.7nm,1.1s
WMOK Wichita Mounta **88.55 53** *eP* **P** **15 01 04.3 -0.2**
comp=Z,1.8nm,0.5s
B21A Ellsworth Farm **88.59 38** ⇑P **P** **15 01 05.2 +0.8**
baz=89
T31A Randall Ranch, **88.75 51** ⇑P **P** **15 01 06.0 +0.6**
baz=89
C22A Vida **88.96 39** ⇓P **P** **15 01 06.7 +0.5**
baz=89
F24A Ekalaka **89.01 41** ⇑P **P** **15 01 07.4 +0.9**
baz=89
HHC Hu-ho-hao-te **89.02 313** *eP* **P** **15 01 05.5 -1.2**
HHC pP **pP** **15 02 13.8 -1.0**
HHC sP **sP** **15 02 44.0 -0.5**
HHC PP **PP** **15 04 42.8 +1.6**
HHC SKS **SKSac** **15 11 06.0 -2.9**
HHC S **S** **15 11 28.3 -2.1**
HHC sS **sS** **15 13 29.5 -1.0**
HHC pmax pmax
comp=Z,44nm,1.0s
HHC pmax pmax
comp=Z,300nm,5.4s
D23A Lindsay **89.11 40** ⇑P **P** **15 01 07.9 +1.0**
baz=89
B22A Reddig Ranch S **89.14 39** ⇓P **P** **15 01 07.8 +0.8**
baz=89
HKT Hockley **89.18 58** *eP* **P** **15 01 09.7 +2.2**
comp=Z,58nm,1.8s
PBKT Sadao Pong **89.34 287** P **P** **15 01 08.6 +0.1**
comp=Z,11nm,1.3s
E24A Baker **89.40 41** ⇑P **P** **15 01 09.7 +1.4**
baz=90
C23A Lambert **89.41 39** ⇑P **P** **15 01 09.4 +1.2**
baz=90
PLCA Paso Flores **89.55 133** P **P** **15 01 11.0 +1.7**
PLCA Paso Flores **89.55 133** P **P** **15 01 11.0 +1.7**
comp=Z,5.1nm,1.1s,baz=227,slow=6.6,SNR=3.5
D24A Glendive **89.63 40** ⇓P **P** **15 01 10.2 +0.9**
baz=90
C24A Savage **89.75 40** ⇓P **P** **15 01 10.6 +0.8**
baz=90
B23A Brockton **89.81 39** ⇓P **P** **15 01 11.1 +1.0**
baz=90
INK Inuvik **90.08 14** P **P** **15 01 10.4 -0.3**
INK Inuvik **90.08 14** P **P** **15 01 10.4 -0.3**
comp=Z,5.5nm,1.0s,baz=200,slow=4.9,SNR=9.6
DGMT Dagmar **90.29 39** *eP* **P** **15 01 13.2 +0.8**
comp=Z,60nm,1.4s
DGMT Dagmar **90.29 39** ⇑P **P** **15 01 13.2 +0.8**
baz=90
KMI Kunming **90.40 296** P **P** **15 01 14.8 +1.1**
KMI pP **pP** **15 02 24.0 +2.1**
KMI pmax pmax
comp=Z,13nm,0.9s
A24A Westby **90.60 39** ⇑P **P** **15 01 14.8 +1.0**
baz=91
SYO Syowa Base **90.84 192**⇑ *eP* **P** **15 01 13.2 -1.3**
SYO Syowa Base **90.84 192**⇑ *eP* P 15 01 30.2 +16
CD2 Chengdu **91.39 302** P **P** **15 01 18.0 +0.1**
CD2 pP **pP** **15 02 27.3 +1.2**
CD2 sP **sP** **15 02 57.0 +1.2**
CD2 PP **PP** **15 05 02.8 +2.7**
CD2 SKS **SKSac** **15 11 21.0 -1.8**
CD2 S **S** **15 11 49.8 -2.5**
CD2 sS **sS** **15 13 52.0 -1.1**
CD2 SS **SS** **15 18 06.8 +1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,100nm,5.6s
SNAA Sanae **91.47 177** *eP* **P** **15 01 18.1 +0.6**
SNAA Sanae **91.47 177** *eP* **P** **15 01 17.1 -0.4**
comp=Z,20nm,1.2s
CMAR Chiang Mai Arr **91.74 289** P **P** **15 01 21.2 +1.5**
CMAR Chiang Mai Arr **91.74 289** P **P** **15 01 21.2 +1.5**
comp=Z,4.4nm,0.8s,baz=98,slow=2.2,SNR=31
CMMT Chiang Mai **91.84 289** P **P** **15 01 20.9 +0.7**
comp=Z,12nm,0.8s,comp=Z,318nm
CHTO Chiang Mai **91.85 289** P **P** **15 01 20.4 +0.2**
YKA Yellowknife Ar **92.05 24** P **P** **15 01 19.7 -0.4**
YKA pP **pP** **15 02 26.3 -2.0**
YKA PP **PP** **15 05 00.2 -4.2**
YKA PKKPbc **PKKPdf** **15 18 34.9 -0.4**
YKA Yellowknife Ar **92.05 24** P **P** **15 01 19.7 -0.4**
comp=Z,2.6nm,0.9s,baz=240,slow=4.1,SNR=34
YKA pP **pP** **15 02 26.3 -2.0**
comp=Z,0.2nm,0.5s,baz=231,slow=4.8,SNR=2.1
YKA PP **PP** **15 05 00.2 -4.2**
comp=Z,0.1nm,0.4s,baz=241,slow=8.1,SNR=3.9
YKA PKKPbc **PKKPdf** **15 18 34.8 -0.4**
comp=Z,0.3nm,0.4s,baz=46,slow=2.1,SNR=6.1
VNA1 Neumayer--Stat **92.17 176** *eP* **P** **15 01 22.3 +1.7**
LZH Lanzhou **92.98 307** *eP* **P** **15 01 25.5 +0.3**
LZH pP **pP** **15 02 35.3 +1.8**
LZH sP **sP** **15 03 04.0 +0.8**
LZH pmax pmax
comp=Z,17nm,1.0s
ECSD EROS Data Cent **93.33 45** *eP* **P** **15 01 26.4 0.0**
comp=Z,7.9nm,1.1s
UALR University of **93.54 55** *eP* **P** **15 01 28.9 +1.3**
comp=Z,15nm,1.0s
SONM Songino Array **95.03 318** P **P** **15 01 33.4 -0.9**
SONM Songino Array **95.03 318** P **P** **15 01 33.4 -0.9**
comp=Z,0.8nm,0.8s,baz=139,slow=6.6,SNR=4.0
SPMN St. Paul **96.39 45** ⇓P **P** **15 01 40.9 +0.5**
baz=97
PLAL Pickwick Lake **96.96 56** *eP* P 15 01 40.1 -3.0
comp=Z,22nm,0.5s
ZALV Zalesovo Beam **109.54 322** PKiKP **PKiKP** **15 06 39.4 -0.7**
ZALV Zalesovo Beam **109.54 322** PKiKP **PKiKP** **15 06 39.4 -0.7**
comp=Z,1.0nm,0.5s,baz=243,slow=1.0,SNR=5.9
MKAR Makanchi Array **110.86 314** PKiKP **PKiKP** **15 06 42.1 -0.8**
MKAR PKKPbc **PKKPbc** **15 17 42.1 -0.9**
MKAR Makanchi Array **110.86 314** PKiKP **PKiKP** **15 06 42.1 -0.8**
comp=Z,1.9nm,0.6s,baz=88,slow=0.6,SNR=30
MKAR PKKPbc **PKKPbc** **15 17 42.1 -0.9**
comp=Z,1.1nm,1.0s,baz=254,slow=2.3,SNR=5.6
KURK Kurchatov **113.33 318** PKKPbc PKKPbc 15 17 34.1 -0.9
KURBB Kurchatov Arra **113.39 318** PKKPbc PKKPbc 15 17 34.1 -0.7
comp=Z,0.1nm,0.5s,baz=268,slow=4.1,SNR=5.0
KSH Kashi **115.22 306** *e*PKP **PKPdf** **15 06 53.0 +1.4**
KSH *es*PKP 15 08 34.0
KSH *e*SKS **SKSdf** **15 13 36.0 -0.4**
KSH LR LR
comp=N,27nm,5.3s
KSH LR LR
comp=E,61nm,4.7s
KSH LR LR
comp=Z,50nm,3.4s
TKM2 Tokmak 2 **115.55 310** *e*PKPdf **PKPdf** **15 06 50.9 -1.3**
AAK Ala-Archa **116.36 310** PKP **PKPdf** **15 06 53.5 -0.3**
AAK Ala-Archa **116.36 310** PKP **PKPdf** **15 06 53.5 -0.3**
comp=Z,1.2nm,0.4s,baz=180,slow=10,SNR=3.9
BVAR Borovoye Array **118.19 322** PKP **PKPdf** **15 06 56.4 -0.4**
BVAR Borovoye Array **118.19 322** PKP **PKPdf** **15 06 56.4 -0.4**
comp=Z,5.5nm,0.5s,baz=129,slow=1.1,SNR=37
KBL Kabul **120.70 300** *e*PKPdf **PKPdf** **15 07 02.2 -0.3**
ARCES ARCESS Array B **125.89 351** PKP **PKPdf** **15 07 10.6 -0.5**
ARCES ARCESS Array B **125.89 351** PKP **PKPdf** **15 07 10.6 -0.5**
comp=Z,7.2nm,0.9s,baz=343,slow=2.5,SNR=5.6
AKTO Aktyubinsk **126.27 321** PKP **PKPdf** **15 07 12.2 -0.1**
AKTO Aktyubinsk **126.27 321** PKP **PKPdf** **15 07 12.2 -0.1**
comp=Z,0.4nm,0.3s,baz=337,slow=2.4,SNR=8.3
BOSA Boshof **130.73 204** PKP **PKPdf** **15 07 23.1 +1.3**
BOSA Boshof **130.73 204** PKP **PKPdf** **15 07 23.1 +1.3**
comp=Z,1.5nm,0.5s,baz=191,slow=1.2,SNR=5.5
FINES FINESS Array B **133.09 346** PKP **PKPdf** **15 07 24.2 -0.7**
FINES SKPbc **SKPab** **15 10 28.8 +1.0**
FINES FINESS Array B **133.09 346** PKP **PKPdf** **15 07 24.2 -0.7**
comp=Z,1.6nm,0.6s,baz=2.3,slow=4.8,SNR=4.6
FINES SKPbc **SKPab** **15 10 28.8 +1.0**
comp=Z,4.7nm,1.0s,baz=132,slow=2.1,SNR=4.9
NB2 NORSAR Subarra **135.72 356** PKP **PKPdf** **15 07 29.9 -0.1**
comp=Z,4.4nm,1.0s,baz=11,slow=4.1
NOA NORSAR Array B **135.72 356** PKP **PKPdf** **15 07 29.9 -0.1**
NOA NORSAR Array B **135.72 356** PKP **PKPdf** **15 07 29.9 -0.1**
comp=Z,2.3nm,0.9s,baz=13,slow=4.1,SNR=4.3
AKASG Malin Array Be **141.16 336** PKhKP PKPpre 15 07 34.1
comp=Z,0.5nm,0.3s,baz=36,slow=3.9,SNR=7.7
KMBO Kilima Mbogo **143.60 244** PKP PKPbc 15 07 44.6 +0.5
KMBO Kilima Mbogo **143.60 244** PKP PKPbc 15 07 44.6 +0.5
comp=Z,18nm,0.8s,baz=67,slow=3.5,SNR=43
NRDL Niedersach Rie **144.28 355** *e*PKPbc **PKPab** **15 07 44.3 0.0**
IBBN Ibbenburen **144.63 357** *e*PKPbc PKPbc 15 07 45.9 +0.2
OJC Ojcow **144.74 344** *e*PKP PKPbc 15 07 46.1 0.0
LEOM Leova **144.83 332** ⇓*i*P **PKPdf** **15 07 47.1 +0.4**
KSP Ksiaz **144.99 348** *e*PKP **PKPab** **15 07 47.3 +0.2**
STHS Stebnicka Huta **145.04 342** *e*PKP **PKPab** **15 07 47.9 +0.5**
CLL Collm **145.12 351** *e*PKPbc **PKPdf** **15 07 47.2 +0.1**
CLL Collm **145.12 351** ⇓*i*PKPbc **PKPdf** **15 07 47.1 0.0**
comp=Z,63nm,1.1s
CLL *e*PKiKP **PKiKP** **15 07 52.0 +1.0**
CLL *ep*PKiKP **pPKiKP** **15 09 00.0 -2.7**
KOLS Kolonicke sedl **145.14 340** *e*PKP **PKPbc** **15 07 47.7 +0.3**
BUR08 Bucovina Ar. S **145.19 336** *e*PKPdf **PKPbc** **15 07 48.0 +0.2**
BURAR Bucovina Array **145.20 336** ⇓*i*P **PKPbc** **15 07 48.1 +0.3**
NIE Niedzica **145.31 342** *e*PKP **PKPab** **15 07 48.8 +0.3**
UPC Upice **145.36 348** *e*PKP **PKPab** **15 07 48.6 0.0**
UPC *ep*PKP **pPKPdf** **15 08 57.8 -1.7**
BRG Berggiesshubel **145.39 350** *e*PKP **PKPbc** **15 07 48.2 +0.1**
comp=Z,59nm,1.4s
BRG *ep*PKP **pPKPdf** **15 09 01.1 +1.6**
comp=Z,17nm,1.8s
BRG *e* 15 09 50.4
comp=Z,26nm,2.0s
BRG *e* 15 11 38.1
comp=Z,6.6nm,1.3s
BRG Berggiesshubel **145.39 350** *e*PKPbc **PKPbc** **15 07 48.3 +0.2**
CRVS Cervenica-Dubn **145.43 341** *e*PKP **PKPdf** **15 07 47.1 -0.6**
CRVS *e* 15 09 00.0
DPC Dobruska-Polom **145.45 347** *e*PKP **PKPab** **15 07 49.2 +0.2**
DPC *ep*PKP **pPKPdf** **15 08 58.4 -1.3**
TESR Tescani **145.50 333** ⇓*i*P **PKPbc** **15 07 48.7 +0.1**
OKC Ostrava-Krasne **145.51 345** *e*PKP **PKPdf** **15 07 48.3 +0.5**
OKC *ep*PKP **pPKPdf** **15 08 59.4 -0.3**
BUG Bochum--Univer **145.51 358** *e*PKPbc **PKPbc** **15 07 48.8 +0.4**
TLCR **145.52 330** ⇑*i*P **PKPbc** **15 07 49.1 +0.5**
KRLC Kraliky **145.61 347** *e*PKP **PKPbc** **15 07 49.2 +0.3**
KRLC *ep*PKP **pPKPdf** **15 08 58.6 -1.4**
PVCC Panska Ves **145.62 349** *e*PKP **PKPbc** **15 07 49.3 +0.5**
MORC Moravsky Berou **145.72 346** *e*PKPdf **PKPbc** **15 07 49.0 -0.2**
MORC Moravsky Berou **145.72 346** ⇓*i*P **PKPbc** **15 07 49.5 +0.3**
TRPA Tarpa **145.75 339** ⇑*i*P **PKPab** **15 07 49.9 -0.2**
MOX Moxa **145.95 353** *e*PKPbc **PKPbc** **15 07 50.1 +0.3**
MOX *ep*PKPbc pPKPbc 15 08 59.5 -1.0
UBBA Unterbreizbach **145.95 354** *e*PKPbc **PKPbc** **15 07 50.3 +0.7**
VRI Vrincioaia **145.97 333** ⇑*i*P **PKPbc** **15 07 50.4 +0.4**
PLOR Plostina **146.02 333** ⇓*i*P **PKPbc** **15 07 50.5 +0.3**
TANN Tannenbergstha **146.06 352** *e*PKPbc **PKPbc** **15 07 50.6 +0.4**
TANN *ep*PKPbc pPKPbc 15 09 00.0 -0.9
KECS Kecovo **146.10 342** *e*PKP **PKPbc** **15 07 50.0 -0.3**
KECS *e* 15 09 00.7
PRU Pruhonice **146.14 349** *e*PKP **PKPbc** **15 07 50.7 +0.3**
PRU *ep*PKP **pPKPdf** **15 09 00.7 -0.1**
NKC Novy Kostel **146.24 352** *e*PKP **PKPbc** **15 07 51.1 +0.4**
TIRR Tirgusor **146.25 329** ⇓*i*P **PKPbc** **15 07 51.5 +0.7**
HARR Harsova **146.31 330** ⇑*i*P **PKPbc** **15 07 51.9 +0.9**
VRAC Vranov **146.37 346** PKPbc **PKPbc** **15 07 51.2 +0.1**
VRAC *ep*PKPbc pPKPbc 15 09 01.2 -0.6
VRAC Vranov **146.37 346** ⇑*i*P **PKPbc** **15 07 51.7 +0.6**
VRAC Vranov **146.37 346** PKPbc **PKPbc** **15 07 51.2 +0.1**
comp=Z,5.9nm,0.6s,baz=21,slow=5.0,SNR=12
VRAC *ep*PKPbc pPKPbc 15 09 01.2 -0.6
comp=Z,5.6nm,0.7s,baz=41,slow=2.2,SNR=2.7
MEM Membach **146.38 359** PKPab **PKPbc** **15 07 51.6 +0.6**
BR131 Keskin Array S **146.38 318** *e*PKPdf **PKPdf** **15 07 50.0 +0.2**
BRTR Keskin Array B **146.38 318** PKP **PKPdf** **15 07 49.5 -0.4**
BRTR PKPbc **PKPbc** **15 07 51.4 -0.3**
BRTR *ep*PKPbc pPKPbc 15 09 03.1 +0.8
BRTR Keskin Array B **146.38 318** PKP **PKPdf** **15 07 49.5 -0.4**
comp=Z,21nm,0.8s,baz=176,slow=1.8,SNR=92
BRTR PKPbc **PKPbc** **15 07 51.4 -0.3**
comp=Z,22nm,0.8s,baz=145,slow=2.6,SNR=89
BRTR *ep*PKPbc pPKPbc 15 09 03.1 +0.8
comp=Z,5.0nm,0.9s,baz=134,slow=3.6,SNR=3.6
DOPR Dopca **146.47 334** ⇑*i*P **PKPab** **15 07 52.8 -0.2**
VYHS Vyhne **146.57 343** *e*PKP **PKPbc** **15 07 51.6 -0.1**
VYHS *e* 15 09 01.7
BCLA Clavier **146.58 360** PKPbc **PKPbc** **15 07 51.7 +0.1**
MLR Muntele Rosu **146.61 333** PKPbc **PKPbc** **15 07 51.7 -0.3**
MLR *ep*PKPbc pPKPbc 15 09 06.0 +3.2
MLR Muntele Rosu **146.61 333** ⇓*i*P **PKPbc** **15 07 51.9 -0.1**
MLR Muntele Rosu **146.61 333** PKPbc **PKPbc** **15 07 51.7 -0.3**
comp=Z,5.3nm,0.9s,baz=28,slow=0.6,SNR=24
MLR *ep*PKPbc pPKPbc 15 09 06.0 +3.2
comp=Z,1.1nm,0.9s,baz=116,slow=4.3,SNR=1.4
TREC Trest **146.62 348** *e*PKP **PKPbc** **15 07 51.9 +0.1**
MANR Mangalia **146.63 328** ⇑*i*P **PKPbc** **15 07 52.8 +0.9**
ISR Istrita **146.63 332** ⇓*i*P **PKPbc** **15 07 52.8 +0.8**
TNS Taunus Mts **146.67 356** *e*PKPbc **PKPbc** **15 07 52.1 +0.2**
TNS *ep*PKPbc pPKPbc 15 09 01.9 -0.9
ROTZ Rotzenmuhle **146.73 352** *e*PKPbc **PKPbc** **15 07 52.8 +0.7**
ROTZ *ep*PKPbc pPKPbc 15 09 02.6 -0.4
PSZ Piszkesteto **146.78 342** *e*PKPdf **PKPdf** **15 07 49.9 -0.2**
PSZ *e*PKPbc **PKPbc** **15 07 52.5 +0.2**
PSZ Piszkesteto **146.78 342** ⇑*i*P **PKPbc** **15 07 53.0 +0.6**
DRGR **146.83 338** ⇓*i*P **PKPbc** **15 07 53.1 +0.6**
ANTO Ankara **146.84 319** *e*PKPdf **PKPdf** **15 07 50.7 +0.2**
ANTO *e*PKPbc **PKPbc** **15 07 53.4 +0.6**
DOU Dourbes **146.90 1** PKPbc **PKPbc** **15 07 52.9 +0.4**
PSN Preselentsi **146.93 329** P **PKPbc** **15 07 53.3 +0.5**
GRF Grafenberg Arr **146.94 353** *e*PKPbc **PKPbc** **15 07 53.4 +0.8**
GRF *ep*PKPbc pPKPbc 15 09 03.2 -0.4
VOIR **147.03 334** ⇑*i*P **PKPbc** **15 07 54.3 +1.2**
KHC Kasperske Hory **147.14 350** *e*PKPdf **PKPdf** **15 07 50.8 +0.2**
KHC *e*PKPbc **PKPbc** **15 07 53.6 +0.3**
KHC Kasperske Hory **147.14 350** *e*PKP **PKPdf** **15 07 51.4 +0.8**
KHC *ex* x 15 07 53.8
KHC *ex* x 15 08 04.5
KHC *ep*PKP **pPKPdf** **15 09 04.2 +1.6**
WET Wettzell **147.24 351** *e*PKPdf **PKPdf** **15 07 51.6 +0.8**
WET *e*PKPbc **PKPbc** **15 07 54.0 +0.5**
WET *ep*PKPbc **pPKPbc** **15 09 04.3 -0.2**
TOD Tromm **147.26 356** PKP **PKPbc** **15 07 53.4 -0.1**
RUP Ruppelstein **147.26 358** PKP **PKPbc** **15 07 54.0 +0.4**
ZST Bratislava **147.29 345** *e*PKP **PKPbc** **15 07 53.7 +0.1**
ZST *e* 15 09 07.0
WLF Walferdange **147.32 359** *e*PKPdf **PKPdf** **15 07 52.4 +1.5**
WLF *e*PKPbc **PKPbc** **15 07 54.7 +1.0**
WLF *ep*PKPbc **pPKPbc** **15 09 04.6 -0.1**
GEC2 GERESS Array S **147.39 349** *e*PKPdf **PKPdf** **15 07 51.9 +0.8**
GEC2 *e*PKPbc **PKPbc** **15 07 54.4 +0.4**
GEC2 *ep*PKPbc **pPKPbc** **15 09 04.1 -1.0**
GERES GERESS Array B **147.39 349** PKP **PKPdf** **15 07 51.4 +0.3**
GERES PKPbc **PKPbc** **15 07 54.1 +0.1**
GERES pPKPbc **pPKPbc** **15 09 06.1 +1.0**
GERES GERESS Array B **147.39 349** PKP **PKPdf** **15 07 51.4 +0.3**
comp=Z,5.5nm,0.7s,baz=31,slow=2.3,SNR=27
GERES PKPbc **PKPbc** **15 07 54.1 +0.1**
comp=Z,5.5nm,0.7s,baz=14,slow=2.8,SNR=29
GERES pPKPbc **pPKPbc** **15 09 06.1 +1.0**
comp=Z,1.1nm,0.8s,baz=76,slow=5.6,SNR=2.4
ASF Jabal al Asfar **147.50 304** PKPbc **PKPbc** **15 07 55.2 +0.4**
ASF Jabal al Asfar **147.50 304** PKPbc **PKPbc** **15 07 55.2 +0.4**
comp=Z,10nm,0.8s,baz=302,slow=1.6,SNR=18
LOT Lotru **147.55 335** ⇑*i*P **PKPbc** **15 07 53.6 -1.0**
CONA Conrad Observa **147.84 346** ⇓*i*PKiKP **PKPbc** **15 07 55.6 +0.4**
comp=Z,45nm,1.5s,SNR=8.3
LANF Langenberg **147.94 357** PKP **PKPbc** **15 07 55.7 +0.3**
LANF Langenberg **147.94 357** PKP **PKPbc** **15 07 55.7 +0.3**
STU Stuttgart **148.05 355** *e*PKPdf **PKPdf** **15 07 53.1 +1.0**
STU *e*PKPbc **PKPbc** **15 07 56.3 +0.7**
BZS Buzias **148.23 338** ⇓*i*P **PKPbc** **15 07 56.3 +0.1**
MOA Molln **148.25 348** ⇓*i*PKiKP **PKPbc** **15 07 56.4 +0.2**
comp=Z,22nm,1.2s,SNR=6.8
MMAI Mount Meron Ar **148.36 306** PKPbc **PKPbc** **15 07 57.6 +0.6**
MMAI Mount Meron Ar **148.36 306** PKPbc **PKPbc** **15 07 57.6 +0.6**
comp=Z,35nm,0.8s,baz=60,slow=4.9,SNR=40
FUR Furstenfeldbru **148.43 352** *e*PKPbc **PKPbc** **15 07 57.3 +0.7**
FUR *e*PKPab **PKPab** **15 08 00.6 -0.2**
FUR *ep*PKPbc **pPKPbc** **15 09 08.7 +0.9**
BFO Black Forest **148.56 356** *e*PKPbc **PKPbc** **15 07 57.4 +0.4**
BFO *e*PKPab **PKPab** **15 08 01.9 +0.6**
BFO *ep*PKPbc **pPKPbc** **15 09 07.6 -0.6**
BFO Black Forest **148.56 356** *e*PKPbc **PKPbc** **15 07 57.2 +0.2**
RJOB Jochberg **148.62 350** *e*PKPbc **PKPbc** **15 07 57.5 +0.3**
RJOB *e*PKPab **PKPab** **15 08 01.9 +0.3**
PKSM Moragy **148.69 342** ⇓*i*P **PKPbc** **15 07 56.4 -0.9**
ECH Echery **148.74 357** *e*PKPbc **PKPbc** **15 07 57.5 0.0**
ECH Echery **148.74 357** PKP **PKPbc** **15 07 57.7 +0.3**
SPAK Spaichingen-Ko **148.75 355** PKP **PKPbc** **15 07 57.5 0.0**
THEF They Montfort **148.76 359** PKP **PKPbc** **15 07 57.9 +0.4**
THEF They Montfort **148.76 359** PKP **PKPbc** **15 07 57.9 +0.4**
ALT Altintas **148.99 320** P **PKPbc** **15 07 58.7 +0.3**
EDRB Edirne **148.99 328** P **PKPbc** **15 07 58.1 -0.1**
FELD Feldberg im Sc **149.03 356** PKP **PKPbc** **15 07 58.6 +0.3**
FELD Feldberg im Sc **149.03 356** PKP **PKPbc** **15 07 58.6 +0.3**
MOF Molkenrain **149.10 357** PKP **PKPbc** **15 07 58.6 +0.2**
MOF Molkenrain **149.10 357** PKP **PKPbc** **15 07 58.6 +0.2**
RETA Reutte **149.16 353** ⇑*i*PKiKP **PKPbc** **15 07 58.5 0.0**
comp=Z,31nm,1.2s
KBA Koelnbreinsper **149.16 349** *i* PKiKP **PKPbc** **15 07 58.3 -0.4**
comp=Z,8.3nm,0.6s,SNR=6.7
WATA Walderalm **149.20 351** ⇓*i*PKiKP **PKPbc** **15 07 58.7 0.0**
comp=Z,5.7nm,0.5s
SOKA Soboth **149.20 347** ⇑*i*PKiKP **PKPbc** **15 07 58.3 -0.4**
comp=Z,30nm,1.4s
MOTA Moosalm **149.26 352** ⇓*i*PKiKP **PKPbc** **15 07 58.9 0.0**
comp=Z,21nm,0.9s
WTTA Wattenberg **149.26 351** ⇑*i*PKiKP **PKPbc** **15 07 59.1 +0.1**
comp=Z,29nm,0.7s
DAVA Damuels **149.46 354** ⇓*i*PKiKP **PKPbc** **15 07 59.6 +0.2**
comp=Z,45nm,1.1s,SNR=12
OBKA Obir **149.47 347** ⇓*i*PKiKP **PKPbc** **15 07 58.8 -0.6**
ISP Isparta **149.47 318** P **PKPbc** **15 07 59.1 -0.6**
MYKA Terra Mystica **149.54 348** ⇓*i*PKiKP **PKPbc** **15 07 59.0 -0.5**
comp=Z,29nm,1.6s
LOMF Lomont **149.62 358** PKP **PKPbc** **15 07 59.6 -0.1**
FETA Feichten **149.62 352** ⇑*i*PKiKP **PKPbc** **15 08 00.2 +0.4**
comp=Z,44nm,1.2s,SNR=13
ABTA Abfaltersbach **149.63 350** ⇓*i*PKPdf **PKPdf** **15 07 55.0 +0.2**
comp=Z,16nm,1.5s
ABTA ⇓*i*PKPbc **PKPbc** **15 07 59.2 -0.5**
comp=Z,52nm,1.4s
EIL Elat **149.90 300** PKPbc **PKPbc** **15 08 00.8 0.0**
EIL PKPab **PKPab** **15 08 08.2 +0.7**
EIL Elat **149.90 300** PKPbc **PKPbc** **15 08 00.8 0.0**
comp=Z,25nm,1.0s,baz=12,slow=3.9,SNR=15
EIL PKPab **PKPab** **15 08 08.2 +0.7**
comp=Z,9.0nm,0.9s,baz=358,slow=13,SNR=3.7
CRNS Crni Vrh **149.94 347** *e*PKPbc **PKPbc** **15 08 00.2 -0.3**
CRNS *ep*PKPbc **pPKPbc** **15 09 13.8 +2.0**
DAVOX Davos/Dischmat **149.96 353** PKPbc **PKPbc** **15 08 00.9 +0.2**
DAVOX Davos/Dischmat **149.96 353** PKPbc **PKPbc** **15 08 00.9 +0.2**
comp=Z,17nm,0.9s,baz=338,slow=16,SNR=5.9
ALN Alexandroupoli **150.04 327** P **PKPbc** **15 08 00.2 -0.6**
VISS Visnje **150.07 346** *e*PKPbc **PKPbc** **15 08 00.8 +0.1**
VISS *ep*PKPbc **pPKPbc** **15 09 13.6 +1.5**
VTS Vitosha **150.11 333** P **PKPbc** **15 08 01.3 +0.2**
VTS Vitosha **150.11 333** ⇑*i*P **PKPbc** **15 08 01.8 +0.7**
VTS Vitosha **150.11 333** *i* P **PKPbc** **15 08 00.8 -0.3**
RDO Rodhopi **150.12 328** P **PKPbc** **15 08 00.7 -0.3**
DIVS Divibare **150.13 338** P **PKPbc** **15 08 01.3 +0.3**
KULA Kula-Manisa **150.21 321** P **PKPbc** **15 08 01.6 +0.2**
BOJS Bojanci **150.26 346** *e*PKPbc **PKPbc** **15 08 01.7 +0.5**
TUE Stuetta **150.32 354** *e*PKPbc **PKPbc** **15 08 01.8 +0.3**
MMB Musomiste **150.67 331** *i* P **PKPbc** **15 08 02.1 -0.2**
KKB Krupnik **150.74 332** *i* P **PKPbc** **15 08 02.5 +0.1**
KAVA Kavala **150.75 329** P **PKPbc** **15 08 02.4 0.0**
NVR Nevrokopi **150.79 330** P **PKPbc** **15 08 02.4 -0.2**
AGO Saint Agoulin **150.90 3** PKP **PKPbc** **15 08 04.2 +1.5**
SRS Serrai **151.10 330** P **PKPbc** **15 08 02.7 -0.6**
PRK Paraskevi **151.10 325** P **PKPbc** **15 08 02.8 -0.5**
PYM Petit Puy Mans **151.20 3** PKP **PKPbc** **15 08 04.5 +1.0**
LIA Limnos Island **151.22 327** P **PKPbc** **15 08 03.3 -0.3**
SIGR SIGRI **151.35 325** P **PKPbc** **15 08 03.4 -0.5**
VAY Valandovo **151.41 332** *e*PKP **PKPbc** **15 08 03.0 -1.0**
comp=Z,22nm,1.2s
OUR Ouranopolis **151.51 329** P **PKPbc** **15 08 03.4 -0.8**
SSB Saint Sauveur **151.72 1** *e*PKPbc **PKPbc** **15 08 05.2 +0.6**
LBL Lubilhac **151.72 3** PKP **PKPbc** **15 08 06.6 +1.9**
HORT Hortiatis **151.74 330** P **PKPbc** **15 08 04.0 -0.9**
CHOS Chios island **151.82 324** P **PKPbc** **15 08 04.9 -0.2**
BNI Bardonecchia **151.92 358** *e*PKPbc **PKPbc** **15 08 05.6 +0.4**
BNI *e*PKPab **PKPab** **15 08 15.4 0.0**
PAIG Paliouri **151.97 329** P **PKPbc** **15 08 04.2 -1.1**
BIA Bitola **152.21 333** *e*PKP **PKPbc** **15 08 04.2 -1.7**
FNA Florina **152.38 333** P **PKPbc** **15 08 05.9 -0.3**
XOR Xorichti **152.54 328** P **PKPbc** **15 08 04.0 -2.8**
TOUF Mont Tournerai **152.93 357** PKP **PKPbc** **15 08 07.7 +0.2**
SAOF Saorge **152.94 356** PKP **PKPbc** **15 08 07.7 +0.4**
KARP Karpathos **152.99 318** P **PKPbc** **15 08 09.2 +1.5**
REVF Revere **153.19 356** PKP **PKPbc** **15 08 07.0 -0.9**
AGG Agios Georgios **153.33 329** P **PKPbc** **15 08 07.2 -1.2**
DID Didima **154.01 326** P **PKPbc** **15 08 08.6 -1.3**
IDI Anoyia **154.59 320** P **PKPdf** **15 08 03.5 +1.0**
VLS Valsamata **154.84 330** P **PKPdf** **15 07 59.9 -2.8**
DYR Agios Nikonas **155.04 326** P **PKPdf** **15 08 02.2 -0.8**
PYL PYLOS **155.26 327** P PKPdf 15 07 55.2 -8.1
ESDC Sonseca Array **155.98 17** PKP **PKPdf** **15 08 04.4 +0.2**
ESDC PKPab **PKPab** **15 08 33.1 +0.3**
ESDC Sonseca Array **155.98 17** PKP **PKPdf** **15 08 04.4 +0.2**
comp=Z,0.2nm,0.3s,baz=350,slow=1.6,SNR=5.6
ESDC PKPab **PKPab** **15 08 33.1 +0.3**
comp=Z,3.7nm,0.7s,baz=333,slow=3.9,SNR=18
DBIC Dimbokro **165.90 135** PKP **PKPdf** **15 08 13.4 -2.0**
DBIC Dimbokro **165.90 135** PKP **PKPdf** **15 08 13.4 -2.0**
comp=Z,7.0nm,0.9s,baz=236

OJC	**Ojcow**	**0.91**	**8**	*e*Pg	**Pb**	**14 57 40.8**	**0.0**
OJC				*e*Sg	**Sb**	**14 57 52.8**	**-0.5**
VYHS	**Vyhne**	**0.97**	**212**	*e*Pg	**Pn**	**14 57 42.9**	**-0.1**
VYHS				*e*SG	**Sb**	**14 57 55.8**	**+0.7**
VYHS	**Vyhne**	**0.97**	**212**	*e*Pg	**Pn**	**14 57 42.9**	**-0.1**
VYHS				*e*Sg	**Sb**	**14 57 55.8**	**+0.7**
KECS	**Kecovo**	**1.02**	**145**	*e*PG	**Pg**	**14 57 41.5**	**-0.3**
KECS				*e*SG	**Sg**	**14 57 54.3**	**-0.7**
KECS	**Kecovo**	**1.02**	**145**	*e*Pg	**Pg**	**14 57 41.5**	**-0.3**
KECS				*e*Sg	**Sg**	**14 57 54.3**	**-0.7**
OKC	**Ostrava-Krasne**	**1.08**	**299**	*e*PG	**Pn**	**14 57 44.2**	**-0.2**
OKC	comp=Z,11nm,0.3s			*e*SG	**Sn**	**14 57 59.4**	**-0.6**
OKC	**Ostrava-Krasne**	**1.08**	**299**	Pg	**Pn**	**14 57 44.2**	**-0.2**
OKC	11nm,0.3s			Sg	**Sn**	**14 57 59.4**	**-0.6**
STHS	**Stebnicka Huta**	**1.08**	**84**	*e*PG	**Pn**	**14 57 44.7**	**+0.2**
STHS				*e*SG	**Sn**	**14 58 00.4**	**+0.4**
STHS	**Stebnicka Huta**	**1.08**	**84**	*e*Pg	**Pn**	**14 57 44.7**	**+0.2**
STHS				*e*Sg	**Sn**	**14 58 00.4**	**+0.4**
CRVS	**Cervenica-Dubn**	**1.29**	**108**	*e*PG	**Pg**	**14 57 46.2**	**-0.7**
CRVS				*e*SG	**Sn**	**14 58 04.7**	**-0.6**
CRVS	**Cervenica-Dubn**	**1.29**	**108**	*e*Pg	**Pg**	**14 57 46.3**	**-0.7**
CRVS				*e*Sg	**Sn**	**14 58 04.7**	**-0.6**
MORC	**Moravsky Berou** baz=108	**1.42**	**290**	*e*Pg	**Pg**	**14 57 50.1**	**+0.7**
MORC	15nm,0.5s,baz=108			*e*Sg	**Sn**	**14 58 09.0**	**+0.6**
KOLS	**Kolonicke sedl**	**1.80**	**102**	*e*PG	**Pg**	**14 57 57.2**	**+0.5**
KOLS				*e*SN	**Sg**	**14 58 19.8**	**-0.1**
KOLS	**Kolonicke sedl**	**1.80**	**102**	*e*Pg	**Pg**	**14 57 57.2**	**+0.5**
KOLS				*e*Sn	**Sg**	**14 58 19.8**	**-0.1**
VRAC	**Vranov** 5.6nm,0.4s,baz=89	**1.97**	**271**	*e*Sg	**Sg**	**14 58 25.8**	**+0.4**
KRUC	**Moravsky** baz=82	**2.12**	**264**	*e*Pn	**Pn**	**14 57 59.9**	**+1.1**
KRUC	2.6nm,0.4s,baz=82			*e*Sg	**Sg**	**14 58 30.6**	**+0.3**
DPC	**Dobruska-Polom**	**2.36**	**297**	*e*PG	**Pg**	**14 58 06.5**	**-0.9**
DPC	comp=Z,19nm,0.3s			*e*SG	**Sg**	**14 58 37.8**	**-0.2**
DPC	**Dobruska-Polom**	**2.36**	**297**	Pg	**Pg**	**14 58 06.5**	**-0.9**
DPC	19nm,0.3s			Sg	**Sg**	**14 58 37.8**	**-0.2**
KHC	**Kasperske Hory** comp=Z,1.3nm,0.5s	**3.95**	**269**	*e*SG	**Sg**	**14 59 29.4**	**+0.3**

IDC **29** *15:03:53.7±4.4,36°.35S×178°.12E,h122km±31km,mb3.5/4, mb1 3.7/5,mb1mx3.5/18,mbtmp3.5/5,Error ellipse: s-maj=55.0km s-min=21.1km az=46.0*

WEL **29** *15:03:60.0±0.3,36°.92S×177°.66E,h147km±3km,ML4.4/16, Error ellipse: s-maj=2.6km s-min=2.0km az=0.0*

NEIC **29** *15:03:60.0,36°.92S×177°.66E,h147km,MG4.4(WEL), After WEL.*

ISC 29 15:03:59.3±0.8,37°.08S±0°.07×177°.67E±0°.06,h170km±6km, n142,σ1s27/150,mb3.6/4,18C-24D,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.70**	**134**	PN	**Pn**	**15 04 23.0**	**-1.0**
MXZ				SN	**Sn**	**15 04 41.3**	**-1.8**
MXZ	**Matakaoa Point**	**0.70**	**134**	Pn	**Pn**	**15 04 23.0**	**-1.0**
MXZ				Sn	**Sn**	**15 04 41.3**	**-1.8**
PUZ	**Puketiti**	**1.10**	**155**	PN	**Pn**	**15 04 26.6**	**-0.2**
PUZ				SN	**Sn**	**15 04 47.1**	**-1.1**
PUZ	**Puketiti**	**1.10**	**155**	Pn	**Pn**	**15 04 26.6**	**-0.2**
PUZ				Sn	**Sn**	**15 04 47.1**	**-1.1**
MARZ	**Manawahe**	**1.20**	**221**	PN	**Pn**	**15 04 27.6**	**-0.1**
MARZ				SN	**Sn**	**15 04 49.5**	**-0.2**
MARZ	**Manawahe**	**1.20**	**221**	Pn	**Pn**	**15 04 27.6**	**-0.1**
MARZ				Sn	**Sn**	**15 04 49.5**	**-0.2**
MWZ	**Matawai**	**1.26**	**185**	⇑PN	**Pn**	**15 04 28.3**	**0.0**
MWZ				SN	**Sn**	**15 04 49.8**	**-1.0**
MWZ	**Matawai**	**1.26**	**185**	⇑Pn	**Pn**	**15 04 28.3**	**0.0**
MWZ				Sn	**Sn**	**15 04 49.8**	**-1.0**
URZ	**Urewera**	**1.26**	**200**	⇑PN	**Pn**	**15 04 27.8**	**-0.3**
URZ				SN	**Sn**	**15 04 49.8**	**-0.8**
URZ	**Urewera**	**1.26**	**200**	⇑Pn	**Pn**	**15 04 27.8**	**-0.3**
URZ				Sn	**Sn**	**15 04 49.8**	**-0.8**
URZ	**Urewera** 25nn,0.3s,baz=346,slow=3.0,SNR=849	**1.26**	**200**	P	**Pn**	**15 04 28.1**	**-0.1**
URZ	153nn,0.3s,baz=224,slow=23,SNR=10			S	**Sn**	**15 04 49.3**	**-1.2**
EDRZ	**Edgecumbe**	**1.27**	**215**	⇑PN	**Pn**	**15 04 28.5**	**+0.2**
EDRZ	**Edgecumbe**	**1.27**	**215**	⇑Pn	**Pn**	**15 04 28.5**	**+0.2**
CNGZ	**Carnagh Statio**	**1.47**	**163**	⇑PN	**Pn**	**15 04 31.1**	**+1.0**
CNGZ	**Carnagh Statio**	**1.47**	**163**	⇑Pn	**Pn**	**15 04 31.1**	**+1.0**
TARZ	**Mount Tarawera**	**1.48**	**218**	PN	**Pn**	**15 04 31.4**	**+1.1**
TARZ	**Mount Tarawera**	**1.48**	**218**	Pn	**Pn**	**15 04 31.4**	**+1.1**
RRRZ	**Republican Roa**	**1.56**	**216**	PN	**Pn**	**15 04 31.4**	**+0.4**
RRRZ	**Republican Roa**	**1.56**	**216**	Pn	**Pn**	**15 04 31.4**	**+0.4**
KUZ	**Kuaotunu**	**1.60**	**281**	PN	**Pn**	**15 04 29.5**	**-1.9**
KUZ	**Kuaotunu**	**1.60**	**281**	Pn	**Pn**	**15 04 29.5**	**-1.9**
PRRZ	**Plateau Road**	**1.74**	**215**	PN	**Pn**	**15 04 33.4**	**+0.5**
PRRZ	**Plateau Road**	**1.74**	**215**	Pn	**Pn**	**15 04 33.4**	**+0.5**
ALRZ	**Allen Road**	**1.82**	**215**	PN	**Pn**	**15 04 34.2**	**+0.5**
ALRZ	**Allen Road**	**1.82**	**215**	Pn	**Pn**	**15 04 34.2**	**+0.5**
TOZ	**Tahuroa Road**	**1.84**	**249**	PN	**Pn**	**15 04 34.3**	**+0.4**
TOZ	**Tahuroa Road**	**1.84**	**249**	Pn	**Pn**	**15 04 34.3**	**+0.4**
PRGZ	**Paritu Road**	**1.85**	**175**	PN	**Pn**	**15 04 34.9**	**+0.9**
PRGZ	**Paritu Road**	**1.85**	**175**	Pn	**Pn**	**15 04 34.9**	**+0.9**
RAHZ	**Arahi**	**1.89**	**194**	⇓PN	**Pn**	**15 04 35.1**	**+0.6**
RAHZ	**Arahi**	**1.89**	**194**	⇓Pn	**Pn**	**15 04 35.1**	**+0.6**
KNZ	**Kokohu**	**1.94**	**180**	PN	**Pn**	**15 04 35.4**	**+0.5**
KNZ	**Kokohu**	**1.94**	**180**	Pn	**Pn**	**15 04 35.4**	**+0.5**
MKAZ	**Moumakai**	**2.00**	**268**	PN	**Pn**	**15 04 35.1**	**-0.6**
MKAZ	**Moumakai**	**2.00**	**268**	Pn	**Pn**	**15 04 35.1**	**-0.6**
MHGZ	**Mahia Peninsul**	**2.08**	**175**	PN	**Pn**	**15 04 37.5**	**+0.9**
MHGZ	**Mahia Peninsul**	**2.08**	**175**	Pn	**Pn**	**15 04 37.5**	**+0.9**
NMHZ	**Naumai**	**2.13**	**198**	PN	**Pn**	**15 04 38.0**	**+0.8**
NMHZ	**Naumai**	**2.13**	**198**	Pn	**Pn**	**15 04 38.0**	**+0.8**
WATZ	**Wairara**	**2.24**	**223**	PN	**Pn**	**15 04 39.3**	**+0.9**
WATZ	**Wairara**	**2.24**	**223**	Pn	**Pn**	**15 04 39.3**	**+0.9**
BKZ	**Black Stump Fm**	**2.28**	**204**	⇓PN	**Pn**	**15 04 38.7**	**-0.2**
BKZ	**Black Stump Fm**	**2.28**	**204**	⇓Pn	**Pn**	**15 04 38.7**	**-0.2**
RITZ	**Rihia Road**	**2.38**	**216**	PN	**Pn**	**15 04 41.1**	**+1.1**
RITZ	**Rihia Road**	**2.38**	**216**	Pn	**Pn**	**15 04 41.1**	**+1.1**
MCHZ	**McNeill Hill**	**2.48**	**198**	PN	**Pn**	**15 04 41.7**	**+0.4**
MCHZ	**McNeill Hill**	**2.48**	**198**	Pn	**Pn**	**15 04 41.7**	**+0.4**
KRVZ	**Karewarewa**	**2.57**	**218**	PN	**Pn**	**15 04 43.1**	**+0.7**
KRVZ	**Karewarewa**	**2.57**	**218**	Pn	**Pn**	**15 04 43.1**	**+0.7**
WTVZ	**West Tongariro**	**2.61**	**218**	⇓PN	**Pn**	**15 04 43.4**	**+0.5**
WTVZ	**West Tongariro**	**2.61**	**218**	⇓Pn	**Pn**	**15 04 43.4**	**+0.5**
OTVZ	**Oturere**	**2.62**	**217**	⇓PN	**Pn**	**15 04 43.4**	**+0.5**
OTVZ	**Oturere**	**2.62**	**217**	⇓Pn	**Pn**	**15 04 43.4**	**+0.5**
CKHZ	**Cape Kidnapper**	**2.62**	**190**	⇑PN	**Pn**	**15 04 43.0**	**+0.2**
CKHZ	**Cape Kidnapper**	**2.62**	**190**	⇑Pn	**Pn**	**15 04 43.0**	**+0.2**
HIZ	**Hauiti**	**2.65**	**236**	PN	**Pn**	**15 04 44.4**	**+1.2**
HIZ	**Hauiti**	**2.65**	**236**	Pn	**Pn**	**15 04 44.5**	**+1.2**
NGZ	**Ngauruhoe**	**2.66**	**217**	PN	**Pn**	**15 04 43.9**	**+0.5**
NGZ	**Ngauruhoe**	**2.66**	**217**	Pn	**Pn**	**15 04 43.9**	**+0.5**
TWVZ	**Taurewa**	**2.66**	**221**	⇓PN	**Pn**	**15 04 43.9**	**+0.6**
TWVZ	**Taurewa**	**2.66**	**221**	⇓Pn	**Pn**	**15 04 44.0**	**+0.6**
TUVZ	**Tukino**	**2.70**	**215**	PN	**Pn**	**15 04 44.2**	**+0.2**
TUVZ	**Tukino**	**2.70**	**215**	Pn	**Pn**	**15 04 44.2**	**+0.2**
WPVZ	**Whakapapa**	**2.70**	**218**	PN	**Pn**	**15 04 44.4**	**+0.4**
WPVZ	**Whakapapa**	**2.70**	**218**	Pn	**Pn**	**15 04 44.4**	**+0.4**
BHHZ	**Black Hill Sta**	**2.72**	**207**	⇓PN	**Pn**	**15 04 43.7**	**-0.4**
BHHZ	**Black Hill Sta**	**2.72**	**207**	⇓Pn	**Pn**	**15 04 43.7**	**-0.4**
FWVZ	**Far West T-bar**	**2.74**	**217**	PN	**Pn**	**15 04 44.4**	**-0.1**
FWVZ	**Far West T-bar**	**2.74**	**217**	Pn	**Pn**	**15 04 44.4**	**-0.1**
MOVZ	**Moawhango**	**2.77**	**212**	⇓PN	**Pn**	**15 04 44.3**	**-0.4**
MOVZ	**Moawhango**	**2.77**	**212**	⇓Pn	**Pn**	**15 04 44.3**	**-0.4**
TRVZ	**Turoa**	**2.78**	**216**	PN	**Pn**	**15 04 44.9**	**-0.1**
TRVZ	**Turoa**	**2.78**	**216**	Pn	**Pn**	**15 04 44.9**	**-0.1**
WNVZ	**Wahianoa**	**2.78**	**215**	⇓PN	**Pn**	**15 04 44.9**	**0.0**
WNVZ	**Wahianoa**	**2.78**	**215**	⇓Pn	**Pn**	**15 04 44.9**	**0.0**
KAHZ	**Kahuranaki**	**2.78**	**193**	⇓PN	**Pn**	**15 04 44.9**	**+0.1**
KAHZ	**Kahuranaki**	**2.78**	**193**	⇓Pn	**Pn**	**15 04 44.9**	**+0.1**
PKVZ	**Pokaka**	**2.87**	**219**	PN	**Pn**	**15 04 46.2**	**+0.3**
PKVZ	**Pokaka**	**2.87**	**219**	Pn	**Pn**	**15 04 46.2**	**+0.3**
PXZ	**Pawanui**	**3.02**	**192**	PN	**Pn**	**15 04 47.1**	**-0.5**
PXZ	**Pawanui**	**3.02**	**192**	Pn	**Pn**	**15 04 47.1**	**-0.5**
PNHZ	**Pukenui**	**3.06**	**202**	PN	**Pn**	**15 04 47.4**	**-0.8**
PNHZ	**Pukenui**	**3.06**	**202**	Pn	**Pn**	**15 04 47.4**	**-0.8**
VRZ	**Vera Road**	**3.07**	**227**	PN	**Pn**	**15 04 49.6**	**+1.2**
VRZ	**Vera Road**	**3.07**	**227**	Pn	**Pn**	**15 04 49.6**	**+1.2**
WPHZ	**Waipukurau**	**3.13**	**198**	PN	**Pn**	**15 04 48.6**	**-0.6**
WPHZ	**Waipukurau**	**3.13**	**198**	Pn	**Pn**	**15 04 48.6**	**-0.6**
TSZ	**Takapari Road**	**3.26**	**204**	PN	**Pn**	**15 04 49.7**	**-1.1**
TSZ	**Takapari Road**	**3.26**	**204**	Pn	**Pn**	**15 04 49.7**	**-1.1**
PRHZ	**Porangahau**	**3.29**	**194**	⇑PN	**Pn**	**15 04 50.5**	**-0.5**
PRHZ	**Porangahau**	**3.29**	**194**	⇑Pn	**Pn**	**15 04 50.5**	**-0.5**
RAEZ	**Rainy Point**	**3.40**	**228**	PN	Pn	15 04 55.2	+2.8
RAEZ	**Rainy Point**	**3.40**	**228**	Pn	Pn	15 04 55.2	+2.8
WAZ	**Wanganui**	**3.41**	**217**	PN	**Pn**	**15 04 52.9**	**+0.4**
WAZ	**Wanganui**	**3.41**	**217**	Pn	**Pn**	**15 04 52.9**	**+0.4**
DVHZ	**Dannevirke**	**3.42**	**200**	PN	**Pn**	**15 04 51.6**	**-1.1**
DVHZ	**Dannevirke**	**3.42**	**200**	Pn	**Pn**	**15 04 51.6**	**-1.1**
POWZ	**Post Office Ro**	**3.63**	**204**	PN	**Pn**	**15 04 54.3**	**-1.0**
POWZ	**Post Office Ro**	**3.63**	**204**	Pn	**Pn**	**15 04 54.3**	**-1.0**
BFZ	**Birch Farm**	**3.77**	**197**	PN	**Pn**	**15 04 55.9**	**-1.2**
BFZ	**Birch Farm**	**3.77**	**197**	Pn	**Pn**	**15 04 55.9**	**-1.2**
MRZ	**Mangatainoka R**	**3.93**	**204**	⇓PN	**Pn**	**15 04 57.6**	**-1.6**
MRZ	**Mangatainoka R**	**3.93**	**204**	⇓Pn	**Pn**	**15 04 57.5**	**-1.6**
TIWZ	**Tintock**	**3.95**	**200**	PN	**Pn**	**15 04 58.1**	**-1.3**
TIWZ	**Tintock**	**3.95**	**200**	Pn	**Pn**	**15 04 58.1**	**-1.3**
HOWZ	**Holdsworth Sta**	**4.17**	**203**	⇓PN	**Pn**	**15 05 00.3**	**-2.0**
HOWZ	**Holdsworth Sta**	**4.17**	**203**	⇓Pn	**Pn**	**15 05 00.3**	**-2.0**
OGWZ	**Otaki Gorge**	**4.21**	**207**	⇑PN	**Pn**	**15 05 01.2**	**-1.6**
OGWZ	**Otaki Gorge**	**4.21**	**207**	⇑Pn	**Pn**	**15 05 01.2**	**-1.6**
TMWZ	**Te Maipa**	**4.25**	**198**	PN	**Pn**	**15 05 01.7**	**-1.7**
TMWZ	**Te Maipa**	**4.25**	**198**	Pn	**Pn**	**15 05 01.7**	**-1.7**
KIW	**Kapiti Island**	**4.35**	**209**	PN	**Pn**	**15 05 02.7**	**-1.8**
KIW	**Kapiti Island**	**4.35**	**209**	Pn	**Pn**	**15 05 02.7**	**-1.8**
CAW	**Cannon Point**	**4.50**	**206**	PN	**Pn**	**15 05 04.3**	**-2.2**
CAW	**Cannon Point**	**4.50**	**206**	Pn	**Pn**	**15 05 04.3**	**-2.2**
TRWZ	**Traveller**	**4.58**	**199**	⇑PN	**Pn**	**15 05 05.8**	**-1.8**
TRWZ	**Traveller**	**4.58**	**199**	⇑Pn	**Pn**	**15 05 05.8**	**-1.8**
MSWZ	**Moikau Station**	**4.72**	**203**	⇑PN	**Pn**	**15 05 06.8**	**-2.6**
MSWZ	**Moikau Station**	**4.72**	**203**	⇑Pn	**Pn**	**15 05 06.8**	**-2.6**
SNZO	**South Karori**	**4.81**	**208**	PN	**Pn**	**15 05 08.0**	**-2.5**
SNZO	**South Karori**	**4.81**	**208**	Pn	**Pn**	**15 05 08.0**	**-2.5**
PLWZ	**Palliser**	**4.86**	**202**	PN	**Pn**	**15 05 08.5**	**-2.7**
PLWZ	**Palliser**	**4.86**	**202**	Pn	**Pn**	**15 05 08.5**	**-2.7**
TCW	**Tory Channel**	**4.90**	**212**	PN	**Pn**	**15 05 09.3**	**-2.4**
TCW	**Tory Channel**	**4.90**	**212**	Pn	**Pn**	**15 05 09.3**	**-2.4**
QRZ	**Quartz Range**	**5.48**	**225**	PN	**Pn**	**15 05 16.9**	**-2.4**
QRZ	**Quartz Range**	**5.48**	**225**	Pn	**Pn**	**15 05 16.9**	**-2.4**
THZ	**Tophouse**	**5.96**	**217**	PN	**Pn**	**15 05 22.8**	**-2.8**
THZ	**Tophouse**	**5.96**	**217**	Pn	**Pn**	**15 05 22.8**	**-2.8**
KHZ	**Kahutara**	**6.21**	**210**	⇓PN	**Pn**	**15 05 25.9**	**-2.9**
KHZ	**Kahutara**	**6.21**	**210**	⇓Pn	**Pn**	**15 05 25.9**	**-2.9**
RPZ	**Rata Peaks** 3.2nn,0.3s,baz=282,slow=0.7,SNR=14	**8.33**	**215**	P	**Pn**	**15 05 54.2**	**-2.7**
RPZ	2.1nn,0.3s,baz=105,slow=21,SNR=11			S	Sn	15 07 21.2	-8.7
ODZ	**Otahua Downs**	**9.56**	**211**	*e*Pn	Pn	15 06 09.8	-3.3
ODZ				*e*S	Sn	15 07 52.4	-6.9
ASAR	**Alice Springs** 1.1nn,0.5s,baz=122,slow=8.2,SNR=36	**39.72**	**277**	P	**P**	**15 11 16.6**	**+1.4**
WRA	**Warramunga Arr** 0.8nn,0.6s,baz=121,slow=7.6,SNR=14	**41.34**	**282**	P	**P**	**15 11 29.2**	**+0.7**
FITZ	**Fitzroy Crossi** 1.5nn,0.9s,baz=123,slow=13,SNR=5.2	**49.20**	**278**	P	**P**	**15 12 31.5**	**+1.1**
QSPA	**South Pole Qui** 1.3nn,0.8s,baz=360,slow=5.3,SNR=9.4	**53.05**	**180**	P	P	15 13 03.7	+5.2
DBIC	**Dimbokro** 2.7nn,0.8s,baz=166,slow=4.2,SNR=3.1	**149.65**	**175**	PKPbc	**PKPbc**	**15 23 30.6**	**+1.4**
FINES	**FINESS Array B** 1.1nn,0.6s,baz=352,slow=2.7,SNR=3.6	**149.82**	**333**	PKPbc	**PKPbc**	**15 23 28.2**	**0.0**
BRTR	**Keskin Array B** 0.4nn,0.6s,baz=325,slow=2.3,SNR=3.9	**151.80**	**287**	PKPbc	**PKPbc**	**15 23 34.1**	**+0.4**
BRTR	0.3nn,0.4s,baz=145,slow=5.3,SNR=2.5			PKPab	**PKPab**	**15 23 44.1**	**+0.7**
TORD	**Torodi Ar. Bea** 0.5nn,0.9s,baz=165,slow=4.0,SNR=5.1	**155.90**	**190**	PKPbc	PKPdf	15 23 46.5	+13
TORD	0.5nn,0.5s,baz=174,slow=2.9,SNR=6.4			PKPab	**PKPab**	**15 24 03.1**	**+2.0**
GERES	**GERESS Array B** 0.4nn,0.5s,baz=28,slow=2.3,SNR=4.4	**163.43**	**320**	PKPab	**PKPab**	**15 24 30.5**	**-2.8**

IDC 29 15:04:39.6±1.6,18°.89S×176°.64E,h0km,mb3.8/6, mb1 4.2/6,mb1mx3.9/18,mbtmp3.8/6,MS3.5/3,Ms1 3.5/3, ms1mx2.8/29,Error ellipse: s-maj=110.0km s-min=22.3km az=153.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 171nn,26.6s	**10.06**	**250**	*e*LR	LR	15 09 24.4	
AFI	**Afiamalu** comp=Z,104nm,18.6s,baz=101,slow=31	**12.17**	**68**	LR	LR	15 11 01.5	
RPZ	**Rata Peaks** comp=Z,112nm,18.3s,baz=352,slow=31	**25.19**	**190**	LR	LR	15 17 50.9	
TBI	**Tubuai** 157nn,30.2s	**31.89**	**104**	*e*LR	LR	15 18 55.1	
PPT2	**Papeete2** 212nn,28.0s	**32.09**	**93**	*e*LR	LR	15 19 04.1	
PPT	**Papeete** comp=Z,125nn,20.9s,baz=171,slow=29	**32.09**	**93**	LR	LR	15 20 09.7	
STKA	**Stephens Creek** 2.2nn,0.9s,baz=86,slow=15,SNR=3.1	**34.04**	**241**	P	P	15 11 27.3	+1.7
WRA	**Warramunga Arr** 0.6nn,0.9s,baz=95,slow=8.1,SNR=3.1	**39.83**	**261**	P	P	15 12 13.9	-1.2
ASAR	**Alice Springs** 0.8nn,0.8s,baz=86,slow=8.5,SNR=6.5	**40.00**	**255**	P	P	15 12 15.9	-0.5
NVAR	**Mina Array Bea** 1.4nn,1.0s,baz=227,slow=7.3,SNR=8.3	**83.43**	**46**	P	P	15 17 09.5	+0.1
ILAR	**Eielson Array** 0.3nn,0.8s,baz=236,slow=6.4,SNR=3.6	**87.97**	**15**	P	P	15 17 32.0	+1.0
TXAR	**Lajitas Array** 1.9nn,0.8s,baz=219,slow=6.7,SNR=12	**90.51**	**59**	P	P	15 17 43.0	-1.0

CSEM **29** *15:05:03.2,44°.26N×8°.39E,h10km,MD1.9/4,After ROM*

ROM 29 15:05:03.2±0.2,44°.26N×8°.39E,h10km±1km,Md1.9/4, Ml1.3/3,Error ellipse: s-maj=4.4km s-min=1.5km az=115.0,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QLNO	**Quiliano** 151nn,0.4s	**0.07**	**335**	Pg	Pg	15 05 06.1	+0.5
QLNO				Sg	Sg	15 05 07.8	+0.5
QLNO	**Quiliano** 151nn,0.4s	**0.07**	**335**	Pg	Pg	15 05 06.1	+0.5
QLNO				Sg	Sg	15 05 07.8	+0.5
FINB	**Finale Ligure** 249nn,0.4s	**0.09**	**209**	Pg	Pg	15 05 06.3	+0.6
FINB				Sg	Sg	15 05 08.0	+0.4
FINB	**Finale Ligure** 249nn,0.4s	**0.09**	**209**	Pg	Pg	15 05 06.3	+0.6
FINB				Sg	Sg	15 05 08.0	+0.4
RORO	**Rocca Rossa** 33nn,0.2s	**0.28**	**238**	Pg	Pb	15 05 09.8	-0.4
RORO				Sg	Sg	15 05 13.7	+1.1
RORO	**Rocca Rossa** 33nn,0.2s	**0.28**	**238**	Pg	Pb	15 05 09.8	-0.4
RORO				Sg	Sg	15 05 13.7	+1.1
PCP	**Piancastagn** 20nn,0.3s	**0.30**	**22**	Pg	Pg	15 05 10.1	+0.6
PCP				Sg	Sg	15 05 14.5	+0.9
PCP	**Piancastagn** 20nn,0.3s	**0.30**	**22**	Pg	Pg	15 05 10.1	+0.6
PCP				Sg	Sg	15 05 14.5	+0.9

IDC **29** *15:06:55.8±1.1,41°.64N×48°.95E,h0km,mb3.7/9, mb1 3.9/13,mb1mx3.7/31,mbtmp3.8/13,ML4.0/2,MS2.8/1, Ms1 2.8/1,ms1mx2.1/40,Error ellipse: s-maj=26.1km s-min=11.6km az=150.0*

AZER **29** *15:06:56.4,42°.10N×49°.54E,h109km*

TIF **29** *15:07:00.4,42°.07N×49°.18E,h21km±9km*

ISCJB **29** *15:07:01.9±0.6,42°.14N±0°.04×49°.26E±0°.04,h40km±11km, mb3.5/11,Error ellipse: s-maj=6.9km s-min=5.1km az=162.9*

CSEM **29** *15:07:04.0±0.3,41°.91N×49°.18E,h64km±5km,mb3.7/6, Error ellipse: s-maj=10.7km s-min=7.7km az=170.0*

MOS **29** *15:07:05.3±1.0,42°.26N×49°.17E,h44km,mb4.3/4,Error ellipse: s-maj=15.2km s-min=13.5km az=97.1*

NNC **29** *15:07:08.0±1.1,41°.99N×50°.75E,h0km,mb3.9,Error ellipse: s-maj=15.5km s-min=7.7km az=113.0*

ISC 29 15:07:02.5±0.8,42°.02N±0°.03×49°.40E±0°.03,h36km±1km, n74,σ2s20/91,mb3.4/11,19C-9D,Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRN	**Derbent**	**0.80**	**271**	*i* P	Pn	15 07 21.0	+3.8
DRN				*i* S	**Sn**	**15 07 33.0**	**+5.2**
QUBA	**Quba, Azerbaij** SNR=846	**0.95**	**226**	⇑P	**Pn**	**15 07 20.3**	**+1.0**
QUBA				⇓S	**Sn**	**15 07 31.9**	**+0.3**
QUBA	**Quba, Azerbaij** SNR=846	**0.95**	**226**	P	**Pn**	**15 07 20.3**	**+1.0**
QUBA				S	**Sn**	**15 07 31.9**	**+0.3**
SIZA	**Siyzn** SNR=15	**1.01**	**202**	⇑P	**Pn**	**15 07 20.1**	**-0.1**
SIZA				⇓S	**Sn**	**15 07 32.7**	**-0.5**
SIZA	**Siyzn** SNR=15	**1.01**	**202**	P	**Pn**	**15 07 20.1**	**-0.1**
SIZA				S	**Sn**	**15 07 32.7**	**-0.5**
PQL	**Pirkuli** SNR=16	**1.37**	**207**	⇑P	**Pn**	**15 07 24.9**	**-0.3**
PQL				⇑S	**Sn**	**15 07 44.6**	**+2.5**
PQL	**Pirkuli** SNR=16	**1.37**	**207**	P	**Pn**	**15 07 24.9**	**-0.3**
PQL				S	**Sn**	**15 07 44.6**	**+2.5**
IML	**Ismayilli** SNR=18	**1.53**	**217**	P	**Pn**	**15 07 26.5**	**-0.8**
IML				⇑S	**Sn**	**15 07 48.9**	**+3.0**
IML	**Ismayilli** SNR=18	**1.53**	**217**	P	**Pn**	**15 07 26.5**	**-0.8**
SEKA	**Sheki** SNR=115	**1.84**	**245**	⇑P	**Pn**	**15 07 32.1**	**+0.5**
SEKA				⇑S	**Sn**	**15 07 54.7**	**+1.1**
SEKA	**Sheki** SNR=115	**1.84**	**245**	P	**Pn**	**15 07 32.1**	**+0.5**
SEKA				S	**Sn**	**15 07 54.7**	**+1.1**
ALIB	**Äli-Bayra** SNR=14	**2.08**	**188**	⇑P	**Pn**	**15 07 35.4**	**+0.6**
ALIB				⇑S	**Sn**	**15 08 01.3**	**+1.9**
ALIB	**Äli-Bayra** SNR=14	**2.08**	**188**	P	**Pn**	**15 07 35.4**	**+0.6**
ALIB				S	**Sn**	**15 08 01.3**	**+1.9**
GANJ	**Ganja** SNR=7.9	**2.69**	**240**	⇓P	**Pn**	**15 07 41.8**	**-1.5**
GANJ				⇑S	**Sn**	**15 08 09.9**	**-4.7**
GANJ	**Ganja** SNR=7.9	**2.69**	**240**	P	**Pn**	**15 07 41.8**	**-1.5**
GANJ				S	**Sn**	**15 08 09.9**	**-4.7**
GLBA	**Clilabad** SNR=4.9	**2.88**	**196**	⇑P	**Pn**	**15 07 43.6**	**-2.2**
GLBA				⇓S	**Sn**	**15 08 14.0**	**-5.0**
GLBA	**Clilabad** SNR=4.9	**2.88**	**196**	P	**Pn**	**15 07 43.6**	**-2.2**
GLBA				S	**Sn**	**15 08 14.0**	**-5.0**
DGRG	**David-gareji**	**3.07**	**261**	P	**Pn**	**15 07 49.5**	**+1.1**
DGRG				S	**Sn**	**15 08 23.7**	**-0.2**
TBLG	**Delisi**	**3.49**	**267**	*e*P	Pn	15 08 03.4	+9.2
TBLG				*e*S	**Sn**	**15 08 32.4**	**-1.9**
TBLG	**Delisi**	**3.49**	**267**	P	Pn	15 08 03.5	+9.2
TBLG				S	**Sn**	**15 08 32.5**	**-1.9**
DUS	**Dusheti**	**3.50**	**273**	P	Pn	15 08 07.1	+13
KZR	**Kazreti**	**3.79**	**262**	P	**Pn**	**15 07 57.7**	**-0.6**
KZR				S	Sn	15

comp=Z,1.0nm,0.4s
GERES **GERESS Array B** 25.79 298 P P 15 12 28.5 -1.5
comp=Z,0.4nm,0.5s,baz=78,slow=9.1,SNR=3.7
GERES **GERESS Array B** 25.79 298 P P 15 12 28.5 -1.5
HFS **Hagfors** 28.34 322 P P 15 12 52.2 -0.4
comp=Z,1.8nm,0.3s,baz=113,slow=8.8,SNR=24
HFS **Hagfors** 28.34 322 P P 15 12 52.2 -0.4
comp=Z,2.0nm,0.3s
NB2 **NORSAR Subarra** 29.82 323 P P 15 13 04.8 -1.0
comp=Z,0.6nm,0.4s,baz=113,slow=8.6
NOA **NORSAR Array B** 29.82 323 P P 15 13 05.0 -0.8
comp=Z,0.7nm,0.4s,baz=111,slow=8.6,SNR=8.2
NOA **NORSAR Array B** 29.82 323 P P 15 13 05.0 -0.8
comp=Z,1.0nm,0.4s
ARCES **ARCESS Array B** 30.25 344 P P 15 13 09.1 -0.3
comp=Z,4.8nm,1.1s,baz=146,slow=9.8,SNR=2.3
ARCES **ARCESS Array B** 30.25 344 P P 15 13 09.1 -0.3
comp=Z,5.0nm,1.1s
TORD **Torodi Ar. Bea** 50.27 250 P P 15 15 51.5 -3.9
comp=Z,0.3nm,0.6s,baz=48,slow=6.4,SNR=7.3
YKA **Yellowknife Ar** 75.05 352 P P 15 18 39.3 -0.6
comp=Z,0.2nm,0.4s,baz=9.1,slow=6.0,SNR=6.1
YKA **Yellowknife Ar** 75.05 352 P P 15 18 39.3 -0.6

IDC 29 15:13:43.1±1.1, 11°.72N×94°.92E, h0km, mb3.6/8, mb1 3.7/9, mb1mx3.6/28, mbtmp3.6/9, ML3.4/1, Error ellipse: s-maj=39.4km s-min=19.5km az=58.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
CMAR	**Chiang Mai Arr**	7.74	30	Op Pn		Pn	15 15 37.6	+0.4
	0.2nm,0.3s,baz=218,slow=15,SNR=7.1							
MKAR	**Makanchi Array**	36.56	345	P		P	15 20 51.4	+0.8
	0.2nm,0.3s,baz=161,slow=7.2,SNR=8.6							
SONM	**Songino Array**	37.27	13	P		P	15 20 57.0	+0.2
	0.9nm,0.8s,baz=200,slow=7.4,SNR=5.4							
KURBB	**Kurchatov Arra**	41.06	344	P		P	15 21 28.3	0.0
	0.8nm,1.0s,baz=158,slow=8.1,SNR=5.8							
ZALV	**Zalesovo Beam**	42.89	351	P		P	15 21 41.3	-1.9
	0.3nm,0.4s,baz=169,slow=8.5,SNR=2.6							
WRA	**Warramunga Arr**	49.95	129	P		P	15 22 39.1	0.0
	1.3nm,0.8s,baz=308,slow=8.6,SNR=6.2							
ASAR	**Alice Springs**	51.86	133	P		P	15 22 53.4	-0.2
	0.4nm,0.6s,baz=310,slow=6.3,SNR=6.6							
BRTR	**Keskin Array B**	60.57	309	P		P	15 23 55.5	-0.3
	0.6nm,0.6s,baz=100,slow=8.4,SNR=3.4							
GERES	**GERESS Array B**	75.51	318	P		P	15 25 30.3	+0.8
	0.7nm,0.6s,baz=106,slow=4.3,SNR=4.0							

*ISK **29** 15:17:45.2,39°.27N×30°.50E, h2km, MD2.6*
*DDA **29** 15:17:45.2,39°.23N×30°.55E, h7km, MD2.8*
*CSEM **29** 15:17:46.1±0.3,39°.27N×30°.51E, h5km, MD2.8, Error ellipse: s-maj=6.6km s-min=4.4km az=159.0*
ISC 29 15:17:46.5±1.1, 39°.28N±0°.03×30°.50E±0°.02, h7km±10km, n20, σ0°75/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
ESKT	**Eskisehir**	0.36	48	*e*PG		Pg	15 17 53.1	-0.6
ESKT				*e*SG		Sg	15 17 58.8	+0.3
ESKT	**Eskisehir**	0.36	48	*e*Pg		Pg	15 17 53.1	-0.6
ESKT				*e*Sg		Sg	15 17 58.8	+0.3
SEYT	**Eskypehyr**	0.36	48	*i* P		Pg	15 17 53.1	-0.6
SEYT				*i* S		Sg	15 17 58.9	+0.3
SEYT	**Eskypehyr**	0.36	48	*i* P		Pg	15 17 53.1	-0.6
SEYT				*i* S		Sg	15 17 58.9	+0.4
ALT	**Altintas**	0.38	234	*e*PG		Pg	15 17 53.5	-0.3
ALT				*e*SG		Sg	15 17 59.4	+0.7
ALT	**Altintas**	0.38	234	*e*Pg		Pg	15 17 53.5	-0.3
ALT				*e*Sg		Sg	15 17 59.4	+0.7
BORA	**Eskisehir**	0.60	357	*i* P		Pg	15 17 57.2	-1.0
BORA				*i* S		Sg	15 18 06.2	+0.1
BORA	**Eskisehir**	0.60	357	*i* P		Pg	15 17 57.2	-1.0
BORA				*i* S		Sg	15 18 06.2	+0.1
SVRH	**Sivrihisar-ESK**	0.81	77	*e*PG		Pg	15 18 02.1	0.0
SVRH				*e*SG		Sb	15 18 14.3	+0.1
SVRH	**Sivrihisar-ESK**	0.81	77	*e*Pg		Pg	15 18 02.1	0.0
SVRH				*e*Sg		Sb	15 18 14.3	+0.1
GDZ	**Gediz**	0.81	257	*i* P		Pg	15 18 00.6	-1.5
GDZ				*i* S		Sb	15 18 14.3	0.0
GDZ	**Gediz**	0.81	257	*i* P		Pg	15 18 00.6	-1.5
GDZ				*i* S		Sb	15 18 14.3	0.0
CAVI	**Cavuskoy**	1.06	331	*e*PG		Pg	15 18 06.2	-0.6
CAVI				*e*SG		Sn	15 18 22.4	-0.4
CAVI	**Cavuskoy**	1.06	331	*e*Pg		Pg	15 18 06.2	-0.6
CAVI				*e*Sg		Sn	15 18 22.4	-0.4
KIZT	**Kizilcal**	1.14	110	*e*PN		Pn	15 18 09.1	0.0
KIZT	**Kizilcal**	1.14	110	*e*Pn		Pn	15 18 09.1	0.0
GULT	**Gulveren**	1.16	1	*e*PN		Pg	15 18 08.1	-0.6
GULT	**Gulveren**	1.16		*e*Pn		Pg	15 18 08.1	-0.6
ULDT	**Uludag**	1.36	310	*i* P		Pg	15 18 12.9	+0.3
ULDT				*i* S		Sg	15 18 32.2	+1.9
ULDT	**Uludag**	1.36	310	*i* P		Pg	15 18 12.9	+0.3
ULDT				*i* S		Sg	15 18 32.2	+1.9

*ISCJB **29** 15:17:59.0±1.7, 15°.76N±0°.03×86°.23W±0°.05, h11km±11km, mb4.2/31, MS3.0/2, Error ellipse: s-maj=7.8km s-min=4.4km az=18.3*
*IDC **29** 15:17:59.1±0.6, 15°.74N×86°.23W, h0km, mb4.1/15, mb1 4.3/15, mb1mx4.2/23, mbtmp4.1/15, ML5.0/1, MS3.1/4, Ms1 3.1/4, ms1mx2.9/33, Error ellipse: s-maj=28.8km s-min=12.7km az=61.0*
*NEIC **29** 15:18:00.9±0.4, 15°.57N×86°.43W, mb4.4/20, Error ellipse: s-maj=13.3km s-min=6.6km az=65.0*
*CASC **29** 15:18:05.1±7.3, 10°.77N×88°.82W, h0km±82km, MD4.2, mb4.4(NEIC)*
ISC 29 15:18:02.3±0.9, 15°.72N±0°.04×86°.26W±0°.06, h22km±7km, n244, σ1°01/249, mb4.3/32, MS3.2/3, 84C-75D, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
TGUH	**Tegucigalpa,Un**	1.92	211	*e*Pn		Pn	15 18 28.0	-5.7
CNCH	**Conchagua**	2.87	212	*e*P		Pn	15 18 45.0	-1.8
BLLM	**Bellamira**	2.97	220	*e*P		Pn	15 18 46.0	-2.2
BLLM				*e*S		Sn	15 19 22.6	-0.5
VSM	**San Miguel**	3.00	221	*e*P		Pn	15 18 48.1	-0.7
CNGN	**Cerro Negro**	3.23	188	*e*P		Pn	15 18 50.8	-0.9
CNGN				*e*S		Sn	15 19 30.6	+1.0
SNVI	**San Vicente**	3.26	230	*e*P		Pn	15 18 50.7	-1.5
LFU	**La Fuente**	3.39	235	*e*P		Pn	15 18 53.7	-0.2
LFU				*e*S		Sn	15 19 34.9	+1.4
BOQS	**Boqueron**	3.53	236	*e*P		Pn	15 18 56.1	+0.1
RBDL	**Robledal**	3.68	245	*e*P		Pn	15 18 58.2	+0.1
RBDL				*e*S		Sn	15 19 44.2	+3.4
SNJE	**San Jose**	3.72	241	*e*P		Pn	15 18 58.9	+0.2
RTR	**El Retiro**	3.74	241	*e*P		Pn	15 18 59.9	+1.0
SBLS	**San Blas**	3.75	241	*e*P		Pn	15 18 59.3	+0.2
TEIG	**Tepich**	4.88	337	*e*Pn		Pn	15 19 14.2	-0.1
TEIG						Sn	15 20 08.9	-1.2
TEIG	**Tepich**	4.88	337	Pn		Pn	15 19 14.2	-0.1
	58nm,0.3s,baz=134,slow=1.7,SNR=83							
TEIG						Sn	15 20 08.9	-1.2
	27nm,0.3s,baz=264,slow=22,SNR=10							
TEIG				LR		LR	15 21 11.3	
	comp=Z,315nm,19.1s,baz=179,slow=40							
JTS	**JuntasAbangare**	5.55	167	*e*Pn		Pn	15 19 19.9	-3.6
	405nm,0.7s							
BCIP	**Isla Barro Col**	9.04	135	*e*Pn		Pn	15 20 08.0	-3.5
ROSC	**El Rosal**	15.94	131	LR		LR	15 28 23.5	
	comp=Z,40nm,20.5s,baz=204,slow=39							
HKT	**Hockley**	16.67	330	*e*P		Pn	15 21 55.4	+0.9
	33nm,0.9s							
SDV	**Santo Domingo**	16.70	112	*e*Pn		P	15 21 57.5	+0.1
	18nm,1.0s							
GOGA	**Godfrey**	17.79	8	*e*Pn		P	15 22 10.7	+1.4
	66nm,2.0s							
732A	**Laxson Ranch,**	18.11	318	⇓P		Pn	15 22 10.8	-1.7
	baz=18,SNR=5.8							
632A	**Uvalde**	18.53	320	⇑P		Pn	15 22 17.7	+0.1
	baz=19,SNR=13							
631A	**Perdido Creek**	18.96	318	⇓P		Pn	15 22 23.1	+0.2
	baz=19,SNR=24							
532A	**Rocksprings**	19.04	321	⇑P		Pn	15 22 24.4	+0.5
	baz=19,SNR=7.7							
WHTX	**Lake Whitney**	19.14	330	⇑P		Pn	15 22 29.2	+4.2
	baz=19,SNR=26							
JCT	**Junction City**	19.23	322	*e*Pn		Pn	15 22 26.4	+0.2
	12nm,0.8s							
JCT	**Junction City**	19.23	322	⇑P		Pn	15 22 26.8	+0.6
	baz=19							
531A	**Rocksprings**	19.46	320	⇓P		Pn	15 22 29.1	+0.2
	baz=20							
432A	**Menard**	19.52	323	⇓P		Pn	15 22 29.6	0.0
	baz=20,SNR=16							
UALR	**University of**	19.75	345	*e*P		P	15 22 29.9	-0.7
	18nm,0.6s							
KMSC	**Kings Mountain**	19.84	12	⇑P		Pn	15 22 35.2	+1.9
	baz=20							
431A	**Sonora**	19.86	321	⇑P		Pn	15 22 33.3	-0.4
	baz=20,SNR=14							
332A	**Millersview**	19.86	324	⇓P		Pn	15 22 33.8	+0.1
	baz=20,SNR=24							
530A	**J-C Ranch, Com**	19.94	319	⇓P		P	15 22 33.8	+0.9
	baz=20,SNR=15							
TKL	**Tuckaleechee C**	19.98	6	P		Pn	15 22 36.9	+1.9
TKL	**Tuckaleechee C**	19.98	6	P		Pn	15 22 36.9	+1.9
	0.2nm,0.3s,baz=183,slow=14,SNR=5.1							
232A	**Coleman**	20.19	325	⇓P		Pn	15 22 37.3	-0.3
	baz=20,SNR=30							
331A	**San Angelo**	20.20	323	⇑P		P	15 22 36.8	+1.1
	baz=20							
430A	**Baggett Ranch,**	20.32	320	⇓P		P	15 22 38.0	+1.0
	baz=20,SNR=10							
529A	**Stev Forest Ra**	20.50	317	⇓P		P	15 22 39.7	+0.7
	baz=20,SNR=13							
628A	**Black Gap, Mar**	20.54	315	⇓P		P	15 22 39.9	+0.5
	baz=21,SNR=19							
231A	**Bronte**	20.60	324	⇑P		Pn	15 22 41.8	-0.6
	baz=21							
429A	**Davenport Ranc**	20.62	319	⇓P		P	15 22 41.4	+1.1
	baz=21,SNR=13							
330A	**Mertzon**	20.71	322	⇓P		P	15 22 42.0	+0.7
	baz=21							
ABTX	**Abilene, Hawle**	20.75	327	⇓P		Pn	15 22 43.9	-0.3
	baz=21,SNR=12							
627A	**Terlingua Ranc**	20.86	314	⇑P		P	15 22 43.7	+0.7
	baz=21,SNR=27							
TZTN	**Tazewell**	20.88	6	*e*P		P	15 22 41.6	-1.4
	14nm,0.9s							
528A	**Cox Ranch, San**	20.89	316	⇑P		P	15 22 43.8	+0.5
	baz=21							
TXAR	**Lajitas Array**	20.99	313	P		P	15 22 45.7	+1.4
TXAR				S		S	15 26 36.4	-0.9
TXAR	**Lajitas Array**	20.99	313	P		P	15 22 45.7	+1.4
	11nm,0.8s,baz=134,slow=11,SNR=68							
TXAR				S		S	15 26 36.4	-0.9
	0.2nm,0.4s,baz=130,slow=24,SNR=2.7							
TXAR				LR		LR	15 31 57.1	
	comp=Z,37nm,18.6s,baz=180,slow=40							
230A	**Sterling City**	21.02	323	⇓P		P	15 22 45.6	+1.0
	baz=21							
131A	**Roby**	21.20	325	⇓P		P	15 22 47.2	+0.8
	baz=21							
Z32A	**Haskell**	21.20	328	⇑P		P	15 22 48.0	+1.4
	baz=21,SNR=18							
329A	**Wagon Wheel Ra**	21.26	320	⇑P		P	15 22 47.3	+0.1
	baz=21							
527A	**Woodward Ranch**	21.44	315	⇑P		P	15 22 49.3	+0.1
	baz=22							
626A	**Big Bend Ranch**	21.45	313	⇓P		P	15 22 50.5	+1.3
	baz=22,SNR=77							
130A	**Snyder**	21.46	324	⇑P		P	15 22 50.7	+1.4
	baz=22							
229A	**Bryant Ranch,**	21.49	322	⇓P		P	15 22 50.4	+0.7
	baz=22							
Z31A	**Sharp Cattle R**	21.56	327	⇓P		P	15 22 52.4	+2.1
	baz=22,SNR=8.7							
328A	**Wristen Ranch,**	21.71	319	⇓P		P	15 22 53.1	+1.1
	baz=22,SNR=23							
526A	**Mary Lane Ranc**	21.72	314	⇑P		P	15 22 53.3	+1.1
	baz=22,SNR=29							
Y32A	**R-V Farms, Ver**	21.74	329	⇑P		P	15 22 53.9	+1.7
	baz=22							
427A	**Hayter Ranch,**	21.74	317	⇑P		P	15 22 52.8	+0.4
	baz=22							
TUL1	**Tulsa**	21.84	339	⇓P		P	15 22 55.6	+2.3
	baz=22							
129A	**Stewart Farms,**	22.00	323	⇑P		P	15 22 56.1	+0.9
	baz=22							
WMOK	**Wichita Mounta**	22.03	332	*e*P		P	15 22 54.0	-1.4
	13nm,0.8s							
426A	**McDonald Obser**	22.05	316	⇑P		P	15 22 55.7	-0.1
	baz=22							
Z30A	**Sanderson Ranc**	22.06	325	⇑P		P	15 22 57.5	+1.7
	baz=22,SNR=8.3							
228A	**UT Block 9, Go**	22.07	321	⇑P		P	15 22 55.8	-0.2
	baz=22							
Y31A	**Rekieta Farm,**	22.12	328	⇓P		P	15 22 57.5	+1.2
	baz=22,SNR=11							
USIN	**University of**	22.19	357	*e*P		P	15 22 56.0	-1.0
128A	**Castleberry Fa**	22.36	322	⇓P		P	15 22 59.2	+0.2
	baz=22,SNR=8.5							
Y30A	**Stafford Cattl**	22.39	326	⇑P		P	15 23 00.1	+0.8
	baz=22,SNR=6.1							
326A	**Caldwell Ranch**	22.42	317	⇑P		P	15 22 59.1	-0.5
	baz=22,SNR=21							
227A	**Bennet, Jal**	22.43	319	⇑P		P	15 22 59.6	-0.2
	baz=22							
X31A	**McDonald Ranch**	22.51	329	⇑P		P	15 23 01.4	+0.8
	baz=23,SNR=11							
425A	**Indio Mountain**	22.77	314	⇑P		P	15 23 01.9	-1.5
	baz=23							
X30A	**Coker Ranch, T**	22.82	327	⇓P		P	15 23 04.4	+0.6
	baz=23,SNR=9.2							
127A	**Arkansas Junct**	22.93	320	⇑P		P	15 23 04.1	-1.0
	baz=23							
W31A	**Holland Ranch,**	22.94	330	⇑P		P	15 23 05.8	+0.8
	baz=23							
OLIL	**Olney**	22.98	356	*e*P		P	15 23 06.5	+1.1
OLIL				*ep*P		pP	15 23 12.8	+1.1
226B	**Tecolote Peak,**	23.03	318	⇑P		P	15 23 05.2	-0.9
	baz=23,SNR=11							
325A	**Bean Ranch, Si**	23.11	316	⇑P		P	15 23 05.4	-1.6
	baz=23,SNR=11							
X29A	**Tulia**	23.25	326	⇑P		P	15 23 08.0	-0.3
	baz=23							
Z27A	**Tatum**	23.28	322	⇓P		P	15 23 07.6	-1.1
	baz=23,SNR=9.1							
BLO	**Bloomington**	23.36	359	*e*P		P	15 23 09.5	+0.3
	30nm,0.6s							
V31A	**Spring Creek L**	23.37	331	⇓P		P	15 23 09.6	+0.2
	baz=24							
225A	**Deer Hill, Car**	23.48	317	⇓P		P	15 23 09.4	-1.3
	baz=24,SNR=10							
MSTX	**Muleshoe**	23.49	324	⇑P		P	15 23 09.1	-1.6
	baz=24							
324A	**Moseley Ranch,**	23.50	315	⇓P		P	15 23 09.0	-1.9
	baz=24,SNR=12							
Y27A	**Causey**	23.65	323	⇑P		P	15 23 11.8	-0.6
	baz=24,SNR=5.4							
125A	**Gardner Draw,**	23.73	319	⇑P		P	15 23 12.0	-1.0
	baz=24,SNR=6.8							
224A	**Cornudas Mount**	23.92	316	⇓P		P	15 23 13.3	-1.7
	baz=24,SNR=8.4							
ATAH	**Atahualpa**	24.01	161	LR		LR	15 32 02.6	
	comp=Z,73nm,19.6s,baz=209,slow=35							
Y26A	**Elida**	24.07	322	⇓P		P	15 23 15.0	-1.3
	baz=24							
Z25A	**Roswell**	24.17	320	⇑P		P	15 23 15.6	-1.6
	baz=24							
124A	**Stringfield Ra**	24.27	318	⇑P		P	15 23 17.2	-1.0
	baz=24,SNR=11							
W27A	**Bowe Ranch, En**	24.45	325	⇑P		P	15 23 19.4	-0.3
	baz=24							
X26A	**CR and CF Fran**	24.50	323	⇓P		P	15 23 20.3	0.0
	baz=25,SNR=15							
Y25A	**Mesa, Roswell**	24.59	321	⇑P		P	15 23 20.8	-0.3
	baz=25							
Z24A	**Sheeppen Canyo**	24.61	319	⇑P		P	15 23 21.8	+0.5
	baz=25,SNR=5.7							
W26A	**Owens Ranch, T**	24.87	324	⇑P		P	15 23 24.1	+0.5
	baz=25							
U28A	**Mallet**	25.01	328	⇓P		P	15 23 25.4	+0.6
	baz=25							
Y24A	**Capitan**	25.05	320	⇑P		P	15 23 25.3	+0.1
	baz=25,SNR=15							
U27A	**Thompson Grove**	25.35	328	⇑P		P	15 23 28.1	+0.2
	baz=25							
W25A	**X Bar L Ranch,**	25.35	323	⇓P		P	15 23 28.5	+0.5
	baz=25,SNR=13							
V26A	**Tequesquite Ra**	25.39	325	⇓P		P	15 23 29.0	+0.7
	baz=26,SNR=14							
Z22A	**Elephant Butte**	25.60	317	⇑P		P	15 23 31.2	+0.9
	baz=26,SNR=8.9							
121A	**Cookes Peak, D**	25.72	314	⇓P		P	15 23 32.4	+1.0
	baz=26,SNR=8.1							
T27A	**Campo**	25.79	329	⇓P		P	15 23 32.0	+0.1
	baz=26							
U26A	**Atchley Ranch,**	25.81	326	⇑P		P	15 23 32.9	+0.8
	baz=26,SNR=9.9							
V25A	**Rancho No Teng**	25.89	324	⇑P		P	15 23 33.4	+0.6
	baz=26,SNR=7.7							
220A	**Playas Peak, P**	25.89	312	⇓P		P	15 23 31.4	-1.4
	baz=26							
W24A	**Lazy 6 Ranch,**	25.90	322	⇑P		P	15 23 31.9	-1.1
	baz=26							
Y22A	**Socorro**	26.03	318	⇓P		P	15 23 32.8	-1.3
	baz=26							
U25A	**Circle Dot Ran**	26.18	325	⇓P		P	15 23 35.9	+0.4
	baz=26							
V24A	**Rampart Ranch,**	26.18	323	⇑P		P	15 23 35.2	-0.4
	baz=26							
120A	**U Bar Ranch, L**	26.32	314	⇑P		P	15 23 35.3	-1.4
	baz=26							
S26A	**Kim**	26.60	328	⇓P		P	15 23 40.1	+0.9
	baz=27,SNR=13							
T25A	**Trinidad**	26.72	326	⇑P		P	15 23 41.2	+0.7
	baz=27,SNR=8.1							
R26A	**Arlington**	27.12	329	⇓P		P	15 23 44.1	+0.2
	baz=27							
S25A	**Robets Cordova**	27.13	327	⇑P		P	15 23 43.7	-0.4
	baz=27							
R25A	**Fountain Ranch**	27.42	328	⇓P		P	15 23 46.5	-0.1
	baz=28							
S24A	**Houchin Ranch,**	27.52	326	⇓P		P	15 23 47.8	+0.1
	baz=28							
Q26A	**Hugo**	27.64	330	⇑P		P	15 23 49.2	+0.6
	baz=28							
R24A	**Sanders Place,**	27.91	327	⇑P		P	15 23 52.3	+1.3
	baz=28							
R23A	**Moffat**	28.26	326	⇓P		P	15 23 54.8	+0.6
	baz=28							
S22A	**4UR Ranch, Cre**	28.49	324	⇑P		P	15 23 56.7	+0.3
	baz=29							
Q23A	**Hartsel**	28.79	327	⇑P		P	15 23 59.4	+0.4
	baz=29							
ECSD	**EROS Data Cent**	29.28	345	*e*P		P	15 24 01.2	-1.8
	8.7nm,0.9s							
Q22A	**Crested Butte,**	29.33	326	⇓P		P	15 24 04.4	+0.6
	baz=29							
ISCO	**Idaho Springs**	29.34	329	⇓P		P	15 24 04.8	+0.8
	baz=29							
P22A	**Eagle**	29.78	327	⇑P		P	15 24 08.3	+0.6
	baz=30							
LONY	**Lake Ozonia**	30.46	17	*e*P		P	15 24 13.4	+0.1
	216nm,3.0s							
N22A	**Wattenberg Ran**	30.52	329	⇓P		P	15 24 15.3	+1.0
	baz=31							
L23A	**Garrett**	31.17	331	⇑P		P	15 24 20.8	+0.8
	baz=31							
N20A	**Spence Gulch,**	31.47	327	⇓P		P	15 24 24.1	+1.5
	baz=32,SNR=11							
SRU	**San Rafael**	31.54	322	⇑P		P	15 24 22.7	-0.5
	baz=32							
P18A	**Preston Nutter**	31.72	323	⇓P		P	15 24 25.0	+0.1
	baz=32							
L21A	**Rawlins**	31.85	329	⇑P		P	15 24 26.5	+0.6
	baz=32							
H24A	**Dirks Ranch, A**	32.81	336	⇓P		P	15 24 35.9	+1.8
	baz=33							
DAU	**Daniels Canyon**	32.82	323	*e*P		P	15 24 33.7	-0.9
	10nm,1.4s							
I22A	**9 Mile Ranch,**	32.93	333	⇓P		P	15 24 36.2	+0.9
	baz=33							
J21A	**Lysite**	32.94	331	⇑P		P	15 24 36.4	+0.9
	baz=33							
H23A	**Clabaugh Cattl**	33.00	335	⇓P		P	15 24 36.9	+1.0
	baz=33							
L18A	**Fontenelle, Gr**	33.18	327	⇑P		P	15 24 38.4	+0.8
	baz=33							
M17A	**Scullys Gap (B**	33.21	325	⇑P		P	15 24 38.2	+0.4
	baz=33							
I21A	**Big Trails, Te**	33.23	332	⇓P		P	15 24 39.1	+1.2
	baz=33							
J20A	**Shoshoni**	33.24	330	⇓P		P	15 24 39.4	+1.4
	baz=33							
PDAR	**Pinedale Array**	33.54	328	P		P	15 24 40.8	+0.1
PDAR	**Pinedale Array**	33.54	328	P		P	15 24 40.8	+0.1
	2.3nm,0.6s,baz=124,slow=8.0,SNR=12							
DUG	**Dugway**	33.59	322	⇑P		P	15 24 41.5	+0.3
	baz=34							
R11A	**Troy Canyon, C**	34.25	317	⇑P		P	15 24 46.7	-0.3
	baz=34							
G20A	**Bridger**	34.73	332	⇓P		P	15 24 51.1	+0.2
	baz=35							
TPAW	**Teton Pass**	34.77	328	*e*P		P	15 24 49.9	-1.5
	7.7nm,0.8s							
MOOW	**Moose Ponds**	34.84	328	*e*P		P	15 24 50.4	-1.6
	3.1nm,0.7s							
RRI2	**Red Ridge**	34.86	327	*e*P		P	15 24 50.7	-1.5
	9.7nm,0.7s							
IMW	**Indian Meadow**	35.05	328	*e*P		P	15 24 51.5	-2.4
	4.2nm,0.6s							
ULM	**Lac du Bonnet**	35.31	349	P		P	15 24 55.0	-0.7
ULM	**Lac du Bonnet**	35.31	349	P		P	15 24 55.0	-0.7
	2.7nm,0.4s,baz=169,slow=5.2,SNR=3.0							
SBC	**Santa Barbara**	35.35	308	⇑P		P	15 24 54.0	-2.2
	baz=35							
ELK	**Elko**	35.40	321	*e*P		P	15 24 57.6	+0.7
	73nm,1.0s							
G18A	**Lazy EL Ranch,**	35.42	331	⇓P		P	15 24 57.4	+0.5
	baz=36							
E20A	**Meyer Farm, Mu**	35.70	334	⇑P		P

D16A	Dana Ranch, Ca	37.62	331	⇑P		P		15 25 16.6	+1.0	
	baz=38									
E15A	Deer Lodge	37.70	330	⇓P		P		15 25 17.0	+0.7	
	baz=38									
B18A	Beardsley Farm	37.88	334	⇑P		P		15 25 18.9	+1.2	
	baz=38									
D15A	Lincoln	38.08	331	⇓P		P		15 25 20.3	+0.7	
	baz=38									
E14A	Clinton	38.11	329	⇓P		P		15 25 20.1	+0.3	
	baz=38									
A18A	Metzger Ranch,	38.32	335	⇑P		P		15 25 22.3	+0.9	
	baz=38									
WVOR	Wild Horse Val	38.45	320	*e*P		P		15 25 21.1	-1.6	
	10nm,1.2s									
E13A	Victor	38.47	329	⇑P		P		15 25 23.1	+0.3	
	baz=39									
F12A	Elk City	38.55	327	⇑P		P		15 25 24.4	+0.9	
	baz=39,SNR=9.7									
D14A	Greenough	38.58	330	⇑P		P		15 25 24.1	+0.4	
	baz=39									
C15A	Salmond Ranch,	38.66	331	⇓P		P		15 25 24.5	+0.2	
	baz=39									
A17A	Triple J Farms	38.69	334	⇓P		P		15 25 24.8	+0.3	
	baz=39									
D13A	Huson	39.06	329	⇑P		P		15 25 28.2	+0.6	
	baz=39									
A16A	West Butte Ran	39.08	333	⇓P		P		15 25 28.2	+0.4	
	baz=39									
D12A	Red Ives Fores	39.47	328	⇓P		P		15 25 31.4	+0.2	
	baz=40									
C13A	Hot Springs	39.52	330	⇓P		P		15 25 32.0	+0.5	
	baz=40									
A15A	Johnson Ranch,	39.60	333	⇓P		P		15 25 32.5	+0.4	
	baz=40									
A14A	Double T Ranch	39.90	332	⇑P		P		15 25 35.4	+0.7	
	baz=40									
SIV	San Ignacio	40.14	141	P		P		15 25 37.1	+0.2	
SIV	San Ignacio	40.14	141	P		P		15 25 37.1	+0.2	
	7.8nm,0.8s,baz=322,slow=9.4,SNR=27									
C11A	Tepee Creek (N	40.46	329	⇑P		P		15 25 40.1	+0.8	
	baz=40									
NEW	Newport	41.17	329	⇑P		P		15 25 45.8	+0.7	
	baz=41									
SCHQ	Schefferville	41.83	17	P		P		15 25 49.5	-0.8	
SCHQ	Schefferville	41.83	17	P		P		15 25 49.5	-0.8	
	2.8nm,0.9s,baz=227,slow=14,SNR=3.2									
LON	Longmire	42.75	324	*e*P		P		15 25 57.3	-0.8	
	2.9nm,0.7s									
CFAA	Coronel Fontan	50.13	160	P		P		15 26 56.4	+0.2	
CFAA	Coronel Fontan	50.13	160	P		P		15 26 56.4	+0.2	
	0.2nm,0.7s,baz=312,slow=15,SNR=5.1									
YKA	Yellowknife Ar	50.80	343	P		P		15 27 00.7	0.0	
YKA				PcP		PcP		15 28 16.9	-0.5	
YKA	Yellowknife Ar	50.80	343	P		P		15 27 00.7	0.0	
	4.3nm,0.8s,baz=139,slow=7.8,SNR=67									
YKA				PcP		PcP		15 28 16.9	-0.5	
	0.6nm,0.8s,baz=148,slow=4.4,SNR=4.8									
YKW3	Yellowknife Ar	50.86	344	*e*P		P		15 27 00.5	-0.6	
	0.1nm,1.0s									
PLCA	Paso Flores	58.03	166	P		P		15 27 53.9	+0.3	
PLCA	Paso Flores	58.03	166	P		P		15 27 53.9	+0.3	
	0.8nm,0.3s,baz=350,slow=9.6,SNR=5.5									
INK	Inuvik	60.46	342	P		P		15 28 10.0	0.0	
INK	Inuvik	60.46	342	P		P		15 28 10.0	0.0	
	0.7nm,0.5s,baz=118,slow=4.2,SNR=3.8									
ILAR	Eielson Array	63.53	335	P		P		15 28 30.3	-0.4	
ILAR	Eielson Array	63.53	335	P		P		15 28 30.3	-0.4	
	1.1nm,0.7s,baz=119,slow=4.5,SNR=13									
ESDC	Sonseca Array	74.28	53	P		P		15 29 39.1	+1.0	
ESDC	Sonseca Array	74.28	53	P		P		15 29 39.2	+1.0	
	0.5nm,0.4s,baz=256,slow=3.7,SNR=4.5									
TORD	Torodi Ar. Bea	84.59	78	P		P		15 30 36.3	+1.7	
TORD	Torodi Ar. Bea	84.59	78	P		P		15 30 36.3	+1.7	
	0.3nm,0.7s,baz=287,slow=5.0,SNR=2.7									
GERES	GERESS Array B	84.72	41	P		P		15 30 34.6	-0.2	
GERES	GERESS Array B	84.72	41	P		P		15 30 34.6	-0.2	
	0.2nm,0.3s,baz=300,slow=7.8,SNR=2.9									
FINES	FINESS Array B	86.55	26	P		P		15 30 44.1	+0.7	
FINES	FINESS Array B	86.55	26	P		P		15 30 44.1	+0.7	
	1.1nm,0.7s,baz=280,slow=8.3,SNR=2.8									
AFI	Afiamalu	89.50	255	LR		LR		16 00 18.1		
	comp=Z,1μm,20.1s,baz=184,slow=28									
WRA	Warramunga Arr	141.19	258	PKP		PKPdf		15 37 30.6	-1.4	
WRA	Warramunga Arr	141.19	258	PKP		PKPdf		15 37 30.6	-1.4	
	0.7nm,0.8s,baz=81,slow=2.1,SNR=7.1									
ASAR	Alice Springs	141.47	252	PKP		PKPdf		15 37 31.1	-1.4	
ASAR	Alice Springs	141.47	252	PKP		PKPdf		15 37 31.1	-1.4	
	0.6nm,0.6s,baz=94,slow=2.1,SNR=10									
CMAR	Chiang Mai Arr	145.65	351	PKPbc		PKPdf		15 37 39.9	-0.1	
CMAR	Chiang Mai Arr	145.65	351	PKPbc		PKPdf		15 37 39.9	-0.1	
	4.4nm,0.9s,baz=342,slow=4.3,SNR=20									

IDC ***29*** *15:26:24.3±0.4,43.˚68S×107.˚50W,h0km,mb5.0/20, mb1 5.1/20,mb1mx5.1/22,mbtmp5.0/20,MS5.0/18, Ms1 5.0/18,ms1mx4.8/29,Error ellipse: s-maj=16.1km s-min=13.2km az=136.0*

ISCJB ***29*** *15:26:24.4±0.2,43.˚72S±0.˚05×107.˚18W±0.˚08,h10km, mb5.4/101,MS5.1/45,Error ellipse: s-maj=8.1km s-min=6.8km az=13.5*

MOS ***29*** *15:26:24.9±1.1,43.˚62S×107.˚48W,h10km,mb5.6/43, MS5.1/13,Error ellipse: s-maj=17.0km s-min=8.8km az=79.4*

NEIC ***29*** *15:26:25.4±0.1,43.˚79S×107.˚18W,h10km,mb5.6/81, Error ellipse: s-maj=7.0km s-min=5.5km az=105.0*

GCMT ***29*** *15:26:27.7±0.1,43.˚78S×107.˚45W,h12km,MW5.4, Moment Tensor Solution. s88,c151; s44,c45; Moment tensor: Scale 10¹⁷Nm; Mrr1.43±.02; Mθθ-0.02±.02; Mϕϕ-1.40±.02; Mrθ-0.26±.05; Mθϕ0.11±.02; Mϕr0.99±.05; Best double couple: M0 1.80000×10¹⁷ NP1:φs181.00000°, δ27.00000°,λ100.00000°. NP2:φs349.00000°,δ63.00000°, λ85.00000°. Principal axes: T 1.7700, Plg72.0000°, Azm247.0000°; N -0.0300, Plg5.0000°, Azm352.0000°; P -1.7400, Plg18.0000°, Azm83.0000°; Data Used: II IU IC G CN. Surface waves: sta= 97, comp=185, per= 50.*

BJI ***29*** *15:26:28.5,43.˚10S×107.˚30W,h23km,mB5.5/26, Ms5.4/26,Ms7 5.3/29*

ISC 29 15:26:25.6±0.2, 43.˚68S±0.˚07×107.˚38W±0.˚06, h10km, n1141,⌀1s27/1163, mb5.5/102, MS5.2/46, 231C-250D, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	27.30	97	*e*P		P	15 32 09.7	-0.5
	85nm,1.5s							
PLCA	Paso Flores	27.30	97	P		P	15 32 11.6	+1.3
	15nm,1.1s,baz=250,slow=10,SNR=13							
PLCA				LR		LR	15 40 07.0	
	comp=Z,8μm,20.9s,baz=237,slow=30							
USHA	Ushuaia	27.40	128	P		P	15 32 12.4	+1.5
USHA	Ushuaia	27.40	128	P		P	15 32 12.4	+1.5
	46nm,1.2s,baz=246,slow=7.6,SNR=6.5							
USHA				LR		LR	15 40 24.8	
	comp=Z,6μm,20.1s,baz=267,slow=31							
RKT	Rikitea	30.61	303	*e*LR		LR	15 40 36.1	
	6μm,27.2s,baz=137							
PMSA	Palmer Station	32.01	146	LR		LR	15 42 07.6	
	comp=Z,2μm,19.8s,baz=336,slow=29							
LCO	Las Campanas	32.68	76	*e*P		P	15 32 56.5	-1.7
	170nm,1.7s							
CFAA	Coronel Fontan	32.96	82	P		P	15 33 01.6	+1.1
CFAA				PcP		PcP	15 35 45.0	+0.5
CFAA	Coronel Fontan	32.96	82	P		P	15 33 01.6	+1.1
	4.3nm,1.0s,baz=237,slow=8.0,SNR=49							
CFAA				PcP		PcP	15 35 45.0	+0.5
	0.7nm,0.9s,baz=246,slow=3.5,SNR=3.5							
CFAA				LR		LR	15 43 03.4	
	comp=Z,743nm,20.6s,baz=232,slow=30							
TRQA	Tornquist	34.45	96	*e*P		P	15 33 11.6	-1.8
	178nm,1.3s							
LVC	Limon Verde	38.00	69	*e*P		P	15 33 42.1	-1.9
	37nm,1.4s							
TBI	Tubuai	39.99	287	*e*S		S	15 40 04.9	-1.1
	576nm,27.8s							
TBI				*e*LQ		LQ	15 43 12.6	
	943nm,35.8s							
TBI				*e*LR		LR	15 44 53.1	
	8μm,28.0s,baz=133							
NNA	Nana	41.11	49	P		P	15 34 08.5	-1.2
NNA	Nana	41.11	49	P		P	15 34 08.5	-1.2
	17nm,0.9s,baz=206,slow=9.7,SNR=4.7							
NNA				LR		LR	15 46 40.8	
	comp=Z,4μm,21.7s,baz=135,slow=30							

LPAZ	La Paz	42.99	63	*e*P		P		15 34 25.0	-0.8	
	57nm,1.3s									
LPAZ	La Paz	42.99	63	P		P		15 34 27.3	+1.5	
	25nm,1.1s,baz=208,slow=6.3,SNR=52									
LPAZ				LR		LR		15 48 05.8		
	comp=Z,1μm,19.1s,baz=257,slow=30									
PPT2	Papeete2	44.00	293	*e*S		S		15 41 04.2	-1.2	
	834nm,25.0s									
PPT2				*e*LQ		LQ		15 44 38.3		
	2μm,29.2s									
PPT2				*e*LR		LR		15 46 44.0		
	7μm,24.5s,baz=139									
PPT	Papeete	44.01	293	LR		LR		15 47 46.2		
	comp=Z,3μm,19.4s,baz=130,slow=29									
ATAH	Atahualpa	44.38	43	P		P		15 34 38.6	+1.9	
ATAH	Atahualpa	44.38	43	P		P		15 34 38.6	+1.9	
	12nm,0.8s,baz=228,slow=8.3,SNR=15									
ATAH				LR		LR		15 48 31.1		
	comp=Z,2μm,22.0s,baz=43,slow=30									
QSPA	South Pole Qui	46.54	180	*e*P		P		15 34 53.0	0.0	
	162nm,1.1s									
QSPA				PcP		PcP		15 36 27.8	+0.7	
QSPA	South Pole Qui	46.54	180	P		P		15 34 55.0	+2.0	
	86nm,0.9s,baz=121,slow=3.9,SNR=173									
QSPA				PcP		PcP		15 36 27.7	+0.7	
	20nm,1.0s,baz=142,slow=7.1,SNR=2.4									
SBA	Scott Base	46.87	197	*e*P		P		15 34 52.9	-2.4	
SBA				pmax		pmax				
	comp=Z,441nm,2.3s									
SBA	Scott Base	46.87	197	*e*P		P		15 34 52.9	-2.4	
	comp=Z,441nm,2.3s									
SIV	San Ignacio	47.90	70	P		P		15 35 04.4	+0.4	
SIV	San Ignacio	47.90	70	P		P		15 35 04.4	+0.4	
	comp=Z,9.4nm,0.7s,baz=244,slow=9.9,SNR=37									
SIV				LR		LR		15 52 37.9		
	comp=Z,1μm,19.1s,slow=33									
VNDA	Vanda	47.97	197	*e*P		P		15 35 06.1	+2.3	
VNDA	Vanda	47.97	197	P		P		15 35 06.5	+2.7	
	comp=Z,20nm,1.0s,baz=102,slow=6.9,SNR=56									
VNDA				PcP		PcP		15 36 34.1	+2.3	
	comp=Z,10nm,1.0s,baz=33,slow=2.9,SNR=6.5									
VNDA				LR		LR		15 51 14.3		
	comp=Z,450nm,19.1s,baz=101,slow=31									
OTAV	Otavalo	50.79	39	*e*P		P		15 35 26.2	-0.4	
	comp=Z,24nm,1.5s									
SAML	Samuel	51.66	61	*e*P		P		15 35 31.0	-1.7	
	comp=Z,50nm,1.2s									
VNA1	Nemayer--Stat	52.37	155	*e*P		P		15 35 38.9	+1.7	
SNAA	Sanae	53.47	158	*e*P		P		15 35 46.0	+0.5	
SNAA	Sanae	53.47	158	*e*P		P		15 35 44.3	-1.2	
	comp=Z,121nm,1.3s									
RPZ	Rata Peaks	56.56	239	*e*P		P		15 36 10.5	+2.4	
	comp=Z,96nm,1.5s									
ROSC	El Rosal	56.76	41	*e*P		P		15 36 11.8	+1.6	
ROSC	El Rosal	56.76	41	P		P		15 36 12.2	+2.0	
	comp=Z,16nm,0.7s,baz=101,slow=16,SNR=28									
ROSC				LR		LR		15 57 15.7		
	comp=Z,1μm,18.7s,baz=194,slow=33									
BDFB	Brasilia	57.28	80	P		P		15 36 13.7	0.0	
BDFB	Brasilia	57.28	80	P		P		15 36 13.7	0.0	
	comp=Z,19nm,1.1s,baz=226,slow=6.5,SNR=9.1									
BDFB				LR		LR		15 58 40.2		
	comp=Z,3μm,18.3s,baz=198,slow=34									
JTS	JuntasAbangare	57.46	26	*e*P		P		15 36 12.7	-2.1	
TGUH	Tegucigalpa,Un	60.33	23	*e*P		P		15 36 34.5	0.0	
	comp=Z,401nm,2.0s									
SDV	Santo Domingo	62.04	42	*e*P		P		15 36 45.2	-1.3	
	comp=Z,97nm,1.8s									
SYO	Syowa Base	64.99	167	‖*e*P		P		15 37 04.2	-0.8	
SYO	Syowa Base	64.99	167	‖*e*P		PcP		15 37 33.0	-5.0	
MSVF	Nonsavu	66.90	267	*e*P		P		15 37 17.3	-0.9	
MSVF	Nonsavu	66.90	267	*e*P		P		15 37 17.3	-0.9	
MAW	Mawson	68.80	176	P		P		15 37 29.7	+0.4	
MAW	Mawson	68.80	176	P		P		15 37 29.7	+0.4	
	comp=Z,18nm,1.0s,baz=192,slow=6.3,SNR=18									
MAW				LR		LR		16 07 59.6		
	comp=Z,427nm,18.2s,baz=204,slow=36									
GTBY	Guantanamo Bay	69.88	32	*e*P		P		15 37 35.0	-1.6	
	comp=Z,219nm,1.6s									
SDDR	Presa de Saban	70.59	36	*e*P		P		15 37 41.4	+0.4	
	comp=Z,59nm,1.5s									
TAU	Tasmania Unive	70.96	229	*e*P		P		15 37 44.1	+1.0	
TAU				pmax		pmax				
	comp=Z,151nm,1.6s									
TAU	Tasmania Unive	70.96	229	*e*P		P		15 37 44.1	+1.0	
	comp=Z,151nm,1.6s									
CRPR	Cabo Rojo, PR	71.62	40	*e*P		P		15 37 43.6	-3.6	
OBIP	Obispado Ponce	71.89	41	*e*P		P		15 37 46.2	-2.5	
	comp=Z,190nm,1.5s									
CELP	Cerrillos	71.93	41	*e*P		P		15 37 46.8	-2.3	
LRS	Lares	71.99	40	*e*P		P		15 37 46.2	-3.2	
732A	Laxson Ranch,	72.37	7	⇓P		P		15 37 52.0	+0.5	
	baz=73,SNR=6.5									
DZM	Mont Dzumac	72.42	256	*e*S		S		15 47 10.9	-5.4	
	comp=Z,928nm,28.6s									
DZM				*e*SS		SS		15 51 48.9	-5.4	
	comp=Z,464nm,27.2s									
DZM				*e*LR		LR		15 59 47.8		
	comp=Z,4μm,28.1s									
TXAR	Lajitas Array	72.74	3	P		P		15 37 55.2	+1.4	
TXAR	Lajitas Array	72.74	3	P		P		15 37 55.2	+1.4	
	comp=Z,16nm,0.8s,baz=183,slow=7.5,SNR=31									
627A	Terlingua Ranc	72.87	4	⇓P		P		15 37 55.9	+1.3	
	baz=73,SNR=33									
628A	Black Gap, Mar	72.92	4	⇓P		P		15 37 55.9	+1.1	
	baz=73,SNR=29									
626A	Big Bend Ranch	72.94	3	⇑P		P		15 37 56.4	+1.4	
	baz=73,SNR=36									
631A	Perdido Creek	73.00	6	⇓P		P		15 37 55.8	+0.6	
	baz=74,SNR=20									
632A	Uvalde	73.16	7	⇑P		P		15 37 57.2	+1.1	
	baz=74,SNR=22									
526A	Mary Lane Ranc	73.44	3	⇓P		P		15 37 59.0	+1.0	
	baz=74,SNR=26									
527A	Woodward Ranch	73.55	3	⇑P		P		15 37 59.8	+1.2	
	baz=74,SNR=44									
529A	Stev Forest Ra	73.60	5	⇓P		P		15 37 59.8	+1.0	
	baz=74,SNR=17									
528A	Cox Ranch, San	73.60	4	⇓P		P		15 37 59.7	+0.8	
	baz=74									
530A	J-C Ranch, Com	73.68	5	⇓P		P		15 38 00.4	+1.1	
	baz=74,SNR=69									
531A	Rocksprings	73.75	6	⇓P		P		15 38 00.9	+1.2	
	baz=74,SNR=41									
532A	Rocksprings	73.77	7	⇓P		P		15 38 00.9	+1.1	
	baz=74,SNR=29									
HKT	Hockley	74.03	10	*e*P		P		15 38 00.7	-0.5	
HKT				pmax		pmax				
	comp=Z,151nm,1.6s									
HKT	Hockley	74.03	10	*e*P		P		15 38 00.7	-0.5	
	comp=Z,151nm,1.6s									
426A	McDonald Obser	74.05	3	⇓P		P		15 38 02.4	+0.8	
	baz=74,SNR=30									
429A	Davenport Ranc	74.11	5	⇑P		P		15 38 02.6	+0.8	
	baz=75,SNR=23									
JCT	Junction City	74.12	7	*e*P		P		15 38 02.1	+0.2	
JCT	Junction City	74.12	7	*e*P		P		15 38 02.1	+0.2	
	comp=Z,258nm,1.5s									
JCT	Junction City	74.12	7	⇑P		P		15 38 02.8	+0.9	
	baz=75,SNR=41									
425A	Indio Mountain	74.14	2	⇑P		P		15 38 02.6	+0.6	
	baz=75,SNR=39									
427A	Hayter Ranch,	74.26	4	⇓P		P		15 38 03.9	+1.3	
	baz=75,SNR=45									
431A	Sonora	74.26	6	⇓P		P		15 38 03.6	+1.0	
	baz=75,SNR=35									
430A	Baggett Ranch,	74.32	5	⇑P		P		15 38 03.7	+0.7	
	baz=75,SNR=14									
432A	Menard	74.52	7	⇓P		P		15 38 04.5	+0.4	
	baz=75,SNR=7.9									
320A	Kipp Ranch, An	74.66	359	⇓P		P		15 38 06.6	+1.5	
	baz=75,SNR=9.2									
326A	Caldwell Ranch	74.70	3	⇓P		P		15 38 05.6	+0.4	
	baz=75,SNR=11									
319A	Douglas	74.71	358	⇓P		P		15 38 06.8	+1.4	
	baz=75,SNR=16									
325A	Bean Ranch, Si	74.72	2	⇑P		P		15 38 05.6	+0.1	
	baz=75,SNR=39									
324A	Moseley Ranch,	74.78	2	⇓P		P		15 38 06.3	+0.5	
	baz=75,SNR=38									
328A	Wristen Ranch,	74.81	4	⇓P		P		15 38 06.6	+0.8	
	baz=75,SNR=11									
331A	San Angelo	74.89	6	⇓P		P		15 38 06.9	+0.6	
	baz=75,SNR=6.0									
330A	Mertzon	74.94	5	⇑P		P		15 38 07.0	+0.4	
	baz=75,SNR=14									
329A	Wagon Wheel Ra	74.97	5	⇓P		P		15 38 07.5	+0.7	
	baz=75,SNR=14									
332A	Millersview	75.03	7	⇓P		P		15 38 07.5	+0.5	
	baz=76,SNR=39									
MNTX	Cornudas Mount	75.03	2	*e*P		P		15 38 05.8	-1.3	
	comp=Z,36nm,1.6s									
220A	Playas Peak, P	75.23	359	⇓P		P		15 38 09.5	+1.2	
	baz=76,SNR=42									
221A	Mesquite Ranch	75.32	360	⇑P		P		15 38 10.5	+1.7	
	baz=76,SNR=12									
223A	Chaparral, Ant	75.33	1	⇓P		P		15 38 10.2	+1.3	
	baz=76									
224A	Cornudas Mount	75.41	2	⇑P		P		15 38 10.2	+0.8	
	baz=76,SNR=94									
222A	Williams Famil	75.42	0	⇑P		P		15 38 10.7	+1.3	
	baz=76,SNR=18									
227A	Bennet, Jal	75.42	4	⇓P		P		15 38 10.5	+1.1	
	baz=76									
230A	Sterling City	75.42	6	⇓P		P		15 38 10.2	+0.8	
	baz=76,SNR=17									
214A	Organ Pipe Nat	75.43	355	⇑P		P		15 38 10.8	+1.5	
	baz=76,SNR=12									
226B	Tecolote Peak,	75.45	3	⇓P		P		15 38 10.2	+0.7	
	baz=76,SNR=15									
229A	Bryant Ranch,	75.45	5	⇓P		P		15 38 10.1	+0.6	
	baz=76									
225A	Deer Hill, Car	75.46	2	⇑P		P		15 38 10.1	+0.4	
	baz=76,SNR=11									
231A	Bronte	75.53	6	⇑P		P		15 38 10.1	+0.1	
	baz=76,SNR=7.1									
232A	Coleman	75.53	7	⇑P		P		15 38 10.4	+0.4	
	baz=76,SNR=17									
228A	UT Block 9, Go	75.56	4	⇑P		P		15 38 10.5	+0.4	
	baz=76									
TUC	Tucson	75.69	357	*e*P		P		15 38 10.1	-0.8	
TUC				pmax		pmax				
	comp=Z,55nm,1.5s									
TUC	Tucson	75.69	357	*e*P		P		15 38 10.1	-0.8	
	comp=Z,56nm,1.5s									
121A	Cookes Peak, D	75.85	360	⇓P		P		15 38 13.3	+1.4	
	baz=76,SNR=24									
WHTX	Lake Whitney	75.85	9	⇑P		P		15 38 12.4	+0.7	
	baz=76,SNR=10.0									
120A	U Bar Ranch, L	75.87	359	⇓P		P		15 38 13.5	+1.5	
	baz=76,SNR=26									
123A	Bell Site, Whi	75.95	1	⇓P		P		15 38 13.8	+1.3	
	baz=76									
125A	Gardner Draw,	76.01	2	⇓P		P		15 38 13.2	+0.4	
	baz=76,SNR=33									
122A	Conniff Cattle	76.01	0	⇓P		P		15 38 14.6	+1.8	
	baz=76									
126A	Clayton Basin,	76.02	3	⇓P		P		15 38 12.9	+0.1	
	baz=76,SNR=7.7									
124A	Stringfield Ra	76.03	2	⇓P		P		15 38 14.1	+1.0	
	baz=76,SNR=19									
128A	Castleberry Fa	76.06	4	⇓P		P		15 38 13.8	+0.7	
	baz=76,SNR=27									
127A	Arkansas Junct	76.08	3	⇑P		P		15 38 13.9	+0.8	
	baz=76,SNR=9.7									
129A	Stewart Farms,	76.11	5	⇓P		P		15 38 14.1	+0.8	
	baz=77,SNR=14									
130A	Snyder	76.13	6	⇓P		P		15 38 14.3	+0.9	
	baz=77,SNR=13									
131A	Roby	76.25	6	⇑P		P		15 38 14.6	+0.5	
	baz=77,SNR=13									
ABTX	Abilene, Hawle	76.27	7	⇑P		P		15 38 14.8	+0.6	
	baz=77,SNR=9.5									
113A	Mohawk Valley,	76.30	354	⇑P		P		15 38 15.6	+1.3	
	baz=77									
Z20A	Nine Sixteen R	76.43	359	⇓P		P		15 38 16.7	+1.4	
	baz=77,SNR=19									
Z22A	Elephant Butte	76.57	0	⇓P		P		15 38 17.3	+1.3	
	baz=77,SNR=9.6									
Z23A	Rita Site, Whi	76.58	1	⇓P		P		15 38 17.5	+1.5	
	baz=77,SNR=9.3									
Z21A	St. Cloud Mine	76.62	360	⇓P		P		15 38 17.8	+1.5	
	baz=77,SNR=27									
Z25A	Roswell	76.63	2	⇑P		P		15 38 17.1	+0.8	
	baz=77,SNR=11									
SWSC	Sam W. Stewart	76.64	353	⇑P		P		15 38 17.6	+1.4	
	baz=77									
Z26A	Caprock	76.64	3	⇑P		P		15 38 16.7	+0.4	
	baz=77,SNR=46									
MONP	Monument Peak	76.65	352	⇓P		P		15 38 18.0	+1.5	
	baz=77,SNR=23									
Z24A	Sheeppen Canyo	76.66	2	⇓P		P		15 38 17.5	+0.9	
	baz=77,SNR=18				

comp=Z,35nm,1.6s
X21A **Alamocita Cree** 77.75 360 ⇑P P 15 38 24.0 +1.3
baz=78,SNR=29
IRM **Iron Mountain** 77.79 353 ⇓P P 15 38 24.1 +1.4
baz=78,SNR=21
X16A **Lo Mia Camp, P** 77.81 357 ⇑P P 15 38 24.3 +1.3
baz=78,SNR=17
X22A **Bernardo** 77.81 0 ⇓P P 15 38 24.7 +1.8
baz=78,SNR=12
PDMCI **Parker Dam,Lak** 77.85 354 ⇓P P 15 38 24.1 +1.1
baz=78,SNR=5.1
X20A **Quemado** 77.86 359 ⇑P P 15 38 24.5 +1.3
baz=78,SNR=14
TIGA **Tifton** 77.86 21 ⇑P P 15 38 23.5 +0.5
baz=78
X18A **Snowflake** 77.87 358 ⇓P P 15 38 24.8 +1.5
baz=78,SNR=15
X25A **Clemmons Ranch** 77.87 2 ⇓P P 15 38 24.1 +0.9
baz=78
X24A **Lazy VL Ranch,** 77.89 2 ⇑P P 15 38 24.5 +1.0
baz=78,SNR=6.1
X23A **Hourglass Bar** 77.89 1 ⇑P P 15 38 24.7 +1.2
baz=78
X29A **Tulia** 77.92 5 ⇑P P 15 38 24.1 +0.6
baz=78
X26A **CR and CF Fran** 77.93 3 ⇑P P 15 38 24.4 +0.8
baz=78,SNR=8.1
X28A **Dimmitt** 77.97 4 ⇓P P 15 38 24.5 +0.7
baz=78
X30A **Coker Ranch, T** 77.98 5 ⇓P P 15 38 24.5 +0.8
baz=78
X27A **F and S Farms,** 78.05 4 ⇑P P 15 38 24.8 +0.6
baz=78
BBRC **Big Bear Solar** 78.06 352 ⇓P P 15 38 25.9 +1.5
baz=79
BSC **Santa Cruz Isl** 78.11 350 ⇓P P 15 38 25.5 +1.0
baz=79
BFSC **Mount Baldy Ra** 78.11 351 ⇓P P 15 38 25.8 +1.2
baz=79,SNR=9.3
MWC **Mount Wilson** 78.14 351 eP P 15 38 26.2 +1.4
MWC pmax pmax
comp=Z,106nm,1.9s
MWC **Mount Wilson** 78.14 351 eP P 15 38 26.2 +1.4
comp=Z,106nm,1.9s
BLG **Laguna Peak** 78.15 350 ⇑P P 15 38 25.9 +1.2
baz=79
DECC **Green Verdugo** 78.20 351 ⇓P P 15 38 26.0 +1.1
baz=79
X31A **McDonald Ranch** 78.23 6 ⇓P P 15 38 25.9 +0.8
baz=79,SNR=9.3
ANMO **Albuquerque** 78.26 1 eP P 15 38 25.4 0.0
ANMO **Albuquerque** 78.26 1 P P 15 38 26.2 +0.8
comp=Z,15nm,1.2s,baz=171,slow=7.2,SNR=32
NEE2 **Needles Airpor** 78.35 354 ⇓P P 15 38 26.8 +1.0
baz=79
AMTX **Amarillo** 78.36 5 eP P 15 38 25.1 -0.8
comp=Z,55nm,1.4s
W22A **Albuquerque** 78.38 0 ⇑P P 15 38 27.5 +1.4
baz=79
W21A **San Fidel** 78.42 360 ⇑P P 15 38 27.6 +1.2
baz=79,SNR=5.0
WMOK **Wichita Mounta** 78.44 7 eP P 15 38 24.9 -1.4
WMOK pmax pmax
comp=Z,38nm,1.6s
WMOK **Wichita Mounta** 78.44 7 eP P 15 38 24.9 -1.4
comp=Z,38nm,1.6s
W20A **Ramah** 78.44 359 ⇑P P 15 38 27.8 +1.3
baz=79,SNR=30
W18A **Petrified Fore** 78.45 358 ⇓P P 15 38 27.5 +1.0
baz=79
W26A **Owens Ranch, T** 78.46 3 ⇓P P 15 38 27.6 +1.0
baz=79,SNR=11
W27A **Bowe Ranch, En** 78.47 4 ⇓P P 15 38 27.5 +0.9
baz=79,SNR=22
W23A **Werner Place,** 78.47 1 ⇓P P 15 38 27.8 +1.1
baz=79,SNR=9.7
W24A **Lazy 6 Ranch,** 78.54 2 ⇑P P 15 38 28.1 +1.1
baz=79,SNR=40
SBC **Santa Barbara** 78.56 350 ⇑P P 15 38 27.9 +1.0
baz=79
HEC **Hector,Ludlow** 78.56 352 ⇓P P 15 38 28.4 +1.4
baz=79,SNR=18
W25A **X Bar L Ranch,** 78.57 2 ⇓P P 15 38 27.8 +0.7
baz=79,SNR=12
LRAL **Lakeview Retre** 78.58 17 eP P 15 38 26.5 -0.6
comp=Z,109nm,1.5s
W29A **Amraillo** 78.60 5 ⇓P P 15 38 27.8 +0.6
baz=79
OSI **Osito Adit** 78.61 350 ⇑P P 15 38 28.4 +1.2
baz=79
W13A **Hualapai Mount** 78.63 355 ⇓P P 15 38 28.7 +1.2
baz=79,SNR=6.2
RRX **Edison Barstow** 78.68 352 ⇓P P 15 38 28.7 +1.1
baz=79
LDFC **Landfair** 78.70 354 eP P 15 38 29.9 +2.1
comp=Z,129nm,1.5s
W28A **Vega** 78.70 4 ⇓P P 15 38 28.5 +0.7
baz=79,SNR=7.1
W30A **Crocket Farms** 78.73 6 ⇓P P 15 38 28.5 +0.6
baz=79
EDW2 **Edwards Air Fo** 78.78 351 ⇑P P 15 38 29.2 +1.0
baz=79,SNR=12
W31A **Holland Ranch,** 78.78 6 ⇑P P 15 38 28.7 +0.5
baz=79
WUAZ **Wupatki** 78.91 357 eP P 15 38 28.8 -0.2
comp=Z,60nm,1.6s
WUAZ **Wupatki** 78.91 357 ⇓P P 15 38 30.1 +1.1
baz=79,SNR=8.4
PKM **Peak Mountain** 79.02 350 ⇓P P 15 38 30.9 +1.3
baz=80,SNR=16
V24A **Rampart Ranch,** 79.05 2 ⇑P P 15 38 30.6 +0.7
baz=80
V23A **Ortiz Mt. (NFS** 79.06 1 ⇑P P 15 38 30.7 +0.8
baz=80
GSC **Goldstone** 79.08 352 eP P 15 38 31.4 +1.6
GSC pmax pmax
comp=Z,69nm,1.6s
GSC **Goldstone** 79.08 352 eP P 15 38 31.4 +1.6
comp=Z,69nm,1.6s
GSC **Goldstone** 79.08 352 ⇑P P 15 38 31.2 +1.4
baz=80,SNR=8.9
V20A **Brimhall** 79.11 359 ⇑P P 15 38 31.3 +1.2
baz=80,SNR=22
V21A **Milan** 79.11 360 ⇑P P 15 38 31.3 +1.1
baz=80,SNR=11
ARVC **Arvin** 79.12 350 ⇓P P 15 38 31.2 +1.2
baz=80
TUQ **Turquoise Moun** 79.12 353 ⇓P P 15 38 31.6 +1.4
baz=80,SNR=14
V26A **Tequesquite Ra** 79.17 3 ⇓P P 15 38 30.8 +0.5
baz=80,SNR=23
V27A **Dan Oppiter Fa** 79.17 4 ⇓P P 15 38 31.0 +0.6
baz=80
V25A **Rancho No Teng** 79.18 2 ⇓P P 15 38 31.4 +0.8
baz=80,SNR=42
V28A **Channing** 79.19 4 ⇑P P 15 38 31.4 +0.9
baz=80
V22A **San Miguel Ran** 79.22 0 ⇓P P 15 38 32.1 +1.3
baz=80,SNR=18
UALR **University of** 79.28 13 eP P 15 38 32.3 +1.5
comp=Z,94nm,1.4s
V30A **Spur Ranch, Mi** 79.30 6 ⇑P P 15 38 32.3 +1.3
baz=80
LRMC **Laurel Mountai** 79.34 351 ⇑P P 15 38 32.7 +1.4
baz=80,SNR=10.0
V29A **Stinnett** 79.36 5 ⇑P P 15 38 32.1 +0.7
baz=80
V31A **Spring Creek L** 79.38 6 ⇑P P 15 38 33.3 +1.9
baz=80,SNR=14
SMMC **Simmler** 79.45 350 ⇓P P 15 38 33.7 +1.8
baz=80
ISA **Isabella** 79.61 351 eP P 15 38 34.4 +1.7
ISA pmax pmax
comp=Z,70nm,1.5s
ISA **Isabella** 79.61 351 eP P 15 38 34.4 +1.7
comp=Z,70nm,1.5s
ISA **Isabella** 79.61 351 ⇓P P 15 38 34.3 +1.7
baz=80,SNR=26
SHOC **Shoshone** 79.62 353 ⇓P P 15 38 33.8 +1.2
baz=80
U23A **El Rito** 79.64 1 ⇓P P 15 38 34.5 +1.4
baz=80,SNR=6.6
U22A **Llaves** 79.68 0 ⇑P P 15 38 34.7 +1.5
baz=80,SNR=8.5
U20A **Newcomb** 79.69 359 ⇓P P 15 38 33.9 +0.7
baz=80,SNR=6.2
U21A **Nageezi** 79.73 360 ⇓P P 15 38 34.6 +1.1
baz=80,SNR=16
U24A **Moreno Valley** 79.73 2 ⇑P P 15 38 35.1 +1.5
baz=80
U25A **Circle Dot Ran** 79.75 2 ⇓P P 15 38 34.7 +1.1
baz=80,SNR=16
U26A **Atchley Ranch,** 79.77 3 ⇓P P 15 38 34.3 +0.6
baz=80,SNR=12
GOGA **Godfrey** 79.77 20 eP P 15 38 34.4 +0.9
GOGA pmax pmax
comp=Z,54nm,1.3s
GOGA **Godfrey** 79.77 20 eP P 15 38 34.4 +0.9
comp=Z,54nm,1.3s
U28A **Mallet** 79.82 4 ⇑P P 15 38 34.6 +0.7
baz=80
U27A **Thompson Grove** 79.83 4 ⇑P P 15 38 34.7 +0.8
baz=80
U15A **North Rim** 79.86 356 ⇓P P 15 38 35.4 +1.1
baz=80,SNR=22
VES **Vestal, Richgr** 79.86 350 ⇑P P 15 38 35.0 +1.1
baz=80,SNR=6.3
MPMC **Manual Prospec** 79.89 352 ⇑P P 15 38 35.5 +1.1
baz=80,SNR=19
TUL1 **Tulsa** 79.91 10 ⇑P P 15 38 34.8 +0.6
baz=80,SNR=6.0
U29A **Oasis Ranch, S** 79.95 5 ⇑P P 15 38 35.3 +0.8
baz=80
U31A **Nine Bar Ranch** 79.97 6 ⇓P P 15 38 35.7 +1.1
baz=80
U30A **WK&E Inc. Balk** 80.07 5 ⇓P P 15 38 36.2 +1.0
baz=80
FURC **Furnace Creek,** 80.24 352 ⇓P P 15 38 37.2 +1.3
baz=81,SNR=5.9
PLAL **Pickwick Lake** 80.24 16 eP P 15 38 36.2 +0.1
comp=Z,100nm,1.8s
T21A **Navajo Lake** 80.29 360 ⇓P P 15 38 37.4 +0.9
baz=81,SNR=5.4
T22A **Edith** 80.32 0 ⇓P P 15 38 38.1 +1.4
baz=81,SNR=25
CWC **Cottonwood Cre** 80.33 351 ⇓P P 15 38 38.1 +1.4
baz=81
RCTC **Rector, Farmer** 80.34 350 ⇑P P 15 38 37.3 +0.8
baz=81
T23A **Casias Ranch,** 80.35 1 ⇑P P 15 38 38.0 +1.1
baz=81
T27A **Campo** 80.47 4 ⇓P P 15 38 38.2 +0.7
baz=81,SNR=10
T25A **Trinidad** 80.48 2 ⇑P P 15 38 38.7 +1.1
baz=81,SNR=16
T26A **Comanche Natio** 80.55 3 ⇑P P 15 38 38.9 +1.0
baz=81,SNR=31
T28A **Walsh** 80.56 4 ⇑P P 15 38 38.7 +0.8
baz=81,SNR=12
T30A **Plains** 80.59 6 ⇓P P 15 38 39.0 +1.0
baz=81
T29A **Hugoton** 80.65 5 ⇑P P 15 38 38.7 +0.4
baz=81
EIDS **Eidsvold** 80.68 244 eP P 15 38 40.0 +1.1
comp=Z,86nm,1.3s
T31A **Randall Ranch,** 80.70 6 ⇓P P 15 38 39.5 +1.0
baz=81,SNR=11
GRAC **Grapevine Rang** 80.81 352 ⇑P P 15 38 40.6 +1.4
baz=81
GNAR **Gosnell** 80.83 14 eP P 15 38 40.0 +0.8
SWET **Sewanee** 80.92 18 eP P 15 38 39.6 -0.1
comp=Z,28nm,0.6s
TIN **Tinemaha** 80.96 351 ⇑P P 15 38 41.2 +1.2
baz=82
S21A **Coal Bank Pass** 80.96 360 ⇓P P 15 38 41.4 +1.2
baz=82,SNR=22
S24A **Houchin Ranch,** 80.97 2 ⇑P P 15 38 41.6 +1.3
baz=81,SNR=20
S26A **Kim** 81.00 3 ⇓P P 15 38 41.2 +0.9
baz=82,SNR=26
S25A **Roberts Cordova** 81.00 2 ⇓P P 15 38 41.5 +1.1
baz=82,SNR=23
S23A **Nye Farm, Mont** 81.02 1 ⇑P P 15 38 41.4 +0.9
baz=82
S18A **Hurst Farm, Bl** 81.03 358 ⇑P P 15 38 41.5 +1.0
baz=82,SNR=16
CCUT **Cedar City** 81.03 355 eP P 15 38 42.1 +1.5
comp=Z,46nm,1.4s
S28A **Manter** 81.04 4 ⇑P P 15 38 41.3 +0.8
baz=82,SNR=11
S22A **4UR Ranch, Cre** 81.05 0 ⇑P P 15 38 42.0 +1.3
baz=82,SNR=27
SDCO **Great Sand Dun** 81.06 2 eP P 15 38 40.3 -0.5
comp=Z,88nm,2.3s
S27A **Las Animas** 81.09 4 ⇑P P 15 38 41.8 +1.1
baz=82
S29A **Ulysses** 81.12 5 ⇓P P 15 38 41.5 +0.7
baz=82
S20A **Disappointment** 81.14 359 ⇑P P 15 38 42.4 +1.2
baz=82,SNR=22
S30A **Montezuma** 81.18 6 ⇑P P 15 38 42.3 +1.2
baz=82,SNR=5.7
S31A **Mullinville** 81.24 6 ⇓P P 15 38 42.1 +0.7
baz=82
MTUM **Tungsten Hills** 81.29 351 eP P 15 38 43.1 +1.3
PV01 **Paradox Valley** 81.44 359 eP P 15 38 41.2 -1.5
comp=Z,4µm,1.4s
CPCT **Cooper Cave** 81.46 19 eP P 15 38 43.4 +0.8
R20A **Redvale** 81.49 359 ⇓P P 15 38 44.1 +1.2
baz=82,SNR=8.5
R25A **Fountain Ranch** 81.50 2 ⇑P P 15 38 43.8 +0.9
baz=82,SNR=11
R23A **Moffat** 81.50 1 ⇓P P 15 38 44.2 +1.1
baz=82,SNR=12
PARMO **Parma** 81.56 14 eP P 15 38 45.0 +2.0
R24A **Sanders Place,** 81.56 2 ⇓P P 15 38 44.7 +1.4
baz=82,SNR=12
MLAC **Mammoth Lakes** 81.60 351 ⇑P P 15 38 44.7 +1.2
baz=82
R21A **Cimarron** 81.67 360 ⇑P P 15 38 45.1 +1.2
baz=82,SNR=16
R26A **Arlington** 81.68 3 ⇓P P 15 38 44.8 +1.0
baz=82,SNR=9.4
R27A **Eads** 81.69 4 ⇑P P 15 38 44.8 +0.9
baz=82,SNR=6.7
PV04 **Paradox Valley** 81.70 359 eP P 15 38 44.9 +0.9
R28A **Tribune** 81.80 4 ⇑P P 15 38 45.2 +0.8
baz=82,SNR=8.5
TKL **Tuckaleechee C** 81.83 19 P P 15 38 44.4 -0.1
TKL **Tuckaleechee C** 81.83 19 P P 15 38 44.4 -0.1
comp=Z,6.2nm,1.0s,baz=191,slow=9.4,SNR=8.3
R30A **Dighton** 81.84 6 ⇑P P 15 38 45.7 +1.1
baz=82
R29A **Marienthal** 81.92 5 ⇓P P 15 38 45.8 +0.8
baz=82
MVU **Marysvale** 81.92 356 eP P 15 38 46.5 +1.3
comp=Z,242nm,3.0s
MSU **Marysvale** 81.93 356 eP P 15 38 46.4 +1.2
MSU **Marysvale** 81.93 356 eP P 15 38 46.4 +1.2
STKA **Stephens Creek** 81.94 233 P P 15 38 45.7 +0.2
STKA **Stephens Creek** 81.94 233 P P 15 38 45.7 +0.2
comp=Z,17nm,1.1s,baz=131,slow=6.6,SNR=22
STKA LR LR 16 07 39.6
comp=Z,834nm,21.7s,baz=90,slow=30
KMSC **Kings Mountain** 81.96 21 ⇑P P 15 38 45.3 +0.1
baz=82
R11A **Troy Canyon, C** 81.99 353 ⇑P P 15 38 47.0 +1.5
baz=82,SNR=20
Q21A **Lamborn Mesa,** 82.13 360 ⇓P P 15 38 47.5 +1.2
baz=83,SNR=6.7
Q22A **Crested Butte,** 82.16 0 ⇓P P 15 38 47.7 +1.1
baz=83,SNR=5.1
CMB **Columbia Colle** 82.19 350 eP P 15 38 47.6 +1.2
CMB pmax pmax
comp=Z,58nm,1.7s
CMB **Columbia Colle** 82.19 350 eP P 15 38 47.6 +1.2
comp=Z,58nm,1.7s
Q23A **Hartsel** 82.22 1 ⇑P P 15 38 48.1 +1.3
baz=83
Q20A **Ridgley Place,** 82.26 359 ⇓P P 15 38 47.8 +0.9
baz=83,SNR=9.4
Q25A **Bedland, Calha** 82.26 2 ⇑P P 15 38 47.8 +0.8
baz=83,SNR=9.6
Q24A **Divide** 82.29 2 ⇓P P 15 38 48.2 +1.0
baz=83
Q16A **Castle Valley** 82.29 357 ⇓P P 15 38 48.0 +0.9
baz=83,SNR=17
Q26A **Hugo** 82.30 3 ⇑P P 15 38 48.3 +1.2
baz=83
NV11 **Mina Array Sit** 82.31 351 eP P 15 38 46.6 -0.6
NVAR **Mina Array Bea** 82.33 351 P P 15 38 48.8 +1.5
NVAR PKKPbc **PKKPbc** 15 57 16.9 +1.4
NVAR **Mina Array Bea** 82.33 351 P P 15 38 48.8 +1.5
comp=Z,4.7nm,0.7s,baz=187,slow=6.5,SNR=51
NVAR PKKPbc **PKKPbc** 15 57 16.9 +1.4
comp=Z,1.0nm,0.9s,baz=354,slow=1.5,SNR=4.9
KSCO **Kaye Shedlock'** 82.42 4 ⇓P P 15 38 49.1 +1.4
baz=83,SNR=7.6
SRU **San Rafael** 82.46 358 ⇑P P 15 38 48.4 +0.5
baz=83,SNR=12
SMCO **Snowmass** 82.48 0 eP P 15 38 49.6 +1.3
comp=Z,33nm,1.3s
Q28A **Sharon Springs** 82.51 4 ⇓P P 15 38 49.0 +0.9
baz=83
SIUC **Southern Illin** 82.67 14 eP P 15 38 49.7 +0.8
comp=Z,62nm,1.1s
TZTN **Tazewell** 82.73 19 eP P 15 38 50.0 +0.8
comp=Z,63nm,1.3s
P20A **De Beque** 82.80 359 ⇑P P 15 38 50.9 +1.1
baz=83
P21A **Newcastle** 82.82 360 ⇑P P 15 38 51.0 +1.1
baz=83
P24A **Kohler Place,** 82.84 2 ⇑P P 15 38 50.9 +0.9
baz=83
P25A **Willow Gulch B** 82.86 3 ⇓P P 15 38 51.3 +1.3
baz=83,SNR=8.8
P22A **Eagle** 82.89 0 ⇓P P 15 38 51.5 +1.2
baz=83,SNR=26
P26A **Davis Ranch, A** 82.94 3 ⇓P P 15 38 51.6 +1.2
baz=83
P19A **Cripple Cowboy** 82.94 359 ⇓P P 15 38 51.3 +0.8
baz=83,SNR=6.6
P18A **Preston Nutter** 82.97 358 ⇑P P 15 38 51.3 +0.5
baz=84,SNR=8.0
P27A **Ficken Ranch,** 82.97 4 ⇑P P 15 38 51.5 +0.9
baz=83
P28A **Saint Francis** 83.03 4 ⇓P P 15 38 51.9 +1.1
baz=84
ISCO **Idaho Springs** 83.11 1 eP P 15 38 53.0 +1.5
ISCO pmax pmax
comp=Z,152nm,2.7s
ISCO **Idaho Springs** 83.11 1 eP P 15 38 53.0 +1.5
comp=Z,152nm,2.7s
ISCO **Idaho Springs** 83.11 1 ⇓P P 15 38 52.4 +0.9
baz=84,SNR=5.8
USIN **University of** 83.21 16 eP P 15 38 52.4 +0.8
comp=Z,134nm,1.5s
WCN **Washoe City** 83.36 350 eP P 15 38 52.6 0.0
WCN pmax pmax
comp=Z,21nm,1.1s
WCN **Washoe City** 83.36 350 eP P 15 38 52.6 0.0
comp=Z,21nm,1.1s
MPU **Maple Canyon** 83.40 357 eP P 15 38 54.3 +1.4
comp=Z,85nm,1.7s
O20A **White River Ci** 83.44 359 ⇑P P 15 38 53.8 +0.8
baz=84
O24A **Longmont** 83.45 2 ⇑P P 15 38 53.9 +0.9
baz=84
O22A **Kremmling** 83.46 1 ⇑P P 15 38 54.4 +1.1
baz=84,SNR=25
O25A **Wiggins** 83.46 3 ⇑P P 15 38 54.4 +1.3
baz=84,SNR=7.6
HOPS **Hopland** 83.51 348 eP P 15 38 52.7 -0.5
comp=Z,111nm,1.5s
O21A **Pagoda** 83.51 360 ⇑P P 15 38 54.4 +0.9
baz=84
O23A **Lake Granby, G** 83.52 1 ⇓P P 15 38 54.6 +1.0
baz=84,SNR=8.3
O27A **Beecher Island** 83.60 4 ⇑P P 15 38 54.9 +1.1
baz=84
O19A **Miners Draw (B** 83.61 359 ⇓P P 15 38 54.4 +0.6
baz=84
OHCM **Honcut** 83.61 349 eP P 15 38 54.7 +1.1
O26A **Horse Wrangler** 83.62 3 ⇑P P 15 38 54.9 +1.0
baz=84
DUG **Dugway** 83.64 356 eP P 15 38 55.0 +1.0
DUG pmax pmax
comp=Z,51nm,1.3s
DUG **Dugway** 83.64 356 eP P 15 38 55.0 +1.0
comp=Z,51nm,1.3s
DUG **Dugway** 83.64 356 ⇓P P 15 38 55.0 +1.0
baz=84,SNR=24
DAU **Daniels Canyon** 83.78 357 eP P 15 38 55.9 +1.0
DAU **Daniels Canyon** 83.78 357 eP P 15 38 55.9 +1.0
OLIL **Olney** 83.87 15 eP P 15 38 55.2 +0.2
comp=Z,107nm,1.2s
JLU **Jordanelle** 83.98 357 eP P 15 38 57.1 +1.3
comp=Z,45nm,1.5s
BEKR **Beckworth** 83.99 350 eP P 15 38 54.6 -1.2
comp=Z,72nm,1.3s
N21A **Black Mountain** 84.06 360 ⇑P P 15 38 57.3 +1.1
baz=84,SNR=24
N22A **Wattenberg Ran** 84.10 1 ⇑P P 15 38 57.8 +1.3
baz=85,SNR=15
N20A **Spence Gulch,** 84.13 359 ⇑P P 15 38 57.5 +0.9
baz=85,SNR=28
N28A **Pribbeno Ranch** 84.15 4 ⇑P P 15 38 57.4 +0.9
baz=85
BLA **Blacksburg** 84.15 21 eP P 15 38 54.9 -1.7
BLA pmax pmax
comp=Z,115nm,1.5s
BLA **Blacksburg** 84.15 21 eP P 15 38 54.9 -1.7
comp=Z,114nm,1.5s
N24A **Carr** 84.15 2 ⇑P P 15 38 57.6 +1.0
baz=85
N25A **Grover** 84.16 3 ⇓P P 15 38 57.7 +1.1
baz=85
BMN **Battle Mountai** 84.20 352 eP P 15 38 58.4 +1.6
BMN pmax pmax
comp=Z,157nm,1.9s
BMN **Battle Mountai** 84.20 352 eP P 15 38 58.4 +1.6
comp=Z,157nm,1.9s
N23A **Red Feather La** 84.20 1 ⇑P P 15 38 58.1 +1.1
baz=85,SNR=12
N26A **Koester Ranch,** 84.21 3 ⇑P P 15 38 57.9 +1.0
baz=85
N27A **Anderson Farm,** 84.22 4 ⇓P P 15 38 58.0 +1.2
baz=85,SNR=7.2
VWCC **Virginia Weste** 84.30 22 eP P 15 38 55.6 -1.7
N29A **Votaw Ranch, W** 84.33 5 ⇓P P 15 38 58.3 +0.9
baz=85
ELK **Elko** 84.34 354 eP P 15 38 58.5 +0.8
N30A **Hueftle Ranch,** 84.35 6 ⇑P P 15 38 58.4 +1.0
baz=85
KIPM **Iron Peak** 84.37 348 eP P 15 38 57.4 -0.4
comp=Z,129nm,1.6s
OGNE **Ogallala** 84.38 4 eP P 15 38 55.7 -1.9
comp=Z,127nm,1.6s
OGNE **Ogallala** 84.38 4 ⇓P P 15 38 58.6 +0.9
baz=85,SNR=6.3
BBOO **Buckleboo** 84.38 229 eP P 15 38 57.9 -0.2
PHWY **Pilot Hill** 84.61 1 eP P 15 38 59.9 +0.7
comp=Z,78nm,1.9s
M22A **Cedar Creek Ra** 84.70 1 ⇓P P 15 39 00.4 +0.9
baz=85,SNR=7.6
M23A **Laramie** 84.78 1 ⇓P P 15 39 00.5 +0.7
baz=85,SNR=6.9
M25A **Palm-Egli Farm** 84.78 3 ⇓P P 15 39 00.9 +1.1
baz=85
M20A **Sweetwater, Wa** 84.79 359 ⇓P P 15 39 00.8 +0.9
baz=85,SNR=12
M24A **Cheyenne** 84.79 2 ⇓P P 15 39 01.1 +1.3
baz=85
M19A **Rock Springs** 84.81 359 ⇓P P 15 39 00.2 +0.2
baz=85
M17A **Scullys Gap (B** 84.82 358 ⇓P P 15 39 00.3 +0.2
baz=85,SNR=5.5
M26A **McRoberts Ranc** 84.85 3 ⇑P P 15 39 01.1 +1.0
baz=85
M28A **Bar X Bar Ranc** 84.86 5 ⇑P P 15 39 01.1 +1.0
baz=85
M21A **Separation Pea** 84.90 0 ⇑P P 15 39 00.8 +0.3
baz=85,SNR=9.5
M27A **Reverse DX Ran** 84.94 4 ⇑P P 15 39 01.5 +1.0
baz=85
M29A **Burnside Ranch** 84.95 5 ⇓P P 15 39 01.8 +1.3
baz=85
WDC **Whiskeytown Da** 84.98 348 eP P 15 38 59.4 -1.2
WDC pmax pmax
comp=Z,64nm,1.5s
WDC **Whiskeytown Da** 84.98 348 eP P 15 38 59.4 -1.2
comp=Z,64nm,1.5s
BGNE **Belgrade** 85.11 7 ⇑P P 15 39 02.0 +0.7
baz=86
HVU **Hansel Valley** 85.21 356 eP P 15 39 02.4 +0.5
HVU pmax pmax
comp=Z,36nm,1.3s
HVU **Hansel Valley** 85.21 356 eP P 15 39 02.4 +0.5
comp=Z,36nm,1.3s
L18A **Fontenelle, Gr** 85.25 358 ⇓P P 15 39 02.3 +0.1
baz=86,SNR=8.4
L21A **Rawlins** 85.26 0 ⇑P P 15 39 02.5 +0.3
baz=86,SNR=21
JSRW **J. Sargeant Re** 85.30 23 eP P 15 39 02.1 -0.1

L20A **Wamsutter** 85.31 359 ⇓P P 15 39 03.4 +1.0
baz=86,SNR=11
L22A **Ellis Ranch, M** 85.33 1 ⇑P P 15 39 03.8 +1.2
baz=86,SNR=9.9
L24A **Wheatland** 85.37 2 ⇑P P 15 39 03.5 +0.8
baz=86
L19A **Farson** 85.42 359 ⇑P P 15 39 03.5 +0.5
baz=86,SNR=12
L26A **Underwood Farm** 85.42 3 ⇑P P 15 39 04.0 +1.1
baz=86
L23A **Garrett** 85.42 1 ⇓P P 15 39 03.5 +0.5
baz=86,SNR=8.3
HDIL **Hopedale** 85.42 14 *e*P P 15 39 04.2 +1.3
comp=Z,100nm,1.1s
KHMM **Horse Mountain** 85.45 348 *e*P P 15 39 05.0 +1.8
comp=Z,64nm,1.2s
L27A **T5 Ranch, Ells** 85.50 4 ⇑P P 15 39 04.2 +0.9
baz=86
L25A **Engebretsen Ra** 85.50 3 ⇓P P 15 39 04.6 +1.3
baz=86
SFIN **Scholer Farm** 85.65 15 ⇓P P 15 39 04.2 +0.2
baz=86
K22A **Casper** 85.95 1 ⇑P P 15 39 06.5 +0.9
baz=86,SNR=26
K20A **Yellowstone Ra** 85.96 359 ⇓P P 15 39 05.9 +0.3
baz=86,SNR=20
K25A **Mack Ranch, Ha** 85.96 3 ⇑P P 15 39 06.8 +1.2
baz=86
K24A **Anderson Ranch** 86.05 2 ⇑P P 15 39 07.0 +0.9
baz=86
K23A **Bowen Ranch, D** 86.06 1 ⇓P P 15 39 06.9 +0.7
baz=87,SNR=5.2
K26A **Motz Farm, Whi** 86.08 3 ⇑P P 15 39 07.2 +1.0
baz=87,SNR=7.6
BW06 **Boulder Array** 86.08 358 *e*P P 15 39 05.6 -0.7
comp=Z,42nm,1.2s
PDAR **Pinedale Array** 86.08 358 P P 15 39 06.4 +0.1
PDAR **Pinedale Array** 86.08 358 P P 15 39 06.4 +0.1
comp=Z,20nm,1.0s,baz=164,slow=6.0,SNR=92
K27A **Flueckinger Fa** 86.12 4 ⇓P P 15 39 07.4 +1.1
baz=87
K19A **Absolon Red Bu** 86.13 359 ⇑P P 15 39 06.6 0.0
baz=87,SNR=12
WVOR **Wild Horse Val** 86.32 352 *e*P P
WVOR pmax pmax
comp=Z,88nm,1.8s
WVOR **Wild Horse Val** 86.32 352 *e*P P 15 39 06.8 -0.6
comp=Z,88nm,1.8s
ACSO **Alum Creek Sta** 86.38 18 *e*P P 15 39 08.1 +0.5
comp=Z,69nm,1.4s
J19A **Crowheart** 86.57 359 ⇓P P 15 39 08.8 +0.1
baz=87,SNR=18
J21A **Lysite** 86.64 360 ⇑P P 15 39 09.9 +0.8
baz=87,SNR=27
J20A **Shoshoni** 86.65 359 ⇑P P 15 39 09.9 +0.9
baz=87,SNR=9.0
J24A **Dixon Ranch, L** 86.66 2 ⇑P P 15 39 09.9 +0.9
baz=87
J23A **Dilts Ranch, B** 86.71 1 ⇓P P 15 39 10.0 +0.7
baz=87
RRI2 **Red Ridge** 86.71 357 *e*P P 15 39 10.4 +0.9
TPAW **Teton Pass** 86.84 357 *e*P P 15 39 10.6 +0.5
comp=Z,24nm,1.3s
J13A **Cove Ranch, Pi** 86.91 355 ⇑P P 15 39 11.3 +1.0
baz=87,SNR=21
LOHW **Long Hollow** 86.95 358 *e*P P 15 39 11.2 +0.7
comp=Z,88nm,2.3s
I18A **Diamond G Ranc** 87.02 358 ⇓P P 15 39 11.4 +0.4
baz=88,SNR=6.2
HUMO **Hull Mountain** 87.03 349 *e*P P 15 39 11.8 +1.0
HLID **Hailey** 87.08 355 *e*P P 15 39 12.1 +1.0
comp=Z,24nm,1.2s
HLID **Hailey** 87.08 355 ⇑P P 15 39 12.2 +1.0
baz=88,SNR=18
MOOW **Moose Ponds** 87.09 358 *e*P P 15 39 11.8 +0.6
I21A **Big Trails, Te** 87.11 0 ⇑P P 15 39 11.6 +0.3
baz=88,SNR=13
I24A **Kuemmerle Ranc** 87.19 2 ⇓P P 15 39 11.8 +0.2
baz=88
I22A **9 Mile Ranch,** 87.19 1 ⇑P P 15 39 12.1 +0.5
baz=88,SNR=15
SDMD **Soldier's Deli** 87.19 23 *e*P P 15 39 11.4 -0.2
comp=Z,35nm,1.3s
I16A **Newdale** 87.25 357 ⇓P P 15 39 12.6 +0.6
baz=88
IMW **Indian Meadow** 87.25 357 *e*P P 15 39 12.7 +0.6
I17A **Pilgrim Ck.** 87.26 358 ⇑P P 15 39 12.7 +0.6
baz=88
I23A **Meade Ranch, G** 87.27 1 ⇓P P 15 39 12.4 +0.4
baz=88
I19A **Meeteetse** 87.34 359 ⇓P P 15 39 12.7 +0.3
baz=88,SNR=6.0
I12A **Atlanta** 87.36 354 ⇓P P 15 39 13.2 +0.7
baz=88
I14A **Mackay** 87.39 356 ⇓P P 15 39 13.8 +1.2
baz=88,SNR=11
I15A **Monteview** 87.41 356 ⇓P P 15 39 13.7 +1.0
baz=88
I13A **Wildhorse Cree** 87.42 355 ⇑P P 15 39 13.6 +0.8
baz=88,SNR=7.0
RSSD **Black Hills** 87.47 2 *e*P P 15 39 13.3 +0.3
RSSD pmax pmax
comp=Z,13nm,1.1s
RSSD **Black Hills** 87.47 2 *e*P P 15 39 13.3 +0.3
comp=Z,14nm,1.1s
CTAO **Charters Tower** 87.55 245 *e*P P 15 39 14.9 +0.9
CTAO pmax pmax
comp=Z,59nm,1.3s
CTAO **Charters Tower** 87.55 245 *e*P P 15 39 14.9 +0.9
comp=Z,59nm,1.3s
ECSD **EROS Data Cent** 87.56 8 *e*P P 15 39 13.4 +0.2
comp=Z,70nm,1.4s
JFWS **Jewell Farm** 87.57 13 *e*P P 15 39 14.3 +1.0
JFWS pmax pmax
comp=Z,57nm,1.3s
JFWS **Jewell Farm** 87.57 13 *e*P P 15 39 14.3 +1.0
comp=Z,56nm,1.3s
H17A **Grant Village** 87.74 358 ⇓P P 15 39 16.1 +1.7
baz=88
H20A **Greybull** 87.78 360 ⇓P P 15 39 14.4 0.0
baz=88
H23A **Clabaugh Cattl** 87.87 1 ⇓P P 15 39 14.8 0.0
baz=88
MVL **Millersville** 87.88 23 *e*P P 15 39 14.6 -0.3
comp=Z,46nm,1.6s
H22A **Clearmont** 87.89 1 ⇑P P 15 39 15.3 +0.4
baz=88,SNR=5.2
H21A **Big Horn, Sher** 87.92 0 ⇓P P 15 39 15.2 +0.1
baz=88
H19A **Powell** 87.98 359 ⇑P P 15 39 15.8 +0.5
baz=88
H18A **Shoshone NF, C** 88.00 358 ⇑P P 15 39 15.9 +0.3
baz=88,SNR=7.0
H15A **Lima** 88.04 356 ⇓P P 15 39 16.8 +1.1
baz=88
BRSD **Miller** 88.06 6 ⇓P P 15 39 15.7 0.0
baz=88
H16A **Russell Place,** 88.07 357 ⇓P P 15 39 16.9 +1.0
baz=89
H14A **Leadore** 88.07 356 ⇓P P 15 39 16.5 +0.6
baz=89
H24A **Dirks Ranch, A** 88.08 2 ⇑P P 15 39 15.8 0.0
baz=89,SNR=6.5
H12A **Diamond D Ranc** 88.10 355 ⇑P P 15 39 16.6 +0.6
baz=89,SNR=7.6
QLMT **Earthquake Lak** 88.20 357 *e*P P 15 39 18.8 +2.3
MCMT **McKenzie Canyo** 88.26 356 *e*P P 15 39 15.5 -1.3
comp=Z,12nm,1.9s
G23A **Biddle** 88.51 1 ⇓P P 15 39 17.9 +0.1
baz=89
G20A **Bridger** 88.52 359 ⇑P P 15 39 18.2 +0.2
baz=89,SNR=11
G22A **Birney** 88.52 1 ⇑P P 15 39 18.2 +0.3
baz=89
G21A **Lodge Grass** 88.52 0 ⇓P P 15 39 18.2 +0.3
baz=89
G15A **Dillon** 88.58 356 ⇓P P 15 39 19.0 +0.7
baz=89
BMO **Blue Mountains** 88.59 353 *e*P P 15 39 17.1 -1.2
comp=Z,66nm,2.4s
G13A **Cobalt** 88.60 355 ⇑P P 15 39 19.0 +0.7
baz=89
G16A **Moss Hill, Enn** 88.61 357 ⇓P P 15 39 19.2 +0.8
baz=89
G18A **Lazy EL Ranch,** 88.63 358 ⇑P P 15 39 19.0 +0.5
baz=89
G24A **Alzada** 88.66 2 ⇓P P 15 39 18.9 +0.4
baz=89

G17A **Pierce Place,** 88.67 358 ⇑P P 15 39 19.7 +1.1
baz=89
G14A **Jackson** 88.70 356 ⇓P P 15 39 19.5 +0.6
baz=89
DLMT **Dillon** 88.78 356 *e*P P 15 39 20.6 +1.4
BOZ **Bozeman (W)** 89.02 357 *e*P P 15 39 18.9 -1.4
BOZ pmax pmax
comp=Z,91nm,2.4s
BOZ **Bozeman (W)** 89.02 357 *e*P P 15 39 18.9 -1.4
comp=Z,91nm,2.4s
F23A **Volborg** 89.03 1 ⇓P P 15 39 20.4 +0.1
baz=90
F22A **Rosebud** 89.08 1 ⇓P P 15 39 20.8 +0.4
baz=90
F20A **Billings** 89.10 359 ⇑P P 15 39 21.0 +0.4
baz=90
F21A **Absaloka Mine,** 89.12 0 ⇑P P 15 39 20.9 +0.2
baz=90
F16A **Kennard Place,** 89.16 357 ⇓P P 15 39 22.1 +1.2
baz=90
F19A **Roth Farm, Mol** 89.16 359 ⇓P P 15 39 21.5 +0.6
baz=90
F24A **Ekalaka** 89.18 2 ⇑P P 15 39 21.4 +0.4
baz=90
F18A **Big Timber** 89.22 358 ⇑P P 15 39 21.9 +0.7
baz=90,SNR=5.7
LRM **Limekiln Ridge** 89.23 356 *e*P P 15 39 22.4 +1.1
F17A **Fitzpatrick Pl** 89.25 358 ⇑P P 15 39 22.7 +1.3
baz=90,SNR=7.2
F15A **Butte** 89.25 356 ⇓P P 15 39 22.3 +0.9
baz=90
F14A **Wisdom** 89.27 356 ⇑P P 15 39 22.1 +0.7
baz=90
F13A **Darby** 89.30 355 ⇓P P 15 39 22.1 +0.5
baz=90,SNR=10
F12A **Elk City** 89.33 354 ⇓P P 15 39 22.2 +0.5
baz=90
SPMN **St. Paul** 89.46 10 ⇓P P 15 39 21.9 -0.2
baz=90
E22A **Miles City** 89.74 1 ⇑P P 15 39 24.0 +0.5
baz=90
E19A **Rath Farm, Rou** 89.76 359 ⇑P P 15 39 24.4 +0.7
baz=90,SNR=8.0
E20A **Meyer Farm, Mu** 89.80 359 ⇑P P 15 39 24.5 +0.7
baz=90
E17A **Martinsdale** 89.81 358 ⇑P P 15 39 25.0 +1.0
baz=90
E23A **Ismay** 89.81 1 ⇓P P 15 39 24.0 +0.2
baz=90
E21A **Keefer Ranch,** 89.84 0 ⇓P P 15 39 24.7 +0.7
baz=90
E15A **Deer Lodge** 89.84 356 ⇑P P 15 39 24.7 +0.6
baz=90
E14A **Clinton** 89.87 356 ⇑P P 15 39 25.0 +0.7
baz=90
E18A **Harlowton** 89.89 358 ⇓P P 15 39 25.7 +1.4
baz=90,SNR=7.9
E24A **Baker** 89.90 2 ⇓P P 15 39 24.8 +0.5
baz=90
E16A **East Helena** 89.91 357 ⇓P P 15 39 25.4 +1.0
baz=90
E13A **Victor** 89.94 355 ⇑P P 15 39 25.0 +0.4
baz=90
MSO **Missoula** 90.31 355 ⇓P P 15 39 27.1 +0.9
baz=91
CHMT **Chamberlain Mo** 90.36 356 *e*P P 15 39 27.9 +1.3
D21A **La Casta Ranch** 90.36 0 ⇑P P 15 39 27.5 +1.1
baz=91,SNR=6.8
D20A **Manuel Ranch,** 90.39 359 ⇑P P 15 39 27.1 +0.6
baz=91
D16A **Dana Ranch, Ca** 90.40 357 ⇓P P 15 39 28.3 +1.6
baz=91,SNR=9.0
D24A **Glendive** 90.45 2 ⇓P P 15 39 27.6 +0.8
baz=91,SNR=6.6
D15A **Lincoln** 90.45 356 ⇑P P 15 39 28.2 +1.2
baz=91
D22A **Cohagen** 90.45 1 ⇓P P 15 39 27.9 +1.1
baz=91,SNR=13
D19A **Cripps Ranch,** 90.47 359 ⇓P P 15 39 28.0 +1.0
baz=91,SNR=5.4
D23A **Lindsay** 90.49 1 ⇓P P 15 39 28.1 +1.1
baz=91,SNR=6.3
D17A **Six Diamond Ra** 90.49 358 ⇓P P 15 39 28.5 +1.4
baz=91
D18A **Linhart Farms,** 90.52 358 ⇑P P 15 39 28.3 +1.1
baz=91
D14A **Greenough** 90.54 356 ⇑P P 15 39 28.3 +1.0
baz=91,SNR=11
D13A **Huson** 90.61 355 ⇓P P 15 39 28.1 +0.5
baz=91,SNR=7.2
D12A **Red Ives Fores** 90.62 355 ⇑P P 15 39 27.7 0.0
baz=91
SLMT **Seeley Lake** 90.70 356 *e*P P 15 39 29.6 +1.5
C24A **Savage** 90.86 2 ⇓P P 15 39 29.5 +0.8
baz=91
C17A **Wharram Farm,** 90.98 358 ⇑P P 15 39 30.3 +1.0
baz=92
SWMT **Swartz Lake** 90.99 356 *e*P P 15 39 30.6 +1.2
C20A **Veseth Ranch,** 91.01 360 ⇑P P 15 39 30.4 +1.0
baz=92
C19A **Slack Wire Ran** 91.04 359 ⇑P P 15 39 30.8 +1.2
baz=92,SNR=10
C22A **Vida** 91.05 1 ⇑P P 15 39 30.2 +0.6
baz=92
C23A **Lambert** 91.12 1 ⇓P P 15 39 30.5 +0.6
baz=92
C21A **Desert Coulee** 91.12 0 ⇑P P 15 39 30.4 +0.5
baz=92
C16A **Fuhringer Ranc** 91.18 357 ⇓P P 15 39 31.7 +1.4
baz=92,SNR=7.3
C15A **Salmond Ranch,** 91.19 356 ⇓P P 15 39 31.5 +1.2
baz=92
C13A **Hot Springs** 91.20 355 ⇓P P 15 39 30.8 +0.5
baz=92,SNR=6.4
JTMT **Jette** 91.25 355 *e*P P 15 39 31.9 +1.3
C12B **Naegeli Ranch,** 91.28 355 ⇓P P 15 39 30.7 +0.1
baz=92
EGMT **Eagleton** 91.34 358 *e*P P 15 39 32.5 +1.5
comp=Z,30nm,1.3s
EGMT **Eagleton** 91.34 358 ⇓P P 15 39 32.1 +1.1
baz=92,SNR=8.4
BSMT **Bassoo Peak** 91.38 355 *e*P P 15 39 32.4 +1.0
MDND **Maddock** 91.40 5 ⇑P P 15 39 31.0 -0.2
baz=92
C11A **Tepee Creek (N** 91.47 354 ⇑P P 15 39 32.1 +0.5
baz=92,SNR=5.6
SADO **Sadowa** 91.59 20 P P 15 39 31.2 -0.9
SADO **Sadowa** 91.59 20 P P 15 39 31.2 -0.9
comp=Z,31nm,1.3s,baz=223,slow=4.6,SNR=6.1
B22A **Reddig Ranch S** 91.60 1 ⇓P P 15 39 33.2 +1.0
baz=92,SNR=11
B17A **L&G Farms, Che** 91.64 358 ⇓P P 15 39 33.6 +1.3
baz=92,SNR=7.9
B18A **Beardsley Farm** 91.71 358 ⇓P P 15 39 34.1 +1.4
baz=92,SNR=8.8
B15A **Bradely Ranch,** 91.72 357 ⇑P P 15 39 33.5 +0.7
baz=92,SNR=6.8
B21A **Ellsworth Farm** 91.72 0 ⇑P P 15 39 33.3 +0.6
baz=92
B20A **Solberg Farm,** 91.74 360 ⇑P P 15 39 33.8 +1.0
baz=92,SNR=12
B19A **Brinkman Farms** 91.76 359 ⇑P P 15 39 34.1 +1.2
baz=92,SNR=8.5
B23A **Brockton** 91.78 2 ⇑P P 15 39 33.6 +0.7
baz=92
B16A **M & M Farms, S** 91.79 357 ⇑P P 15 39 33.9 +0.8
baz=92
B14A **Marquette Ranc** 91.80 356 ⇑P P 15 39 34.0 +0.8
baz=92,SNR=7.6
DGMT **Dagmar** 91.81 2 ⇓P P 15 39 33.5 +0.4
baz=92
B13A **Whitefish** 91.88 355 ⇑P P 15 39 34.0 +0.5
baz=92
NEW **Newport** 91.96 354 *e*P P 15 39 33.3 -0.5
NEW **Newport** 91.96 354 ⇓P P 15 39 34.1 +0.3
baz=92
B12A **Libby** 92.05 355 ⇓P P 15 39 35.1 +0.9
baz=93
NCB **Newcomb** 92.15 23 *e*P P 15 39 34.5 -0.2
A20A **Cobblestone Ra** 92.18 360 ⇓P P 15 39 35.6 +0.8
baz=93
A19A **Klindworth Far** 92.23 359 ⇑P P 15 39 36.0 +0.9
baz=93
A18A **Metzger Ranch,** 92.24 358 ⇓P P 15 39 35.9 +0.8
baz=93
A24A **Westby** 92.27 2 ⇓P P 15 39 35.8 +0.6
baz=93
A23A **Redstone** 92.28 2 ⇓P P 15 39 35.8 +0.6
baz=93
A17A **Triple J Farms** 92.29 358 ⇓P P 15 39 36.3 +1.0
baz=93
A21A **Bergtoll Ranch** 92.29 0 ⇓P P 15 39 35.9 +0.6
baz=93
A22A **Carney Farms,** 92.30 1 ⇑P P 15 39 36.1 +0.7
baz=93
EYMN **Ely** 92.31 11 *e*P P 15 39 35.1 -0.3
comp=Z,28nm,1.4s
A16A **West Butte Ran** 92.32 357 ⇓P P 15 39 36.6 +1.1
baz=93
A15A **Johnson Ranch,** 92.39 356 ⇑P P 15 39 36.4 +0.6
baz=93,SNR=6.6
A14A **Double T Ranch** 92.42 356 ⇑P P 15 39 37.2 +1.2
baz=93,SNR=13
A13A **Flathead Natio** 92.44 355 ⇓P P 15 39 36.9 +0.8
baz=93
A12A **Yaak River Ran** 92.52 355 ⇓P P 15 39 36.9 +0.5
baz=93
ASAR **Alice Springs** 92.58 234 P P 15 39 35.8 -1.7
ASAR PKKPbc **PKKPbc** 15 56 49.4 +1.2
ASAR **Alice Springs** 92.58 234 P P 15 39 35.8 -1.7
comp=Z,8.8nm,1.2s,baz=144,slow=4.9,SNR=25
ASAR PKKPbc **PKKPbc** 15 56 49.4 +1.2
comp=Z,0.5nm,0.6s,baz=330,slow=2.4,SNR=9.8
ASAR LR LR 16 14 30.0
comp=Z,700nm,21.3s,baz=145,slow=31
LONY **Lake Ozonia** 92.65 23 *e*P P 15 39 36.9 -0.1
comp=Z,53nm,1.5s
COEN **Coen** 93.99 247 *e*P P 15 39 40.5 -3.6
PMG **Port Moresby** 94.54 253 LR LR 16 15 37.0
comp=Z,916nm,20.8s,baz=140,slow=31
WRA **Warramunga Arr** 95.17 236 P P 15 39 48.1 -1.3
WRA **Warramunga Arr** 95.17 236 P P 15 39 48.1 -1.3
comp=Z,10nm,1.1s,baz=138,slow=4.3,SNR=29
WRA LR LR 16 18 33.8
comp=Z,941nm,18.2s,baz=130,slow=33
BOSA **Boshof** 95.98 139 P P 15 39 51.4 -1.7
BOSA **Boshof** 95.98 139 P P 15 39 51.4 -1.7
comp=Z,16nm,1.1s,baz=214,slow=7.7,SNR=6.1
BOSA LR LR 16 18 02.9
comp=Z,815nm,19.5s,baz=229,slow=32
YKA **Yellowknife Ar** 105.98 357 Pdif Pdif 15 40 40.2 +3.7
YKA PKiKP **PKiKP** 15 44 48.2 -0.3
YKA **Yellowknife Ar** 105.98 357 Pdiff Pdif 15 40 40.2 +3.7
comp=Z,0.1nm,0.5s,baz=165,slow=4.9,SNR=3.7
YKA PKiKP **PKiKP** 15 44 48.2 -0.3
comp=Z,0.2nm,0.9s,baz=166,slow=2.9,SNR=3.9
YKA PKKPbc **PKKPbc** 15 56 10.8 -1.4
comp=Z,0.8nm,0.9s,baz=328,slow=3.2,SNR=6.9
YKA PKKP **PKKPdf** 15 56 26.3 +1.9
comp=Z,0.9nm,0.9s,baz=346,slow=5.3,SNR=9.5
ILAR **Eielson Array** 112.45 343 PKiKP **PKiKP** 15 44 60.0 -0.7
ILAR **Eielson Array** 112.45 343 PKiKP **PKiKP** 15 44 60.0 -0.7
comp=Z,1.5nm,1.0s,baz=184,slow=2.4,SNR=11
TORD **Torodi Ar. Bea** 112.74 93 PKiKP **PKiKP** 15 45 01.9 -0.8
TORD PP **PP** 15 45 51.5 +1.2
TORD **Torodi Ar. Bea** 112.74 93 PKiKP **PKiKP** 15 45 01.9 -0.8
comp=Z,1.1nm,0.6s,baz=330,slow=1.1,SNR=9.9
TORD PP **PP** 15 45 51.5 +1.2
comp=Z,1.2nm,0.9s,baz=236,slow=4.4,SNR=5.3
TAM **Tamanrasset** 121.71 88 *e*PKiKP **PKPdf** 15 45 19.3 -0.7
TAM **Tamanrasset** 121.71 88 *e*PKPdf **PKPdf** 15 45 19.2 -0.7
ESDC **Sonseca Array** 124.58 66 PKP **PKPdf** 15 45 25.3 +0.5
ESDC **Sonseca Array** 124.58 66 PKP **PKPdf** 15 45 25.3 +0.5
comp=Z,0.2nm,0.3s,baz=271,slow=1.8,SNR=4.3
KMBO **Kilima Mbogo** 125.31 135 PKP **PKPdf** 15 45 28.2 +0.9
KMBO **Kilima Mbogo** 125.31 135 PKP **PKPdf** 15 45 28.2 +0.9
comp=Z,0.8nm,0.2s,baz=230,slow=22,SNR=4.1
PET **Petropavlovsk** 125.36 312 *e*PKiKP **PKPdf** 15 45 25.3 -0.4
PET pmax pmax
comp=Z,11nm,0.6s
PET pmax pmax
comp=Z,100nm,4.7s
PET MLR MLR
comp=Z,800nm,20.0s
PETK **Petropavlovsk-** 125.92 312 PKiKP **PKPdf** 15 45 26.7 -0.2
PETK pmax pmax
comp=Z,12nm,0.9s
PETK **Petropavlovsk-** 125.92 312 PKP **PKPdf** 15 45 26.7 -0.2
PETK **Petropavlovsk-** 125.92 312 PKP **PKPdf** 15 45 26.7 -0.2
comp=Z,12nm,0.9s,baz=108,slow=4.8,SNR=14
SJPF **Ste Jean** 128.06 63⇑*i*PKiKP **PKPdf** 15 45 31.9 +0.6
comp=Z,102nm,1.3s
SJPF **Ste Jean** 128.06 63⇑*i*PKiKP **PKPdf** 15 45 31.9 +0.6
SJPF **Ste Jean** 128.06 63⇑*i*PKPdf **PKPdf** 15 45 31.9 +0.6
BILL **Bilibino** 128.34 331⇑*i*PKiKP **PKPdf** 15 45 31.2 +0.2
BILL pmax pmax
comp=Z,35nm,1.3s
ETSF **Etsaut** 128.39 64⇑*i*PKiKP **PKPdf** 15 45 32.6 +0.6
comp=Z,71nm,1.4s
ETSF **Etsaut** 128.39 64⇑*i*PKiKP **PKPdf** 15 45 32.6 +0.6
ETSF **Etsaut** 128.39 64⇑*i*PKPdf **PKPdf** 15 45 32.6 +0.6
QUIF **Quistinic** 128.98 57 *e*PKiKP **PKPdf** 15 45 32.8 0.0
comp=Z,52nm,1.2s
QUIF **Quistinic** 128.98 57 *e*PKiKP **PKPdf** 15 45 32.8 0.0
QUIF **Quistinic** 128.98 57 *e*PKPdf **PKPdf** 15 45 32.8 0.0
EPF **Esparros** 129.04 64 *e*PKiKP **PKPdf** 15 45 33.4 -0.3
comp=Z,93nm,1.5s
EPF **Esparros** 129.04 64 *e*PKiKP **PKPdf** 15 45 33.5 +0.3
EPF **Esparros** 129.04 64 *e*PKPdf **PKPdf** 15 45 33.5 +0.3
ROSF **Rostrenen** 129.09 56 *e*PKiKP **PKPdf** 15 45 32.8 -0.3
ROSF **Rostrenen** 129.09 56 *e*PKiKP **PKPdf** 15 45 32.8 -0.3
ROSF **Rostrenen** 129.09 56 *e*PKPdf **PKPdf** 15 45 32.8 -0.3
SGMF **Saint Gilles** 129.49 57 *e*PKiKP **PKPdf** 15 45 33.4 -0.4
comp=Z,76nm,1.4s
SGMF **Saint Gilles** 129.49 57 *e*PKiKP **PKPdf** 15 45 33.4 -0.4
SGMF **Saint Gilles** 129.49 57 *e*PKPdf **PKPdf** 15 45 33.4 -0.4
LFF **La Frestale** 130.14 62 *e*PKiKP **PKPdf** 15 45 35.2 0.0
LFF **La Frestale** 130.14 62 *e*PKiKP **PKPdf** 15 45 35.2 0.0
LFF **La Frestale** 130.14 62 *e*PKPdf **PKPdf** 15 45 35.2 0.0
MFF **Saint Martin d** 130.29 60 *e*PKiKP **PKPdf** 15 45 35.4 0.0
comp=Z,40nm,1.3s
MFF **Saint Martin d** 130.29 60 *e*PKiKP **PKPdf** 15 45 35.4 0.0
MFF **Saint Martin d** 130.29 60 *e*PKPdf **PKPdf** 15 45 35.4 0.0
MTLF **Montolieu** 130.40 65 *e*PKiKP **PKPdf** 15 45 35.3 -0.4
MTLF **Montolieu** 130.40 65 *e*PKiKP **PKPdf** 15 45 35.3 -0.4
MTLF **Montolieu** 130.40 65 *e*PKPdf **PKPdf** 15 45 35.3 -0.4
MJAR **Matsushiro Arr** 130.50 285 PKP **PKPdf** 15 45 36.7 +0.5
MJAR **Matsushiro Arr** 130.50 285 PKP **PKPdf** 15 45 36.7 +0.5
comp=Z,3.2nm,0.9s,baz=155,slow=2.9,SNR=6.5
GRR **Gorron** 130.58 57 *e*PKiKP **PKPdf** 15 45 35.7 -0.2
comp=Z,82nm,1.3s
GRR **Gorron** 130.58 57 *e*PKiKP **PKPdf** 15 45 35.7 -0.2
GRR **Gorron** 130.58 57 *e*PKPdf **PKPdf** 15 45 35.7 -0.2
RJF **Les Rejaudoux** 130.80 62 *e*PKiKP **PKPdf** 15 45 36.3 -0.1
RJF *e*R
comp=Z,886nm,22.2s
RJF **Les Rejaudoux** 130.80 62 *e*PKiKP **PKPdf** 15 45 36.3 -0.1
RJF **Les Rejaudoux** 130.80 62 *e*PKPdf **PKPdf** 15 45 36.3 -0.1
CAF **Calviac** 130.99 63 *e*PKiKP **PKPdf** 15 45 36.8 0.0
CAF **Calviac** 130.99 63 *e*PKiKP **PKPdf** 15 45 36.8 0.0
CAF **Calviac** 130.99 63 *e*PKPdf **PKPdf** 15 45 36.8 0.0
LDF **La Druitiere** 131.11 57 *e*PKiKP **PKPdf** 15 45 36.6 -0.3
LDF **La Druitiere** 131.11 57 *e*PKiKP **PKPdf** 15 45 36.6 -0.3
LDF **La Druitiere** 131.11 57 *e*PKPdf **PKPdf** 15 45 36.6 -0.3
TCF **Toulx Ste Croi** 131.65 61 *e*PKiKP **PKPdf** 15 45 37.3 -0.7
comp=Z,34nm,1.3s
TCF **Toulx Ste Croi** 131.65 61 *e*PKiKP **PKPdf** 15 45 37.3 -0.7
TCF **Toulx Ste Croi** 131.65 61 *e*PKPdf **PKPdf** 15 45 37.3 -0.7
KEST **Kesra** 131.73 77 *e*PKPdf **PKPdf** 15 45 37.4 -1.2
KEST PKP **PKPdf** 15 45 38.8 +0.2
KEST **Kesra** 131.73 77 PKP **PKPdf** 15 45 38.8 +0.2
comp=Z,1.0nm,0.7s,baz=249,slow=1.5,SNR=4.5
LASF **Ste Croix** 131.79 64 *e*PKiKP **PKPdf** 15 45 38.2 -0.2
LASF **Ste Croix** 131.79 64 *e*PKPdf **PKPdf** 15 45 38.2 -0.2
YSS **Yuzh-Sakhalins** 132.09 300 *e*PKiKP **PKPdf** 15 45 39.7 +0.9
YSS MLR MLR
comp=Z,400nm,17.0s
YSS MLR MLR
comp=E,400nm,18.0s
SEY **Seymchan** 132.14 323 *i* PKiKP **PKPdf** 15 45 39.1 +0.7
BGF **Bois d'Agland** 132.16 61 *e*PKiKP **PKPdf** 15 45 38.5 -0.5
BGF **Bois d'Agland** 132.16 61 *e*PKiKP **PKPdf** 15 45 38.5 -0.5
BGF **Bois d'Agland** 132.16 61 *e*PKPdf **PKPdf** 15 45 38.5 -0.5
AVF **Avril sur Loir** 132.57 61 *e*PKiKP **PKPdf** 15 45 39.0 -0.7
AVF **Avril sur Loir** 132.57 61 *e*PKiKP **PKPdf** 15 45 39.0 -0.7
AVF **Avril sur Loir** 132.57 61 *e*PKPdf **PKPdf** 15 45 39.0 -0.7
VIVF **Saint-Julien-l** 132.65 64 *e*PKiKP **PKPdf** 15 45 39.8 -0.2
VIVF **Saint-Julien-l** 132.65 64 *e*PKiKP **PKPdf** 15 45 39.8 -0.2
VIVF **Saint-Julien-l** 132.65 64 *e*PKPdf **PKPdf** 15 45 39.8 -0.2
SSF **Saint Saulge** 132.77 60 *e*PKiKP **PKPdf** 15 45 39.4 -0.7
SSF **Saint Saulge** 132.77 60 *e*PKiKP **PKPdf** 15 45 39.4 -0.7
SSF **Saint Saulge** 132.77 60 *e*PKPdf **PKPdf** 15 45 39.4 -0.7

SMF	**Signal de Mont**	**132.82**	**61**	*e*PKIKP	**PKPdf**	**15 45 39.6**	**-0.6**
	comp=E,22nm,1.1s							
SMF	**Signal de Mont**	**132.82**	**61**	*e*PKIKP	**PKPdf**	**15 45 39.6**	**-0.6**
SMF	**Signal de Mont**	**132.82**	**61**	*e*PKPdf	**PKPdf**	**15 45 39.6**	**-0.6**
SMRF	**Simiane la Rot**	**132.88**	**65**	*e*PKIKP	**PKPdf**	**15 45 40.5**	**0.0**
SMRF	**Simiane la Rot**	**132.88**	**65**	*e*PKPdf	**PKPdf**	**15 45 40.5**	**0.0**
LOR	**Lormes**	**133.07**	**60**	⇑*i*PKIKP	**PKPdf**	**15 45 40.3**	**-0.4**
	comp=E,24nm,1.2s							
LOR				*e*R				
	comp=E,576nm,22.5s							
LOR	**Lormes**	**133.07**	**60**	⇑*i*PKPdf	**PKPdf**	**15 45 40.3**	**-0.4**
ORIF	**Oris-en-Rattie**	**133.46**	**64**	*e*PKIKP	**PKPdf**	**15 45 41.4**	**-0.2**
	comp=E,18nm,1.1s							
ORIF				*e*R				
	comp=E,984nm,21.8s							
ORIF	**Oris-en-Rattie**	**133.46**	**64**	*e*PKIKP	**PKPdf**	**15 45 41.4**	**-0.2**
ORIF	**Oris-en-Rattie**	**133.46**	**64**	*e*PKPdf	**PKPdf**	**15 45 41.4**	**-0.2**
MBDF	**Montbardon**	**133.97**	**65**	*e*PKIKP	**PKPdf**	**15 45 42.3**	**-0.3**
MBDF	**Montbardon**	**133.97**	**65**	*e*PKIKP	**PKPdf**	**15 45 42.3**	**-0.3**
MBDF	**Montbardon**	**133.97**	**65**	*e*PKPdf	**PKPdf**	**15 45 42.3**	**-0.3**
SFTF	**Sexfontaines**	**134.16**	**60**	*e*PKIKP	**PKPdf**	**15 45 42.2**	**-0.5**
	comp=E,86nm,1.2s							
SFTF	**Sexfontaines**	**134.16**	**60**	*e*PKPdf	**PKPdf**	**15 45 42.2**	**-0.5**
CABF	**La Chapelle**	**134.24**	**62**	*e*PKIKP	**PKPdf**	**15 45 42.9**	**-0.1**
CABF	**La Chapelle**	**134.24**	**62**	*e*PKIKP	**PKPdf**	**15 45 42.9**	**-0.1**
CABF	**La Chapelle**	**134.24**	**62**	*e*PKPdf	**PKPdf**	**15 45 42.9**	**-0.1**
LPL	**La Plagne**	**134.25**	**64**	*e*PKIKP	**PKPdf**	**15 45 43.3**	**+0.1**
	comp=E,45nm,1.3s							
LPL	**La Plagne**	**134.25**	**64**	*e*PKIKP	**PKPdf**	**15 45 43.3**	**+0.1**
LPL	**La Plagne**	**134.25**	**64**	*e*PKPdf	**PKPdf**	**15 45 43.3**	**+0.1**
LPG	**La Plagne**	**134.25**	**64**	*e*PKIKP	**PKPdf**	**15 45 43.6**	**+0.3**
	comp=E,36nm,1.2s							
LPG	**La Plagne**	**134.25**	**64**	*e*PKIKP	**PKPdf**	**15 45 43.6**	**+0.3**
LPG	**La Plagne**	**134.25**	**64**	*e*PKPdf	**PKPdf**	**15 45 43.6**	**+0.3**
MEZF	**Maizieres J'vi**	**134.27**	**59**	*e*PKIKP	**PKPdf**	**15 45 42.6**	**-0.2**
	comp=E,78nm,1.2s							
MEZF	**Maizieres J'vi**	**134.27**	**59**	*e*PKPdf	**PKPdf**	**15 45 42.6**	**-0.2**
BAIF	**Baives**	**134.28**	**57**	*e*PKIKP	**PKPdf**	**15 45 42.6**	**-0.2**
BAIF	**Baives**	**134.28**	**57**	*e*PKIKP	**PKPdf**	**15 45 42.6**	**-0.2**
BAIF	**Baives**	**134.28**	**57**	*e*PKPdf	**PKPdf**	**15 45 42.6**	**-0.2**
PGF	**Pioggiola**	**134.58**	**68**	*e*PKIKP	**PKPdf**	**15 45 43.5**	**-0.3**
	comp=E,33nm,1.1s							
PGF	**Pioggiola**	**134.58**	**68**	*e*PKIKP	**PKPdf**	**15 45 43.5**	**-0.3**
PGF	**Pioggiola**	**134.58**	**68**	*e*PKPdf	**PKPdf**	**15 45 43.5**	**-0.3**
GIVF	**Givet**	**134.67**	**57**	*e*PKIKP	**PKPdf**	**15 45 43.1**	**-0.4**
GIVF	**Givet**	**134.67**	**57**	*e*PKIKP	**PKPdf**	**15 45 43.1**	**-0.4**
GIVF	**Givet**	**134.67**	**57**	*e*PKPdf	**PKPdf**	**15 45 43.1**	**-0.4**
HINF	**Hinteralfeld**	**135.16**	**61**	*e*PKIKP	**PKPdf**	**15 45 44.2**	**-0.4**
HINF	**Hinteralfeld**	**135.16**	**61**	*e*PKIKP	**PKPdf**	**15 45 44.2**	**-0.4**
HINF	**Hinteralfeld**	**135.16**	**61**	*e*PKPdf	**PKPdf**	**15 45 44.2**	**-0.4**
WLF	**Walferdange**	**135.34**	**58**	*e*PKPdf	**PKPdf**	**15 45 45.8**	**+1.0**
WLF				*e*PKiKP	**PKiKP**	**15 45 47.2**	**+0.9**
WLF				*e*PP	**PP**	**15 48 23.1**	**+1.1**
WLF				*e*L	L	16 40 51.4		
	comp=Z,603nm,21.9s							
BFO	**Black Forest**	**136.27**	**60**	*e*PKPdf	**PKPdf**	**15 45 46.7**	**+0.1**
BFO				*e*PKiKP	**PKPdf**	**15 45 48.5**	**+1.9**
BFO				*e*PP	**PP**	**15 48 26.5**	**-1.4**
BFO				*e*L	L	16 42 55.1		
	comp=Z,326nm,21.8s							
BFO	**Black Forest**	**136.27**	**60**	*e*PKIKP	**PKPdf**	**15 45 46.7**	**+0.1**
BFO	**Black Forest**	**136.27**	**60**	*i* PKIKP	**PKPdf**	**15 45 48.5**	**+1.9**
BFO				*e*		15 48 26.5		
BFO				MLR	MLR			
	comp=Z,300nm,21.8s							
BUG	**Bochum--Univer**	**136.56**	**56**	*e*PKiKP	**PKiKP**	**15 45 49.4**	**+0.7**
BUG				*e*L	L	16 39 54.1		
	comp=Z,439nm,21.7s							
TNS	**Taunus Mts**	**136.93**	**58**	*e*PKiKP	**PKiKP**	**15 45 50.3**	**+0.7**
TNS				*e*L	L	16 44 48.1		
	comp=Z,538nm,19.7s							
TNS	**Taunus Mts**	**136.93**	**58**	*i* PKIKP	**PKiKP**	**15 45 50.3**	**+0.7**
TNS				MLR	MLR			
	comp=Z,500nm,19.7s							
STU	**Stuttgart**	**136.95**	**60**	*e*PKPdf	**PKPdf**	**15 45 48.1**	**+0.2**
STU				*e*PKiKP	**PKiKP**	**15 45 50.2**	**+0.5**
STU				*e*L	L	16 43 03.2		
	comp=Z,253nm,21.4s							
IBBN	**Ibbenburen**	**137.09**	**55**	*e*PKiKP	**PKiKP**	**15 45 50.4**	**+0.6**
IBBN				*e*L	L	16 41 48.4		
	comp=Z,441nm,21.4s							
UBBA	**Unterbreizbach**	**138.04**	**57**	*e*L	L	16 45 51.4		
	comp=Z,466nm,18.7s							
KBS	**Kingsbay**	**138.06**	**15***c*	*i* PKIKP	**PKPdf**	**15 45 50.3**	**+1.2**
KBS				pmax	pmax			
	comp=Z,32nm,1.7s							
USRK	**Ussuriysk Arra**	**138.07**	**292**	PKhKP	PKPpre	15 45 42.4		
	comp=Z,2.1nm,0.8s,baz=119,slow=2.4,SNR=4.5							
USRK				PKP	**PKPdf**	**15 45 50.5**	**+0.4**	
	comp=Z,3.5nm,0.8s,baz=168,slow=5.1,SNR=6.5							
FUR	**Furstenfeldbru**	**138.08**	**62**	*e*L	L	16 43 38.1		
	comp=Z,370nm,21.5s							
KSRS	**Korea Array**	**138.19**	**281**	PKhKP	PKPpre	15 45 43.7		
	comp=Z,1.1nm,0.6s,baz=111,slow=4.1,SNR=6.5							
KSRS				PKP	**PKPdf**	**15 45 50.8**	**+0.3**	
	comp=Z,4.6nm,0.9s,baz=90,slow=2.2,SNR=11							
KSAR	**Wonju Array Be**	**138.22**	**281**	PKP	**PKPdf**	**15 45 50.8**	**+0.3**
GRF	**Grafenberg Arr**	**138.49**	**59**	*e*PKiKP	**PKiKP**	**15 45 53.7**	**+0.9**
GRF				*e*L	L	16 45 10.6		
	comp=Z,427nm,20.8s							
GRF	**Grafenberg Arr**	**138.49**	**59**	*i* PKIKP	**PKiKP**	**15 45 53.7**	**+0.9**
GRF				MLR	MLR			
	comp=Z,400nm,20.8s							
NRDL	**Niedersach Rie**	**138.53**	**55**	*e*L	L	16 41 29.6		
	comp=Z,582nm,22.0s							
RJOB	**Jochberg**	**138.93**	**63**	*e*PKiKP	**PKiKP**	**15 45 53.9**	**+0.1**
RJOB				*e*L	L	16 44 37.4		
	comp=Z,516nm,20.3s							
BSEG	**Bad Segeberg**	**138.97**	**53**	*e*PKiKP	**PKiKP**	**15 45 54.2**	**+0.6**
BSEG				*e*L	L	16 44 06.4		
	comp=Z,768nm,19.4s							
BSEG	**Bad Segeberg**	**138.97**	**53**	*i* PKIKP	**PKiKP**	**15 45 54.2**	**+0.6**
BSEG				MLR	MLR			
	comp=Z,800nm,19.4s							
MOX	**Moxa**	**138.99**	**58**	*e*PKiKP	**PKiKP**	**15 45 54.4**	**+0.6**
MOX				*e*L	L	16 46 01.6		
	comp=Z,437nm,20.1s							
MOX	**Moxa**	**138.99**	**58**	*i* PKIKP	**PKiKP**	**15 45 54.4**	**+0.6**
MOX				MLR	MLR			
	comp=Z,400nm,20.1s							
ROTZ	**Rotzenmuhle**	**139.13**	**60**	*e*PKiKP	**PKiKP**	**15 45 54.4**	**+0.3**
ROTZ				*e*L	L	16 49 58.1		
	comp=Z,281nm,19.8s							
WET	**Wettzell**	**139.38**	**61**	*e*PKiKP	**PKiKP**	**15 45 55.0**	**+0.3**
WET				*e*L	L	16 44 54.2		
	comp=Z,453nm,21.2s							
WET	**Wettzell**	**139.38**	**61**	*i* PKIKP	**PKiKP**	**15 45 55.0**	**+0.3**
WET				MLR	MLR			
	comp=Z,500nm,21.2s							
NKC	**Novy Kostel**	**139.40**	**59**	*e*PKIKP	**PKPdf**	**15 45 47.7**	**-4.6**
NKC				*e*		15 45 55.0		
NKC	**Novy Kostel**	**139.40**	**59**	*e*PKP	**PKPdf**	**15 45 47.7**	**-4.6**
NKC				*ep*PKP	**PKiKP**	**15 45 55.0**	**+0.4**
NKC				AMS	AMS	16 45 20.0		
	comp=Z,300nm,13.2s							
TANN	**Tannenbergstha**	**139.45**	**59**	*e*L	L	16 45 30.3		
	comp=Z,309nm,20.8s							
KLR	**Kul'dur**	**139.79**	**299**	*e*PKHKP	PKPpre	15 45 47.0		
KLR				pmax	pmax			
	comp=Z,42nm,1.6s							
KHC	**Kasperske Hory**	**139.82**	**61**	*e*PKIKP	**PKPdf**	**15 45 52.0**	**-1.2**
KHC	**Kasperske Hory**	**139.82**	**61**	*e*PKP	**PKPdf**	**15 45 51.1**	**-2.1**
KHC				*ep*PKP	**PKiKP**	**15 45 54.7**	**-0.9**
KHC				AMS	AMS	16 43 20.0		
	comp=Z,500nm,21.6s							
GEC2	**GERESS Array S**	**139.82**	**61**	*e*PKiKP	**PKiKP**	**15 45 55.7**	**0.0**
GEC2				*e*L	L	16 42 43.8		
	comp=Z,386nm,21.4s							
GEC2	**GERESS Array S**	**139.82**	**61**	*i* PKIKP	**PKiKP**	**15 45 55.7**	**0.0**
GEC2				MLR	MLR			
	comp=Z,400nm,21.4s							
GERES	**GERESS Array B**	**139.82**	**61**	PKP	**PKPdf**	**15 45 53.6**	**+0.4**
GERES	**GERESS Array B**	**139.82**	**61**	PKhKP	PKPpre	15 45 45.2		
	comp=Z,1.0nm,0.7s,baz=209,slow=2.4,SNR=4.1							
GERES				PKP	**PKPdf**	**15 45 53.6**	**+0.4**	
	comp=Z,4.2nm,0.9s,baz=37,slow=0.7,SNR=13							
MDJ	**Mudanjiang**	**139.83**	**292**	*e*PKPdf	**PKPdf**	**15 45 52.1**	**-1.1**
CLL	**Collm**	**140.00**	**57**	*e*PKiKP	**PKiKP**	**15 45 56.0**	**+0.2**
CLL				*e*L	L	16 45 30.5		
	comp=Z,413nm,21.2s							
CLL	**Collm**	**140.00**	**57**	⇓*i*PKIKP	**PKPdf**	**15 45 55.6**	**+2.3**
CLL				pmax	pmax			
	comp=Z,27nm,1.3s							
CLL	**Collm**	**140.00**	**57**	*e*PKPpre	**PKPdf**	**15 45 52.0**	**-1.3**
	comp=Z,4.0nm,0.9s							
CLL				⇓*i*PKPdf	**PKPdf**	**15 45 55.6**	**+2.3**
	comp=Z,27nm,1.3s							
CLL				*e*PP	**PP**	**15 48 49.0**	**-2.0**
CLL				*e*SS	SS	16 07 08.0	-5.0	
CLL				*e*PSS	PSS	16 07 54.0		
CLL				LmV		16 45 00.0		
	comp=Z,400nm,21.3s							
QIZ	**Qiongzhong**	**140.32**	**244**	PKP	**PKPdf**	**15 45 58.3**	**+3.4**
QIZ				PP	**PP**	**15 48 56.0**	**+3.1**
QIZ				SS	SS	16 07 19.0	+2.2	
QIZ				LR	LR			
	comp=Z,320nm,30.1s							
NB2	**NORSAR Subarra**	**140.37**	**42**	PKPdf	PKPdf	15 45 47.7	-6.1	
	comp=Z,12nm,1.2s,baz=270,slow=1.9							
NB2	**NORSAR Subarra**	**140.37**	**42**	PKPdf	PKPdf	15 45 47.7	-6.1	
	baz=270,slow=1.9							
NOA	**NORSAR Array B**	**140.37**	**42**	PKP	**PKPdf**	**15 45 54.4**	**+0.6**
NOA	**NORSAR Array B**	**140.37**	**42**	PKP	**PKPdf**	**15 45 54.4**	**+0.6**
	comp=Z,3.1nm,1.0s,baz=276,slow=2.2,SNR=4.7							
BRG	**Berggiesshubel**	**140.48**	**58**	*e*P	**PKPdf**	**15 45 57.4**	**+3.2**
	comp=Z,30nm,1.9s							
BRG								
	comp=N,209nm,19.5s							
BRG								
	comp=E,294nm,14.2s							
BRG								
	comp=Z,280nm,18.0s							
BRG	**Berggiesshubel**	**140.48**	**58**	*e*PKiKP	**PKiKP**	**15 45 56.7**	**-0.1**
BRG				*e*L	L	16 41 00.3		
	comp=Z,304nm,20.9s							
BRG	**Berggiesshubel**	**140.48**	**58**	*e*PKIKP	**PKPdf**	**15 45 57.4**	**+3.2**
BRG				pmax	pmax			
	comp=Z,30nm,1.9s							
BRG				MLR	MLR			
	comp=E,209nm,14.2s							
BRG				MLR	MLR			
	comp=Z,294nm,18.0s							
PRU	**Pruhonice**	**140.65**	**60**	*e*PKIKP	**PKPdf**	**15 45 51.6**	**-3.0**
PRU	**Pruhonice**	**140.65**	**60**	*e*PKP	**PKPdf**	**15 45 51.6**	**-3.0**
PRU				AMS	AMS	16 45 40.0		
	comp=Z,300nm,18.0s							
PVCC	**Panska Ves**	**140.79**	**59**	AMS	AMS	16 45 50.0		
	comp=Z,500nm,17.7s							
TREC	**Trest**	**141.07**	**61**	AMS	AMS	16 39 30.0		
	comp=Z,300nm,16.5s							
PYL	**PYLOS**	**141.11**	**82**	P	**PKPdf**	**15 45 55.7**	**-0.1**
PYL	**PYLOS**	**141.11**	**82**	P	**PKPdf**	**15 45 55.7**	**-0.1**
PYL	**PYLOS**	**141.11**	**82**	P	**PKPdf**	**15 45 55.7**	**-0.1**
PYL	**PYLOS**	**141.11**	**82**	P	**PKPdf**	**15 45 55.7**	**-0.1**
TIXI	**Tiksi**	**141.30**	**335**	*i* PKHKP	PKPpre	15 45 49.1		
RLS	**Riolos of Patr**	**141.42**	**80**	P	**PKPdf**	**15 45 59.0**	**+2.7**
RLS	**Riolos of Patr**	**141.42**	**80**	P	**PKPdf**	**15 45 59.0**	**+2.7**
RLS	**Riolos of Patr**	**141.42**	**80**	P	**PKPdf**	**15 45 59.0**	**+2.7**
RLS	**Riolos of Patr**	**141.42**	**80**	P	**PKPdf**	**15 45 59.0**	**+2.7**
UPC	**Upice**	**141.68**	**59**	*e*PKIKP	**PKPdf**	**15 45 55.9**	**-0.5**
UPC				*e*		15 45 59.6		
UPC	**Upice**	**141.68**	**59**	*e*PKP	**PKPdf**	**15 45 55.9**	**-0.5**
UPC				*ep*PKP	**PKiKP**	**15 45 59.6**	**+0.3**
VLX	**Vlachokerasia**	**141.78**	**82**	P	**PKPdf**	**15 45 57.5**	**+0.3**
VLX	**Vlachokerasia**	**141.78**	**82**	P	**PKPdf**	**15 45 57.5**	**+0.3**
VLX	**Vlachokerasia**	**141.78**	**82**	P	**PKPdf**	**15 45 57.5**	**+0.3**
VLX	**Vlachokerasia**	**141.78**	**82**	P	**PKPdf**	**15 45 57.5**	**+0.3**
ZST	**Bratislava**	**141.84**	**63**	*e*PKIKP	**PKPdf**	**15 45 58.9**	**+2.1**
ZST	**Bratislava**	**141.84**	**63**	*e*PKP	**PKPdf**	**15 45 58.9**	**+2.1**
DPC	**Dobruska-Polom**	**141.84**	**60**	*e*PKIKP	**PKPdf**	**15 45 54.2**	**-2.6**
DPC				*e*		15 45 59.8		
DPC	**Dobruska-Polom**	**141.84**	**60**	*e*PKP	**PKPdf**	**15 45 54.2**	**-2.6**
DPC				*ep*PKP	**PKiKP**	**15 45 59.8**	**+0.1**
DPC				AMS	AMS	16 44 20.0		
	comp=Z,2µm,16.6s							
GVD	**Gavdhos**	**141.86**	**86**	P	**PKPdf**	**15 45 58.1**	**+0.8**
GVD	**Gavdhos**	**141.86**	**86**	P	**PKPdf**	**15 45 58.1**	**+0.8**
GVD	**Gavdhos**	**141.86**	**86**	P	**PKPdf**	**15 45 58.1**	**+0.8**
GVD	**Gavdhos**	**141.86**	**86**	*e*PKPdf	**PKPdf**	**15 45 56.5**	**-0.8**
GVD	**Gavdhos**	**141.86**	**86**	P	**PKPdf**	**15 45 58.1**	**+0.8**
EVR	**Evrytania**	**142.02**	**79**	P	**PKPdf**	**15 45 54.7**	**-2.8**
EVR	**Evrytania**	**142.02**	**79**	P	**PKPdf**	**15 45 54.7**	**-2.8**
EVR	**Evrytania**	**142.02**	**79**	P	**PKPdf**	**15 45 54.7**	**-2.8**
EVR	**Evrytania**	**142.02**	**79**	P	**PKPdf**	**15 45 54.7**	**-2.8**
KRLC	**Kraliky**	**142.07**	**60**	*e*PKIKP	**PKPdf**	**15 45 53.0**	**-4.2**
KRLC				*e*		15 45 59.7		
KRLC	**Kraliky**	**142.07**	**60**	*e*PKP	**PKPdf**	**15 45 53.0**	**-4.2**
KRLC				*ep*PKP	**PKiKP**	**15 45 59.7**	**-0.5**
PHP	**Peshkopia**	**142.11**	**74**	P	**PKPdf**	**15 46 01.4**	**+3.8**
PHP	**Peshkopia**	**142.11**	**74**	P	**PKPdf**	**15 46 01.4**	**+3.8**
PHP	**Peshkopia**	**142.11**	**74**	P	**PKPdf**	**15 46 01.4**	**+3.8**
PHP	**Peshkopia**	**142.11**	**74**	P	**PKPdf**	**15 46 01.4**	**+3.8**
NJ2	**Nanjing**	**142.15**	**268**	*e*PKP	**PKPdf**	**15 45 57.0**	**-0.8**
NJ2				AMB	AMB			
	comp=Z,240nm,9.3s							
NJ2				LR	LR			
	comp=N,370nm,26.6s							
NJ2				LR	LR			
	comp=E,570nm,32.8s							
NJ2				LR	LR			
	comp=Z,530nm,34.4s							
VAM	**Vamos**	**142.21**	**86**	P	**PKPdf**	**15 45 53.0**	**-4.9**
VAM	**Vamos**	**142.21**	**86**	P	**PKPdf**	**15 45 53.0**	**-4.9**
VAM	**Vamos**	**142.21**	**86**	P	**PKPdf**	**15 45 53.0**	**-4.9**
VAM	**Vamos**	**142.21**	**86**	P	**PKPdf**	**15 45 53.0**	**-4.9**
PKSM	**Moragy**	**142.32**	**67**	⇑PKHKP	**PKPdf**	**15 45 53.5**	**-4.2**
PKSM	**Moragy**	**142.32**	**67**	⇑*i*P	**PKPdf**	**15 45 53.5**	**-4.2**
CN2	**Changchun**	**142.38**	**289**	*e*PKP	**PKPdf**	**15 45 53.5**	**-4.4**
CN2				*ep*PP	**PP**	**15 49 06.5**	**+0.8**
CN2				LR	LR			
	comp=N,500nm,24.0s							
CN2				LR	LR			
	comp=E,300nm,24.0s							
CN2				LR	LR			
	comp=Z,500nm,24.0s							
YAK	**Yakutsk**	**142.46**	**320**	*e*PKHKP	PKPpre	15 45 50.3		
YAK				pmax	pmax			
	comp=Z,15nm,1.3s							
YAK				pmax	pmax			
	comp=E,5.0nm,1.2s							
MORC	**Moravsky Berou**	**142.49**	**61**	*e*PKIKP	**PKPdf**	**15 45 55.4**	**-2.6**
MORC	**Moravsky Berou**	**142.49**	**61**	*e*PKPdf	**PKPdf**	**15 45 55.4**	**-2.6**
IDI	**Anoyia**	**142.66**	**86**	P	**PKPdf**	**15 45 55.2**	**-3.5**
IDI	**Anoyia**	**142.66**	**86**	P	**PKPdf**	**15 45 55.2**	**-3.5**
IDI	**Anoyia**	**142.66**	**86**	P	**PKPdf**	**15 45 55.2**	**-3.5**
IDI	**Anoyia**	**142.66**	**86**	*e*PKPdf	**PKPdf**	**15 45 55.2**	**-3.5**
IDI	**Anoyia**	**142.66**	**86**	P	**PKPdf**	**15 45 55.2**	**-3.5**
OKC	**Ostrava-Krasne**	**142.88**	**61**	*e*PKIKP	**PKPdf**	**15 45 55.2**	**-3.4**
OKC				*e*		15 46 00.2		
OKC	**Ostrava-Krasne**	**142.88**	**61**	*e*PKP	**PKPdf**	**15 45 55.2**	**-3.4**
OKC				*ep*PKP	**PKiKP**	**15 46 00.2**	**-1.6**
LAST	**Lasithi**	**143.02**	**87**	P	**PKPdf**	**15 45 55.6**	**-3.8**
LAST	**Lasithi**	**143.02**	**87**	P	**PKPdf**	**15 45 55.6**	**-3.8**
LAST	**Lasithi**	**143.02**	**87**	P	**PKPdf**	**15 45 55.6**	**-3.8**
LAST	**Lasithi**	**143.02**	**87**	P	**PKPdf**	**15 45 55.6**	**-3.8**
VYHS	**Vyhne**	**143.03**	**63**	*e*PKIKP	PKPbc	15 45 55.3	-0.5	
VYHS				*e*		15 46 00.8		
VYHS	**Vyhne**	**143.03**	**63**	*e*PKP	PKPbc	15 45 55.3	-0.5	
VYHS				*e*		15 46 00.8		
DL2	**Dalian**	**143.30**	**280**	⇑PKP	PKPab	15 45 55.0	-0.6	
DL2				*e*SS	SS	16 07 48.3	-3.7	
DL2				AMB	AMB			
	comp=Z,160nm,4.4s							
DL2				LR	LR			
	comp=N,210nm,17.0s							
DL2				LR	LR			
	comp=E,230nm,16.4s							
DL2				LR	LR			
	comp=Z,290nm,17.5s							
VAY	**Valandovo**	**143.47**	**76**	P	PKPab	15 45 56.1	-0.1	
VAY	**Valandovo**	**143.47**	**76**	P	PKPab	15 45 56.1	-0.1	
VAY	**Valandovo**	**143.47**	**76**	P	PKPab	15 45 56.1	-0.1	
VAY	**Valandovo**	**143.47**	**76**	P	PKPab	15 45 56.1	-0.1	
AOS	**Alonnisos**	**143.59**	**80**	P	PKPab	15 45 55.3	-1.4	
AOS	**Alonnisos**	**143.59**	**80**	P	PKPab	15 45 55.3	-1.4	
AOS	**Alonnisos**	**143.59**	**80**	P	PKPab	15 45 55.3	-1.4	
AOS	**Alonnisos**	**143.59**	**80**	P	PKPab	15 45 55.3	-1.4	
KNT	**Kendrikon**	**143.65**	**76**	P	PKPbc	15 45 58.1	+0.4	
KNT	**Kendrikon**	**143.65**	**76**	P	PKPbc	15 45 58.1	+0.4	
KNT	**Kendrikon**	**143.65**	**76**	P	PKPbc	15 45 58.1	+0.4	
KNT	**Kendrikon**	**143.65**	**76**	P	PKPbc	15 45 58.1	+0.4	
PAIG	**Paliouri**	**143.75**	**79**	P	PKPab	15 45 57.6	+0.3	
PAIG	**Paliouri**	**143.75**	**79**	P	PKPab	15 45 57.6	+0.3	
PAIG	**Paliouri**	**143.75**	**79**	P	PKPab	15 45 57.6	+0.3	
PAIG	**Paliouri**	**143.75**	**79**	P	PKPab	15 45 57.6	+0.3	
SOH	**Sokhos**	**143.84**	**77**	P	PKPbc	15 45 58.6	+0.2	
SOH	**Sokhos**	**143.84**	**77**	P	PKPbc	15 45 58.6	+0.2	
SOH	**Sokhos**	**143.84**	**77**	P	PKPbc	15 45 58.6	+0.2	
SOH	**Sokhos**	**143.84**	**77**	P	PKPbc	15 45 58.6	+0.2	
APE	**Apeiranthos**	**143.91**	**84**	⇑PKIKP	PKPab	15 45 57.9	-0.2	
APE	**Apeiranthos**	**143.91**	**84**	P	PKPbc	15 45 58.8	+0.1	
APE	**Apeiranthos**	**143.91**	**84**	P	PKPbc	15 45 58.8	+0.1	
APE	**Apeiranthos**	**143.91**	**84**	P	PKPbc	15 45 58.8	+0.1	
APE	**Apeiranthos**	**143.91**	**84**	⇑*i*P	PKPab	15 45 57.8	-0.3	
APE	**Apeiranthos**	**143.91**	**84**	P	PKPbc	15 45 58.8	+0.1	
OJC	**Ojcow**	**144.00**	**61**	*e*PKIKP	PKPbc	15 45 59.5	+1.0	
OJC	**Ojcow**	**144.00**	**61**	*e*PKPdf	PKPbc	15 45 59.5	+1.0	
KECS	**Kecovo**	**144.10**	**64**	*e*PKIKP	PKPbc	15 45 59.6	+0.7	
KECS	**Kecovo**	**144.10**	**64**	*e*PKP	PKPbc	15 45 59.6	+0.7	
OUR	**Ouranopolis**	**144.11**	**78**	P	PKPbc	15 45 58.9	-0.2	
OUR	**Ouranopolis**	**144.11**	**78**	P	PKPbc	15 45 58.9	-0.2	
OUR	**Ouranopolis**	**144.11**	**78**	P	PKPbc	15 45 58.9	-0.2	
OUR	**Ouranopolis**	**144.11**	**78**	P	PKPbc	15 45 58.9	-0.2	
SRS	**Serrai**	**144.12**	**77**	P	**PKPab**	**15 45 58.3**	**-0.4**
SRS	**Serrai**	**144.12**	**77**	P	**PKPab**	**15 45 58.3**	**-0.4**
SRS	**Serrai**	**144.12**	**77**	P	**PKPab**	**15 45 58.3**	**-0.4**
SRS	**Serrai**	**144.12**	**77**	P	**PKPab**	**15 45 58.3**	**-0.4**
BZS	**Buzias**	**144.16**	**69**	⇓PKIKP	**PKPab**	**15 45 58.2**	**-0.5**
BZS	**Buzias**	**144.16**	**69**	⇓*i*P	**PKPab**	**15 45 58.2**	**-0.5**
NIE	**Niedzica**	**144.18**	**62**	*e*PKIKP	PKPbc	15 45 59.7	+0.6	
NIE	**Niedzica**	**144.18**	**62**	*e*PKPdf	PKPbc	15 45 59.7	+0.6	
VTS	**Vitosha**	**144.35**	**74**	⇑PKIKP	**PKPab**	**15 45 59.6**	**-0.1**
VTS	**Vitosha**	**144.35**	**74**	P	**PKPab**	**15 45 59.7**	**0.0**
VTS	**Vitosha**	**144.35**	**74**	P	**PKPab**	**15 45 59.7**	**0.0**
VTS	**Vitosha**	**144.35**	**74**	P	**PKPab**	**15 45 59.7**	**0.0**
VTS	**Vitosha**	**144.35**	**74**	⇑*i*P	**PKPab**	**15 45 59.6**	**-0.1**
VTS	**Vitosha**	**144.35**	**74**	P	**PKPab**	**15 45 59.7**	**0.0**
NVR	**Nevrokopi**	**144.39**	**76**	P	**PKPab**	**15 45 59.2**	**-0.6**
NVR	**Nevrokopi**	**144.39**	**76**	P	**PKPab**	**15 45 59.2**	**-0.6**
NVR	**Nevrokopi**	**144.39**	**76**	P	**PKPab**	**15 45 59.2**	**-0.6**
NVR	**Nevrokopi**	**144.39**	**76**	*e*P	**PKPab**	**15 45 59.5**	**-0.3**
NVR	**Nevrokopi**	**144.39**	**76**	P	**PKPab**	**15 45 59.2**	**-0.6**
KARP	**Karpathos**	**144.42**	**87**	P	PKP

FINES	**FINES Array B**	**147.49**	**40**	PKPbc	**PKPbc**	**15 46 08.2**	**-0.5**		
FINES	**FINES Array B**	**147.49**	**40**	PKPbc	**PKPbc**	**15 46 08.2**	**-0.5**		
	comp=Z,17nm,0.7s,baz=198,slow=1.2,SNR=34								
HIA	**Hailar**	**147.50**	**297**	*e*PKPdf	**PKPdf**	**15 46 06.8**	**+0.2**		
HIA				*e*PKPbc	**PKPbc**	**15 46 09.1**	**-0.1**		
GYA	**Guiyang**	**147.56**	**249**	PKPbc	**PKPbc**	**15 46 10.8**	**+0.6**		
GYA				PKPab	**PKiKP**	**15 46 15.5**	**+3.2**		
GYA				PP	**PP**	**15 49 37.5**	**+0.9**		
GYA				PKS	**PKSdf**	**15 49 44.8**	**+1.9**		
GYA				SKS	**SKSdf**	**15 53 18.0**	**+1.7**		
GYA				SKKS	**SKKSac**	**15 56 26.8**	**-1.7**		
GYA				SS	**SS**	**16 08 40.5**	**0.0**		
GYA				AMB	AMB				
	comp=Z,160nm,8.0s								
GYA				LR	LR				
	comp=N,150nm,20.3s								
GYA				LR	LR				
	comp=E,160nm,21.5s								
GYA				LR	LR				
	comp=Z,190nm,20.5s								
PLOR	**Plostina**	**147.63**	**70**	⇓PKIKP	**PKPdf**	**15 46 06.7**	**-0.2**		
PLOR	**Plostina**	**147.63**	**70**	⇓*i*P	**PKPdf**	**15 46 06.7**	**-0.2**		
BJT	**Baijiatuan**	**147.63**	**279**	*e*PKPdf	**PKPdf**	**15 46 07.0**	**-0.1**		
BJT				*e*PKPbc	**PKPbc**	**15 46 09.9**	**+0.1**		
BJT				*e*PKPab	**PKPab**	**15 46 12.8**	**+0.7**		
BJI	**Beijing**	**147.64**	**279**	PKPbc	**PKPbc**	**15 46 09.8**	**0.0**		
BJI				SS	SS	16 08 45.0	+3.6		
BJI				AMB	AMB				
	comp=Z,180nm,6.3s								
BJI				LR	LR				
	comp=N,180nm,21.6s								
BJI				LR	LR				
	comp=E,300nm,24.9s								
BJI				LR	LR				
	comp=Z,500nm,33.8s								
VRI	**Vrincioaia**	**147.69**	**70**	⇓PKIKP	**PKPdf**	**15 46 06.5**	**-0.5**		
VRI	**Vrincioaia**	**147.69**	**70**	⇓*i*P	**PKPdf**	**15 46 06.5**	**-0.5**		
TESR	**Tescani**	**147.77**	**69**	⇓*i*P	**PKPdf**	**15 46 07.2**	**+0.1**		
ISP	**Isparta**	**147.84**	**86**	*e*PKIKP	**PKPdf**	**15 46 06.8**	**-0.9**		
ISP				*e*		15 46 09.3			
ISP				*e*		15 46 12.8			
ISP	**Isparta**	**147.84**	**86**	P	**PKPdf**	**15 46 08.6**	**+1.0**		
ISP	**Isparta**	**147.84**	**86**	P	**PKPdf**	**15 46 08.6**	**+1.0**		
ISP	**Isparta**	**147.84**	**86**	P	**PKPdf**	**15 46 08.6**	**+1.0**		
ISP	**Isparta**	**147.84**	**86**	*e*PKPdf	**PKPdf**	**15 46 06.8**	**-0.9**		
ISP				*e*PKPbc	**PKPbc**	**15 46 09.3**	**-1.3**		
ISP				*e*PKPab	**PKPab**	**15 46 12.8**	**-0.3**		
ISP	**Isparta**	**147.84**	**86**	⇓*i*P	**PKPdf**	**15 46 08.4**	**+0.8**		
ISP	**Isparta**	**147.84**	**86**	P	**PKPdf**	**15 46 08.6**	**+1.0**		
PPCY	**Paphos**	**147.87**	**92**	P	**PKPbc**	**15 46 11.2**	**+0.6**		
ENH	**Enshi**	**147.92**	**258**	*e*PKPdf	**PKPdf**	**15 46 07.9**	**0.0**		
ENH				*e*PKPbc	**PKPbc**	**15 46 11.1**	**+0.2**		
ENH				*e*PKPab	**PKPab**	**15 46 15.3**	**+1.7**		
AKMC	**Akamas**	**147.93**	**92**	P	**PKPbc**	**15 46 11.3**	**+0.5**		
ISK	**Istanbul-Kandi**	**147.98**	**79**	P	**PKPbc**	**15 46 10.3**	**-0.4**		
ISK	**Istanbul-Kandi**	**147.98**	**79**	P	**PKPbc**	**15 46 10.3**	**-0.4**		
ISK	**Istanbul-Kandi**	**147.98**	**79**	P	**PKPbc**	**15 46 10.3**	**-0.4**		
ISK	**Istanbul-Kandi**	**147.98**	**79**	P	**PKPbc**	**15 46 10.3**	**-0.4**		
ALT	**Altintas**	**148.02**	**83**	P	**PKPdf**	**15 46 08.3**	**+0.4**		
ALT	**Altintas**	**148.02**	**83**	P	**PKPdf**	**15 46 08.3**	**+0.4**		
ALT	**Altintas**	**148.02**	**83**	P	**PKPdf**	**15 46 08.3**	**+0.4**		
ALT	**Altintas**	**148.02**	**83**	P	**PKPdf**	**15 46 08.3**	**+0.4**		
ALFC	**Alevga**	**148.18**	**92**	P	**PKPbc**	**15 46 11.3**	**-0.2**		
	comp=Z,0.8nm,0.6s								
ISAL	**Salakas**	**148.22**	**51**	*e*P	**PKPbc**	**15 46 10.8**	**0.0**		
ISAL				AMB	AMB	15 46 11.9			
	comp=Z,39nm,1.5s								
HARR	**Harsova**	**148.24**	**72**	⇓PKIKP	**PKPdf**	**15 46 08.6**	**+0.7**		
HARR	**Harsova**	**148.24**	**72**	⇓*i*P	**PKPdf**	**15 46 08.6**	**+0.7**		
IZAR	**Zarasai**	**148.28**	**51**	*e*P	**PKPbc**	**15 46 11.1**	**0.0**		
IZAR				AMB	AMB	15 46 12.1			
	comp=Z,27nm,1.5s								
IIGN	**Ignalina**	**148.28**	**52**	*e*P	**PKPbc**	**15 46 11.3**	**+0.3**		
IIGN				AMB	AMB	15 46 12.2			
	comp=Z,37nm,1.4s								
TIRR	**Tirgusor**	**148.51**	**73**	*e*PKHKP	**PKPdf**	**15 46 06.9**	**-1.4**		
TIRR				*e*		15 46 14.2			
TIRR	**Tirgusor**	**148.51**	**73**	*e*PKPdf	**PKPdf**	**15 46 06.9**	**-1.4**		
TIRR				*e*PKPbc	**PKPbc**	**15 46 11.3**	**-0.7**		
TIRR				*e*PKPab	**PKiKP**	**15 46 14.2**	**+0.7**		
TIRR	**Tirgusor**	**148.51**	**73**	⇓*i*P	**PKPdf**	**15 46 08.4**	**+0.1**		
IDID	**Didziasalis**	**148.58**	**52**	*e*P	**PKPbc**	**15 46 11.5**	**-0.3**		
IDID				AMB	AMB	15 46 12.7			
	comp=Z,26nm,1.4s								
LVZ	**Lovozero**	**148.59**	**27**	*c i*PKP2	**PKPbc**	**15 46 12.4**	**+0.9**		
LVZ				pmax	pmax				
	comp=Z,57nm,1.2s								
NACGM	**Naroch**	**148.62**	**53**	*e*	PKPab	15 46 21.0	+5.5		
CSS	**Prodhromos**	**148.62**	**93**	P	**PKPdf**	**15 46 09.5**	**+0.6**		
	comp=Z,1.0nm,1.0s								
CSS	**Prodhromos**	**148.62**	**93**	P	**PKPdf**	**15 46 09.3**	**+0.4**		
CSS	**Prodhromos**	**148.62**	**93**	P	**PKPdf**	**15 46 09.3**	**+0.4**		
CSS	**Prodhromos**	**148.62**	**93**	P	**PKPdf**	**15 46 09.3**	**+0.4**		
CSS	**Prodhromos**	**148.62**	**93**	*e*PKPdf	**PKPdf**	**15 46 08.6**	**-0.3**		
CSS				*e*PKPbc	**PKPbc**	**15 46 12.6**	**0.0**		
CSS	**Prodhromos**	**148.62**	**93**	P	**PKPdf**	**15 46 09.3**	**+0.4**		
PHNC	**Paralimni**	**149.15**	**93**	P	**PKPdf**	**15 46 08.2**	**-1.5**		
	comp=Z,1.8nm,1.4s								
MNK	**Minsk**	**149.24**	**53**	*e*PKHKP	**PKPdf**	**15 46 08.0**	**-1.2**		
MNK				pmax	pmax				
	comp=Z,440nm,1.2s								
KMI	**Kunming**	**149.26**	**243**	PKPbc	**PKPdf**	**15 46 10.8**	**+0.3**		
KMI				pPKP	**pPKPdf**	**15 46 14.3**	**+0.4**		
MICGM	**Minsk**	**149.27**	**53**	*e*P	**PKPdf**	**15 46 08.0**	**-1.2**		
KIS	**Kishinev**	**149.33**	**68**	*α i*PKP2	**PKPbc**	**15 46 14.0**	**0.0**		
KIS				*e*		15 49 50.0			
KIS				pmax	pmax				
	comp=Z,500nm,1.5s								
KIS				pmax	pmax				
	comp=Z,500nm,2.0s								
KIS				MLR	MLR				
	comp=Z,400nm,22.0s								
KIS	**Kishinev**	**149.33**	**68**	⇑*i*PKP	**PKPbc**	**15 46 14.0**	**0.0**		
KIS				M		15 46 14.5			
	comp=Z,500nm,1.5s								
KIS				*ep*PKP		15 48 16.0			
KIS				LRM	MLR	16 45 00.0			
	comp=Z,400nm,22.0s								
JOF	**Joensuu**	**149.46**	**36**	*e*PKHKP	**PKPbc**	**15 46 12.1**	**-1.7**		
JOF				pmax	pmax				
	comp=Z,17nm,0.5s								
JOF	**Joensuu**	**149.46**	**36**	*ep*	**PKPbc**	**15 46 12.1**	**-1.7**		
	comp=Z,16nm,0.5s								
BRBR	**Barbar**	**149.76**	**97**	*e*P	**PKPdf**	**15 46 12.9**	**+1.9**		
BRBR				*e*P	**PKiKP**	**15 46 18.2**	**+1.4**		
SALA	**Sala**	**149.96**	**99**	*e*P	**PKPbc**	**15 46 16.6**	**+0.4**		
KIEV	**Kiev**	**150.03**	**61**	*e*PKIKP	**PKPdf**	**15 46 08.8**	**-1.7**		
KIEV				*e*		15 46 15.0			
KIEV				*e*		15 46 20.0			
KIEV	**Kiev**	**150.03**	**61**	*e*PKPdf	**PKPdf**	**15 46 08.8**	**-1.7**		
KIEV				*e*PKPbc	**PKPbc**	**15 46 15.0**	**-0.6**		
KIEV				*e*PKPab	**PKPab**	**15 46 20.0**	**-1.4**		
AKASG	**Malin Array Be**	**150.04**	**61**	PKIKP	**PKPdf**	**15 46 09.7**	**-0.9**		
AKASG						15 46 14.7			
AKASG				pmax	pmax				
	comp=Z,8.0nm,0.9s								
AKASG	**Malin Array Be**	**150.04**	**61**	PKP	**PKPdf**	**15 46 09.7**	**-0.9**		
AKASG				PKPbc	**PKPbc**	**15 46 14.7**	**-0.8**		
AKASG	**Malin Array Be**	**150.04**	**61**	PKP	**PKPdf**	**15 46 09.7**	**-0.9**		
	comp=Z,8.4nm,0.9s,baz=263,slow=2.4,SNR=13								
AKASG				PKPbc	**PKPbc**	**15 46 14.7**	**-0.8**		
	comp=Z,32nm,0.9s,baz=270,slow=2.9,SNR=63								
TOTH	**TOTAH**	**150.08**	**98**	*e*P	**PKPbc**	**15 46 16.6**	**+0.3**		
ANTO	**Ankara**	**150.25**	**83**	*e*PKIKP	**PKPdf**	**15 46 10.6**	**-0.8**		
ANTO				*e*		15 46 16.3			
ANTO				*e*		15 46 21.3			
ANTO	**Ankara**	**150.25**	**83**	*e*PKPdf	**PKPdf**	**15 46 10.6**	**-0.8**		
ANTO				*e*PKPbc	**PKPbc**	**15 46 16.3**	**-0.3**		
ANTO				*e*PKPab	**PKPab**	**15 46 21.3**	**-1.5**		
XAN	**Xi'an**	**150.34**	**263**	PKPbc	**PKPbc**	**15 46 17.0**	**+0.1**		
XAN				pPKP	**PKPab**	**15 46 24.5**	**+1.2**		
ZALF	**Zalf**	**150.50**	**99**	*e*P	**PKPbc**	**15 46 19.5**	**+2.2**		
BR131	**Keskin Array S**	**150.81**	**84**	*e*PKPdf	**PKPdf**	**15 46 11.6**	**-0.8**		
BR131				*e*PKPbc	**PKPbc**	**15 46 17.5**	**-0.5**		
BR131				*e*PKPab	**PKPab**	**15 46 23.7**	**-1.5**		
BRTR	**Keskin Array B**	**150.81**	**84**	PKP	**PKPdf**	**15 46 12.6**	**+0.2**		
BRTR				PKPbc	**PKPbc**	**15 46 18.0**	**0.0**		
BRTR				PKPab	**PKPab**	**15 46 23.8**	**-1.5**		
BRTR	**Keskin Array B**	**150.81**	**84**	PKP	**PKPdf**	**15 46 12.6**	**+0.2**		
	comp=Z,9.1nm,0.9s,baz=191,slow=3.8,SNR=44								
BRTR				PKPbc	**PKPbc**	**15 46 18.0**	**0.0**		
	comp=Z,35nm,0.9s,baz=204,slow=2.9,SNR=51								
BRTR				PKPab	**PKPab**	**15 46 23.8**	**-1.5**		
	comp=Z,14nm,0.7s,baz=172,slow=3.1,SNR=10								
ROOS	**tl_alroos**	**151.10**	**97**	*e*P	**PKPbc**	**15 46 19.9**	**+1.1**		
HHC	**Hu-ho-hao-te**	**151.22**	**278**	*e*PKPbc	PKPdf	15 46 07.8	-5.1		
HHC				PP	**PP**	**15 49 59.3**	**+1.3**		
HHC				AMB	AMB				
	comp=Z,280nm,9.8s								
HHC				LR	LR				
	comp=N,390nm,21.3s								
HHC				LR	LR				
	comp=E,1μm,20.9s								
HHC				LR	LR				
	comp=Z,860nm,20.6s								
CIT	**Chita**	**151.62**	**302**	*e*PKIKP	**PKPbc**	**15 46 19.2**	**-0.1**		
CIT				pmax	pmax				
	comp=Z,176nm,1.8s								
BTO	**Baotou**	**152.25**	**277**	*e*PKPbc	**PKPdf**	**15 46 17.3**	**+2.8**		
CD2	**Chengdu**	**152.32**	**253**	PKPbc	**PKPdf**	**15 46 13.8**	**-1.0**		
CD2				PKPab	**PKPab**	**15 46 34.5**	**+2.9**		
CD2				pPKP	PKiKP	15 46 50.8	+29		
CD2				sPKP		15 47 05.3			
CD2				PKS	**PKSdf**	**15 49 47.0**	**-2.4**		
CD2				PP	**PP**	**15 50 08.3**	**+4.2**		
CD2				SKS	SKSdf	15 53 05.5	-17		
CD2	**Chengdu**	**152.32**	**253**	PKPbc	**PKPdf**	**15 46 14.5**	**-0.3**		
CD2				pPKP	**PKiKP**	**15 46 25.3**	**+3.4**		
CD2				sPKP		15 46 29.0			
CD2				PKPab	**PKPab**	**15 46 34.3**	**+2.7**		
CD2				PKS	**PKSdf**	**15 49 47.5**	**-1.9**		
CD2				PP	**PP**	**15 50 07.5**	**+3.4**		
CD2				SKS	**SKSdf**	**15 53 19.0**	**-3.2**		
CD2				SKKS	**SKKSac**	**15 56 54.5**	**0.0**		
CD2				SS	**SS**	**16 09 35.0**	**+1.5**		
CD2				AMB	AMB				
	comp=Z,190nm,7.4s								
CD2				LR	LR				
	comp=N,250nm,16.2s								
CD2				LR	LR				
	comp=E,490nm,19.6s								
CD2				LR	LR				
	comp=Z,310nm,23.5s								
SLMH	**Al Salmeh**	**152.53**	**94**	*e*P	**PKPbc**	**15 46 22.2**	**+0.3**		
SIM	**Simferopol'**	**152.59**	**74**	*c i*PKIKP	**PKPdf**	**15 46 15.2**	**+0.5**		
HYB	**Hyderabad**	**153.34**	**193**	*i* P	**PKPbc**	**15 46 23.0**	**-1.2**		
HYB				*e*		15 46 35.0			
KLMR	**Klimovskoe**	**153.85**	**37**	*e*PKIKP	**PKPdf**	**15 46 12.4**	**-3.6**		
KLMR				*i*		15 46 35.0			
KLMR						15 50 13.3			
KLMR				pmax	pmax				
	comp=Z,76nm,1.4s								
OBN	**Obninsk**	**154.19**	**51**	⇓*i*PKIKP	**PKPdf**	**15 46 16.8**	**+0.2**		
OBN				*i*		15 46 24.9			
OBN				*i*		15 46 39.3			
OBN				pmax	pmax				
	comp=Z,77nm,1.7s								
MOS	**Moscow**	**154.65**	**49**	*e*PKIKP	**PKPdf**	**15 46 16.4**	**-0.8**		
MOS				*e*		15 46 39.8			
MOS				pmax	pmax				
	comp=Z,48nm,0.9s								
ANN	**Anapa**	**154.88**	**75**	*e*PKIKP	**PKPdf**	**15 46 17.8**	**-0.1**		
ANN				pmax	pmax				
	comp=Z,75nm,2.2s								
LZH	**Lanzhou**	**154.98**	**263**	*e*PKP	**PKPdf**	**15 46 19.0**	**+0.4**		
LZH				pPKP	**PKPbc**	**15 46 25.8**	**-1.6**		
LZH				sPKP		15 46 28.0			
RDF	**Al-Radifah**	**155.13**	**118**	*e*P	**PKPdf**	**15 46 19.5**	**+0.7**		
RDF				AMb	AMB	15 46 20.9			
	comp=Z,36nm,1.5s								
NAY	**Al-Naaiem**	**155.15**	**117**	*e*P	**PKPdf**	**15 46 19.1**	**+0.3**		
NAY				AMb	AMB	15 46 22.6			
	comp=Z,12nm,1.5s								
RST	**Umm Al-Ruwaisa**	**155.16**	**116**	*e*P	**PKPdf**	**15 46 19.1**	**+0.2**		
RST				AMb	AMB	15 46 20.8			
	comp=Z,272nm,1.0s								
KBD	**Kabd**	**155.39**	**118**	*e*P	**PKPdf**	**15 46 19.6**	**+0.4**		
KBD				AMb	AMB	15 46 21.3			
	comp=Z,18nm,1.3s								
ULN	**Ulaanbaatar**	**155.75**	**292**	*e*PKPdf	**PKPdf**	**15 46 16.8**	**-2.5**		
SONM	**Songino Array**	**156.19**	**292**	PKP	**PKPdf**	**15 46 18.8**	**-1.0**		
SONM				PKPbc	PKPab	15 46 28.3	-19		
SONM				PKPab	PKPab	15 46 47.6	-0.1		
SONM	**Songino Array**	**156.19**	**292**	PKP	**PKPdf**	**15 46 18.8**	**-1.0**		
	comp=Z,7.4nm,1.2s,baz=140,slow=1.6,SNR=23								
SONM				PKPbc	PKPab	15 46 28.3	-19		
	comp=Z,4.4nm,1.0s,baz=139,slow=2.0,SNR=11								
SONM				PKPab	PKPab	15 46 47.6	-0.1		
	comp=Z,3.2nm,0.8s,baz=126,slow=4.9,SNR=9.1								
SOC	**Sochi**	**156.26**	**79**	*c i*PKIKP	**PKPdf**	**15 46 20.4**	**+0.5**		
SOC				*e*		15 50 25.0			
SOC				pmax	pmax				
	comp=Z,42nm,1.1s								
VSR	**Storozhevoye**	**156.31**	**60**	*e*PKIKP	**PKPdf**	**15 46 19.6**	**0.0**		
VSR				pmax	pmax				
	comp=N,10.0nm,1.1s								
VSR				pmax	pmax				
	comp=E,6.0nm,1.1s								
VSR				pmax	pmax				
	comp=Z,50nm,1.1s								
VORD	**Divnogorie**	**156.41**	**60**	*e*PKIKP	**PKPdf**	**15 46 20.0**	**+0.2**		
VORD				pmax	pmax				
	comp=Z,60nm,1.6s								
VORD				pmax	pmax				
	comp=N,40nm,0.5s								
VORD				pmax	pmax				
	comp=E,70nm,0.5s								
TLY	**Talaya**	**157.76**	**302**	*i* PKP2	**PKPab**	**15 46 55.1**	**+0.8**		
TLY				*e*SS	SS	16 10 28.0	-4.1		
TLY				pmax	pmax				
	comp=Z,24nm,1.6s								
VRHR	**Novokhopersk**	**157.86**	**60**	*e*PKIKP	**PKPdf**	**15 46 20.9**	**-0.7**		
VRHR				pmax	pmax				
	comp=N,10.0nm,0.9s								
VRHR				pmax	pmax				
	comp=Z,20nm,0.9s								
VRHR				pmax	pmax				
	comp=E,10.0nm,0.6s								
ZAK	**Zakamensk**	**158.16**	**299**	*e*PKIKP	**PKPdf**	**15 46 20.0**	**-2.2**		
ZAK				*e*		15 46 55.5			
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.3s								
KIV	**Kislovodsk**	**158.45**	**79**	⇑*i*PKIKP	**PKPdf**	**15 46 23.3**	**+0.6**		
KIV				pmax	pmax				
	comp=Z,56nm,1.2s								
KBZ	**Khabaz**	**158.56**	**80**	PKIKP	**PKPdf**	**15 46 23.6**	**+0.9**		
KBZ				pmax	pmax				
	comp=Z,16nm,1.0s								
KBZ	**Khabaz**	**158.56**	**80**	PKP	**PKPdf**	**15 46 23.6**	**+0.9**		
KBZ	**Khabaz**	**158.56**	**80**	PKP	**PKPdf**	**15 46 23.6**	**+0.9**		
	comp=Z,16nm,1.0s,baz=246,slow=2.8,SNR=27								
GNI	**Garni**	**159.00**	**90**	*e*PKPdf	**PKPdf**	**15 46 23.4**	**-0.2**		
GTA	**Gaotai**	**159.25**	**268**	*e*PKP	**PKPdf**	**15 46 24.0**	**+0.1**		
GTA				PKPab	**PKPab**	**15 47 02.5**	**+1.3**		
GTA				PP	**PP**	**15 50 45.3**	**+2.4**		
GTA				SKS	**SKSdf**	**15 53 29.5**	**+0.1**		
GTA				SKKS	**SKKSac**	**15 57 32.5**	**+1.1**		
GTA				SS	**SS**	**16 10 50.5**	**+1.8**		
GTA				AMB	AMB				
	comp=Z,100nm,8.6s								
GTA				LR	LR				
	comp=N,170nm,21.4s								
GTA				LR	LR				
	comp=E,270nm,23.0s								
GTA				LR	LR				
	comp=Z,440nm,22.3s								
ODAN	**Odare**	**159.39**	**220**	*e*P	**PKPab**	**15 47 01.8**	**-0.4**		
	comp=Z,59nm,1.2s								
MOY	**Mondy**	**159.39**	**303**	*e*PKP2	**PKPab**	**15 47 01.9**	**+0.4**		
TAPN	**Taplejung**	**159.65**	**222**	*e*P	**PKPab**	**15 47 03.0**	**-0.4**		
	comp=Z,97nm,1.2s								
RAMN	**Ramite**	**159.83**	**219**	*e*P	**PKPab**	**15 47 03.2**	**-0.9**		
PKI	**Pulchoki**	**160.90**	**217**	*e*P	**PKPab**	**15 47 08.4**	**-0.4**		
	comp=Z,135nm,1.3s								
PKIN	**Phulchoki**	**160.91**	**217**	*e*P	**PKPab**	**15 47 08.3**	**-0.5**		
	comp=Z,27nm,1.2s								
GUN	**Gumba**	**160.98**	**219**	*e*P	**PKPab**	**15 47 08.8**	**-0.4**		
	comp=Z,136nm,1.2s								
DMN	**Daman**	**161.06**	**216**	*e*P	**PKPab**	**15 47 09.0**	**-0.4**		
	comp=Z,121nm,1.1s								
KKN	**Kakani**	**161.14**	**217**	*e*P	**PKPab**	**15 47 09.5**	**-0.3**		
	comp=Z,101nm,1.0s								
MAK	**Makhachkala**	**161.72**	**84**	*e*PKIKP	PKPdf	15 46 17.9	-8.4		
MAK				pmax	pmax				
	comp=Z,280nm,1.7s								
KOLN	**Koldanda**	**161.82**	**213**	*e*P	**PKPab**	**15 47 11.7**	**-1.0**		
	comp=Z,77nm,1.1s								
DANN	**Dangsing**	**162.28**	**214**	*e*P	**PKPab**	**15 47 14.2**	**-0.6**		
	comp=Z,92nm,0.6s								
NVS	**Novosibirsk**	**166.87**	**332**	⇑*i*PKIKP	**PKPdf**	**15 46 26.5**	**-4.0**		
NVS				pmax	pmax				
	comp=Z,24nm,1.8s								
NVS				pmax	pmax				
	comp=N,5.0nm,1.4s								
ZALV	**Zalesovo Beam**	**166.97**	**326**	PKIKP	**PKPdf**	**15 46 27.3**	**-3.3**		
ZALV						15 47 34.7			
ZALV				pmax	pmax				
	comp=Z,10.0nm,1.1s								
ZALV				pmax	pmax				
	comp=Z,2.0nm,0.6s								
ZALV	**Zalesovo Beam**	**166.97**	**326**	PKP	**PKPdf**	**15 46 27.2**	**-3.3**		
ZALV				PKPab	**PKPab**	**15 47 34.7**	**+0.3**		
ZALV	**Zalesovo Beam**	**166.97**	**326**	PKP	**PKPdf**	**15 46 27.2**	**-3.3**		
	comp=Z,10nm,1.1s,baz=284,slow=1.2,SNR=31								
ZALV				PKPab	**PKPab**	**15 47 34.7**	**+0.3**		
	comp=Z,2.4nm,0.6s,baz=36,slow=4.6,SNR=5.0								
WMQ	**Urumqi**	**169.09**	**276**	*e*P	**PKPdf**	**15 46 31.5**	**-1.0**		
WMQ				LR	LR				
	comp=N,430nm,25.8s								
WMQ				LR	LR				
	comp=E,230nm,26.6s								
WMQ				LR	LR				
	comp=Z,350nm,27.6s								
WMQ	**Urumqi**	**169.09**	**276**	*e*PKP	**PKPdf**	**15 46 27.8**	**-4.7**		
WMQ				pPKP	**pPKPdf**	**15 46 38.5**	**+2.5**		
WMQ				sPKP		15 46 42.0			
WMQ				PKS	PKSdf	15 49 59.0	-5.9		
WMQ				PP	**PP**	**15 51 32.8**	**-1.7**		
WMQ				SKKS		15 58 14.8			
WMQ				SS	**SS**	**16 12 23.5**	**-6.3**		
WMQ				LR	LR				
	comp=N,420nm,25.8s								
WMQ				LR	LR				
	comp=E,480nm,26.0s								
WMQ				LR	LR				
	comp=Z,640nm,26.0s								
ABKAR	**Akbulak array**	**169.63**	**53**	*e*PKPdf	**PKPdf**	**15 46 31.6**	**-0.9**		
ABKAR				*e*PKPab	**PKPab**	**15 47 45.6**	**-0.8**		
BRVK	**Borovoye**	**170.49**	**9**	*e*PKIKP	**PKPdf**	**15 46 31.2**	**-1.7**		
BRVK	**Borovoye**	**170.49**	**9**	*e*PKIKP	**PKPdf**	**15 46 31.2**	**-1.7**		
KURK	**Kurchatov**	**171.86**	**332**	*e*PKIKP	**PKPdf**	**15 46 31.8**	**-1.9**		
KURK	**Kurchatov**	**171.86**	**332**	*e*PKPdf	**PKPdf**	**15 46 31.8**	**-1.9**		
MKAR	**Makanchi Array**	**172.50**	**298**	PKIKP	**PKPdf**	**15 46 32.2**	**-2.0**		
MKAR						15 47 59.1			
MKAR						15 51 51.8			
MKAR				pmax	pmax				
	comp=Z,7.0nm,1.1s								
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.6s								
MKAR				pmax	pmax				
	comp=Z,1.0nm,1.1s								
MKAR	**Makanchi Array**	**172.50**	**298**	PKP	**PKPdf**	**15 46 32.2**	**-2.0**		
MKAR				PKPab	**PKPab**	**15 47 59.1**	**-0.2**		
MKAR				PP	**PP**	**15 51 51.8**	**+0.6**		
MKAR	**Makanchi Array**	**172.50**	**298**	PKP	**PKPdf**	**15 46 32.2**	**-2.0**		
	comp=Z,6.8nm,1.1s,baz=11,slow=1.2,SNR=32								
MKAR				PKPab	**PKPab**	**15 47 59.1**	**-0.2**		
	comp=Z,1.1nm,0.6s,baz=66,slow=5.7,SNR=7.9								
MKAR				PP	**PP**	**15 51 51.8**	**+0.6**		
	comp=Z,1.1nm,1.1s,baz=94,slow=5.9,SNR=3.3								
KSH	**Kashi**	**175.14**	**212**	PKP	**PKPdf**	**15 46 36.3**	**+0.8**		
KSH				AMB	AMB				
	comp=Z,260nm,5.0s								
ULHL	**Ulahol**	**176.98**	**243**	P	**PKPab**	**15 48 20.0**	**+0.4**		
	SNR=13								
KZA	**Kyzart**	**177.49**	**231**	P	PKPab	15 48 21.7	-0.3		
	SNR=5.7								
TKM2	**Tokmak 2**	**177.70**	**252**	*e*PKIKP	**PKPdf**	**15 46 35.5**	**-0.5**		
TKM2	**Tokmak 2**	**177.70**	**252**	*e

PDAR	**Pinedale Array**	**33.53 328**	P	P	16 08 25.4	-0.5
	0.6nm,0.7s,baz=130,slow=9.8,SNR=4.1					
NVAR	**Mina Array Bea**	**36.18 315**	P	P	16 08 48.8	0.0
	0.7nm,1.0s,baz=129,slow=7.1,SNR=4.4					
SIV	**San Ignacio**	**40.10 141**	P	P	16 09 21.6	-0.2
	1.4nm,0.6s,baz=325,slow=9.0,SNR=7.2					
YKA	**Yellowknife Ar**	**50.72 343**	P	P	16 10 45.4	0.0
	1.6nm,0.8s,baz=138,slow=7.8,SNR=26					

SZGRF ***29*** *16:03:15.1, 46˚.10N×145˚.70E, h33km, mb4.7, Sea of Okhotsk*

DJA ***29*** *16:03:43.2±5.7, 46˚N±13˚×14˚4E±2˚6, h283km±55km, M4.6/9, mB5.0/2, mb4.6/9, Mw(mB)4.3/2*

BJI ***29*** *16:03:47.3, 46˚.12N×143˚.65E, h335km, mB4.4/12, mb4.9/36*

MOS ***29*** *16:03:48.5±1.0, 46˚.05N×143˚.44E, h336km, mb4.6/71, Error ellipse: s-maj=6.7km s-min=4.5km az=96.0*

ISCJB ***29*** *16:03:49.0±0.1, 45˚.98N±0˚.02×143˚.50E±0˚.03, h343km±1km, mb4.5/168, Error ellipse: s-maj=3.5km s-min=2.9km az=166.2*

JMA ***29*** *16:03:49.3±0.3, 45˚.83N×143˚.59E, h352km±3km, M4.9*

JMA Felt I J1.

SKHL ***29*** *16:03:49.5±1.5, 45˚.98N×143˚.59E, h347km±17km, mb5.9/6, Ms4.5/1, msh5.4/7*

NEIC ***29*** *16:03:50.1±0.1, 46˚.02N×143˚.45E, mb4.7/105, Error ellipse: s-maj=4.8km s-min=3.0km az=150.0*

NEIC Recorded [1 JMA] in eastern Hokkaido. Also recorded [1 JMA] in Aomori, Honshu.

IDC ***29*** *16:03:50.4±0.3, 46˚.07N×143˚.44E, h343km±3km, mb4.2/35, mb1 4.3/42, mb1mx4.3/44, mbtmp4.2/42, Error ellipse: s-maj=6.8km s-min=5.9km az=158.0*

NIED ***29*** *16:04:00, 45˚.90N×143˚.70E, h360km, Mw4.8 Best double couple: M0 1.80000×10^16 NP1:φs159.00000°, δ75.00000°, λ59.00000°. NP2:φs45.00000°, δ34.00000°, λ152.00000°.*

ISC 29 16:03:49.9±0.3, 46˚02N±0˚03×143˚46E±0˚03, h340km±2km, h339km:pP-P,n774,σ1906/870, mb4.6/174, 173C-165D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**1.05**	**333**	*i*PN	**Pn**	**16 04 36.0**	**+1.3**
YSS				*i* S	**S**	**16 05 09.5**	**-1.2**
YSS				pmax	pmax		
	comp=N,2μm,0.5s						
YSS				pmax	pmax		
	comp=E,2μm,0.5s						
YSS				pmax	pmax		
	comp=Z,2μm,0.5s						
YSS				pmax	pmax		
	comp=Z,4μm,0.9s						
YSS				pmax	pmax		
	comp=E,2μm,1.0s						
YSS				smax	smax		
	comp=N,3μm,0.7s						
YSS				smax	smax		
	comp=E,2μm,0.9s						
YSS				smax	smax		
	comp=N,5μm,1.0s						
YSS				smax	smax		
	comp=E,10μm,1.0s						
YSS	**Yuzh-Sakhalins**	**1.05**	**333**	*e*P	**Pn**	**16 04 35.0**	**+0.3**
YSS	**Yuzh-Sakhalins**	**1.05**	**333**	*i*P	**Pn**	**16 04 36.0**	**+1.3**
YSS				AMB	AMB	16 04 37.2	
	comp=E,2μm,0.5s						
YSS				AMB	AMB	16 04 37.2	
	comp=E,2μm,0.5s						
YSS				AMB	AMB	16 04 37.2	
	comp=E,2μm,0.5s						
YSS				AMB	AMB	16 04 38.0	
	comp=E,2μm,1.0s						
YSS				AMB	AMB	16 04 38.0	
	comp=E,4μm,1.0s						
YSS				*i* S	**S**	**16 05 12.0**	**+1.3**
YSS				A	A	16 05 13.0	
	comp=E,5μm,1.0s						
YSS				A	A	16 05 13.0	
	comp=E,10μm,1.0s						
YSS				A	A	16 05 13.0	
	comp=E,3μm,0.8s						
YSS				A	A	16 05 13.0	
	comp=E,2μm,0.8s						
JSE	**Soyaes**	**1.23**	**210**	⇑P	**Pn**	**16 04 35.7**	**0.0**
JWK2	**Keihoku**	**1.30**	**238**	P	**Pn**	**16 04 36.8**	**+0.8**
JWK2				*e*S	**S**	**16 05 13.4**	**+0.5**
ASAJ	**Asahikawa**	**2.00**	**198**	P	**Pn**	**16 04 40.6**	**+0.2**
ASAJ				S	**S**	**16 05 21.4**	**+0.6**
ASAJ	**Asahikawa**	**2.00**	**198**	P	**Pn**	**16 04 40.6**	**+0.2**
	comp=E,267nm,0.3s,baz=17,slow=4.5,SNR=3482						
ASAJ				S	**S**	**16 05 21.4**	**+0.6**
	baz=72,slow=19,SNR=5.1						
JTKR	**Abashiri--Toko**	**2.07**	**171**	⇑P	**Pn**	**16 04 40.5**	**-0.4**
JTKR				*e*S	**S**	**16 05 20.9**	**-0.8**
JYG	**Yagishiri**	**2.14**	**223**	⇑P	**Pn**	**16 04 41.6**	**+0.2**
JYG				*e*S	**S**	**16 05 21.2**	**-1.4**
JKK2	**Kamakawa 2**	**2.20**	**193**	⇑P	**Pn**	**16 04 41.9**	**0.0**
JRA	**Rausu**	**2.39**	**150**	P	**Pn**	**16 04 42.5**	**-0.8**
JRA				*e*S	**S**	**16 05 24.9**	**-1.3**
JHR	**Hokuryu**	**2.59**	**209**	⇑P	**Pn**	**16 04 45.1**	**+0.1**
YUK	**Yuzh-Kuril'sk**	**2.62**	**138**	*i* PN	**Pn**	**16 04 44.0**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**2.62**	**138**	*i* P	**Pn**	**16 04 44.0**	**-1.2**
JAR	**Ashorobuto**	**2.73**	**175**	⇑P	**Pn**	**16 04 45.5**	**-0.7**
JAR				*e*S	**S**	**16 05 29.3**	**-2.1**
JFR	**Furan**	**2.92**	**193**	⇑P	**Pn**	**16 04 47.4**	**-0.5**
JFR				*e*S	**S**	**16 05 34.1**	**-0.4**
NEM2	**Nemuro 2**	**3.11**	**148**	P	Pn	16 04 46.4	-3.2
NEM2				*e*S	S	16 05 30.6	-7.0
JAK	**Akkeshi**	**3.15**	**163**	⇑P	Pn	16 04 47.1	-2.9
JAK				*e*S	**S**	**16 05 33.3**	**-4.9**
KUR	**Kuril'sk**	**3.19**	**103**	⇓*i*PN	**Pn**	**16 04 49.8**	**-0.5**
KUR				*i* S	**S**	**16 05 37.2**	**-1.6**
KUR				pmax	pmax		
	comp=Z,6μm,1.6s						
KUR				pmax	pmax		
	comp=N,760nm,0.7s						
KUR				pmax	pmax		
	comp=Z,1μm,0.7s						
KUR				pmax	pmax		
	comp=E,750nm,0.8s						
KUR				smax	smax		
	comp=N,7μm,4.0s						
KUR				smax	smax		
	comp=E,7μm,4.0s						
KUR				smax	smax		
	comp=N,460nm,0.7s						
KUR				smax	smax		
	comp=E,300nm,0.5s						
KUR	**Kuril'sk**	**3.19**	**103**	⇑*i*P	**Pn**	**16 04 49.8**	**-0.5**
KUR				AMB	AMB	16 04 50.0	
	comp=E,6μm,1.6s						
KUR				AMB	AMB	16 04 51.1	
	comp=E,700nm,0.8s						
KUR				AMB	AMB	16 04 51.1	
	comp=E,860nm,0.8s						
KUR				AMB	AMB	16 04 51.1	
	comp=E,1μm,0.8s						
KUR				*i* S	**S**	**16 05 37.2**	**-1.6**
KUR				A	A	16 05 38.5	
	comp=E,1μm,1.2s						
KUR				A	A	16 05 38.5	
	comp=E,920nm,1.2s						
KUR				A	A	16 05 38.6	
	comp=E,7μm,3.0s						
KUR				A	A	16 05 38.6	
	comp=E,6μm,3.0s						
UGL	**Uglegorsk**	**3.20**	**343**	*i*PN	**Pn**	**16 04 51.0**	**+0.8**
UGL				*i* S	**S**	**16 05 40.0**	**+1.2**
UGL				pmax	pmax		
	comp=Z,506nm,0.7s						
UGL				pmax	pmax		
	comp=N,600nm,2.0s						
UGL				pmax	pmax		
	comp=E,1μm,2.0s						
UGL				*i* S	**S**	**16 05 40.0**	**+1.2**
UGL				*e*S	**S**	**16 05 40.0**	**+1.2**
UGL				A	A	16 05 41.0	
	comp=E,2μm,0.9s						
UGL				A	A	16 05 41.0	
	comp=E,964nm,0.9s						
UGL				A	A	16 05 41.0	
	comp=E,4μm,4.0s						
UGL				A	A	16 05 41.0	
	comp=E,8μm,4.0s						
JCH	**Churui**	**3.40**	**181**	⇑P	**Pn**	**16 04 50.1**	**-2.3**
JCH				*e*S	S	16 05 36.1	-6.6
JSK	**Shakotan**	**3.41**	**220**	P	**Pn**	**16 04 52.7**	**+0.3**
JEW	**Eniwo**	**3.49**	**205**	⇑P	**Pn**	**16 04 53.2**	**0.0**
JNBK	**Urakawa-nobuka**	**3.77**	**188**	⇑P	**Pn**	**16 04 54.0**	**-2.1**
JNBK				*e*S	S	16 05 43.2	-6.1
ERM	**Erimo**	**4.01**	**183**	*d*iPN	**Pn**	**16 04 56.8**	**-1.7**
ERM	**Erimo**	**4.01**	**183**	*e*Pn	**Pn**	**16 04 56.2**	**-2.2**
JKB	**Kayabe**	**4.49**	**204**	⇑P	**Pn**	**16 05 01.8**	**-1.7**
JKB				*e*S	**S**	**16 05 57.6**	**-5.2**
JOSM	**Okushiri--Mats**	**4.87**	**218**	P	**Pn**	**16 05 06.5**	**-1.2**
JOSM				*e*S	**S**	**16 06 06.0**	**-4.4**
TYV	**Tymovskoe**	**4.88**	**354**	*e*P	**Pn**	**16 05 08.0**	**+0.5**
TYV				AMB	AMB	16 05 09.0	
	comp=E,500nm,2.0s						
TYV				AMB	AMB	16 05 09.0	
	comp=E,1μm,2.0s						
TYV				AMB	AMB	16 05 10.2	
	comp=E,253nm,0.8s						
TYV				AMB	AMB	16 05 10.2	
	comp=E,451nm,0.8s						
TYV				*e*S	**S**	**16 06 10.5**	**+0.2**
TYV				A	A	16 06 12.0	
	comp=E,4μm,3.0s						
TYV				A	A	16 06 18.5	
	comp=E,251nm,0.8s						
TEY	**Ternei**	**4.92**	**261**	*i* P	Pn	16 05 11.2	+3.1
TEY				AMB	AMB	16 05 11.8	
	comp=E,1μm,1.0s						
TEY				AMB	AMB	16 05 11.8	
	comp=E,144nm,0.6s						
TEY				AMB	AMB	16 05 11.8	
	comp=E,156nm,0.6s						
TEY				*e*S	**S**	**16 06 12.0**	**+0.8**
TEY				A	A	16 06 14.4	
	comp=E,2μm,4.0s						
TEY				A	A	16 06 14.4	
	comp=E,2μm,4.0s						
JOT	**Ohata**	**4.95**	**202**	⇑P	**Pn**	**16 05 06.4**	**-2.2**
JOT				*e*S	S	16 06 05.6	-6.5
JANG	**Nango**	**5.82**	**195**	P	Pn	16 05 15.4	-3.0
JANG				*e*S	S	16 06 21.2	-8.8
HABR	**Khabarovsk**	**6.23**	**296**	*d*iPN	**Pn**	**16 05 24.6**	**+1.7**
HABR				*e*S	**S**	**16 06 39.4**	**+1.1**
HABR				pmax	pmax		
	comp=Z,2μm,1.4s						
HABR				pmax	pmax		
	comp=E,1μm,1.4s						
HABR				pmax	pmax		
	comp=N,250nm,1.4s						
HABR				smax	smax		
	comp=Z,478nm,4.3s						
HABR				smax	smax		
	comp=N,286nm,4.3s						
HABR				smax	smax		
	comp=E,613nm,4.3s						
GRNR	**Gornyy**	**6.67**	**318**	⇓*i*P	**Pn**	**16 05 28.8**	**+0.7**
GRNR				AMB	AMB	16 05 30.0	
	comp=E,610nm,0.8s						
GRNR				AMB	AMB	16 05 30.0	
	comp=E,620nm,0.8s						
GRNR				AMB	AMB	16 05 30.0	
	comp=E,510nm,0.8s						
GRNR				*e*S	**S**	**16 06 47.4**	**-0.3**
GRNR				A	A	16 06 48.6	
	comp=E,92nm,1.0s						
OKH	**Okha**	**7.55**	**358**	*i* PN	**Pn**	**16 05 39.4**	**+1.1**
OKH				*e*S	**S**	**16 07 08.6**	**+2.1**
OKH				pmax	pmax		
	comp=Z,2μm,3.0s						
OKH				smax	smax		
	comp=N,900nm,6.0s						
OKH				smax	smax		
	comp=E,2μm,6.0s						
OKH	**Okha**	**7.55**	**358**	⇑*i*P	**Pn**	**16 05 39.4**	**+1.1**
OKH				*e*P	**Pn**	**16 05 39.6**	**+1.3**
OKH				AMB	AMB	16 05 39.8	
	comp=E,2μm,3.0s						
OKH				AMB	AMB	16 05 40.2	
	comp=E,700nm,0.9s						
OKH				*e*S	**S**	**16 07 08.6**	**+2.1**
OKH				A	A	16 07 10.0	
	comp=E,900nm,6.0s						
OKH				A	A	16 07 10.0	
	comp=E,2μm,6.0s						
USRK	**Ussuriysk Arra**	**8.31**	**261**	P	**Pn**	**16 05 48.4**	**+0.8**
	comp=E,31nm,0.3s,baz=69,slow=12,SNR=343						
USRK				S	**S**	**16 07 24.4**	**+0.8**
	baz=70,slow=22,SNR=7.0						
KLR	**Kul'dur**	**8.54**	**296**	⇑*i*PN	**Pn**	**16 05 47.4**	**-2.8**
KLR				*e*S	**S**	**16 07 27.5**	**-0.8**
KLR				pmax	pmax		
	comp=E,300nm,1.8s						
KLR				pmax	pmax		
	comp=Z,280nm,1.8s						
KLR				MLR	MLR		
	comp=Z,1μm,11.0s						
KLR	**Kul'dur**	**8.54**	**296**	⇑*i*P	**Pn**	**16 05 47.4**	**-2.8**
KLR				AMB	AMB	16 05 49.0	
	comp=Z,300nm,1.8s						
KLR				AMB	AMB	16 05 49.0	
	comp=Z,280nm,1.8s						
KLR				AMB	AMB	16 05 49.0	
	comp=Z,6μm,1.8s						
KLR				*e*S	**S**	**16 07 27.5**	**-0.8**
KLR				AMS	AMS	16 10 00.0	
	comp=Z,1μm,11.0s						
KLR				AMS	AMS	16 10 00.0	
	comp=Z,4μm,11.0s						
VLA	**Vladivostok**	**8.76**	**255**	⇑*i*PN	**Pn**	**16 05 52.8**	**-0.1**
VLA				*e*S	**S**	**16 07 30.0**	**-3.3**
VLA	**Vladivostok**	**8.76**	**255**	⇓*i*P	**Pn**	**16 05 53.1**	**+0.2**
SKR	**Severo-Kuril's**	**9.63**	**56**	*i* PN	**Pn**	**16 06 02.0**	**-1.2**
SKR				*e*S	**S**	**16 07 47.5**	**-4.9**
SKR				pmax	pmax		
	comp=Z,310nm,0.5s						
SKR				pmax	pmax		
	comp=Z,1μm,2.0s						
SKR				smax	smax		
	comp=N,240nm,0.6s						
SKR				smax	smax		
	comp=E,110nm,0.5s						
SKR				smax	smax		
	comp=N,1μm,12.0s						
SKR				smax	smax		
	comp=E,2μm,12.0s						
SKR	**Severo-Kuril's**	**9.63**	**56**	⇓*i*P	**Pn**	**16 06 02.0**	**-1.2**
SKR				AMB	AMB	16 06 04.0	
	comp=E,80nm,0.5s						
SKR				AMB	AMB	16 06 04.0	
	comp=E,310nm,0.5s						
SKR				AMB	AMB	16 06 06.0	
	comp=E,1μm,2.0s						
SKR				*e*S	**S**	**16 07 47.5**	**-4.9**
SKR				A	A	16 07 51.4	
	comp=E,1μm,12.0s						
SKR				A	A	16 07 51.4	
	comp=E,2μm,12.0s						
SKR				A	A	16 07 51.4	
	comp=E,240nm,0.6s						
SKR				A	A	16 07 51.4	
	comp=E,80nm,0.6s						
SKR				AMS	AMS	16 10 18.0	
	comp=E,2μm,6.0s						
EKMR	**Ekimchan**	**9.81**	**320**	*e*P	Pn	16 06 02.5	-2.9
EKMR				AMB	AMB	16 06 04.5	
	comp=E,79nm,0.6s						
EKMR				AMB	AMB	16 06 04.5	
	comp=E,39nm,0.6s						
EKMR				AMB	AMB	16 06 04.5	
	comp=E,190nm,0.6s						
MDJ	**Mudanjiang**	**9.87**	**267**	P	**P**	**16 06 07.3**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,230nm,1.7s						
MDJ	**Mudanjiang**	**9.87**	**267**	*e*Pn	**Pn**	**16 06 06.7**	**+0.5**
	comp=Z,560nm,0.9s						
MAJO	**Matsushiro**	**10.26**	**204**	*e*Pn	**Pn**	**16 06 09.7**	**-1.3**
MAJO	**Matsushiro**	**10.26**	**204**	*e*Pn	**Pn**	**16 06 09.7**	**-1.3**
MAT	**Matsushiro**	**10.26**	**204**	P	Pn	**16 06 09.5**	**-1.5**
MAT				S	**S**	**16 08 08.7**	**+2.0**
MJAR	**Matsushiro Arr**	**10.26**	**204**	P	**Pn**	**16 06 10.2**	**-0.8**
MJAR	**Matsushiro Arr**	**10.26**	**204**	P	**Pn**	**16 06 10.2**	**-0.8**
	comp=Z,20nm,0.3s,baz=12,slow=11,SNR=453						
PETK	**Petropavlovsk-**	**11.64**	**47**	PN	**Pn**	**16 06 26.8**	**-0.5**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK	**Petropavlovsk-**	**11.64**	**47**	P	**Pn**	**16 06 26.8**	**-0.5**
PETK	**Petropavlovsk-**	**11.64**	**47**	P	**Pn**	**16 06 26.8**	**-0.5**
	comp=Z,4.0nm,0.3s,baz=216,slow=8.6,SNR=104						
PET	**Petropavlovsk**	**12.09**	**49**	*e*PN	**Pn**	**16 06 32.2**	**-0.4**
PET				pmax	pmax		
	comp=Z,33nm,0.7s						
PET				MLR	MLR		
	comp=Z,200nm,11.0s						
PET	**Petropavlovsk**	**12.09**	**49**	*e*P	**Pn**	**16 06 32.2**	**-0.4**
PET				AMB	AMB	16 06 34.7	
	comp=Z,33nm,0.7s						
PET				*e*S	S	16 08 36.6	-10
PET				AMS	AMS	16 10 00.9	
	comp=Z,172nm,11.0s						
BMKR	**Bomnak**	**12.73**	**318**	*e*P	P	16 06 35.8	-4.0
BMKR				AMB	AMB	16 06 38.0	
	comp=Z,288nm,0.6s						
CN2	**Changchun**	**12.96**	**267**	⇓P	**P**	**16 06 42.0**	**-0.4**
CN2				*e*S	S	16 08 59.0	-6.2
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
ZEA	**Zeya**	**12.98**	**312**	*e*P	P	16 06 39.5	-3.0
ZEA				AMB	AMB	16 06 41.9	
	comp=Z,820nm,1.2s						
ZEA				AMB	AMB	16 06 41.9	
	comp=Z,400nm,1.0s						
ZEA				AMB	AMB	16 06 41.9	
	comp=Z,330nm,1.0s						
ZEA				AMB	AMB	16 06 42.0	
	comp=Z,1μm,1.5s						
ZEA				*e*S	**S**	**16 09 00.5**	**-4.8**
ZEA				A	A	16 09 06.0	
	comp=Z,1μm,5.0s						
ZEA				A	A	16 09 06.0	
	comp=Z,800nm,5.0s						
JHJ	**Hachijo jima 2**	**13.19**	**194**	P	**Pn**	**16 06 45.7**	**-0.2**
	comp=Z,75nm,0.3s,baz=290,slow=2.0,SNR=18						
KROS	**Kirovskiy**	**13.47**	**315**	⇓*i*P	P	16 06 44.0	-4.0
KROS				AMB	AMB	16 06 46.5	
	comp=Z,19nm,0.6s						
KROS				AMB	AMB	16 06 46.5	
	comp=Z,22nm,0.6s						
KROS				AMB	AMB	16 06 46.5	
	comp=Z,41nm,0.6s						
KSRS	**Korea Array**	**14.39**	**239**	P	**Pn**	**16 07 00.1**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=42,slow=11,SNR=18						
KSRS				S	S	16 09 41.7	+7.1
	comp=Z,0.1nm,0.3s,baz=60,slow=21,SNR=6.5						
KSRS				PcP	**PcP**	**16 11 49.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=27,slow=0.3,SNR=4.5						
KSRS				ScP	**ScP**	**16 14 50.1**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=64,slow=0.8,SNR=6.7						
KSAR	**Wonju Array Be**	**14.43**	**239**	P	**Pn**	**16 07 00.1**	**-0.2**
KSAR				S	S	16 09 41.7	+6.5
KSAR				PcP	**PcP**	**16 11 49.4**	**+0.5**
KSAR				ScP	**ScP**	**16 14 50.1**	**+0.5**
INCN	**Inchon**	**15.16**	**242**	*e*Pn	**Pn**	**16 07 08.8**	**-0.1**
	comp=Z,25nm,0.8s						
CLNS	**Chul'man**	**15.79**	**320**	*e*P	**P**	**16 07 14.0**	**+0.6**
CLNS				*e*S	**S**	**16 10 01.9**	**-0.2**
CLNS				pmax	pmax		
	comp=N,26nm,1.0s						
CLNS				pmax	pmax		
	comp=E,16nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,42nm,1.0s						
CLNS				smax	smax		
	comp=E,25nm,1.2s						
CLNS				smax	smax		
	comp=N,48nm,1.2s						
JNU	**Nakatsue**	**16.10**	**221**	*e*P	**P**	**16 07 16.3**	**-0.7**
	comp=N,24nm,0.8s						
JNU	**Nakatsue**	**16.10**	**221**	P	**P**	**16 07 17.8**	**+0.9**
	comp=N,3.3nm,0.3s,baz=39,slow=9.1,SNR=28						
HIA	**Hailar**	**16.29**	**290**	*e*P	**P**	**16 07 18.0**	**-0.9**
	comp=N,71nm,0.5s						
DL2	**Dalian**	**17.57**	**254**	P	**P**	**16 07 33.0**	**+0.3**
DL2				S	**S**	**16 10 38.8**	**+1.3**
DL2				pmax	pmax		
	comp=Z,53nm,0.8s						
DL2				pmax	pmax		
	comp=Z,200nm,4.5s						
SEY	**Seymchan**	**17.69**	**14**	*c*P	**P**	**16 07 33.5**	**-0.1**
SEY	**Seymchan**	**17.69**	**14**	⇑*i*P	**P**	**16 07 33.6**	**-0.1**
YAK	**Yakutsk**	**17.90**	**339**	*e*P	**P**	**16 07 32.9**	**-3.0**
YAK				*e*S	**S**	**16 10 39.2**	**-4.1**
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				smax	smax		
	comp=E,367nm,1.8s						
YAK				smax	smax		
	comp=N,753nm,1.9s						
FX1	**Attu Island--F**	**20.39**	**60**	P	**P**	**16 08 02.5**	**+0.6**
FX1	**Attu Island--F**	**20.39**	**60**	P	**P**	**16 08 02.5**	**+0.6**
	comp=N,54nm,0.5s,baz=64,slow=3.4,SNR=35						
BJT	**Baijiatuau**	**20.78**	**263**	*e*P	**P**	**16 08 05.4**	**-0.2**
	comp=N,40nm,0.4s						
JOW	**Kunigami**	**22.64**	**217**	*e*P	**P**	**16 08 23.1**	**+0.5**
	comp=N,33nm,1.0s						
ULN	**Ulaanbaatar**	**24.78**	**288**	*e*P	**P**	**16 08 42.4**	**+0.5**
	comp=N,46nm,0.9s						
ULN	**Ulaanbaatar**	**24.78**	**288**	P	**P**	**16 08 41.1**	**-0.9**
	comp=N,54nm,1.1s,comp=N,639nm						
BTO	**Baotou**	**24.81**	**269**	*e*P	**P**	**16 08 43.0**	**+0.8**
BTO				pmax	pmax		
	comp=Z,78nm,0.7s						
BILL	**Bilibino**	**25.02**	**20**	⇓*i*P	**P**	**16 08 41.6**	**-2.0**
BILL	**Bilibino**	**25.02**	**20**	*e*P	**P**	**16 08 41.4**	**-2.2**
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**25.22**	**288**	P	**P**	**16 08 46.5**	**+0.6**
SONM				ScP	**ScP**	**16 15 15.5**	**+0.6**
SONM	**Songino Array**	**25.22**	**288**	P	**P**	**16 08 46.5**	**+0.6**
	comp=Z,30nm,0.8s,baz=78,slow=9.0,SNR=122						
SONM				ScP	**ScP**	**16 15 15.5**	**+0.6**
	comp=Z,1.5nm,1.0s,baz=126,slow=2.0,SNR=4.8						
TLY	**Talaya**	**26.55**	**297**	*e*P	**P**	**16 08 57.1**	**-0.4**
TIXI	**Tiksi**	**26.63**	**350**	⇑*i*P	**P**	**16 08 55.4**	**-2.5**
ZAK	**Zakamensk**	**26.89**	**294**	⇓*i*P	**P**	**16 09 00.4**	**-0.3**
ZAK				*e*		16 10 06.4	
ZAK				pmax	pmax		
	comp=Z,11nm,1.1s						
WHN	**Wuhan**	**27.39**	**246**	P	P	16 09 19.8	+15
WHN				pP	**PP**	**16 10 21.3**	**+6.3**
WHN				S	S	16 13 31.3	+12
WHN				LR	LR		
	comp=Z,820nm,19.8s						
XAN	**Xi'an**	**28.80**	**258**	P	**P**	**16 09 17.5**	**-0.1**
XAN				LR	LR		
	comp=N,190nm,23.4s						
ENH	**Enshi**	**30.72**	**251**	*e*P	P	16 09 50.9	+16
LZH	**Lanzhou**	**31.19**	**266**	⇑P	**P**	**16 09 40.3**	**+1.6**
LZH				pmax	pmax		
	comp=Z,51nm,1.0s						
LZH				pmax	pmax		
	comp=Z,95nm,4.1s						
LZH				LR	LR		
	comp=N,180nm,13.8s						
LZH				LR	LR		
	comp=E,180nm,13.8s						
LZH				LR	LR		
	comp=Z,330nm,18.7s						
GTA	**Gaotai**	**32.42**	**274**	⇓P	**P**	**16 09 50.5**	**+1.3**
GTA				pmax	pmax		
	comp=Z,62nm,0.9s						
HVS	**Khovu-Aksy**	**32.80**	**297**	*c*P	**P**	**16 09 52.5**	**+0.3**
HVS				pmax	pmax		
	comp=Z,96nm,1.2s						

SDPT **Sand Point** 35.81 54 *e*P P 16 10 16.6 -1.1
comp=Z,37nm,0.6s
ZALV **Zalesovo Beam** 37.55 304 P P 16 10 31.5 -0.7
ZALV 16 12 41.4
ZALV 16 15 56.3
ZALV pmax pmax
comp=Z,6.0nm,0.4s
ZALV **Zalesovo Beam** 37.55 304 P P 16 10 31.5 -0.7
ZALV PcP PcP 16 12 41.4 -0.6
ZALV ScP ScP 16 15 56.3 +0.3
ZALV **Zalesovo Beam** 37.55 304 P P 16 10 31.5 -0.7
comp=Z,6.3nm,0.4s,baz=74,slow=9.8,SNR=36
ZALV PcP PcP 16 12 41.4 -0.6
comp=Z,3.3nm,0.7s,baz=81,slow=3.6,SNR=6.1
ZALV ScP ScP 16 15 56.3 +0.3
comp=Z,3.7nm,0.8s,baz=69,slow=3.2,SNR=10.0
NVS **Novosibirsk** 38.26 306 *i* P P 16 10 37.3 -0.8
NVS *e* 16 11 40.0
NVS *i* PPP PPP 16 12 15.7
NVS *e*S S 16 16 01.9 -3.9
NVS pmax pmax
comp=Z,15nm,1.1s
NVS pmax pmax
comp=N,1.0nm,0.3s
NVS pmax pmax
comp=E,4.0nm,0.6s
NVS smax smax
comp=N,4.0nm,1.3s
NVS smax smax
comp=E,10.0nm,1.3s
KMI **Kunming** 38.59 251 P P 16 10 42.8 +1.3
KMI pmax pmax
comp=Z,14nm,1.1s
WMQ **Urumqi** 38.86 288 *e*P P 16 10 44.0 +0.7
PPLA **Purkeypile** 39.13 41 *e*P P 16 10 44.0 -1.4
comp=Z,12nm,0.8s
RSO **Redoubt South** 39.15 45 *e*P P 16 10 46.7 +1.1
SPU **Mount Spurr** 39.39 44 *e*P P 16 10 47.6 +0.2
OHAK **Old Harbor** 39.43 50 *e*P P 16 10 46.7 -0.9
comp=Z,31nm,0.6s
KDAK **Kodiak Island** 39.69 49 P P 16 10 49.0 -0.7
KDAK PcP PcP 16 12 48.7 +0.1
KDAK **Kodiak Island** 39.69 49 P P 16 10 49.0 -0.7
comp=Z,31nm,0.5s,baz=286,slow=4.1,SNR=99
KDAK PcP PcP 16 12 48.7 +0.1
comp=Z,5.2nm,0.7s,baz=270,slow=1.0,SNR=3.3
COLD **Coldfoot** 39.69 34 *e*P P 16 10 48.3 -1.4
comp=Z,17nm,0.9s
TRF **Thorofare Moun** 39.93 40 *e*P P 16 10 50.7 -1.2
comp=Z,9.2nm,0.7s
MCK **McKinley** 40.50 39 *e*P P 16 10 56.0 -0.3
MCK pmax pmax
comp=Z,12nm,0.6s
MCK **McKinley** 40.50 39 *e*P P 16 10 56.0 -0.3
comp=Z,12nm,0.6s
PMR **Palmer** 40.72 43 *e*P P 16 10 57.7 -0.4
PMR pmax pmax
comp=Z,11nm,0.6s
PMR **Palmer** 40.72 43 *e*P P 16 10 57.7 -0.4
comp=Z,10nm,0.6s
COLA **College** 40.83 37 *e*P P 16 10 58.7 -0.2
COLA pmax pmax
comp=Z,24nm,0.8s
COLA **College** 40.83 37 *e*P P 16 10 58.6 -0.2
comp=Z,24nm,0.8s
SEW **Seward** 40.83 45 *e*P P 16 10 58.3 -0.7
comp=Z,21nm,0.7s
SML **Sawmill** 41.06 42 *e*P P 16 11 00.5 -0.4
SML **Sawmill** 41.06 42 *e*P P 16 11 00.5 -0.4
comp=Z,5.0nm,0.8s
MK31 **Makanchi Array** 41.23 294 *ce*P P 16 11 02.6 +0.1
MK31 pmax pmax
comp=Z,15nm,0.4s
MKAR **Makanchi Array** 41.23 294 P P 16 11 02.6 +0.1
MKAR S S 16 16 49.8 -0.3
MKAR pmax pmax
comp=Z,13nm,0.6s
MKAR smax smax
comp=N,2.0nm,1.0s
MKAR **Makanchi Array** 41.23 294 P P 16 11 02.6 +0.1
MKAR ScP ScP 16 16 10.9 +0.3
MKAR S S 16 16 49.8 -0.3
MKAR **Makanchi Array** 41.23 294 P P 16 11 02.6 +0.1
comp=N,12nm,0.6s,baz=79,slow=8.5,SNR=210
MKAR ScP ScP 16 16 10.9 +0.3
comp=N,2.9nm,0.8s,baz=66,slow=4.5,SNR=9.4
MKAR S S 16 16 49.8 -0.3
comp=N,1.6nm,1.0s,baz=68,slow=19,SNR=5.7
ILAR **Eielson Array** 41.25 38 P P 16 11 00.8 -1.6
ILAR PcP PcP 16 12 52.5 -1.2
ILAR **Eielson Array** 41.25 38 P P 16 11 00.8 -1.6
comp=N,7.3nm,0.6s,baz=264,slow=6.3,SNR=100
ILAR PcP PcP 16 12 52.5 -1.2
comp=N,1.7nm,0.6s,baz=279,slow=3.6,SNR=5.6
CTBH **Cotabato--PC H** 42.06 209 ||*i*P P 16 11 11.3 +1.9
KURK **Kurchatov** 42.10 301 *d i*P P 16 11 09.1 -0.2
KURK pmax pmax
comp=Z,17nm,0.8s
KURK **Kurchatov** 42.10 301 *e*P P 16 11 08.9 -0.5
comp=Z,26nm,1.0s
KURK pP pP 16 12 16.2 -0.6
KURK PcP PcP 16 12 57.9 +1.2
KURK S S 16 17 01.7 -0.8
KURBB **Kurchatov Arra** 42.18 301 P P 16 11 09.9 -0.2
comp=Z,16nm,0.5s,baz=74,slow=8.2,SNR=150
KURBB pP pP 16 12 16.2 -1.4
comp=Z,2.2nm,0.8s,baz=73,slow=9.3,SNR=1.2
KURBB PcP PcP 16 12 57.9 +0.9
comp=Z,2.3nm,0.9s,baz=83,slow=3.3,SNR=4.4
KURBB S S 16 17 01.7 -2.1
comp=Z,0.5nm,0.6s,baz=74,slow=14,SNR=4.2
DIV **Divide** 42.40 43 *e*P P 16 11 11.6 -0.1
comp=Z,14nm,0.6s
DOT **Dot Lake** 42.65 39 *e*P P 16 11 12.4 -1.3
comp=Z,26nm,1.0s
MENT **Mentasta** 42.95 40 *e*P P 16 11 14.4 -1.6
LSA **Lhasa** 43.59 267 P P 16 11 32.0 +10
LSA **Lhasa** 43.59 267 *e*P P 16 11 21.6 -0.5
LSA pmax pmax
comp=Z,8.0nm,0.5s
LSA **Lhasa** 43.59 267 *e*P P 16 11 21.6 -0.5
comp=Z,7.7nm,0.5s
EGAK **Eagle** 43.66 37 *e*P P 16 11 20.4 -1.2
comp=Z,17nm,0.8s
CMMT **Chiang Mai** 45.52 249 P P 16 11 37.0 +0.2
comp=Z,10nm,0.8s,comp=Z,441nm
CHTO **Chiang Mai** 45.53 249 *e*P P 16 11 38.2 +1.4
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO **Chiang Mai** 45.53 249 *e*P P 16 11 38.2 +1.4
comp=Z,6.6nm,0.8s
CHTO **Chiang Mai** 45.53 249 P P 16 11 36.8 0.0
comp=Z,11nm,0.8s
CMAR **Chiang Mai Arr** 45.78 248 P P 16 11 40.0 +1.3
CMAR PcP PcP 16 13 10.6 +0.7
CMAR ScP ScP 16 16 31.4 +1.8
CMAR **Chiang Mai Arr** 45.78 248 P P 16 11 40.0 +1.3
comp=Z,2.8nm,0.9s,baz=33,slow=7.2,SNR=11
CMAR PcP PcP 16 13 10.6 +0.7
comp=Z,1.0nm,0.7s,baz=4.0,slow=2.3,SNR=4.9
CMAR ScP ScP 16 16 31.4 +1.8
comp=Z,1.6nm,1.0s,baz=22,slow=4.3,SNR=5.6
INK **Inuvik** 45.79 31 P P 16 11 37.0 -1.1
INK PcP PcP 16 13 09.2 +0.1
INK **Inuvik** 45.79 31 P P 16 11 37.0 -1.1
comp=Z,12nm,0.4s,baz=287,slow=6.0,SNR=66
INK PcP PcP 16 13 09.2 +0.1
comp=Z,2.8nm,0.8s,baz=342,slow=2.7,SNR=3.2
BVA0 **Borovoye Array** 46.04 307 P P 16 11 39.8 -0.5
BVA0 pmax pmax
comp=Z,4.0nm,0.4s
BVAR **Borovoye Array** 46.04 307 P P 16 11 40.3 0.0
BVAR 16 13 10.7
BVAR pmax pmax
comp=Z,6.0nm,0.4s
BVAR **Borovoye Array** 46.04 307 P P 16 11 40.3 0.0
BVAR PcP PcP 16 13 10.7 +0.4
BVAR ScP ScP 16 16 30.2 +0.1
BVAR S S 16 17 56.2 -2.8
BVAR **Borovoye Array** 46.04 307 P P 16 11 40.3 0.0
comp=Z,6.1nm,0.4s,baz=70,slow=8.4,SNR=56
BVAR PcP PcP 16 13 10.7 +0.4
comp=Z,1.0nm,0.4s,baz=49,slow=2.9,SNR=4.9
BVAR ScP ScP 16 16 30.2 +0.1
comp=Z,3.0nm,0.7s,baz=73,slow=5.1,SNR=7.7
BVAR S S 16 17 56.2 -2.8
comp=Z,4.0nm,1.1s,baz=73,slow=11,SNR=8.1
BRVK **Borovoye** 46.09 307 *d i*P P 16 11 40.4 -0.2
BRVK pmax pmax
comp=Z,11nm,0.8s
BRVK **Borovoye** 46.09 307 *e*P P 16 11 40.8 +0.2
comp=Z,17nm,1.0s
MYLDM **Lahad Datu** 46.09 216 P P 16 11 40.9 -0.2
comp=Z,13nm,1.3s
KKM **Kota Kinabalu** 46.28 219 *e*P P 16 11 44.1 +1.4
comp=Z,8.2nm,0.7s
KKM **Kota Kinabalu** 46.28 219 P P 16 11 40.4 -2.3
comp=Z,14nm,1.1s
ULHL **Ulahol** 47.09 291 P P 16 11 49.8 +1.0
SNR=7.2
TKM2 **Tokmak 2** 47.19 292 *e*P P 16 11 50.5 +1.0
TKM2 pmax pmax
comp=Z,34nm,1.0s
TKM2 **Tokmak 2** 47.19 292 *e*P P 16 11 50.5 +1.0
comp=Z,34nm,1.0s
TKM2 **Tokmak 2** 47.19 292 P P 16 11 50.6 +1.0
SNR=44
TAPN **Taplejung** 47.42 267 *e*P P 16 11 53.0 +1.4
comp=Z,14nm,0.5s
USP **Ospenovka** 47.73 293 P P 16 11 54.5 +1.0
SNR=9.0
KBK **Karagaybulak** 47.74 292 P P 16 11 54.6 +0.9
SNR=47
KZA **Kyzart** 47.82 291 P P 16 11 56.0 +1.4
SNR=63
SKAG **Skagway** 47.85 43 *e*P P 16 11 55.5 +1.4
comp=Z,22nm,1.4s
ODAN **Odare** 47.95 267 *e*P P 16 11 56.9 +1.3
AAK **Ala-Archa** 48.04 292 *d i*P P 16 11 56.5 +0.5
AAK pmax pmax
comp=Z,47nm,1.2s
AAK **Ala-Archa** 48.04 292 *e*P P 16 11 56.8 +0.8
comp=Z,3.6nm,0.9s
AAK **Ala-Archa** 48.04 292 P P 16 11 56.9 +0.8
SNR=13
GUN **Gumba** 48.35 269 *e*P P 16 11 59.5 +0.8
RAMN **Ramite** 48.44 267 *e*P P 16 12 00.5 +1.2
EKS2 **Erkin-Say** 48.49 293 *e*P P 16 12 00.4 +1.1
EKS2 pmax pmax
comp=Z,19nm,0.8s
EKS2 **Erkin-Say** 48.49 293 *e*P P 16 12 00.4 +1.1
comp=Z,19nm,0.8s
EKS2 **Erkin-Say** 48.49 293 P P 16 12 00.3 +1.0
SNR=7.8
KSH **Kashi** 48.63 288 P P 16 12 05.0 +4.6
KSH *e*PcP PcP 16 13 26.0 +6.0
KSH *e*sP sP 16 13 46.3 -1.8
KSH *e*PP PP 16 14 02.3 +5.5
KSH *e*ScP **ScP** **16 16 48.0 +6.6**
KSH S S 16 18 43.3 +7.5
KSH ScS **ScS** **16 21 19.8 +4.0**
KSH SS **SS** **16 22 15.3 +4.8**
KSH pmax pmax
comp=Z,14nm,0.6s
KSH LR LR
comp=N,46nm,3.9s
KSH LR LR
comp=E,88nm,3.5s
KSH LR LR
comp=Z,78nm,3.3s
AML **Almayashu** 48.80 292 P P 16 12 03.1 +1.1
SNR=24
KKN **Kakani** 48.84 269 *e*P P 16 12 02.9 +0.6
comp=Z,14nm,0.5s
PKI **Pulchoki** 48.88 269 *e*P P 16 12 03.7 +0.9
PKIN **Phulchoki** 48.89 269 *e*P P 16 12 03.4 +0.7
comp=Z,16nm,0.7s
DMN **Daman** 49.07 269 *e*P P 16 12 04.8 +0.7
comp=Z,42nm,0.9s
DANN **Dangsing** 49.56 271 *e*P P 16 12 08.8 +1.1
comp=Z,67nm,0.5s
SVE **Sverdlovsk** 49.69 314 ⇑*e*P P 16 12 07.6 -0.3
SVE pmax pmax
comp=Z,20nm,0.7s
KOLN **Koldanda** 50.02 270 *e*P P 16 12 12.0 +0.9
comp=Z,44nm,0.8s
KK31 **Karatay Array** 50.36 295 *ce*P P 16 12 13.5 +0.3
KK31 pmax pmax
comp=Z,23nm,0.9s
KKAR **Karatay Array** 50.36 295 *e*P P 16 12 13.6 +0.4
KKAR **Karatay Array** 50.36 295 *e*P P 16 12 13.6 +0.4
CRAG **Craig** 50.58 47 *e*P P 16 12 14.1 -0.4
comp=Z,14nm,0.9s
DLBC **Dease Lake** 50.78 43 *e*P P 16 12 15.8 -0.3
ARU **Arti** 50.89 315 *d i*P P 16 12 16.0 -0.8
ARU 16 13 27.7
ARU 16 14 13.5
ARU S S 16 19 05.1 -1.1
ARU SS SS 16 22 41.3 -3.9
ARU pmax pmax
comp=Z,20nm,1.2s
SBUM **Sibu** 51.27 222 P P 16 12 20.2 +0.1
comp=Z,14nm,0.8s
RES **Resolute Bay** 53.54 16 P P 16 12 35.0 -0.8
RES **Resolute Bay** 53.54 16 P P 16 12 35.0 -0.8
comp=Z,48nm,0.6s,baz=302,slow=7.3,SNR=16
AB31 **Akbulak array** 53.60 306 *ce*P P 16 12 36.5 -0.2
AB31 pmax pmax
comp=Z,13nm,0.3s
ABKAR **Akbulak array** 53.60 306 *e*P P 16 12 36.5 -0.2
AKTO **Aktyubinsk** 54.07 308 P P 16 12 39.8 -0.2
AKTO pmax pmax
comp=Z,6.0nm,0.6s
AKTO **Aktyubinsk** 54.07 308 P P 16 12 39.8 -0.2
AKTO ScP ScP 16 17 03.4 -1.3
AKTO **Aktyubinsk** 54.07 308 P P 16 12 39.8 -0.2
comp=Z,5.9nm,0.6s,baz=78,slow=12,SNR=7.1
AKTO ScP ScP 16 17 03.4 -1.3
comp=Z,2.6nm,0.8s,baz=61,slow=8.3,SNR=3.7
PMG **Port Moresby** 55.27 176 P P 16 12 49.3 +0.4
PMG **Port Moresby** 55.27 176 P P 16 12 49.3 +0.4
comp=Z,17nm,0.8s,baz=7.9,slow=11,SNR=4.3
YKW3 **Yellowknife Ar** 55.33 33 *e*P P 16 12 48.0 -0.8
comp=Z,0.4nm,0.7s
YKA **Yellowknife Ar** 55.37 34 P P 16 12 48.6 -0.4
YKA PcP PcP 16 13 45.0 +0.1
YKA pP pP 16 14 01.9 +1.0
YKA PP PP 16 14 45.4 -11
YKA **Yellowknife Ar** 55.37 34 P P 16 12 48.6 -0.4
comp=Z,20nm,0.6s,baz=305,slow=6.8,SNR=340
YKA PcP PcP 16 13 44.9 +0.1
comp=Z,2.2nm,0.8s,baz=308,slow=3.8,SNR=6.1
YKA pP pP 16 14 01.9 +1.0
comp=Z,0.9nm,0.5s,baz=304,slow=7.0,SNR=1.9
YKA PP PP 16 14 45.4 -11
comp=Z,1.9nm,0.9s,baz=300,slow=7.2,SNR=4.0
KEV **Kevo** 55.64 338 *e*P P 16 12 49.4 -1.5
KEV pmax pmax
comp=Z,2.0nm,0.3s
KEV **Kevo** 55.64 338 *ep* P 16 12 49.4 -1.5
comp=Z,1.7nm,0.3s
KBL **Kabul** 55.99 286 *e*P P 16 12 53.9 -0.3
KBL pmax pmax
comp=Z,33nm,1.3s
KBL **Kabul** 55.99 286 *e*P P 16 12 53.9 -0.3
comp=Z,33nm,1.3s
ARCES **ARCESS Array B** 56.18 338 P P 16 12 54.2 -0.5
ARCES **ARCESS Array B** 56.18 338 P P 16 12 54.2 -0.5
comp=Z,3.9nm,0.9s,baz=48,slow=7.3,SNR=8.8
JOF **Joensuu** 58.84 330 *e*P P 16 13 11.4 -1.7
JOF pmax pmax
comp=Z,3.0nm,0.4s
JOF **Joensuu** 58.84 330 *ep* P 16 13 11.4 -1.7
comp=Z,2.7nm,0.4s
COEN **Coen** 59.69 180 *e*P P 16 13 19.6 +0.1
comp=Z,187nm,1.1s
NLWA **Neilton Lookou** 59.72 52 *e*P P 16 13 21.0 +1.5
comp=Z,31nm,1.0s
CMW **Cultus Mountai** 60.06 50 P P 16 13 22.7 +0.9
JCW **Jim Creek** 60.30 50 P P 16 13 24.3 +1.0
HTW **Haystack Looko** 60.62 50 P P 16 13 26.3 +0.8
KAF **Kangasniemi** 61.09 331 *e*P P 16 13 26.8 -1.5
KAF pmax pmax
comp=Z,2.0nm,0.4s
KAF **Kangasniemi** 61.09 331 *ep* P 16 13 26.8 -1.5
comp=Z,2.3nm,0.4s
LON **Longmire** 61.23 51 *e*P P 16 13 30.5 +0.9
LON pmax pmax
comp=Z,6.0nm,1.0s
LON **Longmire** 61.23 51 *e*P P 16 13 30.5 +0.9
comp=Z,6.0nm,1.0s
TWW **Teanaway** 61.51 51 P P 16 13 32.8 +1.3
FINES **FINESS Array B** 61.64 331 P P 16 13 31.4 -0.6
FINES pP pP 16 14 46.2 +0.7
FINES PP PP 16 15 46.4 -5.4
FINES **FINESS Array B** 61.64 331 P P 16 13 31.4 -0.6
comp=Z,5.2nm,0.4s,baz=49,slow=7.6,SNR=73
FINES pP pP 16 14 46.2 +0.7
comp=Z,2.5nm,0.6s,baz=54,slow=7.1,SNR=2.1
FINES PP PP 16 15 46.4 -5.4
comp=Z,1.2nm,0.5s,baz=37,slow=8.3,SNR=3.5
SUMG **Summit** 61.70 1 *e*P P 16 13 32.8 +0.1
SUMG pmax pmax
comp=Z,26nm,0.7s
SUMG **Summit** 61.70 1 *e*P P 16 13 32.8 +0.1
comp=Z,26nm,0.7s
NAC **Naches** 61.78 51 P P 16 13 34.3 +1.1
EBG **Ellensburg** 61.81 51 P P 16 13 34.6 +1.2
OBN **Obninsk** 61.92 321 *e*P P 16 13 31.9 -2.0
OBN pmax pmax
comp=Z,7.0nm,0.8s
VLL **Laurance Lake** 62.10 53 P P 16 13 36.9 +1.5
HAWA **Hanford** 62.69 51 *e*P P 16 13 40.3 +1.2
comp=Z,15nm,0.9s
NEW **Newport** 62.78 48 *e*P P 16 13 40.4 +0.6
comp=Z,12nm,0.8s
NEW **Newport** 62.78 48 ||P P 16 13 39.9 +0.2
baz=62,SNR=5.1
A12A **Yaak River Ran** 63.10 47 ⇑P P 16 13 42.5 +0.6
baz=63
HUMO **Hull Mountain** 63.15 56 *e*P P 16 13 43.8 +1.5
comp=Z,4.5nm,0.8s
B12A **Libby** 63.44 47 ||P P 16 13 44.5 +0.4
baz=63
C11A **Tepee Creek (N** 63.50 48 ⇑P P 16 13 44.9 +0.4
baz=63,SNR=15
KHMM **Horse Mountain** 63.79 58 *e*P P 16 13 48.3 +1.7
comp=Z,47nm,1.6s
YBH **Yreka Blue Hor** 63.85 56 P P 16 13 48.1 +1.2
YBH **Yreka Blue Hor** 63.85 56 P P 16 13 48.1 +1.2
comp=Z,8.2nm,0.7s,baz=351,slow=3.8,SNR=30
WALA **Waterton Lakes** 63.90 46 *e*P P 16 13 45.8 -1.3
comp=Z,0.4nm,0.9s
C12B **Naegeli Ranch,** 63.98 48 ⇑P P 16 13 48.1 +0.5
baz=64
B13A **Whitefish** 64.06 46 ||P P 16 13 48.5 +0.3
baz=64,SNR=7.6
A14A **Double T Ranch** 64.20 45 ||P P 16 13 49.1 0.0
baz=64,SNR=18
BSMT **Bassoo Peak** 64.24 47 *e*P P 16 13 50.5 +1.1
BLMT **Blacktail Moun** 64.36 47 *e*P P 16 13 51.0 +0.8
C13A **Hot Springs** 64.47 47 ||P P 16 13 51.2 +0.4
baz=64,SNR=14
D12A **Red Ives Fores** 64.47 48 ||P P 16 13 51.0 +0.2
baz=64
A15A **Johnson Ranch,** 64.53 45 ⇑P P 16 13 50.9 -0.3
baz=64,SNR=12
JTMT **Jette** 64.57 47 *e*P P 16 13 52.2 +0.7
YBMT **Yellow Bay** 64.63 47 *e*P P 16 13 50.9 -1.0
comp=Z,12nm,1.0s
B14A **Marquette Ranc** 64.67 46 ||P P 16 13 52.3 +0.1
baz=64,SNR=11
WDC **Whiskeytown Da** 64.68 57 *e*P P 16 13 51.1 -1.0
WDC pmax pmax
comp=Z,11nm,1.1s
WDC **Whiskeytown Da** 64.68 57 *e*P P 16 13 51.1 -1.0
comp=Z,11nm,1.1s
SWMT **Swartz Lake** 64.87 47 *e*P P 16 13 54.1 +0.7
BMO **Blue Mountains** 64.88 51 *e*P P 16 13 52.9 -0.5
comp=Z,12nm,1.3s
D13A **Huson** 64.91 48 ⇑P P 16 13 53.5 -0.1
baz=65,SNR=5.0
B15A **Bradely Ranch,** 65.06 46 ⇑P P 16 13 54.6 0.0
baz=65,SNR=16
A16A **West Butte Ran** 65.11 45 ⇑P P 16 13 54.8 -0.2
baz=65,SNR=7.0
LBCM **Butte Creek Ri** 65.21 56 P P 16 13 56.4 +0.7
SLMT **Seeley Lake** 65.31 47 *e*P P 16 13 56.6 +0.4
MSO **Missoula** 65.35 47 *e*P P 16 13 57.1 +0.7
comp=Z,17nm,1.2s
MSO **Missoula** 65.35 47 ||P P 16 13 56.7 +0.2
baz=65,SNR=8.3
F12A **Elk City** 65.38 49 ||P P 16 13 57.1 +0.4
baz=65,SNR=27
C15A **Salmond Ranch,** 65.40 46 ⇑P P 16 13 57.5 +0.7
baz=65,SNR=37
D14A **Greenough** 65.41 47 ||P P 16 13 56.9 0.0
baz=65,SNR=19
FFC **Flin Flon** 65.41 35 *ce*P P 16 13 56.8 +0.3
FFC **Flin Flon** 65.41 35 *e*P P 16 13 56.4 -0.2
comp=Z,49nm,0.9s
B16A **M & M Farms, S** 65.42 45 ⇑P P 16 13 56.7 -0.1
baz=65,SNR=5.6
E13A **Victor** 65.48 48 ⇑P P 16 13 57.1 -0.2
baz=65,SNR=6.6
A17A **Triple J Farms** 65.55 44 ⇑P P 16 13 57.5 -0.1
baz=65,SNR=34
CHMT **Chamberlain Mo** 65.65 47 *e*P P 16 13 58.5 +0.1
WVOR **Wild Horse Val** 65.72 54 *e*P P 16 13 57.7 -1.2
WVOR pmax pmax
comp=Z,15nm,1.0s
WVOR **Wild Horse Val** 65.72 54 *e*P P 16 13 57.7 -1.2
comp=Z,15nm,1.0s
C16A **Fuhringer Ranc** 65.81 46 ||P P 16 13 59.7 +0.4
baz=66,SNR=16
FITZ **Fitzroy Crossi** 65.83 199 *e*P P 16 13 58.6 -1.0
comp=Z,24nm,1.2s
F13A **Darby** 65.84 49 ⇑P P 16 13 59.3 -0.3
baz=66
E14A **Clinton** 65.86 48 ⇑P P 16 13 59.7 0.0
baz=66,SNR=17
D15A **Lincoln** 65.93 47 ||P P 16 14 00.4 +0.2
baz=66,SNR=12
B17A **L&G Farms, Che** 65.95 45 ⇑P P 16 14 00.4 +0.2
baz=66,SNR=6.8
A18A **Metzger Ranch,** 65.98 44 ⇑P P 16 14 00.4 0.0
baz=66
OHCM **Honcut** 66.10 58 *e*P P 16 14 01.4 +0.2
WRAB **Tennant Creek** 66.16 189 *e*P P 16 13 59.6 -2.0
WRAB pmax pmax
comp=Z,17nm,0.8s
WRAB **Tennant Creek** 66.16 189 *e*P P 16 13 59.6 -2.0
comp=Z,17nm,0.8s
WRA **Warramunga Arr** 66.17 189 P P 16 14 01.5 -0.2
WRA pP pP 16 15 16.5 0.0
WRA **Warramunga Arr** 66.17 189 P P 16 14 01.5 -0.2
comp=Z,18nm,0.7s,baz=6.1,slow=6.7,SNR=171
WRA pP pP 16 15 16.5 0.0
comp=Z,2.4nm,0.9s,baz=359,slow=7.4,SNR=2.5
E15A **Deer Lodge** 66.29 47 ⇑P P 16 14 02.6 +0.1
baz=66,SNR=16
KIV **Kislovodsk** 66.30 309 *c i*P P 16 14 02.8 +0.3
KIV *e* 16 14 34.3
KIV pmax pmax
comp=Z,34nm,0.8s
F14A **Wisdom** 66.33 48 ⇑P P 16 14 02.9 +0.1
baz=66
KBZ **Khabaz** 66.33 309 P P 16 14 03.9 +1.4
KBZ pmax pmax
comp=Z,15nm,0.8s
KBZ **Khabaz** 66.33 309 P P 16 14 03.9 +1.4
KBZ **Khabaz** 66.33 309 P P 16 14 03.9 +1.4
comp=Z,15nm,0.8s,baz=36,slow=4.5,SNR=35
G13A **Cobalt** 66.36 49 ⇑P P 16 14 02.7 -0.2
baz=66
B18A **Beardsley Farm** 66.38 44 ||P P 16 14 03.2 +0.3
baz=66,SNR=15
H12A **Diamond D Ranc** 66.39 50 ⇑P P 16 14 03.2 0.0
baz=66,SNR=14
BEKR **Beckworth** 66.41 57 *e*P P 16 14 01.8 -1.6
comp=Z,6.6nm,0.8s
C17A **Wharram Farm,** 66.41 45 ||P P 16 14 03.0 -0.1
baz=66,SNR=8.5
D16A **Dana Ranch, Ca** 66.43 46 ⇑P P 16 14 03.5 +0.2
baz=66,SNR=11
A19A **Klindworth Far** 66.50 43 ||P P 16 14 04.1 +0.4
baz=66,SNR=10.0
HRY **Holter Researc** 66.50 47 *e*P P 16 14 04.6 +0.9
NB2 **NORSAR Subarra** 66.51 337 P P 16 14 03.1 -0.4
comp=Z,1.1nm,0.6s,baz=36,slow=6.2
NB2 **NORSAR Subarra** 66.51 337 P pP 16 15 18.9 +0.6
comp=Z,2.5nm,0.8s,baz=34,slow=6.5
NOA **NORSAR Array B** 66.51 337 P P 16 14 03.4 -0.1
NOA pP pP 16 15 19.9 +1.7
NOA PP PP 16 16 28.0 -6.3
NOA **NORSAR Array B** 66.51 337 P P 16 14 03.4 -0.1
comp=Z,2.8nm,0.9s,baz=35,slow=6.3,SNR=13
NOA pP pP 16 15 19.9 +1.7
comp=Z,1.5nm,0.9s,baz=41,slow=5.9,SNR=2.7

NOA PP PP 16 16 28.0 -6.3
comp=Z,0.9nm,0.6s,baz=30,slow=6.5,SNR=3.2
MFID Camas Ranch 66.62 51 *e*P P 16 14 03.8 -0.8
comp=Z,18nm,1.0s
EGMT Eagleton 66.64 44 *e*P P 16 14 04.9 +0.3
comp=Z,27nm,0.9s
EGMT Eagleton 66.64 44 ⇑P P 16 14 04.7 +0.2
baz=66,SNR=18
E16A East Helena 66.70 47 ⇑P P 16 14 05.4 +0.4
baz=66,SNR=16
B19A Brinkman Farms 66.74 44 ⇓P P 16 14 05.4 +0.3
baz=66,SNR=8.3
I12A Atlanta 66.75 51 ⇑P P 16 14 05.9 +0.5
baz=66
F15A Butte 66.76 48 ⇑P P 16 14 05.8 +0.3
baz=66,SNR=29
D17A Six Diamond Ra 66.78 46 ⇓P P 16 14 05.6 +0.1
baz=66,SNR=7.3
LRM Limekiln Ridge 66.79 48 *e*P P 16 14 06.2 +0.5
DLMT Dillon 67.03 48 *e*P P 16 14 07.5 +0.4
comp=Z,28nm,0.8s
H14A Leadore 67.13 49 ⇑P P 16 14 07.7 -0.1
baz=67
E17A Martinsdale 67.17 46 ⇑P P 16 14 08.9 +0.9
baz=67,SNR=22
C19A Slack Wire Ran 67.18 44 ⇑P P 16 14 08.5 +0.6
baz=67,SNR=19
D18A Linhart Farms, 67.19 45 ⇓P P 16 14 08.3 +0.3
baz=67,SNR=5.2
I13A Wildhorse Cree 67.21 50 ⇑P P 16 14 09.0 +0.6
baz=67,SNR=30
G15A Dillon 67.22 48 ⇑P P 16 14 08.7 +0.4
baz=67,SNR=32
F16A Kennard Place, 67.24 47 ⇓P P 16 14 08.7 +0.3
baz=67,SNR=16
MCMT McKenzie Canyo 67.26 49 *e*P P 16 14 07.0 -1.7
comp=Z,4.0nm,0.9s
HLID Hailey 67.29 50 *e*P P 16 14 09.6 +0.8
comp=Z,5.0nm,0.9s
HLID Hailey 67.29 50 ⇓P P 16 14 09.4 +0.6
baz=67,SNR=7.8
A21A Bergtoll Ranch 67.32 42 ⇑P P 16 14 09.4 +0.6
baz=67,SNR=26
BOZ Bozeman (W) 67.33 47 *e*P P 16 14 08.0 -1.0
BOZ pmax pmax
comp=Z,13nm,0.7s
BOZ Bozeman (W) 67.33 47 *e*P P 16 14 08.0 -1.0
comp=Z,13nm,0.7s
H15A Lima 67.51 49 ⇓P P 16 14 10.2 0.0
baz=67
J13A Cove Ranch, Pi 67.53 50 ⇓P P 16 14 11.2 +1.0
baz=67,SNR=18
G16A Moss Hill, Enn 67.53 48 ⇓P P 16 14 10.6 +0.4
baz=67,SNR=13
I14A Mackay 67.55 50 ⇓P P 16 14 11.3 +0.9
baz=67
E18A Harlowton 67.57 46 ⇓P P 16 14 10.9 +0.5
baz=67,SNR=7.3
CMB Columbia Colle 67.60 58 *e*P P 16 14 11.5 +0.9
CMB pmax pmax
comp=Z,14nm,0.9s
CMB Columbia Colle 67.60 58 *e*P P 16 14 11.5 +0.9
comp=Z,14nm,0.9s
F17A Fitzpatrick Pl 67.65 47 ⇑P P 16 14 11.5 +0.5
baz=67,SNR=9.9
TRD Trivandrum 67.65 259⇓*e*PKP pP 16 15 21.0 -5.3
D19A Cripps Ranch, 67.66 45 ⇑P P 16 14 11.6 +0.6
baz=67
B21A Ellsworth Farm 67.67 43 ⇓P P 16 14 11.3 +0.4
baz=67,SNR=9.1
A22A Carney Farms, 67.79 42 ⇑P P 16 14 11.8 +0.1
baz=68
BMN Battle Mountai 67.84 54 *e*P P 16 14 13.5 +1.3
BMN pmax pmax
comp=Z,13nm,0.8s
BMN Battle Mountai 67.84 54 *e*P P 16 14 13.5 +1.3
comp=Z,13nm,0.8s
G17A Pierce Place, 68.01 47 ⇓P P 16 14 14.0 +0.8
baz=68,SNR=6.4
C21A Desert Coulee 68.06 43 ⇑P P 16 14 13.7 +0.3
baz=68,SNR=6.6
D20A Manuel Ranch, 68.08 44 ⇑P P 16 14 14.2 +0.7
baz=68,SNR=7.1
F18A Big Timber 68.12 46 ⇓P P 16 14 14.5 +0.6
baz=68,SNR=17
H16A Russell Place, 68.18 48 ⇓P P 16 14 14.8 +0.4
baz=68,SNR=16
AKASG Malin Array Be 68.18 321 P P 16 14 13.7 -0.3
AKASG *PP pP 16 15 31.2 +2.0
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 68.18 321 P P 16 14 13.7 -0.3
AKASG pP pP 16 15 31.2 +2.0
AKASG Malin Array Be 68.18 321 P P 16 14 13.7 -0.3
comp=Z,1.2nm,0.4s,baz=40,slow=6.1,SNR=9.2
AKASG pP pP 16 15 31.2 +2.0
comp=Z,0.8nm,0.4s,baz=41,slow=6.9,SNR=2.2
KIEV Kiev 68.19 321 *e*P P 16 14 13.8 -0.2
KIEV pmax pmax
comp=Z,6.0nm,1.0s
KIEV Kiev 68.19 321 *e*P P 16 14 13.8 -0.2
comp=Z,5.8nm,1.0s
E19A Rath Farm, Rou 68.20 45 ⇓P P 16 14 14.8 +0.6
baz=68,SNR=10
B22A Reddig Ranch S 68.25 42 ⇑P P 16 14 15.0 +0.5
baz=68
A23A Redstone 68.29 41 ⇑P P 16 14 15.2 +0.4
baz=68
E20A Meyer Farm, Mu 68.49 45 ⇓P P 16 14 16.5 +0.5
baz=68,SNR=6.9
F19A Roth Farm, Mol 68.55 46 ⇑P P 16 14 17.0 +0.5
baz=68,SNR=19
NVAR Mina Array Bea 68.56 57 P P 16 14 17.6 +0.8
NVAR pP pP 16 15 36.1 +4.0
NVAR Mina Array Bea 68.56 57 P P 16 14 17.6 +0.8
comp=Z,14nm,0.7s,baz=295,slow=5.9,SNR=107
NVAR pP pP 16 15 36.1 +4.0
comp=Z,2.1nm,0.8s,baz=296,slow=6.6,SNR=5.3
B23A Brockton 68.60 42 ⇓P P 16 14 16.9 +0.3
baz=68,SNR=10
G18A Lazy EL Ranch, 68.61 46 ⇑P P 16 14 17.0 +0.1
baz=68
I16A Newdale 68.62 49 ⇓P P 16 14 18.1 +1.1
baz=68,SNR=14
D21A La Casta Ranch 68.65 44 ⇑P P 16 14 17.3 +0.3
baz=68
C22A Vida 68.69 43 ⇓P P 16 14 17.3 +0.1
baz=68
A24A Westby 68.72 41 ⇓P P 16 14 17.7 +0.4
baz=68
H17A Grant Village 68.74 48 ⇓P P 16 14 19.6 +1.8
baz=68,SNR=17
ELK Elko 68.74 53 P P 16 14 18.8 +0.9
ELK Elko 68.74 53 P P 16 14 18.8 +0.9
comp=Z,5.1nm,0.8s,baz=301,slow=7.0,SNR=21
DGMT Dagmar 68.96 41 *e*P P 16 14 19.5 +0.7
comp=Z,31nm,0.7s
DGMT Dagmar 68.96 41 ⇑P P 16 14 19.3 +0.4
baz=69
DCID1 Drake Creek 68.98 49 *e*P P 16 14 21.4 +2.2
comp=Z,23nm,0.8s
D22A Cohagen 68.98 43 ⇓P P 16 14 19.6 +0.6
baz=69
F20A Billings 68.98 45 ⇑P P 16 14 19.7 +0.6
baz=69
C23A Lambert 68.98 42 ⇑P P 16 14 19.4 +0.4
baz=69,SNR=9.8
H18A Shoshone NF, C 69.01 47 ⇑P P 16 14 19.7 +0.2
baz=69,SNR=5.6
I17A Pilgrim Ck. 69.07 48 ⇓P P 16 14 21.2 +1.4
baz=69
RRI2 Red Ridge 69.08 49 *e*P P 16 14 21.2 +1.3
comp=Z,34nm,0.8s
MOOW Moose Ponds 69.10 48 *e*P P 16 14 21.1 +1.1
comp=Z,17nm,1.1s
MTUM Tungsten Hills 69.13 58 *e*P P 16 14 21.3 +1.0
TPAW Teton Pass 69.17 49 *e*P P 16 14 21.8 +1.2
comp=Z,26nm,1.3s
LOHW Long Hollow 69.27 48 *e*P P 16 14 22.4 +1.4
comp=Z,19nm,1.5s
G20A Bridger 69.36 46 ⇓P P 16 14 21.3 -0.1
baz=69,SNR=7.7
HVU Hansel Valley 69.39 51 *e*P P 16 14 22.9 +1.2
HVU pmax pmax
comp=Z,11nm,1.3s
HVU Hansel Valley 69.39 51 *e*P P 16 14 22.9 +1.2
comp=Z,11nm,1.3s
D23A Lindsay 69.42 43 ⇑P P 16 14 22.1 +0.4
baz=69,SNR=7.1
C24A Savage 69.53 42 ⇑P P 16 14 23.0 +0.7
baz=69
E22A Miles City 69.60 44 ⇑P P 16 14 23.3 +0.5
baz=69
I19A Meeteetse 69.80 47 ⇓P P 16 14 24.7 +0.5
baz=70
VES Vestal, Richgr 69.84 59 ⇑P P 16 14 24.5 +0.1
baz=70
G21A Lodge Grass 69.86 45 ⇓P P 16 14 24.7 +0.3
baz=70
E23A Ismay 69.87 43 ⇓P P 16 14 24.8 +0.4
baz=70,SNR=19
D24A Glendive 69.88 42 ⇓P P 16 14 24.9 +0.5
baz=70,SNR=11
ASAR Alice Springs 69.89 189 P P 16 14 25.5 +0.8
ASAR pP pP 16 15 41.3 +0.9
ASAR P'P' 16 42 24.8
ASAR Alice Springs 69.89 189 P P 16 14 25.5 +0.8
comp=Z,30nm,0.6s,baz=359,slow=5.1,SNR=557
ASAR pP pP 16 15 41.3 +0.9
comp=Z,2.6nm,0.8s,baz=16,slow=5.9,SNR=3.2
ASAR PKPPKP P'P'df 16 42 24.8 +5.0
comp=Z,0.8nm,0.9s,baz=172,slow=2.5,SNR=6.9
F22A Rosebud 69.92 44 ⇓P P 16 14 24.9 +0.1
baz=70
H20A Greybull 69.98 46 ⇓P P 16 14 25.3 +0.1
baz=70,SNR=5.6
CWC Cottonwood Cre 70.03 58 ⇑P P 16 14 26.3 +0.6
baz=70
PKM Peak Mountain 70.04 60 ⇓P P 16 14 26.1 +0.3
baz=70,SNR=7.9
GRAC Grapevine Rang 70.07 57 ⇑P P 16 14 26.7 +1.0
baz=70,SNR=6.5
HWUT Hardware Ranch 70.16 50 *e*P P 16 14 25.6 -0.8
comp=Z,17nm,1.0s
R11A Troy Canyon, C 70.18 55 ⇓P P 16 14 26.9 +0.3
baz=70,SNR=23
MBWA Marble Bar 70.24 204 *e*P P 16 14 27.4 +0.7
comp=Z,17nm,0.6s
E24A Baker 70.30 43 ⇓P P 16 14 27.2 +0.2
baz=70
G22A Birney 70.31 45 ⇓P P 16 14 27.5 +0.3
baz=70
J19A Crowheart 70.31 48 ⇓P P 16 14 27.8 +0.5
baz=70,SNR=13
ISA Isabella 70.33 59 *e*P P 16 14 27.2 -0.2
ISA pmax pmax
comp=Z,7.0nm,0.9s
ISA Isabella 70.33 59 *e*P P 16 14 27.2 -0.2
comp=Z,7.0nm,0.9s
ISA Isabella 70.33 59 ⇑P P 16 14 26.9 -0.5
baz=70,SNR=5.7
H21A Big Horn, Sher 70.36 46 ⇓P P 16 14 27.6 0.0
baz=70,SNR=6.1
F23A Volborg 70.38 44 ⇑P P 16 14 27.5 0.0
baz=70,SNR=20
PDAR Pinedale Array 70.41 48 P P 16 14 28.1 +0.2
PDAR pP pP 16 15 44.2 +0.5
PDAR Pinedale Array 70.41 48 P P 16 14 28.1 +0.2
comp=Z,15nm,0.7s,baz=308,slow=1.7,SNR=101
PDAR pP pP 16 15 44.2 +0.5
comp=Z,1.7nm,0.9s,baz=346,slow=3.1,SNR=3.1
DUG Dugway 70.46 52 *e*P P 16 14 29.0 +0.8
DUG pmax pmax
comp=Z,14nm,0.8s
DUG Dugway 70.46 52 *e*P P 16 14 29.0 +0.8
comp=Z,14nm,0.8s
DUG Dugway 70.46 52 ⇑P P 16 14 28.9 +0.7
baz=70,SNR=19
MPMC Manual Prospec 70.64 58 ⇓P P 16 14 29.7 +0.3
baz=70,SNR=17
H22A Clearmont 70.73 45 ⇑P P 16 14 29.9 +0.3
baz=70
FURC Furnace Creek, 70.73 57 ⇓P P 16 14 30.3 +0.7
baz=70,SNR=8.4
K19A Absolon Red Bu 70.73 48 ⇓P P 16 14 29.4 -0.5
baz=70
M17A Scullys Gap (B 70.73 50 ⇓P P 16 14 30.4 +0.5
baz=70,SNR=5.8
J20A Shoshoni 70.75 47 ⇓P P 16 14 30.1 +0.2
baz=70,SNR=9.7
L18A Fontenelle, Gr 70.75 49 ⇓P P 16 14 30.3 +0.3
baz=70,SNR=7.8
F24A Ekalaka 70.75 43 ⇓P P 16 14 29.9 +0.1
baz=70,SNR=5.6
G23A Biddle 70.76 44 ⇓P P 16 14 29.9 +0.1
baz=70
I21A Big Trails, Te 70.82 46 ⇓P P 16 14 30.6 +0.3
baz=71,SNR=34
LRMC Laurel Mountai 70.92 59 ⇑P P 16 14 31.4 +0.4
baz=71
JLU Jordanelle 70.92 51 *e*P P 16 14 32.0 +1.0
comp=Z,30nm,1.7s
L19A Farson 70.98 49 ⇓P P 16 14 31.5 +0.1
baz=71
BLG Laguna Peak 71.03 60 ⇓P P 16 14 32.0 +0.5
baz=71
J21A Lysite 71.08 47 ⇑P P 16 14 32.0 +0.1
baz=71,SNR=6.3
K20A Yellowstone Ra 71.11 48 ⇑P P 16 14 31.8 -0.3
baz=71
G24A Alzada 71.14 44 ⇓P P 16 14 32.1 0.0
baz=71
EDW2 Edwards Air Fo 71.15 59 ⇓P P 16 14 32.5 +0.2
baz=71,SNR=13
DAU Daniels Canyon 71.16 51 *e*P P 16 14 33.7 +1.1
DAU Daniels Canyon 71.16 51 *e*P P 16 14 33.7 +1.1
I22A 9 Mile Ranch, 71.17 46 ⇑P P 16 14 32.5 +0.1
baz=71,SNR=6.1
ULM Lac du Bonnet 71.23 36 P P 16 14 31.8 -0.7
ULM Lac du Bonnet 71.23 36 P P 16 14 31.8 -0.7
comp=Z,17nm,0.7s,baz=318,slow=6.2,SNR=15
MPU Maple Canyon 71.24 52 *e*P P 16 14 33.8 +0.9
comp=Z,21nm,0.7s
EIDS Eidsvold 71.38 173 *e*P P 16 14 34.8 +1.3
comp=Z,38nm,1.5s
SHOC Shoshone 71.46 57 ⇓P P 16 14 34.5 +0.4
baz=71
H24A Dirks Ranch, A 71.50 44 ⇑P P 16 14 33.9 -0.4
baz=71,SNR=9.2
GSC Goldstone 71.56 58 *e*P P 16 14 35.2 +0.4
GSC pmax pmax
comp=Z,12nm,1.0s
GSC Goldstone 71.56 58 *e*P P 16 14 35.2 +0.4
comp=Z,12nm,1.0s
GSC Goldstone 71.56 58 ⇑P P 16 14 35.0 +0.3
baz=71,SNR=9.1
L20A Wamsutter 71.58 48 ⇓P P 16 14 35.2 +0.3
baz=71
BFSC Mount Baldy Ra 71.79 60 ⇓P P 16 14 36.3 +0.1
baz=72,SNR=5.3
MVU Marysvale 71.98 53 *e*P P 16 14 38.3 +0.9
comp=Z,12nm,1.0s
MSU Marysvale 71.99 53 *e*P P 16 14 38.5 +1.1
MSU Marysvale 71.99 53 *e*P P 16 14 38.5 +1.1
TUQ Turquoise Moun 71.99 58 ⇑P P 16 14 37.7 +0.4
baz=72,SNR=17
CCUT Cedar City 72.00 54 *e*P P 16 14 38.3 +0.8
comp=Z,11nm,1.1s
M20A Sweetwater, Wa 72.03 49 ⇓P P 16 14 37.8 +0.2
baz=72,SNR=5.2
K22A Casper 72.05 47 ⇑P P 16 14 37.5 -0.1
baz=72
L21A Rawlins 72.11 48 ⇓P P 16 14 38.0 0.0
baz=72,SNR=6.6
I24A Kuemmerle Ranc 72.12 45 ⇑P P 16 14 38.0 +0.1
baz=72
HEC Hector,Ludlow 72.17 58 ⇑P P 16 14 38.6 +0.2
baz=72,SNR=17
RSSD Black Hills 72.21 44 *e*P P 16 14 38.6 0.0
RSSD pmax pmax
comp=Z,35nm,1.6s
RSSD Black Hills 72.21 44 *e*P P 16 14 38.6 0.0
comp=Z,35nm,1.6s
Q16A Castle Valley 72.26 52 ⇑P P 16 14 39.3 +0.3
baz=72,SNR=5.5
P18A Preston Nutter 72.27 51 ⇓P P 16 14 39.6 +0.5
baz=72,SNR=8.9
M21A Separation Pea 72.38 48 ⇑P P 16 14 39.6 0.0
baz=72,SNR=5.2
O19A Miners Draw (B 72.39 50 ⇑P P 16 14 39.6 0.0
baz=72,SNR=8.1
K23A Bowen Ranch, D 72.43 46 ⇑P P 16 14 39.4 -0.4
baz=72
OJC Ojcow 72.45 326 *e*P P 16 14 40.0 +0.4
OJC pmax pmax
comp=Z,8.0nm,0.9s
OJC Ojcow 72.45 326 *e*P P 16 14 40.0 +0.4
comp=Z,7.8nm,0.9s
N20A Spence Gulch, 72.46 49 ⇑P P 16 14 40.7 +0.5
baz=72,SNR=19
KOLS Kolonicke sedl 72.47 324 *e*P P 16 14 40.5 +0.8
KOLS pmax pmax
comp=Z,3.0nm,1.2s
KOLS Kolonicke sedl 72.47 324 *e*P P 16 14 40.5 +0.8
SRU San Rafael 72.48 52 ⇓P P 16 14 40.5 +0.3
baz=72,SNR=13
J24A Dixon Ranch, L 72.49 45 ⇓P P 16 14 39.7 -0.4
baz=72
L22A Ellis Ranch, M 72.55 47 ⇑P P 16 14 40.6 0.0
baz=72
LDFC Landfair 72.72 57 *e*P P 16 14 42.5 +0.9
comp=Z,31nm,0.8s
AGMN Agassiz Nation 72.75 37 *e*P P 16 14 40.1 -1.3
comp=Z,5.3nm,0.6s
CRVS Cervenica-Dubn 72.83 324 *e*P P 16 14 41.0 -0.8
CRVS Cervenica-Dubn 72.83 324 *e*P P 16 14 41.0 -0.8
L23A Garrett 72.86 47 ⇓P P 16 14 42.0 -0.4
baz=73
N21A Black Mountain 72.91 49 ⇓P P 16 14 42.8 0.0
baz=73,SNR=12
M22A Cedar Creek Ra 72.92 48 ⇓P P 16 14 43.3 +0.4
baz=73
P19A Cripple Cowboy 72.94 50 ⇓P P 16 14 43.0 0.0
baz=73,SNR=17
PFO Pinyon Flat Ob 72.94 59 *e*P P 16 14 43.5 +0.5
PFO Pinyon Flat Ob 72.94 59 P P 16 14 43.0 +0.1
comp=Z,5.3nm,1.0s,baz=315,slow=5.3,SNR=7.6
PFO Pinyon Flat Ob 72.94 59 ⇓P P 16 14 42.8 -0.1
baz=73
BELC Belle Mtn. Jos 72.94 59 ⇑P P 16 14 42.4 -0.5
baz=73,SNR=6.1
O20A White River Ci 72.98 50 ⇓P P 16 14 43.2 +0.1
baz=73,SNR=5.5
M23A Laramie 73.32 47 ⇓P P 16 14 45.0 -0.2
baz=73
O21A Pagoda 73.33 49 ⇑P P 16 14 45.6 +0.4
baz=73
IRM Iron Mountain 73.34 58 ⇑P P 16 14 45.5 +0.4
baz=73,SNR=10
U15A North Rim 73.40 55 ⇑P P 16 14 46.7 +1.0
baz=73,SNR=33
W13A Hualapai Mount 73.42 57 ⇑P P 16 14 46.2 +0.4
baz=73,SNR=5.7
N22A Wattenberg Ran 73.43 48 ⇑P P 16 14 46.4 +0.6
baz=73,SNR=10
BAR Barrett 73.46 60 *e*P P 16 14 46.3 +0.5
comp=Z,22nm,0.3s
MONP Monument Peak 73.47 60 ⇓P P 16 14 46.2 +0.1
baz=73
BC3 Big Chuckawall 73.51 59 ⇑P P 16 14 46.5 +0.3
baz=73,SNR=9.3
N23A Red Feather La 73.63 48 ⇑P P 16 14 47.6 +0.6
baz=73,SNR=5.9
UPC Upice 73.65 328 *e*P P 16 14 47.9 +1.3
DPC Dobruska-Polom 73.67 328 *e*P P 16 14 48.0 +1.3
MORC Moravsky Berou 73.67 327 *e*P P 16 14 47.9 +1.1
MORC pmax pmax
comp=Z,51nm,2.5s
MORC Moravsky Berou 73.67 327 *e*P P 16 14 47.9 +1.1
comp=Z,51nm,2.5s
K26A Motz Farm, Whi 73.68 45 ⇓P P 16 14 47.3 +0.2
baz=73
KRLC Kraliky 73.72 327 *e*P P 16 14 48.1 +1.1
M24A Cheyenne 73.78 47 ⇑P P 16 14 48.6 +0.9
baz=74
S18A Hurst Farm, Bl 73.79 52 ⇓P P 16 14 48.1 +0.1
baz=74,SNR=18
Q20A Ridgley Place, 73.80 50 ⇑P P 16 14 47.9 +0.1
baz=74,SNR=5.3
SWSC Sam W. Stewart 73.81 59 ⇓P P 16 14 47.0 -0.8
baz=74
PDMCI Parker Dam,Lak 73.83 57 ⇓P P 16 14 48.2 +0.3
baz=74
P21A Newcastle 73.84 50 ⇑P P 16 14 48.4 +0.2
baz=74,SNR=6.4
O22A Kremmling 73.85 49 ⇓P P 16 14 48.6 +0.3
baz=74,SNR=12
PV04 Paradox Valley 73.88 51 *e*P P 16 14 49.2 +0.9
CLL Collm 74.07 330 *e*P P 16 14 49.7 +0.8
comp=Z,7.0nm,0.6s
CLL Collm 74.07 330⇓*i*P P 16 14 49.6 +0.7
CLL pmax pmax
comp=Z,7.0nm,0.6s
CLL Collm 74.07 330⇓*i*P P 16 14 49.6 +0.7
comp=Z,7.0nm,0.6s
BR131 Keskin Array S 74.08 311 *e*P P 16 14 48.1 -1.3
comp=Z,1.8nm,0.7s
BRTR Keskin Array B 74.08 311 P P 16 14 49.9 +0.5
BRTR pP pP 16 16 07.5 +1.5
BRTR Keskin Array B 74.08 311 P P 16 14 49.9 +0.5
comp=Z,2.0nm,0.5s,baz=74,slow=3.3,SNR=15
BRTR pP pP 16 16 07.5 +1.5
comp=Z,1.1nm,0.8s,baz=80,slow=5.8,SNR=4.1
O23A Lake Granby, G 74.14 48 ⇓P P 16 14 50.7 +0.8
baz=74,SNR=11
P22A Eagle 74.15 49 ⇑P P 16 14 50.5 +0.5
baz=74,SNR=6.9
VYHS Vyhne 74.21 325 *e*P P 16 14 51.0 +1.2
VYHS pmax pmax
comp=Z,2.0nm,0.9s
VYHS Vyhne 74.21 325 *e*P P 16 14 51.0 +1.2
N24A Carr 74.22 47 ⇓P P 16 14 50.9 +0.6
baz=74
PV01 Paradox Valley 74.25 51 *e*P P 16 14 48.6 -1.9
comp=Z,756nm,0.7s
Q21A Lamborn Mesa, 74.28 50 ⇓P P 16 14 51.4 +0.8
baz=74
GLA Glamis 74.31 59 *e*P P 16 14 52.1 +1.4
GLA pmax pmax
comp=Z,20nm,1.0s
GLA Glamis 74.31 59 *e*P P 16 14 52.1 +1.4
comp=Z,20nm,1.0s
GLA Glamis 74.31 59 ⇑P P 16 14 52.0 +1.3
baz=74
R20A Redvale 74.31 51 ⇑P P 16 14 51.4 +0.5
baz=74,SNR=6.7
SMCO Snowmass 74.34 50 *e*P P 16 14 51.8 +0.5
comp=Z,13nm,0.8s
BRSD Miller 74.38 41 ⇑P P 16 14 51.4 +0.6
baz=74,SNR=5.8
WUAZ Wupatki 74.57 55 *e*Pn P 16 14 52.5 +0.1
comp=Z,41nm,1.4s
WUAZ Wupatki 74.57 55 ⇓P P 16 14 53.1 +0.8
baz=74
S20A Disappointment 74.58 51 ⇓P P 16 14 52.9 +0.4
baz=74,SNR=15
ISCO Idaho Springs 74.60 48 *e*P P 16 14 53.3 +0.7
ISCO pmax pmax
comp=Z,13nm,1.3s
ISCO Idaho Springs 74.60 48 *e*P P 16 14 53.3 +0.7
comp=Z,13nm,1.3s
ISCO Idaho Springs 74.60 48 ⇑P P 16 14 53.1 +0.5
baz=74,SNR=6.3
Q22A Crested Butte, 74.61 50 ⇓P P 16 14 53.3 +0.6
baz=74
R21A Cimarron 74.63 50 ⇓P P 16 14 53.5 +0.7
baz=74,SNR=14
Y14A Wickenburg 74.75 57 ⇑P P 16 14 53.6 +0.4
baz=74
EYMN Ely 74.82 35 *e*P P 16 14 52.4 -0.9
comp=Z,30nm,1.0s
S21A Coal Bank Pass 75.01 51 ⇓P P 16 14 55.9 +0.9
baz=75,SNR=20
N26A Koester Ranch, 75.06 46 ⇑P P 16 14 55.3 +0.4
baz=75
O25A Wiggins 75.14 47 ⇑P P 16 14 55.6 +0.2
baz=75
Q23A Hartsel 75.15 49 ⇓P P 16 14 56.1 +0.4
baz=75
R22A Saguache, Gunn 75.15 50 ⇑P P 16 14 56.9 +1.1
baz=75
P24A Kohler Place, 75.18 48 ⇓P P 16 14 56.7 +0.9
baz=75
Z14A Wintersburg 75.20 57 ⇓P P 16 14 56.6 +0.8
baz=75
X16A Lo Mia Camp, P 75.32 56 ⇑P P 16 14 57.2 +0.6
baz=75
N27A Anderson Farm, 75.42 46 ⇑P P 16 14 57.4 +0.4
baz=75
O26A Horse Wrangler 75.45 47 ⇑P P 16 14 57.4 +0.2
baz=75
Q24A Divide 75.46 49 ⇓P P 16 14 57.7 +0.2
baz=75,SNR=5.4

S22A	4UR Ranch, Cre	75.47	50	⇓P		P		16 14 58.4	+0.8
	baz=75,SNR=14								
M28A	Bar X Bar Ranc	75.55	45	⇓P		P		16 14 57.8	+0.1
	baz=75								
P25A	Willow Gulch B	75.56	48	⇓P		P		16 14 58.4	+0.5
	baz=75								
OGNE	Ogallala	75.57	45	⇓P		P		16 14 58.3	+0.5
	baz=75								
ROTZ	Rotzenmuhle	75.64	330	eP		P		16 14 59.5	+1.6
	comp=Z,5.0nm,1.2s								
T21A	Navajo Lake	75.64	51	⇑P		P		16 14 59.0	+0.6
	baz=75								
R23A	Moffat	75.68	50	⇑P		P		16 14 59.7	+1.0
	baz=75,SNR=12								
KHC	Kasperske Hory	75.68	329	eP		P		16 14 59.0	+0.8
GEC2	GERESS Array S	75.87	328	eP		P		16 15 00.4	+1.0
	comp=Z,5.0nm,1.4s								
GEC2	GERESS Array S	75.87	328	eP		P		16 15 00.4	+1.0
GEC2				pmax		pmax			
	comp=Z,5.0nm,1.4s								
GERES	GERESS Array B	75.87	328	P		P		16 15 00.1	+0.7
GERES				pP		pP		16 16 18.3	+1.9
GERES	GERESS Array B	75.87	328	P		P		16 15 00.1	+0.7
	comp=Z,0.8nm,0.3s,baz=30,slow=6.2,SNR=9.5								
GERES				pP		pP		16 16 18.3	+1.9
	comp=Z,0.7nm,0.6s,baz=33,slow=5.1,SNR=2.1								
O27A	Beecher Island	75.91	46	⇓P		P		16 15 00.1	+0.4
	baz=76								
WET	Wettzell	75.92	329	eP		P		16 15 01.0	+1.5
	comp=Z,8.0nm,1.1s								
WET	Wettzell	75.92	329	eP		P		16 15 01.0	+1.5
WET				pmax		pmax			
	comp=Z,8.0nm,1.1s								
Q25A	Bedland, Calha	75.97	48	⇓P		P		16 15 00.4	+0.2
	baz=76								
T22A	Edith	75.97	51	⇓P		P		16 15 01.2	+0.9
	baz=76,SNR=12								
U21A	Nageezi	75.99	52	⇑P		P		16 15 00.9	+0.5
	baz=76								
ECSD	EROS Data Cent	75.99	40	eP		P		16 14 59.7	-0.4
	comp=Z,16nm,0.7s								
V20A	Brimhall	76.00	53	⇓P		P		16 15 00.8	+0.3
	baz=76								
R24A	Sanders Place,	76.03	49	⇑P		P		16 15 01.2	+0.7
	baz=76,SNR=8.0								
GRF	Grafenberg Arr	76.04	330	eP		P		16 15 01.6	+1.4
	comp=Z,10.0nm,0.5s								
GRF	Grafenberg Arr	76.04	330	eP		P		16 15 01.6	+1.4
GRF				pmax		pmax			
	comp=Z,10.0nm,0.5s								
X18A	Snowflake	76.09	55	⇑P		P		16 15 01.8	+0.9
	baz=76								
SDCO	Great Sand Dun	76.18	50	eP		P		16 15 00.8	-0.8
	comp=Z,38nm,1.6s								
SCHQ	Schefferville	76.30	17	eP		P		16 15 01.4	-0.1
SCHQ	Schefferville	76.30	17	P		P		16 15 01.1	-0.4
	comp=Z,9.8nm,0.6s,baz=351,slow=7.3,SNR=19								
Q26A	Hugo	76.34	48	⇓P		P		16 15 02.5	+0.3
	baz=76								
S24A	Houchin Ranch,	76.41	50	⇑P		P		16 15 03.3	+0.5
	baz=76,SNR=7.1								
V21A	Milan	76.45	52	⇑P		P		16 15 03.3	+0.3
	baz=76								
U22A	Llaves	76.46	51	⇑P		P		16 15 03.5	+0.4
	baz=76								
SPMN	St. Paul	76.47	37	⇓P		P		16 15 02.1	-0.5
	baz=76								
TNS	Taunus Mts	76.52	332	eP		P		16 15 03.9	+1.0
	comp=Z,5.0nm,1.0s								
TNS	Taunus Mts	76.52	332	eP		P		16 15 03.9	+1.0
TNS				pmax		pmax			
	comp=Z,5.0nm,1.0s								
R25A	Fountain Ranch	76.52	49	⇓P		P		16 15 03.2	-0.1
	baz=76,SNR=9.2								
KSCO	Kaye Shedlock'	76.73	47	⇑P		P		16 15 04.5	+0.1
	baz=76								
P28A	Saint Francis	76.74	46	⇓P		P		16 15 04.3	0.0
	baz=76								
S25A	Robets Cordova	76.81	49	⇓P		P		16 15 04.9	0.0
	baz=76								
R26A	Arlington	76.84	48	⇓P		P		16 15 04.8	-0.2
	baz=77,SNR=32								
U23A	El Rito	76.86	51	⇑P		P		16 15 06.3	+1.0
	baz=77								
BGNE	Belgrade	77.09	43	⇑P		P		16 15 06.5	+0.3
	baz=77								
R27A	Eads	77.19	48	⇓P		P		16 15 06.9	0.0
	baz=77								
T25A	Trinidad	77.21	49	⇑P		P		16 15 07.2	0.0
	baz=77								
S26A	Kim	77.34	48	⇑P		P		16 15 07.5	-0.3
	baz=77,SNR=6.9								
STKA	Stephens Creek	77.55	182	P		P		16 15 09.3	+0.8
STKA	Stephens Creek	77.55	182	P		P		16 15 09.3	+0.8
	comp=Z,9.3nm,0.8s,baz=337,slow=8.9,SNR=13								
T26A	Comanche Natio	77.61	49	⇑P		P		16 15 09.3	-0.1
	baz=77								
R28A	Tribune	77.65	47	⇓P		P		16 15 09.4	-0.1
	baz=77								
FORT	Forrest	77.70	194	eP		P		16 15 09.6	+0.3
	comp=Z,56nm,0.6s								
ANMO	Albuquerque	77.74	52	P		P		16 15 09.7	-0.4
ANMO	Albuquerque	77.74	52	P		P		16 15 09.7	-0.4
	comp=Z,4.5nm,0.7s,baz=8.9,slow=3.0,SNR=6.0								
GIVF	Givet	77.76	334	eP		P		16 15 09.5	-0.2
GIVF	Givet	77.76	334	eP		P		16 15 09.5	-0.2
GIVF	Givet	77.76	334	eP		P		16 15 09.5	-0.2
R29A	Marienthal	77.93	47	⇓P		P		16 15 10.4	-0.5
	baz=78,SNR=5.3								
BAIF	Baives	77.99	335	eP		P		16 15 10.9	0.0
BAIF	Baives	77.99	335	eP		P		16 15 10.9	0.0
BAIF	Baives	77.99	335	eP		P		16 15 10.9	0.0
T27A	Campo	78.15	48	⇑P		P		16 15 12.1	-0.2
	baz=78								
S28A	Manter	78.18	48	⇑P		P		16 15 12.0	-0.3
	baz=78								
BFO	Black Forest	78.19	331	eP		P		16 15 12.9	+0.8
	comp=Z,4.0nm,0.8s								
BFO	Black Forest	78.19	331	eP		P		16 15 12.9	+0.8
BFO				pmax		pmax			
	comp=Z,4.0nm,0.8s								
Y22A	Socorro	78.20	53	⇓P		P		16 15 13.3	+0.7
	baz=78								
CDF	Champ du Feu	78.47	332	eP		P		16 15 13.8	+0.1
	comp=Z,15nm,0.9s								
CDF	Champ du Feu	78.47	332	eP		P		16 15 13.8	+0.1
CDF				pmax		pmax			
	comp=Z,15nm,0.9s								
CDF	Champ du Feu	78.47	332	eP		P		16 15 13.8	+0.1
	comp=Z,15nm,0.9s								
X24A	Lazy VL Ranch,	78.58	52	⇑P		P		16 15 14.7	0.0
	baz=78								
U27A	Thompson Grove	78.58	49	⇓P		P		16 15 14.2	-0.4
	baz=78								
W25A	X Bar L Ranch,	78.62	51	⇑P		P		16 15 15.0	+0.2
	baz=78								
Z22A	Elephant Butte	78.71	54	⇑P		P		16 15 15.7	+0.4
	baz=78								
Y23A	Lovelace Mesa,	78.71	53	⇓P		P		16 15 15.7	+0.3
	baz=78								
319A	Douglas	78.77	56	⇓P		P		16 15 16.0	+0.4
	baz=78								
121A	Cookes Peak, D	78.78	55	⇓P		P		16 15 16.1	+0.3
	baz=78								
S30A	Montezuma	78.87	47	⇑P		P		16 15 15.8	-0.3
	baz=79								
FUORN	Ofenpass-Fuorn	79.00	329	eP		P		16 15 17.9	+1.1
	comp=Z,12nm,1.3s								
X25A	Clemmons Ranch	79.03	51	⇑P		P		16 15 17.4	+0.3
	baz=79								
V27A	Dan Oppiter Fa	79.08	49	⇓P		P		16 15 17.4	+0.2
	baz=79								
MEZF	Maizieres J'vi	79.11	333	eP		P		16 15 17.2	+0.2
MEZF	Maizieres J'vi	79.11	333	eP		P		16 15 17.2	+0.2
HAU	Haudompre	79.13	332	eP		P		16 15 16.0	-1.2
HAU	Haudompre	79.13	332	eP		P		16 15 16.0	-1.2
HAU	Haudompre	79.13	332	eP		P		16 15 16.0	-1.2
HINF	Hinteralfeld	79.13	332	eP		P		16 15 15.9	-1.3
HINF	Hinteralfeld	79.13	332	eP		P		16 15 15.9	-1.3
HINF	Hinteralfeld	79.13	332	eP		P		16 15 15.9	-1.3
SFTF	Sexfontaines	79.37	333	eP		P		16 15 18.4	0.0
	comp=Z,23nm,1.0s								
SFTF	Sexfontaines	79.37	333	eP		P		16 15 18.4	0.0
	comp=Z,23nm,1.0s								
T31A	Randall Ranch,	79.69	46	⇓P		P		16 15 20.5	+0.1
	baz=79								
W28A	Vega	79.80	49	⇓P		P		16 15 21.3	+0.2
	baz=80								
Z25A	Roswell	79.94	52	⇓P		P		16 15 22.2	+0.3
	baz=80								
Y26A	Elida	79.94	51	⇑P		P		16 15 22.2	+0.3
	baz=80								
Z26A	Caprock	80.35	52	⇓P		P		16 15 24.7	+0.7
	baz=80,SNR=9.2								
224A	Cornudas Mount	80.39	53	⇓P		P		16 15 25.1	+0.7
	baz=80								
125A	Gardner Draw,	80.44	53	⇓P		P		16 15 25.3	+0.8
	baz=80								
FLN	La Foliniere	80.50	337	eP		P		16 15 24.3	-0.1
FLN	La Foliniere	80.50	337	eP		P		16 15 24.3	-0.1
FLN	La Foliniere	80.50	337	eP		P		16 15 24.3	-0.1
LDF	La Druitiere	80.56	336	eP		P		16 15 24.3	-0.4
LDF	La Druitiere	80.56	336	eP		P		16 15 24.3	-0.4
LDF	La Druitiere	80.56	336	eP		P		16 15 24.3	-0.4
LOR	Lormes	80.57	333	eP		P		16 15 24.6	-0.2
	comp=Z,18nm,1.0s								
LOR	Lormes	80.57	333	eP		P		16 15 24.6	-0.2
	comp=Z,18nm,1.0s								
V31A	Spring Creek L	80.63	47	⇓P		P		16 15 25.8	+0.4
	baz=80								
Z27A	Tatum	80.73	51	⇑P		P		16 15 26.4	+0.3
	baz=80								
126A	Clayton Basin,	80.80	52	⇑P		P		16 15 26.6	+0.2
	baz=80								
SSF	Saint Saulge	80.87	334	eP		P		16 15 26.2	-0.2
SSF	Saint Saulge	80.87	334	eP		P		16 15 26.2	-0.2
SSF	Saint Saulge	80.87	334	eP		P		16 15 26.2	-0.2
324A	Moseley Ranch,	80.89	54	⇓P		P		16 15 27.1	+0.1
	baz=81								
GRR	Gorron	80.95	337	eP		P		16 15 26.7	0.0
GRR	Gorron	80.95	337	eP		P		16 15 26.7	0.0
GRR	Gorron	80.95	337	eP		P		16 15 26.7	0.0
SMF	Signal de Mont	81.13	333	eP		P		16 15 27.8	0.0
	comp=Z,21nm,0.8s								
SMF	Signal de Mont	81.13	333	eP		P		16 15 27.8	0.0
SMF				pmax		pmax			
	comp=Z,21nm,0.8s								
SMF	Signal de Mont	81.13	333	eP		P		16 15 27.8	0.0
	comp=Z,21nm,0.8s								
226B	Tecolote Peak,	81.15	53	⇑P		P		16 15 29.2	+1.0
	baz=81								
AVF	Avril sur Loir	81.16	334	eP		P		16 15 27.9	0.0
	comp=Z,24nm,1.1s								
AVF	Avril sur Loir	81.16	334	eP		P		16 15 27.9	0.0
AVF				pmax		pmax			
	comp=Z,24nm,1.1s								
AVF	Avril sur Loir	81.16	334	eP		P		16 15 27.9	0.0
	comp=Z,24nm,1.1s								
LPL	La Plagne	81.18	331	eP		P		16 15 28.6	+0.3
LPL	La Plagne	81.18	331	eP		P		16 15 28.6	+0.3
LPL	La Plagne	81.18	331	eP		P		16 15 28.6	+0.3
LPG	La Plagne	81.19	331	eP		P		16 15 28.8	+0.3
LPG	La Plagne	81.19	331	eP		P		16 15 28.8	+0.3
LPG	La Plagne	81.19	331	eP		P		16 15 28.8	+0.3
X31A	McDonald Ranch	81.44	48	⇑P		P		16 15 30.2	+0.6
	baz=81								
BGF	Bois d'Agland	81.52	334	eP		P		16 15 29.9	+0.1
BGF	Bois d'Agland	81.52	334	eP		P		16 15 29.9	+0.1
BGF	Bois d'Agland	81.52	334	eP		P		16 15 29.9	+0.1
SGMF	Saint Gilles	81.53	338	eP		P		16 15 30.2	+0.5
SGMF	Saint Gilles	81.53	338	eP		P		16 15 30.2	+0.5
SGMF	Saint Gilles	81.53	338	eP		P		16 15 30.2	+0.5
Z29A	Hungry Hill Ra	81.59	50	⇓P		P		16 15 30.9	+0.4
	baz=81								
ROSF	Rostrenen	81.64	338	eP		P		16 15 30.0	-0.3
ROSF	Rostrenen	81.64	338	eP		P		16 15 30.0	-0.3
ROSF	Rostrenen	81.64	338	eP		P		16 15 30.0	-0.3
425A	Indio Mountain	81.67	54	⇑P		P		16 15 31.3	+0.3
	baz=81								
326A	Caldwell Ranch	81.83	53	⇓P		P		16 15 32.0	+0.3
	baz=82,SNR=6.7								
TCF	Toulx Ste Croi	81.96	334	eP		P		16 15 32.3	+0.2
	comp=Z,15nm,1.1s								
TCF	Toulx Ste Croi	81.96	334	eP		P		16 15 32.3	+0.2
TCF				pmax		pmax			
	comp=Z,15nm,1.0s								
TCF	Toulx Ste Croi	81.96	334	eP		P		16 15 32.3	+0.2
	comp=Z,15nm,1.0s								
228A	UT Block 9, Go	81.98	52	⇑P		P		16 15 33.0	+0.4
	baz=82								
QUIF	Quistinic	82.00	338	eP		P		16 15 32.6	+0.4
QUIF	Quistinic	82.00	338	eP		P		16 15 32.6	+0.4
QUIF	Quistinic	82.00	338	eP		P		16 15 32.6	+0.4
426A	McDonald Obser	82.29	53	⇑P		P		16 15 34.5	+0.2
	baz=82								
MFF	Saint Martin d	82.37	336	eP		P		16 15 33.8	-0.4
MFF	Saint Martin d	82.37	336	eP		P		16 15 33.8	-0.4
MFF	Saint Martin d	82.37	336	eP		P		16 15 33.8	-0.4
Z31A	Sharp Cattle R	82.37	49	⇑P		P		16 15 34.3	-0.2
	baz=82								
328A	Wristen Ranch,	82.43	52	⇓P		P		16 15 35.2	+0.3
	baz=82,SNR=9.1								
VIVF	Saint-Julien-l	82.45	332	eP		P		16 15 34.3	-0.4
	comp=Z,15nm,1.1s								
VIVF	Saint-Julien-l	82.45	332	eP		P		16 15 34.3	-0.4
VIVF				pmax		pmax			
	comp=Z,15nm,1.1s								
VIVF	Saint-Julien-l	82.45	332	eP		P		16 15 34.3	-0.4
	comp=Z,15nm,1.1s								
130A	Snyder	82.50	50	⇑P		P		16 15 35.0	-0.1
	baz=82								
427A	Hayter Ranch,	82.50	53	⇓P		P		16 15 35.8	+0.5
	baz=82,SNR=6.5								
229A	Bryant Ranch,	82.52	51	⇑P		P		16 15 35.4	+0.1
	baz=82								
TUL1	Tulsa	82.55	45	⇑P		P		16 15 35.6	+0.3
	baz=82								
526A	Mary Lane Ranc	82.72	54	⇑P		P		16 15 36.5	0.0
	baz=82								
Z32A	Haskell	82.73	49	⇑P		P		16 15 36.2	-0.1
	baz=82								
131A	Roby	82.74	50	⇓P		P		16 15 36.6	+0.2
	baz=82								
329A	Wagon Wheel Ra	82.80	52	⇓P		P		16 15 36.5	-0.2
	baz=82								
SFIN	Scholer Farm	82.84	36	⇓P		P		16 15 36.4	-0.3
	baz=82								
527A	Woodward Ranch	82.92	54	⇓P		P		16 15 37.5	0.0
	baz=83								
230A	Sterling City	82.96	51	⇑P		P		16 15 37.4	-0.1
	baz=83								
626A	Big Bend Ranch	83.08	54	⇑P		P		16 15 38.5	+0.3
	baz=83,SNR=5.1								
ABTX	Abilene, Hawle	83.18	49	⇑P		P		16 15 38.7	+0.2
	baz=83								
CAF	Calviac	83.23	333	eP		P		16 15 39.4	+0.8
	comp=Z,14nm,1.1s								
CAF	Calviac	83.23	333	eP		P		16 15 39.4	+0.8
CAF				pmax		pmax			
	comp=Z,14nm,1.1s								
CAF	Calviac	83.23	333	eP		P		16 15 39.4	+0.8
	comp=Z,14nm,1.1s								
330A	Merton	83.30	51	⇓P		P		16 15 39.5	+0.2
	baz=83								
231A	Bronte	83.35	50	⇓P		P		16 15 39.2	-0.3
	baz=83								
528A	Cox Ranch, San	83.37	53	⇑P		P		16 15 40.2	+0.5
	baz=83,SNR=6.8								
LASF	Ste Croix	83.41	332	eP		P		16 15 40.1	+0.5
LASF	Ste Croix	83.41	332	eP		P		16 15 40.1	+0.5
TXAR	Lajitas Array	83.51	54	P		P		16 15 40.9	+0.5
TXAR				pP		pP		16 17 01.2	+2.2
TXAR	Lajitas Array	83.51	54	P		P		16 15 40.9	+0.5
	comp=Z,9.1nm,0.8s,baz=295,slow=3.8,SNR=28								
TXAR				pP		pP		16 17 01.2	+2.2
	comp=Z,1.3nm,0.7s,baz=290,slow=4.1,SNR=4.3								
429A	Davenport Ranc	83.51	52	⇑P		P		16 15 40.3	-0.1
	baz=83								
627A	Terlingua Ranc	83.58	54	⇑P		P		16 15 40.7	0.0
	baz=83								
529A	Stev Forest Ra	83.71	53	⇑P		P		16 15 41.6	+0.2
	baz=84,SNR=5.1								
430A	Bagget Ranch,	83.75	52	⇓P		P		16 15 41.4	-0.1
	baz=84,SNR=7.1								
232A	Coleman	83.75	50	⇓P		P		16 15 41.6	+0.1
	baz=84								
331A	San Angelo	83.78	51	⇓P		P		16 15 41.5	-0.2
	baz=84								
628A	Black Gap, Mar	83.83	53	⇓P		P		16 15 41.9	-0.1
	baz=84								
SIUC	Southern Illin	84.16	39	eP		P		16 15 43.5	+0.1
	comp=Z,40nm,0.7s								
431A	Sonora	84.17	51	⇓P		P		16 15 43.6	0.0
	baz=84								
530A	J-C Ranch, Com	84.18	52	⇓P		P		16 15 43.9	+0.2
	baz=84,SNR=9.6								
531A	Rocksprings	84.60	51	⇑P		P		16 15 45.6	-0.1
	baz=84								
ACSO	Alum Creek Sta	84.62	34	eP		P		16 15 45.8	+0.2
	comp=Z,20nm,0.6s								
532A	Rocksprings	84.98	51	⇓P		P		16 15 47.6	-0.1
	baz=85								
631A	Perdido Creek	85.17	52	⇓P		P		16 15 48.3	-0.3
	baz=85								
EPF	Esparros	85.47	334	eP		P		16 15 49.9	+0.1
	comp=Z,7.8nm,0.9s								
EPF	Esparros	85.47	334	eP		P		16 15 49.9	+0.1
EPF				pmax		pmax			
	comp=Z,8.0nm,0.9s								
EPF	Esparros	85.47	334	eP		P		16 15 49.9	+0.1
	comp=Z,7.8nm,0.9s								
732A	Laxson Ranch,	86.03	52	⇑P		P		16 15 52.9	+0.2
	baz=86								
WVT	Waverly	86.09	39	eP		P		16 15 51.3	-1.6
WVT				pmax		pmax			
	comp=Z,12nm,1.0s								
WVT	Waverly	86.09	39	eP		P		16 15 51.3	-1.6
	comp=Z,12nm,1.0s								
PLAL	Pickwick Lake	86.94	40	eP		P		16 15 56.1	-0.9
	comp=Z,8.9nm,0.8s								
TZTN	Tazewell	87.56	36	eP		P		16 16 00.3	+0.3
	comp=Z,18nm,1.2s								
SWET	Sewanee	87.69	38	eP		P		16 15 59.5	-1.1
	comp=Z,23nm,1.1s								
TKL	Tuckaleechee C	88.23	37	P		P		16 16 03.2	+0.1
TKL	Tuckaleechee C	88.23	37	P		P		16 16 03.2	+0.1
	comp=Z,12nm,0.7s,baz=138,slow=1.0,SNR=9.3								
URZ	Urewera	89.18	154	P		P		16 16 07.0	-0.1
URZ	Urewera	89.18	154	P		P		16 16 07.0	-0.1
	baz=45,slow=7.1								
ESDC	Sonseca Array	89.83	335	P		P		16 16 10.5	-0.1
ESDC				pP		pP		16 17 31.5	+1.2
ESDC	Sonseca Array	89.83	335	P		P		16 16 10.5	-0.1
	comp=Z,0.3nm,0.3s,baz=360,slow=4.6,SNR=4.8								
ESDC				pP		pP		16 17 31.5	+1.2
	comp=Z,0.3nm,0.3s,baz=3.6,slow=4.2,SNR=1.9								
GOGA	Godfrey	90.28	38	eP		P		16 16 13.4	+0.7
GOGA	Godfrey	90.28	38	eP		P		16 16 13.4	+0.7
	comp=Z,78nm,1.0s								
TORD	Torodi Ar. Bea	111.78	320	PKiKP		PKiKP		16 21 44.0	-0.8
TORD	Torodi Ar. Bea	111.78	320	PKiKP		PKiKP		16 21 44.0	-0.8
	comp=Z,0.4nm,0.4s,baz=20,slow=1.8,SNR=6.0								
OTAV	Otavalo	121.04	51	ePKPdf		PKPdf		16 22 00.9	-2.3
VNDA	Vanda	123.79	175	PKP		PKPdf		16 22 06.2	+0.2
VNDA	Vanda	123.79	175	PKP		PKPdf		16 22 06.2	+0.2
	comp=Z,2.1nm,0.8s,baz=322,slow=5.7,SNR=14								
MAW	Mawson	128.23	209	PKP		PKPdf		16 22 15.9	+1.2
MAW	Mawson	128.23	209	PKP		PKPdf		16 22 15.9	+1.2
	comp=Z,1.9nm,0.7s,baz=292,slow=7.9,SNR=3.9								
LPAZ	La Paz	140.35	52	PKP		PKPdf		16 22 38.6	-1.0
LPAZ	La Paz	140.35	52	PKP		PKPdf		16 22 38.6	-1.0
	comp=Z,2.0nm,0.8s,baz=1.6,slow=6.2,SNR=6.3								
SIV	San Ignacio	143.72	42	PKP	PKPbc	16 22 43.1	-0.4		
SIV	San Ignacio	143.72	42	PKP	PKPbc	16 22 43.1	-0.4		
	comp=Z,3.8nm,0.6s,baz=320,slow=4.0,SNR=14								
LVC	Limon Verde	144.89	59	ePKPdf		PKPab		16 22 48.3	+0.9
MAIT	Maitri	146.13	206	eP		PKPdf		16 22 38.8	-8.6
BDFB	Brasilia	148.22	21	PKPbc		PKPbc		16 22 56.3	-0.1
BDFB	Brasilia	148.22	21	PKPbc		PKPbc		16 22 56.3	-0.1
	comp=Z,9.3nm,0.6s,baz=299,slow=2.0,SNR=13								
SNAA	Sanae	149.75	200	ePKP		PKPbc		16 22 58.5	0.0
SNAA	Sanae	149.75	200	ePKPab		PKPab		16 23 05.9	+0.6
SNAA	Sanae	149.75	200	epPKPab		pPKPab		16 24 22.9	-3.5
SNAA	Sanae	149.75	200	ePKPdf		PKPbc		16 22 58.2	-0.3
CFAA	Coronel Fontan	151.63	71	PKPbc		PKPbc		16 23 03.6	-0.5
CFAA				PKPab		PKPab		16 23 14.8	+0.5
CFAA	Coronel Fontan	151.63	71	PKPbc		PKPbc		16 23 03.6	-0.5
	comp=Z,1.2nm,0.7s,baz=277,slow=2.7,SNR=18								
CFAA				PKPab		PKPab		16 23 14.8	+0.5
	comp=Z,0.2nm,0.6s,baz=263,slow=3.1,SNR=3.8								
VNA1	Neumayer--Stat	151.73	199	ePKP		PKPbc		16 23 03.6	+0.6
PLCA	Paso Flores	154.85	90	PKPbc		PKPbc		16 23 10.6	-0.2
PLCA				PKPab		PKPab		16 23 27.2	-0.5
PLCA	Paso Flores	154.85	90	PKPbc		PKPbc		16 23 10.6	-0.2
	comp=Z,1.6nm,0.7s,baz=253,slow=5.9,SNR=4.2								
PLCA				PKPab		PKPab		16 23 27.2	-0.5
	comp=Z,2.9nm,0.9s,baz=263,slow=4.5,SNR=3.7								

*IDC **29** 16:08:19.9±0.8,20°.92S×69°.98W,h48km±5km

	comp=N,152nm,18.1s,slow=42								
CFAA	**Coronel Fontan**	**10.85**	**172**	P	**Pn**	**16 10 50.2**	**-2.1**
CFAA				S	Sn	16 13 03.3	+11
CFAA	**Coronel Fontan**	**10.85**	**172**	P	**Pn**	**16 10 50.2**	**-2.1**
	comp=N,0.1nm,0.3s,baz=27,slow=16,SNR=4.2								
CFAA				S	Sn	16 13 03.3	+11
	comp=N,0.3nm,0.3s,baz=255,slow=19,SNR=3.5								
SAML	**Samuel**	**13.53**	**30**	*e*Pn	**Pn**	**16 11 27.1**	**-1.9**
	comp=N,3.2nm,0.9s								
TRQA	**Tornquist**	**18.52**	**160**	*e*P	**P**	**16 12 29.4**	**-2.7**
	comp=N,9.0nm,0.8s								
PLCA	**Paso Flores**	**19.84**	**181**	P	**P**	**16 12 47.4**	**+0.8**
PLCA	**Paso Flores**	**19.84**	**181**	P	**P**	**16 12 47.4**	**+0.8**
	baz=356,slow=14,SNR=1.6								
PLCA				LR	LR	16 19 24.7	
	comp=N,171nm,18.4s,baz=354,slow=34								
BDFB	**Brasilia**	**21.52**	**80**	P	**P**	**16 13 06.2**	**+1.3**
BDFB	**Brasilia**	**21.52**	**80**	P	**P**	**16 13 06.2**	**+1.3**
	comp=N,3.3nm,0.8s,baz=276,slow=12,SNR=3.2								
DBIC	**Dimbokro**	**69.54**	**74**	P	**P**	**16 19 23.5**	**-0.4**
	comp=N,2.0nm,0.7s								
NVAR	**Mina Array Bea**	**74.33**	**322**	P	**P**	**16 19 54.0**	**+1.7**
NVAR	**Mina Array Bea**	**74.33**	**322**	P	**P**	**16 19 54.0**	**+1.7**
	comp=N,1.0nm,0.8s,baz=150,slow=6.5,SNR=5.1								
TORD	**Torodi Ar. Bea**	**78.11**	**71**	P	**P**	**16 20 13.9**	**-0.1**
TORD				pP	**pP**	**16 20 27.3**	**-1.0**
TORD	**Torodi Ar. Bea**	**78.11**	**71**	P	**P**	**16 20 13.9**	**-0.1**
	comp=N,3.8nm,0.7s,baz=255,slow=4.8,SNR=24								
TORD				pP	**pP**	**16 20 27.3**	**-1.0**
	comp=N,1.3nm,0.7s,baz=256,slow=5.1,SNR=4.2								
YKA	**Yellowknife Ar**	**90.22**	**341**	P	**P**	**16 21 14.5**	**+0.1**
YKA				pP	**pP**	**16 21 28.9**	**-0.1**
YKA	**Yellowknife Ar**	**90.22**	**341**	P	**P**	**16 21 14.5**	**+0.1**
	comp=N,1.9nm,0.8s,baz=135,slow=4.6,SNR=13								
YKA				pP	**pP**	**16 21 28.9**	**-0.1**
	comp=N,1.0nm,0.8s,baz=133,slow=4.9,SNR=6.6								
WRA	**Warramunga Arr**	**132.99**	**212**	PKP	**PKPdf**	**16 27 28.1**	**-2.4**
WRA	**Warramunga Arr**	**132.99**	**212**	PKP	**PKPdf**	**16 27 28.1**	**-2.4**
	comp=N,0.4nm,0.7s,baz=149,slow=1.8,SNR=6.9								
ZALV	**Zalesovo Beam**	**141.78**	**24**	PKP	**PKPdf**	**16 27 43.4**	**-2.1**
ZALV				pPKP	**pPKPdf**	**16 28 00.3**	**-0.3**
ZALV	**Zalesovo Beam**	**141.78**	**24**	PKP	**PKPdf**	**16 27 43.4**	**-2.1**
	comp=N,0.4nm,0.4s,baz=318,slow=1.9,SNR=3.5								
ZALV				pPKP	**pPKPdf**	**16 28 00.3**	**-0.3**
	comp=N,1.2nm,0.6s,baz=318,slow=2.0,SNR=4.7								
MKAR	**Makanchi Array**	**145.69**	**34**	PKPbc	**PKPab**	**16 27 53.6**	**+0.2**
MKAR				pPKPbc	pPKPbc	16 28 08.1	+0.1
MKAR	**Makanchi Array**	**145.69**	**34**	PKPbc	**PKPab**	**16 27 53.6**	**+0.2**
	comp=N,3.6nm,0.8s,baz=319,slow=3.5,SNR=43								
MKAR				pPKPbc	pPKPbc	16 28 08.1	+0.1
	comp=N,3.8nm,0.9s,baz=300,slow=2.7,SNR=16								
SONM	**Songino Array**	**152.90**	**5**	PKPbc	**PKPbc**	**16 28 12.3**	**+0.8**
SONM				pPKPbc	**pPKPbc**	**16 28 26.7**	**+0.1**
SONM	**Songino Array**	**152.90**	**5**	PKPbc	**PKPbc**	**16 28 12.3**	**+0.8**
	comp=N,0.8nm,0.7s,baz=349,slow=0.8,SNR=5.6								
SONM				pPKPbc	**pPKPbc**	**16 28 26.7**	**+0.1**
	comp=N,1.5nm,0.9s,baz=347,slow=1.5,SNR=7.7								

*IDC **29** 16:10:49.5±0.9, 18°.33N×106°.39W, h0km, mb3.9/9, mb1 4.2/11, mb1mx4.1/26, mbtmp3.9/11, ML3.4/2, MS4.2/19, Ms1 4.2/19, ms1mx4.1/36, Error ellipse: s-maj=47.6km s-min=14.9km az=66.0*

*NEIC **29** 16:10:51.4±0.6, 18°.44N×106°.33W, h10km, mb4.5/31, MD4.6(MEX), Error ellipse: s-maj=11.5km s-min=6.0km az=221.0*

*MEX **29** 16:10:53.7±0.7, 18°.63N×106°.32W, h9km±35km, MD4.6*

*GCMT **29** 16:10:53.3±0.4, 18°.63N×106°.53W, h15km±2km, MW5.0, Moment Tensor Solution. s18,c18; s69,c98; Moment tensor: Scale 10^16 Nm; Mrr=0.61±.14; Mθθ=1.06±.13; Mϕϕ 1.66±.15; Mrθ=0.71±.28; Mθϕ=2.65±.13; Mϕr 1.68±.36; Best double couple: M0 3.40000×10^16 NP1:ϕs281.00000°, δ68.00000°, λ171.00000°. NP2:ϕs14.00000°, δ82.00000°, λ22.00000°. Principal axes: T 3.9900, Plg21.0000°, Azm239.0000°; N -1.2700, Plg66.0000°, Azm33.0000°; P -2.7300, Plg10.0000°, Azm146.0000°; Data Used: IU II G IC CN.*

*ISCJB **29** 16:10:54.6±1.2, 18°.58N±0°.05×106°.19W±0°.05, h39km±10km, mb4.4/31, MS4.2/17 Error ellipse: s-maj=10.4km s-min=5.2km az=137.0*

ISC 29 16:10:52.0±0.5, 18°.58N±0°.04×106°.25W±0°.03, h10km, n179, σ1s42/138, mb4.4/31, MS4.1/17, 46C-35D, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.47**	**51**	*e*P	**Pn**	**16 11 16.6**	**-1.9**
CJM				*i* S	**Sn**	**16 11 35.7**	**-2.1**
CJM	**Chamela**	**1.47**	**51**	*e*P	**Pn**	**16 11 16.6**	**-1.9**
CJM				*i* S	**Sn**	**16 11 35.7**	**-2.1**
R15V		**2.23**	**74**	*e*P	**Pn**	**16 11 28.0**	**-1.1**
R15V				*i* S	**Sn**	**16 11 55.2**	**-1.5**
EZ5V		**2.67**	**70**	*e*P	**Pn**	**16 11 35.7**	**+0.5**
EZ5V				*i* S	**Sn**	**16 12 07.3**	**-0.5**
MMIG	**Aquila**	**2.78**	**95**	*i* P	**Pn**	**16 11 37.3**	**+0.8**
MMIG				*i* S	**Sn**	**16 12 09.8**	**-0.3**
MMIG	**Aquila**	**2.78**	**95**	*i* P	**Pn**	**16 11 37.3**	**+0.8**
MMIG				*i* S	**Sn**	**16 12 09.8**	**-0.3**
ANIG	**Ahuacatlan**	**2.96**	**33**	*e*P	**Pn**	**16 11 38.5**	**-0.6**
ANIG				*i* S	**Sn**	**16 12 13.1**	**-1.6**
ANIG	**Ahuacatlan**	**2.96**	**33**	*e*P	**Pn**	**16 11 38.5**	**-0.6**
ANIG				*i* S	**Sn**	**16 12 13.1**	**-1.6**
ZIIG	**Zihuatanejo**	**4.66**	**101**	*i* P	**Pn**	**16 12 03.5**	**+1.1**
ZIIG				*i* S	**Sn**	**16 12 56.9**	**+0.4**
ZIIG	**Zihuatanejo**	**4.66**	**101**	*i* P	**Pn**	**16 12 03.5**	**+1.1**
ZIIG				*i* S	**Sn**	**16 12 56.9**	**+0.4**
ZAIG	**Zacatecas**	**5.42**	**39**	*e*P	**Pn**	**16 12 13.7**	**+0.6**
ZAIG				*i* S	**Sn**	**16 13 14.2**	**-1.4**
ZAIG	**Zacatecas**	**5.42**	**39**	*e*P	**Pn**	**16 12 13.7**	**+0.6**
ZAIG				*i* S	**Sn**	**16 13 14.2**	**-1.4**
ARIG	**Puente Sto Nin**	**5.62**	**92**	*i* P	**Pn**	**16 12 16.5**	**+0.9**
ARIG				*i* S	**Sn**	**16 13 20.2**	**0.0**
CAIG	**El Cayaco**	**5.90**	**104**	*e*P	**Pn**	**16 12 22.1**	**+2.6**
CAIG	**El Cayaco**	**5.90**	**104**	*e*P	**Pn**	**16 12 22.1**	**+2.6**
PLIG	**Platanillo**	**6.41**	**91**	*e*P	**Pn**	**16 12 27.5**	**+0.9**
PLIG				*i* S	**Sn**	**16 13 40.6**	**+0.7**
PLIG	**Platanillo**	**6.41**	**91**	*e*P	**Pn**	**16 12 27.5**	**+0.9**
PLIG				*i* S	**Sn**	**16 13 40.6**	**+0.7**
YAIG	**Yautepec**	**6.82**	**86**	*i* P	**Pn**	**16 12 32.2**	**0.0**
YAIG				*i* S	**Sn**	**16 13 50.1**	**+0.1**
YAIG	**Yautepec**	**6.82**	**86**	*i* P	**Pn**	**16 12 32.2**	**0.0**
YAIG				*i* S	**Sn**	**16 13 50.1**	**+0.1**
UTMO	**Huajuapan**	**8.07**	**94**	*i* P	**Pn**	**16 12 52.5**	**+3.0**
UTMO	**Huajuapan**	**8.07**	**94**	*i* P	**Pn**	**16 12 52.5**	**+3.0**
TXAR	**Lajitas Array**	**10.97**	**12**	Pn	Pn	16 13 33.3	+4.2
TXAR	**Lajitas Array**	**10.97**	**12**	Pn	Pn	16 13 33.3	+4.2
	0.1nm,0.3s,baz=192,slow=12,SNR=16						
626A	**Big Bend Ranch**	**11.10**	**10**	⇓P	Pn	16 13 34.7	+3.8
	baz=11,SNR=10						
627A	**Terlingua Ranc**	**11.14**	**13**	⇑P	Pn	16 13 35.5	+4.0
	baz=11,SNR=7.9						
628A	**Black Gap, Mar**	**11.29**	**15**	⇓P	Pn	16 13 36.7	+3.2
	baz=12						
526A	**Mary Lane Ranc**	**11.60**	**9**	⇑P	Pn	16 13 42.1	+4.3
	baz=12,SNR=6.7						
527A	**Woodward Ranch**	**11.77**	**11**	⇑P	Pn	16 13 44.4	+4.3
	baz=12						
528A	**Cox Ranch, San**	**11.96**	**15**	⇑P	Pn	16 13 46.4	+3.7
	baz=12						
631A	**Perdido Creek**	**11.97**	**25**	⇑P	Pn	16 13 46.9	+4.2
	baz=12,SNR=6.7						
426A	**McDonald Obser**	**12.21**	**9**	⇓P	Pn	16 13 50.4	+4.2
	baz=12,SNR=9.3						
425A	**Indio Mountain**	**12.21**	**5**	⇑P	Pn	16 13 50.9	+4.8
	baz=12,SNR=19						
530A	**J-C Ranch, Com**	**12.36**	**20**	⇑P	Pn	16 13 51.5	+3.4
	baz=13,SNR=7.8						
632A	**Uvalde**	**12.38**	**27**	⇑P	Pn	16 13 51.8	+3.5
	baz=13,SNR=6.9						
427A	**Hayter Ranch,**	**12.49**	**11**	⇓P	Pn	16 13 53.5	+3.5
	baz=13						
429A	**Davenport Ranc**	**12.63**	**17**	⇓P	Pn	16 13 56.0	+4.2
	baz=13,SNR=6.5						
531A	**Rocksprings**	**12.65**	**23**	⇑P	Pn	16 13 55.2	+3.1
	baz=13						
325A	**Bean Ranch, Si**	**12.79**	**5**	⇓P	Pn	16 13 58.7	+4.5
	baz=13,SNR=8.0						
324A	**Moseley Ranch,**	**12.83**	**3**	⇑P	Pn	16 13 58.4	+3.8
	baz=13,SNR=16						
326A	**Caldwell Ranch**	**12.85**	**9**	⇑P	Pn	16 13 58.9	+4.1
	baz=13						
532A	**Rocksprings**	**12.87**	**25**	⇑P	Pn	16 13 58.9	+3.8
	baz=13,SNR=17						
320A	**Kipp Ranch, An**	**12.87**	**351**	⇓P	Pn	16 13 58.7	+3.5
	baz=13						
430A	**Baggett Ranch,**	**12.98**	**20**	⇑P	Pn	16 14 01.1	+4.5
	baz=13,SNR=14						
319A	**Douglas**	**13.04**	**348**	⇑P	Pn	16 14 00.6	+3.2
	baz=13						
MNTX	**Cornudas Mount**	**13.09**	**3**	*e*Pn	**Pn**	**16 13 59.9**	**+1.8**
	17nm,1.2s						
431A	**Sonora**	**13.10**	**22**	⇓P	Pn	16 14 02.2	+4.0
	baz=13,SNR=5.8						
328A	**Wristen Ranch,**	**13.13**	**13**	⇓P	Pn	16 14 02.6	+4.0
	baz=13						
JCT	**Junction City**	**13.22**	**25**	*e*Pn	Pn	16 14 02.7	+2.9
	100nm,1.6s						
JCT	**Junction City**	**13.22**	**25**	⇓P	Pn	16 14 03.0	+3.2
	baz=13,SNR=7.1						
329A	**Wagon Wheel Ra**	**13.42**	**16**	⇓P	Pn	16 14 06.4	+3.8
	baz=14						
220A	**Playas Peak, P**	**13.43**	**352**	⇑P	Pn	16 14 06.5	+3.7
	baz=14,SNR=26						
221A	**Mesquite Ranch**	**13.45**	**354**	⇑P	Pn	16 14 06.4	+3.4
	baz=14,SNR=7.4						
224A	**Cornudas Mount**	**13.46**	**3**	⇓P	Pn	16 14 06.8	+3.6
	baz=14,SNR=21						
225A	**Deer Hill, Car**	**13.54**	**5**	⇑P	Pn	16 14 08.4	+4.0
	baz=14						
432A	**Menard**	**13.57**	**24**	⇓P	Pn	16 14 08.0	+3.3
	baz=14,SNR=5.2						
226B	**Tecolote Peak,**	**13.58**	**8**	⇑P	Pn	16 14 09.5	+4.7
	baz=14						
330A	**Mertzon**	**13.58**	**19**	⇑P	Pn	16 14 08.6	+3.9
	baz=14						
331A	**San Angelo**	**13.73**	**21**	⇓P	Pn	16 14 10.7	+3.9
	baz=14						
121A	**Cookes Peak, D**	**13.97**	**355**	⇑P	Pn	16 14 14.6	+4.5
	baz=14,SNR=7.0						
332A	**Millersview**	**14.05**	**24**	⇑P	Pn	16 14 14.8	+3.7
	baz=14,SNR=8.8						
120A	**U Bar Ranch, L**	**14.08**	**352**	⇓P	Pn	16 14 15.3	+3.7
	baz=14,SNR=9.5						
124A	**Stringfield Ra**	**14.08**	**3**	⇑P	Pn	16 14 16.3	+4.5
	baz=14,SNR=26						
125A	**Gardner Draw,**	**14.10**	**6**	⇓P	**P**	**16 14 17.1**	**-2.6**
	baz=14,SNR=6.7						
231A	**Bronte**	**14.34**	**21**	⇓P	Pn	16 14 18.2	+3.1
	baz=14						
129A	**Stewart Farms,**	**14.54**	**15**	⇑P	**P**	**16 14 22.3**	**-2.3**
	baz=15						
214A	**Organ Pipe Nat**	**14.58**	**337**	⇑P	**Pn**	**16 14 20.2**	**+1.8**
	baz=15						
Z20A	**Nine Sixteen R**	**14.63**	**352**	⇑P	**P**	**16 14 23.3**	**-2.3**
	baz=15						
Z22A	**Elephant Butte**	**14.63**	**358**	⇓P	**P**	**16 14 23.7**	**-2.0**
	baz=15,SNR=12						
Z24A	**Sheeppen Canyo**	**14.71**	**3**	⇓P	Pn	16 14 23.9	+3.4
	baz=15						
Z21A	**St. Cloud Mine**	**14.73**	**355**	⇓P	**P**	**16 14 24.8**	**-2.0**
	baz=15,SNR=10						
HKT	**Hockley**	**14.77**	**38**	*e*Pn	Pn	16 14 17.8	-3.1
	95nm,2.1s						
Z26A	**Caprock**	**14.78**	**7**	⇑P	**P**	**16 14 25.8**	**-1.4**
	baz=15,SNR=5.7						
Z27A	**Tatum**	**14.93**	**10**	⇓P	**P**	**16 14 27.2**	**-1.8**
	baz=15,SNR=21						
131A	**Roby**	**15.00**	**19**	⇑P	**Pn**	**16 14 27.1**	**+3.0**
	baz=15						
Y23A	**Lovelace Mesa,**	**15.29**	**1**	⇑P	**P**	**16 14 31.4**	**-1.7**
	baz=16						
Y24A	**Capitan**	**15.30**	**3**	⇑P	**P**	**16 14 32.4**	**-0.7**
	baz=16,SNR=5.9						
Y22A	**Socorro**	**15.31**	**358**	⇑P	**P**	**16 14 31.9**	**-1.4**
	baz=16						
Y25A	**Mesa, Roswell**	**15.35**	**5**	⇑P	**P**	**16 14 32.0**	**-1.6**
	baz=16,SNR=12						
Z30A	**Sanderson Ranc**	**15.35**	**16**	⇑P	**Pn**	**16 14 31.5**	**+2.7**
	baz=16,SNR=14						
Y20A	**Horse Springs,**	**15.39**	**353**	⇑P	**P**	**16 14 33.8**	**-0.3**
	baz=16,SNR=8.4						
Y21A	**Point of Rocks**	**15.42**	**356**	⇑P	**P**	**16 14 34.4**	**-0.2**
	baz=16,SNR=10						
Y27A	**Causey**	**15.49**	**10**	⇑P	**Pn**	**16 14 33.4**	**+2.6**
	baz=16,SNR=12						
BNM	**Barren Site**	**15.52**	**359**	*e*Pn	**Pn**	**16 14 32.0**	**+0.8**
	15nm,1.3s						
LENM	**Lemitar**	**15.54**	**358**	*e*Pn	**P**	**16 14 34.3**	**-1.4**
	24nm,1.3s						
MSTX	**Muleshoe**	**15.64**	**11**	⇓P	**P**	**16 14 35.6**	**-1.2**
	baz=16,SNR=20						
113A	**Mohawk Valley,**	**15.66**	**336**	⇓P	**Pn**	**16 14 34.5**	**+1.7**
	baz=16						
Z31A	**Sharp Cattle R**	**15.67**	**19**	⇓P	**Pn**	**16 14 35.3**	**+2.3**
	baz=16						
LAZ	**Ladron**	**15.78**	**357**	*e*Pn	**Pn**	**16 14 36.3**	**+1.7**
	12nm,1.3s						
X21A	**Alamocita Cree**	**15.87**	**355**	⇑P	**P**	**16 14 39.0**	**-0.5**
	baz=16						
Z32A	**Haskell**	**15.88**	**21**	⇑P	**Pn**	**16 14 38.0**	**+2.4**
	baz=16						
Z14A	**Wintersburg**	**15.90**	**339**	⇑P	**Pn**	**16 14 37.8**	**+1.9**
	baz=16						
X23A	**Hourglass Bar**	**15.94**	**0**	⇓P	**Pn**	**16 14 38.9**	**+2.2**
	baz=16						
Y30A	**Stafford Cattl**	**15.97**	**16**	⇓P	**P**	**16 14 39.6**	**-0.9**
	baz=16						
X20A	**Quemado**	**16.03**	**353**	⇑P	**P**	**16 14 41.3**	**0.0**
	baz=16,SNR=8.3						
X26A	**CR and CF Fran**	**16.06**	**7**	⇓P	**P**	**16 14 41.2**	**-0.4**
	baz=16,SNR=5.3						
Y31A	**Rekieta Farm,**	**16.23**	**18**	⇓P	**Pn**	**16 14 42.1**	**+1.9**
	baz=16						
ANMO	**Albuquerque**	**16.31**	**359**	*e*P	**P**	**16 14 43.8**	**-0.5**
	8.9nm,1.2s						
ANMO	**Albuquerque**	**16.31**	**359**	Pn	**P**	**16 14 44.1**	**-0.2**
	0.1nm,0.3s,baz=188,slow=15,SNR=4.7						
ANMO				LR	LR	16 20 50.2	
	comp=Z,727nm,21.9s,baz=40,slow=36						
GLA	**Glamis**	**16.34**	**334**	*e*Pn	**Pn**	**16 14 39.9**	**-1.7**
	10nm,0.6s						
X16A	**Lo Mia Camp, P**	**16.44**	**345**	⇓P	**P**	**16 14 45.5**	**-0.3**
	baz=17,SNR=5.0						
Y14A	**Wickenburg**	**16.45**	**340**	⇓P	**P**	**16 14 44.7**	**-1.0**
	baz=17						
W23A	**Werner Place,**	**16.52**	**0**	⇑P	**P**	**16 14 46.6**	**-0.1**
	baz=17						
W24A	**Lazy 6 Ranch,**	**16.59**	**2**	⇓P	**Pn**	**16 14 46.6**	**+1.7**
	baz=17,SNR=10						
W26A	**Owens Ranch, T**	**16.60**	**7**	⇓P	**Pn**	**16 14 46.3**	**+1.4**
	baz=17						
W20A	**Ramah**	**16.61**	**354**	⇑P	**Pn**	**16 14 46.7**	**+1.5**
	baz=17						
W27A	**Bowe Ranch, En**	**16.67**	**9**	⇑P	**Pn**	**16 14 47.8**	**+2.0**
	baz=17,SNR=7.2						
AMTX	**Amarillo**	**16.75**	**13**	*e*Pn	**P**	**16 14 48.8**	**-0.3**
	20nm,0.7s						
X31A	**McDonald Ranch**	**16.94**	**18**	⇓P	**P**	**16 14 51.2**	**+0.1**
	baz=17						
V21A	**Milan**	**17.21**	**356**	⇑P	**P**	**16 14 54.6**	**+0.3**
	baz=17						
V25A	**Rancho No Teng**	**17.26**	**4**	⇓P	**P**	**16 14 55.0**	**+0.2**
	baz=18						
V22A	**San Miguel Ran**	**17.28**	**358**	⇑P	**P**	**16 14 55.4**	**+0.3**
	baz=18						
V26A	**Tequesquite Ra**	**17.29**	**7**	⇓P	**P**	**16 14 55.4**	**+0.2**
	baz=17						
WMOK	**Wichita Mounta**	**17.42**	**21**	*e*Pn	**Pn**	**16 14 55.3**	**+0.2**
	11nm,0.9s						
PFO	**Pinyon Flat Ob**	**17.53**	**331**	*e*Pn	**P**	**16 14 59.0**	**+1.2**
	18nm,1.5s						
PFO	**Pinyon Flat Ob**	**17.53**	**331**	LR	LR	16 20 51.4	
	comp=Z,981nm,18.8s,baz=144,slow=34						
ISA	**Isabella**	**20.17**	**330**	*e*P	Pn	16 15 28.5	0.0
	19nm,1.2s						
MSU	**Marysvale**	**20.52**	**347**	*e*P	Pn	16 15 32.3	-0.7
	31nm,1.2s						
ISCO	**Idaho Springs**	**21.16**	**1**	*e*P	**P**	**16 15 39.0**	**+1.3**
	15nm,1.1s						
MPU	**Maple Canyon**	**21.86**	**349**	*e*P	**P**	**16 15 45.9**	**+0.8**
	9.8nm,0.9s						
DAU	**Daniels Canyon**	**22.18**	**350**	*e*P	**P**	**16 15 50.2**	**+1.6**
	57nm,1.2s						
JTS	**JuntasAbangare**	**22.19**	**109**	*e*P	**P**	**16 15 46.8**	**-1.8**
	251nm,1.4s						
DUG	**Dugway**	**22.28**	**347**	*e*P	**P**	**16 15 49.2**	**-0.2**
	19nm,1.2s						
NVAR	**Mina Array Bea**	**22.40**	**335**	P	**P**	**16 15 52.7**	**+1.9**
NVAR	**Mina Array Bea**	**22.40**	**335**	P	**P**	**16 15 52.7**	**+1.9**
	5.4nm,1.1s,baz=159,slow=10,SNR=11						
JLU	**Jordanelle**	**22.40**	**350**	*e*P	**P**	**16 15 51.8**	**+0.9**
	60nm,1.7s						
LRAL	**Lakeview Retre**	**22.48**	**46**	*e*P	**P**	**16 15 51.3**	**-0.3**
	32nm,1.0s						
CMB	**Columbia Colle**	**22.98**	**330**	*e*P	**P**	**16 15 55.9**	**-1.0**
	12nm,1.2s						
ELK	**Elko**	**23.41**	**343**	P	**P**	**16 16 03.2**	**+1.8**
ELK	**Elko**	**23.41**	**343**	P	**P**	**16 16 03.2**	**+1.8**
	3.9nm,1.0s,baz=169,slow=6.6,SNR=7.8						
ELK				LR	LR	16 24 32.8	
	comp=Z,601nm,21.1s,baz=156,slow=35						
PDAR	**Pinedale Array**	**24.28**	**354**	P	**P**	**16 16 10.4**	**+0.8**
PDAR	**Pinedale Array**	**24.28**	**354**	P	**P**	**16 16 10.4**	**+0.8**
	1.2nm,0.7s,baz=165,slow=6.2,SNR=3.9						
PDAR				LR	LR	16 25 31.5	
	comp=Z,526nm,21.2s,baz=190,slow=36						
SNOW	**Snow King Moun**	**25.10**	**352**	*e*P	**P**	**16 16 18.7**	**+1.5**
	43nm,1.1s						
TPAW	**Teton Pass**	**25.15**	**352**	*e*P	**P**	**16 16 16.8**	**-0.9**
	43nm,1.3s						
LOHW	**Long Hollow**	**25.23**	**353**	*e*P	**P**	**16 16 17.4**	**-0.8**
	25nm,1.0s						
MOOW	**Moose Ponds**	**25.38**	**352**	*e*P	**P**	**16 16 19.3**	**-0.3**
	19nm,1.3s						
IMW	**Indian Meadow**	**25.55**	**352**	*e*P	**P**	**16 16 20.4**	**-0.9**
	8.8nm,1.0s						
HLID	**Hailey**	**25.84**	**346**	*e*P	**P**	**16 16 23.6**	**-0.2**
	16nm,1.2s						
TKL	**Tuckaleechee C**	**26.16**	**45**	LR	LR	16 28 47.9	
	comp=Z,386nm,18.2s,baz=250,slow=41						
MCMT	**McKenzie Canyo**	**26.75**	**350**	*e*P	**P**	**16 16 33.1**	**+1.0**
	6.4nm,1.1s						
YBH	**Yreka Blue Hor**	**27.02**	**332**	LR	LR	16 26 53.3	
	comp=Z,681nm,19.5s,baz=159,slow=36						
DLMT	**Dillon**	**27.23**	**350**	*e*P	**P**	**16 16 37.9**	**+1.6**
	11nm,1.1s						
LRM	**Limekiln Ridge**	**27.65**	**351**	*e*P	**P**	**16 16 41.1**	**+0.9**
	87nm,1.2s						
F13A	**Darby**	**27.95**	**348**	⇑P	**P**	**16 16 41.0**	**-1.8**
	baz=28						
E17A	**Martinsdale**	**28.07**	**353**	⇑P	**P**	**16 16 42.0**	**-1.8**
	baz=28						
CHMT	**Chamberlain Mo**	**28.84**	**350**	*e*P	**P**	**16 16 51.7**	**+0.9**
	5.9nm,1.1s						
MSO	**Missoula**	**28.88**	**349**	*e*P	**P**	**16 16 50.8**	**-0.2**
	22nm,1.4s						
SLMT	**Seeley Lake**	**29.20**	**350**	*e*P	**P**	**16 16 54.9**	**+1.1**
	32nm,1.3s						
NEW	**Newport**	**30.91**	**346**	LR	LR	16 29 04.2	
	comp=Z,376nm,20.4s,baz=145,slow=35						
ULM	**Lac du Bonnet**	**32.67**	**12**	LR	LR	16 31 04.1	
	comp=Z,709nm,18.7s,baz=271,slow=37						
SADO	**Sadowa**	**34.55**	**35**	LR	LR	16 32 08.3	
	comp=Z,324nm,18.2s,baz=86,slow=37						
BBB	**Bella Bella**	**37.67**	**338**	LR	LR	16 33 18.3	
	comp=Z,332nm,19.9s,baz=155,slow=36						
TAOE	**Nuku Hiva Isla**	**43.14**	**234**	*e*T	T	17 04 34.4	
	94nm,0.3s						
YKA	**Yellowknife Ar**	**44.26**	**354**	P	**P**	**16 19 01.2**	**-0.1**
YKA				PcP	**PcP**	**16 20 45.2**	**-0.5**
YKA	**Yellowknife Ar**	**44.26**	**354**	P	**P**	**16 19 01.2**	**-0.1**
	1.3nm,0.8s,baz=170,slow=7.3,SNR=12						
YKA				PcP	**PcP**	**16 20 45.2**	**-0.5**
	0.2nm,0.7s,baz=159,slow=2.6,SNR=3.3						
SCHQ	**Schefferville**	**46.98**	**30**	LR	LR	16 38 05.6	
	comp=Z,179nm,18.5s,baz=205,slow=35						
RKT	**Rikitea**	**50.04**	**215**	*e*S	**S**	**16 26 55.7**	**-2.5**
	1μm,33.5s						
RKT				*e*LR	LR	16 33 52.0	
	1μm,30.2s,baz=23						
RKT				*e*T	T	17 13 12.3	
	6.4nm,0.3s						
LPAZ	**La Paz**	**51.07**	**130**	P	**P**	**16 19 56.0**	**+0.4**
LPAZ	**La Paz**	**51.07**	**130**	P	**P**	**16 19 56.0**	**+0.4**
	0.3nm,0.3s,baz=333,slow=4.8,SNR=2.7						
LPAZ				LR	LR	16 39 15.8	
	comp=Z,223nm,18.1s,baz=67,slow=34						
EGAK	**Eagle**	**51.73**	**342**	*e*P

	comp=Z,1µm,0.4s							
ISRV	**Sarvestan**	**4.03**	**290**	*e*Pn	**Pn**	**16 18 19.4**	**+1.3**
IMEH	**Mehriz**	**4.14**	**324**	*e*Pn	**Pn**	**16 18 20.1**	**+0.5**
IMEH				*e*		16 18 40.3	
	comp=Z,553nm,0.2s						
IMEH	**Mehriz**	**4.14**	**324**	*e*Pn	**Pn**	**16 18 20.1**	**+0.5**
IPAR	**Pars**	**4.25**	**296**	*e*Pn	**Pn**	**16 18 22.6**	**+1.5**
IPAR				*e*		16 19 51.3	
	comp=Z,645nm,0.3s						
IPAR	**Pars**	**4.25**	**296**	*e*Pn	**Pn**	**16 18 22.6**	**+1.5**
IKOO	**Kooshah**	**4.56**	**17**	*e*Pn	Pn	16 18 20.2	-5.2
IKOO				*e*		16 19 56.5	
	comp=N,833nm,0.3s						
IKOO	**Kooshah**	**4.56**	**17**	*e*Pn	Pn	16 18 20.2	-5.2
ICHK	**Chekchek**	**4.94**	**329**	*e*Pn	**Pn**	**16 18 30.4**	**-0.2**
ICHK				*e*		16 20 13.2	
	comp=Z,326nm,0.3s						
ICHK	**Chekchek**	**4.94**	**329**	*e*Pn	**Pn**	**16 18 30.4**	**-0.2**
ITEG	**Tejag**	**4.96**	**13**	*e*Pn	Pn	16 18 26.0	-4.8
ITEG				*e*Sg	**Sb**	**16 19 46.2**	**+3.2**
ITEG				*e*		16 20 02.0	
	comp=Z,629nm,0.3s						
ITEG	**Tejag**	**4.96**	**13**	*e*Pn	Pn	16 18 26.0	-4.8
ITEG				*e*Sg	**Sb**	**16 19 46.2**	**+3.2**
ISAD	**Sadrabad**	**5.05**	**321**	*e*Pn	**Pn**	**16 18 32.5**	**+0.4**
ISAD	**Sadrabad**	**5.05**	**321**	*e*Pn	**Pn**	**16 18 32.5**	**+0.4**
IDAH	**Dahanechah**	**5.12**	**23**	*e*	Pg	16 19 01.6	+8.4
	comp=Z,322nm,0.3s						
TABS	**Tabas**	**5.59**	**357**	*e*P	**Pn**	**16 18 40.1**	**+0.8**
TABS	**Tabas**	**5.59**	**357**	*e*P	**Pn**	**16 18 40.1**	**+0.8**
NASN	**Na'in**	**6.20**	**321**	*e*P	**Pn**	**16 18 49.2**	**+1.2**
NASN	**Na'in**	**6.20**	**321**	*e*P	**Pn**	**16 18 49.2**	**+1.2**
IGAR	**Gharneh**	**6.38**	**314**	*e*Pn	**Pn**	**16 18 49.2**	**-1.1**
IGAR				*e*		16 20 15.7	
	comp=Z,121nm,0.2s						
IZEF	**Zefreh**	**6.55**	**319**	*e*Pn	**Pn**	**16 18 52.8**	**+0.2**
IZEF				*e*		16 19 16.3	
	comp=Z,39nm,0.1s						
IZEF	**Zefreh**	**6.55**	**319**	*e*Pn	**Pn**	**16 18 52.8**	**+0.2**
UMR	**Umm Al-Rimmam**	**8.67**	**282**	*e*P	**Pn**	**16 19 20.5**	**-1.0**
UMR	**Umm Al-Rimmam**	**8.67**	**282**	*e*P	**Pn**	**16 19 20.5**	**-1.0**
RDF	**Al-Radifah**	**8.76**	**278**	*e*P	**Pn**	**16 19 21.2**	**-1.5**
RDF				AML	AML	16 20 57.6	
	comp=Z,11nm,0.3s						
RDF	**Al-Radifah**	**8.76**	**278**	*e*P	**Pn**	**16 19 21.2**	**-1.5**
NAY	**Al-Naaiem**	**9.05**	**280**	*e*P	**Pn**	**16 19 25.2**	**-1.5**
NAY				AML	AML	16 21 05.0	
	comp=Z,6.6nm,0.5s						
NAY	**Al-Naaiem**	**9.05**	**280**	*e*P	**Pn**	**16 19 25.2**	**-1.5**
RST	**Umm Al-Ruwaisa**	**9.29**	**281**	*e*P	**Pn**	**16 19 29.1**	**-0.9**
RST	**Umm Al-Ruwaisa**	**9.29**	**281**	*e*P	**Pn**	**16 19 29.1**	**-0.9**
BRTR	**Keskin Array B**	**22.87**	**307**	P	**P**	**16 22 17.2**	**-2.7**
	comp=Z,2.4nm,0.7s,baz=120,slow=10.0,SNR=16						
KURBB	**Kurchatov Arra**	**27.64**	**30**	P	**P**	**16 22 59.8**	**-4.1**
	comp=Z,0.1nm,0.2s,baz=224,slow=8.1,SNR=4.1						
ZALV	**Zalesovo Beam**	**32.73**	**30**	P	P	16 23 44.5	-4.4
	comp=Z,0.2nm,0.3s,baz=221,slow=7.7,SNR=4.2						
CMAR	**Chiang Mai Arr**	**39.14**	**95**	LR	LR	16 43 10.2	
	comp=Z,93nm,20.5s,baz=135,slow=40						
FINES	**FINESS Array B**	**39.39**	**337**	P	P	16 24 42.1	-3.8
	comp=Z,0.8nm,0.5s,baz=148,slow=11,SNR=4.1						
TORD	**Torodi Ar. Bea**	**53.83**	**266**	P	P	16 26 35.5	-4.2
	comp=Z,1.7nm,0.6s,baz=62,slow=7.3,SNR=16						

IDC 29 16:27:07.3±8.1, 55°59S×158°03E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.6/13, mbtmp3.5/4, MS3.7/5, Ms1 3.7/5, ms1mx3.5/14, Error ellipse: s-maj=416.8km s-min=21.9km az=72.0, Macquarie Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**14.54**	**41**	LR	LR	16 36 01.5	
	comp=Z,234nm,19.5s,baz=216,slow=37						
URZ	**Urewera**	**21.57**	**44**	LR	LR	16 40 47.5	
	comp=Z,148nm,18.1s,baz=285,slow=38						
VNDA	**Vanda**	**22.06**	**178**	P	P	16 32 04.3	+1.1
	0.9nm,0.9s,baz=342,slow=9.3,SNR=3.9						
STKA	**Stephens Creek**	**26.38**	**327**	LR	LR	16 41 44.1	
	comp=Z,97nm,18.2s,baz=197,slow=33						
RAO	**Raoul Island**	**31.44**	**43**	LR	LR	16 44 08.1	
	comp=Z,130nm,20.9s,baz=38,slow=32						
QSPA	**South Pole Qui**	**34.52**	**180**	P	P	16 33 56.3	-0.7
	1.7nm,1.1s,baz=307,slow=4.8,SNR=4.1						
ASAR	**Alice Springs**	**36.52**	**321**	P	P	16 34 14.9	+0.5
	0.4nm,0.8s,baz=159,slow=8.3,SNR=6.4						
WRA	**Warramunga Arr**	**39.81**	**324**	P	P	16 34 41.5	-0.7
	0.8nm,0.8s,baz=158,slow=7.0,SNR=3.5						
PPT	**Papeete**	**54.73**	**68**	LR	LR	16 56 54.9	
	comp=Z,181nm,18.1s,baz=348,slow=33						

*DDA **29** 16:28:31.8, 38°.05N×35°.62E, h7km, MD2.9*
*CSEM **29** 16:28:32.1±0.3, 38°.05N×35°.62E, h5km, MD2.7, Error ellipse: s-maj=7.2km s-min=6.1km az=77.0*
*ISK **29** 16:28:32.2, 38°.02N×35°.60E, h5km, MD2.7*
ISC 29 16:28:31.5±1.5, 38°.02N±0°.03×35°.64E±0°.03, h1km±13km, n19, σ0°.46/31, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.56**	**164**	*e*PG	**Pb**	**16 28 43.7**	**-0.3**
KOZT				*e*SG	**Sb**	**16 28 52.1**	**-0.3**
KOZT	**Kozan**	**0.56**	**164**	*e*Pg	**Pb**	**16 28 43.7**	**-0.3**
KOZT				*e*Sg	**Sb**	**16 28 52.1**	**-0.3**
ANDN	**Andirin**	**0.71**	**128**	*i* P	**Pb**	**16 28 46.4**	**-0.3**
ANDN				*i* S	**Sb**	**16 28 57.2**	**+0.3**
ANDN	**Andirin**	**0.71**	**128**	*i* P	**Pb**	**16 28 46.4**	**-0.3**
ANDN				*i* S	**Sb**	**16 28 57.2**	**+0.3**
SARI	**SarD1z-Kayseri**	**0.73**	**57**	*e*PG	**Pb**	**16 28 47.2**	**+0.2**
SARI				*e*SG	**Sb**	**16 28 58.1**	**+0.5**
NIG	**Nigde**	**0.82**	**277**	*e*PG	**Pg**	**16 28 47.8**	**+0.6**
NIG	**Nigde**	**0.82**	**277**	*e*Pg	**Pg**	**16 28 47.8**	**+0.6**
BNN	**Bunyan**	**0.85**	**11**	*e*PG	**Pb**	**16 28 49.1**	**0.0**
BNN	**Bunyan**	**0.85**	**11**	*e*Pg	**Pb**	**16 28 49.1**	**0.0**
PINB	**Pinarbasi**	**0.89**	**42**	*i* P	**Pg**	**16 28 47.9**	**-0.7**
PINB				*i* S	**Sn**	**16 29 05.0**	**-0.1**
PINB	**Pinarbasi**	**0.89**	**42**	*i* P	**Pg**	**16 28 47.9**	**-0.7**
PINB				*i* S	**Sn**	**16 29 05.0**	**-0.1**
AVNT	**Avonos**	**0.98**	**321**	*i* P	**Pb**	**16 28 50.9**	**-0.5**
AVNT				*i* S	**Sn**	**16 29 07.5**	**+0.3**
AVNT	**Avonos**	**0.98**	**321**	*i* P	**Pb**	**16 28 50.9**	**-0.5**
AVNT				*i* S	**Sn**	**16 29 07.5**	**+0.3**
GULE	**Gulek**	**1.00**	**223**	*i* P	**Pg**	**16 28 50.8**	**+0.1**
GULE				*i* S	**Sb**	**16 29 05.4**	**-0.1**
GULE	**Gulek**	**1.00**	**223**	*i* P	**Pg**	**16 28 50.8**	**+0.1**
GULE				*i* S	**Sb**	**16 29 05.4**	**-0.1**
AYKD	**Aykdinkavak**	**1.10**	**123**	*i* P	**Pn**	**16 28 53.8**	**-0.3**
AYKD				*i* S	**Sn**	**16 29 10.8**	**+0.9**
KMRS	**Kahramanmaras**	**1.12**	**117**	*e*PN	**Pn**	**16 28 53.9**	**-0.4**
DARE	**Darende-Malaty**	**1.55**	**69**	*e*PN	**Pg**	**16 29 02.0**	**+0.8**
DARE	**Darende-Malaty**	**1.55**	**69**	*e*Pn	**Pg**	**16 29 02.0**	**+0.8**

*IDC **29** 16:29:53.3±2.0, 31°.42S×178°.88W, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.7/19, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=49.0km s-min=32.7km az=60.0*
ISC 29 16:29:55.2±1.7, 31°.6S±0°.1×179°.0W±0°.3, h10km, n24, σ1°50/23, mb3.7/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**6.37**	**200**	PN	**Pn**	**16 31 31.3**	**+2.1**
MXZ				SN	Sn	16 32 36.1	-5.8
PUZ	**Puketiti**	**6.86**	**199**	PN	**Pn**	**16 31 37.0**	**+1.1**
PUZ				SN	Sn	16 32 46.5	-7.5
CNGZ	**Carnagh Statio**	**7.26**	**198**	PN	**Pn**	**16 31 42.5**	**+1.1**
CNGZ				SN	Sn	16 32 55.9	-7.9
MARZ	**Manawahe**	**7.32**	**208**	PN	Pn	16 31 47.0	+4.8
MWZ	**Matawai**	**7.32**	**202**	PN	**Pn**	**16 31 43.2**	**+1.0**
URZ	**Urewera**	**7.39**	**205**	SN	**Sn**	**16 33 05.1**	**-2.0**
URZ	**Urewera**	**7.39**	**205**	Pn	**Pn**	**16 31 45.2**	**+2.1**
	1.0nm,0.3s,baz=308,slow=13,SNR=30						
URZ				Sn	Sn	16 33 02.3	-4.8
	2.2nm,0.3s,baz=148,slow=22,SNR=12						
KNZ	**Kokohu**	**7.91**	**199**	PN	**Pn**	**16 31 50.9**	**+0.7**
MHGZ	**Mahia Peninsul**	**7.97**	**198**	PN	**Pn**	**16 31 51.6**	**+0.5**
RAHZ	**Arahi**	**7.99**	**203**	PN	**Pn**	**16 31 54.1**	**+2.7**
BKZ	**Black Stump Fm**	**8.42**	**205**	PN	**Pn**	**16 31 58.3**	**+1.0**
KAHZ	**Kahuranaki**	**8.86**	**201**	PN	**Pn**	**16 32 03.0**	**-0.3**
BHHZ	**Black Hill Sta**	**8.86**	**206**	PN	**Pn**	**16 32 06.0**	**+2.7**
PXZ	**Pawanui**	**9.08**	**201**	PN	**Pn**	**16 32 07.9**	**+1.6**
PRHZ	**Porangahau**	**9.36**	**201**	PN	**Pn**	**16 32 09.1**	**-1.1**
TSZ	**Takapari Road**	**9.40**	**204**	PN	**Pn**	**16 32 11.7**	**+1.0**
BFZ	**Birch Farm**	**9.86**	**202**	PN	**Pn**	**16 32 15.0**	**-2.0**
TIWZ	**Tintock**	**10.06**	**203**	PN	**Pn**	**16 32 20.1**	**+0.2**
OGWZ	**Otaki Gorge**	**10.35**	**205**	PN	**Pn**	**16 32 23.1**	**-0.6**
KIW	**Kapiti Island**	**10.49**	**206**	PN	**Pn**	**16 32 25.7**	**+0.1**
ASAR	**Alice Springs**	**42.22**	**269**	P	**P**	**16 37 48.8**	**+0.1**
	0.4nm,0.7s,baz=106,slow=7.4,SNR=6.7						
WRA	**Warramunga Arr**	**43.32**	**274**	P	**P**	**16 37 57.7**	**+0.1**
	0.4nm,0.3s,baz=111,slow=8.0,SNR=20						
QSPA	**South Pole Qui**	**58.53**	**180**	P	**P**	**16 39 52.3**	**+0.6**
	1.5nm,1.1s,baz=328,slow=13,SNR=3.8						
FINES	**FINESS Array B**	**145.95**	**339**	PKPbc	**PKPab**	**16 49 33.2**	**-1.7**
	1.0nm,0.6s,baz=72,slow=4.5,SNR=6.5						

*SKO **29** 16:31:13.9, 41°.25N×22°.71E, h15km, M1.8, ML2.2*
*ISCJB **29** 16:31:13.9±0.4, 41°.31N±0°.02×22°.70E±0°.03, h11km±3km, Error ellipse: s-maj=3.6km s-min=3.2km az=174.2*
*SOF **29** 16:31:13.7, 41°.28N×22°.74E, h14km, MD2.6*
*CSEM **29** 16:31:14.5±0.1, 41°.28N×22°.71E, h8km, ML2.0, Error ellipse: s-maj=2.7km s-min=2.5km az=47.0*
*THE **29** 16:31:14.5, 41°.31N×22°.73E, h3km±1km, ML2.2/8, Error ellipse: s-maj=1.8km s-min=0.6km az=200.0*
*ATH **29** 16:31:14.1, 41°.28N×22°.69E, h26km±1km, MD3.0/6*
*BEO **29** 16:31:16.0±0.7, 41°.33N×22°.66E, h2km±3km, ML2.0/5*
ISC 29 16:31:14.3±0.8, 41°.29N±0°.02×22°.72E±0°.02, h9km±5km, n53, σ0°64/86, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**287**	P	**Pg**	**16 31 16.8**	**-0.3**
VAY				S	**Sg**	**16 31 19.1**	**0.0**
VAY	**Valandovo**	**0.12**	**287**	*i* Pg	**Pg**	**16 31 17.1**	**0.0**
VAY				*i* Sg	**Sg**	**16 31 19.2**	**0.0**
VAY				*e*Lg	Lg	16 31 19.2	
	comp=E,2µm,0.2s						
VAY				*e*Lg	Lg	16 31 19.3	
	comp=N,3µm,0.2s						
VAY	**Valandovo**	**0.12**	**287**	*e*Pg	**Pg**	**16 31 17.0**	**-0.1**
VAY				*e*Sg	**Sg**	**16 31 19.0**	**0.0**
VAY	**Valandovo**	**0.12**	**287**	*e*Pg	**Pg**	**16 31 17.0**	**-0.1**
VAY				*e*Sg	**Sg**	**16 31 19.0**	**0.0**
VAY				*e*Lg	Lg	16 31 19.7	
	comp=N,3µm,0.2s						
KNT	**Kendrikon**	**0.19**	**133**	P	**Pg**	**16 31 19.1**	**+0.9**
KNT				S	**Sg**	**16 31 21.7**	**+0.8**
KNT	**Kendrikon**	**0.19**	**133**	P	**Pg**	**16 31 19.1**	**+0.9**
KNT				S	**Sg**	**16 31 21.7**	**+0.8**
GRG	**Griva**	**0.41**	**216**	P	**Pg**	**16 31 22.7**	**+0.4**
GRG				S	**Sg**	**16 31 28.6**	**+0.9**
GRG	**Griva**	**0.41**	**216**	*e*PB	**Pg**	**16 31 23.0**	**+0.7**
GRG				*e*SB	**Sg**	**16 31 28.7**	**+1.0**
GRG	**Griva**	**0.41**	**216**	P	**Pg**	**16 31 22.7**	**+0.4**
GRG	**Griva**	**0.41**	**216**	*e*Pb	**Pg**	**16 31 23.0**	**+0.7**
GRG				S	**Sg**	**16 31 28.6**	**+0.9**
KKB	**Krupnik**	**0.64**	**25**	*i* Pg	**Pg**	**16 31 26.7**	**0.0**
KKB	**Krupnik**	**0.64**	**25**	*i* Pg	**Pg**	**16 31 26.7**	**0.0**
SOH	**Sokhos**	**0.67**	**134**	P	**Pg**	**16 31 27.4**	**+0.2**
SOH				S	**Sb**	**16 31 37.5**	**0.0**
SOH	**Sokhos**	**0.67**	**134**	*e*PN	**Pg**	**16 31 27.5**	**+0.2**
SOH				*e*SN	**Sb**	**16 31 37.6**	**0.0**
SOH	**Sokhos**	**0.67**	**134**	P	**Pg**	**16 31 27.4**	**+0.2**
SOH				S	**Sb**	**16 31 37.5**	**0.0**
SRS	**Serrai**	**0.68**	**104**	P	**Pg**	**16 31 27.6**	**+0.1**
SRS				S	**Sg**	**16 31 36.9**	**+0.5**
SRS	**Serrai**	**0.68**	**104**	P	**Pg**	**16 31 27.6**	**+0.1**
SRS				S	**Sg**	**16 31 36.9**	**+0.5**
THE	**Thessaloniki**	**0.68**	**164**	P	**Pg**	**16 31 27.5**	**0.0**
THE				S	**Sb**	**16 31 37.6**	**-0.2**
THE	**Thessaloniki**	**0.68**	**164**	P	**Pg**	**16 31 27.5**	**0.0**
THE				S	**Sb**	**16 31 37.6**	**-0.2**
HORT	**Hortiatis**	**0.75**	**157**	P	**Pg**	**16 31 29.1**	**+0.4**
HORT				S	**Sb**	**16 31 39.9**	**+0.1**
HORT	**Hortiatis**	**0.75**	**157**	P	**Pg**	**16 31 29.1**	**+0.4**
HORT				S	**Sb**	**16 31 39.9**	**+0.1**
MMB	**Musomiste**	**0.82**	**68**	*i* Pg	**Pg**	**16 31 29.8**	**-0.3**
MMB	**Musomiste**	**0.82**	**68**	*i* Pg	**Pg**	**16 31 29.8**	**-0.3**
NVR	**Nevrokopi**	**0.86**	**86**	P	**Pg**	**16 31 30.9**	**0.0**
NVR				S	**Sg**	**16 31 42.4**	**+0.2**
NVR	**Nevrokopi**	**0.86**	**86**	*e*PN	**Pg**	**16 31 31.0**	**0.0**
NVR				*e*SN	**Sn**	**16 31 43.7**	**-1.7**
NVR	**Nevrokopi**	**0.86**	**86**	P	**Pg**	**16 31 30.9**	**0.0**
NVR				S	**Sg**	**16 31 42.4**	**+0.2**
NVR				*e*Sn	**Sn**	**16 31 43.7**	**-1.7**
PLG	**Polygyros**	**1.07**	**149**	P	**Pb**	**16 31 34.6**	**-0.3**
PLG	**Polygyros**	**1.07**	**149**	*e*PN	**Pb**	**16 31 34.7**	**-0.2**
PLG				*e*SN	**Sb**	**16 31 48.8**	**-0.2**
PLG	**Polygyros**	**1.07**	**149**	P	**Pb**	**16 31 34.6**	**-0.3**
PLG				*e*Sn	**Sb**	**16 31 48.8**	**-0.2**
FNA	**Florina**	**1.13**	**244**	P	**Pb**	**16 31 35.8**	**-0.3**
FNA	**Florina**	**1.13**	**244**	*e*PN	**Pb**	**16 31 35.5**	**-0.6**
FNA	**Florina**	**1.13**	**244**	*e*Pn	**Pb**	**16 31 35.5**	**-0.6**
FNA	**Florina**	**1.13**	**244**	P	**Pb**	**16 31 35.8**	**-0.3**
SKO	**Skopje**	**1.18**	**306**	*i* Pn	**Pg**	**16 31 38.3**	**+1.4**
SKO				*e*Sg	**Sb**	**16 31 51.5**	**-0.6**
SKO				*e*Lg	Lg	16 31 55.0	
	comp=E,18nm,0.4s						
SKO				*e*Lg	Lg	16 31 55.2	
	comp=N,23nm,0.6s						
SKO	**Skopje**	**1.18**	**306**	*i* Pn	**Pg**	**16 31 38.8**	**+1.9**
SKO				*e*Sg	**Sb**	**16 31 51.9**	**-0.2**
SKO				*e*Lg	Lg	16 31 55.6	
	comp=N,23nm,0.6s						
OUR	**Ouranopolis**	**1.35**	**134**	P	**Pb**	**16 31 39.7**	**0.0**
OUR	**Ouranopolis**	**1.35**	**134**	P	**Pb**	**16 31 39.7**	**0.0**
VTS	**Vitosha**	**1.35**	**16**	P	**Pb**	**16 31 39.6**	**-0.3**
VTS				S	**Sb**	**16 31 57.3**	**0.0**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg	**Pb**	**16 31 39.6**	**-0.3**
VTS				*e*Sg	**Sb**	**16 31 57.4**	**+0.1**
VTS	**Vitosha**	**1.35**	**16**	P	**Pb**	**16 31 39.6**	**-0.3**
VTS	**Vitosha**	**1.35**	**16**	P	**Pb**	**16 31 39.6**	**-0.3**
VTS				*e*Sg	**Sb**	**16 31 57.4**	**+0.1**
KAVA	**Kavala**	**1.39**	**102**	P	**Pb**	**16 31 40.1**	**-0.3**
KAVA				S	**Sg**	**16 31 59.9**	**+1.0**
KAVA	**Kavala**	**1.39**	**102**	P	**Pb**	**16 31 40.1**	**-0.3**
KAVA				S	**Sg**	**16 31 59.9**	**+1.0**
PAIG	**Paliouri**	**1.54**	**151**	*e*PN	**Pn**	**16 31 41.9**	**0.0**
PAIG	**Paliouri**	**1.54**	**151**	*e*Pn	Pn	16 31 41.9	0.0
BARS	**Barje**	**1.67**	**337**	*e*Pn	**Pn**	**16 31 44.1**	**+0.4**
BARS				*e*Sg	**Sb**	**16 32 06.7**	**+0.4**
BARS	**Barje**	**1.67**	**337**	*e*Pn	**Pn**	**16 31 44.1**	**+0.4**
BARS				*e*Sg	**Sb**	**16 32 06.7**	**+0.4**
PLD	**Plovdiv**	**1.70**	**61**	*e*Sg	**Sg**	**16 32 11.0**	**+2.2**
PLD	**Plovdiv**	**1.70**	**61**	*e*Sg	**Sg**	**16 32 11.0**	**+2.2**
THL	**Klokotos Trika**	**1.80**	**198**	*e*PN	**Pn**	**16 31 45.2**	**-0.3**
THL	**Klokotos Trika**	**1.80**	**198**	*e*Pn	Pn	16 31 45.2	-0.3
ZAPS	**Zavoj**	**1.98**	**358**	*e*Pn	**Pb**	**16 31 50.5**	**-0.1**
SELS	**Selova**	**2.27**	**329**	*e*Sg	**Sg**	**16 32 26.9**	**-0.2**

*CASC **29** 16:38:26.3±3.0, 12°.99N×91°.59W, h21km±45km, MD3.9, ML3.5*
*IDC **29** 16:38:27.2±3.3, 13°.91N×90°.45W, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.8/22, mbtmp3.7/5, ML4.0/1, Error ellipse: s-maj=129.8km s-min=56.6km az=43.0*
ISC 29 16:38:32.1±2.6, 13°.3N±0°.1×91°.4W±0°.1, h44km±21km, n25, σ1°28/32, mb3.8/4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**1.07**	**349**	*e*P	**Pn**	**16 38 49.4**	**-1.3**
JAT				*e*S	**Sn**	**16 39 06.2**	**+1.9**
IXG	**Ixpaco**	**1.31**	**46**	*e*P	**Pn**	**16 38 52.5**	**-1.5**
IXG				*e*S	Sn	16 39 16.4	+6.0
FUG	**Fuego 3**	**1.31**	**25**	*e*P	**Pn**	**16 38 52.6**	**-1.4**
PCG	**Pacaya**	**1.38**	**35**	*e*P	**Pn**	**16 38 54.0**	**-1.1**
PCG				*e*S	Sn	16 39 19.6	+7.4
NBG	**Las Nubes**	**1.68**	**38**	*e*P	**Pn**	**16 38 59.1**	**-0.2**
NBG				*e*S	Sn	16 39 26.4	+6.6
RTR	**El Retiro**	**1.84**	**70**	*e*P	**Pn**	**16 38 59.5**	**-1.8**
SBLS	**San Blas**	**1.84**	**72**	*e*P	**Pn**	**16 38 59.5**	**-1.9**
SBLS				*e*S	**Sn**	**16 39 24.4**	**+0.7**
SNJE	**San Jose**	**1.87**	**71**	*e*P	**Pn**	**16 39 00.1**	**-1.6**
RBDL	**Robledal**	**1.89**	**63**	*e*P	**Pn**	**16 39 00.9**	**-1.1**
BOQS	**Boqueron**	**2.14**	**77**	*e*P	**Pn**	**16 39 04.7**	**-0.8**
BOQS				*e*S	**Sn**	**16 39 32.2**	**+1.3**
SNET	**Serv Nac Est T**	**2.17**	**78**	AML	AML	16 39 43.4	
	comp=Z,369nm,0.2s						
LFU	**La Fuente**	**2.30**	**78**	*e*P	**Pn**	**16 39 06.9**	**-0.7**
MTO2	**Montecristo 2**	**2.30**	**60**	*e*P	**Pn**	**16 39 06.8**	**-0.9**
MTO2				*e*S	**Sn**	**16 39 35.0**	**+0.1**
LFRS	**El Faro**	**2.32**	**81**	*e*P	**Pn**	**16 39 07.6**	**-0.4**
LFRS				*e*S	**Sn**	**16 39 36.5**	**+1.2**
MRL	**Marmol**	**2.46**	**43**	*e*P	**Pn**	**16 39 09.6**	**-0.2**
MRL				*e*S	Sn	16 39 47.5	+8.8
SNVI	**San Vicente**	**2.54**	**82**	*e*P	**Pn**	**16 39 10.4**	**-0.5**
SNVI				*e*S	**Sn**	**16 39 42.1**	**+1.5**
BLLM	**Bellamira**	**3.10**	**86**	*e*P	**Pn**	**16 39 17.7**	**-0.9**
CAHU	**Cacacuatique**	**3.16**	**80**	*e*P	**Pn**	**16 39 18.9**	**-0.7**
CNCH	**Conchagua**	**3.49**	**89**	*e*P	**Pn**	**16 39 22.9**	**-1.1**
CNCH				*e*S	**Sn**	**16 40 06.0**	**+1.8**
TXAR	**Lajitas Array**	**19.62**	**327**	P	**Pn**	**16 42 58.5**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=156,slow=13,SNR=16						
NVAR	**Mina Array Bea**	**34.60**	**321**	P	**P**	**16 45 19.3**	**+2.2**
	comp=Z,1.3nm,0.8s,baz=130,slow=8.4,SNR=7.7						
YKA	**Yellowknife Ar**	**51.87**	**347**	P	**P**	**16 47 33.5**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=148,slow=7.7,SNR=8.0						
YKA				PcP	**PcP**	**16 48 47.3**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=150,slow=4.1,SNR=7.0						
DLBC	**Dease Lake**	**53.55**	**336**	P	**P**	**16 47 48.2**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=153,slow=11,SNR=3.2						
ILAR	**Eielson Array**	**63.74**	**337**	P	**P**	**16 48 59.1**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=160,slow=4.2,SNR=6.1						
CMAR	**Chiang Mai Arr**	**146.87**	**342**	PKPbc	**PKPab**	**16 58 11.6**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=349,slow=5.6,SNR=7.4						

*NIED **29** 16:53:00, 37°.80N×143°.30E, h8km, Mw4.4 Best double couple: M○3.78000×10^15 NP1:φ○211.00000°, δ88.00000°, λ-160.00000°. NP2:φ○121.00000°, δ70.00000°, λ-2.00000°.*
*IDC **29** 16:53:55.1±0.5, 37°.67N×143°.23E, h0km, mb4.2/27, mb1 4.3/33, mb1mx4.3/39, mbtmp4.2/33, ML3.8/5, MS3.7/5, Ms1 3.8/5, ms1mx3.3/44, Error ellipse: s-maj=14.4km s-min=11.7km az=153.0*
*ISCJB **29** 16:53:56.3±1.2, 37°.76N±0°.04×143°.20E±0°.04, h15km±7km, mb4.3/46, MS4.0/4, Error ellipse: s-maj=6.2km s-min=4.5km az=161.4*
*JMA **29** 16:53:56.2±0.1, 37°.78N×143°.26E, h40km, M4.9*
JMA Felt I J1.
*MOS **29** 16:53:58.3±1.2, 37°.73N×143°.22E, h33km, mb4.5/29, Error ellipse: s-maj=8.9km s-min=6.2km az=108.1*
*NEIC **29** 16:54:00.5±0.9, 37°.76N×143°.19E, h35km±8km, mb4.6/12, MW4.3(NIED), Error ellipse: s-maj=10.1km s-min=6.3km az=148.0*
NEIC Recorded [1 JMA] in Miyagi.
ISC 29 16:53:59.4±2.2, 37°.75N±0°.05×143°.26E±0°.05, h30km±15km, n157, σ1°42/164, mb4.4/46, MS3.9/4, 12C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**1.67**	**296**	⇑P	**Pn**	**16 54 23.8**	**-2.7**
JIO				*e*S	**Sn**	**16 54 44.0**	**-2.9**
OFUJ	**Ofunato**	**1.82**	**317**	⇑P	**Pn**	**16 54 25.8**	**-2.9**
OFUJ				*e*S	**Sn**	**16 54 47.9**	**-2.9**
JMK	**Ichinoseki**	**2.00**	**307**	⇑P	**Pn**	**16 54 28.5**	**-2.7**
JOM	**Ohasama**	**2.31**	**319**	⇑P	**Pn**	**16 54 33.0**	**-2.4**
JFT	**Otama**	**2

	comp=E,183nm,13.0s							
YAK					MLR		MLR	
	comp=Z,236nm,14.0s							
SEY	**Seymchan**	**25.82**	**10**	⇑*iP*		**P**		**16 59 29.1 +1.4**
ULN	**Ulaanbaatar**	**28.19**	**303**	*eP*		**P**		**16 59 49.1 -0.3**
	comp=Z,8.5nm,1.1s							
SONM	**Songino Array**	**28.62**	**302**	P		**P**		**16 59 53.5 +0.3**
SONM	**Songino Array**	**28.62**	**302**	P		**P**		**16 59 53.5 +0.3**
	comp=Z,3.6nm,0.9s,baz=110,slow=8.3,SNR=21							
ENH	**Enshi**	**28.86**	**265**	*eP*		**P**		**16 59 53.7 -1.6**
	comp=Z,14nm,0.8s							
ZAK	**Zakamensk**	**31.00**	**307**	*eP*		**P**		**17 00 14.0 -0.1**
ZAK				*e*				17 00 25.3
ZAK					pmax		pmax	
	comp=Z,2.0nm,1.0s							
BILL	**Bilibino**	**32.93**	**16**	⇑*iP*		**P**		**17 00 31.0 +0.2**
BILL					pmax		pmax	
	comp=Z,2.0nm,1.0s							
TIXI	**Tiksi**	**34.77**	**352**	*iP*		**P**		**17 00 46.3 -0.4**
HVS	**Khovu-Aksy**	**37.12**	**307**	*eP*		**P**		**17 01 08.1 +0.9**
ZAA0	**Zalesovo Array**	**42.53**	**312**	*eP*		**P**		**17 01 51.3 -0.7**
ZALV	**Zalesovo Beam**	**42.53**	**312**	P		**P**		**17 01 52.0 +0.1**
ZALV								17 03 44.5
ZALV					pmax		pmax	
	comp=Z,4.0nm,0.5s							
ZALV	**Zalesovo Beam**	**42.53**	**312**	P		**P**		**17 01 52.0 +0.1**
ZALV					PcP		**PcP**	**17 03 44.5 +0.4**
ZALV	**Zalesovo Beam**	**42.53**	**312**	P		**P**		**17 01 52.0 +0.1**
	comp=Z,4.4nm,0.5s,baz=85,slow=7.9,SNR=15							
ZALV					PcP		**PcP**	**17 03 44.5 +0.4**
	comp=Z,1.4nm,0.6s,baz=92,slow=4.3,SNR=2.8							
CMAR	**Chiang Mai Arr**	**43.10**	**256**	P		**P**		**17 01 58.1 +1.1**
CMAR	**Chiang Mai Arr**	**43.10**	**256**	P		**P**		**17 01 58.1 +1.1**
	comp=Z,0.6nm,0.8s,baz=40,slow=7.4,SNR=4.4							
NVS	**Novosibirsk**	**43.42**	**313**	*eP*		**P**		**17 01 59.0 -0.1**
MK31	**Makanchi Array**	**44.99**	**302**	*eP*		**P**		**17 02 10.5 -1.4**
MK31	**Makanchi Array**	**44.99**	**302**	*eP*		**P**		**17 02 10.4 -1.4**
MKAR	**Makanchi Array**	**44.99**	**302**	P		**P**		**17 02 11.6 -0.3**
MKAR					pmax		pmax	
	comp=Z,6.0nm,1.0s							
MKAR	**Makanchi Array**	**44.99**	**302**	*eP*		**P**		**17 02 11.6 -0.3**
MKAR	**Makanchi Array**	**44.99**	**302**	P		**P**		**17 02 11.6 -0.3**
	comp=Z,5.7nm,0.9s,baz=85,slow=9.5,SNR=25							
RSO	**Redoubt South**	**45.43**	**39**	*eP*		**P**		**17 02 17.0 +1.7**
KDAK	**Kodiak Island**	**45.58**	**42**	P		**P**		**17 02 17.1 +0.7**
KDAK	**Kodiak Island**	**45.58**	**42**	P		**P**		**17 02 17.1 +0.7**
	comp=Z,4.9nm,0.6s							
TRF	**Thorofare Moun**	**46.61**	**35**	*eP*		**P**		**17 02 25.5 +0.9**
	comp=Z,34nm,2.3s							
KURK	**Kurchatov**	**46.65**	**308**	*c iP*		**P**		**17 02 24.3 -0.6**
KURK					pmax		pmax	
	comp=Z,9.0nm,0.8s							
KURK	**Kurchatov**	**46.65**	**308**	*eP*		**P**		**17 02 23.8 -1.1**
	comp=Z,16nm,0.9s							
KURBB	**Kurchatov Arra**	**46.73**	**308**	P		**P**		**17 02 25.0 -0.4**
	comp=Z,8.0nm,0.6s,baz=82,slow=8.0,SNR=38							
TAPN	**Taplejung**	**47.36**	**274**	*eP*		**P**		**17 02 32.5 +1.4**
ILAR	**Eielson Array**	**48.10**	**33**	P		**P**		**17 02 36.9 +0.9**
ILAR	**Eielson Array**	**48.10**	**33**	P		**P**		**17 02 36.9 +0.9**
	comp=Z,2.7nm,0.7s,baz=264,slow=6.5,SNR=29							
RAMN	**Ramite**	**48.42**	**274**	*eP*		**P**		**17 02 39.9 +0.7**
GUN	**Gumba**	**48.55**	**276**	*eP*		**P**		**17 02 40.8 +0.5**
	comp=Z,14nm,0.5s							
PKI	**Pulchoki**	**49.07**	**276**	*eP*		**P**		**17 02 45.0 +0.6**
	comp=Z,11nm,0.6s							
KKN	**Kakani**	**49.07**	**276**	*eP*		**P**		**17 02 44.7 +0.5**
	comp=Z,15nm,0.6s							
PKIN	**Phulchoki**	**49.08**	**276**	*eP*		**P**		**17 02 45.3 +1.0**
	comp=Z,7.4nm,0.7s							
DMN	**Daman**	**49.29**	**276**	*eP*		**P**		**17 02 46.8 +0.8**
DANN	**Dangsing**	**50.02**	**278**	*eP*		**P**		**17 02 51.9 +0.4**
	comp=Z,28nm,0.6s							
KOLN	**Koldanda**	**50.41**	**277**	*eP*		**P**		**17 02 53.7 -0.7**
	comp=Z,9.5nm,0.7s							
TKM2	**Tokmak 2**	**50.58**	**298**	*eP*		**P**		**17 02 55.4 -0.1**
TKM2					pmax		pmax	
	comp=Z,10.0nm,0.8s							
TKM2	**Tokmak 2**	**50.58**	**298**	*eP*		**P**		**17 02 55.4 -0.1**
	comp=Z,9.5nm,0.8s							
BVAR	**Borovoye Array**	**51.18**	**312**	P		**P**		**17 02 59.3 -0.3**
BVAR					pmax		pmax	
	comp=Z,2.0nm,0.7s							
BVAR	**Borovoye Array**	**51.18**	**312**	P		**P**		**17 02 59.3 -0.3**
BVAR	**Borovoye Array**	**51.18**	**312**	P		**P**		**17 02 59.3 -0.3**
	comp=Z,2.0nm,0.7s,baz=76,slow=8.6,SNR=11							
BRVK	**Borovoye**	**51.23**	**312**	*c iP*		**P**		**17 03 00.9 +0.9**
BRVK					pmax		pmax	
	comp=Z,3.0nm,0.8s							
BRVK	**Borovoye**	**51.23**	**312**	*eP*		**P**		**17 02 59.8 -0.2**
	comp=Z,4.0nm,0.9s							
AAK	**Ala-Archa**	**51.45**	**298**	P		**P**		**17 03 03.4 +1.4**
AAK					pmax		pmax	
	comp=Z,9.0nm,0.4s							
AAK	**Ala-Archa**	**51.45**	**298**	*eP*		**P**		**17 03 01.8 -0.2**
	comp=Z,3.4nm,1.0s							
AAK	**Ala-Archa**	**51.45**	**298**	P		**P**		**17 03 03.4 +1.4**
	comp=Z,8.6nm,0.4s,baz=127,slow=10,SNR=3.7							
EKS2	**Erkin-Say**	**51.94**	**299**	*eP*		**P**		**17 03 05.4 -0.2**
EKS2					pmax		pmax	
	comp=Z,6.0nm,0.6s							
EKS2	**Erkin-Say**	**51.94**	**299**	*eP*		**P**		**17 03 05.4 -0.2**
	comp=Z,6.2nm,0.6s							
INK	**Inuvik**	**53.08**	**28**	P		**P**		**17 03 14.8 +1.3**
INK	**Inuvik**	**53.08**	**28**	P		**P**		**17 03 14.8 +1.3**
	comp=Z,1.6nm,0.5s,baz=314,slow=6.2,SNR=8.6							
KKAR	**Karatay Array**	**54.04**	**300**	*eP*		**P**		**17 03 21.4 +0.5**
KKAR	**Karatay Array**	**54.04**	**300**	*eP*		**P**		**17 03 21.4 +0.5**
ARU	**Arti**	**56.80**	**319**	*c iP*		**P**		**17 03 41.7 +1.2**
ARU								17 05 43.2
ARU					S		**S**	**17 11 31.6 +0.2**
ARU					SS		**SS**	**17 15 15.3 -3.8**
ARU					pmax		pmax	
	comp=Z,3.0nm,0.6s							
DLBC	**Dease Lake**	**57.15**	**39**	P		P		17 03 45.9 +2.8
DLBC	**Dease Lake**	**57.15**	**39**	P		P		17 03 45.9 +2.8
	comp=Z,1.5nm,0.6s,baz=270,slow=10,SNR=3.2							
WRA	**Warramunga Arr**	**58.00**	**190**	P		**P**		**17 03 48.8 -0.5**
WRA	**Warramunga Arr**	**58.00**	**190**	P		**P**		**17 03 48.8 -0.5**
	comp=Z,2.5nm,0.7s,baz=93,slow=7.2,SNR=25							
ABKAR	**Akbulak array**	**58.60**	**310**	*eP*		**P**		**17 03 53.4 +0.1**
AKTO	**Aktyubinsk**	**59.29**	**312**	P		**P**		**17 03 56.9 -1.2**
AKTO					pmax		pmax	
	comp=Z,3.0nm,0.7s							
AKTO	**Aktyubinsk**	**59.29**	**312**	P		**P**		**17 03 56.9 -1.2**
AKTO	**Aktyubinsk**	**59.29**	**312**	P		**P**		**17 03 56.9 -1.2**
	comp=Z,2.5nm,0.7s,baz=67,slow=10,SNR=8.2							
ASAR	**Alice Springs**	**61.72**	**190**	P		**P**		**17 04 14.4 -0.4**
ASAR	**Alice Springs**	**61.72**	**190**	P		**P**		**17 04 14.4 -0.4**
	comp=Z,0.9nm,0.8s,baz=21,slow=6.4,SNR=11							
YKA	**Yellowknife Ar**	**62.45**	**31**	P		**P**		**17 04 19.8 +0.5**
YKA	**Yellowknife Ar**	**62.45**	**31**	P		**P**		**17 04 19.8 +0.5**
	comp=Z,1.5nm,0.7s,baz=303,slow=6.7,SNR=24							
ARCES	**ARCESS Array B**	**63.84**	**340**	LR		LR		17 37 53.8
	comp=Z,146nm,18.8s,baz=98,slow=41							
JOF	**Joensuu**	**66.02**	**332**	*eP*		**P**		**17 04 45.2 +2.5**
JOF					pmax		pmax	
	comp=Z,2.0nm,0.6s							
JOF	**Joensuu**	**66.02**	**332**	*ep*		**P**		**17 04 45.2 +2.5**
	comp=Z,1.6nm,0.6s							
KAF	**Kangasniemi**	**68.34**	**333**	*eP*		**P**		**17 04 55.5 -1.9**
KAF					pmax		pmax	
	comp=Z,3.0nm,0.6s							
KAF	**Kangasniemi**	**68.34**	**333**	*ep*		**P**		**17 04 55.5 -1.9**
	comp=Z,2.6nm,0.6s							
YBH	**Yreka Blue Hor**	**68.74**	**53**	P		**P**		**17 04 59.5 -1.0**
YBH	**Yreka Blue Hor**	**68.74**	**53**	P		**P**		**17 04 59.5 -1.0**
	comp=Z,1.9nm,0.7s,baz=66,slow=2.2,SNR=4.7							
FINES	**FINESS Array B**	**68.86**	**333**	P		**P**		**17 05 01.2 +0.5**
FINES	**FINESS Array B**	**68.86**	**333**	P		**P**		**17 05 01.2 +0.5**
	comp=Z,2.9nm,0.7s,baz=42,slow=7.8,SNR=9.2							
STKA	**Stephens Creek**	**69.29**	**182**	P		**P**		**17 05 02.4 -1.2**
STKA	**Stephens Creek**	**69.29**	**182**	P		**P**		**17 05 02.4 -1.2**
	comp=Z,1.4nm,0.8s,baz=324,slow=14,SNR=3.1							
BEKR	**Beckworth**	**71.25**	**54**	*eP*		**P**		**17 05 14.7 -1.3**
	comp=Z,1.6nm,0.8s							
KIV	**Kislovodsk**	**71.54**	**312**	*eP*		**P**		**17 05 19.2 +1.6**
KIV					pmax		pmax	
	comp=Z,11nm,0.9s							
KBZ	**Khabaz**	**71.55**	**311**	P		**P**		**17 05 18.7 +1.2**
KBZ					pmax		pmax	
	comp=Z,3.0nm,0.8s							
KBZ	**Khabaz**	**71.55**	**311**	P		**P**		**17 05 18.6 +1.2**
KBZ	**Khabaz**	**71.55**	**311**	P		**P**		**17 05 18.6 +1.2**
	comp=Z,2.6nm,0.8s,baz=60,slow=6.2,SNR=3.4							
FFC	**Flin Flon**	**72.30**	**34**	*iP*		**P**		**17 05 23.3 +1.5**
FFC	**Flin Flon**	**72.30**	**34**	*eP*		**P**		**17 05 20.7 -1.1**
	comp=Z,6.7nm,0.9s							
NVAR	**Mina Array Bea**	**73.38**	**54**	P		**P**		**17 05 30.5 +1.7**
NVAR	**Mina Array Bea**	**73.38**	**54**	P		**P**		**17 05 30.5 +1.7**
	comp=Z,3.0nm,0.7s,baz=284,slow=6.8,SNR=17							
NB2	**NORSAR Subarra**	**74.09**	**338**	P		**P**		**17 05 32.6 +0.3**
	comp=Z,3.3nm,0.9s,baz=40,slow=6.2							
NOA	**NORSAR Array B**	**74.09**	**338**	P		**P**		**17 05 31.8 -0.5**
NOA	**NORSAR Array B**	**74.09**	**338**	P		**P**		**17 05 31.8 -0.5**
	comp=Z,0.5nm,0.7s,baz=240,slow=22,SNR=2.6							
NOA					LR		LR	17 41 12.6
	comp=Z,61nm,18.5s,baz=60,slow=38							
AKASG	**Malin Array Be**	**74.62**	**323**	P		**P**		**17 05 36.2 +0.7**
AKASG					pmax		pmax	
	comp=Z,3.0nm,0.5s							
AKASG	**Malin Array Be**	**74.62**	**323**	P		**P**		**17 05 36.2 +0.7**
AKASG	**Malin Array Be**	**74.62**	**323**	P		**P**		**17 05 36.2 +0.7**
	comp=Z,2.9nm,0.5s,baz=45,slow=6.0,SNR=6.6							
AK01	**Malin Array Si**	**74.63**	**323**	*eP*		**P**		**17 05 35.2 -0.3**
KIEV	**Kiev**	**74.63**	**323**	*eP*		**P**		**17 05 36.3 +0.7**
KIEV					pmax		pmax	
	comp=Z,5.0nm,0.8s							
KIEV	**Kiev**	**74.63**	**323**	*eP*		**P**		**17 05 36.3 +0.7**
	comp=Z,4.5nm,0.8s							
AK02	**Malin Array Si**	**74.66**	**323**	*eP*		**P**		**17 05 35.9 +0.2**
PDAR	**Pinedale Array**	**76.11**	**46**	P		**P**		**17 05 45.6 +1.1**
PDAR	**Pinedale Array**	**76.11**	**46**	P		**P**		**17 05 45.6 +1.1**
	comp=Z,0.9nm,0.6s,baz=221,slow=1.6,SNR=5.9							
CCUT	**Cedar City**	**77.04**	**53**	*eP*		**P**		**17 05 51.5 +1.6**
	comp=Z,2.1nm,0.9s							
BUR08	**Bucovina Ar. S**	**78.64**	**323**	*eP*		**P**		**17 05 58.9 +0.4**
BRTR	**Keskin Array B**	**79.47**	**312**	P		**P**		**17 06 05.1 +1.9**
BRTR	**Keskin Array B**	**79.47**	**312**	P		**P**		**17 06 05.1 +1.9**
	comp=Z,0.2nm,0.3s,baz=109,slow=3.5,SNR=2.6							
CLL	**Collm**	**81.20**	**331**	*ePcP*		**PcP**		**17 06 19.0 +0.7**
KHC	**Kasperske Hory**	**82.69**	**329**	*eP*		P		17 06 27.5 +7.5
KHC	**Kasperske Hory**	**82.69**	**329**	*eP*		P		17 06 27.5 +7.5
GERES	**GERESS Array B**	**82.87**	**329**	P		**P**		**17 06 22.9 +1.9**
GERES	**GERESS Array B**	**82.87**	**329**	P		**P**		**17 06 22.9 +1.9**
	comp=Z,0.4nm,0.7s,baz=20,slow=3.1,SNR=3.2							
TXAR	**Lajitas Array**	**88.52**	**53**	P		**P**		**17 06 50.5 +1.1**
TXAR	**Lajitas Array**	**88.52**	**53**	P		**P**		**17 06 50.5 +1.1**
	comp=Z,0.5nm,0.7s,baz=313,slow=4.0,SNR=7.7							
TORD	**Torodi Ar. Bea**	**117.84**	**317**	PKP		**PKPdf**		**17 12 42.9 -0.5**
TORD	**Torodi Ar. Bea**	**117.84**	**317**	PKP		**PKPdf**		**17 12 42.9 -0.5**
	comp=Z,0.2nm,0.6s,baz=6.5,slow=3.3,SNR=2.4							
SNAA	**Sanae**	**141.86**	**197**	*ePKP*		**PKPdf**		**17 13 24.4 -2.6**
LPAZ	**La Paz**	**145.06**	**61**	PKPbc		**PKPdf**		**17 13 35.1 +0.1**
LPAZ	**La Paz**	**145.06**	**61**	PKPbc		**PKPdf**		**17 13 35.1 +0.1**
	comp=Z,1.4nm,0.7s,baz=16,slow=5.1,SNR=7.1							
PYL					S		**Sn**	**17 20 37.0 +0.4**
ITM	**Ithomi**	**1.30**	**343**		P		**Pn**	**17 20 26.0 +0.7**
ITM					S		**Sb**	**17 20 43.1 -0.1**
ITM	**Ithomi**	**1.30**	**343**	*ePN*			**Pn**	**17 20 24.9 -0.4**
ITM	**Ithomi**	**1.30**	**343**	*ePn*			**Pn**	**17 20 24.9 -0.4**
ITM	**Ithomi**	**1.30**	**343**	P			**Pn**	**17 20 26.0 +0.7**
ITM					S		**Sb**	**17 20 43.1 -0.1**
VAM	**Vamos**	**1.56**	**109**	P			**Pn**	**17 20 29.0 +0.1**
VAM	**Vamos**	**1.56**	**109**	P			**Pn**	**17 20 29.0 +0.1**

AUST ***29*** *17:21:10.1±54.0, 9°.72S×130°.18E, h512km±1km, Error ellipse: s-maj=11.6km s-min=1.3km az=286.0*

IDC 29 17:20:26.4±12.0, 5°.02S×127°.81E, h361km±156km, mb2.6/2, mb1 2.8/5, mb1mx2.6/24, mbtmp2.6/5, Error ellipse: s-maj=77.9km s-min=49.9km az=93.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**4.90**	**65**	P		S	17 22 56.5	+7.0
	baz=7.1,SNR=6.2							
SWI	**Sorong**	**5.38**	**40**	P		S	17 23 17.6	+19
	baz=8.9,SNR=4.8							
MTN	**Manton Dam**	**8.44**	**157**	P		Pn	17 22 22.4	-3.6
	baz=3.3,SNR=11							
WSI	**Waingapu**	**8.76**	**238**	S		S	17 24 45.6	+35
	baz=9.7,SNR=4.6							
KDU	**Kakadu**	**8.91**	**149**	P		Pn	17 22 27.9	-3.6
	baz=3.7,SNR=17							
KNRA	**Kununurra**	**10.63**	**175**	P		Pn	17 22 49.4	-2.5
	baz=6.1,SNR=13							
FITZ	**Fitzroy Crossi**	**13.18**	**189**	P		P	17 23 20.4	-0.2
	0.1nm,0.3s,baz=23,slow=11,SNR=8.5							
FITZ					S		S	17 25 40.7	-4.2
	0.1nm,0.3s,baz=198,slow=20,SNR=2.4							
FITZ	**Fitzroy Crossi**	**13.18**	**189**	P		P	17 23 21.1	+0.5
	baz=9.5,SNR=3.4							
WRA	**Warramunga Arr**	**16.14**	**157**	P		P	17 23 52.5	-0.6
	0.5nm,0.3s,baz=339,slow=12,SNR=16							
WRA					S		S	17 26 29.8	-15
	0.1nm,0.3s,baz=335,slow=20,SNR=5.5							
ASAR	**Alice Springs**	**19.45**	**163**	P		P	17 24 28.6	+0.4
	0.2nm,0.3s,baz=345,slow=11,SNR=25							
MKAR	**Makanchi Array**	**65.39**	**327**	P		P	17 30 30.5	-1.0
	0.1nm,0.3s,baz=112,slow=5.7,SNR=4.2							
KURBB	**Kurchatov Arra**	**69.69**	**329**	P		P	17 30 58.6	+0.6
	0.2nm,0.6s,baz=127,slow=7.3,SNR=5.4							

PRE 29 16:56:51.6±3.1, 26°.44S×27°.47E, h2km, ML3.8, 3C-4D, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLOF	**Kloof**	**0.15**	**55**	*eP*		Pg	16 56 55.5	+0.6
KLOF				*eS*		Sg	16 56 57.2	+0.2
KLOF					AML	AML	16 56 57.6	
	comp=Z,12μm,0.2s							
PRYS	**Parys**	**0.50**	**192**	⇑*iP*		Pb	16 57 02.8	-0.5
PRYS				*eS*		Sb	16 57 09.7	-1.5
PRYS					AML	AML	16 57 14.8	
	comp=Z,801nm,0.6s							
ERPM	**east rand prop**	**0.70**	**82**	⇑*iP*		Pg	16 57 05.9	+0.6
ERPM				*eS*		Sg	16 57 13.8	-0.7
ERPM					AML	AML	16 57 14.8	
	comp=Z,574nm,0.6s							
SLR	**Silverton**	**1.01**	**46**	⇓*iP*		Pg	16 57 11.0	-0.2
SLR				*eS*		Sb	16 57 25.8	-0.2
SLR					AML	AML	16 57 31.2	
	comp=Z,412nm,0.7s							
SWZ	**Schweizer**	**2.05**	**248**	⇓*iP*		Pn	16 57 28.3	+0.9
SWZ				*eS*		Sb	16 57 55.3	-0.6
SWZ					AML	AML	16 57 57.6	
	comp=Z,586nm,0.4s							
LBTB	**Lobatse**	**2.21**	**310**	⇓*iP*		Pb	16 57 31.0	-1.4
LBTB				*eS*		Sb	16 57 59.2	-1.1
LBTB					AML	AML	16 58 02.4	
	comp=Z,666nm,0.6s							
BOSA	**Boshof**	**2.93**	**222**	⇑*iP*		Pn	16 57 40.3	+0.9
BOSA				*eS*		Sn	16 58 14.2	-1.1
BOSA					AML	AML	16 58 34.7	
	comp=Z,64nm,0.7s							
KSD	**Kokstad**	**4.43**	**158**	*eP*		Pn	16 58 00.9	+0.8
KSD				*eS*		Sn	16 58 47.7	-4.7
KSD					AML	AML	16 59 15.4	
	comp=Z,175nm,0.6s							
HVD	**Gariep Dam**	**4.50**	**202**	*eP*		Pn	16 58 00.7	-0.4
HVD				*eS*		Sn	16 58 54.2	+0.1
HVD					AML	AML	16 59 31.3	
	comp=Z,40nm,0.5s							
MSNA	**Messina**	**4.69**	**30**	*eP*		Pn	16 58 04.0	+0.4
MSNA				*eS*		Sn	16 58 56.8	-1.8
MSNA					AML	AML	16 59 16.5	
	comp=Z,43nm,0.3s							
UPI	**Upington**	**5.85**	**249**	⇓*iP*		Pn	16 58 19.2	-0.3
UPI				*eS*		Sn	16 59 22.9	-4.3
UPI					AML	AML	17 00 02.5	
	comp=Z,48nm,0.7s							
GRM	**Grahamstown**	**6.90**	**187**	*eP*		Pn	16 58 35.5	+1.6
GRM				*eS*		Sn	16 59 49.7	-3.4
GRM					AML	AML	17 00 34.3	
	comp=Z,24nm,0.6s							
BUFB	**Buffelsbos**	**8.04**	**196**	*eS*		Sn	17 00 15.6	-5.4
BUFB					AML	AML	17 01 04.2	
	comp=Z,22nm,0.9s							
SUR	**Sutherland**	**8.29**	**223**	*eP*		Pn	16 58 54.5	+1.4
SUR				*eS*		Sn	17 00 22.9	-4.8
SUR					AML	AML	17 01 14.9	
	comp=Z,17nm,0.6s							
CVNA	**Calvinia**	**8.42**	**232**	*eP*		Pn	16 58 54.8	+0.1
CVNA				*eS*		Sn	17 00 27.6	-2.9
CVNA					AML	AML	17 01 17.8	
	comp=Z,41nm,0.7s							
KOMG	**Komaggas**	**9.43**	**247**	*eS*		Sn	17 00 51.4	-3.9
KOMG					AML	AML	17 01 57.3	
	comp=Z,22nm,0.5s							
LSZ	**Lusaka**	**11.13**	**4**	*eP*		Pn	16 59 30.5	-1.5
LSZ				*eS*		Sn	17 01 30.1	-7.1
LSZ					AML	AML	17 02 46.9	
	comp=Z,230nm,0.7s							
TSUM	**Tsumeb**	**11.62**	**306**	*eP*		Pn	16 59 38.6	-0.1
TSUM				*eS*		Sn	17 01 41.3	-7.9

ISCJB ***29*** *17:20:01.6±1.9, 35°.86N±0°.09×22°.34E±0°.09, h26km±10km, Error ellipse: s-maj=18.0km s-min=7.3km az=36.8*
CSEM ***29*** *17:20:01.5±0.5, 35°.87N×22°.36E, h20km, MD2.8, Error ellipse: s-maj=11.8km s-min=5.5km az=39.0*
ATH ***29*** *17:20:02.6, 36°.00N×22°.43E, h38km±8km, MD2.8/6*
THE ***29*** *17:20:03.6, 35°.91N×22°.40E, h32km±39km, ML2.1/2, Error ellipse: s-maj=39.7km s-min=1.6km az=53.0*

ISC 29 17:20:03.2±2.0, 35°.94N±0°.08×22°.40E±0°.07, h29km±14km, n23, σ0°.68/33, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**0.62**	**56**	P		**Pb**	**17 20 15.0**	**-0.5**
KYTH	**Kithira**	**0.62**	**56**	*ePN*		**Pb**	**17 20 14.9**	**-0.5**
KYTH	**Kithira**	**0.62**	**56**	P		**Pb**	**17 20 15.0**	**-0.5**
ANKY	**Antikythira Is**	**0.73**	**95**	*ePN*		**Pn**	**17 20 16.9**	**-0.6**
ANKY				*eSN*		**Sn**	**17 20 28.1**	**+0.4**
ANKY	**Antikythira Is**	**0.73**	**95**	*ePn*		**Pn**	**17 20 16.9**	**-0.6**
ANKY				*eSn*		**Sn**	**17 20 28.1**	**+0.4**
DYR	**Agios Nikonas**	**0.82**	**356**	P		**Pn**	**17 20 18.4**	**-0.4**
DYR				S		**Sn**	**17 20 30.1**	**+0.1**
DYR	**Agios Nikonas**	**0.82**	**356**	*ePN*		**Pn**	**17 20 18.0**	**-0.8**
DYR	**Agios Nikonas**	**0.82**	**356**	*ePn*		**Pn**	**17 20 18.0**	**-0.8**
DYR	**Agios Nikonas**	**0.82**	**356**	P		**Pn**	**17 20 18.4**	**-0.4**
DYR				S		**Sn**	**17 20 30.1**	**+0.1**
VLI	**Veliai**	**0.89**	**29**	P		**Pn**	**17 20 20.0**	**+0.3**
VLI				S		**Sb**	**17 20 33.0**	**+1.4**
VLI	**Veliai**	**0.89**	**29**	*ePN*		**Pn**	**17 20 18.4**	**-1.3**
VLI	**Veliai**	**0.89**	**29**	*ePn*		**Pn**	**17 20 18.4**	**-1.3**
VLI	**Veliai**	**0.89**	**29**	P		**Pn**	**17 20 20.0**	**+0.3**
VLI				S		**Sb**	**17 20 33.0**	**+1.4**
PYL	**PYLOS**	**1.09**	**331**	P		**Pn**	**17 20 22.1**	**-0.4**
PYL				S		**Sn**	**17 20 37.0**	**+0.4**
PYL	**PYLOS**	**1.09**	**331**	*ePN*		**Pn**	**17 20 22.8**	**+0.3**
PYL	**PYLOS**	**1.09**	**331**	P		**Pn**	**17 20 22.1**	**-0.4**
PYL	**PYLOS**	**1.09**	**331**	*ePn*		**Pn**	**17 20 22.8**	**+0.3**

IDC 29 17:24:31.2±2.0, 4°.20N×127°.13E, h0km, mb3.4/5, mb1 3.6/5, mb1mx3.4/24, mbtmp3.4/5, Error ellipse: s-maj=203.0km s-min=20.5km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.02**	**164**	P	P	17 29 57.2	+0.1
	0.4nm,0.6s,baz=342,slow=11,SNR=4.5						
ASAR	**Alice Springs**	**28.47**	**167**	P	P	17 30 28.8	+0.5
	0.2nm,0.9s,baz=342,slow=11,SNR=2.6						
STKA	**Stephens Creek**	**38.43**	**160**	P	P	17 31 53.7	-1.0
	2.2nm,0.8s,baz=0.0,slow=8.1,SNR=3.8						
MKAR	**Makanchi Array**	**57.40**	**325**	P	P	17 34 21.9	+0.2
	0.2nm,0.5s,baz=125,slow=7.7,SNR=5.8						
KURBB	**Kurchatov Arra**	**61.56**	**327**	P	P	17 34 50.1	-0.2
	0.3nm,0.6s,baz=124,slow=6.1,SNR=5.7						

**IDC 29

SJG	**San Juan**	**0.62**	**134**↑	*e*P	Pn	17 47 22.2	-0.5
SJG				*e*S	Sn	17 47 33.6	-0.2
SJG	**San Juan**	**0.62**	**134**↑	*e*P	Pn	17 47 22.2	-0.6
SJG				*e*S	Sn	17 47 33.4	-0.4
SJG				*e*S	Sn	17 47 33.6	-0.2
CRPR	**Cabo Rojo, PR**	**0.71**	**221**↑	*e*P	Pn	17 47 23.4	-0.3
CRPR	**Cabo Rojo, PR**	**0.71**	**221**	*e*S	Sn	17 47 35.2	-0.2
CRPR	**Cabo Rojo, PR**	**0.71**	**221**↑	*e*P	Pn	17 47 23.4	-0.3
CRPR				*e*S	Sn	17 47 35.2	-0.2
CBYP	**Canovanas**	**0.78**	**110**↑	*e*P	Pn	17 47 24.0	-0.5
CBYP	**Canovanas**	**0.78**	**110**	*e*S	Sn	17 47 36.4	-0.4
CBYP	**Canovanas**	**0.78**	**110**↑	*e*P	Pn	17 47 24.0	-0.5
CBYP				*e*S	Sn	17 47 36.4	-0.4
HUMP	**Col San Antoni**	**0.83**	**118**↑	*e*P	Pn	17 47 24.5	-0.5
HUMP	**Col San Antoni**	**0.83**	**118**	*e*S	Sn	17 47 37.5	-0.4
HUMP	**Col San Antoni**	**0.83**	**118**↑	*e*P	Pn	17 47 24.5	-0.5
HUMP				*e*S	Sn	17 47 37.5	-0.4
CPD	**Cerro la Pandu**	**0.84**	**127**↑	*e*P	Pn	17 47 24.6	-0.5
CPD	**Cerro la Pandu**	**0.84**	**127**	*e*S	Sn	17 47 37.5	-0.5
CPD	**Cerro la Pandu**	**0.84**	**127**↑	*e*P	Pn	17 47 24.6	-0.5
CPD				*e*S	Sn	17 47 37.5	-0.5
MTP	**Monte Pirata**	**1.11**	**113**↑	*e*P	Pn	17 47 27.9	-0.3
MTP	**Monte Pirata**	**1.11**	**113**	*e*S	Sn	17 47 43.4	-0.2
MTP	**Monte Pirata**	**1.11**	**113**↑	*e*P	Pn	17 47 27.9	-0.3
MTP				*e*S	Sn	17 47 43.4	-0.2
STVI	**Saint Thomas**	**1.60**	**97**	*e*S	Sn	17 47 53.9	-0.7
STVI	**Saint Thomas**	**1.60**	**97**	*e*Pn	Pn	17 47 33.4	-1.0
STVI				*e*Sn	Sn	17 47 53.2	-1.3
DR12	**Loma Pena Alta**	**2.63**	**276**↑	*e*P	Pn	17 47 47.9	-0.3
DR12	**Loma Pena Alta**	**2.63**	**276**↑	*e*P	Pn	17 47 47.9	-0.3

IDC ***29*** *17:47:30.9±2.6, 38°.64N×23°.18E, h0km, mb3.4/2, mb1 3.3/3, mb1mx3.1/26, mbtmp3.3/3, ML2.7/1, MS2.8/1, Ms1 2.9/1, ms1mx2.3/18, Error ellipse: s-maj=156.9km s-min=27.4km az=147.0*

ATH ***29*** *17:47:31.8, 38°.58N×23°.49E, h16km±1km, MD3.5/32, ML4.1*

ISCJB ***29*** *17:47:32.2±0.3, 38°.54N±0°.01×23°.47E±0°.02, h8km±2km, mb3.2/2, MS2.6/1, Error ellipse: s-maj=2.1km s-min=1.9km az=14.5*

THE ***29*** *17:47:32.3, 38°.53N×23°.44E, h0km±1km, ML3.7/13, Error ellipse: s-maj=1.3km s-min=0.5km az=255.0*

CSEM ***29*** *17:47:32.4±0.1, 38°.53N×23°.45E, h5km, ML3.7/13, Error ellipse: s-maj=2.3km s-min=2.1km az=89.0*

ISC 29 17:47:33.0±0.8, 38°.54N±0°.01×23°.44E±0°.01, h12km±6km, n198, σ0.88/285, 7C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRKA	**Markates**	**0.20**	**34**	P	**Pg**	**17 47 37.3**	**-0.1**
MRKA				S	**Sg**	**17 47 40.8**	**+0.4**
MRKA	**Markates**	**0.20**	**34**	P	**Pg**	**17 47 37.3**	**-0.1**
MRKA				S	**Sg**	**17 47 40.8**	**+0.4**
VIL2	**Platees**	**0.35**	**203**	P	**Pg**	**17 47 39.4**	**-0.7**
VIL2				S	**Sg**	**17 47 44.7**	**-0.2**
ATAL	**Atalanti**	**0.36**	**295**	P	**Pg**	**17 47 39.6**	**-0.7**
ATAL				S	**Sg**	**17 47 45.6**	**+0.4**
ATAL	**Atalanti**	**0.36**	**295**	P	**Pg**	**17 47 39.6**	**-0.7**
ATAL				S	**Sg**	**17 47 45.6**	**+0.4**
LKR	**Lokris**	**0.36**	**288**	P	**Pg**	**17 47 39.5**	**-0.8**
LKR				S	**Sg**	**17 47 44.7**	**-0.5**
LKR	**Lokris**	**0.36**	**288**	*e*PB	**Pg**	**17 47 39.5**	**-0.8**
LKR				*e*SB	**Sg**	**17 47 45.3**	**+0.1**
LKR	**Lokris**	**0.36**	**288**	P	**Pg**	**17 47 39.5**	**-0.8**
LKR				S	**Sg**	**17 47 44.7**	**-0.5**
LKR				*e*Sb	**Sg**	**17 47 45.3**	**+0.1**
SMIA	**Simia**	**0.39**	**332**	P	**Pg**	**17 47 40.8**	**+0.1**
SMIA				S	**Sg**	**17 47 46.7**	**+0.8**
SMIA	**Simia**	**0.39**	**332**	P	**Pg**	**17 47 40.8**	**+0.1**
SMIA				S	**Sg**	**17 47 46.7**	**+0.8**
PTL	**Penteli**	**0.59**	**146**	P	**Pg**	**17 47 44.0**	**-0.6**
PTL				S	**Sg**	**17 47 51.7**	**-0.6**
PTL	**Penteli**	**0.59**	**146**	*e*PN	**Pg**	**17 47 43.0**	**-1.6**
PTL				*e*SN	**Sg**	**17 47 51.8**	**-0.6**
PTL	**Penteli**	**0.59**	**146**	*e*Pn	**Pg**	**17 47 43.0**	**-1.6**
PTL	**Penteli**	**0.59**	**146**	P	**Pg**	**17 47 44.0**	**-0.6**
PTL				*e*Sn	**Sg**	**17 47 51.8**	**-0.6**
ATH	**Athens Observa**	**0.61**	**159**	P	**Pg**	**17 47 44.1**	**-0.7**
ATH				S	**Sg**	**17 47 53.0**	**+0.2**
ATH	**Athens Observa**	**0.61**	**159**	*e*PN	**Pg**	**17 47 44.2**	**-0.6**
ATH				*e*SN	**Sg**	**17 47 52.8**	**0.0**
ATH	**Athens Observa**	**0.61**	**159**	P	**Pg**	**17 47 44.1**	**-0.7**
ATH				S	**Sg**	**17 47 53.0**	**+0.2**
SKIA	**Skiathos**	**0.63**	**2**	P	**Pg**	**17 47 45.4**	**+0.2**
SKIA				S	**Sb**	**17 47 55.1**	**+0.4**
SKIA	**Skiathos**	**0.63**	**2**	P	**Pg**	**17 47 45.4**	**+0.2**
SKIA				S	**Sb**	**17 47 55.1**	**+0.4**
ATHU	**Athens Univers**	**0.63**	**155**	P	**Pg**	**17 47 44.6**	**-0.7**
ATHU				S	**Sg**	**17 47 52.7**	**-0.9**
ATHU	**Athens Univers**	**0.63**	**155**	P	**Pg**	**17 47 44.6**	**-0.7**
LTK	**Loutraki**	**0.64**	**216**	P	**Pg**	**17 47 44.3**	**-1.1**
LTK				S	**Sg**	**17 47 54.3**	**+0.5**
LTK	**Loutraki**	**0.64**	**216**	*e*PB	**Pg**	**17 47 44.4**	**-1.0**
LTK				*e*SN	**Sg**	**17 47 54.3**	**+0.5**
LTK	**Loutraki**	**0.64**	**216**	*e*Pb	**Pg**	**17 47 44.4**	**-1.0**
LTK				*e*Sn	**Sg**	**17 47 54.3**	**+0.5**
AXAR	**Agios Charalam**	**0.65**	**290**	P	**Pg**	**17 47 44.6**	**-1.1**
AXAR				S	**Sg**	**17 47 54.3**	**-0.1**
AXAR	**Agios Charalam**	**0.65**	**290**	S	**Pg**	**17 47 44.6**	**-1.1**
AXAR				S	**Sg**	**17 47 54.3**	**-0.1**
AOS	**Alonnisos**	**0.72**	**28**	P	**Pg**	**17 47 46.4**	**-0.5**
AOS				S	**Sb**	**17 47 57.7**	**+0.4**
AOS	**Alonnisos**	**0.72**	**28**	P	**Pg**	**17 47 46.4**	**-0.5**
AOS				S	**Sb**	**17 47 57.7**	**+0.4**
DSF	**Desfina**	**0.73**	**260**	P	**Pg**	**17 47 45.5**	**-1.7**
DSF				S	**Sg**	**17 47 56.7**	**-0.1**
NAIG	**Nisos Aigina**	**0.78**	**177**	*e*PN	**Pg**	**17 47 47.4**	**-0.7**
NAIG	**Nisos Aigina**	**0.78**	**177**	*e*Pn	**Pg**	**17 47 47.4**	**-0.7**
THAL	**Thalero**	**0.79**	**231**	P	**Pg**	**17 47 47.2**	**-1.1**
THAL				S	**Sb**	**17 47 59.8**	**+0.4**
THAL	**Thalero**	**0.79**	**231**	P	**Pg**	**17 47 47.2**	**-1.1**
THAL				S	**Sb**	**17 47 59.8**	**+0.4**
XOR	**Xorichti**	**0.85**	**347**	P	**Pg**	**17 47 49.0**	**-0.4**
XOR				S	**Sb**	**17 48 01.3**	**+0.2**
XOR	**Xorichti**	**0.85**	**347**	P	**Pg**	**17 47 49.0**	**-0.4**
XOR				S	**Sb**	**17 48 01.3**	**+0.2**
MRMA	**Marmari**	**0.88**	**123**	P	**Pg**	**17 47 48.9**	**-1.1**
MRMA				S	**Sg**	**17 48 01.5**	**0.0**
MRMA	**Marmari**	**0.88**	**123**	P	**Pg**	**17 47 48.9**	**-1.1**
MRMA				S	**Sg**	**17 48 01.5**	**0.0**
AGG	**Agios Georgios**	**0.99**	**299**	P	**Pg**	**17 47 50.7**	**-1.5**
AGG				S	**Sb**	**17 48 05.5**	**+0.2**
AGG	**Agios Georgios**	**0.99**	**299**	*e*PN	**Pg**	**17 47 50.8**	**-1.5**
AGG				*e*SN	**Sg**	**17 48 05.0**	**-0.2**
AGG	**Agios Georgios**	**0.99**	**299**	P	**Pg**	**17 47 50.7**	**-1.5**
AGG				*e*Sn	**Sg**	**17 48 05.0**	**-0.2**
AGG				S	**Sb**	**17 48 05.5**	**+0.2**
KALE	**Kalithea**	**1.03**	**262**	P	**Pg**	**17 47 50.9**	**-2.0**
KALE				S	**Sg**	**17 48 06.2**	**-0.2**
KALE	**Kalithea**	**1.03**	**262**	*e*PN	**Pg**	**17 47 52.0**	**-0.9**
KALE				*e*SN	**Sb**	**17 48 06.9**	**+0.4**
KALE	**Kalithea**	**1.03**	**262**	*e*Pn	**Pg**	**17 47 52.0**	**-0.9**
KALE				S	**Sg**	**17 48 06.2**	**-0.2**
KALE				*e*Sn	**Sb**	**17 48 06.9**	**+0.4**
DID	**Didima**	**1.04**	**189**	P	**Pg**	**17 47 51.3**	**-1.8**
DID				S	**Sn**	**17 48 07.9**	**-0.2**
DID	**Didima**	**1.04**	**189**	*e*PB	**Pg**	**17 47 51.7**	**-1.4**
DID				*e*SN	**Sb**	**17 48 07.7**	**+1.0**
DID	**Didima**	**1.04**	**189**	P	**Pg**	**17 47 51.3**	**-1.8**
DID	**Didima**	**1.04**	**189**	*e*Pb	**Pg**	**17 47 51.7**	**-1.4**
DID				S	**Sn**	**17 48 07.9**	**-0.2**
GUR	**Goura**	**1.05**	**236**	P	**Pg**	**17 47 51.7**	**-1.7**
GUR				S	**Sg**	**17 48 06.8**	**-0.3**
GUR	**Goura**	**1.05**	**236**	*e*PN	**Pg**	**17 47 52.8**	**-0.6**
GUR				*e*SN	**Sn**	**17 48 08.3**	**-0.2**
GUR	**Goura**	**1.05**	**236**	P	**Pg**	**17 47 51.7**	**-1.7**
GUR	**Goura**	**1.05**	**236**	*e*Pn	**Pg**	**17 47 52.8**	**-0.6**
GUR				S	**Sg**	**17 48 06.8**	**-0.3**
GUR				*e*Sn	**Sn**	**17 48 08.3**	**-0.2**
DIDY	**Didyma**	**1.08**	**190**	P	**Pg**	**17 47 51.6**	**-2.2**
DIDY				S	**Sb**	**17 48 08.1**	**+0.4**
TRIZ	**Trizonia**	**1.09**	**261**	P	**Pg**	**17 47 51.9**	**-2.1**
TRIZ				S	**Sn**	**17 48 08.1**	**0.0**
TRIZ	**Trizonia**	**1.09**	**261**	*e*PN	**Pg**	**17 47 52.8**	**-1.2**
TRIZ				*e*SN	**Sb**	**17 48 08.9**	**+0.9**
TRIZ	**Trizonia**	**1.09**	**261**	P	**Pg**	**17 47 51.9**	**-2.1**
TRIZ	**Trizonia**	**1.09**	**261**	*e*Pn	**Pg**	**17 47 52.8**	**-1.2**
TRIZ				*e*Sn	**Sb**	**17 48 08.9**	**+0.9**
MAKR	**Makrakomi, Fth**	**1.13**	**295**	P	**Pg**	**17 47 53.3**	**-1.4**
MAKR				S	**Sn**	**17 48 10.9**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.13**	**295**	P	**Pg**	**17 47 53.3**	**-1.4**
MAKR				S	**Sn**	**17 48 10.9**	**+0.7**
KLV	**Kalavryta, Ach**	**1.13**	**244**	*e*PN	**Pg**	**17 47 53.4**	**-1.4**
KLV				*e*SN	**Sn**	**17 48 10.4**	**+0.1**
KLV	**Kalavryta, Ach**	**1.13**	**244**	*e*Pn	**Pg**	**17 47 53.4**	**-1.4**
KLV				*e*Sn	**Sn**	**17 48 10.4**	**+0.1**
LAKA	**Lakka**	**1.19**	**256**	P	**Pb**	**17 47 53.9**	**-1.6**
LAKA				S	**Sn**	**17 48 12.1**	**+0.4**
LAKA	**Lakka**	**1.19**	**256**	*e*PN	**Pb**	**17 47 55.0**	**-0.5**
LAKA				*e*SN	**Sn**	**17 48 12.2**	**+0.5**
LAKA	**Lakka**	**1.19**	**256**	P	**Pb**	**17 47 53.9**	**-1.6**
LAKA	**Lakka**	**1.19**	**256**	*e*Pn	**Pb**	**17 47 55.0**	**-0.5**
LAKA				*e*Sn	**Sn**	**17 48 12.2**	**+0.5**
EFP	**Efpalio**	**1.21**	**265**	P	**Pb**	**17 47 54.1**	**-1.8**
EFP				S	**Sg**	**17 48 12.0**	**-0.1**
EFP	**Efpalio**	**1.21**	**265**	*e*PN	**Pb**	**17 47 55.5**	**-0.4**
EFP				*e*SN	**Sn**	**17 48 12.5**	**+0.4**
EFP	**Efpalio**	**1.21**	**265**	P	**Pb**	**17 47 54.1**	**-1.8**
EFP	**Efpalio**	**1.21**	**265**	*e*Pn	**Pb**	**17 47 55.5**	**-0.4**
EFP				S	**Sg**	**17 48 12.0**	**-0.1**
EFP				*e*Sn	**Sn**	**17 48 12.5**	**+0.4**
EVR	**Evrytania**	**1.33**	**287**	P	**Pn**	**17 47 57.8**	**+0.2**
EVR	**Evrytania**	**1.33**	**287**	*e*PN	**Pn**	**17 47 57.8**	**+0.2**
EVR	**Evrytania**	**1.33**	**287**	P	**Pn**	**17 47 57.8**	**+0.2**
VLX	**Vlachokerasia**	**1.44**	**216**	P	**Pn**	**17 47 58.7**	**-0.3**
VLX				S	**Sg**	**17 48 20.0**	**+0.7**
VLX	**Vlachokerasia**	**1.44**	**216**	*e*PN	**Pb**	**17 47 59.9**	**+0.1**
VLX				*e*SN	**Sg**	**17 48 20.1**	**+0.7**
VLX	**Vlachokerasia**	**1.44**	**216**	P	**Pn**	**17 47 58.7**	**-0.3**
VLX	**Vlachokerasia**	**1.44**	**216**	*e*Pn	**Pb**	**17 47 59.9**	**+0.1**
VLX				S	**Sg**	**17 48 20.0**	**+0.7**
THL	**Klokotos Trika**	**1.51**	**313**	P	**Pn**	**17 47 59.6**	**-0.3**
THL	**Klokotos Trika**	**1.51**	**313**	*e*PN	**Pn**	**17 47 59.9**	**0.0**
THL				*e*SN	**Sg**	**17 48 21.1**	**-0.6**
THL	**Klokotos Trika**	**1.51**	**313**	P	**Pn**	**17 47 59.6**	**-0.3**
THL	**Klokotos Trika**	**1.51**	**313**	*e*Pn	**Pn**	**17 47 59.9**	**0.0**
THL				*e*Sn	**Sg**	**17 48 21.1**	**-0.6**
RLS	**Riolos of Patr**	**1.63**	**253**	P	**Pb**	**17 48 03.5**	**+0.5**
RLS				S	**Sg**	**17 48 25.6**	**+0.2**
RLS	**Riolos of Patr**	**1.63**	**253**	*e*PN	**Pb**	**17 48 02.7**	**-0.3**
RLS	**Riolos of Patr**	**1.63**	**253**	*e*Pn	**Pb**	**17 48 02.7**	**-0.3**
RLS	**Riolos of Patr**	**1.63**	**253**	P	**Pn**	**17 48 03.5**	**+0.5**
AMT	**Artemida-Makis**	**1.70**	**234**	*e*PN	**Pb**	**17 48 04.0**	**-0.2**
AMT				*e*SN	**Sg**	**17 48 27.9**	**+0.2**
AMT	**Artemida-Makis**	**1.70**	**234**	*e*Pn	**Pb**	**17 48 04.0**	**-0.2**
AMT				*e*Sn	**Sg**	**17 48 27.9**	**+0.2**
ITM	**Ithomi**	**1.81**	**222**	P	**Pn**	**17 48 04.9**	**+0.8**
ITM				S	**Sb**	**17 48 29.3**	**+0.5**
ITM	**Ithomi**	**1.81**	**222**	*e*PN	**Pn**	**17 48 05.1**	**+1.0**
ITM	**Ithomi**	**1.81**	**222**	P	**Pn**	**17 48 04.9**	**+0.8**
ITM				S	**Sb**	**17 48 29.3**	**+0.5**
PLG	**Polygyros**	**1.83**	**0**	P	**Pn**	**17 48 04.1**	**-0.3**
PLG				S	**Sb**	**17 48 28.9**	**-0.5**
PLG	**Polygyros**	**1.83**	**0**	*e*PN	**Pn**	**17 48 04.1**	**-0.3**
PLG	**Polygyros**	**1.83**	**0**	P	**Pn**	**17 48 04.1**	**-0.3**
PLG				S	**Sb**	**17 48 28.9**	**-0.5**
OUR	**Ouranopolis**	**1.84**	**13**	P	**Pn**	**17 48 04.3**	**-0.1**
OUR	**Ouranopolis**	**1.84**	**13**	P	**Pn**	**17 48 04.3**	**-0.1**
VLI	**Veliai**	**1.86**	**193**	P	**Pn**	**17 48 04.0**	**-0.8**
VLI	**Veliai**	**1.86**	**193**	P	**Pn**	**17 48 04.0**	**-0.8**
LIA	**Limnos Island**	**1.92**	**44**	P	**Pn**	**17 48 04.7**	**-0.8**
LIA				S	**Sn**	**17 48 30.9**	**+1.4**
LIA	**Limnos Island**	**1.92**	**44**	*e*PN	**Pn**	**17 48 05.0**	**-0.5**
LIA	**Limnos Island**	**1.92**	**44**	P	**Pn**	**17 48 04.7**	**-0.8**
LIA	**Limnos Island**	**1.92**	**44**	*e*Pn	**Pn**	**17 48 05.0**	**-0.5**
LIA				S	**Sn**	**17 48 30.9**	**+1.4**
DYR	**Agios Nikonas**	**1.98**	**207**	P	**Pn**	**17 48 06.7**	**+0.3**
DYR	**Agios Nikonas**	**1.98**	**207**	*e*PN	**Pn**	**17 48 07.1**	**+0.7**
DYR	**Agios Nikonas**	**1.98**	**207**	P	**Pn**	**17 48 06.7**	**+0.3**
DYR	**Agios Nikonas**	**1.98**	**207**	*e*Pn	**Pn**	**17 48 07.1**	**+0.7**
SIGR	**SIGRI**	**2.00**	**70**	P	**Pn**	**17 48 06.3**	**-0.3**
SIGR				S	**Sb**	**17 48 34.4**	**+0.2**
SIGR	**SIGRI**	**2.00**	**70**	P	**Pn**	**17 48 06.3**	**-0.3**
CHOS	**Chios island**	**2.06**	**93**	P	**Pn**	**17 48 07.5**	**0.0**
CHOS	**Chios island**	**2.06**	**93**	*e*PN	**Pn**	**17 48 07.4**	**0.0**
CHOS	**Chios island**	**2.06**	**93**	P	**Pn**	**17 48 07.5**	**0.0**
HORT	**Hortiatis**	**2.07**	**353**	P	**Pn**	**17 48 07.7**	**0.0**
HORT				S	**Sn**	**17 48 34.2**	**+0.6**
HORT	**Hortiatis**	**2.07**	**353**	P	**Pn**	**17 48 07.7**	**0.0**
HORT				S	**Sn**	**17 48 34.2**	**+0.6**
PYL	**PYLOS**	**2.12**	**220**	P	**Pn**	**17 48 09.8**	**+1.4**
PYL				S	**Sb**	**17 48 37.0**	**-0.2**
PYL	**PYLOS**	**2.12**	**220**	*e*PN	**Pn**	**17 48 09.8**	**+1.4**
PYL	**PYLOS**	**2.12**	**220**	P	**Pn**	**17 48 09.8**	**+1.4**
KFL	**Anninata**	**2.13**	**259**	P	**Pn**	**17 48 10.6**	**-1.0**
KFL	**Anninata**	**2.13**	**259**	P	**Pb**	**17 48 10.6**	**-1.0**
KZN	**Kozani**	**2.19**	**324**	P	**Pn**	**17 48 09.0**	**-0.3**
KZN	**Kozani**	**2.19**	**324**	*e*PN	**Pn**	**17 48 09.8**	**+0.5**
KZN	**Kozani**	**2.19**	**324**	P	**Pn**	**17 48 09.0**	**-0.3**
KZN	**Kozani**	**2.19**	**324**	*e*Pn	**Pn**	**17 48 09.8**	**+0.5**
LKD2	**Lefkada island**	**2.19**	**277**	P	**Pb**	**17 48 11.5**	**-1.2**
LKD2	**Lefkada island**	**2.19**	**277**	*e*PN	**Pn**	**17 48 10.8**	**+1.4**
LKD2	**Lefkada island**	**2.19**	**277**	*e*Pn	**Pn**	**17 48 10.8**	**+1.4**
LKD2	**Lefkada island**	**2.19**	**277**	P	**Pb**	**17 48 11.5**	**-1.2**
APE	**Apeiranthos**	**2.21**	**131**	P	**Pn**	**17 48 09.3**	**-0.3**
APE				S	**Sn**	**17 48 38.0**	**+1.1**
APE	**Apeiranthos**	**2.21**	**131**	*e*PN	**Pn**	**17 48 10.2**	**+0.6**
APE	**Apeiranthos**	**2.21**	**131**	P	**Pn**	**17 48 09.3**	**-0.3**
APE				S	**Sn**	**17 48 38.0**	**+1.1**
APE	**Apeiranthos**	**2.21**	**131**	P	**Pn**	**17 48 09.3**	**-0.3**
APE	**Apeiranthos**	**2.21**	**131**	*e*Pn	**Pn**	**17 48 10.2**	**+0.6**
APE				S	**Sn**	**17 48 38.0**	**+1.1**
VLS	**Valsamata**	**2.27**	**262**	P	**Pn**	**17 48 12.2**	**+1.8**
VLS	**Valsamata**	**2.27**	**262**	P	**Pn**	**17 48 12.2**	**+1.8**
KYTH	**Kithira**	**2.28**	**188**	P	**Pn**	**17 48 09.9**	**-0.6**
KYTH	**Kithira**	**2.28**	**188**	*e*PB	**Pn**	**17 48 10.5**	**0.0**
KYTH	**Kithira**	**2.28**	**188**	P	**Pn**	**17 48 09.9**	**-0.6**
KYTH	**Kithira**	**2.28**	**188**	*e*Pb	**Pn**	**17 48 10.5**	**0.0**
SOH	**Sokhos**	**2.28**	**358**	*e*PN	**Pn**	**17 48 10.7**	**+0.1**
SOH	**Sokhos**	**2.28**	**358**	*e*Pn	**Pn**	**17 48 10.7**	**+0.1**
JAN	**Janina**	**2.31**	**300**	*e*PN	**Pn**	**17 48 12.0**	**+1.1**
JAN	**Janina**	**2.31**	**300**	*e*Pn	**Pn**	**17 48 12.0**	**+1.1**
PRK	**Paraskevi**	**2.32**	**71**	P	**Pn**	**17 48 10.9**	**-0.1**
PRK				S	**Sn**	**17 48 40.4**	**+1.0**
PRK	**Paraskevi**	**2.32**	**71**	*e*PN	**Pn**	**17 48 11.5**	**+0.5**
PRK	**Paraskevi**	**2.32**	**71**	P	**Pn**	**17 48 10.9**	**-0.1**
PRK	**Paraskevi**	**2.32**	**71**	*e*Pn	**Pn**	**17 48 11.5**	**+0.5**
PRK				S	**Sn**	**17 48 40.4**	**+1.0**
SMTH	**Samothraki Isl**	**2.52**	**39**	*e*PB	**Pn**	**17 48 13.6**	**-0.2**
SMTH	**Samothraki Isl**	**2.52**	**39**	*e*Pb	**Pn**	**17 48 13.6**	**-0.2**
GRG	**Griva**	**2.54**	**342**	*e*PB	**Pn**	**17 48 14.7**	**+0.5**
GRG	**Griva**	**2.54**	**342**	*e*Pb	**Pn**	**17 48 14.7**	**+0.5**
SRS	**Serrai**	**2.58**	**3**	P	**Pn**	**17 48 14.6**	**0.0**
SRS	**Serrai**	**2.58**	**3**	P	**Pn**	**17 48 14.6**	**0.0**
KAVA	**Kavala**	**2.59**	**18**	P	**Pn**	**17 48 14.1**	**-0.6**
KAVA	**Kavala**	**2.59**	**18**	P	**Pn**	**17 48 14.1**	**-0.6**
IGT	**Igoumenitsa**	**2.62**	**293**	P	**Pb**	**17 48 17.9**	**-2.0**
IGT	**Igoumenitsa**	**2.62**	**293**	P	**Pb**	**17 48 17.9**	**-2.0**
NEST	**Nestorio**	**2.63**	**316**	P	**Pn**	**17 48 15.6**	**+0.1**
NEST	**Nestorio**	**2.63**	**316**	P	**Pn**	**17 48 15.6**	**+0.1**
THR3	**Thira Island,**	**2.64**	**143**	P	**Pn**	**17 48 16.1**	**+0.7**
THR3	**Thira Island,**	**2.64**	**143**	P	**Pn**	**17 48 16.1**	**+0.7**
KNT	**Kendrikon**	**2.65**	**351**	P	**Pn**	**17 48 16.2**	**+0.6**
KNT	**Kendrikon**	**2.65**	**351**	P	**Pn**	**17 48 16.2**	**+0.6**
ANKY	**Antikythira Is**	**2.67**	**182**	*e*PN	**Pn**	**17 48 16.0**	**+0.1**
ANKY	**Antikythira Is**	**2.67**	**182**	*e*Pn	**Pn**	**17 48 16.0**	**+0.1**
FNA	**Florina**	**2.75**	**325**	*e*PB	**Pn**	**17 48 18.2**	**+1.2**
FNA	**Florina**	**2.75**	**325**	*e*Pb	**Pn**	**17 48 18.2**	**+1.2**
NVR	**Nevrokopi**	**2.83**	**6**	P	**Pn**	**17 48 18.0**	**-0.1**
NVR	**Nevrokopi**	**2.83**	**6**	P	**Pn**	**17 48 18.0**	**-0.1**
VAY	**Valandovo**	**2.86**	**347**	*e*Pn	Pg	17 48 30.9	+3.1
RDO	**Rodhopi**	**3.06**	**31**	*e*PN	**Pn**	**17 48 20.6**	**-0.6**
RDO	**Rodhopi**	**3.06**	**31**	*e*Pn	**Pn**	**17 48 20.6**	**-0.6**
ALN	**Alexandroupoli**	**3.09**	**40**	P	**Pn**	**17 48 21.0**	**-0.7**
ALN	**Alexandroupoli**	**3.09**	**40**	*e*PN	**Pn**	**17 48 21.8**	**+0.1**
ALN	**Alexandroupoli**	**3.09**	**40**	P	**Pn**	**17 48 21.0**	**-0.7**
ALN	**Alexandroupoli**	**3.09**	**40**	*e*Pn	**Pn**	**17 48 21.8**	**+0.1**
VAM	**Vamos**	**3.19**	**169**	P	**Pn**	**17 48 23.8**	**+0.8**
VAM	**Vamos**	**3.19**	**169**	*e*PN	**Pn**	**17 48 23.8**	**+0.8**
VAM	**Vamos**	**3.19**	**169**	P	**Pn**	**17 48 23.8**	**+0.8**
IDI	**Anoyia**	**3.45**	**160**	P	**Pn**	**17 48 27.8**	**+1.2**
IDI	**Anoyia**	**3.45**	**160**	*e*PN	**Pn**	**17 48 28.1**	**+1.5**
IDI	**Anoyia**	**3.45**	**160**	P	**Pn**	**17 48 27.8**	**+1.2**
IDI	**Anoyia**	**3.45**	**160**	*e*Pn	**Pn**	**17 48 28.1**	**+1.5**
SIVA	**Sivas**	**3.68**	**162**	P	**Pn**	**17 48 30.5**	**+0.7**
SIVA	**Sivas**	**3.68**	**162**	*e*PN	**Pn**	**17 48 31.1**	**+1.3**
SIVA	**Sivas**	**3.68**	**162**	*e*Pn	**Pn**	**17 48 31.1**	**+1.3**
LAST	**Lasithi**	**3.75**	**154**	P	**Pn**	**17 48 31.2**	**+0.4**
LAST	**Lasithi**	**3.75**	**154**	P	**Pn**	**17 48 31.2**	**+0.4**
VTS	**Vitosha**	**4.05**	**358**↓	*i*P	**Pn**	**17 48 36.4**	**+1.4**
VTS	**Vitosha**	**4.05**	**358**↓	*i*P	**Pn**	**17 48 36.4**	**+1.4**
BARS	**Barje**	**4.45**	**344**	*e*Pn	**Pn**	**17 48 40.9**	**+0.6**
TIRR	**Tirgusor**	**6.99**	**31**↑	*i*P	**Pn**	**17 49 15.5**	**+0.3**
TIRR	**Tirgusor**	**6.99**	**31**	S	**Sn**	**17 50 31.2**	**-3.4**
TIRR	**Tirgusor**	**6.99**	**31**↑	*i*P	**Pn**	**17 49 15.5**	**+0.3**
VOIR		**7.00**	**9**↑	*i*P	**Pn**	**17 49 16.6**	**+1.2**
VOIR		**7.00**	**9**↑	*i*P	**Pn**	**17 49 16.6**	**+1.2**
VOIR				S	**Sn**	**17 50 35.4**	**+0.5**
MLR	**Muntele Rosu**	**7.19**	**14**↑	*i*P	**Pn**	**17 49 19.9**	**+1.8**
MLR	**Muntele Rosu**	**7.19**	**14**↑	*i*P	**Pn**	**17 49 19.9**	**+1.8**
MLR				S	**Sn**	**17 50 39.5**	**-0.3**
BRTR	**Keskin Array B**	**8.01**	**78**	Pn	**Pn**	**17 49 31.2**	**+1.8**
	0.1nm,0.3s,baz=257,slow=11,SNR=5.1						
NOA	**NORSAR Array B**	**23.79**	**345**	LR	LR	18 01 31.2	
	comp=Z,22nm,18.5s,baz=95,slow=36						
TORD	**Torodi Ar. Bea**	**31.81**	**223**	P	**P**	**17 53 56.7**	**-0.9**
	0.5nm,0.7s,baz=31,slow=8.0,SNR=3.4						
MKAR	**Makanchi Array**	**43.15**	**59**	P	**P**	**17 55 34.0**	**+0.6**
	0.2nm,0.7s,ba

5.6nm,0.8s
KKN **Kakani** 42.73 272 *e*P P 18 09 15.9 -1.2
10nm,0.4s
DMN **Daman** 42.95 272 *e*P P 18 09 16.8 -2.1
DANN **Dangsing** 43.70 274 *e*P P 18 09 25.4 +0.5
28nm,0.6s
KOLN **Koldanda** 44.08 273 *e*P P 18 09 24.8 -2.9
ILAR **Eielson Array** 52.06 32 P P 18 10 28.3 +1.1
0.2nm,0.5s,baz=269,slow=6.3,SNR=3.8
FITZ **Fitzroy Crossi** 55.68 191 P P 18 10 52.9 -0.7
3.2nm,1.0s,baz=30,slow=14,SNR=3.2
WRA **Warramunga Arr** 56.78 181 P P 18 11 01.4 +0.1
4.0nm,0.4s,baz=357,slow=7.5,SNR=30
ASAR **Alice Springs** 60.49 181 P P 18 11 26.9 +0.2
1.0nm,0.6s,baz=15,slow=13,SNR=10
FINES **FINESS Array B** 66.34 330 P P 18 12 04.2 +0.2
1.6nm,0.8s,baz=67,slow=3.6,SNR=3.4
AKASG **Malin Array Be** 71.10 320 P P 18 12 33.0 -0.3
1.0nm,0.6s,baz=47,slow=7.2,SNR=3.6

*ISCJB **29** 18:16:01.0±0.4, 48°.62N±0°.03×112°.36W±0°.06, h10km, mb3.3/2, Error ellipse: s-maj=6.1km s-min=4.5km az=161.3*
*NEIC **29** 18:16:01.0, 48°.52N×112°.34W, h0km, ML3.9(BUT), ML3.6(PGC), MW3.2(SLM), After BUT.*
NEIC Felt at Cut Bank.
*IDC **29** 18:16:01.4±1.0, 48°.53N×112°.32W, h0km, mb3.4/2, mb1 3.6/5, mb1mx3.4/29, mbtmp3.3/5, ML3.3/2, MS2.4/1, Ms1 2.4/1, ms1mx2.0/23, Error ellipse: s-maj=11.4km s-min=9.6km az=29.0*
*PGC **29** 18:16:03.6±4.3, 48°.62N×112°.31W, h1km, ML3.6/5, 125km Sse of Lethbridge, Alberta Montana*
ISC 29 18:16:02.2±0.6, 48°.56N±0°.02×112°.33W±0°.01, h10km, n104, σ1§51/164, 46C-66D, Montana

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
B15A	**Bradely Ranch,**	**0.29**	**212**	P	**Pg**	**18 16 07.2**	**-1.0**
	baz=0.3,SNR=677						
B15A				⇓S	**Sg**	**18 16 10.7**	**-1.4**
	baz=0.3						
B15A				⇓S	**Sg**	**18 16 10.7**	**-1.4**
	baz=0.3						
B16A	**M & M Farms, S**	**0.44**	**110**	P	**Pg**	**18 16 10.4**	**-0.4**
	baz=0.4,SNR=327						
B16A				⇓S	**Sg**	**18 16 16.3**	**-0.3**
	baz=0.4						
B16A				⇓S	**Sg**	**18 16 16.3**	**-0.3**
	baz=0.4						
A15A	**Johnson Ranch,**	**0.49**	**327**	⇓P	**Pg**	**18 16 12.1**	**+0.2**
	baz=0.5,SNR=81						
A15A				⇑S	**Sb**	**18 16 19.4**	**-1.0**
	baz=0.5						
A15A				⇑S	**Sb**	**18 16 19.4**	**-1.0**
	baz=0.5						
A16A	**West Butte Ran**	**0.62**	**51**	P	**Pg**	**18 16 14.4**	**+0.1**
	baz=0.7,SNR=322						
A16A				⇑S	**Sb**	**18 16 23.3**	**-0.7**
	baz=0.7						
A16A				⇑S	**Sb**	**18 16 23.3**	**-0.7**
	baz=0.7						
B14A	**Marquette Ranc**	**0.66**	**253**	⇓P	**Pg**	**18 16 14.1**	**-0.9**
	baz=0.6,SNR=327						
B14A				⇓S	**Sg**	**18 16 22.8**	**-0.9**
	baz=0.6						
B14A				⇓S	**Sg**	**18 16 22.8**	**-0.9**
	baz=0.6						
C15A	**Salmond Ranch,**	**0.81**	**193**	⇓P	Pg	18 16 15.9	-1.9
	baz=0.8,SNR=151						
C15A				⇑S	**Sg**	**18 16 26.5**	**-1.9**
	baz=0.8						
C15A				⇑S	**Sg**	**18 16 26.5**	**-1.9**
	baz=0.8						
A14A	**Double T Ranch**	**0.83**	**300**	⇓P	**Pg**	**18 16 18.0**	**-0.3**
	baz=0.8,SNR=75						
A14A				⇑S	**Sg**	**18 16 29.5**	**+0.4**
	baz=0.8						
A14A				⇑S	**Sg**	**18 16 29.5**	**+0.4**
	baz=0.8						
C16A	**Fuhringer Ranc**	**0.85**	**153**	⇑P	**Pg**	**18 16 17.2**	**-1.5**
	baz=0.8,SNR=72						
C16A				⇑S	**Sg**	**18 16 28.1**	**-1.8**
	baz=0.8						
C16A				⇑S	**Sg**	**18 16 28.1**	**-1.8**
	baz=0.8						
B17A	**L&G Farms, Che**	**1.05**	**104**	P	**Pg**	**18 16 21.6**	**-0.9**
	baz=1.0,SNR=190						
B17A				⇑S	**Sg**	**18 16 35.7**	**-0.5**
	baz=1.0						
B17A				⇑S	**Sg**	**18 16 35.7**	**-0.5**
	baz=1.0						
A17A	**Triple J Farms**	**1.14**	**70**	⇓P	**Pb**	**18 16 23.8**	**-0.4**
	baz=1.2,SNR=173						
A17A				⇓S	**Sn**	**18 16 39.8**	**-0.4**
	baz=1.2						
A17A				⇓S	**Sn**	**18 16 39.8**	**-0.4**
	baz=1.2						
WALA	**Waterton Lakes**	**1.16**	**296**	*e*Pg	**Pb**	**18 16 23.2**	**-1.3**
WALA	**Waterton Lakes**	**1.16**	**296**	⇓P	**Pb**	**18 16 23.4**	**-1.1**
WALA				⇓S	**Sb**	**18 16 39.0**	**-0.6**
YBMT	**Yellow Bay**	**1.32**	**239**	*e*Pg	**Pn**	**18 16 25.2**	**-1.7**
C17A	**Wharram Farm,**	**1.40**	**131**	⇑P	**Pn**	**18 16 27.2**	**-0.7**
	baz=1.4,SNR=52						
C17A				⇓S	**Sn**	**18 16 45.6**	**-0.9**
	baz=1.4						
C17A				⇓S	**Sn**	**18 16 45.6**	**-0.9**
	baz=1.4						
B13A	**Whitefish**	**1.44**	**263**	⇑P	**Pn**	**18 16 28.4**	**0.0**
	baz=1.4,SNR=314						
B13A				⇓S	**Sn**	**18 16 47.2**	**-0.2**
	baz=1.4						
B13A				⇓S	**Sn**	**18 16 47.2**	**-0.2**
	baz=1.4						
BLMT	**Blacktail Moun**	**1.47**	**249**	*e*Pn	**Pn**	**18 16 28.6**	**-0.4**
D15A	**Lincoln**	**1.53**	**185**	⇓P	**Pn**	**18 16 28.8**	**-0.9**
	baz=1.5,SNR=112						
D15A				⇓S	**Sn**	**18 16 49.1**	**-0.6**
	baz=1.5						
D15A				⇓S	**Sn**	**18 16 49.1**	**-0.6**
	baz=1.5						
SLMT	**Seeley Lake**	**1.54**	**211**	*e*Pn	**Pn**	**18 16 28.9**	**-1.0**
SWMT	**Swartz Lake**	**1.54**	**227**	*e*Pn	**Pn**	**18 16 29.2**	**-0.6**
JTMT	**Jette**	**1.54**	**239**	*e*Pn	**Pn**	**18 16 29.7**	**-0.2**
D16A	**Dana Ranch, Ca**	**1.62**	**161**	⇑P	**Pn**	**18 16 30.8**	**-0.2**
	baz=1.6						
D16A				⇓S	**Sn**	**18 16 52.0**	**+0.1**
	baz=1.6						
D16A				⇓S	**Sn**	**18 16 52.0**	**+0.1**
	baz=1.6						
A18A	**Metzger Ranch,**	**1.68**	**77**	⇑P	**Pn**	**18 16 32.9**	**+1.1**
	baz=1.7,SNR=46						
A18A				⇓S	**Sb**	**18 16 55.5**	**+1.0**
	baz=1.7						
A18A				⇓S	**Sb**	**18 16 55.5**	**+1.0**
	baz=1.7						
D14A	**Greenough**	**1.68**	**209**	⇑P	**Pn**	**18 16 31.2**	**-0.6**
	baz=1.6,SNR=593						
D14A				⇓S	**Sn**	**18 16 53.3**	**-0.1**
	baz=1.6						
D14A				⇓S	**Sn**	**18 16 53.3**	**-0.1**
	baz=1.6						
B18A	**Beardsley Farm**	**1.71**	**95**	⇓P	**Pn**	**18 16 33.2**	**+1.1**
	baz=1.7,SNR=193						
B18A				⇓S	**Sb**	**18 16 55.6**	**+0.4**
	baz=1.7						
B18A				⇓S	**Sb**	**18 16 55.6**	**+0.4**
	baz=1.7						
C13A	**Hot Springs**	**1.75**	**240**	⇑P	**Pn**	**18 16 33.4**	**+0.8**
	baz=1.7,SNR=202						
C13A				⇑S	**Sn**	**18 16 55.6**	**+0.7**
	baz=1.7						
C13A				⇑S	**Sn**	**18 16 55.6**	**+0.7**
	baz=1.7						
CHMT	**Chamberlain Mo**	**1.76**	**201**	*e*Pn	**Pn**	**18 16 32.6**	**-0.4**
D17A	**Six Diamond Ra**	**1.79**	**141**	⇑P	**Pn**	**18 16 33.9**	**+0.5**
	baz=1.8,SNR=240						
D17A				⇑S	**Sn**	**18 16 57.3**	**+1.0**
	baz=1.8						
D17A				⇑S	**Sn**	**18 16 57.3**	**+1.0**
	baz=1.8						
BSMT	**Bassoo Peak**	**1.79**	**248**	*e*Pn	**Pn**	**18 16 34.0**	**+0.6**
EGMT	**Eagleton**	**1.80**	**106**	*e*Pn	**Pn**	**18 16 34.2**	**+0.8**
EGMT	**Eagleton**	**1.80**	**106**	⇓P	**Pn**	**18 16 34.5**	**+1.0**
	baz=1.8						
EGMT				⇑S	**Sb**	**18 16 58.2**	**+0.3**
	baz=1.8						
EGMT				⇑S	**Sb**	**18 16 58.2**	**+0.3**
	baz=1.8						
HRY	**Holter Researc**	**1.88**	**170**	*e*Pn	**Pn**	**18 16 34.9**	**+0.3**
MSO	**Missoula**	**2.05**	**213**	*e*Pn	**Pn**	**18 16 37.6**	**+0.8**
MSO	**Missoula**	**2.05**	**213**	⇑P	**Pn**	**18 16 37.8**	**+1.0**
	baz=2.0,SNR=112						
MSO				⇑Sb	**Sn**	**18 17 06.2**	**+3.7**
	baz=2.0						
MSO				⇑Sb	**Sn**	**18 17 06.2**	**+3.7**
	baz=2.0						
D13A	**Huson**	**2.05**	**225**	⇑P	**Pn**	**18 16 37.8**	**+0.9**
	baz=2.0,SNR=39						
E16A	**East Helena**	**2.08**	**167**	⇓P	**Pn**	**18 16 38.0**	**+0.7**
	baz=2.0,SNR=168						
E15A	**Deer Lodge**	**2.15**	**186**	⇓P	**Pn**	**18 16 38.6**	**+0.3**
	baz=2.1,SNR=159						
B12A	**Libby**	**2.17**	**269**	⇓Pb	**Pb**	**18 16 41.5**	**-0.2**
	baz=2.2						
B12A				⇓Sb	**Sb**	**18 17 10.3**	**+1.7**
	baz=2.2						
B12A				⇓Sb	**Sb**	**18 17 10.3**	**+1.7**
	baz=2.2						
D18A	**Linhart Farms,**	**2.18**	**128**	⇑P	**Pn**	**18 16 39.9**	**+1.2**
	baz=2.2,SNR=14						
A12A	**Yaak River Ran**	**2.23**	**281**	⇓P	**Pn**	**18 16 40.7**	**+1.3**
	baz=2.2,SNR=93						
B19A	**Brinkman Farms**	**2.25**	**91**	⇓P	**Pn**	**18 16 40.8**	**+1.2**
	baz=2.2,SNR=71						
C12B	**Naegeli Ranch,**	**2.27**	**249**	⇓P	**Pn**	**18 16 40.8**	**+0.9**
	baz=2.2,SNR=19						
E14A	**Clinton**	**2.29**	**201**	⇓P	**Pn**	**18 16 40.7**	**+0.6**
	baz=2.2,SNR=111						
E14A				⇓Sb	**Sb**	**18 17 13.1**	**+1.0**
	baz=2.2						
E14A				⇓Sb	**Sb**	**18 17 13.1**	**+1.0**
	baz=2.2						
E17A	**Martinsdale**	**2.33**	**154**	⇓P	**Pn**	**18 16 41.5**	**+0.8**
	baz=2.3,SNR=48						
E17A				⇑Sb	**Sb**	**18 17 13.9**	**+0.7**
	baz=2.3						
E17A				⇑Sb	**Sb**	**18 17 13.9**	**+0.7**
	baz=2.3						
C19A	**Slack Wire Ran**	**2.35**	**109**	⇓P	**Pn**	**18 16 41.7**	**+0.8**
	baz=2.3,SNR=224						
C19A				⇓Sb	**Sb**	**18 17 15.0**	**+1.3**
	baz=2.3						
C19A				⇓Sb	**Sb**	**18 17 15.0**	**+1.3**
	baz=2.3						
A19A	**Klindworth Far**	**2.40**	**80**	⇓P	**Pn**	**18 16 42.8**	**+1.2**
	baz=2.4,SNR=85						
A19A				⇑Sb	**Sb**	**18 17 17.3**	**+2.0**
	baz=2.4						
A19A				⇑Sb	**Sb**	**18 17 17.3**	**+2.0**
	baz=2.4						
E13A	**Victor**	**2.47**	**211**	⇑P	**Pn**	**18 16 43.5**	**+0.9**
	baz=2.4,SNR=115						
F15A	**Butte**	**2.73**	**182**	⇑P	**Pn**	**18 16 46.3**	**+0.1**
	baz=2.7,SNR=55						
LRM	**Limekiln Ridge**	**2.74**	**182**	*e*Pn	**Pn**	**18 16 46.5**	**0.0**
F16A	**Kennard Place,**	**2.82**	**170**	⇓P	**Pn**	**18 16 47.7**	**+0.2**
	baz=2.8,SNR=42						
F14A	**Wisdom**	**2.84**	**195**	⇑P	**Pn**	**18 16 48.2**	**+0.4**
	baz=2.8,SNR=36						
B20A	**Solberg Farm,**	**2.87**	**91**	⇓P	**Pn**	**18 16 49.3**	**+1.3**
	baz=2.9,SNR=9.2						
F17A	**Fitzpatrick Pl**	**2.89**	**156**	⇑P	**Pn**	**18 16 49.2**	**+0.7**
	baz=2.8,SNR=12						
BOZ	**Bozeman (W)**	**2.96**	**170**	*e*Pn	**Pn**	**18 16 50.4**	**+1.0**
F13A	**Darby**	**3.09**	**207**	⇑P	**Pn**	**18 16 51.7**	**+0.5**
	baz=3.0,SNR=48						
DLMT	**Dillon**	**3.21**	**183**	*e*Pn	**Pn**	**18 16 52.9**	**+0.1**
NEW	**Newport**	**3.21**	**266**	Pn	**Pn**	**18 16 53.3**	**+0.6**
NEW				Pg	**Pb**	**18 16 59.3**	**0.0**
NEW				Lg	Lg	18 17 40.5	
NEW	**Newport**	**3.21**	**266**	Pn	**Pn**	**18 16 53.3**	**+0.6**
	1.6nm,0.3s,baz=83,slow=14,SNR=8.6						
NEW				Pg	**Pb**	**18 16 59.3**	**0.0**
	6.7nm,0.3s,baz=86,slow=15,SNR=32						
NEW				Lg	Lg	18 17 40.5	
	19nm,0.3s,baz=172,slow=23,SNR=11						
NEW	**Newport**	**3.21**	**266**	⇑P	**Pn**	**18 16 53.1**	**+0.4**
	baz=3.2,SNR=7.4						
GCMT	**Greycliff**	**3.31**	**146**	*e*Pn	**Pn**	**18 16 55.5**	**+1.3**
G16A	**Moss Hill, Enn**	**3.35**	**174**	⇓P	**Pn**	**18 16 55.1**	**+0.3**
	baz=3.3,SNR=25						
G15A	**Dillon**	**3.40**	**182**	⇑P	**Pn**	**18 16 55.5**	**0.0**
	baz=3.4,SNR=25						
G14A	**Jackson**	**3.41**	**194**	⇑P	**Pn**	**18 16 56.0**	**+0.3**
	baz=3.4						
F12A	**Elk City**	**3.44**	**217**	⇓P	**Pn**	**18 16 56.5**	**+0.5**
	baz=3.4,SNR=8.6						
G13A	**Cobalt**	**3.71**	**201**	⇓P	**Pn**	**18 16 59.9**	**+0.2**
	baz=3.7,SNR=5.7						
MCMT	**McKenzie Canyo**	**3.75**	**186**	*e*Pn	**Pn**	**18 17 00.8**	**+0.4**
QLMT	**Earthquake Lak**	**3.78**	**170**	*e*Pn	**Pn**	**18 17 00.2**	**-0.5**
H16A	**Russell Place,**	**3.93**	**169**	⇓P	**Pn**	**18 17 03.4**	**+0.6**
	baz=3.9,SNR=22						
H15A	**Lima**	**3.95**	**183**	⇓P	**Pn**	**18 17 03.4**	**+0.3**
	baz=3.9,SNR=6.1						
YMR	**Madison River**	**4.01**	**166**	*e*Pn	**Pn**	**18 17 04.6**	**+0.7**
H14A	**Leadore**	**4.01**	**191**	⇓P	**Pn**	**18 17 04.1**	**+0.2**
	baz=4.0,SNR=86						
H12A	**Diamond D Ranc**	**4.38**	**204**	⇑P	**Pn**	**18 17 09.3**	**+0.4**
	baz=4.3,SNR=6.1						
SLEB	**Sale Mountain**	**4.57**	**307**	Pn	**Pn**	**18 17 13.8**	**+2.2**
SLEB				Pg	**Pb**	**18 17 24.7**	**+2.1**
SLEB				Sg	**Sb**	**18 18 22.6**	**+4.8**
SLEB	**Sale Mountain**	**4.57**	**307**	⇓Pn	**Pn**	**18 17 13.8**	**+2.2**
SLEB				⇓Pg	**Pb**	**18 17 24.7**	**+2.1**
SLEB				⇓Sg	**Sb**	**18 18 22.6**	**+4.8**
EDM	**Edmonton**	**4.71**	**352**	Pn	**Pn**	**18 17 13.3**	**-0.1**
EDM				Sn	**Sn**	**18 18 07.5**	**-0.5**
EDM				Sg	**Sg**	**18 18 28.2**	**-5.1**
EDM	**Edmonton**	**4.71**	**352**	⇓Pn	**Pn**	**18 17 13.3**	**-0.1**
EDM				⇑Sn	**Sn**	**18 18 07.5**	**-0.5**
EDM				⇓Sg	**Sg**	**18 18 28.2**	**-5.1**
IMW	**Indian Meadow**	**4.76**	**168**	*e*Pn	**Pn**	**18 17 15.9**	**+1.5**
DOWB	**Downie Slide**	**4.96**	**309**	Pn	**Pn**	**18 17 18.5**	**+1.6**
DOWB				Sg	**Sg**	**18 18 35.6**	**-6.0**
DOWB	**Downie Slide**	**4.96**	**309**	⇑Pn	**Pn**	**18 17 18.5**	**+1.6**
DOWB				⇓Sg	**Sg**	**18 18 35.6**	**-6.0**
BMO	**Blue Mountains**	**5.05**	**225**	*e*Pn	**Pn**	**18 17 18.7**	**+0.6**
	6.9nm,0.5s						
I12A	**Atlanta**	**5.15**	**203**	⇓P	**Pn**	**18 17 19.8**	**+0.2**
	baz=5.1,SNR=6.3						
HLID	**Hailey**	**5.21**	**197**	*e*Pn	**Pn**	**18 17 20.9**	**+0.6**
	9.7nm,0.5s						
HLID	**Hailey**	**5.21**	**197**	⇑P	**Pn**	**18 17 20.6**	**+0.3**
	baz=5.2,SNR=11						
MNB	**Mounoet Dainar**	**5.32**	**316**	Pn	**Pn**	**18 17 24.5**	**+2.7**
MNB				Sg	**Sg**	**18 18 49.0**	**-3.8**
MNB	**Mounoet Dainar**	**5.32**	**316**	⇓Pn	**Pn**	**18 17 24.5**	**+2.7**
MNB				⇑Sg	**Sg**	**18 18 49.0**	**-3.8**
J13A	**Cove Ranch, Pi**	**5.32**	**195**	⇑P	**Pn**	**18 17 22.2**	**+0.3**
	baz=5.3,SNR=13						
HAWA	**Hanford**	**5.34**	**249**	*e*Pn	**Pn**	**18 17 23.0**	**+0.9**
	10nm,0.4s						
DGMT	**Dagmar**	**5.41**	**88**	*e*Pn	**Pn**	**18 17 24.4**	**+1.5**
	53nm,0.7s						
A24A	**Westby**	**5.52**	**83**	⇓P	**Pn**	**18 17 26.0**	**+1.5**
	baz=5.5,SNR=5.8						
BLBC	**Blue River**	**5.64**	**311**	⇑Sg	**Sg**	**18 18 57.9**	**-5.1**
MFID	**Camas Ranch**	**5.70**	**207**	*e*Pn	**Pn**	**18 17 26.7**	**-0.2**
	6.2nm,0.6s						
PDAR	**Pinedale Array**	**6.11**	**160**	Pn	**Pn**	**18 17 34.9**	**+2.1**
PDAR				Lg	Lg	18 19 10.3	
PDAR	**Pinedale Array**	**6.11**	**160**	Pn	**Pn**	**18 17 34.9**	**+2.1**
	0.1nm,0.3s,baz=345,slow=12,SNR=4.1						
PDAR				Lg	Lg	18 19 10.3	
	0.2nm,0.3s,baz=352,slow=34,SNR=3.4						
LLLB	**Lillooet**	**6.54**	**292**	⇑Sg	Sg	18 19 25.3	-6.8
LON	**Longmire**	**6.66**	**258**	*e*Pn	**Pn**	**18 17 40.1**	**+0.1**
	5.9nm,0.7s						
ELK	**Elko**	**8.09**	**196**	Lg	Lg	18 20 09.0	
	0.1nm,0.3s,baz=356,slow=19,SNR=3.3						
YBH	**Yreka Blue Hor**	**10.02**	**231**	LR	LR	18 23 12.1	
	comp=Z,21nm,18.8s,baz=105,slow=43						
YKA	**Yellowknife Ar**	**14.02**	**356**	Pn	**Pn**	**18 19 17.7**	**-3.0**
YKA				Sn	Sn	18 21 44.3	-12
YKA				Lg	Lg	18 23 14.0	
YKA	**Yellowknife Ar**	**14.02**	**356**	Pn	**Pn**	**18 19 17.7**	**-3.0**
	0.5nm,0.3s,baz=169,slow=13,SNR=29						
YKA				Sn	Sn	18 21 44.3	-12
	0.3nm,0.3s,baz=172,slow=22,SNR=8.9						
YKA				Lg	Lg	18 23 14.0	
	0.2nm,0.3s,baz=166,slow=30,SNR=5.1						
YKW3	**Yellowknife Ar**	**14.09**	**356**	*e*Pn	**Pn**	**18 19 18.8**	**-2.9**
	0.1nm,0.8s						
YKW3				*e*Sn	Sn	18 21 44.2	-14
YKW3	**Yellowknife Ar**	**14.09**	**356**	⇓Pn	Pn	18 19 18.2	-3.4
YKW3				⇑Sn	Sn	18 21 44.8	-13
ILAR	**Eielson Array**	**24.52**	**324**	P	**P**	**18 21 23.7**	**+2.2**
ILAR	**Eielson Array**	**24.52**	**324**	P	**P**	**18 21 23.7**	**+2.2**
	0.5nm,0.8s,baz=116,slow=6.7,SNR=6.6						
MKAR	**Makanchi Array**	**84.18**	**350**	P	**P**	**18 28 33.9**	**+0.4**
MKAR	**Makanchi Array**	**84.18**	**350**	P	**P**	**18 28 33.9**	**+0.4**
	0.5nm,0.9s,baz=350,slow=5.9,SNR=4.2						

IDC 29 18:24:47.1±1.0, 4°.09N×126°.70E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/24, mbtmp3.8/8, MS3.0/1, Ms1 3.0/1, ms1mx2.1/34, 1C, Error ellipse: s-maj=107.3km s-min=15.8km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**3.96**	**322**	⇑*i*P	Pb	**18 25 53.8**	**-3.9**
KAPI	**Kappang**	**11.40**	**218**	LR	LR	**18 32 40.7**	
	comp=Z,72nm,18.4s,baz=105,slow=42						
FITZ	**Fitzroy Crossi**	**22.08**	**183**	P	P	**18 29 44.5**	**+0.6**
	1.0nm,0.5s,baz=3.2,slow=12,SNR=6.4						
WRA	**Warramunga Arr**	**25.04**	**163**	P	P	**18 30 13.1**	**-0.2**
	1.3nm,0.6s,baz=343,slow=10,SNR=9.5						
ASAR	**Alice Springs**	**28.47**	**166**	P	P	**18 30 43.6**	**-0.6**
	0.3nm,0.7s,baz=353,slow=12,SNR=5.6						
STKA	**Stephens Creek**	**38.48**	**159**	P	P	**18 32 11.2**	**+0.1**
	1.2nm,0.5s,baz=351,slow=6.1,SNR=5.1						
SONM	**Songino Array**	**46.95**	**341**	P	P	**18 33 20.8**	**+1.0**
	0.4nm,0.7s,baz=158,slow=7.9,SNR=4.7						
SONM				PcP	PcP	**18 34 52.8**	**+0.4**
	0.2nm,0.6s,baz=175,slow=3.7,SNR=2.5						
MKAR	**Makanchi Array**	**57.24**	**325**	P	P	**18 34 36.7**	**+0.2**
	0.6nm,0.4s,baz=122,slow=7.8,SNR=17						
ZALV	**Zalesovo Beam**	**60.26**	**333**	P	P	**18 34 56.1**	**-1.1**
	0.4nm,0.5s,baz=120,slow=8.1,SNR=3.2						
FINES	**FINESS Array B**	**91.50**	**332**	P	P	**18 37 54.5**	**-1.0**
	2.9nm,1.0s,baz=63,slow=8.8,SNR=3.9						

IDC 29 18:32:11.5±1.7, 8°.38N×127°.14E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.3/25, mbtmp3.5/4, 1C, Error ellipse: s-maj=36.0km s-min=26.4km az=77.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.03**	**230**	Pn	Pn	**18 32 46.4**	**-0.6**
	41nm,0.3s,baz=276,slow=9.3,SNR=4.0						
DAV				Sn	Sb	**18 33 14.8**	**-0.3**
	47nm,0.3s,baz=32,slow=16,SNR=5.4						
CTBH	**Cotabato--PC H**	**3.10**	**248**	⇑*i*P	Pn	**18 33 00.7**	**-1.0**
WRA	**Warramunga Arr**	**29.02**	**166**	P	P	**18 38 11.8**	**-1.6**
	0.4nm,0.6s,baz=347,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**32.53**	**168**	P	P	**18 38 45.8**	**+1.4**
	0.3nm,1.1s,baz=341,slow=7.3,SNR=3.7						
MKAR	**Makanchi Array**	**54.04**	**323**	P	P	**18 41 37.8**	**-0.1**
	0.6nm,0.7s,baz=120,slow=8.7,SNR=6.8						

*ISK **29** 19:03:46.4, 37°.96N×38°.17E, h5km, MD2.9*
*CSEM **29** 19:03:47.4±0.2, 37°.98N×38°.19E, h8km, MD2.9, Error ellipse: s-maj=5.2km s-min=4.1km az=131.0*
*DDA **29** 19:03:47.3, 37°.99N×38°.18E, h7km, MD2.9*
ISC 29 19:03:47.1±1.2, 38°.00N±0°.03×38°.19E±0°.03, h19km±3km, n30, σ0§55/49, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKCD	**Akcadag**	**0.36**	**325**	*i*P	**Pb**	**19 03 54.7**	**-0.4**
AKCD				*i*S	**Sb**	**19 04 00.0**	**-0.5**
AKCD	**Akcadag**	**0.36**	**325**	*i*P	**Pb**	**19 03 54.7**	**-0.4**
AKCD				*i*S	**Sb**	**19 04 00.0**	**-0.5**
MYA	**Malataya**	**0.38**	**30**	*e*PG	**Pb**	**19 03 55.2**	**-0.1**
MYA				*e*SG	**Sb**	**19 04 01.7**	**+0.8**
MYA	**Malataya**	**0.38**	**30**	*e*Pg	**Pb**	**19 03 55.2**	**-0.1**
MYA				*e*Sg	**Sb**	**19 04 01.7**	**+0.8**
ATAB	**Bozova**	**0.54**	**171**	*i*P	**Pb**	**19 03 57.5**	**-0.4**
ATAB				*i*S	**Sb**	**19 04 05.0**	**-0.2**
ATAB	**Bozova**	**0.54**	**171**	*i*P	**Pb**	**19 03 57.5**	**-0.4**
ATAB				*i*S	**Sb**	**19 04 05.0**	**-0.2**
URFA	**Urfa**	**0.75**	**138**	*e*PG	**Pb**	**19 04 01.1**	**-0.5**
URFA				*e*SG	**Sb**	**19 04 11.8**	**+0.3**
URFA	**Urfa**	**0.75**	**138**	*e*Pg	**Pb**	**19 04 01.1**	**-0.5**
URFA				*e*Sg	**Sb**	**19 04 11.8**	**+0.3**
DARE	**Darende-Malaty**	**0.80**	**316**	*e*PG	**Pb**	**19 04 02.5**	**+0.1**
DARE				*e*SG	**Sn**	**19 04 14.5**	**-0.3**
DARE	**Darende-Malaty**	**0.80**	**316**	*e*Pg	**Pb**	**19 04 02.5**	**+0.1**
ELZG	**Elazig**	**0.80**	**51**	*i*P	**Pn**	**19 04 02.9**	**-0.6**
ELZG				*i*S	**Sn**	**19 04 14.5**	**-0.5**
ELZG	**Elazig**	**0.80**	**51**	*i*P	**Pn**	**19 04 02.9**	**-0.6**
ELZG				*i*S	**Sn**	**19 04 14.5**	**-0.5**
GZT	**Gaziantep**	**0.81**	**218**	*i*P	**Pg**	**19 04 02.4**	**-0.6**
GZT				*i*S	**Sn**	**19 04 15.4**	**+0.1**
SVRC	**Sivrice-ELAZID**	**0.96**	**66**	*e*PG	**Pn**	**19 04 05.8**	**+0.1**
SVRC				*

GAMI Galela, Maluku 1.80 63 P **Pb** 19 13 04.3 -0.9
LBMI Labuha 2.09 141 P **Pn** 19 13 06.7 +1.1
KMSI Cibinong 2.25 259 P **Pn** 19 13 08.5 +0.8
LUWI Luwuk 3.98 239 P Pn 19 13 35.3 +3.8
MRSI Marisa 4.28 263 P **Pn** 19 13 38.2 +2.5
MSAI Masohi 5.12 148 P Pn 19 13 51.9 +4.7
SWI Sorong 5.40 110 P Pn 19 13 54.2 +3.1
MATI Mati 5.90 1 *e*P Pn 19 14 05.0 +7.0
MATI *e*S Sn 19 14 49.2 -15
DAV Davao City (W) 6.05 354 P Pn 19 14 05.5 +5.4
DAV Sn Sn 19 15 19.0 +11
DAV Davao City (W) 6.05 354 P Pb 19 14 14.1 -3.5
SNR=8.6
DAV Davao City (W) 6.05 354 P **Pb** **19 14 17.5 -0.1**
DAV Davao City (W) 6.05 354 Pn Pb 19 14 09.3 -8.3
78nm,0.3s,baz=30,slow=6.5,SNR=3.0
DAV Sn Sn 19 15 19.0 +11
baz=119,slow=19,SNR=4.2
KCP Kidapawan 6.06 350 *i* S Pb 19 14 25.6 +7.8
CTBH Cotabato--PC H 6.47 343 ⇑ *i*P Pn 19 14 10.0 +4.2
FAKI Fak Fak 7.20 123 P Pn 19 14 19.6 +3.7
PAGZ Pagadian 7.35 338 *e*P Pn 19 14 21.2 +3.3
BBSI Bau Bau 7.39 209 P Pn 19 14 21.6 +3.1
551nm,1.3s,5µm2.0nm
TTSI Tana Toraja 7.53 238 P **Pn** **19 14 22.7 +2.3**
CGP Cagayan de Oro 7.55 349 ⇓ *e*P Pn 19 14 32.1 +11
IPIL Ipil 7.64 332 *e*P Pn 19 14 25.7 +3.8
RKPI Ransiki, Papua 8.37 107 P Pn 19 14 36.2 +4.3
MYLDM Lahad Datu 8.72 299 P Pn 19 14 41.8 +5.1
MYLDM Lahad Datu 8.72 299 P Pn 19 14 40.7 +3.9
BKSI Bulukumba 8.73 224 P **Pn** **19 14 39.3 +2.5**
189nm,0.6s,3µm0.8nm
KAPI Kappang 8.78 227 Pn **Pn** **19 14 37.9 +0.4**
KAPI Sn **Sn** **19 16 12.1 -3.3**
KAPI Kappang 8.78 227 P **Pn** **19 14 39.6 +2.1**
SNR=11
KAPI Kappang 8.78 227 Pn **Pn** **19 14 39.5 +2.0**
1µm,0.4s,SNR=13
KAPI Kappang 8.78 227 P **Pn** **19 14 39.5 +2.0**
131nm,1.2s,2µm0.6nm
KAPI Kappang 8.78 227 Pn **Pn** **19 14 37.9 +0.4**
14nm,0.3s,baz=41,slow=5.1,SNR=35
KAPI Sn **Sn** **19 16 12.1 -3.3**
baz=90,slow=20,SNR=2.3
TSM Tawau 8.93 292 P **Pn** **19 14 41.9 +2.4**
BSSI Bau Bau, Buton 9.10 219 P **Pn** **19 14 44.8 +2.9**
189nm,0.5s,2µm
MSLP Maasin 9.16 352 *e*P Pn 19 14 51.4 +8.6
SDKM Sandakan 10.09 297 P Pn 19 14 58.8 +3.2
BAKI Biak 10.15 102 P Pn 19 15 00.2 +3.8
MMRI Maumere 10.36 202 P **Pn** **19 15 01.8 +2.7**
SRPI Serui, Papua 10.45 106 P Pn 19 15 08.7 +8.3
KBKI Kotabaru 10.89 247 P **Pn** **19 15 08.3 +1.8**
KDM Kudat 11.02 302 P Pn 19 15 12.5 +4.2
RCP Roxas 11.03 342 ⇓ *e*P Pn 19 15 19.2 +11
KKM Kota Kinabalu 11.14 297 ⇑ *e*Pn **Pn** **19 15 12.9 +2.9**
KKM Kota Kinabalu 11.14 297 P Pn 19 15 14.1 +4.1
KKM Kota Kinabalu 11.14 297 P **Pn** **19 15 13.1 +3.1**
WSI Waingapu 12.12 209 P **Pn** **19 15 21.7 -1.6**
BBKI Banjar Baru 12.18 249 P Pn 19 15 27.5 +3.4
WBSI Waikabubak, Su 12.56 212 P **Pn** **19 15 31.7 +2.4**
BTM Bintulu 13.28 280 P Pn 19 15 43.3 +4.2
SBUM Sibu 14.04 276 P Pn 19 15 53.5 +4.0
SBUM Sibu 14.04 276 P Pn 19 15 53.1 +3.6
KHKI Kahang-Kahang 14.07 228 P **P** **19 15 59.9 +2.7**
SRBI Singaraja 14.19 230 P **P** **19 16 01.2 +2.6**
DNP Denpasar 14.57 228 P P 19 16 06.0 +3.2
KMMI Kalianget 14.59 237 P **P** **19 16 05.2 +2.2**
IGBI Denpasar 14.71 228 P **P** **19 16 04.1 -0.3**
STKI Sintang 14.74 266 P **Pn** **19 16 00.7 +1.6**
JAGI Jajag, Banyuwa 15.25 232 P **P** **19 16 11.2 +0.8**
170nm,1.3s,2µm
BLJI Banyuglugur 15.27 235 P **P** **19 16 12.6 +1.9**
BALP Baler 15.33 343 *e*P **P** **19 16 12.7 +1.4**
BALP *e*S **pP** **19 16 20.6 +0.7**
GMJI Gumukmas 15.70 234 P **P** **19 16 17.7 +2.3**
KSM Kuching 15.88 272 *e*Pn **Pn** **19 16 12.0 -2.1**
348nm,1.7s
KSM Kuching 15.88 272 P **P** **19 16 17.1 -0.3**
KSM Kuching 15.88 272 P **P** **19 16 18.2 +0.7**
107nm,1.6s,2µm
CAUP Cauayan 16.41 345 *e*P **P** **19 16 24.3 +1.0**
CAUP *e*S sP 19 16 42.0 +5.9
KRKI Karangkates 16.44 236 P **P** **19 16 25.8 +2.1**
839nm,1.3s,11µm
SJI Sawahan 16.80 239 P **P** **19 16 27.2 -0.5**
PWJI Pagerwojo 16.92 238 P **P** **19 16 29.8 +0.9**
150nm,0.9s
ABRA Dolores 17.39 342 *e*P **P** **19 16 35.2 +1.0**
APYP Conner 17.44 344 *e*P **P** **19 16 36.9 +2.2**
PCJI Pacitan 17.54 238 P **P** **19 16 38.0 +2.2**
253nm,0.7s
WOJI Wonogiri, Jawa 17.58 240 P **P** **19 16 37.1 +0.9**
140nm,1.0s
SMRI Semarang 17.63 243 P **P** **19 16 37.1 +0.2**
BJII Banjamegara 18.41 243 P **Pn** **19 16 47.4 +1.7**
212nm,1.6s,3µm
TGJI Tegal 18.74 245 P **Pn** **19 16 51.8 +2.1**
82nm,1.2s,2µm
FITZ Fitzroy Crossi 19.00 182 P **P** **19 16 50.6 -1.2**
FITZ S **Sn** **19 20 22.9 -1.7**
FITZ Fitzroy Crossi 19.00 182 P **P** **19 16 50.6 -1.2**
1.5nm,0.3s,baz=14,slow=7.7,SNR=31
FITZ S **Sn** **19 20 22.9 -1.7**
0.1nm,0.3s,baz=64,slow=2.5,SNR=2.4
LEM Lembang 20.10 247 P **P** **19 17 04.8 +0.7**
83nm,1.1s
CISI Cisompet, Garu 20.20 245 P Pn 19 17 06.5 -0.7
164nm,1.2s
PPBI Pangkal Pinang 20.29 261 P **P** **19 17 06.0 -0.1**
26nm,1.1s,422nm
CBJI Citeko 20.66 249 P **P** **19 17 09.9 -0.2**
181nm,0.9s
DBJI Dramaga 20.80 249 P **P** **19 17 10.2 -1.4**
TWG Pinlang 22.25 347 *e*P **P** **19 17 24.9 -2.1**
218nm,0.7s
WRAB Tennant Creek 22.30 159 *e*P **P** **19 17 26.0 -1.6**
WRAB pmax pmax
comp=Z,84nm,0.8s
WRAB Tennant Creek 22.30 159 *e*P **P** **19 17 26.0 -1.6**
comp=Z,84nm,0.8s
WRAB Tennant Creek 22.30 159 P **P** **19 17 26.2 -1.4**
comp=Z,598nm,1.1s,SNR=22
WRA Warramunga Arr 22.30 159 P **P** **19 17 25.9 -1.7**
WRA S **S** **19 21 24.4 -6.7**
WRA ScP **ScP** **19 24 58.2 +0.1**
WRA Warramunga Arr 22.30 159 P **P** **19 17 25.9 -1.7**
comp=Z,344nm,0.6s,baz=336,slow=11,SNR=192
WRA S **S** **19 21 24.4 -6.7**
comp=Z,5.4nm,0.9s,baz=340,slow=18,SNR=4.1
WRA ScP **ScP** **19 24 58.2 +0.1**
comp=Z,1.4nm,1.1s,baz=353,slow=2.6,SNR=6.1
GUMO Guam 22.32 55 P **P** **19 17 26.9 -1.0**
comp=Z,172nm,1.2s
MYKOM Kota Tinggi 22.35 272 P **P** **19 17 29.7 +1.5**
MYKOM Kota Tinggi 22.35 272 P **P** **19 17 29.2 +1.0**
comp=Z,78nm,1.1s,comp=Z,1µm
COEN Coen 22.45 132 *e*P **P** **19 17 25.1 -4.3**
comp=Z,206nm,0.8s
YULB Yu-li 22.75 348 *e*P **P** **19 17 28.1 -4.3**
comp=Z,31nm,0.8s
TPUB Ta-pu 22.81 347 *e*P **P** **19 17 30.3 -2.7**
comp=Z,113nm,0.7s
KGM Kluang 22.88 273 P **P** **19 17 35.3 +1.5**
LWLI Liwa 22.90 255 P **P** **19 17 34.7 +0.5**
comp=Z,134nm,0.7s,comp=Z,2µm
MBWA Marble Bar 22.92 196 *e*P **P** **19 17 30.8 -3.3**
comp=Z,38nm,0.8s
SSLB Suanglung 23.21 348 *e*P **P** **19 17 33.9 -3.2**
comp=Z,54nm,0.8s
PMG Port Moresby 23.31 117 P **P** **19 17 37.5 -0.7**
PMG Port Moresby 23.31 117 P **P** **19 17 39.4 +1.3**
comp=Z,29nm,0.9s,baz=259,slow=3.9,SNR=6.2
XMIS Christmas Isla 23.40 240 *e*P **P** **19 17 35.4 -3.7**
comp=Z,832nm,0.8s
KTGM Kuala Trenggan 23.41 281 P **P** **19 17 40.2 +1.0**
NACB Ninganchiao 23.46 349 *e*P **P** **19 17 40.1 +0.6**
YHNB Yeheng 23.98 349 *e*P **P** **19 17 43.8 -0.8**
comp=Z,85nm,1.1s
KSI Kapahiang 24.03 259 P **P** **19 17 44.6 -0.6**
QIZ Qiongzhong 24.04 319 P **P** **19 17 45.0 0.0**
QIZ S **S** **19 22 02.3 +2.0**
QIZ pmax pmax
comp=Z,17nm,1.0s
QIZ pmax pmax
comp=Z,240nm,4.8s
QIZ LR LR
comp=N,1µm,16.0s
QIZ LR LR
comp=Z,1µm,22.4s
QIZ Qiongzhong 24.04 319 *e*P **P** **19 17 45.2 +0.1**
comp=Z,132nm,1.5s
TATO Taipei 24.26 350 P **P** **19 17 44.4 -2.6**
FRIM Kepong 24.64 276 P **P** **19 17 51.4 +0.6**
QZH Quanzhou 24.91 343 P **P** **19 17 53.0 +0.1**
QZH S **S** **19 22 15.8 +1.6**
QZH LR LR
comp=Z,3µm,27.2s
IPM Ipoh 25.37 278 *e*P **P** **19 17 55.8 -1.4**
comp=Z,90nm,0.9s
IPM Ipoh 25.37 278 P **P** **19 17 57.9 +0.6**
ASAR Alice Springs 25.64 163 P **P** **19 17 58.5 -1.1**
ASAR PP PnPn 19 18 27.9 -8.9
ASAR PcP **PcP** **19 21 29.8 -0.3**
ASAR S **S** **19 22 28.2 +2.1**
ASAR Alice Springs 25.64 163 P **P** **19 17 58.5 -1.1**
comp=Z,22nm,0.4s,baz=346,slow=12,SNR=201
ASAR PP PnPn 19 18 27.9 -8.9
comp=Z,24nm,0.8s,baz=343,slow=10,SNR=6.2
ASAR PcP **PcP** **19 21 29.8 -0.3**
comp=Z,2.7nm,0.5s,baz=351,slow=2.1,SNR=6.1
ASAR S **S** **19 22 28.2 +2.1**
comp=Z,2.7nm,0.9s,baz=344,slow=20,SNR=5.8
JOW Kunigami 25.76 4 *e*P **P** **19 17 58.0 -2.6**
comp=Z,30nm,0.7s
KULM Kulim 25.85 280 *e*P **P** **19 18 00.5 -1.1**
comp=Z,48nm,1.1s
KULM Kulim 25.85 280 P **P** **19 18 02.3 +0.6**
CTA Charters Tower 28.75 138 P **P** **19 18 28.7 +1.2**
CTA Charters Tower 28.75 138 P **P** **19 18 28.7 +1.2**
comp=Z,2.3nm,0.4s,baz=345,slow=12,SNR=2.9
CTAO Charters Tower 28.75 138 *e*P **P** **19 18 24.4 -3.2**
CTAO pmax pmax
comp=Z,37nm,1.3s
CTAO Charters Tower 28.75 138 *e*P **P** **19 18 24.4 -3.2**
comp=Z,37nm,1.3s
SSE Sheshan 30.30 351 P **P** **19 18 39.0 -2.2**
SSE pP **pP** **19 18 50.3 -0.3**
SSE S **S** **19 23 39.5 +0.4**
SSE pmax pmax
comp=Z,26nm,0.8s
SSE pmax pmax
comp=Z,150nm,3.8s
SSE LR LR
comp=N,400nm,32.7s
SSE LR LR
comp=E,390nm,32.7s
SSE LR LR
comp=Z,400nm,21.1s
WHN Wuhan 31.45 340 P P 19 18 55.0 +3.6
WHN S **S** **19 23 55.0 -2.2**
WHN LR LR
comp=Z,3µm,27.4s
GYA Guiyang 31.52 325 ⇓ *i*P **P** **19 18 52.5 +0.4**
GYA pP **pP** **19 19 02.0 +0.4**
GYA sP **sP** **19 19 06.0 +0.4**
GYA PP **PnPn** **19 19 57.5 +1.5**
GYA PcP **PcP** **19 21 46.0 +1.3**
GYA S **S** **19 24 00.0 +1.4**
GYA sS **sS** **19 24 14.0 -0.3**
GYA ScP **ScP** **19 25 26.0 +0.3**
GYA SS **SnSn** **19 25 48.0 +2.8**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,140nm,4.4s
GYA LR LR
comp=N,880nm,16.8s
GYA LR LR
comp=E,860nm,17.4s
GYA LR LR
comp=Z,1µm,16.5s
NJ2 Nanjing 31.65 348 *e*P **P** **19 18 53.8 +0.8**
NJ2 pP **pP** **19 19 03.5 +1.0**
NJ2 sP **sP** **19 19 06.5 0.0**
NJ2 S **S** **19 24 05.5 +5.3**
NJ2 sS sS 19 24 22.0 +6.1
NJ2 pmax pmax
comp=Z,20nm,1.0s
NJ2 pmax pmax
comp=Z,290nm,4.4s
NJ2 LR LR
comp=N,680nm,23.1s
NJ2 LR LR
comp=E,710nm,23.6s
NJ2 LR LR
comp=Z,690nm,30.1s
FORT Forrest 31.66 177 *e*P **P** **19 18 50.8 -2.4**
comp=Z,65nm,0.7s
CM31 Chiang Mai Arr 31.87 305 *e*P **P** **19 18 53.6 -1.6**
comp=Z,12nm,0.9s
CM31 *e*PcP **PcP** **19 21 47.2 +1.6**
CMAR Chiang Mai Arr 31.87 305 P **P** **19 18 54.9 -0.4**
CMAR PcP **PcP** **19 21 47.1 +1.5**
CMAR Chiang Mai Arr 31.87 305 P **P** **19 18 54.9 -0.4**
comp=Z,10nm,0.9s,baz=135,slow=8.0,SNR=55
CMAR PcP **PcP** **19 21 47.1 +1.5**
comp=Z,5.4nm,0.8s,baz=157,slow=1.8,SNR=17
CMAR LR LR 19 32 38.7
comp=Z,183nm,21.0s,baz=120,slow=38
CHTO Chiang Mai 32.05 305 *e*P **P** **19 18 55.1 -1.7**
CHTO *e* 19 21 45.7
CHTO pmax pmax
comp=Z,21nm,0.8s
CHTO Chiang Mai 32.05 305 *e*P **P** **19 18 55.1 -1.7**
comp=Z,21nm,0.8s
CHTO *e*PcP **PcP** **19 21 45.7 -0.5**
KMI Kunming 32.98 318 P **P** **19 19 05.8 +0.7**
KMI pP **pP** **19 19 16.0 +1.4**
KMI sP **sP** **19 19 20.0 +1.4**
KMI PP **PP** **19 20 18.3 -1.8**
KMI S **S** **19 24 23.5 +1.8**
KMI sS **sS** **19 24 41.0 +3.6**
KMI SS **SnSn** **19 26 27.5 +6.5**
KMI pmax pmax
comp=Z,32nm,1.3s
KMI LR LR
comp=N,410nm,25.3s
KMI LR LR
comp=E,540nm,23.6s
KMI LR LR
comp=Z,900nm,23.2s
ENH Enshi 33.15 333 *e*P **P** **19 19 05.8 -0.5**
comp=Z,46nm,1.0s
NWAO Narrogin (SRO) 34.79 193 *e*P **P** **19 19 19.6 -0.9**
comp=Z,22nm,0.9s
BBOO Buckleboo 34.90 165 *e*P **P** **19 19 19.8 -1.6**
comp=Z,282nm,0.7s
STKA Stephens Creek 35.81 157 *e*P **P** **19 19 28.3 -1.1**
comp=Z,6.1nm,0.8s
STKA P **P** **19 19 28.6 -0.7**
STKA Stephens Creek 35.81 157 P **P** **19 19 28.6 -0.7**
comp=Z,33nm,0.8s,baz=329,slow=8.6,SNR=48
KSAR Wonju Array Be 36.29 2 P **P** **19 19 35.3 +2.0**
KSAR PcP **PcP** **19 21 59.4 +1.5**
KSRS Korea Array 36.30 2 P **P** **19 19 35.3 +1.9**
comp=Z,8.4nm,0.7s,baz=179,slow=9.8,SNR=36
KSRS PcP **PcP** **19 21 59.4 +1.5**
comp=Z,2.7nm,0.7s,baz=197,slow=2.1,SNR=7.0
KSRS LR LR 19 33 33.9
comp=Z,350nm,21.4s,baz=190,slow=35
CD2 Chengdu 36.56 327 P **P** **19 19 36.0 +0.2**
CD2 pP **pP** **19 19 46.0 +0.7**
CD2 sP **sP** **19 19 50.3 +1.0**
CD2 PP **PP** **19 21 01.8 +2.4**
CD2 PcP **PcP** **19 21 58.3 -0.6**
CD2 S **S** **19 25 17.0 +0.6**
CD2 sS **sS** **19 25 33.8 +1.6**
CD2 PcS **PcS** **19 25 45.0 -1.9**
CD2 SS **SnSn** **19 27 45.5 -1.9**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,160nm,5.3s
CD2 LR LR
comp=N,830nm,23.5s
CD2 LR LR
comp=E,1µm,20.1s
CD2 LR LR
comp=Z,790nm,25.5s
XAN Xi'an 36.62 336 P **P** **19 19 35.3 -1.0**
XAN pP **pP** **19 19 44.3 -1.6**
XAN S **S** **19 25 12.5 -4.8**
XAN pmax pmax
comp=Z,7.0nm,0.8s
XAN pmax pmax
comp=Z,24nm,5.1s
XAN LR LR
comp=N,370nm,21.4s
XAN LR LR
comp=E,260nm,27.5s
XAN LR LR
comp=Z,150nm,23.4s
MAJO Matsushiro 37.07 16 *e*P **P** **19 19 39.9 -0.1**
MAJO pmax pmax
comp=Z,164nm,2.1s
MAJO Matsushiro 37.07 16 *e*P **P** **19 19 39.9 -0.1**
comp=Z,164nm,2.1s
MAT Matsushiro 37.07 16 P **P** **19 19 40.2 +0.2**
MAT S **S** **19 25 19.6 -4.4**
MJAR Matsushiro Arr 37.07 16 P **P** **19 19 40.4 +0.4**
MJAR PcP **PcP** **19 22 02.1 +1.9**
MJAR Matsushiro Arr 37.07 16 P **P** **19 19 40.4 +0.4**
comp=Z,8.3nm,0.5s,baz=181,slow=9.9,SNR=33
MJAR PcP **PcP** **19 22 02.1 +1.9**
comp=Z,2.5nm,0.9s,baz=193,slow=3.8,SNR=4.4
DL2 Dalian 37.95 354 P **P** **19 19 49.0 +1.6**
DL2 S **S** **19 25 38.8 +1.7**
DL2 pmax pmax
comp=Z,63nm,0.6s
DL2 pmax pmax
comp=Z,110nm,5.2s
DL2 LR LR
comp=N,290nm,17.0s
DL2 LR LR
comp=E,260nm,16.2s
DL2 LR LR
comp=Z,230nm,17.6s
ARMA Armidale 39.54 144 *e*P **P** **19 20 01.3 +0.3**
comp=Z,23nm,1.0s
BJT Baijiatuan 39.89 348 P **P** **19 20 02.9 -0.7**
BJI Beijing 39.91 348 P **P** **19 20 03.5 -0.2**
BJI S **S** **19 26 02.0 -4.6**
BJI SS **SS** **19 29 03.8 -0.3**
BJI pmax pmax
comp=Z,21nm,0.8s
BJI pmax pmax
comp=Z,130nm,7.2s
BJI LR LR
comp=N,330nm,21.1s
BJI LR LR
comp=E,380nm,22.4s
BJI LR LR
comp=Z,400nm,32.0s
LZH Lanzhou 40.60 332 *e*P **P** **19 20 10.0 +0.2**
LZH pP **pP** **19 20 16.0 -3.4**
LZH sP **sP** **19 20 19.5 -3.9**
LZH *e*S **S** **19 26 20.0 +2.6**
LZH sS **sS** **19 26 31.3 -2.1**
LZH SS **SS** **19 29 21.0 +2.7**
LZH pmax pmax
comp=Z,24nm,1.0s
LZH pmax pmax
comp=Z,130nm,5.6s
LZH LR LR
comp=N,370nm,13.2s
LZH LR LR
comp=E,380nm,13.6s
LZH LR LR
comp=Z,840nm,14.6s
SNY Shenyang 40.71 357 ⇑ P **P** **19 20 11.0 +0.7**
SNY S **S** **19 26 15.3 -3.2**
SNY pmax pmax
comp=Z,25nm,1.5s
SNY pmax pmax
comp=Z,290nm,5.1s
SNY LR LR
comp=N,340nm,24.3s
SNY LR LR
comp=E,400nm,17.9s
SNY LR LR
comp=Z,320nm,28.8s
HHC Hu-ho-hao-te 41.82 343 *e*P **P** **19 20 17.8 -1.8**
HHC pP **pP** **19 20 27.5 -1.8**
HHC sP **sP** **19 20 31.5 -1.8**
HHC PP **PP** **19 21 58.3 +1.5**
HHC S **S** **19 26 34.8 -0.5**
HHC sS **sS** **19 26 50.5 -0.8**
HHC SS **SS** **19 29 35.8 -6.5**
HHC pmax pmax
comp=Z,31nm,1.0s
HHC pmax pmax
comp=Z,210nm,5.7s
HHC LR LR
comp=N,570nm,14.2s
HHC LR LR
comp=E,600nm,15.7s
HHC LR LR
comp=Z,990nm,15.9s
VLA Vladivostok 42.24 6 ⇑ *e*P **P** **19 20 21.4 -1.5**
VLA S **S** **19 26 40.4 -0.7**
VLA pmax pmax
comp=Z,30nm,1.1s
CN2 Changchun 42.62 359 *e*P **P** **19 20 27.3 +1.4**
CN2 *e*pP **pP** **19 20 37.3 +1.7**
CN2 *e*S **S** **19 26 48.0 +1.3**
CN2 SS **SS** **19 29 55.3 -2.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,20.0s
CN2 LR LR
comp=E,200nm,20.0s
CN2 LR LR
comp=Z,300nm,22.0s
USRK Ussuriysk Arra 43.32 6 P **P** **19 20 33.0 +1.4**
comp=Z,15nm,0.6s,baz=188,slow=6.5,SNR=61
MDJ Mudanjiang 43.53 4 P **P** **19 20 35.3 +2.0**
MDJ pP **pP** **19 20 41.5 -1.6**
MDJ sP **sP** **19 20 44.0 -3.0**
MDJ PP **PP** **19 22 17.3 +2.3**
MDJ S **S** **19 27 04.5 +4.4**
MDJ sS **sS** **19 27 16.3 +0.2**
MDJ pmax pmax
comp=Z,22nm,0.7s
MDJ pmax pmax
comp=Z,110nm,5.0s
MDJ LR LR
comp=N,130nm,19.2s
MDJ LR LR
comp=E,320nm,25.6s
MDJ LR LR
comp=Z,230nm,15.9s
LSA Lhasa 43.88 314 P **P** **19 20 36.5 -0.4**
LSA LR LR
comp=E,430nm,35.1s
LSA LR LR
comp=Z,550nm,35.1s
LSA Lhasa 43.88 314 *e*P **P** **19 20 37.2 +0.3**
LSA pmax pmax
comp=Z,15nm,0.6s
LSA Lhasa 43.88 314 *e*P **P** **19 20 37.2 +0.3**
comp=Z,15nm,0.6s
GTA Gaotai 45.17 331 *e*P **P** **19 20 46.8 +0.1**
GTA pP **pP** **19 20 56.0 -0.5**
GTA sP **sP** **19 21 00.5 +0.1**
GTA ScP **ScP** **19 26 18.5 +1.4**
GTA S **S** **19 27 25.8 +1.3**
GTA sS **sS** **19 27 41.5 +1.0**
GTA ScS **ScS** **19 30 40.3 -1.3**
GTA SS **SS** **19 30 41.5 -6.2**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,130nm,5.7s
GTA LR LR
comp=N,340nm,18.5s
GTA LR LR
comp=E,350nm,21.1s
GTA LR LR
comp=Z,650nm,22.8s
TAPN Taplejung 45.24 309 *e*P **P** **19 20 46.4 -1.3**
comp=Z,17nm,0.4s

ODAN Odare 45.26 308 *e*P P 19 20 46.6 -1.1
comp=Z,51nm,0.8s
DZM Mont Dzumac 45.47 123 *e*LR LR 19 33 35.5
comp=Z,899nm,26.2s
RAMN Ramite 45.92 308 *e*P P 19 20 52.0 -1.0
comp=Z,53nm,0.7s
GUN Gumba 46.93 308 *e*P P 19 20 59.7 -1.4
comp=Z,94nm,0.7s
PKI Pulchoki 47.15 308 *e*P P 19 21 01.0 -1.7
comp=Z,16nm,0.5s
PKIN Phulchoki 47.16 308 *e*P P 19 21 01.3 -1.5
KKN Kakani 47.35 308 *e*P P 19 21 03.0 -1.2
comp=Z,14nm,0.4s
DMN Daman 47.40 308 *e*P P 19 21 03.3 -1.3
comp=Z,38nm,0.9s
HABR Khabarovsk 47.90 8 *e*P P 19 21 07.9 +0.1
HABR *e**PP **pP** 19 21 16.3 -1.3
HABR *e**SP **sP** 19 21 20.1 -1.4
HABR *e* 19 22 33.8
HABR *e* 19 22 58.3
HABR PPP PPP 19 23 45.9
HABR *e*S **S** 19 28 03.0 +0.1
HABR *e**SS **sS** 19 28 18.6 -0.5
HABR *e* 19 30 56.7
HABR *e*SS **SS** 19 31 32.5 +0.5
HABR *e*SSS SSS 19 32 40.8
HABR pmax pmax
comp=E,55nm,3.1s
HABR pmax pmax
comp=N,38nm,2.7s
HABR pmax pmax
comp=Z,72nm,2.7s
HABR MLR MLR
comp=Z,159nm,18.0s
YSS Yuzh-Sakhalins 47.99 15 *e*P P 19 21 10.1 +1.6
HIA Hailar 48.40 354 *e*P P 19 21 12.6 +1.0
comp=Z,34nm,0.9s
KOLN Koldanda 48.67 307 *e*P P 19 21 13.2 -1.2
comp=Z,77nm,0.7s
DANN Dangsing 48.80 308 *e*P P 19 21 14.1 -1.4
comp=Z,94nm,0.7s
PYUN Piuthan 49.30 307 *e*P P 19 21 18.1 -1.1
comp=Z,109nm,0.7s
ULN Ulaanbaatar 49.54 343 *e*P P 19 21 20.2 -0.4
comp=Z,19nm,1.2s
ULN *e*PcP **PcP** 19 22 42.1 0.0
ULN Ulaanbaatar 49.54 343 P P 19 21 21.2 +0.6
SNR=10
HYB Hyderabad 49.58 292 *i* P P 19 21 19.5 -1.8
SONM Songino Array 49.70 343 P P 19 21 22.3 +0.4
SONM PcP **PcP** 19 22 43.4 +0.7
SONM Songino Array 49.70 343 P P 19 21 22.3 +0.4
comp=Z,11nm,0.8s,baz=157,slow=8.0,SNR=52
SONM PcP **PcP** 19 22 43.4 +0.7
comp=Z,6.6nm,0.8s,baz=160,slow=2.9,SNR=7.0
SONM LR LR 19 45 51.4
comp=Z,235nm,21.3s,baz=153,slow=40
CIT Chita 51.93 350 *e*P P 19 21 39.5 +1.0
CIT *e* 19 21 52.1
ZAK Zakamensk 52.91 342 *e*P P 19 21 46.8 +1.0
ZAK *e* 19 22 55.7
TLY Talaya 53.94 343 *e*P P 19 21 55.3 +2.0
TLY *e*S S 19 29 19.4 -7.2
TLY pmax pmax
comp=Z,9.0nm,0.9s
TLY MLR MLR
comp=Z,168nm,18.0s
TLY Talaya 53.94 343 P P 19 21 55.4 +2.1
comp=Z,100nm,0.7s,SNR=7.2
POO Poona 54.19 292⇑ *i*P P 19 21 50.0 -5.7
comp=Z,40nm,1.0s
IRK Irkutsk 54.26 344 *e*P P 19 21 56.3 +0.7
IRK pmax pmax
comp=Z,32nm,1.4s
WMQ Urumqi 54.66 326 P P 19 21 58.5 -0.2
WMQ pP **pP** 19 22 08.5 -0.1
WMQ sP **sP** 19 22 12.5 0.0
WMQ PP **PP** 19 24 02.5 +1.0
WMQ PcS **PcS** 19 26 58.8 -2.1
WMQ S **S** 19 29 34.8 -1.8
WMQ sS **sS** 19 29 51.5 -1.5
WMQ ScS **ScS** 19 31 41.5 -4.2
WMQ SS **SS** 19 33 17.5 -2.5
WMQ pmax pmax
comp=Z,63nm,1.0s
WMQ LR LR
comp=N,570nm,16.8s
WMQ LR LR
comp=E,370nm,20.8s
WMQ LR LR
comp=Z,520nm,25.8s
MOY Mondy 54.75 341 *e*P P 19 22 00.1 +0.8
HVS Khovu-Aksy 56.98 336 *c i*P P 19 22 15.3 +0.1
PETK Petropavlovsk- 58.14 22 P P 19 22 24.9 +1.7
PETK Petropavlovsk- 58.14 22 P P 19 22 24.9 +1.7
PETK Petropavlovsk- 58.14 22 P P 19 22 24.9 +1.7
comp=Z,7.1nm,0.5s,baz=180,slow=5.6,SNR=19
PETK LR LR 19 46 40.1
comp=Z,158nm,21.3s,baz=235,slow=35
PET Petropavlovsk 58.44 22 *e*P **sP** 19 22 40.1 +1.0
PET *e*S **S** 19 30 28.7 +2.6
PET *e*SS **SS** 19 34 22.3 +3.5
PET *e*SSS SSS 19 36 43.0
PET pmax pmax
comp=Z,30nm,1.7s
PET pmax pmax
comp=Z,100nm,11.3s
PET MLR MLR
comp=Z,200nm,22.0s
MK31 Makanchi Array 59.49 326 *e*P P 19 22 31.6 -1.2
MK31 Makanchi Array 59.49 326 *e*P P 19 22 31.6 -1.2
MKAR Makanchi Array 59.49 326 *e*P P 19 22 31.4 -1.4
MKAR Makanchi Array 59.49 326 *e*P P 19 22 31.4 -1.4
MKAR P P 19 22 32.1 -0.6
MKAR Makanchi Array 59.49 326 P P 19 22 32.1 -0.6
comp=Z,13nm,0.4s,baz=121,slow=7.0,SNR=121
MKAR LR LR 19 48 17.0
comp=Z,345nm,21.2s,baz=253,slow=36
KSH Kashi 59.61 316 P P 19 22 35.0 +1.2
KSH *e*sP **sP** 19 22 49.5 +1.8
KSH *e*PcP **PcP** 19 23 21.3 +0.4
KSH PP **PP** 19 24 49.0 +3.3
KSH *e*PcS **PcS** 19 27 21.0 -2.1
KSH *e*S **S** 19 30 42.0 -0.1
KSH sS **sS** 19 30 59.0 +0.4
KSH ScS **ScS** 19 32 19.3 -2.8
KSH SS **SS** 19 34 40.0 +1.9
KSH pmax pmax
comp=Z,34nm,1.1s
KSH LR LR
comp=N,200nm,4.3s
KSH LR LR
comp=E,280nm,6.1s
KSH LR LR
comp=Z,300nm,6.1s
ULHL Ulahol 60.70 319 P P 19 22 40.8 -0.6
SNR=22
YAK Yakutsk 60.93 2 *e*P P 19 22 43.1 +0.9
YAK *e**PP **pP** 19 22 52.5 +0.2
YAK *e* 19 23 29.7
YAK *e* 19 24 54.5
YAK *e*S **S** 19 30 57.6 -0.3
YAK *e* 19 32 27.0
YAK *e*SS **SS** 19 34 56.7 -1.0
YAK pmax pmax
comp=Z,20nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.3s
YAK pmax pmax
comp=N,10.0nm,1.1s
YAK pmax pmax
comp=Z,10.0nm,1.2s
YAK pmax pmax
comp=E,38nm,3.0s
YAK smax smax
comp=N,219nm,2.7s
YAK smax smax
comp=E,122nm,2.7s
YAK MLR MLR
comp=Z,207nm,18.0s
YAK MLR MLR
comp=N,209nm,21.0s
URZ Urewera 60.96 136 *e*P P 19 22 41.3 -1.7
comp=N,19nm,1.0s
KZA Kyzart 61.27 319 P P 19 22 46.6 +1.0
SNR=41
TKM2 Tokmak 2 61.44 320 *e*P P 19 22 45.5 -0.9
TKM2 pmax pmax
comp=Z,21nm,0.8s
TKM2 Tokmak 2 61.44 320 *e*P P 19 22 45.5 -0.9
comp=Z,21nm,0.8s
TKM2 Tokmak 2 61.44 320 P P 19 22 47.2 +0.8
SNR=35
KBK Karagaybulak 61.74 319 P P 19 22 49.3 +0.9
SNR=20
UCH Uchtor 61.83 319 P P 19 22 50.6 +1.2
SNR=5.9
AAK Ala-Archa 62.02 319 *i* P P 19 22 50.4 +0.1
AAK pmax pmax
comp=Z,54nm,1.7s
AAK Ala-Archa 62.02 319 *e*P P 19 22 49.2 -1.1
comp=Z,7.2nm,1.4s
AAK Ala-Archa 62.02 319 P P 19 22 50.8 +0.5
SNR=14
AAK Ala-Archa 62.02 319 P P 19 22 50.4 +0.1
SNR=9.5
CHMS Chumysh 62.02 319 P P 19 22 49.6 -0.5
SNR=11
FRU Bishkek 62.03 319 *e*P P 19 22 50.0 -0.2
USP Ospenovka 62.31 320 P P 19 22 51.3 -0.8
SNR=38
AML Almayashu 62.33 318 P P 19 22 52.3 -0.3
SNR=52
EKS2 Erkin-Say 62.51 319 *e*P P 19 22 52.3 -1.2
EKS2 pmax pmax
comp=Z,52nm,1.4s
EKS2 Erkin-Say 62.51 319 *e*P P 19 22 52.3 -1.2
comp=Z,52nm,1.4s
EKS2 Erkin-Say 62.51 319 P P 19 22 54.5 +1.0
SNR=34
KBL Kabul 62.77 309 *e*P P 19 22 53.3 -2.2
KBL pmax pmax
comp=Z,35nm,0.8s
KBL Kabul 62.77 309 *e*P P 19 22 53.3 -2.2
comp=Z,35nm,0.8s
ZAA0 Zalesovo Array 62.77 334 *e*P P 19 22 53.5 -1.3
ZALV Zalesovo Beam 62.77 334 P P 19 22 53.6 -1.2
ZALV Zalesovo Beam 62.77 334 P P 19 22 53.6 -1.2
ZALV Zalesovo Beam 62.77 334 P P 19 22 53.6 -1.2
comp=Z,8.2nm,0.7s,baz=117,slow=6.7,SNR=35
ZALV LR LR 19 52 13.1
comp=Z,168nm,19.1s,baz=253,slow=38
KURK Kurchatov 63.75 328 *c i*P P 19 23 00.7 -0.7
KURK pmax pmax
comp=Z,106nm,1.0s
KURK Kurchatov 63.75 328 *e*P P 19 23 00.0 -1.3
comp=Z,92nm,0.9s
KURK *e*PP PP 19 25 16.4 -5.5
KURK Kurchatov 63.75 328 P P 19 23 01.0 -0.3
SNR=49
KURK Kurchatov 63.75 328 P P 19 23 00.6 -0.8
comp=Z,601nm,0.9s
NVS Novosibirsk 64.06 334⇑ *i*P P 19 23 02.3 -1.0
NVS pmax pmax
comp=N,8.0nm,0.8s
NVS pmax pmax
comp=Z,33nm,0.8s
NVS pmax pmax
comp=E,7.0nm,0.7s
FX1 Attu Island--F 64.70 29 *e*P P 19 23 06.0 -1.6
SEY Seymchan 64.79 13 *e*P P 19 23 10.5 +2.6
KKAR Karatay Array 64.86 318 *e*P P 19 23 07.5 -1.4
KKAR pmax pmax
comp=Z,26nm,1.0s
KKAR Karatay Array 64.86 318 *e*P P 19 23 07.5 -1.4
comp=Z,26nm,1.0s
BRVK Borovoye 69.38 328 *c i*P P 19 23 37.1 -0.2
BRVK pmax pmax
comp=Z,64nm,1.2s
BRVK Borovoye 69.38 328 *e*P P 19 23 36.6 -0.7
comp=Z,63nm,1.2s
BRVK Borovoye 69.38 328 P P 19 23 37.7 +0.4
SNR=16
BRVK Borovoye 69.38 328 P P 19 23 36.7 -0.6
comp=Z,262nm,1.3s,SNR=13
MRIV Mauritius Mete 70.42 248 *e*P P 19 23 41.3 -3.1
ABKT Ailbek 72.19 310 P P 19 23 55.6 +0.8
comp=Z,122nm,0.8s,SNR=9.9
BILL Bilibino 72.31 15⇑ *i*P P 19 23 57.0 +2.2
BILL *i* 19 24 12.8
ABKAR Akbulak array 73.92 321 *e*P P 19 24 03.9 -0.8
AKTO Aktyubinsk 75.45 322 P P 19 24 13.2 -0.4
AKTO Aktyubinsk 75.45 322 P P 19 24 13.2 -0.4
AKTO Aktyubinsk 75.45 322 P P 19 24 13.2 -0.4
comp=Z,12nm,0.6s,baz=103,slow=7.1,SNR=35
AKTO LR LR 20 00 55.7
comp=Z,309nm,21.7s,baz=248,slow=38
SVE Sverdlovsk 75.99 329⇓ *i*P P 19 24 16.4 -0.1
SVE *e*S **S** 19 33 55.1 -2.2
SVE pmax pmax
comp=Z,130nm,0.9s
SVE MLR MLR
comp=Z,470nm,23.0s
ARU Arti 76.94 328 *c i*P P 19 24 20.9 -1.0
ARU 19 27 09.8
ARU S **S** 19 34 06.7 -1.0
ARU pmax pmax
comp=Z,107nm,1.2s
ARU Arti 76.94 328 P P 19 24 21.4 -0.5
comp=Z,551nm,0.7s,SNR=31
SOKR Solikamsk 78.82 331 *d i*P P 19 24 32.4 +0.2
SOKR pmax pmax
comp=Z,50nm,1.2s
RDF Al-Radifah 79.57 299 *e*P P 19 24 35.7 -1.3
RDF AMb AMB 19 24 37.9
comp=Z,69nm,1.0s
SDPT Sand Point 79.74 34 P P 19 24 37.3 -0.1
comp=Z,44nm,0.6s
MIB Mutribah 79.82 300 *e*P P 19 24 37.2 -1.2
MIB AMb AMB 19 24 39.3
comp=Z,101nm,0.7s
NAY Al-Naaiem 79.86 299 *e*P P 19 24 37.2 -1.4
NAY AMb AMB 19 24 39.4
comp=Z,52nm,0.9s
ABPO Ambohimpanom 79.89 251 *e*P P 19 24 39.5 +0.3
ABPO pmax pmax
comp=Z,8.0nm,0.8s
ABPO Ambohimpanom 79.89 251 *e*P P 19 24 39.5 +0.3
comp=Z,8.1nm,0.8s
RST Umm Al-Ruwaisa 80.10 300 *e*P P 19 24 38.5 -1.4
RST AMb AMB 19 24 40.8
comp=Z,936nm,0.8s
VNDA Vanda 80.81 173 *e*P P 19 24 42.0 -0.8
comp=Z,9.4nm,0.7s
VNDA Vanda 80.81 173 P P 19 24 42.5 -0.2
comp=Z,11nm,0.8s,baz=312,slow=5.8,SNR=37
MAW Mawson 81.03 200 P P 19 24 44.0 -0.1
MAW Mawson 81.03 200 P P 19 24 44.0 -0.1
comp=Z,10nm,1.0s,baz=41,slow=5.8,SNR=11
MAW LR LR 19 58 50.3
comp=Z,136nm,19.9s,baz=70,slow=34
RAYN Ar Rayn 81.06 294 P P 19 24 44.5 -0.7
comp=Z,149nm,0.9s,SNR=20
RAYN Ar Rayn 81.06 294 *e*P P 19 24 44.0 -1.2
comp=Z,19nm,0.9s
SBA Scott Base 81.73 172 *e*P P 19 24 47.7 +0.1
SBA pmax pmax
comp=Z,12nm,1.0s
SBA Scott Base 81.73 172 *e*P P 19 24 47.7 +0.1
comp=Z,12nm,1.0s
DGRG David-gareji 82.45 312 P P 19 24 52.9 +0.7
GNI Garni 82.81 310 *e*P P 19 24 53.6 -0.6
comp=Z,25nm,0.8s
GNI Garni 82.81 310 P P 19 24 55.7 +1.4
SNR=10
GNI Garni 82.81 310 P P 19 24 55.5 +1.2
comp=Z,6.3nm,0.7s,baz=254,slow=2.1,SNR=10
TBLG Delisi 82.95 312 *e*P P 19 24 56.2 +1.4
TBLG Delisi 82.95 312 P P 19 24 56.2 +1.4
DUS Dusheti 83.00 312 P P 19 24 57.9 +2.8
KZR Kazreti 83.16 311 P P 19 24 56.7 +0.8
GOR Gori 83.44 312 P P 19 24 57.9 +0.6
SVW2 Sparrevohn 83.44 29 *e*P P 19 24 58.7 +1.9
comp=Z,14nm,1.3s
AKH Akhalkalaki 83.85 311 P P 19 25 00.7 +1.1
ONI Oni 83.97 313 P P 19 25 00.9 +0.9
OHAK Old Harbor 84.02 33 *e*P P 19 25 00.6 +0.7
comp=Z,26nm,1.3s
KBZ Khabaz 84.45 314 P P 19 25 02.2 -0.2
KBZ Khabaz 84.45 314 P P 19 25 02.1 -0.2
comp=Z,20nm,0.9s,baz=93,slow=3.4,SNR=27
KDAK Kodiak Island 84.47 32 *e*P P 19 25 01.7 -0.5
comp=Z,35nm,1.4s
KIV Kislovodsk 84.62 314 *c i*P P 19 25 02.8 -0.6
KIV *e*S **S** 19 35 27.5 -1.1
KIV pmax pmax
comp=Z,36nm,1.2s
KIV Kislovodsk 84.62 314 P P 19 25 03.1 -0.3
comp=Z,185nm,0.7s,SNR=7.0
RSO Redoubt South 84.71 29 *e*P P 19 25 04.2 +0.6
comp=Z,27nm,0.8s
PPT2 Papeete2 84.80 108 *e*S S 19 35 29.4 -1.9
comp=Z,69nm,25.0s
PPT2 *e*LR LR 19 51 56.3
comp=Z,216nm,25.0s
TBI Tubuai 85.20 113 *e*S S 19 35 33.8 -1.1
comp=Z,62nm,29.8s
TBI *e*LR LR 19 51 56.7
comp=Z,308nm,27.2s
PPLA Purkeypile 85.28 27 *e*P P 19 25 07.6 +1.2
comp=Z,3.0nm,0.6s
MZRK Al-Mazaregh 85.79 306 *e*P P 19 25 10.0 +0.7
VRHR Novokhopersk 85.80 321 *e*P P 19 25 07.8 -1.1
VRHR pmax pmax
comp=N,10.0nm,0.8s
VRHR pmax pmax
comp=E,20nm,0.8s
VRHR pmax pmax
comp=Z,90nm,0.8s
SFNV Sufian 86.25 306⇑ *e*P P 19 25 12.5 +0.8
SEW Seward 86.31 30 *e*P P 19 25 12.1 +0.8
comp=Z,27nm,1.4s
COLD Coldfoot 86.60 23 *e*P P 19 25 13.7 +1.1
comp=Z,11nm,1.3s
SOC Sochi 86.75 313 *c i*P P 19 25 12.5 -1.3
SOC *e**PP **pP** 19 25 21.2 -3.1
SOC *e*S **SKSac** 19 35 36.4 -2.1
SOC pmax pmax
comp=Z,27nm,0.6s
MCK McKinley 86.83 26 *e*P P 19 25 13.9 +0.1
MCK McKinley 86.83 26 *e*P P 19 25 13.9 +0.1
SML Sawmill 86.97 28 *e*P P 19 25 10.2 -4.4
SML pmax pmax
comp=Z,2.0nm,0.8s
SML Sawmill 86.97 28 *e*P P 19 25 10.2 -4.4
comp=Z,2.2nm,0.8s
VORD Divnogorie 87.26 321 *e*P P 19 25 15.0 -1.1
VORD pmax pmax
comp=Z,80nm,1.5s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,30nm,0.8s
VSR Storozhevoye 87.35 321 *e*P P 19 25 15.2 -1.4
VSR pmax pmax
comp=Z,70nm,1.4s
VSR pmax pmax
comp=N,2.0nm,0.4s
VSR pmax pmax
comp=E,20nm,0.7s
KLMR Klimovskoe 87.50 331 *c i*P P 19 25 17.1 +0.1
KLMR *e**PP **pP** 19 25 27.6 +0.1
KLMR S **SKSac** 19 35 42.9 +0.6
KLMR pmax pmax
comp=Z,15nm,2.8s
KLMR pmax pmax
comp=Z,103nm,1.3s
ILAR Eielson Array 87.78 25 P P 19 25 17.6 -0.7
ILAR Eielson Array 87.78 25 P P 19 25 17.6 -0.7
comp=Z,1.0nm,0.5s,baz=248,slow=4.8,SNR=18
MOS Moscow 88.36 326 *e*P P 19 25 15.3 -6.0
MOS pmax pmax
comp=Z,33nm,1.0s
ANN Anapa 88.41 315 *e*P P 19 25 19.8 -1.9
ANN pmax pmax
comp=Z,108nm,1.2s
ZALF Zalf 88.50 303⇑ *e*P P 19 25 24.0 +1.5
KMBO Kilima Mbogo 88.96 269 *e*P P 19 25 25.4 +0.1
KMBO Kilima Mbogo 88.96 269 P P 19 25 25.5 +0.2
comp=Z,11nm,0.9s,baz=46,slow=6.6,SNR=24
KMBO LR LR 19 59 51.1
comp=Z,326nm,21.8s,baz=96,slow=32
ARNB Al Arnab 89.59 306 *e*P P 19 25 30.1 +2.5
SYO Syowa Base 89.71 201⇑ *e*P P 19 25 26.2 -1.1
SYO Syowa Base 89.71 201⇑ *e*X sP 19 25 43.6 +2.1
BR131 Keskin Array S 91.33 310 *e*P P 19 25 34.8 -0.9
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 91.33 310 P P 19 25 34.5 -1.2
BRTR PP **PP** 19 29 12.6 -0.8
BRTR Keskin Array B 91.33 310 P P 19 25 34.5 -1.2
comp=Z,6.5nm,0.8s,baz=122,slow=5.9,SNR=20
BRTR PP **PP** 19 29 12.6 -0.8
comp=Z,0.5nm,0.7s,baz=85,slow=8.0,SNR=3.5
JOF Joensuu 91.34 333 *e*P P 19 25 34.9 -0.1
JOF pmax pmax
comp=Z,10.0nm,0.7s
JOF Joensuu 91.34 333 *ep* P 19 25 34.9 -0.1
comp=Z,9.8nm,0.7s
CSS Prodhromos 91.78 305 *e*P P 19 25 36.9 -0.8
comp=Z,13nm,0.9s
ARCES ARCESS Array B 92.80 340 P P 19 25 41.6 -0.1
ARCES ARCESS Array B 92.80 340 P P 19 25 41.6 -0.1
comp=Z,7.6nm,0.9s,baz=89,slow=8.3,SNR=6.3
SPITS Spitsbergen Ar 93.03 349 P P 19 25 41.9 -0.7
SPITS Spitsbergen Ar 93.03 349 P P 19 25 41.9 -0.7
comp=Z,5.0nm,0.7s,baz=97,slow=7.1,SNR=14
SPITS LR LR 20 16 57.6
comp=Z,187nm,20.2s,baz=205,slow=42
AKASG Malin Array Be 93.65 321 P P 19 25 45.1 -0.9
AKASG Malin Array Be 93.65 321 P P 19 25 45.1 -0.9
AKASG Malin Array Be 93.65 321 P P 19 25 45.1 -0.9
comp=Z,3.9nm,0.7s,baz=71,slow=4.6,SNR=10
KAF Kangasniemi 93.75 332 *e*P P 19 25 44.3 -1.9
KAF pmax pmax
comp=Z,8.0nm,0.8s
KAF Kangasniemi 93.75 332 *ep* P 19 25 44.3 -1.9
comp=Z,7.6nm,0.8s
FINES FINESS Array B 93.96 332 P P 19 25 47.5 +0.4
FINES FINESS Array B 93.96 332 P P 19 25 47.5 +0.4
comp=Z,6.4nm,0.8s,baz=52,slow=6.2,SNR=8.5
TIRR Tirgusor 94.86 315 *e*P P 19 25 51.3 -0.4
TIRR pmax pmax
comp=Z,8.0nm,1.0s
TIRR Tirgusor 94.86 315 *e*P P 19 25 51.2 -0.4
comp=Z,8.0nm,1.0s
TIRR Tirgusor 94.86 315⇑ *i*P P 19 25 55.1 +3.4
TESR Tescani 95.84 317⇑ *i*P P 19 25 56.3 +0.1
VRI Vrincioaia 95.88 316⇑ *i*P P 19 25 57.0 +0.7
MLR Muntele Rosu 96.47 316 P P 19 25 59.6 +0.4
MLR Muntele Rosu 96.47 316⇑ *i*P P 19 25 59.1 -0.1
MLR Muntele Rosu 96.47 316 P P 19 25 59.6 +0.4
comp=Z,1.9nm,1.1s,baz=220,slow=1.9,SNR=8.0
BURAR Bucovina Array 96.66 318⇓ *i*P P 19 26 01.4 +1.4
BUR08 Bucovina Ar. S 96.66 318 *e*P P 19 25 60.0 0.0
SUW Suwalki 96.82 325 *e*P P 19 26 00.9 +0.5
KWP Kalwaria Pacla 97.95 320 *e*P Pdif 19 26 07.3 +1.6
KWP Kalwaria Pacla 97.95 320 *e*P Pdif 19 26 07.4 +1.7
LSZ Lusaka 97.98 255 *e*P P 19 26 06.7 0.0
comp=Z,76nm,2.6s
KOLS Kolonicke sedl 98.36 320 *e*P Pdif 19 26 09.2 +1.7
KOLS pmax pmax
comp=Z,8.0nm,1.0s
KOLS Kolonicke sedl 98.36 320 PDIF Pdif 19 26 09.2 +1.7
KOLS Kolonicke sedl 98.36 320 *e*P Pdif 19 26 09.2 +1.7
comp=Z,8.1nm,1.0s
UZH Uzhgorod 98.41 319 *e*P Pdif 19 26 09.1 +1.4
IDI Anoyia 98.64 306 *e*P Pdif 19 26 11.2 +2.1
comp=Z,6.0nm,0.9s
VTS Vitosha 98.86 313⇓ *i*P P 19 26 09.9 -0.2
CRVS Cervenica-Dubn 98.89 320 *e*P P 19 26 08.1 -1.8
CRVS pmax pmax
comp=Z,11nm,1.2s
CRVS Cervenica-Dubn 98.89 320 PDIF P 19 26 08.1 -1.8
STHS Stebnicka Huta 98.93 320 *e*P Pdif 19 26 11.8 +1.7
STHS pmax pmax
comp=Z,3.0nm,0.8s
STHS Stebnicka Huta 98.93 320 PDIF Pdif 19 26 11.8 +1.7
KECS Kecovo 99.62 319 *e*P **Pdif** 19 26 13.6 +0.5
KECS pmax pmax
comp=Z,3.0nm,0.8s
KECS Kecovo 99.62 319 PDIF **Pdif** 19 26 13.6 +0.5
BOSA Boshof 100.08 241 LR LR 20 06 06.6
comp=Z,407nm,18.0s,baz=96,slow=32

HFS	**Hagfors**	**100.16**	**332**	P		**Pdif**	**19 26 15.2**	**0.0**
HFS	**Hagfors**	**100.16**	**332**	P		**Pdif**	**19 26 15.2**	**0.0**
	comp=Z,2.1nm,0.8s,baz=97,slow=7.4,SNR=6.3							
VYHS	**Vyhne**	**100.68**	**320**	*e*P		**Pdif**	**19 26 22.1**	**+4.2**
VYHS				pmax	pmax			
	comp=Z,2.0nm,1.1s							
VYHS	**Vyhne**	**100.68**	**320**	PDIF		**Pdif**	**19 26 22.1**	**+4.2**
NOA	**NORSAR Array B**	**100.97**	**333**	P		**Pdif**	**19 26 18.5**	**-0.4**
NOA	**NORSAR Array B**	**100.97**	**333**	P		**Pdif**	**19 26 18.5**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=166,slow=16,SNR=3.0							
DPC	**Dobruska-Polom**	**101.79**	**322**	*e*PP		PP	19 30 37.3	+3.8
ZST	**Bratislava**	**101.88**	**320**	*e*P		**Pdif**	**19 26 24.0**	**+0.9**
ZST	**Bratislava**	**101.88**	**320**	PDIF		**Pdif**	**19 26 24.0**	**+0.9**
YKA	**Yellowknife Ar**	**102.19**	**24**	P		**Pdif**	**19 26 25.8**	**+1.7**
YKA				PKKPbc		**PKKPbc**	**19 42 26.2**	**-3.3**
YKA	**Yellowknife Ar**	**102.19**	**24**	P		**Pdif**	**19 26 25.8**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=302,slow=5.0,SNR=5.9							
YKA				PKKPbc		**PKKPbc**	**19 42 26.2**	**-3.3**
	comp=Z,0.5nm,0.7s,baz=113,slow=2.5,SNR=6.4							
BRG	**Berggiesshubel**	**103.08**	**323**	*e*P		**Pdif**	**19 26 34.1**	**+5.7**
	comp=Z,5.3nm,1.1s							
BRG	**Berggiesshubel**	**103.08**	**323**	*e*P		**Pdif**	**19 26 34.1**	**+5.7**
BRG				pmax	pmax			
	comp=Z,4.0nm,1.0s							
CLL	**Collm**	**103.50**	**324**	*e*Pdif		**Pdif**	**19 26 31.0**	**+0.7**
CLL				*e*PP		**PP**	**19 30 44.0**	**-2.2**
KHC	**Kasperske Hory**	**103.85**	**321**	*e*PP		PP	19 30 42.7	-6.2
GERES	**GERESS Array B**	**103.86**	**321**	Pdif		**Pdif**	**19 26 34.0**	**+1.9**
GERES	**GERESS Array B**	**103.86**	**321**	Pdiff		**Pdif**	**19 26 34.0**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=38,slow=5.0,SNR=5.0							
NVAR	**Mina Array Bea**	**109.11**	**49**	PKKPab	PKKPab		19 42 19.9	+0.1
NVAR	**Mina Array Bea**	**109.11**	**49**	PKKPab	PKKPab		19 42 19.9	+0.1
	comp=Z,1.3nm,0.8s,baz=129,slow=4.5,SNR=7.5							
PDAR	**Pinedale Array**	**113.74**	**42**	PKKPbc	PKKPbc		19 41 51.0	-1.8
PDAR				PKKPab	**PKKPab**		**19 41 58.6**	**-0.6**
PDAR	**Pinedale Array**	**113.74**	**42**	PKKPbc	PKKPbc		19 41 51.0	-1.8
	comp=Z,1.4nm,1.0s,baz=108,slow=4.8,SNR=5.6							
PDAR				PKKPab	**PKKPab**		**19 41 58.6**	**-0.6**
	comp=Z,2.0nm,0.9s,baz=112,slow=6.6,SNR=9.4							
ULM	**Lac du Bonnet**	**117.59**	**29**	PKP		**PKPdf**	**19 31 15.2**	**-0.3**
ULM				PKKPab		**PKKPab**	**19 41 41.8**	**-0.1**
ULM	**Lac du Bonnet**	**117.59**	**29**	PKP		**PKPdf**	**19 31 15.2**	**-0.3**
	comp=Z,3.0nm,0.5s,baz=310,slow=5.2,SNR=3.0							
ULM				PKKPab		**PKKPab**	**19 41 41.8**	**-0.1**
	comp=Z,2.4nm,0.5s,baz=225,slow=1.4,SNR=3.2							
120A	**U Bar Ranch, L**	**118.50**	**52**	P		**PKPdf**	**19 31 17.2**	**-0.8**
	baz=118							
121A	**Cookes Peak, D**	**119.17**	**51**	P		**PKPdf**	**19 31 18.8**	**-0.6**
	baz=119							
Z22A	**Elephant Butte**	**119.53**	**50**	P		**PKPdf**	**19 31 19.3**	**-0.8**
	baz=120							
W24A	**Lazy 6 Ranch,**	**119.91**	**48**	P		**PKPdf**	**19 31 20.1**	**-0.7**
	baz=120							
V25A	**Rancho No Teng**	**120.22**	**47**	P		**PKPdf**	**19 31 21.4**	**0.0**
	baz=120							
Y24A	**Capitan**	**120.43**	**49**	P		**PKPdf**	**19 31 20.8**	**-1.0**
	baz=120							
124A	**Stringfield Ra**	**120.92**	**50**	P		**PKPdf**	**19 31 22.1**	**-0.7**
	baz=121							
Y25A	**Mesa, Roswell**	**120.99**	**49**	P		**PKPdf**	**19 31 22.5**	**-0.3**
	baz=121							
MNTX	**Cornudas Mount**	**121.37**	**51**	*e*PKPdf		**PKPdf**	**19 31 22.6**	**-0.8**
X26A	**CR and CF Fran**	**121.38**	**48**	P		**PKPdf**	**19 31 22.4**	**-1.1**
	baz=121							
324A	**Moseley Ranch,**	**121.40**	**52**	P		**PKPdf**	**19 31 22.9**	**-0.7**
	baz=121							
125A	**Gardner Draw,**	**121.55**	**50**	P		**PKPdf**	**19 31 23.7**	**-0.2**
	baz=122							
325A	**Bean Ranch, Si**	**121.83**	**52**	P		**PKPdf**	**19 31 24.5**	**0.0**
	baz=122							
425A	**Indio Mountain**	**122.05**	**52**	P		**PKPdf**	**19 31 24.6**	**-0.3**
	baz=122							
Z27A	**Tatum**	**122.36**	**49**	P		**PKPdf**	**19 31 25.2**	**-0.3**
	baz=122							
526A	**Mary Lane Ranc**	**123.04**	**53**	P		**PKPdf**	**19 31 26.5**	**-0.4**
	baz=123							
TOA0	**Torodi Ar. Sit**	**123.21**	**286**	*e*PKPdf		**PKPdf**	**19 31 27.4**	**+0.1**
TORD	**Torodi Ar. Bea**	**123.21**	**286**	PKP		**PKPdf**	**19 31 26.9**	**-0.4**
TORD				PKKPab		**PKKPab**	**19 41 18.9**	**+1.1**
TORD	**Torodi Ar. Bea**	**123.21**	**286**	PKP		**PKPdf**	**19 31 26.9**	**-0.4**
	comp=Z,7.4nm,0.9s,baz=62,slow=1.6,SNR=28							
TORD				PKKPab		**PKKPab**	**19 41 18.9**	**+1.1**
	comp=Z,2.4nm,0.8s,baz=266,slow=3.5,SNR=11							
626A	**Big Bend Ranch**	**123.21**	**53**	P		**PKPdf**	**19 31 27.2**	**+0.1**
	baz=123							
427A	**Hayter Ranch,**	**123.27**	**52**	P		**PKPdf**	**19 31 27.5**	**+0.3**
	baz=123							
SCHQ	**Schefferville**	**123.33**	**9**	PKP		**PKPdf**	**19 31 26.8**	**+0.4**
SCHQ	**Schefferville**	**123.33**	**9**	PKP		**PKPdf**	**19 31 26.8**	**+0.4**
	comp=Z,2.7nm,0.6s,baz=54,slow=0.3,SNR=8.2							
527A	**Woodward Ranch**	**123.39**	**52**	P		**PKPdf**	**19 31 27.8**	**+0.3**
	baz=123							
328A	**Wristen Ranch,**	**123.50**	**51**	P		**PKPdf**	**19 31 28.0**	**+0.5**
	baz=124							
TXAR	**Lajitas Array**	**123.67**	**53**	PKP		**PKPdf**	**19 31 28.6**	**+0.6**
TXAR				PKKPab		**PKKPbc**	**19 41 17.6**	**+1.5**
TXAR	**Lajitas Array**	**123.67**	**53**	PKP		**PKPdf**	**19 31 28.6**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=298,slow=2.7,SNR=8.1							
TXAR				PKKPab		**PKKPbc**	**19 41 17.6**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=108,slow=8.0,SNR=4.2							
627A	**Terlingua Ranc**	**123.84**	**53**	P		**PKPdf**	**19 31 28.1**	**-0.2**
	baz=124							
428A	**Kincaid Ranch,**	**123.88**	**51**	P		**PKPdf**	**19 31 28.4**	**+0.1**
	baz=124							
628A	**Black Gap, Mar**	**124.23**	**53**	P		**PKPdf**	**19 31 29.0**	**0.0**
	baz=124							
529A	**Stev Forest Ra**	**124.50**	**52**	P		**PKPdf**	**19 31 29.6**	**+0.1**
	baz=124							
429A	**Davenport Ranc**	**124.54**	**51**	P		**PKPdf**	**19 31 29.8**	**+0.2**
	baz=125							
430A	**Baggett Ranch,**	**124.98**	**51**	P		**PKPdf**	**19 31 30.7**	**+0.2**
	baz=125							
Z32A	**Haskell**	**125.14**	**47**	P		**PKPdf**	**19 31 31.1**	**+0.5**
	baz=125							
530A	**J-C Ranch, Com**	**125.18**	**51**	P		**PKPdf**	**19 31 31.3**	**+0.5**
	baz=125							
331A	**San Angelo**	**125.37**	**50**	P		**PKPdf**	**19 31 31.4**	**+0.3**
	baz=125							
531A	**Rocksprings**	**125.79**	**51**	P		**PKPdf**	**19 31 32.3**	**+0.3**
	baz=126							
631A	**Perdido Creek**	**126.09**	**52**	P		**PKPdf**	**19 31 32.6**	**+0.1**
	baz=126							
JCT	**Junction City**	**126.22**	**50**	*e*PKIKP		**PKPdf**	**19 31 32.2**	**-0.6**
JCT	**Junction City**	**126.22**	**50**	*e*PKPdf		**PKPdf**	**19 31 32.2**	**-0.6**
JCT	**Junction City**	**126.22**	**50**	P		**PKPdf**	**19 31 32.4**	**-0.4**
	baz=126							
632A	**Uvalde**	**126.67**	**51**	P		**PKPdf**	**19 31 34.4**	**+0.8**
	baz=127							
DBIC	**Dimbokro**	**130.55**	**280**	PKP		**PKPdf**	**19 31 41.2**	**-0.2**
DBIC	**Dimbokro**	**130.55**	**280**	PKP		**PKPdf**	**19 31 41.2**	**-0.2**
	comp=Z,8.9nm,1.1s,baz=135,slow=1.4,SNR=3.9							
LIC	**Lamto**	**130.78**	**279**	*e*PKKP		**PKPdf**	**19 31 42.0**	**+0.2**
LIC	**Lamto**	**130.78**	**279**	*e*PKPdf		**PKPdf**	**19 31 42.0**	**+0.2**
PLCA	**Paso Flores**	**137.64**	**161**	PKP		**PKPdf**	**19 31 55.8**	**+1.7**
PLCA	**Paso Flores**	**137.64**	**161**	PKP		**PKPdf**	**19 31 55.8**	**+1.7**
	comp=Z,2.7nm,0.7s,baz=203,slow=3.6,SNR=5.7							
JTS	**JuntasAbangare**	**147.04**	**69**	*e*PKPbc		**PKPab**	**19 32 14.5**	**-0.5**
LPAZ	**La Paz**	**159.27**	**138**	PKP		**PKPdf**	**19 32 31.1**	**+1.5**
LPAZ	**La Paz**	**159.27**	**138**	PKP		**PKPdf**	**19 32 31.1**	**+1.5**
	comp=Z,2.0nm,1.0s,baz=135,slow=5.7,SNR=4.5							

CSEM ***29*** *19:25:24.6±0.5,50°.16N×18°.68E,h1km, Error ellipse: s-maj=16.5km s-min=7.0km az=178.0*

PRU 29 19:25:27.9,50°.08N×18°.49E,h0km,2C,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.33**	**222**	*e*PG	Pg	19 25 34.5	+0.3
OKC				*e*SG	Sg	19 25 38.4	-0.1
	comp=Z,11nm,1.2s						
OKC	**Ostrava-Krasne**	**0.33**	**222**	Pg	Pg	19 25 34.5	+0.3
OKC				Sg	Sg	19 25 38.4	-0.1
	11nm,1.2s						
MORC	**Moravsky Berou**	**0.68**	**244**	⇑*i*P	Pg	19 25 40.6	-0.5
MORC	**Moravsky Berou**	**0.68**	**244**	⇑*i*P	Pg	19 25 40.6	-0.5
MORC				*e*Sg	Sg	19 25 49.4	-0.6
KRLC	**Kraliky**	**1.10**	**270**	*e*PG	Pg	19 25 48.3	-0.8
KRLC	**Kraliky**	**1.10**	**270**	Pg	Pg	19 25 48.3	-0.8
DPC	**Dobruska-Polom**	**1.42**	**282**	*e*PG	Pn	19 25 54.1	-0.9
DPC				*e*SG	Sg	19 26 13.5	-0.2
	comp=Z,25nm,0.6s						
DPC	**Dobruska-Polom**	**1.42**	**282**	Pg	Pn	19 25 54.1	-0.9
DPC				Sg	Sg	19 26 13.5	-0.2
	25nm,0.6s						

IDC ***29*** *19:38:33.6±0.7,0°.90N×125°.90E,h0km,mb3.8/8, mb1 3.9/8,mb1mx3.7/23,mbtmp3.8/8, Error ellipse: s-maj=60.4km s-min=15.7km az=69.0*

ISCJB ***29*** *19:38:37.4±0.6,0°.9N±0°.1×125°.9E±0°.3,h44km,mb4.0/10, Error ellipse: s-maj=49.6km s-min=10.2km az=158.7*

NEIC ***29*** *19:38:38.5±0.5,0°.88N×125°.88E,h35km,mb4.3/2, Error ellipse: s-maj=42.5km s-min=8.9km az=69.0*

NEIC Felt at Manado, Indonesia.

ISC 29 19:38:39.8±0.7,0°.9N±0°.2×126°.0E±0°.4,h44km,n21, σ0s84/27,mb4.0/10,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**22.25**	**159**	*e*P	**P**	**19 43 31.5**	**-1.6**
	6.3nm,0.9s						
WRA	**Warramunga Arr**	**22.25**	**159**	P	**P**	**19 43 31.9**	**-1.2**
WRA	**Warramunga Arr**	**22.25**	**159**	P	**P**	**19 43 31.9**	**-1.2**
	2.7nm,0.8s,baz=337,slow=11,SNR=16						
AS31	**Alice Springs**	**25.58**	**163**	*e*P	**P**	**19 44 06.2**	**+1.2**
ASAR	**Alice Springs**	**25.59**	**163**	P	**P**	**19 44 05.9**	**+0.9**
ASAR				PcP	**PcP**	**19 47 35.6**	**+0.2**
ASAR	**Alice Springs**	**25.59**	**163**	P	**P**	**19 44 05.9**	**+0.9**
	0.8nm,0.3s,baz=346,slow=12,SNR=36						
ASAR				PcP	**PcP**	**19 47 35.6**	**+0.2**
	0.4nm,0.5s,baz=353,slow=2.2,SNR=8.6						
STKA	**Stephens Creek**	**35.78**	**157**	P	**P**	**19 45 34.9**	**+0.1**
STKA	**Stephens Creek**	**35.78**	**157**	P	**P**	**19 45 34.9**	**+0.1**
	1.9nm,0.8s,baz=332,slow=7.9,SNR=3.2						
SONM	**Songino Array**	**49.76**	**343**	P	**P**	**19 47 27.4**	**-0.6**
SONM				PcP	**PcP**	**19 48 49.2**	**+0.7**
SONM	**Songino Array**	**49.76**	**343**	P	**P**	**19 47 27.4**	**-0.6**
	0.4nm,0.7s,baz=158,slow=8.6,SNR=4.8						
SONM				PcP	**PcP**	**19 48 49.2**	**+0.7**
	0.4nm,0.7s,baz=151,slow=2.6,SNR=3.3						
PETK	**Petropavlovsk-**	**58.33**	**22**	P	**P**	**19 48 30.6**	**+0.3**
PETK	**Petropavlovsk-**	**58.33**	**22**	P	**P**	**19 48 30.6**	**+0.3**
	0.8nm,0.7s,baz=182,slow=6.7,SNR=4.8						
MK31	**Makanchi Array**	**59.48**	**327**	*e*P	**P**	**19 48 37.0**	**-1.4**
MKAR	**Makanchi Array**	**59.48**	**327**	P	**P**	**19 48 38.3**	**-0.2**
MKAR				PcP	**PcP**	**19 49 26.6**	**+0.9**
MKAR	**Makanchi Array**	**59.48**	**327**	P	**P**	**19 48 38.3**	**-0.2**
	1.1nm,0.6s,baz=120,slow=7.9,SNR=16						
MKAR				PcP	**PcP**	**19 49 26.6**	**+0.9**
	0.3nm,0.6s,baz=110,slow=5.9,SNR=2.0						
ZALV	**Zalesovo Beam**	**62.79**	**334**	P	**P**	**19 48 59.7**	**-1.0**
ZALV	**Zalesovo Beam**	**62.79**	**334**	P	**P**	**19 48 59.7**	**-1.0**
	0.3nm,0.4s,baz=103,slow=10,SNR=2.7						
KURBB	**Kurchatov Arra**	**63.74**	**328**	P	**P**	**19 49 06.8**	**-0.2**
	1.5nm,0.7s,baz=125,slow=6.1,SNR=26						
KURK	**Kurchatov**	**63.75**	**329**	*e*P	**P**	**19 49 06.3**	**-0.8**
	4.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**123.05**	**286**	PKP	**PKPdf**	**19 57 32.5**	**0.0**
TORD	**Torodi Ar. Bea**	**123.05**	**286**	PKP	**PKPdf**	**19 57 32.5**	**0.0**
	0.3nm,0.6s,baz=59,slow=0.5,SNR=2.9						

BJI ***29*** *19:51:12.1,5°.27N×126°.01E,h164km,mB5.1/28,mb5.1/64*

MAN ***29*** *19:51:17,5°.86N×125°.90E,h170km,mb6.1,ML5.2,MS5.8*

MAN INTENSITY III - DAVAO CITY; INTENSITY II - GENERAL SANTOS CITY.

ISCJB ***29*** *19:51:17.7±0.2,5°.94N±0°.01×125°.92E±0°.02,h172km±2km, mb5.4/209,Error ellipse: s-maj=3.3km s-min=2.2km az=170.2*

MOS ***29*** *19:51:17.0±1.0,5°.93N×125°.69E,h163km,mb5.4/66, MS4.5/6,Error ellipse: s-maj=8.7km s-min=4.5km az=113.8*

IDC ***29*** *19:51:18.2±0.3,5°.90N×125°.65E,h159km±2km, mb4.9/44, mb1 5.0/45,mb1mx5.0/46,mbtmp4.9/45,MS4.5/19, Ms1 4.5/19,ms1mx4.3/41,Error ellipse: s-maj=9.5km s-min=4.9km az=74.0*

NEIC ***29*** *19:51:18.0±0.1,5°.93N×125°.78E, mb5.5/91,MW5.7,Error ellipse: s-maj=5.1km s-min=3.9km az=70.0*

NEIC Felt [III PIVS] at Davao, [II PIVS] at General Santos and [I PIVS] at Kidapawan. Also felt at Banga, Buhangin and Dadiangas.

DJA ***29*** *19:51:19.4±0.3,6°.N±2°×12°.6E±°,h168km±3km,M5.9/119, mb5.8/119,mB6.2/109,MLv6.6/9,Mw(mB)5.8/109*

GCMT ***29*** *19:51:19.1±0.1,5°.86N×125°.96E,h147km,MW5.7, Moment Tension Solution. s108,c199; s42,c49; Moment tensor: Scale 10^17Nm; Mrr0.81±.05; Mθθ2.42±.06; Mφφ-3.23±.06; Mrθ-1.61±.04; Mθφ-2.77±.06; Mφr2.68±.04; Best double couple: M0:5.10000×10^17 NP1:φ244.00000°, δ52.00000°,λ170.00000°. NP2:φ340.00000°,δ82.00000°, λ39.00000°. Principal axes: T 5.1400, Plg32.0000°, Azm209.0000°; N -0.0900, Plg51.0000°, Azm350.0000°; P -5.0500, Plg20.0000°, Azm106.0000°; Data Used: II IU IC G CN. Surface waves: sta=114, comp=209, per= 50.*

AUST ***29*** *19:51:21.4±0.2,5°.80N×125°.96E,h189km Error ellipse: s-maj=0.6km s-min=0.5km az=27.0*

NEIC ***29*** *19:51:27.3±0.0,5°.61N×126°.28E,h146km,Moment Tensor Solution. s150 Moment tensor: Scale 10^17Nm; Mrr0.65; Mθθ2.08; Mφφ-2.73; Mrθ-1.30; Mθφ-1.27; Mφr2.38; Best double couple: M0:3.90000×10^17 NP1:φ237.00000°, δ44.00000°,λ171.00000°. NP2:φ333.00000°,δ84.00000°, λ46.00000°. Principal axes: T 3.7400, Plg35.0000°, Azm206.0000°; N 0.2700, Plg43.0000°, Azm339.0000°; P -4.0100, Plg25.0000°, Azm96.0000°;*

ISC 29 19:51:17.9±0.2,5°.92N±0°.02×125°.87E±0°.03,h161km±1km, h161km:pP-P,n1111,σ1s50/1320,mb5.4/216,300C-190D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.09**	**21**	*e*P	**Pn**	**19 51 44.4**	**-0.2**
MATI				*e*S	**Sn**	**19 52 08.0**	**+2.9**
DAV	**Davao City (W)**	**1.18**	**346**	*e*Pn	**Pn**	**19 51 45.7**	**+0.4**
DAV				*e*Sn	**Sn**	**19 52 02.5**	**-4.0**
DAV				S	**Sn**	**19 52 06.2**	**-0.3**
DAV	**Davao City (W)**	**1.18**	**346**	P	**Pn**	**19 51 46.0**	**+0.6**
	SNR=684						
DAV	**Davao City (W)**	**1.18**	**346**	⇑*i*P	**Pn**	**19 51 45.7**	**+0.4**
DAV	**Davao City (W)**	**1.18**	**346**	P	**Pn**	**19 51 46.0**	**+0.6**
DAV	**Davao City (W)**	**1.18**	**346**	P	**Pn**	**19 51 45.8**	**+0.5**
	3μm,0.3s,baz=161,slow=2.1,SNR=406						
DAV				S	**Sn**	**19 52 06.2**	**-0.3**
	24μm,0.3s,baz=259,slow=19,SNR=43						
DMPH	**Davao City--Mi**	**1.21**	**343**	⇑*i*P	**Pn**	**19 51 45.9**	**+0.3**
DMPH				*i* S	**Sn**	**19 52 07.8**	**+0.8**
CTBH	**Cotabato--PC H**	**2.07**	**309**	⇓*i*P	**Pn**	**19 51 55.0**	**+0.5**
CGP	**Cagayan de Oro**	**2.78**	**335**	⇑*i*P	**Pn**	**19 52 04.5**	**+1.5**
CGP				*i* S	**Sn**	**19 52 36.7**	**-1.3**
PAGZ	**Pagadian**	**3.12**	**308**	*e*P	**Pn**	**19 52 08.6**	**+1.3**
DCPH	**Dipolog City**	**3.64**	**317**	⇓*e*P	**Pn**	**19 52 15.6**	**+1.8**
IPIL	**Ipil**	**3.76**	**300**	*e*P	**Pn**	**19 52 16.6**	**+1.2**
TBP	**Tagbilaran**	**4.24**	**332**	*e*P	**Pn**	**19 52 22.4**	**+0.7**
SNPH	**Sibulan**	**4.29**	**323**	⇓*i*P	Pn	19 52 09.7	-13
MSLP	**Maasin**	**4.31**	**347**	*e*P	**Pn**	**19 52 22.9**	**+0.4**
GAMI	**Galela, Maluku**	**4.48**	**155**	P	**Pn**	**19 52 23.3**	**-1.5**
MNI	**Manado**	**4.56**	**193**	P	**Pn**	**19 52 26.4**	**+0.6**
LLP	**Lapu-Lapu**	**4.76**	**337**	⇓*e*P	**Pn**	**19 52 30.0**	**+1.6**
LLP				*e*S	**Sn**	**19 53 24.9**	**+1.4**
OCLP	**Ormoc**	**5.25**	**346**	*e*P	**Pn**	**19 52 35.9**	**+1.1**
PLP	**Palo**	**5.29**	**351**	⇑*e*P	**Pn**	**19 52 35.9**	**+0.5**
TNTI	**Ternate**	**5.33**	**164**	P	**Pn**	**19 52 35.0**	**-0.9**
	7μm,0.9s,195μm47nm						
KMSI	**Cibinong**	**5.63**	**200**	P	**Pn**	**19 52 41.4**	**+1.5**
	25μm,1.2s,191μm80nm						
GUIM	**Jordan**	**5.69**	**325**	*e*P	**Pn**	**19 52 42.1**	**+1.4**
RCP	**Roxas**	**6.40**	**331**	*e*P	**Pn**	**19 52 52.1**	**+2.0**
MRSI	**Masa**	**6.67**	**216**	P	**Pn**	**19 52 55.5**	**+1.8**
	3μm,1.2s,51μm17nm						
LBMI	**Labuha**	**6.71**	**166**	P	**Pn**	**19 52 53.5**	**-0.7**
	2μm,1.2s,152μm50nm						
MYLDM	**Lahad Datu**	**7.37**	**265**	P	Pn	19 53 07.6	+4.7
MYLDM	**Lahad Datu**	**7.37**	**265**	P	Pn	19 53 06.7	+3.8
	3μm,1.6s,44μm12nm						
LUWI	**Luwuk**	**7.57**	**204**	P	**Pn**	**19 53 08.1**	**+2.5**
	5μm,1.2s,61μm20nm						
LUWI	**Luwuk**	**7.57**	**204**	P	**Pn**	**19 53 08.3**	**+2.7**
	baz=7.6,SNR=101						
LUWI				S	Sn	19 54 38.9	+8.4
	baz=7.6,SNR=5.4						
PPR	**Puerto Princes**	**8.04**	**299**	⇓*e*P	Pn	19 53 15.8	+3.9
TSM	**Tawau**	**8.12**	**259**	P	**Pn**	**19 53 15.8**	**+2.8**
GQP	**Guinayangan**	**8.62**	**337**	⇓*e*P	Pn	19 53 23.1	+3.5
SWI	**Sorong**	**8.62**	**141**	P	**Pn**	**19 53 18.4**	**-1.2**
	1μm,1.4s,11μm						
SWI	**Sorong**	**8.62**	**141**	P	**Pn**	**19 53 18.6**	**-1.0**
	baz=8.5,SNR=128						
SWI				S	**Sn**	**19 54 49.9**	**-5.8**
	baz=8.5,SNR=8.7						
SDKM	**Sandakan**	**8.63**	**269**	P	**Pn**	**19 53 22.2**	**+2.4**
PALU	**Palau**	**8.67**	**80**	P	**Pn**	**19 53 17.3**	**-2.9**
	baz=8.6,SNR=22						
PALU				S	Sn	19 54 42.0	-15
	baz=8.6,SNR=8.4						
KDM	**Kudat**	**9.03**	**277**	P	Pn	19 53 28.7	+3.7
LQP	**Lukban**	**9.19**	**333**	⇑*e*P	Pn	19 53 32.4	+5.1
TGY	**Tagaytay City**	**9.47**	**330**	P	Pn	19 53 34.3	+3.5
TGY	**Tagaytay City**	**9.47**	**330**	P	Pn	19 53 34.3	+3.5
	16nm,0.3s,baz=172,slow=5.0,SNR=15						
KKM	**Kota Kinabalu**	**9.60**	**271**	⇓*i*P	**Pn**	**19 53 35.2**	**+2.5**
	512nm,0.8s						
KKM				*e*Sn	Sn	19 55 26.0	+6.7
KKM	**Kota Kinabalu**	**9.60**	**271**	P	**Pn**	**19 53 35.7**	**+3.0**
KKM	**Kota Kinabalu**	**9.60**	**271**	P	**Pn**	**19 53 35.3**	**+2.6**
	698nm,2.1s,10μm						
KKM	**Kota Kinabalu**	**9.60**	**271**	P	**Pn**	**19 53 35.4**	**+2.8**
	baz=9.7,SNR=102						
MSAI	**Masohi**	**9.70**	**162**	P	**Pn**	**19 53 32.6**	**-1.2**
	130nm,1.0s,2μm						
SGKI	**Sangatta, Kali**	**10.44**	**232**	P	Pn	19 53 38.8	-4.9
BALP	**Baler**	**10.63**	**337**	*e*P	**Pn**	**19 53 48.4**	**+2.3**
SMKI	**Samarinda**	**10.71**	**234**	P	P	19 53 51.7	-3.9
	2μm,1.2s,16μm						
TTSI	**Tana Toraja**	**10.76**	**214**	P	**Pn**	**19 53 50.6**	**+2.8**
	8μm,1.4s,108μm						
FAKI	**Fak Fak**	**10.85**	**144**	P	**Pn**	**19 53 48.6**	**-0.4**
	1μm,1.4s,16μm						
FAKI	**Fak Fak**	**10.85**	**144**	P	**Pn**	**19 53 48.5**	**-0.4**
	baz=11,SNR=62						
KKSI	**Kolaka, Sulawe**	**10.87**	**203**	P	**Pn**	**19 53 48.0**	**-1.2**
	549nm,1.2s						
RKPI	**Ransiki, Papua**	**11.11**	**131**	P	**Pn**	**19 53 52.4**	**+0.1**
	1μm,1.2s,18μm						
SCZP	**Santa Cruz**	**11.41**	**330**	*e*P	**Pn**	**19 53 56.6**	**+0.3**
BCPH	**Baguio City Da**	**11.62**	**334**	⇓*i*P	**Pn**	**19 54 02.1**	**+2.9**
CAUP	**Cauayan**	**11.65**	**340**	*e*P	**Pn**	**19 53 59.9**	**+0.5**
BBSI	**Bau Bau**	**11.80**	**196**	P	**Pn**	**19 54 00.0**	**-1.3**
	1μm,1.1s,9μm						
BOLP	**Bolinao**	**11.92**	**331**	*e*P	Pn	19 53 58.5	-4.4
BAKI	**Biak**	**12.43**	**124**	P	**Pn**	**19 54 08.6**	**-0.9**
	1μm,1.5s,17μm						
KAPI	**Kappang**	**12.46**	**209**	⇑*i*P	**Pn**	**19 54 09.7**	**-0.2**
	3μm,1.3s						
KAPI				P	Pn	**19 54 09.9**	**+0.1**
KAPI	**Kappang**	**12.46**	**209**	P	**Pn**	**19 54 10.3**	**+0.5**
	SNR=120						
KAPI	**Kappang**	**12.46**	**209**	Pn	Pn	**19 54 10.7**	**+0.8**
	7μm,1.1s						
KAPI	**Kappang**	**12.46**	**209**	P	Pn	**19 54 10.0**	**+0.1**
	1μm,1.1s,14μm						
KAPI	**Kappang**	**12.46**	**209**	P	Pn	**19 54 09.9**	**+0.1**
	25nm,0.3s,baz=36,slow=7.3,SNR=148						
BKSI	**Bulukumba**	**12.55**	**207**	P	Pn	**19 54 11.3**	**+0.2**
	1μm,1.2s,13μm						
MTKI	**Muara Teweh, K**	**12.90**	**238**	P	**P**	**19 54 18.5**	**-1.6**
	709nm,0.8s,9μm						
SRPI	**Serui, Papua**	**12.93**	**126**	P

comp=Z,1µm,1.2s,comp=Z,13µm
PCJI Pacitan 20.28 226 P **P** **19 55 41.4 +0.3**
comp=Z,614nm,1.6s,comp=Z,8µm
QIZ Qiongzhong 20.34 311 P **P** **19 55 42.0 +0.3**
QIZ pP **pP** **19 56 09.0 -0.8**
QIZ S **S** **19 59 21.8 +0.8**
QIZ pmax pmax
comp=Z,210nm,1.2s
QIZ pmax pmax
comp=Z,360nm,3.9s
QIZ Qiongzhong 20.34 311 *e*P **P** **19 55 43.4 +1.7**
comp=Z,749nm,1.6s
MMPI Merauke 20.34 134 P **P** **19 55 41.9 +0.1**
comp=Z,2µm,1.4s,comp=Z,25µm
MMPI Merauke 20.34 134 P **P** **19 55 42.8 +1.0**
baz=20,SNR=12
MMPI S **S** **19 59 20.6 -0.5**
baz=20,SNR=6.3
UGM Wanagama 20.57 228 P **P** **19 55 45.6 +1.3**
comp=Z,2µm,1.2s,comp=Z,18µm
UGM Wanagama 20.57 228 P **P** **19 55 45.9 +1.6**
baz=21,SNR=24
YOGI Yogyakarta 20.67 229 P **P** **19 55 45.7 +0.3**
comp=Z,3µm,0.9s,comp=Z,29µm
BJII Banjamegara 20.81 231 P Pn 19 55 50.0 -1.7
comp=Z,2µm,1.6s,comp=Z,33µm
GZH Guangzhou 20.91 326 P Pn 19 55 51.3 -1.4
GZH PP pP 19 56 22.5 +6.4
GZH S **S** **19 59 35.8 +3.9**
GZH LR LR
comp=N,2µm,14.9s
GZH LR LR
comp=E,3µm,12.5s
JOW Kunigami 20.93 6 *e*P **P** **19 55 49.5 +1.5**
comp=E,181nm,0.9s
JOW *e*pP **pP** **19 56 17.6 +1.4**
TGJI Tegal 20.99 233 P **P** **19 55 50.7 +1.9**
comp=E,1µm,1.5s,comp=E,18µm
PPBI Pangkal Pinang 21.27 248 P **P** **19 55 52.4 +0.6**
comp=E,467nm,1.1s,comp=E,5µm
CLJI Cilicap 21.59 231 P **P** **19 55 54.2 -1.0**
comp=E,532nm,1.3s,comp=E,28µm
KNRA Kununurra 21.64 172 P **P** **19 55 56.0 +0.3**
baz=22,SNR=374
KNRA S **S** **19 59 46.0 +1.1**
baz=22,SNR=7.7
UBPT Khong Chiam 22.08 297 P **P** **19 56 01.9 +1.7**
comp=E,226nm,1.6s,comp=E,7µm
LEM Lembang 22.18 235 P **P** **19 56 02.7 +1.4**
comp=E,4µm,1.3s,comp=E,44µm
LEM Lembang 22.18 235 P **P** **19 56 03.2 +1.9**
baz=22,SNR=135
MYKOM Kota Tinggi 22.34 260 P **P** **19 56 04.4 +1.6**
MYKOM Kota Tinggi 22.34 260 P **P** **19 56 03.9 +1.2**
comp=E,864nm,1.5s,comp=E,10µm
CISI Cisompet, Garu 22.44 234 P **P** **19 56 03.1 -0.6**
comp=E,1µm,1.2s,comp=E,11µm
CISI Cisompet, Garu 22.44 234 P **P** **19 56 03.3 -0.4**
baz=22,SNR=51
BTDF Bukit Timah Da 22.50 259 P **P** **19 56 05.8 +1.5**
baz=23,SNR=117
BTDF P **P** **19 56 05.8 +1.5**
baz=23,SNR=117
CBJI Citeko 22.59 237 P **P** **19 56 07.0 +1.9**
comp=E,4µm,1.1s,comp=E,36µm
KTGM Kuala Trenggan 22.63 270 P **P** **19 56 07.9 +2.4**
TNG Tangerang 22.63 238 P **P** **19 56 07.5 +2.1**
comp=E,3µm,1.6s,comp=E,52µm
TNG Tangerang 22.63 238 P **P** **19 56 07.6 +2.1**
comp=E,2µm,1.6s,comp=E,32µm
DBJI Dramaga 22.75 237 P **P** **19 56 07.9 +1.4**
comp=E,1µm,1.6s,comp=E,18µm
KGM Kluang 22.82 261 P **P** **19 56 09.2 +1.9**
SBJI Serang 23.05 239 P **P** **19 56 11.8 +2.6**
comp=E,3µm,1.3s,comp=E,23µm
SKJI Sukabumi 23.15 237 P **P** **19 56 09.6 -0.6**
BLSI Bandar Lampung 23.44 242 P **P** **19 56 15.0 +2.1**
comp=E,1µm,1.3s,comp=E,10µm
FITZ Fitzroy Crossi 23.87 181 P **P** **19 56 17.2 +0.6**
FITZ S **S** **20 00 20.2 -0.8**
FITZ Fitzroy Crossi 23.87 181 P **P** **19 56 17.2 +0.6**
comp=E,212nm,0.5s,baz=9.4,slow=8.8,SNR=405
FITZ S **S** **20 00 20.2 -0.8**
comp=E,53nm,1.1s,baz=204,slow=7.5,SNR=3.7
FITZ Fitzroy Crossi 23.87 181 P **P** **19 56 17.2 +0.6**
baz=24,SNR=539
FITZ S S 20 00 29.4 +8.4
baz=24,SNR=5.2
KASI Kota Agung 24.17 242 P **P** **19 56 20.4 +0.9**
comp=E,463nm,1.2s,comp=E,5µm
CHBT CHBT 24.18 288 P **P** **19 56 21.5 +1.9**
comp=E,206nm,1.5s,comp=E,5µm
RGRI Rengat 24.30 256 P **P** **19 56 23.0 +2.3**
comp=E,976nm,1.4s,comp=E,127µm
FRIM Kepong 24.31 265 P **P** **19 56 22.7 +2.0**
LWLI Liwa 24.33 244 P **P** **19 56 22.4 +1.3**
comp=E,2µm,1.3s,comp=E,13µm
IPM Ipoh 24.78 268⇑ *e*P **P** **19 56 25.6 +0.5**
comp=E,620nm,1.3s
IPM *e*pP **pP** **19 56 58.3 +0.2**
IPM *e*PcP **PcP** **19 59 58.1 +0.6**
IPM Ipoh 24.78 268 P **P** **19 56 26.4 +1.3**
IPM Ipoh 24.78 268 P **P** **19 56 26.2 +1.1**
comp=E,377nm,1.3s,comp=E,3µm
MNAI Manna 25.05 246 P **P** **19 56 29.6 +2.1**
comp=E,2µm,1.3s,comp=E,21µm
MNAI Manna 25.05 246 P **P** **19 56 31.0 +3.5**
baz=25,SNR=15
KULM Kulim 25.10 270⇑ *e*P **P** **19 56 28.4 +0.5**
comp=E,487nm,1.1s
KULM *e*pP **pP** **19 57 01.4 +0.1**
KULM *e*PcP **PcP** **19 59 59.1 +0.9**
KULM *e*ScP **ScP** **20 03 23.0 +0.6**
KULM Kulim 25.10 270 P **P** **19 56 29.7 +1.7**
KULM Kulim 25.10 270 P **P** **19 56 29.4 +1.4**
comp=E,337nm,1.4s,comp=E,4µm
KSI Kapahiang 25.11 248 P **P** **19 56 29.9 +1.8**
comp=E,1µm,0.8s,comp=E,14µm
BKNI Bangkinang 25.39 258 P **P** **19 56 31.6 +1.0**
comp=E,457nm,1.2s,comp=E,7µm
BKNI Bangkinang 25.39 258 P **P** **19 56 32.1 +1.4**
baz=26,SNR=4.6
XMI Christmas Isla 25.85 231 P **P** **19 56 38.1 +3.4**
baz=26,SNR=4.2
XMIS Christmas Isla 25.89 231 *e*P **P** **19 56 34.2 -0.9**
comp=E,696nm,0.9s
XMIS Christmas Isla 25.89 231 P **P** **19 56 37.1 +1.9**
baz=26,SNR=5.9
PMG Port Moresby 26.11 126⇓ *i*P **P** **19 56 36.9 -0.2**
comp=E,288nm,0.9s
PMG P **P** **19 56 37.4 +0.3**
PMG ScP **ScP** **20 03 26.4 +1.1**
PMG Port Moresby 26.11 126 P **P** **19 56 37.3 +0.3**
comp=E,356nm,1.0s,comp=E,5µm
PMG Port Moresby 26.11 126 P **P** **19 56 37.4 +0.3**
comp=E,267nm,0.8s,baz=286,slow=8.6,SNR=39
PMG ScP **ScP** **20 03 26.4 +1.1**
comp=E,73nm,1.2s,baz=338,slow=9.4,SNR=4.9
COEN Coen 26.17 139 *e*P **P** **19 56 37.8 +0.2**
comp=E,7µm,0.9s
COEN Coen 26.17 139 P **P** **19 56 38.2 +0.6**
baz=26,SNR=76
PPI Padang Panjang 26.20 257 P **P** **19 56 38.7 +0.8**
comp=E,406nm,1.5s,comp=E,489µm
PPI Padang Panjang 26.20 257 P **P** **19 56 39.2 +1.3**
baz=26,SNR=4.3
PBKT Sadao Pong 26.58 296 P **P** **19 56 42.7 +1.5**
comp=E,131nm,1.1s,comp=E,6µm
WHN Wuhan 26.79 338 P **P** **19 56 43.8 +0.9**
WHN S **S** **20 01 05.3 -1.7**
WHN LR LR
comp=N,6µm,10.8s
WHN LR LR
comp=E,3µm,6.9s
WHN LR LR
comp=Z,3µm,18.1s
NJ2 Nanjing 26.82 347 *e*P P 19 56 51.0 +7.9
NJ2 pP pP 19 57 15.5 -1.2
NJ2 sP sP 19 57 35.8 +0.4
NJ2 S **S** **20 01 09.5 +2.1**
NJ2 sS sS 20 02 05.0 -2.0
NJ2 pmax pmax
comp=Z,160nm,0.8s
NJ2 pmax pmax
comp=Z,790nm,6.5s
NJ2 LR LR
comp=N,980nm,14.2s
NJ2 LR LR
comp=E,1µm,20.8s
NJ2 LR LR
comp=Z,460nm,14.5s
WRAB Tennant Creek 27.01 162 *e*P **P** **19 56 44.6 -0.4**
WRAB pmax pmax
comp=Z,209nm,0.9s
WRAB Tennant Creek 27.01 162 *e*P **P** **19 56 44.6 -0.4**
comp=Z,209nm,0.9s
WRAB Tennant Creek 27.01 162 P **P** **19 56 45.0 0.0**
comp=Z,1µm,0.6s,SNR=68
WRA Warramunga Arr 27.02 162 P **P** **19 56 44.9 -0.2**
WRA S **S** **20 01 07.5 -3.4**
WRA ScP **ScP** **20 03 28.4 +0.6**
WRA PKiKP **PKiKP** **20 07 39.6 -0.8**
WRA Warramunga Arr 27.02 162 P **P** **19 56 44.9 -0.2**
comp=Z,93nm,0.8s,baz=344,slow=9.4,SNR=275
WRA S **S** **20 01 07.5 -3.4**
comp=Z,28nm,1.0s,baz=331,slow=16,SNR=8.3
WRA ScP **ScP** **20 03 28.4 +0.6**
comp=Z,30nm,1.1s,baz=342,slow=3.7,SNR=6.8
WRA LR LR 20 07 05.0
comp=Z,1µm,19.3s,baz=335,slow=35
WRA PKiKP **PKiKP** **20 07 39.6 -0.8**
comp=Z,3.6nm,1.2s,baz=301,slow=1.1,SNR=6.2
PSI Prapat 27.04 265 P **P** **19 56 46.4 +0.9**
comp=Z,139nm,1.2s,comp=Z,2µm
PSI Prapat 27.04 265 P **P** **19 56 46.4 +0.9**
baz=27,SNR=23
TSI Tuntungan 27.31 266 P **P** **19 56 47.6 -0.2**
comp=Z,186nm,1.2s,comp=Z,5µm
GYA Guiyang 27.44 320 P **P** **19 56 50.8 +1.8**
GYA pP **pP** **19 57 23.5 +0.9**
GYA sP **sP** **19 57 42.8 +1.5**
GYA PP **PnPn** **19 57 46.0 +2.6**
GYA PcP **PcP** **20 00 04.5 +0.9**
GYA S **S** **20 01 17.8 +0.1**
GYA sS **sS** **20 02 16.0 -1.3**
GYA ScP **ScP** **20 03 29.8 +0.6**
GYA PcS **PcS** **20 03 46.0 +0.2**
GYA ScS **ScS** **20 07 20.5 -0.8**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,210nm,4.9s
GYA LR LR
comp=N,2µm,15.7s
GYA LR LR
comp=E,1µm,16.7s
GYA LR LR
comp=Z,2µm,16.7s
JNU Nakatsue 27.47 9 *e*P **P** **19 56 49.5 +0.5**
comp=Z,60nm,1.0s
JNU P **P** **19 56 49.8 +0.8**
JNU Nakatsue 27.47 9 P **P** **19 56 49.8 +0.8**
comp=Z,29nm,0.5s,baz=217,slow=5.1,SNR=41
MBWA Marble Bar 27.57 192⇑ *i*P **P** **19 56 50.0 -0.1**
comp=Z,637nm,1.3s
MBWA *e*ScP **ScP** **20 03 29.1 -0.3**
MBWA Marble Bar 27.57 192 P **P** **19 56 50.7 +0.7**
SNR=44
SRDT SRDT 27.60 290 P **P** **19 56 51.2 +0.8**
comp=Z,145nm,1.4s,comp=Z,4µm
KCSI Kotacane, Aceh 28.10 266 P **P** **19 56 54.9 0.0**
comp=Z,247nm,1.2s,comp=Z,3µm
RABL Rabaul 28.11 110 P **P** **19 56 56.7 +1.7**
baz=28,SNR=13
ENH Enshi 28.72 329⇓ *e*P **P** **19 57 00.0 -0.2**
comp=Z,141nm,1.0s
ENH *e*ScP **ScP** **20 03 32.6 -0.4**
CM31 Chiang Mai Arr 29.06 298 *e*P **P** **19 57 04.2 +0.9**
comp=Z,53nm,1.0s
CM31 *e*pP **pP** **19 57 38.1 +0.9**
CM31 *e*ScP **ScP** **20 03 35.4 +1.1**
CMAR Chiang Mai Arr 29.06 298 P **P** **19 57 04.0 +0.6**
CMAR pP **pP** **19 57 37.9 +0.7**
CMAR PcP **PcP** **20 00 09.1 +1.4**
CMAR ScP **ScP** **20 03 34.8 +0.5**
CMAR Chiang Mai Arr 29.06 298 P **P** **19 57 04.0 +0.6**
comp=Z,22nm,1.0s,baz=121,slow=7.4,SNR=74
CMAR pP **pP** **19 57 37.9 +0.7**
comp=Z,24nm,0.9s,baz=123,slow=7.5,SNR=5.5
CMAR PcP **PcP** **20 00 09.1 +1.4**
comp=Z,17nm,0.9s,baz=145,slow=0.9,SNR=7.8
CMAR ScP **ScP** **20 03 34.8 +0.5**
comp=Z,61nm,1.0s,baz=125,slow=1.4,SNR=41
CMAR LR LR 20 08 46.7
comp=Z,2µm,18.5s,baz=251,slow=36
CMMT Chiang Mai 29.19 298 P **P** **19 57 06.5 +2.0**
comp=Z,51nm,1.4s,comp=Z,2µm
CHTO Chiang Mai 29.20 298⇑ *e*P **P** **19 57 04.6 +0.1**
CHTO *e**PP **pP** **19 57 39.3 +0.9**
CHTO *e* 20 00 09.0
CHTO pmax pmax
comp=Z,159nm,1.4s
CHTO Chiang Mai 29.20 298⇑ *e*P **P** **19 57 04.6 +0.1**
comp=Z,159nm,1.4s
CHTO *e*pP **pP** **19 57 39.3 +0.9**
CHTO *e*PcP **PcP** **20 00 09.0 +1.0**
CHTO *e*ScP **ScP** **20 03 35.3 +0.7**
CHTO Chiang Mai 29.20 298 P **P** **19 57 06.3 +1.8**
SNR=19
CHTO Chiang Mai 29.20 298 P **P** **19 57 05.7 +1.2**
comp=Z,55nm,1.4s,comp=Z,2µm
KMI Kunming 29.25 313 P **P** **19 57 06.8 +1.6**
KMI pP **pP** **19 57 41.5 +2.5**
KMI sP **sP** **19 58 01.0 +3.3**
KMI PP **PnPn** **19 58 09.8 +3.0**
KMI S **S** **20 01 41.0 -5.4**
KMI sS **sS** **20 02 45.0 -1.1**
KMI pmax pmax
comp=Z,20nm,0.7s
KMI LR LR
comp=N,2µm,19.2s
KMI LR LR
comp=E,2µm,17.8s
KMI LR LR
comp=Z,1µm,17.4s
QIS Mount Isa 29.57 153 P **P** **19 57 08.3 +0.6**
baz=30,SNR=176
SNSI Sinabang, Aceh 29.66 264 P **P** **19 57 07.2 -1.5**
comp=Z,307nm,1.2s
JHJ Hachijo jima 2 30.00 24 LR LR 20 07 22.3
comp=Z,909nm,21.9s,baz=228,slow=32
MTSU Mount Surprise 30.04 143 P **P** **19 57 13.1 +1.1**
baz=30,SNR=41
BSI Banda Aceh 30.42 271 P **P** **19 57 17.5 +2.1**
comp=Z,99nm,1.5s
ASAR Alice Springs 30.43 165 P **P** **19 57 15.8 +0.4**
ASAR PcP **PcP** **20 00 11.8 +0.7**
ASAR S **S** **20 02 03.2 -1.2**
ASAR ScP **ScP** **20 03 39.1 +0.6**
ASAR Alice Springs 30.43 165 P **P** **19 57 15.8 +0.4**
comp=Z,112nm,0.6s,baz=340,slow=6.9,SNR=1644
ASAR PcP **PcP** **20 00 11.8 +0.7**
comp=Z,26nm,0.8s,baz=351,slow=3.2,SNR=4.0
ASAR S **S** **20 02 03.2 -1.2**
comp=Z,23nm,1.0s,baz=350,slow=21,SNR=5.2
ASAR ScP **ScP** **20 03 39.1 +0.6**
comp=Z,21nm,1.0s,baz=337,slow=3.0,SNR=9.7
ASAR LR LR 20 08 36.1
comp=Z,831nm,19.4s,baz=162,slow=34
GIRL Giralia 30.58 201 P **P** **19 57 18.2 +1.6**
baz=31,SNR=28
TIA Tai'an 31.20 346 P **P** **19 57 20.8 -1.1**
TIA S **S** **20 02 17.8 +1.6**
TIA LR LR
comp=N,800nm,22.0s
TIA LR LR
comp=E,800nm,16.7s
TIA LR LR
comp=Z,1µm,17.8s
KSAR Wonju Array Be 31.43 3 P **P** **19 57 25.5 +1.6**
KSAR ScP **ScP** **20 03 44.2 +2.7**
KSRS Korea Array 31.45 3 P **P** **19 57 25.5 +1.5**
comp=Z,15nm,0.7s,baz=179,slow=9.6,SNR=37
KSRS ScP **ScP** **20 03 44.2 +2.6**
comp=Z,9.7nm,0.9s,baz=185,slow=3.8,SNR=11
KSRS LR LR 20 10 09.4
comp=Z,744nm,20.5s,baz=190,slow=36
XAN Xi'an 32.09 333 P **P** **19 57 29.8 0.0**
XAN pP **pP** **19 58 04.8 +0.9**
XAN S **S** **20 02 26.3 -3.9**
XAN pmax pmax
comp=Z,21nm,0.8s
XAN LR LR
comp=N,1µm,30.5s
XAN LR LR
comp=E,880nm,27.5s
XAN LR LR
comp=Z,320nm,17.3s
CD2 Chengdu 32.39 323 P **P** **19 57 34.0 +1.5**
CD2 pP **pP** **19 58 07.8 +1.2**
CD2 sP **sP** **19 58 26.3 +1.2**
CD2 PP **PP** **19 58 48.3 -0.7**
CD2 PcP **PcP** **20 00 17.5 +1.2**
CD2 S **S** **20 02 35.5 +0.6**
CD2 sS **sS** **20 03 35.0 +0.1**
CD2 PcS **PcS** **20 04 01.5 -0.1**
CD2 pmax pmax
comp=Z,70nm,0.5s
CD2 pmax pmax
comp=Z,150nm,4.1s
CD2 LR LR
comp=N,2µm,17.8s
CD2 LR LR
comp=E,1µm,14.1s
CD2 LR LR
comp=Z,2µm,18.6s
MAJO Matsushiro 32.51 19⇓ *i*P **P** **19 57 32.9 -0.5**
MAJO *e**PP **pP** **19 58 04.0 -3.5**
MAJO pmax pmax
comp=Z,63nm,0.9s
MAJO Matsushiro 32.51 19⇓ *i*P **P** **19 57 32.9 -0.5**
comp=Z,63nm,0.9s
MAJO *e*pP **pP** **19 58 04.0 -3.5**
MAJO *e*ScP **ScP** **20 03 46.4 +1.1**
MAT Matsushiro 32.51 19 P **P** **19 57 33.0 -0.4**
MAT S **S** **20 02 34.7 -1.9**
MJAR Matsushiro Arr 32.51 19 P **P** **19 57 33.0 -0.4**
MJAR pP **pP** **19 58 04.4 -3.2**
MJAR S **S** **20 02 33.8 -2.8**
MJAR ScP **ScP** **20 03 47.2 +1.8**
MJAR Matsushiro Arr 32.51 19 P **P** **19 57 33.0 -0.4**
comp=Z,31nm,0.9s,baz=198,slow=9.9,SNR=57
MJAR pP **pP** **19 58 04.4 -3.2**
comp=Z,45nm,0.9s,baz=200,slow=9.8,SNR=8.1
MJAR S **S** **20 02 33.8 -2.8**
comp=Z,1.7nm,0.9s,baz=186,slow=9.8,SNR=3.0
MJAR ScP **ScP** **20 03 47.2 +1.8**
comp=Z,6.2nm,0.9s,baz=212,slow=5.2,SNR=6.3
CTA Charters Tower 32.71 143 P **P** **19 57 37.0 +1.7**
CTA ScP **ScP** **20 03 47.8 +1.6**
CTA Charters Tower 32.71 143 P **P** **19 57 37.0 +1.7**
comp=Z,36nm,0.6s,baz=323,slow=11,SNR=71
CTA ScP **ScP** **20 03 47.8 +1.6**
comp=Z,36nm,1.0s,baz=333,slow=4.4,SNR=4.7
CTAO Charters Tower 32.71 143⇑ *e*P **P** **19 57 36.5 +1.2**
CTAO pmax pmax
comp=Z,80nm,0.8s
CTAO Charters Tower 32.71 143⇑ *e*P **P** **19 57 36.5 +1.2**
comp=Z,80nm,0.8s
CTAO *e*ScP **ScP** **20 03 47.6 +1.3**
DL2 Dalian 33.06 354 P **P** **19 57 39.8 +1.7**
DL2 pP **pP** **19 58 11.5 -0.8**
DL2 S **S** **20 02 48.5 +3.5**
DL2 sS **ScP** **20 03 46.3 -0.8**
DL2 ScS **ScS** **20 07 48.8 +1.1**
DL2 pmax pmax
comp=Z,75nm,0.6s
DL2 pmax pmax
comp=Z,120nm,3.6s
MEEK Meekatharra 33.12 192 P **P** **19 57 39.0 +0.2**
baz=33,SNR=170
MEEK S **S** **20 02 45.5 -0.6**
baz=33,SNR=5.3
COCO West Island 34.01 238 *i*P **P** **19 57 47.2 +0.5**
BJT Baijiatuau 35.06 347 *e*P **P** **19 57 55.6 +0.2**
comp=Z,298nm,1.2s
BJT *e*ScP **ScP** **20 03 54.9 +0.7**
BJI Beijing 35.08 347 P **P** **19 57 56.0 +0.5**
BJI pP **pP** **19 58 30.0 +0.1**
BJI sP **sP** **19 58 47.3 -1.1**
BJI S **S** **20 03 14.5 -1.4**
BJI ScP **ScP** **20 03 55.5 +1.3**
BJI pmax pmax
comp=Z,59nm,0.8s
BJI LR LR
comp=N,660nm,15.9s
BJI LR LR
comp=E,600nm,13.7s
BJI LR LR
comp=Z,410nm,28.1s
MORW Morawa 36.05 195 P **P** **19 58 04.3 +0.4**
baz=36,SNR=106
LZH Lanzhou 36.20 329 *e*P **P** **19 58 06.5 +1.2**
LZH pP **pP** **19 58 42.0 +2.1**
LZH sP **sP** **19 58 59.8 +1.4**
LZH S **S** **20 03 34.5 +0.9**
LZH sS **sS** **20 04 35.0 +0.8**
LZH SS **SS** **20 06 08.5 -10**
LZH pmax pmax
comp=Z,60nm,1.0s
LZH pmax pmax
comp=Z,290nm,4.0s
FORT Forrest 36.55 177⇑ *i*P **P** **19 58 08.7 +0.5**
comp=Z,703nm,1.0s
FORT *e*PP **PP** **19 59 34.0 -0.8**
FORT *e*ScP **ScP** **20 03 59.8 0.0**
FORT Forrest 36.55 177 P **P** **19 58 08.9 +0.8**
baz=37,SNR=166
FORT S **S** **20 03 38.6 +0.1**
baz=37,SNR=4.6
QLP Quilpie 36.89 152 P **P** **19 58 11.3 +0.2**
baz=37,SNR=94
HHC Hu-ho-hao-te 37.07 342 *e*P **P** **19 58 13.3 +0.7**
HHC pP **pP** **19 58 48.3 +1.1**
HHC sP **sP** **19 59 06.5 +0.8**
HHC PP **PnPn** **19 59 46.0 +3.0**
HHC S **S** **20 03 48.0 +1.5**
HHC sS **sS** **20 04 48.8 +1.4**
HHC SS **SS** **20 06 28.5 -7.5**
HHC pmax pmax
comp=Z,63nm,0.8s
HHC pmax pmax
comp=Z,480nm,5.4s
HHC LR LR
comp=N,2µm,16.5s
HHC LR LR
comp=E,2µm,15.7s
HHC LR LR
comp=Z,3µm,17.5s
HNR Honiara 37.23 114 *e*P **P** **19 58 12.1 -2.1**
comp=Z,302nm,0.8s
KMBL Kambalda 37.27 186 P **P** **19 58 14.9 +0.7**
baz=37,SNR=47
BTO Baotou 37.35 340 *e*P **P** **19 58 16.0 +1.1**
BLDU Ballidu 37.37 193 P **P** **19 58 15.5 +0.4**
baz=38,SNR=274
VLA Vladivostok 37.43 7⇓ *i*P **P** **19 58 17.9 +2.5**
VLA *e* 20 00 32.2
VLA *e*S **S** **20 03 55.5 +3.8**
VLA pmax pmax
comp=Z,98nm,1.1s
CN2 Changchun 37.73 360⇑ P **P** **19 58 19.0 +1.0**
CN2 *e*pP **pP** **19 58 52.5 -0.3**
CN2 *e*S **S** **20 03 58.0 +1.7**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,900nm,19.0s
CN2 LR LR
comp=E,600nm,19.0s
CN2 LR LR
comp=Z,700nm,18.0s
SHL Shillong 37.91 305 *e*PKP **P** **19 58 21.0 +1.0**
SHL *e*x x 20 03 56.0
KLBR Kellerberrin 38.09 191 P **P** **19 58 21.8 +0.6**
baz=38,SNR=214
USRK Ussuriysk Arra 38.51 7 P **P** **19 58 26.5 +2.0**
comp=Z,17nm,0.5s,baz=184,slow=8.7,SNR=78
USRK pP **pP** **19 58 56.5 -2.8**
comp=Z,116nm,1.0s,baz=192,slow=8.4,SNR=9.4
USRK ScP **S** **20 04 08.9 +1.1**
comp=Z,2.5nm,1.0s,baz=145,slow=27,SNR=4.3
USRK LR LR 20 15 02.6
comp=Z,450nm,21.1s,baz=176,slow=37
MDJ Mudanjiang 38.68 4 P **P** **19 58 28.0 +2.1**
MDJ pP **pP** **19 59 00.3 -0.5**

MDJ sP sP 19 59 18.0 -1.2
MDJ PP PnPn 20 00 00.0 -1.9
MDJ PcP PcP 20 00 36.0 +1.5
MDJ S S 20 04 13.0 +2.4
MDJ sS sS 20 05 13.5 +1.8
MDJ pmax pmax
comp=Z,28nm,0.8s
MDJ pmax pmax
comp=Z,85nm,4.0s
MDJ LR LR
comp=N,340nm,14.7s
MDJ LR LR
comp=E,480nm,20.5s
MDJ LR LR
comp=Z,620nm,17.8s
MDJ Mudanjiang 38.68 4 eP **P 19 58 27.9 +2.0**
comp=Z,119nm,0.9s
ERM Erimo 39.10 21c iP **P 19 58 31.5 +2.1**
ERM pmax pmax
comp=Z,74nm,1.1s
ERM Erimo 39.10 21 eP **P 19 58 31.2 +1.9**
comp=Z,88nm,0.9s
ERM Erimo 39.10 21 P **P 19 58 31.0 +1.6**
comp=Z,524nm,1.0s,SNR=16
RMQ Roma 39.12 146 P **P 19 58 30.4 +0.6**
baz=39,SNR=19
RMQ S S 20 04 12.7 -4.8
baz=39,SNR=17
NWAO Narrogin (SRO) 39.49 191⇑iP **P 19 58 33.5 +0.8**
comp=Z,770nm,0.9s
NWAO P P 19 58 33.9 +1.1
NWAO Narrogin (SRO) 39.49 191 P **P 19 58 34.2 +1.5**
SNR=39
NWAO Narrogin (SRO) 39.49 191 P **P 19 58 33.9 +1.1**
comp=Z,758nm,0.9s,baz=19,slow=9.2,SNR=436
EIDS Eidsvold 39.60 143 eP **P 19 58 33.5 -0.3**
comp=Z,131nm,1.1s
EIDS epP pP 19 59 12.7 +3.9
EIDS ePP PP 20 00 06.1 -2.1
EIDS eScP ScP 20 04 12.9 +1.4
EIDS Eidsvold 39.60 143 P **P 19 58 33.9 +0.2**
baz=40,SNR=39
EIDS S S 20 04 13.7 -11
baz=40,SNR=8.4
BBOO Buckleboo 39.71 167⇑iP **P 19 58 35.6 +1.0**
comp=Z,8µm,0.6s
BBOO eScP ScP 20 04 10.9 -0.9
BBOO eS S 20 04 23.1 -3.1
BBOO Buckleboo 39.71 167 P **P 19 58 35.8 +1.2**
baz=40,SNR=1000
BBOO S S 20 04 12.1 -14
baz=40,SNR=6.1
LSA Lhasa 40.37 310 P **P 19 58 42.3 +1.6**
LSA Lhasa 40.37 310⇑eP **P 19 58 41.5 +0.8**
LSA pmax pmax
comp=Z,334nm,1.6s
LSA Lhasa 40.37 310⇑eP **P 19 58 41.5 +0.8**
comp=Z,334nm,1.6s
LSA eScP ScP 20 04 14.3 -0.8
STKA Stephens Creek 40.47 159⇑iP **P 19 58 41.7 +0.9**
comp=Z,55nm,0.6s
STKA P P 19 58 42.0 +1.2
STKA eScP ScP 20 04 14.7 -0.1
STKA ScP ScP 20 04 15.3 +0.6
STKA eS S 20 04 34.7 -2.7
STKA S S 20 04 36.6 -0.8
STKA Stephens Creek 40.47 159 P **P 19 58 42.0 +1.2**
comp=Z,237nm,0.6s,baz=334,slow=8.0,SNR=644
STKA ScP ScP 20 04 15.3 +0.6
comp=Z,19nm,0.9s,baz=334,slow=6.9,SNR=3.3
STKA S S 20 04 36.6 -0.8
comp=Z,32nm,1.1s,baz=203,slow=19,SNR=4.8
STKA LR LR 20 15 24.2
comp=Z,941nm,19.6s,baz=331,slow=36
STKA Stephens Creek 40.47 159 P **P 19 58 42.0 +1.2**
baz=40,SNR=396
STKA S S 20 04 36.7 -0.8
baz=40,SNR=15
ASAJ Asahikawa 40.78 19 P **P 19 58 45.0 +1.7**
ASAJ ⇓iP P 19 58 45.2 +1.9
ASAJ S S 20 04 44.8 +2.9
ASAJ Asahikawa 40.78 19 P **P 19 58 45.0 +1.7**
comp=Z,87nm,0.9s,baz=234,slow=12,SNR=49
ASAJ S S 20 04 44.8 +2.9
comp=Z,18nm,1.2s,baz=60,slow=20,SNR=5.5
ASAJ LR LR 20 14 22.2
comp=Z,677nm,20.1s,baz=339,slow=34
GTA Gaotai 40.79 329 eP **P 19 58 44.5 +0.9**
GTA pP pP 19 59 20.3 +1.5
GTA sP sP 19 59 37.5 +0.4
GTA PcP PcP 20 00 43.0 +1.4
GTA ScP ScP 20 04 16.8 +0.6
GTA S S 20 04 43.8 +1.3
GTA sS sS 20 05 44.8 +0.8
GTA ScS ScS 20 08 29.8 -1.8
GTA pmax pmax
comp=Z,12nm,0.9s
GTA pmax pmax
comp=Z,150nm,5.7s
GTA LR LR
comp=N,730nm,13.1s
GTA LR LR
comp=E,1µm,15.4s
GTA LR LR
comp=Z,710nm,20.0s
RKGY Rocky Gully 41.17 191 P **P 19 58 48.6 +2.1**
baz=41,SNR=504
CMSA Cobar Meteorol 41.78 154 P **P 19 58 52.6 +1.1**
baz=42,SNR=16
WAKE Wake Island 41.84 68 eP **P 19 58 50.9 -1.3**
comp=Z,130nm,1.3s
TAPN Taplejung 42.05 305 eP **P 19 58 55.4 +1.1**
comp=Z,115nm,0.5s
ODAN Odare 42.12 304 eP **P 19 58 55.9 +1.1**
comp=Z,150nm,0.6s
RAMN Ramite 42.81 304 eP **P 19 59 01.7 +1.4**
comp=Z,370nm,1.1s
HABR Khabarovsk 43.12 9deP **P 19 59 03.5 +1.4**
HABR e*PP pP 19 59 36.3 -1.4
HABR e*SP sP 19 59 54.8 -1.1
HABR e 20 00 47.7
HABR ePPP PPP 20 01 25.0
HABR eS S 20 05 17.4 +1.4
HABR e*SS sS 20 06 18.9 +0.8
HABR e 20 08 44.1
HABR pmax pmax
comp=Z,129nm,1.5s
HABR pmax pmax
comp=N,94nm,2.5s
HABR pmax pmax
comp=E,55nm,1.5s
HABR smax smax
comp=N,49nm,4.8s
HABR smax smax
comp=Z,103nm,4.8s
HABR smax smax
comp=E,78nm,4.8s
HABR MLR MLR
comp=Z,349nm,20.0s
YSS Yuzh-Sakhalins 43.39 17⇓eP **P 19 59 06.3 +2.0**
YSS e*PP pP 19 59 39.9 0.0
YSS e 20 00 52.0
YSS eS S 20 05 22.0 +1.9
YSS eSS SS 20 08 30.0 -11
YSS e 20 08 43.0
YSS eSSS SSS 20 09 35.0
YSS pmax pmax
comp=N,50nm,1.2s
YSS pmax pmax
comp=Z,90nm,1.2s
YSS pmax pmax
comp=E,70nm,1.5s
YSS MLR MLR
comp=Z,300nm,15.0s
YSS MLR MLR
comp=N,300nm,19.0s
KLR Kul'dur 43.45 6 eP **P 19 59 02.2 -2.6**
KLR e 19 59 37.0
KLR eS S 20 05 14.5 -6.4
KLR e 20 06 16.0
KLR eSSS SSS 20 08 42.5
KLR pmax pmax
comp=Z,78nm,1.8s
KLR MLR MLR
comp=Z,2µm,12.0s

HIA Hailar 43.51 354 eP **P 19 59 05.8 +0.5**
comp=Z,27nm,0.8s
ARMA Armidale 43.76 147 eP **P 19 59 08.6 +1.0**
comp=Z,181nm,0.9s
ARMA eScP ScP 20 04 30.3 +2.2
ARMA Armidale 43.76 147 P **P 19 59 08.9 +1.3**
baz=44,SNR=22
ARMA S S 20 05 27.4 +1.4
baz=44,SNR=5.7
GUN Gumba 43.77 305 eP **P 19 59 08.7 +0.6**
comp=Z,201nm,0.5s
PKI Pulchoki 44.02 304 eP **P 19 59 10.3 +0.2**
comp=Z,104nm,0.8s
PKIN Phulchoki 44.04 304 eP **P 19 59 11.1 +0.9**
KKN Kakani 44.21 304 eP **P 19 59 12.2 +0.7**
DMN Daman 44.29 304 eP **P 19 59 12.5 +0.3**
comp=Z,276nm,1.2s
ULN Ulaanbaatar 44.79 342 eP **P 19 59 15.8 +0.2**
comp=Z,84nm,1.1s
ULN eScP ScP 20 04 32.9 +0.7
ULN Ulaanbaatar 44.79 342 P **P 19 59 16.8 +1.1**
SNR=25
ULN Ulaanbaatar 44.79 342 P **P 19 59 16.9 +1.3**
comp=Z,72nm,1.1s,comp=Z,795nm
PALK Pallekele 44.87 274 P **P 19 59 14.4 -2.3**
PALK Pallekele 44.87 274 P P 19 59 25.7 +9.0
SONM Songino Array 44.97 341 P **P 19 59 17.4 +0.4**
SONM ScP ScP 20 04 33.0 +0.2
SONM P'P' 20 30 49.9
SONM Songino Array 44.97 341 P **P 19 59 17.4 +0.4**
comp=Z,3.3nm,0.4s,baz=153,slow=9.2,SNR=36
SONM ScP ScP 20 04 33.0 +0.2
comp=Z,3.2nm,0.8s,baz=183,slow=3.7,SNR=4.8
SONM LR LR 20 20 51.7
comp=Z,771nm,19.5s,baz=153,slow=40
SONM PKPPKP P'P'df 20 30 49.9 -2.5
comp=Z,0.5nm,0.8s,baz=250,slow=4.3,SNR=4.0
ARPS Mount Arapiles 45.02 162 P **P 19 59 18.8 +1.4**
baz=45,SNR=47
YNG Young 45.31 154 P **P 19 59 21.5 +1.7**
baz=45,SNR=105
KOLN Koldanda 45.59 303 eP **P 19 59 22.8 +0.4**
comp=Z,196nm,0.5s
DANN Dangsing 45.67 304 eP **P 19 59 23.3 +0.2**
comp=Z,180nm,0.4s
MGCD Mangrove Creek 45.69 150 P **P 19 59 25.3 +2.5**
baz=46,SNR=4.1
PYUN Piuthan 46.21 304 eP **P 19 59 27.9 +0.6**
comp=Z,212nm,0.6s
CAN Canberra 46.44 154⇑iP **P 19 59 30.4 +1.7**
CAN pmax pmax
comp=Z,84nm,0.7s
CAN Canberra 46.44 154⇑iP **P 19 59 30.4 +1.7**
comp=Z,84nm,0.7s
CAN eScP ScP 20 04 41.1 +2.0
CNB Canberra Magne 46.60 153 P **P 19 59 31.9 +2.0**
baz=47,SNR=40
TOO Toolangi 46.98 159 P **P 19 59 34.9 +2.2**
baz=47,SNR=40
CIT Chita 47.07 350 eP **P 19 59 32.5 -0.8**
HYB Hyderabad 47.60 288 iP **P 19 59 37.0 -0.9**
HYB e 19 59 45.0
HYB e 20 00 23.5
HYB esP sP 20 00 33.0 +0.9
HYB eS S 20 06 20.0 -1.3
HYB e 20 07 24.0
MILA Mila 47.97 155 P **P 19 59 42.6 +2.1**
baz=48,SNR=12
ZAK Zakamensk 48.19 341 eP **P 19 59 39.8 -2.2**
ZAK e 20 00 18.6
ZAK e 20 01 07.7
NOUC Port Laguerre 48.41 126 eP **P 19 59 43.8 -0.2**
DZM Mont Dzumac 48.50 126 eP **P 19 59 46.0 +1.1**
comp=Z,464nm,1.2s
DZM eS S 20 06 34.8 +0.8
comp=Z,2µm,26.4s
DZM eLR LR 20 13 43.2
comp=Z,1µm,35.9s
DZM Mont Dzumac 48.50 126 eP **P 19 59 44.9 0.0**
TLY Talaya 49.20 342 eP **P 19 59 50.8 +1.2**
TLY e 20 00 24.8
TLY e 20 01 40.1
TLY eS S 20 06 39.5 -3.3
TLY e 20 07 46.2
TLY pmax pmax
comp=Z,18nm,1.5s
TLY MLR MLR
comp=Z,423nm,21.0s
IRK Irkutsk 49.50 343 eP **P 19 59 53.4 +1.6**
IRK e 20 00 27.4
IRK pmax pmax
comp=Z,60nm,1.7s
MOY Mondy 50.05 340 eP **P 19 59 59.0 +2.9**
AGRA Agra 50.20 301 ePKP **P 19 59 57.0 -0.5**
AGRA AMB AMB 19 59 58.7
comp=Z,116nm,1.4s
WMQ Urumqi 50.45 325 P **P 20 00 00.3 +1.0**
WMQ pP pP 20 00 36.5 +0.6
WMQ sP sP 20 00 54.5 +0.7
WMQ PP PP 20 01 59.0 +2.4
WMQ ScP ScP 20 04 55.8 -0.3
WMQ PcS PcS 20 05 12.5 -0.1
WMQ S S 20 06 59.5 -1.1
WMQ sS sS 20 08 03.5 -0.6
WMQ ScS ScS 20 09 31.5 -2.3
WMQ SS SS 20 10 33.0 -3.6
WMQ pmax pmax
comp=Z,29nm,1.0s
WMQ LR LR
comp=N,3µm,21.0s
WMQ LR LR
comp=E,1µm,20.8s
WMQ LR LR
comp=Z,770nm,20.0s
CLNS Chul'man 50.79 359 eP **P 20 00 03.9 +2.4**
CLNS e 20 01 18.9
CLNS e 20 01 58.1
CLNS eS S 20 07 08.4 +3.7
CLNS e 20 09 34.3
CLNS pmax pmax
comp=Z,54nm,0.9s
CLNS pmax pmax
comp=N,34nm,0.9s
CLNS pmax pmax
comp=E,16nm,1.0s
CLNS pmax pmax
comp=Z,30nm,0.9s
CLNS pmax pmax
comp=N,25nm,1.1s
CLNS pmax pmax
comp=E,21nm,1.0s
CLNS smax smax
comp=N,27nm,1.3s
CLNS smax smax
comp=E,26nm,1.3s
BISR Bishrakh 51.00 302 ex x 19 59 55.5
BISR AMB AMB 19 59 56.7
comp=Z,314nm,1.6s
AYAN Aya Nagar 51.24 302 ePKP **P 20 00 04.7 -0.6**
AYAN AMB AMB 20 00 06.3
comp=Z,82nm,1.2s
SKR Severo-Kuril's 51.27 24 eP **P 20 00 05.0 -0.1**
SKR eSSS SSS 20 09 32.0
SKR pmax pmax
comp=Z,360nm,1.0s
SKR pmax pmax
comp=Z,1µm,3.0s
BHGR Bahadurgarh 51.46 302 ePKP **P 20 00 06.4 -0.5**
MOO Moorlands 51.90 160 P **P 20 00 11.9 +2.2**
baz=52,SNR=5.6
KKR Kurukshetra 51.92 304 ePKP **P 20 00 10.3 -0.1**
KKR AMB AMB 20 00 11.5
comp=Z,166nm,0.7s
SMLA Simla 52.00 305 ePKP **P 20 00 12.0 +1.1**
SMLA iS S 20 07 20.9 -1.1
SMLA iS S 20 07 22.3 +0.3
POO Poona 52.18 289⇓ix x 20 00 09.0
TAU Tasmania Unive 52.36 160 eP **P 20 00 14.8 +1.5**
TAU pmax pmax
comp=Z,160nm,1.4s
TAU Tasmania Unive 52.36 160 eP **P 20 00 14.8 +1.5**
comp=Z,160nm,1.4s
HVS Khovu-Aksy 52.41 335 eP **P 20 00 14.4 +0.7**
HVS pmax pmax
comp=Z,105nm,1.3s

DLH Dalhousie 53.41 306 ePKP **P 20 00 20.0 -1.6**
DLH ex x 20 00 27.0
THN Thein Dam 53.58 306 ex **P 20 00 19.9 -2.6**
THN ex x 20 05 03.3
PEA0B Petropavlovsk- 53.76 23⇓iP **P 20 00 25.1 +1.7**
PETK Petropavlovsk- 53.76 23 P **P 20 00 25.1 +1.7**
PETK Petropavlovsk- 53.76 23 P **P 20 00 25.1 +1.7**
PETK P'P' 20 30 39.4
PETK Petropavlovsk- 53.76 23 P **P 20 00 25.1 +1.7**
comp=Z,58nm,0.9s,baz=195,slow=3.8,SNR=88
PETK LR LR 20 23 32.6
comp=Z,294nm,19.7s,baz=211,slow=36
PETK PKPPKP P'P'df 20 30 39.4 -1.1
comp=Z,3.1nm,1.0s,baz=132,slow=6.6,SNR=3.9
PET Petropavlovsk 54.07 24κ iP **P 20 00 27.4 +1.7**
PET e*PP pP 20 01 01.5 -1.2
PET iS S 20 07 52.5 +3.2
PET pmax pmax
comp=Z,600nm,1.8s
PET pmax pmax
comp=Z,166nm,1.2s
PET MLR MLR
comp=Z,400nm,19.0s
FUNA Funafuti 55.08 105 eP **P 20 00 35.1 +1.5**
comp=Z,2µm,1.7s
MK31 Makanchi Array 55.28 325⇑iP **P 20 00 34.6 0.0**
MK31 e*PP pP 20 01 12.9 +1.1
MK31 Makanchi Array 55.28 325⇑iP **P 20 00 34.6 0.0**
MK31 epP pP 20 01 12.9 +1.1
MK31 eScP ScP 20 05 16.1 -0.9
MKAR Makanchi Array 55.28 325 P **P 20 00 34.8 +0.2**
MKAR *PP pP 20 01 12.1 +0.3
MKAR Makanchi Array 55.28 325 P **P 20 00 34.8 +0.2**
MKAR pP pP 20 01 12.1 +0.3
MKAR ScP ScP 20 05 16.3 -0.7
MKAR P'P' 20 30 30.5
MKAR Makanchi Array 55.28 325 P **P 20 00 34.8 +0.2**
comp=Z,15nm,0.4s,baz=119,slow=7.4,SNR=335
MKAR pP pP 20 01 12.1 +0.3
comp=Z,109nm,0.8s,baz=126,slow=7.6,SNR=24
MKAR ScP ScP 20 05 16.3 -0.7
comp=Z,14nm,0.8s,baz=121,slow=4.7,SNR=6.0
MKAR PKPPKP P'P'df 20 30 30.5 -8.4
comp=Z,1.0nm,0.9s,baz=292,slow=3.3,SNR=5.6
KSH Kashi 55.90 314 P **P 20 00 41.0 +1.7**
KSH pP pP 20 01 18.3 +1.7
KSH PcP PcP 20 01 38.0 +2.0
KSH PP PP 20 02 49.8 +4.1
KSH ePcS PcS 20 05 37.3 +0.6
KSH S S 20 08 12.0 -2.5
KSH ScS ScS 20 10 10.3 -2.3
KSH pmax pmax
comp=Z,24nm,0.7s
KSH pmax pmax
comp=Z,710nm,4.4s
KSH LR LR
comp=N,2µm,16.7s
KSH LR LR
comp=E,2µm,14.2s
KSH LR LR
comp=Z,980nm,14.1s
YAK Yakutsk 56.07 2 eP **P 20 00 40.9 +1.1**
YAK e*PP pP 20 01 14.5 -2.6
YAK e 20 01 38.5
YAK e 20 02 45.7
YAK eS S 20 08 15.8 +0.2
YAK e 20 10 08.6
YAK pmax pmax
comp=Z,165nm,0.9s
YAK pmax pmax
comp=E,9.0nm,1.0s
YAK pmax pmax
comp=N,52nm,1.0s
YAK pmax pmax
comp=E,62nm,1.7s
YAK pmax pmax
comp=Z,44nm,1.4s
YAK smax smax
comp=E,308nm,2.5s
YAK smax smax
comp=N,386nm,2.2s
MSVF Nonsavu 56.61 116⇓iP **P 20 00 46.4 +1.8**
MSVF Nonsavu 56.61 116⇓iP **P 20 00 46.4 +1.8**
comp=N,304nm,1.0s
MSVF Nonsavu 56.61 116 P **P 20 00 46.9 +2.4**
comp=N,2µm,1.0s,SNR=24
ULHL Ulahol 56.84 317 P **P 20 00 46.4 +0.5**
SNR=32
KZA Kyzart 57.44 317 P **P 20 00 51.4 +1.0**
SNR=34
TKM2 Tokmak 2 57.55 318 iP **P 20 00 51.5 +0.6**
TKM2 Tokmak 2 57.55 318⇑iP **P 20 00 51.1 +0.1**
comp=N,20nm,0.6s
TKM2 epP pP 20 01 27.7 -0.8
TKM2 Tokmak 2 57.55 318 P **P 20 00 51.5 +0.6**
SNR=41
KBK Karagaybulak 57.88 317 P **P 20 00 53.8 +0.6**
SNR=24
MIDW Midway 58.04 60 eP **P 20 00 54.5 +0.2**
comp=N,30nm,0.6s
CHMS Chumysh 58.15 318 P **P 20 00 55.1 +0.2**
SNR=17
FRU Bishkek 58.17 318 eP **P 20 00 54.0 -1.0**
FRU e 20 01 45.0
AAK Ala-Archa 58.17 317c iP **P 20 00 55.8 +0.6**
AAK pmax pmax
comp=Z,25nm,1.1s
AAK Ala-Archa 58.17 317⇑iP **P 20 00 55.4 +0.2**
comp=Z,31nm,1.0s
AAK P P 20 00 55.9 +0.6
AAK epP pP 20 01 34.8 +2.0
AAK eScP ScP 20 05 29.2 -0.8
AAK Ala-Archa 58.17 317 P **P 20 00 55.7 +0.6**
SNR=12
AAK Ala-Archa 58.17 317 P **P 20 00 56.0 +0.8**
SNR=9.3
AAK Ala-Archa 58.17 317 P **P 20 00 55.0 -0.2**
comp=Z,119nm,1.1s,SNR=6.3
AAK Ala-Archa 58.17 317 P **P 20 00 55.9 +0.6**
comp=Z,4.0nm,0.4s,baz=120,slow=5.8,SNR=17
ZAA0 Zalesovo Array 58.26 333⇑iP **P 20 00 54.4 -1.0**
ZAA0 epP pP 20 01 36.7 +3.7
ZALV Zalesovo Beam 58.26 333 P **P 20 00 54.6 -0.8**
ZALV *PP pP 20 01 33.4 +0.4
ZALV S S 20 08 41.1 -3.5
ZALV Zalesovo Beam 58.26 333 P **P 20 00 54.6 -0.8**
ZALV pP pP 20 01 33.4 +0.4
ZALV ScP ScP 20 05 28.9 -1.0
ZALV S S 20 08 41.1 -3.5
ZALV P'P' 20 30 34.1
ZALV Zalesovo Beam 58.26 333 P **P 20 00 54.6 -0.8**
comp=Z,6.0nm,0.6s,baz=136,slow=7.0,SNR=32
ZALV pP pP 20 01 33.4 +0.4
comp=Z,30nm,0.9s,baz=126,slow=7.0,SNR=4.2
ZALV ScP ScP 20 05 28.9 -1.0
comp=Z,6.1nm,0.9s,baz=110,slow=7.8,SNR=4.5
ZALV S S 20 08 41.1 -3.5
comp=Z,1.4nm,0.8s,baz=85,slow=18,SNR=3.6
ZALV PKPPKP P'P'df 20 30 34.1 +0.2
comp=Z,0.9nm,0.3s,baz=272,slow=4.0,SNR=4.7
USP Ospenovka 58.43 318 P **P 20 00 57.2 +0.4**
SNR=24
AML Almayashu 58.52 316 P **P 20 00 58.8 +0.9**
SNR=40
EKS2 Erkin-Say 58.67 317⇑iP **P 20 00 58.2 -0.4**
EKS2 e*PP pP 20 01 37.5 +1.2
EKS2 pmax pmax
comp=Z,40nm,0.8s
EKS2 Erkin-Say 58.67 317⇑iP **P 20 00 58.2 -0.4**
comp=Z,40nm,0.8s
EKS2 epP pP 20 01 37.5 +1.2
EKS2 Erkin-Say 58.67 317 P **P 20 00 59.5 +0.9**
SNR=41
KURBB Kurchatov Arra 59.45 327 P **P 20 01 03.5 -0.1**
comp=Z,36nm,0.8s,baz=125,slow=6.2,SNR=202
KURBB pP pP 20 01 41.8 +0.4
comp=Z,66nm,0.8s,baz=126,slow=6.3,SNR=4.7
KURBB S S 20 08 57.5 -2.5
comp=Z,4.5nm,1.3s,baz=130,slow=13,SNR=4.6
KURK Kurchatov 59.45 327c iP **P 20 01 03.4 -0.2**
KURK pmax pmax
comp=Z,69nm,1.3s
KURK Kurchatov 59.45 327⇑iP **P 20 01 03.2 -0.3**
comp=Z,168nm,1.1s
KURK P P 20 01 03.5 -0.2

KURK ep P **pP** **20 01 40.8 -0.5**
KURK p P **pwP** **20 01 41.8 +0.5**
KURK S **S** **20 08 57.5 -2.5**
KURK Kurchatov **59.45 327** P **P** **20 01 03.9 +0.3**
SNR=25
KURK Kurchatov **59.45 327** P **P** **20 01 03.3 -0.3**
comp=Z,383nm,0.6s,SNR=55
KBL Kabul **59.53 307**⇑ *i* P **P** **20 01 04.6 -0.2**
KBL pmax pmax
comp=Z,92nm,1.0s
KBL Kabul **59.53 307**⇑ *i* P **P** **20 01 04.6 -0.2**
comp=Z,92nm,1.0s
KBL Kabul **59.53 307** P **P** **20 01 04.8 +0.1**
baz=60,SNR=24
NVS Novosibirsk **59.55 333**⇑ *i* P **P** **20 01 03.3 -0.9**
NVS eS S 20 08 55.0 -6.1
NVS pmax pmax
comp=N,6.0nm,1.2s
NVS pmax pmax
comp=Z,16nm,1.2s
NVS pmax pmax
comp=E,11nm,1.1s
NVS smax smax
comp=N,16nm,1.2s
NVS smax smax
comp=E,33nm,1.2s
SEY Seymchan **60.12 14**⇓ *i* P **P** **20 01 10.7 +2.8**
FX1 Attu Island--F **60.64 31** *e* P **P** **20 01 13.6 +1.9**
FX1 Attu Island--F **60.64 31** P **P** **20 01 13.6 +1.9**
comp=E,239nm,1.0s,baz=250,slow=3.1,SNR=19
KKAR Karatay Array **61.06 316**⇑ *i* P **P** **20 01 14.1 -0.7**
KKAR *e* 20 01 56.4
KKAR pmax pmax
comp=Z,65nm,0.8s
KKAR Karatay Array **61.06 316**⇑ *i* P **P** **20 01 14.1 -0.7**
comp=Z,65nm,0.8s
KKAR epPcP **PcP** **20 01 56.4 +0.1**
AMKA Amchitka **63.18 34** *e* P **P** **20 01 28.3 -0.3**
comp=Z,103nm,0.9s
RPZ Rata Peaks **64.03 145** *e* P **P** **20 01 35.1 +0.7**
comp=Z,64nm,0.9s
RPZ P **P** **20 01 35.2 +0.8**
RPZ Rata Peaks **64.03 145** P **P** **20 01 35.2 +0.8**
comp=Z,29nm,0.7s,baz=1.0,slow=7.6,SNR=18
KHZ Kahutara **64.71 143** *e* P **P** **20 01 38.7 -0.1**
comp=Z,24nm,0.7s
URZ Urewera **64.72 137** *e* P **P** **20 01 39.1 +0.1**
comp=Z,46nm,1.0s
BVAR Borovoye Array **65.03 327** P **P** **20 01 40.5 -0.3**
BVAR *PP **pP** **20 02 18.1 -1.0**
BVAR S **S** **20 10 06.8 -3.1**
BVAR Borovoye Array **65.03 327** P **P** **20 01 40.5 -0.3**
BVAR pP **pP** **20 02 18.1 -1.0**
BVAR S **S** **20 10 06.8 -3.1**
BVAR Borovoye Array **65.03 327** P **P** **20 01 40.5 -0.3**
comp=Z,18nm,0.7s,baz=132,slow=8.8,SNR=70
BVAR pP **pP** **20 02 18.1 -1.0**
comp=Z,32nm,0.8s,baz=120,slow=8.8,SNR=4.2
BVAR S **S** **20 10 06.8 -3.1**
comp=Z,0.5nm,0.6s,baz=116,slow=6.6,SNR=3.7
BRVK Borovoye **65.10 327***c* *i* P **P** **20 01 41.1 -0.1**
BRVK pmax pmax
comp=Z,31nm,0.8s
BRVK Borovoye **65.10 327** *e* P **P** **20 01 41.1 -0.1**
comp=Z,92nm,1.0s
BRVK Borovoye **65.10 327** P **P** **20 01 41.4 +0.2**
SNR=22
BRVK Borovoye **65.10 327** P **P** **20 01 41.1 -0.1**
comp=Z,282nm,1.0s,SNR=28
JMDO Jabal Madar **67.22 292** P **P** **20 01 55.2 -0.1**
SNR=8.7
BILL Bilibino **67.68 15***d* *i* P **P** **20 01 58.2 +0.9**
BILL *j* 20 02 23.6
BILL *i* S **S** **20 10 44.2 +2.9**
BILL eSS SS 20 15 14.4 +9.0
HOQ Hoqain **68.01 293** P **P** **20 02 00.2 0.0**
SNR=16
BSY Bisya **68.07 292** P **P** **20 02 00.8 +0.2**
SNR=5.1
ARQ Araqi **68.72 293** P **P** **20 02 04.2 -0.5**
SNR=5.5
ABKT Ailbek **68.86 308** P **P** **20 02 06.4 +1.1**
comp=Z,434nm,1.3s,SNR=45
BANOM Banah **69.07 295** P **P** **20 02 07.5 +0.7**
SNR=5.2
UOSS Wadi Hilu **69.10 294** P **P** **20 02 06.9 -0.1**
comp=Z,114nm,1.1s,SNR=5.2
HATD Hatta, Dubai **69.16 294** P **P** **20 02 07.5 +0.2**
SNR=14
ASHO Ashiyiah **69.22 294** P **P** **20 02 07.6 -0.1**
SNR=13
NAZ Nazwa, Dubai **69.59 294** P **P** **20 02 09.5 -0.4**
SNR=9.6
ASUD Al Ashush, Dub **69.87 294** P **P** **20 02 12.5 +0.8**
SNR=11
ABKAR Akbulak array **69.92 320**⇑ *i* P **P** **20 02 11.0 -0.5**
comp=Z,39nm,0.8s
ABKAR epP **pP** **20 02 50.6 +0.2**
ABKAR eS **S** **20 11 06.2 -2.3**
RBK Rabkut **70.78 286** P **P** **20 02 17.4 0.0**
SNR=6.0
AKTO Aktyubinsk **71.42 321** P **P** **20 02 20.4 -0.2**
AKTO S **S** **20 11 23.1 -2.7**
AKTO Aktyubinsk **71.42 321** P **P** **20 02 20.4 -0.2**
AKTO S **S** **20 11 23.1 -2.7**
AKTO Aktyubinsk **71.42 321** P **P** **20 02 20.4 -0.2**
comp=Z,26nm,0.7s,baz=100,slow=7.9,SNR=68
AKTO S **S** **20 11 23.1 -2.7**
comp=Z,6.5nm,1.2s,baz=188,slow=23,SNR=20
ABTO Aybut **71.64 286** P **P** **20 02 22.5 -0.1**
SNR=10
SVE Sverdlovsk **71.66 328**⇓ *e* P **P** **20 02 21.5 -0.3**
SVE pmax pmax
comp=Z,61nm,0.9s
MRIV Mauritius Mete **72.01 247** *e* P **P** **20 02 24.1 -0.5**
UNV Unalaska Valle **72.13 35** *e* P **P** **20 02 25.6 +0.9**
comp=Z,114nm,1.0s
ARU Arti **72.64 328***c* *i* P **P** **20 02 26.8 -0.9**
ARU *PP **pP** **20 03 05.9 -0.9**
ARU *SP **sP** **20 03 23.2 -0.9**
ARU 20 05 09.7
ARU PPP PPP 20 06 54.2
ARU S **S** **20 11 38.5 -0.9**
ARU SS **SS** **20 16 20.0 -2.0**
ARU SSS SSS 20 19 39.2
ARU pmax pmax
comp=Z,54nm,1.0s
ARU Arti **72.64 328** P **P** **20 02 27.9 +0.2**
comp=Z,380nm,0.6s,SNR=22
GAMB Gambell **72.77 24** *e* P **P** **20 02 30.0 +1.8**
comp=Z,52nm,1.2s
CASY Casey **72.88 186**⇑ *e* P **P** **20 02 29.7 +0.9**
comp=Z,227nm,1.2s
FALS False Pass **74.13 35** *e* P **P** **20 02 36.6 +0.2**
comp=Z,80nm,0.5s
SOKR Solikamsk **74.40 330***c* *i* P **P** **20 02 37.2 -0.7**
SOKR pmax pmax
comp=Z,20nm,0.9s
SOKR MLR MLR
comp=Z,450nm,20.0s
KIP Kipapa **74.96 69***d* *i* P **P** **20 02 43.8 +2.0**
KIP pmax pmax
comp=Z,205nm,1.2s
KIP Kipapa **74.96 69** *e* P **P** **20 02 43.9 +2.0**
comp=Z,279nm,1.2s
HON Honolulu **74.97 70** *e* P **P** **20 02 42.0 0.0**
HON Honolulu **74.97 70** *e* P **P** **20 02 42.0 0.0**
SDPT Sand Point **75.88 34** *e* P **P** **20 02 47.0 +0.5**
comp=Z,496nm,1.6s
MIR Mirnyy **76.08 193**⇑ *i* P **P** **20 02 49.0 +1.8**
MIR *i* 20 02 58.0
MIR pmax pmax
comp=Z,193nm,1.5s
UMR Umm Al-Rimmam **76.81 299** *e* P **P** **20 02 51.8 -0.4**
UMR AMb AMB 20 02 54.3
comp=Z,283nm,1.1s
KBD Kabd **76.82 298** *e* P **P** **20 02 51.6 -0.7**
KBD AMb AMB 20 02 53.6
comp=Z,164nm,1.5s
RDF Al-Radifah **76.95 298** *e* P **P** **20 02 52.6 -0.4**
RDF AMb AMB 20 02 54.8
comp=Z,165nm,1.5s
CHGN Chignik **77.19 34** *e* P **P** **20 02 54.5 +0.8**
NAY Al-Naaiem **77.22 299** *e* P **P** **20 02 53.3 -1.2**
NAY AMb AMB 20 02 55.6
comp=Z,141nm,1.2s

MAK Makhachkala **77.48 313** *e* P **P** **20 02 55.8 +0.1**
MAK *e* *PP **pP** **20 03 38.0 +2.7**
MAK *e* *SP **sP** **20 03 55.4 +3.0**
MAK *e* 20 05 53.3
MAK eS **S** **20 12 34.9 +1.6**
MAK eSS **SS** **20 17 38.0 +2.2**
MAK pmax pmax
comp=Z,183nm,1.5s
PUH Pauahi **77.63 72** *e* P **P** **20 02 59.0 +1.9**
STCH Steam Cracks **77.71 72** *e* P **P** **20 02 59.5 +1.9**
RAYN Ar Rayn **78.84 293** P **P** **20 03 02.0 -1.7**
comp=Z,612nm,1.1s,SNR=82
DGRG David-gareji **78.99 311** P **P** **20 03 05.0 +0.9**
GNI Garni **79.43 310**⇑ *i* P **P** **20 03 06.9 +0.2**
comp=Z,103nm,1.0s
GNI epP **pP** **20 03 46.9 +0.4**
GNI eS **S** **20 12 55.8 +1.1**
GNI S SKSac 20 12 57.5 -11
GNI Garni **79.43 310** P **P** **20 03 08.2 +1.5**
SNR=17
GNI Garni **79.43 310** P **P** **20 03 06.9 +0.2**
comp=Z,9.8nm,0.8s,baz=159,slow=3.5,SNR=21
GNI S **S** **20 12 57.5 +2.8**
comp=Z,1.7nm,0.3s,baz=179,slow=14,SNR=5.4
TBLG Delisi **79.47 311** *e* P **P** **20 03 06.8 +0.1**
TBLG Delisi **79.47 311** P **P** **20 03 06.9 +0.1**
DUS Dusheti **79.51 312** P **P** **20 03 08.2 +1.3**
KZR Kazreti **79.70 311** P **P** **20 03 08.3 +0.3**
OHAK Old Harbor **80.10 33** *e* P **P** **20 03 10.9 +1.3**
comp=Z,82nm,1.1s
AKH Akhalkalaki **80.40 311** P **P** **20 03 12.6 +0.7**
ONI Oni **80.44 312** P **P** **20 03 12.3 +0.3**
KDAK Kodiak Island **80.52 32** P **P** **20 03 13.2 +1.4**
KDAK Kodiak Island **80.52 32** P **P** **20 03 13.3 +1.4**
comp=Z,281nm,0.9s,SNR=14
KDAK Kodiak Island **80.52 32** P **P** **20 03 13.2 +1.4**
comp=Z,30nm,0.8s,baz=258,slow=2.8,SNR=37
RSO Redoubt South **80.63 30** *e* P **P** **20 03 13.1 +0.4**
comp=Z,77nm,0.8s
KBZ Khabaz **80.86 313** P **P** **20 03 13.8 -0.2**
KBZ S **S** **20 13 06.0 -3.1**
KBZ Khabaz **80.86 313** P **P** **20 03 13.8 -0.2**
KBZ S **S** **20 13 06.0 -3.1**
KBZ Khabaz **80.86 313** P **P** **20 03 13.8 -0.2**
comp=Z,20nm,0.9s,baz=164,slow=4.5,SNR=22
KBZ S **S** **20 13 06.0 -3.1**
comp=Z,6.2nm,1.1s,baz=13,slow=23,SNR=9.1
KIV Kislovodsk **81.02 313***c* *i* P **P** **20 03 14.3 -0.7**
KIV *i* 20 03 57.5
KIV eS **S** **20 13 09.9 -1.1**
KIV pmax pmax
comp=Z,40nm,1.0s
KIV Kislovodsk **81.02 313** P **P** **20 03 15.7 +0.7**
comp=Z,257nm,0.7s,SNR=13
PPLA Purkeypile **81.09 27** *e* P **P** **20 03 16.6 +1.6**
comp=Z,18nm,0.6s
PPLA ePP PP 20 06 16.9 -5.3
ABPO Ambohimpanom **81.24 250** *e* P **P** **20 03 15.4 -1.4**
ABPO *e* *PP **pP** **20 03 54.4 -2.3**
ABPO pmax pmax
comp=Z,29nm,0.9s
ABPO Ambohimpanom **81.24 250** *e* P **P** **20 03 15.4 -1.4**
comp=Z,29nm,0.9s
ABPO epP **pP** **20 03 54.4 -2.3**
VRHR Novokhopersk **81.81 321** *e* P **P** **20 03 17.5 -1.4**
VRHR *e* *PP **pP** **20 04 02.8 +3.9**
VRHR eS S 20 13 11.9 -6.7
VRHR pmax pmax
comp=E,70nm,1.1s
VRHR pmax pmax
comp=Z,120nm,1.1s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR smax smax
comp=N,560nm,2.0s
VRHR smax smax
comp=Z,30nm,2.0s
VRHR smax smax
comp=E,130nm,1.0s
TRF Thorofare Moun **81.99 27** *e* P **P** **20 03 20.2 +0.4**
comp=E,77nm,1.2s
RC01 Rabbit Creek A **82.14 29** *e* P **P** **20 03 20.9 +0.5**
comp=E,60nm,1.0s
COLD Coldfoot **82.23 23** *e* P **P** **20 03 22.6 +1.9**
comp=E,52nm,0.9s
SEW Seward **82.25 30** *e* P **P** **20 03 21.7 +0.7**
comp=E,123nm,1.4s
PMR Palmer **82.45 29** *e* P **P** **20 03 22.5 +0.6**
PMR pmax pmax
comp=Z,73nm,1.1s
PMR Palmer **82.45 29** *e* P **P** **20 03 22.5 +0.6**
comp=Z,73nm,1.1s
PMR epP **pP** **20 03 58.2 -3.8**
MCK McKinley **82.60 27** *e* P **P** **20 03 23.2 +0.4**
MCK pmax pmax
comp=Z,108nm,1.0s
MCK McKinley **82.60 27** *e* P **P** **20 03 23.2 +0.4**
comp=Z,108nm,1.0s
MZRK Al-Mazaregh **82.70 305** *e* P **P** **20 03 24.8 +0.9**
MZRK Al-Mazaregh **82.70 305** *e* P **P** **20 03 24.8 +0.9**
SNR=46
SML Sawmill **82.84 29** *e* P **P** **20 03 25.3 +1.3**
SML pmax pmax
comp=Z,37nm,1.1s
SML Sawmill **82.84 29** *e* P **P** **20 03 25.3 +1.3**
comp=Z,36nm,1.1s
KLMR Klimovskoe **83.09 331** *e* P **P** **20 03 22.4 -2.9**
KLMR *i* S **S** **20 13 25.5 -5.7**
KLMR *e* 20 14 15.2
KLMR pmax pmax
comp=Z,166nm,1.5s
COLA College **83.10 25** *e* P **P** **20 03 25.2 0.0**
COLA pmax pmax
comp=Z,25nm,0.8s
COLA College **83.10 25** *e* P **P** **20 03 25.2 0.0**
comp=Z,24nm,0.8s
SFNV Sufian **83.11 306** *e* P **P** **20 03 26.2 +0.1**
SFNV eS **pP** **20 04 02.5 -3.7**
SFNV Sufian **83.11 306** *e* P **P** **20 03 26.2 +0.1**
SNR=46
SFNV eS **pP** **20 04 02.5 -3.7**
SNR=48
SOC Sochi **83.17 313***c* *i* P **P** **20 03 24.6 -1.5**
SOC *e* *PP **pP** **20 04 07.8 +1.6**
SOC *e* PPP PPP 20 08 34.2
SOC eS **S** **20 13 28.2 -4.5**
SOC eSS **SS** **20 19 04.9 +4.2**
SOC pmax pmax
comp=Z,23nm,0.8s
VORD Divnogorie **83.28 321** *e* P **P** **20 03 26.0 -0.5**
VORD pmax pmax
comp=Z,30nm,0.9s
VORD pmax pmax
comp=N,80nm,0.6s
VORD pmax pmax
comp=E,40nm,0.6s
VSR Storozhevoye **83.36 321** *e* P **P** **20 03 25.9 -1.0**
VSR *e* *PP **pP** **20 04 11.4 +4.4**
VSR eS S 20 13 27.9 -6.4
VSR pmax pmax
comp=N,7.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR pmax pmax
comp=Z,40nm,0.9s
VSR smax smax
comp=N,260nm,3.2s
VSR smax smax
comp=E,190nm,3.2s
VSR smax smax
comp=Z,120nm,3.2s
ILAR Eielson Array **83.51 26** P **P** **20 03 27.0 -0.4**
ILAR PKKPbc **PKKPbc** **20 21 43.5 -4.3**
ILAR P'P' 20 29 45.8
ILAR Eielson Array **83.51 26** P **P** **20 03 27.0 -0.4**
comp=Z,5.6nm,0.6s,baz=248,slow=4.8,SNR=51
ILAR PKKPbc **PKKPbc** **20 21 43.4 -4.3**
comp=Z,0.5nm,0.6s,baz=134,slow=1.5,SNR=6.7
ILAR PKPPKP **P'P'df** **20 29 45.8 -4.7**
comp=Z,0.4nm,0.8s,baz=11,slow=1.8,SNR=5.1
ILAR LR LR 20 39 41.5
comp=Z,172nm,20.5s,baz=56,slow=35
DIV Divide **84.07 29** *e* P **P** **20 03 32.7 +2.3**
comp=Z,186nm,1.2s
MOS Moscow **84.16 325** *e* P **P** **20 03 29.3 -1.5**

MOS *e* 20 04 27.4
MOS *e* 20 06 52.9
MOS eS S 20 13 34.9 -7.2
MOS *e* 20 14 50.7
MOS pmax pmax
comp=Z,300nm,1.5s
MOS pmax pmax
comp=Z,178nm,1.3s
PAX Paxson **84.16 27** *e* P **P** **20 03 32.9 +2.0**
PAX pmax pmax
comp=Z,32nm,0.9s
PAX Paxson **84.16 27** *e* P **P** **20 03 32.9 +2.0**
comp=Z,32nm,0.9s
ANN Anapa **84.76 314***c* *i* P **P** **20 03 32.6 -1.5**
ANN *e* *PP **pP** **20 04 12.2 -2.2**
ANN eS S 20 13 40.9 -7.6
ANN pmax pmax
comp=Z,153nm,1.0s
DOT Dot Lake **84.77 27** *e* P **P** **20 03 34.9 +1.1**
comp=Z,51nm,1.1s
MENT Mentasta **84.97 27** *e* P **P** **20 03 36.0 +1.1**
MAW Mawson **85.50 200** P **P** **20 03 37.8 +0.6**
MAW Mawson **85.50 200** P **P** **20 03 37.8 +0.6**
comp=Z,52nm,1.0s,baz=60,slow=6.3,SNR=60
MAW LR LR 20 42 05.8
comp=Z,196nm,19.0s,baz=50,slow=36
MAW Mawson **85.50 200** P **P** **20 03 37.9 +0.6**
baz=86,SNR=30
APA Apatity **85.52 337**⇑ *i* P **P** **20 03 40.4 +3.0**
APA *i* *PP **pP** **20 04 20.0 +2.3**
APA *e* 20 13 44.0
APA pmax pmax
comp=Z,36nm,1.2s
APA MLR MLR
comp=Z,600nm,20.0s
ZALF Zalf **85.59 303** *e* P **P** **20 03 39.9 +1.3**
ZALF Zalf **85.59 303** *e* P **P** **20 03 39.9 +1.3**
SNR=46
VNDA Vanda **85.69 173** *e* P **P** **20 03 38.3 +0.3**
comp=Z,49nm,1.3s
VNDA PKKPbc **PKKPbc** **20 21 41.8 -1.5**
VNDA Vanda **85.69 173** P **P** **20 03 38.6 +0.6**
comp=Z,13nm,0.9s,baz=315,slow=5.6,SNR=44
VNDA PKKPbc **PKKPbc** **20 21 41.8 -1.5**
comp=Z,1.9nm,1.1s,baz=298,slow=5.7,SNR=3.5
VNDA LR LR 20 36 50.0
comp=Z,256nm,21.1s,baz=334,slow=32
EGAK Eagle **85.96 25** *e* P **P** **20 03 40.2 +0.5**
comp=Z,25nm,0.9s
ASF Jabal al Asfar **86.02 302** P **P** **20 03 41.3 +0.5**
ASF pP **pP** **20 04 20.6 -0.5**
ASF Jabal al Asfar **86.02 302** P **P** **20 03 41.3 +0.5**
comp=Z,27nm,0.9s,baz=336,slow=2.5,SNR=42
ASF pP **pP** **20 04 20.6 -0.5**
comp=Z,15nm,1.0s,baz=334,slow=3.1,SNR=2.6
SALA Sala **86.11 302** *e* P **P** **20 03 41.4 +0.1**
SALA Sala **86.11 302** *e* P **P** **20 03 41.4 +0.1**
SNR=46
FKH Fakeheh **86.26 304** *e* P **P** **20 03 42.6 +0.6**
TOTH TOTAH **86.32 303** *e* P P 20 03 35.0 -7.2
TOTH TOTAH **86.32 303** *e* P P 20 03 35.0 -7.2
SNR=46
QASN Qassioun **86.43 303** *e* P P 20 03 34.1 -8.7
QASN Qassioun **86.43 303** *e* P P 20 03 34.1 -8.7
SNR=46
PPT Papeete **86.60 108** LR LR 20 39 01.6
comp=Z,246nm,18.1s,baz=182,slow=33
PPT2 Papeete2 **86.60 108** eS **S** **20 14 05.7 -1.9**
comp=Z,510nm,26.0s
PPT2 eLR LR 20 31 31.9
comp=Z,478nm,29.0s
SBA Scott Base **86.61 172** *e* P **P** **20 03 43.4 +0.9**
SBA pmax pmax
comp=Z,81nm,1.5s
SBA Scott Base **86.61 172** *e* P **P** **20 03 43.4 +0.9**
comp=Z,81nm,1.5s
HWQ Hawqa **86.64 304** *e* P **P** **20 03 43.5 -0.3**
BRBR Barbar **86.71 303** *e* P **P** **20 03 44.4 +0.1**
BRBR eS PcP 20 04 17.3 +31
BRBR Barbar **86.71 303** *e* P **P** **20 03 44.4 +0.1**
SNR=46
BRBR eS PcP 20 04 17.3 +31
SNR=48
TCHB Talchebab **86.76 302** *e* P **P** **20 03 44.9 +0.6**
TCHB Talchebab **86.76 302** *e* P **P** **20 03 44.9 +0.6**
SNR=46
JOF Joensuu **86.85 333** *e* P **P** **20 03 42.9 -1.1**
JOF pmax pmax
comp=Z,13nm,0.5s
JOF Joensuu **86.85 333** *ep* P **P** **20 03 42.9 -1.1**
comp=Z,13nm,0.5s
BHL Bhannes **86.92 304** *e* P **P** **20 03 44.6 -0.5**
SIM Simferopol' **87.10 315***ce* P **P** **20 03 44.7 -0.9**
SIM *e* 20 13 54.0
SIM eS **S** **20 14 09.0 -2.4**
SIM pmax pmax
comp=Z,31nm,1.1s
MMAI Mount Meron Ar **87.20 303** P P **20 03 46.2 -0.3**
MMAI pP **pP** **20 04 25.2 -1.7**
MMAI Mount Meron Ar **87.20 303** P P **20 03 46.2 -0.3**
comp=Z,23nm,1.0s,baz=71,slow=5.4,SNR=21
MMAI pP **pP** **20 04 25.2 -1.7**
comp=Z,9.3nm,0.8s,baz=76,slow=8.7,SNR=2.6
TBI Tubuai **87.45 114** *e* S **S** **20 14 14.6 -0.8**
comp=Z,428nm,29.0s
TBI eSS **SS** **20 20 05.6 +1.0**
comp=Z,442nm,26.5s
TBI eLR LR 20 31 49.4
comp=Z,448nm,24.2s
KEV Kevo **87.56 340** *e* P **P** **20 03 44.4 -2.8**
KEV pmax pmax
comp=Z,8.0nm,0.8s
KEV Kevo **87.56 340** *ep* P **P** **20 03 44.4 -2.8**
comp=Z,7.5nm,0.8s
EIL Elat **87.90 299** P P **20 03 49.7 -0.1**
EIL pP **pP** **20 04 29.6 -0.8**
EIL Elat **87.90 299** P P **20 03 49.7 -0.1**
comp=Z,18nm,0.9s,baz=18,slow=4.5,SNR=16
EIL pP **pP** **20 04 29.6 -0.8**
comp=Z,13nm,0.8s,baz=65,slow=3.0,SNR=4.0
EIL Elat **87.90 299** P P **20 03 50.0 +0.3**
baz=88,SNR=11
BR131 Keskin Array S **87.97 310** *e* P **P** **20 03 48.5 -1.6**
comp=Z,20nm,0.9s
BRTR Keskin Array B **87.97 310** P P **20 03 48.6 -1.4**
BRTR pP **pP** **20 04 30.1 -0.5**
BRTR P'P' 20 29 43.6
BRTR Keskin Array B **87.97 310** P P **20 03 48.6 -1.4**
comp=Z,22nm,0.9s,baz=117,slow=4.7,SNR=91
BRTR pP **pP** **20 04 30.1 -0.5**
comp=Z,4.9nm,0.9s,baz=135,slow=6.2,SNR=2.1
BRTR PKPPKP **P'P'df** **20 29 43.6 -0.2**
comp=Z,0.5nm,0.8s,baz=325,slow=2.0,SNR=3.8
ARCES ARCESS Array B **88.11 340** P P **20 03 49.4 -0.5**
ARCES PKKP **PKKPbc** **20 21 33.6 -3.3**
ARCES ARCESS Array B **88.11 340** P P **20 03 49.4 -0.5**
comp=Z,21nm,0.9s,baz=85,slow=7.2,SNR=22
ARCES PKKP **PKKPbc** **20 21 33.6 -3.3**
comp=Z,4.6nm,0.9s,baz=243,slow=3.6,SNR=9.9
ARCES LR LR 20 48 39.1
comp=Z,232nm,18.6s,baz=256,slow=39
ARE0 ARCESS Array S **88.11 340** *e* P **P** **20 03 49.2 -0.8**
SPITS Spitsbergen Ar **88.18 349** P P **20 03 49.7 -0.4**
SPITS pP **pP** **20 04 28.7 -2.0**
SPITS Spitsbergen Ar **88.18 349** P P **20 03 49.7 -0.4**
comp=Z,2.3nm,0.3s,baz=90,slow=9.2,SNR=63
SPITS pP **pP** **20 04 28.7 -2.0**
comp=Z,27nm,0.8s,baz=122,slow=14,SNR=4.9
INK Inuvik **88.46 21** P P **20 03 52.4 +0.9**
INK PKKPbc **PKKPdf** **20 21 32.2 +2.7**
INK Inuvik **88.46 21** P P **20 03 52.4 +0.9**
comp=Z,5.2nm,0.8s,baz=281,slow=7.4,SNR=14
INK PKKPbc **PKKPdf** **20 21 32.2 +2.7**
comp=Z,1.5nm,0.6s,baz=348,slow=1.9,SNR=5.8
ANTO Ankara **88.61 310** *e* P **P** **20 03 51.4 -1.6**
ANTO pmax pmax
comp=Z,20nm,1.2s
ANTO Ankara **88.61 310** *e* P **P** **20 03 51.4 -1.6**
comp=Z,20nm,1.2s
ANTO Ankara **88.61 310** P P **20 03 52.6 -0.3**
SNR=6.2
CSS Prodhromos **88.72 305** *e* P **P** **20 03 51.9 -1.7**
comp=Z,40nm,0.9s
CSS epP **pP** **20 04 35.3 +1.1**
KMBO Kilima Mbogo **88.74 269** *e* P **P** **20 03 53.5 -0.8**
comp=Z,48nm,1.3s

KMBO ePP pP 20 04 31.8 -3.1
KMBO pP pwP 20 04 32.2 -2.7
KMBO Kilima Mbogo 88.74 269 P P 20 03 54.5 +0.1
SNR=16
KMBO Kilima Mbogo 88.74 269 P P 20 03 53.9 -0.4
comp=Z,21nm,1.1s,baz=57,slow=5.9,SNR=27
KMBO pP pwP 20 04 32.2 -2.7
comp=Z,5.5nm,0.9s,baz=68,slow=12,SNR=2.1
KMBO LR LR 20 44 50.4
comp=Z,210nm,19.5s,baz=93,slow=36
KMBO Kilima Mbogo 88.74 269 P P 20 03 55.4 +1.1
baz=89,SNR=4.5
KAF Kangasniemi 89.27 332 *eP* **P 20 03 53.8 -1.7**
KAF pmax pmax
comp=Z,7.0nm,0.5s
KAF Kangasniemi 89.27 332 *ep* **P 20 03 53.8 -1.7**
comp=Z,6.9nm,0.5s
FINES FINESS Array B 89.51 332 P P 20 03 55.9 -0.7
FINES pP pP 20 04 35.6 -1.6
FINES PKKPbc **PKKPdf 20 21 29.9 +2.3**
FINES FINESS Array B 89.51 332 P P 20 03 55.9 -0.7
comp=Z,38nm,1.1s,baz=80,slow=4.5,SNR=30
FINES pP pP 20 04 35.6 -1.6
comp=Z,30nm,1.0s,baz=73,slow=6.6,SNR=4.0
FINES PKKPbc **PKKPdf 20 21 29.9 +2.3**
comp=Z,1.6nm,0.9s,baz=328,slow=2.5,SNR=3.9
AKASG Malin Array Be 89.66 321 P P 20 03 56.2 -1.3
AKASG *PP pP 20 04 36.6 -1.6
AKASG S SKSac 20 14 10.4 -2.4
AKASG Malin Array Be 89.66 321 P P 20 03 56.2 -1.3
AKASG pP pP 20 04 36.6 -1.6
AKASG S SKSac 20 14 10.4 -2.4
AKASG Malin Array Be 89.66 321 P P 20 03 56.2 -1.3
comp=Z,20nm,1.0s,baz=70,slow=4.4,SNR=37
AKASG pP pP 20 04 36.5 -1.6
comp=Z,20nm,0.9s,baz=66,slow=4.3,SNR=6.0
AKASG S SKSac 20 14 10.4 -2.4
comp=Z,0.3nm,0.4s,baz=72,slow=7.1,SNR=4.5
AK01 Malin Array Si 89.67 321 *eP* **P 20 03 55.5 -2.1**
AK01 epP pP 20 04 37.0 -1.2
KIEV Kiev 89.67 321 *eP* **P 20 03 55.6 -2.0**
KIEV *PP pP 20 04 35.5 -2.7
KIEV pmax pmax
comp=Z,43nm,1.3s
KIEV Kiev 89.67 321 *eP* **P 20 03 55.6 -2.0**
comp=Z,43nm,1.3s
KIEV epP pP 20 04 35.5 -2.7
AK02 Malin Array Si 89.68 321 *eP* **P 20 03 55.8 -1.9**
AK02 epP pP 20 04 36.6 -1.7
VSU Vasula 89.76 329 *eP* **P 20 03 56.6 -1.2**
VSU pmax pmax
comp=Z,53nm,1.4s
MICGM Minsk 89.85 325 *e* **P 20 03 56.0 -2.4**
MNK Minsk 89.88 325 *eP* **P 20 03 56.0 -2.5**
IDID Didziasalis 90.35 326 *eP* **pP 20 04 42.0 +0.7**
IDID AMB AMB 20 04 48.6
comp=Z,16nm,0.9s
NACGM Naroch 90.41 325 *e* P 20 03 57.0 -3.9
KIS Kishinev 90.51 317 *eP* **pP 20 04 46.0 +3.8**
KIS LRM MLR 20 50 00.0
comp=Z,200nm,19.0s
IZAR Zarasai 90.55 326 *eP* **pP 20 04 42.9 +0.7**
IZAR AMB AMB 20 04 48.4
comp=Z,17nm,1.1s
IIGN Ignalina 90.64 326 *eP* **pP 20 04 43.3 +0.6**
IIGN AMB AMB 20 04 50.0
comp=Z,12nm,1.0s
ISAL Salakas 90.65 326 *eP* **pP 20 04 43.4 +0.7**
ISAL AMB AMB 20 04 49.0
comp=Z,20nm,1.2s
TLCR 90.80 315⇑*iP* **P 20 04 02.5 -0.5**
TIRR Tirgusor 91.20 315 *eP* **P 20 04 03.1 -1.8**
TIRR *PP pP 20 04 42.5 -3.0
TIRR pmax pmax
comp=Z,21nm,1.2s
TIRR Tirgusor 91.20 315 *eP* **P 20 04 03.1 -1.8**
comp=Z,21nm,1.2s
TIRR epP pP 20 04 42.5 -3.0
TIRR Tirgusor 91.20 315⇑*iP* **P 20 04 03.6 -1.2**
PETR Petresti 91.81 316⇑*iP* **P 20 04 07.9 +0.3**
TESR Tescani 92.06 317⇑*iP* **P 20 04 08.1 -0.7**
VRI Vrincioaia 92.13 316⇓*iP* **P 20 04 08.6 -0.6**
PLOR Plostina 92.19 316⇑*iP* **P 20 04 09.0 -0.5**
SUW Suwalki 92.65 325 *eP* **P 20 04 09.5 -1.8**
SUW *PP pP 20 04 49.4 -2.6
SUW Suwalki 92.65 325 *eP* **P 20 04 09.5 -1.8**
comp=Z,143nm,1.1s
SUW *e* 20 04 32.4
SUW epP pP 20 04 49.4 -2.6
SUW Suwalki 92.65 325 *eP* **P 20 04 10.3 -1.0**
SUW *e* 20 04 32.5
SUW *e* 20 04 51.0
MLR Muntele Rosu 92.74 316 P P 20 04 11.3 -0.9
MLR Muntele Rosu 92.74 316⇑*iP* **P 20 04 11.3 -0.9**
MLR Muntele Rosu 92.74 316 P P 20 04 11.3 -0.9
comp=Z,5.0nm,1.0s,baz=23,slow=1.9,SNR=30
BURAR Bucovina Array 92.81 318⇑*iP* **P 20 04 11.6 -0.8**
BUR08 Bucovina Ar. S 92.81 318 *eP* **P 20 04 11.4 -1.0**
BUR08 epP pP 20 04 53.4 +0.3
LVV L'vov 93.10 321 *eP* **P 20 04 12.6 -0.9**
VOIR 93.37 316⇑*iP* **P 20 04 14.1 -0.9**
SYO Syowa Base 94.14 201⇓*eP* **P 20 04 16.8 -1.0**
LOT Lotru 94.25 316⇓*iP* P 20 04 15.8 -3.2
KOLS Kolonicke sedl 94.43 320 *eP* **P 20 04 18.9 -0.8**
KOLS pmax pmax
comp=Z,17nm,1.2s
KOLS Kolonicke sedl 94.43 320 *eP* **P 20 04 18.9 -0.8**
KOLS epP pP 20 05 04.1 +3.7
KOLS ePP PP 20 08 04.3 -4.7
UZH Uzhgorod 94.49 320*c iP* **P 20 04 20.1 +0.2**
UZH *e*PP pP 20 05 03.1 +2.5
BEL Belsk 94.60 323 *eP* **P 20 04 20.1 -0.2**
BEL *e* 20 04 43.1
BEL *e* 20 05 00.6
DRGR 94.66 318⇑*iP* **P 20 04 18.5 -2.3**
CRVS Cervenica-Dubn 94.95 320 *eP* **P 20 04 20.2 -1.9**
CRVS pmax pmax
comp=Z,32nm,1.2s
CRVS Cervenica-Dubn 94.95 320 *eP* **P 20 04 20.2 -1.9**
CRVS epP pP 20 05 04.5 +1.7
STHS Stebnicka Huta 94.96 321 *eP* **P 20 04 21.9 -0.2**
STHS pmax pmax
comp=Z,10.0nm,1.5s
STHS Stebnicka Huta 94.96 321 *eP* **P 20 04 21.9 -0.2**
STHS epP pP 20 05 04.2 +1.4
STHS ePP PP 20 08 13.7 +0.6
VTS Vitosha 95.27 314⇓*iP* **P 20 04 22.3 -1.6**
IDI Anoyia 95.51 306 *eP* **P 20 04 23.2 -1.8**
comp=Z,14nm,0.9s
IDI epP pP 20 05 01.9 -3.8
NIE Niedzica 95.55 321 *eP* **P 20 04 25.0 +0.2**
NIE Niedzica 95.55 321 *eP* **P 20 04 25.0 +0.2**
OJC Ojcow 95.65 322 *eP* **P 20 04 25.3 +0.1**
OJC Ojcow 95.65 322 *eP* **P 20 04 25.3 +0.1**
BZS Buzias 95.68 317⇓*iP* **P 20 04 24.1 -1.3**
KECS Kecovo 95.69 320 *eP* **P 20 04 24.8 -0.6**
KECS pmax pmax
comp=Z,10.0nm,1.2s
KECS Kecovo 95.69 320 *eP* **P 20 04 24.8 -0.6**
KECS epP pP 20 05 05.7 -0.5
HFS Hagfors 95.69 332 P P 20 04 23.8 -1.4
HFS pP pP 20 05 04.1 -1.8
HFS Hagfors 95.69 332 P P 20 04 23.8 -1.4
comp=Z,61nm,1.3s,baz=99,slow=4.7,SNR=18
HFS pP pP 20 05 04.1 -1.8
comp=Z,21nm,0.9s,baz=33,slow=3.5,SNR=7.0
QSPA South Pole Qui 95.81 180 PKKPbc PKKPbc 20 21 22.6 +4.5
QSPA South Pole Qui 95.81 180 PKKPbc PKKPbc 20 21 22.6 +4.5
comp=Z,4.0nm,1.1s,baz=339,slow=1.9,SNR=6.8
PSZ Piszkesteto 96.22 319 *eP* **P 20 04 26.7 -1.2**
PSZ *e*PP pP 20 05 09.3 +0.6
PSZ pmax pmax
comp=Z,16nm,1.3s
PSZ Piszkesteto 96.22 319 *eP* **P 20 04 26.7 -1.2**
comp=Z,16nm,1.3s
PSZ epP pP 20 05 09.3 +0.6
GVD Gavdhos 96.25 306 *eP* **P 20 04 26.5 -1.7**
comp=Z,11nm,0.6s
GVD epP pP 20 05 09.9 +0.9
NB2 NORSAR Subarra 96.46 334 P P 20 04 27.1 -1.6
comp=Z,16nm,1.0s,baz=68,slow=4.6
NB2 NORSAR Subarra 96.46 334 P P 20 04 27.1 -1.6
baz=68,slow=4.6

NOA NORSAR Array B 96.46 334 P P 20 04 27.4 -1.3
NOA pP pP 20 05 07.1 -2.3
NOA NORSAR Array B 96.46 334 P P 20 04 27.4 -1.3
comp=Z,6.8nm,0.8s,baz=66,slow=4.6,SNR=19
NOA pP pP 20 05 07.1 -2.3
comp=Z,11nm,1.0s,baz=65,slow=4.6,SNR=5.4
NOA LR LR 20 53 21.4
comp=Z,284nm,18.2s,baz=70,slow=39
VYHS Vyhne 96.74 320 *eP* **P 20 04 29.6 -0.6**
VYHS pmax pmax
comp=Z,6.0nm,1.3s
VYHS Vyhne 96.74 320 *eP* **P 20 04 29.6 -0.6**
VYHS epP pP 20 05 10.7 -0.3
VYHS ePP PP 20 08 23.4 -3.4
OKC Ostrava-Krasne 96.78 322 *eP* **P 20 04 29.9 -0.4**
OKC *e*PP pP 20 05 11.2 +0.1
OKC Ostrava-Krasne 96.78 322 *eP* **P 20 04 29.9 -0.4**
OKC epP pP 20 05 11.2 +0.1
PKS6 Bocsa 96.80 318⇓*eP* **P 20 04 30.4 0.0**
BUD Budapest 96.91 319 *eP* **P 20 04 30.9 0.0**
PKS2 Kecel 97.06 318⇓*eP* Pdif 20 04 32.0 +0.3
MORC Moravsky Berou 97.17 322 *eP* **P 20 04 31.1 -1.1**
MORC *e*PP pP 20 05 13.0 0.0
MORC pmax pmax
comp=Z,9.0nm,1.3s
MORC Moravsky Berou 97.17 322 *eP* **P 20 04 31.1 -1.1**
comp=Z,9.4nm,1.3s
MORC epP pP 20 05 12.9 0.0
MORC Moravsky Berou 97.17 322⇓*iP* **P 20 04 31.7 -0.4**
PKSG 97.34 319⇓*eP* **P 20 04 32.7 -0.2**
CSKK Cs˘‡kako 97.44 319⇓*eP* **P 20 04 33.1 -0.2**
PKSM Moragy 97.52 318⇓*eP* **P 20 04 32.9 -0.8**
JMIC Jan Mayen 97.54 346 LR LR 20 54 19.7
comp=Z,164nm,19.6s,baz=45,slow=39
KRLC Kraliky 97.54 322 *eP* **P 20 04 33.3 -0.5**
KRLC Kraliky 97.54 322 *eP* **P 20 04 33.3 -0.5**
KSP Ksiaz 97.59 323⇓*eP* Pdif 20 04 34.0 0.0
KSP *e*PP pP 20 05 14.9 +0.1
KSP Ksiaz 97.59 323 *eP* **P 20 04 33.9 0.0**
KSP *e* 20 04 56.3
KSP *e* 20 05 14.7
PKST T˘'s 97.61 319 *e* **P 20 04 33.1 -1.1**
PKS9 Tamasi 97.65 318⇓*eP* **P 20 04 34.1 -0.2**
DPC Dobruska-Polom 97.73 322 *eP* **P 20 04 34.6 -0.1**
DPC *e*PP **pP 20 05 15.8 +0.3**
DPC MLR MLR
comp=Z,2μm,19.8s
DPC Dobruska-Polom 97.73 322 *eP* **P 20 04 34.6 -0.1**
DPC epP **pP 20 05 15.8 +0.3**
DPC AMS AMS 20 48 40.0
comp=Z,2μm,19.8s
UPC Upice 97.87 323 *eP* Pdif 20 04 35.3 +0.1
UPC *e*PP pP 20 05 16.1 +0.1
UPC Upice 97.87 323 *eP* Pdif 20 04 35.3 +0.1
UPC epP pP 20 05 16.1 +0.1
YKA Yellowknife Ar 97.87 24 P Pdif 20 04 35.8 +0.8
YKA pP pP 20 05 14.2 -1.6
YKA PP **PP 20 08 33.8 -1.2**
YKA PKiKP **PKiKP 20 09 08.6 +0.9**
YKA PKKPbc PKKPbc 20 21 06.0 -5.4
YKA Yellowknife Ar 97.87 24 P Pdif 20 04 35.7 +0.8
comp=Z,1.5nm,0.7s,baz=300,slow=4.7,SNR=23
YKA pP pP 20 05 14.1 -1.6
comp=Z,7.0nm,0.8s,baz=301,slow=4.8,SNR=7.7
YKA PP **PP 20 08 33.7 -1.2**
comp=Z,1.6nm,0.9s,baz=297,slow=7.6,SNR=4.2
YKA PKiKP **PKiKP 20 09 08.5 +0.9**
comp=Z,0.6nm,0.5s,baz=294,slow=1.7,SNR=5.5
YKA PKKPbc PKKPbc 20 21 05.9 -5.4
comp=Z,6.5nm,1.1s,baz=106,slow=2.4,SNR=18
VRAC Vranov 97.90 321 P Pdif 20 04 35.4 0.0
VRAC pP pP 20 05 15.5 -0.7
VRAC Vranov 97.90 321⇓*iP* **P 20 04 35.2 -0.2**
VRAC Vranov 97.90 321 P Pdif 20 04 35.4 0.0
comp=Z,5.1nm,1.0s,baz=72,slow=5.0,SNR=10
VRAC pP pP 20 05 15.5 -0.7
comp=Z,9.9nm,0.9s,baz=77,slow=3.0,SNR=3.9
RUE Ruedersdorf 98.50 325 *eP* **P 20 04 37.6 -0.3**
comp=Z,45nm,1.1s
TREC Trest 98.59 322 *eP* Pdif 20 04 38.6 +0.1
TREC *e*PP pP 20 05 19.6 +0.3
TREC MLR MLR
comp=Z,300nm,17.3s
TREC Trest 98.59 322 *ePDIFF* Pdif 20 04 38.6 +0.1
TREC epP pP 20 05 19.6 +0.3
TREC AMS AMS 20 47 00.0
comp=Z,300nm,17.3s
PVCC Panska Ves 98.73 323 *eP* **P 20 04 39.0 0.0**
PVCC *e*PP **pP 20 05 20.4 +0.5**
PVCC MLR MLR
comp=Z,400nm,20.2s
PVCC Panska Ves 98.73 323 *ePDIFF* **P 20 04 39.0 0.0**
PVCC epP **pP 20 05 20.4 +0.5**
PVCC AMS AMS 20 52 20.0
comp=Z,400nm,20.2s
CONA Conrad Observa 98.81 320⇑*iPdiff* **P 20 04 39.0 -0.6**
comp=Z,8.6nm,1.5s
LSZ Lusaka 98.92 256 *eP* **P 20 04 38.5 -2.3**
PRU Pruhonice 98.93 323 *eP* **P 20 04 39.8 -0.2**
PRU *e*PP **pP 20 05 20.3 -0.5**
PRU MLR MLR
comp=Z,400nm,25.0s
PRU Pruhonice 98.93 323 *ePDIFF* **P 20 04 39.8 -0.2**
PRU epP **pP 20 05 20.3 -0.5**
PRU AMS AMS 20 52 20.0
comp=Z,400nm,25.0s
PRA Prague 98.97 323 PDIFF Pdif 20 04 41.0 +0.9
PRA pP pP 20 05 22.0 +1.0
BRG Berggiesshubel 98.98 323 *eP* **P 20 04 40.0 -0.1**
comp=Z,25nm,1.2s
BRG epP **pP 20 05 21.1 +0.1**
comp=Z,16nm,1.1s
BRG *e* 20 09 07.7
comp=Z,4.6nm,1.1s
BRG Berggiesshubel 98.98 323 *ePdiff* **P 20 04 39.9 -0.2**
BRG Berggiesshubel 98.98 323 *eP* **P 20 04 40.0 -0.1**
BRG *e*PP **pP 20 05 21.1 +0.1**
BRG pmax pmax
comp=Z,5.0nm,1.1s
CLL Collm 99.38 324 *ePdiff* **Pdif 20 04 41.4 -0.5**
CLL Collm 99.38 324⇑*iP* **Pdif 20 04 41.4 -0.5**
CLL pmax pmax
comp=Z,27nm,1.4s
CLL Collm 99.38 324⇑*iPdif* **Pdif 20 04 41.4 -0.5**
comp=Z,27nm,1.4s
CLL *ep*Pdif **pP 20 05 22.0 -0.8**
CLL *es*Pdif 20 05 40.0
KHC Kasperske Hory 99.82 322 *eP* **Pdif 20 04 43.0 -1.1**
KHC *e* 20 05 25.5
KHC Kasperske Hory 99.82 322 Pdif **Pdif 20 04 42.9 -1.1**
comp=Z,4.5nm,1.0s
KHC epP **pP 20 05 24.8 -0.1**
KHC Kasperske Hory 99.82 322 *ePDIFF* **Pdif 20 04 44.0 0.0**
KHC epP **pP 20 05 25.8 +0.9**
KHC *es*P **sP 20 05 42.6 +0.8**
KHC *ex* x 20 09 11.9
KHC *ex* x 20 16 53.5
KHC AMS AMS 20 54 10.0
comp=Z,400nm,18.7s
MOA Molln 99.84 321⇑*iPdiff* **Pdif 20 04 43.7 -0.4**
comp=Z,19nm,1.2s
GEC2 GERESS Array S 99.85 322 *ePdiff* **Pdif 20 04 43.8 -0.4**
GEC2 GERESS Array S 99.85 322 *eP* **Pdif 20 04 43.8 -0.4**
GERES GERESS Array B 99.85 322 P **Pdif 20 04 43.5 -0.7**
GERES pP **pP 20 05 24.4 -0.7**
GERES GERESS Array B 99.85 322 P **Pdif 20 04 43.5 -0.7**
comp=Z,3.8nm,1.0s,baz=66,slow=4.5,SNR=19
GERES pP **pP 20 05 24.4 -0.7**
comp=Z,6.4nm,0.9s,baz=54,slow=2.3,SNR=4.5
GERES LR LR 20 50 40.2
comp=Z,260nm,19.2s,baz=261,slow=36
BSEG Bad Segeberg 99.85 327 *ePdiff* **Pdif 20 04 44.0 +0.1**
BSEG Bad Segeberg 99.85 327 *eP* **Pdif 20 04 44.0 +0.1**
TANN Tannenbergstha 100.03 323 *ePdiff* **Pdif 20 04 44.6 -0.3**
NKC Novy Kostel 100.10 323 *eP* **Pdif 20 04 44.9 -0.3**
NKC *e*PP pP 20 05 26.2 +0.1
NKC Novy Kostel 100.10 323 *ePDIFF* **Pdif 20 04 44.9 -0.3**
NKC epP pP 20 05 26.2 +0.1
WET Wettzell 100.25 322 *ePdiff* **Pdif 20 04 45.9 0.0**
WET epPdiff **pPdif 20 05 26.3 -0.4**
WET Wettzell 100.25 322 *eP* **Pdif 20 04 45.9 0.0**
ROTZ Rotzenmuhle 100.42 323 *ePdiff* **Pdif 20 04 46.8 +0.2**
ROTZ epPdiff pP 20 05 27.5 0.0

MOX Moxa 100.44 324 *ePdiff* **Pdif 20 04 46.5 -0.2**
MOX Moxa 100.44 324 *eP* **Pdif 20 04 46.5 -0.2**
NRDL Niedersack Rie 100.56 326 *ePdiff* **Pdif 20 04 47.3 +0.3**
RJOB Jochberg 100.81 321 *ePdiff* **Pdif 20 04 47.6 -0.9**
GRF Grafenberg Arr 101.04 323 *ePdiff* **Pdif 20 04 49.6 +0.2**
GRF *ep*Pdiff **pPdif 20 05 30.1 -0.1**
GRF *e*PP PKiKP 20 09 40.8 +27
GRF Grafenberg Arr 101.04 323 *eP* **Pdif 20 04 49.6 +0.2**
UBBA Unterbreizbach 101.31 324 *ePdiff* **Pdif 20 04 50.6 +0.2**
UBBA *ep*Pdiff **pPdif 20 05 31.2 0.0**
YBH Yreka Blue Hor 101.77 45 PP PP 20 09 03.9 -1.4
YBH Yreka Blue Hor 101.77 45 PP PP 20 09 03.9 -1.4
comp=Z,5.3nm,1.1s,baz=359,slow=2.0,SNR=5.1
IBBN Ibbenburen 101.94 326 *ePdiff* **Pdif 20 04 53.6 +0.3**
TNS Taunus Mts 102.46 324 *ePdiff* **Pdif 20 04 55.9 +0.2**
TNS *ep*Pdiff **pPdif 20 05 36.4 -0.1**
TNS Taunus Mts 102.46 324 *eP* **Pdif 20 04 55.9 +0.2**
BUG Bochum--Univer 102.60 326 *ePdiff* **Pdif 20 04 56.3 +0.1**
DAVOX Davos/Dischmat 103.01 321 Pdif **Pdif 20 04 59.2 +0.8**
DAVOX Davos/Dischmat 103.01 321 Pdiff **Pdif 20 04 59.2 +0.8**
comp=Z,2.9nm,0.9s,baz=195,slow=4.7,SNR=4.0
D13A Huson 105.17 38 ⇓P 20 21 05.1
baz=105
F12A Elk City 105.26 39 ⇑P 20 21 05.4
baz=105
C14A Swan Lake 105.30 37 ⇑P 20 21 05.1
baz=105
B14A Marquette Ranc 105.31 36 ⇑P 20 21 05.0
baz=105
A15A Johnson Ranch, 105.33 36 ⇓P 20 21 04.8
baz=105
G12A Big Creek, Yel 105.49 40 ⇑P 20 21 04.2
baz=105
LPG La Plagne 105.52 320 *ePKIKP* **PKiKP 20 09 21.3 -1.1**
comp=Z,17nm,1.3s
LPG La Plagne 105.52 320 *ePKPdf* **PKiKP 20 09 21.3 -1.1**
LPL La Plagne 105.53 320 *ePKIKP* **PKiKP 20 09 21.5 -0.9**
comp=Z,22nm,1.4s
LPL La Plagne 105.53 320 *ePKPdf* **PKiKP 20 09 21.5 -0.9**
MSO Missoula 105.61 38 ⇓P 20 21 03.9
baz=106
E13A Victor 105.63 38 ⇑P 20 21 03.9
baz=106
B15A Bradely Ranch, 105.75 36 ⇑P 20 21 03.1
baz=106
D14A Greenough 105.76 38 ⇑P 20 21 03.3
baz=106,SNR=9.0
F13A Darby 105.83 39 ⇑P 20 21 03.2
baz=106
MFID Camas Ranch 105.88 42 ⇓P 20 21 02.7
baz=106
C15A Salmond Ranch, 105.98 37 ⇓P 20 21 02.5
baz=106,SNR=7.7
H12A Diamond D Ranc 106.04 40 ⇓P 20 21 02.1
baz=106
E14A Clinton 106.07 38 ⇓P 20 21 02.3
baz=106,SNR=5.8
NVAR Mina Array Bea 106.08 47 Pdif **Pdif 20 05 13.9 +1.6**
NVAR PP **PP 20 09 35.7 -1.9**
NVAR PKKPbc **PKKPbc 20 20 47.0 +0.1**
NVAR PKKPab **PKKPab 20 21 02.7 -1.0**
NVAR Mina Array Bea 106.08 47 Pdif **Pdif 20 05 13.9 +1.6**
comp=Z,0.5nm,0.6s,baz=264,slow=5.2,SNR=3.8
NVAR PP **PP 20 09 35.7 -1.9**
comp=Z,1.5nm,0.6s,baz=273,slow=9.8,SNR=6.2
NVAR PKKPbc **PKKPbc 20 20 47.0 +0.1**
comp=Z,3.5nm,0.8s,baz=147,slow=4.5,SNR=18
NVAR PKKPab **PKKPab 20 21 02.7 -1.0**
comp=Z,7.3nm,1.1s,baz=126,slow=4.6,SNR=11
PKM Peak Mountain 106.16 51 ⇑P 20 21 02.3
baz=106
I12A Atlanta 106.18 41 ⇑P 20 21 01.4
baz=106
G13A Cobalt 106.20 40 ⇓P 20 21 01.5
baz=106,SNR=6.0
D15A Lincoln 106.37 37 ⇑P 20 21 01.1
baz=106,SNR=9.1
F14A Wisdom 106.42 39 ⇓P 20 21 00.8
baz=106
C16A Fuhringer Ranc 106.47 36 ⇑P 20 21 00.4
baz=106
A17A Triple J Farms 106.52 35 ⇑P 20 21 00.3
baz=106
E15A Deer Lodge 106.59 38 ⇓P 20 21 00.0
baz=106
HLID Hailey 106.75 41 ⇓P 20 20 59.1
baz=107
B17A L&G Farms, Che 106.79 36 ⇓P 20 20 58.9
baz=107
I13A Wildhorse Cree 106.79 41 ⇑P 20 20 59.4
baz=107,SNR=7.7
ISA Isabella 106.94 50 ⇑P 20 20 59.1
baz=107
F15A Butte 106.95 38 ⇓P 20 20 58.3
baz=107,SNR=7.8
H14A Leadore 106.96 40 ⇓P 20 20 58.7
baz=107
D16A Dana Ranch, Ca 106.96 37 ⇓P 20 20 58.2
baz=107,SNR=6.9
J13A Cove Ranch, Pi 106.98 41 ⇑P 20 20 58.2
baz=107,SNR=7.3
A18A Metzger Ranch, 107.02 35 ⇑P 20 20 57.7
baz=107,SNR=5.3
SNAA Sanae 107.09 195 *ePdiff* **Pdif 20 05 17.3 +1.4**
SNAA Sanae 107.09 195 *ePP* PP 20 09 44.6 +0.6
SNAA Sanae 107.09 195 *ePKKP* **PKKPab 20 20 57.7 +0.2**
E16A East Helena 107.12 38 ⇓P 20 20 57.4
baz=107,SNR=18
C17A Wharram Farm, 107.14 36 ⇑P 20 20 57.1
baz=107
I14A Mackay 107.22 41 ⇑P 20 20 57.4
baz=107,SNR=7.1
G15A Dillon 107.27 39 ⇑P 20 20 56.7
baz=107,SNR=6.0
B18A Beardsley Farm 107.33 35 ⇑P 20 20 56.1
baz=107
ELK Elko 107.38 44 *ePKPdf* **PKiKP 20 09 25.7 -0.2**
ELK PP **PP 20 09 44.8 -2.1**
ELK PKKPbc **PKKPbc 20 20 42.1 -0.9**
ELK Elko 107.38 44 PP PP 20 09 44.8 -2.2
comp=Z,4.0nm,1.0s,baz=314,slow=4.6,SNR=7.3
ELK PKKPbc **PKKPbc 20 20 42.1 -0.9**
comp=Z,4.7nm,0.9s,baz=99,slow=2.0,SNR=16
D17A Six Diamond Ra 107.42 37 ⇑P 20 20 55.7
baz=107,SNR=8.0
H15A Lima 107.42 40 ⇓P 20 20 56.4
baz=107,SNR=9.6
F16A Kennard Place, 107.51 38 ⇓P 20 20 56.0
baz=107
MPMC Manual Prospec 107.54 49 ⇓P 20 20 56.4
baz=108
A19A Klindworth Far 107.64 34 ⇓P 20 20 55.1
baz=108
E17A Martinsdale 107.66 37 ⇑P 20 20 55.0
baz=108,SNR=6.8
G16A Moss Hill, Enn 107.67 39 ⇑P 20 20 54.3
baz=108
FMP Fort Macarthur 107.75 52 ⇑P 20 20 54.7
baz=108
B19A Brinkman Farms 107.77 35 ⇓P 20 20 54.4
baz=108
D18A Linhart Farms, 107.92 36 ⇓P 20 20 53.4
baz=108
F17A Fitzpatrick Pl 108.05 38 ⇓P 20 20 53.5
baz=108,SNR=6.0
C19A Slack Wire Ran 108.08 36 ⇑P 20 20 52.9
baz=108
R11A Troy Canyon, C 108.09 47 ⇓P 20 20 53.2
baz=108
E18A Harlowton 108.17 37 ⇓P 20 20 52.5
baz=108
H16A Russell Place, 108.26 39 ⇓P 20 20 51.9
baz=108
GSC Goldstone 108.34 50 ⇑P 20 20 51.9
baz=108
D19A Cripps Ranch, 108.48 36 ⇓P 20 20 51.3
baz=108
I16A Newdale 108.50 40 ⇓P 20 20 51.3
baz=108
A21A Bergtoll Ranch 108.61 34 ⇓P 20 20 50.8
baz=108
F18A Big Timber 108.62 37 ⇑P 20 20 50.4
baz=108,SNR=13
B21A Ellsworth Farm 108.87 34 ⇑P 20 20 50.3
baz=109
E19A Rath Farm, Rou 108.89 37 ⇑P 20 20 49.5
baz=109,SNR=8.9

D20A	Manuel Ranch, baz=109	108.95	36	⇑P				20 20 49.3		
G18A	Lazy EL Ranch, baz=109,SNR=17	109.01	38	⇑P				20 20 48.7		
VNA1	Neumayer--Stat	109.11	195	*e*PP		PP		20 09 59.8	+1.3	
F19A	Roth Farm, Mol baz=109,SNR=16	109.11	37	⇑P				20 20 48.4		
C21A	Desert Coulee baz=109	109.15	35	⇑P				20 20 48.5		
E20A	Meyer Farm, Mu baz=109	109.26	36	⇑P				20 20 47.7		
H18A	Shoshone NF, C baz=109	109.26	39	⇓P				20 20 47.5		
DUG	Dugway baz=109,SNR=10.0	109.28	44	⇑P				20 20 48.1		
BELC	Belle Mtn. Jos baz=109	109.43	51	⇓P				20 20 47.6		
MONP	Monument Peak baz=110	109.50	52	⇓P				20 20 47.3		
B22A	Reddig Ranch S baz=109	109.51	34	⇑P				20 20 47.1		
F20A	Billings baz=110	109.62	37	⇓P				20 20 46.0		
D21A	La Casta Ranch baz=110	109.62	35	⇑P				20 20 46.5		
I18A	Diamond G Ranc baz=110	109.65	39	⇑P				20 20 46.0		
H19A	Powell baz=110,SNR=8.1	109.69	38	⇑P				20 20 45.6		
G20A	Bridger baz=110	109.88	37	⇑P				20 20 44.7		
B23A	Brockton baz=110,SNR=6.0	109.97	33	⇑P				20 20 45.2		
BC3	Big Chuckawall baz=110	109.98	51	⇑P				20 20 45.6		
I19A	Meeteetse baz=110,SNR=6.6	110.00	39	⇑P				20 20 44.1		
IRM	Iron Mountain baz=110	110.03	51	⇓P				20 20 45.1		
M17A	Scullys Gap (B baz=110,SNR=5.2	110.16	42	⇑P				20 20 43.3		
C23A	Lambert baz=110	110.24	34	⇑P				20 20 43.6		
PDAR	Pinedale Array	110.27	40	PKiKP		PKiKP		20 09 33.2	+1.9	
PDAR				PKKPbc		PKKPbc		20 20 32.0	-2.0	
PDAR				PKKPab		PKKPab		20 20 42.8	-2.3	
PDAR	Pinedale Array comp=Z,0.6nm,0.6s,baz=46,slow=2.6,SNR=3.0	110.27	40	PKiKP		PKiKP		20 09 33.2	+1.9	
PDAR	comp=Z,6.8nm,1.1s,baz=114,slow=3.6,SNR=19			PKKPbc		PKKPbc		20 20 32.0	-2.0	
PDAR	comp=Z,10.0nm,0.9s,baz=121,slow=6.0,SNR=25			PKKPab		PKKPab		20 20 42.8	-2.3	
J19A	Crowheart baz=110,SNR=10	110.35	40	⇑P				20 20 42.4		
L18A	Fontenelle, Gr baz=110	110.36	41	⇑P				20 20 42.5		
H20A	Greybull baz=110,SNR=8.1	110.39	38	⇑P				20 20 42.2		
DGMT	Dagmar baz=110	110.40	33	⇓P				20 20 42.8		
G21A	Lodge Grass baz=110,SNR=10	110.48	37	⇓P				20 20 42.4		
I20A	Worland baz=110,SNR=5.5	110.58	39	⇓P				20 20 41.3		
W13A	Hualapai Mount baz=111	110.63	49	⇑P				20 20 42.7		
Y12C	Blythe baz=111	110.66	51	⇓P				20 20 42.9		
K19A	Absolon Red Bu baz=111	110.70	40	⇑P				20 20 41.5		
L19A	Farson baz=111	110.72	41	⇑P				20 20 41.6		
PDMCI	Parker Dam,Lak baz=111	110.75	50	⇑P				20 20 41.2		
F22A	Rosebud baz=111	110.75	36	⇑P				20 20 41.1		
H21A	Big Horn, Sher baz=111	110.90	38	⇓P				20 20 40.8		
E23A	Ismay baz=111	110.90	35	⇓P				20 20 40.1		
J20A	Shoshoni baz=111	110.91	39	⇑P				20 20 40.7		
Q16A	Castle Valley baz=111	110.99	45	⇓P				20 20 40.2		
G22A	Birney baz=111	111.03	37	⇑P				20 20 39.8		
K20A	Yellowstone Ra baz=111	111.10	40	⇓P				20 20 39.6		
D24A	Glendive baz=111	111.11	34	⇓P				20 20 39.8		
I21A	Big Trails, Te baz=111	111.17	38	⇑P				20 20 38.6		
U15A	North Rim baz=111,SNR=6.9	111.27	47	⇑P				20 20 40.3		
P18A	Preston Nutter baz=111,SNR=6.7	111.30	43	⇓P				20 20 39.6		
J21A	Lysite baz=111,SNR=5.5	111.32	39	⇑P				20 20 38.4		
H22A	Clearmont baz=111	111.33	37	⇑P				20 20 38.3		
SRU	San Rafael baz=111,SNR=6.9	111.35	44	⇑P				20 20 39.0		
L20A	Wamsutter baz=111	111.43	40	⇓P				20 20 37.8		
E24A	Baker baz=111	111.44	35	⇓P				20 20 37.8		
G23A	Biddle baz=112	111.58	36	⇑P				20 20 37.2		
I22A	9 Mile Ranch, baz=112	111.63	38	⇑P				20 20 37.4		
O19A	Miners Draw (B baz=112	111.75	42	⇑P				20 20 37.3		
Y14A	Wickenburg baz=112	111.75	50	⇓P				20 20 37.1		
N20A	Spence Gulch, baz=112,SNR=7.8	112.06	42	⇓P				20 20 35.5		
L21A	Rawlins baz=112,SNR=6.9	112.07	40	⇑P				20 20 35.3		
P19A	Cripple Cowboy baz=112,SNR=7.5	112.16	43	⇑P				20 20 35.2		
K22A	Casper baz=112	112.26	39	P				20 09 35.7		
K22A	baz=112			⇑P		PKKPab		20 20 35.1	-1.1	
K22A	baz=112			⇑P		PKKPab		20 20 35.1	-1.1	
M21A	Separation Pea baz=112	112.26	40	⇑P				20 20 35.1		
H24A	Dirks Ranch, A baz=112	112.32	36	⇑P				20 20 35.0		
WUAZ	Wupatki baz=112,SNR=5.2	112.33	48	⇓P				20 20 35.5		
S18A	Hurst Farm, Bl baz=112,SNR=8.2	112.37	45	⇑P				20 20 35.1		
O20A	White River Ci baz=112	112.42	42	⇓P				20 20 34.2		
N21A	Black Mountain baz=112	112.59	41	⇓P				20 20 33.6		
P20A	De Beque baz=113	112.63	43	⇑P				20 20 33.7		
L22A	Ellis Ranch, M baz=113	112.64	40	⇓P				20 20 33.7		
214A	Organ Pipe Nat baz=113	112.68	52	⇑P				20 20 33.4		
X16A	Lo Mia Camp, P baz=113	112.74	49	⇑P				20 20 33.7		
MDND	Maddock baz=113	113.22	31	⇑P				20 20 30.3		
N22A	Wattenberg Ran baz=113	113.26	41	⇓P				20 20 30.9		
R20A	Redvale baz=113,SNR=7.4	113.26	44	⇑P				20 20 31.2		
K24A	Anderson Ranch baz=113	113.28	38	⇑P				20 20 30.5		
M23A	Laramie baz=113,SNR=6.7	113.39	40	⇑P				20 20 29.6		
S20A	Disappointment baz=113	113.45	44	⇑P				20 20 30.4		
ULM	Lac du Bonnet	113.45	28	PKKPbc		PKKPbc		20 20 21.0	-2.5	
ULM	Lac du Bonnet comp=Z,6.4nm,1.0s,baz=133,slow=5.7,SNR=4.6	113.45	28	PKKPbc		PKKPbc		20 20 21.0	-2.5	
Q21A	Lamborn Mesa, baz=113,SNR=5.7	113.50	43	⇓P				20 20 30.1		
O22A	Kremmling baz=114,SNR=16	113.53	41	⇑P				20 20 29.4		
N23A	Red Feather La baz=114	113.54	41	⇓P				20 20 29.3		
L24A	Wheatland	113.58	39	⇑P				20 20 28.9		
P22A	Eagle baz=114,SNR=6.1	113.68	42	⇑P				20 20 28.9		
W18A	Petrified Fore baz=114	113.71	48	⇑P				20 20 28.7		
R21A	Cimarron baz=114	113.75	44	⇑P				20 20 29.0		
X18A	Snowflake baz=114	113.81	48	⇑P				20 20 29.1		
O23A	Lake Granby, G baz=114	113.92	41	⇑P				20 20 27.5		
K25A	Mack Ranch, Ha baz=114	113.92	38	⇓P				20 20 28.0		
S21A	Coal Bank Pass baz=114	113.92	44	P				20 09 40.1		
S21A	baz=114,SNR=6.5			⇑P		PKKPab		20 20 28.4	-0.5	
S21A	baz=114,SNR=6.5			⇑P		PKKPab		20 20 28.4	-0.5	
Q22A	Crested Butte, baz=114	113.94	43	⇓P				20 20 28.4		
M24A	Cheyenne baz=114	113.96	40	⇓P				20 20 27.6		
U20A	Newcomb baz=114	114.02	46	⇓P				20 20 27.6		
L25A	Engebretsen Ra baz=114	114.12	39	⇑P				20 20 27.3		
N24A	Carr baz=114	114.26	40	⇑P				20 20 26.6		
K26A	Motz Farm, Whi baz=114	114.30	38	⇑P				20 20 26.0		
V20A	Brimhall baz=114	114.32	46	⇑P				20 20 26.5		
ISCO	Idaho Springs baz=114	114.33	41	⇓P				20 20 26.3		
R22A	Saguache, Gunn baz=114	114.36	43	⇑P				20 20 26.6		
P23A	Jefferson baz=114	114.40	42	⇓P				20 20 26.2		
T21A	Navajo Lake baz=114	114.43	45	⇓P				20 20 26.3		
M25A	Palm-Egli Farm baz=114	114.46	39	⇓P				20 20 25.4		
O24A	Longmont baz=114	114.51	41	⇑P				20 20 25.3		
U21A	Nageezi baz=114,SNR=7.5	114.61	46	⇓P				20 20 25.5		
W20A	Ramah baz=115	114.61	47	⇓P				20 20 25.3		
Q23A	Hartsel baz=115,SNR=7.3	114.64	42	⇑P				20 20 24.7		
L26A	Underwood Farm baz=115	114.73	38	⇑P				20 20 24.3		
N25A	Grover baz=115	114.78	40	⇓P				20 20 24.0		
T22A	Edith baz=115,SNR=6.3	114.86	45	⇓P				20 20 24.4		
K27A	Flueckinger Fa baz=115	114.86	37	⇓P				20 20 23.0		
X20A	Quemado baz=115	114.87	48	⇓P				20 20 24.4		
V21A	Milan baz=115,SNR=8.2	114.92	46	⇓P				20 20 24.1		
M26A	McRoberts Ranc baz=115	115.01	39	⇓P				20 20 22.7		
R23A	Moffat baz=115	115.01	43	⇓P				20 20 23.4		
Q24A	Divide baz=115	115.07	42	⇑P				20 20 22.9		
L27A	T5 Ranch, Ells baz=115	115.17	38	⇑P				20 20 22.1		
U22A	Laves baz=115	115.20	45	P		PKPdf		20 09 42.5	+1.5	
U22A	baz=115			⇑P		PKKPab		20 20 22.8	-0.4	
U22A	baz=115			⇑P		PKKPab		20 20 22.8	-0.4	
W21A	San Fidel baz=115	115.23	47	⇑P				20 20 22.8		
Y20A	Horse Springs, baz=115,SNR=7.8	115.25	48	⇑P				20 20 22.8		
ESDC	Sonseca Array	115.25	319	PKP		PKPdf		20 09 41.5	+0.8	
ESDC	Sonseca Array comp=Z,0.1nm,0.3s,baz=36,slow=2.9,SNR=5.7	115.25	319	PKP		PKPdf		20 09 41.5	+0.8	
V22A	San Miguel Ran baz=115	115.38	46	⇓P				20 20 22.3		
P25A	Willow Gulch B baz=115	115.43	41	P		PKPdf		20 09 42.2	+1.0	
P25A	baz=115			⇓P		PKKPab		20 20 21.5	-0.6	
P25A	baz=115			⇓P		PKKPab		20 20 21.5	-0.6	
X21A	Alamocita Cree baz=115,SNR=9.5	115.44	47	⇓P				20 20 22.0		
Z20A	Nine Sixteen R baz=115	115.44	49	⇓P				20 20 21.8		
M27A	Reverse DX Ran baz=115	115.45	38	⇓P				20 20 20.8		
T23A	Casias Ranch, baz=115	115.45	44	⇓P				20 20 21.7		
R24A	Sanders Place, baz=115	115.48	43	⇑P				20 20 21.4		
O26A	Horse Wrangler baz=116	115.58	40	⇓P				20 20 20.4		
120A	U Bar Ranch, L baz=116	115.66	50	⇑P				20 20 20.7		
319A	Douglas baz=116	115.67	51	⇑P				20 20 20.3		
U23A	El Rito baz=116	115.69	45	⇑P				20 20 20.6		
Q25A	Bedland, Calha baz=116	115.69	42	⇓P				20 20 20.5		
S24A	Houchin Ranch, baz=116	115.71	43	⇑P				20 20 20.6		
Y21A	Point of Rocks baz=116,SNR=16	115.72	48	⇓P				20 20 21.0		
N27A	Anderson Farm, baz=116	115.76	39	⇓P				20 20 19.6		
P26A	Davis Ranch, A baz=116	115.94	41	⇑P				20 20 19.1		
X22A	Bernardo baz=116,SNR=7.6	115.98	47	⇑P				20 20 19.8		
V23A	Ortiz Mt. (NFS baz=116	115.98	46	⇑P				20 20 19.6		
OGNE	Ogallala baz=116	116.00	39	⇓P				20 20 18.3		
220A	Playas Peak, P baz=116	116.02	50	⇑P				20 20 18.8		
Z21A	St. Cloud Mine baz=116	116.05	49	⇓P				20 20 19.3		
R25A	Fountain Ranch baz=116,SNR=9.4	116.08	42	⇑P				20 20 18.5		
O27A	Beecher Island baz=116	116.14	40	⇑P				20 20 17.9		
M28A	Bar X Bar Ranc baz=116	116.15	38	⇓P				20 20 17.6		
Q26A	Hugo baz=116	116.17	41	⇑P				20 20 18.2		
ANMO	Albuquerque	116.17	46	*e*PKPdf		PKPdf		20 09 43.9	+1.1	
ANMO				PKP		PKPdf		20 09 44.4	+1.6	
ANMO				PKKPab		PKKPab		20 20 17.1	-1.7	
ANMO	Albuquerque comp=Z,2.6nm,0.8s,baz=321,slow=6.1,SNR=4.0	116.17	46	PKP		PKPdf		20 09 44.4	+1.6	
ANMO	comp=Z,4.8nm,1.0s,baz=141,slow=6.3,SNR=11			PKKPab		PKKPab		20 20 17.1	-1.7	
S25A	Robets Cordova baz=116	116.23	43	P		PKPdf		20 09 44.0	+1.2	
S25A	baz=116,SNR=7.1			⇑P		PKKPab		20 20 18.1	-0.6	
S25A	baz=116,SNR=7.1			⇑P		PKKPab		20 20 18.1	-0.6	
Y22A	Socorro baz=116	116.28	48	P		PKPdf		20 09 44.1	+1.1	
Y22A	baz=116,SNR=5.7			⇑P		PKKPab		20 20 17.9	-0.4	
Y22A	baz=116,SNR=5.7			⇑P		PKKPab		20 20 17.9	-0.4	
W23A	Werner Place, baz=116,SNR=9.2	116.29	46	⇑P				20 20 18.0		
U24A	Moreno Valley baz=116	116.29	44	⇓P				20 20 18.4		
121A	Cookes Peak, D baz=116	116.31	49	P		PKPdf		20 09 44.4	+1.3	
121A	baz=116			⇓P		PKKPab		20 20 17.9	-0.3	
121A	baz=116			⇓P		PKKPab		20 20 17.9	-0.3	
P27A	Ficken Ranch, baz=116	116.44	40	⇑P				20 20 16.7		
N28A	Pribbeno Ranch baz=116	116.45	39	⇓P				20 20 16.3		
T25A	Trinidad baz=116	116.52	43	P		PKPdf		20 09 44.7	+1.3	
T25A	baz=116,SNR=6.6			⇑P		PKKPab		20 20 16.9	-0.5	
T25A	baz=116,SNR=6.6			⇑P		PKKPab		20 20 16.9	-0.5	
X23A	Hourglass Bar baz=116,SNR=9.3	116.54	47	⇓P				20 20 16.8		
221A	Mesquite Ranch baz=116	116.55	50	⇓P				20 20 17.0		
R26A	Arlington baz=116,SNR=6.5	116.55	42	⇑P				20 20 16.2		
Z22A	Elephant Butte baz=116	116.60	48	P		PKPdf		20 09 45.1	+1.5	
Z22A	baz=116			⇑P		PKKPab		20 20 16.6	-0.3	
Z22A	baz=116			⇑P		PKKPab		20 20 16.6	-0.3	
V24A	Rampart Ranch, baz=117	116.64	45	P		PKPdf		20 09 45.0	+1.3	
V24A	baz=117,SNR=8.6			⇑P		PKKPab		20 20 16.6	-0.3	
V24A	baz=117,SNR=8.6			⇑P		PKKPab		20 20 16.6	-0.3	
KSCO	Kaye Shedlock' baz=117	116.70	41	⇓P				20 20 15.5		
POLO	Lamas de Olo	116.71	322	*e*PKP		PKPdf		20 09 44.9	+1.4	
W24A	Lazy 6 Ranch, baz=117	116.80	46	P		PKPdf		20 09 45.5	+1.5	
W24A	baz=117,SNR=14			⇓P		PKKPab		20 20 15.5	-0.6	
W24A	baz=117,SNR=14			⇓P		PKKPab		20 20 15.5	-0.6	
U25A	Circle Dot Ran baz=117	116.90	44	P		PKPdf		20 09 45.2	+1.1	
U25A	baz=117,SNR=7.4			⇑P		PKKPab		20 20 14.9	-0.8	
U25A	baz=117,SNR=7.4			⇑P		PKKPab		20 20 14.9	-0.8	
S26A	Kim baz=117,SNR=5.2	116.90	42	⇑P				20 20 15.0		
N29A	Votaw Ranch, W baz=117	116.94	38	⇓P				20 20 14.1		
Y23A	Lovelace Mesa, baz=117	116.95	47	P		PKPdf		20 09 45.3	+1.0	
Y23A	baz=117,SNR=11			⇓P		PKKPab		20 20 15.0	-0.4	
Y23A	baz=117,SNR=11			⇓P		PKKPab		20 20 15.0	-0.4	
P28A	Saint Francis baz=117	116.95	40	⇑P				20 20 14.3		
R27A	Eads baz=117	116.99	42	⇑P				20 20 14.4		
222A	Williams Famil baz=117	117.02	50	P		PKPdf		20 09 45.9	+1.5	
222A	baz=117			⇓P		PKKPab		20 20 14.4	-0.6	
222A	baz=117			⇓P		PKKPab		20 20 14.4	-0.6	
V25A	Rancho No Teng baz=117	117.04	45	P		PKPdf		20 09 45.7	+1.3	
V25A	baz=117,SNR=8.6			⇓P		PKKPab		20 20 14.4	-0.6	
V25A	baz=117,SNR=8.6			⇓P		PKKPab		20 20 14.4	-0.6	
T26A	Comanche Natio baz=117	117.05	43	P		PKPdf		20 09 45.5	+1.1	
T26A	baz=117,SNR=9.4			⇑P		PKKPab		20 20 14.5	-0.5	
T26A	baz=117,SNR=9.4			⇑P		PKKPab		20 20 14.5	-0.5	
X24A	Lazy VL Ranch, baz=117	117.09	46	⇓P				20 20 14.3		
MTE	Manteigas	117.13	321	*e*PKP		PKPdf		20 09 45.4	+1.1	
Z23A	Rita Site, Whi baz=117,SNR=9.8	117.14	48	⇑P				20 20 14.7		
Q28A	Sharon Springs baz=117	117.19	40	⇓P				20 20 13.2		
O29A	4D Ranch, Culb baz=117	117.24	39	⇓P				20 20 13.0		
S27A	Las Animas baz=117	117.25	42	⇓P				20 20 13.2		
N30A	Hueftle Ranch, baz=117	117.28	38	⇑P				20 20 12.2		
U26A	Atchley Ranch, baz=117	117.36	44	P		PKPdf		20 09 46.0	+1.0	
U26A	baz=117,SNR=7.6			⇑P		PKKPab		20 20 12.8	-0.9	
U26A	baz=117,SNR=7.6			⇑P		PKKPab		20 20 12.8	-0.9	
Y24A	Capitan baz=117	117.40	47	P		PKPdf		20 09 46.1	+0.9	
Y24A	baz=117,SNR=8.1			⇑P		PKKPab		20 20 12.8	-0.7	
Y24A	baz=117,SNR=8.1			⇑P		PKKPab		20 20 12.8	-0.7	
123A	Bell Site, Whi baz=117	117.41	49	⇓P				20 20 13.1		
W25A	X Bar L Ranch, baz=117	117.46	45	P		PKPdf		20 09 46.4	+1.2	
W25A	baz=117,SNR=8.1			⇑P		PKKPab		20 20 12.4	-0.7	
W25A	baz=117,SNR=8.1			⇑P		PKKPab		20 20 12.4	-0.7	
ECSD	EROS Data Cent	117.47	33	*e*PKPdf		PKPdf		20 09 44.7	0.0	
R28A	Tribune baz=118	117.61	41	⇑P				20 20 11.3		
V26A	Tequesquite Ra baz=118,SNR=9.0	117.64	44	⇓P				20 20 11.4		
X25A	Clemmons Ranch baz=118	117.67	46	⇑P				20 20 11.2		
T27A	Campo baz=118	117.70	43	⇓P				20 20 10.8		
Z24A	Sheeppen Canyo baz=118	117.74	48	P		PKPdf		20 09 47.4	+1.5	
Z24A	baz=118			⇑P		PKKPab		20 20 11.2	-0.8	
Z24A	baz=118			⇑P		PKKPab		20 20 11.2	-0.8	
Q29A	Oakley baz=118	117.84	40	P		PKPdf		20 09 46.9	+1.2	
Y25A	Mesa, Roswell baz=118	117.94	47	P		PKPdf		20 09 47.0	+0.8	
Y25A	baz=118,SNR=23			⇑P		PKKPab		20 20 09.8	-1.2	
Y25A	baz=118,SNR=23			⇑P		PKKPab		20 20 09.8	-1.2	
S28A	Manter baz=118	117.97	42	⇑P				20 20 10.0		
U27A	Thompson Grove baz=118	117.98	43	⇓P				20 20 10.1		
124A	Stringfield Ra baz=118,SNR=17	117.98	48	⇑P				20 20 10.3		
R29A	Marienthal baz=118	118.00	41	⇓P				20 20 09.6		
W26A	Owens Ranch, T baz=118	118.02	45	⇓P				20 20 10.2		
BGNE	Belgrade baz=118	118.08	36	⇑P				20 20 08.5		
PBAR	Barrancos	118.08	319	*e*PKP		PKPdf		20 09 47.4	+1.3	
T28A	Walsh baz=118	118.08	42	⇑P				20 20 09.2		
224A	Cornudas Mount baz=118	118.22	49	⇓P				20 20 08.7		
Z25A	Roswell baz=118,SNR=6.8	118.24	47	⇑P				20 20 08.7		
X26A	CR and CF Fran baz=118,SNR=11	118.26	46	⇑P				20 20 08.9		
V27A	Dan Oppiter Fa baz=118	118.32	44	⇑P				20 20 08.5		
U28A	Mallet baz=118	118.41	43	⇓P				20 20 08.2		
SPMN	St. Paul baz=118	118.45	30	⇑P				20 20 07.8		
S29A	Ulysses baz=118	118.46	41	⇑P				20 20 07.5		
P31A	Stockton baz=118	118.48	39	P		PKPdf		20 09 47.5	+0.7	
MNTX	Cornudas Mount	118.50	49	*e*PKPdf		PKPdf		20 09 48.1	+1.0	
EVO	Evora comp=Z,38nm,1.2s	118.50	320	*e*PKIKP		PKPdf		20 09 47.8	+0.9	
W27A	Bowe Ranch, En baz=118,SNR=6.5	118.53	45	⇑P				20 20 07.7		
324A	Moseley Ranch, baz=118	118.55	49	⇑P				20 20 06.5		

SCHQ	**Schefferville**	**118.55**	**8**	*e*PKPdf	**PKPdf**	**20 09 47.1**	**+0.6**
SCHQ				pPKP	**pPKPdf**	**20 10 27.1**	**-2.0**
SCHQ				PKKPbc	**PKKPbc**	**20 20 02.6**	**-3.3**
SCHQ	**Schefferville**	**118.55**	**8**	PKP	**PKPdf**	**20 09 47.1**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=58,slow=2.7,SNR=7.2						
SCHQ				pPKP	**pPKPdf**	**20 10 27.1**	**-2.0**
	comp=Z,9.0nm,0.9s,baz=257,slow=2.6,SNR=4.2						
SCHQ				PKKPbc	**PKKPbc**	**20 20 02.6**	**-3.3**
	comp=Z,4.0nm,1.0s,baz=168,slow=5.3,SNR=4.1						
Y26A	**Elida**	**118.57**	**46**	⇓P		20 20 07.6	
	baz=118						
EVOP	**Sao Brissos**	**118.58**	**320**	*e*PKIKP	**PKPdf**	**20 09 47.8**	**+0.8**
EVOP	**Sao Brissos**	**118.58**	**320**	*e*PKPdf	**PKPdf**	**20 09 47.8**	**+0.8**
125A	**Gardner Draw,**	**118.59**	**48**	P	**PKPdf**	**20 09 48.4**	**+1.0**
	baz=118						
125A				⇑P	**PKKPab**	**20 20 07.0**	**-1.1**
	baz=118						
125A				⇑P	**PKKPab**	**20 20 07.0**	**-1.1**
	baz=118						
T29A	**Hugoton**	**118.61**	**42**	⇑P		20 20 07.2	
	baz=118						
R30A	**Dighton**	**118.63**	**40**	P	**PKPdf**	**20 09 48.1**	**+0.8**
	baz=118						
R30A				⇑P	**PKKPab**	**20 20 06.6**	**-1.2**
	baz=118						
R30A				⇑P	**PKKPab**	**20 20 06.6**	**-1.2**
	baz=118						
225A	**Deer Hill, Car**	**118.73**	**48**	⇑P		20 20 06.2	
	baz=119						
Z26A	**Caprock**	**118.78**	**47**	P	**PKPdf**	**20 09 47.7**	**0.0**
	baz=119						
Z26A				⇑P	**PKKPab**	**20 20 06.1**	**-1.2**
	baz=119,SNR=6.1						
Z26A				⇑P	**PKKPab**	**20 20 06.1**	**-1.2**
	baz=119,SNR=6.1						
S30A	**Montezuma**	**118.88**	**41**	⇑P		20 20 05.8	
	baz=119						
U29A	**Oasis Ranch, S**	**119.01**	**43**	⇓P		20 20 05.3	
	baz=119						
W28A	**Vega**	**119.02**	**44**	⇓P		20 20 05.5	
	baz=119						
126A	**Clayton Basin,**	**119.06**	**48**	P	**PKPdf**	**20 09 48.8**	**+0.6**
	baz=119						
126A				⇑P	**PKKPab**	**20 20 05.4**	**-0.6**
	baz=119,SNR=6.7						
126A				⇑P	**PKKPab**	**20 20 05.4**	**-0.6**
	baz=119,SNR=6.7						
Y27A	**Causey**	**119.06**	**46**	⇑P		20 20 05.3	
	baz=119,SNR=9.6						
T30A	**Plains**	**119.17**	**42**	⇑P		20 20 04.5	
	baz=119						
425A	**Indio Mountain**	**119.23**	**50**	P	**PKPdf**	**20 09 49.4**	**+0.7**
	baz=119						
425A				⇓P	**PKKPab**	**20 20 04.2**	**-1.1**
	baz=119						
425A				⇓P	**PKKPab**	**20 20 04.2**	**-1.1**
	baz=119						
226B	**Tecolote Peak,**	**119.23**	**48**	P	**PKPdf**	**20 09 49.0**	**+0.4**
	baz=119						
226B				⇑P	**PKKPab**	**20 20 05.0**	**-0.3**
	baz=119,SNR=12						
226B				⇑P	**PKKPab**	**20 20 05.0**	**-0.3**
	baz=119,SNR=12						
MSTX	**Muleshoe**	**119.30**	**46**	P	**PKPdf**	**20 09 49.4**	**+0.6**
	baz=119						
MSTX				⇓P	**PKKPab**	**20 20 04.3**	**-0.7**
	baz=119,SNR=10						
MSTX				⇓P	**PKKPab**	**20 20 04.3**	**-0.7**
	baz=119,SNR=10						
Z27A	**Tatum**	**119.31**	**47**	P	**PKPdf**	**20 09 49.4**	**+0.7**
	baz=119						
Z27A				⇑P	**PKKPab**	**20 20 04.1**	**-0.9**
	baz=119,SNR=12						
Z27A				⇑P	**PKKPab**	**20 20 04.1**	**-0.9**
	baz=119,SNR=12						
U30A	**WK&E Inc. Balk**	**119.38**	**42**	P	**PKPdf**	**20 09 49.4**	**+0.6**
	baz=119						
U30A				⇓P	**PKKPab**	**20 20 03.7**	**-0.9**
	baz=119						
U30A				⇓P	**PKKPab**	**20 20 03.7**	**-0.9**
	baz=119						
W29A	**Amraillo**	**119.48**	**44**	⇓P		20 20 03.4	
	baz=119						
127A	**Arkansas Junct**	**119.53**	**47**	⇑P		20 20 03.2	
	baz=120						
COWI	**Conover**	**119.56**	**27**	*e*PKPdf	**PKPdf**	**20 09 49.0**	**+0.3**
Y28A	**McKinney Farm,**	**119.70**	**45**	⇓P		20 20 02.6	
	baz=120						
T31A	**Randall Ranch,**	**119.70**	**41**	⇓P		20 20 00.7	
	baz=120						
326A	**Caldwell Ranch**	**119.74**	**49**	P	**PKPdf**	**20 09 50.4**	**+0.8**
	baz=120						
326A				⇑P	**PKKPbc**	**20 20 00.7**	**-0.2**
	baz=120						
326A				⇑P	**PKKPbc**	**20 20 00.7**	**-0.2**
	baz=120						
V30A	**Spur Ranch, Mi**	**119.78**	**43**	⇑P		20 20 02.1	
	baz=120						
X29A	**Tulia**	**119.80**	**45**	⇑P		20 20 02.1	
	baz=120						
PFVI	**Vila Bisbo**	**119.84**	**319**	*e*PKP	**PKPdf**	**20 09 51.6**	**+2.1**
227A	**Bennet, Jal**	**119.91**	**48**	⇓P		20 20 01.5	
	baz=120						
Z28A	**Tucker Farm, M**	**119.92**	**46**	⇓P		20 20 01.3	
	baz=120						
426A	**McDonald Obser**	**120.01**	**50**	P	**PKPdf**	**20 09 51.2**	**+0.9**
	baz=120						
426A				⇑P	**PKKPab**	**20 20 01.3**	**-0.8**
	baz=120,SNR=13						
426A				⇑P	**PKKPab**	**20 20 01.3**	**-0.8**
	baz=120,SNR=13						
128A	**Castleberry Fa**	**120.19**	**47**	P	**PKPdf**	**20 09 51.2**	**+0.7**
	baz=120						
128A				⇑P	**PKKPab**	**20 20 00.2**	**-0.9**
	baz=120,SNR=13						
128A				⇑P	**PKKPab**	**20 20 00.2**	**-0.9**
	baz=120,SNR=13						
526A	**Mary Lane Ranc**	**120.25**	**50**	P	**PKPdf**	**20 09 51.8**	**+1.1**
	baz=120						
V31A	**Spring Creek L**	**120.35**	**42**	⇓P		20 19 60.0	
	baz=120						
228A	**UT Block 9, Go**	**120.37**	**47**	⇑P		20 19 59.0	
	baz=120						
X30A	**Coker Ranch, T**	**120.38**	**44**	⇓P		20 19 59.6	
	baz=120						
427A	**Hayter Ranch,**	**120.40**	**49**	P	**PKPdf**	**20 09 51.9**	**+1.0**
	baz=120						
427A				⇓P	**PKKPbc**	**20 19 59.3**	**+0.9**
	baz=120						
427A				⇓P	**PKKPbc**	**20 19 59.3**	**+0.9**
	baz=120						
Z29A	**Hungry Hill Ra**	**120.42**	**46**	P	**PKPdf**	**20 09 51.5**	**+0.6**
	baz=120						
Z29A				⇑P	**PKKPbc**	**20 19 59.1**	**+0.6**
	baz=120						
Z29A				⇑P	**PKKPbc**	**20 19 59.1**	**+0.6**
	baz=120						
626A	**Big Bend Ranch**	**120.46**	**51**	P	**PKPdf**	**20 09 51.8**	**+0.7**
	baz=120						
626A				⇑P	**PKKPbc**	**20 19 58.9**	**+0.7**
	baz=120,SNR=7.1						
626A				⇑P	**PKKPbc**	**20 19 58.9**	**+0.7**
	baz=120,SNR=7.1						
527A	**Woodward Ranch**	**120.58**	**50**	P	**PKPdf**	**20 09 52.2**	**+0.8**
	baz=120						
527A				⇑P	**PKKPbc**	**20 19 58.4**	**+0.6**
	baz=120,SNR=13						
527A				⇑P	**PKKPbc**	**20 19 58.4**	**+0.6**
	baz=120,SNR=13						
328A	**Wristen Ranch,**	**120.58**	**48**	P	**PKPdf**	**20 09 52.3**	**+1.1**
	baz=120						
328A				⇑P	**PKKPbc**	**20 19 58.4**	**+0.6**
	baz=120						
328A				⇑P	**PKKPbc**	**20 19 58.4**	**+0.6**
	baz=120						
W31A	**Holland Ranch,**	**120.61**	**43**	⇑P		20 19 58.2	
	baz=120						
129A	**Stewart Farms,**	**120.64**	**47**	⇓P		20 19 58.2	
	baz=121						
Y30A	**Stafford Cattl**	**120.67**	**45**	⇑P		20 19 58.3	
	baz=121						
Z30A	**Sanderson Ranc**	**120.82**	**46**	P	**PKPdf**	**20 09 51.9**	**+0.3**
	baz=121						
Z30A				⇑P	**PKKPbc**	**20 19 57.4**	**+0.5**
	baz=121,SNR=7.8						
Z30A				⇑P	**PKKPbc**	**20 19 57.4**	**+0.5**
	baz=121,SNR=7.8						
X31A	**McDonald Ranch**	**120.89**	**44**	P	**PKPdf**	**20 09 52.5**	**+0.9**
	baz=121						
X31A				⇑P	**PKKPbc**	**20 19 57.2**	**+0.5**
	baz=121						
X31A				⇑P	**PKKPbc**	**20 19 57.2**	**+0.5**
	baz=121						
TXAR	**Lajitas Array**	**120.92**	**51**	PKP	**PKPdf**	**20 09 52.7**	**+0.8**
TXAR				PP	**PP**	**20 11 20.0**	**-2.6**
TXAR				PKKPab	**PKKPbc**	**20 19 56.2**	**-0.2**
TXAR				SKKP		20 23 52.9	
TXAR	**Lajitas Array**	**120.92**	**51**	PKP	**PKPdf**	**20 09 52.7**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=253,slow=0.9,SNR=13						
TXAR				PP	**PP**	**20 11 20.0**	**-2.6**
	comp=Z,3.0nm,1.0s,baz=270,slow=2.5,SNR=6.0						
TXAR				PKKPab	**PKKPbc**	**20 19 56.2**	**-0.2**
	comp=Z,5.2nm,1.1s,baz=124,slow=6.7,SNR=14						
TXAR				SKKP		20 23 52.9	
	comp=Z,0.8nm,0.9s,baz=107,slow=3.1,SNR=4.4						
428A	**Kincaid Ranch,**	**121.00**	**49**	P	**PKPdf**	**20 09 53.4**	**+1.4**
	baz=121						
428A				⇑P	**PKKPab**	**20 19 57.0**	**-0.6**
	baz=121,SNR=12						
428A				⇑P	**PKKPab**	**20 19 57.0**	**-0.6**
	baz=121,SNR=12						
229A	**Bryant Ranch,**	**121.02**	**47**	⇑P		20 19 56.7	
	baz=121						
Y31A	**Rekieta Farm,**	**121.07**	**44**	⇓P		20 19 56.4	
	baz=121						
627A	**Terlingua Ranc**	**121.08**	**50**	P	**PKPdf**	**20 09 53.3**	**+1.0**
	baz=121						
329A	**Wagon Wheel Ra**	**121.14**	**48**	P	**PKPdf**	**20 09 52.6**	**+0.3**
	baz=121						
329A				⇑P	**PKKPbc**	**20 19 55.6**	**-0.1**
	baz=121						
329A				⇑P	**PKKPbc**	**20 19 55.6**	**-0.1**
	baz=121						
528A	**Cox Ranch, San**	**121.19**	**49**	P	**PKPdf**	**20 09 53.0**	**+0.5**
	baz=121						
528A				⇑P	**PKKPbc**	**20 19 55.1**	**-0.4**
	baz=121						
528A				⇑P	**PKKPbc**	**20 19 55.1**	**-0.4**
	baz=121						
130A	**Snyder**	**121.30**	**46**	⇓P		20 19 54.5	
	baz=121						
JFWS	**Jewell Farm**	**121.39**	**30**	*e*PKIKP	**PKPdf**	**20 09 51.9**	**-0.4**
JFWS	**Jewell Farm**	**121.39**	**30**	*e*PKPdf	**PKPdf**	**20 09 51.9**	**-0.4**
TOA0	**Torodi Ar. Sit**	**121.41**	**289**	*e*PKPdf	**PKPdf**	**20 09 52.6**	**-0.5**
TORD	**Torodi Ar. Bea**	**121.41**	**289**	PKP	**PKPdf**	**20 09 53.1**	**0.0**
TORD				PKKPab	**PKKPab**	**20 19 55.5**	**0.0**
TORD	**Torodi Ar. Bea**	**121.41**	**289**	PKP	**PKPdf**	**20 09 53.1**	**0.0**
	comp=Z,44nm,0.9s,baz=52,slow=1.9,SNR=143						
TORD				PKKPab	**PKKPab**	**20 19 55.5**	**0.0**
	comp=Z,3.3nm,0.7s,baz=281,slow=3.6,SNR=11						
628A	**Black Gap, Mar**	**121.44**	**50**	P	**PKPdf**	**20 09 53.9**	**+1.0**
	baz=121						
628A				⇑P	**PKKPbc**	**20 19 54.1**	**-0.3**
	baz=121,SNR=8.5						
628A				⇑P	**PKKPbc**	**20 19 54.1**	**-0.3**
	baz=121,SNR=8.5						
Z31A	**Sharp Cattle R**	**121.50**	**45**	⇓P		20 19 54.3	
	baz=121						
230A	**Sterling City**	**121.57**	**47**	⇑P		20 19 53.6	
	baz=122						
Y32A	**R-V Farms, Ver**	**121.61**	**44**	⇓P		20 19 53.5	
	baz=122						
429A	**Davenport Ranc**	**121.64**	**49**	P	**PKPdf**	**20 09 53.9**	**+0.7**
	baz=122						
529A	**Stev Forest Ra**	**121.64**	**49**	P	**PKPdf**	**20 09 54.1**	**+0.8**
	baz=122						
WMOK	**Wichita Mounta**	**121.65**	**43**	*e*PKIKP	**PKPdf**	**20 09 53.1**	**0.0**
WMOK	**Wichita Mounta**	**121.65**	**43**	*e*PKPdf	**PKPdf**	**20 09 53.1**	**0.0**
131A	**Roby**	**121.67**	**46**	⇑P		20 19 53.3	
	baz=122						
330A	**Mertzon**	**121.77**	**47**	P	**PKPdf**	**20 09 53.9**	**+0.4**
	baz=122						
330A				⇑P	**PKKPbc**	**20 19 52.5**	**-0.8**
	baz=122						
330A				⇑P	**PKKPbc**	**20 19 52.5**	**-0.8**
	baz=122						
Z32A	**Haskell**	**121.97**	**45**	P	**PKPdf**	**20 09 54.8**	**+1.0**
	baz=122						
Z32A				⇓P	**PKKPbc**	**20 19 52.5**	**0.0**
	baz=122						
Z32A				⇓P	**PKKPbc**	**20 19 52.5**	**0.0**
	baz=122						
430A	**Baggett Ranch,**	**122.04**	**48**	P	**PKPdf**	**20 09 54.8**	**+0.8**
	baz=122						
430A				⇓P	**PKKPbc**	**20 19 51.8**	**-0.5**
	baz=122						
430A				⇓P	**PKKPbc**	**20 19 51.8**	**-0.5**
	baz=122						
231A	**Bronte**	**122.12**	**46**	P	**PKPdf**	**20 09 54.7**	**+0.6**
	baz=122						
231A				⇓P	**PKKPbc**	**20 19 51.5**	**-0.5**
	baz=122						
231A				⇓P	**PKKPbc**	**20 19 51.5**	**-0.5**
	baz=122						
ABTX	**Abilene, Hawle**	**122.23**	**45**	⇓P		20 19 51.0	
	baz=122						
530A	**J-C Ranch, Com**	**122.29**	**49**	P	**PKPdf**	**20 09 55.5**	**+1.0**
	baz=122						
530A				⇑P	**PKKPbc**	**20 19 50.9**	**-0.4**
	baz=122,SNR=7.2						
530A				⇑P	**PKKPbc**	**20 19 50.9**	**-0.4**
	baz=122,SNR=7.2						
331A	**San Angelo**	**122.37**	**47**	P	**PKPdf**	**20 09 55.0**	**+0.4**
	baz=122						
331A				⇑P	**PKKPbc**	**20 19 50.1**	**-0.9**
	baz=122						
331A				⇑P	**PKKPbc**	**20 19 50.1**	**-0.9**
	baz=122						
431A	**Sonora**	**122.56**	**48**	P	**PKPdf**	**20 09 55.7**	**+0.7**
	baz=122						
431A				⇑P	**PKKPbc**	**20 19 49.0**	**-1.3**
	baz=122						
431A				⇑P	**PKKPbc**	**20 19 49.0**	**-1.3**
	baz=122						
232A	**Coleman**	**122.62**	**46**	⇓P		20 19 49.3	
	baz=123						
332A	**Millersview**	**122.83**	**47**	P	**PKPdf**	**20 09 56.3**	**+0.8**
	baz=123						
332A				⇑P	**PKKPbc**	**20 19 48.5**	**-0.7**
	baz=123						
332A				⇑P	**PKKPbc**	**20 19 48.5**	**-0.7**
	baz=123						
531A	**Rocksprings**	**122.87**	**48**	P	**PKPdf**	**20 09 56.4**	**+0.8**
	baz=123						
531A				⇑P	**PKKPbc**	**20 19 48.2**	**-0.8**
	baz=123,SNR=5.1						
531A				⇑P	**PKKPbc**	**20 19 48.2**	**-0.8**
	baz=123,SNR=5.1						
TUL1	**Tulsa**	**122.92**	**40**	⇓P		20 19 47.3	
	baz=123						
432A	**Menard**	**123.06**	**47**	P	**PKPdf**	**20 09 56.6**	**+0.6**
	baz=123						
432A				⇑P	**PKKPbc**	**20 19 47.4**	**-0.9**
	baz=123						
432A				⇑P	**PKKPbc**	**20 19 47.4**	**-0.9**
	baz=123						
631A	**Perdido Creek**	**123.23**	**49**	P	**PKPdf**	**20 09 57.1**	**+0.8**
	baz=123						
631A				⇑P	**PKKPbc**	**20 19 46.7**	**-0.8**
	baz=123,SNR=6.3						
631A				⇑P	**PKKPbc**	**20 19 46.7**	**-0.8**
	baz=123,SNR=6.3						
JCT	**Junction City**	**123.26**	**48**	*e*PKIKP	**PKPdf**	**20 09 57.2**	**+0.9**
JCT	**Junction City**	**123.26**	**48**	*e*PKPdf	**PKPdf**	**20 09 57.2**	**+0.9**
JCT	**Junction City**	**123.26**	**48**	P	**PKPdf**	**20 09 57.0**	**+0.7**
	baz=123						
JCT				⇓P	**PKKPbc**	**20 19 46.3**	**-1.2**
	baz=123						
JCT				⇓P	**PKKPbc**	**20 19 46.3**	**-1.2**
	baz=123						
532A	**Rocksprings**	**123.37**	**48**	P	**PKPdf**	**20 09 57.1**	**+0.6**
	baz=123						
532A				⇓P	**PKKPbc**	**20 19 46.0**	**-1.1**
	baz=123						
532A				⇓P	**PKKPbc**	**20 19 46.0**	**-1.1**
	baz=123						
632A	**Uvalde**	**123.78**	**49**	P	**PKPdf**	**20 09 58.3**	**+1.0**
	baz=124						
632A				⇓P	**PKKPbc**	**20 19 45.1**	**-0.4**
	baz=124						
632A				⇓P	**PKKPbc**	**20 19 45.1**	**-0.4**
	baz=124						
732A	**Laxson Ranch,**	**124.03**	**49**	P	**PKPdf**	**20 09 58.9**	**+1.1**
	baz=124						
732A				⇑P	**PKKPbc**	**20 19 42.1**	**-2.3**
	baz=124						
WHTX	**Lake Whitney**	**124.12**	**45**	P	**PKPdf**	**20 09 58.7**	**+0.8**
	baz=124						
WHTX				⇑P	**PKKPab**	**20 19 42.1**	**-2.0**
	baz=124						
WHTX				⇑P	**PKKPab**	**20 19 42.1**	**-2.0**
	baz=124						
SADO	**Sadowa**	**124.77**	**22**	PKP	**PKPdf**	**20 09 59.0**	**+0.3**
SADO	**Sadowa**	**124.77**	**22**	PKP	**PKPdf**	**20 09 59.0**	**+0.3**
	comp=Z,6.8nm,0.6s,baz=316,slow=4.6,SNR=4.3						
OLIL	**Olney**	**125.55**	**32**	*e*PKPdf	**PKPdf**	**20 10 01.1**	**+0.7**
PQI	**Presque Isle**	**126.21**	**12**	*e*PKPdf	**PKPdf**	**20 10 01.2**	**-0.2**
HKT	**Hockley**	**126.42**	**46**	*e*PKIKP	**PKPdf**	**20 10 04.2**	**+1.9**
HKT	**Hockley**	**126.42**	**46**	*e*PKPdf	**PKPdf**	**20 10 04.2**	**+1.9**
ACSO	**Alum Creek Sta**	**126.95**	**28**	*e*PKPdf	**PKPdf**	**20 10 03.9**	**+0.8**
BINY	**Binghamton**	**128.13**	**21**	*e*PKPdf	**PKPdf**	**20 10 06.2**	**+0.9**
BINY				*e*SKP		20 13 10.3	
DBIC	**Dimbokro**	**129.26**	**284**	PKP	**PKPdf**	**20 10 08.4**	**+0.3**
DBIC				*e*PKPdf	**PKiKP**	**20 10 08.6**	**-0.2**
DBIC				SKPbc	SKPbc	20 13 14.6	-0.3
DBIC	**Dimbokro**	**129.26**	**284**	PKP	**PKPdf**	**20 10 08.4**	**+0.3**
	comp=Z,54nm,1.0s,baz=14,slow=1.5,SNR=23						
DBIC				SKPbc	SKPbc	20 13 14.6	-0.3
	comp=Z,48nm,0.8s,baz=52,slow=4.9,SNR=24						
LIC	**Lamto**	**129.52**	**283**	⇑*i*PKIKP	**PKPdf**	**20 10 08.7**	**0.0**
	comp=Z,81nm,0.8s						
LIC	**Lamto**	**129.52**	**283**	⇑*i*PKPdf	**PKPdf**	**20 10 08.7**	**0.0**
USHA	**Ushuaia**	**129.88**	**169**	PKP	**PKPdf**	**20 10 09.7**	**+1.6**
USHA				SKPbc	SKPbc	20 13 17.2	+1.5
USHA	**Ushuaia**	**129.88**	**169**	PKP	**PKPdf**	**20 10 09.7**	**+1.6**
	comp=Z,12nm,0.7s,baz=327,slow=5.4,SNR=6.4						
USHA				SKPbc	SKPbc	20 13 17.2	+1.5
	comp=Z,33nm,1.0s,baz=216,slow=4.1,SNR=6.8						
TKL	**Tuckaleechee C**	**130.14**	**32**	PKP	**PKPdf**	**20 10 09.9**	**+0.7**
TKL				SKPbc	**SKPbc**	**20 13 18.7**	**+1.3**
TKL	**Tuckaleechee C**	**130.14**	**32**	PKP	**PKPdf**	**20 10 09.9**	**+0.7**
	comp=Z,12nm,0.7s,baz=134,slow=5.0,SNR=5.6						
TKL				SKPbc	**SKPbc**	**20 13 18.7**	**+1.3**
	comp=Z,40nm,1.1s,baz=304,slow=0.5,SNR=16						
LRAL	**Lakeview Retre**	**130.26**	**37**	*e*PKPdf	**PKPdf**	**20 10 10.6**	**+1.0**
BBTS	**Babate**	**137.48**	**299**	SKP	**SKPbc**	**20 13 41.5**	**-0.6**
BBTS	**Babate**	**137.48**	**299**	SKP	**SKPbc**	**20 13 41.5**	**-0.6**
	comp=Z,87nm,1.0s,baz=93,slow=3.6,SNR=5.8						
TEIG	**Tepich**	**137.56**	**51**	SKPbc	**SKPbc**	**20 13 38.4**	**-3.8**
TEIG	**Tepich**	**137.56**	**51**	SKPbc	**SKPbc**	**20 13 38.4**	**-3.8**
	comp=Z,9.0nm,1.0s,baz=333,slow=8.2,SNR=2.4						
PLCA	**Paso Flores**	**142.34**	**159**	PKPpre	PKPpre	20 10 26.6	
PLCA				*e*PKPdf	**PKPdf**	**20 10 27.7**	**-4.1**
PLCA				*e*SKP		20 13 55.5	
PLCA	**Paso Flores**	**142.34**	**159**	PKhKP	PKPpre	20 10 26.6	
	comp=Z,8.6nm,0.8s,baz=206,slow=2.7,SNR=15						
JTS	**JuntasAbangare**	**145.34**	**62**	*e*PKPdf	**PKPab**	**20 10 38.5**	**+0.4**
TRQA	**Tornquist**	**147.22**	**169**	*e*PKPdf	**PKPdf**	**20 10 40.4**	**+0.2**
TRQA				*e*PKPbc	**PKPbc**	**20 10 43.1**	**+0.4**
TRQA				*e*SKP		20 13 57.5	
GRTK	**Grand Turk**	**148.05**	**31**	*e*PKPbc	**PKPbc**	**20 10 46.4**	**+1.1**
SDDR	**Presa de Saban**	**150.03**	**34**	*e*PKPbc	**PKPbc**	**20 10 51.3**	**+0.9**
BCIP	**Isla Barro Col**	**150.32**	**60**	*e*PKPbc	**PKPbc**	**20 10 51.4**	**+0.3**
CFAA	**Coronel Fontan**	**151.23**	**154**	PKP	**PKPdf**	**20 10 48.1**	**+1.2**
CFAA				PKPbc	**PKiKP**	**20 10 53.7**	**+0.3**
CFAA	**Coronel Fontan**	**151.23**	**154**	PKP	**PKPdf**	**20 10 48.1**	**+1.2**
	comp=Z,1.8nm,1.0s,baz=212,slow=0.5,SNR=11						
CFAA				PKPbc	**PKiKP**	**20 10 53.7**	**+0.3**
	comp=Z,9.8nm,0.6s,baz=228,slow=2.6,SNR=77						
LCO	**Las Campanas**	**152.19**	**148**	*e*PKPdf	**PKPdf**	**20 10 49.6**	**+1.0**
LCO				*e*PKPbc	**PKiKP**	**20 10 56.7**	**+0.9**
LRS	**Lares**	**152.87**	**27**	*e*PKPbc	**PKPbc**	**20 10 56.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**153.00**	**28**	*e*PKPbc	**PKPbc**	**20 10 58.4**	**+1.2**
CELP	**Cerrillos**	**153.18**	**27**	*e*PKPbc	**PKPbc**	**20 11 00.8**	**+3.3**
OTAV	**Otavalo**	**154.97**	**77**	*e*PKPdf	**PKPdf**	**20 10 53.5**	**+0.3**
OTAV				*e*PKPab	**PKPab**	**20 11 21.1**	**+2.9**
ATAH	**Atahualpa**	**155.87**	**94**	PKP	**PKPdf**	**20 10 56.0**	**+1.6**
ATAH				PKPab	**PKPab**	**20 11 19.8**	**-2.2**
ATAH	**Atahualpa**	**155.87**	**94**	PKP	**PKPdf**	**20 10 56.0**	**+1.6**
	comp=Z,11nm,1.0s,baz=207,slow=3.8,SNR=10						
ATAH				PKPab	**PKPab**	**20 11 19.8**	**-2.2**
	comp=Z,11nm,0.8s,baz=314,slow=2.5,SNR=4.8						
NNA	**Nana**	**156.78**	**107**	PKP	**PKPdf**	**20 10 57.1**	**+2.0**
NNA	**Nana**	**156.78**	**107**	PKP	**PKPdf**	**20 10 57.1**	**+2.0**
	comp=Z,8.1nm,0.5s,baz=220,slow=7.0,SNR=3.6						
ROSC	**El Rosal**	**157.17**	**62**	PKP	**PKPdf**	**20 10 57.6**	**+1.6**
ROSC	**El Rosal**	**157.17**	**62**	PKP	**PKPdf**	**20 10 57.6**	**+1.6**
	comp=Z,6.8nm,0.5s,baz=92,slow=18,SNR=7.1						
LPAZ	**La Paz**	**162.84**	**128**	*e*PKPdf	**PKPdf**	**20 11 03.7**	**+1.2**
LPAZ				PKP	**PKPdf**	**20 11 04.2**	**+1.6**
LPAZ				*e*PKPab	**PKPab**	**20 11 53.7**	**+1.3**
LPAZ	**La Paz**	**162.84**	**128**	PKP	**PKPdf**	**20 11 04.2**	**+1.6**
	comp=Z,13nm,1.0s,baz=22,slow=2.4,SNR=27						
LPAZ				PKPab	**PKPab**	**20 11 53.7**	**+1.3**
	comp=Z,16nm,0.9s,baz=177,slow=2.7,SNR=8.5						
SIV	**San Ignacio**	**167.90**	**146**	PKP	**PKPdf**	**20 11 07.0**	**+1.0**
SIV				PKPab	**PKPab**	**20 12 15.3**	**+1.6**
SIV	**San Ignacio**	**167.90**	**146**	PKP	**PKPdf**	**20 11 07.0**	**+1.0**
	comp=Z,10nm,0.9s,baz=204,slow=0.6,SNR=25						
SIV				PKPab	**PKPab**	**20 12 15.3**	**+1.6**
	comp=Z,8.4nm,1.0s,baz=240,slow=5.7,SNR=5.4						
BDFB	**Brasilia**	**168.62**	**211**	PKP	**PKPdf**	**20 11 06.9**	**+0.3**
BDFB				PKPab	**PKPab**	**20 12 17.9**	**+0.9**
BDFB				PP	**

TXAR	**Lajitas Array**	**28.06**	**356**	P		P		20 49 17.7	+1.2
	0.2nm,0.4s,baz=174,slow=12,SNR=5.4								
NVAR	**Mina Array Bea**	**40.19**	**339**	P		P		20 51 02.2	+0.7
	0.2nm,0.5s,baz=150,slow=7.3,SNR=4.2								
PDAR	**Pinedale Array**	**42.03**	**351**	P		P		20 51 16.9	+0.2
	2.2nm,0.9s,baz=165,slow=7.5,SNR=15								
YKA	**Yellowknife Ar**	**61.95**	**353**	P		P		20 53 43.5	-0.9
	2.7nm,0.9s,baz=162,slow=6.5,SNR=25								
INK	**Inuvik**	**70.49**	**348**	P		P		20 54 39.0	-0.2
	2.1nm,0.9s,baz=131,slow=6.5,SNR=5.4								
ILAR	**Eielson Array**	**71.41**	**341**	P		P		20 54 43.9	-1.0
	1.7nm,0.8s,baz=149,slow=4.8,SNR=18								
KURBB	**Kurchatov Arra**	**128.37**	**0**	PKP		PKPdf		21 02 31.8	0.0
	0.2nm,0.7s,baz=350,slow=2.2,SNR=5.3								
CMAR	**Chiang Mai Arr**	**152.10**	**315**	PKPbc		PKPbc		21 03 22.3	+0.7
	0.3nm,0.3s,baz=18,slow=1.2,SNR=4.8								

IDC ***29*** *20:43:37.4±0.5,0.˚86N×125.˚95E, h0km, mb4.4/22, mb1 4.5/23,mb1mx4.4/32,mbtmp4.4/23,ML3.9/1,MS3.7/1, Ms1 3.7/1,ms1mx2.5/38, Error ellipse: s-maj=26.2km s-min=11.1km az=79.0*

BJI ***29*** *20:43:38.2,0.˚49N×126.˚26E, h41km, mB5.1/19, mb4.8/29, Ms4.5/7,Ms7 4.2/8*

DJA ***29*** *20:43:43.9±0.3,1˚N±5˚×12˚6E±˚, h15km, M4.8/9, mb5.0/7, mB5.0/3, MLv4.8/9, Mw(mB)4.3/3*

ISCJB ***29*** *20:43:43.8±0.5,0.˚90N±0.˚03×126.˚09E±0.˚04, h64km±5km, mb4.5/50, Error ellipse: s-maj=5.9km s-min=4.5km az=165.3*

NEIC ***29*** *20:43:45.3±1.4,0.˚86N×126.˚10E, h63km±13km, mb4.5/20, Error ellipse: s-maj=12.6km s-min=6.0km az=70.0*

AUST ***29*** *20:43:50.4,0.˚50N×126.˚00E, h100km*

ISC 29 20:43:44.1±0.4,**0.˚94N**±0.˚04×**126.˚13E**±0.˚05,**h45**km±2km,
n132,σ1$**46**/172,**mb4.6**/50,**1D**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
TNTI	**Ternate**	**1.25**	**98**	P		**Pn**	**20 44 05.0**		**-0.2**
MNI	**Manado**	**1.38**	**291**	P		**Pn**	**20 44 06.8**		**-0.2**
GAMI	**Galela, Maluku**	**1.88**	**62**	P		**Pn**	**20 44 15.4**		**+1.5**
LBMI	**Labuha**	**2.09**	**139**	P		**Pn**	**20 44 17.3**		**+0.6**
KMSI	**Cibinong**	**2.18**	**260**	P		**Pn**	**20 44 17.9**		**0.0**
LUWI	**Luwuk**	**3.89**	**240**	P		**Pn**	**20 44 43.4**		**+2.0**
LUWI	**Luwuk**	**3.89**	**240**	P		**Pn**	**20 44 43.0**		**+1.5**
	baz=3.6,SNR=48								
MRSI	**Marisa**	**4.21**	**264**	P		**Pn**	**20 44 46.8**		**+1.0**
MATI	**Mati**	**5.97**	**1**	*e*P		**Pn**	**20 45 12.7**		**+2.7**
CTBH	**Cotabato--PC H**	**6.51**	**343**	*i*P		Pn	20 45 20.8		+3.3
FAKI	**Fak Fak**	**7.22**	**122**	P		**Pn**	**20 45 30.1**		**+2.8**
	baz=7.1,SNR=3.5								
BBSI	**Bau Bau**	**7.31**	**209**	P		**Pn**	**20 45 30.1**		**+1.7**
	141nm,0.9s,1μm0.4nm								
PAGZ	**Pagadian**	**7.38**	**338**	*e*P		**Pn**	**20 45 29.9**		**+0.5**
TTSI	**Tana Toraja**	**7.45**	**238**	P		**Pn**	**20 45 31.7**		**+1.4**
	77nm,0.7s,966nm0.3nm								
IPIL	**Ipil**	**7.67**	**333**	*e*P		**Pn**	**20 45 34.3**		**+0.9**
BKSI	**Bulukumba**	**8.64**	**224**	P		**Pn**	**20 45 47.5**		**+0.8**
	69nm,0.5s,654nm								
KAPI	**Kappang**	**8.69**	**227**	*e*Pn		**Pn**	**20 45 47.4**		**0.0**
	40nm,0.8s								
KAPI				Sn		**Sn**	**20 47 24.3**		**+0.2**
KAPI				*e*Sn		Sn	20 47 24.9		+0.8
KAPI	**Kappang**	**8.69**	**227**	P		**Pn**	**20 45 48.3**		**+0.9**
	53nm,0.8s								
KAPI	**Kappang**	**8.69**	**227**	Pn		**Pn**	**20 45 48.0**		**+0.6**
	5.4nm,0.3s,baz=39,slow=8.4,SNR=29								
KAPI				Sn		**Sn**	**20 47 24.3**		**+0.2**
	1.2nm,0.3s,baz=236,slow=23,SNR=1.7								
MYLDM	**Lahad Datu**	**8.70**	**299**	P		**Pn**	**20 45 50.5**		**+3.0**
	72nm,0.9s								
KKM	**Kota Kinabalu**	**11.11**	**297**	*e*Pn		**Pn**	**20 46 23.3**		**+2.7**
KHKI	**Kahang-Kahang**	**13.98**	**228**	P		**Pn**	**20 47 01.1**		**+1.4**
	54nm,0.8s								
MTN	**Manton Dam**	**14.57**	**160**	P		**Pn**	**20 47 07.7**		**+0.1**
	baz=14,SNR=6.9								
KDU	**Kakadu**	**14.93**	**155**	P		**Pn**	**20 47 10.4**		**-2.0**
	baz=15,SNR=9.2								
KSM	**Kuching**	**15.82**	**272**	*e*Pn		**P**	**20 47 27.1**		**0.0**
	12nm,0.7s								
KSM	**Kuching**	**15.82**	**272**	P		**P**	**20 47 28.3**		**+1.1**
	baz=16,SNR=4.4								
SJI	**Sawahan**	**16.71**	**239**	P		**P**	**20 47 38.1**		**+1.0**
KNRA	**Kununurra**	**16.72**	**171**	P		**Pn**	**20 47 35.1**		**-0.1**
	baz=16,SNR=16								
FITZ	**Fitzroy Crossi**	**18.93**	**181**	P		**P**	**20 47 59.9**		**-1.5**
FITZ	**Fitzroy Crossi**	**18.93**	**181**	P		**P**	**20 47 59.9**		**-1.5**
	0.3nm,0.3s,baz=2.8,slow=7.6,SNR=8.0								
FITZ	**Fitzroy Crossi**	**18.93**	**181**	P		**P**	**20 48 00.4**		**-1.1**
	baz=19,SNR=6.3								
WRAB	**Tennant Creek**	**22.26**	**159**	*e*P		**P**	**20 48 35.4**		**-2.1**
	19nm,0.8s								
WRA	**Warramunga Arr**	**22.26**	**159**	P		**P**	**20 48 35.7**		**-1.9**
WRA				S		**S**	**20 52 37.4**		**-2.6**
WRA	**Warramunga Arr**	**22.26**	**159**	P		**P**	**20 48 35.7**		**-1.9**
	6.5nm,0.6s,baz=337,slow=11,SNR=69								
WRA				S		**S**	**20 52 37.4**		**-2.6**
	0.2nm,0.6s,baz=318,slow=1.9,SNR=1.6								
COEN	**Coen**	**22.46**	**132**	*e*P		**P**	**20 48 38.4**		**-1.3**
COEN	**Coen**	**22.46**	**132**	P		**P**	**20 48 39.1**		**-0.6**
	baz=22,SNR=4.6								
MBWA	**Marble Bar**	**22.84**	**196**	*e*P		**P**	**20 48 41.9**		**-1.7**
	7.4nm,0.7s								
TPUB	**Ta-pu**	**22.86**	**347**	*e*P		**P**	**20 48 40.1**		**-3.8**
	23nm,0.8s								
YHNB	**Yeheng**	**24.03**	**349**	P		P	20 48 49.7		-5.4
	38nm,1.3s								
QIS	**Mount Isa**	**25.11**	**149**	P		**P**	**20 49 04.8**		**-0.3**
	baz=25,SNR=7.8								
AS31	**Alice Springs**	**25.60**	**163**	*e*P		**P**	**20 49 08.2**		**-1.2**
ASAR	**Alice Springs**	**25.60**	**163**	P		**P**	**20 49 08.2**		**-1.3**
ASAR				PcP		**PcP**	**20 52 39.5**		**-0.3**
ASAR				ScP		**ScP**	**20 56 18.9**		**+3.2**
ASAR	**Alice Springs**	**25.60**	**163**	P		**P**	**20 49 08.2**		**-1.3**
	6.8nm,0.6s,baz=344,slow=7.6,SNR=58								
ASAR				PcP		**PcP**	**20 52 39.5**		**-0.3**
	1.0nm,0.6s,baz=339,slow=2.4,SNR=5.9								
ASAR				ScP		**ScP**	**20 56 18.9**		**+3.2**
	0.3nm,0.7s,baz=316,slow=2.6,SNR=3.5								
MEEK	**Meekatharra**	**28.36**	**194**	P		**P**	**20 49 35.2**		**+1.0**
	baz=28,SNR=4.7								
MORW	**Morawa**	**31.36**	**197**	P		**P**	**20 50 00.2**		**-0.5**
	baz=31,SNR=3.9								
GYA	**Guiyang**	**31.53**	**325**	*e*P		**P**	**20 50 03.3**		**+0.9**
GYA				pP		**pP**	**20 50 15.5**		**+1.2**
GYA				sP		**sP**	**20 50 21.3**		**+1.6**
GYA				S		**S**	**20 55 09.5**		**+1.5**
GYA				sS		**sS**	**20 55 29.0**		**+0.9**
GYA				ScP		**ScP**	**20 56 33.5**		**-0.8**
GYA				ScS		**ScS**	**21 00 30.8**		**-1.6**
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
FORT	**Forrest**	**31.60**	**177**	P		**P**	**20 50 02.4**		**-0.4**
	baz=31,SNR=7.4								
JNU	**Nakatsue**	**32.32**	**7**	P		**P**	**20 50 09.3**		**+0.2**
JNU	**Nakatsue**	**32.32**	**7**	P		**P**	**20 50 09.3**		**+0.2**
	comp=Z,19nm,1.0s,baz=299,slow=6.0,SNR=6.1								
KMI	**Kunming**	**32.99**	**319**	P		**P**	**20 50 16.3**		**+1.0**
KMI				pP		**pP**	**20 50 27.5**		**+0.2**
KMI				sP		**sP**	**20 50 33.5**		**+0.9**
KMI				pmax		pmax			
	comp=Z,5.0nm,1.0s								
ENH	**Enshi**	**33.18**	**333**	*e*P		**P**	**20 50 14.4**		**-2.2**
	comp=Z,6.1nm,0.8s								
JHJ	**Hachijo jima 2**	**34.49**	**20**	LR		LR	21 03 56.4		
	comp=Z,108nm,18.2s,baz=7.8,slow=35								
BBOO	**Buckleboo**	**34.86**	**165**	P		**P**	**20 50 30.3**		**-0.8**
	baz=35,SNR=8.0								
STKA	**Stephens Creek**	**35.78**	**157**	*e*P		**P**	**20 50 38.2**		**-0.9**
	comp=Z,1.0nm,0.8s								
STKA	**Stephens Creek**	**35.78**	**157**	P		**P**	**20 50 38.5**		**-0.7**
	comp=Z,6.6nm,0.8s,baz=311,slow=8.4,SNR=12								
STKA	**Stephens Creek**	**35.78**	**157**	P		**P**	**20 50 38.6**		**-0.5**
	baz=36,SNR=5.5								
KSAR	**Wonju Array Be**	**36.36**	**2**	P		**P**	**20 50 45.2**		**+1.2**
KSRS	**Korea Array**	**36.37**	**2**	P		**P**	**20 50 45.2**		**+1.2**
	comp=Z,4.0nm,0.6s,baz=180,slow=9.5,SNR=18								
CD2	**Chengdu**	**36.58**	**327**	P		**P**	**20 50 46.0**		**0.0**
CD2				pP		**pP**	**20 50 57.5**		**-0.6**
CD2				sP		**sP**	**20 51 02.5**		**-0.9**
CD2				PP		**PnPn**	**20 52 12.0**		**+2.0**
CD2				PcP		**PcP**	**20 53 08.3**		**-0.5**
CD2				S		**S**	**20 56 26.3**		**+0.5**
CD2				sS		**sS**	**20 56 45.5**		**-0.5**
CD2				SS		**SnSn**	**20 58 55.3**		**-3.1**
CD2				pmax		pmax			
	comp=Z,10.0nm,0.5s								
CD2				pmax		pmax			
	comp=Z,80nm,5.2s								
MJAR	**Matsushiro Arr**	**37.15**	**16**	P		**P**	**20 50 49.9**		**-0.9**
MJAR	**Matsushiro Arr**	**37.15**	**16**	P		**P**	**20 50 49.9**		**-0.9**
	comp=Z,8.9nm,0.8s,baz=189,slow=9.9,SNR=20								
MAJO	**Matsushiro**	**37.15**	**16**	*e*P		**P**	**20 50 49.5**		**-1.2**
	comp=Z,12nm,0.7s								
MAT	**Matsushiro**	**37.15**	**16**	P		**P**	**20 50 49.8**		**-1.0**
DL2	**Dalian**	**38.01**	**354**	P		**P**	**20 50 58.8**		**+0.9**
DL2				pmax		pmax			
	comp=Z,34nm,0.7s								
ARMA	**Armidale**	**39.53**	**144**	P		**P**	**20 51 11.5**		**+0.5**
	baz=39,SNR=3.9								
BJT	**Baijiatuau**	**39.94**	**348**	P		**P**	**20 51 15.4**		**+1.3**
BJI	**Beijing**	**39.96**	**348**	P		**P**	**20 51 15.8**		**+1.6**
BJI				pmax		pmax			
	comp=Z,18nm,0.4s								
LZH	**Lanzhou**	**40.62**	**332**	*e*P		**P**	**20 51 22.0**		**+1.9**
LZH				pP		**pP**	**20 51 27.5**		**-4.8**
LZH				pmax		pmax			
	comp=Z,18nm,1.5s								
HHC	**Hu-ho-hao-te**	**41.86**	**343**	*e*P		**P**	**20 51 28.0**		**-2.1**
HHC				pP		**pP**	**20 51 40.3**		**-2.0**
HHC				sP		**sP**	**20 51 45.8**		**-1.8**
HHC				PP		**PP**	**20 53 09.8**		**+2.2**
HHC				S		**S**	**20 57 44.0**		**-1.0**
HHC				sS		**sS**	**20 58 04.3**		**-1.2**
HHC				pmax		pmax			
	comp=Z,34nm,1.1s								
HHC				pmax		pmax			
	comp=Z,170nm,5.2s								
HHC				LR		LR			
	comp=N,220nm,14.0s								
HHC				LR		LR			
	comp=E,190nm,14.1s								
HHC				LR		LR			
	comp=Z,200nm,13.8s								
CN2	**Changchun**	**42.68**	**359**	*e*P		**P**	**20 51 38.8**		**+2.3**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.8s								
USRK	**Ussuriysk Arra**	**43.39**	**6**	P		**P**	**20 51 43.2**		**+1.0**
	comp=Z,10nm,0.7s,baz=190,slow=6.1,SNR=37								
MDJ	**Mudanjiang**	**43.60**	**4**	P		**P**	**20 51 45.0**		**+1.1**
MDJ				pmax		pmax			
	comp=Z,22nm,0.8s								
MDJ				pmax		pmax			
	comp=Z,91nm,3.9s								
MDJ	**Mudanjiang**	**43.60**	**4**	*e*P		**P**	**20 51 44.2**		**+0.3**
	comp=Z,18nm,0.8s								
LSA	**Lhasa**	**43.87**	**314**	P		**P**	**20 51 46.5**		**-0.5**
LSA	**Lhasa**	**43.87**	**314**	*e*P		**P**	**20 51 45.8**		**-1.2**
	comp=Z,2.3nm,0.6s								
TAPN	**Taplejung**	**45.23**	**309**	*e*P		**P**	**20 51 55.1**		**-2.5**
ODAN	**Odare**	**45.24**	**308**	*e*P		**P**	**20 51 55.5**		**-2.2**
ASAJ	**Asahikawa**	**45.42**	**17**	P		**P**	**20 51 59.5**		**+1.1**
ASAJ	**Asahikawa**	**45.42**	**17**	P		**P**	**20 51 59.5**		**+1.1**
	comp=Z,9.9nm,0.8s,baz=241,slow=13,SNR=6.2								
RAMN	**Ramite**	**45.91**	**308**	*e*P		**P**	**20 52 00.1**		**-2.9**
GUN	**Gumba**	**46.92**	**308**	*e*P		**P**	**20 52 09.4**		**-1.6**
	comp=Z,14nm,0.5s								
PKIN	**Phulchoki**	**47.15**	**308**	*e*P		**P**	**20 52 10.9**		**-1.8**
KKN	**Kakani**	**47.34**	**308**	*e*P		**P**	**20 52 12.5**		**-1.6**
DMN	**Daman**	**47.39**	**308**	*e*P		**P**	**20 52 12.9**		**-1.7**
	comp=Z,6.9nm,0.7s								
HIA	**Hailar**	**48.45**	**354**	P		**P**	**20 52 21.0**		**-1.2**
KOLN	**Koldanda**	**48.66**	**307**	*e*P		**P**	**20 52 23.1**		**-1.2**
	comp=Z,13nm,0.6s								
DANN	**Dangsing**	**48.79**	**308**	*e*P		**P**	**20 52 23.6**		**-1.8**
	comp=Z,16nm,0.6s								
ULN	**Ulaanbaatar**	**49.58**	**343**	*e*P		**P**	**20 52 30.9**		**-0.1**
	comp=Z,2.0nm,0.6s								
SONM	**Songino Array**	**49.75**	**343**	P		**P**	**20 52 31.7**		**-0.5**
SONM				PcP		**PcP**	**20 53 52.9**		**+0.2**
SONM	**Songino Array**	**49.75**	**343**	P		**P**	**20 52 31.7**		**-0.5**
	comp=Z,2.1nm,0.9s,baz=154,slow=7.5,SNR=16								
SONM				PcP		**PcP**	**20 53 52.9**		**+0.2**
	comp=Z,2.0nm,0.8s,baz=158,slow=3.0,SNR=8.0								
WMQ	**Urumqi**	**54.68**	**327**	P		**P**	**20 53 08.0**		**-0.8**
WMQ				pP		**pP**	**20 53 20.8**		**-0.6**
WMQ				sP		**sP**	**20 53 26.0**		**-0.6**
WMQ				pmax		pmax			
	comp=Z,8.0nm,1.2s								
WMQ				pmax		pmax			
	comp=Z,170nm,4.4s								
PETK	**Petropavlovsk-**	**58.22**	**22**	P		**P**	**20 53 34.9**		**+1.1**
PETK	**Petropavlovsk-**	**58.22**	**22**	P		**P**	**20 53 34.9**		**+1.1**
	comp=Z,6.7nm,0.6s,baz=178,slow=4.0,SNR=24								
MK31	**Makanchi Array**	**59.51**	**326**	*e*P		**P**	**20 53 41.3**		**-1.6**
MKAR	**Makanchi Array**	**59.51**	**326**	P		**P**	**20 53 41.8**		**-1.1**
MKAR				PcP		**PcP**	**20 54 30.7**		**+0.7**
MKAR	**Makanchi Array**	**59.51**	**326**	P		**P**	**20 53 41.8**		**-1.1**
	comp=Z,2.1nm,0.4s,baz=121,slow=7.5,SNR=61								
MKAR				PcP		**PcP**	**20 54 30.7**		**+0.7**
	comp=Z,1.4nm,0.8s,baz=108,slow=4.0,SNR=4.1								
KSH	**Kashi**	**59.61**	**316**	P		**P**	**20 53 45.5**		**+1.7**
KSH				*e*sP		**sP**	**20 54 03.8**		**+2.1**
KSH				*e*PcP		**PcP**	**20 54 33.3**		**+2.6**
KSH				*e*PP		**PP**	**20 55 59.0**		**+3.1**
KSH				*e*PcS		**PcS**	**20 58 33.3**		**+0.3**
KSH				*e*S		**S**	**21 01 51.0**		**-0.1**
KSH				sS		**sS**	**21 02 12.0**		**-0.4**
KSH				ScS		**ScS**	**21 03 28.3**		**-2.5**
KSH				*e*SS		**SS**	**21 05 48.0**		**+0.7**
KSH				pmax		pmax			
	comp=Z,10.0nm,1.2s								
KSH				pmax		pmax			
	comp=Z,230nm,6.5s								
TKM2	**Tokmak 2**	**61.45**	**320**	*e*P		**P**	**20 53 55.8**		**-0.6**
	comp=Z,1.9nm,0.7s								
AAK	**Ala-Archa**	**62.03**	**319**	P		**P**	**20 54 00.8**		**+0.4**
AAK	**Ala-Archa**	**62.03**	**319**	P		**P**	**20 54 01.0**		**+0.7**
	comp=Z,0.8nm,0.4s,baz=207,slow=4.8,SNR=4.0								
EKS2	**Erkin-Say**	**62.51**	**319**	*e*P		**P**	**20 54 03.1**		**-0.4**
	comp=Z,2.1nm,0.8s								
ZAA0	**Zalesovo Array**	**62.80**	**334**	*e*P		**P**	**20 54 03.0**		**-2.0**
ZALV	**Zalesovo Beam**	**62.80**	**334**	P		**P**	**20 54 03.4**		**-1.6**
ZALV	**Zalesovo Beam**	**62.80**	**334**	P		**P**	**20 54 03.4**		**-1.6**
	comp=Z,1.6nm,0.5s,baz=139,slow=5.9,SNR=10								
KURBB	**Kurchatov Arra**	**63.76**	**328**	P		**P**	**20 54 10.3**		**-1.1**
	comp=Z,6.2nm,0.6s,baz=131,slow=6.1,SNR=50								
KURK	**Kurchatov**	**63.77**	**328**	*e*P		**P**	**20 54 10.1**		**-1.4**
	comp=Z,9.4nm,0.7s								
BVAR	**Borovoye Array**	**69.33**	**328**	P		**P**	**20 54 46.3**		**-0.6**
BVAR	**Borovoye Array**	**69.33**	**328**	P		**P**	**20 54 46.3**		**-0.6**
	comp=Z,2.4nm,0.6s,baz=142,slow=7.4,SNR=19								
BRVK	**Borovoye**	**69.40**	**328**	*e*P		**P**	**20 54 46.4**		**-1.0**
	comp=Z,10nm,1.0s								
ABKAR	**Akbulak array**	**73.93**	**321**	*e*P		**P**	**20 55 13.1**		**-1.6**
	comp=Z,1.2nm,0.4s								
AKTO	**Aktyubinsk**	**75.47**	**322**	P		**P**	**20 55 24.7**		**+1.1**
AKTO	**Aktyubinsk**	**75.47**	**322**	P		**P**	**20 55 24.7**		**+1.1**
	comp=Z,1.6nm,0.4s,baz=93,slow=4.4,SNR=4.8								
SDPT	**Sand Point**	**79.83**	**34**	*e*P		**P**	**20 55 47.7**		**0.0**
	comp=Z,32nm,0.6s								
VNDA	**Vanda**	**80.76**	**173**	P		**P**	**20 55 52.2**		**-0.2**
VNDA	**Vanda**	**80.76**	**173**	P		**P**	**20 55 52.2**		**-0.2**
	comp=Z,1.7nm,0.7s,baz=310,slow=6.7,SNR=13								
KDAK	**Kodiak Island**	**84.55**	**32**	P		**P**	**20 56 13.5**		**+1.0**
KDAK	**Kodiak Island**	**84.55**	**32**	P		**P**	**20 56 13.5**		**+1.0**
	comp=Z,5.8nm,0.8s,baz=270,slow=5.6,SNR=6.2								
TRF	**Thorofare Moun**	**86.29**	**27**	P		**P**	**20 56 23.7**		**+2.5**
	comp=Z,2.9nm,0.9s								
COLD	**Coldfoot**	**86.68**	**23**	*e*P		**P**	**20 56 23.2**		**+0.3**
	comp=Z,5.1nm,0.9s								
MCK	**McKinley**	**86.91**	**26**	*e*P		**P**	**20 56 21.8**		**-2.3**
	comp=Z,3.4nm,0.7s								
ILAR	**Eielson Array**	**87.86**	**25**	P		**P**	**20 56 27.4**		**-1.3**
ILAR	**Eielson Array**	**87.86**	**25**	P		**P**	**20 56 27.4**		**-1.3**
	comp=Z,0.5nm,0.6s,baz=254,slow=4.7,SNR=6.8								
QSPA	**South Pole Qui**	**90.87**	**180**	P		**P**	**20 56 42.9**		**0.0**
QSPA	**South Pole Qui**	**90.87**	**180**	P		**P**	**20 56 42.8**		**0.0**
	comp=Z,0.8nm,0.5s,baz=323,slow=0.5								
BRTR	**Keskin Array B**	**91.32**	**310**	P		**P**	**20 56 44.0**		**-1.6**
BRTR	**Keskin Array B**	**91.32**	**310**	P		**P**	**20 56 44.0**		**-1.6**
	comp=Z,0.4nm,0.7s,baz=97,slow=4.2,SNR=4.5								
INK	**Inuvik**	**92.96**	**21**	P		**P**	**20 56 52.0**		**-0.3**
INK	**Inuvik**	**92.96**	**21**	P		**P**	**20 56 52.0**		**-0.3**
	comp=Z,1.6nm,0.9s,baz=199,slow=2.9,SNR=3.3								
TORD	**Torodi Ar. Bea**	**123.16**	**286**	PKP		**PKPdf**	**21 02 36.6**		**-0.4**
TORD	**Torodi Ar. Bea**	**123.16**	**286**	PKP		**PKPdf**	**21 02 36.6**		**-0.4**
	comp=Z,2.0nm,0.8s,baz=63,slow=1.8,SNR=9.8								
TXAR	**Lajitas Array**	**123.75**	**53**	PKP		**PKPdf**	**21 02 38.4**		**+0.4**
TXAR	**Lajitas Array**	**123.75**	**53**	PKP		**PKPdf**	**21 02 38.4**		**+0.4**
	comp=Z,0.8nm,0.7s,baz=281,slow=1.2,SNR=6.4								

IDC ***29*** *20:44:57.6±1.9,46.˚31N×151.˚99E, h0km, mb3.7/12, mb1 3.9/14,mb1mx3.7/30, mbtmp3.7/14, ML3.2/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/48, Error ellipse: s-maj=53.3km s-min=19.7km az=173.0*

MOS ***29*** *20:45:01.3±0.8, 46.˚23N×151.˚96E, h40km, mb4.3/5, Error ellipse: s-maj=23.0km s-min=13.1km az=67.6*

ISCJB ***29*** *20:45:02.2±1.1, 46.˚2N±0.˚2×152.˚0E±0.˚2, h48km, mb3.7/12, Error ellipse: s-maj=29.0km s-min=7.1km az=151.0*

ISC 29 20:45:04.0±1.3,**46.˚2N**±0.˚2×**152.˚0E**±0.˚1,**h48**km,**n21,**
σ0$**89**/**22**,**mb3.6**/**12**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
KUR	**Kuril'sk**	**3.04**	**252**	PN		**Pn**	**20 45 48.5**		**-1.0**
KUR				S		**Sn**	**20 46 26.0**		**+1.5**
KUR				pmax		pmax			
	comp=Z,100nm,0.4s								
KUR				pmax		pmax			
	comp=N,80nm,0.5s								
KUR				pmax		pmax			
	comp=E,50nm,0.3s								
KUR				smax		smax			
	comp=N,140nm,0.5s								
KUR				smax		smax			
	comp=E,190nm,1.0s								
SKR	**Severo-Kuril's**	**5.25**	**30**	*e*PN		**Pn**	**20 46 19.0**		**-0.8**
ASAJ	**Asahikawa**	**6.95**	**256**	Pn		**Pn**	**20 46 42.5**		**-0.7**
	comp=E,0.9nm,0.3s,baz=90,slow=18,SNR=8.4								
PETK	**Petropavlovsk-**	**7.83**	**26**	PN		**Pn**	**20 46 55.2**		**+0.1**
PETK				pmax		pmax			
	comp=Z,1.0nm,0.3s								
PETK	**Petropavlovsk-**	**7.83**	**26**	Pn		**Pn**	**20 46 55.2**		**+0.1**
	comp=Z,0.7nm,0.3s,baz=182,slow=14,SNR=18								
USRK	**Ussuriysk Arra**	**14.22**	**269**	Pn		**Pn**	**20 48 19.8**		**-2.6**
	comp=Z,0.2nm,0.3s,baz=74,slow=14,SNR=5.1								
USRK				LR		LR	20 53 58.0		
	comp=Z,60nm,19.5s,baz=220,slow=38								
ILAR	**Eielson Array**	**37.45**	**38**	P		**P**	**20 52 12.4**		**+0.1**
	comp=Z,0.2nm,0.7s,baz=257,slow=8.2,SNR=4.1								
KURK	**Kurchatov**	**46.99**	**304**	P		**P**	**20 53 31.1**		**+1.1**
KURBB	**Kurchatov Arra**	**47.08**	**304**	P		**P**	**20 53 31.1**		**+0.4**
	comp=Z,0.4nm,0.6s,baz=70,slow=8.8,SNR=3.2								
YKA	**Yellowknife Ar**	**51.82**	**36**	P		**P**	**20 54 07.0**		**+0.4**
	comp=Z,0.2nm,0.5s,baz=300,slow=6.9,SNR=2.9								
NVAR	**Mina Array Bea**	**63.38**	**61**	P		**P**	**20 55 28.4**		**-0.1**
	comp=Z,0.3nm,0.5s,baz=289,slow=5.6,SNR=3.0								
FINES	**FINESS Array B**	**64.17**	**334**	P		**P**	**20 55 32.3**		**-0.8**
	comp=Z,2.3nm,0.9s,baz=29,slow=8.7,SNR=7.7								
NB2	**NORSAR Subarra**	**68.46**	**341**	P		**P**	**20 56 00.7**		**+0.1**
	comp=Z,0.8nm,0.5s,baz=28,slow=6.5								
NOA

BJO1					S	Sg	20 47 39.7	-0.5
	comp=Z,48nm,0.2s							
BJO	**Bjornoya**	**1.89**	**40**	*eP*	**Pg**		**20 47 16.5**	**-0.5**
BJO				*eS*	**Sg**		**20 47 39.7**	**-1.7**
BJO				AML	AML		20 47 43.6	
	comp=Z,48nm,0.2s							
BJO	**Bjornoya**	**1.89**	**40**	*eP*	**Pg**		**20 47 16.5**	**-0.5**
	SNR=50							
TRO	**Tromso**	**3.75**	**157**	*eP*	**Pn**		**20 47 40.0**	**+1.4**
TRO	**Tromso**	**3.75**	**157**	*eP*	**Pn**		**20 47 40.3**	**+1.6**
TRO				*eS*	**Sn**		**20 48 19.7**	**-3.0**
TRO	**Tromso**	**3.75**	**157**	P	**Pn**		**20 47 40.2**	**+1.6**
TRO				S	**Sn**		**20 48 19.6**	**-3.0**
HSP	**Hornsund**	**3.93**	**3**	*eP*	**Pn**		**20 47 42.5**	**+1.4**
HSP				*eS*	Sn		20 48 21.6	-5.6
KIF	**Kilpisjarvi**	**4.58**	**151**	*eP*	**Pn**		**20 47 50.7**	**+0.7**
KIF				*eS*	**Sn**		**20 48 40.7**	**-2.4**
KIF				MSN			20 48 46.7	
	comp=Z,9.9nm,0.3s							
KIF	**Kilpisjarvi**	**4.58**	**151**	P	**Pn**		**20 47 50.7**	**+0.7**
KIF				S	**Sn**		**20 48 40.7**	**-2.4**
KTK1	**Kautokeino**	**4.96**	**142**	*eP*	**Pn**		**20 47 56.9**	**+1.6**
KTK1				*eS*	**Sn**		**20 48 50.3**	**-2.4**
KTK1	**Kautokeino**	**4.96**	**142**	P	**Pn**		**20 47 56.9**	**+1.6**
ARA0	**ARCESS Array S**	**4.99**	**131**	Pn	**Pn**		**20 47 57.7**	**+2.0**
	baz=320,slow=14							
ARA0				Sn	**Sn**		**20 48 53.5**	**+0.2**
	baz=318,slow=22							
ARA0	**ARCESS Array S**	**4.99**	**131**	Pn	**Pn**		**20 47 57.7**	**+2.0**
	baz=320,slow=14							
ARA0				Sn	**Sn**		**20 48 53.5**	**+0.2**
	baz=318,slow=22							
ARA0	**ARCESS Array S**	**4.99**	**131**	*eP*	**Pn**		**20 47 57.7**	**+2.0**
ARA0				*eS*	**Sn**		**20 48 53.5**	**+0.2**
ARA0	**ARCESS Array S**	**4.99**	**131**	P	**Pn**		**20 47 57.7**	**+2.0**
ARA0				S	**Sn**		**20 48 53.5**	**+0.2**
ARCES	**ARCESS Array B**	**4.99**	**131**	Pn	**Pn**		**20 47 57.8**	**+2.1**
	comp=Z,1.5nm,0.3s,baz=321,slow=12,SNR=59							
ARCES				Sn	**Sn**		**20 48 53.1**	**-0.2**
	comp=Z,4.2nm,0.3s,baz=318,slow=20,SNR=17							
ARE0	**ARCESS Array S**	**4.99**	**131**	*eP*	**Pn**		**20 47 58.1**	**+2.4**
ARE0				*eS*	**Sn**		**20 48 53.0**	**-0.4**
ARE0	**ARCESS Array S**	**4.99**	**131**	P	**Pn**		**20 47 58.0**	**+2.4**
ARE0				S	**Sn**		**20 48 52.9**	**-0.4**
LOF	**Lofoten**	**5.02**	**185**	*eP*	**Sn**		**20 48 48.9**	**-5.1**
LOF				*eS*	Sg		20 49 40.4	+19
LOF				AML	AML		20 49 49.0	
	comp=Z,7.9nm,0.5s							
SPA0	**Spitsbergen Ar**	**5.12**	**4**	Pn	**Pn**		**20 47 59.2**	**+1.8**
	baz=178,slow=18							
SPA0				Sn	**Sn**		**20 48 54.7**	**-1.8**
SPA0	**Spitsbergen Ar**	**5.12**	**4**	Pn	**Pn**		**20 47 59.2**	**+1.8**
	baz=178,slow=18							
SPA0				*eP*	Pb		20 47 59.6	-11
SPA0				Sn	**Sn**		**20 48 54.7**	**-1.8**
SPA0	**Spitsbergen Ar**	**5.12**	**4**	*e*	**Pn**		**20 47 59.2**	**+1.8**
SPA0				*eP*	Pb		20 47 59.6	-11
SPA0				*e*			20 48 54.7	
SPA0	**Spitsbergen Ar**	**5.12**	**4**	Pn	**Pn**		**20 47 59.2**	**+1.8**
	baz=178,slow=18,SNR=3.1							
SPA0	**Spitsbergen Ar**	**5.12**	**4**	P	**Pn**		**20 47 59.5**	**+2.1**
SPITS	**Spitsbergen Ar**	**5.12**	**4**	Pn	**Pn**		**20 47 59.7**	**+2.3**
	baz=167,slow=17,SNR=78							
SPITS				Sn	**Sn**		**20 48 56.6**	**+0.2**
	baz=165,slow=20,SNR=6.3							
KEV	**Kevo**	**5.17**	**125**	*eP*	**Pn**		**20 47 59.9**	**+1.7**
KEV				*eS*	**Sn**		**20 48 55.6**	**-2.1**
KEV				MSN			20 48 59.5	
	comp=Z,12nm,0.3s							
KEV	**Kevo**	**5.17**	**125**	P	**Pn**		**20 47 59.8**	**+1.7**
HEF	**Hetta**	**5.57**	**144**	*eP*	**Pn**		**20 48 05.4**	**+1.8**
HEF				*eS*	**Sn**		**20 49 04.9**	**-2.7**
HEF				MSN			20 49 07.7	
	comp=Z,3.3nm,0.3s							
HEF	**Hetta**	**5.57**	**144**	P	**Pn**		**20 48 05.4**	**+1.8**
LANU	**Lannavaara**	**5.63**	**151**	*eP*	**Pn**		**20 48 06.0**	**+1.5**
LANU				*eS*	**Sn**		**20 49 06.7**	**-2.5**
LANU	**Lannavaara**	**5.63**	**151**	P	**Pn**		**20 48 06.0**	**+1.5**
LANU				S	**Sn**		**20 49 06.6**	**-2.5**
KBS	**Kingsbay**	**5.89**	**355**	Pn	**Pn**		**20 48 08.5**	**+0.5**
KBS				Sn	Sn		20 49 10.8	-4.6
KBS	**Kingsbay**	**5.89**	**355**	*eP*	**Pn**		**20 48 09.3**	**+1.3**
KBS				*eS*	**Sn**		**20 49 11.4**	**-4.0**
KBS				AML	AML		20 49 17.9	
	comp=Z,3.1nm,0.7s							
KBS	**Kingsbay**	**5.89**	**355**	*eP*	**Pn**		**20 48 09.3**	**+1.3**
KBS				*eS*	**Sn**		**20 49 11.4**	**-4.0**
KBS				AML	AML		20 49 17.9	
	comp=Z,3.1nm,0.7s							
KBS	**Kingsbay**	**5.89**	**355**	Pn	**Pn**		**20 48 08.5**	**+0.5**
KBS	**Kingsbay**	**5.89**	**355**	P	**Pn**		**20 48 09.3**	**+1.3**
SGF	**Sodankyl**	**6.94**	**139**	*eP*	**Pn**		**20 48 23.9**	**+1.4**
SGF				*eS*	**Sn**		**20 49 37.3**	**-4.0**
SGF	**Sodankyl**	**6.94**	**139**	P	**Pn**		**20 48 23.8**	**+1.4**
SGF				S	**Sn**		**20 49 37.3**	**-4.0**
VRF	**Varrio**	**7.33**	**130**	*eP*	**Pn**		**20 48 29.1**	**+1.4**
VRF				*eS*	**Sn**		**20 49 47.7**	**-3.1**
VRF				MSN			20 49 52.5	
	comp=Z,6.2nm,0.3s							
VRF	**Varrio**	**7.33**	**130**	P	**Pn**		**20 48 29.1**	**+1.4**
RNF	**Rovaniemi**	**7.59**	**144**	*eP*	**Pn**		**20 48 32.4**	**+1.0**
RNF				*eS*	**Sn**		**20 49 53.8**	**-3.5**
RNF	**Rovaniemi**	**7.59**	**144**	P	**Pn**		**20 48 32.3**	**+1.0**
RNF				S	**Sn**		**20 49 53.7**	**-3.5**
APA0	**Apatity Array**	**8.24**	**123**	Pn	**Pn**		**20 48 41.2**	**+1.0**
	baz=318,slow=9.3							
APA0				Sn	**Sn**		**20 50 07.8**	**-5.3**
	baz=323,slow=22							
APA0	**Apatity Array**	**8.24**	**123**	Pn	**Pn**		**20 48 41.2**	**+1.0**
	baz=318,slow=9.3							
APA0				Sn	**Sn**		**20 50 07.8**	**-5.3**
	baz=323,slow=22							
APA0	**Apatity Array**	**8.24**	**123**	*eP*	**Pn**		**20 48 41.2**	**+1.0**
APA0				*eS*	**Sn**		**20 50 07.8**	**-5.3**
APA0	**Apatity Array**	**8.24**	**123**	P	**Pn**		**20 48 41.2**	**+1.0**
MSF	**Maaselka**	**8.77**	**138**	*eP*	**Pn**		**20 48 48.5**	**+1.0**
MSF				*eS*	**Sn**		**20 50 22.4**	**-3.9**
MSF	**Maaselka**	**8.77**	**138**	P	**Pn**		**20 48 48.5**	**+1.0**
OUL	**Oulu**	**8.97**	**148**	*eP*	**Pn**		**20 48 50.0**	**-0.3**
OUL				*eS*	**Sn**		**20 50 26.4**	**-4.8**
OUL	**Oulu**	**8.97**	**148**	P	**Pn**		**20 48 49.9**	**-0.3**
KJN	**Kajaani**	**10.20**	**146**	*eP*	**Pn**		**20 49 06.9**	**-0.2**
KJN				*eS*	Sn		20 50 54.0	-7.2
KJN	**Kajaani**	**10.20**	**146**	P	**Pn**		**20 49 06.8**	**-0.2**
VAF	**Ylistaro**	**10.53**	**160**	*eP*	**Pn**		**20 49 11.5**	**0.0**
VAF	**Ylistaro**	**10.53**	**160**	P	**Pn**		**20 49 11.5**	**0.0**
SUF	**Sumiainen**	**11.25**	**152**	*eP*	**Pn**		**20 49 21.1**	**-0.5**
SUF	**Sumiainen**	**11.25**	**152**	P	**Pn**		**20 49 21.0**	**-0.5**
KEF	**Keuruu**	**11.62**	**156**	*eP*	**Pn**		**20 49 24.8**	**-1.7**
KEF	**Keuruu**	**11.62**	**156**	P	**Pn**		**20 49 24.8**	**-1.7**
KAF	**Kangasniemi**	**11.86**	**153**	*eP*	**Pn**		**20 49 27.7**	**-2.0**
KAF	**Kangasniemi**	**11.86**	**153**	P	**Pn**		**20 49 27.7**	**-2.0**
FIA0	**FINESS Array S**	**12.47**	**154**	Pn	**Pn**		**20 49 39.0**	**+0.9**
	baz=355,slow=12							
FIA0	**FINESS Array S**	**12.47**	**154**	Pn	**Pn**		**20 49 39.0**	**+0.9**
	baz=355,slow=12							
FIA0	**FINESS Array S**	**12.47**	**154**	*eP*	**Pn**		**20 49 39.0**	**+0.9**
FIA0	**FINESS Array S**	**12.47**	**154**	P	**Pn**		**20 49 39.0**	**+0.9**
FINES	**FINESS Array B**	**12.47**	**154**	Pn	**Pn**		**20 49 39.1**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=347,slow=11,SNR=6.4							
FINES				Sn	**Sn**		**20 51 51.4**	**-5.5**
	comp=Z,0.1nm,0.3s,baz=351,slow=21,SNR=1.8							
HFS	**Hagfors**	**13.04**	**182**	Pn	**Pn**		**20 49 48.0**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=359,slow=12,SNR=2.1							
AKASG	**Malin Array Be**	**23.36**	**156**	P	**P**		**20 51 51.8**	**+2.7**
	comp=Z,0.6nm,0.4s,baz=349,slow=12,SNR=3.2							
TORD	**Torodi Ar. Bea**	**60.42**	**195**	P	**P**		**20 56 53.0**	**+2.8**
	comp=Z,0.6nm,0.9s,baz=16,slow=5.2,SNR=3.2							

*ISK **29** 20:50:21.7,37.64N×36.24E,h2km,MD2.6*
*CSEM **29** 20:50:22.5±0.2,37.69N×36.22E,h2km,MD2.9, Error ellipse: s-maj=5.1km s-min=4.4km az=21.0*
*DDA **29** 20:50:23.9,37.63N×36.31E, h6km, MD2.9*
ISC 29 20:50:23.3±1.1,37.65N±0.03×36.22E±0.02,h3km±11km, n23,σ0°85/35,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ANDN	**Andirin**	**0.12**	**126**	*i* P		**Pg**	**20 50 24.9**	**-0.8**
ANDN				*i* S		**Sg**	**20 50 27.6**	**+0.2**
ANDN	**Andirin**	**0.12**	**126**	*i* P		**Pg**	**20 50 24.9**	**-0.8**
ANDN				*i* S		**Sg**	**20 50 27.6**	**+0.2**
KOZT	**Kozan**	**0.36**	**241**	*e*PG		**Pg**	**20 50 29.8**	**-0.4**
KOZT				*e*SG		**Sg**	**20 50 35.8**	**+1.0**
KOZT	**Kozan**	**0.36**	**241**	*e*Pg		**Pg**	**20 50 29.8**	**-0.4**
KOZT				*e*Sg		**Sg**	**20 50 35.8**	**+1.0**
AYKD	**Aykdinkavak**	**0.52**	**117**	*i* P		**Pg**	**20 50 32.5**	**-0.8**
AYKD				*i* S		**Sg**	**20 50 40.2**	**+0.1**
KMRS	**Kahramanmaras**	**0.56**	**105**	*e*PG		**Pg**	**20 50 33.1**	**-0.9**
KMRS	**Kahramanmaras**	**0.56**	**105**	*e*Pg		**Pg**	**20 50 33.1**	**-0.9**
SARI	**SarD1z-Kayseri**	**0.77**	**12**	*e*PG		**Pg**	**20 50 37.5**	**-0.6**
SARI				*e*SG		**Sg**	**20 50 49.1**	**+1.0**
SARI	**SarD1z-Kayseri**	**0.77**	**12**	*e*Pg		**Pg**	**20 50 37.5**	**-0.6**
GAZ	**Gaziantep**	**0.92**	**121**	*e*PG		**Pg**	**20 50 40.1**	**-0.9**
GAZ	**Gaziantep**	**0.92**	**121**	*e*Pg		**Pg**	**20 50 40.1**	**-0.9**
GZT	**Gaziantep**	**1.11**	**105**	*i* P		**Pg**	**20 50 44.9**	**+0.3**
GZT				*i* S		**Sn**	**20 51 01.7**	**0.0**
KUZU	**Kuzuini**	**1.11**	**142**	*i* P		**Pg**	**20 50 44.7**	**+0.1**
KUZU				*i* S		**Sb**	**20 51 00.2**	**+0.1**
KUZU	**Kuzuini**	**1.11**	**142**	*i* P		**Pg**	**20 50 44.7**	**+0.1**
KUZU				*i* S		**Sb**	**20 51 00.2**	**+0.1**
COBT	**Iskenderun**	**1.13**	**179**	*i* P		**Pg**	**20 50 45.0**	**0.0**
COBT				*i* S		**Sb**	**20 51 01.0**	**+0.2**
COBT	**Iskenderun**	**1.13**	**179**	*i* P		**Pg**	**20 50 45.0**	**0.0**
COBT				*i* S		**Sb**	**20 51 01.0**	**+0.2**
BNN	**Bunyan**	**1.23**	**346**	*e*PN		**Pg**	**20 50 46.4**	**-0.6**
BNN	**Bunyan**	**1.23**	**346**	*e*Pn		**Pg**	**20 50 46.4**	**-0.6**
DARE	**Darende-Malaty**	**1.35**	**47**	*e*PN		**Pn**	**20 50 48.4**	**-0.8**
NIG	**Nigde**	**1.35**	**290**	*e*PN		**Pn**	**20 50 48.5**	**-0.9**
NIG	**Nigde**	**1.35**	**290**	*e*Pn		**Pn**	**20 50 48.5**	**-0.9**
AKCD	**Akcadag**	**1.49**	**64**	*i* P		**Pn**	**20 50 51.2**	**+0.1**
AKCD				*i* S		**Sg**	**20 51 14.4**	**+3.2**
AKCD	**Akcadag**	**1.49**	**64**	*i* P		**Pn**	**20 50 51.2**	**+0.1**

KRSC 29 20:50:34.6±1.1,55.33N×160.64E,h200km±30km,ML3.6, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TUMR	**Tumrok**	**0.29**	**261**	P		Pn	20 51 02.2	+1.0
KMNR	**Kamenistaya**	**0.48**	**332**	P		Pn	20 51 02.3	+0.6
KMNR				S		Sn	20 51 22.5	-0.4
MKZ	**Mys Kozlova**	**1.00**	**141**	P		Pn	20 51 05.4	+1.1
MKZ				S		Sn	20 51 27.9	+0.7
KBTR	**Krutoberegovo**	**1.51**	**54**	P		Pn	20 51 09.4	+1.1
SPN	**Mys Shipunski**	**2.27**	**189**	P		Pn	20 51 16.6	+0.7
NLC	**Nalytchevo**	**2.29**	**200**	S		Sn	20 51 48.8	+0.3
SDLR	**Sedlovina**	**2.30**	**207**	P		Pn	20 51 17.8	+1.4
SMAR	**Somma**	**2.33**	**208**	P		Pn	20 51 17.7	+0.8
UGLR	**Uglovaya**	**2.38**	**207**	P		Pn	20 51 19.4	+2.1

*IDC **29** 21:10:22.6±1.0, 12.17S×122.12E, h0km, mb3.8/5, mb1 4.0/9, mb1mx3.7/21, mbtmp3.9/9, ML3.8/4, MS2.7/1, Ms1 2.7/1, ms1mx2.2/29, Error ellipse: s-maj=47.2km s-min=18.0km az=67.0*
*ISCJB **29** 21:10:24.2±0.6, 12.35S±0.05×122.08E±0.06, h33km, mb3.6/4, Error ellipse: s-maj=8.5km s-min=6.6km az=140.2*
*AUST **29** 21:10:27.9, 12.50S×121.98E, h35km*
ISC 29 21:10:26.7±0.8,12.38S±0.07×122.03E±0.08,h35km,n21, σ1°96/20,mb3.7/4,South of Timor

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**6.67**	**149**	Pn		**Pn**	**21 12 03.6**	**+1.3**
	1.1nm,0.3s,baz=333,slow=13,SNR=52							
FITZ				Sn		**Sn**	**21 13 17.5**	**+0.3**
	8.4nm,0.3s,baz=173,slow=18,SNR=14							
FITZ				LR		LR	21 14 36.2	
	comp=Z,63nm,20.5s,baz=64,slow=37							
FITZ	**Fitzroy Crossi**	**6.67**	**149**	P		**Pn**	**21 12 04.3**	**+2.0**
	baz=6.6,SNR=12							
FITZ				S		**Sn**	**21 13 17.2**	**0.0**
	baz=6.6,SNR=6.0							
KNRA	**Kununurra**	**7.31**	**117**	P		**Pn**	**21 12 13.9**	**+2.9**
	baz=7.3,SNR=42							
KAPI	**Kappang**	**7.65**	**343**	Pn		**Pn**	**21 12 14.2**	**-1.7**
	1.2nm,0.3s,baz=168,slow=14,SNR=9.1							
JAGI	**Jajag, Banyuwa**	**8.67**	**296**	P		Pn	21 12 23.4	-6.4
	baz=8.7,SNR=15							
JAGI				S		Sn	21 13 51.6	-15
	baz=8.7,SNR=4.8							
MTN	**Manton Dam**	**8.90**	**94**	P		Pn	21 12 38.0	+5.1
	baz=8.9,SNR=4.0							
MTN				S		**Sn**	**21 14 11.5**	**-0.4**
	baz=8.9,SNR=7.2							
KDU	**Kakadu**	**10.20**	**93**	P		Pn	21 12 54.6	+3.8
	baz=10,SNR=5.0							
KDU				S		**Sn**	**21 14 43.7**	**-0.3**
	baz=10,SNR=4.2							
GIRL	**Giralia**	**12.63**	**215**	P		P	21 13 29.0	-5.9
	baz=12,SNR=3.0							
WRA	**Warramunga Arr**	**14.01**	**124**	Pn		**Pn**	**21 13 41.9**	**-0.9**
	0.5nm,0.3s,baz=297,slow=14,SNR=11							
WRA				Sn		Sn	21 16 11.1	-6.1
	0.9nm,0.3s,baz=300,slow=25,SNR=7.2							
MEEK	**Meekatharra**	**14.55**	**192**	P		**Pn**	**21 13 48.1**	**-2.0**
	baz=14,SNR=47							
MEEK				S		Sn	21 16 17.6	-13
	baz=14,SNR=6.0							
ASAR	**Alice Springs**	**15.91**	**137**	Pn		**Pn**	**21 14 08.7**	**+0.6**
	0.7nm,0.3s,baz=313,slow=12,SNR=89							
ASAR				Sn		**Sn**	**21 16 57.8**	**-5.7**
	0.4nm,0.3s,baz=306,slow=21,SNR=9.4							
MORW	**Morawa**	**17.52**	**198**	P		**Pn**	**21 14 26.9**	**-1.5**
	baz=18,SNR=7.8							
MORW				S		Sn	21 17 25.6	-17
	baz=18,SNR=9.5							
MMPI	**Merauke**	**18.46**	**80**	S		S	21 18 38.3	+30
	baz=18,SNR=3.6							
BLDU	**Baliidu**	**18.81**	**194**	P		**Pn**	**21 14 43.7**	**-0.3**
	baz=19,SNR=11							
NWAO	**Narrogin (SRO)**	**20.92**	**191**	P		Pn	21 15 10.0	+0.9
	3.7nm,0.4s,baz=18,slow=13,SNR=10							
PPI	**Padang Panjang**	**24.51**	**297**	S		**S**	**21 20 02.1**	**+0.6**
	baz=25,SNR=5.2							
STKA	**Stephens Creek**	**26.47**	**140**	P		**P**	**21 16 03.3**	**+2.6**
	1.0nm,0.7s,baz=309,slow=13,SNR=3.1							
USRK	**Ussuriysk Arra**	**57.03**	**9**	P		**P**	**21 20 09.1**	**+0.1**
	1.0nm,0.7s,baz=208,slow=8.6,SNR=3.3							
MKAR	**Makanchi Array**	**68.81**	**332**	P		**P**	**21 21 28.2**	**+0.8**
	0.3nm,0.5s,baz=150,slow=7.0,SNR=5.9							
ZALV	**Zalesovo Beam**	**73.25**	**338**	P		**P**	**21 21 54.2**	**+0.1**
	0.4nm,0.4s,baz=122,slow=5.4,SNR=3.1							
TORD	**Torodi Ar. Bea**	**121.93**	**278**	PKP		**PKPdf**	**21 29 18.4**	**0.0**
	0.2nm,0.5s,baz=102,slow=1.8,SNR=2.6							

IDC 29 21:25:39.7±1.7,16.84S×178.25W,h0km,mb4.0/7, mb1 4.2/7,mb1mx3.9/20,mbtmp4.1/7,Error ellipse: s-maj=48.8km s-min=24.3km az=113.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
URZ	**Urewera**	**21.73**	**190**	P		P	21 30 33.4	+0.9
	5.6nm,0.5s,baz=33,slow=5.0,SNR=9.7							
STKA	**Stephens Creek**	**39.28**	**240**	P		P	21 33 10.2	-0.2
	1.9nm,0.5s,baz=92,slow=10,SNR=9.8							
WRA	**Warramunga Arr**	**44.98**	**258**	P		P	21 33 56.6	-0.5
	0.2nm,0.3s,baz=94,slow=7.1,SNR=5.2							
ASAR	**Alice Springs**	**45.23**	**253**	P		P	21 33 58.4	-0.8
	4.5nm,0.5s,baz=88,slow=8.2,SNR=102							
MJAR	**Matsushiro Arr**	**67.15**	**323**	P		P	21 36 36.4	+0.9
	1.4nm,0.7s,baz=163,slow=6.1,SNR=4.7							
PETK	**Petropavlovsk-**	**72.69**	**345**	P		P	21 37 10.2	+1.0
	1.4nm,0.7s,baz=132,slow=6.0,SNR=3.2							
ILAR	**Eielson Array**	**84.82**	**13**	P		P	21 38 14.0	-1.7
	0.2nm,0.3s,baz=224,slow=5.1,SNR=4.4							

*BJI **29** 21:28:10.9,30.86N×86.20E,h14km, mB4.9/6, mb4.3/12, Ms3.8/5, Ms7 3.8/5*
*NDI **29** 21:28:10.2±2.1,30.98N×87.33E, h33km, ML4.2*
*IDC **29** 21:28:11.6±0.7,30.83N×86.67E, h0km, mb4.0/19, mb1 4.1/21,mb1mx4.0/35,mbtmp3.9/21,ML2.9/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/35, Error ellipse: s-maj=22.4km s-min=14.6km az=45.0*
*DMN **29** 21:28:13.1±0.7,31.44N×86.75E, h10km, Ml4.5/5, Error ellipse: s-maj=14.4km s-min=7.5km az=30.0*
ISC 29 21:28:12.5±2.5,30.81N±0.05×86.62E±0.04,h5km±17km, n50,σ1°17/52,mb4.1/20,2C,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUN	**Gumba**	**2.97**	**193**	*e*Pn		**Pb**	**21 29 07.5**	**+1.5**
GUN				*e*Sn		**Sg**	**21 29 47.2**	**-0.6**
	714nm,0.8s							
KKN	**Kakani**	**3.23**	**202**	*e*Pn		**Pb**	**21 29 10.8**	**+0.3**
PKIN	**Phulchoki**	**3.40**	**199**	*e*Pn		**Pb**	**21 29 13.0**	**-0.4**
PKI	**Pulchoki**	**3.40**	**198**	*e*Pn		**Pb**	**21 29 13.3**	**-0.2**
DMN	**Daman**	**3.46**	**203**	*e*Pn		**Pb**	**21 29 14.3**	**-0.1**
DANN	**Dangsing**	**3.50**	**226**	*e*Pn		**Pb**	**21 29 13.8**	**-1.3**
DANN				*e*Sn		**Sb**	**21 29 56.9**	**-1.2**
	338nm,0.6s							
TAPN	**Taplejung**	**3.58**	**164**	*e*Pn		**Pb**	**21 29 15.3**	**-1.2**
TAPN				*e*Sn		**Sb**	**21 30 01.2**	**+0.8**
	499nm,0.7s							
TAPN				*e*Sn		**Sb**	**21 30 01.2**	**+0.8**
	510nm,0.7s							
RAMN	**Ramite**	**3.85**	**180**	*e*Pn		Pb	21 29 18.1	-3.0
ODAN	**Odare**	**4.00**	**170**	*e*Pn		Pb	21 29 20.6	-3.0
ODAN				*e*Sn		**Sb**	**21 30 11.1**	**-1.2**
	361nm,0.5s							
KOLN	**Koldanda**	**4.02**	**222**	*e*Pn		Pb	21 29 20.3	-3.7
LSA	**Lhasa**	**4.07**	**105**	Pn		Pb	21 29 21.0	-3.9
LSA				Sn		**Sb**	**21 30 15.0**	**+0.4**
LSA				LR		LR		
	comp=E,730nm,9.3s							
LSA				LR		LR		
	comp=Z,1μm,8.9s							
PYUN	**Piuthan**	**4.17**	**230**	*e*Pn		Pn	21 29 21.3	+4.4
DDI	**Dehra Dun**	**7.41**	**268**	*e*PKP		Pn	21 30 04.9	+3.6
DDI				*e*S		**Sn**	**21 31 27.3**	**+1.5**
DDI				AML		AML	21 31 32.1	
	comp=N,602nm,0.7s							
DDI				AML		AML	21 31 33.8	
	comp=E,428nm,0.7s							
SMLA	**Simla**	**8.13**	**275**	*i* P		**Pn**	**21 30 13.2**	**+2.1**
SMLA				*i* S		**Sn**	**21 31 44.1**	**+0.8**
SMLA				AML		AML	21 31 49.9	
	comp=E,105nm,0.6s							
SMLA				AML		AML	21 31 51.5	
	comp=Z,49nm,0.6s							
AGRA	**Agra**	**8.40**	**247**	*e*S		**Sn**	**21 31 48.6**	**-1.4**
AGRA				AML		AML	21 32 00.9	
	comp=E,63nm,0.4s							
AGRA				AML		AML	21 32 02.2	
	comp=N,75nm,0.3s							
KKR	**Kurukshetra**	**8.51**	**267**	*e*S		**Sn**	**21 31 53.9**	**+1.0**
AYAN	**Aya Nagar**	**8.59**	**257**	*e*S		**Sn**	**21 31 55.2**	**+0.5**
DHRM	**DHARAMSHALA**	**8.93**	**282**	*e*PKP		**Pn**	**21 30 23.4**	**+1.1**
DHRM				*e*S		**Sn**	**21 32 01.2**	**-2.3**
DHRM				AML		AML	21 32 09.3	
	comp=E,129nm,0.5s							
DHRM				AML		AML	21 32 10.1	
	comp=N,60nm,0.5s							
THN	**Thein Dam**	**9.44**	**283**	*e*S		**Sn**	**21 32 11.9**	**-3.7**
CHCP	**Chirah Chowk**	**11.66**	**288**	P		**Pn**	**21 30 59.6**	**0.0**
KSH	**Kashi**	**12.29**	**318**	P		**Pn**	**21 31 08.0**	**-0.3**
KSH				*e*SP			21 31 14.8	
KSH				PP		**PnPn**	**21 31 18.5**	**+2.4**
KSH				pmax		pmax		
	comp=Z,2.0nm,0.4s							
KSH				pmax		pmax		
	comp=Z,190nm,3.7s							
KSH				LR		LR		
	comp=N,810nm,15.3s							
KSH				LR		LR		
	comp=E,300nm,7.6s							
KSH				LR		LR		
	comp=Z,260nm,11.4s							
CEP	**Cherat**	**12.80**	**287**	P		Pn	21 31 09.3	-6.0
THW	**Thamme Wali**	**12.81**	**283**	P		**Pn**	**21 31 14.3**	**-1.1**
AAK	**Ala-Archa**	**15.27**	**324**	Pn		**Pn**	**21 31 51.0**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=195,slow=16,SNR=1.7							
MKAR	**Makanchi Array**	**16.30**	**349**	Pn		**Pn**	**21 32 01.1**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=159

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVOG	**Vogar**	**0.08**	**313**	P	Pg	21 33 49.8	-4.1
IVOG				S	**Sg**	**21 33 52.8**	**-3.0**
IVOG	**Vogar**	**0.08**	**313**	P	**Pg**	**21 33 51.2**	**-2.7**
IVOG				S	**Sg**	**21 33 52.8**	**-3.0**
IKRI	**Krysuvik**	**0.09**	**115**	P	**Pg**	**21 33 51.8**	**-2.2**
IKRI				S	**Sg**	**21 33 53.9**	**-2.2**
IGRV	**Grindav??k**	**0.10**	**235**	P	Pg	21 33 49.5	-4.7
IGRV	**Grindav??k**	**0.10**	**235**	P	Pg	21 33 50.7	-3.5
IGRV				S	**Sg**	**21 33 52.2**	**-4.1**
IKAS	**Kald??rsel**	**0.21**	**59**	P	**Pg**	**21 33 54.0**	**-1.8**
IKAS				S	**Sg**	**21 33 58.2**	**-0.7**
INYL	**Nylenda**	**0.22**	**286**	P	**Pg**	**21 33 53.0**	**-2.9**
INYL				S	**Sg**	**21 33 56.0**	**-3.1**
IVOS	**Vogsosar**	**0.26**	**104**	P	Pg	21 33 53.4	-3.2
IVOS				S	**Sg**	**21 33 59.2**	**-0.9**
IVOS	**Vogsosar**	**0.26**	**104**	P	**Pg**	**21 33 54.7**	**-1.9**
IVOS				S	**Sg**	**21 33 59.2**	**-0.9**
ISAN	**Sandskeio**	**0.34**	**65**	P	**Pg**	**21 33 56.1**	**-1.9**
ISAN				S	**Sg**	**21 34 01.8**	**-0.8**
IBJA	**Bjarnastaoir**	**0.42**	**86**	P	Pg	21 33 56.4	-3.3
IBJA	**Bjarnastaoir**	**0.42**	**86**	P	**Pg**	**21 33 57.8**	**-1.9**
IBJA				S	**Sg**	**21 34 04.4**	**-0.9**
IKUD	**Kuludalsa**	**0.44**	**22**	P	**Pg**	**21 33 57.6**	**-2.4**
IKUD				S	**Sg**	**21 34 04.5**	**-1.3**
IHEI	**Heioarbar**	**0.53**	**57**	P	Pg	21 33 58.0	-3.6
IHEI	**Heioarbar**	**0.53**	**57**	P	**Pg**	**21 33 59.3**	**-2.4**
IHEI				S	**Sg**	**21 34 07.6**	**-1.2**
IKRO	**Krokur**	**0.54**	**70**	P	**Pg**	**21 33 59.4**	**-2.3**
IKRO				S	**Sg**	**21 34 07.7**	**-1.1**
ISOL	**Solvholt**	**0.58**	**88**	P	Pg	21 33 58.8	-3.8
ISOL				S	**Sg**	**21 34 08.6**	**-1.7**
ISOL	**Solvholt**	**0.58**	**88**	P	**Pg**	**21 34 00.1**	**-2.5**
ISOL				S	**Sg**	**21 34 08.6**	**-1.7**
IASM	**Asmuli**	**0.73**	**96**	P	**Pg**	**21 34 02.5**	**-2.9**
IASM				S	**Sg**	**21 34 13.1**	**-1.9**
ISAU	**Saurbar**	**0.82**	**84**	P	Pg	21 34 04.0	-3.1
ISAU				S	**Sg**	**21 34 15.8**	**-1.9**
BORG	**Borgarnes**	**0.93**	**26**	*i* Pg	Pg	21 34 05.5	-3.6
BORG				*e*Sg	**Sg**	**21 34 17.9**	**-3.4**
BORG				Lg	Lg	21 34 18.7	
BORG	**Borgarnes**	**0.93**	**26**	Pg	Pg	21 34 05.8	-3.3
	1μm,0.3s,baz=205,slow=10.0,SNR=1984						
BORG				Lg	Lg	21 34 18.7	
	3μm,0.3s,baz=294,slow=20,SNR=72						
BORG	**Borgarnes**	**0.93**	**26**	*i* P	Pg	21 34 05.5	-3.6
BORG				*e*Sg	**Sg**	**21 34 17.9**	**-3.4**
BORG				S	**Sb**	**21 34 18.7**	**-2.7**
IGYG	**Gygjarholskot**	**0.97**	**67**	P	Pg	21 34 05.3	-4.6
IGYG	**Gygjarholskot**	**0.97**	**67**	P	Pg	21 34 06.4	-3.5
IGYG				S	**Sg**	**21 34 20.1**	**-2.5**
IVES	**Vestmannaeyjar**	**1.00**	**117**	P	Pb	21 34 06.5	-3.9
IVES				S	**Sg**	**21 34 20.1**	**-3.4**
IHAU	**Haukadalur**	**1.01**	**86**	P	Pb	21 34 06.9	-3.8
IHAU				S	**Sb**	**21 34 21.5**	**-2.4**
IMID	**Miomork**	**1.09**	**103**	S	**Sb**	**21 34 23.1**	**-2.9**
IGOD	**Go??abunga**	**1.33**	**100**	S	**Sb**	**21 34 30.6**	**-2.5**
IVAT	**Vatnsfell**	**1.50**	**78**	P	Pn	21 34 14.6	-3.2
SCO	**Scoresbysund**	**6.60**	**1**	*e*P	**Pn**	**21 35 27.2**	**-0.6**
SCO	**Scoresbysund**	**6.60**	**1**	*i* P	**Pn**	**21 35 27.2**	**-0.6**
SCO	**Scoresbysund**	**6.60**	**1**	*e*P	**Pn**	**21 35 27.2**	**-0.6**
JMIC	**Jan Mayen**	**8.82**	**31**	LR	LR	21 38 26.4	
	comp=Z,654nm,19.1s,baz=221,slow=31						
KPL	**Plockton**	**10.46**	**121**	*e*P	**Pn**	**21 36 19.8**	**-1.0**
KPL				AMB	AMB	21 36 24.7	
	comp=Z,103nm,3.5s						
KPL	**Plockton**	**10.46**	**121**	P	**Pn**	**21 36 19.8**	**-1.0**
KPL				AMB	AMB	21 36 24.7	
	comp=Z,103nm,3.5s						
KPL	**Plockton**	**10.46**	**121**	*e*P	**Pn**	**21 36 19.8**	**-1.0**
KAC	**Achnashellach**	**10.48**	**120**	*e*P	**Pn**	**21 36 20.4**	**-0.7**
KAC	**Achnashellach**	**10.48**	**120**	P	**Pn**	**21 36 20.4**	**-0.7**
KAC	**Achnashellach**	**10.48**	**120**	*e*P	**Pn**	**21 36 20.4**	**-0.7**
SUMG	**Summit**	**10.52**	**333**	*i* P	**Pn**	**21 36 21.6**	**-0.2**
SUMG	**Summit**	**10.52**	**333**	*e*Pn	**Pn**	**21 36 21.4**	**-0.4**
SUMG	**Summit**	**10.52**	**333**	*i* P	**Pn**	**21 36 21.6**	**-0.2**
SUMG				*i*		21 39 21.8	
SUMG	**Summit**	**10.52**	**333**	*e*Pn	**Pn**	**21 36 21.4**	**-0.4**
MVH1	**Achvaich**	**10.62**	**116**	*e*P	**Pn**	**21 36 22.9**	**-0.1**
MVH1	**Achvaich**	**10.62**	**116**	P	**Pn**	**21 36 22.9**	**-0.1**
MVH1	**Achvaich**	**10.62**	**116**	*e*P	**Pn**	**21 36 22.9**	**-0.1**
KSB	**Sheil Bridge**	**10.64**	**121**	*e*P	**Pn**	**21 36 22.6**	**-0.7**
KSB	**Sheil Bridge**	**10.64**	**121**	P	**Pn**	**21 36 22.6**	**-0.7**
KSB	**Sheil Bridge**	**10.64**	**121**	*e*P	**Pn**	**21 36 22.5**	**-0.7**
MDO	**Dochfour**	**10.88**	**118**	*e*P	**Pn**	**21 36 25.8**	**-0.8**
MDO	**Dochfour**	**10.88**	**118**	P	**Pn**	**21 36 25.8**	**-0.8**
MDO	**Dochfour**	**10.88**	**118**	*e*P	**Pn**	**21 36 25.8**	**-0.8**
MCD	**Coleburn Disti**	**11.22**	**116**	*e*P	**Pn**	**21 36 30.6**	**-0.6**
MCD	**Coleburn Disti**	**11.22**	**116**	P	**Pn**	**21 36 30.6**	**-0.6**
MCD	**Coleburn Disti**	**11.22**	**116**	*e*P	**Pn**	**21 36 30.6**	**-0.6**
MME1	**Meikle Cairn**	**11.52**	**116**	*e*P	**Pn**	**21 36 34.6**	**-0.7**
MME1	**Meikle Cairn**	**11.52**	**116**	P	**Pn**	**21 36 34.6**	**-0.7**
EAB	**Aberfoyle**	**11.80**	**123**	*e*P	**Pn**	**21 36 39.3**	**+0.2**
EAB	**Aberfoyle**	**11.80**	**123**	P	**Pn**	**21 36 39.4**	**+0.2**
EAB	**Aberfoyle**	**11.80**	**123**	*e*P	**Pn**	**21 36 39.3**	**+0.2**
DRUM	**Mains of Drumt**	**11.99**	**117**	*e*P	**Pn**	**21 36 40.5**	**-1.2**
DRUM	**Mains of Drumt**	**11.99**	**117**	P	**Pn**	**21 36 40.5**	**-1.2**
DRUM	**Mains of Drumt**	**11.99**	**117**	*e*P	**Pn**	**21 36 40.5**	**-1.2**
SFJD	**Kangerlussuaq**	**12.13**	**297**	*e*P	**Pn**	**21 36 42.8**	**-0.7**
SFJD	**Kangerlussuaq**	**12.13**	**297**	Pn	**Pn**	**21 36 41.1**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=84,slow=13,SNR=4.8						
SFJD				LR	LR	21 40 47.0	
	comp=Z,2μm,19.4s,baz=95,slow=35						
SFJD	**Kangerlussuaq**	**12.13**	**297**	*e*P	**Pn**	**21 36 42.8**	**-0.7**
EAU	**Auchinoon**	**12.39**	**122**	*e*P	**Pn**	**21 36 47.3**	**+0.2**
EAU	**Auchinoon**	**12.39**	**122**	P	**Pn**	**21 36 47.3**	**+0.2**
EAU	**Auchinoon**	**12.39**	**122**	*e*P	**Pn**	**21 36 47.3**	**+0.2**
EBL	**Broad Law**	**12.60**	**121**	*e*P	**Pn**	**21 36 49.5**	**-0.5**
EBL	**Broad Law**	**12.60**	**121**	P	**Pn**	**21 36 49.5**	**-0.5**
EBL	**Broad Law**	**12.60**	**121**	*e*P	**Pn**	**21 36 49.5**	**-0.5**
GAL1	**Galloway**	**12.69**	**127**	*e*P	**Pn**	**21 36 51.0**	**-0.2**
GAL1				AMB	AMB	21 36 53.6	
	comp=Z,54nm,2.9s						
GAL1	**Galloway**	**12.69**	**127**	P	**Pn**	**21 36 51.0**	**-0.2**
GAL1				AMB	AMB	21 36 53.6	
	comp=Z,54nm,2.9s						
GAL1	**Galloway**	**12.69**	**127**	*e*P	**Pn**	**21 36 51.0**	**-0.2**
GMM	**Mts of Mourne**	**12.78**	**132**	*e*P	**Pn**	**21 36 52.4**	**0.0**
GMM	**Mts of Mourne**	**12.78**	**132**	P	**Pn**	**21 36 52.4**	**0.0**
GMM	**Mts of Mourne**	**12.78**	**132**	*e*P	**Pn**	**21 36 52.4**	**0.0**
ESK	**Eskdalemuir**	**12.88**	**123**	*e*P	**Pn**	**21 36 53.7**	**-0.1**
ESK				AMB	AMB	21 36 56.2	
	comp=Z,32nm,1.0s						
ESK	**Eskdalemuir**	**12.88**	**123**	P	**Pn**	**21 36 53.7**	**-0.1**
ESK				AMB	AMB	21 36 56.2	
	comp=Z,32nm,1.0s						
ESK	**Eskdalemuir**	**12.88**	**123**	*e*P	**Pn**	**21 36 54.3**	**+0.5**
ESK	**Eskdalemuir**	**12.88**	**123**	*e*Pn	**Pn**	**21 36 54.3**	**+0.5**
ESK	**Eskdalemuir**	**12.88**	**123**	*e*P	**Pn**	**21 36 53.7**	**-0.1**
ESK	**Eskdalemuir**	**12.88**	**123**	*e*Pn	**Pn**	**21 36 54.3**	**+0.5**
EKA	**Eskdalemuir Ar**	**12.88**	**123**	Pn	**Pn**	**21 36 53.3**	**-0.6**
EKA	**Eskdalemuir Ar**	**12.88**	**123**	Pn	**Pn**	**21 36 53.3**	**-0.6**
	baz=320,slow=12,SNR=40						
EKA	**Eskdalemuir Ar**	**12.88**	**123**	P	**Pn**	**21 36 53.3**	**-0.6**
ECK	**Cauldkaine Hil**	**13.01**	**123**	*e*P	**Pn**	**21 36 55.6**	**-0.1**
ECK	**Cauldkaine Hil**	**13.01**	**123**	P	**Pn**	**21 36 55.6**	**-0.1**
ECK	**Cauldkaine Hil**	**13.01**	**123**	*e*P	**Pn**	**21 36 55.6**	**-0.1**
DCN	**Croghan**	**13.12**	**137**	⇑*i*P	Pn	21 37 00.8	+3.7
VAL	**Valentia**	**13.56**	**147**	*e*P	**P**	**21 37 10.3**	**-1.9**
WPM1	**Penmaenmawr**	**14.27**	**130**	*e*P	**Pn**	**21 37 12.7**	**-0.1**
WPM1	**Penmaenmawr**	**14.27**	**130**	P	**Pn**	**21 37 12.7**	**-0.1**
HLM1	**Long Mynd**	**15.23**	**129**	*e*P	**Pn**	**21 37 25.1**	**-0.8**
HLM1				AMB	AMB	21 37 26.9	
	comp=Z,72nm,2.7s						
HLM1	**Long Mynd**	**15.23**	**129**	P	**Pn**	**21 37 25.1**	**-0.8**
HLM1				AMB	AMB	21 37 26.9	
	comp=Z,72nm,2.7s						
NOA	**NORSAR Array B**	**15.63**	**85**	Pn	**P**	**21 37 33.2**	**-2.0**
NOA	**NORSAR Array B**	**15.63**	**85**	Pn	**P**	**21 37 33.2**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=291,slow=13,SNR=4.9						
NOA				LR	LR	21 43 20.3	
	comp=Z,276nm,18.6s,baz=290,slow=36						
MCH1	**Michaelchurch**	**15.63**	**131**	*e*P	**Pn**	**21 37 30.9**	**-0.1**
MCH1				AMB	AMB	21 37 33.2	
	comp=Z,47nm,1.9s						
MCH1	**Michaelchurch**	**15.63**	**131**	P	**Pn**	**21 37 30.9**	**-0.1**
MCH1				AMB	AMB	21 37 33.2	
	comp=Z,47nm,1.9s						
HEX	**Exmoor**	**16.16**	**134**	*e*P	**Pn**	**21 37 37.7**	**-0.2**
HEX	**Exmoor**	**16.16**	**134**	P	**Pn**	**21 37 37.7**	**-0.2**
HFS	**Hagfors**	**17.13**	**86**	LR	LR	21 44 25.7	
	comp=Z,409nm,18.7s,baz=294,slow=37						
MUD	**Monsted U'grnd**	**17.16**	**101**	*i* P	**P**	**21 37 52.1**	**0.0**
MUD	**Monsted U'grnd**	**17.16**	**101**	*i* P	**P**	**21 37 52.1**	**0.0**
MUD	**Monsted U'grnd**	**17.16**	**101**	*i* P	**P**	**21 37 52.1**	**0.0**
SPITS	**Spitsbergen Ar**	**18.39**	**24**	LR	LR	21 43 18.2	
	comp=Z,387nm,21.9s,baz=255,slow=31						
ROSF	**Rostrenen**	**18.73**	**137**	⇑*i*P	**P**	**21 38 07.5**	**-2.0**
	comp=Z,100nm,1.0s						
ROSF	**Rostrenen**	**18.73**	**137**	⇑*i*P	**P**	**21 38 07.5**	**-2.0**
ROSF				pmax	pmax		
	comp=Z,100nm,1.0s						
ROSF	**Rostrenen**	**18.73**	**137**	⇑*i*P	**P**	**21 38 07.5**	**-2.0**
	comp=Z,100nm,1.0s						
ROSF	**Rostrenen**	**18.73**	**137**	⇑*i*P	**P**	**21 38 07.5**	**-2.0**
	comp=Z,50nm,1.0s						
SGMF	**Saint Gilles**	**19.02**	**136**	⇑*i*P	**P**	**21 38 11.8**	**-0.8**
	comp=Z,53nm,0.9s						
SGMF	**Saint Gilles**	**19.02**	**136**	⇑*i*P	**P**	**21 38 11.8**	**-0.8**
SGMF				pmax	pmax		
	comp=Z,53nm,0.9s						
SGMF	**Saint Gilles**	**19.02**	**136**	⇑*i*P	**P**	**21 38 11.8**	**-0.8**
	comp=Z,53nm,0.9s						
SGMF	**Saint Gilles**	**19.02**	**136**	⇑*i*P	**P**	**21 38 11.8**	**-0.8**
	comp=Z,26nm,0.9s						
COP	**Copenhagen**	**19.07**	**99**	*i* P	**Pn**	**21 38 14.1**	**+0.2**
COP	**Copenhagen**	**19.07**	**99**	*i* P	**Pn**	**21 38 14.1**	**+0.2**
QUIF	**Quistinic**	**19.14**	**138**	*e*P	**P**	**21 38 13.7**	**-0.2**
	comp=Z,71nm,1.1s						
QUIF	**Quistinic**	**19.14**	**138**	*e*P	**P**	**21 38 13.7**	**-0.2**
QUIF				pmax	pmax		
	comp=Z,71nm,1.1s						
QUIF	**Quistinic**	**19.14**	**138**	*e*P	**P**	**21 38 13.7**	**-0.2**
	comp=Z,71nm,1.1s						
QUIF	**Quistinic**	**19.14**	**138**	*e*P	**P**	**21 38 13.7**	**-0.2**
	comp=Z,36nm,1.1s						
ARCES	**ARCESS Array B**	**19.23**	**52**	P	**Pn**	**21 38 16.6**	**+0.8**
ARCES	**ARCESS Array B**	**19.23**	**52**	P	**Pn**	**21 38 16.6**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=281,slow=9.1,SNR=4.0						
ARCES				LR	LR	21 44 24.5	
	comp=Z,757nm,18.2s,baz=247,slow=33						
ARCES	**ARCESS Array B**	**19.23**	**52**	P	**Pn**	**21 38 16.6**	**+0.8**
FLN	**La Foliniere**	**19.24**	**132**	*e*P	**P**	**21 38 14.6**	**-0.3**
	comp=Z,87nm,0.8s						
FLN				*e*R			
	comp=Z,1μm,21.2s						
FLN	**La Foliniere**	**19.24**	**132**	*e*P	**P**	**21 38 14.6**	**-0.3**
FLN				pmax	pmax		
	comp=Z,87nm,0.8s						
FLN	**La Foliniere**	**19.24**	**132**	*e*P	**P**	**21 38 14.6**	**-0.3**
	comp=Z,87nm,0.8s						
FLN	**La Foliniere**	**19.24**	**132**	*e*P	**P**	**21 38 14.6**	**-0.3**
	comp=Z,44nm,0.8s						
WTSB	**Winterswijk**	**19.30**	**115**	*e*P	**P**	**21 38 15.4**	**-0.2**
	comp=Z,29nm,1.3s						
BSEG	**Bad Segeberg**	**19.33**	**106**	*e*P	**P**	**21 38 15.2**	**-0.7**
	comp=Z,59nm,1.2s						
BSEG				*e*L	L	21 45 09.0	
	comp=Z,651nm,20.8s						
BSEG	**Bad Segeberg**	**19.33**	**106**	*e*P	**P**	**21 38 15.2**	**-0.7**
BSEG				pmax	pmax		
	comp=Z,59nm,1.2s						
BSEG				MLR	MLR		
	comp=Z,700nm,20.8s						
BSEG	**Bad Segeberg**	**19.33**	**106**	*e*P	**P**	**21 38 15.2**	**-0.7**
	comp=Z,700nm,20.8s						
IBBN	**Ibbenburen**	**19.43**	**113**	*e*P	**Pn**	**21 38 18.8**	**+0.5**
	comp=Z,50nm,1.5s						
IBBN				*e*L	L	21 45 22.6	
	comp=Z,345nm,21.5s						
GRR	**Gorron**	**19.44**	**133**	*e*P	**P**	**21 38 17.6**	**+0.4**
	comp=Z,46nm,1.0s						
GRR	**Gorron**	**19.44**	**133**	*e*P	**P**	**21 38 17.6**	**+0.4**
GRR				pmax	pmax		
	comp=Z,46nm,1.0s						
GRR	**Gorron**	**19.44**	**133**	*e*P	**P**	**21 38 17.6**	**+0.4**
	comp=Z,46nm,1.0s						
GRR	**Gorron**	**19.44**	**133**	*e*P	**P**	**21 38 17.6**	**+0.4**
	comp=Z,23nm,1.0s						
LDF	**La Druitiere**	**19.50**	**131**	*e*P	**P**	**21 38 18.2**	**+0.3**
	comp=Z,38nm,0.9s						
LDF	**La Druitiere**	**19.50**	**131**	*e*P	**P**	**21 38 18.2**	**+0.3**
LDF				pmax	pmax		
	comp=Z,38nm,0.9s						
LDF	**La Druitiere**	**19.50**	**131**	*e*P	**P**	**21 38 18.2**	**+0.3**
	comp=Z,38nm,0.9s						
LDF	**La Druitiere**	**19.50**	**131**	*e*P	**P**	**21 38 18.2**	**+0.3**
	comp=Z,19nm,0.9s						
KEV	**Kevo**	**19.73**	**51**	*e*P	**Pn**	**21 38 25.2**	**+3.5**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KEV	**Kevo**	**19.73**	**51**	*e*p	**Pn**	**21 38 25.2**	**+3.5**
	comp=Z,6.2nm,0.6s						
BEBN	**Eben Emael**	**19.77**	**118**	P	**Pn**	**21 38 22.1**	**-0.2**
	comp=Z,14nm,1.2s						
BEBN	**Eben Emael**	**19.77**	**118**	P	**Pn**	**21 38 22.0**	**-0.2**
	comp=Z,14nm,1.2s						
BAIF	**Baives**	**19.80**	**122**	*e*P	**P**	**21 38 21.0**	**-0.1**
	comp=Z,105nm,0.8s						
BAIF	**Baives**	**19.80**	**122**	*e*P	**P**	**21 38 21.0**	**-0.1**
BAIF				pmax	pmax		
	comp=Z,105nm,0.8s						
BAIF	**Baives**	**19.80**	**122**	*e*P	**P**	**21 38 21.0**	**-0.1**
	comp=Z,105nm,0.8s						
BAIF	**Baives**	**19.80**	**122**	*e*P	**P**	**21 38 21.0**	**-0.1**
	comp=Z,53nm,0.8s						
HGN	**Heimansgroeve**	**19.89**	**118**	*e*P	**Pn**	**21 38 23.7**	**-0.1**
	comp=Z,10nm,0.8s						
HGN	**Heimansgroeve**	**19.89**	**118**	*e*P	**Pn**	**21 38 23.7**	**-0.1**
	comp=Z,10nm,0.8s						
BUG	**Bochum--Univer**	**19.90**	**115**	*e*P	**P**	**21 38 21.8**	**-0.3**
	comp=Z,31nm,0.9s						
BUG				*e*L	L	21 45 47.3	
	comp=Z,673nm,20.9s						
DOU	**Dourbes**	**19.92**	**121**	P	**P**	**21 38 22.1**	**-0.3**
	comp=Z,17nm,1.4s						
DOU	**Dourbes**	**19.92**	**121**	P	**P**	**21 38 22.1**	**-0.3**
	comp=Z,17nm,1.4s						
BCLA	**Clavier**	**19.93**	**120**	P	**Pn**	**21 38 23.7**	**-0.5**
	comp=Z,7.9nm,0.9s						
BCLA	**Clavier**	**19.93**	**120**	P	**Pn**	**21 38 23.6**	**-0.5**
	comp=Z,7.9nm,0.9s						
GIVF	**Givet**	**20.00**	**121**	*e*P	**P**	**21 38 23.3**	**0.0**
	comp=Z,50nm,0.9s						
GIVF	**Givet**	**20.00**	**121**	*e*P	**P**	**21 38 23.3**	**0.0**
GIVF				pmax	pmax		
	comp=Z,50nm,0.9s						
GIVF	**Givet**	**20.00**	**121**	*e*P	**P**	**21 38 23.3**	**0.0**
	comp=Z,50nm,0.9s						
GIVF	**Givet**	**20.00**	**121**	*e*P	**P**	**21 38 23.3**	**0.0**
	comp=Z,25nm,0.9s						
MEM	**Membach**	**20.05**	**118**	P	Pn	21 38 25.3	-0.3
	comp=Z,19nm,1.0s						
MEM	**Membach**	**20.05**	**118**	P	Pn	21 38 25.2	-0.4
	comp=Z,19nm,1.0s						
FRB	**Frobisher Bay**	**20.07**	**291**	P	**P**	**21 38 23.0**	**-0.9**
FRB	**Frobisher Bay**	**20.07**	**291**	P	**P**	**21 38 23.0**	**-0.9**
	comp=Z,6.9nm,1.0s,baz=77,slow=10.0,SNR=3.0						
FRB				LR	LR	21 45 22.2	
	comp=Z,705nm,20.8s,baz=40,slow=35						
FRB	**Frobisher Bay**	**20.07**	**291**	P	**P**	**21 38 23.0**	**-0.9**
NRDL	**Niedersach Rie**	**20.27**	**109**	*e*P	**P**	**21 38 26.1**	**0.0**
	comp=Z,46nm,1.4s						
NRDL				*e*L	L	21 46 43.6	
	comp=Z,635nm,19.7s						
WLF	**Walferdange**	**20.86**	**120**	P	**P**	**21 38 33.2**	**+0.6**
	comp=Z,14nm,1.2s						
WLF	**Walferdange**	**20.86**	**120**	*e*P	**P**	**21 38 32.8**	**+0.2**
	comp=Z,28nm,1.2s						
WLF				*e*L	L	21 45 50.7	
	comp=Z,570nm,21.9s						
WLF	**Walferdange**	**20.86**	**120**	*e*P	**P**	**21 38 32.3**	**-0.3**
WLF				pmax	pmax		
	comp=Z,16nm,0.8s						
WLF	**Walferdange**	**20.86**	**120**	*e*P	**P**	**21 38 32.3**	**-0.3**
	comp=Z,16nm,0.8s						
WLF	**Walferdange**	**20.86**	**120**	*e*P	**P**	**21 38 32.3**	**-0.3**
	comp=Z,16nm,0.8s						
RUP	**Ruppelstein**	**21.18**	**118**	*e*P	**P**	**21 38 36.5**	**+0.4**
RUP	**Ruppelstein**	**21.18**	**118**	*e*P	**P**	**21 38 36.5**	**+0.4**
RUP	**Ruppelstein**	**21.18**	**118**	*e*P	**P**	**21 38 36.5**	**+0.4**
ABH	**Alteburg**	**21.23**	**117**	*e*P	**P**	**21 38 36.7**	**+0.1**
ABH	**Alteburg**	**21.23**	**117**	*e*P	**P**	**21 38 36.7**	**+0.1**
MFF	**Saint Martin d**	**21.24**	**134**	⇑*i*P	**P**	**21 38 36.3**	**-0.5**
	comp=Z,47nm,1.0s						
MFF	**Saint Martin d**	**21.24**	**134**	⇑*i*P	**P**	**21 38 36.3**	**-0.5**
MFF				pmax	pmax		
	comp=Z,47nm,1.0s						
MFF	**Saint Martin d**	**21.24**	**134**	⇑*i*P	**P**	**21 38 36.3**	**-0.5**
	comp=Z,24nm,1.0s						
TNS	**Taunus Mts**	**21.31**	**116**	*e*P	**P**	**21 38 37.7**	**+0.1**
	comp=Z,72nm,1.4s						
TNS				*e*L	L	21 47 22.0	
	comp=Z,1μm,18.0s						
TNS	**Taunus Mts**	**21.31**	**116**	*e*P	**P**	**21 38 37.7**	**+0.1**
TNS				pmax	pmax		
	comp=Z,72nm,1.4s						
TNS				MLR	MLR		
	comp=Z,1μm,18.0s						
TNS	**Taunus Mts**	**21.31**	**116**	*e*P	**P**	**21 38 37.7**	**+0.1**
	comp=Z,1μm,18.0s						
MEZF	**Maizieres J'vi**	**21.40**	**123**	⇑*i*P	**P**	**21 38 38.4**	**0.0**
	comp=Z,138nm,1.0s						
MEZF	**Maizieres J'vi**	**21.40**	**123**	⇑*i*P	**P**	**21 38 38.4**	**0.0**
	comp=Z,138nm,1.0s						
MEZF	**Maizieres J'vi**	**21.40**	**123**	⇑*i*P	**P**	**21 38 38.4**	**0.0**
	comp=Z,69nm,1.0s						
UBBA	**Unterbreizbach**	**21.48**	**112**	*e*P	**P**	**21 38 39.9**	**+0.8**
	comp=Z,24nm,1.1s						
UBBA				*e*L	L	21 46 48.4	
	comp=Z,335nm,21.2s						
HYF	**Humbligny**	**21.58**	**129**	*e*P	**P**	**21 38 39.5**	**-0.9**
HYF	**Humbligny**	**21.58**	**129**	*e*P	**P**	**21 38 39.5**	**-0.9**
HYF	**Humbligny**	**21.58**	**129**	*e*P	**P**	**21 38 39.5**	**-0.9**
PAGF	**Fort de Pagny**	**21.60**	**122**	⇑*i*P	**P**	**21 38 40.9**	**+0.3**
	comp=Z,34nm,1.1s						
PAGF	**Fort de Pagny**	**21.60**	**122**	⇑*i*P	**P**	**21 38 40.9**	**+0.3**
	comp=Z,34nm,1.1s						
PAGF	**Fort de Pagny**	**21.60**	**122**	⇑*i*P	**P**	**21 38 40.9**	**+0.3**
	comp=Z,17nm,1.1s						
SFTF	**Sexfontaines**	**21.64**	**124**	⇑*i*P	**P**	**21 38 40.9**	**-0.1**
	comp=Z,234nm,1.3s						
SFTF	**Sexfontaines**	**21.64**	**124**	⇑*i*P	**P**	**21 38 40.9**	**-0.1**
	comp=Z,234nm,1.3s						
SFTF	**Sexfontaines**	**21.64**	**124**	⇑*i*P	**P**	**21 38 40.9**	**-0.1**
	comp=Z,117nm,1.3s						
KAF	**Kangasniemi**	**21.69**	**73**	*e*P	**P**	**21 38 41.3**	**-0.1**
KAF	**Kangasniemi**	**21.69**	**73**	*e*p	**P**	**21 38 41.3**	**-0.1**
	comp=Z,5.0nm,0.6s						
KAF	**Kangasniemi**	**21.69**	**73**	*e*P	**P**	**21 38 41.3**	**-0.1**
	comp=Z,5.0nm,0.6s						
RUE	**Ruedersdorf**	**21.83**	**105**	*e*P	**P**	**21 38 43.0**	**0.0**
	comp=Z,61nm,1.1s						
RUE	**Ruedersdorf**	**21.83**	**105**	*e*P	**P**	**21 38 43.0**	**0.0**
	comp=Z,61nm,1.1s						
FINES	**FINESS Array B**	**21.90**	**74**	P	**P**	**21 38 45.1**	**+1.5**
FINES	**FINESS Array B**	**21.90**	**74**	P	**P**	**21 38 45.1**	**+1.5**
	comp=Z,22nm,0.9s,baz=307,slow=9.7,SNR=23						
FINES				LR	LR	21 47 20.8	
	comp=Z,306nm,18.8s,baz=291,slow=37						
FINES	**FINESS Array B**	**21.90**	**74**	P	**P**	**21 38 45.2**	**+1.5**
TOD	**Tromm**	**21.94**	**116**	*e*P	**P**	**21 38 44.1**	**-0.2**
TOD	**Tromm**	**21.94**	**116**	*e*P	**P**	**21 38 44.1**	**-0.2**
TOD	**Tromm**	**21.94**	**116**	*e*P	**P**	**21 38 44.1**

ECH **Echery** 22.43 121 *e*P P 21 38 49.5 0.0
ECH **Echery** 22.43 121 *e*P P 21 38 49.5 0.0
SMF **Signal de Mont** 22.54 128⇑*i*P P 21 38 49.7 -0.9
comp=Z,53nm,1.0s
SMF **Signal de Mont** 22.54 128⇑*i*P P 21 38 49.7 -0.9
SMF pmax pmax
comp=Z,53nm,1.0s
SMF **Signal de Mont** 22.54 128⇑*i*P P 21 38 49.7 -0.9
comp=Z,53nm,1.0s
SMF **Signal de Mont** 22.54 128⇑*i*P P 21 38 49.7 -0.9
comp=Z,26nm,1.0s
HINF **Hinteralfeld** 22.64 122⇑*i*P P 21 38 51.7 -0.1
comp=Z,82nm,1.2s
HINF **Hinteralfeld** 22.64 122⇑*i*P P 21 38 51.7 -0.1
HINF pmax pmax
comp=Z,82nm,1.2s
HINF **Hinteralfeld** 22.64 122⇑*i*P P 21 38 51.7 -0.1
comp=Z,82nm,1.2s
HINF **Hinteralfeld** 22.64 122⇑*i*P P 21 38 51.7 -0.1
comp=Z,411nm,1.2s
MOF **Molkenrain** 22.72 121 *e*P P 21 38 52.7 +0.1
MOF **Molkenrain** 22.72 121 *e*P P 21 38 52.7 +0.1
MOF **Molkenrain** 22.72 121 *e*P P 21 38 52.7 +0.1
MOF **Molkenrain** 22.72 121 *e*P P 21 38 52.7 +0.1
STU **Stuttgart** 22.76 117 *e*P P 21 38 53.6 +0.6
comp=Z,61nm,0.9s
STU *e*L L 21 47 35.1
comp=Z,880nm,20.7s
STU **Stuttgart** 22.76 117 *e*P P 21 38 53.6 +0.6
STU pmax pmax
comp=Z,61nm,1.0s
STU **Stuttgart** 22.76 117 *e*P P 21 38 53.6 +0.6
comp=Z,61nm,1.0s
STU **Stuttgart** 22.76 117 *e*P P 21 38 53.6 +0.6
comp=Z,61nm,1.0s
BFO **Black Forest** 22.78 119 *e*P P 21 38 53.5 +0.2
comp=Z,35nm,1.0s
BFO *e*L L 21 47 02.2
comp=Z,535nm,21.2s
BFO **Black Forest** 22.78 119 *e*P P 21 38 53.5 +0.2
BFO pmax pmax
comp=Z,35nm,1.0s
BFO MLR MLR
comp=Z,500nm,21.2s
BFO **Black Forest** 22.78 119 *e*P P 21 38 52.8 -0.5
BFO **Black Forest** 22.78 119 *e*P P 21 38 53.5 +0.2
comp=Z,500nm,21.2s
TANN **Tannenbergstha** 22.80 110 *e*P P 21 38 54.1 +0.6
comp=Z,37nm,1.0s
TANN *e*L L 21 47 17.9
comp=Z,470nm,22.0s
AGO **Saint Agoulin** 22.80 130 *e*P P 21 38 53.7 +0.2
AGO **Saint Agoulin** 22.80 130 *e*P P 21 38 53.7 +0.2
AGO **Saint Agoulin** 22.80 130 *e*P P 21 38 53.7 +0.2
GRA1 **Grafenberg Arr** 22.85 113 *e*P P 21 38 55.0 +1.1
comp=Z,300nm,22.0s
GRF **Grafenberg Arr** 22.85 113 *e*P P 21 38 55.0 +1.1
comp=Z,64nm,1.5s
GRF *e*L L 21 47 07.2
comp=Z,260nm,22.0s
GRF **Grafenberg Arr** 22.85 113 *e*P P 21 38 55.0 +1.1
GRF pmax pmax
comp=Z,64nm,1.5s
GRF MLR MLR
comp=Z,300nm,22.0s
RJF **Les Rejaudoux** 22.93 133 *e*P P 21 38 53.7 -1.1
comp=Z,34nm,0.8s
RJF *e*R
comp=Z,1μm,22.2s
RJF **Les Rejaudoux** 22.93 133 *e*P P 21 38 53.7 -1.1
RJF pmax pmax
comp=Z,34nm,0.8s
RJF **Les Rejaudoux** 22.93 133 *e*P P 21 38 53.7 -1.1
comp=Z,34nm,0.8s
RJF **Les Rejaudoux** 22.93 133 *e*P P 21 38 53.7 -1.1
comp=Z,17nm,0.8s
NKC **Novy Kostel** 22.93 110 *e*P P 21 38 54.4 -0.4
NKC **Novy Kostel** 22.93 110 *e*P P 21 38 54.4 -0.4
NKC **Novy Kostel** 22.93 110 *e*P P 21 38 54.4 -0.4
LFF **La Frestale** 23.01 135 *e*P P 21 38 54.8 -0.8
comp=Z,62nm,1.0s
LFF **La Frestale** 23.01 135 *e*P P 21 38 54.8 -0.8
LFF pmax pmax
comp=Z,62nm,1.0s
LFF **La Frestale** 23.01 135 *e*P P 21 38 54.8 -0.8
comp=Z,62nm,1.0s
LFF **La Frestale** 23.01 135 *e*P P 21 38 54.8 -0.8
comp=Z,31nm,1.0s
LOMF **Lomont** 23.02 122 *e*P P 21 38 55.3 -0.5
LOMF **Lomont** 23.02 122 *e*P P 21 38 55.3 -0.5
LOMF **Lomont** 23.02 122 *e*P P 21 38 55.3 -0.5
LOMF **Lomont** 23.02 122 *e*P P 21 38 55.3 -0.5
PYM **Petit Puy Mans** 23.03 130 *e*P P 21 38 56.3 +0.4
PYM **Petit Puy Mans** 23.03 130 *e*P P 21 38 56.3 +0.4
PYM **Petit Puy Mans** 23.03 130 *e*P P 21 38 56.3 +0.4
PYM **Petit Puy Mans** 23.03 130 *e*P P 21 38 56.3 +0.4
FELD **Feldberg im Sc** 23.03 120 *e*P P 21 38 56.6 +0.7
FELD **Feldberg im Sc** 23.03 120 *e*P P 21 38 56.6 +0.7
FELD **Feldberg im Sc** 23.03 120 *e*P P 21 38 56.6 +0.7
BRG **Berggiesshubel** 23.08 107 *e*P P 21 38 55.5 -0.8
comp=Z,21nm,1.1s
BRG *e*PP PnPn 21 39 19.3 -1.8
comp=Z,9.5nm,1.0s
BRG S S 21 43 13.0 +6.3
BRG
comp=N,675nm,14.0s
BRG
comp=E,254nm,14.5s
BRG
comp=Z,689nm,16.9s
BRG **Berggiesshubel** 23.08 107 *e*P P 21 38 55.4 -0.8
comp=Z,40nm,1.2s
BRG *e*L L 21 47 36.1
comp=Z,422nm,21.7s
BRG **Berggiesshubel** 23.08 107 *e*P P 21 38 55.5 -0.8
BRG *e* 21 39 19.3
BRG pmax pmax
comp=Z,12nm,1.0s
BRG pmax pmax
comp=Z,21nm,0.9s
BRG MLR MLR
comp=N,10μm,14.0s
BRG MLR MLR
comp=E,675nm,14.5s
BRG MLR MLR
comp=Z,254nm,16.9s
BRG **Berggiesshubel** 23.08 107 *e*P P 21 38 55.5 -0.8
comp=Z,12nm,1.0s
SPAK **Spaichingen-Ko** 23.14 118 *e*P P 21 38 56.8 -0.3
SPAK **Spaichingen-Ko** 23.14 118 *e*P P 21 38 56.8 -0.3
BBS **Basel-Blauen** 23.18 121 *e*P P 21 38 57.3 -0.1
BBS **Basel-Blauen** 23.18 121 *e*P P 21 38 57.3 -0.1
BBS **Basel-Blauen** 23.18 121 *e*P P 21 38 57.3 -0.1
ROTZ **Rotzenmuhle** 23.19 111 *e*P P 21 38 58.1 +0.6
comp=Z,36nm,1.4s
ROTZ *e*L L 21 48 03.0
comp=Z,408nm,19.2s
CABF **La Chapelle** 23.37 124 *e*P P 21 38 59.0 -0.3
comp=Z,41nm,0.9s
CABF **La Chapelle** 23.37 124 *e*P P 21 38 59.0 -0.3
CABF pmax pmax
comp=Z,41nm,0.9s
CABF **La Chapelle** 23.37 124 *e*P P 21 38 59.0 -0.3
comp=Z,41nm,0.9s
CABF **La Chapelle** 23.37 124 *e*P P 21 38 59.0 -0.3
comp=Z,20nm,0.9s
JOF **Joensuu** 23.41 68 *e*P P 21 39 01.0 +1.5
JOF **Joensuu** 23.41 68 *e*p P 21 39 01.0 +1.5
comp=Z,2.7nm,0.8s
JOF **Joensuu** 23.41 68 *e*P P 21 39 01.0 +1.5
comp=Z,2.7nm,0.8s
PGAV **Gavieira, Arco** 23.44 153 *e*P P 21 39 00.2 +0.1
comp=Z,37nm,1.4s
PGAV *i*P pP 21 39 20.1 +16
PGAV *e*LQ LQ 21 49 20.1
PGAV *e*LR LR 21 55 50.3
comp=Z,540nm,24.3s
PGAV **Gavieira, Arco** 23.44 153 *e*P P 21 39 00.2 +0.1
comp=Z,37nm,1.4s
CAF **Calviac** 23.44 133 *e*P P 21 38 58.8 -1.2
comp=Z,31nm,1.1s
CAF **Calviac** 23.44 133 *e*P P 21 38 58.8 -1.2
CAF pmax pmax
comp=Z,31nm,1.1s
CAF **Calviac** 23.44 133 *e*P P 21 38 58.8 -1.2
comp=Z,31nm,1.1s
CAF **Calviac** 23.44 133 *e*P P 21 38 58.8 -1.2
comp=Z,5nm,1.1s
LBL **Lubilhac** 23.56 130 *e*P P 21 39 04.0 +2.7
LBL **Lubilhac** 23.56 130 *e*P P 21 39 04.0 +2.7
LBL **Lubilhac** 23.56 130 *e*P P 21 39 04.0 +2.7
PVCC **Panska Ves** 23.60 107 *e*P P 21 39 01.9 +0.4
PVCC MLR MLR
comp=Z,600nm,16.3s
PVCC **Panska Ves** 23.60 107 *e*P P 21 39 01.9 +0.4
PVCC AMS AMS 21 49 40.0
comp=Z,600nm,16.3s
PVCC **Panska Ves** 23.60 107 *e*P P 21 39 01.9 +0.4
comp=Z,600nm,16.3s
VSU **Vasula** 23.72 80 *e*P P 21 39 02.3 -0.2
VSU pmax pmax
comp=Z,34nm,1.2s
VSU **Vasula** 23.72 80 *e*P P 21 39 02.3 -0.2
comp=Z,34nm,1.2s
PBRG **Braganca** 23.91 150 *e*P P 21 39 07.3 +2.6
comp=Z,19nm,1.7s
PBRG *i*P pP 21 39 25.8 +17
OSSF **Osses** 23.94 140 *e*P P 21 39 03.8 -1.0
OSSF **Osses** 23.94 140 *e*P P 21 39 03.8 -1.0
OSSF **Osses** 23.94 140 *e*P P 21 39 03.8 -1.0
WET **Wettzell** 23.95 111 *e*P P 21 39 05.0 0.0
comp=Z,17nm,0.8s
WET *e*L L 21 47 52.8
comp=Z,363nm,21.5s
WET **Wettzell** 23.95 111 *e*P P 21 39 05.0 0.0
WET pmax pmax
comp=Z,17nm,0.8s
WET MLR MLR
comp=Z,400nm,21.5s
WET **Wettzell** 23.95 111 *e*P P 21 39 05.0 0.0
comp=Z,400nm,21.5s
SCHQ **Schefferville** 23.96 269 *e*P P 21 39 03.5 -1.5
comp=Z,17nm,1.0s
SCHQ **Schefferville** 23.96 269 P P 21 39 03.9 -1.1
comp=Z,12nm,1.0s,baz=57,slow=10,SNR=12
SCHQ LR LR 21 46 16.9
comp=Z,174nm,20.7s,baz=306,slow=31
SCHQ **Schefferville** 23.96 269 *e*P P 21 39 03.5 -1.5
comp=Z,17nm,1.0s
SSB **Saint Sauveur** 23.96 128 *e*P P 21 39 04.8 -0.3
SSB pmax pmax
comp=Z,30nm,1.4s
SSB **Saint Sauveur** 23.96 128 *e*P P 21 39 04.8 -0.3
comp=Z,30nm,1.4s
SSB **Saint Sauveur** 23.96 128 *e*P P 21 39 04.8 -0.3
comp=Z,30nm,1.4s
PRU **Pruhonice** 24.00 108 *e*P P 21 39 05.0 -0.3
PRU MLR MLR
comp=Z,400nm,13.6s
PRU **Pruhonice** 24.00 108 *e*P P 21 39 05.0 -0.3
PRU *e*S S 21 43 29.3 +7.7
PRU AMS AMS 21 52 20.0
comp=Z,400nm,13.6s
PRU **Pruhonice** 24.00 108 *e*P P 21 39 05.0 -0.3
comp=Z,400nm,13.6s
SENIN **Lac Senin/Sane** 24.02 123 *e*P P 21 39 06.0 +0.1
comp=Z,23nm,0.8s
SENIN **Lac Senin/Sane** 24.02 123 *e*P P 21 39 06.0 +0.1
comp=Z,23nm,0.8s
FUR **Furstenfeldbru** 24.08 115 *e*P P 21 39 06.3 +0.2
comp=Z,27nm,0.9s
FUR *e*L L 21 49 05.4
comp=Z,921nm,18.1s
FUR **Furstenfeldbru** 24.08 115 *e*P P 21 39 06.3 +0.2
FUR pmax pmax
comp=Z,27nm,0.9s
FUR MLR MLR
comp=Z,900nm,18.1s
FUR **Furstenfeldbru** 24.08 115 *e*P P 21 39 06.3 +0.2
comp=Z,900nm,18.1s
SJPF **Ste Jean** 24.08 140 *e*P P 21 39 05.1 -1.0
comp=Z,19nm,0.9s
SJPF **Ste Jean** 24.08 140 *e*P P 21 39 05.1 -1.0
SJPF pmax pmax
comp=Z,19nm,0.9s
SJPF **Ste Jean** 24.08 140 *e*P P 21 39 05.1 -1.0
comp=Z,19nm,0.9s
SJPF **Ste Jean** 24.08 140 *e*P P 21 39 05.1 -1.0
comp=Z,9.4nm,0.9s
KSP **Ksiaz** 24.10 105⇑*e*P P 21 39 06.3 0.0
KSP *e**PP pP 21 39 08.8 -1.3
KSP *e*S S 21 43 24.5 +1.3
KSP MLR MLR
comp=Z,2μm,15.1s
KSP **Ksiaz** 24.10 105 *e*P P 21 39 06.5 +0.2
KSP **Ksiaz** 24.10 105 *e*P P 21 39 06.3 0.0
KSP *e*S S 21 43 24.5 +1.3
POLO **Lamas de Olo** 24.11 153 *e*P P 21 39 07.4 +0.9
comp=Z,13nm,1.8s
POLO **Lamas de Olo** 24.11 153 *e*P P 21 39 07.4 +0.9
comp=Z,13nm,1.8s
UPC **Upice** 24.23 105 *e*P P 21 39 10.1 +2.6
UPC **Upice** 24.23 105 *e*P P 21 39 10.1 +2.6
DAVA **Damuels** 24.24 118⇑*i*pP P 21 39 08.3 +0.5
comp=Z,14nm,0.8s
DAVA **Damuels** 24.24 118 P P 21 39 08.3 +0.5
comp=Z,14nm,0.8s
KHC **Kasperske Hory** 24.25 111 *e*P P 21 39 08.0 +0.2
KHC pmax pmax
comp=Z,20nm,0.8s
KHC **Kasperske Hory** 24.25 111 *e*P P 21 39 08.0 +0.2
comp=Z,20nm,0.8s
KHC **Kasperske Hory** 24.25 111 *e*P P 21 39 08.0 +0.2
KHC *e*pP pP 21 39 10.2 -1.4
KHC *e*S S 21 43 26.2 +0.4
KHC AMS AMS 21 51 00.0
comp=Z,700nm,11.6s
KHC **Kasperske Hory** 24.25 111 *e*P P 21 39 08.0 +0.2
comp=Z,20nm,0.8s
VIVF **Saint-Julien-l** 24.38 129 *e*P P 21 39 08.8 -0.1
comp=Z,42nm,1.2s
VIVF **Saint-Julien-l** 24.38 129 *e*P P 21 39 08.8 -0.1
VIVF pmax pmax
comp=Z,42nm,1.2s
VIVF **Saint-Julien-l** 24.38 129 *e*P P 21 39 08.8 -0.1
comp=Z,42nm,1.2s
RETA **Reutte** 24.42 117⇑*i*pP P 21 39 10.1 +0.8
comp=Z,37nm,1.1s,SNR=13
RETA **Reutte** 24.42 117 P P 21 39 10.1 +0.8
comp=Z,37nm,1.1s,SNR=13
MVO **Moncorvo** 24.47 151 *e*P P 21 39 11.8 +2.0
comp=Z,20nm,1.2s
MVO *e*LQ LQ 21 49 31.2
MVO *e*LR LR 21 55 30.7
comp=Z,478nm,21.6s
ETSF **Etsaut** 24.47 139 *e*P P 21 39 09.3 -0.5
comp=Z,16nm,0.6s
ETSF **Etsaut** 24.47 139 *e*P P 21 39 09.3 -0.5
ETSF pmax pmax
comp=Z,16nm,0.6s
ETSF **Etsaut** 24.47 139 *e*P P 21 39 09.3 -0.5
comp=Z,16nm,0.6s
DPC **Dobruska-Polom** 24.48 105 *e*P P 21 39 09.9 +0.1
DPC pmax pmax
comp=Z,12nm,0.9s
DPC **Dobruska-Polom** 24.48 105 *e*P P 21 39 09.9 +0.1
comp=Z,12nm,0.9s
DPC **Dobruska-Polom** 24.48 105 *e*P P 21 39 09.8 0.0
DPC AMS AMS 21 51 10.0
comp=Z,3μm,15.3s
DPC **Dobruska-Polom** 24.48 105 P P 21 39 09.8 0.0
GEC2 **GERESS Array S** 24.53 111 *e*P P 21 39 10.3 0.0
comp=Z,21nm,1.7s
GEC2 *e*L L 21 48 20.6
comp=Z,416nm,21.9s
GEC2 **GERESS Array S** 24.53 111 *e*P P 21 39 10.3 0.0
GEC2 pmax pmax
comp=Z,21nm,1.7s
GEC2 MLR MLR
comp=Z,400nm,21.9s
GEC2 **GERESS Array S** 24.53 111 *e*P P 21 39 12.4 +2.1
GEC2 **GERESS Array S** 24.53 111 *e*P P 21 39 12.4 +2.1
GERES **GERESS Array B** 24.53 111 P P 21 39 11.2 +0.9
GERES **GERESS Array B** 24.53 111 P P 21 39 11.2 +0.9
comp=Z,1.5nm,0.7s,baz=322,slow=10,SNR=11
GERES LR LR 21 48 53.3
comp=Z,432nm,19.8s,baz=269,slow=37
GERES **GERESS Array B** 24.53 111 P P 21 39 11.2 +0.9
LPL **La Plagne** 24.54 125 *e*P P 21 39 11.2 +0.6
comp=Z,50nm,1.1s
LPL **La Plagne** 24.54 125 *e*P P 21 39 11.2 +0.6
LPL pmax pmax
comp=Z,50nm,1.1s
LPL **La Plagne** 24.54 125 *e*P P 21 39 11.2 +0.6
comp=Z,50nm,1.1s
LPG **La Plagne** 24.56 125 *e*P P 21 39 11.0 +0.2
comp=Z,67nm,1.1s
LPG **La Plagne** 24.56 125 *e*P P 21 39 11.0 +0.2
LPG pmax pmax
comp=Z,67nm,1.1s
LPG **La Plagne** 24.56 125 *e*P P 21 39 11.0 +0.2
comp=Z,67nm,1.1s
EPF **Esparros** 24.61 137⇑*i*P P 21 39 10.0 -1.1
comp=Z,22nm,0.7s
EPF **Esparros** 24.61 137⇑*i*P P 21 39 10.0 -1.1
EPF pmax pmax
comp=Z,22nm,0.7s
EPF **Esparros** 24.61 137⇑*i*P P 21 39 10.0 -1.1
comp=Z,22nm,0.7s
VIEF **Viey** 24.65 138 *e*P P 21 39 12.4 +0.9
VIEF **Viey** 24.65 138 *e*P P 21 39 12.4 +0.9
DAVOX **Davos/Dischmat** 24.65 119 P P 21 39 11.7 +0.1
DAVOX **Davos/Dischmat** 24.65 119 P P 21 39 11.7 +0.1
comp=Z,7.2nm,0.9s,baz=311,slow=11,SNR=8.5
DAVOX LR LR 21 48 23.1
comp=Z,503nm,21.8s,baz=270,slow=35
DAVOX **Davos/Dischmat** 24.65 119 P P 21 39 11.7 +0.1
MOTA **Moosalm** 24.67 116⇑*i*pP P 21 39 12.5 +0.8
comp=Z,26nm,1.0s,SNR=10
MOTA **Moosalm** 24.67 116 P P 21 39 12.5 +0.8
comp=Z,26nm,1.0s,SNR=10
TUE **Stuetta** 24.70 120 *e*P P 21 39 12.8 +0.7
comp=Z,19nm,0.7s
TUE **Stuetta** 24.70 120 *e*P P 21 39 12.8 +0.7
comp=Z,19nm,0.7s
ORIF **Oris-en-Rattie** 24.75 127 *e*P P 21 39 12.8 +0.5
comp=Z,87nm,1.3s
ORIF *e*R
comp=Z,762nm,23.0s
ORIF **Oris-en-Rattie** 24.75 127 *e*P P 21 39 12.8 +0.5
ORIF pmax pmax
comp=Z,87nm,1.3s
ORIF **Oris-en-Rattie** 24.75 127 *e*P P 21 39 12.8 +0.5
comp=Z,87nm,1.3s
LASF **Ste Croix** 24.79 131 *e*P P 21 39 12.5 -0.1
comp=Z,36nm,1.1s
LASF **Ste Croix** 24.79 131 *e*P P 21 39 12.5 -0.1
comp=Z,36nm,1.1s
RESF **Ens** 24.82 138 *e*P P 21 39 14.4 +1.4
RESF **Ens** 24.82 138 *e*P P 21 39 14.4 +1.4
WATA **Walderalm** 24.87 116 *i*P P 21 39 14.4 +0.9
comp=Z,37nm,1.1s,SNR=11
WATA **Walderalm** 24.87 116 P P 21 39 14.4 +0.9
comp=Z,37nm,1.1s,SNR=11
KRLC **Kraliky** 24.88 105 *e*P P 21 39 13.5 +0.1
KRLC **Kraliky** 24.88 105 *e*P P 21 39 13.5 +0.1
KRLC **Kraliky** 24.88 105 P P 21 39 13.5 +0.1
SUW **Suwalki** 24.88 92 *e*P P 21 39 14.5 +1.1
SUW pmax pmax
comp=Z,20nm,0.9s
SUW **Suwalki** 24.88 92 *e*P P 21 39 14.5 +1.1
comp=Z,20nm,0.9s
SUW **Suwalki** 24.88 92 *e*P P 21 39 14.5 +1.1
comp=Z,20nm,0.9s
MLS **Moulis** 24.91 136 *e*P P 21 39 13.4 -0.3
MLS **Moulis** 24.91 136 *e*P P 21 39 13.4 -0.3
MTLF **Montolieu** 24.91 134 *e*P P 21 39 13.4 -0.3
comp=Z,29nm,1.2s
MTLF **Montolieu** 24.91 134 *e*P P 21 39 13.4 -0.3
MTLF pmax pmax
comp=Z,29nm,1.2s
MTLF **Montolieu** 24.91 134 *e*P P 21 39 13.4 -0.3
comp=Z,29nm,1.2s
BNI **Bardonecchia** 24.91 125 *e*P P 21 39 13.7 -0.2
BNI pmax pmax
comp=Z,31nm,1.5s
BNI **Bardonecchia** 24.91 125 *e*P P 21 39 13.7 -0.2
comp=Z,31nm,1.5s
BNI **Bardonecchia** 24.91 125 *e*P P 21 39 13.7 -0.2
comp=Z,31nm,1.5s
TREC **Trest** 24.92 108 *e*P P 21 39 14.4 +0.6
TREC MLR MLR
comp=Z,500nm,10.2s
TREC **Trest** 24.92 108 *e*P P 21 39 14.4 +0.6
TREC AMS AMS 21 52 40.0
comp=Z,500nm,10.2s
TREC **Trest** 24.92 108 P P 21 39 14.4 +0.6
FUORN **Ofenpass-Fuorn** 24.93 118 *e*P P 21 39 15.8 +1.6
FUORN **Ofenpass-Fuorn** 24.93 118 *e*P P 21 39 15.8 +1.6
WTTA **Wattenberg** 24.95 116⇑*i*sP sP 21 39 15.6 -4.0
comp=Z,44nm,1.1s,SNR=11
WTTA **Wattenberg** 24.95 116 P sP 21 39 15.6 -4.0
comp=Z,44nm,1.1s,SNR=11
RJOB **Jochberg** 25.03 114 *e*P P 21 39 15.2 +0.4
comp=Z,47nm,0.8s
RJOB *e*L L 21 49 09.7
comp=Z,459nm,19.6s
MTE **Manteigas** 25.09 153 *e*P P 21 39 19.6 +4.2
comp=Z,39nm,1.1s
MTE *e*LR LR 21 53 03.6
MTE A A 21 55 21.0
comp=Z,403nm,5.4s
MTE **Manteigas** 25.09 153 *e*P P 21 39 16.0 +0.6
comp=Z,54nm,1.7s
MTE **Manteigas** 25.09 153 *e*P P 21 39 16.0 +0.6
comp=Z,54nm,1.7s
MBDF **Montbardon** 25.23 126 *e*P P 21 39 17.3 +0.6
comp=Z,51nm,1.0s
MBDF **Montbardon** 25.23 126 *e*P P 21 39 17.3 +0.6
MBDF pmax pmax
comp=Z,51nm,1.0s
MBDF **Montbardon** 25.23 126 *e*P P 21 39 17.3 +0.6
comp=Z,51nm,1.0s
LRDF **Laroque-de-Fa** 25.37 134 *e*P P 21 39 19.1 +1.2
LRDF **Laroque-de-Fa** 25.37 134 *e*P P 21 39 19.1 +1.2
VRAC **Vranov** 25.38 107 P P 21 39 18.7 +0.8
VRAC **Vranov** 25.38 107⇑*i*P P 21 39 18.5 +0.5
VRAC **Vranov** 25.38 107 P P 21 39 18.7 +0.8
comp=Z,2.8nm,0.3s,baz=318,slow=11,SNR=6.7
VRAC LR LR 21 49 07.0
comp=Z,264nm,21.4s,baz=325,slow=36
VRAC **Vranov** 25.38 107 *e*P P 21 39 18.4 +0.5
MORC **Moravsky Berou** 25.43 105 *e*P P 21 39 18.4 0.0
MORC pmax pmax
comp=Z,23nm,0.9s
MORC **Moravsky Berou** 25.43 105 *e*P P 21 39 18.4 0.0
comp=Z,23nm,0.9s
MORC **Moravsky Berou** 25.43 105⇑*i*P P 21 39 18.0 -0.4
MORC **Moravsky Berou** 25.43 105 *e*P P 21 39 18.4 0.0
comp=Z,23nm,0.9s
CARF **Carcanieres** 25.44 135 *e*P P 21 39 18.4 -0.2
CARF **Carcanieres** 25.44 135 *e*P P 21 39 18.4 -0.2
SMRF **Simiane la Rot** 25.46 128 *e*P P 21 39 19.1 +0.4
comp=Z,55nm,1.3s
SMRF **Simiane la Rot** 25.46 128 *e*P P 21 39 19.1 +0.4
comp=Z,55nm,1.3s
MOA **Molln** 25.54 112⇑*i*P P 21 39 21.7 +2.3
comp=Z,20nm,1.5s
MOA **Molln** 25.54 112 P P 21 39 21.7 +2.3
comp=Z,20nm,1.5s
OKC **Ostrava-Krasne** 25.64 104 *e*P P 21 39 20.3 +0.1
OKC MLR MLR
comp=Z,800nm,14.2s
OKC **Ostrava-Krasne** 25.64 104 *e*P P 21 39 20.3 +0.1
OKC AMS AMS 21 51 20.0
comp=Z,800nm,14.2s
OKC **Ostrava-Krasne** 25.64 104 P P 21 39 20.3 +0.1
KBA **Koelnbreinsper** 25.78 114⇓*i*P P 21 39 23.5 +1.7
comp=Z,27nm,1.0s
KBA **Koelnbreinsper** 25.78 114 P P 21 39 23.5 +1.7
comp=Z,27nm,1.0s
TOUF **Mont Tournerai** 26.02 126 *e*P P 21 39 25.2 +1.2
TOUF **Mont Tournerai** 26.02 126 *e*P P 21 39 25.2 +1.2
TOUF **Mont Tournerai** 26.02 126 *e*P P 21 39 25.2 +1.2
PMRV **Marv??o** 26.06 153 *e*P P 21 39 27.3 +3.1
comp=Z,19nm,1.6s
PMRV *e*LR LR 21 56 13.2
comp=Z,327nm,16.2s
OJC **Ojcow** 26.07 102 *e*P P 21 39 25.4 +1.3
OJC pmax pmax
comp=Z,32nm,1.5s
OJC **Ojcow** 26.07 102 *e*P P 21 39 25.4 +1.3
comp=Z,32nm,1.5s
OJC **Ojcow** 26.07 102 *e*P P 21 39 25.4 +1.3
OJC **Ojcow** 26.07 102 *e*P P 21 39 25.4 +1.3
MVIF **Mont Vial** 26.09 126 *e*P P 21 39 26.2 +1.7
MVIF **Mont Vial** 26.09 126 *e*P P 21 39 26.2 +1.7
MVIF **Mont Vial** 26.09 126 *e*P P 21 39 26.2 +1.7

CONA Conrad Observa 26.14 110 ⇓*i*P P 21 39 25.6 +0.7
comp=Z,14nm,1.1s
CONA Conrad Observa 26.14 110 P P 21 39 25.6 +0.7
comp=Z,14nm,1.1s
FRF La Foret Royal 26.20 127 *e*P P 21 39 25.7 +0.3
comp=Z,44nm,1.3s
FRF La Foret Royal 26.20 127 *e*P P 21 39 25.7 +0.3
FRF pmax pmax
comp=Z,44nm,1.3s
FRF La Foret Royal 26.20 127 *e*P P 21 39 25.7 +0.3
comp=Z,44nm,1.3s
SBF Sospel 26.21 126 *e*P P 21 39 26.3 +0.7
SBF Sospel 26.21 126 *e*P P 21 39 26.3 +0.7
SBF Sospel 26.21 126 *e*P P 21 39 26.3 +0.7
MYKA Terra Mystica 26.27 114 ⇑*i*pP P 21 39 26.6 +0.6
comp=Z,34nm,1.5s
MYKA Terra Mystica 26.27 114 P P 21 39 26.6 +0.6
comp=Z,34nm,1.5s
LMR La Mourre 26.35 128 *e*P P 21 39 26.6 -0.1
LMR La Mourre 26.35 128 *e*P P 21 39 26.6 -0.1
LMR La Mourre 26.35 128 *e*P P 21 39 26.6 -0.1
ZST Bratislava 26.45 108 *e*P P 21 39 29.3 +1.7
ZST pmax pmax
comp=Z,4.0nm,0.8s
ZST Bratislava 26.45 108 *e*P P 21 39 29.3 +1.7
ZST Bratislava 26.45 108 *e*P P 21 39 29.3 +1.7
comp=Z,4.3nm,0.8s
ESDC Sonseca Array 26.58 147 P P 21 39 29.1 +0.2
ESDC Sonseca Array 26.58 147 P P 21 39 29.1 +0.2
comp=Z,4.0nm,0.6s,baz=346,slow=8.9,SNR=18
ESDC LR LR 21 49 26.8
comp=Z,420nm,18.6s,baz=335,slow=35
ESDC Sonseca Array 26.58 147 P P 21 39 29.1 +0.2
ESLA Sonseca Array 26.58 147 *e*P P 21 39 28.8 -0.1
comp=Z,1.0nm,0.7s
ESLA Sonseca Array 26.58 147 *e*P P 21 39 28.8 -0.1
comp=Z,1.0nm,0.7s
PAB San Pablo 26.61 148 *e*P P 21 39 27.0 -2.2
PAB pmax pmax
comp=Z,14nm,0.8s
PAB San Pablo 26.61 148 *e*P P 21 39 27.0 -2.2
comp=Z,14nm,0.8s
PAB San Pablo 26.61 148 *e*P P 21 39 27.0 -2.2
comp=Z,14nm,0.8s
NIE Niedzica 26.89 102 *e*P P 21 39 33.9 +2.3
NIE Niedzica 26.89 102 *e*P P 21 39 33.9 +2.3
NIE Niedzica 26.89 102 *e*P P 21 39 33.9 +2.3
VYHS Vyhne 26.96 105 *e*P P 21 39 34.0 +1.8
VYHS pmax pmax
comp=Z,6.0nm,1.4s
VYHS Vyhne 26.96 105 *e*P P 21 39 34.0 +1.8
VYHS Vyhne 26.96 105 *e*P P 21 39 34.0 +1.8
comp=Z,6.1nm,1.4s
STHS Stebnicka Huta 27.29 101 *e*P P 21 39 39.4 +4.2
STHS pmax pmax
comp=Z,6.0nm,0.9s
STHS Stebnicka Huta 27.29 101 *e*P P 21 39 39.3 +4.1
KECS Kecovo 27.67 103 *e*P P 21 39 39.3 +0.7
KECS pmax pmax
comp=Z,4.0nm,1.3s
KECS Kecovo 27.67 103 *e*P P 21 39 39.3 +0.7
KECS Kecovo 27.67 103 *e*P P 21 39 39.3 +0.7
comp=Z,4.2nm,1.3s
KWP Kalwaria Pacla 27.77 99 *e*P P 21 39 39.9 +0.4
KWP pmax pmax
comp=Z,15nm,0.8s
KWP Kalwaria Pacla 27.77 99 *e*P P 21 39 39.9 +0.4
comp=Z,15nm,0.8s
KWP Kalwaria Pacla 27.77 99 *e*P P 21 39 40.4 +1.0
KWP Kalwaria Pacla 27.77 99 *e*P P 21 39 39.9 +0.4
comp=Z,15nm,0.8s
CRVS Cervenica-Dubn 27.77 102 *e*P P 21 39 39.0 -0.5
CRVS pmax pmax
comp=Z,5.0nm,1.1s
CRVS Cervenica-Dubn 27.77 102 *e*P P 21 39 39.0 -0.5
CRVS Cervenica-Dubn 27.77 102 *e*P P 21 39 39.0 -0.5
comp=Z,5.1nm,1.1s
KLMR Klimovskoe 27.81 68 *e*P P 21 39 37.6 -2.1
KLMR 21 40 29.1
KLMR *e*S S 21 44 29.3 +7.4
KLMR pmax pmax
comp=Z,25nm,1.7s
KLMR MLR MLR
comp=Z,397nm,14.0s
PSZ Piszkesteto 27.85 105 *e*P P 21 39 40.4 +0.1
PSZ pmax pmax
comp=Z,9.0nm,0.8s
PSZ Piszkesteto 27.85 105 *e*P P 21 39 40.4 +0.1
comp=Z,8.5nm,0.8s
PSZ Piszkesteto 27.85 105 ⇓*i*P P 21 39 40.2 -0.1
PSZ Piszkesteto 27.85 105 *e*P P 21 39 40.4 +0.1
comp=Z,8.5nm,0.8s
PGF Pioggiola 27.92 125 *e*P P 21 39 40.7 -0.3
comp=Z,20nm,1.0s
PGF Pioggiola 27.92 125 *e*P P 21 39 40.7 -0.3
PGF pmax pmax
comp=Z,20nm,1.0s
PGF Pioggiola 27.92 125 *e*P P 21 39 40.7 -0.3
comp=Z,20nm,1.0s
PVAQ Vaqueiros 27.96 155 *e*LR LR 21 54 54.7
comp=Z,207nm,13.5s
KOLS Kolonicke sedl 28.10 101 *e*P P 21 39 44.7 +2.3
KOLS pmax pmax
comp=Z,8.0nm,1.3s
KOLS Kolonicke sedl 28.10 101 *e*P P 21 39 44.7 +2.3
KOLS Kolonicke sedl 28.10 101 *e*P P 21 39 44.7 +2.3
comp=Z,7.7nm,1.3s
LVV L'vov 28.21 98 *e*P P 21 39 43.6 +0.3
LVV MLR MLR
comp=N,210nm,18.0s
LVV MLR MLR
comp=E,440nm,18.0s
LVV MLR MLR
comp=Z,500nm,18.0s
UZH Uzhgorod 28.34 101 *e*P P 21 39 45.0 +0.5
UZH *i* 21 39 49.6
AKASG Malin Array Be 29.85 92 P P 21 39 59.3 +1.4
AKASG Malin Array Be 29.85 92 P P 21 39 59.3 +1.4
AKASG Malin Array Be 29.85 92 P P 21 39 59.3 +1.4
comp=Z,3.6nm,0.7s,baz=319,slow=9.7,SNR=6.8
AKASG Malin Array Be 29.85 92 P P 21 39 59.3 +1.4
CUC Castrocucco 32.70 119 *e*P P 21 40 23.1 0.0
comp=Z,28nm,1.1s
CUC Castrocucco 32.70 119 *e*P P 21 40 23.1 0.0
comp=Z,28nm,1.1s
VSR Storozhevoye 33.87 82 *e*P P 21 40 33.4 +0.3
VSR pmax pmax
comp=N,20nm,1.4s
VSR pmax pmax
comp=Z,10.0nm,1.4s
VSR pmax pmax
comp=E,7.0nm,0.7s
VSR MLR MLR
comp=N,160nm,14.0s
VSR MLR MLR
comp=E,420nm,14.0s
VSR MLR MLR
comp=Z,500nm,14.0s
VORD Divnogorie 34.10 83 *e*P P 21 40 34.5 -0.7
VORD pmax pmax
comp=Z,10.0nm,1.8s
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,7.0nm,0.9s
VORD MLR MLR
comp=N,80nm,13.0s
VORD MLR MLR
comp=E,400nm,13.0s
VORD MLR MLR
comp=Z,440nm,13.0s
KEST Kesra 34.12 131 *e*P P 21 40 36.1 +0.5
KEST Kesra 34.12 131 P P 21 40 35.7 +0.1
comp=Z,5.1nm,1.1s,baz=65,slow=2.7,SNR=8.5
KEST LR LR 21 53 47.4
comp=Z,126nm,18.1s,baz=265,slow=35
KEST Kesra 34.12 131 *e*P P 21 40 36.1 +0.5
VRHR Novokhopersk 35.03 81 *e*P P 21 40 43.8 +0.6
VRHR pmax pmax
comp=Z,20nm,1.9s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.9s
VRHR MLR MLR
comp=N,180nm,14.0s
VRHR MLR MLR
comp=E,300nm,14.0s
VRHR MLR MLR
comp=Z,290nm,14.0s
ANN Anapa 37.93 91 *e*P P 21 41 08.2 +0.2
ANN pmax pmax
comp=Z,23nm,0.9s
ANN MLR MLR
comp=Z,549nm,18.0s
YKW3 Yellowknife Ar 38.14 311 *e*P P 21 41 09.1 -0.5
comp=Z,0.6nm,1.8s
YKW3 Yellowknife Ar 38.14 311 *e*P P 21 41 09.1 -0.5
comp=Z,0.6nm,1.8s
YKA Yellowknife Ar 38.18 311 P P 21 41 09.5 -0.4
YKA Yellowknife Ar 38.18 311 P P 21 41 09.5 -0.4
comp=Z,4.0nm,0.9s,baz=46,slow=8.9,SNR=22
YKA Yellowknife Ar 38.18 311 P P 21 41 09.5 -0.4
FFC Flin Flon 39.07 295 *e*P P 21 41 17.7 +0.3
FFC pmax pmax
comp=Z,11nm,1.1s
FFC Flin Flon 39.07 295 *e*P P 21 41 17.7 +0.3
comp=Z,10nm,1.1s
FFC Flin Flon 39.07 295 *e*P P 21 41 17.7 +0.3
comp=Z,10nm,1.1s
INK Inuvik 39.37 327 P P 21 41 18.6 -1.1
INK Inuvik 39.37 327 P P 21 41 18.6 -1.1
comp=Z,2.5nm,1.1s,baz=34,slow=7.3,SNR=4.1
INK Inuvik 39.37 327 P P 21 41 18.6 -1.1
EYMN Ely 39.70 280 *e*P P 21 41 23.6 +0.7
comp=Z,12nm,1.0s
EYMN Ely 39.70 280 *e*P P 21 41 23.5 +0.7
comp=Z,12nm,1.0s
ULM Lac du Bonnet 39.84 286 *e*P P 21 41 25.1 +1.1
comp=Z,7.5nm,0.9s
ULM Lac du Bonnet 39.84 286 P P 21 41 23.6 -0.3
comp=Z,3.6nm,0.5s,baz=34,slow=10,SNR=3.9
ULM LR LR 21 56 48.7
comp=Z,289nm,18.9s,baz=7.2,slow=35
ULM Lac du Bonnet 39.84 286 *e*P P 21 41 25.1 +1.1
comp=Z,7.5nm,0.9s
BR131 Keskin Array S 40.35 99 *e*P P 21 41 30.6 +2.1
comp=Z,2.8nm,0.8s
BR131 Keskin Array S 40.35 99 *e*P P 21 41 30.6 +2.1
comp=Z,2.8nm,0.8s
BRTR Keskin Array B 40.35 99 P P 21 41 29.9 +1.4
BRTR Keskin Array B 40.35 99 P P 21 41 29.9 +1.4
comp=Z,4.9nm,0.9s,baz=328,slow=7.0,SNR=20
BRTR Keskin Array B 40.35 99 P P 21 41 29.9 +1.4
IDI Anoyia 40.38 112 *e*P P 21 41 27.2 -1.4
comp=Z,16nm,0.8s
IDI Anoyia 40.38 112 *e*P P 21 41 27.2 -1.4
comp=Z,16nm,0.8s
GVD Gavdhos 40.44 113 *e*P P 21 41 29.5 +0.5
comp=Z,18nm,0.7s
GVD Gavdhos 40.44 113 *e*P P 21 41 29.5 +0.5
comp=Z,18nm,0.7s
KBZ Khabaz 41.19 87 P P 21 41 36.5 +1.3
KBZ Khabaz 41.19 87 P P 21 41 36.5 +1.3
KBZ Khabaz 41.19 87 P P 21 41 36.5 +1.3
comp=Z,3.4nm,1.0s,baz=285,slow=9.4,SNR=4.1
KBZ LR LR 21 58 37.4
comp=Z,178nm,20.5s,baz=325,slow=36
KBZ Khabaz 41.19 87 P P 21 41 36.5 +1.3
AGMN Agassiz Nation 41.32 284 *e*P P 21 41 36.0 -0.2
comp=Z,9.4nm,0.9s
AGMN Agassiz Nation 41.32 284 *e*P P 21 41 36.0 -0.2
comp=Z,9.4nm,0.9s
AKTO Aktyubinsk 42.49 69 P P 21 41 47.2 +1.4
AKTO Aktyubinsk 42.49 69 P P 21 41 47.2 +1.4
AKTO Aktyubinsk 42.49 69 P P 21 41 47.2 +1.4
comp=Z,2.4nm,0.9s,baz=312,slow=7.7,SNR=8.6
AKTO Aktyubinsk 42.49 69 P P 21 41 47.2 +1.4
TIXI Tiksi 43.27 13 *e*P P 21 41 53.6 +1.9
TIXI pmax pmax
comp=Z,4.0nm,1.7s
MAK Makhachkala 43.84 84 *e*P P 21 41 51.9 -4.8
MAK *e*S S 21 48 22.1 -4.8
MAK *e*SS SS 21 51 37.2 -5.3
MAK pmax pmax
comp=Z,133nm,1.3s
MAK MLR MLR
comp=Z,366nm,13.0s
COLD Coldfoot 43.91 334 *e*P P 21 41 56.8 -0.2
comp=Z,4.7nm,0.9s
COLD Coldfoot 43.91 334 *e*P P 21 41 56.8 -0.2
comp=Z,4.7nm,0.9s
EGAK Eagle 44.03 327 *e*P P 21 41 57.4 -0.6
comp=Z,8.6nm,1.1s
EGAK Eagle 44.03 327 *e*P P 21 41 57.4 -0.6
comp=Z,8.6nm,1.1s
ABKAR Akbulak array 44.20 69 *e*P P 21 42 00.7 +1.1
ABKAR Akbulak array 44.20 69 *e*P P 21 42 00.6 +1.1
BLO Bloomington 44.48 268 *e*P P 21 42 03.9 +2.0
BLO pmax pmax
comp=Z,39nm,0.6s
BLO Bloomington 44.48 268 *e*P P 21 42 03.9 +2.0
comp=Z,39nm,0.6s
BLO Bloomington 44.48 268 *e*P P 21 42 03.9 +2.0
comp=Z,39nm,0.6s
B23A Brockton 45.03 291 ⇓P P 21 42 05.9 -0.3
bai45
TAM Tamanrasset 45.06 143 *e*P P 21 42 07.8 +1.0
TAM pmax pmax
comp=Z,14nm,1.1s
TAM Tamanrasset 45.06 143 *e*P P 21 42 07.8 +1.0
comp=Z,14nm,1.1s
TAM Tamanrasset 45.06 143 *e*P P 21 42 07.8 +1.0
comp=Z,14nm,1.1s
SCIA State Center 45.21 276 *e*P P 21 42 08.1 +0.5
comp=Z,26nm,1.0s
SCIA State Center 45.21 276 *e*P P 21 42 08.1 +0.5
comp=Z,26nm,1.0s
ECSD EROS Data Cent 45.22 280 *e*P P 21 42 07.8 0.0
comp=Z,9.4nm,1.0s
ECSD EROS Data Cent 45.22 280 *e*P P 21 42 07.8 0.0
comp=Z,9.4nm,1.0s
BRVK Borovoye 45.31 58 *e*P P 21 42 10.1 +1.8
ILAR Eielson Array 45.35 330 P P 21 42 08.5 0.0
ILAR PcP PcP 21 43 47.0 -0.7
ILAR Eielson Array 45.35 330 P P 21 42 08.5 0.0
comp=Z,2.5nm,0.9s,baz=26,slow=6.6,SNR=19
ILAR PcP PcP 21 43 47.0 -0.7
comp=Z,1.2nm,0.8s,baz=3.7,slow=2.9,SNR=7.2
ILAR LR LR 22 01 36.2
comp=Z,214nm,21.4s,baz=154,slow=37
ILAR Eielson Array 45.35 330 P P 21 42 08.5 0.0
ILAR Eielson Array 45.35 330 PcP PcP 21 43 47.0 -0.7
BVAR Borovoye Array 45.37 58 P P 21 42 09.9 +1.0
BVAR Borovoye Array 45.37 58 P P 21 42 09.9 +1.0
BVAR Borovoye Array 45.37 58 P P 21 42 09.9 +1.0
comp=Z,0.5nm,0.6s,baz=317,slow=7.9,SNR=4.2
BVAR Borovoye Array 45.37 58 P P 21 42 09.9 +1.0
A21A Bergtoll Ranch 45.41 293 ⇑P P 21 42 09.2 0.0
baz=45
COLA College 45.47 331 *e*P P 21 42 09.8 +0.4
COLA pmax pmax
comp=Z,14nm,0.9s
COLA College 45.47 331 *e*P P 21 42 09.8 +0.4
comp=Z,14nm,0.9s
COLA College 45.47 331 *e*P P 21 42 09.8 +0.4
comp=Z,14nm,0.9s
OLIL Olney 45.54 269 *e*P P 21 42 10.8 +0.5
OLIL Olney 45.54 269 *e*P P 21 42 10.8 +0.5
C24A Savage 45.54 290 ⇑P P 21 42 09.8 -0.4
baz=45
B22A Reddig Ranch S 45.58 292 ⇓P P 21 42 11.0 +0.4
baz=45
USIN University of 45.98 268 *e*P P 21 42 14.2 +0.4
USIN University of 45.98 268 *e*P P 21 42 14.2 +0.4
TKL Tuckaleechee C 46.19 263 LR LR 21 58 54.8
comp=Z,118nm,19.7s,baz=84,slow=33
MENT Mentasta 46.20 327 *e*P P 21 42 15.7 +0.4
MENT Mentasta 46.20 327 *e*P P 21 42 15.7 +0.4
DLBC Dease Lake 46.22 316 P P 21 42 15.5 0.0
DLBC Dease Lake 46.22 316 P P 21 42 15.5 0.0
comp=Z,5.1nm,1.1s,baz=321,slow=6.5,SNR=4.4
DLBC LR LR 22 00 34.9
comp=Z,289nm,21.1s,baz=137,slow=35
DLBC Dease Lake 46.22 316 P P 21 42 15.5 0.0
C21A Desert Coulee 46.40 292 ⇓P P 21 42 16.8 -0.3
baz=46
B19A Brinkman Farms 46.66 294 ⇓P P 21 42 19.0 -0.1
baz=46
CPCT Cooper Cave 46.69 263 *e*P P 21 42 19.1 -0.4
CPCT Cooper Cave 46.69 263 *e*P P 21 42 19.1 -0.4
MCK McKinley 46.70 331 *e*P P 21 42 19.3 +0.1
MCK pmax pmax
comp=Z,10.0nm,1.2s
MCK McKinley 46.70 331 *e*P P 21 42 19.3 +0.1
comp=Z,10nm,1.2s
MCK McKinley 46.70 331 *e*P P 21 42 19.3 +0.1
comp=Z,10nm,1.2s
E23A Ismay 46.72 290 ⇑P P 21 42 19.2 -0.5
baz=46
C20A Veseth Ranch, 46.87 293 ⇑P P 21 42 20.6 -0.2
baz=47
D21A La Casta Ranch 46.97 291 ⇓P P 21 42 21.7 +0.1
baz=47
A17A Triple J Farms 46.97 296 ⇑P P 21 42 21.5 0.0
baz=47
C19A Slack Wire Ran 47.27 293 ⇓P P 21 42 23.9 -0.1
baz=47
EGMT Eagleton 47.33 294 *e*P P 21 42 24.9 +0.5
comp=Z,34nm,1.4s
EGMT Eagleton 47.33 294 *e*P P 21 42 24.9 +0.5
comp=Z,34nm,1.4s
EGMT Eagleton 47.33 294 ⇑P P 21 42 24.4 0.0
baz=47
F23A Volborg 47.39 289 ⇓P P 21 42 24.7 -0.1
baz=47
B17A L&G Farms, Che 47.53 295 ⇓P P 21 42 25.6 -0.4
baz=47
D19A Cripps Ranch, 47.66 293 ⇑P P 21 42 26.4 -0.6
baz=48,SNR=5.5
A15A Johnson Ranch, 47.75 297 ⇓P P 21 42 27.2 -0.5
baz=48,SNR=20
B16A M & M Farms, S 47.80 296 ⇑P P 21 42 27.9 -0.2
baz=48,SNR=15
G23A Biddle 47.80 289 ⇑P P 21 42 27.5 -0.6
baz=48
H24A Dirks Ranch, A 47.81 288 ⇓P P 21 42 27.5 -0.7
baz=48
E20A Meyer Farm, Mu 47.89 292 ⇑P P 21 42 28.4 -0.3
baz=48
A14A Double T Ranch 48.02 298 ⇓P P 21 42 29.6 -0.3
baz=48,SNR=14
C17A Wharram Farm, 48.05 295 ⇑P P 21 42 29.1 -0.9
baz=48
WALA Waterton Lakes 48.15 298 *e*P P 21 42 30.7 -0.1
comp=Z,0.6nm,1.0s
WALA Waterton Lakes 48.15 298 *e*P P 21 42 30.7 -0.1
comp=Z,0.6nm,1.0s
E19A Rath Farm, Rou 48.19 292 ⇓P P 21 42 30.9 -0.2
baz=48
B15A Bradely Ranch, 48.22 296 ⇑P P 21 42 30.6 -0.7
baz=48,SNR=7.6
SML Sawmill 48.26 329 *e*P P 21 42 31.6 +0.2
SML Sawmill 48.26 329 *e*P P 21 42 31.6 +0.2
comp=Z,1.4nm,0.9s
SML Sawmill 48.26 329 *e*P P 21 42 31.6 +0.2
comp=Z,1.4nm,0.9s
C16A Fuhringer Ranc 48.30 295 ⇓P P 21 42 32.0 +0.1
baz=48,SNR=9.2
D17A Six Diamond Ra 48.40 294 ⇓P P 21 42 32.3 -0.4
baz=48,SNR=6.4
NVS Novosibirsk 48.44 48 *e*P P 21 42 34.9 +2.1
B14A Marquette Ranc 48.46 297 ⇓P P 21 42 32.8 -0.4
baz=48
E18A Harlowton 48.56 293 ⇑P P 21 42 33.7 -0.3
baz=48
C15A Salmond Ranch, 48.67 296 ⇑P P 21 42 34.3 -0.5
baz=48,SNR=7.9
D16A Dana Ranch, Ca 48.85 295 ⇑P P 21 42 36.0 -0.2
baz=49,SNR=36
B13A Whitefish 48.92 298 ⇑P P 21 42 36.3 -0.3
baz=49,SNR=9.8
F18A Big Timber 49.02 292 ⇓P P 21 42 37.3 -0.2
baz=49
C14A Swan Lake 49.12 297 ⇓P P 21 42 37.9 -0.4
baz=49
YBMT Yellow Bay 49.15 297 *e*P P 21 42 38.4 -0.2
comp=Z,5.8nm,1.0s
YBMT Yellow Bay 49.15 297 *e*P P 21 42 38.3 -0.2
comp=Z,5.8nm,1.0s
BLMT Blacktail Moun 49.17 298 *e*P P 21 42 39.1 +0.4
BLMT Blacktail Moun 49.17 298 *e*P P 21 42 39.1 +0.4
RC01 Rabbit Creek A 49.21 329 *e*P P 21 42 37.4 -1.2
comp=Z,20nm,1.2s
RC01 Rabbit Creek A 49.21 329 *e*P P 21 42 37.4 -1.2
comp=Z,20nm,1.2s
HRY Holter Researc 49.22 295 *e*P P 21 42 39.9 +0.9
HRY Holter Researc 49.22 295 *e*P P 21 42 39.9 +0.9
D15A Lincoln 49.23 295 ⇓P P 21 42 38.7 -0.5
baz=49,SNR=7.6
E16A East Helena 49.30 294 ⇑P P 21 42 39.6 -0.1
baz=49,SNR=12
I22A 9 Mile Ranch, 49.32 288 ⇑P P 21 42 39.3 -0.5
baz=49
JTMT Jette 49.35 297 *e*P P 21 42 40.0 -0.1
JTMT Jette 49.35 297 *e*P P 21 42 40.0 -0.1
SWMT Swartz Lake 49.44 297 *e*P P 21 42 40.5 -0.2
SWMT Swartz Lake 49.44 297 *e*P P 21 42 40.5 -0.2
SLMT Seeley Lake 49.45 296 *e*P P 21 42 40.8 -0.1
SLMT Seeley Lake 49.45 296 *e*P P 21 42 40.8 -0.1
BSMT Bassoo Peak 49.47 298 *e*P P 21 42 41.4 +0.3
BSMT Bassoo Peak 49.47 298 *e*P P 21 42 41.3 +0.3
C13A Hot Springs 49.52 297 ⇑P P 21 42 41.2 -0.1
baz=49,SNR=15
D14A Greenough 49.59 296 ⇑P P 21 42 41.6 -0.2
baz=49
CHMT Chamberlain Mo 49.62 296 *e*P P 21 42 43.7 +1.5
CHMT Chamberlain Mo 49.62 296 *e*P P 21 42 43.7 +1.5
ZALV Zalesovo Beam 49.70 48 LR LR 22 04 26.8
comp=Z,102nm,19.0s,baz=248,slow=37
I21A Big Trails, Te 49.72 289 ⇓P P 21 42 43.0 0.0
baz=50,SNR=13
E15A Deer Lodge 49.78 295 ⇓P P 21 42 43.1 -0.2
baz=50
C12B Naegeli Ranch, 49.85 298 ⇑P P 21 42 43.6 -0.2
baz=50
F16A Kennard Place, 49.89 294 ⇓P P 21 42 43.6 -0.6
baz=50
D13A Huson 49.95 297 ⇑P P 21 42 44.4 -0.2
baz=50
MSO Missoula 49.97 296 *e*P P 21 42 46.4 +1.7
MSO Missoula 49.97 296 *e*P P 21 42 46.4 +1.7
MSO Missoula 49.97 296 ⇑P P 21 42 44.3 -0.4
baz=50
O29A 4D Ranch, Culb 49.97 281 ⇓P P 21 42 45.0 +0.3
baz=50
BOZ Bozeman (W) 50.01 294 *e*P P 21 42 45.9 +0.8
BOZ pmax pmax
comp=Z,11nm,0.9s
BOZ Bozeman (W) 50.01 294 *e*P P 21 42 45.9 +0.8
comp=Z,11nm,0.9s
BOZ Bozeman (W) 50.01 294 *e*P P 21 42 45.9 +0.8
comp=Z,11nm,0.9s
NEW Newport 50.03 300 *e*P P 21 42 46.1 +1.0
comp=Z,5.0nm,0.9s
NEW Newport 50.03 300 P P 21 42 45.1 0.0
comp=Z,5.1nm,0.9s,baz=33,slow=6.8,SNR=4.3
NEW LR LR 22 03 22.5
comp=Z,271nm,20.3s,baz=30,slow=36
NEW Newport 50.03 300 *e*P P 21 42 46.1 +1.0
comp=Z,5.0nm,0.9s
NEW Newport 50.03 300 ⇓P P 21 42 44.5 -0.6
baz=50
E14A Clinton 50.13 296 ⇓P P 21 42 45.8 -0.2
baz=50
J21A Lysite 50.17 289 ⇓P P 21 42 46.2 -0.1
baz=50,SNR=9.8
LRM Limekiln Ridge 50.20 294 *e*P P 21 42 47.6 +1.0
LRM Limekiln Ridge 50.20 294 *e*P P 21 42 47.6 +1.0
F15A Butte 50.20 295 ⇓P P 21 42 46.6 0.0
baz=50,SNR=7.3
I19A Meeteetse 50.24 291 ⇓P P 21 42 46.9 0.0
baz=50
KURK Kurchatov 50.26 54 P P 21 42 47.5 +0.8
KURK Kurchatov 50.26 54 P P 21 42 47.5 +0.8
KURK Kurchatov 50.26 54 P P 21 42 47.5 +0.8
KURBB Kurchatov Arra 50.30 54 P P 21 42 47.4 +0.4
comp=Z,0.7nm,0.7s,baz=321,slow=7.4,SNR=6.7
K22A Casper 50.35 288 ⇑P P 21 42 47.9 +0.2
baz=50
E13A Victor 50.38 296 ⇓P P 21 42 47.8 -0.1
baz=50
J20A Shoshoni 50.43 289 ⇑P P 21 42 48.5 +0.2
baz=50
L23A Garrett 50.44 287 ⇓P P 21 42 48.7 +0.2
baz=50
H16A Russell Place, 50.62 293 ⇑P P 21 42 50.3 +0.5
baz=50
DLMT Dillon 50.63 294 *e*P P 21 42 50.3 +0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DLMT	Dillon	50.63	294	*e*P	P	21 42 50.3	+0.5
G15A	Dillon	50.75	294	⇓P	P	21 42 50.9	+0.1
	baz=50						
K20A	Yellowstone Ra	51.10	289	⇑P	P	21 42 52.8	-0.6
	baz=51						
IMW	Indian Meadow	51.16	292	*e*P	P	21 42 53.2	-0.8
IMW	Indian Meadow	51.16	292	*e*P	P	21 42 53.2	-0.8
MCMT	McKenzie Canyo	51.17	294	*e*P	P	21 42 54.2	+0.2
	comp=Z,2.1nm,0.9s						
MCMT	McKenzie Canyo	51.17	294	*e*P	P	21 42 54.2	+0.2
	comp=Z,2.1nm,0.9s						
K19A	Absolon Red Bu	51.18	290	⇑P	P	21 42 53.3	-0.7
	baz=51						
H15A	Lima	51.26	294	⇑P	P	21 42 54.8	+0.1
	baz=51						
R30A	Dighton	51.27	279	⇓P	P	21 42 54.9	+0.3
	baz=51						
L21A	Rawlins	51.27	288	⇑P	P	21 42 54.9	+0.1
	baz=51						
F12A	Elk City	51.37	296	⇑P	P	21 42 55.1	-0.2
	baz=51						
I16A	Newdale	51.40	292	⇑P	P	21 42 56.2	+0.6
	baz=51						
G13A	Cobalt	51.51	295	⇑P	P	21 42 56.3	-0.1
	baz=51,SNR=9.0						
PDAR	Pinedale Array	51.52	290	P	P	21 42 56.2	-0.4
PDAR	Pinedale Array	51.52	290	P	P	21 42 56.3	-0.4
	comp=Z,4.3nm,0.8s,baz=57,slow=6.6,SNR=24						
PDAR				LR	LR	22 04 06.6	
	comp=Z,264nm,19.0s,baz=43,slow=35						
PDAR	Pinedale Array	51.52	290	P	P	21 42 56.2	-0.4
BW06	Boulder Array	51.52	290	*e*P	P	21 42 56.1	-0.5
	comp=Z,4.2nm,0.8s						
BW06	Boulder Array	51.52	290	*e*P	P	21 42 56.1	-0.5
	comp=Z,4.2nm,0.8s						
N23A	Red Feather La	51.55	286	⇓P	P	21 42 57.3	+0.4
	baz=51,SNR=8.2						
H14A	Leadore	51.55	294	⇓P	P	21 42 56.8	0.0
	baz=51						
M21A	Separation Pea	51.56	287	⇑P	P	21 42 56.9	0.0
	baz=51						
KSCO	Kaye Shedlock'	51.69	282	⇓P	P	21 42 58.1	+0.4
	baz=52						
RRI2	Red Ridge	51.77	292	*e*P	P	21 43 00.2	+1.7
RRI2	Red Ridge	51.77	292	*e*P	P	21 43 00.2	+1.7
G12A	Big Creek, Yel	51.92	296	⇑P	P	21 42 59.3	-0.2
	baz=52						
P25A	Willow Gulch B	51.94	283	⇑P	P	21 42 59.9	+0.2
	baz=52,SNR=5.5						
I14A	Mackay	52.16	294	⇑P	P	21 43 01.1	-0.2
	baz=52,SNR=9.4						
H12A	Diamond D Ranc	52.21	295	⇑P	P	21 43 01.5	-0.1
	baz=52						
O22A	Kremmling	52.41	286	⇓P	P	21 43 03.0	-0.4
	baz=52,SNR=5.5						
I13A	Wildhorse Cree	52.44	294	⇓P	P	21 43 03.3	-0.2
	baz=52						
N20A	Spence Gulch,	52.58	288	⇓P	P	21 43 04.4	-0.1
	baz=52						
P23A	Jefferson	52.77	285	⇓P	P	21 43 05.3	-0.8
	baz=53						
KDAK	Kodiak Island	52.83	329	P	P	21 43 05.5	-0.3
KDAK	Kodiak Island	52.83	329	P	P	21 43 05.5	-0.3
	comp=Z,4.2nm,0.9s,baz=38,slow=6.7,SNR=3.4						
KDAK	Kodiak Island	52.83	329	P	P	21 43 05.5	-0.3
HLID	Hailey	52.85	294	*e*P	P	21 43 07.2	+0.8
	comp=Z,20nm,2.0s						
HLID	Hailey	52.85	294	*e*P	P	21 43 07.2	+0.8
	comp=Z,20nm,2.0s						
HLID	Hailey	52.85	294	⇑P	P	21 43 06.1	-0.3
	baz=53						
J13A	Cove Ranch, Pi	52.89	294	⇓P	P	21 43 06.4	-0.3
	baz=53						
BMO	Blue Mountains	52.93	297	*e*P	P	21 43 06.1	-0.8
	comp=Z,23nm,1.3s						
BMO	Blue Mountains	52.93	297	*e*P	P	21 43 06.1	-0.8
	comp=Z,23nm,1.3s						
I12A	Atlanta	52.95	295	⇑P	P	21 43 06.8	-0.4
	baz=53						
T28A	Walsh	53.04	280	⇑P	P	21 43 08.1	+0.3
	baz=53						
S26A	Kim	53.21	282	⇑P	P	21 43 09.9	+0.8
	baz=53						
O19A	Miners Draw (B	53.39	288	⇑P	P	21 43 10.6	+0.2
	baz=53						
SEY	Seymchan	53.40	3	*e*P	P	21 43 10.0	+0.1
TORD	Torodi Ar. Bea	53.40	150	P	P	21 43 09.7	-0.8
TORD	Torodi Ar. Bea	53.40	150	P	P	21 43 09.7	-0.8
	comp=Z,1.8nm,0.7s,baz=345,slow=7.4,SNR=11						
TORD				LR	LR	22 06 44.0	
	comp=Z,118nm,18.4s,baz=155,slow=37						
TORD	Torodi Ar. Bea	53.40	150	P	P	21 43 09.6	-0.8
WMOK	Wichita Mounta	53.58	276	*e*P	P	21 43 11.0	-0.7
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WMOK	Wichita Mounta	53.58	276	*e*P	P	21 43 11.0	-0.7
	comp=Z,8.2nm,1.0s						
WMOK	Wichita Mounta	53.58	276	*e*P	P	21 43 11.0	-0.7
	comp=Z,8.2nm,1.0s						
S25A	Robets Cordova	53.59	282	⇓P	P	21 43 12.2	+0.2
	baz=53						
T26A	Comanche Natio	53.64	281	⇑P	P	21 43 12.8	+0.5
	baz=54						
P19A	Cripple Cowboy	53.88	287	⇓P	P	21 43 14.7	+0.5
	baz=54						
T25A	Trinidad	54.02	282	⇓P	P	21 43 15.0	-0.1
	baz=54						
X31A	McDonald Ranch	54.20	277	⇑P	P	21 43 16.9	+0.7
	baz=54						
MKAR	Makanchi Array	54.87	54	P	P	21 43 21.6	+0.7
MKAR	Makanchi Array	54.87	54	P	P	21 43 21.6	+0.7
MKAR	Makanchi Array	54.87	54	P	P	21 43 21.6	+0.7
	comp=Z,0.8nm,0.9s,baz=292,slow=7.6,SNR=6.6						
MKAR				LR	LR	22 06 47.9	
	comp=Z,114nm,18.7s,baz=83,slow=36						
MKAR	Makanchi Array	54.87	54	P	P	21 43 21.6	+0.7
V26A	Tequesquite Ra	54.88	281	⇓P	P	21 43 21.5	+0.2
	baz=55						
HVS	Khovu-Aksy	54.93	44	*e*P	P	21 43 22.4	+1.0
HVS				pmax	pmax		
	comp=Z,18nm,1.3s						
DUG	Dugway	55.01	291	*e*P	P	21 43 23.0	+0.8
DUG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DUG	Dugway	55.01	291	*e*P	P	21 43 23.0	+0.8
	comp=Z,7.6nm,1.1s						
DUG	Dugway	55.01	291	*e*P	P	21 43 23.0	+0.8
	comp=Z,7.6nm,1.1s						
Z32A	Haskell	55.10	275	⇓P	P	21 43 23.2	+0.4
	baz=55						
W27A	Bowe Ranch, En	55.18	279	⇑P	P	21 43 23.6	+0.2
	baz=55,SNR=7.0						
T22A	Edith	55.20	284	⇓P	P	21 43 23.6	-0.1
	baz=55						
Y30A	Stafford Cattl	55.24	277	⇓P	P	21 43 24.6	+0.8
	baz=55						
Z31A	Sharp Cattle R	55.38	276	⇓P	P	21 43 25.2	+0.4
	baz=55						
AAK	Ala-Archa	55.46	63	*e*P	P	21 43 26.2	+0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,1.8s						
ELK	Elko	55.55	293	*e*P	P	21 43 27.7	+1.5
	comp=Z,112nm,1.0s						
ELK	Elko	55.55	293	LR	LR	22 06 50.8	
	comp=Z,470nm,19.4s,baz=33,slow=36						
ELK	Elko	55.55	293	*e*P	P	21 43 27.7	+1.5
	comp=Z,112nm,1.0s						
W25A	X Bar L Ranch,	55.66	281	⇑P	P	21 43 27.1	+0.1
	baz=56						
X26A	CR and CF Fran	55.94	280	⇑P	P	21 43 29.2	+0.2
	baz=56						
S18A	Hurst Farm, Bl	55.95	287	⇑P	P	21 43 29.1	0.0
	baz=56						
MSTX	Muleshoe	55.98	279	⇑P	P	21 43 29.6	+0.4
	baz=56						
131A	Roby	56.04	276	⇑P	P	21 43 29.9	+0.4
	baz=56						
MSU	Marysvale	56.17	289	*e*P	P	21 43 31.3	+0.6
MSU	Marysvale	56.17	289	*e*P	P	21 43 31.3	+0.6
MSU	Marysvale	56.17	289	*e*P	P	21 43 31.3	+0.6
MVU	Marysvale	56.19	289	*e*P	P	21 43 31.6	+0.7
	comp=Z,7.1nm,1.4s						
MVU	Marysvale	56.19	289	*e*P	P	21 43 31.5	+0.7
	comp=Z,7.1nm,1.4s						
232A	Coleman	56.38	275	⇑P	P	21 43 31.9	-0.1
	baz=56						
MOY	Mondy	56.58	39	*e*P	P	21 43 36.1	+2.9
231A	Bronte	56.63	275	⇓P	P	21 43 34.0	+0.2
	baz=56						
Z27A	Tatum	56.73	278	⇓P	P	21 43 35.1	+0.5
	baz=57						
ANMO	Albuquerque	56.76	282	LR	LR	22 07 21.9	
	comp=Z,211nm,18.6s,baz=37,slow=36						
332A	Millersview	56.85	274	⇓P	P	21 43 35.3	0.0
	baz=57						
Y25A	Mesa, Roswell	56.86	280	⇓P	P	21 43 35.8	+0.3
	baz=57						
128A	Castleberry Fa	57.00	277	⇑P	P	21 43 35.7	-0.7
	baz=57						
230A	Sterling City	57.03	276	⇑P	P	21 43 36.9	+0.3
	baz=57						
Z26A	Caprock	57.10	279	⇓P	P	21 43 37.3	+0.1
	baz=57						
331A	San Angelo	57.22	275	⇓P	P	21 43 38.2	+0.2
	baz=57						
432A	Menard	57.31	274	⇓P	P	21 43 39.1	+0.5
	baz=57						
Z25A	Roswell	57.42	280	⇑P	P	21 43 39.5	+0.1
	baz=57						
CCUT	Cedar City	57.48	290	*e*P	P	21 43 41.5	+1.6
	comp=Z,6.0nm,1.2s						
CCUT	Cedar City	57.48	290	*e*P	P	21 43 41.5	+1.6
	comp=Z,6.0nm,1.2s						
JCT	Junction City	57.65	274	*e*P	P	21 43 40.8	-0.2
JCT				pmax	pmax		
	comp=Z,17nm,0.9s						
JCT	Junction City	57.65	274	*e*P	P	21 43 40.8	-0.2
	comp=Z,17nm,0.9s						
JCT	Junction City	57.65	274	*e*P	P	21 43 40.8	-0.2
	comp=Z,17nm,0.9s						
JCT	Junction City	57.65	274	⇑P	P	21 43 41.3	+0.2
	baz=58						
YBH	Yreka Blue Hor	57.67	299	P	P	21 43 41.2	+0.2
YBH	Yreka Blue Hor	57.67	299	P	P	21 43 41.2	+0.2
	comp=Z,0.5nm,0.3s,baz=344,slow=7.4,SNR=2.8						
YBH				LR	LR	22 08 36.4	
	comp=Z,240nm,18.3s,baz=20,slow=36						
YBH	Yreka Blue Hor	57.67	299	P	P	21 43 41.2	+0.2
R11A	Troy Canyon, C	57.72	292	⇓P	P	21 43 41.9	+0.3
	baz=58,SNR=7.6						
431A	Sonora	57.84	275	⇑P	P	21 43 42.0	-0.3
	baz=58						
125A	Gardner Draw,	57.92	279	⇓P	P	21 43 43.0	0.0
	baz=58						
532A	Rocksprings	58.00	274	⇑P	P	21 43 43.8	+0.3
	baz=58						
226B	Tecolote Peak,	58.20	279	⇑P	P	21 43 45.3	+0.4
	baz=58,SNR=6.0						
328A	Wristen Ranch,	58.20	277	⇑P	P	21 43 45.3	+0.4
	baz=58						
531A	Rocksprings	58.25	274	⇑P	P	21 43 45.5	+0.2
	baz=58						
ZAK	Zakamensk	58.36	38	*e*P	P	21 43 47.8	+2.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
Z22A	Elephant Butte	58.41	282	⇑P	P	21 43 46.6	+0.1
	baz=58						
429A	Davenport Ranc	58.45	276	⇓P	P	21 43 46.6	-0.1
	baz=58						
632A	Uvalde	58.48	273	⇑P	P	21 43 47.0	+0.2
	baz=58						
DBIC	Dimbokro	58.50	160	LR	LR	22 08 51.5	
	comp=Z,102nm,18.6s,baz=225,slow=36						
WCN	Washoe City	58.59	296	*e*P	P	21 43 47.8	+0.1
WCN				pmax	pmax		
	comp=Z,15nm,1.1s						
WCN	Washoe City	58.59	296	*e*P	P	21 43 47.8	+0.1
	comp=Z,15nm,1.1s						
WCN	Washoe City	58.59	296	*e*P	P	21 43 47.8	+0.1
	comp=Z,15nm,1.1s						
530A	J-C Ranch, Com	58.61	275	⇑P	P	21 43 48.1	+0.3
	baz=58						
KSH	Kashi	58.70	64	*e*P	P	21 43 51.8	+3.4
KSH				*e*sP	sP	21 43 58.5	+4.6
KSH				*e*PcP	PcP	21 44 40.0	+1.9
KSH				*e*PP	PP	21 46 02.0	+4.2
KSH				*e*PcS	PcS	21 48 40.0	+0.1
KSH				*e*S	S	21 51 54.3	+1.7
KSH				*e*sS	sS	21 52 01.3	+2.1
KSH				*e*ScS	ScS	21 53 36.3	-1.4
KSH				*e*SS	SS	21 55 49.0	+4.2
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,98nm,4.2s						
KSH				LR	LR		
	comp=N,92nm,4.6s						
KSH				LR	LR		
	comp=E,70nm,2.5s						
428A	Kincaid Ranch,	58.71	276	⇓P	P	21 43 48.5	0.0
	baz=59						
NVAR	Mina Array Bea	58.76	294	P	P	21 43 48.7	-0.2
NVAR	Mina Array Bea	58.76	294	P	P	21 43 48.7	-0.2
	comp=E,2.5nm,0.8s,baz=50,slow=5.7,SNR=12						
NVAR				LR	LR	22 08 43.6	
	comp=E,247nm,19.4s,baz=329,slow=36						
NVAR	Mina Array Bea	58.76	294	P	P	21 43 48.7	-0.2
224A	Cornudas Mount	58.80	280	⇓P	P	21 43 49.3	+0.2
	baz=59						
529A	Stev Forest Ra	59.02	276	⇓P	P	21 43 51.4	+0.8
	baz=59						
732A	Laxson Ranch,	59.23	273	⇓P	P	21 43 52.2	+0.2
	baz=59						
426A	McDonald Obser	59.35	278	⇑P	P	21 43 53.6	+0.6
	baz=59						
WMQ	Urumqi	59.36	52	*e*P	P	21 43 54.5	+1.7
WMQ				pP	pP	21 43 59.3	+2.5
WMQ				sP	sP	21 44 01.5	+3.2
WMQ				PP	PP	21 46 07.5	+4.1
WMQ				PcS	PcS	21 48 42.5	-0.1
WMQ				S	S	21 52 00.8	0.0
WMQ				sS	sS	21 52 08.5	+1.0
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,90nm,4.4s						
WMQ				LR	LR		
	comp=N,250nm,12.8s						
WMQ				LR	LR		
	comp=E,340nm,15.6s						
WMQ				LR	LR		
	comp=Z,150nm,19.8s						
527A	Woodward Ranch	59.62	277	⇑P	P	21 43 55.3	+0.4
	baz=60						
W13A	Hualapai Mount	59.79	288	⇑P	P	21 43 55.8	-0.3
	baz=60						
628A	Black Gap, Mar	59.87	276	⇓P	P	21 43 56.3	-0.1
	baz=60						
526A	Mary Lane Ranc	59.90	277	⇓P	P	21 43 56.6	-0.2
	baz=60						
627A	Terlingua Ranc	60.11	276	⇑P	P	21 43 58.2	0.0
	baz=60						
220A	Playas Peak, P	60.25	282	⇑P	P	21 43 58.8	-0.4
	baz=60						
TXAR	Lajitas Array	60.34	277	P	P	21 43 59.2	-0.5
TXAR	Lajitas Array	60.34	277	P	P	21 43 59.2	-0.5
	comp=Z,1.3nm,0.9s,baz=39,slow=4.8,SNR=8.1						
TXAR				LR	LR	22 09 09.8	
	comp=Z,156nm,21.4s,baz=5.0,slow=35						
TXAR	Lajitas Array	60.34	277	P	P	21 43 59.2	-0.5
626A	Big Bend Ranch	60.35	277	⇑P	P	21 43 59.8	0.0
	baz=60						
MPMC	Manual Prospec	60.46	292	⇓P	P	21 44 00.3	-0.3
	baz=60						
GSC	Goldstone	60.83	291	*e*P	P	21 44 02.2	-0.8
GSC	Goldstone	60.83	291	*e*P	P	21 44 02.2	-0.8
GSC	Goldstone	60.83	291	*e*P	P	21 44 02.2	-0.8
GSC	Goldstone	60.83	291	⇑P	P	21 44 03.5	+0.5
	baz=61						
319A	Douglas	61.03	282	⇑P	P	21 44 05.0	+0.6
	baz=61						
IRM	Iron Mountain	61.13	289	⇓P	P	21 44 05.5	+0.5
	baz=61						
ISA	Isabella	61.20	293	*e*P	P	21 44 06.1	+0.6
ISA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ISA	Isabella	61.20	293	*e*P	P	21 44 06.1	+0.6
	comp=Z,7.0nm,0.8s						
ISA	Isabella	61.20	293	*e*P	P	21 44 06.1	+0.6
	comp=Z,7.0nm,0.8s						
ISA	Isabella	61.20	293	⇑P	P	21 44 05.9	+0.3
	baz=61						
Y12C	Blythe	61.22	288	⇓P	P	21 44 06.0	+0.4
	baz=61						
SONM	Songino Array	61.52	37	P	P	21 44 08.5	+0.9
SONM	Songino Array	61.52	37	P	P	21 44 08.5	+0.9
	comp=Z,1.3nm,0.9s,baz=331,slow=6.1,SNR=9.2						
SONM				LR	LR	22 12 04.3	
	comp=Z,169nm,20.8s,baz=347,slow=37						
SONM	Songino Array	61.52	37	P	P	21 44 08.5	+0.9
BELC	Belle Mtn. Jos	61.62	290	⇓P	P	21 44 08.2	-0.3
	baz=61						
ULN	Ulaanbaatar	61.67	36	*e*P	P	21 44 11.0	+2.4
	comp=Z,4.1nm,1.1s						
ULN	Ulaanbaatar	61.67	36	*e*P	P	21 44 11.0	+2.4
	comp=Z,4.1nm,1.1s						
EDW2	Edwards Air Fo	61.68	292	⇑P	P	21 44 08.9	+0.1
	baz=62						
BC3	Big Chuckawall	61.69	289	⇓P	P	21 44 09.2	+0.3
	baz=62						
113A	Mohawk Valley,	61.74	287	⇑P	P	21 44 09.6	+0.5
	baz=62						
GLA	Glamis	61.95	288	*e*P	P	21 44 11.6	+1.1
GLA				pmax	pmax		
	comp=Z,24nm,1.5s						
GLA	Glamis	61.95	288	*e*P	P	21 44 11.6	+1.1
	comp=Z,24nm,1.5s						
GLA	Glamis	61.95	288	*e*P	P	21 44 11.6	+1.1
	comp=Z,24nm,1.5s						
GLA	Glamis	61.95	288	⇑P	P	21 44 11.1	+0.5
	baz=62						
BFSC	Mount Baldy Ra	62.10	291	⇑P	P	21 44 11.9	+0.2
	baz=62						
PFO	Pinyon Flat Ob	62.15	290	LR	LR	22 11 01.0	
	comp=Z,319nm,18.6s,baz=140,slow=36						
PFO	Pinyon Flat Ob	62.15	290	⇑P	P	21 44 12.0	+0.1
	baz=62						
MONP	Monument Peak	62.76	289	⇓P	P	21 44 16.1	-0.1
	baz=63						
PETK	Petropavlovsk-	63.31	0	LR	LR	22 11 26.4	
	comp=Z,54nm,18.1s,baz=205,slow=36						
GTA	Gaotai	67.34	45	*e*P	P	21 44 48.3	+2.6
GTA				pP	pP	21 44 52.3	+2.5
GTA				sP	sP	21 44 55.8	+4.5
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC	Hu-ho-hao-te	69.38	36	*e*P	P	21 44 58.0	-0.5
HHC				sP	sP	21 45 04.0	-0.1
HHC				PcP	PcP	21 45 22.0	+0.1
HHC				PP	PP	21 47 32.8	+1.7
HHC				S	S	21 54 01.5	-3.3
HHC				ScS	SKSac	21 54 54.0	-4.2
HHC				SS	SS	21 58 28.0	-2.7
HHC				pmax	pmax		
	comp=Z,30nm,0.6s						
HHC				pmax	pmax		
	comp=Z,220nm,5.6s						
HHC				LR	LR		
	comp=N,300nm,14.3s						
HHC				LR	LR		
	comp=E,300nm,16.7s						
HHC				LR	LR		
	comp=Z,210nm,17.8s						
LZH	Lanzhou	71.64	44	*e*P	P	21 45 14.0	+1.6
LZH				pP	pP	21 45 19.3	+2.8
LZH				sP	sP	21 45 21.3	+3.3
LZH				pmax	pmax		
	comp=Z,15nm,1.2s						
KSRS	Korea Array	76.23	24	LR	LR	22 18 54.5	
	comp=Z,58nm,19.4s,baz=168,slow=36						
CD2	Chengdu	76.41	46	P	P	21 45 40.3	+0.1
CD2				pP	pP	21 45 45.0	+0.7
CD2				sP	sP	21 45 47.3	+1.5
CD2				PcP	PcP	21 45 53.0	+1.0
CD2				PP	PP	21 48 32.8	+1.6
CD2				S	S	21 55 22.5	-2.4
CD2				sS	sS	21 55 29.8	-2.0
CD2				SKS	SKSac	21 55 46.0	-5.2
CD2				SS	SS	22 00 18.0	-0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,80nm,5.4s						
KMBO	Kilima Mbogo	78.07	118	LR	LR	22 23 14.4	
	comp=Z,190nm,18.6s,baz=97,slow=38						
MJAR	Matsushiro Arr	78.68	16	P	P	21 45 53.5	+0.7
MJAR	Matsushiro Arr	78.68	16	P	P	21 45 53.5	+0.7
	comp=Z,0.5nm,0.4s,baz=356,slow=5.2,SNR=3.7						
MJAR	Matsushiro Arr	78.68	16	P	P	21 45 53.5	+0.7
KMI	Kunming	81.44	49	P	P	21 46 07.8	-0.3
KMI				pP	pP	21 46 12.5	+0.2
KMI				sP	sP	21 46 15.0	+1.2
KMI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KMI				LR	LR		
	comp=N,120nm,16.3s						
KMI				LR	LR		
	comp=E,98nm,15.8s						
KMI				LR	LR		
	comp=Z,98nm,22.4s						
GYA	Guiyang	81.46	45	P	P	21 46 07.8	-0.3
GYA				PP	PP	21 49 11.5	-2.0
GYA				S	S	21 56 16.5	-2.6
GYA				SKS	SKSac	21 56 22.0	-5.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BDFB	Brasilia	81.76	205	LR	LR	22 17 28.1	
	comp=Z,106nm,18.9s,baz=40,slow=32						
CMAR	Chiang Mai Arr	86.28	54	LR	LR	22 28 22.3	
	comp=Z,61nm,18.3s,baz=205,slow=38						
LPAZ	La Paz	87.39	224	LR	LR	22 24 34.7	
	comp=Z,53nm,18.3s,baz=297,slow=35						
BOSA	Boshof	99.49	139	LR	LR	22 32 06.3	
	comp=Z,256nm,18.7s,baz=345,slow=35						
PPT2	Papeete2	121.67	297	*e*LR	LR	22 30 16.1	
	comp=Z,164nm,23.2s						
TBI	Tubuai	126.81	294	*e*LR	LR	22 32 39.1	
	comp=Z,125nm,23.5s						
ASAR	Alice Springs	136.78	33	PKP	PKPdf	21 53 13.2	+0.2
ASAR	Alice Springs	136.78	33	PKP	PKPdf	21 53 13.2	+0.2
	comp=Z,0.6nm,0.8s,baz=339,slow=2.4,SNR=3.6						
ASAR	Alice Springs	136.78	33	PKIKP	PKPdf	21 53 13.2	+0.2
STKA	Stephens Creek	146.37	25	PKPbc	PKPdf	21 53 29.6	-0.2
STKA	Stephens Creek	146.37	25	PKPbc	PKPdf	21 53 29.6	-0.2
	comp=Z,5.6nm,1.1s,baz=60,slow=5.5,SNR=3.7						
STKA	Stephens Creek	146.37	25	PKPbc	PKPdf	21 53 29.6	-0.2

SOF ***29*** *21:37:16.2, 41°.26N×22°.76E, h5km, MD3.3*
ATH ***29*** *21:37:16.8, 41°.29N×22°.73E, h20km±1km, MD3.4/8*
SKO ***29*** *21:37:16.8, 41°.24N×22°.73E, h15km, M2.2, ML2.7*
ISCJB ***29*** *21:37:16.5±0.3, 41°.29N±0°.01×22°.74E±0°.02, h0km±3km, Error ellipse: s-maj=2.2km s-min=2.1km az=21.4*
THE ***29*** *21:37:17.5, 41°.27N×22°.74E, h2km, ML3.0/16, Error ellipse: s-maj=0.9km s-min=0.4km az=226.0*
CSEM ***29*** *21:37:17.2±0.1, 41°.27N×22°.73E, h2km, ML2.8, Error ellipse: s-maj=1.9km s-min=1.8km az=84.0*
BEO ***29*** *21:37:17.6±0.6, 41°.27N×22°.71E, h4km±2km, ML2.8/9*
TIR ***29*** *21:37:19.7±0.5, 41°.28N×22°.70E, h70km±46km*
ISC 29 21:37:17.3±0.9**, 41°.28N**±0°.01×**22°.73E**±0°.01**, h5**km±7km**, n146, σ0s.73**/214**, 13C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.12	290	P	Pg	21 37 19.4	-0.4
VAY				S	Sg	21 37 21.9	+0.3
VAY	Valandovo	0.12	290	*i* Pg	Pg	21 37 19.7	-0.2
VAY				*e*Lg	Lg	21 37 22.0	
	comp=N,4μm,0.3s						
VAY				*i* Sg	Sg	21 37 22.1	+0.5
VAY				*e*Lg	Lg	21 37 22.2	
	comp=E,3μm,0.3s						
VAY	Valandovo	0.12	290	*e*Pg	Pg	21 37 19.5	-0.4
VAY				*e*Sg	Sg	21 37 21.8	+0.2
VAY	Valandovo	0.12	290	*e*Pg	Pg	21 37 19.5	-0.4
VAY				S	Sg	21 37 21.9	+0.3
VAY				*e*Lg	Lg	21 37 22.7	
	comp=E,3μm,0.3s						
KNT	Kendrikon	0.17	132	P	Pg	21 37 21.1	+0.3
KNT				S	Sg	21 37 23.6	+0.5
KNT	Kendrikon	0.17	132	P	Pg	21 37 21.1	+0.3
KNT				S	Sg	21 37 23.6	+0.5
GRG	Griva	0.40	217	P	Pg	21 37 25.3	+0.2
GRG				S	Sg	21 37 31.3	+0.9
GRG	Griva	0.40	217	*e*PB	Pg	21 37 25.4	+0.3
GRG				*e*SB	Sg	21 37 31.3	+0.9

GRG	**Griva**	**0.40**	**217**	P	**Pg**	**21 37 25.3**	**+0.2**
GRG				S	**Sg**	**21 37 31.3**	**+0.9**
KKB	**Krupnik**	**0.65**	**24**	*i* Pg	**Pg**	**21 37 29.6**	**-0.2**
KKB	**Krupnik**	**0.65**	**24**	*i* Pg	**Pg**	**21 37 29.6**	**-0.2**
SOH	**Sokhos**	**0.66**	**134**	P	**Pg**	**21 37 29.6**	**-0.4**
SOH				S	**Sg**	**21 37 38.9**	**+0.4**
SOH	**Sokhos**	**0.66**	**134**	*e*PN	**Pg**	**21 37 29.7**	**-0.3**
SOH				*e*SN	**Sg**	**21 37 38.9**	**+0.4**
SOH	**Sokhos**	**0.66**	**134**	*e*Pn	**Pg**	**21 37 29.7**	**-0.3**
SOH				S	**Sg**	**21 37 38.9**	**+0.4**
THE	**Thessaloniki**	**0.67**	**164**	P	**Pg**	**21 37 29.9**	**-0.3**
THE				S	**Sg**	**21 37 39.1**	**+0.2**
THE	**Thessaloniki**	**0.67**	**164**	P	**Pg**	**21 37 29.9**	**-0.3**
THE				S	**Sg**	**21 37 39.1**	**+0.2**
SRS	**Serrai**	**0.67**	**104**	P	**Pg**	**21 37 29.7**	**-0.6**
SRS				S	**Sg**	**21 37 39.4**	**+0.4**
SRS	**Serrai**	**0.67**	**104**	P	**Pg**	**21 37 29.7**	**-0.6**
SRS				S	**Sg**	**21 37 39.4**	**+0.4**
HORT	**Hortiatis**	**0.74**	**157**	P	**Pg**	**21 37 31.2**	**-0.3**
HORT				S	**Sg**	**21 37 41.6**	**+0.6**
HORT	**Hortiatis**	**0.74**	**157**	P	**Pg**	**21 37 31.2**	**-0.3**
HORT				S	**Sg**	**21 37 41.6**	**+0.6**
MMB	**Musomiste**	**0.81**	**67**	*i* Pg	**Pg**	**21 37 32.6**	**-0.4**
MMB	**Musomiste**	**0.81**	**67**	*i* Pg	**Pg**	**21 37 32.6**	**-0.4**
NVR	**Nevrokopi**	**0.86**	**85**	P	**Pg**	**21 37 33.3**	**-0.5**
NVR				S	**Sg**	**21 37 45.3**	**+0.3**
NVR	**Nevrokopi**	**0.86**	**85**	*e*PN	**Pg**	**21 37 33.4**	**-0.4**
NVR				*e*SN	**Sg**	**21 37 45.4**	**+0.4**
NVR	**Nevrokopi**	**0.86**	**85**	P	**Pg**	**21 37 33.3**	**-0.5**
NVR				S	**Sg**	**21 37 45.3**	**+0.3**
PLG	**Polygyros**	**1.06**	**149**	P	**Pg**	**21 37 36.5**	**-1.1**
PLG				S	**Sb**	**21 37 52.1**	**-0.1**
PLG	**Polygyros**	**1.06**	**149**	*e*PN	**Pg**	**21 37 36.9**	**-0.7**
PLG				*e*SN	**Sb**	**21 37 51.5**	**-0.7**
PLG	**Polygyros**	**1.06**	**149**	P	**Pg**	**21 37 36.5**	**-1.1**
PLG	**Polygyros**	**1.06**	**149**	*e*Pn	**Pg**	**21 37 36.9**	**-0.7**
PLG				*e*Sn	**Sb**	**21 37 51.5**	**-0.7**
PLG				S	**Sb**	**21 37 52.1**	**-0.1**
BIA	**Bitola**	**1.09**	**257**	P	**Pg**	**21 37 38.2**	**0.0**
BIA				S	**Sg**	**21 37 52.8**	**+0.4**
BIA	**Bitola**	**1.09**	**257**	*i* Pg	**Pb**	**21 37 38.5**	**-0.3**
BIA				*i* Sg	**Sg**	**21 37 52.5**	**+0.1**
BIA	**Bitola**	**1.09**	**257**	*i* Pg	**Pb**	**21 37 38.4**	**-0.3**
BIA				*i* Sg	**Sg**	**21 37 52.4**	**+0.1**
BIA				S	**Sg**	**21 37 52.8**	**+0.4**
FNA	**Florina**	**1.13**	**245**	P	**Pg**	**21 37 38.4**	**-0.6**
FNA				S	**Sb**	**21 37 54.6**	**+0.1**
FNA	**Florina**	**1.13**	**245**	*e*PN	**Pg**	**21 37 38.5**	**-0.6**
FNA	**Florina**	**1.13**	**245**	P	**Pg**	**21 37 38.4**	**-0.6**
FNA				S	**Sb**	**21 37 54.6**	**+0.1**
SKO	**Skopje**	**1.19**	**306**	P	**Pg**	**21 37 39.1**	**-1.0**
SKO				S	**Sb**	**21 37 56.2**	**+0.2**
SKO	**Skopje**	**1.19**	**306**	*i* Pn	**Pn**	**21 37 41.2**	**+0.6**
SKO				*i* Sg	**Sg**	**21 37 55.0**	**-0.5**
SKO				*e*Lg	Lg	21 37 58.1	
	comp=N,78nm,0.3s						
SKO				*e*Lg	Lg	21 38 02.0	
	comp=E,140nm,1.1s						
SKO	**Skopje**	**1.19**	**306**	*e*Sg	**Sb**	**21 37 56.6**	**+0.6**
SKO	**Skopje**	**1.19**	**306**	P	**Pg**	**21 37 39.1**	**-1.0**
SKO	**Skopje**	**1.19**	**306**	*i* Pn	**Pn**	**21 37 41.7**	**+1.1**
SKO				*i* Sg	**Sg**	**21 37 55.5**	**0.0**
SKO				S	**Sb**	**21 37 56.2**	**+0.2**
SKO				*e*Lg	Lg	21 38 01.4	
	comp=E,140nm,1.1s						
LIT	**Litokhoron**	**1.19**	**189**	P	**Pg**	**21 37 39.0**	**-1.1**
LIT	**Litokhoron**	**1.19**	**189**	P	**Pg**	**21 37 39.0**	**-1.1**
KZN	**Kozani**	**1.21**	**217**	P	**Pg**	**21 37 39.8**	**-0.8**
KZN				S	**Sb**	**21 37 57.0**	**+0.2**
KZN	**Kozani**	**1.21**	**217**	*e*PN	**Pg**	**21 37 39.7**	**-0.8**
KZN	**Kozani**	**1.21**	**217**	P	**Pg**	**21 37 39.8**	**-0.8**
KZN				S	**Sb**	**21 37 57.0**	**+0.2**
OUR	**Ouranopolis**	**1.34**	**134**	P	**Pn**	**21 37 42.5**	**-0.2**
OUR				S	**Sn**	**21 38 01.2**	**+0.3**
OUR	**Ouranopolis**	**1.34**	**134**	P	**Pn**	**21 37 42.5**	**-0.2**
OUR				S	**Sn**	**21 38 01.2**	**+0.3**
VTS	**Vitosha**	**1.36**	**15**	P	**Pn**	**21 37 42.8**	**-0.3**
VTS				S	**Sg**	**21 38 01.7**	**+0.6**
VTS	**Vitosha**	**1.36**	**15**	*e*Pg	**Pn**	**21 37 42.9**	**-0.2**
VTS				*e*Sg	**Sb**	**21 38 01.0**	**-0.1**
VTS	**Vitosha**	**1.36**	**15**	*i* P	**Pn**	**21 37 42.8**	**-0.3**
VTS				S	**Sb**	**21 38 01.1**	**-0.1**
VTS	**Vitosha**	**1.36**	**15**	*i* P	**Pn**	**21 37 43.2**	**+0.1**
VTS	**Vitosha**	**1.36**	**15**	P	**Pn**	**21 37 42.8**	**-0.3**
VTS				*e*Sg	**Sb**	**21 38 01.0**	**-0.1**
VTS				S	**Sg**	**21 38 01.7**	**+0.6**
KAVA	**Kavala**	**1.38**	**101**	P	**Pn**	**21 37 42.8**	**-0.4**
KAVA				S	**Sn**	**21 38 02.0**	**+0.2**
KAVA	**Kavala**	**1.38**	**101**	P	**Pn**	**21 37 42.8**	**-0.4**
KAVA				S	**Sn**	**21 38 02.0**	**+0.2**
NEST	**Nestorio**	**1.54**	**236**	P	**Pn**	**21 37 45.8**	**+0.3**
NEST				S	**Sg**	**21 38 07.6**	**+0.9**
NEST	**Nestorio**	**1.54**	**236**	P	**Pn**	**21 37 45.8**	**+0.3**
NEST				S	**Sg**	**21 38 07.6**	**+0.9**
RZN	**Rozhen**	**1.55**	**74**	*i* Pg	**Pb**	**21 37 46.2**	**-0.4**
RZN	**Rozhen**	**1.55**	**74**	*i* Pg	**Pb**	**21 37 46.2**	**-0.4**
KBN	**Korca**	**1.61**	**247**	*i* PN	**Pb**	**21 37 47.8**	**+0.3**
KBN	**Korca**	**1.61**	**247**	*i* Pn	**Pb**	**21 37 47.8**	**+0.3**
	SNR=4.0						
PGB	**Panagyurishte**	**1.67**	**40**	P	**Pn**	**21 37 47.6**	**+0.4**
PGB	**Panagyurishte**	**1.67**	**40**	P	**Pn**	**21 37 47.6**	**+0.4**
BARS	**Barje**	**1.68**	**336**	*e*Pn	**Pn**	**21 37 47.6**	**+0.2**
BARS				*e*Sg	**Sb**	**21 38 10.8**	**+0.6**
BARS	**Barje**	**1.68**	**336**	*e*Pn	**Pn**	**21 37 47.6**	**+0.2**
BARS				*e*Sg	**Sb**	**21 38 10.8**	**+0.6**
PLD	**Plovdiv**	**1.70**	**60**	P	**Pn**	**21 37 47.4**	**-0.2**
PLD				S	**Sg**	**21 38 11.5**	**-0.3**
PLD	**Plovdiv**	**1.70**	**60**	*e*Pn	**Pb**	**21 37 48.2**	**-0.8**
PLD				*e*Sg	**Sg**	**21 38 12.2**	**+0.4**
PLD	**Plovdiv**	**1.70**	**60**	*i* P	**Pb**	**21 37 48.7**	**-0.3**
PLD	**Plovdiv**	**1.70**	**60**	P	**Pn**	**21 37 47.4**	**-0.2**
PLD	**Plovdiv**	**1.70**	**60**	*e*Pn	**Pb**	**21 37 48.2**	**-0.8**
PLD				S	**Sg**	**21 38 11.5**	**-0.3**
PLD				*e*Sg	**Sg**	**21 38 12.2**	**+0.4**
PHP	**Peshkopia**	**1.76**	**284**	*i* PN	**Pb**	**21 37 49.6**	**-0.6**
PHP				*i* SN	**Sb**	**21 38 12.2**	**-0.5**
PHP	**Peshkopia**	**1.76**	**284**	P	**Pn**	**21 37 49.1**	**+0.5**
PHP	**Peshkopia**	**1.76**	**284**	P	**Pn**	**21 37 49.1**	**+0.5**
PHP	**Peshkopia**	**1.76**	**284**	*i* Pn	**Pb**	**21 37 49.6**	**-0.6**
	SNR=4.0						
PHP				*i* Sn	**Sb**	**21 38 12.2**	**-0.5**
	SNR=4.0						
THL	**Klokotos Trika**	**1.80**	**198**	P	**Pn**	**21 37 48.8**	**-0.1**
THL				S	**Sb**	**21 38 13.0**	**-0.5**
THL	**Klokotos Trika**	**1.80**	**198**	*e*PN	**Pn**	**21 37 49.5**	**+0.6**
THL	**Klokotos Trika**	**1.80**	**198**	P	**Pn**	**21 37 48.8**	**-0.1**
THL	**Klokotos Trika**	**1.80**	**198**	*e*Pn	**Pn**	**21 37 49.5**	**+0.6**
THL				S	**Sb**	**21 38 13.0**	**-0.5**
XOR	**Xorichti**	**1.94**	**169**	P	**Pn**	**21 37 50.3**	**-0.7**
XOR				S	**Sb**	**21 38 16.8**	**-1.0**
XOR	**Xorichti**	**1.94**	**169**	P	**Pn**	**21 37 50.3**	**-0.7**
XOR				S	**Sb**	**21 38 16.8**	**-1.0**
ZAPS	**Zavoj**	**2.00**	**358**	*e*Sg	**Sg**	**21 38 21.3**	**-0.1**
RDO	**Rodhopi**	**2.12**	**93**	P	**Pn**	**21 37 53.2**	**-0.3**
RDO	**Rodhopi**	**2.12**	**93**	*e*PB	**Pn**	**21 37 53.2**	**-0.3**
RDO	**Rodhopi**	**2.12**	**93**	P	**Pn**	**21 37 53.2**	**-0.3**
PUK	**Puka**	**2.26**	**291**	*i* PN	**Pb**	**21 37 58.0**	**-0.6**
PUK	**Puka**	**2.26**	**291**	*i* Pn	**Pb**	**21 37 58.0**	**-0.6**
	SNR=4.0						
AGG	**Agios Georgios**	**2.27**	**188**	P	**Pn**	**21 37 55.3**	**-0.3**
AGG				S	**Sn**	**21 38 24.6**	**+0.6**
AGG	**Agios Georgios**	**2.27**	**188**	P	**Pn**	**21 37 55.3**	**-0.3**
AGG				S	**Sn**	**21 38 24.6**	**+0.6**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*PB	**Pn**	**21 37 54.8**	**-0.8**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*Pb	**Pn**	**21 37 54.8**	**-0.8**
SELS	**Selova**	**2.28**	**329**	*e*Pn	**Pn**	**21 37 55.1**	**-0.5**
MAKR	**Makrakomi, Fth**	**2.31**	**192**	P	**Pn**	**21 37 56.3**	**+0.3**
MAKR	**Makrakomi, Fth**	**2.31**	**192**	P	**Pn**	**21 37 56.3**	**+0.3**
LIA	**Limnos Island**	**2.32**	**126**	P	**Pn**	**21 37 55.9**	**-0.3**
LIA				S	**Sn**	**21 38 25.9**	**+0.8**
LIA	**Limnos Island**	**2.32**	**126**	*e*PN	**Pn**	**21 37 55.8**	**-0.4**
LIA	**Limnos Island**	**2.32**	**126**	P	**Pn**	**21 37 55.9**	**-0.3**
LIA				S	**Sn**	**21 38 25.9**	**+0.8**
EVR	**Evrytania**	**2.46**	**197**	P	**Pn**	**21 37 58.6**	**+0.4**
EVR	**Evrytania**	**2.46**	**197**	P	**Pn**	**21 37 58.6**	**+0.4**
SRN	**Sarande**	**2.50**	**237**	*i* PN	**Pb**	**21 38 01.9**	**-0.8**
SRN	**Sarande**	**2.50**	**237**	*i* Pn	**Pb**	**21 38 01.9**	**-0.8**
	SNR=4.0						
ALN	**Alexandroupoli**	**2.54**	**98**	P	**Pn**	**21 37 59.0**	**-0.2**
ALN				S	**Sn**	**21 38 32.1**	**+1.7**
ALN	**Alexandroupoli**	**2.54**	**98**	P	**Pn**	**21 37 59.0**	**-0.2**
ALN				S	**Sn**	**21 38 32.1**	**+1.7**
BOLS	**Boljevac**	**2.61**	**348**	*e*Pn	**Pn**	**21 38 00.8**	**+0.6**
BOLS	**Boljevac**	**2.61**	**348**	*e*Pn	**Pn**	**21 38 00.8**	**+0.6**
PVL	**Pavlikeni**	**2.74**	**44**	P	**Pb**	**21 38 06.0**	**-0.8**
PVL	**Pavlikeni**	**2.74**	**44**	P	**Pb**	**21 38 06.0**	**-0.8**
EFP	**Efpalio**	**2.92**	**193**	P	**Pn**	**21 38 04.8**	**+0.4**
EFP	**Efpalio**	**2.92**	**193**	P	**Pn**	**21 38 04.8**	**+0.4**
GRUS	**Gruza**	**3.00**	**331**	*e*Pn	**Pn**	**21 38 05.1**	**-0.4**
GRUS	**Gruza**	**3.00**	**331**	*e*Pn	**Pn**	**21 38 05.1**	**-0.4**
EDRB	**Edirne**	**3.07**	**78**	P	**Pn**	**21 38 06.5**	**0.0**
EDRB				S	**Sn**	**21 38 44.5**	**+1.0**
EDRB	**Edirne**	**3.07**	**78**	P	**Pn**	**21 38 06.5**	**0.0**
EDRB				S	**Sn**	**21 38 44.5**	**+1.0**
ZIMR		**3.08**	**39**	S	**Sn**	**21 38 46.3**	**+2.6**
JMB	**Yambol**	**3.12**	**66**	P	**Pn**	**21 38 07.4**	**+0.3**
JMB	**Yambol**	**3.12**	**66**	P	**Pn**	**21 38 07.4**	**+0.3**
GUR	**Goura**	**3.35**	**185**	P	**Pn**	**21 38 10.4**	**0.0**
GUR	**Goura**	**3.35**	**185**	P	**Pn**	**21 38 10.4**	**0.0**
PRK	**Paraskevi**	**3.39**	**126**	P	**Pn**	**21 38 11.8**	**+1.0**
PRK	**Paraskevi**	**3.39**	**126**	P	**Pn**	**21 38 11.8**	**+1.0**
DIVS	**Divibare**	**3.46**	**325**	*e*Pn	**Pn**	**21 38 11.7**	**-0.3**
DIVS	**Divibare**	**3.46**	**325**	*e*Pn	**Pn**	**21 38 11.7**	**-0.3**
DID	**Didima**	**3.79**	**174**	P	**Pn**	**21 38 16.5**	**+0.1**
DID	**Didima**	**3.79**	**174**	P	**Pn**	**21 38 16.5**	**+0.1**
CHOS	**Chios island**	**3.86**	**137**	P	**Pn**	**21 38 17.7**	**+0.3**
CHOS	**Chios island**	**3.86**	**137**	P	**Pn**	**21 38 17.7**	**+0.3**
LOT	**Lotru**	**4.24**	**10**	*i* P	**Pn**	**21 38 22.8**	**+0.2**
LOT	**Lotru**	**4.24**	**10**	*i* P	**Pn**	**21 38 22.8**	**+0.2**
LOT				S	**Sn**	**21 39 10.8**	**-1.7**
SULR		**4.27**	**36**	*i* P	**Pg**	**21 38 38.3**	**-0.9**
BZS	**Buzias**	**4.41**	**350**	*e*Pn	**Pn**	**21 38 24.2**	**-0.7**
BZS	**Buzias**	**4.41**	**350**	*i* P	**Pn**	**21 38 24.2**	**-0.7**
BZS	**Buzias**	**4.41**	**350**	*i* P	**Pn**	**21 38 24.2**	**-0.7**
VOIR		**4.49**	**21**	*i* P	**Pn**	**21 38 27.4**	**+1.3**
VOIR		**4.49**	**21**	*i* P	**Pn**	**21 38 27.4**	**+1.3**
ISR	**Istrita**	**4.75**	**35**	*i* P	**Pn**	**21 38 31.7**	**+2.1**
ISR	**Istrita**	**4.75**	**35**	S	**Sg**	**21 39 48.8**	**-0.9**
ISR	**Istrita**	**4.75**	**35**	*i* P	**Pn**	**21 38 31.7**	**+2.1**
MLR	**Muntele Rosu**	**4.82**	**28**	*i* P	**Pn**	**21 38 32.1**	**+1.4**
MLR	**Muntele Rosu**	**4.82**	**28**	*i* P	**Pn**	**21 38 32.1**	**+1.4**
TIRR	**Tirgusor**	**5.25**	**51**	*i* P	**Pn**	**21 38 39.5**	**+3.1**
TIRR	**Tirgusor**	**5.25**	**51**	S	Sg	21 39 59.4	-6.5
TIRR	**Tirgusor**	**5.25**	**51**	*i* P	**Pn**	**21 38 39.5**	**+3.1**
PLOR	**Plostina**	**5.39**	**31**	*i* P	**Pn**	**21 38 39.0**	**+0.6**
PLOR	**Plostina**	**5.39**	**31**	*i* P	**Pn**	**21 38 39.0**	**+0.6**
VRI	**Vrincioaia**	**5.43**	**31**	*i* P	**Pn**	**21 38 40.6**	**+1.7**
VRI	**Vrincioaia**	**5.43**	**31**	*i* P	**Pn**	**21 38 40.6**	**+1.7**
PKSM	**Moragy**	**5.75**	**330**	*i* P	**Pn**	**21 38 43.0**	**-0.3**
PKSM	**Moragy**	**5.75**	**330**	*i* P	**Pn**	**21 38 43.0**	**-0.3**

NIED ***29*** *22:29:00.2, 26°.30N × 127°.40E, h44km, Mw4.2 Best double couple: M0 2.15000 × 10^15 NP1: φ=5.00000°, δ=61.00000°, λ=62.00000°. NP2: φ=232.00000°, δ=39.00000°, λ=130.00000°.*

BJI ***29*** *22:29:25.0, 25°.30N × 128°.30E, h76km, mB4.6/5, mb4.2/8, Ms4.1/5, Ms7 3.9/5*

ISCJB ***29*** *22:29:33.2 ± 0.3, 26°.32N ± 0°.04 × 127°.38E ± 0°.04, h57km ± 3km, mb4.2/25, MS3.3/6, Error ellipse: s-maj=8.4km s-min=3.8km az=145.3*

JMA ***29*** *22:29:33.9 ± 0.1, 26°.32N × 127°.36E, h52km ± 1km, M4.1*

JMA Felt II J1.

NEIC ***29*** *22:29:35.0 ± 0.7, 26°.28N × 127°.37E, h58km ± 5km, mb4.5/6, MW4.2(NIED), Error ellipse: s-maj=10.8km s-min=6.0km az=136.0*

NEIC Felt at Nago and Okinawa, Okinawa. Recorded [2 JMA] on Okinawa and [1 JMA] on Aguni-jima and Kume-jima.

IDC ***29*** *22:29:36.1 ± 3.2, 26°.37N × 127°.33E, h64km ± 28km, mb3.9/15, mb1 4.0/17, mb1mx3.9/26, mbtmp3.9/17, ML3.7/2, MS3.2/8, Ms1 3.3/8, ms1mx3.0/36, Error ellipse: s-maj=22.4km s-min=17.6km az=81.0*

ISC 29 22:29:35.0 ± 0.6, 26°.22N ± 0°.05 × 127°.53E ± 0°.04, h62km ± 4km, n90, σ 1§65/106, mb4.2/25, 3C, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
JJT2	**Tamagusuku 2**	**0.21**	**112**	P	**Pn**	**22**	**29**	**44.0**	**-0.7**
JJT2				S	**Sn**	**22**	**29**	**51.6**	**-0.2**
JAGN	**Aguni-jima**	**0.45**	**325**	P	Pn	22	29	43.1	-3.5
JAGN				S	**Sn**	**22**	**29**	**49.7**	**-5.4**
JKE	**Kume jima 2**	**0.68**	**279**	P	Pn	22	29	45.4	-3.7
JKE				S	**Sn**	**22**	**29**	**53.6**	**-5.9**
JIH	**Iheya**	**0.90**	**25**	P	**Pn**	**22**	**29**	**50.4**	**-1.4**
JIH				S	**Sn**	**22**	**30**	**01.2**	**-3.1**
JOW	**Kunigami**	**0.90**	**47**	*e*Pn	**Pn**	**22**	**29**	**51.7**	**-0.2**
JOW	**Kunigami**	**0.90**	**47**	P	**Pn**	**22**	**29**	**51.7**	**-0.2**
JOW				S	**Sn**	**22**	**30**	**04.1**	**-0.2**
JTK	**Tokunoshima**	**2.01**	**39**	P	**Pn**	**22**	**30**	**06.1**	**-0.5**
JTK				S	**Sn**	**22**	**30**	**28.8**	**-1.9**
JAMN	**Amaminishikomi**	**2.49**	**36**	P	**Pn**	**22**	**30**	**12.6**	**-0.5**
JAMN				S	**Sn**	**22**	**30**	**40.3**	**-2.1**
JAM	**Amami Oshima**	**2.86**	**40**	P	**Pn**	**22**	**30**	**18.0**	**-0.1**
JAM				S	**Sn**	**22**	**30**	**50.0**	**-1.4**
JZK	**Kikaishima**	**3.01**	**46**	P	**Pn**	**22**	**30**	**21.3**	**+1.0**
JMZ	**Minamidaito 2**	**3.34**	**96**	P	**Pn**	**22**	**30**	**23.0**	**-1.7**
JMZ				S	**Sn**	**22**	**31**	**00.0**	**-3.2**
JIJ	**Ishigaki jima**	**3.58**	**240**	P	**Pn**	**22**	**30**	**26.7**	**-1.4**
JKRS	**Kuro-shima**	**3.75**	**239**	P	**Pn**	**22**	**30**	**29.3**	**-1.1**
IRIF	**Iriomote-Funau**	**3.92**	**242**	P	**Pn**	**22**	**30**	**31.5**	**-1.2**
JTN	**Tanegashima 3**	**5.36**	**34**	P	**Pn**	**22**	**30**	**53.1**	**+0.7**
TATO	**Taipei**	**5.60**	**259**	*e*Pn	**Pn**	**22**	**30**	**54.9**	**-0.7**
NACB	**Ninganchiao**	**5.75**	**251**	*e*Pn	**Pn**	**22**	**30**	**55.9**	**-1.9**
YHNB	**Yeheng**	**5.78**	**256**	*e*Pn	**Pn**	**22**	**30**	**57.8**	**-0.4**
YULB	**Yu-li**	**6.33**	**245**	*e*Pn	Pn	22	31	02.0	-3.7
SSLB	**Suanglung**	**6.44**	**249**	*e*Pn	**Pn**	**22**	**31**	**04.3**	**-2.9**
SSLB				*e*Sn	**Sn**	**22**	**32**	**19.4**	**0.0**
TPUB	**Ta-pu**	**6.92**	**247**	*e*Pn	**Pn**	**22**	**31**	**12.3**	**-1.4**
JNU	**Nakatsue**	**7.47**	**22**	*e*Pn	**Pn**	**22**	**31**	**22.3**	**+1.0**
JNU	**Nakatsue**	**7.47**	**22**	P	**Pn**	**22**	**31**	**22.4**	**+1.1**
	1.8nm,0.3s,baz=266,slow=20,SNR=12								
KSAR	**Wonju Array Be**	**11.20**	**1**	P	**Pn**	**22**	**32**	**12.7**	**+0.5**
KSRS	**Korea Array**	**11.21**	**2**	P	**Pn**	**22**	**32**	**12.7**	**+0.3**
	0.2nm,0.3s,baz=170,slow=12,SNR=5.7								
KSRS				LR	LR	22	36	54.6	
	comp=Z,68nm,19.0s,baz=190,slow=40								
MJAR	**Matsushiro Arr**	**13.74**	**39**	P	**P**	**22**	**32**	**52.6**	**-0.8**
MJAR	**Matsushiro Arr**	**13.74**	**39**	P	**P**	**22**	**32**	**52.6**	**-0.8**
	0.1nm,0.3s,baz=212,slow=8.9,SNR=3.6								
MJAR				LR	LR	22	37	56.8	
	comp=Z,60nm,21.3s,baz=185,slow=36								
ENH	**Enshi**	**16.41**	**288**	*e*Pn	**P**	**22**	**33**	**25.5**	**+2.4**
GYA	**Guiyang**	**18.71**	**275**	P	**Pn**	**22**	**33**	**50.0**	**+0.4**
GYA				pP	**pP**	**22**	**34**	**04.5**	**+2.7**
GYA				sP	**sP**	**22**	**34**	**11.0**	**+1.3**
GYA				S	**S**	**22**	**37**	**21.3**	**+2.9**
GYA				sS	**sS**	**22**	**37**	**41.8**	**+1.8**
GYA				SS	SnSn	22	37	50.8	+18
GYA				pmax	pmax				
	comp=Z,10.0nm,0.8s								
GYA				LR	LR				
	comp=N,430nm,15.0s								
GYA				LR	LR				
	comp=E,320nm,16.2s								
GYA				LR	LR				
	comp=Z,460nm,16.4s								
HHC	**Hu-ho-hao-te**	**19.71**	**322**	*e*P	**Pn**	**22**	**34**	**04.0**	**+2.7**
HHC				pP	pP	22	34	21.0	+8.3
HHC				sP	sP	22	34	30.3	+10
HHC				S	**Sn**	**22**	**37**	**46.5**	**+4.4**
HHC				PcP	PcP	22	38	10.5	-5.5
HHC				sS	**PcP**	**22**	**38**	**12.8**	**-3.2**
HHC				SS	SnSn	22	38	24.8	+27
HHC				pmax	pmax				
	comp=Z,16nm,0.5s								
HHC				pmax	pmax				
	comp=Z,230nm,6.8s								
HHC				LR	LR				
	comp=N,370nm,14.3s								
HHC				LR	LR				
	comp=E,470nm,16.7s								
HHC				LR	LR				
	comp=Z,320nm,16.7s								
ASAJ	**Asahikawa**	**21.63**	**31**	LR	LR	22	43	31.1	
	comp=Z,65nm,19.8s,baz=358,slow=39								
LZH	**Lanzhou**	**22.48**	**302**	*e*P	P	22	34	42.5	+13
LZH				pP	pP	22	34	48.0	+5.1
LZH				sP	sP	22	34	50.8	+0.1
LZH				pmax	pmax				
	comp=Z,16nm,1.4s								

GTA	**Gaotai**	**26.64**	**307**	*e*P	**P**	**22**	**35**	**04.5**	**-3.4**
GTA				pmax	pmax				
	comp=Z,2.0nm,0.6s								
ULN	**Ulaanbaatar**	**26.94**	**329**	*e*P	**P**	**22**	**35**	**11.1**	**+0.5**
	comp=Z,2.2nm,0.6s								
SONM	**Songino Array**	**27.23**	**328**	P	**P**	**22**	**35**	**12.3**	**-0.8**
SONM				PcP	**PcP**	**22**	**38**	**33.8**	**+2.0**
SONM	**Songino Array**	**27.23**	**328**	P	**P**	**22**	**35**	**12.3**	**-0.8**
	comp=Z,3.2nm,0.5s,baz=139,slow=9.4,SNR=31								
SONM				PcP	**PcP**	**22**	**38**	**33.8**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=157,slow=4.7,SNR=3.0								
SONM				LR	LR	22	47	08.4	
	comp=Z,62nm,21.4s,baz=152,slow=39								
CHTO	**Chiang Mai**	**27.38**	**260**	*e*P	**P**	**22**	**35**	**14.9**	**+0.3**
	comp=Z,6.2nm,0.6s								
CMAR	**Chiang Mai Arr**	**27.51**	**260**	P	**P**	**22**	**35**	**15.9**	**+0.2**
CMAR				PcP	**PcP**	**22**	**38**	**35.1**	**+2.4**
CMAR	**Chiang Mai Arr**	**27.51**	**260**	P	**P**	**22**	**35**	**15.9**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=59,slow=7.6,SNR=12								
CMAR				PcP	**PcP**	**22**	**38**	**35.1**	**+2.4**
	comp=Z,0.7nm,0.7s,baz=38,slow=1.6,SNR=4.8								
PETK	**Petropavlovsk-**	**35.04**	**32**	LR	LR	22	51	37.6	
	comp=Z,20nm,18.4s,baz=63,slow=38								
TAPN	**Taplejung**	**35.47**	**281**	*e*P	**P**	**22**	**36**	**25.3**	**-0.7**
	comp=Z,3.6nm,0.5s								
ODAN	**Odare**	**35.82**	**280**	*e*P	**P**	**22**	**36**	**27.8**	**-1.1**
	comp=Z,14nm,0.5s								
RAMN	**Ramite**	**36.50**	**281**	*e*P	**P**	**22**	**36**	**32.7**	**-2.0**
GUN	**Gumba**	**37.01**	**282**	*e*P	**P**	**22**	**36**	**38.7**	**-0.4**
PKI	**Pulchoki**	**37.46**	**282**	*e*P	**P**	**22**	**36**	**41.7**	**-1.3**
	comp=Z,11nm,0.4s								
PKIN	**Phulchoki**	**37.47**	**282**	*e*P	**P**	**22**	**36**	**41.7**	**-1.3**
	comp=Z,4.0nm,0.4s								
KKN	**Kakani**	**37.55**	**282**	*e*P	**P**	**22**	**36**	**42.8**	**-0.8**
	comp=Z,12nm,0.4s								
DMN	**Daman**	**37.73**	**282**	*e*P	**P**	**22**	**36**	**44.7**	**-0.4**
	comp=Z,4.8nm,0.4s								
DANN	**Dangsing**	**38.81**	**283**	*e*P	**P**	**22**	**36**	**53.9**	**-0.4**
	comp=Z,38nm,0.4s								
KOLN	**Koldanda**	**39.02**	**282**	*e*P	**P**	**22**	**36**	**55.4**	**-0.6**
MK31	**Makanchi Array**	**41.08**	**312**	*e*P	**P**	**22**

2.8nm,0.6s,baz=243,slow=9.0,SNR=13
INK LR LR 23 15 20.0
comp=Z,57nm,18.7s,baz=268,slow=41
ASAJ Asahikawa 27.26 269 LR LR 23 13 38.7
comp=Z,50nm,18.6s,baz=150,slow=36
YKA Yellowknife Ar 34.48 47 P **P** 23 03 55.5 -0.5
YKA Yellowknife Ar 34.48 47 P **P** 23 03 55.5 -0.5
1.3nm,0.6s,baz=281,slow=8.4,SNR=14
NEW Newport 38.19 71 P **P** 23 04 28.1 +0.1
NEW Newport 38.19 71 P **P** 23 04 28.1 +0.1
2.2nm,0.7s,baz=307,slow=10,SNR=3.5
YBH Yreka Blue Hor 38.27 83 P **P** 23 04 30.0 +1.2
YBH Yreka Blue Hor 38.27 83 P **P** 23 04 30.0 +1.2
1.7nm,0.7s,baz=315,slow=7.1,SNR=4.7
NVAR Mina Array Bea 42.95 84 P **P** 23 05 07.8 +0.1
NVAR Mina Array Bea 42.95 84 P **P** 23 05 07.7 +0.1
0.9nm,0.7s,baz=311,slow=6.1,SNR=5.7
PDAR Pinedale Array 45.63 73 P **P** 23 05 29.1 0.0
PDAR Pinedale Array 45.63 73 P **P** 23 05 29.1 0.0
1.4nm,0.6s,baz=308,slow=5.2,SNR=9.9
SONM Songino Array 46.91 297 LR LR 23 26 36.6
comp=Z,41nm,18.4s,baz=173,slow=38
SPITS Spitsbergen Ar 49.90 356 P **P** 23 06 01.1 -0.4
SPITS Spitsbergen Ar 49.90 356 P **P** 23 06 01.1 -0.4
2.2nm,0.5s,baz=57,slow=6.1,SNR=15
TXAR Lajitas Array 58.03 82 P **P** 23 07 02.0 +0.3
TXAR Lajitas Array 58.03 82 P **P** 23 07 02.0 +0.3
0.5nm,0.5s,baz=309,slow=5.7,SNR=6.5
NB2 NORSAR Subarra 67.18 355 P **P** 23 08 01.7 -0.4
comp=Z,1.0nm,0.8s,baz=3.5,slow=6.5
NOA NORSAR Array B 67.18 355 P **P** 23 08 01.8 -0.4
NOA NORSAR Array B 67.18 355 P **P** 23 08 01.8 -0.4
comp=Z,2.0nm,0.9s,baz=4.0,slow=6.5,SNR=6.0
AKASG Malin Array Be 75.22 343 P **P** 23 08 51.5 +0.6
AKASG Malin Array Be 75.22 343 P **P** 23 08 51.5 +0.6
comp=Z,0.9nm,0.7s,baz=1.3,slow=5.3,SNR=3.9
WRA Warramunga Arr 82.77 225 P **P** 23 09 31.5 -1.1
WRA Warramunga Arr 82.77 225 P **P** 23 09 31.5 -1.1
comp=Z,1.0nm,0.8s,baz=32,slow=6.1,SNR=4.0
ASAR Alice Springs 86.24 223 P **P** 23 09 50.0 -0.2
ASAR Alice Springs 86.24 223 P **P** 23 09 50.0 -0.2
comp=Z,0.7nm,0.7s,baz=23,slow=5.5,SNR=6.8

NNC 29 23:11:02.7±1.9, 38.77N×67.09E, h0km, mb3.5, mpv2.9, 5C-1D, Error ellipse: s-maj=15.4km s-min=8.9km az=178.0, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.04**	**30**	⇑Pn	Pn	23 12 19.1	-0.5
	0.2nm,0.2s,baz=210,slow=12,SNR=20						
KK31				Pg	Pb	23 12 34.6	+2.7
	2.2nm,0.5s,baz=206,slow=18,SNR=16						
KK31				⇓Sn	Sn	23 13 19.9	+1.3
	1.4nm,0.3s,baz=273,slow=21,SNR=4.2						
KK31				⇑Lg	Lg	23 13 42.9	
	5.1nm,0.5s,baz=213,slow=28,SNR=5.1						
AB31	**Akbulak array**	**11.67**	**336**	Pn	Pn	23 13 51.0	+0.6
	0.4nm,0.3s,baz=157,slow=14,SNR=20						
AB31				⇑Sn	Sn	23 16 02.1	+0.8
	0.3nm,0.3s,baz=148,slow=25,SNR=4.1						
AKTO	**Aktyubinsk**	**13.32**	**334**	⇑Pn	Pn	23 14 13.2	+0.2
	2.4nm,1.4s						
AKTO				⇑Sn	Sn	23 16 43.7	+2.0
	0.8nm,0.6s						

*NSSP **29** 23:13:09.6, 38.57N×44.80E, h8km, Ms2.8*
*DDA **29** 23:13:11.1, 38.89N×44.76E, h6km, MD3.1*
*ISK **29** 23:13:13.7, 38.89N×44.50E, h3km, MD3.5*
*CSEM **29** 23:13:14.4±0.4, 38.89N×44.53E, h2km, ML2.8, Error ellipse: s-maj=10.0km s-min=6.5km az=134.0*
ISC 29 23:13:14.2±1.0, 38.88N±0.03×44.54E±0.03, h17km±10km, n43, σ1°46/54, 4C-2D, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLDR	**Caldiran**	**0.55**	**298**	*e*PG	**Pb**	**23 13 24.4**	**-1.1**
CLDR				*e*SG	**Sb**	**23 13 32.7**	**-0.5**
CLDR	**Caldiran**	**0.55**	**298**	*e*Pg	**Pb**	**23 13 24.4**	**-1.1**
CLDR				*e*Sg	**Sb**	**23 13 32.7**	**-0.5**
DYDN	**Diyadin**	**0.93**	**315**	*i* P	**Pb**	**23 13 31.4**	**-0.6**
DYDN	**Diyadin**	**0.93**	**315**	*i* P	**Pb**	**23 13 31.4**	**-0.6**
VANB	**Van**	**0.94**	**253**	*e*PG	**Pn**	**23 13 32.2**	**-0.5**
VANB	**Van**	**0.94**	**253**	*e*Pg	**Pn**	**23 13 32.3**	**-0.5**
TVAN	**Van**	**0.95**	**249**	*i* P	**Pn**	**23 13 32.3**	**-0.7**
TVAN				*i* S	**Sn**	**23 13 49.0**	**+2.7**
TVAN	**Van**	**0.95**	**249**	*i* P	**Pn**	**23 13 32.3**	**-0.7**
TVAN				*i* S	**Sn**	**23 13 49.0**	**+2.7**
GNI	**Garni**	**1.27**	**7**	*e*PN	**Pg**	**23 13 38.8**	**-0.1**
GNI	**Garni**	**1.27**	**7**	⇑*i*P	**Pg**	**23 13 39.3**	**+0.4**
GNI				⇓*i*S	Sg	23 14 01.8	+6.3
GNI	**Garni**	**1.27**	**7**	*e*Pn	**Pg**	**23 13 38.8**	**-0.1**
GNI	**Garni**	**1.27**	**7**	⇑P	**Pg**	**23 13 39.3**	**+0.4**
GNI				S	Sg	23 14 01.8	+6.3
ERE	**Yerevan**	**1.29**	**358**	P	**Pn**	**23 13 36.0**	**-1.5**
GEVA	**Gevas**	**1.29**	**244**	*i* P	**Pg**	**23 13 37.8**	**-1.4**
GEVA				*i* S	**Sg**	**23 13 58.8**	**+2.8**
GEVA	**Gevas**	**1.29**	**244**	*i* P	**Pg**	**23 13 37.8**	**-1.4**
GEVA				*i* S	**Sg**	**23 13 58.8**	**+2.8**
TUTA	**Tutak**	**1.44**	**292**	*i* P	**Pg**	**23 13 41.5**	**-0.5**
TUTA				*i* S	**Sg**	**23 14 03.6**	**+2.9**
TUTA	**Tutak**	**1.44**	**292**	*i* P	**Pg**	**23 13 41.5**	**-0.5**
TUTA				*i* S	**Sg**	**23 14 03.6**	**+2.9**
HAKT	**HAKKARI**	**1.48**	**207**	*i* P	**Pb**	**23 13 41.0**	**-0.3**
HAKT				*i* S	**Sg**	**23 14 02.9**	**+1.0**
HAKT	**HAKKARI**	**1.48**	**207**	*i* P	**Pb**	**23 13 41.0**	**-0.3**
HAKT				*i* S	**Sg**	**23 14 02.9**	**+1.0**
GRS	**Goris**	**1.53**	**66**	⇑*i*P	**Pn**	**23 13 41.0**	**+0.2**
GRS				⇓*i*S	**Sg**	**23 14 03.0**	**-0.5**
GRS	**Goris**	**1.53**	**66**	⇑P	**Pn**	**23 13 41.0**	**+0.2**
GRS				S	**Sg**	**23 14 03.0**	**-0.5**
VADZ	**Vardenis**	**1.59**	**36**	*e*P	**Pg**	**23 13 45.0**	**+0.1**
VADZ				*e*S	**Sg**	**23 14 07.0**	**+1.4**
VADZ	**Vardenis**	**1.59**	**36**	P	**Pg**	**23 13 45.0**	**+0.1**
VADZ				S	**Sg**	**23 14 07.0**	**+1.4**
DIGO	**Kars**	**1.77**	**330**	*i* P	**Pg**	**23 13 48.1**	**-0.3**
DIGO	**Kars**	**1.77**	**330**	*i* P	**Pg**	**23 13 48.1**	**-0.3**
CUKT	**Cukurca**	**1.79**	**204**	*e*PN	**Pb**	**23 13 46.3**	**-0.4**
CUKT	**Cukurca**	**1.79**	**204**	*e*Pn	**Pb**	**23 13 46.3**	**-0.4**
KARS	**Kars**	**2.07**	**328**	*e*PN	**Pb**	**23 13 50.1**	**-1.3**
KARS	**Kars**	**2.07**	**328**	*e*Pn	**Pb**	**23 13 50.2**	**-1.3**
SIRN	**S¨¨rnak**	**2.17**	**231**	*i* P	**Pg**	**23 13 53.7**	**-2.2**
SIRN	**S¨¨rnak**	**2.17**	**231**	*i* P	**Pg**	**23 13 53.7**	**-2.2**
HOMI	**Horasan**	**2.34**	**300**	*i* P	**Pg**	**23 13 58.1**	**-1.2**
HOMI				*i* S	Sg	23 14 34.3	+4.7
VRTB	**Varto-Mus**	**2.42**	**278**	*e*PN	**Pb**	**23 13 55.0**	**-2.3**
VRTB	**Varto-Mus**	**2.42**	**278**	*e*Pn	**Pb**	**23 13 55.0**	**-2.3**
BTMT	**Batman**	**2.49**	**255**	*e*PN	**Pb**	**23 13 58.6**	**+0.1**
BTMT	**Batman**	**2.49**	**255**	*e*Pn	**Pb**	**23 13 58.6**	**+0.1**
EZM	**Erzurum**	**2.66**	**294**	*e*PN	**Pb**	**23 13 58.6**	**-3.0**
DDEM	**Demirkent**	**2.94**	**314**	*i* P	**Pg**	**23 14 08.7**	**-1.8**
DDEM	**Demirkent**	**2.94**	**314**	*i* P	**Pg**	**23 14 08.7**	**-1.8**
BNGB	**Bing¨ll**	**3.01**	**273**	*e*PN	Pb	23 14 03.5	-3.9
BINT	**Bingol**	**3.16**	**271**	*e*Pn	**Pn**	**23 14 03.6**	**+0.3**
PTK	**Pertek**	**4.01**	**272**	*e*PN	Pn	23 14 17.7	+2.6
PTK	**Pertek**	**4.01**	**272**	*e*Pn	Pn	23 14 17.7	+2.6

*AUST **29** 23:31:58.8, 5.59S×155.13E, h200km*
*IDC **29** 23:32:02.8±4.8, 6.32S×155.35E, h224km±49km, mb3.6/13, mb1 3.8/15, mb1mx3.7/20, mbtmp3.6/15, Error ellipse: s-maj=21.8km s-min=15.9km az=109.0*
ISC 29 23:31:58.8±1.8, 5.9S±0.2×155.3E±0.2, h200km, n30, σ1°77/16, mb3.9/12, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COEN	**Coen**	**14.42**	**235**	P	**P**	**23 35 16.3**	**+0.9**
	baz=14,SNR=3.8						
MTSU	**Mount Surprise**	**16.25**	**220**	P	**Pn**	**23 35 37.4**	**+1.0**
	baz=16,SNR=8.4						
CTA	**Charters Tower**	**16.66**	**211**	P	**P**	**23 35 40.2**	**+0.1**
	0.8nm,0.3s,baz=43,slow=12,SNR=10						
DZM	**Mont Dzumac**	**19.35**	**147**	P	**P**	**23 36 08.0**	**-1.5**
	1.2nm,0.3s,baz=261,slow=9.1,SNR=13						
EIDS	**Eidsvold**	**19.81**	**191**	P	**P**	**23 36 13.7**	**-0.5**
	baz=20,SNR=5.1						
RMQ	**Roma**	**21.44**	**196**	P	**P**	**23 36 30.9**	**-0.6**
	baz=22,SNR=7.8						
QLP	**Quilpie**	**23.16**	**206**	P	**P**	**23 36 47.1**	**-0.5**
	baz=23,SNR=15						
FAKI	**Fak Fak**	**23.20**	**276**	P	P	23 36 50.7	+2.4
	baz=23,SNR=3.9						
KDU	**Kakadu**	**23.55**	**252**	P	**P**	**23 36 52.9**	**+1.6**
	baz=23,SNR=9.7						
ARMA	**Armidale**	**24.66**	**188**	P	P	23 37 09.9	+8.4
	baz=25,SNR=6.3						
WRA	**Warramunga Arr**	**24.74**	**234**	P	**P**	**23 37 02.3**	**+0.1**
	3.0nm,0.5s,baz=57,slow=9.7,SNR=13						
ASAR	**Alice Springs**	**27.17**	**227**	P	**P**	**23 37 23.1**	**-0.9**
	0.9nm,0.3s,baz=59,slow=9.4,SNR=12						
STKA	**Stephens Creek**	**28.89**	**205**	P	P	23 37 36.1	-3.0
	1.0nm,0.5s,baz=34,slow=9.6,SNR=4.9						
YNG	**Young**	**29.00**	**192**	P	P	23 37 56.8	+17
	baz=29,SNR=8.4						
FITZ	**Fitzroy Crossi**	**31.43**	**245**	P	**P**	**23 38 01.2**	**-0.4**
	baz=31,SNR=15						
LUWI	**Luwuk**	**32.85**	**277**	S	S	23 43 42.3	+26
	baz=33,SNR=3.1						
MEEK	**Meekatharra**	**40.62**	**235**	P	**P**	**23 39 21.1**	**+1.6**
	baz=41,SNR=8.0						
UGM	**Wanagama**	**44.52**	**265**	P	**P**	**23 39 51.9**	**+0.8**
	baz=44,SNR=3.4						
MJAR	**Matsushiro Arr**	**45.14**	**340**	P	P	23 39 58.9	+3.3
	2.5nm,0.6s,baz=166,slow=7.8,SNR=8.5						
KSRS	**Korea Array**	**50.12**	**331**	P	P	23 40 38.2	+4.4
	1.2nm,0.5s,baz=150,slow=8.1,SNR=4.6						
USRK	**Ussuriysk Arra**	**54.10**	**339**	P	P	23 41 07.2	+4.2
	2.7nm,0.7s,baz=221,slow=7.2,SNR=5.3						
PPI	**Padang Panjang**	**55.09**	**274**	S	**S**	**23 48 32.9**	**-5.2**
	baz=55,SNR=6.8						
PETK	**Petropavlovsk-**	**58.79**	**2**	P	P	23 41 40.7	+4.8
	4.7nm,0.8s,baz=171,slow=10,SNR=8.1						
SONM	**Songino Array**	**68.59**	**327**	P	P	23 42 44.8	+4.6
	2.6nm,0.8s,baz=142,slow=7.0,SNR=18						
ILAR	**Eielson Array**	**82.21**	**21**	P	P	23 43 59.9	+2.6
	0.6nm,0.3s,baz=241,slow=5.5,SNR=10.0						
MKAR	**Makanchi Array**	**82.80**	**319**	P	P	23 44 04.1	+3.4
	0.7nm,0.7s,baz=98,slow=5.6,SNR=8.8						
ZALV	**Zalesovo Beam**	**83.45**	**326**	P	P	23 44 07.5	+3.7
	0.3nm,0.3s,baz=109,slow=5.5,SNR=3.1						
YKA	**Yellowknife Ar**	**95.19**	**28**	P	P	23 45 03.2	+3.9
	0.6nm,0.7s,baz=270,slow=4.9,SNR=8.4						
PDAR	**Pinedale Array**	**97.70**	**48**	P	Pdif	23 45 14.8	+3.4
	0.4nm,0.7s,baz=235,slow=5.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**153.04**	**287**	PKPbc	**PKPbc**	**23 51 34.0**	**+0.4**
	0.2nm,0.6s,baz=79,slow=1.6,SNR=7.1						
TORD				PKPab	**PKPab**	**23 51 47.0**	**+1.2**
	0.9nm,1.2s,baz=92,slow=3.8,SNR=4.8						

*ISCJB **29** 23:31:59.7±0.5, 17.78S±0.10×175.09W±0.09, h228km, mb4.4/8, Error ellipse: s-maj=16.2km s-min=7.9km az=141.7*
*IDC **29** 23:32:00.1±2.2, 17.90S×175.24W, h209km±24km, mb4.2/7, mb1 4.3/8, mb1mx3.7/22, mbtmp4.2/8, MS4.8/2, Ms1 4.8/2, ms1mx3.2/38, Error ellipse: s-maj=24.4km s-min=17.1km az=105.0*
*NEIC **29** 23:32:02.7±1.4, 17.90S×174.86W, h252km±16km, mb4.8/2, Error ellipse: s-maj=27.5km s-min=17.2km az=147.0*
*AUST **29** 23:32:04.0±0.0, 17.69S×174.70W, h276km, Error ellipse: s-maj=1.5km s-min=1.5km az=355.0*
ISC 29 23:32:00.9±0.6, 17.77S±0.09×175.02W±0.09, h228km, n34, σ1°16/32, mb4.5/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.95**	**40**	*e*Pn	**Pn**	**23 33 17.0**	**+1.4**
AFI				*e*Sn	**S**	**23 34 12.6**	**-1.9**
AFI	**Afiamalu**	**4.95**	**40**	P	**Pn**	**23 33 17.2**	**+1.7**
	49nm,0.3s,baz=249,slow=8.6,SNR=17						
AFI				S	**S**	**23 34 12.3**	**-2.2**
	69nm,0.3s,baz=98,slow=23,SNR=7.5						
NIUE	**Niue**	**5.00**	**106**	P	**Pn**	**23 33 17.8**	**+1.7**
	baz=4.7,SNR=3.2						
MSVF	**Nonsavu**	**6.61**	**269**	*e*Pn	Pn	23 33 42.8	+6.3
DZM	**Mont Dzumac**	**17.95**	**253**	P	**P**	**23 35 55.4**	**+0.9**
DZM	**Mont Dzumac**	**17.95**	**253**	P	**P**	**23 35 55.4**	**+0.9**
	0.2nm,0.3s,baz=78,slow=18,SNR=3.7						
URZ	**Urewera**	**21.54**	**197**	*e*P	**P**	**23 36 30.6**	**-1.7**
	23nm,0.5s						
URZ	**Urewera**	**21.54**	**197**	P	**P**	**23 36 30.8**	**-1.6**
	29nm,0.7s,baz=8.7,slow=4.1,SNR=35						
RPZ	**Rata Peaks**	**28.42**	**202**	P	**P**	**23 37 33.4**	**-1.0**
RPZ	**Rata Peaks**	**28.42**	**202**	P	**P**	**23 37 33.4**	**-1.0**
	5.2nm,0.4s,baz=6.1,slow=3.5,SNR=4.0						
PMG	**Port Moresby**	**37.63**	**278**	LR	LR	23 51 47.9	
	comp=Z,3μm,19.7s,baz=229,slow=32						
CMSA	**Cobar Meteorol**	**38.04**	**241**	P	**P**	**23 38 58.1**	**+0.6**
	baz=38,SNR=5.4						
QLP	**Quilpie**	**38.60**	**250**	S	**S**	**23 44 42.2**	**+0.8**
	baz=39,SNR=5.8						
STKA	**Stephens Creek**	**41.53**	**242**	*e*P	**P**	**23 39 24.9**	**-1.4**
	1.8nm,0.9s						
STKA	**Stephens Creek**	**41.53**	**242**	P	**P**	**23 39 24.9**	**-1.4**
	8.0nm,0.9s,baz=81,slow=6.8,SNR=11						
STKA	**Stephens Creek**	**41.53**	**242**	P	**P**	**23 39 26.6**	**+0.3**
	baz=42,SNR=5.8						
BBOO	**Buckleboo**	**46.30**	**241**	P	**P**	**23 40 03.6**	**-0.5**
	baz=47,SNR=9.8						
WRA	**Warramunga Arr**	**47.83**	**259**	P	**P**	**23 40 15.2**	**-0.9**
WRA	**Warramunga Arr**	**47.83**	**259**	P	**P**	**23 40 15.3**	**-0.9**
	3.1nm,0.6s,baz=96,slow=6.9,SNR=9.2						
ASAR	**Alice Springs**	**47.93**	**254**	P	**P**	**23 40 16.0**	**-0.9**
ASAR	**Alice Springs**	**47.93**	**254**	P	**P**	**23 40 16.0**	**-0.9**
	15nm,0.4s,baz=88,slow=8.7,SNR=147						
VNDA	**Vanda**	**60.87**	**186**	P	**P**	**23 41 49.4**	**+0.4**
VNDA	**Vanda**	**60.87**	**186**	P	**P**	**23 41 49.4**	**+0.4**
	3.0nm,0.7s,baz=4.7,slow=6.5,SNR=25						
NWAO	**Narrogin (SRO)**	**62.12**	**242**	*e*P	**P**	**23 41 57.0**	**-1.1**
	24nm,1.3s						
MORW	**Morawa**	**63.49**	**246**	P	P	23 42 02.1	-5.1
	baz=64,SNR=3.2						
KAPI	**Kappang**	**64.91**	**273**	LR	LR	00 08 29.2	
	comp=Z,391nm,20.8s,baz=299,slow=34						
KKM	**Kota Kinabalu**	**71.85**	**283**	P	**P**	**23 43 01.2**	**+1.5**
	baz=72,SNR=3.5						
MAW	**Mawson**	**85.06**	**199**	P	**P**	**23 44 10.5**	**-0.1**
MAW	**Mawson**	**85.06**	**199**	P	**P**	**23 44 10.5**	**-0.1**
	3.9nm,0.6s,baz=140,slow=5.4,SNR=14						
MAW	**Mawson**	**85.06**	**199**	P	**P**	**23 44 10.8**	**+0.2**
	baz=86,SNR=5.2						
BRTR	**Keskin Array B**	**146.93**	**317**	PKPbc	**PKPbc**	**23 51 17.3**	**+0.3**
BRTR	**Keskin Array B**	**146.93**	**317**	PKPbc	**PKPbc**	**23 51 17.3**	**+0.3**
	0.8nm,0.6s,baz=140,slow=3.0,SNR=5.8						
GERES	**GERESS Array B**	**148.21**	**349**	PKPbc	**PKPbc**	**23 51 20.8**	**+0.7**
GERES	**GERESS Array B**	**148.21**	**349**	PKPbc	**PKPbc**	**23 51 20.8**	**+0.7**
	0.4nm,0.5s,baz=54,slow=3.4,SNR=5.4						

*ISCJB **29** 23:36:20.0±0.5, 6.89S±0.03×129.15E±0.05, h156km, mb3.7/3, Error ellipse: s-maj=7.5km s-min=4.5km az=176.9*
*AUST **29** 23:36:19.6, 6.98S×129.03E, h100km*
*IDC **29** 23:36:20.8±6.4, 6.97S×128.69E, h180km±67km, mb3.5/3, mb1 3.8/5, mb1mx3.4/19, mbtmp3.7/5, Error ellipse: s-maj=218.1km s-min=21.8km az=67.0*
*DJA **29** 23:36:21.5±0.4, 7.7S±4.2×12.9E±, h100km±11km, M4.9/6, mb5.2/6, mB5.3/5, MLv4.8/6, Mw(mB)4.7/5*
ISC 29 23:36:19.7±0.7, 6.91S±0.06×129.06E±0.07, h156km, n23, σ2°21/28, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**3.54**	**358**	P	**Pn**	**23 37 15.6**	**+1.4**
NLAI	**Namlea**	**4.13**	**332**	P	**Pn**	**23 37 23.1**	**+1.2**
FAKI	**Fak Fak**	**5.08**	**39**	P	**Pn**	**23 37 35.0**	**+0.7**
	baz=5.2,SNR=34						
FAKI				S	**Sn**	**23 38 30.7**	**-1.9**
	baz=5.2,SNR=10.0						
MTN	**Manton Dam**	**6.24**	**161**	P	**Pn**	**23 37 52.7**	**+3.0**
	baz=6.2,SNR=118						
MTN				S	**Sn**	**23 39 00.7**	**+0.4**
	baz=6.2,SNR=10						
SWI	**Sorong**	**6.39**	**20**	P	**Pn**	**23 37 51.9**	**+0.2**
	39nm,0.5s,2μm0.3nm						
SWI	**Sorong**	**6.39**	**20**	P	**Pn**	**23 37 52.4**	**+0.6**
	baz=6.5,SNR=12						
LBMI	**Labuha**	**6.42**	**346**	P	**Pn**	**23 37 52.5**	**+0.4**
	152nm,0.7s,1μm0.5nm						
KDU	**Kakadu**	**6.66**	**150**	P	**Pn**	**23 37 58.0**	**+2.8**
	baz=6.6,SNR=47						
KDU				S	**Sn**	**23 39 10.3**	**+0.2**
	baz=6.6,SNR=9.8						
RKPI	**Ransiki, Papua**	**7.40**	**44**	P	**Pn**	**23 38 05.8**	**+0.6**
	481nm,0.7s,9μm2.5nm						
KNRA	**Kununurra**	**8.72**	**182**	P	**Pn**	**23 38 24.0**	**+1.3**
	baz=8.7,SNR=100						
KNRA				S	**Sn**	**23 39 56.4**	**-3.3**
	baz=8.7,SNR=6.0						
WSI	**Waingapu**	**9.09**	**252**	S	**Sn**	**23 40 12.3**	**+3.6**
	baz=9.1,SNR=3.2						
FITZ	**Fitzroy Crossi**	**11.62**	**196**	P	**Pn**	**23 39 00.1**	**-0.7**
	baz=12,SNR=36						
WRA	**Warramunga Arr**	**13.94**	**159**	P	**Pn**	**23 39 29.9**	**-0.8**
	1.5nm,0.3s,baz=335,slow=13,SNR=15						
WRA				S	**Sn**	**23 42 00.8**	**-4.5**
	1.6nm,0.3s,baz=332,slow=25,SNR=5.0						
COEN	**Coen**	**15.54**	**118**	P	**P**	**23 39 53.4**	**+1.7**
	baz=16,SNR=6.8						
QIS	**Mount Isa**	**16.99**	**144**	P	**Pn**	**23 40 09.4**	**+1.2**
	baz=17,SNR=22						
ASAR	**Alice Springs**	**17.30**	**165**	P	**Pn**	**23 40 12.7**	**+0.7**
	3.7nm,0.3s,baz=340,slow=11,SNR=150						
ASAR				S	**S**	**23 43 20.2**	**-3.2**
	0.4nm,0.3s,baz=347,slow=24,SNR=9.5						
MTSU	**Mount Surprise**	**18.59**	**128**	P	**Pn**	**23 40 30.4**	**+3.1**
	baz=19,SNR=4.7						
MEEK	**Meekatharra**	**22.00**	**206**	P	**P**	**23 41 04.1**	**+2.6**
	baz=22,SNR=8.5						
TPRI	**Tanjung Pinang**	**25.68**	**287**	P	P	23 41 43.3	+7.8
STKA	**Stephens Creek**	**27.46**	**156**	P	**P**	**23 41 51.1**	**-0.1**
	0.8nm,0.4s,baz=329,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	**67.64**	**327**	P	**P**	**23 46 57.5**	**-2.2**
	1.2nm,0.4s,baz=115,slow=8.8,SNR=25						
VNDA	**Vanda**	**72.65**	**173**	P	**P**	**23 47 28.1**	**-1.7**
	0.4nm,0.5s,baz=319,slow=8.9,SNR=4.6						
TORD	**Torodi Ar. Bea**	**127.87**	**281**	PKP	**PKPdf**	**23 55 04.7**	**-3.2**
	0.3nm,0.6s,baz=120,slow=1.5,SNR=3.1						

*IDC **29** 23:47:56.5±0.4, 6.14S×151.19E, h0km, mb4.5/27, mb1 4.7/29, mb1mx4.7/30, mbtmp4.5/29, ML3.6/2, MS4.4/22, Ms1 4.4/22, ms1mx4.2/33, Error ellipse: s-maj=16.8km s-min=10.3km az=108.0*
*BJI **29** 23:48:00.1, 6.42S×151.46E, h50km, mB5.1/28, mb4.8/35, Ms4.9/27, Ms7 4.5/28*
*MOS **29** 23:48:00.6±1.1, 6.14S×151.01E, h33km, mb5.1/12, MS4.3/5, Error ellipse: s-maj=12.9km s-min=7.9km az=80.2*
*ISCJB **29** 23:48:01.6±0.3, 6.23S±0.04×151.07E±0.05, h44km, mb4.7/60, MS4.4/35, Error ellipse: s-maj=7.5km s-min=5.2km az=14.7*
*NEIC **29** 23:48:01.7±0.2, 6.17S×151.09E, h35km, mb5.0/23, Error ellipse: s-maj=9.5km s-min=6.0km az=106.0*
*GCMT **29** 23:48:05.3±0.2, 6.44S×151.14E, h18km, MW5.2, Moment Tensor Solution. s55,c80; s79,c128; Moment tensor: Scale 10^16Nm; Mrr4.45±.18; Mθθ-4.92±.13; Mϕϕ0.47±.12; Mrθ4.81±.36; Mrϕ-0.78±.09; Mθϕ1.60±.33; Best double couple: M0 7.00000×10^16 NP1:ϕ271.00000°, δ22.00000°, λ106.00000°. NP2:ϕ74.00000°, δ69.00000°, λ83.00000°. Principal axes: T 6.7000, Plg66.0000°, Azm333.0000°; N 0.4800, Plg6.0000°, Azm76.0000°; P -7.1900, Plg23.0000°, Azm169.0000°; Data Used: ll IU IC G CN.*
*DJA **29** 23:48:10.4±1.3, 6.5S±6.1×15.1E±1.0, h93km±12km, M4.8/9, mB5.7/1, mb4.8/9, Mw(mB)5.2/1*
ISC 29 23:48:03.3±0.4, 6.21S±0.04×151.11E±0.06, h43km±2km, h42km:pP-P, n245, σ1°76/280, mb4.8/59, MS4.4/37, 5C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.04**	**231**	*e*Pn	**Pn**	**23 49 15.6**	**-0.9**
PMG				*e*Sn	**Sn**	**23 50 10.8**	**-2.8**
PMG	**Port Moresby**	**5.04**	**231**	P	**Pn**	**23 49 16.7**	**+0.2**
PMG	**Port Moresby**	**5.04**	**231**	Pn	**Pn**	**23 49 16.4**	**-0.1**
	6.2nm,0.3s,baz=34,slow=13,SNR=21						
PMG				Sn	**Sn**	**23 50 14.3**	**+0.7**
	42nm,0.3s,baz=127,slow=16,SNR=8.4						
COEN	**Coen**	**10.97**	**225**	*e*Pn	**Pn**	**23 50 37.8**	**0.0**
CTA	**Charters Tower**	**14.58**	**198**	Pn	**Pn**	**23 51 25.6**	**-1.5**
CTA	**Charters Tower**	**14.58**	**198**	Pn	**Pn**	**23 51 25.6**	**-1.5**
	0.4nm,0.3s,baz=42,slow=15,SNR=3.7						
CTAO	**Charters Tower**	**14.58**	**198**	*e*P	**Pn**	**23 51 26.3**	**-0.8**
CTAO	**Charters Tower**	**14.58**	**198**	*e*Pn	**Pn**	**23 51 25.4**	**-1.7**
EIDS	**Eidsvold**	**19.06**	**180**	*e*P	**P**	**23 52 21.3**	**-0.9**
	193nm,2.0s						
SWI	**Sorong**	**20.51**	**284**	P	Pn	23 52 58.6	+18
GUMO	**Guam**	**20.62**	**343**	*e*P	**

comp=Z,1.9nm,0.7s,baz=168,slow=8.9,SNR=3.1
MJAR ScP **ScP** **00 01 45.1 +3.8**
comp=Z,4.8nm,1.1s,baz=177,slow=5.0,SNR=4.4
KSRS Korea Array 48.53 335 P **P** **23 56 43.0 +0.8**
comp=Z,4.7nm,0.8s,baz=153,slow=8.1,SNR=6.2
KSRS LR LR 00 15 22.6
comp=Z,249nm,19.1s,baz=66,slow=34
KSAR Wonju Array Be 48.53 335 P **P** **23 56 43.0 +0.8**
ASAJ Asahikawa 50.68 352 LR LR 00 17 32.7
comp=Z,293nm,19.1s,baz=190,slow=35
DL2 Dalian 52.55 331 P P 23 57 05.0 -7.6
DL2 pmax pmax
comp=Z,24nm,1.2s
DL2 pmax pmax
comp=Z,100nm,6.5s
DL2 LR LR
comp=N,130nm,16.0s
DL2 LR LR
comp=E,220nm,13.6s
DL2 LR LR
comp=Z,180nm,14.2s
USRK Ussuriysk Arra 53.06 343 P **P** **23 57 15.0 -1.2**
comp=Z,1.3nm,0.6s,baz=142,slow=9.7,SNR=3.3
USRK LR LR 00 16 20.9
comp=Z,198nm,19.3s,baz=107,slow=32
ENH Enshi 53.91 315 *e*P **P** **23 57 22.1 -0.7**
GYA Guiyang 53.94 309 *e*P **P** **23 57 25.0 +1.8**
GYA pP **pP** **23 57 38.5 +3.1**
GYA sP **sP** **23 57 42.3 +2.0**
GYA PcP **PcP** **23 58 30.0 +1.8**
GYA PP **PP** **23 59 28.5 +3.6**
GYA ScP **ScP** **00 02 22.0 -1.1**
GYA S **S** **00 04 55.8 -0.3**
GYA sS **sS** **00 05 17.5 +1.2**
GYA SS **SKiKP** **00 08 35.0 +1.8**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.2s
GYA LR LR
comp=N,530nm,18.0s
GYA LR LR
comp=E,420nm,19.2s
GYA LR LR
comp=Z,560nm,18.4s
MDJ Mudanjiang 54.17 341 P **P** **23 57 25.3 +0.9**
MDJ pmax pmax
comp=Z,3.0nm,0.7s
MDJ pmax pmax
comp=Z,120nm,4.7s
CN2 Changchun 54.91 337 *e*P **P** **23 57 29.3 -0.5**
CN2 *e*S **S** **00 05 06.0 -2.4**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,300nm,15.0s
KMI Kunming 56.40 306 P **P** **23 57 42.8 +1.7**
KMI pP **pP** **23 57 54.5 +1.1**
KMI sP **sP** **23 57 59.0 +0.7**
KMI PP **PP** **23 59 50.5 +3.3**
KMI S **S** **00 05 27.8 -1.6**
KMI sS **sS** **00 05 48.5 -1.2**
KMI SS **SS** **00 09 16.8 -0.4**
KMI pmax pmax
comp=Z,6.0nm,0.6s
KMI pmax pmax
comp=Z,110nm,3.8s
KMI LR LR
comp=N,250nm,27.3s
KMI LR LR
comp=E,200nm,21.8s
KMI LR LR
comp=Z,270nm,20.4s
XAN Xi'an 56.51 318 P **P** **23 57 40.0 -1.5**
XAN S **S** **00 05 30.3 +0.2**
XAN pmax pmax
comp=Z,3.0nm,1.3s
XAN pmax pmax
comp=Z,25nm,4.8s
XAN LR LR
comp=N,130nm,17.6s
XAN LR LR
comp=E,49nm,19.7s
XAN LR LR
comp=Z,110nm,18.6s
KIP Kipapa 56.94 60⇓ *i*P **pP** **23 57 56.7 -0.2**
KIP pmax pmax
comp=Z,104nm,1.2s
CMAR Chiang Mai Arr 56.98 297 P **P** **23 57 45.5 +0.5**
CMAR Chiang Mai Arr 56.98 297 P **P** **23 57 45.5 +0.5**
comp=Z,0.9nm,0.6s,baz=98,slow=6.0,SNR=6.0
CD2 Chengdu 58.40 312 P **P** **23 57 57.0 +2.1**
CD2 pP **pP** **23 58 08.8 +1.6**
CD2 sP **sP** **23 58 13.5 +1.4**
CD2 PcP **PcP** **23 58 47.3 +1.9**
CD2 PP **PP** **00 00 08.3 +3.7**
CD2 PcS **PcS** **00 02 47.3 +0.2**
CD2 S **S** **00 05 55.5 +0.4**
CD2 sS **sS** **00 06 15.0 -0.5**
CD2 SS **SS** **00 09 49.5 +1.4**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,160nm,5.6s
CD2 LR LR
comp=N,190nm,15.7s
CD2 LR LR
comp=E,340nm,17.6s
CD2 LR LR
comp=Z,320nm,15.5s
PPT Papeete 58.92 107 LR LR 00 17 36.9
comp=Z,94nm,21.7s,baz=1.2,slow=30
PPT2 Papeete2 58.92 107 *e*S **S** **00 06 05.9 +3.6**
comp=Z,388nm,26.0s
PPT2 *e*LR LR 00 15 11.3
comp=Z,146nm,26.0s
HHC Hu-ho-hao-te 59.23 326 *e*P **P** **23 58 00.5 -0.1**
HHC pP **pP** **23 58 13.3 +0.5**
HHC sP **sP** **23 58 18.5 +0.7**
HHC PP **PP** **00 00 14.5 +2.6**
HHC S **S** **00 06 04.3 -1.4**
HHC sS **sS** **00 06 26.0 -0.1**
HHC SS **SS** **00 10 01.5 +0.6**
HHC pmax pmax
comp=Z,49nm,0.7s
HHC pmax pmax
comp=Z,290nm,7.1s
HHC LR LR
comp=N,570nm,15.1s
HHC LR LR
comp=E,400nm,16.3s
HHC LR LR
comp=Z,650nm,16.3s
PET Petropavlovsk 59.35 5 *e*P P 23 58 07.3 +6.4
PET *e*S sS 00 06 29.2 +2.3
PET pmax pmax
comp=Z,100nm,14.7s
PET MLR MLR
comp=Z,100nm,19.0s
PETK Petropavlovsk- 59.35 5 P **P** **23 57 59.5 -1.5**
PETK Petropavlovsk- 59.35 5 P **P** **23 57 59.5 -1.5**
PETK Petropavlovsk- 59.35 5 P **P** **23 57 59.5 -1.5**
comp=Z,2.1nm,0.9s,baz=158,slow=8.7,SNR=3.3
PETK LR LR 00 18 43.1
comp=Z,141nm,19.7s,baz=207,slow=31
TBI Tubuai 59.53 113 *e*LR LR 00 15 40.5
comp=Z,366nm,35.5s
LZH Lanzhou 61.09 317 *e*P **P** **23 58 13.5 +0.1**
LZH pP **pP** **23 58 26.0 +0.2**
LZH sP **sP** **23 58 31.5 +0.8**
LZH *e*S **S** **00 06 32.0 +2.2**
LZH sS **sS** **00 06 51.0 +0.7**
LZH SS **SS** **00 10 33.5 +3.2**
LZH pmax pmax
comp=Z,14nm,1.0s
LZH pmax pmax
comp=Z,52nm,4.0s
LZH LR LR
comp=N,230nm,16.0s
LZH LR LR
comp=E,350nm,14.4s
LZH LR LR
comp=Z,430nm,17.8s
FX1 Attu Island--F 61.77 15 LR LR 00 22 54.2
comp=Z,260nm,19.1s,baz=235,slow=34
GTA Gaotai 65.56 318 *e*P **P** **23 58 43.0 0.0**
GTA pP **pP** **23 58 56.3 +0.9**
GTA sP **sP** **23 59 01.8 +1.5**
GTA S **S** **00 07 23.5 -2.0**
GTA sS **sS** **00 07 46.0 -0.1**
GTA SS **SS** **00 11 39.3 -0.8**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,92nm,5.2s
GTA LR LR
comp=N,190nm,18.0s
GTA LR LR
comp=E,180nm,16.1s
GTA LR LR
comp=Z,230nm,15.9s
ULN Ulaanbaatar 66.32 329 *e*P **P** **23 58 45.9 -1.7**
comp=Z,5.3nm,1.1s
SONM Songino Array 66.63 329 P **P** **23 58 49.0 -0.6**
SONM Songino Array 66.63 329 P **P** **23 58 49.0 -0.6**
comp=Z,2.7nm,1.0s,baz=144,slow=6.7,SNR=17
SONM LR LR 00 30 23.6
comp=Z,334nm,18.2s,baz=130,slow=38
ZAK Zakamensk 69.83 330⇑ *i*P **P** **23 59 08.7 -0.9**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
VNDA Vanda 71.50 178 *e*P **P** **23 59 20.5 +1.2**
comp=Z,22nm,1.6s
VNDA Vanda 71.50 178 P **P** **23 59 19.4 +0.1**
comp=Z,3.9nm,0.8s,baz=326,slow=6.5,SNR=27
SBA Scott Base 72.08 177 *e*P **P** **23 59 25.0 +2.3**
SBA pmax pmax
comp=Z,57nm,1.9s
SBA Scott Base 72.08 177 *e*P **P** **23 59 25.0 +2.3**
comp=Z,57nm,1.9s
RKT Rikitea 72.81 112 *e*LR LR 00 21 50.4
comp=Z,2μm,36.0s
BILL Bilibino 74.84 6⇑ *e*P P 23 59 43.4 +4.4
BILL *i* 23 59 50.9
BILL pmax pmax
comp=Z,3.0nm,1.0s
HVS Khovu-Aksy 75.29 327⇑ *i*P **P** **23 59 41.2 -0.8**
HVS pmax pmax
comp=Z,42nm,1.2s
WMQ Urumqi 75.64 318 *e*P **P** **23 59 44.3 +0.1**
WMQ pP **PcP** **23 59 57.3 +0.4**
WMQ sP **sP** **00 00 02.5 +0.8**
WMQ PP **PP** **00 02 36.0 +1.6**
WMQ S **S** **00 09 20.5 -2.1**
WMQ sS **sS** **00 09 42.8 -0.8**
WMQ ScS **SKSac** **00 09 50.5 -0.6**
WMQ pmax pmax
comp=Z,11nm,1.2s
WMQ pmax pmax
comp=Z,110nm,4.4s
WMQ LR LR
comp=N,140nm,8.8s
WMQ LR LR
comp=E,140nm,13.2s
WMQ LR LR
comp=Z,110nm,22.4s
KDAK Kodiak Island 78.18 27 P **P** **23 59 58.0 0.0**
KDAK Kodiak Island 78.18 27 P **P** **23 59 58.0 0.0**
comp=Z,7.0nm,1.0s,baz=118,slow=5.1,SNR=3.6
TIXI Tiksi 79.07 353 *e*P **P** **00 00 04.0 +1.3**
TIXI pmax pmax
comp=Z,6.0nm,1.7s
MKAR Makanchi Array 80.28 319 *e*P **P** **00 00 09.1 -0.8**
MKAR 00 03 10.7
MKAR Makanchi Array 80.28 319 *e*P **P** **00 00 09.1 -0.8**
MKAR PP **PP** **00 03 10.7 -2.4**
MKAR Makanchi Array 80.28 319 P **P** **00 00 09.0 -0.8**
comp=Z,2.5nm,0.9s,baz=101,slow=7.5,SNR=17
MKAR PP **PP** **00 03 10.7 -2.4**
comp=Z,1.2nm,1.0s,baz=101,slow=7.5,SNR=4.1
MKAR LR LR 00 36 37.8
comp=Z,125nm,19.0s,baz=330,slow=36
ZALV Zalesovo Beam 81.39 327 P **P** **00 00 13.8 -1.8**
ZALV Zalesovo Beam 81.39 327 P **P** **00 00 13.8 -1.8**
ZALV Zalesovo Beam 81.39 327 P **P** **00 00 13.8 -1.8**
comp=Z,2.1nm,0.9s,baz=98,slow=6.1,SNR=10
ZALV LR LR 00 36 59.9
comp=Z,161nm,18.9s,baz=249,slow=36
TRF Thorofare Moun 82.14 23 *e*P **P** **00 00 18.4 -1.1**
comp=Z,12nm,1.4s
KSH Kashi 82.58 311 *e*P **P** **00 00 23.0 +0.7**
KSH *es*P **sP** **00 00 41.5 +1.6**
KSH *e*PP **PP** **00 03 33.8 +1.5**
KSH *e*S **S** **00 10 33.5 -3.1**
KSH pmax pmax
comp=Z,4.0nm,0.7s
KSH pmax pmax
comp=Z,180nm,4.6s
KSH LR LR
comp=N,150nm,4.0s
KSH LR LR
comp=E,240nm,7.5s
KSH LR LR
comp=Z,260nm,8.0s
MCK McKinley 82.80 23 *e*P **P** **00 00 22.2 -0.6**
MCK pmax pmax
comp=Z,29nm,1.3s
MCK McKinley 82.80 23 *e*P **P** **00 00 22.2 -0.6**
comp=Z,29nm,1.3s
MAW Mawson 83.63 203 P **P** **00 00 26.5 -0.5**
MAW Mawson 83.63 203 P **P** **00 00 26.5 -0.5**
comp=Z,4.0nm,1.0s,baz=105,slow=8.0,SNR=4.9
MAW LR LR 00 35 03.5
comp=Z,248nm,19.2s,baz=67,slow=34
QSPA South Pole Qui 83.76 180 P **P** **00 00 27.7 -0.3**
QSPA South Pole Qui 83.76 180 P **P** **00 00 27.7 -0.3**
comp=Z,4.0nm,0.7s,baz=298,slow=1.0,SNR=16
KURK Kurchatov 83.84 322*c* *i*P **P** **00 00 26.6 -1.9**
KURK pmax pmax
comp=Z,12nm,1.2s
KURK Kurchatov 83.84 322 *e*P **P** **00 00 26.4 -2.0**
comp=Z,9.7nm,1.1s
KURK PP **PP** **00 03 42.7 +0.5**
KURK Kurchatov 83.84 322 P **P** **00 00 26.5 -1.9**
comp=Z,45nm,1.2s,SNR=5.7
KURBB Kurchatov Arra 83.87 322 P **P** **00 00 27.4 -1.2**
comp=Z,2.5nm,0.8s,baz=103,slow=4.1,SNR=23
KURBB PP **PP** **00 03 42.7 +0.3**
comp=Z,0.2nm,0.3s,baz=103,slow=7.3,SNR=4.5
ILAR Eielson Array 84.09 22 P **P** **00 00 27.9 -1.5**
ILAR Eielson Array 84.09 22 P **P** **00 00 27.9 -1.5**
comp=Z,6.6nm,1.1s,baz=260,slow=5.0,SNR=25
ILAR LR LR 00 37 36.0
comp=Z,258nm,18.8s,baz=252,slow=36
COLD Coldfoot 84.13 20 *e*P **P** **00 00 30.3 +0.8**
comp=Z,8.5nm,1.1s
AAK Ala-Archa 84.41 314 *e*P **P** **00 00 30.4 -1.4**
AAK pmax pmax
comp=Z,3.0nm,0.8s
AAK Ala-Archa 84.41 314 *e*P **P** **00 00 30.4 -1.4**
comp=Z,3.1nm,0.8s
AAK Ala-Archa 84.41 314 P **P** **00 00 30.9 -0.9**
comp=Z,1.1nm,0.4s,baz=192,slow=2.9,SNR=6.5
DOT Dot Lake 84.69 24 *e*P **P** **00 00 32.6 +0.1**
comp=Z,12nm,1.1s
EKS2 Erkin-Say 84.94 314 *e*P **P** **00 00 34.3 -0.1**
EKS2 pmax pmax
comp=Z,6.0nm,0.9s
EKS2 Erkin-Say 84.94 314 *e*P **P** **00 00 34.2 -0.1**
comp=Z,6.3nm,0.9s
EGAK Eagle 86.31 23 *e*P **P** **00 00 40.6 +0.2**
comp=Z,20nm,1.3s
KKAR Karatay Array 87.38 314 *e*P **P** **00 00 45.2 -1.0**
KKAR Karatay Array 87.38 314 *e*P **P** **00 00 45.2 -1.0**
BVAR Borovoye Array 89.36 323 P **P** **00 00 53.5 -1.8**
BVAR Borovoye Array 89.36 323 P **P** **00 00 53.5 -1.8**
BVAR Borovoye Array 89.36 323 P **P** **00 00 53.5 -1.8**
comp=Z,0.8nm,0.5s,baz=145,slow=5.4,SNR=4.2
DLBC Dease Lake 89.44 31 P **P** **00 00 55.9 +0.2**
DLBC Dease Lake 89.44 31 P **P** **00 00 55.9 +0.2**
comp=Z,4.6nm,1.0s,baz=275,slow=3.0,SNR=6.2
INK Inuvik 90.36 21 P **P** **00 00 58.4 -1.2**
INK Inuvik 90.36 21 P **P** **00 00 58.4 -1.2**
comp=Z,4.1nm,1.1s,baz=271,slow=4.6,SNR=5.5
HUMO Hull Mountain 91.17 47 *e*P **P** **00 01 05.0 +1.0**
comp=Z,12nm,1.1s
YBH Yreka Blue Hor 91.24 48 P **P** **00 01 03.9 -0.6**
YBH Yreka Blue Hor 91.24 48 P **P** **00 01 03.9 -0.6**
comp=Z,4.4nm,1.1s,baz=225,slow=2.9,SNR=3.8
SYO Syowa Base 91.79 200⇑ *e*P **P** **00 01 05.4 -0.9**
CMB Columbia Colle 92.60 52 *e*P **P** **00 01 11.4 +0.6**
CMB pmax pmax
comp=Z,13nm,1.4s
CMB Columbia Colle 92.60 52 *e*P **P** **00 01 11.4 +0.6**
comp=Z,13nm,1.4s
MTUM Tungsten Hills 93.98 53 *e*P **P** **00 01 18.7 +1.3**
NVAR Mina Array Bea 94.27 52 P **P** **00 01 17.9 -0.9**
NVAR Mina Array Bea 94.27 52 P **P** **00 01 17.8 -0.9**
comp=Z,1.4nm,0.9s,baz=232,slow=7.3,SNR=6.5
NVAR LR LR 00 40 36.2
comp=Z,511nm,18.2s,baz=144,slow=34
FURC Furnace Creek, 95.27 54 P P 00 01 34.2 +11
baz=95
MONP Monument Peak 95.40 58 P **P** **00 01 24.2 +0.2**
baz=96
PFO Pinyon Flat Ob 95.42 57 P **P** **00 01 23.9 -0.1**
baz=96
NEW Newport 95.76 42 P **P** **00 01 25.9 +0.8**
baz=96
TUQ Turquoise Moun 95.97 55 P P 00 01 38.3 +12
baz=96
BC3 Big Chuckawall 96.25 57 P P 00 01 39.8 +12
baz=96
R11A Troy Canyon, C 96.39 52 P P 00 01 40.1 +12
baz=96
YKA Yellowknife Ar 97.44 28 P Pdif 00 01 32.1 -0.2
YKA Yellowknife Ar 97.44 28 P Pdif 00 01 32.1 -0.2
comp=Z,0.9nm,0.9s,baz=269,slow=4.5,SNR=12
B13A Whitefish 97.53 42 P Pdif 00 01 32.8 -0.5
baz=98
W13A Hualapai Mount 97.62 55 P **P** **00 01 33.3 -0.7**
baz=98
G13A Cobalt 97.64 45 P Pdif 00 01 46.8 +13
baz=98
E15A Deer Lodge 98.77 44 P Pdif 00 01 38.6 -0.2
baz=99
WUAZ Wupatki 99.68 55 P Pdif 00 02 00.5 +17
baz=100
H16A Russell Place, 99.76 46 P **Pdif** **00 01 43.4 0.0**
baz=100
S18A Hurst Farm, BI 100.80 53 P Pdif 00 02 00.0 +12
baz=101
PDAR Pinedale Array 101.03 48 P **Pdif** **00 01 47.6 -1.5**
PDAR Pinedale Array 101.03 48 P **Pdif** **00 01 47.7 -1.5**
comp=Z,0.4nm,0.7s,baz=289,slow=2.8,SNR=4.8
319A Douglas 101.39 59 P Pdif 00 02 02.3 +11
baz=102
TXAR Lajitas Array 106.28 61 PP PP 00 06 48.8 +11
TXAR Lajitas Array 106.28 61 PP PP 00 06 48.8 +11
comp=Z,0.8nm,0.9s,baz=271,slow=7.4,SNR=6.0
NB2 NORSAR Subarra117.64 339 PKPdf **PKPdf** **00 06 43.3 -1.3**
comp=Z,4.8nm,1.4s,baz=44,slow=1.9
NOA NORSAR Array B117.64 339 PKP **PKPdf** **00 06 44.4 -0.2**
NOA NORSAR Array B117.64 339 PKP **PKPdf** **00 06 44.4 -0.2**
comp=Z,1.0nm,0.8s,baz=329,slow=2.5,SNR=3.2
KOLS Kolonicke sedl 119.47 324 *e*PKIKP **PKPdf** **00 06 49.4 +1.0**
KOLS *e* 00 06 59.3
CRVS Cervenica-Dubn 119.95 324 *e*PKIKP **PKPdf** **00 06 48.5 -0.9**
VYHS Vyhne 121.67 325 *e*PKIKP **PKPdf** **00 06 52.2 -0.5**
VYHS *e* 00 07 03.1
BSEG Bad Segeberg 122.83 334 *e*PKPdf **PKPdf** **00 06 55.6 +0.9**
BSEG *e*L L 01 02 45.8
comp=Z,220nm,18.4s
BSEG Bad Segeberg 122.83 334 *e*PKIKP **PKPdf** **00 06 55.6 +0.9**
IDI Anoyia 122.85 308 *e*PKPdf **PKPdf** **00 06 55.3 -0.1**
BRG Berggiesshubel 123.03 329 *e*P **PKPdf** **00 06 55.9 +0.7**
comp=Z,11nm,1.4s
BRG *e* 00 07 05.3
comp=Z,8.0nm,1.1s
BRG Berggiesshubel 123.03 329 *e*PKPdf **PKPdf** **00 06 55.7 +0.5**
BRG *ep*PKPdf **pPKPdf** **00 07 05.5 -3.0**
BRG *e*L L 01 04 10.4
comp=Z,178nm,19.5s
BRG Berggiesshubel 123.03 329 *e*PKIKP **PKPdf** **00 06 55.9 +0.7**
BRG *e* 00 07 05.3
CLL Collm 123.24 330 *e*PKPdf **PKPdf** **00 06 55.8 +0.2**
CLL *ep*PKPdf **pPKPdf** **00 07 05.8 -3.1**
CLL *e*L L 01 00 53.9
comp=Z,117nm,20.1s
CLL Collm 123.24 330 *i* PKIKP **PKPdf** **00 06 54.8 -0.8**
CLL pmax pmax
comp=Z,7.0nm,1.2s
CLL Collm 123.24 330 *i* PKPdf **PKPdf** **00 06 54.8 -0.8**
comp=Z,7.0nm,1.2s
CLL *i* pPKPdf **pPKPdf** **00 07 05.8 -3.1**
comp=Z,7.0nm,1.1s
CLL LmV 01 00 00.0
comp=Z,100nm,20.2s
NRDL Niedersach Rie 123.88 332 *e*PKPdf **PKPdf** **00 06 57.3 +0.6**
TANN Tannenbergstha 124.06 329 *e*PKPdf **PKPdf** **00 06 57.8 +0.5**
TANN *e*L L 01 04 59.0
comp=Z,133nm,18.8s
CLZ Clausthal 124.18 332 *e*L L 01 02 43.0
comp=Z,142nm,20.6s
KHC Kasperske Hory 124.24 328 *e*PKIKP **PKPdf** **00 06 57.5 -0.2**
KHC *e* 00 07 07.5
KHC Kasperske Hory 124.24 328 *e*PKP **PKPdf** **00 06 57.5 -0.2**
KHC *ex* x 00 07 07.5
MOX Moxa 124.34 330 *ep*PKPdf **pPKPdf** **00 07 07.9 -3.2**
MOX *e*L L 01 01 36.1
comp=Z,115nm,21.6s
MOX Moxa 124.34 330 *e*PKIKP **pPKPdf** **00 07 07.9 -3.2**
MOX MLR MLR
comp=Z,100nm,21.6s
GEC2 GERESS Array S 124.34 327 *ep*PKPdf **pPKPdf** **00 07 08.0 -3.3**
GEC2 *e*L L 01 02 32.5
comp=Z,124nm,20.1s
GEC2 GERESS Array S 124.34 327 *e*PKIKP **pPKPdf** **00 07 08.0 -3.3**
GEC2 MLR MLR
comp=Z,100nm,20.1s
GERES GERESS Array B 124.34 327 PKP **PKPdf** **00 06 57.9 -0.1**
GERES GERESS Array B 124.34 327 PKP **PKPdf** **00 06 57.9 -0.1**
comp=Z,1.1nm,0.8s,baz=107,slow=1.4,SNR=9.4
ROTZ Rotzenmuhle 124.58 329 *e*L L 01 00 56.3
comp=Z,122nm,20.7s
WET Wettzell 124.61 328 *e*PKPdf **PKPdf** **00 06 58.8 +0.5**
WET *e*L L 00 56 08.6
comp=Z,112nm,20.6s
WET Wettzell 124.61 328 *e*PKIKP **PKPdf** **00 06 58.8 +0.5**
UBBA Unterbreizbach 125.02 331 *e*PKPdf **PKPdf** **00 06 59.4 +0.5**
UBBA *e*L L 01 02 33.4
comp=Z,138nm,19.2s
IBBN Ibbenburen 125.07 333 *e*PKPdf **PKPdf** **00 06 59.7 +0.7**
IBBN *e*L L 01 05 20.4
comp=Z,192nm,20.0s
GRF Grafenberg Arr 125.13 329 *e*PKPdf **PKPdf** **00 06 59.6 +0.3**
GRF *ep*PKPdf **pPKPdf** **00 07 09.7 -2.9**
GRF *e*L L 01 05 30.7
comp=Z,106nm,19.5s
GRF Grafenberg Arr 125.13 329 *e*PKIKP **PKPdf** **00 06 59.6 +0.3**
GRF *e* 00 07 09.7
RJOB Jochberg 125.48 327 *e*L L 01 03 31.3
comp=Z,135nm,18.2s
BUG Bochum--Univer 125.89 333 *e*L L 00 57 51.3
comp=Z,127nm,22.0s
FUR Furstenfeldbru 126.05 328 *e*PKPdf **PKPdf** **00 07 01.6 +0.5**
FUR *e*L L 01 01 19.0
comp=Z,89nm,21.9s
FUR Furstenfeldbru 126.05 328 *e*PKIKP **PKPdf** **00 07 01.6 +0.5**
FUR MLR MLR
comp=Z,100nm,21.9s
TNS Taunus Mts 126.16 331 *e*PKPdf **PKPdf** **00 07 01.9 +0.6**
TNS *e*L L 01 03 06.3
comp=Z,142nm,19.3s
TNS Taunus Mts 126.16 331 *e*PKIKP **PKPdf** **00 07 01.9 +0.6**
TNS MLR MLR
comp=Z,100nm,19.3s
STU Stuttgart 126.74 329 *e*L L 01 02 12.6
comp=Z,107nm,21.0s
CFAA Coronel Fontan 126.87 137 PKP **PKPdf** **00 07 03.2 0.0**
CFAA Coronel Fontan 126.87 137 PKP **PKPdf** **00 07 03.2 0.0**
comp=Z,0.2nm,0.6s,baz=216,slow=4.0,SNR=6.7
BFO Black Forest 127.47 329 *e*L L 01 02 24.2
comp=Z,104nm,20.5s
GIVF Givet 127.93 333 *e*PKIKP **PKPdf** **00 07 02.3 -2.3**
comp=Z,30nm,1.2s
GIVF Givet 127.93 333 *e*PKIKP **PKPdf** **00 07 02.3 -2.3**
GIVF Givet 127.93 333 *e*PKPdf **PKPdf** **00 07 02.3 -2.3**
CDF Champ du Feu 127.94 330 *e*PKIKP **PKPdf** **00 07 02.1 -2.7**
comp=Z,6.9nm,0.9s
CDF Champ du Feu 127.94 330 *e*PKIKP **PKPdf** **00 07 02.1 -2.7**

CDF	**Champ du Feu**	**127.94**	**330**	*e*PKPdf	**PKPdf**	**00 07 02.1**	**-2.7**
BAIF	**Baives**	**128.24**	**333**	*e*PKIKP	**PKPdf**	**00 07 03.2**	**-2.0**
	comp=Z,18nm,1.2s						
BAIF	**Baives**	**128.24**	**333**	*e*PKIKP	**PKPdf**	**00 07 03.2**	**-2.0**
BAIF	**Baives**	**128.24**	**333**	*e*PKPdf	**PKPdf**	**00 07 03.2**	**-2.0**
HINF	**Hinteralfeld**	**128.55**	**330**	*e*PKIKP	**PKPdf**	**00 07 03.3**	**-2.7**
	comp=Z,34nm,1.3s						
HINF	**Hinteralfeld**	**128.55**	**330**	*e*PKIKP	**PKPdf**	**00 07 03.3**	**-2.7**
HINF	**Hinteralfeld**	**128.55**	**330**	*e*PKPdf	**PKPdf**	**00 07 03.3**	**-2.7**
HAU	**Haudompre**	**128.68**	**330**	*e*PKIKP	**PKPdf**	**00 07 03.6**	**-2.6**
	comp=Z,20nm,1.2s						
HAU	**Haudompre**	**128.68**	**330**	*e*PKIKP	**PKPdf**	**00 07 03.6**	**-2.6**
HAU	**Haudompre**	**128.68**	**330**	*e*PKPdf	**PKPdf**	**00 07 03.6**	**-2.6**
MEZF	**Maizieres J'vi**	**128.96**	**331**	*e*PKPdf	**PKPdf**	**00 07 04.8**	**-1.8**
	comp=Z,100nm,1.8s						
MEZF	**Maizieres J'vi**	**128.96**	**331**	*e*PKPdf	**PKPdf**	**00 07 04.8**	**-1.8**
LPG	**La Plagne**	**130.14**	**328**	*e*PKIKP	**PKPdf**	**00 07 07.1**	**-2.3**
	comp=Z,27nm,1.6s						
LPG	**La Plagne**	**130.14**	**328**	*e*PKIKP	**PKPdf**	**00 07 07.1**	**-2.3**
LPG	**La Plagne**	**130.14**	**328**	*e*PKPdf	**PKPdf**	**00 07 07.1**	**-2.3**
LOR	**Lormes**	**130.40**	**331**	*e*PKIKP	**PKPdf**	**00 07 07.3**	**-2.1**
	comp=Z,26nm,1.3s						
LOR	**Lormes**	**130.40**	**331**	*e*PKPdf	**PKPdf**	**00 07 07.3**	**-2.1**
SSF	**Saint Saulge**	**130.72**	**331**	*e*PKIKP	**PKPdf**	**00 07 07.9**	**-2.1**
	comp=Z,62nm,1.9s						
SSF	**Saint Saulge**	**130.72**	**331**	*e*PKIKP	**PKPdf**	**00 07 07.9**	**-2.1**
SSF	**Saint Saulge**	**130.72**	**331**	*e*PKPdf	**PKPdf**	**00 07 07.9**	**-2.1**
SBF	**Sospel**	**130.81**	**326**	*e*PKIKP	**PKPdf**	**00 07 07.7**	**-2.7**
	comp=Z,82nm,1.4s						
SBF	**Sospel**	**130.81**	**326**	*e*PKIKP	**PKPdf**	**00 07 07.7**	**-2.7**
SBF	**Sospel**	**130.81**	**326**	*e*PKPdf	**PKPdf**	**00 07 07.7**	**-2.7**
SMF	**Signal de Mont**	**130.85**	**330**	*e*PKIKP	**PKPdf**	**00 07 07.9**	**-2.4**
	comp=Z,54nm,1.6s						
SMF	**Signal de Mont**	**130.85**	**330**	*e*PKIKP	**PKPdf**	**00 07 07.9**	**-2.4**
SMF	**Signal de Mont**	**130.85**	**330**	*e*PKPdf	**PKPdf**	**00 07 07.9**	**-2.4**
AVF	**Avril sur Loir**	**130.98**	**331**	*e*PKIKP	**PKPdf**	**00 07 07.8**	**-2.7**
AVF	**Avril sur Loir**	**130.98**	**331**	*e*PKIKP	**PKPdf**	**00 07 07.8**	**-2.7**
AVF	**Avril sur Loir**	**130.98**	**331**	*e*PKPdf	**PKPdf**	**00 07 07.8**	**-2.7**
LDF	**La Druitiere**	**131.22**	**335**	*e*PKIKP	**PKPdf**	**00 07 08.5**	**-2.4**
	comp=Z,83nm,1.6s						
LDF	**La Druitiere**	**131.22**	**335**	*e*PKIKP	**PKPdf**	**00 07 08.5**	**-2.4**
LDF	**La Druitiere**	**131.22**	**335**	*e*PKPdf	**PKPdf**	**00 07 08.5**	**-2.4**
BGF	**Bois d'Agland**	**131.39**	**331**	*e*PKIKP	**PKPdf**	**00 07 09.3**	**-2.0**
	comp=Z,20nm,1.2s						
BGF	**Bois d'Agland**	**131.39**	**331**	*e*PKIKP	**PKPdf**	**00 07 09.3**	**-2.0**
BGF	**Bois d'Agland**	**131.39**	**331**	*e*PKPdf	**PKPdf**	**00 07 09.3**	**-2.0**
VIVF	**Saint-Julien-l**	**131.66**	**328**	*e*PKIKP	**PKPdf**	**00 07 09.7**	**-2.2**
	comp=Z,49nm,1.7s						
VIVF	**Saint-Julien-l**	**131.66**	**328**	*e*PKIKP	**PKPdf**	**00 07 09.7**	**-2.2**
VIVF	**Saint-Julien-l**	**131.66**	**328**	*e*PKPdf	**PKPdf**	**00 07 09.7**	**-2.2**
LMR	**La Mourre**	**131.67**	**326**	*e*PKIKP	**PKPdf**	**00 07 09.6**	**-2.3**
	comp=Z,38nm,1.3s						
LMR	**La Mourre**	**131.67**	**326**	*e*PKIKP	**PKPdf**	**00 07 09.6**	**-2.3**
LMR	**La Mourre**	**131.67**	**326**	*e*PKPdf	**PKPdf**	**00 07 09.6**	**-2.3**
TCF	**Toulx Ste Croi**	**131.89**	**331**	*e*PKIKP	**PKPdf**	**00 07 10.3**	**-2.0**
	comp=Z,30nm,1.4s						
TCF	**Toulx Ste Croi**	**131.89**	**331**	*e*PKIKP	**PKPdf**	**00 07 10.3**	**-2.0**
TCF	**Toulx Ste Croi**	**131.89**	**331**	*e*PKPdf	**PKPdf**	**00 07 10.3**	**-2.0**
TOAD	**Torodi Ar. Sit**	**149.10**	**285**	PKPbc	**PKPbc**	**00 07 47.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**149.10**	**285**	PKPbc	**PKPbc**	**00 07 47.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**149.10**	**285**	PKPbc	**PKPbc**	**00 07 47.4**	**-0.7**
	comp=Z,7.5nm,0.7s,baz=96,slow=2.6,SNR=58						
BDFB	**Brasilia**	**151.19**	**139**	PKPbc	**PKPbc**	**00 07 52.9**	**-0.4**
BDFB	**Brasilia**	**151.19**	**139**	PKPbc	**PKPbc**	**00 07 52.9**	**-0.4**
	comp=Z,4.9nm,0.7s,baz=204,slow=3.6,SNR=9.6						

MEX 30 00:04:28.8±0.9, 18°52N×106°15W, h10km, MD4.4, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.43**	**47**	*e*P	Pn	00 04 50.4	-4.4
CJM				*i* S	Sn	00 05 08.2	-5.5
R15V		**2.15**	**72**	*i* P	Pn	00 05 01.4	-3.4
R15V				*i* S	Sn	00 05 26.8	-4.9
EZ5V		**2.59**	**68**	*e*P	Pn	00 05 09.0	-2.2
EZ5V				*i* S	Sn	00 05 39.5	-3.6
MMIG	**Aquila**	**2.67**	**95**	*i* P	Pn	00 05 09.3	-2.7
ANIG	**Ahuacatlan**	**2.95**	**31**	*i* P	Pn	00 05 13.3	-2.6
ANIG				*i* S	Sn	00 05 49.0	-2.5
MAIG	**Mazatlaan**	**4.65**	**357**	*i* P	Pn	00 05 37.1	-2.0
MAIG				*i* S	Sn	00 06 29.1	-4.0
ARIG	**Puente Sto Nin**	**5.52**	**92**	*e*P	Pn	00 05 49.8	-1.4
ARIG				*i* S	Sn	00 06 50.9	-3.8

*ISCJB **30** 00:04:39.6±0.4, 37°.84S±0°.08×50°.7E±0°.1, h10km, mb4.1/22, MS4.0/14, Error ellipse: s-maj=13.2km s-min=10.1km az=140.8*
*IDC **30** 00:04:39.9±0.6, 37°.78S×50°.81E, h0km, mb4.0/15, mb1 4.1/15, mb1mx4.0/25, mbtmp4.0/15, MS4.0/15, Ms1 4.0/15, ms1mx3.8/30, Error ellipse: s-maj=20.4km s-min=15.8km az=56.0*
*NEIC **30** 00:04:41.1±0.4, 37°.81S×50°.71E, h10km, mb4.4/11, Error ellipse: s-maj=15.1km s-min=11.6km az=45.0*
ISC 30 00:04:41.3±0.5, 37°.80S±0°.09×50°.8E±0°.1, h10km, n58, σ1§17/50, mb4.1/22, MS4.0/14, 1C-2D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABPO	**Ambohimpanom**	**18.97**	**350**	*e*P	Pn	00 09 08.7	+5.0
	3.6nm,0.5s						
OPO	**Ambohidratompo**	**19.41**	**350**	P	**Pn**	**00 09 10.0**	**+1.0**
OPO	**Ambohidratompo**	**19.41**	**350**	P	**Pn**	**00 09 10.0**	**+1.0**
	0.2nm,0.3s,baz=183,slow=9.4,SNR=4.4						
OPO				LR	LR	00 15 21.4	
	comp=Z,360nm,19.3s,baz=172,slow=33						
BOSA	**Boshof**	**23.17**	**286**	*e*P	**P**	**00 09 45.4**	**-2.8**
	55nm,1.6s						
BOSA	**Boshof**	**23.17**	**286**	P	**P**	**00 09 45.1**	**-3.1**
	4.0nm,0.9s,baz=136,slow=7.5,SNR=4.6						
BOSA				LR	LR	00 17 16.0	
	comp=Z,254nm,19.8s,baz=128,slow=33						
LBTB	**Lobatse**	**24.89**	**294**	*e*P	**P**	**00 10 02.6**	**-1.8**
	31nm,1.5s						
LBTB	**Lobatse**	**24.89**	**294**	LR	LR	00 17 45.3	
	comp=Z,232nm,18.5s,baz=284,slow=32						
SUR	**Sutherland**	**25.04**	**273**	P	**P**	**00 10 05.3**	**-0.6**
SUR	**Sutherland**	**25.04**	**273**	P	**P**	**00 10 05.3**	**-0.6**
	11nm,0.9s,baz=132,slow=9.9,SNR=3.4						
LSZ	**Lusaka**	**30.04**	**312**	*e*P	**P**	**00 10 50.3**	**-0.4**
	4.7nm,1.0s						
LSZ	**Lusaka**	**30.04**	**312**	P	**P**	**00 10 51.4**	**+0.8**
	1.1nm,0.6s,baz=135,slow=11,SNR=4.0						
LSZ				LR	LR	00 20 36.3	
	comp=Z,234nm,20.9s,baz=110,slow=32						
MAW	**Mawson**	**30.62**	**171**	P	**P**	**00 10 55.8**	**+0.6**
MAW	**Mawson**	**30.62**	**171**	P	**P**	**00 10 55.8**	**+0.6**
	2.3nm,0.6s,baz=328,slow=12,SNR=7.6						
MAW				LR	LR	00 20 03.7	
	comp=Z,258nm,21.6s,baz=33,slow=30						
TSUM	**Tsumeb**	**34.30**	**293**	P	**P**	**00 11 28.3**	**+0.2**
TSUM	**Tsumeb**	**34.30**	**293**	P	**P**	**00 11 28.3**	**+0.2**
	3.1nm,0.8s,baz=140,slow=4.5,SNR=5.2						
KMBO	**Kilima Mbogo**	**38.56**	**338**	LR	LR	00 25 55.1	
	comp=Z,223nm,19.8s,baz=94,slow=33						
SNAA	**Sanae**	**43.31**	**202**	*e*P	**P**	**00 12 43.3**	**+0.4**
	5.3nm,1.2s						
SNAA	**Sanae**	**43.31**	**202**	P	**P**	**00 12 43.0**	**+0.1**
	0.5nm,0.9s,baz=107,slow=14,SNR=3.9						
QSPA	**South Pole Qui**	**52.39**	**180**	*e*P	**P**	**00 13 53.2**	**-0.3**
	10nm,1.1s						
QSPA	**South Pole Qui**	**52.39**	**180**	P	**P**	**00 13 53.9**	**+0.4**
	7.6nm,1.0s,baz=250,slow=4.0,SNR=11						
VNDA	**Vanda**	**57.74**	**166**	P	**P**	**00 14 32.5**	**+0.7**
VNDA	**Vanda**	**57.74**	**166**	P	**P**	**00 14 32.5**	**+0.7**
	0.8nm,0.9s,baz=267,slow=9.8,SNR=4.1						
VNDA				LR	LR	00 36 48.8	
	comp=Z,214nm,21.5s,baz=309,slow=33						
FITZ	**Fitzroy Crossi**	**67.35**	**96**	*e*P	**P**	**00 15 37.6**	**+0.8**
	8.3nm,1.4s						
DBIC	**Dimbokro**	**68.05**	**298**	LR	LR	00 43 50.8	
	comp=Z,80nm,18.6s,baz=3.3,slow=34						
TORD	**Torodi Ar. Bea**	**68.44**	**308**	P	**P**	**00 15 44.8**	**+1.2**
TORD	**Torodi Ar. Bea**	**68.44**	**308**	P	**P**	**00 15 44.8**	**+1.2**
	0.9nm,0.7s,baz=113,slow=5.1,SNR=7.3						
TORD				LR	LR	00 44 45.1	
	comp=Z,97nm,19.7s,baz=165,slow=35						
ASAR	**Alice Springs**	**70.71**	**105**	P	**P**	**00 15 58.0**	**+0.3**
ASAR	**Alice Springs**	**70.71**	**105**	P	**P**	**00 15 58.0**	**+0.3**
	0.7nm,0.5s,baz=231,slow=6.1,SNR=10						
STKA	**Stephens Creek**	**71.88**	**116**	*e*P	**P**	**00 16 02.7**	**-2.0**
	1.6nm,1.2s						
STKA	**Stephens Creek**	**71.88**	**116**	LR	LR	00 40 29.2	
	comp=Z,93nm,19.6s,baz=205,slow=30						
CMAR	**Chiang Mai Arr**	**71.98**	**48**	P	**P**	**00 16 04.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**71.98**	**48**	P	**P**	**00 16 04.9**	**-0.4**
	1.2nm,0.4s,baz=218,slow=5.7,SNR=5.4						
WRA	**Warramunga Arr**	**73.12**	**102**	P	**P**	**00 16 12.5**	**+0.3**
WRA	**Warramunga Arr**	**73.12**	**102**	P	**P**	**00 16 12.5**	**+0.3**
	1.2nm,0.7s,baz=230,slow=5.3,SNR=8.5						
BRTR	**Keskin Array B**	**78.74**	**347**	P	**P**	**00 16 43.8**	**0.0**
BRTR	**Keskin Array B**	**78.74**	**347**	P	**P**	**00 16 43.8**	**0.0**
	0.6nm,0.7s,baz=161,slow=7.9,SNR=4.5						
KKAR	**Karatay Array**	**82.50**	**14**	*e*P	**P**	**00 17 04.3**	**+0.6**
	0.3nm,0.4s						
KEST	**Kesra**	**82.62**	**327**	LR	LR	00 55 44.3	
	comp=Z,46nm,18.0s,baz=294,slow=37						
AAK	**Ala-Archa**	**82.92**	**17**	*e*P	**P**	**00 17 03.5**	**-2.7**
	1.5nm,0.6s						
AAK	**Ala-Archa**	**82.92**	**17**	LR	LR	00 49 19.5	
	comp=Z,62nm,18.1s,baz=355,slow=32						
PLCA	**Paso Flores**	**85.19**	**221**	LR	LR	00 48 35.6	
	comp=Z,81nm,19.7s,baz=191,slow=31						
MLR	**Muntele Rosu**	**85.88**	**343**	⇑*i*P	**P**	**00 17 21.5**	**+0.5**
VRI	**Vrincioaia**	**86.05**	**343**	⇓*i*P	**P**	**00 17 22.1**	**+0.4**
PLOR	**Plostina**	**86.05**	**343**	⇓*i*P	**P**	**00 17 22.1**	**+0.3**
MKAR	**Makanchi Array**	**88.83**	**21**	P	**P**	**00 17 35.9**	**+0.8**
MKAR	**Makanchi Array**	**88.83**	**21**	P	**P**	**00 17 35.9**	**+0.8**
	0.4nm,0.9s,baz=190,slow=2.6,SNR=2.7						
AKASG	**Malin Array Be**	**90.14**	**346**	LR	LR	00 56 26.2	
	comp=Z,136nm,21.7s,baz=65,slow=34						
KURK	**Kurchatov**	**91.48**	**17**	*e*P	**P**	**00 17 45.9**	**-1.4**
	0.7nm,0.5s						
ESDC	**Sonseca Array**	**92.01**	**321**	P	**P**	**00 17 52.0**	**+1.8**
ESDC	**Sonseca Array**	**92.01**	**321**	P	**P**	**00 17 52.0**	**+1.8**
	0.1nm,0.3s,baz=152,slow=3.1,SNR=5.1						
GERES	**GERESS Array B**	**92.33**	**337**	LR	LR	01 03 21.8	
	comp=Z,138nm,18.2s,baz=78,slow=38						
ZALV	**Zalesovo Beam**	**95.99**	**19**	P	**P**	**00 18 08.2**	**+0.3**
ZALV	**Zalesovo Beam**	**95.99**	**19**	P	**P**	**00 18 08.2**	**+0.3**
	0.5nm,0.5s,baz=222,slow=2.0,SNR=3.7						
SWET	**Sewanee**	**145.33**	**279**	*e*PKPdf	**PKPbc**	**00 24 18.5**	**-0.7**
ILAR	**Eielson Array**	**151.04**	**16**	PKPbc	**PKPbc**	**00 24 32.6**	**-0.9**
ILAR	**Eielson Array**	**151.04**	**16**	PKPbc	**PKPbc**	**00 24 32.6**	**-0.9**
	2.5nm,0.8s,baz=327,slow=3.1,SNR=9.1						
YKA	**Yellowknife Ar**	**153.69**	**345**	PKPbc	**PKPbc**	**00 24 37.3**	**-2.2**
YKA				PKPab	**PKPab**	**00 24 52.8**	**+0.5**
YKA	**Yellowknife Ar**	**153.69**	**345**	PKPbc	**PKPbc**	**00 24 37.3**	**-2.2**
	0.2nm,0.6s,baz=24,slow=1.9,SNR=2.9						
YKA				PKPab	**PKPab**	**00 24 52.8**	**+0.5**
	1.1nm,1.1s,baz=24,slow=2.4,SNR=4.2						

*IDC **30** 00:32:39.8±1.5, 36°.19S×72°.95W, h0km, mb3.6/5, mb1 3.8/7, mb1mx3.7/18, mbtmp3.5/7, ML3.2/2, Error ellipse: s-maj=37.9km s-min=29.3km az=88.0*
*ISCJB **30** 00:32:41.6±0.9, 36°.36S±0°.06×73°.24W±0°.07, h25km, mb3.6/4, Error ellipse: s-maj=8.6km s-min=8.2km az=39.5*
*GUC **30** 00:32:42.2±0.8, 36°.43S×73°.12W, h22km±9km, ML4.0*
ISC 30 00:32:43.4±1.1, 36°.30S±0°.07×73°.06W±0°.09, h25km, n12, σ1§43/16, mb3.7/4, 4C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COCH	**Cobquecura**	**0.28**	**53**	⇑*i*P	**Pb**	**00 32 50.7**	**+0.5**
COCH				*i* S	**Sn**	**00 32 56.1**	**-1.3**
CCHI	**Chillan**	**0.85**	**111**	⇓*i*P	**Pn**	**00 32 59.7**	**-0.1**
CCHI				*i* S	**Sn**	**00 33 11.6**	**+0.1**
CCHI				AML	AML	00 33 13.5	
	comp=E,4μm,0.2s						
CTCH	**Constitucion**	**1.10**	**29**	⇑*i*P	**Pb**	**00 33 03.9**	**0.0**
CTCH				*i* S	**Sb**	**00 33 20.2**	**+2.4**
TALC	**Talca**	**1.47**	**53**	⇑*i*P	**Pn**	**00 33 09.0**	**+0.6**
TALC				*i* S	**Sb**	**00 33 29.6**	**+1.2**
LMEL	**Las Melosas**	**3.39**	**45**	⇑*i*P	**Pn**	**00 33 36.8**	**+1.9**
LMEL				AML	AML	00 34 36.5	
	comp=N,431nm,0.9s						
PLCA	**Paso Flores**	**4.84**	**157**	Pn	**Pn**	**00 33 55.8**	**+1.0**
	comp=N,0.4nm,0.3s,baz=315,slow=13,SNR=7.2						
PLCA				Lg	Lg	00 35 09.6	
	comp=N,1.6nm,0.3s,baz=256,slow=19,SNR=2.9						
CFAA	**Coronel Fontan**	**6.17**	**42**	Pn	**Pn**	**00 34 10.8**	**-2.2**
	comp=N,0.2nm,0.3s,baz=207,slow=9.7,SNR=15						
CFAA				Lg	Lg	00 35 42.2	
	comp=N,0.2nm,0.3s,baz=288,slow=20,SNR=6.6						
LPAZ	**La Paz**	**20.41**	**14**	P	**P**	**00 37 19.4**	**+0.1**
	comp=N,0.9nm,0.6s,baz=202,slow=10.0,SNR=3.2						
SIV	**San Ignacio**	**22.87**	**31**	P	**P**	**00 37 42.5**	**-2.7**
	comp=N,2.0nm,0.8s,baz=228,slow=11,SNR=6.1						
TXAR	**Lajitas Array**	**71.35**	**332**	P	**P**	**00 44 00.9**	**-0.2**
	comp=N,0.3nm,0.6s,baz=159,slow=8.4,SNR=3.6						
NVAR	**Mina Array Bea**	**85.30**	**326**	P	**P**	**00 45 18.6**	**+0.3**
	comp=N,0.4nm,0.6s,baz=150,slow=8.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**85.78**	**70**	P	**P**	**00 45 20.2**	**-0.7**
	comp=N,0.5nm,0.9s,baz=242,slow=3.1,SNR=3.9						

CASC 30 00:38:14.6±3.2, 12°.97N×89°.98W, h0km±8km, MD3.6, ML3.5, 3C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.93**	**22**	⇑*i*P	Pg	00 38 33.3	+0.5
SNJE	**San Jose**	**0.96**	**22**	*e*P	Pg	00 38 33.4	-0.1
RTR	**El Retiro**	**0.98**	**20**	*e*P	Pg	00 38 34.1	+0.5
SNET	**Serv Nac Est T**	**1.02**	**46**	AML	AML	00 38 56.6	
	comp=Z,1μm,0.2s						
SNET				⇑*i*		00 38 56.6	
BOQS	**Boqueron**	**1.02**	**42**	*e*P	Pg	00 38 34.9	+0.3
LFRS	**El Faro**	**1.11**	**54**	*e*P	Pg	00 38 36.4	+0.4
LFU	**La Fuente**	**1.15**	**47**	*e*P	Pb	00 38 37.2	-0.2
RBDL	**Robledal**	**1.17**	**14**	⇑*i*P	Pg	00 38 37.1	-0.2
LBRS	**Las Brisas**	**1.19**	**50**	*e*P	Pb	00 38 37.9	-0.3
IXG	**Ixpaco**	**1.28**	**339**	*e*P	Pg	00 38 38.2	-1.3
IXG				*e*S	Sn	00 39 01.4	+3.3
SNVI	**San Vicente**	**1.28**	**60**	*e*P	Pg	00 38 39.5	+0.1
SNVI				*e*S	Sb	00 38 57.6	+0.5
MTO2	**Montecristo 2**	**1.54**	**23**	*e*P	Pn	00 38 43.0	-0.7
MTO2				*e*S	Sn	00 39 04.0	-0.7
FUG	**Fuego 3**	**1.69**	**330**	*e*P	Pn	00 38 43.8	-1.9
VSM	**San Miguel**	**1.72**	**74**	*e*P	Pn	00 38 45.0	-1.2
CAHU	**Cacaucatique**	**1.90**	**65**	*e*P	Pn	00 38 48.7	+0.1
JAT	**Jato**	**2.09**	**310**	*e*P	Pn	00 38 47.7	-3.3
JAT				*e*S	Sb	00 39 19.8	-0.2
MRL	**Marmol**	**2.10**	**8**	*e*P	Pn	00 38 49.8	-1.6
MRL				*e*S	Sb	00 39 21.1	+0.4

*NNC **30** 00:42:13.4±4.8, 37°.17N×71°.24E, h183km±63km, mb2.5, mpv3.4, Error ellipse: s-maj=46.1km s-min=23.1km az=8.0*
ISC 30 00:42:07.5±3.7, 36°.8N±0°.2×71°.1E±0°.1, h88km, n10, σ1§99/12, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.70**	**20**	P	**Pn**	**00 43 31.6**	**+1.6**
	SNR=19						
EKS2	**Erkin-Say**	**6.22**	**19**	P	**Pn**	**00 43 38.6**	**+1.8**
	SNR=5.9						
KK31	**Karatay Array**	**6.32**	**356**	Pn	**Pn**	**00 43 40.4**	**+2.3**
	0.8nm,0.4s,baz=176,slow=12,SNR=30						
KK31				⇓Sn	**Sn**	**00 44 48.6**	**-0.1**
	4.2nm,0.4s,baz=176,slow=21,SNR=18						
AAK	**Ala-Archa**	**6.40**	**23**	P	**Pn**	**00 43 41.4**	**+2.1**
	SNR=5.8						
KBK	**Karagaybulak**	**6.57**	**26**	P	**Pn**	**00 43 43.0**	**+1.4**
	SNR=5.3						
USP	**Ospenovka**	**6.98**	**21**	P	**Pn**	**00 43 48.3**	**+1.2**
	SNR=5.1						
TKM2	**Tokmak 2**	**7.04**	**28**	⇓Pn	**Pn**	**00 43 48.6**	**+0.6**
	2.3nm,0.5s						
TKM2				⇓Sn	**Sn**	**00 45 04.8**	**-1.8**
	2.3nm,0.8s						
TKM2	**Tokmak 2**	**7.04**	**28**	P	**Pn**	**00 43 49.4**	**+1.3**
	SNR=7.5						
AB31	**Akbulak array**	**14.86**	**330**	⇑P	**Pn**	**00 45 32.1**	**-0.7**
	0.2nm,0.5s,baz=164,slow=12,SNR=8.1						
AKTO	**Aktyubinsk**	**16.56**	**330**	⇑P	**Pn**	**00 45 50.9**	**-3.3**
	1.1nm,0.5s						

IDC 30 00:46:15.6±2.4, 51°.43N×93°.17E, h0km, mb1 2.8/3, mb1mx2.7/31, mbtmp2.8/3, ML2.7/3, Error ellipse: s-maj=33.5km s-min=19.4km az=16.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**5.67**	**300**	Pn	Pn	00 47 42.3	+1.2
	0.3nm,0.3s,baz=110,slow=12,SNR=4.0						
ZALV				Pg	Pg	00 48 03.5	-0.8
	0.5nm,0.3s,baz=117,slow=15,SNR=7.4						
ZALV				Lg	Lg	00 49 12.6	
	1.2nm,0.3s,baz=114,slow=32,SNR=8.4						
MKAR	**Makanchi Array**	**8.51**	**241**	Pn	Pn	00 48 20.5	+0.4
	0.1nm,0.3s,baz=46,slow=16,SNR=8.1						
MKAR				Lg	Lg	00 50 46.0	
	0.2nm,0.3s,baz=54,slow=36,SNR=3.5						
KURBB	**Kurchatov Arra**	**9.26**	**271**	Pn	Pn	00 48 30.9	+0.6
	0.0nm,0.3s,baz=76,slow=14,SNR=2.6						
KURBB				Lg	Lg	00 51 07.3	
	0.0nm,0.3s,baz=80,slow=31,SNR=5.8						
SONM	**Songino Array**	**9.31**	**108**	Pg	Pn	00 49 05.9	+35
	0.1nm,0.3s,baz=297,slow=16,SNR=3.1						
SONM				Lg	Lg	00 51 08.0	
	0.5nm,0.3s,baz=297,slow=31,SNR=7.6						

*ISCJB **30** 00:53:46.1±0.5, 20°.54S±0°.04×68°.82W±0°.09, h108km±6km, mb3.9/7, Error ellipse: s-maj=13.7km s-min=6.1km az=176.5*
*GUC **30** 00:53:46.9±0.4, 20°.60S×69°.09W, h112km±3km, ML4.6*
*IDC **30** 00:53:47.8±0.9, 20°.57S×68°.68W, h108km±7km, mb3.7/8, mb1 3.9/10, mb1mx3.8/18, mbtmp3.8/10, Error ellipse: s-maj=21.2km s-min=19.8km az=84.0*
ISC 30 00:53:47.2±0.7, 20°.54S±0°.04×68°.88W±0°.08, h103km±6km, n23, σ1§11/29, mb4.1/7, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.76**	**228**	⇑*i*P	**Pn**	**00 54 04.7**	**-0.9**
PB01				*i* S	**Sn**	**00 54 18.3**	**-1.0**
PB01				AML	AML	00 54 19.4	
	comp=N,25μm,0.2s						
PB09	**Plate Boundary**	**1.30**	**195**	⇑*i*P	**Pn**	**00 54 11.0**	**-0.4**
PB09				*i* S	**Sn**	**00 54 29.8**	**+0.2**
PB09				AML	AML	00 54 31.9	
	comp=N,35μm,0.5s						
PSGC	**Pisagua**	**1.50**	**308**	⇑*i*P	**Pn**	**00 54 13.0**	**-0.7**
PSGC				*i* S	**Sn**	**00 54 33.2**	**-0.6**
MNMC	**Minimini**	**1.56**	**334**	⇓*i*P	**Pn**	**00 54 15.2**	**+0.6**
MNMC				*i* S	**Sn**	**00 54 36.7**	**+1.4**
MNMC				AML	AML	00 54 41.6	
	comp=E,6μm,0.3s						
PB04	**Plate Boundary**	**1.81**	**198**	⇑*i*P	Pn	00 54 21.0	+3.5
PB04				*i* S	Sn	00 54 46.8	+6.3
PB04				AML	AML	00 54 54.2	
	comp=E,4μm,1.1s						
LVC	**Limon Verde**	**2.06**	**181**	*e*P	**Pn**	**00 54 21.3**	**+0.3**
LVC				*i* S	**Sn**	**00 54 47.8**	**+1.0**
LPAZ	**La Paz**	**4.29**	**10**	P	**Pn**	**00 54 53.4**	**+2.5**
	comp=E,5.4nm,0.3s,baz=203,slow=5.7,SNR=75						
LPAZ				S	**Sn**	**00 55 39.6**	**-0.7**
	baz=235,slow=12,SNR=2.7						
SIV	**San Ignacio**	**8.69**	**60**	P	**Pn**	**00 55 48.0**	**-2.2**
	comp=E,12nm,0.3s,baz=253,slow=13,SNR=142						
CFAA	**Coronel Fontan**	**11.04**	**177**

AKHS	**Akhisar**	**0.48**	**31**	*i* P	**Pg**	**01 01 20.2**	**-0.6**
AKHS				*i* S	**Sg**	**01 01 27.3**	**+0.1**
AKHS	**Akhisar**	**0.48**	**31**	*i* P	**Pg**	**01 01 20.2**	**-0.6**
AKHS				*i* S	**Sg**	**01 01 27.3**	**+0.1**
URLA	**Izmir**	**0.71**	**262**	*i* P	**Pg**	**01 01 25.3**	**0.0**
URLA				*i* S	**Sg**	**01 01 35.0**	**+0.4**
URLA	**Izmir**	**0.71**	**262**	*i* P	**Pg**	**01 01 25.3**	**0.0**
URLA				*i* S	**Sg**	**01 01 35.0**	**+0.4**
GCAM	**G?zelcaml?**	**0.80**	**195**	*i* P	**Pg**	**01 01 26.3**	**-0.5**
GCAM				*i* S	**Sb**	**01 01 38.2**	**+0.5**
GCAM	**G?zelcaml?**	**0.80**	**195**	*i* P	**Pg**	**01 01 26.3**	**-0.5**
GCAM				*i* S	**Sb**	**01 01 38.2**	**+0.5**
MANT	**Manisa**	**0.83**	**88**	*i* P	**Pg**	**01 01 27.4**	**-0.2**
MANT				*i* S	**Sg**	**01 01 37.6**	**-0.9**
MANT	**Manisa**	**0.83**	**88**	*i* P	**Pg**	**01 01 27.4**	**-0.2**
MANT				*i* S	**Sg**	**01 01 37.6**	**-0.9**
AYDN	**Tasoluk**	**0.86**	**159**	*i* P	**Pg**	**01 01 27.8**	**-0.2**
AYDN				*i* S	**Sg**	**01 01 39.0**	**-0.3**
AYDN	**Tasoluk**	**0.86**	**159**	*i* P	**Pg**	**01 01 27.8**	**-0.2**
AYDN				*i* S	**Sg**	**01 01 39.0**	**-0.3**
KULA	**Kula-Manisa**	**0.92**	**87**	*e*PG	**Pg**	**01 01 28.6**	**-0.5**
KULA	**Kula-Manisa**	**0.92**	**87**	P	**Pg**	**01 01 28.6**	**-0.5**
KULA				S	**Sg**	**01 01 40.2**	**-0.8**
KULA	**Kula-Manisa**	**0.92**	**87**	P	**Pg**	**01 01 28.6**	**-0.5**
KULA				S	**Sg**	**01 01 40.2**	**-0.8**
DEMI	**Demirci**	**1.11**	**59**	*i* P	**Pb**	**01 01 31.9**	**-0.6**
DEMI				*i* S	**Sb**	**01 01 45.1**	**-1.9**
DEMI	**Demirci**	**1.11**	**59**	*i* P	**Pb**	**01 01 31.9**	**-0.6**
DEMI				*i* S	**Sb**	**01 01 45.1**	**-1.9**
CHOS	**Chios island**	**1.14**	**266**	P	**Pb**	**01 01 32.4**	**-0.5**
CHOS				S	**Sn**	**01 01 48.9**	**+0.4**
CHOS	**Chios island**	**1.14**	**266**	P	**Pb**	**01 01 32.4**	**-0.5**
CHOS				S	**Sn**	**01 01 48.9**	**+0.4**
MLSB	**Milas**	**1.19**	**169**	*e*PN	**Pn**	**01 01 33.0**	**-0.8**
MLSB	**Milas**	**1.19**	**169**	*e*Pn	**Pn**	**01 01 33.0**	**-0.8**
BALB	**Balikesir**	**1.21**	**14**	*e*PN	**Pn**	**01 01 33.0**	**-1.0**
BALB	**Balikesir**	**1.21**	**14**	*e*Pn	**Pn**	**01 01 33.0**	**-1.0**
PRK	**Paraskevi**	**1.23**	**309**	P	**Pb**	**01 01 34.6**	**+0.1**
PRK				S	**Sg**	**01 01 52.2**	**+1.1**
PRK	**Paraskevi**	**1.23**	**309**	P	**Pb**	**01 01 34.6**	**+0.1**
PRK				S	**Sg**	**01 01 52.2**	**+1.1**
BALY	**Balya**	**1.27**	**4**	*i* P	**Pn**	**01 01 33.8**	**-1.1**
BALY				*i* S	**Sb**	**01 01 50.2**	**-1.3**
BALY	**Balya**	**1.27**	**4**	*i* P	**Pn**	**01 01 33.8**	**-1.1**
BALY				*i* S	**Sb**	**01 01 50.2**	**-1.3**
DENT	**Denizli**	**1.41**	**120**	*e*PN	**Pn**	**01 01 36.4**	**-0.4**
DENT	**Denizli**	**1.41**	**120**	*e*Pn	**Pn**	**01 01 36.4**	**-0.4**
BODT	**Bodrum**	**1.41**	**186**	*e*PN	**Pn**	**01 01 35.6**	**-1.2**
BODT	**Bodrum**	**1.41**	**186**	*e*Pn	**Pn**	**01 01 35.6**	**-1.2**
DST	**Dursunbey**	**1.43**	**37**	*e*PN	**Pn**	**01 01 36.8**	**-0.3**
DST	**Dursunbey**	**1.43**	**37**	*e*Pn	**Pn**	**01 01 36.8**	**-0.3**
DNZL	**Cakiroluk**	**1.45**	**122**	*i* P	**Pn**	**01 01 36.9**	**-0.6**
DNZL				*i* S	**Sb**	**01 01 57.4**	**+0.6**
DNZL	**Cakiroluk**	**1.45**	**122**	*i* P	**Pn**	**01 01 36.9**	**-0.6**
DNZL				*i* S	**Sb**	**01 01 57.4**	**+0.6**
YER	**Yerkesik**	**1.47**	**155**	*e*PN	**Pn**	**01 01 36.9**	**-0.8**
YER	**Yerkesik**	**1.47**	**155**	*e*Pn	**Pn**	**01 01 36.9**	**-0.8**
SIGR	**SIGRI**	**1.48**	**301**	P	**Pn**	**01 01 37.1**	**-0.6**
SIGR				S	**Sg**	**01 01 59.1**	**+0.1**
SIGR	**SIGRI**	**1.48**	**301**	P	**Pn**	**01 01 37.1**	**-0.6**
SIGR				S	**Sg**	**01 01 59.1**	**+0.1**
KHAL	**Karahalli**	**1.57**	**93**	*i* P	**Pb**	**01 01 40.6**	**+0.3**
KHAL				*i* S	**Sb**	**01 02 00.1**	**-0.1**
KHAL	**Karahalli**	**1.57**	**93**	*i* P	**Pb**	**01 01 40.6**	**+0.3**
KHAL				*i* S	**Sb**	**01 02 00.1**	**-0.1**
GONE	**Gonen-Balikesi**	**1.58**	**5**	*e*PN	**Pn**	**01 01 38.1**	**-0.9**
GONE	**Gonen-Balikesi**	**1.58**	**5**	*e*Pn	**Pn**	**01 01 38.2**	**-0.9**
KHL	**Karahalli**	**1.60**	**95**	*e*PN	**Pn**	**01 01 39.1**	**-0.3**
KHL	**Karahalli**	**1.60**	**95**	*e*Pn	**Pn**	**01 01 39.1**	**-0.3**
EZN	**Ezine**	**1.63**	**326**	*e*PN	**Pn**	**01 01 39.3**	**-0.5**
EZN	**Ezine**	**1.63**	**326**	*e*Pn	**Pn**	**01 01 39.3**	**-0.5**
TVSB	**Tavsanli**	**1.82**	**57**	*e*PN	**Pn**	**01 01 42.4**	**-0.1**
TVSB	**Tavsanli**	**1.82**	**57**	*e*Pn	**Pn**	**01 01 42.4**	**-0.1**
TURN	**Turunc**	**1.82**	**151**	*i* P	**Pn**	**01 01 41.0**	**-1.4**
TURN				*i* S	**Sn**	**01 02 04.0**	**-1.3**
TURN	**Turunc**	**1.82**	**151**	*i* P	**Pn**	**01 01 41.0**	**-1.4**
TURN				*i* S	**Sn**	**01 02 04.0**	**-1.3**
NIS1	**Nisyros Isl.**	**1.88**	**188**	P	**Pn**	**01 01 42.1**	**-1.1**
NIS1	**Nisyros Isl.**	**1.88**	**188**	P	**Pn**	**01 01 42.1**	**-1.1**
BNT	**Bandirma**	**1.91**	**10**	*e*PN	**Pn**	**01 01 42.6**	**-1.1**
BNT	**Bandirma**	**1.91**	**10**	*e*Pn	**Pn**	**01 01 42.6**	**-1.1**
KCTX	**Karacabey (Bur**	**1.91**	**20**	*e*PN	**Pn**	**01 01 43.5**	**-0.2**
KCTX	**Karacabey (Bur**	**1.91**	**20**	*e*Pn	**Pn**	**01 01 43.5**	**-0.2**
ORLT	**Orhaneli**	**1.91**	**34**	*e*PN	**Pn**	**01 01 43.3**	**-0.4**
ORLT	**Orhaneli**	**1.91**	**34**	*e*Pn	**Pn**	**01 01 43.3**	**-0.4**
KRBG	**Karabiga-Canak**	**1.93**	**355**	*e*PN	**Pn**	**01 01 43.2**	**-0.7**
KRBG	**Karabiga-Canak**	**1.93**	**355**	*e*Pn	**Pn**	**01 01 43.2**	**-0.7**
LPK	**Lapseki**	**1.98**	**344**	*e*PN	**Pn**	**01 01 44.2**	**-0.5**
LPK	**Lapseki**	**1.98**	**344**	*e*Pn	**Pn**	**01 01 44.2**	**-0.5**
GLHS	**Glhisar (BURDU**	**2.06**	**129**	*e*PN	**Pn**	**01 01 45.3**	**-0.4**
GLHS	**Glhisar (BURDU**	**2.06**	**129**	*e*Pn	**Pn**	**01 01 45.3**	**-0.4**
GELI	**Tayfur-Gelibol**	**2.08**	**338**	*e*PN	**Pn**	**01 01 45.7**	**-0.3**
GELI	**Tayfur-Gelibol**	**2.08**	**338**	*e*Pn	**Pn**	**01 01 45.7**	**-0.3**
APE	**Apeiranthos**	**2.09**	**229**	*e*PN	**Pn**	**01 01 46.5**	**+0.3**
APE	**Apeiranthos**	**2.09**	**229**	P	**Pn**	**01 01 44.8**	**-1.4**
APE				S	**Sb**	**01 02 14.6**	**-0.5**
APE	**Apeiranthos**	**2.09**	**229**	P	**Pn**	**01 01 44.8**	**-1.4**
APE	**Apeiranthos**	**2.09**	**229**	*e*Pn	**Pn**	**01 01 46.5**	**+0.3**
APE				S	**Sb**	**01 02 14.6**	**-0.5**
ULDT	**Uludag**	**2.10**	**37**	*i* P	**Pb**	**01 01 49.5**	**+0.1**
ULDT				*i* S	**Sb**	**01 02 16.6**	**+1.1**
ULDT	**Uludag**	**2.10**	**37**	*i* P	**Pb**	**01 01 49.5**	**+0.1**
ULDT				*i* S	**Sb**	**01 02 16.6**	**+1.1**
ALT	**Altintas**	**2.13**	**73**	*e*PN	**Pn**	**01 01 46.6**	**-0.1**
ALT	**Altintas**	**2.13**	**73**	P	**Pn**	**01 01 46.0**	**-0.7**
ALT	**Altintas**	**2.13**	**73**	P	**Pn**	**01 01 46.0**	**-0.7**
ALT	**Altintas**	**2.13**	**73**	*e*Pn	**Pn**	**01 01 46.6**	**-0.1**
MRMT	**Marmara Adasi**	**2.13**	**2**	*e*PN	**Pn**	**01 01 46.8**	**0.0**
MRMT	**Marmara Adasi**	**2.13**	**2**	*e*Pn	**Pn**	**01 01 46.8**	**0.0**
MDNY	**Mudanya-Bursa**	**2.18**	**29**	*e*PN	**Pn**	**01 01 47.5**	**+0.1**
MDNY	**Mudanya-Bursa**	**2.18**	**29**	*e*Pn	**Pn**	**01 01 47.5**	**+0.1**
FETY	**Fethiye**	**2.22**	**145**	*e*PN	**Pn**	**01 01 47.5**	**-0.5**
FETY	**Fethiye**	**2.22**	**145**	*e*Pn	**Pn**	**01 01 47.5**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.23**	**354**	*e*PN	**Pn**	**01 01 48.0**	**-0.1**
RKY	**Sarkoy-Tekirda**	**2.23**	**354**	*e*Pn	**Pn**	**01 01 48.0**	**-0.1**
LIA	**Limnos Island**	**2.29**	**309**	P	**Pn**	**01 01 48.7**	**-0.2**
LIA				S	**Sb**	**01 02 19.6**	**-1.3**
LIA	**Limnos Island**	**2.29**	**309**	P	**Pn**	**01 01 48.7**	**-0.2**
LIA				S	**Sb**	**01 02 19.6**	**-1.3**
ARG	**Arkhangelos**	**2.30**	**167**	P	**Pn**	**01 01 48.7**	**-0.3**
ARG				S	**Sn**	**01 02 18.8**	**+1.5**
ARG	**Arkhangelos**	**2.30**	**167**	P	**Pn**	**01 01 48.7**	**-0.3**
ARG				S	**Sn**	**01 02 18.8**	**+1.5**
MFT	**Murefte**	**2.32**	**356**	*e*PN	**Pn**	**01 01 49.9**	**+0.5**
MFT	**Murefte**	**2.32**	**356**	*e*Pn	**Pn**	**01 01 49.9**	**+0.5**
ERIK	**Erikli-Kesan**	**2.33**	**341**	*e*PN	**Pn**	**01 01 49.2**	**-0.1**
ERIK	**Erikli-Kesan**	**2.33**	**341**	*e*Pn	**Pn**	**01 01 49.2**	**-0.1**
ARMT	**Armutlu**	**2.34**	**26**	*e*PN	**Pn**	**01 01 49.9**	**+0.3**
ARMT	**Armutlu**	**2.34**	**26**	*e*Pn	**Pn**	**01 01 49.9**	**+0.3**
GEMT	**Gemlik**	**2.36**	**33**	*e*PN	**Pn**	**01 01 50.1**	**+0.3**
GEMT	**Gemlik**	**2.36**	**33**	*e*Pn	**Pn**	**01 01 50.1**	**+0.3**
ISP	**Isparta**	**2.47**	**104**	*e*PN	**Pn**	**01 01 51.6**	**+0.2**
ISP	**Isparta**	**2.47**	**104**	*e*Pn	**Pn**	**01 01 51.6**	**+0.2**
MRMA	**Marmari**	**2.49**	**261**	P	**Pn**	**01 01 51.0**	**-0.6**
MRMA	**Marmari**	**2.49**	**261**	P	**Pn**	**01 01 51.0**	**-0.6**
ENEZ	**Enez**	**2.49**	**336**	*e*PN	**Pn**	**01 01 51.7**	**+0.1**
ENEZ	**Enez**	**2.49**	**336**	*e*Pn	**Pn**	**01 01 51.7**	**+0.1**
CAVI	**Cavuskoy**	**2.51**	**46**	*e*PN	**Pn**	**01 01 52.6**	**+0.7**
CAVI	**Cavuskoy**	**2.51**	**46**	*e*Pn	**Pn**	**01 01 52.6**	**+0.7**
YLV	**Yalova**	**2.55**	**34**	*e*PN	**Pn**	**01 01 52.9**	**+0.4**
YLV	**Yalova**	**2.55**	**34**	*e*Pn	**Pn**	**01 01 52.9**	**+0.4**
ELL	**Elmali**	**2.57**	**131**	*e*PN	**Pn**	**01 01 52.8**	**-0.1**
ELL	**Elmali**	**2.57**	**131**	*e*Pn	**Pn**	**01 01 52.8**	**-0.1**
ADVT	**Abdulvahap**	**2.62**	**41**	*e*PN	**Pn**	**01 01 54.1**	**+0.7**
ADVT	**Abdulvahap**	**2.62**	**41**	*e*Pn	**Pn**	**01 01 54.1**	**+0.7**
ALN	**Alexandroupoli**	**2.67**	**336**	P	**Pn**	**01 01 53.7**	**-0.4**
ALN	**Alexandroupoli**	**2.67**	**336**	P	**Pn**	**01 01 53.7**	**-0.4**
BUY	**Buyukada**	**2.69**	**27**	*e*PN	**Pn**	**01 01 54.7**	**+0.4**
BUY	**Buyukada**	**2.69**	**27**	*e*Pn	**Pn**	**01 01 54.7**	**+0.4**
BORA	**Eskisehir**	**2.70**	**58**	*i* P	**Pb**	**01 02 00.9**	**+1.4**
BORA				*i* S	**Sg**	**01 02 36.8**	**-1.2**
SLVT	**Silivri**	**2.81**	**11**	*e*PN	**Pn**	**01 01 56.6**	**+0.7**
SLVT	**Silivri**	**2.81**	**11**	*e*Pn	**Pn**	**01 01 56.7**	**+0.7**
ESKT	**Eskisehir**	**2.82**	**67**	*e*PN	**Pn**	**01 01 56.5**	**+0.3**
ESKT	**Eskisehir**	**2.82**	**67**	*e*Pn	**Pn**	**01 01 56.5**	**+0.3**
SEYT	**Eskypehyr**	**2.82**	**67**	*i* P	**Pb**	**01 02 02.7**	**+1.1**
SEYT				*i* S	**Sg**	**01 02 42.9**	**+1.1**
GPA	**Golpazari**	**2.84**	**49**	*e*PN	**Pn**	**01 01 56.9**	**+0.5**
GPA	**Golpazari**	**2.84**	**49**	*e*Pn	**Pn**	**01 01 56.9**	**+0.5**
ISK	**Istanbul-Kandi**	**2.86**	**24**	*e*PN	**Pn**	**01 01 57.3**	**+0.6**
ISK	**Istanbul-Kandi**	**2.86**	**24**	*e*Pn	**Pn**	**01 01 57.3**	**+0.6**
CTKS	**Kestanelik-??a**	**2.87**	**15**	*e*PN	**Pn**	**01 01 57.4**	**+0.6**
CTKS	**Kestanelik-??a**	**2.87**	**15**	*e*Pn	**Pn**	**01 01 57.4**	**+0.6**
BGKT	**Bogazkoy**	**2.88**	**20**	*e*PN	**Pn**	**01 01 57.4**	**+0.4**
BGKT	**Bogazkoy**	**2.88**	**20**	*e*Pn	**Pn**	**01 01 57.4**	**+0.4**
KARP	**Karpathos**	**2.93**	**185**	P	**Pn**	**01 01 57.2**	**-0.5**
KARP				S	**Sn**	**01 02 34.6**	**+1.9**
KARP	**Karpathos**	**2.93**	**185**	P	**Pn**	**01 01 57.2**	**-0.5**
KARP				S	**Sn**	**01 02 34.6**	**+1.9**
KLYT	**Kilyos**	**3.02**	**23**	*e*PN	**Pn**	**01 01 59.7**	**+0.8**
KLYT	**Kilyos**	**3.02**	**23**	*e*Pn	**Pn**	**01 01 59.7**	**+0.8**
GULT	**Gulveren**	**3.05**	**49**	*e*PN	**Pn**	**01 01 59.9**	**+0.5**
GULT	**Gulveren**	**3.05**	**49**	*e*Pn	**Pn**	**01 01 59.9**	**+0.5**
CTYL	**Yal??k??y-??at**	**3.06**	**11**	*e*PN	**Pn**	**01 02 00.1**	**+0.6**
CTYL	**Yal??k??y-??at**	**3.06**	**11**	*e*Pn	**Pn**	**01 02 00.0**	**+0.6**
SILT	**Sile**	**3.15**	**31**	*e*PN	**Pn**	**01 02 01.5**	**+0.9**
SILT	**Sile**	**3.15**	**31**	*e*Pn	**Pn**	**01 02 01.5**	**+0.9**
SVRH	**Sivrihisar-ESK**	**3.29**	**71**	*e*PN	**Pn**	**01 02 03.4**	**+0.7**
SVRH	**Sivrihisar-ESK**	**3.29**	**71**	*e*Pn	**Pn**	**01 02 03.4**	**+0.7**
EDRB	**Edirne**	**3.42**	**351**	*e*PN	**Pn**	**01 02 05.2**	**+0.8**
EDRB	**Edirne**	**3.42**	**351**	*e*Pn	**Pn**	**01 02 05.2**	**+0.8**
KIZT	**Kizilcal**	**3.46**	**82**	*e*PN	**Pn**	**01 02 05.8**	**+0.8**
KIZT	**Kizilcal**	**3.46**	**82**	*e*Pn	**Pn**	**01 02 05.8**	**+0.8**
MDUB	**Mudurnu**	**3.49**	**54**	*e*PN	**Pn**	**01 02 06.4**	**+0.9**
MDUB	**Mudurnu**	**3.49**	**54**	*e*Pn	**Pn**	**01 02 06.4**	**+0.9**

IDC 30 01:30:15.4±6.3, 16°.91S×176°.48W, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.6/19, mbtmp3.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.4/25, Error ellipse: s-maj=303.7km s-min=43.6km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**12.36**	**186**	LR	LR	01 36 59.8	
	comp=Z,60nm,21.2s,baz=165,slow=33						
WRA	**Warramunga Arr**	**46.63**	**258**	P	P	01 38 46.0	0.0
	0.6nm,0.4s,baz=94,slow=7.1,SNR=26						
ASAR	**Alice Springs**	**46.84**	**253**	P	P	01 38 47.4	-0.2
	1.0nm,0.4s,baz=88,slow=7.9,SNR=16						
BRTR	**Keskin Array B**	**145.35**	**317**	PKPbc	PKPbc	01 49 53.6	-2.0
	0.2nm,0.4s,baz=57,slow=5.3,SNR=3.9						
GERES	**GERESS Array B**	**147.08**	**348**	PKPbc	PKPbc	01 50 00.4	-0.1
	0.2nm,0.5s,baz=45,slow=1.7,SNR=2.8						

IDC 30 01:44:48.1±3.9, 16°.09N×85°.81W, h0km, mb3.4/4, mb1 4.0/5, mb1mx3.6/22, mbtmp3.6/5, ML4.5/1, Error ellipse: s-maj=111.5km s-min=56.9km az=46.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.74**	**331**	Pn	Pn	01 46 01.4	+0.6
	20nm,0.3s,baz=152,slow=15,SNR=50						
TEIG				Sn	Sn	01 46 55.9	-0.5
	14nm,0.3s,baz=81,slow=24,SNR=18						
TXAR	**Lajitas Array**	**21.06**	**312**	P	P	01 49 32.8	-1.2
	1.9nm,0.7s,baz=129,slow=11,SNR=13						
PDAR	**Pinedale Array**	**33.45**	**327**	P	P	01 51 30.8	+1.6
	0.3nm,0.5s,baz=123,slow=7.6,SNR=2.7						
YKA	**Yellowknife Ar**	**50.57**	**343**	P	P	01 53 48.1	-0.1
	0.6nm,0.8s,baz=138,slow=7.8,SNR=11						
ILAR	**Eielson Array**	**63.38**	**335**	P	P	01 55 18.0	-1.1
	0.2nm,0.6s,baz=92,slow=6.6,SNR=3.7						

*BJI **30** 01:55:04.6, 9°.66N×93°.20E, h26km, mB4.9/22, mb4.6/34, Ms4.4/20, Ms7 4.1/17*
*IDC **30** 01:55:06.3±0.5, 10°.12N×93°.58E, h0km, mb4.2/20, mb1 4.3/21, mb1mx4.2/28, mbtmp4.2/21, ML3.7/1, MS3.6/14, Ms1 3.6/14, ms1mx3.3/36, Error ellipse: s-maj=19.6km s-min=13.7km az=51.0*
*ISCJB **30** 01:55:08.6±1.4, 10°.01N±0°.04×93°.51E±0°.04, h25km±9km, mb4.5/55, MS3.7/20, Error ellipse: s-maj=7.7km s-min=6.3km az=138.3*
*NEIC **30** 01:55:10.4±0.2, 10°.02N×93°.54E, mb4.5/18, Error ellipse: s-maj=8.1km s-min=5.4km az=47.0*
*DJA **30** 01:55:15.2±1.3, 10°.N±4°×9°.4E±1°.9, h10km, M4.6/7, mB5.4/3, mb4.6/7, MLv4.5/2, Mw(mB)4.8/3*

ISC 30 01:55:10.4±0.5, 10°.00N±0°.05×93°.40E±0°.05, h25km±2km, h25km:pP-P, n176, σ1°.21/212, mb4.5/55, MS3.8/21, 3C-3D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSI	**Banda Aceh**	**4.85**	**157**	P	Pn	01 56 25.1	+3.3
KCSI	**Kotacane, Aceh**	**7.76**	**146**	P	**Pn**	**01 57 04.4**	**+2.6**
	74nm,1.2s,1µm0.2nm						
KULM	**Kulim**	**8.57**	**123**	*e*Pn	Pn	01 57 09.0	-4.0
	78nm,1.6s						
PSI	**Prapat**	**9.01**	**142**	P	Pn	01 57 22.4	+3.3
	91nm,1.3s,804nm						
IPM	**Ipoh**	**9.34**	**125**	*e*Pn	Pn	01 57 18.9	-4.6
PBKT	**Sadao Pong**	**9.85**	**48**	P	**Pn**	**01 57 28.4**	**-2.0**
	27nm,1.1s						
CM31	**Chiang Mai Arr**	**9.98**	**32**	*e*Pn	**Pn**	**01 57 33.4**	**+1.2**
	15nm,0.8s						
CMAR	**Chiang Mai Arr**	**9.98**	**32**	Pn	**Pn**	**01 57 29.9**	**-2.3**
CMAR	**Chiang Mai Arr**	**9.98**	**32**	Pn	**Pn**	**01 57 29.9**	**-2.3**
	0.2nm,0.3s,baz=226,slow=14,SNR=31						
CHTO	**Chiang Mai**	**10.28**	**31**	*e*Pn	**Pn**	**01 57 37.9**	**+1.5**
	16nm,1.1s						
CHTO	**Chiang Mai**	**10.28**	**31**	P	**Pn**	**01 57 37.3**	**+0.9**
	19nm,1.1s						
CMMT	**Chiang Mai**	**10.28**	**31**	P	**Pn**	**01 57 37.9**	**+1.5**
	17nm,1.1s						
PALK	**Pallekele**	**12.84**	**259**	*e*Pn	**Pn**	**01 58 09.5**	**-2.0**
HYB	**Hyderabad**	**16.19**	**299**	*i* P	**P**	**01 59 00.0**	**+0.6**
KMI	**Kunming**	**17.47**	**29**	P	**P**	**01 59 14.3**	**+0.6**
KMI				pP	**pP**	**01 59 22.0**	**+1.5**
KMI				S	**Sn**	**02 02 29.8**	**+3.2**
KMI				SS	SnSn	02 02 51.3	+11
KMI				pmax	pmax		
	comp=Z,18nm,1.3s						
KMI				LR	LR		
	comp=N,180nm,10.3s						
KMI				LR	LR		
	comp=E,200nm,11.3s						
KMI				LR	LR		
	comp=Z,140nm,12.5s						
ODAN	**Odare**	**17.71**	**342**	*e*P	**P**	**01 59 16.5**	**+0.1**
	comp=Z,22nm,0.7s						
RAMN	**Ramite**	**18.05**	**340**	*e*P	**P**	**01 59 20.7**	**+0.6**
	comp=Z,21nm,0.4s						
TAPN	**Taplejung**	**18.08**	**343**	*e*P	**P**	**01 59 20.6**	**+0.1**
	comp=Z,58nm,0.8s						
QIZ	**Qiongzhong**	**18.26**	**59**	P	**P**	**01 59 23.0**	**+0.7**
QIZ				S	**S**	**02 02 48.0**	**-2.1**
QIZ				pmax	pmax		
	comp=Z,43nm,2.4s						
QIZ				pmax	pmax		
	comp=Z,210nm,4.0s						
PKI	**Pulchoki**	**19.04**	**338**	*e*P	**Pn**	**01 59 32.0**	**+0.1**
PKIN	**Phulchoki**	**19.05**	**338**	*e*P	**Pn**	**01 59 33.2**	**+1.2**
	comp=Z,18nm,0.6s						
GUN	**Gumba**	**19.18**	**339**	*e*P	**P**	**01 59 33.1**	**+0.5**
	comp=Z,38nm,0.5s						
DMN	**Daman**	**19.18**	**337**	*e*P	**Pn**	**01 59 34.1**	**+0.5**
	comp=Z,34nm,0.8s						
KKN	**Kakani**	**19.28**	**338**	*e*P	**Pn**	**01 59 35.4**	**+0.7**
	comp=Z,25nm,0.5s						
LSA	**Lhasa**	**19.72**	**354**	P	**P**	**01 59 37.3**	**-1.3**
LSA	**Lhasa**	**19.72**	**354**	*e*P	**P**	**01 59 37.8**	**-0.8**
	comp=Z,26nm,0.5s						
KOLN	**Koldanda**	**19.95**	**334**	*e*P	**Pn**	**01 59 42.2**	**-0.4**
	comp=Z,42nm,0.5s						
SBUM	**Sibu**	**20.14**	**111**	P	**P**	**01 59 40.7**	**-2.2**
	comp=Z,8.4nm,1.8s						
DANN	**Dangsing**	**20.38**	**335**	*e*P	Pn	01 59 47.4	-0.6
	comp=Z,60nm,0.5s						
GYA	**Guiyang**	**20.63**	**36**	P	Pn	01 59 50.5	-0.1
GYA				pP	pP	01 59 58.8	+3.7
GYA				S	S	02 03 29.0	-8.8
GYA				SS	SnSn	02 04 09.3	+11
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,70nm,4.6s						
GYA				LR	LR		
	comp=N,380nm,11.2s						
GYA				LR	LR		
	comp=E,350nm,11.0s						
GYA				LR	LR		
	comp=Z,560nm,11.2s						
CD2	**Chengdu**	**22.93**	**23**	P	**P**	**02 00 13.0**	**+0.2**
CD2				pP	**pP**	**02 00 20.5**	**+0.7**
CD2				sP	**sP**	**02 00 24.3**	**+1.3**
CD2				PP	**PnPn**	**02 00 43.5**	**+5.7**
CD2				PcP	**PcP**	**02 04 02.8**	**0.0**
CD2				S	**S**	**02 04 18.5**	**-3.0**
CD2				sS	**sS**	**02 04 31.0**	**-2.6**
CD2				SS	SnSn	02 05 04.3	+10
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.1s						
CD2				LR	LR		
	comp=N,240nm,12.7s						
CD2				LR	LR		
	comp=E,190nm,11.2s						
CD2				LR	LR		
	comp=Z,230nm,10.4s						
ENH	**Enshi**	**25.14**	**34**	*e*P	**P**	**02 00 31.4**	**-2.3**
	comp=Z,37nm,0.9s						
BBKI	**Banjar Baru**	**25.20**	**121**	P	**P**	**02 00 37.3**	**+3.0**
LZH	**Lanzhou**	**27.65**	**18**	*e*P	**P**	**02 00 55.0**	**-1.4**
LZH				pP	**pP**	**02 01 01.3**	**-2.6**
LZH				sP	**sP**	**02 01 03.5**	**-3.5**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				LR	LR		
	comp=N,120nm,11.0s						
LZH				LR	LR		
	comp=E,110nm,5.7s						
LZH				LR	LR		
	comp=Z,170nm,8.0s						
XAN	**Xi'an**	**27.85**	**28**	P	**P**	**02 00 55.5**	**-2.5**
XAN				pP	**pP**	**02 01 03.0**	**-2.5**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
XAN				LR	LR		
	comp=N,94nm,7.9s						
GTA	**Gaotai**	**29.85**	**10**	*e*P	**P**	**02 01 15.0**	**-0.9**
GTA				pP	**pP**	**02 01 22.5**	**-0.8**
GTA				sP	**sP**	**02 01 25.8**	**-0.6**
GTA				S	**S**	**02 06 11.3**	**-0.1**
GTA				sS	**sS**	**02 06 23.5**	**-0.3**
GTA				SS	ScP	02 07 50.5	-8.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,75nm,5.2s						
GTA				LR	LR		
	comp=N,57nm,15.4s						
GTA				LR	LR		
	comp=E,74nm,16.4s						
GTA				LR	LR		
	comp=Z,88nm,14.5s						
KAPI	**Kappang**	**30.19**	**118**	*e*P	**P**	**02 01 19.7**	**+0.7**
	comp=Z,26nm,1.2s						
NJ2	**N

CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,12.0s						
CN2				LR	LR		
	comp=E,200nm,12.0s						
CN2				LR	LR		
	comp=Z,200nm,14.0s						
ZAA0	**Zalesovo Array**	**44.37 353**	*e*P	**P**		**02 03 17.4**	**-1.1**
ZALV	**Zalesovo Beam**	**44.37 353**	P	**P**		**02 03 17.8**	**-0.8**
ZALV	**Zalesovo Beam**	**44.37 353**	P	**P**		**02 03 17.8**	**-0.8**
	comp=Z,12nn,0.4s,baz=175,slow=8.9,SNR=65						
ZALV				LR	LR	02 23 41.2	
	comp=Z,25nn,21.7s,baz=61,slow=39						
MDJ	**Mudanjiang**	**46.49 36**	P	**P**		**02 03 36.5**	**+0.9**
MDJ			pP	**pP**		**02 03 42.8**	**-0.5**
MDJ			sP	**sP**		**02 03 45.3**	**-1.0**
MDJ			ScP	**ScP**		**02 09 02.5**	**+0.6**
MDJ			PcS	**PcS**		**02 09 05.0**	**+0.6**
MDJ			S	**S**		**02 10 25.0**	**+2.6**
MDJ			sS	**sS**		**02 10 36.0**	**+0.9**
MDJ			pmax	pmax			
	comp=Z,3.0nm,0.6s						
MDJ			pmax	pmax			
	comp=Z,62nm,5.1s						
MDJ			LR	LR			
	comp=N,19nm,18.6s						
MDJ			LR	LR			
	comp=E,28nm,20.2s						
BRVK	**Borovoye**	**46.82 341**	*e*P	**P**		**02 03 37.3**	**-0.7**
USRK	**Ussuriysk Arra**	**47.66 37**	P	**P**		**02 03 42.6**	**-2.1**
	comp=E,1.1nn,0.7s,baz=195,slow=14,SNR=4.0						
ABKAR	**Akbulak array**	**48.03 331**	*e*P	**P**		**02 03 48.1**	**+0.6**
ABKAR			*ep*P	**pP**		**02 03 56.3**	**+1.1**
MJAR	**Matsushiro Arr**	**48.31 49**	LR	LR		02 25 24.5	
	comp=E,55nn,19.0s,baz=80,slow=38						
WRA	**Warramunga Arr**	**50.09 127**	P	**P**		**02 04 03.0**	**-0.7**
WRA	**Warramunga Arr**	**50.09 127**	P	**P**		**02 04 03.0**	**-0.7**
	comp=E,1.4nn,0.6s,baz=306,slow=8.5,SNR=39						
WRAB	**Tennant Creek**	**50.10 127**	*e*P	**P**		**02 04 03.1**	**-0.7**
	comp=E,3.1nn,0.5s						
ASAR	**Alice Springs**	**51.84 131**	P	**P**		**02 04 15.7**	**-1.1**
ASAR	**Alice Springs**	**51.84 131**	P	**P**		**02 04 15.7**	**-1.1**
	comp=E,1.8nn,0.8s,baz=300,slow=6.7,SNR=15						
FORT	**Forrest**	**52.45 142**	*e*P	**P**		**02 04 21.7**	**+0.5**
	comp=E,29nm,1.0s						
COEN	**Coen**	**54.81 115**	*e*P	**P**		**02 04 39.4**	**+0.6**
	comp=E,454nm,1.8s						
KBZ	**Khabaz**	**55.04 317**	P	**P**		**02 04 40.5**	**+0.4**
KBZ	**Khabaz**	**55.04 317**	P	**P**		**02 04 40.5**	**+0.4**
	comp=E,5.6nn,0.9s,baz=143,slow=4.0,SNR=8.2						
KMBO	**Kilima Mbogo**	**56.96 262**	LR	LR		02 28 22.0	
	comp=E,58nn,18.1s,baz=93,slow=35						
BR131	**Keskin Array S**	**60.51 310**	*e*P	**P**		**02 05 18.4**	**-0.3**
	comp=E,2.4nn,0.7s						
BR131			*ep*P	**pP**		**02 05 26.6**	**0.0**
BRTR	**Keskin Array B**	**60.51 310**	P	**P**		**02 05 18.5**	**-0.2**
BRTR	**Keskin Array B**	**60.51 310**	P	**P**		**02 05 18.5**	**-0.2**
	comp=E,3.7nn,0.7s,baz=128,slow=7.6,SNR=31						
BRTR			LR	LR		02 34 34.3	
	comp=E,21nn,19.7s,baz=110,slow=39						
STKA	**Stephens Creek**	**62.09 134**	LR	LR		02 32 56.8	
	comp=E,76nn,21.8s,baz=206,slow=37						
AKASG	**Malin Array Be**	**66.05 321**	P	**P**		**02 05 54.1**	**-1.0**
AKASG	**Malin Array Be**	**66.05 321**	P	**P**		**02 05 54.1**	**-1.0**
	comp=E,0.9nn,0.5s,baz=96,slow=4.8,SNR=5.3						
VRI	**Vrincioaia**	**66.68 316** ⇑	*i*P	**P**		**02 06 00.3**	**+1.1**
PLOR	**Plostina**	**66.73 316** ⇑	*i*P	**P**		**02 06 00.6**	**+1.0**
PLOR	**Plostina**	**66.73 316**	S	**S**		**02 14 48.1**	**-2.1**
TESR	**Tescani**	**66.84 316** ⇓	*i*P	**P**		**02 06 00.3**	**+0.1**
MLR	**Muntele Rosu**	**67.16 315** ⇑	*i*P	**P**		**02 06 03.2**	**+0.8**
BUR08	**Bucovina Ar. S**	**68.01 317**	*e*P	**P**		**02 06 07.8**	**+0.1**
BUR08			*ep*P	**pP**		**02 06 16.4**	**+0.7**
JOF	**Joensuu**	**68.63 334**	*ep*	**P**		**02 06 11.0**	**-0.2**
GZR	**Gura Zlata**	**69.35 315** ⇓	*i*P	**P**		**02 06 17.2**	**+1.1**
KWP	**Kalwaria Pacla**	**69.95 319** ⇓	*i*P	**P**		**02 06 18.7**	**-1.0**
KOLS	**Kolonicke sedl**	**70.14 318**	*e*P	**P**		**02 06 22.6**	**+1.8**
FINES	**FINESS Array B**	**70.51 332**	P	**P**		**02 06 21.9**	**-0.8**
FINES	**FINESS Array B**	**70.51 332**	P	**P**		**02 06 21.9**	**-0.8**
	comp=E,1.1nn,0.5s,baz=107,slow=5.7,SNR=17						
FINES			LR	LR		02 43 57.3	
	comp=E,45nn,18.0s,baz=81,slow=42						
KAF	**Kangasniemi**	**70.58 333**	*ep*	**P**		**02 06 23.0**	**-0.2**
CRVS	**Cervenica-Dubn**	**70.67 318**	*e*P	**P**		**02 06 22.9**	**-1.1**
KECS	**Kecovo**	**71.26 318**	*e*P	**P**		**02 06 27.8**	**+0.2**
VYHS	**Vyhne**	**72.35 318**	*e*P	**P**		**02 06 34.4**	**+0.2**
KEV	**Kevo**	**72.60 340**	*ep*	**P**		**02 06 35.3**	**+0.1**
ARCES	**ARCESS Array B**	**73.03 340**	P	**P**		**02 06 37.5**	**-0.4**
ARCES	**ARCESS Array B**	**73.03 340**	P	**P**		**02 06 37.5**	**-0.4**
	comp=E,2.0nn,0.4s,baz=94,slow=6.5,SNR=32						
ARCES			LR	LR		02 40 18.5	
	comp=E,72nn,20.9s,baz=81,slow=37						
MORC	**Moravsky Berou**	**73.30 319**	*e*P	**P**		**02 06 39.6**	**-0.3**
	comp=E,3.0nn,0.9s						
CRNS	**Crni Vrh**	**75.34 315**	*i* P	**P**		**02 06 52.4**	**+0.6**
GERES	**GERESS Array B**	**75.77 318**	P	**P**		**02 06 54.5**	**+0.2**
GERES	**GERESS Array B**	**75.77 318**	P	**P**		**02 06 54.5**	**+0.2**
	comp=E,1.8nn,0.6s,baz=88,slow=5.8,SNR=23						
GERES			LR	LR		02 42 31.4	
	comp=E,41nn,18.2s,baz=63,slow=38						
KHC	**Kasperske Hory**	**75.86 318**	*e*P	**P**		**02 06 54.7**	**0.0**
BOSA	**Boshof**	**76.10 237**	P	**P**		**02 06 58.5**	**+1.9**
BOSA	**Boshof**	**76.10 237**	P	**P**		**02 06 58.5**	**+1.9**
	comp=E,2.8nn,0.9s,baz=178,slow=2.5,SNR=5.7						
NOA	**NORSAR Array B**	**77.54 330**	P	**P**		**02 07 02.9**	**-1.0**
NOA	**NORSAR Array B**	**77.54 330**	P	**P**		**02 07 02.9**	**-1.0**
	comp=E,1.0nn,0.8s,baz=90,slow=11,SNR=3.2						
NOA			LR	LR		02 44 54.3	
	comp=E,33nn,18.9s,baz=355,slow=38						
KEST	**Kesra**	**79.44 305**	*e*P	**P**		**02 07 15.4**	**+0.4**
KEST			*ep*P	**pP**		**02 07 24.1**	**+1.0**
KEST	**Kesra**	**79.44 305**	P	**P**		**02 07 15.9**	**+0.9**
	comp=E,1.3nn,0.5s,baz=284,slow=1.9,SNR=30						
CDF	**Champ du Feu**	**80.04 318**	*e*P	**P**		**02 07 17.6**	**-0.4**
	comp=E,1.5nn,0.4s						
CDF	**Champ du Feu**	**80.04 318**	*e*P	**P**		**02 07 17.6**	**-0.4**
	comp=E,1.5nn,0.4s						
HINF	**Hinteralfeld**	**80.36 317**	*e*P	**P**		**02 07 20.1**	**+0.4**
HINF	**Hinteralfeld**	**80.36 317**	*e*P	**P**		**02 07 20.1**	**+0.4**
LPG	**La Plagne**	**80.61 315**	*e*P	**P**		**02 07 21.7**	**+0.3**
	comp=E,8.5nn,0.5s						
LPG	**La Plagne**	**80.61 315**	*e*P	**P**		**02 07 21.7**	**+0.3**
	comp=E,8.5nn,0.5s						
LPL	**La Plagne**	**80.63 315**	*e*P	**P**		**02 07 21.9**	**+0.5**
	comp=E,10nn,0.5s						
LPL	**La Plagne**	**80.63 315**	*e*P	**P**		**02 07 21.9**	**+0.5**
	comp=E,10nn,0.5s						
HAU	**Haudompre**	**80.69 317**	*e*P	**P**		**02 07 21.1**	**-0.4**
	comp=E,6.0nn,0.7s						
HAU	**Haudompre**	**80.69 317**	*e*P	**P**		**02 07 21.1**	**-0.4**
	comp=E,6.0nn,0.7s						
FRF	**La Foret Royal**	**80.85 313**	*e*P	**P**		**02 07 22.5**	**+0.1**
FRF	**La Foret Royal**	**80.85 313**	*e*P	**P**		**02 07 22.5**	**+0.1**
LMR	**La Mourre**	**80.97 312**	*e*P	**P**		**02 07 23.1**	**+0.1**
	comp=E,8.7nn,0.8s						
LMR	**La Mourre**	**80.97 312**	*e*P	**P**		**02 07 23.1**	**+0.1**
	comp=E,8.7nn,0.8s						
CABF	**La Chapelle**	**80.98 316**	*e*P	**P**		**02 07 23.3**	**+0.2**
	comp=E,6.7nn,0.7s						
CABF	**La Chapelle**	**80.98 316**	*e*P	**P**		**02 07 23.3**	**+0.2**
	comp=E,6.7nn,0.6s						
ORIF	**Oris-en-Rattie**	**81.28 314**	*e*P	**P**		**02 07 25.0**	**+0.2**
ORIF	**Oris-en-Rattie**	**81.28 314**	*e*P	**P**		**02 07 25.0**	**+0.2**
SFTF	**Sexfontaines**	**81.55 317**	*e*P	**P**		**02 07 25.8**	**-0.2**
SFTF	**Sexfontaines**	**81.55 317**	*e*P	**P**		**02 07 25.8**	**-0.2**
SMRF	**Simiane la Rot**	**81.59 313**	*e*P	**P**		**02 07 27.0**	**+0.7**
	comp=E,3.9nn,0.6s						
SMRF	**Simiane la Rot**	**81.59 313**	*e*P	**P**		**02 07 27.0**	**+0.7**
	comp=E,3.9nn,0.6s						
VIVF	**Saint-Julien-l**	**82.14 314**	*e*P	**P**		**02 07 29.3**	**+0.1**
	comp=E,2.0nn,0.5s						
VIVF	**Saint-Julien-l**	**82.14 314**	*e*P	**P**		**02 07 29.3**	**+0.1**
	comp=E,2.0nn,0.5s						
LOR	**Lormes**	**82.44 317**	*e*P	**P**		**02 07 31.2**	**+0.5**
LOR	**Lormes**	**82.44 317**	*e*P	**P**		**02 07 31.2**	**+0.5**
SMF	**Signal de Mont**	**82.52 316**	*e*P	**P**		**02 07 30.9**	**-0.2**
	comp=E,3.8nn,0.5s						
SMF	**Signal de Mont**	**82.52 316**	*e*P	**P**		**02 07 30.9**	**-0.2**
	comp=E,3.8nn,0.4s						
SSF	**Saint Saulge**	**82.70 316**	*e*P	**P**		**02 07 31.9**	**-0.2**
	comp=E,4.2nn,0.7s						
SSF	**Saint Saulge**	**82.70 316**	*e*P	**P**		**02 07 31.9**	**-0.2**
	comp=E,4.2nn,0.7s						
LASF	**Ste Croix**	**82.81 313**	*e*P	**P**		**02 07 33.1**	**+0.4**
	comp=E,3.4nn,0.7s						
LASF	**Ste Croix**	**82.81 313**	*e*P	**P**		**02 07 33.1**	**+0.4**
	comp=E,3.4nn,0.7s						
AVF	**Avril sur Loir**	**82.83 316**	*e*P	**P**		**02 07 32.4**	**-0.3**
AVF	**Avril sur Loir**	**82.83 316**	*e*P	**P**		**02 07 32.4**	**-0.3**
MTLF	**Montolieu**	**84.08 313**	*e*P	**P**		**02 07 39.6**	**+0.3**
	comp=E,2.5nn,0.7s						
MTLF	**Montolieu**	**84.08 313**	*e*P	**P**		**02 07 39.6**	**+0.3**
	comp=E,2.5nn,0.7s						
RJF	**Les Rejaudoux**	**84.30 315**	*e*P	**P**		**02 07 40.3**	**0.0**
RJF	**Les Rejaudoux**	**84.30 315**	*e*P	**P**		**02 07 40.3**	**0.0**
ETSF	**Etsaut**	**86.16 313**	*e*P	**P**		**02 07 51.6**	**+1.8**
	comp=E,3.1nn,0.5s						
ETSF	**Etsaut**	**86.16 313**	*e*P	**P**		**02 07 51.6**	**+1.8**
	comp=E,3.1nn,0.5s						
ESDC	**Sonseca Array**	**89.30 310**	P	**P**		**02 08 05.5**	**+0.6**
ESDC	**Sonseca Array**	**89.30 310**	P	**P**		**02 08 05.5**	**+0.6**
	comp=E,0.5nn,0.5s,baz=61,slow=4.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**89.40 283**	P	**P**		**02 08 06.9**	**+1.1**
TORD	**Torodi Ar. Bea**	**89.40 283**	P	**P**		**02 08 06.9**	**+1.1**
	comp=E,0.4nn,0.8s,baz=105,slow=4.4,SNR=5.8						
TORD			LR	LR		02 49 05.7	
	comp=E,60nn,18.3s,baz=5.0,slow=36						
ILAR	**Eielson Array**	**93.06 22**	P	**P**		**02 08 20.4**	**-1.3**
ILAR	**Eielson Array**	**93.06 22**	P	**P**		**02 08 20.4**	**-1.3**
	comp=E,0.2nn,0.6s,baz=306,slow=5.2,SNR=5.2						
DBIC	**Dimbokro**	**96.93 278**	LR	LR		02 50 34.9	
	comp=E,40nn,18.1s,baz=250,slow=34						
YKA	**Yellowknife Ar**	**104.54 13**	PP	PP		02 13 28.1	-3.7
YKA	**Yellowknife Ar**	**104.54 13**	PP	PP		02 13 28.1	-3.7
	comp=E,0.5nn,1.0s,baz=334,slow=6.8,SNR=4.1						
PDAR	**Pinedale Array**	**123.45 20**	PKP	**PKPdf**		**02 14 04.6**	**-1.5**
PDAR	**Pinedale Array**	**123.45 20**	PKP	**PKPdf**		**02 14 04.6**	**-1.5**
	comp=E,0.9nn,0.7s,baz=101,slow=1.5,SNR=6.4						
NVAR	**Mina Array Bea**	**123.47 30**	PKP	**PKPdf**		**02 14 06.6**	**+0.3**
NVAR	**Mina Array Bea**	**123.47 30**	PKP	**PKPdf**		**02 14 06.6**	**+0.3**
	comp=E,0.9nn,0.6s,baz=312,slow=2.2,SNR=7.8						
TXAR	**Lajitas Array**	**137.57 22**	PKP	**PKPdf**		**02 14 32.9**	**-0.1**
TXAR	**Lajitas Array**	**137.57 22**	PKP	**PKPdf**		**02 14 32.9**	**-0.1**
	comp=E,16nn,0.5s,baz=193,slow=0.3,SNR=13						
PLCA	**Paso Flores**	**146.25 202**	PKPbc	**PKPab**		**02 14 50.3**	**+0.4**
PLCA	**Paso Flores**	**146.25 202**	PKPbc	**PKPab**		**02 14 50.3**	**+0.4**
	comp=E,1.4nn,0.7s,baz=187,slow=5.7,SNR=3.9						

CSEM ***30*** *02:00:06.5, 63.88N×22.35W, h6km, ML3.9, After REY*

REY 30 02:00:06.5, 63.88N×22.35W, h6km, ML3.3, ML3.9, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGRV	**Grindav??k**	**0.05**	**246**	P	Pg	02 00 08.1	+0.2
IGRV				S	Sg	02 00 09.4	+0.6
IVOG	**Vogar**	**0.09**	**348**	P	Pg	02 00 08.7	+0.2
IVOG				S	Sg	02 00 10.5	+0.6
IKRI	**Krysuvik**	**0.12**	**90**	P	Pg	02 00 09.1	+0.1
IKRI				S	Sg	02 00 11.0	+0.3
INYL	**Nylenda**	**0.20**	**299**	P	Pg	02 00 10.5	+0.1
INYL				S	Sg	02 00 13.1	+0.1
IKAS	**Kald??rsel**	**0.26**	**56**	P	Pg	02 00 11.6	0.0
IKAS				S	Sg	02 00 15.4	+0.3
IVOS	**Vogsosar**	**0.29**	**95**	P	Pg	02 00 12.0	-0.1
IVOS				S	Sg	02 00 16.2	+0.4
ISAN	**Sandskeio**	**0.39**	**62**	P	Pg	02 00 13.7	-0.3
ISAN				S	Sg	02 00 18.9	-0.2
IBJA	**Bjarnastaoir**	**0.47**	**81**	P	Pg	02 00 15.5	0.0
IBJA				S	Sg	02 00 21.5	-0.1
IKRO	**Krokur**	**0.58**	**67**	S	Sg	02 00 25.5	+0.1
IHEI	**Heioarbar**	**0.59**	**56**	S	Sg	02 00 25.1	-0.3
ISOL	**Solvholt**	**0.62**	**85**	P	Pg	02 00 17.7	-0.8
ISOL				S	Sg	02 00 26.5	0.0
IASM	**Asmuli**	**0.77**	**93**	P	Pg	02 00 20.2	-1.0
IASM				S	Sg	02 00 30.6	-0.6
ISAU	**Saurbar**	**0.86**	**82**	P	Pg	02 00 21.0	-2.0
ISAU				S	Sg	02 00 33.1	-1.1
IASB	**`sbjarnarst**	**0.98**	**27**	S	Sg	02 00 36.3	-1.7
IVES	**Vestmannaeyjar**	**1.02**	**114**	P	Pg	02 00 23.7	-2.3
IVES				S	Sg	02 00 37.3	-1.9
IGYG	**Gygjarholskot**	**1.02**	**66**	S	Sg	02 00 37.5	-1.8
IHAU	**Haukadalur**	**1.06**	**84**	S	Sg	02 00 38.8	-1.7
IMID	**Miomork**	**1.12**	**100**	S	Sg	02 00 39.6	-2.8
IGOD	**Go??abunga**	**1.36**	**98**	S	Sb	02 00 47.2	-3.2
IHVE	**Hveravellir**	**1.57**	**49**	S	Sn	02 00 53.1	-2.5
SCO	**Scoresbysund**	**6.64**	**1**	*i* P	Pn	02 01 46.0	+1.6
SCO				*e*S	Sn	02 03 07.1	+6.8

CSEM ***30*** *02:06:44.8, 63.90N×22.27W, h6km, ML3.9, After REY*

REY 30 02:06:44.8, 63.90N×22.27W, h6km, ML3.2, ML3.9, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVOG	**Vogar**	**0.09**	**323**	P	Pg	02 06 47.0	+0.2
IVOG				S	Sg	02 06 48.8	+0.7
IGRV	**Grindav??k**	**0.09**	**241**	P	Pg	02 06 47.0	+0.2
IGRV				S	Sg	02 06 48.5	+0.3
IKRI	**Krysuvik**	**0.09**	**105**	P	Pg	02 06 46.9	+0.1
IKRI				S	Sg	02 06 48.5	+0.2
INYL	**Nylenda**	**0.22**	**290**	P	Pg	02 06 49.1	0.0
INYL				S	Sg	02 06 52.5	+0.5
IKAS	**Kald??rsel**	**0.22**	**57**	P	Pg	02 06 49.2	0.0
IKAS				S	Sg	02 06 53.0	+0.8
IVOS	**Vogsosar**	**0.26**	**101**	P	Pg	02 06 49.9	+0.1
IVOS				S	Sg	02 06 53.8	+0.6
ISAN	**Sandskeio**	**0.35**	**63**	P	Pg	02 06 51.4	-0.2
ISAN				S	Sg	02 06 56.4	+0.2
IBJA	**Bjarnastaoir**	**0.43**	**84**	P	Pg	02 06 52.9	-0.2
IBJA				S	Sg	02 06 59.0	+0.2
IKUD	**Kuludalsa**	**0.46**	**22**	P	Pg	02 06 53.0	-0.6
IKUD				S	Sg	02 06 59.4	-0.2
IKRO	**Krokur**	**0.55**	**68**	P	Pg	02 06 54.5	-0.8
IKRO				S	Sg	02 07 02.2	-0.2
IHEI	**Heioarbar**	**0.55**	**56**	P	Pg	02 06 54.4	-0.9
IHEI				S	Sg	02 07 02.3	-0.2
ISOL	**Solvholt**	**0.59**	**87**	P	Pg	02 06 55.3	-0.8
ISOL				S	Sg	02 07 03.3	-0.5
IASM	**Asmuli**	**0.74**	**94**	P	Pg	02 06 57.8	-1.1
IASM				S	Sg	02 07 07.8	-0.7
ISAU	**Saurbar**	**0.83**	**83**	P	Pg	02 06 59.3	-1.3
ISAU				S	Sg	02 07 10.5	-0.8
IASB	**`sbjarnarst**	**0.95**	**26**	P	Pg	02 07 01.0	-1.9
IASB				S	Sg	02 07 14.0	-1.2
IGYG	**Gygjarholskot**	**0.98**	**66**	P	Pg	02 07 01.6	-2.0
IGYG				S	Sg	02 07 14.9	-1.5
IVES	**Vestmannaeyjar**	**1.00**	**117**	P	Pg	02 07 01.8	-2.1
IVES				S	Sg	02 07 15.2	-1.7
IHAU	**Haukadalur**	**1.02**	**85**	P	Pg	02 07 02.1	-1.9
IHAU				S	Sg	02 07 16.5	-1.1
IMID	**Miomork**	**1.09**	**102**	P	Pg	02 07 03.3	-2.4
IMID				S	Sg	02 07 17.5	-2.3
IESK	**Eystri-Skogar**	**1.31**	**105**	P	Pn	02 07 06.7	-2.9
IGOD	**Go??abunga**	**1.33**	**99**	P	Pn	02 07 07.7	-2.4
IGOD				S	Sb	02 07 25.2	-2.5
IVAT	**Vatnsfell**	**1.50**	**77**	P	Pn	02 07 10.3	-2.0
IVAT				S	Sn	02 07 29.3	-2.9
IHVE	**Hveravellir**	**1.53**	**49**	P	Pn	02 07 10.4	-2.2
ISNB	**Snabyli**	**1.62**	**94**	P	Pn	02 07 12.1	-1.8
SCO	**Scoresbysund**	**6.61**	**1**	*i* P	Pn	02 08 28.4	+6.1
SCO				*e*S	Sb	02 09 51.3	-7.9

MEX 30 02:09:02.3±0.8, 16.93N×99.53W, h25km±30km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.32**	**260**	*e*P	Pb	02 09 09.1	-0.6
CAIG	**El Cayaco**	**0.72**	**280**	*e*P	Pb	02 09 14.3	-1.8
CAIG				*i* S	Sb	02 09 22.5	-3.1
MEIG	**Mezcala**	**1.00**	**355**	*i* P	Pn	02 09 17.5	-3.3
MEIG				*i* S	Sb	02 09 30.3	-3.6
PNIG	**Pinotepa**	**1.45**	**111**	*e*P	Pn	02 09 24.9	-2.0
PNIG				*i* S	Sn	02 09 41.8	-3.4
PLIG	**Platanillo**	**1.46**	**1**	*e*P	Pn	02 09 24.3	-2.9
PLIG				*i* S	Sn	02 09 42.5	-3.1
ARIG	**Puente Sto Nin**	**1.56**	**330**	*e*P	Pn	02 09 25.5	-3.0
ARIG				*i* S	Sn	02 09 45.0	-2.8
UTMO	**Huajuapan**	**1.88**	**61**	*e*P	Pn	02 09 30.1	-3.0
UTMO				*e*S	Sn	02 09 53.4	-2.8
ZIIG	**Zihuatanejo**	**1.97**	**290**	*e*P	Pn	02 09 32.6	-1.4
ZIIG				*i* S	Sn	02 09 55.7	-2.3
YAIG	**Yautepec**	**1.97**	**13**	*e*P	Pn	02 09 32.1	-2.3
YAIG				*i* S	Sn	02 09 54.6	-3.9
PPM	**Popocatepetl**	**2.29**	**22**	*i* P	Pn	02 09 35.8	-3.5
PPM				*i* S	Sn	02 10 04.1	-3.1

IDC 30 02:51:53.4±6.2, 21.37S×178.91W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/19, mbtmp4.0/4, Error ellipse: s-maj=161.2km s-min=95.8km az=139.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.65**	**245**	P	P	02 59 01.1	-0.8
	1.5nm,0.8s,baz=90,slow=9.1,SNR=2.7						
ASAR	**Alice Springs**	**43.50**	**258**	P	P	02 59 58.8	-0.1
	1.6nm,0.6s,baz=96,slow=6.9,SNR=17						
WRA	**Warramunga Arr**	**43.65**	**263**	P	P	03 00 00.6	+0.4
	0.9nm,0.3s,baz=96,slow=8.4,SNR=106						
FITZ	**Fitzroy Crossi**	**52.08**	**263**	P	P	03 01 05.3	-0.1
	0.8nm,0.5s,baz=100,slow=6.1,SNR=7.8						
HFS	**Hagfors**	**140.26**	**350**	PKP	PKPdf	03 11 23.4	-0.4
	1.2nm,0.8s,baz=17,slow=1.5,SNR=6.8						

ISCJB ***30*** *02:55:09.7±0.2, 42.34N±0.01×13.33E±0.02, h11km±1km, mb3.5/4, Error ellipse: s-maj=2.7km s-min=2.2km az=141.9*

LDG ***30*** *02:55:09.8±0.1, 42.35N×13.35E, h2km, Ml3.4/6, Error ellipse: s-maj=3.7km s-min=2.7km az=39.0*

SZGRF ***30*** *02:55:09.9, 42.22N×13.72E, h10km, mb3.8, Central Italy*

ROM ***30*** *02:55:10.0±0.1, 42.35N×13.34E, h11km, Ml3.6/31, Error ellipse: s-maj=1.0km s-min=0.8km az=65.0*

CSEM ***30*** *02:55:10.3±0.1, 42.35N×13.31E, h2km, ML4.2/10, Error ellipse: s-maj=2.6km s-min=2.3km az=55.0*

PRU ***30*** *02:55:10.5, 42.33N×13.58E, h0km*

IDC ***30*** *02:55:10.4±1.2, 42.48N×13.19E, h0km, mb3.4/5, mb1 3.5/9, mb1mx3.4/29, mbtmp3.3/9, ML3.5/3, Error ellipse: s-maj=19.2km s-min=15.1km az=91.0*

ISC 30 02:55:10.9±0.7, 42.36N±0.02×13.33E±0.02, h8km±4km, n196, σ1°50/243, mb3.6/4, 24C-11D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.05**	**95** ⇓	*i* P	**Pg**	**02 55 12.3**	**-0.5**
AQU	**L'Aquila**	**0.05**	**95** ⇓	Pg	**Pg**	**02 55 12.5**	**-0.3**
AQU				Sg	**Sg**	**02 55 14.0**	**-0.2**
	93μm,0.2s						
AQU	**L'Aquila**	**0.05**	**95** ⇓	*i* P	**Pg**	**02 55 12.3**	**-0.5**
AQU				Sg	**Sg**	**02 55 14.0**	**-0.2**
	93μm,0.2s						
FIAM	**Fiamignano**	**0.18**	**241**	Pg	**Pg**	**02 55 14.8**	**0.0**
FIAM				Sg	**Sg**	**02 55 17.8**	**+0.4**
	17μm,0.6s						
FIAM	**Fiamignano**	**0.18**	**241**	Pg	**Pg**	**02 55 14.8**	**0.0**
CAMP	**Campotosto**	**0.19**	**18** ⇑	*i* Pg	**Pg**	**02 55 14.6**	**-0.3**
CAMP				Sg	**Sg**	**02 55 17.8**	**+0.2**
	20μm,0.5s						
CAMP	**Campotosto**	**0.19**	**18** ⇑	*i* Pg	**Pg**	**02 55 14.6**	**-0.3**
CAMP				Sg	**Sg**	**02 55 17.8**	**+0.2**
	20μm,0.5s						
FAGN	**Fagnano**	**0.21**	**116**	Pg	**Pg**	**02 55 14.9**	**-0.3**
FAGN				Sg	**Sg**	**02 55 18.5**	**+0.4**
	37μm,0.4s						
FAGN	**Fagnano**	**0.21**	**116**	Pg	**Pg**	**02 55 14.9**	**-0.3**
FAGN				Sg	**Sg**	**02 55 18.5**	**+0.4**
	37μm,0.4s						
LNSS	**Leonessa**	**0.33**	**319**	Pg	**Pg**	**02 55 17.1**	**-0.3**
LNSS				Sg	**Sg**	**02 55 22.4**	**+0.6**
	12μm,0.7s						
LNSS	**Leonessa**	**0.33**	**319**	Pg	**Pg**	**02 55 17.1**	**-0.3**
LNSS

CERA	**Filignano**	**0.92**	**146**	Pg	**Pg**	**02 55 26.7**	**-1.9**
	948nm,0.6s						
CERA	**Filignano**	**0.92**	**146**	Pg	**Pg**	**02 55 26.7**	**-1.9**
	948nm,0.6s						
SNTG	**Esanatoglia**	**0.94**	**342**	Pg	**Pg**	**02 55 27.5**	**-1.6**
SNTG	**Esanatoglia**	**0.94**	**342**	Pg	**Pg**	**02 55 27.5**	**-1.6**
MIDA	**Miranda**	**0.99**	**136**	Pg	**Pg**	**02 55 27.8**	**-2.2**
	1µm,1.0s						
MIDA	**Miranda**	**0.99**	**136**	Pg	**Pg**	**02 55 27.8**	**-2.2**
	1µm,1.0s						
CING	**Cingoli**	**1.02**	**354**	Pg	**Pg**	**02 55 28.9**	**-1.7**
	2µm,0.6s						
CING	**Cingoli**	**1.02**	**354**	Pg	**Pg**	**02 55 28.9**	**-1.7**
	2µm,0.6s						
TOLF	**Tolfa**	**1.03**	**254**	Pg	**Pg**	**02 55 29.5**	**-1.3**
	522nm,0.6s						
TOLF	**Tolfa**	**1.03**	**254**	Pg	**Pg**	**02 55 29.5**	**-1.3**
	522nm,0.6s						
MURB	**Monte Urbino**	**1.08**	**327**	Pg	**Pg**	**02 55 30.6**	**-1.1**
	3µm,0.5s						
MURB	**Monte Urbino**	**1.08**	**327**	Pg	**Pg**	**02 55 30.6**	**-1.1**
	3µm,0.5s						
TRIV	**Trivento**	**1.08**	**123**	Pg	**Pg**	**02 55 30.6**	**-1.1**
TRIV	**Trivento**	**1.08**	**123**	Pg	**Pg**	**02 55 30.6**	**-1.1**
VAGA	**Valle Agricola**	**1.16**	**144**	Pg	**Pb**	**02 55 32.1**	**-1.1**
	353nm,0.8s						
VAGA	**Valle Agricola**	**1.16**	**144**	Pg	**Pb**	**02 55 32.1**	**-1.1**
	353nm,0.8s						
SACS	**San Casciano d**	**1.16**	**296**	Pg	**Pb**	**02 55 32.7**	**-0.5**
	867nm,0.7s						
ARVD	**Arcevia**	**1.18**	**346**	Pg	**Pb**	**02 55 31.7**	**-1.8**
	1µm,0.7s						
ARVD	**Arcevia**	**1.18**	**346**	Pg	**Pb**	**02 55 31.7**	**-1.8**
	1µm,0.7s						
AOI	**Ancona**	**1.21**	**9**	Pg	**Pb**	**02 55 32.5**	**-1.5**
	2µm,1.0s						
AOI	**Ancona**	**1.21**	**9**	Pg	**Pb**	**02 55 32.5**	**-1.5**
	2µm,1.0s						
PIEI	**Pieia**	**1.31**	**334**	Pg	**Pg**	**02 55 34.2**	**-1.4**
	429nm,0.5s						
PIEI	**Pieia**	**1.31**	**334**	Pg	**Pn**	**02 55 34.2**	**-1.4**
	429nm,0.5s						
NVLJ	**Novalja**	**2.47**	**26**	*e*Pn	**Pn**	**02 55 50.8**	**-0.6**
NVLJ				*e*Sn	**Sn**	**02 56 20.5**	**-1.3**
NVLJ	**Novalja**	**2.47**	**26**	*e*Pn	**Pn**	**02 55 50.8**	**-0.6**
NVLJ				*e*Sn	**Sn**	**02 56 20.4**	**-1.3**
MAIM	**Mastiano**	**2.60**	**308**	P	**Pn**	**02 55 52.7**	**-0.5**
PGF	**Pioggiola**	**3.21**	**275**	*e*P	**Pn**	**02 56 02.0**	**+0.3**
PGF				*e*Sn	**Sn**	**02 56 35.3**	**-4.9**
	50nm,0.9s						
PGF	**Pioggiola**	**3.21**	**275**	*e*P	**Pn**	**02 56 02.0**	**+0.3**
PGF				*e*Sn	**Sn**	**02 56 35.3**	**-4.9**
	25nm,0.9s						
SKDS	**Skadanscina**	**3.23**	**9**	*i* Pn	**Pn**	**02 56 01.5**	**-0.3**
SKDS				*i* Sn	**Sn**	**02 56 41.1**	**+0.7**
SKDS	**Skadanscina**	**3.23**	**9**	*i* Pn	**Pn**	**02 56 01.5**	**-0.3**
SKDS				*i* Sn	**Sn**	**02 56 41.1**	**+0.7**
STON	**Ston**	**3.27**	**79**	*e*Pn	**Pn**	**02 56 02.2**	**-0.2**
STON				Sn	**Sn**	**02 56 40.2**	**-1.1**
STON	**Ston**	**3.27**	**79**	*e*Pn	**Pn**	**02 56 02.1**	**-0.2**
STON				Sn	**Sn**	**02 56 40.2**	**-1.1**
GBRS	**Gornja Briga**	**3.35**	**18**	*i* Pn	**Pn**	**02 56 03.9**	**+0.4**
BOJS	**Bojanci**	**3.44**	**23**	*i* Pn	**Pn**	**02 56 05.3**	**+0.6**
BOJS				*i* Sn	**Sb**	**02 56 51.1**	**-2.8**
CEY	**Cerknica**	**3.47**	**13**	*i* Pn	**Pn**	**02 56 04.8**	**-0.4**
CEY				*i* Sn	**Sn**	**02 56 46.8**	**+0.3**
CEY	**Cerknica**	**3.47**	**13**	*i* Pn	**Pn**	**02 56 04.8**	**-0.4**
CEY				*i* Sn	**Sn**	**02 56 46.8**	**+0.3**
JAVS	**Javornik**	**3.57**	**8**	*i* Pn	**Pn**	**02 56 06.1**	**-0.6**
JAVS				*i* Sn	**Sn**	**02 56 49.3**	**+0.2**
JAVS	**Javornik**	**3.57**	**8**	*i* Pn	**Pn**	**02 56 06.1**	**-0.6**
JAVS				*i* Sn	**Sn**	**02 56 49.3**	**+0.2**
BLY	**Banja Luka**	**3.68**	**48**	*e*Pn	**Pn**	**02 56 10.4**	**+2.3**
VOY	**Vojsko**	**3.69**	**6**	*e*Pn	**Pn**	**02 56 07.8**	**-0.6**
VOY				*e*		02 56 10.2	
VOY				*e*Sn	**Sn**	**02 56 54.3**	**+2.2**
VOY	**Vojsko**	**3.69**	**6**	*e*Pn	**Pn**	**02 56 07.8**	**-0.6**
VOY				*e*Sn	**Sn**	**02 56 54.3**	**+2.2**
OBKA	**Obir**	**4.24**	**11**	*e*Pn	**Pn**	**02 56 15.9**	**0.0**
ABTA	**Abfaltersbach**	**4.43**	**353**	⇓*i*Pn	**Pn**	**02 56 18.7**	**+0.3**
	SNR=20						
ABTA	**Abfaltersbach**	**4.43**	**353**	Pn	**Pn**	**02 56 18.7**	**+0.3**
	SNR=20						
BBLS	**Lazići**	**4.69**	**69**	*e*Pn	**Pn**	**02 56 23.2**	**+1.1**
KBA	**Koelnbreinsper**	**4.72**	**0**	*e*Pn	**Pn**	**02 56 23.5**	**+1.0**
KBA				*e*Sn	**Sn**	**02 57 17.6**	**+0.1**
TEKS	**Tekeris**	**5.01**	**62**	*e*Pn	**Pn**	**02 56 27.3**	**+0.9**
FRF	**La Foret Royal**	**5.05**	**286**	*e*Pn	**Pn**	**02 56 26.6**	**-0.3**
FRF	**La Foret Royal**	**5.05**	**286**	*e*Pn	**Pn**	**02 56 26.6**	**-0.3**
WTTA	**Wattenberg**	**5.05**	**347**	*e*Pn	**Pn**	**02 56 28.4**	**+1.3**
WTTA				*e*Sn	**Sn**	**02 57 27.9**	**+2.2**
DAVOX	**Davos/Dischmat**	**5.06**	**332**	Pn	**Pn**	**02 56 29.4**	**+2.2**
	1.6nm,0.3s,baz=155,slow=17,SNR=16						
DAVOX				Sn	**Sn**	**02 57 27.2**	**+1.3**
	2.1nm,0.3s,baz=91,slow=22,SNR=4.7						
LMR	**La Mourre**	**5.11**	**283**	*e*Pn	**Pn**	**02 56 27.1**	**-0.6**
LMR	**La Mourre**	**5.11**	**283**	*e*Pn	**Pn**	**02 56 27.1**	**-0.6**
ARSA	**Arzberg**	**5.13**	**17**	*e*Pn	**Pn**	**02 56 26.6**	**-1.5**
DIVS	**Divibare**	**5.17**	**68**	*e*Pn	**Pn**	**02 56 29.0**	**+0.4**
MOTA	**Moosalm**	**5.23**	**343**	⇓*i*Pn	**Pn**	**02 56 30.7**	**+1.2**
	SNR=8.3						
MOTA	**Moosalm**	**5.23**	**343**	Pn	**Pn**	**02 56 30.7**	**+1.2**
	SNR=8.3						
MBDF	**Montbardon**	**5.32**	**299**	*e*P	**Pn**	**02 56 32.4**	**+1.6**
MBDF				*e*Sn	Sn	02 57 25.9	-6.4
	3.2nm,0.3s						
MBDF	**Montbardon**	**5.32**	**299**	*e*P	**Pn**	**02 56 32.4**	**+1.6**
RJOB	**Jochberg**	**5.39**	**356**	*e*Pn	**Pn**	**02 56 32.4**	**+0.7**
RJOB				*e*Sn	**Sn**	**02 57 35.2**	**+1.3**
PKSM	**Moragy**	**5.42**	**43**	⇓*i*P	**Pn**	**02 56 34.4**	**+2.5**
PKSM	**Moragy**	**5.42**	**43**	⇓*i*P	**Pn**	**02 56 34.4**	**+2.5**
PLONS	**Plons/SG**	**5.47**	**330**	*e*Pn	**Pn**	**02 56 34.7**	**+2.0**
PLONS				*e*Sn	**Sn**	**02 57 38.8**	**+3.0**
OBER	**Oberstdorf**	**5.49**	**338**	*e*Pn	**Pn**	**02 56 35.9**	**+2.9**
OBER				*e*Sn	**Sn**	**02 57 39.9**	**+3.6**
DAVA	**Damuels**	**5.50**	**335**	*e*Pn	**Pn**	**02 56 35.7**	**+2.4**
DAVA				*e*Sn	**Sn**	**02 57 40.4**	**+3.6**
DAVA	**Damuels**	**5.50**	**335**	⇑*i*Pn	**Pn**	**02 56 35.4**	**+2.1**
	SNR=9.9						
DAVA	**Damuels**	**5.50**	**335**	Pn	**Pn**	**02 56 35.4**	**+2.1**
	SNR=9.9						
MOA	**Molln**	**5.53**	**7**	*e*Pn	**Pn**	**02 56 33.6**	**+0.1**
MOA				*e*Sn	**Sn**	**02 57 38.2**	**+0.9**
MOA	**Molln**	**5.53**	**7**	⇓*i*Pn	**Pn**	**02 56 33.4**	**-0.1**
	SNR=15						
MOA	**Molln**	**5.53**	**7**	Pn	**Pn**	**02 56 33.4**	**-0.1**
	SNR=15						
GRUS	**Gruza**	**5.62**	**72**	*e*Pn	**Pn**	**02 56 35.1**	**+0.4**
LPG	**La Plagne**	**5.69**	**306**	*e*P	**Pn**	**02 56 37.0**	**+1.0**
LPG				*e*Sn	Sn	02 57 34.4	-7.3
	8.0nm,0.6s						
LPG	**La Plagne**	**5.69**	**306**	*e*P	**Pn**	**02 56 37.0**	**+1.0**
SELS	**Selova**	**5.79**	**79**	*e*Pn	**Pn**	**02 56 37.3**	**+0.2**
CONA	**Conrad Observa**	**5.85**	**17**	⇑*i*Pn	**Pn**	**02 56 36.4**	**-1.6**
CONA	**Conrad Observa**	**5.85**	**17**	Pn	**Pn**	**02 56 36.4**	**-1.6**
SMRF	**Simiane la Rot**	**5.90**	**289**	*e*P	**Pn**	**02 56 40.0**	**+1.4**
SMRF	**Simiane la Rot**	**5.90**	**289**	*e*P	**Pn**	**02 56 40.0**	**+1.4**
WILA	**Wila**	**5.95**	**330**	*e*Sn	**Sn**	**02 57 51.8**	**+4.1**
ORIF	**Oris-en-Rattie**	**5.98**	**298**	*e*P	**Pn**	**02 56 42.0**	**+2.2**
ORIF	**Oris-en-Rattie**	**5.98**	**298**	*e*P	**Pn**	**02 56 42.0**	**+2.2**
SULZ	**Cheisacher**	**6.36**	**326**	*e*Sn	**Sn**	**02 57 59.1**	**+1.5**
GEC2	**GERESS Array S**	**6.49**	**2**	*e*Pn	**Pn**	**02 56 45.1**	**-1.7**
GEC2				*e*Sn	**Sn**	**02 57 59.5**	**-1.5**
GERES	**GERESS Array B**	**6.49**	**2**	Pn	**Pn**	**02 56 46.4**	**-0.4**
	0.4nm,0.3s,baz=172,slow=13,SNR=15						
GERES				Sn	**Sn**	**02 57 57.9**	**-3.1**
	2.1nm,0.3s,baz=185,slow=28,SNR=12						
CABF	**La Chapelle**	**6.70**	**312**	*e*P	**Pn**	**02 56 51.7**	**+2.1**
CABF	**La Chapelle**	**6.70**	**312**	*e*P	**Pn**	**02 56 51.7**	**+2.1**
KHC	**Kasperske Hory**	**6.78**	**1**	*e*PN	**Pn**	**02 56 50.5**	**-0.1**
KHC				*ex*	x	02 56 59.5	
KHC				*e*SN	**Sn**	**02 58 04.8**	**-3.1**
KHC				*ex*	x	02 58 29.5	
KHC	**Kasperske Hory**	**6.78**	**1**	Pn	**Pn**	**02 56 50.5**	**-0.1**
WET	**Wettzell**	**6.79**	**357**	*e*Pn	**Pn**	**02 56 50.2**	**-0.7**
WET				*e*Sn	**Sn**	**02 58 05.0**	**-3.4**
BZS	**Buzias**	**6.80**	**59**	⇑*i*P	**Pn**	**02 56 52.8**	**+1.8**
BZS	**Buzias**	**6.80**	**59**	⇑*i*P	**Pn**	**02 56 52.8**	**+1.8**
BFO	**Black Forest**	**6.93**	**331**	*e*Pn	**Pn**	**02 56 53.6**	**+0.8**
BFO				*e*Sn	**Sn**	**02 58 12.6**	**+0.8**
TREC	**Trest**	**7.10**	**11**	*e*PN	**Pn**	**02 56 54.0**	**-1.0**
TREC	**Trest**	**7.10**	**11**	Pn	**Pn**	**02 56 54.0**	**-1.0**
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn	**Pn**	**02 56 54.3**	**-1.1**
HINF				*e*Sn	Sn	02 58 08.8	-7.8
	9.9nm,0.5s						
HINF	**Hinteralfeld**	**7.13**	**322**	*e*Pn	**Pn**	**02 56 54.3**	**-1.1**
LASF	**Ste Croix**	**7.13**	**287**	*e*Pn	**Pn**	**02 56 54.9**	**-0.6**
LASF	**Ste Croix**	**7.13**	**287**	*e*Pn	**Pn**	**02 56 54.9**	**-0.6**
VYHS	**Vyhne**	**7.25**	**30**	*e*PN	Pn	02 56 50.2	-7.0
VYHS				*e*		02 56 59.8	
VYHS	**Vyhne**	**7.25**	**30**	*e*PG	**Pg**	**02 57 30.2**	**+0.4**
VYHS	**Vyhne**	**7.25**	**30**	*e*Pg	**Pg**	**02 57 30.2**	**+0.4**
ECH	**Echery**	**7.30**	**326**	*e*Pn	**Pn**	**02 56 57.4**	**-0.3**
ECH				*e*Sn	**Sn**	**02 58 18.2**	**-2.5**
VTS	**Vitosha**	**7.31**	**85**	⇑*i*P	**Pn**	**02 56 59.4**	**+1.4**
VTS	**Vitosha**	**7.31**	**85**	⇑*i*P	**Pn**	**02 56 59.4**	**+1.4**
KEST	**Kesra**	**7.31**	**206**	Pn	Pn	02 57 02.1	+4.2
	0.3nm,0.3s,baz=297,slow=2.7,SNR=24						
CDF	**Champ du Feu**	**7.40**	**327**	*e*Pn	**Pn**	**02 56 58.4**	**-0.9**
CDF				*e*Sn	Sn	02 58 14.9	-8.5
	4.8nm,0.3s						
CDF	**Champ du Feu**	**7.40**	**327**	*e*Pn	**Pn**	**02 56 58.4**	**-0.9**
ROTZ	**Rotzenmuhle**	**7.45**	**354**	*e*Sn	**Sn**	**02 58 20.7**	**-3.8**
GZR	**Gura Zlata**	**7.47**	**63**	⇓*i*P	**Pn**	**02 57 02.0**	**+1.9**
GZR	**Gura Zlata**	**7.47**	**63**	⇓*i*P	**Pn**	**02 57 02.0**	**+1.9**
GRF	**Grafenberg Arr**	**7.48**	**349**	*e*Sn	**Sn**	**02 58 23.1**	**-2.1**
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	**Pn**	**02 56 59.5**	**-1.0**
HAU				*e*Sn	Sn	02 58 17.3	-8.3
	18nm,0.6s						
HAU	**Haudompre**	**7.50**	**321**	*e*Pn	**Pn**	**02 56 59.5**	**-1.0**
PRU	**Pruhonice**	**7.68**	**6**	*e*SN	**Sn**	**02 58 28.0**	**-2.0**
NKC	**Novy Kostel**	**7.90**	**356**	*e*SN	**Sn**	**02 58 32.9**	**-2.7**
KECS	**Kecovo**	**7.92**	**37**	*e*PN	Pn	02 57 02.3	-4.0
MORC	**Moravsky Berou**	**7.97**	**20**	⇑*i*P	Pn	02 57 10.4	+3.3
DRGR		**8.03**	**53**	⇑*i*P	**Pn**	**02 57 09.6**	**+1.8**
DRGR		**8.03**	**53**	⇑*i*P	**Pn**	**02 57 09.6**	**+1.8**
LOT	**Lotru**	**8.14**	**64**	⇑*i*P	**Pn**	**02 57 11.4**	**+1.9**
LOT	**Lotru**	**8.14**	**64**	⇑*i*P	**Pn**	**02 57 11.4**	**+1.9**
MTLF	**Montolieu**	**8.23**	**281**	*e*Pn	Pn	02 57 07.0	-3.5
MOX	**Moxa**	**8.37**	**352**	*e*Sn	**Sn**	**02 58 42.6**	**-4.5**
BRG	**Berggiesshubel**	**8.53**	**3**	SN	**Sn**	**02 58 47.7**	**-3.2**
	4.1nm,0.9s						
BRG				SG		03 50 54.6	
	0.7nm,0.5s						
BRG				PG		03 52 23.0	
BRG				SG		03 52 44.3	
	3.3nm,0.5s						
CLL	**Collm**	**8.96**	**359**	*e*Sn	Sn	02 58 47.0	-14
CLL				*e*Sg	**Sg**	**02 59 53.0**	**-5.2**
VOIR		**9.00**	**66**	⇑*i*P	**Pn**	**02 57 23.4**	**+2.2**
VOIR		**9.00**	**66**	⇑*i*P	**Pn**	**02 57 23.4**	**+2.2**
KOLS	**Kolonicke sedl**	**9.07**	**41**	*e*PN	**Pn**	**02 57 23.4**	**+1.3**
KOLS	**Kolonicke sedl**	**9.07**	**41**	*e*Pn	**Pn**	**02 57 23.4**	**+1.3**
MLR	**Muntele Rosu**	**9.62**	**67**	⇑*i*P	**Pn**	**02 57 30.8**	**+1.0**
MLR	**Muntele Rosu**	**9.62**	**67**	Pn	**Pn**	**02 57 31.8**	**+2.0**
	0.0nm,0.3s,baz=132,slow=18,SNR=8.9						
MLR	**Muntele Rosu**	**9.62**	**67**	⇑*i*P	**Pn**	**02 57 30.8**	**+1.0**
KWP	**Kalwaria Pacla**	**9.77**	**39**	⇑*i*P	Pn	02 57 35.2	+3.6
PLOR	**Plostina**	**10.20**	**65**	⇓*i*P	**Pn**	**02 57 39.2**	**+1.7**
PLOR	**Plostina**	**10.20**	**65**	⇓*i*P	**Pn**	**02 57 39.2**	**+1.7**
VRI	**Vrincioaia**	**10.25**	**65**	⇑*i*P	**Pn**	**02 57 39.6**	**+1.4**
VRI	**Vrincioaia**	**10.25**	**65**	⇑*i*P	**Pn**	**02 57 39.6**	**+1.4**
ESDC	**Sonseca Array**	**13.33**	**264**	Pn	**Pn**	**02 58 19.5**	**-0.9**
	0.3nm,0.3s,baz=63,slow=14,SNR=3.6						
BRTR	**Keskin Array B**	**15.55**	**93**	Pn	**P**	**02 58 54.3**	**-0.6**
	0.0nm,0.3s,baz=277,slow=12,SNR=2.7						
FINES	**FINESS Array B**	**20.59**	**18**	P	**P**	**02 59 51.0**	**+1.0**
	1.4nm,0.7s,baz=187,slow=9.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**30.81**	**203**	P	**P**	**03 01 28.3**	**+1.2**
	0.4nm,0.9s,baz=18,slow=7.1,SNR=4.8						
MKAR	**Makanchi Array**	**47.89**	**60**	P	**P**	**03 03 49.3**	**0.0**
	0.5nm,0.6s,baz=282,slow=6.3,SNR=7.0						
SONM	**Songino Array**	**62.01**	**50**	P	**P**	**03 05 32.5**	**+0.9**
	0.6nm,0.9s,baz=302,slow=8.5,SNR=3.9						
YKA	**Yellowknife Ar**	**67.48**	**337**	P	**P**	**03 06 06.7**	**-0.1**
	0.2nm,0.6s,baz=39,slow=5.3,SNR=5.2						

CSEM ***30*** *02:55:15.7, 36.50N×26.76E, h39km, MD3.0, After ATH*

ATH 30 02:55:15.7, 36.50N×26.76E, h39km±7km, MD3.0/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**1.00**	**161**	*e*PN	Pn	02 55 35.2	+1.8
KARP				*e*SN	Sn	02 55 49.1	+2.8
KARP	**Karpathos**	**1.00**	**161**	*e*Pn	Pn	02 55 35.2	+1.8
KARP				*e*Sn	Sn	02 55 49.1	+2.8
APE	**Apeiranthos**	**1.14**	**300**	*e*PN	Pn	02 55 37.0	+1.8
APE	**Apeiranthos**	**1.14**	**300**	*e*Pn	Pn	02 55 37.0	+1.8
ARG	**Arkhangelos**	**1.14**	**104**	*e*PN	Pn	02 55 36.7	+1.6
ARG	**Arkhangelos**	**1.14**	**104**	*e*Pn	Pn	02 55 36.7	+1.6
ZKR	**Zakros**	**1.45**	**198**	*e*PB	Pn	02 55 40.9	+1.5
ZKR	**Zakros**	**1.45**	**198**	*e*Pb	Pn	02 55 40.9	+1.5
NPS	**Neapolis**	**1.55**	**217**	*e*PN	Pn	02 55 41.8	+1.0
NPS				*e*SN	Sn	02 56 01.4	+1.8
NPS	**Neapolis**	**1.55**	**217**	*e*Pn	Pn	02 55 41.8	+1.0
NPS				*e*Sn	Sn	02 56 01.4	+1.8

IDC 30 02:56:03.7±7.0, 14.33S×69.29W, h191km±130km, mb2.9/2, mb1 3.1/2, mb1mx2.9/19, mbtmp2.9/2, Error ellipse: s-maj=283.2km s-min=42.1km az=24.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.24**	**150**	P	Pn	02 56 44.9	-0.2
	37nm,0.3s,baz=329,slow=6.9,SNR=1120						
LPAZ				S	Sn	02 57 17.4	+0.2
	1.3nm,0.3s,baz=202,slow=24,SNR=7.2						
TORD	**Torodi Ar. Bea**	**75.40**	**72**	P	P	03 07 27.0	+0.1
	0.3nm,0.5s,baz=270,slow=5.7,SNR=8.6						
YKA	**Yellowknife Ar**	**84.34**	**341**	P	P	03 08 13.9	0.0
	0.1nm,0.6s,baz=125,slow=4.2,SNR=3.9						

IDC 30 02:58:16.7±1.4, 3.35N×126.24E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/23, mbtmp3.5/5, Error ellipse: s-maj=106.4km s-min=19.3km az=72.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.32**	**182**	P	P	03 03 06.6	+1.2
	0.9nm,0.7s,baz=0.0,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**24.47**	**161**	P	P	03 03 35.7	-2.0
	1.8nm,0.8s,baz=338,slow=11,SNR=8.4						
ASAR	**Alice Springs**	**27.87**	**165**	P	P	03 04 09.7	+1.3
	0.3nm,0.6s,baz=337,slow=6.1,SNR=3.9						
SONM	**Songino Array**	**47.51**	**342**	P	P	03 06 53.4	-0.4
	0.3nm,0.4s,baz=158,slow=9.7,SNR=2.9						
MKAR	**Makanchi Array**	**57.59**	**326**	P	P	03 08 08.5	0.0
	0.7nm,0.6s,baz=125,slow=8.8,SNR=8.8						

AUST ***30*** *03:04:22.7±0.7, 9.95S×119.42E, h0km, Error ellipse: s-maj=0.9km s-min=0.8km az=254.0*

ISCJB ***30*** *03:04:23.1±0.6, 9.90S±0.06×119.41E±0.05, h33km, mb3.7/2, Error ellipse: s-maj=9.3km s-min=5.5km az=38.5*

IDC ***30*** *03:04:28.0±4.7, 9.85S×119.47E, h74km±42km, mb3.3/2, mb1 3.6/6, mb1mx3.4/21, mbtmp3.4/6, ML3.7/4, Error ellipse: s-maj=80.9km s-min=14.7km az=70.0*

ISC 30 03:04:24.2±0.6, 10.13S±0.05×119.44E±0.04, h35km, n16, σ2s85/16, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**0.96**	**62**	P	**Pn**	**03 04 38.9**	**-2.2**
	baz=0.9,SNR=4.1						
WSI				S	**Sn**	**03 04 58.8**	**+5.3**
	baz=0.9,SNR=10						
KAPI	**Kappang**	**5.09**	**3**	P	**Pn**	**03 05 39.9**	**+1.9**
	1.6nm,0.3s,baz=164,slow=7.4,SNR=15						
KAPI				S	**Sn**	**03 06 32.6**	**-3.0**
	4.9nm,0.3s,baz=180,slow=23,SNR=10.0						
JAGI	**Jajag, Banyuwa**	**5.48**	**287**	P	**Pn**	**03 05 44.6**	**+1.3**
	baz=5.4,SNR=7.4						
JAGI				S	**Sn**	**03 06 44.4**	**-0.7**
	baz=5.4,SNR=6.1						
FITZ	**Fitzroy Crossi**	**9.94**	**144**	P	Pn	03 06 49.2	+4.6
	0.5nm,0.3s,baz=342,slow=12,SNR=24						
FITZ				S	**Sn**	**03 08 33.2**	**-1.8**
	1.4nm,0.3s,baz=190,slow=19,SNR=13						
FITZ	**Fitzroy Crossi**	**9.94**	**144**	P	Pn	03 06 49.3	+4.6
	baz=10,SNR=12						
FITZ				S	**Sn**	**03 08 33.1**	**-2.0**
	baz=10,SNR=8.5						
KNRA	**Kununurra**	**10.63**	**122**	P	Pn	03 06 58.9	+4.9
	baz=11,SNR=4.9						
KNRA				S	Sn	03 08 58.7	+6.9
	baz=11,SNR=4.0						
MTN	**Manton Dam**	**11.77**	**104**	P	**Pn**	**03 07 12.3**	**+2.7**
	baz=12,SNR=9.7						
MTN				S	Sn	03 09 14.0	-5.9
	baz=12,SNR=7.5						
KDU	**Kakadu**	**13.02**	**102**	P	Pn	03 07 31.3	+4.5
	baz=13,SNR=4.1						
KDU				S	Sn	03 09 46.2	-4.4
	baz=13,SNR=5.0						
GIRL	**Giralia**	**13.41**	**201**	P	**P**	**03 07 41.2**	**+0.2**
	baz=14,SNR=5.0						
MEEK	**Meekatharra**	**16.44**	**183**	P	**P**	**03 08 16.8**	**+2.1**
	baz=17,SNR=6.0						
MEEK				S	Sn	03 11 06.4	-7.3
	baz=17,SNR=12						
WRA	**Warramunga Arr**	**17.37**	**126**	P	**P**	**03 08 27.3**	**+2.3**
	0.3nm,0.3s,baz=303,slow=12,SNR=19						
WRA				S	Sn	03 11 29.6	-6.7
	0.3nm,0.3s,baz=301,slow=23,SNR=7.4						
MORW	**Morawa**	**19.11**	**189**	S	Sn	03 12 05.7	-13
	baz=19,SNR=5.3						
ASAR	**Alice Springs**	**19.28**	**136**	P	**Pn**	**03 08 50.2**	**+3.0**
	0.4nm,0.3s,baz=320,slow=11,SNR=32						
ASAR				S	**S**	**03 12 18.8**	**-3.8**
	0.1nm,0.3s,baz=307,slow=23,SNR=4.4						
RABL	**Rabaul**	**32.98**	**82**	P	P	03 11 02.7	+6.7
	baz=33,SNR=3.1						
SONM	**Songino Array**	**58.86**	**350**	P	**P**	**03 14 17.2**	**-2.3**
	0.4nm,0.5s,baz=180,slow=5.8,SNR=2.7						
MKAR	**Makanchi Array**	**65.65**	**333**	P	**P**	**03 15 02.5**	**-2.4**
	0.3nm,0.4s,baz=159,slow=6.1,SNR=5.9						

IDC 30 03:06:26.8±24.0, 17.86N×86.10W, h0km, mb3.0/2, mb1 3.5/3, mb1mx3.3/22, mbtmp3.0/3, ML3.4/1, Error ellipse: s-maj=587.9km s-min=93.7km az=3.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**19.71**	**309**	P	P	03 10 58.0	-0.1
	0.0nm,0.3s,baz=132,slow=12,SNR=3.7						
NVAR	**Mina Array Bea**	**34.75**	**313**	P	P	03 13 19.2	0.0
	0.1nm,0.5s,baz=118,slow=9.3,SNR=1.9						
ILAR	**Eielson Array**	**61.67**	**335**	P	P	03 16 46.2	-0.1
	0.2nm,0.8s,baz=122,slow=5.2,SNR=3.4						

ISCJB ***30*** *03:12:33.7±0.6, 73.24N±0.03×14.4E±0.2, h10km, mb3.3/3, Error ellipse: s-maj=7.6km s-min=3.9km az=167.1*

IDC ***30*** *03:12:33.7±0.8, 73.50N×14.78E, h0km, mb3.4/3, mb1 3.4/7, mb1mx3.2/30, mbtmp3.3/7, ML2.7/4, MS2.6/1, Ms1 2.6/1, ms1mx2.1/30, Error ellipse: s-maj=21.6km s-min=7.9km az=73.0*

BER ***30*** *03:12:35.6,

HEF				S		**Sn**	03 15 05.6	**-1.0**	
LANU	**Lannavaara**	**5.83**	**150**	*e*P		Pn	03 14 05.0	+3.8	
LANU				*e*S		**Sn**	**03 15 07.5**	**-0.6**	
LANU	**Lannavaara**	**5.83**	**150**	P		Pn	03 14 05.0	+3.8	
LANU				S		**Sn**	**03 15 07.4**	**-0.6**	
STOK	**Stokkvaagen**	**6.97**	**184**	*e*P		**Pn**	**03 14 16.7**	**-0.1**	
STOK				*e*S		Sn	03 15 30.2	-5.8	
STOK	**Stokkvaagen**	**6.97**	**184**	*e*P		**Pn**	**03 14 16.7**	**-0.1**	
STOK				*e*S		Sn	03 15 30.2	-5.8	
STOK	**Stokkvaagen**	**6.97**	**184**	P		**Pn**	**03 14 16.7**	**-0.1**	
SGF	**Sodankyl**	**7.14**	**139**	*e*P		**Pn**	**03 14 21.3**	**+2.0**	
SGF				*e*S		**Sn**	**03 15 38.5**	**-1.8**	
SGF	**Sodankyl**	**7.14**	**139**	P		**Pn**	**03 14 21.2**	**+2.0**	
JMIC	**Jan Mayen**	**7.33**	**263**	LR		LR	03 16 35.9		
	comp=Z,48nm,20.1s,baz=72,slow=32								
VRF	**Varrio**	**7.53**	**130**	*e*P		**Pn**	**03 14 26.2**	**+1.6**	
VRF				*e*S		**Sn**	**03 15 47.2**	**-2.6**	
VRF				MSN			03 15 52.5		
	comp=Z,7.1nm,0.2s								
VRF	**Varrio**	**7.53**	**130**	P		**Pn**	**03 14 26.2**	**+1.6**	
RNF	**Rovaniemi**	**7.79**	**143**	*e*P		**Pn**	**03 14 30.2**	**+2.1**	
RNF				*e*S		**Sn**	**03 15 53.6**	**-2.6**	
RNF	**Rovaniemi**	**7.79**	**143**	P		**Pn**	**03 14 30.2**	**+2.1**	
APA0	**Apatity Array**	**8.43**	**123**	Pn		**Pn**	**03 14 37.4**	**+0.5**	
	baz=315,slow=8.6								
APA0				Sn		Sn	03 16 06.5	-5.5	
	baz=318,slow=28								
APA0	**Apatity Array**	**8.43**	**123**	Pn		**Pn**	**03 14 37.4**	**+0.5**	
	baz=315,slow=8.6								
APA0				Sn		Sn	03 16 06.5	-5.5	
	baz=318,slow=28								
APA0	**Apatity Array**	**8.43**	**123**	*e*P		**Pn**	**03 14 37.4**	**+0.5**	
APA0				*e*S		Sn	03 16 06.5	-5.5	
APA0	**Apatity Array**	**8.43**	**123**	P		**Pn**	**03 14 37.4**	**+0.5**	
OUL	**Oulu**	**9.17**	**147**	*e*P		Pn	03 14 50.1	+3.1	
OUL				*e*S		**Sn**	**03 16 27.1**	**-3.1**	
OUL	**Oulu**	**9.17**	**147**	P		Pn	03 14 50.1	+3.1	
FIA0	**FINESS Array S**	**12.67**	**153**	Pn		**Pn**	**03 15 36.0**	**+1.2**	
	baz=352,slow=14								
FIA0				Sn		Sn	03 17 50.5	-5.2	
	baz=349,slow=28								
FIA0	**FINESS Array S**	**12.67**	**153**	Pn		**Pn**	**03 15 36.0**	**+1.2**	
	baz=352,slow=14								
FIA0				Sn		Sn	03 17 50.5	-5.2	
	baz=349,slow=28								
FIA0	**FINESS Array S**	**12.67**	**153**	*e*P		**Pn**	**03 15 36.0**	**+1.2**	
FIA0				*e*S		Sn	03 17 50.5	-5.2	
FIA0	**FINESS Array S**	**12.67**	**153**	P		**Pn**	**03 15 36.0**	**+1.2**	
FINES	**FINESS Array B**	**12.67**	**153**	Pn		**Pn**	**03 15 36.5**	**+1.7**	
	comp=Z,0.1nm,0.3s,baz=351,slow=13,SNR=5.4								
FINES				Sn		Sn	03 17 51.5	-4.2	
	comp=Z,0.2nm,0.3s,baz=347,slow=23,SNR=3.4								
HFS	**Hagfors**	**13.18**	**181**	Pn		Pn	03 15 46.6	+4.8	
	baz=358,slow=16								
HFS	**Hagfors**	**13.18**	**181**	Pn		Pn	03 15 46.6	+4.8	
	baz=358,slow=16								
HFS	**Hagfors**	**13.18**	**181**	*e*		Pn	03 15 46.6	+4.8	
HFS	**Hagfors**	**13.18**	**181**	Pn		**Pn**	**03 15 42.4**	**+0.6**	
	comp=Z,0.0nm,0.3s,baz=10,slow=8.9,SNR=2.8								
YKA	**Yellowknife Ar**	**40.25**	**326**	P		**P**	**03 20 11.2**	**0.0**	
	comp=Z,0.2nm,0.5s,baz=15,slow=8.5,SNR=4.4								
ILAR	**Eielson Array**	**41.66**	**348**	P		**P**	**03 20 22.0**	**-0.7**	
	comp=Z,0.4nm,0.6s,baz=0.2,slow=6.8,SNR=9.7								
TORD	**Torodi Ar. Bea**	**60.53**	**194**	P		**P**	**03 22 46.3**	**+1.4**	
	comp=Z,0.5nm,0.8s,baz=0.0,slow=8.6,SNR=3.0								

*MAN **30** 03:14:10, 7.°73N×127.°21E, h17km, mb4.8, ML7.0, MS3.7*
MAN INTENSITY II - TAGASAKA HINATUAN SURIGAO DEL SUR.
*AUST **30** 03:14:14.0, 7.°49N×127.°52E, h35km*
*ISCJB **30** 03:14:16.5±1.0, 7.°65N±0.°04×127.°05E±0.°07, h77km±8km, mb4.3/49, Error ellipse: s-maj=12.3km s-min=5.5km az=162.9*
*NEIC **30** 03:14:19.0±1.2, 7.°67N×126.°93E, h86km±11km, mb4.4/21, Error ellipse: s-maj=11.4km s-min=6.0km az=75.0*
NEIC Felt [II PIVS] at Hinatuan and Tagasaka. Also felt at Davao.
*IDC **30** 03:14:19.3±2.0, 7.°68N×126.°89E, h87km±17km, mb4.0/24, mb1 4.1/24, mb1mx4.0/29, mbtmp4.0/24, MS3.3/7, Ms1 3.4/7, ms1mx2.8/35, Error ellipse: s-maj=21.7km s-min=10.4km az=79.0*

ISC 30 03:14:18.0±0.5, 7.°66N±0.°05×127.°06E±0.°07, h76km±3km, n107, σ1§22/132, mb4.4/48, 4C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.58**	**248**	*e*Pn	**Pn**	**03 14 44.0**	**-0.2**
DAV	**Davao City (W)**	**1.58**	**248**	P	**Pn**	**03 14 43.7**	**-0.6**
	147nm,0.3s,baz=53,slow=4.8,SNR=28						
DMPH	**Davao City--Mi**	**1.64**	**250**	*e*P	**Pn**	**03 14 44.5**	**-0.5**
DMPH				*i* S	**Sn**	**03 15 10.0**	**+4.4**
KCP	**Kidapawan**	**2.06**	**252**	*e*P	**Pn**	**03 14 48.7**	**-2.0**
CGP	**Cagayan de Oro**	**2.47**	**289**	*i*P	**Pn**	**03 14 56.6**	**+0.5**
CGP				*i* S	**Sn**	**03 15 26.3**	**+0.9**
CTBH	**Cotabato--PC H**	**2.83**	**261**	*i*P	**Pn**	**03 14 59.3**	**-1.6**
TBP	**Tagbilaran**	**3.75**	**303**	*e*P	**Pn**	**03 15 11.6**	**-1.9**
DCPH	**Dipolog City**	**3.79**	**284**	*e*P	**Pn**	**03 15 13.5**	**-0.5**
SNPH	**Sibulan**	**4.14**	**294**	*i*P	Pn	03 15 03.6	-15
SNPH				*i* S	Sn	03 15 52.2	-14
PALU	**Palau**	**7.36**	**92**	S	Sn	03 17 06.7	-18
	baz=6.9,SNR=5.1						
FAKI	**Fak Fak**	**11.71**	**154**	P	Pn	03 16 57.3	-5.0
	baz=11,SNR=10						
FAKI				S	Sn	03 18 59.9	-11
	baz=11,SNR=3.1						
KAPI	**Kappang**	**14.55**	**210**	*e*Pn	**Pn**	**03 17 37.5**	**-2.6**
KAPI	**Kappang**	**14.55**	**210**	P	**Pn**	**03 17 37.0**	**-3.0**
	1.1nm,0.3s,baz=135,slow=13,SNR=5.7						
KAPI				LR	LR	03 23 42.0	
	comp=Z,54nm,18.6s,baz=23,slow=39						
KSM	**Kuching**	**17.79**	**251**	*e*Pn	**Pn**	**03 18 21.9**	**+1.2**
	20nm,0.0s						
KSM	**Kuching**	**17.79**	**251**	P	**Pn**	**03 18 22.7**	**+2.1**
	baz=18,SNR=3.3						
QIZ	**Qiongzhong**	**20.18**	**306**	P	Pn	03 18 49.0	-0.1
QIZ				S	**S**	**03 22 30.0**	**+0.9**
QIZ				pmax	pmax		
	comp=Z,38nm,2.0s						
MTN	**Manton Dam**	**20.77**	**169**	P	**P**	**03 18 52.1**	**-0.7**
	baz=21,SNR=6.4						
KDU	**Kakadu**	**20.92**	**165**	P	**P**	**03 18 52.6**	**-1.8**
	baz=21,SNR=12						
KNRA	**Kununurra**	**23.25**	**176**	P	**P**	**03 19 19.7**	**+0.8**
	baz=23,SNR=11						
NJ2	**Nanjing**	**25.44**	**344**	*e*P	**P**	**03 19 39.8**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**25.64**	**183**	*e*P	**P**	**03 19 41.5**	**+0.9**
	comp=Z,3.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**25.64**	**183**	P	**P**	**03 19 39.9**	**-0.7**
	comp=Z,4.1nm,0.6s,baz=10.0,slow=10,SNR=14						
FITZ	**Fitzroy Crossi**	**25.64**	**183**	P	**P**	**03 19 41.0**	**+0.4**
	baz=26,SNR=5.3						
GYA	**Guiyang**	**26.93**	**316**	*e*P	**P**	**03 19 53.3**	**+0.9**
GYA				pP	**pP**	**03 20 12.8**	**+2.6**
GYA				PP	**PnPn**	**03 20 41.3**	**+2.5**
GYA				PcP	**PcP**	**03 23 13.5**	**+0.7**
GYA				S	**S**	**03 24 22.5**	**-1.7**
GYA				sS	**sS**	**03 24 55.0**	**0.0**
GYA				ScP	**ScP**	**03 26 45.5**	**-1.0**
GYA				ScS	**ScS**	**03 30 36.0**	**-1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JHJ	**Hachijo jima 2**	**27.94**	**23**	LR	LR	03 29 36.1	
	comp=Z,114nm,18.9s,baz=164,slow=33						
WRAB	**Tennant Creek**	**28.34**	**165**	*e*P	**P**	**03 20 06.7**	**+1.8**
	comp=Z,4.4nm,0.8s						
WRA	**Warramunga Arr**	**28.35**	**165**	P	**P**	**03 20 07.0**	**+2.0**
WRA	**Warramunga Arr**	**28.35**	**165**	P	**P**	**03 20 07.0**	**+2.0**
	comp=Z,2.6nm,0.6s,baz=346,slow=11,SNR=21						
KMI	**Kunming**	**28.99**	**310**	P	P	03 20 14.8	+3.9
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
CMAR	**Chiang Mai Arr**	**29.37**	**294**	P	**P**	**03 20 13.6**	**-0.5**
CMAR				PcP	**PcP**	**03 23 20.2**	**+1.4**
CMAR	**Chiang Mai Arr**	**29.37**	**294**	P	**P**	**03 20 13.6**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=121,slow=7.5,SNR=6.7						
CMAR				PcP	**PcP**	**03 23 20.2**	**+1.4**
	comp=Z,1.1nm,0.7s,baz=101,slow=0.9,SNR=4.1						
CMAR				LR	LR	03 31 07.8	
	comp=Z,32nm,19.2s,baz=85,slow=34						

MBWA	**Marble Bar**	**29.53**	**194**	*e*P		**P**	**03 20 14.7**	**-0.7**	
	comp=Z,5.0nm,0.7s								
KSAR	**Wonju Array Be**	**29.66**	**1**	P		**P**	**03 20 17.0**	**+0.6**	
KSRS	**Korea Array**	**29.67**	**1**	P		**P**	**03 20 17.0**	**+0.5**	
	comp=Z,1.8nm,0.8s,baz=180,slow=10.0,SNR=5.5								
MJAR	**Matsushiro Arr**	**30.49**	**18**	LR		LR	03 31 44.2		
	comp=Z,106nm,18.7s,baz=210,slow=34								
QIS	**Mount Isa**	**30.64**	**156**	P		**P**	**03 20 25.4**	**+0.2**	
	baz=30,SNR=7.3								
ASAR	**Alice Springs**	**31.84**	**168**	P		**P**	**03 20 36.2**	**+0.4**	
ASAR				PcP		**PcP**	**03 23 25.6**	**+0.3**	
ASAR	**Alice Springs**	**31.84**	**168**	P		**P**	**03 20 36.2**	**+0.4**	
	comp=Z,0.7nm,0.5s,baz=350,slow=6.5,SNR=8.9								
ASAR				PcP		**PcP**	**03 23 25.6**	**+0.3**	
	comp=Z,0.9nm,0.6s,baz=346,slow=2.4,SNR=9.3								
ASAR				LR		LR	03 35 53.0		
	comp=Z,47nm,18.0s,baz=186,slow=41								
SNY	**Shenyang**	**34.17**	**355**	*i*P		**P**	**03 20 56.8**	**+1.0**	
SNY				pmax		pmax			
	comp=Z,17nm,0.8s								
MEEK	**Meekatharra**	**35.06**	**193**	P		**P**	**03 21 04.0**	**+0.2**	
	baz=35,SNR=4.3								
HHC	**Hu-ho-hao-te**	**35.82**	**340**	*e*P		**P**	**03 21 10.0**	**-0.2**	
HHC				pP		**pP**	**03 21 28.3**	**-0.2**	
HHC				sP		**sP**	**03 21 37.0**	**-0.3**	
HHC				PP		**PP**	**03 22 33.8**	**+0.8**	
HHC				S		**S**	**03 26 42.8**	**+0.4**	
HHC				sS		**sS**	**03 27 10.0**	**-3.6**	
HHC				SS		**SnSn**	**03 29 09.0**	**-3.4**	
HHC				pmax		pmax			
	comp=Z,31nm,0.9s								
HHC				pmax		pmax			
	comp=Z,140nm,7.4s								
HHC				LR		LR			
	comp=N,270nm,13.9s								
HHC				LR		LR			
	comp=E,660nm,16.7s								
HHC				LR		LR			
	comp=Z,340nm,13.1s								
CN2	**Changchun**	**36.03**	**358**	*e*P		**P**	**03 21 13.3**	**+1.5**	
CN2				*e*pP		**pP**	**03 21 31.3**	**+1.3**	
CN2				*e*sP		**sP**	**03 21 40.5**	**+1.6**	
CN2				*e*S		**S**	**03 26 47.0**	**+1.8**	
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
CN2				pmax		pmax			
	comp=Z,200nm,3.0s								
USRK	**Ussuriysk Arra**	**36.65**	**6**	P		**P**	**03 21 17.1**	**0.0**	
	comp=Z,3.0nm,0.6s,baz=181,slow=6.6,SNR=7.3								
MDJ	**Mudanjiang**	**36.88**	**3**	P		**P**	**03 21 20.0**	**+0.9**	
MDJ				pP		**pP**	**03 21 36.8**	**-0.6**	
MDJ				sP		**sP**	**03 21 45.3**	**-0.9**	
MDJ				S		**S**	**03 27 00.5**	**+2.3**	
MDJ				ScP		**ScP**	**03 27 20.3**	**+0.7**	
MDJ				PcS		**PcS**	**03 27 28.0**	**+0.7**	
MDJ				sS		**sS**	**03 27 30.0**	**+0.5**	
MDJ				pmax		pmax			
	comp=Z,8.0nm,1.4s								
MDJ				pmax		pmax			
	comp=Z,100nm,3.2s								
MORW	**Morawa**	**38.03**	**196**	P		**P**	**03 21 29.1**	**+0.2**	
	baz=38,SNR=5.1								
FORT	**Forrest**	**38.23**	**179**	*e*P		**P**	**03 21 30.1**	**-0.5**	
	comp=Z,25nm,0.8s								
ASAJ	**Asahikawa**	**38.77**	**18**	P		**P**	**03 21 36.4**	**+1.5**	
ASAJ	**Asahikawa**	**38.77**	**18**	P		**P**	**03 21 36.4**	**+1.5**	
	comp=Z,1.9nm,0.4s,baz=204,slow=19,SNR=4.1								
BLDU	**Ballidu**	**39.33**	**194**	P		**P**	**03 21 40.5**	**+0.7**	
	baz=40,SNR=4.8								
KLBR	**Kellerberrin**	**40.03**	**192**	P		**P**	**03 21 45.6**	**0.0**	
	baz=40,SNR=11								
BBOO	**Buckleboo**	**41.15**	**168**	P		**P**	**03 21 56.5**	**+1.7**	
	baz=41,SNR=6.0								
NWAO	**Narrogin (SRO)**	**41.43**	**193**	P		**P**	**03 21 57.5**	**+0.3**	
NWAO	**Narrogin (SRO)**	**41.43**	**193**	P		**P**	**03 21 57.5**	**+0.3**	
	comp=Z,7.2nm,0.6s,baz=30,slow=8.6,SNR=5.7								
STKA	**Stephens Creek**	**41.70**	**161**	*e*P		**P**	**03 21 59.3**	**0.0**	
	comp=Z,0.8nm,0.7s								
STKA	**Stephens Creek**	**41.70**	**161**	P		**P**	**03 21 59.3**	**0.0**	
	comp=Z,1.7nm,0.7s,baz=305,slow=16,SNR=4.8								
RKGY	**Rocky Gully**	**43.11**	**192**	P		**P**	**03 22 12.1**	**+1.3**	
	baz=43,SNR=4.2								
SONM	**Songino Array**	**43.72**	**340**	P		**P**	**03 22 13.8**	**-1.9**	
SONM	**Songino Array**	**43.72**	**340**	P		**P**	**03 22 13.8**	**-1.9**	
	comp=Z,0.9nm,0.7s,baz=116,slow=3.4,SNR=4.4								
WMQ	**Urumqi**	**49.76**	**323**	*e*P		**P**	**03 23 03.3**	**+0.5**	
WMQ				LR		LR			
	comp=N,46nm,19.4s								
WMQ				LR		LR			
	comp=E,33nm,25.2s								
WMQ				LR		LR			
	comp=Z,32nm,22.0s								
PETK	**Petropavlovsk-**	**51.70**	**23**	P		**P**	**03 23 18.5**	**+1.3**	
PETK	**Petropavlovsk-**	**51.70**	**23**	P		**P**	**03 23 18.5**	**+1.3**	
	comp=Z,1.3nm,0.6s,baz=187,slow=6.6,SNR=3.8								
MK31	**Makanchi Array**	**54.57**	**324**	*e*P		**P**	**03 23 38.1**	**-0.3**	
MKAR	**Makanchi Array**	**54.57**	**324**	*e*P		**P**	**03 23 38.4**	**-0.1**	
MKAR				PcP		**PcP**	**03 24 40.5**	**-0.2**	
MKAR	**Makanchi Array**	**54.57**	**324**	P		**P**	**03 23 38.2**	**-0.2**	
	comp=Z,11nm,0.6s,baz=123,slow=8.1,SNR=130								
MKAR				PcP		**PcP**	**03 24 40.5**	**-0.2**	
	comp=Z,1.6nm,0.7s,baz=115,slow=4.6,SNR=3.8								
MKAR				LR		LR	03 48 42.4		
	comp=Z,24nm,19.4s,baz=172,slow=38								
KSH	**Kashi**	**55.56**	**313**	*e*SS		SKiKP	03 35 04.0	+22	
KSH				pmax		pmax			
	comp=Z,4.0nm,0.6s								
KSH				pmax		pmax			
	comp=Z,210nm,3.3s								
KSH				LR		LR			
	comp=N,97nm,4.3s								
KSH				LR		LR			
	comp=E,98nm,6.7s								
KSH				LR		LR			
	comp=Z,87nm,3.9s								
TKM2	**Tokmak 2**	**57.08**	**317**	*e*P		**P**	**03 23 56.1**	**-0.6**	
	comp=Z,1.9nm,0.7s								
ZALV	**Zalesovo Beam**	**57.28**	**332**	P		**P**	**03 23 56.2**	**-1.4**	
ZALV				PcP		**PcP**	**03 24 50.3**	**-0.7**	
ZALV	**Zalesovo Beam**	**57.28**	**332**	P		**P**	**03 23 56.2**	**-1.4**	
	comp=Z,2.1nm,0.4s,baz=128,slow=6.4,SNR=12								
ZALV				PcP		**PcP**	**03 24 50.3**	**-0.7**	
	comp=Z,1.4nm,0.8s,baz=113,slow=3.4,SNR=3.5								
AAK	**Ala-Archa**	**57.73**	**316**	*e*P		**P**	**03 24 01.2**	**0.0**	
	comp=Z,1.5nm,0.6s								
EKS2	**Erkin-Say**	**58.23**	**316**	*e*P		**P**	**03 24 03.6**	**-1.0**	
	comp=Z,2.8nm,0.6s								
KURK	**Kurchatov**	**58.65**	**326**	*e*P		**P**	**03 24 06.8**	**-0.4**	
	comp=Z,22nm,1.3s								
KKAR	**Karatay Array**	**60.64**	**315**	*e*P		**P**	**03 24 20.7**	**-0.4**	
	comp=Z,2.4nm,0.5s								
BRVK	**Borovoye**	**64.32**	**326**	*e*P		**P**	**03 24 45.1**	**-0.3**	
	comp=Z,7.4nm,0.8s								
ABKAR	**Akbulak array**	**69.36**	**320**	*e*P		**P**	**03 25 16.9**	**-0.5**	
	comp=Z,2.0nm,0.7s								
AKTO	**Aktyubinsk**	**70.82**	**321**	P		**P**	**03 25 26.0**	**-0.5**	
AKTO	**Aktyubinsk**	**70.82**	**321**	P		**P**	**03 25 26.0**	**-0.5**	
	comp=Z,1.7nm,0.5s,baz=82,slow=9.9,SNR=8.5								
RAYN	**Ar Rayn**	**79.27**	**292**	*e*P		**P**	**03 26 15.8**	**+0.1**	
	comp=Z,9.4nm,0.8s								
TRF	**Thorofare Moun**	**79.91**	**27**	*e*P		**P**	**03 26 18.4**	**-0.1**	
	comp=Z,4.4nm,0.9s								
COLD	**Coldfoot**	**80.17**	**23**	*e*P		**P**	**03 26 18.6**	**-1.0**	
	comp=Z,2.3nm,0.7s								
MCK	**McKinley**	**80.52**	**27**	*e*P		**P**	**03 26 22.5**	**+0.9**	
	comp=Z,8.3nm,0.8s								
ILAR	**Eielson Array**	**81.44**	**26**	P		**P**	**03 26 26.5**	**+0.1**	
ILAR	**Eielson Array**	**81.44**	**26**	P		**P**	**03 26 26.5**	**+0.1**	
	comp=Z,1.5nm,0.8s,baz=248,slow=5.6,SNR=20								
JOF	**Joensuu**	**85.85**	**333**	*e*p		**P**	**03 26 49.9**	**+0.9**	
	comp=Z,6.3nm,0.5s								
ARCES	**ARCESS Array B**	**86.90**	**340**	P		**P**	**03 26 54.0**	**0.0**	
ARCES	**ARCESS Array B**	**86.90**	**340**	P		**P**	**03 26 54.0**	**0.0**	
	comp=Z,1.3nm,0.5s,baz=87,slow=6.3,SNR=8.2								
VNDA	**Vanda**	**87.26**	**173**	*e*P		**P**	**03 26 55.7**	**+0.2**	
	comp=Z,2.0nm,1.0s								
VNDA	**Vanda**	**87.26**	**173**	P		**P**	**03 26 55.3**	**-0.2**	
	comp=Z,0.6nm,0.5s,baz=318,slow=6.5,SNR=6.3								
BR131	**Keskin Array S**	**87.78**	**310**	*e*P		**P**	**03 26 58.1**	**-1.1**	
	comp=Z,2.1nm,0.8s								
BRTR	**Keskin Array B**	**87.78**	**310**	P		**P**	**03 26 58.2**	**-0.9**	
BRTR	**Keskin Array B**	**87.78**	**310**	P		**P**	**03 26 58.2**	**-0.9**	
	comp=Z,2.5nm,0.7s,baz=127,slow=4.6,SNR=16								
KAF	**Kangasniemi**	**88.29**	**332**	*e*p		**P**	**03 27 00.8**	**0.0**	
FINES	**FINESS Array B**	**88.55**	**332**	P		**P**	**03 27 01.4**	**-0.6**	
FINES	**FINESS Array B**	**88.55**	**332**	P		**P**	**03 27 01.4**	**-0.6**	

	comp=Z,2.3nm,0.5s,baz=74,slow=4.6,SNR=26								
CSS	**Prodhromos**	**88.71**	**305**	*e*P		**P**	**03 27 02.9**	**-0.5**	
	comp=Z,14nm,0.6s								
AKASG	**Malin Array Be**	**89.07**	**321**	P		**P**	**03 27 03.7**	**-1.0**	
AKASG	**Malin Array Be**	**89.07**	**321**	P		**P**	**03 27 03.7**	**-1.0**	
	comp=Z,1.0nm,0.5s,baz=60,slow=4.8,SNR=3.5								
KIEV	**Kiev**	**89.08**	**321**	*e*P		**P**	**03 27 04.2**	**-0.6**	
	comp=Z,2.5nm,0.6s								
HFS	**Hagfors**	**94.71**	**333**	P		P	**03 27 29.2**	**-1.4**	
HFS	**Hagfors**	**94.71**	**333**	P		P	**03 27 29.2**	**-1.4**	
	comp=Z,1.6nm,0.7s,baz=87,slow=6.1,SNR=9.3								
NOA	**NORSAR Array B**	**95.43**	**334**	P		P	**03 27 32.6**	**-1.4**	
NOA	**NORSAR Array B**	**95.43**	**334**	P		P	**03 27 32.6**	**-1.4**	
	comp=Z,0.6nm,0.7s,baz=54,slow=1.6,SNR=3.1								
NOA				LR		LR	04 11 13.1		
	comp=Z,18nm,19.4s,baz=295,slow=36								
YKA	**Yellowknife Ar**	**95.80**	**24**	P		**P**	**03 27 34.9**	**-0.7**	
YKA	**Yellowknife Ar**	**95.80**	**24**	P		**P**	**03 27 34.8**	**-0.7**	
	comp=Z,0.3nm,0.8s,baz=301,slow=4.4,SNR=4.3								
GERES	**GERESS Array B**	**99.22**	**322**	P		**Pdif**	**03 27 50.9**	**-0.6**	
GERES	**GERESS Array B**	**99.22**	**322**	P		**Pdif**	**03 27 50.9**	**-0.6**	
	comp=Z,0.3nm,0.7s,baz=57,slow=4.9,SNR=3.5								
TORD	**Torodi Ar. Bea**	**121.93**	**291**	PKP		**PKPdf**	**03 33 04.2**	**-0.4**	
TORD	**Torodi Ar. Bea**	**121.93**	**291**	PKP		**PKPdf**	**03 33 04.2**	**-0.4**	
	comp=Z,0.9nm,0.6s,baz=48,slow=1.9,SNR=15								

*MOS **30** 03:29:37.7±1.2, 53.°24N×160.°42E, h56km, mb4.4/9, Error ellipse: s-maj=12.2km s-min=6.9km az=74.9*
*ISCJB **30** 03:29:38.4±0.4, 53.°21N±0.°02×160.°49E±0.°05, h62km±3km, mb3.8/19, Error ellipse: s-maj=6.2km s-min=2.3km az=35.4*
*IDC **30** 03:29:38.9±1.6, 53.°36N×160.°50E, h50km±15km, mb3.5/15, mb1 3.7/16, mb1mx3.6/29, mbtmp3.5/16, ML4.3/1, Error ellipse: s-maj=17.9km s-min=10.0km az=169.0*
*KRSC **30** 03:29:38.8±0.3, 53.°23N×160.°46E, h43km±33km, ML4.3*
*NEIC **30** 03:29:39.6±0.8, 53.°38N×160.°36E, h56km±8km, mb4.3/3, Error ellipse: s-maj=11.7km s-min=7.0km az=163.0*

ISC 30 03:29:37.8±0.8, 53.°19N±0.°03×160.°54E±0.°03, h43km±7km, n108, σ1§58/163, mb3.9/19, 1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.33**	**253**	PN	Pn	**03 29 47.1**	**+0.5**
SPN				S	**Sn**	**03 29 53.1**	**+0.4**
SPN	**Mys Shipunski**	**0.33**	**253**	P	**Pn**	**03 29 47.1**	**+0.5**
SPN				*e*S	**Sn**	**03 29 53.1**	**+0.4**
NLC	**Nalytchevo**	**0.72**	**269**	PN	**Pn**	**03 29 52.0**	**+0.5**
NLC				S	**Sn**	**03 30 01.7**	**+0.3**
NLC	**Nalytchevo**	**0.72**	**269**	*e*P	**Pn**	**03 29 52.0**	**+0.5**
NLC				*e*S	**Sn**	**03 30 01.7**	**+0.3**
SDLR	**Sedlovina**	**1.00**	**275**	P	**Pn**	**03 29 56.1**	**+0.6**
SDLR				*e*S	**Sn**	**03 30 08.7**	**+0.3**
UGLR	**Uglovaya**	**1.03**	**272**	P	**Pn**	**03 29 56.9**	**+1.0**
UGLR				*e*S	**Sn**	**03 30 10.3**	**+1.1**
SMAR	**Somma**	**1.05**	**274**	P	**Pn**	**03 29 56.8**	**+0.6**
SMAR				*e*S	**Sn**	**03 30 09.5**	**-0.2**
KII	**Karymskiy**	**1.06**	**323**	*e*P	**Pn**	**03 29 56.7**	**+0.4**
KII				*e*S	**Sn**	**03 30 11.0**	**+1.0**
KRER	**Koryakskii**	**1.08**	**277**	P	**Pn**	**03 29 57.6**	**+0.9**
KRER				*e*S	**Sn**	**03 30 11.6**	**+1.0**
AVH	**Avacha**	**1.08**	**274**	P	**Pn**	**03 29 57.6**	**+1.0**
AVH				*e*S	**Sn**	**03 30 11.7**	**+1.2**
KOK	**Koryaka**	**1.15**	**276**	P	**Pn

SRKR				*e*S		**Sn**	**03 31 11.1 +1.6**
SKR	**Severo-Kuril's**	**3.72**	**229**	PN		Pn	03 30 39.2 +6.6
SKR				*e*S		**Sn**	**03 31 16.2 +1.1**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax	smax		
	comp=N,150nm,0.5s						
SKR				smax	smax		
	comp=E,150nm,0.5s						
SKR	**Severo-Kuril's**	**3.72**	**229**	*e*S		**Sn**	**03 31 18.4 +3.3**
BKI	**Bering**	**3.77**	**56**	PN		**Pn**	**03 30 34.5 +1.1**
BKI	**Bering**	**3.77**	**56**	*e*P		**Pn**	**03 30 34.5 +1.1**
BKI				*e*S		**Sn**	**03 31 13.7 -2.7**
FX1	**Attu Island--F**	**7.62**	**87**	*e*Pn		**Pn**	**03 31 27.9 +1.7**
FX1				*e*Sn		**Sn**	**03 32 48.6 -2.6**
FX1	**Attu Island--F**	**7.62**	**87**	P		**Pn**	**03 31 27.8 +1.7**
	comp=E,15nm,0.3s,baz=256,slow=2.3,SNR=33						
FX1				S		**Sn**	**03 32 48.5 -2.6**
	comp=E,10nm,0.3s,baz=253,slow=19,SNR=7.7						
YSS	**Yuzh-Sakhalins**	**13.00**	**248**	*e*PN		**Pn**	**03 32 38.0 -1.7**
MJAR	**Matsushiro Arr**	**22.82**	**232**	P		**P**	**03 34 37.9 +1.0**
MJAR	**Matsushiro Arr**	**22.82**	**232**	P		**P**	**03 34 37.9 +1.0**
	comp=E,2.7nm,0.5s,baz=20,slow=10,SNR=14						
MAJO	**Matsushiro**	**22.82**	**232**	*e*P		**P**	**03 34 37.7 +0.8**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAJO	**Matsushiro**	**22.82**	**232**	*e*P		**P**	**03 34 37.7 +0.8**
	comp=Z,9.7nm,0.6s						
MAT	**Matsushiro**	**22.82**	**232**	P		**P**	**03 34 37.9 +1.0**
TIXI	**Tiksi**	**23.10**	**335**	*e*P		**P**	**03 34 36.2 -3.2**
ILAR	**Eielson Array**	**28.55**	**45**	P		**P**	**03 35 29.9 +0.9**
ILAR	**Eielson Array**	**28.55**	**45**	P		**P**	**03 35 29.9 +0.9**
	comp=Z,0.2nm,0.6s,baz=251,slow=7.5,SNR=5.6						
SONM	**Songino Array**	**34.14**	**283**	P		**P**	**03 36 17.9 -0.5**
SONM	**Songino Array**	**34.14**	**283**	P		**P**	**03 36 18.0 -0.5**
	comp=Z,0.4nm,0.4s,baz=60,slow=8.5,SNR=2.8						
YKA	**Yellowknife Ar**	**42.91**	**43**	P		**P**	**03 37 32.9 +1.3**
YKA	**Yellowknife Ar**	**42.91**	**43**	P		**P**	**03 37 32.9 +1.3**
	comp=Z,0.3nm,0.6s,baz=304,slow=7.7,SNR=5.0						
KURK	**Kurchatov**	**47.91**	**302**	*e*P		**P**	**03 38 09.7 -1.6**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	**Kurchatov**	**47.91**	**302**	*e*P		**P**	**03 38 09.7 -1.6**
	comp=Z,4.5nm,1.0s						
MK31	**Makanchi Array**	**48.35**	**296**	*e*P		**P**	**03 38 13.2 -1.7**
MK31	**Makanchi Array**	**48.35**	**296**	*e*P		**P**	**03 38 13.2 -1.7**
MKAR	**Makanchi Array**	**48.35**	**296**	*e*P		P	03 38 11.5 -3.4
MKAR	**Makanchi Array**	**48.35**	**296**	P		**P**	**03 38 12.5 -2.4**
MKAR	**Makanchi Array**	**48.35**	**296**	P		**P**	**03 38 12.5 -2.4**
	comp=Z,0.4nm,0.4s,baz=54,slow=6.0,SNR=9.5						
ARCES	**ARCESS Array B**	**53.27**	**342**	P		**P**	**03 38 49.9 -1.6**
ARCES	**ARCESS Array B**	**53.27**	**342**	P		**P**	**03 38 49.9 -1.6**
	comp=Z,4.6nm,0.9s,baz=40,slow=9.6,SNR=3.6						
TKM2	**Tokmak 2**	**54.48**	**296**	*e*P		**P**	**03 39 00.1 -0.9**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TKM2	**Tokmak 2**	**54.48**	**296**	*e*P		**P**	**03 39 00.1 -0.9**
	comp=Z,2.2nm,0.9s						
JOF	**Joensuu**	**57.59**	**335**	*e*P		**P**	**03 39 21.9 -0.7**
JOF	**Joensuu**	**57.59**	**335**	*e*p		**P**	**03 39 21.9 -0.7**
KAF	**Kangasniemi**	**59.50**	**337**	*e*P		**P**	**03 39 35.1 -0.8**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KAF	**Kangasniemi**	**59.50**	**337**	*e*p		**P**	**03 39 35.1 -0.8**
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**60.13**	**337**	P		**P**	**03 39 38.9 -1.3**
FINES	**FINESS Array B**	**60.13**	**337**	P		**P**	**03 39 38.9 -1.3**
	comp=Z,0.8nm,0.4s,baz=30,slow=8.0,SNR=14						
NB2	**NORSAR Subarra**	**63.52**	**344**	P		**P**	**03 40 02.3 -0.8**
	comp=Z,0.3nm,0.4s,baz=25,slow=6.5						
NOA	**NORSAR Array B**	**63.52**	**344**	P		**P**	**03 40 01.9 -1.2**
NOA	**NORSAR Array B**	**63.52**	**344**	P		**P**	**03 40 01.9 -1.2**
	comp=Z,0.3nm,0.4s,baz=20,slow=5.2,SNR=6.3						
TXAR	**Lajitas Array**	**70.35**	**67**	P		**P**	**03 40 48.2 +1.1**
TXAR	**Lajitas Array**	**70.35**	**67**	P		**P**	**03 40 48.2 +1.1**
	comp=Z,0.1nm,0.4s,baz=290,slow=4.7,SNR=4.2						
BUR08	**Bucovina Ar. S**	**72.60**	**330**	*e*P		**P**	**03 41 00.1 -0.2**
GERES	**GERESS Array B**	**74.52**	**338**	P		**P**	**03 41 11.5 0.0**
GERES	**GERESS Array B**	**74.52**	**338**	P		**P**	**03 41 11.5 0.0**
	comp=Z,0.5nm,0.6s,baz=31,slow=5.9,SNR=5.9						
WRA	**Warramunga Arr**	**76.29**	**205**	P		**P**	**03 41 22.6 +0.8**
WRA	**Warramunga Arr**	**76.29**	**205**	P		**P**	**03 41 22.6 +0.8**
	comp=Z,0.3nm,0.4s,baz=22,slow=6.2,SNR=13						
BRTR	**Keskin Array B**	**76.71**	**321**	P		**P**	**03 41 23.2 -1.1**
BRTR	**Keskin Array B**	**76.71**	**321**	P		**P**	**03 41 23.3 -1.1**
	comp=Z,0.3nm,0.6s,baz=18,slow=5.2,SNR=2.9						
DAVOX	**Davos/Dischmat**	**77.30**	**340**	P		**P**	**03 41 27.0 -0.6**
DAVOX	**Davos/Dischmat**	**77.30**	**340**	P		**P**	**03 41 27.0 -0.6**
	comp=Z,1.3nm,0.6s,baz=313,slow=13,SNR=3.7						
ASAR	**Alice Springs**	**79.96**	**205**	P		**P**	**03 41 43.6 +1.6**
ASAR	**Alice Springs**	**79.96**	**205**	P		**P**	**03 41 43.6 +1.6**
	comp=Z,0.7nm,0.5s,baz=16,slow=5.2,SNR=13						
KEST	**Kesra**	**87.97**	**337**	P		**P**	**03 42 22.6 -0.4**
KEST	**Kesra**	**87.97**	**337**	P		**P**	**03 42 22.6 -0.4**
	comp=Z,0.4nm,0.6s,baz=48,slow=14,SNR=3.2						

IDC 30 03:37:24.0±1.8, 3.78S×151.17E, h0km, mb3.3/4, mb1 3.6/4, mb1mx3.4/18, mbtmp3.4/4, Error ellipse: s-maj=89.9km s-min=25.4km az=121.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.97**	**224**	P	P	03 42 28.5	-1.9
	0.5nm,0.8s,baz=50,slow=10,SNR=7.6						
ASAR	**Alice Springs**	**25.87**	**219**	P	P	03 42 59.3	+1.6
	0.5nm,0.9s,baz=55,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**78.50**	**319**	P	P	03 49 27.9	+0.6
	0.4nm,0.9s,baz=101,slow=7.5,SNR=2.7						
ILAR	**Eielson Array**	**81.84**	**22**	P	P	03 49 44.6	-0.2
	0.4nm,0.6s,baz=241,slow=5.0,SNR=14						
TORD	**Torodi Ar. Bea**	**148.44**	**289**	PKPbc	PKPbc	03 57 12.7	-1.1
	0.4nm,0.9s,baz=93,slow=2.7,SNR=2.4						

IDC 30 03:57:02.7±0.8, 60.27S×26.63W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.9/15, mbtmp4.1/4, MS3.5/9, Ms1 3.4/9, ms1mx3.4/19, Error ellipse: s-maj=43.6km s-min=23.4km az=87.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**14.83**	**150**	Pn	Pn	04 00 30.0	-3.4
	0.7nm,0.3s,baz=315,slow=14,SNR=84						
SNAA				Sn	Sn	04 03 01.4	-17
	0.1nm,0.3s,baz=359,slow=22,SNR=1.8						
SNAA				LR	LR	04 05 10.0	
	comp=Z,76nm,21.7s,baz=3.9,slow=33						
QSPA	**South Pole Qui**	**29.97**	**180**	P	P	04 03 11.7	-0.8
	5.9nm,1.0s,baz=198,slow=5.8,SNR=12						
PLCA	**Paso Flores**	**33.24**	**286**	LR	LR	04 17 23.7	
	comp=Z,83nm,18.5s,baz=352,slow=37						
MAW	**Mawson**	**36.64**	**140**	LR	LR	04 16 51.0	
	comp=Z,79nm,18.8s,baz=95,slow=32						
VNDA	**Vanda**	**42.36**	**183**	P	P	04 04 57.7	-0.1
	1.5nm,0.8s,baz=188,slow=8.6,SNR=8.0						
BOSA	**Boshof**	**46.88**	**71**	LR	LR	04 21 36.4	
	comp=Z,6.2nm,18.2s,baz=346,slow=31						
LPAZ	**La Paz**	**53.12**	**307**	P	P	04 06 21.5	-1.2
	0.6nm,0.6s,baz=172,slow=3.8,SNR=2.7						
NNA	**Nana**	**60.59**	**300**	LR	LR	04 29 24.2	
	comp=Z,78nm,21.8s,baz=317,slow=32						
DBIC	**Dimbokro**	**68.91**	**23**	LR	LR	04 32 19.4	
	comp=Z,34nm,18.5s,baz=26,slow=31						
ROSC	**El Rosal**	**74.85**	**310**	LR	LR	04 38 16.6	
	comp=Z,32nm,21.0s,baz=12,slow=33						
KMBO	**Kilima Mbogo**	**76.33**	**68**	LR	LR	04 40 21.1	
	comp=Z,72nm,18.2s,baz=10.0,slow=34						
TORD	**Torodi Ar. Bea**	**76.61**	**28**	P	P	04 08 54.3	-0.5
	2.5nm,0.6s,baz=196,slow=6.2,SNR=17						
TORD				LR	LR	04 37 22.0	
	comp=Z,48nm,18.6s,baz=145,slow=32						
ZALV	**Zalesovo Beam**	**143.80**	**69**	PKP	PKPbc	04 16 37.0	+0.9
	0.6nm,0.4s,baz=259,slow=1.5,SNR=3.8						
INK	**Inuvik**	**149.16**	**316**	PKPbc	PKPbc	04 16 51.4	+0.2
	0.8nm,0.7s,baz=123,slow=14,SNR=4.1						
SONM	**Songino Array**	**150.43**	**94**	PKPbc	PKPbc	04 16 55.3	+0.2
	1.3nm,0.7s,baz=213,slow=3.1,SNR=5.0						
ILAR	**Eielson Array**	**152.98**	**305**	PKPbc	PKPbc	04 17 02.2	+2.0
	0.2nm,0.4s,baz=27,slow=1.9,SNR=4.9						

*IDC **30** 03:57:47.6±2.1, 36.23N×141.19E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.4/27, mbtmp3.5/6, ML2.7/2, Error ellipse: s-maj=55.4km s-min=21.7km az=52.0*

*ISCJB **30** 03:57:48.4±1.2, 36.57N±0.04×141.35E±0.08, h26km±7km, mb3.5/4, Error ellipse: s-maj=10.4km s-min=6.8km az=7.1*

*JMA **30** 03:57:50.8±0.1, 36.63N×141.19E, h44km±2km, M3.5*

JMA Felt I J1.

*NIED **30** 03:58:00, 36.60N×141.20E, h32km, Mw3.3 Best double couple: M0 9.01000×10^13 NP1:Φ=26.00000°, δ=89.00000°, λ=77.00000°. NP2:Φ=293.00000°, δ=13.00000°, λ=176.00000°.*

ISC 30 03:57:49.0±1.8, 36.59N±0.05×141.31E±0.08, h16km±11km, n15, σ1s10/22, mb3.7/4, 4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.59**	**272**	∥P	**Pb**	**03 58 01.6**	**+0.6**
JHO				*e*S	**Sb**	**03 58 09.4**	**+0.3**
ONAJ	**Iwakimizuishiy**	**0.65**	**321**	∥P	**Pg**	**03 58 02.2**	**+0.4**
ONAJ				*e*S	**Sg**	**03 58 09.9**	**-0.6**
JFK	**Kawauchi**	**0.84**	**336**	∥P	**Pb**	**03 58 05.1**	**-0.2**
JFK				*e*S	**Sb**	**03 58 15.2**	**-1.2**
JYT	**Yasato**	**0.97**	**248**	P	**Pb**	**03 58 06.9**	**-0.5**
JYT				*e*S	**Sb**	**03 58 18.6**	**-1.3**
JFT	**Otama**	**1.21**	**320**	∥P	**Pn**	**03 58 11.1**	**-0.1**
JFT				*e*S	**Sb**	**03 58 25.4**	**-1.4**
JAG	**Ashikaga**	**1.50**	**264**	P	**Pn**	**03 58 14.8**	**-0.4**
JFY	**Yanaizu**	**1.52**	**303**	P	**Pn**	**03 58 14.7**	**-0.8**
MJAR	**Matsushiro Arr**	**2.50**	**270**	Pn	**Pn**	**03 58 28.4**	**-0.5**
	5.2nm,0.3s,baz=107,slow=11,SNR=36						
MJAR				Sn	**Sn**	**03 58 59.1**	**+0.1**
	15nm,0.3s,baz=101,slow=14,SNR=16						
MAT	**Matsushiro**	**2.50**	**270**	P	**Pn**	**03 58 29.6**	**+0.7**
MAT				S	**Sn**	**03 58 58.7**	**-0.3**
JHJ	**Hachijo jima 2**	**3.69**	**200**	Pn	**Pn**	**03 58 45.9**	**+0.6**
	8.0nm,0.3s,baz=254,slow=19,SNR=5.2						
JHJ				Sn	**Sn**	**03 59 27.1**	**-1.2**
	12nm,0.3s,baz=78,slow=22,SNR=4.8						
USRK	**Ussuriysk Arra**	**10.39**	**320**	Pn	Pn	04 00 22.7	+5.5
	0.2nm,0.3s,baz=129,slow=14,SNR=4.2						
SONM	**Songino Array**	**27.96**	**305**	P	**P**	**04 03 39.5**	**+0.8**
	0.7nm,0.4s,baz=108,slow=9.3,SNR=5.2						
MKAR	**Makanchi Array**	**44.28**	**302**	P	**P**	**04 06 00.5**	**+2.8**
	0.2nm,0.4s,baz=81,slow=8.9,SNR=3.5						
WRA	**Warramunga Arr**	**56.61**	**188**	P	**P**	**04 07 29.4**	**-1.7**
	0.3nm,0.4s,baz=6.4,slow=7.4,SNR=11						
ASAR	**Alice Springs**	**60.34**	**188**	P	**P**	**04 07 56.1**	**-1.0**
	0.5nm,0.8s,baz=9.9,slow=7.4,SNR=4.2						

IDC 30 04:05:02.0±2.7, 4.94N×93.75E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/27, mbtmp3.7/5, ML4.1/1, Error ellipse: s-maj=106.0km s-min=23.2km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.36**	**20**	Pn	Pn	04 08 27.2	+0.5
	0.3nm,0.3s,baz=210,slow=15,SNR=4.7						
MKAR	**Makanchi Array**	**42.86**	**348**	P	P	04 13 02.0	0.0
	1.7nm,0.6s,baz=170,slow=7.6,SNR=23						
WRA	**Warramunga Arr**	**46.93**	**123**	P	P	04 13 34.7	-0.2
	0.5nm,0.7s,baz=301,slow=9.3,SNR=4.1						
ASAR	**Alice Springs**	**48.38**	**128**	P	P	04 13 46.1	0.0
	0.3nm,0.8s,baz=309,slow=7.8,SNR=4.1						
ZALV	**Zalesovo Beam**	**49.40**	**353**	P	P	04 13 53.0	-0.4
	1.2nm,0.6s,baz=167,slow=9.1,SNR=5.0						

IDC 30 04:10:40.0±1.9, 1.12N×126.30E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=114.9km s-min=25.3km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.11**	**182**	P	Pn	04 15 05.5	+0.1
	0.0nm,0.3s,baz=352,slow=14,SNR=1.8						
WRA	**Warramunga Arr**	**22.37**	**160**	P	P	04 15 39.2	-0.7
	1.2nm,0.8s,baz=337,slow=11,SNR=6.6						
ASAR	**Alice Springs**	**25.72**	**164**	P	P	04 16 12.3	0.0
	0.5nm,0.7s,baz=334,slow=8.2,SNR=6.0						
MKAR	**Makanchi Array**	**59.46**	**326**	P	P	04 20 44.7	-0.1
	0.2nm,0.4s,baz=116,slow=7.8,SNR=4.7						

IDC 30 04:30:18.5±1.6, 1.03N×126.23E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/21, mbtmp3.8/4, MS3.9/2, Ms1 3.9/2, ms1mx2.8/28, Error ellipse: s-maj=154.9km s-min=23.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.30**	**160**	P	P	04 35 17.6	-0.2
	1.3nm,0.5s,baz=338,slow=12,SNR=36						
ASAR	**Alice Springs**	**25.65**	**164**	P	P	04 35 50.5	+0.3
	1.2nm,0.4s,baz=343,slow=11,SNR=32						
ASAR				PcP	PcP	04 39 21.4	+0.3
	0.3nm,0.6s,baz=356,slow=2.7,SNR=4.9						
STKA	**Stephens Creek**	**35.82**	**157**	P	P	04 37 19.0	-0.9
	1.4nm,0.7s,baz=324,slow=15,SNR=3.0						
DZM	**Mont Dzumac**	**45.44**	**123**	LR	LR	04 53 53.2	
	comp=Z,186nm,20.7s,baz=27,slow=31						
MKAR	**Makanchi Array**	**59.50**	**326**	P	P	04 40 23.3	-0.3
	0.4nm,0.5s,baz=120,slow=8.6,SNR=7.1						
RAO	**Raoul Island**	**61.19**	**124**	LR	LR	05 05 45.1	
	comp=Z,70nm,20.3s,baz=66,slow=35						

IDC 30 04:41:26.5±1.7, 0.46N×125.78E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/23, mbtmp3.7/4, ML3.3/1, Error ellipse: s-maj=118.1km s-min=23.2km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.45**	**180**	P	P	04 45 44.7	+0.9
	0.1nm,0.3s,baz=0.0,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**21.95**	**158**	P	P	04 46 21.5	-0.4
	2.3nm,0.6s,baz=335,slow=12,SNR=19						
ASAR	**Alice Springs**	**25.25**	**162**	P	P	04 46 54.4	-0.2
	0.5nm,0.3s,baz=343,slow=11,SNR=13						
MKAR	**Makanchi Array**	**59.72**	**327**	P	P	04 51 33.1	0.0
	0.6nm,0.4s,baz=121,slow=8.0,SNR=8.5						

*IDC **30** 04:53:41.0±1.5, 64.80N×148.23W, h0km, mb3.5/2, mb1 3.5/4, mb1mx3.3/27, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=14.2km s-min=10.7km az=33.0*

*ISCJB **30** 04:53:42.8±0.3, 64.83N±0.03×148.00W±0.06, h20km±3km, mb3.5/2, Error ellipse: s-maj=4.7km s-min=4.4km az=148.2*

*NEIC **30** 04:53:43.5, 64.78N×148.02W, h17km, ML3.5(AEIC), After AEIC.*

NEIC Felt [III] at Ester, Fairbanks, Fort Wainwright and North Pole. Also felt at Eielson AFB and Salcha.

ISC 30 04:53:42.8±0.9, 64.75N±0.02×148.13W±0.02, h12km±6km, n42, σ1s10/54, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCB	**Clear Creek Bu**	**0.17**	**125**	P	**Pg**	**04 53 47.2**	**+0.6**
COLA	**College**	**0.18**	**43**	P	**Pg**	**04 53 45.9**	**-0.8**
COLA				S	**Sg**	**04 53 48.7**	**-0.8**
MDM	**Murphy Dome**	**0.22**	**349**	P	**Pg**	**04 53 47.4**	**-0.1**
MDM				S	**Sg**	**04 53 50.3**	**-0.4**
WRH	**Wood River Hil**	**0.28**	**176**	P	**Pb**	**04 53 50.1**	**+0.5**
GLM	**Gilmore Dome**	**0.40**	**52**	P	**Pg**	**04 53 50.5**	**-0.2**
GLM				S	**Sg**	**04 53 55.2**	**-0.9**
NEA	**Nenana**	**0.44**	**248**	P	**Pb**	**04 53 53.0**	**+0.6**
ILAR	**Eielson Array**	**0.54**	**87**	Pg	**Pg**	**04 53 53.0**	**-0.2**
ILAR				Lg	Lg	04 53 59.9	
ILAR	**Eielson Array**	**0.54**	**87**	Pg	**Pg**	**04 53 53.0**	**-0.2**
	240nm,0.3s,baz=274,slow=17,SNR=8800						
ILAR				Lg	Lg	04 53 59.9	
	342nm,0.3s,baz=260,slow=31,SNR=34						
HDA	**Harding Lake**	**0.61**	**123**	P	**Pb**	**04 53 55.3**	**-0.1**
HDA				S	**Sg**	**04 54 03.0**	**+0.3**
MCK	**McKinley**	**1.07**	**199**	P	**Pn**	**04 54 04.5**	**+0.8**
MCK				S	**Sn**	**04 54 18.6**	**+0.1**
MLY	**Manley**	**1.15**	**286**	P	**Pb**	**04 54 04.6**	**0.0**
MLY				S	**Sg**	**04 54 20.1**	**+0.3**
PRP	**Porcupine Dome**	**1.35**	**54**	P	**Pn**	**04 54 07.2**	**-0.4**
RND	**Reindeer**	**1.38**	**194**	P	**Pb**	**04 54 09.0**	**+0.5**
RND				S	**Sg**	**04 54 27.4**	**+0.3**
TRF	**Thorofare Moun**	**1.61**	**217**	P	**Pn**	**04 54 11.5**	**+0.4**
TRF				S	**Sg**	**04 54 34.6**	**+0.2**
DHY	**Denali Highway**	**1.71**	**168**	P	**Pb**	**04 54 13.7**	**-0.5**
DOT	**Dot Lake**	**2.09**	**120**	P	**Pn**	**04 54 16.7**	**-0.9**
PAX	**Paxson**	**2.14**	**145**	P	**Pn**	**04 54 17.5**	**-0.8**
PPLA	**Purkeypile**	**2.58**	**226**	P	**Pn**	**04 54 24.9**	**+0.5**
COLD	**Coldfoot**	**2.63**	**342**	P	**Pn**	**04 54 25.1**	**+0.1**
IM3	**Indian Mountai**	**2.66**	**300**	P	**Pn**	**04 54 25.2**	**-0.2**
MENT	**Mentasta**	**2.67**	**131**	*e*Pn	**Pn**	**04 54 24.8**	**-0.7**
MENT				*e*Pg	**Pb**	**04 54 31.7**	**+1.3**
MENT				*e*Sg	**Sg**	**04 55 08.6**	**+0.3**
SML	**Sawmill**	**2.95**	**182**	*e*Pn	**Pn**	**04 54 31.9**	**+2.5**
SML				*e*Pg	**Pb**	**04 54 36.8**	**+1.6**
SML				*e*Sg	**Sg**	**04 55 16.2**	**-1.2**
EGAK	**Eagle**	**2.99**	**86**	*e*Pn	**Pn**	**04 54 29.0**	**-0.9**
EGAK				*e*Pg	**Pb**	**04 54 37.9**	**+2.0**
EGAK				*e*Sg	**Sb**	**04 55 14.6**	**+2.3**
BM3	**Burnt Mountain**	**3.05**	**27**	P	**Pn**	**04 54 30.3**	**-0.5**
PMR	**Palmer**	**3.20**	**189**	*e*Pn	**Pn**	**04 54 35.1**	**+2.3**
PMR				*e*Pg	**Pg**	**04 54 42.8**	**-1.1**
PMR				*e*Sg	**Sg**	**04 55 25.2**	**-0.1**
BCA3	**Beaver Creek A**	**3.27**	**118**	P	**Pn**	**04 54 32.8**	**-1.1**
SUA	**Susitna One**	**3.50**	**201**	P	**Pn**	**04 54 39.8**	**+2.8**
RC01	**Rabbit Creek A**	**3.74**	**192**	P	Pn	04 54 44.2	+3.9
DIV	**Divide**	**3.79**	**162**	*e*Pn	Pb	04 54 45.7	-3.8
DIV				*e*Pg	**Pg**	**04 54 53.1**	**-2.1**
DIV				*e*Sg	**Sg**	**04 55 41.6**	**-2.7**
DAWY	**Dawson**	**3.85**	**96**	P	**Pn**	**04 54 41.1**	**-0.7**
TT01	**Tatalina**	**3.95**	**246**	P	**Pn**	**04 54 43.3**	**+0.2**
VRDI	**Verde Repeater**	**4.12**	**147**	P	**Pn**	**04 54 46.1**	**+0.4**
INK	**Inuvik**	**6.84**	**52**	Pn	**Pn**	**04 55 23.1**	**+0.4**
INK	**Inuvik**	**6.84**	**52**	Pn	**Pn**	**04 55 23.1**	**+0.4**
	0.4nm,0.3s,baz=236,slow=8.4,SNR=11						
KDAK	**Kodiak Island**	**7.31**	**199**	Pn	Pn	04 55 35.6	+6.5
KDAK	**Kodiak Island**	**7.31**	**199**	Pn	Pn	04 55 35.6	+6.5
	0.6nm,0.3s,baz=17,slow=14,SNR=3.2						
YKA	**Yellowknife Ar**	**14.97**	**83**	Pn	Pn	04 57 09.7	-4.1
YKA	**Yellowknife Ar**	**14.97**	**83**	Pn	Pn	04 57 09.7	-4.1
	0.1nm,0.3s,baz=292,slow=13,SNR=3.6						
FINES	**FINESS Array B**	**54.05**	**3**	P	**P**	**05 03 06.6**	**+0.3**
FINES	**FINESS Array B**	**54.05**	**3**	P	**P**	**05 03 06.6**	**+0.3**
	0.3nm,0.4s,baz=1.1,slow=7.0,SNR=5.4						
MKAR	**Makanchi Array**	**62.06**	**323**	P	**P**	**05 04 01.6**	**-1.1**
MKAR	**Makanchi Array**	**62.06**	**323**	P	**P**	**05 04 01.6**	**-1.1**
	0.2nm,0.5s,baz=36,slow=6.5,SNR=3.6						

*IDC **30** 04:53:54.5±1.2, 64.78N×148.25W, h0km, mb3.7/2, mb1 3.7/5, mb1mx3.4/28, mbtmp3.6/5, ML3.2/3, Error ellipse: s-maj=11.9km s-min=10.2km az=164.0*

NEIC 30 04:53:57.1, 64.80N×148.03W, h15km, ML3.1(AEIC), After AEIC., Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
COLA	**College**	**0.11**	**43**	P	Pg	04 54 00.6	+0.1
COLA				S	Sg	04 54 02.6	-0.1
CCB	**Clear Creek Bu**	**0.18**	**148**	P	Pg	04 54 01.5	+0.1
CCB				S	Sg	04 54 04.0	-0.2
MDM	**Murphy Dome**	**0.19**	**332**	P	Pg	04 54 01.6	-0.1
MDM				S	Sg	04 54 04.3	-0.4
GLM	**Gilmore Dome**	**0.33**	**54**	P	Pg	04 54 04.2	+0.1
GLM				S	Sg	04 54 08.9	0.0
ILAR	**Eielson Array**	**0.49**	**92**	Pg	Pg	04 54 07.0	+0.2
ILAR				Lg	Lg	04 54 13.6	
ILAR	**Eielson Array**	**0.49**	**92**	Pg	Pg	04 54 07.0	+0.2
	313nm,0.3s,baz=274,slow=18,SNR=15						
ILAR				Lg	Lg	04 54 13.6	
	556nm,0.3s,baz=259,slow=29,SNR=15						
INK	**Inuvik**	**6.77**	**52**	Pn	Pn	04 55 37.0	+1.3
INK				Sn	Sn	04 56 58.5	+6.1
INK				Lg	Lg	04 57 27.9	
INK	**Inuvik**	**6.77**	**52**	Pn	Pn	04 55 37.0	+1.3
	0.5nm,0.3s,baz=236,slow=15,SNR=6.8						
INK				Sn	Sn	04 56 58.5	+6.1
	1.0nm,0.3s,baz=161,slow=21,SNR=2

ZALV	**Zalesovo Beam**	**71.42**	**335**	P	**P**	**05 17 55.3**	**-0.5**
	0.8nm,0.4s,baz=136,slow=5.6,SNR=6.0						
VNDA	**Vanda**	**72.05**	**173**	P	**P**	**05 18 00.7**	**+1.5**
	0.4nm,0.4s,baz=296,slow=9.7,SNR=8.0						
KMBO	**Kilima Mbogo**	**90.97**	**269**	P	P	05 19 33.1	-7.1
	baz=91,SNR=4.0						
TORD	**Torodi Ar. Bea**	**127.34**	**281**	PKP	**PKPdf**	**05 25 41.2**	**+1.2**
	0.1nm,0.5s,baz=48,slow=2.1,SNR=2.7						
LPAZ	**La Paz**	**151.18**	**146**	PKPbc	**PKPbc**	**05 26 28.8**	**-0.6**
	0.5nm,0.4s,baz=38,slow=2.8,SNR=4.2						

IDC 30 05:12:13.4±2.0, 0.°77N×125.°49E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/22, mbtmp3.6/3, Error ellipse: s-maj=209.2km s-min=25.2km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.34**	**158**	P	P	05 17 14.0	+0.9
	1.4nm,0.7s,baz=336,slow=12,SNR=4.4						
ASAR	**Alice Springs**	**25.63**	**162**	P	P	05 17 44.2	-0.7
	0.5nm,0.4s,baz=344,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**59.30**	**327**	P	P	05 22 17.1	0.0
	0.3nm,0.3s,baz=126,slow=7.2,SNR=6.8						

*ISCJB **30** 05:40:53.1±0.7, 2.°31S±0.°06×128.°31E±0.°06, h33km, mb3.8/2, Error ellipse: s-maj=8.7km s-min=7.3km az=44.1*
*DJA **30** 05:40:53.7±1.1, 2.°5S±4.°×12.°8E±.°, h15km±15km, M4.1/6, mb4.5/2, mB4.8/1, MLv3.9/6, Mw(mB)4.1/1*
*IDC **30** 05:41:04.3±3.7, 2.°97S×127.°95E, h85km±35km, mb3.4/2, mb1 3.8/4, mb1mx3.4/23, mbtmp3.6/4, MS3.1/1, Ms1 3.1/1, ms1mx1.7/17, Error ellipse: s-maj=49.7km s-min=13.3km az=67.0*

ISC 30 05:40:53.7±1.0, 2.°36S±0.°07×128.°31E±0.°09, h35km, n13, σ2§26/11, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.15**	**148**	P	Pn	05 41 18.6	+5.3
AAI	**Ambon**	**1.32**	**185**	P	Pn	05 41 19.1	+3.5
NLAI	**Namlea**	**1.49**	**234**	P	Pn	05 41 21.2	+3.3
NLAI				S	Sn	05 41 44.5	+8.3
LBMI	**Labuha**	**1.90**	**335**	P	**Pn**	**05 41 22.0**	**-1.6**
SWI	**Sorong**	**3.30**	**63**	P	**Pn**	**05 41 43.9**	**+1.0**
SWI				S	**Sn**	**05 42 23.0**	**+2.0**
FAKI	**Fak Fak**	**3.97**	**98**	P	**Pn**	**05 41 52.8**	**+0.7**
MRSI	**Marisa**	**6.97**	**294**	P	**Pn**	**05 42 32.6**	**-0.7**
	15nm,0.9s,716nm						
KAPI	**Kappang**	**8.94**	**253**	P	Pn	05 43 03.8	+3.4
KAPI	**Kappang**	**8.94**	**253**	P	**Pn**	**05 43 03.2**	**+2.9**
	6.0nm,0.3s,baz=95,slow=9.3,SNR=21						
FITZ	**Fitzroy Crossi**	**15.86**	**189**	P	**P**	**05 44 36.8**	**-0.9**
	0.1nm,0.3s,baz=16,slow=15,SNR=3.9						
FITZ				LR	LR	05 51 12.8	
	comp=Z,66nm,20.3s,baz=20,slow=40						
WRA	**Warramunga Arr**	**18.44**	**162**	P	**Pn**	**05 45 06.8**	**+0.2**
	0.3nm,0.3s,baz=340,slow=12,SNR=4.8						
WRA				S	**Sn**	**05 48 30.4**	**-1.3**
	0.1nm,0.3s,baz=338,slow=22,SNR=2.0						
ASAR	**Alice Springs**	**21.86**	**166**	P	**P**	**05 45 44.1**	**+0.6**
	2.2nm,0.3s,baz=345,slow=11,SNR=33						
ASAR				S	**S**	**05 49 38.8**	**-4.6**
	0.2nm,0.5s,baz=346,slow=27,SNR=1.8						
SONM	**Songino Array**	**53.54**	**342**	P	P	05 50 20.1	+9.1
	0.4nm,0.6s,baz=151,slow=3.3,SNR=2.1						

*IDC **30** 05:45:04.7±0.8, 4.°53N×126.°96E, h0km, mb4.0/11, mb1 4.2/11, mb1mx4.0/24, mbtmp4.0/11, MS3.5/2, Ms1 3.5/2, ms1mx2.4/30, Error ellipse: s-maj=44.8km s-min=14.4km az=70.0*
*ISCJB **30** 05:45:13.1±0.6, 4.°35N±0.°07×126.°9E±0.°1, h81km, mb3.9/11, Error ellipse: s-maj=17.0km s-min=8.9km az=168.0*
*DJA **30** 05:45:35.8±1.0, 2.°1N±6.°×12.°6E±.°, h101km±18km, M4.1/6, mb4.2/1, MLv4.1/6*

ISC 30 05:45:14.6±0.7, 4.°29N±0.°09×126.°9E±0.°1, h81km, n20, σ1§44/17, mb3.9/11, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**2.59**	**160**	P	Pn	05 45 59.5	+5.1
DAV	**Davao City (W)**	**3.06**	**335**	P	Sn	05 46 46.4	+10
MNI	**Manado**	**3.50**	**216**	P	**Pn**	**05 46 06.4**	**-0.3**
TNTI	**Ternate**	**3.52**	**172**	P	**Pn**	**05 46 06.0**	**-1.1**
CTBH	**Cotabato--PC H**	**3.93**	**318**	↑iP	**Pn**	**05 46 13.3**	**+0.7**
MRSI	**Marisa**	**6.24**	**233**	P	**Pn**	**05 46 45.1**	**+1.1**
SKSI	**Soroako, Sulaw**	**8.76**	**220**	P	**Pn**	**05 47 15.5**	**-3.1**
FITZ	**Fitzroy Crossi**	**22.28**	**183**	P	**P**	**05 50 05.6**	**+0.3**
	2.3nm,0.5s,baz=13,slow=11,SNR=9.9						
WRA	**Warramunga Arr**	**25.16**	**163**	P	**P**	**05 50 33.5**	**+1.0**
	4.1nm,0.8s,baz=344,slow=10,SNR=10						
ASAR	**Alice Springs**	**28.61**	**167**	P	**P**	**05 51 06.6**	**+3.1**
	1.3nm,0.6s,baz=348,slow=6.5,SNR=14						
CMAR	**Chiang Mai Arr**	**30.74**	**299**	P	**P**	**05 51 22.1**	**-0.3**
	1.6nm,0.7s,baz=124,slow=7.4,SNR=9.1						
HNR	**Honiara**	**35.64**	**113**	LR	LR	06 05 36.1	
	comp=Z,67nm,18.1s,baz=162,slow=34						
STKA	**Stephens Creek**	**38.59**	**160**	P	**P**	**05 52 31.1**	**+1.3**
	3.5nm,0.5s,baz=329,slow=10,SNR=10						
STKA				LR	LR	06 10 51.7	
	comp=Z,75nm,18.9s,baz=205,slow=40						
SONM	**Songino Array**	**46.83**	**341**	P	**P**	**05 53 35.4**	**-1.0**
	0.8nm,0.6s,baz=160,slow=9.2,SNR=3.0						
MKAR	**Makanchi Array**	**57.20**	**325**	P	**P**	**05 54 52.6**	**-0.7**
	1.0nm,0.4s,baz=118,slow=7.5,SNR=13						
ZALV	**Zalesovo Beam**	**60.17**	**333**	P	**P**	**05 55 13.8**	**0.0**
	0.7nm,0.4s,baz=139,slow=11,SNR=2.7						
ILAR	**Eielson Array**	**84.53**	**25**	P	**P**	**05 57 38.1**	**-0.3**
	0.3nm,0.5s,baz=251,slow=5.4,SNR=7.5						
BRTR	**Keskin Array B**	**89.80**	**310**	P	**P**	**05 58 03.8**	**-0.9**
	1.8nm,0.9s,baz=104,slow=5.2,SNR=6.9						
FINES	**FINESS Array B**	**91.42**	**332**	P	**P**	**05 58 10.4**	**-1.1**
	0.7nm,0.7s,baz=38,slow=3.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**122.91**	**289**	PKP	**PKPdf**	**06 04 02.9**	**+0.4**
	0.5nm,0.8s,baz=50,slow=1.7,SNR=3.0						

KRSC 30 05:48:34.1±0.2, 52.°98N×161.°87E, h37km±37km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.12**	**277**	*e*P	Pn	05 48 54.4	+1.2
SPN				*e*S	Sn	05 49 08.7	+1.3
NLC	**Nalytchevo**	**1.54**	**278**	*e*P	Pn	05 49 00.3	+1.4
NLC				*e*S	Sn	05 49 19.5	+2.0
MKZ	**Mys Kozlova**	**1.58**	**357**	*e*P	Pn	05 49 00.6	+1.1
MKZ				*e*S	Sn	05 49 19.2	+0.5
SDLR	**Sedlovina**	**1.82**	**281**	P	Pn	05 49 04.8	+1.8
SDLR				*e*S	Sn	05 49 27.3	+2.3
UGLR	**Uglovaya**	**1.85**	**278**	*e*P	Pn	05 49 05.3	+1.9
UGLR				*e*S	Sn	05 49 28.9	+3.3
SMAR	**Somma**	**1.87**	**280**	*e*P	Pn	05 49 05.4	+1.6
SMAR				*e*S	Sn	05 49 28.1	+1.7
KRER	**Koryakskii**	**1.91**	**281**	P	Pn	05 49 06.3	+2.0
KRER				*e*S	Sn	05 49 30.0	+2.8
AVH	**Avacha**	**1.91**	**280**	P	Pn	05 49 06.2	+2.1
AVH				*e*S	Sn	05 49 30.1	+3.1
PET	**Petropavlovsk**	**1.94**	**273**	*e*P	Pn	05 49 06.2	+1.7
PET				*e*S	Sn	05 49 29.8	+2.2
KOK	**Koryaka**	**1.97**	**280**	P	Pn	05 49 06.9	+1.8
KOK				*e*S	Sn	05 49 31.0	+2.4
RUS	**Russkaya**	**2.12**	**256**	P	Pn	05 49 09.0	+2.2
RUS				*e*S	Sn	05 49 34.1	+2.3
MTVR	**Mutnovka**	**2.30**	**259**	*e*P	Pn	05 49 11.5	+1.9
MTVR				*e*S	Sn	05 49 38.3	+1.6
GNL	**Ganaly**	**2.46**	**288**	*e*P	Pn	05 49 14.5	+2.7
GNL				*e*S	Sn	05 49 44.0	+3.3
ASAK	**Asacha**	**2.49**	**258**	P	Pn	05 49 14.7	+2.6
ASAK				*e*S	Sn	05 49 43.8	+2.5
TUMR	**Tumrok**	**2.52**	**337**	*e*P	Pn	05 49 15.3	+2.7
APC	**Apacha**	**2.85**	**271**	*e*P	Pn	05 49 20.4	+3.4
APC				*e*S	Sn	05 49 53.4	+3.4
KMNR	**Kamenistaya**	**2.94**	**342**	*e*P	Pn	05 49 21.7	+3.3
KMNR				*e*S	Sn	05 49 56.2	+3.7
BKI	**Bering**	**3.29**	**46**	*e*S	Sn	05 50 00.9	+0.2
ESO	**Esso**	**3.48**	**329**	*e*P	Pn	05 49 28.8	+3.1

MEX 30 05:59:24.4±0.6, 17.°17N×100.°14W, h47km±9km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.17**	**226**	*e*P	Pn	05 59 30.5	-1.8
CAIG				*e*S	Sn	05 59 36.2	-1.7
ACX	**Acapulco**	**0.40**	**138**	*i*P	Pn	05 59 32.2	-2.1
ACX				*i*S	Sn	05 59 38.7	-2.8
ARIG	**Puente Sto Nin**	**1.12**	**350**	*i*P	Pn	05 59 42.1	-1.7
ARIG				*i*S	Sn	05 59 55.9	-2.3
PLIG	**Platanillo**	**1.36**	**26**	*i*P	Pn	05 59 45.9	-1.2
PLIG				*i*S	Sn	06 00 01.0	-3.0
YAIG	**Yautepec**	**1.97**	**31**	*i*P	Pn	05 59 54.4	-1.1
YAIG				*i*S	Sn	06 00 17.0	-2.1
PNIG	**Pinotepa**	**2.07**	**112**	*i*P	Pn	05 59 55.5	-1.3
PNIG				*i*S	Sn	06 00 20.9	-0.5
UTMO	**Huajuapan**	**2.32**	**73**	*i*P	Pn	05 59 58.6	-1.9
UTMO				*i*S	Sn	06 00 24.4	-3.6

IDC 30 06:10:52.8±1.1, 4.°03N×126.°78E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.7/26, mbtmp3.7/8, Error ellipse: s-maj=90.8km s-min=15.4km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.02**	**183**	P	P	06 15 49.7	+0.8
	1.4nm,0.7s,baz=18,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	**24.95**	**163**	P	P	06 16 17.4	-0.7
	1.6nm,0.6s,baz=342,slow=10,SNR=7.6						
ASAR	**Alice Springs**	**28.39**	**166**	P	P	06 16 48.3	-0.7
	0.1nm,0.4s,baz=340,slow=9.3,SNR=2.9						
STKA	**Stephens Creek**	**38.39**	**159**	P	P	06 18 16.6	+0.7
	2.8nm,0.9s,baz=351,slow=9.5,SNR=4.2						
SONM	**Songino Array**	**47.03**	**341**	P	P	06 19 26.0	-0.2
	0.4nm,0.5s,baz=152,slow=9.1,SNR=2.8						
MKAR	**Makanchi Array**	**57.34**	**325**	P	P	06 20 42.4	-0.4
	0.7nm,0.5s,baz=119,slow=7.9,SNR=17						
KURBB	**Kurchatov Arra**	**61.52**	**327**	P	P	06 21 11.4	-0.1
	1.7nm,0.8s,baz=122,slow=6.2,SNR=13						
BVAR	**Borovoye Array**	**67.10**	**327**	P	P	06 21 48.8	+0.7
	0.7nm,0.6s,baz=134,slow=6.2,SNR=3.8						

*CASC **30** 06:32:43.7±2.4, 17.°84N×86.°78W, h35km±999km, MD4.6, ML4.7, mb4.6(NEIC)*
*ISCJB **30** 06:33:04.7±0.3, 16.°29N±0.°02×87.°54W±0.°04, h10km, mb4.4/47, MS3.8/6, Error ellipse: s-maj=5.9km s-min=3.3km az=9.9*
*IDC **30** 06:33:05.0±1.1, 16.°49N×87.°40W, h0km, mb4.0/12, mb1 4.2/15, mb1mx4.1/27, mbtmp4.1/15, ML4.3/2, MS3.5/7, Ms1 3.5/7, ms1mx3.2/30, Error ellipse: s-maj=31.9km s-min=17.6km az=41.0*
*NEIC **30** 06:33:05.5±0.4, 16.°14N×87.°71W, h10km, mb4.6/47, Error ellipse: s-maj=7.1km s-min=6.6km az=79.0*
NEIC Felt [IV] at San Pedro Sula. Also felt at Arizona, Choloma, La Ceiba, La Lima, Puerto Cortes and Utila. Felt [III] at Dangriga, Belize. Also felt at Belmopan and San Ignacio.
*BJI **30** 06:33:07.4, 16.°40N×87.°60W, h10km, Ms4.9/2, Ms7 4.5/2*

ISC 30 06:33:05.7±1.8, 16.°25N±0.°03×87.°64W±0.°05, h12km±11km, n187, σ1§56/183, mb4.6/47, MS3.6/6, 22C-20D, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**2.21**	**171**	*e*Pn	**Pn**	**06 33 39.4**	**-2.7**
TGUH				*e*Sn	**Sn**	**06 34 09.6**	**+0.3**
TGUH	**Tegucigalpa,Un**	**2.21**	**171**	↑*i*P	Pn	06 33 39.0	-3.2
TGUH				*e*S	**Sn**	**06 34 09.4**	**+0.1**
MRL	**Marmol**	**2.30**	**240**	*e*P	Pn	06 33 40.4	-3.3
MRL				*e*S	Sg	06 34 28.6	+8.8
MTO2	**Montecristo 2**	**2.48**	**222**	*e*P	**Pn**	**06 33 47.1**	**+1.0**
LFU	**La Fuente**	**2.87**	**210**	*e*P	**Pn**	**06 33 52.1**	**+0.7**
SNVI	**San Vicente**	**2.87**	**204**	*e*S	**Sb**	**06 34 29.7**	**-2.3**
CNCH	**Conchagua**	**2.96**	**184**	*e*P	**Pn**	**06 33 52.8**	**+0.1**
BOQS	**Boqueron**	**2.96**	**213**	*e*P	**Pn**	**06 33 53.8**	**+1.1**
SNET	**Serv Nac Est T**	**2.98**	**211**	*e*P	**Pn**	**06 33 53.8**	**+1.0**
SNET				*e*S	**Sb**	**06 34 32.9**	**-2.3**
SNET				AML	AML	06 34 41.4	
	comp=Z,2μm,0.4s						
RTR	**El Retiro**	**3.04**	**220**	*e*P	**Pn**	**06 33 55.5**	**+1.7**
SBLS	**San Blas**	**3.07**	**219**	*e*P	**Pn**	**06 33 54.6**	**+0.3**
NBG	**Las Nubes**	**3.09**	**238**	*e*P	**Pn**	**06 33 52.0**	**-2.7**
NBG				*e*S	**Sg**	**06 34 47.1**	**+1.9**
FUG	**Fuego 3**	**3.57**	**240**	*e*P	**Pn**	**06 33 58.7**	**-2.4**
FUG				*e*S	**Sg**	**06 34 58.2**	**-2.4**
TEIG	**Tepich**	**4.00**	**351**	*e*Pn	**Pn**	**06 34 06.0**	**-0.9**
TEIG				*e*Sn	**Sn**	**06 34 52.7**	**-1.1**
TEIG				Lg	Lg	06 35 15.8	
TEIG	**Tepich**	**4.00**	**351**	Pn	**Pn**	**06 34 06.5**	**-0.4**
	comp=Z,18nm,0.3s,baz=34,slow=0.7,SNR=123						
TEIG				Sn	**Sn**	**06 34 51.9**	**-1.9**
	comp=Z,65nm,0.3s,baz=50,slow=22,SNR=4.4						
TEIG				Lg	Lg	06 35 15.8	
	comp=Z,77nm,0.3s,baz=83,slow=23,SNR=5.9						
TEIG				LR	LR	06 35 57.5	
	comp=Z,604nm,18.9s,baz=115,slow=45						
CCIG	**Comitan**	**4.32**	**271**	P	**Pn**	**06 34 09.2**	**-2.3**
CCIG				S	**Sg**	**06 35 28.1**	**+3.4**
THIG		**4.66**	**254**	P	**Pn**	**06 34 14.9**	**-1.0**
THIG				S	**Sg**	**06 35 34.8**	**-0.5**
TGIG		**5.29**	**277**	P	**Pn**	**06 34 22.8**	**-1.9**
TGIG				S	**Sn**	**06 35 29.0**	**+3.4**
PCIG		**5.40**	**265**	P	Pn	06 34 22.6	-3.4
PCIG				S	**Sg**	**06 35 55.3**	**-3.9**
JTS	**JuntasAbangare**	**6.47**	**156**	*e*Pn	**Pn**	**06 34 43.0**	**+2.1**
HUIG	**Huatulco**	**8.16**	**268**	P	Pn	06 34 59.9	-4.2
HUIG				S	Sn	06 36 17.0	-19
VHO	**Vista Hermosa**	**8.76**	**277**	P	Pn	06 35 09.4	-3.0
UTMO	**Huajuapan**	**9.85**	**281**	P	**Pn**	**06 35 25.0**	**-2.5**
HKT	**Hockley**	**15.58**	**333**	*e*Pn	**P**	**06 36 48.2**	**-1.2**
LRAL	**Lakeview Retre**	**16.73**	**2**	*e*P	**Pn**	**06 36 58.9**	**-1.0**
	comp=Z,16nm,0.9s						
LRAL				*e*S	Sn	06 39 57.1	-8.5
ROSC	**El Rosal**	**17.28**	**129**	*e*P	**Pn**	**06 37 08.6**	**+1.1**
ROSC	**El Rosal**	**17.28**	**129**	Pn	**P**	**06 37 08.9**	**0.0**
	comp=Z,0.4nm,0.3s,baz=88,slow=24,SNR=7.4						
ROSC				LR	LR	06 44 12.3	
	comp=Z,147nm,21.4s,baz=181,slow=39						
631A	**Perdido Creek**	**17.70**	**320**	↑P	**P**	**06 37 13.7**	**+0.6**
	baz=18,SNR=6.0						
532A	**Rocksprings**	**17.81**	**323**	↓P	**P**	**06 37 15.0**	**+0.6**
	baz=18,SNR=6.4						
JCT	**Junction City**	**18.02**	**324**	*e*P	**P**	**06 37 19.4**	**+2.9**
	comp=Z,10nm,1.0s						
WHTX	**Lake Whitney**	**18.04**	**332**	↓P	**Pn**	**06 37 16.9**	**+0.6**
	baz=18,SNR=19						
OXF	**Oxford**	**18.26**	**355**	*e*P	**P**	**06 37 20.2**	**+1.1**
	comp=Z,21nm,0.7s						
OTAV	**Otavalo**	**18.31**	**149**	*e*P	**Pn**	**06 37 17.9**	**-2.2**
	comp=Z,0.8nm,1.0s						
PLAL	**Pickwick Lake**	**18.66**	**359**	*e*Pn	**P**	**06 37 24.0**	**+0.4**
	comp=Z,6.2nm,0.9s						
332A	**Millersview**	**18.68**	**326**	P	**Pn**	**06 37 24.9**	**+0.7**
	baz=19,SNR=6.6						
530A	**J-C Ranch, Com**	**18.68**	**320**	↓P	**Pn**	**06 37 25.0**	**+0.7**
	baz=19,SNR=12						
UALR	**University of**	**18.93**	**348**	*e*P	**Pn**	**06 37 28.4**	**+1.3**
	comp=Z,9.4nm,0.9s						
SWET	**Sewanee**	**18.95**	**4**	*e*P	**P**	**06 37 26.9**	**+0.1**
	comp=Z,17nm,0.8s						
232A	**Coleman**	**19.02**	**327**	↓P	**Pn**	**06 37 28.6**	**+0.3**
	baz=19,SNR=5.8						
628A	**Black Gap, Mar**	**19.24**	**316**	↓P	**Pn**	**06 37 31.4**	**+0.4**
	baz=19,SNR=22						
CPCT	**Cooper Cave**	**19.33**	**8**	*e*P	**Pn**	**06 37 34.0**	**+2.0**
429A	**Davenport Ranc**	**19.36**	**320**	↓P	**P**	**06 37 32.1**	**+0.7**
	baz=19,SNR=17						
627A	**Terlingua Ranc**	**19.55**	**315**	P	**Pn**	**06 37 35.7**	**+0.9**
	baz=20,SNR=28						
528A	**Cox Ranch, San**	**19.61**	**318**	P	**Pn**	**06 37 36.6**	**+1.1**
	baz=20,SNR=6.3						
TKL	**Tuckaleechee C**	**19.64**	**9**	P	**Pn**	**06 37 36.0**	**+0.3**
TKL				S	S	06 41 05.7	-10
TKL	**Tuckaleechee C**	**19.64**	**9**	P	**Pn**	**06 37 36.0**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=178,slow=11,SNR=10						
TKL				S	S	06 41 05.7	-10
	comp=Z,0.9nm,0.3s,baz=313,slow=2.9,SNR=6.4						
TKL				LR	LR	06 45 24.1	
	comp=Z,101nm,18.1s,baz=156,slow=38						
KMSC	**Kings Mountain**	**19.64**	**16**	↑P	**P**	**06 37 35.8**	**+1.4**
	baz=20,SNR=5.6						

TXAR	**Lajitas Array**	**19.67**	**314**	P	**Pn**	**06 37 36.3**	**+0.1**
TXAR				S	S	06 41 08.1	-8.5
TXAR	**Lajitas Array**	**19.67**	**314**	P	**Pn**	**06 37 36.3**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=134,slow=11,SNR=36						
TXAR				S	S	06 41 08.1	-8.5
	comp=Z,0.1nm,0.3s,baz=116,slow=21,SNR=3.1						
WVT	**Waverly**	**19.80**	**360**	*e*P	**P**	**06 37 37.2**	**+1.2**
	comp=Z,21nm,0.8s						
UTMT	**University of**	**20.05**	**357**	*e*P	Pn	06 37 40.5	0.0
	comp=Z,52nm,0.9s						
Z32A	**Haskell**	**20.07**	**330**	P	Pn	06 37 41.1	+0.2
	baz=20,SNR=13						
626A	**Big Bend Ranch**	**20.13**	**314**	↑P	Pn	06 37 41.8	+0.2
	baz=20,SNR=21						
527A	**Woodward Ranch**	**20.14**	**316**	↓P	Pn	06 37 41.5	-0.4
	baz=20,SNR=15						
526A	**Mary Lane Ranc**	**20.41**	**315**	↓P	Pn	06 37 44.8	-0.3
	baz=20,SNR=7.1						
Z31A	**Sharp Cattle R**	**20.41**	**329**	P	**P**	**06 37 44.1**	**+1.4**
	baz=20,SNR=6.5						
328A	**Wristen Ranch,**	**20.45**	**320**	↑P	Pn	06 37 45.5	+0.1
	baz=20,SNR=20						
427A	**Hayter Ranch,**	**20.46**	**318**	P	**P**	**06 37 44.4**	**+1.0**
	baz=20,SNR=11						
TZTN	**Tazewell**	**20.54**	**9**	*e*P	**P**	**06 37 45.9**	**+1.8**
	comp=Z,16nm,0.8s						
426A	**McDonald Obser**	**20.75**	**317**	↓P	Pn	06 37 49.0	-0.1
	baz=21,SNR=6.6						
CNNC	**Cliffs of the**	**20.83**	**23**	*e*P	**P**	**06 37 47.7**	**+0.5**
	comp=Z,16nm,0.9s						
Z30A	**Sanderson Ranc**	**20.89**	**327**	P	**P**	**06 37 48.4**	**+0.4**
	baz=21,SNR=5.4						
WMOK	**Wichita Mounta**	**20.95**	**334**	*e*P	**P**	**06 37 49.9**	**+1.2**
	comp=Z,8.0nm,0.8s						
WMOK				*e*S	S	06 41 33.0	-9.0
128A	**Castleberry Fa**	**21.14**	**323**	↓P	**P**	**06 37 51.0**	**+0.3**
	baz=21,SNR=14						
X31A	**McDonald Ranch**	**21.40**	**331**	P	**P**	**06 37 54.8**	**+1.3**
	baz=22,SNR=11						
SIUC	**Southern Illin**	**21.43**	**357**	*e*P	**P**	**06 37 55.7**	**+2.0**
	comp=Z,38nm,0.8s						
425A	**Indio Mountain**	**21.46**	**315**	↑P	**P**	**06 37 54.8**	**+0.5**
	baz=22,SNR=10.0						
Z28A	**Tucker Farm, M**	**21.57**	**325**	P	**P**	**06 37 55.7**	**+0.3**
	baz=22,SNR=6.8						
Y29A	**Porterfield Fa**	**21.62**	**327**	↑P	**P**	**06 37 56.1**	**+0.3**
	baz=22,SNR=6.5						
USIN	**University of**	**21.64**	**360**	*e*P	**P**	**06 37 57.3**	**+1.4**
	comp=Z,82nm,0.9s						
X30A	**Coker Ranch, T**	**21.68**	**329**	P	**P**	**06 37 57.4**	**+1.0**
	baz=22,SNR=6.6						
226B	**Tecolote Peak,**	**21.77**	**319**	P	**P**	**06 37 58.5**	**+1.0**
	baz=22,SNR=20						
325A	**Bean Ranch, Si**	**21.82**	**317**	P	**P**	**06 37 58.5**	**+0.3**
	baz=22,SNR=19						
BLA	**Blacksburg**	**21.84**	**16**	*e*P	**P**	**06 37 59.3**	**+1.2**
	comp=Z,36nm,1.0s						
WCI	**Wyandotte Cave**	**21.93**	**3**	*e*P	**P**	**06 37 59.8**	**+0.7**
	comp=Z,35nm,1.0s						
Y28A	**McKinney Farm,**	**21.96**	**326**	P	**P**	**06 37 59.9**	**+0.3**
	baz=22,SNR=10.0						
GDL2	**Guadalupe Moun**	**21.97**	**319**	*e*P	**P**	**06 38 03.4**	**+3.6**
Z27A	**Tatum**	**22.06**	**323**	P	**P**	**06 38 00.8**	**+0.1**
	baz=22,SNR=12						
225A	**Deer Hill, Car**	**22.20**	**318**	↓P	**P**	**06 38 03.3**	**+1.0**
	baz=22,SNR=15						
324A	**Moseley Ranch,**	**22.21**	**316**	P	**P**	**06 38 02.8**	**+0.6**
	baz=22,SNR=17						
MSTX	**Muleshoe**	**22.30**	**325**	↑P	**P**	**06 38 03.7**	**+0.5**
	baz=22,SNR=6.8						
MNTX	**Cornudas Mount**	**22.30**	**317**	*e*P	**P**	**06 38 03.1**	**-0.1**
	comp=Z,8.3nm,1.0s						
OLIL	**Olney**	**22.41**	**359**	*e*P	**P**	**06 38 05.5**	**+1.4**
	comp=Z,72nm,1.1s						
SLM	**Saint Louis**	**22.42**	**355**	*e*P	**P**	**06 38 05.7**	**+1.4**
	comp=Z,20nm,0.6s						
AMTX	**Amarillo**	**22.43**	**328**	*e*P	**P**	**06 38 04.7**	**+0.2**
	comp=Z,14nm,0.9s						
Y27A	**Causey**	**22.45**	**324**	P	**P**	**06 38 05.0**	**+0.1**
	baz=22,SNR=15						
125A	**Gardner Draw,**	**22.47**	**320**	↑P	**P**	**06 38 05.7**	**+0.7**
	baz=22,SNR=17						
Z26A	**Caprock**	**22.48**	**322**	↓P	**P**	**06 38 05.3**	**+0.2**
	baz=23,SNR=6.7						
224A	**Cornudas Mount**	**22.63**	**317**	↓P	**P**	**06 38 07.3**	**+0.5**
	baz=23,SNR=19						
BLO	**

X20A	**Quemado**	**26.12**	**318**	⇓P		**P**	**06 38 42.1**	**+2.2**
	baz=26,SNR=34								
TUC	**Tucson**	**26.39**	**311**	*e*P		**P**	**06 38 42.9**	**+0.6**
	comp=Z,40nm,2.5s								
W20A	**Ramah**	**26.49**	**319**	⇑P		**P**	**06 38 45.9**	**+2.6**
	baz=27,SNR=8.1								
SDCO	**Great Sand Dun**	**26.59**	**327**	*e*P		**P**	**06 38 45.2**	**+1.0**
	comp=Z,2.9nm,1.0s								
ERPA	**Erie**	**26.61**	**13**	*e*P		**P**	**06 38 48.3**	**+4.3**
	comp=Z,28nm,0.9s								
JFWS	**Jewell Farm**	**26.67**	**356**	*e*P		**P**	**06 38 44.2**	**-0.4**
	comp=Z,10nm,0.9s								
BINY	**Binghamton**	**27.73**	**19**	*e*P		**P**	**06 38 55.1**	**+1.0**
	comp=Z,17nm,1.0s								
WUAZ	**Wupatki**	**28.58**	**317**	*e*P		**P**	**06 39 03.4**	**+1.4**
	comp=Z,4.9nm,1.0s								
TRY	**Troy**	**28.98**	**22**	*e*P		**P**	**06 39 06.3**	**+1.1**
	comp=Z,20nm,1.0s								
SADO	**Sadowa**	**29.32**	**12**	P		**P**	**06 39 07.9**	**-0.3**
SADO	**Sadowa**	**29.32**	**12**	P		**P**	**06 39 07.9**	**-0.3**
	comp=Z,8.0nm,0.7s,baz=221,slow=8.6,SNR=9.6								
SADO				LR		LR	06 50 06.4		
	comp=Z,66nm,20.9s,baz=217,slow=35								
ACCN	**Adirondack Com**	**29.55**	**21**	*e*P		**P**	**06 39 11.4**	**+1.1**
	comp=Z,9.9nm,0.9s								
COWI	**Conover**	**29.79**	**358**	*e*P		**P**	**06 39 11.8**	**-0.6**
	comp=Z,2.5nm,0.5s								
FFD	**Franklin Falls**	**30.36**	**23**	*e*P		**P**	**06 39 18.8**	**+1.4**
	comp=Z,31nm,1.1s								
LONY	**Lake Ozonia**	**30.36**	**19**	*e*P		**P**	**06 39 18.4**	**+1.0**
	comp=Z,18nm,0.9s								
PFO	**Pinyon Flat Ob**	**31.18**	**309**	P		**P**	**06 39 25.2**	**+0.2**
PFO	**Pinyon Flat Ob**	**31.18**	**309**	P		**P**	**06 39 25.2**	**+0.2**
	comp=Z,2.8nm,1.0s,baz=100,slow=12,SNR=4.1								
PFO				LR		LR	06 54 39.1		
	comp=Z,121nm,18.3s,baz=297,slow=42								
ARUT	**Antelope Range**	**31.26**	**318**	*e*P		**P**	**06 39 27.1**	**+1.5**
	comp=Z,4.2nm,0.8s								
SNOW	**Snow King Moun**	**33.51**	**329**	*e*P		**P**	**06 39 46.7**	**+1.3**
	comp=Z,4.3nm,0.9s								
NV11	**Mina Array Sit**	**34.72**	**316**	*e*P		**P**	**06 39 56.7**	**+0.9**
NVAR	**Mina Array Bea**	**34.81**	**315**	P		**P**	**06 39 58.1**	**+1.3**
NVAR	**Mina Array Bea**	**34.81**	**315**	P		**P**	**06 39 58.1**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=125,slow=8.6,SNR=9.5								
D20A	**Manuel Ranch,**	**35.14**	**335**	⇓P		**P**	**06 40 00.7**	**+1.4**
	baz=35,SNR=8.8								
MCMT	**McKenzie Canyo**	**35.53**	**329**	*e*P		**P**	**06 40 04.3**	**+1.4**
	comp=Z,1.4nm,1.1s								
BOZ	**Bozeman (W)**	**35.54**	**331**	*e*P		**P**	**06 40 04.4**	**+1.6**
	comp=Z,2.4nm,0.9s								
LRM	**Limekiln Ridge**	**36.05**	**330**	*e*P		**P**	**06 40 09.6**	**+2.2**
SIV	**San Ignacio**	**41.39**	**139**	P		**P**	**06 40 55.0**	**+2.9**
SIV	**San Ignacio**	**41.39**	**139**	P		**P**	**06 40 55.0**	**+2.9**
	comp=Z,0.5nm,0.6s,baz=318,slow=8.1,SNR=3.5								
SCHQ	**Schefferville**	**41.73**	**18**	*e*P		**P**	**06 40 53.3**	**-1.2**
	comp=Z,17nm,1.1s								
SCHQ	**Schefferville**	**41.73**	**18**	P		**P**	**06 40 54.0**	**-0.5**
	comp=Z,111nm,0.9s,baz=222,slow=7.3,SNR=14								
SCHQ				LR		LR	06 59 25.9		
	comp=Z,67nm,18.6s,baz=46,slow=38								
YKA	**Yellowknife Ar**	**49.93**	**344**	P		**P**	**06 41 58.5**	**-0.5**
YKA	**Yellowknife Ar**	**49.93**	**344**	P		**P**	**06 41 58.5**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=141,slow=7.7,SNR=11								
SFJD	**Kangerlussuaq**	**56.14**	**17**	*i* P		**P**	**06 42 43.2**	**-1.6**
	comp=Z,4.5nm,0.8s								
ILAR	**Eielson Array**	**62.50**	**335**	P		**P**	**06 43 28.5**	**-0.4**
ILAR	**Eielson Array**	**62.50**	**335**	P		**P**	**06 43 28.5**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=120,slow=5.4,SNR=8.5								
SUMG	**Summit**	**62.98**	**15**	*e*P		**P**	**06 43 31.5**	**-0.9**
	comp=Z,10nm,0.9s								
SUMG	**Summit**	**62.98**	**15**	*i* P		**P**	**06 43 31.9**	**-0.5**
	comp=Z,10nm,0.9s								
TRF	**Thorofare Moun**	**63.47**	**334**	*e*P		P	06 43 40.0	+4.5
	comp=Z,4.8nm,0.8s								
ESDC	**Sonseca Array**	**75.02**	**53**	P		**P**	**06 44 46.6**	**-0.9**
ESDC	**Sonseca Array**	**75.02**	**53**	P		**P**	**06 44 46.6**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=284,slow=5.7,SNR=9.4								
NB2	**NORSAR Subarra**	**80.16**	**29**	P		**P**	**06 45 15.0**	**-0.7**
	comp=Z,1.0nm,0.7s,baz=288,slow=5.6								
NOA	**NORSAR Array B**	**80.16**	**29**	P		**P**	**06 45 14.7**	**-1.0**
NOA	**NORSAR Array B**	**80.16**	**29**	P		**P**	**06 45 14.7**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=288,slow=5.2,SNR=6.0								
GERES	**GERESS Array B**	**85.18**	**41**	P		**P**	**06 45 40.2**	**-2.0**
GERES	**GERESS Array B**	**85.18**	**41**	P		**P**	**06 45 40.2**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=300,slow=2.9,SNR=6.1								
FINES	**FINESS Array B**	**86.66**	**26**	P		**P**	**06 45 48.3**	**-0.8**
FINES	**FINESS Array B**	**86.66**	**26**	P		**P**	**06 45 48.3**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=263,slow=5.5,SNR=3.3								
CN2	**Changchun**	**113.02**	**335**	*e*PKP		**PKiKP**	**06 51 40.0**	**-3.1**
WMQ	**Urumqi**	**120.08**	**4**	*e*PKP		**PKPdf**	**06 51 56.0**	**-0.8**
WMQ				LR		LR			
	comp=N,71nm,25.4s								
WMQ				LR		LR			
	comp=E,76nm,24.4s								
WMQ				LR		LR			
	comp=Z,62nm,26.2s								
HHC	**Hu-ho-hao-te**	**120.46**	**343**	*e*PKP		**PKPdf**	**06 51 59.8**	**+2.1**
HHC				PP		**PP**	**06 53 28.0**	**+5.0**
HHC				PKS		**PKSdf**	**06 55 35.0**	**+0.5**
HHC				SKS		**SKSdf**	**06 59 10.3**	**+0.4**
HHC				SKKS		**SKKSac**	**07 00 21.5**	**-2.7**
HHC				SS		**SS**	**07 09 52.5**	**+1.5**
HHC				LR		LR			
	comp=N,220nm,19.7s								
HHC				LR		LR			
	comp=E,230nm,20.6s								
HHC				LR		LR			
	comp=Z,230nm,19.6s								
GTA	**Gaotai**	**124.20**	**353**	*e*PKPbc		PKPdf	06 52 14.3	+9.4
LZH	**Lanzhou**	**126.83**	**348**	*e*PKP		**PKPdf**	**06 52 07.0**	**-3.1**
LZH				sPKP			06 52 11.5		
WRA	**Warramunga Arr**	**140.00**	**258**	PKPpre		PKPpre	06 52 32.4		
WRA	**Warramunga Arr**	**140.00**	**258**	PKhKP		PKPpre	06 52 32.4		
	comp=Z,0.5nm,0.8s,baz=81,slow=2.0,SNR=3.0								
ASAR	**Alice Springs**	**140.37**	**252**	PKPpre		PKPpre	06 52 33.0		
ASAR	**Alice Springs**	**140.37**	**252**	PKhKP		PKPpre	06 52 33.0		
	comp=Z,0.3nm,0.8s,baz=81,slow=2.9,SNR=3.0								

*ISK **30** 06:37:35.6, 39˚.13N×27˚.58E, h20km, MD2.7*
*ISCJB **30** 06:37:36.3±0.6, 39˚.13N±0˚.03×27˚.54E±0˚.05, h0km, Error ellipse: s-maj=6.1km s-min=3.7km az=12.8*
*DDA **30** 06:37:36.3, 39˚.12N×27˚.55E, h7km, MD2.6*
*CSEM **30** 06:37:36.6±0.3, 39˚.13N×27˚.58E, h1km, MD2.6, Error ellipse: s-maj=7.0km s-min=4.2km az=100.0*

ISC 30 06:37:36.3±1.0, **39˚.12N**±0˚.02×**27˚.56E**±0˚.04, **h0km, n18, σ0s67/29, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.32**	**141**	*i* P	**Pg**	**06 37 42.3**	**0.0**
AKHS				*i* S	**Sg**	**06 37 47.7**	**+1.3**
AKHS	**Akhisar**	**0.32**	**141**	*i* P	**Pg**	**06 37 42.3**	**0.0**
AKHS				*i* S	**Sg**	**06 37 47.7**	**+1.3**
BALY	**Balya**	**0.62**	**4**	*i* P	**Pg**	**06 37 48.7**	**+0.6**
BALY				*i* S	**Sb**	**06 37 58.7**	**-0.5**
BALY	**Balya**	**0.62**	**4**	*i* P	**Pg**	**06 37 48.7**	**+0.6**
BALY				*i* S	**Sb**	**06 37 58.7**	**-0.5**
IZM	**Izmir**	**0.76**	**198**	*e*PG	**Pg**	**06 37 51.0**	**+0.2**
IZM				*e*SG	**Sb**	**06 38 02.3**	**-1.0**
IZM	**Izmir**	**0.76**	**198**	*e*Pg	**Pg**	**06 37 51.0**	**+0.2**
IZM				*e*Sg	**Sb**	**06 38 02.3**	**-1.0**
BLCB	**Balcova**	**0.84**	**209**	*e*PG	**Pg**	**06 37 52.6**	**+0.2**
BLCB				*e*SG	**Sb**	**06 38 05.0**	**-0.5**
BLCB	**Balcova**	**0.84**	**209**	*e*Pg	**Pg**	**06 37 52.6**	**+0.2**
BLCB				*e*Sg	**Sb**	**06 38 05.1**	**-0.5**
DURS	**Dursunbey**	**0.85**	**56**	*i* P	**Pg**	**06 37 52.9**	**+0.2**
DURS				*i* S	**Sn**	**06 38 08.0**	**-1.0**
DURS	**Dursunbey**	**0.85**	**56**	*i* P	**Pg**	**06 37 52.9**	**+0.2**
GONE	**Gonen-Balikesi**	**0.93**	**6**	*e*PG	**Pg**	**06 37 53.9**	**-0.2**
GONE	**Gonen-Balikesi**	**0.93**	**6**	*e*Pg	**Pg**	**06 37 53.9**	**-0.2**
DST	**Dursunbey**	**0.95**	**59**	*e*PG	**Pg**	**06 37 54.2**	**-0.3**
DST	**Dursunbey**	**0.95**	**59**	*e*Pg	**Pg**	**06 37 54.2**	**-0.3**
MANT	**Manisa**	**1.00**	**129**	*i* P	**Pb**	**06 37 56.7**	**0.0**
MANT				*i* S	**Sb**	**06 38 11.3**	**+0.8**
MANT	**Manisa**	**1.00**	**129**	*i* P	**Pb**	**06 37 56.7**	**0.0**
MANT				*i* S	**Sb**	**06 38 11.3**	**+0.8**
KULA	**Kula-Manisa**	**1.05**	**125**	*e*PG	**Pg**	**06 37 55.6**	**-0.9**
KULA	**Kula-Manisa**	**1.05**	**125**	*e*Pg	**Pg**	**06 37 55.6**	**-0.9**

*IDC **30** 06:47:52.2±0.5, 60˚.43S×26˚.08W, h0km, mb4.8/10, mb1 4.9/12, mb1mx4.7/15, mbtmp4.8/12, ML5.1/2, MS5.2/18, Ms1 5.2/18, ms1mx5.1/19, Error ellipse: s-maj=19.8km s-min=13.4km az=133.0*
*ISCJB **30** 06:47:54.2±0.4, 60˚.49S±0˚.06×26˚.5W±0˚.1, h19km, mb4.8/26, MS5.2/183, Error ellipse: s-maj=10.8km s-min=7.5km az=153.6*
*NEIC **30** 06:47:54.0±0.4, 60˚.42S×26˚.11W, h10km, mb5.1/16, MS5.2/151, Error ellipse: s-maj=13.9km s-min=11.8km az=74.0*
*BJI **30** 06:47:58.7, 60˚.80S×26˚.40W, h35km, mB5.5/16, Ms5.5/24, Ms7 5.1/23*
*GCMT **30** 06:47:58.0±0.1, 60˚.75S×27˚.43W, h12km, MW5.5, Moment Tensor Solution. s87,c140; s41,c41; Moment tensor: Scale 10^17Nm; Mrr=0.16±.02; Mθθ-0.01±.03; Mφφ0.17±.02; Mrθ-0.65±.06; Mθφ-1.80±.02; Mφr0.16±.05; Best double couple: M0 1.90000×10^17 NP1:φ2.00000°, δ70.00000°, λ1.00000°. NP2:φ272.00000°, δ89.00000°, λ160.00000°. Principal axes: T 2.0300, Plg15.0000°, Azm225.0000°; N -0.2200, Plg70.0000°, Azm88.0000°; P -1.8100, Plg13.0000°, Azm318.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=212, per= 50.*

ISC 30 06:47:55.7±0.3, **60˚.49S**±0˚.07×**26˚.81W**±0˚.06, **h19km, n269, σ2s21**/129, **mb4.9**/26, **MS5.2**/184, **2C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.68**	**151**	*e*Pn	**Pn**	**06 50 55.2**	**+0.6**
VNA1	**Neumayer--Stat**	**12.68**	**151**	*e*Sn	**Sn**	**06 53 15.4**	**+0.4**
SNAA	**Sanae**	**14.68**	**150**	*e*Pn	Pn	06 51 20.5	-1.5
SNAA	**Sanae**	**14.68**	**150**	*e*Sn	Sn	06 53 56.4	-7.6
SNAA	**Sanae**	**14.68**	**150**	*e*Pn	**Pn**	**06 51 21.2**	**-0.9**
SNAA				*e*Sn	Sn	06 53 57.1	-6.8
SNAA	**Sanae**	**14.68**	**150**	Pn	**Pn**	**06 51 21.3**	**-0.7**
	3.8nm,0.3s,baz=318,slow=13,SNR=379						
SNAA				Sn	Sn	06 53 57.6	-6.4
	0.2nm,0.3s,baz=223,slow=18,SNR=5.3						
SNAA				LR	LR	06 56 10.6	
	comp=Z,5μm,18.5s,baz=325,slow=34						
PMSA	**Palmer Station**	**17.46**	**240**	*e*P	**P**	**06 52 01.1**	**+2.3**
	120nm,1.1s						
PMSA				S	**S**	**06 55 21.3**	**+2.1**
PMSA	**Palmer Station**	**17.46**	**240**	P	**P**	**06 51 59.6**	**+0.8**
	1.5nm,0.3s,baz=121,slow=12,SNR=5.1						
PMSA				S	**S**	**06 55 21.3**	**+2.1**
	4.4nm,0.3s,baz=160,slow=21,SNR=7.2						
PMSA				LR	LR	06 57 38.1	
	comp=Z,10μm,18.0s,baz=86,slow=33						
USHA	**Ushuaia**	**22.66**	**266**	P	**P**	**06 52 52.9**	**-2.5**
USHA	**Ushuaia**	**22.66**	**266**	P	**P**	**06 52 52.9**	**-2.5**
	30nm,1.0s,baz=112,slow=9.8,SNR=9.7						
USHA				LR	LR	06 59 17.0	
	comp=Z,7μm,19.1s,baz=279,slow=30						
SYO	**Syowa Base**	**28.13**	**136**	⇑*e*P	**P**	**06 53 45.0**	**-0.9**
SYO	**Syowa Base**	**28.13**	**136**	⇑epP	pP	06 53 51.2	-0.5
QSPA	**South Pole Qui**	**29.74**	**180**	*e*P	**P**	**06 54 01.4**	**+0.9**
	125nm,1.1s						
QSPA	**South Pole Qui**	**29.74**	**180**	P	**P**	**06 54 01.4**	**+0.9**
	80nm,1.0s,baz=200,slow=6.3,SNR=32						
QSPA				LR	LR	07 04 19.4	
	comp=Z,948nm,20.2s,baz=9.7,slow=33						
TRQA	**Tornquist**	**31.48**	**299**	PFAKE		06 54 30.0	+14
TRQA				LR	LR		
	comp=Z,4μm,22.0s						
PLCA	**Paso Flores**	**33.22**	**286**	P	P	06 54 36.4	+5.2
PLCA	**Paso Flores**	**33.22**	**286**	P	P	06 54 36.4	+5.2
	comp=Z,2.4nm,0.8s,baz=170,slow=11,SNR=4.6						
MAW	**Mawson**	**36.52**	**140**	P	**P**	**06 55 01.7**	**+2.5**
MAW	**Mawson**	**36.52**	**140**	P	**P**	**06 55 01.7**	**+2.5**
	comp=Z,17nm,0.9s,baz=230,slow=7.9,SNR=16						
MAW				LR	LR	07 09 06.3	
	comp=Z,4μm,18.5s,baz=238,slow=35						
SPB	**Sao Paulo**	**39.57**	**330**	PFAKE		06 55 40.0	+15
SPB				LR	LR		
	comp=Z,3μm,20.0s						
CFAA	**Coronel Fontan**	**39.66**	**298**	P	P	06 55 20.2	-5.9
CFAA	**Coronel Fontan**	**39.66**	**298**	P	P	06 55 20.2	-5.9
	comp=Z,0.2nm,0.4s,baz=170,slow=6.5,SNR=9.1						
CFAA				LR	LR	07 10 23.4	
	comp=Z,243nm,20.8s,baz=146,slow=34						
SBA	**Scott Base**	**41.65**	**184**	*e*P	**P**	**06 55 42.6**	**+0.6**
	comp=Z,36nm,1.1s						
SUR	**Sutherland**	**41.81**	**70**	P	P	06 55 41.0	-3.1
SUR				LR	LR		
	comp=Z,2μm,21.0s						
SUR	**Sutherland**	**41.81**	**70**	P	P	06 55 41.0	-3.1
	comp=Z,18nm,1.2s,baz=21,slow=3.2,SNR=3.2						
VNDA	**Vanda**	**42.13**	**183**	*e*P	**P**	**06 55 46.6**	**+0.7**
	comp=Z,43nm,1.1s						
VNDA	**Vanda**	**42.13**	**183**	P	**P**	**06 55 46.4**	**+0.5**
	comp=Z,13nm,1.1s,baz=193,slow=6.6,SNR=28						
VNDA				LR	LR	07 12 45.8	
	comp=Z,674nm,19.4s,baz=12,slow=35						
LCO	**Las Campanas**	**42.97**	**297**	*e*P	**P**	**06 55 54.6**	**+1.0**
	comp=Z,18nm,1.0s						
LCO				LR	LR		
	comp=Z,2μm,22.0s						
SHEL	**Horse Pasture**	**47.02**	**28**	PFAKE		06 56 40.0	+14
SHEL				LR	LR		
	comp=Z,3μm,20.0s						
BOSA	**Boshof**	**47.04**	**71**	*e*P	**P**	**06 56 27.4**	**+1.6**
	comp=Z,31nm,1.1s						
BOSA	**Boshof**	**47.04**	**71**	P	**P**	**06 56 25.9**	**0.0**
	comp=Z,11nm,0.8s,baz=207,slow=7.8,SNR=14						
BOSA				LR	LR	07 12 49.6	
	comp=Z,3μm,18.9s,baz=212,slow=32						
BDFB	**Brasilia**	**47.35**	**332**	P	P	06 56 25.0	-3.3
BDFB	**Brasilia**	**47.35**	**332**	P	P	06 56 25.0	-3.3
	comp=Z,8.1nm,0.9s,baz=113,slow=8.5,SNR=5.8						
BDFB				LR	LR	07 13 03.0	
	comp=Z,2μm,21.1s,baz=330,slow=32						
LVC	**Limon Verde**	**47.81**	**303**	*e*P	**P**	**06 56 33.0**	**+1.0**
	comp=Z,3.0nm,0.7s						
LVC				LR	LR		
	comp=Z,2μm,19.0s						
LBTB	**Lobatse**	**50.26**	**69**	*e*P	**P**	**06 56 52.2**	**+1.7**
	comp=Z,34nm,1.1s						
SIV	**San Ignacio**	**50.85**	**316**	LR	LR	07 17 23.7	
	comp=Z,2μm,19.7s,slow=35						
TSUM	**Tsumeb**	**51.81**	**57**	*e*P	**P**	**06 57 03.9**	**+1.6**
	comp=Z,31nm,1.1s						
TSUM				LR	LR		
	comp=Z,3μm,21.0s						
PAF	**Port-aux-Franc**	**51.85**	**124**	PFAKE		06 57 10.0	+7.9
PAF				LR	LR		
	comp=Z,5μm,19.0s						
DRV	**Dumont d'Urvil**	**52.77**	**173**	S	S	07 04 25.0	-10
DRV				SS	**SKiKP**	**07 08 24.0**	**-2.9**
DRV				R		07 14 00.0	
LPAZ	**La Paz**	**53.18**	**308**	*e*P	P	06 57 06.9	-6.2
	comp=Z,5.7nm,0.8s						
LPAZ	**La Paz**	**53.18**	**308**	P	**P**	**06 57 14.4**	**+1.4**
	comp=Z,3.0nm,0.5s,baz=151,slow=6.6,SNR=13						
LPAZ				LR	LR	07 20 19.4	
	comp=Z,1μm,20.0s,baz=136,slow=36						
ASCN	**Ascension**	**53.28**	**15**	PFAKE		06 57 20.0	+7.0
ASCN				LR	LR		
	comp=Z,575nm,21.0s						
RCBR	**Riachuelo**	**54.97**	**349**	PFAKE		06 57 40.0	+15
RCBR				LR	LR		
	comp=Z,758nm,19.0s						
SAML	**Samuel**	**58.12**	**316**	*e*P	P	06 57 44.2	-3.6
	comp=Z,22nm,1.4s						
SAML				LR	LR		
	comp=Z,2μm,22.0s						
LSZ	**Lusaka**	**59.90**	**66**	*e*P	**P**	**06 58 01.7**	**+1.4**
	comp=Z,64nm,1.3s						
LSZ				LR	LR		
	comp=Z,4μm,20.0s						
NNA	**Nana**	**60.63**	**301**	PFAKE		06 58 20.0	+15
NNA				LR	LR		
	comp=Z,2μm,22.0s						
ABPO	**Ambohimpanom**	**65.78**	**86**	PFAKE		06 58 50.0	+10
ABPO				LR	LR		
	comp=Z,1μm,19.0s						
DBIC	**Dimbokro**	**69.16**	**23**	P	**P**	**06 58 58.2**	**-2.3**
DBIC	**Dimbokro**	**69.16**	**23**	P	**P**	**06 58 58.2**	**-2.3**
	comp=Z,4.9nm,0.8s,baz=137,slow=13,SNR=3.8						
DBIC				LR	LR	07 22 10.9	
	comp=Z,1μm,21.5s,baz=169,slow=30						
OTAV	**Otavalo**	**72.32**	**305**	*e*P	**P**	**06 59 20.6**	**+0.1**
	comp=Z,2.3nm,1.1s						
OTAV				LR	LR		
	comp=Z,921nm,20.0s						
MBAR	**Mbarara**	**74.06**	**61**	PFAKE		06 59 40.0	+10
MBAR				LR	LR		
	comp=Z,683nm,19.0s						
ROSC	**El Rosal**	**74.92**	**310**	LR	LR	07 32 38.0	
	comp=Z,1μm,20.8s,baz=186,slow=36						
SACV	**Santiago Islan**	**75.25**	**3**	PFAKE		06 59 50.0	+13
SACV				LR	LR		
	comp=Z,597nm,19.0s						
KMBO	**Kilima Mbogo**	**76.50**	**68**	*e*P	P	06 59 49.0	+4.5
	comp=Z,81nm,2.0s						
KMBO	**Kilima Mbogo**	**76.50**	**68**	LR	LR	07 31 05.1	
	comp=Z,3μm,18.6s,baz=22,slow=34						
PAYG	**Puerto Ayora**	**76.63**	**293**	PFAKE		07 00 00.0	+15
PAYG				LR	LR		
	comp=Z,1μm,20.0s						
TAU	**Tasmania Unive**	**76.84**	**176**	*e*P	P	06 59 49.8	+4.0
	comp=Z,51nm,1.1s						
TAU				LR	LR		
	comp=Z,2μm,19.0s						
TOA0	**Torodi Ar. Sit**	**76.86**	**29**	*e*P	**P**	**06 59 45.2**	**-0.9**
TORD	**Torodi Ar. Bea**	**76.86**	**29**	P	**P**	**06 59 45.1**	**-1.0**
TORD	**Torodi Ar. Bea**	**76.86**	**29**	P	**P**	**06 59 45.1**	**-1.0**
	comp=Z,11nm,0.7s,baz=197,slow=5.6,SNR=34						
TORD				LR	LR	07 26 45.5	
	comp=Z,1μm,21.5s,baz=155,slow=30						
SNZO	**South Karori**	**77.03**	**196**	PFAKE		07 00 00.0	+13
SNZO				LR	LR		
	comp=Z,892nm,20.0s						
GRGR	**Grenville**	**77.53**	**325**	PFAKE		07 00 00.0	+10
GRGR				LR	LR		
	comp=Z,1μm,22.0s						
BBGH	**Gun Hill**	**77.92**	**327**	PFAKE		07 00 00.0	+8.0
BBGH				LR	LR		
	comp=Z,2μm,19.0s						
RKT	**Rikitea**	**78.63**	**243**	*e*S	**S**	**07 09 49.8**	**-2.0**
	comp=Z,561nm,34.0s						
RKT				*e*LQ	LQ	07 20 58.1	
	comp=Z,784nm,31.5s						
RKT				*e*LR	LR	07 24 19.9	
	comp=Z,3μm,28.0s,baz=153						
URZ	**Urewera**	**79.65**	**199**	*e*P	**P**	**07 00 01.5**	**0.0**
	comp=Z,79nm,1.6s						
URZ	**Urewera**	**79.65**	**199**	P	**P**	**07 00 00.9**	**-0.5**
	comp=Z,9.2nm,0.9s,baz=111,slow=4.0,SNR=3.6						
FDF	**Fort de France**	**79.87**	**326**	PFAKE		07 00 10.0	+7.2
FDF				LR	LR		
	comp=Z,568nm,21.0s						
BCIP	**Isla Barro Col**	**81.00**	**307**	PFAKE		07 00 20.0	+11
BCIP				LR	LR		
	comp=Z,660nm,20.0s						
MSEY	**Mahe Island**	**82.16**	**86**	PFAKE		07 00 20.0	+4.8
MSEY				LR	LR		
	comp=Z,974nm,20.0s						
NWAO	**Narrogin (SRO)**	**82.36**	**150**	PFAKE		07 00 30.0	+14
NWAO				LR	LR		
	comp=Z,991nm,19.0s						
ANWB	**Willy Bob**	**82.84**	**327**	PFAKE		07 00 30.0	+12
ANWB				LR	LR		
	comp=Z,467nm,20.0s						
JTS	**JuntasAbangare**	**84.09**	**303**	PFAKE		07 00 40.0	+15
JTS				LR	LR		
	comp=Z,1μm,21.0s						
TBI	**Tubuai**	**84.44**	**231**	*e*S	**S**	**07 10 50.4**	**-1.5**
	comp=Z,341nm,24.0s						
TBI				*e*LR	LR	07 26 54.3	
	comp=Z,647nm,21.2s,baz=160						
CAN	**Canberra**	**84.47**	**177**	PFAKE		07 00 40.0	+13
CAN				LR	LR		
	comp=Z,1μm,20.0s						
SJG	**San Juan**	**84.51**	**323**	PFAKE		07 00 40.0	+13
SJG				LR	LR		
	comp=Z,1μm,20.0s						
SDDR	**Presa de Saban**	**86.94**	**318**	PFAKE		07 00 50.0	+11
SDDR				LR	LR		
	comp=Z,1μm,20.0s						
TAM	**Tamanrasset**	**87.06**	**30**	PFAKE		07 00 50.0	+10
TAM				LR	LR		
	comp=Z,893nm,21.0s						
STKA	**Stephens Creek**	**87.47**	**170**	*e*P	**P**	**07 00 41.2**	**-0.5**
STKA	**Stephens Creek**	**87.47**	**170**	P	**P**	**07 00 41.0**	**-0.7**
	comp=Z,11nm,1.0s,baz=166,slow=6.1,SNR=12						
STKA				LR	LR	07 37 47.5	
	comp=Z,2μm,20.1s,baz=185,slow=34						
RAO	**Raoul Island**	**87.50**	**205**	PFAKE		07 00 50.0	+8.2
RAO				LR	LR		
	comp=Z,984nm,22.0s						
DGAR	**Diego Garcia**	**88.15**	**102**	PFAKE		07 00 50.0	+4.9
DGAR				LR	LR		
	comp=Z,2μm,19.0s						
MTDJ	**Mount Denham**	**88.41**	**313**	PFAKE		07 01 00.0	+14
MTDJ				LR	LR		
	comp=Z,1μm,20.0s						
TGUH	**Tegucigalpa,Un**	**88.44**	**302**	PFAKE		07 01 00.0	+14
TGUH				LR	LR		
	comp=Z,780nm,21.0s						
GTBY	**Guantanam

LRAL Lakeview Retre 105.35 311 PFAKE 07 06 30.0
LRAL LR LR
comp=Z,781nm,20.0s
VBMS Vicksburg 105.97 308 PFAKE 07 06 30.0
VBMS LR LR
comp=Z,335nm,20.0s
CUC Castrocucco 106.05 33 PFAKE 07 06 30.0
CUC LR LR
comp=Z,369nm,19.0s
CBN Corbin 106.70 321 PFAKE 07 06 30.0
CBN LR LR
comp=Z,567nm,21.0s
BLA Blacksburg 106.78 318 PFAKE 07 06 30.0
BLA LR LR
comp=Z,941nm,22.0s
CSS Prodhromos 107.05 48 PFAKE 07 06 30.0
CSS LR LR
comp=Z,595nm,20.0s
OXF Oxford 107.57 310 PFAKE 07 06 30.0
OXF LR LR
comp=Z,631nm,21.0s
AQU L'Aquila 107.64 30 PFAKE 07 06 30.0
AQU LR LR
comp=Z,973nm,20.0s
FUNA Funafuti 108.18 207 PFAKE 07 06 30.0
FUNA LR LR
comp=Z,9µm,19.0s
JCT Junction City 108.27 300 PFAKE 07 06 30.0
JCT LR LR
comp=Z,324nm,20.0s
TIR Tirane 108.43 35 PFAKE 07 06 30.0
TIR LR LR
comp=Z,564nm,19.0s
SSB Saint Sauveur 108.47 23 PFAKE 07 06 30.0
SSB LR LR
comp=Z,917nm,19.0s
ISP Isparta 108.60 45 PFAKE 07 06 30.0
ISP LR LR
comp=Z,357nm,21.0s
VLC Villacollemand 108.63 27 PFAKE 07 06 30.0
VLC LR LR
comp=Z,822nm,21.0s
BNI Bardonecchia 108.68 24 PFAKE 07 06 30.0
BNI LR LR
comp=Z,1µm,21.0s
KAPI Kappang 109.64 144 PFAKE 07 06 40.0
KAPI LR LR
comp=Z,361nm,20.0s
BINY Binghamton 109.94 323 PFAKE 07 06 40.0
BINY LR LR
comp=Z,642nm,20.0s
HNR Honiara 110.09 187 PFAKE 07 06 40.0
HNR LR LR
comp=Z,647nm,20.0s
PMG Port Moresby 110.16 174 PFAKE 07 06 40.0
PMG LR LR
comp=Z,1µm,19.0s
ACSO Alum Creek Sta 110.36 317 PFAKE 07 06 40.0
ACSO LR LR
comp=Z,898nm,21.0s
TUE Stuetta 110.59 26 PFAKE 07 06 40.0
TUE LR LR
comp=Z,535nm,19.0s
LBNH Lisbon 110.67 327 PFAKE 07 06 40.0
LBNH LR LR
comp=Z,696nm,20.0s
NCB Newcomb 111.06 325 PFAKE 07 06 40.0
NCB LR LR
comp=Z,769nm,21.0s
ERPA Erie 111.09 320 PFAKE 07 06 40.0
ERPA LR LR
comp=Z,545nm,21.0s
ANTO Ankara 111.22 45 PFAKE 07 06 40.0
ANTO LR LR
comp=Z,627nm,22.0s
WMOK Wichita Mounta 111.51 303 PFAKE 07 06 40.0
WMOK LR LR
comp=Z,268nm,20.0s
LONY Lake Ozonia 111.75 325 PFAKE 07 06 40.0
LONY LR LR
comp=Z,693nm,20.0s
MNTX Cornudas Mount 111.76 296 PFAKE 07 06 40.0
MNTX LR LR
comp=Z,315nm,21.0s
ECH Echery 111.80 24 PFAKE 07 06 40.0
ECH LR LR
comp=Z,751nm,20.0s
BFO Black Forest 112.15 25 PFAKE 07 06 40.0
BFO LR LR
comp=Z,1µm,20.0s
KULM Kulim 112.30 121 PFAKE 07 06 40.0
KULM LR LR
comp=Z,798nm,19.0s
KSM Kuching 112.63 133 PFAKE 07 06 40.0
KSM LR LR
comp=Z,299nm,20.0s
AMTX Amarillo 112.86 301 PFAKE 07 06 40.0
AMTX LR LR
comp=Z,502nm,20.0s
WLF Walferdange 112.99 23 PFAKE 07 06 40.0
WLF LR LR
comp=Z,635nm,20.0s
KHC Kasperske Hory 114.05 28 AMS AMS 07 52 20.0
comp=Z,700nm,18.9s
KSU1 Kansas State U 114.38 307 PFAKE 07 06 50.0 +17
KSU1 LR LR
comp=Z,851nm,21.0s
PSZ Piszkesteto 114.49 33 PFAKE 07 06 40.0 +6.8
PSZ LR LR
comp=Z,269nm,19.0s
TREC Trest 114.65 29 AMS AMS 07 49 20.0
comp=Z,1µm,21.2s
TUC Tucson 114.72 292 PFAKE 07 06 50.0 +16
TUC LR LR
comp=Z,635nm,20.0s
VYHS Vyhne 114.75 32 PDIF **Pdif 07 02 48.4 +4.3**
ANMO Albuquerque 114.98 297 PFAKE 07 06 50.0 +15
ANMO LR LR
comp=Z,513nm,19.0s
PRU Pruhonice 115.07 28 AMS AMS 07 48 50.0
comp=Z,600nm,22.9s
JFWS Jewell Farm 115.27 313 PFAKE 07 06 50.0 +15
JFWS LR LR
comp=Z,479nm,22.0s
SCIA State Center 115.48 311 PFAKE 07 06 50.0 +15
SCIA LR LR
comp=Z,903nm,21.0s
PVCC Panska Ves 115.58 28 AMS AMS 07 51 40.0
comp=Z,600nm,17.5s
OKC Ostrava-Krasne 115.81 31 AMS AMS 07 54 20.0
comp=Z,400nm,18.9s
DPC Dobruska-Polom 115.83 29 AMS AMS 07 50 50.0
comp=Z,500nm,20.5s
GNI Garni 115.98 54 PFAKE 07 06 50.0 +14
GNI LR LR
comp=Z,743nm,19.0s
KWP Kalwaria Pacla 116.82 34 PFAKE 07 06 50.0 +12
KWP LR LR
comp=Z,501nm,20.0s
SDCO Great Sand Dun 116.92 299 PFAKE 07 06 50.0 +12
SDCO LR LR
comp=Z,555nm,20.0s
ESK Eskdalemuir 116.98 15 PFAKE 07 06 50.0 +12
ESK LR LR
comp=Z,854nm,20.0s
COWI Conover 117.65 316 PFAKE 07 06 50.0 +11
COWI LR LR
comp=Z,617nm,20.0s
WUAZ Wupatki 117.66 294 PFAKE 07 06 50.0 +10
WUAZ LR LR
comp=Z,400nm,20.0s
OGNE Ogallala 118.14 304 PFAKE 07 06 50.0 +10
OGNE LR LR
comp=Z,567nm,20.0s
ECSD EROS Data Cent 118.34 309 PFAKE 07 06 50.0 +9.3
ECSD LR LR
comp=Z,920nm,22.0s
PFO Pinyon Flat Ob 118.43 288 PFAKE 07 06 50.0 +8.7
PFO LR LR
comp=Z,410nm,21.0s
ISCO Idaho Springs 118.68 301 PFAKE 07 06 50.0 +8.2
ISCO LR LR
comp=Z,441nm,21.0s
KKM Kota Kinabalu 118.96 137 PFAKE 07 06 50.0 +7.1
KKM LR LR
comp=Z,519nm,19.0s
TARA Tarawa 119.09 203 PFAKE 07 06 50.0 +6.9
TARA LR LR
comp=Z,720nm,21.0s
KIEV Kiev 119.64 37 PFAKE 07 06 50.0 +7.1
KIEV LR LR
comp=Z,361nm,22.0s
EYMN Ely 120.06 315 PFAKE 07 07 00.0 +16
EYMN LR LR
comp=Z,590nm,21.0s
MVU Marysvale 120.50 295 PFAKE 07 07 00.0 +15
MVU LR LR
comp=Z,696nm,21.0s
DUG Dugway 122.15 296 PFAKE 07 07 00.0 +12
DUG LR LR
comp=Z,562nm,22.0s
TPH Tonopah 122.44 291 PFAKE 07 07 00.0 +11
TPH LR LR
comp=Z,387nm,20.0s
HWUT Hardware Ranch 122.74 297 PFAKE 07 07 00.0 +11
HWUT LR LR
comp=Z,345nm,20.0s
DAV Davao City (W) 122.79 147 PFAKE 07 07 00.0 +10
DAV LR LR
comp=Z,468nm,22.0s
BW06 Boulder Array 122.81 300 PFAKE 07 07 00.0 +10
BW06 LR LR
comp=Z,718nm,21.0s
KONO Kongsberg 123.11 21 PFAKE 07 07 00.0 +11
KONO LR LR
comp=Z,829nm,19.0s
NVAR Mina Array Bea 123.22 290 PKP **PKPdf 07 06 50.4 -0.1**
NVAR Mina Array Bea 123.22 290 PKP **PKPdf 07 06 50.4 -0.1**
comp=Z,0.2nm,0.7s,baz=180,slow=1.7,SNR=2.5
CMAR Chiang Mai Arr 123.23 113 PKP **PKPdf 07 06 50.0 -0.8**
CMAR Chiang Mai Arr 123.23 113 PKP **PKPdf 07 06 50.0 -0.8**
comp=Z,0.7nm,0.3s,baz=232,slow=3.2,SNR=4.4
AHID Auburn Hatcher 123.47 299 PFAKE 07 07 00.0 +9.2
AHID LR LR
comp=Z,582nm,21.0s
CHTO Chiang Mai 123.54 113 PFAKE 07 07 00.0 +8.6
CHTO LR LR
comp=Z,382nm,22.0s
TPAW Teton Pass 123.99 299 *e*PKPdf **PKPdf 07 06 54.2 +2.4**
BMN Battle Mountai 124.33 292 PFAKE 07 07 00.0 +7.5
BMN LR LR
comp=Z,371nm,20.0s
RLMT Red Lodge 124.58 302 PFAKE 07 07 00.0 +7.1
RLMT LR LR
comp=Z,832nm,21.0s
LKWY Lake 124.62 300 PFAKE 07 07 10.0 +17
LKWY LR LR
comp=Z,893nm,19.0s
NB2 NORSAR Subarra124.70 21 PKPdf **PKPdf 07 06 50.3 -2.0**
comp=Z,3.4nm,1.1s,baz=202,slow=1.9
NOA NORSAR Array B124.70 21 PKP **PKPdf 07 06 51.4 -0.9**
NOA NORSAR Array B124.70 21 PKP **PKPdf 07 06 51.4 -0.9**
comp=Z,1.3nm,0.9s,baz=199,slow=1.9,SNR=3.6
DGMT Dagmar 125.21 307 PFAKE 07 07 10.0 +16
DGMT LR LR
comp=Z,324nm,20.0s
HLID Hailey 125.56 297 PFAKE 07 07 10.0 +15
HLID LR LR
comp=Z,375nm,19.0s
BOZ Bozeman (W) 126.01 300 PFAKE 07 07 10.0 +14
BOZ LR LR
comp=Z,541nm,22.0s
EGMT Eagleton 127.10 303 PFAKE 07 07 10.0 +13
EGMT LR LR
comp=Z,612nm,20.0s
BMO Blue Mountains 127.86 296 PFAKE 07 07 10.0 +11
BMO LR LR
comp=Z,533nm,19.0s
MSO Missoula 127.93 300 *e*PKPdf **PKPdf 07 07 02.9 +3.8**
MSO LR LR
comp=Z,366nm,20.0s
FINES FINESS Array B 128.21 29 PKP **PKPdf 07 06 56.2 -2.7**
FINES FINESS Array B 128.21 29 PKP **PKPdf 07 06 56.2 -2.7**
comp=Z,5.3nm,0.9s,baz=50,slow=3.0,SNR=7.8
SFJD Kangerlussuaq 128.39 348 PFAKE 07 07 10.0 +11
SFJD LR LR
comp=Z,479nm,19.0s
QIZ Qiongzhong 128.48 124 PKP **PKPdf 07 07 01.3 +0.5**
QIZ PP **PP 07 09 07.0 +1.1**
QIZ LR LR
comp=E,240nm,18.2s
QIZ LR LR
comp=Z,570nm,20.3s
QIZ Qiongzhong 128.48 124 PFAKE 07 07 10.0 +9.2
QIZ LR LR
comp=Z,616nm,19.0s
LSA Lhasa 129.07 98 PFAKE 07 07 10.0 +7.7
LSA LR LR
comp=Z,607nm,19.0s
FFC Flin Flon 129.36 314 PFAKE 07 07 10.0 +8.6
FFC LR LR
comp=Z,559nm,20.0s
KSH Kashi 129.45 78 *e*PKP **PKPdf 07 06 59.8 -2.4**
KSH *es*PKP 07 07 14.3
KSH *e*PKS **PKSdf 07 10 35.0 -3.8**
KSH *e*SKS **SKSdf 07 14 06.5 -6.0**
KSH AMB AMB
KSH comp=Z,110nm,4.6s LR LR
KSH comp=N,140nm,5.0s LR LR
KSH comp=E,88nm,4.7s LR LR
KSH comp=Z,120nm,4.1s LR LR
AKTO Aktyubinsk 129.75 56 PKP **PKPdf 07 07 00.8 -1.5**
AKTO Aktyubinsk 129.75 56 PKP **PKPdf 07 07 00.8 -1.5**
comp=Z,4.3nm,0.9s,baz=275,slow=3.7,SNR=9.0
HAWA Hanford 130.04 295 PFAKE 07 07 20.0 +17
HAWA LR LR
comp=Z,518nm,22.0s
NEW Newport 130.41 299 PFAKE 07 07 20.0 +16
NEW LR LR
comp=Z,563nm,21.0s
KMI Kunming 130.74 113 PKP **PKPdf 07 07 03.8 -1.5**
KMI PP **PP 07 09 22.8 +1.8**
KMI PKS PKSdf 07 10 37.3 -4.8
KMI SKKS 07 16 14.0
KMI LR LR
KMI comp=N,220nm,19.4s LR LR
KMI comp=E,210nm,15.2s LR LR
KMI comp=Z,250nm,22.6s LR LR
EKS2 Erkin-Say 130.83 73 PFAKE 07 07 20.0 +15
EKS2 LR LR
comp=Z,850nm,19.0s
AAK Ala-Archa 131.15 74 PKP **PKPdf 07 07 05.2 -0.2**
AAK *e*PKPdf **PKiKP 07 07 08.5 +2.1**
AAK LR LR
comp=Z,795nm,20.0s
AAK Ala-Archa 131.15 74 PKP **PKPdf 07 07 05.2 -0.2**
comp=Z,1.0nm,0.4s,baz=196,slow=19,SNR=2.2
TKM2 Tokmak 2 131.89 75 PFAKE 07 07 20.0 +13
TKM2 LR LR
comp=Z,1µm,20.0s
NLWA Neilton Lookou 132.75 293 PFAKE 07 07 20.0 +12
NLWA LR LR
comp=Z,541nm,20.0s
GUMO Guam 132.78 169 PFAKE 07 07 20.0 +11
GUMO LR LR
comp=Z,445nm,19.0s
SUMG Summit 133.03 355 *i* P **SKPbc 07 10 34.8 +0.1**
comp=Z,6.8nm,0.9s
GYA Guiyang 133.66 116 *e*Pdif **Pdif 07 04 09.0 +0.1**
GYA PKP **PKPdf 07 07 11.0 +0.4**
GYA sPKP 07 07 25.5
GYA PP **PP 07 09 44.5 +4.9**
GYA PKS **PKSdf 07 10 45.5 -1.7**
GYA SKKS 07 16 31.0
GYA SS **SS 07 27 26.0 +1.3**
GYA AMB AMB
GYA comp=Z,120nm,7.6s LR LR
GYA comp=N,180nm,20.2s LR LR
GYA comp=E,150nm,21.0s LR LR
GYA comp=Z,160nm,20.4s LR LR
KEV Kevo 135.47 24 PFAKE 07 07 20.0 +7.6
KEV LR LR
comp=Z,630nm,19.0s
CD2 Chengdu 136.12 110 PKP **PKPdf 07 07 16.0 +1.0**
CD2 sPKP 07 07 31.0
CD2 PP **PP 07 10 00.3 +5.1**
CD2 PKS **PKSdf 07 10 51.0 -0.3**
CD2 SKS **SKSdf 07 14 21.3 -3.4**
CD2 SKKS **SKKSac 07 16 47.0 -1.7**
CD2 SS **SS 07 27 56.0 +1.8**
CD2 AMB AMB
CD2 comp=Z,180nm,6.8s LR LR
CD2 comp=N,450nm,16.2s LR LR
CD2 comp=E,290nm,19.1s LR LR
CD2 comp=Z,490nm,17.1s LR LR
BRVK Borovoye 136.86 61 PFAKE 07 07 30.0 +14
BRVK LR LR
comp=Z,603nm,21.0s
BVAR Borovoye Array 136.88 61 PKP **PKPdf 07 07 15.2 -0.4**
BVAR Borovoye Array 136.88 61 PKP **PKPdf 07 07 15.2 -0.4**
comp=Z,2.0nm,0.6s,baz=248,slow=1.6,SNR=9.6
MKAR Makanchi Array 137.96 76 PKP **PKPdf 07 07 14.1 -3.8**
MKAR Makanchi Array 137.96 76 PKP **PKPdf 07 07 14.1 -3.8**
comp=Z,1.6nm,0.9s,baz=270,slow=2.1,SNR=5.5
YHNB Yeheng 138.02 134 PFAKE 07 07 30.0 +11
YHNB LR LR
comp=Z,355nm,19.0s
ENH Enshi 138.20 116 PFAKE 07 07 30.0 +11
ENH LR LR
comp=Z,346nm,19.0s
WMQ Urumqi 138.43 83 *e*PKP **PKPdf 07 07 20.8 +1.9**
WMQ PP PP 07 10 16.3 +6.6
WMQ SKKS 07 16 55.8
WMQ SS **SS 07 28 18.8 -3.1**
WMQ LR LR
WMQ comp=N,300nm,20.0s LR LR
WMQ comp=E,360nm,24.4s LR LR
WMQ comp=Z,400nm,25.4s LR LR
KURBB Kurchatov Arra 138.87 69 PKhKP PKPpre 07 07 12.2
comp=Z,1.2nm,1.0s,baz=230,slow=3.3,SNR=7.6
KURK Kurchatov 138.98 69 PKPpre PKPpre 07 07 12.2
KURK LR LR
comp=Z,650nm,21.0s
YKA Yellowknife Ar 139.53 314 PKP **PKPdf 07 07 18.8 -1.4**
YKA PP **PP 07 10 20.9 +4.8**
YKA Yellowknife Ar 139.53 314 PKP **PKPdf 07 07 18.8 -1.4**
comp=Z,0.7nm,0.8s,baz=126,slow=2.1,SNR=5.3
YKA PP **PP 07 10 20.9 +4.8**
comp=Z,0.5nm,0.9s,baz=127,slow=5.9,SNR=3.9
YKW3 Yellowknife Ar 139.57 314 *e*PKPdf **PKPdf 07 07 23.9 +3.7**
LZH Lanzhou 140.42 105 *e*PKP **PKPdf 07 07 23.5 +0.6**
LZH sPKP 07 07 35.5
LZH LR LR
LZH comp=N,420nm,17.4s LR LR
LZH comp=E,270nm,16.8s LR LR
LZH comp=Z,340nm,19.9s LR LR
KBS Kingsbay 141.06 11 PFAKE 07 07 30.0 +7.5
KBS LR LR
comp=Z,532nm,21.0s
GTA Gaotai 141.10 98 *e*PKP **PKPdf 07 07 22.3 -1.6**
GTA sPKP 07 07 36.5
GTA PP **PP 07 10 28.8 +2.6**
GTA SKS **SKSdf 07 14 26.8 -5.9**
GTA SKKS **SKKSac 07 17 13.5 -4.4**
GTA SS **SS 07 28 51.8 -1.4**
GTA AMB AMB
GTA comp=Z,140nm,5.2s LR LR
GTA comp=N,280nm,19.5s LR LR
GTA comp=E,310nm,18.1s LR LR
GTA comp=Z,340nm,20.0s LR LR
WRAK Wrangell Islan 142.75 298 PFAKE 07 07 40.0 +14
WRAK LR LR
comp=Z,618nm,22.0s
NJ2 Nanjing 143.71 126 *e*PKP PKPbc 07 07 27.8 +1.6
ZAA0 Zalesovo Array 143.97 69 *e*PKPdf **PKPdf 07 07 30.3 +2.0**
ZALV Zalesovo Beam 143.97 69 PKP PKPab 07 07 25.2 -0.6
ZALV Zalesovo Beam 143.97 69 PKP PKPab 07 07 25.2 -0.6
comp=Z,6.3nm,0.7s,baz=234,slow=3.5,SNR=15
BTO Baotou 146.95 107 *e*PKPbc **PKPab 07 07 38.3 +0.7**
HHC Hu-ho-hao-te 147.87 109 *e*PKPbc **PKPdf 07 07 35.0 -0.6**
HHC pPKP **pPKPdf 07 07 45.8 +3.7**
HHC sPKP 07 07 49.5
HHC PP **PP 07 11 10.8 +4.3**
HHC SKS **SKSdf 07 14 38.3 -4.5**
HHC SKKS **SKKSac 07 17 54.5 -1.9**
HHC SS **SS 07 30 10.8 +0.1**
HHC AMB AMB
HHC comp=Z,280nm,7.6s LR LR
HHC comp=N,540nm,20.5s LR LR
HHC comp=E,580nm,20.9s LR LR
HHC comp=Z,430nm,20.8s LR LR
BJT Baijiatuan 149.32 115 PFAKE 07 07 50.0 +3.1
BJT LR LR
comp=Z,329nm,21.0s
BJI Beijing 149.34 115 PKPbc **PKPbc 07 07 42.3 +0.1**
BJI PP **PP 07 11 15.5 +0.6**
BJI AMB AMB
BJI comp=Z,270nm,7.8s LR LR
BJI comp=N,110nm,14.9s LR LR
BJI comp=E,120nm,21.1s LR LR
BJI comp=Z,110nm,37.7s LR LR
SONM Songino Array 150.51 94 PKPbc **PKPbc 07 07 44.0 -1.1**
SONM Songino Array 150.51 94 PKPbc **PKPbc 07 07 44.0 -1.1**
comp=Z,11nm,0.9s,baz=221,slow=1.9,SNR=14
EGAK Eagle 150.75 307 *e*PKPdf **PKPbc 07 07 44.0 -0.9**
EGAK LR LR
comp=Z,685nm,21.0s
DL2 Dalian 150.76 123 *e*PKPbc **PKPbc 07 07 46.5 +0.8**
DL2 LR LR
comp=N,220nm,18.6s
DL2 LR LR
comp=Z,180nm,18.6s
ULN Ulaanbaatar 150.85 95 *e*PKPbc **PKPbc 07 07 49.1 +3.2**
ULN LR LR
comp=Z,372nm,20.0s
MENT Mentasta 151.06 303 *e*PKPbc **PKPbc 07 07 48.7 +3.0**
DQT Dot Lake 151.49 304 *e*PKPdf **PKPbc 07 07 45.1 -1.6**
INCN Inchon 151.49 132 PFAKE 07 07 50.0 +2.5
INCN LR LR
comp=Z,394nm,21.0s
KSAR Wonju Array Be 151.91 134 PKPbc **PKPbc 07 07 47.8 -0.6**
KSRS Korea Array 151.94 134 PKPbc **PKPbc 07 07 47.8 -0.7**
comp=Z,4.7nm,0.9s,baz=199,slow=3.7,SNR=10
SML Sawmill 152.57 299 *e*PKPbc **PKPbc 07 07 52.8 +3.6**
KDAK Kodiak Island 152.71 289 PFAKE 07 07 50.0 +0.5
KDAK LR LR
comp=Z,641nm,21.0s
ILAR Eielson Array 153.04 305 PKP **PKPdf 07 07 44.5 +1.8**
ILAR PKPbc **PKiKP 07 07 52.8 +2.5**
ILAR Eielson Array 153.04 305 PKP **PKPdf 07 07 44.5 +1.8**
comp=Z,2.3nm,1.1s,baz=310,slow=0.5,SNR=11
ILAR PKPbc **PKiKP 07 07 52.7 +2.5**
comp=Z,1.2nm,0.7s,baz=139,slow=0.7,SNR=18
COLA College 153.47 305 PFAKE 07 07 50.0 -1.0
COLA LR LR
comp=Z,660nm,20.0s
TRF Thorofare Moun 154.01 301 *e*PKPbc **PKPbc 07 07 54.2 +1.7**
MAJO Matsushiro 154.19 151 PFAKE 07 08 00.0 +6.5
MAJO LR LR
comp=Z,452nm,21.0s
MJAR Matsushiro Arr 154.19 151 PKPbc **PKPbc 07 07 52.2 -1.3**
MJAR Matsushiro Arr 154.19 151 PKPbc **PKPbc 07 07 52.2 -1.3**
comp=Z,1.1nm,0.7s,baz=182,slow=4.1,SNR=3.0
HIA Hailar 157.99 106 PFAKE 07 08 00.0 +10
HIA LR LR
comp=Z,672nm,19.0s
MDJ Mudanjiang 158.78 128 PKP **PKPdf 07 07 52.0 +1.0**
MDJ Mudanjiang 158.78 128 PFAKE 07 08 00.0 +9.0
MDJ LR LR
comp=Z,572nm,21.0s
USRK Ussuriysk Arra 159.33 133 PKPab **PKPab 07 08 28.2 -1.0**

comp=Z,1.8nm,0.8s,baz=138,slow=7.3,SNR=2.9
ERM Erimo 160.50 157 PFAKE 07 08 00.0 +7.0
ERM LR LR
comp=Z,463nm,20.0s
BILL Bilibino 170.55 329 PFAKE 07 08 10.0 +10
BILL LR LR
comp=Z,315nm,21.0s
PETK Petropavlovsk- 172.19 200 PKPab **PKPab 07 09 24.6 -1.1**
PETK Petropavlovsk- 172.19 200 PKPab **PKPab 07 09 24.6 -1.1**
comp=Z,4.9nm,1.0s,baz=191,slow=6.9,SNR=3.5

FUNV 30 07:04:45.8, 10.77N×65.77W, h5km, MW3.5, 3C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIRV	**Birongo**	**0.57**	**240**	⇑*iP*	Pg	07 04 55.9	-1.0
BIRV				*eS*	Sg	07 05 04.6	+0.3
CUPV	**Cœpira**	**0.71**	**182**	⇑*iP*	Pg	07 04 58.4	-1.1
CUPV				*eS*	Sg	07 05 09.3	+0.5
FUNV	**FUNVISIS**	**1.07**	**254**	*eP*	Pg	07 05 05.0	-1.5
FUNV				*eS*	Sg	07 05 19.7	-0.7
ORCV	**Isla La Orchil**	**1.12**	**338**	*eP*	Pg	07 05 06.2	-1.1
ORCV				*eS*	Sg	07 05 21.5	-0.3
PCRV	**Puerto La Cruz**	**1.26**	**118**	*eP*	Pg	07 05 09.2	-0.8
PCRV				*eS*	Sn	07 05 27.5	0.0
MERV	**Las Mercedes**	**1.59**	**199**	⇑*eP*	Pn	07 05 13.8	-0.9
MERV				*eS*	Sn	07 05 35.9	+0.2
TURV	**Turiamo**	**2.06**	**261**	*eP*	Pn	07 05 19.5	-1.6
TURV				*eS*	Sn	07 05 46.5	-0.8
PRGV	**PARIAGUAN**	**2.28**	**151**	*eP*	Pn	07 05 22.9	-1.3
PRGV				*eS*	Sn	07 05 51.9	-0.8
CRUV	**Carupano**	**2.49**	**92**	*eP*	Pn	07 05 27.6	+0.6
MAPV	**Macapo**	**2.81**	**251**	*eP*	Pn	07 05 31.2	-0.2
JACV	**Jacura**	**3.02**	**276**	*eP*	Pn	07 05 33.8	-0.7
TEPV	**Terepaima**	**3.46**	**257**	*eP*	Pn	07 05 39.7	-0.8
TEPV				*eS*	Sn	07 06 18.9	-3.0
GUIV	**Guiria**	**3.49**	**92**	*eP*	Pn	07 05 39.6	-1.2
SANV	**Sanarito**	**3.92**	**252**	*eP*	Pn	07 05 46.2	-0.6
SIQV	**Siquisique**	**3.97**	**269**	*eP*	Pn	07 05 46.5	-1.0
GURV	**El Guri**	**3.99**	**138**	*eP*	Pn	07 05 46.3	-1.4
CURV	**Curarigua**	**4.19**	**260**	*eP*	Pn	07 05 50.0	-0.6
CURV				*eS*	Sn	07 06 35.7	-4.4
MONV	**Montecano**	**4.29**	**286**	*eP*	Pn	07 05 49.6	-2.1
MONV				*eS*	Sn	07 06 38.6	-3.7
RIOV	**Rio Grande**	**4.73**	**124**	*eP*	Pn	07 05 56.9	-1.1
ELOV	**Elorza**	**5.24**	**225**	*eP*	Pn	07 06 04.0	-0.9
SOCV	**Socops**	**5.59**	**244**	*eP*	Pn	07 06 07.9	-1.8
VIGV	**El Vigia**	**5.84**	**251**	*eP*	Pn	07 06 11.9	-1.3
LUEV	**Luepa**	**6.49**	**139**	*eP*	Pn	07 06 19.4	-2.9

IDC 30 07:05:30.3±1.6, 4.98S×151.54E, h0km, mb3.9/5, mb1 4.1/6, mb1mx3.8/20, mbtmp4.0/6, ML3.3/1, MS3.6/4, Ms1 3.6/4, ms1mx3.3/22, Error ellipse: s-maj=46.9km s-min=23.6km az=104.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.19**	**224**	Pn	Pn	07 07 05.0	+2.0
	4.8nm,0.3s,baz=28,slow=13,SNR=8.2						
PMG				Sn	Sn	07 08 18.4	+4.0
	1.2nm,0.3s,baz=134,slow=12,SNR=2.0						
DZM	**Mont Dzumac**	**22.29**	**141**	LR	LR	07 17 01.2	
	comp=Z,236nm,19.7s,baz=214,slow=31						
WRA	**Warramunga Arr**	**22.40**	**227**	P	P	07 10 29.2	-1.4
	1.3nm,0.5s,baz=50,slow=10.0,SNR=14						
ASAR	**Alice Springs**	**25.19**	**221**	P	P	07 10 57.4	-0.4
	4.3nm,0.9s,baz=57,slow=8.4,SNR=29						
FITZ	**Fitzroy Crossi**	**28.48**	**241**	LR	LR	07 23 03.8	
	comp=Z,126nm,18.3s,baz=197,slow=37						
MJAR	**Matsushiro Arr**	**43.14**	**344**	LR	LR	07 29 44.3	
	comp=Z,58nm,20.2s,baz=190,slow=34						
KSRS	**Korea Array**	**47.60**	**334**	LR	LR	07 32 03.1	
	comp=Z,40nm,21.2s,baz=210,slow=34						
CMAR	**Chiang Mai Arr**	**56.82**	**296**	P	P	07 15 17.3	+0.3
	0.8nm,0.3s,baz=114,slow=7.5,SNR=5.7						
SONM	**Songino Array**	**65.81**	**328**	P	P	07 16 17.8	+0.2
	0.7nm,0.7s,baz=141,slow=7.5,SNR=3.5						
QSPA	**South Pole Qui**	**84.98**	**180**	P	P	07 18 07.4	-0.1
	1.0nm,0.9s,baz=45,slow=2.8,SNR=5.4						
TORD	**Torodi Ar. Bea**	**149.16**	**287**	PKPbc	PKPbc	07 25 21.4	-0.5
	0.4nm,0.6s,baz=48,slow=2.8,SNR=3.3						

*SKO **30** 07:05:42.0, 41.38N×22.69E, h21km, M1.4, ML1.7*
*ISCJB **30** 07:05:43.7±0.5, 41.33N±0.03×22.70E±0.04, h6km±7km, Error ellipse: s-maj=4.8km s-min=4.3km az=9.3*
*ATH **30** 07:05:44.2, 41.30N×22.70E, h7km, MD2.9/5*
*CSEM **30** 07:05:44.2±0.2, 41.28N×22.70E, h8km, ML1.7, Error ellipse: s-maj=5.3km s-min=4.9km az=76.0*
*BEO **30** 07:05:45.7±0.7, 41.33N×22.62E, h3km±4km, ML1.7/5*
ISC 30 07:05:44.2±0.9, 41.28N±0.03×22.70E±0.03, h8km±8km, n19, σ0.61/32, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.10**	**293**	*i* Pg	**Pg**	**07 05 46.3**	**-0.3**
VAY				*i* Sg	**Sg**	**07 05 48.3**	**0.0**
VAY				*e*Lg	Lg	07 05 48.4	
	comp=E,499nm,0.2s						
VAY				*e*Lg	Lg	07 05 48.4	
	comp=N,619nm,0.4s						
VAY	**Valandovo**	**0.10**	**293**	*i* Pg	**Pg**	**07 05 46.7**	**+0.1**
VAY				*e*Sg	**Sg**	**07 05 48.2**	**-0.1**
VAY				*e*Lg	Lg	07 05 48.8	
	comp=N,619nm,0.4s						
GRG	**Griva**	**0.39**	**215**	*e*PB	**Pg**	**07 05 52.1**	**+0.2**
GRG				*e*SB	**Sg**	**07 05 57.9**	**+0.9**
GRG	**Griva**	**0.39**	**215**	*e*Pg	**Pg**	**07 05 52.1**	**+0.2**
GRG				*e*Sg	**Sg**	**07 05 57.9**	**+0.9**
SOH	**Sokhos**	**0.68**	**133**	*e*PG	**Pg**	**07 05 57.1**	**-0.1**
SOH				*e*SB	**Sb**	**07 06 07.2**	**-0.5**
SOH	**Sokhos**	**0.68**	**133**	*e*Pg	**Pg**	**07 05 57.1**	**-0.1**
SOH				*e*Sg	**Sb**	**07 06 07.2**	**-0.5**
NVR	**Nevrokopi**	**0.88**	**85**	*e*PB	**Pg**	**07 06 00.8**	**-0.3**
NVR				*e*SB	**Sg**	**07 06 12.9**	**+0.4**
NVR	**Nevrokopi**	**0.88**	**85**	*e*Pg	**Pg**	**07 06 00.8**	**-0.3**
NVR				*e*Sg	**Sg**	**07 06 12.9**	**+0.4**
PLG	**Polygyros**	**1.07**	**148**	*e*PB	**Pg**	**07 06 03.9**	**-0.8**
PLG	**Polygyros**	**1.07**	**148**	*e*Pb	**Pg**	**07 06 03.9**	**-0.8**
FNA	**Florina**	**1.12**	**244**	*e*PB	**Pg**	**07 06 05.5**	**-0.1**
FNA	**Florina**	**1.12**	**244**	*e*Pb	**Pg**	**07 06 05.5**	**-0.1**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pn**	**07 06 09.8**	**+0.1**
VTS				*e*Sg	**Sb**	**07 06 27.7**	**0.0**
VTS	**Vitosha**	**1.36**	**16**	*e*Pb	**Pb**	**07 06 09.9**	**-0.1**
VTS				*e*Sg	**Sb**	**07 06 27.7**	**0.0**
BARS	**Barje**	**1.67**	**337**	*e*Pn	**Pn**	**07 06 13.2**	**-0.5**
BARS				*e*Sg	**Sb**	**07 06 36.6**	**+0.2**
BARS	**Barje**	**1.67**	**337**	*e*Pn	**Pn**	**07 06 13.2**	**-0.5**
BARS				*e*Sg	**Sb**	**07 06 36.6**	**+0.2**
PLD	**Plovdiv**	**1.71**	**61**	*e*Sg	**Sg**	**07 06 40.8**	**+1.6**
PLD	**Plovdiv**	**1.71**	**61**	*e*Sg	**Sg**	**07 06 40.8**	**+1.6**
ZAPS	**Zavoj**	**1.99**	**359**	*e*Pn	**Pb**	**07 06 21.0**	**+0.3**
ZAPS				*e*Sg	**Sg**	**07 06 47.4**	**-0.8**

NNC 30 07:08:53.5±6.5, 54.21N×87.73E, h0km, mb3.9, mpv3.6, 7C-3D, Error ellipse: s-maj=53.7km s-min=45.9km az=167.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.58**	**242**	⇑Pn	Pn	07 10 33.2	+1.8
	6.9nm,1.0s						
KURK				⇓Sn	Sn	07 11 46.0	-1.0
	3.6nm,1.1s						
KURK				⇑Lg	Lg	07 12 24.7	
	18nm,0.8s						
KUR14	**Kurchatov Arra**	**6.65**	**241**	⇑Pn	Pn	07 10 34.7	+2.2
	1.4nm,0.7s						
KUR14				⇑Sn	Sn	07 11 48.2	-0.7
	1.0nm,0.7s						
KUR14				⇑Lg	Lg	07 12 25.7	
	6.9nm,1.3s						
MK31	**Makanchi Array**	**8.19**	**207**	⇓Pn	Pn	07 10 49.5	-4.1
	3.0nm,0.8s,baz=25,slow=13,SNR=7.3						
MK31				⇑Sn	Sn	07 12 30.4	+3.4
	1.9nm,0.7s,baz=28,slow=26,SNR=5.7						
MK31				⇓Lg	Lg	07 13 18.7	
	9.2nm,0.9s,baz=28,slow=30,SNR=6.3						
AB31	**Akbulak array**	**17.85**	**265**	⇑Pn	Pn	07 12 58.4	-4.7
	0.5nm,0.3s,baz=358,slow=15,SNR=17						

*ISK **30** 07:14:51.8, 36.48N×28.12E, h19km, MD2.7*
*ATH **30** 07:14:53.5, 36.48N×28.21E, h59km±1km, MD2.8/3*
*DDA **30** 07:14:53.2, 36.59N×28.12E, h50km, MD2.8*
*CSEM **30** 07:14:54.3±0.2, 36.58N×28.16E, h48km±5km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.8km az=133.0*
ISC 30 07:14:53.7±1.2, 36.60N±0.03×28.16E±0.03, h23km±13km, n31, σ0.76/51, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.38**	**184**	*e*P	**Pn**	**07 15 04.0**	**+0.2**
ARG				*e*S	**Sn**	**07 15 11.5**	**+1.0**
ARG	**Arkhangelos**	**0.38**	**184**	*e*P	**Pn**	**07 15 04.0**	**+0.2**
ARG				*e*S	**Sn**	**07 15 11.5**	**+1.0**
TURN	**Turunc**	**0.45**	**52**	*i* P	**Pb**	**07 15 02.3**	**-0.7**
TURN				*i* S	**Sb**	**07 15 08.7**	**-0.6**
YER	**Yerkesik**	**0.54**	**11**	*e*PG	**Pn**	**07 15 05.7**	**-0.5**
YER				*e*SG	**Sn**	**07 15 15.5**	**+0.9**
YER	**Yerkesik**	**0.54**	**11**	*e*Pg	**Pn**	**07 15 05.7**	**-0.5**
YER				*e*Sg	**Sn**	**07 15 15.5**	**+0.9**
FETY	**Fethiye**	**0.74**	**87**	*e*PG	**Pb**	**07 15 07.9**	**-0.1**
FETY				*e*SG	**Sn**	**07 15 19.1**	**-0.4**
FETY	**Fethiye**	**0.74**	**87**	*e*Pg	**Pb**	**07 15 07.9**	**-0.1**
FETY				*e*Sg	**Sn**	**07 15 19.1**	**-0.4**
MLSB	**Milas**	**0.76**	**336**	*e*PG	**Pn**	**07 15 08.9**	**-0.2**
MLSB	**Milas**	**0.76**	**336**	*e*Pg	**Pn**	**07 15 08.9**	**-0.2**
NIS1	**Nisyros Isl.**	**0.79**	**271**	*e*P	**Pn**	**07 15 10.3**	**+0.8**
NIS1	**Nisyros Isl.**	**0.79**	**271**	*e*P	**Pn**	**07 15 10.3**	**+0.8**
BODT	**Bodrum**	**0.82**	**304**	*e*PG	**Pn**	**07 15 09.2**	**-0.7**
BODT				*e*SG	**Sn**	**07 15 21.8**	**+0.4**
BODT	**Bodrum**	**0.82**	**304**	*e*Pg	**Pn**	**07 15 09.2**	**-0.7**
BODT				*e*Sg	**Sn**	**07 15 21.8**	**+0.4**
AYDN	**Tasoluk**	**1.08**	**348**	*i* P	**Pb**	**07 15 13.8**	**0.0**
AYDN				*i* S	**Sb**	**07 15 28.0**	**+0.5**
AYDN	**Tasoluk**	**1.08**	**348**	*i* P	**Pb**	**07 15 13.8**	**0.0**
AYDN				*i* S	**Sb**	**07 15 28.0**	**+0.5**
GLHS	**Glhisar (BURDU**	**1.21**	**62**	*e*PN	**Pb**	**07 15 15.5**	**-0.4**
GLHS	**Glhisar (BURDU**	**1.21**	**62**	*e*Pn	**Pb**	**07 15 15.5**	**-0.4**
AKAS	**Kas**	**1.22**	**107**	*i* P	**Pn**	**07 15 15.5**	**0.0**
AKAS	**Kas**	**1.22**	**107**	*i* P	**Pn**	**07 15 15.5**	**0.0**
GOLH	**Golhisar**	**1.29**	**60**	*i* P	**Pb**	**07 15 16.9**	**-0.5**
GOLH				*i* S	**Sb**	**07 15 36.4**	**+2.8**
GOLH	**Golhisar**	**1.29**	**60**	*i* P	**Pb**	**07 15 16.9**	**-0.5**
DNZL	**Cakiroluk**	**1.30**	**33**	*i* P	**Pn**	**07 15 16.7**	**+0.1**
DNZL				*i* S	**Sb**	**07 15 34.7**	**+0.8**
DNZL	**Cakiroluk**	**1.30**	**33**	*i* P	**Pn**	**07 15 16.7**	**+0.1**
DNZL				*i* S	**Sb**	**07 15 34.7**	**+0.8**
KARP	**Karpathos**	**1.32**	**218**	*e*P	**Pn**	**07 15 15.9**	**-0.9**
KARP				*e*S	**Sn**	**07 15 32.5**	**-1.3**
KARP	**Karpathos**	**1.32**	**218**	*e*P	**Pn**	**07 15 15.9**	**-0.9**
KARP				*e*S	**Sn**	**07 15 32.5**	**-1.3**
KULA	**Kula-Manisa**	**1.95**	**12**	*e*PN	**Pn**	**07 15 25.9**	**+0.3**
KULA	**Kula-Manisa**	**1.95**	**12**	*e*Pn	**Pn**	**07 15 25.9**	**+0.3**
KHAL	**Karahalli**	**2.06**	**31**	*i* P	**Pn**	**07 15 26.1**	**-1.0**
KHAL				*i* S	**Sn**	**07 15 51.5**	**-0.6**
KHAL	**Karahalli**	**2.06**	**31**	*i* P	**Pn**	**07 15 26.1**	**-1.0**
KHAL				*i* S	**Sn**	**07 15 51.5**	**-0.6**
AKHS	**Akhisar**	**2.29**	**353**	*i* P	**Pn**	**07 15 29.7**	**-0.4**
AKHS				*i* S	**Sn**	**07 15 57.4**	**-0.3**
AKHS	**Akhisar**	**2.29**	**353**	*i* P	**Pn**	**07 15 29.7**	**-0.4**
AKHS				*i* S	**Sn**	**07 15 57.4**	**-0.3**

IDC 30 07:51:42.8±1.7, 5.23S×151.86E, h0km, mb4.1/5, mb1 4.4/5, mb1mx3.9/19, mbtmp4.1/5, MS4.1/3, Ms1 4.1/3, ms1mx3.2/37, Error ellipse: s-maj=62.2km s-min=25.7km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.24**	**228**	Pn	Pn	07 53 19.1	+2.8
	2.7nm,0.3s,baz=16,slow=11,SNR=9.3						
PMG				Sn	Sn	07 54 22.6	-5.8
	0.3nm,0.3s,baz=168,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**22.46**	**228**	P	P	07 56 43.2	-0.6
	5.1nm,0.7s,baz=50,slow=10.0,SNR=20						
ASAR	**Alice Springs**	**25.20**	**222**	P	P	07 57 11.8	+1.4
	5.1nm,0.7s,baz=57,slow=8.1,SNR=60						
FITZ	**Fitzroy Crossi**	**28.63**	**241**	P	P	07 57 39.9	-1.5
	4.2nm,0.8s,baz=93,slow=11,SNR=10						
TGY	**Tagaytay City**	**36.20**	**302**	LR	LR	08 11 22.8	
	comp=Z,34nm,21.0s,baz=161,slow=33						
RAO	**Raoul Island**	**37.25**	**133**	LR	LR	08 12 03.6	
	comp=Z,67nm,20.1s,baz=346,slow=33						
CMAR	**Chiang Mai Arr**	**57.21**	**296**	P	P	08 01 34.0	+1.6
	0.9nm,0.4s,baz=103,slow=4.9,SNR=4.9						
ZALV	**Zalesovo Beam**	**80.99**	**327**	LR	LR	08 40 26.6	
	comp=Z,276nm,19.9s,baz=69,slow=36						
ILAR	**Eielson Array**	**82.91**	**22**	P	P	08 04 09.1	-0.2
	0.4nm,0.8s,baz=254,slow=5.1,SNR=5.9						
NEW	**Newport**	**94.54**	**42**	LR	LR	08 44 15.1	
	comp=Z,105nm,20.5s,baz=354,slow=33						
TORD	**Torodi Ar. Bea**	**149.54**	**287**	PKPbc	PKPbc	08 11 33.8	-1.6
	0.4nm,0.8s,baz=119,slow=2.8,SNR=3.5						

*ISCJB **30** 07:52:08.7±0.8, 0.1S±0.2×16.3W±0.1, h13km, mb4.1/8, MS3.8/8, Error ellipse: s-maj=28.0km s-min=13.8km az=154.4*
*IDC **30** 07:52:08.2±1.1, 0.08S×16.24W, h0km, mb4.1/9, mb1 4.2/10, mb1mx3.9/27, mbtmp4.1/10, ML3.4/1, MS3.8/9, Ms1 3.8/9, ms1mx3.6/32, Error ellipse: s-maj=37.6km s-min=23.3km az=150.0*
*NEIC **30** 07:52:09.9±0.8, 0.13S×16.27W, h10km, mb4.4/1, Error ellipse: s-maj=27.9km s-min=14.2km az=152.0*
ISC 30 07:52:09.8±1.1, 0.1S±0.2×16.3W±0.2, h13km, n31, σ0.99/21, mb4.3/8, MS3.8/8, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	**Dimbokro**	**13.29**	**59**	*e*Pn	**Pn**	**07 55 20.7**	**+2.4**
DBIC				*e*Sn	Sn	07 57 36.2	-10
DBIC	**Dimbokro**	**13.29**	**59**	Pn	**Pn**	**07 55 16.6**	**-1.7**
	0.2nm,0.3s,baz=235,slow=16,SNR=2.5						
DBIC				LR	LR	07 59 24.4	
	comp=Z,323nm,19.5s,baz=138,slow=33						
RCBR	**Riachuelo**	**20.34**	**253**	*e*P	Pn	07 56 49.0	+0.7
	26nm,1.2s						
RCBR	**Riachuelo**	**20.34**	**253**	P	Pn	07 56 48.4	+0.2
	4.1nm,0.6s,baz=80,slow=14,SNR=8.6						
RCBR				LR	LR	08 02 29.9	
	comp=Z,303nm,18.8s,baz=164,slow=30						
TOA0	**Tordi Ar. Sit**	**22.21**	**53**	*e*P	**P**	**07 57 06.2**	**0.0**
TORD	**Torodi Ar. Bea**	**22.21**	**53**	P	**P**	**07 57 06.1**	**-0.1**
TORD	**Torodi Ar. Bea**	**22.21**	**53**	P	**P**	**07 57 06.1**	**-0.1**
	23nm,1.0s,baz=234,slow=12,SNR=38						
TORD				LR	LR	08 04 34.7	
	comp=Z,285nm,18.8s,baz=245,slow=34						
BDFB	**Brasilia**	**34.88**	**242**	LR	LR	08 11 19.6	
	comp=Z,145nm,20.4s,baz=256,slow=33						
KEST	**Kesra**	**42.95**	**31**	LR	LR	08 18 53.7	
	comp=Z,83nm,20.1s,baz=233,slow=38						
BOSA	**Boshof**	**48.80**	**129**	P	**P**	**08 00 55.4**	**+0.3**
BOSA	**Boshof**	**48.80**	**129**	P	**P**	**08 00 55.4**	**+0.3**
	11nm,1.1s,baz=297,slow=13,SNR=3.2						
LPAZ	**La Paz**	**53.53**	**250**	LR	LR	08 22 42.8	
	comp=Z,122nm,18.5s,baz=187,slow=34						
KMBO	**Kilima Mbogo**	**53.58**	**91**	LR	LR	08 21 20.3	
	comp=Z,142nm,19.0s,baz=291,slow=33						
GERES	**GERESS Array B**	**55.23**	**24**	P	**P**	**08 01 41.6**	**-1.1**
GERES	**GERESS Array B**	**55.23**	**24**	P	**P**	**08 01 41.6**	**-1.1**
	0.6nm,0.9s,baz=193,slow=5.5,SNR=5.1						
ROSC	**El Rosal**	**58.14**	**276**	LR	LR	08 23 56.1	
	comp=Z,93nm,19.5s,baz=145,slow=33						
BRTR	**Keskin Array B**	**60.35**	**43**	P	**P**	**08 02 19.5**	**+0.6**
BRTR	**Keskin Array B**	**60.35**	**43**	P	**P**	**08 02 19.5**	**+0.6**
	2.5nm,1.1s,baz=216,slow=6.1,SNR=7.9						
PLCA	**Paso Flores**	**63.53**	**224**	LR	LR	08 27 19.7	
	comp=Z,88nm,20.4s,baz=177,slow=33						
KBZ	**Khabaz**	**68.32**	**42**	P	**P**	**08 03 11.8**	**+1.0**
KBZ	**Khabaz**	**68.32**	**42**	P	**P**	**08 03 11.8**	**+1.0**
	1.8nm,0.6s,baz=276,slow=4.1,SNR=3.9						
FINES	**FINESS Array B**	**69.34**	**20**	P	**P**	**08 03 16.6**	**-0.2**
FINES	**FINESS Array B**	**69.34**	**20**	P	**P**	**08 03 16.6**	**-0.2**
	3.1nm,0.9s,baz=355,slow=4.4,SNR=4.4						
TXAR	**Lajitas Array**	**87.74**	**299**	P	**P**	**08 04 59.9**	**+0.7**
TXAR	**Lajitas Array**	**87.74**	**299**	P	**P**	**08 04 59.9**	**+0.7**
	0.1nm,0.5s,baz=101,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**96.00**	**43**	P	**P**	**08 05 36.8**	**-0.2**
MKAR	**Makanchi Array**	**96.00**	**43**	P	**P**	**08 05 36.8**	**-0.2**
	0.3nm,0.8s,baz=292,slow=6.4,SNR=3.7						
ASAR	**Alice Springs**	**142.65**	**131**	PKPpre	PKPpre	08 11 38.6	
ASAR	**Alice Springs**	**142.65**	**131**	PKhKP	PKPpre	08 11 38.6	
	0.6nm,0.9s,baz=227,slow=1.8,SNR=6.1						
WRA	**Warramunga Arr**	**145.02**	**126**	PKP	**PKPab**	**08 11 46.1**	**-1.1**
WRA	**Warramunga Arr**	**145.02**	**126**	PKP	**PKPab**	**08 11 46.1**	**-1.1**
	3.3nm,0.9s,baz=243,slow=3.0,SNR=13						

IDC 30 08:01:48.1±2.9, 13.84N×118.43E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/25, mbtmp3.4/3, Error ellipse: s-maj=441.2km s-min=25.4km az=61.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**37.04**	**155**	P	P	08 08 59.2	-0.8
	0.3nm,0.5s,baz=332,slow=9.7,SNR=3.0						
ASAR	**Alice Springs**	**40.23**	**158**	P	P	08 09 27.4	+0.6
	0.3nm,0.5s,baz=335,slow=6.7,SNR=6.8						
MKAR	**Makanchi Array**	**44.63**	**325**	P	P	08 10 02.3	-0.2
	0.2nm,0.8s,baz=127,slow=9.2,SNR=2.6						

*SOF **30** 08:03:10.1, 42.36N×23.75E, h20km, MD2.8*
*CSEM **30** 08:03:10.8±0.1, 42.40N×23.72E, h2km, MD2.8, Error ellipse: s-maj=3.2km s-min=2.8km az=57.0*
*BEO **30** 08:03:11.2±0.4, 42.37N×23.73E, h10km±3km, ML2.2/7*
*THE **30** 08:03:12.4, 42.31N×23.64E, h0km±3km, ML2.8/7, Error ellipse: s-maj=4.3km s-min=1.8km az=340.0*
*SKO **30** 08:03:13.5, 42.28N×23.72E, h2km, M2.5, ML2.7*
ISC 30 08:03:10.9±1.1, 42.37N±0.02×23.72E±0.02, h5km±9km, n62, σ0.62/90, 3C-2D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGB	**Panagyurishte**	**0.37**	**62**	*i* Pg	**Pg**	**08 03 18.2**	**+0.1**
PGB	**Panagyurishte**	**0.37**	**62**	*i* Pg	**Pg**	**08 03 18.2**	**+0.1**
VTS	**Vitosha**	**0.44**	**300**	P	**Pg**	**08 03 19.7**	**+0.4**
VTS	**Vitosha**	**0.44**	**300**	*e*P	**Pg**	**08 03 19.9**	**+0.5**
VTS	**Vitosha**	**0.44**	**300**	*e*Pg	**Pg**	**08 03 19.8**	**+0.4**
VTS				*e*Sg	**Sg**	**08 03 25.6**	**+0.5**
VTS	**Vitosha**	**0.44**	**300**	⇑*iP*	**Pg**	**08 03 19.8**	**+0.4**
VTS	**Vitosha**	**0.44**	**300**	Pg	**Pg**	**08 03 19.9**	**+0.5**
VTS	**Vitosha**	**0.44**	**300**	P	**Pg**	**08 03 19.7**	**+0.4**
VTS				*e*Sg	**Sg**	**08 03 25.6**	**+0.5**
KKB	**Krupnik**	**0.69**	**223**	*i* Pg	**Pg**	**08 03 24.4**	**+0.2**
KKB	**Krupnik**	**0.69**	**223**	*i* Pg	**Pg**	**08 03 24.4**	**+0.2**
PLD	**Plovdiv**	**0.78**	**110**	P	**Pn**	**08 03 28.2**	**-0.2**
PLD	**Plovdiv**	**0.78**	**110**	P	**Pn**	**08 03 28.2**	**-0.2**
PLD				*e*Sg	**Sg**	**08 03 35.3**	**-0.5**
MMB	**Musomiste**	**0.78**	**180**	*i* Pg	**Pb**	**08 03 26.8**	**-0.2**
MMB	**Musomiste**	**0.78**	**180**	*i* Pg	**Pb**	**08 03 26.8**	**-0.2**
MPEP	**Malo Peshtene**	**0.98**	**1**	*i* Pg	**Pg**	**08 03 30.2**	**+0.5**
RZN	**Rozhen**	**1.01**	**132**	*i* Pg	**Pg**	**08 03 29.9**	**-0.3**
RZN	**Rozhen**	**1.01**	**132**	*i* Pg	**Pg**	**08 03 29.9**	**-0.3**
NVR	**Nevrokopi**	**1.03**	**174**	P	**Pg**	**08 03 30.5**	**0.0**
NVR				S	**Sb**	**08 03 45.0**	**+0.1**
NVR	**Nevrokopi**	**1.03**	**174**	*e*P	**Pb**	**08 03 30.8**	**-0.3**
NVR	**Nevrokopi**	**1.03**	**174**	P	**Pg**	**08 03 30.5**	**0.0**
NVR				S	**Sb**	**08 03 45.0**	**+0.1**
ZAPS	**Zavoj**	**1.21**	**319**	*e*Pg	**Pn**	**08 03 34.5**	**+0.1**
ZAPS				*e*Sg	**Sn**	**08 03 51.8**	**+0.7**
SRS	**Serrai**	**1.26**	**184**	P	**Pg**	**08 03 34.9**	**-0.1**
SRS				S	**Sn**	**08 03 52.5**	**+0.1**
SRS	**Serrai**	**1.26**	**184**	P	**Pg**	**08 03 34.9**	**-0.1**
SRS				S	**Sn**	**08 03 52.5**	**+0.1**
KNT	**Kendrikon**	**1.36**	**207**	P	**Pn**	**08 03 36.2**	**-0.2**
KNT				S	**Sg**	**08 03 53.7**	**-0.8**
KNT	**Kendrikon**	**1.36**	**207**	P	**Pn**	**08 03 36.2**	**-0.2**
KNT				S	**Sg**	**08 03 53.7**	**-0.8**
VAY	**Valandovo**	**1.36**	**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	**Carnagh Statio**	**1.32**	**212**	PN	**Pn**	**08 36 54.0**	**-0.1**
MWZ	**Matawai**	**1.57**	**232**	PN	**Pn**	**08 36 56.6**	**-0.9**
MWZ				SN	**Sn**	**08 37 19.1**	**+1.8**
URZ	**Urewera**	**1.81**	**240**	⇑PN	**Pn**	**08 36 59.8**	**-0.7**
URZ				SN	**Sn**	**08 37 24.1**	**+1.4**
URZ	**Urewera**	**1.81**	**240**	Pn	**Pn**	**08 36 59.8**	**-0.7**
	18nm,0.3s,baz=33,slow=1.3,SNR=476						
URZ				Sn	**Sn**	**08 37 23.6**	**+0.8**
	14nm,0.3s,baz=254,slow=23,SNR=7.5						
PRGZ	**Paritu Road**	**1.82**	**211**	⇑PN	**Pn**	**08 36 60.0**	**-0.8**
KNZ	**Kokohu**	**1.99**	**214**	PN	**Pn**	**08 37 01.6**	**-1.4**
KNZ				SN	**Sn**	**08 37 28.8**	**+1.7**
EDRZ	**Edgecumbe**	**2.01**	**248**	PN	**Pn**	**08 37 02.6**	**-0.6**
MHGZ	**Mahia Peninsul**	**2.01**	**207**	PN	**Pn**	**08 37 02.5**	**-0.7**
MARZ	**Manawahe**	**2.02**	**251**	PN	**Pn**	**08 37 01.9**	**-1.4**
MARZ				SN	**Sn**	**08 37 27.4**	**-0.4**
OPRZ	**Ohinepanea**	**2.07**	**256**	PN	**Pn**	**08 37 02.5**	**-1.5**
RAHZ	**Arahi**	**2.21**	**225**	PN	**Pn**	**08 37 05.3**	**-0.6**
TARZ	**Mount Tarawera**	**2.23**	**246**	PN	**Pn**	**08 37 05.9**	**-0.3**
RRRZ	**Republican Roa**	**2.26**	**244**	PN	**Pn**	**08 37 05.7**	**-0.9**
TGRZ	**Tauranga**	**2.28**	**260**	PN	**Pn**	**08 37 05.2**	**-1.6**
PRRZ	**Plateau Road**	**2.42**	**241**	PN	**Pn**	**08 37 07.9**	**-0.8**
NMHZ	**Naumai**	**2.50**	**226**	PN	**Pn**	**08 37 09.1**	**-0.7**
BKZ	**Black Stump Fm**	**2.72**	**228**	PN	**Pn**	**08 37 11.9**	**-1.0**
BKZ				SN	**Sn**	**08 37 45.9**	**+1.1**
KUZ	**Kuaotunu**	**2.77**	**282**	PN	Pn	08 37 09.8	-3.6
CKHZ	**Cape Kidnapper**	**2.78**	**214**	PN	**Pn**	**08 37 12.0**	**-1.6**
MCHZ	**McNeill Hill**	**2.80**	**222**	PN	**Pn**	**08 37 12.9**	**-0.9**
TOZ	**Tahuroa Road**	**2.88**	**262**	PN	**Pn**	**08 37 12.7**	**-2.1**
KAHZ	**Kahuranaki**	**2.98**	**215**	PN	**Pn**	**08 37 14.6**	**-1.7**
MKAZ	**Moumakai**	**3.14**	**274**	PN	**Pn**	**08 37 15.7**	**-2.8**
PXZ	**Pawanui**	**3.18**	**213**	PN	**Pn**	**08 37 16.7**	**-2.3**
BHHZ	**Black Hill Sta**	**3.19**	**227**	PN	**Pn**	**08 37 18.2**	**-0.9**
KRVZ	**Karewarewa**	**3.22**	**237**	PN	**Pn**	**08 37 19.0**	**-0.7**
OTVZ	**Oturere**	**3.24**	**235**	PN	**Pn**	**08 37 19.0**	**-0.9**
NGZ	**Ngauruhoe**	**3.29**	**236**	PN	**Pn**	**08 37 19.5**	**-1.1**
TUVZ	**Tukino**	**3.30**	**234**	PN	**Pn**	**08 37 19.5**	**-1.2**
MOVZ	**Moawhango**	**3.32**	**231**	PN	**Pn**	**08 37 19.6**	**-1.4**
WPVZ	**Whakapapa**	**3.34**	**236**	PN	**Pn**	**08 37 20.2**	**-1.0**
FWVZ	**Far West T-bar**	**3.36**	**235**	PN	**Pn**	**08 37 20.4**	**-1.2**
DRZ	**Dome Shelter**	**3.37**	**234**	PN	**Pn**	**08 37 20.6**	**-1.2**
WNVZ	**Wahianoa**	**3.37**	**234**	PN	**Pn**	**08 37 20.5**	**-1.2**
TRVZ	**Turoa**	**3.39**	**234**	PN	**Pn**	**08 37 20.6**	**-1.4**
WPHZ	**Waipukurau**	**3.40**	**217**	PN	**Pn**	**08 37 20.1**	**-1.9**
PNHZ	**Pukenui**	**3.41**	**221**	PN	**Pn**	**08 37 20.2**	**-1.8**
PKVZ	**Pokaka**	**3.52**	**236**	PN	**Pn**	**08 37 23.8**	**+0.2**
KAAZ	**Kauri Point**	**3.55**	**278**	PN	**Pn**	**08 37 22.4**	**-1.6**
TSZ	**Takapari Road**	**3.64**	**221**	PN	**Pn**	**08 37 23.5**	**-1.7**
DVHZ	**Dannevirke**	**3.71**	**217**	PN	**Pn**	**08 37 24.0**	**-2.2**
DVHZ				SN	**Sn**	**08 38 08.0**	**-0.9**
BFZ	**Birch Farm**	**3.98**	**213**	PN	**Pn**	**08 37 26.8**	**-3.0**
POWZ	**Post Office Ro**	**3.98**	**220**	PN	**Pn**	**08 37 27.8**	**-2.0**
WAZ	**Wanganui**	**4.01**	**232**	PN	**Pn**	**08 37 29.2**	**-1.0**
WCZ	**Waipu Caves**	**4.08**	**289**	PN	**Pn**	**08 37 28.4**	**-2.8**
TIWZ	**Tintock**	**4.22**	**215**	PN	**Pn**	**08 37 30.6**	**-2.6**
MRZ	**Mangatainoka R**	**4.28**	**219**	PN	**Pn**	**08 37 30.9**	**-3.0**
MRZ				SN	**Sn**	**08 38 20.8**	**-1.8**
TMWZ	**Te Maipa**	**4.49**	**213**	PN	**Pn**	**08 37 33.8**	**-2.9**
HOWZ	**Holdsworth Sta**	**4.49**	**217**	PN	**Pn**	**08 37 33.7**	**-3.1**
OGWZ	**Otaki Gorge**	**4.60**	**220**	PN	**Pn**	**08 37 35.3**	**-3.0**
MTW	**Mount Morrison**	**4.70**	**215**	PN	Pn	08 37 36.2	-3.4
KIW	**Kapiti Island**	**4.77**	**224**	PN	**Pn**	**08 37 37.9**	**-2.7**
CAW	**Cannon Point**	**4.87**	**219**	PN	Pn	08 37 38.1	-3.9
OUZ	**Omahuta**	**4.93**	**294**	PN	**Pn**	**08 37 40.8**	**-2.0**
PLWZ	**Palliser**	**5.14**	**214**	PN	Pn	08 37 42.3	-3.3
TCW	**Tory Channel**	**5.36**	**223**	PN	Pn	08 37 45.2	-3.4
NNZ	**Nelson**	**5.87**	**227**	PN	Pn	08 37 52.1	-3.4
QRZ	**Quartz Range**	**6.16**	**234**	PN	**Pn**	**08 37 56.5**	**-3.1**
THZ	**Tophouse**	**6.49**	**226**	PN	Pn	08 37 59.6	-4.5
LTZ	**Lake Taylor**	**7.52**	**222**	PN	Pn	08 38 13.9	-4.3
ASAR	**Alice Springs**	**40.88**	**276**	P	**P**	**08 44 06.5**	**+0.9**
	1.4nm,0.7s,baz=118,slow=8.0,SNR=17						
WRA	**Warramunga Arr**	**42.51**	**281**	P	**P**	**08 44 18.9**	**-0.1**
	1.3nm,0.6s,baz=125,slow=7.4,SNR=6.1						
FINES	**FINESS Array B**	**150.60**	**334**	PKPbc	**PKPbc**	**08 56 13.6**	**+0.6**
	0.9nm,0.8s,baz=17,slow=1.5,SNR=3.9						

IDC 30 08:37:48.1±7.7, 6°27S×128°08E, h406km±106km, mb2.9/1, mb1 3.3/5, mb1mx3.0/21, mbtmp3.2/5, Error ellipse: s-maj=48.8km s-min=28.0km az=174.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.00**	**191**	P	P	08 40 27.6	-0.1
	0.2nm,0.3s,baz=137,slow=12,SNR=6.4						
FITZ				S	S	08 42 49.9	+10
	0.2nm,0.3s,baz=67,slow=14,SNR=2.0						
WRA	**Warramunga Arr**	**14.89**	**156**	P	P	08 40 59.6	+0.2
	0.9nm,0.3s,baz=335,slow=11,SNR=29						
WRA				S	S	08 43 36.3	-1.3
	0.1nm,0.3s,baz=326,slow=18,SNR=3.9						
ASAR	**Alice Springs**	**18.19**	**163**	P	P	08 41 34.9	+0.3
	1.5nm,0.3s,baz=344,slow=12,SNR=122						
PMG	**Port Moresby**	**19.16**	**101**	P	P	08 41 44.2	-0.3
	0.6nm,0.3s,baz=238,slow=9.5,SNR=3.4						
MKAR	**Makanchi Array**	**66.58**	**328**	P	P	08 47 56.4	0.0
	0.3nm,0.4s,baz=111,slow=8.8,SNR=7.9						

DDA 30 08:57:20.2, 36°28N×36°90E, h28km, MD2.8, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COBT	**Iskenderun**	**0.57**	**295**	*i* P	Pb	08 57 31.8	-0.3
COBT				*i* S	Sn	08 57 43.8	+2.3
YAYL	**Yayladag**	**0.69**	**249**	*i* P	Pb	08 57 33.2	-0.7
YAYL				*i* S	Sn	08 57 46.9	+2.7
AYKD	**Aykdinkavak**	**1.14**	**356**	*i* P	Pn	08 57 40.7	+0.4
AYKD				*i* S	Sb	08 57 57.2	+1.5

*DDA **30** 08:58:59.0, 37°.24N×28°.17E, h7km, MD2.8*
*CSEM **30** 08:58:59.0±0.2, 37°.23N×28°.24E, h12km, MD2.7, Error ellipse: s-maj=4.4km s-min=3.2km az=33.0*
ISK 30 08:58:58.2, 37°28N×28°24E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.15**	**167**	*e*PG	Pg	08 59 01.9	+0.5
YER				*e*SG	Sg	08 59 04.3	+0.8
YER	**Yerkesik**	**0.15**	**167**	*e*Pg	Pg	08 59 01.9	+0.5
YER				*e*Sg	Sg	08 59 04.3	+0.8
MLSB	**Milas**	**0.37**	**273**	*e*PG	Pg	08 59 05.9	+0.4
MLSB				*e*SG	Sg	08 59 11.7	+1.2
MLSB	**Milas**	**0.37**	**273**	*e*Pg	Pg	08 59 05.9	+0.4
MLSB				*e*Sg	Sg	08 59 11.7	+1.2
AYDN	**Tasoluk**	**0.48**	**323**	*i* P	Pb	08 59 09.0	-0.1
AYDN				*i* S	Sb	08 59 16.0	-0.4
AYDN	**Tasoluk**	**0.48**	**323**	*i* P	Pb	08 59 09.0	-0.1
AYDN				*i* S	Sb	08 59 16.0	-0.4
TURN	**Turunc**	**0.50**	**144**	*i* P	Pg	08 59 08.1	+0.2
TURN				*i* S	Sg	08 59 14.8	+0.5
TURN	**Turunc**	**0.50**	**144**	*i* P	Pg	08 59 08.1	+0.3
TURN				*i* S	Sg	08 59 14.8	+0.5
DNZL	**Cakiroluk**	**0.76**	**57**	*i* P	Pn	08 59 15.0	-0.6
DNZL	**Cakiroluk**	**0.76**	**57**	*i* P	Pn	08 59 15.0	-0.6
BODT	**Bodrum**	**0.77**	**254**	*e*PG	Pg	08 59 13.6	+0.4
BODT				*e*SG	Sb	08 59 24.8	0.0
BODT	**Bodrum**	**0.77**	**254**	*e*Pg	Pb	08 59 13.6	-0.4
BODT				*e*Sg	Sb	08 59 24.8	0.0
GCAM	**G?zelcaml?**	**0.91**	**298**	*i* P	Pn	08 59 18.3	+1.0
GCAM	**G?zelcaml?**	**0.91**	**298**	*i* P	Pn	08 59 18.3	+1.0
FETY	**Fethiye**	**0.93**	**133**	*e*PG	Pg	08 59 15.9	-0.3
FETY	**Fethiye**	**0.93**	**133**	*e*Pg	Pg	08 59 15.9	-0.3
MANT	**Manisa**	**1.23**	**12**	*i* P	Pg	08 59 23.8	+1.5
MANT	**Manisa**	**1.23**	**12**	*i* P	Pg	08 59 23.8	+1.5
KULA	**Kula-Manisa**	**1.28**	**15**	*e*PN	Pg	08 59 23.1	+0.2
KULA	**Kula-Manisa**	**1.28**	**15**	*e*Pn	Pg	08 59 23.1	+0.2
IZM	**Izmir**	**1.36**	**326**	*e*PN	Pb	08 59 24.1	+0.1
IZM	**Izmir**	**1.36**	**326**	*e*Pn	Pb	08 59 24.1	0.0
KHL	**Karahalli**	**1.46**	**44**	*e*PN	Pb	08 59 25.6	-0.1
KHL	**Karahalli**	**1.46**	**44**	*e*Pn	Pb	08 59 25.6	-0.2
AKAS	**Kas**	**1.51**	**133**	*i* P	Pg	08 59 28.5	+1.1
AKAS	**Kas**	**1.51**	**133**	*i* P	Pg	08 59 28.5	+1.1

*JMA **30** 09:03:51.5±0.4, 24°.17N×122°.50E, h47km, M1.8*

*ISCJB **30** 09:03:52.1±0.6, 24°.06N±0°.04×122°.57E±0°.02, h28km±5km, Error ellipse: s-maj=6.0km s-min=2.8km az=169.9*
*TAP **30** 09:03:52.2, 24°.07N×122°.59E, h52km±1km, ML3.0, C*
ISC 30 09:03:52.0±1.1, 24°.06N±0°.04×122°.57E±0°.02, h26km±13km, n29, σ0°81/53, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.57**	**45**	P	**Pb**	**09 04 03.2**	**-0.2**
YOJ				S	**Sb**	**09 04 11.5**	**+0.4**
ENA	**Nanau**	**0.84**	**296**	*e*P	**Pb**	**09 04 08.1**	**+0.1**
	baz=301						
TWC	**Suao**	**0.86**	**310**	*i* P	**Pb**	**09 04 08.1**	**-0.2**
	baz=308						
TWC				S	**Sn**	**09 04 19.8**	**-0.3**
	baz=308						
TWD	**Chiawan**	**0.89**	**272**	*e*P	**Pb**	**09 04 08.8**	**0.0**
	baz=271						
TWD				*e*S	**Sb**	**09 04 19.7**	**-0.6**
	baz=271						
TWE	**Neicheng**	**1.06**	**309**	*e*P	**Pb**	**09 04 11.5**	**-0.1**
	baz=301						
TWE				*e*S	**Sn**	**09 04 25.4**	**+0.3**
	baz=301						
ESL	**Shilin**	**1.07**	**257**	*e*P	**Pn**	**09 04 10.7**	**-0.6**
	baz=257						
ESL				*e*S	**Sn**	**09 04 24.2**	**-1.2**
	baz=257						
ENTT	**Nioudou**	**1.09**	**303**	*e*P	**Pn**	**09 04 11.8**	**+0.2**
	baz=301						
ENTT				*e*S	**Sb**	**09 04 25.7**	**-0.2**
	baz=301						
IRIF	**Iriomote-Funau**	**1.09**	**75**	P	**Pn**	**09 04 11.5**	**-0.1**
IRIF				*e*S	**Sb**	**09 04 26.5**	**+0.5**
HATJ	**Hateruma jima**	**1.13**	**90**	P	**Pn**	**09 04 12.0**	**-0.1**
HATJ				*e*S	**Sb**	**09 04 27.6**	**+0.6**
NNS	**Nan Shan**	**1.16**	**289**	*e*P	**Pn**	**09 04 12.6**	**0.0**
	baz=289						
NNS				*e*S	**Sn**	**09 04 27.8**	**0.0**
	baz=289						
WHF	**Hehuan Shan**	**1.20**	**275**	P	**Pn**	**09 04 13.2**	**-0.3**
	baz=274						
WHF				*e*S	**Sn**	**09 04 28.4**	**-0.7**
	baz=274						
NWF	**Wu-fen Shan**	**1.24**	**325**	*e*P	**Pn**	**09 04 14.0**	**+0.2**
	baz=323						
NWF				*e*S	**Sn**	**09 04 29.6**	**-0.1**
	baz=323						
NSK	**Sanguang**	**1.27**	**299**	*e*P	**Pn**	**09 04 14.2**	**+0.1**
	baz=298						
NSK				*e*S	**Sn**	**09 04 30.2**	**-0.1**
	baz=298						
EHY	**Hungye**	**1.27**	**245**	*e*P	**Pn**	**09 04 14.4**	**+0.4**
	baz=257						
EHY				*e*S	**Sn**	**09 04 29.5**	**-0.8**
	baz=257						
JKRS	**Kuro-shima**	**1.32**	**82**	P	**Pn**	**09 04 15.2**	**+0.4**
JKRS				*e*S	**Sb**	**09 04 33.0**	**+0.3**
TWF1	**Yuli**	**1.36**	**239**	P	**Pn**	**09 04 15.2**	**-0.1**
	baz=240						
TWF1				*e*S	**Sn**	**09 04 32.3**	**-0.3**
	baz=240						
CHKT	**Chengkung**	**1.46**	**230**	*e*P	**Pn**	**09 04 17.1**	**+0.4**
	baz=222						
CHKT				*e*S	**Sn**	**09 04 32.6**	**-2.3**
	baz=222						
JIJ	**Ishigaki jima**	**1.47**	**78**	P	**Pn**	**09 04 15.5**	**-1.2**
JIJ				*e*S	**Sn**	**09 04 34.3**	**-0.8**
SMLT	**Sun Moon Lake**	**1.54**	**264**	*e*P	**Pn**	**09 04 18.2**	**+0.3**
	baz=263						
NSTT	**Nanjuang**	**1.54**	**292**	*e*P	**Pn**	**09 04 18.4**	**+0.6**
	baz=291						
TYC	**Yuchr**	**1.58**	**265**	*e*P	**Pn**	**09 04 18.8**	**+0.5**
	baz=265						
TYC				*e*S	**Sn**	**09 04 37.4**	**-0.4**
	baz=265						
YUS	**Yu-Shan**	**1.59**	**250**	*e*P	**Pn**	**09 04 19.2**	**+0.3**
	baz=250						
YUS				*e*S	**Sn**	**09 04 38.3**	**-0.5**
	baz=250						
TWQ1	**Liyutan**	**1.67**	**280**	*e*P	**Pn**	**09 04 20.0**	**+0.4**
	baz=280						
CHN5	**Tsauling**	**1.79**	**256**	*e*P	**Pn**	**09 04 22.7**	**+1.4**
	baz=256						
CHN5				*e*S	**Sn**	**09 04 44.0**	**+0.6**
	baz=256						
CHN4	**Tsaushan**	**1.95**	**249**	*e*P	**Pn**	**09 04 25.2**	**+1.8**
	baz=250						
CHN4				*e*S	**Sb**	**09 04 49.2**	**-1.4**
	baz=250						
WTP	**Ta-pu**	**1.97**	**246**	*e*P	**Pn**	**09 04 24.8**	**+1.1**
	baz=247						
WTP				*e*S	**Sn**	**09 04 49.0**	**+1.4**
	baz=247						
JTJ	**Tarama**	**2.03**	**73**	P	**Pn**	**09 04 24.9**	**+0.4**
JTJ				*e*S	**Sn**	**09 04 48.9**	**-0.1**
CHN1	**Nanshi**	**2.07**	**246**	*e*P	**Pn**	**09 04 26.0**	**+1.0**
	baz=247						
CHN1				*e*S	**Sn**	**09 04 52.2**	**+2.2**
	baz=247						
TWK	**Hsinying**	**2.07**	**248**	*e*P	**Pn**	**09 04 26.2**	**+1.1**
	baz=248						

*ISCJB **30** 09:06:53.5±0.5, 0°.28N±0°.05×124°.88E±0°.06, h87km, mb4.0/10, Error ellipse: s-maj=9.1km s-min=7.3km az=16.6*
*IDC **30** 09:06:53.6±3.5, 0°.26N×124°.97E, h64km±34km, mb3.7/10, mb1 3.8/12, mb1mx3.7/24, mbtmp3.7/12, ML3.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.3/32, Error ellipse: s-maj=27.1km s-min=12.4km az=79.0*
*DJA **30** 09:06:56.4±0.6, 0°N±4°×12°5E±°, h10km, M5.0/3, mb6.0/1, MLv4.5/3*
ISC 30 09:06:55.6±0.7, 0°36N±0°07×124°87E±0°09, h87km, n24, σ1°47/19, mb4.0/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.91**	**284**	P	**Pn**	**09 07 11.7**	**-2.4**
KMSI				S	**Sn**	**09 07 26.2**	**-1.7**
MNI	**Manado**	**1.08**	**359**	P	**Pn**	**09 07 13.9**	**-2.2**
LUWI	**Luwuk**	**2.51**	**236**	P	Pn	09 07 39.6	+5.1
LUWI				S	Sn	09 08 13.2	+8.8
MRSI	**Marisa**	**2.93**	**272**	P	**Pn**	**09 07 39.8**	**-0.3**
SKSI	**Soroako, Sulaw**	**4.54**	**231**	P	Pn	09 08 07.6	+5.5
TTSI	**Tana Toraja**	**6.07**	**236**	P	Pn	09 08 27.7	+4.9
SPSI	**Sidrap Palu**	**6.66**	**230**	P	**Pn**	**09 08 31.1**	**+0.2**
DAV	**Davao City (W)**	**6.71**	**6**	LR	LR	09 11 26.1	
	comp=Z,163nm,19.7s,baz=226,slow=40						
BKSI	**Bulukumba**	**7.36**	**220**	P	Pn	09 08 45.8	+5.3
KAPI	**Kappang**	**7.38**	**224**	P	**Pn**	**09 08 39.5**	**-1.3**
	1.2nm,0.3s,baz=45,slow=14,SNR=3.9						
KAPI				S	**Sn**	**09 10 03.3**	**+0.2**
	0.8nm,0.3s,baz=97,slow=17,SNR=2.1						
MTKI	**Muara Teweh, K**	**10.05**	**263**	P	Pn	09 09 24.3	+7.1
SBUM	**Sibu**	**12.81**	**279**	P	P	09 10 07.1	+5.0
FITZ	**Fitzroy Crossi**	**18.36**	**178**	P	**P**	**09 11 01.3**	**-2.2**
	0.1nm,0.3s,baz=5.2,slow=14,SNR=4.0						
WRA	**Warramunga Arr**	**22.21**	**156**	P	P	09 11 41.7	-3.4
	2.5nm,0.7s,baz=335,slow=10.0,SNR=12						
ASAR	**Alice Springs**	**25.44**	**160**	P	**P**	**09 12 14.5**	**-1.0**
	0.9nm,0.3s,baz=340,slow=10,SNR=32						
ASAR				PcP	**PcP**	**09 15 47.5**	**+1.8**
	0.9nm,0.5s,baz=349,slow=2.1,SNR=13						
STKA	**Stephens Creek**	**35.76**	**155**	P	**P**	**09 13 46.0**	**-0.3**
	2.7nm,0.8s,baz=297,slow=4.0,SNR=11						
KSRS	**Korea Array**	**37.02**	**4**	P	**P**	**09 13 58.6**	**+1.6**
	2.7nm,0.7s,baz=177,slow=10,SNR=10						
MJAR	**Matsushiro Arr**	**38.07**	**18**	P	**P**	**09 14 06.1**	**+0.2**
	0.7nm,0.3s,baz=257,slow=10,SNR=4.6						
USRK	**Ussurisyk Arra**	**44.12**	**7**	P	**P**	**09 14 57.1**	**+1.8**
	1.9nm,0.4s,baz=189,slow=7.2,SNR=15						
SONM	**Songino Array**	**49.94**	**344**	P	**P**	**09 15 41.8**	**+1.0**
	1.2nm,0.7s,baz=163,slow=8.6,SNR=4.6						
MKAR	**Makanchi Array**	**59.31**	**327**	P	**P**	**09 16 49.3**	**+0.9**
	0.7nm,0.4s,baz=126,slow=7.6,SNR=22						
ZALV	**Zalesovo Beam**	**62.78**	**335**	P	**P**	**09 17 11.3**	**-0.4**
	0.8nm,0.7s,baz=120,slow=8.5,SNR=3.0						
VNDA	**Vanda**	**80.34**	**172**	P	**P**	**09 18 56.4**	**-0.4**
	1.0nm,0.6s,baz=313,slow=7.0,SNR=9.4						
TORD	**Torodi Ar. Bea**	**122.11**	**286**	PKP	**PKPdf**	**09 25 42.6**	**+1.3**
	0.2nm,0.4s,baz=121,slow=1.6,SNR=5.6						

IGQ 30 09:08:03.5, 1°66S×77°55W, h209km±16km, Mb4.1, Ms3.9,

13C-8D, Error ellipse: s-maj=3.9km s-min=1.9km az=2.9, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.88**	**228**	⇑S	S	09 08 55.4	-1.6
MACE	**Macas**	**0.88**	**228**	⇑P	Pn	09 08 33.8	+0.1
ULBA	**Ulba**	**0.89**	**284**	⇑S	S	09 08 55.5	-1.9
ULBA	**Ulba**	**0.89**	**284**	⇑P	Pn	09 08 34.1	+0.1
BULB	**Ulba Tungurahu**	**0.89**	**285**	⇑P	Pn	09 08 34.0	0.0
BULB	**Ulba Tungurahu**	**0.89**	**285**	⇑S	S	09 08 55.5	-2.0
BRUN	**Tungurahua Vol**	**0.90**	**285**	⇑S	S	09 08 56.0	-1.5
BRUN	**Tungurahua Vol**	**0.90**	**285**	⇑P	Pn	09 08 34.1	+0.2
PAT1	**Patacocha**	**0.90**	**280**	⇑S	S	09 08 56.0	-1.8
PAT1	**Patacocha**	**0.90**	**280**	⇑P	Pn	09 08 34.3	+0.1
RUN5	**Runtun**	**0.91**	**286**	S	S	09 08 55.7	-1.9
RUN5	**Runtun**	**0.91**	**286**	P	Pn	09 08 34.0	0.0
ARRY	**Arrayan**	**0.92**	**280**	⇓S	S	09 08 55.6	-2.1
ARRY	**Arrayan**	**0.92**	**280**	⇓P	Pn	09 08 34.2	0.0
RETU	**Refugio**	**0.92**	**283**	P	Pn	09 08 34.4	+0.1
BMAS	**Trigal station**	**0.94**	**280**	⇑S	S	09 08 55.4	-2.6
BMAS	**Trigal station**	**0.94**	**280**	⇑P	Pn	09 08 34.4	+0.1
JUI6	**Juive**	**0.95**	**284**	P	Pn	09 08 34.1	-0.1
BBIL	**Ulba Tungurahu**	**0.96**	**283**	⇑P	Pn	09 08 34.6	+0.2
PISA	**Pisayambo**	**1.03**	**306**	S	S	09 08 59.0	-0.3
PISA	**Pisayambo**	**1.03**	**306**	P	Pn	09 08 35.5	+0.5
RIOE	**Riobamba**	**1.09**	**265**	P	Pn	09 08 35.6	+0.4
IGUA	**Igualata**	**1.10**	**279**	P	Pn	09 08 36.0	+0.4
TAMB	**Tambo**	**1.26**	**320**	⇓P	Pn	09 08 37.7	+0.9
BTAM	**Cotopaxi Volca**	**1.30**	**319**	S	S	09 09 02.4	-0.5
BTAM	**Cotopaxi Volca**	**1.30**	**319**	P	Pn	09 08 37.6	+0.6
BMOR	**Cotopaxi Volca**	**1.30**	**315**	⇓S	S	09 09 01.0	-1.9
BMOR	**Cotopaxi Volca**	**1.30**	**315**	⇓P	Pn	09 08 37.9	+0.8
MOV1	**Cotopaxi Vol s**	**1.30**	**317**	P	Pn	09 08 37.9	+0.7
BVC2	**Cotopaxi Volca**	**1.32**	**319**	S	S	09 09 02.5	-0.8
BVC2	**Cotopaxi Volca**	**1.32**	**319**	P	Pn	09 08 38.0	+0.7
VC1	**Cotopaxi 1**	**1.33**	**320**	P	Pn	09 08 38.8	+1.6
BREF	**Cotopaxi Volca**	**1.33**	**318**	P	Pn	09 08 38.4	+0.9
ANTI	**Antisana**	**1.35**	**333**	⇓P	Pn	09 08 38.2	+0.7
ANTI	**Antisana**	**1.35**	**333**	⇓S	S	09 09 03.1	-0.7
PITA	**Cotopaxi Volc**	**1.41**	**321**	P	Pn	09 08 38.9	+1.0
LAV4	**Lava4-Reventad**	**1.56**	**357**	P	Pn	09 08 38.6	-0.3
CHAR	**Charly**	**1.57**	**356**	P	Pn	09 08 39.9	+0.7
CONE	**Cono NE Rev Vo**	**1.58**	**357**	P	Pn	09 08 39.5	+0.3
CAYR	**Refugio Cayamb**	**1.73**	**345**	P	Pn	09 08 42.0	+1.1
PINO	**Pino**	**1.83**	**325**	P	Pn	09 08 42.5	+0.7
OTAV	**Otavalo**	**2.09**	**334**	⇓P	Pn	09 08 44.6	+0.3
CATE	**Catamayo**	**2.92**	**219**	S	S	09 09 31.4	+0.2
CATE	**Catamayo**	**2.92**	**219**	P	Pn	09 08 53.0	+0.1
CHIS	**Cerro-Chispas-**	**3.23**	**281**	S	S	09 09 35.7	-1.7
CHIS	**Cerro-Chispas-**	**3.23**	**281**	P	Pn	09 08 55.5	-1.0

IDC 30 09:09:59.2±5.0, 6°55S×145°54E, h256km±60km, mb2.9/3, mb1 3.1/5, mb1mx2.9/18, mbtmp2.9/5, Error ellipse: s-maj=95.8km s-min=22.8km az=139.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.26**	**151**	P	Pn	09 10 54.9	0.0
	1.2nm,0.3s,baz=344,slow=7.4,SNR=3.6						
PMG				S	S	09 11 31.0	-8.2
	0.8nm,0.3s,baz=344,slow=19,SNR=3.4						
WRA	**Warramunga Arr**	**17.20**	**218**	P	P	09 13 43.6	+0.7
	0.3nm,0.3s,baz=42,slow=11,SNR=4.7						
ASAR	**Alice Springs**	**20.37**	**212**	P	P	09 14 16.4	-0.6
	0.4nm,0.5s,baz=41,slow=8.6,SNR=5.2						
FITZ	**Fitzroy Crossi**	**22.

KHAL				*i* S		**Sb**	**09 14 19.5**	**+1.2**
KHL	**Karahalli**	**2.08**	**94**	*e*PN		**Pn**	**09 13 49.9**	**-0.4**
KHL	**Karahalli**	**2.08**	**94**	*e*Pn		**Pn**	**09 13 49.9**	**-0.4**
KCTX	**Karacabey (Bur**	**2.09**	**33**	*e*PN		**Pn**	**09 13 50.2**	**-0.2**
KCTX	**Karacabey (Bur**	**2.09**	**33**	*e*Pn		**Pn**	**09 13 50.2**	**-0.2**
MRMT	**Marmara Adasi**	**2.16**	**14**	*e*PN		**Pn**	**09 13 51.3**	**-0.1**
MRMT	**Marmara Adasi**	**2.16**	**14**	*e*Pn		**Pn**	**09 13 51.3**	**-0.1**
ERIK	**Erikli-Kesan**	**2.18**	**353**	*e*PN		**Pn**	**09 13 51.7**	**+0.1**
ERIK	**Erikli-Kesan**	**2.18**	**353**	*e*Pn		**Pn**	**09 13 51.7**	**+0.1**
ENEZ	**Enez**	**2.30**	**346**	*e*PN		**Pn**	**09 13 53.4**	**+0.2**
ENEZ	**Enez**	**2.30**	**346**	*e*Pn		**Pn**	**09 13 53.4**	**+0.2**
ALN	**Alexandroupoli**	**2.47**	**345**	P		**Pn**	**09 13 54.5**	**-1.1**
ALN	**Alexandroupoli**	**2.47**	**345**	P		**Pn**	**09 13 54.5**	**-1.1**
ARMT	**Armutlu**	**2.56**	**36**	*e*PN		**Pn**	**09 13 57.3**	**+0.5**
ARMT	**Armutlu**	**2.56**	**36**	*e*Pn		**Pn**	**09 13 57.3**	**+0.5**

CSEM ***30*** *09:13:35.7±0.6, 34°.67N×36°.63E, h10km, ML1.7, Error ellipse: s-maj=11.8km s-min=10.7km az=54.0*
ISCJB ***30*** *09:13:36.4±1.0, 34°.62N±0°.05×36°.62E±0°.05, h10km, Error ellipse: s-maj=7.4km s-min=6.4km az=176.7*
NSSC ***30*** *09:13:36.5±1.9, 34°.66N×36°.55E, h18km±14km, ML1.8*
GRAL ***30*** *09:13:39.2±0.3, 34°.45N×36°.73E, h8km±8km, MD2.9*

ISC 30 09:13:34.9±1.0, 34°.66N±0°.04×36°.60E±0°.05, h10km, n15, σ0s86/26, 4C-6D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWQ	**Hawqa**	**0.66**	**235**	*e*P	**Pn**	**09 13 51.3**	**+0.9**
HWQ				*e*S	**Sn**	**09 14 00.4**	**-0.5**
HWQ	**Hawqa**	**0.66**	**235**	*e*P	**Pn**	**09 13 51.3**	**+0.9**
HWQ				*e*S	**Sn**	**09 14 00.4**	**-0.5**
ROOS	**tl_alroos**	**0.75**	**130**	*e*P	**Pb**	**09 13 50.8**	**+0.8**
ROOS				AML	AML	09 14 01.2	
	comp=Z,1.3nm,0.3s						
ROOS				*e*S	**Sn**	**09 14 02.2**	**-0.8**
ROOS				AML	AML	09 14 03.9	
	comp=E,1.9nm,0.3s						
ROOS				AML	AML	09 14 04.2	
	comp=N,1.1nm,0.3s						
ROOS	**tl_alroos**	**0.75**	**130**	*e*P	**Pb**	**09 13 50.8**	**+0.8**
	SNR=95						
ROOS				*e*S	**Sn**	**09 14 02.2**	**-0.8**
	comp=N,1.1nm,0.3s,SNR=95						
SLNF	**Slenfeh**	**0.99**	**342**	*e*P	**Pg**	**09 13 53.7**	**-0.2**
SLNF	**Slenfeh**	**0.99**	**342**	*e*P	**Pg**	**09 13 53.7**	**-0.2**
	SNR=94						
BHL	**Bhannes**	**1.09**	**227**	*e*P	**Pn**	**09 13 57.7**	**+1.5**
BHL	**Bhannes**	**1.09**	**227**	*e*P	**Pn**	**09 13 57.7**	**+1.5**
QASN	**Qassioun**	**1.15**	**194**	*e*P	**Pb**	**09 13 57.0**	**+0.1**
QASN				*e*S	**Sb**	**09 14 11.3**	**-0.7**
QASN				AML	AML	09 14 19.5	
	comp=E,Z,61nm,0.6s						
QASN				AML	AML	09 14 21.4	
	comp=N,111nm,0.5s						
QASN				AML	AML	09 14 21.5	
	comp=E,169nm,0.4s						
QASN	**Qassioun**	**1.15**	**194**	*e*P	**Pb**	**09 13 57.0**	**+0.1**
	SNR=93						
QASN				*e*S	**Sb**	**09 14 11.3**	**-0.7**
	comp=E,169nm,0.4s,SNR=93						
RCY	**Rachaya**	**1.32**	**209**	*e*P	**Pg**	**09 14 00.4**	**+0.2**
RCY				*e*S	**Sb**	**09 14 16.0**	**-0.9**
BRBR	**Barbar**	**1.35**	**204**	*e*P	**Pg**	**09 14 01.4**	**+0.5**
BRBR				*e*S	**Sb**	**09 14 16.7**	**-1.2**
BRBR				AML	AML	09 14 23.9	
	comp=N,36nm,0.6s						
BRBR				AML	AML	09 14 25.5	
	comp=Z,31nm,0.6s						
BRBR				AML	AML	09 14 25.5	
	comp=E,55nm,0.6s						
BRBR	**Barbar**	**1.35**	**204**	*e*P	**Pg**	**09 14 01.4**	**+0.5**
	SNR=57						
BRBR				*e*S	**Sb**	**09 14 16.7**	**-1.2**
	comp=E,55nm,0.6s,SNR=58						
ZALF	**Zalf**	**1.83**	**160**	*e*P	**Pb**	**09 14 07.6**	**-0.9**
ZALF				*e*S	**Sn**	**09 14 29.1**	**-0.6**
ZALF				AML	AML	09 14 30.8	
	comp=N,31nm,0.7s						
ZALF				AML	AML	09 14 31.9	
	comp=Z,23nm,0.7s						
ZALF	**Zalf**	**1.83**	**160**	*e*P	**Pb**	**09 14 07.6**	**-0.9**
	SNR=57						
ZALF				*e*S	**Sn**	**09 14 29.1**	**-0.6**
	comp=Z,23nm,0.7s,SNR=58						

CASC ***30*** *09:15:33.9±3.2, 16°.25N×87°.72W, h20km±999km, MD4.4, ML3.9*
ISCJB ***30*** *09:15:36.7±1.1, 16°.10N±0°.05×87°.8W±0°.1, h33km, mb3.6/4, MS3.4/1, Error ellipse: s-maj=19.7km s-min=5.7km az=10.0*
IDC ***30*** *09:15:44.9±3.4, 16°.31N×88°.76W, h0km, mb3.6/4, mb1 3.9/6, mb1mx3.7/23, mbtmp3.6/6, ML3.9/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/28, Error ellipse: s-maj=66.9km s-min=28.2km az=116.0*

ISC 30 09:15:38.4±1.6, 16°.05N±0°.06×87°.7W±0°.2, h35km, n23, σ1s44/15, mb3.6/4, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**2.18**	**243**	*e*P	Pn	09 16 07.6	-4.7
MTO2	**Montecristo 2**	**2.31**	**225**	*e*P	**Pn**	**09 16 13.1**	**-1.1**
BLLM	**Bellamira**	**2.65**	**192**	*e*P	**Pn**	**09 16 17.2**	**-1.5**
VSM	**San Miguel**	**2.67**	**193**	*e*P	**Pn**	**09 16 17.9**	**-1.4**
SNVI	**San Vicente**	**2.67**	**205**	*e*P	**Pn**	**09 16 18.5**	**-0.7**
LFU	**La Fuente**	**2.68**	**211**	*e*P	**Pn**	**09 16 19.1**	**0.0**
RBDL	**Robledal**	**2.74**	**225**	*e*P	**Pn**	**09 16 19.5**	**-0.6**
SNET	**Serv Nac Est T**	**2.79**	**213**	*e*S	**Sn**	**09 16 54.0**	**+0.7**
SNET				AML	AML	09 17 03.7	
	comp=Z,796nm,0.3s						
RTR	**El Retiro**	**2.87**	**222**	*e*P	**Pn**	**09 16 20.8**	**-1.0**
RTR				*e*S	**Sn**	**09 16 56.9**	**+1.7**
SBLS	**San Blas**	**2.90**	**221**	*e*P	**Pn**	**09 16 22.7**	**+0.4**
NBG	**Las Nubes**	**2.96**	**241**	*e*P	Pn	09 16 19.2	-4.0
FUG	**Fuego 3**	**3.45**	**243**	*e*P	Pn	09 16 25.8	-4.0
TEIG	**Tepich**	**4.19**	**352**	Pn	**Pn**	**09 16 39.4**	**-0.4**
	comp=Z,19nm,0.3s,baz=186,slow=2.5,SNR=106						
TEIG				Pg		09 16 56.0	
	comp=Z,103nm,0.3s,baz=7.9,slow=1.6,SNR=38						
TEIG				Sn	**Sn**	**09 17 27.7**	**+0.2**
	comp=Z,55nm,0.3s,baz=289,slow=20,SNR=8.7						
TEIG				Lg	Lg	09 17 50.8	
	comp=Z,100nm,0.3s,baz=88,slow=22,SNR=7.6						
JAT	**Jato**	**4.19**	**246**	*e*P	**Pn**	**09 16 37.7**	**-2.2**
TXAR	**Lajitas Array**	**19.77**	**315**	P	**Pn**	**09 20 05.9**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=125,slow=11,SNR=6.2						
TKL	**Tuckaleechee C**	**19.83**	**9**	P	Pn	09 20 15.4	+7.4
	comp=Z,0.4nm,0.3s,baz=142,slow=14,SNR=6.7						
TKL				LR	LR	09 27 41.7	
	comp=Z,52nm,21.4s,baz=255,slow=36						
ATAH	**Atahualpa**	**24.80**	**158**	LR	LR	09 30 11.3	
	comp=Z,120nm,19.0s,baz=169,slow=34						
ANMO	**Albuquerque**	**25.24**	**322**	P	**P**	**09 21 04.0**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=143,slow=9.3,SNR=4.6						
NVAR	**Mina Array Bea**	**34.92**	**316**	P	P	09 22 30.9	+3.7
	comp=Z,0.4nm,0.6s,baz=138,slow=12,SNR=5.4						
YKA	**Yellowknife Ar**	**50.10**	**344**	P	P	09 24 37.9	+8.2
	comp=Z,0.6nm,0.6s,baz=140,slow=7.6,SNR=8.5						
ILAR	**Eielson Array**	**62.66**	**336**	P	P	09 26 07.5	+8.3
	comp=Z,0.9nm,0.9s,baz=108,slow=4.9,SNR=8.8						
WRA	**Warramunga Arr**	**139.93**	**258**	PKhKP	PKPpre	09 35 11.7	
	comp=Z,0.7nm,0.8s,baz=72,slow=2.1,SNR=5.0						
ASAR	**Alice Springs**	**140.28**	**252**	PKhKP	PKPpre	09 35 12.0	
	comp=Z,0.5nm,1.1s,baz=120,slow=3.3,SNR=2.9						

IDC 30 09:22:42.3±9.1, 1°.36N×96°.94E, h0km, mb3.8/3, mb1 3.9/4, mb1mx3.5/26, mbtmp3.8/4, ML4.2/1, Error ellipse: s-maj=186.8km s-min=118.5km az=139.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**17.11**	**6**	P	Pn	09 26 42.6	-0.4
	0.3nm,0.3s,baz=198,slow=11,SNR=7.3						
SONM	**Songino Array**	**47.02**	**9**	P	P	09 31 15.5	0.0
	0.5nm,0.4s,baz=190,slow=9.9,SNR=3.3						
MKAR	**Makanchi Array**	**47.03**	**346**	P	P	09 31 15.5	0.0
	0.9nm,0.7s,baz=146,slow=7.3,SNR=5.9						
ZALV	**Zalesovo Beam**	**53.36**	**351**	P	P	09 32 03.1	-0.2
	0.8nm,0.3s,baz=164,slow=5.6,SNR=4.6						

IDC 30 09:23:52.0±4.2, 6°.61S×128°.01E, h370km±62km, mb3.3/2, mb1 3.5/5, mb1mx3.1/20, mbtmp3.3/5, Error ellipse: s-maj=89.5km s-min=15.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.66**	**191**	P	P	09 26 27.7	-1.3
	0.4nm,0.3s,baz=28,slow=12,SNR=13						
FITZ				S	S	09 28 47.7	+9.0
	0.2nm,0.3s,baz=111,slow=20,SNR=3.3						
WRA	**Warramunga Arr**	**14.61**	**156**	P	P	09 27 01.2	-0.4
	2.2nm,0.3s,baz=331,slow=12,SNR=59						
WRA				S	S	09 29 36.8	-1.9
	0.1nm,0.3s,baz=338,slow=21,SNR=4.0						
ASAR	**Alice Springs**	**17.88**	**162**	P	P	09 27 37.0	+0.2
	1.6nm,0.3s,baz=342,slow=11,SNR=157						
ASAR				S	S	09 30 44.0	+0.8
	0.1nm,0.3s,baz=342,slow=18,SNR=7.5						
STKA	**Stephens Creek**	**28.16**	**155**	P	P	09 29 12.3	+0.4
	1.6nm,0.5s,baz=344,slow=9.1,SNR=11						
KSRS	**Korea Array**	**43.83**	**360**	P	P	09 31 22.7	-0.4
	0.9nm,0.5s,baz=176,slow=10.0,SNR=5.6						

IDC 30 09:43:28.4±9.7, 9°.29S×77°.22W, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.7/19, mbtmp3.6/4, MS2.7/1, Ms1 2.8/1, ms1mx2.6/18, Error ellipse: s-maj=380.7km s-min=37.3km az=27.0, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**11.26**	**129**	LR	LR	09 51 39.3	
	comp=Z,33nm,18.3s,baz=254,slow=44						
TXAR	**Lajitas Array**	**46.09**	**327**	P	P	09 51 55.2	+0.6
	0.4nm,0.8s,baz=158,slow=9.7,SNR=4.9						
NVAR	**Mina Array Bea**	**60.98**	**324**	P	P	09 53 43.6	-0.3
	0.6nm,0.7s,baz=140,slow=7.1,SNR=5.7						
YKA	**Yellowknife Ar**	**77.17**	**343**	P	P	09 55 23.3	-0.4
	0.4nm,0.5s,baz=139,slow=5.8,SNR=7.5						
TORD	**Torodi Ar. Bea**	**81.45**	**75**	P	P	09 55 48.3	+0.2
	0.6nm,1.0s,baz=244,slow=6.3,SNR=2.4						

ISCJB ***30*** *09:52:47.6±0.7, 5°.0S±0°.1×151°.4E±0°.1, h10km, mb4.1/14, MS3.6/12, Error ellipse: s-maj=21.4km s-min=11.6km az=31.2*
IDC ***30*** *09:52:47.5±1.0, 5°.00S×151°.52E, h0km, mb4.0/10, mb1 4.2/11, mb1mx4.1/20, mbtmp4.0/11, ML3.4/1, MS3.6/12, Ms1 3.6/12, ms1mx3.5/22, Error ellipse: s-maj=32.0km s-min=17.4km az=114.0*
NEIC ***30*** *09:52:50.0±0.6, 5°.00S×151°.37E, h15km, mb4.6/3, Error ellipse: s-maj=19.0km s-min=11.3km az=119.0*

ISC 30 09:52:48.9±0.8, 4°.9S±0°.1×151°.5E±0°.1, h10km, n33, σ1s34/28, mb4.2/14, MS3.7/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.20**	**224**	Pn	**Pn**	**09 54 18.8**	**-1.7**
	115nm,0.8s						
PMG				Sn	**Sn**	**09 55 33.9**	**+2.4**
PMG				*e*Sn	Sn	09 55 35.6	+4.1
PMG	**Port Moresby**	**6.20**	**224**	Pn	**Pn**	**09 54 21.5**	**+1.0**
	5.3nm,0.3s,baz=33,slow=7.9,SNR=18						
PMG				Sn	**Sn**	**09 55 33.9**	**+2.4**
	2.3nm,0.3s,baz=218,slow=11,SNR=2.5						
DZM	**Mont Dzumac**	**22.35**	**141**	LR	LR	10 05 27.7	
	comp=Z,288nm,18.5s,baz=203,slow=34						
WRAB	**Tennant Creek**	**22.39**	**227**	*e*P	**P**	**09 57 46.3**	**-1.4**
	6.9nm,0.6s						
WRA	**Warramunga Arr**	**22.41**	**227**	P	**P**	**09 57 46.5**	**-1.3**
WRA	**Warramunga Arr**	**22.41**	**227**	P	**P**	**09 57 46.5**	**-1.3**
	6.5nm,0.7s,baz=49,slow=10.0,SNR=29						
ASAR	**Alice Springs**	**25.20**	**221**	P	**P**	**09 58 14.8**	**-0.1**
ASAR	**Alice Springs**	**25.20**	**221**	P	**P**	**09 58 14.8**	**-0.1**
	5.1nm,0.6s,baz=57,slow=8.5,SNR=80						
ASAR				LR	LR	10 08 07.8	
	comp=Z,80nm,19.0s,baz=225,slow=37						
STKA	**Stephens Creek**	**28.38**	**198**	P	**P**	**09 58 43.0**	**-0.5**
STKA	**Stephens Creek**	**28.38**	**198**	P	**P**	**09 58 43.0**	**-0.5**
	1.8nm,0.6s,baz=12,slow=12,SNR=4.8						
STKA				LR	LR	10 10 01.6	
	comp=Z,172nm,19.6s,baz=20,slow=36						
FITZ	**Fitzroy Crossi**	**28.47**	**241**	P	**P**	**09 58 42.8**	**-1.6**
FITZ	**Fitzroy Crossi**	**28.47**	**241**	P	**P**	**09 58 42.8**	**-1.6**
	5.3nm,0.7s,baz=91,slow=8.2,SNR=17						
FITZ				LR	LR	10 11 15.1	
	comp=Z,112nm,18.4s,baz=66,slow=39						
KAPI	**Kappang**	**31.64**	**268**	*e*P	**P**	**09 59 10.0**	**-2.5**
	32nm,1.3s						
MBWA	**Marble Bar**	**34.79**	**239**	*e*P	**P**	**09 59 38.9**	**-1.2**
	12nm,1.2s						
MJAR	**Matsushiro Arr**	**43.09**	**344**	LR	LR	10 15 53.5	
	comp=Z,48nm,21.2s,baz=180,slow=32						
KSRS	**Korea Array**	**47.55**	**334**	LR	LR	10 18 24.2	
	comp=Z,38nm,20.3s,baz=157,slow=32						
CMAR	**Chiang Mai Arr**	**56.77**	**296**	P	**P**	**10 02 34.8**	**+1.1**
CMAR	**Chiang Mai Arr**	**56.77**	**296**	P	**P**	**10 02 34.8**	**+1.1**
	0.8nm,0.5s,baz=104,slow=4.8,SNR=5.0						
PETK	**Petropavlovsk-**	**58.05**	**4**	LR	LR	10 23 34.7	
	comp=Z,17nm,20.8s,baz=344,slow=32						
SONM	**Songino Array**	**65.75**	**328**	P	**P**	**10 03 35.6**	**+1.4**
SONM	**Songino Array**	**65.75**	**328**	P	**P**	**10 03 35.6**	**+1.4**
	0.6nm,0.6s,baz=141,slow=7.1,SNR=3.1						
SONM				LR	LR	10 30 46.2	
	comp=Z,46nm,19.7s,baz=273,slow=35						
VNDA	**Vanda**	**72.75**	**178**	P	**P**	**10 04 17.3**	**+0.4**
VNDA	**Vanda**	**72.75**	**178**	P	**P**	**10 04 17.3**	**+0.4**
	0.8nm,0.9s,baz=340,slow=3.3,SNR=4.2						
MKAR	**Makanchi Array**	**79.58**	**319**	P	**P**	**10 04 56.8**	**+0.5**
MKAR	**Makanchi Array**	**79.58**	**319**	P	**P**	**10 04 56.8**	**+0.5**
	0.6nm,0.9s,baz=54,slow=7.3,SNR=2.4						
ZALV	**Zalesovo Beam**	**80.55**	**327**	LR	LR	10 38 35.9	
	comp=Z,34nm,18.7s,baz=71,slow=34						
ILAR	**Eielson Array**	**82.76**	**22**	P	**P**	**10 05 11.9**	**-0.9**
ILAR	**Eielson Array**	**82.76**	**22**	P	**P**	**10 05 11.9**	**-0.9**
	0.4nm,0.9s,baz=260,slow=4.7,SNR=4.2						
ILAR				LR	LR	10 41 26.2	
	comp=Z,33nm,18.7s,baz=82,slow=35						
QSPA	**South Pole Qui**	**85.03**	**180**	*e*P	**P**	**10 05 24.6**	**-0.1**
	7.5nm,1.3s						
NVAR	**Mina Array Bea**	**93.18**	**52**	P	**P**	**10 06 04.9**	**+0.9**
NVAR	**Mina Array Bea**	**93.18**	**52**	P	**P**	**10 06 04.9**	**+0.9**
	0.9nm,1.0s,baz=262,slow=6.1,SNR=3.1						
PFO	**Pinyon Flat Ob**	**94.39**	**57**	LR	LR	10 41 27.3	
	comp=Z,61nm,18.6s,baz=189,slow=31						
PDAR	**Pinedale Array**	**99.89**	**48**	LR	LR	10 45 44.5	
	comp=Z,24nm,18.6s,baz=257,slow=32						

ISCJB ***30*** *10:15:59.1±0.6, 14°.27N±0°.05×92°.75W±0°.04, h45km±9km, mb3.8/6, MS2.9/2, Error ellipse: s-maj=9.2km s-min=4.5km az=27.5*
MEX ***30*** *10:15:59.1±1.2, 14°.13N×92°.70W, h19km±60km, MD4.4*
CASC ***30*** *10:16:04.0±1.6, 14°.30N×92°.45W, h38km±13km, MD4.0, ML3.8*
IDC ***30*** *10:16:09.7±9.6, 14°.86N×92°.26W, h103km±59km, mb3.5/6, mb1 3.9/8, mb1mx3.6/25, mbtmp3.5/8, MS3.1/2, Ms1 3.1/2, ms1mx2.7/20, Error ellipse: s-maj=95.5km s-min=41.1km az=4.0*

ISC 30 10:16:00.4±1.2, 14°.31N±0°.06×92°.72W±0°.04, h38km±2km, n32, σ1s19/37, mb3.8/6, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.74**	**36**	*e*P	**Pn**	**10 16 13.1**	**-1.3**
THIG				*i* S	**Sn**	**10 16 23.3**	**-1.1**
JAT	**Jato**	**1.05**	**89**	*e*P	**Pn**	**10 16 19.2**	**+0.6**
PCIG		**1.47**	**341**	*e*P	**Pn**	**10 16 23.0**	**-1.4**
PCIG				*i* S	**Sn**	**10 16 44.0**	**+1.6**
FUG	**Fuego 3**	**1.82**	**85**	*e*P	**Pn**	**10 16 29.2**	**-0.2**
CCIG	**Comitan**	**2.04**	**16**	*e*P	**Pn**	**10 16 33.1**	**+0.7**
CCIG				*i* S	**Sn**	**10 16 57.2**	**+0.4**
PCG	**Pacaya**	**2.05**	**87**	*e*P	**Pn**	**10 16 33.2**	**+0.7**
NBG	**Las Nubes**	**2.31**	**83**	*e*P	**Pn**	**10 16 38.0**	**+1.8**
TGIG		**2.49**	**351**	*e*P	**Pn**	**10 16 38.9**	**+0.5**
TGIG				*i* S	**Sn**	**10 17 09.8**	**+2.2**
RBDL	**Robledal**	**2.94**	**93**	*e*P	**Pn**	**10 16 45.5**	**+0.7**
RTR	**El Retiro**	**3.01**	**97**	*e*P	**Pn**	**10 16 46.6**	**+0.9**
MRL	**Marmol**	**3.02**	**75**	*e*P	**Pn**	**10 16 47.2**	**+1.3**
SBLS	**San Blas**	**3.04**	**98**	*e*P	**Pn**	**10 16 47.1**	**+0.9**
SNJE	**San Jose**	**3.05**	**98**	*e*P	**Pn**	**10 16 46.5**	**+0.3**
BOQS	**Boqueron**	**3.38**	**99**	*e*P	**Pn**	**10 16 51.0**	**+0.1**
SNET	**Serv Nac Est T**	**3.44**	**100**	*e*S	**Sn**	**10 17 29.2**	**-1.9**
SNET				AML	AML	10 17 39.6	
	comp=Z,516nm,0.2s						
HUIG	**Huatulco**	**3.58**	**294**	*i* P	**Pn**	**10 16 52.6**	**-0.8**
HUIG				*i* S	**Sn**	**10 17 33.7**	**-0.9**
LFRS	**El Faro**	**3.61**	**100**	*e*P	**Pn**	**10 16 53.7**	**-0.2**
SNVI	**San Vicente**	**3.83**	**100**	*e*P	**Pn**	**10 16 57.5**	**+0.6**
VHO	**Vista Hermosa**	**4.75**	**306**	*i* P	**Pn**	**10 17 10.1**	**+0.5**
VHO				*i* S	**Sn**	**10 18 03.9**	**+0.4**
CNCH	**Conchagua**	**4.85**	**102**	*e*P	**Pn**	**10 17 11.0**	**0.0**
PNIG	**Pinotepa**	**5.62**	**292**	*e*P	**Pn**	**10 17 22.0**	**+0.6**
PNIG				*i* S	**Sn**	**10 18 25.6**	**+0.9**
UTMO	**Huajuapan**	**6.01**	**306**	*e*P	Pn	10 17 31.1	+4.1
TEIG	**Tepich**	**7.26**	**35**	P	**Pn**	**10 17 43.4**	**-0.5**
	comp=Z,31nm,0.3s,baz=209,slow=10,SNR=47						
TXAR	**Lajitas Array**	**18.06**	**328**	P	**Pn**	**10 20 10.4**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=150,slow=9.3,SNR=20						
TKL	**Tuckaleechee C**	**22.73**	**19**	P	**P**	**10 20 56.5**	**-2.6**
	comp=Z,1.7nm,0.7s,baz=190,slow=11,SNR=2.3						
TKL				LR	LR	10 30 10.8	
	comp=Z,36nm,18.8s,baz=275,slow=38						
ANMO	**Albuquerque**	**24.00**	**331**	P	**P**	**10 21 12.4**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=153,slow=9.0,SNR=14						
ATAH	**Atahualpa**	**25.61**	**145**	LR	LR	10 29 00.7	
	comp=Z,51nm,21.4s,baz=54,slow=30						
PDAR	**Pinedale Array**	**31.86**	**336**	P	**P**	**10 22 22.4**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=162,slow=9.5,SNR=4.1						
NVAR	**Mina Array Bea**	**33.00**	**321**	P	**P**	**10 22 34.5**	**+2.4**
	comp=Z,0.8nm,0.6s,baz=130,slow=8.4,SNR=11						
YKA	**Yellowknife Ar**	**50.57**	**347**	P	**P**	**10 24 54.1**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=150,slow=7.3,SNR=31						
ILAR	**Eielson Array**	**62.29**	**337**	P	**P**	**10 26 18.1**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=122,slow=5.2,SNR=8.0						
CMAR	**Chiang Mai Arr**	**145.47**	**340**	PKPbc	**PKPab**	**10 35 34.8**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=339,slow=2.2,SNR=4.9						

MAN 30 10:43:48, 9°.24N×121°.59E, h52km, mb4.8, ML3.7, MS3.7, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.69**	**35**	*e*P	Pn	10 44 16.3	+1.1
GUIM				*e*S	Sn	10 44 37.3	+1.6
IPIL	**Ipil**	**1.73**	**146**	*e*P	Pn	10 44 16.8	+1.1
PAGZ	**Pagadian**	**2.24**	**128**	*e*P	Pn	10 44 23.8	+1.1
RCP	**Roxas**	**2.57**	**26**	*e*P	Pn	10 44 36.8	+10

ISCJB ***30*** *10:45:12.2±0.7, 6°.34S±0°.05×130°.03E±0°.08, h146km, mb3.9/5, Error ellipse: s-maj=11.7km s-min=7.6km az=170.7*
IDC ***30*** *10:45:16.0±3.7, 6°.39S×129°.99E, h175km±35km, mb3.6/6, mb1 3.8/9, mb1mx3.5/22, mbtmp3.7/9, Error ellipse: s-maj=33.1km s-min=14.0km az=66.0*
AUST ***30*** *10:45:39.8, 7°.97S×130°.56E, h300km*

ISC 30 10:45:14.5±1.1, 6°.42S±0°.09×130°.0E±0°.1, h146km, n20, σ1s62/23, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**6.48**	**170**	S	**Sn**	**10 48 02.5**	**+2.0**
	baz=4.9,SNR=16						
KDU	**Kakadu**	**6.69**	**159**	S	**Sn**	**10 48 04.2**	**-1.4**
	baz=5.1,SNR=16						
KNRA	**Kununurra**	**9.27**	**187**	P	**Pn**	**10 47 27.2**	**+2.3**
	baz=7.9,SNR=73						
KNRA				S	**Sn**	**10 49 06.7**	**-1.0**
	baz=7.9,SNR=20						
FITZ	**Fitzroy Crossi**	**12.35**	**200**	P	**Pn**	**10 48 06.9**	**+1.4**
	1.0nm,0.3s,baz=25,slow=11,SNR=35						
FITZ				S	**Sn**	**10 50 19.4**	**-2.6**
	1.7nm,0.3s,baz=75,slow=14,SNR=11						
FITZ	**Fitzroy Crossi**	**12.35**	**200**	P	**Pn**	**10 48 07.8**	**+2.3**
	baz=11,SNR=11						
FITZ				S	**Sn**	**10 50 20.6**	**-1.4**
	baz=11,SNR=4.8						
WRA	**Warramunga Arr**	**14.09**	**163**	P	**Pn**	**10 48 27.0**	**-0.7**
	1.2nm,0.3s,baz=346,slow=12,SNR=66						
WRA				S	Sn	10 50 57.1	-6.8
	3.0nm,0.3s,baz=345,slow=22,SNR=11						
COEN	**Coen**	**14.99**	**121**	P	**Pn**	**10 48 40.0**	**+0.9**
	baz=14,SNR=9.9						
COEN				S	Sn	10 51 14.1	-12
	baz=14,SNR=5.6						
QIS	**Mount Isa**	**16.87**	**147**	P	**P**	**10 49 02.3**	**+0.5**
	baz=15,SNR=13						
QIS				S	S	10 51 59.9	-10
	baz=15,SNR=4.7						
**

comp=Z,664nm,21.6s,baz=277,slow=31
CM31 Chiang Mai Arr 38.45 51 *e*P **P 10 57 53.2 -0.9**
3.3nm,0.3s
CMAR Chiang Mai Arr 38.45 51 P **P 10 57 53.1 -1.0**
CMAR Chiang Mai Arr 38.45 51 P **P 10 57 53.1 -1.0**
0.9nm,0.3s,baz=238,slow=8.3,SNR=7.0
CMAR LR LR 11 13 11.5
comp=Z,153nm,18.9s,baz=70,slow=36
KBL Kabul 40.03 1 *e*P **P 10 58 06.9 -0.5**
3.3nm,0.5s
LSZ Lusaka 40.68 253 P **P 10 58 13.8 +0.8**
LSZ Lusaka 40.68 253 P **P 10 58 12.6 -0.4**
1.0nm,0.4s,baz=35,slow=12,SNR=4.2
LSA Lhasa 41.38 30 *e*P **P 10 58 19.7 +0.8**
4.1nm,0.4s
KSM Kuching 42.37 82 *e*P **P 10 58 26.8 +0.1**
2.5nm,0.7s
KSH Kashi 45.52 8 *e*P **P 10 58 50.5 -1.3**
KSH *e*PP **PP 11 00 34.8 -3.7**
KSH *e*ScP **ScP 11 04 24.0 +0.8**
KSH *e*S S 11 05 20.5 -13
KSH *es*S **sS 11 05 36.0 -4.3**
KSH *e*ScS **ScS 11 08 44.3 -4.1**
KSH pmax pmax
comp=Z,10.0nm,0.8s
KSH pmax pmax
comp=Z,110nm,3.3s
KSH LR LR
comp=N,52nm,5.9s
BOSA Boshof 46.80 236 LR LR 11 14 29.6
comp=N,470nm,21.7s,baz=263,slow=31
EKS2 Erkin-Say 48.38 5 *e*P **P 10 59 13.8 -0.2**
comp=N,17nm,1.6s
AAK Ala-Archa 48.42 6 P **P 10 59 14.5 +0.1**
AAK Ala-Archa 48.42 6 P **P 10 59 14.5 +0.1**
comp=N,1.2nm,0.3s,baz=178,slow=9.1,SNR=5.4
KKAR Karatay Array 48.61 2 *e*P **P 10 59 15.1 -0.6**
comp=N,0.7nm,0.3s
TKM2 Tokmak 2 48.82 7 *e*P **P 10 59 17.2 -0.4**
comp=N,0.8nm,0.5s
GYA Guiyang 48.89 47 *e*P **P 10 59 20.3 +2.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s
KKM Kota Kinabalu 49.05 77 P **P 10 59 21.5 +1.8**
comp=Z,3.1nm,0.5s
GNI Garni 50.60 336 *e*P **P 10 59 30.6 -0.4**
TSUM Tsumeb 51.29 250 *e*P **P 10 59 36.2 -0.5**
comp=Z,4.6nm,1.0s
ENH Enshi 53.12 45 *e*P P 10 59 44.3 -5.6
comp=Z,5.2nm,0.4s
GTA Gaotai 53.41 30 *e*P **P 10 59 52.0 0.0**
GTA pP **pP 10 59 56.8 +0.6**
GTA sP **sP 10 59 59.0 +1.2**
GTA pmax pmax
comp=Z,5.0nm,1.4s
GTA pmax pmax
comp=Z,54nm,5.5s
GTA LR LR
comp=N,130nm,14.0s
GTA LR LR
comp=E,110nm,16.4s
GTA LR LR
comp=Z,170nm,15.2s
MKAR Makanchi Array 53.68 12 P **P 10 59 52.3 -1.5**
MKAR Makanchi Array 53.68 12 P **P 10 59 52.3 -1.5**
comp=Z,0.7nm,0.7s,baz=198,slow=9.3,SNR=4.3
MKAR LR LR 11 23 18.9
comp=Z,103nm,21.7s,baz=198,slow=37
KBZ Khabaz 54.36 337 P **P 10 59 58.6 -0.1**
KBZ Khabaz 54.36 337 P **P 10 59 58.6 -0.1**
comp=Z,1.8nm,0.8s,baz=152,slow=9.3,SNR=3.5
ABKAR Akbulak array 55.24 353 *e*P **P 11 00 05.0 +0.1**
comp=Z,0.9nm,0.6s
BRTR Keskin Array B 55.46 328 P **P 11 00 05.4 -1.6**
BRTR Keskin Array B 55.46 328 P **P 11 00 05.4 -1.6**
comp=Z,1.0nm,0.9s,baz=146,slow=8.2,SNR=4.7
KURK Kurchatov 56.87 8 P **P 11 00 17.9 +1.3**
comp=Z,1.1nm,0.6s
BVAR Borovoye Array 58.53 1 LR LR 11 25 03.4
comp=Z,152nm,21.4s,baz=245,slow=36
BTO Baotou 59.79 36 *e*P **P 11 00 34.3 -3.1**
HHC Hu-ho-hao-te 60.85 36 *e*P **P 11 00 47.5 +2.8**
HHC sP **sP 11 00 54.0 +3.6**
HHC PcP **PcP 11 01 30.5 +2.2**
HHC PP **PP 11 03 03.3 +4.4**
HHC S **S 11 09 03.5 +1.3**
HHC sS **sS 11 09 10.5 +1.4**
HHC ScS SKKSac 11 10 34.0 -1.7
HHC SS **SS 11 13 05.0 +3.4**
HHC pmax pmax
comp=Z,39nm,0.6s
HHC pmax pmax
comp=Z,160nm,4.9s
HHC LR LR
comp=N,320nm,15.5s
HHC LR LR
comp=E,260nm,15.5s
HHC LR LR
comp=Z,140nm,16.7s
ZALV Zalesovo Beam 61.00 11 P **P 11 00 43.2 -2.0**
ZALV Zalesovo Beam 61.00 11 P **P 11 00 43.2 -2.0**
comp=Z,1.2nm,0.5s,baz=188,slow=7.8,SNR=5.5
ZALV LR LR 11 27 06.4
comp=Z,85nm,20.5s,baz=249,slow=36
MAW Mawson 61.92 182 LR LR 11 21 13.2
comp=Z,128nm,21.5s,baz=7.2,slow=30
SONM Songino Array 62.87 28 P **P 11 00 58.1 -0.1**
SONM Songino Array 62.87 28 P **P 11 00 58.1 -0.1**
comp=Z,3.7nm,0.9s,baz=219,slow=7.0,SNR=12
SONM LR LR 11 28 07.9
comp=Z,166nm,21.0s,baz=64,slow=36
ASAR Alice Springs 65.23 113 P **P 11 01 13.4 -0.7**
ASAR Alice Springs 65.23 113 P **P 11 01 13.4 -0.7**
comp=Z,0.6nm,0.6s,baz=280,slow=6.3,SNR=8.1
ASAR LR LR 11 25 42.0
comp=Z,162nm,18.7s,baz=277,slow=32
WRA Warramunga Arr 65.39 109 P **P 11 01 14.7 -0.5**
WRA Warramunga Arr 65.39 109 P **P 11 01 14.7 -0.5**
comp=Z,1.1nm,0.6s,baz=281,slow=6.2,SNR=11
AKASG Malin Array Be 65.56 334 P **P 11 01 15.0 -0.6**
AKASG Malin Array Be 65.56 334 P **P 11 01 15.0 -0.6**
comp=Z,0.5nm,0.4s,baz=141,slow=6.0,SNR=3.7
SYO Syowa Base 66.05 191 *e*P **P 11 01 18.4 0.0**
TORD Torodi Ar. Bea 68.92 286 P **P 11 01 36.6 -1.0**
TORD Torodi Ar. Bea 68.92 286 P **P 11 01 36.6 -1.0**
comp=Z,0.5nm,0.9s,baz=94,slow=5.8,SNR=2.8
TORD LR LR 11 32 36.5
comp=Z,209nm,18.1s,baz=120,slow=37
KEST Kesra 69.03 312 LR LR 11 28 57.8
comp=Z,49nm,20.5s,baz=272,slow=34
KSRS Korea Array 69.94 47 LR LR 11 33 57.5
comp=Z,162nm,18.9s,baz=360,slow=37
STKA Stephens Creek 72.67 121 LR LR 11 29 57.7
comp=Z,148nm,19.4s,baz=231,slow=33
MDJ Mudanjiang 74.08 41 P **P 11 02 08.8 +0.6**
MDJ pmax pmax
comp=Z,6.0nm,1.6s
MDJ pmax pmax
comp=Z,52nm,3.5s
DBIC Dimbokro 74.22 279 LR LR 11 31 24.4
comp=Z,89nm,18.4s,baz=99,slow=33
FINES FINESS Array B 74.55 340 LR LR 11 32 38.1
comp=Z,118nm,19.3s,baz=189,slow=34
USRK Ussuriysk Arra 75.48 42 LR LR 11 37 52.5
comp=Z,63nm,18.1s,baz=329,slow=38
MJAR Matsushiro Arr 77.34 51 P **P 11 02 25.2 -1.8**
MJAR Matsushiro Arr 77.34 51 P **P 11 02 25.2 -1.8**
comp=Z,2.4nm,1.1s,baz=242,slow=4.4,SNR=4.8
MJAR LR LR 11 37 35.3
comp=Z,59nm,19.8s,baz=255,slow=36
NOA NORSAR Array B 79.89 335 LR LR 11 37 28.5
comp=Z,46nm,19.5s,baz=150,slow=35
ESDC Sonseca Array 80.28 312 P **P 11 02 42.3 -0.9**
ESDC Sonseca Array 80.28 312 P **P 11 02 42.3 -0.9**
comp=Z,0.3nm,0.3s,baz=93,slow=4.4,SNR=5.2
ESDC LR LR 11 38 02.6
comp=Z,44nm,18.3s,baz=325,slow=36
ARCES ARCESS Array B 80.58 346 LR LR 11 38 00.8
comp=Z,112nm,20.6s,baz=106,slow=35
ASAJ Asahikawa 82.66 44 LR LR 11 39 11.3
comp=Z,86nm,18.6s,baz=352,slow=35
QSPA South Pole Qui 84.32 180 P **P 11 03 05.8 +1.9**
comp=Z,1.8nm,0.8s
VNDA Vanda 85.20 167 P **P 11 03 09.9 +1.9**
VNDA Vanda 85.20 167 P **P 11 03 09.9 +1.9**
comp=Z,0.4nm,0.7s,baz=279,slow=6.7,SNR=4.7
VNDA LR LR 11 35 04.0
comp=Z,118nm,19.0s,baz=268,slow=31
PETK Petropavlovsk- 94.04 37 LR LR 11 51 11.3
comp=Z,52nm,18.0s,baz=255,slow=39
TRQA Tornquist 116.69 222 *e*PKPdf **PKPdf 11 09 19.1 +2.2**
YKA Yellowknife Ar 123.28 2 PKP **PKPdf 11 09 27.3 -1.4**
YKA Yellowknife Ar 123.28 2 PKP **PKPdf 11 09 27.3 -1.4**
comp=Z,0.3nm,0.8s,baz=347,slow=1.9,SNR=3.0
PDAR Pinedale Array 143.05 358 PKP **PKPdf 11 10 07.4 +0.8**
PDAR Pinedale Array 143.05 358 PKP **PKPdf 11 10 07.4 +0.8**
comp=Z,0.6nm,0.8s,baz=22,slow=2.9,SNR=3.2
BEKR Beckworth 145.06 12 *e*PKPdf **PKPdf 11 10 11.9 +1.7**
DAU Daniels Canyon 145.44 360 *e*PKPdf **PKPab 11 10 11.9 +0.9**
DUG Dugway 145.64 2 *e*PKPdf **PKPab 11 10 12.4 +0.9**
WCN Washoe City 145.73 11 *e*PKPdf **PKPab 11 10 12.8 +0.9**
SMCO Snowmass 146.42 354 *e*PKPdf **PKPbc 11 10 14.0 -0.1**
CMB Columbia Colle 146.82 13 *e*PKPbc **PKPab 11 10 16.8 +0.9**
NVAR Mina Array Bea 146.84 10 PKPbc **PKPbc 11 10 15.3 +0.3**
NVAR Mina Array Bea 146.84 10 PKPbc **PKPbc 11 10 15.3 +0.3**
comp=Z,1.1nm,0.8s,baz=352,slow=2.7,SNR=10
MSU Marysvale 147.33 1 *e*PKPbc **PKPab 11 10 17.9 -0.3**
MVU Marysvale 147.34 1 *e*PKPbc **PKPab 11 10 18.7 +0.5**
PV01 Paradox Valley 147.61 356 *e*PKPdf **PKPbc 11 10 16.1 -1.1**
SDCO Great Sand Dun 147.64 351 *e*PKPdf **PKPbc 11 10 16.6 -0.8**
WMOK Wichita Mounta 148.80 339 *e*PKPbc **PKPbc 11 10 20.9 +0.7**
GSC Goldstone 150.14 9 *e*PKPbc **PKPbc 11 10 25.8 +2.2**
LAZ Ladron 151.16 352 *e*PKPdf **PKPdf 11 10 20.6 +0.3**
LAZ *e*PKPab **PKPab 11 10 34.4 +0.7**
JCT Junction City 153.00 337 *e*PKPbc **PKPbc 11 10 30.2 0.0**
MNTX Cornudas Mount 153.51 348 *e*PKPab **PKPab 11 10 46.3 +2.9**
TXAR Lajitas Array 155.35 343 PKP **PKPdf 11 10 27.8 +1.4**
TXAR Lajitas Array 155.35 343 PKP **PKPdf 11 10 27.8 +1.4**
comp=Z,0.1nm,0.7s,baz=29,slow=2.1,SNR=2.8

IDC 30 11:03:39.5±1.4, 2.72S×11.93W, h0km, mb4.0/7, mb1 4.2/7, mb1mx3.9/26, mbtmp4.0/7, MS3.4/2, Ms1 3.4/2, ms1mx3.0/26, Error ellipse: s-maj=65.2km s-min=29.6km az=120.0, North of Ascension Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**20.77**	**40**	P	P	11 08 20.9	-1.4
	2.9nm,0.8s,baz=225,slow=11,SNR=9.9						
TORD				LR	LR	11 15 11.4	
	comp=Z,60nm,21.0s,baz=230,slow=33						
KEST	**Kesra**	**43.12**	**26**	P	P	11 11 41.1	-0.7
	1.0nm,0.7s,baz=227,slow=18,SNR=3.7						
KMBO	**Kilima Mbogo**	**49.17**	**89**	LR	LR	11 30 14.9	
	comp=Z,82nm,19.8s,baz=96,slow=32						
GERES	**GERESS Array B**	**55.98**	**20**	P	P	11 13 20.1	+0.3
	2.6nm,0.9s,baz=198,slow=6.2,SNR=15						
BRTR	**Keskin Array B**	**59.38**	**40**	P	P	11 13 45.1	+1.1
	0.9nm,0.6s,baz=222,slow=5.6,SNR=5.5						
KBZ	**Khabaz**	**67.38**	**40**	P	P	11 14 36.6	0.0
	3.0nm,1.0s,baz=256,slow=8.3,SNR=4.1						
QSPA	**South Pole Qui**	**87.36**	**180**	P	P	11 16 28.2	-0.2
	2.7nm,0.9s,baz=209,slow=3.6,SNR=5.3						
TXAR	**Lajitas Array**	**92.84**	**299**	P	P	11 16 54.4	-0.4
	0.3nm,0.8s,baz=106,slow=6.7,SNR=3.5						

*IDC **30** 11:04:14.1±1.0, 42.79S×72.43W, h0km, mb4.0/7, mb1 4.1/8, mb1mx4.0/20, mbtmp4.0/8, ML3.9/1, MS3.9/2, Ms1 3.8/2, ms1mx2.9/21, Error ellipse: s-maj=40.5km s-min=17.9km az=98.0*

*GUC **30** 11:04:14.9±0.6, 42.83S×72.54W, h8km±7km, ML3.4*

ISC 30 11:04:14.5±1.5, 42.80S±0.04×72.45W±0.08, h3km±10km, n17,σ0 87/21, mb4.0/7, 3C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FUTA	**Futaleufœ**	**0.58**	**132**	⇑*i*P	**Pg**	**11 04 26.3**	**+0.5**
FUTA				*i* S	**Sb**	**11 04 35.4**	**-0.7**
CNTO	**Contao**	**1.02**	**349**	⇑*i*P	**Pg**	**11 04 33.7**	**-0.3**
CNTO				*e*S	**Sg**	**11 04 47.8**	**+0.6**
PUEL	**Puelo Alto**	**1.14**	**6**	*e*P	**Pg**	**11 04 36.1**	**-0.3**
PUEL				*i* S	**Sb**	**11 04 52.9**	**+0.8**
PMCH	**Puerto Montt**	**1.35**	**346**	*e*P	**Pg**	**11 04 40.0**	**-0.4**
PMCH				*e*S	**Sn**	**11 04 58.7**	**0.0**
PLCA	**Paso Flores**	**2.51**	**35**	Pn	**Pn**	**11 04 57.9**	**+1.6**
	6.4nm,0.3s,baz=219,slow=16,SNR=95						
PLCA				Sn	**Sg**	**11 05 34.6**	**-0.5**
	45nm,0.3s,baz=319,slow=19,SNR=23						
COYC	**Coyhaique**	**2.78**	**175**	⇑*i*P	**Pb**	**11 05 03.8**	**-1.1**
COYC				*i* S	**Sb**	**11 05 40.5**	**+1.1**
COYC				AML	AML	11 05 43.5	
	comp=E,142nm,0.7s						
CFAA	**Coronel Fontan**	**11.67**	**18**	Pn	**Pn**	**11 07 02.6**	**+0.7**
	comp=E,0.0nm,0.3s,baz=223,slow=11,SNR=3.0						
CFAA				Lg	Lg	11 10 32.3	
	comp=E,0.0nm,0.3s,baz=90,slow=4.0,SNR=2.0						
SIV	**San Ignacio**	**28.44**	**23**	P	**P**	**11 10 09.0**	**-1.6**
	comp=E,0.4nm,0.3s,baz=202,slow=11,SNR=3.4						
BDFB	**Brasilia**	**34.21**	**45**	LR	LR	11 26 08.2	
	comp=E,129nm,20.5s,baz=199,slow=38						
SNAA	**Sanae**	**43.67**	**155**	P	**P**	**11 12 19.7**	**-0.5**
	comp=E,3.8nm,1.3s,baz=266,slow=8.2,SNR=5.6						
QSPA	**South Pole Qui**	**47.45**	**180**	P	**P**	**11 12 50.2**	**-0.1**
	comp=E,5.9nm,1.1s,baz=129,slow=6.8,SNR=7.7						
VNDA	**Vanda**	**55.43**	**192**	P	**P**	**11 13 49.9**	**+0.3**
	comp=E,3.3nm,1.2s,baz=149,slow=5.9,SNR=4.2						
MAW	**Mawson**	**64.86**	**163**	P	**P**	**11 14 55.0**	**+0.6**
	comp=E,2.3nm,0.8s,baz=219,slow=6.5,SNR=3.1						
TXAR	**Lajitas Array**	**77.31**	**332**	P	**P**	**11 16 11.3**	**+0.9**
	comp=E,0.5nm,0.9s,baz=153,slow=8.7,SNR=4.2						
AFI	**Afiamalu**	**87.37**	**254**	LR	LR	11 54 30.7	
	comp=E,87nm,19.1s,baz=143,slow=34						
TORD	**Torodi Ar. Bea**	**87.54**	**70**	P	**P**	**11 17 03.0**	**-1.0**
	comp=E,0.4nm,0.7s,baz=205,slow=6.4,SNR=3.6						
AKTO	**Aktyubinsk**	**145.68**	**60**	PKPbc	**PKPdf**	**11 23 53.3**	**-0.4**
	comp=E,0.6nm,0.3s,baz=259,slow=5.9,SNR=5.5						

IDC 30 11:11:03.4±6.9, 17.64S×174.58W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/19, mbtmp3.9/3, Error ellipse: s-maj=312.2km s-min=32.8km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**48.27**	**259**	P	P	11 19 45.8	-0.8
	0.3nm,0.3s,baz=95,slow=8.3,SNR=21						
ASAR	**Alice Springs**	**48.38**	**254**	P	P	11 19 48.5	+1.1
	2.3nm,0.5s,baz=88,slow=7.7,SNR=76						
ILAR	**Eielson Array**	**84.85**	**12**	P	P	11 23 40.2	+0.7
	0.5nm,0.6s,baz=221,slow=5.0,SNR=18						
BRTR	**Keskin Array B**	**147.11**	**318**	PKPbc	PKPdf	11 30 46.0	-0.7
	0.7nm,0.8s,baz=46,slow=4.2,SNR=3.9						

JMA 30 11:17:14.6, 29.37N×141.46E, h155km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.35**	**164**	P	Pn	11 17 54.8	+0.6
CBIJ				*e*S	Sn	11 18 25.0	+0.2
JHHJ	**Haha-jima-NKT**	**2.80**	**167**	P	Pn	11 17 59.6	-0.1
JHJ2	**Mitsune**	**3.99**	**340**	P	Pn	11 18 15.2	+0.4
JHJ2				*e*S	Sn	11 19 01.5	-0.1
BSO1	**Boso 1**	**5.28**	**356**	P	Pn	11 18 32.8	+1.7
BSO1				*e*S	Sn	11 19 31.2	+0.2
BSO3	**Boso 3**	**5.47**	**352**	P	Pn	11 18 34.8	+0.8
BSO3				*e*S	Sn	11 19 36.2	+0.1
BSO4	**Boso 4**	**5.68**	**351**	P	Pn	11 18 39.5	+2.5
BSO4				*e*S	Sn	11 19 42.2	+0.7
JOD2	**Odawara 2**	**6.21**	**342**	P	Pn	11 18 46.4	+2.3
JHU	**Hanno**	**6.72**	**345**	P	Pn	11 18 52.0	+1.1
JHU				*e*S	Sn	11 20 05.2	-1.2
JAO	**Obara**	**6.87**	**330**	P	Pn	11 18 53.8	+0.9
JYT	**Yasato**	**6.92**	**351**	P	Pn	11 18 54.2	+0.7
JRY	**Ryogami san**	**6.97**	**343**	P	Pn	11 18 54.9	+0.7
JAG	**Ashikaga**	**7.24**	**347**	P	Pn	11 18 57.7	0.0
JAG				*e*S	Sn	11 20 16.4	-2.4
JHO	**Hitachi**	**7.26**	**354**	*e*S	Sn	11 20 15.6	-3.8

TAP 30 11:26:49.2, 24.42N×121.96E, h32km, ML3.7, 3C-2D, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.20**	**271**	⇓*i*P	Pb	11 26 55.7	+0.1
	baz=271						
ENA				S	Sn	11 27 00.3	+0.2
TWC	**Suao**	**0.21**	**332**	⇓*i*P	Pn	11 26 55.9	-0.2
	baz=334						
TWC				*i* S	Sn	11 27 00.3	-0.2
	baz=334						
ILA	**Ilan**	**0.39**	**331**	*e*P	Pn	11 26 58.6	0.0
	baz=327						
ILA				S	Sn	11 27 05.4	+0.5
	baz=327						
TWE	**Neicheng**	**0.40**	**318**	⇑*i*P	Pn	11 26 58.6	-0.1
	baz=319						
TWE				S	Sn	11 27 05.0	-0.1
	baz=319						
ENTT	**Nioudou**	**0.41**	**301**	*i* P	Pb	11 26 58.7	+0.3
	baz=301						
ENTT				*i* S	Sn	11 27 05.7	0.0
	baz=301						
EGS		**0.42**	**357**	P	Pn	11 26 59.0	0.0
	baz=354						
EGS				S	Sn	11 27 05.9	+0.2
	baz=354						
TWD	**Chiawan**	**0.47**	**224**	*i* P	Pn	11 26 59.6	-0.2
	baz=224						
TWD				S	Sn	11 27 07.5	+0.5
	baz=224						
NNS	**Nan Shan**	**0.53**	**272**	⇑*i*P	Pn	11 27 00.6	-0.1
	baz=275						
NNS				*e*S	Sn	11 27 08.8	0.0
	baz=275						
HWA	**Hwalien**	**0.55**	**216**	*e*P	Pn	11 27 01.4	+0.6
	baz=215						
HWA				*e*S	Sn	11 27 09.9	+1.0
	baz=215						
TWB1	**Santiao Chiao**	**0.58**	**3**	*i* P	Pn	11 27 01.5	+0.2
	baz=4.0						
TWB1				*i* S	Sn	11 27 09.9	+0.2
	baz=4.0						
NSK	**Sanguang**	**0.60**	**295**	*i* P	Pn	11 27 01.7	+0.1
	baz=295						
NSK				*i* S	Sn	11 27 10.3	0.0
	baz=295						
NWF	**Wu-fen Shan**	**0.66**	**346**	*i* P	Pn	11 27 03.2	+0.7
	baz=339						
NWF				*i* S	Sn	11 27 13.1	+1.1
	baz=339						
WHF	**Hehuan Shan**	**0.69**	**246**	⇑*i*P	Pn	11 27 03.3	0.0
	baz=246						
WHF				*i* S	Sn	11 27 13.4	+0.1
	baz=246						
TAP1	**Taipei**	**0.73**	**327**	*i* P	Pb	11 27 04.5	+1.1
	baz=326						
TAP1				*i* S	Sn	11 27 14.8	+1.5
	baz=326						
TWT	**Tachien**	**0.73**	**257**	*e*P	Pb	11 27 04.2	+0.4
	baz=257						
TWT				*e*S	Sn	11 27 14.6	+0.8
	baz=257						
TAP	**Taipei**	**0.74**	**326**	*e*P	Pb	11 27 04.2	+0.6
	baz=326						
TAP				*e*S	Sn	11 27 14.9	+1.4
	baz=326						
ESL	**Shilin**	**0.77**	**218**	*e*P	Pn	11 27 03.3	-0.6
	baz=232						
ESL				*e*S	Sn	11 27 15.6	+1.2
	baz=232						
TWS1	**Kuangyinshan**	**0.83**	**324**	P	Pb	11 27 05.9	+0.7
	baz=332						
TWS1				*e*S	Sb	11 27 18.1	+2.0
	baz=332						
NCU	**National Centr**	**0.89**	**308**	*e*P	Pb	11 27 06.5	+0.4
	baz=307						
NCU				S	Sb	11 27 20.2	+2.6
	baz=307						
NSTT	**Nanjuang**	**0.89**	**284**	*i* P	Pb	11 27 07.2	+1.0
	baz=283						
NSTT				*i* S	Sb	11 27 19.4	+1.5
	baz=283						
TWY	**Chenhua**	**0.91**	**339**	*e*P	Pb	11 27 07.4	+1.0
	baz=339						
TWY				*e*S	Sb	11 27 19.4	+1.1
	baz=339						
HSN	**Hsinchu**	**0.97**	**293**	*e*P	Pb	11 27 08.3	+0.7
	baz=295						
HSN				*e*S	Sb	11 27 21.3	+1.2
	baz=295						
TWQ1	**Liyutan**	**1.08**	**266**	*e*P	Pb	11 27 10.5	+1.1
	baz=266						
TWQ1				*e*S	Sb	11 27 25.1	+1.9
	baz=266						
EHY	**Hungye**	**1.08**	**213**	*e*P	Pn	11 27 08.0	-0.2
	baz=213						
EHY				*e*S	Sb	11 27 23.4	+0.2
	baz=213						
NSY	**Sanyi**	**1.09**	**270**	*e*P	Pb	11 27 10.0	+0.5
	baz=270						
NSY				*e*S	Sb	11 27 25.9	+2.5
	baz=270						
SMLT	**Sun Moon Lake**	**1.10**	**241**	*e*P	Pb	11 27 10.5	+0.6
	baz=231						
SMLT				*e*S	Sb	11 27 24.2	+0.1
	baz=231						
TYC	**Yuchr**	**1.13**	**243**	*e*P	Pb	11 27 10.9	+0.8
	baz=243						
TYC				S	Sb	11 27 24.9	+0.4
	baz=243						
TCU	**Taichung**	**1.20**	**257**	*e*P	Pb	11 27 11.7	+0.3
	baz=257						
TCU				*e*S	Sb	11 27 28.9	+2.3
	baz=257						
PCYT	**Pengchaiyu**	**1.21**	**5**	*e*P	Pb	11 27 11.2	-0.3
	baz=4.0						
PCYT				*e*S	Sb	11 27 26.6	-0.1
	baz=4.0						
TWF1	**Yuli**	**1.23**	**210**	*e*P	Pn	11 27 10.7	+0.6
	baz=223						
TWF1				*e*S	Sn	11 27 26.4	+0.8
	baz=223						
WNT	**Mingjian**	**1.28**	**245**	*e*P	Pb	11 27 14.0	+1.2
	baz=245						
YUS	**Yu-Shan**	**1.31**	**225**	*e*P	Pn	11 27 12.5	+0.6
	baz=214						
YUS				*e*S	Sn	11 27 29.7	+1.0
	baz=214						
ALS	**Alishan**	**1.39**	**229**	*e*P	Pb	11 27 14.8	-0.2
	baz=220						
ALS				*e*S	Sb	11 27 33.1	+0.4
	baz=220						
CHKT	**Chengkung**	**1.43**	**202**	*e*P	Pn	11 27 12.9	+0.1
	baz=182						
CHKT				*e*S	Sb	11 27 32.6	-0.4
	baz=182						
CHN5	**Tsauling**	**1.43**	**235**	*e*P	Pb	11 27 15.4	+0.1
	baz=236						
CHN5				*e*S	Sb	11 27 33.8	+0.5
	baz=236						
WGK	**Gukeng**	**1.47**	**240**	*e*P	Pb	11 27 15.9	0.0
	baz=241						
WGK				*e*S	Sb	11 27 36.2	+1.9
	baz=241						
CHN2	**Minshiung**	**1.62**	**237**	*e*P	Pb	11 27 17.6	-0.9
	baz=237						
CHN2				*e*S	Sb	11 27 41.2	+2.7
	baz=237						
CHN4	**Tsaushan**	**1.64**	**230**	*e*P	Pb	11 27 18.6	-0.3
	baz=230						
CHN4				*e*S	Sb	11 27 40.6	+1.4
	baz=230						
CHY	**Chiayi**	**1.68**	**237**	*e*P	Pb	11 27 19.5	0.0
	baz=252						
WTP	**Ta-pu**	**1.70**	**227**	*e*P	Pb	11 27 19.5	-0.4
	baz=214						
TWK	**Hsinying**	**1.77**	**230**	*e*P	Pb	11 27 19.7	-1.4
	baz=229						
TWG	**Pinlang**	**1.79**	**207**	*e*P	Pn	11 27 19.3	+1.4
	baz=192						
CHN1	**Nanshi**	**1.80**	**227**	*e*P	Pb	11 27 20.9	-0.6
	baz=227						
CHN8	**Yiju**	**1.92**	**236**	*e*P	Pb	11 27 22.5	-1.1
	baz=236						
SSD	**Sandimen**	**2.06**	**216**	*e*P	Pn	11 27 23.5	+1.8
	baz=216						

DDA 30 11:39:59.6, 37.42N×28.08E, h7km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSB	**Milas**	**0.27**	**243**	*e*PG	Pg	11 40 05.6	+0.6
MLSB				*e*SG	Sg	11 40 09.6	+1.0

AYDN	**Tasoluk**	**0.29**	**327**	*i* P	Pg	11 40 05.8	+0.4
AYDN				*i* S	Sg	11 40 10.0	+0.7
YER	**Yerkesik**	**0.33**	**150**	*e*PG	Pg	11 40 06.3	+0.1
BODT	**Bodrum**	**0.71**	**240**	*e*PG	Pg	11 40 13.8	+0.5
DNZL	**Cakiroluk**	**0.82**	**70**	*i* P	Pg	11 40 15.4	-0.2
KULA	**Kula-Manisa**	**1.19**	**23**	*e*PG	Pn	11 40 23.5	+0.7
KULA				*e*SG	Sg	11 40 35.7	-2.3

BJI **30** *11:54:44.1, 12.°74S×63.°69E, h34km, mB5.0/12, mb4.6/20, Ms4.7/5, Ms7 4.3/5*

ISCJB **30** *11:54:46.0±0.3, 12.°49S±0.°06×65.°31E±0.°06, h10km, mb4.4/41, MS3.8/23, Error ellipse: s-maj=9.1km s-min=8.3km az=137.6*

IDC **30** *11:54:46.1±0.4, 12.°45S×65.°26E, h0km, mb4.3/23, mb1 4.4/24, mb1mx4.3/28, mbtmp4.2/24, ML4.0/1, MS3.8/21, Ms1 3.8/21, ms1mx3.5/43, Error ellipse: s-maj=15.3km s-min=13.6km az=157.0*

NEIC **30** *11:54:48.3±0.2, 12.°52S×65.°27E, h10km, mb4.6/8, Error ellipse: s-maj=8.5km s-min=7.8km az=144.0*

ISC 30 11:54:47.9±0.4, 12.°52S±0.°08×65.°29E±0.°08, h10km, n215, σ1§03/217, mb4.6/41, MS3.8/23, 36C-27D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSEY	**Mahe Island**	**12.44**	**308**	Pn		**Pn**	**11 57 47.0**	**+1.8**
MSEY				Sn			11 59 43.0	-21
RER	**Riviere de l'E**	**12.54**	**225**	*e*Pn		Pn	11 57 39.5	-7.0
OPO	**Ambohidratompo**	**18.44**	**249**	P		**P**	**11 59 05.0**	**+1.1**
OPO	**Ambohidratompo**	**18.44**	**249**	P		**P**	**11 59 05.0**	**+1.1**
	0.5nm,0.3s,baz=73,slow=10,SNR=4.3							
OPO				LR		LR	12 04 15.4	
	comp=Z,221nm,20.0s,baz=243,slow=31							
KMBO	**Kilima Mbogo**	**30.00**	**290**	LR		LR	12 13 06.4	
	comp=Z,58nm,18.7s,baz=92,slow=37							
LSZ	**Lusaka**	**36.09**	**261**	P		**P**	**12 01 50.3**	**-0.1**
	1.5nm,1.1s							
LSZ	**Lusaka**	**36.09**	**261**	P		**P**	**12 01 50.3**	**-0.1**
	3.3nm,0.8s,baz=79,slow=11,SNR=5.9							
LBTB	**Lobatse**	**39.44**	**246**	P		**P**	**12 02 18.4**	**-0.2**
LBTB	**Lobatse**	**39.44**	**246**	P		**P**	**12 02 18.4**	**-0.2**
	4.0nm,0.8s,baz=83,slow=9.6,SNR=4.8							
BOSA	**Boshof**	**40.54**	**240**	P		**P**	**12 02 27.4**	**-0.3**
BOSA	**Boshof**	**40.54**	**240**	P		**P**	**12 02 27.4**	**-0.3**
	3.7nm,0.9s,baz=79,slow=10,SNR=2.9							
BOSA				LR		LR	12 16 19.9	
	comp=Z,208nm,20.6s,baz=260,slow=32							
CMAR	**Chiang Mai Arr**	**45.27**	**48**	P		**P**	**12 03 06.4**	**+0.4**
CMAR				PcP		**PcP**	**12 04 46.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**45.27**	**48**	P		**P**	**12 03 06.4**	**+0.4**
	1.5nm,0.8s,baz=240,slow=9.6,SNR=8.1							
CMAR				PcP		**PcP**	**12 04 46.4**	**+0.4**
	1.8nm,0.7s,baz=246,slow=4.2,SNR=7.3							
CMAR				LR		LR	12 19 23.3	
	comp=Z,76nm,18.9s,baz=220,slow=33							
KBL	**Kabul**	**46.93**	**4**	*e*P		**P**	**12 03 20.2**	**+1.1**
	3.3nm,0.4s							
LSA	**Lhasa**	**48.82**	**30**	P		**P**	**12 03 35.3**	**+1.1**
LSA	**Lhasa**	**48.82**	**30**	*e*P		**P**	**12 03 35.7**	**+1.6**
	3.9nm,0.6s							
ASF	**Jabal al Asfar**	**52.09**	**329**	LR		LR	12 23 05.5	
	comp=Z,37nm,19.5s,baz=176,slow=33							
KSH	**Kashi**	**52.71**	**10**	⇓*i* P		P	12 03 59.8	-3.1
KSH				*e*sP		sP	12 04 14.0	+6.7
KSH				*e*PP		**PP**	**12 05 58.0**	**-4.4**
KSH				*e*S		S	12 11 17.3	-14
KSH				*e*ScS		ScS	12 13 44.0	-9.1
KSH				pmax		pmax		
	comp=Z,23nm,0.5s							
KSH				pmax		pmax		
	comp=Z,150nm,4.3s							
KSH				LR		LR		
	comp=N,130nm,4.7s							
KSH				LR		LR		
	comp=E,170nm,4.5s							
KSH				LR		LR		
	comp=Z,140nm,3.5s							
MMAI	**Mount Meron Ar**	**53.52**	**329**	LR		LR	12 23 38.8	
	comp=Z,54nm,18.3s,baz=170,slow=32							
QIZ	**Qiongzhong**	**53.95**	**55**	P		P	12 04 07.3	-4.9
QIZ				S		**S**	**12 11 43.5**	**-4.7**
QIZ				pmax		pmax		
	comp=Z,14nm,2.0s							
MAW	**Mawson**	**55.05**	**181**	P		**P**	**12 04 20.1**	**+0.6**
MAW	**Mawson**	**55.05**	**181**	P		**P**	**12 04 20.1**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=14,slow=6.7,SNR=6.7							
MAW				LR		LR	12 21 04.0	
	comp=Z,138nm,21.4s,baz=340,slow=29							
EKS2	**Erkin-Say**	**55.46**	**8**	*e*P		**P**	**12 04 24.0**	**+1.1**
	comp=Z,5.2nm,0.8s							
AAK	**Ala-Archa**	**55.52**	**8**	LR		LR	12 24 30.8	
	comp=Z,77nm,21.7s,baz=53,slow=32							
KKAR	**Karatay Array**	**55.55**	**5**	*e*P		**P**	**12 04 23.1**	**-0.4**
	comp=Z,0.7nm,0.3s							
GNI	**Garni**	**55.77**	**341**	LR		LR	12 25 44.5	
	comp=Z,80nm,21.5s,baz=290,slow=33							
GYA	**Guiyang**	**55.84**	**46**	*e*P		P	12 04 32.0	+6.0
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
CD2	**Chengdu**	**56.83**	**40**	P		P	12 04 39.8	+6.9
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
CD2				pmax		pmax		
	comp=Z,120nm,5.2s							
SYO	**Syowa Base**	**58.80**	**191**	⇑*e*P		**P**	**12 04 45.0**	**-1.1**
KBZ	**Khabaz**	**59.59**	**341**	LR		LR	12 26 32.6	
	comp=Z,58nm,19.0s,baz=2.7,slow=32							
BRTR	**Keskin Array B**	**59.73**	**332**	P		**P**	**12 04 52.3**	**-0.8**
BRTR	**Keskin Array B**	**59.73**	**332**	P		**P**	**12 04 52.3**	**-0.8**
	comp=Z,1.0nm,1.0s,baz=153,slow=8.1,SNR=4.6							
GTA	**Gaotai**	**60.85**	**30**	⇑P		**P**	**12 05 01.8**	**+1.0**
GTA				pmax		pmax		
	comp=Z,7.0nm,1.3s							
GTA				pmax		pmax		
	comp=Z,80nm,5.7s							
GTA				LR		LR		
	comp=N,90nm,16.6s							
GTA				LR		LR		
	comp=E,120nm,16.6s							
GTA				LR		LR		
	comp=Z,140nm,18.5s							
MKAR	**Makanchi Array**	**60.98**	**13**	P		**P**	**12 05 00.2**	**-1.2**
MKAR				PcP		**PcP**	**12 05 45.0**	**+0.4**
MKAR	**Makanchi Array**	**60.98**	**13**	P		**P**	**12 05 00.2**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=210,slow=7.8,SNR=8.7							
MKAR				PcP		**PcP**	**12 05 45.0**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=211,slow=4.4,SNR=6.5							
MKAR				LR		LR	12 30 26.3	
	comp=Z,62nm,19.8s,baz=75,slow=35							
ABKAR	**Akbulak array**	**61.68**	**356**	*e*P		**P**	**12 05 05.8**	**-0.2**
	comp=Z,3.0nm,0.6s							
XAN	**Xi'an**	**62.16**	**40**	P		**P**	**12 05 09.5**	**-0.2**
XAN				pmax		pmax		
	comp=Z,3.0nm,1.3s							
AKTO	**Aktyubinsk**	**63.01**	**355**	LR		LR	12 29 06.9	
	comp=Z,60nm,20.4s,baz=295,slow=33							
BVAR	**Borovoye Array**	**65.42**	**3**	LR		LR	12 31 44.2	
	comp=Z,78nm,20.3s,baz=351,slow=34							
ASAR	**Alice Springs**	**65.64**	**110**	P		**P**	**12 05 32.6**	**-0.2**
ASAR	**Alice Springs**	**65.64**	**110**	P		**P**	**12 05 32.6**	**-0.2**
	comp=Z,4.0nm,0.7s,baz=272,slow=6.0,SNR=60							
ASAR				LR		LR	12 27 52.4	
	comp=Z,48nm,21.4s,baz=49,slow=30							
WRA	**Warramunga Arr**	**66.33**	**106**	P		**P**	**12 05 37.8**	**+0.5**
WRA	**Warramunga Arr**	**66.33**	**106**	P		**P**	**12 05 37.8**	**+0.5**
	comp=Z,5.8nm,0.7s,baz=273,slow=5.7,SNR=61							
WRAB	**Tennant Creek**	**66.34**	**106**	*e*P		**P**	**12 05 38.1**	**+0.7**
	comp=Z,6.6nm,0.8s							
TORD	**Torodi Ar. Bea**	**68.01**	**290**	P		**P**	**12 05 47.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**68.01**	**290**	P		**P**	**12 05 47.5**	**-0.5**
	comp=Z,2.6nm,1.2s,baz=134,slow=4.2,SNR=4.2							
HHC	**Hu-ho-hao-te**	**68.18**	**36**	*e*P		P	12 05 53.5	+4.8
HHC				PP		PP	12 08 28.5	+9.2
HHC				S		**S**	**12 14 53.8**	**+4.7**
HHC				ScS		**ScS**	**12 15 49.8**	**+1.5**
HHC				SS		SS	12 19 20.3	+8.0
HHC				pmax		pmax		
	comp=Z,36nm,0.7s							
HHC				pmax		pmax		
	comp=Z,130nm,4.6s							
HHC				LR		LR		
	comp=N,220nm,15.5s							
HHC				LR		LR		
	comp=E,290nm,16.7s							
HHC				LR		LR		
	comp=Z,120nm,17.8s							
ZAA0	**Zalesovo Array**	**68.27**	**12**	*e*P		**P**	**12 05 48.0**	**-0.7**
ZALV	**Zalesovo Beam**	**68.27**	**12**	P		**P**	**12 05 47.8**	**-1.0**
ZALV	**Zalesovo Beam**	**68.27**	**12**	P		**P**	**12 05 47.8**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=202,slow=5.6,SNR=14							
ZALV				LR		LR	12 33 09.9	
	comp=Z,55nm,21.4s,baz=159,slow=34							
SONM	**Songino Array**	**70.33**	**28**	P		**P**	**12 06 02.5**	**+0.6**
SONM	**Songino Array**	**70.33**	**28**	P		**P**	**12 06 02.5**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=221,slow=5.5,SNR=20							
SONM				LR		LR	12 35 43.5	
	comp=Z,169nm,21.2s,baz=18,slow=35							
AKASG	**Malin Array Be**	**70.38**	**337**	P		**P**	**12 06 00.6**	**-1.3**
AKASG	**Malin Array Be**	**70.38**	**337**	P		**P**	**12 06 00.6**	**-1.3**
	comp=Z,3.4nm,0.8s,baz=141,slow=5.4,SNR=6.5							
SNAA	**Sanae**	**71.37**	**198**	*e*P		**P**	**12 06 08.3**	**+0.4**
STKA	**Stephens Creek**	**71.95**	**120**	P		**P**	**12 06 12.0**	**0.0**
STKA	**Stephens Creek**	**71.95**	**120**	P		**P**	**12 06 12.0**	**0.0**
	comp=Z,1.9nm,0.8s,baz=280,slow=6.1,SNR=3.7							
KOLS	**Kolonicke sedl**	**72.00**	**332**	*e*P		**P**	**12 06 12.4**	**+0.5**
DBIC	**Dimbokro**	**72.27**	**281**	P		**P**	**12 06 13.4**	**-0.7**
DBIC	**Dimbokro**	**72.27**	**281**	P		**P**	**12 06 13.4**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=90,slow=6.3,SNR=3.2							
DBIC				LR		LR	12 35 05.0	
	comp=Z,42nm,18.5s,baz=254,slow=34							
CRVS	**Cervenica-Dubn**	**72.36**	**331**	*e*P		**P**	**12 06 13.7**	**-0.3**
KECS	**Kecovo**	**72.53**	**331**	*e*P		**P**	**12 06 15.2**	**+0.2**
VYHS	**Vyhne**	**73.34**	**330**	*e*P		**P**	**12 06 19.9**	**+0.1**
DPC	**Dobruska-Polom**	**75.80**	**330**	*e*P		**P**	**12 06 33.8**	**-0.3**
GERES	**GERESS Array B**	**76.16**	**328**	P		**P**	**12 06 35.5**	**-0.8**
GERES	**GERESS Array B**	**76.16**	**328**	P		**P**	**12 06 35.5**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=134,slow=5.6,SNR=6.2							
KHC	**Kasperske Hory**	**76.40**	**328**	*e*P		**P**	**12 06 36.9**	**-0.7**
PRU	**Pruhonice**	**76.45**	**329**	*e*P		**P**	**12 06 36.3**	**-1.4**
PVCC	**Panska Ves**	**76.77**	**330**	*e*P		**P**	**12 06 40.0**	**+0.4**
KSAR	**Wonju Array Be**	**76.86**	**47**	P		**P**	**12 06 40.1**	**-0.2**
KSRS	**Korea Array**	**76.89**	**47**	P		**P**	**12 06 40.1**	**-0.4**
	comp=Z,3.2nm,0.8s,baz=251,slow=6.2,SNR=14							
KSRS				LR		LR	12 39 09.9	
	comp=Z,52nm,18.6s,baz=347,slow=35							
BRG	**Berggiesshubel**	**77.30**	**330**	*e*P		**P**	**12 06 43.9**	**+1.4**
	comp=Z,8.1nm,1.3s							
QSPA	**South Pole Qui**	**77.55**	**180**	*e*P		**P**	**12 06 45.1**	**+1.2**
	comp=Z,5.7nm,1.1s							
NKC	**Novy Kostel**	**77.66**	**328**	*e*P		**P**	**12 06 45.1**	**+0.5**
CLL	**Collm**	**78.03**	**329**	*e*(sP)		sP	12 06 53.0	+1.9
	comp=Z,5.0nm,1.2s							
VNDA	**Vanda**	**79.29**	**167**	P		**P**	**12 06 52.5**	**-0.7**
VNDA	**Vanda**	**79.29**	**167**	P		**P**	**12 06 52.5**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=270,slow=5.1,SNR=9.4							
VNDA				LR		LR	12 37 58.9	
	comp=Z,121nm,18.6s,baz=274,slow=33							
JOF	**Joensuu**	**79.68**	**345**	*e*p		**P**	**12 06 55.4**	**0.0**
	comp=Z,13nm,0.6s							
FINES	**FINESS Array B**	**79.94**	**342**	P		**P**	**12 06 55.5**	**-1.3**
FINES	**FINESS Array B**	**79.94**	**342**	P		**P**	**12 06 55.5**	**-1.3**
	comp=Z,2.8nm,0.7s,baz=133,slow=8.1,SNR=8.0							
FINES				LR		LR	12 39 32.6	
	comp=Z,103nm,18.2s,baz=216,slow=34							
KAF	**Kangasniemi**	**80.39**	**343**	*e*p		**P**	**12 06 59.2**	**-0.1**
	comp=Z,8.9nm,0.7s							
MDJ	**Mudanjiang**	**81.28**	**41**	P		**P**	**12 07 07.5**	**+3.1**
MDJ				pmax		pmax		
	comp=Z,8.0nm,1.2s							
MDJ				pmax		pmax		
	comp=Z,50nm,4.1s							
ESDC	**Sonseca Array**	**82.53**	**313**	P		**P**	**12 07 10.7**	**-0.5**
ESDC	**Sonseca Array**	**82.53**	**313**	P		**P**	**12 07 10.7**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=121,slow=5.2,SNR=6.8							
USRK	**Ussuriysk Arra**	**82.63**	**42**	P		**P**	**12 07 10.0**	**-1.6**
	comp=Z,3.0nm,0.8s,baz=242,slow=4.2,SNR=5.2							
MAT	**Matsushiro**	**84.07**	**51**	P		**P**	**12 07 18.6**	**-0.6**
MJAR	**Matsushiro Arr**	**84.07**	**51**	P		**P**	**12 07 19.3**	**+0.1**
MJAR	**Matsushiro Arr**	**84.07**	**51**	P		**P**	**12 07 19.3**	**+0.1**
	comp=Z,4.0nm,0.8s,baz=248,slow=7.1,SNR=14							
JHJ	**Hachijo jima 2**	**84.15**	**54**	LR		LR	12 45 38.6	
	comp=Z,3.3nm,20.7s,baz=300,slow=36							
ARCES	**ARCESS Array B**	**86.43**	**347**	P		**P**	**12 07 30.1**	**-0.2**
ARCES	**ARCESS Array B**	**86.43**	**347**	P		**P**	**12 07 30.0**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=134,slow=5.1,SNR=7.4							
ARCES				LR		LR	12 44 51.3	
	comp=Z,64nm,19.9s,baz=254,slow=35							
ILAR	**Eielson Array**	**123.29**	**16**	PKP		**PKPdf**	**12 13 43.2**	**-1.5**
ILAR	**Eielson Array**	**123.29**	**16**	PKP		**PKPdf**	**12 13 43.2**	**-1.5**
	comp=Z,1.0nm,0.9s,baz=299,slow=3.3,SNR=12							
LPAZ	**La Paz**	**125.77**	**239**	PKP		**PKPdf**	**12 13 51.3**	**-0.4**
LPAZ	**La Paz**	**125.77**	**239**	PKP		**PKPdf**	**12 13 51.3**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=45,slow=2.9,SNR=6.6							
YKA	**Yellowknife Ar**	**130.10**	**360**	PKP		**PKPdf**	**12 13 56.8**	**-1.0**
YKA	**Yellowknife Ar**	**130.10**	**360**	PKP		**PKPdf**	**12 13 56.8**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=345,slow=1.5,SNR=6.4							
B17A	**L & I Farms, Che**	**144.19**	**356**	⇓P		PKPbc	12 14 22.8	+0.5
	baz=144							
C21A	**Desert Coulee**	**144.23**	**351**	⇑P		**PKPdf**	**12 14 23.6**	**-0.8**
	baz=144							
B14A	**Marquette Ranc**	**144.25**	**358**	⇑P		**PKPab**	**12 14 22.5**	**+0.3**
	baz=144							
B13A	**Whitefish**	**144.25**	**360**	⇑P		PKPbc	12 14 23.1	+0.5
	baz=144							
B15A	**Bradely Ranch,**	**144.27**	**358**	⇓P		PKPbc	12 14 23.2	+0.6
	baz=144							
NEW	**Newport**	**144.31**	**3**	⇓P		PKPbc	12 14 23.3	+0.6
	baz=144							
C20A	**Veseth Ranch,**	**144.47**	**352**	⇑P		**PKPdf**	**12 14 24.2**	**-0.6**
	baz=144							
D23A	**Lindsay**	**144.54**	**349**	⇑P		**PKPdf**	**12 14 24.7**	**-0.2**
	baz=144,SNR=5.5							
C16A	**Fuhringer Ranc**	**144.74**	**357**	⇓P		**PKPab**	**12 14 23.6**	**-0.4**
	baz=145,SNR=5.1							
D22A	**Cohagen**	**144.74**	**350**	⇑P		**PKPab**	**12 14 23.7**	**-0.3**
	baz=145,SNR=7.3							
C11A	**Tepee Creek (N**	**144.76**	**2**	⇑P		PKPbc	12 14 24.7	+0.5
	baz=145							
BSMT	**Bassoo Peak**	**144.78**	**0**	*e*PKPbc		**PKPdf**	**12 14 25.1**	**-0.3**
C15A	**Salmond Ranch,**	**144.81**	**358**	⇑P		PKPbc	12 14 24.6	+0.1
	baz=145,SNR=5.7							
C14A	**Swan Lake**	**144.85**	**359**	⇑P		PKPbc	12 14 24.8	+0.3
	baz=145							
JTMT	**Jette**	**144.88**	**359**	*e*PKPbc		PKPbc	12 14 25.2	+0.5
C12B	**Naegeli Ranch,**	**144.91**	**1**	⇑P		**PKPdf**	**12 14 25.5**	**0.0**
	baz=145,SNR=6.9							
E24A	**Baker**	**144.95**	**347**	⇑P		**PKPdf**	**12 14 25.8**	**+0.1**
	baz=145,SNR=5.9							
C13A	**Hot Springs**	**144.95**	**360**	⇓P		**PKPdf**	**12 14 25.4**	**-0.3**
	baz=145,SNR=8.4							
D20A	**Manuel Ranch,**	**145.09**	**352**	⇑P		**PKPab**	**12 14 25.4**	**+0.1**
	baz=145							
SWMT	**Swartz Lake**	**145.11**	**359**	*e*PKPbc		**PKPab**	**12 14 25.8**	**+0.4**
D19A	**Cripps Ranch,**	**145.12**	**353**	⇓P		**PKPab**	**12 14 25.6**	**+0.2**
	baz=145							
D18A	**Hannart Farms,**	**145.19**	**354**	⇓P		**PKPdf**	**12 14 26.4**	**+0.3**
	baz=145							
ECSD	**EROS Data Cent**	**145.21**	**337**	*e*PKPbc		**PKPbc**	**12 14 25.6**	**-0.1**
E23A	**Ismay**	**145.21**	**349**	⇑P		**PKPdf**	**12 14 26.1**	**+0.1**
	baz=145							
D17A	**Six Diamond Ra**	**145.31**	**355**	⇓P		**PKPbc**	**12 14 26.2**	**+0.1**
	baz=145,SNR=19							
LON	**Longmire**	**145.36**	**9**	*e*PKPbc		**PKPab**	**12 14 26.8**	**+0.5**
SLMT	**Seeley Lake**	**145.37**	**359**	*e*PKPbc		**PKPab**	**12 14 26.9**	**+0.4**
BRSD	**Miller**	**145.44**	**340**	⇓P		**PKPbc**	**12 14 26.1**	**-0.3**
	baz=145							
D16A	**Dana Ranch, Ca**	**145.49**	**356**	⇑P		**PKPab**	**12 14 27.1**	**+0.2**
	baz=145,SNR=22							
D14A	**Greenough**	**145.53**	**359**	⇑P		**PKPdf**	**12 14 26.7**	**-0.1**
	baz=145,SNR=18							
D13A	**Huson**	**145.53**	**360**	P		**PKPab**	**12 14 27.1**	**+0.1**
	baz=145,SNR=7.0							
D15A	**Lincoln**	**145.54**	**357**	⇓P		**PKPab**	**12 14 27.2**	**+0.2**
	baz=145,SNR=6.6							
D12A	**Red Ives Fores**	**145.57**	**1**	⇑P		**PKPbc**	**12 14 27.0**	**+0.2**
	baz=146							
F24A	**Ekalaka**	**145.66**	**347**	P		**PKPab**	**12 14 27.9**	**+0.4**
	baz=146,SNR=6.4							
E20A	**Meyer Farm, Mu**	**145.67**	**352**	P		**PKPab**	**12 14 28.0**	**+0.6**
	baz=146,SNR=6.5							
CHMT	**Chamberlain Mo**	**145.69**	**358**	*e*PKPbc		**PKPab**	**12 14 27.8**	**+0.1**
MSO	**Missoula**	**145.79**	**359**	*e*PKPbc		**PKPab**	**12 14 28.0**	**0.0**
MSO	**Missoula**	**145.79**	**359**	P		**PKPab**	**12 14 28.2**	**+0.3**
	baz=146,SNR=14							
E19A	**Rath Farm, Rou**	**145.80**	**353**	P		**PKPab**	**12 14 28.4**	**+0.5**
	baz=146,SNR=13							
E18A	**Harlowton**	**145.82**	**354**	P		**PKPab**	**12 14 28.9**	**+0.8**
	baz=146,SNR=19							
HRY	**Holter Researc**	**145.83**	**356**	*e*PKPbc		**PKPab**	**12 14 28.7**	**+0.6**
F23A	**Volborg**	**145.97**	**348**	⇑P		**PKPab**	**12 14 28.7**	**+0.1**
	baz=146							
E16A	**East Helena**	**146.00**	**356**	P		**PKPab**	**12 14 29.1**	**+0.3**
	baz=146,SNR=20							
E17A	**Martinsdale**	**146.01**	**355**	P		**PKPab**	**12 14 29.3**	**+0.4**
	baz=146,SNR=16							
F22A	**Rosebud**	**146.08**	**349**	⇓P		**PKPab**	**12 14 29.4**	**+0.4**
	baz=146							
E15A	**Deer Lodge**	**146.16**	**357**	P		**PKPab**	**12 14 29.3**	**-0.1**
	baz=146,SNR=7.7							
E13A	**Victor**	**146.18**	**359**	P		**PKPbc**	**12 14 29.0**	**+0.2**
	baz=146,SNR=9.8							
E14A	**Clinton**	**146.20**	**358**	⇓P		**PKPab**	**12 14 29.4**	**-0.2**
	baz=146							
F19A	**Roth Farm, Mol**	**146.41**	**353**	P		**PKPab**	**12 14 30.4**	**0.0**
	baz=146,SNR=17							
F18A	**Big Timber**	**146.45**	**354**	P		**PKPab**	**12 14 30.7**	**+0.2**
	baz=146,SNR=11							
F17A	**Fitzpatrick Pl**	**146.54**	**355**	⇓P		**PKPab**	**12 14 29.9**	**0.0**
	baz=146,SNR=5.4							
GCMT	**Greycliff**	**146.56**	**354**	*e*PKPbc		**PKPab**	**12 14 31.2**	**+0.3**
H24A	**Dirks Ranch, A**	**146.72**	**347**	⇓P		**PKPbc**	**12 14 29.7**	**-0.7**
	baz=147							
F15A	**Butte**	**146.73**	**357**	⇑P		**PKPbc**	**12 14 30.8**	**+0.3**
	baz=147,SNR=6.6							
LRM	**Limekiln Ridge**	**146.75**	**357**	*e*PKPbc		**PKPbc**	**12 14 30.9**	**+0.2**
G21A	**Lodge Grass**	**146.78**	**350**	⇑P		**PKPbc**	**12 14 30.7**	**+0.1**
	baz=147							
F12A	**Elk City**	**146.87**	**1**	⇑P		**PKPbc**	**12 14 30.1**	**-0.8**
	baz=147							
BOZ	**Bozeman (W)**	**146.88**	**356**	*e*PKPbc		**PKPab**	**12 14 32.0**	**-0.2**
G20A	**Bridger**	**146.94**	**352**	P		**PKPab**	**12 14 31.9**	**-0.5**
	baz=147,SNR=5.6							
G17A	**Pierce Place,**	**147.13**	**355**	⇑P		**PKPab**	**12 14 33.5**	**+0.3**
	baz=147							
RSSD	**Black Hills**	**147.20**	**346**	*e*PKPbc		**PKPbc**	**12 14 32.5**	**+0.6**
DLMT	**Dillon**	**147.22**	**357**	*e*PKPbc		**PKPbc**	**12 14 32.4**	**+0.5**
G16A	**Moss Hill, Enn**	**147.31**	**356**	P		**PKPbc**	**12 14 33.1**	**+1.0**
	baz=147,SNR=8.7							
H21A	**Big Horn, Sher**	**147.33**	**350**	⇓P		**PKPbc**	**12 14 32.7**	**+0.5**
	baz=147							
G15A	**Dillon**	**147.41**	**357**	⇑P		**PKPbc**	**12 14 33.0**	**+0.5**
	baz=147,SNR=5.5							
LRAL	**Lakeview Retre**	**147.46**	**313**	*e*PKPbc		**PKPbc**	**12 14 33.1**	**+0.4**
G13A	**Cobalt**	**147.53**	**359**	⇑P		**PKPbc**	**12 14 32.1**	**-0.6**
	baz=147,SNR=5.8							
H19A	**Powell**	**147.59**	**352**	⇓P		**PKPbc**	**12 14 32.0**	**-0.9**
	baz=148							
H18A	**Shoshone NF, C**	**147.66**	**353**	⇓P		**PKPbc**	**12 14 32.7**	**-0.5**
	baz=148							
QLMT	**Earthquake Lak**	**147.68**	**356**	*e*PKPbc		**PKPab**	**12 14 35.0**	**-0.4**
BMO	**Blue Mountains**	**147.70**	**3**	*e*PKPbc		**PKPbc**	**12 14 33.1**	**0.0**
MCMT	**McKenzie Canyo**	**147.76**	**358**	*e*PKPbc		**PKPbc**	**12 14 34.8**	**+1.3**
H16A	**Russell Place,**	**147.79**	**355**	⇑P		**PKPbc**	**12 14 33.0**	**-0.6**
	baz=148,SNR=7.0							
LKWY	**Lake**	**147.85**	**354**	*e*PKPbc		**PKPbc**	**12 14 34.6**	**+0.8**
I22A	**9 Mile Ranch,**	**147.94**	**349**	⇓P		**PKPdf**	**12 14 29.8**	**-1.0**
	baz=148							
H15A	**Lima**	**147.96**	**357**	⇑P		**PKPbc**	**12 14 34.0**	**0.0**
	baz=148							
H14A	**Lead

TGUH				*e*Sn		**Sb**	**12 21 00.9**	**-3.2**
TGUH	**Tegucigalpa,Un**	**1.98**	**172**	*e*P		**Pn**	**12 20 36.0**	**-1.0**
TGUH				*e*S		**Sb**	**12 21 01.0**	**-3.2**
MRL	**Marmol**	**2.27**	**245**	*e*P		Pn	12 20 37.3	-3.9
CAHU	**Cacacuatique**	**2.33**	**196**	*e*P		**Pn**	**12 20 41.2**	**-0.9**
MTO2	**Montecristo 2**	**2.38**	**228**	*e*P		**Pn**	**12 20 41.3**	**-1.4**
BLLM	**Bellamira**	**2.65**	**195**	*e*P		**Pn**	**12 20 46.3**	**0.0**
BLLM				*e*S		**Sn**	**12 21 19.4**	**+1.0**
VSM	**San Miguel**	**2.67**	**195**	*e*P		**Pn**	**12 20 47.1**	**+0.3**
LBRS	**Las Brisas**	**2.69**	**213**	*e*P		**Pn**	**12 20 47.6**	**+0.6**
SNVI	**San Vicente**	**2.70**	**208**	*e*P		**Pn**	**12 20 46.7**	**-0.4**
SNVI				*e*S		**Sn**	**12 21 20.9**	**+1.1**
LFU	**La Fuente**	**2.72**	**214**	*e*P		**Pn**	**12 20 47.7**	**+0.4**
CNCH	**Conchagua**	**2.75**	**186**	*e*P		**Pn**	**12 20 47.7**	**0.0**
LFRS	**El Faro**	**2.80**	**212**	*e*P		**Pn**	**12 20 48.9**	**+0.5**
RBDL	**Robledal**	**2.81**	**228**	*e*P		**Pn**	**12 20 48.0**	**-0.6**
BOQS	**Boqueron**	**2.83**	**217**	*e*P		**Pn**	**12 20 48.7**	**-0.2**
SNET	**Serv Nac Est T**	**2.84**	**215**	⇓*e*S		**Sn**	**12 21 24.4**	**+1.3**
SNET				⇓*i*			12 21 38.7	
SNET				AML		AML	12 21 38.8	
	comp=Z,2µm,0.6s							
NBG	**Las Nubes**	**3.05**	**242**	*e*P		**Pn**	**12 20 49.0**	**-3.0**
NBG				*e*S		**Sb**	**12 21 34.5**	**-1.1**
FUG	**Fuego 3**	**3.54**	**244**	*e*P		**Pn**	**12 20 55.8**	**-2.9**
TEIG	**Tepich**	**4.24**	**351**	*e*Pn		**Pn**	**12 21 08.4**	**+0.3**
TEIG				Sn		**Sn**	**12 21 56.9**	**-0.5**
TEIG				*e*Sn		Sb	12 21 57.9	-11
TEIG	**Tepich**	**4.24**	**351**	Pn		**Pn**	**12 21 08.2**	**+0.1**
	comp=Z,12nm,0.3s,baz=172,slow=1.3,SNR=31							
TEIG				Sn		**Sn**	**12 21 56.9**	**-0.5**
	comp=Z,36nm,0.3s,baz=120,slow=20,SNR=25							
JTS	**JuntasAbangare**	**6.24**	**156**	Pn		**Pn**	**12 21 36.1**	**+0.5**
	comp=Z,142nm,0.8s							
732A	**Laxson Ranch,**	**17.06**	**320**	⇑P		**Pn**	**12 24 02.4**	**+0.2**
	baz=17							
632A	**Uvalde**	**17.51**	**322**	⇑P		**Pn**	**12 24 08.8**	**+1.0**
	baz=18							
532A	**Rocksprings**	**18.04**	**323**	⇑P		**Pn**	**12 24 14.9**	**+0.6**
	baz=18							
JCT	**Junction City**	**18.25**	**324**	*e*P		**Pn**	**12 24 17.6**	**+0.8**
	comp=Z,6.0nm,0.6s							
JCT	**Junction City**	**18.25**	**324**	⇓P		**P**	**12 24 18.4**	**+1.3**
	baz=18							
WHTX	**Lake Whitney**	**18.27**	**332**	⇑P		**P**	**12 24 19.6**	**+2.4**
	baz=18,SNR=11							
531A	**Rocksprings**	**18.44**	**322**	⇑P		**Pn**	**12 24 21.9**	**+2.6**
	baz=19							
432A	**Menard**	**18.54**	**325**	⇓P		**P**	**12 24 20.7**	**+0.4**
	baz=19							
431A	**Sonora**	**18.86**	**323**	⇓P		**P**	**12 24 23.7**	**-0.1**
	baz=19							
332A	**Millersview**	**18.91**	**326**	P		**Pn**	**12 24 25.6**	**+0.7**
	baz=19,SNR=14							
530A	**J-C Ranch, Com**	**18.91**	**320**	P		**Pn**	**12 24 25.6**	**+0.6**
	baz=19,SNR=14							
331A	**San Angelo**	**19.22**	**325**	⇑P		**Pn**	**12 24 29.8**	**+1.1**
	baz=19,SNR=6.1							
232A	**Coleman**	**19.25**	**327**	⇓P		**Pn**	**12 24 30.1**	**+1.1**
	baz=19,SNR=19							
529A	**Stev Forest Ra**	**19.44**	**319**	⇓P		**Pn**	**12 24 31.6**	**+0.2**
	baz=20,SNR=7.9							
628A	**Black Gap, Mar**	**19.45**	**316**	⇓P		**Pn**	**12 24 32.0**	**+0.5**
	baz=20							
429A	**Davenport Ranc**	**19.58**	**320**	P		**Pn**	**12 24 33.2**	**+0.1**
	baz=20,SNR=15							
231A	**Bronte**	**19.64**	**326**	P		**P**	**12 24 33.6**	**+1.3**
	baz=20,SNR=18							
330A	**Mertzon**	**19.72**	**323**	P		**P**	**12 24 34.2**	**+1.0**
	baz=20,SNR=7.7							
627A	**Terlingua Ranc**	**19.77**	**315**	P		**Pn**	**12 24 35.9**	**+0.6**
	baz=20,SNR=16							
528A	**Cox Ranch, San**	**19.83**	**318**	⇓P		**Pn**	**12 24 36.5**	**+0.5**
	baz=20							
ABTX	**Abilene, Hawle**	**19.83**	**329**	⇓P		**Pn**	**12 24 36.4**	**+0.4**
	baz=20							
TXAR	**Lajitas Array**	**19.88**	**315**	P		**P**	**12 24 36.4**	**+1.4**
TXAR	**Lajitas Array**	**19.88**	**315**	P		**P**	**12 24 36.4**	**+1.4**
	comp=Z,5.7nm,0.8s,baz=138,slow=9.6,SNR=79							
230A	**Sterling City**	**20.04**	**324**	⇑P		**P**	**12 24 37.8**	**+1.1**
	baz=20,SNR=8.7							
428A	**Kincaid Ranch,**	**20.14**	**319**	P		Pn	12 24 40.6	+0.8
	baz=20,SNR=8.8							
131A	**Roby**	**20.25**	**327**	P		**P**	**12 24 40.6**	**+1.6**
	baz=20,SNR=10							
Z32A	**Haskell**	**20.31**	**330**	P		Pn	12 24 41.7	+0.1
	baz=20,SNR=26							
626A	**Big Bend Ranch**	**20.34**	**314**	P		Pn	12 24 41.8	-0.3
	baz=20,SNR=35							
527A	**Woodward Ranch**	**20.36**	**316**	P		**P**	**12 24 41.5**	**+1.2**
	baz=20,SNR=17							
130A	**Snyder**	**20.50**	**326**	⇓P		**P**	**12 24 42.9**	**+1.2**
	baz=21,SNR=11							
526A	**Mary Lane Ranc**	**20.62**	**316**	P		Pn	12 24 45.1	-0.4
	baz=21,SNR=9.1							
Z31A	**Sharp Cattle R**	**20.64**	**329**	P		**P**	**12 24 44.8**	**+1.5**
	baz=21,SNR=14							
328A	**Wristen Ranch,**	**20.67**	**320**	P		**P**	**12 24 45.0**	**+1.4**
	baz=21,SNR=13							
427A	**Hayter Ranch,**	**20.68**	**318**	P		**P**	**12 24 45.1**	**+1.4**
	baz=21,SNR=7.9							
Y32A	**R-V Farms, Ver**	**20.86**	**331**	P		Pn	12 24 47.8	-0.3
	baz=21,SNR=7.4							
426A	**McDonald Obser**	**20.97**	**317**	P		**P**	**12 24 48.3**	**+1.3**
	baz=21,SNR=16							
129A	**Stewart Farms,**	**21.02**	**324**	P		**P**	**12 24 48.5**	**+1.2**
	baz=21,SNR=5.8							
Z30A	**Sanderson Ranc**	**21.12**	**327**	P		**P**	**12 24 49.4**	**+1.0**
	baz=21,SNR=11							
WMOK	**Wichita Mounta**	**21.19**	**334**	*e*P		**P**	**12 24 50.3**	**+1.2**
	comp=Z,28nm,1.0s							
WMOK				*e*S		**S**	**12 28 40.5**	**-4.0**
Y31A	**Rekieta Farm,**	**21.22**	**330**	P		**P**	**12 24 51.3**	**+1.8**
	baz=21,SNR=8.3							
326A	**Caldwell Ranch**	**21.36**	**318**	P		**P**	**12 24 52.2**	**+1.1**
	baz=22,SNR=14							
128A	**Castleberry Fa**	**21.36**	**323**	P		**P**	**12 24 52.1**	**+1.0**
	baz=22,SNR=16							
Z29A	**Hungry Hill Ra**	**21.41**	**326**	P		**P**	**12 24 52.1**	**+0.6**
	baz=22,SNR=8.5							
X31A	**McDonald Ranch**	**21.63**	**331**	P		**P**	**12 24 55.6**	**+1.8**
	baz=22,SNR=10							
425A	**Indio Mountain**	**21.68**	**316**	P		**P**	**12 24 55.7**	**+1.2**
	baz=22,SNR=9.8							
Z28A	**Tucker Farm, M**	**21.80**	**325**	P		**P**	**12 24 56.5**	**+0.8**
	baz=22,SNR=6.9							
Y29A	**Porterfield Fa**	**21.85**	**327**	⇓P		**P**	**12 24 57.2**	**+0.9**
	baz=22							
USIN	**University of**	**21.86**	**360**	*e*P		**P**	**12 24 58.2**	**+2.0**
	comp=Z,9.6nm,0.4s							
X30A	**Coker Ranch, T**	**21.91**	**329**	P		**P**	**12 24 58.2**	**+1.3**
	baz=22,SNR=5.8							
226B	**Tecolote Peak,**	**21.99**	**320**	P		**P**	**12 24 59.0**	**+1.2**
	baz=22,SNR=17							
325A	**Bean Ranch, Si**	**22.04**	**317**	P		**P**	**12 24 59.4**	**+0.9**
	baz=22,SNR=13							
WCI	**Wyandotte Cave**	**22.15**	**3**	*e*P		**P**	**12 25 00.7**	**+1.3**
	comp=Z,9.7nm,0.8s							
Y28A	**McKinney Farm,**	**22.19**	**326**	⇓P		**P**	**12 25 00.4**	**+0.4**
	baz=22							
Z27A	**Tatum**	**22.29**	**323**	P		**P**	**12 25 00.8**	**-0.2**
	baz=22,SNR=7.8							
X29A	**Tulia**	**22.32**	**328**	⇑P		**P**	**12 25 02.2**	**+0.8**
	baz=22							
324A	**Moseley Ranch,**	**22.42**	**316**	⇓P		**P**	**12 25 03.2**	**+0.7**
	baz=23							
225A	**Deer Hill, Car**	**22.42**	**319**	P		**P**	**12 25 03.4**	**+0.8**
	baz=23,SNR=15							
MNTX	**Cornudas Mount**	**22.52**	**317**	*e*P		**P**	**12 25 03.4**	**0.0**
	comp=Z,6.7nm,1.2s							
V31A	**Spring Creek L**	**22.52**	**333**	⇓P		**P**	**12 25 04.9**	**+1.4**
	baz=23,SNR=5.3							
AMTX	**Amarillo**	**22.66**	**329**	*e*P		**P**	**12 25 04.8**	**-0.1**
	comp=Z,12nm,0.8s							
Y27A	**Causey**	**22.68**	**324**	⇓P		**P**	**12 25 05.1**	**-0.1**
	baz=23,SNR=9.4							
125A	**Gardner Draw,**	**22.69**	**320**	P		**P**	**12 25 05.7**	**+0.4**
	baz=23,SNR=12							
224A	**Cornudas Mount**	**22.85**	**318**	P		**P**	**12 25 07.2**	**+0.1**
	baz=23,SNR=7.8							
Y26A	**Elida**	**23.08**	**324**	⇓P		**P**	**12 25 09.3**	**-0.1**
	baz=23							
Z25A	**Roswell**	**23.15**	**321**	P		**P**	**12 25 10.1**	**0.0**
	baz=23,SNR=8.5							
X27A	**F and S Farms,**	**23.21**	**326**	⇑P		**P**	**12 25 10.8**	**0.0**
	baz=23							
124A	**Stringfield Ra**	**23.21**	**319**	P		**P**	**12 25 11.6**	**+0.7**
	baz=23,SNR=25							
W27A	**Bowe Ranch, En**	**23.51**	**327**	⇑P		**P**	**12 25 13.8**	**+0.1**
	baz=24							
X26A	**CR and CF Fran**	**23.53**	**325**	P		**P**	**12 25 14.2**	**+0.3**
	baz=24,SNR=11							
Z24A	**Sheeppen Canyo**	**23.58**	**320**	P		**P**	**12 25 15.8**	**+1.3**
	baz=24,SNR=15							
W26A	**Owens Ranch, T**	**23.90**	**326**	P		**P**	**12 25 18.4**	**+0.8**
	baz=24,SNR=9.2							
Y24A	**Capitan**	**24.03**	**321**	P		**P**	**12 25 20.2**	**+1.4**
	baz=24,SNR=32							
Z23A	**Rita Site, Whi**	**24.07**	**319**	P		**P**	**12 25 21.0**	**+1.8**
	baz=24,SNR=14							
W25A	**X Bar L Ranch,**	**24.38**	**325**	P		**P**	**12 25 23.1**	**+1.1**
	baz=24,SNR=7.4							
Y23A	**Lovelace Mesa,**	**24.41**	**320**	P		**P**	**12 25 24.4**	**+2.1**
	baz=24,SNR=18							
U27A	**Thompson Grove**	**24.44**	**329**	⇑P		**P**	**12 25 24.1**	**+1.6**
	baz=25							
V26A	**Tequesquite Ra**	**24.45**	**327**	P		**P**	**12 25 24.5**	**+1.9**
	baz=25,SNR=12							
Z22A	**Elephant Butte**	**24.54**	**318**	P		**P**	**12 25 26.1**	**+2.7**
	baz=25,SNR=10							
BNM	**Barren Site**	**24.91**	**320**	*e*P		**P**	**12 25 29.1**	**+2.2**
	comp=Z,24nm,1.6s							
W24A	**Lazy 6 Ranch,**	**24.91**	**323**	⇓P		**P**	**12 25 29.9**	**+3.0**
	baz=25,SNR=15							
V25A	**Rancho No Teng**	**24.92**	**326**	P		**P**	**12 25 28.4**	**+1.4**
	baz=25,SNR=8.3							
Y22A	**Socorro**	**24.98**	**319**	P		**P**	**12 25 29.1**	**+1.7**
	baz=25,SNR=40							
319A	**Douglas**	**25.02**	**312**	⇑P		**P**	**12 25 31.4**	**+3.6**
	baz=25							
Z21A	**St. Cloud Mine**	**25.03**	**317**	⇓P		**P**	**12 25 31.5**	**+3.5**
	baz=25							
V24A	**Rampart Ranch,**	**25.20**	**324**	P		**P**	**12 25 32.8**	**+3.3**
	baz=25,SNR=5.6							
120A	**U Bar Ranch, L**	**25.22**	**315**	⇓P		**P**	**12 25 32.6**	**+3.0**
	baz=25							
U25A	**Circle Dot Ran**	**25.23**	**327**	⇑P		**P**	**12 25 32.4**	**+2.6**
	baz=25							
W23A	**Werner Place,**	**25.31**	**322**	⇓P		**P**	**12 25 33.6**	**+3.2**
	baz=25,SNR=8.1							
ANMO	**Albuquerque**	**25.34**	**322**	*e*P		**P**	**12 25 32.6**	**+1.8**
	comp=Z,2.3nm,1.1s							
ANMO	**Albuquerque**	**25.34**	**322**	P		**P**	**12 25 33.1**	**+2.4**
	comp=Z,1.4nm,0.9s,baz=147,slow=14,SNR=5.5							
X22A	**Bernardo**	**25.38**	**320**	⇓P		**P**	**12 25 34.5**	**+3.4**
	baz=26							
LAZ	**Ladron**	**25.39**	**320**	*e*P		**P**	**12 25 33.9**	**+2.7**
	comp=Z,1.4nm,0.7s							
Y21A	**Point of Rocks**	**25.47**	**318**	P		**P**	**12 25 34.1**	**+2.1**
	baz=26,SNR=17							
V23A	**Ortiz Mt. (NFS**	**25.73**	**323**	⇓P		**P**	**12 25 38.0**	**+3.7**
	baz=26							
T25A	**Trinidad**	**25.80**	**328**	⇑P		**P**	**12 25 37.3**	**+2.4**
	baz=26							
X21A	**Alamocita Cree**	**25.82**	**319**	⇓P		**P**	**12 25 39.0**	**+3.8**
	baz=26,SNR=17							
Y20A	**Horse Springs,**	**25.86**	**317**	⇑P		**P**	**12 25 39.9**	**+4.3**
	baz=26							
R27A	**Eads**	**25.92**	**332**	⇑P		**P**	**12 25 39.5**	**+3.6**
	baz=26							
X20A	**Quemado**	**26.34**	**318**	P		P	12 25 44.7	+4.9
	baz=26,SNR=9.7							
W20A	**Ramah**	**26.71**	**319**	P		**P**	**12 25 47.9**	**+4.7**
	baz=27,SNR=5.1							
SDCO	**Great Sand Dun**	**26.82**	**327**	*e*P		**P**	**12 25 45.4**	**+1.2**
	comp=Z,3.0nm,1.1s							
V20A	**Brimhall**	**27.13**	**320**	⇑P		P	12 25 52.0	+5.0
	baz=27							
SADO	**Sadowa**	**29.52**	**12**	P		**P**	**12 26 09.1**	**+1.1**
SADO	**Sadowa**	**29.52**	**12**	P		**P**	**12 26 09.1**	**+1.1**
	comp=Z,1.4nm,0.5s,baz=192,slow=9.3,SNR=1.8							
SADO				LR		LR	12 40 13.8	
	comp=Z,31nm,18.2s,baz=152,slow=41							
PFO	**Pinyon Flat Ob**	**31.39**	**309**	LR		LR	12 41 21.6	
	comp=Z,72nm,18.4s,baz=286,slow=40							
TPAW	**Teton Pass**	**33.85**	**329**	P		**P**	**12 26 47.2**	**+0.8**
	comp=Z,2.8nm,0.9s							
ELK	**Elko**	**34.38**	**321**	P		**P**	**12 26 52.8**	**+1.8**
ELK	**Elko**	**34.38**	**321**	P		**P**	**12 26 52.8**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=150,slow=8.6,SNR=4.7							
NVAR	**Mina Array Bea**	**35.03**	**316**	P		**P**	**12 26 57.6**	**+1.1**
NVAR	**Mina Array Bea**	**35.03**	**316**	P		**P**	**12 26 57.6**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=119,slow=7.3,SNR=5.7							
MCMT	**McKenzie Canyo**	**35.77**	**329**	P		**P**	**12 27 04.3**	**+1.5**
	comp=Z,2.7nm,1.4s							
B20A	**Solberg Farm,**	**36.43**	**337**	P		**P**	**12 27 10.3**	**+2.0**
	baz=37,SNR=5.2							
BDFB	**Brasilia**	**50.13**	**127**	LR		LR	12 52 40.2	
	comp=Z,96nm,20.9s,baz=358,slow=39							
YKA	**Yellowknife Ar**	**50.16**	**344**	P		**P**	**12 28 58.3**	**-0.5**
YKA	**Yellowknife Ar**	**50.16**	**344**	P		**P**	**12 28 58.3**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=139,slow=7.9,SNR=9.8							
ILAR	**Eielson Array**	**62.74**	**335**	P		**P**	**12 30 28.1**	**-0.4**
ILAR	**Eielson Array**	**62.74**	**335**	P		**P**	**12 30 28.1**	**-0.4**
	comp=Z,2.0nm,0.9s,baz=112,slow=5.6,SNR=29							
TRF	**Thorofare Moun**	**63.70**	**334**	*e*P		**P**	**12 30 35.0**	**-0.1**
	comp=Z,2.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**85.74**	**78**	P		**P**	**12 32 42.4**	**-1.0**
TORD	**Torodi Ar. Bea**	**85.74**	**78**	P		**P**	**12 32 42.4**	**-1.0**
	comp=Z,1.2nm,1.0s,baz=297,slow=4.5,SNR=4.0							
WRA	**Waramunga Arr**	**140.04**	**258**	PKP		**PKPdf**	**12 39 32.1**	**-0.8**
WRA	**Warramunga Arr**	**140.04**	**258**	PKP		**PKPdf**	**12 39 32.1**	**-0.8**
	comp=Z,1.6nm,0.9s,baz=78,slow=1.7,SNR=7.5							
ASAR	**Alice Springs**	**140.38**	**252**	PKP		**PKPdf**	**12 39 32.6**	**-0.9**
ASAR	**Alice Springs**	**140.38**	**252**	PKP		**PKPdf**	**12 39 32.6**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=86,slow=1.2,SNR=8.1							
CMAR	**Chiang Mai Arr**	**145.14**	**349**	PKP		**PKPbc**	**12 39 40.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**145.14**	**349**	PKP		**PKPbc**	**12 39 40.4**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=328,slow=3.7,SNR=10							

*ISCJB **30** 12:21:19.3±0.3,32°.57N±0'.03×48°.27E±0'.04, h15km, mb3.7/13, Error ellipse: s-maj=4.9km s-min=3.5km az=136.0*
*THR **30** 12:21:20.3±1.3,32°.55N×48°.29E, h15km±11km, ML3.6*
*CSEM **30** 12:21:20.1±0.2,32°.52N×48°.29E, h2km, ML3.6, Error ellipse: s-maj=4.8km s-min=4.0km az=58.0*
*TEH **30** 12:21:22.3,32°.45N×48°.23E, h20km, ML3.8*
*KISR **30** 12:21:23.0±0.4,32°.06N×48°.00E, h34km±277km, ML3.3*
*IDC **30** 12:21:24.4±4.2,32°.59N×48°.22E, h54km±39km, mb3.5/13, mb1 3.7/16, mb1mx3.5/31, mbtmp3.5/16, ML3.3/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/36, Error ellipse: s-maj=33.1km s-min=16.3km az=168.0*

ISC 30 12:21:20.1±0.5, 32°.51N±0'.03×48°.24E±0'.03, h15km, n65, σ1§59/71, mb3.8/13, 3C-3D, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.62**	**130**	*e*Pg		**Pg**		**12 21 31.7**	**-0.6**
SHGR				*e*Sg		**Sb**		**12 21 41.6**	**+0.4**
SHGR				AML		AML		12 21 56.0	
	comp=N,3µm,0.7s								
SHGR				AML		AML		12 21 56.0	
	comp=E,3µm,0.2s								
SHGR	**Shooshtar-Gavs**	**0.62**	**130**	*e*Pg		**Pg**		**12 21 31.7**	**-0.6**
SHGR				*e*Sg		**Sb**		**12 21 41.6**	**+0.4**
KHMZ	**Khomeyn**	**1.90**	**49**	*e*Pg		**Pb**		**12 21 54.0**	**-0.5**
KHMZ				AML		AML		12 22 27.1	
	comp=N,454nm,0.5s								
KHMZ	**Khomeyn**	**1.90**	**49**	*e*Pg		**Pb**		**12 21 54.0**	**-0.5**
IGHG	**Ghaleghazi**	**2.29**	**323**	*e*Pn		**Pb**		**12 22 00.1**	**-1.2**
IGHG				*e*				12 22 53.1	
	comp=Z,6µm,0.3s								
IGHG	**Ghaleghazi**	**2.29**	**323**	*e*Pn		**Pb**		**12 22 00.1**	**-1.2**
IVIS	**Veis**	**2.32**	**330**	*e*Pn		**Pn**		**12 22 00.1**	**+2.2**
IVIS				*e*Pn		**Pb**		**12 22 00.4**	**-1.3**
IVIS				*e*				12 22 45.9	
	comp=E,3µm,0.2s								
IVIS	**Veis**	**2.32**	**330**	*e*Pn		**Pn**		**12 22 00.1**	**+2.2**
ILIN	**Lien**	**2.63**	**336**	*e*Pn		**Pn**		**12 22 04.4**	**+2.2**
ILIN				*e*				12 22 49.2	
	comp=Z,3µm,0.3s								
ILIN	**Lien**	**2.63**	**336**	*e*Pn		**Pn**		**12 22 04.4**	**+2.2**
IDHR	**Dehrash**	**2.68**	**325**	*e*Pn		**Pn**		**12 22 04.3**	**+1.5**
IDHR				*e*Sg		**Sg**		**12 22 47.3**	**+1.2**
IDHR				*e*				12 22 51.1	
	comp=Z,3µm,0.2s								
IDHR	**Dehrash**	**2.68**	**325**	*e*Pn		**Pn**		**12 22 04.3**	**+1.5**
IDHR				*e*Sg		**Sg**		**12 22 47.3**	**+1.2**
IKLH	**Kolahrood**	**2.92**	**73**	*e*		**Sg**		**12 22 58.7**	**+4.6**
	comp=Z,3µm,0.2s								
IKLH				*e*Pn		**Pn**		**12 22 08.0**	**+1.7**
UMR	**Umm Al-Rimmam**	**2.98**	**189**	*e*P		**Pn**		**12 22 08.8**	**+2.0**
UMR				AML		AML		12 22 54.5	
	comp=Z,200nm,0.5s								
UMR	**Umm Al-Rimmam**	**2.98**	**189**	*e*P		**Pn**		**12 22 08.8**	**+2.0**
RST	**Umm Al-Ruwaisa**	**3.18**	**200**	*e*P		**Pn**		**12 22 11.3**	**+1.7**
RST	**Umm Al-Ruwaisa**	**3.18**	**200**	*e*P		**Pn**		**12 22 11.3**	**+1.7**
IGAR	**Gharneh**	**3.22**	**91**	*e*Pn		**Pn**		**12 22 11.8**	**+1.5**
IGAR				*e*				12 22 59.9	
	comp=Z,2µm,0.2s								
BHD	**Baghdad**	**3.33**	**284**	*ex*		**Pn**		**12 22 13.0**	**+1.4**
BHD				*ex*		x		12 22 53.5	
BHD	**Baghdad**	**3.33**	**284**	*e*Pn		**Pn**		**12 22 13.0**	**+1.4**
BHD				*e*Sn		**Sn**		**12 22 53.5**	**+2.5**
KBD	**Kabd**	**3.36**	**188**	*e*P		**Pn**		**12 22 13.9**	**+1.9**
KBD				AML		AML		12 23 06.6	
	comp=Z,66nm,0.3s								
KBD	**Kabd**	**3.36**	**188**	*e*P		**Pn**		**12 22 13.9**	**+1.9**
NAY	**Al-Naaiem**	**3.36**	**195**	*e*P		**Pn**		**12 22 13.8**	**+1.8**
NAY				AML		AML		12 23 00.5	
	comp=Z,54nm,0.7s								
NAY	**Al-Naaiem**	**3.36**	**195**	*e*P		**Pn**		**12 22 13.9**	**+1.8**
IZEF	**Zefreh**	**3.47**	**83**	*e*Pn		**Pn**		**12 22 15.4**	**+1.6**
IZEF				*e*				12 22 23.1	
	comp=Z,2µm,0.1s								
IZEF	**Zefreh**	**3.47**	**83**	*e*Pn		**Pn**		**12 22 15.4**	**+1.6**
RDF	**Al-Radifah**	**3.62**	**190**	*e*P		**Pn**		**12 22 17.8**	**+2.2**
RDF				*e*S		**Sn**		**12 22 58.8**	**+0.7**
RDF				AML		AML		12 23 04.0	
	comp=Z,120nm,0.6s								
RDF	**Al-Radifah**	**3.62**	**190**	*e*P		**Pn**		**12 22 17.8**	**+2.2**
RDF				*e*S		**Sn**		**12 22 58.8**	**+0.7**
NASN	**Na'in**	**3.87**	**84**	*e*Pn		**Pn**		**12 22 20.7**	**+1.4**
NASN	**Na'in**	**3.87**	**84**	*e*Pn		**Pn**		**12 22 20.7**	**+1.4**
ZNJK	**Zanjan**	**4.17**	**5**	*e*Pn		**Pn**		**12 22 25.7**	**+2.3**
ZNJK	**Zanjan**	**4.17**	**5**	*e*Pn		**Pn**		**12 22 25.7**	**+2.3**
DAMV	**Damavand**	**4.39**	**44**	*e*Pn		**Pn**		**12 22 27.8**	**+1.3**
DAMV	**Damavand**	**4.39**	**44**	*e*Pn		**Pn**		**12 22 27.8**	**+1.3**
ISAD	**Sadrabad**	**4.66**	**96**	*e*Pn		**Pn**		**12 22 31.1**	**+1.0**
ISAD				*e*				12 22 49.5	
	comp=Z,564nm,0.2s								
ISAD	**Sadrabad**	**4.66**	**96**	*e*Pn		**Pn**		**12 22 31.1**	**+1.0**
IPAR	**Pars**	**4.91**	**122**	*e*Pn		**Pn**		**12 22 34.4**	**+0.8**
IPAR				*e*				12 24 04.4	
	comp=Z,466nm,0.4s								
IPAR	**Pars**	**4.91**	**122**	*e*Pn		**Pn**		**12 22 34.4**	**+0.8**
ISRV	**Sarvestan**	**5.22**	**125**	*e*Pn		**Pn**		**12 22 38.4**	**+0.5**
ISRV				*e*				12 23 59.3	
	comp=Z,681nm,0.4s								
IMEH	**Mehriz**	**5.53**	**100**	*e*Pn		**Pn**		**12 22 43.0**	**+0.9**
IMEH				*e*				12 23 56.0	
	comp=Z,177nm,0.2s								
ASF	**Jabal al Asfar**	**9.60**	**271**	P		**Pn**		**12 23 38.3**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=338,slow=4.4,SNR=3.5								
ASF				S		Sn		12 25 20.3	-5.2
	comp=Z,0.8nm,0.3s,baz=167,slow=17,SNR=3.8								
EIL	**Elat**	**11.74**	**260**	LR		LR		12 28 47.8	
	comp=Z,58nm,19.7s,baz=277,slow=38								
BRTR	**Keskin Array B**	**13.81**	**306**	P		**Pn**		**12 24 38.4**	**+2.9**

KMBO	**Kilima Mbogo**	**44.65**	**301**	LR	LR	13 11 48.8		
	comp=Z,94nm,19.1s,baz=94,slow=33							
FITZ	**Fitzroy Crossi**	**47.95**	**89**	LR	LR	13 15 07.6		
	comp=Z,76nm,18.4s,baz=88,slow=35							
CMAR	**Chiang Mai Arr**	**52.39**	**30**	P	P	12 56 45.2	+0.3	
	0.8nm,0.9s,baz=215,slow=6.2,SNR=5.2							
CMAR				LR	LR	13 15 45.4		
	comp=Z,51nm,18.7s,baz=220,slow=32							
ASAR	**Alice Springs**	**53.27**	**99**	P	P	12 56 51.5	-0.2	
	1.3nm,0.8s,baz=251,slow=6.5,SNR=12							
WRA	**Warramunga Arr**	**54.92**	**95**	P	P	12 57 03.5	-0.1	
	1.9nm,0.8s,baz=252,slow=7.5,SNR=9.4							
MKAR	**Makanchi Array**	**75.28**	**6**	P	P	12 59 14.4	-0.9	
	0.6nm,0.9s,baz=178,slow=5.2,SNR=2.7							
BVAR	**Borovoye Array**	**81.24**	**358**	P	P	12 59 48.3	+0.2	
	1.2nm,0.6s,baz=165,slow=6.0,SNR=5.7							
ZALV	**Zalesovo Beam**	**82.59**	**6**	P	P	12 59 55.3	0.0	
	0.5nm,0.3s,baz=163,slow=5.6,SNR=2.1							
YKA	**Yellowknife Ar**	**145.49**	**7**	PKPbc	PKPdf	13 07 09.8	-0.3	
	0.3nm,0.7s,baz=340,slow=2.9,SNR=4.7							

IDC ***30*** *12:56:50.9±1.3,6.66S×129.84E,h0km,mb3.9/4, mb1 4.1/7,mb1mx3.9/20,mbtmp4.0/7,ML4.3/3,Error ellipse: s-maj=63.0km s-min=23.1km az=87.0*

AUST ***30*** *12:56:59.7,6.98S×129.54E,h35km*

ISC 30 12:57:01.5±1.1,7.06S±0.06×129.5E±0.2,h139km,n16, σ2.330/14,mb3.7/4,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**4.93**	**34**	P		**Pn**	**12 58 12.6**	**-1.3**
	baz=4.9,SNR=43							
FAKI				S		Sn	12 59 04.0	-6.3
	baz=4.9,SNR=7.6							
MTN	**Manton Dam**	**5.96**	**165**	P		Pn	12 58 30.3	+2.7
	baz=6.1,SNR=40							
MTN				S		**Sn**	**12 59 34.2**	**-0.7**
	baz=6.1,SNR=11							
KDU	**Kakadu**	**6.30**	**153**	P		**Pn**	**12 58 34.0**	**+1.9**
	baz=6.4,SNR=119							
KDU				S		**Sn**	**12 59 40.7**	**-2.4**
	baz=6.4,SNR=7.7							
SWI	**Sorong**	**6.40**	**16**	P		**Pn**	**12 58 33.5**	**0.0**
	baz=6.4,SNR=10							
SWI				S		**Sn**	**12 59 43.0**	**-2.5**
	baz=6.4,SNR=3.8							
KNRA	**Kununurra**	**8.59**	**185**	P		Pn	12 59 05.3	+2.4
	baz=8.7,SNR=138							
KNRA				S		**Sn**	**13 00 36.6**	**-1.7**
	baz=8.7,SNR=11							
FITZ	**Fitzroy Crossi**	**11.61**	**199**	Pn		Pn	12 59 45.3	+2.3
	2.8nm,0.3s,baz=26,slow=11,SNR=92							
FITZ				Sn		**Sn**	**13 01 48.6**	**-2.5**
	3.0nm,0.3s,baz=278,slow=19,SNR=5.9							
FITZ	**Fitzroy Crossi**	**11.61**	**199**	P		Pn	12 59 45.1	+2.1
	baz=12,SNR=70							
WRA	**Warramunga Arr**	**13.63**	**160**	Pn		**Pn**	**13 00 08.9**	**-0.4**
	1.0nm,0.3s,baz=346,slow=13,SNR=48							
WRA				Sn		Sn	13 02 32.4	-7.7
	4.0nm,0.3s,baz=335,slow=22,SNR=14							
COEN	**Coen**	**15.07**	**118**	P		**P**	**13 00 29.8**	**+0.4**
	baz=15,SNR=17							
QIS	**Mount Isa**	**16.60**	**145**	P		**P**	**13 00 48.9**	**+2.6**
	baz=17,SNR=6.3							
ASAR	**Alice Springs**	**17.04**	**166**	Pn		**Pn**	**13 00 54.6**	**+3.1**
	0.5nm,0.3s,baz=345,slow=13,SNR=27							
ASAR				Sn		**S**	**13 03 58.1**	**-3.7**
	0.7nm,0.3s,baz=359,slow=28,SNR=7.3							
MTSU	**Mount Surprise**	**18.14**	**129**	P		Pn	13 01 10.1	+5.3
	baz=18,SNR=7.1							
MJAR	**Matsushiro Arr**	**44.13**	**10**	P		**P**	**13 04 57.3**	**+1.1**
	0.3nm,0.3s,baz=195,slow=10,SNR=7.6							
USRK	**Ussuriysk Arra**	**51.07**	**2**	P		P	13 05 52.3	+2.8
	0.7nm,0.5s,baz=195,slow=9.2,SNR=3.4							
SONM	**Songino Array**	**58.35**	**342**	P		P	13 06 46.5	+4.4
	0.5nm,0.6s,baz=154,slow=7.2,SNR=4.1							
MKAR	**Makanchi Array**	**68.02**	**327**	P		P	13 07 50.7	+4.9
	0.7nm,0.3s,baz=118,slow=8.0,SNR=16							

IDC 30 13:26:43.8±5.2,29.42S×177.36W,h0km,mb3.4/2, mb1 3.7/2,mb1mx3.5/17,mbtmp3.4/2,Error ellipse: s-maj=254.5km s-min=79.7km az=164.0,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	**Alice Springs**	**43.72**	**266**	P		P	13 34 52.4	+1.4
	0.5nm,0.9s,baz=108,slow=7.9,SNR=2.8							
WRA	**Warramunga Arr**	**44.62**	**271**	P		P	13 34 56.6	-1.6
	0.8nm,0.7s,baz=112,slow=7.6,SNR=9.0							
FINES	**FINESS Array B**	**144.41**	**341**	PKP		PKPdf	13 46 20.7	-0.6
	1.0nm,0.7s,baz=50,slow=4.3,SNR=3.5							

IDC 30 13:27:43.2±2.3,0.28S×132.52E,h0km,mb3.3/2, mb1 3.5/4,mb1mx3.3/22,mbtmp3.3/4,ML3.3/2,Error ellipse: s-maj=96.3km s-min=24.8km az=77.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.96**	**201**	P		P	13 32 04.7	-1.4
	0.1nm,0.3s,baz=37,slow=14,SNR=4.3							
WRA	**Warramunga Arr**	**19.62**	**175**	P		P	13 32 13.1	-0.4
	0.1nm,0.3s,baz=355,slow=12,SNR=6.5							
ASAR	**Alice Springs**	**23.28**	**177**	P		P	13 32 53.8	+1.0
	0.8nm,0.6s,baz=353,slow=10.0,SNR=9.7							
MKAR	**Makanchi Array**	**64.15**	**324**	P		P	13 38 19.6	0.0
	0.1nm,0.3s,baz=110,slow=7.3,SNR=3.9							

ISCJB ***30*** *13:35:20.5±0.3,63.93N±0.02×22.24W±0.04,h10km±1km, mb4.2/44,MS3.6/21,Error ellipse: s-maj=3.9km s-min=2.6km az=0.3*

CSEM ***30*** *13:35:20.6±0.1,63.94N×22.25W,h2km,mb4.4/29,Ms3.3, Error ellipse: s-maj=4.7km s-min=3.4km az=6.0*

NEIC ***30*** *13:35:21.0±0.6,63.94N×22.27W,h4km±3km,mb4.5/37, Error ellipse: s-maj=7.3km s-min=3.7km az=208.0*

NEIC Felt at Reykjavik.

IDC ***30*** *13:35:21.4±0.8,63.82N×22.62W,h0km,mb3.7/10, mb1 4.0/11,mb1mx3.8/31,mbtmp3.8/11,ML4.2/1,MS3.6/26, Ms1 3.6/26,ms1mx3.5/41,Error ellipse: s-maj=29.8km s-min=14.8km az=32.0*

REY ***30*** *13:35:21.0,63.91N×22.28W,h7km,ML4.0,ML4.3*

ISC 30 13:35:21.6±0.7,63.92N±0.03×22.23W±0.02,h8km±4km, n229,σ1§24/227,mb4.3/44,MS3.5/21,Iceland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IKRI	**Krysuvik**	**0.08**	**120**	P		**Pg**	**13 35 23.2**	**-0.5**
IKRI				S		**Sg**	**13 35 25.0**	**-0.2**
IKRI	**Krysuvik**	**0.08**	**120**	P		**Pg**	**13 35 23.2**	**-0.5**
IKRI				S		**Sg**	**13 35 24.9**	**-0.2**
IVOG	**Vogar**	**0.09**	**307**	P		**Pg**	**13 35 22.8**	**-1.0**
IVOG				S		**Sg**	**13 35 24.9**	**-0.5**
IVOG	**Vogar**	**0.09**	**307**	P		**Pg**	**13 35 22.9**	**-0.9**
IVOG				S		**Sg**	**13 35 24.7**	**-0.6**
IGRV	**Grindav??k**	**0.12**	**238**	P		**Pg**	**13 35 23.2**	**-1.0**
IGRV	**Grindav??k**	**0.12**	**238**	P		**Pg**	**13 35 23.2**	**-1.0**
IGRV				S		**Sg**	**13 35 24.9**	**-1.1**
IKAS	**Kald??rsel**	**0.20**	**58**	P		**Pg**	**13 35 25.6**	**-0.1**
IKAS				S		**Sg**	**13 35 29.2**	**+0.8**
IKAS	**Kald??rsel**	**0.20**	**58**	P		**Pg**	**13 35 25.5**	**-0.1**
IKAS				S		**Sg**	**13 35 28.9**	**+0.5**
INYL	**Nylenda**	**0.23**	**284**	P		**Pg**	**13 35 25.3**	**-0.9**
INYL				S		**Sg**	**13 35 28.7**	**-0.6**
IVOS	**Vogsosar**	**0.24**	**105**	P		**Pg**	**13 35 26.3**	**-0.2**
IVOS				S		**Sg**	**13 35 30.3**	**+0.6**
IVOS	**Vogsosar**	**0.24**	**105**	P		**Pg**	**13 35 26.1**	**-0.4**
IVOS				S		**Sg**	**13 35 30.1**	**+0.4**
ISAN	**Sandskeio**	**0.32**	**64**	P		**Pg**	**13 35 27.5**	**-0.5**
ISAN				S		**Sg**	**13 35 32.7**	**+0.4**
IBJA	**Bjarnastaoir**	**0.41**	**86**	P		**Pg**	**13 35 29.1**	**-0.5**
IBJA				S		**Sg**	**13 35 35.2**	**+0.2**
IKUD	**Kuludalsa**	**0.43**	**21**	P		**Pg**	**13 35 29.2**	**-0.8**
IKUD				S		**Sg**	**13 35 35.4**	**-0.3**
IHEI	**Heioarbar**	**0.52**	**57**	P		**Pg**	**13 35 30.7**	**-1.0**
IHEI				S		**Sg**	**13 35 38.6**	**+0.1**
IKRO	**Krokur**	**0.52**	**69**	P		**Pg**	**13 35 30.7**	**-1.0**
IKRO				S		**Sg**	**13 35 38.5**	**-0.1**
ISOL	**Solvholt**	**0.57**	**88**	P		**Pg**	**13 35 31.5**	**-1.1**
ISOL				S		**Sg**	**13 35 39.7**	**-0.3**
IASM	**Asmuli**	**0.72**	**96**	P		**Pg**	**13 35 34.0**	**-1.5**
IASM				S		**Sg**	**13 35 44.1**	**-0.8**
ISAU	**Saurbar**	**0.81**	**84**	P		**Pg**	**13 35 35.4**	**-1.7**
ISAU				S		**Sg**	**13 35 46.8**	**-0.8**
BORG	**Borgarnes**	**0.92**	**25**	*e*Pg		**Pg**	**13 35 37.2**	**-2.1**
BORG				Sn		**Sg**	**13 35 49.8**	**-1.5**
BORG	**Borgarnes**	**0.92**	**25**	Pn		**Pg**	**13 35 37.2**	**-2.1**
	391nm,0.3s,baz=195,slow=8.8,SNR=145							
BORG				Sn		**Sg**	**13 35 49.8**	**-1.5**
	1µm,0.3s,baz=300,slow=20,SNR=75							
BORG	**Borgarnes**	**0.92**	**25**	*e*Pg		**Pg**	**13 35 37.2**	**-2.1**
IASB	**`sbjarnarst**	**0.92**	**25**	P		**Pg**	**13 35 37.2**	**-2.1**
IASB				S		**Sg**	**13 35 49.9**	**-1.4**
IGYG	**Gygjarholskot**	**0.96**	**67**	P		**Pg**	**13 35 37.8**	**-2.2**
IGYG				S		**Sg**	**13 35 51.2**	**-1.2**
IVES	**Vestmannaeyjar**	**0.99**	**118**	P		**Pg**	**13 35 38.0**	**-2.6**
IVES				S		**Sg**	**13 35 51.1**	**-2.3**
IHAU	**Haukadalur**	**1.00**	**86**	P		**Pg**	**13 35 38.6**	**-2.2**
IHAU				S		**Sg**	**13 35 52.8**	**-1.1**
IMID	**Miomork**	**1.07**	**103**	P		**Pg**	**13 35 39.2**	**-3.0**
IMID				S		**Sg**	**13 35 54.3**	**-1.8**
IESK	**Eystri-Skogar**	**1.30**	**106**	P		Pn	13 35 42.2	-3.8
IESK				S		**Sg**	**13 35 59.8**	**-3.5**
IGOD	**Go??abunga**	**1.32**	**100**	P		Pn	13 35 43.1	-3.3
IHVE	**Hveravellir**	**1.50**	**49**	P		**Pn**	**13 35 46.3**	**-2.5**
ISKR	**Skrokkalda**	**1.80**	**67**	P		**Pn**	**13 35 51.3**	**-1.7**
SCO	**Scoresbysund**	**6.60**	**1**	*i* P		Pn	13 37 02.8	+4.1
SCO				*i* S		Sn	13 38 23.0	+9.1
JMIC	**Jan Mayen**	**8.81**	**31**	LR		LR	13 40 06.5	
	comp=Z,418nm,18.4s,baz=257,slow=32							
SUMG	**Summit**	**10.52**	**333**	*i* P		Pn	13 38 09.2	+16
SFJD	**Kangerlussuaq**	**12.13**	**297**	LR		LR	13 42 19.7	
	comp=Z,382nm,19.7s,baz=96,slow=35							
EKA	**Eskdalemuir Ar**	**12.88**	**123**	Pn		**Pn**	**13 38 24.6**	**0.0**
EKA	**Eskdalemuir Ar**	**12.88**	**123**	Pn		**Pn**	**13 38 24.6**	**0.0**
	baz=318,slow=12,SNR=10							
EKA	**Eskdalemuir Ar**	**12.88**	**123**	Pn		**Pn**	**13 38 24.6**	**0.0**
NOA	**NORSAR Array B**	**15.61**	**85**	Pn		**P**	**13 39 08.5**	**+2.5**
NOA	**NORSAR Array B**	**15.61**	**85**	Pn		**P**	**13 39 08.5**	**+2.5**
	0.1nm,0.3s,baz=298,slow=13,SNR=2.9							
NOA						LR	13 44 59.8	
	comp=Z,93nm,19.6s,baz=305,slow=37							
HFS	**Hagfors**	**17.12**	**86**	LR		LR	13 44 44.4	
	comp=Z,156nm,18.8s,baz=294,slow=32							
ROSF	**Rostrenen**	**18.73**	**138**	*e*P		**P**	**13 39 39.1**	**-1.3**
	51nm,1.2s							
ROSF	**Rostrenen**	**18.73**	**138**	*e*P		**P**	**13 39 39.1**	**-1.3**
	51nm,1.2s							
ROSF	**Rostrenen**	**18.73**	**138**	*e*P		**P**	**13 39 39.1**	**-1.3**
	25nm,1.2s							
SGMF	**Saint Gilles**	**19.02**	**136**	*e*P		**P**	**13 39 43.7**	**+0.2**
	44nm,1.1s							
SGMF	**Saint Gilles**	**19.02**	**136**	*e*P		**P**	**13 39 43.7**	**+0.2**
	44nm,1.1s							
SGMF	**Saint Gilles**	**19.02**	**136**	*e*P		**P**	**13 39 43.7**	**+0.2**
	22nm,1.1s							
QUIF	**Quistinic**	**19.14**	**138**	*e*P		**Pn**	**13 39 45.6**	**-0.1**
QUIF	**Quistinic**	**19.14**	**138**	*e*P		**Pn**	**13 39 45.6**	**-0.1**
QUIF	**Quistinic**	**19.14**	**138**	*e*P		**Pn**	**13 39 45.6**	**-0.1**
ARCES	**ARCESS Array B**	**19.22**	**52**	LR		LR	13 45 45.0	
	comp=Z,210nm,18.5s,baz=264,slow=32							
FLN	**La Foliniere**	**19.23**	**132**	*e*P		**P**	**13 39 46.2**	**+0.4**
	28nm,0.9s							
FLN				*e*R				
	353nm,21.2s							
FLN	**La Foliniere**	**19.23**	**132**	*e*P		**P**	**13 39 46.2**	**+0.4**
	28nm,0.9s							
FLN	**La Foliniere**	**19.23**	**132**	*e*P		**P**	**13 39 46.2**	**+0.4**
	14nm,0.9s							
BAIF	**Baives**	**19.79**	**122**	*e*P		**Pn**	**13 39 53.2**	**-0.3**
	22nm,0.8s							
BAIF	**Baives**	**19.79**	**122**	*e*P		**Pn**	**13 39 53.2**	**-0.3**
	22nm,0.8s							
BAIF	**Baives**	**19.79**	**122**	*e*P		**Pn**	**13 39 53.2**	**-0.3**
	11nm,0.8s							
GIVF	**Givet**	**19.99**	**121**	*e*P		**P**	**13 39 54.9**	**+0.8**
	16nm,0.8s							
GIVF	**Givet**	**19.99**	**121**	*e*P		**P**	**13 39 54.9**	**+0.8**
	16nm,0.8s							
GIVF	**Givet**	**19.99**	**121**	*e*P		**P**	**13 39 54.9**	**+0.8**
	7.9nm,0.8s							
FRB	**Frobisher Bay**	**20.08**	**291**	LR		LR	13 46 54.8	
	comp=Z,192nm,20.2s,baz=162,slow=35							
MFF	**Saint Martin d**	**21.23**	**134**	*e*P		**P**	**13 40 08.1**	**+0.4**
MFF	**Saint Martin d**	**21.23**	**134**	*e*P		**P**	**13 40 08.1**	**+0.4**
MFF	**Saint Martin d**	**21.23**	**134**	*e*P		**P**	**13 40 08.1**	**+0.4**
MEZF	**Maizieres J'vi**	**21.39**	**123**	*e*P		**P**	**13 40 10.2**	**+0.9**
	36nm,0.9s							
MEZF	**Maizieres J'vi**	**21.39**	**123**	*e*P		**P**	**13 40 10.2**	**+0.9**
	36nm,0.9s							
MEZF	**Maizieres J'vi**	**21.39**	**123**	*e*P		**P**	**13 40 10.2**	**+0.9**
	18nm,0.9s							
PAGF	**Fort de Pagny**	**21.59**	**122**	*e*P		**P**	**13 40 12.3**	**+0.8**
	16nm,1.2s							
PAGF	**Fort de Pagny**	**21.59**	**122**	*e*P		**P**	**13 40 12.3**	**+0.8**
	16nm,1.3s							
PAGF	**Fort de Pagny**	**21.59**	**122**	*e*P		**P**	**13 40 12.3**	**+0.8**
	7.8nm,1.2s							
SFTF	**Sexfontaines**	**21.63**	**124**	*e*P		**P**	**13 40 12.9**	**+1.0**
	51nm,1.0s							
SFTF	**Sexfontaines**	**21.63**	**124**	*e*P		**P**	**13 40 12.9**	**+1.0**
	51nm,1.0s							
SFTF	**Sexfontaines**	**21.63**	**124**	*e*P		**P**	**13 40 12.9**	**+1.0**
	26nm,1.0s							
FINES	**FINESS Array B**	**21.89**	**74**	P		**P**	**13 40 15.9**	**+1.4**
FINES	**FINESS Array B**	**21.89**	**74**	P		**P**	**13 40 15.9**	**+1.4**
	3.3nm,0.8s,baz=309,slow=8.8,SNR=7.3							
FINES	**FINESS Array B**	**21.89**	**74**	P		**P**	**13 40 15.9**	**+1.4**
LOR	**Lormes**	**22.00**	**127**	*e*P		**P**	**13 40 15.8**	**-0.1**
	36nm,1.3s							
LOR				*e*R				
	226nm,21.0s							
LOR	**Lormes**	**22.00**	**127**	*e*P		**P**	**13 40 15.8**	**-0.1**
	36nm,1.3s							
LOR	**Lormes**	**22.00**	**127**	*e*P		**P**	**13 40 15.8**	**-0.1**
	18nm,1.3s							
SSF	**Saint Saulge**	**22.05**	**128**	*e*P		**P**	**13 40 16.4**	**0.0**
	17nm,1.1s							
SSF	**Saint Saulge**	**22.05**	**128**	*e*P		**P**	**13 40 16.4**	**0.0**
	17nm,1.1s							
SSF	**Saint Saulge**	**22.05**	**128**	*e*P		**P**	**13 40 16.4**	**0.0**
	8.6nm,1.1s							
AVF	**Avril sur Loir**	**22.23**	**128**	*e*P		**P**	**13 40 18.3**	**0.0**
	13nm,1.0s							
AVF	**Avril sur Loir**	**22.23**	**128**	*e*P		**P**	**13 40 18.3**	**0.0**
	13nm,1.0s							
AVF	**Avril sur Loir**	**22.23**	**128**	*e*P		**P**	**13 40 18.3**	**0.0**
	6.7nm,1.0s							
BGF	**Bois d'Agland**	**22.26**	**129**	*e*P		**P**	**13 40 18.5**	**-0.2**
	22nm,0.9s							
BGF	**Bois d'Agland**	**22.26**	**129**	*e*P		**P**	**13 40 18.5**	**-0.2**
	22nm,0.9s							
BGF	**Bois d'Agland**	**22.26**	**129**	*e*P		**P**	**13 40 18.5**	**-0.2**
	11nm,0.9s							
TCF	**Toulx Ste Croi**	**22.28**	**131**	*e*P		**P**	**13 40 19.1**	**+0.2**
	45nm,1.2s							
TCF	**Toulx Ste Croi**	**22.28**	**131**	*e*P		**P**	**13 40 19.1**	**+0.2**
	45nm,1.2s							
TCF	**Toulx Ste Croi**	**22.28**	**131**	*e*P		**P**	**13 40 19.1**	**+0.2**
	22nm,1.2s							
HAU	**Haudompre**	**22.28**	**122**	*e*P		**P**	**13 40 19.9**	**+1.0**
	50nm,1.1s							
HAU				*e*R				
	149nm,20.0s							
HAU	**Haudompre**	**22.28**	**122**	*e*P		**P**	**13 40 19.9**	**+1.0**
	50nm,1.1s							
HAU	**Haudompre**	**22.28**	**122**	*e*P		**P**	**13 40 19.9**	**+1.0**
	25nm,1.1s							
CDF	**Champ du Feu**	**22.30**	**120**	*e*P		**P**	**13 40 20.4**	**+1.2**
	32nm,1.1s							
CDF	**Champ du Feu**	**22.30**	**120**	*e*P		**P**	**13 40 20.4**	**+1.2**
	32nm,1.1s							
CDF	**Champ du Feu**	**22.30**	**120**	*e*P		**P**	**13 40 20.4**	**+1.2**
	16nm,1.1s							
CLL	**Collm**	**22.35**	**108**	*i* P		**P**	**13 40 23.2**	**+3.7**
	comp=Z,6.0nm,0.9s							
CLL						LmV	13 47 00.0	
	comp=Z,100nm,19.2s							
ECH	**Echery**	**22.42**	**121**	*e*P		**P**	**13 40 17.7**	**-2.6**
	comp=Z,9.8nm,0.9s							
SMF	**Signal de Mont**	**22.53**	**128**	*e*P		**P**	**13 40 21.4**	**-0.1**
	comp=Z,26nm,1.0s							
SMF	**Signal de Mont**	**22.53**	**128**	*e*P		**P**	**13 40 21.4**	**-0.1**
	comp=Z,26nm,1.0s							
SMF	**Signal de Mont**	**22.53**	**128**	*e*P		**P**	**13 40 21.4**	**-0.1**
	comp=Z,13nm,1.0s							
HINF	**Hinteralfeld**	**22.63**	**122**	*e*P		**P**	**13 40 23.4**	**+0.7**
	comp=Z,9.5nm,0.8s							
HINF	**Hinteralfeld**	**22.63**	**122**	*e*P		**P**	**13 40 23.4**	**+0.7**
	comp=Z,9.5nm,0.8s							
HINF	**Hinteralfeld**	**22.63**	**122**	*e*P		**P**	**13 40 23.4**	**+0.7**
	comp=Z,4.8nm,0.8s							
BFO	**Black Forest**	**22.77**	**119**	*e*P		**P**	**13 40 22.4**	**-1.8**
BFO	**Black Forest**	**22.77**	**119**	*e*P		**P**	**13 40 22.4**	**-1.8**
RJF	**Les Rejaudoux**	**22.92**	**133**	*e*P		**P**	**13 40 25.0**	**-0.7**
	comp=Z,5.0nm,0.6s							
RJF				*e*R				
	comp=Z,310nm,21.8s							
RJF	**Les Rejaudoux**	**22.92**	**133**	*e*P		**P**	**13 40 25.0**	**-0.7**
	comp=Z,5.0nm,0.6s							
RJF	**Les Rejaudoux**	**22.92**	**133**	*e*P		**P**	**13 40 25.0**	**-0.7**
	comp=Z,2.5nm,0.6s							
NKC	**Novy Kostel**	**22.93**	**110**	*e*P		**P**	**13 40 28.5**	**+2.8**
NKC	**Novy Kostel**	**22.93**	**110**	P		**P**	**13 40 28.5**	**+2.8**
BRG	**Berggiesshubel**	**23.07**	**107**	*e*P		**P**	**13 40 27.3**	**+0.2**
	comp=Z,4.1nm,1.0s							
CABF	**La Chapelle**	**23.36**	**124**	*e*P		**P**	**13 40 31.0**	**+0.7**
	comp=Z,30nm,1.3s							
CABF	**La Chapelle**	**23.36**	**124**	*e*P		**P**	**13 40 31.0**	**+0.7**
	comp=Z,30nm,1.3s							
CABF	**La Chapelle**	**23.36**	**124**	*e*P		**P**	**13 40 31.0**	**+0.7**
	comp=Z,15nm,1.3s							
CAF	**Calviac**	**23.43**	**133**	*e*P		**P**	**13 40 31.2**	**+0.2**
	comp=Z,11nm,1.0s							
CAF	**Calviac**	**23.43**	**133**	*e*P		**P**	**13 40 31.2**	**+0.2**
	comp=Z,11nm,1.0s							
CAF	**Calviac**	**23.43**	**133**	*e*P		**P**	**13 40 31.2**	**+0.2**
	comp=Z,5.7nm,1.0s							
SCHQ	**Schefferville**	**23.98**	**269**	LR		LR	13 47 48.0	
	comp=Z,66nm,18.7s,baz=93,slow=31							
PRU	**Pruhonice**	**23.98**	**108**	*e*P		**P**	**13 40 38.0**	**+1.8**
PRU	**Pruhonice**	**23.98**	**108**	P		**P**	**13 40 38.0**	**+1.8**
UPC	**Upice**	**24.22**	**106**	*e*P		**P**	**13 40 40.9**	**+2.5**
UPC	**Upice**	**24.22**	**106**	P		**P**	**13 40 40.9**	**+2.5**
KHC	**Kasperske Hory**	**24.24**	**111**	*e*P		**P**	**13 40 38.2**	**-0.5**
	comp=Z,10.0nm,1.1s							
KHC	**Kasperske Hory**	**24.24**	**111**	*e*P		**P**	**13 40 39.7**	**+1.0**
KHC	**Kasperske Hory**	**24.24**	**111**	P		**P**	**13 40 39.7**	**+1.0**
VIVF	**Saint-Julien-l**	**24.37**	**129**	*e*P		**P**	**13 40 41.1**	**+1.2**
	comp=Z,23nm,1.3s							
VIVF	**Saint-Julien-l**	**24.37**	**129**	*e*P		**P**	**13 40 41.1**	**+1.2**
	comp=Z,23nm,1.3s							
VIVF	**Saint-Julien-l**	**24.37**	**129**	*e*P		**P**	**13 40 41.1**	**+1.2**
	comp=Z,11nm,1.3s							
DPC	**Dobruska-Polom**	**24.47**	**105**	*e*P		**P**	**13 40 43.3**	**+2.6**
DPC	**Dobruska-Polom**	**24.47**	**105**	P		**P**	**13 40 43.3**	**+2.6**
GERES	**GERESS Array B**	**24.52**	**111**	P		**P**	**13 40 42.2**	**+0.9**
GERES	**GERESS Array B**	**24.52**	**111**	P		**P**	**13 40 42.2**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=338,slow=13,SNR=2.7							
GERES				LR		LR	13 50 44.0	
	comp=Z,126nm,18.9s,baz=151,slow=37							
GERES	**GERESS Array B**	**24.52**	**111**	P		**P**	**13 40 42.2**	**+0.9**
LPL	**La Plagne**	**24.53**	**125**	*e*P		**P**	**13 40 42.8**	**+1.3**
LPL	**La Plagne**	**24.53**	**125**	*e*P		**P**	**13 40 42.8**	**+1.3**
LPL	**La Plagne**	**24.53**	**125**	*e*P		**P**	**13 40 42.8**	**+1.3**
LPG	**La Plagne**	**24.55**	**125**	*e*P		**P**	**13 40 42.8**	**+1.0**
	comp=Z,24nm,1.1s							
LPG	**La Plagne**	**24.55**	**125**	*e*P		**P**	**13 40 42.8**	**+1.0**
	comp=Z,24nm,1.1s							
LPG	**La Plagne**	**24.55**	**125**	*e*P		**P**	**13 40 42.8**	**+1.0**
	comp=Z,12nm,1.1s							
EPF	**Esparros**	**24.61**	**137**	*e*P		**P**	**13 40 41.8**	**-0.2**
	comp=Z,3.3nm,0.5s							
EPF	**Esparros**	**24.61**	**137**	*e*P		**P**	**13 40 41.8**	**-0.2**
	comp=Z,3.3nm,0.5s							
EPF	**Esparros**	**24.61**	**137**	*e*P		**P**	**13 40 41.8**	**-0.2**
	comp=Z,1.6nm,0.5s							
DAVOX	**Davos/Dischmat**	**24.64**	**119**	LR		LR	13 49 20.0

PDAR	**Pinedale Array**	**51.53 290**	P	**P**	**13 44 27.0**	**-0.8**
BMO	**Blue Mountains**	**52.94 297**	*e*P	**P**	**13 44 36.0**	**-2.0**
	comp=Z,4.3nm,1.1s					
BMO	**Blue Mountains**	**52.94 297**	*e*P	**P**	**13 44 36.0**	**-2.0**
	comp=Z,4.3nm,1.1s					
TORD	**Torodi Ar. Bea**	**53.39 151**	P	**P**	**13 44 41.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**53.39 151**	P	**P**	**13 44 41.4**	**-0.2**
	comp=Z,1.0nm,0.9s,baz=340,slow=7.0,SNR=5.0					
TORD			LR	LR	14 08 26.2	
	comp=Z,40nm,18.2s,baz=150,slow=37					
TORD	**Torodi Ar. Bea**	**53.39 151**	P	**P**	**13 44 41.3**	**-0.2**
WMOK	**Wichita Mounta**	**53.59 276**	*e*P	**P**	**13 44 42.2**	**-0.6**
	comp=Z,2.2nm,0.8s					
WMOK	**Wichita Mounta**	**53.59 276**	*e*P	**P**	**13 44 42.2**	**-0.6**
	comp=Z,2.2nm,0.8s					
CCUT	**Cedar City**	**57.49 290**	*e*P	**P**	13 45 15.2	+4.1
	comp=Z,8.5nm,1.7s					
JCT	**Junction City**	**57.66 274**	*e*P	**P**	**13 45 14.0**	**+1.8**
	comp=Z,5.5nm,0.8s					
JCT	**Junction City**	**57.66 274**	*e*P	**P**	**13 45 14.0**	**+1.8**
	comp=Z,5.5nm,0.8s					
NVAR	**Mina Array Bea**	**58.77 294**	P	**P**	**13 45 21.2**	**+1.2**
NVAR	**Mina Array Bea**	**58.77 294**	P	**P**	**13 45 21.2**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=46,slow=5.4,SNR=6.7					
NVAR			LR	LR	14 10 35.6	
	comp=Z,78nm,18.9s,baz=325,slow=36					
NVAR	**Mina Array Bea**	**58.77 294**	P	**P**	**13 45 21.2**	**+1.2**
TXAR	**Lajitas Array**	**60.35 277**	LR	LR	14 09 15.6	
	comp=Z,46nm,21.1s,baz=175,slow=34					
ISA	**Isabella**	**61.22 293**	*e*P	**P**	**13 45 38.5**	**+1.8**
	comp=Z,2.5nm,0.8s					
ISA	**Isabella**	**61.22 293**	*e*P	**P**	**13 45 38.5**	**+1.8**
	comp=Z,2.5nm,0.8s					
SONM	**Songino Array**	**61.52 37**	P	P	13 45 42.0	+3.4
SONM	**Songino Array**	**61.52 37**	P	P	13 45 42.0	+3.4
	comp=Z,0.2nm,0.4s,baz=350,slow=7.3,SNR=4.4					
SONM			LR	LR	14 13 45.5	
	comp=Z,43nm,18.7s,baz=66,slow=37					
FX1	**Attu Island--F**	**62.92 350**	LR	LR	14 12 39.0	
	comp=Z,29nm,20.8s,baz=50,slow=36					
KSRS	**Korea Array**	**76.23 24**	LR	LR	14 23 06.0	
	comp=Z,23nm,18.6s,baz=292,slow=38					
BDFB	**Brasilia**	**81.77 205**	LR	LR	14 19 04.6	
	comp=Z,65nm,20.7s,baz=26,slow=32					
CMAR	**Chiang Mai Arr**	**86.27 54**	LR	LR	14 30 58.3	
	comp=Z,59nm,19.1s,baz=105,slow=39					
BOSA	**Boshof**	**99.48 139**	LR	LR	14 33 24.1	
	comp=Z,65nm,20.3s,baz=248,slow=35					

IDC 30 13:53:20.4±4.3, 23.00S×179.53W, h541km±63km, mb3.1/4, mb1 3.3/6, mb1mx3.0/22, mbtmp3.3/6, Error ellipse: s-maj=72.8km s-min=23.5km az=171.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**11.65**	**40**	P	P	13 55 55.2	-0.4
	1.8nm,0.3s,baz=345,slow=22,SNR=3.9						
AFI				S	S	13 58 05.6	+2.5
	2.0nm,0.3s,baz=95,slow=22,SNR=3.5						
DZM	**Mont Dzumac**	**13.00**	**271**	P	P	13 56 08.8	-0.6
	0.7nm,0.3s,baz=92,slow=16,SNR=12						
CTA	**Charters Tower**	**31.92**	**269**	P	P	13 59 02.4	+0.4
	5.9nm,0.3s,baz=95,slow=12,SNR=12						
ASAR	**Alice Springs**	**42.62**	**260**	P	P	14 00 28.9	-0.6
	0.3nm,0.4s,baz=96,slow=8.3,SNR=15						
WRA	**Warramunga Arr**	**42.91**	**265**	P	P	14 00 31.3	-0.5
	0.5nm,0.4s,baz=94,slow=8.4,SNR=34						
FITZ	**Fitzroy Crossi**	**51.34**	**265**	P	P	14 01 36.0	+0.8
	0.7nm,0.5s,baz=116,slow=11,SNR=4.5						
TORD	**Torodi Ar. Bea**	**170.13**	**187**	PKPab	PKPab	14 13 45.5	-0.7
	0.4nm,0.7s,baz=167,slow=3.7,SNR=3.6						

*NIED **30** 13:56:00, 40.90N×143.10E, h23km, Mw3.6 Best double couple: M0 3.32000×10^14 NP1:φs359.00000°, δ81.00000°, λ59.00000°. NP2:φs254.00000°, δ32.00000°, λ162.00000°.*
*JMA **30** 13:56:31.4±0.1, 40.91N×143.11E, h19km, M3.5*
*ISCJB **30** 13:56:32.0±0.7, 40.89N±0.04×143.22E±0.07, h48km±9km, mb3.5/5, Error ellipse: s-maj=9.7km s-min=5.6km az=24.5*
*IDC **30** 13:56:34.4±3.4, 40.93N×143.23E, h51km±27km, mb3.3/5, mb1 3.4/8, mb1mx3.3/27, mbtmp3.4/8, ML2.9/3, Error ellipse: s-maj=45.4km s-min=20.1km az=81.0*
ISC 30 13:56:33.1±1.4, 40.90N±0.06×143.22E±0.07, h38km±2km, n21, σ1§88/27, mb3.5/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.11**	**358**	P	**Pn**	**13 56 51.6**	**-0.5**
JEM				S	**Sn**	**13 57 06.1**	**-0.1**
JANG	**Nango**	**1.40**	**248**	P	**Pn**	**13 56 55.0**	**-1.0**
JTH	**Tanohata**	**1.41**	**227**	P	**Pn**	**13 56 55.4**	**-0.8**
JNBK	**Urakawa-nobuka**	**1.42**	**346**	P	**Pn**	**13 56 56.0**	**-0.3**
JTM	**Tenmabayashi**	**1.63**	**267**	P	**Pn**	**13 56 58.9**	**-0.3**
JOT	**Ohata**	**1.71**	**287**	P	**Pn**	**13 56 59.4**	**-0.8**
JOT				*e*S	**Sn**	**13 57 19.9**	**-0.9**
JCH	**Churui**	**1.71**	**4**	P	**Pn**	**13 57 00.3**	**-0.1**
JCH				*e*S	**Sn**	**13 57 21.1**	**+0.1**
JKB	**Kayabe**	**1.92**	**302**	P	**Pn**	**13 57 02.5**	**-0.6**
JKB				*e*S	**Sn**	**13 57 25.3**	**-0.6**
JOM	**Ohasama**	**2.05**	**227**	P	**Pn**	**13 57 05.6**	**+0.6**
JFR	**Furan**	**2.31**	**349**	*e*S	**Sn**	**13 57 36.8**	**+1.2**
JEW	**Eniwo**	**2.34**	**326**	P	**Pn**	**13 57 10.1**	**+1.1**
JEW				*e*S	**Sn**	**13 57 37.7**	**+1.2**
JAK	**Akkeshi**	**2.37**	**27**	P	**Pn**	**13 57 08.8**	**-0.5**
JAK				S	**Sn**	**13 57 36.4**	**-0.6**
JMK	**Ichinoseki**	**2.48**	**219**	P	**Pn**	**13 57 11.7**	**+0.8**
ASAJ	**Asahikawa**	**3.24**	**352**	P	**Pn**	**13 57 22.4**	**+1.0**
	1.7nm,0.3s,baz=255,slow=11,SNR=19						
ASAJ				S	Sn	13 58 09.2	+10
	2.4nm,0.3s,baz=270,slow=20,SNR=5.7						
MJAR	**Matsushiro Arr**	**5.86**	**224**	P	**Pn**	**13 57 58.4**	**+1.1**
	0.5nm,0.3s,baz=31,slow=13,SNR=10						
USRK	**Ussuriysk Arra**	**8.91**	**295**	P	**Pn**	**13 58 41.3**	**+2.2**
	0.2nm,0.3s,baz=93,slow=15,SNR=7.2						
SONM	**Songino Array**	**27.02**	**297**	P	**P**	**14 02 11.8**	**+0.2**
	0.3nm,0.5s,baz=106,slow=11,SNR=4.9						
MKAR	**Makanchi Array**	**43.36**	**299**	P	**P**	**14 04 31.0**	**-0.5**
	0.6nm,0.7s,baz=82,slow=9.7,SNR=3.8						
WRA	**Warramunga Arr**	**61.09**	**190**	P	**P**	**14 06 43.2**	**-0.1**
	0.2nm,0.5s,baz=6.6,slow=6.9,SNR=7.9						
ASAR	**Alice Springs**	**64.82**	**189**	P	**P**	**14 07 08.4**	**+0.5**
	0.3nm,0.7s,baz=17,slow=6.8,SNR=6.5						
FINES	**FINESS Array B**	**66.05**	**332**	P	**P**	**14 07 15.2**	**-0.3**
	0.7nm,0.6s,baz=23,slow=10,SNR=4.9						

IDC 30 14:06:03.8±3.0, 31.78S×177.73W, h0km, mb3.9/2, mb1 4.1/3, mb1mx3.7/19, mbtmp3.9/3, ML2.6/1, Error ellipse: s-maj=72.5km s-min=45.0km az=125.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.72**	**212**	Pn	Pn	14 07 56.9	-0.6
	0.1nm,0.3s,baz=168,slow=19,SNR=2.2						
ASAR	**Alice Springs**	**43.28**	**268**	P	P	14 14 07.2	-0.2
	0.5nm,0.5s,baz=105,slow=7.5,SNR=11						
WRA	**Warramunga Arr**	**44.39**	**273**	P	P	14 14 16.4	0.0
	1.1nm,0.3s,baz=111,slow=8.1,SNR=46						
FINES	**FINESS Array B**	**146.51**	**339**	PKPbc	PKPdf	14 25 45.5	+0.7
	1.0nm,0.8s,baz=336,slow=6.4,SNR=2.5						

*AUST **30** 14:12:28.2, 18.13S×179.51W, h300km*
*ISCJB **30** 14:12:33.4±0.6, 17.9S±0.1×178.6W±0.1, h500km, mb3.7/8, Error ellipse: s-maj=20.6km s-min=11.2km az=156.0*
*IDC **30** 14:12:35.4±1.9, 17.88S×178.52W, h520km±23km, mb3.3/9, mb1 3.5/11, mb1mx3.2/24, mbtmp3.3/11, Error ellipse: s-maj=19.2km s-min=14.1km az=153.0*
ISC 30 14:12:34.4±0.7, 17.9S±0.2×178.6W±0.1, h500km, n24, σ1§15/23, mb3.8/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.64**	**60**	P	P	**14 14 28.9**	**+1.7**
	5.6nm,0.3s,baz=324,slow=13,SNR=8.4						
DZM	**Mont Dzumac**	**14.70**	**251**	P	**P**	**14 15 42.3**	**+0.7**
	0.2nm,0.3s,baz=108,slow=20,SNR=3.1						
URZ	**Urewera**	**20.62**	**190**	P	**P**	**14 16 37.0**	**-1.5**
	6.3nm,0.4s,baz=273,slow=3.2,SNR=13						
RMQ	**Roma**	**31.38**	**248**	P	**P**	**14 18 15.2**	**+1.5**
	baz=30,SNR=7.3						
CTA	**Charters Tower**	**33.31**	**261**	P	**P**	**14 18 30.5**	**+0.2**
	1.8nm,0.5s,baz=98,slow=14,SNR=2.6						
CNB	**Canberra Magne**	**33.31**	**232**	P	P	**14 18 31.9**	**+1.7**
	baz=32,SNR=18						
CMSA	**Cobar Meteorol**	**35.03**	**240**	P	P	**14 18 45.4**	**+0.9**
	baz=34,SNR=15						
QLP	**Quilpie**	**35.41**	**249**	P	P	**14 18 48.2**	**+0.4**
	baz=34,SNR=5.0						
TOO	**Toolangi**	**37.06**	**231**	P	P	**14 19 02.8**	**+1.4**
	baz=36,SNR=12						
STKA	**Stephens Creek**	**38.51**	**241**	P	P	**14 19 14.3**	**+1.1**
	7.4nm,0.5s,baz=92,slow=9.8,SNR=30						
STKA	**Stephens Creek**	**38.51**	**241**	P	P	**14 19 14.4**	**+1.1**
	baz=38,SNR=5.8						
BBOO	**Buckleboo**	**43.28**	**241**	P	P	**14 19 51.7**	**+0.3**
	baz=42,SNR=26						
WRA	**Warramunga Arr**	**44.50**	**260**	P	P	**14 19 59.9**	**-1.1**
	1.8nm,0.7s,baz=91,slow=7.1,SNR=28						
ASAR	**Alice Springs**	**44.66**	**254**	P	P	**14 20 01.9**	**-0.3**
	18nm,0.6s,baz=88,slow=8.3,SNR=317						
ASAR				PcP	**PcP**	**14 21 32.2**	**-2.1**
	0.6nm,0.5s,baz=102,slow=3.9,SNR=4.7						
KDU	**Kakadu**	**47.42**	**269**	P	P	**14 20 22.7**	**-0.6**
	baz=46,SNR=4.0						
KNRA	**Kununurra**	**50.35**	**264**	P	P	**14 20 44.3**	**-0.8**
	baz=49,SNR=6.5						
FITZ	**Fitzroy Crossi**	**52.89**	**261**	P	P	**14 21 03.1**	**-0.4**
	baz=52,SNR=4.8						
VNDA	**Vanda**	**60.42**	**185**	P	P	**14 21 54.9**	**+0.5**
	0.4nm,0.5s,baz=332,slow=5.2,SNR=6.1						
QSPA	**South Pole Qui**	**72.14**	**180**	P	P	**14 23 07.5**	**-0.1**
	2.5nm,0.8s,baz=5.4,slow=1.7,SNR=13						
CISI	**Cisompet, Garu**	**72.19**	**268**	P	P	14 23 16.0	+7.2
	baz=71,SNR=4.6						
NVAR	**Mina Array Bea**	**79.52**	**44**	P	P	**14 23 48.0**	**-1.1**
	0.5nm,0.8s,baz=236,slow=6.4,SNR=3.2						
PPI	**Padang Panjang**	**81.34**	**272**	P	P	14 24 07.1	+8.2
	baz=80,SNR=24						
TXAR	**Lajitas Array**	**86.11**	**58**	P	P	**14 24 21.6**	**-0.8**
	0.2nm,0.7s,baz=221,slow=5.0,SNR=3.5						
GERES	**GERESS Array B**	**147.59**	**345**	PKPbc	**PKPdf**	**14 31 19.7**	**+1.0**
	0.3nm,0.4s,baz=7.8,slow=3.0,SNR=4.4						

*IDC **30** 14:25:24.9±0.6, 12.91N×92.58E, h0km, mb3.9/16, mb1 4.0/17, mb1mx3.9/29, mbtmp3.9/17, ML3.9/1, MS3.6/1, Ms1 3.6/1, ms1mx2.2/35, Error ellipse: s-maj=22.6km s-min=13.9km az=55.0*
*ISCJB **30** 14:25:27.9±0.6, 13.04N±0.08×92.63E±0.10, h32km, mb3.9/16, MS3.6/1, Error ellipse: s-maj=15.4km s-min=9.8km az=146.5*
ISC 30 14:25:30.0±0.7, 13.1N±0.1×92.8E±0.1, h32km, n27, σ1§37/25, mb3.9/16, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.96**	**47**	Pn	Pn	14 27 26.9	+3.4
	0.4nm,0.3s,baz=236,slow=15,SNR=15						
CMAR				Sn	**Sn**	**14 28 49.6**	**-2.9**
	0.5nm,0.3s,baz=238,slow=29,SNR=5.0						
ODAN	**Odare**	**14.58**	**341**	*e*P	**Pn**	**14 28 53.5**	**-0.8**
	11nm,0.4s						
RAMN	**Ramite**	**14.93**	**338**	*e*P	**Pn**	**14 28 58.9**	**-0.2**
	9.6nm,0.4s						
TAPN	**Taplejung**	**14.94**	**342**	*e*P	Pn	14 28 53.2	-6.0
PKI	**Pulchoki**	**15.95**	**336**	*e*P	**Pn**	**14 29 09.7**	**-2.7**
GUN	**Gumba**	**16.07**	**337**	*e*P	Pn	14 29 07.0	-7.0
DMN	**Daman**	**16.11**	**335**	*e*P	**Pn**	**14 29 11.8**	**-2.5**
KOLN	**Koldanda**	**16.91**	**331**	*e*P	**Pn**	**14 29 23.4**	**-1.2**
	13nm,0.5s						
DANN	**Dangsing**	**17.33**	**332**	*e*P	Pn	14 29 23.4	-6.5
	11nm,0.5s						
MKAR	**Makanchi Array**	**34.71**	**347**	P	**P**	**14 32 17.9**	**+1.0**
	1.0nm,0.6s,baz=166,slow=8.2,SNR=10						
SONM	**Songino Array**	**36.43**	**15**	P	**P**	**14 32 33.3**	**+1.4**
	1.0nm,0.7s,baz=210,slow=7.1,SNR=8.8						
KURBB	**Kurchatov Arra**	**39.17**	**346**	P	**P**	**14 32 55.0**	**+0.3**
	1.7nm,0.6s,baz=162,slow=8.0,SNR=14						
KSRS	**Korea Array**	**39.60**	**46**	P	**P**	**14 33 01.1**	**+2.6**
	0.7nm,0.8s,baz=244,slow=7.4,SNR=3.9						
ZALV	**Zalesovo Beam**	**41.22**	**353**	P	**P**	**14 33 12.1**	**+0.4**
	1.3nm,0.5s,baz=181,slow=10,SNR=4.5						
FITZ	**Fitzroy Crossi**	**44.87**	**133**	P	**P**	**14 33 40.6**	**-1.0**
	0.9nm,0.4s,baz=331,slow=11,SNR=9.7						
WRA	**Warramunga Arr**	**52.45**	**128**	P	**P**	**14 34 39.6**	**-0.4**
	0.4nm,0.5s,baz=303,slow=9.9,SNR=16						
WRA				PcP	**PcP**	**14 35 50.8**	**+0.3**
	0.5nm,0.4s,baz=320,slow=3.1,SNR=17						
ASAJ	**Asahikawa**	**52.47**	**44**	LR	LR	14 56 55.1	
	comp=Z,67nm,21.5s,baz=216,slow=36						
ASAR	**Alice Springs**	**54.34**	**132**	P	**P**	**14 34 53.5**	**-0.4**
	0.5nm,0.5s,baz=309,slow=6.7,SNR=13						
ASAR				PcP	**PcP**	**14 35 57.9**	**+0.2**
	0.4nm,0.6s,baz=312,slow=3.8,SNR=4.6						
BRTR	**Keskin Array B**	**58.07**	**309**	P	**P**	**14 35 20.1**	**-0.4**
	1.6nm,0.8s,baz=119,slow=7.6,SNR=7.3						
FINES	**FINESS Array B**	**67.49**	**331**	P	**P**	**14 36 22.6**	**0.0**
	2.7nm,0.9s,baz=102,slow=9.0,SNR=6.2						
ARCES	**ARCESS Array B**	**69.91**	**340**	P	**P**	**14 36 38.3**	**+0.7**
	1.6nm,0.6s,baz=90,slow=8.5,SNR=7.5						
GERES	**GERESS Array B**	**73.07**	**317**	P	**P**	**14 36 57.6**	**+0.5**
	0.6nm,0.6s,baz=86,slow=6.8,SNR=5.7						
NB2	**NORSAR Subarra**	**74.54**	**330**	P	**P**	**14 37 05.0**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=91,slow=5.9						
NOA	**NORSAR Array B**	**74.54**	**330**	P	**P**	**14 37 04.3**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=90,slow=5.7,SNR=3.7						
BOSA	**Boshof**	**77.29**	**236**	P	**P**	**14 37 20.2**	**-1.6**
	comp=Z,4.2nm,1.0s,baz=106,slow=6.6,SNR=3.8						
ESDC	**Sonseca Array**	**86.84**	**310**	P	**P**	**14 38 12.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=76,slow=5.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**88.11**	**283**	P	**P**	**14 38 18.8**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=68,slow=4.7,SNR=2.7						

FUNV 30 14:32:20.0, 9.79N×69.85W, h5km, MW3.7, 6C-5D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CURV	**Curarigua**	**0.24**	**334**	*i*P	Pg	14 32 24.1	-0.8
CURV				*e*S	Sg	14 32 27.5	-0.7
SANV	**Sanarito**	**0.43**	**133**	*i*P	Pg	14 32 27.6	-0.9
SANV				*e*S	Sg	14 32 33.7	-0.5
TEPV	**Terepaima**	**0.67**	**75**	*i*P	Pg	14 32 32.6	-0.5
TEPV				*e*S	Sg	14 32 41.8	-0.1
QARV	**Quebrada Arrib**	**0.78**	**302**	*e*P	Pg	14 32 35.4	+0.4
QARV				*e*S	Sg	14 32 45.6	+0.4
SIQV	**Siquisique**	**0.85**	**3**	*i*P	Pg	14 32 35.9	-0.5
SIQV				*e*S	Sg	14 32 48.3	+0.7
DABV	**Dabajuro**	**1.36**	**326**	*e*P	Pn	14 32 45.2	-0.5
DABV				*e*S	Sb	14 33 03.4	-0.3
MAPV	**Macapo**	**1.38**	**88**	*e*P	Pn	14 32 45.2	-0.8
MAPV				*e*S	Sb	14 33 03.5	-0.8
JACV	**Jacura**	**1.63**	**38**	*e*P	Pn	14 32 49.3	-0.1
JACV				*e*S	Sn	14 33 10.8	-0.1
VIGV	**El Vigia**	**1.77**	**238**	*e*P	Pn	14 32 51.3	0.0
VIGV				*e*S	Sn	14 33 13.6	-0.6
SOCV	**Socops**	**1.80**	**213**	*i*P	Pn	14 32 50.3	-1.4
SOCV				*e*S	Sn	14 33 14.4	-0.6
BAUV	**El Baul**	**1.98**	**115**	*e*P	Pn	14 32 53.7	-0.5
BAUV				*e*S	Sn	14 33 19.1	-0.3
TURV	**Turiamo**	**2.09**	**72**	*e*P	Pn	14 32 55.1	-0.6
TURV				*e*S	Sn	14 33 21.2	-0.9
MONV	**Montecano**	**2.15**	**357**	*e*P	Pn	14 32 56.0	-0.6
ELOV	**Elorza**	**2.80**	**172**	*e*P	Pn	14 33 04.7	-0.8
FUNV	**FUNVISIS**	**3.07**	**77**	*e*P	Pn	14 33 09.2	-0.2
CAPV	**Capacho**	**3.10**	**232**	*e*P	Pn	14 33 08.9	-1.0
MERV	**Las Mercedes**	**3.55**	**98**	*e*P	Pn	14 33 15.6	-0.3
BIRV	**Birongo**	**3.59**	**79**	*e*P	Pn	14 33 15.9	-0.6
CUPV	**Cepira**	**4.01**	**86**	*e*P	Pn	14 33 21.5	-0.8
ORCV	**Isla La Orchil**	**4.12**	**61**	*e*P	Pn	14 33 21.8	-1.8
PCRV	**Puerto La Cruz**	**5.15**	**85**	*e*P	Pn	14 33 37.7	-0.3
PRGV	**PARIAGUAN**	**5.24**	**101**	*e*P	Pn	14 33 37.9	-1.2

*IDC **30** 14:42:06.4±0.4, 10.98N×141.44E, h0km, mb4.6/24, mb1 4.7/24, mb1mx4.6/29, mbtmp4.6/24, MS4.2/32, Ms1 4.2/32, ms1mx4.1/35, Error ellipse: s-maj=22.4km s-min=10.2km az=89.0*
*MOS **30** 14:42:09.2±1.1, 10.96N×141.44E, h33km, mb5.0/20, Error ellipse: s-maj=14.4km s-min=6.7km az=101.2*
*ISCJB **30** 14:42:10.7±1.0, 11.07N±0.04×141.52E±0.05, h44km±9km, mb4.8/83, MS4.2/47, Error ellipse: s-maj=8.6km s-min=6.3km az=7.4*
*NEIC **30** 14:42:10.9±0.3, 10.98N×141.20E, h35km, mb4.9/24, Error ellipse: s-maj=8.7km s-min=5.6km az=79.0*
*BJI **30** 14:42:14.6, 11.49N×141.04E, h35km, mB4.9/34, mb4.8/46, Ms4.5/37, Ms7 4.2/38*
*GCMT **30** 14:42:15.8±0.2, 10.96N×141.33E, h51km±1km, MW5.0, Moment Tensor Solution. s46,c58; s66,c100; Moment tensor: Scale 10^16 Nm; Mrr 2.98±.16; Mθθ-3.15±.12; Mφφ 0.17±.13; Mrθ-1.92±.09; Mrφ-1.99±.11; Mθφ 0.01±.10; Best double couple: M0 4.10000×10^16 NP1:φs46.00000°, δ35.00000°, λ60.00000°. NP2:φs261.00000°, δ60.00000°, λ109.00000°. Principal axes: T 3.6400, Plg68.0000°, Azm210.0000°; N 0.8500, Plg17.0000°, Azm71.0000°; P -4.4900, Plg13.0000°, Azm337.0000°; Data Used: II IC G IU CN.*
*DJA **30** 14:42:22.1±0.6, 11.76N±6.6×14.2E±., h131km±9km, M4.9/21, mB5.3/12, mb5.0/21, MLv5.1/1, Mw(mB)4.7/12*
ISC 30 14:42:11.3±0.4, 11.09N±0.04×141.37E±0.05, h31km±1km, h31km:pP-P, n175, σ1§85/230, mb4.8/83, MS4.2/48, 5C-2D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.22**	**54**	*e*Pn	**Pn**	**14 43 15.4**	**+1.8**
JAY	**Jayapura**	**13.53**	**183**	P	Pn	14 45 24.5	+3.2
	100nm,0.3s,4μm						
RKPI	**Ransiki, Papua**	**14.42**	**210**	P	P	14 45 46.9	+7.1
SWI	**Sorong**	**15.56**	**221**	P	**P**	**14 45 56.2**	**+3.7**
	42nm,1.2s,748nm						
DAV	**Davao City (W)**	**16.10**	**257**	LR	LR	14 51 08.2	
	comp=Z,426nm,21.1s,baz=343,slow=34						
GAMI	**Galela, Maluku**	**16.32**	**237**	P	P	14 46 05.6	+4.6
	68nm,1.0s,3μm						
FAKI	**Fak Fak**	**16.61**	**214**	P	**P**	**14 46 06.7**	**+2.4**
	56nm,1.1s						
LBMI	**Labuha**	**18.05**	**231**	P	P	14 46 26.2	+6.0
	129nm,1.1s,1μm						
MSAI	**Masohi**	**18.95**	**222**	P	**Pn**	**14 46 33.1**	**+2.3**
	44nm,0.8s						
JOW	**Kunigami**	**19.94**	**324**	*e*Pn	**P**	**14 46 40.1**	**-0.7**
	35nm,0.9s						
KMSI	**Cibinong**	**20.19**	**240**	P	Pn	14 46 49.4	+3.8
	204nm,0.8s,2μm						
PMG	**Port Moresby**	**21.16**	**164**	*e*P	**P**	**14 46 51.4**	**-2.6**
	43nm,0.8s						
PMG				P	**P**	**14 46 51.8**	**-2.3**
PMG	**Port Moresby**	**21.16**	**164**	P	**P**	**14 46 51.8**	**-2.3**
	28nm,0.8s,baz=2.9,slow=16,SNR=7.9						
PMG				LR	LR	14 54 32.9	
	comp=Z,916nm,20.6s,baz=256,slow=36						
JHJ	**Hachijo jima 2**	**21.98**	**356**	LR	LR	14 54 51.4	
	comp=Z,779nm,19.4s,baz=287,slow=35						
MRSI	**Marisa**	**22.00**	**243**	P	**P**	**14 47 04.4**	**+1.3**
	124nm,0.7s,2μm						
LUWI	**Luwuk**	**22.07**	**238**	P	**P**	**14 47 03.7**	**-0.2**
	337nm,0.8s,2μm						
TWG	**Pinlang**	**22.62**	**304**	*e*P	**P**	**14 47 08.1**	**-1.7**
	222nm,1.5s						
YULB	**Yu-li**	**22.71**	**305**	*e*P	**P**	**14 47 07.4**	**-3.3**
SSLB	**Suanglung**	**23.18**	**306**	*e*P	**P**	**14 47 12.5**	**-3.0**
	109nm,1.7s						
TPUB	**Ta-pu**	**23.20**	**304**	*e*P	**P**	**14 47 13.0**	**-2.8**
	206nm,1.9s						
YHNB	**Yeheng**	**23.30**	**308**	*e*P	**P**	**14 47 14.8**	**-1.9**
	461nm,2.7s						
MYLDM	**Lahad Datu**	**23.38**	**257**	P	P	14 47 22.5	+4.9
MYLDM	**Lahad Datu**	**23.38**	**257**	P	P	14 47 22.9	+5.3
	42nm,1.9s,1μm						
JNU	**Nakatsue**	**23.96**	**338**	*e*P	**P**	**14 47 21.9**	**-1.1**
	41nm,1.6s						
JNU				P	**P**	**14 47 24.1**	**+1.2**
JNU	**Nakatsue**	**23.96**	**338**	P	**P**	**14 47 24.1**	**+1.2**
	21nm,0.7s,baz=131,slow=3.2,SNR=16						
JNU				LR	LR	14 56 34.6	
	comp=Z,316nm,18.1s,baz=191,slow=36						
SKSI	**Soroako, Sulaw**	**24.09**	**237**	P	**P**	**14 47 25.7**	**+1.3**
	55nm,0.9s,663nm						
COEN	**Coen**	**24.95**	**176**	*e*P	**P**	**14 47 29.3**	**-2.7**
	114nm,0.9s						
MJAR	**Matsushiro Arr**	**25.50**	**354**	P	**P**	**14 47 36.1**	**-0.9**
MJAR				PcP	**PcP**	**14 51 08.8**	**+0.6**
MJAR	**Matsushiro Arr**	**25.50**	**354**	P	**P**	**14 47 36.1**	**-0.9**
	4.4nm,0.6s,baz=170,slow=12,SNR=20						
MJAR				PcP	**PcP**	**14 51 08.8**	**+0.6**
	1.2nm,0.6s,baz=182,slow=3.4,SNR=5.7						
MAJO	**Matsushiro**	**25.51**	**354**	*e*P	**P**	**14 47 36.0**	**-1.0**
M

WRA PcP **PcP** **14 51 23.3 -0.2**
WRA Warramunga Arr 31.60 193 P **P** **14 48 29.9 -1.6**
comp=Z,15nm,0.8s,baz=12,slow=9.4,SNR=69
WRA PcP **PcP** **14 51 23.3 -0.2**
comp=Z,2.8nm,0.7s,baz=0.2,slow=2.8,SNR=9.8
WRA LR LR 15 00 56.2
comp=Z,594nm,21.5s,baz=15,slow=36
FITZ Fitzroy Crossi 32.90 208 *e*P P 14 48 39.5 -3.4
comp=Z,5.0nm,0.9s
FITZ P **P** **14 48 41.3 -1.6**
FITZ Fitzroy Crossi 32.90 208 P **P** **14 48 41.3 -1.6**
comp=Z,4.1nm,0.8s,baz=26,slow=7.3,SNR=9.5
FITZ LR LR 15 01 22.7
comp=Z,163nm,21.5s,baz=27,slow=35
USRK Ussuriysk Arra 33.97 348 P **P** **14 48 53.5 +1.6**
comp=Z,5.5nm,0.7s,baz=168,slow=8.2,SNR=7.9
USRK LR LR 15 02 23.9
comp=Z,324nm,19.6s,baz=148,slow=36
MDJ Mudanjiang 34.92 345 P **P** **14 48 59.0 -1.1**
MDJ pP **pP** **14 49 08.0 -1.3**
MDJ sP **sP** **14 49 11.8 -1.3**
MDJ S **S** **14 54 29.8 +0.2**
MDJ sS **sS** **14 54 44.5 -0.2**
MDJ ScP **ScP** **14 55 14.0 -1.8**
MDJ PcS **PcS** **14 55 17.8 -1.2**
MDJ pmax pmax
comp=Z,8.0nm,2.4s
MDJ pmax pmax
comp=Z,47nm,3.9s
MDJ LR LR
comp=N,400nm,26.2s
MDJ LR LR
comp=E,130nm,18.1s
MDJ LR LR
comp=Z,420nm,26.7s
AS31 Alice Springs 35.30 192 *e*P **P** **14 49 01.0 -2.7**
ASAR Alice Springs 35.30 192 P **P** **14 49 02.5 -1.2**
ASAR PcP **PcP** **14 51 33.6 -0.3**
ASAR Alice Springs 35.30 192 P **P** **14 49 02.5 -1.2**
comp=Z,10nm,0.6s,baz=19,slow=12,SNR=75
ASAR PcP **PcP** **14 51 33.6 -0.3**
comp=Z,5.3nm,0.7s,baz=36,slow=2.7,SNR=18
ASAR LR LR 15 03 00.3
comp=Z,472nm,21.6s,baz=16,slow=36
CN2 Changchun 35.39 340 *e*P **P** **14 49 05.0 +0.8**
CN2 *es*P **sP** **14 49 18.8 +1.6**
CN2 *e*S **S** **14 54 37.3 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,300nm,16.0s
GYA Guiyang 36.10 300 *e*P **P** **14 49 08.8 -1.9**
GYA pP **pP** **14 49 18.5 -1.4**
GYA sP **sP** **14 49 22.5 -1.2**
GYA PP **PnPn** **14 50 31.3 -1.1**
GYA S **S** **14 54 44.8 -3.6**
GYA sS **sS** **14 55 02.0 -1.6**
GYA ScP **ScP** **14 55 17.5 -3.2**
GYA SS **SnSn** **14 57 07.5 -7.6**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.9s
GYA LR LR
comp=N,580nm,16.2s
GYA LR LR
comp=E,470nm,17.0s
GYA LR LR
comp=Z,560nm,16.4s
BJI Beijing 36.46 327 P **P** **14 49 15.5 +2.1**
BJI S **S** **14 54 52.3 -1.0**
BJI sS **sS** **14 55 07.0 -1.5**
BJI pmax pmax
comp=Z,38nm,0.7s
BJI pmax pmax
comp=Z,120nm,3.9s
BJI LR LR
comp=N,300nm,27.5s
BJI LR LR
comp=E,220nm,23.6s
BJI LR LR
comp=Z,380nm,27.5s
XAN Xi'an 37.41 313 P **P** **14 49 23.8 +2.1**
XAN pP **pP** **14 49 29.0 -2.0**
XAN S **S** **14 55 03.8 -4.4**
XAN pmax pmax
comp=Z,2.0nm,0.8s
XAN pmax pmax
comp=Z,21nm,4.7s
XAN LR LR
comp=N,150nm,27.6s
XAN LR LR
comp=E,68nm,26.6s
XAN LR LR
comp=Z,110nm,24.5s
HABR Khabarovsk 37.64 353 *e*P **P** **14 49 21.7 -1.6**
HABR *e**SP **sP** **14 49 35.5 -0.9**
HABR 14 50 48.2
HABR 14 51 37.7
HABR *e*S **S** **14 55 10.6 -0.5**
HABR *e**SS **sS** **14 55 27.0 +0.7**
HABR pmax pmax
comp=Z,43nm,1.9s
HABR pmax pmax
comp=N,13nm,1.9s
HABR pmax pmax
comp=E,23nm,1.9s
HABR MLR MLR
comp=Z,96nm,16.0s
KLR Kul'dur 38.86 350 *e*P **P** **14 49 31.7 -1.9**
KLR pmax pmax
comp=Z,43nm,1.4s
PBKT Sadao Pong 39.56 283 P P 14 49 44.3 +4.4
comp=Z,13nm,1.3s
JMBI JAMBI 39.59 254 P **P** **14 49 41.6 +1.4**
comp=Z,564nm,1.0s,comp=Z,25μm
HHC Hu-ho-hao-te 39.59 324 *e*P **P** **14 49 38.0 -2.0**
HHC pP **pP** **14 49 47.8 -1.5**
HHC sP **sP** **14 49 51.8 -1.3**
HHC PP **PnPn** **14 51 13.5 -0.9**
HHC S **S** **14 55 38.5 -2.6**
HHC sS **sS** **14 55 54.5 -1.8**
HHC pmax pmax
comp=Z,23nm,0.8s
HHC pmax pmax
comp=Z,330nm,5.2s
HHC LR LR
comp=N,460nm,16.7s
HHC LR LR
comp=E,470nm,14.7s
HHC LR LR
comp=Z,500nm,17.2s
CD2 Chengdu 40.01 305 P **P** **14 49 42.5 -1.1**
CD2 pP **pP** **14 49 52.8 -0.1**
CD2 sP **sP** **14 49 57.0 +0.4**
CD2 PP **PnPn** **14 51 19.3 -0.1**
CD2 PcP **PcP** **14 51 48.3 -0.1**
CD2 PcS **PcS** **14 55 37.3 -1.5**
CD2 S **S** **14 55 45.3 -2.1**
CD2 sS **sS** **14 56 02.3 -0.4**
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,260nm,5.6s
CD2 LR LR
comp=E,400nm,27.4s
CD2 LR LR
comp=Z,200nm,17.2s
RGRI Rengat 40.43 256 P sP 14 50 00.9 +0.7
DZM Mont Dzumac 41.12 143 *e*S **S** **14 56 06.8 +2.7**
comp=Z,182nm,30.6s
DZM *e*LR LR 15 01 20.2
comp=Z,962nm,23.7s
CM31 Chiang Mai Arr 41.60 285 *e*P **P** **14 49 54.0 -2.8**
comp=Z,2.1nm,0.5s
CMAR Chiang Mai Arr 41.60 285 P P 14 50 00.0 +3.2
CMAR Chiang Mai Arr 41.60 285 P P 14 50 00.0 +3.2
comp=Z,4.7nm,0.7s,baz=89,slow=6.7,SNR=34
CMAR LR LR 15 04 21.6
comp=Z,176nm,21.0s,baz=98,slow=32
LZH Lanzhou 42.05 313 *e*P **P** **14 50 02.8 +2.4**
LZH pP **pP** **14 50 12.0 +2.2**
LZH sP **sP** **14 50 17.0 +3.5**
LZH *e*S **S** **14 56 20.0 +2.1**
LZH sS **sS** **14 56 31.3 -1.9**
LZH pmax pmax
comp=Z,13nm,1.0s
LZH pmax pmax
comp=Z,92nm,6.0s
LZH LR LR
comp=N,120nm,14.0s
LZH LR LR
comp=E,230nm,15.0s
LZH LR LR
comp=Z,360nm,15.2s
STKA Stephens Creek 42.72 180 *e*P **P** **14 50 03.3 -2.3**
comp=Z,2.7nm,0.9s
STKA P **P** **14 50 04.1 -1.5**
STKA Stephens Creek 42.72 180 P **P** **14 50 04.1 -1.5**
comp=Z,10nm,0.8s,baz=357,slow=8.3,SNR=15
STKA LR LR 15 08 53.8
comp=Z,905nm,18.1s,baz=276,slow=38
PSI Prapat 42.89 262 P **P** **14 50 08.1 +0.6**
comp=Z,20nm,0.8s
FORT Forrest 43.55 197 *e*P **P** **14 50 09.7 -2.6**
comp=Z,91nm,0.8s
PETK Petropavlovsk- 43.92 14 P **P** **14 50 15.8 +0.7**
PETK Petropavlovsk- 43.92 14 P **P** **14 50 15.8 +0.7**
PETK Petropavlovsk- 43.92 14 P **P** **14 50 15.8 +0.7**
comp=Z,2.0nm,0.9s,baz=223,slow=3.3,SNR=4.3
PETK LR LR 15 07 14.2
comp=Z,198nm,21.9s,baz=192,slow=34
BBOO Buckleboo 43.94 186 *e*P **P** **14 50 13.8 -1.7**
comp=Z,349nm,0.8s
PET Petropavlovsk 44.08 15 *e*P P 14 50 23.9 +7.6
PET *e*S S 14 56 55.2 +8.5
MSVF Nonsavu 46.17 128 *e*P **P** **14 50 32.4 -1.2**
MSVF pmax pmax
comp=Z,38nm,0.8s
MSVF Nonsavu 46.17 128 *e*P **P** **14 50 32.4 -1.2**
comp=Z,38nm,0.8s
GTA Gaotai 46.38 315 P **P** **14 50 37.3 +2.2**
GTA pP **pP** **14 50 47.0 +2.5**
GTA sP **sP** **14 50 51.0 +2.8**
GTA PcP **PcP** **14 52 12.3 +2.5**
GTA S **S** **14 57 25.5 +4.7**
GTA pmax pmax
comp=Z,10.0nm,1.4s
GTA pmax pmax
comp=Z,93nm,5.9s
GTA LR LR
comp=N,140nm,21.9s
GTA LR LR
comp=E,170nm,22.8s
GTA LR LR
comp=Z,290nm,23.3s
SONM Songino Array 46.92 328 P **P** **14 50 41.1 +2.0**
SONM PcP **PcP** **14 52 11.4 0.0**
SONM Songino Array 46.92 328 P **P** **14 50 41.1 +2.0**
comp=Z,1.6nm,0.6s,baz=142,slow=4.6,SNR=24
SONM PcP **PcP** **14 52 11.4 0.0**
comp=Z,1.7nm,0.6s,baz=149,slow=4.0,SNR=5.7
SONM LR LR 15 09 25.9
comp=Z,265nm,21.7s,baz=117,slow=35
FX1 Attu Island--F 48.88 25 P **P** **14 50 54.1 +0.1**
FX1 Attu Island--F 48.88 25 P **P** **14 50 54.1 +0.1**
comp=Z,16nm,0.7s,baz=187,slow=8.1,SNR=5.5
FX1 LR LR 15 13 42.4
comp=Z,136nm,18.1s,baz=237,slow=39
ZAK Zakamensk 50.11 329 *e*P **P** **14 51 04.7 +1.1**
ZAK pmax pmax
comp=Z,12nm,1.5s
TLY Talaya 50.74 331 *e*P **P** **14 51 11.1 +2.9**
TLY *e*S **S** **14 58 17.2 -4.4**
TLY *e*SS **SS** **15 02 01.3 +5.0**
TLY pmax pmax
comp=Z,10.0nm,1.3s
TLY MLR MLR
comp=Z,156nm,18.0s
YAK Yakutsk 51.56 353 *e*P **P** **14 51 14.4 +0.2**
YAK *e**PP **pP** **14 51 27.8 +4.1**
YAK *e* 14 52 31.0
YAK *e* 14 53 11.5
YAK *e*PPP PPP 14 54 10.1
YAK *e*S **S** **14 58 29.7 -2.9**
YAK *e**SS **sS** **14 58 46.0 -2.2**
YAK *e* 15 00 57.8
YAK *e*SS **SS** **15 02 08.5 -0.4**
YAK *e*SSS SSS 15 03 42.0
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=Z,26nm,0.8s
YAK pmax pmax
comp=E,60nm,6.4s
YAK pmax pmax
comp=Z,57nm,3.2s
YAK pmax pmax
comp=N,11nm,1.4s
YAK smax smax
comp=E,57nm,2.3s
YAK smax smax
comp=N,39nm,2.4s
MOY Mondy 52.04 329 *e*P **P** **14 51 20.2 +2.1**
SEY Seymchan 52.36 6*c* *i*P **P** **14 51 20.7 +0.6**
TAPN Taplejung 52.80 296 *e*P **P** **14 51 26.2 +1.8**
ODAN Odare 53.02 295 *e*P **P** **14 51 27.6 +1.6**
comp=N,11nm,0.7s
RAMN Ramite 53.74 295 *e*P **P** **14 51 33.3 +2.1**
comp=N,8.8nm,0.6s
GUN Gumba 54.48 296 *e*P **P** **14 51 38.1 +1.4**
comp=N,18nm,0.7s
PKI Pulchoki 54.85 296 *e*P **P** **14 51 41.1 +1.7**
PKIN Phulchoki 54.87 296 *e*P **P** **14 51 41.4 +1.9**
KKN Kakani 54.99 296 *e*P **P** **14 51 41.3 +1.0**
DMN Daman 55.13 296 *e*P **P** **14 51 42.7 +1.4**
comp=N,14nm,0.6s
DANN Dangsing 56.38 297 *e*P **P** **14 51 51.4 +1.0**
comp=N,15nm,0.6s
WMQ Urumqi 56.45 316 P **P** **14 51 51.8 +1.5**
WMQ pP **pP** **14 52 02.0 +2.1**
WMQ sP **sP** **14 52 05.8 +2.2**
WMQ PcS **PcS** **14 56 47.5 -0.1**
WMQ S **S** **14 59 38.5 -1.0**
WMQ sS **sS** **14 59 55.3 0.0**
WMQ ScS **ScS** **15 01 34.8 -2.7**
WMQ pmax pmax
comp=Z,16nm,1.0s
WMQ pmax pmax
comp=Z,170nm,4.6s
WMQ LR LR
comp=N,240nm,10.8s
WMQ LR LR
comp=E,240nm,14.4s
WMQ LR LR
comp=Z,230nm,25.2s
KOLN Koldanda 56.47 296 *e*P **P** **14 51 52.9 +2.0**
comp=Z,9.2nm,0.6s
BILL Bilibino 59.21 11↓ *i*P **P** **14 52 09.1 0.0**
BILL *e* 14 54 19.3
BILL *e*SS SS 15 04 17.7 +8.5
BILL pmax pmax
comp=Z,18nm,1.5s
BILL MLR MLR
comp=Z,500nm,19.0s
BILL Bilibino 59.21 11 *e*P **P** **14 52 07.8 -1.4**
comp=Z,12nm,1.0s
MK31 Makanchi Array 60.97 318 *i*P **P** **14 52 23.0 +1.4**
MK31 pmax pmax
comp=Z,2.0nm,0.3s
MK31 Makanchi Array 60.97 318 *e*P **P** **14 52 20.4 -1.3**
MKAR Makanchi Array 60.97 318 P **P** **14 52 23.1 +1.4**
MKAR Makanchi Array 60.97 318 P **P** **14 52 23.1 +1.4**
MKAR *e*P pP 14 52 23.2 -8.1
MKAR Makanchi Array 60.97 318 P **P** **14 52 23.1 +1.4**
comp=Z,2.0nm,0.5s,baz=98,slow=9.4,SNR=36
MKAR LR LR 15 18 52.6
comp=Z,121nm,20.2s,baz=170,slow=36
TIXI Tiksi 61.00 356↓ *i*P **P** **14 52 20.9 -0.5**
TIXI pmax pmax
comp=Z,6.0nm,1.4s
ZAA0 Zalesovo Array 61.71 326 *e*P **P** **14 52 25.5 -1.0**
ZALV Zalesovo Beam 61.71 326 P **P** **14 52 27.1 +0.6**
ZALV Zalesovo Beam 61.71 326 P **P** **14 52 27.1 +0.6**
ZALV Zalesovo Beam 61.71 326 P **P** **14 52 27.1 +0.6**
comp=Z,4.1nm,0.5s,baz=105,slow=6.2,SNR=15
ZALV LR LR 15 18 49.9
comp=Z,169nm,20.4s,baz=249,slow=36
NVS Novosibirsk 62.90 327 *e*P **P** **14 52 35.0 +0.6**
NVS pmax pmax
comp=N,6.0nm,1.5s
NVS pmax pmax
comp=E,10.0nm,1.5s
NVS pmax pmax
comp=Z,12nm,1.5s
KSH Kashi 64.08 309 *e*P P 14 52 47.5 +4.8
KSH *es*P sP 14 53 02.0 +5.9
KSH *e*PcP **PcP** **14 53 22.0 +4.2**
KSH *e*PP PP 14 55 11.0 +7.2
KSH *e*PcS 14 57 23.0
KSH *e*S **S** **15 01 23.3 +5.7**
KSH *es*S sS 15 01 40.0 +6.4
KSH *e*ScS **ScS** **15 02 35.0 +0.3**
KSH pmax pmax
comp=Z,11nm,1.1s
KSH LR LR
comp=N,200nm,6.0s
KSH LR LR
comp=E,170nm,5.4s
KSH LR LR
comp=Z,270nm,7.8s
KURK Kurchatov 64.33 321*c**e*P **P** **14 52 44.9 +1.0**
KURK pmax pmax
comp=Z,21nm,0.7s
KURK Kurchatov 64.33 321 *e*P **P** **14 52 41.8 -2.2**
comp=Z,20nm,0.8s
AAK Ala-Archa 65.58 312*c**e*P **P** **14 52 54.2 +1.7**
AAK pmax pmax
comp=Z,8.0nm,1.2s
KK31 Karatay Array 68.55 312 *i*P **P** **14 53 12.0 +0.9**
KK31 pmax pmax
comp=Z,1.0nm,0.3s
VOSK Vostochnaya 69.39 322 P **P** **14 53 16.2 0.0**
VOSK pmax pmax
comp=Z,8.0nm,1.2s
BVAR Borovoye Array 69.79 323 LR LR 15 25 35.2
comp=Z,159nm,18.4s,baz=82,slow=37
BRVK Borovoye 69.86 323*c**e*P **P** **14 53 20.0 +1.0**
BRVK pmax pmax
comp=Z,23nm,1.2s
BRVK Borovoye 69.86 323 *e*P **P** **14 53 18.8 -0.2**
comp=Z,14nm,0.5s
ZRNK Zerenda 70.61 322 *i*P **P** **14 53 23.6 0.0**
ZRNK pmax pmax
comp=Z,15nm,0.9s
COLD Coldfoot 71.55 22 *e*P **P** **14 53 29.6 +0.6**
comp=Z,7.9nm,1.0s
ILAR Eielson Array 72.28 25 P **P** **14 53 32.5 -1.0**
ILAR Eielson Array 72.28 25 P **P** **14 53 32.5 -1.0**
comp=Z,1.9nm,0.6s,baz=249,slow=5.6,SNR=33
ILAR LR LR 15 27 43.1
comp=Z,129nm,18.4s,baz=165,slow=38
DOT Dot Lake 73.29 27 *e*P **P** **14 53 39.1 -0.5**
comp=Z,9.8nm,1.0s
PPT Papeete 73.89 112 LR LR 15 20 02.2
comp=Z,229nm,18.9s,baz=305,slow=31
PPT2 Papeete2 73.90 112 *e*LR LR 15 16 20.6
comp=Z,325nm,25.2s
TBI Tubuai 75.78 118 *e*LR LR 15 17 15.2
comp=Z,248nm,28.5s
AB31 Akbulak array 76.10 318 *i*P **P** **14 53 56.6 +0.5**
AB31 pmax pmax
comp=Z,3.0nm,0.5s
ABKAR Akbulak array 76.10 318 *e*P **P** **14 53 55.4 -0.7**
ARU Arti 76.87 326*c* *i*P **P** **14 54 01.0 +0.7**
ARU S **S** **15 03 48.5 +2.6**
ARU SS **SS** **15 08 39.8 -2.5**
ARU pmax pmax
comp=Z,7.0nm,0.6s
AKTO Aktyubinsk 77.32 319 LR LR 15 29 17.1
comp=Z,135nm,18.4s,baz=266,slow=37
YKA Yellowknife Ar 86.63 27 P **P** **14 54 52.2 +0.7**
YKA Yellowknife Ar 86.63 27 P **P** **14 54 52.2 +0.7**
comp=Z,1.1nm,0.4s,baz=292,slow=5.3,SNR=9.9
ARCES ARCESS Array B 88.38 342 P **P** **14 55 00.6 +0.7**
ARCES ARCESS Array B 88.38 342 P **P** **14 55 00.6 +0.7**
comp=Z,1.8nm,0.6s,baz=79,slow=7.9,SNR=8.8
ARCES LR LR 15 36 40.2
comp=Z,228nm,20.1s,baz=264,slow=37
KBZ Khabaz 88.47 314 LR LR 15 39 54.8
comp=Z,103nm,19.0s,baz=256,slow=39
KIV Kislovodsk 88.56 314 *e*P **P** **14 55 02.0 +0.6**
KIV *e*PS **PS** **15 06 53.2 +0.2**
KIV *e*SS SS 15 11 36.6 +0.2
KIV pmax pmax
comp=Z,3.0nm,0.7s
KIV MLR MLR
comp=Z,100nm,22.0s
JOF Joensuu 89.10 335 *e*P **P** **14 55 03.2 -0.1**
JOF Joensuu 89.10 335 *ep* **P** **14 55 03.2 -0.1**
VNDA Vanda 89.22 176 *e*P **P** **14 55 01.3 -2.2**
VNDA P **P** **14 55 02.7 -0.8**
VNDA Vanda 89.22 176 P **P** **14 55 02.7 -0.8**
comp=Z,3.0nm,0.8s,baz=318,slow=6.6,SNR=18
VNDA LR LR 15 34 17.7
comp=Z,223nm,18.4s,baz=346,slow=35
BEKR Beckworth 89.23 50 *e*P **P** **14 55 04.5 -0.3**
comp=Z,2.4nm,0.9s
BEKR *ep*P **pP** **14 55 15.9 +1.1**
NVAR Mina Array Bea 91.14 51 P **P** **14 55 14.9 +1.1**
NVAR Mina Array Bea 91.14 51 P **P** **14 55 14.9 +1.1**
comp=Z,2.5nm,0.7s,baz=263,slow=5.6,SNR=24
KAF Kangasniemi 91.54 335 *e*P **P** **14 55 13.8 -1.0**
KAF Kangasniemi 91.54 335 *ep* **P** **14 55 13.8 -1.0**
FINES FINESS Array B 91.95 334 P **P** **14 55 16.1 -0.6**
FINES FINESS Array B 91.95 334 P **P** **14 55 16.1 -0.6**
comp=Z,4.9nm,0.6s,baz=74,slow=4.9,SNR=25
FINES LR LR 15 39 00.8
comp=Z,150nm,18.0s,baz=27,slow=37
HLID Hailey 92.52 45 *e*P **P** **14 55 18.4 -1.5**
comp=Z,3.2nm,1.2s
AKASG Malin Array Be 95.04 324 LR LR 15 39 30.0
comp=Z,138nm,22.0s,baz=65,slow=36
MAW Mawson 95.83 202 P **P** **14 55 34.0 -0.2**
MAW Mawson 95.83 202 P **P** **14 55 34.0 -0.2**
comp=Z,3.5nm,0.8s,baz=338,slow=3.2,SNR=6.0
MAW LR LR 15 31 54.7
comp=Z,98nm,20.9s,baz=272,slow=31
PDAR Pinedale Array 96.14 44 P **P** **14 55 36.5 -0.1**
PDAR Pinedale Array 96.14 44 P **P** **14 55 36.5 -0.1**
comp=Z,0.4nm,0.5s,baz=222,slow=1.2,SNR=2.9
PDAR LR LR 15 32 41.4
comp=Z,74nm,19.0s,baz=129,slow=32
BRTR Keskin Array B 96.26 312 LR LR 15 46 48.3
comp=Z,40nm,19.5s,baz=208,slow=40
HFS Hagfors 97.75 336 LR LR 15 45 15.2
comp=Z,157nm,19.9s,baz=147,slow=39
NOA NORSAR Array B 98.12 338 LR LR 15 39 23.9
comp=Z,132nm,21.8s,baz=55,slow=35
TORD Torodi Ar. Bea 133.30 300 PKP **PKPdf** **15 01 25.0 -0.3**
TORD Torodi Ar. Bea 133.30 300 PKP **PKPdf** **15 01 25.0 -0.3**
comp=Z,0.6nm,0.7s,baz=59,slow=1.4,SNR=5.0
PLCA Paso Flores 139.22 142 PKP **PKPdf** **15 01 36.6 +1.0**
PLCA Paso Flores 139.22 142 PKP **PKPdf** **15 01 36.6 +1.0**
comp=Z,2.0nm,0.7s,baz=236,slow=8.4,SNR=7.4
LCO Las Campanas 145.16 126 *e*PKPab **PKPbc** **15 01 45.6 -0.8**
LVC Limon Verde 148.90 116 *e*PKPbc **PKPbc** **15 01 56.2 -0.9**
LPAZ La Paz 150.89 104 PKPbc **PKPbc** **15 02 02.8 +0.2**
LPAZ La Paz 150.89 104 PKPbc **PKPbc** **15 02 02.8 +0.2**
comp=Z,22nm,0.7s,baz=300,slow=1.8,SNR=79

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*CSEM **30** 14:53:46.8, 67°.90N×25°.38E, h0km, ML1.0, Mining explosion. After HEL*

HEL 30 14:53:46.8±0.2, 67°.90N×25°.38E, h0km, ML1.0, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SGF	**Sodankyl**	**0.64**	**136**	SG		Sg	14 54 06.1	-1.1
SGF				RG		Rg	14 54 11.5	
SGF	**Sodankyl**	**0.64**	**136**	Sg		Sg	14 54 06.1	-1.1
HEF	**Hetta**	**0.82**	**309**	PG		Pg	14 54 01.2	-1.3
HEF	**Hetta**	**0.82**	**309**	Pg		Pg	14 54 01.2	-1.4
LANU	**Lannavaara**	**1.29**	**278**	PG		Pg	14 54 10.1	-1.4
LANU	**Lannavaara**	**1.29**	**278**	Pg		Pg	14 54 10.0	-1.5
VRF	**Varrio**	**1.61**	**93**	SG		Sn	14 54 36.2	-1.8

VRF				MSG		14 54 36.2		
	comp=Z,0.4nm,0.2s							
VRF	**Varrio**	**1.61**	**93**	Sg	Sn	14 54 36.2	-1.8	
ARA0	**ARCESS Array S**	**1.64**	**2**	PG	Pn	14 54 16.0	-0.9	
	baz=181							
ARA0				SG	Sn	14 54 38.5	-0.3	
ARA0				MSG		14 54 38.5		
	comp=Z,1.0nm,0.1s							
ARA0	**ARCESS Array S**	**1.64**	**2**	Pg	Pn	14 54 16.0	-0.9	
ARA0				Sg	Sn	14 54 38.5	-0.3	
KEV	**Kevo**	**1.96**	**17**	PN	Pn	14 54 21.4	+0.2	
	baz=199							
KEV				SG	Sn	14 54 46.0	-0.4	
KEV				MSG		14 54 46.0		
	comp=Z,1.1nm,0.2s							
KEV	**Kevo**	**1.96**	**17**	Pn	Pn	14 54 21.3	+0.1	
KEV				Sg	Sn	14 54 45.9	-0.5	
KIF	**Kilpisjarvi**	**2.02**	**305**	SG	Sb	14 54 49.4	-0.6	
KIF				MSG		14 54 49.4		
	comp=Z,0.6nm,0.2s							
KIF	**Kilpisjarvi**	**2.02**	**305**	Sg	Sb	14 54 49.3	-0.7	

*NEIC **30** 15:16:37.2, 16°.90N×94°.84W, h101km, MD4.2(MEX), After MEX.*

MEX 30 15:16:37.2±0.9, 16°.90N×94°.84W, h101km±10km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**1.20**	**19**	*i* P	Pn	15 16 58.5	-1.5
TUIG				*i* S	Sn	15 17 15.3	-1.7
TUIG	**Tuzandepetl**	**1.20**	**19**	*i* P	Pn	15 16 58.5	-1.5
TUIG				*i* S	Sn	15 17 15.3	-1.7
TGIG		**1.65**	**94**	*i* P	Sn	15 17 04.3	-1.1
TGIG				*eS*	Sn	15 17 25.4	-1.5
TGIG		**1.65**	**94**	*i* P	Sn	15 17 04.3	-1.1
TGIG				*eS*	Sn	15 17 25.4	-1.5
HUIG	**Huatulco**	**1.66**	**227**	*eP*	Pn	15 17 03.0	-2.5
HUIG				*i* S	Sn	15 17 25.5	-1.5
HUIG	**Huatulco**	**1.66**	**227**	*eP*	Pn	15 17 03.0	-2.5
HUIG				*i* S	Sn	15 17 25.5	-1.5
TGBT	**Tuxtla Gutierr**	**1.68**	**94**	*i* P	Pn	15 17 03.9	-1.9
TGBT				*i* S	Sn	15 17 25.4	-2.1
OXBJ	**Oaxaca**	**1.81**	**276**	*i* P	Pn	15 17 06.8	-0.8
OXBJ				*i* S	Sn	15 17 28.5	-2.3
VHO	**Vista Hermosa**	**1.82**	**276**	*eP*	Pn	15 17 07.2	-0.5
VHO				*i* S	Sn	15 17 30.0	-1.0
VHO	**Vista Hermosa**	**1.82**	**276**	*eP*	Pn	15 17 07.2	-0.5
VHO				*i* S	Sn	15 17 30.0	-1.0
PCIG		**1.96**	**127**	*i* P	Pn	15 17 08.5	-0.8
PCIG				*eS*	Sn	15 17 33.0	-0.7
PCIG		**1.96**	**127**	*i* P	Pn	15 17 08.5	-0.8
PCIG				*eS*	Sn	15 17 33.0	-0.7
PANG	**Puerto Angel**	**1.99**	**232**	*i* P	Pn	15 17 08.1	-1.6
PANG				*i* S	Sn	15 17 32.6	-1.9
CCIG	**Comitan**	**2.67**	**103**	*i* P	Pn	15 17 18.0	-0.8
CCIG				*i* S	Sn	15 17 49.3	-1.4
CCIG	**Comitan**	**2.67**	**103**	*i* P	Pn	15 17 18.0	-0.8
CCIG				*i* S	Sn	15 17 49.3	-1.4
TPIG	**Tehuac#an**	**2.84**	**303**	*i* P	Pn	15 17 20.5	-0.6
TPIG				*eS*	Sn	15 17 52.7	-2.1
TPIG	**Tehuac#an**	**2.84**	**303**	*i* P	Pn	15 17 20.5	-0.6
TPIG				*eS*	Sn	15 17 52.7	-2.1
UTMO	**Huajuapan**	**2.98**	**289**	*i* P	Pn	15 17 22.2	-0.7
UTMO				*eS*	Sn	15 17 55.9	-2.3
UTMO	**Huajuapan**	**2.98**	**289**	*i* P	Pn	15 17 22.2	-0.7
UTMO				*eS*	Sn	15 17 55.9	-2.3
THIG		**3.17**	**128**	*i* P	Pn	15 17 24.6	-0.7
THIG				*i* S	Sn	15 18 00.8	-1.6
THIG		**3.17**	**128**	*i* P	Pn	15 17 24.6	-0.7
THIG				*i* S	Sn	15 18 00.8	-1.6
PNIG	**Pinotepa**	**3.19**	**261**	*i* P	Pn	15 17 22.9	-2.6
PNIG				*eS*	Sn	15 18 00.7	-2.2
PNIG	**Pinotepa**	**3.19**	**261**	*i* P	Pn	15 17 22.9	-2.6
PNIG				*eS*	Sn	15 18 00.7	-2.2
YAIG	**Yautepec**	**4.47**	**297**	*i* P	Pn	15 17 42.9	-0.1
YAIG				*eS*	Sn	15 18 31.9	-2.2
YAIG	**Yautepec**	**4.47**	**297**	*i* P	Pn	15 17 42.9	-0.1
YAIG				*eS*	Sn	15 18 31.9	-2.2
MEIG	**Mezcala**	**4.67**	**283**	*i* P	Pn	15 17 45.2	-0.5
MEIG				*eS*	Sn	15 18 36.9	-2.0
MEIG	**Mezcala**	**4.67**	**283**	*i* P	Pn	15 17 45.2	-0.5
MEIG				*eS*	Sn	15 18 36.9	-2.0
PLIG	**Platanillo**	**4.69**	**289**	*i* P	Pn	15 17 45.6	-0.2
PLIG				*i* S	Sn	15 18 37.6	-1.5
PLIG	**Platanillo**	**4.69**	**289**	*i* P	Pn	15 17 45.6	-0.2
PLIG				*i* S	Sn	15 18 37.6	-1.5
CAIG	**El Cayaco**	**5.20**	**272**	*i* P	Pn	15 17 50.1	-2.5
CAIG				*eS*	Sn	15 18 49.6	-1.7
CAIG	**El Cayaco**	**5.20**	**272**	*i* P	Pn	15 17 50.1	-2.5
CAIG				*eS*	Sn	15 18 49.6	-1.7
ARIG	**Puente Sto Nin**	**5.43**	**285**	*i* P	Pn	15 17 55.7	-0.1
ARIG				*eS*	Sn	15 18 54.9	-2.2

*ISCJB **30** 15:22:16.9±0.7, 32°.60N±0°.05×48°.1E±0°.1, h17km, mb3.6/4, Error ellipse: s-maj=15.2km s-min=5.8km az=15.0*
*KISR **30** 15:22:16.8±0.6, 32°.41N×48°.21E, h12km±999km, ML2.6*
*IDC **30** 15:22:20.4±18.0, 33°.35N×48°.44E, h0km, mb3.7/4, mb1 3.6/4, mb1mx3.2/26, mbtmp3.7/4, Error ellipse: s-maj=385.9km s-min=36.7km az=10.0*
*CSEM **30** 15:22:20.0±0.3, 32°.47N×48°.44E, h20km, ML2.6, Error ellipse: s-maj=12.8km s-min=6.0km az=97.0*

ISC 30 15:22:18.4±0.9, 32°.52N±0°.05×48°.3E±0°.1, h17km, n14, σ1§44/20, mb3.7/4, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.57**	**136**	*ePg*	**Pb**	**15 22 29.5**	**-0.4**
KHMZ	**Khomeyn**	**1.82**	**48**	*ePg*	**Pb**	**15 22 51.2**	**-0.2**
ASAO	**Ashtian**	**2.46**	**34**	*ePn*	**Pn**	**15 23 00.1**	**+2.1**
SNGE	**Sanandaj**	**2.69**	**342**	*ePn*	**Pn**	**15 23 03.2**	**+2.1**
KBD	**Kabd**	**3.38**	**190**	*eP*	**Pn**	**15 23 11.2**	**+0.8**
KBD				*eS*	**Sn**	**15 23 51.5**	**+1.3**
KBD	**Kabd**	**3.38**	**190**	*eP*	**Pn**	**15 23 11.2**	**+0.8**
KBD				*eS*	**Sn**	**15 23 51.5**	**+1.3**
NAY	**Al-Naaiem**	**3.40**	**196**	*eP*	**Pn**	**15 23 11.0**	**+0.3**
NAY				*eS*	**Sn**	**15 23 52.0**	**+1.5**
NAY				AML	AML	15 23 57.6	
	comp=Z,11nm,0.6s						
NAY	**Al-Naaiem**	**3.40**	**196**	*eP*	**Pn**	**15 23 11.0**	**+0.3**
NAY				*eS*	**Sn**	**15 23 52.0**	**+1.5**
RDF	**Al-Radifah**	**3.65**	**191**	*eP*	**Pn**	**15 23 15.0**	**+0.9**
RDF				*eS*	**Sn**	**15 23 58.6**	**+1.8**
RDF				AML	AML	15 24 07.7	
	comp=Z,20nm,0.4s						
RDF	**Al-Radifah**	**3.65**	**191**	*eP*	**Pn**	**15 23 15.0**	**+0.9**
RDF				*eS*	**Sn**	**15 23 58.6**	**+1.8**
MKAR	**Makanchi Array**	**29.51**	**51**	P	**P**	**15 28 21.7**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=251,slow=6.7,SNR=4.0						
FINES	**FINESS Array B**	**32.33**	**340**	P	**P**	**15 28 45.1**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=136,slow=7.0,SNR=4.6						
ZALV	**Zalesovo Beam**	**33.58**	**39**	P	**P**	**15 28 55.4**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=266,slow=5.8,SNR=3.5						
HFS	**Hagfors**	**35.80**	**331**	P	**P**	**15 29 14.7**	**-1.8**
	comp=Z,1.1nm,0.7s,baz=120,slow=10,SNR=6.5						

MAN 30 15:38:53, 16°.35N×119°.69E, h24km, mb4.1, ML2.9, MS2.6, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.22**	**82**	*eP*	Pn	15 39 01.6	+0.8
BOLP				*eS*	Sb	15 39 05.6	+2.8
SCZP	**Santa Cruz**	**0.61**	**159**	*eP*	Pn	15 39 05.9	-0.3
BCPH	**Baguio City Da**	**0.86**	**88**	*iP*	Pb	15 39 09.0	-0.5
PCPH	**Palayan**	**1.56**	**120**	*eP*	Pn	15 39 20.2	+0.8
ABRA	**Dolores**	**1.62**	**37**	*eP*	Pb	15 39 21.2	-1.0
BALP	**Baler**	**1.91**	**108**	*eP*	Pb	15 39 25.8	-1.4
APYP	**Conner**	**2.11**	**44**	*eP*	Pn	15 39 27.6	+0.7
CAUP	**Cauayan**	**2.13**	**74**	*eP*	Pb	15 39 29.6	-1.3

IDC 30 15:50:06.3±2.1, 1°.61N×126°.58E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.1/21, mbtmp3.1/3, Error ellipse: s-maj=178.5km s-min=24.7km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.73**	**161**	P	P	15 55 10.5	+0.4
	0.2nm,0.3s,baz=340,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**26.11**	**165**	P	P	15 55 41.8	-0.4
	0.1nm,0.5s,baz=340,slow=7.4,SNR=3.2						
MKAR	**Makanchi Array**	**59.21**	**326**	P	P	16 00 09.4	0.0
	0.3nm,0.9s,baz=115,slow=6.5,SNR=2.6						

*TEH **30** 16:06:28.8, 32°.22N×47°.39E, h4km, ML3.9*
*ISCJB **30** 16:06:29.5±0.4, 32°.32N±0°.03×47°.58E±0°.05, h10km, Error ellipse: s-maj=6.1km s-min=4.5km az=177.9*
*CSEM **30** 16:06:29.4±0.2, 32°.32N×47°.54E, h2km, ML3.9, Error ellipse: s-maj=5.1km s-min=4.0km az=86.0*
*THR **30** 16:06:34.2±0.4, 32°.58N×47°.83E, h30km±4km, ML3.9*

ISC 30 16:06:30.0±0.9, 32°.31N±0°.03×47°.49E±0°.04, h10km, n56, σ1§05/58, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.13**	**100**	*ePg*	**Pb**	**16 06 52.0**	**+0.4**
SHGR				AML	AML	16 07 13.3	
	comp=E,8μm,1.4s						
SHGR				AML	AML	16 07 13.6	
	comp=N,6μm,1.0s						
SHGR	**Shooshtar-Gavs**	**1.13**	**100**	*ePg*	**Pb**	**16 06 52.0**	**+0.4**
IGHG	**Ghaleghazi**	**2.16**	**339**	*eSg*	**Sb**	**16 07 38.4**	**+2.2**
IGHG				*ePn*	**Pn**	**16 07 07.3**	**+1.0**
IGHG				*e*		16 07 48.8	
	comp=Z,9μm,0.4s						
IVIS	**Veis**	**2.28**	**347**	*e*	Pg	16 07 11.3	-2.4
	comp=Z,3μm,0.2s						
IVIS				*ePn*	**Pn**	**16 07 07.9**	**+0.1**
IVIS				*eSg*	**Sb**	**16 07 41.2**	**+1.7**
MIB	**Mutribah**	**2.50**	**183**	*eP*	**Pn**	**16 07 11.2**	**+0.5**
MIB				AML	AML	16 07 42.9	
	comp=Z,305nm,0.5s						
MIB	**Mutribah**	**2.50**	**183**	*eP*	**Pn**	**16 07 11.2**	**+0.5**
KHMZ	**Khomeyn**	**2.52**	**55**	*ePg*	**Pn**	**16 07 12.4**	**+1.2**
KHMZ				AML	AML	16 07 56.8	
	comp=E,316nm,0.9s						
KHMZ	**Khomeyn**	**2.52**	**55**	*ePg*	**Pn**	**16 07 12.4**	**+1.2**
IDHR	**Dehrash**	**2.56**	**339**	*ePn*	**Pn**	**16 07 10.7**	**-1.0**
IDHR				*e*		16 08 03.9	
	comp=Z,8μm,0.5s						
IDHR	**Dehrash**	**2.56**	**339**	*ePn*	**Pn**	**16 07 10.6**	**-1.1**
ILIN	**Lien**	**2.64**	**351**	*ePn*	**Pn**	**16 07 13.3**	**+0.4**
ILIN				*e*	Sg	16 08 03.1	+8.2
	comp=Z,1μm,0.2s						
ILIN	**Lien**	**2.64**	**351**	*ePn*	**Pn**	**16 07 13.3**	**+0.4**
UMR	**Umm Al-Rimmam**	**2.75**	**176**	*eP*	**Pn**	**16 07 14.5**	**+0.3**
UMR				*eS*	**Sn**	**16 07 48.7**	**+1.2**
UMR				AML	AML	16 07 50.0	
	comp=Z,171nm,0.4s						
UMR	**Umm Al-Rimmam**	**2.75**	**176**	*eP*	**Pn**	**16 07 14.5**	**+0.3**
UMR				*eS*	**Sn**	**16 07 48.7**	**+1.2**
SNGE	**Sanandaj**	**2.78**	**358**	*ePn*	**Pn**	**16 07 15.8**	**+1.0**
SNGE	**Sanandaj**	**2.78**	**358**	*ePn*	**Pn**	**16 07 15.8**	**+1.0**
BHD	**Baghdad**	**2.79**	**291**	*ex*	Pb	16 07 17.5	-2.4
BHD				*ex*	**Sg**	**16 07 56.0**	**-3.5**
BHD	**Baghdad**	**2.79**	**291**	*ePn*	Pb	16 07 17.5	-2.4
RST	**Umm Al-Ruwaisa**	**2.83**	**189**	*eP*	**Pn**	**16 07 15.3**	**+0.1**
RST	**Umm Al-Ruwaisa**	**2.83**	**189**	*eP*	**Pn**	**16 07 15.3**	**+0.1**
NAY	**Al-Naaiem**	**3.06**	**184**	*eP*	**Pn**	**16 07 18.6**	**+0.2**
NAY	**Al-Naaiem**	**3.06**	**184**	*eP*	**Pn**	**16 07 18.6**	**+0.2**
KBD	**Kabd**	**3.13**	**177**	*eP*	**Pn**	**16 07 19.6**	**+0.3**
KBD				AML	AML	16 07 58.8	
	comp=Z,152nm,0.3s						
KBD	**Kabd**	**3.13**	**177**	*eP*	**Pn**	**16 07 19.6**	**+0.3**
RDF	**Al-Radifah**	**3.37**	**179**	*eP*	**Pn**	**16 07 23.6**	**+0.8**
RDF				AML	AML	16 08 04.7	
	comp=Z,129nm,0.3s						
RDF	**Al-Radifah**	**3.37**	**179**	*eP*	**Pn**	**16 07 23.5**	**+0.8**
IKLH	**Kolahrood**	**3.59**	**73**	*ePn*	**Pn**	**16 07 26.6**	**+0.6**
IKLH				*e*	Sg	16 08 35.4	+10
	comp=Z,2μm,0.3s						
IKLH	**Kolahrood**	**3.59**	**73**	*ePn*	**Pn**	**16 07 26.6**	**+0.6**
IRAZ	**Razeghan**	**3.70**	**33**	*ePn*	**Pn**	**16 07 28.1**	**+0.7**
IRAZ				*e*	Sg	16 08 36.3	+7.5
	comp=Z,2μm,0.3s						
IRAZ	**Razeghan**	**3.70**	**33**	*ePn*	**Pn**	**16 07 28.1**	**+0.7**
IGAR	**Gharneh**	**3.86**	**87**	*ePn*	**Pn**	**16 07 29.4**	**-0.2**
IGAR				*e*		16 08 22.8	
	comp=Z,2μm,0.2s						
IZEF	**Zefreh**	**4.13**	**81**	*ePn*	**Pn**	**16 07 33.7**	**+0.3**
IZEF				*e*		16 08 58.5	
	comp=Z,899nm,0.3s						
IZEF	**Zefreh**	**4.13**	**81**	*ePn*	**Pn**	**16 07 33.7**	**+0.3**
IR3	**Iran Long-Peri**	**4.32**	**42**	*eSg*	**Sg**	**16 08 46.4**	**-2.3**
IR3	**Iran Long-Peri**	**4.32**	**42**	*eSg*	**Sg**	**16 08 46.4**	**-2.3**
IVRN	**Varamin**	**4.44**	**52**	*ePn*	**Pn**	**16 07 37.8**	**+0.4**
IVRN				*e*		16 09 00.9	
	comp=Z,1μm,0.5s						
IVRN	**Varamin**	**4.44**	**52**	*ePn*	**Pn**	**16 07 37.8**	**+0.4**
NASN	**Na'in**	**4.52**	**82**	*ePn*	**Pn**	**16 07 38.9**	**+0.1**
NASN				AML	AML	16 09 09.1	
	comp=N,46nm,0.7s						
NASN	**Na'in**	**4.52**	**82**	*ePn*	**Pn**	**16 07 38.9**	**+0.1**
DAMV	**Damavand**	**4.99**	**47**	*ePn*	**Pn**	**16 07 44.2**	**-0.9**
DAMV	**Damavand**	**4.99**	**47**	*ePn*	**Pn**	**16 07 44.2**	**-0.9**
IDMV	**Damavand**	**4.99**	**48**	*ePn*	**Pn**	**16 07 46.0**	**+0.8**
IDMV				*e*		16 09 33.0	
	comp=Z,526nm,0.4s						
IDMV	**Damavand**	**4.99**	**48**	*ePn*	**Pn**	**16 07 46.0**	**+0.8**
ISAD	**Sadrabad**	**5.27**	**93**	*ePn*	**Pn**	**16 07 48.7**	**-0.4**
ISAD				*e*		16 09 04.3	
	comp=Z,649nm,0.2s						
ISAD	**Sadrabad**	**5.27**	**93**	*ePn*	**Pn**	**16 07 48.7**	**-0.4**
IPAR	**Pars**	**5.37**	**116**	*ePn*	**Pn**	**16 07 49.6**	**-0.8**
IPAR				*e*		16 09 39.5	
	comp=Z,870nm,0.4s						
IPAR	**Pars**	**5.37**	**116**	*ePn*	**Pn**	**16 07 49.6**	**-0.8**
IFIR	**Firoozkooh**	**5.50**	**51**	*eSg*	**Sg**	**16 09 24.4**	**-2.1**
IFIR	**Firoozkooh**	**5.50**	**51**	*eSg*	**Sg**	**16 09 24.4**	**-2.1**
ISRV	**Sarvestan**	**5.65**	**120**	*e*		16 10 11.6	
	comp=Z,2μm,0.4s						
ICHK	**Chekchek**	**5.86**	**89**	*ePn*	**Pn**	**16 07 56.7**	**-0.5**
ICHK				*e*		16 09 49.7	
	comp=Z,615nm,0.4s						
ICHK	**Chekchek**	**5.86**	**89**	*ePn*	**Pn**	**16 07 56.7**	**-0.5**
IMEH	**Mehriz**	**6.13**	**97**	*ePn*	**Pn**	**16 08 00.7**	**-0.2**
IMEH				*e*		16 09 17.5	
	comp=Z,242nm,0.2s						
IMEH	**Mehriz**	**6.13**	**97**	*ePn*	**Pn**	**16 08 00.7**	**-0.2**
TABS	**Tabas**	**8.20**	**78**	*ePn*	**Pn**	**16 08 28.8**	**-0.4**
TABS	**Tabas**	**8.20**	**78**	*ePn*	**Pn**	**16 08 28.8**	**-0.4**

*IDC **30** 16:15:54.6±1.5, 9°.09S×123°.47E, h0km, mb4.0/2, mb1 3.9/4, mb1mx3.5/20, mbtmp3.7/4, ML3.5/2, Error ellipse: s-maj=219.5km s-min=24.3km az=57.0*
*AUST **30** 16:16:36.4, 11°.50S×125°.03E, h100km*

ISC 30 16:16:01.6±4.9, 9°.4S±0°.2×123°.7E±0°.2, h100km, n10, σ3§07/8, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNRA	**Kununurra**	**7.98**	**142**	P	Pn	16 18 00.6	+5.8
	baz=5.5,SNR=14						
KNRA				S	**Sn**	**16 19 25.4**	**+2.0**
	baz=5.5,SNR=11						
MTN	**Manton Dam**	**8.05**	**116**	P	Pn	16 18 01.5	+5.6
	baz=6.1,SNR=40						
MTN				S	**Sn**	**16 19 26.7**	**+1.5**
	baz=6.1,SNR=14						
FITZ	**Fitzroy Crossi**	**8.89**	**168**	P	Pn	16 18 12.4	+5.1
	baz=6.6,SNR=33						
FITZ				S	**Sn**	**16 19 48.9**	**+3.2**
	baz=6.6,SNR=7.1						
KDU	**Kakadu**	**9.20**	**112**	P	Pn	16 18 16.5	+5.1
	baz=7.4,SNR=12						
KDU				S	**Sn**	**16 19 54.6**	**+1.4**
	baz=7.4,SNR=5.5						
WRA	**Warramunga Arr**	**14.69**	**137**	Pn	**P**	**16 19 28.0**	**-0.1**
	0.2nm,0.3s,baz=310,slow=13,SNR=19						
WRA				Sn	**Sn**	**16 22 02.3**	**-4.3**
	0.9nm,0.3s,baz=299,slow=22,SNR=11						
ASAR	**Alice Springs**	**17.24**	**147**	P	Pn	16 20 03.5	+7.2
	0.3nm,0.3s,baz=322,slow=12,SNR=31						
ASAR				S	**Sn**	**16 23 05.2**	**-2.9**
	0.3nm,0.3s,baz=311,slow=21,SNR=7.4						
MEEK	**Meekatharra**	**17.86**	**195**	P	Pn	16 20 17.9	+14
	baz=16,SNR=6.0						
MEEK				S	**Sn**	**16 23 21.6**	**-1.4**
	baz=16,SNR=3.0						
QIS	**Mount Isa**	**18.93**	**128**	P	Pn	16 20 23.5	+6.8
	baz=17,SNR=4.8						
STKA	**Stephens Creek**	**27.87**	**146**	P	P	16 21 48.9	+6.8
	0.7nm,0.4s,baz=328,slow=13,SNR=4.1						
MKAR	**Makanchi Array**	**66.98**	**330**	P	P	16 26 47.0	+3.3
	0.7nm,0.5s,baz=131,slow=7.3,SNR=18						

*ISCJB **30** 16:53:19.8±0.3, 7°.59S±0°.03×127°.90E±0°.04, h142km, mb3.7/9, Error ellipse: s-maj=5.4km s-min=4.1km az=157.0*
*IDC **30** 16:53:20.1±3.5, 7°.53S×128°.02E, h128km±32km, mb3.5/9, mb1 3.9/12, mb1mx3.8/20, mbtmp3.8/12, Error ellipse: s-maj=31.8km s-min=13.2km az=76.0*
*AUST **30** 16:53:21.1±0.4, 7°.59S×127°.92E, h119km, Error ellipse: s-maj=0.9km s-min=0.7km az=241.0*
*DJA **30** 16:53:24.5±0.3, 8°.S±2°×12°.8E±°, h201km±12km, M4.6/7, mB5.0/3, mb4.7/7, MLv4.7/3, Mw(mB)4.3/3*

ISC 30 16:53:21.3±0.4, 7°.69S±0°.05×127°.97E±0°.05, h142km, n50, σ2§31/55, mb3.7/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**4.42**	**13**	P	Pn	16 54 30.7	+3.8
MTN	**Manton Dam**	**5.99**	**149**	P	**Pn**	**16 54 50.9**	**+3.1**
	baz=6.1,SNR=768						
MTN				S	**Sn**	**16 55 58.7**	**+3.1**
	baz=6.1,SNR=7.2						
FAKI	**Fak Fak**	**6.38**	**42**	P	**Pn**	**16 54 53.3**	**+0.3**
	baz=6.4,SNR=12						
FAKI				S	**Sn**	**16 56 01.4**	**-3.4**
	baz=6.4,SNR=14						
KDU	**Kakadu**	**6.66**	**139**	P	**Pn**	**16 54 59.8**	**+3.0**
	baz=6.8,SNR=1000						
KDU				S	**Sn**	**16 56 09.9**	**-1.5**
	baz=6.8,SNR=15						
SWI	**Sorong**	**7.54**	**26**	P	**Pn**	**16 55 10.0**	**+1.5**
	80nm,0.9s,852nm0.3nm						
SWI	**Sorong**	**7.54**	**26**	P	**Pn**	**16 55 10.0**	**+1.5**
	baz=7.5,SNR=13						
WSI	**Waingapu**	**7.83**	**255**	S	**Sn**	**16 56 38.5**	**-1.2**
	baz=7.8,SNR=8.8						
KNRA	**Kununurra**	**7.97**	**174**	P	**Pn**	**16 55 17.1**	**+2.7**
	baz=8.1,SNR=685						
KNRA				S	**Sn**	**16 56 43.1**	**-0.1**
	baz=8.1,SNR=6.9						
LUWI	**Luwuk**	**8.39**	**322**	P	**Pn**	**16 55 23.0**	**+3.0**
	baz=8.3,SNR=6.3						
RKPI	**Ransiki, Papua**	**8.72**	**46**	P	**Pn**	**16 55 25.0**	**+0.6**
	58nm,0.7s,1μm						
RKPI				S	**Sn**	**16 56 58.8**	**-2.4**
	58nm,0.7s,1μm						
MNI	**Manado**	**9.60**	**341**	P	Pn	16 55 40.0	+3.9
	91nm,1.0s						
FITZ	**Fitzroy Crossi**	**10.59**	**192**	P	**Pn**	**16 55 49.8**	**+0.5**
	5.0nm,0.3s,baz=26,slow=10,SNR=127						
FITZ				S	**Sn**	**16 57 41.8**	**-4.6**
	1.9nm,0.3s,baz=328,slow=15,SNR=3.8						
FITZ	**Fitzroy Crossi**	**10.59**	**192**	P	**Pn**	**16 55 49.9**	**+0.5**
	baz=11,SNR=153						
WRA	**Warramunga Arr**	**13.66**	**154**	P	**Pn**	**16 56 29.4**	**+0.1**
	5.6nm,0.3s,baz=327,slow=13,SNR=177						
WRA				S	**Sn**	**16 58 54.4**	**-5.9**
	6.2nm,0.3s,baz=328,slow=24,SNR=18						
JAGI	**Jajag, Banyuwa**	**13.70**	**266**	P	**P**	**16 56 34.4**	**+0.7**
	baz=14,SNR=6.4						
COEN	**Coen**	**16.18**	**114**	P	P	16 57 06.1	+4.8
	baz=16,SNR=6.8						
COEN				S	Sn	16 59 51.3	-10
	baz=16,SNR=4.2						
ASAR	**Alice Springs**	**16.88**	**161**	P	**Pn**	**16 57 11.3**	**+2.1**
	3.8nm,0.3s,baz=330,slow=10,SNR=409						
ASAR				S	**S**	**17 00 11.2**	**-6.3**
	0.7nm,0.3s,baz=334,slow=17,SNR=3.9						
QIS	**Mount Isa**	**17.04**	**140**	P	**Pn**	**16 57 14.0**	**+2.8**
	baz=17,SNR=7.4						
QIS				S	**S**	**17 00 14.4**	**-6.8**
	baz=17,SNR=5.9						
UGM	**Wanagama**	**17.28**	**268**	P	**P**	**16 57 13.7**	**+0.3**
	baz=17,SNR=3.5						
STKI	**Sintang**	**18.16**	**294**	P	Pn	16 57 33.6	+9.1
SBUM	**Sibu**	**18.66**	**302**	P	**Pn**	**16 57 29.7**	**-0.8**
MTSU	**Mount Surprise**	**19.00**	**125**	P	**Pn**	**16 57 35.5**	**+1.0**
	baz=19,SNR=15						
MEEK	**Meekatharra**	**20.83**	**204**	P	Pn	16 57 55.9	-0.1
	baz=21,SNR=5.0						
TNG	**Tangerang**	**21.22**	**273**	P	**P**	**16 57 53.7**	**-2.3**
MORW	**Morawa**	**24.05**	**206**	P	**P**	**16 58 26.6**	**+3.2**
	baz=24,SNR=6.4						
MORW				S	S	17 03 02.0	+32
	baz=24,SNR=3.7						
STKA	**Stephens Creek**	**27.21**	**154**	P	**P**	**16 58 52.9**	**+1.0**
	0.7nm,0.3s,baz=335,slow=12,SNR=5.7						
CMSA	**Cobar Meteorol**	**28.92**	**147**	P	**P**	**16 59 09.8**	**+2.7**
	baz=29

IBJA	**Bjarnastaoir**	**0.42**	**84**	P	Pg	17 05 47.6	-0.3
IBJA				S	Sg	17 05 53.8	+0.3
IKUD	**Kuludalsa**	**0.45**	**22**	P	Pg	17 05 47.8	-0.6
IKUD				S	Sg	17 05 53.8	-0.5
IKRO	**Krokur**	**0.54**	**68**	P	Pg	17 05 49.3	-0.8
IKRO				S	Sg	17 05 56.8	-0.3
IHEI	**Heioarbar**	**0.54**	**56**	P	Pg	17 05 49.3	-0.8
IHEI				S	Sg	17 05 57.0	-0.2
ISOL	**Solvholt**	**0.58**	**87**	P	Pg	17 05 50.0	-0.9
ISOL				S	Sg	17 05 58.1	-0.4
IASM	**Asmuli**	**0.73**	**95**	P	Pg	17 05 52.5	-1.2
IASM				S	Sg	17 06 02.5	-0.7
ISAU	**Saurbar**	**0.82**	**83**	P	Pg	17 05 54.0	-1.4
ISAU				S	Sg	17 06 05.1	-1.0
IASB	**`sbjarnarst**	**0.94**	**25**	P	Pg	17 05 55.7	-2.0
IASB				S	Sg	17 06 08.4	-1.5
IGYG	**Gygjarholskot**	**0.97**	**66**	P	Pg	17 05 56.3	-2.1
IGYG				S	Sg	17 06 10.1	-0.9
IHAU	**Haukadalur**	**1.02**	**85**	P	Pg	17 05 57.2	-2.0
IHAU				S	Sg	17 06 11.1	-1.3
IMID	**Miomork**	**1.08**	**102**	P	Pg	17 05 58.2	-2.3
IMID				S	Sg	17 06 12.5	-2.0
IVAT	**Vatnsfell**	**1.50**	**78**	P	Pn	17 06 05.0	-2.0
IHVE	**Hveravellir**	**1.52**	**49**	P	Pn	17 06 05.0	-2.3
IHVE				S	Sn	17 06 25.1	-2.2
ISKR	**Skrokkalda**	**1.82**	**67**	P	Pn	17 06 10.2	-1.2
IKAL	**Kalfafell**	**2.02**	**87**	P	Pn	17 06 13.2	-0.9
SCO	**Scoresbysund**	**6.61**	**1**	*i* P	Pn	17 07 19.2	+2.1
SCO				*e*S	Sn	17 08 39.5	+7.0

GUC 30 17:54:10.0±0.6, 23°93S×68°02W, h130km±7km, ML4.0, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**1.03**	**351**	*e*P	Pn	17 54 34.2	+0.6
SPCH				*i* S	Sn	17 54 52.5	+1.1
LVC	**Limon Verde**	**1.55**	**328**	*e*P	Pn	17 54 39.6	+0.7
LVC				*i* S	Sn	17 55 02.5	+1.5
PB04	**Plate Boundary**	**2.14**	**320**	AML	AML	17 55 26.1	
	comp=N,379nm,0.5s						
ANCH	**Antofagasta**	**2.21**	**276**	⇑*i* P	Pn	17 54 47.7	+1.2
ANCH				*i* S	Sn	17 55 15.5	+1.0
MACH	**Maria Elena**	**2.35**	**317**	⇑*i* P	Pn	17 54 49.3	+0.6
MACH				*e*S	Sn	17 55 19.1	+0.7
PB09	**Plate Boundary**	**2.40**	**332**	⇓*i* P	Pn	17 54 50.3	+1.1
PB09				*i* S	Sn	17 55 21.0	+1.7
PB09				AML	AML	17 55 26.4	
	comp=E,1μm,0.6s						
PB01	**Plate Boundary**	**3.18**	**334**	⇑*i* P	Pn	17 54 59.2	+0.1
PB01				*i* S	Sn	17 55 37.2	+0.3
PB01				AML	AML	17 55 43.2	
	comp=E,237nm,0.3s						
HMBC	**Humberstone**	**4.03**	**334**	⇑*i* P	Pn	17 55 09.0	-1.3
HMBC				*i* S	Sn	17 55 55.6	-1.4

GUC 30 18:04:10.8±0.5, 23°90S×67°20W, h223km±12km, ML3.7, 3C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.03**	**309**	⇑*i* P	Pn	18 04 53.0	+1.3
LVC				*i* S	S	18 05 25.6	+2.1
PB04	**Plate Boundary**	**2.66**	**307**	⇓*i* P	Pn	18 05 05.3	+7.4
PB04				*i* S	S	18 05 47.0	+12
PB04				AML	AML	18 05 48.3	
	comp=N,50nm,0.5s						
CEN1	**Los Morros**	**2.80**	**280**	⇑*i* P	Pn	18 05 03.7	+4.1
CEN1				*i* S	S	18 05 41.3	+3.7
PB09	**Plate Boundary**	**2.82**	**318**	*e*P	Pn	18 05 01.8	+1.9
PB09				*i* S	S	18 05 40.7	+2.6
PB09				AML	AML	18 05 44.3	
	comp=E,157nm,0.5s						
ANCH	**Antofagasta**	**2.95**	**274**	⇓*i* P	Pn	18 05 03.3	+2.2
ANCH				*i* S	S	18 05 42.6	+2.2
PB01	**Plate Boundary**	**3.55**	**323**	⇑*i* P	Pn	18 05 09.2	+1.0
PB01				*e*S	S	18 05 54.2	+1.1
PB01				AML	AML	18 05 56.4	
	comp=E,62nm,0.3s						

*ISCJB **30** 18:53:13.9±0.6, 22°.18S±0°.05×70°.02W±0°.09, h77km±4km, mb3.9/8, Error ellipse: s-maj=14.0km s-min=7.3km az=159.9*
*NEIC **30** 18:53:15.7, 22°.12S×69°.91W, h66km, mb3.4/2, After GUC.*
NEIC Felt [III] at Maria Elena and Tocopilla.
*IDC **30** 18:53:15.4±0.6, 22°.14S×69°.73W, h71km±5km, mb3.7/8, mb1 3.8/10, mb1mx3.7/20, mbtmp3.7/10, MS3.1/1, Ms1 3.1/1, ms1mx2.3/33, Error ellipse: s-maj=20.0km s-min=17.6km az=88.0*
*GUC **30** 18:53:15.7±0.7, 22°.12S×69°.91W, h66km±3km, ML4.3*

ISC 30 18:53:14.6±0.6, 22°.15S±0°.05×70°.00W±0°.07, h70km±4km, n40, σ1°27/58, mb4.1/8, 4C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MACH	**Maria Elena**	**0.23**	**103**	*e*P	**Pn**	**18 53 26.0**	**+0.4**
MACH				*i* S	**Sn**	**18 53 34.1**	**+0.4**
MACH	**Maria Elena**	**0.23**	**103**	*e*P	**Pn**	**18 53 26.0**	**+0.4**
MACH				*i* S	**Sn**	**18 53 34.1**	**+0.4**
PB07	**Plate Boundary**	**0.43**	**14**	⇓*i* P	**Pn**	**18 53 27.9**	**+0.9**
PB07				*i* S	**Sn**	**18 53 37.0**	**+1.0**
PB07	**Plate Boundary**	**0.43**	**14**	⇓*i* P	**Pn**	**18 53 27.9**	**+0.9**
PB07				*i* S	**Sn**	**18 53 37.0**	**+1.0**
PB07				AML	AML	18 53 37.7	
	comp=E,31μm,0.5s						
PB04	**Plate Boundary**	**0.48**	**104**	⇓*i* P	**Pn**	**18 53 26.9**	**-0.4**
PB04				*i* S	**Sn**	**18 53 35.6**	**-0.9**
PB04	**Plate Boundary**	**0.48**	**104**	⇓*i* P	**Pn**	**18 53 26.9**	**-0.4**
PB04				*i* S	**Sn**	**18 53 35.6**	**-0.9**
PB04				AML	AML	18 53 37.1	
	comp=N,24μm,0.1s						
PB09	**Plate Boundary**	**0.78**	**64**	⇑*i* P	**Pn**	**18 53 31.4**	**+0.8**
PB09				*i* S	**Sn**	**18 53 42.9**	**+0.5**
PB09	**Plate Boundary**	**0.78**	**64**	⇑*i* P	**Pn**	**18 53 31.4**	**+0.8**
PB09				*i* S	**Sn**	**18 53 42.9**	**+0.5**
PB09				AML	AML	18 53 44.1	
	comp=N,53μm,0.2s						
LVC	**Limon Verde**	**1.11**	**115**	*e*P	**Pn**	**18 53 35.8**	**+1.1**
LVC				*i* S	**Sn**	**18 53 50.6**	**+1.0**
LVC	**Limon Verde**	**1.11**	**115**	*e*P	**Pn**	**18 53 35.8**	**+1.1**
LVC				*i* S	**Sn**	**18 53 50.6**	**+1.0**
PB01	**Plate Boundary**	**1.19**	**23**	⇑*i* P	**Pn**	**18 53 36.2**	**+0.6**
PB01				*i* S	**Sn**	**18 53 52.0**	**+0.6**
PB01	**Plate Boundary**	**1.19**	**23**	⇑*i* P	**Pn**	**18 53 36.2**	**+0.6**
PB01				*i* S	**Sn**	**18 53 52.0**	**+0.6**
PB01				AML	AML	18 53 52.6	
	comp=E,11μm,0.2s						
CEN1	**Los Morros**	**1.25**	**189**	*e*P	Pn	18 53 41.0	+4.5
CEN1	**Los Morros**	**1.25**	**189**	*e*P	Pn	18 53 41.0	+4.5
CEN1				AML	AML	18 54 00.6	
	comp=N,3μm,0.7s						
SPCH	**San Pedro de A**	**1.83**	**115**	*e*P	**Pn**	**18 53 46.0**	**+1.8**
SPCH				*i* S	**Sn**	**18 54 09.1**	**+2.5**
SPCH	**San Pedro de A**	**1.83**	**115**	*e*P	**Pn**	**18 53 46.0**	**+1.8**
SPCH				*i* S	**Sn**	**18 54 09.1**	**+2.5**
ARE	**Arequipa**	**5.83**	**346**	*e*P	**Pn**	**18 54 38.0**	**-0.7**
ARE				*e*S	**Sn**	**18 55 42.0**	**-2.4**
LPAZ	**La Paz**	**6.09**	**17**	*e*Pn	**Pn**	**18 54 44.9**	**+2.4**
	comp=N,12nm,0.3s						
LPAZ	**La Paz**	**6.09**	**17**	P	**Pn**	**18 54 45.0**	**+2.4**
	comp=N,3.5nm,0.3s,baz=220,slow=6.6,SNR=57						
CFAA	**Coronel Fontan**	**9.55**	**171**	P	**Pn**	**18 55 27.1**	**-2.3**
	comp=N,0.1nm,0.3s,baz=352,slow=8.7,SNR=15						
CFAA				S	Sn	18 57 06.6	-8.5
	baz=147,slow=18,SNR=2.1						
SIV	**San Ignacio**	**10.42**	**56**	P	**Pn**	**18 55 38.6**	**-2.7**
	comp=N,1.2nm,0.3s,baz=263,slow=12,SNR=14						
CPUP	**Villa Florida**	**12.28**	**112**	P	**Pn**	**18 56 04.4**	**-2.2**
	comp=N,0.3nm,0.3s,baz=268,slow=18,SNR=4.6						
TRQA	**Tornquist**	**17.30**	**158**	*e*Pn	**Pn**	**18 57 10.8**	**-0.6**
	comp=N,3.9nm,0.9s						
PLCA	**Paso Flores**	**18.54**	**181**	*e*Pn	**P**	**18 57 25.1**	**-0.5**
	comp=N,1.1nm,0.7s						
PLCA	**Paso Flores**	**18.54**	**181**	LR	LR	19 05 23.0	
	comp=N,56nm,18.3s,baz=161,slow=39						
BDFB	**Brasilia**	**21.77**	**77**	P	**P**	**18 57 59.9**	**-0.9**
	comp=N,3.3nm,0.6s,baz=223,slow=14,SNR=5.2						
SNAA	**Sanae**	**62.00**	**161**	P	**P**	**19 03 27.5**	**+0.3**
	comp=N,0.5nm,0.7s,baz=284,slow=9.1,SNR=9.3						
SNAA				pP	**pP**	**19 03 45.2**	**-0.2**
	comp=N,0.4nm,0.6s,baz=296,slow=8.6,SNR=3.2						
QSPA	**South Pole Qui**	**68.05**	**180**	P	**P**	**19 04 07.7**	**+1.2**
	comp=N,1.9nm,0.5s,baz=241,slow=2.8,SNR=13						
QSPA				pP	**pP**	**19 04 26.2**	**+1.2**
	comp=N,1.4nm,0.6s,baz=214,slow=3.6,SNR=3.5						
DBIC	**Dimbokro**	**69.88**	**74**	P	**P**	**19 04 17.8**	**-0.8**
	comp=N,7.4nm,1.1s,baz=201,slow=7.3,SNR=3.7						
PDAR	**Pinedale Array**	**74.17**	**331**	P	**P**	**19 04 45.4**	**+1.5**
	comp=N,0.2nm,0.4s,baz=152,slow=4.1,SNR=2.9						
NVAR	**Mina Array Bea**	**75.39**	**323**	P	**P**	**19 04 53.2**	**+2.2**
	comp=N,0.3nm,0.6s,baz=143,slow=5.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**78.52**	**71**	P	**P**	**19 05 07.7**	**-1.1**
	comp=N,3.6nm,0.6s,baz=255,slow=5.3,SNR=19						
TORD				pP	**pP**	**19 05 27.6**	**-0.1**
	comp=N,2.5nm,0.6s,baz=249,slow=5.2,SNR=6.4						
YKA	**Yellowknife Ar**	**91.46**	**341**	P	**P**	**19 06 13.1**	**+0.5**
	comp=N,0.9nm,0.8s,baz=121,slow=6.0,SNR=5.7						
ASAR	**Alice Springs**	**128.87**	**208**	PKP	**PKPdf**	**19 12 14.5**	**-0.5**
	comp=N,0.9nm,1.1s,baz=142,slow=3.2,SNR=4.2						
ASAR				pPKP	**pPKPdf**	**19 12 35.4**	**+0.3**
	comp=N,0.3nm,0.7s,baz=84,slow=1.8,SNR=3.0						
WRA	**Warramunga Arr**	**131.88**	**211**	PKP	**PKPdf**	**19 12 21.1**	**+0.3**
	comp=N,0.3nm,0.9s,baz=154,slow=1.9,SNR=6.4						
WRA				pPKP	**pPKPdf**	**19 12 41.8**	**+0.9**
	comp=N,0.3nm,0.5s,baz=150,slow=1.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**142.96**	**25**	PKhKP	PKPpre	19 12 36.5	
	comp=N,1.1nm,0.8s,baz=261,slow=2.5,SNR=6.4						
ZALV				pPKP	pPKPdf	19 13 00.8	+0.7
	comp=N,0.7nm,0.6s,baz=26,slow=3.8,SNR=3.0						
AAK	**Ala-Archa**	**144.08**	**47**	PKP	**PKPdf**	**19 12 41.7**	**-0.8**
	comp=N,1.0nm,0.3s,baz=255,slow=7.2,SNR=3.6						
MKAR	**Makanchi Array**	**146.74**	**36**	PKP	**PKPdf**	**19 12 46.2**	**-0.6**
	comp=N,1.8nm,0.7s,baz=345,slow=3.1,SNR=17						
MKAR				PKPbc	**PKPbc**	**19 12 48.6**	**0.0**
	comp=N,1.8nm,0.7s,baz=332,slow=3.1,SNR=17						
MKAR				pPKPbc	pPKPbc	19 13 08.2	-0.3
	comp=N,1.8nm,0.7s,baz=340,slow=3.2,SNR=9.7						
MJAR	**Matsushiro Arr**	**151.66**	**307**	PKPbc	**PKPbc**	**19 13 01.5**	**+0.2**
	comp=N,1.0nm,0.8s,baz=110,slow=1.2,SNR=5.6						
SONM	**Songino Array**	**154.20**	**6**	PKPbc	**PKPbc**	**19 13 07.0**	**+0.2**
	comp=N,0.3nm,0.5s,baz=352,slow=2.9,SNR=3.4						
SONM				pPKPab	**pPKPab**	**19 13 38.5**	**-1.7**
	comp=N,0.5nm,0.7s,baz=269,slow=1.3,SNR=3.7						

IDC 30 19:03:28.9±7.9, 13°.17N×145°.53E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/26, mbtmp3.4/4, Error ellipse: s-maj=314.7km s-min=24.9km az=83.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.70**	**199**	P	P	19 10 20.4	-0.3
	0.3nm,0.8s,baz=24,slow=9.9,SNR=4.8						
ASAR	**Alice Springs**	**38.34**	**197**	P	P	19 10 51.8	+0.1
	0.3nm,0.5s,baz=19,slow=12,SNR=11						
SONM	**Songino Array**	**47.44**	**325**	P	P	19 12 05.6	+0.2
	0.3nm,0.7s,baz=132,slow=6.0,SNR=3.6						
KURBB	**Kurchatov Arra**	**65.36**	**320**	P	P	19 14 12.8	-0.2
	0.3nm,0.4s,baz=104,slow=7.0,SNR=6.9						

*CSEM **30** 19:05:00.7±0.3, 41°.93N×17°.39E, h10km, ML2.2, Error ellipse: s-maj=6.1km s-min=4.4km az=96.0*
*ROM **30** 19:05:01.6±0.5, 41°.92N×17°.35E, h10km, Md2.6/7, MI2.2/4, Error ellipse: s-maj=5.5km s-min=2.8km az=43.0*
*ISCJB **30** 19:05:02.2±0.9, 41°.96N±0°.04×17°.39E±0°.08, h28km±10km, Error ellipse: s-maj=9.5km s-min=6.2km az=3.9*

ISC 30 19:05:02.0±2.8, 41°.96N±0°.03×17°.37E±0°.05, h19km±6km, n18, σ0°.79/34, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAI	**Bari**	**0.93**	**204**	*e*Pg	**Pb**	**19 05 19.4**	**0.0**
BAI				*e*Sg	**Sb**	**19 05 32.0**	**+0.8**
STON	**Ston**	**0.95**	**15**	*i* Pg	**Pb**	**19 05 20.0**	**+0.2**
STON				Sg	**Sb**	**19 05 31.7**	**-0.2**
STON	**Ston**	**0.95**	**15**	*i* Pg	**Pb**	**19 05 19.9**	**+0.2**
STON				Sg	**Sb**	**19 05 31.7**	**-0.2**
MS1	**Monte Sant'Ang**	**1.09**	**257**	*e*Pg	**Pn**	**19 05 22.6**	**+0.2**
MS1				*e*Sg	**Sb**	**19 05 38.0**	**+1.8**
MSAG	**Monte S. Angel**	**1.12**	**258**	Pg	**Pn**	**19 05 22.1**	**-0.6**
MSAG				Sg	**Sb**	**19 05 37.0**	**+0.1**
	68nm,0.3s						
MSAG	**Monte S. Angel**	**1.12**	**258**	Pg	**Pn**	**19 05 22.1**	**-0.6**
MSAG				Sg	**Sb**	**19 05 37.0**	**+0.1**
	68nm,0.3s						
NOCI	**Noci**	**1.19**	**191**	Pg	**Pn**	**19 05 22.7**	**-0.9**
NOCI				Sg	**Sb**	**19 05 38.5**	**-0.4**
	60nm,0.2s						
NOCI	**Noci**	**1.19**	**191**	Pg	**Pn**	**19 05 22.7**	**-0.9**
NOCI				Sg	**Sb**	**19 05 38.5**	**-0.4**
	60nm,0.2s						
AMUR	**Altamura**	**1.20**	**209**	Pg	**Pn**	**19 05 22.9**	**-0.8**
AMUR				Sg	**Sb**	**19 05 38.0**	**-1.1**
AMUR	**Altamura**	**1.20**	**209**	Pg	**Pn**	**19 05 22.9**	**-0.8**
AMUR				Sg	**Sb**	**19 05 38.0**	**-1.1**
SGRT	**San Giovanni R**	**1.23**	**261**	Pg	**Pn**	**19 05 23.7**	**-0.5**
SGRT				Sg	**Sb**	**19 05 39.4**	**-0.8**
	58nm,1.2s						
SGRT	**San Giovanni R**	**1.23**	**261**	Pg	**Pn**	**19 05 23.7**	**-0.5**
SGRT				Sg	**Sb**	**19 05 39.4**	**-0.8**
	58nm,1.2s						
MATE	**Matera**	**1.40**	**201**	Pg	**Pn**	**19 05 27.6**	**+1.2**
MATE				Sg	**Sn**	**19 05 44.0**	**-0.3**
	40nm,0.6s						
MATE	**Matera**	**1.40**	**201**	Pg	**Pn**	**19 05 27.6**	**+1.2**
MATE				Sg	**Sn**	**19 05 44.0**	**-0.3**
	40nm,0.6s						
LTRZ	**Laterza**	**1.41**	**197**	Pg	**Pn**	**19 05 26.7**	**0.0**
LTRZ				Sg	**Sn**	**19 05 46.2**	**+1.4**
LTRZ	**Laterza**	**1.41**	**197**	Pg	**Pn**	**19 05 26.7**	**0.0**
LTRZ				Sg	**Sn**	**19 05 46.2**	**+1.4**
MESG	**Mesagne**	**1.41**	**165**	Pg	**Pn**	**19 05 26.5**	**-0.2**
MESG	**Mesagne**	**1.41**	**165**	Pg	**Pn**	**19 05 26.5**	**-0.2**

*IDC **30** 19:14:29.9±0.7, 32°.65N×81°.66E, h0km, mb3.8/14, mb1 4.0/17, mb1mx3.8/32, mbtmp3.8/17, ML3.3/3, MS3.0/4, Ms1 3.0/4, ms1mx2.6/39, Error ellipse: s-maj=22.8km s-min=13.8km az=44.0*
*ISCJB **30** 19:14:32.8±0.4, 32°.82N±0°.05×81°.70E±0°.05, h33km, mb3.8/18, MS3.0/3, Error ellipse: s-maj=9.0km s-min=4.9km az=35.8*
*NEIC **30** 19:14:35.1±0.5, 32°.84N×81°.72E, h35km, mb4.1/5, Error ellipse: s-maj=12.9km s-min=6.9km az=47.0*

ISC 30 19:14:35.4±0.6, 32°.79N±0°.09×81°.68E±0°.06, h35km, n50, σ1°36/53, mb3.9/18, MS3.0/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDI	**Dehra Dun**	**3.95**	**233**	*e*PN	Pn	19 15 45.3	+12
DDI				*e*SN	Sn	19 16 45.0	+26
CHCP	**Chirah Chowk**	**7.11**	**279**	P	**Pn**	**19 16 17.6**	**+0.7**
CEP	**Cherat**	**8.25**	**280**	P	**Pn**	**19 16 33.0**	**+0.4**
THW	**Thamme Wali**	**8.37**	**273**	P	**Pn**	**19 16 35.0**	**+0.8**
LSA	**Lhasa**	**8.67**	**108**	*e*Pn	**Pn**	**19 16 40.0**	**+1.2**
	7.5nm,0.5s						
LSA				*e*Sn	**Sn**	**19 18 16.4**	**+0.9**
KBL	**Kabul**	**10.68**	**283**	*e*Pn	**Pn**	**19 17 04.4**	**-1.6**
	8.2nm,0.8s						
KBL				*e*Sn	**Sn**	**19 19 01.9**	**-2.5**
TKM2	**Tokmak 2**	**11.20**	**336**	*e*Pn	**Pn**	**19 17 12.5**	**-0.5**
AAK	**Ala-Archa**	**11.35**	**332**	Pn	**Pn**	**19 17 14.0**	**-1.1**
AAK				Sn	**Sn**	**19 19 22.2**	**+1.4**
AAK	**Ala-Archa**	**11.35**	**332**	Pn	**Pn**	**19 17 17.0**	**+1.9**
	0.5nm,0.3s,baz=207,slow=3.8,SNR=3.7						
AAK				Sn	**Sn**	**19 19 22.2**	**+1.4**
	0.3nm,0.3s,baz=196,slow=18,SNR=2.1						
AAK				LR	LR	19 21 55.8	
	comp=Z,43nm,18.6s,baz=39,slow=39						
EKS2	**Erkin-Say**	**11.67**	**330**	*e*Pn	**Pn**	**19 17 19.0**	**-0.5**
	4.0nm,0.9s						
MK31	**Makanchi Array**	**14.00**	**2**	*e*Pn	**Pn**	**19 17 48.8**	**-2.3**
MKAR	**Makanchi Array**	**14.00**	**2**	Pn	**Pn**	**19 17 48.3**	**-2.8**
MKAR	**Makanchi Array**	**14.00**	**2**	Pn	**Pn**	**19 17 48.3**	**-2.8**
	0.1nm,0.3s,baz=184,slow=13,SNR=8.6						
KURBB	**Kurchatov Arra**	**17.97**	**353**	Pn	**Pn**	**19 18 39.4**	**-2.8**
	0.0nm,0.3s,baz=173,slow=10,SNR=6.9						
KURK	**Kurchatov**	**18.05**	**354**	Pn	**Pn**	**19 18 39.4**	**-3.9**
CHTO	**Chiang Mai**	**20.82**	**128**	*e*P	**P**	**19 19 12.3**	**-1.6**
	5.0nm,0.7s						
CM31	**Chiang Mai Arr**	**21.07**	**128**	*e*P	**P**	**19 19 15.6**	**-1.1**
	12nm,0.9s						
CMAR	**Chiang Mai Arr**	**21.07**	**128**	P	**P**	**19 19 15.8**	**-0.9**
CMAR	**Chiang Mai Arr**	**21.07**	**128**	P	**P**	**19 19 15.8**	**-0.9**
	14nm,0.7s,baz=311,slow=11,SNR=78						
ZAA0	**Zalesovo Array**	**21.27**	**5**	*e*P	**P**	**19 19 16.7**	**-1.8**
ZALV	**Zalesovo Beam**	**21.27**	**5**	P	**P**	**19 19 18.8**	**+0.4**
ZALV	**Zalesovo Beam**	**21.27**	**5**	P	**P**	**19 19 18.8**	**+0.4**
	1.2nm,0.5s,baz=183,slow=10.0,SNR=8.4						
BVAR	**Borovoye Array**	**21.80**	**341**	P	**P**	**19 19 24.1**	**-0.1**
BVAR	**Borovoye Array**	**21.80**	**341**	P	**P**	**19 19 24.1**	**-0.1**
	2.3nm,0.5s,baz=152,slow=9.5,SNR=15						
BRVK	**Borovoye**	**21.86**	**341**	*e*P	**P**	**19 19 24.1**	**-0.7**
	6.3nm,0.8s						
ABKAR	**Akbulak array**	**23.10**	**322**	*e*P	**P**	**19 19 37.6**	**-0.4**
	4.0nm,0.7s						
SONM	**Songino Array**	**23.96**	**44**	P	**P**	**19 19 46.8**	**+0.3**
SONM	**Songino Array**	**23.96**	**44**	P	**P**	**19 19 46.8**	**+0.3**
	0.5nm,0.8s,baz=232,slow=11,SNR=3.1						
SONM				LR	LR	19 29 50.5	
	comp=Z,42nm,19.2s,baz=238,slow=38						
AKTO	**Aktyubinsk**	**24.81**	**322**	P	**P**	**19 19 53.6**	**-0.4**
AKTO	**Aktyubinsk**	**24.81**	**322**	P	**P**	**19 19 53.6**	**-0.4**
	1.0nm,0.5s,baz=128,slow=10,SNR=5.6						
AKTO				LR	LR	19 31 00.2	
	comp=Z,49nm,20.6s,baz=128,slow=40						
KBZ	**Khabaz**	**32.09**	**301**	P	**P**	**19 20 59.2**	**+0.2**
KBZ	**Khabaz**	**32.09**	**301**	P	**P**	**19 20 59.2**	**+0.2**
	2.1nm,0.9s,baz=72,slow=3.2,SNR=2.9						
KSAR	**Wonju Array Be**	**37.79**	**70**	P	**P**	**19 21 48.9**	**+0.7**
KSRS	**Korea Array**	**37.82**	**70**	P	**P**	**19 21 48.9**	**+0.4**
	0.4nm,0.6s,baz=284,slow=9.0,SNR=2.5						
KSRS				LR	LR	19 38 05.4	
	comp=Z,26nm,18.7s,baz=255,slow=37						
BR131	**Keskin Array S**	**38.98**	**294**	P	**P**	**19 21 59.4**	**+1.0**
BRTR	**Keskin Array B**	**38.98**	**294**	P	**P**	**19 21 59.2**	**+0.8**
BRTR	**Keskin Array B**	**38.98**	**294**	P	**P**	**19 21 59.2**	**+0.8**
	0.5nm,0.6s,baz=112,slow=5.5,SNR=5.1						
FINES	**FINESS Array B**	**45.47**	**326**	P	**P**	**19 22 51.0**	**+0.3**
FINES	**FINESS Array B**	**45.47**	**326**	P	**P**	**19 22 51.0**	**+0.3**
	1.0nm,0.6s,baz=129,slow=8.1,SNR=9.3						
ARCES	**ARCESS Array B**	**47.98**	**337**	P	**P**	**19 23 12.2**	**+2.0**
ARCES	**ARCESS Array B**	**47.98**	**337**	P	**P**	**19 23 12.2**	**+2.0**
	3.9nm,0.9s,baz=88,slow=8.6,SNR=6.4						
WRA	**Warramunga Arr**	**72.67**	**128**	P	**P**	**19 25 58.8**	**-0.9**
WRA	**Warramunga Arr**	**72.67**	**128**	P	**P**	**19 25 58.8**	**-0.9**
	1.5nm,0.7s,baz=325,slow=6.0,SNR=16						
WRAB	**Tennant Creek**	**72.67**	**128**	P	**P**	**19 25 59.2**	**-0.6**
	3.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**74.66**	**276**	P	**P**	**19 26 11.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**74.66**	**276**	P	**P**	**19 26 11.2**	**-0.5**
	0.4nm,0.6s,baz=44,slow=5.6,SNR=3.4						
ASAR	**Alice Springs**	**75.05**	**131**	P	**P**	**19 26 13.0**	**-0.7**
ASAR	**Alice Springs**	**75.05**	**131**	P	**P**	**19 26 13.0**	**-0.7**
	0.9nm,0.6s,baz=313,slow=6.1,SNR=34						
ILAR	**Eielson Array**	**75.64**	**19**	P	**P**	**19 26 17.5**	**+1.1**
ILAR	**Eielson Array**	**75.64**	**19**	P	**P**	**19 26 17.5**	**+1.1**
	0.4nm,0.8s,baz=324,slow=4.5,SNR=4.1						

*NNC **30** 19:19:31.9±4.2, 38°.97N×76°.42E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=38.1km s-min=27.2km az=130.0*
*IDC **30** 19:19:33.5±2.0, 39°.50N×76°.70E, h0km, mb3.2/3, mb1 3.3/8, mb1mx3.2/32, mbtmp3.2/8, ML3.3/5, Error ellipse: s-maj=27.2km s-min=21.2km az=23.0*
*BJI **30** 19:19:34.5, 39°.48N×77°.00E, h5km, ML3.7/7*

ISC 30 19:19:37.7±1.7, 39°.57N±0°.10×76°.95E±0°.09, h10km, n25, σ1°61/25, mb3.5/3, 5C-3D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.76**	**266**	Pg	**Pn**	**19 19 55.0**	**+0.4**
KSH				Sg	**Sn**	**19 20 09.8**	**+3.6**
KSH				smax	smax		
	comp=N,2μm,0.7s				

BFZ	**Birch Farm**	**5.90**	**199**	PN	Pn	19 26 12.6 0.0
MRZ	**Mangatainoka R**	**6.08**	**204**	PN	Pn	19 26 13.1 -1.9
MRZ				SN	S	19 27 19.1 -6.9
TIWZ	**Tintock**	**6.09**	**201**	PN	Pn	19 26 13.8 -1.3
HOWZ	**Holdsworth Sta**	**6.32**	**203**	PN	Pn	19 26 15.8 -2.1
OGWZ	**Otaki Gorge**	**6.37**	**206**	PN	Pn	19 26 16.6 -1.8
KIW	**Kapiti Island**	**6.50**	**207**	PN	Pn	19 26 18.7 -1.5
CAW	**Cannon Point**	**6.66**	**205**	PN	Pn	19 26 19.9 -2.3
TCW	**Tory Channel**	**7.04**	**209**	PN	Pn	19 26 25.1 -1.9
TUWZ	**Tuamarina**	**7.36**	**210**	PN	Pn	19 26 28.6 -2.4
NNZ	**Nelson**	**7.43**	**214**	PN	Pn	19 26 29.4 -2.5
QRZ	**Quartz Range**	**7.55**	**219**	PN	Pn	19 26 31.8 -1.6
KHZ	**Kahutara**	**8.36**	**208**	PN	Pn	19 26 41.5 -2.2

ISCJB ***30*** *19:33:27.0±0.9, 22°.68N±0°.08×122°.82E±0°.05, h20km, Error ellipse: s-maj=12.9km s-min=3.3km az=150.5*
TAP ***30*** *19:33:29.6, 22°.55N×122°.66E, h91km±2km, ML3.0, D*
JMA ***30*** *19:33:29.9±0.6, 22°.86N×122°.75E, h73km*
ISC 30 19:33:27.2±1.4, 22°.70N±0°.09×122°.77E±0°.06, h20km, n16, σ0§68/27, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**1.30**	**240**	*eP*			**Pn**	**19 33 50.8**	**+0.5**
	baz=248								
LAY				*eS*			**Sn**	**19 34 06.4**	**-0.8**
	baz=248								
CHKT	**Chengkung**	**1.35**	**287**	*eP*			**Pb**	**19 33 52.0**	**+0.1**
	baz=292								
CHKT				*eS*			**Sn**	**19 34 07.7**	**-0.7**
	baz=292								
TWG	**Pinlang**	**1.57**	**275**	*eP*			**Pb**	**19 33 55.6**	**0.0**
	baz=283								
TWG				*eS*			**Sb**	**19 34 14.7**	**-0.4**
	baz=283								
HATJ	**Hateruma jima**	**1.66**	**35**	P			**Pn**	**19 33 55.8**	**+0.7**
HATJ				*eS*			**Sn**	**19 34 15.1**	**-0.7**
ECL	**Taimali**	**1.68**	**267**	*eP*			**Pb**	**19 33 56.8**	**-0.7**
	baz=272								
ECL				*eS*			**Sn**	**19 34 16.4**	**0.0**
	baz=272								
ELDTW	**Lidau**	**1.69**	**287**	*eP*			**Pn**	**19 33 56.5**	**+0.8**
	baz=293								
YOJ	**Yonaguni jima**	**1.77**	**7**	P			**Pn**	**19 33 56.9**	**+0.2**
EAST	**Anshuo**	**1.80**	**260**	*eP*			**Pn**	**19 33 57.9**	**+0.6**
	baz=258								
EAST				*eS*			**Sn**	**19 34 19.2**	**-0.3**
	baz=258								
IRIF	**Iriomote-Funau**	**1.85**	**28**	P			**Pn**	**19 33 58.9**	**+1.0**
IRIF				*eS*			**Sn**	**19 34 20.5**	**-0.2**
JKRS	**Kuro-shima**	**1.91**	**36**	P			**Pn**	**19 33 59.8**	**+1.1**
JKRS				*eS*			**Sn**	**19 34 21.6**	**-0.5**
WTP	**Ta-pu**	**2.06**	**286**	*eP*			**Pb**	**19 34 03.5**	**-0.5**
	baz=297								
WTP				*eS*			**Sb**	**19 34 29.8**	**+0.6**
	baz=297								
JIJ	**Ishigaki jima**	**2.08**	**37**	P			**Pn**	**19 34 01.5**	**+0.4**
JIJ				*eS*			**Sn**	**19 34 24.8**	**-1.6**
CHN4	**Tsaushan**	**2.11**	**288**	*eP*			**Pb**	**19 34 05.1**	**+0.4**
	baz=292								
CHN5	**Tsauling**	**2.12**	**295**	*eP*			**Pb**	**19 34 04.6**	**-0.5**
	baz=304								
TYC	**Yuchr**	**2.13**	**305**	*eP*			**Pb**	**19 34 04.7**	**-0.4**
	baz=314								
JTJ	**Tarama**	**2.62**	**42**	P			**Pn**	**19 34 09.1**	**+0.6**
JTJ				*eS*			**Sn**	**19 34 39.7**	**-0.1**

IDC ***30*** *19:34:16.1±1.6, 64°.54N×17°.33W, h0km, mb3.3/4, mb1 3.7/6, mb1mx3.4/29, mbtmp3.6/6, ML4.3/2, Error ellipse: s-maj=50.5km s-min=17.1km az=21.0*
ISCJB ***30*** *19:34:17.5±0.8, 64°.5N±0°.2×17°.4W±0°.2, h9km, mb3.5/8, Error ellipse: s-maj=24.9km s-min=6.8km az=26.8*
ISC 30 19:34:17.6±1.2, 64°.6N±0°.2×17°.4W±0°.1, h9km, n18, σ1§82/16, mb3.6/8, Iceland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**1.70**	**278**	Pn			**Pn**	**19 34 47.6**	**+0.2**
	10nm,0.3s,baz=96,slow=9.1,SNR=29								
BORG				Sn			**Sb**	**19 35 10.1**	**-0.4**
	4.6nm,0.3s,baz=29,slow=23,SNR=6.7								
EKA	**Eskdalemuir Ar**	**11.65**	**136**	Pn			**Pn**	**19 37 02.4**	**-1.4**
	baz=326,slow=13,SNR=15								
SFJD	**Kangerlussuaq**	**13.75**	**295**	Pn			**Pn**	**19 37 32.5**	**+0.2**
	1.9nm,0.3s,baz=104,slow=18,SNR=6.3								
ROSF	**Rostrenen**	**17.96**	**148**	*eP*			**Pn**	**19 38 27.5**	**+0.3**
LOR	**Lormes**	**20.84**	**136**	*eP*			Pn	19 39 04.0	+2.3
SSF	**Saint Saulge**	**20.92**	**137**	*eP*			Pn	19 39 04.5	+1.8
	5.8nm,0.8s								
AVF	**Avril sur Loir**	**21.12**	**138**	*eP*			**P**	**19 39 06.5**	**+4.2**
SMF	**Signal de Mont**	**21.40**	**137**	*eP*			**P**	**19 39 09.3**	**+4.1**
	12nm,0.8s								
LFF	**La Frestale**	**22.11**	**144**	*eP*			**P**	**19 39 14.2**	**+1.3**
CAF	**Calviac**	**22.47**	**142**	*eP*			**P**	**19 39 18.1**	**+1.3**
GERES	**GERESS Array B**	**22.86**	**119**	P			**P**	**19 39 19.9**	**-1.2**
	0.3nm,0.8s,baz=334,slow=11,SNR=2.6								
SJPF	**Ste Jean**	**23.37**	**149**	*eP*			**P**	**19 39 25.2**	**-0.9**
ETSF	**Etsaut**	**23.72**	**148**	*eP*			**P**	**19 39 29.6**	**-0.1**
	6.3nm,0.8s								
EPF	**Esparros**	**23.81**	**146**	*eP*			**P**	**19 39 31.4**	**+0.9**
	13nm,1.1s								
ESDC	**Sonseca Array**	**26.14**	**156**	P			**P**	**19 39 51.6**	**-0.2**
	1.1nm,0.7s,baz=346,slow=9.5,SNR=6.2								
BRTR	**Keskin Array B**	**38.41**	**105**	P			**P**	**19 41 38.8**	**-0.3**
	0.5nm,0.7s,baz=332,slow=10,SNR=2.5								
ILAR	**Eielson Array**	**45.80**	**333**	P			P	19 42 43.2	+4.3
	0.3nm,0.8s,baz=25,slow=6.9,SNR=4.4								
TORD	**Torodi Ar. Bea**	**53.03**	**157**	P			**P**	**19 43 34.7**	**+0.1**
	0.4nm,0.6s,baz=345,slow=9.0,SNR=3.1								

IDC 30 19:42:26.1±2.2, 2°.29N×128°.42E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, Error ellipse: s-maj=144.4km s-min=25.6km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.85**	**166**	P			P	19 47 31.3	+0.2
	0.3nm,0.4s,baz=345,slow=11,SNR=8.2								
ASAR	**Alice Springs**	**26.35**	**169**	P			P	19 48 03.5	-0.5
	0.2nm,0.6s,baz=355,slow=8.2,SNR=6.9								
MKAR	**Makanchi Array**	**59.69**	**325**	P			P	19 52 32.7	+0.2
	0.4nm,0.6s,baz=121,slow=7.7,SNR=6.4								

IDC ***30*** *19:56:37.8±0.3, 6°.52S×150°.00E, h0km, mb4.9/29, mb1 4.9/30, mb1mx4.9/31, mbtmp4.9/30, ML4.5/2, MS4.7/25, Ms1 4.7/25, ms1mx4.5/32, Error ellipse: s-maj=14.5km s-min=9.6km az=90.0*
MOS ***30*** *19:56:42.8±1.2, 6°.48S×149°.79E, h33km, mb5.4/36, MS5.0/16, Error ellipse: s-maj=8.6km s-min=6.2km az=85.9*
ISCJB ***30*** *19:56:42.9±0.1, 6°.60S±0°.02×149°.90E±0°.03, h44km, mb5.1/132, MS4.8/57, Error ellipse: s-maj=4.2km s-min=3.3km az=21.6*
AUST ***30*** *19:56:42.1, 6°.67S×150°.14E, h25km*
BJI ***30*** *19:56:42.6, 6°.38S×150°.31E, h46km, mB5.1/39, mb5.0/48, Ms4.9/50, Ms7 4.7/50*
NEIC ***30*** *19:56:43.7±0.8, 6°.54S×149°.89E, h37km±6km, mb5.2/87, Error ellipse: s-maj=4.7km s-min=4.6km az=122.0*
GCMT ***30*** *19:56:45.2±0.1, 6°.77S×150°.03E, h17km, MW5.3, Moment Tensor Solution. s80,c120; s97,c184; Moment tensor: Scale 10^17Nm; Mrr=0.00; Mθθ=0.00; Mφφ=0.00; Mrθ=0.00; Mrφ=0.00; Mθφ=0.00; Best double couple: Mo=1.10000×10^17 NP1:ϕ=30.00000°, δ=61.00000°, λ=172.00000°. NP2: ϕ=124.00000°, δ=83.00000°, λ=30.00000°. Principal axes: T 1.0700, Plg26.0000°, Azm351.0000°; N 0.1400, Plg60.0000°, Azm136.0000°; P -1.2100, Plg15.0000°, Azm253.0000°; Data Used: ll IU IC G CN.*
DJA ***30*** *19:56:55.8±2.4, 7°.S±13°×15°.0E±1°.5, h94km±16km, M5.2/14, mB5.4/13, mb5.2/14, MLv5.7/1, Mw(mB)4.9/13*
ISC 30 19:56:44.9±0.3, 6°.61S±0°.03×149°.99E±0°.04, h46km±1km, h46km:pP-P, n858, σ1§37/919, mb5.1/131, MS4.8/57, 43C-35D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.24**	**42**	P			**Pn**	**19 57 31.8**	**-1.5**
	baz=3.2,SNR=331								

PMG	**Port Moresby**	**3.94**	**225**	*ePn*		**Pn**	**19 57 42.2**	**-0.7**
PMG				*eSn*		**Sn**	**19 58 26.0**	**-2.0**
PMG	**Port Moresby**	**3.94**	**225**	P		**Pn**	**19 57 43.0**	**0.0**
PMG	**Port Moresby**	**3.94**	**225**	Pn		**Pn**	**19 57 42.4**	**-0.6**
	335nm,0.3s,baz=45,slow=6.2,SNR=752							
PMG				Sn		**Sn**	**19 58 28.4**	**+0.4**
	528nm,0.3s,baz=83,slow=13,SNR=12							
PMG				LR		LR	19 59 35.7	
	comp=Z,9μm,19.9s,baz=37,slow=44							
COEN	**Coen**	**9.91**	**222**	*ePn*		**Pn**	**19 59 03.2**	**-1.6**
	403nm,0.7s							
COEN				*eSn*		Sn	20 00 48.1	-6.6
COEN	**Coen**	**9.91**	**222**	P		**Pn**	**19 59 03.2**	**-1.6**
	baz=10.0,SNR=66							
JAY	**Jayapura**	**10.11**	**293**	P		Pn	19 59 18.3	+11
	baz=10,SNR=4.9							
HNR	**Honiara**	**10.25**	**107**	*ePn*		**Pn**	**19 59 09.9**	**+0.4**
HNR	**Honiara**	**10.25**	**107**	Pn		**Pn**	**19 59 10.1**	**+0.6**
	baz=172,slow=15,SNR=5.0							
HNR				LR		LR	20 02 11.1	
	comp=Z,3μm,20.2s,baz=109,slow=32							
MTSU	**Mount Surprise**	**12.72**	**205**	P		**Pn**	**19 59 42.5**	**-0.7**
	baz=13,SNR=46							
CTA	**Charters Tower**	**13.88**	**195**	Pn		**Pn**	**19 59 59.1**	**0.0**
CTA	**Charters Tower**	**13.88**	**195**	Pn		**Pn**	**19 59 59.1**	**0.0**
	1.0nm,0.3s,baz=20,slow=13,SNR=14							
CTA				LR		LR	20 05 00.7	
	comp=Z,4μm,19.0s,baz=17,slow=36							
CTAO	**Charters Tower**	**13.88**	**195**	*eP*		**Pn**	**19 59 59.1**	**0.0**
CTAO				pmax		pmax		
	comp=Z,53nm,0.7s							
CTAO	**Charters Tower**	**13.88**	**195**	*ePn*		**Pn**	**19 59 59.1**	**0.0**
	comp=Z,53nm,0.7s							
CTAO				*e*			20 00 06.7	
QIS	**Mount Isa**	**17.13**	**215**	P		**Pn**	**20 00 40.2**	**-1.0**
	baz=17,SNR=163							
FAKI	**Fak Fak**	**18.05**	**281**	P		**P**	**20 00 55.1**	**+2.6**
	comp=Z,95nm,1.9s,comp=Z,2μm							
FAKI	**Fak Fak**	**18.05**	**281**	P		**P**	**20 00 53.9**	**+1.4**
	baz=18,SNR=6.3							
FAKI				S		S	20 04 29.8	+13
	baz=18,SNR=5.4							
KDU	**Kakadu**	**18.29**	**249**	P		**P**	**20 00 52.7**	**-2.4**
	baz=18,SNR=78							
EIDS	**Eidsvold**	**18.68**	**177**	*eP*		**P**	**20 00 58.4**	**-1.0**
	comp=Z,27nm,0.6s							
EIDS	**Eidsvold**	**18.68**	**177**	P		**P**	**20 00 58.8**	**-0.5**
	baz=19,SNR=24							
SWI	**Sorong**	**19.54**	**286**	P		**Pn**	**20 01 11.0**	**+0.6**
	comp=Z,88nm,1.0s,comp=Z,905nm							
SWI	**Sorong**	**19.54**	**286**	P		**P**	**20 01 08.8**	**0.0**
	baz=20,SNR=7.0							
MTN	**Manton Dam**	**19.58**	**250**	P		**P**	**20 01 08.7**	**-0.6**
	baz=20,SNR=118							
RMQ	**Roma**	**19.80**	**183**	P		**P**	**20 01 11.7**	**+0.1**
	baz=20,SNR=86							
WRAB	**Tennant Creek**	**20.15**	**227**	*ǁiP*		**P**	**20 01 14.5**	**-0.9**
WRAB				pmax		pmax		
	comp=Z,503nm,0.7s							
WRAB	**Tennant Creek**	**20.15**	**227**	*ǁiP*		**P**	**20 01 14.5**	**-0.9**
	comp=Z,503nm,0.7s							
WRAB	**Tennant Creek**	**20.15**	**227**	P		**P**	**20 01 14.2**	**-1.2**
	comp=Z,5μm,0.7s							
WRA	**Warramunga Arr**	**20.16**	**227**	P		**P**	**20 01 14.9**	**-0.7**
WRA				ScP		**ScP**	**20 09 05.1**	**+3.2**
WRA				PKiKP		**PKiKP**	**20 13 16.4**	**-1.7**
WRA	**Warramunga Arr**	**20.16**	**227**	P		**P**	**20 01 14.9**	**-0.7**
	comp=Z,447nm,0.6s,baz=51,slow=11,SNR=440							
WRA				ScP		**ScP**	**20 09 05.1**	**+3.2**
	comp=Z,7.3nm,1.2s,baz=42,slow=2.3,SNR=8.2							
WRA				LR		LR	20 09 37.0	
	comp=Z,2μm,18.5s,baz=60,slow=38							
WRA				PKiKP		**PKiKP**	**20 13 16.4**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=320,slow=1.2,SNR=12							
QLP	**Quilpie**	**20.60**	**195**	P		**P**	**20 01 20.1**	**-0.2**
	baz=21,SNR=179							
GUMO	**Guam**	**20.70**	**346**	*eP*		**P**	**20 01 21.0**	**-0.4**
	comp=Z,162nm,1.1s							
PALU	**Palu**	**20.78**	**312**	P		Pn	20 01 31.3	+6.2
	baz=21,SNR=7.8							
MSAI	**Masohi**	**21.23**	**278**	P		**P**	**20 01 30.2**	**+3.1**
	comp=Z,24nm,0.7s,comp=Z,787nm							
DZM	**Mont Dzumac**	**22.11**	**136**	*eP*		**P**	**20 01 38.9**	**+2.3**
	comp=Z,144nm,1.4s							
DZM				*eLQ*		LQ	20 06 09.0	
	comp=Z,6μm,32.0s							
DZM				*eLR*		LR	20 07 07.2	
	comp=Z,6μm,23.9s							
DZM	**Mont Dzumac**	**22.11**	**136**	P		**P**	**20 01 36.7**	**+0.1**
DZM	**Mont Dzumac**	**22.11**	**136**	P		**P**	**20 01 36.7**	**+0.1**
	comp=Z,14nm,0.8s,baz=337,slow=13,SNR=8.5							
KNRA	**Kununurra**	**22.67**	**245**	P		**P**	**20 01 41.3**	**-1.3**
	baz=23,SNR=230							
AS31	**Alice Springs**	**22.94**	**221**	*eP*		**P**	**20 01 44.2**	**-1.2**
ASAR	**Alice Springs**	**22.95**	**221**	P		**P**	**20 01 44.2**	**-1.2**
ASAR				S		**S**	**20 05 52.2**	**-0.2**
ASAR				ScP		**ScP**	**20 09 12.8**	**+3.9**
ASAR				PKiKP		**PKiKP**	**20 13 18.2**	**-1.2**
ASAR				*e*			20 35 09.8	
ASAR	**Alice Springs**	**22.95**	**221**	P		**P**	**20 01 44.2**	**-1.2**
	comp=Z,62nm,0.6s,baz=58,slow=8.5,SNR=582							
ASAR				S		**S**	**20 05 52.2**	**-0.2**
	comp=Z,10nm,0.7s,baz=38,slow=20,SNR=6.1							
ASAR				ScP		**ScP**	**20 09 12.8**	**+3.9**
	comp=Z,0.9nm,0.8s,baz=46,slow=4.0,SNR=3.1							
ASAR				LR		LR	20 11 35.4	
	comp=Z,2μm,18.2s,baz=46,slow=39							
ASAR				PKiKP		**PKiKP**	**20 13 18.2**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=28,slow=1.7,SNR=4.6							
ASAR				P3KPbc			20 35 09.8	
	comp=Z,0.2nm,0.6s,baz=216,slow=2.6,SNR=4.5							
LBMI	**Labuha**	**23.20**	**284**	P		**P**	**20 01 51.5**	**+3.4**
	comp=Z,165nm,1.1s,comp=Z,2μm							
ARMA	**Armidale**	**23.73**	**176**	*eP*		**P**	**20 01 51.8**	**-1.3**
	comp=Z,422nm,1.5s							
ARMA	**Armidale**	**23.73**	**176**	P		**P**	**20 01 52.1**	**-0.9**
	baz=24,SNR=21							
CMSA	**Cobar Meteorol**	**25.12**	**189**	P		**P**	**20 02 04.6**	**-1.0**
	baz=25,SNR=76							
STKA	**Stephens Creek**	**26.33**	**196**	*eP*		**P**	**20 02 15.3**	**-1.2**
	comp=Z,31nm,1.0s							
STKA	**Stephens Creek**	**26.33**	**196**	P		**P**	**20 02 15.8**	**-0.8**
	comp=Z,84nm,0.8s,baz=344,slow=8.0,SNR=67							
STKA				LR		LR	20 13 04.8	
	comp=Z,4μm,19.1s,baz=12,slow=37							
STKA	**Stephens Creek**	**26.33**	**196**	P		**P**	**20 02 15.5**	**-1.0**
	baz=26,SNR=89							
FITZ	**Fitzroy Crossi**	**26.34**	**242**	*eP*		**P**	**20 02 16.5**	**-0.3**
	comp=Z,225nm,0.6s							
FITZ	**Fitzroy Crossi**	**26.34**	**242**	P		**P**	**20 02 16.7**	**-0.2**
	comp=Z,249nm,0.6s,baz=75,slow=7.6,SNR=692							
FITZ				LR		LR	20 15 03.2	
	comp=Z,2μm,18.1s,baz=67,slow=42							
FITZ	**Fitzroy Crossi**	**26.34**	**242**	P		**P**	**20 02 16.6**	**-0.3**
	baz=26,SNR=1000							
MNI	**Manado**	**26.35**	**287**	P		P	20 02 25.5	+8.6
MGCD	**Mangrove Creek**	**26.48**	**178**	P		**P**	**20 02 17.9**	**0.0**
	baz=27,SNR=6.2							
MMRI	**Maumere**	**27.58**	**264**	P		**P**	**20 02 28.6**	**+0.6**
	comp=Z,386nm,0.7s,comp=Z,4μm							
YNG	**Young**	**27.59**	**183**	P		**P**	**20 02 27.6**	**-0.3**
	baz=28,SNR=39							
LUWI	**Luwuk**	**27.70**	**280**	P		**P**	**20 02 30.0**	**+0.9**
	baz=28,SNR=8.3							
CNB	**Canberra Magne**	**28.57**	**181**	P		**P**	**20 02 36.6**	**0.0**
	baz=29,SNR=12							
BBOO	**Buckleboo**	**29.11**	**205**	*eP*		**P**	**20 02 40.0**	**-1.4**
	comp=Z,1μm,1.2s							
BBOO	**Buckleboo**	**29.11**	**205**	P		**P**	**20 02 40.3**	**-1.1**
	baz=29,SNR=42							
MSVF	**Nonsavu**	**29.52**	**115**	*eP*		**P**	**20 02 48.4**	**+3.0**
MSVF				pmax		pmax		
	comp=Z,95nm,1.4s							
MSVF	**Nonsavu**	**29.52**	**115**	*eP*		**P**	**20 02 48.4**	**+3.0**
	comp=Z,95nm,1.4s							
WSI	**Waingapu**	**29.54**	**262**	P		P	20 02 50.7	+5.2
	baz=30,SNR=8.9							
KAPI	**Kappang**	**30.12**	**271**	*eP*		**P**	**20 02 50.1**	**-0.4**
	comp=Z,29nm,0.8s							
KAPI	**Kappang**	**30.12**	**271**	P		**P**	**20 02 50.9**	**+0.3**
	comp=Z,215nm,0.7s,SNR=6.6							
KAPI	**Kappang**	**30.12**	**271**	P		**P**	**20 02 50.2**	**-0.4**
	comp=Z,27nm,0.9s,baz=122,slow=1.6,SNR=15							
ARPS	**Mount Arapiles**	**30.93**	**193**	P		**P**	**20 02 57.2**	**-0.2**
	baz=31,SNR=38							
TOO	**Toolangi**	**31.09**	**187**	P		**P**	**20 02 59.3**	**+0.4**
	baz=31,SNR=10							

FORT	**Forrest**	**31.64**	**218**	*eP*		**P**	**20 03 03.0**	**-0.8**
	comp=Z,132nm,0.7s							
FORT	**Forrest**	**31.64**	**218**	P		**P**	**20 03 03.5**	**-0.3**
	baz=32,SNR=30							
MBWA	**Marble Bar**	**32.65**	**241**	*eP*		**P**	**20 03 12.5**	**-0.3**
	comp=Z,62nm,0.8s							
TSM	**Tawau**	**33.84**	**288**	P		pP	20 03 33.3	-2.2
JAGI	**Jajag, Banyuwa**	**35.57**	**265**	P		**P**	**20 03 36.2**	**-2.0**
	baz=36,SNR=20							
MOO	**Moorlands**	**35.77**	**184**	P		**P**	**20 03 40.0**	**+0.5**
	baz=36,SNR=16							
MEEK	**Meekatharra**	**35.89**	**233**	P		**P**	**20 03 40.6**	**-0.2**
	baz=36,SNR=65							
KMBL	**Kambalda**	**36.02**	**223**	P		**P**	**20 03 41.8**	**-0.1**
	baz=36,SNR=56							
TAU	**Tasmania Unive**	**36.23**	**183**	*eP*		**P**	**20 03 43.2**	**-0.2**
TAU				pmax		pmax		
	comp=Z,70nm,0.9s							
TAU	**Tasmania Unive**	**36.23**	**183**	*eP*		**P**	**20 03 43.2**	**-0.2**
	comp=Z,70nm,0.9s							
TAU	**Tasmania Unive**	**36.23**	**183**	P		**P**	**20 03 43.0**	**-0.4**
	comp=Z,381nm,0.8s,SNR=13							
RAO	**Raoul Island**	**37.71**	**131**	LR		LR	20 16 47.2	
	comp=Z,530nm,20.6s,baz=232,slow=32							
GIRL	**Giralia**	**37.95**	**241**	P		**P**	**20 04 00.8**	**+2.5**
	baz=38,SNR=7.0							
BTM	**Bintulu**	**38.11**	**284**	P		**P**	**20 03 57.7**	**-2.2**
SBUM	**Sibu**	**38.76**	**282**	P		**P**	**20 04 06.1**	**+0.8**
KLBR	**Kellerberrin**	**39.04**	**226**	P		**P**	**20 04 06.5**	**-0.9**
	baz=39,SNR=118							
MORW	**Morawa**	**39.04**	**231**	P		**P**	**20 04 07.1**	**-0.4**
	baz=39,SNR=19							
UGM	**Wanagama**	**39.16**	**266**	P		**P**	**20 04 11.3**	**+2.6**
	baz=39,SNR=9.3							
BLDU	**Ballidu**	**39.29**	**228**	P		**P**	**20 04 09.0**	**-0.5**
	baz=39,SNR=26							
URZ	**Urewera**	**39.95**	**146**	P		**P**	**20 04 15.0**	**+0.2**
URZ	**Urewera**	**39.95**	**146**	P		**P**	**20 04 15.0**	**+0.2**
	comp=Z,12nm,1.0s,baz=268,slow=8.7,SNR=2.8							
NWAO	**Narrogin (SRO)**	**40.13**	**225**	*eP*		**P**	**20 04 15.8**	**-0.7**
	comp=Z,113nm,1.4s							
NWAO	**Narrogin (SRO)**	**40.13**	**225**	P		**P**	**20 04 16.0**	**-0.5**
	comp=Z,37nm,0.7s,baz=53,slow=8.3,SNR=27							
NWAO				LR		LR	20 21 19.1	
	comp=Z,3μm,19.0s,baz=58,slow=37							
KSM	**Kuching**	**40.41**	**280**	*eP*		**P**	**20 04 18.7**	**-0.4**
	comp=Z,12nm,0.8s							
KSM	**Kuching**	**40.41**	**280**	P		**P**	**20 04 19.6**	**+0.6**
KSM	**Kuching**	**40.41**	**280**	P		**P**	**20 04 20.0**	**+1.0**
	baz=41,SNR=5.7							
JHJ	**Hachijo jima 2**	**40.69**	**347**	LR		LR	20 20 49.3	
	comp=Z,633nm,19.1s,baz=54,slow=36							
YULB	**Yu-li**	**40.93**	**318**	*eP*		**P**	**20 04 22.1**	**-1.1**
	comp=Z,9.7nm,0.6s							
RKGY	**Rocky Gully**	**41.25**	**223**	P		**P**	**20 04 26.1**	**+0.4**
	baz=41,SNR=18							
NACB	**Ninganchiao**	**41.27**	**319**	*eP*		**P**	**20 04 26.6**	**+0.7**
	comp=Z,41nm,1.1s							
TPUB	**Ta-pu**	**41.32**	**317**	*eP*		**P**	**20 04 24.4**	**-2.0**
	comp=Z,18nm,0.6s							
TPUB				*e*		**pP**	**20 04 35.9**	**-3.0**
RPZ	**Rata Peaks**	**41.33**	**157**	P		**P**	**20 04 26.2**	**+0.1**
RPZ	**Rata Peaks**	**41.33**	**157**	P		**P**	**20 04 26.2**	**+0.1**
	comp=Z,18nm,0.8s,baz=333,slow=11,SNR=3.9							
SSLB	**Suanglung**	**41.43**	**318**	*eP*		**P**	**20 04 25.7**	**-1.6**
	comp=Z,8.6nm,0.6s							
YHNB	**Yeheng**	**41.76**	**319**	*eP*		**P**	**20 04 30.4**	**+0.3**
	comp=Z,34nm,0.9s							
CISI	**Cisompet, Garu**	**41.85**	**266**	P		**P**	**20 04 31.6**	**+0.6**
	baz=42,SNR=9.1							
LEM	**Lembang**	**42.07**	**267**	P		**P**	**20 04 34.7**	**+1.8**
	baz=42,SNR=8.1							
JNU	**Nakatsue**	**43.49**	**336**	P		**P**	**20 04 42.7**	**-1.2**
JNU	**Nakatsue**	**43.49**	**336**	P		**P**	**20 04 42.7**	**-1.2**
	comp=Z,15nm,0.5s,baz=137,slow=3.2,SNR=27							
JNU				LR		LR	20 21 19.4	
	comp=Z,696nm,20.1s,baz=317,slow=34							
QZH	**Quanzhou**	**43.80**	**317**	*ǁiP*		P	20 04 50.5	+4.1
QZH				S		**S**	**20 11 14.0**	**-0.1**
QZH				LR		LR		
	comp=N,1μm,15.1s							
QZH				LR		LR		
	comp=E,750nm,14.0s							
QZH				LR		LR		
	comp=Z,2μm,25.0s							
**XM

WHN LR LR
comp=Z,1μm,24.3s
YUK Yuzh-Kuril'sk 50.55 356 *c iP* **P 20 05 37.3 -1.4**
YUK *i* *PP **pP** **20 05 48.4 -3.1**
YUK *e* 20 07 32.7
YUK *i* S **S 20 12 47.8 -1.9**
YUK *e**SS **sS** **20 13 08.4 -2.7**
YUK *e*SS SS 20 16 15.8 -8.7
KULM Kulim 50.65 282 *eP* **P 20 05 39.8 -0.3**
comp=Z,15nm,0.8s
ASAJ Asahikawa 50.93 353 *eP* **P 20 05 41.1 -0.5**
comp=Z,11nm,0.8s
ASAJ Asahikawa 50.93 353 P **P 20 05 41.1 -0.5**
comp=Z,25nm,0.7s,baz=205,slow=12,SNR=20
ASAJ LR LR 20 25 31.2
comp=Z,452nm,22.0s,baz=177,slow=34
PSI Prapat 51.83 279 P **P 20 05 48.9 -0.2**
baz=52,SNR=6.5
VLA Vladivostok 52.16 343⇑ *eP* P 20 05 47.5 -3.3
VLA *e* 20 07 00.1
VLA 20 07 47.1
VLA pmax pmax
comp=Z,45nm,1.6s
USRK Ussuriysk Arra 53.12 344 P **P 20 05 57.9 -0.1**
comp=Z,12nm,0.5s,baz=163,slow=8.0,SNR=32
USRK LR LR 20 26 32.9
comp=Z,524nm,20.8s,baz=146,slow=34
GYA Guiyang 53.33 310 *eP* **P 20 06 02.0 +2.0**
GYA pP **pP** **20 06 16.3 +3.4**
GYA sP **sP** **20 06 22.5 +4.3**
GYA PcP **PcP** **20 07 09.5 +2.4**
GYA PP **PP** **20 08 04.3 +3.6**
GYA ScP **ScP** **20 11 01.5 +0.3**
GYA S **S** **20 13 28.3 -0.5**
GYA SS **SS** **20 17 09.5 +0.1**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=N,650nm,18.2s
GYA LR LR
comp=E,510nm,19.0s
GYA LR LR
comp=Z,590nm,18.4s
ENH Enshi 53.41 316 *eP* **P 20 05 59.0 -1.3**
comp=Z,47nm,1.6s
YSS Yuzh-Sakhalins 53.72 354⇑ *iP* **P 20 06 05.0 +2.8**
YSS *eS* **S** **20 13 38.0 +5.0**
YSS *e*PS **PnS** **20 13 47.0 -1.0**
YSS *e*SS **SS** **20 17 15.0 +0.5**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,400nm,18.0s
SNY Shenyang 53.92 336 ⇑P **P 20 06 01.5 -2.2**
SNY S **S** **20 13 34.5 -1.4**
SNY LR LR
comp=N,430nm,20.3s
SNY LR LR
comp=E,310nm,15.3s
SNY LR LR
comp=Z,520nm,30.4s
MDJ Mudanjiang 54.20 342 P **P 20 06 08.5 +2.7**
MDJ pP **pP** **20 06 20.0 +1.3**
MDJ sP **sP** **20 06 25.0 +0.9**
MDJ PcS **PcS** **20 11 11.5 +2.4**
MDJ S **S** **20 13 44.0 +4.3**
MDJ sS **sS** **20 14 04.0 +2.7**
MDJ pmax pmax
comp=Z,23nm,0.9s
MDJ pmax pmax
comp=Z,78nm,4.0s
MDJ LR LR
comp=N,390nm,27.3s
MDJ LR LR
comp=E,240nm,29.3s
MDJ LR LR
comp=Z,660nm,25.4s
MDJ Mudanjiang 54.20 342 *eP* **P 20 06 05.7 -0.1**
comp=Z,17nm,0.7s
CN2 Changchun 54.87 338 *eP* P 20 06 15.8 +5.1
CN2 *e*pP pP 20 06 28.5 +4.9
CN2 *e*sP sP 20 06 33.8 +4.8
CN2 *e*S **S** **20 13 54.3 +5.6**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,19.0s
CN2 LR LR
comp=E,300nm,19.0s
CN2 LR LR
comp=Z,400nm,19.0s
KMI Kunming 55.74 306 P **P 20 06 19.0 +1.4**
KMI pP **pP** **20 06 29.5 -1.1**
KMI PP **PP** **20 08 22.8 +0.4**
KMI S **S** **20 14 01.5 +0.1**
KMI pmax pmax
comp=Z,8.0nm,0.9s
KMI pmax pmax
comp=Z,96nm,7.2s
KMI LR LR
comp=N,330nm,18.3s
KMI LR LR
comp=E,310nm,19.1s
KMI LR LR
comp=Z,330nm,23.3s
BJI Beijing 55.92 329 P **P 20 06 17.5 -0.8**
BJI PP **PP** **20 08 24.8 +1.3**
BJI S **S** **20 14 04.3 +1.5**
BJI sS **sS** **20 14 27.3 +2.8**
BJI pmax pmax
comp=Z,12nm,1.6s
BJI pmax pmax
comp=Z,180nm,11.5s
BJI LR LR
comp=N,860nm,17.3s
BJI LR LR
comp=E,480nm,18.6s
BJI LR LR
comp=Z,540nm,18.2s
XAN Xi'an 56.07 319 P **P 20 06 18.0 -1.6**
XAN pP **pP** **20 06 31.3 -1.3**
XAN S S 20 13 56.8 -8.4
XAN ScS **ScS** **20 16 04.5 -0.7**
XAN SS **SS** **20 17 46.5 -5.7**
XAN pmax pmax
comp=Z,3.0nm,1.4s
XAN pmax pmax
comp=Z,35nm,7.7s
XAN LR LR
comp=N,280nm,23.5s
XAN LR LR
comp=E,120nm,23.5s
XAN LR LR
comp=Z,140nm,23.5s
CM31 Chiang Mai Arr 56.16 297 *eP* **P 20 06 20.6 +0.1**
comp=Z,6.6nm,0.6s
CMAR Chiang Mai Arr 56.16 297 P **P 20 06 20.6 +0.1**
CMAR PcP **PcP** **20 07 18.0 0.0**
CMAR Chiang Mai Arr 56.16 297 P **P 20 06 20.6 +0.1**
comp=Z,8.0nm,1.1s,baz=118,slow=5.9,SNR=21
CMAR PcP **PcP** **20 07 18.0 0.0**
comp=Z,11nm,1.2s,baz=141,slow=3.2,SNR=8.2
CMAR LR LR 20 30 19.0
comp=Z,177nm,18.4s,baz=90,slow=36
CHTO Chiang Mai 56.29 298 *eP* **P 20 06 20.7 -0.7**
CHTO pmax pmax
comp=Z,7.0nm,0.5s
CHTO Chiang Mai 56.29 298 *eP* **P 20 06 20.7 -0.7**
comp=Z,6.8nm,0.5s
HABR Khabarovsk 56.40 348 *de*P **P 20 06 18.4 -3.1**
HABR *e**PP pP 20 06 28.3 -6.2
HABR *e* 20 07 15.6
HABR *e* 20 08 23.8
HABR *e*S **S** **20 14 06.2 -2.7**
HABR *e*SS S 20 14 18.0 +9.1
HABR *e**SS sS 20 14 23.4 -7.2
HABR *e* 20 16 04.8
HABR *e*SS **SS** **20 17 54.2 -2.6**
HABR *e*SSS SSS 20 20 10.9
HABR pmax pmax
comp=Z,421nm,2.8s

HABR pmax pmax
comp=Z,179nm,1.5s
HABR pmax pmax
comp=N,73nm,2.0s
HABR pmax pmax
comp=E,53nm,1.5s
HABR MLR MLR
comp=Z,322nm,19.0s
CD2 Chengdu 57.85 313 P **P 20 06 34.0 +1.8**
CD2 pP **pP** **20 06 47.8 +2.5**
CD2 sP **sP** **20 06 53.5 +2.9**
CD2 PcP **PcP** **20 07 25.8 +1.4**
CD2 PP **PP** **20 08 44.5 +3.6**
CD2 PcS **PcS** **20 11 25.5 -0.3**
CD2 S **S** **20 14 28.5 -0.3**
CD2 sS **sS** **20 14 51.5 +1.0**
CD2 SS **SS** **20 18 21.5 +1.2**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,240nm,5.6s
CD2 LR LR
comp=N,600nm,18.1s
CD2 LR LR
comp=E,460nm,20.1s
CD2 LR LR
comp=Z,370nm,21.1s
KLR Kul'dur 57.85 346 *eP* P 20 06 26.8 -5.0
KLR *e* 20 14 30.5
KLR pmax pmax
comp=E,35nm,1.8s
KLR pmax pmax
comp=Z,78nm,1.8s
KLR MLR MLR
comp=Z,600nm,14.0s
KIP Kipapa 58.10 60*ceP* **P 20 06 35.1 +1.0**
KIP Kipapa 58.10 60 *eP* **P 20 06 34.6 +0.5**
comp=Z,67nm,0.8s
HHC Hu-ho-hao-te 58.94 327 *eP* **P 20 06 41.3 +1.5**
HHC pP **pP** **20 06 54.0 +1.2**
HHC sP **sP** **20 06 59.3 +1.1**
HHC PP **PP** **20 08 53.5 +2.9**
HHC S **S** **20 14 43.3 +0.5**
HHC sS **sS** **20 15 05.3 +0.6**
HHC SS **SS** **20 18 41.0 +3.6**
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,300nm,7.7s
HHC LR LR
comp=N,860nm,17.3s
HHC LR LR
comp=E,850nm,17.7s
HHC LR LR
comp=Z,1μm,16.2s
PEA0B Petropavlovsk- 59.85 5 *eP* **P 20 06 43.5 -2.1**
PETK Petropavlovsk- 59.85 5 P **P 20 06 43.7 -1.9**
PETK Petropavlovsk- 59.85 5 P **P 20 06 43.7 -1.9**
PETK Petropavlovsk- 59.85 5 P **P 20 06 43.7 -1.9**
comp=Z,4.7nm,0.5s,baz=170,slow=8.1,SNR=31
PETK LR LR 20 28 13.4
comp=Z,460nm,21.9s,baz=186,slow=32
PET Petropavlovsk 59.86 6 *eP* P 20 06 50.3 +4.6
PET *e*PPP PPP 20 10 30.9
PET *e*S sS 20 15 12.8 -3.0
PET pmax pmax
comp=Z,100nm,13.5s
PPT2 Papeete2 59.87 106 *e*S S 20 15 02.1 +6.5
comp=Z,270nm,31.2s
PPT2 *e*LQ LQ 20 21 57.7
comp=Z,2μm,30.2s
PPT2 *e*LR LR 20 24 30.5
comp=Z,308nm,25.5s
DRV Dumont d'Urvil 60.35 185 P **P 20 06 52.0 +3.2**
DRV Dumont d'Urvil 60.35 185 PP PP 20 09 02.0 -0.2
DRV S sS 20 15 21.0 -0.8
DRV L L 20 22 00.0
DRV R 20 25 00.0
TBI Tubuai 60.40 113 *e*S S 20 15 10.7 +8.7
comp=Z,390nm,26.5s
TBI *e*LQ LQ 20 22 15.6
comp=Z,1μm,33.8s
TBI *e*LR LR 20 24 46.7
comp=Z,526nm,36.2s
LZH Lanzhou 60.63 318 *eP* **P 20 06 50.5 -1.0**
LZH pP **pP** **20 07 03.0 -1.6**
LZH sP **sP** **20 07 07.5 -2.5**
LZH pmax pmax
comp=Z,17nm,1.2s
LZH LR LR
comp=N,650nm,20.1s
LZH LR LR
comp=E,460nm,16.4s
LZH LR LR
comp=Z,920nm,20.3s
PMOR Pomariorio Ree 61.42 103 *eP* pP 20 07 10.9 +0.7
comp=Z,283nm,1.1s
HIA Hailar 61.59 338 *eP* **P 20 06 54.7 -2.9**
comp=Z,12nm,0.8s
FX1 Attu Island--F 62.45 16 *eP* **P 20 07 01.6 -1.6**
FX1 Attu Island--F 62.45 16 P **P 20 07 01.8 -1.4**
comp=Z,15nm,0.6s,baz=331,slow=3.1,SNR=10
GTA Gaotai 65.13 319 *eP* **P 20 07 21.0 -0.3**
GTA pP **pP** **20 07 34.3 -0.3**
GTA sP **sP** **20 07 39.5 -0.4**
GTA PP **PP** **20 09 46.8 +1.6**
GTA S **S** **20 15 59.0 -2.0**
GTA sS **sS** **20 16 21.5 -1.6**
GTA SS **SS** **20 20 14.8 +0.5**
GTA pmax pmax
comp=Z,5.0nm,1.7s
GTA pmax pmax
comp=Z,110nm,6.2s
GTA LR LR
comp=N,270nm,18.5s
GTA LR LR
comp=E,270nm,20.0s
GTA LR LR
comp=Z,440nm,22.8s
SONM Songino Array 66.41 330 P **P 20 07 28.5 -0.9**
SONM ⇑*e* 20 36 05.8
SONM Songino Array 66.41 330 P **P 20 07 28.5 -0.9**
comp=Z,2.5nm,0.5s,baz=143,slow=5.2,SNR=39
SONM PKP2bc 20 36 05.8
comp=Z,0.8nm,0.8s,baz=307,slow=0.7,SNR=6.1
SONM LR LR 20 37 54.6
comp=Z,515nm,18.9s,baz=133,slow=37
LSA Lhasa 66.99 306 P **P 20 07 33.5 -0.4**
LSA Lhasa 66.99 306 *eP* **P 20 07 33.2 -0.7**
LSA pmax pmax
comp=Z,14nm,0.6s
LSA Lhasa 66.99 306 *eP* **P 20 07 33.2 -0.7**
comp=Z,14nm,0.6s
TAPN Taplejung 68.98 302 *eP* **P 20 07 45.6 -0.6**
ODAN Odare 69.08 302 *eP* **P 20 07 46.6 -0.2**
comp=Z,31nm,0.7s
SEY Seymchan 69.37 1*ceP* **P 20 07 45.9 -1.6**
ZAK Zakamensk 69.62 330 *eP* **P 20 07 47.9 -1.6**
ZAK pmax pmax
comp=Z,6.0nm,1.2s
RAMN Ramite 69.78 302 *eP* **P 20 07 51.3 +0.2**
comp=Z,21nm,0.6s
YAK Yakutsk 70.22 350*c iP* **P 20 07 50.8 -2.0**
YAK pmax pmax
comp=Z,21nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.2s
TLY Talaya 70.28 331 *eP* **P 20 07 53.4 0.0**
TLY *e*S S 20 16 55.9 -6.1
TLY *e* 20 17 56.6
TLY pmax pmax
comp=Z,5.0nm,1.0s
TLY MLR MLR
comp=Z,234nm,18.0s
UNV Unalaska Valle 70.44 26 *eP* **P 20 07 52.7 -1.6**
PALK Pallekele 70.48 280 *eP* **P 20 07 55.6 +0.3**
comp=Z,32nm,1.1s
GUN Gumba 70.69 302 *eP* **P 20 07 56.3 -0.5**
comp=Z,36nm,0.6s
PKI Pulchoki 70.98 302 *eP* **P 20 07 57.9 -0.7**
PKIN Phulchoki 70.99 302 *eP* **P 20 07 57.3 -1.3**
VNDA Vanda 71.15 177 *eP* **P 20 07 58.3 +0.1**
comp=Z,9.1nm,0.8s

VNDA Vanda 71.15 177 P **P 20 07 58.5 +0.2**
comp=Z,5.3nm,0.7s,baz=331,slow=6.6,SNR=40
VNDA LR LR 20 37 17.8
comp=Z,536nm,18.1s,baz=351,slow=34
KKN Kakani 71.16 302 *eP* **P 20 07 58.9 -0.6**
comp=Z,15nm,0.6s
DMN Daman 71.25 302 *eP* **P 20 07 59.7 -0.4**
comp=Z,42nm,0.9s
MOY Mondy 71.55 330 *eP* **P 20 08 01.1 -0.1**
SBA Scott Base 71.74 176 *eP* **P 20 08 03.3 +1.4**
SBA pmax pmax
comp=Z,25nm,1.4s
SBA Scott Base 71.74 176 *eP* **P 20 08 03.2 +1.4**
comp=Z,25nm,1.4s
KOLN Koldanda 72.57 302 *eP* **P 20 08 07.2 -0.8**
comp=Z,22nm,0.6s
DANN Dangsing 72.61 302 *eP* **P 20 08 07.2 -1.1**
comp=Z,28nm,0.6s
HYB Hyderabad 74.46 290 *i P* **P 20 08 18.0 -1.0**
WMQ Urumqi 75.20 318 *eP* P 20 08 26.0 +3.1
WMQ pP pP 20 08 39.0 +2.6
WMQ sP sP 20 08 44.3 +2.7
WMQ PP PP 20 11 17.3 +5.5
WMQ S **S** **20 18 00.0 +1.5**
WMQ sS sS 20 18 23.3 +2.2
WMQ ScS **ScS** **20 18 32.0 -0.1**
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,140nm,4.6s
WMQ LR LR
comp=N,380nm,19.0s
WMQ LR LR
comp=E,290nm,19.8s
WMQ LR LR
comp=Z,250nm,24.2s
BILL Bilibino 75.36 6⇑ *iP* **P 20 08 21.8 -1.4**
BILL *e*SS SS 20 22 45.0 -5.3
BILL pmax pmax
comp=Z,14nm,1.6s
BILL Bilibino 75.36 6 *eP* **P 20 08 21.6 -1.6**
comp=Z,10nm,1.0s
DDI Dehra Dun 77.94 303 *ex* **P 20 08 38.5 -0.1**
OHAK Old Harbor 78.43 28 *eP* **P 20 08 39.2 -1.5**
comp=Z,26nm,1.1s
KDAK Kodiak Island 79.05 27 P **P 20 08 43.4 -0.7**
KDAK Kodiak Island 79.05 27 P **P 20 08 43.4 -0.7**
comp=Z,7.6nm,0.8s,baz=157,slow=4.2,SNR=6.7
TIXI Tiksi 79.34 353⇓ *iP* **P 20 08 42.9 -2.4**
TIXI pmax pmax
comp=Z,9.0nm,1.2s
MK31 Makanchi Array 79.87 320 *eP* **P 20 08 46.9 -1.9**
MK31 Makanchi Array 79.87 320 *eP* **P 20 08 46.9 -1.9**
MKAR Makanchi Array 79.87 320 P **P 20 08 47.5 -1.3**
MKAR Makanchi Array 79.87 320 P **P 20 08 47.5 -1.3**
MKAR PKiKP **PKiKP** **20 14 19.0 -0.4**
MKAR Makanchi Array 79.87 320 P **P 20 08 47.5 -1.3**
comp=Z,1.9nm,0.6s,baz=99,slow=7.7,SNR=30
MKAR PKiKP **PKiKP** **20 14 19.0 -0.4**
comp=Z,0.6nm,0.6s,baz=198,slow=0.9,SNR=5.4
MKAR LR LR 20 45 01.9
comp=Z,335nm,19.7s,baz=104,slow=36
ZAA0 Zalesovo Array 81.12 327 *eP* **P 20 08 52.9 -2.4**
ZALV Zalesovo Beam 81.12 327 P **P 20 08 53.4 -1.9**
ZALV Zalesovo Beam 81.12 327 P **P 20 08 53.4 -1.9**
ZALV Zalesovo Beam 81.12 327 P **P 20 08 53.4 -1.9**
comp=Z,2.2nm,0.4s,baz=110,slow=6.2,SNR=20
ZALV LR LR 20 45 38.2
comp=Z,433nm,18.8s,baz=249,slow=36
KSH Kashi 82.00 311 P **P 20 09 02.3 +1.8**
KSH *e*sP **sP** **20 09 20.8 +1.5**
KSH *e*PP **PP** **20 12 12.0 +3.2**
KSH *e*S **S** **20 19 10.3 -1.3**
KSH *e*sS **sS** **20 19 32.8 -1.6**
KSH *e*SS **SS** **20 24 32.0 +0.5**
KSH pmax pmax
comp=Z,17nm,1.0s
KSH pmax pmax
comp=Z,310nm,5.2s
KSH LR LR
comp=N,280nm,9.0s
KSH LR LR
comp=E,220nm,6.8s
KSH LR LR
comp=Z,280nm,5.9s
NVS Novosibirsk 82.33 328 *eP* **P 20 08 59.7 -1.9**
NVS *e*S **S** **20 19 10.8 -3.1**
NVS pmax pmax
comp=N,4.0nm,1.5s
NVS pmax pmax
comp=Z,13nm,1.5s
NVS pmax pmax
comp=E,3.0nm,1.3s
NVS smax smax
comp=N,5.0nm,2.3s
NVS smax smax
comp=E,13nm,2.1s
PMR Palmer 82.49 25 *eP* **P 20 08 59.9 -2.4**
PMR pmax pmax
comp=Z,20nm,1.2s
PMR Palmer 82.49 25 *eP* **P 20 08 59.9 -2.4**
comp=Z,20nm,1.2s
MAW Mawson 82.83 203 P **P 20 09 04.0 0.0**
MAW Mawson 82.83 203 P **P 20 09 04.0 0.0**
comp=Z,3.4nm,0.6s,baz=107,slow=8.0,SNR=6.3
MAW LR LR 20 43 00.2
comp=Z,626nm,21.8s,baz=86,slow=34
SML Sawmill 82.93 25 *eP* **P 20 09 03.4 -1.3**
SML pmax pmax
comp=Z,8.0nm,1.0s
SML Sawmill 82.93 25 *eP* **P 20 09 03.4 -1.3**
comp=Z,7.6nm,1.0s
TRF Thorofare Moun 82.94 23 *eP* **P 20 09 01.9 -3.0**
comp=Z,8.8nm,0.8s
TKM2 Tokmak 2 83.18 315 *eP* **P 20 09 05.5 -1.1**
TKM2 pmax pmax
comp=Z,4.0nm,0.6s
TKM2 Tokmak 2 83.18 315 *eP* **P 20 09 05.5 -1.1**
comp=Z,4.5nm,0.6s
TKM2 Tokmak 2 83.18 315 P **P 20 09 07.9 +1.3**
SNR=11
KZA Kyzart 83.21 314 P **P 20 09 09.1 +2.1**
SNR=18
QSPA South Pole Qui 83.36 180 *eP* **P 20 09 06.6 -0.4**
comp=Z,25nm,0.6s
QSPA South Pole Qui 83.36 180 P **P 20 09 07.0 0.0**
comp=Z,13nm,0.7s,baz=324,slow=1.0,SNR=67
KURK Kurchatov 83.48 323*ceP* **P 20 09 06.2 -1.5**
KURK pmax pmax
comp=Z,18nm,1.7s
KURK Kurchatov 83.48 323 *eP* **P 20 09 04.8 -3.0**
comp=Z,9.2nm,1.0s
KURK PKiKP **PKiKP** **20 14 23.9 -0.9**
KURBB Kurchatov Arra 83.51 323 P **P 20 09 06.5 -1.4**
comp=Z,1.3nm,0.6s,baz=116,slow=3.9,SNR=21
KURBB PKiKP **PKiKP** **20 14 23.9 -0.9**
comp=Z,1.0nm,0.6s,baz=115,slow=1.6,SNR=15
MCK McKinley 83.61 23 *eP* **P 20 09 06.0 -2.1**
MCK pmax pmax
comp=Z,49nm,1.1s
MCK McKinley 83.61 23 *eP* **P 20 09 06.0 -2.1**
comp=Z,49nm,1.1s
DIV Divide 83.71 26 *eP* **P 20 09 08.2 -0.6**
comp=Z,9.1nm,0.7s
AAK Ala-Archa 83.89 314 *eP* **P 20 09 10.6 +0.4**
AAK pmax pmax
comp=Z,7.0nm,0.8s
AAK Ala-Archa 83.89 314 *eP* **P 20 09 10.6 +0.4**
comp=Z,7.4nm,0.8s
AAK Ala-Archa 83.89 314 P **P 20 09 11.6 +1.4**
SNR=6.7
AAK Ala-Archa 83.89 314 P **P 20 09 10.5 +0.4**
comp=Z,5.9nm,0.7s,baz=106,slow=3.5,SNR=16
USP Ospenovka 84.05 315 P P 20 09 07.2 -3.7
SNR=9.0
AML Almayashu 84.34 313 P **P 20 09 14.5 +1.7**
SNR=26
EKS2 Erkin-Say 84.41 314 *eP* **P 20 09 12.6 -0.2**
EKS2 pmax pmax
comp=Z,10.0nm,0.8s
EKS2 Erkin-Say 84.41 314 *eP* **P 20 09 12.6 -0.2**
comp=Z,10nm,0.8s
EKS2 Erkin-Say 84.41 314 P **P 20 09 14.5 +1.7**
SNR=14
COLA College 84.57 22 *eP* **P 20 09 09.9 -3.0**
COLA pmax pmax

comp=Z,19nm,0.9s
COLA College 84.57 22 *e*P **P 20 09 09.9 -3.0**
comp=Z,19nm,0.9s
COLD Coldfoot 84.89 20 *e*P **P 20 09 14.1 -0.4**
comp=Z,7.1nm,0.8s
ILAR Eielson Array 84.89 23 P **P 20 09 11.7 -2.9**
ILAR Eielson Array 84.89 23 P **P 20 09 11.7 -2.9**
comp=Z,10.0nm,0.7s,baz=252,slow=4.8,SNR=94
ILAR LR LR 20 43 57.0
comp=Z,443nm,20.1s,baz=73,slow=34
DOT Dot Lake 85.51 24 *e*P **P 20 09 16.4 -1.3**
comp=Z,12nm,0.9s
KBL Kabul 86.30 305 *e*P P 20 09 19.4 -3.2
KBL Kabul 86.30 305 *e*P P 20 09 19.4 -3.2
comp=Z,2.2nm,0.7s
KKAR Karatay Array 86.85 314 *e*P **P 20 09 24.0 -0.8**
KKAR pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 86.85 314 *e*P **P 20 09 24.0 -0.8**
comp=Z,6.4nm,0.8s
EGAK Eagle 87.12 24 *e*P **P 20 09 24.1 -1.5**
comp=Z,25nm,1.0s
BVAR Borovoye Array 89.02 324 P **P 20 09 32.9 -2.0**
BVAR Borovoye Array 89.02 324 P **P 20 09 32.9 -2.0**
BVAR PKiKP **PKiKP 20 14 33.0 -0.9**
BVAR Borovoye Array 89.02 324 P **P 20 09 32.9 -2.0**
comp=Z,2.2nm,0.6s,baz=111,slow=6.3,SNR=15
BVAR PKiKP **PKiKP 20 14 33.0 -0.9**
comp=Z,0.7nm,0.5s,baz=90,slow=0.1,SNR=4.2
BRVK Borovoye 89.09 324 *ce*P **P 20 09 33.2 -2.0**
BRVK pmax pmax
comp=Z,8.0nm,1.7s
BRVK Borovoye 89.09 324 *e*P **P 20 09 32.4 -2.8**
INK Inuvik 91.14 21 P **P 20 09 43.1 -1.3**
INK Inuvik 91.14 21 P **P 20 09 43.1 -1.3**
comp=Z,4.6nm,0.8s,baz=278,slow=6.2,SNR=8.5
KEBM Edson Butte 91.29 47 P **P 20 09 44.9 -0.9**
comp=Z,54nm,1.1s
KCPM Cahto Peak 91.43 50 *e*P **P 20 09 46.7 +0.1**
comp=Z,12nm,0.6s
KHMM Horse Mountain 91.47 49 *e*P **P 20 09 47.3 +0.5**
comp=Z,8.3nm,0.7s
KIPM Iron Peak 91.53 50 *e*P **P 20 09 47.5 +0.4**
comp=Z,28nm,1.1s
HUMO Hull Mountain 92.26 48 *e*P **P 20 09 51.1 +0.9**
comp=Z,34nm,0.8s
WDC Whiskeytown Da 92.33 50 *e*P **P 20 09 50.4 -0.2**
WDC pmax pmax
comp=Z,36nm,1.4s
WDC Whiskeytown Da 92.33 50 *e*P **P 20 09 50.4 -0.2**
comp=Z,36nm,1.4s
YBH Yreka Blue Hor 92.34 48 *e*P **P 20 09 51.5 +0.8**
comp=Z,41nm,1.3s
YBH Yreka Blue Hor 92.34 48 LR LR 20 44 19.2
comp=Z,597nm,21.2s,baz=254,slow=31
LHEM Herd Peak 92.69 49 P **P 20 09 53.2 +0.7**
BUOR Burton Butte 92.75 48 P **P 20 09 53.7 +1.0**
SAO San Andreas Ge 92.76 53 *e*P **P 20 09 53.6 +0.9**
SAO pmax pmax
comp=Z,36nm,1.8s
SAO San Andreas Ge 92.76 53 *e*P **P 20 09 53.6 +0.9**
comp=Z,36nm,1.8s
IRO Indian Ridge 92.93 46 P **P 20 09 55.2 +1.7**
HOG Hogback Mounta 93.14 48 P **P 20 09 55.8 +1.2**
PRLK Prince Lake 93.16 46 P **P 20 09 56.0 +1.5**
CMB Columbia Colle 93.73 52 *e*P **P 20 09 57.5 +0.3**
CMB pmax pmax
comp=Z,33nm,1.2s
CMB Columbia Colle 93.73 52 *e*P **P 20 09 57.5 +0.3**
comp=Z,33nm,1.2s
SMMC Simmler 93.78 55 ⇓P **P 20 09 59.5 +2.1**
baz=94,SNR=6.8
PKM Peak Mountain 93.89 55 ⇑P **P 20 10 00.1 +1.9**
baz=94,SNR=26
BEKR Beckworth 93.92 50 *e*P **P 20 09 58.4 +0.2**
comp=Z,7.4nm,0.8s
BSC Santa Cruz Isl 93.96 56 ⇑P **P 20 09 59.7 +1.4**
baz=94
VIPM Ingram Point 94.15 46 P **P 20 09 59.7 +0.6**
VIPM Ingram Point 94.15 46 P **P 20 09 59.7 +0.6**
WCN Washoe City 94.34 51 *e*P **P 20 10 00.5 +0.4**
WCN pmax pmax
comp=Z,13nm,0.8s
WCN Washoe City 94.34 51 *e*P **P 20 10 00.5 +0.4**
comp=Z,13nm,0.8s
BLG Laguna Peak 94.44 56 ⇓P **P 20 10 02.3 +1.8**
baz=94
VES Vestal, Richgr 94.57 55 P **P 20 10 02.0 +1.0**
baz=95,SNR=7.3
ARVC Arvin 94.72 55 ⇑P **P 20 10 02.7 +1.0**
baz=95
SNIWA Snively Ranch 94.98 44 P **P 20 10 04.8 +2.1**
ABKAR Akbulak array 94.99 319 *e*P **P 20 10 00.1 -2.4**
comp=Z,0.8nm,0.6s
ABKAR *e*PP PP 20 13 44.5 -7.8
ISA Isabella 95.06 55 *e*P **P 20 10 03.5 +0.2**
ISA pmax pmax
comp=Z,29nm,1.3s
ISA Isabella 95.06 55 *e*P **P 20 10 03.5 +0.2**
comp=Z,29nm,1.3s
ISA Isabella 95.06 55 P **P 20 10 04.4 +1.1**
baz=95,SNR=13
HAWA Hanford 95.07 44 *e*P **P 20 10 03.0 0.0**
comp=Z,13nm,1.4s
PASC Pasadena Art C 95.18 56 *e*P **P 20 10 04.7 +0.8**
comp=Z,86nm,1.4s
MWC Mount Wilson 95.28 56 *e*P **P 20 10 06.0 +1.4**
MWC Mount Wilson 95.28 56 *e*P **P 20 10 06.0 +1.4**
comp=Z,128nm,1.4s
EDW2 Edwards Air Fo 95.39 56 P **P 20 10 06.5 +1.6**
baz=96,SNR=24
NVAR Mina Array Bea 95.40 52 P **P 20 10 05.7 +0.7**
NVAR Mina Array Bea 95.40 52 P **P 20 10 05.7 +0.7**
comp=Z,17nm,0.7s,baz=257,slow=6.4,SNR=137
NVAR LR LR 20 45 26.1
comp=Z,717nm,21.5s,baz=93,slow=31
WVOR Wild Horse Val 95.42 48 *e*P **P 20 10 05.3 +0.3**
WVOR pmax pmax
comp=Z,44nm,1.6s
WVOR Wild Horse Val 95.42 48 *e*P **P 20 10 05.3 +0.3**
comp=Z,44nm,1.6s
CWC Cottonwood Cre 95.43 54 P **P 20 10 06.5 +1.3**
baz=96
NV11 Mina Array Sit 95.51 52 *e*P **P 20 10 06.0 +0.5**
BFSC Mount Baldy Ra 95.62 56 P **P 20 10 07.2 +1.2**
baz=96
LRMC Laurel Mountai 95.68 55 P **P 20 10 07.8 +1.6**
baz=96,SNR=38
MPMC Manual Prospec 95.88 54 P **P 20 10 08.5 +1.3**
baz=96,SNR=27
MURC Murrieta 95.95 57 P **P 20 10 09.0 +1.6**
baz=96
GRAC Grapevine Rang 96.04 54 P **P 20 10 08.8 +1.0**
baz=96
AKTO Aktyubinsk 96.30 320 P **P 20 10 07.1 -1.5**
AKTO Aktyubinsk 96.30 320 P **P 20 10 07.1 -1.5**
AKTO PKiKP **PKiKP 20 14 46.8 +0.4**
AKTO Aktyubinsk 96.30 320 P **P 20 10 07.1 -1.5**
comp=Z,1.0nm,0.5s,baz=83,slow=6.7,SNR=4.5
AKTO PKiKP **PKiKP 20 14 46.8 +0.4**
comp=Z,1.3nm,0.5s,baz=101,slow=6.1,SNR=6.1
BAR Barrett 96.33 58 *e*P **P 20 10 09.7 +0.5**
comp=Z,41nm,1.4s
BMN Battle Mountai 96.36 50 *e*P **P 20 10 10.1 +0.8**
BMN pmax pmax
comp=Z,20nm,1.3s
BMN Battle Mountai 96.36 50 *e*P **P 20 10 10.1 +0.8**
comp=Z,20nm,1.3s
GSC Goldstone 96.39 55 *e*P **P 20 10 09.9 +0.4**
GSC pmax pmax
comp=Z,35nm,1.3s
GSC Goldstone 96.39 55 *e*P **P 20 10 09.9 +0.4**
comp=Z,35nm,1.3s
GSC Goldstone 96.39 55 P **P 20 10 10.8 +1.3**
baz=96,SNR=16
FURC Furnace Creek, 96.42 54 ⇓P **P 20 10 11.0 +1.6**
baz=96,SNR=7.0
BMO Blue Mountains 96.53 46 *e*P **P 20 10 09.5 -0.4**
BMO pmax pmax
comp=Z,19nm,1.4s
BMO Blue Mountains 96.53 46 *e*P **P 20 10 09.5 -0.4**
comp=Z,19nm,1.4s
MONP Monument Peak 96.56 58 ⇑P **P 20 10 12.0 +1.6**
baz=97,SNR=9.7
PFO Pinyon Flat Ob 96.57 57 P **P 20 10 12.0 +1.7**
comp=Z,79nm,0.8s,SNR=8.0
PFO Pinyon Flat Ob 96.57 57 *e*P **P 20 10 11.3 +1.0**
comp=Z,33nm,1.3s
PFO Pinyon Flat Ob 96.57 57 *e*P **P 20 10 12.1 +1.7**
baz=97,SNR=10.0
HEC Hector,Ludlow 96.75 56 ⇑P **P 20 10 12.4 +1.3**
baz=97,SNR=7.0
NEW Newport 96.81 42 P **P 20 10 10.6 -0.4**
NEW Newport 96.81 42 P **P 20 10 10.6 -0.4**
comp=Z,2.9nm,0.7s,baz=268,slow=7.5,SNR=7.9
DVTC Desert V Tower 96.81 58 P **P 20 10 12.9 +1.5**
baz=97
SHOC Shoshone 96.85 55 P **P 20 10 13.0 +1.6**
baz=97
BELC Belle Mtn. Jos 96.97 57 ⇓P **P 20 10 13.8 +1.6**
baz=97,SNR=22
SWSC Sam W. Stewart 97.08 58 ⇓P Pdif 20 10 14.4 +1.8
baz=97
TUQ Turquoise Moun 97.11 55 P Pdif 20 10 13.9 +1.0
baz=97,SNR=14
BC3 Big Chuckawall 97.41 57 ⇑P Pdif 20 10 15.8 +1.6
baz=98,SNR=12
R11A Troy Canyon, C 97.53 52 P Pdif 20 10 15.6 +0.9
baz=98
MFID Camas Ranch 97.54 47 *e*P Pdif 20 10 15.0 +0.5
comp=Z,8.7nm,1.1s
MFID Camas Ranch 97.54 47 P Pdif 20 10 15.3 +0.8
baz=98
IRM Iron Mountain 97.69 56 ⇑P Pdif 20 10 17.3 +1.9
baz=98,SNR=21
LDFC Landfair 97.76 56 *e*P Pdif 20 10 17.2 +1.4
comp=Z,7.1nm,0.5s
ELK Elko 97.89 50 *e*P Pdif 20 10 16.8 +0.4
comp=Z,12nm,1.3s
G12A Big Creek, Yel 97.95 45 P **P 20 10 16.3 -0.1**
baz=98
D12A Red Ives Fores 97.97 43 P Pdif 20 10 17.0 +0.6
baz=98
F12A Elk City 98.01 45 P **P 20 10 16.6 0.0**
baz=98
I12A Atlanta 98.05 47 P Pdif 20 10 17.5 +0.6
baz=98
H12A Diamond D Ranc 98.27 46 P Pdif 20 10 18.4 +0.5
baz=98
YKA Yellowknife Ar 98.32 28 P **P 20 10 16.8 -0.6**
YKA Yellowknife Ar 98.32 28 P **P 20 10 16.8 -0.6**
comp=Z,2.5nm,0.9s,baz=270,slow=4.6,SNR=12
BSMT Basoo Peak 98.37 43 *e*P **P 20 10 18.2 0.0**
comp=Z,2.5nm,1.0s
HLID Hailey 98.57 47 *e*P Pdif 20 10 19.4 +0.1
comp=Z,9.6nm,1.2s
HLID Hailey 98.57 47 P Pdif 20 10 19.8 +0.5
baz=99
B13A Whitefish 98.58 42 P Pdif 20 10 19.9 +0.9
baz=99
G13A Cobalt 98.72 45 P Pdif 20 10 20.3 +0.5
baz=99
I13A Wildhorse Cree 98.79 47 P Pdif 20 10 21.1 +0.8
baz=99
WALA Waterton Lakes 98.95 41 *e*Pdif Pdif 20 10 21.1 +0.3
ARUT Antelope Range 99.20 53 *e*P **Pdif 20 10 22.6 +0.4**
ARUT pmax pmax
comp=Z,13nm,1.2s
ARUT Antelope Range 99.20 53 *e*Pdif **Pdif 20 10 22.6 +0.4**
comp=Z,13nm,1.2s
CCUT Cedar City 99.26 53 *e*Pdif **Pdif 20 10 23.2 +0.7**
comp=Z,6.1nm,0.8s
A14A Double T Ranch 99.28 42 P **Pdif 20 10 23.1 +1.0**
baz=99,SNR=6.5
MCMT McKenzie Canyo 99.70 46 *e*Pdif **Pdif 20 10 24.5 +0.2**
comp=Z,0.6nm,0.6s
DUG Dugway 99.72 50 P **Pdif 20 10 24.5 +0.1**
baz=100
A15A Johnson Ranch, 99.73 42 P **Pdif 20 10 24.7 +0.5**
baz=100
E15A Deer Lodge 99.83 44 P **Pdif 20 10 25.0 +0.2**
baz=100,SNR=7.7
C15A Salmond Ranch, 99.83 43 P **Pdif 20 10 25.0 +0.3**
baz=100,SNR=9.9
SNAA Sanae 99.85 188 *e*Pdif **Pdif 20 10 23.2 -1.0**
B15A Bradely Ranch, 99.86 42 P **Pdif 20 10 25.0 +0.3**
baz=100
DLMT Dillon 99.88 45 *e*Pdif **Pdif 20 10 25.3 +0.3**
comp=Z,1.8nm,0.6s
D15A Lincoln 99.91 43 P **Pdif 20 10 25.4 +0.3**
baz=100
F15A Butte 99.94 45 P **Pdif 20 10 25.5 +0.2**
baz=100
C16A Fuhringer Ranc 100.42 43 P **Pdif 20 10 27.9 +0.7**
baz=100
F16A Kennard Place, 100.55 45 P **Pdif 20 10 28.6 +0.7**
baz=101
BOZ Bozeman (W) 100.55 45 *e*P **Pdif 20 10 28.5 +0.5**
BOZ pmax pmax
comp=Z,1.0nm,0.6s
BOZ Bozeman (W) 100.55 45 *e*Pdif **Pdif 20 10 28.5 +0.5**
comp=Z,1.2nm,0.6s
RRI2 Red Ridge 100.82 47 *e*Pdif **Pdif 20 10 30.4 +1.0**
comp=Z,11nm,1.3s
A17A Triple J Farms 101.07 42 P **Pdif 20 10 30.6 +0.5**
baz=101
TPAW Teton Pass 101.09 47 *e*Pdif **Pdif 20 10 31.4 +0.9**
comp=Z,7.7nm,1.2s
F17A Fitzpatrick Pl 101.22 45 P **Pdif 20 10 32.2 +1.2**
baz=101,SNR=6.2
TUC Tucson 101.29 58 P **Pdif 20 10 32.8 +1.4**
TUC pmax pmax
comp=Z,9.0nm,1.6s
TUC Tucson 101.29 58 Pdif **Pdif 20 10 32.8 +1.4**
comp=Z,9.1nm,1.6s
B18A Beardsley Farm 101.71 42 P **Pdif 20 10 33.4 +0.5**
baz=102
F18A Big Timber 101.88 45 P **Pdif 20 10 33.8 -0.1**
baz=102
PDAR Pinedale Array 102.13 48 P **Pdif 20 10 34.5 -0.7**
PDAR Pinedale Array 102.13 48 P **Pdif 20 10 34.5 -0.7**
comp=Z,3.9nm,0.6s,baz=242,slow=1.9,SNR=21
F19A Roth Farm, Mol 102.42 45 P **Pdif 20 10 36.8 +0.6**
baz=102
J19A Crowheart 102.48 47 P **Pdif 20 10 37.3 +0.6**
baz=102
O19A Miners Draw (B 102.55 50 P **Pdif 20 10 36.8 -0.1**
baz=103
K19A Alcolon Red Bu 102.65 48 P **Pdif 20 10 37.2 -0.2**
baz=103
C20A Veseth Ranch, 102.94 43 P **Pdif 20 10 38.6 +0.2**
baz=103
H20A Greybull 103.17 46 P **Pdif 20 10 39.6 0.0**
baz=103
J20A Shoshoni 103.18 47 P **Pdif 20 10 39.7 0.0**
baz=103
Q20A Ridgley Place, 103.23 52 P **Pdif 20 10 40.8 +0.7**
baz=103
Y20A Horse Springs, 103.31 57 P **Pdif 20 10 40.4 -0.2**
baz=103
J21A Lysite 103.65 47 P **Pdif 20 10 41.9 0.0**
baz=104
N21A Black Mountain 103.75 50 P **Pdif 20 10 42.6 +0.2**
baz=104
L21A Rawlins 103.79 49 P **Pdif 20 10 42.7 +0.1**
baz=104
Q21A Lamborn Mesa, 103.80 52 P **Pdif 20 10 43.2 +0.6**
baz=104
SMCO Snowmass 104.25 51 *e*Pdif **Pdif 20 10 43.1 -1.8**
comp=Z,5.9nm,1.0s
J22A Midwest 104.34 47 P **Pdif 20 10 44.8 -0.1**
baz=104
TXAR Lajitas Array 107.45 61 Pdif **Pdif 20 11 05.2 +6.2**
TXAR PKiKP **PKiKP 20 15 08.0 +0.6**
TXAR PKKPbc **PKKPbc 20 26 25.7 +2.6**
TXAR Lajitas Array 107.45 61 Pdiff **Pdif 20 11 05.2 +6.2**
comp=Z,0.6nm,0.8s,baz=256,slow=3.6,SNR=4.8
TXAR PKiKP **PKiKP 20 15 08.0 +0.6**
comp=Z,0.6nm,0.6s,baz=243,slow=0.3,SNR=8.2
TXAR PKKPbc **PKKPbc 20 26 25.7 +2.6**
comp=Z,0.3nm,0.6s,baz=86,slow=4.9,SNR=3.6
627A Terlingua Banc 107.69 61 P 20 15 08.4
baz=108
ARCES ARCESS Array B 107.75 342 Pdif **Pdif 20 10 58.7 -0.6**
ARCES PKiKP **PKiKP 20 15 06.5 -0.1**
ARCES ARCESS Array B 107.75 342 Pdiff **Pdif 20 10 58.7 -0.6**
comp=Z,7.1nm,1.0s,baz=54,slow=4.6,SNR=5.6
ARCES PKiKP **PKiKP 20 15 06.5 -0.1**
comp=Z,4.2nm,0.9s,baz=118,slow=1.5,SNR=9.8
528A Cox Ranch, San 108.18 61 P 20 15 09.1
baz=108
430A Baggett Ranch, 109.48 60 P 20 15 11.6
baz=110
Y30A Stafford Cattl 109.52 57 P 20 15 11.4
baz=110
531A Rocksprings 110.11 60 P 20 15 12.6
baz=110
JCT Junction City 110.73 60 *e*PKiKP **PKiKP 20 15 14.2 +0.8**
JCT Junction City 110.73 60 *e*PKPdf **PKiKP 20 15 14.2 +0.8**
JCT Junction City 110.73 60 P 20 15 13.9
baz=111
KAF Kangasniemi 111.10 335 *e*PKiKP **PKiKP 20 15 12.8 -0.3**
KAF Kangasniemi 111.10 335 *e*p **PKiKP 20 15 12.8 -0.3**
WMOK Wichita Mounta 111.17 55 *e*PKiKP **PKiKP 20 15 13.6 -0.5**
WMOK Wichita Mounta 111.17 55 *e*PKPdf **PKiKP 20 15 13.6 -0.5**
ECSD EROS Data Cent 111.39 46 *e*PKPdf **PKiKP 20 15 14.6 +0.4**
FINES FINESS Array B 111.51 335 Pdif **Pdif 20 11 14.1 -1.9**
FINES PKiKP **PKiKP 20 15 13.7 -0.1**
FINES FINESS Array B 111.51 335 Pdiff **Pdif 20 11 14.1 -1.9**
comp=Z,0.5nm,0.5s,baz=53,slow=5.4,SNR=7.5
FINES PKiKP **PKiKP 20 15 13.7 -0.1**
comp=Z,2.4nm,0.6s,baz=69,slow=1.7,SNR=14
TUL1 Tulsa 113.43 54 P 20 15 18.2
baz=114
AKASG Malin Array Be 114.30 323 PKiKP PKPdf 20 15 18.7 -0.8
AKASG Malin Array Be 114.30 323 PKiKP PKPdf 20 15 18.7 -0.8
AKASG Malin Array Be 114.30 323 PKiKP PKPdf 20 15 18.7 -0.8
comp=Z,4.7nm,0.5s,baz=60,slow=2.6,SNR=17
AK01 Malin Array Si 114.31 323 *e*PKPdf PKPdf 20 15 19.4 -0.1
KIEV Kiev 114.31 323 *e*PKiKP PKPdf 20 15 18.6 -0.9
KIEV Kiev 114.31 323 *e*PKPdf PKPdf 20 15 18.6 -0.9
AK02 Malin Array Si 114.32 323 *e*PKPdf PKPdf 20 15 18.9 -0.6
BR131 Keskin Array S 114.39 311 *e*PKPdf PKPdf 20 15 19.7 -0.5
BRTR Keskin Array B 114.39 311 PKiKP PKPdf 20 15 19.9 -0.4
BRTR Keskin Array B 114.39 311 PKiKP PKPdf 20 15 19.9 -0.4
comp=Z,1.9nm,0.7s,baz=146,slow=5.0,SNR=13
BOSA Boshof 116.30 234 PKP **PKPdf 20 15 24.6 +0.3**
BOSA *e*PKPdf **PKiKP 20 15 26.5 +2.3**
BOSA PKKPbc **PKKPbc 20 25 54.3 +0.5**
BOSA Boshof 116.30 234 PKP **PKPdf 20 15 24.6 +0.3**
comp=Z,3.2nm,0.5s,baz=135,slow=1.8,SNR=19
BOSA PKKPbc **PKKPbc 20 25 54.3 +0.5**
comp=Z,3.8nm,0.9s,baz=326,slow=7.3,SNR=3.6
TLCR 116.39 318 ⇓PKiKP **PKPdf 20 15 24.0 +0.3**
TLCR 116.39 318 ⇓*i*P **PKPdf 20 15 24.0 +0.3**
HARR Harsova 117.15 317 ⇓PKiKP **PKPdf 20 15 25.5 +0.3**
HARR Harsova 117.15 317 ⇓*i*P **PKPdf 20 15 25.5 +0.3**
TESR Tescani 117.38 319 ⇑*i*P **PKPdf 20 15 25.8 +0.2**
LBTB Lobatse 117.45 238 *e*PKPdf **PKPdf 20 15 29.0 +2.4**
VRI Vrincioaia 117.55 319 ⇑PKiKP **PKPdf 20 15 26.9 +0.9**
VRI Vrincioaia 117.55 319 ⇑*i*P **PKPdf 20 15 26.9 +0.9**
NB2 NORSAR Subarra 117.62 339 PKPdf **PKPdf 20 15 25.8 +0.1**
comp=Z,23nm,1.7s,baz=45,slow=1.9
NB2 NORSAR Subarra 117.62 339 PKPdf **PKPdf 20 15 25.8 +0.1**
baz=45,slow=1.9
NOA NORSAR Array B 117.62 339 PKP **PKPdf 20 15 25.1 -0.5**
NOA NORSAR Array B 117.62 339 PKP **PKPdf 20 15 25.1 -0.5**
comp=Z,2.2nm,0.7s,baz=49,slow=1.8,SNR=11
BUR08 Bucovina Ar. S 117.88 321 *e*PKPdf **PKPdf 20 15 27.5 +0.9**
BURAR Bucovina Array 117.88 321 ⇓*i*P **PKPdf 20 15 27.5 +0.8**
MLR Muntele Rosu 118.20 319 ⇓*i*P **PKPdf 20 15 27.0 -0.4**
LSZ Lusaka 118.38 249 *e*PKPdf **PKPdf 20 15 28.6 0.0**
KWP Kalwaria Pacla 118.57 324 ⇓PKiKP **PKPdf 20 15 28.2 +0.4**
KWP Kalwaria Pacla 118.57 324 ⇓*i*P **PKPdf 20 15 28.2 +0.4**
KWP Kalwaria Pacla 118.57 324 *e*PKP **PKPdf 20 15 28.2 +0.4**
VOIR 118.80 319 ⇑PKiKP **PKPdf 20 15 29.7 +1.2**
VOIR 118.80 319 ⇑*i*P **PKPdf 20 15 29.6 +1.1**
OLI Olney 118.82 49 *e*PKPdf **PKPdf 20 15 29.4 +0.8**
SFIN Scholer Farm 119.09 47 P **PKPdf 20 15 29.3 +0.2**
baz=119
ARR Arges 119.10 319 ⇓*i*P **PKPdf 20 15 29.6 +0.5**
KOLS Kolonicke sedl 119.13 323 *e*PKiKP **PKPdf 20 15 29.6 +0.7**
KOLS Kolonicke sedl 119.13 323 *e*PKP **PKPdf 20 15 29.6 +0.7**
UZH Uzhgorod 119.25 323 *e*PKiKP PKPdf 20 15 37.6 +8.5
TRPA Tarpa 119.31 322 ⇓*i*P **PKPdf 20 15 29.9 +0.7**
ARG Arkhangelos 119.43 308 *e*P **PKPdf 20 15 29.5 -0.4**
STHS Stebnicka Huta 119.52 324 *e*PKiKP **PKPdf 20 15 30.7 +1.0**
STHS Stebnicka Huta 119.52 324 *e*PKP **PKPdf 20 15 30.7 +1.0**
CRVS Cervenica-Dubn 119.62 324 *e*PKiKP **PKPdf 20 15 28.7 -1.2**
CRVS Cervenica-Dubn 119.62 324 *e*PKP **PKPdf 20 15 28.7 -1.2**
ALN Alexandroupoli 119.68 314 *e*P **PKPdf 20 15 29.5 -0.7**
WVT Waverly 119.70 52 *e*PKiKP **PKPdf 20 15 29.7 -0.7**
WVT Waverly 119.70 52 *e*PKPdf **PKPdf 20 15 29.6 -0.7**
DRGR 119.77 321 ⇑PKiKP **PKPdf 20 15 29.5 -0.8**
DRGR 119.77 321 ⇑*i*P **PKPdf 20 15 29.5 -0.8**
BLO Bloomington 119.87 48 *e*PKiKP **PKPdf 20 15 30.0 -0.6**
BLO Bloomington 119.87 48 *e*PKPdf **PKPdf 20 15 30.0 -0.6**
PLCA Paso Flores 119.96 145 PKP **PKPdf 20 15 30.2 -0.7**
PLCA Paso Flores 119.96 145 PKP **PKPdf 20 15 30.2 -0.7**
comp=Z,1.7nm,0.5s,baz=3.6,slow=2.5,SNR=8.7
OJC Ojcow 119.97 325 *e*PKiKP **PKPdf 20 15 28.3 -2.2**
OJC Ojcow 119.97 325 *e*PKP **PKPdf 20 15 28.3 -2.2**
PRK Paraskevi 120.02 312 *e*P **PKPdf 20 15 31.0 +0.1**
NIE Niedzica 120.06 324 *e*PKiKP **PKPdf 20 15 28.5 -2.2**
NIE Niedzica 120.06 324 *e*PKP **PKPdf 20 15 28.5 -2.2**
SMTH Samothraki Isl 120.18 313 *e*P **PKPdf 20 15 30.5 -0.7**
GZR Gura Zlata 120.30 319 ⇓PKiKP **PKPdf 20 15 32.0 +0.7**
GZR Gura Zlata 120.30 319 ⇓*i*P **PKPdf 20 15 32.0 +0.7**
WCI Wyandotte Cave 120.32 49 *e*PKiKP **PKPdf 20 15 30.6 -0.9**
WCI Wyandotte Cave 120.32 49 *e*PKPdf **PKPdf 20 15 30.6 -0.9**
KECS Kecovo 120.39 323 *e*PKiKP **PKPdf 20 15 31.7 +0.4**
KECS Kecovo 120.39 323 *e*PKP **PKPdf 20 15 31.7 +0.4**
LIA Limnos Island 120.62 313 *e*P **PKPdf 20 15 31.0 -1.0**
RGN Rugen 120.93 332 *e*L L 21 08 57.0
comp=Z,554nm,20.5s
BZS Buzias 120.95 320 ⇓PKiKP **PKPdf 20 15 32.5 0.0**
BZS Buzias 120.95 320 ⇓*i*P **PKPdf 20 15 32.5 0.0**
PSZ Piszkesteto 121.00 323 *e*PKiKP **PKPdf 20 15 32.0 -0.6**
PSZ Piszkesteto 121.00 323 *e*PKPdf **PKPdf 20 15 32.0 -0.6**
PSZ Piszkesteto 121.00 323 ⇓*e*PKPdf **PKPdf 20 15 33.4 +0.8**
NVR Nevrokopi 121.08 315 *e*P **PKPdf 20 15 32.5 -0.4**
OKC Ostrava-Krasne 121.08 326 *e*PKiKP **PKPdf 20 15 32.4 -0.2**
OKC *e* 20 15 40.1
OKC *e* 20 15 44.9
OKC MLR MLR
comp=Z,400nm,19.3s
OKC Ostrava-Krasne 121.08 326 *e*PKPdf **PKPdf 20 15 32.4 -0.2**
OKC *ex* x 20 15 40.1
OKC *e*pPKP **pPKPdf 20 15 44.9 -2.0**
OKC AMS AMS 21 07 50.0
comp=Z,400nm,19.3s
VTS Vitosha 121.09 316 ⇑PKiKP **PKPdf 20 15 32.9 -0.2**
VTS Vitosha 121.09 316 ⇑*i*P **PKPdf 20 15 32.9 -0.2**
LRAL Lakeview Retre 121.11 55 *e*PKPdf **PKPdf 20 15 32.6 -0.6**
VYHS Vyhne 121.35 324 *e*PKiKP **PKPdf 20 15 33.7 +0.5**
VYHS Vyhne 121.35 324 *e*PKP **PKPdf 20 15 33.7 +0.5**
SWET Sewanee 121.43 53 *e*PKPdf **PKPdf 20 15 32.4 -1.4**
MORC Moravsky Berou 121.45 326 ⇑PKiKP **PKPdf 20 15 34.1 +0.7**
MORC Moravsky Berou 121.45 326 *e*PKPdf **PKPdf 20 15 34.3 -0.1**
MORC Moravsky Berou 121.45 326 ⇑*i*P **PKPdf 20 15 34.3 +0.7**
KSP Ksiaz 121.57 327 *e*PKiKP **PKPdf 20 15 34.5 +1.0**
KSP MLR MLR
comp=Z,900nm,20.9s
KRLC Kraliky 121.72 326 *e*PKiKP **PKPdf 20 15 34.4 +0.5**
KRLC *e* 20 15 41.1
KRLC Kraliky 121.72 326 *e*PKPdf **PKPdf 20 15 34.4 +0.5**
KRLC *ex* x 20 15 41.1
LAST Lasithi 121.78 307 *e*P **PKPdf 20 15 35.0 +0.5**
PKS6 Bocsa 121.81 322 ⇑*e*PKPdf **PKPdf 20 15 35.5 +1.4**
AOS Alonnisos 121.81 312 *e*P **PKPdf 20 15 35.0 +0.7**
UPC Upice 121.90 327 *e*PKiKP **PKPdf 20 15 34.6 +0.4**
UPC Upice 121.90 327 *e*PKPdf **PKPdf 20 15 34.6 +0.4**
RUE Ruedersdorf 121.94 330 *e*PKPdf **PKPdf 20 15 34.9 +0.8**
RUE *e*L L 21 11 48.5
comp=Z,450nm,20.2s
PKS2 Kecel 122.07 322 ⇓*e*PKPdf **PKPdf 20 15 35.5 +0.9**
ACSO Alum Creek Sta 122.11 46 *e*PKPdf **PKPdf 20 15 35.2 +0.2**
PKSG 122.14 323 ⇓*e*PKPdf **PKPdf 20 15 35.0 +0.3**
IDI Anoyia 122.21 308 *e*PKPdf **PKPdf 20 15 35.3 0.0**
IDI Anoyia 122.21 308 *e*P **PKPdf 20 15 36.5 +1.2**
VRAC Vranov 122.22 326 ⇑*i*P **PKPdf 20 15 36.0 +1.1**
CSKK Cs˙ákako 122.24 323 ⇓*e*PKPdf **PKPdf 20 15 35.1 +0.2**
NEO Neokhori 122.24 313 *e*P **PKPdf 20 15 35.0 -0.2**
GRG Griva 122.25 315 *e*P **PKPdf 20 15 34.5 -0.7**
SIVA Sivas 122.35 307 *e*P **PKPdf 20 15 36.0 +0.5**
PKST T˜'s 122.42 323 ⇓*e*PKPdf **PKPdf 20 15 35.3 0.0**
LIT Litokhoron 122.50 314 *e*P **PKPdf 20 15 37.0 +1.3**
ZST Bratislava 122.50 324 *e*PKiKP **PKPdf 20 15 35.3 -0.1**
ZST Bratislava 122.50 324 *e*PKP **PKPdf 20 15 35.3 -0.1**
PKSM Moragy 122.55 322 ⇑PKiKP **PKPdf 20 15 35.5 0.0**
PKSM Moragy 122.55 322 ⇑*i*P **PKPdf 20 15 35.5 0.0**
PKSM Moragy 122.55 322 ⇓*e*PKPdf **PKPdf 20 15 36.1 +0.6**
NAIG Nisos Aigina 122.56 311 *e*P **PKPdf 20 15 34.5 -1.3**
PKS9 Tamasi 122.60 322 ⇓*e*PKPdf **PKPdf 20 15 35.9 +0.3**
PVCC Panska Ves 122.66 328 *e*PKiKP **PKPdf 20 15 35.8 +0.2**
PVCC *e* 20 15 41.9

PVCC MLR MLR
comp=Z,400nm,18.2s
PVCC Panska Ves 122.66 328 *e*PKPdf PKPdf 20 15 35.8 +0.2
PVCC *ex* x 20 15 41.9
PVCC AMS AMS 21 09 50.0
comp=Z,400nm,18.2s
BSEG Bad Segeberg 122.69 333 *e*PKPdf PKPdf 20 15 36.5 +1.0
BSEG *eL* L 21 10 24.6
comp=Z,493nm,20.7s
BSEG Bad Segeberg 122.69 333 *e*PKIKP PKPdf 20 15 36.6 +1.0
BSEG MLR MLR
comp=Z,500nm,20.7s
BRG Berggiesshubel 122.80 328 *i* PKP PKPdf 20 15 36.3 +0.4
comp=Z,25nm,1.1s
BRG *i* 20 15 48.2
comp=Z,7.2nm,0.9s
BRG Berggiesshubel 122.80 328 *e*PKPdf PKPdf 20 15 36.5 +0.6
BRG *eL* L 21 10 52.5
comp=Z,368nm,19.9s
BRG Berggiesshubel 122.80 328 *i* PKIKP PKPdf 20 15 36.3 +0.4
BRG *i* 20 15 48.2
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG pmax pmax
comp=Z,25nm,0.9s
DID Didima 122.83 311 *e*P PKPdf 20 15 35.5 -0.9
TREC Trest 122.84 326 *e*PKIKP PKPdf 20 15 36.5 +0.4
TREC MLR MLR
comp=Z,600nm,22.0s
TREC Trest 122.84 326 *e*PKPdf PKPdf 20 15 36.5 +0.4
TREC AMS AMS 21 08 30.0
comp=Z,600nm,22.0s
LTK Loutraki 122.86 311 *e*P PKPdf 20 15 35.5 -0.9
TZTN Tazewell 122.91 50 *e*PKPdf PKPdf 20 15 36.9 +0.3
GVD Gavdhos 122.97 307 *e*PKPdf PKPdf 20 15 36.4 -0.3
GVD Gavdhos 122.97 307 *e*P PKPdf 20 15 37.0 +0.3
PRU Pruhonice 122.98 327 *e*PKIKP PKPdf 20 15 36.6 +0.3
PRU *e* 20 15 41.9
PRU *e* 20 15 48.2
PRU MLR MLR
comp=Z,400nm,19.6s
PRU Pruhonice 122.98 327 *e*PKPdf PKPdf 20 15 36.6 +0.3
PRU *ex* x 20 15 41.9
PRU *ep*PKP pPKPdf 20 15 48.2 -2.3
PRU AMS AMS 21 09 50.0
comp=Z,400nm,19.6s
AGG Agios Georgios 122.99 313 *e*P PKPdf 20 15 36.5 -0.2
CLL Collm 123.03 329 *e*PKPdf PKPdf 20 15 36.7 +0.4
CLL *eL* L 21 10 32.1
comp=Z,418nm,20.4s
CLL Collm 123.03 329 *e*PKIKP PKPdf 20 15 36.0 -0.3
CLL pmax pmax
comp=Z,16nm,0.9s
CLL Collm 123.03 329 *e*PKPdf PKPdf 20 15 36.0 -0.3
comp=Z,16nm,0.9s
CLL *ep*PKPdf pPKPdf 20 15 48.0 -2.5
CLL *e*PS PS 20 27 05.0 -7.4
CLL *e*SS SS 20 34 00.0 +4.0
CLL LmV 21 10 00.0
comp=Z,400nm,20.4s
CLL LmH 21 11 00.0
comp=N,200nm,19.7s
CLL LmH 21 11 00.0
comp=E,300nm,19.2s
SOP Sopron 123.08 324⇓ *e*PKPdf PKPdf 20 15 37.3 +0.8
ANKY Antikythira Is 123.29 309 *e*P PKPdf 20 15 38.0 +0.7
KALE Kalithea 123.35 312 *e*P PKPdf 20 15 37.5 +0.1
GUR Goura 123.35 311 *e*P PKPdf 20 15 37.5 0.0
CONA Conrad Observa 123.36 325⇑ *i*PKiKP PKPdf 20 15 36.5 -0.7
comp=E,11nm,0.7s
KYTH Kithira 123.36 309 *e*P PKPdf 20 15 37.5 0.0
EVR Evrytania 123.41 313 *e*P PKPdf 20 15 38.5 +0.9
KLV Kalavryta, Ach 123.46 312 *e*P PKPdf 20 15 37.5 -0.1
EFP Efpalio 123.51 312 *e*P PKPdf 20 15 38.5 +0.9
VLX Vlachokerasia 123.51 311 *e*P PKPdf 20 15 38.0 +0.2
LAKA Lakka 123.52 312 *e*P PKPdf 20 15 39.0 +1.3
BEHE Becsehely 123.56 323⇓ *e*PKPdf PKPdf 20 15 38.4 +0.9
HLG Helgoland 123.60 334 *e*L L 21 09 41.2
comp=Z,388nm,21.8s
SCHQ Schefferville 123.60 25 *e*PKPdf PKPdf 20 15 37.2 -0.1
SCHQ PKP PKPdf 20 15 37.4 +0.1
SCHQ Schefferville 123.60 25 PKP PKPdf 20 15 37.4 +0.1
comp=Z,8.4nm,0.6s,baz=334,slow=2.8,SNR=22
NEUB Neuenburg 123.70 330 *e*L L 21 12 50.1
comp=Z,454nm,19.5s
NRDL Niedersach Rie 123.71 332 *e*PKPdf PKPdf 20 15 38.4 +0.9
NRDL *eL* L 21 10 20.0
comp=Z,435nm,21.9s
DYR Agios Nikonas 123.75 310 *e*P PKPdf 20 15 38.0 -0.2
TANN Tannenbergstha 123.83 329 *e*PKPdf PKPdf 20 15 38.4 +0.4
TANN *eL* L 21 08 42.9
comp=Z,262nm,20.4s
JAN Janina 123.83 314 *e*P PKPdf 20 15 39.0 +0.7
NKC Novy Kostel 123.94 328 *e*PKIKP PKPdf 20 15 37.9 -0.2
NKC *e* 20 15 45.7
NKC Novy Kostel 123.94 328 *e*PKPdf PKPdf 20 15 37.9 -0.2
NKC *ep*PKP pPKPdf 20 15 45.7 -6.7
RLS Riolos of Patr 123.96 312 *e*P PKPdf 20 15 39.5 +1.0
AMT Artemida-Makis 123.96 311 *e*P PKPdf 20 15 38.5 -0.1
KHC Kasperske Hory 123.98 327 *e*PKIKP PKPdf 20 15 37.8 -0.5
KHC *e* 20 15 49.8
KHC MLR MLR
comp=Z,400nm,20.5s
KHC Kasperske Hory 123.98 327 *e*PKPdf PKPdf 20 15 37.7 -0.6
KHC Kasperske Hory 123.98 327 *e*PKPdf PKPdf 20 15 37.8 -0.5
KHC *ep*PKP pPKPdf 20 15 49.8 -2.7
KHC AMS AMS 21 10 50.0
comp=Z,400nm,20.5s
GEC2 GERESS Array S 124.07 327 *e*PKPdf PKPdf 20 15 38.8 +0.3
GEC2 *eL* L 21 11 18.5
comp=Z,378nm,20.5s
GEC2 GERESS Array S 124.07 327 *e*PKIKP PKPdf 20 15 38.8 +0.3
GEC2 MLR MLR
comp=Z,400nm,20.5s
GERES GERESS Array B 124.07 327 PKP PKPdf 20 15 38.5 -0.1
GERES GERESS Array B 124.07 327 PKP PKPdf 20 15 38.5 -0.1
comp=Z,8.8nm,0.6s,baz=76,slow=1.6,SNR=98
MOX Moxa 124.12 329 *e*PKPdf PKPdf 20 15 38.9 +0.4
MOX *eL* L 21 12 33.0
comp=Z,362nm,20.1s
MOX Moxa 124.12 329 *e*PKIKP PKPdf 20 15 38.9 +0.4
MOX MLR MLR
comp=Z,400nm,20.1s
PYL PYLOS 124.15 310 *e*P PKPdf 20 15 38.5 -0.4
MANZ Manzenberg 124.27 328 *e*L L 21 08 55.5
comp=Z,313nm,21.1s
LKD2 Lefkada island 124.29 313 *e*P PKPdf 20 15 39.5 +0.3
ROTZ Rotzenmuhle 124.34 328 *e*PKPdf PKPdf 20 15 39.4 +0.5
ROTZ *eL* L 21 12 08.0
comp=Z,310nm,19.5s
WET Wettzell 124.35 327 *e*PKPdf PKPdf 20 15 39.5 +0.5
WET *eL* L 21 10 56.8
comp=Z,302nm,21.4s
WET Wettzell 124.35 327 *e*PKIKP PKPdf 20 15 39.5 +0.5
WET MLR MLR
comp=Z,300nm,21.4s
GOLS Golise 124.48 323 *i* PKPdf PKPdf 20 15 40.0 +0.7
SOKA Soboth 124.49 324⇓ *i*PKiKP PKPdf 20 15 39.1 -0.3
comp=Z,19nm,1.1s
VLS Valsamata 124.57 312 *e*P PKPdf 20 15 39.5 -0.2
UBBA Unterbreizbach 124.83 330 *e*PKPdf PKPdf 20 15 40.7 +1.1
UBBA *eL* L 21 13 24.3
comp=Z,445nm,19.0s
GRF Grafenberg Arr 124.90 329 *e*PKPdf PKPdf 20 15 40.6 +0.6
GRF *eL* L 21 12 15.0
comp=Z,345nm,18.5s
GRF Grafenberg Arr 124.90 329 *e*PKIKP PKPdf 20 15 40.6 +0.6
GRF MLR MLR
comp=Z,300nm,18.5s
IBBN Ibbenburen 124.92 333 *e*PKPdf PKPdf 20 15 40.6 +0.7
IBBN *eL* L 21 11 21.2
comp=Z,356nm,21.2s
BLA Blacksburg 125.05 49 *e*PKIKP PKPdf 20 15 40.8 +0.1
BLA Blacksburg 125.05 49 *e*PKPdf PKPdf 20 15 40.8 +0.1
KMSC Kings Mountain 125.06 51 P PKPdf 20 15 40.9 +0.2
baz=125
RJOB Jochberg 125.19 326 *e*PKPdf PKPdf 20 15 40.6 -0.1
RJOB *eL* L 21 12 37.9
comp=Z,371nm,20.5s
KBA Koelnbreinsper 125.25 325⇑ *i*PKPdf PKPdf 20 15 39.7 -1.2
comp=Z,26nm,1.4s
MYKA Terra Mystica 125.33 324⇑ *i*PKiKP PKPdf 20 15 40.9 -0.1
comp=Z,7.9nm,0.7s
VOY Vojsko 125.50 324 *e*PKPdf PKPdf 20 15 41.2 -0.2

SSPA Standing Stone 125.54 44 *e*PKPdf PKPdf 20 15 42.2 +0.7
JTS JuntasAbangare 125.58 82 *e*PKPdf PKPdf 20 15 41.5 -0.8
BUG Bochum--Univer 125.73 332 *e*PKPdf PKPdf 20 15 42.1 +0.7
BUG *eL* L 21 11 22.8
comp=Z,462nm,21.6s
FUR Furstenfeldbru 125.78 327 *e*PKPdf PKPdf 20 15 42.2 +0.5
FUR *eL* L 21 09 27.1
comp=Z,301nm,21.6s
FUR Furstenfeldbru 125.78 327 *e*PKIKP PKPdf 20 15 42.2 +0.5
FUR MLR MLR
comp=Z,300nm,21.6s
ABTA Abfaltersbach 125.91 325⇑ *i*PKPdf PKPdf 20 15 41.0 -1.1
comp=Z,24nm,0.9s
TNS Taunus Mts 125.97 330 *e*PKPdf PKPdf 20 15 42.8 +0.7
TNS *eL* L 21 13 11.6
comp=Z,398nm,20.8s
TNS Taunus Mts 125.97 330 *e*PKIKP PKPdf 20 15 42.8 +0.7
TNS MLR MLR
comp=Z,400nm,20.8s
WATA Walderalm 126.10 326⇑ *i*PKiKP PKPdf 20 15 42.0 -0.6
comp=Z,8.3nm,0.5s
WTTA Wattenberg 126.11 326⇑ *i*PKiKP PKiKP 20 15 43.2 +0.2
comp=Z,53nm,1.1s
BINY Binghamton 126.13 41 *e*PKPdf PKPdf 20 15 42.3 -0.3
TOD Tromm 126.19 330 PKIKP PKPdf 20 15 42.5 0.0
TOD Tromm 126.19 330 PKP PKPdf 20 15 42.5 0.0
MOTA Moosalm 126.36 326⇑ *i*PKiKP PKPdf 20 15 42.3 -0.7
comp=Z,27nm,0.9s
NCB Newcomb 126.39 39 *e*PKPdf PKPdf 20 15 43.9 +0.9
RETA Reutte 126.46 327⇑ *i*PKiKP PKiKP 20 15 43.5 -0.1
comp=Z,14nm,1.2s
STU Stuttgart 126.52 329 *e*PKPdf PKPdf 20 15 43.6 +0.5
STU *eL* L 21 14 04.7
comp=Z,323nm,20.1s
STU Stuttgart 126.52 329 *e*PKIKP PKPdf 20 15 43.8 +0.7
STU Stuttgart 126.52 329 *e*PKPdf PKPdf 20 15 43.8 +0.7
TSUM Tsumeb 126.56 240 *e*PKPdf PKPdf 20 15 45.3 +1.1
JSRW J. Sargeant Re 126.75 47 *e*PKPdf PKPdf 20 15 43.6 -0.3
FETA Feichten 126.76 326⇑ *i*PKiKP PKPdf 20 15 43.3 -0.5
comp=Z,31nm,1.0s
MEM Membach 126.88 332 PKP PKPdf 20 15 44.5 +0.8
RUP Ruppelstein 126.99 331 PKIKP PKPdf 20 15 44.7 +0.7
RUP Ruppelstein 126.99 331 PKP PKPdf 20 15 44.7 +0.7
DAVA Damuels 127.06 327⇑ *i*PKPdf PKPdf 20 15 42.5 -1.9
comp=Z,20nm,0.9s
LANF Langenberg 127.09 330 PKIKP PKPdf 20 15 44.7 +0.5
LANF Langenberg 127.09 330 PKP PKPdf 20 15 44.7 +0.5
LANF Langenberg 127.09 330 PKP PKPdf 20 15 44.7 +0.5
SPAK Spaichingen-Ko 127.15 328 PKP PKPdf 20 15 44.1 -0.3
LCO Las Campanas 127.20 134 *e*PKPdf PKPdf 20 15 45.3 -0.1
BFO Black Forest 127.24 329 *e*PKPdf PKPdf 20 15 44.5 0.0
BFO *eL* L 21 14 35.2
comp=Z,244nm,21.0s
BFO Black Forest 127.24 329 *e*PKIKP PKPdf 20 15 44.5 0.0
BFO MLR MLR
comp=Z,200nm,21.0s
BFO Black Forest 127.24 329 *e*PKPdf PKPdf 20 15 43.4 -1.1
CFAA Coronel Fontan 127.32 138 PKP PKPdf 20 15 44.9 -0.3
CFAA Coronel Fontan 127.32 138 PKP PKPdf 20 15 44.9 -0.3
comp=Z,0.7nm,0.6s,baz=224,slow=3.1,SNR=17
BCLA Clavier 127.34 332 PKP PKPdf 20 15 45.5 +0.9
WLF Walferdange 127.45 331 PKP PKPdf 20 15 45.9 +1.0
WLF Walferdange 127.45 331 *e*PKPdf PKPdf 20 15 46.0 +1.2
WLF *eL* L 21 13 01.4
comp=Z,333nm,20.6s
LBNH Lisbon 127.65 37 *e*PKIKP PKPdf 20 15 45.1 -0.3
LBNH Lisbon 127.65 37 *e*PKPdf PKPdf 20 15 45.1 -0.3
FELD Feldberg im Sc 127.70 328 PKP PKPdf 20 15 45.4 -0.2
FELD Feldberg im Sc 127.70 328 PKP PKPdf 20 15 45.4 -0.2
CDF Champ du Feu 127.73 329 *e*PKIKP PKPdf 20 15 45.0 -0.5
comp=Z,19nm,1.1s
CDF Champ du Feu 127.73 329 *e*PKIKP PKPdf 20 15 45.0 -0.5
CDF Champ du Feu 127.73 329 *e*PKPdf PKPdf 20 15 45.0 -0.5
GIVF Givet 127.78 332 *e*PKIKP PKPdf 20 15 45.6 +0.2
comp=Z,72nm,1.2s
GIVF Givet 127.78 332 *e*PKIKP PKPdf 20 15 45.6 +0.2
GIVF Givet 127.78 332 *e*PKPdf PKPdf 20 15 45.6 +0.2
TUE Stuetta 127.85 326 *e*PKPdf PKPdf 20 15 46.2 +0.2
DOU Dourbes 127.89 332 PKP PKPdf 20 15 45.9 +0.2
BAIF Baives 128.09 333 *e*PKIKP PKPdf 20 15 46.2 +0.2
comp=Z,17nm,0.9s
BAIF Baives 128.09 333 *e*PKIKP PKPdf 20 15 46.2 +0.2
BAIF Baives 128.09 333 *e*PKPdf PKPdf 20 15 46.2 +0.2
MOF Molkenrain 128.16 329 PKIKP PKPdf 20 15 46.2 -0.2
MOF Molkenrain 128.16 329 PKP PKPdf 20 15 46.2 -0.2
MOF Molkenrain 128.16 329 PKP PKPdf 20 15 46.2 -0.2
BBS Basel-Blauen 128.22 328 PKIKP PKPdf 20 15 45.8 -0.6
BBS Basel-Blauen 128.22 328 PKP PKPdf 20 15 45.8 -0.6
HINF Hinteralfeld 128.33 329 *e*PKIKP PKPdf 20 15 46.3 -0.3
comp=Z,55nm,1.1s
HINF Hinteralfeld 128.33 329 *e*PKIKP PKPdf 20 15 46.3 -0.3
HINF Hinteralfeld 128.33 329 *e*PKPdf PKPdf 20 15 46.3 -0.3
PAGF Fort de Pagny 128.41 330 *e*PKIKP PKPdf 20 15 46.8 +0.1
PAGF Fort de Pagny 128.41 330 *e*PKPdf PKPdf 20 15 46.8 +0.1
HAU Haudompre 128.46 329 *e*PKIKP PKPdf 20 15 46.6 -0.3
comp=Z,25nm,0.7s
HAU Haudompre 128.46 329 *e*PKIKP PKPdf 20 15 46.6 -0.3
HAU Haudompre 128.46 329 *e*PKPdf PKPdf 20 15 46.6 -0.3
THEF They Montfort 128.50 330 PKIKP PKPdf 20 15 47.3 +0.4
THEF They Montfort 128.50 330 PKP PKPdf 20 15 47.3 +0.4
THEF They Montfort 128.50 330 PKP PKPdf 20 15 47.3 +0.4
LOMF Lomont 128.65 329 PKIKP PKPdf 20 15 47.5 +0.2
LOMF Lomont 128.65 329 PKP PKPdf 20 15 47.5 +0.2
LOMF Lomont 128.65 329 PKP PKPdf 20 15 47.5 +0.2
MEZF Maizieres J'vi 128.77 331 *e*PKIKP PKPdf 20 15 47.8 +0.4
comp=Z,50nm,1.1s
MEZF Maizieres J'vi 128.77 331 *e*PKPdf PKPdf 20 15 47.8 +0.4
SFTF Sexfontaines 128.98 330 *e*PKIKP PKPdf 20 15 47.9 +0.1
SFTF Sexfontaines 128.98 330 *e*PKPdf PKPdf 20 15 47.9 +0.1
CABF La Chapelle 129.51 328 *e*PKIKP PKPdf 20 15 49.4 +0.4
comp=Z,83nm,1.2s
CABF La Chapelle 129.51 328 *e*PKIKP PKPdf 20 15 49.4 +0.4
CABF La Chapelle 129.51 328 *e*PKPdf PKPdf 20 15 49.4 +0.4
LPL La Plagne 129.87 327 *e*PKIKP PKPdf 20 15 50.0 +0.1
LPL La Plagne 129.87 327 *e*PKIKP PKPdf 20 15 50.0 +0.1
LPL La Plagne 129.87 327 *e*PKPdf PKPdf 20 15 50.0 +0.1
LPG La Plagne 129.87 327 *e*PKIKP PKPdf 20 15 50.1 +0.1
LPG La Plagne 129.87 327 *e*PKIKP PKPdf 20 15 50.1 +0.1
LPG La Plagne 129.87 327 *e*PKPdf PKPdf 20 15 50.1 +0.1
BNI Bardonecchia 130.19 326 *e*PKIKP PKPdf 20 15 49.2 -1.2
BNI Bardonecchia 130.19 326 *e*PKPdf PKPdf 20 15 49.2 -1.2
LOR Lormes 130.20 330 *e*PKIKP PKPdf 20 15 50.4 +0.2
comp=Z,50nm,1.2s
LOR Lormes 130.20 330 *e*PKPdf PKPdf 20 15 50.4 +0.2
MBDF Montbardon 130.35 326 *e*PKIKP PKPdf 20 15 50.6 -0.1
MBDF Montbardon 130.35 326 *e*PKIKP PKPdf 20 15 50.6 -0.1
MBDF Montbardon 130.35 326 *e*PKPdf PKPdf 20 15 50.6 -0.1
PGF Pioggiola 130.35 322 *e*PKIKP PKPdf 20 15 50.6 -0.1
comp=Z,41nm,0.8s
PGF Pioggiola 130.35 322 *e*PKIKP PKPdf 20 15 50.6 -0.1
PGF Pioggiola 130.35 322 *e*PKPdf PKPdf 20 15 50.6 -0.1
SBF Sospel 130.50 325 *e*PKIKP PKPdf 20 15 50.7 -0.2
SBF Sospel 130.50 325 *e*PKIKP PKPdf 20 15 50.7 -0.2
SBF Sospel 130.50 325 *e*PKPdf PKPdf 20 15 50.7 -0.2
SSF Saint Saulge 130.52 330 *e*PKIKP PKPdf 20 15 51.1 +0.3
comp=Z,27nm,1.0s
SSF Saint Saulge 130.52 330 *e*PKIKP PKPdf 20 15 51.1 +0.3
SSF Saint Saulge 130.52 330 *e*PKPdf PKPdf 20 15 51.1 +0.3
SMF Signal de Mont 130.64 330 *e*PKIKP PKPdf 20 15 51.0 0.0
comp=Z,41nm,1.1s
SMF Signal de Mont 130.64 330 *e*PKIKP PKPdf 20 15 51.0 0.0
SMF Signal de Mont 130.64 330 *e*PKPdf PKPdf 20 15 51.0 0.0
ORIF Oris-en-Rattie 130.72 327 *e*PKIKP PKPdf 20 15 51.5 +0.2
comp=Z,16nm,0.9s
ORIF Oris-en-Rattie 130.72 327 *e*PKIKP PKPdf 20 15 51.5 +0.2
ORIF Oris-en-Rattie 130.72 327 *e*PKPdf PKPdf 20 15 51.5 +0.2
AVF Avril sur Loir 130.78 330 *e*PKIKP PKPdf 20 15 51.2 -0.1
comp=Z,8.6nm,0.8s
AVF Avril sur Loir 130.78 330 *e*PKIKP PKPdf 20 15 51.2 -0.1
AVF Avril sur Loir 130.78 330 *e*PKPdf PKPdf 20 15 51.2 -0.1
HYF Humbligny 130.80 331 *e*PKIKP PKPdf 20 15 52.1 +0.8
HYF Humbligny 130.80 331 *e*PKPdf PKPdf 20 15 52.1 +0.8
LDF La Druitiere 131.10 334 *e*PKIKP PKPdf 20 15 51.8 0.0
LDF La Druitiere 131.10 334 *e*PKIKP PKPdf 20 15 51.8 0.0
LDF La Druitiere 131.10 334 *e*PKPdf PKPdf 20 15 51.8 0.0
FLN La Foliniere 131.13 334 *e*PKIKP PKPdf 20 15 52.0 +0.2
FLN La Foliniere 131.13 334 *e*PKIKP PKPdf 20 15 52.0 +0.2
FLN La Foliniere 131.13 334 *e*PKPdf PKPdf 20 15 52.0 +0.2
FLN La Foret Royal 131.14 325 *e*PKIKP PKPdf 20 15 52.0 -0.1
comp=Z,35nm,1.0s
FRF La Foret Royal 131.14 325 *e*PKIKP PKPdf 20 15 52.0 -0.1
FRF La Foret Royal 131.14 325 *e*PKPdf PKPdf 20 15 52.0 -0.1
BGF Bois d'Agland 131.20 330 *e*PKIKP PKPdf 20 15 52.5 +0.4
comp=Z,34nm,0.9s
BGF Bois d'Agland 131.20 330 *e*PKIKP PKPdf 20 15 52.5 +0.4
BGF Bois d'Agland 131.20 330 *e*PKPdf PKPdf 20 15 52.5 +0.4
SSB Saint Sauveur 131.20 328 *e*PKIKP PKPdf 20 15 49.9 -2.3
SSB Saint Sauveur 131.20 328 *e*PKPdf PKPdf 20 15 49.9 -2.3
SSB *e*SKP 20 19 14.0
OTAV Otavalo 131.26 95 *e*PKPdf PKPdf 20 15 54.4 +0.7
LMR La Mourre 131.36 325 *e*PKIKP PKPdf 20 15 52.5 0.0
comp=Z,38nm,1.0s
LMR La Mourre 131.36 325 *e*PKIKP PKPdf 20 15 52.5 0.0
LMR La Mourre 131.36 325 *e*PKPdf PKPdf 20 15 52.5 0.0
AGO Saint Agoulin 131.41 329 PKP PKPdf 20 15 53.9 +1.4
AGO Saint Agoulin 131.41 329 PKP PKPdf 20 15 53.9 +1.4
VIVF Saint-Julien-l 131.41 327 *e*PKIKP PKPdf 20 15 52.9 +0.3
VIVF Saint-Julien-l 131.41 327 *e*PKIKP PKPdf 20 15 52.9 +0.3
VIVF Saint-Julien-l 131.41 327 *e*PKPdf PKPdf 20 15 52.9 +0.3
SMRF Simiane la Rot 131.49 326 *e*PKIKP PKPdf 20 15 53.4 +0.6
comp=Z,34nm,1.0s
SMRF Simiane la Rot 131.49 326 *e*PKPdf PKPdf 20 15 53.4 +0.6
GRR Gorron 131.57 334 *e*PKIKP PKPdf 20 15 53.0 +0.3
comp=Z,11nm,0.7s
GRR Gorron 131.57 334 *e*PKIKP PKPdf 20 15 53.0 +0.3
GRR Gorron 131.57 334 *e*PKPdf PKPdf 20 15 53.0 +0.3
PYM Petit Puy Mans 131.68 329 PKIKP PKPdf 20 15 54.5 +1.4
PYM Petit Puy Mans 131.68 329 PKP PKPdf 20 15 54.5 +1.4
PYM Petit Puy Mans 131.68 329 PKP PKPdf 20 15 54.5 +1.4
TCF Toulx Ste Croi 131.70 330 *e*PKIKP PKPdf 20 15 53.5 +0.4
comp=Z,33nm,0.8s
TCF Toulx Ste Croi 131.70 330 *e*PKIKP PKPdf 20 15 53.5 +0.4
TCF Toulx Ste Croi 131.70 330 *e*PKPdf PKPdf 20 15 53.5 +0.4
LBL Lubilhac 131.91 329 PKIKP PKPdf 20 15 54.1 +0.5
LBL Lubilhac 131.91 329 PKP PKPdf 20 15 54.1 +0.5
LBL Lubilhac 131.91 329 PKP PKPdf 20 15 54.1 +0.5
LASF Ste Croix 132.36 327 *e*PKIKP PKPdf 20 15 54.9 +0.5
comp=Z,76nm,1.3s
LASF Ste Croix 132.36 327 *e*PKPdf PKPdf 20 15 54.9 +0.5
SGMF Saint Gilles 132.40 335 *e*PKIKP PKPdf 20 15 54.4 +0.1
comp=Z,29nm,0.8s
SGMF Saint Gilles 132.40 335 *e*PKIKP PKPdf 20 15 54.4 +0.1
SGMF Saint Gilles 132.40 335 *e*PKPdf PKPdf 20 15 54.4 +0.1
MFF Saint Martin d 132.60 332 *e*PKIKP PKPdf 20 15 55.0 +0.3
comp=Z,9.7nm,0.8s
MFF Saint Martin d 132.60 332 *e*PKIKP PKPdf 20 15 55.0 +0.3
MFF Saint Martin d 132.60 332 *e*PKPdf PKPdf 20 15 55.0 +0.3
ROSF Rostrenen 132.62 336 *e*PKIKP PKPdf 20 15 54.7 0.0
comp=Z,12nm,0.8s
ROSF Rostrenen 132.62 336 *e*PKIKP PKPdf 20 15 54.7 0.0
ROSF Rostrenen 132.62 336 *e*PKPdf PKPdf 20 15 54.7 0.0
CAF Calviac 132.73 329 *e*PKIKP PKPdf 20 15 55.8 +0.7
CAF Calviac 132.73 329 *e*PKIKP PKPdf 20 15 55.8 +0.7
CAF Calviac 132.73 329 *e*PKPdf PKPdf 20 15 55.8 +0.7
RJF Les Rejaudoux 132.74 330 *e*PKIKP PKPdf 20 15 55.5 +0.5
comp=Z,9.3nm,0.9s
RJF Les Rejaudoux 132.74 330 *e*PKIKP PKPdf 20 15 55.5 +0.5
RJF Les Rejaudoux 132.74 330 *e*PKPdf PKPdf 20 15 55.5 +0.5
LFF La Frestale 133.38 330 *e*PKIKP PKPdf 20 15 57.0 +0.8
LFF La Frestale 133.38 330 *e*PKIKP PKPdf 20 15 57.0 +0.8
LFF La Frestale 133.38 330 *e*PKPdf PKPdf 20 15 57.0 +0.8
MTLF Montolieu 133.74 327 *e*PKIKP PKPdf 20 15 57.5 +0.5
comp=Z,13nm,0.8s
MTLF Montolieu 133.74 327 *e*PKIKP PKPdf 20 15 57.5 +0.5
MTLF Montolieu 133.74 327 *e*PKPdf PKPdf 20 15 57.5 +0.5
KEST Kesra 133.75 314 PKP PKPdf 20 15 54.9 -2.4
KEST *e*PKPdf PKiKP 20 15 58.0 -0.6
KEST SKPbc SKPab 20 19 24.8 -0.2
KEST Kesra 133.75 314 PKP PKPdf 20 15 54.9 -2.4
comp=Z,0.7nm,0.7s,baz=10,slow=3.7,SNR=4.6
KEST SKPbc SKPab 20 19 24.8 -0.2
comp=Z,2.5nm,1.1s,baz=158,slow=3.1,SNR=3.1
EPF Esparros 134.94 328 *e*PKIKP PKPdf 20 16 00.2 +0.9
comp=Z,4.3nm,0.5s
EPF Esparros 134.94 328 *e*PKIKP PKPdf 20 16 00.2 +0.9
EPF Esparros 134.94 328 *e*PKPdf PKPdf 20 16 00.2 +0.9
ETSF Etsaut 135.50 329 *e*PKIKP PKPdf 20 16 01.9 +1.5
comp=Z,18nm,0.8s
ETSF Etsaut 135.50 329 *e*PKIKP PKPdf 20 16 01.9 +1.5
ETSF Etsaut 135.50 329 *e*PKPdf PKPdf 20 16 01.9 +1.5
SJPF Ste Jean 135.68 330 *e*PKIKP PKPdf 20 16 02.0 +1.4
comp=Z,13nm,0.7s
SJPF Ste Jean 135.68 330 *e*PKIKP PKPdf 20 16 02.0 +1.4
SJPF Ste Jean 135.68 330 *e*PKPdf PKPdf 20 16 02.0 +1.4
ROSC El Rosal 135.88 90 *e*PKPdf PKPdf 20 16 01.2 -1.1
ROSC PKP PKPdf 20 16 01.9 -0.4
ROSC El Rosal 135.88 90 PKP PKPdf 20 16 01.9 -0.4
comp=Z,10nm,0.4s,baz=285,slow=7.8,SNR=4.0
LPAZ La Paz 135.95 122 *e*PKPpre PKPpre 20 15 54.9
LPAZ PKPpre PKPpre 20 15 55.0
LPAZ PKP PKPdf 20 16 02.3 -0.3
LPAZ SKPab SKiKP 20 19 38.5 +1.7
LPAZ La Paz 135.95 122 PKhKP PKPpre 20 15 55.0
comp=Z,1.4nm,0.6s,baz=321,slow=3.3,SNR=3.0
LPAZ PKP PKPdf 20 16 02.3 -0.3
comp=Z,4.7nm,0.6s,baz=296,slow=2.9,SNR=14
LPAZ SKPab SKiKP 20 19 38.5 +1.7
comp=Z,1.7nm,1.1s,baz=207,slow=9.0,SNR=2.8
CPUP Villa Florida 137.87 142 PKP PKPdf 20 16 04.9 -0.3
CPUP Villa Florida 137.87 142 PKP PKPdf 20 16 04.9 -0.3
comp=Z,1.5nm,0.6s,baz=180,slow=2.5
PBRG Braganca 139.31 333 *e*PKPdf PKPdf 20 16 08.5 +1.1
ESDC Sonseca Array 139.60 328 PKPpre PKPpre 20 16 00.7
ESDC PKP PKPdf 20 16 07.7 -0.4
ESDC SKPab SKPab 20 19 53.1 +2.6
ESDC Sonseca Array 139.60 328 PKhKP PKPpre 20 16 00.7
comp=Z,0.5nm,0.5s,baz=16,slow=2.8,SNR=5.6
ESDC PKP PKPdf 20 16 07.7 -0.4
comp=Z,0.9nm,0.6s,baz=22,slow=2.7,SNR=8.8
ESDC SKPab SKPab 20 19 53.1 +2.6
comp=Z,0.2nm,0.3s,baz=26,slow=5.7,SNR=6.6
PGAV Gavieira, Arco 139.85 335 *e*PKPdf PKPdf 20 16 09.8 +1.3
PAB San Pablo 139.90 329 *e*PKIKP PKPdf 20 16 07.5 -1.1
PAB San Pablo 139.90 329 *e*PKPdf PKPdf 20 16 07.5 -1.1
MVO Moncorvo 139.95 333 *e*PKIKP PKPdf 20 16 08.6 0.0
MVO Moncorvo 139.95 333 *e*PKPdf PKPdf 20 16 12.3 +3.7
POLO Lamas de Olo 140.13 334 *e*PKPdf PKPdf 20 16 06.0 -3.0
POLO Lamas de Olo 140.13 334 *e*PKPdf PKPdf 20 16 12.7 +3.7
MTE Manteigas 140.80 332 *e*PKPdf PKPdf 20 16 10.5 +0.3
MTE *i* P PKiKP 20 16 14.5 +1.7
PCBR Castelo Branco 141.21 332 *e*PKPdf PKPdf 20 16 07.7 -3.1
PCBR *i* P PKiKP 20 16 14.9 +1.3
PMRV Marv??o 141.50 331 *e*PKPdf PKPdf 20 16 08.3 -3.1
PMRV Marv??o 141.50 331 *e*PKPdf PKPdf 20 16 14.4 +3.0
SIV San Ignacio 141.92 126 PKPpre PKPpre 20 16 06.8
SIV SKPbc SKiKP 20 19 50.2 +1.8
SIV San Ignacio 141.92 126 PKhKP PKPpre 20 16 06.8
comp=Z,2.4nm,0.6s,baz=266,slow=2.6,SNR=6.8
SIV SKPbc SKiKP 20 19 50.2 +1.8
comp=Z,0.6nm,0.5s,baz=256,slow=7.1,SNR=3.7
LSP Las Mesas 142.09 69 *e*PKPdf PKPdf 20 16 11.9 -1.2
CRPR Cabo Rojo, PR 142.11 69 *e*PKPdf PKPdf 20 16 06.5 -6.5
PMTG Montargil 142.18 332 *e*PKPdf PKPdf 20 16 10.4 -2.2
TAM Tamanrasset 142.20 299 *e*PKIKP PKPdf 20 16 09.9 -3.4
TAM Tamanrasset 142.20 299 *e*PKPdf PKPdf 20 16 09.9 -3.4
LRS Lares 142.29 69 *e*PKPdf PKPdf 20 16 09.8 -3.5
PBAR Barrancos 142.31 330 *i* P PKPdf 20 16 17.0 +4.1
EVO Evora 142.50 331 *e*PKIKP PKPdf 20 16 09.0 -4.2
comp=Z,67nm,1.4s
EVO Evora 142.50 331 *e*PKPdf PKPdf 20 16 09.8 -3.4
EVO *i* P P

TORD	**Torodi Ar. Bea**	**148.12**	**284**	PKPbc	**PKPbc**	**20**	**16**	**25.4**	**-1.3**
	comp=Z,48nm,0.6s,baz=53,slow=2.0,SNR=178								
GRGR	**Grenville**	**148.32**	**78**	*e*PKPbc	**PKPbc**	**20**	**16**	**26.8**	**-0.5**
FDF	**Fort de France**	**148.39**	**73**	*e*PKIKP	**PKPdf**	**20**	**16**	**24.8**	**+0.8**
FDF	**Fort de France**	**148.39**	**73**	*e*PKPdf	**PKPdf**	**20**	**16**	**24.8**	**+0.8**
FDF	**Fort de France**	**148.39**	**73**	*e*P	**PKPbc**	**20**	**16**	**27.5**	**+0.1**
FDF	**Fort de France**	**148.39**	**73**	*e*P	**PKPab**	**20**	**16**	**29.1**	**-1.6**
MVM	**Montagne Vaucl**	**148.66**	**73**	*e*P	**PKPab**	**20**	**16**	**30.4**	**-1.4**
PMPST	**Porto Santo, M**	**150.76**	**336**	*e*PKPdf	**PKPbc**	**20**	**16**	**34.3**	**+1.5**
PMPS	**Porto Santo**	**150.78**	**336**	*e*PKPdf	**PKPbc**	**20**	**16**	**33.8**	**+1.0**
PMAR	**Madeira**	**151.30**	**337**	*e*PKPdf	**PKPbc**	**20**	**16**	**35.4**	**+1.1**
BDFB	**Brasilia**	**151.59**	**141**	PKPbc	**PKPbc**	**20**	**16**	**34.7**	**-0.6**
BDFB	**Brasilia**	**151.59**	**141**	PKPbc	**PKPbc**	**20**	**16**	**34.7**	**-0.6**
	comp=Z,17nm,0.5s,baz=348,slow=2.4,SNR=5.1								
DBIC	**Dimbokro**	**155.01**	**272**	*e*PKPbc		20	16	42.8	
DBIC				PKPab	**PKPab**	**20**	**16**	**59.5**	**+1.1**
DBIC	**Dimbokro**	**155.01**	**272**	PKPbc		20	16	43.4	
	comp=Z,10nm,0.6s,baz=31,slow=4.1,SNR=17								
DBIC				PKPab	**PKPab**	**20**	**16**	**59.5**	**+1.1**
	comp=Z,5.6nm,0.6s,baz=39,slow=4.0,SNR=6.7								
LIC	**Lamto**	**155.17**	**271**	*e*PKIKP	**PKPdf**	**20**	**16**	**34.7**	**+0.5**
	comp=Z,32nm,0.6s								
LIC	**Lamto**	**155.17**	**271**	*e*PKPdf	**PKPdf**	**20**	**16**	**34.7**	**+0.5**

MAN ***30*** *20:14:49.5˚54N×126˚95E, h67km, mb5.2, ML4.1, MS4.3*
MOS ***30*** *20:15:00.7±1.2, 6˚77N×126˚50E, h33km, mb5.4/32, Error ellipse: s-maj=12.5km s-min=5.5km az=115.4*
BJI ***30*** *20:15:03.9, 6˚40N×126˚57E, h79km, mB5.0/28, mb4.9/51, Ms4.5/27, Ms7 4.4/27*
ISCJB ***30*** *20:15:04.7±0.4, 6˚78N±0˚02×126˚56E±0˚03, h67km±3km, mb4.8/113, Error ellipse: s-maj=4.8km s-min=2.9km az=160.4*
NEIC ***30*** *20:15:04.7±0.2, 6˚78N×126˚46E, mb4.8/35, Error ellipse: s-maj=6.7km s-min=4.5km az=72.0*
IDC ***30*** *20:15:05.0±0.7, 6˚74N×126˚43E, h56km±6km, mb4.5/31, mb1 4.6/32, mb1mx4.6/33, mbtmp4.5/32, MS4.0/2, Ms1 4.0/2, ms1mx2.8/42, Error ellipse: s-maj=15.3km s-min=8.7km az=76.0*
AUST ***30*** *20:15:06.3±0.0, 6˚77N×126˚56E, h76km, Error ellipse: s-maj=1.0km s-min=0.6km az=26.0*
DJA ***30*** *20:15:07.2±0.5, 7˚N±4˚×12˚7E±˚, h59km±4km, M5.1/66, mB5.5/24, mb5.2/66, MLv5.6/6, Mw(mB)4.9/24*

ISC 30 20:15:07.4±0.3, 6˚74N±0˚03×126˚58E±0˚04, h77km±2km, h77km:pP-P, n383, σ1ᵎ59/473, mb4.9/112, 34C-10D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.38**	**303**	*e*P		Pn	20 15 14.9	-4.9
MATI				*e*S		**Sn**	**20 15 23.5**	**-5.5**
DAV	**Davao City (W)**	**1.05**	**288**	*e*Pn		Pn	20 15 22.7	-4.1
DAV				S		**Sn**	**20 15 37.4**	**-3.9**
DAV				*e*Sn		Sn	20 15 37.8	-3.5
DAV	**Davao City (W)**	**1.05**	**288**	P		Pn	20 15 23.5	-3.3
DAV	**Davao City (W)**	**1.05**	**288**	P		Pn	20 15 22.9	-3.9
	1μm,0.3s,baz=154,slow=0.9,SNR=402							
DAV				S		**Sn**	**20 15 37.4**	**-3.9**
	1μm,0.3s,baz=246,slow=19,SNR=68							
DMPH	**Davao City--Mi**	**1.12**	**288**	*i*P		Pn	20 15 24.2	-3.5
DMPH				*i*S		**Sn**	**20 15 40.3**	**-2.6**
KCP	**Kidapawan**	**1.50**	**280**	*e*P		Pn	20 15 28.0	-4.7
KCP				*i*S		**Sn**	**20 15 47.5**	**-4.3**
CTBH	**Cotabato--PC H**	**2.37**	**282**	*i*P		Pn	20 15 39.8	-4.2
BUTP	**Butuan**	**2.41**	**337**	*e*P		**Pn**	**20 15 46.0**	**+1.3**
BUTP				*e*S		Sn	20 16 27.6	+14
CGP	**Cagayan de Oro**	**2.53**	**313**	*e*P		**Pn**	**20 15 43.6**	**-2.7**
CGP				*e*S		**Sn**	**20 16 13.5**	**-2.7**
PAGZ	**Pagadian**	**3.36**	**289**	*e*P		**Pn**	**20 15 54.4**	**-3.1**
DCPH	**Dipolog City**	**3.69**	**300**	*e*P		**Pn**	**20 16 01.0**	**-1.0**
MSLP	**Maasin**	**3.78**	**333**	*e*P		**Pn**	**20 16 03.5**	**+0.2**
TBP	**Tagbilaran**	**3.98**	**318**	*e*P		**Pn**	**20 16 04.3**	**-1.7**
LLP	**Lapu-Lapu**	**4.40**	**324**	*e*P		**Pn**	**20 16 09.6**	**-2.1**
LLP				*e*S		**Sn**	**20 16 59.9**	**-1.8**
ZMPH	**Zamboanga City**	**4.49**	**273**	*i*P		Pn	20 16 09.1	-3.9
PLP	**Palo**	**4.67**	**340**	*e*P		**Pn**	**20 16 15.3**	**-0.2**
PLP				*i*S		Sn	20 17 15.4	+6.9
OCLP	**Ormoc**	**4.71**	**336**	*e*P		**Pn**	**20 16 17.3**	**+1.4**
GAMI	**Galela, Maluku**	**5.01**	**166**	P		**Pn**	**20 16 20.3**	**+0.1**
	576nm,0.8s,14μm5.7nm							
GUIM	**Jordan**	**5.52**	**315**	*e*P		**Pn**	**20 16 26.6**	**-0.4**
MNI	**Manado**	**5.54**	**198**	P		**Pn**	**20 16 24.9**	**-2.4**
	604nm,0.9s,12μm4.4nm							
TNTI	**Ternate**	**5.98**	**172**	P		**Pn**	**20 16 33.8**	**+0.5**
	742nm,1.1s,8μm3.2nm							
RCP	**Roxas**	**6.11**	**322**	*e*P		**Pn**	**20 16 34.7**	**-0.4**
KMSI	**Cibinong**	**6.65**	**203**	P		**Pn**	**20 16 41.4**	**-1.1**
	681nm,0.7s							
LBMI	**Labuha**	**7.38**	**173**	P		**Pn**	**20 16 53.4**	**+0.9**
	301nm,0.8s,4μm2.0nm							
MRSI	**Marisa**	**7.75**	**217**	P		Pn	20 16 53.7	-3.8
	353nm,0.8s,4μm2.1nm							
PALU	**Palau**	**7.86**	**85**	P		**Pn**	**20 16 57.2**	**-1.8**
	baz=7.9,SNR=12							
PALU				S		**Sn**	**20 18 21.9**	**-4.6**
	baz=7.9,SNR=20							
MYLDM	**Lahad Datu**	**8.18**	**260**	P		**Pn**	**20 17 02.0**	**-1.5**
MYLDM	**Lahad Datu**	**8.18**	**260**	P		**Pn**	**20 17 01.8**	**-1.6**
	160nm,1.2s,2μm							
LUWI	**Luwuk**	**8.61**	**206**	P		**Pn**	**20 17 10.1**	**+0.8**
	707nm,0.9s,6μm							
LUWI	**Luwuk**	**8.61**	**206**	P		Pn	20 16 56.9	-12
	baz=8.7,SNR=11							
LUWI				S		**Sn**	**20 18 47.7**	**+2.8**
	baz=8.7,SNR=3.8							
SWI	**Sorong**	**8.88**	**148**	P		**Pn**	**20 17 14.2**	**+1.3**
	111nm,0.6s,1μm							
SWI	**Sorong**	**8.88**	**148**	P		**Pn**	**20 17 13.8**	**+0.9**
	baz=9.0,SNR=27							
SWI				S		**Sn**	**20 18 48.7**	**-2.7**
	baz=9.0,SNR=5.1							
TSM	**Tawau**	**9.00**	**255**	P		**Pn**	**20 17 12.4**	**-2.2**
TGY	**Tagaytay City**	**9.18**	**323**	P		Pn	20 17 22.1	+5.0
TGY	**Tagaytay City**	**9.18**	**323**	P		Pn	20 17 22.1	+5.0
	29nm,0.3s,baz=295,slow=20,SNR=3.7							
SDKM	**Sandakan**	**9.39**	**264**	P		**Pn**	**20 17 18.5**	**-1.5**
KDM	**Kudat**	**9.68**	**272**	P		**Pn**	**20 17 22.2**	**-1.6**
MSAI	**Masohi**	**10.29**	**167**	P		**Pn**	**20 17 33.4**	**+1.2**
	16nm,0.8s							
KKM	**Kota Kinabalu**	**10.32**	**267**	*e*Pn		**Pn**	**20 17 33.2**	**+0.4**
	13nm,0.9s							
KKM	**Kota Kinabalu**	**10.32**	**267**	P		**Pn**	**20 17 31.3**	**-1.5**
KKM	**Kota Kinabalu**	**10.32**	**267**	P		**Pn**	**20 17 32.2**	**-0.6**
	52nm,1.3s,854nm							
KKM	**Kota Kinabalu**	**10.32**	**267**	P		**Pn**	**20 17 33.3**	**+0.6**
	baz=10,SNR=7.1							
FAKI	**Fak Fak**	**11.14**	**149**	P		**Pn**	**20 17 45.3**	**+1.5**
	baz=11,SNR=20							
RKPI	**Ransiki, Papua**	**11.16**	**137**	P		Pn	20 17 49.5	+5.3
	107nm,1.0s,1μm							
SMKI	**Samarinda**	**11.76**	**233**	P		**Pn**	**20 17 53.2**	**+0.9**
	76nm,0.7s							
TTSI	**Tana Toraja**	**11.83**	**215**	P		**Pn**	**20 17 54.6**	**+1.4**
	198nm,1.1s,2μm							
KKSI	**Kolaka, Sulawe**	**11.90**	**205**	P		Pn	20 18 03.7	+10
BAKI	**Biak**	**12.35**	**129**	P		Pn	20 18 04.9	+4.6
	193nm,1.0s							
BBSI	**Bau Bau**	**12.79**	**198**	P		**P**	**20 18 11.6**	**-2.7**
SRPI	**Serui, Papua**	**12.89**	**131**	P		**P**	**20 18 12.7**	**-2.7**
KAPI	**Kappang**	**13.52**	**210**	*e*Pn		**Pn**	**20 18 13.9**	**-2.1**
	46nm,0.7s							
KAPI	**Kappang**	**13.52**	**210**	P		**Pn**	**20 18 14.4**	**-1.5**
	80nm,1.0s,855nm							
KAPI	**Kappang**	**13.52**	**210**	P		**Pn**	**20 18 13.7**	**-2.2**
	4.1nm,0.3s,baz=19,slow=6.2,SNR=16							
BKSI	**Bulukumba**	**13.60**	**208**	P		**Pn**	**20 18 17.2**	**+0.1**
	59nm,1.0s,505nm							
BTM	**Bintulu**	**13.89**	**256**	P		**Pn**	**20 18 20.0**	**-0.9**
KBKI	**Kotabaru**	**14.40**	**226**	P		**P**	**20 18 33.2**	**+1.0**
SBUM	**Sibu**	**14.93**	**254**	P		**Pn**	**20 18 34.0**	**-0.4**
SBUM	**Sibu**	**14.93**	**254**	P		**Pn**	**20 18 33.3**	**-1.1**
	119nm,1.2s,1μm							
BBKI	**Banjar Baru**	**15.49**	**229**	P		**Pn**	**20 18 41.9**	**+0.4**
	179nm,1.3s,2μm							
MMRI	**Maumere**	**15.87**	**196**	P		**P**	**20 18 50.4**	**+1.8**
	176nm,1.3s,2μm							
STKI	**Sintang**	**16.46**	**247**	P		**Pn**	**20 18 53.5**	**-0.2**
	51nm,1.3s							
KSM	**Kuching**	**17.05**	**253**	*e*Pn		**Pn**	**20 18 58.9**	**-2.0**
	40nm,1.0s							
KSM	**Kuching**	**17.05**	**253**	P		**Pn**	**20 18 59.9**	**-1.0**
KSM	**Kuching**	**17.05**	**253**	P		**Pn**	**20 18 59.9**	**-1.0**
	39nm,1.2s							
KSM	**Kuching**	**17.05**	**253**	P		**Pn**	**20 18 59.3**	**-1.7**
	baz=17,SNR=10.0							
TPUB	**Ta-pu**	**17.43**	**341**	*e*Pn		**P**	**20 19 08.2**	**+2.4**
	19nm,0.8s							
WSI	**Waingapu**	**17.46**	**201**	P		P	20 19 19.4	+13
PBKI	**Pangkalan Bun**	**17.59**	**238**	P		**P**	**20 19 09.0**	**+1.4**
	114nm,1.0s,866nm							
WBSI	**Waikabubak, Su**	**17.78**	**204**	P		**Pn**	**20 19 10.6**	**+0.7**
	128nm,0.8s,1μm							
SSLB	**Suanglung**	**17.79**	**343**	*e*P		**Pn**	**20 19 11.5**	**+1.5**
	13nm,0.8s							
YHNB	**Yeheng**	**18.52**	**345**	*e*P		**Pn**	**20 19 21.4**	**+2.6**
	77nm,1.6s							
KHKI	**Kahang-Kahang**	**18.57**	**216**	P		**Pn**	**20 19 19.0**	**-0.4**
	58nm,1.3s							
KMMI	**Kalianget**	**18.60**	**223**	P		Pn	20 19 25.0	+5.2
BLJI	**Banyuglugur**	**19.36**	**222**	P		Pn	20 19 37.1	+8.3
JAGI	**Jajag, Banyuwa**	**19.54**	**220**	P		**Pn**	**20 19 30.5**	**-0.4**
	75nm,1.1s							
JAGI	**Jajag, Banyuwa**	**19.54**	**220**	P		**P**	**20 19 28.9**	**0.0**
	baz=20,SNR=19							
GMJI	**Gumukmas**	**19.85**	**221**	P		**Pn**	**20 19 38.7**	**+4.2**
	52nm,0.9s,18μm							
MTN	**Manton Dam**	**19.97**	**167**	P		**P**	**20 19 34.0**	**+0.4**
	baz=20,SNR=36							
MTN				S		Sn	20 23 29.5	+9.0
	baz=20,SNR=3.6							
KDU	**Kakadu**	**20.17**	**163**	P		**P**	**20 19 36.0**	**+0.3**
	baz=20,SNR=37							
QIZ	**Qiongzhong**	**20.36**	**308**	P		**P**	**20 19 36.5**	**-1.3**
QIZ				S		**S**	**20 23 21.0**	**-0.8**
QIZ				pmax	pmax			
	comp=Z,20nm,2.0s							
QIZ				LR	LR			
	comp=N,350nm,15.1s							
QIZ				LR	LR			
	comp=E,200nm,16.8s							
QIZ				LR	LR			
	comp=Z,440nm,17.0s							
SJI	**Sawahan**	**20.61**	**226**	P		Pn	20 19 44.4	+0.7
	comp=Z,71nm,1.4s							
TPI	**Tanjungpandan**	**21.12**	**244**	P		**P**	**20 19 46.2**	**+0.2**
	comp=Z,33nm,1.1s							
SMRI	**Semarang**	**21.14**	**230**	P		P	20 19 51.4	+5.2
	comp=Z,109nm,1.1s							
UGM	**Wanagama**	**21.64**	**228**	P		**P**	**20 19 55.0**	**+3.4**
	baz=22,SNR=4.0							
BJII	**Banjamegara**	**21.88**	**231**	P		P	20 19 59.1	+4.9
	comp=Z,116nm,0.9s							
PPBI	**Pangkal Pinang**	**22.24**	**247**	P		**P**	**20 19 59.5**	**+1.5**
	comp=Z,28nm,1.2s,comp=Z,535nm							
UBPT	**Khong Chiam**	**22.37**	**294**	P		**P**	**20 20 00.6**	**+1.1**
	comp=Z,27nm,1.4s							
KNRA	**Kununurra**	**22.38**	**174**	P		**P**	**20 19 58.9**	**-0.5**
	baz=23,SNR=73							
MYKOM	**Kota Tinggi**	**23.19**	**259**	P		**P**	**20 20 07.7**	**-0.1**
MYKOM	**Kota Tinggi**	**23.19**	**259**	P		**P**	**20 20 09.1**	**+1.3**
	comp=Z,28nm,1.3s							
LEM	**Lembang**	**23.23**	**235**	P		**P**	**20 20 10.3**	**+2.0**
	comp=Z,79nm,1.0s							
KTGM	**Kuala Trenggan**	**23.36**	**268**	P		**P**	**20 20 08.6**	**-0.8**
CISI	**Cisompet, Garu**	**23.49**	**233**	S		**S**	**20 24 18.5**	**-0.3**
	baz=24,SNR=4.2							
CBJI	**Citeko**	**23.63**	**237**	P		**P**	**20 20 13.6**	**+1.8**
	comp=Z,292nm,0.9s,comp=Z,5μm							
KGM	**Klungkung**	**23.66**	**260**	P		**P**	**20 20 11.7**	**-0.4**
DBJI	**Dramaga**	**23.79**	**237**	P		**P**	**20 20 17.1**	**+3.8**
	comp=Z,60nm,1.2s							
FITZ	**Fitzroy Crossi**	**24.70**	**182**	*e*P		**P**	**20 20 20.7**	**-0.7**
	comp=Z,49nm,0.9s							
FITZ				PcP	PcP	**PcP**	**20 23 57.7**	**+0.7**
FITZ				S	S	**S**	**20 24 36.2**	**-1.8**
FITZ	**Fitzroy Crossi**	**24.70**	**182**	P		**P**	**20 20 20.8**	**-0.7**
	comp=Z,31nm,0.6s,baz=7.6,slow=8.8,SNR=29							
FITZ				PcP		**PcP**	**20 23 57.7**	**+0.7**
	comp=Z,5.8nm,0.7s,baz=341,slow=3.6,SNR=3.2							
FITZ				S		**S**	**20 24 36.2**	**-1.8**
	comp=Z,4.2nm,0.9s,baz=156,slow=18,SNR=2.9							
FITZ	**Fitzroy Crossi**	**24.70**	**182**	P		**P**	**20 20 21.0**	**-0.4**
	baz=25,SNR=39							
FRIM	**Kepong**	**25.10**	**263**	P		**P**	**20 20 24.8**	**-0.4**
KASI	**Kota Agung**	**25.18**	**242**	P		P	20 20 34.4	+8.5
LWLI	**Liwa**	**25.33**	**243**	P		**P**	**20 20 28.4**	**+1.0**
	comp=Z,165nm,0.9s,comp=Z,1μm							
IPM	**Ipoh**	**25.53**	**266**	*e*P		**P**	**20 20 27.4**	**-1.7**
	comp=Z,28nm,0.8s							
IPM				*e*PcP		**PcP**	**20 23 58.9**	**-0.1**
IPM	**Ipoh**	**25.53**	**266**	P		**P**	**20 20 27.9**	**-1.2**
IPM	**Ipoh**	**25.53**	**266**	P		**P**	**20 20 28.4**	**-0.7**
	comp=Z,43nm,1.1s							
KULM	**Kulim**	**25.82**	**268**	*e*P		**P**	**20 20 29.1**	**-2.7**
	comp=Z,35nm,1.0s							
KULM	**Kulim**	**25.82**	**268**	P		**P**	**20 20 32.9**	**+1.2**
KULM	**Kulim**	**25.82**	**268**	P		**P**	**20 20 31.3**	**-0.5**
	comp=Z,34nm,1.1s							
PMG	**Port Moresby**	**26.03**	**128**	P		**P**	**20 20 34.9**	**+1.3**
KSI	**Kapahiang**	**26.07**	**247**	P		**P**	**20 20 34.5**	**+0.4**
	comp=Z,88nm,0.7s							
NJ2	**Nanjing**	**26.20**	**345**	*e*P		**P**	**20 20 36.0**	**+1.1**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.7s							
MASI	**Maura Aman, Be**	**26.20**	**249**	P		P	20 20 39.9	+4.7
	comp=Z,92nm,1.2s							
WHN	**Wuhan**	**26.32**	**336**	P		**P**	**20 20 37.5**	**+1.5**
COEN	**Coen**	**26.35**	**141**	*e*P		**P**	**20 20 36.4**	**0.0**
	comp=Z,81nm,0.6s							
COEN	**Coen**	**26.35**	**141**	P		**P**	**20 20 37.9**	**+1.5**
	baz=26,SNR=6.6							
JNU	**Nakatsue**	**26.55**	**8**	P		**P**	**20 20 38.4**	**+0.2**
JNU	**Nakatsue**	**26.55**	**8**	P		**P**	**20 20 38.4**	**+0.2**
	comp=Z,8.5nm,0.9s,baz=32,slow=2.5,SNR=4.8							
PBKT	**Sadao Pong**	**26.88**	**294**	P		**P**	**20 20 43.0**	**+1.7**
	comp=Z,31nm,1.0s							
PPI	**Padang Panjang**	**27.09**	**256**	S		S	20 25 08.0	-7.9
	baz=27,SNR=4.9							
GYA	**Guiyang**	**27.28**	**318**	P		**P**	**20 20 47.3**	**+2.4**
GYA				pP		**pP**	**20 21 04.5**	**+1.7**
GYA				PP		**PnPn**	**20 21 37.5**	**+4.5**
GYA				PcP		**PcP**	**20 24 04.0**	**+1.0**
GYA				S		**S**	**20 25 20.8**	**+1.8**
GYA				sS		**sS**	**20 25 50.5**	**+0.5**
GYA				SS		**SnSn**	**20 26 42.5**	**+7.4**
GYA				ScP		**ScP**	**20 27 36.5**	**-0.3**
GYA				ScS		**ScS**	**20 31 27.0**	**-1.6**
GYA				pmax	pmax			
	comp=Z,10.0nm,0.7s							
GYA				pmax	pmax			
	comp=Z,50nm,5.3s							
GYA				LR	LR			
	comp=N,520nm,13.4s							
GYA				LR	LR			
	comp=E,490nm,17.0s							
GYA				LR	LR			
	comp=Z,730nm,18.3s							
MNSI	**Mandailing Nat**	**27.57**	**259**	P		**P**	**20 20 49.0**	**+1.6**
	comp=Z,11nm,0.7s							
WRAB	**Tennant Creek**	**27.59**	**164**	*e*P		**P**	**20 20 46.7**	**-0.8**
WRAB				pmax	pmax			
	comp=Z,18nm,0.7s							
WRAB	**Tennant Creek**	**27.59**	**164**	*e*P		**P**	**20 20 46.7**	**-0.8**
	comp=Z,18nm,0.7s							
WRA	**Warramunga Arr**	**27.59**	**164**	P		**P**	**20 20 46.9**	**-0.7**
WRA				PcP		**PcP**	**20 24 04.0**	**+0.4**
WRA				ScP		**ScP**	**20 27 39.8**	**+2.1**
WRA	**Warramunga Arr**	**27.59**	**164**	P		**P**	**20 20 46.9**	**-0.7**
	comp=Z,13nm,0.6s,baz=343,slow=10,SNR=67							
WRA				PcP		**PcP**	**20 24 04.0**	**+0.4**
	comp=Z,4.5nm,0.7s,baz=345,slow=2.7,SNR=5.8							
WRA				ScP		**ScP**	**20 27 39.8**	**+2.1**
	comp=Z,1.5nm,0.7s,baz=347,slow=3.4,SNR=5.1							
PSI	**Prapat**	**27.83**	**263**	P		**P**	**20 20 50.6**	**+0.7**
	comp=Z,20nm,1.4s							
PSI	**Prapat**	**27.83**	**263**	P		**P**	**20 20 51.0**	**+1.0**
	baz=28,SNR=8.1							
MBWA	**Marble Bar**	**28.53**	**193**	*e*P		**P**	**20 20 54.1**	**-1.7**
	comp=Z,13nm,0.6s							
KCSI	**Kotacane, Aceh**	**28.86**	**265**	P		**P**	**20 20 57.2**	**-1.8**
	comp=Z,30nm,1.0s							
KMI	**Kunming**	**29.23**	**311**	P		**P**	**20 21 02.8**	**+0.5**
KMI				pP		**pP**	**20 21 22.0**	**+1.7**
KMI				PcP		**PcP**	**20 24 09.3**	**+1.3**
KMI				pmax	pmax			
	comp=Z,7.0nm,0.9s							
CM31	**Chiang Mai Arr**	**29.33**	**296**	*e*P		**P**	**20 21 02.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**29.33**	**296**	P		**P**	**20 21 03.1**	**0.0**
CMAR				PcP		**PcP**	**20 24 07.9**	**-0.2**
CMAR				ScP		**ScP**	**20 27 45.5**	**+2.2**
CMAR	**Chiang Mai Arr**	**29.33**	**296**	P		**P**	**20 21 03.1**	**0.0**
	comp=Z,1.5nm,0.7s,baz=95,slow=7.2,SNR=12							
CMAR				PcP		**PcP**	**20 24 07.9**	**-0.2**
	comp=Z,2.9nm,0.9s,baz=131,slow=1.5,SNR=10							
CMAR				ScP		**ScP**	**20 27 45.5**	**+2.2**
	comp=Z,2.9nm,1.1s,baz=134,slow=1.5,SNR=10.0							
CHTO	**Chiang Mai**	**29.45**	**297**	*e*P		**P**	**20 21 03.4**	**-0.8**
CHTO				*e*			20 24 08.8	
CHTO	**Chiang Mai**	**29.45**	**297**	*e*P		**P**	**20 21 03.4**	**-0.8**
	comp=Z,5.2nm,0.9s							
CHTO				*e*PcP		**PcP**	**20 24 08.8**	**+0.5**
QIS	**Mount Isa**	**30.00**	**155**	P		**P**	**20 21 08.3**	**-0.6**
	baz=30,SNR=17							
MTSU	**Mount Surprise**	**30.29**	**145**	P		**P**	**20 21 14.4**	**+2.9**
	baz=30,SNR=12							
KSAR	**Wonju Array Be**	**30.59**	**2**	P		**P**	**20 21 14.8**	**+0.9**
KSAR				PcP		**PcP**	**20 24 11.7**	**+0.7**
KSAR				ScP		**ScP**	**20 27 49.6**	**+2.8**
KSRS	**Korea Array**	**30.60**	**2**	P		**P**	**20 21 14.8**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=176,slow=10,SNR=8.1							
KSRS				PcP		**PcP**	**20 24 11.7**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=181,slow=2.7,SNR=4.8							
KSRS				ScP		**ScP**	**20 27 49.6**	**+2.8**
	comp=Z,1.3nm,0.9s,baz=211,slow=4.4,SNR=4.7							
KSRS				LR	LR		20 32 30.2	
	comp=Z,196nm,20.0s,baz=178,slow=34							
ASAR	**Alice Springs**	**31.05**	**167**	P		**P**	**20 21 18.1**	**-0.1**
ASAR				PcP		**PcP**	**20 24 12.4**	**0.0**
ASAR				ScP		**ScP**	**20 27 52.0**	**+3.3**
ASAR	**Alice Springs**	**31.05**	**167**	P		**P**	**20 21 18.1**	**-0.1**
	comp=Z,9.6nm,0.6s,baz=352,slow=7.8,SNR=256							
ASAR				PcP		**PcP**	**20 24 12.4**	**0.0**
	comp=Z,4.2nm,0.6s,baz=336,slow=2.0,SNR=7.1							
ASAR				ScP		**ScP**	**20 27 52.0**	**+3.3**
	comp=Z,2.1nm,1.0s,baz=4.2,slow=4.1,SNR=5.2							
MJAR	**Matsushiro Arr**	**31.51**	**18**	P		**P**	**20 21 21.8**	**-0.4**
MJAR	**Matsushiro Arr**	**31.51**	**18**	P		**P**	**20 21 21.8**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=200,slow=9.9,SNR=11							
MAJO	**Matsushiro**	**31.51**	**18**	P		**P**	**20 21 21.2**	**-1.0**
MAJO	**Matsushiro**	**31.51**	**18**	P		**P**	**20 21 21.1**	**-1.0**
GIRL	**Giralia**	**31.60**	**202**	P		**P**	**20 21 22.9**	**-0.1**
	baz=32,SNR=6.2							
XAN	**Xi'an**	**31.70**	**331**	P		**P**	**20 21 24.0**	**+0.1**
XAN				pmax	pmax			
	comp=Z,17nm,0.8s							
XAN				pmax	pmax			
	comp=Z,70nm,14.3s							
CD2	**Chengdu**	**32.18**	**321**	P		**P**	**20 21 29.0**	**+0.9**
CD2				pP		**pP**	**20 21 46.5**	**+0.3**
CD2				sP		**sP**	**20 21 55.5**	**+0.3**
CD2				PP		**PnPn**	**20 22 38.3**	**+1.4**
CD2				PcP		**PcP**	**20 24 16.3**	**+0.9**
CD2				S		**S**	**20 26 35.3**	**-0.3**
CD2				sS		**sS**	**20 27 05.5**	**-1.2**
CD2				SS		**SnSn**	**20 28 33.0**	**-0.9**
CD2				pmax	pmax			
	comp=Z,20nm,0.5s							
CD2				pmax	pmax			
	comp=Z,120nm,5.4s							
CD2				LR	LR			
	comp=N,320nm,18.1s							
CD2				LR	LR			
	comp=E,450nm,19.1s							
CD2				LR	LR			
	comp=Z,370nm,21.1s							
CTA	**Charters Tower**	**32.94**	**144**	P		**P**	**20 21 36.2**	**+1.4**
CTA	**Charters Tower**	**32.94**	**144**	P		**P**	**20 21 36.2**

comp=Z,1µm,0.6s
BBOO Buckleboo 40.35 168 P **P** **20 22 38.2 +0.6**
baz=41,SNR=94
LSA Lhasa 40.40 309 P **P** **20 22 37.8 -0.9**
NWAO Narrogin (SRO) 40.44 192 *eP* **P** **20 22 37.8 -0.5**
comp=Z,54nm,1.1s
GTA Gaotai 40.48 327 ⇑P **P** **20 22 40.5 +1.7**
GTA pP **pP** **20 22 59.0 +1.6**
GTA sP **sP** **20 23 08.0 +1.8**
GTA PcP **PcP** **20 24 41.5 +1.3**
GTA S **S** **20 28 46.3 +4.2**
GTA sS **sS** **20 29 17.0 +3.1**
GTA SS **SS** **20 31 45.0 +0.7**
GTA pmax pmax
comp=Z,38nm,1.1s
GTA pmax pmax
comp=Z,92nm,6.7s
GTA LR LR
comp=N,210nm,17.6s
GTA LR LR
comp=E,190nm,17.3s
GTA LR LR
comp=Z,260nm,16.6s
STKA Stephens Creek 40.99 160 *eP* **P** **20 22 43.3 +0.4**
comp=Z,12nm,0.6s
STKA Stephens Creek 40.99 160 P **P** **20 22 43.3 +0.4**
comp=Z,75nm,0.7s,baz=335,slow=8.1,SNR=190
STKA Stephens Creek 40.99 160 P **P** **20 22 43.5 +0.6**
baz=41,SNR=95
RKGY Rocky Gully 42.11 192 P **P** **20 22 52.7 +0.7**
baz=42,SNR=16
TAPN Taplejung 42.18 304 *eP* **P** **20 22 51.6 -1.5**
comp=Z,23nm,0.7s
HABR Khabarovsk 42.21 8 *eP* **P** **20 22 50.3 -2.3**
HABR *e* 20 24 29.2
HABR *e*PPP PPP 20 25 02.3
HABR *e*S **S** **20 29 04.7 -2.4**
HABR *e*SS **SS** **20 32 16.6 -1.4**
HABR *e*SSS SSS 20 32 52.7
HABR pmax pmax
comp=Z,21nm,2.0s
HABR MLR MLR
comp=Z,176nm,17.0s
CMSA Cobar Meteorol 42.22 155 P **P** **20 22 53.5 +0.5**
baz=42,SNR=22
ODAN Odare 42.26 303 *eP* **P** **20 22 52.3 -1.5**
comp=Z,53nm,1.0s
YSS Yuzh-Sakhalins 42.41 16 *eP* P 20 22 59.2 +4.9
RAMN Ramite 42.95 303 *eP* **P** **20 22 58.3 -1.1**
comp=Z,44nm,0.8s
GUN Gumba 43.89 304 *eP* **P** **20 23 05.7 -1.3**
comp=Z,27nm,0.6s
ARMA Armidale 44.07 148 *eP* **P** **20 23 09.7 +1.7**
comp=Z,29nm,0.7s
ARMA Armidale 44.07 148 P **P** **20 23 10.0 +1.9**
baz=44,SNR=24
PKI Pulchoki 44.16 303 *eP* **P** **20 23 07.2 -2.0**
comp=Z,13nm,0.6s
PKIN Phulchoki 44.18 303 *eP* **P** **20 23 07.3 -1.9**
comp=Z,11nm,0.7s
KKN Kakani 44.35 303 *eP* **P** **20 23 08.6 -1.9**
comp=Z,20nm,0.8s
SONM Songino Array 44.42 341 P **P** **20 23 11.3 +0.6**
SONM PcP **PcP** **20 24 53.2 +0.1**
SONM Songino Array 44.42 341 P **P** **20 23 11.3 +0.6**
comp=Z,6.1nm,0.7s,baz=158,slow=8.6,SNR=60
SONM PcP **PcP** **20 24 53.2 +0.1**
comp=Z,3.0nm,0.7s,baz=164,slow=2.8,SNR=5.7
DMN Daman 44.43 303 *eP* **P** **20 23 09.3 -1.9**
comp=Z,20nm,0.8s
ARPS Mount Arapiles 45.58 163 P **P** **20 23 21.1 +1.3**
baz=46,SNR=38
YNG Young 45.74 155 P **P** **20 23 22.6 +1.5**
baz=46,SNR=9.0
KOLN Koldanda 45.74 302 *eP* **P** **20 23 20.0 -1.6**
comp=Z,25nm,0.6s
DANN Dangsing 45.80 303 *eP* **P** **20 23 20.4 -1.7**
comp=Z,35nm,0.6s
CAN Canberra 46.87 155 *eP* **P** **20 23 31.3 +1.3**
CAN pmax pmax
comp=Z,21nm,0.7s
CAN Canberra 46.87 155 *eP* **P** **20 23 31.3 +1.3**
comp=Z,21nm,0.7s
CNB Canberra Magne 47.02 154 P **P** **20 23 33.3 +2.1**
baz=47,SNR=16
TOO Toolangi 47.48 160 P **P** **20 23 36.8 +2.0**
baz=48,SNR=25
MILA Mila 48.41 156 P **P** **20 23 44.0 +2.0**
baz=49,SNR=4.8
TLY Talaya 48.65 341 *eP* **P** **20 23 44.9 +1.4**
TLY pmax pmax
comp=Z,14nm,0.9s
MOY Mondy 49.53 339 *eP* **P** **20 23 52.2 +1.8**
WMQ Urumqi 50.21 324 P **P** **20 23 57.0 +1.4**
WMQ pP **pP** **20 24 15.8 +1.0**
WMQ sP **sP** **20 24 24.5 +1.0**
WMQ PP **PP** **20 25 54.3 +2.7**
WMQ PcS **PcS** **20 29 11.5 +0.6**
WMQ S **S** **20 31 01.3 -0.8**
WMQ sS **sS** **20 31 33.8 -0.9**
WMQ SS **SS** **20 34 32.0 -4.4**
WMQ pmax pmax
comp=Z,17nm,0.8s
WMQ pmax pmax
comp=Z,120nm,4.4s
WMQ LR LR
comp=N,270nm,21.0s
WMQ LR LR
comp=E,240nm,16.6s
WMQ LR LR
comp=Z,250nm,24.8s
DDI Dehra Dun 51.15 304 *ex* **P** **20 24 02.5 -0.4**
HVS Khovu-Aksy 51.97 334 *c i*P **P** **20 24 10.1 +1.4**
MOO Moorlands 52.43 161 P **P** **20 24 14.2 +2.2**
baz=53,SNR=3.2
PETK Petropavlovsk- 52.73 23 P **P** **20 24 14.9 +0.7**
PETK *pP **pP** **20 24 29.4 -4.1**
PETK Petropavlovsk- 52.73 23 P **P** **20 24 14.9 +0.7**
PETK pP **pP** **20 24 29.4 -4.1**
PETK Petropavlovsk- 52.73 23 P **P** **20 24 14.9 +0.7**
comp=Z,2.9nm,0.6s,baz=194,slow=4.1,SNR=16
PETK pP **pP** **20 24 29.4 -4.1**
comp=Z,3.7nm,0.7s,baz=193,slow=6.1,SNR=6.3
TAU Tasmania Unive 52.89 161 *eP* **P** **20 24 15.1 -0.3**
TAU Tasmania Unive 52.89 161 *eP* **P** **20 24 15.1 -0.3**
MK31 Makanchi Array 55.03 324 *eP* **P** **20 24 30.4 -0.7**
MK31 *e* 20 25 31.7
MK31 Makanchi Array 55.03 324 *eP* **P** **20 24 30.4 -0.7**
MK31 *e*PcP **PcP** **20 25 31.7 -0.2**
MKAR Makanchi Array 55.03 324 P **P** **20 24 30.2 -0.9**
MKAR 20 25 32.0
MKAR Makanchi Array 55.03 324 P **P** **20 24 30.2 -0.9**
MKAR PcP **PcP** **20 25 32.0 +0.1**
MKAR Makanchi Array 55.03 324 P **P** **20 24 30.2 -0.9**
comp=Z,32nm,0.6s,baz=117,slow=7.5,SNR=172
MKAR PcP **PcP** **20 25 32.0 +0.1**
comp=Z,11nm,0.7s,baz=122,slow=4.3,SNR=9.6
YAK Yakutsk 55.23 2 *eP* **P** **20 24 34.5 +2.4**
YAK pmax pmax
comp=Z,17nm,0.8s
YAK pmax pmax
comp=N,6.0nm,1.1s
KSH Kashi 55.84 314 P **P** **20 24 39.8 +2.6**
KSH *es*P **sP** **20 25 07.5 +2.2**
KSH *e*PcP **PcP** **20 25 37.3 +2.0**
KSH *e*PP **PP** **20 26 46.8 +4.3**
KSH *e*PcS **PcS** **20 29 35.3 -0.5**
KSH *e*S **S** **20 32 19.8 +0.8**
KSH *es*S **sS** **20 32 52.3 +0.1**
KSH *e*SS **SS** **20 36 06.0 +0.2**
KSH pmax pmax
comp=Z,10.0nm,0.6s
KSH pmax pmax
comp=Z,220nm,5.5s
KSH LR LR
comp=N,100nm,6.2s
KSH LR LR
comp=E,93nm,4.7s
KSH LR LR
comp=Z,77nm,4.1s
ULHL Ulahol 56.72 317 P **P** **20 24 44.9 +1.4**
SNR=6.2
KZA Kyzart 57.33 316 P **P** **20 24 49.8 +1.8**
SNR=17
TKM2 Tokmak 2 57.43 317 *eP* **P** **20 24 47.3 -1.2**
TKM2 pmax pmax
comp=Z,15nm,0.7s
TKM2 Tokmak 2 57.43 317 *eP* **P** **20 24 47.3 -1.2**
comp=Z,15nm,0.7s
TKM2 Tokmak 2 57.43 317 P **P** **20 24 49.6 +1.2**
SNR=37
KBK Karagaybulak 57.76 317 P **P** **20 24 52.2 +1.4**
SNR=10
ZAA0 Zalesovo Array 57.86 332 *eP* **P** **20 24 49.7 -1.3**
ZALV Zalesovo Beam 57.86 332 P **P** **20 24 49.9 -1.2**
ZALV *PP pP 20 25 05.0 -5.6
ZALV 20 25 41.5
ZALV Zalesovo Beam 57.86 332 P **P** **20 24 49.9 -1.2**
ZALV pP pP 20 25 05.0 -5.6
ZALV PcP **PcP** **20 25 41.5 -1.3**
ZALV ⇑*e* 20 54 42.7
ZALV Zalesovo Beam 57.86 332 P **P** **20 24 49.9 -1.2**
comp=Z,14nm,0.7s,baz=124,slow=6.5,SNR=62
ZALV pP pP 20 25 05.0 -5.6
comp=Z,2.1nm,0.6s,baz=159,slow=5.7,SNR=2.9
ZALV PcP **PcP** **20 25 41.5 -1.3**
comp=Z,5.4nm,0.8s,baz=122,slow=1.9,SNR=6.3
ZALV PKP2bc 20 54 42.7
comp=Z,0.5nm,0.4s,baz=255,slow=2.9,SNR=4.3
AAK Ala-Archa 58.06 317 *ce*P **P** **20 24 53.0 +0.1**
AAK pmax pmax
comp=Z,17nm,0.7s
AAK Ala-Archa 58.06 317 *eP* **P** **20 24 52.7 -0.2**
comp=Z,7.2nm,0.8s
AAK Ala-Archa 58.06 317 P **P** **20 24 53.0 +0.1**
comp=Z,6.4nm,0.7s,baz=149,slow=13,SNR=16
USP Ospenovka 58.30 317 P **P** **20 24 55.2 +0.8**
SNR=25
AML Almayashu 58.42 316 P **P** **20 24 57.0 +1.3**
SNR=24
EKS2 Erkin-Say 58.56 316 *eP* **P** **20 24 55.6 -0.7**
EKS2 pmax pmax
comp=Z,62nm,0.5s
EKS2 Erkin-Say 58.56 316 *eP* **P** **20 24 55.5 -0.7**
comp=Z,62nm,0.5s
EKS2 Erkin-Say 58.56 316 P **P** **20 24 57.8 +1.5**
SNR=34
NVS Novosibirsk 59.14 332 ⇑*iP* **P** **20 24 58.7 -1.2**
NVS *e* 20 25 46.8
NVS pmax pmax
comp=Z,38nm,1.2s
NVS pmax pmax
comp=N,12nm,1.0s
NVS pmax pmax
comp=E,16nm,1.0s
KURK Kurchatov 59.15 327 *eP* **P** **20 24 58.7 -1.3**
KURK pmax pmax
comp=Z,53nm,1.1s
KURK Kurchatov 59.15 327 *eP* **P** **20 24 58.7 -1.3**
comp=Z,53nm,1.1s
KURK P'P' 20 54 26.1
KURK ⇑*e* 20 54 43.2
KURBB Kurchatov Arra 59.15 327 P **P** **20 24 59.1 -0.9**
comp=Z,9.7nm,0.6s,baz=125,slow=7.9,SNR=58
KURBB PKPPKP P'P'df 20 54 26.1 -6.9
comp=Z,1.4nm,1.0s,baz=268,slow=3.1,SNR=13
KURBB PKP2bc 20 54 43.2
comp=Z,0.6nm,0.8s,baz=292,slow=3.3,SNR=5.2
SEY Seymchan 59.16 13 *eP* **P** **20 25 00.0 +0.1**
KBL Kabul 59.61 306 *eP* **P** **20 25 01.2 -2.7**
KBL pmax pmax
comp=Z,5.0nm,0.7s
KBL Kabul 59.61 306 *eP* **P** **20 25 01.2 -2.7**
comp=Z,4.6nm,0.7s
KKAR Karatay Array 60.96 316 *eP* **P** **20 25 10.8 -1.9**
KKAR pmax pmax
comp=Z,9.0nm,0.7s
KKAR Karatay Array 60.96 316 *eP* **P** **20 25 10.8 -1.9**
comp=Z,9.0nm,0.7s
BVAR Borovoye Array 64.74 326 P **P** **20 25 36.7 -0.8**
BVAR 20 26 10.8
BVAR Borovoye Array 64.74 326 P **P** **20 25 36.7 -0.8**
BVAR PcP **PcP** **20 26 10.8 +0.2**
BVAR Borovoye Array 64.74 326 P **P** **20 25 36.7 -0.8**
comp=Z,11nm,0.6s,baz=127,slow=8.6,SNR=76
BVAR PcP **PcP** **20 26 10.8 +0.2**
comp=Z,7.2nm,0.8s,baz=123,slow=5.3,SNR=6.0
BRVK Borovoye 64.81 326 *eP* **P** **20 25 36.7 -1.3**
BRVK pmax pmax
comp=Z,26nm,0.8s
BRVK Borovoye 64.81 326 *ce*P **P** **20 25 38.1 +0.1**
BRVK pmax pmax
comp=Z,51nm,1.2s
BRVK Borovoye 64.81 326 *eP* **P** **20 25 36.7 -1.3**
comp=Z,26nm,0.8s
TIXI Tiksi 64.86 1 *ce*P **P** **20 25 37.2 -0.7**
TIXI pmax pmax
comp=Z,4.0nm,0.7s
BILL Bilibino 66.70 15 *eP* **P** **20 25 48.8 -1.1**
BILL *e* 20 26 17.0
BILL *e*SS SS 20 38 54.8 +0.5
BILL pmax pmax
comp=Z,7.0nm,0.6s
ABKAR Akbulak array 69.75 320 *eP* **P** **20 26 07.1 -2.2**
comp=Z,11nm,0.7s
AKTO Aktyubinsk 71.23 321 P **P** **20 26 16.9 -1.4**
AKTO Aktyubinsk 71.23 321 P **P** **20 26 16.9 -1.4**
AKTO Aktyubinsk 71.23 321 P **P** **20 26 16.9 -1.4**
comp=Z,14nm,0.7s,baz=100,slow=7.9,SNR=52
SVE Sverdlovsk 71.34 328 *ce*P **P** **20 26 19.0 +0.2**
SVE pmax pmax
comp=Z,50nm,0.8s
ARU Arti 72.33 327 *c i*P **P** **20 26 24.1 -0.7**
ARU *PP **PcP** **20 26 42.0 -0.4**
ARU 20 29 04.2
ARU S **S** **20 35 41.6 -0.4**
ARU pmax pmax
comp=Z,32nm,0.7s
OHAK Old Harbor 79.03 33 *eP* **P** **20 27 01.5 -1.4**
comp=Z,10nm,1.0s
KDAK Kodiak Island 79.45 33 *eP* **P** **20 27 05.2 0.0**
comp=Z,6.2nm,0.6s
GNI Gani 79.46 309 *eP* **P** **20 27 06.5 +0.6**
comp=Z,8.9nm,0.8s
KBZ Khabaz 80.82 313 P **P** **20 27 12.0 -0.9**
KBZ Khabaz 80.82 313 P **P** **20 27 12.0 -0.9**
KBZ Khabaz 80.82 313 P **P** **20 27 12.0 -0.9**
comp=Z,2.7nm,0.8s,baz=85,slow=2.5,SNR=6.4
TRF Thorofare Moun 80.94 27 *eP* **P** **20 27 12.3 -1.0**
comp=Z,9.6nm,1.2s
KIV Kislovodsk 80.97 313 ⇑*eP* **P** **20 27 15.1 +1.2**
KIV *e* 20 27 21.5
KIV *e* 20 30 19.0
KIV *e*SS SS 20 42 33.7 +1.1
KIV pmax pmax
comp=Z,12nm,0.7s
KIV MLR MLR
comp=Z,200nm,22.0s
COLD Coldfoot 81.20 23 *eP* **P** **20 27 15.2 +0.8**
comp=Z,2.9nm,0.5s
PMR Palmer 81.39 29 P **P** **20 27 13.4 -2.2**
PMR Palmer 81.39 29 P **P** **20 27 13.4 -2.2**
MCK McKinley 81.56 27 *eP* **P** **20 27 15.7 -0.8**
MCK pmax pmax
comp=Z,8.0nm,0.8s
MCK McKinley 81.56 27 *eP* **P** **20 27 15.7 -0.8**
comp=Z,7.6nm,0.8s
VRHR Novokhopersk 81.63 321 *eP* **P** **20 27 16.2 -0.8**
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,10.0nm,1.5s
VRHR pmax pmax
comp=E,10.0nm,0.8s
SML Sawmill 81.78 29 *eP* **P** **20 27 17.7 0.0**
SML pmax pmax
comp=Z,1.0nm,0.7s
SML Sawmill 81.78 29 *eP* **P** **20 27 17.7 0.0**
comp=Z,1.4nm,0.7s
COLA College 82.06 25 *eP* **P** **20 27 17.5 -1.5**
COLA pmax pmax
comp=Z,5.0nm,0.6s
COLA College 82.06 25 *eP* **P** **20 27 17.5 -1.5**
comp=Z,4.9nm,0.6s
ILAR Eielson Array 82.47 26 P **P** **20 27 19.9 -1.2**
ILAR Eielson Array 82.47 26 P **P** **20 27 19.9 -1.2**
comp=Z,2.5nm,0.7s,baz=240,slow=5.2,SNR=27
KLMR Klimovskoe 82.73 330 *eP* **P** **20 27 20.9 -1.7**
KLMR *e* 20 27 26.0
KLMR *e* 20 30 29.7
KLMR S **S** **20 37 28.5 -5.6**
KLMR pmax pmax
comp=Z,45nm,1.1s
KLMR MLR MLR
comp=Z,624nm,19.0s
VORD Divnogorie 83.11 320 *eP* **P** **20 27 24.0 -0.7**
VORD pmax pmax
comp=Z,20nm,0.4s
VORD pmax pmax
comp=N,60nm,0.3s
VORD pmax pmax
comp=E,140nm,0.6s
SOC Sochi 83.13 313 *eP* **P** **20 27 24.6 -0.5**
SOC *e* 20 30 31.2
SOC *e*PPP PPP 20 32 32.4
SOC *e*S **S** **20 37 38.1 -0.8**
SOC *e*SS **SS** **20 43 02.4 -2.1**
SOC pmax pmax
comp=Z,32nm,0.8s
VSR Storozhevoye 83.18 321 *eP* **P** **20 27 24.9 -0.2**
VSR pmax pmax
comp=Z,30nm,0.7s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,20nm,0.9s
DOT Dot Lake 83.73 27 *eP* **P** **20 27 27.5 -0.2**
comp=E,2.8nm,0.8s
ANN Anapa 84.70 314 *eP* **P** **20 27 31.5 -1.4**
ANN *e* 20 30 43.6
ANN *e*S S 20 37 47.5 -7.0
ANN *e*SS SS 20 43 35.5 +8.0
ANN pmax pmax
comp=Z,54nm,0.8s
ANN Anapa 84.70 314 *eP* **P** **20 27 31.6 -1.4**
VNDA Vanda 86.41 173 P **P** **20 27 40.6 -0.2**
VNDA Vanda 86.41 173 P **P** **20 27 40.6 -0.2**
comp=Z,4.9nm,0.8s,baz=318,slow=6.7,SNR=22
JOF Joensuu 86.45 333 *eP* **P** **20 27 40.7 -0.6**
JOF pmax pmax
comp=Z,29nm,0.7s
JOF Joensuu 86.45 333 *ep* **P** **20 27 40.7 -0.6**
comp=Z,29nm,0.7s
MAW Mawson 86.51 200 P **P** **20 27 40.0 -1.4**
MAW Mawson 86.51 200 P **P** **20 27 40.0 -1.4**
comp=Z,2.8nm,0.8s,baz=49,slow=11,SNR=3.0
ARCES ARCESS Array B 87.59 340 P **P** **20 27 45.9 -0.9**
ARCES ARCESS Array B 87.59 340 P **P** **20 27 45.9 -0.9**
comp=Z,18nm,0.8s,baz=69,slow=6.6,SNR=18
ARE0 ARCESS Array S 87.59 340 *eP* **P** **20 27 45.9 -0.8**
BR131 Keskin Array S 88.00 310 *eP* P 20 27 46.3 -3.2
comp=Z,2.8nm,0.8s
BRTR Keskin Array B 88.00 310 P **P** **20 27 47.5 -2.0**
BRTR Keskin Array B 88.00 310 P **P** **20 27 47.5 -2.0**
comp=Z,3.3nm,0.8s,baz=120,slow=4.7,SNR=21
CSS Prodhromos 88.84 305 *eP* **P** **20 27 53.0 -0.4**
comp=Z,15nm,0.8s
KAF Kangasniemi 88.88 332 *eP* **P** **20 27 52.0 -0.9**
KAF pmax pmax
comp=Z,10.0nm,0.8s
KAF Kangasniemi 88.88 332 *ep* **P** **20 27 52.0 -0.9**
comp=Z,10nm,0.8s
FINES FINESS Array B 89.13 332 P **P** **20 27 53.0 -1.1**
FINES FINESS Array B 89.13 332 P **P** **20 27 53.0 -1.1**
comp=Z,9.9nm,0.7s,baz=74,slow=3.5,SNR=33
KMBO Kilima Mbogo 89.46 269 P **P** **20 27 55.2 -1.8**
KMBO Kilima Mbogo 89.46 269 P **P** **20 27 55.2 -1.8**
comp=Z,0.5nm,0.3s,baz=52,slow=19,SNR=4.4
AKASG Malin Array Be 89.48 321 P **P** **20 27 55.0 -1.0**
AKASG Malin Array Be 89.48 321 P **P** **20 27 55.0 -1.0**
AKASG Malin Array Be 89.48 321 P **P** **20 27 55.0 -1.0**
comp=Z,10nm,0.8s,baz=71,slow=4.6,SNR=25
TLCR 90.72 316 ⇑P **P** **20 28 01.0 -0.9**
TLCR 90.72 316 ⇑*iP* **P** **20 28 01.0 -0.9**
HARR Harsova 91.42 315 ⇓P **P** **20 28 05.8 +0.6**
HARR Harsova 91.42 315 ⇓*iP* **P** **20 28 05.8 +0.6**
TESR Tescani 91.95 317 ⇓*iP* **P** **20 28 07.8 +0.2**
VRI Vrincioaia 92.03 316 ⇓P **P** **20 28 08.1 +0.1**
VRI Vrincioaia 92.03 316 ⇓*iP* **P** **20 28 08.1 +0.1**
SUW Suwalki 92.39 325 *eP* **P** **20 28 09.1 -0.3**
MLR Muntele Rosu 92.64 316 ⇑*iP* **P** **20 28 11.4 +0.4**
BURAR Bucovina Array 92.67 318 ⇓*iP* **P** **20 28 11.4 +0.4**
ARR Arges 93.57 316 ⇑*iP* **P** **20 28 14.4 -0.8**
SIBR Sibiu 93.78 317 ⇑*iP* P 20 28 22.8 +6.7
KWP Kalwaria Pacla 93.80 321 ⇑P **P** **20 28 16.8 +0.7**
KWP Kalwaria Pacla 93.80 321 *eP* **P** **20 28 15.8 -0.3**
comp=Z,9.4nm,0.9s
KWP Kalwaria Pacla 93.80 321 ⇑*iP* **P** **20 28 16.8 +0.7**
KWP Kalwaria Pacla 93.80 321 *eP* **P** **20 28 16.8 +0.7**
KOLS Kolonicke sedl 94.26 320 *eP* **P** **20 28 17.8 -0.4**
KOLS pmax pmax
comp=Z,4.0nm,1.2s
KOLS Kolonicke sedl 94.26 320 *eP* **P** **20 28 17.8 -0.4**
UZH Uzhgorod 94.32 320 *c iP* **P** **20 28 19.4 +0.9**
UZH *e* 20 28 26.8
STHS Stebnicka Huta 94.78 321 *eP* **P** **20 28 22.1 +1.5**
STHS pmax pmax
comp=Z,3.0nm,0.9s
STHS Stebnicka Huta 94.78 321 *eP* **P** **20 28 22.1 +1.5**
CRVS Cervenica-Dubn 94.78 320 *eP* **P** **20 28 19.6 -1.0**
CRVS pmax pmax
comp=Z,36nm,2.1s
CRVS Cervenica-Dubn 94.78 320 *eP* **P** **20 28 19.6 -1.0**
VTS Vitosha 95.22 314 ⇓P **P** **20 28 21.5 -1.4**
VTS Vitosha 95.22 314 ⇓*iP* **P** **20 28 21.5 -1.4**
KECS Kecovo 95.52 320 *eP* **P** **20 28 24.5 +0.5**
KECS pmax pmax
comp=Z,4.0nm,0.8s
KECS Kecovo 95.52 320 *eP* **P** **20 28 24.5 +0.5**
BZS Buzias 95.56 317 ⇑P **P** **20 28 23.8 -0.4**
BZS Buzias 95.56 317 ⇑*iP* **P** **20 28 23.8 -0.4**
NB2 NORSAR Subarra 96.04 334 P **P** **20 28 24.3 -1.8**
comp=Z,4.7nm,0.8s,baz=67,slow=4.6
NB2 NORSAR Subarra 96.04 334 P **P** **20 28 24.3 -1.8**
baz=67,slow=4.6
NOA NORSAR Array B 96.04 334 P **P** **20 28 24.5 -1.6**
NOA NORSAR Array B 96.04 334 P **P** **20 28 24.5 -1.6**
comp=Z,4.5nm,0.8s,baz=65,slow=4.6,SNR=22
YKA Yellowknife Ar 96.84 24 P **P** **20 28 28.8 -0.8**
YKA Yellowknife Ar 96.84 24 P **P** **20 28 28.8 -0.8**
comp=Z,1.7nm,0.7s,baz=299,slow=4.8,SNR=10
MORC Moravsky Berou 96.97 322 P **P** **20 28 30.2 -0.4**
MORC pmax pmax
comp=Z,3.0nm,0.8s
MORC Moravsky Berou 96.97 322 P **P** **20 28 30.1 -0.4**
comp=Z,3.4nm,0.8s
PKSM Moragy 97.39 318 ⇓P **P** **20 28 32.2 -0.3**
PKSM Moragy 97.39 318 ⇓*iP* **P** **20 28 32.2 -0.3**
VRAC Vranov 97.70 322 ⇑*iP* Pdif 20 28 34.9 +1.0
BRG Berggiesshubel 98.74 324 *eP* **P** **20 28 37.6 -0.8**
comp=Z,3.1nm,1.1s
BRG pmax pmax
comp=N,309nm,32.5s
BRG pmax pmax
comp=E,234nm,20.0s
BRG pmax pmax
comp=Z,465nm,18.9s
BRG Berggiesshubel 98.74 324 *eP* **P** **20 28 37.6 -0.8**
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG MLR MLR
comp=E,309nm,20.0s
BRG MLR MLR
comp=Z,234nm,18.9s
CLL Collm 99.13 324 *i* P **Pdif** **20 28 39.9 -0.2**
CLL pmax pmax
comp=Z,4.0nm,1.1s
CLL Collm 99.13 324 *i* Pdif **Pdif** **20 28 39.9 -0.2**
comp=Z,4.0nm,1.1s
GERES GERESS Array B 99.65 322 P **Pdif** **20 28 43.1 +0.4**
GERES PKiKP **PKiKP** **20 33 09.9 -1.3**
GERES GERESS Array B 99.65 322 P **Pdif** **20 28 43.1 +0.4**
comp=Z,2.2nm,0.8s,baz=73,slow=4.6,SNR=20
GERES PKiKP **PKiKP** **20 33 09.9 -1.3**
comp=Z,0.3nm,0.7s,baz=132,slow=1.5,SNR=2.5
GRF Grafenberg Arr 100.81 323 *e*Pdiff **Pdif** **20 28 48.0 +0.3**
GRF Grafenberg Arr 100.81 323 *eP* **Pdif** **20 28 48.0 +0.3**
NVAR Mina Array Bea 105.01 47 Pdif **Pdif** **20 29 08.1 +1.2**
NVAR Mina Array Bea 105.01 47 Pdiff **Pdif** **20 29 08.1 +1.2**
comp=Z,4.0nm,0.7s,baz=274,slow=7.1,SNR=3.2
ESDC Sonseca Array 115.10 320 PKP **PKPdf** **20 33 39.2 -1.0**
ESDC Sonseca Array 115.10 320 PKP **PKPdf** **20 33 39.2 -1.0**
comp=Z,0.1nm,0.3s,baz=88,slow=1.5,SNR=4.1
SCHQ Schefferville 117.64 9 PKP **PKPdf** **20 33 44.2 -0.3**

SCHQ	**Schefferville**	**117.64**	**9**	PKP	**PKPdf**	**20 33 44.2**	**-0.3**		
	comp=Z,1.8nm,0.8s,baz=323,slow=10,SNR=2.8								
TXAR	**Lajitas Array**	**119.85**	**51**	PKP	**PKPdf**	**20 33 50.2**	**+0.5**		
TXAR				PKKPbc	**PKKPbc**	**20 43 59.7**	**-0.2**		
TXAR	**Lajitas Array**	**119.85**	**51**	PKP	**PKPdf**	**20 33 50.2**	**+0.5**		
	comp=Z,0.5nm,0.5s,baz=348,slow=0.9,SNR=4.9								
TXAR				PKKPbc	**PKKPbc**	**20 43 59.7**	**-0.2**		
	comp=Z,0.2nm,0.5s,baz=125,slow=7.9,SNR=3.6								
TORD	**Torodi Ar. Bea**	**121.80**	**290**	PKP	**PKPdf**	**20 33 53.0**	**-0.6**		
TORD				PKKPbc	**PKKPab**	**20 43 53.3**	**0.0**		
TORD	**Torodi Ar. Bea**	**121.80**	**290**	PKP	**PKPdf**	**20 33 53.0**	**-0.6**		
	comp=Z,4.8nm,0.7s,baz=70,slow=1.4,SNR=29								
TORD				PKKPbc	**PKKPab**	**20 43 53.3**	**0.0**		
	comp=Z,0.8nm,0.7s,baz=260,slow=2.1,SNR=4.4								
TKL	**Tuckaleechee C**	**129.07**	**32**	PKP	**PKPdf**	**20 34 07.9**	**+0.8**		
TKL	**Tuckaleechee C**	**129.07**	**32**	PKP	**PKPdf**	**20 34 07.9**	**+0.8**		
	comp=Z,1.5nm,0.6s,baz=223,slow=11,SNR=4.1								
DBIC	**Dimbokro**	**129.75**	**284**	PKP	**PKPdf**	**20 34 08.8**	**-0.1**		
DBIC	**Dimbokro**	**129.75**	**284**	PKP	**PKPdf**	**20 34 08.8**	**-0.1**		
	comp=Z,4.0nm,0.8s,baz=89,slow=1.0,SNR=4.5								
USHA	**Ushuaia**	**130.55**	**169**	PKP	**PKPdf**	**20 34 10.4**	**+1.2**		
USHA	**Ushuaia**	**130.55**	**169**	PKP	**PKPdf**	**20 34 10.4**	**+1.2**		
	comp=Z,2.8nm,0.6s,baz=236,slow=10,SNR=4.5								
PLCA	**Paso Flores**	**142.85**	**158**	*e*PKPdf	**PKPdf**	**20 34 29.0**	**-3.5**		
PLCA				PKP	**PKPdf**	**20 34 30.1**	**-2.4**		
PLCA	**Paso Flores**	**142.85**	**158**	PKP	**PKPdf**	**20 34 30.1**	**-2.4**		
	comp=Z,3.0nm,0.7s,baz=233,slow=4.4,SNR=11								
TRQA	**Tornquist**	**147.87**	**167**	*e*PKPbc	**PKPbc**	**20 34 44.8**	**+0.7**		
CFAA	**Coronel Fontan**	**151.65**	**153**	PKP	**PKPdf**	**20 34 47.9**	**+0.5**		
CFAA				PKPbc	**PKiKP**	**20 34 54.1**	**+0.1**		
CFAA	**Coronel Fontan**	**151.65**	**153**	PKP	**PKPdf**	**20 34 47.9**	**+0.5**		
	comp=Z,3.5nm,0.7s,baz=280,slow=2.7,SNR=4.0								
CFAA				PKPbc	**PKiKP**	**20 34 54.1**	**+0.1**		
	comp=Z,3.5nm,0.7s,baz=236,slow=2.9,SNR=42								
LCO	**Las Campanas**	**152.49**	**146**	*e*PKPdf	**PKPdf**	**20 34 49.6**	**+0.7**		
LCO				*e*PKPbc	**PKiKP**	**20 34 56.9**	**+0.7**		
LCO				*e*PKPab	**PKPab**	**20 35 07.5**	**+1.2**		
BDFB	**Brasilia**	**169.69**	**210**	PKP	**PKPdf**	**20 35 07.2**	**0.0**		
BDFB	**Brasilia**	**169.69**	**210**	PKP	**PKPdf**	**20 35 07.2**	**0.0**		
	comp=Z,2.9nm,0.8s,baz=72,slow=6.4,SNR=3.7								

*NAO **30** 20:22:28.2±1.0, 76.°94N×18.°32E, ML3.0*
*CSEM **30** 20:22:28.8±0.1, 76.°99N×18.°20E, h2km, ML2.6, Error ellipse: s-maj=7.7km s-min=2.5km az=67.0*
*ISCJB **30** 20:22:30.1±0.8, 76.°93N±0.°05×18.°2E±0.°2, h16km, Error ellipse: s-maj=9.1km s-min=5.7km az=40.4*
*BER **30** 20:22:33.4, 77.°01N×18.°58E, h19km, MD2.2, ML2.6, ML3.0(NAO)*

ISC 30 20:22:31.1±0.8, 77.°03N±0.°04×18.°33E±0.°06, h16km, n17, σ0s98/26, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.63**	**270**	*e*P	**Pg**	**20 22 43.0**	**-0.5**
HSP				*e*S	**Sg**	**20 22 51.3**	**-0.5**
SPA0	**Spitsbergen Ar**	**1.23**	**341**	Pg	**Pn**	**20 22 52.8**	**-0.9**
	baz=152,slow=18						
SPA0				Lg	Lg	20 23 09.8	
	baz=162,slow=28						
SPA0	**Spitsbergen Ar**	**1.23**	**341**	P	**Pn**	**20 22 52.8**	**-0.9**
	baz=152,slow=18						
SPA0				*e*S	**Sg**	**20 23 11.2**	**+0.3**
SPA0	**Spitsbergen Ar**	**1.23**	**341**	P	**Pn**	**20 22 52.8**	**-0.9**
	baz=152,slow=18,SNR=55						
SPA0				Lg	Lg	20 23 09.8	
	baz=162,slow=25,SNR=8.7						
SPA0				*e*S	**Sg**	**20 23 11.2**	**+0.3**
	SNR=55						
HOPEN	**Hopen**	**1.62**	**105**	*e*Sg	**Sb**	**20 23 21.1**	**+0.3**
HOPEN	**Hopen**	**1.62**	**105**	*e*Sg	**Sb**	**20 23 21.1**	**+0.3**
	SNR=93						
KBS	**Kingsbay**	**2.33**	**328**	Pn	**Pn**	**20 23 07.8**	**-0.9**
KBS				Pg	**Pb**	**20 23 13.6**	**+0.9**
KBS				Lg	Lg	20 23 42.5	
KBS	**Kingsbay**	**2.33**	**328**	*e*P	**Pn**	**20 23 07.6**	**-1.1**
KBS				*e*Pg	**Pb**	**20 23 13.5**	**+0.8**
KBS				*e*S	**Sn**	**20 23 38.2**	**+1.2**
KBS				AML	AML	20 23 48.4	
	comp=Z,94nm,0.3s						
KBS	**Kingsbay**	**2.33**	**328**	Pn	**Pn**	**20 23 07.8**	**-0.9**
KBS	**Kingsbay**	**2.33**	**328**	*e*Pg	**Pb**	**20 23 13.5**	**+0.8**
	SNR=92						
KBS				*e*S	**Sn**	**20 23 38.2**	**+1.2**
	comp=Z,94nm,0.3s,SNR=55						
KBS				Lg	Lg	20 23 42.5	
BJO	**Bjornoya**	**2.54**	**175**	*e*Pg	**Pb**	**20 23 17.2**	**+0.9**
BJO				*e*Sg	**Sb**	**20 23 48.7**	**+1.4**
BJO				AML	AML	20 23 54.0	
	comp=Z,39nm,0.2s						
BJO	**Bjornoya**	**2.54**	**175**	*e*Pg	**Pb**	**20 23 17.2**	**+0.9**
	SNR=92						
BJO				*e*Sg	**Sb**	**20 23 48.7**	**+1.4**
	comp=Z,39nm,0.2s,SNR=92						
KEV	**Kevo**	**7.71**	**157**	*ep*	**Pn**	**20 24 22.3**	**-0.2**
KEV	**Kevo**	**7.71**	**157**	*e*P	**Pn**	**20 24 22.3**	**-0.2**
ARA0	**ARCESS Array S**	**7.80**	**161**	Pn	**Pn**	**20 24 22.5**	**-1.3**
	baz=348,slow=14						
ARA0				Sn	Sn	20 25 41.6	-10
	baz=358,slow=28						
ARA0	**ARCESS Array S**	**7.80**	**161**	P	**Pn**	**20 24 22.5**	**-1.3**
	baz=348,slow=14						
ARA0				S	Sn	20 25 41.6	-10
	baz=358,slow=28						
ARA0	**ARCESS Array S**	**7.80**	**161**	P	**Pn**	**20 24 22.5**	**-1.3**
	baz=348,slow=13,SNR=51						

*PRU **30** 20:27:15.8, 51.°36N×16.°23E, h0km*
*CSEM **30** 20:27:19.6, 51.°24N×16.°17E, h0km, After GFU*

ISC 30 20:27:15.7±1.9, 51.°37N±0.°10×16.°20E±0.°06, h0km, n14, σ0s80/21, 1C, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.53**	**174**	*e*Pg	**Pg**	**20 27 26.6**	**+0.7**
KSP				*e*Sg	**Sg**	**20 27 34.2**	**+1.5**
UPC	**Upice**	**0.87**	**188**	*e*PG	**Pg**	**20 27 32.5**	**+0.1**
UPC	**Upice**	**0.87**	**188**	Pg	**Pg**	**20 27 32.5**	**+0.1**
PVCC	**Panska Ves**	**1.33**	**231**	*e*PG	**Pg**	**20 27 41.3**	**0.0**
PVCC				*e*SG	**Sg**	**20 27 58.8**	**+0.3**
	comp=Z,17nm,0.2s						
PVCC	**Panska Ves**	**1.33**	**231**	Pg	**Pg**	**20 27 41.3**	**0.0**
PVCC				Sg	**Sg**	**20 27 58.8**	**+0.3**
	17nm,0.2s						
KRLC	**Kraliky**	**1.35**	**164**	*e*PG	**Pg**	**20 27 41.5**	**0.0**
KRLC				*e*SG	**Sg**	**20 27 58.2**	**-0.8**
KRLC	**Kraliky**	**1.35**	**164**	Pg	**Pg**	**20 27 41.5**	**0.0**
KRLC				Sg	**Sg**	**20 27 58.2**	**-0.8**
BRG	**Berggiesshubel**	**1.51**	**252**	PG	**Pn**	**20 27 43.1**	**-0.9**
BRG				SG	**Sg**	**20 28 03.5**	**-0.7**
	6.0nm,0.5s						
PRU	**Pruhonice**	**1.74**	**218**	*e*SG	**Sg**	**20 28 11.5**	**-0.1**
	comp=Z,4.0nm,0.2s						
PRU	**Pruhonice**	**1.74**	**218**	Sg	**Sg**	**20 28 11.5**	**-0.1**
	4.0nm,0.2s						
MORC	**Moravsky Berou**	**1.81**	**151**	*i*P	**Sg**	**20 28 14.5**	**+0.7**
CLL	**Collm**	**2.01**	**269**	*e*Pg	**Pb**	**20 27 53.0**	**-0.1**
CLL				*i*		20 27 55.2	
CLL				*e*Sg	**Sb**	**20 28 20.0**	**+1.4**
NKC	**Novy Kostel**	**2.64**	**246**	*e*SG	**Sg**	**20 28 41.9**	**+1.4**
	comp=Z,4.4nm,0.3s						
KHC	**Kasperske Hory**	**2.80**	**218**	*e*SG	**Sg**	**20 28 44.4**	**-1.4**

IDC 30 20:27:20.8±6.0, 14.°11N×91.°59W, h95km±50km, mb3.5/4, mb1 3.6/6, mb1mx3.3/24, mbtmpg3.4/6, MS4.3/2, Ms1 4.2/2, ms1mx3.2/25, Error ellipse: s-maj=62.0km s-min=23.0km az=56.0, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**6.86**	**27**	P	Pn	20 28 58.1	-0.7
	2.7nm,0.3s,baz=188,slow=2.3,SNR=9.9						
TXAR	**Lajitas Array**	**18.83**	**326**	P	Pn	20 31 34.4	-0.6
	baz=135,slow=9.0,SNR=2.1						
TKL	**Tuckaleechee C**	**22.58**	**17**	P	P	20 32 14.1	+0.7
	3.2nm,0.9s,baz=182,slow=11,SNR=5.3						
PDAR	**Pinedale Array**	**32.49**	**335**	LR	LR	20 49 33.3	
	comp=Z,408nm,21.0s,baz=279,slow=41						
SIV	**San Ignacio**	**42.48**	**134**	P	P	20 35 06.9	0.0
	2.4nm,0.7s,baz=294,slow=3.0,SNR=5.5						
YKA	**Yellowknife Ar**	**51.01**	**346**	P	P	20 36 12.8	0.0
	0.3nm,0.4s,baz=143,slow=8.5,SNR=4.1						
PLCA	**Paso Flores**	**57.95**	**161**	LR	LR	20 59 05.8	
	comp=Z,261nm,18.4s,baz=179,slow=33						
ILAR	**Eielson Array**	**62.90**	**337**	P	P	20 37 35.8	-0.9
	0.4nm,0.9s,baz=116,slow=6.1,SNR=3.7						
CMAR	**Chiang Mai Arr**	**146.02**	**342**	PKPbc	PKPdf	20 46 50.0	+0.3
	0.3nm,0.6s,baz=336,slow=2.5,SNR=4.6						

*ISCJB **30** 20:27:43.7±0.7, 21.°82S±0.°04×68.°48W±0.°09, h105km±6km, mb3.6/5, Error ellipse: s-maj=14.0km s-min=7.4km az=177.7*
*GUC **30** 20:27:44.3±0.6, 21.°86S×68.°66W, h107km±3km, ML4.0*
*IDC **30** 20:28:01.2±12.0, 20.°58S×67.°87W, h209km±78km, mb3.3/5, mb1 3.6/7, mb1mx3.4/20, mbtmpg3.3/7, MS3.5/2, Ms1 3.5/2, ms1mx2.6/12, Error ellipse: s-maj=179.4km s-min=21.4km az=19.0*

ISC 30 20:27:44.4±0.9, 21.°85S±0.°05×68.°53W±0.°09, h101km±8km, n22, σ0s78/25, mb3.7/5, 7C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**0.67**	**275**	↑*i*P	**Pn**	**20 28 02.3**	**+0.5**
PB09				*i* S	**Sn**	**20 28 15.6**	**+0.8**
PB09				AML	AML	20 28 19.5	
	comp=N,10μm,0.6s						
LVC	**Limon Verde**	**0.84**	**205**	↓*i*P	**Pn**	**20 28 04.2**	**+0.7**
LVC				*i* S	**Sn**	**20 28 18.6**	**+0.8**
PB04	**Plate Boundary**	**0.98**	**245**	↑*i*P	Pn	20 28 11.1	+6.5
PB04				*e*S	Sn	20 28 47.9	+12
PB04				AML	AML	20 28 32.9	
	comp=E,1μm,0.5s						
MACH	**Maria Elena**	**1.19**	**253**	↑*i*P	**Pn**	**20 28 06.8**	**-0.5**
MACH				*i* S	**Sn**	**20 28 23.9**	**-0.6**
PB01	**Plate Boundary**	**1.20**	**312**	↑*i*P	**Pn**	**20 28 07.3**	**+0.1**
PB01				*i* S	**Sn**	**20 28 24.6**	**+0.1**
PB01				AML	AML	20 28 25.5	
	comp=N,2μm,0.3s						
PB07	**Plate Boundary**	**1.27**	**275**	↑*i*P	**Pn**	**20 28 07.7**	**-0.4**
PB07				*i* S	**Sn**	**20 28 25.1**	**-0.9**
PB07				AML	AML	20 28 28.4	
	comp=E,2μm,0.5s						
HMBC	**Humberstone**	**2.02**	**321**	↑*i*P	**Pn**	**20 28 17.2**	**-0.2**
HMBC				*i* S	**Sn**	**20 28 42.2**	**-0.2**
HMBC				AML	AML	20 28 43.6	
	comp=E,2μm,0.6s						
CEN1	**Los Morros**	**2.17**	**225**	*e*P	Pn	20 28 22.3	+3.0
CEN1				*e*S	Sn	20 28 50.3	+4.2
ANCH	**Antofagasta**	**2.52**	**223**	↑*i*P	**Pn**	**20 28 23.6**	**-0.1**
MNMC	**Minimini**	**2.89**	**340**	↓*i*P	**Pn**	**20 28 29.5**	**+0.6**
MNMC				*i* S	**Sn**	**20 29 04.3**	**+1.1**
MNMC				AML	AML	20 29 11.2	
	comp=N,800nm,0.4s						
LPAZ	**La Paz**	**5.55**	**4**	P	Pn	20 29 08.4	+3.3
	comp=N,2.2nm,0.3s,baz=201,slow=6.7,SNR=29						
LPAZ				S	Sn	20 29 48.4	-20
	comp=N,0.3nm,0.3s,baz=216,slow=8.6,SNR=4.5						
SIV	**San Ignacio**	**9.15**	**52**	P	**Pn**	**20 29 52.3**	**-1.4**
	comp=N,2.6nm,0.3s,baz=242,slow=12,SNR=36						
SIV				S	Sn	20 31 28.3	-6.6
	comp=N,0.3nm,0.3s,baz=170,slow=24,SNR=3.9						
CPUP	**Villa Florida**	**11.16**	**116**	LR	LR	20 35 30.6	
	comp=N,666nm,21.6s,baz=355,slow=40						
PLCA	**Paso Flores**	**18.90**	**185**	LR	LR	20 40 47.9	
	comp=N,48nm,19.3s,baz=274,slow=38						
TXAR	**Lajitas Array**	**61.12**	**325**	P	**P**	**20 37 48.3**	**0.0**
	comp=N,0.2nm,0.5s,baz=139,slow=12,SNR=2.2						
ANMO	**Albuquerque**	**66.99**	**327**	P	**P**	**20 38 27.6**	**+0.9**
	comp=N,0.7nm,0.5s,baz=90,slow=6.1,SNR=3.5						
NVAR	**Mina Array Bea**	**75.99**	**322**	P	**P**	**20 39 22.2**	**+1.4**
	comp=N,0.5nm,0.8s,baz=149,slow=7.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**77.14**	**70**	P	**P**	**20 39 26.9**	**-0.6**
	comp=N,0.5nm,0.4s,baz=254,slow=5.1,SNR=13						
YKA	**Yellowknife Ar**	**91.64**	**340**	P	**P**	**20 40 39.6**	**-0.1**
	comp=N,0.9nm,0.6s,baz=136,slow=5.0,SNR=7.3						
ZALV	**Zalesovo Beam**	**142.12**	**26**	PKP	**PKPdf**	**20 47 05.0**	**+0.5**
	comp=N,0.3nm,0.4s,baz=270,slow=3.0,SNR=3.8						
MKAR	**Makanchi Array**	**145.71**	**36**	PKP	**PKPab**	**20 47 11.9**	**-0.2**
	comp=N,0.8nm,0.6s,baz=338,slow=2.9,SNR=8.7						
SONM	**Songino Array**	**153.76**	**8**	PKPbc	**PKPbc**	**20 47 32.2**	**+0.4**
	comp=N,0.4nm,0.9s,baz=245,slow=1.6,SNR=3.7						
SONM				PKPab	**PKPab**	**20 47 43.5**	**-1.4**
	comp=N,0.4nm,0.7s,baz=306,slow=2.1,SNR=3.8						

IDC 30 20:33:16.3±1.6, 19.°93S×69.°53W, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.6/19, mbtmpg3.6/4, ML3.5/2, MS2.8/1, Ms1 2.9/1, ms1mx2.3/25, Error ellipse: s-maj=42.1km s-min=35.0km az=149.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.86**	**20**	Pn	Pn	20 34 17.9	+0.4
	1.4nm,0.3s,baz=205,slow=6.3,SNR=20						
LPAZ				Pg	Pb	20 34 25.8	+0.2
	5.4nm,0.3s,baz=211,slow=13,SNR=42						
LPAZ				Sn	Sn	20 35 07.8	+4.0
	2.2nm,0.3s,baz=90,slow=20,SNR=1.3						
LPAZ				LR	LR	20 36 01.5	
	comp=Z,114nm,18.7s,baz=131,slow=43						
SIV	**San Ignacio**	**8.95**	**65**	Pn	Pn	20 35 27.9	+1.0
	0.6nm,0.3s,baz=258,slow=14,SNR=5.5						
PDAR	**Pinedale Array**	**72.47**	**330**	P	P	20 44 45.2	+0.2
	0.5nm,0.6s,baz=139,slow=8.4,SNR=2.7						
TORD	**Torodi Ar. Bea**	**77.38**	**71**	P	P	20 45 13.5	-0.2
	0.4nm,0.6s,baz=250,slow=4.6,SNR=6.2						
SONM	**Songino Array**	**151.97**	**6**	PKPbc	PKPbc	20 53 13.1	-0.4
	0.2nm,0.4s,baz=329,slow=2.8,SNR=3.3						
SONM				PKPab	PKPab	20 53 22.5	-0.2
	0.2nm,0.6s,baz=7.8,slow=3.2,SNR=2.8						

*ATH **30** 20:44:48.5, 37.°88N×27.°18E, h21km±9km, MD3.0/3*
*ISCJB **30** 20:44:50.0±0.6, 37.°93N±0.°03×27.°09E±0.°03, h6km±4km, Error ellipse: s-maj=5.3km s-min=3.4km az=137.7*
*ISK **30** 20:44:49.4, 37.°95N×27.°06E, h5km, MD3.0*
*DDA **30** 20:44:50.5, 37.°97N×27.°16E, h7km, MD2.9*
*CSEM **30** 20:44:50.3±0.2, 37.°94N×27.°07E, h10km, MD3.0, Error ellipse: s-maj=5.6km s-min=4.0km az=56.0*

ISC 30 20:44:50.2±1.0, 37.°95N±0.°02×27.°15E±0.°02, h12km±9km, n50, σ0s81/79, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.44**	**349**	PG	**Pg**	**20 44 58.3**	**-0.7**
BLCB				*e*SG	**Sg**	**20 45 04.8**	**-0.1**
BLCB	**Balcova**	**0.44**	**349**	*i* Pg	**Pg**	**20 44 58.3**	**-0.7**
BLCB				*e*Sg	**Sg**	**20 45 04.8**	**-0.1**
IZM	**Izmir**	**0.46**	**11**	PG	**Pg**	**20 44 59.2**	**0.0**
IZM				*e*SG	**Sb**	**20 45 06.7**	**-0.3**
IZM	**Izmir**	**0.46**	**11**	*i* Pg	**Pg**	**20 44 59.2**	**0.0**
IZM				*e*Sg	**Sb**	**20 45 06.7**	**-0.3**
URLA	**Izmir**	**0.60**	**313**	*i* P	**Pg**	**20 45 02.1**	**+0.1**
URLA				*i* S	**Sg**	**20 45 09.6**	**-0.3**
URLA	**Izmir**	**0.60**	**313**	*i* P	**Pg**	**20 45 02.1**	**+0.1**
URLA				*i* S	**Sg**	**20 45 09.6**	**-0.3**
AYDN	**Tasoluk**	**0.64**	**116**	*i* P	**Pb**	**20 45 03.9**	**+0.4**
AYDN				*i* S	**Sb**	**20 45 11.9**	**-0.5**
AYDN	**Tasoluk**	**0.64**	**116**	*i* P	**Pb**	**20 45 03.9**	**+0.4**
AYDN				*i* S	**Sb**	**20 45 11.9**	**-0.5**
MLSB	**Milas**	**0.82**	**143**	*e*PG	**Pb**	**20 45 06.5**	**+0.1**
MLSB				*e*SG	**Sb**	**20 45 18.5**	**+1.0**
MLSB	**Milas**	**0.82**	**143**	*e*Pg	**Pb**	**20 45 06.6**	**+0.1**
MLSB				*e*Sg	**Sb**	**20 45 18.5**	**+1.0**
BODT	**Bodrum**	**0.90**	**172**	*e*PG	**Pg**	**20 45 07.4**	**-0.2**
BODT	**Bodrum**	**0.90**	**172**	*e*Pg	**Pg**	**20 45 07.4**	**-0.2**
CHOS	**Chios island**	**0.97**	**297**	*e*PN	**Pg**	**20 45 08.6**	**-0.3**
CHOS				*e*SN	**Sg**	**20 45 21.9**	**+0.3**
CHOS	**Chios island**	**0.97**	**297**	*e*Pn	**Pg**	**20 45 08.6**	**-0.3**
CHOS				*e*Sn	**Sg**	**20 45 21.9**	**+0.3**
AKHS	**Akhisar**	**1.06**	**29**	*i* P	**Pb**	**20 45 10.6**	**0.0**
AKHS				*i* S	**Sg**	**20 45 24.8**	**+0.2**
AKHS	**Akhisar**	**1.06**	**29**	*i* P	**Pb**	**20 45 10.6**	**0.0**
AKHS				*i* S	**Sg**	**20 45 24.8**	**+0.2**
YER	**Yerkesik**	**1.21**	**132**	*e*PN	**Pn**	**20 45 13.1**	**0.0**
YER	**Yerkesik**	**1.21**	**132**	*e*Pn	**Pn**	**20 45 13.1**	**0.0**
MANT	**Manisa**	**1.23**	**64**	*i* P	**Pg**	**20 45 15.0**	**+1.0**
MANT				*i* S	**Sb**	**20 45 29.4**	**-0.1**
MANT	**Manisa**	**1.23**	**64**	*i* P	**Pg**	**20 45 15.0**	**+1.0**
MANT				*i* S	**Sb**	**20 45 29.4**	**-0.1**
KULA	**Kula-Manisa**	**1.31**	**64**	*e*PN	**Pg**	**20 45 16.1**	**+0.6**
KULA	**Kula-Manisa**	**1.31**	**64**	*e*Pn	**Pg**	**20 45 16.1**	**+0.6**
AYVA	**Ayvalik**	**1.40**	**345**	*i* P	**Pb**	**20 45 16.9**	**+0.5**
AYVA				*i* S	**Sg**	**20 45 37.2**	**+1.8**
AYVA	**Ayvalik**	**1.40**	**345**	*i* P	**Pb**	**20 45 16.9**	**+0.5**
AYVA				*i* S	**Sg**	**20 45 37.2**	**+1.8**
PRK	**Paraskevi**	**1.47**	**332**	*e*PB	**Pn**	**20 45 15.8**	**-0.7**
PRK				*e*SN	**Sg**	**20 45 38.0**	**+0.5**
PRK	**Paraskevi**	**1.47**	**332**	*e*Pb	**Pn**	**20 45 15.8**	**-0.7**
PRK				*e*Sn	**Sg**	**20 45 38.0**	**+0.5**
DNZL	**Cakiroluk**	**1.52**	**99**	*i* P	**Pg**	**20 45 19.6**	**+0.1**
DNZL				*i* S	**Sg**	**20 45 39.2**	**-0.1**
DNZL	**Cakiroluk**	**1.52**	**99**	*i* P	**Pg**	**20 45 19.6**	**+0.1**
DNZL				*i* S	**Sg**	**20 45 39.2**	**-0.1**
APE	**Apeiranthos**	**1.56**	**236**	*e*PN	**Pn**	**20 45 17.6**	**-0.2**
APE	**Apeiranthos**	**1.56**	**236**	*e*PN	**Pn**	**20 45 17.0**	**-0.9**
APE	**Apeiranthos**	**1.56**	**236**	*e*Pn	**Pn**	**20 45 17.7**	**-0.2**
DEMI	**Demirci**	**1.64**	**48**	*i* P	**Pg**	**20 45 22.0**	**+0.2**
DEMI				*i* S	**Sg**	**20 45 44.1**	**+1.0**
DEMI	**Demirci**	**1.64**	**48**	*i* P	**Pg**	**20 45 22.0**	**+0.2**
DEMI				*i* S	**Sg**	**20 45 44.1**	**+1.0**
BALB	**Balikesir**	**1.78**	**18**	*e*PN	**Pb**	**20 45 22.2**	**-0.6**
BALB	**Balikesir**	**1.78**	**18**	*e*Pn	**Pb**	**20 45 22.2**	**-0.6**
BALY	**Balya**	**1.82**	**11**	*i* P	**Pn**	**20 45 21.6**	**+0.1**
BALY				*i* S	**Sn**	**20 45 43.8**	**-0.8**
BALY	**Balya**	**1.82**	**11**	*i* P	**Pn**	**20 45 21.6**	**+0.1**
BALY				*i* S	**Sn**	**20 45 43.8**	**-0.8**
KHAL	**Karahalli**	**1.89**	**76**	*i* P	**Pg**	**20 45 27.3**	**+0.8**
KHAL	**Karahalli**	**1.89**	**76**	*i* P	**Pg**	**20 45 27.3**	**+0.8**
KHL	**Karahalli**	**1.91**	**78**	*e*PN	**Pb**	**20 45 24.8**	**-0.2**
KHL	**Karahalli**	**1.91**	**78**	*e*Pn	**Pb**	**20 45 24.8**	**-0.2**
DURS	**Dursunbey**	**1.94**	**32**	*i* P	Pn	**20 45 22.1**	**-1.1**
DURS				*i* S	**Sn**	**20 45 47.6**	**0.0**
DURS	**Dursunbey**	**1.94**	**32**	*i* P	Pn	**20 45 22.1**	**-1.1**
DURS				*i* S	**Sn**	**20 45 47.6**	**0.0**
BOZC	**Bozcaada**	**2.07**	**336**	*i* P	**Pb**	**20 45 28.6**	**+0.8**
BOZC				*i* S	**Sb**	**20 45 55.6**	**+2.0**
GONE	**Gonen-Balikesi**	**2.13**	**11**	*e*PN	**Pn**	**20 45 27.2**	**+1.5**
GONE	**Gonen-Balikesi**	**2.13**	**11**	*e*Pn	**Pn**	**20 45 27.2**	**+1.5**
TVSB	**Tavsanli**	**2.35**	**50**	*e*PN	**Pb**	**20 45 30.8**	**-1.7**
TVSB	**Tavsanli**	**2.35**	**50**	*e*Pn	**Pb**	**20 45 30.8**	**-1.7**
ALT	**Altintas**	**2.57**	**64**	*e*PN	**Pb**	**20 45 34.2**	**-2.1**
ALT	**Altintas**	**2.57**	**64**	*e*Pn	**Pb**	**20 45 34.2**	**-2.1**

IDC 30 20:58:31.8±12.0, 24.°20S×178.°87W, h501km±61km, mb3.3/5, mb1 3.4/7, mb1mx3.1/21, mbtmpg3.3/7, Error ellipse: s-maj=197.0km s-min=48.7km az=58.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.68**	**276**	P	P	21 01 29.0	+0.7
	0.4nm,0.3s,baz=117,slow=14,SNR=4.5						
URZ	**Urewera**	**14.43**	**193**	P	P	21 01 35.8	+0.1
	3.9nm,0.3s,baz=30,slow=3.6,SNR=21						
URZ				S	S	21 03 56.5	-11
	0.3nm,0.3s,baz=44,slow=18,SNR=3.2						
CTA	**Charters Tower**	**32.51**	**270**	P	P	21 04 21.1	+0.3
	5.7nm,0.5s,baz=95,slow=11,SNR=11						
STKA	**Stephens Creek**	**35.57**	**249**	P	P	21 04 45.2	-1.3
	1.1nm,0.8s,baz=98,slow=14,SNR=3.4						
ASAR	**Alice Springs**	**43.01**	**261**	P	P	21 05 46.1	-0.6
	1.0nm,0.6s,baz=90,slow=7.1,SNR=25						
WRA	**Warramunga Arr**	**43.42**	**266**	P	P	21 05 49.4	-0.5
	1.6nm,0.3s,baz=99,slow=6.8,SNR=84						
FITZ	**Fitzroy Crossi**	**51.84**	**265**	P	P	21 06 54.0	+0.8
	1.7nm,0.5s,baz=119,

KLY	Klyuchi	2.66	348	P		Pn	21 32 16.7	+0.1
KLY				S		Sn	21 32 48.0	-1.4
ESO	Esso	2.79	324	PN		Pn	21 32 18.8	+0.4
ESO	Esso	2.79	324	eP		Pn	21 32 18.8	+0.4
ESO				eS		Sn	21 32 50.9	-1.6
APC	Apacha	2.79	255	eP		Pn	21 32 20.3	+1.9
APC				eS		Sn	21 32 54.0	+1.3
SRDR	Sredinnyy	2.83	338	eP		Pn	21 32 19.8	+0.8
SRDR				eS		Sn	21 32 53.2	-0.4
SMKR	Semkarok	2.87	358	eP		Pn	21 32 21.3	+1.7
SMKR				eS		Sn	21 32 55.9	+1.2
BKI	Bering	2.94	58	PN		Pn	21 32 19.5	-1.0
BKI	Bering	2.94	58	eP		Pn	21 32 19.5	-1.0
SRKR	Sorokina	2.96	355	eP		Pn	21 32 21.5	+0.8
SRKR				eS		Sn	21 32 56.4	-0.4
MIPR	Malaya Ipel'ka	3.28	246	eP		Pn	21 32 27.7	+2.6
SKR	Severo-Kuril's	4.55	230	ePN		Pg	21 33 05.3	+5.4

*ISCJB **30** 21:33:18.9±0.4,8°.03S±0°.05×122°.08E±0°.04,h200km, mb3.5/7, Error ellipse: s-maj=7.7km s-min=5.2km az=28.7*
*AUST **30** 21:33:20.6,8°.00S×121°.99E,h200km*
*IDC **30** 21:33:21.2±1.9,8°.07S×121°.97E,h212km±19km,mb3.4/7, mb1 3.4/11,mb1mx3.3/24,mbtmp3.3/11, Error ellipse: s-maj=35.7km s-min=10.7km az=65.0*
ISC 30 21:33:20.4±0.5,8°.17S±0°.05×122°.02E±0°.06,h200km,n25, σ1s76/30,mb3.6/7,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**2.27**	**229**	P	**Pn**	**21 34 02.9**	**+1.1**
	baz=2.4,SNR=4.5						
WSI				S	**Sn**	**21 34 35.6**	**+1.7**
	baz=2.4,SNR=7.3						
KAPI	**Kappang**	**3.86**	**324**	P	**Pn**	**21 34 20.6**	**0.0**
	0.5nm,0.3s,baz=55,slow=17,SNR=3.9						
JAGI	**Jajag, Banyuwa**	**7.79**	**267**	P	**Pn**	**21 35 10.1**	**-1.0**
	baz=7.8,SNR=5.4						
JAGI				S	**Sn**	**21 36 36.9**	**-2.2**
	baz=7.8,SNR=3.4						
KNRA	**Kununurra**	**9.96**	**139**	P	**Pn**	**21 35 40.1**	**+1.0**
	baz=10,SNR=6.2						
MTN	**Manton Dam**	**10.09**	**118**	P	**Pn**	**21 35 40.2**	**-0.7**
	baz=10,SNR=107						
MTN				S	Sn	21 37 27.6	-6.1
	baz=10,SNR=5.0						
FITZ	**Fitzroy Crossi**	**10.48**	**161**	P	**Pn**	**21 35 47.8**	**+1.9**
	0.2nm,0.3s,baz=350,slow=19,SNR=7.0						
FITZ				S	Sn	21 37 38.6	-4.4
	0.7nm,0.3s,baz=127,slow=7.7,SNR=9.6						
FITZ	**Fitzroy Crossi**	**10.48**	**161**	P	Pn	21 35 50.1	+4.2
	baz=11,SNR=5.8						
FITZ				S	**Sn**	**21 37 40.4**	**-2.6**
	baz=11,SNR=4.2						
KDU	**Kakadu**	**11.21**	**114**	P	**Pn**	**21 35 54.7**	**-0.7**
	baz=11,SNR=14						
UGM	**Wanagama**	**11.39**	**270**	P	**Pn**	**21 35 59.0**	**+1.3**
	baz=11,SNR=5.8						
FAKI	**Fak Fak**	**11.43**	**63**	P	**Pn**	**21 35 58.6**	**+0.4**
	baz=11,SNR=7.2						
FAKI				S	**S**	**21 38 10.0**	**+4.0**
	baz=11,SNR=3.3						
CISI	**Cisompet, Garu**	**14.09**	**271**	P	**P**	**21 36 34.4**	**+1.0**
	baz=14,SNR=9.3						
WRA	**Warramunga Arr**	**16.71**	**136**	P	**P**	**21 37 02.4**	**+0.1**
	0.7nm,0.3s,baz=315,slow=11,SNR=35						
WRA				S	**S**	**21 40 03.0**	**-3.7**
	0.2nm,0.3s,baz=227,slow=22,SNR=4.4						
MEEK	**Meekatharra**	**18.65**	**190**	P	**P**	**21 37 25.9**	**+2.5**
	baz=19,SNR=6.4						
MEEK				S	S	21 40 54.5	+9.2
	baz=19,SNR=6.0						
ASAR	**Alice Springs**	**19.16**	**145**	P	**P**	**21 37 30.1**	**+1.1**
	0.9nm,0.3s,baz=324,slow=12,SNR=86						
ASAR				S	**S**	**21 40 52.9**	**-2.5**
	0.0nm,0.3s,baz=327,slow=25,SNR=3.8						
QIS	**Mount Isa**	**20.99**	**128**	P	**P**	**21 37 48.4**	**-0.1**
	baz=21,SNR=5.0						
MORW	**Morawa**	**21.54**	**194**	P	**P**	**21 37 55.2**	**+1.1**
	baz=22,SNR=6.2						
MORW				S	S	21 42 03.1	+24
	baz=22,SNR=3.8						
STKA	**Stephens Creek**	**29.80**	**145**	P	**P**	**21 39 09.3**	**+0.6**
	2.4nm,0.7s,baz=4.6,slow=7.6,SNR=11						
STKA	**Stephens Creek**	**29.80**	**145**	P	**P**	**21 39 09.8**	**+1.1**
	baz=30,SNR=8.5						
USRK	**Ussuriysk Arra**	**52.90**	**9**	P	**P**	**21 42 14.1**	**-1.7**
	0.6nm,0.4s,baz=192,slow=6.8,SNR=5.1						
SONM	**Songino Array**	**57.45**	**348**	P	**P**	**21 42 47.1**	**-1.3**
	0.4nm,0.7s,baz=148,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**65.13**	**331**	P	**P**	**21 43 39.1**	**-0.7**
	0.8nm,0.5s,baz=143,slow=7.5,SNR=16						
PETK	**Petropavlovsk-**	**68.15**	**22**	P	**P**	**21 43 58.5**	**-0.3**
	1.2nm,0.7s,baz=191,slow=6.8,SNR=3.9						
ZALV	**Zalesovo Beam**	**69.38**	**338**	P	**P**	**21 44 04.4**	**-1.9**
	0.5nm,0.4s,baz=145,slow=5.8,SNR=3.4						
VNDA	**Vanda**	**72.35**	**172**	P	**P**	**21 44 24.6**	**+0.7**
	0.3nm,0.4s,baz=330,slow=7.5,SNR=6.1						
TORD	**Torodi Ar. Bea**	**121.26**	**280**	PKP	**PKPdf**	**21 51 48.8**	**-1.8**
	0.3nm,0.7s,baz=103,slow=3.0,SNR=2.3						

*IDC **30** 21:49:00.4±1.0,32°.48N×130°.00E,h0km,mb3.0/4, mb1 3.3/6,mb1mx3.2/26,mbtmp3.1/6,ML3.2/2, Error ellipse: s-maj=19.8km s-min=11.0km az=137.0*
*NIED **30** 21:49:00,32°.60N×130°.00E,h11km,Mw3.6 Best double couple: M0 2.76000×10^14 NP1:φs321.00000°,δ87.00000°, λ-10.00000°. NP2:φs51.00000°,δ80.00000°, λ-176.00000°.*
*ISCJB **30** 21:49:01.1±0.7,32°.53N±0°.04×129°.93E±0°.05,h15km±3km, mb3.1/5, Error ellipse: s-maj=8.8km s-min=5.1km az=44.8*
*JMA **30** 21:49:01.8,32°.57N×129°.96E,h13km±1km,M3.7 Broadband fault plane solution: P waves. NP1: φs53.00000°,δ77.00000°,λ-151.00000°. NP2: φs316.00000°,δ62.00000°,λ-15.00000°. Principal axes: T Plg10.0000°, Azm182.0000°; N Plg58.0000°, Azm76.0000°; P Plg30.0000°, Azm278.0000°:*
JMA Felt II J1.
ISC 30 21:49:02.3±1.0,32°.57N±0°.04×129°.96E±0°.04,h7km±7km, n14,σ1s31/21,mb3.3/5,3C-3D,Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGSJ	**Nagasakinomoza**	**0.15**	**295**	⇑P	**Pg**	**21 49 05.5**	**0.0**
NGSJ				S	**Sg**	**21 49 08.0**	**+0.4**
JHD	**Hondo**	**0.18**	**125**	⇓P	**Pg**	**21 49 06.0**	**+0.1**
JHD				S	**Sg**	**21 49 08.8**	**+0.4**
JUR	**Ureshino**	**0.52**	**359**	⇑P	**Pg**	**21 49 12.0**	**-0.5**
JUR				S	**Sg**	**21 49 19.8**	**+0.5**
JTA	**Tamana**	**0.62**	**50**	⇑P	**Pg**	**21 49 13.6**	**-0.7**
JTA				S	**Sg**	**21 49 22.3**	**-0.1**
JZO	**Okuchi**	**0.69**	**128**	⇓P	**Pg**	**21 49 14.9**	**-0.6**
JZO				S	**Sg**	**21 49 24.1**	**-0.4**
JIU2	**Izumi 2**	**0.72**	**92**	⇓P	**Pg**	**21 49 15.1**	**-1.1**
JNU	**Nakatsue**	**0.95**	**54**	Pg	**Pg**	**21 49 19.7**	**-0.9**
	baz=247,slow=7.4						
JNU				Lg	Lg	21 49 32.3	
	236nm,0.3s,baz=221,slow=20,SNR=30						
KSRS	**Korea Array**	**5.15**	**342**	Pn	**Pn**	**21 50 19.6**	**-0.2**
	1.2nm,0.3s,baz=159,slow=14,SNR=16						
KSRS				Pg	**Pg**	**21 50 39.0**	**-2.0**
	2.0nm,0.3s,baz=160,slow=17,SNR=21						
KSRS				Sn	**Sn**	**21 51 20.1**	**+0.5**
	0.7nm,0.3s,baz=153,slow=28,SNR=2.9						
KSRS				Lg	Lg	21 51 39.6	
	2.4nm,0.3s,baz=166,slow=30,SNR=7.2						
MJAR	**Matsushiro Arr**	**7.87**	**57**	Pn	**Pn**	**21 50 58.3**	**+1.1**
	0.2nm,0.3s,baz=245,slow=14,SNR=3.6						
MJAR				Lg	Lg	21 53 09.8	
	baz=231,slow=32,SNR=3.3						
SONM	**Songino Array**	**23.46**	**317**	P	**P**	**21 54 14.2**	**+1.7**
	0.1nm,0.3s,baz=117,slow=11,SNR=2.5						
MKAR	**Makanchi Array**	**38.75**	**306**	P	**P**	**21 56 25.9**	**-1.3**
	0.2nm,0.7s,baz=100,slow=7.5,SNR=2.4						
WRA	**Warramunga Arr**	**52.38**	**175**	P	**P**	**21 58 12.9**	**-2.3**
	0.3nm,0.8s,baz=356,slow=7.9,SNR=2.8						
ASAR	**Alice Springs**	**56.05**	**176**	P	**P**	**21 58 40.8**	**-1.2**
	0.3nm,0.9s,baz=5.7,slow=12,SNR=3.1						
ILAR	**Eielson Array**	**58.18**	**30**	P	**P**	**21 58 59.5**	**+2.9**
	0.3nm,0.7s,baz=286,slow=6.5,SNR=3.3						

*NNC **30** 21:57:19.5±6.8,36°.53N×69°.98E,h0km,mb3.8,mpv3.8,*

Error ellipse: s-maj=57.4km s-min=47.1km az=160.0
ISC 30 21:57:26.1±3.4,36°.6N±0°.2×70°.1E±0°.2,h213km,n12, σ0s94/14,3C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.21**	**26**	P	**Pn**	**21 58 55.2**	**-1.2**
	SNR=47						
KK31	**Karatay Array**	**6.53**	**3**	⇓Pn	**Pn**	**21 58 59.1**	**-1.1**
	2.1nm,0.5s,baz=180,slow=13,SNR=58						
KK31				⇑Sn	**S**	**22 00 14.6**	**-0.3**
	0.5nm,0.3s,baz=185,slow=21,SNR=4.5						
EKS2	**Erkin-Say**	**6.71**	**24**	P	**Pn**	**21 59 02.5**	**-0.1**
	SNR=22						
KZA	**Kyzart**	**6.79**	**34**	P	**Pn**	**21 59 02.4**	**-1.6**
	SNR=19						
AAK	**Ala-Archa**	**6.94**	**28**	P	**Pn**	**21 59 05.3**	**-0.3**
	SNR=14						
KBK	**Karagaybulak**	**7.13**	**30**	P	**Pn**	**21 59 07.7**	**-0.4**
	SNR=9.4						
CHMS	**Chumysh**	**7.34**	**28**	P	**Pn**	**21 59 10.4**	**-0.3**
	SNR=14						
ULHL	**Ulahol**	**7.39**	**38**	P	**Pn**	**21 59 11.6**	**0.0**
	SNR=12						
USP	**Ospenovka**	**7.49**	**25**	P	**Pn**	**21 59 12.9**	**+0.3**
	SNR=6.4						
TKM2	**Tokmak 2**	**7.62**	**32**	⇓Pn	**Pn**	**21 59 13.2**	**-1.3**
	4.4nm,0.5s						
TKM2				⇑Sn	**S**	**22 00 42.0**	**+1.0**
	2.2nm,0.7s						
TKM2	**Tokmak 2**	**7.62**	**32**	P	**Pn**	**21 59 13.8**	**-0.7**
	SNR=13						
AB31	**Akbulak array**	**14.67**	**333**	⇑P	**P**	**22 00 45.1**	**+0.8**
	0.1nm,0.3s,baz=0.0,slow=0.1,SNR=7.4						

IDC 30 22:02:59.0±0.9,12°.54N×143°.56E,h0km,mb3.7/7, mb1 4.0/7,mb1mx3.7/25,mbtmp3.7/7,MS3.5/3,Ms1 3.5/3, ms1mx2.9/49,Error ellipse: s-maj=35.9km s-min=19.4km az=98.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**24.38**	**350**	P	P	22 08 17.6	-1.4
	2.2nm,1.0s,baz=182,slow=11,SNR=4.9						
KSRS	**Korea Array**	**28.48**	**333**	LR	LR	22 17 34.9	
	comp=Z,30nm,20.7s,baz=160,slow=31						
WRA	**Warramunga Arr**	**33.53**	**196**	P	P	22 09 40.1	-0.6
	3.6nm,0.7s,baz=19,slow=9.8,SNR=40						
ASAR	**Alice Springs**	**37.20**	**195**	P	P	22 10 12.3	0.0
	1.1nm,0.6s,baz=20,slow=12,SNR=21						
ASAR				LR	LR	22 24 39.9	
	comp=Z,74nm,19.7s,baz=280,slow=35						
CMAR	**Chiang Mai Arr**	**43.31**	**284**	P	P	22 11 03.0	0.0
	1.3nm,1.1s,baz=72,slow=6.6,SNR=4.3						
SONM	**Songino Array**	**46.87**	**326**	P	P	22 11 31.8	+0.7
	0.2nm,0.8s,baz=125,slow=6.8,SNR=3.4						
ILAR	**Eielson Array**	**70.06**	**25**	P	P	22 14 12.3	-0.3
	0.1nm,0.5s,baz=300,slow=4.1,SNR=2.9						
NVAR	**Mina Array Bea**	**88.57**	**51**	P	P	22 15 55.2	+0.7
	0.4nm,0.7s,baz=274,slow=5.9,SNR=3.1						
ELK	**Eiko**	**90.22**	**48**	LR	LR	22 53 37.1	
	comp=Z,50nm,18.0s,baz=29,slow=34						

IDC 30 22:13:08.1±2.2,18°.02S×173°.98W,h0km,mb4.0/5, mb1 4.3/5,mb1mx3.9/20,mbtmp4.0/5,Error ellipse: s-maj=133.9km s-min=24.1km az=144.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**42.29**	**242**	P	P	22 21 03.6	-0.1
	1.6nm,0.6s,baz=50,slow=12,SNR=3.7						
WRA	**Warramunga Arr**	**48.76**	**259**	P	P	22 21 54.2	-0.9
	1.5nm,0.4s,baz=97,slow=5.9,SNR=54						
WRA				PcP	PcP	22 23 20.2	0.0
	0.8nm,1.0s,baz=94,slow=3.3,SNR=3.4						
ASAR	**Alice Springs**	**48.82**	**254**	P	P	22 21 55.1	-0.5
	2.5nm,0.7s,baz=93,slow=8.7,SNR=28						
ASAR				PcP	PcP	22 23 20.6	+0.1
	0.8nm,0.8s,baz=102,slow=4.0,SNR=4.6						
NVAR	**Mina Array Bea**	**76.64**	**42**	P	P	22 24 59.9	-1.3
	0.8nm,0.9s,baz=224,slow=10,SNR=3.7						
ILAR	**Eielson Array**	**85.11**	**11**	P	P	22 25 45.0	-0.6
	0.5nm,0.6s,baz=228,slow=6.6,SNR=8.3						
BVAR	**Borovoye Array**	**119.58**	**321**	PKP	PKPdf	22 31 59.7	-0.1
	0.3nm,0.5s,baz=90,slow=2.2,SNR=5.0						
BRTR	**Keskin Array B**	**147.78**	**318**	PKPbc	PKPbc	22 32 56.2	+0.8
	0.4nm,0.6s,baz=55,slow=4.7,SNR=4.2						
GERES	**GERESS Array B**	**148.62**	**350**	PKPbc	PKPbc	22 32 58.4	+1.1
	0.5nm,0.7s,baz=18,slow=4.8,SNR=4.6						

MEX 30 22:19:16.9±0.9,14°.53N×94°.63W,h16km±11km,MD4.3, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.79**	**49**	eP	Pn	22 19 43.2	-3.9
PCIG				*i* S	Sn	22 20 04.5	-5.1
HUIG	**Huatulco**	**1.88**	**311**	eP	Pn	22 19 45.0	-3.5
HUIG				*i* S	Sn	22 20 06.4	-5.5
THIG		**2.32**	**80**	*i* P	Pn	22 19 50.8	-3.6
THIG				*i* S	Sn	22 20 17.7	-5.0
TGIG		**2.66**	**33**	*i* P	Pn	22 19 57.1	-2.2
TGIG				*i* S	Sn	22 20 26.9	-4.4
CCIG	**Comitan**	**2.97**	**54**	eP	Pn	22 20 01.5	-2.1
CCIG				*i* S	Sn	22 20 35.7	-3.4
VHO	**Vista Hermosa**	**3.23**	**322**	*i* P	Pn	22 20 04.6	-2.7
VHO				*i* S	Sn	22 20 41.6	-4.1
PNIG	**Pinotepa**	**3.84**	**299**	*i* P	Pn	22 20 13.6	-1.9
PNIG				*i* S	Sn	22 20 55.8	-4.5
UTMO	**Huajuapan**	**4.47**	**318**	*i* P	Pn	22 20 22.2	-2.2
UTMO				*i* S	Sn	22 21 13.0	-3.4

IDC 30 22:33:24.1±5.0,12°.77S×75°.28W,h0km,mb3.8/2, mb1 4.1/3,mb1mx3.8/20,mbtmp3.9/3,ML4.3/1,MS3.0/2, Ms1 3.0/2,ms1mx2.8/28,Error ellipse: s-maj=216.5km s-min=30.5km az=34.0,Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**7.75**	**118**	Pn	Pn	22 35 20.0	+0.9
	2.1nm,0.3s,baz=297,slow=7.7,SNR=58						
LPAZ				Sn	Sb	22 37 01.4	-12
	baz=202,slow=25,SNR=2.1						
LPAZ				LR	LR	22 38 32.4	
	comp=Z,51nm,20.0s,baz=301,slow=40						
BDFB	**Brasilia**	**26.57**	**99**	LR	LR	22 51 57.6	
	comp=Z,69nm,18.1s,baz=64,slow=42						
TXAR	**Lajitas Array**	**50.04**	**327**	P	P	22 42 21.4	+0.6
	0.2nm,0.5s,baz=146,slow=8.3,SNR=2.7						
TORD	**Torodi Ar. Bea**	**80.53**	**74**	P	P	22 45 38.8	-0.1
	2.2nm,0.6s,baz=266,slow=5.5,SNR=31						
SONM	**Songino Array**	**145.02**	**358**	PKPbc	PKPbc	22 53 01.3	-1.7
	0.5nm,0.6s,baz=338,slow=2.0,SNR=3.7						

*PRU **30** 22:39:01.7,49°.77N×18°.54E,h0km*
CSEM 30 22:38:59.6±1.1,49°.95N×18°.63E,h1km,Error ellipse: s-maj=25.5km s-min=8.7km az=27.0,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.33**	**251**	ePG	Pg	22 39 06.2	+0.2
OKC				eSG	Sg	22 39 10.1	-0.2
	comp=Z,8.7nm,0.7s						
OKC	**Ostrava-Krasne**	**0.33**	**251**	Pg	Pg	22 39 06.2	+0.2
OKC				Sg	Sg	22 39 10.1	-0.2
	8.7nm,0.7s						
MORC	**Moravsky Berou**	**0.73**	**257**	ePg	Pg	22 39 14.2	+0.6
MORC				eSg	Sg	22 39 22.6	-0.5
VRAC	**Vranov**	**1.47**	**245**	ePn	Pn	22 39 26.7	-0.6

IDC 30 22:40:16.4±0.9,13°.89N×145°.05E,h0km,mb3.7/10, mb1 3.9/10,mb1mx3.7/28,mbtmp3.7/10,Error ellipse: s-maj=39.0km s-min=15.9km az=91.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**23.38**	**346**	P	P	22 45 27.4	+0.6
	0.7nm,0.6s,baz=169,slow=10,SNR=4.5						
WRA	**Warramunga Arr**	**35.23**	**198**	P	P	22 47 12.7	-0.1
	1.1nm,0.6s,baz=15,slow=8.6,SNR=15						

FITZ	Fitzroy Crossi	37.11	212	P		P	22 47 28.8	-0.1
	0.6nm,0.3s,baz=39,slow=11,SNR=8.1							
ASAR	Alice Springs	38.88	196	P		P	22 47 43.8	-0.1
	0.5nm,0.4s,baz=19,slow=12,SNR=16							
STKA	Stephens Creek	45.62	184	P		P	22 48 38.1	-0.5
	1.7nm,0.7s,baz=0.0,slow=10,SNR=4.3							
MKAR	Makanchi Array	61.40	316	P		P	22 50 35.3	+0.8
	0.2nm,0.6s,baz=71,slow=6.6,SNR=2.4							
KURBB	Kurchatov Arra	64.51	320	P		P	22 50 55.3	+0.3
	0.7nm,0.8s,baz=102,slow=6.6,SNR=6.6							
ILAR	Eielson Array	68.22	25	P		P	22 51 18.3	-0.3
	0.3nm,0.4s,baz=252,slow=5.4,SNR=4.9							
BVAR	Borovoye Array	69.80	322	P		P	22 51 28.0	-0.7
	0.6nm,0.6s,baz=111,slow=8.1,SNR=4.6							
FINES	FINESS Array B	90.97	335	P		P	22 53 20.3	-1.9
	1.1nm,0.8s,baz=66,slow=4.6,SNR=4.5							
LPAZ	La Paz	147.89	99	PKPbc	PKPbc		23 00 05.8	+0.5
	1.2nm,0.5s,baz=271,slow=3.9,SNR=4.9							

*VIE **30** 22:40:46.0±0.7,43°.97N×17°.22E,h10km,mb2.5/4,ML2.6/6, Error ellipse: s-maj=8.3km s-min=5.4km az=46.0 79 km NE of Split*
*BEO **30** 22:40:45.7±0.5,43°.85N×16°.67E,h0km,ML2.6/1*
*CSEM **30** 22:40:46.9±0.2,43°.91N×16°.76E,h2km,ML2.6,Error ellipse: s-maj=7.8km s-min=3.1km az=43.0*
*PDG **30** 22:40:47.2±0.5,43°.68N×16°.76E,h6km±1km,ML2.8/9, Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*
ISC 30 22:40:45.2±1.2,43°.98N±0°.02×17°.14E±0°.03,h1km±11km, n73,σ1s54/106,17C-9D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLY	**Banja Luka**	**0.77**	**2**	eSg	**Sn**	**22 41 17.8**	**+2.3**
BLY	**Banja Luka**	**0.77**	**2**	eSg	**Sn**	**22 41 17.8**	**+2.3**
STON	**Ston**	**1.18**	**160**	*i* Pg	**Pb**	**22 41 06.1**	**-2.3**
STON				Sg	**Sg**	**22 41 22.4**	**-0.7**
STON				Sn	**Sn**	**22 41 25.6**	**0.0**
BRY	**Bratogost**	**1.48**	**136**	⇓*i*Pg	**Pg**	**22 41 15.0**	**+1.4**
BRY				Sg	**Sg**	22 41 39.6	+6.7
BRY	**Bratogost**	**1.48**	**136**	⇓*i*Pg	**Pg**	**22 41 15.0**	**+1.4**
UPM	**Unac-Piva**	**1.50**	**121**	*e*Pn	Pg	22 41 16.5	+2.5
UPM				*e*Sn	Sg	22 41 43.0	+9.1
UPM	**Unac-Piva**	**1.50**	**121**	*e*Pn	Pg	22 41 16.5	+2.5
UPM				*e*Sn	Sg	22 41 43.0	+9.1
SISC	**Sisak**	**1.59**	**340**	*e*Pn	**Pg**	**22 41 15.7**	**+0.1**
SISC				Sn	**Sg**	**22 41 38.5**	**+2.3**
SISC	**Sisak**	**1.59**	**340**	*e*Pn	**Pg**	**22 41 15.7**	**+0.1**
SISC				Sn	**Sg**	**22 41 38.5**	**+2.3**
BBLS	**Lazići**	**1.64**	**93**	*e*Pn	Pg	22 41 18.8	+2.1
BBLS				*e*Sn	Sg	22 41 45.3	+7.4
BBLS	**Lazići**	**1.64**	**93**	*e*Pn	Pg	22 41 18.8	+2.1
BBLS				*e*Sn	Sg	22 41 45.3	+7.4
NKY	**Niksic**	**1.79**	**130**	*e*Pn	**Pg**	**22 41 21.2**	**+1.8**
NKY				*e*Sn	Sg	22 41 48.8	+6.2
NKY	**Niksic**	**1.79**	**130**	*e*Pn	**Pg**	**22 41 21.2**	**+1.8**
NKY				*e*Sn	Sg	22 41 48.8	+6.2
TEKS	**Tekeris**	**1.81**	**71**	*e*Pn	Pg	22 41 24.0	+4.1
TEKS	**Tekeris**	**1.81**	**71**	*e*Pn	Pg	22 41 24.0	+4.1
HCY	**Herceg Novi**	**1.82**	**147**	*e*Pn	**Pg**	**22 41 19.4**	**-0.8**
HCY				*e*Sn	**Sg**	**22 41 46.8**	**+3.0**
HCY	**Herceg Novi**	**1.82**	**147**	*e*Pn	**Pg**	**22 41 19.4**	**-0.8**
HCY				*e*Sn	**Sg**	**22 41 46.8**	**+3.0**
BOJS	**Bojanci**	**2.03**	**319**	*i* Pn	**Pn**	**22 41 20.7**	**+0.1**
BOJS				*i*		22 41 22.3	
BOJS				*i* Sn	**Sb**	**22 41 49.3**	**+0.6**
BOJS	comp=Z,33nm,0.5s						
BOJS	**Bojanci**	**2.03**	**319**	⇑*i*Pn	**Pn**	**22 41 20.7**	**+0.1**
BOJS				*e*Sg	**Sb**	**22 41 47.6**	**-1.1**
BOJS	**Bojanci**	**2.03**	**319**	⇑*i*Pn	**Pn**	**22 41 20.7**	**+0.1**
BOJS				*e*Sg	**Sb**	**22 41 47.6**	**-1.1**
BOJS				*i* Sn	**Sb**	**22 41 49.3**	**+0.6**
BOJS	comp=Z,33nm,0.5s						
DIVS	**Divibare**	**2.06**	**86**	*e*Sn	Sg	22 41 58.1	+6.7
DIVS	**Divibare**	**2.06**	**86**	*e*Sn	Sg	22 41 58.1	+6.7
BUM	**Brajici-Budva**	**2.11**	**142**	*e*Pn	**Pg**	**22 41 24.2**	**-1.5**
BUM				*e*Sn	**Sg**	**22 41 54.9**	**+1.8**
BUM	**Brajici-Budva**	**2.11**	**142**	*e*Pn	**Pg**	**22 41 24.2**	**-1.5**
BUM				*e*Sn	**Sg**	**22 41 54.9**	**+1.8**
PDG	**Podgorica**	**2.19**	**134**	*e*Pn	**Pg**	**22 41 26.4**	**-0.8**
PDG				*e*Sg	Sg	22 41 59.3	+3.8
PDG	**Podgorica**	**2.19**	**134**	*e*Pn	**Pg**	**22 41 26.4**	**-0.8**
PDG				*e*Sn	**Sg**	**22 41 57.9**	**+2.4**
TTG	**Podgorica**	**2.19**	**134**	⇓*i*Pn	**Pg**	**22 41 26.0**	**-1.2**
TTG				*e*Sn	**Sg**	**22 41 57.9**	**+2.4**
CRES	**Cresnjev**	**2.20**	**328**	*i* Pn	**Pn**	**22 41 23.6**	**+0.7**
CRES				*i*		22 41 25.6	
CRES				*i* Sn	**Sb**	**22 41 52.4**	**-1.1**
CRES	**Cresnjev**	**2.20**	**328**	*i* Pn	**Pn**	**22 41 23.6**	**+0.7**
CRES				*i* Sn	**Sb**	**22 41 52.4**	**-1.1**
FGSL	**Fruska Gora**	**2.24**	**57**	*e*Pn	**Pg**	**22 41 27.8**	**-0.4**
FGS

WTTA	**Wattenberg**	**5.07**	**312**	⇑*i* Pn	**Pn**	**22**	**42**	**02.7 +0.2**
WTTA				⇓*i* Sn	**Sn**	**22**	**43**	**03.2 +1.5**
WTTA	**Wattenberg**	**5.07**	**312**	Pn	**Pn**	**22**	**42**	**02.7 +0.2**
WTTA				Sn	**Sn**	**22**	**43**	**03.2 +1.5**
WATA	**Walderalm**	**5.14**	**313**	⇓*i* Pn	**Pn**	**22**	**42**	**03.3 -0.2**
WATA				⇓*i* Sn	**Sn**	**22**	**43**	**04.7 +1.1**
WATA	**Walderalm**	**5.14**	**313**	Pn	**Pn**	**22**	**42**	**03.3 -0.2**
WATA				Sn	**Sn**	**22**	**43**	**04.7 +1.1**
MOTA	**Moosalm**	**5.40**	**311**	⇓*i* Pn	**Pn**	**22**	**42**	**07.1 0.0**
MOTA				⇓*i* Sn	**Sn**	**22**	**43**	**11.0 +1.0**
MOTA	**Moosalm**	**5.40**	**311**	Pn	**Pn**	**22**	**42**	**07.1 0.0**
MOTA				Sn	**Sn**	**22**	**43**	**11.0 +1.0**

*IDC **30** 22:51:33.0±0.9, 3°.68N×122°.85E, h556km±12km, mb3.4/14, mb1 3.5/15, mb1mx3.2/31, mbtmp3.5/15, Error ellipse: s-maj=25.9km s-min=8.0km az=70.0*

ISC 30 22:51:32.2±0.6, 3°.67N±0°.09×122°.8E±0°.1, h545km, n31, σ1°9/09/38, mb4.1/14, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**4.35**	**39**	P	**P**	**22 52 58.8**	**+2.4**
	20nm,0.3s,baz=272,slow=10,SNR=3.7						
DAV				S	**S**	**22 54 07.4**	**+2.3**
	16nm,0.3s,baz=193,slow=4.7,SNR=3.9						
MYLDM	**Lahad Datu**	**4.57**	**289**	P	**P**	**22 52 59.5**	**+1.4**
TSM	**Tawau**	**4.98**	**277**	P	**P**	**22 53 02.2**	**+0.6**
SDKM	**Sandakan**	**5.95**	**289**	P	**P**	**22 53 10.3**	**+0.2**
KKM	**Kota Kinabalu**	**7.00**	**290**	P	**P**	**22 53 20.4**	**+0.3**
BTM	**Bintulu**	**9.74**	**268**	P	**P**	**22 53 49.8**	**+2.4**
SBUM	**Sibu**	**10.66**	**264**	P	**P**	**22 53 59.0**	**+2.1**
FITZ	**Fitzroy Crossi**	**21.81**	**173**	P	**P**	**22 55 44.4**	**-0.5**
	4.0nm,0.8s,baz=0.3,slow=6.8,SNR=15						
FITZ				ScP	**ScP**	**23 02 07.8**	**-1.0**
	1.0nm,0.6s,baz=67,slow=2.0,SNR=4.7						
WRA	**Warramunga Arr**	**26.05**	**155**	P	**P**	**22 56 21.8**	**-0.8**
	6.1nm,0.3s,baz=336,slow=9.7,SNR=144						
WRA				PcP	**PcP**	**22 59 31.9**	**-0.3**
	0.2nm,0.4s,baz=308,slow=4.4,SNR=2.9						
WRA				ScP	**ScP**	**23 02 18.7**	**-1.9**
	0.8nm,0.6s,baz=340,slow=3.0,SNR=12						
CMAR	**Chiang Mai Arr**	**27.61**	**304**	P	**P**	**22 56 37.3**	**+1.0**
	1.0nm,0.4s,baz=132,slow=8.7,SNR=6.1						
ASAR	**Alice Springs**	**29.23**	**159**	P	**P**	**22 56 50.5**	**+0.1**
	3.9nm,0.5s,baz=338,slow=7.5,SNR=98						
ASAR				PcP	**PcP**	**22 59 40.0**	**-0.2**
	0.2nm,0.4s,baz=346,slow=2.4,SNR=2.7						
ASAR				ScP	**ScP**	**23 02 29.1**	**-1.4**
	0.8nm,0.7s,baz=333,slow=2.2,SNR=7.6						
NWAO	**Narrogin (SRO)**	**36.78**	**188**	P	**P**	**22 57 54.3**	**+0.3**
	3.3nm,0.4s,baz=11,slow=8.9,SNR=6.9						
STKA	**Stephens Creek**	**39.60**	**155**	P	**P**	**22 58 17.6**	**+0.7**
	3.8nm,0.4s,baz=337,slow=6.8,SNR=13						
TAPN	**Taplejung**	**40.96**	**309**	*e*P	**P**	**22 58 28.7**	**+0.4**
	7.2nm,0.4s						
ODAN	**Odare**	**40.98**	**308**	*e*P	**P**	**22 58 28.2**	**-0.1**
	9.0nm,0.6s						
RAMN	**Ramite**	**41.65**	**307**	*e*P	**P**	**22 58 32.4**	**-1.2**
	23nm,0.8s						
GUN	**Gumba**	**42.66**	**308**	*e*P	**P**	**22 58 42.1**	**+0.4**
	24nm,0.7s						
PKI	**Pulchoki**	**42.87**	**308**	*e*P	**P**	**22 58 43.3**	**0.0**
PKIN	**Phulchoki**	**42.88**	**308**	*e*P	**P**	**22 58 43.1**	**-0.3**
KKN	**Kakani**	**43.07**	**308**	*e*P	**P**	**22 58 44.8**	**0.0**
DMN	**Daman**	**43.13**	**307**	*e*P	**P**	**22 58 44.8**	**-0.5**
KOLN	**Koldanda**	**44.40**	**307**	*e*P	**P**	**22 58 53.8**	**-1.2**
	52nm,0.7s						
DANN	**Dangsing**	**44.52**	**308**	*e*P	**P**	**22 58 56.4**	**+0.3**
	36nm,0.6s						
SONM	**Songino Array**	**46.22**	**345**	P	**P**	**22 59 08.8**	**+0.3**
	0.9nm,0.5s,baz=161,slow=9.2,SNR=10						
MKAR	**Makanchi Array**	**55.44**	**327**	P	**P**	**23 00 15.7**	**+0.3**
	4.2nm,0.3s,baz=125,slow=7.7,SNR=141						
MKAR				PcP	**PcP**	**23 01 06.9**	**-0.6**
	0.5nm,0.5s,baz=136,slow=3.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**58.93**	**335**	P	**P**	**23 00 38.2**	**-0.9**
	0.8nm,0.4s,baz=121,slow=4.8,SNR=8.1						
KURBB	**Kurchatov Arra**	**59.74**	**329**	P	**P**	**23 00 44.2**	**-0.3**
	4.3nm,0.6s,baz=135,slow=6.7,SNR=90						
BVAR	**Borovoye Array**	**65.28**	**328**	P	**P**	**23 01 19.9**	**-0.4**
	0.9nm,0.4s,baz=140,slow=9.6,SNR=9.7						
AKTO	**Aktyubinsk**	**71.31**	**322**	P	**P**	**23 01 56.5**	**-0.4**
	2.2nm,0.4s,baz=104,slow=7.6,SNR=14						
SPITS	**Spitsbergen Ar**	**89.78**	**349**	P	**P**	**23 03 31.5**	**-0.7**
	7.5nm,1.1s,baz=109,slow=6.5,SNR=6.7						
FINES	**FINESS Array B**	**90.04**	**331**	P	**P**	**23 03 31.9**	**-1.8**
	1.3nm,0.9s,baz=28,slow=8.6,SNR=4.8						

IDC 30 22:57:46.7±9.9, 67°.35N×20°.01W, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.2/31, mbtmp3.5/5, ML3.2/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/41, Error ellipse: s-maj=171.7km s-min=28.1km az=129.0, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**2.67**	**192**	Pn	**Pn**	**22 58 30.8**	**-0.1**
	4.6nm,0.3s,baz=14,slow=6.4,SNR=15						
BORG				LR	LR	22 59 02.5	
	comp=Z,415nm,18.9s,baz=76,slow=28						
BORG				Sn	Sn	22 59 03.0	-0.9
	2.4nm,0.3s,baz=75,slow=20,SNR=6.9						
SCO	**Scoresbysund**	**3.22**	**348**	*i* P	Pn	22 58 40.0	+1.5
NOA	**NORSAR Array B**	**14.85**	**100**	LR	LR	23 05 42.4	
	comp=Z,29nm,20.9s,baz=5.0,slow=32						
HFS	**Hagfors**	**16.38**	**100**	LR	LR	23 06 31.5	
	comp=Z,78nm,19.1s,baz=314,slow=32						
FINES	**FINESS Array B**	**20.34**	**85**	P	P	23 02 22.3	-1.8
	3.2nm,1.0s,baz=311,slow=12,SNR=6.0						
GERES	**GERESS Array B**	**25.18**	**120**	P	P	23 03 13.3	-0.2
	0.5nm,0.9s,baz=345,slow=18,SNR=4.9						
DAVOX	**Davos/Dischmat**	**25.78**	**128**	P	P	23 03 19.7	+0.7
	1.2nm,0.8s,baz=333,slow=11,SNR=3.5						
AKASG	**Malin Array Be**	**29.27**	**100**	P	P	23 03 51.0	+0.9
	0.7nm,0.4s,baz=331,slow=5.3,SNR=5.7						

*JMA **30** 23:06:14.6±0.5, 33°.18N×138°.17E, h344km±4km, M3.5*
*ISCJB **30** 23:06:15.7±0.5, 33°.27N±0°.06×138°.19E±0°.07, h337km±4km, mb3.4/7, Error ellipse: s-maj=9.8km s-min=9.1km az=12.7*
*IDC **30** 23:06:17.0±0.6, 33°.18N×138°.16E, h335km±10km, mb3.2/7, mb1 3.3/10, mb1mx3.1/29, mbtmp3.2/10, Error ellipse: s-maj=32.5km s-min=9.8km az=69.0*

ISC 30 23:06:16.8±0.8, 33°.30N±0°.07×138°.16E±0°.08, h332km±7km, n31, σ1°13/41, mb3.6/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.72**	**333**	P	**Pn**	**23 06 59.4**	**+0.1**
TTO5	**TONANKAI O.B.S**	**1.02**	**339**	P	**Pn**	**23 07 00.6**	**+0.2**
TTO2	**TONANKAI O.B.S**	**1.04**	**295**	P	**Pn**	**23 07 00.4**	**+0.1**
TK04	**Tokai 4**	**1.11**	**348**	P	**Pn**	**23 07 01.4**	**+0.5**
JHJ	**Hachijo jima 2**	**1.38**	**97**	P	**Pn**	**23 07 03.3**	**+0.8**
	11nm,0.3s,baz=240,slow=20,SNR=6.9						
JHJ				S	**S**	**23 07 40.6**	**+1.7**
	28nm,0.3s,baz=106,slow=21,SNR=4.4						
JHJ2	**Mitsune**	**1.40**	**97**	P	**Pn**	**23 07 02.2**	**-0.4**
JHJ2				*e*S	**S**	**23 07 38.5**	**-0.6**
HMMJ	**Hamamatsu 2**	**1.59**	**347**	P	**Pn**	**23 07 03.8**	**+0.2**
JIE	**Ise**	**1.62**	**312**	P	**Pn**	**23 07 03.5**	**-0.3**
JKN2	**Miekihoku**	**1.83**	**301**	P	**Pn**	**23 07 04.4**	**-0.8**
JNY	**Yasuok**	**2.07**	**353**	P	**Pn**	**23 07 07.7**	**+0.8**
JAO	**Obara**	**2.10**	**339**	P	**Pn**	**23 07 07.6**	**+0.5**
JOD2	**Odawara 2**	**2.10**	**21**	P	**Pn**	**23 07 07.8**	**+0.6**
BSO3	**Boso 3**	**2.46**	**52**	S	**S**	**23 07 51.8**	**-0.3**
JHU	**Hanno**	**2.71**	**20**	P	**Pn**	**23 07 12.1**	**0.0**
JHU				S	**S**	**23 07 56.0**	**-0.5**
JRY	**Ryogami san**	**2.78**	**13**	P	**Pn**	**23 07 13.5**	**+0.8**
JRY				*e*S	**S**	**23 07 57.9**	**+0.3**
JWT	**Wachi**	**3.02**	**312**	P	**Pn**	**23 07 14.5**	**-0.4**
JWT				*e*S	**S**	**23 08 00.2**	**-1.4**
JAI	**Aioi**	**3.13**	**280**	P	**Pn**	**23 07 14.8**	**-1.2**
MJAR	**Matsushiro Arr**	**3.23**	**1**	P	**Pn**	**23 07 17.2**	**+0.2**
	6.1nm,0.3s,baz=186,slow=11,SNR=151						
MJAR				S	**S**	**23 08 06.5**	**+1.3**
	baz=230,slow=24,SNR=1.8						
MAT	**Matsushiro**	**3.23**	**1**	P	**Pn**	**23 07 17.3**	**+0.3**
MAT				*e*S	**S**	**23 08 05.1**	**-0.2**
JAG	**Ashikaga**	**3.29**	**19**	P	**Pn**	**23 07 16.8**	**-0.7**
JAG				S	**S**	**23 08 04.3**	**-2.0**
JYT	**Yasato**	**3.37**	**29**	P	**Pn**	**23 07 17.5**	**-0.7**
JYT				S	**S**	**23 08 04.5**	**-3.0**
JHO	**Hitachi**	**3.85**	**30**	P	**Pn**	**23 07 22.2**	**-0.9**
JHO				S	**S**	**23 08 13.4**	**-3.0**
KSRS	**Korea Array**	**9.33**	**299**	P	**Pn**	**23 08 27.3**	**+0.7**
	0.5nm,0.3s,baz=113,slow=12,SNR=24						
ASAJ	**Asahikawa**	**11.34**	**16**	P	**P**	**23 08 51.8**	**+0.1**
	1.2nm,0.3s,baz=219,slow=9.1,SNR=5.6						
SONM	**Songino Array**	**27.93**	**311**	P	**P**	**23 11 38.9**	**+1.4**
	1.9nm,0.6s,baz=122,slow=9.8,SNR=21						
ZALV	**Zalesovo Beam**	**42.58**	**316**	P	**P**	**23 13 41.7**	**+0.8**
	0.3nm,0.4s,baz=103,slow=6.2,SNR=2.4						
MKAR	**Makanchi Array**	**43.95**	**305**	P	**P**	**23 13 52.3**	**+0.3**
	0.4nm,0.3s,baz=87,slow=9.5,SNR=12						
WRA	**Warramunga Arr**	**53.07**	**184**	P	**P**	**23 14 59.2**	**-1.8**
	2.0nm,0.5s,baz=0.5,slow=7.8,SNR=17						
ASAR	**Alice Springs**	**56.80**	**185**	P	**P**	**23 15 26.0**	**-1.4**
	0.9nm,0.5s,baz=21,slow=11,SNR=23						
ARCES	**ARCESS Array B**	**66.54**	**339**	P	**P**	**23 16 32.1**	**+0.7**
	2.2nm,1.0s,baz=74,slow=8.9,SNR=4.0						
FINES	**FINESS Array B**	**70.85**	**332**	P	**P**	**23 16 58.6**	**+0.8**
	0.7nm,0.6s,baz=39,slow=7.1,SNR=5.3						

*IDC **30** 23:09:59.9±3.0, 51°.31N×179°.99W, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.5/31, mbtmp3.8/6, ML3.8/2, MS2.4/1, Ms1 2.4/1, ms1mx1.8/41, Error ellipse: s-maj=70.1km s-min=12.6km az=3.0*
*NEIC **30** 23:10:05.0, 51°.10N×179°.69E, h15km, ML3.5(AEIC), After AEIC.*

ISC 30 23:10:03.8±4.1, 51°.3N±0°.3×179°.63E±0°.04, h14km±27km, n25, σ0°62/22, mb3.8/4, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAEA	**Gareloi East**	**1.13**	**64**	P	**Pb**	**23 10 24.6**	**-0.4**
GAEA				S	**Sb**	**23 10 40.7**	**+1.1**
TASE	**Tanaga Southea**	**1.56**	**69**	P	**Pn**	**23 10 31.0**	**-0.1**
TASE				S	**Sn**	**23 10 51.0**	**-0.1**
TAFP	**Tanaga Falls P**	**1.61**	**67**	P	**Pn**	**23 10 31.5**	**-0.4**
TAFP				S	**Sn**	**23 10 51.6**	**-0.8**
TAPA	**Tanaga Point A**	**1.68**	**71**	P	**Pn**	**23 10 32.7**	**-0.1**
TAPA				S	**Sn**	**23 10 54.6**	**+0.4**
KICM	**Kanaga Island**	**2.08**	**71**	P	**Pn**	**23 10 37.9**	**-0.3**
KICM				S	**Sn**	**23 11 03.4**	**-0.4**
KIRH	**Kanaga Island**	**2.13**	**72**	P	**Pn**	**23 10 38.9**	**-0.1**
ETKA	**Kagalaska Isla**	**2.54**	**76**	P	**Pn**	**23 10 45.0**	**+0.5**
ETKA				S	**Sn**	**23 11 15.5**	**+0.3**
GSCK	**Great Sitkin C**	**2.72**	**73**	P	**Pn**	**23 10 47.0**	**-0.1**
GSTD	**Great Sitkin T**	**2.74**	**72**	P	**Pn**	**23 10 47.2**	**-0.2**
GSMY	**Great Sitkin M**	**2.79**	**73**	P	**Pn**	**23 10 47.8**	**-0.3**
SMY	**Shemya**	**3.71**	**295**	P	**Pn**	**23 11 02.0**	**+1.5**
KOWE	**Korovin West**	**3.95**	**72**	P	**Pn**	**23 11 04.6**	**+0.6**
FX1	**Attu Island--F**	**4.29**	**294**	P	**Pn**	**23 11 08.9**	**+0.3**
FX1				Sn	**Sn**	**23 11 57.9**	**-0.6**
FX1	**Attu Island--F**	**4.29**	**294**	Pn	**Pn**	**23 11 07.8**	**-0.9**
	12nm,0.3s,baz=112,slow=17,SNR=24						
FX1				Sn	**Sn**	**23 11 57.9**	**-0.6**
	3.7nm,0.3s,baz=56,slow=22,SNR=2.6						
PETK	**Petropavlovsk-**	**13.56**	**286**	LR	LR	23 17 38.2	
	comp=Z,15nm,20.1s,baz=188,slow=33						
KDAK	**Kodiak Island**	**17.30**	**57**	P	Pn	23 13 59.8	-4.8
KDAK	**Kodiak Island**	**17.30**	**57**	P	Pn	23 13 59.8	-4.8
	0.6nm,0.3s,baz=270,slow=7.1,SNR=8.4						
ILAR	**Eielson Array**	**21.93**	**39**	P	P	23 14 53.5	-3.0
ILAR	**Eielson Array**	**21.93**	**39**	P	P	23 14 53.5	-3.0
	0.5nm,0.6s,baz=253,slow=9.3,SNR=6.2						
INK	**Inuvik**	**28.10**	**35**	P	P	23 15 51.9	-2.7
INK	**Inuvik**	**28.10**	**35**	P	P	23 15 51.9	-2.7
	0.9nm,0.6s,baz=253,slow=7.3,SNR=4.2						
YKA	**Yellowknife Ar**	**36.00**	**46**	P	P	23 16 59.4	-4.6
YKA	**Yellowknife Ar**	**36.00**	**46**	P	P	23 16 59.3	-4.6
	0.9nm,0.5s,baz=281,slow=8.1,SNR=7.3						
PDAR	**Pinedale Array**	**47.27**	**71**	P	P	23 18 33.2	-3.5
PDAR	**Pinedale Array**	**47.27**	**71**	P	P	23 18 33.2	-3.5
	0.9nm,0.8s,baz=289,slow=4.5,SNR=4.7						

*ISK **30** 23:14:51.6, 39°.14N×29°.00E, h8km, MD2.8*
*ISCJB **30** 23:14:52.2±0.5, 39°.14N±0°.04×29°.03E±0°.03, h9km, Error ellipse: s-maj=5.3km s-min=3.8km az=2.3*
*DDA **30** 23:14:52.4, 39°.11N×29°.00E, h7km, MD2.9*
*CSEM **30** 23:14:52.3±0.1, 39°.14N×29°.01E, h8km, MD2.9, Error ellipse: s-maj=2.5km s-min=2.0km az=16.0*

ISC 30 23:14:52.5±0.8, 39°.14N±0°.03×29°.00E±0°.03, h9km, n38, σ0°39/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.38**	**98**	*i* P	**Pg**	**23 15 00.1**	**+0.1**
GDZ				*i* S	**Sg**	**23 15 04.9**	**-0.1**
GDZ	**Gediz**	**0.38**	**98**	*i* P	**Pg**	**23 15 00.1**	**+0.1**
GDZ				*i* S	**Sg**	**23 15 04.9**	**-0.1**
TVSB	**Tavsanli**	**0.47**	**49**	PG	**Pg**	**23 15 01.1**	**-0.6**
TVSB				*e*SG	**Sg**	**23 15 08.2**	**+0.2**
TVSB	**Tavsanli**	**0.47**	**49**	*i* Pg	**Pg**	**23 15 01.2**	**-0.6**
TVSB				*e*Sg	**Sg**	**23 15 08.2**	**+0.2**
DST	**Dursunbey**	**0.55**	**328**	*e*PG	**Pg**	**23 15 02.6**	**-0.5**
DST	**Dursunbey**	**0.55**	**328**	*e*Pg	**Pg**	**23 15 02.6**	**-0.5**
KULA	**Kula-Manisa**	**0.68**	**203**	*e*PG	**Pg**	**23 15 05.0**	**-0.6**
KULA	**Kula-Manisa**	**0.68**	**203**	*e*Pg	**Pg**	**23 15 05.0**	**-0.6**
ALT	**Altintas**	**0.87**	**95**	*e*PG	**Pg**	**23 15 09.1**	**-0.1**
ALT	**Altintas**	**0.87**	**95**	*e*Pg	**Pg**	**23 15 09.1**	**-0.1**
ORLT	**Orhaneli**	**0.91**	**355**	*e*PG	**Pg**	**23 15 09.5**	**-0.5**
ORLT	**Orhaneli**	**0.91**	**355**	*e*Pg	**Pg**	**23 15 09.5**	**-0.5**
KHL	**Karahalli**	**0.91**	**153**	*e*PG	**Pg**	**23 15 09.7**	**-0.4**
KHL	**Karahalli**	**0.91**	**153**	*e*Pg	**Pg**	**23 15 09.7**	**-0.4**
AKHS	**Akhisar**	**0.96**	**255**	*i* P	**Pb**	**23 15 11.4**	**+0.1**
AKHS				*i* S	**Sb**	**23 15 24.7**	**+0.6**
AKHS	**Akhisar**	**0.96**	**255**	*i* P	**Pb**	**23 15 11.4**	**+0.1**
AKHS				*i* S	**Sb**	**23 15 24.7**	**+0.6**
BALB	**Balikesir**	**1.00**	**300**	*e*PG	**Pg**	**23 15 11.1**	**-0.6**
BALB	**Balikesir**	**1.00**	**300**	*e*Pg	**Pg**	**23 15 11.1**	**-0.6**
BALY	**Balya**	**1.23**	**300**	*i* P	**Pg**	**23 15 16.7**	**+0.7**
BALY				*i* S	**Sn**	**23 15 32.8**	**+0.2**
BALY	**Balya**	**1.23**	**300**	*i* P	**Pg**	**23 15 16.7**	**+0.7**
BALY				*i* S	**Sn**	**23 15 32.8**	**+0.2**
KCTX	**Karacabey (Bur**	**1.23**	**336**	*e*PN	**Pn**	**23 15 15.7**	**-0.2**
KCTX	**Karacabey (Bur**	**1.23**	**336**	*e*Pn	**Pn**	**23 15 15.7**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.23**	**356**	*e*PN	**Pn**	**23 15 15.6**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.23**	**356**	*e*Pn	**Pn**	**23 15 15.6**	**-0.3**
CAVI	**Cavuskoy**	**1.24**	**31**	*e*PN	**Pn**	**23 15 15.8**	**-0.2**
CAVI	**Cavuskoy**	**1.24**	**31**	*e*Pn	**Pn**	**23 15 15.9**	**-0.2**
SHUT	**Suhut-Afyon**	**1.35**	**115**	*e*PN	**Pn**	**23 15 17.4**	**-0.2**
SHUT	**Suhut-Afyon**	**1.35**	**115**	*e*Pn	**Pn**	**23 15 17.4**	**-0.2**
GONE	**Gonen-Balikesi**	**1.36**	**312**	*e*PN	**Pn**	**23 15 17.3**	**-0.4**
GONE	**Gonen-Balikesi**	**1.36**	**312**	*e*Pn	**Pn**	**23 15 17.3**	**-0.4**
ADVT	**Abdulvahap**	**1.41**	**24**	*e*PN	**Pn**	**23 15 18.3**	**-0.1**
ADVT	**Abdulvahap**	**1.41**	**24**	*e*Pn	**Pn**	**23 15 18.3**	**-0.1**
ARMT	**Armutlu**	**1.43**	**356**	*e*PN	**Pn**	**23 15 18.2**	**-0.3**
ARMT	**Armutlu**	**1.43**	**356**	*e*Pn	**Pn**	**23 15 18.3**	**-0.3**
YLV	**Yalova**	**1.45**	**11**	*e*PN	**Pn**	**23 15 19.0**	**0.0**
YLV	**Yalova**	**1.45**	**11**	*e*Pn	**Pn**	**23 15 19.0**	**0.0**
GULT	**Gulveren**	**1.74**	**42**	*e*PN	**Pn**	**23 15 23.0**	**0.0**
GULT	**Gulveren**	**1.74**	**42**	*e*Pn	**Pn**	**23 15 23.0**	**0.0**

*IDC **30** 23:24:01.3±0.9, 39°.42N×75°.65E, h0km, mb3.7/8, mb1 3.8/14, mb1mx3.6/33, mbtmp3.6/14, ML3.5/6, MS3.1/7, Ms1 3.0/7, ms1mx2.8/37, Error ellipse: s-maj=18.9km s-min=14.5km az=78.0*
*MOS **30** 23:24:04.3±1.4, 39°.49N×75°.58E, h33km, mb4.1/2, Error ellipse: s-maj=21.4km s-min=9.3km az=97.1*
*BJI **30** 23:24:06.2, 39°.76N×75°.84E, h5km, mB4.3/2, mb3.7/2, ML3.8/7, Ms3.6/1, Ms7 3.5/2*
*NNC **30** 23:24:08.4±4.2, 39°.99N×75°.70E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=38.3km s-min=24.8km az=148.0*

ISC 30 23:24:03.7±0.5, 39°.69N±0°.03×75°.73E±0°.06, h10km, n67, σ2°36/56, mb3.7/7, MS3.0/4, 7C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.26**	**133**	Pg	Pg	23 24 20.0	+11
KSH				Sg	Sg	23 24 28.5	+16
KSH				smax	smax		
	comp=N,5μm,0.3s						
KSH				smax	smax		
	comp=E,5μm,0.4s						
KZA	**Kyzart**	**2.41**	**351**	P	**Pb**	**23 24 46.4**	**-1.0**
	SNR=71						
ULHL	**Ulahol**	**2.58**	**8**	P	**Pb**	**23 24 50.5**	**+0.3**
	SNR=177						
UCH	**Uchtor**	**2.70**	**340**	P	**Pb**	**23 24 50.9**	**-1.4**
	SNR=35						
AML	**Almayashu**	**2.89**	**328**	P	Pn	23 24 53.5	+3.4
	SNR=188						
KBK	**Karagaybulak**	**3.02**	**349**	P	**Pb**	**23 24 55.4**	**-2.3**
	SNR=42						
AAK	**Ala-Archa**	**3.08**	**343**	*i* PN	**Pb**	**23 24 56.4**	**-2.4**
AAK	**Ala-Archa**	**3.08**	**343**	P	**Pb**	**23 24 56.5**	**-2.2**
	SNR=112						
AAK	**Ala-Archa**	**3.08**	**343**	Pn	**Pb**	**23 24 56.5**	**-2.2**
	comp=E,35nm,0.3s,baz=140,slow=8.1,SNR=248						
AAK				Sn	**Sb**	**23 25 34.1**	**-2.4**
	comp=E,28nm,0.3s,baz=346,slow=21,SNR=7.5						
AAK				Lg	Lg	23 25 41.0	
	comp=E,49nm,0.3s,baz=25,slow=18,SNR=9.2						
AAK				LR	LR	23 26 18.0	
	comp=E,168nm,19.1s,baz=129,slow=41						
TKM2	**Tokmak 2**	**3.23**	**358**	⇓Pg	Pn	23 24 57.8	+3.1
	comp=E,38nm,0.4s						
TKM2				⇓Lg	Lg	23 25 43.7	
	comp=E,107nm,0.3s						
TKM2	**Tokmak 2**	**3.23**	**358**	P	**Pb**	**23 24 58.6**	**-2.7**
	SNR=12						
FRU	**Bishkek**	**3.25**	**345**	⇑*i* PN	Pn	23 24 58.5	+3.7
FRU				*i* S	**Sb**	**23 25 43.0**	**+1.8**
FRU				pmax	pmax		
	comp=Z,180nm,2.0s						
FRU				smax	smax		
	comp=N,720nm,1.9s						
EKS2	**Erkin-Say**	**3.31**	**334**	P	Pn	23 24 59.7	+3.9
	SNR=44						
CHMS	**Chumysh**	**3.39**	**348**	P	Pn	23 25 00.2	+3.6
	SNR=52						
KNDC	**Almaty**	**3.64**	**14**	⇓Pn	**Pb**	**23 25 05.6**	**-2.6**
KNDC				⇓Lg	Lg	23 25 57.4	
USP	**Ospenovka**	**3.69**	**346**	P	Pn	23 25 04.5	+3.6
	SNR=68						
AAA	**Alma-Ata**	**3.69**	**14**	*e*PN	**Pg**	**23 25 13.4**	**-1.1**
AAA				*e*S	**Sb**	**23 25 56.9**	**+3.0**
AAA				pmax	pmax		
	comp=Z,105nm,0.4s						
AAA				smax	smax		
	comp=N,342nm,0.4s						
KK31	**Karatay Array**	**5.20**	**313**	Pn	**Pn**	**23 25 23.8**	**+2.2**
	comp=N,1.2nm,0.3s,baz=128,slow=12,SNR=102						
KK31				⇑Pg	Pg	23 25 40.6	-2.7
	comp=N,9.0nm,0.5s,baz=132,slow=14,SNR=21						
KK31				⇑Lg	Lg	23 26 48.8	
	comp=N,24nm,0.6s,baz=126,slow=28,SNR=3.5						
CHCP	**Chirah Chowk**	**6.34**	**199**	P	Pn	23 25 43.6	+6.3
CEP	**Cherat**	**6.61**	**209**	⇑P	Pn	23 25 46.9	+5.8
CEP				S	**Sn**	**23 27 01.0**	**+4.4**
DLH	**Dalhousie**	**7.14**	**178**	*e*PKP	**Pn**	**23 25 51.0**	**+2.6**
DLH				*e*S	**Sn**	**23 27 15.0**	**+5.3**
THN	**Thein Dam**	**7.24**	**180**	*e*PKP	**Pn**	**23 25 51.5**	**+1.9**
THN				*e*S	**Sn**	**23 27 15.8**	**+3.9**
THW	**Thamme Wali**	**7.60**	**206**	P	Pn	23 25 58.9	+4.4
MK31	**Makanchi Array**	**8.56**	**32**	Pn	**Pn**	**23 26 08.7**	**+1.0**
	comp=N,0.8nm,0.5s,baz=203,slow=14,SNR=19						
MK31				⇓Lg	Lg	23 28 28.8	
	comp=N,3.0nm,0.6s,baz=212,slow=27,SNR=3.9						
MKAR	**Makanchi Array**	**8.56**	**32**	P	Pn	23 26 12.1	+4.4
MKAR	**Makanchi Array**	**8.56**	**32**	Pn	Pn	23 26 12.1	+4.4
	comp=N,0.3nm,0.3s,baz=204,slow=16,SNR=16						
MKAR				Lg	L

Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.29**	**217**	P	Pn	23 33 50.6	+1.4
	26nm,0.3s,baz=322,slow=6.4,SNR=55						
ROSC				S	Sn	23 34 19.9	0.0
	28nm,0.3s,baz=104,slow=16,SNR=16						
TXAR	**Lajitas Array**	**36.68**	**312**	P	P	23 40 00.4	-0.7
	0.1nm,0.5s,baz=141,slow=12,SNR=3.8						
SCHQ	**Schefferville**	**48.25**	**5**	P	P	23 41 34.4	+0.5
	1.3nm,0.6s,baz=180,slow=6.1,SNR=4.1						
PDAR	**Pinedale Array**	**48.28**	**324**	P	P	23 41 34.3	-0.4
	0.3nm,0.4s,baz=128,slow=10,SNR=2.7						
TORD	**Torodi Ar. Bea**	**73.59**	**78**	P	P	23 44 25.1	-0.5
	0.1nm,0.3s,baz=282,slow=6.4,SNR=7.5						
MKAR	**Makanchi Array**	**122.38**	**20**	PKP	PKPdf	23 51 45.7	0.0
	0.1nm,0.5s,baz=306,slow=2.0,SNR=4.1						
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	PKPbc	23 52 39.5	-0.2
	0.4nm,0.5s,baz=116,slow=3.7,SNR=7.5						
WRA	**Warramunga Arr**	**150.43**	**241**	PKPbc	PKPbc	23 52 42.5	-0.4
	0.4nm,0.5s,baz=109,slow=2.4,SNR=6.5						
WRA				PKPab	PKPab	23 52 49.7	-0.2
	0.3nm,0.5s,baz=103,slow=3.2,SNR=5.0						

*KRSC **31** 00:26:07.3±1.3,51.07N×154.57E,h359km±38km,ML4.1*
*MOS **31** 00:26:09.4±1.4,51.75N×153.72E,h303km,mb4.3/6,Error ellipse: s-maj=15.1km s-min=8.2km az=63.0*
*ISCJB **31** 00:26:10.3±0.3,51.51N±0.06×154.0E±0.1,h327km±5km,mb3.3/14,Error ellipse: s-maj=14.3km s-min=5.6km az=39.6*
*IDC **31** 00:26:12.4±0.8,51.68N×153.96E,h328km±8km,mb3.1/13,mb1 3.3/17,mb1mx3.2/29,mbtmp3.1/17,Error ellipse: s-maj=15.0km s-min=11.2km az=142.0*

ISC 31 00:26:10.9±0.6,51.51N±0.07×154.13E±0.08,h322km±7km, n71,σ1°83/99,mb3.4/14,1D,Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.50**	**123**	*e*PN	Pn	00 26 53.1	-3.1
SKR				*e*S	**S**	**00 27 32.5**	**+0.1**
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax	smax		
	comp=N,160nm,0.2s						
SKR				smax	smax		
	comp=E,120nm,0.2s						
SKR	**Severo-Kuril's**	**1.50**	**123**	P	**Pn**	**00 26 56.9**	**+0.7**
SKR				S	**S**	**00 27 33.4**	**+1.0**
MIPR	**Malaya Ipel'ka**	**1.80**	**64**	P	**Pn**	**00 26 58.8**	**+0.7**
MIPR				S	**S**	**00 27 35.7**	**-0.1**
APC	**Apacha**	**2.34**	**52**	P	**Pn**	**00 27 02.3**	**+0.2**
APC				S	**S**	**00 27 42.6**	**-0.6**
ASAK	**Asacha**	**2.49**	**68**	P	**Pn**	**00 27 04.6**	**+1.0**
ASAK				S	**S**	**00 27 46.9**	**+1.2**
MTVR	**Mutnovka**	**2.69**	**67**	P	**Pn**	**00 27 04.7**	**-0.7**
MTVR				S	**S**	**00 27 47.4**	**-1.6**
PETK	**Petropavlovsk-**	**2.71**	**53**	*e*PN	**Pn**	**00 27 05.9**	**+0.5**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**2.71**	**53**	P	**Pn**	**00 27 06.3**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=202,slow=5.0,SNR=45						
PETK				S	**S**	**00 27 51.7**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=249,slow=12,SNR=3.6						
RUS	**Russkaya**	**2.86**	**70**	PN	**Pn**	**00 27 06.7**	**-0.1**
RUS				S	**S**	**00 27 50.2**	**-1.4**
RUS	**Russkaya**	**2.86**	**70**	P	**Pn**	**00 27 06.7**	**-0.1**
RUS				S	**S**	**00 27 50.2**	**-1.4**
PET	**Petropavlovsk**	**3.17**	**60**	*e*PN	**Pn**	**00 27 10.5**	**+0.9**
PET				*e*S	**S**	**00 27 56.0**	**-0.7**
PET				smax	smax		
	comp=N,75nm,0.6s						
PET				smax	smax		
	comp=E,58nm,0.7s						
GNL	**Ganaly**	**3.19**	**45**	P	**Pn**	**00 27 10.5**	**+0.5**
KOK	**Koryaka**	**3.29**	**55**	P	**Pn**	**00 27 12.4**	**+1.5**
KOK				S	**S**	**00 27 59.6**	**+0.5**
AVH	**Avacha**	**3.33**	**56**	P	**Pn**	**00 27 12.8**	**+1.5**
AVH				S	**S**	**00 28 00.3**	**+0.6**
UGLR	**Uglovaya**	**3.34**	**58**	P	**Pn**	**00 27 13.2**	**+1.7**
UGLR				S	**S**	**00 28 01.1**	**+1.0**
KRER	**Koryakskii**	**3.35**	**56**	P	**Pn**	**00 27 12.7**	**+1.0**
KRER				S	**S**	**00 28 00.8**	**+0.4**
SMAR	**Somma**	**3.36**	**57**	P	**Pn**	**00 27 12.6**	**+0.8**
SMAR				S	**S**	**00 28 00.8**	**+0.2**
SDLR	**Sedlovina**	**3.41**	**57**	P	**Pn**	**00 27 13.5**	**+1.3**
SDLR				S	**S**	**00 28 02.1**	**+0.8**
NLC	**Nalytchevo**	**3.60**	**61**	PN	**Pn**	**00 27 13.6**	**-0.4**
NLC				S	**S**	**00 28 02.1**	**-2.6**
NLC	**Nalytchevo**	**3.60**	**61**	P	**Pn**	**00 27 13.6**	**-0.4**
NLC				S	**S**	**00 28 02.1**	**-2.6**
SPN	**Mys Shipunski**	**3.95**	**64**	PN	**Pn**	**00 27 17.1**	**-0.5**
SPN				S	**S**	**00 28 07.3**	**-4.0**
SPN	**Mys Shipunski**	**3.95**	**64**	P	**Pn**	**00 27 17.1**	**-0.5**
SPN				S	**S**	**00 28 07.3**	**-4.0**
TUMR	**Tumrok**	**5.22**	**41**	P	**Pn**	**00 27 33.7**	**+2.0**
TUMR				S	**S**	**00 28 37.7**	**+0.8**
MKZ	**Mys Kozlova**	**5.51**	**53**	PN	**Pn**	**00 27 34.2**	**-0.7**
MKZ				S	**S**	**00 28 37.2**	**-5.5**
MKZ	**Mys Kozlova**	**5.51**	**53**	P	**Pn**	**00 27 34.2**	**-0.7**
MKZ				S	**S**	**00 28 37.2**	**-5.5**
KMNR	**Kamenistaya**	**5.59**	**38**	P	Pn	00 27 38.5	+2.5
KPT	**Kopyto**	**5.74**	**37**	P	**Pn**	**00 27 39.9**	**+2.2**
BZMR	**Bezymyannaya**	**5.82**	**38**	P	**Pn**	**00 27 40.8**	**+2.1**
SRDR	**Sredinnyy**	**5.84**	**32**	P	**Pn**	**00 27 40.5**	**+1.7**
BZWR	**Bezymyannyi-We**	**5.84**	**38**	P	**Pn**	**00 27 41.3**	**+2.3**
BZGR	**Bezymyannyi-Gr**	**5.90**	**39**	P	**Pn**	**00 27 41.9**	**+2.3**
ZLN	**Zelenaya**	**6.00**	**39**	P	**Pn**	**00 27 43.0**	**+2.3**
LGNR	**Loginova**	**6.00**	**38**	P	Pn	00 27 43.6	+2.6
CIRR	**Tsirk**	**6.05**	**38**	P	Pn	00 27 44.2	+2.8
KRSR	**Krestovskiy**	**6.06**	**36**	P	**Pn**	**00 27 41.8**	**+0.4**
KBG	**Krutoberegovo**	**6.95**	**43**	PN	**Pn**	**00 27 52.1**	**+0.3**
KBG				S	**S**	**00 29 08.9**	**-4.7**
KBG	**Krutoberegovo**	**6.95**	**43**	P	**Pn**	**00 27 52.1**	**+0.3**
KBG				S	**S**	**00 29 08.9**	**-4.7**
KBTR	**Krutoberegovo**	**6.96**	**44**	PN	**Pn**	**00 27 52.6**	**+0.6**
KBTR				S	**S**	**00 29 10.2**	**-3.8**
KBTR	**Krutoberegovo**	**6.96**	**44**	P	**Pn**	**00 27 52.6**	**+0.6**
KBTR				S	**S**	**00 29 10.2**	**-3.8**
BKI	**Bering**	**7.99**	**58**	PN	**Pn**	**00 28 04.5**	**+0.2**
BKI				S	S	00 29 30.0	-6.6
BKI	**Bering**	**7.99**	**58**	P	**Pn**	**00 28 04.5**	**+0.2**
BKI				S	S	00 29 30.0	-6.6
YUK	**Yuzh-Kuril'sk**	**9.32**	**220**	*i* PN	**Pn**	**00 28 20.3**	**-0.3**
YUK				*i* S	**S**	**00 30 03.2**	**-3.3**
YUK				pmax	pmax		
	comp=N,22nm,0.6s						
YUK				pmax	pmax		
	comp=Z,64nm,0.6s						
YUK				pmax	pmax		
	comp=E,31nm,0.6s						
YUK				smax	smax		
	comp=N,542nm,2.6s						
YUK				smax	smax		
	comp=E,664nm,2.6s						
YUK				MLR	MLR		
	comp=N,69nm,11.0s						
YUK				MLR	MLR		
	comp=Z,25nm,11.0s						
YUK				MLR	MLR		
	comp=E,79nm,12.0s						
ASAJ	**Asahikawa**	**10.71**	**231**	P	**P**	**00 28 38.8**	**-0.5**
	comp=E,1.2nm,0.3s,baz=58,slow=11,SNR=5.4						
FX1	**Attu Island--F**	**11.76**	**76**	P	**P**	**00 28 52.6**	**+1.6**
	comp=E,3.8nm,0.3s,baz=276,slow=21,SNR=8.5						
FX1				S	**S**	**00 31 05.4**	**+4.3**
	comp=E,0.9nm,0.3s,baz=254,slow=18,SNR=2.1						
ERM	**Erimo**	**12.10**	**223**	*i* PN	**Pn**	**00 28 52.5**	**-1.7**
MJA0	**Matsu Arr-Jizo**	**18.76**	**223**	*e*P	**P**	**00 30 10.6**	**+3.2**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**18.78**	**223**	P	**P**	**00 30 10.8**	**+3.2**
	comp=Z,0.6nm,0.3s,baz=18,slow=11,SNR=16						
TIXI	**Tiksi**	**23.14**	**340**	⇓*e*P	**P**	**00 30 48.9**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ILAR	**Eielson Array**	**32.50**	**43**	P	**P**	**00 32 12.2**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=255,slow=9.3,SNR=3.2						
ZALV	**Zalesovo Beam**	**40.52**	**302**	*e*P	**P**	**00 33 18.8**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**40.52**	**302**	P	**P**	**00 33 19.0**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=61,slow=7.2,SNR=4.5						
ZALV				PcP	**PcP**	**00 35 14.3**	**0.0**
	comp=Z,0.4nm,0.4s,baz=94,slow=2.2,SNR=3.2						
KURK	**Kurchatov**	**45.41**	**300**	*i* P	**P**	**00 33 57.1**	**-0.9**
KURK				pmax	pmax		
	comp=Z,15nm,3.6s						
MKAR	**Makanchi Array**	**45.49**	**294**	*e*P	**P**	**00 33 58.6**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**45.49**	**294**	P	**P**	**00 33 58.7**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=63,slow=7.0,SNR=21						
KURBB	**Kurchatov Arra**	**45.51**	**300**	P	**P**	**00 33 58.7**	**0.0**
	baz=59,slow=7.6						
KURBB				PcP	**PcP**	**00 35 30.7**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=59,slow=3.9,SNR=4.5						
YKA	**Yellowknife Ar**	**46.76**	**40**	P	**P**	**00 34 09.4**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=294,slow=8.2,SNR=3.7						
YKA				PcP	**PcP**	**00 35 36.9**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=310,slow=3.9,SNR=3.6						
ARU	**Arti**	**52.01**	**315**	*e*P	**P**	**00 34 47.1**	**-0.6**
ARCES	**ARCESS Array B**	**53.58**	**340**	P	**P**	**00 34 57.7**	**-1.2**
	comp=Z,2.7nm,0.9s,baz=32,slow=8.0,SNR=9.0						
JOF	**Joensuu**	**57.38**	**333**	*e*P	**P**	**00 35 24.7**	**-1.0**
JOF	**Joensuu**	**57.38**	**333**	*e*p	**P**	**00 35 24.7**	**-1.0**
KAF	**Kangasniemi**	**59.41**	**334**	*e*P	**P**	**00 35 38.7**	**-1.0**
KAF	**Kangasniemi**	**59.41**	**334**	*e*p	**P**	**00 35 38.7**	**-1.0**
FINES	**FINESS Array B**	**60.03**	**334**	P	**P**	**00 35 43.2**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=34,slow=6.9,SNR=28						
NOA	**NORSAR Array B**	**63.94**	**341**	P	**P**	**00 36 08.7**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=25,slow=6.6,SNR=4.5						
KBZ	**Khabaz**	**68.06**	**313**	P	**P**	**00 36 35.6**	**-0.4**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KBZ	**Khabaz**	**68.06**	**313**	P	**P**	**00 36 35.6**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=12,slow=2.9,SNR=2.7						
SCHQ	**Schefferville**	**68.67**	**24**	P	**P**	**00 36 39.7**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=342,slow=8.3,SNR=3.6						
WRA	**Warramunga Arr**	**73.23**	**199**	P	**P**	**00 37 07.6**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=15,slow=6.2,SNR=2.8						
GERES	**GERESS Array B**	**74.46**	**334**	P	**P**	**00 37 13.8**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=32,slow=5.3,SNR=3.8						
TXAR	**Lajitas Array**	**74.62**	**62**	P	**P**	**00 37 16.9**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=286,slow=5.1,SNR=4.8						
ASAR	**Alice Springs**	**76.94**	**199**	P	**P**	**00 37 29.4**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=14,slow=5.2,SNR=5.9						

*SKO **31** 00:28:08.3,41.27N×22.70E,h15km,M1.8,ML2.1*
*ATH **31** 00:28:08.4,41.30N×22.69E,h18km±1km,MD3.0/7*
*CSEM **31** 00:28:08.7±0.1,41.27N×22.70E,h5km,ML1.9,Error ellipse: s-maj=2.4km s-min=2.0km az=31.0*
*THE **31** 00:28:08.7,41.28N×22.70E,h4km±1km,ML2.1/7,Error ellipse: s-maj=1.8km s-min=0.7km az=210.0*
*ISCJB **31** 00:28:08.2±0.3,41.29N±0.02×22.70E±0.02,h7km±3km,Error ellipse: s-maj=3.1km s-min=2.8km az=26.8*
*BEO **31** 00:28:10.1±0.7,41.32N×22.63E,h4km±3km,ML1.9/5*

ISC 31 00:28:08.9±0.9,41.28N±0.02×22.70E±0.02,h6km±7km, n55,σ0°48/96,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**294**	P	**Pg**	**00 28 11.0**	**-0.1**
VAY				S	**Sg**	**00 28 11.9**	**-0.7**
VAY	**Valandovo**	**0.10**	**294**	*i* Pg	**Pg**	**00 28 11.0**	**-0.1**
VAY				*i* Sg	**Sg**	**00 28 13.0**	**+0.4**
VAY				*e*Lg	Lg	00 28 13.1	
	comp=N,3μm,0.2s						
VAY				*e*Lg	Lg	00 28 13.1	
	comp=E,2μm,0.2s						
VAY	**Valandovo**	**0.10**	**294**	*i* Pg	**Pg**	**00 28 11.0**	**-0.1**
VAY				*i* Sg	**Sg**	**00 28 13.0**	**+0.4**
VAY				*e*Lg	Lg	00 28 13.0	
	comp=E,2μm,0.2s						
VAY				*e*Lg	Lg	00 28 13.1	
	comp=N,3μm,0.2s						
VAY	**Valandovo**	**0.10**	**294**	*e*Pg	**Pg**	**00 28 10.9**	**-0.1**
VAY				*e*Sg	**Sg**	**00 28 12.8**	**+0.2**
VAY	**Valandovo**	**0.10**	**294**	*e*Pg	**Pg**	**00 28 10.9**	**-0.1**
VAY				S	**Sg**	**00 28 11.9**	**-0.7**
VAY				*e*Sg	Sg	00 28 12.8	+0.2
VAY				*e*Lg	Lg	00 28 13.5	
	comp=N,3μm,0.2s						
KNT	**Kendrikon**	**0.19**	**128**	P	**Pg**	**00 28 13.1**	**+0.4**
KNT				S	**Sg**	**00 28 15.9**	**+0.6**
KNT	**Kendrikon**	**0.19**	**128**	P	**Pg**	**00 28 13.1**	**+0.4**
KNT				S	**Sg**	**00 28 15.9**	**+0.6**
GRG	**Griva**	**0.39**	**215**	P	**Pg**	**00 28 16.4**	**-0.1**
GRG				S	**Sg**	**00 28 22.1**	**+0.5**
GRG	**Griva**	**0.39**	**215**	*e*PB	**Pg**	**00 28 16.5**	**-0.1**
GRG				*e*SB	**Sg**	**00 28 22.7**	**+1.1**
GRG	**Griva**	**0.39**	**215**	P	**Pg**	**00 28 16.4**	**-0.1**
GRG				S	**Sg**	**00 28 22.1**	**+0.5**
GRG				*e*Sb	**Sg**	**00 28 22.7**	**+1.1**
SOH	**Sokhos**	**0.68**	**132**	P	**Pg**	**00 28 21.4**	**-0.5**
SOH	**Sokhos**	**0.68**	**132**	*e*PN	**Pg**	**00 28 21.6**	**-0.3**
SOH				*e*SN	**Sb**	**00 28 31.7**	**-1.1**
SOH	**Sokhos**	**0.68**	**132**	P	**Pg**	**00 28 21.4**	**-0.5**
SOH				*e*Sn	**Sb**	**00 28 31.7**	**-1.1**
THE	**Thessaloniki**	**0.68**	**162**	P	**Pg**	**00 28 21.5**	**-0.4**
THE				S	**Sg**	**00 28 30.3**	**-0.4**
THE	**Thessaloniki**	**0.68**	**162**	P	**Pg**	**00 28 21.5**	**-0.4**
THE				S	**Sg**	**00 28 30.3**	**-0.4**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**00 28 22.1**	**-0.2**
SRS				S	**Sg**	**00 28 31.3**	**0.0**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**00 28 22.1**	**-0.2**
SRS				S	**Sg**	**00 28 31.3**	**0.0**
HORT	**Hortiatis**	**0.75**	**156**	P	**Pg**	**00 28 22.9**	**-0.4**
HORT				S	**Sg**	**00 28 33.8**	**+0.8**
HORT	**Hortiatis**	**0.75**	**156**	P	**Pg**	**00 28 22.9**	**-0.4**
HORT				S	**Sg**	**00 28 33.8**	**+0.8**
NVR	**Nevrokopi**	**0.88**	**85**	P	**Pg**	**00 28 25.4**	**-0.4**
NVR				S	**Sg**	**00 28 37.5**	**+0.2**
NVR	**Nevrokopi**	**0.88**	**85**	*e*PN	**Pg**	**00 28 25.4**	**-0.4**
NVR				*e*SN	**Sg**	**00 28 37.7**	**+0.4**
NVR	**Nevrokopi**	**0.88**	**85**	P	**Pg**	**00 28 25.4**	**-0.4**
NVR				S	**Sg**	**00 28 37.5**	**+0.2**
BIA	**Bitola**	**1.07**	**256**	*e*Pg	**Pg**	**00 28 29.4**	**0.0**
BIA				*i* Sg	**Sg**	**00 28 43.5**	**+0.2**
BIA	**Bitola**	**1.07**	**256**	*i* Pg	**Pg**	**00 28 29.2**	**-0.2**
BIA				*i* Sg	**Sg**	**00 28 43.3**	**+0.1**
BIA	**Bitola**	**1.07**	**256**	*i* Pg	**Pg**	**00 28 29.2**	**-0.2**
BIA				*i* Sg	**Sg**	**00 28 43.3**	**+0.1**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**00 28 28.7**	**-0.7**
PLG				S	**Sb**	**00 28 44.3**	**+0.2**
PLG	**Polygyros**	**1.07**	**148**	*e*PN	**Pg**	**00 28 29.0**	**-0.4**
PLG				*e*SN	**Sg**	**00 28 43.6**	**+0.3**
PLG	**Polygyros**	**1.07**	**148**	P	**Pg**	**00 28 28.7**	**-0.7**
PLG	**Polygyros**	**1.07**	**148**	*e*Pn	**Pg**	**00 28 29.0**	**-0.4**
PLG				*e*Sn	**Sg**	**00 28 43.6**	**+0.3**
PLG				S	**Sb**	**00 28 44.3**	**+0.2**
FNA	**Florina**	**1.11**	**244**	P	**Pg**	**00 28 29.8**	**-0.5**
FNA				S	**Sb**	**00 28 45.5**	**0.0**
FNA	**Florina**	**1.11**	**244**	*e*PN	**Pg**	**00 28 29.7**	**-0.5**
FNA				*e*SN	**Sb**	**00 28 45.3**	**-0.2**
FNA	**Florina**	**1.11**	**244**	P	**Pg**	**00 28 29.8**	**-0.5**
FNA				S	**Sb**	**00 28 45.5**	**0.0**
SKO	**Skopje**	**1.17**	**307**	*i* Pn	**Pn**	**00 28 31.9**	**0.0**
SKO				*e*Sg	**Sb**	**00 28 46.9**	**-0.1**
SKO				*e*Lg	Lg	00 28 48.3	
	comp=E,7.2nm,0.3s						
SKO				*e*Lg	Lg	00 28 48.4	
	comp=N,12nm,0.3s						
SKO	**Skopje**	**1.17**	**307**	*i* Pn	**Pn**	**00 28 31.9**	**0.0**
SKO				*i* Sg	**Sb**	**00 28 46.5**	**-0.5**
SKO				*e*Lg	Lg	00 28 47.2	
	comp=N,8.2nm,0.3s						
SKO				*e*Lg	Lg	00 28 48.2	
	comp=E,7.8nm,0.4s						
SKO	**Skopje**	**1.17**	**307**	*i* Pn	**Pn**	**00 28 32.3**	**+0.4**
SKO				*i* Sg	**Sb**	**00 28 46.9**	**-0.1**
SKO				*e*Lg	Lg	00 28 48.7	
	comp=E,7.8nm,0.4s						
KZN	**Kozani**	**1.20**	**216**	*e*PN	**Pg**	**00 28 31.7**	**-0.2**
KZN	**Kozani**	**1.20**	**216**	*e*Pn	**Pg**	**00 28 31.7**	**-0.2**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**00 28 34.4**	**0.0**
OUR				S	**Sg**	**00 28 52.1**	**-0.5**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**00 28 34.4**	**0.0**
OUR				S	**Sg**	**00 28 52.1**	**-0.5**
VTS	**Vitosha**	**1.36**	**16**	P	**Pn**	**00 28 34.5**	**-0.3**
VTS				S	**Sb**	**00 28 52.7**	**-0.1**
VTS	**Vitosha**	**1.36**	**16**	*e*Pg	**Pn**	**00 28 34.4**	**-0.3**
VTS				*e*Sg	**Sb**	**00 28 52.9**	**+0.1**
VTS	**Vitosha**	**1.36**	**16**	P	**Pn**	**00 28 34.5**	**-0.3**
VTS				*e*Sg	**Sb**	**00 28 52.9**	**+0.1**
BARS	**Barje**	**1.67**	**337**	*e*Sg	**Sb**	**00 29 01.1**	**-0.3**
BARS	**Barje**	**1.67**	**337**	*e*Sg	**Sb**	**00 29 01.1**	**-0.3**
PLD	**Plovdiv**	**1.71**	**61**	*e*Sg	**Sg**	**00 29 05.2**	**+1.2**
PLD	**Plovdiv**	**1.71**	**61**	*e*Sg	**Sg**	**00 29 05.2**	**+1.2**
ZAPS	**Zavoj**	**1.99**	**359**	*e*Pn	**Pn**	**00 28 44.3**	**+1.1**
ZAPS				*e*Sn	**Sn**	**00 29 08.4**	**-0.2**
NEO	**Neokhori**	**2.01**	**168**	*e*PN	**Pn**	**00 28 44.0**	**+0.5**
NEO	**Neokhori**	**2.01**	**168**	*e*Pn	**Pn**	**00 28 44.0**	**+0.5**
RDO	**Rodhopi**	**2.15**	**93**	*e*PB	**Pn**	**00 28 45.3**	**0.0**
RDO	**Rodhopi**	**2.15**	**93**	*e*Pb	**Pn**	**00 28 45.3**	**0.0**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*PB	**Pn**	**00 28 47.7**	**+0.3**
SMTH	**Samothraki Isl**	**2.30**	**110**	*e*Pb	**Pn**	**00 28 47.7**	**+0.3**
ALN	**Alexandroupoli**	**2.56**	**97**	*e*PN	**Pn**	**00 28 51.6**	**+0.6**
ALN	**Alexandroupoli**	**2.56**	**97**	*e*Pn	**Pn**	**00 28 51.6**	**+0.6**

WEL 31 00:29:34.7±0.2,36.40S×178.38E,h33km,ML3.7/7,1D, Error ellipse: s-maj=1.9km s-min=1.3km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.16**	**183**	P*	Pn	00 29 53.8	-0.8
MXZ				S*	Sn	00 30 08.5	-0.9
PUZ	**Puketiti**	**1.67**	**183**	PN	Pn	00 30 01.2	-0.6
PUZ				SN	Sn	00 30 21.0	-1.0
MWZ	**Matawai**	**2.05**	**199**	P*	Pn	00 30 06.8	-0.1
MWZ				S*	Sn	00 30 30.7	-0.6
CNGZ	**Carnagh Statio**	**2.08**	**184**	PN	Pn	00 30 07.0	-0.4
URZ	**Urewera**	**2.11**	**208**	⇓P*	Pn	00 30 07.0	-0.7
TOZ	**Tahuroa Road**	**2.66**	**239**	P*	Pn	00 30 15.5	+0.3
ALRZ	**Allen Road**	**2.70**	**216**	P*	Pn	00 30 15.9	+0.1
RAHZ	**Arahi**	**2.71**	**202**	PN	Pn	00 30 15.0	-1.1
RAHZ				SN	Sn	00 30 46.1	-1.7
MCHZ	**McNeill Hill**	**3.32**	**203**	PN	Pn	00 30 22.9	-1.4
MOVZ	**Moawhango**	**3.65**	**214**	P*	Pn	00 30 28.9	-0.1
WNVZ	**Wahianoa**	**3.66**	**216**	P*	Pn	00 30 29.5	+0.3
TSZ	**Takapari Road**	**4.12**	**207**	PN	Pn	00 30 34.1	-1.3
MRZ	**Mangatainoka R**	**4.79**	**206**	PN	Pn	00 30 42.3	-2.2
HOWZ	**Holdsworth Sta**	**5.02**	**206**	*e*PN	Pn	00 30 43.7	-4.0
OGWZ	**Otaki Gorge**	**5.08**	**209**	PN	Pn	00 30 44.9	-3.5
MTW	**Mount Morrison**	**5.25**	**204**	PN	Pn	00 30 47.4	-3.6
NNZ	**Nelson**	**6.19**	**218**	PN	Pn	00 31 01.4	-2.5
KHZ	**Kahutara**	**7.08**	**210**	PN	Pn	00 31 13.3	-2.7

*NIED **31** 00:36:00,34.00N×134.70E,h32km,Mw3.4 Best double couple: M0 1.46000×10^14 NP1:φs69.00000°,δ74.00000°,λ-22.00000°. NP2:φs165.00000°,δ69.00000°,λ-162.00000°.*

JMA 31 00:36:26.0,33.95N×134.70E,h41km±1km,M3.5,4C-4D Broadband fault plane solution: P waves. NP1: φs162.00000°,δ79.00000°,λ-158.00000°. **NP2:** φs67.00000°,δ69.00000°,λ-12.00000°. **Principal axes:** T Plg7.0000°, Azm293.0000°; N Plg66.0000°, Azm187.0000°; P Plg23.0000°, Azm26.0000°; **Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAI	**Aioi**	**0.26**	**233**	⇓P	Pn	00 36 33.9	0.0
JAI				S	Sn	00 36 39.4	-0.1
JAJ2	**Tsuna**	**0.49**	**18**	⇓P	Pn	00 36 36.7	0.0
JAJ2				S	Sn	00 36 44.0	-0.2
JWM	**Minabe**	**0.55**	**100**	⇑P	Pn	00 36 37.3	-0.2
JWM				S	Sn	00 36 45.2	-0.5
JMN	**Monobe**	**0.72**	**252**	⇑P	Pn	00 36 39.7	-0.1
JMN				S	Sn	00 36 49.7	0.0
JJS	**Sakaide**	**0.77**	**304**	P	Pn	00 36 40.0	-0.4
JJS				S	Sn	00 36 50.1	-0.7
JWY	**Kouya**	**0.79**	**70**	⇑P	Pn	00 36 40.6	-0.2
JWY				S	Sn	00 36 51.1	-0.4
JWZ	**Kozaga**	**0.94**	**116**	⇑P	Pn	00 36 42.5	-0.3
JWZ				S	Sn	00 36 55.0	-0.1
JKS	**Kasai**	**1.04**	**7**	⇓P	Pn	00 36 43.6

0.2nm,0.3s,baz=152,slow=29,SNR=6.9
BVAR LR LR 00 51 52.7
comp=Z,39nm,18.6s,baz=60,slow=38
BRVK Borovoye 14.04 344 ⇓Lg Lg 00 50 11.8
12nm,1.3s
AB31 Akbulak array 15.18 314 Pn **Pn 00 46 30.7 -2.6**
1.5nm,0.6s,baz=120,slow=13,SNR=21
ZALV Zalesovo Beam 15.33 19 Pn **Pn 00 46 34.9 -0.4**
0.1nm,0.3s,baz=214,slow=12,SNR=3.5
YKA Yellowknife Ar 77.77 5 P P 00 54 55.9 +0.1
0.1nm,0.5s,baz=353,slow=5.0,SNR=3.8

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*SZGRF **31** 00:46:54.0,2.2ʺ26Nˣ31.7ʹ75W,h33ᵏᵐ,mb4.7,MS4.1, Central Mid-Atlantic Ridge*
*IDC **31** 00:47:00.5±0.5,4.54Nˣ32.63W,h0ᵏᵐ,mb4.2/25, mb1 4.4/26,mb1mx4.3/29,mbtmp4.2/26,ML3.5/1,MS4.0/25, Ms1 4.0/25,ms1mx4.0/26,Error ellipse: s-maj=15.6km s-min=12.9km az=150.0*
*ISCJB **31** 00:47:02.8±0.3,4.61N±0.05ˣ32.54W±0.04,h22ᵏᵐ, mb4.6/108,MS4.1/25,Error ellipse: s-maj=8.0km s-min=5.0km az=150.5*
*NEIC **31** 00:47:02.3±0.2,4.55Nˣ32.57W,h10ᵏᵐ,mb4.8/65,Error ellipse: s-maj=7.2km s-min=4.5km az=163.0*
*GCMT **31** 00:47:05.3±0.3,4.61Nˣ32.58W,h14ᵏᵐ± 1ᵏᵐ,MW4.9, Moment Tensor Solution. s25,c32; s70,c96; Moment tensor: Scale 10¹⁶Nm; Mrr-2.59± .15; Mθθ0.16± .09; Mϕϕ2.44± .11; Mrθ-0.40± .24; Mθϕ-0.09± .07; Mϕr-0.06± .20; Best double couple: M₀2.60000×10¹⁶ NP1:ϕ₈170.00000°, δ45.00000°,λ-101.00000°. NP2:ϕ₈6.00000°,δ46.00000°, λ-79.00000°. Principal axes: T 2.4400, Plg0.0000°, Azm88.0000°; N 0.2100, Plg8.0000°, Azm178.0000°; P -2.6500, Plg82.0000°, Azm354.0000°; Data Used: lI lU G IC.*

ISC 31 00:47:04.0±0.7,4.63N±0.07ˣ32.63W±0.07,h18ᵏᵐ±2ᵏᵐ, h18ᵏᵐ:pP-P,n337,σ0.90/352,mb4.7/108,MS4.0/25, 60C-51D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**10.89**	**197**	Pn	Pn	00 49 35.6	-3.5
RCBR				Sn	**Sn**	**00 51 43.2**	**+2.6**
RCBR	**Riachuelo**	**10.89**	**197**	Pn	Pn	00 49 35.6	-3.5
	0.3nm,0.3s,baz=25,slow=12,SNR=4.1						
RCBR				Sn	**Sn**	**00 51 43.2**	**+2.6**
	0.2nm,0.3s,baz=24,slow=14,SNR=2.0						
RCBR				LR	LR	00 52 46.6	
	comp=Z,552nm,21.6s,baz=5.8,slow=32						
BBTS	**Babate**	**18.72**	**57**	LR	LR	00 57 03.8	
	comp=Z,621nm,18.6s,baz=52,slow=32						
BDFB	**Brasilia**	**25.25**	**217**	P	**P**	**00 52 28.2**	**-1.2**
BDFB	**Brasilia**	**25.25**	**217**	P	**P**	**00 52 28.2**	**-1.2**
	1.9nm,0.6s,baz=41,slow=9.3,SNR=2.9						
BDFB				LR	LR	01 01 17.2	
	comp=Z,474nm,20.1s,baz=213,slow=34						
LIC	**Lamto**	**27.52**	**85**	*e*P	**P**	**00 52 49.4**	**-0.5**
	25nm,1.1s						
LIC				*e*R			
	909nm,20.2s						
LIC	**Lamto**	**27.52**	**85**	*e*P	**P**	**00 52 49.4**	**-0.5**
	25nm,1.1s						
DBIC	**Dimbokro**	**27.71**	**85**	P	**P**	**00 52 50.7**	**-0.8**
DBIC	**Dimbokro**	**27.71**	**85**	P	**P**	**00 52 50.7**	**-0.8**
	5.0nm,0.8s,baz=238,slow=13,SNR=3.0						
DBIC				LR	LR	01 01 10.9	
	comp=Z,511nm,21.6s,baz=261,slow=31						
SIV	**San Ignacio**	**34.81**	**233**	P	**P**	**00 53 54.4**	**+0.2**
SIV	**San Ignacio**	**34.81**	**233**	P	**P**	**00 53 54.3**	**+0.2**
	2.7nm,0.9s,baz=54,slow=9.8,SNR=5.9						
TOA0	**Torodi Ar. Sit**	**34.91**	**74**	*e*P	**P**	**00 53 53.4**	**-1.6**
TORD	**Torodi Ar. Bea**	**34.91**	**74**	P	**P**	**00 53 54.0**	**-1.0**
TORD				PcP	**PcP**	**00 56 26.9**	**-0.8**
TORD	**Torodi Ar. Bea**	**34.91**	**74**	P	**P**	**00 53 54.0**	**-1.0**
	7.8nm,1.0s,baz=265,slow=7.0,SNR=26						
TORD				PcP	**PcP**	**00 56 26.9**	**-0.8**
	0.6nm,0.8s,baz=276,slow=2.9,SNR=4.1						
TORD				LR	LR	01 06 15.6	
	comp=Z,502nm,19.5s,baz=250,slow=33						
CELP	**Cerrillos**	**35.78**	**295**	*e*P	**P**	**00 54 01.4**	**-1.1**
SDV	**Santo Domingo**	**37.96**	**278**	*e*P	**P**	**00 54 21.1**	**-0.2**
	39nm,2.0s						
MORF	**Marmelete**	**39.23**	**31**	*e*P	**P**	**00 54 31.8**	**+0.3**
	40nm,1.6s						
MORF				*i* P	**pP**	**00 54 38.6**	**+1.4**
PTEO	**Sao Teotonio**	**39.38**	**31**	*e*P	**P**	**00 54 35.3**	**+2.7**
	48nm,2.2s						
PBDV	**Barranco-do-Ve**	**39.56**	**32**	*e*P	**P**	**00 54 34.9**	**+0.8**
	42nm,1.6s						
PBDV				*i* P	**pP**	**00 54 41.5**	**+1.6**
PVAQ	**Vaqueiros**	**39.79**	**32**	*e*P	**P**	**00 54 36.1**	**+0.1**
	21nm,1.1s						
PVAQ				*i* P	**pP**	**00 54 43.4**	**+1.6**
PVAQ				*e*LR	LR	01 05 52.4	
	138nm,18.0s						
PNCL	**Nicolau / Gran**	**39.91**	**30**	*e*P	**P**	**00 54 37.6**	**+0.5**
	16nm,1.4s						
PNCL				*i* P	**pP**	**00 54 44.5**	**+1.7**
EVOP	**Sao Brissos**	**40.44**	**30**	*e*P	**P**	**00 54 41.3**	**-0.1**
	14nm,1.1s						
EVO	**Evora**	**40.50**	**30**	*e*P	**P**	**00 54 41.3**	**-0.6**
	14nm,1.1s						
EVO				*e*R			
	290nm,22.5s						
EVO	**Evora**	**40.50**	**30**	*e*P	**P**	**00 54 42.2**	**+0.3**
	18nm,1.8s						
EVO				*i* P	**pP**	**00 54 49.1**	**+1.5**
LPAZ	**La Paz**	**40.80**	**239**	*e*P	P	00 54 49.1	+3.6
	4.7nm,1.0s						
LPAZ	**La Paz**	**40.80**	**239**	P	**P**	**00 54 44.3**	**-1.1**
	1.8nm,0.9s,baz=52,slow=12,SNR=2.5						
LPAZ				LR	LR	01 10 54.4	
	comp=Z,278nm,18.5s,baz=80,slow=35						
PESTR	**Estremoz**	**40.97**	**30**	*e*P	**P**	**00 54 46.1**	**+0.3**
	14nm,1.7s						
PESTR				*i* P	**pP**	**00 54 53.0**	**+1.5**
TAM	**Tamanrasset**	**41.04**	**60**	*e*P	**P**	**00 54 47.4**	**+0.6**
	9.4nm,1.2s						
PTOM	**Tomar**	**41.14**	**29**	*e*P	**P**	**00 54 47.7**	**+0.5**
	32nm,1.8s						
PTOM				*i* P	**pP**	**00 54 54.2**	**+1.3**
PMRV	**Marv??o**	**41.49**	**30**	*e*P	**P**	**00 54 50.9**	**+0.8**
	21nm,1.7s						
PMRV				*i* P	**pP**	**00 54 57.5**	**+1.6**
PMRV				*e*LR	LR	01 06 30.4	
	154nm,20.0s						
ROSC	**El Rosal**	**41.55**	**272**	LR	LR	01 13 12.6	
	comp=Z,301nm,18.2s,baz=8.8,slow=38						
MTE	**Manteigas**	**42.17**	**29**	*e*P	**P**	**00 54 57.0**	**+1.3**
	23nm,1.5s						
MTE				*i* P	**pP**	**00 55 03.7**	**+2.3**
MTE				*e*LR	LR	01 06 46.0	
	176nm,20.0s						
MVO	**Moncorvo**	**43.01**	**29**	*e*P	**P**	**00 55 03.3**	**+0.8**
	14nm,1.5s						
MVO				*e*LR	LR	01 07 29.0	
	119nm,16.0s						
PGAV	**Gavieira, Arco**	**43.06**	**27**	*e*LR	LR	01 07 40.4	
	148nm,20.0s						
ESDC	**Sonseca Array**	**43.45**	**33**	P	**P**	**00 55 05.9**	**-0.2**
ESDC	**Sonseca Array**	**43.45**	**33**	P	**P**	**00 55 05.9**	**-0.2**
	1.4nm,0.7s,baz=229,slow=8.3,SNR=18						
SJPF	**Ste Jean**	**47.34**	**31**	*e*P	**P**	**00 55 36.1**	**-0.8**
	38nm,1.5s						
SJPF	**Ste Jean**	**47.34**	**31**	*e*P	**P**	**00 55 36.1**	**-0.8**
	38nm,1.5s						
ETSF	**Etsaut**	**47.54**	**32**	*e*P	**P**	**00 55 38.4**	**-0.1**
ETSF	**Etsaut**	**47.54**	**32**	*e*P	**P**	**00 55 38.4**	**-0.1**
EPF	**Esparros**	**48.11**	**32**	*e*P	**P**	**00 55 42.7**	**-0.2**
	14nm,1.1s						
EPF	**Esparros**	**48.11**	**32**	*e*P	**P**	**00 55 42.7**	**-0.2**
	14nm,1.1s						
MTLF	**Montolieu**	**49.33**	**33**	*e*P	**P**	**00 55 51.6**	**-0.6**
	26nm,1.3s						
MTLF	**Montolieu**	**49.33**	**33**	*e*P	**P**	**00 55 51.6**	**-0.6**
	26nm,1.3s						
KEST	**Kesra**	**49.49**	**46**	*e*P	**P**	**00 55 53.3**	**-0.4**
KEST	**Kesra**	**49.49**	**46**	P	**P**	**00 55 53.9**	**+0.2**
	3.2nm,1.1s,baz=226,slow=3.9,SNR=5.2						
KEST				LR	LR	01 17 41.7	
	comp=Z,146nm,18.0s,baz=233,slow=37						
LFF	**La Frestale**	**49.63**	**31**	*e*P	**P**	**00 55 53.6**	**-0.9**
LFF	**La Frestale**	**49.63**	**31**	*e*P	**P**	**00 55 53.6**	**-0.9**
CAF	**Calviac**	**50.31**	**32**	*e*P	**P**	**00 55 59.3**	**-0.4**
	12nm,1.0s						
CAF	**Calviac**	**50.31**	**32**	*e*P	**P**	**00 55 59.3**	**-0.4**
	12nm,1.0s						
SGMF	**Saint Gilles**	**50.50**	**26**	*e*P	**P**	**00 56 00.4**	**-0.5**
	77nm,1.6s						
SGMF	**Saint Gilles**	**50.50**	**26**	*e*P	**P**	**00 56 00.4**	**-0.5**
	77nm,1.5s						
LASF	**Ste Croix**	**50.71**	**34**	*e*P	**P**	**00 56 02.0**	**-0.7**
	36nm,1.3s						
LASF	**Ste Croix**	**50.71**	**34**	*e*P	**P**	**00 56 02.0**	**-0.7**
	36nm,1.3s						
TCF	**Toulx Ste Croi**	**51.31**	**30**	*e*P	**P**	**00 56 07.3**	**+0.1**
	17nm,1.2s						
TCF	**Toulx Ste Croi**	**51.31**	**30**	*e*P	**P**	**00 56 07.3**	**+0.1**
	17nm,1.3s						
VIVF	**Saint-Julien-l**	**51.66**	**33**	*e*P	**P**	**00 56 09.2**	**-0.6**
	15nm,1.1s						
VIVF	**Saint-Julien-l**	**51.66**	**33**	*e*P	**P**	**00 56 09.2**	**-0.6**
	15nm,1.1s						
FLN	**La Foliniere**	**51.79**	**27**	*e*P	**P**	**00 56 10.7**	**0.0**
	114nm,1.6s						
FLN				*e*R			
	142nm,19.0s						
FLN	**La Foliniere**	**51.79**	**27**	*e*P	**P**	**00 56 10.7**	**0.0**
	114nm,1.6s						
BGF	**Bois d'Agland**	**51.82**	**31**	*e*P	**P**	**00 56 10.7**	**-0.2**
BGF	**Bois d'Agland**	**51.82**	**31**	*e*P	**P**	**00 56 10.7**	**-0.2**
ORIF	**Oris-en-Rattie**	**52.37**	**34**	*e*P	**P**	**00 56 15.1**	**-0.1**
	19nm,1.3s						
ORIF				*e*R			
	141nm,21.0s						
ORIF	**Oris-en-Rattie**	**52.37**	**34**	*e*P	**P**	**00 56 15.1**	**-0.1**
	19nm,1.3s						
SSF	**Saint Saulge**	**52.49**	**31**	*e*P	**P**	**00 56 15.3**	**-0.6**
SSF	**Saint Saulge**	**52.49**	**31**	*e*P	**P**	**00 56 15.3**	**-0.6**
SBF	**Sospel**	**52.62**	**36**	*e*P	**P**	**00 56 17.1**	**+0.1**
	61nm,1.1s						
SBF	**Sospel**	**52.62**	**36**	*e*P	**P**	**00 56 17.1**	**+0.1**
	61nm,1.1s						
LOR	**Lormes**	**52.81**	**31**	*e*P	**P**	**00 56 18.3**	**0.0**
	17nm,1.2s						
LOR				*e*R			
	233nm,20.0s						
LOR	**Lormes**	**52.81**	**31**	*e*P	**P**	**00 56 18.3**	**0.0**
	17nm,1.2s						
BNI	**Bardonecchia**	**52.90**	**34**	*e*P	**P**	**00 56 19.2**	**0.0**
	14nm,2.5s						
LPG	**La Plagne**	**53.21**	**34**	*e*P	**P**	**00 56 21.0**	**-0.6**
	14nm,1.1s						
LPG	**La Plagne**	**53.21**	**34**	*e*P	**P**	**00 56 21.0**	**-0.6**
	14nm,1.1s						
LPL	**La Plagne**	**53.21**	**34**	*e*P	**P**	**00 56 21.2**	**-0.4**
	38nm,1.4s						
LPL	**La Plagne**	**53.21**	**34**	*e*P	**P**	**00 56 21.2**	**-0.4**
	38nm,1.4s						
CABF	**La Chapelle**	**53.54**	**32**	*e*P	**P**	**00 56 22.1**	**-1.7**
	19nm,1.1s						
CABF	**La Chapelle**	**53.54**	**32**	*e*P	**P**	**00 56 22.1**	**-1.7**
	19nm,1.1s						
SFTF	**Sexfontaines**	**54.03**	**30**	*e*P	**P**	**00 56 27.3**	**+0.1**
SFTF	**Sexfontaines**	**54.03**	**30**	*e*P	**P**	**00 56 27.3**	**+0.1**
SENIN	**Lac Senin/Sane**	**54.04**	**33**	*e*P	**P**	**00 56 27.9**	**+0.3**
	7.9nm,1.0s						
MEZF	**Maizieres J'vi**	**54.23**	**30**	*e*P	**P**	**00 56 28.0**	**-0.7**
MEZF	**Maizieres J'vi**	**54.23**	**30**	*e*P	**P**	**00 56 28.0**	**-0.7**
HAU	**Haudompre**	**54.57**	**31**	*e*P	**P**	**00 56 30.0**	**-1.2**
	23nm,1.3s						
HAU				*e*R			
	232nm,21.0s						
HAU	**Haudompre**	**54.57**	**31**	*e*P	**P**	**00 56 30.0**	**-1.2**
	23nm,1.3s						
PAGF	**Fort de Pagny**	**54.60**	**30**	*e*P	**P**	**00 56 31.5**	**+0.1**
PAGF	**Fort de Pagny**	**54.60**	**30**	*e*P	**P**	**00 56 31.5**	**+0.1**
HINF	**Hinteralfeld**	**54.71**	**32**	*e*P	**P**	**00 56 32.4**	**+0.2**
	13nm,1.1s						
HINF	**Hinteralfeld**	**54.71**	**32**	*e*P	**P**	**00 56 32.4**	**+0.2**
	13nm,1.1s						
TSUM	**Tsumeb**	**54.79**	**117**	P	**P**	**00 56 32.4**	**-1.0**
TSUM	**Tsumeb**	**54.79**	**117**	P	**P**	**00 56 32.4**	**-1.0**
	6.0nm,1.0s,baz=295,slow=5.5,SNR=3.7						
BAIF	**Baives**	**54.87**	**28**	*e*P	**P**	**00 56 32.7**	**-0.6**
	25nm,1.0s						
BAIF	**Baives**	**54.87**	**28**	*e*P	**P**	**00 56 32.7**	**-0.6**
	25nm,1.0s						
DOU	**Dourbes**	**55.08**	**28**	P	**P**	**00 56 34.7**	**-0.1**
	comp=Z,6.8nm,1.2s						
GIVF	**Givet**	**55.19**	**28**	*e*P	**P**	**00 56 35.4**	**-0.2**
GIVF	**Givet**	**55.19**	**28**	*e*P	**P**	**00 56 35.4**	**-0.2**
CDF	**Champ du Feu**	**55.30**	**31**	*e*P	**P**	**00 56 36.5**	**-0.1**
	comp=Z,17nm,1.2s						
CDF	**Champ du Feu**	**55.30**	**31**	*e*P	**P**	**00 56 36.5**	**-0.1**
	comp=Z,17nm,1.2s						
AQU	**L'Aquila**	**55.47**	**40**	*e*P	**P**	**00 56 37.8**	**0.0**
	comp=Z,30nm,1.2s						
BFO	**Black Forest**	**55.80**	**32**	*e*P	**P**	**00 56 39.7**	**-0.4**
MEM	**Membach**	**56.09**	**29**	P	**P**	**00 56 41.9**	**-0.2**
	comp=Z,5.2nm,1.0s						
TKL	**Tuckaleechee C**	**56.24**	**310**	P	**P**	**00 56 42.4**	**-1.0**
TKL	**Tuckaleechee C**	**56.24**	**310**	P	**P**	**00 56 42.4**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=128,slow=7.8,SNR=3.8						
PLCA	**Paso Flores**	**56.95**	**214**	LR	LR	01 21 09.8	
	comp=Z,209nm,20.0s,baz=13,slow=36						
TNS	**Taunus Mts**	**57.04**	**30**	*e*P	**P**	**00 56 49.6**	**+0.7**
	comp=Z,7.0nm,1.0s						
SCHQ	**Schefferville**	**57.16**	**337**	*e*P	**P**	**00 56 47.9**	**-1.7**
	comp=Z,93nm,2.4s						
SCHQ	**Schefferville**	**57.16**	**337**	P	**P**	**00 56 49.4**	**-0.2**
	comp=Z,5.6nm,0.8s,baz=138,slow=3.9,SNR=4.2						
SCHQ				LR	LR	01 17 30.3	
	comp=Z,82nm,18.0s,baz=2.2,slow=32						
ACSO	**Alum Creek Sta**	**57.42**	**316**	*e*P	**P**	**00 56 51.6**	**-0.1**
	comp=Z,11nm,0.9s						
GRF	**Grafenberg Arr**	**58.14**	**32**	*e*P	**P**	**00 56 56.3**	**-0.4**
	comp=Z,19nm,1.4s						
GRF				*e*L	L	01 20 12.7	
	comp=Z,125nm,19.2s						
UBBA	**Unterbreizbach**	**58.19**	**30**	*e*P	**P**	**00 56 56.9**	**+0.1**
	comp=Z,11nm,1.9s						
ROTZ	**Rotzenmuhle**	**58.71**	**32**	*e*P	**P**	**00 57 00.4**	**-0.2**
	comp=Z,8.0nm,1.2s						
WET	**Wettzell**	**58.72**	**33**	*e*P	**P**	**00 57 00.0**	**-0.7**
MOX	**Moxa**	**58.91**	**31**	*e*L	L	01 18 30.6	
	comp=Z,140nm,18.4s						
GEC2	**GERESS Array S**	**59.01**	**34**	*e*P	**P**	**00 57 02.2**	**-0.6**
	comp=Z,11nm,1.3s						
GEC2	**GERESS Array S**	**59.01**	**34**	*e*P	**P**	**00 57 02.6**	**-0.3**
GERES	**GERESS Array B**	**59.01**	**34**	P	**P**	**00 57 02.7**	**-0.1**
GERES	**GERESS Array B**	**59.01**	**34**	P	**P**	**00 57 02.7**	**-0.1**
	comp=Z,2.9nm,1.0s,baz=224,slow=5.6,SNR=17						
GERES				LR	LR	01 19 55.4	
	comp=Z,103nm,18.1s,baz=256,slow=33						
KHC	**Kasperske Hory**	**59.10**	**34**	*e*P	**P**	**00 57 02.8**	**-0.6**
	comp=Z,13nm,1.4s						
KHC	**Kasperske Hory**	**59.10**	**34**	*e*P	**P**	**00 57 03.1**	**-0.3**
	comp=Z,8.7nm,1.2s						
KHC	**Kasperske Hory**	**59.10**	**34**	*i* P	**P**	**00 57 03.1**	**-0.3**
KHC				*e*pP	**pP**	**00 57 09.6**	**+0.3**
NKC	**Novy Kostel**	**59.10**	**32**	*e*P	P	00 57 08.5	+5.2
TANN	**Tannenbergstha**	**59.22**	**32**	*e*P	**P**	**00 57 04.1**	**-0.1**
	comp=Z,12nm,1.2s						
PRU	**Pruhonice**	**60.09**	**33**	*e*P	**P**	**00 57 09.8**	**-0.3**
PRU				*e*pP	**pP**	**00 57 16.6**	**+0.6**
TREC	**Trest**	**60.25**	**34**	*i* P	**P**	**00 57 11.2**	**0.0**
TREC				*e*pP	**pP**	**00 57 17.7**	**+0.5**
BRG	**Berggiesshubel**	**60.25**	**32**	*e*P	P	00 57 18.1	+6.9
	comp=Z,10nm,1.4s						
BRG							
	comp=N,184nm,21.7s						
BRG							
	comp=E,102nm,17.5s						
BRG							
	comp=Z,176nm,11.5s						
BSEG	**Bad Segeberg**	**60.26**	**28**	*e*P	**P**	**00 57 11.8**	**+0.7**
	comp=Z,26nm,1.1s						
SFIN	**Scholer Farm**	**60.38**	**314**	⇑P	**P**	**00 57 11.6**	**-0.7**
	baz=60						
ZST	**Bratislava**	**60.62**	**36**	*e*P	**P**	**00 57 12.7**	**-1.0**
IDI	**Anoyia**	**61.05**	**52**	*e*P	**P**	**00 57 17.3**	**+0.2**
	comp=Z,30nm,1.5s						
UPC	**Upice**	**61.17**	**33**	*e*P	**P**	**00 57 17.0**	**-0.5**
UPC				*e*pP	**pP**	**00 57 24.0**	**+0.6**
UPC				*ex*	x	00 57 34.3	
KRLC	**Kraliky**	**61.37**	**34**	*e*P	**P**	**00 57 17.1**	**-1.8**
MORC	**Moravsky Berou**	**61.65**	**34**	*e*P	**P**	**00 57 20.6**	**-0.2**
	comp=Z,6.3nm,1.2s						
APE	**Apeiranthos**	**62.05**	**50**	⇓*i*P	**P**	**00 57 23.9**	**+0.2**
VTS	**Vitosha**	**62.13**	**44**	⇑*i*P	**P**	**00 57 25.7**	**+1.4**
PSZ	**Piszkesteto**	**62.14**	**37**	*e*P	**P**	**00 57 25.1**	**+0.9**
	comp=Z,10nm,1.0s						
PSZ	**Piszkesteto**	**62.14**	**37**	⇓*i*P	**P**	**00 57 25.4**	**+1.2**
BZS	**Buzias**	**62.23**	**40**	⇑*i*P	**P**	**00 57 25.5**	**+0.8**
KECS	**Kecovo**	**62.75**	**37**	*e*P	**P**	**00 57 29.7**	**+1.6**
GZR	**Gura Zlata**	**62.89**	**41**	⇑*i*P	**P**	**00 57 29.4**	**+0.2**
NIE	**Niedzica**	**63.06**	**36**	*e*P	**P**	**00 57 30.9**	**+0.6**
OJC	**Ojcow**	**63.14**	**35**	*e*P	**P**	**00 57 31.2**	**+0.6**
	comp=Z,14nm,1.2s						
OJC	**Ojcow**	**63.14**	**35**	*e*P	**P**	**00 57 31.3**	**+0.6**
DEV	**Deva**	**63.16**	**40**	⇑*i*P	**P**	**00 57 31.7**	**+0.8**
DRGR		**63.40**	**39**	⇓*i*P	**P**	**00 57 32.9**	**+0.3**
CRVS	**Cervenica-Dubn**	**63.51**	**37**	*e*P	**P**	**00 57 31.6**	**-1.6**
LOT	**Lotru**	**63.56**	**41**	⇑*i*P	**P**	**00 57 35.9**	**+2.2**
CJR	**Cluj-Napoca**	**63.93**	**40**	⇑*i*P	**P**	**00 57 37.1**	**+1.0**
KOLS	**Kolonicke sedl**	**64.01**	**37**	*e*P	**P**	**00 57 37.0**	**+0.5**
HUMR	**Humele**	**64.03**	**42**	⇑*i*P	**P**	**00 57 37.6**	**+0.9**
ARR	**Arges**	**64.10**	**41**	⇑*i*P	**P**	**00 57 37.8**	**+0.6**
VOIR		**64.39**	**41**	⇓*i*P	**P**	**00 57 40.0**	**+0.8**
KWP	**Kalwaria Pacla**	**64.56**	**36**	⇓*i*P	**P**	**00 57 41.0**	**+0.9**
BOSA	**Boshof**	**64.68**	**125**	P	**P**	**00 57 40.0**	**-1.3**
BOSA	**Boshof**	**64.68**	**125**	P	**P**	**00 57 40.0**	**-1.3**
	comp=Z,5.2nm,0.8s,baz=290,slow=5.7,SNR=9.0						
BOSA				LR	LR	01 20 11.4	
	comp=Z,388nm,19.4s,baz=339,slow=31						
MLR	**Muntele Rosu**	**65.00**	**41**	⇓*i*P	**P**	**00 57 43.4**	**+0.2**
NB2	**NORSAR Subarra**	**65.17**	**22**	P	**P**	**00 57 43.4**	**-0.5**
	comp=Z,10nm,1.1s,baz=228,slow=6.5						
NOA	**NORSAR Array B**	**65.17**	**22**	P	**P**	**00 57 43.6**	**-0.3**
NOA	**NORSAR Array B**	**65.17**	**22**	P	**P**	**00 57 43.6**	**-0.3**
	comp=Z,3.9nm,1.1s,baz=230,slow=6.3,SNR=4.6						
NOA				LR	LR	01 21 56.1	
	comp=Z,77nm,19.7s,baz=245,slow=32						
ISR	**Istrita**	**65.27**	**42**	⇑*i*P	**P**	**00 57 45.3**	**+0.4**
PGOR	**Pogoanele**	**65.50**	**42**	⇑*i*P	**P**	**00 57 46.5**	**+0.3**
VRI	**Vrincioaia**	**65.65**	**41**	⇓*i*P	**P**	**00 57 47.7**	**+0.5**
TESR	**Tescani**	**65.82**	**41**	⇓*i*P	**P**	**00 57 48.2**	**-0.1**
PRAR	**RASCA**	**65.84**	**40**	⇑*i*P	**P**	**00 57 48.8**	**+0.3**
TLCR		**66.82**	**43**	⇓*i*P	**P**	**00 57 54.6**	**-0.1**
632A	**Uvalde**	**67.88**	**300**	⇓P	**P**	**00 58 01.4**	**-0.3**
	baz=68						
732A	**Laxson Ranch,**	**67.94**	**299**	⇓P	**P**	**00 58 01.9**	**-0.3**
	baz=68						
SUMG	**Summit**	**67.96**	**358**	*e*P	**P**	**00 58 01.7**	**-0.2**
	comp=Z,7.4nm,0.9s						
532A	**Rocksprings**	**68.06**	**301**	⇑P	**P**	**00 58 02.4**	**-0.6**
	baz=68						
ECSD	**EROS Data Cent**	**68.15**	**315**	*e*P	**P**	**00 58 01.8**	**-1.4**
	comp=Z,5.2nm,0.8s						
ANTO	**Ankara**	**68.27**	**49**	*e*P	**P**	**00 58 04.9**	**+0.8**
	comp=Z,10nm,0.9s						
AK02	**Malin Array Si**	**68.82**	**37**	*e*P	**P**	**00 58 05.8**	**-1.4**
KIEV	**Kiev**	**68.83**	**37**	*e*P	**P**	**00 58 06.7**	**-0.6**
	comp=Z,55nm,2.1s						
AK01	**Malin Array Si**	**68.84**	**37**	*e*P	**P**	**00 58 06.8**	**-0.5**
AKASG	**Malin Array Be**	**68.85**	**37**	P	**P**	**00 58 07.0**	**-0.3**
AKASG	**Malin Array Be**	**68.85**	**37**	P	**P**	**00 58 07.0**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=245,slow=7.4,SNR=8.9						
AKASG				LR	LR	01 24 56.1	
	comp=Z,50nm,19.2s,baz=305,slow=33						
BR131	**Keskin Array S**	**68.87**	**49**	*e*P	**P**	**00 58 07.8**	**-0.1**
	comp=Z,5.7nm,0.9s						
BRTR	**Keskin Array B**	**68.87**	**49**	P	**P**	**00 58 08.3**	**+0.3**
BRTR	**Keskin Array B**	**68.87**	**49**	P	**P**	**00 58 08.3**	**+0.3**
	comp=Z,5.2nm,0.9s,baz=246,slow=6.1,SNR=29						
BRTR				LR	LR	01 31 48.3	
	comp=Z,49nm,18.6s,baz=180,slow=39						
530A	**J-C Ranch, Com**	**69.29**	**300**	⇑P	**P**	**00 58 09.9**	**-0.7**
	baz=69,SNR=5.8						
330A	**Mertzon**	**69.31**	**302**	⇑P	**P**	**00 58 11.3**	**+0.5**
	baz=69						
ULM	**Lac du Bonnet**	**69.54**	**322**	P	**P**	**00 58 12.2**	**+0.4**
ULM	**Lac du Bonnet**	**69.54**	**322**	P	**P**	**00 58 12.2**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=106,slow=2.7,SNR=3.7						
ULM				LR	LR	01 27 15.3	
	comp=Z,46nm,18.5s,baz=170,slow=35						
KMBO	**Kilima Mbogo**	**70.05**	**93**	*e*P	**P**	**00 58 17.6**	**+1.8**
	comp=Z,85nm,2.9s						
KMBO	**Kilima Mbogo**	**70.05**	**93**	P	**P**	**00 58 16.2**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=276,slow=8.9,

baz=74
FFC Flin Flon 74.38 326 *e*P P **00 58 40.3 -0.3**
comp=Z,7.5nm,0.9s
J23A Dilts Ranch, B 74.44 314 ⇑P P **00 58 41.6 +0.1**
baz=74
G23A Biddle 74.60 316 ⇓P P **00 58 43.1 +0.9**
baz=75
LAZ Ladron 74.62 304 *e*P P **00 58 42.8 +0.1**
comp=Z,3.6nm,1.1s
R22A Saguache, Gunn 74.69 308 ⇑P P **00 58 43.5 +0.2**
baz=75
S22A 4UR Ranch, Cre 74.69 308 ⇓P P **00 58 43.5 +0.3**
baz=75,SNR=6.1
O22A Kremmling 74.75 310 ⇓P P **00 58 43.7 +0.1**
baz=75
N22A Wattenberg Ran 74.75 311 ⇑P P **00 58 44.0 +0.5**
baz=75
D23A Lindsay 74.80 318 ⇓P P **00 58 44.0 +0.6**
baz=75
B23A Brockton 74.88 319 ⇑P P **00 58 43.8 0.0**
baz=75
A23A Redstone 74.89 319 ⇑P P **00 58 44.5 +0.7**
baz=75
ARCES ARCESS Array B 74.92 18 P P **00 58 43.1 -0.4**
ARCES ARCESS Array B 74.92 18 P P **00 58 43.1 -0.4**
comp=Z,4.1nm,1.0s,baz=216,slow=7.6,SNR=3.6
ARCES LR LR 01 29 54.4
comp=Z,76nm,18.3s,baz=21,slow=34
SMCO Snowmass 74.96 309 *e*P P **00 58 45.5 +0.7**
comp=Z,7.3nm,1.1s
X21A Alamocita Cree 75.16 304 ⇓P P **00 58 46.4 +0.5**
baz=75,SNR=8.3
I22A 9 Mile Ranch, 75.18 314 P P **00 58 45.5 -0.2**
baz=75,SNR=7.3
U21A Nageezi 75.22 306 ⇓P P **00 58 47.0 +0.7**
baz=75,SNR=6.5
F22A Rosebud 75.29 316 ⇓P P **00 58 46.6 +0.4**
baz=75
D22A Cohagen 75.45 317 ⇑P P **00 58 48.3 +1.2**
baz=76,SNR=7.9
L21A Rawlins 75.58 312 ⇑P P **00 58 48.6 +0.4**
baz=76,SNR=6.7
220A Playas Peak, P 75.60 302 ⇓P P **00 58 48.8 +0.5**
baz=76
I21A Big Trails, Te 75.75 314 P P **00 58 48.4 -0.7**
baz=76,SNR=18
O20A White River Ci 76.03 310 ⇑P P **00 58 51.4 +0.6**
baz=76,SNR=6.5
PV01 Paradox Valley 76.10 308 *e*P P **00 58 52.0 +0.8**
comp=Z,348nm,1.0s
C21A Desert Coulee 76.17 318 ⇓P P **00 58 51.7 +0.5**
baz=76
319A Douglas 76.21 301 ⇑P P **00 58 52.8 +0.9**
baz=76
J20A Shoshoni 76.26 313 P P **00 58 52.9 +0.9**
baz=76,SNR=6.7
KBZ Khabaz 76.36 46 P P **00 58 53.1 +0.9**
KBZ Khabaz 76.36 46 P P **00 58 53.1 +0.9**
comp=Z,3.9nm,1.0s,baz=273,slow=6.1,SNR=3.4
KBZ LR LR 01 34 44.8
comp=Z,41nm,19.2s,baz=323,slow=38
I20A Worland 76.37 314 ⇑P P **00 58 53.1 +0.6**
baz=76,SNR=8.7
G20A Bridger 76.58 315 ⇑P P **00 58 54.0 +0.3**
baz=77
C20A Veseth Ranch, 76.76 318 ⇑P P **00 58 55.1 +0.6**
baz=77
D20A Manuel Ranch, 76.76 317 ⇑P P **00 58 55.3 +0.7**
baz=77
J19A Crowheart 76.96 313 ⇑P P **00 58 55.6 -0.3**
baz=77
L19A Farson 77.06 312 ⇓P P **00 58 57.4 +0.8**
baz=77
E19A Rath Farm, Rou 77.13 316 P P **00 58 57.2 +0.5**
baz=77,SNR=8.9
F19A Roth Farm, Mol 77.16 316 ⇓P P **00 58 57.0 0.0**
baz=77
S18A Hurst Farm, Bl 77.19 307 ⇑P P **00 58 58.0 +0.5**
baz=77
BW06 Boulder Array 77.28 313 *e*P P **00 58 56.4 -1.4**
comp=Z,6.6nm,1.3s
PDAR Pinedale Array 77.28 313 P P **00 58 57.3 -0.5**
PDAR Pinedale Array 77.28 313 P P **00 58 57.3 -0.5**
comp=Z,1.2nm,0.7s,baz=96,slow=6.0,SNR=6.0
PDAR LR LR 01 29 29.2
comp=Z,112nm,19.0s,baz=103,slow=33
RAYN Ar Rayn 77.29 67 *e*P P **00 58 58.8 +0.8**
comp=Z,9.2nm,1.2s
RLMT Red Lodge 77.31 315 *e*P P **00 58 57.5 -0.4**
comp=Z,7.2nm,1.0s
A19A Klindworth Far 77.41 319 ⇓P P **00 58 59.1 +0.9**
baz=78
C19A Slack Wire Ran 77.46 318 ⇓P P **00 58 57.3 -1.2**
baz=78,SNR=7.9
P18A Preston Nutter 77.52 309 ⇑P P **00 58 59.8 +0.4**
baz=78,SNR=6.4
G18A Lazy EL Ranch, 77.54 315 ⇑P P **00 58 59.9 +0.8**
baz=78
GCMT Greycliff 77.66 316 *e*P P **00 59 00.7 +1.0**
comp=Z,4.6nm,1.1s
SRU San Rafael 77.70 309 ⇓P P **00 59 00.6 +0.4**
baz=78
F18A Big Timber 77.70 316 ⇓P P **00 59 00.1 +0.1**
baz=78,SNR=6.5
E18A Harlowton 77.91 317 ⇑P P **00 59 01.4 +0.3**
baz=78
M17A Scullys Gap (B 77.98 311 ⇑P P **00 59 02.3 +0.5**
baz=78,SNR=7.2
LOHW Long Hollow 78.11 313 *e*P P **00 59 03.7 +1.2**
comp=Z,6.5nm,1.1s
WUAZ Wupatki 78.17 305 ⇓P P **00 59 03.3 +0.5**
baz=78
TPAW Teton Pass 78.36 313 *e*P P **00 59 04.6 +0.7**
comp=Z,7.7nm,1.1s
F17A Fitzpatrick Pl 78.36 316 ⇓P P **00 59 04.3 +0.7**
baz=78
IMW Indian Meadow 78.38 314 *e*P P **00 59 05.4 +1.4**
comp=Z,14nm,1.3s
YMR Madison River 78.47 315 *e*P P **00 59 03.8 -0.6**
comp=Z,13nm,0.9s
D17A Six Diamond Ra 78.50 317 ⇓P P **00 59 05.0 +0.6**
baz=79
JLU Jordanelle 78.51 310 *e*P P **00 59 05.6 +0.9**
comp=Z,11nm,1.3s
E17A Martinsdale 78.55 316 ⇑P P **00 59 04.8 0.0**
baz=79,SNR=9.3
HWUT Hardware Ranch 78.67 311 *e*P P **00 59 05.1 -0.4**
comp=Z,6.1nm,0.7s
U15A North Rim 78.95 306 ⇑P P **00 59 07.9 +0.6**
baz=79
MSU Marysvale 78.95 308 *e*P P **00 59 08.8 +1.6**
MVU Marysvale 78.98 308 *e*P P **00 59 08.2 +0.8**
comp=Z,9.3nm,1.1s
E16A East Helena 79.12 316 ⇑P P **00 59 08.0 +0.2**
baz=79
LRM Limekiln Ridge 79.60 316 *e*P P **00 59 11.6 +1.0**
F15A Butte 79.63 316 P P **00 59 11.8 +1.1**
baz=80,SNR=6.6
DLMT Dillon 79.67 315 *e*P P **00 59 12.7 +1.9**
comp=Z,13nm,1.4s
CCUT Cedar City 79.85 307 *e*P P **00 59 14.0 +1.9**
comp=Z,7.4nm,1.2s
C15A Salmond Ranch, 79.85 318 ⇓P P **00 59 12.6 +0.8**
baz=80
B15A Bradely Ranch, 79.86 318 ⇑P P **00 59 12.2 +0.4**
baz=80,SNR=6.1
D14A Greenough 80.41 317 ⇑P P **00 59 15.0 +0.2**
baz=80
A14A Double T Ranch 80.48 319 ⇑P P **00 59 15.3 +0.2**
baz=81
C14A Swan Lake 80.62 318 ⇓P P **00 59 16.1 +0.2**
baz=81
I13A Wildhorse Cree 80.67 314 ⇑P P **00 59 17.4 +1.0**
baz=81
J13A Cove Ranch, Pi 80.69 313 ⇓P P **00 59 17.5 +1.1**
baz=81
WALA Waterton Lakes 80.81 319 *e*P P **00 59 15.9 -1.0**
comp=Z,0.5nm,1.2s
E13A Victor 80.84 316 ⇑P P **00 59 17.9 +0.8**
baz=81
HLID Hailey 80.87 313 *e*P P **00 59 18.4 +1.0**
comp=Z,4.4nm,1.1s
D13A Huson 81.06 317 ⇑P P **00 59 18.9 +0.6**
baz=81
A13A Flathead Natio 81.13 319 ⇑P P **00 59 18.4 -0.2**
baz=81
B13A Whitefish 81.14 318 ⇑P P **00 59 19.7 +1.1**
baz=81
C13A Hot Springs 81.17 317 ⇓P P **00 59 19.9 +1.1**
baz=81
LDFC Landfair 81.21 305 *e*P P **00 59 21.6 +2.3**
comp=Z,11nm,1.3s
R11A Troy Canyon, C 81.62 308 ⇑P P **00 59 22.0 +0.5**
baz=82
YKA Yellowknife Ar 82.21 332 P P **00 59 24.0 +0.3**
YKA Yellowknife Ar 82.21 332 P P **00 59 24.0 +0.3**
comp=Z,0.8nm,0.7s,baz=96,slow=5.2,SNR=8.6
HEC Hector,Ludlow 82.21 304 ⇓P P **00 59 24.8 +0.2**
baz=82
C11A Tepee Creek (N 82.31 318 ⇑P P **00 59 24.5 -0.3**
baz=82
PFO Pinyon Flat Ob 82.32 303 ⇑P P **00 59 25.7 +0.5**
baz=82
BMO Blue Mountains 82.98 314 *e*P P **00 59 29.0 +0.6**
comp=Z,7.5nm,1.3s
NVAR Mina Array Bea 83.76 308 P P **00 59 32.2 -0.4**
NVAR Mina Array Bea 83.76 308 P P **00 59 32.2 -0.4**
comp=Z,0.8nm,0.8s,baz=107,slow=5.4,SNR=5.9
NVAR LR LR 01 32 08.9
comp=Z,158nm,21.2s,baz=184,slow=32
ISA Isabella 83.95 305 *e*P P **00 59 36.3 +2.8**
comp=Z,6.1nm,1.1s
PGC Sidney 87.10 318 *e*P P **00 59 50.9 +2.1**
comp=Z,1.4nm,1.3s
ILAR Eielson Array 95.92 337 P P **01 00 28.1 -1.5**
ILAR Eielson Array 95.92 337 P P **01 00 28.1 -1.5**
comp=Z,0.7nm,0.9s,baz=53,slow=4.0,SNR=5.1
ILAR LR LR 01 41 11.4
comp=Z,100nm,18.7s,baz=85,slow=34
MAW Mawson 96.35 157 LR LR 01 34 38.9
comp=Z,63nm,18.3s,baz=121,slow=30
KSH Kashi 101.25 48 *e*P **Pdif 01 00 58.0 +3.8**
KSH *e*PP PP 01 05 10.3 +7.1
KSH *e*SKS **SKSac 01 11 35.0 +1.9**
KSH *e*S **Sdif 01 12 33.5 +0.2**
KSH *es*S **sS 01 12 41.3 -2.4**
KSH LR LR
comp=Z,23nm,4.3s
GTA Gaotai 118.06 40 *e*PKP PKPdf 01 05 56.5 +6.0
LZH Lanzhou 122.57 41 *e*PKP PKPdf 01 05 53.5 -5.8
LZH sPKP 01 05 57.3
HHC Hu-ho-hao-te 124.12 32⇓*e*PKP **PKPdf 01 06 04.8 +2.8**
HHC PP PP 01 07 51.3 +5.6
HHC PKS **PKSdf 01 09 40.0 +1.2**
HHC SKS **SKSdf 01 13 15.3 +1.9**
HHC SKKS **SKKSac 01 14 43.3 -1.3**
HHC SS **SS 01 24 36.3 +1.0**
HHC LR LR
comp=Z,130nm,21.4s
CD2 Chengdu 125.40 47 PKP **PKPdf 01 06 05.8 +1.1**
CMAR Chiang Mai Arr 127.06 63 PKP **PKPdf 01 06 07.6 -0.5**
CMAR Chiang Mai Arr 127.06 63 PKP **PKPdf 01 06 07.6 -0.5**
comp=Z,0.5nm,0.4s,baz=308,slow=4.4,SNR=4.2
BJI Beijing 127.10 30 PKP **PKPdf 01 06 08.0 +0.4**
BJI LR LR
comp=Z,36nm,21.0s
GYA Guiyang 129.93 50 *e*Pdif **Pdif 01 03 01.8 -0.2**
GYA PKP **PKPdf 01 06 13.5 0.0**
GYA PP **PP 01 08 27.3 +2.5**
ASAR Alice Springs 157.04 147 PKP **PKPdf 01 06 58.1 -1.4**
ASAR PKPab **PKPab 01 07 27.5 -2.2**
ASAR Alice Springs 157.04 147 PKP **PKPdf 01 06 58.1 -1.4**
comp=Z,0.8nm,0.8s,baz=212,slow=0.9,SNR=5.7
ASAR PKPab **PKPab 01 07 27.5 -2.2**
comp=Z,1.0nm,1.0s,baz=198,slow=4.6,SNR=3.9
WRA Warramunga Arr 160.18 141 PKPab **PKPab 01 07 41.9 -1.4**
WRA Warramunga Arr 160.18 141 PKPab **PKPab 01 07 41.9 -1.4**
comp=Z,2.7nm,1.2s,baz=220,slow=2.8,SNR=4.6

JMA 31 00:53:10.6±0.2, 31.11N×140.06E, h204km±2km, M3.5,
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.01**	**354**	P	Pn	00 53 49.8	+0.4
JHJ2				*e*S	S	00 54 19.8	+0.5
BSO1	**Boso 1**	**3.62**	**12**	P	Pn	00 54 08.0	+1.0
BSO3	**Boso 3**	**3.70**	**6**	P	Pn	00 54 09.6	+1.2
BSO3				*e*S	S	00 54 52.5	-1.0
BSO4	**Boso 4**	**3.88**	**3**	P	Pn	00 54 12.1	+1.3
BSO4				*e*S	S	00 54 57.2	-0.5
CBIJ	**Chichi jima**	**4.41**	**155**	P	Pn	00 54 17.4	-0.3
JHU	**Hanno**	**4.77**	**352**	*e*S	S	00 55 16.5	-1.8
JYT	**Yasato**	**5.11**	**1**	*e*S	S	00 55 21.3	-4.6
JAG	**Ashikaga**	**5.33**	**355**	P	Pn	00 54 29.9	+0.7
JAG				*e*S	S	00 55 30.2	-0.8
JHO	**Hitachi**	**5.50**	**4**	P	Pn	00 54 32.2	+0.7
JHO				*e*S	S	00 55 30.3	-4.8

IDC 31 01:30:42.4±14.0, 29.20S×76.81E, h0km, mb3.7/4,
mb1 3.8/4, mb1mx3.5/22, mbtmp3.7/4, MS3.6/3, Ms1 3.7/3,
ms1mx3.0/25, Error ellipse: s-maj=465.8km
s-min=33.8km az=42.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**51.01**	**98**	P	P	01 39 46.8	+0.4
	1.2nm,1.0s,baz=257,slow=7.2,SNR=7.4						
CMAR	**Chiang Mai Arr**	**51.98**	**27**	LR	LR	01 57 54.6	
	comp=Z,42nm,18.3s,baz=285,slow=31						
WRA	**Warramunga Arr**	**52.69**	**94**	P	P	01 39 58.4	-0.6
	0.9nm,1.0s,baz=245,slow=7.1,SNR=2.8						
VNDA	**Vanda**	**60.65**	**166**	LR	LR	02 03 12.8	
	comp=Z,77nm,19.1s,baz=38,slow=32						
MKAR	**Makanchi Array**	**75.80**	**4**	P	P	01 42 30.1	+0.1
	0.3nm,0.6s,baz=177,slow=5.5,SNR=3.7						
KSRS	**Korea Array**	**81.79**	**39**	LR	LR	02 18 21.8	
	comp=Z,26nm,19.5s,baz=300,slow=35						
ZALV	**Zalesovo Beam**	**83.09**	**5**	P	P	01 43 09.4	0.0
	0.3nm,0.4s,baz=180,slow=5.8,SNR=3.3						

*ISCJB **31** 01:47:23.5±0.2, 23.71N±0.01×121.79E±0.02, h25km,*
Error ellipse: s-maj=2.4km s-min=1.7km az=136.4
*TAP **31** 01:47:24.4, 23.76N×121.70E, h43km, ML3.7, C*
*JMA **31** 01:47:24.6±0.3, 23.81N×121.77E, h76km, M2.8*
ISC 31 01:47:23.1±0.9, 23.72N±0.02×121.77E±0.02, h25km, n60,
g0s82/114, 8C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEGC	**Jichi Village**	**0.21**	**268**	*i* P	**Pn**	**01 47 31.9**	**+1.2**
	baz=251						
TEGC				*i* S	**Sb**	**01 47 37.5**	**+4.7**
	baz=251						
ESF	**Shoufeng Towns**	**0.29**	**302**	*e*P	**Pn**	**01 47 31.7**	**-0.1**
	baz=292						
ESF				*e*S	**Sn**	**01 47 38.2**	**+1.0**
	baz=292						
HWA	**Hwalien**	**0.30**	**329**	*i* P	**Pn**	**01 47 32.3**	**+0.4**
	baz=346						
HWA				S	**Sn**	**01 47 38.1**	**+0.5**
	baz=346						
ESL	**Shilin**	**0.33**	**287**	*i* P	**Pn**	**01 47 32.4**	**+0.1**
	baz=284						
ESL				S	**Sn**	**01 47 38.0**	**-0.2**
	baz=284						
TWD	**Chiawan**	**0.40**	**336**	*i* P	**Pn**	**01 47 33.2**	**0.0**
	baz=350						
TWD				*i* S	**Sn**	**01 47 39.8**	**-0.2**
	baz=350						
EHY	**Hungye**	**0.46**	**243**	⇓*i* P	**Pn**	**01 47 34.1**	**-0.1**
	baz=242						
EHY				*i* S	**Sn**	**01 47 40.7**	**-0.9**
	baz=242						
TWF1	**Yuli**	**0.57**	**230**	⇑*i* P	**Pn**	**01 47 35.5**	**-0.1**
	baz=231						
TWF1				*e*S	**Sn**	**01 47 43.5**	**-0.8**
	baz=231						
WHF	**Hehuan Shan**	**0.63**	**313**	⇑*i* P	**Pb**	**01 47 36.2**	**+0.4**
	baz=308						
WHF				*e*S	**Sb**	**01 47 44.6**	**+0.2**
	baz=308						
ENA	**Nanau**	**0.71**	**358**	P	**Pn**	**01 47 37.5**	**-0.1**
	baz=12						
ENA				*e*S	**Sn**	**01 47 47.2**	**-0.5**
	baz=12						
CHKT	**Chengkung**	**0.72**	**211**	*e*P	**Pb**	**01 47 37.1**	**+0.1**
	baz=197						
CHKT				*e*S	**Sn**	**01 47 47.6**	**-0.3**
	baz=197						
TWT	**Tachien**	**0.76**	**315**	P	**Pn**	**01 47 38.5**	**0.0**
	baz=315						
TWT				S	**Sb**	**01 47 48.2**	**+0.2**
	baz=315						
YUS	**Yu-Shan**	**0.79**	**253**	⇑*i* P	**Pn**	**01 47 39.3**	**+0.3**
	baz=248						
YUS				S	**Sb**	**01 47 49.5**	**+0.6**
	baz=248						
NNS	**Nan Shan**	**0.81**	**333**	P	**Pb**	**01 47 38.6**	**0.0**
	baz=338						
NNS				*e*S	**Sb**	**01 47 48.7**	**-0.5**
	baz=338						
SMLT	**Sun Moon Lake**	**0.82**	**282**	⇑*i* P	**Pn**	**01 47 39.0**	**-0.1**
	baz=282						
SMLT				S	**Sn**	**01 47 49.9**	**-0.6**
	baz=282						
TYC	**Yuchr**	**0.86**	**283**	⇑*i* P	**Pn**	**01 47 39.5**	**-0.1**
	baz=286						
TYC				*e*S	**Sb**	**01 47 50.4**	**-0.1**
	baz=286						
ELDTW	**Lidau**	**0.87**	**233**	*i* P	**Pb**	**01 47 39.4**	**-0.2**
	baz=225						
ELDTW				*e*S	**Sb**	**01 47 50.6**	**-0.3**
	baz=225						
TWC	**Suao**	**0.89**	**5**	P	**Pn**	**01 47 40.3**	**+0.2**
	baz=10.0						
TWC				S	**Sn**	**01 47 51.8**	**-0.3**
	baz=10.0						
ALS	**Alishan**	**0.91**	**257**	⇑*i* P	**Pn**	**01 47 41.0**	**+0.4**
	baz=260						
ALS				*e*S	**Sb**	**01 47 52.5**	**+0.2**
	baz=260						
ENTT	**Nioudou**	**0.94**	**348**	*e*P	**Pn**	**01 47 40.5**	**-0.3**
	baz=346						
ENTT				*e*S	**Sb**	**01 47 52.6**	**-0.2**
	baz=346						
TWE	**Neicheng**	**1.00**	**355**	*e*P	**Pb**	**01 47 41.8**	**-0.1**
	baz=349						
TWE				*e*S	**Sn**	**01 47 54.9**	**-0.1**
	baz=349						
WNT	**Mingjian**	**1.01**	**279**	*i* P	**Pb**	**01 47 42.6**	**+0.6**
	baz=278						
WNT				*e*S	**Sn**	**01 47 55.8**	**+0.7**
	baz=278						
CHN5	**Tsauling**	**1.01**	**263**	*i* P	**Pb**	**01 47 42.2**	**+0.2**
	baz=261						
CHN5				*i* S	**Sn**	**01 47 55.7**	**+0.4**
	baz=261						
NSK	**Sanguang**	**1.03**	**338**	⇑*i* P	**Pn**	**01 47 42.0**	**-0.3**
	baz=343						
NSK				*i* S	**Sb**	**01 47 54.0**	**-1.4**
	baz=343						
TCU	**Taichung**	**1.09**	**293**	P	**Pb**	**01 47 43.6**	**+0.3**
	baz=294						
TCU				*e*S	**Sb**	**01 47 57.9**	**+0.7**
	baz=294						
TWG	**Pinlang**	**1.10**	**216**	*e*P	**Pn**	**01 47 42.5**	**-0.4**
	baz=211						
TWG				*e*S	**Sn**	**01 47 56.7**	**-0.7**
	baz=211						
TWQ1	**Liyutan**	**1.11**	**305**	⇑*i* P	**Pb**	**01 47 43.7**	**0.0**
	baz=306						
TWQ1				S	**Sn**	**01 47 57.5**	**-0.1**
	baz=306						
WGK	**Gukeng**	**1.11**	**269**	P	**Pb**	**01 47 43.5**	**-0.1**
	baz=266						
WGK				*e*S	**Sb**	**01 47 58.4**	**+0.7**
	baz=266						
EGS		**1.13**	**7**	P	**Pb**	**01 47 44.5**	**+0.4**
	baz=11						
CHN4	**Tsaushan**	**1.14**	**252**	*e*P	**Pb**	**01 47 44.2**	**0.0**
	baz=248						
CHN4				*e*S	**Sb**	**01 47 59.4**	**+0.7**
	baz=248						
NSTT	**Nanjuang**	**1.15**	**322**	P	**Pb**	**01 47 44.4**	**+0.1**
	baz=312						
NSTT				*i* S	**Sb**	**01 47 58.7**	**-0.2**
	baz=312						
NSY	**Sanyi**	**1.16**	**307**	P	**Pb**	**01 47 44.5**	**0.0**
	baz=309						
NSY				*e*S	**Sb**	**01 47 59.1**	**+0.1**
	baz=309						
WTP	**Ta-pu**	**1.16**	**246**	P	**Pb**	**01 47 44.5**	**-0.1**
	baz=242						
WTP				*e*S	**Sb**	**01 47 59.8**	**+0.6**
	baz=242						
CHN2	**Minshiung**	**1.20**	**261**	*e*P	**Pb**	**01 47 45.1**	**-0.1**
	baz=259						
CHN2				*e*S	**Sb**	**01 48 01.0**	**+0.6**
	baz=259						
CHY	**Chiayi**	**1.26**	**260**	*e*P	**Pb**	**01 47 46.2**	**+0.1**
	baz=257						
CHY				*e*S	**Sb**	**01 48 01.9**	**0.0**
	baz=257						
CHN1	**Nanshi**	**1.26**	**245**	P	**Pb**	**01 47 46.1**	**-0.1**
	baz=242						
CHN1				S	**Sb**	**01 48 02.5**	**+0.5**
	baz=242						
TWK	**Hsinying**	**1.26**	**249**	*e*P	**Pb**	**01 47 46.1**	**-0.2**
	baz=246						
TWK				*e*S	**Sb**	**01 48 02.2**	**+0.1**
	baz=246						
TWB1	**Santiao Chiao**	**1.30**	**9**	*e*P	**Pb**	**01 47 46.4**	**-0.5**
	baz=13						
TWB1				*e*S	**Sb**	**01 48 02.6**	**-0.6**
	baz=13						
ECL	**Taimali**	**1.34**	**214**	*e*P	**Pn**	**01 47 44.8**	**-1.5**
	baz=211						
NWF	**Wu-fen Shan**	**1.35**	**0**	*e*P	**Pb**	**01 47 47.2**	**-0.6**
	baz=353						
NWF				*e*S	**Sn**	**01 48 03.8**	**+0.2**
	baz=353						
YOJ	**Yonaguni jima**	**1.35**	**57**	P	**Pb**	**01 47 47.5**	**-0.3**
YOJ				S	**Sb**	**01 48 04.8**	**+0.1**
NCU	**National Centr**	**1.36**	**337**	*e*P	**Pb**	**01 47 47.8**	**-0.1**
	baz=341						
NCU				*e*S	**Sb**	**01 48 04.2**	**-0.6**
	baz=341						
WTCT	**Ta-ch'eng**	**1.37**	**276**	*i* P	**Pb**	**01 47 47.5**	**-0.7**
	baz=275						
WTCT				*e*S	**Sb**	**01 48 05.3**	**+0.1**
	baz=275						
TWS1	**Kuangyinshan**	**1.42**	**347**	P	**Pn**	**01 47 47.4**	**+0.1**
	baz=351						
TWS1				*e*S	**Sb**	**01 48 05.9**	**-0.6**
	baz=351						
WSF	**Szhu**	**1.42**	**267**	*e*P	**Pb**	**01 47 48.0**	**-0.9**
	baz=253						
WSF				*e*S	**Sb**	**01 48 05.9**	**-0.8**
	baz=253						
SSD	**Sandimen**	**1.43**	**228**	*e*P	**Pb**	**01 47 49.5**	**+0.4**
	baz=223						
SSD				*e*S	**Sb**	**01 48 06.8**	**0.0**
	baz=223						
CHN3	**Shinhua**	**1.44**	**244**	*e*P	**Pb**	**01 47 50.6**	**+1.3**
	baz=241						
CHN3				*e*S	**Sb**	**01 48 08.6**	**+1.4**
	baz=241						
TWM1	**Shoushan**	**1.53**	**235**	*e*P	**Pb**	**01 47 50.6**	**-0.1**
	baz=244						
SCLT	**Jiali**	**1.55**	**250**	*e*P	**Pb**	**01 47 50.1**	**-1.0**
	baz=247						
SCLT				*e*S	**Sb**	**01 48 09.5**	**-0.7**
	baz=247						
TWY	**Chenhua**	**1.56**	**354**	*e*P	**Pn**	**01 47 49.9**	**+0.6**
	baz=345						
EAST	**Anshuo**	**1.58**	**213**	*e*P	**Pn**	**01 47 49.4**	**-0.2**
	baz=204						
LAY	**Lan-yu**	**1.68**	**187**	*e*P	**Pn**	**01 47 50.2**	**-0.8**
	baz=177						
LAY				*e*S	**Sn**	**01 48 10.2**	**-1.6**
	baz=177						
HATJ	**Hateruma jima**	**1.89**	**79**	P	**Pn**	**01 47 55.1**	**+1.3**
HATJ				*e*S	**Sn**	**01 48 17.6**	**+0.7**
IRIF	**Iriomote-Funau**	**1.89**	**71**	P	**Pb**	**01 47 55.3**	**-1.7**
IRIF				*e*S	**Sb**	**01 48 18.4**	**-1.8**
TWK1	**Hengchun**	**1.98**	**207**	*e*P	**Pn**	**01 47 56.2**	**+1.2**
	baz=194						
TWK1				*e*S	**Sn**	**01 48 19.6**	**+0.6**
	baz=194						
WDGT	**Dungji**	**1.99**	**257**	*e*P	**Pn**	**01 47 54.5**	**-0.7**
	baz=255						
WDGT				*e*S	**Sn**	**01 48 17.5**	**-1.9**
	baz=255						
PNG	**Penghu**	**2.04**	**266**	*e*P	**Pn**	**01 47 55.4**	**-0.5**
	baz=265						
PNG				*e*S	**Sn**	**01 48 19.0**	**-1.5**
	baz=265						
JKRS	**Kuro-shima**	**2.11**	**75**	P	**Pn**	**01 47 58.5**	**+1.7**

JKRS				*e*S		**Sn**	**01 48 24.1**	**+1.8**
JIJ	**Ishigaki jima**	**2.26**	**73**	P		**Pn**	**01 47 59.9**	**+1.0**
JIJ				S		**Sn**	**01 48 26.1**	**+0.1**
JTJ	**Tarama**	**2.83**	**70**	P		**Pn**	**01 48 07.8**	**+1.1**
JTJ				*e*S		**Sn**	**01 48 40.7**	**+0.7**
KNM	**Kinmen** baz=284	**3.13**	**284**	*e*P		**Pn**	**01 48 11.2**	**+0.3**

*THE **31** 01:48:42.2, 35˚.50N×22˚.90E, h13km±2km, ML3.0/2, Error ellipse: s-maj=3.5km s-min=0.9km az=223.0*
*ATH **31** 01:48:44.3, 35˚.65N×23˚.13E, h43km±1km, MD3.6/18*
*CSEM **31** 01:48:44.4±0.3, 35˚.59N×23˚.08E, h25km±2km, MD3.6, Error ellipse: s-maj=7.5km s-min=2.3km az=42.0*

ISC 31 01:48:44.3±1.9**, 35˚.61N**±0˚.05×**23˚.09E**±0˚.05**, h19**km±5km**, n85, σ0°67/96, Crete**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANKY	**Antikythira Is**	**0.31**	**34**	*e*P	**Pn**	**01 48 52.8**	**-1.0**
ANKY				*e*S	**Sn**	**01 48 59.5**	**-0.4**
ANKY	**Antikythira Is**	**0.31**	**34**	*e*P	**Pn**	**01 48 52.8**	**-1.0**
KYTH	**Kithira**	**0.67**	**357**	P	**Pb**	**01 48 57.2**	**-0.2**
KYTH	**Kithira**	**0.67**	**357**	*e*P	**Pb**	**01 48 57.2**	**-0.2**
KYTH	**Kithira**	**0.67**	**357**	*e*P	**Pb**	**01 48 57.2**	**-0.2**
VAM	**Vamos**	**0.93**	**102**	P	**Pb**	**01 49 02.0**	**+0.2**
VAM				S	**Sn**	**01 49 17.6**	**+2.5**
VAM	**Vamos**	**0.93**	**102**	*e*P	**Pb**	**01 49 02.0**	**+0.2**
VAM				*e*S	**Sg**	**01 49 14.7**	**0.0**
VAM	**Vamos**	**0.93**	**102**	*e*P	**Pb**	**01 49 02.0**	**+0.2**
VAM				*e*S	**Sg**	**01 49 14.7**	**0.0**
VLI	**Veliai**	**1.11**	**354**	P	**Pn**	**01 49 04.3**	**-0.6**
VLI				S	**Sg**	**01 49 21.1**	**+0.5**
VLI	**Veliai**	**1.11**	**354**	*e*P	**Pn**	**01 49 04.4**	**-0.5**
VLI				*e*S	**Sb**	**01 49 18.9**	**-0.2**
VLI	**Veliai**	**1.11**	**354**	*e*P	**Pn**	**01 49 04.4**	**-0.5**
VLI				*e*S	**Sb**	**01 49 18.9**	**-0.2**
GVD	**Gavdhos**	**1.12**	**133**	P	**Pn**	**01 49 02.9**	**-2.1**
GVD	**Gavdhos**	**1.12**	**133**	P	**Pn**	**01 49 02.9**	**-2.1**
DYR	**Agios Nikonas**	**1.30**	**332**	P	**Pn**	**01 49 06.2**	**-1.3**
DYR	**Agios Nikonas**	**1.30**	**332**	*e*P	**Pn**	**01 49 06.6**	**-0.9**
DYR				*e*S	**Sn**	**01 49 23.9**	**-0.5**
DYR	**Agios Nikonas**	**1.30**	**332**	*e*P	**Pn**	**01 49 06.6**	**-0.9**
DYR				*e*S	**Sn**	**01 49 23.9**	**-0.5**
IDI	**Anoyia**	**1.51**	**102**	P	**Pn**	**01 49 10.0**	**-0.3**
IDI	**Anoyia**	**1.51**	**102**	*e*P	**Pn**	**01 49 10.0**	**-0.3**
IDI	**Anoyia**	**1.51**	**102**	*e*P	**Pn**	**01 49 10.0**	**-0.3**
SIVA	**Sivas**	**1.53**	**112**	*e*P	**Pn**	**01 49 10.1**	**-0.4**
SIVA	**Sivas**	**1.53**	**112**	*e*P	**Pn**	**01 49 10.1**	**-0.4**
PYL	**PYLOS**	**1.68**	**320**	P	Pn	01 49 08.4	-4.3
PYL	**PYLOS**	**1.68**	**320**	*e*P	**Pn**	**01 49 12.4**	**-0.3**
PYL	**PYLOS**	**1.68**	**320**	*e*P	**Pn**	**01 49 12.4**	**-0.3**
VLX	**Vlachokerasia**	**1.85**	**342**	S	**Sn**	**01 49 38.3**	**+0.3**
VLX	**Vlachokerasia**	**1.85**	**342**	*e*P	**Pn**	**01 49 15.4**	**+0.3**
VLX	**Vlachokerasia**	**1.85**	**342**	*e*P	**Pn**	**01 49 15.4**	**+0.3**
VLX				S	**Sn**	**01 49 38.3**	**+0.3**
DIDY	**Didyma**	**1.87**	**3**	P	**Pn**	**01 49 15.0**	**-0.3**
DIDY	**Didyma**	**1.87**	**3**	P	**Pn**	**01 49 15.0**	**-0.3**
DID	**Didima**	**1.90**	**4**	P	**Pn**	**01 49 14.9**	**-0.8**
DID	**Didima**	**1.90**	**4**	*e*P	**Pn**	**01 49 15.2**	**-0.5**
DID	**Didima**	**1.90**	**4**	*e*P	**Pn**	**01 49 15.2**	**-0.5**
LAST	**Lasithi**	**2.00**	**102**	P	**Pn**	**01 49 17.1**	**-0.1**
LAST	**Lasithi**	**2.00**	**102**	P	**Pn**	**01 49 17.1**	**-0.1**
THR3	**Thira Island,**	**2.04**	**66**	P	**Pn**	**01 49 17.1**	**-0.5**
THR3	**Thira Island,**	**2.04**	**66**	P	**Pn**	**01 49 17.1**	**-0.5**
NPS	**Neapolis**	**2.09**	**99**	P	**Pn**	**01 49 17.8**	**-0.5**
NPS	**Neapolis**	**2.09**	**99**	*e*P	**Pn**	**01 49 18.2**	**-0.1**
NPS	**Neapolis**	**2.09**	**99**	*e*P	**Pn**	**01 49 18.2**	**-0.1**
NAIG	**Nisos Aigina**	**2.17**	**8**	*e*P	**Pn**	**01 49 19.3**	**-0.1**
NAIG	**Nisos Aigina**	**2.17**	**8**	*e*P	**Pn**	**01 49 19.3**	**-0.1**
AMT	**Artemida-Makis**	**2.22**	**330**	*e*P	**Pn**	**01 49 20.4**	**+0.3**
AMT	**Artemida-Makis**	**2.22**	**330**	*e*P	**Pn**	**01 49 20.4**	**+0.3**
GUR	**Goura**	**2.40**	**346**	P	**Pn**	**01 49 22.0**	**-0.7**
GUR	**Goura**	**2.40**	**346**	*e*P	**Pn**	**01 49 22.8**	**+0.1**
GUR	**Goura**	**2.40**	**346**	*e*P	**Pn**	**01 49 22.8**	**+0.1**
LTK	**Loutraki**	**2.41**	**358**	*e*P	**Pn**	**01 49 22.6**	**-0.1**
LTK	**Loutraki**	**2.41**	**358**	*e*P	**Pn**	**01 49 22.6**	**-0.1**
APE	**Apeiranthos**	**2.45**	**53**	P	**Pn**	**01 49 22.6**	**-0.8**
APE	**Apeiranthos**	**2.45**	**53**	*e*P	**Pn**	**01 49 22.5**	**-0.8**
APE	**Apeiranthos**	**2.45**	**53**	P	**Pn**	**01 49 22.6**	**-0.8**
PTL	**Penteli**	**2.52**	**14**	P	**Pn**	**01 49 23.7**	**-0.5**
PTL	**Penteli**	**2.52**	**14**	*e*P	**Pn**	**01 49 23.3**	**-0.9**
PTL	**Penteli**	**2.52**	**14**	P	**Pn**	**01 49 23.7**	**-0.5**
KLV	**Kalavryta, Ach**	**2.54**	**343**	*e*P	**Pn**	**01 49 24.7**	**+0.1**
KLV	**Kalavryta, Ach**	**2.54**	**343**	*e*P	**Pn**	**01 49 24.7**	**+0.1**
ZKR	**Zakros**	**2.60**	**100**	P	**Pn**	**01 49 25.6**	**+0.2**
ZKR	**Zakros**	**2.60**	**100**	P	**Pn**	**01 49 25.6**	**+0.2**
RLS	**Riolos of Patr**	**2.77**	**332**	*e*P	**Pn**	**01 49 27.2**	**-0.4**
RLS	**Riolos of Patr**	**2.77**	**332**	*e*P	**Pn**	**01 49 27.2**	**-0.4**
LAKA	**Lakka**	**2.77**	**342**	*e*P	**Pn**	**01 49 27.0**	**-0.7**
LAKA	**Lakka**	**2.77**	**342**	*e*P	**Pn**	**01 49 27.0**	**-0.7**
DSF	**Desfina**	**2.83**	**351**	P	**Pn**	**01 49 27.4**	**-1.2**
DSF	**Desfina**	**2.83**	**351**	P	**Pn**	**01 49 27.4**	**-1.2**
KALE	**Kalithea**	**2.88**	**345**	*e*P	**Pn**	**01 49 29.2**	**0.0**
KALE	**Kalithea**	**2.88**	**345**	*e*P	**Pn**	**01 49 29.2**	**0.0**
EFP	**Efpalio**	**2.97**	**342**	P	**Pn**	**01 49 29.4**	**-1.0**
EFP	**Efpalio**	**2.97**	**342**	*e*P	**Pn**	**01 49 30.6**	**+0.2**
EFP	**Efpalio**	**2.97**	**342**	*e*P	**Pn**	**01 49 30.6**	**+0.2**
LKR	**Lokris**	**3.04**	**359**	P	**Pn**	**01 49 30.2**	**-1.1**
LKR	**Lokris**	**3.04**	**359**	*e*P	**Pn**	**01 49 31.0**	**-0.3**
LKR	**Lokris**	**3.04**	**359**	*e*P	**Pn**	**01 49 31.0**	**-0.3**
VLS	**Valsamata**	**3.25**	**323**	*e*P	**Pn**	**01 49 35.0**	**+0.7**
VLS	**Valsamata**	**3.25**	**323**	*e*P	**Pn**	**01 49 35.0**	**+0.7**
KARP	**Karpathos**	**3.32**	**90**	*e*P	**Pn**	**01 49 34.5**	**-0.8**
KARP	**Karpathos**	**3.32**	**90**	*e*P	**Pn**	**01 49 34.5**	**-0.8**
EVR	**Evrytania**	**3.46**	**343**	*e*P	**Pn**	**01 49 37.5**	**+0.3**
EVR	**Evrytania**	**3.46**	**343**	*e*P	**Pn**	**01 49 37.5**	**+0.3**
AGG	**Agios Georgios**	**3.46**	**350**	P	**Pn**	**01 49 36.1**	**-1.1**
AGG				S	**Sn**	**01 50 18.3**	**+0.7**
AGG	**Agios Georgios**	**3.46**	**350**	*e*P	**Pn**	**01 49 37.2**	**0.0**
AGG	**Agios Georgios**	**3.46**	**350**	*e*P	**Pn**	**01 49 37.2**	**0.0**
AGG				S	**Sn**	**01 50 18.3**	**+0.7**
LKD2	**Lefkada island**	**3.72**	**329**	*e*P	**Pn**	**01 49 41.1**	**+0.4**
LKD2	**Lefkada island**	**3.72**	**329**	*e*P	**Pn**	**01 49 41.1**	**+0.4**
ARG	**Arkhangelos**	**4.13**	**80**	*e*P	**Pn**	**01 49 46.6**	**+0.2**
ARG	**Arkhangelos**	**4.13**	**80**	*e*P	**Pn**	**01 49 46.6**	**+0.2**

NEIC 31 01:55:27.0, 19˚.35N×155˚.32W, h26km, ML3.5(HVO)**, 1D, After HVO., Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PUH	**Pauahi**	**0.10**	**76**	*e*Pg	Pb	01 55 31.3	-0.6
PUH				*e*Sg	Sb	01 55 34.5	-0.7
STCH	**Steam Cracks**	**0.19**	**79**	*e*Pg	Pb	01 55 31.5	-1.2
STCH				*e*Sg	Sb	01 55 34.9	-1.7
POHA	**Pohakuloa**	**0.45**	**334**	*i*Pb	Pb	01 55 35.6	-1.1
POHA				*i* Sb	Sb	01 55 41.8	-1.5
HON	**Honolulu**	**3.19**	**308**	*e*Sn	Sn	01 56 47.4	-5.3
KIP	**Kipapa**	**3.26**	**310**	*e*Pn	Pn	01 56 16.0	-0.5
KIP				*e*Sg	Sn	01 56 45.3	-9.1

*ISCJB **31** 02:10:15.7±0.4, 15˚.50N±0˚.04×86˚.13W±0˚.05, h10km, mb3.9/14, MS2.8/3, Error ellipse: s-maj=7.3km s-min=5.1km az=22.5*
*IDC **31** 02:10:16.0±0.8, 15˚.44N×86˚.08W, h0km, mb3.8/10, mb1 4.2/10, mb1mx3.9/23, mbtmp3.8/10, MS3.0/4, Ms1 3.0/4, ms1mx2.7/39, Error ellipse: s-maj=36.0km s-min=18.4km az=56.0*
*NEIC **31** 02:10:17.1±0.5, 15˚.43N×86˚.30W, h10km, mb4.1/7, Error ellipse: s-maj=15.5km s-min=7.3km az=68.0*
*CASC **31** 02:10:19.5±1.5, 15˚.38N×86˚.07W, h35km±999km, ML4.0, mb4.1(NEIC)*

ISC 31 02:10:16.9±0.5**, 15˚.43N**±0˚.04×**86˚.24W**±0˚.06**, h10**km**, n120, σ1°41/120, mb4.0/14, MS2.8/3, 31C-35D, Honduras**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**1.69**	**216**	*e*Pn	**Pn**	**02 10 45.7**	**-0.8**
TGUH				*e*Sn	**Sb**	**02 11 09.5**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.69**	**216**	*e*P	**Pn**	**02 10 46.6**	**0.0**
TGUH				*e*S	**Sg**	**02 11 09.6**	**-1.8**
VSM	**San Miguel**	**2.80**	**225**	*e*P	**Pb**	**02 11 04.4**	**-2.8**
SNVI	**San Vicente**	**3.10**	**235**	*e*P	**Pn**	**02 11 08.2**	**+2.2**
MTO2	**Montecristo 2**	**3.19**	**252**	*e*P	**Pn**	**02 11 09.6**	**+2.3**
LFRS	**El Faro**	**3.27**	**237**	*e*P	**Pn**	**02 11 10.6**	**+2.2**
SNET	**Serv Nac Est T**	**3.38**	**239**	AML	AML	02 12 10.9	
SNET				AML	AML	02 12 11.5	

comp=Z,636nm,1.0s

RBDL	**Robledal**	**3.58**	**249**	*e*P	**Pn**	**02 11 14.4**	**+1.7**
RBDL				*e*S	**Sn**	**02 11 58.2**	**+3.0**
SNJE	**San Jose**	**3.61**	**245**	*e*P	**Pn**	**02 11 15.5**	**+2.4**
SBLS	**San Blas**	**3.64**	**245**	*e*P	Pn	02 11 16.8	+3.3
TEIG	**Tepich**	**5.15**	**338**	Pn	**Pn**	**02 11 31.8**	**-2.2**
TEIG				Sn	Sn	02 12 26.0	-7.5
TEIG	**Tepich**	**5.15**	**338**	Pn	**Pn**	**02 11 31.8**	**-2.2**

comp=Z,50nm,0.3s,baz=156,slow=18,SNR=143

TEIG				Sn	Sn	02 12 26.0	-7.5

comp=Z,93nm,0.3s,baz=260,slow=24,SNR=25

TEIG				LR	LR	02 13 39.0	

comp=Z,151nm,20.6s,baz=5.0,slow=39

JTS	**JuntasAbangare**	**5.26**	**166**	*e*Pn	**Pn**	**02 11 36.4**	**+0.7**
JTS				*e*Sg	**Sg**	**02 13 02.2**	**-3.8**
BCIP	**Isla Barro Col**	**8.83**	**134**	*e*Pn	**Pn**	**02 12 25.1**	**+0.6**
HKT	**Hockley**	**16.93**	**330**	*e*P	**Pn**	**02 14 14.5**	**+0.6**

comp=Z,17nm,0.9s

LRAL	**Lakeview Retre**	**17.54**	**358**	*e*Pn	**Pn**	**02 14 21.3**	**-0.3**

comp=Z,4.2nm,0.3s

732A	**Laxson Ranch,** baz=18	**18.33**	**318**	⇓P	**Pn**	**02 14 29.3**	**-2.0**
632A	**Uvalde** baz=19,SNR=14	**18.76**	**321**	⇓P	**P**	**02 14 35.8**	**-0.4**
631A	**Perdido Creek** baz=19,SNR=12	**19.18**	**319**	⇓P	**P**	**02 14 39.6**	**-1.2**
532A	**Rocksprings** baz=19,SNR=15	**19.27**	**322**	⇑P	**P**	**02 14 42.0**	**+0.1**
WHTX	**Lake Whitney** baz=19,SNR=26	**19.39**	**330**	⇓P	**Pn**	**02 14 45.1**	**+0.9**
JCT	**Junction City** comp=Z,7.0nm,0.5s	**19.47**	**323**	*e*P	**P**	**02 14 43.8**	**-0.1**
JCT	**Junction City** baz=20	**19.47**	**323**	⇑P	**P**	**02 14 44.1**	**+0.1**
531A	**Rocksprings** baz=20	**19.69**	**321**	⇑P	**P**	**02 14 46.7**	**+0.3**
432A	**Menard** baz=20,SNR=12	**19.76**	**323**	P	**P**	**02 14 47.0**	**-0.1**
431A	**Sonora** baz=20,SNR=11	**20.09**	**322**	⇓P	**P**	**02 14 51.2**	**+0.4**
332A	**Millersview** baz=20,SNR=8.4	**20.11**	**324**	⇑P	Pn	02 14 51.7	-1.0
530A	**J-C Ranch, Com** baz=20,SNR=8.3	**20.17**	**319**	⇓P	**P**	**02 14 51.7**	**+0.1**
TKL	**Tuckaleechee C**	**20.26**	**6**	P	Pn	02 14 55.5	+1.0
TKL				S	S	02 18 26.2	-14
TKL	**Tuckaleechee C**	**20.26**	**6**	P	Pn	02 14 55.5	+1.0

comp=Z,0.8nm,0.3s,baz=150,slow=8.1,SNR=3.0

TKL				S	S	02 18 26.2	-14

comp=Z,3.6nm,0.6s,baz=78,slow=22,SNR=6.7

TKL				LR	LR	02 23 39.5	

comp=Z,22nm,18.7s,baz=99,slow=40

232A	**Coleman** baz=20,SNR=12	**20.44**	**326**	P	**P**	**02 14 55.2**	**+0.7**
331A	**San Angelo** baz=20	**20.44**	**323**	⇑P	**P**	**02 14 55.1**	**+0.5**
430A	**Baggett Ranch,** baz=21,SNR=5.4	**20.55**	**321**	⇑P	**P**	**02 14 56.6**	**+0.8**
628A	**Black Gap, Mar** baz=21	**20.75**	**315**	⇑P	**P**	**02 14 58.3**	**+0.3**
231A	**Bronte** baz=21	**20.84**	**324**	⇓P	**P**	**02 14 59.9**	**+1.0**
429A	**Davenport Ranc** baz=21,SNR=10	**20.85**	**319**	P	Pn	02 15 00.2	-1.3
330A	**Mertzon** baz=21	**20.95**	**322**	⇓P	**P**	**02 15 00.1**	**0.0**
ABTX	**Abilene, Hawle** baz=21	**21.00**	**327**	⇑P	**P**	**02 15 01.1**	**+0.4**
627A	**Terlingua Ranc** baz=21,SNR=12	**21.08**	**314**	⇓P	**P**	**02 15 01.1**	**-0.4**
528A	**Cox Ranch, San** baz=21	**21.12**	**317**	⇓P	**P**	**02 15 01.7**	**-0.3**
TXAR	**Lajitas Array**	**21.20**	**314**	P	**P**	**02 15 03.8**	**+0.9**
TXAR				S	**S**	**02 18 53.5**	**-5.2**
TXAR	**Lajitas Array**	**21.20**	**314**	P	**P**	**02 15 03.8**	**+0.9**

comp=Z,10nm,1.0s,baz=133,slow=11,SNR=36

TXAR				S	**S**	**02 18 53.5**	**-5.2**

comp=Z,0.3nm,0.7s,baz=119,slow=14,SNR=4.0

TXAR				LR	LR	02 24 41.9	

comp=Z,32nm,18.0s,baz=5.0,slow=41

230A	**Sterling City** baz=21	**21.26**	**323**	⇑P	**P**	**02 15 03.6**	**+0.1**
428A	**Kincaid Ranch,** baz=21	**21.42**	**318**	⇓P	**P**	**02 15 07.4**	**+2.2**
Z32A	**Haskell** baz=22,SNR=8.2	**21.46**	**328**	⇑P	**P**	**02 15 08.1**	**+2.6**
626A	**Big Bend Ranch** baz=22,SNR=12	**21.66**	**313**	⇓P	**P**	**02 15 08.5**	**+0.8**
527A	**Woodward Ranch** baz=22	**21.66**	**316**	⇑P	**P**	**02 15 07.3**	**-0.5**
130A	**Snyder** baz=22	**21.70**	**325**	⇓P	**P**	**02 15 08.1**	**-0.1**
Z31A	**Sharp Cattle R** baz=22,SNR=6.5	**21.81**	**327**	⇓P	**P**	**02 15 10.4**	**+1.1**
526A	**Mary Lane Ranc** baz=22,SNR=20	**21.93**	**315**	⇑P	**P**	**02 15 11.5**	**+0.8**
328A	**Wristen Ranch,** baz=22,SNR=7.4	**21.94**	**319**	⇓P	**P**	**02 15 11.9**	**+1.2**
427A	**Hayter Ranch,** baz=22	**21.96**	**317**	⇑P	**P**	**02 15 11.6**	**+0.5**
Y32A	**R-V Farms, Ver** baz=22	**22.00**	**330**	⇓P	**P**	**02 15 12.8**	**+1.5**
129A	**Stewart Farms,** baz=22	**22.24**	**323**	⇓P	**P**	**02 15 14.8**	**+0.8**
426A	**McDonald Obser** baz=22	**22.27**	**316**	⇑P	**P**	**02 15 13.8**	**-0.6**
WMOK	**Wichita Mounta** comp=Z,3.7nm,0.6s	**22.29**	**332**	*e*P	**P**	**02 15 13.4**	**-1.0**
WMOK				*e*S	**S**	**02 19 14.4**	**-5.3**
Z30A	**Sanderson Ranc** baz=22	**22.31**	**325**	⇑P	**P**	**02 15 15.3**	**+0.6**
Y31A	**Rekieta Farm,** baz=22,SNR=5.3	**22.37**	**328**	⇑P	**P**	**02 15 15.5**	**+0.2**
128A	**Castleberry Fa** baz=23,SNR=5.4	**22.60**	**322**	⇓P	**P**	**02 15 17.8**	**0.0**
326A	**Caldwell Ranch** baz=23,SNR=5.0	**22.64**	**317**	⇓P	**P**	**02 15 18.6**	**+0.3**
227A	**Bennet, Jal** baz=23	**22.66**	**320**	⇓P	**P**	**02 15 18.0**	**-0.5**
WCI	**Wyandotte Cave** comp=Z,8.3nm,0.8s	**22.71**	**360**	*e*P	**P**	**02 15 20.8**	**+2.0**
X31A	**McDonald Ranch** baz=23	**22.77**	**330**	⇓P	**P**	**02 15 19.9**	**+0.4**
425A	**Indio Mountain** baz=23	**22.98**	**315**	⇑P	**P**	**02 15 21.8**	**-0.2**
Z28A	**Tucker Farm, M** baz=23	**23.02**	**323**	⇓P	**P**	**02 15 22.9**	**+0.7**
Y29A	**Porterfield Fa** baz=23	**23.04**	**326**	⇓P	**P**	**02 15 23.7**	**+1.2**
226B	**Tecolote Peak,** baz=23	**23.26**	**319**	⇓P	**P**	**02 15 24.7**	**-0.1**
325A	**Bean Ranch, Si** baz=23	**23.33**	**316**	⇓P	**P**	**02 15 25.8**	**+0.2**
324A	**Moseley Ranch,** baz=24	**23.72**	**316**	⇑P	**P**	**02 15 29.2**	**-0.2**
MNTX	**Cornudas Mount** comp=Z,2.8nm,1.0s	**23.81**	**316**	*e*P	**P**	**02 15 28.6**	**-1.5**
AMTX	**Amarillo** comp=Z,3.6nm,0.5s	**23.82**	**327**	P	**P**	**02 15 28.9**	**-1.3**
Y27A	**Causey** baz=24,SNR=5.2	**23.89**	**323**	⇓P	**P**	**02 15 30.8**	**-0.1**
Z26A	**Caprock** baz=24	**23.95**	**321**	⇑P	**P**	**02 15 31.3**	**-0.1**
224A	**Cornudas Mount** baz=24	**24.14**	**317**	⇓P	**P**	**02 15 33.0**	**-0.3**
Z25A	**Roswell** baz=24	**24.40**	**320**	⇑P	**P**	**02 15 35.7**	**0.0**
124A	**Stringfield Ra** baz=24	**24.49**	**318**	⇑P	**P**	**02 15 36.9**	**+0.2**
X26A	**CR and CF Fran** baz=25	**24.75**	**323**	⇑P	**P**	**02 15 38.5**	**-0.3**
Y25A	**Mesa, Roswell** baz=25	**24.83**	**321**	⇑P	**P**	**02 15 39.7**	**+0.1**
Z24A	**Sheeppen Canyo** baz=25	**24.84**	**319**	⇓P	**P**	**02 15 40.4**	**+0.6**
Y24A	**Capitan** baz=25,SNR=7.0	**25.28**	**320**	⇓P	**P**	**02 15 42.8**	**-0.9**
W25A	**X Bar L Ranch,** baz=26	**25.59**	**324**	⇑P	**P**	**02 15 47.3**	**+0.8**
U27A	**Thompson Grove** baz=26	**25.60**	**328**	⇑P	**P**	**02 15 46.5**	**0.0**
V26A	**Tequesquite Ra** baz=26	**25.64**	**325**	⇑P	**P**	**02 15 46.8**	**-0.1**
Y23A	**Lovelace Mesa,** baz=26	**25.67**	**319**	⇓P	**P**	**02 15 46.7**	**-0.5**
320A	**Kipp Ranch, An** baz=26	**25.79**	**312**	⇓P	**P**	**02 15 48.6**	**+0.2**
Z22A	**Elephant Butte** baz=26	**25.82**	**317**	⇓P	**P**	**02 15 48.8**	**+0.2**
121A	**Cookes Peak, D** baz=26	**25.94**	**315**	⇑P	**P**	**02 15 48.8**	**-0.9**
U26A	**Atchley Ranch,** baz=26	**26.06**	**326**	⇑P	**P**	**02 15 51.3**	**+0.5**
220A	**Playas Peak, P** baz=26	**26.10**	**313**	⇓P	**P**	**02 15 52.4**	**+1.3**
Z21A	**St. Cloud Mine** baz=26	**26.32**	**316**	⇓P	**P**	**02 15 55.5**	**+2.3**
S26A	**Kim** baz=27,SNR=5.3	**26.86**	**329**	⇑P	**P**	**02 15 58.1**	**+0.2**
T25A	**Trinidad** baz=27	**26.97**	**327**	⇑P	**P**	**02 15 59.6**	**+0.5**
Y20A	**Horse Springs,** baz=27	**27.16**	**317**	⇓P	**P**	**02 16 00.7**	**0.0**
U23A	**El Rito** baz=27	**27.38**	**323**	⇑P	**P**	**02 16 03.4**	**+0.7**
PDAR	**Pinedale Array**	**33.79**	**328**	P	**P**	**02 17 00.9**	**+1.6**
PDAR	**Pinedale Array**	**33.79**	**328**	P	**P**	**02 17 00.9**	**+1.6**

comp=Z,0.5nm,0.5s,baz=127,slow=9.4,SNR=4.1

LPAZ	**La Paz**	**36.24**	**150**	LR	LR	02 32 50.1	

comp=Z,34nm,20.0s,baz=238,slow=37

NVAR	**Mina Array Bea**	**36.33**	**315**	P	**P**	**02 17 23.2**	**+1.9**
NVAR	**Mina Array Bea**	**36.33**	**315**	P	**P**	**02 17 23.2**	**+1.9**

comp=Z,1.4nm,0.9s,baz=125,slow=6.0,SNR=7.2

CFAA	**Coronel Fontan**	**49.86**	**160**	P	**P**	**02 19 11.5**	**+1.1**
CFAA	**Coronel Fontan**	**49.86**	**160**	P	**P**	**02 19 11.5**	**+1.1**

comp=Z,0.2nm,0.9s,baz=3.3,slow=5.4,SNR=5.6

YKA	**Yellowknife Ar**	**51.08**	**344**	P	**P**	**02 19 19.9**	**+0.7**
YKA	**Yellowknife Ar**	**51.08**	**344**	P	**P**	**02 19 19.9**	**+0.7**

comp=Z,2.3nm,0.7s,baz=138,slow=7.9,SNR=26

PLCA	**Paso Flores**	**57.75**	**166**	P	**P**	**02 20 08.2**	**0.0**
PLCA	**Paso Flores**	**57.75**	**166**	P	**P**	**02 20 08.2**	**0.0**

comp=Z,1.4nm,0.7s,baz=336,slow=8.9,SNR=4.1

ILAR	**Eielson Array**	**63.80**	**335**	P	**P**	**02 20 50.1**	**+1.1**
ILAR	**Eielson Array**	**63.80**	**335**	P	**P**	**02 20 50.1**	**+1.1**

comp=Z,0.4nm,0.7s,baz=124,slow=4.6,SNR=8.3

ESDC	**Sonseca Array**	**74.44**	**53**	P	**P**	**02 21 56.3**	**+0.7**
ESDC	**Sonseca Array**	**74.44**	**53**	P	**P**	**02 21 56.3**	**+0.7**

comp=Z,0.1nm,0.3s,baz=279,slow=5.8,SNR=4.8

TORD	**Torodi Ar. Bea**	**84.63**	**78**	P	**P**	**02 22 50.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**84.63**	**78**	P	**P**	**02 22 50.5**	**-0.9**

comp=Z,0.8nm,1.0s,baz=285,slow=4.9,SNR=4.7

FINES	**FINESS Array B**	**86.79**	**26**	P	**P**	**02 23 02.4**	**+1.1**
FINES	**FINESS Array B**	**86.79**	**26**	P	**P**	**02 23 02.4**	**+1.1**

comp=Z,1.8nm,1.0s,baz=289,slow=4.3,SNR=3.0

BRTR	**Keskin Array B**	**101.66**	**43**	P	**Pdif**	**02 24 09.0**	**-1.2**

comp=Z,0.4nm,0.8s,baz=331,slow=5.6,SNR=2.5

WRA	**Warramunga Arr**	**141.15**	**257**	PKPpre	PKPpre	02 29 44.5	
WRA				PKP	**PKPdf**	**02 29 48.3**	**-0.2**
WRA	**Warramunga Arr**	**141.15**	**257**	PKhKP	PKPpre	02 29 44.5	

comp=Z,0.4nm,0.8s,baz=88,slow=2.3,SNR=5.4

WRA				PKP	**PKPdf**	**02 29 48.3**	**-0.2**

comp=Z,0.4nm,0.8s,baz=89,slow=2.2,SNR=5.5

ASAR	**Alice Springs**	**141.40**	**251**	PKPpre	PKPpre	02 29 45.7	
ASAR				PKP	**PKPdf**	**02 29 48.7**	**-0.2**
ASAR	**Alice Springs**	**141.40**	**251**	PKhKP	PKPpre	02 29 45.7	

comp=Z,0.5nm,0.6s,baz=95,slow=2.0,SNR=6.6

ASAR				PKP	**PKPdf**	**02 29 48.7**	**-0.2**

comp=Z,0.5nm,0.6s,baz=96,slow=1.7,SNR=6.5

GELI	**Tayfur-Gelibol**	**1.90**	**360**	*e*PN		**Pb**	**02 33 42.0**	**+0.5**
GELI	**Tayfur-Gelibol**	**1.90**	**360**	*e*Pn		**Pb**	**02 33 42.0**	**+0.5**
DST	**Dursunbey**	**1.99**	**56**	*e*PN		**Pb**	**02 33 43.0**	**-0.1**
DST	**Dursunbey**	**1.99**	**56**	*e*Pn		**Pb**	**02 33 43.0**	**-0.1**
KRBG	**Karabiga-Canak**	**2.00**	**18**	*e*PN		**Pb**	**02 33 42.9**	**-0.2**
KRBG	**Karabiga-Canak**	**2.00**	**18**	*e*Pn		**Pb**	**02 33 42.9**	**-0.2**
ERIK	**Erikli-Kesan**	**2.17**	**0**	*e*PN		**Pb**	**02 33 46.0**	**-0.1**
ERIK	**Erikli-Kesan**	**2.17**	**0**	*e*Pn		**Pb**	**02 33 46.0**	**-0.1**
ENEZ	**Enez**	**2.25**	**353**	*e*PN		**Pb**	**02 33 47.0**	**-0.5**
ENEZ	**Enez**	**2.25**	**353**	*e*Pn		**Pb**	**02 33 47.0**	**-0.5**
RKY	**Sarkoy-Tekirda**	**2.25**	**13**	*e*PN		**Pb**	**02 33 46.8**	**-0.8**
RKY	**Sarkoy-Tekirda**	**2.25**	**13**	*e*Pn		**Pb**	**02 33 46.8**	**-0.8**
KCTX	**Karacabey (Bur**	**2.28**	**39**	*e*PN		**Pb**	**02 33 46.9**	**-1.2**
KCTX	**Karacabey (Bur**	**2.28**	**39**	*e*Pn		**Pb**	**02 33 46.9**	**-1.2**
MFT	**Murefte**	**2.37**	**15**	*e*PN		**Pb**	**02 33 48.6**	**-0.9**
MFT	**Murefte**	**2.37**	**15**	*e*Pn		**Pb**	**02 33 48.6**	**-0.9**
KHL	**Karahalli**	**2.39**	**93**	*e*PN		**Pb**	**02 33 48.4**	**-1.5**
KHL	**Karahalli**	**2.39**	**93**	*e*Pn		**Pb**	**02 33 48.4**	**-1.5**
TVSB	**Tavsanli**	**2.50**	**67**	*e*PN		**Pb**	**02 33 49.8**	**-2.1**
TVSB	**Tavsanli**	**2.50**	**67**	*e*Pn		**Pb**	**02 33 49.8**	**-2.1**

CSEM ***31*** *02:36:48.5, 37°.03N×5°.46W, h9km, ML1.0, After MDD*
MDD 31 02:36:48.5±0.6, 37°.03N×5°.46W, h9km±5km, mbLg1.0/6, Error ellipse: s-maj=4.9km s-min=4.4km az=23.0, PRXIMO, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.13**	**161**	Pg	Pg	02 36 51.0	-0.5
LIJA				Lg	Lg	02 36 53.8	
LIJA	**Lijar**	**0.13**	**161**	Pg	Pg	02 36 51.0	-0.5
LIJA				Lg	Lg	02 36 53.8	
ESPR	**Espera**	**0.36**	**244**	Lg	Lg	02 36 59.8	
	0.3nm,0.4s,SNR=4.0						
ESPR	**Espera**	**0.36**	**244**	Lg	Lg	02 36 59.8	
	0.3nm,0.4s,SNR=4.0						
ELOJ	**Sierra Loja**	**1.05**	**83**	Pg	Pn	02 37 10.4	+0.9
	0.3nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**1.05**	**83**	Pg	Pn	02 37 10.4	+0.9
	0.3nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.09**	**60**	Lg	Lg	02 37 25.0	
	1.5nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**1.09**	**60**	Lg	Lg	02 37 25.0	
	1.5nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.22**	**308**	Pg	Pn	02 37 11.1	-0.6
	0.5nm,0.3s,SNR=7.9						
EMIN				Sn	Sb	02 37 26.6	-1.0
	0.2nm,0.2s,SNR=6.8						
EMIN				Lg	Lg	02 37 28.0	
	0.7nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.22**	**308**	Pg	Pn	02 37 11.1	-0.6
	0.5nm,0.3s,SNR=7.9						
EMIN				Sn	Sb	02 37 26.6	-1.0
	0.2nm,0.2s,SNR=6.8						
EMIN				Lg	Lg	02 37 28.0	
	0.7nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.33**	**31**	Pg	Pn	02 37 12.7	-0.6
	0.1nm,0.3s,SNR=7.9						
EADA				Sn	Sb	02 37 28.5	-2.5
	0.3nm,0.1s,SNR=7.9						
EADA				Lg	Lg	02 37 30.4	
	0.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.33**	**31**	Pg	Pn	02 37 12.7	-0.7
	0.1nm,0.3s,SNR=7.9						
EADA				Sn	Sb	02 37 28.5	-2.5
	0.3nm,0.1s,SNR=7.9						
EADA				Lg	Lg	02 37 30.4	
	0.6nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.69**	**288**	Pg	Pb	02 37 20.3	+0.5
	0.1nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	02 37 42.7	
	0.5nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**1.69**	**288**	Pg	Pb	02 37 20.3	+0.5
	0.1nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	02 37 42.7	
	0.5nm,0.4s,SNR=7.9						
PBAR	**Barrancos**	**1.70**	**313**	*e*Sn	Sn	02 37 38.0	-2.2
PBAR				A	A	02 37 48.2	
	0.6nm,0.5s						
PBAR	**Barrancos**	**1.70**	**313**	Sn	Sn	02 37 38.0	-2.2
	0.6nm,0.5s						
PBAR	**Barrancos**	**1.70**	**313**	Sn	Sn	02 37 38.0	-2.2
	0.6nm,0.5s						
PVAQ	**Vaqueiros**	**1.84**	**282**	*e*Sn	Sn	02 37 42.4	-1.4
PVAQ				A	A	02 37 51.8	
	0.9nm,0.8s						
PVAQ	**Vaqueiros**	**1.84**	**282**	Sn	Sn	02 37 42.4	-1.4
	0.9nm,0.8s						
PVAQ	**Vaqueiros**	**1.84**	**282**	Sn	Sn	02 37 42.4	-1.4
	0.9nm,0.8s						
EQES	**Quesada**	**2.05**	**67**	Sn	Sn	02 37 48.2	-0.9
	0.1nm,0.3s,SNR=7.9						
EQES				Lg	Lg	02 37 53.6	
	0.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.05**	**67**	Sn	Sn	02 37 48.2	-0.9
	0.1nm,0.3s,SNR=7.9						
EQES				Lg	Lg	02 37 53.6	
	0.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**2.12**	**325**	Lg	Lg	02 37 55.0	
	0.6nm,0.2s,SNR=4.0						
EBAD	**Badajoz**	**2.12**	**325**	Lg	Lg	02 37 55.0	
	0.6nm,0.2s,SNR=4.0						

IDC 31 02:40:21.2±9.6, 12°.55N×91°.32W, h0km, mb3.6/4, mb1 4.1/5, mb1mx3.7/24, mbtmp3.8/5, ML4.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.5/28, Error ellipse: s-maj=158.6km s-min=60.0km az=157.0, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**8.17**	**21**	Pn	Pn	02 42 22.8	+1.7
	3.5nm,0.3s,baz=203,slow=3.8,SNR=5.7						
TEIG				Sn	Sn	02 43 42.6	-12
	0.1nm,0.3s,baz=42,slow=12,SNR=2.1						
TEIG				LR	LR	02 44 38.7	
	comp=Z,60nm,20.8s,baz=98,slow=32						
TXAR	**Lajitas Array**	**20.26**	**327**	P	P	02 44 56.6	-1.9
	0.6nm,0.6s,baz=152,slow=12,SNR=10.0						
ANMO	**Albuquerque**	**26.18**	**331**	P	P	02 45 58.0	+0.2
	1.2nm,0.7s,baz=135,slow=13,SNR=7.9						
NVAR	**Mina Array Bea**	**35.21**	**322**	P	P	02 47 19.1	+1.6
	0.6nm,0.6s,baz=125,slow=8.9,SNR=5.9						
YKA	**Yellowknife Ar**	**52.58**	**347**	P	P	02 49 34.9	-1.4
	0.1nm,0.3s,baz=147,slow=7.2,SNR=5.7						

ISK ***31*** *02:46:57.7, 35°.05N×31°.45E, h9km, MD4.0*
ISCJB ***31*** *02:47:00.2±0.3, 35°.00N±0°.02×31°.36E±0°.03, h58km±6km, mb3.6/8, Error ellipse: s-maj=4.1km s-min=2.9km az=150.1*
DDA ***31*** *02:47:01.4, 35°.15N×31°.37E, h52km, MD3.5*
NIC ***31*** *02:47:01.6±0.2, 35°.12N×31°.39E, h35km, mb4.1, ML3.8, MW3.6*
IDC ***31*** *02:47:01.7±2.9, 35°.12N×31°.34E, h38km±30km, mb3.5/8, mb1 3.6/14, mb1mx3.4/31, mbtmp3.5/14, ML3.8/5, Error ellipse: s-maj=21.3km s-min=18.7km az=67.0*
CSEM ***31*** *02:47:01.8±0.1, 35°.03N×31°.39E, h40km, Mw3.6, Error ellipse: s-maj=2.8km s-min=2.1km az=57.0*
HLW ***31*** *02:47:02.7, 34°.90N×31°.22E, h33km±32km, Md0.0, Ml3.4*
NSSC ***31*** *02:47:14.9±2.9, 34°.62N×32°.86E, h16km±109km, ML2.7*
ISC 31 02:47:01.4±1.0, 34°.99N±0°.03×31°.35E±0°.03, h41km±14km, n160, σ1°13/187, mb3.6/8, 2D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.80**	**87**	||P	**Pn**	**02 47 16.0**	**-0.3**
AKMC	**Akamas**	**0.80**	**87**	||*i*P	**Pn**	**02 47 16.0**	**-0.3**
PPCY	**Paphos**	**0.82**	**97**	P	P	**Pn**	**02 47 16.5**	**0.0**
PPCY	**Paphos**	**0.82**	**97**	P	P	**Pn**	**02 47 16.5**	**0.0**
ALFC	**Alevga**	**1.04**	**80**	P	P	**Pn**	**02 47 19.3**	**-0.2**
	66nm,0.2s							
ALFC				S	S	**Sn**	**02 47 32.8**	**-0.1**
ALFC	**Alevga**	**1.04**	**80**	P	P	**Pn**	**02 47 19.3**	**-0.2**
	66nm,0.2s							
ALFC				S	S	**Sn**	**02 47 32.8**	**-0.1**
SZAC	**Souni-Zanaja**	**1.28**	**100**	P	P	**Pn**	**02 47 23.3**	**+0.4**
SZAC				S	S	**Sn**	**02 47 40.0**	**+1.2**
SZAC	**Souni-Zanaja**	**1.28**	**100**	P	P	**Pn**	**02 47 23.3**	**+0.4**
SZAC				S	S	**Sn**	**02 47 40.0**	**+1.2**
AKDN	**Akdeniz- K¯–br**	**1.36**	**76**	*e*PN	P	**Pn**	**02 47 22.3**	**-1.6**
AKDN				*e*SN	S	**Sn**	**02 47 39.9**	**-0.8**
AKDN	**Akdeniz- K¯–br**	**1.36**	**76**	*e*Pn	P	**Pn**	**02 47 22.3**	**-1.6**
AKDN				*e*Sn	S	**Sn**	**02 47 39.9**	**-0.8**
GAZI	**Gazipasa**	**1.47**	**32**	*i*P	P	**Pn**	**02 47 24.0**	**-1.5**
GAZI				*i*S	S	**Sn**	**02 47 42.5**	**-1.0**
GAZI	**Gazipasa**	**1.47**	**32**	*i*P	P	**Pn**	**02 47 24.0**	**-1.5**
GAZI				*i*S	S	**Sn**	**02 47 42.5**	**-1.0**
MAMC	**Mammari**	**1.54**	**83**	P	P	**Pn**	**02 47 26.5**	**+0.1**
MAMC	**Mammari**	**1.54**	**83**	P	P	**Pn**	**02 47 26.5**	**+0.1**
CSS	**Prodhromos**	**1.62**	**90**	P	P	**Pn**	**02 47 27.4**	**-0.2**
	10nm,0.3s							
CSS				S	S	**Sn**	**02 47 47.7**	**+0.4**
CSS	**Prodhromos**	**1.62**	**90**	*e*PN	P	**Pn**	**02 47 26.8**	**-0.8**
CSS				*e*SN	S	**Sn**	**02 47 47.4**	**+0.1**
CSS	**Prodhromos**	**1.62**	**90**	*e*Pn	P	**Pn**	**02 47 26.8**	**-0.8**
CSS	**Prodhromos**	**1.62**	**90**	P	P	**Pn**	**02 47 27.4**	**-0.2**
	10nm,0.3s							
CSS				*e*Sn	S	**Sn**	**02 47 47.4**	**+0.1**
CSS				S	S	**Sn**	**02 47 47.7**	**+0.4**
AKIN	**Ak¯–nc¯–lar- K**	**1.74**	**89**	*e*PN	P	**Pn**	**02 47 27.6**	**-1.5**
AKIN	**Ak¯–nc¯–lar- K**	**1.74**	**89**	*e*Pn	P	**Pn**	**02 47 27.6**	**-1.5**
LFK	**Lefkose**	**1.81**	**80**	*e*PN	P	**Pn**	**02 47 28.8**	**-1.4**
LFK	**Lefkose**	**1.81**	**80**	*e*Pn	P	**Pn**	**02 47 28.8**	**-1.4**
ANTB	**Antalya**	**1.99**	**344**	*e*PN	P	**Pn**	**02 47 32.0**	**-0.6**
ANTB	**Antalya**	**1.99**	**344**	*e*Pn	P	**Pn**	**02 47 32.0**	**-0.6**
ERMK	**Ermenek**	**2.08**	**37**	*i*P	P	**Pn**	**02 47 34.9**	**+0.9**
ERMK				*i*S	S	**Sn**	**02 48 00.9**	**+2.1**
ERMK	**Ermenek**	**2.08**	**37**	*i*P	P	**Pn**	**02 47 34.9**	**+0.9**
ERMK				*i*S	S	**Sn**	**02 48 00.9**	**+2.1**
ELL	**Elmali**	**2.11**	**327**	*e*PN	P	**Pn**	**02 47 34.1**	**-0.3**
ELL	**Elmali**	**2.11**	**327**	*e*Pn	P	**Pn**	**02 47 34.1**	**-0.3**
PHNC	**Paralimni**	**2.20**	**89**	P	P	**Pn**	**02 47 37.1**	**+1.6**
	10nm,0.6s							
PHNC				S	S	**Sn**	**02 48 04.0**	**+2.5**
PHNC	**Paralimni**	**2.20**	**89**	P	P	**Pn**	**02 47 37.1**	**+1.6**
	10nm,0.6s							
FETY	**Fethiye**	**2.47**	**312**	*e*PN	P	**Pn**	**02 47 39.6**	**+0.4**
FETY	**Fethiye**	**2.47**	**312**	*e*Pn	P	**Pn**	**02 47 39.6**	**+0.4**
GLHS	**Gihisar (BURDU**	**2.63**	**326**	*e*PN	P	**Pn**	**02 47 41.7**	**+0.2**
GLHS	**Gihisar (BURDU**	**2.63**	**326**	*e*Pn	P	**Pn**	**02 47 41.7**	**+0.2**
ISP	**Isparta**	**2.91**	**347**	*e*PN	P	**Pn**	**02 47 45.8**	**+0.5**
ISP	**Isparta**	**2.91**	**347**	*e*Pn	P	**Pn**	**02 47 45.8**	**+0.5**
KONT	**Konya--Tatoy**	**3.06**	**15**	*e*PN	P	**Pn**	**02 47 47.0**	**-0.3**
KONT	**Konya--Tatoy**	**3.06**	**15**	*e*Pn	P	**Pn**	**02 47 47.1**	**-0.3**
YER	**Yerkesik**	**3.28**	**312**	*e*PN	P	**Pn**	**02 47 51.2**	**+0.8**
YER	**Yerkesik**	**3.28**	**312**	*e*Pn	P	**Pn**	**02 47 51.2**	**+0.8**
LADK	**Ladik-KONYA**	**3.31**	**14**	*e*PN	P	**Pn**	**02 47 50.6**	**-0.2**
LADK	**Ladik-KONYA**	**3.31**	**14**	*e*Pn	P	**Pn**	**02 47 50.6**	**-0.2**
GULE	**Gulek**	**3.60**	**49**	*i*P	P	**Pn**	**02 47 56.2**	**+1.4**
GULE				*i*S	S	**Sn**	**02 48 40.1**	**+4.0**
GULE	**Gulek**	**3.60**	**49**	*i*P	P	**Pn**	**02 47 56.2**	**+1.4**
SHUT	**Suhut-Afyon**	**3.62**	**350**	*e*PN	P	**Pn**	**02 47 54.8**	**-0.2**
SHUT	**Suhut-Afyon**	**3.62**	**350**	*e*Pn	P	**Pn**	**02 47 54.8**	**-0.2**
KRTS	**Karatas**	**3.63**	**63**	*e*PN	P	**Pn**	**02 47 54.7**	**-0.5**
KRTS	**Karatas**	**3.63**	**63**	*e*Pn	P	**Pn**	**02 47 54.7**	**-0.5**
KHL	**Karahalli**	**3.64**	**337**	*e*PN	P	**Pn**	**02 47 55.7**	**+0.4**
KHL	**Karahalli**	**3.64**	**337**	*e*Pn	P	**Pn**	**02 47 55.7**	**+0.4**
SULT	**Sultanhani-AKS**	**3.65**	**28**	*e*PN	P	**Pn**	**02 47 54.9**	**-0.5**
SULT	**Sultanhani-AKS**	**3.65**	**28**	*e*Pn	P	**Pn**	**02 47 54.9**	**-0.5**
NAQL	**Naqoura**	**3.66**	**120**	*e*P	P	**Pn**	**02 47 55.4**	**-0.1**
MLSB	**Milas**	**3.70**	**310**	*e*PN	P	**Pn**	**02 47 57.1**	**+1.0**
MLSB	**Milas**	**3.70**	**310**	*e*Pn	P	**Pn**	**02 47 57.1**	**+1.0**
HNTI	**Hanita**	**3.70**	**120**	Pn	P	**Pn**	**02 47 56.7**	**-0.4**
BHL	**Bhannes**	**3.72**	**106**	*e*P	P	**Pn**	**02 47 55.1**	**-1.3**
BHL	**Bhannes**	**3.72**	**106**	*e*P	P	**Pn**	**02 47 55.1**	**-1.3**
OFRI	**'Ofer**	**3.84**	**127**	Pn	P	**Pn**	**02 47 58.3**	**+0.3**
ARNB	**Al Arnab**	**3.87**	**76**	*e*P	P	**Pn**	**02 47 57.6**	**-0.9**
ARNB				*e*S	S	Sn	02 48 33.2	-10
ARNB					AML	AML	02 48 41.8	
	comp=E,114nm,0.2s							
ARNB					AML	AML	02 48 46.0	
	comp=Z,44nm,0.3s							
ARNB					AML	AML	02 48 46.5	
	comp=N,85nm,0.2s							
ARNB	**Al Arnab**	**3.87**	**76**	*e*P	P	**Pn**	**02 47 57.6**	**-0.9**
	SNR=47							
BODT	**Bodrum**	**3.87**	**303**	*e*PN	P	**Pn**	**02 47 59.9**	**+1.4**
BODT	**Bodrum**	**3.87**	**303**	*e*Pn	P	**Pn**	**02 47 59.9**	**+1.4**
MMA0	**Mount Meron ar**	**3.90**	**119**	Pn	P	**Pn**	**02 47 58.9**	**0.0**
MMAI	**Mount Meron Ar**	**3.90**	**119**	Pn	P	**Pn**	**02 47 59.1**	**+0.2**
	comp=N,22nm,0.3s,baz=304,slow=13,SNR=68							
MMAI				Sn	Sn	**Sn**	**02 48 42.7**	**-0.7**
	comp=N,53nm,0.3s,baz=302,slow=22,SNR=14							
KIZT	**Kizilcal**	**3.91**	**6**	*e*PN	P	**Pn**	**02 47 58.8**	**-0.3**
KIZT	**Kizilcal**	**3.91**	**6**	*e*Pn	P	**Pn**	**02 47 58.8**	**-0.3**
KSDI	**Kefar Szold**	**4.00**	**115**	Pn	P	**Pn**	**02 48 00.1**	**-0.1**
RCY	**Rachaya**	**4.00**	**111**	*e*P	P	**Pn**	**02 48 00.3**	**-0.1**
RCY	**Rachaya**	**4.00**	**111**	*e*P	P	**Pn**	**02 48 00.3**	**-0.1**
YAYL	**Yayladag**	**4.02**	**74**	*i*P	P	**Pn**	**02 48 01.4**	**+0.8**
YAYL				*i*S	S	**Sn**	**02 48 45.8**	**-0.6**
YAYL	**Yayladag**	**4.02**	**74**	*i*P	P	**Pn**	**02 48 01.4**	**+0.8**
YAYL				*i*S	S	**Sn**	**02 48 45.8**	**-0.6**
HTY	**Hatay**	**4.06**	**72**	*e*PN	P	**Pn**	**02 48 00.7**	**-0.3**
HTY	**Hatay**	**4.06**	**72**	*e*Pn	P	**Pn**	**02 48 00.7**	**-0.3**
NIG	**Nigde**	**4.07**	**39**	*e*PN	P	**Pn**	**02 48 00.9**	**-0.5**
NIG	**Nigde**	**4.07**	**39**	*e*Pn	P	**Pn**	**02 48 00.9**	**-0.5**
CEYT	**Ceyhan**	**4.10**	**59**	*e*PN	P	**Pn**	**02 48 01.2**	**-0.3**
CEYT	**Ceyhan**	**4.10**	**59**	*e*Pn	P	**Pn**	**02 48 01.2**	**-0.3**
SLTI	**Sal'it**	**4.12**	**131**	Pn	P	**Pn**	**02 48 01.7**	**-0.2**
KULA	**Kula-Manisa**	**4.13**	**329**	*e*PN	P	**Pn**	**02 48 02.5**	**+0.5**
KULA	**Kula-Manisa**	**4.13**	**329**	*e*Pn	P	**Pn**	**02 48 02.5**	**+0.5**
ALT	**Altintas**	**4.18**	**347**	*e*PN	P	**Pn**	**02 48 03.1**	**+0.3**
ALT	**Altintas**	**4.18**	**347**	*e*Pn	P	**Pn**	**02 48 03.1**	**+0.3**
KSHT	**Keshet**	**4.21**	**117**	Pn	P	**Pn**	**02 48 04.9**	**+1.7**
KSHT				Sn	Sn	**Sn**	**02 48 51.1**	**0.0**
MMLI	**Mount Malkishu**	**4.24**	**126**	Pn	P	**Pn**	**02 48 04.2**	**+0.7**
GCAM	**G?zelcaml?**	**4.29**	**310**	*i*P	P	**Pn**	**02 48 04.2**	**+0.1**
GCAM				*i*S	S	**Sn**	**02 48 49.9**	**-2.9**
GCAM	**G?zelcaml?**	**4.29**	**310**	*i*P	P	**Pn**	**02 48 04.2**	**+0.1**
GCAM				*i*S	S	**Sn**	**02 48 49.9**	**-2.9**
BTCH	**Batrach**	**4.30**	**74**	*e*P	P	**Pn**	**02 48 04.5**	**+0.1**
BTCH				*e*S	Sn	02 48 43.1	-10	
BTCH					AML	AML	02 48 56.8	
	comp=E,112nm,0.5s							
BTCH					AML	AML	02 49 04.0	
	comp=N,145nm,0.4s							
BTCH					AML	AML	02 49 04.0	
	comp=Z,81nm,0.4s							
BTCH	**Batrach**	**4.30**	**74**	*e*P	P	**Pn**	**02 48 04.5**	**+0.1**
	SNR=47							
GDZ	**Gediz**	**4.36**	**340**	*i*P	P	**Pn**	**02 48 05.6**	**+0.4**
GDZ				*i*S	S	**Sn**	**02 48 52.8**	**-2.0**
GDZ	**Gediz**	**4.36**	**340**	*i*P	P	**Pn**	**02 48 05.6**	**+0.4**
GDZ				*i*S	S	**Sn**	**02 48 52.8**	**-2.0**
KOZT	**Kozan**	**4.39**	**54**	*e*PN	P	**Pn**	**02 48 04.8**	**-0.8**
KOZT	**Kozan**	**4.39**	**54**	*e*Pn	P	**Pn**	**02 48 04.8**	**-0.8**
HMDT	**Nahal Hemdat**	**4.42**	**127**	Pn	P	**Pn**	**02 48 07.2**	**+1.2**
SVRH	**Sivrihisar-ESK**	**4.45**	**2**	*e*PN	P	**Pn**	**02 48 06.9**	**+0.4**
SVRH	**Sivrihisar-ESK**	**4.45**	**2**	*e*Pn	P	**Pn**	**02 48 06.9**	**+0.4**
RSH		**4.48**	**153**	S	Sn	**Sn**	**02 48 55.2**	**-2.5**
	baz=151							
RSH		**4.48**	**153**	P	Pn	**Pn**	**02 48 08.6**	**+1.7**
TCHB	**Talchebab**	**4.49**	**120**	*e*P	Pn	**Pn**	**02 48 05.9**	**-1.0**
	SNR=47							
TOTH	**TOTAH**	**4.51**	**110**	*e*P	Pn	**Pn**	**02 48 07.7**	**+0.4**
TOTH				*e*S	Sn	02 48 40.1	-18	
TOTH					AML	AML	02 48 59.1	
	comp=Z,124nm,0.2s							
TOTH					AML	AML	02 49 02.4	
	comp=E,56nm,0.5s							
TOTH					AML	AML	02 49 02.5	
	comp=N,49nm,0.4s							
TOTH	**TOTAH**	**4.51**	**110**	*e*P	Pn	**Pn**	**02 48 07.7**	**+0.4**
	SNR=47							
AMAG	**Maghara**	**4.61**	**160**	P	Pn	**Pn**	**02 48 09.8**	**+1.2**
	baz=157							
AMAG	**Maghara**	**4.61**	**160**	P	Pn	**Pn**	**02 48 09.8**	**+1.2**
TVSB	**Tavsanli**	**4.70**	**342**	*e*PN	Pn	**Pn**	**02 48 09.8**	**-0.1**
TVSB	**Tavsanli**	**4.70**	**342**	*e*Pn	Pn	**Pn**	**02 48 09.8**	**-0.1**
DSI	**Dead Sea**	**4.80**	**134**	Pn	Pn	**Pn**	**02 48 11.8**	**+0.7**
KZIT	**Kziot**	**4.81**	**147**	Pn	Pn	**Pn**	**02 48 12.4**	**+1.1**
RTMI	**Retamim**	**4.82**	**144**	Pn	Pn	**Pn**	**02 48 12.5**	**+1.0**
SALA	**Sala**	**5.02**	**115**	*e*P	P	**Pn**	**02 48 13.4**	**-1.0**
SALA				*e*S	Sn	02 48 55.0	-16	
SALA					AML	AML	02 49 13.0	
	comp=E,5.3nm,0.5s							
SALA	**Sala**	**5.02**	**115**	*e*P	P	**Pn**	**02 48 13.4**	**-1.0**
	SNR=47							
HHAG	**Hagoal**	**5.06**	**173**	P	P	**Pn**	**02 48 15.8**	**+1.0**
	baz=171							
HHAG	**Hagoal**	**5.06**	**173**	P	P	**Pn**	**02 48 15.8**	**+1.0**
KOT	**Kottamia**	**5.06**	**175**	P	P	**Pn**	**02 48 15.8**	**+1.0**
	baz=173							
KOT				AMP			02 49 00.0	
	comp=N,40μm,0.4s,logA/T=5.0,baz=173							
KOT	**Kottamia**	**5.06**	**175**	P	P	**Pn**	**02 48 15.8**	**+1.0**
BRTR	**Keskin Array B**	**5.07**	**20**	Pn	Pn	**Pn**	**02 48 14.5**	**-0.4**
	comp=N,0.2nm,0.3s,baz=196,slow=16,SNR=8.5							
BRTR				Sn	Sn	**Sn**	**02 49 15.7**	**+3.4**
	comp=N,0.2nm,0.3s,baz=187,slow=21,SNR=3.3							
KMRS	**Kahramanmaras**	**5.14**	**59**	*e*PN	P	**Pn**	**02 48 15.8**	**-0.1**
KMRS	**Kahramanmaras**	**5.14**	**59**	*e*Pn	P	**Pn**	**02 48 15.8**	**-0.1**
GAZ	**Gaziantep**	**5.22**	**64**	*e*PN	P	**Pn**	**02 48 16.6**	**-0.4**
GAZ	**Gaziantep**	**5.22**	**64**	*e*Pn	P	**Pn**	**02 48 16.6**	**-0.4**
BNN	**Bunyan**	**5.28**	**42**	*e*PN	P	**Pn**	**02 48 17.2**	**-0.6**
BNN	**Bunyan**	**5.28**	**42**	*e*Pn	P	**Pn**	**02 48 17.3**	**-0.6**
HMAT	**Matruh**	**5.28**	**224**	P	Pn	**Pn**	**02 48 18.0**	**+0.3**
	baz=224							
HMAT	**Matruh**	**5.28**	**224**	P	Pn	**Pn**	**02 48 18.0**	**+0.3**
SUZ		**5.28**	**166**	P	Pn	**Pn**	**02 48 19.3**	**+1.4**
	baz=164							
SUZ		**5.28**	**166**	P	Pn	**Pn**	**02 48 19.3**	**+1.4**
SARI	**SarD1z-Kayseri**	**5.31**	**49**	*e*PN	Pn	**Pn**	**02 48 18.5**	**+0.2**
HSAF	**As Saff**	**5.36**	**178**	P	Pn	**Pn**	**02 48 19.4**	**+0.5**
	baz=176							
HSAF	**As Saff**	**5.36**	**178**	P	Pn	**Pn**	**02 48 19.4**	**+0.5**
ASF	**Jabal al Asfar**	**5.41**	**120**	Pn	Pn	**Pn**	**02 48 21.4**	**+1.7**
	comp=N,1.8nm,0.3s,baz=161,slow=4.5,SNR=16							
ASF				Sn	Sn	**Sn**	**02 49 26.0**	**+5.2**
	comp=N,2.2nm,0.3s,baz=307,slow=5.1,SNR=6.7							
HNKL	**Nakhl**	**5.51**	**156**	S	S	**Sn**	**02 49 19.2**	**-4.0**
	baz=154							
PRNI	**Paran**	**5.55**	**145**	Pn	Pn	**Pn**	**02 48 22.6**	**+1.0**
KRMI	**Paran Flat**	**5.63**	**149**	Pn	Pn	**Pn**	**02 48 23.2**	**+0.6**
CORM	**Corum**	**5.80**	**26**	*e*PN	Pn	**Pn**	**02 48 25.6**	**+0.7**
CORM	**Corum**	**5.80**	**26**	*e*Pn	Pn	**Pn**	**02 48 25.7**	**+0.7**
HRFI	**Mount Harif**	**5.84**	**147**	Pn	Pn	**Pn**	**02 48 26.3**	**+0.8**
MBRI	**Mt Berech**	**5.99**	**149**	Pn	Pn	**Pn**	**02 48 28.5**	**+0.9**
DARE	**Darende-Malaty**	**6.08**	**52**	*e*PN	Pn	**Pn**	**02 48 29.4**	**+0.5**
EIL	**Elat**	**6.12**	**149**	Pn	Pn	**Pn**	**02 48 30.4**	**+1.1**
	comp=N,1.5nm,0.3s,baz=337,slow=9.2,SNR=14							
EIL				Sn	Sn	**Sn**	**02 49 36.3**	**-1.7**
	comp=N,3.1nm,0.3s,baz=322,

CKL	**Chakachamna La**	**0.83**	**300**	P		**Pn**	**02 54 39.6**	**-1.2**
STLK	**Strandline Lak**	**0.85**	**327**	P		**Pn**	**02 54 40.2**	**-0.9**
BGL	**Barrier Glacie**	**0.89**	**303**	P		**Pn**	**02 54 40.5**	**-1.0**
DFR	**Drift River**	**0.92**	**258**	P		**Pn**	**02 54 40.7**	**-1.2**
SEW	**Seward**	**0.98**	**134**	P		**Pn**	**02 54 41.9**	**-0.7**
SEW				S		**Sn**	**02 54 56.5**	**+0.8**
RSO	**Redoubt South**	**0.99**	**251**	*e*Pn		**Pn**	**02 54 42.0**	**-1.0**
BRLK	**Bradley Lake**	**1.03**	**181**	P		**Pn**	**02 54 43.2**	**-0.1**
BRLK				S		**Sn**	**02 54 58.5**	**+1.6**
PMR	**Palmer**	**1.16**	**45**	P		**Pn**	**02 54 44.3**	**-0.6**
PMR				S		**Sn**	**02 54 60.0**	**+0.1**
SKT	**Skwentna**	**1.24**	**345**	P		**Pn**	**02 54 45.3**	**-0.8**
ILIM	**Iliamna**	**1.27**	**237**	P		**Pn**	**02 54 45.8**	**-0.6**
ILW	**Iliamna West**	**1.35**	**238**	P		**Pn**	**02 54 47.2**	**-0.5**
SML	**Sawmill**	**1.59**	**49**	P		**Pn**	**02 54 50.2**	**-0.5**
SML				S		**Sn**	**02 55 10.4**	**+0.1**
CUT	**Chulitna**	**1.64**	**9**	P		**Pn**	**02 54 51.4**	**0.0**
OPT	**Oil Point**	**1.65**	**227**	P		**Pn**	**02 54 51.7**	**+0.2**
AUNW	**Augustine NWes**	**1.93**	**224**	P		**Pn**	**02 54 55.7**	**+0.4**
AUW	**Augustine West**	**1.94**	**224**	P		**Pn**	**02 54 55.4**	**-0.1**
PPLA	**Purkeypile**	**2.21**	**344**	P		**Pn**	**02 54 59.0**	**-0.2**
VLZ	**Valdez**	**2.23**	**79**	P		**Pn**	**02 54 58.5**	**-0.9**
SVW2	**Sparrevohn**	**2.33**	**280**	P		**Pn**	**02 54 59.3**	**-1.4**
KLU	**Klutina**	**2.49**	**71**	P		**Pn**	**02 55 02.1**	**-0.9**
DIV	**Divide**	**2.50**	**80**	P		**Pn**	**02 55 02.0**	**-1.1**
EYAK	**Cordova Ski Ar**	**2.52**	**93**	P		**Pn**	**02 55 01.7**	**-1.6**
TRF	**Thorofare Moun**	**2.68**	**5**	P		**Pn**	**02 55 05.7**	**0.0**
DHY	**Denali Highway**	**2.82**	**34**	P		**Pn**	**02 55 07.4**	**-0.2**
KAPH	**Katmai Pasha**	**2.83**	**220**	P		**Pn**	**02 55 08.1**	**+0.6**
KAHC	**Katmai Hardscr**	**3.01**	**226**	P		**Pn**	**02 55 09.8**	**-0.3**
GOAT	**Goat Mountain**	**3.02**	**91**	P		**Pn**	**02 55 08.5**	**-1.7**
RAGM	**Ragged Mountai**	**3.07**	**95**	P		**Pn**	**02 55 08.9**	**-2.0**
MCK	**McKinley**	**3.08**	**16**	P		**Pn**	**02 55 11.9**	**+0.8**
KDAK	**Kodiak Island**	**3.15**	**197**	P		**Pn**	**02 55 10.8**	**-1.0**
KDAK				S		**Sn**	**02 55 47.0**	**-1.2**
KDAK	**Kodiak Island**	**3.15**	**197**	P		**Pn**	**02 55 10.9**	**-1.0**
	5.0nm,0.3s,baz=16,slow=13,SNR=34							
KDAK				S		**Sn**	**02 55 47.0**	**-1.2**
	16nm,0.3s,baz=19,slow=14,SNR=9.5							
HARP	**HAARP**	**3.17**	**57**	P		**Pn**	**02 55 12.7**	**+0.5**
TT01	**Tatalina**	**3.24**	**313**	P		**Pn**	**02 55 12.6**	**-0.6**
KAKN	**Katmai Knife C**	**3.29**	**222**	P		**Pn**	**02 55 13.9**	**-0.1**
KCG	**Knife Ck. Glac**	**3.30**	**223**	P		**Pn**	**02 55 14.5**	**+0.5**
KABR	**Katmai Barrier**	**3.40**	**220**	P		**Pn**	**02 55 15.7**	**+0.3**
WASW	**Wrangell South**	**3.41**	**68**	P		**Pn**	**02 55 15.1**	**-0.6**
KELA	**Mount Kelaz**	**3.42**	**228**	P		**Pn**	**02 55 16.2**	**+0.4**
GLB	**Gilahina Butte**	**3.48**	**76**	P		**Pn**	**02 55 15.4**	**-1.1**
VRDI	**Verde Repeater**	**3.63**	**80**	P		**Pn**	**02 55 17.2**	**-1.4**
OHAK	**Old Harbor**	**3.79**	**200**	P		**Pn**	**02 55 19.2**	**-1.5**
MCARA	**McCarthy VSAT**	**3.85**	**78**	P		**Pn**	**02 55 20.6**	**-0.9**
HDA	**Harding Lake**	**4.05**	**25**	P		**Pn**	**02 55 24.5**	**+0.3**
CCB	**Clear Creek Bu**	**4.12**	**19**	P		**Pn**	**02 55 25.4**	**+0.3**
KIAG	**Kiagna River**	**4.16**	**84**	P		**Pn**	**02 55 24.3**	**-1.6**
DOT	**Dot Lake**	**4.28**	**45**	P		**Pn**	**02 55 27.2**	**-0.2**
COLA	**College**	**4.32**	**17**	P		**Pn**	**02 55 28.6**	**+0.6**
MDM	**Murphy Dome**	**4.35**	**15**	P		**Pn**	**02 55 28.4**	**+0.1**
IL1	**Eielson Array**	**4.39**	**23**	P		**Pn**	**02 55 29.1**	**+0.2**
ILAR	**Eielson Array**	**4.39**	**23**	P		**Pn**	**02 55 29.1**	**+0.2**
ILAR				S		**Sn**	**02 56 18.0**	**-0.7**
ILAR	**Eielson Array**	**4.39**	**23**	P		**Pn**	**02 55 29.1**	**+0.2**
	2.9nm,0.3s,baz=206,slow=14,SNR=152							
ILAR				S		**Sn**	**02 56 18.0**	**-0.7**
	4.4nm,0.3s,baz=197,slow=23,SNR=4.7							
GRNC	**Granite Creek**	**4.46**	**87**	P		**Pn**	**02 55 28.4**	**-1.7**
BARN	**Barnard Glacie**	**4.49**	**83**	P		**Pn**	**02 55 29.3**	**-1.2**
BCA3	**Beaver Creek A**	**4.85**	**58**	P		**Pn**	**02 55 34.8**	**-0.5**
IM3	**Indian Mountai**	**5.37**	**347**	P		**Pn**	**02 55 41.5**	**-0.9**
PNL	**Peninsula**	**5.82**	**96**	P		**Pn**	**02 55 46.9**	**-1.6**
EGAK	**Eagle**	**5.98**	**44**	*e*Pn		**Pn**	**02 55 50.0**	**-0.5**
DAWY	**Dawson**	**6.25**	**53**	P		**Pn**	**02 55 53.8**	**-0.6**
COLD	**Coldfoot**	**6.47**	**2**	P		**Pn**	**02 55 57.1**	**-0.2**
HYT	**Haines Junctio**	**6.53**	**84**	P		**Pn**	**02 55 57.5**	**-0.8**
BM3	**Burnt Mountain**	**7.19**	**20**	P		**Pn**	**02 56 06.7**	**-0.5**
YKA	**Yellowknife Ar**	**17.16**	**69**	P		**Pn**	**02 58 21.2**	**+1.0**
YKA	**Yellowknife Ar**	**17.16**	**69**	P		**Pn**	**02 58 21.2**	**+1.0**
	0.1nm,0.3s,baz=278,slow=10,SNR=6.0							
NVAR	**Mina Array Bea**	**30.21**	**123**	P		**P**	**03 00 31.0**	**+1.4**
NVAR	**Mina Array Bea**	**30.21**	**123**	P		**P**	**03 00 31.0**	**+1.4**
	0.6nm,0.6s,baz=302,slow=7.9,SNR=4.6							
SCHQ	**Schefferville**	**42.24**	**59**	P		**P**	**03 02 11.4**	**-0.2**
SCHQ	**Schefferville**	**42.24**	**59**	P		**P**	**03 02 11.4**	**-0.2**
	0.9nm,0.5s,baz=333,slow=6.8,SNR=3.0							
TXAR	**Lajitas Array**	**44.29**	**113**	P		**P**	**03 02 28.0**	**-0.5**
TXAR				PcP		**PcP**	**03 04 11.7**	**-0.1**
TXAR	**Lajitas Array**	**44.29**	**113**	P		**P**	**03 02 28.0**	**-0.5**
	0.2nm,0.7s,baz=339,slow=6.8,SNR=3.4							
TXAR				PcP		**PcP**	**03 04 11.7**	**-0.1**
	0.1nm,0.4s,baz=292,slow=2.4,SNR=3.1							
KSRS	**Korea Array**	**54.04**	**284**	P		**P**	**03 03 42.6**	**-0.1**
	0.4nm,0.7s,baz=24,slow=6.2,SNR=4.1							
KSAR	**Wonju Array Be**	**54.07**	**284**	P		**P**	**03 03 42.6**	**-0.3**
SONM	**Songino Array**	**55.18**	**307**	P		**P**	**03 03 50.7**	**-0.3**
SONM	**Songino Array**	**55.18**	**307**	P		**P**	**03 03 50.7**	**-0.3**
	1.0nm,0.8s,baz=46,slow=7.7,SNR=8.6							
SONM				LR		LR	03 26 38.1	
	comp=Z,8.4nm,21.5s,baz=160,slow=35							

CASC 31 03:28:59.0±1.3, **13°.29N**×**89°.88W, h36**km±3km**, MD3.6, ML3.2, 1C-2D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.60**	**24**	*i*P	Pn	03 29 11.5	0.0
SBLS				*e*S	Sn	03 29 20.3	0.0
SNJE	**San Jose**	**0.64**	**25**	*e*P	Pn	03 29 11.8	-0.1
SNJE				*e*S	Sn	03 29 22.2	+1.2
RTR	**El Retiro**	**0.65**	**21**	*i*P	Pn	03 29 12.1	+0.1
BOQS	**Boqueron**	**0.74**	**53**	*i*P	Pn	03 29 13.3	+0.1
BOQS				*e*S	Sn	03 29 24.5	+1.1
SNET	**Serv Nac Est T**	**0.75**	**58**	*i* P	Pn	03 29 13.2	0.0
SNET				*e*S	Sn	03 29 23.7	+0.4
SNET				AML	AML	03 29 27.1	
	comp=Z,727nm,0.1s						
RBDL	**Robledal**	**0.84**	**13**	*e*P	Pn	03 29 14.9	+0.3
RBDL				*e*S	Sn	03 29 27.1	+1.1
LFRS	**El Faro**	**0.86**	**67**	*e*P	Pn	03 29 14.6	-0.3
LFRS				*e*S	Sn	03 29 26.3	-0.1
LFU	**La Fuente**	**0.88**	**58**	*e*P	Pn	03 29 15.1	+0.2
LBRS	**Las Brisas**	**0.93**	**61**	*e*P	Pn	03 29 15.8	+0.1
SNVI	**San Vicente**	**1.06**	**72**	*e*P	Pn	03 29 17.7	+0.1
SNVI				*e*S	Sn	03 29 31.9	+0.6
FUG	**Fuego 3**	**1.49**	**321**	*e*P	Pn	03 29 22.8	-0.7
FUG				*e*S	Sn	03 29 42.2	+0.4
VSM	**San Miguel**	**1.57**	**85**	*e*P	Pn	03 29 24.8	+0.1
BLLM	**Bellamira**	**1.61**	**84**	*e*S	Sn	03 29 45.3	+0.7
CNCH	**Conchagua**	**1.99**	**90**	*e*P	Pn	03 29 29.9	-0.5

SKO 31 03:31:23.5, 41°.37N×**22°.70E, h19**km**, M0.5, ML0.8, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**243**	*i* Pg	Pg	03 31 27.5	+0.1
VAY				*i* Sg	Sg	03 31 29.5	-0.5
VAY				*i* Lg	Lg	03 31 29.6	
	comp=E,38nm,0.2s						
VAY				*i* Lg	Lg	03 31 29.6	
	comp=N,66nm,0.2s						

*MOS **31** 03:34:21.4±1.0, 1°.88N×125°.83E, h35km, mb5.5/44, Error ellipse: s-maj=10.5km s-min=5.0km az=117.4*
*BJI **31** 03:34:25.9, 1°.31N×126°.04E, h119km, mB4.9/33, mb5.1/49*
*NEIC **31** 03:34:28.9±1.0, 1°.79N×125°.91E, h91km±8km, mb5.1/58, Error ellipse: s-maj=5.9km s-min=4.0km az=64.0*
NEIC Felt [III] at Bitung and Manado, Indonesia.
*GCMT **31** 03:34:28.6±0.3, 1°.78N×125°.97E, h81km±3km, MW4.8, Moment Tensor Solution. s31,c33; s62,c81; Moment tensor: Scale 10^{16}Nm; M_{rr}1.68±.11; $M_{\theta\theta}$-1.41±.13; $M_{\phi\phi}$-0.27±.16; $M_{r\theta}$0.53±.07; $M_{r\phi}$-0.87±.13; $M_{\theta\phi}$1.16±.08; Best double couple: $M_0$2.20000×10^{16} NP1:$\phi_1$261.00000°, δ33.00000°, λ124.00000°. NP2:$\phi_2$42.00000°, δ63.00000°, λ70.00000°. Principal axes: T 2.2200, Plg66.0000°, Azm275.0000°; N -0.0600, Plg18.0000°, Azm51.0000°; P -2.1700, Plg16.0000°, Azm146.0000°; Data Used: ll IC IU G.*
*ISCJB **31** 03:34:28.5±0.3, 1°.81N±0°.02×126°.02E±0°.02, h106km±2km, mb5.2/136 Error ellipse: s-maj=3.8km s-min=3.2km az=144.4*
*IDC **31** 03:34:29.6±1.3, 1°.74N×125°.94E, h97km±11km, mb4.8/24, mb1 4.8/27, mb1mx4.8/28, mbtmp4.8/27, MS3.6/14, Ms1 3.6/14, ms1mx3.4/31, Error ellipse: s-maj=14.0km s-min=6.7km az=79.0*
*DJA **31** 03:34:31.1±0.2, 2°.N±2°×12°.6E±°, h96km±3km, M5.1/50, mB5.5/28, mb5.3/50, MLv5.6/14, Mw(mB)5.0/28*
*TEH **31** 03:34:32.0, 1°.71N×125°.89E, h124km, ML5.1*

ISC 31 03:34:31.9±0.3, **1°.69N**±0°.03×**125°.93E**±0°.04, **h117**km±2km, **n673**, σ1°$49/759, **mb5.2**/146, **42C-18D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNI	**Manado**	**1.11**	**257**	P	Pn	03 34 51.9	-3.0
MNI				S	**Sn**	**03 35 08.7**	**-3.6**
TNTI	**Ternate**	**1.71**	**122**	P	Pn	03 34 57.5	-4.1
TNTI				S	**Sn**	**03 35 18.6**	**-5.6**
GAMI	**Galela, Maluku**	**1.86**	**86**	P	Pn	03 34 58.4	-5.1
GAMI				S	Sn	03 35 20.1	-7.6
KMSI	**Cibinong**	**2.24**	**240**	P	**Pn**	**03 35 07.8**	**-0.5**
KMSI				S	**Sn**	**03 35 38.5**	**+2.4**
LBMI	**Labuha**	**2.80**	**146**	P	**Pn**	**03 35 12.6**	**-2.9**
LBMI				S	**Sn**	**03 35 45.0**	**-4.1**
LUWI	**Luwuk**	**4.16**	**229**	P	**Pn**	**03 35 34.2**	**+0.6**
MRSI	**Marisa**	**4.17**	**253**	P	**Pn**	**03 35 33.9**	**+0.3**
MRSI				S	**Sn**	**03 36 22.6**	**+1.1**
NLAI	**Namlea**	**5.04**	**167**	P	**Pn**	**03 35 42.8**	**-2.5**
	1μm,0.9s,55μm19nm						
KCP	**Kidapawan**	**5.35**	**351**	*e*P	Pn	03 35 45.8	-3.8
DAV	**Davao City (W)**	**5.35**	**356**	*e*Pn	**Pn**	**03 35 51.7**	**+2.1**
DAV				S	**Sn**	**03 36 45.6**	**-4.5**
DAV	**Davao City (W)**	**5.35**	**356**	P	**Pn**	**03 35 48.0**	**-1.6**
	589nm,0.7s,19μm6.7nm						
DAV	**Davao City (W)**	**5.35**	**356**	P	Pn	03 35 46.2	-3.4
	74nm,0.3s,baz=240,slow=5.2,SNR=3.5						
DAV				S	**Sn**	**03 36 45.6**	**-4.5**
	95nm,0.3s,baz=196,slow=20,SNR=3.6						
DAV				LR	LR	03 38 09.8	
	comp=Z,323nm,19.8s,baz=143,slow=42						
CTBH	**Cotabato--PC H**	**5.74**	**343**	*i*P	**Pn**	**03 35 51.9**	**-3.0**
AAI	**Ambon**	**5.80**	**157**	P	**Pn**	**03 35 53.6**	**-2.1**
	2μm,0.5s,26μm8.1nm						
AAI				S	**Sn**	**03 36 59.3**	**-1.8**
	2μm,0.5s,26μm8.1nm						
MSAI	**Masohi**	**5.83**	**149**	P	**Pn**	**03 35 54.3**	**-1.8**
	490nm,0.6s,14μm3.3nm						
SKSI	**Soroako, Sulaw**	**6.22**	**228**	P	**Pn**	**03 36 00.2**	**-1.2**
	236nm,0.9s,2μm0.9nm						
ZMPH	**Zamboanga City**	**6.49**	**324**	*i*P	**Pn**	**03 36 02.2**	**-2.8**
CGP	**Cagayan de Oro**	**6.83**	**350**	*e*P	Pn	03 36 05.0	-4.6
DCPH	**Dipolog City**	**7.31**	**340**	*e*P	**Pn**	**03 36 15.0**	**-1.0**
TTSI	**Tana Toraja**	**7.71**	**232**	P	**Pn**	**03 36 22.2**	**+0.7**
	165nm,0.8s,2μm0.6nm						
FAKI	**Fak Fak**	**7.80**	**126**	P	**Pn**	**03 36 20.6**	**-2.2**
	479nm,1.1s,5μm1.9nm						
BBSI	**Bau Bau**	**7.88**	**205**	P	**Pn**	**03 36 24.1**	**+0.3**
	235nm,0.8s,2μm						
MYLDM	**Lahad Datu**	**8.18**	**295**	P	**Pn**	**03 36 29.4**	**+1.5**
MYLDM	**Lahad Datu**	**8.18**	**295**	P	**Pn**	**03 36 29.1**	**+1.2**
	1μm,0.8s,8μm						
SPSI	**Sidrap Palu**	**8.34**	**228**	P	**Pn**	**03 36 31.5**	**+1.6**
	94nm,0.8s,1μm						
TSM	**Tawau**	**8.45**	**288**	P	**Pn**	**03 36 30.7**	**-0.8**
RKPI	**Ransiki, Papua**	**8.84**	**111**	P	**Pn**	**03 36 36.3**	**-0.5**
	186nm,0.9s						
SMKI	**Samarinda**	**8.97**	**256**	P	**Pn**	**03 36 40.7**	**+2.1**
	171nm,0.8s						
BKSI	**Bulukumba**	**9.06**	**220**	P	**Pn**	**03 36 40.6**	**+0.8**
	66nm,0.8s,795nm						
KAPI	**Kappang**	**9.08**	**223**	*e*Pn	**Pn**	**03 36 38.8**	**-1.2**
KAPI				S	**Sn**	**03 38 18.6**	**-2.0**
KAPI	**Kappang**	**9.08**	**223**	P	Pn	03 36 45.8	+5.8
KAPI	**Kappang**	**9.08**	**223**	P	**Pn**	**03 36 38.8**	**-1.2**
	2.9nm,0.3s,baz=111,slow=2.6,SNR=13						
KAPI				S	**Sn**	**03 38 18.6**	**-2.0**
	1.4nm,0.3s,baz=18,slow=20,SNR=2.6						
BSSI	**Bau Bau, Buton**	**9.49**	**215**	P	Pn	03 36 41.5	-4.1
SDKM	**Sandakan**	**9.55**	**294**	P	**Pn**	**03 36 46.1**	**-0.5**
RCP	**Roxas**	**10.30**	**342**	*e*P	**Pn**	**03 36 54.7**	**-1.8**
KDM	**Kudat**	**10.45**	**300**	P	Pn	03 37 02.0	+3.5
BAKI	**Biak**	**10.57**	**106**	P	**Pn**	**03 36 59.0**	**-1.3**
	336nm,1.4s,3μm						
KKM	**Kota Kinabalu**	**10.61**	**294**	*e*Pn	**Pn**	**03 37 02.0**	**+1.1**
KKM	**Kota Kinabalu**	**10.61**	**294**	P	**Pn**	**03 37 02.6**	**+1.8**
KKM	**Kota Kinabalu**	**10.61**	**294**	P	**Pn**	**03 37 02.6**	**+1.8**
	481nm,0.6s,5μm						
PPR	**Puerto Princes**	**10.76**	**319**	*e*P	Pn	03 37 08.0	+5.3
BTM	**Bintulu**	**12.92**	**277**	P	**Pn**	**03 37 32.7**	**+1.4**
WBSI	**Waikabubak, Su**	**13.01**	**210**	P	P	03 37 47.3	+8.9
SBUM	**Sibu**	**13.72**	**273**	P	**P**	**03 37 46.2**	**-0.1**
SBUM	**Sibu**	**13.72**	**273**	P	**P**	**03 37 45.2**	**-1.1**
	205nm,1.0s,2μm						
KHKI	**Kahang-Kahang**	**14.34**	**226**	P	**P**	**03 37 56.1**	**+2.9**
SRBI	**Singaraja**	**14.44**	**228**	P	**P**	**03 37 56.4**	**+2.1**
STKI	**Sintang**	**14.54**	**264**	P	**P**	**03 37 53.8**	**-1.6**
	66nm,1.1s,12μm						
KMMI	**Kalianget**	**14.76**	**234**	P	**P**	**03 38 00.3**	**+2.4**
DNP	**Denpasar**	**14.84**	**226**	P	P	03 38 04.0	+5.3
IGBI	**Denpasar**	**14.98**	**226**	P	**P**	**03 38 02.6**	**+2.3**
JAY	**Jayapura**	**15.35**	**106**	P	**P**	**03 38 05.0**	**+0.5**
BLJI	**Banyuglugur**	**15.47**	**233**	P	**P**	**03 38 07.2**	**+1.5**
	150nm,0.8s,2μm						
JAGI	**Jajag, Banyuwa**	**15.48**	**229**	P	**P**	**03 38 07.3**	**+1.4**
	160nm,1.0s,2μm						
KSM	**Kuching**	**15.62**	**269**	*e*Pn	**Pn**	**03 38 06.0**	**+0.4**
	63nm,0.7s						
KSM	**Kuching**	**15.62**	**269**	P	**P**	**03 38 08.5**	**+1.2**
KSM	**Kuching**	**15.62**	**269**	P	**P**	**03 38 09.3**	**+1.9**
	87nm,0.8s,1μm						
GMJI	**Gumukmas**	**15.90**	**231**	P	**P**	**03 38 13.1**	**+2.6**
PWJI	**Pagerwojo**	**17.07**	**235**	P	**Pn**	**03 38 23.7**	**+0.1**
	66nm,0.9s						
MMPI	**Merauke**	**17.59**	**125**	P	**Pn**	**03 38 30.5**	**+0.6**
	1μm,0.6s						
PCJI	**Pacitan**	**17.69**	**236**	P	**Pn**	**03 38 31.9**	**+0.9**
	146nm,0.6s						
BJII	**Banjamegara**	**18.50**	**241**	P	**P**	**03 38 40.0**	**+0.8**
	51nm,0.8s						
TPI	**Tanjungpandan**	**18.80**	**256**	P	**P**	**03 38 42.6**	**+0.2**
	48nm,1.2s						
TGJI	**Tegal**	**18.81**	**243**	P	Pn	03 38 49.5	+5.2
FITZ	**Fitzroy Crossi**	**19.67**	**181**	*e*P	**P**	**03 38 51.2**	**-0.6**
	64nm,0.5s						
FITZ				S	**S**	**03 42 24.1**	**-3.3**
FITZ	**Fitzroy Crossi**	**19.67**	**181**	P	**P**	**03 38 51.2**	**-0.6**
	15nm,0.3s,baz=13,slow=8.5,SNR=548						
FITZ				S	**S**	**03 42 24.1**	**-3.3**
	0.3nm,0.3s,baz=214,slow=15,SNR=3.2						
FITZ				LR	LR	03 46 39.9	
	comp=Z,100nm,20.1s,baz=358,slow=37						
PPBI	**Pangkal Pinang**	**20.15**	**259**	P	**P**	**03 38 56.9**	**-0.2**
	61nm,0.9s,3μm						
MYKOM	**Kota Tinggi**	**22.07**	**271**	P	**P**	**03 39 18.1**	**+0.5**
MYKOM	**Kota Tinggi**	**22.07**	**271**	P	**P**	**03 39 17.9**	**+0.3**
	84nm,1.1s,1μm						
BTDF	**Bukit Timah Da**	**22.15**	**269**	P	**P**	**03 39 18.6**	**+0.2**
	60nm,1.6s,640nm						
KASI	**Kota Agung**	**22.57**	**251**	P	**P**	**03 39 23.7**	**+1.0**
	93nm,0.7s,1μm						
KGM	**Kluang**	**22.60**	**271**	P	**P**	**03 39 23.2**	**+0.2**
LWLI	**Liwa**	**22.84**	**253**	P	**P**	**03 39 25.1**	**-0.4**
	220nm,0.7s						
WRAB	**Tennant Creek**	**23.03**	**159**	*e*P	**P**	**03 39 26.0**	**-1.0**
WRAB				*e*S	**S**	**03 43 28.7**	**-0.1**
WRAB	**Tennant Creek**	**23.03**	**159**	*e*P	**P**	**03 39 25.9**	**-1.0**
	300nm,0.7s						
WRAB				*e*S	**S**	**03 43 28.7**	**-0.1**
WRAB	**Tennant Creek**	**23.03**	**159**	P	**P**	**03 39 26.0**	**-1.0**
	3μm,0.5s						
WRA	**Warramunga Arr**	**23.03**	**159**	P	**P**	**03 39 26.0**	**-1.1**
WRA				S	**S**	**03 43 27.9**	**-1.0**
WRA				ScP	**ScP**	**03 46 44.5**	**+4.2**
WRA	**Warramunga Arr**	**23.03**	**159**	P	**P**	**03 39 26.0**	**-1.1**
	218nm,0.5s,baz=336,slow=10,SNR=971						
WRA				S	**S**	**03 43 27.9**	**-1.0**
	12nm,0.9s,baz=328,slow=16,SNR=5.6						
WRA				ScP	**ScP**	**03 46 44.5**	**+4.2**
	3.4nm,0.9s,baz=343,slow=3.2,SNR=5.5						
KTGM	**Kuala Trenggan**	**23.03**	**280**	P	**P**	**03 39 27.6**	**+0.4**
COEN	**Coen**	**23.11**	**133**	*e*P	**P**	**03 39 25.4**	**-2.5**
	332nm,0.8s						
QIZ	**Qiongzhong**	**23.35**	**319**	P	**P**	**03 39 30.5**	**+0.5**
QIZ				pP	**pP**	**03 39 52.5**	**-0.9**
QIZ				S	**S**	**03 43 35.5**	**+1.5**
QIZ				pmax	pmax		
	comp=Z,41nm,0.7s						
QIZ				pmax	pmax		
	comp=Z,100nm,3.7s						
QIZ				LR	LR		
	comp=N,320nm,18.5s						
QIZ				LR	LR		
	comp=E,120nm,19.4s						
QIZ				LR	LR		
	comp=Z,340nm,24.6s						
QIZ	**Qiongzhong**	**23.35**	**319**	*e*P	**P**	**03 39 28.2**	**-1.8**
	comp=Z,32nm,0.8s						
MBWA	**Marble Bar**	**23.51**	**195**	*e*P	**P**	**03 39 31.6**	**+0.1**
	comp=Z,32nm,0.6s						
PMG	**Port Moresby**	**23.85**	**118**	*e*P	**P**	**03 39 33.9**	**-0.7**
	comp=Z,42nm,0.8s						
PMG	**Port Moresby**	**23.85**	**118**	P	**P**	**03 39 34.1**	**-0.5**
	comp=Z,56nm,0.9s						
PMG	**Port Moresby**	**23.85**	**118**	P	**P**	**03 39 33.9**	**-0.7**
	comp=Z,39nm,0.8s,baz=5.0,slow=4.9,SNR=8.4						
MBSI	**MBSI**	**24.26**	**257**	P	**P**	**03 39 38.4**	**+0.1**
	comp=Z,593nm,0.8s						
UBPT	**Khong Chiam**	**24.28**	**305**	P	**P**	**03 39 38.3**	**-0.2**
	comp=Z,29nm,1.1s						
FRIM	**Kepong**	**24.33**	**274**	P	**P**	**03 39 39.4**	**+0.4**
IPM	**Ipoh**	**25.02**	**277**	*e*P	**P**	**03 39 44.8**	**-0.5**
	comp=Z,33nm,0.8s						
IPM	**Ipoh**	**25.02**	**277**	P	**P**	**03 39 45.2**	**0.0**
JOW	**Kunigami**	**25.10**	**5**	*e*P	**P**	**03 39 45.5**	**-0.3**
	comp=Z,20nm,0.8s						
KULM	**Kulim**	**25.48**	**279**	*e*P	**P**	**03 39 49.1**	**-0.3**
	comp=Z,30nm,0.9s						
KULM	**Kulim**	**25.48**	**279**	P	**P**	**03 39 49.3**	**-0.1**
ASAR	**Alice Springs**	**26.38**	**163**	P	**P**	**03 39 57.4**	**-0.1**
ASAR				S	**S**	**03 44 22.4**	**+0.3**
ASAR				PKiKP	**PKiKP**	**03 50 59.4**	**0.0**
ASAR	**Alice Springs**	**26.38**	**163**	P	**P**	**03 39 57.4**	**-0.1**
	comp=Z,26nm,0.4s,baz=340,slow=7.0,SNR=773						
ASAR				S	**S**	**03 44 22.4**	**+0.3**
	comp=Z,4.5nm,0.7s,baz=354,slow=19,SNR=5.1						
ASAR				PKiKP	**PKiKP**	**03 50 59.4**	**0.0**
	comp=Z,0.6nm,0.8s,baz=321,slow=1.2,SNR=4.2						
PSI	**Prapat**	**27.00**	**273**	P	**P**	**03 40 02.8**	**-0.5**
	comp=Z,51nm,1.2s,comp=Z,506nm						
CTA	**Charters Tower**	**29.43**	**138**	P	**P**	**03 40 24.0**	**-0.6**
CTA	**Charters Tower**	**29.43**	**138**	P	**P**	**03 40 24.0**	**-0.6**
	comp=Z,14nm,1.0s,baz=311,slow=9.3,SNR=5.4						
CTAO	**Charters Tower**	**29.43**	**138**	*e*P	**P**	**03 40 24.8**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,29nm,0.9s						
CTAO	**Charters Tower**	**29.43**	**138**	*e*P	**P**	**03 40 24.8**	**+0.2**
	comp=Z,29nm,0.9s						
WHN	**Wuhan**	**30.72**	**340**	P	**P**	**03 40 34.8**	**-1.1**
GYA	**Guiyang**	**30.81**	**325**	*i*P	**P**	**03 40 36.8**	**-0.1**
GYA				pP	**pP**	**03 41 00.3**	**-2.3**
GYA				sP	**sP**	**03 41 13.5**	**-2.7**
GYA				PP	**PnPn**	**03 41 39.5**	**-2.8**
GYA				PcP	**PcP**	**03 43 32.8**	**+1.3**
GYA				S	**S**	**03 45 27.0**	**-5.

MJAR Matsushiro Arr 36.49 17 P **P** **03 41 23.6 -2.2**
comp=Z,15nm,0.9s,baz=197,slow=9.9,SNR=46
MJAR PcP **PcP** **03 43 48.5 +1.3**
comp=Z,6.3nm,0.8s,baz=185,slow=3.2,SNR=7.1
STKA Stephens Creek 36.55 157 *eP* **P** **03 41 26.8 +0.5**
STKA PP **PP** **03 42 50.9 -1.1**
STKA Stephens Creek 36.55 157 P **P** **03 41 26.8 +0.5**
comp=Z,93nm,0.7s,baz=330,slow=8.5,SNR=243
STKA PP **PP** **03 42 50.9 -1.1**
comp=Z,23nm,0.8s,baz=332,slow=11,SNR=3.9
BJT Baijiatuau 39.17 348 *eP* **P** **03 41 46.8 -1.4**
comp=Z,33nm,0.6s
BJI Beijing 39.19 348 P **P** **03 41 46.5 -1.9**
BJI pP **pP** **03 42 14.8 0.0**
BJI sP **sP** **03 42 27.8 -0.4**
BJI S **ScP** **03 47 33.0 -0.3**
BJI pmax pmax
comp=Z,52nm,1.0s
BJI pmax pmax
comp=Z,100nm,4.2s
LZH Lanzhou 39.87 332 ⇑P **P** **03 41 53.5 -0.9**
LZH pP **pP** **03 42 19.5 -1.4**
LZH sP **sP** **03 42 36.0 +1.7**
LZH pmax pmax
comp=Z,47nm,1.0s
LZH pmax pmax
comp=Z,140nm,4.0s
LZH LR LR
comp=N,140nm,16.5s
LZH LR LR
comp=E,170nm,14.9s
LZH LR LR
comp=Z,170nm,19.8s
ARMA Armidale 40.25 145 *eP* **P** **03 41 59.0 +1.5**
comp=Z,86nm,0.7s
SHL Shillong 40.48 309 *e*PKP **P** **03 42 00.5 +0.9**
SHL *ex* x 03 47 52.0
HHC Hu-ho-hao-te 41.09 343⇓ *iP* **P** **03 42 05.8 +1.5**
HHC pP **pP** **03 42 34.0 +3.1**
HHC sP 03 42 48.8 +4.6
HHC PP **PnPn** **03 43 45.8 -1.1**
HHC PcS **PcS** **03 47 53.0 0.0**
HHC S **S** **03 48 09.5 +1.0**
HHC sS sS 03 48 59.0 +4.4
HHC SS **SS** **03 51 12.3 -3.4**
HHC ScS **ScS** **03 51 54.5 -2.2**
HHC pmax pmax
comp=Z,40nm,1.0s
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=N,470nm,21.4s
HHC LR LR
comp=E,440nm,21.4s
HHC LR LR
comp=Z,420nm,21.4s
VLA Vladivostok 41.59 7⇑ *eP* P 03 42 04.3 -3.8
VLA *eS* **S** **03 48 18.1 +2.6**
VLA pmax pmax
comp=Z,29nm,1.5s
CN2 Changchun 41.93 359 *eP* **P** **03 42 09.8 -1.1**
CN2 *epP* **pP** **03 42 35.3 -2.4**
CN2 *ePP* **PP** **03 43 52.0 +1.7**
CN2 *eS* **S** **03 48 20.5 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
USRK Ussuriysk Arra 42.67 6 P **P** **03 42 15.9 -1.0**
comp=Z,15nm,0.7s,baz=191,slow=6.5,SNR=32
CAN Canberra 42.68 152 *eP* **P** **03 42 18.6 +1.4**
CAN pmax pmax
comp=Z,67nm,0.8s
CAN Canberra 42.68 152 *eP* **P** **03 42 18.6 +1.4**
comp=Z,67nm,0.8s
MDJ Mudanjiang 42.87 4 P **P** **03 42 18.0 -0.5**
MDJ S **S** **03 48 35.5 +1.2**
MDJ pmax pmax
comp=Z,29nm,0.8s
MDJ pmax pmax
comp=Z,74nm,4.2s
MDJ LR LR
comp=N,80nm,38.6s
MDJ LR LR
comp=E,53nm,38.0s
MDJ LR LR
comp=Z,79nm,38.0s
MDJ Mudanjiang 42.87 4 *eP* **P** **03 42 18.0 -0.5**
comp=Z,25nm,0.8s
LSA Lhasa 43.21 314 P **P** **03 42 21.3 -0.8**
LSA Lhasa 43.21 314 *eP* **P** **03 42 22.0 -0.1**
LSA pmax pmax
comp=Z,30nm,0.6s
LSA Lhasa 43.21 314 *eP* **P** **03 42 22.0 -0.1**
comp=Z,30nm,0.6s
GTA Gaotai 44.45 331 ⇑P **P** **03 42 30.0 -1.4**
GTA pP **pP** **03 42 58.8 +0.4**
GTA sP **sP** **03 43 13.5 +1.8**
GTA PcP **PcP** **03 44 14.0 +0.9**
GTA PP **PP** **03 44 17.3 -0.2**
GTA S **S** **03 48 56.0 -1.8**
GTA sS **sS** **03 49 45.8 +1.4**
GTA SS **ScS** **03 52 10.8 -6.9**
GTA pmax pmax
comp=Z,12nm,1.8s
GTA pmax pmax
comp=Z,61nm,4.8s
GTA LR LR
comp=N,120nm,16.2s
GTA LR LR
comp=E,91nm,17.1s
GTA LR LR
comp=Z,130nm,18.1s
TAPN Taplejung 44.61 308 *eP* **P** **03 42 31.9 -1.2**
ODAN Odare 44.63 308 *eP* **P** **03 42 31.9 -1.3**
comp=Z,43nm,0.5s
ASAJ Asahikawa 44.76 17 *eP* **P** **03 42 32.4 -1.3**
ASAJ Asahikawa 44.76 17 P **P** **03 42 33.8 +0.2**
comp=Z,35nm,0.8s,baz=217,slow=7.2,SNR=20
ASAJ LR LR 03 59 39.4
comp=Z,38nm,20.9s,baz=342,slow=34
RAMN Ramite 45.30 307 *eP* **P** **03 42 37.1 -1.4**
comp=Z,48nm,0.5s
PALK Pallekele 45.40 278 *eP* **P** **03 42 38.8 -0.5**
comp=Z,33nm,0.8s
PALK Pallekele 45.40 278 P **P** **03 42 39.2 -0.1**
comp=Z,209nm,0.7s,SNR=5.3
GUN Gumba 46.30 308 *eP* **P** **03 42 45.3 -1.3**
comp=Z,190nm,0.4s
PKI Pulchoki 46.52 307 *eP* **P** **03 42 46.6 -1.6**
comp=Z,30nm,0.5s
PKIN Phulchoki 46.54 307 *eP* **P** **03 42 47.4 -0.9**
comp=Z,14nm,0.3s
KKN Kakani 46.72 308 *eP* **P** **03 42 48.1 -1.6**
comp=Z,48nm,0.4s
DMN Daman 46.78 307 *eP* **P** **03 42 48.7 -1.5**
comp=Z,61nm,0.9s
HABR Khabarovsk 47.26 8 *eP* **P** **03 42 50.1 -3.1**
HABR *e**SP sP 03 43 03.8 -30
HABR 03 44 21.0
HABR *e**SS S 03 49 57.1 +20
HABR *e* 03 52 41.2
HABR *e*SSS SSS 03 54 11.4
HABR pmax pmax
comp=Z,81nm,2.0s
HABR pmax pmax
comp=E,46nm,2.6s
HABR pmax pmax
comp=N,45nm,2.7s
HABR MLR MLR
comp=Z,73nm,19.0s
YSS Yuzh-Sakhalins 47.41 16⇓ *eP* **P** **03 42 55.0 +0.7**
YSS pmax pmax
comp=Z,30nm,1.0s
KLR Kul'dur 47.62 5 *eP* P 03 42 51.2 -4.8
KLR pmax pmax
comp=Z,30nm,1.2s
HIA Hailar 47.69 355 *eP* **P** **03 42 56.1 -0.5**
comp=Z,81nm,1.1s
KOLN Koldanda 48.05 307 *eP* **P** **03 42 58.8 -1.2**
comp=Z,193nm,0.6s
DANN Dangsing 48.17 307 *eP* **P** **03 42 59.3 -1.7**
comp=Z,191nm,0.5s
PYUN Piuthan 48.68 307 *eP* **P** **03 43 03.8 -1.0**
comp=Z,288nm,0.7s
SONM Songino Array 48.98 343 P **P** **03 43 05.5 -1.1**
SONM PcP **PcP** **03 44 28.9 0.0**
SONM Songino Array 48.98 343 P **P** **03 43 05.5 -1.1**
comp=Z,3.4nm,0.4s,baz=158,slow=8.6,SNR=29
SONM PcP **PcP** **03 44 28.9 0.0**
comp=Z,5.4nm,0.7s,baz=162,slow=4.5,SNR=6.0
SONM LR LR 04 04 09.3
comp=Z,50nm,20.1s,baz=156,slow=36
HYB Hyderabad 49.08 292 *i P* **P** **03 43 06.0 -1.8**
ZAK Zakamensk 52.18 342 *eP* **P** **03 43 28.1 -2.5**
ZAK *e* 03 44 40.9
ZAK pmax pmax
comp=Z,6.0nm,1.0s
AGRA Agra 52.48 303 *e*PKP **P** **03 43 31.4 -1.6**
AGRA AMB AMB 03 43 32.1
comp=Z,44nm,0.4s
BISR Bishrakh 53.37 305 *ex* x 03 43 29.9
DDI Dehra Dun 53.52 307 *e*PKP **P** **03 43 39.6 -1.2**
DDI *ex* x 03 43 53.0
AYAN Aya Nagar 53.59 305 *e*PKP **P** **03 43 39.2 -2.0**
AYAN AMB AMB 03 43 40.5
comp=Z,36nm,1.0s
WMQ Urumqi 53.94 326 P **P** **03 43 43.3 -0.3**
WMQ pP **pP** **03 44 12.8 +1.3**
WMQ sP **sP** **03 44 27.0 +2.5**
WMQ PP **PP** **03 45 49.0 +2.9**
WMQ PcS PcS 03 48 41.5 -5.4
WMQ S **S** **03 51 12.8 +2.5**
WMQ sS sS 03 52 04.3 +6.0
WMQ ScS **ScS** **03 53 16.3 -5.3**
WMQ pmax pmax
comp=Z,54nm,0.9s
WMQ pmax pmax
comp=Z,130nm,3.8s
WMQ LR LR
comp=N,160nm,6.8s
WMQ LR LR
comp=E,180nm,7.8s
WMQ LR LR
comp=Z,59nm,23.2s
KUDL Kundal 54.00 304 *e*PKP **P** **03 43 42.7 -1.5**
KUDL AMB AMB 03 43 43.5
comp=Z,56nm,0.7s
MOY Mondy 54.02 341 *eP* **P** **03 43 43.8 -0.3**
KKR Kurukshetra 54.38 306 *e*PKP **P** **03 43 45.7 -1.3**
SMLA Simla 54.54 308 *i P* **P** **03 43 47.5 -0.5**
KHET Khetri 54.55 304 *e*PKP **P** **03 43 45.9 -2.2**
KHET AMB AMB 03 43 47.4
comp=Z,41nm,1.2s
MSVF Nonsavu 54.83 113 *eP* **P** **03 43 51.7 +1.3**
MSVF Nonsavu 54.83 113 *eP* **P** **03 43 51.7 +1.3**
MSVF Nonsavu 54.83 113 P **P** **03 43 51.0 +0.6**
comp=Z,105nm,0.5s,SNR=6.5
PEA0B Petropavlovsk- 57.61 22 *eP* **P** **03 44 09.7 +0.3**
PETK Petropavlovsk- 57.61 22 P **P** **03 44 10.1 +0.6**
PETK Petropavlovsk- 57.61 22 P **P** **03 44 10.1 +0.6**
PETK Petropavlovsk- 57.61 22 P **P** **03 44 10.1 +0.6**
comp=Z,19nm,0.6s,baz=190,slow=6.8,SNR=41
MK31 Makanchi Array 58.78 326 *ceP* **P** **03 44 16.5 -1.3**
MK31 pmax pmax
comp=Z,12nm,0.3s
MK31 Makanchi Array 58.78 326 *eP* **P** **03 44 16.6 -1.3**
MKAR Makanchi Array 58.78 326 P **P** **03 44 16.6 -1.2**
MKAR 03 45 06.0
MKAR S **S** **03 52 15.3 +1.4**
MKAR Makanchi Array 58.78 326 P **P** **03 44 16.6 -1.2**
MKAR PcP **PcP** **03 45 06.0 -0.3**
MKAR S **S** **03 52 15.3 +1.4**
MKAR Makanchi Array 58.78 326 P **P** **03 44 16.6 -1.2**
comp=Z,17nm,0.4s,baz=121,slow=7.2,SNR=354
MKAR PcP **PcP** **03 45 06.0 -0.3**
comp=Z,16nm,0.8s,baz=112,slow=4.9,SNR=6.5
MKAR S **S** **03 52 15.3 +1.4**
comp=Z,0.6nm,0.8s,baz=124,slow=15,SNR=3.7
MKAR LR LR 04 09 19.5
comp=Z,79nm,21.9s,baz=276,slow=36
KSH Kashi 58.93 316⇑ *iP* **P** **03 44 19.8 +0.7**
KSH *epP* **pP** **03 44 50.3 +2.9**
KSH *ePcP* **PcP** **03 45 08.8 +1.6**
KSH *ePP* **PP** **03 46 33.0 +2.3**
KSH *ePcS* **PcS** **03 49 09.3 +0.1**
KSH *eS* **S** **03 52 11.8 -4.6**
KSH sS **sS** **03 53 05.5 +0.4**
KSH ScS **ScS** **03 53 53.5 -4.6**
KSH *e*SS **SS** **03 56 09.0 -3.0**
KSH pmax pmax
comp=Z,24nm,0.8s
KSH pmax pmax
comp=Z,150nm,4.8s
KSH LR LR
comp=N,540nm,15.1s
KSH LR LR
comp=E,220nm,10.7s
KSH LR LR
comp=Z,280nm,5.6s
ULHL Ulahol 60.01 319 P **P** **03 44 25.7 -0.9**
SNR=9.5
YAK Yakutsk 60.26 2*c iP* **P** **03 44 26.9 -0.7**
YAK *e* 03 45 08.2
YAK *e* 03 46 40.2
YAK *e*PPP PPP 03 48 05.5
YAK *eS* **S** **03 52 33.5 +1.2**
YAK *e*SS **SS** **03 56 33.5 +1.9**
YAK pmax pmax
comp=Z,51nm,0.8s
YAK pmax pmax
comp=N,19nm,1.2s
YAK pmax pmax
comp=Z,102nm,5.1s
YAK pmax pmax
comp=N,31nm,4.0s
YAK pmax pmax
comp=E,37nm,2.8s
YAK smax smax
comp=E,40nm,1.5s
YAK smax smax
comp=N,23nm,1.6s
KZA Kyzart 60.58 319 P **P** **03 44 30.4 -0.4**
SNR=46
RPZ Rata Peaks 60.58 144 *eP* **P** **03 44 31.0 +0.8**
comp=N,27nm,0.6s
TKM2 Tokmak 2 60.75 320 *eP* **P** **03 44 30.5 -1.1**
TKM2 Tokmak 2 60.75 320 *eP* **P** **03 44 30.5 -1.1**
TKM2 Tokmak 2 60.75 320 P **P** **03 44 30.6 -1.1**
SNR=40
KBK Karagaybulak 61.05 319 P **P** **03 44 33.0 -0.6**
SNR=15
UCH Uchtor 61.14 318 P **P** **03 44 35.2 +0.6**
SNR=5.5
CHMS Chumysh 61.34 319 P P 03 44 30.2 -5.2
SNR=6.8
AAK Ala-Archa 61.34 319*ceP* **P** **03 44 34.8 -0.8**
AAK pmax pmax
comp=Z,34nm,1.0s
AAK Ala-Archa 61.34 319 *eP* **P** **03 44 34.8 -0.8**
comp=Z,2.4nm,0.7s
AAK Ala-Archa 61.34 319 P **P** **03 44 35.1 -0.4**
SNR=9.8
AAK Ala-Archa 61.34 319 P **P** **03 44 34.5 -1.0**
comp=Z,99nm,0.6s,SNR=6.0
USP Ospenovka 61.62 320 P **P** **03 44 36.2 -1.0**
SNR=36
AML Almayashu 61.64 318 P **P** **03 44 37.2 -0.7**
SNR=56
EKS2 Erkin-Say 61.82 319 *eP* **P** **03 44 38.1 -0.6**
EKS2 Erkin-Say 61.82 319 *eP* **P** **03 44 38.1 -0.6**
EKS2 Erkin-Say 61.82 319 P **P** **03 44 38.1 -0.6**
SNR=12
ZAA0 Zalesovo Array 62.04 334 *eP* **P** **03 44 37.9 -1.9**
ZALV Zalesovo Beam 62.04 334 P **P** **03 44 38.0 -1.8**
ZALV S **S** **03 52 55.1 -0.1**
ZALV Zalesovo Beam 62.04 334 P **P** **03 44 38.0 -1.8**
ZALV S **S** **03 52 55.1 -0.1**
ZALV Zalesovo Beam 62.04 334 P **P** **03 44 38.0 -1.8**
comp=Z,11nm,0.6s,baz=124,slow=6.4,SNR=19
ZALV S **S** **03 52 55.1 -0.1**
comp=Z,0.4nm,0.3s,baz=137,slow=18,SNR=3.5
ZALV LR LR 04 11 36.3
comp=Z,37nm,19.5s,baz=69,slow=36
KBL Kabul 62.14 309 *eP* **P** **03 44 39.2 -1.9**
KBL pmax pmax
comp=Z,38nm,0.7s
KBL Kabul 62.14 309 *eP* **P** **03 44 39.2 -1.9**
comp=Z,38nm,0.7s
KURK Kurchatov 63.03 328*ceP* **P** **03 44 45.0 -1.4**
KURK pmax pmax
comp=Z,86nm,0.7s
KURK Kurchatov 63.03 328 *eP* **P** **03 44 45.1 -1.4**
comp=Z,105nm,0.9s
KURK Kurchatov 63.03 328 P **P** **03 44 45.1 -1.4**
comp=Z,799nm,0.9s,SNR=54
NVS Novosibirsk 63.33 334⇑ *iP* **P** **03 44 46.3 -2.0**
NVS pmax pmax
comp=N,11nm,0.5s
NVS pmax pmax
comp=E,10.0nm,0.5s
NVS pmax pmax
comp=Z,21nm,0.5s
KK31 Karatay Array 64.18 318*ceP* **P** **03 44 52.6 -1.6**
KK31 pmax pmax
comp=Z,5.0nm,0.4s
KKAR Karatay Array 64.18 318 *eP* **P** **03 44 52.9 -1.3**
KKAR Karatay Array 64.18 318 *eP* **P** **03 44 52.9 -1.3**
SEY Seymchan 64.18 13*ceP* **P** **03 44 54.9 +1.1**
FX1 Attu Island--F 64.24 30 *eP* **P** **03 44 54.7 +0.4**
FX1 Attu Island--F 64.24 30 P **P** **03 44 55.1 +0.8**
comp=Z,12nm,0.5s,baz=256,slow=4.2,SNR=10
BVA0 Borovoye Array 68.59 328 *i P* **P** **03 45 20.3 -1.8**
BVA0 pmax pmax
comp=Z,7.0nm,0.4s
BRVK Borovoye 68.66 328*ceP* **P** **03 45 21.0 -1.5**
BRVK pmax pmax
comp=Z,28nm,0.7s
BRVK Borovoye 68.66 328 *eP* **P** **03 45 21.3 -1.2**
comp=Z,30nm,0.8s
BRVK Borovoye 68.66 328 P **P** **03 45 21.3 -1.2**
comp=Z,244nm,0.6s,SNR=11
IDAH Dahanechah 69.05 304 *eP* **P** **03 45 24.1 -1.5**
IMYA Miami 69.65 308 *eP* **P** **03 45 27.4 -1.8**
IKOO Kooshah 69.69 304 *eP* **P** **03 45 27.5 -2.2**
TIXI Tiksi 69.88 1*ceP* **P** **03 45 28.4 -1.2**
TIXI pmax pmax
comp=Z,28nm,0.8s
ITEG Tejag 70.00 304 *eP* **P** **03 45 30.6 -0.8**
ISRO Mashad 70.14 308 *eP* P 03 45 28.6 -3.5
MRIV Mauritius Mete 70.44 248 *eP* **P** **03 45 34.9 +0.8**
IPAY Payeh 70.54 308 *eP* **P** **03 45 32.8 -1.9**
ISFR Sfrayin 71.45 309 *eP* **P** **03 45 40.6 +0.3**
BILL Bilibino 71.71 15⇓ *iP* **P** **03 45 40.7 -0.1**
BILL *e* 03 48 15.9
BILL *i S* **S** **03 54 55.6 +4.5**
BILL pmax pmax
comp=Z,13nm,1.6s
BILL Bilibino 71.71 15 *eP* **P** **03 45 40.4 -0.5**
comp=Z,7.6nm,0.8s
ISHV Shirvan 71.78 309 *eP* **P** **03 45 39.8 -2.4**
AB31 Akbulak array 73.22 321*ceP* **P** **03 45 48.9 -1.2**
AB31 pmax pmax
comp=Z,8.0nm,0.2s
ABKAR Akbulak array 73.22 321 *eP* **P** **03 45 48.8 -1.3**
comp=Z,8.4nm,0.3s
IKIA Kiasar 74.70 307 *eP* **P** **03 45 58.5 -0.9**
AKTO Aktyubinsk 74.76 322 *i P* **P** **03 45 57.8 -1.3**
AKTO pmax pmax
comp=Z,19nm,0.7s
SVE Sverdlovsk 75.27 329*d iP* **P** **03 46 01.1 -0.8**
SVE *eS* **S** **03 55 37.3 +5.8**
SVE pmax pmax
comp=Z,59nm,1.0s
UNV Unalaska Valle 75.55 34 *eP* **P** **03 46 04.8 +1.4**
comp=Z,18nm,0.6s
ARU Arti 76.22 328*d iP* **P** **03 46 05.1 -2.2**
ARU 03 48 52.5
ARU S **S** **03 55 46.7 +4.7**
ARU pmax pmax
comp=Z,37nm,0.8s
ARU Arti 76.22 328 P **P** **03 46 05.4 -1.9**
comp=Z,265nm,0.9s,SNR=17
GAMB Gambell 76.57 24 *eP* **P** **03 46 09.7 +0.7**
comp=Z,32nm,1.0s
RDF Al-Radifah 79.01 299 *eP* **P** **03 46 21.4 -2.0**
MIB Mutribah 79.26 300 *eP* **P** **03 46 22.7 -2.0**
MIB AMb AMB 03 46 25.7
comp=Z,152nm,0.7s
NAY Al-Naaiem 79.30 299 *eP* **P** **03 46 23.2 -1.8**
NAY AMb AMB 03 46 25.8
comp=Z,51nm,1.0s
SDPT Sand Point 79.32 34 *eP* **P** **03 46 24.1 -0.3**
comp=Z,60nm,0.7s
RST Umm Al-Ruwaisa 79.53 300 *eP* **P** **03 46 24.2 -2.0**
RST AMb AMB 03 46 27.3
comp=Z,1μm,0.8s
ABPO Ambohimpanom 79.88 250 *eP* **P** **03 46 28.8 +0.3**
ABPO pmax pmax
comp=Z,18nm,0.7s
ABPO Ambohimpanom 79.88 250 *eP* **P** **03 46 28.8 +0.3**
comp=Z,18nm,0.7s
RAYN Ar Rayn 80.55 293 P **P** **03 46 31.0 -0.9**
comp=Z,268nm,0.8s,SNR=13
VNDA Vanda 81.52 173 *eP* **P** **03 46 37.0 +1.1**
comp=Z,4.3nm,0.6s
VNDA Vanda 81.52 173 P **P** **03 46 37.3 +1.5**
comp=Z,4.4nm,0.7s,baz=313,slow=6.1,SNR=20
VNDA LR LR 04 18 20.2
comp=Z,88nm,21.5s,baz=318,slow=32
MAW Mawson 81.58 200 P **P** **03 46 38.1 +1.9**
MAW Mawson 81.58 200 P **P** **03 46 38.1 +1.9**
comp=Z,12nm,1.0s,baz=58,slow=6.5,SNR=12
DGRG David-gareji 81.80 311 P **P** **03 46 38.7 +0.5**
GNI Garni 82.17 310 *eP* **P** **03 46 40.3 +0.1**
comp=Z,14nm,0.8s
TBLG Delisi 82.30 312 *eP* **P** **03 46 40.0 -0.6**
TBLG Delisi 82.30 312 P **P** **03 46 40.1 -0.6**
DUS Dusheti 82.35 312 P **P** **03 46 43.8 +2.8**
SBA Scott Base 82.44 172 *eP* **P** **03 46 42.6 +2.0**
SBA pmax pmax
comp=Z,9.0nm,1.0s
SBA Scott Base 82.44 172 *eP* **P** **03 46 42.6 +2.0**
comp=Z,8.6nm,1.0s
KZR Kazreti 82.51 311 P **P** **03 46 43.9 +2.1**
GOR Gori 82.78 312 P **P** **03 46 44.4 +1.2**
AKH Akhalkalaki 83.20 311 P **P** **03 46 46.1 +0.6**
ONI Oni 83.31 313 P **P** **03 46 46.7 +0.7**
KBZ Khabaz 83.79 314 P **P** **03 46 48.3 0.0**
KBZ Khabaz 83.79 314 P **P** **03 46 48.2 0.0**
KBZ Khabaz 83.79 314 P **P** **03 46 48.2 0.0**
comp=Z,9.7nm,0.8s,baz=110,slow=3.1,SNR=17
KIV Kislovodsk 83.96 314 *eP* **P** **03 46 49.0 -0.3**
KIV pmax pmax
comp=Z,15nm,0.7s
KDAK Kodiak Island 84.03 32 *eP* **P** **03 46 49.9 +0.8**
comp=Z,39nm,1.3s
RSO Redoubt South 84.25 29 *eP* **P** **03 46 50.4 -0.1**
comp=Z,74nm,0.9s
CHVG Ch'k'valeri 84.33 313 P **P** **03 46 51.8 +0.7**
PPLA Purkeypile 84.80 27 *eP* **P** **03 46 53.8 +0.7**
comp=Z,8.6nm,0.7s
VRHR Novokhopersk 85.10 321 *eP* **P** **03 46 53.6 -1.1**
VRHR pmax pmax
comp=Z,170nm,0.9s
VRHR pmax pmax
comp=N,9.0nm,0.6s
VRHR pmax pmax
comp=E,70nm,1.1s
TRF Thorofare Moun 85.71 27 *eP* **P** **03 46 56.1 -1.6**
comp=E,3.7nm,0.7s
SEW Seward 85.85 30 *eP* **P** **03 46 58.4 +0.2**
comp=E,20nm,1.0s
COLD Coldfoot 86.07 23 *eP* **P** **03 47 00.2 +1.0**
comp=E,30nm,0.6s
SOC Sochi 86.09 313 *eP* **P** **03 46 58.2 -1.6**
SOC *e* 03 50 12.7
SOC *eS* **SKSac** **03 57 15.9 +0.7**
SOC *e*SS SS 04 03 16.2 +11
SOC pmax pmax
comp=Z,70nm,0.5s
PMR Palmer 86.11 29 *eP* **P** **03 46 58.6 -0.8**
PMR pmax pmax
comp=Z,21nm,1.1s
PMR Palmer 86.11 29 *eP* **P** **03 46 58.6 -0.8**
comp=Z,21nm,1.1s
MCK McKinley 86.33 26 *eP* **P** **03 46 59.9 -0.7**
MCK pmax pmax
comp=Z,8.0nm,0.7s
MCK McKinley 86.33 26 *eP* **P** **03 46 59.9 -0.7**
comp=Z,7.7nm,0.7s
SML Sawmill 86.50 28 *eP* **P** **03 47 01.0 -0.5**
SML pmax pmax
comp=Z,3.0nm,0.7s
SML Sawmill 86.50 28 *eP* **P** **03 47 01.0 -0.5**
comp=Z,3.4nm,0.7s

VORD Divnogorie 86.57 321 *e*P **P** 03 47 01.1 -0.8
VORD pmax pmax
comp=Z,130nm,0.6s
VORD pmax pmax
comp=N,20nm,0.4s
VORD pmax pmax
comp=E,110nm,1.0s
VSR Storozhevoye 86.66 321 *e*P **P** 03 47 01.6 -0.8
VSR pmax pmax
comp=N,50nm,1.0s
VSR pmax pmax
comp=Z,210nm,1.0s
VSR pmax pmax
comp=E,80nm,0.8s
KLMR Klimovskoe 86.78 331*c i*P **P** 03 47 01.3 -1.4
KLMR *e**PP PcP 03 47 11.8 +6.9
KLMR S S 03 57 24.5 -6.0
KLMR pmax pmax
comp=Z,40nm,0.9s
COLA College 86.87 25 *e*P **P** 03 47 02.2 -0.9
COLA pmax pmax
comp=Z,3.0nm,0.5s
COLA College 86.87 25 *e*P **P** 03 47 02.2 -0.9
comp=Z,3.4nm,0.5s
ILAR Eielson Array 87.28 25 P **P** 03 47 03.5 -1.6
ILAR PKKP **PKKPbc** 04 04 56.1 -2.2
ILAR Eielson Array 87.28 25 P **P** 03 47 03.5 -1.6
comp=Z,3.1nm,0.5s,baz=248,slow=4.6,SNR=112
ILAR PKKP **PKKPbc** 04 04 56.1 -2.2
comp=Z,0.4nm,0.8s,baz=139,slow=1.5,SNR=5.6
MOS Moscow 87.65 326 *e*P **P** 03 47 06.6 -0.5
MOS *e* 03 50 33.3
MOS *e*PPP PPP 03 52 28.6
MOS *e*S S 03 57 32.3 -6.8
MOS pmax pmax
comp=Z,134nm,0.6s
ANN Anapa 87.75 315*c i*P **P** 03 47 06.6 -1.2
ANN pmax pmax
comp=Z,110nm,0.6s
KMBO Kilima Mbogo 88.71 269 *e*P **P** 03 47 14.3 +1.0
comp=Z,32nm,1.1s
KMBO Kilima Mbogo 88.71 269 P **P** 03 47 14.7 +1.4
comp=Z,22nm,1.0s,baz=56,slow=7.0,SNR=42
KMBO LR LR 04 22 47.4
comp=Z,50nm,18.9s,baz=276,slow=33
APA Apatity 89.42 337⇑ *e*P **P** 03 47 14.7 -0.4
EGAK Eagle 89.73 25 *e*P **P** 03 47 16.7 +0.1
comp=Z,6.3nm,0.8s
SIM Simferopol' 90.10 315*c i*P **P** 03 47 18.0 -0.8
SIM pmax pmax
comp=Z,47nm,0.7s
SYO Syowa Base 90.25 201⇓ *e*P **P** 03 47 19.0 +0.1
JOF Joensuu 90.61 333 *e*P **P** 03 47 20.4 -0.4
JOF pmax pmax
comp=Z,10.0nm,0.4s
JOF Joensuu 90.61 333 *e*p **P** 03 47 20.4 -0.4
comp=Z,9.5nm,0.4s
BR131 Keskin Array S 90.69 310 *e*P **P** 03 47 20.5 -1.4
comp=Z,11nm,0.9s
BRTR Keskin Array B 90.69 310 P **P** 03 47 20.7 -1.2
BRTR Keskin Array B 90.69 310 P **P** 03 47 20.7 -1.2
comp=Z,11nm,0.8s,baz=118,slow=4.8,SNR=66
BRTR LR LR 04 37 25.4
comp=Z,25nm,18.9s,baz=75,slow=42
CSS Prodhromos 91.17 305 *e*P **P** 03 47 23.4 -0.7
comp=Z,49nm,0.8s
KEV Kevo 91.52 340 *e*P **P** 03 47 23.9 -0.9
KEV Kevo 91.52 340 *e*p **P** 03 47 23.9 -0.9
ARCES ARCESS Array B 92.07 340 P **P** 03 47 26.2 -1.3
ARCES ARCESS Array B 92.07 340 P **P** 03 47 26.2 -1.3
comp=Z,3.7nm,0.4s,baz=89,slow=5.4,SNR=27
ARCES LR LR 04 38 36.1
comp=Z,67nm,18.5s,baz=230,slow=42
AKASG Malin Array Be 92.95 321 P **P** 03 47 30.8 -1.1
AKASG Malin Array Be 92.95 321 P **P** 03 47 30.8 -1.1
AKASG Malin Array Be 92.95 321 P **P** 03 47 30.8 -1.1
comp=Z,9.4nm,0.6s,baz=76,slow=4.2,SNR=20
AK01 Malin Array Si 92.96 321 *e*P **P** 03 47 30.6 -1.4
KIEV Kiev 92.97 321 *e*P **P** 03 47 30.6 -1.4
KIEV pmax pmax
comp=Z,7.0nm,0.6s
KIEV Kiev 92.97 321 *e*P **P** 03 47 30.6 -1.4
comp=Z,6.8nm,0.6s
AK02 Malin Array Si 92.97 321 *e*P **P** 03 47 30.6 -1.4
KAF Kangasniemi 93.02 332 *e*P **P** 03 47 30.5 -1.4
KAF pmax pmax
comp=Z,11nm,0.5s
KAF Kangasniemi 93.02 332 *e*p **P** 03 47 30.5 -1.4
comp=Z,11nm,0.5s
FIA1 FINESS Array S 93.23 332 *e*P **P** 03 47 31.1 -1.8
FINES FINESS Array B 93.23 332 P **P** 03 47 31.3 -1.6
FINES PKiKP **PKiKP** 03 52 20.1 +1.1
FINES FINESS Array B 93.23 332 P **P** 03 47 31.3 -1.6
comp=Z,10nm,0.5s,baz=64,slow=3.7,SNR=64
FINES PKiKP **PKiKP** 03 52 20.1 +1.1
comp=Z,0.8nm,0.6s,baz=329,slow=1.1,SNR=3.6
FINES LR LR 04 32 36.3
comp=Z,58nm,19.7s,baz=73,slow=37
TIRR Tirgusor 94.19 315⇑ P **P** 03 47 36.4 -1.3
TIRR Tirgusor 94.19 315⇑ *i*P **P** 03 47 36.4 -1.3
TESR Tescani 95.17 317⇑ *i*P **P** 03 47 41.8 -0.4
VRI Vrincioaia 95.20 316 ⇓P **P** 03 47 42.4 0.0
VRI Vrincioaia 95.20 316 ⇓*i*P **P** 03 47 42.4 0.0
PLOR Plostina 95.26 316⇑ P **P** 03 47 42.4 -0.3
PLOR Plostina 95.26 316⇑ *i*P **P** 03 47 42.4 -0.3
ISR Istrita 95.43 315⇑ P **P** 03 47 43.7 +0.2
ISR Istrita 95.43 315⇑ *i*P **P** 03 47 43.7 +0.2
JMB Yambol 95.76 313 *e*P **P** 03 47 43.8 -1.2
MLR Muntele Rosu 95.80 316⇑ *i*P **P** 03 47 44.4 -0.9
BUR08 Bucovina Ar. S 95.98 318 *e*P **P** 03 47 45.6 -0.4
SUW Suwalki 96.11 325 *e*P **P** 03 47 44.6 -1.7
SUW pmax pmax
comp=Z,24nm,0.8s
SUW Suwalki 96.11 325 *e*P **P** 03 47 44.6 -1.7
comp=Z,24nm,0.8s
SUW *e*pP pP 03 48 10.6 -6.2
SUW Suwalki 96.11 325 *e*P **P** 03 47 45.0 -1.3
SUW *e* 03 48 16.6
KARP Karpathos 96.16 306 *e*P **P** 03 47 46.0 -1.0
PRK Paraskevi 96.41 310 *e*P **P** 03 47 47.0 -1.0
CHOS Chios island 96.69 309 *e*P **P** 03 47 47.5 -1.9
RDO Rodhopi 96.71 312 *e*P **P** 03 47 48.0 -1.3
ARR Arges 96.73 316⇑ *i*P **P** 03 47 48.3 -1.1
KDZ Kurdzhali 96.73 312 *e*P **P** 03 47 46.2 -2.8
SMTH Samothraki Isl 96.81 315 *e*P **P** 03 47 48.5 -1.3
CJR Cluj-Napoca 97.21 317⇑ *i*P **P** 03 47 51.4 -0.1
KWP Kalwaria Pacla 97.26 320 *e*P **P** 03 47 51.3 -0.3
KWP pmax pmax
comp=Z,7.0nm,0.5s
KWP Kalwaria Pacla 97.26 320 *e*P **P** 03 47 51.3 -0.3
comp=Z,6.8nm,0.5s
KWP Kalwaria Pacla 97.26 320 *e*P Pdif 03 47 51.7 0.0
KWP *e* 03 48 22.2
APE Apeiranthos 97.28 308⇑ P **P** 03 47 49.2 -2.8
APE Apeiranthos 97.28 308 *e*P **P** 03 47 50.0 -2.0
APE Apeiranthos 97.28 308⇑ *i*P **P** 03 47 49.2 -2.8
LOT Lotru 97.32 316⇓ *i*P Pdif 03 47 52.2 0.0
NPS Neapolis 97.45 306 *e*P **P** 03 47 52.0 -0.8
TRPA Tarpa 97.66 319⇓ *i*P **P** 03 47 53.3 -0.1
KOLS Kolonicke sedl 97.67 320 *e*P Pdif 03 47 54.0 +0.4
KOLS pmax pmax
comp=Z,14nm,1.3s
KOLS Kolonicke sedl 97.67 320 *e*P Pdif 03 47 54.0 +0.4
MPEP Malo Peshtene 97.69 314 *e*P **P** 03 47 51.8 -1.9
UZH Uzhgorod 97.72 319*c i*P Pdif 03 47 53.8 +0.1
UZH *i* 03 48 02.4
DRGR 97.80 318⇓ P **P** 03 47 53.6 -0.6
DRGR 97.80 318⇓ *i*P **P** 03 47 53.6 -0.6
LSZ Lusaka 97.91 255 *e*P **P** 03 47 54.9 -0.5
comp=Z,4.7nm,0.8s
MMB Musomiste 97.99 312 *e*P **P** 03 47 52.6 -2.5
IDI Anoyia 98.03 306 *e*P **P** 03 47 54.1 -1.5
comp=Z,6.6nm,0.6s
IDI Anoyia 98.03 306 *e*P **P** 03 47 54.0 -1.5
SIVA Sivas 98.13 306 *e*P **P** 03 47 55.5 -0.3
CRVS Cervenica-Dubn 98.20 320 *e*P **P** 03 47 54.0 -1.9
CRVS pmax pmax
comp=Z,19nm,1.0s
CRVS Cervenica-Dubn 98.20 320 *e*P **P** 03 47 54.0 -1.9
VTS Vitosha 98.21 313⇓ P **P** 03 47 55.0 -1.2
VTS Vitosha 98.21 313⇓ *i*P **P** 03 47 55.0 -1.2
VTS Vitosha 98.21 313 *e*P **P** 03 47 54.2 -2.0
STHS Stebnicka Huta 98.24 320 *e*P Pdif 03 47 56.8 +0.7
STHS pmax pmax
comp=Z,5.0nm,0.8s
STHS Stebnicka Huta 98.24 320 PDIF Pdif 03 47 56.8 +0.7
AOS Alonnisos 98.26 310 *e*P **P** 03 47 54.0 -2.4
SOH Sokhos 98.40 312 *e*P **P** 03 47 54.5 -2.5
PLG Polygyros 98.40 311 *e*P **P** 03 47 55.0 -2.0
KKB Krupnik 98.42 313 *e*P **P** 03 47 54.2 -2.8
PTL Penteli 98.45 309 *e*P **P** 03 47 55.0 -2.3
VAM Vamos 98.57 306 *e*P **P** 03 47 57.0 -0.8
ATH Athens Observa 98.58 309 *e*P **P** 03 47 56.0 -1.8
BZS Buzias 98.77 317⇑ P **P** 03 47 57.5 -1.0
BZS Buzias 98.77 317⇑ *i*P **P** 03 47 57.5 -1.0
NAIG Nisos Aigina 98.79 308 *e*P **P** 03 47 56.0 -2.7
KECS Kecovo 98.93 320 *e*P Pdif 03 47 59.1 0.0
KECS pmax pmax
comp=Z,6.0nm,0.9s
KECS Kecovo 98.93 320 PDIF Pdif 03 47 59.1 0.0
DID Didima 99.02 308 *e*P **Pdif** 03 47 56.5 -3.4
LKR Lokris 99.02 309 *e*P **Pdif** 03 47 57.5 -2.3
GRG Griva 99.08 312 *e*P **Pdif** 03 47 58.0 -2.0
LTK Loutraki 99.15 309 *e*P **Pdif** 03 47 57.0 -3.4
ANKY Antikythira Is 99.23 307 *e*P **Pdif** 03 47 59.0 -1.7
KYTH Kithira 99.38 307 *e*P **Pdif** 03 48 00.5 -0.9
VLI Veliai 99.39 307 *e*P **Pdif** 03 47 59.0 -2.4
PSZ Piszkesteto 99.44 319 *e*P **Pdif** 03 48 01.5 0.0
PSZ pmax pmax
comp=Z,6.0nm,0.9s
PSZ Piszkesteto, 99.44 319 *e*Pdif **Pdif** 03 48 01.5 0.0
comp=Z,5.7nm,0.9s
AGG Agios Georgios 99.48 310 *e*P **Pdif** 03 47 59.0 -2.8
THL Kiokotos Trika 99.62 310 *e*P **Pdif** 03 47 59.5 -2.9
GUR Goura 99.65 309 *e*P **Pdif** 03 48 00.5 -2.2
VLX Vlachokerasia 99.72 308 *e*P **Pdif** 03 48 01.0 -2.0
KALE Kalithea 99.73 309 *e*P **Pdif** 03 48 00.5 -2.5
KLV Kalavryta, Ach 99.78 309 *e*P **Pdif** 03 48 01.5 -1.8
DYR Agios Nikonas 99.86 308 *e*P **Pdif** 03 48 02.0 -1.6
FNA Florina 99.88 312 *e*P **Pdif** 03 48 01.5 -2.1
LAKA Lakka 99.88 309 *e*P **Pdif** 03 48 02.0 -1.7
EVR Evrytania 99.90 310 *e*P **Pdif** 03 48 01.5 -2.3
EFP Efpalio 99.91 309 *e*P **Pdif** 03 48 02.0 -1.7
VYHS Vyhne 99.99 320 *e*P **Pdif** 03 48 03.3 -0.6
VYHS pmax pmax
comp=Z,6.0nm,1.4s
VYHS Vyhne 99.99 320 PDIF **Pdif** 03 48 03.3 -0.6
ITM Ithomi 100.11 308 *e*P **Pdif** 03 48 03.0 -1.7
AMT Artemida-Makis 100.22 308 *e*P **Pdif** 03 48 03.5 -1.7
NB2 NORSAR Subarra100.24 333 P **Pdif** 03 48 02.5 -2.2
comp=Z,1.6nm,0.7s,baz=70,slow=4.4
NB2 NORSAR Subarra100.24 333 P **Pdif** 03 48 02.5 -2.2
baz=70,slow=4.4
NOA NORSAR Array B100.24 333 P **Pdif** 03 48 03.0 -1.8
NOA NORSAR Array B100.24 333 P **Pdif** 03 48 03.0 -1.8
comp=Z,1.5nm,0.6s,baz=69,slow=4.6,SNR=13
PYL PYLOS 100.30 308 *e*P **Pdif** 03 48 03.0 -2.5
RLS Riolos of Patr 100.31 309 *e*P **Pdif** 03 48 04.5 -1.0
MORC Moravsky Berou 100.49 321 *e*P **Pdif** 03 48 06.3 +0.2
MORC Moravsky Berou 100.49 321 *e*Pdif **Pdif** 03 48 06.3 +0.2
MORC Moravsky Berou 100.49 321⇓ *i*P **Pdif** 03 48 05.2 -0.9
JAN Janina 100.49 311 *e*P **Pdif** 03 48 05.0 -1.3
PKSM Moragy 100.67 318⇑ P **Pdif** 03 48 06.2 -0.7
PKSM Moragy 100.67 318⇑ *i*P **Pdif** 03 48 06.2 -0.7
LKD2 Lefkada island 100.80 310 *e*P **Pdif** 03 48 06.0 -1.7
VLS Valsamata 100.97 309 *e*P **Pdif** 03 48 07.0 -1.5
YKA Yellowknife Ar 101.67 24 P **Pdif** 03 48 11.7 +0.8
YKA PP **PP** 03 52 23.5 +1.1
YKA PKiKP **PKiKP** 03 52 34.5 +0.6
YKA PKKPbc **PKKPbc** 04 04 17.0 -3.0
YKA Yellowknife Ar 101.67 24 P **Pdif** 03 48 11.7 +0.8
comp=Z,2.1nm,0.6s,baz=299,slow=4.4,SNR=23
YKA PP **PP** 03 52 23.5 +1.1
comp=Z,0.5nm,0.8s,baz=300,slow=6.8,SNR=3.6
YKA PKiKP **PKiKP** 03 52 34.5 +0.6
comp=Z,0.5nm,0.5s,baz=291,slow=1.6,SNR=7.6
YKA PKKPbc **PKKPbc** 04 04 17.0 -3.0
comp=Z,0.6nm,0.7s,baz=110,slow=2.5,SNR=6.5
BRG Berggiesshubel 102.38 323 *e*P **Pdif** 03 48 14.4 0.0
comp=Z,3.8nm,1.0s
BRG *e* 03 48 46.1
comp=Z,4.3nm,0.9s
BRG Berggiesshubel 102.38 323 *e*P **Pdif** 03 48 14.4 0.0
BRG pmax pmax
comp=Z,4.0nm,1.0s
GERES GERESS Array B 103.16 321 Pdif **Pdif** 03 48 17.7 -0.4
GERES PKiKP **PKiKP** 03 52 37.8 +0.7
GERES GERESS Array B 103.16 321 Pdiff **Pdif** 03 48 17.7 -0.4
comp=Z,1.9nm,1.0s,baz=66,slow=4.5,SNR=11
GERES PKiKP **PKiKP** 03 52 37.8 +0.7
comp=Z,0.4nm,0.5s,baz=73,slow=3.3,SNR=8.1
DAVOX Davos/Dischmat 106.28 320 Pdif **Pdif** 03 48 33.9 +1.8
DAVOX Davos/Dischmat 106.28 320 Pdiff **Pdif** 03 48 33.9 +1.8
comp=Z,2.8nm,0.5s,baz=76,slow=4.2,SNR=6.4
PGF Pioggiola 108.34 316 *e*PKiKP **PKiKP** 03 52 47.3 +0.4
PGF Pioggiola 108.34 316 *e*PKPdf **PKiKP** 03 52 47.3 +0.4
CABF La Chapelle 108.76 321 *e*PKiKP **PKiKP** 03 52 48.4 +0.8
CABF La Chapelle 108.76 321 *e*PKPdf **PKiKP** 03 52 48.4 +0.8
LPG La Plagne 108.78 320 *e*PKiKP **PKiKP** 03 52 48.5 +0.6
LPG La Plagne 108.78 320 *e*PKPdf **PKiKP** 03 52 48.5 +0.6
LPL La Plagne 108.78 320 *e*PKiKP **PKiKP** 03 52 48.3 +0.5
LPL La Plagne 108.78 320 *e*PKPdf **PKiKP** 03 52 48.3 +0.5
NVAR Mina Array Bea 108.85 48 PKKPab PKKPab 04 04 10.2 +0.1
NVAR Mina Array Bea 108.85 48 PKKPab PKKPab 04 04 10.2 +0.1
comp=Z,0.6nm,0.7s,baz=129,slow=5.2,SNR=5.0
ORIF Oris-en-Rattie 109.57 319 *e*PKiKP **PKiKP** 03 52 48.5 -0.6
ORIF Oris-en-Rattie 109.57 319 *e*PKPdf **PKiKP** 03 52 48.5 -0.6
FRF La Foret Royal 109.59 318 *e*PKiKP **PKiKP** 03 52 49.9 +0.8
FRF La Foret Royal 109.59 318 *e*PKPdf **PKiKP** 03 52 49.9 +0.8
EKA Eskdalemuir Ar 109.64 332 PKKPbc PKKPbc 04 03 54.7 -0.8
EKA Eskdalemuir Ar 109.64 332 PKKPbc PKKPbc 04 03 54.7 -0.7
comp=Z,0.2nm,0.4s,baz=241,slow=2.4,SNR=3.6
HLID Hailey 109.84 42 *e*PKP **PKiKP** 03 52 51.2 +1.4
HLID Hailey 109.84 42 P 03 52 51.3
baz=110
A17A Triple J Farms 109.90 36 P 03 52 50.5
baz=110
KEST Kesra 110.30 309 PKiKP **PKiKP** 03 52 52.1 +1.3
KEST Kesra 110.30 309 PKiKP **PKiKP** 03 52 52.1 +1.3
comp=Z,0.6nm,0.7s,baz=79,slow=5.2,SNR=3.8
AVF Avril sur Loir 110.39 322 *e*PKiKP **PKiKP** 03 52 50.7 +0.2
comp=Z,1.5nm,0.3s
AVF Avril sur Loir 110.39 322 *e*PKiKP **PKiKP** 03 52 50.7 +0.2
AVF Avril sur Loir 110.39 322 *e*PKPdf **PKiKP** 03 52 50.7 +0.2
F16A Kennard Place, 110.75 39 P 03 52 52.1
baz=111
BOZ Bozeman (W) 110.81 39 *e*PKiKP **PKiKP** 03 52 52.6 +1.1
BOZ Bozeman (W) 110.81 39 *e*PKP **PKiKP** 03 52 52.6 +1.1
BGF Bois d'Agland 110.81 322 *e*PKiKP **PKiKP** 03 52 52.5 +1.2
comp=Z,5.6nm,0.5s
BGF Bois d'Agland 110.81 322 *e*PKiKP **PKiKP** 03 52 52.5 +1.2
BGF Bois d'Agland 110.81 322 *e*PKPdf **PKiKP** 03 52 52.5 +1.2
EGMT Eagleton 110.89 36 P 03 52 52.0
baz=111
R11A Troy Canyon, C 110.90 48 P 03 52 53.1
baz=111
FFC Flin Flon 111.39 28 *i* PKiKP **PKiKP** 03 52 53.9 +1.8
FFC Flin Flon 111.39 28 *e*PKP **PKiKP** 03 52 53.0 +0.8
FLN La Foliniere 111.75 325 *e*PKiKP **PKiKP** 03 52 52.5 -0.5
FLN La Foliniere 111.75 325 *e*PKiKP **PKiKP** 03 52 52.5 -0.5
FLN La Foliniere 111.75 325 *e*PKPdf **PKiKP** 03 52 52.5 -0.5
F18A Big Timber 111.89 38 P 03 52 54.4
baz=112
C20A Veseth Ranch, 112.07 36 P 03 52 54.7
baz=112
RJF Les Rejaudoux 112.20 321 *e*PKiKP **PKiKP** 03 52 53.6 -0.4
RJF Les Rejaudoux 112.20 321 *e*PKiKP **PKiKP** 03 52 53.6 -0.4
RJF Les Rejaudoux 112.20 321 *e*PKPdf **PKiKP** 03 52 53.6 -0.4
D20A Manuel Ranch, 112.30 37 P 03 52 55.3
baz=112
SNOW Snow King Moun 112.31 41 *e*PKP **PKiKP** 03 52 54.6 0.0
MFF Saint Martin d 112.62 323 *e*PKiKP **PKiKP** 03 52 55.2 +0.5
comp=Z,4.8nm,0.4s
MFF Saint Martin d 112.62 323 *e*PKiKP **PKiKP** 03 52 55.2 +0.5
MFF Saint Martin d 112.62 323 *e*PKPdf **PKiKP** 03 52 55.2 +0.5
A22A Carney Farms, 112.62 34 P 03 52 55.3
baz=112
LFF La Frestale 112.86 321 *e*PKiKP **PKiKP** 03 52 54.2 -1.0
LFF La Frestale 112.86 321 *e*PKiKP **PKiKP** 03 52 54.2 -1.0
LFF La Frestale 112.86 321 *e*PKPdf **PKiKP** 03 52 54.2 -1.0
G20A Bridger 113.15 39 P 03 52 56.4
baz=113
SGMF Saint Gilles 113.20 325 *e*PKiKP **PKiKP** 03 52 56.1 +0.3
SGMF Saint Gilles 113.20 325 *e*PKiKP **PKiKP** 03 52 56.1 +0.3
SGMF Saint Gilles 113.20 325 *e*PKPdf **PKiKP** 03 52 56.1 +0.3
PDAR Pinedale Array 113.40 41 PKKPbc PKKPbc 04 03 42.2 -0.7
PDAR PKKPab **PKKPab** 04 03 49.8 -0.1
comp=Z,0.6nm,0.5s,baz=116,slow=3.4,SNR=3.7
PDAR PKKPab **PKKPab** 04 03 49.8 -0.1
comp=Z,1.2nm,0.7s,baz=120,slow=5.8,SNR=7.5
H20A Greybull 113.63 39 P 03 52 57.8
baz=114
QUIF Quistinic 113.72 325 *e*PKiKP **PKiKP** 03 52 57.0 +0.2
QUIF Quistinic 113.72 325 *e*PKiKP **PKiKP** 03 52 57.0 +0.2
QUIF Quistinic 113.72 325 *e*PKPdf **PKiKP** 03 52 57.0 +0.2
I20A Worland 113.80 40 P 03 52 58.2
baz=114
J20A Shoshoni 114.10 40 P PKPdf 03 52 58.8 +1.0
baz=114
E23A Ismay 114.28 36 P PKPdf 03 52 58.9 +1.0
baz=114
SRU San Rafael 114.29 45 P PKPdf 03 52 58.0 -0.4
baz=114
F23A Volborg 114.62 37 P PKPdf 03 52 59.8 +1.1
baz=114
J22A Midwest 115.11 40 P **PKPdf** 03 53 00.3 +0.5
baz=115
N20A Spence Gulch, 115.13 43 P **PKPdf** 03 53 01.6 +1.5
baz=115
M21A Separation Pea 115.38 42 P **PKPdf** 03 53 01.6 +1.1
baz=115
O20A White River Ci 115.45 44 P **PKPdf** 03 53 01.8 +1.2
baz=115
H24A Dirks Ranch, A 115.64 38 P **PKPdf** 03 53 01.2 +0.5
baz=116
PV01 Paradox Valley 116.08 46 *e*PKPdf **PKPdf** 03 53 02.8 +0.8
N22A Wattenberg Ran 116.36 42 P **PKPdf** 03 53 03.1 +0.6
baz=116
TUC Tucson 116.68 52 *e*PKiKP **PKPdf** 03 53 02.9 -0.2
TUC Tucson 116.68 52 *e*PKPdf **PKPdf** 03 53 02.9 -0.2
S21A Coal Bank Pass 116.84 46 P **PKPdf** 03 53 04.9 +1.4
baz=117
O23A Lake Granby, G 117.00 43 P **PKPdf** 03 53 04.7 +0.9
baz=117
ULM Lac du Bonnet 117.12 29 PKP **PKPdf** 03 53 02.6 -0.6
ULM Lac du Bonnet 117.12 29 PKP **PKPdf** 03 53 02.6 -0.6
comp=Z,2.8nm,0.5s,baz=6.8,slow=1.2,SNR=4.0
R22A Saguache, Gunn 117.33 45 P **PKPdf** 03 53 05.2 +0.7
baz=117
W20A Ramah 117.38 49 P **PKPdf** 03 53 05.4 +0.8
baz=117
ISCO Idaho Springs 117.40 43 P **PKPdf** 03 53 05.3 +0.7
baz=117
U21A Nageezi 117.47 47 P **PKPdf** 03 53 05.4 +0.7
baz=117
S22A 4UR Ranch, Cre 117.49 45 P **PKPdf** 03 53 05.6 +0.9
baz=117
Y20A Horse Springs, 117.95 50 P **PKPdf** 03 53 06.5 +0.8
baz=118
X21A Alamocita Cree 118.19 49 P **PKPdf** 03 53 07.0 +0.9
baz=118
V22A San Miguel Ran 118.23 47 P **PKPdf** 03 53 07.0 +0.8
baz=118
T23A Casias Ranch, 118.37 46 P **PKPdf** 03 53 07.6 +1.1
baz=118
ESDC Sonseca Array 118.43 318 PKP **PKPdf** 03 53 07.0 +0.9
ESDC PP **PP** 03 54 26.5 +2.6
ESDC Sonseca Array 118.43 318 PKP **PKPdf** 03 53 07.0 +0.9
comp=Z,0.5nm,0.4s,baz=25,slow=2.7,SNR=9.1
ESDC PP **PP** 03 54 26.5 +2.6
comp=Z,0.2nm,0.3s,baz=56,slow=7.2,SNR=7.1
SDCO Great Sand Dun 118.43 45 *e*PKPdf **PKPdf** 03 53 07.5 +0.9
P25A Willow Gulch B 118.52 42 P **PKPdf** 03 53 07.3 +0.7
baz=118
121A Cookes Peak, D 118.95 51 P **PKPdf** 03 53 09.1 +1.5
baz=119
ANMO Albuquerque 118.98 48 *e*PKPdf **PKPdf** 03 53 09.1 +1.5
P26A Davis Ranch, A 119.05 42 P **PKPdf** 03 53 08.2 +0.7
baz=119
PBRG Braganca 119.14 321 *e*PKPdf **PKPdf** 03 53 07.6 +0.1
Z22A Elephant Butte 119.30 50 P **PKPdf** 03 53 08.9 +0.7
baz=119
O27A Beecher Island 119.30 41 P **PKPdf** 03 53 08.6 +0.7
baz=119
T25A Trinidad 119.48 45 P **PKPdf** 03 53 09.0 +0.5
baz=119
V24A Rampart Ranch, 119.51 47 P **PKPdf** 03 53 09.8 +1.1
baz=119
R26A Arlington 119.60 43 P **PKPdf** 03 53 09.6 +1.0
baz=119
W24A Lazy 6 Ranch, 119.64 47 P **PKPdf** 03 53 09.5 +0.7
baz=120
MVO Moncorvo 119.67 321 *e*PKPdf **PKPdf** 03 53 08.2 -0.4
MVO *i* P **PKiKP** 03 53 09.8 +1.2
S26A Kim 119.91 44 P **PKPdf** 03 53 10.1 +0.9
baz=120
V25A Rancho No Teng 119.94 46 P **PKPdf** 03 53 10.0 +0.6
baz=120
PCAB Cabril 120.00 322 *e*PKPdf **PKPdf** 03 53 10.2 +1.1
PGAV Gavieira, Arco 120.01 322 *e*PKPdf **PKPdf** 03 53 10.2 +1.0
POLO Lamas de Olo 120.04 321 *e*PKPdf **PKPdf** 03 53 10.3 +1.0
T26A Comanche Natio 120.04 45 P **PKPdf** 03 53 10.1 +0.5
baz=120
PVRL Vila Real 120.05 321 *e*PKPdf **PKPdf** 03 53 10.2 +1.0
Y24A Capitan 120.17 49 P **PKPdf** 03 53 10.7 +0.8
baz=120
U26A Atchley Ranch, 120.31 45 P **PKPdf** 03 53 11.3 +1.2
baz=120
W25A X Bar L Ranch, 120.33 47 P **PKPdf** 03 53 11.1 +0.9
baz=120
MTE Manteigas 120.41 320 *e*PKPdf **PKPdf** 03 53 09.5 -0.5
MTE *i* P **PKiKP** 03 53 11.3 +1.2
PVIS Viseu 120.47 320 *e*PKPdf **PKPdf** 03 53 11.1 +1.0
Z24A Sheeppen Canyo 120.48 49 P **PKPdf** 03 53 12.0 +1.5
baz=120
V26A Tequesquite Ra 120.55 46 P **PKPdf** 03 53 10.3 -0.2
baz=120
P29A Atwood 120.63 41 P **PKPdf** 03 53 10.7 +0.2
baz=120
PCBR Castelo Branco 120.67 319 *e*PKPdf **PKPdf** 03 53 11.6 +1.2
R28A Tribune 120.69 43 P **PKPdf** 03 53 11.0 +0.4
baz=120
Y25A Mesa, Roswell 120.73 48 P **PKPdf** 03 53 11.4 +0.5
baz=121
PMRV Marv??o 120.83 319 *e*PKPdf **PKPdf** 03 53 07.3 -3.5
PMRV *i* P **PKiKP** 03 53 12.1 +1.2
ECSD EROS Data Cent 120.91 35 *e*PKPdf **PKPdf** 03 53 10.9 +0.2
U27A Thompson Grove 120.94 45 P **PKPdf** 03 53 11.4 +0.2
baz=121
S28A Manter 121.02 43 P **PKPdf** 03 53 12.4 +1.1
baz=121
T28A Walsh 121.10 44 P **PKPdf** 03 53 12.0 +0.5
baz=121
MNTX Cornudas Mount 121.15 51 *e*PKPdf **PKPdf** 03 53 12.5 +0.9
324A Moseley Ranch, 121.17 51 P **PKPdf** 03 53 13.0 +1.1
baz=121
PBAR Barrancos 121.26 318 *e*PKPdf **PKPdf** 03 53 12.8 +1.2
PESTR Estremoz 121.26 319 *e*PKPdf **PKPdf** 03 53 12.9 +1.3
125A Gardner Draw, 121.31 50 P **PKPdf** 03 53 12.9 +0.9
baz=121
BGNE Belgrade 121.39 38 P **PKPdf** 03 53 12.3 +0.5
baz=121
U28A Mallet 121.39 45 P **PKPdf** 03 53 12.8 +0.8
baz=121
PTOM Tomar 121.40 320 *e*PKPdf **PKPdf** 03 53 12.7 +0.9
W27A Bowe Ranch, En 121.42 46 P **PKPdf** 03 53 12.6 +0.5
baz=121
Q30A Quinter 121.42 41 P **PKPdf** 03 53 12.8 +0.8
baz=121
S29A Ulysses 121.53 43 P **PKPdf** 03 53 13.0 +0.8
baz=121
Z26A Caprock 121.55 49 P **PKPdf** 03 53 13.1 +0.6
baz=121
PMTG Montargil 121.57 319 *e*PKPdf **PKPdf** 03 53 12.2 0.0
325A Bean Ranch, Si 121.60 51 P **PKPdf** 03 53 13.4 +0.7
baz=122
P31A Stockton 121.68 40 P **PKPdf** 03 53 13.2 +0.8
baz=122
V28A Channing 121.69 45 P **PKPdf** 03 53 13.8 +1.1
baz=122
EVO Evora 121.72 318⇑ *i*PKiKP **PKPdf** 03 53 13.2 +0.7
comp=Z,7.6nm,0.6s
EVO Evora 121.72 318 *e*PKPdf **PKPdf** 03 53 13.6 +1.1
R30A Dighton 121.76 42 P **PKPdf** 03 53 13.7 +1.1
baz=122
EVOP Sao Brissos 121.80 318⇑ *i*PKiKP **PKPdf** 03 53 13.2 +0.6
EVOP Sao Brissos 121.80 318⇑ *i*PKPdf **PKPdf** 03 53 13.2 +0.6
425A Indio Mountain 121.83 52 P **PKPdf** 03 53 14.2 +1.1
baz=122
Y27A Causey 121.89 48 P **PKPdf** 03 53 13.8 +0.7
baz=122
PBEJ Beja 121.89 318 *e*PKPdf **PKPdf** 03 53 14.2 +1.4

SPMN	**St. Paul**	**122.03**	**31**	P		**PKPdf**	**03 53 13.3**	**+0.5**
	baz=122							
MDT	**Midelt**	**122.09**	**311**	PKP		**PKPdf**	**03 53 14.7**	**+1.2**
MDT	**Midelt**	**122.09**	**311**	PKP		**PKPdf**	**03 53 14.7**	**+1.2**
	comp=Z,1.9nm,0.5s,baz=70,slow=1.5,SNR=9.4							
Z27A	**Tatum**	**122.11**	**48**	P		**PKPdf**	**03 53 14.0**	**+0.5**
	baz=122							
PVAQ	**Vaqueiros**	**122.12**	**317**	*e*PKPdf		**PKPdf**	**03 53 14.2**	**+0.9**
V29A	**Stinnett**	**122.13**	**45**	P		**PKPdf**	**03 53 13.9**	**+0.4**
	baz=122							
MSTX	**Muleshoe**	**122.14**	**48**	P		**PKPdf**	**03 53 13.7**	**+0.1**
	baz=122							
R31A	**Burdett**	**122.25**	**42**	P		**PKPdf**	**03 53 14.5**	**+1.0**
	baz=122							
127A	**Arkansas Junct**	**122.28**	**49**	P		**PKPdf**	**03 53 14.5**	**+0.6**
	baz=122							
PNCL	**Nicolau / Gran**	**122.29**	**318**	*e*PKPdf		**PKPdf**	**03 53 14.9**	**+1.3**
X28A	**Dimmitt**	**122.30**	**47**	P		**PKPdf**	**03 53 14.3**	**+0.5**
	baz=122							
U30A	**WK&E Inc. Balk**	**122.41**	**44**	P		**PKPdf**	**03 53 15.2**	**+1.2**
	baz=122							
AMTX	**Amarillo**	**122.50**	**46**	*e*PKPdf		**PKPdf**	**03 53 15.6**	**+1.3**
Y28A	**McKinney Farm,**	**122.55**	**47**	P		**PKPdf**	**03 53 14.8**	**+0.4**
	baz=122							
SCHQ	**Schefferville**	**122.69**	**9**	*e*PKPdf		**PKPdf**	**03 53 14.3**	**+0.5**
SCHQ				PKP		**PKPdf**	**03 53 14.7**	**+0.9**
SCHQ	**Schefferville**	**122.69**	**9**	PKP		**PKPdf**	**03 53 14.7**	**+0.9**
	comp=Z,13nm,0.5s,baz=352,slow=1.9,SNR=56							
X29A	**Tulia**	**122.70**	**47**	P		**PKPdf**	**03 53 15.6**	**+1.0**
	baz=122							
TOA0	**Torodi Ar. Sit**	**122.76**	**287**	*e*PKPdf		**PKPdf**	**03 53 15.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**122.76**	**287**	PKP		**PKPdf**	**03 53 15.4**	**+0.4**
TORD				PP		PP	03 54 45.5	-9.0
TORD				PKKPbc		**PKKPbc**	**04 03 08.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**122.76**	**287**	PKP		**PKPdf**	**03 53 15.4**	**+0.4**
	comp=Z,9.2nm,0.7s,baz=83,slow=1.8,SNR=135							
TORD				PP		PP	03 54 45.5	-9.0
	comp=Z,1.4nm,0.7s,baz=57,slow=5.7,SNR=3.8							
TORD				PKKPbc		**PKKPbc**	**04 03 08.2**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=295,slow=3.3,SNR=12							
MORF	**Marmelete**	**122.80**	**317**	*e*PKPdf		**PKPdf**	**03 53 14.4**	**-0.2**
526A	**Mary Lane Ranc**	**122.83**	**52**	P		**PKPdf**	**03 53 15.9**	**+0.8**
	baz=123							
128A	**Castleberry Fa**	**122.97**	**49**	P		**PKPdf**	**03 53 15.5**	**+0.3**
	baz=123							
Y29A	**Porterfield Fa**	**123.00**	**47**	P		**PKPdf**	**03 53 15.9**	**+0.7**
	baz=123							
PFVI	**Vila Bisbo**	**123.01**	**317**	*e*PKPdf		**PKPdf**	**03 53 16.4**	**+1.4**
427A	**Hayter Ranch,**	**123.04**	**51**	P		**PKPdf**	**03 53 16.3**	**+1.0**
	baz=123							
527A	**Woodward Ranch**	**123.17**	**52**	P		**PKPdf**	**03 53 16.8**	**+1.1**
	baz=123							
Z29A	**Hungry Hill Ra**	**123.25**	**48**	P		**PKPdf**	**03 53 16.1**	**+0.4**
	baz=123							
328A	**Wristen Ranch,**	**123.27**	**50**	P		**PKPdf**	**03 53 16.6**	**+0.8**
	baz=123							
X30A	**Coker Ranch, T**	**123.29**	**46**	P		**PKPdf**	**03 53 16.6**	**+0.9**
	baz=123							
129A	**Stewart Farms,**	**123.43**	**48**	P		**PKPdf**	**03 53 16.7**	**+0.7**
	baz=123							
TXAR	**Lajitas Array**	**123.47**	**53**	PKP		**PKPdf**	**03 53 17.5**	**+1.2**
TXAR				PKKPbc		**PKKPbc**	**04 03 06.7**	**+0.7**
TXAR	**Lajitas Array**	**123.47**	**53**	PKP		**PKPdf**	**03 53 17.5**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=129,slow=1.8,SNR=9.3							
TXAR				PKKPbc		**PKKPbc**	**04 03 06.7**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=106,slow=4.6,SNR=4.9							
627A	**Terlingua Ranc**	**123.64**	**53**	P		**PKPdf**	**03 53 17.3**	**+0.8**
	baz=124							
428A	**Kincaid Ranch,**	**123.65**	**51**	P		**PKPdf**	**03 53 17.8**	**+1.2**
	baz=124							
Z30A	**Sanderson Ranc**	**123.67**	**47**	P		**PKPdf**	**03 53 17.3**	**+0.8**
	baz=124							
KSU1	**Kansas State U**	**123.69**	**39**	*e*PKPdf		**PKPdf**	**03 53 16.7**	**+0.5**
229A	**Bryant Ranch,**	**123.77**	**49**	P		**PKPdf**	**03 53 17.1**	**+0.4**
	baz=124							
528A	**Cox Ranch, San**	**123.81**	**52**	P		**PKPdf**	**03 53 17.2**	**+0.3**
	baz=124							
X31A	**McDonald Ranch**	**123.84**	**45**	P		**PKPdf**	**03 53 17.7**	**+1.0**
	baz=124							
329A	**Wagon Wheel Ra**	**123.86**	**50**	P		**PKPdf**	**03 53 17.6**	**+0.7**
	baz=124							
Y31A	**Rekieta Farm,**	**123.97**	**46**	P		**PKPdf**	**03 53 17.8**	**+0.8**
	baz=124							
529A	**Stev Forest Ra**	**124.28**	**51**	P		**PKPdf**	**03 53 18.3**	**+0.6**
	baz=124							
429A	**Davenport Ranc**	**124.31**	**51**	P		**PKPdf**	**03 53 18.1**	**+0.4**
	baz=124							
330A	**Mertzon**	**124.51**	**49**	P		**PKPdf**	**03 53 18.9**	**+0.8**
	baz=124							
WMOK	**Wichita Mounta**	**124.64**	**45**	*e*PKIKP		**PKPdf**	**03 53 19.0**	**+0.7**
WMOK	**Wichita Mounta**	**124.64**	**45**	*e*PKPdf		**PKPdf**	**03 53 18.9**	**+0.7**
430A	**Baggett Ranch,**	**124.74**	**50**	P		**PKPdf**	**03 53 19.0**	**+0.4**
	baz=125							
Z32A	**Haskell**	**124.86**	**47**	P		**PKPdf**	**03 53 19.6**	**+0.9**
	baz=125							
231A	**Bronte**	**124.91**	**48**	P		**PKPdf**	**03 53 19.3**	**+0.5**
	baz=125							
JFWS	**Jewell Farm**	**124.95**	**32**	*e*PKIKP		**PKPdf**	**03 53 18.6**	**+0.1**
JFWS	**Jewell Farm**	**124.95**	**32**	*e*PKPdf		**PKPdf**	**03 53 18.6**	**+0.1**
530A	**J-C Ranch, Com**	**124.95**	**51**	P		**PKPdf**	**03 53 20.2**	**+1.2**
	baz=125							
331A	**San Angelo**	**125.12**	**49**	P		**PKPdf**	**03 53 20.0**	**+0.7**
	baz=125							
431A	**Sonora**	**125.27**	**50**	P		**PKPdf**	**03 53 20.6**	**+1.0**
	baz=125							
531A	**Rocksprings**	**125.56**	**51**	P		**PKPdf**	**03 53 20.6**	**+0.4**
	baz=125							
332A	**Millersview**	**125.60**	**49**	P		**PKPdf**	**03 53 20.7**	**+0.5**
	baz=126							
432A	**Menard**	**125.81**	**49**	P		**PKPdf**	**03 53 21.1**	**+0.5**
	baz=126							
631A	**Perdido Creek**	**125.87**	**51**	P		**PKPdf**	**03 53 21.8**	**+1.1**
	baz=126							
JCT	**Junction City**	**125.98**	**50**	*e*PKIKP		**PKPdf**	**03 53 22.1**	**+1.1**
JCT	**Junction City**	**125.98**	**50**	*e*PKPdf		**PKPdf**	**03 53 22.1**	**+1.1**
JCT	**Junction City**	**125.98**	**50**	P		**PKPdf**	**03 53 22.0**	**+1.1**
	baz=126							
TUL1	**Tulsa**	**126.05**	**42**	P		**PKPdf**	**03 53 22.0**	**+1.1**
	baz=126							
532A	**Rocksprings**	**126.07**	**50**	P		**PKPdf**	**03 53 22.3**	**+1.1**
	baz=126							
632A	**Uvalde**	**126.44**	**51**	P		**PKPdf**	**03 53 23.8**	**+2.0**
	baz=126							
732A	**Laxson Ranch,**	**126.65**	**52**	P		**PKPdf**	**03 53 24.0**	**+1.8**
	baz=126							
OLIL	**Olney**	**129.02**	**34**	*e*PKPdf		**PKPdf**	**03 53 27.2**	**+0.8**
DBIC	**Dimbokro**	**130.18**	**280**	PKP		**PKPdf**	**03 53 30.4**	**+1.1**
DBIC	**Dimbokro**	**130.18**	**280**	PKP		**PKPdf**	**03 53 30.4**	**+1.1**
	comp=Z,6.0nm,0.6s,baz=148,slow=3.9,SNR=12							
WCI	**Wyandotte Cave**	**130.38**	**33**	*e*PKIKP		**PKPdf**	**03 53 30.0**	**+0.9**
WCI	**Wyandotte Cave**	**130.38**	**33**	*e*PKPdf		**PKPdf**	**03 53 30.0**	**+0.9**
LIC	**Lamto**	**130.41**	**280**	*e*PKIKP		**PKPdf**	**03 53 30.9**	**+1.2**
	comp=Z,20nm,0.4s							
LIC	**Lamto**	**130.41**	**280**	*e*PKPdf		**PKPdf**	**03 53 30.9**	**+1.2**
ACSO	**Alum Creek Sta**	**130.62**	**29**	*e*PKPdf		**PKPdf**	**03 53 30.0**	**+0.5**
LRAL	**Lakeview Retre**	**133.54**	**39**	*e*PKPdf		**PKPdf**	**03 53 35.9**	**+0.8**
KMSC	**Kings Mountain**	**135.35**	**32**	P		**PKPdf**	**03 53 40.4**	**+1.9**
	baz=135							
TIGA	**Tifton**	**136.74**	**38**	P		**PKPdf**	**03 53 42.9**	**+1.7**
	baz=136							
TRQA	**Tornquist**	**143.09**	**170**	*e*PKPdf		PKPbc	03 53 50.5	+0.9
LCO	**Las Campanas**	**148.55**	**151**	*e*PKPbc		**PKPbc**	**03 54 07.6**	**+1.4**
LCO				*e*PKPab		**PKPab**	**03 54 09.8**	**0.0**
BCIP	**Isla Barro Col**	**152.15**	**67**	*e*PKPbc		**PKPbc**	**03 54 14.9**	**+0.1**
LPAZ	**La Paz**	**159.95**	**137**	PKP		**PKPdf**	**03 54 18.8**	**-0.2**
LPAZ				*e*PKPdf		**PKPdf**	**03 54 20.2**	**+1.2**
LPAZ	**La Paz**	**159.95**	**137**	PKP		**PKPdf**	**03 54 18.8**	**-0.2**
	comp=Z,2.6nm,0.9s,baz=55,slow=3.7,SNR=10							
BDFB	**Brasilia**	**164.91**	**203**	PKP		**PKPdf**	**03 54 24.0**	**+0.7**
BDFB				PKPab		**PKPab**	**03 55 21.4**	**+1.6**
BDFB	**Brasilia**	**164.91**	**203**	PKP		**PKPdf**	**03 54 24.0**	**+0.7**
	comp=Z,3.4nm,0.8s,baz=14,slow=6.4,SNR=4.6							
BDFB				PKPab		**PKPab**	**03 55 21.4**	**+1.6**
	comp=Z,1.9nm,0.5s,baz=139,slow=6.7,SNR=4.0							
SAML	**Samuel**	**168.42**	**129**	*e*PKPdf		**PKPdf**	**03 54 26.9**	**+1.0**

*ISCJB **31** 03:36:19.0±0.3, 42°.39N±0°.02×13°.41E±0°.03, h15km±2km, Error ellipse: s-maj=3.5km s-min=2.7km az=166.4*
*LDG **31** 03:36:19.3±0.1, 42°.37N×13°.38E, h2km, Ml2.8/4, Error ellipse: s-maj=4.1km s-min=2.9km az=58.0*
*ROM **31** 03:36:19.4±0.1, 42°.38N×13°.39E, h9km, Ml3.0/29, Error ellipse: s-maj=1.0km s-min=0.7km az=77.0*
*CSEM **31** 03:36:19.5±0.1, 42°.39N×13°.40E, h10km, ML3.5/10, Error ellipse: s-maj=3.0km s-min=2.2km az=66.0*

*GEN **31** 03:36:23.6, 42°.26N×13°.28E, h72km, ML3.0*
ISC 31 03:36:18.9±0.8, 42°.40N±0°.02×13°.40E±0°.02, h14km±4km, n93, σ1s12/120, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AQU	**L'Aquila**	**0.04**	**181**	Pg		**Pg**	**03 36 21.4**	**-0.2**
AQU				Sg		**Sg**	**03 36 22.4**	**-1.0**
	7μm,0.1s							
AQU	**L'Aquila**	**0.04**	**181**	Pg		**Pg**	**03 36 21.4**	**-0.2**
AQU				Sg		**Sg**	**03 36 22.4**	**-1.0**
	7μm,0.1s							
CAMP	**Campotosto**	**0.14**	**2**	Pg		**Pb**	**03 36 23.4**	**0.0**
CAMP				Sg		**Sg**	**03 36 26.2**	**+1.0**
	4μm,0.4s							
CAMP	**Campotosto**	**0.14**	**2**	Pg		**Pb**	**03 36 23.4**	**0.0**
CAMP				Sg		**Sg**	**03 36 26.2**	**+1.0**
	4μm,0.4s							
FAGN	**Fagnano**	**0.19**	**135**	Pg		**Pb**	**03 36 24.2**	**0.0**
	11μm,0.5s							
FAGN	**Fagnano**	**0.19**	**135**	Pg		**Pb**	**03 36 24.2**	**0.0**
	11μm,0.5s							
FIAM	**Fiamignano**	**0.25**	**238**	Pg		**Pb**	**03 36 25.0**	**-0.2**
FIAM				Sg		**Sg**	**03 36 28.6**	**+0.6**
	3μm,0.5s							
FIAM	**Fiamignano**	**0.25**	**238**	Pg		**Pb**	**03 36 25.0**	**-0.2**
FIAM				Sg		**Sg**	**03 36 28.6**	**+0.6**
	3μm,0.5s							
TERO	**Teramo**	**0.27**	**34**	Pg		**Pb**	**03 36 25.6**	**0.0**
TERO				Sg		**Sb**	**03 36 30.1**	**+0.1**
	2μm,0.4s							
TERO	**Teramo**	**0.27**	**34**	Pg		**Pb**	**03 36 25.6**	**0.0**
TERO				Sg		**Sb**	**03 36 30.1**	**+0.1**
	2μm,0.4s							
VCEL	**Villa Celiera**	**0.33**	**91**	Pg		**Pb**	**03 36 26.8**	**+0.3**
	3μm,0.7s							
VCEL	**Villa Celiera**	**0.33**	**91**	Pg		**Pb**	**03 36 26.8**	**+0.3**
	3μm,0.7s							
LNSS	**Leonessa**	**0.34**	**307**	Pg		**Pb**	**03 36 26.7**	**-0.1**
LNSS				Sg		**Sb**	**03 36 32.6**	**+0.6**
	3μm,0.6s							
LNSS	**Leonessa**	**0.34**	**307**	Pg		**Pb**	**03 36 26.7**	**-0.1**
LNSS				Sg		**Sb**	**03 36 32.6**	**+0.6**
	3μm,0.6s							
PTQR	**Pietraquaria**	**0.38**	**180**	Pg		**Pb**	**03 36 27.1**	**-0.3**
PTQR				Sg		**Sb**	**03 36 32.7**	**-0.4**
PTQR	**Pietraquaria**	**0.38**	**180**	Pg		**Pb**	**03 36 27.1**	**-0.3**
PTQR				Sg		**Sb**	**03 36 32.7**	**-0.4**
NRCA	**Norcia**	**0.48**	**334**	Pg		**Pb**	**03 36 29.2**	**0.0**
NRCA				Sg		**Sb**	**03 36 37.1**	**+0.8**
	497nm,0.2s							
NRCA	**Norcia**	**0.48**	**334**	Pg		**Pb**	**03 36 29.2**	**0.0**
NRCA				Sg		**Sb**	**03 36 37.1**	**+0.8**
	497nm,0.2s							
MNS	**Montasola**	**0.54**	**269**	Pg		**Pb**	**03 36 29.8**	**-0.3**
	507nm,0.5s							
MNS	**Montasola**	**0.54**	**269**	Pg		**Pb**	**03 36 29.8**	**-0.3**
	507nm,0.5s							
INTR	**Introdacqua**	**0.54**	**136**	Pg		**Pb**	**03 36 30.1**	**0.0**
INTR				Sg		**Sb**	**03 36 38.7**	**+0.9**
	2μm,0.8s							
INTR	**Introdacqua**	**0.54**	**136**	Pg		**Pb**	**03 36 30.1**	**0.0**
INTR				Sg		**Sb**	**03 36 38.7**	**+0.9**
	2μm,0.8s							
CERT	**Cerreto**	**0.55**	**215**	Pg		**Pb**	**03 36 29.9**	**-0.4**
CERT				Sg		**Sg**	**03 36 36.9**	**-0.1**
	1μm,0.4s							
CERT	**Cerreto**	**0.55**	**215**	Pg		**Pb**	**03 36 29.9**	**-0.4**
CERT				Sg		**Sg**	**03 36 36.9**	**-0.1**
	1μm,0.4s							
VVLD	**Villa Vallelon**	**0.55**	**163**	Pg		**Pg**	**03 36 30.0**	**+0.2**
VVLD	**Villa Vallelon**	**0.55**	**163**	Pg		**Pg**	**03 36 30.0**	**+0.2**
OFFI	**Offida**	**0.57**	**21**	Pg		**Pn**	**03 36 32.1**	**-0.6**
	3μm,0.5s							
OFFI	**Offida**	**0.57**	**21**	Pg		**Pn**	**03 36 32.1**	**-0.6**
	3μm,0.5s							
GUAR	**Guarcino**	**0.61**	**186**	Pg		**Pb**	**03 36 31.5**	**+0.2**
	441nm,0.4s							
GUAR	**Guarcino**	**0.61**	**186**	Pg		**Pb**	**03 36 31.5**	**+0.2**
	441nm,0.4s							
MTCE	**Montecelio**	**0.62**	**233**	Pg		**Pb**	**03 36 31.1**	**-0.4**
	361nm,0.6s							
MTCE	**Montecelio**	**0.62**	**233**	Pg		**Pb**	**03 36 31.1**	**-0.4**
	361nm,0.6s							
CESX	**Cesi**	**0.64**	**289**	Pg		**Pb**	**03 36 31.9**	**0.0**
	288nm,0.5s							
CESX	**Cesi**	**0.64**	**289**	Pg		**Pb**	**03 36 31.9**	**0.0**
	288nm,0.5s							
FDMO	**Fiordimonte**	**0.68**	**340**	Pg		**Pb**	**03 36 32.6**	**+0.1**
FDMO				Sg		**Sn**	**03 36 43.4**	**-1.1**
	267nm,0.3s							
FDMO	**Fiordimonte**	**0.68**	**340**	Pg		**Pb**	**03 36 32.6**	**+0.1**
FDMO				Sg		**Sn**	**03 36 43.4**	**-1.1**
	267nm,0.3s							
LPEL	**Lama dei Pelig**	**0.68**	**121**	Pg		**Pb**	**03 36 32.6**	**+0.1**
	522nm,0.6s							
LPEL	**Lama dei Pelig**	**0.68**	**121**	Pg		**Pb**	**03 36 32.6**	**+0.1**
	522nm,0.6s							
CESI	**CESI - Serrava**	**0.71**	**329**	Pg		**Pb**	**03 36 33.4**	**+0.3**
	112nm,0.4s							
CESI	**CESI - Serrava**	**0.71**	**329**	Pg		**Pb**	**03 36 33.4**	**+0.3**
	112nm,0.4s							
POFI	**Posta Fibreno**	**0.72**	**161**	Pg		**Pb**	**03 36 33.2**	**0.0**
POFI	**Posta Fibreno**	**0.72**	**161**	Pg		**Pb**	**03 36 33.2**	**0.0**
CAFR	**Castel Frentan**	**0.72**	**103**	Pg		**Pn**	**03 36 34.0**	**-0.7**
CAFR	**Castel Frentan**	**0.72**	**103**	Pg		**Pn**	**03 36 34.0**	**-0.7**
SDI	**San Donato**	**0.75**	**156**	Pg		**Pg**	**03 36 33.5**	**0.0**
	165nm,0.2s							
SDI	**San Donato**	**0.75**	**156**	Pg		**Pg**	**03 36 33.5**	**0.0**
	165nm,0.2s							
GUMA	**Gualdo di Mace**	**0.77**	**30**	Pg		**Pg**	**03 36 33.0**	**-0.9**
GUMA				Sg		**Sg**	**03 36 43.0**	**-1.0**
	2μm,0.4s							
GUMA	**Gualdo di Mace**	**0.77**	**30**	Pg		**Pg**	**03 36 33.0**	**-0.9**
GUMA				Sg		**Sg**	**03 36 43.0**	**-1.0**
	2μm,0.4s							
RMP	**Rome, Mte Porz**	**0.79**	**222**	Pg		**Pb**	**03 36 34.4**	**+0.1**
	395nm,0.6s							
RMP	**Rome, Mte Porz**	**0.79**	**222**	Pg		**Pb**	**03 36 34.4**	**+0.1**
	395nm,0.6s							
RDP	**Rocca di Papa**	**0.82**	**219**	Pg		**Pb**	**03 36 35.2**	**+0.3**
	685nm,0.5s							
RDP	**Rocca di Papa**	**0.82**	**219**	Pg		**Pb**	**03 36 35.2**	**+0.3**
	685nm,0.5s							
RNI2	**Rionero Sannit**	**0.89**	**141**	Pg		**Pg**	**03 36 36.5**	**+0.3**
	557nm,0.7s							
RNI2	**Rionero Sannit**	**0.89**	**141**	Pg		**Pg**	**03 36 36.5**	**+0.3**
	557nm,0.7s							
SNTG	**Esanatoglia**	**0.92**	**338**	Pg		**Pg**	**03 36 36.9**	**+0.2**
	127nm,0.5s							
SNTG	**Esanatoglia**	**0.92**	**338**	Pg		**Pg**	**03 36 36.9**	**+0.2**
	127nm,0.5s							
CERA	**Filignano**	**0.92**	**150**	Pg		**Pg**	**03 36 36.7**	**0.0**
	361nm,0.6s							
CERA	**Filignano**	**0.92**	**150**	Pg		**Pg**	**03 36 36.7**	**0.0**
	361nm,0.6s							
MIDA	**Miranda**	**0.99**	**140**	Pg		**Pb**	**03 36 37.6**	**-0.2**
	183nm,0.7s							
MIDA	**Miranda**	**0.99**	**140**	Pg		**Pb**	**03 36 37.6**	**-0.2**
	183nm,0.7s							
CING	**Cingoli**	**0.99**	**351**	Pg		**Pb**	**03 36 38.1**	**+0.3**
	205nm,0.3s							
CING	**Cingoli**	**0.99**	**351**	Pg		**Pb**	**03 36 38.1**	**+0.3**
	205nm,0.3s							
TRIV	**Trivento**	**1.06**	**126**	Pg		**Pg**	**03 36 39.9**	**+0.5**
TRIV	**Trivento**	**1.06**	**126**	Pg		**Pg**	**03 36 39.9**	**+0.5**
MURB	**Monte Urbino**	**1.08**	**324**	Pg		**Pg**	**03 36 40.3**	**+0.6**
	414nm,0.6s							
MURB	**Monte Urbino**	**1.08**	**324**	Pg		**Pg**	**03 36 40.3**	**+0.6**
	414nm,0.6s							
TOLF	**Tolfa**	**1.09**	**253**	Pg		**Pg**	**03 36 40.6**	**+0.6**
	146nm,0.5s							
TOLF	**Tolfa**	**1.09**	**253**	Pg		**Pg**	**03 36 40.6**	**+0.6**
	146nm,0.5s							
ARVD	**Arcevia**	**1.15**	**343**	Pg		**Pg**	**03 36 41.0**	**-0.1**
ARVD	**Arcevia**	**1.15**	**343**	Pg		**Pg**	**03 36 41.0**	**-0.1**
AOI	**Ancona**	**1.16**	**7**	Pg		**Pg**	**03 36 41.9**	**+0.6**
	184nm,0.4s							
AOI	**Ancona**	**1.16**	**7**	Pg		**Pg**	**03 36 41.9**	**+0.6**
	184nm,0.4s							
PIEI	**Pieia**	**1.30**	**331**	Pg		**Pg**	**03 36 44.1**	**+0.1**
	99nm,0.5s							
PIEI	**Pieia**	**1.30**	**331**	Pg		**Pg**	**03 36 44.1**	**+0.1**
	99nm,0.5s							
FSSB	**Fossombrone**	**1.37**	**341**	Pn		**Pg**	**03 36 45.2**	**-0.1**
	313nm,0.4s							
FSSB	**Fossombrone**	**1.37**	**341**	Pn		**Pg**	**03 36 45.2**	**-0.1**
	313nm,0.4s							
MAIM	**Mastiano**	**2.61**	**306**	P		**Pb**	**03 37 05.1**	**-0.4**
STON	**Ston**	**3.21**	**80**	*e*Pn		**Pn**	**03 37 10.6**	**+1.8**
STON				Sn		**Sn**	**03 37 47.7**	**+0.9**
STON	**Ston**	**3.21**	**80**	*e*Pn		**Pn**	**03 37 10.5**	**+1.8**
STON				Sn		**Sn**	**03 37 47.6**	**+0.9**
PGF	**Pioggiola**	**3.26**	**274**	*e*P		**Pn**	**03 37 12.3**	**+2.6**
PGF				*e*Sn		**Sn**	**03 37 46.3**	**-2.0**
	8.7nm,0.7s							
PGF	**Pioggiola**	**3.26**	**274**	*e*P		**Pn**	**03 37 12.3**	**+2.6**
PGF				*e*Sn		**Sn**	**03 37 46.3**	**-2.0**
	4.3nm,0.7s							
FRF	**La Foret Royal**	**5.09**	**285**	*e*P		Pn	03 37 38.1	+3.4
FRF	**La Foret Royal**	**5.09**	**285**	*e*P		Pn	03 37 38.1	+3.4
LMR	**La Mourre**	**5.15**	**283**	*e*P		**Pn**	**03 37 38.5**	**+3.0**
LMR	**La Mourre**	**5.15**	**283**	*e*P		**Pn**	**03 37 38.5**	**+3.0**
MBDF	**Montbardon**	**5.35**	**298**	*e*Pn		**Pn**	**03 37 37.9**	**-0.5**
MBDF				*e*Sn		**Sn**	**03 38 36.1**	**-3.8**
	1.3nm,0.2s							
MBDF	**Montbardon**	**5.35**	**298**	*e*Pn		**Pn**	**03 37 37.9**	**-0.5**
CABF	**La Chapelle**	**6.71**	**311**	*e*P		Pn	03 38 01.4	+4.3
KHC	**Kasperske Hory**	**6.73**	**1**	*e*PN		**Pn**	**03 38 00.0**	**+2.7**
KHC				*ex*		x	03 38 10.0	
KHC				*e*SN		**Sn**	**03 39 16.5**	**+2.7**
CDF	**Champ du Feu**	**7.40**	**326**	*e*Pn		**Pn**	**03 38 06.2**	**-0.3**
CDF				*e*Sn		**Sn**	**03 39 25.3**	**-4.9**
	0.6nm,0.3s							
CDF	**Champ du Feu**	**7.40**	**326**	*e*Pn		**Pn**	**03 38 06.2**	**-0.3**
HAU	**Haudompre**	**7.50**	**321**	*e*Pn		**Pn**	**03 38 07.0**	**-0.8**
HAU				*e*Sn		**Sn**	**03 39 27.9**	**-4.7**
	2.0nm,0.4s							
HAU	**Haudompre**	**7.50**	**321**	*e*Pn		**Pn**	**03 38 07.0**	**-0.8**

*ISCJB **31** 03:43:27.2±0.5, 10°.82N±0°.04×62°.33W±0°.03, h102km±6km, Error ellipse: s-maj=6.6km s-min=4.6km az=160.9*
*TRN **31** 03:43:29.3, 10°.88N×62°.13W, h112km, MD3.2*
*FUNV **31** 03:43:30.1, 10°.73N×62°.27W, h90km, MW3.2*
ISC 31 03:43:26.9±1.3, 10°.79N±0°.04×62°.29W±0°.04, h110km±9km, n23, σ1s68/38, 6C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUIV	**Guiria**	**0.16**	**157**	↑	*i*	**Pn**	**03 43 42.4**	**+0.2**
GUIV					*e*	**Sn**	**03 43 51.4**	**-2.2**
TRN	**Trinidad (W)**	**0.88**	**99**	↑	*i*	**Pn**	**03 43 47.8**	**+0.9**
TRN					*e*	**Sn**	**03 44 01.8**	**-0.1**
CRUV	**Carupano**	**0.94**	**263**	↓	*i*	**Pn**	**03 43 48.6**	**+1.1**
CRUV					*e*	**Sn**	**03 44 01.7**	**-1.4**
TPP	**Pointe-a-Pierr**	**0.95**	**120**	↓	*i*	**Pn**	**03 43 49.5**	**+1.9**
TPP					*e*	**Sn**	**03 44 05.0**	**+1.9**
TBH	**Brigand Hill**	**1.24**	**104**	↑	*i*	**Pn**	**03 43 52.0**	**+1.3**
TBH					*e*	**Sn**	**03 44 09.7**	**+1.0**
GRW	**Mount Saint Ca**	**1.49**	**24**	*e*	P	**Pn**	**03 43 54.3**	**+0.6**
GRW				*e*	S	**Sn**	**03 44 13.4**	**-0.7**
TOSP	**Speyside**	**1.79**	**74**	*e*	P	**Pn**	**03 43 57.2**	**-0.1**
TOSP				*e*	S	**Sn**	**03 44 18.6**	**-1.8**
PCRV	**Puerto La Cruz**	**2.39**	**255**

PRXIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIJA	**Lijar**	**0.07**	**171**	Pg	Pg	04 02 00.0	-0.3
LIJA	**Lijar**	**0.07**	**171**	Pg	Pg	04 02 00.0	-0.3
ESPR	**Espera**	**0.37**	**253**	Pg	Pn	04 02 07.2	-1.1
	0.4nm,0.1s,SNR=4.0						
ESPR				Lg	Lg	04 02 14.5	
	2.3nm,0.3s,SNR=7.9						
ESPR	**Espera**	**0.37**	**253**	Pg	Pn	04 02 07.2	-1.0
	0.4nm,0.1s,SNR=4.0						
ESPR				Lg	Lg	04 02 14.5	
	2.3nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**1.09**	**57**	Lg	Lg	04 02 32.8	
	1.1nm,0.2s,SNR=4.0						
ELUQ	**Luque**	**1.09**	**57**	Lg	Lg	04 02 32.8	
	1.1nm,0.2s,SNR=4.0						
EMIN	**Mina Concepcio**	**1.27**	**309**	Pg	Pn	04 02 20.1	-0.6
	0.2nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	04 02 37.3	
	0.5nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**1.27**	**309**	Pg	Pn	04 02 20.1	-0.6
	0.2nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	04 02 37.3	
	0.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**1.37**	**29**	Pg	Pn	04 02 22.0	0.0
	0.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	04 02 37.0	-3.0
	0.1nm,0.1s,SNR=7.9						
EADA				Lg	Lg	04 02 39.0	
	0.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**1.37**	**29**	Pg	Pn	04 02 22.0	-0.1
	0.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	04 02 37.0	-3.0
	0.1nm,0.1s,SNR=7.9						
EADA				Lg	Lg	04 02 39.0	
	0.6nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.74**	**289**	Lg	Lg	04 02 52.3	
	0.2nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**1.74**	**289**	Lg	Lg	04 02 52.3	
	0.2nm,0.1s,SNR=7.9						
PVAQ	**Vaqueiros**	**1.89**	**284**	Sn	Sn	04 02 51.3	-1.4
	1.2nm,0.6s						
PVAQ	**Vaqueiros**	**1.89**	**284**	Sn	Sn	04 02 51.3	-1.4
	1.2nm,0.6s						
PVAQ	**Vaqueiros**	**1.89**	**284**	*e*Sn	Sn	04 02 51.3	-1.4
PVAQ				A	A	04 02 59.8	
	1.2nm,0.6s						
EQES	**Quesada**	**2.04**	**65**	Lg	Lg	04 03 02.0	
	0.3nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.04**	**65**	Lg	Lg	04 03 02.0	
	0.3nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**2.18**	**325**	Lg	Lg	04 03 03.9	
	0.4nm,0.2s,SNR=4.0						

IDC 31 04:08:29.9±1.0, 31°.68N×103°.93E, h0km, mb3.5/6, mb1 3.6/7, mb1mx3.4/29, mbtmp3.5/7, ML3.5/1, Error ellipse: s-maj=88.5km s-min=18.0km az=58.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**16.25**	**6**	Pn	Pn	04 12 20.6	+1.0
	0.2nm,0.3s,baz=185,slow=15,SNR=4.4						
MKAR	**Makanchi Array**	**22.45**	**318**	P	P	04 13 31.3	+0.8
	0.6nm,0.6s,baz=111,slow=12,SNR=7.2						
ZALV	**Zalesovo Beam**	**26.14**	**334**	P	P	04 14 04.6	-0.9
	0.5nm,0.5s,baz=123,slow=11,SNR=3.8						
KURBB	**Kurchatov Arra**	**26.69**	**323**	P	P	04 14 11.1	+0.5
	0.2nm,0.7s,baz=127,slow=8.6,SNR=8.0						
FINES	**FINESS Array B**	**57.01**	**326**	P	P	04 18 16.4	-0.7
	0.5nm,0.4s,baz=90,slow=7.6,SNR=5.9						
WRA	**Warramunga Arr**	**59.03**	**146**	P	P	04 18 32.7	+0.9
	0.5nm,0.8s,baz=340,slow=7.5,SNR=3.3						
ASAR	**Alice Springs**	**62.06**	**149**	P	P	04 18 51.6	-0.9
	0.3nm,0.8s,baz=347,slow=8.0,SNR=3.4						

*SKO **31** 04:43:31.8, 39°.36N×23°.71E, h0km*
*ISCJB **31** 04:43:32.8±0.5, 39°.49N±0°.02×23°.71E±0°.03, h8km±4km, Error ellipse: s-maj=4.2km s-min=2.5km az=19.7*
*SOF **31** 04:43:32.5, 39°.61N×23°.76E, h2km, MD2.8*
*ATH **31** 04:43:33.0, 39°.49N×23°.65E, h27km±1km, MD3.1/8, ML2.9*
*CSEM **31** 04:43:33.0±0.1, 39°.48N×23°.71E, h10km, ML2.9/9, Error ellipse: s-maj=4.2km s-min=2.1km az=104.0*
*THE **31** 04:43:34.1, 39°.47N×23°.67E, h12km±1km, ML2.9/9, Error ellipse: s-maj=1.0km s-min=0.5km az=158.0*
ISC 31 04:43:31.4±1.2, 39°.45N±0°.02×23°.72E±0°.02, h3km±10km, n92, σ0°.74/127, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.30**	**156**	P	**Pn**	**04 43 40.8**	**-1.9**
AOS				S	**Sb**	**04 43 46.0**	**+1.2**
AOS	**Alonnisos**	**0.30**	**156**	P	**Pn**	**04 43 40.8**	**-1.9**
AOS				S	**Sb**	**04 43 46.0**	**+1.2**
SKIA	**Skiathos**	**0.34**	**215**	P	**Pb**	**04 43 40.9**	**+0.7**
SKIA				S	**Sb**	**04 43 45.4**	**-0.6**
SKIA	**Skiathos**	**0.34**	**215**	P	**Pb**	**04 43 40.9**	**+0.7**
SKIA				S	**Sb**	**04 43 45.4**	**-0.6**
NEO	**Neokhori**	**0.41**	**250**	P	**Pb**	**04 43 41.5**	**+0.1**
NEO				S	**Sb**	**04 43 47.1**	**-0.9**
NEO	**Neokhori**	**0.41**	**250**	*e*PB	**Pb**	**04 43 41.4**	**+0.1**
NEO				*e*SB	**Sb**	**04 43 47.7**	**-0.3**
NEO	**Neokhori**	**0.41**	**250**	P	**Pb**	**04 43 41.5**	**+0.1**
NEO				S	**Sb**	**04 43 47.1**	**-0.9**
XOR	**Xorichti**	**0.42**	**259**	P	**Pb**	**04 43 41.4**	**-0.1**
XOR				S	**Sb**	**04 43 47.1**	**-1.1**
XOR	**Xorichti**	**0.42**	**259**	P	**Pb**	**04 43 41.4**	**-0.1**
XOR				S	**Sb**	**04 43 47.1**	**-1.1**
SMIA	**Simia**	**0.69**	**215**	P	**Pn**	**04 43 47.2**	**-0.9**
SMIA				S	**Sn**	**04 43 58.0**	**-1.4**
SMIA	**Simia**	**0.69**	**215**	P	**Pn**	**04 43 47.2**	**-0.9**
SMIA				S	**Sn**	**04 43 58.0**	**-1.4**
MRKA	**Markates**	**0.75**	**188**	P	**Pn**	**04 43 48.4**	**-0.5**
MRKA				S	**Sn**	**04 43 59.9**	**-0.8**
MRKA	**Markates**	**0.75**	**188**	P	**Pn**	**04 43 48.4**	**-0.5**
MRKA				S	**Sn**	**04 43 59.9**	**-0.8**
OUR	**Ouranopolis**	**0.91**	**13**	P	**Pn**	**04 43 51.0**	**0.0**
OUR				S	**Sn**	**04 44 04.6**	**0.0**
OUR	**Ouranopolis**	**0.91**	**13**	P	**Pn**	**04 43 51.0**	**0.0**
ATAL	**Atalanti**	**0.93**	**216**	P	**Pn**	**04 43 51.4**	**0.0**
ATAL	**Atalanti**	**0.93**	**216**	P	**Pn**	**04 43 51.4**	**0.0**
PLG	**Polygyros**	**0.95**	**347**	P	**Pn**	**04 43 50.8**	**-0.9**
PLG	**Polygyros**	**0.95**	**347**	*e*PN	**Pb**	**04 43 50.2**	**-0.3**
PLG	**Polygyros**	**0.95**	**347**	P	**Pn**	**04 43 50.8**	**-0.9**
LKR	**Lokris**	**0.97**	**216**	P	**Pn**	**04 43 52.0**	**0.0**
LKR				S	**Sn**	**04 44 06.3**	**0.0**
LKR	**Lokris**	**0.97**	**216**	*e*PN	**Pn**	**04 43 52.0**	**0.0**
LKR				*e*SN	**Sn**	**04 44 06.0**	**-0.3**
LKR	**Lokris**	**0.97**	**216**	P	**Pn**	**04 43 52.0**	**0.0**
LKR				S	**Sn**	**04 44 06.3**	**0.0**
AXAR	**Agios Charalam**	**1.07**	**231**	P	**Pn**	**04 43 54.7**	**+1.4**
AXAR				S	**Sn**	**04 44 09.0**	**+0.3**
AXAR	**Agios Charalam**	**1.07**	**231**	P	**Pn**	**04 43 54.7**	**+1.4**
AXAR				S	**Sn**	**04 44 09.0**	**+0.3**
LIT	**Litokhoron**	**1.15**	**305**	P	**Pn**	**04 43 54.4**	**-0.1**
LIT	**Litokhoron**	**1.15**	**305**	P	**Pn**	**04 43 54.4**	**-0.1**
AGG	**Agios Georgios**	**1.16**	**249**	P	**Pn**	**04 43 54.6**	**0.0**
AGG				S	**Sn**	**04 44 12.0**	**+1.0**
AGG	**Agios Georgios**	**1.16**	**249**	P	**Pn**	**04 43 54.6**	**0.0**
AGG				S	**Sn**	**04 44 12.0**	**+1.0**
LIA	**Limnos Island**	**1.21**	**68**	*e*PN	**Pn**	**04 43 56.4**	**+1.2**
LIA				*e*SN	**Sn**	**04 44 13.7**	**+1.5**
HORT	**Hortiatis**	**1.24**	**338**	P	**Pn**	**04 43 55.9**	**+0.1**
HORT				S	**Sb**	**04 44 11.9**	**-0.2**
HORT	**Hortiatis**	**1.24**	**338**	P	**Pn**	**04 43 55.9**	**+0.1**
HORT				S	**Sb**	**04 44 11.9**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.31**	**251**	P	**Pg**	**04 43 57.5**	**+1.0**
MAKR	**Makrakomi, Fth**	**1.31**	**251**	P	**Pg**	**04 43 57.5**	**+1.0**
THE	**Thessaloniki**	**1.32**	**334**	P	**Pg**	**04 43 57.4**	**+0.7**
THE	**Thessaloniki**	**1.32**	**334**	P	**Pg**	**04 43 57.4**	**+0.7**
THL	**Klokotos Trika**	**1.33**	**276**	P	**Pb**	**04 43 56.7**	**-0.2**
THL	**Klokotos Trika**	**1.33**	**276**	P	**Pb**	**04 43 56.7**	**-0.2**
DSF	**Desfina**	**1.39**	**222**	P	**Pn**	**04 43 57.5**	**-0.3**
DSF				S	**Sb**	**04 44 16.3**	**0.0**
DSF	**Desfina**	**1.39**	**222**	P	**Pn**	**04 43 57.5**	**-0.3**
DSF				S	**Sb**	**04 44 16.3**	**0.0**
PTL	**Penteli**	**1.40**	**175**	P	**Pg**	**04 43 58.4**	**+0.1**
PTL	**Penteli**	**1.40**	**175**	P	**Pg**	**04 43 58.4**	**+0.1**
SOH	**Sokhos**	**1.40**	**348**	P	**Pg**	**04 43 58.5**	**+0.2**
SOH	**Sokhos**	**1.40**	**348**	P	**Pg**	**04 43 58.5**	**+0.2**
ATH	**Athens Observa**	**1.47**	**180**	P	**Pg**	**04 43 59.8**	**+0.2**
ATH				S	**Sg**	**04 44 19.1**	**+0.4**
ATH	**Athens Observa**	**1.47**	**180**	*e*PN	**Pg**	**04 44 00.2**	**+0.6**
ATH	**Athens Observa**	**1.47**	**180**	P	**Pg**	**04 43 59.8**	**+0.2**
ATH				S	**Sg**	**04 44 19.1**	**+0.4**
ATHU	**Athens Univers**	**1.48**	**178**	P	**Pg**	**04 44 00.0**	**+0.2**
ATHU	**Athens Univers**	**1.48**	**178**	P	**Pg**	**04 44 00.0**	**+0.2**
LTK	**Loutraki**	**1.54**	**203**	P	**Pg**	**04 44 01.0**	**+0.1**
LTK	**Loutraki**	**1.54**	**203**	P	**Pg**	**04 44 01.0**	**+0.1**
EVR	**Evrytania**	**1.58**	**251**	*e*PN	**Pb**	**04 44 01.1**	**-0.2**
KALE	**Kalithea**	**1.62**	**230**	P	**Pb**	**04 44 01.8**	**-0.2**
KALE	**Kalithea**	**1.62**	**230**	P	**Pb**	**04 44 01.8**	**-0.2**
KAVA	**Kavala**	**1.66**	**21**	P	**Pn**	**04 44 01.4**	**0.0**
KAVA				S	**Sg**	**04 44 24.4**	**-0.4**
KAVA	**Kavala**	**1.66**	**21**	P	**Pn**	**04 44 01.4**	**0.0**
KAVA				S	**Sg**	**04 44 24.4**	**-0.4**
SIGR	**SIGRI**	**1.67**	**97**	P	**Pg**	**04 44 03.4**	**0.0**
SIGR	**SIGRI**	**1.67**	**97**	P	**Pg**	**04 44 03.4**	**0.0**
SRS	**Serrai**	**1.67**	**357**	P	**Pb**	**04 44 02.1**	**-0.7**
SRS	**Serrai**	**1.67**	**357**	P	**Pb**	**04 44 02.1**	**-0.7**
KZN	**Kozani**	**1.73**	**300**	*e*PN	**Pb**	**04 44 03.1**	**-0.8**
GRG	**Griva**	**1.81**	**327**	P	**Pn**	**04 44 04.0**	**+0.4**
GRG	**Griva**	**1.81**	**327**	P	**Pn**	**04 44 04.0**	**+0.4**
KNT	**Kendrikon**	**1.82**	**340**	P	**Pb**	**04 44 04.9**	**-0.5**
KNT	**Kendrikon**	**1.82**	**340**	P	**Pb**	**04 44 04.9**	**-0.5**
GUR	**Goura**	**1.86**	**216**	P	**Pb**	**04 44 05.1**	**-0.9**
GUR	**Goura**	**1.86**	**216**	P	**Pb**	**04 44 05.1**	**-0.9**
NVR	**Nevrokopi**	**1.90**	**3**	P	**Pn**	**04 44 04.7**	**-0.1**
NVR	**Nevrokopi**	**1.90**	**3**	*e*PB	**Pn**	**04 44 04.9**	**+0.1**
NVR	**Nevrokopi**	**1.90**	**3**	P	**Pn**	**04 44 04.7**	**-0.1**
DID	**Didima**	**1.98**	**191**	P	**Pn**	**04 44 06.4**	**+0.6**
DID	**Didima**	**1.98**	**191**	P	**Pn**	**04 44 06.4**	**+0.6**
DIDY	**Didyma**	**2.01**	**192**	P	**Pn**	**04 44 07.1**	**+0.8**
DIDY	**Didyma**	**2.01**	**192**	P	**Pn**	**04 44 07.1**	**+0.8**
VAY	**Valandovo**	**2.07**	**335**	*e*PN	**Pb**	**04 44 09.5**	**0.0**
VAY	**Valandovo**	**2.07**	**335**	*e*PN	**Pb**	**04 44 10.0**	**+0.4**
MMB	**Musomiste**	**2.14**	**0**	*i* P	**Pn**	**04 44 08.1**	**+0.1**
MMB				*i* Pg	**Pg**	**04 44 12.2**	**-0.2**
MMB	**Musomiste**	**2.14**	**0**	*i* P	**Pn**	**04 44 08.1**	**+0.1**
JAN	**Janina**	**2.23**	**276**	P	**Pb**	**04 44 11.0**	**-1.4**
JAN	**Janina**	**2.23**	**276**	P	**Pb**	**04 44 11.0**	**-1.4**
VLX	**Vlachokerasia**	**2.33**	**207**	P	**Pn**	**04 44 11.3**	**+0.6**
VLX	**Vlachokerasia**	**2.33**	**207**	P	**Pn**	**04 44 11.3**	**+0.6**
RZN	**Rozhen**	**2.36**	**18**	*i* P	**Pn**	**04 44 12.3**	**+1.1**
RZN				*i* Pg	**Pg**	**04 44 16.4**	**-0.3**
RZN	**Rozhen**	**2.36**	**18**	*i* P	**Pn**	**04 44 12.3**	**+1.1**
KKB	**Krupnik**	**2.46**	**349**	*i* P	**Pn**	**04 44 12.9**	**+0.4**
KKB				*i* Pg	**Pg**	**04 44 17.4**	**-1.3**
KKB	**Krupnik**	**2.46**	**349**	*i* P	**Pn**	**04 44 12.9**	**+0.4**
KDZ	**Kurdzhali**	**2.55**	**30**	*i* P	**Pn**	**04 44 13.6**	**-0.1**
KDZ	**Kurdzhali**	**2.55**	**30**	*i* P	**Pn**	**04 44 13.6**	**-0.1**
VTS	**Vitosha**	**3.17**	**353**	*i* P	**Pn**	**04 44 23.9**	**+1.7**
VTS				*i* P	**Pn**	**04 44 23.9**	**+1.7**
VTS	**Vitosha**	**3.17**	**353**	*i* P	**Pn**	**04 44 23.9**	**+1.7**
BARS	**Barje**	**3.66**	**337**	*e*Pn	**Pn**	**04 44 30.2**	**+1.3**
MPEP	**Malo Peshtene**	**3.91**	**0**	*i* P	**Pn**	**04 44 33.9**	**+1.6**
MPEP				*i* Pg	**Pg**	**04 44 45.9**	**-0.3**

*SKO **31** 05:15:22.8, 41°.28N×22°.71E, h15km, M1.8, ML2.1*
*THE **31** 05:15:23.0, 41°.32N×22°.73E, h3km±1km, ML2.5/10, Error ellipse: s-maj=1.7km s-min=0.6km az=209.0*
*SOF **31** 05:15:23.1, 41°.36N×22°.73E, h4km, MD2.7*
*CSEM **31** 05:15:23.4±0.1, 41°.30N×22°.71E, h2km, ML2.0, Error ellipse: s-maj=2.7km s-min=2.3km az=28.0*
*BEO **31** 05:15:25.0±0.5, 41°.35N×22°.67E, h1km±3km, ML2.0/6*
ISC 31 05:15:23.3±0.8, 41°.30N±0°.02×22°.71E±0°.02, h8km±6km, n59, σ0°.66/95, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**280**	P	**Pg**	**05 15 25.8**	**+0.1**
VAY				S	**Sg**	**05 15 26.7**	**-0.7**
VAY	**Valandovo**	**0.10**	**280**	*i* Pg	**Pg**	**05 15 25.8**	**+0.1**
VAY				*i* Sg	**Sg**	**05 15 27.9**	**+0.6**
VAY				*e*Lg	Lg	05 15 28.0	
	comp=E,1μm,0.2s						
VAY				*e*Lg	Lg	05 15 28.0	
	comp=N,2μm,0.3s						
VAY	**Valandovo**	**0.10**	**280**	*e*Pg	**Pg**	**05 15 25.6**	**-0.1**
VAY				*e*Sg	**Sg**	**05 15 27.8**	**+0.4**
VAY	**Valandovo**	**0.10**	**280**	P	**Pg**	**05 15 25.8**	**+0.1**
VAY				S	**Sg**	**05 15 26.7**	**-0.7**
VAY				*e*Sg	Sg	05 15 27.8	+0.4
VAY				*e*Lg	Lg	05 15 28.5	
	comp=N,2μm,0.3s						
KNT	**Kendrikon**	**0.20**	**134**	P	**Pg**	**05 15 27.8**	**+0.4**
KNT				S	**Sg**	**05 15 30.7**	**+0.5**
KNT	**Kendrikon**	**0.20**	**134**	P	**Pg**	**05 15 27.8**	**+0.4**
KNT				S	**Sg**	**05 15 30.7**	**+0.5**
GRG	**Griva**	**0.41**	**214**	P	**Pg**	**05 15 31.5**	**+0.1**
GRG				S	**Sg**	**05 15 37.9**	**+1.1**
GRG	**Griva**	**0.41**	**214**	P	**Pg**	**05 15 31.5**	**+0.1**
GRG				S	**Sg**	**05 15 37.9**	**+1.1**
KKB	**Krupnik**	**0.63**	**27**	*i* Pg	**Pg**	**05 15 35.3**	**-0.2**
KKB	**Krupnik**	**0.63**	**27**	*i* Pg	**Pg**	**05 15 35.3**	**-0.2**
SOH	**Sokhos**	**0.69**	**134**	P	**Pg**	**05 15 35.9**	**-0.6**
SOH				S	**Sg**	**05 15 45.9**	**+0.4**
SOH	**Sokhos**	**0.69**	**134**	P	**Pg**	**05 15 35.9**	**-0.6**
SOH				S	**Sg**	**05 15 45.9**	**+0.4**
SRS	**Serrai**	**0.69**	**105**	P	**Pg**	**05 15 36.4**	**-0.3**
SRS				S	**Sg**	**05 15 45.5**	**-0.2**
SRS	**Serrai**	**0.69**	**105**	P	**Pg**	**05 15 36.4**	**-0.3**
SRS				S	**Sg**	**05 15 45.5**	**-0.2**
THE	**Thessaloniki**	**0.70**	**164**	P	**Pg**	**05 15 36.4**	**-0.3**
THE				S	**Sg**	**05 15 46.6**	**+0.8**
THE	**Thessaloniki**	**0.70**	**164**	P	**Pg**	**05 15 36.4**	**-0.3**
THE				S	**Sg**	**05 15 46.6**	**+0.8**
HORT	**Hortiatis**	**0.77**	**157**	P	**Pg**	**05 15 37.9**	**-0.1**
HORT				S	**Sg**	**05 15 48.5**	**+0.5**
HORT	**Hortiatis**	**0.77**	**157**	P	**Pg**	**05 15 37.9**	**-0.1**
HORT				S	**Sg**	**05 15 48.5**	**+0.5**
MMB	**Musomiste**	**0.82**	**69**	*i* Pg	**Pg**	**05 15 38.7**	**-0.4**
MMB	**Musomiste**	**0.82**	**69**	*i* Pg	**Pg**	**05 15 38.7**	**-0.4**
NVR	**Nevrokopi**	**0.87**	**87**	P	**Pg**	**05 15 39.6**	**-0.5**
NVR				S	**Sg**	**05 15 50.8**	**-0.6**
NVR	**Nevrokopi**	**0.87**	**87**	P	**Pg**	**05 15 39.6**	**-0.5**
NVR				S	**Sg**	**05 15 50.8**	**-0.6**
BIA	**Bitola**	**1.08**	**255**	P	**Pg**	**05 15 43.4**	**-0.6**
BIA	**Bitola**	**1.08**	**255**	*i* Pg	**Pg**	**05 15 43.9**	**-0.1**
BIA				*i* Sg	**Sg**	**05 15 58.4**	**+0.3**
BIA	**Bitola**	**1.08**	**255**	P	**Pg**	**05 15 43.4**	**-0.6**
BIA	**Bitola**	**1.08**	**255**	*i* Pg	**Pg**	**05 15 43.9**	**-0.1**
BIA				*i* Sg	**Sg**	**05 15 58.3**	**+0.3**
PLG	**Polygyros**	**1.08**	**149**	P	**Pg**	**05 15 43.5**	**-0.6**
PLG				S	**Sb**	**05 15 58.9**	**+0.3**
PLG	**Polygyros**	**1.08**	**149**	P	**Pg**	**05 15 43.5**	**-0.6**
PLG				S	**Sb**	**05 15 58.9**	**+0.3**
FNA	**Florina**	**1.13**	**243**	P	**Pg**	**05 15 44.3**	**-0.7**
FNA				S	**Sb**	**05 16 00.7**	**+0.7**
FNA	**Florina**	**1.13**	**243**	P	**Pg**	**05 15 44.3**	**-0.7**
FNA				S	**Sb**	**05 16 00.7**	**+0.7**
SKO	**Skopje**	**1.16**	**306**	P	**Pb**	**05 15 43.2**	**-2.4**
SKO	**Skopje**	**1.16**	**306**	*i* Pn	**Pn**	**05 15 46.4**	**+0.6**
SKO				*i* Sg	**Sb**	**05 16 01.4**	**+0.6**
SKO				*e*Lg	Lg	05 16 02.8	
	comp=N,21nm,0.3s						
SKO				*e*Lg	Lg	05 16 03.2	
	comp=E,28nm,0.7s						
SKO	**Skopje**	**1.16**	**306**	*e*Pg	**Pn**	**05 15 46.6**	**+0.8**
SKO	**Skopje**	**1.16**	**306**	P	**Pb**	**05 15 43.2**	**-2.4**
SKO	**Skopje**	**1.16**	**306**	*e*Pg	**Pn**	**05 15 46.6**	**+0.8**
SKO	**Skopje**	**1.16**	**306**	*i* Pn	**Pn**	**05 15 46.9**	**+1.1**
SKO				*e*Lg	Lg	05 16 01.7	
	comp=E,28nm,0.7s						
SKO				*i* Sg	**Sn**	**05 16 01.9**	**0.0**
VTS	**Vitosha**	**1.34**	**16**	P	**Pn**	**05 15 47.9**	**-0.6**
VTS				S	**Sb**	**05 16 06.0**	**-0.2**
VTS	**Vitosha**	**1.34**	**16**	*e*Sg	**Sb**	**05 16 05.9**	**-0.2**
VTS	**Vitosha**	**1.34**	**16**	*i* P	**Pn**	**05 15 48.7**	**+0.2**
VTS	**Vitosha**	**1.34**	**16**	*i* P	**Pn**	**05 15 48.7**	**+0.2**
VTS				S	**Sb**	**05 16 06.0**	**-0.2**
OUR	**Ouranopolis**	**1.37**	**135**	P	**Pn**	**05 15 48.5**	**-0.2**
OUR				S	**Sg**	**05 16 08.2**	**+0.9**
OUR	**Ouranopolis**	**1.37**	**135**	P	**Pn**	**05 15 48.5**	**-0.2**
OUR				S	**Sg**	**05 16 08.2**	**+0.9**
KAVA	**Kavala**	**1.40**	**102**	P	**Pn**	**05 15 48.8**	**-0.3**
KAVA				S	**Sb**	**05 16 07.0**	**-0.7**
KAVA	**Kavala**	**1.40**	**102**	P	**Pn**	**05 15 48.8**	**-0.3**
KAVA				S	**Sb**	**05 16 07.0**	**-0.7**
RZN	**Rozhen**	**1.56**	**75**	*i* P	**Pg**	**05 15 53.4**	**+0.2**
RZN	**Rozhen**	**1.56**	**75**	*i* P	**Pg**	**05 15 53.4**	**+0.2**
BARS	**Barje**	**1.65**	**337**	*e*Pn	**Pn**	**05 15 52.3**	**-0.3**
BARS				*e*Sg	**Sb**	**05 16 15.6**	**+0.6**
BARS	**Barje**	**1.65**	**337**	*e*Pn	**Pn**	**05 15 52.3**	**-0.3**
BARS				*e*Sg	**Sb**	**05 16 15.6**	**+0.6**
PGB	**Panagyurishte**	**1.66**	**41**	*i* P	**Pb**	**05 15 54.6**	**+0.5**
PGB	**Panagyurishte**	**1.66**	**41**	*i* P	**Pb**	**05 15 54.6**	**+0.5**
PLD	**Plovdiv**	**1.70**	**61**	*e*Pn	**Pb**	**05 15 54.3**	**-0.4**
PLD				*e*Sg	**Sg**	**05 16 19.8**	**+2.0**
PLD	**Plovdiv**	**1.70**	**61**	*i* Pg	**Pg**	**05 15 56.0**	**+0.2**
PLD	**Plovdiv**	**1.70**	**61**	*e*Pn	**Pb**	**05 15 54.3**	**-0.4**
PLD	**Plovdiv**	**1.70**	**61**	*i* Pg	**Pg**	**05 15 56.0**	**+0.2**
ZAPS	**Zavoj**	**1.97**	**358**	*e*Pn	**Pb**	**05 16 00.2**	**+0.8**
ZAPS				*e*Sn	**Sn**	**05 16 22.4**	**+0.5**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* P	**Pb**	**05 16 00.4**	**-0.7**
KDZ	**Kurdzhali**	**2.07**	**79**	*i* P	**Pb**	**05 16 00.4**	**-0.7**
MPEP	**Malo Peshtene**	**2.19**	**20**	*i* Pg	**Pg**	**05 16 04.7**	**-0.6**
SELS	**Selova**	**2.25**	**329**	*e*Pn	**Pb**	**05 16 04.6**	**+0.4**

IDC 31 05:22:45.3±7.0, 17°.27S×179°.18W, h531km±79km, mb3.1/11, mb1 3.3/11, mb1mx3.2/20, mbtmp3.1/11, Error ellipse: s-maj=28.5km s-min=18.2km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.30**	**240**	P	P	05 29 21.1	+0.7
	1.1nm,0.4s,baz=87,slow=6.8,SNR=8.0						
WRA	**Warramunga Arr**	**44.03**	**259**	P	P	05 30 05.2	-0.9
	0.3nm,0.3s,baz=94,slow=8.1,SNR=14						
ASAR	**Alice Springs**	**44.26**	**254**	P	P	05 30 07.8	-0.1
	2.8nm,0.5s,baz=89,slow=7.9,SNR=62						
VNDA	**Vanda**	**61.01**	**185**	P	P	05 32 07.0	+0.3
	0.5nm,0.7s,baz=5.5,slow=6.5,SNR=3.9						
MJAR	**Matsushiro Arr**	**66.96**	**324**	P	P	05 32 45.2	0.0
	0.6nm,0.5s,baz=159,slow=6.6,SNR=7.2						
QSPA	**South Pole Qui**	**72.78**	**180**	P	P	05 33 19.1	-0.4
	1.5nm,0.6s,baz=10,slow=2.0,SNR=15						
PETK	**Petropavlovsk-**	**72.88**	**346**	P	P	05 33 20.3	+0.2
	2.6nm,0.9s,baz=106,slow=9.4,SNR=3.9						
NVAR	**Mina Array Bea**	**79.48**	**44**	P	P	05 33 57.0	-0.1
	1.0nm,0.8s,baz=232,slow=8.5,SNR=5.3						
ILAR	**Eielson Array**	**85.44**	**13**	P	P	05 34 25.0	-1.2
	0.4nm,0.4s,baz=226,slow=5.3,SNR=15						
TXAR	**Lajitas Array**	**86.28**	**58**	P	P	05 34 32.3	+1.1
	0.3nm,0.7s,baz=204,slow=5.8,SNR=4.9						
PDAR	**Pinedale Array**	**87.40**	**44**	P	P	05 34 36.0	-0.4
	0.4nm,0.5s,baz=226,slow=4.8,SNR=3.1						
BRTR	**Keskin Array B**	**143.82**	**315**	PKP	PKPab	05 41 19.9	+0.3
	0.3nm,0.4s,baz=347,slow=5.1,SNR=3.8						
GERES	**GERESS Array B**	**146.81**	**344**	PKPbc	PKPbc	05 41 27.7	-0.2
	0.7nm,0.5s,baz=25,slow=3.3,SNR=8.3						
DAVOX	**Davos/Dischmat**	**149.63**	**348**	PKPbc	PKPbc	05 41 35.0	-0.2
	0.8nm,0.4s,baz=0.0,slow=6.1,SNR=6.6						

*IDC **31** 05:

ASAR	**Alice Springs**	**29.09 239**	P	P	05 37 28.2	+2.3
ASAR	**Alice Springs**	**29.09 239**	P	P	05 37 28.2	+2.3
	0.7nm,0.5s,baz=63,slow=10.0,SNR=22					
ASAR			LR	LR	05 48 56.8	
	comp=Z,223nm,18.3s,baz=95,slow=36					
URZ	**Urewera**	**31.56 155**	LR	LR	05 47 11.8	
	comp=Z,113nm,20.6s,baz=70,slow=30					
FITZ	**Fitzroy Crossi**	**35.09 253**	P	**P**	**05 38 18.5**	**0.0**
FITZ	**Fitzroy Crossi**	**35.09 253**	P	**P**	**05 38 18.5**	**0.0**
	1.4nm,0.7s,baz=66,slow=12,SNR=6.3					
FITZ			LR	LR	05 52 37.9	
	comp=Z,59nm,19.8s,baz=66,slow=36					
DAV	**Davao City (W)**	**39.14 294**	LR	LR	05 52 52.0	
	comp=Z,34nm,18.7s,baz=311,slow=33					
NWAO	**Narrogin (SRO)**	**46.12 234**	LR	LR	05 59 48.6	
	comp=Z,108nm,19.8s,baz=20,slow=37					
PPT	**Papeete**	**48.50 104**	LR	LR	05 57 05.2	
	comp=Z,132nm,18.3s,baz=169,slow=32					
USRK	**Ussuriysk Arra**	**60.10 336**	P	**P**	**05 41 32.4**	**+0.7**
	0.8nm,0.6s,baz=109,slow=10,SNR=4.2					
PETK	**Petropavlovsk-**	**63.04 358**	P	**P**	**05 41 51.5**	**+0.1**
PETK	**Petropavlovsk-**	**63.04 358**	P	**P**	**05 41 51.5**	**+0.1**
	0.8nm,0.4s,baz=159,slow=9.3,SNR=4.9					
VNDA	**Vanda**	**67.39 180**	P	**P**	**05 42 18.8**	**-0.5**
VNDA	**Vanda**	**67.39 180**	P	**P**	**05 42 18.8**	**-0.5**
	0.7nm,0.9s,baz=347,slow=6.6,SNR=5.1					
BILL	**Bilibino**	**78.05 2**	*e*P	**P**	**05 43 22.5**	**-0.2**
	6.5nm,1.0s					
MCK	**McKinley**	**82.84 20**	*e*P	**P**	**05 43 48.4**	**-0.1**
	5.8nm,0.8s					
ILAR	**Eielson Array**	**84.20 20**	P	**P**	**05 43 54.8**	**-0.6**
ILAR	**Eielson Array**	**84.20 20**	P	**P**	**05 43 54.8**	**-0.6**
	0.6nm,0.4s,baz=238,slow=5.0,SNR=25					
NVAR	**Mina Array Bea**	**89.07 51**	P	**P**	**05 44 20.8**	**+0.7**
NVAR	**Mina Array Bea**	**89.07 51**	P	**P**	**05 44 20.8**	**+0.7**
	0.9nm,0.7s,baz=240,slow=6.3,SNR=7.7					
ZALV	**Zalesovo Beam**	**90.07 325**	LR	LR	06 22 07.4	
	comp=Z,16nm,19.6s,baz=65,slow=34					
KURK	**Kurchatov**	**92.93 321**	P	P	05 44 38.8	+1.4
KURBB	**Kurchatov Arra**	**92.96 321**	P	**P**	**05 44 38.8**	**+1.2**
	0.2nm,0.5s,baz=104,slow=3.3,SNR=4.1					
HLID	**Hailey**	**93.04 46**	*e*P	**P**	**05 44 38.8**	**+0.5**
	2.6nm,1.0s					
YKA	**Yellowknife Ar**	**96.34 28**	P	**P**	**05 44 52.1**	**-0.6**
YKA	**Yellowknife Ar**	**96.34 28**	P	**P**	**05 44 52.1**	**-0.6**
	0.5nm,0.6s,baz=261,slow=4.8,SNR=8.8					
ARCES	**ARCESS Array B**	**114.21 344**	PKP	PKPdf	05 50 03.7	+0.6
ARCES	**ARCESS Array B**	**114.21 344**	PKP	PKPdf	05 50 03.7	+0.6
	2.8nm,1.0s,baz=72,slow=2.9,SNR=3.3					

*IDC **31** 05:34:21.9±0.8,0°.92N×123°.37E, h0km, mb3.9/8, mb1 4.1/10, mb1mx3.8/26, mbtmpg3.9/10, ML3.9/2, Error ellipse: s-maj=42.6km s-min=14.8km az=68.0*

*ISCJB **31** 05:34:39.2±0.6,0°.21N±0°.06×122°.33E±0°.07, h150km, mb3.6/8, Error ellipse: s-maj=9.9km s-min=9.0km az=18.2*

*DJA **31** 05:34:41.5±1.0,0°.N±4°×12°.2E±°, h133km±8km, MA1.4/4, MLv4.1/4*

ISC 31 05:34:40.2±0.8,0°.21N±0°.07×122°.35E±0°.07,h150km,n15, σ1f12/16,mb3.7/8,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.49**	**303**	P	**Pn**	**05 35 01.8**	**+0.3**
MRSI				S	**Sn**	**05 35 18.1**	**+0.5**
LUWI	**Luwuk**	**1.31**	**161**	P	**Pn**	**05 35 08.8**	**+0.9**
LUWI				S	**Sn**	**05 35 29.3**	**+0.2**
KMSI	**Cibinong**	**1.67**	**77**	P	**Pn**	**05 35 12.7**	**+1.1**
KMSI				S	**Sn**	**05 35 36.2**	**+0.6**
MNI	**Manado**	**2.78**	**64**	P	**Pn**	**05 35 25.2**	**+0.4**
SKSI	**Soroako, Sulaw**	**2.90**	**200**	P	**Pn**	**05 35 27.1**	**+0.7**
KAPI	**Kappang**	**5.80**	**207**	Pn	**Pn**	**05 36 05.0**	**+0.7**
	2.0nm,0.3s,baz=359,slow=5.6,SNR=10						
FITZ	**Fitzroy Crossi**	**18.48**	**170**	P	**P**	**05 38 44.8**	**0.0**
	0.3nm,0.3s,baz=4.1,slow=9.2,SNR=12						
WRA	**Warramunga Arr**	**23.22**	**150**	P	**P**	**05 39 32.8**	**-1.3**
	1.6nm,0.6s,baz=341,slow=9.9,SNR=20						
ASAR	**Alice Springs**	**26.25**	**155**	P	**P**	**05 40 00.7**	**-1.0**
	0.8nm,0.5s,baz=342,slow=14,SNR=17						
CMAR	**Chiang Mai Arr**	**29.28**	**310**	P	**P**	**05 40 30.4**	**+1.8**
	0.6nm,0.3s,baz=124,slow=8.8,SNR=3.3						
STKA	**Stephens Creek**	**36.74**	**152**	P	**P**	**05 41 32.6**	**-0.6**
	4.1nm,0.7s,baz=339,slow=7.7,SNR=9.4						
SONM	**Songino Array**	**49.42**	**346**	P	P	05 43 09.7	-5.2
	1.6nm,0.7s,baz=143,slow=6.0,SNR=6.4						
MKAR	**Makanchi Array**	**58.09**	**329**	P	**P**	**05 44 17.4**	**-0.5**
	0.6nm,0.5s,baz=127,slow=8.9,SNR=10						
KURBB	**Kurchatov Arra**	**62.46**	**330**	P	**P**	**05 44 45.0**	**-2.4**
	0.2nm,0.5s,baz=130,slow=7.2,SNR=5.7						
ILAR	**Eielson Array**	**90.14**	**25**	P	P	05 47 19.8	-3.3
	0.3nm,1.0s,baz=250,slow=5.1,SNR=4.2						

*ISCJB **31** 05:37:17.4±0.5,7°.96S±0°.03×120°.84E±0°.07, h33km, mb3.9/3, Error ellipse: s-maj=9.6km s-min=4.7km az=168.0*

*DJA **31** 05:37:17.2±1.7,8°.S±5°×12°.1E±°, h113km±24km, M4.0/6, MLv4.0/6*

*IDC **31** 05:37:19.0±5.5,7°.93S×120°.91E, h33km±46km, mb3.6/4, mb1 3.7/7, mb1mx3.5/24, mbtmpg3.6/7, ML3.6/2, Error ellipse: s-maj=79.9km s-min=13.3km az=56.0*

ISC 31 05:37:18.9±0.8,7°.99S±0°.04×120°.70E±0°.08,h33km,n15, σ1f33/19,mb3.9/3,Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**1.65**	**113**	P	**Pn**	**05 37 47.0**	**+1.4**
WSI	**Waingapu**	**1.71**	**193**	P	**Pn**	**05 37 47.0**	**+0.6**
WSI				S	**Sb**	**05 38 10.3**	**-0.5**
BSSI	**Bau Bau, Buton**	**1.85**	**354**	P	**Pn**	**05 37 47.8**	**-0.5**
WBSI	**Waikabubak, Su**	**2.08**	**218**	S	**Sn**	**05 38 17.9**	**+1.5**
BASI	**Baing, Sumba**	**2.21**	**183**	P	**Pn**	**05 37 52.4**	**-0.9**
BKSI	**Bulukumba**	**2.71**	**348**	P	**Pn**	**05 37 59.8**	**-0.4**
KAPI	**Kappang**	**3.11**	**342**	P	**Pn**	**05 38 04.8**	**-0.8**
KAPI	**Kappang**	**3.11**	**342**	Pn	**Pn**	**05 38 04.9**	**-0.8**
	13nm,0.3s,baz=167,slow=11,SNR=36						
KAPI				Sn	**Sn**	**05 38 42.2**	**+0.6**
	5.2nm,0.3s,baz=194,slow=22,SNR=5.6						
SPSI	**Sidrap Palu**	**4.11**	**347**	P	**Pn**	**05 38 20.9**	**+1.5**
FITZ	**Fitzroy Crossi**	**11.14**	**155**	Pn	**Pn**	**05 39 56.7**	**+0.8**
	baz=333,slow=14,SNR=3.2						
FITZ				Sn	**Sn**	**05 41 58.1**	**-1.3**
	0.3nm,0.3s,baz=201,slow=17,SNR=3.7						
WRA	**Warramunga Arr**	**17.77**	**133**	P	**Pn**	**05 41 23.9**	**0.0**
	0.2nm,0.3s,baz=309,slow=12,SNR=5.5						
WRA				S	**Sn**	**05 44 37.1**	**-3.9**
	0.1nm,0.3s,baz=301,slow=25,SNR=3.2						
ASAR	**Alice Springs**	**20.08**	**142**	P	**P**	**05 41 50.5**	**+0.7**
	0.6nm,0.4s,baz=321,slow=12,SNR=11						
STKA	**Stephens Creek**	**30.71**	**144**	P	**P**	**05 43 30.6**	**-0.3**
	0.6nm,0.3s,baz=324,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**64.35**	**332**	P	**P**	**05 47 52.0**	**+0.5**
	0.7nm,0.7s,baz=134,slow=7.5,SNR=5.4						
ZALV	**Zalesovo Beam**	**68.72**	**338**	P	**P**	**05 48 18.9**	**-0.3**
	1.0nm,0.5s,baz=122,slow=6.9,SNR=4.2						

MEX 31 05:40:21.5±0.9,16°.66N×99°.91W,h5km±4km,MD3.6,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	**0.22**	**6**	*i* P	Pg	05 40 25.6	-0.1
ACP2				*i* S	Sg	05 40 28.7	0.0
ACX	**Acapulco**	**0.22**	**13**	*i* P	Pg	05 40 25.8	0.0
ACX				*e*S	Sg	05 40 28.7	0.0
CAIG	**El Cayaco**	**0.52**	**319**	*i* P	Pg	05 40 30.8	-0.7
CAIG				*i* S	Sg	05 40 38.0	-0.3
MEIG	**Mezcala**	**1.29**	**12**	*i* P	Pn	05 40 42.1	-4.3
MEIG				*e*S	Sg	05 40 58.2	-5.0
ARIG	**Puente Sto Nin**	**1.67**	**346**	*i* P	Pn	05 40 48.6	-2.8
ARIG				*e*S	Sn	05 41 08.8	-4.5
PNIG	**Pinotepa**	**1.73**	**99**	*i* P	Pn	05 40 48.8	-3.6
PNIG				*e*S	Sn	05 41 10.1	-4.7
ZIIG	**Zihuatanejo**	**1.76**	**303**	*i* P	Pn	05 40 49.7	-3.1
ZIIG				*e*S	Sn	05 41 10.9	-4.7
PLIG	**Platanillo**	**1.77**	**13**	*i* P	Pn	05 40 48.6	-4.4
PLIG				*e*S	Sn	05 41 11.7	-4.3
UTMO	**Huajuapan**	**2.33**	**60**	*i* P	Pn	05 40 57.2	-3.5
UTMO				*i* S	Sn	05 41 24.6	-5.4
YAIG	**Yautepec**	**2.33**	**20**	*e*P	Pn	05 40 56.8	-4.0
YAIG				*i* S	Sn	05 41 25.7	-4.3

*ISCJB **31** 06:16:57.6±0.7,42°.83S±0°.08×72°.2W±0°.2, h10km, mb3.8/8, MS3.6/3, Error ellipse: s-maj=21.6km s-min=10.0km az=17.7*

*IDC **31** 06:16:57.8±0.8,42°.92S×72°.30W, h0km, mb3.9/8, mb1 4.1/9, mb1mx4.0/20, mbtmpg3.9/9, ML4.2/1, MS3.6/4, Ms1 3.6/4, ms1mx3.1/29, Error ellipse: s-maj=34.5km s-min=13.2km az=112.0*

*NEIC **31** 06:16:59.0±0.5,42°.90S×72°.44W, h10km, mb4.2/4, Error ellipse: s-maj=17.2km s-min=8.8km az=108.0*

ISC 31 06:16:59.1±0.7,42°.87S±0°.08×72°.4W±0°.1,h10km,n33, σ0f91/31,mb3.8/8,MS3.8/3,Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.56**	**34**	*e*Pn	**Pn**	**06 17 42.0**	**+1.3**
PLCA				Lg	Lg	06 18 19.4	
PLCA	**Paso Flores**	**2.56**	**34**	Pn	**Pn**	**06 17 42.5**	**+1.8**
	11nm,0.3s,baz=216,slow=17,SNR=114						
PLCA				Pg	**Pb**	**06 17 45.0**	**0.0**
	11nm,0.3s,baz=222,slow=17,SNR=130						
PLCA				Lg	Lg	06 18 19.4	
	63nm,0.3s,baz=121,slow=6.1,SNR=5.8						
PLCA				LR	LR	06 18 53.1	
	comp=Z,539nm,20.0s,baz=200,slow=45						
TRQA	**Tornquist**	**9.30**	**62**	*e*Pn	**Pn**	**06 19 15.1**	**+1.8**
CFAA	**Coronel Fontan**	**11.72**	**18**	Pn	**Pn**	**06 19 46.0**	**-0.4**
CFAA	**Coronel Fontan**	**11.72**	**18**	Pn	**Pn**	**06 19 46.0**	**-0.4**
	0.0nm,0.3s,baz=195,slow=16,SNR=3.0						
LVC	**Llann Verde**	**20.41**	**9**	*e*P	**P**	**06 21 36.8**	**+0.2**
	13nm,1.4s						
CPUP	**Villa Florida**	**20.60**	**42**	P	**P**	**06 21 37.9**	**-0.4**
CPUP	**Villa Florida**	**20.60**	**42**	P	**P**	**06 21 37.9**	**-0.4**
	1.5nm,0.7s,baz=211,slow=12,SNR=4.5						
PMSA	**Palmer Station**	**22.46**	**171**	LR	LR	06 30 33.7	
	comp=Z,84nm,20.5s,baz=297,slow=36						
LPAZ	**La Paz**	**26.74**	**9**	*e*P	**P**	**06 22 39.5**	**0.0**
	0.9nm,0.8s						
SIV	**San Ignacio**	**28.50**	**23**	P	**P**	**06 22 53.7**	**-0.9**
SIV	**San Ignacio**	**28.50**	**23**	P	**P**	**06 22 53.7**	**-0.9**
	0.9nm,0.7s,baz=230,slow=12,SNR=4.5						
BDFB	**Brasilia**	**34.25**	**45**	LR	LR	06 38 59.2	
	comp=Z,170nm,20.3s,baz=326,slow=39						
SNAA	**Sanae**	**43.61**	**155**	P	**P**	**06 25 01.3**	**-1.7**
SNAA	**Sanae**	**43.61**	**155**	P	**P**	**06 25 01.3**	**-1.7**
	2.6nm,1.3s,baz=281,slow=9.9,SNR=2.9						
QSPA	**South Pole Qui**	**47.38**	**180**	*e*P	**P**	**06 25 33.4**	**+0.2**
	9.0nm,1.1s						
QSPA	**South Pole Qui**	**47.38**	**180**	P	**P**	**06 25 34.2**	**+1.0**
	5.7nm,1.1s,baz=149,slow=5.9,SNR=8.2						
VNDA	**Vanda**	**55.37**	**192**	P	**P**	**06 26 33.1**	**+0.5**
	3.3nm,1.3s						
VNDA				*e*		06 26 36.9	
VNDA	**Vanda**	**55.37**	**192**	P	**P**	**06 26 33.3**	**+0.7**
	3.2nm,1.2s,baz=133,slow=6.8,SNR=4.3						
TXAR	**Lajitas Array**	**77.37**	**332**	P	**P**	**06 28 55.1**	**+1.0**
TXAR	**Lajitas Array**	**77.37**	**332**	P	**P**	**06 28 55.1**	**+1.0**
	0.6nm,0.9s,baz=158,slow=8.4,SNR=7.5						
TORD	**Torodi Ar. Bea**	**87.56**	**70**	P	**P**	**06 29 47.0**	**-0.4**
TORD	**Torodi Ar. Bea**	**87.56**	**70**	P	**P**	**06 29 47.0**	**-0.4**
	0.4nm,0.8s,baz=242,slow=3.1,SNR=3.1						
PDAR	**Pinedale Array**	**91.54**	**334**	P	**P**	**06 30 06.4**	**+0.6**
PDAR	**Pinedale Array**	**91.54**	**334**	P	**P**	**06 30 06.4**	**+0.6**
	0.3nm,0.4s,baz=154,slow=4.8,SNR=3.0						
DZM	**Mont Dzumac**	**95.70**	**233**	LR	LR	07 03 59.0	
	comp=Z,56nm,20.1s,baz=32,slow=30						
GERES	**GERESS Array B**	**118.43**	**49**	PKP	**PKPdf**	**06 35 46.0**	**-0.3**
GERES	**GERESS Array B**	**118.43**	**49**	PKP	**PKPdf**	**06 35 46.0**	**-0.3**
	0.1nm,0.4s,baz=222,slow=1.3,SNR=3.7						
ILAR	**Eielson Array**	**121.87**	**331**	PKP	**PKPdf**	**06 35 52.6**	**+0.4**
ILAR	**Eielson Array**	**121.87**	**331**	PKP	**PKPdf**	**06 35 52.6**	**+0.4**
	0.5nm,0.9s,baz=127,slow=2.0,SNR=5.4						
ABKAR	**Akbulak array**	**146.80**	**62**	*e*PKPbc	**PKPbc**	**06 36 40.6**	**-0.1**
MKAR	**Makanchi Array**	**161.68**	**69**	PKPab	**PKPab**	**06 37 44.3**	**-0.7**
MKAR	**Makanchi Array**	**161.68**	**69**	PKPab	**PKPab**	**06 37 44.3**	**-0.7**
	0.3nm,0.7s,baz=266,slow=4.3,SNR=3.5						

*ISCJB **31** 06:21:39.7±0.5,0°.40N±0°.05×120°.6E±0°.1, h55km, mb4.2/9, MS2.5/1, Error ellipse: s-maj=16.3km s-min=6.4km az=171.1*

*DJA **31** 06:21:43.8±2.1,0°.N±18°×12°.1E±1°.4, h17km±26km, M4.3/5, mb4.3/1, mb4.4/1, MLv4.3/5, Mw(mB)3.6/1*

*IDC **31** 06:21:43.3±3.7,0°.30N×120°.56E, h83km±37km, mb3.9/9, mb1 4.0/11, mb1mx3.7/25, mbtmpg3.9/11, MS2.6/1, Ms1 2.8/1, ms1mx1.5/44, Error ellipse: s-maj=39.9km s-min=13.9km az=67.0*

ISC 31 06:21:41.9±0.8,0°.33N±0°.06×120°.54E±0°.07,h55km,n27, σ1f87/21,mb4.3/9,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**1.41**	**84**	P	**Pn**	**06 22 07.3**	**+2.1**
LUWI	**Luwuk**	**2.62**	**121**	P	**Pn**	**06 22 23.9**	**+2.2**
SKSI	**Soroako, Sulaw**	**2.95**	**164**	P	**Pn**	**06 22 27.9**	**+1.5**
SGKI	**Sangatta, Kali**	**3.06**	**254**	P	**Sn**	**06 23 02.4**	**-0.8**
	3.9nm10µm1µm,0.5s						
SMKI	**Samarinda**	**3.42**	**257**	P	**Sn**	**06 23 15.3**	**+3.2**
TTSI	**Tana Toraja**	**3.43**	**192**	P	**Pn**	**06 22 35.2**	**+2.3**
KMSI	**Cibinong**	**3.45**	**86**	P	**Pn**	**06 22 36.2**	**+3.1**
SPSI	**Sidrap Palu**	**4.34**	**190**	P	**Pn**	**06 22 46.8**	**+1.5**
TSM	**Tawau**	**4.75**	**326**	P	**Pn**	**06 22 51.0**	**-0.1**
MYLDM	**Lahad Datu**	**5.23**	**337**	P	**Pn**	**06 23 00.1**	**+2.5**
KAPI	**Kappang**	**5.37**	**188**	P	**Pn**	**06 23 01.1**	**+1.6**
	40nm,1.0s,0.1nm						
KAPI	**Kappang**	**5.37**	**188**	P	**Pn**	**06 22 59.9**	**+0.4**
	3.1nm,0.3s,baz=336,slow=5.3,SNR=19						
KAPI				S	**Sn**	**06 24 01.2**	**+1.2**
	1.0nm,0.3s,baz=53,slow=20,SNR=2.5						
BKSI	**Bulukumba**	**5.63**	**184**	P	**Pn**	**06 23 05.0**	**+1.9**
BKSI	**Bulukumba**	**5.63**	**184**	P	Pn	06 23 07.6	+4.5
	22nm,0.6s,353nm0.1nm						
SDKM	**Sandakan**	**6.24**	**328**	P	Pn	06 23 15.3	+3.8
KKM	**Kota Kinabalu**	**7.13**	**323**	P	Pn	06 23 31.5	+7.7
FITZ	**Fitzroy Crossi**	**18.99**	**165**	P	**P**	**06 25 59.0**	**-0.1**
	0.3nm,0.3s,baz=3.7,slow=7.6,SNR=8.3						
WRA	**Warramunga Arr**	**24.27**	**147**	P	**P**	**06 26 52.2**	**-1.9**
	12nm,0.6s,baz=332,slow=9.6,SNR=157						
ASAR	**Alice Springs**	**27.16**	**152**	P	**P**	**06 27 18.9**	**-1.4**
	2.2nm,0.5s,baz=342,slow=14,SNR=48						
CMAR	**Chiang Mai Arr**	**27.83**	**312**	LR	LR	06 39 49.7	
	comp=Z,13nm,19.9s,baz=145,slow=39						
STKA	**Stephens Creek**	**37.73**	**150**	P	**P**	**06 28 51.3**	**-1.2**
	7.4nm,0.7s,baz=333,slow=8.0,SNR=14						
USRK	**Ussuriysk Arra**	**44.85**	**12**	P	P	06 29 48.2	-2.5
	1.5nm,0.6s,baz=203,slow=8.3,SNR=3.9						
SONM	**Songino Array**	**48.88**	**347**	P	**P**	**06 30 21.7**	**-0.6**
	2.1nm,0.7s,baz=169,slow=8.5,SNR=6.0						
MKAR	**Makanchi Array**	**57.06**	**330**	P	**P**	**06 31 22.0**	**-0.5**
	2.6nm,0.7s,baz=128,slow=8.7,SNR=22						
ZALV	**Zalesovo Beam**	**61.02**	**337**	P	**P**	**06 31 48.1**	**-1.6**
	2.0nm,0.6s,baz=131,slow=5.5,SNR=9.7						
VNDA	**Vanda**	**80.92**	**172**	P	P	06 33 47.0	-2.8
	0.4nm,0.6s,baz=325,slow=6.5,SNR=5.2						
BRTR	**Keskin Array B**	**87.40**	**310**	P	P	06 34 20.7	-3.0
	0.7nm,0.7s,baz=116,slow=6.6,SNR=3.9						

IDC 31 06:33:49.5±5.3,6°.96S×155°.46E, h69km±43km, mb3.7/8, mb1 3.9/9, mb1mx3.7/20, mbtmpg3.7/9, ML3.2/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/28, Error ellipse: s-maj=36.9km s-min=21.6km az=121.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.08**	**119**	LR	LR	06 36 56.9	
	comp=Z,117nm,19.2s,baz=273,slow=37						
PMG	**Port Moresby**	**8.57**	**253**	P	Pn	06 35 51.1	+0.2
	1.6nm,0.3s,baz=57,slow=11,SNR=4.1						
PMG				S	Sn	06 37 28.0	+2.0
	1.0nm,0.3s,baz=162,slow=20,SNR=2.6						
PMG				LR	LR	06 38 58.9	
	comp=Z,126nm,21.9s,baz=300,slow=36						
WRA	**Warramunga Arr**	**24.21**	**236**	P	P	06 39 00.1	+0.1
	1.6nm,0.5s,baz=60,slow=9.7,SNR=45						
WRA				PcP	PcP	06 42 39.5	+0.4
	0.2nm,0.5s,baz=59,slow=2.7,SNR=6.9						
ASAR	**Alice Springs**	**26.54**	**229**	P	P	06 39 20.6	-0.6
	0.5nm,0.4s,baz=59,slow=9.4,SNR=15						
ASAR				PcP	PcP	06 42 44.7	+0.3
	0.2nm,0.6s,baz=66,slow=2.3,SNR=5.2						
FITZ	**Fitzroy Crossi**	**31.09**	**246**	P	P	06 40 00.7	-0.8
	1.6nm,0.6s,baz=72,slow=10,SNR=6.1						
PETK	**Petropavlovsk-**	**59.87**	**2**	P	P	06 43 48.8	+0.9
	1.2nm,0.6s,baz=157,slow=8.0,SNR=4.9						
CMAR	**Chiang Mai Arr**	**61.19**	**295**	P	P	06 43 58.2	+0.6
	2.3nm,0.6s,baz=118,slow=5.2,SNR=12						
ILAR	**Eielson Array**	**83.18**	**21**	P	P	06 46 06.8	-1.1
	0.4nm,0.6s,baz=240,slow=5.2,SNR=9.3						
MKAR	**Makanchi Array**	**83.69**	**319**	P	P	06 46 10.0	-0.9
	0.6nm,0.7s,baz=107,slow=3.6,SNR=3.5						
YKA	**Yellowknife Ar**	**96.09**	**28**	P	P	06 47 09.2	0.0
	0.4nm,0.5s,baz=268,slow=4.6,SNR=11						
HFS	**Hagfors**	**119.64**	**339**	PKP	PKPdf	06 52 30.5	-0.9
	0.5nm,0.6s,baz=29,slow=3.3,SNR=4.9						
NOA	**NORSAR Array B**	**119.82**	**341**	PKP	PKPdf	06 52 31.1	-0.7
	0.3nm,0.6s,baz=53,slow=2.2,SNR=2.8						
EKA	**Eskdalemuir Ar**	**128.83**	**344**	PKP	PKPdf	06 52 48.8	-0.3
	0.3nm,0.4s,baz=6.6,slow=2.9,SNR=4.3						
BDFB	**Brasilia**	**147.67**	**134**	PKPbc	PKPbc	06 53 27.6	+0.1
	2.1nm,0.5s,baz=221,slow=4.3,SNR=9.8						
MDT	**Midelt**	**148.30**	**327**	PKPbc	PKPbc	06 53 29.4	+0.6
	0.9nm,0.6s,baz=12,slow=4.3,SNR=5.5						
TORD	**Torodi Ar. Bea**	**153.46**	**285**	PKPbc	PKPbc	06 53 40.5	-0.7
	0.4nm,0.5s,baz=71,slow=2.2,SNR=5.1						
TORD				PKPab	PKPab	06 53 52.9	-0.7
	0.6nm,0.5s,baz=83,slow=4.3,SNR=7.0						

IDC 31 06:45:29.1±1.1,13°.80S×169°.85E, h0km, mb4.3/8, mb1 4.5/9, mb1mx4.1/21, mbtmpg4.3/9, ML4.6/1, MS3.5/11, Ms1 3.5/11, ms1mx3.4/26, Error ellipse: s-maj=34.6km s-min=20.5km az=124.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**8.84**	**201**	Pn	Pn	06 47 38.9	+0.5
	6.0nm,0.3s,baz=50,slow=18,SNR=53						
DZM				LR	LR	06 50 33.4	
	comp=Z,400nm,20.2s,baz=41,slow=34						
HNR	**Honiara**	**10.62**	**293**	LR	LR	06 51 33.1	
	comp=Z,48nm,19.2s,baz=5.8,slow=34						
CTA	**Charters Tower**	**23.41**	**251**	P	P	06 50 40.5	+0.6
	9.2nm,1.0s,baz=76,slow=15,SNR=3.1						
RPZ	**Rata Peaks**	**29.83**	**178**	LR	LR	07 00 52.3	
	comp=Z,199nm,18.4s,baz=197,slow=31						
STKA	**Stephens Creek**	**31.50**	**230**	P	P	06 51 54.0	+1.2
	22nm,0.8s,baz=48,slow=7.0,SNR=41						
STKA				LR	LR	07 03 33.4	
	comp=Z,70nm,18.6s,baz=27,slow=34						
WRA	**Warramunga Arr**	**34.48**	**255**	P	P	06 52 18.1	-0.9
	1.9nm,0.7s,baz=86,slow=9.0,SNR=18						
ASAR	**Alice Springs**	**35.34**	**249**	P	P	06 52 25.7	-0.8
	7.0nm,0.7s,baz=78,slow=9.7,SNR=99						
ASAR				LR	LR	07 05 32.9	
	comp=Z,62nm,19.9s,baz=303,slow=34						
MJAR	**Matsushiro Ar**	**58.29**	**330**	P	P	06 55 25.9	+0.1
	1.2nm,0.9s,baz=155,slow=8.4,SNR=4.5						
VNDA	**Vanda**	**63.86**	**182**	P	P	06 56 02.6	-0.4
	1.8nm,0.9s,baz=2.2,slow=4.4,SNR=7.1						
VNDA				LR	LR	07 18 11.0	
	comp=Z,87nm,21.2s,baz=231,slow=31						
KSRS	**Korea Array**	**64.42**	**324**	LR	LR	07 18 20.9	
	comp=Z,12nm,21.3s,baz=230,slow=31						
PETK	**Petropavlovsk-**	**67.45**	**352**	LR	LR	07 20 35.3	
	comp=Z,48nm,20.2s,baz=329,slow=31						
ILAR	**Eielson Array**	**84.89**	**17**	P	P	06 58 05.7	+0.2
	0.8nm,0.7s,baz=233,slow=5.3,SNR=12						
ILAR				LR	LR	07 30 41.3	
	comp=Z,51nm,20.0s,baz=46,slow=32						
YKA	**Yellowknife Ar**	**95

SIGR				S	Sb	06 49 29.9	+0.4
SIGR	**SIGRI**	**1.59**	**172**	P	Pn	06 49 08.4	+0.4
SIGR				S	Sb	06 49 29.9	+0.4
MMB	**Musomiste**	**1.61**	**300**	*i* P	Pn	06 49 07.9	-0.4
MMB	**Musomiste**	**1.61**	**300**	*i* P	Pn	06 49 07.9	-0.4
PLG	**Polygyros**	**1.68**	**256**	P	Pn	06 49 08.9	-0.4
PLG				S	Sn	06 49 30.0	-0.9
PLG	**Polygyros**	**1.68**	**256**	*e*PB	Pn	06 49 08.9	-0.4
PLG				*e*SN	Sn	06 49 30.4	-0.5
PLG	**Polygyros**	**1.68**	**256**	P	Pn	06 49 08.9	-0.4
PLG				S	Sn	06 49 30.0	-0.9
SOH	**Sokhos**	**1.69**	**272**	P	Pn	06 49 09.7	+0.3
SOH				S	Sn	06 49 31.7	+0.5
SOH	**Sokhos**	**1.69**	**272**	*e*PN	Pn	06 49 09.0	-0.4
SOH	**Sokhos**	**1.69**	**272**	P	Pn	06 49 09.7	+0.3
SOH				S	Sn	06 49 31.7	+0.5
AYVA	**Ayvalik**	**1.71**	**150**	*i* P	Pg	06 49 12.5	0.0
AYVA				*i* S	Sg	06 49 34.0	-0.7
AYVA	**Ayvalik**	**1.71**	**150**	*i* P	Pg	06 49 12.5	0.0
AYVA				*i* S	Sg	06 49 34.0	-0.7
GONE	**Gonen-Balikesi**	**1.77**	**114**	*e*PN	Pb	06 49 11.9	-0.4
GONE	**Gonen-Balikesi**	**1.77**	**114**	*e*Pn	Pb	06 49 11.9	-0.4
JMB	**Yambol**	**1.83**	**24**	P	Pn	06 49 11.4	+0.1
JMB				S	Sb	06 49 35.9	-0.4
JMB	**Yambol**	**1.83**	**24**	*i* Pg	Pg	06 49 14.5	-0.4
JMB	**Yambol**	**1.83**	**24**	P	Pn	06 49 11.4	+0.1
JMB	**Yambol**	**1.83**	**24**	*i* Pg	Pg	06 49 14.5	-0.4
JMB				S	Sb	06 49 35.9	-0.4
BNT	**Bandirma**	**1.83**	**103**	*e*PN	Pb	06 49 12.3	-1.0
BNT	**Bandirma**	**1.83**	**103**	*e*Pn	Pb	06 49 12.3	-1.0
BALY	**Balya**	**1.88**	**123**	*i* P	Pb	06 49 13.3	-0.9
BALY				*i* S	Sg	06 49 34.1	-1.2
BALY	**Balya**	**1.88**	**123**	*i* P	Pb	06 49 13.3	-0.9
BALY				*i* S	Sg	06 49 38.9	-1.2
HORT	**Hortiatis**	**1.90**	**265**	P	Pn	06 49 12.3	0.0
HORT				S	Sb	06 49 37.8	-0.6
HORT	**Hortiatis**	**1.90**	**265**	P	Pn	06 49 12.3	0.0
HORT				S	Sb	06 49 37.8	-0.6
THE	**Thessaloniki**	**2.00**	**266**	P	Pn	06 49 13.8	+0.2
THE	**Thessaloniki**	**2.00**	**266**	P	Pn	06 49 13.8	+0.2
PGB	**Panagyurishte**	**2.05**	**329**	*i* P	Pn	06 49 14.1	-0.3
PGB	**Panagyurishte**	**2.05**	**329**	*i* P	Pn	06 49 14.1	-0.3
KNT	**Kendrikon**	**2.07**	**281**	P	Pn	06 49 14.6	+0.1
KNT				S	Sn	06 49 40.8	+0.4
KNT	**Kendrikon**	**2.07**	**281**	P	Pn	06 49 14.6	+0.1
KNT				S	Sn	06 49 40.8	+0.4
AOS	**Alonnisos**	**2.08**	**219**	P	Pn	06 49 14.5	-0.3
AOS				S	Sn	06 49 41.4	+0.6
AOS	**Alonnisos**	**2.08**	**219**	*e*PN	Pn	06 49 14.4	-0.3
AOS	**Alonnisos**	**2.08**	**219**	P	Pn	06 49 14.5	-0.3
AOS				S	Sn	06 49 41.4	+0.6
BALB	**Balikesir**	**2.10**	**123**	*e*PN	Pb	06 49 16.6	-1.3
BALB	**Balikesir**	**2.10**	**123**	*e*Pn	Pb	06 49 16.6	-1.3
CTYL	**Yal??k??y-??at**	**2.15**	**71**	*e*PN	Pb	06 49 17.4	-1.4
CTYL	**Yal??k??y-??at**	**2.15**	**71**	*e*Pn	Pb	06 49 17.4	-1.4
KKB	**Krupnik**	**2.17**	**300**	*i* P	Pn	06 49 16.1	+0.2
KKB	**Krupnik**	**2.17**	**300**	*i* P	Pn	06 49 16.1	+0.2
KCTX	**Karacabey (Bur**	**2.18**	**103**	*e*PN	Pb	06 49 17.6	-1.6
KCTX	**Karacabey (Bur**	**2.18**	**103**	*e*Pn	Pb	06 49 17.6	-1.6
ELBA	**Catalca**	**2.18**	**80**	*i* P	Pn	06 49 15.0	-1.1
ELBA				*i* S	Sn	06 49 39.0	-4.2
ELBA	**Catalca**	**2.18**	**80**	*i* P	Pn	06 49 15.0	-1.1
CTKS	**Kestanelik-??a**	**2.25**	**78**	*e*PN	Pn	06 49 18.6	+1.5
CTKS	**Kestanelik-??a**	**2.25**	**78**	*e*Pn	Pn	06 49 18.6	+1.5
XOR	**Xorichti**	**2.33**	**233**	P	Pn	06 49 18.0	-0.1
XOR				S	Sn	06 49 47.4	+0.7
XOR	**Xorichti**	**2.33**	**233**	P	Pn	06 49 18.0	-0.1
XOR				S	Sn	06 49 47.4	+0.7
VAY	**Valandovo**	**2.34**	**284**	P	Pn	06 49 18.2	0.0
VAY				S	Sn	06 49 46.8	-0.3
VAY	**Valandovo**	**2.34**	**284**	*e*Pn	Pn	06 49 18.3	0.0
VAY	**Valandovo**	**2.34**	**284**	P	Pn	06 49 18.2	0.0
VAY	**Valandovo**	**2.34**	**284**	*e*Pn	Pn	06 49 18.7	+0.4
VAY				S	Sn	06 49 46.8	-0.3
NEO	**Neokhori**	**2.34**	**231**	P	Pn	06 49 17.1	-1.3
NEO	**Neokhori**	**2.34**	**231**	P	Pn	06 49 17.1	-1.3
GRG	**Griva**	**2.42**	**275**	P	Pn	06 49 20.4	+1.0
GRG	**Griva**	**2.42**	**275**	*e*PB	Pn	06 49 20.1	+0.7
GRG	**Griva**	**2.42**	**275**	P	Pn	06 49 20.4	+1.0
PVL	**Pavlikeni**	**2.43**	**356**	*i* P	Pn	06 49 19.1	-0.4
PVL				*i* Pg	Pb	06 49 23.9	+0.4
PVL	**Pavlikeni**	**2.43**	**356**	*i* P	Pn	06 49 19.1	-0.4
CHOS	**Chios island**	**2.43**	**171**	P	Pn	06 49 20.1	+0.5
CHOS	**Chios island**	**2.43**	**171**	*e*PN	Pn	06 49 20.1	+0.5
CHOS	**Chios island**	**2.43**	**171**	P	Pn	06 49 20.1	+0.5
BGKT	**Bogazkoy**	**2.44**	**80**	*e*PN	Pn	06 49 21.2	+1.5
BGKT	**Bogazkoy**	**2.44**	**80**	*e*Pn	Pn	06 49 21.2	+1.5
LIT	**Litokhoron**	**2.46**	**255**	*e*PN	Pn	06 49 19.2	-0.8
SZH	**Strazhica**	**2.48**	**6**	*i* P	Pn	06 49 20.9	+0.6
SZH				*i* Pg	Pb	06 49 25.8	+1.3
SZH	**Strazhica**	**2.48**	**6**	*i* P	Pn	06 49 20.9	+0.6
ARMT	**Armutlu**	**2.50**	**94**	*e*PN	Pn	06 49 22.3	+1.8
ARMT	**Armutlu**	**2.50**	**94**	*e*Pn	Pn	06 49 22.3	+1.8
DURS	**Dursunbey**	**2.51**	**117**	*i* P	Pn	06 49 21.3	+0.6
DURS				*i* S	Sg	06 49 58.3	-2.2
DURS	**Dursunbey**	**2.51**	**117**	*i* P	Pn	06 49 21.3	+0.6
DURS				*i* S	Sg	06 49 58.3	-2.2
VTS	**Vitosha**	**2.53**	**316**	P	Pn	06 49 21.6	+0.6
VTS				S	Sn	06 49 53.2	+1.2
VTS	**Vitosha**	**2.53**	**316**	⇓ *i* P	Pn	06 49 21.6	+0.6
VTS	**Vitosha**	**2.53**	**316**	*i* P	Pn	06 49 21.6	+0.6
VTS	**Vitosha**	**2.53**	**316**	P	Pn	06 49 21.6	+0.6
VTS				S	Sn	06 49 53.2	+1.2
URLA	**Izmir**	**2.55**	**162**	*i* P	Pn	06 49 22.0	+0.8
URLA				*i* S	Sn	06 49 49.5	-2.9
URLA	**Izmir**	**2.55**	**162**	*i* P	Pn	06 49 22.0	+0.8
URLA				*i* S	Sn	06 49 49.5	-2.9
AKHS	**Akhisar**	**2.57**	**137**	*i* P	Pn	06 49 22.8	+1.4
AKHS				*i* S	Sg	06 50 00.4	-1.9
AKHS	**Akhisar**	**2.57**	**137**	*i* P	Pn	06 49 22.8	+1.4
MRKA	**Markates**	**2.59**	**217**	P	Pn	06 49 22.3	+0.5
MRKA	**Markates**	**2.59**	**217**	P	Pn	06 49 22.3	+0.5
DST	**Dursunbey**	**2.61**	**116**	*e*PN	Pn	06 49 24.2	+2.1
DST	**Dursunbey**	**2.61**	**116**	*e*Pn	Pn	06 49 24.2	+2.1
ISK	**Istanbul-Kandi**	**2.65**	**83**	*e*PN	Pn	06 49 24.3	+1.9
ISK	**Istanbul-Kandi**	**2.65**	**83**	P	Pn	06 49 22.5	0.0
ISK	**Istanbul-Kandi**	**2.65**	**83**	P	Pn	06 49 22.5	0.0
ISK	**Istanbul-Kandi**	**2.65**	**83**	*e*Pn	Pn	06 49 24.3	+1.9
SMIA	**Simia**	**2.65**	**224**	P	Pn	06 49 23.3	+0.8
SMIA	**Simia**	**2.65**	**224**	P	Pn	06 49 23.3	+0.8
BLCB	**Balcova**	**2.66**	**154**	*e*PN	Pn	06 49 24.2	+1.6
BLCB	**Balcova**	**2.66**	**154**	*e*Pn	Pn	06 49 24.2	+1.6
BUY	**Buyukada**	**2.68**	**88**	*e*PN	Pn	06 49 24.9	+2.0
BUY	**Buyukada**	**2.68**	**88**	*e*Pn	Pn	06 49 24.9	+2.0
IZM	**Izmir**	**2.72**	**151**	*e*PN	Pn	06 49 25.4	+1.8
IZM	**Izmir**	**2.72**	**151**	*e*Pn	Pn	06 49 25.4	+1.8
PRD	**Provadia**	**2.76**	**29**	*i* P	Pn	06 49 24.1	+0.1
PRD	**Provadia**	**2.76**	**29**	P	Pn	06 49 24.1	+0.1
PRD	**Provadia**	**2.76**	**29**	*i* Pg	Pg	06 49 34.4	+1.8
ULDT	**Uludag**	**2.79**	**102**	*i* P	Pb	06 49 29.3	-0.4
ULDT				*i* S	Sg	06 50 07.6	-1.7
ULDT	**Uludag**	**2.79**	**102**	*i* P	Pb	06 49 29.3	-0.4
MPEP	**Malo Peshtene**	**2.91**	**332**	*i* P	Pn	06 49 26.4	+0.3
MPEP				*i* Pg	Pg	06 49 34.4	-1.0
LKR	**Lokris**	**2.93**	**224**	P	Pn	06 49 25.7	-0.6
LKR	**Lokris**	**2.93**	**224**	P	Pn	06 49 25.7	-0.6
KZN	**Kozani**	**2.95**	**262**	*e*PN	Pn	06 49 25.6	-1.1
THL	**Klokotos Trika**	**3.00**	**247**	P	Pn	06 49 27.1	-0.2
THL	**Klokotos Trika**	**3.00**	**247**	P	Pn	06 49 27.1	-0.2
AGG	**Agios Georgios**	**3.07**	**236**	*e*PN	Pn	06 49 27.9	-0.4
ATH	**Athens Observa**	**3.17**	**208**	*e*PN	Pn	06 49 29.0	-0.7
ADVT	**Abdulvahap**	**3.18**	**95**	*e*PN	Pn	06 49 32.0	+2.1
ADVT	**Abdulvahap**	**3.18**	**95**	*e*Pn	Pn	06 49 32.0	+2.1
FNA	**Florina**	**3.19**	**271**	*e*PN	Pn	06 49 30.3	+0.2
KULA	**Kula-Manisa**	**3.29**	**133**	P	Pn	06 49 32.3	+0.9
KULA				S	Sn	06 50 09.9	-0.7
KULA	**Kula-Manisa**	**3.29**	**133**	P	Pn	06 49 32.3	+0.9
EVR	**Evrytania**	**3.46**	**238**	*e*PN	Pn	06 49 33.8	0.0
BARS	**Barje**	**3.47**	**307**	⇓ *i* Pn	Pn	06 49 34.5	+0.7
AYDN	**Tasoluk**	**3.60**	**150**	*i* P	Pn	06 49 36.8	+1.1
AYDN				*i* S	Sn	06 50 18.5	+0.2
AYDN	**Tasoluk**	**3.60**	**150**	*i* P	Pn	06 49 36.8	+1.1
AYDN				*i* S	Sn	06 50 18.5	+0.2
APE	**Apeiranthos**	**3.72**	**181**	*e*PN	Pn	06 49 38.1	+0.8
APE	**Apeiranthos**	**3.72**	**181**	*e*PN	Pn	06 49 37.0	-0.3
APE	**Apeiranthos**	**3.72**	**181**	*e*Pn	Pn	06 49 38.1	+0.8
MANR	**Mangalia**	**3.75**	**35**	⇓ *i* P	Pg	06 49 50.3	-1.3
HUMR	**Humele**	**3.76**	**353**	⇑ *i* P	Pg	06 49 49.6	-2.1
GULT	**Gulveren**	**3.77**	**94**	*e*PN	Pn	06 49 40.4	+2.4
GULT	**Gulveren**	**3.77**	**94**	*e*Pn	Pn	06 49 40.4	+2.4
KHAL	**Karahalli**	**3.87**	**127**	*i* P	Pn	06 49 41.3	+1.9
KHAL				*i* S	Sn	06 50 20.4	-4.6
KHAL	**Karahalli**	**3.87**	**127**	*i* P	Pn	06 49 41.3	+1.9
ALT	**Altintas**	**3.89**	**115**	*e*PN	Pn	06 49 41.4	+1.7
ALT	**Altintas**	**3.89**	**115**	*e*Pn	Pn	06 49 41.4	+1.7
KHL	**Karahalli**	**3.92**	**128**	*e*PN	Pn	06 49 42.4	+2.3
KHL	**Karahalli**	**3.92**	**128**	*e*Pn	Pn	06 49 42.4	+2.3
BODT	**Bodrum**	**3.96**	**160**	*e*PN	Pn	06 49 41.9	+1.3
BODT	**Bodrum**	**3.96**	**160**	*e*Pn	Pn	06 49 41.9	+1.3
EFOR	**EFORIE**	**3.98**	**33**	⇑ *i* P	Pg	06 49 54.2	-1.8
BOLS	**Boljevac**	**4.05**	**320**	⇑ *i* Pn	Pn	06 49 40.7	-1.2
SELS	**Selova**	**4.12**	**308**	*e*Pn	Pn	06 49 42.6	-0.1
TIRR	**Tirgusor**	**4.21**	**29**	⇑ *i* P	Pn	06 49 44.6	+0.6
TIRR	**Tirgusor**	**4.21**	**29**	⇑ *i* P	Pn	06 49 44.6	+0.6
LKD2	**Lefkada island**	**4.29**	**244**	*e*PN	Pn	06 49 46.5	+1.4
ISR	**Istrita**	**4.38**	**9**	⇑ *i* P	Pn	06 49 45.9	-0.5
ISR	**Istrita**	**4.38**	**9**	⇑ *i* P	Pn	06 49 45.9	-0.5
ARR	**Arges**	**4.62**	**352**	⇓ *i* P	Pn	06 49 49.7	0.0
ARR	**Arges**	**4.62**	**352**	⇓ *i* P	Pn	06 49 49.7	0.0
VOIR		**4.66**	**355**	⇑ *i* P	Pn	06 49 51.0	+0.8
VOIR		**4.66**	**355**	⇑ *i* P	Pn	06 49 51.0	+0.8
GRER		**4.70**	**12**	⇑ *i* P	Pg	06 50 08.4	-1.3
MLR	**Muntele Rosu**	**4.70**	**3**	⇓ *i* P	Pn	06 49 53.2	+2.3
MLR	**Muntele Rosu**	**4.70**	**3**	⇓ *i* P	Pn	06 49 53.2	+2.3
GRUS	**Gruza**	**4.75**	**312**	⇓ *i* Pn	Pn	06 49 51.6	+0.2
LOT	**Lotru**	**4.84**	**345**	⇑ *i* P	Pn	06 49 52.6	-0.1
LOT	**Lotru**	**4.84**	**345**	⇑ *i* P	Pn	06 49 52.6	-0.1
TLCR		**4.99**	**27**	⇓ *i* P	Pn	06 49 57.8	+3.2
TLCR		**4.99**	**27**	⇓ *i* P	Pn	06 49 57.8	+3.2
PLOR	**Plostina**	**5.11**	**8**	⇓ *i* P	Pn	06 49 58.8	+2.4
PLOR	**Plostina**	**5.11**	**8**	⇓ *i* P	Pn	06 49 58.8	+2.4
VRI	**Vrincioaia**	**5.14**	**9**	⇓ *i* P	Pn	06 49 59.1	+2.4
VRI	**Vrincioaia**	**5.14**	**9**	⇓ *i* P	Pn	06 49 59.1	+2.4
DOPR	**Dopca**	**5.17**	**358**	⇑ *i* P	Pn	06 49 57.8	+0.6
DOPR	**Dopca**	**5.17**	**358**	⇑ *i* P	Pn	06 49 57.8	+0.6
KIZT	**Kizilcal**	**5.21**	**109**	*e*PN	Pn	06 49 59.8	+2.0
KIZT	**Kizilcal**	**5.21**	**109**	*e*Pn	Pn	06 49 59.8	+2.0
DIVS	**Divibare**	**5.29**	**310**	⇓ *i* Pn	Pn	06 49 58.8	-0.1
BBLS	**Lazići**	**5.51**	**306**	*e*Pn	Pn	06 50 02.8	+0.8
BZS	**Buzias**	**5.62**	**330**	⇑ *i* P	Pn	06 50 03.4	0.0
BZS	**Buzias**	**5.62**	**330**	⇑ *i* P	Pn	06 50 03.4	0.0
TESR	**Tescani**	**5.77**	**7**	⇓ *i* P	Pn	06 50 06.8	+1.4
TESR	**Tescani**	**5.77**	**7**	⇓ *i* P	Pn	06 50 06.8	+1.4
TEKS	**Tekeris**	**5.83**	**312**	*e*Pn	Pn	06 50 05.8	-0.5
DRGR		**6.34**	**342**	⇓ *i* P	Pn	06 50 13.5	+0.1
DRGR		**6.34**	**342**	⇓ *i* P	Pn	06 50 13.5	+0.1
BURAR	**Bucovina Array**	**6.82**	**358**	⇓ *i* P	Pn	06 50 19.4	-0.6
BURAR	**Bucovina Array**	**6.82**	**358**	⇓ *i* P	Pn	06 50 19.4	-0.6
KOLS	**Kolonicke sedl**	**8.47**	**345**	*e*PN	Pn	06 50 46.9	+4.4
KOLS	**Kolonicke sedl**	**8.47**	**345**	*e*SG	Sg	06 53 14.6	+3.2
CRVS	**Cervenica-Dubn**	**8.62**	**342**	*e*PN	Pn	06 50 48.1	+3.6
CRVS	**Cervenica-Dubn**	**8.62**	**342**	*e*SG	Sg	06 53 22.6	+6.4
VYHS	**Vyhne**	**9.07**	**330**	*e*PN	Pn	06 50 53.9	+3.2

IDC 31 06:53:11.0±2.7, 4°32'S×103°09'W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/18, mbtmp3.8/4, MS3.2/4, Ms1 3.3/4, ms1mx3.1/23, Error ellipse: s-maj=153.3km s-min=29.5km az=62.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**24.73**	**98**	LR	LR	07 05 18.8	
	comp=Z,50nm,21.0s,baz=246,slow=29						
TXAR	**Lajitas Array**	**33.46**	**359**	P	P	06 59 52.7	+0.6
	0.5nm,0.9s,baz=185,slow=5.1,SNR=3.9						
TXAR				LR	LR	07 11 44.7	
	comp=Z,98nm,19.6s,baz=180,slow=33						
CFAA	**Coronel Fontan**	**42.50**	**134**	P	P	07 01 08.3	0.0
	0.1nm,0.6s,baz=308,slow=12,SNR=4.0						
CFAA				LR	LR	07 14 25.0	
	comp=Z,6.7nm,18.2s,baz=263,slow=30						
PLCA	**Paso Flores**	**46.57**	**146**	LR	LR	07 16 02.8	
	comp=Z,71nm,18.8s,baz=177,slow=30						
YKA	**Yellowknife Ar**	**67.20**	**354**	P	P	07 04 05.4	-1.3
	1.1nm,1.0s,baz=164,slow=5.8,SNR=5.4						
INK	**Inuvik**	**75.51**	**349**	P	P	07 04 57.0	+0.3
	1.9nm,0.9s,baz=139,slow=4.1,SNR=2.5						
ILAR	**Eielson Array**	**76.06**	**342**	P	P	07 05 00.6	+0.5
	1.4nm,0.8s,baz=161,slow=5.2,SNR=5.8						

IDC 31 07:07:37.6±4.1, 18°39S×169°22E, h192km±46km, mb3.6/5, mb1 3.7/6, mb1mx3.4/20, mbtmp3.5/6, MS3.2/1, Ms1 3.2/1, ms1mx2.5/22, Error ellipse: s-maj=74.6km s-min=29.3km az=152.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.49**	**215**	P	Pn	07 08 47.2	+1.8
	2.5nm,0.3s,baz=36,slow=19,SNR=27						
DZM				S	Sn	07 09 37.7	-1.2
	0.7nm,0.3s,baz=61,slow=19,SNR=1.6						
CTA	**Charters Tower**	**21.75**	**262**	P	P	07 12 15.1	+0.9
	2.5nm,0.5s,baz=76,slow=8.3,SNR=2.5						
STKA	**Stephens Creek**	**28.29**	**236**	P	P	07 13 13.2	-0.1
	1.0nm,0.3s,baz=75,slow=9.1,SNR=4.3						
WRA	**Warramunga Arr**	**32.95**	**262**	P	P	07 13 54.0	-0.4
	0.8nm,0.3s,baz=90,slow=8.4,SNR=45						
ASAR	**Alice Springs**	**33.32**	**255**	P	P	07 13 57.5	-0.1
	6.5nm,0.4s,baz=83,slow=8.8,SNR=102						
KAPI	**Kappang**	**50.06**	**279**	LR	LR	07 37 22.8	
	comp=Z,29nm,21.4s,baz=284,slow=36						
ILAR	**Eielson Array**	**89.43**	**17**	P	P	07 20 11.8	-0.4
	0.3nm,0.9s,baz=238,slow=5.2,SNR=3.1						

MEX 31 07:08:36.2±0.4, 15°77N×95°94W, h10km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.16**	**268**	*e*P	Pg	07 08 39.1	-0.6
HUIG				*e*S	Sg	07 08 41.8	-0.4
VHO	**Vista Hermosa**	**1.50**	**330**	*e*P	Pn	07 08 59.9	-3.5
VHO				*i* S	Sn	07 09 17.9	-5.4
PNIG	**Pinotepa**	**2.19**	**287**	*i* P	Pn	07 09 10.2	-2.5
PNIG				*i* S	Sn	07 09 36.3	-3.6
UTMO	**Huajuapan**	**2.71**	**319**	*i* P	Pn	07 09 16.9	-3.3
UTMO				*i* S	Sn	07 09 49.7	-3.6

*NEIC **31** 07:30:03.7±0.4, 1°95N×127°66E, h35km, mb4.5/12, Error ellipse: s-maj=16.1km s-min=7.6km az=70.0*
*ISCJB **31** 07:30:11.2±0.3, 1°80N±0°04×127°47E±0°05, h128km, mb4.3/24, Error ellipse: s-maj=7.5km s-min=5.7km az=177.7*
*IDC **31** 07:30:11.8±2.5, 1°83N×127°44E, h114km±23km, mb3.9/14, mb1 4.1/16, mb1mx4.0/23, mbtmp3.9/16, Error ellipse: s-maj=22.5km s-min=10.2km az=82.0*
*DJA **31** 07:30:16.0±0.8, 2°N±7°×12°7E±°, h51km±11km, M4.3/7, mb4.5/3, mB4.5/2, MLv4.2/7, Mw(mB)3.7/2*

ISC 31 07:30:12.5±0.5, 1°73N±0°05×127°46E±0°06, h128km, n58, σ1°39/60, mb4.3/24, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.35**	**71**	P	Pn	07 30 28.6	-2.0
TNTI	**Ternate**	**0.95**	**186**	P	Pn	07 30 32.4	-2.4
LBMI	**Labuha**	**2.35**	**179**	P	Pn	07 30 49.7	-1.0
MNI	**Manado**	**2.63**	**264**	P	Pn	07 30 53.7	-0.6
MNI				S	Sn	07 31 24.8	-1.7
NLAI	**Namlea**	**4.94**	**184**	P	Pn	07 31 26.9	+2.1
DAV	**Davao City (W)**	**5.63**	**341**	S	Sn	07 32 39.2	+1.5
	23nm,0.3s,baz=252,slow=20,SNR=3.0						
MRSI	**Marisa**	**5.66**	**257**	P	Pn	07 31 35.6	+1.2
	37nm,0.6s,492nm0.2nm						
SKSI	**Soroako, Sulaw**	**7.44**	**235**	P	Pn	07 31 58.8	+0.3
	28nm,0.7s,385nm0.2nm						
KAPI	**Kappang**	**10.20**	**229**	P	Pn	07 32 36.9	+1.2
KAPI				S	Sn	07 34 24.8	-3.6
KAPI	**Kappang**	**10.20**	**229**	P	Pn	07 32 36.9	+1.2
	1.6nm,0.3s,baz=6.6,slow=13,SNR=5.8						
KAPI				S	Sn	07 34 24.8	-3.6
	1.4nm,0.3s,baz=224,slow=23,SNR=9.7						
BMNI	**Bima**	**13.43**	**220**	P	Pn	07 33 13.5	-4.6
SBUM	**Sibu**	**15.25**	**273**	P	P	07 33 45.0	+1.9
KSM	**Kuching**	**17.15**	**269**	*e*P	Pn	07 34 04.7	+0.2
	2.9nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.78**	**185**	*e*P	Pn	07 34 34.0	-1.6
	7.3nm,0.6s						
FITZ	**Fitzroy Crossi**	**19.78**	**185**	P	Pn	07 34 34.3	-1.3
	1.5nm,0.3s,baz=20,slow=8.5,SNR=36						
COEN	**Coen**	**22.03**	**135**	*e*P	P	07 34 54.9	-2.1
	111nm,1.3s						
TPUB	**Ta-pu**	**22.45**	**343**	*e*P	P	07 34 59.4	-1.7
	15nm,0.6s						
WRAB	**Tennant Creek**	**22.56**	**163**	*e*P	P	07 35 03.6	+1.5
	30nm,0.6s						
WRA	**Warramunga Arr**	**22.57**	**163**	P	P	07 35 03.8	+1.6
WRA	**Warramunga Arr**	**22.57**	**163**	P	P	07 35 03.8	+1.6
	33nm,0.4s,baz=343,slow=11,SNR=509						
YHNB	**Yeheng**	**23.56**	**346**	*e*P	P	07 35 10.9	-0.7
	15nm,0.8s						
ASAR	**Alice Springs**	**26.01**	**166**	P	P	07 35 35.1	+1.4
ASAR				ScP	ScP	07 42 27.9	+1.1
ASAR	**Alice Springs**	**26.01**	**166**	P	P	07 35 35.1	+1.4
	12nm,0.4s,baz=346,slow=7.5,SNR=259						
ASAR				ScP	ScP	07 42 27.9	+1.1
	0.6nm,0.9s,baz=327,slow=2.9,SNR=4.3						
CMAR	**Chiang Mai Arr**	**32.53**	**303**	P	P	07 36 32.8	+1.2
CMAR	**Chiang Mai Arr**	**32.53**	**303**	P	P	07 36 32.8	+1.2
	0.6nm,0.4s,baz=114,slow=5.7,SNR=6.2						
KSAR	**Wonju Array Be**	**35.55**	**1**	P	P	07 36 57.5	+0.2
KSRS	**Korea Array**	**35.56**	**1**	P	P	07 36 57.5	+0.1
	1.8nm,0.7s,baz=180,slow=9.4,SNR=8.7						
STKA	**Stephens Creek**	**36.01**	**159**	P	P	07 37 03.4	+2.0
STKA	**Stephens Creek**	**36.01**	**159**	P	P	07 37 03.4	+2.0
	15nm,0.6s,baz=330,slow=8.6,SNR=34						
MAT	**Matsushiro**	**36.04**	**15**	P	P	07 36 59.8	-1.8
MJAR	**Matsushiro Arr**	**36.04**	**15**	P	P	07 36 59.9	-1.8
MJAR	**Matsushiro Arr**	**36.04**	**15**	P	P	07 36 59.9	-1.8
	2.6nm,0.4s,baz=194,slow=9.1,SNR=19						
USRK	**Ussuriysk Arra**	**42.49**	**5**	P	P	07 37 55.0	+0.1
	3.5nm,0.7s,baz=189,slow=8.5,SNR=7.3						
SONM	**Songino Array**	**49.42**	**341**	P	P	07 38 49.8	+0.3
SONM	**Songino Array**	**49.42**	**341**	P	P	07 38 49.8	+0.3
	1.4nm,0.5s,baz=151,slow=7.4,SNR=6.4						
PETK	**Petropavlovsk-**	**57.01**	**21**	P	P	07 39 44.0	-0.7
PETK	**Petropavlovsk-**	**57.01**	**21**	P	P	07 39 44.0	-0.7
	0.3nm,0.6s,baz=129,slow=2.

	baz=24							
432A	**Menard**	23.85	330	P		P	07 40 39.0	+0.7
	baz=24,SNR=7.2							
530A	**J-C Ranch, Com**	24.07	326	⇓P		P	07 40 41.2	+0.7
	baz=24							
431A	**Sonora**	24.10	328	P		P	07 40 41.5	+0.8
	baz=24,SNR=8.9							
332A	**Millersview**	24.24	331	⇓P		P	07 40 42.4	+0.5
	baz=24,SNR=17							
PLAL	**Pickwick Lake**	24.38	356	*eP*		P	07 40 43.4	+0.3
	6.7nm,0.8s							
628A	**Black Gap, Mar**	24.46	323	P		P	07 40 44.7	+0.7
	baz=24,SNR=5.4							
331A	**San Angelo**	24.51	329	⇑P		P	07 40 45.0	+0.5
	baz=25,SNR=25							
430A	**Baggett Ranch,**	24.51	327	⇑P		P	07 40 45.1	+0.6
	baz=25							
SWET	**Sewanee**	24.55	0	*eP*		P	07 40 44.9	+0.1
	12nm,1.0s							
232A	**Coleman**	24.61	332	⇑P		P	07 40 45.3	-0.1
	baz=25,SNR=8.7							
627A	**Terlingua Ranc**	24.73	322	P		P	07 40 47.5	+0.9
	baz=25,SNR=7.9							
429A	**Davenport Ranc**	24.74	326	⇓P		P	07 40 47.1	+0.5
	baz=25,SNR=19							
UALR	**University of**	24.75	348	*eP*		P	07 40 46.2	-0.3
	8.9nm,0.8s							
TXAR	**Lajitas Array**	24.82	321	P		P	07 40 48.4	+1.1
TXAR				PcP		PcP	07 44 25.2	+2.0
TXAR	**Lajitas Array**	24.82	321	P		P	07 40 48.4	+1.1
	4.2nm,0.7s,baz=138,slow=10,SNR=54							
TXAR				PcP		PcP	07 44 25.2	+2.0
	1.0nm,0.8s,baz=139,slow=5.4,SNR=9.7							
CPCT	**Cooper Cave**	24.83	3	*eP*		P	07 40 47.2	0.0
CPCT				*epP*		pP	07 40 56.4	-0.3
KMSC	**Kings Mountain**	24.87	9	⇑P		P	07 40 48.4	+0.8
	baz=25,SNR=11							
231A	**Bronte**	24.97	331	⇓P		P	07 40 48.7	+0.1
	baz=25							
330A	**Mertzon**	24.97	328	⇓P		P	07 40 48.8	+0.2
	baz=25,SNR=5.7							
TKL	**Tuckaleechee C**	25.08	5	P		P	07 40 46.6	-2.9
TKL	**Tuckaleechee C**	25.08	5	P		P	07 40 46.6	-2.9
	6.7nm,0.8s,baz=174,slow=10.0,SNR=15							
TKL				LR		LR	07 51 50.4	
	comp=Z,55nm,18.7s,baz=33,slow=40							
ABTX	**Abilene, Hawle**	25.23	333	⇑P		P	07 40 51.5	+0.6
	baz=25							
428A	**Kincaid Ranch,**	25.26	325	⇓P		P	07 40 51.3	0.0
	baz=25							
626A	**Big Bend Ranch**	25.26	321	⇑P		P	07 40 51.6	+0.3
	baz=25							
230A	**Sterling City**	25.32	329	⇑P		P	07 40 52.1	+0.3
	baz=25							
329A	**Wagon Wheel Ra**	25.46	327	⇓P		P	07 40 53.0	0.0
	baz=26							
131A	**Roby**	25.61	331	⇓P		P	07 40 55.4	+1.0
	baz=26							
Z32A	**Haskell**	25.73	334	P		P	07 40 56.9	+1.4
	baz=26,SNR=14							
328A	**Wristen Ranch,**	25.82	326	P		P	07 40 56.6	+0.3
	baz=26,SNR=7.8							
TZTN	**Tazewell**	25.98	5	*eP*		P	07 40 57.5	-0.1
	4.1nm,0.7s							
Z31A	**Sharp Cattle R**	26.04	333	⇓P		P	07 40 58.8	+0.6
	baz=26,SNR=7.0							
129A	**Stewart Farms,**	26.30	329	⇑P		P	07 41 01.4	+0.7
	baz=26							
326A	**Caldwell Ranch**	26.44	324	⇓P		P	07 41 02.7	+0.8
	baz=26							
128A	**Castleberry Fa**	26.61	328	⇓P		P	07 41 03.6	+0.1
	baz=27							
WMOK	**Wichita Mounta**	26.68	336	P		P	07 41 03.5	-0.4
	7.1nm,0.8s							
WMOK				*epP*		pP	07 41 13.0	-0.5
BLA	**Blacksburg**	27.04	10	*eP*		P	07 41 07.8	+0.5
	4.4nm,0.7s							
X31A	**McDonald Ranch**	27.07	334	⇓P		P	07 41 08.4	+0.8
	baz=27							
Z28A	**Tucker Farm, M**	27.09	329	P		P	07 41 08.2	+0.5
	baz=27,SNR=5.2							
226B	**Tecolote Peak,**	27.11	325	⇑P		P	07 41 09.0	+1.1
	baz=27							
127A	**Arkansas Junct**	27.11	327	⇓P		P	07 41 08.2	+0.1
	baz=27							
Y29A	**Porterfield Fa**	27.20	331	⇓P		P	07 41 09.7	+1.0
	baz=27							
GDL2	**Guadalupe Moun**	27.31	325	*eP*		P	07 41 10.2	+0.4
GDL2				*ePcP*		PcP	07 44 31.4	+2.5
324A	**Moseley Ranch,**	27.41	322	⇑P		P	07 41 12.4	+1.6
	baz=28							
125A	**Gardner Draw,**	27.82	325	⇑P		P	07 41 14.9	+0.5
	baz=28							
224A	**Cornudas Mount**	27.89	323	⇓P		P	07 41 16.0	+1.0
	baz=28							
Y27A	**Causey**	27.95	329	⇑P		P	07 41 16.3	+0.7
	baz=28							
V31A	**Spring Creek L**	28.00	336	⇑P		P	07 41 16.8	+0.9
	baz=28							
124A	**Stringfield Ra**	28.30	324	⇑P		P	07 41 19.4	+0.5
	baz=28,SNR=6.1							
Z25A	**Roswell**	28.31	326	⇑P		P	07 41 19.0	+0.3
	baz=28							
Z24A	**Sheeppen Canyo**	28.71	325	⇑P		P	07 41 24.0	+1.5
	baz=29							
Y24A	**Capitan**	29.19	326	⇓P		P	07 41 28.3	+1.6
	baz=29							
Y23A	**Lovelace Mesa,**	29.54	325	⇑P		P	07 41 31.1	+1.3
	baz=30							
ANMO	**Albuquerque**	30.51	326	P		P	07 41 39.8	+1.4
ANMO	**Albuquerque**	30.51	326	P		P	07 41 39.8	+1.4
	0.9nm,0.7s,baz=132,slow=8.2,SNR=5.0							
MVL	**Millersville**	30.59	15	*eP*		P	07 41 39.4	+0.6
	5.7nm,0.8s							
SSPA	**Standing Stone**	30.84	12	*eP*		P	07 41 41.0	0.0
	7.8nm,0.8s							
U23A	**El Rito**	31.41	328	⇑P		P	07 41 46.3	0.0
	baz=32,SNR=7.6							
SDCO	**Great Sand Dun**	32.16	330	*eP*		P	07 41 53.5	+0.6
	2.3nm,1.0s							
BINY	**Binghamton**	32.76	14	*eP*		P	07 41 58.1	+0.3
	8.6nm,0.8s							
SMCO	**Snowmass**	34.00	330	*eP*		P	07 42 08.9	-0.3
	2.8nm,0.7s							
S18A	**Hurst Farm, Bl**	34.47	326	⇓P		P	07 42 13.9	+0.8
	baz=34							
LONY	**Lake Ozonia**	35.38	14	*eP*		P	07 42 19.9	-0.7
	8.3nm,0.8s							
SIV	**San Ignacio**	36.24	136	P		P	07 42 28.6	+0.3
SIV	**San Ignacio**	36.24	136	P		P	07 42 28.6	+0.3
	0.6nm,0.8s,baz=313,slow=8.5,SNR=3.5							
J21A	**Lysite**	37.53	334	⇑P		P	07 42 40.0	+0.9
	baz=38							
M17A	**Scullys Gap (B**	37.57	329	⇓P		P	07 42 40.3	+0.7
	baz=38							
PDAR	**Pinedale Array**	38.02	332	P		P	07 42 41.9	-1.4
PDAR				PcP		PcP	07 44 59.6	+1.2
PDAR	**Pinedale Array**	38.02	332	P		P	07 42 41.9	-1.4
	0.5nm,0.7s,baz=126,slow=12,SNR=3.3							
PDAR				PcP		PcP	07 44 59.6	+1.2
	0.5nm,0.5s,baz=123,slow=5.5,SNR=4.2							
AGMN	**Agassiz Nation**	38.49	350	*eP*		P	07 42 45.6	-1.3
	3.6nm,0.4s							
SNOW	**Snow King Moun**	39.11	331	*eP*		P	07 42 53.6	+1.1
	1.8nm,0.5s							
NV11	**Mina Array Sit**	39.84	320	*eP*		P	07 43 00.1	+1.5
NV11				*epP*		pP	07 43 09.9	+1.6
NVAR	**Mina Array Bea**	39.94	319	P		P	07 43 02.3	+2.9
NVAR				PcP		PcP	07 45 06.7	+2.1
NVAR	**Mina Array Bea**	39.94	319	P		P	07 43 02.3	+2.9
	2.5nm,0.8s,baz=135,slow=7.4,SNR=18							
NVAR				PcP		PcP	07 45 06.7	+2.1
	2.5nm,0.7s,baz=136,slow=4.3,SNR=17							
MCMT	**McKenzie Canyo**	41.13	331	P		P	07 43 09.4	+0.1
BDFB	**Brasilia**	45.89	124	P		P	07 43 49.1	+1.3
BDFB	**Brasilia**	45.89	124	P		P	07 43 49.1	+1.3
	1.6nm,0.7s,baz=297,slow=4.5,SNR=2.7							
SCHQ	**Schefferville**	46.75	15	P		P	07 43 51.9	-1.9
SCHQ	**Schefferville**	46.75	15	P		P	07 43 51.9	-1.9
	5.8nm,0.7s,baz=225,slow=6.7,SNR=13							
SCHQ				LR		LR	08 04 06.0	
	comp=Z,62nm,21.7s,baz=71,slow=37							
YKA	**Yellowknife Ar**	55.76	344	P		P	07 44 59.7	-1.5
YKA				PcP		PcP	07 46 00.6	+0.5
YKA	**Yellowknife Ar**	55.76	344	P		P	07 44 59.7	-1.5
	0.6nm,0.8s,baz=138,slow=7.2,SNR=13							
YKA				PcP		PcP	07 46 00.6	+0.5
	0.7nm,0.6s,baz=142,slow=4.1,SNR=17							
ILAR	**Eielson Array**	68.24	336	P		P	07 46 24.2	-0.9
ILAR	**Eielson Array**	68.24	336	P		P	07 46 24.2	-0.9
	0.8nm,1.0s,baz=104,slow=5.0,SNR=8.0							
ESDC	**Sonseca Array**	77.38	52	P		P	07 47 18.0	-1.9
ESDC	**Sonseca Array**	77.38	52	P		P	07 47 18.0	-1.9
	0.1nm,0.4s,baz=291,slow=6.2,SNR=4.1							
NOA	**NORSAR Array B**	84.41	29	LR		LR	08 21 39.4	
	comp=Z,24nm,19.0s,baz=335,slow=33							
TORD	**Torodi Ar. Bea**	85.61	78	P		P	07 48 02.0	-1.8
TORD	**Torodi Ar. Bea**	85.61	78	P		P	07 48 02.0	-1.8
	0.2nm,0.5s,baz=270,slow=4.3,SNR=2.3							
AKASG	**Malin Array Be**	97.34	35	LR		LR	08 33 40.8	
	comp=Z,36nm,18.1s,baz=345,slow=36							
KURK	**Kurchatov**	117.56	11	PKP		PKPdf	07 54 10.8	+0.3
KURBB	**Kurchatov Arra**	117.64	11	PKP		PKPdf	07 54 10.8	+0.2
	0.5nm,0.6s,baz=333,slow=2.5,SNR=4.3							
MKAR	**Makanchi Array**	121.98	9	PKP		PKPdf	07 54 18.4	-0.8
MKAR	**Makanchi Array**	121.98	9	PKP		PKPdf	07 54 18.4	-0.8
	0.3nm,0.8s,baz=336,slow=3.2,SNR=3.2							
KSRS	**Korea Array**	122.53	328	PKP		PKPdf	07 54 21.6	+1.2
	1.7nm,0.7s,baz=7.6,slow=1.2,SNR=8.2							
KSAR	**Wonju Array Be**	122.56	328	PKP		PKPdf	07 54 21.6	+1.1
BJT	**Baijiatuau**	125.58	339	*e*PKPdf		PKPdf	07 54 24.6	-1.6
WMQ	**Urumqi**	125.60	5	*e*PKP		PKPdf	07 54 26.0	-0.3
HHC	**Hu-ho-hao-te**	126.29	343	⇓*i*PKP		PKPdf	07 54 27.0	-0.8
HHC				PP		PP	07 56 25.0	+3.7
HHC				PKS		PKSdf	07 58 02.3	-2.1
HHC				SKS		SKSdf	08 01 33.5	-4.0
HHC				SKKS		SKKSac	08 03 13.0	-5.4
HHC				SS		SS	08 13 21.0	-0.9
HHC				LR		LR		
	comp=Z,210nm,20.6s							
ASAR	**Alice Springs**	139.68	246	PKPpre	PKPpre		07 54 49.2	
ASAR	**Alice Springs**	139.68	246	PKhKP	PKPpre		07 54 49.2	
	comp=Z,0.4nm,0.7s,baz=108,slow=3.0,SNR=2.7							
WRA	**Warramunga Arr**	139.90	252	PKPpre	PKPpre		07 54 46.3	
WRA				PKP	PKPdf		07 54 54.7	+1.0
WRA	**Warramunga Arr**	139.90	252	PKhKP	PKPpre		07 54 46.3	
	comp=Z,0.2nm,0.8s,baz=101,slow=2.6,SNR=2.7							
WRA				PKP	PKPdf		07 54 54.7	+1.0
	comp=Z,0.9nm,0.7s,baz=88,slow=2.0,SNR=6.4							
CMAR	**Chiang Mai Arr**	150.73	350	PKPbc	PKPbc		07 55 18.1	+0.4
CMAR	**Chiang Mai Arr**	150.73	350	PKPbc	PKPbc		07 55 18.1	+0.4
	comp=Z,1.4nm,0.5s,baz=334,slow=2.8,SNR=12							

*IDC **31** 08:14:06.5±1.0,2˚.83S×119˚.82E,h0km,mb4.0/5, mb1 4.1/6,mb1mx3.7/24,mbtmp4.0/6,ML3.9/1,MS3.2/4, Ms1 3.3/4,ms1mx2.6/39,Error ellipse: s-maj=54.2km s-min=16.3km az=70.0*
*DJA **31** 08:14:09.4±0.3,3˚.S±4˚×12˚.0E±˚,h15km,M4.4/7,mb4.8/3, mB6.0/2,MLv4.3/7,Mw(mB)5.7/2*
ISC 31 08:14:06.9±1.8,2˚.89S±0˚.04×119˚.79E±0˚.07,h0km±13km, n18,σ1°56/20,mb4.0/5,MS3.1/3,Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SPSI	**Sidrap Palu**	1.07	181	P	P	Pg	08 14 27.2	-0.2
SPSI				S	S	Sn	08 14 45.4	+0.7
SKSI	**Soroako, Sulaw**	1.58	77	P	Pn	Pn	08 14 34.2	-2.1
SKSI				S	S	Sg	08 14 59.5	+1.6
KAPI	**Kappang**	2.11	181	P	Pn	Pn	08 14 44.6	+1.1
KAPI	**Kappang**	2.11	181	Pn	Pn	Pn	08 14 43.5	0.0
	39nm,0.3s,baz=353,slow=12,SNR=50							
KAPI				Sn	Sn	Sn	08 15 12.4	+1.9
	135nm,0.3s,baz=252,slow=20,SNR=8.9							
BKSI	**Bulukumba**	2.44	172	P	Pb	Pb	08 14 50.6	-1.1
BKSI				S	S	Sb	08 15 22.9	+0.6
LUWI	**Luwuk**	3.50	58	P	Pn	Pn	08 15 00.7	-1.9
LUWI				S	S	Sg	08 15 59.7	+0.3
MRSI	**Marisa**	3.97	33	P	Pn	Pn	08 15 06.7	-2.4
MRSI				S	S	Sb	08 16 09.0	+2.5
BBKI	**Banjar Baru**	4.97	263	P	Pn	Pn	08 15 26.7	+3.8
	96nm,1.0s,7um0.5nm							
MYLDM	**Lahad Datu**	8.12	351	P	Pn	Pn	08 16 07.7	+1.6
	40nm,1.0s							
STKI	**Sintang**	8.81	289	P	Pn	Pn	08 16 16.2	+0.6
FITZ	**Fitzroy Crossi**	16.17	160	LR	LR	LR	08 25 48.4	
	comp=Z,101nm,18.2s,baz=346,slow=43							
WRA	**Warramunga Arr**	22.12	141	P	P	P	08 19 02.9	-1.3
	3.3nm,0.9s,baz=316,slow=12,SNR=21							
ASAR	**Alice Springs**	24.76	148	P	P	P	08 19 31.4	+0.9
	2.3nm,0.8s,baz=324,slow=8.6,SNR=18							
ASAR				LR	LR	LR	08 30 01.7	
	comp=Z,85nm,19.3s,baz=198,slow=38							
CMAR	**Chiang Mai Arr**	29.52	317	LR	LR	LR	08 33 44.6	
	comp=Z,51nm,20.3s,baz=145,slow=40							
KSRS	**Korea Array**	40.84	10	LR	LR	LR	08 39 15.1	
	comp=Z,20nm,18.8s,baz=314,slow=37							
SONM	**Songino Array**	51.86	349	P	P	P	08 23 15.8	-1.3
	1.9nm,0.9s,baz=159,slow=7.8,SNR=8.5							
MKAR	**Makanchi Array**	59.47	321	P	P	P	08 24 10.3	-1.4
	0.9nm,0.8s,baz=138,slow=7.4,SNR=10							
AAK	**Ala-Archa**	61.01	323	P	P	P	08 24 23.2	+0.7
	0.9nm,0.3s,baz=148,slow=3.1,SNR=3.9							

*IDC **31** 09:00:36.6±0.5,46˚.98S×10˚.88W,h0km,mb4.4/18, mb1 4.5/18,mb1mx4.4/23,mbtmp4.4/18,MS4.1/18, Ms1 4.1/18,ms1mx4.1/20,Error ellipse: s-maj=15.8km s-min=12.0km az=149.0*
*ISCJB **31** 09:00:37.5±0.3,47˚.11S±0˚.06×10˚.92W±0˚.10,h10km, mb4.5/29,MS4.1/18,Error ellipse: s-maj=10.1km s-min=8.8km az=38.7*
*INMG **31** 09:00:38.6,47˚.05S×10˚.86W,h10km,Mb4.7*
*NEIC **31** 09:00:38.6±0.3,47˚.05S×10˚.86W,h10km,mb4.7/13,Error ellipse: s-maj=10.8km s-min=8.8km az=151.0*
ISC 31 09:00:38.8±0.4,47.14S±0˚.08×10.88W±0˚.07,h10km,n96, σ1°35/83,mb4.7/29,MS4.1/18,1C,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	23.61	178	*eP*	P	P	09 05 51.1	+1.6
SNAA	**Sanae**	24.90	174	*eP*	P	P	09 06 01.6	+0.1
SNAA	**Sanae**	24.90	174	*eP*	P	P	09 06 01.9	+0.5
	30nm,0.9s							
SNAA	**Sanae**	24.90	174	P	P	P	09 06 01.8	+0.4
	7.8nm,0.8s,baz=350,slow=10,SNR=54							
SNAA				LR	LR	LR	09 14 06.1	
	comp=Z,111nm,18.0s,baz=22,slow=32							
MAIT	**Maitri**	26.07	163	*eP*	P	P	09 06 04.8	-7.3
SUR	**Sutherland**	28.24	70	P	P	P	09 06 31.9	-0.2
SUR	**Sutherland**	28.24	70	P	P	P	09 06 31.9	-0.2
	9.9nm,0.9s,baz=260,slow=11,SNR=4.1							
SUR				LR	LR	LR	09 14 26.7	
	comp=Z,389nm,19.3s,baz=215,slow=30							
SYO	**Syowa Base**	33.05	149	*eP*	P	P	09 07 10.6	-3.3
PMSA	**Palmer Station**	33.32	219	P	P	P	09 07 17.2	+0.9
PMSA	**Palmer Station**	33.32	219	P	P	P	09 07 17.2	+0.9
	13nm,0.9s,baz=156,slow=10,SNR=14							
PMSA				LR	LR	LR	09 17 38.6	
	comp=Z,606nm,21.4s,baz=138,slow=31							
BOSA	**Boshof**	33.60	70	P	P	P	09 07 17.7	-1.7
BOSA	**Boshof**	33.60	70	P	P	P	09 07 17.7	-1.7
	7.6nm,0.8s,baz=232,slow=10.0,SNR=12							
BOSA				LR	LR	LR	09 19 16.6	
	comp=Z,279nm,18.7s,baz=229,slow=33							
USHA	**Ushuaia**	36.11	236	P	P	P	09 07 40.8	+0.3
USHA	**Ushuaia**	36.11	236	P	P	P	09 07 40.8	+0.3
	10.0nm,0.8s,baz=63,slow=7.0,SNR=7.7							
TSUM	**Tsumeb**	36.28	50	*eP*	P	P	09 07 40.7	-1.8
	10nm,0.8s							
TSUM	**Tsumeb**	36.28	50	P	P	P	09 07 40.7	-1.8
	8.1nm,0.7s,baz=206,slow=11,SNR=12							
LBTB	**Lobatse**	36.36	65	*eP*	P	P	09 07 41.3	-1.8
	12nm,0.8s							
LBTB	**Lobatse**	36.36	65	P	P	P	09 07 41.5	-1.6
	10nm,0.7s,baz=236,slow=9.6,SNR=16							
TRQA	**Tornquist**	38.10	265	*eP*	P	P	09 07 56.2	-1.5
	5.0nm,0.7s							
MAW	**Mawson**	41.57	146	P	P	P	09 08 26.7	+0.6
MAW	**Mawson**	41.57	146	P	P	P	09 08 26.7	+0.6
	2.4nm,0.6s,baz=254,slow=7.3,SNR=9.9							
MAW				LR	LR	LR	09 22 14.0	
	comp=Z,248nm,20.1s,baz=270,slow=31							
CPUP	**Villa Florida**	41.89	283	P	P	P	09 08 28.3	-0.9
CPUP	**Villa Florida**	41.89	283	P	P	P	09 08 28.3	-0.9
	1.2nm,0.6s,baz=91,slow=15,SNR=5.4							
CPUP				LR	LR	LR	09 22 33.7	
	comp=Z,172nm,20.0s,baz=124,slow=32							
PLCA	**Paso Flores**	42.53	256	P	P	P	09 08 32.6	-1.8
	8.5nm,0.3s,baz=221,slow=14,SNR=32							
PLCA				LR	LR	LR	09 22 29.7	
	comp=Z,194nm,20.8s,baz=327,slow=31							
QSPA	**South Pole Qui**	43.12	180	*eP*	P	P	09 08 39.1	+0.1
	28nm,1.4s							
QSPA	**South Pole Qui**	43.12	180	P	P	P	09 08 39.0	0.0
	8.1nm,1.0s,baz=217,slow=4.4,SNR=19							
BDFB	**Brasilia**	43.94	303	P	P	P	09 08 45.0	-1.1
BDFB	**Brasilia**	43.94	303	P	P	P	09 08 45.0	-1.1
	4.6nm,0.8s,baz=96,slow=10,SNR=7.5							
BDFB				LR	LR	LR	09 23 47.1	
	comp=Z,594nm,18.7s,baz=286,slow=32							
LSZ	**Lusaka**	45.34	59	*eP*	P	P	09 08 55.9	-1.4
	6.6nm,0.8s							
LSZ	**Lusaka**	45.34	59	P	P	P	09 08 55.7	-1.6
	4.0nm,0.7s,baz=226,slow=9.7,SNR=11							
CFAA	**Coronel Fontan**	45.95	268	P	P	P	09 09 01.0	-0.9
CFAA	**Coronel Fontan**	45.95	268	P	P	P	09 09 01.0	-0.9
	0.7nm,0.8s,baz=144,slow=7.6,SNR=16							
RCBR	**Riachuelo**	46.44	324	P	P	P	09 09 07.5	+1.7
RCBR	**Riachuelo**	46.44	324	P	P	P	09 09 07.5	+1.7
	7.3nm,1.1s,baz=104,slow=15,SNR=2.1							
LVC	**Limon Verde**	52.17	277	*eP*	P	P	09 09 50.0	+0.1
	28nm,1.3s							
DBIC	**Dimbokro**	53.84	7	LR	LR	LR	09 27 06.6	
	comp=Z,215nm,19.2s,baz=151,slow=30							
SBA	**Scott Base**	55.27	179	*eP*	P	P	09 10 12.9	+1.3
	14nm,1.2s							
VNDA	**Vanda**	55.53	178	*eP*	P	P	09 10 15.1	+1.6
	6.4nm,1.1s							
VNDA	**Vanda**	55.53	178	P	P	P	09 10 15.0	+1.6
	2.6nm,1.0s,baz=228,slow=6.2,SNR=9.0							
VNDA				LR	LR	LR	09 32 07.9	
	comp=Z,378nm,19.9s,baz=181,slow=34							
LPAZ	**La Paz**	56.06	283	*eP*	P	P	09 10 18.2	-0.6
	4.6nm,1.1s							
LPAZ	**La Paz**	56.06	283	P	P	P	09 10 17.4	-1.3
	1.7nm,0.9s,baz=150,slow=3.7,SNR=5.9							
LPAZ				LR	LR	LR	09 31 32.3	
	comp=Z,126nm,21.5s,baz=50,slow=33							
SAML	**Samuel**	58.31	293	*eP*	P	P	09 10 32.8	-1.2
	7.3nm,0.9s							
TOA0	**Torodi Ar. Sit**	61.06	14	*eP*	P	P	09 10 51.6	-1.1
TORD	**Torodi Ar. Bea**	61.06	14	P	P	P	09 10 51.1	-1.6
TORD	**Torodi Ar. Bea**	61.06	14	P	P	P	09 10 51.1	-1.6
	2.4nm,1.0s,baz=197,slow=8.0,SNR=9.7							
TORD				LR	LR	LR	09 31 46.6	
	comp=Z,238nm,20.6s,baz=175,slow=31							
KMBO	**Kilima Mbogo**	61.98	57	LR	LR	LR	09 35 26.1	
	comp=Z,282nm,19.3s,baz=100,slow=34							
TAM	**Tamanrasset**	71.16	16	*eP*	P	P	09 11 58.0	+0.3
	5.4nm,0.9s							
OTAV	**Otavalo**	75.08	287	*eP*	P	P	09 12 22.4	+0.9
	18nm,1.4s							
ROSC	**El Rosal**	75.96	293	LR	LR	LR	09 45 22.9	
	comp=Z,102nm,18.4s,baz=9,slow=35							
MORF	**Marmelete**	84.09	2	*eP*	P	P	09 13 12.8	+3.4
PVAQ	**Vaqueiros**	84.22	3	*eP*	P	P	09 13 12.4	+2.5
PCVE	**Castro Verde**	84.43	2	*eP*	P	P	09 13 13.6	+2.6
KEST	**Kesra**	84.47	16	P	P	P	09 13 13.7	+2.3
KEST	**Kesra**	84.47	16	P	P	P	09 13 13.7	+2.3
	1.6nm,0.8s,baz=272,slow=13,SNR=4.3							
KEST				LR	LR	LR	09 47 37.7	
	comp=Z,69nm,18.7s,baz=185,slow=34							
PBEJ	**Beja**	84.83	2	*eP*	P	P	09 13 19.1	+6.1
PNCL	**Nicolau / Gran**	84.90	2	*eP*	P	P	09 13 16.5	+3.1
	18nm,1.6s							
PBAR	**Barrancos**	85.01	3	*eP*	P	P	09 13 16.7	+2.8
	19nm,2.0s							
PESTR	**Estremoz**	85.68	3	*eP*	P	P	09 13 22.7	+5.4
PMTG	**Montargil**	85.86	2	*eP*	P	P	09 13 21.0	+2.8
PMRV	**Marv??o**	86.25	3	*eP*	P	P	09 13 22.1	+2.0
PCBR	**Castelo Branco**	86.65	3	*eP*	P	P	09 13 25.1	+3.1
ESDC	**Sonseca Array**	86.65	5	P	P	P	09 13 21.4	-0.8
ESDC	**Sonseca Array**	86.65	5	P	P	P	09 13 21.4	-0.8
	3.0nm,0.8s,baz=179,slow=5.0,SNR=11							
ESDC				LR	LR	LR	09 50 30.5	
	comp=Z,58nm,18.4s,baz=315,slow=35

MOS ***31*** *09:27:43.3±0.9, 52°.14N×158°.95E, h45km, mb4.8/67, Error ellipse: s-maj=9.7km s-min=4.3km az=89.8*

KRSC ***31*** *09:27:44.1±0.3, 52°.11N×159°.19E, h23km±23km, ML4.7*

ISCJB ***31*** *09:27:45.4±0.4, 52°.11N±0°.02×159°.05E±0°.04, h65km±2km, mb4.4/125, Error ellipse: s-maj=5.1km s-min=2.7km az=44.2*

IDC ***31*** *09:27:45.0±0.5, 52°.28N×159°.04E, h44km±4km, mb4.0/26, mb1 4.3/29, mb1mx4.3/31, mbtmp4.1/29, MS3.4/11, Ms1 3.4/11, ms1mx3.3/34, Error ellipse: s-maj=15.7km s-min=9.6km az=144.0*

NEIC ***31*** *09:27:48.0±0.7, 52°.27N×158°.95E, h70km±6km, mb4.7/56, Error ellipse: s-maj=6.1km s-min=4.1km az=159.0*

BJI ***31*** *09:27:48.0, 52°.05N×158°.62E, h76km, mb4.8/13, mb4.5/22, Ms3.9/11, Ms7 3.7/12*

SZGRF ***31*** *09:27:54.9, 53°.59N×157°.62E, h33km, mb4.8, MS3.8, Kamchatka Peninsula, Russia*

ISC 31 09:27:45.2±0.4, 52°06N±0°.03×159°13E±0°.03, h52km±3km, h51km:pP-P, n397, σ1s24/464, mb4.6/125, MS3.6/15, 18C-19D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op	ISC		h m s	ISC
RUS	**Russkaya**	**0.53**	**315**	PN	**Pn**		**09 27 56.1**	**-0.8**
RUS	**Russkaya**	**0.53**	**315**	P	**Pn**		**09 27 56.1**	**-0.8**
MTVR	**Mutnovka**	**0.72**	**306**	*e*P	**Pn**		**09 27 59.2**	**-0.2**
MTVR				*i* S	**Sn**		**09 28 10.1**	**+0.4**
GRL	**Gorelyy**	**0.81**	**308**	P	**Pn**		**09 28 01.1**	**+0.5**
GRL				*i* S	**Sn**		**09 28 12.8**	**+1.0**
ASAK	**Asacha**	**0.82**	**294**	P	**Pn**		**09 28 01.3**	**+0.6**
ASAK				*i* S	**Sn**		**09 28 13.2**	**+1.2**
PET	**Petropavlovsk**	**1.01**	**343**	K *i* PN	**Pn**		**09 28 01.9**	**-1.1**
PET				*e*S	**Sn**		**09 28 14.4**	**-1.8**
PET				pmax	pmax			
	comp=Z,2μm,0.6s							
PET				smax	smax			
	comp=N,7μm,0.3s							
PET				smax	smax			
	comp=E,4μm,0.6s							
PET	**Petropavlovsk**	**1.01**	**343**	P	**Pn**		**09 28 01.9**	**-1.1**
PET				*i* S	**Sn**		**09 28 14.2**	**-2.0**
INSR	**Institute**	**1.06**	**343**	*e*P	**Pn**		**09 28 02.8**	**-0.9**
INSR				*i* S	**Sn**		**09 28 17.0**	**-0.4**
NLC	**Nalytchevo**	**1.12**	**7**	PN	**Pn**		**09 28 02.4**	**-2.1**
NLC				S	**Sn**		**09 28 15.6**	**-3.3**
NLC	**Nalytchevo**	**1.12**	**7**	*e*P	**Pn**		**09 28 02.4**	**-2.1**
NLC				*i* S	**Sn**		**09 28 15.6**	**-3.3**
UGLR	**Uglovaya**	**1.17**	**351**	P	**Pn**		**09 28 04.2**	**-1.1**
UGLR				*i* S	**Sn**		**09 28 19.3**	**-0.9**
SPN	**Mys Shipunski**	**1.17**	**27**	PN	**Pn**		**09 28 04.1**	**-1.2**
SPN				S	**Sn**		**09 28 19.3**	**-0.9**
SPN	**Mys Shipunski**	**1.17**	**27**	*e*P	**Pn**		**09 28 04.1**	**-1.2**
SPN				*i* S	**Sn**		**09 28 19.3**	**-0.9**
SMAR	**Somma**	**1.22**	**351**	*e*P	**Pn**		**09 28 04.6**	**-1.5**
SMAR				*e*S	**Sn**		**09 28 20.7**	**-1.0**
SDLR	**Sedlovina**	**1.23**	**353**	*e*P	**Pn**		**09 28 04.7**	**-1.4**
AVH	**Avacha**	**1.23**	**349**	*e*P	**Pn**		**09 28 05.2**	**-0.9**
AVH				*e*S	**Sn**		**09 28 19.6**	**-2.1**
KRER	**Koryakskii**	**1.27**	**350**	*e*P	**Pn**		**09 28 05.8**	**-0.9**
KOK	**Koryaka**	**1.27**	**347**	*e*P	**Pn**		**09 28 06.3**	**-0.4**
KOK				*e*S	**Sn**		**09 28 21.8**	**-0.9**
PEA0B	**Petropavlovsk-**	**1.36**	**321**	*e*Pn	**Pn**		**09 28 08.5**	**+0.6**
PEA0B				*e*Sn	**Sn**		**09 28 24.3**	**-0.5**
PETK	**Petropavlovsk-**	**1.36**	**321**	PN	**Pn**		**09 28 08.4**	**+0.5**
PETK	**Petropavlovsk-**	**1.36**	**321**	P	**Pn**		**09 28 08.4**	**+0.5**
PETK				S	**Sn**		**09 28 26.2**	**+1.4**
PETK	**Petropavlovsk-**	**1.36**	**321**	P	**Pn**		**09 28 08.4**	**+0.5**
	comp=E,1μm,0.3s,baz=120,slow=19							
PETK				LR	LR		09 28 19.6	
	comp=E,815nm,18.4s,baz=66,slow=30							
PETK				S	**Sn**		**09 28 26.2**	**+1.4**
	comp=E,362nm,0.3s,baz=121,slow=19,SNR=10							
MIPR	**Malaya Ipel'ka**	**1.48**	**279**	*e*P	**Pn**		**09 28 11.0**	**+1.6**
MIPR				*e*S	**Sn**		**09 28 31.3**	**+3.8**
APC	**Apacha**	**1.48**	**306**	P	**Pn**		**09 28 11.2**	**+1.8**
APC				*i* S	**Sn**		**09 28 30.7**	**+3.0**
PAU	**Pauzhetka**	**1.56**	**249**	PN	**Pn**		**09 28 11.5**	**+1.0**
PAU				S	**Sn**		**09 28 31.1**	**+1.6**
PAU	**Pauzhetka**	**1.56**	**249**	*e*P	**Pn**		**09 28 11.5**	**+1.0**
PAU				*i* S	**Sn**		**09 28 31.1**	**+1.6**
GNL	**Ganaly**	**1.79**	**337**	*e*P	**Pn**		**09 28 14.1**	**+0.4**
GNL				*i* S	**Sn**		**09 28 35.5**	**+0.2**
KII	**Karymskiy**	**1.99**	**5**	P	**Pn**		**09 28 17.3**	**+0.9**
KII				*i* S	**Sn**		**09 28 41.4**	**+1.2**
SKR	**Severo-Kuril's**	**2.34**	**235**	*e*PN	**Pn**		**09 28 19.5**	**-1.6**
SKR				*e*S	**Sn**		**09 28 47.6**	**-1.0**
SKR				pmax	pmax			
	comp=E,90nm,0.5s							
SKR				pmax	pmax			
	comp=Z,180nm,0.5s							
SKR				smax	smax			
	comp=N,4μm,0.3s							
SKR				smax	smax			
	comp=E,3μm,0.3s							
SKR				smax	smax			
	comp=N,4μm,2.0s							
SKR				smax	smax			
	comp=E,3μm,2.0s							
SKR	**Severo-Kuril's**	**2.34**	**235**	P	**Pn**		**09 28 22.0**	**+0.9**
SKR				*i* S	**Sn**		**09 28 49.8**	**+1.2**
MKZ	**Mys Kozlova**	**2.95**	**31**	PN	**Pn**		**09 28 28.2**	**-1.2**
MKZ				S	**Sn**		**09 29 00.3**	**-3.2**
MKZ	**Mys Kozlova**	**2.95**	**31**	P	**Pn**		**09 28 28.2**	**-1.2**
MKZ				*i* S	**Sn**		**09 29 00.3**	**-3.2**
TUMR	**Tumrok**	**3.29**	**10**	P	**Pn**		**09 28 36.1**	**+1.9**
TUMR				*i* S	**Sn**		**09 29 13.3**	**+1.3**
KMNR	**Kamenistaya**	**3.76**	**10**	P	Pn		09 28 43.5	+2.8
ESO	**Esso**	**3.88**	**356**	PN	**Pn**		**09 28 43.3**	**+1.0**
ESO	**Esso**	**3.88**	**356**	*e*P	**Pn**		**09 28 43.3**	**+1.0**
BZMR	**Bezymyannaya**	**3.96**	**11**	*e*P	**Pn**		**09 28 46.2**	**+2.7**
KIRR	**Kirishev**	**3.97**	**10**	*e*P	**Pn**		**09 28 46.1**	**+2.5**
KIRR				*e*S	**Sn**		**09 29 30.7**	**+1.9**
KPT	**Kopyto**	**3.97**	**9**	*e*P	**Pn**		**09 28 45.7**	**+2.2**
KPT				*e*S	**Sn**		**09 29 30.8**	**+2.1**
BZWR	**Bezymyannyi-We**	**3.99**	**11**	P	**Pn**		**09 28 46.6**	**+2.6**
BZGR	**Bezymyannyi-Gr**	**4.00**	**13**	P	Pn		09 28 46.8	+2.9
BZGR				*i* S	**Sn**		**09 29 32.0**	**+2.5**
KOZ	**Kozyrevsk**	**4.03**	**6**	*e*P	**Pn**		**09 28 46.3**	**+2.0**
KOZR	**Kozyr**	**4.04**	**6**	PN	**Pn**		**09 28 46.3**	**+1.9**
ZLN	**Zelenaya**	**4.09**	**13**	*e*P	**Pn**		**09 28 47.6**	**+2.4**
ZLN				*i* S	**Sn**		**09 29 34.1**	**+2.4**
LGNR	**Loginova**	**4.13**	**12**	*e*P	**Pn**		**09 28 47.9**	**+1.9**
LGNR				*e*S	**Sn**		**09 29 34.4**	**+1.3**
CIRR	**Tsirk**	**4.17**	**13**	*e*P	**Pn**		**09 28 48.9**	**+2.5**
CIRR				*i* S	**Sn**		**09 29 35.6**	**+1.7**
KRSR	**Krestovskiy**	**4.25**	**11**	*e*P	**Pn**		**09 28 49.2**	**+1.8**
KRSR				*i* S	**Sn**		**09 29 37.1**	**+1.4**
SRDR	**Sredinnyy**	**4.28**	**4**	*e*P	**Pn**		**09 28 49.2**	**+1.4**
SRDR				*i* S	**Sn**		**09 29 37.3**	**+0.9**
KLY	**Klyuchi**	**4.36**	**11**	PN	**Pn**		**09 28 50.3**	**+1.6**
KLY				S	**Sn**		**09 29 38.4**	**+0.3**
KLY	**Klyuchi**	**4.36**	**11**	*e*P	**Pn**		**09 28 50.3**	**+1.6**
KLY				*i* S	**Sn**		**09 29 38.4**	**+0.3**
KBTR	**Krutoberegovo**	**4.69**	**26**	PN	**Pn**		**09 28 54.5**	**+1.2**
KBTR	**Krutoberegovo**	**4.69**	**26**	*e*P	Pn		**09 28 54.5**	**+1.2**
KBG	**Krutoberegovo**	**4.70**	**25**	PN	Pn		09 28 56.4	+3.0
KBG				S	**Sn**		**09 29 49.3**	**+2.8**
KBG	**Krutoberegovo**	**4.70**	**25**	*e*P	Pn		09 28 56.4	+3.0
KBG				*i* S	**Sn**		**09 29 49.3**	**+2.8**
SMKR	**Semkarok**	**4.73**	**16**	*e*P	**Pn**		**09 28 56.4**	**+2.4**
SMKR				*i* S	**Sn**		**09 29 48.9**	**+1.3**
SRKR	**Sorokina**	**4.75**	**14**	*e*P	Pn		09 28 57.5	+3.2
SRKR				*i* S	**Sn**		**09 29 49.7**	**+1.6**
FX1	**Attu Island--F**	**8.61**	**79**	P	**Pn**		**09 29 45.3**	**-1.7**
FX1				S	Sn		09 31 13.6	-9.1
FX1	**Attu Island--F**	**8.61**	**79**	P	**Pn**		**09 29 45.3**	**-1.7**
	comp=E,13nm,0.3s,baz=347,slow=21,SNR=81							
FX1				S	Sn		09 31 13.6	-9.1
	comp=E,23nm,0.3s,baz=252,slow=20,SNR=10							
FX1				LR	LR		09 32 59.5	
	comp=E,173nm,22.0s,baz=92,slow=36							
SEY	**Seymchan**	**11.48**	**344**	*e*PN	**Pn**		**09 30 26.3**	**+0.1**
YSS	**Yuzh-Sakhalins**	**11.80**	**251**	*e*PN	Pn		09 30 37.0	+6.4
YSS				MLR	MLR			
	comp=Z,200nm,17.0s							
YUK	**Yuzh-Kuril'sk**	**11.96**	**233**	*i* PN	Pn		09 30 22.6	-10
YUK				pmax	pmax			
	comp=N,60nm,0.9s							
YUK				pmax	pmax			
	comp=Z,92nm,0.9s							
YUK				pmax	pmax			
	comp=E,31nm,0.9s							
YUK				MLR	MLR			
	comp=N,457nm,21.0s							
YUK				MLR	MLR			
	comp=E,706nm,20.0s							
YUK				MLR	MLR			
	comp=Z,321nm,20.0s							
ASAJ	**Asahikawa**	**13.59**	**241**	*e*Pn	**Pn**		**09 30 56.2**	**+1.1**
ASAJ	**Asahikawa**	**13.59**	**241**	P	**Pn**		**09 30 56.7**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=68,slow=9.8,SNR=10							
ASAJ				LR	LR		09 36 03.7	
	comp=Z,110nm,19.3s,baz=26,slow=36							
ERM	**Erimo**	**14.78**	**233**	*e*P	**Pn**		**09 31 09.6**	**-1.3**
BILL	**Bilibino**	**16.40**	**10**	*e*P	**Pn**		**09 31 32.4**	**+0.9**
BILL				*e*S	**Sn**		**09 34 29.0**	**-3.3**
BILL				pmax	pmax			
	comp=Z,12nm,2.5s							
BILL				MLR	MLR			
	comp=Z,100nm,17.0s							
YAK	**Yakutsk**	**18.70**	**314**	*e*P	**P**		**09 31 56.3**	**-2.6**
YAK				*e*S	**Sn**		**09 35 22.3**	**-5.5**
YAK				pmax	pmax			
	comp=Z,8.0nm,0.9s							
YAK				smax	smax			
	comp=E,13nm,1.5s							
YAK				smax	smax			
	comp=N,24nm,2.0s							
USRK	**Ussuriysk Arra**	**19.66**	**257**	P	**P**		**09 32 09.4**	**-0.1**
	comp=N,0.3nm,0.3s,baz=67,slow=12,SNR=6.1							
USRK				LR	LR		09 39 45.9	
	comp=N,123nm,20.3s,baz=185,slow=37							
VLA	**Vladivostok**	**20.33**	**255**	*e*P	**P**		**09 32 13.9**	**-2.9**
VLA				*i*			09 32 31.8	
VLA				S	**S**		**09 35 57.8**	**-3.8**
VLA				pmax	pmax			
	comp=Z,35nm,1.3s							
MDJ	**Mudanjiang**	**20.89**	**261**	P	**P**		**09 32 22.0**	**-0.9**
MDJ				pmax	pmax			
	comp=Z,6.0nm,1.2s							
MDJ				pmax	pmax			
	comp=Z,38nm,4.9s							
MDJ				LR	LR			
	comp=N,110nm,26.5s							
MDJ				LR	LR			
	comp=Z,74nm,24.4s							
TNA	**Tin City**	**21.43**	**38**	*e*P	**P**		**09 32 31.3**	**+2.9**
	comp=Z,9.6nm,0.9s							
MAJO	**Matsushiro**	**21.44**	**232**	*e*P	**P**		**09 32 30.6**	**+1.7**
MAJO				pmax	pmax			
	comp=Z,29nm,1.0s							
MAJO	**Matsushiro**	**21.44**	**232**	*e*P	**P**		**09 32 30.6**	**+1.7**
	comp=Z,29nm,1.0s							
MAT	**Matsushiro**	**21.44**	**232**	P	**P**		**09 32 29.8**	**+0.9**
MJAR	**Matsushiro Arr**	**21.44**	**232**	P	**P**		**09 32 30.8**	**+1.9**
MJAR	**Matsushiro Arr**	**21.44**	**232**	P	**P**		**09 32 30.8**	**+1.9**
	comp=Z,12nm,0.8s,baz=30,slow=7.1,SNR=42							
MJAR				LR	LR		09 40 32.1	
	comp=Z,77nm,21.7s,baz=70,slow=36							
TIXI	**Tiksi**	**23.79**	**337**	*e*P	**P**		**09 32 51.6**	**-1.0**
TIXI				pmax	pmax			
	comp=Z,12nm,0.7s							
KSRS	**Korea Array**	**26.29**	**249**	P	**P**		**09 33 16.8**	**+1.2**
	comp=Z,3.4nm,0.7s,baz=43,slow=9.6,SNR=17							
KSRS				LR	LR		09 42 45.6	
	comp=Z,57nm,19.4s,baz=356,slow=34							
KSAR	**Wonju Array Be**	**26.32**	**249**	P	**P**		**09 33 16.8**	**+0.9**
KDAK	**Kodiak Island**	**27.83**	**59**	P	**P**		**09 33 31.5**	**+2.3**
KDAK	**Kodiak Island**	**27.83**	**59**	P	**P**		**09 33 31.5**	**+2.3**
	comp=Z,7.8nm,0.8s,baz=315,slow=4.3,SNR=3.3							
JNU	**Nakatsue**	**27.84**	**238**	P	**P**		**09 33 31.3**	**+1.6**
JNU	**Nakatsue**	**27.84**	**238**	P	**P**		**09 33 31.3**	**+1.6**
	comp=Z,11nm,0.8s,baz=120,slow=3.9,SNR=9.5							
JNU				LR	LR		09 45 28.1	
	comp=Z,42nm,20.2s,baz=229,slow=38							
SML	**Sawmill**	**29.47**	**50**	*e*P	**P**		**09 33 43.8**	**0.0**
SML				pmax	pmax			
	comp=Z,2.0nm,0.7s							
SML	**Sawmill**	**29.47**	**50**	*e*P	**P**		**09 33 43.8**	**0.0**
	comp=Z,1.6nm,0.7s							
COLA	**College**	**29.55**	**44**	*e*P	**P**		**09 33 44.7**	**+0.3**
ILAR	**Eielson Array**	**29.96**	**44**	P	**P**		**09 33 46.4**	**-1.8**
ILAR				PcP	**PcP**		**09 36 47.9**	**-1.4**
ILAR	**Eielson Array**	**29.96**	**44**	P	**P**		**09 33 46.4**	**-1.8**
	comp=Z,2.3nm,0.8s,baz=259,slow=8.0,SNR=18							
ILAR				PcP	**PcP**		**09 36 47.9**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=287,slow=3.7,SNR=5.1							
ILAR				LR	LR		09 45 39.6	
	comp=Z,44nm,19.4s,baz=309,slow=36							
BJI	**Beijing**	**31.68**	**265**	P	**P**		**09 34 02.5**	**-1.0**
BJI				pmax	pmax			
	comp=Z,15nm,0.5s							
BJI				LR	LR			
	comp=N,110nm,17.3s							
BJI				LR	LR			
	comp=E,120nm,16.1s							
BJI				LR	LR			
	comp=Z,64nm,17.3s							
EGAK	**Eagle**	**32.41**	**44**	*e*P	**P**		**09 34 08.5**	**-1.2**
	comp=Z,5.3nm,0.9s							
SONM	**Songino Array**	**33.57**	**284**	P	**P**		**09 34 20.0**	**-0.2**
SONM				PcP	**PcP**		**09 36 59.6**	**+0.1**
SONM	**Songino Array**	**33.57**	**284**	P	**P**		**09 34 20.0**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=65,slow=8.6,SNR=4.7							
SONM				PcP	**PcP**		**09 36 59.6**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=66,slow=2.2,SNR=10							
SONM				LR	LR		09 49 01.5	
	comp=Z,140nm,20.1s,baz=246,slow=38							
HHC	**Hu-ho-hao-te**	**34.05**	**270**	*e*P	**P**		**09 34 24.8**	**+0.5**
HHC				PP	**PnPn**		**09 35 39.0**	**+0.2**
HHC				S	**S**		**09 39 44.5**	**-1.6**
HHC				PcS	**PcS**		**09 40 48.3**	**+1.2**
HHC				SS	**SnSn**		**09 41 52.3**	**-4.5**
HHC				ScS	**ScS**		**09 44 43.3**	**0.0**
HHC				pmax	pmax			
	comp=Z,34nm,1.0s							
HHC				LR	LR			
	comp=N,260nm,23.7s							
HHC				LR	LR			
	comp=E,520nm,24.3s							
HHC				LR	LR			
	comp=Z,150nm,20.6s							
JOW	**Kunigami**	**34.23**	**235**	*e*P	P		09 34 29.7	+3.9
	comp=Z,5.9nm,0.5s							
INK	**Inuvik**	**35.05**	**37**	P	**P**		**09 34 32.6**	**+0.1**
INK	**Inuvik**	**35.05**	**37**	P	**P**		**09 34 32.6**	**+0.1**
	comp=Z,2.9nm,0.5s,baz=293,slow=6.8,SNR=24							
NJ2	**Nanjing**	**35.37**	**252**	*e*P	**P**		**09 34 34.5**	**-1.1**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
LZH	**Lanzhou**	**41.75**	**270**	*e*P	**P**		**09 35 29.0**	**-0.3**
LZH				pmax	pmax			
	comp=Z,15nm,1.0s							
GTA	**Gaotai**	**42.14**	**277**	*e*P	**P**		**09 35 32.5**	**+0.1**
GTA				S	**S**		**09 41 47.0**	**-1.5**
GTA				SS	SS		09 44 48.5	-8.8
GTA				pmax	pmax			
	comp=Z,4.0nm,1.5s							
GTA				pmax	pmax			
	comp=Z,55nm,5.0s							
GTA				LR	LR			
	comp=N,84nm,16.9s							
GTA				LR	LR			
	comp=E,66nm,15.2s							
GTA				LR	LR			
	comp=Z,69nm,16.9s							
ZALV	**Zalesovo Beam**	**42.84**	**303**	PcP	**PcP**		**09 37 28.2**	**+0.3**
ZALV	**Zalesovo Beam**	**42.84**	**303**	PcP	**PcP**		**09 37 28.2**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=85,slow=3.3,SNR=4.9							
ZALV				LR	LR		09 54 45.9	
	comp=Z,126nm,18.1s,baz=50,slow=38							
YKA	**Yellowknife Ar**	**44.33**	**42**	P	**P**		**09 35 49.5**	**0.0**
YKA	**Yellowknife Ar**	**44.33**	**42**	P	**P**		**09 35 49.5**	**0.0**
	comp=Z,1.8nm,0.8s,baz=298,slow=8.0,SNR=19							
CD2	**Chengdu**	**45.28**	**264**	P	**P**		**09 35 58.3**	**+0.7**
CD2				PcP	**PcP**		**09 37 39.0**	**+2.3**
CD2				PP	**PP**		**09 37 44.8**	**+0.7**
CD2				PcS	**PcS**		**09 41 31.3**	**+0.5**
CD2				S	**S**		**09 42 33.5**	**-0.7**
CD2				SS	**ScS**		**09 45 47.5**	**-2.1**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=Z,120nm,5.6s							
GYA	**Guiyang**	**46.70**	**258**	*e*P	**P**		**09 36 08.5**	**-0.4**
GYA				pmax	pmax			
	comp=Z,1.0nm,0.8s							
WMQ	**Urumqi**	**46.76**	**290**	*e*P	**P**		**09 36 10.5**	**+1.4**
WMQ				PcP	**PcP**		**09 37 44.3**	**+2.6**
WMQ				ScP	**ScP**		**09 41 32.8**	**+2.1**
WMQ				S	**S**		**09 42 55.3**	**0.0**
WMQ				ScS	**ScS**		**09 45 58.5**	**-0.4**
WMQ				pmax	pmax			
	comp=Z,8.0nm,0.5s							
WMQ				pmax	pmax			
	comp=Z,85nm,4.2s							
WMQ				LR	LR			
	comp=N,120nm,6.2s							
WMQ				LR	LR			
	comp=E,140nm,7.0s							
WMQ				LR	LR			
	comp=Z,38nm,24.2s							
KURK	**Kurchatov**	**47.78**	**302**	*d i* P	**P**		**09 36 15.1**	**-1.8**
KURK				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KURK	**Kurchatov**	**47.78**	**302**	*e*P	**P**		**09 36 14.3**	**-2.6**
	comp=Z,7.2nm,0.9s							
MK31	**Makanchi Array**	**48.08**	**296**	*e*P	**P**		**09 36 17.1**	**-2.2**
MK31	**Makanchi Array**	**48.08**	**296**	*e*P	**P**		**09 36 17.1**	**-2.2**
MKAR	**Makanchi Array**	**48.08**	**296**	P	**P**		**09 36 17.5**	**-1.8**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
MKAR				MLR	MLR			
	comp=Z,57nm,18.5s							
MKAR	**Makanchi Array**	**48.08**	**296**	*e*P	**P**		**09 36 17.4**	**-1.8**
MKAR	**Makanchi Array**	**48.08**	**296**	P	**P**		**09 36 17.5**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=54,slow=6.4,SNR=19							
MKAR				LR	LR		09 57 53.8	
	comp=Z,57nm,18.5s,baz=250,slow=38							
QIZ	**Qiongzhong**	**50.51**	**248**	P	**P**		**09 36 39.8**	**+1.7**
QIZ				S	**S**		**09 43 50.8**	**+2.4**
QIZ				LR	LR			
	comp=Z,44nm,25.5s							
BRVK	**Borovoye**	**50.60**	**309**	*e*P	**P**		**09 36 36.6**	**-1.8**
BRVK				pmax	pmax			
	comp=Z,1.0nm,0.8s							
DAG	**Danmarks Havn**	**51.43**	**359**	*i* P	**P**		**09 36 43.2**	**-1.1**
DAG				pmax	pmax			
	comp=Z,6.0nm,0.8s							
DAG	**Danmarks Havn**	**51.43**	**359**	*i* P	**P**		**09 36 43.2**	**-1.1**
	comp=Z,8.4nm,0.8s							
WALA	**Waterton Lakes**	**52.12**	**56**	*e*P	**P**		**09 36 50.0**	**+0.1**
	comp=Z,0.3nm,1.4s							
WALA				*e*			09 37 03.8	
WALA				*e*			09 37 06.9	
BSMT	**Bassoo Peak**	**52.42**	**58**	*e*P	**P**		**09 36 53.3**	**+1.0**
BSMT				*e*			09 37 05.5	
BSMT				*e*			09 37 08.9	
SLMT	**Seeley Lake**	**53.48**	**58**	*e*P	**P**		**09 37 00.7**	**+0.6**
SLMT				*e*			09 37 13.3	
SLMT				*e*			09 37 16.6	
KEV	**Kevo**	**53.61**	**341**	*e*P	**P**		**09 36 58.4**	**-2.0**
KEV	**Kevo**	**53.61**	**341**	*e*p	**P**		**09 36 58.4**	**-2.0**
ARU	**Arti**	**53.76**	**317**	*e*P	P		09 36 56.4	-5.3
ARCES	**ARCESS Array B**	**54.09**	**342**	P	**P**		**09 37 02.6**	**-1.4**
ARCES	**ARCESS Array B**	**54.09**	**342**	P	**P**		**09 37 02.6**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=39,slow=7.8,SNR=5.1							
FFC	**Flin Flon**	**54.17**	**45**	*ce*P	**P**		**09 37 06.9**	**+2.1**
BEKR	**Beckworth**	**54.51**	**69**	*e*P	**P**		**09 37 08.6**	**+0.9**
	comp=Z,3.4nm,0.9s							
BEKR				*e*			09 37 21.2	
BEKR				*e*			09 37 24.6	
AAK	**Ala-Archa**	**55.01**	**296**	*e*P	**P**		**09 37 09.4**	**-1.9**
AAK				pmax	pmax			
	comp=Z,9.0nm,1.7s							
AAK	**Ala-Archa**	**55.01**	**296**	*e*P	**P**		**09 37 09.6**	**-1.6**
	comp=Z,1.5nm,0.3s							
SUMG	**Summit**	**55.06**	**6**	*i* P	**P**		**09 37 11.4**	**0.0**
SUMG				pmax	pmax			
	comp=Z,7.0nm,0.8s							
SUMG	**Summit**	**55.06**	**6**	*e*P	**P**		**09 37 10.5**	**-0.9**
	comp=Z,12nm,1.1s							
SUMG	**Summit**	**55.06**	**6**	*i* P	**P**		**09 37 11.4**	**0.0**
	comp=Z,6.8nm,0.8s							
WCN	**Washoe City**	**55.23**	**69**	*e*P	**P**		**09 37 14.0**	**+1.1**
WCN				*e*			09 37 30.7	
WCN				pmax	pmax			
	comp=Z,6.0nm,0.9s							
WCN	**Washoe City**	**55.23**	**69**	*e*P	**P**		**09 37 14.0**	**+1.1**
	comp=Z,6.0nm,0.9s							
WCN				*e*			09 37 30.7	
BOZ	**Bozeman (W)**	**55.50**	**58**	*e*P	**P**		**09 37 15.3**	**+0.6**
BOZ				*e*			09 37 27.6	
BOZ				pmax	pmax			
	comp=Z,2.0nm,0.9s							
BOZ	**Bozeman (W)**	**55.50**	**58**	*e*P	**P**		**09 37 15.3**	**+0.6**
	comp=Z,2.4nm,0.9s							
BOZ				*e*			09 37 27.6	
NVAR	**Mina Array Bea**	**56.66**	**69**	P	**P**		**09 37 24.2**	**+1.0**
NVAR				pP	**pP**		**09 37 37.0**	**-0.3**
NVAR				sP	**sP**		**09 37 41.3**	**-1.9**
NVAR	**Mina Array Bea**	**56.66**	**69**	P	**P**		**09 37 24.2**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=294,slow=8.1,SNR=13							
NVAR				pP	**pP**		**09 37 37.0

KAF	**Kangasniemi**	**60.20**	**337**	*e*p		**P**	**09 37 46.5**	**-0.7**
	comp=Z,2.9nm,0.4s								
RSSD	**Black Hills**	**60.47**	**55**	*e*P		**P**	**09 37 50.6**	**+1.0**
RSSD				*e*			09 38 02.9		
RSSD				*e*			09 38 06.7		
RSSD					pmax	pmax			
	comp=Z,7.0nm,0.8s								
RSSD	**Black Hills**	**60.47**	**55**	*e*P		**P**	**09 37 50.6**	**+1.0**
	comp=Z,7.2nm,0.8s								
RSSD				*e*			09 38 02.9		
RSSD				*e*			09 38 06.7		
LDFC	**Landfair**	**60.83**	**70**	*e*P		**P**	**09 37 53.0**	**+0.9**
	comp=Z,13nm,0.8s								
LDFC				*e*			09 38 05.3		
LDFC				*e*			09 38 09.0		
FINES	**FINESS Array B**	**60.83**	**336**	P		**P**	**09 37 50.7**	**-0.8**
FINES	**FINESS Array B**	**60.83**	**336**	P		**P**	**09 37 50.7**	**-0.8**
	comp=Z,2.5nm,0.6s,baz=34,slow=8.3,SNR=37								
PV10	**Paradox Valley**	**61.91**	**63**	*e*P		**P**	**09 38 01.0**	**+1.5**
	comp=Z,148nm,1.0s								
PV10				*e*			09 38 13.6		
PV10				*e*			09 38 17.7		
SMCO	**Snowmass**	**62.46**	**61**	*e*P		**P**	**09 38 04.4**	**+1.0**
SMCO				*e*			09 38 15.6		
SMCO				*e*			09 38 20.1		
ISCO	**Idaho Springs**	**62.74**	**60**	*e*P		**P**	**09 38 06.3**	**+1.2**
ISCO				*e*			09 38 19.2		
ISCO				*e*			09 38 23.2		
ISCO					pmax	pmax			
	comp=Z,4.0nm,0.9s								
ISCO	**Idaho Springs**	**62.74**	**60**	*e*P		**P**	**09 38 06.3**	**+1.2**
	comp=Z,4.1nm,0.9s								
ISCO				*e*			09 38 19.1		
ISCO				*e*			09 38 23.2		
NB2	**NORSAR Subarra**	**64.37**	**343**	P		**P**	**09 38 14.3**	**-0.8**
	comp=Z,12nm,0.5s,baz=23,slow=6.9								
NB2	**NORSAR Subarra**	**64.37**	**343**	P		**P**	**09 38 14.3**	**-0.8**
	baz=23,slow=6.9								
NOA	**NORSAR Array B**	**64.37**	**343**	P		**P**	**09 38 14.4**	**-0.8**
NOA	**NORSAR Array B**	**64.37**	**343**	P		**P**	**09 38 14.4**	**-0.8**
	comp=Z,14nm,0.6s,baz=22,slow=6.6,SNR=92								
NAO01	**NORSAR Array S**	**64.61**	**343**	*e*P		**P**	**09 38 15.4**	**-1.2**
	comp=Z,4.3nm,0.6s								
TUC	**Tucson**	**65.31**	**69**	*e*P		**P**	**09 38 21.8**	**0.0**
TUC				*e*			09 38 35.2		
TUC				*e*			09 38 38.8		
TUC					pmax	pmax			
	comp=Z,2.0nm,0.9s								
TUC	**Tucson**	**65.31**	**69**	*e*P		**P**	**09 38 21.8**	**0.0**
	comp=Z,2.4nm,0.9s								
TUC				*e*			09 38 35.2		
TUC				*e*			09 38 38.8		
ANMO	**Albuquerque**	**65.83**	**64**	*e*P		**P**	**09 38 26.2**	**+1.0**
	comp=Z,0.7nm,0.8s								
ANMO				*e*			09 38 39.0		
ANMO				*e*			09 38 42.8		
SCHQ	**Schefferville**	**66.84**	**27**	*e*P		**P**	**09 38 30.3**	**-0.8**
	comp=Z,3.2nm,0.5s								
SCHQ	**Schefferville**	**66.84**	**27**	P		**P**	**09 38 29.7**	**-1.4**
	comp=Z,4.2nm,0.7s,baz=335,slow=6.9,SNR=9.1								
MNTX	**Cornudas Mount**	**68.84**	**65**	*e*P		**P**	**09 38 44.9**	**+0.8**
	comp=Z,6.5nm,1.3s								
MNTX				*e*			09 38 57.8		
MNTX				*e*			09 39 02.0		
MUD	**Monsted U'grnd**	**69.05**	**343**	*i* P		**P**	**09 38 44.2**	**-0.7**
MUD					pmax	pmax			
	comp=Z,9.0nm,0.7s								
MUD	**Monsted U'grnd**	**69.05**	**343**	*i* P		**P**	**09 38 44.2**	**-0.7**
	comp=Z,8.5nm,0.7s								
AKASG	**Malin Array Be**	**69.19**	**329**	P		**P**	**09 38 44.3**	**-1.6**
AKASG					pmax	pmax			
	comp=Z,1.0nm,0.3s								
AKASG	**Malin Array Be**	**69.19**	**329**	P		**P**	**09 38 44.3**	**-1.6**
AKASG	**Malin Array Be**	**69.19**	**329**	P		**P**	**09 38 44.3**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=28,slow=6.3,SNR=6.4								
KIEV	**Kiev**	**69.20**	**329**	*e*P		**P**	**09 38 44.4**	**-1.6**
KIEV					pmax	pmax			
	comp=Z,9.0nm,1.3s								
KIEV	**Kiev**	**69.20**	**329**	*e*P		**P**	**09 38 44.4**	**-1.6**
	comp=Z,9.1nm,1.3s								
AK02	**Malin Array Si**	**69.24**	**329**	*e*P		**P**	**09 38 44.8**	**-1.4**
KBZ	**Khabaz**	**69.88**	**316**	P		**P**	**09 38 49.4**	**-0.9**
KBZ					pmax	pmax			
	comp=Z,2.0nm,0.7s								
KBZ	**Khabaz**	**69.88**	**316**	P		**P**	**09 38 49.4**	**-0.9**
KBZ	**Khabaz**	**69.88**	**316**	P		**P**	**09 38 49.4**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=27,slow=4.5,SNR=2.1								
WMOK	**Wichita Mounta**	**70.14**	**59**	*e*P		**P**	**09 38 51.9**	**-0.2**
WMOK				*e*			09 39 05.5		
WMOK				*e*			09 39 09.5		
WMOK					pmax	pmax			
	comp=Z,2.0nm,0.9s								
WMOK	**Wichita Mounta**	**70.14**	**59**	*e*P		**P**	**09 38 51.9**	**-0.2**
	comp=Z,1.9nm,0.9s								
WMOK				*e*			09 39 05.5		
WMOK				*e*			09 39 09.5		
BSEG	**Bad Segeberg**	**71.21**	**341**	*e*P		**P**	**09 38 58.4**	**+0.2**
	comp=Z,18nm,0.9s								
BSEG	**Bad Segeberg**	**71.21**	**341**	*e*P		**P**	**09 38 58.4**	**+0.2**
BSEG					pmax	pmax			
	comp=Z,18nm,0.9s								
TXAR	**Lajitas Array**	**71.59**	**66**	P		**P**	**09 39 01.8**	**+0.8**
TXAR				pP		**pP**	**09 39 14.8**	**-0.8**
TXAR				sP		**sP**	**09 39 19.1**	**-2.3**
TXAR	**Lajitas Array**	**71.59**	**66**	P		**P**	**09 39 01.8**	**+0.8**
	comp=Z,2.5nm,0.6s,baz=301,slow=4.7,SNR=18								
TXAR				pP		**pP**	**09 39 14.8**	**-0.8**
	comp=Z,4.8nm,0.7s,baz=286,slow=4.1,SNR=16								
TXAR				sP		**sP**	**09 39 19.1**	**-2.3**
	comp=Z,4.9nm,0.7s,baz=302,slow=4.6,SNR=16								
KWP	**Kalwaria Pacla**	**72.13**	**332**	⇓P		**P**	**09 39 04.1**	**+0.2**
KWP	**Kalwaria Pacla**	**72.13**	**332**	⇓*i*P		**P**	**09 39 04.1**	**+0.2**
KWP	**Kalwaria Pacla**	**72.13**	**332**	*e*P		**P**	**09 39 03.9**	**0.0**
OJC	**Ojcow**	**72.42**	**334**	*e*P		**P**	**09 39 05.5**	**0.0**
OJC	**Ojcow**	**72.42**	**334**	*e*P		**P**	**09 39 05.5**	**0.0**
OJC	**Ojcow**	**72.42**	**334**	*e*P		**P**	**09 39 05.0**	**-0.5**
NRDL	**Niedersach Rie**	**72.61**	**341**	*e*P		**P**	**09 39 06.1**	**-0.4**
	comp=Z,6.0nm,0.9s								
STHS	**Stebnicka Huta**	**72.75**	**333**	*e*P		**P**	**09 39 07.8**	**+0.3**
STHS					pmax	pmax			
	comp=Z,6.0nm,0.8s								
STHS	**Stebnicka Huta**	**72.75**	**333**	*e*P		**P**	**09 39 07.8**	**+0.3**
JCT	**Junction City**	**72.86**	**62**	*e*P		**P**	**09 39 08.9**	**+0.4**
JCT				*e*			09 39 25.6		
JCT					pmax	pmax			
	comp=Z,2.0nm,0.7s								
JCT	**Junction City**	**72.86**	**62**	*e*P		**P**	**09 39 08.9**	**+0.4**
	comp=Z,2.2nm,0.7s								
JCT				*e*			09 39 25.6		
KOLS	**Kolonicke sedl**	**72.89**	**332**	*e*P		**P**	**09 39 07.9**	**-0.4**
KOLS					pmax	pmax			
	comp=Z,5.0nm,1.0s								
KOLS	**Kolonicke sedl**	**72.89**	**332**	*e*P		**P**	**09 39 07.9**	**-0.4**
NIE	**Niedzica**	**73.00**	**333**	*e*P		**P**	**09 39 09.3**	**+0.2**
NIE	**Niedzica**	**73.00**	**333**	*e*P		**P**	**09 39 09.3**	**+0.2**
CLL	**Collm**	**73.11**	**339**	*e*P		**P**	**09 39 09.0**	**-0.5**
	comp=Z,13nm,0.9s								
CLL	**Collm**	**73.11**	**339**	⇑*i*P		**P**	**09 39 09.1**	**-0.5**
CLL				*e*			09 39 27.0		
CLL					pmax	pmax			
	comp=Z,13nm,0.9s								
CLL	**Collm**	**73.11**	**339**	⇑*i*P		**P**	**09 39 09.1**	**-0.5**
	comp=Z,13nm,0.9s								
CLL				*e*pP		**PcP**	**09 39 27.0**	**+0.9**
CLL				L		L	10 13 00.0		
	comp=Z,100nm,20.4s								
UPC	**Upice**	**73.14**	**336**	*i* P		**P**	**09 39 09.9**	**+0.1**
UPC	**Upice**	**73.14**	**336**	*i* P		**P**	**09 39 09.9**	**+0.1**
CRVS	**Cervenica-Dubn**	**73.15**	**332**	*e*P		**P**	**09 39 07.8**	**-2.1**
CRVS					pmax	pmax			
	comp=Z,4.0nm,1.2s								
CRVS	**Cervenica-Dubn**	**73.15**	**332**	*e*P		**P**	**09 39 07.8**	**-2.1**
BUR08	**Bucovina Ar. S**	**73.15**	**329**	*e*P		**P**	**09 39 09.1**	**-1.0**
DPC	**Dobruska-Polom**	**73.20**	**336**	*e*P		**P**	**09 39 10.6**	**+0.3**
DPC					pmax	pmax			
	comp=Z,6.0nm,1.0s								
DPC	**Dobruska-Polom**	**73.20**	**336**	*e*P		**P**	**09 39 10.6**	**+0.3**
	comp=Z,6.2nm,1.0s								
DPC	**Dobruska-Polom**	**73.20**	**336**	*i* P		**P**	**09 39 10.2**	**-0.1**
IBBN	**Ibbenburen**	**73.25**	**342**	*e*P		**P**	**09 39 10.5**	**+0.1**
	comp=Z,21nm,1.4s								
BRG	**Berggiesshubel**	**73.30**	**338**	*e*P		**P**	**09 39 10.1**	**-0.6**
	comp=Z,6.0nm,1.2s								
BRG					MLR	MLR			
	comp=N,156nm,19.0s								
BRG					MLR	MLR			
	comp=E,86nm,16.2s								
BRG					MLR	MLR			
	comp=Z,214nm,19.6s								
BRG	**Berggiesshubel**	**73.30**	**338**	*e*P		**P**	**09 39 10.2**	**-0.6**
	comp=Z,6.0nm,1.2s								
BRG	**Berggiesshubel**	**73.30**	**338**	*e*P		**P**	**09 39 10.1**	**-0.6**
BRG					pmax	pmax			
	comp=Z,6.0nm,1.2s								
BRG					MLR	MLR			
	comp=N,156nm,19.0s								
BRG					MLR	MLR			
	comp=E,86nm,16.2s								
BRG					MLR	MLR			
	comp=Z,214nm,19.6s								
MORC	**Moravsky Berou**	**73.42**	**335**	⇑P		**P**	**09 39 11.7**	**+0.2**
MORC	**Moravsky Berou**	**73.42**	**335**	*e*P		**P**	**09 39 10.9**	**-0.6**
	comp=Z,12nm,1.1s								
MORC	**Moravsky Berou**	**73.42**	**335**	⇑*i*P		**P**	**09 39 11.7**	**+0.2**
TRPA	**Tarpa**	**73.53**	**331**	⇓*i*P		**P**	**09 39 12.4**	**+0.3**
TESR	**Tescani**	**73.68**	**328**	⇑*i*P		**P**	**09 39 12.6**	**-0.5**
KECS	**Kecovo**	**73.80**	**333**	*e*P		**P**	**09 39 13.3**	**-0.4**
KECS					pmax	pmax			
	comp=Z,3.0nm,0.9s								
KECS	**Kecovo**	**73.80**	**333**	*e*P		**P**	**09 39 13.3**	**-0.4**
PRU	**Pruhonice**	**73.98**	**337**	*i* P		**P**	**09 39 13.9**	**-0.8**
PRU	**Pruhonice**	**73.98**	**337**	*i* P		**P**	**09 39 13.9**	**-0.8**
MOX	**Moxa**	**74.04**	**339**	*e*P		**P**	**09 39 14.7**	**-0.4**
	comp=Z,7.0nm,0.8s								
MOX				*e*L		L	10 10 31.0		
	comp=Z,65nm,18.7s								
MOX	**Moxa**	**74.04**	**339**	*e*P		**P**	**09 39 14.7**	**-0.4**
MOX					pmax	pmax			
	comp=Z,7.0nm,0.8s								
TANN	**Tannenbergstha**	**74.06**	**339**	*e*P		**P**	**09 39 14.9**	**-0.4**
	comp=Z,12nm,1.8s								
VRAC	**Vranov**	**74.10**	**336**	⇓*i*P		**P**	**09 39 14.3**	**-1.2**
BUG	**Bochum--Univer**	**74.17**	**342**	*e*P		**P**	**09 39 15.6**	**-0.2**
	comp=Z,10.0nm,0.9s								
UBBA	**Unterbiizbach**	**74.22**	**340**	*e*P		**P**	**09 39 16.0**	**0.0**
	comp=Z,5.0nm,1.3s								
VRI	**Vrincioaia**	**74.23**	**328**	⇓P		**P**	**09 39 15.9**	**-0.4**
VRI	**Vrincioaia**	**74.23**	**328**	⇓*i*P		**P**	**09 39 15.9**	**-0.4**
VYHS	**Vyhne**	**74.25**	**334**	*e*P		**P**	**09 39 16.3**	**-0.1**
VYHS					pmax	pmax			
	comp=Z,5.0nm,1.2s								
VYHS	**Vyhne**	**74.25**	**334**	*e*P		**P**	**09 39 16.3**	**-0.1**
TREC	**Trest**	**74.39**	**336**	*e*P		**P**	**09 39 17.2**	**0.0**
TREC	**Trest**	**74.39**	**336**	*e*P		**P**	**09 39 17.2**	**0.0**
PSZ	**Piszkesteto**	**74.48**	**333**	⇑P		**P**	**09 39 17.7**	**-0.1**
PSZ	**Piszkesteto**	**74.48**	**333**	*e*P		**P**	**09 39 15.7**	**-2.1**
	comp=Z,7.7nm,0.9s								
PSZ	**Piszkesteto**	**74.48**	**333**	⇑*i*P		**P**	**09 39 17.7**	**-0.1**
DRGR		**74.68**	**331**	⇓P		**P**	**09 39 18.7**	**-0.3**
DRGR		**74.68**	**331**	⇓*i*P		**P**	**09 39 18.7**	**-0.3**
ROTZ	**Rotzenmuhle**	**74.73**	**338**	*e*P		**P**	**09 39 19.1**	**0.0**
	comp=Z,6.0nm,0.9s								
MLR	**Muntele Rosu**	**74.82**	**328**	⇓*i*P		**P**	**09 39 19.9**	**+0.1**
TIRR	**Tirgusor**	**74.89**	**326**	⇑P		**P**	**09 39 20.0**	**-0.1**
TIRR	**Tirgusor**	**74.89**	**326**	⇑*i*P		**P**	**09 39 20.0**	**-0.1**
WRA	**Warramunga Arr**	**74.89**	**204**	P		**P**	**09 39 21.0**	**+0.7**
WRA	**Warramunga Arr**	**74.89**	**204**	P		**P**	**09 39 21.0**	**+0.7**
	comp=Z,2.3nm,0.6s,baz=20,slow=6.3,SNR=26								
ZST	**Bratislava**	**74.99**	**335**	*e*P		**P**	**09 39 20.2**	**-0.4**
ZST					pmax	pmax			
	comp=Z,8.0nm,1.3s								
ZST	**Bratislava**	**74.99**	**335**	*e*P		**P**	**09 39 20.1**	**-0.5**
KHC	**Kasperske Hory**	**75.00**	**337**	*i* P		**P**	**09 39 20.9**	**+0.1**
KHC				*e*			09 39 39.3		
KHC	**Kasperske Hory**	**75.00**	**337**	*e*P		**P**	**09 39 20.5**	**-0.3**
	comp=Z,9.3nm,0.9s								
KHC	**Kasperske Hory**	**75.00**	**337**	*i* P		**P**	**09 39 20.9**	**+0.1**
KHC				*e*pP		**pP**	**09 39 39.3**	**+3.9**
GRF	**Grafenberg Arr**	**75.02**	**339**	*e*P		**P**	**09 39 21.2**	**+0.4**
	comp=Z,24nm,1.3s								
GRF				*e*L		L	10 11 40.3		
	comp=Z,55nm,20.2s								
GRF	**Grafenberg Arr**	**75.02**	**339**	*e*P		**P**	**09 39 21.2**	**+0.4**
GRF					pmax	pmax			
	comp=Z,24nm,1.3s								
TNS	**Taunus Mts**	**75.10**	**341**	*e*P		**P**	**09 39 21.3**	**0.0**
	comp=Z,5.0nm,0.7s								
TNS	**Taunus Mts**	**75.10**	**341**	*e*P		**P**	**09 39 21.3**	**0.0**
TNS					pmax	pmax			
	comp=Z,5.0nm,0.7s								
VOIR		**75.16**	**328**	⇑P		**P**	**09 39 21.8**	**+0.1**
VOIR		**75.16**	**328**	⇑*i*P		**P**	**09 39 21.8**	**+0.1**
WET	**Wettzell**	**75.16**	**338**	*e*P		**P**	**09 39 21.9**	**+0.3**
	comp=Z,10.0nm,1.0s								
WET	**Wettzell**	**75.16**	**338**	*e*P		**P**	**09 39 21.9**	**+0.3**
WET					pmax	pmax			
	comp=Z,10.0nm,1.0s								
MEM	**Membach**	**75.20**	**343**	P		**P**	**09 39 22.0**	**+0.2**
	comp=Z,5.2nm,1.0s								
GEC2	**GERESS Array S**	**75.24**	**337**	*e*P		**P**	**09 39 21.9**	**-0.3**
	comp=Z,5.0nm,0.7s								
GEC2	**GERESS Array S**	**75.24**	**337**	*e*P		**P**	**09 39 21.9**	**-0.3**
GEC2					pmax	pmax			
	comp=Z,5.0nm,0.7s								
GERES	**GERESS Array B**	**75.24**	**337**	P		**P**	**09 39 22.2**	**0.0**
GERES	**GERESS Array B**	**75.24**	**337**	P		**P**	**09 39 22.2**	**0.0**
	comp=Z,3.5nm,0.6s,baz=34,slow=5.6,SNR=46								
ARR	**Arges**	**75.35**	**329**	⇓*i*P		**P**	**09 39 23.4**	**+0.6**
BCLA	**Clavier**	**75.51**	**343**	P		**P**	**09 39 23.5**	**-0.1**
	comp=Z,8.3nm,1.4s								
CONA	**Conrad Observa**	**75.56**	**335**	⇑*i*P		**P**	**09 39 24.4**	**+0.4**
	comp=Z,15nm,1.4s								
FITZ	**Fitzroy Crossi**	**75.71**	**213**	P		**P**	**09 39 26.8**	**+1.9**
FITZ	**Fitzroy Crossi**	**75.71**	**213**	P		**P**	**09 39 26.8**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=0.0,slow=4.0,SNR=3.3								
GIVF	**Givet**	**75.90**	**343**	*e*P		**P**	**09 39 25.3**	**-0.5**
GIVF	**Givet**	**75.90**	**343**	*e*P		**P**	**09 39 25.3**	**-0.5**
GIVF	**Givet**	**75.90**	**343**	*e*P		**P**	**09 39 25.3**	**-0.5**
BAIF	**Baives**	**76.05**	**344**	*e*P		**P**	**09 39 26.2**	**-0.5**
	comp=Z,12nm,0.9s								
BAIF	**Baives**	**76.05**	**344**	*e*P		**P**	**09 39 26.2**	**-0.5**
BAIF					pmax	pmax			
	comp=Z,12nm,0.9s								
BAIF	**Baives**	**76.05**	**344**	*e*P		**P**	**09 39 26.2**	**-0.5**
	comp=Z,12nm,0.9s								
BZS	**Buzias**	**76.07**	**331**	⇓P		**P**	**09 39 26.5**	**-0.3**
BZS	**Buzias**	**76.07**	**331**	⇓*i*P		**P**	**09 39 26.5**	**-0.3**
RJOB	**Jochberg**	**76.49**	**337**	*e*P		**P**	**09 39 29.6**	**+0.3**
	comp=Z,6.0nm,0.9s								
BFO	**Black Forest**	**76.93**	**340**	*e*P		**P**	**09 39 31.6**	**-0.1**
	comp=Z,4.0nm,0.9s								
BFO	**Black Forest**	**76.93**	**340**	*e*P		**P**	**09 39 31.6**	**-0.1**
BFO					pmax	pmax			
	comp=Z,4.0nm,0.9s								
SOKA	**Soboth**	**76.93**	**336**	⇑*i*P		**P**	**09 39 32.0**	**+0.2**
	comp=Z,5.4nm,0.6s								
KBA	**Koelnbreinsper**	**76.98**	**337**	⇑*i*P		**P**	**09 39 33.1**	**+0.9**
	comp=Z,32nm,0.8s								
BR131	**Keskin Array S**	**77.04**	**320**	*e*P		**P**	**09 39 31.0**	**-1.6**
	comp=Z,1.1nm,0.5s								
BRTR	**Keskin Array B**	**77.04**	**320**	P		**P**	**09 39 31.9**	**-0.8**
BRTR	**Keskin Array B**	**77.04**	**320**	P		**P**	**09 39 31.9**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=48,slow=3.3,SNR=7.7								
CDF	**Champ du Feu**	**77.06**	**341**	*e*P		**P**	**09 39 32.0**	**-0.5**
	comp=Z,9.1nm,0.8s								
CDF	**Champ du Feu**	**77.06**	**341**	*e*P		**P**	**09 39 32.0**	**-0.5**
CDF					pmax	pmax			
	comp=Z,9.0nm,0.8s								
CDF	**Champ du Feu**	**77.06**	**341**	*e*P		**P**	**09 39 32.0**	**-0.5**
	comp=Z,9.1nm,0.8s								
PAGF	**Fort de Pagny**	**77.22**	**342**	*e*P		**P**	**09 39 33.3**	**0.0**
	comp=Z,5.8nm,0.7s								
PAGF	**Fort de Pagny**	**77.22**	**342**	*e*P		**P**	**09 39 33.3**	**0.0**
	comp=Z,5.8nm,0.7s								
MOTA	**Moosalm**	**77.26**	**338**	⇑*i*P		**P**	**09 39 33.7**	**0.0**
	comp=Z,6.6nm,0.8s								
MEZF	**Maizieres J'vi**	**77.40**	**343**	*e*P		**P**	**09 39 34.2**	**-0.1**
	comp=Z,13nm,0.7s								
MEZF	**Maizieres J'vi**	**77.40**	**343**	*e*P		**P**	**09 39 34.2**	**-0.1**
	comp=Z,13nm,0.7s								
ABTA	**Abfaltersbach**	**77.49**	**337**	⇑*i*P		**P**	**09 39 35.5**	**+0.5**
	comp=Z,9.2nm,0.7s								
HAU	**Haudompre**	**77.63**	**342**	*e*P		**P**	**09 39 35.0**	**-0.7**
HAU					*e*R				
	comp=Z,52nm,18.2s								
HAU	**Haudompre**	**77.63**	**342**	*e*P		**P**	**09 39 35.0**	**-0.7**
HAU	**Haudompre**	**77.63**	**342**	*e*P		**P**	**09 39 35.0**	**-0.7**
SFTF	**Sexfontaines**	**77.69**	**343**	*e*P		**P**	**09 39 35.6**	**-0.3**
	comp=Z,17nm,0.6s								
SFTF	**Sexfontaines**	**77.69**	**343**	*e*P		**P**	**09 39 35.6**	**-0.3**
	comp=Z,17nm,0.6s								
HINF	**Hinteralfeld**	**77.71**	**341**	*e*P		**P**	**09 39 35.2**	**-0.9**
	comp=Z,4.0nm,0.6s								
HINF	**Hinteralfeld**	**77.71**	**341**	*e*P		**P**	**09 39 35.2**	**-0.9**
HINF					pmax	pmax			
	comp=Z,4.0nm,0.6s								
HINF	**Hinteralfeld**	**77.71**	**341**	*e*P		**P**	**09 39 35.2**	**-0.9**
	comp=Z,4.0nm,0.6s								
VTS	**Vitosha**	**78.29**	**328**	⇓P		**P**	**09 39 39.2**	**-0.4**
VTS	**Vitosha**	**78.29**	**328**	⇓*i*P		**P**	**09 39 39.2**	**-0.4**
TUE	**Stuetta**	**78.47**	**339**	*e*P		**P**	**09 39 40.8**	**+0.2**
	comp=Z,7.9nm,0.7s								
GRR	**Gorron**	**78.48**	**347**	*e*P		**P**	**09 39 39.7**	**-0.6**
GRR	**Gorron**	**78.48**	**347**	*e*P		**P**	**09 39 39.7**	**-0.6**
GRR	**Gorron**	**78.48**	**347**	*e*P		**P**	**09 39 39.7**	**-0.6**
AS31	**Alice Springs**	**78.57**	**203**	*e*P		**P**	**09 39 42.2**	**+1.3**
ASAR	**Alice Springs**	**78.57**	**203**	P		**P**	**09 39 42.5**	**+1.5**
ASAR	**Alice Springs**	**78.57**	**203**	P		**P**	**09 39 42.5**	**+1.5**
	comp=Z,2.2nm,0.6s,baz=14,slow=5.2,SNR=53								
LOR	**Lormes**	**78.81**	**343**	*e*P		**P**	**09 39 41.6**	**-0.5**
	comp=Z,12nm,0.7s								
LOR				*e*R					
	comp=Z,54nm,17.8s								
LOR	**Lormes**	**78.81**	**343**	*e*P		**P**	**09 39 41.6**	**-0.5**
	comp=Z,12nm,0.7s								
SGMF	**Saint Gilles**	**78.85**	**348**	*e*P		**P**	**09 39 41.8**	**-0.5**
	comp=Z,9.3nm,0.7s								
SGMF	**Saint Gilles**	**78.85**	**348**	*e*P		**P**	**09 39 41.8**	**-0.5**
SGMF					pmax	pmax			
	comp=Z,9.0nm,0.7s								
SGMF	**Saint Gilles**	**78.85**	**348**	*e*P		**P**	**09 39 41.8**	**-0.5**
	comp=Z,9.3nm,0.7s								
CABF	**La Chapelle**	**79.02**	**341**	*e*P		**P**	**09 39 43.1**	**-0.3**
	comp=Z,16nm,1.1s								
CABF	**La Chapelle**	**79.02**	**341**	*e*P		**P**	**09 39 43.1**	**-0.3**
CABF					pmax	pmax			
	comp=Z,16nm,1.1s								
CABF	**La Chapelle**	**79.02**	**341**	*e*P		**P**	**09 39 43.1**	**-0.3**
	comp=Z,16nm,1.1s								
SSF	**Saint Saulge**	**79.07**	**343**	*e*P		**P**	**09 39 43.1**	**-0.5**
	comp=Z,4.7nm,0.5s								
SSF	**Saint Saulge**	**79.07**	**343**	*e*P		**P**	**09 39 43.1**	**-0.5**
SSF					pmax	pmax			
	comp=Z,5.0nm,0.5s								
SSF	**Saint Saulge**	**79.07**	**343**	*e*P		**P**	**09 39 43.1**	**-0.5**
	comp=Z,4.7nm,0.5s								
AVF	**Avril sur Loir**	**79.36**	**343**	*e*P		**P**	**09 39 44.8**	**-0.3**
	comp=Z,8.7nm,0.6s								
AVF	**Avril sur Loir**	**79.36**	**343**	*e*P		**P**	**09 39 44.8**	**-0.3**
AVF					pmax	pmax			
	comp=Z,9.0nm,0.6s								
AVF	**Avril sur Loir**	**79.36**	**343**	*e*P		**P**	**09 39 44.8**	**-0.3**
	comp=Z,8.7nm,0.6s								
SMF	**Signal de Mont**	**79.41**	**343**	*e*P		**P**	**09 39 45.0**	**-0.5**
	comp=Z,9.0nm,0.8s								
SMF	**Signal de Mont**	**79.41**	**343**	*e*P		**P**	**09 39 45.0**	**-0.5**
SMF					pmax	pmax			
	comp=Z,9.0nm,0.8s								
SMF	**Signal de Mont**	**79.41**	**343**	*e*P		**P**	**09 39 45.0**	**-0.5**
	comp=Z,9.0nm,0.8s								
BGF	**Bois d'Agland**	**79.67**	**344**	*e*P		**P**	**09 39 46.4**	**-0.5**
	comp=Z,5.8nm,0.5s								
BGF	**Bois d'Agland**	**79.67**	**344**	*e*P		**P**	**09 39 46.4**	**-0.5**
BGF					pmax	pmax			
	comp=Z,6.0nm,0.5s								
BGF

ATH 31 09:36:12.8, 35.77N×27.76E, h5km, MD2.9/4, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.54**	**34**	*e*PB	Pg	09 36 23.3	+0.2
KARP	**Karpathos**	**0.54**	**246**	*e*PB	Pg	09 36 23.1	-0.1
TURN	**Turunc**	**1.29**	**31**	*i* P	Pg	09 36 42.0	+4.3
TURN				*i* S	Sn	09 36 59.7	+4.4
NPS	**Neapolis**	**1.82**	**255**	*e*PN	Pb	09 36 46.5	-0.2
LAST	**Lasithi**	**1.96**	**253**	*e*PN	Pb	09 36 48.8	-0.2
DNZL	**Cakiroluk**	**2.18**	**28**	*i* P	Pg	09 37 00.9	+6.2
DNZL				*i* S	Sg	09 37 29.7	+6.6

*IDC **31** 09:56:42.0±2.8, 1.53N×97.15W, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.9/20, mbtmp3.8/6, MS3.5/9, Ms1 3.5/9, ms1mx3.4/24, Error ellipse: s-maj=128.1km s-min=22.2km az=50.0*

*ISCJB **31** 09:56:47.0±1.0, 2.4N±0.1×96.1W±0.1, h10km, mb4.2/24, MS3.5/8, Error ellipse: s-maj=25.0km s-min=10.5km az=40.5*

*NEIC **31** 09:56:48.2±1.0, 2.36N×95.99W, h10km, mb4.2/20, Error ellipse: s-maj=21.7km s-min=12.5km az=212.0*

ISC 31 09:56:47.6±1.0, 2.4N±0.1×96.1W±0.1, h10km, n85, σ1s82/80, mb4.1/24, MS3.5/8, 11C-19D, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**14.49**	**36**	*e*Pn	**Pn**	**10 00 11.2**	**-1.8**
OTAV	**Otavalo**	**17.73**	**97**	*e*P	**P**	**10 00 55.9**	**-0.3**
	9.6nm,1.3s						
TEIG	**Tepich**	**19.30**	**23**	*e*P	**P**	**10 01 10.4**	**-2.5**
	111nm,1.9s						
TEIG	**Tepich**	**19.30**	**23**	LR	LR	10 07 42.4	
	comp=Z,103nm,20.7s,baz=298,slow=32						
ATAH	**Atahualpa**	**20.00**	**118**	P	**Pn**	**10 01 25.2**	**+2.5**
ATAH	**Atahualpa**	**20.00**	**118**	P	**Pn**	**10 01 25.2**	**+2.5**
	6.8nm,0.9s,baz=320,slow=12,SNR=4.9						
ATAH				LR	LR	10 07 43.1	
	comp=Z,61nm,19.9s,baz=92,slow=32						
ROSC	**El Rosal**	**21.82**	**83**	LR	LR	10 08 46.7	
	comp=Z,81nm,18.9s,baz=20,slow=32						
HKT	**Hockley**	**27.42**	**0**	*e*P	**P**	**10 02 35.6**	**+2.0**
	4.0nm,1.3s						
TXAR	**Lajitas Array**	**27.77**	**346**	P	**P**	**10 02 38.0**	**+1.1**
TXAR	**Lajitas Array**	**27.77**	**346**	P	**P**	**10 02 38.0**	**+1.1**
	0.7nm,0.8s,baz=160,slow=12,SNR=5.7						
TXAR				LR	LR	10 12 39.0	
	comp=Z,94nm,18.1s,baz=5.0,slow=34						
531A	**Rocksprings**	**27.96**	**352**	P	**P**	**10 02 40.2**	**+1.6**
	baz=28,SNR=9.1						
526A	**Mary Lane Ranc**	**28.57**	**345**	P	**P**	**10 02 46.0**	**+1.9**
	baz=29,SNR=6.9						
332A	**Millersview**	**29.06**	**354**	⇑P	**P**	**10 02 50.8**	**+2.5**
	baz=29						
331A	**San Angelo**	**29.07**	**352**	⇑P	**P**	**10 02 51.1**	**+2.7**
	baz=29						
427A	**Hayter Ranch,**	**29.16**	**347**	⇓P	**P**	**10 02 51.7**	**+2.4**
	baz=29						
Z32A	**Haskell**	**30.93**	**354**	⇑P	**P**	**10 03 07.3**	**+2.4**
	baz=31						
Z30A	**Sanderson Ranc**	**31.11**	**352**	⇓P	**P**	**10 03 09.4**	**+2.9**
	baz=31						
320A	**Kipp Ranch, An**	**31.12**	**339**	⇓P	**P**	**10 03 09.1**	**+2.4**
	baz=31						
125A	**Gardner Draw,**	**31.19**	**346**	P	**P**	**10 03 08.8**	**+1.6**
	baz=31,SNR=5.1						
124A	**Stringfield Ra**	**31.43**	**345**	⇑P	**P**	**10 03 11.2**	**+1.7**
	baz=32						
319A	**Douglas**	**31.43**	**338**	⇓P	**P**	**10 03 11.5**	**+2.1**
	baz=32						
Z26A	**Caprock**	**31.62**	**347**	P	**P**	**10 03 12.1**	**+1.1**
	baz=32,SNR=7.2						
Z25A	**Roswell**	**31.80**	**346**	⇓P	**P**	**10 03 15.1**	**+2.5**
	baz=32						
Y27A	**Causey**	**32.04**	**349**	⇓P	**P**	**10 03 17.3**	**+2.5**
	baz=32						
Y26A	**Elida**	**32.21**	**348**	⇑P	**P**	**10 03 18.7**	**+2.4**
	baz=32						
WMOK	**Wichita Mounta**	**32.30**	**356**	*e*P	**P**	**10 03 17.8**	**+1.0**
	1.9nm,1.0s						
Y25A	**Mesa, Roswell**	**32.40**	**347**	P	**P**	**10 03 19.2**	**+1.2**
	baz=33,SNR=5.7						
Z20A	**Nine Sixteen R**	**32.76**	**340**	⇓P	**P**	**10 03 22.5**	**+1.4**
	baz=33						
TUC	**Tucson**	**32.84**	**337**	*e*P	**P**	**10 03 23.7**	**+2.0**
	2.9nm,1.2s						
BNM	**Barren Site**	**33.12**	**344**	*e*P	**P**	**10 03 25.6**	**+1.4**
	5.6nm,1.2s						
LPAZ	**La Paz**	**33.25**	**125**	*e*P	**P**	**10 03 25.8**	**-0.3**
	2.9nm,1.3s						
LPAZ	**La Paz**	**33.25**	**125**	P	**P**	**10 03 24.6**	**-1.5**
	2.5nm,1.2s,baz=322,slow=6.1,SNR=4.1						
LPAZ				LR	LR	10 15 53.0	
	comp=Z,50nm,18.4s,baz=233,slow=34						
Y21A	**Point of Rocks**	**33.29**	**342**	⇓P	**P**	**10 03 28.2**	**+2.4**
	baz=34						
W26A	**Owens Ranch, T**	**33.33**	**348**	⇓P	**P**	**10 03 27.6**	**+1.6**
	baz=34						
Y20A	**Horse Springs,**	**33.41**	**341**	P	**P**	**10 03 28.4**	**+1.4**
	baz=34,SNR=5.6						
W25A	**X Bar L Ranch,**	**33.59**	**348**	P	**P**	**10 03 29.3**	**+0.9**
	baz=34,SNR=6.1						
X21A	**Alamocita Cree**	**33.73**	**342**	⇓P	**P**	**10 03 31.5**	**+1.8**
	baz=34,SNR=7.8						
W24A	**Lazy 6 Ranch,**	**33.80**	**346**	⇑P	**P**	**10 03 32.1**	**+1.8**
	baz=34						
ANMO	**Albuquerque**	**33.82**	**345**	*e*P	**P**	**10 03 31.3**	**+0.9**
	3.7nm,1.3s						
WVT	**Waverly**	**34.44**	**12**	*e*P	**P**	**10 03 36.2**	**+0.8**
	13nm,1.4s						
W20A	**Ramah**	**34.58**	**342**	⇑P	**P**	**10 03 39.7**	**+2.8**
	baz=35						
CPCT	**Cooper Cave**	**34.60**	**17**	*e*P	**P**	**10 03 39.0**	**+2.0**
V22A	**San Miguel Ran**	**34.85**	**344**	⇑P	**P**	**10 03 41.1**	**+1.7**
	baz=35						
TKL	**Tuckaleechee C**	**35.02**	**18**	*e*P	**P**	**10 03 42.9**	**+2.4**
U22A	**Llaves**	**35.27**	**345**	⇓P	**P**	**10 03 44.9**	**+1.9**
	baz=36						
T26A	**Comanche Natio**	**35.32**	**350**	⇓P	**P**	**10 03 45.8**	**+2.5**
	baz=36						
T25A	**Trinidad**	**35.44**	**348**	⇓P	**P**	**10 03 46.4**	**+2.0**
	baz=36						
U21A	**Nageezi**	**35.54**	**344**	⇓P	**P**	**10 03 46.9**	**+1.6**
	baz=36						
T23A	**Casias Ranch,**	**35.70**	**346**	P	**P**	**10 03 48.5**	**+1.8**
	baz=36,SNR=6.2						
S26A	**Kim**	**35.73**	**350**	⇑P	**P**	**10 03 49.4**	**+2.6**
	baz=36						
T22A	**Edith**	**35.89**	**345**	⇓P	**P**	**10 03 50.5**	**+2.2**
	baz=36						
TZTN	**Tazewell**	**35.91**	**17**	*e*P	**P**	**10 03 50.4**	**+2.3**
	7.6nm,1.3s						
S24A	**Houchin Ranch,**	**36.09**	**348**	⇓P	**P**	**10 03 52.1**	**+2.1**
	baz=36						
SDCO	**Great Sand Dun**	**36.25**	**347**	*e*P	**P**	**10 03 52.5**	**+1.1**
	6.3nm,1.6s						
R26A	**Arlington**	**36.39**	**350**	⇑P	**P**	**10 03 55.1**	**+2.7**
	baz=37						
R25A	**Fountain Ranch**	**36.39**	**349**	⇓P	**P**	**10 03 55.3**	**+2.9**
	baz=37						
R21A	**Cimarron**	**37.33**	**345**	⇓P	**P**	**10 04 02.6**	**+2.0**
	baz=38						
PV01	**Paradox Valley**	**37.39**	**344**	*e*P	**P**	**10 04 01.9**	**+0.9**
	132nm,0.5s						
P27A	**Ficken Ranch,**	**37.48**	**352**	⇑P	**P**	**10 04 03.4**	**+1.7**
	baz=38						
PV04	**Paradox Valley**	**37.73**	**343**	*e*P	**P**	**10 04 04.8**	**+0.9**
ISCO	**Idaho Springs**	**38.25**	**348**	*e*P	**P**	**10 04 10.1**	**+1.7**
	2.6nm,1.1s						
ARUT	**Antelope Range**	**38.69**	**338**	*e*P	**P**	**10 04 13.0**	**+1.0**
	7.7nm,1.4s						
MVU	**Marysvale**	**38.87**	**340**	*e*P	**P**	**10 04 14.0**	**+0.4**
	6.5nm,1.6s						
ECSD	**EROS Data Cent**	**41.18**	**359**	*e*P	**P**	**10 04 33.0**	**+0.6**
	9.1nm,1.1s						
NVAR	**Mina Array Bea**	**41.25**	**333**	P	**P**	**10 04 34.2**	**+0.9**
NVAR	**Mina Array Bea**	**41.25**	**333**	P	**P**	**10 04 34.2**	**+0.9**
	1.1nm,1.1s,baz=152,slow=6.0,SNR=5.9						
HWUT	**Hardware Ranch**	**41.47**	**342**	*e*P	**P**	**10 04 35.0**	**0.0**
	10nm,1.5s						
J22A	**Midwest**	**41.90**	**349**	P	**P**	**10 04 40.0**	**+1.5**
	baz=42,SNR=5.8						
PDAR	**Pinedale Array**	**41.98**	**345**	P	**P**	**10 04 39.9**	**+0.6**
	1.1nm,0.9s,baz=134,slow=6.4,SNR=8.2						
PDAR				LR	LR	10 21 40.7	
	comp=Z,163nm,19.1s,baz=146,slow=35						
HLID	**Hailey**	**44.14**	**341**	*e*P	**P**	**10 04 58.7**	**+2.1**
	45nm,2.6s						
MCMT	**McKenzie Canyo**	**44.80**	**343**	*e*P	**P**	**10 05 03.1**	**+1.1**
	2.4nm,1.5s						
GCMT	**Greycliff**	**44.85**	**346**	*e*P	**P**	**10 05 03.0**	**+0.7**
	5.3nm,1.3s						
E19A	**Rath Farm, Rou**	**45.29**	**348**	⇓P	**P**	**10 05 06.5**	**+0.8**
	baz=46,SNR=6.7						
AGMN	**Agassiz Nation**	**45.74**	**0**	*e*P	**P**	**10 05 09.2**	**+0.1**
	17nm,1.3s						
CPUP	**Villa Florida**	**47.05**	**130**	LR	LR	10 22 41.6	
	comp=Z,53nm,19.4s,baz=105,slow=33						
PLCA	**Paso Flores**	**48.81**	**154**	LR	LR	10 21 25.1	
	comp=Z,124nm,19.1s,baz=359,slow=30						
BDFB	**Brasilia**	**50.76**	**112**	LR	LR	10 25 50.5	
	comp=Z,55nm,19.2s,baz=13,slow=34						
YKA	**Yellowknife Ar**	**61.55**	**350**	P	**P**	**10 07 04.1**	**-0.6**
YKA	**Yellowknife Ar**	**61.55**	**350**	P	**P**	**10 07 04.1**	**-0.6**
	0.4nm,0.9s,baz=156,slow=6.7,SNR=7.4						
ILAR	**Eielson Array**	**72.08**	**340**	P	**P**	**10 08 10.8**	**-1.1**
ILAR	**Eielson Array**	**72.08**	**340**	P	**P**	**10 08 10.8**	**-1.1**
	1.1nm,0.8s,baz=151,slow=5.1,SNR=17						
CHGN	**Chignik**	**72.99**	**329**	*e*P	**P**	**10 08 15.6**	**-1.7**
KURK	**Kurchatov**	**126.92**	**4**	PKP	**PKPdf**	**10 15 49.6**	**-2.4**
KURBB	**Kurchatov Arra**	**127.00**	**4**	PKP	**PKPdf**	**10 15 49.6**	**-2.5**
	0.2nm,0.3s,baz=340,slow=3.9,SNR=3.6						

IDC 31 10:03:36.9±2.6, 7.32S×128.30E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.3/19, mbtmp3.4/3, ML3.5/2, Error ellipse: s-maj=294.6km s-min=31.8km az=65.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.84**	**156**	Pn	Pn	10 06 53.7	-0.9
	0.3nm,0.3s,baz=333,slow=13,SNR=22						
WRA				Sn	Sn	10 09 15.1	-14
	0.3nm,0.3s,baz=330,slow=23,SNR=7.6						
ASAR	**Alice Springs**	**17.12**	**162**	P	Pn	10 07 38.5	+0.7
	0.1nm,0.3s,baz=339,slow=10,SNR=13						
MKAR	**Makanchi Array**	**67.58**	**328**	P	P	10 14 35.4	0.0
	0.3nm,0.5s,baz=122,slow=7.8,SNR=5.6						

*IDC **31** 10:58:27.7±0.9, 42.74S×72.52W, h0km, mb3.9/7, mb1 4.2/8, mb1mx4.0/20, mbtmp3.9/8, ML3.8/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/22, Error ellipse: s-maj=33.5km s-min=13.5km az=115.0*

*GUC **31** 10:58:27.1±0.7, 42.85S×72.62W, h4km±8km, ML3.3*

*NEIC **31** 10:58:29.2±0.6, 42.78S×72.56W, h10km, mb4.4/5, Error ellipse: s-maj=19.7km s-min=12.7km az=108.0*

ISC 31 10:58:28.2±1.5, 42.76S±0.03×72.51W±0.07, h4km±9km, n32, σ1s20/37, mb4.1/10, MS3.5/3, 2C-1D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUTA	**Futaleufœ**	**0.64**	**132**	⇑*i*P	**Pg**	**10 58 39.4**	**-1.2**
FUTA				*i* S	**Sg**	**10 58 49.0**	**0.0**
CNTO	**Contao**	**0.97**	**351**	⇑*i*P	**Pg**	**10 58 46.2**	**-0.6**
CNTO				*i* S	**Sb**	**10 59 00.9**	**+0.2**
PUEL	**Puelo Alto**	**1.11**	**8**	⇓*i*P	**Pb**	**10 58 49.2**	**-0.7**
PUEL				*e*S	**Sn**	**10 59 06.6**	**+0.5**
PMCH	**Puerto Montt**	**1.30**	**347**	*e*P	**Pn**	**10 58 52.7**	**-0.4**
PMCH				*i* S	**Sg**	**10 59 11.2**	**+1.2**
PLCA	**Paso Flores**	**2.50**	**37**	*e*Pn	**Pn**	**10 59 11.4**	**+1.7**
PLCA				Pg	**Pb**	**10 59 14.2**	**+0.5**
PLCA				Lg	Lg	10 59 48.0	
PLCA				*e*S	**Sg**	**10 59 48.5**	**0.0**
PLCA	**Paso Flores**	**2.50**	**37**	Pn	**Pn**	**10 59 11.6**	**+1.9**
	5.1nm,0.3s,baz=218,slow=16,SNR=87						
PLCA				Pg	**Pb**	**10 59 14.2**	**+0.5**
	9.2nm,0.3s,baz=223,slow=17,SNR=174						
PLCA				Lg	Lg	10 59 48.0	
	33nm,0.3s,baz=100,slow=21,SNR=22						
PLCA				LR	LR	11 00 23.1	
	comp=Z,326nm,21.3s,baz=166,slow=46						
COYC	**Coyhaique**	**2.83**	**174**	*e*P	**Pn**	**10 59 16.2**	**+2.0**
COYC				*e*S	**Sb**	**10 59 53.0**	**-1.2**
COYC				AML	AML	10 59 56.5	
	comp=E,129nm,0.8s						
TRQA	**Tornquist**	**9.30**	**63**	*e*Pn	**Pn**	**11 00 45.3**	**+2.2**
LVC	**Limon Verde**	**20.32**	**10**	*e*P	**P**	**11 03 06.6**	**+1.1**
	comp=E,5.5nm,0.9s						
CPUP	**Villa Florida**	**20.56**	**42**	LR	LR	11 12 02.0	
	comp=E,71nm,18.1s,baz=24,slow=40						
PMSA	**Palmer Station**	**22.57**	**171**	LR	LR	11 11 24.1	
	comp=E,154nm,19.2s,baz=155,slow=34						
SIV	**San Ignacio**	**28.42**	**24**	P	**P**	**11 04 22.3**	**-1.7**
SIV	**San Ignacio**	**28.42**	**24**	P	**P**	**11 04 22.3**	**-1.7**
	comp=E,0.8nm,0.7s,baz=204,slow=10.0,SNR=4.4						
BDFB	**Brasilia**	**34.21**	**45**	LR	LR	11 20 29.1	
	comp=E,128nm,20.7s,baz=177,slow=39						
SNAA	**Sanae**	**43.72**	**155**	P	**P**	**11 06 33.2**	**-0.9**
SNAA	**Sanae**	**43.72**	**155**	P	**P**	**11 06 33.2**	**-0.9**
	comp=E,2.3nm,1.2s,baz=279,slow=6.1,SNR=4.5						
QSPA	**South Pole Qui**	**47.49**	**180**	*e*P	**P**	**11 07 03.9**	**-0.2**
	comp=E,6.1nm,1.1s						
QSPA	**South Pole Qui**	**47.49**	**180**	P	**P**	**11 07 04.5**	**+0.5**
	comp=E,5.1nm,1.1s,baz=141,slow=5.8,SNR=5.9						
VNDA	**Vanda**	**55.46**	**192**	P	**P**	**11 08 05.5**	**+2.1**
VNDA	**Vanda**	**55.46**	**192**	P	**P**	**11 08 05.5**	**+2.1**
	comp=E,2.2nm,1.2s,baz=148,slow=9.6,SNR=3.1						
LRAL	**Lakeview Retre**	**76.59**	**348**	*e*P	**P**	**11 10 19.7**	**+0.2**
	comp=E,4.0nm,1.0s						
TXAR	**Lajitas Array**	**77.26**	**332**	P	**P**	**11 10 24.0**	**+0.5**
TXAR	**Lajitas Array**	**77.26**	**332**	P	**P**	**11 10 24.0**	**+0.5**
	comp=E,0.7nm,0.9s,baz=129,slow=5.0,SNR=6.2						
ANMO	**Albuquerque**	**83.33**	**332**	*e*P	**P**	**11 10 57.3**	**+1.0**
	comp=E,3.8nm,1.4s						
TORD	**Torodi Ar. Bea**	**87.57**	**70**	P	**P**	**11 11 16.5**	**-1.1**
TORD	**Torodi Ar. Bea**	**87.57**	**70**	P	**P**	**11 11 16.5**	**-1.1**
	comp=E,0.6nm,1.0s,baz=244,slow=5.4,SNR=3.7						
ECSD	**EROS Data Cent**	**88.78**	**343**	*e*P	**P**	**11 11 22.1**	**-0.7**
	comp=E,2.6nm,1.0s						
PDAR	**Pinedale Array**	**91.42**	**334**	P	**P**	**11 11 34.5**	**-0.9**
PDAR	**Pinedale Array**	**91.42**	**334**	P	**P**	**11 11 34.5**	**-0.9**
	comp=E,0.4nm,0.4s,baz=144,slow=5.1,SNR=4.7						
ABKAR	**Akbulak array**	**146.80**	**62**	*e*PKPdf	**PKPdf**	**11 18 09.2**	**+0.1**
MKAR	**Makanchi Array**	**161.69**	**69**	PKPab	**PKPab**	**11 19 14.2**	**-1.1**
MKAR	**Makanchi Array**	**161.69**	**69**	PKPab	**PKPab**	**11 19 14.2**	**-1.1**
	comp=E,0.4nm,0.7s,baz=256,slow=5.8,SNR=4.8						

IDC 31 11:05:44.2±2.2, 6.62S×129.36E, h0km, mb3.4/1, mb1 3.9/5, mb1mx3.6/21, mbtmp3.8/5, ML3.8/4, Error ellipse: s-maj=59.3km s-min=27.6km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**9.69**	**279**	Pn	Pn	11 08 05.5	+0.5
	3.8nm,0.3s,baz=94,slow=8.5,SNR=12						
FITZ	**Fitzroy Crossi**	**11.98**	**197**	Pn	Pn	11 08 36.1	-0.1
	0.5nm,0.3s,baz=20,slow=12,SNR=20						
FITZ				Sn	Sn	11 10 44.1	-6.6
	0.4nm,0.3s,baz=84,slow=23,SNR=4.8						
WRA	**Warramunga Arr**	**14.10**	**160**	Pn	Pn	11 09 04.8	-0.6
	0.3nm,0.3s,baz=335,slow=14,SNR=25						
WRA				Sn	Sn	11 11 35.7	-7.0
	0.4nm,0.3s,baz=334,slow=22,SNR=5.4						
ASAR	**Alice Springs**	**17.50**	**166**	P	Pn	11 09 50.4	+0.5
	0.2nm,0.3s,baz=337,slow=9.4,SNR=30						
ASAR				S	Sn	11 13 02.5	-3.1
	0.1nm,0.3s,baz=353,slow=26,SNR=4.9						
MKAR	**Makanchi Array**	**67.56**	**327**	P	P	11 16 42.4	-0.1
	0.2nm,0.5s,baz=125,slow=7.2,SNR=4.0						

*DDA **31** 11:18:56.0, 38.34N×27.30E, h15km, MD2.8*

*ISCJB **31** 11:18:56.3±0.5, 38.35N±0.03×27.30E±0.04, h7km±5km, Error ellipse: s-maj=5.3km s-min=4.2km az=175.0*

*ISK **31** 11:18:56.0, 38.39N×27.26E, h8km, MD2.8*

*CSEM **31** 11:18:56.3±0.1, 38.36N×27.27E, h8km, MD2.8, Error ellipse: s-maj=2.3km s-min=2.2km az=98.0*

ISC 31 11:18:56.2±0.8, 38.36N±0.02×27.26E±0.02, h10km±6km, n35, σ0s65/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IZM	**Izmir**	**0.04**	**0**	PG	**Pg**	**11 18 57.8**	**-0.4**
IZM	**Izmir**	**0.04**	**0**	*i* Pg	**Pg**	**11 18 57.8**	**-0.4**
BLCB	**Balcova**	**0.17**	**278**	*e*PG	**Pg**	**11 18 59.8**	**-0.1**
BLCB				*e*SG	**Sg**	**11 19 03.3**	**+0.8**
BLCB	**Balcova**	**0.17**	**278**	*e*Pg	**Pg**	**11 18 59.8**	**-0.1**
BLCB				*e*Sg	**Sg**	**11 19 03.3**	**+0.8**
URLA	**Izmir**	**0.52**	**270**	*i* P	**Pg**	**11 19 06.2**	**-0.2**
URLA				*i* S	**Sn**	**11 19 17.5**	**-1.3**
URLA	**Izmir**	**0.52**	**270**	*i* P	**Pg**	**11 19 06.2**	**-0.2**
URLA				*i* S	**Sn**	**11 19 17.5**	**-1.3**
GCAM	**G?zelcaml?**	**0.66**	**182**	*i* P	**Pg**	**11 19 08.9**	**-0.1**
GCAM				*i* S	**Sb**	**11 19 18.3**	**-0.8**
GCAM	**G?zelcaml?**	**0.66**	**182**	*i* P	**Pg**	**11 19 08.9**	**-0.1**
GCAM				*i* S	**Sb**	**11 19 18.3**	**-0.8**
AKHS	**Akhisar**	**0.67**	**40**	*i* P	**Pg**	**11 19 09.4**	**+0.1**
AKHS				*i* S	**Sb**	**11 19 19.9**	**+0.5**
AKHS	**Akhisar**	**0.67**	**40**	*i* P	**Pg**	**11 19 09.4**	**+0.1**
AKHS				*i* S	**Sb**	**11 19 19.9**	**+0.5**
AYDN	**Tasoluk**	**0.85**	**145**	*i* P	**Pg**	**11 19 12.6**	**-0.1**
AYDN				*i* S	**Sg**	**11 19 23.6**	**-0.1**
AYDN	**Tasoluk**	**0.85**	**145**	*i* P	**Pg**	**11 19 12.6**	**-0.1**
AYDN				*i* S	**Sg**	**11 19 23.6**	**-0.1**
MANT	**Manisa**	**1.02**	**82**	*i* P	**Pg**	**11 19 15.6**	**-0.3**
MANT				*i* S	**Sg**	**11 19 28.5**	**-0.8**
MANT	**Manisa**	**1.02**	**82**	*i* P	**Pg**	**11 19 15.6**	**-0.3**
MANT				*i* S	**Sg**	**11 19 28.5**	**-0.8**
AYVA	**Ayvalik**	**1.04**	**335**	*i* P	**Pb**	**11 19 16.6**	**+0.2**
AYVA				*i* S	**Sb**	**11 19 30.7**	**+0.5**
AYVA	**Ayvalik**	**1.04**	**335**	*i* P	**Pb**	**11 19 16.6**	**+0.2**
AYVA				*i* S	**Sb**	**11 19 30.7**	**+0.5**
KULA	**Kula-Manisa**	**1.11**	**82**	*e*PN	**Pn**	**11 19 17.7**	**-0.2**
KULA				*e*SN	**Sn**	**11 19 33.4**	**+0.1**
KULA	**Kula-Manisa**	**1.11**	**82**	*e*Pn	**Pn**	**11 19 17.7**	**-0.2**
KULA				*e*Sn	**Sn**	**11 19 33.4**	**+0.1**
MLSB	**Milas**	**1.14**	**159**	*e*PN	**Pn**	**11 19 18.7**	**+0.4**
MLSB	**Milas**	**1.14**	**159**	*e*Pn	**Pn**	**11 19 18.7**	**+0.4**
BODT	**Bodrum**	**1.30**	**178**	*e*PN	**Pg**	**11 19 21.3**	**+0.2**
BODT	**Bodrum**	**1.30**	**178**	*e*Pn	**Pg**	**11 19 21.3**	**+0.2**
DEMI	**Demirci**	**1.32**	**59**	*i* P	**Pg**	**11 19 21.5**	**-0.2**
DEMI				*i* S	**Sb**	**11 19 36.9**	**-1.4**
DEMI	**Demirci**	**1.32**	**59**	*i* P	**Pg**	**11 19 21.5**	**-0.2**
DEMI				*i* S	**Sb**	**11 19 36.9**	**-1.4**
BALB	**Balikesir**	**1.36**	**20**	*e*PN	**Pb**	**11 19 21.7**	**-0.1**
BALB	**Balikesir**	**1.36**	**20**	*e*Pn	**Pb**	**11 19 21.7**	**-0.1**
BALY	**Balya**	**1.40**	**11**	*i* P	**Pn**	**11 19 22.0**	**+0.1**
BALY				*i* S	**Sg**	**11 19 41.9**	**+0.5**
BALY	**Balya**	**1.40**	**11**	*i* P	**Pn**	**11 19 22.0**	**+0.1**
BALY				*i* S	**Sg**	**11 19 41.9**	**+0.5**
DNZL	**Cakiroluk**	**1.56**	**115**	*i* P	**Pn**	**11 19 24.6**	**+0.4**
DNZL				*i* S	**Sg**	**11 19 48.3**	**+1.9**
DNZL	**Cakiroluk**	**1.56**	**115**	*i* P	**Pn**	**11 19 24.6**	**+0.4**
DNZL				*i* S	**Sg**	**11 19 48.3**	**+1.9**
DST	**Dursunbey**	**1.63**	**40**	*e*PN	**Pn**	**11 19 24.8**	**-0.2**
DST	**Dursunbey**	**1.63**	**40**	*e*Pn	**Pn**	**11 19 24.8**	**-0.2**
KHAL	**Karahalli**	**1.75**	**89**	*i* P	Pn	11 19 18.2	-8.6
KHAL				*i* S	**Sn**	**11 19 49.7**	**+0.5**
TVSB	**Tavsanli**	**2.03**	**57**	*e*PN	**Pn**	**11 19 31.1**	**+0.5**
TVSB	**Tavsanli**	**2.03**	**57**	*e*Pn	**Pn**	**11 19 31.1**	**+0.5**

IDC 31 11:42:53.5±5.0, 13.19N×142.76E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/27, mbtmp3.8/5, Error ellipse: s-maj=211.2km s-min=21.8km az=80.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**33.95**	**194**	P	P	11 49 38.3	-0.5
	2.4nm,0.6s,baz=16,slow=9.4,SNR=34						
ASAR	**Alice Springs**	**37.64**	**193**	P	P	11 50 10.8	+0.3
	0.7nm,0.5s,baz=19,slow=13,SNR=17						
MKAR	**Makanchi Array**	**60.36**	**317**	P	P	11 53 05.8	+1.2
	0.2nm,0.5s,baz=102,slow=7.7,SNR=3.5						
KURBB	**Kurchatov Arra**	**63.61**	**320**	P	P	11 53 25.2	-1.1
	0.3nm,0.4s,baz=102,slow=6.7,SNR=3.5						
BVAR	**Borovoye Array**	**68.97**	**322**	P	P	11 54 00.9	+0.2
	0.9nm,0.5s,baz=99,slow=6.6,SNR=4.7						

CSEM 31 11:44:30.6, 35.09N×54.83E, h15km, ML3.3, After THR, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TABS	**Tabas**	**2.38**	**127**

az=0.3
*ATH **31** 12:51:10.5, 37°.83N×22°.12E, h20km±1km, MD3.2/34, ML3.5*
*CSEM **31** 12:51:10.8±0.1, 37°.80N×22°.14E, h2km, ML3.4/11, Error ellipse: s-maj=3.2km s-min=2.7km az=64.0*
*THE **31** 12:51:11.0, 37°.81N×22°.15E, h0km±1km, ML3.4/11, Error ellipse: s-maj=1.9km s-min=0.6km az=237.0*

ISC 31 12:51:11.2±1.0, 37.81N±0.01×22.15E±0.01, h5km±7km, n145, σ0ᵗ97/209, mb3.6/6, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUR	**Goura**	**0.20**	**50**	P		**Pg**	**12 51 15.3**	**0.0**
GUR				S		**Sg**	**12 51 18.2**	**+0.2**
GUR	**Goura**	**0.20**	**50**	*e*PB		**Pg**	**12 51 15.2**	**0.0**
GUR				*e*SB		**Sg**	**12 51 19.0**	**+1.0**
GUR	**Goura**	**0.20**	**50**	P		**Pg**	**12 51 15.3**	**0.0**
GUR				S		**Sg**	**12 51 18.2**	**+0.2**
KLV	**Kalavryta, Ach**	**0.24**	**1**	*e*PB		**Pg**	**12 51 15.7**	**-0.2**
KLV				*e*SB		**Sg**	**12 51 19.0**	**-0.1**
AMT	**Artemida-Makis**	**0.44**	**232**	*e*PB		**Pg**	**12 51 19.3**	**-0.4**
AMT				*e*SB		**Sb**	**12 51 26.6**	**-1.8**
LAKA	**Lakka**	**0.45**	**343**	P		**Pg**	**12 51 19.4**	**-0.6**
LAKA				S		**Sg**	**12 51 25.2**	**-0.8**
LAKA	**Lakka**	**0.45**	**343**	*e*PB		**Pg**	**12 51 19.4**	**-0.6**
LAKA				*e*SB		**Sg**	**12 51 26.2**	**+0.2**
LAKA	**Lakka**	**0.45**	**343**	P		**Pg**	**12 51 19.4**	**-0.6**
LAKA				S		**Sg**	**12 51 25.2**	**-0.8**
THAL	**Thalero**	**0.47**	**60**	P		**Pg**	**12 51 20.2**	**-0.1**
THAL				S		**Sg**	**12 51 27.1**	**+0.6**
THAL	**Thalero**	**0.47**	**60**	P		**Pg**	**12 51 20.2**	**-0.1**
THAL				S		**Sg**	**12 51 27.1**	**+0.6**
VLX	**Vlachokerasia**	**0.47**	**157**	P		**Pg**	**12 51 20.2**	**-0.1**
VLX				S		**Sb**	**12 51 27.6**	**-1.7**
VLX	**Vlachokerasia**	**0.47**	**157**	*e*PN		**Pg**	**12 51 20.2**	**-0.1**
VLX				*e*SN		**Sb**	**12 51 28.2**	**-1.1**
VLX	**Vlachokerasia**	**0.47**	**157**	P		**Pg**	**12 51 20.2**	**-0.1**
VLX				S		**Sb**	**12 51 27.6**	**-1.7**
KALE	**Kalithea**	**0.58**	**360**	P		**Pg**	**12 51 21.7**	**-0.8**
KALE	**Kalithea**	**0.58**	**360**	*e*PN		**Pg**	**12 51 21.5**	**-1.0**
KALE				*e*SN		**Sg**	**12 51 30.2**	**0.0**
KALE	**Kalithea**	**0.58**	**360**	P		**Pg**	**12 51 21.7**	**-0.8**
RLS	**Riolos of Patr**	**0.59**	**295**	P		**Pg**	**12 51 21.4**	**-1.2**
RLS				S		**Sg**	**12 51 30.5**	**+0.1**
RLS	**Riolos of Patr**	**0.59**	**295**	*e*PN		**Pg**	**12 51 21.3**	**-1.3**
RLS				*e*SN		**Sg**	**12 51 30.5**	**+0.1**
RLS	**Riolos of Patr**	**0.59**	**295**	P		**Pg**	**12 51 21.4**	**-1.2**
RLS				S		**Sg**	**12 51 30.5**	**+0.1**
ITM	**Ithomi**	**0.65**	**196**	P		**Pg**	**12 51 23.2**	**-0.5**
ITM				S		**Sb**	**12 51 33.5**	**-0.8**
ITM	**Ithomi**	**0.65**	**196**	*e*PN		**Pg**	**12 51 23.5**	**-0.2**
ITM				*e*SN		**Sb**	**12 51 33.3**	**-1.0**
ITM	**Ithomi**	**0.65**	**196**	P		**Pg**	**12 51 23.2**	**-0.5**
ITM				S		**Sb**	**12 51 33.5**	**-0.8**
EFP	**Efpalio**	**0.65**	**343**	P		**Pg**	**12 51 23.1**	**-0.6**
EFP				S		**Sb**	**12 51 33.9**	**-0.5**
EFP	**Efpalio**	**0.65**	**343**	*e*PN		**Pg**	**12 51 23.1**	**-0.6**
EFP				*e*SN		**Sg**	**12 51 31.7**	**-0.5**
EFP	**Efpalio**	**0.65**	**343**	P		**Pg**	**12 51 23.1**	**-0.6**
EFP				S		**Sb**	**12 51 33.9**	**-0.5**
DSF	**Desfina**	**0.68**	**26**	P		**Pg**	**12 51 23.2**	**-1.0**
DSF				S		**Sb**	**12 51 34.2**	**-1.0**
DSF	**Desfina**	**0.68**	**26**	P		**Pg**	**12 51 23.2**	**-1.0**
DSF				S		**Sb**	**12 51 34.2**	**-1.0**
LTK	**Loutraki**	**0.69**	**71**	P		**Pg**	**12 51 24.0**	**-0.4**
LTK				S		**Sb**	**12 51 34.2**	**-1.2**
LTK	**Loutraki**	**0.69**	**71**	*e*PN		**Pg**	**12 51 24.1**	**-0.4**
LTK				*e*SN		**Sb**	**12 51 34.4**	**-1.0**
LTK	**Loutraki**	**0.69**	**71**	P		**Pg**	**12 51 24.0**	**-0.4**
LTK				S		**Sb**	**12 51 34.2**	**-1.2**
DIDY	**Didyma**	**0.91**	**111**	P		**Pg**	**12 51 28.0**	**-0.7**
DIDY				S		**Sb**	**12 51 42.2**	**+0.3**
DIDY	**Didyma**	**0.91**	**111**	P		**Pg**	**12 51 28.0**	**-0.7**
DIDY				S		**Sb**	**12 51 42.2**	**+0.3**
DID	**Didima**	**0.92**	**109**	P		**Pg**	**12 51 28.0**	**-0.8**
DID				S		**Sb**	**12 51 41.7**	**-0.4**
DID	**Didima**	**0.92**	**109**	*e*PN		**Pg**	**12 51 28.1**	**-0.8**
DID				*e*SN		**Sb**	**12 51 41.7**	**-0.4**
DID	**Didima**	**0.92**	**109**	P		**Pg**	**12 51 28.0**	**-0.8**
DID				S		**Sb**	**12 51 41.7**	**-0.4**
PYL	**PYLOS**	**0.96**	**200**	P		**Pg**	**12 51 28.4**	**-1.3**
PYL				S		**Sb**	**12 51 43.4**	**0.0**
PYL	**PYLOS**	**0.96**	**200**	*e*PB		**Pg**	**12 51 28.4**	**-1.3**
PYL				*e*SN		**Sb**	**12 51 43.8**	**+0.4**
PYL	**PYLOS**	**0.96**	**200**	P		**Pg**	**12 51 28.4**	**-1.3**
PYL				S		**Sb**	**12 51 43.4**	**0.0**
VIL2	**Platees**	**0.97**	**65**	P		**Pb**	**12 51 30.0**	**-0.6**
AXAR	**Agios Charalam**	**1.04**	**23**	P		**Pg**	**12 51 30.2**	**-1.0**
AXAR				S		**Sn**	**12 51 46.8**	**-0.6**
AXAR	**Agios Charalam**	**1.04**	**23**	P		**Pg**	**12 51 30.2**	**-1.0**
AXAR				S		**Sn**	**12 51 46.8**	**-0.6**
DYR	**Agios Nikonas**	**1.05**	**172**	P		**Pg**	**12 51 30.2**	**-1.2**
DYR	**Agios Nikonas**	**1.05**	**172**	*e*PB		**Pg**	**12 51 30.0**	**-1.4**
DYR	**Agios Nikonas**	**1.05**	**172**	P		**Pg**	**12 51 30.2**	**-1.2**
NAIG	**Nisos Aigina**	**1.06**	**92**	*e*PN		**Pb**	**12 51 31.6**	**-0.5**
LKR	**Lokris**	**1.08**	**38**	P		**Pg**	**12 51 30.5**	**-1.4**
LKR				S		**Sb**	**12 51 47.5**	**+0.7**
LKR	**Lokris**	**1.08**	**38**	*e*PN		**Pg**	**12 51 31.0**	**-0.9**
LKR	**Lokris**	**1.08**	**38**	P		**Pg**	**12 51 30.5**	**-1.4**
LKR				S		**Sb**	**12 51 47.5**	**+0.7**
KFL	**Anninata**	**1.11**	**286**	P		**Pg**	**12 51 31.5**	**-1.1**
KFL	**Anninata**	**1.11**	**286**	P		**Pg**	**12 51 31.5**	**-1.1**
ATAL	**Atalanti**	**1.12**	**38**	P		**Pg**	**12 51 31.7**	**-1.1**
ATAL	**Atalanti**	**1.12**	**38**	P		**Pg**	**12 51 31.7**	**-1.1**
EVR	**Evrytania**	**1.14**	**347**	P		**Pg**	**12 51 31.8**	**-1.3**
EVR				S		**Sb**	**12 51 49.1**	**+0.4**
EVR	**Evrytania**	**1.14**	**347**	*e*PN		**Pg**	**12 51 31.4**	**-1.7**
EVR	**Evrytania**	**1.14**	**347**	P		**Pg**	**12 51 31.8**	**-1.3**
EVR				S		**Sb**	**12 51 49.1**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.21**	**359**	P		**Pg**	**12 51 33.9**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.21**	**359**	P		**Pg**	**12 51 33.9**	**-0.5**
AGG	**Agios Georgios**	**1.22**	**7**	P		**Pg**	**12 51 33.4**	**-1.3**
AGG				S		**Sb**	**12 51 51.0**	**0.0**
AGG	**Agios Georgios**	**1.22**	**7**	*e*PN		**Pg**	**12 51 33.3**	**-1.4**
AGG				*e*SN		**Sb**	**12 51 51.0**	**0.0**
AGG	**Agios Georgios**	**1.22**	**7**	P		**Pg**	**12 51 33.4**	**-1.3**
AGG				S		**Sb**	**12 51 51.0**	**0.0**
ATH	**Athens Observa**	**1.25**	**82**	P		**Pb**	**12 51 35.0**	**-0.3**
ATH				S		**Sn**	**12 51 52.4**	**-0.2**
ATH	**Athens Observa**	**1.25**	**82**	*e*PN		**Pb**	**12 51 35.1**	**-0.3**
ATH				*e*SN		**Sn**	**12 51 52.5**	**-0.2**
ATH	**Athens Observa**	**1.25**	**82**	P		**Pb**	**12 51 35.0**	**-0.3**
ATH				S		**Sn**	**12 51 52.4**	**-0.2**
VLI	**Veliai**	**1.25**	**150**	P		**Pg**	**12 51 34.4**	**-0.9**
VLI				S		**Sn**	**12 51 53.5**	**+0.9**
VLI	**Veliai**	**1.25**	**150**	*e*PN		**Pg**	**12 51 34.9**	**-0.4**
VLI	**Veliai**	**1.25**	**150**	P		**Pg**	**12 51 34.4**	**-0.9**
VLI				S		**Sn**	**12 51 53.5**	**+0.9**
VLS	**Valsamata**	**1.28**	**287**	P		**Pg**	**12 51 33.7**	**-2.2**
VLS				S		**Sn**	**12 51 55.0**	**+1.6**
VLS	**Valsamata**	**1.28**	**287**	*e*PB		**Pg**	**12 51 33.7**	**-2.2**
VLS	**Valsamata**	**1.28**	**287**	P		**Pg**	**12 51 33.7**	**-2.2**
VLS				S		**Sn**	**12 51 55.0**	**+1.6**
ATHU	**Athens Univers**	**1.31**	**82**	P		**Pg**	**12 51 35.3**	**-1.0**
ATHU				S		**Sb**	**12 51 53.6**	**+0.3**
ATHU	**Athens Univers**	**1.31**	**82**	P		**Pg**	**12 51 35.3**	**-1.0**
ATHU				S		**Sb**	**12 51 53.6**	**+0.3**
SMIA	**Simia**	**1.36**	**38**	P		**Pn**	**12 51 36.3**	**-0.6**
SMIA				S		**Sn**	**12 51 56.2**	**+0.9**
SMIA	**Simia**	**1.36**	**38**	P		**Pn**	**12 51 36.3**	**-0.6**
SMIA				S		**Sn**	**12 51 56.2**	**+0.9**
PTL	**Penteli**	**1.38**	**79**	P		**Pn**	**12 51 36.3**	**-0.9**
PTL				S		**Sb**	**12 51 55.3**	**-0.2**
PTL	**Penteli**	**1.38**	**79**	*e*PN		**Pn**	**12 51 36.3**	**-0.9**
PTL	**Penteli**	**1.38**	**79**	P		**Pn**	**12 51 36.3**	**-0.9**
PTL				S		**Sb**	**12 51 55.3**	**-0.2**
MRKA	**Markates**	**1.45**	**51**	P		**Pn**	**12 51 37.2**	**-0.9**
MRKA				S		**Sn**	**12 51 58.1**	**+0.6**
MRKA	**Markates**	**1.45**	**51**	P		**Pn**	**12 51 37.2**	**-0.9**
MRKA				S		**Sn**	**12 51 58.1**	**+0.6**
LKD2	**Lefkada island**	**1.53**	**310**	P		**Pn**	**12 51 37.9**	**-1.3**
LKD2	**Lefkada island**	**1.53**	**310**	*e*PN		**Pn**	**12 51 37.9**	**-1.3**
LKD2	**Lefkada island**	**1.53**	**310**	P		**Pn**	**12 51 37.9**	**-1.3**
KYTH	**Kithira**	**1.68**	**155**	P		**Pb**	**12 51 42.4**	**-0.2**
KYTH	**Kithira**	**1.68**	**155**	*e*PN		**Pb**	**12 51 42.5**	**-0.2**
KYTH	**Kithira**	**1.68**	**155**	P		**Pb**	**12 51 42.4**	**-0.2**
SKIA	**Skiathos**	**1.71**	**37**	P		**Pn**	**12 51 41.0**	**-0.7**
SKIA	**Skiathos**	**1.71**	**37**	P		**Pn**	**12 51 41.0**	**-0.7**
NEO	**Neokhori**	**1.72**	**29**	P		**Pn**	**12 51 41.1**	**-0.7**
NEO	**Neokhori**	**1.72**	**29**	*e*PN		**Pn**	**12 51 41.1**	**-0.7**
NEO	**Neokhori**	**1.72**	**29**	P		**Pn**	**12 51 41.1**	**-0.7**
THL	**Klokotos Trika**	**1.76**	**357**	P		**Pn**	**12 51 42.3**	**0.0**
THL				S		**Sn**	**12 52 05.8**	**+0.7**
THL	**Klokotos Trika**	**1.76**	**357**	*e*PN		**Pn**	**12 51 42.1**	**-0.2**
THL	**Klokotos Trika**	**1.76**	**357**	P		**Pn**	**12 51 42.3**	**0.0**
THL				S		**Sn**	**12 52 05.8**	**+0.7**
XOR	**Xorichti**	**1.76**	**27**	P		**Pn**	**12 51 41.6**	**-0.8**
XOR				S		**Sn**	**12 52 05.0**	**-0.2**
XOR	**Xorichti**	**1.76**	**27**	P		**Pn**	**12 51 41.6**	**-0.8**
XOR				S		**Sn**	**12 52 05.0**	**-0.2**
MRMA	**Marmari**	**1.78**	**81**	P		**Pn**	**12 51 42.4**	**-0.3**
MRMA				S		**Sg**	**12 52 07.9**	**-0.7**
MRMA	**Marmari**	**1.78**	**81**	P		**Pn**	**12 51 42.4**	**-0.3**
MRMA				S		**Sg**	**12 52 07.9**	**-0.7**
AOS	**Alonnisos**	**1.93**	**44**	P		**Pn**	**12 51 43.8**	**-0.8**
AOS	**Alonnisos**	**1.93**	**44**	*e*PB		**Pn**	**12 51 43.8**	**-0.8**
AOS	**Alonnisos**	**1.93**	**44**	P		**Pn**	**12 51 43.8**	**-0.8**
JAN	**Janina**	**2.11**	**332**	P		**Pb**	**12 51 49.1**	**-0.8**
JAN	**Janina**	**2.11**	**332**	*e*PN		**Pn**	**12 51 46.6**	**-0.6**
JAN	**Janina**	**2.11**	**332**	P		**Pb**	**12 51 49.1**	**-0.8**
ANKY	**Antikythira Is**	**2.15**	**154**	*e*PN		**Pn**	**12 51 48.5**	**+0.9**
IGT	**Igoumenitsa**	**2.23**	**321**	P		**Pn**	**12 51 50.0**	**+1.1**
IGT	**Igoumenitsa**	**2.23**	**321**	P		**Pn**	**12 51 50.0**	**+1.1**
KEK	**Kerkira**	**2.65**	**317**	P		**Pn**	**12 51 55.5**	**+1.0**
KEK	**Kerkira**	**2.65**	**317**	*e*PB		**Pn**	**12 51 55.3**	**+0.8**
KEK	**Kerkira**	**2.65**	**317**	P		**Pn**	**12 51 55.5**	**+1.0**
NEST	**Nestorio**	**2.74**	**342**	P		**Pn**	**12 51 58.2**	**+2.2**
NEST	**Nestorio**	**2.74**	**342**	P		**Pn**	**12 51 58.2**	**+2.2**
PLG	**Polygyros**	**2.76**	**21**	*e*PN		**Pn**	**12 51 54.9**	**-1.2**
OUR	**Ouranopolis**	**2.90**	**29**	P		**Pn**	**12 51 57.2**	**-0.8**
OUR	**Ouranopolis**	**2.90**	**29**	P		**Pn**	**12 51 57.2**	**-0.8**
VAM	**Vamos**	**2.91**	**145**	P		**Pn**	**12 51 58.2**	**+0.1**
VAM	**Vamos**	**2.91**	**145**	*e*PN		**Pn**	**12 51 58.2**	**+0.1**
VAM	**Vamos**	**2.91**	**145**	P		**Pn**	**12 51 58.2**	**+0.1**
FNA	**Florina**	**3.03**	**349**	P		**Pn**	**12 52 00.6**	**+0.7**
FNA	**Florina**	**3.03**	**349**	P		**Pn**	**12 52 00.6**	**+0.7**
LIA	**Limnos Island**	**3.16**	**48**	*e*PN		**Pn**	**12 52 00.7**	**-0.9**
IDI	**Anoyia**	**3.34**	**138**	P		**Pn**	**12 52 03.7**	**-0.5**
IDI	**Anoyia**	**3.34**	**138**	P		**Pn**	**12 52 03.7**	**-0.5**
KAVA	**Kavala**	**3.68**	**29**	P		**Pn**	**12 52 07.4**	**-1.3**
KAVA	**Kavala**	**3.68**	**29**	P		**Pn**	**12 52 07.4**	**-1.3**
SMTH	**Samothraki Isl**	**3.74**	**44**	*e*PN		**Pn**	**12 52 09.3**	**-0.3**
LAST	**Lasithi**	**3.77**	**133**	P		**Pn**	**12 52 10.2**	**+0.2**
LAST	**Lasithi**	**3.77**	**133**	P		**Pn**	**12 52 10.2**	**+0.2**
NVR	**Nevrokopi**	**3.78**	**20**	*e*PN		**Pn**	**12 52 09.9**	**-0.3**
XRY	**Khrisi**	**4.09**	**135**	*e*PN		**Pn**	**12 52 15.6**	**+1.2**
KARP	**Karpathos**	**4.62**	**118**	*e*PN		**Pn**	**12 52 23.3**	**+1.6**
BARS	**Barje**	**5.01**	**357**	*e*Pn		**Pn**	**12 52 30.2**	**+3.1**
GRUS	**Gruza**	**6.17**	**350**	*e*Pn		**Pn**	**12 52 44.9**	**+1.9**
BBLS	**Lazići**	**6.40**	**342**	*e*Pn		**Pn**	**12 52 47.8**	**+1.6**
DIVS	**Divibare**	**6.50**	**346**	*e*Pn		**Pn**	**12 52 45.2**	**-2.3**
MLR	**Muntele Rosu**	**8.19**	**19**	Pn		Pn	12 53 14.8	+4.1
	0.1nm,0.3s,baz=166,slow=13,SNR=3.6							
BRTR	**Keskin Array B**	**9.18**	**74**	Pn		**Pn**	**12 53 26.1**	**+1.6**
	0.4nm,0.3s,baz=255,slow=13,SNR=12							
GERES	**GERESS Array B**	**12.62**	**334**	Pn		**Pn**	**12 54 12.8**	**+1.3**
	0.1nm,0.3s,baz=150,slow=14,SNR=4.0							
ESDC	**Sonseca Array**	**20.43**	**283**	P		**P**	**12 55 49.0**	**-0.4**
	1.2nm,0.7s,baz=77,slow=11,SNR=15							
HFS	**Hagfors**	**22.99**	**349**	P		**P**	**12 56 18.3**	**+1.8**
	0.9nm,0.6s,baz=159,slow=12,SNR=6.3							
NOA	**NORSAR Array B**	**24.25**	**347**	P		**P**	**12 56 31.4**	**+2.5**
	0.7nm,0.7s,baz=158,slow=8.6,SNR=3.9							
EKA	**Eskdalemuir Ar**	**24.48**	**324**	P		**P**	**12 56 30.8**	**-0.2**
	1.1nm,0.6s,baz=125,slow=9.7,SNR=12							
TORD	**Torodi Ar. Bea**	**30.58**	**222**	P		**P**	**12 57 25.6**	**-0.3**
	0.6nm,0.5s,baz=36,slow=8.8,SNR=8.7							
DBIC	**Dimbokro**	**39.51**	**225**	LR		LR	13 15 05.8	
	comp=Z,23nm,19.7s,baz=183,slow=96							
MKAR	**Makanchi Array**	**44.40**	**58**	P		**P**	**12 59 21.4**	**-1.3**
	0.4nm,0.6s,baz=275,slow=6.4,SNR=5.4							
ZALV	**Zalesovo Beam**	**44.98**	**48**	P		**P**	**12 59 26.1**	**-1.1**
	0.7nm,0.4s,baz=266,slow=6.5,SNR=5.1							
ASAR	**Alice Springs**	**120.86**	**97**	PKP		**PKPdf**	**13 10 03.0**	**-1.8**
	0.3nm,0.9s,baz=323,slow=2.0,SNR=2.5							

*BJI **31** 12:51:27.0, 39°.52N×73°.55E, h5km, ML3.3/5*
*ISCJB **31** 12:51:28.4±0.7, 39°.29N±0°.06×73°.54E±0°.08, h10km, mb3.6/6, Error ellipse: s-maj=8.6km s-min=8.0km az=12.1*
*IDC **31** 12:51:28.2±0.9, 39°.32N×73°.61E, h0km, mb3.7/6, mb1 3.7/11, mb1mx3.5/33, mbtmp3.6/11, ML3.2/4, Error ellipse: s-maj=20.6km s-min=15.5km az=104.0*
*NNC **31** 12:51:32.7±1.8, 39°.72N×73°.47E, h0km, mb3.9, mpv4.0, Error ellipse: s-maj=15.9km s-min=8.1km az=5.0*

ISC 31 12:51:29.5±1.1, 39.34N±0°.09×73.76E±0°.07, h10km, n33, σ1ᵗ30/27, mb3.7/6, 9C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.73**	**83**		Pg	Pn	12 51 55.8	-3.9
KSH					Sg	Sn	12 52 15.0	-6.9
KSH					smax	smax		
	comp=N,400nm,0.5s							
KSH					smax	smax		
	comp=E,310nm,0.5s							
AML	**Almayashu**	**2.79**	**359**	P		**Pn**	**12 52 15.6**	**+1.1**
	SNR=143							
UCH	**Uchtor**	**2.94**	**11**	P		**Pn**	**12 52 18.5**	**+1.7**
	SNR=14							
KZA	**Kyzart**	**2.96**	**22**	P		**Pb**	**12 52 20.3**	**-2.3**
	SNR=184							
EKS2	**Erkin-Say**	**3.32**	**0**	P		**Pb**	**12 52 26.4**	**-2.1**
	SNR=18							
AAK	**Ala-Archa**	**3.34**	**9**	P		Pn	12 52 24.3	+2.4
	SNR=49							
AAK	**Ala-Archa**	**3.34**	**9**	Pn		Pn	12 52 24.3	+2.4
	comp=E,11nm,0.3s,baz=163,slow=8.1,SNR=45							
AAK					Sn	**Sn**	**12 53 04.4**	**+2.7**
	comp=E,5.5nm,0.3s,baz=40,slow=17,SNR=3.1							
KBK	**Karagaybulak**	**3.43**	**15**	P		Pb	12 52 27.2	-3.4
	SNR=11							
ULHL	**Ulahol**	**3.46**	**32**	P		**Pb**	**12 52 29.4**	**-1.6**
	SNR=26							
CHMS	**Chumysh**	**3.73**	**11**	P		**Pn**	**12 52 28.6**	**+1.4**
	SNR=11							
TKM2	**Tokmak 2**	**3.84**	**21**	⇑Pn		**Pn**	**12 52 30.6**	**+1.7**
TKM2	comp=E,7.9nm,0.4s			⇑Sn		**Sn**	**12 53 15.0**	**+0.9**
	comp=E,18nm,0.7s							
TKM2				⇑Lg		Lg	12 53 24.5	
	comp=E,38nm,0.6s							
TKM2	**Tokmak 2**	**3.84**	**21**	P		Pn	12 52 32.3	+3.5
	SNR=6.0							
USP	**Ospenovka**	**3.96**	**8**	P		Pn	12 52 34.0	+3.6
	SNR=25							
KK31	**Karatay Array**	**4.48**	**328**	Pn		**Pn**	**12 52 38.5**	**+1.0**
	comp=E,1.5nm,0.3s,baz=286,slow=41,SNR=78							
KK31				⇓Pg		**Pb**	**12 52 48.2**	**-0.2**
	comp=E,4.5nm,0.5s,baz=154,slow=16,SNR=28							
KK31				⇑Sn		**Sn**	**12 53 29.6**	**-0.1**
	comp=E,13nm,0.3s,baz=155,slow=13,SNR=8.6							
KK31				⇑Lg		Lg	12 53 43.1	
	comp=E,78nm,0.9s,baz=154,slow=27,SNR=6.3							
KNDC	**Almaty**	**4.56**	**31**	⇓Pn		**Pn**	**12 52 39.1**	**+0.4**
	comp=E,7.8nm,0.5s							
KNDC				⇓Pg		**Pb**	**12 52 50.5**	**+0.7**
	comp=E,267nm,0.1s							
KNDC				⇑Lg		Lg	12 53 47.8	
	comp=E,108nm,0.8s							
MK31	**Makanchi Array**	**9.71**	**37**	⇓Pn		Pn	12 53 53.8	+4.5
	comp=E,0.9nm,0.7s,baz=214,slow=13,SNR=5.1							
MK31				⇓Lg		Lg	12 56 32.7	
	comp=E,4.7nm,1.1s							
MKAR	**Makanchi Array**	**9.71**	**37**	Pn		Pn	12 53 52.6	+3.3
	comp=E,0.1nm,0.3s,baz=224,slow=11,SNR=5.1							
KUR16	**Kurchatov Arra**	**11.77**	**15**	⇑Lg		Lg	12 57 34.6	
	comp=E,2.2nm,0.9s							
KURBB	**Kurchatov Arra**	**11.77**	**15**	Pn		**Pn**	**12 54 17.7**	**+0.3**
	comp=E,0.0nm,0.3s,baz=200,slow=11,SNR=2.6							
KURK	**Kurchatov**	**11.88**	**15**	⇑Lg		Lg	12 57 38.9	
	comp=E,22nm,1.2s							
BVA0	**Borovoye Array**	**13.88**	**351**	Pn		**Pn**	**12 54 46.4**	**+0.2**
	comp=E,2.8nm,0.9s,baz=162,slow=12,SNR=7.3							
BVAR	**Borovoye Array**	**13.88**	**351**	Pn		**Pn**	**12 54 43.9**	**-2.3**
	comp=E,0.2nm,0.3s,baz=168,slow=11,SNR=4.0							
BRVK	**Borovoye**	**13.93**	**351**	⇓Pn		**Pn**	**12 54 47.1**	**+0.3**
	comp=E,6.2nm,1.0s							
AB31	**Akbulak array**	**13.98**	**320**	⇑Pn		**Pn**	**12 54 47.5**	**0.0**
	comp=E,0.3nm,0.3s,baz=125,slow=14,SNR=19							
AB31				⇓Sn		Sn	12 57 14.9	-7.8
	comp=E,0.9nm,0.6s,baz=125,slow=25,SNR=4.1							
AKTO	**Aktyubinsk**	**15.69**	**320**	Pn		**Pn**	**12 55 10.4**	**-0.2**
	comp=E,0.3nm,0.3s,baz=152,slow=12,SNR=5.2							
ZALV	**Zalesovo Beam**	**16.44**	**24**	Pn		**P**	**12 55 21.2**	**-1.6**
	baz=220,slow=11,SNR=6.5							
GTA	**Gaotai**	**20.13**	**81**	*e*P		Pn	12 56 07.5	+1.9
GTA				pP		pP	12 56 12.0	+5.4
GTA				sP		sP	12 56 14.5	+6.6
FINES	**FINESS Array B**	**36.43**	**323**	P		**P**	**12 58 34.1**	**+0.1**
	comp=E,0.7nm,0.5s,baz=107,slow=7.6,SNR=6.8							
HFS	**Hagfors**	**42.24**	**320**	P		**P**	**12 59 22.4**	**-0.2**
	comp=E,0.4nm,0.5s,baz=69,slow=8.0,SNR=4.4							
NOA	**NORSAR Array B**	**43.48**	**321**	P		**P**	**12 59 31.9**	**-0.7**
	comp=E,0.4nm,0.6s,baz=93,slow=7.8,SNR=2.1							
TORD	**Torodi Ar. Bea**	**67.95**	**269**	P		**P**	**13 02 28.9**	**0.0**
	comp=E,0.4nm,0.5s,baz=42,slow=5.4,SNR=13							
WRA	**Warramunga Arr**	**81.71**	**124**	P		**P**	**13 03 49.0**	**+0.6**
	comp=E,1.0nm,0.7s,baz=326,slow=5.0,SNR=12							
ASAR	**Alice Springs**	**84.15**	**127**	P		**P**	**13 04 01.3**	**+0.3**
	comp=E,0.4nm,0.7s,baz=312,slow=5.3,SNR=11							

IDC 31 13:20:03.5±1.1, 10°.25S×160°.99E, h0km, mb3.9/10, mb1 4.1/10, mb1mx4.0/19, mbtmp3.9/10, MS3.6/7, Ms1 3.6/7, ms1mx3.1/32, Error ellipse: s-maj=25.8km s-min=20.1km az=149.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.31**	**308**	Pn		Pn	13 20 29.2	+0.1
	728nm,0.3s,baz=154,slow=6.7,SNR=208							
HNR					Sn	Sn	13 20 47.0	-0.4
	522nm,0.3s,baz=132,slow=16,SNR=12							
DZM	**Mont Dzumac**	**12.86**	**157**	LR		LR	13 26 57.0	
	comp=Z,100nm,20.5s,baz=36,slow=32							
AFI	**Afiamalu**	**26.87**	**101**	LR		LR	13 33 37.3	
	comp=Z,108nm,19.2s,baz=77,slow=30							
WRA	**Warramunga Arr**	**27.43**	**246**	P		P	13 25 51.9	+0.5
	0.9nm,0.7s,baz=75,slow=8.9,SNR=7.5							
STKA	**Stephens Creek**	**28.02**	**217**	P		P	13 26 03.3	+6.9
	1.1nm,0.5s,baz=66,slow=14,SNR=6.4							
ASAR	**Alice Springs**	**29.07**	**239**	P		P	13 26 05.5	-0.4
	1.0nm,0.9s,baz

TUMR	**Tumrok**	**3.52**	**350**	P		Pn	13 41 48.2	+3.3
TUMR				S		Sn	13 42 28.8	+3.4
KMNR	**Kamenistaya**	**3.98**	**352**	P		Pn	13 41 55.1	+3.9
KMNR				S		Sn	13 42 40.4	+3.8
BZGR	**Bezymyannyi-Gr**	**4.13**	**356**	P		Pn	13 41 56.2	+3.0
BZGR				S		Sn	13 42 41.8	+1.4
BZMR	**Bezymyannaya**	**4.14**	**354**	P		Pn	13 41 56.8	+3.4
BZMR				S		Sn	13 42 43.3	+2.7
BZWR	**Bezymyannyi-We**	**4.17**	**354**	P		Pn	13 41 57.6	+3.8
BZWR				S		Sn	13 42 44.8	+3.4
KIRR	**Kirishev**	**4.17**	**353**	P		Pn	13 41 57.3	+3.5
KIRR				S		Sn	13 42 44.0	+2.7
KPT	**Kopyto**	**4.19**	**352**	P		Pn	13 41 57.4	+3.4
KPT				S		Sn	13 42 44.5	+2.8
ZLN	**Zelenaya**	**4.20**	**357**	P		Pn	13 41 57.7	+3.5
ZLN				S		Sn	13 42 45.1	+3.0
LGNR	**Loginova**	**4.27**	**356**	P		Pn	13 41 59.2	+3.8
LGNR				S		Sn	13 42 48.2	+3.9
KOZ	**Kozyrevsk**	**4.31**	**350**	P		Pn	13 41 59.6	+4.0
KOZ				S		Sn	13 42 47.8	+3.1
BKI	**Bering**	**4.40**	**38**	P		Pn	13 41 57.4	+0.7
BKI				S		Sn	13 42 44.2	-2.5
KRSR	**Krestovskiy**	**4.41**	**355**	P		Pn	13 42 00.3	+3.2
KRSR				S		Sn	13 42 49.8	+2.5
KLY	**Klyuchi**	**4.51**	**356**	P		Pn	13 42 01.0	+2.8
KLY				S		Sn	13 42 50.5	+1.2
KBG	**Krutoberegovo**	**4.52**	**10**	S		Sn	13 42 51.7	+2.2
SRDR	**Sredinnyy**	**4.59**	**349**	P		Pn	13 42 02.8	+3.4
SRDR				S		Sn	13 42 53.2	+1.8
SMKR	**Semkarok**	**4.76**	**1**	P		Pn	13 42 04.4	+2.5
SMKR				S		Sn	13 42 57.3	+1.4
SRKR	**Sorokina**	**4.83**	**359**	P		Pn	13 42 06.4	+3.6
SRKR				S		Sn	13 43 00.0	+2.4

*MAN **31** 13:50:34.8±01.0N×126°.81E.6, h77km±5.0, mb5.0, ML3.9, MS4.0*
*ISCJB **31** 13:50:36.4±0.8, 8°.12N±0°.04×126°.69E±0°.07, h71km±7km, mb3.9/19, Error ellipse: s-maj=11.8km s-min=6.1km az=168.8*
*IDC **31** 13:50:38.2±2.0, 8°.13N×126°.51E, h70km±18km, mb3.7/19, mb1 3.8/19, mb1mx3.7/27, mbtmp3.7/19, MS3.5/2, Ms1 3.5/2, ms1mx2.4/40, Error ellipse: s-maj=24.2km s-min=11.8km az=76.0*
ISC 31 13:50:37.6±1.3, 8°.10N±0°.05×126°.65E±0°.09, h67km±11km, n47, σ1§18/54, mb4.0/19, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.21**	**199**	*e*P	**Pn**	**13 50 56.7**	**-2.0**
MATI				*e*S	**Sn**	**13 51 13.0**	**-1.4**
BUTP	**Butuan**	**1.34**	**310**	*e*P	**Pn**	**13 51 00.4**	**0.0**
DAV	**Davao City (W)**	**1.47**	**226**	P	**Pn**	**13 51 01.1**	**-1.1**
	69nm,0.3s,baz=6.2,slow=2.8,SNR=10						
DAV				S	**Sn**	**13 51 22.9**	**+2.3**
	203nm,0.3s,baz=270,slow=20,SNR=14						
DMPH	**Davao City--Mi**	**1.52**	**228**	‖*i*P	**Pn**	**13 51 03.9**	**+1.2**
DMPH				*i* S	**Sn**	**13 51 24.0**	**+2.3**
BUKP	**Musuan**	**1.59**	**262**	*e*P	**Pn**	**13 51 03.8**	**0.0**
KCP	**Kidapawan**	**1.89**	**235**	↑*e*P	**Pn**	**13 51 07.1**	**-0.6**
KCP				*i* S	**Sn**	**13 51 31.0**	**+0.4**
CGP	**Cagayan de Oro**	**1.97**	**281**	↑*i*P	**Pn**	**13 51 08.1**	**-0.7**
CGP				*i* S	**Sn**	**13 51 32.2**	**-0.3**
CTBH	**Cotabato--PC H**	**2.54**	**250**	‖*i*P	**Pn**	**13 51 15.9**	**-0.6**
MSLP	**Maasin**	**2.69**	**319**	*e*P	**Pn**	**13 51 19.2**	**+0.7**
TBP	**Tagbilaran**	**3.18**	**300**	*e*P	**Pn**	**13 51 25.8**	**+0.5**
TBP				*e*S	**Sn**	**13 51 58.2**	**-3.8**
PAGZ	**Pagadian**	**3.25**	**266**	*e*P	**Pn**	**13 51 26.4**	**+0.2**
DCPH	**Dipolog City**	**3.30**	**279**	‖*e*P	**Pn**	**13 51 27.8**	**+0.9**
LLP	**Lapu-Lapu**	**3.45**	**310**	*e*P	**Pn**	**13 51 29.9**	**+0.9**
LLP				*e*S	**Sn**	**13 52 07.6**	**-1.1**
PLP	**Palo**	**3.46**	**332**	*e*P	**Pn**	**13 51 28.8**	**-0.4**
OCLP	**Ormoc**	**3.56**	**326**	*e*P	**Pn**	**13 51 31.7**	**+1.2**
SNPH	**Sibulan**	**3.59**	**290**	↑*i*P	Pn	13 51 17.7	-13
SNPH				*i* S	Sn	13 51 57.3	-15
IPIL	**Ipil**	**4.05**	**266**	*e*P	Pn	13 51 27.5	-10
RCP	**Roxas**	**5.16**	**312**	↑*i*P	**Pn**	**13 51 54.0**	**+1.6**
FITZ	**Fitzroy Crossi**	**26.05**	**182**	P	**P**	**13 56 06.1**	**+1.2**
	0.8nm,0.4s,baz=6.2,slow=12,SNR=7.3						
CMAR	**Chiang Mai Arr**	**28.82**	**294**	P	**P**	**13 56 30.6**	**+0.9**
	0.3nm,0.7s,baz=119,slow=7.3,SNR=3.6						
WRA	**Warramunga Arr**	**28.87**	**165**	P	**P**	**13 56 31.9**	**+1.7**
	0.2nm,0.5s,baz=344,slow=9.6,SNR=5.1						
KSRS	**Korea Array**	**29.25**	**2**	P	**P**	**13 56 33.0**	**-0.3**
	0.7nm,0.7s,baz=181,slow=10,SNR=5.0						
MJAR	**Matsushiro Arr**	**30.21**	**19**	P	**P**	**13 56 41.5**	**-0.4**
	1.2nm,0.7s,baz=192,slow=11,SNR=4.7						
MJAR				LR	LR	14 07 49.7	
	comp=Z,43nm,19.4s,baz=165,slow=34						
ASAR	**Alice Springs**	**32.36**	**168**	P	**P**	**13 57 01.1**	**+0.3**
	0.2nm,0.3s,baz=343,slow=7.4,SNR=17						
ASAR				PcP	**PcP**	**13 59 48.2**	**+0.8**
	0.2nm,0.4s,baz=345,slow=2.9,SNR=4.3						
ASAR				ScP	**ScP**	**14 03 24.9**	**-0.6**
	0.5nm,0.9s,baz=350,slow=2.9,SNR=4.5						
TAPN	**Taplejung**	**41.50**	**302**	*e*P	**P**	**13 58 19.2**	**+0.4**
	7.9nm,0.4s						
ODAN	**Odare**	**41.60**	**302**	*e*P	**P**	**13 58 19.9**	**+0.3**
	9.9nm,0.5s						
STKA	**Stephens Creek**	**42.24**	**161**	P	**P**	**13 58 24.2**	**-0.1**
	1.4nm,0.9s,baz=343,slow=11,SNR=3.3						
RAMN	**Ramite**	**42.30**	**301**	*e*P	**P**	**13 58 25.6**	**+0.3**
	6.0nm,0.5s						
GUN	**Gumba**	**43.22**	**302**	*e*P	**P**	**13 58 32.5**	**-0.3**
	9.1nm,0.5s						
DMN	**Daman**	**43.77**	**302**	*e*P	**P**	**13 58 37.1**	**-0.1**
KOLN	**Koldanda**	**45.09**	**301**	*e*P	**P**	**13 58 47.7**	**+0.1**
	7.8nm,0.6s						
DANN	**Dangsing**	**45.13**	**302**	*e*P	**P**	**13 58 47.9**	**-0.2**
	11nm,0.4s						
PETK	**Petropavlovsk-**	**51.46**	**23**	P	**P**	**13 59 38.1**	**+2.1**
	1.2nm,0.6s,baz=208,slow=5.9,SNR=4.9						
MKAR	**Makanchi Array**	**53.98**	**324**	P	**P**	**13 59 54.7**	**-0.1**
	2.5nm,0.6s,baz=121,slow=7.6,SNR=26						
MKAR				PcP	**PcP**	**14 00 57.9**	**-1.4**
	0.5nm,0.6s,baz=123,slow=5.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**56.70**	**332**	P	**P**	**14 00 12.9**	**-1.3**
	0.6nm,0.3s,baz=126,slow=6.4,SNR=5.6						
KURBB	**Kurchatov Arra**	**58.07**	**326**	P	**P**	**14 00 23.6**	**-0.3**
	1.7nm,0.4s,baz=124,slow=7.4,SNR=30						
BVAR	**Borovoye Array**	**63.66**	**326**	P	**P**	**14 01 00.4**	**-1.4**
	0.8nm,0.4s,baz=104,slow=5.8,SNR=4.5						
ILAR	**Eielson Array**	**81.22**	**26**	P	**P**	**14 02 46.6**	**+0.6**
	0.5nm,0.5s,baz=262,slow=4.3,SNR=12						
JOF	**Joensuu**	**85.28**	**333**	*e*p	**P**	**14 03 07.2**	**+0.3**
ARCES	**ARCESS Array B**	**86.35**	**340**	P	**P**	**14 03 13.2**	**+1.1**
	1.1nm,0.5s,baz=102,slow=10.0,SNR=3.6						
FINES	**FINESS Array B**	**87.97**	**332**	P	**P**	**14 03 19.1**	**-0.9**
	2.8nm,0.5s,baz=77,slow=5.6,SNR=35						
AKASG	**Malin Array Be**	**88.47**	**321**	P	**P**	**14 03 21.4**	**-1.3**
	2.1nm,0.7s,baz=68,slow=5.4,SNR=5.1						
HFS	**Hagfors**	**94.14**	**332**	LR	LR	14 55 21.8	
	comp=Z,36nm,18.6s,baz=150,slow=41						
NOA	**NORSAR Array B**	**94.86**	**334**	P	**P**	**14 03 52.0**	**-0.1**
	0.5nm,0.7s,baz=28,slow=4.9,SNR=2.2						
YKA	**Yellowknife Ar**	**95.58**	**24**	P	**P**	**14 03 54.9**	**-0.4**
	0.3nm,0.6s,baz=292,slow=4.5,SNR=3.6						
GERES	**GERESS Array B**	**98.62**	**322**	P	**P**	**14 04 07.6**	**-1.9**
	0.3nm,0.7s,baz=81,slow=8.2,SNR=4.3						
TXAR	**Lajitas Array**	**118.94**	**50**	PKP	**PKPdf**	**14 09 20.8**	**+1.4**
	0.2nm,0.5s,baz=354,slow=3.9,SNR=3.9						

IDC 31 13:57:49.9±15.0, 0°.10N×96°.26E, h0km, mb3.3/3, mb1 3.3/3, mb1mx3.1/24, mbtmp3.3/3, Error ellipse: s-maj=787.8km s-min=30.3km az=57.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.51**	**126**	P	P	14 05 55.4	-0.1
	0.1nm,0.7s,baz=295,slow=7.6,SNR=5.2						
MKAR	**Makanchi Array**	**48.09**	**347**	P	P	14 06 31.8	+0.5
	0.2nm,0.5s,baz=174,slow=9.3,SNR=3.9						
ZALV	**Zalesovo Beam**	**54.50**	**352**	P	P	14 07 18.7	-0.5
	0.4nm,0.4s,baz=149,slow=5.4,SNR=3.4						

*NEIC **31** 14:31:04.5, 39°.04S×175°.72E, h6km, ML3.8(WEL), After WEL.*
NEIC Felt [IV] at Turangi.
WEL 31 14:31:04.4±0.1, 39°.04S×175°.73E, h5km, ML2.8/14, 11C-1D, Error ellipse: s-maj=0.8km s-min=0.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.07**	**337**	↑‖P*i*	Pg	14 31 06.6	+0.4
KATZ	**Kakaramea**	**0.07**	**337**	P*g*	Pg	14 31 06.6	+0.4
KATZ				S*g*	Sg	14 31 08.3	+0.8
KRVZ	**Karewarewa**	**0.09**	**233**	↑‖P*i*	Pg	14 31 06.9	+0.4
KRVZ				S*i*	Sg	14 31 08.9	+1.0
KRVZ	**Karewarewa**	**0.09**	**233**	P*g*	Pg	14 31 06.9	+0.4
KRVZ				S*g*	Sg	14 31 08.5	+0.6
RITZ	**Rihia Road**	**0.12**	**57**	↓‖P*i*	Pg	14 31 07.6	+0.8
RITZ	**Rihia Road**	**0.12**	**57**	P*g*	Pg	14 31 07.7	+0.8
OTVZ	**Oturere**	**0.13**	**203**	↑‖P*i*	Pg	14 31 07.8	+0.5
OTVZ				S*i*	Sg	14 31 10.2	+0.9
OTVZ	**Oturere**	**0.13**	**203**	P*g*	Pg	14 31 07.8	+0.5
WTVZ	**West Tongariro**	**0.13**	**237**	↑‖P*i*	Pg	14 31 07.6	+0.4
WTVZ	**West Tongariro**	**0.13**	**237**	P*g*	Pg	14 31 07.6	+0.4
NGZ	**Ngauruhoe**	**0.17**	**217**	P*i*	Pg	14 31 08.4	+0.5
NGZ	**Ngauruhoe**	**0.17**	**217**	P*g*	Pg	14 31 08.4	+0.5
RATZ	**Rangitukua**	**0.18**	**10**	↑‖P*i*	Pg	14 31 08.7	+0.7
RATZ	**Rangitukua**	**0.18**	**10**	P*g*	Pg	14 31 08.7	+0.7
WPVZ	**Whakapapa**	**0.22**	**222**	P*i*	Pg	14 31 09.3	+0.4
WPVZ	**Whakapapa**	**0.22**	**222**	P*g*	Pg	14 31 09.2	+0.4
TWVZ	**Taurewa**	**0.23**	**263**	P*i*	Pg	14 31 09.2	+0.1
TWVZ	**Taurewa**	**0.23**	**263**	P*g*	Pg	14 31 09.2	+0.1
TUVZ	**Tukino**	**0.23**	**195**	↑‖P*i*	Pg	14 31 09.7	+0.6
TUVZ	**Tukino**	**0.23**	**195**	P*g*	Pg	14 31 09.7	+0.6
FWVZ	**Far West T-bar**	**0.25**	**213**	P*i*	Pg	14 31 10.0	+0.3
FWVZ	**Far West T-bar**	**0.25**	**213**	P*g*	Pg	14 31 10.0	+0.4
DRZ	**Dome Shelter**	**0.27**	**209**	P*i*	Pg	14 31 10.4	+0.4
DRZ	**Dome Shelter**	**0.27**	**209**	P*g*	Pg	14 31 10.5	+0.5
TRVZ	**Turoa**	**0.29**	**209**	P*i*	Pg	14 31 10.5	+0.1
TRVZ	**Turoa**	**0.29**	**209**	P*g*	Pg	14 31 10.6	+0.2
WNVZ	**Wahianoa**	**0.30**	**200**	↑‖P*i*	Pg	14 31 10.9	+0.3
WNVZ	**Wahianoa**	**0.30**	**200**	P*g*	Pg	14 31 10.8	+0.3
HATZ	**Hinemaiaia**	**0.32**	**62**	P*i*	Pg	14 31 10.6	-0.1
WATZ	**Wairara**	**0.33**	**0**	↑‖P*i*	Pg	14 31 11.5	+0.6
WATZ	**Wairara**	**0.33**	**0**	P*g*	Pg	14 31 11.5	+0.6
MOVZ	**Moawhango**	**0.36**	**177**	↑‖P*i*	Pg	14 31 11.8	+0.2
MOVZ	**Moawhango**	**0.36**	**177**	P*g*	Pg	14 31 11.8	+0.2
PKVZ	**Pokaka**	**0.39**	**230**	P*i*	Pg	14 31 12.1	+0.1
PKVZ	**Pokaka**	**0.39**	**230**	P*g*	Pg	14 31 12.1	+0.1
MTVZ	**Mangateitei**	**0.40**	**211**	P*i*	Pg	14 31 12.4	+0.2
MTVZ	**Mangateitei**	**0.40**	**211**	P*g*	Pg	14 31 12.5	+0.3
BHHZ	**Black Hill Sta**	**0.51**	**150**	P*g*	Pg	14 31 14.7	+0.3
BKZ	**Black Stump Fm**	**0.60**	**102**	P*	Pg	14 31 16.5	+0.4
PRRZ	**Plateau Road**	**0.75**	**44**	P*	Pg	14 31 19.1	+0.3
VRZ	**Vera Road**	**0.76**	**264**	↑P*	Pg	14 31 19.1	0.0
VRZ	**Vera Road**	**0.76**	**264**	P*	Pg	14 31 19.1	0.0
TSZ	**Takapari Road**	**1.03**	**170**	↑P*	Pb	14 31 24.5	-0.3
WPHZ	**Waipukurau**	**1.16**	**152**	P*	Pn	14 31 27.7	+0.4
URZ	**Urewera**	**1.33**	**54**	*e*P	Pn	14 31 29.5	-0.1
SNZO	**South Karori**	**2.40**	**199**	*e*Pn	Pb	14 31 46.4	-1.5

WEL 31 14:31:07.0±0.1, 39°.04S×175°.74E, h7km±2km, ML3.8/37, 7C, Error ellipse: s-maj=1.2km s-min=0.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.07**	**331**	↑‖P*g*	Pg	14 31 09.5	+0.5
KATZ				S*g*	Sg	14 31 11.0	+0.5
KATZ				S*g*		14 31 11.4	
KRVZ	**Karewarewa**	**0.10**	**232**	P*g*	Pg	14 31 09.7	+0.3
KRVZ				S*g*	Sg	14 31 11.4	+0.2
KRVZ				S*g*		14 31 11.5	
OTVZ	**Oturere**	**0.14**	**204**	S*g*	Sg	14 31 13.0	+0.6
WTVZ	**West Tongariro**	**0.14**	**236**	↑‖P*g*	Pg	14 31 10.9	+0.7
WTVZ				S*g*	Sg	14 31 12.7	+0.4
RATZ	**Rangitukua**	**0.17**	**9**	P*g*	Pg	14 31 11.3	+0.7
NGZ	**Ngauruhoe**	**0.17**	**217**	S*g*	Sg	14 31 13.8	+0.4
WPVZ	**Whakapapa**	**0.23**	**222**	↑‖P*g*	Pg	14 31 12.0	+0.3
TWVZ	**Taurewa**	**0.24**	**261**	P*g*	Pg	14 31 12.0	+0.2
TWVZ				S*g*	Sg	14 31 15.2	0.0
TUVZ	**Tukino**	**0.24**	**196**	↑‖P*g*	Pg	14 31 12.6	+0.5
FWVZ	**Far West T-bar**	**0.26**	**213**	↑‖P*g*	Pg	14 31 12.8	+0.3
TRVZ	**Turoa**	**0.30**	**209**	P*g*	Pg	14 31 13.5	+0.2
WNVZ	**Wahianoa**	**0.31**	**201**	↑‖P*g*	Pg	14 31 13.7	+0.4
MOVZ	**Moawhango**	**0.37**	**178**	↑‖P*g*	Pg	14 31 14.6	+0.2
PKVZ	**Pokaka**	**0.40**	**230**	P*g*	Pg	14 31 15.0	+0.2

IDC 31 14:39:43.4±4.1, 8°.36S×119°.21E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.3/22, mbtmp3.5/3, Error ellipse: s-maj=134.8km s-min=31.1km az=38.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.63**	**130**	P	Pn	14 44 04.5	+1.5
	0.2nm,0.3s,baz=303,slow=12,SNR=4.9						
WRA				S	Sn	14 47 31.5	-0.6
	0.1nm,0.3s,baz=255,slow=22,SNR=3.1						
ASAR	**Alice Springs**	**20.73**	**139**	P	P	14 44 26.4	+0.7
	0.9nm,0.5s,baz=310,slow=9.2,SNR=41						
ASAR				S	Sn	14 48 21.3	-1.5
	0.4nm,0.5s,baz=307,slow=22,SNR=5.4						
STKA	**Stephens Creek**	**31.31**	**141**	P	P	14 46 03.6	-2.0
	0.7nm,0.6s,baz=311,slow=11,SNR=3.6						

*NEIC **31** 14:40:09.9, 29°.76S×71°.18W, h34km, ML4.0(GUC), After GUC.*
NEIC Felt [II] at Coquimbo, La Higuera and La Serena.
*GUC **31** 14:40:09.9±0.3, 29°.76S×71°.18W, h34km±2km, MD4.0, ML4.0*
*ISCJB **31** 14:40:10.6±0.7, 29°.75S±0°.04×71°.2W±0°.2, h56km±11km, mb3.4/1, Error ellipse: s-maj=22.1km s-min=5.1km az=8.1*
*IDC **31** 14:40:12.1±4.3, 29°.82S×71°.21W, h55km±34km, mb3.3/1, mb1 3.6/4, mb1mx3.4/19, mbtmp3.4/4, ML3.9/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/8, Error ellipse: s-maj=67.7km s-min=35.4km az=105.0*
ISC 31 14:40:11.4±0.9, 29°.74S±0°.03×71°.2W±0°.1, h43km±11km, n24, σ0§84/35, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.86**	**32**	↑‖P*i*	**Pn**	**14 40 26.1**	**-1.2**
LCO				*i* S	**Sn**	**14 40 38.5**	**-0.4**
LCO	**Las Campanas**	**0.86**	**32**	↑‖P*i*	**Pn**	**14 40 26.1**	**-1.2**
LCO				*i* S	**Sn**	**14 40 38.5**	**-0.4**
CMCH	**Combarbala**	**1.44**	**173**	*i* P	**Pn**	**14 40 34.5**	**-0.6**
CMCH				*i* S	**Sn**	**14 40 53.5**	**+0.6**
CMCH	**Combarbala**	**1.44**	**173**	*i* P	**Pn**	**14 40 34.5**	**-0.6**
CMCH				*i* S	**Sn**	**14 40 53.5**	**+0.6**
CMCH				AML	AML	14 41 01.0	
	comp=E,7μm,0.6s						
CHNG	**Los Chungos**	**2.15**	**187**	*i* P	**Pn**	**14 40 44.5**	**-0.3**
CHNG				*i* S	**Sn**	**14 41 10.8**	**+0.7**
CHNG	**Los Chungos**	**2.15**	**187**	*i* P	**Pn**	**14 40 44.5**	**-0.3**
CHNG				*i* S	**Sn**	**14 41 10.8**	**+0.7**
CHNG				AML	AML	14 41 24.0	
	comp=E,876nm,0.5s						
CPCH	**Copiapo**	**2.49**	**18**	*i* P	**Pn**	**14 40 49.4**	**-0.2**
CPCH				*i* S	**Sn**	**14 41 19.5**	**+0.7**
CPCH	**Copiapo**	**2.49**	**18**	*i* P	**Pn**	**14 40 49.4**	**-0.2**
CPCH				*i* S	**Sn**	**14 41 19.5**	**+0.7**
CDCH	**Caldera**	**2.69**	**7**	*e*P	**Pn**	**14 40 52.0**	**-0.2**
CDCH				*i* S	**Sn**	**14 41 24.2**	**+0.7**
CDCH	**Caldera**	**2.69**	**7**	*e*P	**Pn**	**14 40 52.0**	**-0.2**
CDCH				*i* S	**Sn**	**14 41 24.2**	**+0.7**
CDCH				AML	AML	14 41 37.4	
	comp=E,386nm,0.7s						
LVC	**Limon Verde**	**7.40**	**17**	*e*Pn	Pn	14 41 53.8	-3.3
	comp=E,12nm,0.4s						
PLCA	**Paso Flores**	**10.98**	**177**	P	**Pn**	**14 42 45.4**	**-0.5**
PLCA	**Paso Flores**	**10.98**	**177**	P	**Pn**	**14 42 45.4**	**-0.5**
	comp=E,0.1nm,0.3s,baz=350,slow=12,SNR=3.6						
TRQA	**Tornquist**	**11.29**	**140**	*e*P	**Pn**	**14 42 50.6**	**+0.5**
	comp=E,12nm,0.6s						
CPUP	**Villa Florida**	**12.73**	**78**	P	**Pn**	**14 43 10.9**	**+1.1**
CPUP	**Villa Florida**	**12.73**	**78**	P	**Pn**	**14 43 10.9**	**+1.1**
	comp=E,0.7nm,0.3s,baz=243,slow=16,SNR=5.5						
CPUP				LR	LR	14 48 33.8	
	comp=E,79nm,20.6s,baz=175,slow=39						
LPAZ	**La Paz**	**13.69**	**13**	P	**Pn**	**14 43 24.8**	**+1.2**
LPAZ	**La Paz**	**13.69**	**13**	P	**Pn**	**14 43 24.8**	**+1.2**
	comp=E,0.1nm,0.3s,baz=180,slow=11,SNR=6.1						
TORD	**Torodi Ar. Bea**	**82.10**	**70**	P	**P**	**14 52 27.1**	**-0.8**
TORD	**Torodi Ar. Bea**	**82.10**	**70**	P	**P**	**14 52 27.1**	**-0.8**
	comp=E,0.4nm,0.8s,baz=255,slow=5.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**150.21**	**29**	PKPbc	**PKPbc**	**14 59 56.4**	**-0.8**
ZALV				pPKPbc	**pPKPbc**	**15 00 09.1**	**-1.5**
ZALV	**Zalesovo Beam**	**150.21**	**29**	PKPbc	**PKPbc**	**14 59 56.4**	**-0.8**
	comp=E,1.2nm,0.4s,baz=304,slow=2.7,SNR=11						
ZALV				pPKPbc	**pPKPbc**	**15 00 09.1**	**-1.5**
	comp=E,1.5nm,0.7s,baz=297,slow=3.5,SNR=3.9						
MKAR	**Makanchi Array**	**153.31**	**43**	PKPbc	**PKPbc**	**15 00 04.0**	**-0.6**
MKAR	**Makanchi Array**	**153.31**	**43**	PKPbc	**PKPbc**	**15 00 04.0**	**-0.6**
	comp=E,0.2nm,0.7s,baz=288,slow=1.4,SNR=2.9						

*NNC **31** 14:43:01.2±8.1, 38°.16N×72°.09E, h242km±68km, mb2.3, mpv3.4, Error ellipse: s-maj=77.4km s-min=43.2km az=9.0*
ISC 31 14:43:00.4±3.7, 38°.2N±0°.2×71°.5E±0°.1, h113km, n11, σ1§69/11, 5C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**4.30**	**22**	P	**Pn**	**14 44 06.3**	**+2.1**
	SNR=180						
UCH	**Uchtor**	**4.66**	**28**	P	Sn	14 45 09.6	+6.9
	SNR=6.8						
EKS2	**Erkin-Say**	**4.81**	**20**	P	Pn	14 44 13.9	+3.1
	SNR=11						
KZA	**Kyzart**	**4.84**	**35**	P	**Pn**	**14 44 11.2**	**-0.2**
	SNR=26						
KK31	**Karatay Array**	**5.00**	**351**	↑P	Pn	14 44 17.1	+3.8
	6.0nm,0.7s,baz=162,slow=11,SNR=56						
KK31				S	Sn	14 45 20.3	+10
	5.6nm,0.3s,baz=172,slow=23,SNR=29						
AAK	**Ala-Archa**	**5.01**	**26**	P	**Pn**	**14 44 15.3**	**+1.8**
	SNR=11						
CHMS	**Chumysh**	**5.42**	**26**	P	**Pn**	**14 44 20.7**	**+1.8**
	SNR=6.7						
ULHL	**Ulahol**	**5.45**	**40**	P	**Pn**	**14 44 18.3**	**-1.1**
	SNR=8.4						
TKM2	**Tokmak 2**	**5.68**	**32**	↓‖P	**Pn**	**14 44 22.6**	**+0.1**
	2.4nm,0.8s						
TKM2				↑S	**Sn**	**14 45 26.1**	**-0.4**
	0.8nm,0.4s						
AB31	**Akbulak array**	**13.89**	**327**	P	**Pn**	**14 46 12.7**	**+0.5**
	0.3nm,0.5s,baz=191,slow=40,SNR=7.4						
AB31				↑S	**Sn**	**14 48 44.9**	**-0.3**
	1.4nm,0.5s						
AKTO	**Aktyubinsk**	**15.60**	**326**	↑P	**Pn**	**14 46 33.3**	**-0.5**
	2.2nm,0.9s						
AKTO				↑S	**Sn**	**14 49 23.3**	**-3.1**
	2.6nm,1.2s						

*ISCJB **31** 14:44:47.0±0.6, 6°.84N±0°.07×72°.96W±0°.05, h166km, mb3.6/8, Error ellipse: s-maj=9.7km s-min=6.9km az=156.8*
*IDC **31** 14:44:47.3±2.4, 6°.72N×73°.03W, h156km±20km, mb3.5/8, mb1 3.8/10, mb1mx3.5/24, mbtmp3.6/10, Error ellipse: s-maj=35.8km s-min=15.3km az=75.0*
*FUNV **31** 14:44:51.9, 6°.93N×72°.82W, h142km, MW3.6*
ISC 31 14:44:49.0±0.7, 6°.94N±0°.07×72°.80W±0°.08, h166km, n34, σ1§46/38, mb3.6/8, 14C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.04**	**28**	↑*i*P	**Pn**	**14 45 16.4**	**+0.5**
CAPV				*e*S	**Sn**	**14 45 33.7**	**-3.0**
SOCV	**Socops**	**2.35**	**55**	‖*e*P	**Pn**	**14 45 30.4**	**+1.3**
SOCV				*e*S	Sn	**14 45 58.1**	**-2.2**
VIGV	**El Vigia**	**2.37**	**37**	↑‖*i*P	**Pn**	**14 45 30.8**	**+1.4**
VIGV				*e*S	**Sn**

TUIG				*i* S		**Sn**	14 57 46.4	+0.6
PANG	**Puerto Angel**	**2.31**	**265**	*i* P		**Pn**	14 57 20.6	-1.0
PANG				*i* S		**Sn**	14 57 49.2	+0.1
OXBJ	**Oaxaca**	**2.80**	**296**	*i* P		**Pn**	14 57 28.7	+0.2
OXBJ				*i* S		**Sn**	14 58 01.5	+0.2
VHO	**Vista Hermosa**	**2.81**	**296**	*i* P		**Pn**	14 57 29.2	+0.5
VHO				*eS*		**Sn**	14 58 02.1	+0.5
PNIG	**Pinotepa**	**3.92**	**278**	*i* P		**Pn**	14 57 43.7	0.0
PNIG				*eS*		**Sn**	14 58 28.6	0.0
TPIG	**Tehuac#an**	**4.04**	**309**	*i* S		**Sn**	14 58 31.2	-0.3
UTMO	**Huajuapan**	**4.07**	**299**	*i* P		**Pn**	14 57 46.9	+1.2
UTMO				*i* S		**Sn**	14 58 32.9	+0.7
YAIG	**Yautepec**	**5.62**	**303**	*i* P		**Pn**	14 58 08.2	+1.2
YAIG				*i* S		**Sn**	14 59 10.2	0.0
CAIG	**El Cayaco**	**6.05**	**282**	*i* P		**Pn**	14 58 13.8	+1.0
CAIG				*i* S		**Sn**	14 59 20.4	-0.3
ARIG	**Puente Sto Nin**	**6.46**	**293**	*i* P		**Pn**	14 58 19.3	+1.0
ARIG				*eS*		**Sn**	14 59 30.9	+0.3
TEIG	**Tepich**	**7.02**	**51**	P		**Pn**	14 58 24.4	-1.5
	12nm,0.3s,baz=235,slow=2.2,SNR=54							
TEIG				S		**Sn**	14 59 39.9	-4.4
	6.6nm,0.3s,baz=80,slow=19,SNR=9.2							
TXAR	**Lajitas Array**	**16.05**	**328**	P		**P**	15 00 29.5	-0.1
	0.0nm,0.3s,baz=139,slow=13,SNR=5.0							
NVAR	**Mina Array Bea**	**30.96**	**321**	P		**P**	15 02 57.9	+1.1
	0.7nm,0.7s,baz=131,slow=7.6,SNR=8.1							
YKA	**Yellowknife Ar**	**48.77**	**347**	P		**P**	15 05 22.5	-1.0
	1.0nm,0.6s,baz=153,slow=7.2,SNR=14							
YKA				pP		pP	15 05 47.1	+6.3
	0.2nm,0.6s,baz=147,slow=8.1,SNR=3.9							

*ISK **31** 15:00:21.7, 39.°12N×29.°04E, h5km, MD2.9*
*DDA **31** 15:00:22.9, 39.°12N×29.°06E, h8km, MD2.9*
*CSEM **31** 15:00:23.2±0.1, 39.°13N×29.°07E, h2km, MD2.9, Error ellipse: s-maj=2.0km s-min=1.6km az=48.0*

ISC 31 15:00:23.4±1.0, **39.°13N**±0.°02×**29.°07E**±0.°02, **h5**km±11km, **n80**, σ0**945**/100, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DEMI	**Demirci**	**0.29**	**252**	*i* P		**Pg**	**15 00 29.2**	**+0.2**
DEMI				*i* S		**Sg**	**15 00 33.3**	**+0.5**
DEMI	**Demirci**	**0.29**	**252**	*i* P		**Pg**	**15 00 29.2**	**+0.2**
DEMI				*i* S		**Sg**	**15 00 33.3**	**+0.5**
GDZ	**Gediz**	**0.33**	**97**	*i* P		**Pg**	**15 00 29.5**	**-0.2**
GDZ				*i* S		**Sg**	**15 00 34.2**	**+0.1**
GDZ	**Gediz**	**0.33**	**97**	*i* P		**Pg**	**15 00 29.5**	**-0.2**
GDZ				*i* S		**Sg**	**15 00 34.2**	**+0.1**
TVSB	**Tavsanli**	**0.44**	**44**	*e*PG		**Pg**	**15 00 31.1**	**-0.8**
TVSB	**Tavsanli**	**0.44**	**44**	*e*Pg		**Pg**	**15 00 31.1**	**-0.8**
DST	**Dursunbey**	**0.59**	**324**	*e*PG		**Pg**	**15 00 34.3**	**-0.4**
DST				*e*SG		**Sg**	**15 00 42.4**	**+0.1**
DST	**Dursunbey**	**0.59**	**324**	*e*Pg		**Pg**	**15 00 34.3**	**-0.4**
DST				*e*Sg		**Sg**	**15 00 42.4**	**+0.1**
DURS	**Dursunbey**	**0.66**	**316**	*i* P		**Pg**	**15 00 35.8**	**-0.2**
DURS				*i* S		**Sg**	**15 00 44.9**	**+0.3**
DURS	**Dursunbey**	**0.66**	**316**	*i* P		**Pg**	**15 00 35.8**	**-0.2**
DURS				*i* S		**Sg**	**15 00 44.9**	**+0.3**
KULA	**Kula-Manisa**	**0.69**	**207**	*e*PG		**Pg**	**15 00 35.8**	**-0.9**
KULA	**Kula-Manisa**	**0.69**	**207**	*e*Pg		**Pg**	**15 00 35.8**	**-0.9**
ALT	**Altintas**	**0.82**	**95**	*e*PG		**Pg**	**15 00 39.1**	**+0.1**
ALT	**Altintas**	**0.82**	**95**	*e*Pg		**Pg**	**15 00 39.1**	**+0.1**
KHAL	**Karahalli**	**0.83**	**156**	*i* P		**Pg**	**15 00 39.1**	**-0.2**
KHAL				*i* S		**Sg**	**15 00 50.5**	**+0.5**
KHAL	**Karahalli**	**0.83**	**156**	*i* P		**Pg**	**15 00 39.1**	**-0.2**
KHAL				*i* S		**Sg**	**15 00 50.5**	**+0.5**
KHL	**Karahalli**	**0.88**	**156**	*e*PG		**Pg**	**15 00 39.7**	**-0.6**
KHL	**Karahalli**	**0.88**	**156**	*e*Pg		**Pg**	**15 00 39.7**	**-0.6**
ORLT	**Orhaneli**	**0.92**	**352**	*e*PG		**Pg**	**15 00 41.0**	**-0.1**
ORLT	**Orhaneli**	**0.92**	**352**	*e*Pg		**Pg**	**15 00 41.0**	**-0.1**
AKHS	**Akhisar**	**1.01**	**256**	*i* P		**Pg**	**15 00 42.7**	**0.0**
AKHS				*i* S		**Sb**	**15 00 56.3**	**-0.5**
AKHS	**Akhisar**	**1.01**	**256**	*i* P		**Pg**	**15 00 42.7**	**0.0**
AKHS				*i* S		**Sb**	**15 00 56.3**	**-0.5**
BALB	**Balikesir**	**1.05**	**299**	*e*PG		**Pg**	**15 00 42.9**	**-0.6**
BALB				*e*SG		**Sb**	**15 00 58.1**	**0.0**
BALB	**Balikesir**	**1.05**	**299**	*e*Pg		**Pg**	**15 00 42.9**	**-0.6**
BALB				*e*Sg		**Sb**	**15 00 58.1**	**0.0**
CAVI	**Cavuskoy**	**1.23**	**29**	*e*PN		**Pg**	**15 00 46.5**	**-0.4**
CAVI	**Cavuskoy**	**1.23**	**29**	*e*Pn		**Pg**	**15 00 46.5**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.24**	**354**	*e*PN		**Pg**	**15 00 46.6**	**-0.6**
MDNY	**Mudanya-Bursa**	**1.24**	**354**	*e*Pn		**Pg**	**15 00 46.7**	**-0.6**
KCTX	**Karacabey (Bur**	**1.26**	**334**	*e*PN		**Pg**	**15 00 46.6**	**-0.9**
KCTX	**Karacabey (Bur**	**1.26**	**334**	*e*Pn		**Pg**	**15 00 46.6**	**-0.9**
BALY	**Balya**	**1.27**	**299**	*i* P		**Pg**	**15 00 47.5**	**-0.3**
BALY				*i* S		**Sg**	**15 01 04.3**	**-0.1**
BALY	**Balya**	**1.27**	**299**	*i* P		**Pg**	**15 00 47.5**	**-0.3**
BALY				*i* S		**Sg**	**15 01 04.3**	**-0.1**
SHUT	**Suhut-Afyon**	**1.29**	**116**	*e*PN		**Pn**	**15 00 47.9**	**-0.3**
SHUT	**Suhut-Afyon**	**1.29**	**116**	*e*Pn		**Pn**	**15 00 47.9**	**-0.3**
GEMT	**Gemlik**	**1.31**	**4**	*e*PN		**Pn**	**15 00 48.1**	**-0.1**
GEMT	**Gemlik**	**1.31**	**4**	*e*Pn		**Pn**	**15 00 48.1**	**-0.1**
ADVT	**Abdulvahap**	**1.40**	**22**	*e*PN		**Pb**	**15 00 49.8**	**-0.1**
ADVT	**Abdulvahap**	**1.40**	**22**	*e*Pn		**Pb**	**15 00 49.8**	**-0.1**
GONE	**Gonen-Balikesi**	**1.41**	**311**	*e*PN		**Pn**	**15 00 49.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.41**	**311**	*e*Pn		**Pn**	**15 00 49.5**	**-0.1**
ESKT	**Eskisehir**	**1.44**	**74**	*e*PN		**Pn**	**15 00 50.4**	**+0.3**
ESKT	**Eskisehir**	**1.44**	**74**	*e*Pn		**Pn**	**15 00 50.4**	**+0.3**
DNZL	**Cakiroluk**	**1.44**	**181**	*i* P		**Pn**	**15 00 50.3**	**0.0**
DNZL				*i* S		**Sg**	**15 01 09.9**	**+0.3**
DNZL	**Cakiroluk**	**1.44**	**181**	*i* P		**Pn**	**15 00 50.3**	**0.0**
DNZL				*i* S		**Sg**	**15 01 09.9**	**+0.3**
ARMT	**Armutlu**	**1.44**	**354**	*e*PN		**Pn**	**15 00 50.5**	**+0.4**
ARMT	**Armutlu**	**1.44**	**354**	*e*Pn		**Pn**	**15 00 50.5**	**+0.4**
YLV	**Yalova**	**1.45**	**9**	*e*PN		**Pb**	**15 00 50.8**	**-0.1**
YLV	**Yalova**	**1.45**	**9**	*e*Pn		**Pb**	**15 00 50.8**	**-0.1**
GPA	**Golpazari**	**1.50**	**39**	*e*PN		**Pb**	**15 00 51.5**	**-0.2**
GPA	**Golpazari**	**1.50**	**39**	*e*Pn		**Pb**	**15 00 51.6**	**-0.2**
GULT	**Gulveren**	**1.71**	**40**	*e*PN		**Pn**	**15 00 54.5**	**+0.6**
GULT	**Gulveren**	**1.71**	**40**	*e*Pn		**Pn**	**15 00 54.5**	**+0.6**
BUY	**Buyukada**	**1.72**	**1**	*e*PN		**Pn**	**15 00 54.4**	**+0.5**
BUY	**Buyukada**	**1.72**	**1**	*e*Pn		**Pn**	**15 00 54.4**	**+0.5**
ISP	**Isparta**	**1.74**	**138**	*e*PN		**Pn**	**15 00 54.0**	**-0.2**
ISP	**Isparta**	**1.74**	**138**	*e*Pn		**Pn**	**15 00 54.1**	**-0.2**
AYDN	**Tasoluk**	**1.74**	**213**	*i* P		**Pb**	**15 00 55.5**	**-0.3**
AYDN				*i* S		**Sb**	**15 01 18.5**	**+0.6**
AYDN	**Tasoluk**	**1.74**	**213**	*i* P		**Pb**	**15 00 55.5**	**-0.3**
AYDN				*i* S		**Sb**	**15 01 18.5**	**+0.6**
MRMT	**Marmara Adasi**	**1.85**	**323**	*e*PN		**Pn**	**15 00 56.2**	**+0.3**
MRMT	**Marmara Adasi**	**1.85**	**323**	*e*Pn		**Pn**	**15 00 56.2**	**+0.3**
KRBG	**Karabiga-Canak**	**1.86**	**313**	*e*PN		**Pn**	**15 00 56.0**	**+0.2**
KRBG	**Karabiga-Canak**	**1.86**	**313**	*e*Pn		**Pn**	**15 00 56.0**	**+0.2**
ISK	**Istanbul-Kandi**	**1.93**	**360**	*e*PN		**Pn**	**15 00 57.5**	**+0.6**
ISK	**Istanbul-Kandi**	**1.93**	**360**	*e*Pn		**Pn**	**15 00 57.5**	**+0.6**
SVRH	**Sivrihisar-ESK**	**1.93**	**80**	*e*PN		**Pn**	**15 00 57.2**	**+0.3**
SVRH	**Sivrihisar-ESK**	**1.93**	**80**	*e*Pn		**Pn**	**15 00 57.2**	**+0.3**
BGKT	**Bogazkoy**	**2.06**	**354**	*e*PN		**Pn**	**15 00 59.4**	**+0.8**
BGKT	**Bogazkoy**	**2.06**	**354**	*e*Pn		**Pn**	**15 00 59.4**	**+0.8**
MDUB	**Mudurnu**	**2.12**	**50**	*e*PN		**Pn**	**15 01 00.1**	**+0.6**
MDUB	**Mudurnu**	**2.12**	**50**	*e*Pn		**Pn**	**15 01 00.1**	**+0.6**
KLYT	**Kilyos**	**2.12**	**360**	*e*PN		**Pn**	**15 01 00.4**	**+1.0**
KLYT	**Kilyos**	**2.12**	**360**	*e*Pn		**Pn**	**15 01 00.4**	**+1.0**
RKY	**Sarkoy-Tekirda**	**2.13**	**318**	*e*PN		**Pn**	**15 01 00.1**	**+0.5**
RKY	**Sarkoy-Tekirda**	**2.13**	**318**	*e*Pn		**Pn**	**15 01 00.1**	**+0.5**
CTKS	**Kestanelik-??a**	**2.15**	**349**	*e*PN		**Pn**	**15 01 00.1**	**+0.4**
CTKS	**Kestanelik-??a**	**2.15**	**349**	*e*Pn		**Pn**	**15 01 00.1**	**+0.4**
KIZT	**Kizilcal**	**2.21**	**96**	*e*PN		**Pn**	**15 01 01.4**	**+0.6**
KIZT	**Kizilcal**	**2.21**	**96**	*e*Pn		**Pn**	**15 01 01.4**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.37**	**303**	*e*PN		**Pn**	**15 01 03.0**	**+0.2**
GELI	**Tayfur-Gelibol**	**2.37**	**303**	*e*Pn		**Pn**	**15 01 03.0**	**+0.2**

IDC 31 15:11:40.3±1.6, **18.°85S**×**172.°99W**, **h0**km, **mb3.8**/5, **mb1 4.1**/6, **mb1mx3.9**/21, **mbtmp3.8**/6, **ML1.5**/1, **MS3.2**/4, **Ms1 3.2**/4, **ms1mx2.7**/34, **Error ellipse: s-maj=72.9km s-min=22.7km az=146.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**5.05**	**13**	Pn		Pn	15 12 55.4	-2.1
	1.1nm,0.3s,baz=115,slow=14,SNR=5.8							
AFI				Sn		Sn	15 13 50.6	-6.0
	3.5nm,0.3s,baz=154,slow=21,SNR=2.1							
RAR	**Rarotonga**	**12.64**	**103**	LR		LR	15 18 21.0	
	comp=Z,136nm,20.0s,baz=45,slow=32							
DZM	**Mont Dzumac**	**19.53**	**257**	LR		LR	15 22 35.6	
	comp=Z,56nm,18.5s,baz=65,slow=34							
PPT2	**Papeete2**	**22.27**	**91**	*e*LR		LR	15 21 37.9	
	122nm,26.0s							
PPT	**Papeete**	**22.27**	**90**	LR		LR	15 22 00.6	
	comp=Z,28nm,20.3s,baz=326,slow=28							
ASAR	**Alice Springs**	**49.50**	**255**	P		P	15 20 32.5	-0.5
	1.3nm,0.5s,baz=93,slow=7.5,SNR=25							
WRA	**Warramunga Arr**	**49.52**	**260**	P		P	15 20 32.6	-0.6
	0.7nm,0.6s,baz=97,slow=7.7,SNR=15							
NVAR	**Mina Array Bea**	**76.64**	**41**	P		P	15 23 33.7	+0.4
	0.6nm,0.7s,baz=227,slow=8.8,SNR=5.7							
KSRS	**Korea Array**	**78.89**	**316**	P		P	15 23 49.8	+4.2
	1.1nm,0.7s,baz=129,slow=6.4,SNR=5.4							
TXAR	**Lajitas Array**	**82.22**	**56**	P		P	15 24 02.5	-1.3
	0.5nm,1.0s,baz=276,slow=3.6,SNR=4.8							
ANMO	**Albuquerque**	**82.72**	**49**	LR		LR	15 53 01.0	
	comp=Z,25nm,18.3s,baz=301,slow=30							
ILAR	**Eielson Array**	**85.74**	**11**	P		P	15 24 21.9	+1.1
	0.4nm,0.6s,baz=228,slow=5.3,SNR=6.9							
BRTR	**Keskin Array B**	**149.02**	**318**	PKPbc		PKPbc	15 31 31.6	+0.8
	1.7nm,1.0s,baz=153,slow=1.0,SNR=6.0							

*THE **31** 15:25:01.9, 40.°65N×29.°45E, h0km±4km, ML3.7/3, Error ellipse: s-maj=8.1km s-min=2.9km az=40.0*
*ISCJB **31** 15:25:03.6±0.3, 40.°50N±0.°02×29.°14E±0.°02, h5km±3km, Error ellipse: s-maj=2.9km s-min=2.5km az=135.6*
*ISK **31** 15:25:03.4, 40.°49N×29.°14E, h5km, ML3.5*
*DDA **31** 15:25:03.8, 40.°47N×29.°17E, h12km, MD3.3*
*SOF **31** 15:25:04.3, 40.°65N×28.°96E, h9km, MD3.6*
*CSEM **31** 15:25:04.1±0.1, 40.°48N×29.°15E, h5km, ML3.5, Error ellipse: s-maj=2.5km s-min=2.2km az=39.0*
*ATH **31** 15:25:27.5, 40.°35N×27.°02E, h44km, MD3.7/5*

ISC 31 15:25:04.6±0.8, **40.°48N**±0.°02×**29.°14E**±0.°01, **h7**km±5km, **n180**, σ0**90**/216, **9C-3D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GEMT	**Gemlik**	**0.06**	**139**	PG		**Pg**	**15 25 05.4**	**-0.8**
GEMT				*e*SG		**Sg**	**15 25 07.5**	**+0.1**
GEMT	**Gemlik**	**0.06**	**139**	*i* Pg		**Pg**	**15 25 05.4**	**-0.8**
GEMT				*e*Sg		**Sg**	**15 25 07.5**	**+0.1**
YLV	**Yalova**	**0.20**	**63**	PG		**Pg**	**15 25 08.3**	**-0.4**
YLV				*e*SG		**Sg**	**15 25 11.5**	**+0.1**
YLV	**Yalova**	**0.20**	**63**	*i* Pg		**Pg**	**15 25 08.3**	**-0.4**
YLV				*e*Sg		**Sg**	**15 25 11.5**	**+0.1**
MDNY	**Mudanya-Bursa**	**0.22**	**241**	PG		**Pg**	**15 25 08.4**	**-0.7**
MDNY				*e*SG		**Sg**	**15 25 12.2**	**+0.1**
MDNY	**Mudanya-Bursa**	**0.22**	**241**	*i* Pg		**Pg**	**15 25 08.4**	**-0.7**
MDNY				*e*Sg		**Sg**	**15 25 12.2**	**+0.1**
ARMT	**Armutlu**	**0.23**	**293**	*e*PG		**Pg**	**15 25 09.2**	**+0.1**
ARMT	**Armutlu**	**0.23**	**293**	*e*Pg		**Pg**	**15 25 09.3**	**+0.1**
BUY	**Buyukada**	**0.38**	**357**	*i* P		**Pg**	**15 25 12.0**	**0.0**
BUY				*i* S		**Sg**	**15 25 17.8**	**+0.9**
BUY	**Buyukada**	**0.38**	**357**	*i* P		**Pg**	**15 25 12.0**	**0.0**
BUY				*i* S		**Sg**	**15 25 17.8**	**+0.9**
ADVT	**Abdulvahap**	**0.46**	**95**	*e*PG		**Pg**	**15 25 12.6**	**-0.9**
ADVT	**Abdulvahap**	**0.46**	**95**	*e*Pg		**Pg**	**15 25 12.6**	**-0.9**
ORLT	**Orhaneli**	**0.47**	**204**	*e*PG		**Pg**	**15 25 13.2**	**-0.4**
ORLT	**Orhaneli**	**0.47**	**204**	*e*Pg		**Pg**	**15 25 13.3**	**-0.4**
ISK	**Istanbul-Kandi**	**0.59**	**354**	*e*PG		**Pg**	**15 25 15.2**	**-0.9**
ISK	**Istanbul-Kandi**	**0.59**	**354**	*e*Pg		**Pg**	**15 25 15.2**	**-0.9**
CAVI	**Cavuskoy**	**0.60**	**117**	*e*PG		**Pg**	**15 25 15.1**	**-1.1**
CAVI	**Cavuskoy**	**0.60**	**117**	*e*Pg		**Pg**	**15 25 15.1**	**-1.1**
KCTX	**Karacabey (Bur**	**0.64**	**251**	*e*PG		**Pg**	**15 25 16.2**	**-0.7**
KCTX	**Karacabey (Bur**	**0.64**	**251**	*e*Pg		**Pg**	**15 25 16.2**	**-0.7**
BGKT	**Bogazkoy**	**0.76**	**338**	*e*PG		**Pg**	**15 25 18.3**	**-0.9**
BGKT				*e*SG		**Sg**	**15 25 28.9**	**-0.1**
BGKT	**Bogazkoy**	**0.76**	**338**	*e*Pg		**Pg**	**15 25 18.3**	**-0.9**
BGKT				*e*Sg		**Sg**	**15 25 28.9**	**-0.1**
SILT	**Sile**	**0.78**	**29**	*e*PG		**Pg**	**15 25 18.5**	**-1.1**
SILT	**Sile**	**0.78**	**29**	*e*Pg		**Pg**	**15 25 18.5**	**-1.1**
KLYT	**Kilyos**	**0.78**	**355**	*e*PG		**Pg**	**15 25 18.8**	**-0.8**
KLYT	**Kilyos**	**0.78**	**355**	*e*Pg		**Pg**	**15 25 18.8**	**-0.8**
ELBA	**Catalca**	**0.86**	**321**	*i* P		**Pg**	**15 25 21.1**	**-0.1**
ELBA				*i* S		**Sg**	**15 25 32.3**	**0.0**
ELBA	**Catalca**	**0.86**	**321**	*i* P		**Pg**	**15 25 21.1**	**-0.1**
ELBA				*i* S		**Sg**	**15 25 32.3**	**0.0**
CTKS	**Kestanelik-??a**	**0.90**	**328**	*e*PG		**Pg**	**15 25 21.0**	**-0.9**
CTKS	**Kestanelik-??a**	**0.90**	**328**	*e*Pg		**Pg**	**15 25 21.0**	**-0.9**
GPA	**Golpazari**	**0.91**	**102**	*e*PG		**Pg**	**15 25 21.1**	**-1.1**
SPNC	**Sapanca-Adapaz**	**0.91**	**76**	*e*PG		**Pg**	**15 25 21.1**	**-1.0**
SPNC	**Sapanca-Adapaz**	**0.91**	**76**	*e*Pg		**Pg**	**15 25 21.2**	**-1.0**
BNT	**Bandirma**	**0.94**	**263**	*e*PG		**Pg**	**15 25 21.8**	**-0.9**
BNT	**Bandirma**	**0.94**	**263**	*e*Pg		**Pg**	**15 25 21.8**	**-0.9**
DST	**Dursunbey**	**0.96**	**205**	*e*PG		**Pg**	**15 25 22.1**	**-1.0**
DST	**Dursunbey**	**0.96**	**205**	*e*Pg		**Pg**	**15 25 22.1**	**-1.0**
DURS	**Dursunbey**	**1.01**	**211**	*i* P		**Pg**	**15 25 23.0**	**-1.1**
DURS				*i* S		**Sb**	**15 25 38.7**	**+0.6**
DURS	**Dursunbey**	**1.01**	**211**	*i* P		**Pg**	**15 25 23.0**	**-1.1**
DURS				*i* S		**Sb**	**15 25 38.7**	**+0.6**
SLVT	**Silivri**	**1.03**	**317**	*e*PG		**Pg**	**15 25 23.5**	**-1.0**
SLVT	**Silivri**	**1.03**	**317**	*e*Pg		**Pg**	**15 25 23.5**	**-1.0**
GULT	**Gulveren**	**1.05**	**92**	*e*PG		**Pg**	**15 25 23.4**	**-1.4**
GULT	**Gulveren**	**1.05**	**92**	*e*Pg		**Pg**	**15 25 23.4**	**-1.4**
TVSB	**Tavsanli**	**1.05**	**166**	*e*PG		**Pg**	**15 25 23.8**	**-1.1**
TVSB	**Tavsanli**	**1.05**	**166**	*e*Pg		**Pg**	**15 25 23.8**	**-1.1**
MRMT	**Marmara Adasi**	**1.18**	**277**	*e*PN		**Pg**	**15 25 26.4**	**-1.0**
MRMT	**Marmara Adasi**	**1.18**	**277**	*e*Pn		**Pg**	**15 25 26.4**	**-1.0**
GONE	**Gonen-Balikesi**	**1.19**	**249**	*e*PN		**Pg**	**15 25 26.8**	**-0.7**
GONE	**Gonen-Balikesi**	**1.19**	**249**	*e*Pn		**Pg**	**15 25 26.8**	**-0.7**
BALB	**Balikesir**	**1.28**	**230**	*e*PN		**Pn**	**15 25 28.6**	**-0.3**
BALB	**Balikesir**	**1.28**	**230**	*e*Pn		**Pn**	**15 25 28.6**	**-0.3**
TKR	**Tekirdag**	**1.32**	**293**	*e*PN		**Pn**	**15 25 29.1**	**-0.5**
TKR	**Tekirdag**	**1.32**	**293**	*e*Pn		**Pn**	**15 25 29.1**	**-0.5**
BALY	**Balya**	**1.38**	**238**	*i* P		**Pn**	**15 25 30.2**	**-0.2**
BALY				*i* S		**Sb**	**15 25 49.1**	**+0.5**
BALY	**Balya**	**1.38**	**238**	*i* P		**Pn**	**15 25 30.2**	**-0.2**
BALY				*i* S		**Sb**	**15 25 49.1**	**+0.5**
HENT	**Hendek**	**1.38**	**75**	*i* P		**Pn**	**15 25 28.9**	**-1.4**
HENT				*i* S		**Sb**	**15 25 48.4**	**-0.3**
HENT	**Hendek**	**1.38**	**75**	*i* P		**Pn**	**15 25 29.0**	**-1.4**
HENT				*i* S		**Sb**	**15 25 48.4**	**-0.3**
KRBG	**Karabiga-Canak**	**1.41**	**267**	*e*PN		**Pn**	**15 25 30.5**	**-0.2**
KRBG	**Karabiga-Canak**	**1.41**	**267**	*e*Pn		**Pn**	**15 25 30.5**	**-0.2**
GDZ	**Gediz**	**1.41**	**169**	*i* P		**Pn**	**15 25 29.6**	**-1.3**
GDZ				*i* S		**Sn**	**15 25 50.0**	**+0.2**
GDZ	**Gediz**	**1.41**	**169**	*i* P		**Pn**	**15 25 29.6**	**-1.3**
GDZ				*i* S		**Sn**	**15 25 50.0**	**+0.2**
MFT	**Murefte**	**1.45**	**283**	*e*PN		**Pn**	**15 25 30.2**	**-1.2**
MFT	**Murefte**	**1.45**	**283**	*e*Pn		**Pn**	**15 25 30.2**	**-1.2**
DEMI	**Demirci**	**1.47**	**193**	*i* P		**Pn**	**15 25 29.9**	**-1.7**
DEMI				*i* S		**Sb**	**15 25 52.4**	**+1.1**
DEMI	**Demirci**	**1.47**	**193**	*i* P		**Pn**	**15 25 29.9**	**-1.7**
DEMI				*i* S		**Sb**	**15 25 52.4**	**+1.1**
RKY	**Sarkoy-Tekirda**	**1.51**	**279**	*e*PN		**Pn**	**15 25 31.8**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.51**	**279**	*e*Pn		**Pn**	**15 25 31.8**	**-0.4**
MDUB	**Mudurnu**	**1.57**	**90**	*e*PN		**Pn**	**15 25 32.6**	**-0.4**
MDUB	**Mudurnu**	**1.57**	**90**	*e*Pn		**Pn**	**15 25 32.6**	**-0.4**
ALT	**Altintas**	**1.60**	**152**	*e*PN		**Pn**	**15 25 33.4**	**-0.1**
ALT	**Altintas**	**1.60**	**152**	P		**Pn**	**15 25 32.1**	**-1.4**
ALT				S		**Sn**	**15 25 53.7**	**-0.8**
ALT	**Altintas**	**1.60**	**152**	P		**Pn**	**15 25 32.1**	**-1.4**
ALT	**Altintas**	**1.60**	**152**	*e*Pn		**Pn**	**15 25 33.4**	**-0.1**
ALT				S		**Sn**	**15 25 53.7**	**-0.8**
ESKT	**Eskisehir**	**1.62**	**126**	*e*PN		**Pn**	**15 25 33.0**	**-0.7**
ESKT	**Eskisehir**	**1.62**	**126**	*e*Pn		**Pn**	**15 25 33.1**	**-0.7**
LPK	**Lapseki**	**1.82**	**267**	*e*PN		**Pn**	**15 25 36.1**	**-0.2**
LPK	**Lapseki**	**1.82**	**267**	*e*Pn		**Pn**	**15 25 36.2**	**-0.2**
AKHS	**Akhisar**	**1.90**	**213**	*i* P		**Pn**	**15 25 35.7**	**-1.8**
AKHS				*i* S		**Sg**	**15 26 05.8**	**+0.3**
AKHS	**Akhisar**	**1.90**	**213**	*i* P		**Pn**	**15 25 35.7**	**-1.8**
AKHS				*i* S		**Sg**	**15 26 05.8**	**+0.3**
KDZE	**Karadeniz Ereo**	**1.94**	**64**	*e*PN		**Pn**	**15 25 37.6**	**-0.4**
KDZE	**Karadeniz Ereo**	**1.94**	**64**	*e*Pn		**Pn**	**15 25 37.6**	**-0.4**
KULA	**Kula-Manisa**	**2.00**	**191**	*e*PN		**Pn**	**15 25 38.8**	**-0.1**
KULA	**Kula-Manisa**	**2.00**	**191**	P		**Pn**	**15 25 37.1**	**-1.8**
KULA				S		**Sb**	**15 26 06.6**	**+0.2**
KULA	**Kula-Manisa**	**2.00**	**191**	P		**Pn**	**15 25 37.1**	**-1.8**
KULA	**Kula-Manisa**	**2.00**	**191**	*e*Pn		**Pn**	**15 25 38.8**	**-0.1**
KULA				S		**Sb**	**15 26 06.6**	**+0.2**
ERIK	**Erikli-Kesan**	**2.01**	**276**	*e*PN		**Pn**	**15 25 38.9**	**-0.1**
ERIK	**Erikli-Kesan**	**2.01**	**276**	*e*Pn		**Pn**	**15 25 38.9**	**-0.1**
GELI	**Tayfur-Gelibol**	**2.04**	**269**	*e*PN		**Pn**	**15 25 39.5**	**+0.1**
GELI	**Tayfur-Gelibol**	**2.04**	**269**	*e*Pn		**Pn**	**15 25 39.5**	**+0.1**
SVRH	**Sivrihisar-ESK**	**2.10**	**119**	*e*PN		**Pn**	**15 25 40.3**	**0.0**
SVRH	**Sivrihisar-ESK**	**2.10**	**119**	*e*Pn		**Pn**	**15 25 40.3**	**0.0**
KHL	**Karahalli**	**2.17**	**172**	*e*PN		**Pn**	**15 25 41.3**	**0.0**
KHL	**Karahalli**	**2.17**	**172**	*e*Pn		**Pn**	**15 25 41.3**	**0.0**
SHUT	**Suhut-Afyon**	**2.21**	**150**	*e*PN		**Pn**	**15 25 41.8**	**-0.1**
SHUT	**Suhut-Afyon**	**2.21**	**150**	*e*Pn		**Pn**	**15 25 41.8**	**-0.1**
BOLV	**Bolvadin**	**2.25**	**141**	*i* P		**Pb**	**15 25 45.9**	**+0.3**
BOLV				*i* S		**Sb**	**15 26 13.4**	**-0.2**
BOLV	**Bolvadin**	**2.25**	**141**	*i* P		**Pb**	**15 25 45.9**	**+0.3**
BOLV				*i* S		**Sb**	**15 26 13.4**	**-0.2**
**E

48nm,0.3s,baz=22,slow=26,SNR=3.5
MAJO Matsushiro 2.98 247 *e*P **Pn 15 33 50.9 +2.0**
MAJO Matsushiro 2.98 247 *e*P **Pn 15 33 50.9 +2.0**
MAT Matsushiro 2.98 247 P **Pn 15 33 50.7 +1.8**
MAT S Sn 15 34 30.1 +6.7
ERM Erimo 4.40 15 *e*P **Pn 15 34 06.9 -1.3**
ERM pmax pmax
comp=Z,117nm,2.5s
ERM Erimo 4.40 15 *e*P **Pn 15 34 06.6 -1.6**
JHJ Hachijo jima 2 4.88 198 P **Pn 15 34 14.2 -0.6**
comp=Z,82nm,0.3s,baz=49,slow=4.2,SNR=64
JHJ S **Sn 15 35 07.0 -3.1**
comp=Z,262nm,0.3s,baz=271,slow=24,SNR=11
ASAJ Asahikawa 6.38 6 *e*P **Pn 15 34 34.5 -0.7**
comp=Z,17nm,0.7s
ASAJ S **Sn 15 35 46.1 -0.5**
ASAJ Asahikawa 6.38 6 P **Pn 15 34 34.2 -1.0**
comp=Z,6.5nm,0.3s,baz=202,slow=14,SNR=80
ASAJ S **Sn 15 35 46.1 -0.5**
comp=Z,3.6nm,0.3s,baz=313,slow=31,SNR=1.7
YUK Yuzh-Kuril'sk 7.03 26 *i* P **Pn 15 34 41.3 -2.9**
YUK *i* S Sn 15 35 54.2 -8.5
YUK pmax pmax
comp=N,122nm,0.6s
YUK pmax pmax
comp=Z,128nm,0.6s
YUK pmax pmax
comp=E,89nm,0.6s
YUK smax smax
comp=N,315nm,0.3s
KUR Kuril'sk 8.80 30 P **Pn 15 35 07.0 -1.4**
KUR *e*S Sn 15 36 38.8 -7.3
KUR smax smax
comp=N,130nm,0.5s
KUR smax smax
comp=E,270nm,0.8s
VLA Vladivostok 9.13 309‖ *e*P **Pn 15 35 12.8 -0.1**
VLA *e*S **Sn 15 36 54.3 +0.3**
VLA pmax pmax
comp=Z,32nm,1.1s
YSS Yuzh-Sakhalins 9.21 5⇑ *e*P **Pn 15 35 15.0 +1.0**
YSS *e*S **Sn 15 36 55.0 -1.0**
YSS pmax pmax
comp=Z,20nm,0.8s
USRK Ussuriysk Arra 9.69 314 P **Pn 15 35 22.1 +1.5**
comp=Z,2.0nm,0.3s,baz=122,slow=14,SNR=25
USRK LR LR 15 38 55.0
comp=Z,259nm,20.9s,baz=76,slow=36
JNU Nakatsue 9.90 245 *e*P **Pn 15 35 26.1 +2.4**
comp=Z,16nm,0.8s
JNU Nakatsue 9.90 245 P **Pn 15 35 25.0 +1.4**
comp=Z,0.6nm,0.3s,baz=57,slow=12,SNR=8.1
KSRS Korea Array 10.86 272 P Pn 15 35 40.4 +3.8
comp=Z,1.6nm,0.3s,baz=83,slow=14,SNR=56
KSRS LR LR 15 39 39.7
comp=Z,190nm,20.9s,baz=354,slow=36
KSAR Wonju Array Be 10.89 272 P Pn 15 35 40.4 +3.4
MDJ Mudanjiang 11.33 311 P Pn 15 35 46.8 +3.8
MDJ pmax pmax
comp=Z,12nm,1.6s
MDJ pmax pmax
comp=Z,69nm,4.6s
MDJ LR LR
comp=N,180nm,25.8s
MDJ LR LR
comp=E,180nm,26.4s
MDJ LR LR
comp=Z,290nm,27.1s
MDJ Mudanjiang 11.33 311 P **Pn 15 35 43.5 +0.5**
comp=Z,20nm,0.9s
HABR Khabarovsk 11.71 338 P **Pn 15 35 46.7 -1.4**
HABR S **Sn 15 37 51.5 -5.5**
HABR pmax pmax
comp=E,39nm,1.6s
HABR pmax pmax
comp=Z,28nm,1.6s
HABR pmax pmax
comp=N,27nm,1.6s
HABR MLR MLR
comp=Z,146nm,15.0s
KLR Kul'dur 13.48 331 *e*P **Pn 15 36 12.2 0.0**
CN2 Changchun 13.63 301 *e*P **P 15 36 21.3 +0.1**
CN2 *es*P 15 36 40.5
CN2 *e*S Sn 15 38 51.8 +7.8
CN2 *e*SS **S 15 39 09.0 +5.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
CN2 LR LR
comp=Z,200nm,15.0s
PEA0B Petropavlovsk- 18.97 31 *e*P **Pn 15 37 20.8 -0.6**
PETK Petropavlovsk- 18.97 31 P **P 15 37 20.1 0.0**
PETK MLR MLR
comp=Z,42nm,20.6s
PETK Petropavlovsk- 18.97 31 P **P 15 37 20.1 0.0**
PETK Petropavlovsk- 18.97 31 P **P 15 37 20.1 0.0**
comp=Z,0.2nm,0.3s,baz=204,slow=9.1,SNR=17
PETK LR LR 15 44 26.2
comp=Z,42nm,20.6s,baz=220,slow=36
NJ2 Nanjing 19.49 260 *e*P **P 15 37 23.5 -2.5**
NJ2 pP **pP 15 37 35.5 -3.7**
NJ2 sP **sP 15 37 43.5 -3.4**
NJ2 S **S 15 40 56.0 -7.0**
NJ2 sS sS 15 41 18.5 -5.8
NJ2 pmax pmax
comp=Z,10.0nm,0.9s
NJ2 pmax pmax
comp=Z,80nm,5.3s
NJ2 LR LR
comp=N,140nm,18.1s
NJ2 LR LR
comp=E,180nm,13.6s
NJ2 LR LR
comp=Z,140nm,16.2s
HIA Hailar 19.50 313 P **Pn 15 37 28.3 +0.5**
comp=Z,7.2nm,0.7s
BJI Beijing 19.90 284 P **P 15 37 29.5 -0.9**
BJI S **S 15 41 09.0 -1.9**
BJI pmax pmax
comp=Z,14nm,0.5s
BJI pmax pmax
comp=Z,64nm,3.7s
BJI LR LR
comp=N,76nm,21.7s
BJI LR LR
comp=E,100nm,22.4s
BJI LR LR
comp=Z,120nm,30.1s
CLNS Chul'man 22.07 335 *e*P **P 15 37 56.0 +2.4**
CLNS pmax pmax
comp=Z,15nm,0.9s
CLNS pmax pmax
comp=N,10.0nm,1.0s
CLNS pmax pmax
comp=E,7.0nm,1.0s
YULB Yu-li 22.54 236 *e*P **P 15 37 56.4 -2.6**
comp=E,8.7nm,0.8s
TPUB Ta-pu 23.05 237 *e*P **P 15 38 00.9 -3.3**
comp=E,10nm,0.5s
TWG Pinlang 23.09 236 *e*P **P 15 38 03.2 -1.4**
comp=E,44nm,0.5s
HHC Hu-ho-hao-te 23.39 287‖ *e*P **P 15 38 07.3 -0.1**
HHC pP **pP 15 38 21.5 +0.1**
HHC sP **sP 15 38 29.0 0.0**
HHC PP **PnPn 15 38 40.0 +3.9**
HHC S **S 15 42 10.8 -5.0**
HHC sS Sn 15 42 34.8 -4.5
HHC SS **SnSn 15 43 00.3 +4.0**
HHC PcS **PcS 15 45 33.3 +1.7**
HHC pmax pmax
comp=Z,44nm,1.0s
HHC pmax pmax
comp=Z,170nm,5.3s
HHC LR LR
comp=N,360nm,20.2s
HHC LR LR
comp=E,350nm,20.2s
HHC LR LR
comp=Z,330nm,21.4s
WHN Wuhan 23.62 260 P **P 15 38 09.5 0.0**
YAK Yakutsk 25.38 347 *e*P **P 15 38 24.1 -1.0**
YAK *e**PP **pP 15 38 41.6 +1.6**
YAK *e* 15 39 04.5
YAK *e* 15 41 55.3
YAK *e*S **S 15 42 42.7 -4.3**
YAK *e* 15 49 13.2
YAK pmax pmax
comp=Z,53nm,0.9s
YAK pmax pmax
comp=N,16nm,1.0s
YAK pmax pmax
comp=Z,122nm,4.8s
YAK pmax pmax
comp=N,64nm,4.8s
YAK pmax pmax
comp=E,96nm,3.7s
YAK smax smax
comp=N,34nm,1.5s
YAK smax smax
comp=E,24nm,1.3s
SEY Seymchan 26.03 11*d* *i*P **P 15 38 32.4 +1.3**
XAN Xi'an 26.66 272 P **P 15 38 36.3 -0.8**
XAN pmax pmax
comp=Z,3.0nm,0.7s
SONM Songino Array 27.50 303 P **P 15 38 44.8 +0.2**
SONM pP **pP 15 38 58.3 -1.3**
SONM Songino Array 27.50 303 P **P 15 38 44.8 +0.2**
comp=Z,15nm,0.8s,baz=99,slow=8.6,SNR=90
SONM pP **pP 15 38 58.3 -1.3**
comp=Z,5.4nm,0.8s,baz=104,slow=8.3,SNR=6.4
SONM LR LR 15 50 04.6
comp=Z,69nm,19.1s,baz=61,slow=37
ENH Enshi 27.55 264 *e*P **P 15 38 44.1 -1.1**
comp=Z,37nm,0.8s
ZAK Zakamensk 29.93 307 *e*P **P 15 39 05.9 -0.3**
ZAK pmax pmax
comp=Z,9.0nm,1.0s
TLY Talaya 29.96 310 *e*P **P 15 39 06.8 +0.5**
TLY pmax pmax
comp=Z,7.0nm,0.7s
TLY MLR MLR
comp=Z,65nm,16.0s
LZH Lanzhou 30.10 278 *e*P P 15 39 11.5 +3.6
LZH pmax pmax
comp=Z,16nm,1.0s
LZH LR LR
comp=N,98nm,15.3s
LZH LR LR
comp=E,160nm,13.1s
LZH LR LR
comp=Z,140nm,14.7s
GYA Guiyang 31.50 259 *e*P **P 15 39 22.0 +1.8**
GYA pP **pP 15 39 37.5 +2.1**
GYA sP **sP 15 39 44.3 +1.7**
GYA PP **PnPn 15 40 25.5 +0.1**
GYA PcP **PcP 15 42 13.3 +1.3**
GYA S **S 15 44 23.8 -0.5**
GYA ScP **ScP 15 45 49.5 -0.2**
GYA ScS **ScS 15 49 45.0 -2.9**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.8s
MOY Mondy 31.58 309 *e*P **P 15 39 20.7 0.0**
CD2 Chengdu 31.83 269 P **P 15 39 24.0 +1.0**
CD2 pP **pP 15 39 39.5 +1.3**
CD2 sP **sP 15 39 47.0 +1.6**
CD2 PP **PnPn 15 40 31.0 +1.5**
CD2 PcP **PcP 15 42 14.5 +1.8**
CD2 S **S 15 44 28.0 -1.2**
CD2 sS **sS 15 44 54.5 -0.5**
CD2 SS **SnSn 15 46 21.5 -0.5**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,100nm,5.6s
CD2 LR LR
comp=N,170nm,16.2s
CD2 LR LR
comp=E,180nm,21.6s
CD2 LR LR
comp=Z,140nm,15.7s
GTA Gaotai 32.50 286 *e*P **P 15 39 28.5 -0.4**
GTA pP **pP 15 39 43.3 -0.7**
GTA sP **sP 15 39 50.5 -0.7**
GTA PcP **PcP 15 42 15.5 +1.0**
GTA S **S 15 44 37.0 -2.6**
GTA sS **sS 15 45 02.8 -2.6**
GTA SS **SnSn 15 46 36.0 -2.1**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,99nm,5.2s
GTA LR LR
comp=N,100nm,19.5s
GTA LR LR
comp=E,130nm,20.2s
GTA LR LR
comp=Z,150nm,21.9s
BILL Bilibino 33.27 17⇑ *e*P **P 15 39 34.0 -1.1**
BILL *e* 15 40 45.5
BILL MLR MLR
comp=Z,100nm,21.0s
QIZ Qiongzhong 33.38 245 P **P 15 39 37.5 +0.9**
QIZ sP **sP 15 39 59.5 +0.5**
QIZ S **S 15 44 54.0 +0.7**
QIZ pmax pmax
comp=Z,7.0nm,0.9s
QIZ LR LR
comp=Z,95nm,22.9s
TIXI Tiksi 34.57 353*ce* P **P 15 39 45.4 -0.9**
TIXI pmax pmax
comp=Z,4.0nm,0.7s
TIXI MLR MLR
comp=Z,258nm,24.0s
KMI Kunming 35.23 260 P **P 15 39 55.5 +2.7**
KMI S **S 15 45 20.3 -1.9**
KMI pmax pmax
comp=Z,45nm,0.9s
KMI LR LR
comp=N,72nm,23.3s
KMI LR LR
comp=E,88nm,22.1s
KMI LR LR
comp=Z,110nm,23.3s
TNA Tin City 40.13 30 *e*P **P 15 40 34.7 +1.3**
comp=Z,4.7nm,0.8s
WMQ Urumqi 40.64 296 P **P 15 40 39.5 +1.4**
WMQ pP **pP 15 40 54.8 +1.2**
WMQ sP **sP 15 41 02.0 +1.3**
WMQ PP **PnPn 15 42 17.5 +0.5**
WMQ PcP **PcP 15 42 41.3 +2.5**
WMQ PcS **PcS 15 46 30.8 +1.2**
WMQ S **S 15 46 44.5 +1.0**
WMQ sS **sS 15 47 10.5 +0.7**
WMQ pmax pmax
comp=Z,34nm,0.8s
WMQ pmax pmax
comp=Z,120nm,2.6s
WMQ LR LR
comp=N,60nm,17.4s
WMQ LR LR
comp=E,94nm,26.6s
WMQ LR LR
comp=Z,100nm,26.6s
ZAA0 Zalesovo Array 41.53 312 *e*P **P 15 40 44.2 -0.9**
ZALV Zalesovo Beam 41.53 312 P **P 15 40 44.8 -0.3**
ZALV 15 42 41.0
ZALV pmax pmax
comp=Z,18nm,0.7s
ZALV MLR MLR
comp=Z,55nm,20.3s
ZALV Zalesovo Beam 41.53 312 P **P 15 40 44.8 -0.3**
ZALV PcP **PcP 15 42 41.0 -0.4**
ZALV Zalesovo Beam 41.53 312 P **P 15 40 44.8 -0.3**
comp=Z,18nm,0.7s,baz=89,slow=7.5,SNR=102
ZALV PcP **PcP 15 42 41.0 -0.4**
comp=Z,3.8nm,0.7s,baz=102,slow=3.3,SNR=5.1
ZALV LR LR 15 58 44.7
comp=Z,55nm,20.3s,baz=70,slow=37
CHTO Chiang Mai 41.63 255 *e*P **P 15 40 44.3 -2.0**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 41.63 255 *e*P **P 15 40 44.3 -2.0**
comp=Z,3.9nm,0.7s
CMAR Chiang Mai Arr 41.84 255 P **P 15 40 47.9 -0.2**
CMAR pP **pP 15 41 03.3 -0.3**
CMAR sP **sP 15 41 09.2 -1.5**
CMAR Chiang Mai Arr 41.84 255 P **P 15 40 47.9 -0.2**
comp=Z,1.9nm,0.7s,baz=44,slow=7.0,SNR=14
CMAR pP **pP 15 41 03.3 -0.3**
comp=Z,1.0nm,0.6s,baz=52,slow=11,SNR=3.6
CMAR sP **sP 15 41 09.2 -1.5**
comp=Z,1.3nm,0.7s,baz=43,slow=4.1,SNR=4.0
CMAR LR LR 16 00 04.9
comp=Z,42nm,19.2s,baz=324,slow=39
LSA Lhasa 42.30 274 P **P 15 40 52.3 +0.1**
LSA Lhasa 42.30 274 *e*P **P 15 40 53.2 +1.0**
LSA pmax pmax
comp=Z,9.0nm,0.8s
LSA Lhasa 42.30 274 *e*P **P 15 40 53.2 +1.0**
comp=Z,8.8nm,0.8s
NVS Novosibirsk 42.44 313 *e*P **P 15 40 52.3 -0.2**
NVS *e*S **S 15 47 07.7 -1.8**
NVS pmax pmax
comp=Z,22nm,0.9s
NVS pmax pmax
comp=N,2.0nm,0.6s
NVS pmax pmax
comp=E,10.0nm,0.6s
NVS smax smax
comp=N,5.0nm,1.5s
NVS smax smax
comp=E,6.0nm,1.5s
MK31 Makanchi Array 43.86 301 *i* P **P 15 41 03.7 -0.4**
MK31 pmax pmax
comp=Z,8.0nm,0.5s
MK31 Makanchi Array 43.86 301 *e*P **P 15 41 04.0 -0.1**
MKAR Makanchi Array 43.86 301 P **P 15 41 03.9 -0.2**
MKAR *PP **pP 15 41 19.1 -0.6**
MKAR 15 42 49.4
MKAR pmax pmax
comp=Z,9.0nm,0.7s
MKAR MLR MLR
comp=Z,34nm,19.0s
MKAR Makanchi Array 43.86 301 P **P 15 41 03.9 -0.2**
MKAR pP **pP 15 41 19.1 -0.6**
MKAR PcP **PcP 15 42 49.4 0.0**
MKAR Makanchi Array 43.86 301 P **P 15 41 03.9 -0.2**
comp=Z,8.9nm,0.7s,baz=84,slow=9.4,SNR=97
MKAR pP **pP 15 41 19.1 -0.6**
comp=Z,2.2nm,0.6s,baz=74,slow=5.2,SNR=4.7
MKAR PcP **PcP 15 42 49.4 0.0**
comp=Z,1.3nm,0.7s,baz=49,slow=4.4,SNR=2.1
MKAR LR LR 15 59 55.7
comp=Z,34nm,19.0s,baz=52,slow=37
KURK Kurchatov 45.60 308*c* *i*P **P 15 41 17.5 -0.3**
KURK pmax pmax
comp=Z,40nm,0.9s
KURK Kurchatov 45.60 308 *e*P **P 15 41 17.5 -0.3**
comp=Z,30nm,0.7s
TAPN Taplejung 46.05 273 *e*P **P 15 41 22.1 +0.1**
comp=Z,14nm,0.4s
KSM Kuching 46.18 226 *e*P **P 15 41 23.4 +0.6**
comp=Z,6.7nm,0.6s
ODAN Odare 46.52 273 *e*P **P 15 41 25.9 +0.2**
comp=Z,48nm,1.0s
RAMN Ramite 47.11 274 *e*P **P 15 41 30.3 0.0**
comp=Z,71nm,1.0s
KAPI Kappang 47.18 210 LR LR 16 02 11.9
comp=Z,28nm,19.0s,baz=160,slow=37
GUN Gumba 47.24 275 *e*P **P 15 41 31.5 +0.1**
comp=Z,23nm,0.3s
PKI Pulchoki 47.76 275 *e*P **P 15 41 35.3 -0.2**
comp=Z,36nm,0.8s
KKN Kakani 47.77 275 *e*P **P 15 41 35.3 0.0**
comp=Z,58nm,0.9s
PKIN Phulchoki 47.77 275 *e*P **P 15 41 36.2 +0.8**
comp=Z,15nm,0.6s
DMN Daman 47.98 275 *e*P **P 15 41 37.2 +0.1**
DANN Dangsing 48.71 277 *e*P **P 15 41 43.2 +0.5**
comp=Z,190nm,0.7s
ILAR Eielson Array 48.78 33 P **P 15 41 42.5 +0.1**
ILAR pP **pP 15 41 58.2 -0.1**
ILAR Eielson Array 48.78 33 P **P 15 41 42.5 +0.1**
comp=Z,2.5nm,0.6s,baz=265,slow=6.0,SNR=27
ILAR pP **pP 15 41 58.2 -0.1**
comp=Z,2.3nm,0.7s,baz=268,slow=6.2,SNR=5.3
KOLN Koldanda 49.10 276 *e*P **P 15 41 45.8 +0.2**
comp=Z,34nm,0.8s
ULHL Ulahol 49.16 297 P **P 15 41 46.4 +0.4**
SNR=10.0
TKM2 Tokmak 2 49.41 298 *i* P **P 15 41 48.7 +0.9**
TKM2 Tokmak 2 49.41 298 *e*P **P 15 41 48.4 +0.6**
comp=Z,30nm,0.6s
TKM2 Tokmak 2 49.41 298 P **P 15 41 48.8 +0.9**
SNR=77
KZA Kyzart 49.92 297 P **P 15 41 53.2 +1.3**
SNR=31
KBK Karagaybulak 49.95 298 P **P 15 41 52.6 +0.7**
SNR=21
CHMS Chumysh 49.98 298 P **P 15 41 52.1 +0.2**
SNR=6.7
USP Ospenovka 50.07 299 P **P 15 41 52.7 +0.1**
SNR=5.4
BVA0 Borovoye Array 50.19 312 *i* P **P 15 41 51.5 -1.8**
BVA0 pmax pmax
comp=Z,5.0nm,0.7s
BVAR Borovoye Array 50.19 312 P **P 15 41 52.9 -0.4**
BVAR *PP **pP 15 42 07.5 -1.7**
BVAR 15 43 11.6
BVAR pmax pmax
comp=Z,5.0nm,0.6s
BVAR Borovoye Array 50.19 312 P **P 15 41 52.9 -0.4**
BVAR pP **pP 15 42 07.5 -1.7**
BVAR PcP **PcP 15 43 11.6 -0.1**
BVAR Borovoye Array 50.19 312 P **P 15 41 52.9 -0.4**
comp=Z,5.4nm,0.6s,baz=72,slow=7.7,SNR=30
BVAR pP **pP 15 42 07.5 -1.7**
comp=Z,2.8nm,0.5s,baz=68,slow=8.3,SNR=5.5
BVAR PcP **PcP 15 43 11.6 -0.1**
comp=Z,5.1nm,0.7s,baz=69,slow=3.3,SNR=6.4
BRVK Borovoye 50.24 312*ce* P **P 15 41 53.6 -0.1**
BRVK pmax pmax
comp=Z,6.0nm,0.6s
BRVK Borovoye 50.24 312 *e*P **P 15 41 53.5 -0.1**
comp=Z,7.9nm,0.8s
KSH Kashi 50.24 294⇑ *i*P P 15 41 58.3 +4.2
KSH *es*P sP 15 42 20.8 +3.8
KSH *e*PcP **PcP 15 43 16.0 +3.7**
KSH *e*PP PP 15 43 55.0 +5.3
KSH *e*S **S 15 49 05.5 +3.5**
KSH *es*S sS 15 49 34.3 +5.4
KSH *e*SS **SS 15 52 37.5 +1.8**
KSH pmax pmax
comp=Z,18nm,0.8s
KSH LR LR
comp=N,160nm,3.4s
KSH LR LR
comp=E,110nm,3.2s
KSH LR LR
comp=Z,88nm,4.4s
AAK Ala-Archa 50.27 298*c* *i*P **P 15 41 54.4 +0.1**
AAK pmax pmax
comp=Z,23nm,0.7s
AAK Ala-Archa 50.27 298 *e*P **P 15 41 54.4 +0.1**
comp=Z,7.4nm,0.6s
AAK Ala-Archa 50.27 298 P **P 15 41 54.6 +0.3**
SNR=11
EKS2 Erkin-Say 50.77 298 *e*P **P 15 41 57.9 0.0**
EKS2 pmax pmax
comp=Z,11nm,0.7s
EKS2 Erkin-Say 50.77 298 *e*P **P 15 41 57.9 0.0**
comp=Z,11nm,0.7s
EKS2 Erkin-Say 50.77 298 P **P 15 41 58.2 +0.3**
SNR=17
AML Almayashu 51.00 298 P **P 15 42 01.0 +0.9**
SNR=45
KK31 Karatay Array 52.89 300 *i* P **P 15 42 13.3 -0.3**
KK31 pmax pmax
comp=Z,4.0nm,0.5s
KKAR Karatay Array 52.89 300 *e*P **P 15 42 13.4 -0.2**
KKAR pmax pmax
comp=Z,10.0nm,0.8s
KKAR Karatay Array 52.89 300 *e*P **P 15 42 13.4 -0.2**
comp=Z,10nm,0.8s
SVE Sverdlovsk 54.69 318*de* P **P 15 42 26.9 +0.4**
SVE pmax pmax
comp=Z,47nm,0.8s
ARU Arti 55.91 318*c* *i*P **P 15 42 35.2 0.0**
ARU *PP **pP 15 42 50.3 -1.1**
ARU 15 43 34.9

ARU 15 44 39.8
ARU S **S** **15 50 15.4 -2.7**
ARU pmax pmax
comp=Z,45nm,0.8s
ARU Arti 55.91 318 P **P** **15 42 35.2 0.0**
comp=Z,428nm,0.5s,SNR=15
KBL Kabul 57.29 291 *e*P **P** **15 42 45.1 -0.6**
KBL pmax pmax
comp=Z,24nm,1.0s
KBL Kabul 57.29 291 *e*P **P** **15 42 45.1 -0.6**
comp=Z,24nm,1.0s
FITZ Fitzroy Crossi 57.58 198 *e*P **P** **15 42 48.1 +0.7**
comp=Z,2.8nm,0.5s
FITZ pP **pP** **15 43 03.2 -0.5**
FITZ Fitzroy Crossi 57.58 198 P **P** **15 42 48.1 +0.7**
comp=Z,5.6nm,0.6s,baz=11,slow=8.1,SNR=25
FITZ pP **pP** **15 43 03.2 -0.5**
comp=Z,3.1nm,0.7s,baz=20,slow=5.1,SNR=3.0
AB31 Akbulak array 57.58 310 *i* P **P** **15 42 46.4 -0.8**
AB31 pmax pmax
comp=Z,9.0nm,0.4s
ABKAR Akbulak array 57.58 310 *e*P **P** **15 42 46.9 -0.4**
comp=Z,14nm,0.5s
WRAB Tennant Creek 57.81 188 *e*P **P** **15 42 48.8 -0.2**
WRAB *e**PP **pP** **15 43 05.2 -0.1**
WRAB pmax pmax
comp=Z,15nm,0.8s
WRAB Tennant Creek 57.81 188 *e*P **P** **15 42 48.8 -0.2**
comp=Z,15nm,0.8s
WRAB *ep*P **pP** **15 43 05.2 -0.1**
WRA Warramunga Arr 57.82 188 P **P** **15 42 48.7 -0.4**
WRA pP **pP** **15 43 05.3 -0.1**
WRA Warramunga Arr 57.82 188 P **P** **15 42 48.7 -0.4**
comp=Z,10.0nm,0.5s,baz=6.0,slow=7.3,SNR=68
WRA pP **pP** **15 43 05.3 -0.1**
comp=Z,15nm,0.6s,baz=6.0,slow=7.3,SNR=16
AKTO Aktyubinsk 58.29 312 *i* P **P** **15 42 52.0 -0.2**
AKTO pmax pmax
comp=Z,15nm,0.8s
AKTO Aktyubinsk 58.29 312 LR LR 16 09 12.0
comp=Z,46nm,21.0s,baz=110,slow=37
HYB Hyderabad 58.38 268 *i* P **P** **15 42 52.0 -1.3**
HYB *e* 15 43 15.0
LVZ Lovozero 61.49 336 P P 15 43 04.4 -10
comp=Z,225nm,0.9s,SNR=7.3
AS31 Alice Springs 61.54 188 *e*P **P** **15 43 14.6 -0.1**
AS31 *ep*P **pP** **15 43 31.6 +0.5**
ASAR Alice Springs 61.55 188 P **P** **15 43 14.6 -0.2**
ASAR pP **pP** **15 43 30.9 -0.2**
ASAR Alice Springs 61.55 188 P **P** **15 43 14.6 -0.2**
comp=Z,4.5nm,0.8s,baz=12,slow=6.4,SNR=48
ASAR pP **pP** **15 43 31.0 -0.2**
comp=Z,7.1nm,0.7s,baz=11,slow=7.2,SNR=17
APA Apatity 62.07 336⇑ *i*P **P** **15 43 17.8 +0.1**
APA pmax pmax
comp=Z,13nm,0.7s
APA MLR MLR
comp=Z,400nm,19.0s
YKW3 Yellowknife Ar 63.05 30 *e*P **P** **15 43 24.4 +0.1**
YKA Yellowknife Ar 63.09 30 P **P** **15 43 24.7 +0.1**
YKA pP **pP** **15 43 41.2 +0.1**
YKA sP **sP** **15 43 48.1 +0.2**
YKA PcP **PcP** **15 44 02.2 +0.5**
YKA Yellowknife Ar 63.09 30 P **P** **15 43 24.7 +0.1**
comp=Z,2.0nm,0.6s,baz=302,slow=6.7,SNR=24
YKA pP **pP** **15 43 41.2 +0.1**
comp=Z,2.7nm,0.8s,baz=299,slow=6.8,SNR=7.7
YKA sP **sP** **15 43 48.1 +0.2**
comp=Z,1.2nm,0.8s,baz=301,slow=6.5,SNR=3.1
YKA PcP **PcP** **15 44 02.2 +0.5**
comp=Z,1.1nm,0.8s,baz=300,slow=5.9,SNR=4.0
KLMR Klimovskoe 63.21 328 *e*P **P** **15 43 24.0 -1.4**
KLMR *e**PP **pP** **15 43 39.9 -2.0**
KLMR *e* 15 44 02.7
KLMR *e* 15 45 43.1
KLMR *e*SS SS 15 55 57.1 -1.1
KLMR pmax pmax
comp=Z,11nm,0.6s
ARCES ARCESS Array B 63.35 339 P **P** **15 43 25.7 -0.6**
ARCES ARCESS Array B 63.35 339 P **P** **15 43 25.7 -0.6**
comp=Z,6.5nm,0.8s,baz=57,slow=7.4,SNR=6.1
DAG Danmarks Havn 65.05 355 *i* P **P** **15 43 36.9 -0.3**
DAG pmax pmax
comp=Z,7.0nm,0.9s
DAG Danmarks Havn 65.05 355 *i* P **P** **15 43 36.9 -0.3**
comp=Z,8.0nm,0.9s
JOF Joensuu 65.38 332 *e*P **P** **15 43 40.0 +0.4**
JOF pmax pmax
comp=Z,7.0nm,0.5s
JOF Joensuu 65.38 332 *ep* **P** **15 43 40.0 +0.4**
comp=Z,6.9nm,0.5s
KAF Kangasniemi 67.72 333 *e*P **P** **15 43 54.5 0.0**
KAF pmax pmax
comp=Z,20nm,0.6s
KAF Kangasniemi 67.72 333 *ep* **P** **15 43 54.5 0.0**
comp=Z,20nm,0.6s
FINES FINESS Array B 68.23 332 P **P** **15 43 57.4 -0.3**
FINES FINESS Array B 68.23 332 P **P** **15 43 57.4 -0.3**
comp=Z,27nm,0.7s,baz=53,slow=7.4,SNR=86
FINES LR LR 16 19 02.5
comp=Z,51nm,18.2s,baz=15,slow=40
STKA Stephens Creek 69.30 180 *e*P **P** **15 44 05.1 +0.5**
comp=Z,1.7nm,0.6s
STKA pP **pP** **15 44 22.2 +0.9**
STKA *ep*P **pwP** **15 44 22.4 +1.1**
STKA Stephens Creek 69.30 180 P **P** **15 44 05.2 +0.6**
comp=Z,2.7nm,0.6s,baz=34,slow=5.9,SNR=10
STKA pP **pP** **15 44 22.2 +0.9**
comp=Z,7.9nm,0.6s,baz=347,slow=7.6,SNR=13
FORT Forrest 69.37 192 *e*P **P** **15 44 05.5 +0.5**
comp=Z,15nm,0.6s
FORT *ep*P **pP** **15 44 22.7 +0.9**
NEW Newport 69.49 44⇑P **P** **15 44 06.7 +0.9**
baz=69
SUMG Summit 69.94 0 *e*P **P** **15 44 09.3 +0.7**
SUMG pmax pmax
comp=Z,6.0nm,0.8s
SUMG Summit 69.94 0 *e*P **P** **15 44 09.3 +0.7**
comp=Z,6.3nm,0.8s
SUMG Summit 69.94 0 *i* P **P** **15 44 09.3 +0.7**
comp=Z,6.6nm,0.9s
C11A Tepee Creek (N 70.21 44⇑P **P** **15 44 11.5 +1.2**
baz=70
KBZ Khabaz 70.53 311 P **P** **15 44 12.7 +0.5**
KBZ pmax pmax
comp=Z,20nm,0.9s
KBZ MLR MLR
comp=Z,41nm,21.9s
KBZ Khabaz 70.53 311 P **P** **15 44 12.7 +0.5**
KBZ Khabaz 70.53 311 P **P** **15 44 12.7 +0.5**
comp=Z,20nm,0.9s,baz=71,slow=3.3,SNR=43
KBZ LR LR 16 15 46.0
comp=Z,41nm,21.9s,baz=15,slow=36
KIV Kislovodsk 70.53 311 *e*P **P** **15 44 12.7 +0.3**
KIV pmax pmax
comp=Z,51nm,0.9s
KIV MLR MLR
comp=Z,32nm,19.0s
KIV Kislovodsk 70.53 311 P **P** **15 44 13.6 +1.2**
comp=Z,341nm,0.8s,SNR=8.1
WALA Waterton Lakes 70.78 42 *e*P **P** **15 44 14.5 +0.6**
comp=Z,0.1nm,0.7s
B13A Whitefish 70.88 43 P **P** **15 44 16.0 +1.6**
baz=71,SNR=9.9
A14A Double T Ranch 71.10 42 P **P** **15 44 17.0 +1.3**
baz=71,SNR=5.1
C13A Hot Springs 71.23 44⇓P **P** **15 44 17.5 +1.0**
baz=71
GNI Garni 71.38 307 *e*P **P** **15 44 18.4 +0.7**
comp=Z,15nm,0.9s
GNI Garni 71.38 307 LR LR 16 17 59.0
comp=Z,39nm,19.8s,baz=267,slow=38
A15A Johnson Ranch, 71.46 42⇓P **P** **15 44 18.8 +0.9**
baz=71,SNR=6.1
B14A Marquette Ranc 71.54 43 P **P** **15 44 19.9 +1.4**
baz=71,SNR=8.7
D13A Huson 71.64 44⇓P **P** **15 44 19.9 +0.9**
baz=71
SWMT Swartz Lake 71.64 44 *e*P **P** **15 44 20.0 +0.9**
comp=Z,1.2nm,0.5s
IZAR Zarasai 71.86 327 *e*P **P** **15 44 20.5 +0.5**
IZAR AMB AMB 15 44 21.0
comp=Z,8.8nm,0.6s
IDID Didziasalis 71.94 327 *e*P **P** **15 44 20.9 +0.5**
IDID AMB AMB 15 44 21.5
comp=Z,10nm,0.8s

B15A Bradely Ranch, 71.95 42 P **P** **15 44 22.0 +1.1**
baz=72,SNR=14
F12A Elk City 71.97 46⇓P **P** **15 44 22.3 +1.2**
baz=72
ISAL Salakas 72.03 327 *e*P **P** **15 44 21.5 +0.5**
ISAL AMB AMB 15 44 22.2
comp=Z,14nm,0.8s
A16A West Butte Ran 72.08 42⇑P **P** **15 44 21.7 0.0**
baz=72
SLMT Seeley Lake 72.08 44 *e*P **P** **15 44 22.4 +0.6**
comp=Z,3.1nm,0.6s
IIGN Ignalina 72.14 327 *e*P **P** **15 44 22.2 +0.5**
IIGN AMB AMB 15 44 22.8
comp=Z,11nm,0.7s
D14A Greenough 72.17 44⇑P **P** **15 44 22.7 +0.4**
baz=72
C15A Salmond Ranch, 72.25 43⇑P **P** **15 44 23.3 +0.6**
baz=72,SNR=7.1
B16A M & M Farms, S 72.34 42⇓P **P** **15 44 23.4 +0.2**
baz=72,SNR=5.3
A17A Triple J Farms 72.55 41⇓P **P** **15 44 25.1 +0.7**
baz=72
C16A Fuhringer Ranc 72.69 43⇑P **P** **15 44 25.8 +0.5**
baz=72
B17A L&G Farms, Che 72.90 42⇓P **P** **15 44 26.8 +0.3**
baz=73
FFC Flin Flon 73.00 33 *i* P **P** **15 44 27.6 +0.8**
FFC Flin Flon 73.00 33 *e*P **P** **15 44 27.0 +0.2**
comp=Z,7.9nm,1.0s
FFC *ep*P **pP** **15 44 44.1 +0.5**
A18A Metzger Ranch, 73.01 41⇑P **P** **15 44 27.6 +0.5**
baz=73,SNR=5.3
MFID Camas Ranch 73.01 48⇓P **P** **15 44 26.6 -0.7**
baz=73
E15A Deer Lodge 73.04 44⇑P **P** **15 44 26.4 -1.1**
baz=73
I12A Atlanta 73.20 47⇑P **P** **15 44 29.5 +1.0**
baz=73
D16A Dana Ranch, Ca 73.27 43⇑P **P** **15 44 29.9 +1.1**
baz=73
HFS Hagfors 73.47 336 LR LR 16 19 52.0
comp=Z,71nm,18.3s,baz=225,slow=38
F15A Butte 73.47 45⇑P **P** **15 44 31.1 +1.0**
baz=73,SNR=9.5
E16A East Helena 73.50 44⇓P **P** **15 44 30.4 +0.3**
baz=73
LRM Limekiln Ridge 73.51 45 *e*P **P** **15 44 31.3 +0.9**
comp=Z,69nm,1.0s
NB2 NORSAR Subarra 73.56 337 P **P** **15 44 29.8 -0.3**
comp=Z,21nm,0.9s,baz=40,slow=5.9
NB2 NORSAR Subarra 73.56 337 P **P** **15 44 29.8 -0.3**
baz=40,slow=5.9
NOA NORSAR Array B 73.56 337 P **P** **15 44 29.9 -0.3**
NOA NORSAR Array B 73.56 337 P **P** **15 44 29.9 -0.3**
comp=Z,13nm,0.8s,baz=39,slow=5.8,SNR=49
NOA LR LR 16 18 00.8
comp=Z,55nm,20.3s,baz=30,slow=37
DLMT Dillon 73.71 45 *e*P **P** **15 44 32.7 +1.3**
comp=Z,7.5nm,1.0s
I13A Wildhorse Cree 73.72 47⇓P **P** **15 44 32.9 +1.4**
baz=74
HLID Hailey 73.75 47 *e*P **P** **15 44 32.8 +1.1**
comp=Z,2.0nm,0.9s
B19A Brinkman Farms 73.77 41⇑P **P** **15 44 32.2 +0.6**
baz=74
AKASG Malin Array Be 73.80 322 P **P** **15 44 31.1 -0.5**
AKASG *PP **pP** **15 44 48.9 +0.4**
AKASG pmax pmax
comp=Z,13nm,0.5s
AKASG Malin Array Be 73.80 322 P **P** **15 44 31.1 -0.5**
AKASG pP **pP** **15 44 48.9 +0.4**
AKASG Malin Array Be 73.80 322 P **P** **15 44 31.1 -0.5**
comp=Z,12nm,0.5s,baz=45,slow=5.9,SNR=51
AKASG pP **pP** **15 44 48.9 +0.4**
comp=Z,3.0nm,0.5s,baz=45,slow=6.3,SNR=3.7
AK01 Malin Array Si 73.81 322 *e*P **P** **15 44 31.2 -0.5**
KIEV Kiev 73.81 322 *e*P **P** **15 44 30.9 -0.8**
KIEV pmax pmax
comp=Z,6.0nm,0.6s
KIEV Kiev 73.81 322 *e*P **P** **15 44 30.9 -0.8**
comp=Z,5.6nm,0.6s
AK02 Malin Array Si 73.84 322 *e*P **P** **15 44 31.3 -0.6**
G15A Dillon 73.89 45⇑P **P** **15 44 33.5 +1.0**
baz=74,SNR=5.9
E17A Martinsdale 73.99 43⇓P **P** **15 44 34.4 +1.3**
baz=74
J13A Cove Ranch, Pi 73.99 47⇑P **P** **15 44 34.8 +1.7**
baz=74,SNR=5.3
BOZ Bozeman (W) 74.07 44 *e*P **P** **15 44 34.6 +1.0**
BOZ *e**PP **pP** **15 44 50.9 +0.5**
BOZ pmax pmax
comp=Z,4.0nm,1.0s
BOZ Bozeman (W) 74.07 44 *e*P **P** **15 44 34.5 +1.0**
comp=Z,3.8nm,1.0s
BOZ *ep*P **pP** **15 44 50.9 +0.5**
I14A Mackay 74.09 47 P **P** **15 44 35.5 +1.8**
baz=74,SNR=11
C19A Slack Wire Ran 74.16 41 P **P** **15 44 35.4 +1.5**
baz=74,SNR=16
G16A Moss Hill, Enn 74.23 45⇓P **P** **15 44 35.7 +1.2**
baz=74
J14A Carey 74.42 47⇑P **P** **15 44 37.9 +2.3**
baz=74
NVAR Mina Array Bea 74.42 53 P **P** **15 44 36.7 +1.0**
NVAR pP **pP** **15 44 54.0 +1.3**
NVAR Mina Array Bea 74.42 53 P **P** **15 44 36.7 +1.0**
comp=Z,2.6nm,0.8s,baz=290,slow=5.9,SNR=20
NVAR pP **pP** **15 44 54.0 +1.3**
comp=Z,1.0nm,0.5s,baz=294,slow=5.3,SNR=5.2
E18A Harlowton 74.44 43⇓P **P** **15 44 37.0 +1.4**
baz=74
F17A Fitzpatrick Pl 74.45 44⇓P **P** **15 44 37.0 +1.3**
baz=74
D19A Cripps Ranch, 74.61 42⇓P **P** **15 44 37.8 +1.2**
baz=74,SNR=6.3
C20A Veseth Ranch, 74.72 41⇑P **P** **15 44 37.7 +0.6**
baz=74
B21A Ellsworth Farm 74.77 40⇑P **P** **15 44 37.7 +0.3**
baz=74
H16A Russell Place, 74.87 45⇓P **P** **15 44 39.3 +1.0**
baz=75
SIM Simferopol' 74.90 315*c* *i*P **P** **15 44 38.0 -0.2**
SIM pmax pmax
comp=Z,25nm,0.8s
F18A Big Timber 74.96 43 P **P** **15 44 40.1 +1.5**
baz=75,SNR=7.8
A22A Carney Farms, 74.96 39⇑P **P** **15 44 38.9 +0.4**
baz=75
D20A Manuel Ranch, 75.05 42 P **P** **15 44 40.5 +1.4**
baz=75,SNR=7.6
E19A Rath Farm, Rou 75.11 42⇓P **P** **15 44 41.1 +1.7**
baz=75,SNR=7.4
C21A Desert Coulee 75.12 41⇓P **P** **15 44 40.6 +1.2**
baz=75
I16A Newdale 75.25 46⇑P **P** **15 44 42.1 +1.7**
baz=75,SNR=14
F19A Roth Farm, Mol 75.41 43⇑P **P** **15 44 42.5 +1.3**
baz=75
E20A Meyer Farm, Mu 75.43 42⇓P **P** **15 44 42.2 +0.9**
baz=75,SNR=7.4
IMW Indian Meadow 75.54 45 *e*P **P** **15 44 43.6 +1.4**
comp=Z,5.4nm,0.7s
IMW *ep*P **pP** **15 45 00.8 +1.7**
MOOW Moose Ponds 75.74 45 *e*P **P** **15 44 44.6 +1.3**
comp=Z,2.6nm,0.9s
B23A Brockton 75.77 39⇓P **P** **15 44 44.3 +1.2**
baz=76
TPAW Teton Pass 75.79 46 *e*P **P** **15 44 45.3 +1.7**
comp=Z,5.5nm,0.8s
TPAW *ep*P **pP** **15 45 02.2 +1.6**
R11A Troy Canyon, C 76.18 52⇓P **P** **15 44 47.0 +1.2**
baz=76
G20A Bridger 76.21 43⇑P **P** **15 44 46.4 +0.6**
baz=76
MPMC Manual Prospec 76.35 55⇓P **P** **15 44 47.7 +0.9**
baz=76
HWUT Hardware Ranch 76.61 48 *e*P **P** **15 44 48.9 +0.6**
comp=Z,7.8nm,1.4s
EDW2 Edwards Air Fo 76.72 56⇓P **P** **15 44 50.1 +1.3**
baz=76
BEL Belsk 76.90 327 *e*P **P** **15 44 50.2 +0.8**
E23A Ismay 76.91 41⇓P **P** **15 44 50.9 +1.2**
baz=77,SNR=6.0
J19A Crowheart 77.00 45⇓P **P** **15 44 52.1 +1.7**
baz=77,SNR=5.8
BW06 Boulder Array 77.04 46 *e*P **P** **15 44 51.0 +0.4**
comp=Z,2.2nm,0.8s

PDAR Pinedale Array 77.04 46 P **P** **15 44 51.0 +0.3**
PDAR pP **pP** **15 45 08.4 +0.8**
PDAR Pinedale Array 77.04 46 P **P** **15 44 51.0 +0.3**
comp=Z,2.6nm,0.6s,baz=272,slow=2.7,SNR=18
PDAR pP **pP** **15 45 08.4 +0.8**
comp=Z,3.3nm,0.5s,baz=301,slow=1.1,SNR=12
I20A Worland 77.08 44⇑P **P** **15 44 52.4 +1.7**
baz=77
F23A Volborg 77.38 41⇑P **P** **15 44 52.9 +0.6**
baz=77,SNR=6.5
E24A Baker 77.39 40⇓P **P** **15 44 52.8 +0.5**
baz=77
J20A Shoshoni 77.49 44⇓P **P** **15 44 53.9 +0.9**
baz=77
DAU Daniels Canyon 77.55 48 *e*P **P** **15 44 54.8 +1.2**
DAU *e**PP **pP** **15 45 12.8 +2.2**
DAU pmax pmax
comp=Z,2.0nm,0.7s
DAU Daniels Canyon 77.55 48 *e*P **P** **15 44 54.8 +1.2**
comp=Z,1.9nm,0.7s
DAU *ep*P **pP** **15 45 12.8 +2.2**
KWP Kalwaria Pacla 77.61 324 *e*P **P** **15 44 54.1 +0.6**
I21A Big Trails, Te 77.62 44⇑P **P** **15 44 55.3 +1.5**
baz=77,SNR=6.0
TLCR 77.63 318⇓P **P** **15 44 53.9 +0.3**
TLCR 77.63 318⇓*i*P **P** **15 44 53.9 +0.3**
TUQ Turquoise Moun 77.74 55⇑P **P** **15 44 55.7 +1.1**
baz=78
BUR08 Bucovina Ar. S 77.81 322 *e*P **P** **15 44 54.8 +0.1**
BURAR Bucovina Array 77.82 322⇑*i*P **P** **15 44 55.3 +0.5**
TESR Tescani 77.86 320⇓*i*P **P** **15 44 55.0 +0.1**
ARUT Antelope Range 77.86 52 P **P** **15 44 56.3 +1.0**
ARUT *e**PP **pP** **15 45 13.5 +1.3**
ARUT pmax pmax
comp=Z,1.0nm,0.5s
ARUT Antelope Range 77.86 52 P **P** **15 44 56.3 +1.0**
comp=Z,1.4nm,0.5s
ARUT *ep*P **pP** **15 45 13.5 +1.3**
I22A 9 Mile Ranch, 78.01 43⇑P **P** **15 44 57.1 +1.1**
baz=78
VRI Vrincioaia 78.26 320⇓P **P** **15 44 57.8 +0.7**
VRI Vrincioaia 78.26 320⇓*i*P **P** **15 44 57.8 +0.7**
KOLS Kolonicke sedl 78.31 324 *e*P **P** **15 44 57.5 +0.2**
KOLS pmax pmax
comp=Z,8.0nm,1.1s
KOLS Kolonicke sedl 78.31 324 *e*P **P** **15 44 57.5 +0.2**
J22A Midwest 78.33 44 P **P** **15 44 58.6 +0.8**
baz=78,SNR=9.1
K21A Alcova 78.42 45⇓P **P** **15 44 59.3 +1.0**
baz=78
STHS Stebnicka Huta 78.44 325 *e*P **P** **15 44 59.1 +1.1**
STHS pmax pmax
comp=Z,7.0nm,0.9s
STHS Stebnicka Huta 78.44 325 *e*P **P** **15 44 59.1 +1.1**
BR131 Keskin Array S 78.47 312 *e*P **P** **15 44 58.8 +0.2**
comp=Z,3.0nm,0.6s
BRTR Keskin Array B 78.47 312 P **P** **15 44 58.6 0.0**
BRTR Keskin Array B 78.47 312 P **P** **15 44 58.6 0.0**
comp=Z,4.1nm,0.6s,baz=81,slow=4.1,SNR=22
BRTR LR LR 16 22 33.9
comp=Z,18nm,18.8s,baz=104,slow=38
H24A Dirks Ranch, A 78.48 42 P **P** **15 44 58.9 +0.4**
baz=78,SNR=5.8
OJC Ojcow 78.51 326 *e*P **P** **15 44 58.8 +0.4**
P18A Preston Nutter 78.64 48⇓P **P** **15 45 01.9 +2.1**
baz=78
CRVS Cervenica-Dubn 78.71 324 *e*P **P** **15 44 58.2 -1.3**
CRVS pmax pmax
comp=Z,5.0nm,1.0s
CRVS Cervenica-Dubn 78.71 324 *e*P **P** **15 44 58.2 -1.3**
TRPA Tarpa 78.75 323⇓*i*P **P** **15 45 01.0 +1.3**
L21A Rawlins 78.79 45⇓P **P** **15 45 02.0 +1.6**
baz=78
SRU San Rafael 78.81 49⇑P **P** **15 45 01.4 +0.9**
baz=79,SNR=7.1
K22A Casper 78.81 44⇑P **P** **15 45 01.1 +0.7**
baz=79
NIE Niedzica 78.86 325 *e*P **P** **15 45 01.5 +1.1**
N20A Spence Gulch, 79.02 47⇑P **P** **15 45 03.0 +1.3**
baz=79
P19A Cripple Cowboy 79.39 48 P **P** **15 45 05.0 +1.4**
baz=79,SNR=5.3
VOIR 79.41 320⇑P **P** **15 45 04.4 +0.9**
VOIR 79.41 320⇑*i*P **P** **15 45 04.3 +0.8**
U15A North Rim 79.43 52⇓P **P** **15 45 05.7 +1.7**
baz=79,SNR=5.5
KECS Kecovo 79.46 325 *e*P **P** **15 45 03.9 +0.3**
KECS pmax pmax
comp=Z,2.0nm,0.9s
KECS Kecovo 79.46 325 *e*P **P** **15 45 03.9 +0.3**
BSEG Bad Segeberg 79.47 333 *e*P **P** **15 45 04.1 +0.6**
comp=Z,30nm,0.9s
BSEG Bad Segeberg 79.47 333 *e*P **P** **15 45 04.1 +0.6**
BSEG pmax pmax
comp=Z,30nm,0.9s
N21A Black Mountain 79.50 46⇑P **P** **15 45 05.3 +1.0**
baz=79
OKC Ostrava-Krasne 79.51 327 *e*P **P** **15 45 04.3 +0.4**
OKC Ostrava-Krasne 79.51 327⇑*e*P **P** **15 45 04.3 +0.4**
KSP Ksiaz 79.55 328⇑*e*P **P** **15 45 04.5 +0.4**
KSP Ksiaz 79.55 328 *e*P **P** **15 45 04.7 +0.6**
DRGR 79.62 322⇑P **P** **15 45 05.0 +0.4**
DRGR 79.62 322⇑*i*P **P** **15 45 05.0 +0.4**
ARR Arges 79.67 320⇓*i*P **P** **15 45 06.0 +1.1**
MORC Moravsky Berou 79.82 327⇑P **P** **15 45 06.3 +0.7**
MORC Moravsky Berou 79.82 327 *e*P **P** **15 45 05.4 -0.2**
comp=Z,13nm,0.9s
MORC Moravsky Berou 79.82 327⇑*i*P **P** **15 45 06.3 +0.7**
DPC Dobruska-Polom 79.91 328⇑*i*P **P** **15 45 06.9 +0.8**
DPC Dobruska-Polom 79.91 328⇑P **P** **15 45 06.9 +0.8**
UPC Upice 79.92 328⇑*i*P **P** **15 45 06.5 +0.4**
UPC Upice 79.92 328⇑P **P** **15 45 06.5 +0.4**
KRLC Kraliky 79.92 328 *e*P **P** **15 45 06.6 +0.4**
KRLC Kraliky 79.92 328⇑*e*P **P** **15 45 06.6 +0.4**
S18A Hurst Farm, Bl 80.04 50⇓P **P** **15 45 08.0 +0.7**
baz=80,SNR=6.6
LOT Lotru 80.05 321⇑*i*P **P** **15 45 07.4 +0.4**
PSZ Piszkesteto 80.14 324 *e*P **P** **15 45 08.0 +0.6**
PSZ pmax pmax
comp=Z,13nm,0.9s
PSZ Piszkesteto 80.14 324⇑P **P** **15 45 08.4 +1.0**
PSZ Piszkesteto 80.14 324 *e*P **P** **15 45 08.0 +0.6**
comp=Z,13nm,0.9s
PSZ Piszkesteto 80.14 324⇑*i*P **P** **15 45 08.4 +1.0**
VYHS Vyhne 80.20 325 *e*P **P** **15 45 08.2 +0.6**
VYHS pmax pmax
comp=Z,5.0nm,1.0s
VYHS Vyhne 80.20 325 *e*P **P** **15 45 08.2 +0.6**
O22A Kremmling 80.45 46⇓P **P** **15 45 10.5 +0.9**
baz=80
BRG Berggiesshubel 80.49 329 *e*P **P** **15 45 09.2 +0.1**
comp=Z,8.5nm,0.8s
BRG Berggiesshubel 80.49 329 *e*P **P** **15 45 09.4 +0.3**
comp=Z,8.0nm,0.8s
BRG Berggiesshubel 80.49 329 *e*P **P** **15 45 09.2 +0.1**
BRG pmax pmax
comp=Z,9.0nm,0.8s
PVCC Panska Ves 80.50 329 *e*P **P** **15 45 09.9 +0.7**
PVCC Panska Ves 80.50 329⇑*e*P **P** **15 45 09.9 +0.7**
CLL Collm 80.53 330 *e*P **P** **15 45 09.3 0.0**
comp=Z,22nm,1.0s
CLL Collm 80.53 330⇑*i*P **P** **15 45 09.1 -0.2**
CLL pmax pmax
comp=Z,22nm,1.0s
CLL Collm 80.53 330⇑*i*P **P** **15 45 09.1 -0.2**
comp=Z,22nm,1.0s
CLL *i* sP **sP** **15 45 32.3 -0.8**
VRAC Vranov 80.58 327⇓*i*P **P** **15 45 10.7 +1.0**
WUAZ Wupatki 80.58 52 *e*P **P** **15 45 10.8 +0.7**
comp=Z,3.1nm,1.0s
WUAZ *ep*P **pP** **15 45 28.6 +1.4**
WUAZ Wupatki 80.58 52⇑P **P** **15 45 11.6 +1.4**
baz=80
NRDL Niedersach Rie 80.69 332 *e*P **P** **15 45 10.3 +0.2**
comp=Z,8.0nm,0.9s
BZS Buzias 80.99 322⇓P **P** **15 45 12.2 +0.3**
BZS Buzias 80.99 322⇓*i*P **P** **15 45 12.2 +0.3**
TREC Trest 81.06 328 *e*P **P** **15 45 12.6 +0.3**
TREC Trest 81.06 328⇑*e*P **P** **15 45 12.6 +0.3**
TANN Tannenbergstha 81.44 330 *e*P **P** **15 45 14.4 +0.1**
comp=Z,4.0nm,1.0s
NKC Novy Kostel 81.59 330 *i* P **P** **15 45 14.8 -0.2**
NKC Novy Kostel 81.59 330⇑*i*P **P** **15 45 14.8 -0.2**
MOX Moxa 81.59 330 *e*P **P** **15 45 15.2 +0.2**
comp=Z,16nm,1.5s

MOX					*e*L		L	16 26 12.9		
	comp=Z,49nm,18.7s									
MOX	**Moxa**	**81.59**	**330**		*e*P		**P**	**15 45 15.2**	**+0.2**
MOX						pmax	pmax			
	comp=Z,16nm,1.5s									
IBBN	**Ibbenburen**	**81.69**	**333**		*e*P		**P**	**15 45 15.7**	**+0.2**
	comp=Z,20nm,0.7s									
214A	**Organ Pipe Nat**	**81.93**	**56**	⇓	P		**P**	**15 45 18.0**	**+0.8**
	baz=82									
CONA	**Conrad Observa**	**81.94**	**327**	⇑	*i* P		**P**	**15 45 17.8**	**+0.8**
	comp=Z,9.7nm,0.8s									
PKSM	**Moragy**	**81.98**	**324**	⇓	P		**P**	**15 45 16.7**	**-0.4**
PKSM	**Moragy**	**81.98**	**324**	⇓	*i* P		**P**	**15 45 16.7**	**-0.4**
KHC	**Kasperske Hory**	**81.99**	**328**		*i* P		**P**	**15 45 17.3**	**+0.1**
KHC					*e*			15 45 35.6		
KHC	**Kasperske Hory**	**81.99**	**328**		*e*P		**P**	**15 45 17.3**	**+0.1**
	comp=Z,13nm,1.0s									
KHC	**Kasperske Hory**	**81.99**	**328**	⇑	*i* P		**P**	**15 45 17.3**	**+0.1**
KHC					*e*pP		**pP**	**15 45 35.6**	**+1.3**
ROTZ	**Rotzenmuhle**	**82.05**	**330**		*e*P		**P**	**15 45 18.2**	**+0.8**
	comp=Z,26nm,1.7s									
UBBA	**Unterbreizbach**	**82.08**	**331**		*e*P		**P**	**15 45 17.8**	**+0.4**
	comp=Z,8.0nm,1.4s									
GEC2	**GERESS Array S**	**82.16**	**328**		*e*P		**P**	**15 45 18.2**	**+0.1**
	comp=Z,11nm,1.3s									
GEC2	**GERESS Array S**	**82.16**	**328**		*e*P		**P**	**15 45 18.2**	**+0.1**
GEC2						pmax	pmax			
	comp=Z,11nm,1.3s									
GERES	**GERESS Array B**	**82.16**	**328**		P		**P**	**15 45 17.9**	**-0.2**
GERES	**GERESS Array B**	**82.16**	**328**		P		**P**	**15 45 17.9**	**-0.2**
	comp=Z,5.0nm,0.7s,baz=37,slow=5.8,SNR=41									
GERES						LR	LR	16 27 02.6		
	comp=Z,37nm,18.4s,baz=74,slow=39									
R23A	**Moffat**	**82.19**	**47**	⇓	P		**P**	**15 45 20.5**	**+1.7**
	baz=82									
WET	**Wettzell**	**82.27**	**329**		*e*P		**P**	**15 45 19.1**	**+0.5**
	comp=Z,10.0nm,1.1s									
WET	**Wettzell**	**82.27**	**329**		*e*P		**P**	**15 45 19.1**	**+0.5**
WET						pmax	pmax			
	comp=Z,10.0nm,1.1s									
U21A	**Nageezi**	**82.28**	**50**	⇑	P		**P**	**15 45 20.6**	**+1.5**
	baz=82									
VTS	**Vitosha**	**82.35**	**319**	⇓	P		**P**	**15 45 19.3**	**0.0**
VTS	**Vitosha**	**82.35**	**319**	⇓	*i* P		**P**	**15 45 19.3**	**0.0**
GRF	**Grafenberg Arr**	**82.50**	**330**		*e*P		**P**	**15 45 20.6**	**+0.8**
	comp=Z,23nm,1.0s									
GRF					*e*L		L	16 25 56.2		
	comp=Z,25nm,20.9s									
GRF	**Grafenberg Arr**	**82.50**	**330**		*e*P		**P**	**15 45 20.6**	**+0.8**
GRF						pmax	pmax			
	comp=Z,23nm,1.0s									
BUG	**Bochum--Univer**	**82.58**	**333**		*e*P		**P**	**15 45 19.9**	**-0.2**
	comp=Z,10.0nm,0.9s									
TNS	**Taunus Mts**	**83.14**	**332**		*e*P		**P**	**15 45 22.7**	**-0.5**
	comp=Z,9.0nm,0.9s									
TNS	**Taunus Mts**	**83.14**	**332**		*e*P		**P**	**15 45 22.7**	**-0.5**
TNS						pmax	pmax			
	comp=Z,9.0nm,0.9s									
GROS	**Grobnik**	**83.22**	**326**		*e*P		**P**	**15 45 23.5**	**-0.2**
U23A	**El Rito**	**83.22**	**49**		P		**P**	**15 45 25.9**	**+1.8**
	baz=83,SNR=7.8									
ECSD	**EROS Data Cent**	**83.24**	**38**		*e*P		**P**	**15 45 23.2**	**-0.6**
	comp=Z,1.8nm,0.5s									
SOKA	**Soboth**	**83.26**	**326**	⇑	*i* P		**P**	**15 45 24.0**	**+0.1**
	comp=Z,15nm,0.7s									
S25A	**Robets Cordova**	**83.35**	**47**	⇑	P		**P**	**15 45 25.1**	**+0.5**
	baz=83									
RJOB	**Jochberg**	**83.40**	**328**		*e*P		**P**	**15 45 25.2**	**+0.6**
	comp=Z,18nm,0.9s									
R26A	**Arlington**	**83.48**	**46**	⇓	P		**P**	**15 45 26.1**	**+0.8**
	baz=83									
Y20A	**Horse Springs,**	**83.50**	**52**	⇑	P		**P**	**15 45 27.4**	**+1.8**
	baz=83,SNR=5.9									
GOLS	**Golise**	**83.51**	**325**		*e*P		**P**	**15 45 24.8**	**-0.3**
X21A	**Alamocita Cree**	**83.51**	**51**	⇑	P		**P**	**15 45 27.3**	**+1.6**
	baz=83,SNR=5.8									
GCIS	**Gornji Cirnik**	**83.62**	**325**		*e*P		**P**	**15 45 25.5**	**-0.1**
FUR	**Furstenfeldbru**	**83.69**	**329**		*e*P		**P**	**15 45 26.4**	**+0.4**
	comp=Z,34nm,0.8s									
FUR	**Furstenfeldbru**	**83.69**	**329**		*e*P		**P**	**15 45 26.4**	**+0.4**
FUR						pmax	pmax			
	comp=Z,34nm,0.8s									
Z20A	**Nine Sixteen R**	**83.89**	**53**		P		**P**	**15 45 28.7**	**+1.2**
	baz=84,SNR=7.1									
MYKA	**Terra Mystica**	**83.91**	**327**	⇑	*i* P		**P**	**15 45 26.5**	**-0.6**
	comp=Z,8.3nm,0.6s									
LAZ	**Ladron**	**83.94**	**51**		*e*P		**P**	**15 45 29.3**	**+1.5**
	comp=Z,0.5nm,0.7s									
STU	**Stuttgart**	**84.03**	**331**		*e*P		**P**	**15 45 27.9**	**+0.2**
	comp=Z,33nm,1.5s									
BCLA	**Clavier**	**84.12**	**334**		P		**P**	**15 45 27.9**	**-0.2**
V24A	**Rampart Ranch,**	**84.18**	**49**	⇑	P		**P**	**15 45 31.0**	**+2.0**
	baz=84,SNR=6.8									
U25A	**Circle Dot Ran**	**84.23**	**48**	⇓	P		**P**	**15 45 30.2**	**+1.0**
	baz=84									
Z21A	**St. Cloud Mine**	**84.34**	**52**	⇓	P		**P**	**15 45 31.1**	**+1.3**
	baz=84									
MOTA	**Moosalm**	**84.42**	**329**	⇑	*i* P		**P**	**15 45 29.7**	**-0.1**
	comp=Z,6.2nm,0.7s									
BNM	**Barren Site**	**84.42**	**51**		*e*P		**P**	**15 45 31.1**	**+0.8**
	comp=Z,2.7nm,1.1s									
BNM					*e*pP		**pP**	**15 45 49.3**	**+1.9**
RETA	**Reutte**	**84.44**	**329**	⇑	*i* PcP		**P**	**15 45 30.1**	**+0.2**
	comp=Z,14nm,0.6s									
WLF	**Walferdange**	**84.45**	**333**		P		**P**	**15 45 30.3**	**+0.5**
	comp=Z,13nm,2.0s									
WLF	**Walferdange**	**84.45**	**333**		*e*P		**P**	**15 45 30.1**	**+0.3**
	comp=Z,35nm,1.9s									
W24A	**Lazy 6 Ranch,**	**84.45**	**49**	⇑	P		**P**	**15 45 31.6**	**+1.3**
	baz=84,SNR=6.1									
V25A	**Rancho No Teng**	**84.49**	**48**		P		**P**	**15 45 32.0**	**+1.5**
	baz=84,SNR=7.4									
GIVF	**Givet**	**84.56**	**334**		*e*P		**P**	**15 45 29.8**	**-0.5**
	comp=Z,15nm,0.9s									
GIVF	**Givet**	**84.56**	**334**		*e*P		**P**	**15 45 29.8**	**-0.5**
GIVF						pmax	pmax			
	comp=Z,15nm,0.9s									
GIVF	**Givet**	**84.56**	**334**		*e*P		**P**	**15 45 29.8**	**-0.5**
	comp=Z,15nm,0.9s									
SCHQ	**Schefferville**	**84.58**	**16**		P		**P**	**15 45 30.7**	**+0.3**
SCHQ	**Schefferville**	**84.58**	**16**		P		**P**	**15 45 30.7**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=357,slow=6.2,SNR=13									
BFO	**Black Forest**	**84.73**	**331**		*e*P		**P**	**15 45 31.0**	**-0.3**
	comp=Z,22nm,0.9s									
BFO	**Black Forest**	**84.73**	**331**		*e*P		**P**	**15 45 31.0**	**-0.3**
BFO						pmax	pmax			
	comp=Z,22nm,0.9s									
BFO	**Black Forest**	**84.73**	**331**		*e*P		**P**	**15 45 30.8**	**-0.5**
	comp=Z,18nm,0.9s									
121A	**Cookes Peak, D**	**84.78**	**53**	⇓	P		**P**	**15 45 33.5**	**+1.5**
	baz=85									
BAIF	**Baives**	**84.81**	**334**		*e*P		**P**	**15 45 31.3**	**-0.2**
	comp=Z,7.8nm,0.5s									
BAIF	**Baives**	**84.81**	**334**		*e*P		**P**	**15 45 31.3**	**-0.2**
BAIF						pmax	pmax			
	comp=Z,8.0nm,0.5s									
BAIF	**Baives**	**84.81**	**334**		*e*P		**P**	**15 45 31.3**	**-0.2**
	comp=Z,7.8nm,0.5s									
Z22A	**Elephant Butte**	**84.81**	**52**	⇑	P		**P**	**15 45 33.3**	**+1.2**
	baz=85									
FETA	**Feichten**	**84.83**	**329**	⇓	*i* P		**P**	**15 45 31.7**	**-0.3**
	comp=Z,8.8nm,0.7s									
Y23A	**Lovelace Mesa,**	**84.92**	**51**		P		**P**	**15 45 33.9**	**+1.2**
	baz=85,SNR=6.5									
DAVA	**Damuels**	**84.96**	**329**	⇑	*i* PcP		**P**	**15 45 32.5**	**-0.1**
	comp=Z,23nm,0.9s									
W25A	**X Bar L Ranch,**	**85.01**	**49**		P		**P**	**15 45 34.5**	**+1.5**
	baz=85,SNR=10.0									
CDF	**Champ du Feu**	**85.06**	**331**		*e*P		**P**	**15 45 32.8**	**-0.2**
	comp=Z,36nm,0.9s									
CDF	**Champ du Feu**	**85.06**	**331**		*e*P		**P**	**15 45 32.8**	**-0.2**
CDF						pmax	pmax			
	comp=Z,36nm,0.9s									
CDF	**Champ du Feu**	**85.06**	**331**		*e*P		**P**	**15 45 32.8**	**-0.2**
	comp=Z,36nm,0.9s									
U27A	**Thompson Grove**	**85.14**	**47**	⇑	P		**P**	**15 45 34.2**	**+0.5**
	baz=85									
ECH	**Echery**	**85.27**	**331**		*e*P		**P**	**15 45 33.6**	**-0.4**
ECH						pmax	pmax			
	comp=Z,12nm,0.8s									
ECH	**Echery**	**85.27**	**331**		*e*P		**P**	**15 45 33.6**	**-0.4**
	comp=Z,12nm,0.8s									
PAGF	**Fort de Pagny**	**85.53**	**332**		*e*P		**P**	**15 45 35.2**	**0.0**
	comp=Z,8.8nm,0.6s									
PAGF	**Fort de Pagny**	**85.53**	**332**		*e*P		**P**	**15 45 35.2**	**0.0**
	comp=Z,8.8nm,0.6s									
HINF	**Hinteralfeld**	**85.72**	**331**		*e*P		**P**	**15 45 35.6**	**-0.6**
	comp=Z,13nm,1.0s									
HINF	**Hinteralfeld**	**85.72**	**331**		*e*P		**P**	**15 45 35.6**	**-0.6**
HINF						pmax	pmax			
	comp=Z,13nm,1.0s									
HINF	**Hinteralfeld**	**85.72**	**331**		*e*P		**P**	**15 45 35.6**	**-0.6**
	comp=Z,13nm,1.0s									
HAU	**Haudompre**	**85.75**	**332**		*e*P		**P**	**15 45 35.8**	**-0.6**
	comp=Z,27nm,0.7s									
HAU					*e*R					
	comp=Z,44nm,17.8s									
HAU	**Haudompre**	**85.75**	**332**		*e*P		**P**	**15 45 35.8**	**-0.6**
HAU						pmax	pmax			
	comp=Z,27nm,0.7s									
HAU	**Haudompre**	**85.75**	**332**		*e*P		**P**	**15 45 35.8**	**-0.6**
	comp=Z,27nm,0.7s									
MEZF	**Maizieres J'vi**	**85.82**	**333**		*e*P		**P**	**15 45 36.7**	**+0.1**
	comp=Z,17nm,0.8s									
MEZF	**Maizieres J'vi**	**85.82**	**333**		*e*P		**P**	**15 45 36.7**	**+0.1**
	comp=Z,17nm,0.8s									
W27A	**Bowe Ranch, En**	**85.94**	**48**		P		**P**	**15 45 38.9**	**+1.2**
	baz=86,SNR=7.2									
SFTF	**Sexfontaines**	**86.07**	**333**		*e*P		**P**	**15 45 37.7**	**-0.2**
	comp=Z,48nm,1.0s									
SFTF	**Sexfontaines**	**86.07**	**333**		*e*P		**P**	**15 45 37.7**	**-0.2**
	comp=Z,48nm,1.0s									
W29A	**Amraillo**	**86.73**	**47**	⇓	P		**P**	**15 45 40.7**	**-0.8**
	baz=86									
CABF	**La Chapelle**	**87.01**	**331**		*e*P		**P**	**15 45 42.2**	**-0.4**
	comp=Z,11nm,0.8s									
CABF	**La Chapelle**	**87.01**	**331**		*e*P		**P**	**15 45 42.2**	**-0.4**
CABF						pmax	pmax			
	comp=Z,11nm,0.8s									
CABF	**La Chapelle**	**87.01**	**331**		*e*P		**P**	**15 45 42.2**	**-0.4**
	comp=Z,11nm,0.8s									
LOR	**Lormes**	**87.29**	**333**		*e*P		**P**	**15 45 43.6**	**-0.3**
	comp=Z,44nm,1.0s									
LOR					*e*R					
	comp=Z,49nm,17.2s									
LOR	**Lormes**	**87.29**	**333**		*e*P		**P**	**15 45 43.6**	**-0.3**
	comp=Z,44nm,1.0s									
FLN	**La Foliniere**	**87.49**	**336**		*e*P		**P**	**15 45 44.4**	**-0.4**
	comp=Z,29nm,0.9s									
FLN					*e*R					
	comp=Z,53nm,20.2s									
FLN	**La Foliniere**	**87.49**	**336**		*e*P		**P**	**15 45 44.4**	**-0.4**
FLN						pmax	pmax			
	comp=Z,29nm,0.9s									
FLN	**La Foliniere**	**87.49**	**336**		*e*P		**P**	**15 45 44.4**	**-0.4**
	comp=Z,29nm,0.9s									
LDF	**La Druitiere**	**87.52**	**336**		*e*P		**P**	**15 45 44.5**	**-0.4**
	comp=Z,20nm,0.6s									
LDF	**La Druitiere**	**87.52**	**336**		*e*P		**P**	**15 45 44.5**	**-0.4**
LDF						pmax	pmax			
	comp=Z,20nm,0.6s									
LDF	**La Druitiere**	**87.52**	**336**		*e*P		**P**	**15 45 44.5**	**-0.4**
	comp=Z,20nm,0.6s									
SSF	**Saint Saulge**	**87.59**	**333**		*e*P		**P**	**15 45 45.1**	**-0.2**
	comp=Z,24nm,1.0s									
SSF	**Saint Saulge**	**87.59**	**333**		*e*P		**P**	**15 45 45.1**	**-0.2**
SSF						pmax	pmax			
	comp=Z,24nm,1.0s									
SSF	**Saint Saulge**	**87.59**	**333**		*e*P		**P**	**15 45 45.1**	**-0.2**
	comp=Z,24nm,1.0s									
LPL	**La Plagne**	**87.67**	**330**		*e*P		**P**	**15 45 45.4**	**-0.6**
	comp=Z,10nm,0.6s									
LPL	**La Plagne**	**87.67**	**330**		*e*P		**P**	**15 45 45.4**	**-0.6**
LPL						pmax	pmax			
	comp=Z,10.0nm,0.6s									
LPL	**La Plagne**	**87.67**	**330**		*e*P		**P**	**15 45 45.4**	**-0.6**
	comp=Z,10nm,0.6s									
LPG	**La Plagne**	**87.67**	**330**		*e*P		**P**	**15 45 45.6**	**-0.5**
	comp=Z,13nm,0.6s									
LPG	**La Plagne**	**87.67**	**330**		*e*P		**P**	**15 45 45.6**	**-0.5**
LPG						pmax	pmax			
	comp=Z,13nm,0.6s									
LPG	**La Plagne**	**87.67**	**330**		*e*P		**P**	**15 45 45.6**	**-0.5**
	comp=Z,13nm,0.6s									
HYF	**Humbligny**	**87.73**	**333**		*e*P		**P**	**15 45 46.2**	**+0.2**
HYF	**Humbligny**	**87.73**	**333**		*e*P		**P**	**15 45 46.2**	**+0.2**
SMF	**Signal de Mont**	**87.82**	**332**		*e*P		**P**	**15 45 46.1**	**-0.3**
	comp=Z,15nm,0.8s									
SMF	**Signal de Mont**	**87.82**	**332**		*e*P		**P**	**15 45 46.1**	**-0.3**
SMF						pmax	pmax			
	comp=Z,15nm,0.8s									
SMF	**Signal de Mont**	**87.82**	**332**		*e*P		**P**	**15 45 46.1**	**-0.3**
	comp=Z,15nm,0.8s									
AVF	**Avril sur Loir**	**87.88**	**333**		*e*P		**P**	**15 45 46.5**	**-0.2**
	comp=Z,32nm,0.8s									
AVF	**Avril sur Loir**	**87.88**	**333**		*e*P		**P**	**15 45 46.5**	**-0.2**
AVF						pmax	pmax			
	comp=Z,32nm,0.8s									
AVF	**Avril sur Loir**	**87.88**	**333**		*e*P		**P**	**15 45 46.5**	**-0.2**
	comp=Z,32nm,0.8s									
GRR	**Gorron**	**87.94**	**336**		*e*P		**P**	**15 45 46.9**	**0.0**
	comp=Z,39nm,0.8s									
GRR	**Gorron**	**87.94**	**336**		*e*P		**P**	**15 45 46.9**	**0.0**
GRR						pmax	pmax			
	comp=Z,39nm,0.8s									
GRR	**Gorron**	**87.94**	**336**		*e*P		**P**	**15 45 46.9**	**0.0**
	comp=Z,39nm,0.8s									
BGF	**Bois d'Agland**	**88.26**	**333**		*e*P		**P**	**15 45 48.3**	**-0.2**
BGF	**Bois d'Agland**	**88.26**	**333**		*e*P		**P**	**15 45 48.3**	**-0.2**
BGF	**Bois d'Agland**	**88.26**	**333**		*e*P		**P**	**15 45 48.3**	**-0.2**
MBDF	**Montbardon**	**88.30**	**330**		*e*P		**P**	**15 45 48.3**	**-0.6**
MBDF	**Montbardon**	**88.30**	**330**		*e*P		**P**	**15 45 48.3**	**-0.6**
MBDF	**Montbardon**	**88.30**	**330**		*e*P		**P**	**15 45 48.3**	**-0.6**
ORIF	**Oris-en-Rattie**	**88.50**	**330**		*e*P		**P**	**15 45 49.1**	**-0.7**
	comp=Z,9.3nm,0.7s									
ORIF					*e*R					
	comp=Z,53nm,21.2s									
ORIF	**Oris-en-Rattie**	**88.50**	**330**		*e*P		**P**	**15 45 49.1**	**-0.7**
ORIF						pmax	pmax			
	comp=Z,9.0nm,0.7s									
ORIF	**Oris-en-Rattie**	**88.50**	**330**		*e*P		**P**	**15 45 49.1**	**-0.7**
	comp=Z,9.3nm,0.7s									
SGMF	**Saint Gilles**	**88.60**	**337**		*e*P		**P**	**15 45 49.9**	**-0.1**
	comp=Z,16nm,0.7s									
SGMF	**Saint Gilles**	**88.60**	**337**		*e*P		**P**	**15 45 49.9**	**-0.1**
SGMF						pmax	pmax			
	comp=Z,17nm,0.7s									
SGMF	**Saint Gilles**	**88.60**	**337**		*e*P		**P**	**15 45 49.9**	**-0.1**
	comp=Z,16nm,0.7s									
TCF	**Toulx Ste Croi**	**88.72**	**333**		*e*P		**P**	**15 45 50.9**	**+0.2**
	comp=Z,6.6nm,0.6s									
TCF	**Toulx Ste Croi**	**88.72**	**333**		*e*P		**P**	**15 45 50.9**	**+0.2**
TCF						pmax	pmax			
	comp=Z,7.0nm,0.6s									
TCF	**Toulx Ste Croi**	**88.72**	**333**		*e*P		**P**	**15 45 50.9**	**+0.2**
	comp=Z,6.6nm,0.6s									
ROSF	**Rostrenen**	**88.74**	**337**		*e*P		**P**	**15 45 50.7**	**0.0**
	comp=Z,14nm,0.7s									
ROSF	**Rostrenen**	**88.74**	**337**		*e*P		**P**	**15 45 50.7**	**0.0**
ROSF						pmax	pmax			
	comp=Z,14nm,0.7s									
ROSF	**Rostrenen**	**88.74**	**337**		*e*P		**P**	**15 45 50.7**	**0.0**
	comp=Z,14nm,0.7s									
VIVF	**Saint-Julien-l**	**89.02**	**331**		*e*P		**P**	**15 45 51.7**	**-0.5**
VIVF	**Saint-Julien-l**	**89.02**	**331**		*e*P		**P**	**15 45 51.7**	**-0.5**
VIVF	**Saint-Julien-l**	**89.02**	**331**		*e*P		**P**	**15 45 51.7**	**-0.5**
QUIF	**Quistinic**	**89.08**	**337**		*e*P		**P**	**15 45 51.9**	**-0.4**
	comp=Z,15nm,0.7s									
QUIF	**Quistinic**	**89.08**	**337**		*e*P		**P**	**15 45 51.9**	**-0.4**
QUIF						pmax	pmax			
	comp=Z,15nm,0.7s									
QUIF	**Quistinic**	**89.08**	**337**		*e*P		**P**	**15 45 51.9**	**-0.4**
	comp=Z,15nm,0.7s									
PGF	**Pioggiola**	**89.16**	**327**		*e*P		**P**	**15 45 51.9**	**-1.1**
PGF	**Pioggiola**	**89.16**	**327**		*e*P		**P**	**15 45 51.9**	**-1.1**
PGF	**Pioggiola**	**89.16**	**327**		*e*P		**P**	**15 45 51.9**	**-1.1**
MFF	**Saint Martin d**	**89.27**	**335**		*e*P		**P**	**15 45 53.4**	**+0.2**
	comp=Z,12nm,0.6s									
MFF	**Saint Martin d**	**89.27**	**335**		*e*P		**P**	**15 45 53.4**	**+0.2**
MFF						pmax	pmax			
	comp=Z,12nm,0.6s									
MFF	**Saint Martin d**	**89.27**	**335**		*e*P		**P**	**15 45 53.4**	**+0.2**
	comp=Z,12nm,0.6s									
FRF	**La Foret Royal**	**89.32**	**329**		*e*P		**P**	**15 45 52.7**	**-0.8**
	comp=Z,22nm,1.0s									
FRF	**La Foret Royal**	**89.32**	**329**		*e*P		**P**	**15 45 52.7**	**-0.8**
FRF						pmax	pmax			
	comp=Z,22nm,1.0s									
FRF	**La Foret Royal**	**89.32**	**329**		*e*P		**P**	**15 45 52.7**	**-0.8**
	comp=Z,22nm,1.0s									
SMRF	**Simiane la Rot**	**89.40**	**330**		*e*P		**P**	**15 45 53.6**	**-0.4**
SMRF	**Simiane la Rot**	**89.40**	**330**		*e*P		**P**	**15 45 53.6**	**-0.4**
TXAR	**Lajitas Array**	**89.55**	**52**		P		**P**	**15 45 55.3**	**+0.3**
TXAR						pP	**pP**	**15 46 12.2**	**-0.1**
TXAR	**Lajitas Array**	**89.55**	**52**		P		**P**	**15 45 55.3**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=298,slow=2.9,SNR=37									
TXAR						pP	**pP**	**15 46 12.2**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=302,slow=3.1,SNR=7.9									
LMR	**La Mourre**	**89.56**	**329**		*e*P		**P**	**15 45 53.9**	**-0.8**
LMR	**La Mourre**	**89.56**	**329**		*e*P		**P**	**15 45 53.9**	**-0.8**
LMR	**La Mourre**	**89.56**	**329**		*e*P		**P**	**15 45 53.9**	**-0.8**
RJF	**Les Rejaudoux**	**89.81**	**333**		*e*P		**P**	**15 45 55.9**	**+0.1**
	comp=Z,11nm,0.7s									
RJF					*e*R					
	comp=Z,57nm,18.8s									
RJF	**Les Rejaudoux**	**89.81**	**333**		*e*P		**P**	**15 45 55.9**	**+0.1**
RJF						pmax	pmax			
	comp=Z,11nm,0.7s									
RJF	**Les Rejaudoux**	**89.81**	**333**		*e*P		**P**	**15 45 55.9**	**+0.1**
	comp=Z,11nm,0.7s									
CAF	**Calviac**	**89.94**	**333**		*e*P		**P**	**15 45 56.8**	**+0.3**
	comp=Z,11nm,0.7s									
CAF	**Calviac**	**89.94**	**333**		*e*P		**P**	**15 45 56.8**	**+0.3**
CAF						pmax	pmax			
	comp=Z,11nm,0.7s									
CAF	**Calviac**	**89.94**	**333**		*e*P		**P**	**15 45 56.8**	**+0.3**
	comp=Z,11nm,0.7s									
LASF	**Ste Croix**	**89.99**	**331**		*e*P		**P**	**15 45 56.7**	**0.0**
	comp=Z,10nm,0.9s									
LASF	**Ste Croix**	**89.99**	**331**		*e*P		**P**	**15 45 56.7**	**0.0**
	comp=Z,10nm,0.9s									
LFF	**La Frestale**	**90.40**	**333**		*e*P		**P**	**15 45 57.8**	**-0.8**
	comp=Z,18nm,0.8s									
LFF	**La Frestale**	**90.40**	**333**		*e*P		**P**	**15 45 57.8**	**-0.8**
LFF						pmax	pmax			
	comp=Z,18nm,0.8s									
LFF	**La Frestale**	**90.40**	**333**		*e*P		**P**	**15 45 57.8**	**-0.8**
	comp=Z,18nm,0.8s									
MTLF	**Montolieu**	**91.24**	**332**		*e*P		**P**	**15 46 02.6**	**+0.1**
	comp=Z,4.4nm,0.8s									
MTLF	**Montolieu**	**91.24**	**332**		*e*P		**P**	**15 46 02.6**	**+0.1**
MTLF						pmax	pmax			
	comp=Z,4.0nm,0.8s									
MTLF	**Montolieu**	**91.24**	**332**		*e*P		**P**	**15 46 02.6**	**+0.1**
	comp=Z,4.4nm,0.8s									
EPF	**Esparros**	**92.20**	**333**		*e*P		**P**	**15 46 06.6**	**-0.4**
EPF	**Esparros**	**92.20**	**333**		*e*P		**P**	**15 46 06.6**	**-0.4**
EPF	**Esparros**	**92.20**	**333**		*e*P		**P**	**15 46 06.6**	**-0.4**
ETSF	**Etsaut**	**92.64**	**333**		*e*P		**P**	**15 46 09.4**	**+0.3**
	comp=Z,8.6nm,0.9s									
ETSF	**Etsaut**	**92.64**	**333**		*e*P		**P**	**15 46 09.4**	**+0.3**
ETSF						pmax	pmax			
	comp=Z,9.0nm,0.9s									
ETSF	**Etsaut**	**92.64**	**333**		*e*P		**P**	**15 46 09.4**	**+0.3**
	comp=Z,8.6nm,0.9s									
SJPF	**Ste Jean**	**92.69**	**334**		*e*P		**P**	**15 46 09.0**	**-0.2**
SJPF	**Ste Jean**	**92.69**	**334**		*e*P		**P**	**15 46 09.0**	**-0.2**
SJPF	**Ste Jean**	**92.69**	**334**		*e*P		**P**	**15 46 09.0**	**-0.2**
TKL	**Tuckaleechee C**	**95.69**	**36**		P		**P**	**15 46 23.4**	**+0.2**
TKL						pP	**pP**	**15 46 40.4**	**-0.1**
TKL	**Tuckaleechee C**	**95.69**	**36**		P		**P**	**15 46 23.4**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=126,slow=8.7,SNR=2.9		

LBTB	**Lobatse**	**7.59**	**239**	⇓*i*P	**Pn**	**15 53 37.9**	**+2.8**
LBTB				*e*S	**Sn**	**15 55 04.4**	**+3.4**
LBTB				AML	AML	15 56 03.6	
	comp=Z,54nm,0.6s						
SWZ	**Schweizer**	**8.99**	**228**	*e*P	**Pn**	**15 53 56.7**	**+2.3**
SWZ				*e*S	**Sn**	**15 55 35.8**	**+0.3**
SWZ				AML	AML	15 56 43.0	
	comp=Z,58nm,0.7s						
KSD	**Kokstad**	**9.71**	**198**	*e*P	**Pn**	**15 54 05.6**	**+1.4**
KSD				*e*S	**Sn**	**15 55 50.0**	**-3.1**
KSD				AML	AML	15 56 54.7	
	comp=Z,50nm,0.6s						
BOSA	**Boshof**	**10.00**	**222**	*e*P	**Pn**	**15 54 09.2**	**+1.0**
BOSA				*e*S	**Sn**	**15 55 59.6**	**-0.6**
BOSA				AML	AML	15 57 10.5	
	comp=Z,28nm,0.6s						
BOSA	**Boshof**	**10.00**	**222**	Pn	**Pn**	**15 54 08.2**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=50,slow=14,SNR=23						
BOSA				Sn	**Sn**	**15 55 58.1**	**-2.1**
	comp=Z,1.6nm,0.3s,baz=314,slow=16,SNR=4.7						
BOSA				Lg	Lg	15 56 56.3	
	comp=Z,2.0nm,0.3s,baz=131,slow=19,SNR=6.6						
HVD	**Gariep Dam**	**11.37**	**214**	*e*P	**Pn**	**15 54 28.3**	**+1.4**
HVD				*e*S	**Sn**	**15 56 34.5**	**+0.7**
HVD				AML	AML	15 57 44.6	
	comp=Z,18nm,0.7s						
UPI	**Upington**	**12.62**	**234**	*e*P	**Pn**	**15 54 45.6**	**+1.6**
UPI				*e*S	**Sn**	**15 57 02.3**	**-2.1**
UPI				AML	AML	15 58 34.5	
	comp=Z,16nm,0.6s						
TSUM	**Tsumeb**	**14.42**	**276**	*e*P	**Pn**	**15 55 08.8**	**0.0**
TSUM				*e*S	**Sn**	**15 57 48.3**	**-0.3**
SUR	**Sutherland**	**15.37**	**222**	*e*P	**P**	**15 55 25.3**	**-0.7**
SUR				*e*S	**Sn**	**15 58 09.4**	**-2.1**
SUR				AML	AML	16 00 11.5	
	comp=Z,10nm,0.7s						
CVNA	**Calvinia**	**15.46**	**226**	*e*P	**Pn**	**15 55 24.4**	**+1.8**
CVNA				*e*S	**Sn**	**15 58 11.0**	**-2.7**
CVNA				AML	AML	16 00 10.6	
	comp=Z,27nm,0.7s						
KOMG	**Komaggas**	**16.20**	**235**	*e*P	**P**	**15 55 37.7**	**+2.6**
KOMG				*e*S	**Sn**	**15 58 28.5**	**-3.0**
KOMG				AML	AML	16 00 37.8	
	comp=Z,10.0nm,0.7s						
TORD	**Torodi Ar. Bea**	**45.86**	**315**	P	P	16 00 11.3	+4.5
	comp=Z,0.6nm,0.6s,baz=126,slow=7.2,SNR=5.5						
MKAR	**Makanchi Array**	**81.14**	**32**	P	P	16 03 58.4	-1.2
	comp=Z,0.1nm,0.5s,baz=237,slow=5.0,SNR=3.8						
YKA	**Yellowknife Ar**	**133.19**	**340**	PKP	**PKPdf**	**16 10 60.0**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=23,slow=2.1,SNR=4.3						
NVAR	**Mina Array Bea**	**149.84**	**311**	PKPbc	**PKPbc**	**16 11 37.3**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=69,slow=3.0,SNR=4.1						

*IDC **31** 15:59:30.3±1.4,37.88N×21.47E, h0km, mb3.7/9, mb1 3.7/10,mb1mx3.5/29,mbtmp3.6/10,ML4.4/1,Error ellipse: s-maj=29.8km s-min=23.0km az=144.0*

*ATH **31** 15:59:32.8,37.89N×21.41E,h26km±1km,MD3.1/19, ML3.1*

*ISCJB **31** 15:59:33.6±0.3,37.89N±0.02×21.40E±0.02,h25km±2km, mb3.5/9,Error ellipse: s-maj=3.4km s-min=2.9km az=135.1*

*THE **31** 15:59:33.9,37.88N×21.45E,h0km±2km,ML3.4/8,Error ellipse: s-maj=2.6km s-min=1.0km az=253.0*

*CSEM **31** 15:59:33.2±0.2,37.89N×21.43E,h2km,ML3.4,Error ellipse: s-maj=3.6km s-min=2.7km az=54.0*

ISC 31 15:59:33.6±0.8,37.88N±0.02×21.42E±0.02,h19km±2km, n109,σ0.95/152,mb3.6/9,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.18**	**11**	P	**Pg**	**15 59 38.6**	**+0.3**
RLS				S	**Sg**	**15 59 42.7**	**+1.2**
RLS	**Riolos of Patr**	**0.18**	**11**	*e*PB	**Pg**	**15 59 38.3**	**0.0**
RLS				*e*SB	**Sg**	**15 59 42.4**	**+0.9**
RLS	**Riolos of Patr**	**0.18**	**11**	P	**Pg**	**15 59 38.4**	**+0.1**
RLS				S	**Sb**	**15 59 40.9**	**+1.0**
AMT	**Artemida-Makis**	**0.42**	**147**	*e*PB	**Pg**	**15 59 42.1**	**-0.1**
AMT				*e*SB	**Sb**	**15 59 49.5**	**+1.0**
KFL	**Anninata**	**0.55**	**294**	P	**Pb**	**15 59 44.5**	**-0.2**
KFL				S	**Sg**	**15 59 53.8**	**+1.7**
KFL	**Anninata**	**0.55**	**294**	P	**Pb**	**15 59 44.4**	**-0.2**
KFL				S	**Sg**	**15 59 53.0**	**+0.9**
LAKA	**Lakka**	**0.56**	**51**	P	**Pb**	**15 59 44.2**	**-0.7**
LAKA				S	**Sg**	**15 59 53.0**	**+0.4**
LAKA	**Lakka**	**0.56**	**51**	*e*PN	**Pb**	**15 59 44.4**	**-0.5**
LAKA				*e*SN	**Sb**	**15 59 52.8**	**+0.2**
LAKA	**Lakka**	**0.56**	**51**	P	**Pb**	**15 59 44.2**	**-0.7**
LAKA				S	**Sb**	**15 59 52.0**	**-0.6**
KLV	**Kalavryta, Ach**	**0.60**	**74**	*e*PB	**Pb**	**15 59 44.5**	**-0.9**
KLV				*e*SN	**Sg**	**15 59 54.7**	**+1.2**
EFP	**Efpalio**	**0.66**	**35**	P	**Pb**	**15 59 45.9**	**-0.6**
EFP				S	**Sg**	**15 59 56.1**	**+0.5**
EFP	**Efpalio**	**0.66**	**35**	*e*PN	**Pb**	**15 59 46.0**	**-0.6**
EFP				*e*SN	**Sg**	**15 59 56.5**	**+0.9**
EFP	**Efpalio**	**0.66**	**35**	P	**Pb**	**15 59 45.9**	**-0.6**
EFP				S	**Sb**	**15 59 55.2**	**-0.2**
VLS	**Valsamata**	**0.72**	**294**	P	**Pb**	**15 59 46.7**	**-0.9**
VLS	**Valsamata**	**0.72**	**294**	*e*PN	**Pb**	**15 59 46.5**	**-1.1**
VLS				*e*SN	**Sb**	**15 59 58.0**	**+0.5**
VLS	**Valsamata**	**0.72**	**294**	P	**Pb**	**15 59 46.7**	**-0.9**
VLS				S	**Sb**	**15 59 56.8**	**-0.4**
GUR	**Goura**	**0.73**	**86**	P	**Pb**	**15 59 46.6**	**-1.2**
GUR				S	**Sb**	**15 59 57.2**	**-0.2**
GUR	**Goura**	**0.73**	**86**	*e*PN	**Pb**	**15 59 46.8**	**-1.0**
GUR				*e*SN	**Sg**	**15 59 58.2**	**+0.5**
GUR	**Goura**	**0.73**	**86**	P	**Pb**	**15 59 46.7**	**-1.0**
GUR				S	**Sb**	**15 59 57.1**	**-0.3**
KALE	**Kalithea**	**0.76**	**48**	P	**Pb**	**15 59 47.5**	**-0.8**
KALE				S	**Sg**	**15 59 59.2**	**+0.6**
KALE	**Kalithea**	**0.76**	**48**	*e*PN	**Pb**	**15 59 47.5**	**-0.8**
KALE				*e*SN	**Sb**	**15 59 58.6**	**+0.3**
KALE	**Kalithea**	**0.76**	**48**	P	**Pb**	**15 59 47.5**	**-0.8**
KALE				S	**Sb**	**15 59 57.8**	**-0.5**
ITM	**Ithomi**	**0.81**	**150**	P	**Pb**	**15 59 48.5**	**-0.6**
ITM	**Ithomi**	**0.81**	**150**	*e*PN	**Pb**	**15 59 47.7**	**-1.4**
ITM	**Ithomi**	**0.81**	**150**	P	**Pb**	**15 59 48.2**	**-0.9**
ITM				S	**Sg**	**16 00 00.6**	**+0.5**
VLX	**Vlachokerasia**	**0.92**	**124**	P	**Pb**	**15 59 50.9**	**0.0**
VLX				S	**Sn**	**16 00 05.0**	**+0.7**
VLX	**Vlachokerasia**	**0.92**	**124**	*e*PN	**Pb**	**15 59 51.0**	**0.0**
VLX	**Vlachokerasia**	**0.92**	**124**	P	**Pb**	**15 59 50.9**	**0.0**
VLX				S	**Sg**	**16 00 04.0**	**+0.4**
THAL	**Thalero**	**0.99**	**81**	P	**Pb**	**15 59 51.4**	**-0.8**
THAL	**Thalero**	**0.99**	**81**	P	**Pb**	**15 59 51.4**	**-0.8**
DSF	**Desfina**	**1.02**	**58**	P	**Pb**	**15 59 51.9**	**-0.8**
DSF				S	**Sb**	**16 00 06.3**	**+0.6**
DSF	**Desfina**	**1.02**	**58**	P	**Pb**	**15 59 51.9**	**-0.8**
DSF				S	**Sb**	**16 00 06.3**	**+0.6**
PYL	**PYLOS**	**1.02**	**166**	*e*PN	**Pb**	**15 59 52.3**	**-0.4**
PYL	**PYLOS**	**1.02**	**166**	P	**Pb**	**15 59 51.8**	**-0.9**
PYL				S	**Sn**	**16 00 06.7**	**0.0**
EVR	**Evrytania**	**1.07**	**16**	P	**Pb**	**15 59 53.1**	**-0.6**
EVR				S	**Sg**	**16 00 11.0**	**+2.3**
EVR	**Evrytania**	**1.07**	**16**	*e*PN	**Pb**	**15 59 53.4**	**-0.3**
EVR	**Evrytania**	**1.07**	**16**	P	**Pb**	**15 59 53.2**	**-0.5**
EVR				S	**Sn**	**16 00 08.7**	**+0.4**
LKD2	**Lefkada island**	**1.09**	**327**	P	**Pb**	**15 59 53.4**	**-0.5**
LKD2				S	**Sg**	**16 00 11.3**	**+2.3**
LKD2	**Lefkada island**	**1.09**	**327**	P	**Pb**	**15 59 53.4**	**-0.5**
LKD2				S	**Sn**	**16 00 09.2**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.26**	**26**	P	**Pn**	**15 59 56.6**	**+0.3**
MAKR				S	**Sg**	**16 00 16.7**	**+2.3**
MAKR	**Makrakomi, Fth**	**1.26**	**26**	P	**Pn**	**15 59 56.7**	**+0.4**
MAKR				S	**Sg**	**16 00 14.5**	**+0.1**
AXAR	**Agios Charalam**	**1.31**	**47**	P	**Pn**	**15 59 56.9**	**-0.1**
AXAR				S	**Sg**	**16 00 17.1**	**+1.0**
AXAR	**Agios Charalam**	**1.31**	**47**	P	**Pn**	**15 59 56.9**	**-0.1**
AXAR				S	**Sb**	**16 00 15.1**	**+0.9**
DYR	**Agios Nikonas**	**1.33**	**147**	P	**Pb**	**15 59 58.0**	**-0.1**
DYR				S	**Sg**	**16 00 18.7**	**+1.9**
DYR	**Agios Nikonas**	**1.33**	**147**	*e*PN	**Pb**	**15 59 58.0**	**-0.1**
DYR	**Agios Nikonas**	**1.33**	**147**	P	**Pn**	**15 59 57.8**	**+0.5**
DYR				S	**Sg**	**16 00 16.9**	**+0.1**
AGG	**Agios Georgios**	**1.34**	**32**	P	**Pb**	**15 59 58.2**	**0.0**
AGG				S	**Sg**	**16 00 17.8**	**+0.7**
AGG	**Agios Georgios**	**1.34**	**32**	P	**Pb**	**15 59 58.2**	**0.0**
AGG				S	**Sg**	**16 00 17.8**	**+0.7**
LKR	**Lokris**	**1.46**	**58**	P	**Pn**	**15 59 59.5**	**+0.5**
LKR	**Lokris**	**1.46**	**58**	*e*PN	**Pn**	**15 59 59.4**	**+0.5**
LKR	**Lokris**	**1.46**	**58**	P	**Pn**	**15 59 59.5**	**+0.5**
DIDY	**Didyma**	**1.48**	**105**	P	**Pn**	**16 00 00.1**	**+0.8**
DIDY	**Didyma**	**1.48**	**105**	P	**Pn**	**16 00 00.1**	**+0.8**
DID	**Didima**	**1.49**	**104**	P	**Pn**	**16 00 00.1**	**+0.7**
	2µm,0.7s						
DID				S	**Sg**	**16 00 21.5**	**-0.2**
DID	**Didima**	**1.49**	**104**	*e*PN	**Pb**	**16 00 00.5**	**-0.2**
DID	**Didima**	**1.49**	**104**	P	**Pn**	**16 00 00.1**	**+0.7**
	2µm,0.7s						
DID				S	**Sg**	**16 00 21.5**	**-0.2**
VIL2	**Platees**	**1.49**	**77**	P	**Pn**	**16 00 01.1**	**+0.3**
ATAL	**Atalanti**	**1.49**	**57**	P	**Pn**	**15 59 59.9**	**+0.4**
ATAL	**Atalanti**	**1.49**	**57**	P	**Pn**	**15 59 59.9**	**+0.4**
VLI	**Veliai**	**1.68**	**133**	P	**Pb**	**16 00 04.8**	**+0.9**
	800nm,0.9s						
VLI				S	**Sg**	**16 00 28.9**	**+1.2**
VLI	**Veliai**	**1.68**	**133**	*e*PB	**Pn**	**16 00 02.1**	**+0.1**
VLI	**Veliai**	**1.68**	**133**	P	**Pb**	**16 00 04.8**	**+0.9**
	800nm,0.9s						
VLI				S	**Sg**	**16 00 28.9**	**+1.2**
THL	**Klokotos Trika**	**1.74**	**15**	P	**Pb**	**16 00 05.0**	**0.0**
THL				S	**Sg**	**16 00 29.6**	**-0.2**
THL	**Klokotos Trika**	**1.74**	**15**	*e*PN	**Pb**	**16 00 04.7**	**-0.3**
THL	**Klokotos Trika**	**1.74**	**15**	P	**Pb**	**16 00 05.0**	**0.0**
THL				S	**Sg**	**16 00 29.6**	**-0.2**
ATH	**Athens Observa**	**1.81**	**86**	*e*PN	**Pn**	**16 00 04.5**	**+0.6**
IGT	**Igoumenitsa**	**1.85**	**333**	P	**Pn**	**16 00 05.9**	**+1.4**
IGT	**Igoumenitsa**	**1.85**	**333**	P	**Pn**	**16 00 05.9**	**+1.4**
MRKA	**Markates**	**1.89**	**64**	P	**Pn**	**16 00 06.2**	**+1.3**
MRKA				S	**Sb**	**16 00 31.8**	**+1.0**
MRKA	**Markates**	**1.89**	**64**	P	**Pn**	**16 00 06.2**	**+1.3**
MRKA				S	**Sb**	**16 00 31.8**	**+1.0**
PTL	**Penteli**	**1.94**	**84**	P	**Pb**	**16 00 07.4**	**-0.9**
PTL	**Penteli**	**1.94**	**84**	*e*PB	**Pn**	**16 00 06.6**	**+1.0**
PTL	**Penteli**	**1.94**	**84**	P	**Pb**	**16 00 07.4**	**-0.9**
XOR	**Xorichti**	**2.03**	**43**	P	**Pb**	**16 00 08.9**	**-1.0**
XOR	**Xorichti**	**2.03**	**43**	P	**Pb**	**16 00 08.9**	**-1.0**
KYTH	**Kithira**	**2.05**	**141**	P	**Pb**	**16 00 10.9**	**+0.5**
KYTH	**Kithira**	**2.05**	**141**	P	**Pb**	**16 00 10.9**	**+0.5**
KEK	**Kerkira**	**2.23**	**326**	P	**Pn**	**16 00 11.2**	**+1.7**
KEK	**Kerkira**	**2.23**	**326**	P	**Pn**	**16 00 11.2**	**+1.7**
ANKY	**Antikythira Is**	**2.51**	**143**	*e*PN	**Pn**	**16 00 14.9**	**+1.4**
NEST	**Nestorio**	**2.54**	**354**	P	**Pb**	**16 00 17.1**	**-1.7**
NEST	**Nestorio**	**2.54**	**354**	P	**Pb**	**16 00 17.1**	**-1.7**
FNA	**Florina**	**2.90**	**359**	P	**Pn**	**16 00 21.1**	**+2.3**
FNA	**Florina**	**2.90**	**359**	P	**Pn**	**16 00 21.1**	**+2.3**
MMB	**Musomiste**	**4.11**	**25**	*i* P	**Pn**	**16 00 37.1**	**+1.7**
MMB	**Musomiste**	**4.11**	**25**	*i* P	**Pn**	**16 00 37.1**	**+1.7**
KKB	**Krupnik**	**4.18**	**17**	*i* P	**Pn**	**16 00 37.9**	**+1.5**
KKB	**Krupnik**	**4.18**	**17**	*i* P	**Pn**	**16 00 37.9**	**+1.5**
RZN	**Rozhen**	**4.57**	**33**	*i* P	**Pn**	**16 00 44.1**	**+2.2**
RZN	**Rozhen**	**4.57**	**33**	*i* P	**Pn**	**16 00 44.1**	**+2.2**
VTS	**Vitosha**	**4.90**	**16**	*i* P	Pn	16 00 50.9	+4.5
VTS	**Vitosha**	**4.90**	**16**	*i* P	Pn	16 00 50.9	+4.5
BARS	**Barje**	**4.94**	**3**	*e*Pn	**Pn**	**16 00 45.7**	**-1.1**
STON	**Ston**	**5.74**	**331**	*i* Pn	**Pn**	**16 00 55.9**	**-1.8**
STON					Sn	16 01 55.7	-7.3
GRUS	**Gruza**	**6.02**	**355**	*e*Pn	**Pn**	**16 01 02.2**	**+0.5**
DIVS	**Divibare**	**6.30**	**351**	*e*Pn	**Pn**	**16 01 05.4**	**-0.2**
TEKS	**Tekeris**	**6.81**	**348**	*e*Pn	**Pn**	**16 01 13.0**	**+0.4**
MLR	**Muntele Rosu**	**8.32**	**23**	Pn	Pn	16 01 40.1	+6.8
	0.1nm,0.3s,baz=240,slow=8.1,SNR=3.1						
BRTR	**Keskin Array B**	**9.71**	**75**	Pn	Pn	16 01 56.2	+3.8
	0.1nm,0.3s,baz=254,slow=11,SNR=3.3						
ESDC	**Sonseca Array**	**19.86**	**283**	P	**P**	**16 04 03.0**	**-0.6**
	0.2nm,0.3s,baz=82,slow=10,SNR=4.4						
HFS	**Hagfors**	**22.81**	**350**	P	**P**	**16 04 35.1**	**0.0**
	0.8nm,0.4s,baz=153,slow=10.0,SNR=12						
FINES	**FINESS Array B**	**23.76**	**6**	P	**P**	**16 04 44.0**	**-0.6**
	0.5nm,0.4s,baz=166,slow=12,SNR=5.0						
NOA	**NORSAR Array B**	**24.05**	**348**	P	**P**	**16 04 46.0**	**-1.4**
	0.5nm,0.6s,baz=162,slow=10,SNR=3.2						
EKA	**Eskdalemuir Ar**	**24.08**	**324**	P	**P**	**16 04 48.3**	**+0.6**
	0.7nm,0.6s,baz=129,slow=10,SNR=10						
TORD	**Torodi Ar. Bea**	**30.26**	**221**	P	**P**	**16 05 43.6**	**+0.1**
	0.2nm,0.5s,baz=37,slow=10.0,SNR=3.3						
ARCES	**ARCESS Array B**	**31.79**	**3**	P	**P**	**16 05 56.3**	**-0.2**
	2.6nm,0.8s,baz=201,slow=9.7,SNR=2.6						
MKAR	**Makanchi Array**	**44.85**	**58**	P	**P**	**16 07 46.0**	**-0.6**
	1.0nm,0.5s,baz=273,slow=7.3,SNR=8.4						
ZALV	**Zalesovo Beam**	**45.36**	**48**	P	**P**	**16 07 49.7**	**-0.8**
	0.5nm,0.3s,baz=273,slow=9.3,SNR=5.0						
TXAR	**Lajitas Array**	**95.69**	**314**	P	**P**	**16 12 57.5**	**-1.1**
	0.3nm,0.8s,baz=135,slow=12,SNR=4.6						

IDC 31 16:00:07.7±1.6,7.07S×128.13E, h0km,mb3.5/2, mb1 3.9/5,mb1mx3.5/20,mbtmp3.7/5,ML3.9/3,MS4.3/1, Ms1 4.3/1,ms1mx2.5/22,Error ellipse: s-maj=88.6km s-min=23.9km az=68.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.23**	**192**	Pn	Pn	16 02 49.8	+0.1
	0.3nm,0.3s,baz=21,slow=13,SNR=14						
FITZ				Sn	Sn	16 04 39.6	-16
	0.4nm,0.3s,baz=258,slow=20,SNR=3.2						
WRA	**Warramunga Arr**	**14.15**	**155**	Pn	Pn	16 03 30.4	+0.9
	0.9nm,0.3s,baz=328,slow=13,SNR=29						
WRA				Sn	Sn	16 05 54.0	-13
	1.3nm,0.3s,baz=327,slow=24,SNR=12						
ASAR	**Alice Springs**	**17.41**	**162**	Pn	P	16 04 14.4	+0.7
	0.5nm,0.3s,baz=340,slow=12,SNR=76						
ASAR				Sn	Sn	16 07 13.1	-14
	0.3nm,0.3s,baz=320,slow=16,SNR=5.8						
STKA	**Stephens Creek**	**27.70**	**155**	P	P	16 05 56.8	-0.9
	0.8nm,0.6s,baz=332,slow=15,SNR=3.5						
RPZ	**Rata Peaks**	**52.33**	**141**	LR	LR	16 30 29.7	
	comp=Z,277nm,18.1s,baz=127,slow=35						
MKAR	**Makanchi Array**	**67.28**	**328**	P	P	16 11 04.4	+0.1
	0.2nm,0.6s,baz=122,slow=8.1,SNR=2.5						

PRE 31 16:04:04.3±2.4,21.16S×33.28E,h5km,ML3.7, Mozambique

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**3.25**	**248**	*e*P	Pn	16 04 56.5	+0.5
MSNA				*e*S	Sn	16 05 36.2	+0.9
MSNA				AML	AML	16 05 51.6	
	comp=Z,95nm,0.2s						
LSZ	**Lusaka**	**7.59**	**320**	*e*P	Pn	16 05 58.9	+3.1
LSZ				*e*S	Sn	16 07 17.4	-5.0
LBTB	**Lobatse**	**8.05**	**240**	*e*P	Pn	16 06 02.5	+0.4
LBTB				*e*S	Sn	16 07 29.6	-4.0
LBTB				AML	AML	16 08 20.3	
	comp=Z,8.2nm,0.5s						
BOSA	**Boshof**	**10.40**	**223**	*e*P	Pn	16 06 34.3	0.0
BOSA				*e*S	Sn	16 08 26.7	-4.7
BOSA				AML	AML	16 09 31.2	
	comp=Z,3.1nm,0.6s						

*IDC **31** 16:14:27.4±0.6,16.14S×178.34E,h0km,mb4.3/17, mb1 4.6/17,mb1mx4.6/20,mbtmp4.3/17,MS4.1/21, Ms1 4.1/21,ms1mx4.0/31,Error ellipse: s-maj=23.3km s-min=15.8km az=126.0*

*SZGRF **31** 16:14:28.4,17.95S×178.38E,h33km,mb4.3,Fiji Islands*

*ISCJB **31** 16:14:29.4±0.2,16.22S±0.06×178.30E±0.06,h22km, mb4.7/80,MS4.2/26,Error ellipse: s-maj=10.4km s-min=6.6km az=144.0*

*NEIC **31** 16:14:30.8±0.2,16.21S×178.28E,mb4.9/51,Error ellipse: s-maj=8.0km s-min=4.4km az=136.0*

*MOS **31** 16:14:31.1±1.0,16.21S×178.29E,h33km,mb5.0/22,Error ellipse: s-maj=15.6km s-min=9.5km az=61.0*

*BJI **31** 16:14:32.0,15.76S×178.09E,h22km,mB5.1/22,mb4.8/30, Ms4.8/15,Ms7 4.6/15*

*GCMT **31** 16:14:33.4±0.2,16.19S×178.40E,h18km,MW5.0, Moment Tensor Solution. s37,c53; s73,c110; Moment tensor: Scale 10^16Nm; Mrr-3.45±.21; Mθθ-0.26±.14; Mφφ3.71±.14; Mrθ-1.60±.31; Mθφ2.14±.09; Mφr0.50±.27; Best double couple: M0 4.50000×10^16 NP1:φs178.00000°, δ50.00000°,λ-128.00000°. NP2:φs49.00000°,δ53.00000°, λ-54.00000°. Principal axes: T 4.6500, Plg1.0000°, Azm114.0000°; N -0.3100, Plg28.0000°, Azm205.0000°; P -4.3400, Plg62.0000°, Azm21.0000°; Data Used: II IU IC G.*

ISC 31 16:14:30.6±0.4,16.25S×178.38E±0.08,h21km±4km, h21km:pP-P,n367,σ0.89/379,mb4.8/80,MS4.2/26,

61C-71D,Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.51**	**192**	*e*P	**Pn**	**16 14 54.7**	**-1.8**
MSVF	**Nonsavu**	**1.51**	**192**	*e*P	**Pn**	**16 14 54.6**	**-1.8**
AFI	**Afiamalu**	**9.79**	**78**	LR	LR	16 19 49.9	
	comp=Z,1µm,22.0s,baz=261,slow=33						
DZM	**Mont Dzumac**	**12.67**	**241**	*e*LR	LR	16 20 50.8	
	2µm,24.8s						
DZM	**Mont Dzumac**	**12.67**	**241**	LR	LR	16 21 20.6	
	comp=Z,877nm,20.6s,baz=240,slow=33						
HNR	**Honiara**	**19.20**	**288**	LR	LR	16 25 12.6	
	comp=Z,649nm,19.7s,baz=121,slow=34						
RAR	**Rarotonga**	**21.26**	**107**	LR	LR	16 25 55.3	
	comp=Z,321nm,18.4s,baz=315,slow=32						
URZ	**Urewera**	**21.95**	**183**	P	**P**	**16 19 24.8**	**+1.9**
URZ	**Urewera**	**21.95**	**183**	P	**P**	**16 19 24.8**	**+1.9**
	8.7nm,0.9s,baz=297,slow=16,SNR=2.3						
URZ				LR	LR	16 26 30.3	
	comp=Z,578nm,19.7s,baz=183,slow=33						
PPT2	**Papeete2**	**30.66**	**97**	*e*S	S	16 25 38.8	-6.9
	226nm,26.0s						
PPT2				*e*LQ	LQ	16 27 18.2	
	650nm,24.2s						
PPT2				*e*LR	LR	16 28 34.5	
	1µm,30.0s,baz=263						
PPT	**Papeete**	**30.67**	**97**	LR	LR	16 29 44.1	
	comp=Z,382nm,19.4s,baz=75,slow=30						
TBI	**Tubuai**	**31.02**	**108**	*e*S	**S**	**16 25 48.4**	**-2.6**
	266nm,26.5s						
TBI				*e*LQ	LQ	16 27 33.2	
	534nm,24.8s						
TBI				*e*LR	LR	16 28 51.1	
	1µm,30.5s,baz=283						
STKA	**Stephens Creek**	**36.81**	**238**	*e*P	**P**	**16 21 38.2**	**+1.1**
	2.0nm,0.8s						
STKA	**Stephens Creek**	**36.81**	**238**	P	**P**	**16 21 38.1**	**+0.9**
	11nm,0.8s,baz=73,slow=8.5,SNR=13						
STKA				LR	LR	16 34 55.4	
	comp=Z,410nm,18.4s,baz=212,slow=33						
WRAB	**Tennant Creek**	**41.93**	**258**	P	**P**	**16 22 18.9**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WRAB	**Tennant Creek**	**41.93**	**258**	P	**P**	**16 22 18.9**	**-1.2**
	comp=Z,7.5nm,0.9s						
WRA	**Warramunga Arr**	**41.94**	**258**	P	**P**	**16 22 18.7**	**-1.5**
WRA	**Warramunga Arr**	**41.94**	**258**	P	**P**	**16 22 18.7**	**-1.5**
	comp=Z,5.5nm,0.8s,baz=91,slow=8.6,SNR=12						
AS31	**Alice Springs**	**42.32**	**253**	*e*P	**P**	**16 22 22.5**	**-0.7**
ASAR	**Alice Springs**	**42.32**	**253**	P	**P**	**16 22 22.6**	**-0.6**
ASAR	**Alice Springs**	**42.32**	**253**	P	**P**	**16 22 22.6**	**-0.6**
	comp=Z,8.3nm,0.7s,baz=87,slow=9.2,SNR=63						
ASAR				LR	LR	16 38 39.3	
	comp=Z,279nm,18.1s,baz=90,slow=34						
RKT	**Rikitea**	**44.30**	**107**	*e*LR	LR	16 34 59.1	
	comp=Z,887nm,27.5s,baz=273						
FORT	**Forrest**	**47.98**	**243**	*e*P	**P**	**16 23 08.0**	**-0.1**
	comp=Z,28nm,0.8s						
MBWA	**Marble Bar**	**55.51**	**255**	*e*P	**P**	**16 24 03.4**	**-1.1**
	comp=Z,18nm,1.2s						
VNDA	**Vanda**	**61.85**	**184**	P	**P**	**16 24 50.5**	**+2.8**
VNDA	**Vanda**	**61.85**	**184**	P	**P**	**16 24 50.5**	**+2.8**
	comp=Z,0.4nm,0.8s,baz=18,slow=8.5,SNR=2.9						
VNDA				LR	LR	16 47 56.2	
	comp=Z,165nm,19.7s,baz=137,slow=32						
MJAR	**Matsushiro Arr**	**64.78**	**325**	P	**P**	**16 25 07.0**	**-0.7**
MJAR	**Matsushiro Arr**	**64.78**	**325**	P	**P**	**16 25 07.0**	**-0.7**
	comp=Z,3.7nm,1.1s,baz=157,slow=6.5,SNR=6.7						
MJAR				LR	LR	16 47 22.9	
	comp=Z,137nm,21.9s,baz=45,slow=31						
PETK	**Petropavlovsk-**	**71.35**	**347**	P	**P**	**16 25 48.8**	**+0.2**
PETK	**Petropavlovsk-**	**71.35**	**347**	P	**P**	**16 25 48.8**	**+0.2**
PETK	**Petropavlovsk-**	**71.35**	**347**	P	**P**	**16 25 48.8**	**+0.2**
	comp=Z,4.6nm,0.9s,baz=116,slow=10,SNR=10						
PETK				LR	LR	16 52 36.8	
	comp=Z,53nm,19.7s,baz=360,slow=32						
KSRS	**Korea

BC3	**Big Chuckawall**	80.19	51	⇓P		P		16 26 40.6	+0.8	
	baz=80									
MPOR	**Mary's Peak**	80.26	38	P		P		16 26 40.9	+1.0	
GRAC	**Grapevine Rang**	80.36	47	⇓P		P		16 26 41.6	+1.1	
	baz=81,SNR=11									
GLA	**Glamis**	80.39	52	⇑P		P		16 26 41.4	+0.6	
	baz=81									
NVAR	**Mina Array Bea**	80.41	45	P		P		16 26 41.0	0.0	
NVAR	**Mina Array Bea**	80.41	45	P		P		16 26 41.0	0.0	
	comp=Z,5.6nm,1.0s,baz=230,slow=9.0,SNR=34									
BJI	**Beijing**	80.47	316	P		P		16 26 42.0	+1.0	
BJI				PP		PP		16 29 45.5	+0.9	
BJI				S		S		16 36 49.0	+2.7	
BJI				pmax		pmax				
	comp=Z,11nm,0.9s									
BJI				pmax		pmax				
	comp=Z,69nm,5.2s									
BJI				LR		LR				
	comp=N,81nm,23.2s									
BJI				LR		LR				
	comp=E,77nm,24.2s									
BJI				LR		LR				
	comp=Z,85nm,30.3s									
NV11	**Mina Array Sit**	80.51	45	*e*P		P		16 26 41.6	+0.1	
IRM	**Iron Mountain**	80.64	50	⇑P		P		16 26 43.0	+0.9	
	baz=81									
TUQ	**Turquoise Moun**	80.66	49	P		P		16 26 42.9	+0.6	
	baz=81,SNR=7.6									
BROR	**Big Rock Looko**	80.78	39	P		P		16 26 42.9	+0.4	
ENH	**Enshi**	80.81	305	*e*P		P		16 26 42.9	-0.2	
	comp=Z,18nm,1.3s									
113A	**Mohawk Valley,**	81.07	52	⇑P		P		16 26 45.1	+0.7	
	baz=81									
LDFC	**Landfair**	81.09	50	*e*P		P		16 26 45.4	+0.8	
	comp=Z,27nm,1.0s									
214A	**Organ Pipe Nat**	81.45	53	⇑P		P		16 26 47.2	+0.7	
	baz=82									
SEY	**Seymchan**	81.51	348	*c i*P		P		16 26 46.0	0.0	
GYA	**Guiyang**	81.56	301	*e*P		P		16 26 48.5	+1.2	
GYA				pP		pP		16 26 55.8	+1.5	
GYA				PP		PP		16 29 56.8	+2.8	
GYA				S		S		16 36 49.5	-9.0	
GYA				SKS		SKSac		16 37 02.0	-4.2	
GYA				pmax		pmax				
	comp=Z,10.0nm,1.0s									
GYA				pmax		pmax				
	comp=Z,90nm,5.4s									
GYA				LR		LR				
	comp=N,420nm,19.4s									
GYA				LR		LR				
	comp=E,390nm,20.0s									
GYA				LR		LR				
	comp=Z,430nm,19.3s									
VLL	**Laurance Lake**	81.89	38	P		P		16 26 49.3	+0.7	
VFP	**Flag Point**	81.94	38	P		P		16 26 49.5	+0.5	
Z14A	**Wintersburg**	81.94	52	⇓P		P		16 26 50.2	+1.2	
	baz=82									
W13A	**Hualapai Mount**	82.00	50	⇓P		P		16 26 50.3	+0.8	
	baz=82									
BMN	**Battle Mountai**	82.12	44	*e*P		P		16 26 49.6	-0.4	
BMN				pmax		pmax				
	comp=Z,16nm,1.3s									
BMN	**Battle Mountai**	82.12	44	*e*P		P		16 26 49.6	-0.4	
	comp=Z,16nm,1.3s									
Y14A	**Wickenburg**	82.15	51	⇓P		P		16 26 50.8	+0.7	
	baz=82									
WVOR	**Wild Horse Val**	82.18	42	*e*P		P		16 26 50.3	+0.1	
WVOR				pmax		pmax				
	comp=Z,12nm,1.1s									
WVOR	**Wild Horse Val**	82.18	42	*e*P		P		16 26 50.3	+0.1	
	comp=Z,12nm,1.1s									
TNA	**Tin City**	82.22	6	*e*P		P		16 26 49.5	-0.2	
	comp=Z,20nm,1.6s									
R11A	**Troy Canyon, C**	82.25	46	⇑P		P		16 26 51.0	+0.2	
	baz=82,SNR=8.3									
BBB	**Bella Bella**	82.38	30	LR		LR		16 59 34.5		
	comp=Z,82nm,18.2s,baz=182,slow=33									
XAN	**Xi'an**	82.83	308	P		P		16 26 54.3	+0.6	
XAN				pP		pP		16 27 02.3	+1.6	
XAN				sP		sP		16 27 06.0	+2.8	
XAN				pmax		pmax				
	comp=Z,2.0nm,1.4s									
TRF	**Thorofare Moun**	83.10	14	*e*P		P		16 26 52.9	-1.6	
	comp=Z,19nm,1.1s									
TUC	**Tucson**	83.16	54	*e*P		P		16 26 56.4	+0.9	
TUC				pmax		pmax				
	comp=Z,4.0nm,1.1s									
TUC	**Tucson**	83.16	54	*e*P		P		16 26 56.4	+0.9	
	comp=Z,4.5nm,1.1s									
CCUT	**Cedar City**	83.45	48	*e*P		P		16 26 57.9	+0.8	
	comp=Z,6.0nm,1.0s									
X16A	**Lo Mia Camp, P**	83.52	52	⇓P		P		16 26 58.7	+1.2	
	baz=84									
ELK	**Elko**	83.59	44	*e*P		P		16 26 58.0	+0.3	
	comp=Z,4.3nm,1.0s									
MCK	**McKinley**	83.65	14	*e*P		P		16 26 56.2	-1.0	
MCK				pmax		pmax				
	comp=Z,32nm,1.3s									
MCK	**McKinley**	83.65	14	*e*P		P		16 26 56.1	-1.0	
	comp=Z,32nm,1.3s									
HAWA	**Hanford**	83.66	38	*e*P		P		16 26 57.4	-0.2	
	comp=Z,14nm,1.2s									
U15A	**North Rim**	83.74	49	⇑P		P		16 26 59.6	+1.0	
	baz=84									
HHC	**Hu-ho-hao-te**	83.94	315	⇓*e*P		P		16 27 01.3	+2.0	
HHC				PP		PP		16 30 17.5	+4.2	
HHC				SKS		S		16 37 18.5	-3.7	
HHC				S		SKSac		16 37 22.5	+1.1	
HHC				pmax		pmax				
	comp=Z,34nm,1.2s									
HHC				pmax		pmax				
	comp=Z,130nm,5.2s									
HHC				LR		LR				
	comp=N,170nm,21.2s									
HHC				LR		LR				
	comp=E,170nm,21.0s									
HHC				LR		LR				
	comp=Z,300nm,21.8s									
319A	**Douglas**	83.96	55	⇓P		P		16 27 00.8	+1.1	
	baz=84									
WUAZ	**Wupatki**	84.03	51	*e*P		P		16 27 00.5	+0.5	
	comp=Z,7.5nm,0.9s									
WUAZ	**Wupatki**	84.03	51	⇓P		P		16 27 00.8	+0.8	
	baz=84									
SKAG	**Skagway**	84.27	22	*e*P		P		16 27 00.7	+0.3	
	comp=Z,23nm,1.6s									
MENT	**Mentasta**	84.30	16	*e*P		P		16 27 00.5	0.0	
KMI	**Kunming**	84.35	298	P		P		16 27 02.0	+0.1	
KMI				pmax		pmax				
	comp=Z,13nm,1.4s									
KMI				pmax		pmax				
	comp=Z,53nm,7.2s									
KMI				LR		LR				
	comp=N,81nm,16.2s									
KMI				LR		LR				
	comp=E,130nm,21.2s									
KMI				LR		LR				
	comp=Z,150nm,22.4s									
MAW	**Mawson**	84.35	200	P		P		16 27 00.4	-0.5	
MAW	**Mawson**	84.35	200	P		P		16 27 00.4	-0.5	
	comp=Z,3.9nm,0.9s,baz=119,slow=5.9,SNR=7.0									
MAW				LR		LR		17 02 41.4		
	comp=Z,127nm,18.1s,baz=288,slow=34									
MFID	**Camas Ranch**	84.46	42	*e*P		P		16 27 02.0	+0.1	
	comp=Z,16nm,1.2s									
MFID	**Camas Ranch**	84.46	42	⇓P		P		16 27 02.5	+0.5	
	baz=85									
BILL	**Bilibino**	84.52	355	⇑*i*P		P		16 27 00.5	-1.0	
BILL				*e*				16 30 22.8		
BILL				pmax		pmax				
	comp=Z,5.0nm,1.2s									
320A	**Kipp Ranch, An**	84.54	55	⇑P		P		16 27 03.9	+1.2	
	baz=85									
MVU	**Marysvale**	84.69	48	*e*P		P		16 27 03.8	+0.5	
	comp=Z,7.3nm,0.9s									
MVU				*e*		pP		16 27 11.0	+0.6	
X18A	**Snowflake**	84.69	52	⇑P		P		16 27 04.1	+0.7	
	baz=85									
220A	**Playas Peak, P**	84.76	55	⇓P		P		16 27 04.9	+1.1	
	baz=85									
COLA	**College**	84.87	14	*e*P		P		16 27 02.5	-0.8	
COLA				pmax		pmax				
	comp=Z,23nm,1.0s									
COLA	**College**	84.87	14	*e*P		P		16 27 02.5	-0.8	
	comp=Z,23nm,1.0s									
120A	**U Bar Ranch, L**	84.92	54	⇓P		P		16 27 05.9	+1.3	
	baz=85									
ILAR	**Eielson Array**	85.01	14	P		P		16 27 02.8	-1.3	
ILAR	**Eielson Array**	85.01	14	P		P		16 27 02.8	-1.3	
	comp=Z,10nm,1.0s,baz=235,slow=6.0,SNR=51									
I12A	**Atlanta**	85.08	42	⇓P		P		16 27 05.9	+0.7	
	baz=85									
Z20A	**Nine Sixteen R**	85.17	54	⇓P		P		16 27 07.0	+1.2	
	baz=85									
CMAR	**Chiang Mai Arr**	85.44	291	P		P		16 27 08.2	+1.0	
CMAR	**Chiang Mai Arr**	85.44	291	P		P		16 27 08.2	+1.0	
	comp=Z,2.8nm,0.9s,baz=105,slow=3.6,SNR=13									
CMAR				LR		LR		17 03 40.1		
	comp=Z,65nm,18.1s,baz=141,slow=35									
HLID	**Hailey**	85.44	42	*e*P		P		16 27 07.3	+0.4	
	comp=Z,7.9nm,0.8s									
HLID				*e*		pP		16 27 14.6	+0.6	
HLID	**Hailey**	85.44	42	P		P		16 27 07.5	+0.5	
	baz=86,SNR=13									
J13A	**Cove Ranch, Pi**	85.52	42	⇓P		P		16 27 08.2	+1.0	
	baz=86,SNR=13									
DLBC	**Dease Lake**	85.56	24	LR		LR		17 00 29.9		
	comp=Z,87nm,18.9s,baz=308,slow=32									
121A	**Cookes Peak, D**	85.58	54	⇓P		P		16 27 08.4	+0.5	
	baz=86									
G12A	**Big Creek, Yel**	85.59	41	⇓P		P		16 27 08.1	+0.5	
	baz=86									
Q16A	**Castle Valley**	85.60	48	⇓P		P		16 27 08.7	+0.9	
	baz=86									
CD2	**Chengdu**	85.60	304	P		P		16 27 08.5	+0.7	
CD2				pP		pP		16 27 15.5	+0.6	
CD2				sP		sP		16 27 18.5	+1.1	
CD2				PP		PP		16 30 29.3	+2.3	
CD2				SKS		SKSac		16 37 29.3	-3.1	
CD2				S		S		16 37 38.0	-1.0	
CD2				sS		sS		16 37 50.0	-0.7	
CD2				pmax		pmax				
	comp=Z,10.0nm,0.5s									
CD2				pmax		pmax				
	comp=Z,120nm,5.6s									
H12A	**Diamond D Ranc**	85.61	41	P		P		16 27 08.2	+0.4	
	baz=86,SNR=7.3									
Y20A	**Horse Springs,**	85.65	53	⇑P		P		16 27 09.2	+1.0	
	baz=86									
HVU	**Hansel Valley**	85.72	44	*e*P		P		16 27 08.9	+0.6	
HVU				*e*				16 27 16.0		
HVU				pmax		pmax				
	comp=Z,7.0nm,1.0s									
HVU	**Hansel Valley**	85.72	44	*e*P		P		16 27 08.9	+0.6	
	comp=Z,7.1nm,1.0s									
HVU				*e*		pP		16 27 16.0	+0.6	
I13A	**Wildhorse Cree**	85.79	42	⇑P		P		16 27 09.5	+0.7	
	baz=86									
X20A	**Quemado**	85.80	52	⇓P		P		16 27 09.8	+0.8	
	baz=86									
J14A	**Carey**	85.91	43	⇑P		P		16 27 10.3	+1.0	
	baz=86									
F12A	**Elk City**	85.93	40	P		P		16 27 09.1	-0.1	
	baz=86,SNR=16									
S18A	**Hurst Farm, Bl**	85.94	49	⇓P		P		16 27 09.9	+0.2	
	baz=86									
Z21A	**St. Cloud Mine**	85.96	54	⇑P		P		16 27 10.9	+1.1	
	baz=86									
SRU	**San Rafael**	86.14	48	⇓P		P		16 27 11.0	+0.5	
	baz=86									
DAU	**Daniels Canyon**	86.17	46	*e*P		P		16 27 11.2	+0.4	
DAU				pmax		pmax				
	comp=Z,6.0nm,1.0s									
DAU	**Daniels Canyon**	86.17	46	*e*P		P		16 27 11.2	+0.4	
	comp=Z,6.3nm,1.0s									
I14A	**Mackay**	86.23	42	⇑P		P		16 27 11.7	+0.8	
	baz=86,SNR=10									
Y21A	**Point of Rocks**	86.23	53	⇑P		P		16 27 11.9	+0.7	
	baz=86									
G13A	**Cobalt**	86.26	41	⇓P		P		16 27 11.2	+0.3	
	baz=86									
X21A	**Alamocita Cree**	86.31	53	⇑P		P		16 27 10.9	-0.6	
	baz=86									
C11A	**Tepee Creek (N**	86.32	38	⇑P		P		16 27 11.4	+0.4	
	baz=86									
COLD	**Coldfoot**	86.39	12	*e*P		P		16 27 10.7	-0.2	
	comp=Z,6.3nm,1.0s									
COLD				*e*		pP		16 27 17.9	0.0	
EGAK	**Eagle**	86.45	16	*e*P		P		16 27 10.9	-0.3	
	comp=Z,12nm,1.2s									
Z22A	**Elephant Butte**	86.49	54	⇓P		P		16 27 13.0	+0.7	
	baz=87									
H14A	**Leadore**	86.59	42	⇓P		P		16 27 13.3	+0.7	
	baz=87,SNR=8.6									
Y22A	**Socorro**	86.75	53	⇓P		P		16 27 13.7	+0.1	
	baz=87									
E13A	**Victor**	86.90	40	⇑P		P		16 27 13.6	-0.4	
	baz=87									
324A	**Moseley Ranch,**	87.00	56	⇑P		P		16 27 15.0	+0.1	
	baz=87									
MCMT	**McKenzie Canyo**	87.01	42	*e*P		P		16 27 14.8	+0.1	
	comp=Z,4.8nm,1.1s									
MCMT				*e*		pP		16 27 22.4	+0.6	
M17A	**Scullys Gap (B**	87.02	45	⇓P		P		16 27 14.5	-0.4	
	baz=87									
H15A	**Lima**	87.05	42	P		P		16 27 15.5	+0.6	
	baz=87,SNR=13									
F14A	**Wisdom**	87.12	41	⇑P		P		16 27 15.5	+0.3	
	baz=87									
U21A	**Nageezi**	87.16	51	⇓P		P		16 27 16.0	+0.4	
	baz=87									
425A	**Indio Mountain**	87.17	57	⇑P		P		16 27 15.8	+0.1	
	baz=87									
S20A	**Disappointment**	87.18	49	⇓P		P		16 27 16.0	+0.3	
	baz=87									
224A	**Cornudas Mount**	87.19	56	⇑P		P		16 27 16.5	+0.7	
	baz=87									
BSMT	**Bassoo Peak**	87.19	38	*e*P		P		16 27 15.1	-0.4	
	comp=Z,20nm,1.6s									
E14A	**Clinton**	87.32	40	⇓P		P		16 27 16.2	+0.1	
	baz=88									
RRI2	**Red Ridge**	87.36	43	*e*P		P		16 27 16.9	+0.4	
	comp=Z,9.8nm,0.8s									
RRI2				*e*		pP		16 27 23.8	+0.2	
325A	**Bean Ranch, Si**	87.38	56	⇓P		P		16 27 17.1	+0.3	
	baz=88									
G15A	**Dillon**	87.39	41	⇑P		P		16 27 17.1	+0.6	
	baz=88									
DLMT	**Dillon**	87.41	41	*e*P		P		16 27 16.7	+0.2	
	comp=Z,6.0nm,0.8s									
626A	**Big Bend Ranch**	87.43	58	⇓P		P		16 27 17.7	+0.8	
	baz=88									
LZH	**Lanzhou**	87.46	309	*e*P		P		16 27 18.3	+1.3	
LZH				pP		pP		16 27 24.3	+0.2	
LZH				sP		sP		16 27 26.0	-0.6	
LZH				pmax		pmax				
	comp=Z,29nm,1.2s									
LZH				pmax		pmax				
	comp=Z,150nm,4.8s									
LZH				LR		LR				
	comp=N,84nm,9.6s									
LZH				LR		LR				
	comp=E,400nm,8.0s									
LZH				LR		LR				
	comp=Z,93nm,8.6s									
I16A	**Newdale**	87.48	43	P		P		16 27 18.2	+1.3	
	baz=88,SNR=6.9									
ANMO	**Albuquerque**	87.51	53	*e*P		P		16 27 17.2	-0.1	
	comp=Z,1.6nm,0.8s									
S21A	**Coal Bank Pass**	87.53	50	⇑P		P		16 27 18.1	+0.6	
	baz=88									
O19A	**Miners Draw (B**	87.61	47	⇓P		P		16 27 17.9	+0.3	
	baz=88									
D14A	**Greenough**	87.61	39	⇑P		P		16 27 17.3	-0.1	
	baz=88									
B13A	**Whitefish**	87.63	38	⇓P		P		16 27 17.1	-0.3	
	baz=88									
TPAW	**Teton Pass**	87.67	43	*e*P		P		16 27 18.5	+0.5	
	comp=Z,9.4nm,1.2s									
F15A	**Butte**	87.69	41	⇑P		P		16 27 18.0	+0.1	
	baz=88,SNR=8.9									
CHMT	**Chamberlain Mo**	87.69	40	*e*P		P		16 27 17.6	-0.4	
	comp=Z,3.6nm,1.0s									
LRM	**Limekiln Ridge**	87.70	41	*e*P		P		16 27 17.9	-0.1	
	comp=Z,68nm,1.1s									
TXAR	**Lajitas Array**	87.74	59	P		P		16 27 18.9	+0.5	
TXAR	**Lajitas Array**	87.74	59	P		P		16 27 18.9	+0.5	
	comp=Z,1.3nm,1.0s,baz=234,slow=5.7,SNR=12									
TXAR				LR		LR		17 00 48.8		
	comp=Z,96nm,18.1s,baz=185,slow=32									
IMW	**Indian Meadow**	87.85	43	*e*P		P		16 27 19.0	+0.1	
	comp=Z,15nm,1.3s									
E15A	**Deer Lodge**	87.85	40	⇓P		P		16 27 18.7	+0.1	
	baz=88									
426A	**McDonald Obser**	87.90	57	⇓P		P		16 27 19.5	+0.2	
	baz=88									
MOOW	**Moose Ponds**	87.91	43	*e*P		P		16 27 19.1	0.0	
	comp=Z,4.5nm,1.2s									
LOHW	**Long Hollow**	87.95	43	*e*P		P		16 27 19.2	0.0	
H16A	**Russell Place,**	87.99	42	P		P		16 27 20.4	+1.0	
	baz=88,SNR=13									
627A	**Terlingua Ranc**	88.00	59	⇓P		P		16 27 20.5	+0.8	
	baz=88									
527A	**Woodward Ranch**	88.06	58	⇑P		P		16 27 19.4	-0.6	
	baz=88									
BOZ	**Bozeman (W)**	88.15	41	*e*P		P		16 27 19.7	-0.3	
BOZ				pmax		pmax				
	comp=Z,6.0nm,1.2s									
BOZ	**Bozeman (W)**	88.15	41	*e*P		P		16 27 19.7	-0.3	
	comp=Z,5.8nm,1.2s									
L19A	**Farson**	88.17	45	⇓P		P		16 27 20.7	+0.4	
	baz=88									
D15A	**Lincoln**	88.20	40	P		P		16 27 20.2	0.0	
	baz=88,SNR=7.2									
F16A	**Kennard Place,**	88.21	41	⇑P		P		16 27 21.0	+0.7	
	baz=88,SNR=6.3									
Z25A	**Roswell**	88.25	55	⇓P		P		16 27 21.0	+0.1	
	baz=88									
WALA	**Waterton Lakes**	88.27	38	*e*P		P		16 27 20.6	+0.1	
	comp=Z,0.1nm,1.0s									
226B	**Tecolote Peak,**	88.27	56	⇓P		P		16 27 21.1	+0.2	
	baz=88									
PDAR	**Pinedale Array**	88.30	44	P		P		16 27 20.8	-0.2	
PDAR	**Pinedale Array**	88.30	44	P		P		16 27 20.8	-0.2	
	comp=Z,2.8nm,1.0s,baz=224,slow=4.1,SNR=15									
PDAR				LR		LR		17 01 48.4		
	comp=Z,66nm,18.4s,baz=258,slow=32									
B14A	**Marquette Ranc**	88.33	38	⇑P		P		16 27 20.7	-0.1	
	baz=88,SNR=9.5									
W24A	**Lazy 6 Ranch,**	88.41	53	⇓P		P		16 27 21.4	-0.2	
	baz=89									
N20A	**Spence Gulch,**	88.42	47	⇓P		P		16 27 22.1	+0.6	
	baz=89									
628A	**Black Gap, Mar**	88.43	59	⇑P		P		16 27 22.0	+0.4	
	baz=89									
C15A	**Salmond Ranch,**	88.47	39	⇑P		P		16 27 21.4	-0.1	
	baz=89,SNR=8.9									
E16A	**East Helena**	88.50	40	⇓P		P		16 27 22.0	+0.3	
	baz=89,SNR=10.0									
A14A	**Double T Ranch**	88.52	38	⇓P		P		16 27 21.8	+0.1	
	baz=89,SNR=6.4									
SMCO	**Snowmass**	88.70	49	*e*P		P		16 27 23.4	+0.2	
	comp=Z,2.9nm,1.0s									
M20A	**Sweetwater, Wa**	88.73	46	⇓P		P		16 27 23.8	+0.8	
	baz=89									
528A	**Cox Ranch, San**	88.73	58	⇑P		P		16 27 23.8	+0.6	
	baz=89									
B15A	**Bradely Ranch,**	88.73	39	⇓P		P		16 27 22.2	-0.5	
	baz=89,SNR=6.6									
D16A	**Dana Ranch, Ca**	88.79	40	P		P		16 27 23.6	+0.6	
	baz=89,SNR=11									
K19A	**Absolon Red Bu**	88.80	45	⇑P		P		16 27 23.2	-0.1	
	baz=89									
L20A	**Wamsutter**	88.82	46	⇓P		P		16 27 24.1	+0.7	
	baz=89									
Z26A	**Caprock**	88.83	55	⇑P		P		16 27 23.8	+0.3	
	baz=89									
J19A	**Crowheart**	88.84	44	⇓P		P		16 27 23.8	+0.4	
	baz=89									
F17A	**Fitzpatrick Pl**	88.87	41	⇑P		P		16 27 24.4	+1.0	
	baz=89									
N21A	**Black Mountain**	88.91	47	⇓P		P		16 27 24.8	+0.9	
	baz=89									
A15A	**Johnson Ranch,**	88.93	38	P		P		16 27 23.6	0.0	
	baz=89,SNR=8.2									
E17A	**Martinsdale**	88.98	41	⇓P		P		16 27 24.7	+0.7	
	baz=89									
C16A	**Fuhringer Ranc**	89.00	39	⇓P		P		16 27 24.0	+0.1	
	baz=89									
428A	**Kincaid Ranch,**	89.01	58	⇑P		P		16 27 24.5	+0.1	
	baz=89									
K20A	**Yellowstone Ra**	89.08	45	⇓P		P		16 27 24.6	0.0	
	baz=89									
G18A	**Lazy EL Ranch,**	89.33	42	⇓P		P		16 27 26.3	+0.7	
	baz=90									
M21A	**Separation Pea**	89.34	46	⇓P		P		16 27 26.4	+0.5	
	baz=90									
O22A	**Kremmling**	89.37	48	⇓P		P		16 27 26.4	+0.2	
	baz=90									
D17A	**Six Diamond Ra**	89.38	40	P		P		16 27 26.2	+0.4	
	baz=90,SNR=15									
F18A	**Big Timber**	89.47	42	⇑P		P		16 27 27.2	+1.0	
	baz=90									
J20A	**Shoshoni**	89.52	44	⇓P		P		16 27 27.1	+0.6	
	baz=90									
A16A	**West Butte Ran**	89.59	38	⇑P		P		16 27 27.0	+0.3	
	baz=90,SNR=7.5									
429A	**Davenport Ranc**	89.61	58	⇑P		P		16 27 27.3	0.0	
	baz=90									
E18A	**Harlowton**	89.62	41	⇑P		P		16 27 27.8	+0.9	
	baz=90,SNR=6.4									
N22A	**Wattenberg Ran**	89.68	47	⇑P		P		16 27 28.0	+0.5	
	baz=90									
I20A	**Worland**	89.73	44	⇓P		P		16 27 28.0	+0.5	
	baz=90									
B17A	**L&G Farms, Che**	89.79	39	⇑P		P		16 27 27.8	+0.2	
	baz=90									
K21A	**Alcova**	89.81	45	⇓P		P		16 27 28.5	+0.5	
	baz=90									
SYO	**Syowa Base**	90.05	194	⇑*e*PcP		PcP		16 27 29.5	-0.2	
N23A	**Red Feather La**	90.07	47	⇑P		P		16 27 30.0	+0.6	
	baz=90									
A17A

WMQ					LR	LR			
	comp=Z,110nm,26.0s								
KIV	**Kislovodsk**	**133.54**	**316**	*i*	PKIKP	**PKPdf**	**16**	**33**	**47.6 +1.9**
KIV					pmax	pmax			
	comp=Z,2.0nm,0.6s								
BRTR	**Keskin Array B**	**141.44**	**314**		PKP	**PKPdf**	**16**	**34**	**00.2 -0.3**
BRTR	**Keskin Array B**	**141.44**	**314**		PKP	**PKPdf**	**16**	**34**	**00.2 -0.3**
	comp=Z,0.9nm,0.9s,baz=101,slow=0.6,SNR=5.1								
STHS	**Stebnicka Huta**	**142.06**	**336**	*e*	PKIKP	**PKPdf**	**16**	**33**	**59.8 -1.3**
STHS	**Stebnicka Huta**	**142.06**	**336**	*e*	PKP	**PKPdf**	**16**	**33**	**59.8 -1.3**
UZH	**Uzhgorod**	**142.25**	**334**	*e*	PKHKP	PKPpre	16	33	56.0
DPC	**Dobruska-Polom**	**143.03**	**341**	*i*	PKIKP	PKPbc	16	34	01.0 +1.3
DPC				*e*			16	34	06.1
DPC	**Dobruska-Polom**	**143.03**	**341**	*i*	PKP	PKPbc	16	34	01.0 +1.3
DPC				*ex*		x	16	34	06.1
CLL	**Collm**	**143.12**	**345**	*i*	PKIKP	PKPbc	16	34	00.1 +0.3
CLL	**Collm**	**143.12**	**345**	*i*	PKPdf	PKPbc	16	34	00.1 +0.3
BRG	**Berggiesshubel**	**143.27**	**343**	*e*	PKP	Pdif	16	31	48.9 +22
	comp=Z,3.5nm,1.0s								
BRG				*e*		PKPab	16	33	59.6 +0.6
	comp=Z,2.0nm,0.9s								
BRG				*e*		PKPbc	16	34	00.7 +0.5
	comp=Z,7.2nm,1.3s								
VYHS	**Vyhne**	**143.74**	**337**	*e*	PKIKP	PKPbc	16	34	01.7 0.0
VYHS	**Vyhne**	**143.74**	**337**	*e*	PKP	PKPbc	16	34	01.7 0.0
PRU	**Pruhonice**	**143.90**	**342**	*i*	PKIKP	PKPab	16	34	01.8 +0.4
PRU				*e*			16	34	06.6
PRU	**Pruhonice**	**143.90**	**342**	*i*	PKP	PKPab	16	34	01.8 +0.4
PRU				*ex*		x	16	34	06.6
MOX	**Moxa**	**144.08**	**346**	*e*	L	L	17	38	21.1
	comp=Z,51nm,21.8s								
NKC	**Novy Kostel**	**144.25**	**345**	*i*	PKIKP	PKPbc	16	34	03.6 +0.4
NKC	**Novy Kostel**	**144.25**	**345**	*i*	PKP	PKPbc	16	34	03.6 +0.4
ZST	**Bratislava**	**144.62**	**338**	*e*	PKIKP	**PKPab**	**16**	**34**	**03.9 -0.3**
ZST	**Bratislava**	**144.62**	**338**	*e*	PKP	**PKPab**	**16**	**34**	**03.9 -0.3**
ROTZ	**Rotzenmuhle**	**144.74**	**344**	*e*	PKPbc	PKPbc	16	34	05.0 +0.3
KHC	**Kasperske Hory**	**144.94**	**343**	*i*	PKIKP	PKPbc	16	34	05.8 +0.3
KHC				*e*			16	34	12.2
KHC	**Kasperske Hory**	**144.94**	**343**	*e*	PKP	PKPbc	16	34	05.7 +0.2
KHC	**Kasperske Hory**	**144.94**	**343**	*i*	PKP	PKPbc	16	34	05.8 +0.3
KHC				*ep*	PKP	pPKPdf	16	34	12.2 -1.3
BEBN	**Eben Emael**	**145.04**	**352**		PKP	**PKPbc**	**16**	**34**	**05.7 +0.1**
GRF	**Grafenberg Arr**	**145.06**	**345**	*e*	PKPbc	**PKPab**	**16**	**34**	**06.1 +0.3**
GRF				*e*	L	L	17	31	45.0
	comp=Z,57nm,21.5s								
GRF	**Grafenberg Arr**	**145.06**	**345**	*e*	PKIKP	**PKPab**	**16**	**34**	**06.1 +0.3**
GRF					MLR	MLR			
	comp=Z,100nm,21.5s								
WET	**Wettzell**	**145.13**	**343**	*e*	PKPbc	**PKPbc**	**16**	**34**	**06.0 0.0**
WET	**Wettzell**	**145.13**	**343**	*e*	PKIKP	**PKPbc**	**16**	**34**	**06.0 0.0**
TNS	**Taunus Mts**	**145.15**	**349**	*e*	PKPbc	**PKPbc**	**16**	**34**	**06.0 -0.1**
TNS	**Taunus Mts**	**145.15**	**349**	*e*	PKIKP	**PKPbc**	**16**	**34**	**06.0 -0.1**
GEC2	**GERESS Array S**	**145.16**	**342**	*e*	PKPbc	**PKPbc**	**16**	**34**	**06.0 -0.2**
GEC2	**GERESS Array S**	**145.16**	**342**	*e*	PKIKP	**PKPbc**	**16**	**34**	**06.0 -0.2**
GERES	**GERESS Array B**	**145.16**	**342**		PKPbc	**PKPbc**	**16**	**34**	**06.0 -0.2**
GERES	**GERESS Array B**	**145.16**	**342**		PKPbc	**PKPbc**	**16**	**34**	**06.1 -0.2**
	comp=Z,5.5nm,0.9s,baz=35,slow=3.3,SNR=36								
MEM	**Membach**	**145.18**	**351**		PKP	**PKPbc**	**16**	**34**	**06.2 +0.1**
MEM					APKP	**PKiKP**	**16**	**34**	**12.0 +1.6**
CONA	**Conrad Observa**	**145.29**	**339**	⇑ *i*	PKPdf	**PKPdf**	**16**	**34**	**07.3 +0.3**
	comp=Z,28nm,1.4s								
BCLA	**Clavier**	**145.46**	**352**		PKP	**PKPbc**	**16**	**34**	**06.9 -0.1**
BCLA					APKP	**PKiKP**	**16**	**34**	**12.4 +1.5**
ABH	**Alteburg**	**145.64**	**349**		PKP	**PKPab**	**16**	**34**	**08.1 +0.1**
TOD	**Tromm**	**145.67**	**348**		PKP2	**PKPbc**	**16**	**34**	**07.9 +0.2**
TOD	**Tromm**	**145.67**	**348**		PKP	**PKPbc**	**16**	**34**	**07.9 +0.2**
DOU	**Dourbes**	**145.87**	**353**		PKP	**PKPbc**	**16**	**34**	**08.5 +0.2**
DOU					APKP	**pPKPdf**	**16**	**34**	**14.2 -0.8**
MOA	**Molln**	**145.88**	**341**	⇑ *i*	PKPab	**PKPbc**	**16**	**34**	**08.4 -0.1**
	comp=Z,18nm,1.3s,SNR=8.6								
RUP	**Ruppelstein**	**145.90**	**350**		PKP2	**PKPab**	**16**	**34**	**08.9 0.0**
RUP	**Ruppelstein**	**145.90**	**350**		PKP	**PKPab**	**16**	**34**	**08.9 0.0**
ARSA	**Arzberg**	**145.99**	**339**	⇑ *i*	PKPab	**PKPbc**	**16**	**34**	**08.8 0.0**
	comp=Z,14nm,1.4s								
WLF	**Walferdange**	**146.08**	**351**		PKP	**PKPbc**	**16**	**34**	**09.3 +0.3**
WLF					APKP	**pPKPdf**	**16**	**34**	**15.3 -0.1**
WLF	**Walferdange**	**146.08**	**351**	*e*	PKPbc	**PKPbc**	**16**	**34**	**09.4 +0.3**
WLF	**Walferdange**	**146.08**	**351**	*e*	PKP2	**PKPbc**	**16**	**34**	**09.3 +0.3**
WLF	**Walferdange**	**146.08**	**351**	*e*	PKPbc	**PKPbc**	**16**	**34**	**09.3 +0.3**
STU	**Stuttgart**	**146.38**	**347**	*e*	PKPbc	**PKPbc**	**16**	**34**	**09.9 0.0**
STU	**Stuttgart**	**146.38**	**347**	*e*	PKP2	**PKPdf**	**16**	**34**	**08.3 -0.3**
STU	**Stuttgart**	**146.38**	**347**	*e*	PKPdf	**PKPdf**	**16**	**34**	**08.3 -0.3**
STU				*e*	PKPbc	PKPbc	**16**	**34**	**10.0 0.0**
RJOB	**Jochberg**	**146.43**	**342**	*e*	PKPbc	**PKPbc**	**16**	**34**	**10.0 -0.2**
FUR	**Furstenfeldbru**	**146.46**	**344**	*e*	PKPbc	**PKPbc**	**16**	**34**	**09.9 -0.3**
FUR	**Furstenfeldbru**	**146.46**	**344**	*e*	PKP2	**PKPbc**	**16**	**34**	**09.9 -0.3**
LANF	**Langenberg**	**146.46**	**349**		PKP2	**PKPdf**	**16**	**34**	**09.2 +0.4**
LANF	**Langenberg**	**146.46**	**349**		PKP	**PKPdf**	**16**	**34**	**09.2 +0.4**
LANF	**Langenberg**	**146.46**	**349**		PKP	**PKPdf**	**16**	**34**	**09.2 +0.4**
SOKA	**Soboth**	**146.65**	**339**	⇓ *i*	PKPab	**PKPbc**	**16**	**34**	**10.5 -0.4**
	comp=Z,14nm,1.2s								
BFO	**Black Forest**	**146.98**	**348**	*e*	PKPbc	**PKPbc**	**16**	**34**	**11.6 -0.1**
BFO	**Black Forest**	**146.98**	**348**	*e*	PKP2	**PKPbc**	**16**	**34**	**11.4 -0.3**
BFO	**Black Forest**	**146.98**	**348**	*e*	PKPbc	**PKPbc**	**16**	**34**	**11.4 -0.3**
SPAK	**Spaichingen-Ko**	**147.10**	**347**		PKP	**PKPbc**	**16**	**34**	**12.0 -0.1**
WATA	**Walderalm**	**147.14**	**343**	⇓ *i*	PKPab	**PKPbc**	**16**	**34**	**11.8 -0.5**
	comp=Z,7.0nm,0.9s								
MYKA	**Terra Mystica**	**147.16**	**340**	⇑ *i*	PKPbc	**PKPdf**	**16**	**34**	**10.9 +0.8**
	comp=Z,14nm,1.4s								
WTTA	**Wattenberg**	**147.19**	**343**	⇓ *i*	PKPab	**PKPbc**	**16**	**34**	**12.2 -0.3**
	comp=Z,28nm,1.4s								
RETA	**Reutte**	**147.22**	**344**	⇑ *i*	PKPab	**PKPbc**	**16**	**34**	**12.6 +0.2**
	comp=Z,18nm,1.2s								
MOTA	**Moosalm**	**147.26**	**344**	⇓ *i*	PKPab	**PKPbc**	**16**	**34**	**12.0 -0.6**
	comp=Z,23nm,1.2s								
ECH	**Echery**	**147.32**	**349**	*e*	PKP2	**PKPbc**	**16**	**34**	**12.4 -0.3**
ECH	**Echery**	**147.32**	**349**	*e*	PKPbc	**PKPbc**	**16**	**34**	**12.4 -0.3**
ECH	**Echery**	**147.32**	**349**		PKP	**PKPbc**	**16**	**34**	**12.6 0.0**
LJU	**Ljubljana**	**147.38**	**339**	*e*	PKPbc	**PKPbc**	**16**	**34**	**12.9 +0.1**
FELD	**Feldberg im Sc**	**147.48**	**348**		PKP	**PKPbc**	**16**	**34**	**13.3 0.0**
FELD	**Feldberg im Sc**	**147.48**	**348**		PKP	**PKPbc**	**16**	**34**	**13.3 0.0**
THEF	**They Montfort**	**147.51**	**351**		PKP2	**PKPbc**	**16**	**34**	**13.3 +0.2**
THEF	**They Montfort**	**147.51**	**351**		PKP	**PKPbc**	**16**	**34**	**13.3 +0.2**
THEF	**They Montfort**	**147.51**	**351**		PKP	**PKPbc**	**16**	**34**	**13.3 +0.2**
DAVA	**Damuels**	**147.62**	**345**	⇑ *i*	PKPbc	**PKPbc**	**16**	**34**	**12.7 -1.0**
	comp=Z,20nm,1.2s,SNR=6.0								
FETA	**Feichten**	**147.65**	**344**	⇑ *i*	PKPab	**PKPbc**	**16**	**34**	**14.0 +0.2**
	comp=Z,17nm,1.1s								
MOF	**Molkenrain**	**147.67**	**349**		PKP2	**PKPbc**	**16**	**34**	**13.7 0.0**
MOF	**Molkenrain**	**147.67**	**349**		PKP	**PKPbc**	**16**	**34**	**13.7 0.0**
MOF	**Molkenrain**	**147.67**	**349**		PKP	**PKPbc**	**16**	**34**	**13.7 0.0**
BBS	**Basel-Blauen**	**147.97**	**348**		PKP2	**PKPbc**	**16**	**34**	**14.8 +0.3**
BBS	**Basel-Blauen**	**147.97**	**348**		PKP	**PKPbc**	**16**	**34**	**14.8 +0.3**
TUE	**Stuetta**	**148.51**	**345**	*e*	PKPbc	**PKPbc**	**16**	**34**	**16.1 0.0**
AGO	**Saint Agoulin**	**150.03**	**353**		PKP	**PKPbc**	**16**	**34**	**19.6 -0.1**
AGO	**Saint Agoulin**	**150.03**	**353**		PKP	**PKPbc**	**16**	**34**	**19.6 -0.1**
PYM	**Petit Puy Mans**	**150.34**	**353**		PKP	**PKPbc**	**16**	**34**	**20.3 -0.2**
BNI	**Bardonecchia**	**150.45**	**348**	*e*	PKIKP	**PKPbc**	**16**	**34**	**21.0 +0.1**
BNI	**Bardonecchia**	**150.45**	**348**	*e*	PKPbc	**PKPbc**	**16**	**34**	**21.0 +0.1**
SSB	**Saint Sauveur**	**150.60**	**351**	*e*	PKIKP	**PKPbc**	**16**	**34**	**21.2 +0.1**
SSB	**Saint Sauveur**	**150.60**	**351**	*e*	PKPbc	**PKPbc**	**16**	**34**	**21.2 +0.1**
LBL	**Lubilhac**	**150.82**	**353**		PKP	**PKPbc**	**16**	**34**	**21.9 +0.2**
ESDC	**Sonseca Array**	**156.57**	**5**		PKPab	**PKPab**	**16**	**34**	**52.7 -0.5**
ESDC	**Sonseca Array**	**156.57**	**5**		PKPab	**PKPab**	**16**	**34**	**52.7 -0.5**
	comp=Z,0.7nm,0.7s,baz=357,slow=3.9,SNR=9.0								
TORD	**Torodi Ar. Bea**	**175.55**	**227**		PKP	**PKPdf**	**16**	**34**	**38.5 -1.6**
TORD					PKPab	**PKPab**	**16**	**36**	**16.6 -0.7**
TORD	**Torodi Ar. Bea**	**175.55**	**227**		PKP	**PKPdf**	**16**	**34**	**38.5 -1.6**
	comp=Z,2.5nm,1.1s,baz=231,slow=0.9,SNR=8.4								
TORD					PKPab	**PKPab**	**16**	**36**	**16.6 -0.7**
	comp=Z,0.8nm,0.9s,baz=169,slow=2.9,SNR=3.5								

*ISCJB **31** 16:15:46.7±0.3,24°.21N±0°.02×122°.03E±0°.02,h27km±3km, Error ellipse: s-maj=3.2km s-min=2.1km az=149.8*
*TAP **31** 16:15:46.9,24°.25N×121°.95E,h37km,ML3.5,C*
*JMA **31** 16:15:47.0±0.2,24°.32N×122°.00E,h60km,M2.6*

ISC 31 16:15:44.9±1.0,24°.20N±0°.02×122°.02E±0°.02,h15km±9km, n61,σ0°74/116,2C-6D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ENA	**Nanau**	**0.34**	**312**	*e*	P	**Pn**	**16 15 54.8**	**-0.6**
	baz=320							
ENA				*e*	S	**Sn**	**16 16 00.3**	**-1.7**
	baz=320							
TWD	**Chiawan**	**0.40**	**253**		P	**Pn**	**16 15 55.8**	**-0.4**
	baz=242							
TWD				*i*	S	**Sn**	**16 16 02.4**	**-1.1**
	baz=242							
HWA	**Hwalien**	**0.44**	**240**		P	**Pn**	**16 15 56.8**	**+0.1**
	baz=227							
HWA				*e*	S	**Sn**	**16 16 04.4**	**+0.1**
	baz=227							
TWC	**Suao**	**0.44**	**340**	*i*	P	**Pn**	**16 15 56.2**	**-0.5**
	baz=352							
TWC				*i*	S	**Sn**	**16 16 02.6**	**-1.8**
	baz=352							
ENTT	**Nioudou**	**0.60**	**317**	*e*	P	**Pb**	**16 15 56.9**	**-0.3**
	baz=314							
ENTT				*e*	S	**Sb**	**16 16 06.6**	**+1.1**
	baz=314							
TWE	**Neicheng**	**0.61**	**329**		P	**Pb**	**16 15 57.9**	**+0.5**
	baz=333							
TWE					S	**Sn**	**16 16 07.1**	**-1.6**
	baz=333							
ILA	**Ilan**	**0.62**	**337**	*i*	P	**Pn**	**16 15 59.0**	**-0.2**
	baz=337							
ILA				*i*	S	**Sn**	**16 16 07.6**	**-1.2**
	baz=337							
NNS	**Nan Shan**	**0.64**	**292**	*e*	P	**Pg**	**16 15 56.2**	**-1.2**
	baz=290							
NNS				*e*	S	**Sb**	**16 16 07.6**	**+1.0**
	baz=290							
EGS		**0.65**	**353**	*i*	P	**Pn**	**16 15 59.8**	**+0.1**
	baz=3.0							
EGS				*e*	S	**Sn**	**16 16 08.9**	**-0.8**
	baz=3.0							
ESL	**Shilin**	**0.66**	**235**	*e*	P	**Pb**	**16 15 58.0**	**-0.1**
	baz=226							
ESL				*e*	S	**Sn**	**16 16 09.8**	**0.0**
	baz=226							
WHF	**Hehuan Shan**	**0.69**	**266**	*e*	P	**Pb**	**16 15 59.8**	**+0.9**
	baz=260							
WHF				*e*	S	**Sb**	**16 16 09.7**	**+1.3**
	baz=260							
NSK	**Sanguang**	**0.77**	**309**	*e*	P	**Pg**	**16 15 59.4**	**-0.5**
	baz=299							
NSK					S	**Sb**	**16 16 10.4**	**+0.1**
	baz=299							
TWT	**Tachien**	**0.77**	**274**	*e*	P	**Pn**	**16 16 01.6**	**+0.1**
	baz=266							
TWT				*e*	S	**Sn**	**16 16 11.9**	**-1.0**
	baz=266							
TWB1	**Santiao Chiao**	**0.81**	**358**		P	**Pn**	**16 16 02.4**	**+0.6**
	baz=5.0							
TWB1					S	**Sn**	**16 16 12.9**	**-0.7**
	baz=5.0							
NWF	**Wu-fen Shan**	**0.90**	**346**		P	**Pn**	**16 16 03.8**	**+0.7**
	baz=350							
NWF					S	**Sn**	**16 16 15.2**	**-0.6**
	baz=350							
EHY	**Hungye**	**0.94**	**223**	*e*	P	**Pb**	**16 16 03.0**	**0.0**
	baz=226							
EHY				*e*	S	**Sn**	**16 16 17.5**	**+0.8**
	baz=226							
YOJ	**Yonaguni jima**	**0.94**	**74**		P	**Pn**	**16 16 04.4**	**+0.7**
YOJ					S	**Sn**	**16 16 17.1**	**+0.2**
TAP1	**Taipei**	**0.95**	**332**		P	**Pn**	**16 16 04.0**	**+0.3**
	baz=324							
TAP1				*i*	S	**Sn**	**16 16 16.6**	**-0.5**
	baz=324							
TAP	**Taipei**	**0.96**	**331**		P	**Pn**	**16 16 03.9**	**+0.1**
	baz=324							
TAP					S	**Sn**	**16 16 17.0**	**-0.2**
	baz=324							
NSTT	**Nanjuang**	**1.02**	**295**	⇑ *i*	P	**Pg**	**16 16 05.3**	**+0.7**
	baz=294							
NSTT					S	**Sg**	**16 16 18.2**	**+0.2**
	baz=294							
TWS1	**Kuangyinshan**	**1.05**	**329**	⇑ *i*	P	**Pg**	**16 16 05.4**	**+0.1**
	baz=332							
TWS1				*e*	S	**Sn**	**16 16 19.6**	**0.0**
	baz=332							
SMLT	**Sun Moon Lake**	**1.07**	**253**	⇓	P	**Pg**	**16 16 06.0**	**+0.4**
	baz=240							
SMLT				*e*	S	**Sg**	**16 16 19.6**	**+0.1**
	baz=240							
TWF1	**Yuli**	**1.07**	**218**	⇓ *i*	P	**Pb**	**16 16 05.0**	**-0.1**
	baz=224							
TWF1				*e*	S	**Sn**	**16 16 20.5**	**+0.5**
	baz=224							
NCU	**National Centr**	**1.08**	**316**	*e*	P	**Pg**	**16 16 06.0**	**+0.2**
	baz=318							
NCU				*e*	S	**Sn**	**16 16 20.1**	**-0.2**
	baz=318							
TYC	**Yuchr**	**1.10**	**255**		P	**Pg**	**16 16 06.3**	**+0.1**
	baz=241							
TYC				*e*	S	**Sg**	**16 16 20.4**	**-0.1**
	baz=241							
HSN	**Hsinchu**	**1.13**	**302**	*e*	P	**Pg**	**16 16 06.6**	**-0.1**
	baz=305							
HSN				*e*	S	**Sn**	**16 16 21.0**	**-0.4**
	baz=305							
TWY	**Chenhua**	**1.14**	**341**		P	**Pg**	**16 16 07.0**	**+0.1**
	baz=345							
TWY				*e*	S	**Sg**	**16 16 21.5**	**-0.3**
	baz=345							
TWQ1	**Liyutan**	**1.15**	**278**	*e*	P	**Pg**	**16 16 07.7**	**+0.6**
	baz=275							
TWQ1				*e*	S	**Sg**	**16 16 22.5**	**+0.5**
	baz=275							
NSY	**Sanyi**	**1.17**	**281**	*e*	P	**Pg**	**16 16 07.7**	**+0.3**
	baz=278							
NSY				*e*	S	**Sg**	**16 16 22.8**	**+0.1**
	baz=278							
YUS	**Yu-Shan**	**1.20**	**234**	⇓ *i*	P	**Pb**	**16 16 08.4**	**+0.7**
	baz=230							
TCU	**Taichung**	**1.23**	**268**	*e*	P	**Pg**	**16 16 08.8**	**+0.2**
	baz=264							
TCU				*e*	S	**Sg**	**16 16 25.0**	**+0.4**
	baz=264							
CHKT	**Chengkung**	**1.25**	**209**	*e*	P	**Pn**	**16 16 07.2**	**-0.7**
	baz=190							
CHKT				*e*	S	**Sb**	**16 16 21.9**	**-2.1**
	baz=190							
WNT	**Mingjian**	**1.26**	**256**	*e*	P	**Pg**	**16 16 09.4**	**+0.2**
	baz=250							
WNT				*e*	S	**Sg**	**16 16 25.7**	**+0.1**
	baz=250							
ALS	**Alishan**	**1.30**	**239**	⇓ *i*	P	**Pb**	**16 16 10.0**	**+0.6**
	baz=224							
ALS				*e*	S	**Sg**	**16 16 28.2**	**+1.1**
	baz=224							
ELDTW	**Lidau**	**1.36**	**223**	*e*	P	**Pn**	**16 16 09.0**	**-0.5**
	baz=209							
CHN5	**Tsauling**	**1.36**	**244**	⇓ *i*	P	**Pg**	**16 16 10.9**	**-0.2**
	baz=227							
CHN5				*e*	S	**Sg**	**16 16 29.3**	**+0.4**
	baz=227							
WGK	**Gukeng**	**1.43**	**249**	*e*	P	**Pb**	**16 16 11.5**	**+0.3**
	baz=244							
WGK				*e*	S	**Sg**	**16 16 30.1**	**-0.8**
	baz=244							
CHN4	**Tsaushan**	**1.55**	**237**	*e*	P	**Pb**	**16 16 13.8**	**+0.4**
	baz=220							
CHN4					S	**Sg**	**16 16 34.4**	**-0.6**
	baz=220							
CHN2	**Minshiung**	**1.56**	**245**	*e*	P	**Pb**	**16 16 13.8**	**+0.3**
	baz=240							
CHN2				*e*	S	**Sg**	**16 16 35.0**	**-0.2**
	baz=240							
IRIF	**Iriomote-Funau**	**1.57**	**85**		P	**Pb**	**16 16 12.8**	**-0.9**
IRIF				*e*	S	**Sb**	**16 16 32.6**	**-0.8**
WTP	**Ta-pu**	**1.60**	**234**	⇓ *i*	P	**Pb**	**16 16 14.3**	**+0.1**
	baz=228							
WTP				*e*	S	**Sb**	**16 16 34.8**	**+0.5**
	baz=228							
CHY	**Chiayi**	**1.62**	**245**	*e*	P	**Pb**	**16 16 13.7**	**-0.7**
	baz=228							
CHY				*e*	S	**Sb**	**16 16 35.5**	**+0.8**
	baz=228							
WTCT	**Ta-ch'eng**	**1.62**	**259**	*e*	P	**Pb**	**16 16 14.5**	**0.0**
	baz=254							
WTCT				*e*	S	**Sb**	**16 16 34.5**	**-0.3**
	baz=254							
TWG	**Pinlang**	**1.62**	**213**	*e*	P	**Pn**	**16 16 12.6**	**-0.5**
	baz=206							
TWG				*e*	S	**Sn**	**16 16 33.1**	**-0.6**
	baz=206							
HATJ	**Hateruma jima**	**1.64**	**95**		P	**Pb**	**16 16 14.6**	**-0.3**
HATJ				*e*	S	**Sb**	**16 16 35.3**	**-0.1**
TWK	**Hsinying**	**1.68**	**237**	*e*	P	**Pb**	**16 16 15.6**	**0.0**
	baz=230							
TWK				*e*	S	**Sb**	**16 16 36.9**	**+0.3**
	baz=230							
CHN1	**Nanshi**	**1.70**	**234**	*e*	P	**Pb**	**16 16 15.7**	**-0.2**
	baz=228							
CHN1				*e*	S	**Sb**	**16 16 37.7**	**+0.6**
	baz=228							
WSF	**Szhu**	**1.73**	**252**	*e*	P	**Pb**	**16 16 16.1**	**-0.4**
	baz=247							
WSF				*e*	S	**Sb**	**16 16 37.6**	**-0.4**
	baz=247							
JKRS	**Kuro-shima**	**1.82**	**88**		P	**Pb**	**16 16 17.1**	**-0.8**
JKRS				*e*	S	**Sb**	**16 16 39.7**	**-0.9**
ECL	**Taimali**	**1.87**	**212**	*e*	P	**Pb**	**16 16 19.2**	**+0.4**
	baz=205							
ECL				*e*	S	**Sn**	**16 16 38.6**	**-1.2**
	baz=205							
SSD	**Sandimen**	**1.93**	**222**	*e*	P	**Pb**	**16 16 18.8**	**-0.9**
	baz=200							
SSD				*e*	S	**Sn**	**16 16 42.2**	**+1.0**
	baz=200							
JIJ	**Ishigaki jima**	**1.95**	**85**		P	**Pn**	**16 16 18.3**	**+0.8**
JIJ				*e*	S	**Sn**	**16 16 41.0**	**-0.7**
TWM1	**Shoushan**	**2.00**	**227**	*e*	P	**Pb**	**16 16 21.0**	**-0.1**
	baz=235							
EAST	**Anshuo**	**2.10**	**211**	*e*	P	**Pn**	**16 16 20.7**	**+1.0**
	baz=207							
LAY	**Lan-yu**	**2.19**	**191**	*e*	P	**Pn**	**16 16 20.2**	**-0.7**
	baz=188							
PNG	**Penghu**	**2.34**	**255**	*e*	P	**Pn**	**16 16 23.0**	**+0.2**
	baz=251							
PNG				*e*	S	**Sn**	**16 16 51.0**	**-0.3**
	baz=251							
WDGT	**Dungji**	**2.35**	**247**	*e*	P	**Pn**	**16 16 23.5**	**+0.5**
	baz=241							
WDGT				*e*	S	**Sn**	**16 16 51.0**	**-0.7**
	baz=241							
HEN	**Hengchun**	**2.48**	**209**	*e*	P	**Pb**	**16 16 27.3**	**-1.9**
	baz=194							
HEN				*e*	S	**Sn**	**16 16 55.4**	**+0.5**
	baz=194							
JTJ	**Tarama**	**2.49**	**79**		P	**Pn**	**16 16 26.0**	**+1.1**
JTJ				*e*	S	**Sn**	**16 16 55.0**	**0.0**
TWK1	**Hengchun**	**2.51**	**207**	*e*	P	**Pn**	**16 16 25.5**	**+0.3**
	baz=194							
JOGS	**Gusukube**	**3.14**	**79**		P	**Pn**	**16 16 36.5**	**+2.6**
JOGS				*e*	S	**Sn**	**16 17 12.0**	**+0.9**

IDC 31 16:20:31.6±2.6,29°.98S×177°.14W,h0km,mb4.0/3, mb1 4.2/4,mb1mx3.8/18,mbtmp4.0/4,ML3.1/1,Error ellipse: s-maj=48.7km s-min=26.4km az=93.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**0.99**	**317**		Pn	**Pg**	**16 20 51.1**	**+0.5**
	840nm,0.3s,baz=138,slow=3.9,SNR=39							
RAO					Sn	Sg	16 21 00.7	-2.8
	1μm,0.3s,baz=66,slow=21,SNR=10.0							
URZ	**Urewera**	**9.54**	**208**		Pn	Pn	16 22 51.4	+1.3
	0.2nm,0.3s,baz=313,slow=19,SNR=2.6							
URZ					Sn	Sn	16 24 38.9	+0.9
	0.7nm,0.3s,baz=121,slow=21,SNR=6.4							
STKA	**Stephens Creek**	**35.30**	**256**		P	P	16 27 30.3	+1.9
	1.0nm,0.4s,baz=100,slow=12,SNR=8.1							
ASAR	**Alice Springs**	**43.88**	**266**		P	P	16 28 39.3	-0.7
	0.4nm,0.3s,baz=106,slow=7.2,SNR=28							
WRA	**Warramunga Arr**	**44.83**	**271**		P	P	16 28 46.8	-0.9
	1.3nm,0.4s,baz=110,slow=8.1,SNR=30							
FINES	**FINESS Array B**	**145.00**	**341**		PKPbc	PKPbc	16 40 09.2	-0.2
	2.0nm,0.4s,baz=57,slow=4.1,SNR=27							

**IDC 31 16:23:40.2±1.3,42°.72S×72°.54W,h0km,mb3.5/2, mb1 4.0/3,mb1mx3.7/16,mb

3.7nm,1.2s
VNDA **Vanda** 63.87 186 P P 16 51 10.6 0.0
1.2nm,0.9s,baz=0.7,slow=6.9,SNR=5.1
NVAR **Mina Array Bea** 73.61 42 P P 16 52 13.5 +1.3
NVAR **Mina Array Bea** 73.61 42 P P 16 52 13.5 +1.3
0.5nm,0.8s,baz=233,slow=9.5,SNR=5.1
KDAK **Kodiak Island** 74.38 11 LR LR 17 16 28.2
comp=Z,65nm,20.9s,baz=98,slow=29
QSPA **South Pole Qui** 75.08 180 *eP* P 16 52 19.5 -0.7
6.0nm,1.0s
KSRS **Korea Array** 76.27 315 LR LR 17 21 29.5
comp=Z,21nm,18.4s,baz=65,slow=32
TXAR **Lajitas Array** 79.88 56 P P 16 52 49.5 +1.8
TXAR **Lajitas Array** 79.88 56 P P 16 52 49.5 +1.8
0.5nm,0.8s,baz=247,slow=12,SNR=4.6
ANMO **Albuquerque** 80.07 50 LR LR 17 22 23.1
comp=Z,40nm,19.4s,baz=220,slow=31
PDAR **Pinedale Array** 81.55 42 LR LR 17 20 40.7
comp=Z,31nm,19.7s,baz=74,slow=29
ILAR **Eielson Array** 81.91 11 P P 16 52 58.3 +0.7
ILAR **Eielson Array** 81.91 11 P P 16 52 58.3 +0.7
0.6nm,0.7s,baz=222,slow=5.5,SNR=9.9
MAW **Mawson** 88.39 198 P P 16 53 29.9 -0.2
MAW **Mawson** 88.39 198 P P 16 53 29.9 -0.2
4.9nm,1.0s,baz=106,slow=6.0,SNR=6.9
YKA **Yellowknife Ar** 89.47 23 P P 16 53 36.0 +0.9
YKA **Yellowknife Ar** 89.47 23 P P 16 53 36.0 +0.9
0.5nm,0.7s,baz=237,slow=4.4,SNR=5.5
SONM **Songino Array** 94.92 318 LR LR 17 32 45.9
comp=Z,29nm,18.2s,baz=305,slow=33
ARCES **ARCESS Array B** 124.26 352 PKP PKPdf 16 59 37.2 +0.5
ARCES **ARCESS Array B** 124.26 352 PKP PKPdf 16 59 37.2 +0.5
4.5nm,0.9s,baz=8.8,slow=8.7,SNR=4.2
GERES **GERESS Array B** 145.80 352 PKPbc PKPab 17 00 19.0 +0.8
GERES **GERESS Array B** 145.80 352 PKPbc PKPab 17 00 19.0 +0.8
0.7nm,0.7s,baz=41,slow=2.6,SNR=8.8
BRTR **Keskin Array B** 146.19 322 PKPbc PKPab 17 00 20.6 +0.5
BRTR **Keskin Array B** 146.19 322 PKPbc PKPab 17 00 20.6 +0.5
1.7nm,0.8s,baz=96,slow=2.3,SNR=8.3
ESDC **Sonseca Array** 153.50 20 PKPbc PKPbc 17 00 38.0 +0.6
ESDC **Sonseca Array** 153.50 20 PKPbc PKPbc 17 00 38.0 +0.6
0.2nm,0.3s,baz=348,slow=1.6,SNR=5.2

SKO ***31*** *16:44:00.4, 41.41°N×22.68°E, h23km, M1.4, ML1.8*
ATH ***31*** *16:44:03.8, 41.25°N×22.71°E, h5km, MD2.9/5*
BEO ***31*** *16:44:03.6±1.1, 41.22°N×22.64°E, h0km, ML1.6/5*
CSEM ***31*** *16:44:03.7±1.4, 41.27°N×22.68°E, h2km, ML1.6, Error ellipse: s-maj=26.8km s-min=13.4km az=176.0*

ISC 31 16:44:03.4±1.0, 41.26°N±0.03×22.69°E±0.03, h4km±11km, n14, σ0.965/24, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
VAY	**Valandovo**	**0.11**	**305**	*i* Pg	**Pg**		**16 44 05.2**	**-0.4**
VAY				*i* Sg	**Sg**		**16 44 07.1**	**0.0**
VAY				*i* Lg	Lg		16 44 07.2	
	comp=N,899nm,0.2s							
VAY				*i* Lg	Lg		16 44 07.4	
	comp=E,273nm,0.5s							
VAY	**Valandovo**	**0.11**	**305**	*i* Pg	Pg		16 44 01.6	-4.0
VAY				*i* Lg	Lg		16 44 01.9	
	comp=E,273nm,0.5s							
VAY				*e*Sg	**Sg**		**16 44 07.0**	**-0.1**
GRG	**Griva**	**0.37**	**216**	*e*PB	**Pg**		**16 44 11.1**	**+0.5**
GRG				*e*SB	**Sg**		**16 44 16.4**	**+1.0**
SOH	**Sokhos**	**0.67**	**131**	*e*PB	**Pg**		**16 44 16.2**	**0.0**
SOH				*e*SB	**Sg**		**16 44 25.1**	**+0.3**
NVR	**Nevrokopi**	**0.89**	**84**	*e*PB	**Pg**		**16 44 20.4**	**0.0**
NVR				*e*SB	**Sg**		**16 44 32.1**	**+0.1**
PLG	**Polygyros**	**1.05**	**147**	*e*PB	**Pg**		**16 44 23.0**	**-0.6**
PLG				*e*SB	**Sg**		**16 44 37.0**	**-0.3**
FNA	**Florina**	**1.10**	**245**	*e*PN	**Pb**		**16 44 24.8**	**-0.2**
FNA				*e*SB	**Sb**		**16 44 39.8**	**+0.1**
VTS	**Vitosha**	**1.39**	**16**	*e*Pg	**Pn**		**16 44 29.3**	**-0.3**
VTS				*e*Sg	**Sg**		**16 44 48.4**	**+0.4**
VTS	**Vitosha**	**1.39**	**16**	*e*Pg	**Pn**		**16 44 29.3**	**-0.3**
VTS				*e*Sg	**Sg**		**16 44 48.4**	**+0.4**
BARS	**Barje**	**1.69**	**338**	*e*Pn	**Pn**		**16 44 33.6**	**0.0**
BARS				*e*Sg	**Sg**		**16 44 58.4**	**+0.8**
BARS	**Barje**	**1.69**	**338**	*e*Pn	**Pn**		**16 44 33.6**	**0.0**
BARS				*e*Sg	**Sg**		**16 44 58.4**	**+0.8**
PLD	**Plovdiv**	**1.73**	**60**	*e*Sg	**Sg**		**16 45 00.4**	**+1.4**
PLD	**Plovdiv**	**1.73**	**60**	*e*Sg	**Sg**		**16 45 00.4**	**+1.4**
ZAPS	**Zavoj**	**2.01**	**359**	*e*Pn	**Pb**		**16 44 40.0**	**-0.6**

JMA ***31*** *16:44:09.7±0.2, 24.69°N×122.04°E, h51km±3km, M2.4*
ISCJB ***31*** *16:44:10.2±0.4, 24.68°N±0.03×122.06°E±0.02, h54km±5km, Error ellipse: s-maj=4.8km s-min=2.9km az=166.0*
TAP ***31*** *16:44:10.2, 24.69°N×122.02°E, h54km, ML3.2, D*

ISC 31 16:44:10.7±1.3, 24.69°N±0.04×122.05°E±0.03, h53km±7km, n44, σ0.944/71, 3C-3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
EGS		**0.18**	**325**	P		**Pn**	**16 44 19.5**	**+0.2**
	baz=335							
EGS				*e*S		**Sn**	**16 44 25.7**	**+0.3**
	baz=335							
TWC	**Suao**	**0.20**	**246**	P		Pn	16 44 18.9	-0.5
	baz=241							
TWC				S		**Sn**	**16 44 25.4**	**-0.1**
	baz=241							
ILA	**Ilan**	**0.28**	**285**	*e*P		**Pn**	**16 44 20.1**	**+0.1**
	baz=287							
ILA				*e*S		**Sn**	**16 44 26.9**	**+0.4**
	baz=287							
TWB1	**Santiao Chiao**	**0.32**	**350**	*i* P		**Pn**	**16 44 20.2**	**-0.1**
	baz=356							
TWB1				*i* S		**Sn**	**16 44 27.2**	**+0.1**
	baz=356							
TWE	**Neicheng**	**0.35**	**275**	⇑*i* P		**Pn**	**16 44 20.5**	**0.0**
	baz=275							
TWE				S		**Sn**	**16 44 27.6**	**+0.1**
	baz=275							
ENA	**Nanau**	**0.39**	**227**	⇓*i* P		**Pn**	**16 44 20.6**	**-0.3**
	baz=223							
ENA				S		**Sn**	**16 44 28.1**	**-0.1**
	baz=223							
ENTT	**Nioudou**	**0.44**	**263**	⇓*i* P		**Pn**	**16 44 21.6**	**0.0**
	baz=262							
ENTT				*e*S		**Sn**	**16 44 29.6**	**+0.3**
	baz=262							
NWF	**Wu-fen Shan**	**0.45**	**327**	⇑*i* P		**Pn**	**16 44 21.8**	**0.0**
	baz=330							
NWF				*i* S		**Sn**	**16 44 29.7**	**+0.1**
	baz=330							
TAP1	**Taipei**	**0.59**	**306**	P		**Pn**	**16 44 22.7**	**-0.5**
	baz=307							
TAP1				*e*S		**Sn**	**16 44 31.9**	**-0.4**
	baz=307							
TAP	**Taipei**	**0.60**	**305**	P		**Pn**	**16 44 22.9**	**-0.5**
	baz=307							
TAP				*e*S		**Sn**	**16 44 32.4**	**-0.1**
	baz=307							
NSK	**Sanguang**	**0.63**	**269**	⇑*i*P		**Pn**	**16 44 23.6**	**-0.2**
	baz=268							
NSK				*i* S		**Sn**	**16 44 33.1**	**-0.1**
	baz=268							
NNS	**Nan Shan**	**0.67**	**248**	⇓P		**Pn**	**16 44 23.8**	**-0.5**
	baz=246							
NNS				*e*S		**Sn**	**16 44 33.6**	**-0.5**
	baz=246							
TWS1	**Kuangyinshan**	**0.70**	**305**	*i* P		**Pn**	**16 44 24.5**	**-0.2**
	baz=307							
TWS1				*e*S		**Sn**	**16 44 34.9**	**+0.1**
	baz=307							
TWY	**Chenhua**	**0.71**	**325**	P		**Pn**	**16 44 24.6**	**-0.2**
	baz=327							
TWY				S		**Sn**	**16 44 35.3**	**+0.4**
	baz=327							
TWD	**Chiawan**	**0.74**	**214**	P		Pn	16 44 24.0	-1.1
	baz=212							
TWD				*e*S		**Sn**	**16 44 34.6**	**-0.9**
	baz=212							
HWA	**Hwalien**	**0.82**	**210**	*e*P		**Pn**	**16 44 25.9**	**-0.3**
	baz=207							
NCU	**National Centr**	**0.83**	**290**	*e*P		**Pn**	**16 44 25.9**	**-0.4**
	baz=290							
NCU				*e*S		**Sn**	**16 44 38.1**	**+0.4**
	baz=290							
WHF	**Hehuan Shan**	**0.90**	**233**	P		Pn	16 44 26.8	-0.9
	baz=231							
WHF				S		**Sn**	**16 44 39.3**	**-0.6**
	baz=231							
YOJ	**Yonaguni jima**	**0.91**	**105**	P		Pn	16 44 26.4	-0.9
YOJ				*e*S		**Sn**	**16 44 38.7**	**-0.7**
TWT	**Tachien**	**0.91**	**241**	*e*P		**Pn**	**16 44 27.3**	**-0.2**
	baz=240							
TWT				S		**Sn**	**16 44 39.6**	**-0.1**
	baz=240							
NSTT	**Nanjuang**	**0.96**	**267**	*e*P		**Pn**	**16 44 27.8**	**-0.2**
	baz=266							
NSTT				*e*S		**Sn**	**16 44 40.2**	**-0.4**
	baz=266							
HSN	**Hsinchu**	**0.99**	**277**	*e*P		**Pn**	16 44 27.4	-1.0
	baz=278							
HSN				*e*S		**Sn**	**16 44 40.6**	**-0.8**
	baz=278							
ESL	**Shilin**	**1.04**	**213**	*e*P		Pn	16 44 28.4	-0.7
	baz=211							
NSY	**Sanyi**	**1.21**	**257**	*e*P		**Pn**	**16 44 30.8**	**-0.5**
	baz=256							
NSY				*e*S		**Sn**	**16 44 46.9**	**+0.3**
	baz=256							
TWQ1	**Liyutan**	**1.21**	**254**	*e*P		**Pn**	**16 44 31.2**	**-0.2**
	baz=253							
TWQ1				*e*S		**Sn**	**16 44 46.7**	**-0.1**
	baz=253							
SMLT	**Sun Moon Lake**	**1.32**	**233**	*e*P		**Pn**	**16 44 33.3**	**+0.3**
	baz=231							
SMLT				*e*S		**Sn**	**16 44 49.8**	**+0.1**
	baz=231							
TYC	**Yuchr**	**1.34**	**234**	*e*P		**Pn**	**16 44 33.3**	**+0.2**
	baz=233							
TYC				*e*S		**Sn**	**16 44 49.9**	**0.0**
	baz=233							
EHY	**Hungye**	**1.36**	**210**	*e*P		Pn	16 44 32.9	-0.5
	baz=208							
TWF1	**Yuli**	**1.50**	**207**	*e*P		Pn	16 44 34.3	-1.0
	baz=206							
YUS	**Yu-Shan**	**1.56**	**220**	*e*P		**Pn**	**16 44 37.1**	**+0.5**
	baz=219							
YUS				*e*S		**Sn**	**16 44 55.0**	**-1.0**
	baz=219							
IRIF	**Iriomote-Funau**	**1.57**	**103**	P		Pn	16 44 35.8	-0.5
IRIF				*e*S		**Sn**	**16 44 55.1**	**-0.4**
ALS	**Alishan**	**1.64**	**224**	*e*P		**Pn**	**16 44 38.0**	**+0.5**
	baz=223							
ALS				*e*S		**Sn**	**16 44 57.5**	**0.0**
	baz=223							
CHN5	**Tsauling**	**1.66**	**229**	*e*P		**Pn**	**16 44 37.8**	**+0.2**
	baz=228							
CHN5				*e*S		**Sn**	**16 44 58.0**	**+0.2**
	baz=228							
WGK	**Gukeng**	**1.69**	**234**	*e*P		**Pn**	**16 44 38.4**	**+0.6**
	baz=232							
WGK				*e*S		**Sn**	**16 44 58.6**	**+0.2**
	baz=232							
HATJ	**Hateruma jima**	**1.72**	**111**	P		Pn	16 44 38.0	-0.3
HATJ				*e*S		**Sn**	**16 44 59.1**	**-0.1**
ELDTW	**Lidau**	**1.77**	**212**	*e*P		Pn	16 44 38.6	-0.5
	baz=211							
JKRS	**Kuro-shima**	**1.84**	**104**	P		**Pn**	**16 44 39.9**	**-0.1**
JKRS				*e*S		**Sn**	**16 45 01.8**	**-0.3**
CHN4	**Tsaushan**	**1.89**	**225**	*e*P		**Pn**	**16 44 41.3**	**+0.7**
	baz=224							
CHN4				*e*S		**Sn**	**16 45 03.5**	**+0.3**
	baz=224							
JIJ	**Ishigaki jima**	**1.94**	**99**	P		Pn	16 44 40.8	-0.4
JIJ				*e*S		**Sn**	**16 45 03.3**	**-1.1**
WTP	**Ta-pu**	**1.95**	**223**	*e*P		**Pn**	**16 44 41.6**	**+0.1**
	baz=221							
WTP				*e*S		**Sn**	**16 45 05.3**	**+0.5**
	baz=221							
TWK	**Hsinying**	**2.01**	**225**	*e*P		**Pn**	**16 44 42.0**	**-0.4**
	baz=224							
TWK				*e*S		**Sn**	**16 45 06.0**	**-0.4**
	baz=224							
CHN1	**Nanshi**	**2.05**	**223**	*e*P		**Pn**	**16 44 43.8**	**+0.9**
	baz=222							
CHN1				*e*S		**Sn**	**16 45 08.1**	**+0.9**
	baz=222							
SSD	**Sandimen**	**2.33**	**214**	*e*P		**Pn**	**16 44 47.1**	**+0.5**
	baz=213							
SSD				*e*S		**Sn**	**16 45 13.5**	**-0.6**
	baz=213							
JTJ	**Tarama**	**2.41**	**91**	P		**Pn**	**16 44 48.3**	**+0.5**
JTJ				*e*S		**Sn**	**16 45 16.7**	**+0.6**

IDC 31 17:04:57.1±1.7, 49.71°N×149.59°E, h0km, mb3.3/2, mb1 3.4/3, mb1mx3.1/25, mbtmp3.4/3, ML3.1/1, Error ellipse: s-maj=45.7km s-min=37.5km az=153.0, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PETK	**Petropavlovsk-**	**6.11**	**53**	P		Pn	17 06 28.5	0.0
	0.5nm,0.3s,baz=216,slow=6.7,SNR=12							
MKAR	**Makanchi Array**	**43.55**	**293**	P		P	17 13 02.2	-0.2
	0.2nm,0.3s,baz=62,slow=6.7,SNR=7.0							
ASAR	**Alice Springs**	**74.37**	**195**	P		P	17 16 36.5	0.0
	0.2nm,0.6s,baz=11,slow=5.7,SNR=4.0							

IDC 31 17:25:34.8±1.4, 6.34°S×151.10°E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/19, mbtmp3.8/9, ML2.3/1, MS3.2/1, Ms1 3.1/1, ms1mx1.9/29, Error ellipse: s-maj=49.6km s-min=19.3km az=117.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PMG	**Port Moresby**	**4.95**	**232**	Pn		Pn	17 26 52.0	+1.5
	0.7nm,0.3s,baz=342,slow=3.2,SNR=4.5							
PMG				Sn		Sn	17 27 45.5	-3.0
	3.8nm,0.3s,baz=165,slow=19,SNR=2.3							
WRA	**Warramunga Arr**	**21.16**	**229**	P		P	17 30 21.8	-0.1
	2.3nm,0.6s,baz=53,slow=11,SNR=19							
ASAR	**Alice Springs**	**23.88**	**222**	P		P	17 30 50.1	-0.1
	1.6nm,0.5s,baz=56,slow=9.0,SNR=61							
STKA	**Stephens Creek**	**26.91**	**198**	P		P	17 31 18.2	+0.5
	3.4nm,1.0s,baz=354,slow=14,SNR=4.5							
STKA				LR		LR	17 40 47.9	
	comp=Z,49nm,21.4s,baz=17,slow=34							
FITZ	**Fitzroy Crossi**	**27.45**	**243**	P		P	17 31 21.8	-0.9
	1.8nm,0.6s,baz=77,slow=6.0,SNR=8.2							
SONM	**Songino Array**	**66.74**	**329**	P		P	17 36 29.0	+0.9
	0.3nm,0.5s,baz=134,slow=4.2,SNR=3.2							
MKAR	**Makanchi Array**	**80.38**	**319**	P		P	17 37 47.8	-0.4
	0.1nm,0.5s,baz=103,slow=6.4,SNR=2.6							
ILAR	**Eielson Array**	**84.22**	**22**	P		P	17 38 06.7	-1.2
	0.4nm,0.8s,baz=253,slow=4.6,SNR=4.2							
YKA	**Yellowknife Ar**	**97.57**	**28**	P		Pdif	17 39 11.7	+0.9
	0.3nm,0.7s,baz=273,slow=4.1,SNR=3.7							
TORD	**Torodi Ar. Bea**	**149.12**	**285**	PKPbc		PKPbc	17 45 25.6	-0.7
	1.0nm,0.7s,baz=66,slow=2.3,SNR=7.8							

NNC 31 17:34:37.0±4.1, 37.33°N×70.83°E, h0km, mb3.5, mpv3.3, 1C-2D, Error ellipse: s-maj=69.0km s-min=32.0km az=79.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KK31	**Karatay Array**	**5.77**	**358**	Pn		Pn	17 36 07.0	+3.1
	1.0nm,0.3s,baz=179,slow=12,SNR=90							
KK31					⇑Sn	Sn	17 37 17.2	+6.4
	0.8nm,0.5s,baz=186,slow=21,SNR=4.9							
TKM2	**Tokmak 2**	**6.67**	**32**	⇓Pn		Pn	17 36 15.5	-1.0
	4.0nm,1.2s							
AB31	**Akbulak array**	**14.29**	**330**	⇓Pn		Pn	17 37 58.3	-2.2
	0.2nm,0.5s,baz=167,slow=12,SNR=5.8							

IDC ***31*** *17:36:02.8±0.7, 5.63°S×131.44°E, h0km, mb4.0/7, mb1 4.2/10, mb1mx4.0/18, mbtmp4.0/10, ML4.2/3, Error ellipse: s-maj=39.7km s-min=16.1km az=73.0*
ISCJB ***31*** *17:36:07.0±0.6, 5.84°S±0.06×131.5°E±0.2, h61km, mb4.0/8, Error ellipse: s-maj=22.6km s-min=7.4km az=165.6*

ISC 31 17:36:08.3±0.6, 5.97°S±0.07×131.67°E±0.10, h61km, n25, σ1.886/26, mb4.0/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
FITZ	**Fitzroy Crossi**	**13.42**	**205**	Pn		**Pn**	**17 39 16.8**	**+0.9**
	2.0nm,0.3s,baz=39,slow=11,SNR=54							
FITZ				Sn		**Sn**	**17 41 39.7**	**-3.9**
	1.9nm,0.3s,baz=96,slow=16,SNR=7.6							
WRA	**Warramunga Arr**	**14.13**	**170**	Pn		**Pn**	**17 39 27.4**	**+1.9**
	1.0nm,0.3s,baz=342,slow=13,SNR=28							
WRA				Sn		**Sn**	**17 42 00.3**	**-0.6**
	2.7nm,0.3s,baz=348,slow=24,SNR=11							
PMG	**Port Moresby**	**15.72**	**104**	Sn		**Sn**	**17 42 35.7**	**-3.9**
	0.6nm,0.3s,baz=325,slow=7.2,SNR=2.6							
ASAR	**Alice Springs**	**17.73**	**173**	P		**P**	**17 40 14.4**	**+3.2**
	0.5nm,0.3s,baz=3.2,slow=14,SNR=41							
ASAR				S		**Sn**	**17 43 28.4**	**+0.3**
	0.6nm,0.3s,baz=359,slow=28,SNR=6.4							
STKA	**Stephens Creek**	**27.40**	**161**	P		P	17 41 54.5	+6.3
	0.5nm,0.3s,baz=328,slow=11,SNR=6.5							
CMAR	**Chiang Mai Arr**	**40.38**	**308**	P		**P**	**17 43 40.0**	**-0.6**
	1.4nm,0.6s,baz=134,slow=7.1,SNR=12							
ODAN	**Odare**	**53.86**	**309**	*e*P		**P**	**17 45 25.1**	**-0.7**
	7.1nm,0.6s							
TAPN	**Taplejung**	**53.87**	**310**	*e*P		**P**	**17 45 25.3**	**-0.6**
	16nm,0.3s							
RAMN	**Ramite**	**54.51**	**309**	*e*P		**P**	**17 45 30.3**	**-0.3**
	15nm,0.4s							
GUN	**Gumba**	**55.55**	**310**	*e*P		**P**	**17 45 37.4**	**-0.7**
	9.9nm,0.4s							
PKI	**Pulchoki**	**55.74**	**309**	*e*P		**P**	**17 45 38.4**	**-1.1**
PKIN	**Phulchoki**	**55.75**	**309**	*e*P		**P**	**17 45 38.7**	**-0.8**
KKN	**Kakani**	**55.95**	**309**	*e*P		**P**	**17 45 40.2**	**-0.7**
DMN	**Daman**	**55.99**	**309**	*e*P		**P**	**17 45 40.5**	**-0.7**
KOLN	**Koldanda**	**57.24**	**308**	*e*P		**P**	**17 45 49.0**	**-1.0**
	10nm,0.4s							
DANN	**Dangsing**	**57.39**	**309**	*e*P		**P**	**17 45 49.6**	**-1.6**
SONM	**Songino Array**	**58.02**	**340**	P		**P**	**17 45 55.0**	**0.0**
	0.4nm,0.6s,baz=172,slow=6.2,SNR=4.9							
PETK	**Petropavlovsk-**	**62.84**	**17**	P		**P**	**17 46 28.6**	**+0.9**
	1.4nm,0.5s,baz=178,slow=9.1,SNR=8.4							
MKAR	**Makanchi Array**	**68.29**	**326**	P		**P**	**17 47 03.3**	**+0.4**
	2.3nm,0.4s,baz=115,slow=8.1,SNR=72							
ZALV	**Zalesovo Beam**	**71.41**	**333**	P		**P**	**17 47 21.3**	**-0.6**
	0.8nm,0.3s,baz=122,slow=5.2,SNR=6.8							
VNDA	**Vanda**	**73.27**	**173**	P		P	17 47 38.4	+5.7
	0.5nm,0.5s,baz=248,slow=5.4,SNR=6.8							
ILAR	**Eielson Array**	**91.71**	**25**	P		**P**	**17 49 08.0**	**-0.9**
	0.3nm,0.5s,baz=254,slow=4.5,SNR=5.3							
TXAR	**Lajitas Array**	**122.98**	**59**	PKP		**PKPdf**	**17 55 02.1**	**+3.5**
	0.2nm,0.7s,baz=210,slow=5.2,SNR=2.7							
TORD	**Torodi Ar. Bea**	**130.23**	**282**	PKP		**PKPdf**	**17 55 14.6**	**+2.0**
	0.7nm,0.7s,baz=60,slow=1.2,SNR=4.6							
LPAZ	**La Paz**	**150.46**	**139**	PKPbc		**PKPab**	**17 55 58.5**	**-2.8**
	3.1nm,0.9s,baz=148,slow=3.2,SNR=8.7							

IDC 31 18:11:44.4±0.8, 13.85°N×145.18°E, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.7/24, mbtmp3.7/7, Error ellipse: s-maj=43.8km s-min=19.0km az=105.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
WRA	**Warramunga Arr**	**35.23**	**198**	P		P	18 18 40.7	-0.1
	1.4nm,0.6s,baz=18,slow=9.3,SNR=8.1							
ASAR	**Alice Springs**	**38.88**	**197**	P		P	18 19 11.7	-0.1
	0.3nm,0.4s,baz=16,slow=9.1,SNR=20							
ASAR				PcP		PcP	18 21 22.1	-0.8
	0.5nm,0.7s,baz=27,slow=3.1,SNR=5.8							
CMAR	**Chiang Mai Arr**	**44.56**	**282**	PcP		PcP	18 21 41.4	-0.5
	0.4nm,0.5s,baz=80,slow=2.6,SNR=4.2							
STKA	**Stephens Creek**	**45.59**	**184**	P		P	18 20 06.2	-0.2
	1.2nm,0.4s,baz=25,slow=9.9,SNR=7.5							
MKAR	**Makanchi Array**	**61.52**	**316**	P		P	18 22 03.7	+0.4
	0.4nm,0.5s,baz=89,slow=8.4,SNR=6.7							
ILAR	**Eielson Array**	**68.21**	**25**	P		P	18 22 45.4	-1.2
	0.3nm,0.4s,baz=252,slow=6.1,SNR=6.8							
YKA	**Yellowknife Ar**	**82.49**	**27**	P		P	18 24 08.5	-0.2
	0.2nm,0.6s,baz=286,slow=4.8,SNR=3.9							
NVAR	**Mina Array Bea**	**86.53**	**51**	P		P	18 24 31.7	+1.7
	0.8nm,0.7s,baz=268,slow=5.4,SNR=6.2							
LPAZ	**La Paz**	**147.76**	**99**	PKPbc		PKPbc	18 31 32.3	-0.7
	1.1nm,0.5s,baz=284,slow=3.0,SNR=5.8							

TAP 31 18:22:14.2, 24.40°N×121.97°E, h20km, ML3.5, 12C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ENA	**Nanau**	**0.21**	**279**	⇑*i*P		Pb	18 22 19.5	-0.3
	baz=284							
ENA				*e*S		Sb	18 22 23.2	-0.6
	baz=284							
EHP	**Heping Village**	**0.22**	**247**	*e*P		Pb	18 22 19.3	-0.7
	baz=251							
EHP				*e*S		Sb	18 22 23.9	-0.1
	baz=251							
TWC	**Suao**	**0.24**	**333**	⇑*i*P		Pb	18 22 20.0	-0.1
	baz=341							
TWC				S		Sb	18 22 23.4	-0.8
	baz=341							
ILA	**Ilan**	**0.42**	**331**	P		Pb	18 22 23.4	+0.6
	baz=330							
ILA				S		Sb	18 22 29.6	+0.9
	baz=330							
TWE	**Neicheng**	**0.42**	**320**	⇑*i*P		Pb	18 22 23.4	+0.4
	baz=322							
TWE				S		Sb	18 22 29.0	+0.2
	baz=322							
ENTT	**Nioudou**	**0.44**	**304**	⇑*i*P		Pb	18 22 23.6	+0.3
	baz=305							
ENTT				S		Sb	18 22 30.2	+0.8
	baz=305							
EGS		**0.45**	**356**	⇓*i*P		Pb	18 22 23.8	+0.4
	baz=354							
TWD	**Chiawan**	**0.46**	**227**	P		Pb	18 22 23.4	-0.2
	baz=228							
TWD				*e*S		Sn	18 22 33.4	+0.1
	baz=228							
HWA	**Hwalien**	**0.53**	**218**	*e*P		Pn	18 22 25.9	-0.7
	baz=217							
NNS	**Nan Shan**	**0.54**	**275**	⇑*i*P		Pb	18 22 25.2	-0.1
	baz=280							
NNS				*e*S		Sb	18 22 32.1	-0.7
	baz=280							
TWB1	**Santiao Chiao**	**0.61**	**2**	P		Pb	18 22 26.5	+0.3
	baz=357							
TWB1				*e*S		Sb	18 22 34.4	0.0
	baz=357							
NSK

EHY	**Hungye**	**1.07 214**	*e*P		Pb	18 22 33.6	-0.4
	baz=212							
TWQ1	**Liyutan**	**1.09 268**	*i* P		Pb	18 22 36.6	+2.3
	baz=268							
TWQ1			S		Sn	18 22 51.8	+3.0
	baz=268							
NSY	**Sanyi**	**1.10 271**	P		Pb	18 22 37.1	+2.5
	baz=285							
SMLT	**Sun Moon Lake**	**1.10 243**⇑	*i* P		Pb	18 22 35.6	+0.9
	baz=234							
SMLT			*e*S		Sn	18 22 52.0	+2.7
	baz=234							
TYC	**Yuchr**	**1.13 244**	⇑P		Pb	18 22 36.0	+1.0
	baz=233							
TCU	**Taichung**	**1.21 258**	*e*P		Pb	18 22 38.2	+1.9
	baz=258							
TCU			*e*S		Sn	18 22 56.5	+4.8
	baz=258							
TWF1	**Yuli**	**1.21 211**	*e*P		Pn	18 22 34.8	-1.2
	baz=223							
WNT	**Mingjian**	**1.28 246**	P		Pb	18 22 39.1	+1.5
	baz=245							
WNT			*e*S		Sb	18 22 59.4	+5.7
	baz=245							
YUS	**Yu-Shan**	**1.30 226**	P		Pb	18 22 38.5	0.0
	baz=207							
YUS			*e*S		Sb	18 22 56.9	+1.7
	baz=207							
ALS	**Alishan**	**1.38 231**	P		Pb	18 22 40.0	+0.2
	baz=230							
CHKT	**Chengkung**	**1.41 203**	*e*P		Pn	18 22 37.2	-1.4
	baz=185							
CHN5	**Tsauling**	**1.42 236**	*e*P		Pb	18 22 41.2	+1.0
	baz=234							
CHN5			*e*S		Sb	18 23 02.2	+4.3
	baz=234							
WGK	**Gukeng**	**1.47 241**	*e*P		Pb	18 22 41.8	+1.0
	baz=240							
WGK			*e*S		Sb	18 23 03.7	+4.7
	baz=240							
ELDTW	**Lidau**	**1.48 216**	*e*P		Pn	18 22 39.7	-0.2
	baz=202							
CHN2	**Minshiung**	**1.61 238**	*e*P		Pb	18 22 44.6	+1.3
	baz=237							
CHN2			*e*S		Sb	18 23 09.2	+6.0
	baz=237							
CHN4	**Tsaushan**	**1.63 231**	P		Pb	18 22 44.5	+0.8
	baz=228							
CHN4			*e*S		Sb	18 23 07.5	+3.6
	baz=228							
CHY	**Chiayi**	**1.67 238**	*e*P		Pb	18 22 45.5	+1.3
	baz=236							
CHY			*e*S		Sb	18 23 09.4	+4.5
	baz=236							
WTP	**Ta-pu**	**1.69 228**	⇑P		Pb	18 22 45.0	+0.3
	baz=225							
WTP			*e*S		Sb	18 23 08.6	+3.0
	baz=225							
TWK	**Hsinying**	**1.76 231**	*e*P		Pb	18 22 45.5	-0.4
	baz=228							
TWK			*e*S		Sb	18 23 10.6	+2.9
	baz=228							
WSF	**Szhu**	**1.77 245**	*e*P		Pb	18 22 45.0	-0.9
	baz=244							
WSF			*e*S		Sb	18 23 10.8	+3.2
	baz=244							
TWG	**Pinlang**	**1.77 208**	*e*P		Pn	18 22 42.5	-1.1
	baz=193							
CHN1	**Nanshi**	**1.79 228**⇑	*e*P		Pb	18 22 46.3	0.0
	baz=225							
CHN1			*e*S		Sb	18 23 10.5	+2.2
	baz=225							
SGST	**Jiashian**	**1.82 224**⇓	*e*P		Pb	18 22 46.8	-0.1
	baz=209							
CHN3	**Shinhua**	**1.97 228**	*e*P		Pb	18 22 49.9	+0.5
	baz=228							
ECL	**Taimali**	**2.02 208**	*e*P		Pn	18 22 46.4	-0.7
	baz=195							
SCLT	**Jiali**	**2.03 234**	*e*P		Pn	18 22 48.2	+1.0
	baz=233							
SSD	**Sandimen**	**2.05 217**	*e*P		Pb	18 22 50.2	-0.6
	baz=214							
SSD			*e*S		Sb	18 23 17.2	+1.4
	baz=214							
TWM1	**Shoushan**	**2.11 222**	*e*P		Pb	18 22 51.5	-0.4
	baz=221							
EAST	**Anshuo**	**2.25 207**	*e*P		Pn	18 22 51.3	+1.0
	baz=195							
PNG	**Penghu**	**2.36 250**	*e*P		Pn	18 22 51.7	0.0
	baz=249							
PNG			*e*S		Sb	18 23 22.9	-1.7
	baz=249							
LAY	**Lan-yu**	**2.38 189**	*e*P		Pn	18 22 51.0	-1.1
	baz=187							
WDGT	**Dungji**	**2.40 242**	*e*P		Pn	18 22 53.6	+1.3
	baz=241							
WDGT			*e*S		Sb	18 23 26.2	+0.4
	baz=241							

MEX 31 18:27:50.0±0.8, 16°.92N×100°.10W, h5^{km}±4^{km}, MD3.7,
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.20**	**309**	*i* P	Pg	18 27 53.6	-0.4
CAIG				*i* S	Sg	18 27 56.9	+0.1
ACP2	**Acapulco**	**0.21**	**102**	*e*P	Pg	18 27 53.1	-1.0
ACP2				*i* S	Sg	18 27 56.2	-0.7
ACX	**Acapulco**	**0.24**	**102**	*i* P	Pg	18 27 53.8	-0.9
ACX				*i* S	Sg	18 27 56.9	-1.0
MEIG	**Mezcala**	**1.10**	**25**	*i* P	Pg	18 28 06.8	-4.4
MEIG				*i* S	Sg	18 28 20.9	-4.8
ARIG	**Puente Sto Nin**	**1.37**	**350**	*i* P	Pn	18 28 11.8	-4.1
ARIG				*e*S	Sb	18 28 29.6	-4.7
ZIIG	**Zihuatanejo**	**1.47**	**298**	*i* P	Pn	18 28 14.3	-3.0
ZIIG				*e*S	Sn	18 28 32.0	-4.9
PLIG	**Platanillo**	**1.57**	**21**	*i* P	Pn	18 28 15.3	-3.4
PLIG				*i* S	Sn	18 28 34.9	-4.8
PNIG	**Pinotepa**	**1.96**	**105**	*i* P	Pn	18 28 20.4	-3.6
PNIG				*e*S	Sn	18 28 44.0	-5.2
YAIG	**Yautepec**	**2.17**	**27**	*i* P	Pn	18 28 24.3	-2.8
YAIG				*i* S	Sn	18 28 50.1	-4.4
UTMO	**Huajuapan**	**2.37**	**67**	*i* P	Pn	18 28 26.1	-3.8
UTMO				*e*S	Sn	18 28 54.9	-4.7

*JMA **31** 18:40:08.4±0.3, 32°.47N×138°.22E, h384^{km}, M3.3*
*ISCJB **31** 18:40:11.4±0.5, 32°.65N±0°.07×138°.31E±0°.08, h365^{km}, mb3.3/11, Error ellipse: s-maj=9.2km s-min=8.7km az=149.3*
*IDC **31** 18:40:12.2±0.6, 32°.48N×138°.04E, h334^{km}±7^{km}, mb3.1/11, mb1 3.2/16, mb1mx3.1/30, mbtmp3.1/16, Error ellipse: s-maj=16.8km s-min=11.3km az=68.0*
ISC 31 18:40:12.0±1.2, 32°.6N±0°.1×138°.29E±0°.08, h365^{km}, n33, σ1^{s}78/30, mb3.5/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**1.38**	**65**	P	**Pn**	**18 40 58.3**	**-2.7**
	11nm,0.3s,baz=29,slow=14,SNR=11						
JHJ				S	**S**	**18 41 37.4**	**-3.0**
	28nm,0.3s,baz=90,slow=20,SNR=7.5						
JHJ2	**Mitsune**	**1.40**	**66**	P	**Pn**	**18 41 00.5**	**-0.6**
JHJ2				*e*S	**S**	**18 41 40.7**	**+0.1**
TK02	**Tokai 2**	**1.46**	**342**	P	**Pn**	**18 41 00.3**	**-0.8**
TTO4	**TONANKAI O.B.S**	**1.58**	**337**	P	**Pn**	**18 41 00.6**	**-1.1**
TTO2	**TONANKAI O.B.S**	**1.58**	**318**	P	**Pn**	**18 41 00.8**	**-0.9**
TTO1	**TONANKAI O.B.S**	**1.65**	**311**	P	**Pn**	**18 41 00.7**	**-1.4**
JIE	**Ise**	**2.26**	**325**	P	**Pn**	**18 41 05.0**	**-1.5**
JWZ	**Kozaga**	**2.37**	**295**	P	**Pn**	**18 41 04.6**	**-2.7**
JOD2	**Odawara 2**	**2.79**	**14**	P	**Pn**	**18 41 10.0**	**-0.6**
JWY	**Kouya**	**2.80**	**307**	P	**Pn**	**18 41 09.2**	**-1.7**
JYN	**Shimob**	**2.95**	**4**	P	**Pn**	**18 41 11.9**	**-0.2**
BSO1	**Boso 1**	**3.07**	**46**	P	**Pn**	**18 41 11.2**	**-1.2**
BSO1				*e*S	**S**	**18 41 58.3**	**-3.0**
JGM	**Miyama**	**3.40**	**338**	P	**Pn**	**18 41 15.3**	**-0.8**
JRY	**Ryogami san**	**3.49**	**8**	P	**Pn**	**18 41 16.7**	**-0.3**
JWT	**Wachi**	**3.63**	**319**	P	**Pn**	**18 41 16.9**	**-1.3**
MJAR	**Matsushiro Arr**	**3.98**	**359**	P	**Pn**	**18 41 20.4**	**-1.2**
	3.3nm,0.3s,baz=172,slow=10,SNR=64						
MAT	**Matsushiro**	**3.98**	**359**	P	**Pn**	**18 41 21.0**	**-0.7**
MAT				S	**S**	**18 42 13.8**	**-4.2**
MAT	**Matsushiro**	**3.98**	**359**	P	**Pn**	**18 41 21.0**	**-0.7**
JNU	**Nakatsue**	**6.26**	**277**	P	**Pn**	**18 41 44.7**	**-1.7**
	0.6nm,0.3s,baz=90,slow=9.9,SNR=5.9						
KSRS	**Korea Array**	**9.81**	**303**	P	**P**	**18 42 27.2**	**-1.3**
	0.6nm,0.3s,baz=119,slow=12,SNR=22						
ASAJ	**Asahikawa**	**12.03**	**15**	P	**Pn**	**18 42 54.9**	**+1.1**
	0.5nm,0.3s,baz=221,slow=11,SNR=7.3						
USRK	**Ussuriysk Arra**	**12.63**	**339**	P	**Pn**	**18 43 01.3**	**+0.5**
	0.9nm,0.3s,baz=151,slow=11,SNR=16						
SONM	**Songino Array**	**28.50**	**312**	P	**P**	**18 45 37.3**	**+2.1**
	2.2nm,0.6s,baz=113,slow=7.6,SNR=21						
ZALV	**Zalesovo Beam**	**43.19**	**316**	P	**P**	**18 47 39.4**	**+1.3**
	0.6nm,0.3s,baz=100,slow=7.9,SNR=5.8						
MKAR	**Makanchi Array**	**44.47**	**306**	P	**P**	**18 47 49.6**	**+1.2**
	1.2nm,0.4s,baz=88,slow=9.7,SNR=29						
WRA	**Warramunga Arr**	**52.33**	**185**	P	P	18 48 49.8	+2.0
	0.7nm,0.4s,baz=0.2,slow=7.6,SNR=29						
ILAR	**Eielson Array**	**54.65**	**30**	P	P	18 49 09.0	+5.0
	0.1nm,0.6s,baz=292,slow=4.8,SNR=2.9						
ASAR	**Alice Springs**	**56.06**	**185**	P	P	18 49 16.9	+2.5
	0.4nm,0.7s,baz=0.4,slow=5.3,SNR=7.3						
STKA	**Stephens Creek**	**64.16**	**177**	P	P	18 50 11.7	+3.1
	1.6nm,0.8s,baz=342,slow=9.6,SNR=3.8						
YKA	**Yellowknife Ar**	**68.97**	**28**	P	P	18 50 42.7	+4.2
	0.1nm,0.6s,baz=301,slow=6.2,SNR=2.9						
FINES	**FINESS Array B**	**71.57**	**332**	P	**P**	**18 50 56.1**	**+2.1**
	0.7nm,0.4s,baz=59,slow=5.4,SNR=6.2						
AKASG	**Malin Array Be**	**76.24**	**322**	P	P	18 51 23.3	+2.3
	0.4nm,0.3s,baz=53,slow=5.3,SNR=3.4						
BRTR	**Keskin Array B**	**79.86**	**311**	P	P	18 51 44.2	+3.1
	0.5nm,0.5s,baz=135,slow=3.6,SNR=5.2						

*ISCJB **31** 19:17:20.4±0.3, 24°.27N±0°.02×121°.92E±0°.02, h40^{km}±8^{km}, Error ellipse: s-maj=4.3km s-min=2.7km az=146.5*
*TAP **31** 19:17:20.1, 24°.30N×121°.83E, h45^{km}, ML2.8, C*
*JMA **31** 19:17:20.0±0.3, 24°.58N×121°.96E, h73^{km}, M2.0*
ISC 31 19:17:20.8±1.2, 24°.28N±0°.03×121°.90E±0°.03, h41^{km}±9^{km}, n39, σ0^{s}87/69, 1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.21**	**315**	P	**Pn**	**19 17 27.7**	**-0.6**
	baz=338						
ENA				S	**Sn**	**19 17 33.5**	**-0.1**
	baz=338						
TWC	**Suao**	**0.33**	**351**	*i* P	**Pn**	**19 17 29.3**	**-0.2**
	baz=10.0						
TWC				S	**Sn**	**19 17 36.0**	**+0.3**
	baz=10.0						
TWD	**Chiawan**	**0.34**	**235**	P	**Pn**	**19 17 29.1**	**-0.6**
	baz=226						
TWD				S	**Sn**	**19 17 36.0**	**+0.2**
	baz=226						
HWA	**Hwalien**	**0.41**	**222**	*e*P	**Pn**	**19 17 30.5**	**+0.1**
	baz=201						
ENTT	**Nioudou**	**0.47**	**319**	*i* P	**Pn**	**19 17 30.4**	**-1.0**
	baz=322						
ENTT				S	**Sn**	**19 17 38.1**	**-0.5**
	baz=322						
TWE	**Neicheng**	**0.49**	**334**	P	**Pn**	**19 17 30.9**	**-0.7**
	baz=342						
TWE				S	**Sn**	**19 17 38.9**	**-0.1**
	baz=342						
ILA	**Ilan**	**0.51**	**344**	*e*P	**Pn**	**19 17 31.3**	**-0.4**
	baz=349						
ILA				*e*S	**Sn**	**19 17 40.1**	**+0.7**
	baz=349						
NNS	**Nan Shan**	**0.51**	**288**	P	**Pn**	**19 17 30.6**	**-1.2**
	baz=288						
NNS				*e*S	**Sn**	**19 17 38.1**	**-1.6**
	baz=288						
EGS		**0.56**	**3**	*e*P	**Pn**	**19 17 32.6**	**+0.1**
	baz=12						
EGS				*e*S	**Sn**	**19 17 40.6**	**-0.1**
	baz=12						
WHF	**Hehuan Shan**	**0.60**	**257**⇓	*i* P	**Pn**	**19 17 32.3**	**-1.0**
	baz=258						
WHF				S	**Sn**	**19 17 41.0**	**-1.2**
	baz=258						
ESL	**Shilin**	**0.63**	**223**	*e*P	**Pn**	**19 17 31.8**	**-1.6**
	baz=225						
ESL				*e*S	**Sn**	**19 17 41.1**	**-1.3**
	baz=225						
NSK	**Sanguang**	**0.64**	**309**	P	**Pn**	**19 17 32.4**	**-1.2**
	baz=304						
NSK				*e*S	**Sn**	**19 17 40.8**	**-1.7**
	baz=304						
TWT	**Tachien**	**0.67**	**268**	*e*P	**Pn**	**19 17 33.4**	**-0.6**
	baz=260						
TWT				*e*S	**Sn**	**19 17 42.9**	**-0.6**
	baz=260						
TWB1	**Santiao Chiao**	**0.73**	**6**	*e*P	**Pn**	**19 17 34.4**	**-0.4**
	baz=14						
TWB1				*e*S	**Sn**	**19 17 44.8**	**+0.1**
	baz=14						
NWF	**Wu-fen Shan**	**0.80**	**352**	*e*P	**Pn**	**19 17 35.6**	**-0.1**
	baz=358						
NWF				*e*S	**Sn**	**19 17 46.8**	**+0.3**
	baz=358						
NSTT	**Nanjuang**	**0.89**	**293**	*e*P	**Pn**	**19 17 36.6**	**-0.4**
	baz=294						
NSTT				*e*S	**Sn**	**19 17 48.1**	**-0.6**
	baz=294						
TWS1	**Kuangyinshan**	**0.93**	**332**	*e*P	Pn	19 17 39.6	+2.1
	baz=335						
EHY	**Hungye**	**0.94**	**215**	*e*P	**Pn**	**19 17 37.4**	**-0.2**
	baz=208						
EHY				*e*S	**Sn**	**19 17 47.5**	**-2.3**
	baz=208						
SMLT	**Sun Moon Lake**	**1.00**	**247**	*e*P	**Pn**	**19 17 37.8**	**-0.7**
	baz=236						
SMLT				*e*S	**Sn**	**19 17 51.7**	**+0.3**
	baz=236						
YOJ	**Yonaguni jima**	**1.03**	**80**	P	**Pn**	**19 17 38.3**	**-0.5**
YOJ				S	**Sn**	**19 17 52.1**	**+0.2**
TYC	**Yuchr**	**1.03**	**249**	*e*P	**Pn**	**19 17 38.2**	**-0.5**
	baz=238						
TYC				*e*S	**Sn**	**19 17 52.0**	**0.0**
	baz=238						
TWQ1	**Liyutan**	**1.03**	**274**	*e*P	**Pn**	**19 17 38.3**	**-0.6**
	baz=272						
TWQ1				*e*S	**Sn**	**19 17 52.2**	**0.0**
	baz=272						
NSY	**Sanyi**	**1.05**	**278**	*e*P	**Pn**	**19 17 39.4**	**+0.3**
	baz=276						
TWF1	**Yuli**	**1.08**	**211**	*e*P	**Pn**	**19 17 38.9**	**-0.6**
	baz=214						
TWF1				*e*S	**Sn**	**19 17 53.8**	**+0.6**
	baz=214						
TCU	**Taichung**	**1.13**	**264**	*e*P	**Pn**	**19 17 39.9**	**-0.3**
	baz=261						
YUS	**Yu-Shan**	**1.17**	**228**	*e*P	**Pn**	**19 17 40.4**	**-0.8**
	baz=223						
WNT	**Mingjian**	**1.18**	**251**	*e*P	**Pn**	**19 17 41.6**	**+0.6**
	baz=246						
WNT				*e*S	**Sn**	**19 17 57.8**	**+2.0**
	baz=246						
ALS	**Alishan**	**1.26**	**233**	*e*P	**Pn**	**19 17 42.4**	**+0.1**
	baz=218						
ALS				*e*S	**Sn**	**19 17 58.7**	**+0.5**
	baz=218						
CHN5	**Tsauling**	**1.31**	**239**	*e*P	**Pn**	**19 17 43.0**	**+0.2**
	baz=234						
CHN5				*e*S	**Sn**	**19 18 00.8**	**+1.7**
	baz=234						
ELDTW	**Lidau**	**1.36**	**217**	*e*P	**Pn**	**19 17 42.4**	**-1.0**
	baz=203						
ELDTW				*e*S	**Sn**	**19 17 59.0**	**-1.3**
	baz=203						
WGK	**Gukeng**	**1.36**	**245**	*e*P	**Pn**	**19 17 44.0**	**+0.7**
	baz=240						
CHN4	**Tsaushan**	**1.52**	**233**	*e*P	**Pn**	**19 17 46.0**	**+0.5**
	baz=216						
CHN4				*e*S	**Sn**	**19 18 05.6**	**+1.6**
	baz=216						
WTP	**Ta-pu**	**1.57**	**229**	*e*P	**Pn**	**19 17 46.7**	**+0.5**
	baz=213						
CHN1	**Nanshi**	**1.67**	**229**	*e*P	**Pn**	**19 17 48.2**	**+0.6**
	baz=223						
CHN1				*e*S	**Sn**	**19 18 09.6**	**+1.8**
	baz=223						
IRIF	**Iriomote-Funau**	**1.67**	**88**	P	**Pn**	**19 17 46.9**	**-0.7**
IRIF				S	**Sn**	**19 18 07.1**	**-0.6**
HATJ	**Hateruma jima**	**1.75**	**97**	P	**Pn**	**19 17 49.1**	**+0.4**
HATJ				S	**Sn**	**19 18 10.4**	**+0.6**
JKRS	**Kuro-shima**	**1.92**	**91**	P	**Pn**	**19 17 51.1**	**0.0**
JKRS				S	**Sn**	**19 18 14.3**	**+0.3**
JIJ	**Ishigaki jima**	**2.04**	**87**	P	**Pn**	**19 17 52.0**	**-0.7**
JIJ				S	**Sn**	**19 18 15.8**	**-1.2**
JTJ	**Tarama**	**2.58**	**81**	P	**Pn**	**19 17 59.8**	**-0.2**

*ISCJB **31** 19:37:59.8±0.5, 39°.74N±0°.02×38°.88E±0°.03, h3^{km}±5^{km}, Error ellipse: s-maj=3.9km s-min=3.2km az=21.4*
*ISK **31** 19:37:59.4, 39°.75N×38°.87E, h5^{km}, MD3.6*
*DDA **31** 19:37:59.1, 39°.72N×38°.90E, h3^{km}, MD3.1*
*CSEM **31** 19:38:00.0±0.1, 39°.74N×38°.89E, h2^{km}, MD3.6, Error ellipse: s-maj=3.7km s-min=2.9km az=111.0*
ISC 31 19:37:59.6±1.1, 39°.72N±0°.02×38°.88E±0°.02, h2^{km}±10^{km}, n63, σ1^{s}13/83, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILIC	**ilic-Erzincan**	**0.36**	**222**	*e*PG	**Pb**	**19 38 07.5**	**-1.3**
ILIC				*e*SG	**Sg**	**19 38 12.4**	**+1.2**
ILIC	**ilic-Erzincan**	**0.36**	**222**	*e*Pg	**Pb**	**19 38 07.5**	**-1.3**
ILIC				*e*Sg	**Sg**	**19 38 12.4**	**+1.2**
EZC	**Erzincan**	**0.37**	**85**	*e*PG	**Pb**	**19 38 07.7**	**-1.2**
EZC	**Erzincan**	**0.37**	**85**	*e*Pg	**Pn**	**19 38 13.2**	**+1.1**
EZC				*e*Sg	Sb	19 38 22.9	+7.7
KELT	**Kelkit**	**0.52**	**34**	*i* P	**Pg**	**19 38 09.8**	**+0.2**
KELT				*i* S	**Sg**	**19 38 16.8**	**+0.5**
KELT	**Kelkit**	**0.52**	**34**	*i* P	**Pg**	**19 38 09.8**	**+0.2**
KELT				*i* S	**Sg**	**19 38 16.8**	**+0.5**
KEMA	**Kemaliye**	**0.54**	**214**	*i* P	**Pg**	**19 38 10.6**	**+0.6**
KEMA				*i* S	**Sb**	**19 38 18.8**	**-1.3**
KEMA	**Kemaliye**	**0.54**	**214**	*i* P	**Pg**	**19 38 10.6**	**+0.6**
KEMA				*i* S	**Sb**	**19 38 18.8**	**-1.3**
ERZN	**Erzincan**	**0.66**	**101**	*e*PG	**Pb**	**19 38 13.2**	**-0.8**
ERZN				*e*SG	**Sb**	**19 38 22.9**	**-0.8**
SUSE	**Susehri**	**0.71**	**313**	*i* P	**Pb**	**19 38 13.9**	**-1.0**
SUSE				*i* S	**Sg**	**19 38 23.3**	**+0.7**
SUSE	**Susehri**	**0.71**	**313**	*i* P	**Pb**	**19 38 13.9**	**-1.0**
SUSE				*i* S	**Sg**	**19 38 23.3**	**+0.7**
GUMT	**Gumushane**	**0.87**	**32**	*e*PG	**Pb**	**19 38 16.6**	**-1.0**
GUMT				*e*SG	**Sg**	**19 38 27.9**	**+0.3**
GUMT	**Gumushane**	**0.87**	**32**	*e*Pg	**Pb**	**19 38 16.6**	**-1.0**
GUMT				*e*Sg	**Sg**	**19 38 27.9**	**+0.3**
PTK	**Pertek**	**0.92**	**154**	*e*PG	**Pg**	**19 38 17.2**	**+0.1**
PTK				*e*SG	**Sn**	**19 38 31.7**	**-1.9**
PTK	**Pertek**	**0.92**	**154**	*e*Pg	**Pg**	**19 38 17.2**	**+0.1**
PTK				*e*Sg	**Sn**	**19 38 31.7**	**-1.9**
BAYT	**Ayd¯–ntepe-Bay**	**1.18**	**55**	*e*PN	**Pb**	**19 38 22.1**	**-0.7**
BAYT	**Ayd¯–ntepe-Bay**	**1.18**	**55**	*e*Pn	**Pb**	**19 38 22.1**	**-0.7**
ESPY	**Espiye-Giresun**	**1.20**	**354**	*e*PN	**Pg**	**19 38 22.1**	**-0.5**
ESPY	**Espiye-Giresun**	**1.20**	**354**	*e*Pn	**Pg**	**19 38 22.1**	**-0.5**
ELZG	**Elazig**	**1.22**	**176**	*i* P	**Pb**	**19 38 22.9**	**-0.6**
ELZG				*i* S	**Sb**	**19 38 39.8**	**0.0**
ELZG	**Elazig**	**1.22**	**176**	*i* P	**Pb**	**19 38 22.9**	**-0.6**
ELZG				*i* S	**Sb**	**19 38 39.8**	**0.0**
KOPT	**Kop Dagi**	**1.28**	**76**	*i* P	**Pn**	**19 38 25.0**	**+0.2**
KOPT				*i* S	**Sn**	**19 38 46.4**	**+3.7**
KOPT	**Kop Dagi**	**1.28**	**76**	*i* P	**Pn**	**19 38 25.0**	**+0.2**
KOPT				*i* S	**Sn**	**19 38 46.4**	**+3.7**
GRSN	**GIRESUNGRSN**	**1.29**	**339**	*i* P	**Pg**	**19 38 23.8**	**-0.6**
GRSN				*i* S	**Sn**	**19 38 42.7**	**0.0**
GRSN	**GIRESUNGRSN**	**1.29**	**339**	*i* P	**Pg**	**19 38 23.8**	**-0.6**
GRSN				*i* S	**Sn**	**19 38 42.7**	**0.0**
RSDY	**Resadiye-TOKAT**	**1.37**	**300**	*e*PN	**Pn**	**19 38 24.9**	**-0.9**
RSDY	**Resadiye-TOKAT**	**1.37**	**300**	*e*Pn	**Pn**	**19 38 24.9**	**-0.9**
SVRC	**Sivrice-ELAZID**	**1.38**	**166**	*e*PN	**Pn**	**19 38 25.5**	**-0.5**
SVRC	**Sivrice-ELAZID**	**1.38**	**166**	*e*Pn	**Pn**	**19 38 25.5**	**-0.5**
MYA	**Malataya**	**1.44**	**194**	*e*PN	**Pg**	**19 38 26.8**	**-0.3**
MYA	**Malataya**	**1.44**	**194**	*e*Pn	**Pg**	**19 38 26.8**	**-0.3**
BINT	**Bingol**	**1.50**	**123**	*e*Pn	**Pg**	**19 38 29.0**	**+0.6**
BNQB	**Bing¶ll**	**1.57**	**117**	*e*PN	**Pg**	**19 38 29.0**	**-0.8**
DARE	**Darende-Malaty**	**1.58**	**224**	*e*PN	**Pb**	**19 38 29.3**	**-0.3**
DARE	**Darende-Malaty**	**1.58**	**224**	*e*Pn	**Pb**	**19 38 29.3**	**-0.3**
EZM	**Erzurum**	**1.92**	**84**	*e*PN	**Pb**	**19 38 33.8**	**-1.7**
PZAR	**Pazar-Rize**	**2.12**	**46**	*e*PN	**Pn**	**19 38 36.4**	**+0.3**
PZAR	**Pazar-Rize**	**2.12**	**46**	*e*Pn	**Pn**	**19 38 36.4**	**+0.3**
URFA	**Urfa**	**2.27**	**181**	*e*PN	**Pb**	**19 38 39.3**	**-2.2**
URFA	**Urfa**	**2.27**	**181**	*e*Pn	**Pb**	**19 38 39.3**	**-2.2**
SARI	**SarD1z-Kayseri**	**2.32**	**236**	*e*PN	**Pn**	**19 38 40.0**	**+1.0**
SARI	**SarD1z-Kayseri**	**2.32**	**236**	*e*Pn	**Pn**	**19 38 40.0**	**+1.0**
BNN	**Bunyan**	**2.51**	**251**	*e*PN	**Pn**	**19 38 42.7**	**+1.1**
BNN	**Bunyan**	**2.51**	**251**	*e*Pn	**Pn**	**19 38 42.7**	**+1.1**
KVT	**Kavak**	**2.56**	**303**	*e*PN	**Pn**	**19 38 42.5**	**+0.4**
KVT	**Kavak**	**2.56**	**303**	*e*Pn	**Pn**	**19 38 42.5**	**+0.4**
DAGI	**Agillar**	**2.69**	**59**	*i* P	**Pb**	**19 38 48.9**	**+0.4**
DAGI				*i* S	**Sg**	**19 39 24.7**	**-1.2**
KMRS	**Kahramanmaras**	**2.70**	**216**	*e*PN	**Pn**	**19 38 45.3**	**+1.2**
KMRS	**Kahramanmaras**	**2.70**	**216**	*e*Pn	**Pn**	**19 38 45.3**	**+1.2**
BCA	**Borcka**	**2.71**	**50**	*e*PN	**Pn**	**19 38 44.8**	**+0.6**
BCA	**Borcka**	**2.71**	**50**	*e*Pn	**Pn**	**19 38 44.8**	**+0.6**
YOZ	**Yozgat**	**2.75**	**269**	*e*PN	**Pn**	**19 38 45.6**	**+0.8**
YOZ	**Yozgat**	**2.75**	**269**	*e*Pn	**Pn**	**19 38 45.6**	**+0.8**
GAZ	**Gaziantep**	**2.86**	**208**	*e*PN	**Pn**	**19 38 47.8**	**+1.5**
GAZ	**Gaziantep**	**2.86**	**208**	*e*Pn	**Pn**	**19 38 47.8**	**+1.5**
KOZT	**Kozan**	**3.27**	**228**	*e*PN	**Pn**	**19 38 53.6**	**+1.6**

1.4nm,1.0s,baz=197,slow=10,SNR=4.6
MJAR LR LR 20 00 43.6
comp=Z,54nm,21.5s,baz=205,slow=30
WRA Warramunga Arr 30.03 165 P **P** **19 52 01.2 -1.6**
0.5nm,0.5s,baz=347,slow=9.4,SNR=13
ASAR Alice Springs 33.52 168 P **P** **19 52 32.5 -0.9**
0.5nm,0.3s,baz=348,slow=7.3,SNR=29
ASAR PcP **PcP** **19 55 13.2 0.0**
0.5nm,0.7s,baz=346,slow=2.5,SNR=4.2
USRK Ussuriysk Arra 35.12 7 P **P** **19 52 48.2 +1.2**
4.7nm,0.9s,baz=186,slow=6.8,SNR=11
TAPN Taplejung 40.78 301 *eP* **P** **19 53 34.3 -1.0**
6.8nm,0.4s
ODAN Odare 40.90 301 *eP* **P** **19 53 35.7 -0.5**
21nm,0.7s
RAMN Ramite 41.60 300 *eP* **P** **19 53 41.8 -0.2**
10nm,0.7s
SONM Songino Array 42.04 340 P **P** **19 53 44.8 -0.4**
0.6nm,0.7s,baz=159,slow=8.3,SNR=6.4
SONM PcP **PcP** **19 55 39.9 +0.8**
0.3nm,0.5s,baz=155,slow=4.5,SNR=3.2
SONM LR LR 20 12 26.7
comp=Z,43nm,18.4s,baz=11,slow=38
GUN Gumba 42.50 301 *eP* **P** **19 53 48.3 -1.1**
10nm,0.6s
PKI Pulchoki 42.79 301 *eP* **P** **19 53 50.7 -1.1**
PKIN Phulchoki 42.81 301 *eP* **P** **19 53 51.4 -0.4**
KKN Kakani 42.97 301 *eP* **P** **19 53 53.2 +0.1**
DMN Daman 43.06 301 *eP* **P** **19 53 53.6 -0.3**
STKA Stephens Creek 43.38 161 P **P** **19 53 55.3 -0.7**
1.4nm,0.6s,baz=347,slow=8.0,SNR=7.3
KOLN Koldanda 44.39 300 *eP* **P** **19 54 04.0 -0.5**
17nm,0.6s
DANN Dangsing 44.41 301 *eP* **P** **19 54 04.0 -0.8**
PETK Petropavlovsk- 50.44 24 P **P** **19 54 52.9 +2.1**
2.5nm,0.6s,baz=196,slow=3.6,SNR=12
MKAR Makanchi Array 52.97 323 P **P** **19 55 09.3 -0.5**
3.4nm,0.7s,baz=123,slow=8.3,SNR=42
MKAR PcP **PcP** **19 56 17.8 -0.1**
0.6nm,0.6s,baz=115,slow=2.7,SNR=2.3
ZALV Zalesovo Beam 55.62 332 P **P** **19 55 27.6 -1.3**
1.1nm,0.3s,baz=120,slow=6.9,SNR=8.5
ZALV LR LR 20 23 02.0
comp=Z,15nm,18.9s,baz=71,slow=40
MIB Mutribah 76.11 298 *eP* **P** **19 57 40.4 -0.8**
MIB AMb AMB 19 57 40.8
comp=Z,16nm,0.7s
NAY Al-Naaiem 76.22 298 *eP* **P** **19 57 40.5 -1.3**
RST Umm Al-Ruwaisa 76.42 298 *eP* **P** **19 57 41.6 -1.3**
RST AMb AMB 19 57 43.1
comp=Z,101nm,0.9s
KBZ Khabaz 79.07 313 P **P** **19 57 55.9 -1.4**
comp=Z,2.2nm,0.9s,baz=158,slow=4.7,SNR=4.2
ILAR Eielson Array 80.22 26 P **P** **19 58 04.2 +1.0**
comp=Z,0.9nm,0.7s,baz=277,slow=4.4,SNR=10
JOF Joensuu 84.19 333 *ep* **P** **19 58 24.3 +0.4**
ARCES ARCESS Array B 85.21 340 P **P** **19 58 29.4 +0.4**
comp=Z,4.2nm,0.6s,baz=82,slow=8.9,SNR=15
BRTR Keskin Array B 86.36 309 P **P** **19 58 34.3 -1.2**
comp=Z,0.3nm,0.5s,baz=72,slow=4.7,SNR=3.1
KAF Kangasniemi 86.62 332 *ep* **P** **19 58 36.3 +0.3**
FINES FINESS Array B 86.89 332 P **P** **19 58 35.3 -2.0**
comp=Z,2.2nm,0.8s,baz=75,slow=5.9,SNR=12
VNDA Vanda 88.91 173 P **P** **19 58 47.4 +0.8**
comp=Z,1.0nm,1.0s,baz=314,slow=5.6,SNR=6.2
YKA Yellowknife Ar 94.56 24 P **P** **19 59 14.6 +1.5**
comp=Z,1.4nm,0.7s,baz=301,slow=4.7,SNR=23
TORD Torodi Ar. Bea 120.87 291 PKP **PKPdf** **20 04 45.7 -0.1**
comp=Z,0.6nm,0.6s,baz=80,slow=1.7,SNR=10.0

IDC 31 20:06:59.2±6.5,5°.57S×145°.92E,h58km±61km, mb3.7/3, mb1 4.0/5, mb1mx3.4/19, mbtmp3.8/5, ML4.6/1, Error ellipse: s-maj=58.7km s-min=39.9km az=52.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.00**	**162**	P		Pn		20 07 59.4	+1.3
	3.4nm,0.3s,baz=9.5,slow=12,SNR=18								
PMG				S		Sn		20 08 44.0	+0.2
	9.7nm,0.3s,baz=274,slow=19,SNR=13								
WRA	**Warramunga Arr**	**18.19**	**217**	P		Pn		20 11 07.8	-0.1
	2.0nm,0.3s,baz=43,slow=11,SNR=84								
ASAR	**Alice Springs**	**21.39**	**212**	P		P		20 11 40.8	-1.5
	3.6nm,0.6s,baz=48,slow=8.5,SNR=85								
FITZ	**Fitzroy Crossi**	**23.39**	**236**	P		P		20 12 02.5	-0.7
	4.2nm,0.4s,baz=53,slow=10,SNR=40								
STKA	**Stephens Creek**	**26.48**	**188**	P		P		20 12 33.1	+2.0
	0.5nm,0.4s,baz=6.2,slow=11,SNR=3.8								

MEX 31 20:08:43.7±0.4,16°.42N×96°.18W,h63km±6km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.65**	**174**	*eP*		Pn		20 08 56.2	-1.4
HUIG				*i* S		Sn		20 09 06.0	-1.9
VHO	**Vista Hermosa**	**0.84**	**321**	*i* P		Pn		20 08 59.3	-0.9
VHO				*i* S		Sn		20 09 10.3	-1.9
PNIG	**Pinotepa**	**1.87**	**269**	*eP*		Pn		20 09 12.2	-1.4
PNIG				*i* S		Sn		20 09 34.4	-1.8
UTMO	**Huajuapan**	**2.09**	**312**	*i* P		Pn		20 09 14.8	-2.0
UTMO				*i* S		Sn		20 09 39.2	-2.8

KRSC 31 20:15:30.2±0.3,54°.37N×161°.48E,h43km±32km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.24**	**38**	P		Pn		20 15 38.4	+0.3
MKZ				*i* S		Sn		20 15 44.1	+0.5
TUMR	**Tumrok**	**1.20**	**320**	*eP*		Pn		20 15 51.0	+0.4
TUMR				*eS*		Sn		20 16 06.7	+0.9
KII	**Karymskiy**	**1.24**	**255**	*eP*		Pn		20 15 51.8	+0.6
KII				*i* S		Sn		20 16 07.9	+1.2
SPN	**Mys Shipunski**	**1.54**	**215**	P		Pn		20 15 55.4	+0.2
SPN				*i* S		Sn		20 16 13.2	-0.7
KMNR	**Kamenistaya**	**1.56**	**333**	P		Pn		20 15 57.1	+1.5
KMNR				*i* S		Sn		20 16 16.6	+1.9
BZGR	**Bezymyannyi-Gr**	**1.64**	**344**	*eP*		Pn		20 15 57.7	+1.1
BZGR				*i* S		Sn		20 16 18.2	+1.6
BZMR	**Bezymyannaya**	**1.67**	**340**	*eP*		Pn		20 15 58.2	+1.1
BZMR				*i* S		Sn		20 16 18.4	+0.9
BZWR	**Bezymyannyi-We**	**1.69**	**341**	*eP*		Pn		20 15 59.0	+1.5
BZWR				*i* S		Sn		20 16 20.7	+2.6
ZLN	**Zelenaya**	**1.70**	**347**	*eP*		Pn		20 15 58.7	+1.3
ZLN				*i* S		Sn		20 16 20.0	+2.0
KIRR	**Kirishev**	**1.72**	**338**	*eP*		Pn		20 15 59.5	+1.7
KIRR				*i* S		Sn		20 16 20.2	+1.6
NLC	**Nalytchevo**	**1.75**	**227**	*eP*		Pn		20 15 58.8	+0.9
NLC				*i* S		Sn		20 16 19.5	+0.6
KPT	**Kopyto**	**1.75**	**336**	*eP*		Pn		20 15 59.6	+1.4
KPT				*i* S		Sn		20 16 20.6	+1.1
LGNR	**Loginova**	**1.77**	**346**	P		Pn		20 16 00.4	+1.6
LGNR				*i* S		Sn		20 16 22.7	+2.3
CIRR	**Tsirk**	**1.80**	**347**	*eP*		Pn		20 16 00.2	+1.3
CIRR				*i* S		Sn		20 16 21.9	+1.2
SDLR	**Sedlovina**	**1.89**	**236**	P		Pn		20 16 01.7	+1.6
SDLR				*i* S		Sn		20 16 24.5	+1.7
KRSR	**Krestovskiy**	**1.92**	**345**	*eP*		Pn		20 16 01.6	+1.0
KRSR				*i* S		Sn		20 16 24.7	+1.1
KOZ	**Kozyrevsk**	**1.93**	**332**	P		Pn		20 16 02.0	+1.5
SMAR	**Somma**	**1.94**	**236**	P		Pn		20 16 02.5	+1.6
SMAR				*i* S		Sn		20 16 26.4	+2.2
KRER	**Koryakskii**	**1.94**	**238**	P		Pn		20 16 02.8	+1.9
KRER				*i* S		Sn		20 16 26.9	+2.7
UGLR	**Uglovaya**	**1.96**	**235**	P		Pn		20 16 02.9	+1.8
UGLR				*i* S		Sn		20 16 26.3	+1.8
AVH	**Avacha**	**1.97**	**237**	P		Pn		20 16 03.1	+2.0
AVH				*i* S		Sn		20 16 27.2	+2.6
KBTR	**Krutoberegovo**	**2.00**	**22**	*eP*		Pn		20 16 03.2	+1.8
KBTR				*eS*		Sn		20 16 27.4	+2.3
KOK	**Koryaka**	**2.00**	**238**	P		Pn		20 16 03.3	+1.7
KOK				*i* S		Sn		20 16 27.5	+2.0
KLY	**Klyuchi**	**2.00**	**347**	*eP*		Pn		20 16 02.5	+1.0
KLY				*i* S		Sn		20 16 26.4	+1.1
KBG	**Krutoberegovo**	**2.02**	**20**	*eP*		Pn		20 16 04.1	+2.5
KBG				*i* S		Sn		20 16 28.9	+3.3
PET	**Petropavlovsk**	**2.15**	**232**	*eP*		Pn		20 16 04.9	+1.3
PET				*i* S		Sn		20 16 30.7	+1.7
GNL	**Ganaly**	**2.19**	**253**	P		Pn		20 16 06.1	+1.8
GNL				*i* S		Sn		20 16 32.3	+2.0
SRDR	**Sredinnyy**	**2.20**	**333**	*eP*		Pn		20 16 05.1	+0.8
SRDR				*i* S		Sn		20 16 31.2	+1.0
BDR	**Baidarnaya**	**2.21**	**356**	P		Pn		20 16 06.8	+2.4
SMKR	**Semkarok**	**2.22**	**360**	*eP*		Pn		20 16 05.9	+1.3
SMKR				*i* S		Sn		20 16 32.3	+1.5
ESO	**Esso**	**2.23**	**315**	*eP*		Pn		20 16 05.6	+0.9
ESO				*eS*		Sn		20 16 31.3	+0.3
SRKR	**Sorokina**	**2.30**	**356**	*eP*		Pn		20 16 06.8	+1.2
SRKR				*eS*		Sn		20 16 33.8	+1.1
RUS	**Russkaya**	**2.63**	**224**	P		Pn		20 16 11.5	+1.4
RUS				*i* S		Sn		20 16 41.2	+0.5
BKI	**Bering**	**2.73**	**70**	P		Pn		20 16 11.8	+0.3
BKI				*i* S		Sn		20 16 41.7	-1.5
GRL	**Gorelyy**	**2.73**	**230**	P		Pn		20 16 13.9	+2.2
GRL				*i* S		Sn		20 16 45.9	+2.3
MTVR	**Mutnovka**	**2.73**	**228**	*eP*		Pn		20 16 13.7	+2.0
MTVR				*i* S		Sn		20 16 46.2	+2.6
ASAK	**Asacha**	**2.93**	**229**	*eP*		Pn		20 16 16.9	+2.6
ASAK				*i* S		Sn		20 16 50.5	+2.2
APC	**Apacha**	**2.95**	**242**	*eP*		Pn		20 16 16.9	+2.4
APC				*eS*		Sn		20 16 50.6	+2.0
MIPR	**Malaya Ipel'ka**	**3.52**	**235**	*eP*		Pn		20 16 25.1	+2.7

IGQ 31 20:37:59.5,2°.09S×80°.16W,h16km±177km, Mb4.2, Ms4.0, 9C-10D, Error ellipse: s-maj=3.1km s-min=1.6km az=4.2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**1.18**	**331**	P		Pn		20 38 20.7	-0.6
PECV	**Mancha de Ca P**	**1.31**	**5**	P		Pb		20 38 23.5	-0.3
PECV	**Mancha de Ca P**	**1.31**	**5**	S		Sg		20 38 42.0	+0.1
IGUA	**Igualata**	**1.64**	**69**	⇓P		Pb		20 38 30.0	-0.1
BIL2	**Estacion Bilba**	**1.78**	**69**	S		Sb		20 38 54.4	0.0
BIL2	**Estacion Bilba**	**1.78**	**69**	P		Pb		20 38 32.3	+0.2
BMAS	**Trigal station**	**1.78**	**71**	⇑P		Pb		20 38 32.0	-0.3
BBIL	**Ulba Tungurahu**	**1.79**	**69**	⇑S		Sb		20 38 55.4	+0.4
BBIL	**Ulba Tungurahu**	**1.79**	**69**	⇑P		Pb		20 38 32.4	0.0
ARRY	**Arrayan**	**1.80**	**71**	⇓P		Pb		20 38 32.0	-0.6
JAMA	**Jama**	**1.82**	**359**	P		Pb		20 38 32.0	-0.5
JUI6	**Juive**	**1.82**	**69**	S		Sb		20 38 55.6	0.0
JUI6	**Juive**	**1.82**	**69**	P		Pb		20 38 32.6	-0.2
PAT1	**Patacocha**	**1.82**	**72**	⇑P		Pb		20 38 32.6	-0.5
RETU	**Refugio**	**1.83**	**70**	S		Sb		20 38 56.6	+0.2
RETU	**Refugio**	**1.83**	**70**	P		Pb		20 38 33.2	-0.1
RUN5	**Runtun**	**1.86**	**69**	⇑P		Pb		20 38 34.1	+0.5
ULBA	**Ulba**	**1.87**	**70**	P		Pb		20 38 33.5	-0.3
ULBA	**Ulba**	**1.87**	**70**	S		Sb		20 38 57.8	+0.6
BULB	**Ulba Tungurahu**	**1.87**	**70**	S		Sb		20 38 57.5	+0.3
BULB	**Ulba Tungurahu**	**1.87**	**70**	P		Pb		20 38 33.4	-0.4
BRUN	**Tungurahua Vol**	**1.87**	**69**	S		Sb		20 38 56.5	-0.8
BRUN	**Tungurahua Vol**	**1.87**	**69**	P		Pb		20 38 33.4	-0.4
MACE	**Macas**	**1.97**	**95**	S		Sb		20 38 58.6	-1.2
MACE	**Macas**	**1.97**	**95**	P		Pb		20 38 34.8	-0.5
CATE	**Catamayo**	**2.02**	**157**	P		Pb		20 38 36.3	+0.2
CATE	**Catamayo**	**2.02**	**157**	S		Sb		20 39 00.1	-1.1
PISA	**Pisayambo**	**2.05**	**60**	S		Sb		20 39 02.9	+0.1
PISA	**Pisayambo**	**2.05**	**60**	P		Pb		20 38 36.4	-0.7
CAMI	**Rancho Maria**	**2.17**	**52**	P		Pb		20 38 38.4	-0.7
BMOR	**Cotopaxi Volca**	**2.17**	**52**	⇓S		Sb		20 39 05.7	-0.7
BMOR	**Cotopaxi Volca**	**2.17**	**52**	⇓P		Pb		20 38 38.0	-1.2
BNAS	**Cotopaxi Volca**	**2.19**	**50**	⇓P		Pb		20 38 38.6	-0.9
MOV1	**Cotopaxi Vol s**	**2.20**	**52**	S		Sb		20 39 05.7	-1.6
MOV1	**Cotopaxi Vol s**	**2.20**	**52**	P		Pb		20 38 38.3	-1.4
NAS2	**Nasa**	**2.22**	**50**	P		Pb		20 38 39.5	-0.5
BREF	**Cotopaxi Volca**	**2.23**	**51**	S		Sb		20 39 08.5	+0.4
BREF	**Cotopaxi Volca**	**2.23**	**51**	P		Pb		20 38 39.4	-0.8
BVC2	**Cotopaxi Volca**	**2.26**	**51**	⇓S		Sn		20 39 06.7	+1.8
BVC2	**Cotopaxi Volca**	**2.26**	**51**	⇓P		Pb		20 38 39.6	-1.1
BTAM	**Cotopaxi Volca**	**2.26**	**52**	⇓P		Pb		20 38 39.5	-1.1
TAMB	**Tambo**	**2.27**	**52**	⇓P		Pb		20 38 39.6	-1.2
VC1	**Cotopaxi 1**	**2.27**	**51**	S		Sb		20 39 08.2	-1.0
VC1	**Cotopaxi 1**	**2.27**	**51**	P		Pb		20 38 40.0	-0.9
PITA	**Cotopaxi Volc**	**2.30**	**49**	⇓P		Pb		20 38 40.2	-1.2
COV1	**Cotopaxi Volc**	**2.31**	**52**	S		Sb		20 39 08.8	-1.6
COV1	**Cotopaxi Volc**	**2.31**	**52**	P		Pn		20 38 39.3	+1.6
JUA2	**San Juan 2**	**2.43**	**40**	P		Pn		20 38 40.4	+1.3
TERV	**Terraza Guagua**	**2.46**	**39**	P		Pn		20 38 40.9	+1.2
GGP	**Refugio Guagua**	**2.46**	**40**	⇑P		Pn		20 38 40.9	+1.1
PINO	**Pino**	**2.47**	**39**	P		Pn		20 38 40.7	+0.8
GOLV	**Golondrinas**	**2.50**	**24**	⇑P		Pn		20 38 39.1	-0.5
GOLV	**Golondrinas**	**2.50**	**24**	⇑S		Sn		20 39 08.5	-1.4
YANA	**Yana**	**2.52**	**39**	P		Pn		20 38 42.7	+2.2
ANTI	**Antisana**	**2.58**	**51**	⇑P		Pb		20 38 44.0	-2.2
OTAV	**Otavalo**	**2.88**	**37**	S		Sn		20 39 20.1	+0.1
OTAV	**Otavalo**	**2.88**	**37**	P		Pn		20 38 46.0	+0.7
CAYR	**Refugio Cayamb**	**3.00**	**46**	S		Sb		20 39 28.2	-2.3
CAYR	**Refugio Cayamb**	**3.00**	**46**	P		Pb		20 38 51.2	-2.3
LITE	**Lita**	**3.39**	**32**	P		Pn		20 38 52.4	+0.4
LITE	**Lita**	**3.39**	**32**	S		Sn		20 39 32.4	+0.3

MAN 31 20:45:15,14°.77N×121°.99E,h27km, mb4.3, ML3.2, MS3.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	**0.07**	**231**	*eP*		Pb		20 45 20.6	+0.8
BALP	**Baler**	**1.04**	**337**	*eP*		Pn		20 45 33.8	-0.2
BALP				*eS*		Sb		20 45 47.8	0.0
PCPH	**Palayan**	**1.17**	**312**	⇓*eP*		Pn		20 45 35.4	-0.2
PCPH				*eS*		Sb		20 45 57.3	+6.0
CAUP	**Cauayan**	**2.17**	**356**	*eP*		Pn		20 45 50.7	+1.3
PALP	**Palanan**	**2.32**	**10**	*eP*		Pn		20 45 51.4	0.0

IDC 31 20:46:21.2±5.8,7°.98S×148°.51E,h0km, mb2.7/1, mb1 3.2/2, mb1mx3.0/16, mbtmp2.9/2, ML3.3/1, Error ellipse: s-maj=279.2km s-min=41.2km az=121.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**1.95**	**223**	Pn		Pn		20 46 54.8	-0.8
	9.4nm,0.3s,baz=49,slow=5.0,SNR=24								
PMG				Sn		Sn		20 47 15.5	-5.3
	34nm,0.3s,baz=39,slow=13,SNR=11								
WRA	**Warramunga Arr**	**18.16**	**228**	P		Pn		20 50 34.1	-1.0
	0.1nm,0.3s,baz=56,slow=12,SNR=8.4								
ASAR	**Alice Springs**	**20.96**	**220**	P		Pn		20 51 08.0	-0.7
	0.3nm,0.8s,baz=56,slow=9.3,SNR=3.6								
TORD	**Torodi Ar. Bea**	**147.00**	**282**	PKPbc		PKPbc		21 06 06.0	-1.0
	0.5nm,1.0s,baz=62,slow=3.4,SNR=3.3								

IDC 31 20:49:32.5±3.5,23°.59S×180°.00E,h595km±41km, mb3.3/10, mb1 3.6/12, mb1mx3.3/21, mbtmp3.4/12, Error ellipse: s-maj=31.6km s-min=22.2km az=159.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.59**	**274**	P		P		20 52 16.8	-0.5
	0.3nm,0.3s,baz=81,slow=19,SNR=4.0								
URZ	**Urewera**	**14.83**	**189**	P		P		20 52 37.6	-1.4
	1.6nm,0.3s,baz=325,slow=12,SNR=10.0								
URZ				S		S		20 55 10.6	-0.8
	0.1nm,0.3s,baz=120,slow=20,SNR=2.5								
CTA	**Charters Tower**	**31.48**	**270**	P		P		20 55 07.5	+0.3
	21nm,0.6s,baz=97,slow=11,SNR=24								
STKA	**Stephens Creek**	**34.84**	**248**	P		P		20 55 35.9	+0.6
	4.3nm,0.6s,baz=93,slow=9.7,SNR=28								
ASAR	**Alice Springs**	**42.09**	**260**	P		P		20 56 33.8	-0.1
	5.8nm,0.8s,baz=98,slow=7.1,SNR=52								
WRA	**Warramunga Arr**	**42.43**	**266**	P		P		20 56 35.5	-1.1
	5.5nm,0.6s,baz=90,slow=8.4,SNR=89								
FITZ	**Fitzroy Crossi**	**50.85**	**265**	P		P		20 57 40.0	+0.1
	1.6nm,0.6s,baz=81,slow=9.7,SNR=6.9								
PETK	**Petropavlovsk-**	**78.80**	**347**	P		P		21 00 34.3	0.0
	2.8nm,0.7s,baz=132,slow=8.0,SNR=6.8								
USRK	**Ussuriysk Arra**	**80.50**	**327**	P		P		21 00 43.5	+0.1
	0.6nm,0.6s,baz=144,slow=7.3,SNR=3.7								
NVAR	**Mina Array Bea**	**84.53**	**44**	P		P		21 01 04.0	-0.2
	0.3nm,0.6s,baz=213,slow=6.5,SNR=5.5								
TXAR	**Lajitas Array**	**90.27**	**58**	P		P		21 01 31.8	+0.6
	0.8nm,0.8s,baz=216,slow=4.5,SNR=12								
ILAR	**Eielson Array**	**91.73**	**14**	P		P		21 01 37.2	+0.3
	0.2nm,0.5s,baz=231,slow=4.3,SNR=4.4								
MKAR	**Makanchi Array**	**111.94**	**313**	PKiKP		PKiKP		21 07 00.4	-0.4
	0.1nm,0.4s,baz=180,slow=0.9,SNR=3.7								
KURBB	**Kurchatov Arra**	**115.02**	**316**	PKP		PKPdf		21 07 05.9	-0.6
	0.3nm,0.6s,baz=83,slow=2.5,SNR=5.8								
FINES	**FINESS Array B**	**138.15**	**342**	PKhKP		PKPpre		21 07 41.6	
	1.3nm,0.9s,baz=346,slow=2.9,SNR=3.1								
FINES				PKP		PKPdf		21 07 49.6	-0.5
	1.4nm,0.9s,baz=67,slow=6.4,SNR=3.6								
NOA	**NORSAR Array B**	**141.78**	**351**	PKhKP		PKPpre		21 07 52.6	
	1.0nm,0.7s,baz=7.9,slow=2.3,SNR=5.8								
AKASG	**Malin Array Be**	**144.71**	**327**	PKP		PKPdf		21 08 01.8	-0.3
	2.5nm,0.6s,baz=46,slow=3.9,SNR=14								
BRTR	**Keskin Array B**	**147.39**	**308**	PKPbc		PKPbc		21 08 10.5	-0.1
	0.6nm,0.6s,baz=146,slow=3.9,SNR=4.3								
BRG	**Berggiesshubel**	**150.69**	**342**	*eP*		PKPbc		21 08 18.5	+0.5
	2.5nm,0.8s								
GERES	**GERESS Array B**	**152.57**	**340**	PKPbc		PKPbc		21 08 21.3	-1.1
	0.2nm,0.6s,baz=346,slow=2.0,SNR=4.6								
ESDC	**Sonseca Array**	**163.62**	**11**	PKPab		PKPab		21 09 23.1	-1.0
	0.7nm,0.9s,baz=343,slow=4.5,SNR=3.7								

NIED ***31*** *20:58:00,27°.70N×127°.60E,h89km,Mw3.7 Best double couple: M₀3.39000×10¹⁴ NP1:φ₀218.00000°,δ74.00000°, λ81.00000°. NP2:φ₀67.00000°,δ18.00000°,λ118.00000°.*
ISCJB ***31*** *20:58:17.9±0.4,27°.50N±0°.06×127°.74E±0°.06, h130km±5km,mb3.4/7, Error ellipse: s-maj=12.4km s-min=4.8km az=137.6*
JMA ***31*** *20:58:19.7±0.2,27°.65N×127°.65E,h105km±3km,M3.5*
IDC ***31*** *20:58:21.4±9.3,27°.66N×127°.57E,h135km±56km,mb3.2/7, mb1 3.2/10,mb1mx3.1/29,mbtmp3.1/10, Error ellipse: s-maj=94.4km s-min=25.5km az=180.0*

ISC 31 20:58:19.1±0.7,27°.52N±0°.07×127°.73E±0°.06,h124km±7km, n24,σ1°.08/36,mb3.7/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIH	**Iheya**	**0.53**	**156**	P		**Pn**		**20 58 37.7**	**+0.1**
JIH				S		**Sn**		**20 58 50.9**	**-0.7**
JOW	**Kunigami**	**0.84**	**145**	P		**Pn**		**20 58 40.5**	**+0.5**
JOW				S		**Sn**		**20 58 55.8**	**0.0**
JAGN	**Aguni-jima**	**1.03**	**205**	P		**Pn**		**20 58 41.9**	**+0.2**
JAGN				S		**Sn**		**20 58 58.4**	**-0.4**
JTK	**Tokunoshima**	**1.11**	**76**	P		**Pn**		**20 58 42.4**	**-0.1**
JTK				S		**Sn**		**20 58 59.1**	**-1.2**
JJT2	**Tamagusuku 2**	**1.38**	**179**	P		**Pn**		**20 58 46.8**	**+1.4**
JJT2				S		**Sn**		**20 59 07.0**	**+1.6**
JKE	**Kume jima 2**	**1.46**	**216**	P		**Pn**		**20 58 46.6**	**+0.3**
JKE				S		**Sn**		**20 59 06.5**	**-0.5**
JAMN	**Amaminishikomi**	**1.47**	**60**	P		**Pn**		**20 58 46.2**	**-0.1**
JAMN				S		**Sn**		**20 59 05.3**	**-1.8**
JAM	**Amami Oshima**	**1.88**	**61**	P		**Pn**		**20 58 51.4**	**+0.2**
JAM				S		**Sn**		**20 59 15.4**	**-0.4**
JZK	**Kikaishima**	**2.13**	**68**	P		**Pn**		**20 58 55.7**	**+1.3**
JZK				S		**Sn**		**20 59 22.4**	**+1.0**
JOGS	**Gusukube**	**3.45**	**218**	P		**Pn**		**20 59 12.1**	**+0.6**
JOGS				S		**Sn**		**20 59 51.0**	**-1.0**
JMZ	**Minamidaito 2**	**3.55**	**118**	P		**Pn**		**20 59 12.7**	**-0.1**
JMZ				S		**Sn**		**20 59 51.7**	**-2.6**
JTJ	**Tarama**	**3.96**	**224**	P		**Pn**		**20 59 17.0**	**-1.1**
JIJ	**Ishigaki jima**	**4.51**	**227**	P		**Pn**		**20 59 24.3**	**-1.2**
IRIF	**Iriomote-Funau**	**4.80**	**230**	P		**Pn**		**20 59 28.3**	**-1.1**
JNU	**Nakatsue**	**6.21**	**25**	P		**Pn**		**20 59 49.8**	**+1.4**
	0.6nm,0.3s,baz=331,slow=22,SNR=7.7								
KSRS	**Korea Array**	**9.91**	**1**	P		**Pn**		**21 00 39.2**	**+1.1**
	0.2nm,0.3s,baz=177,slow=13,SNR=6.2								
USRK	**Ussuriysk Arra**	**17.00**	**11**	P		**Pn**		**21 02 09.3**	**+0.1**
	0.1nm,0.3s,baz=178,slow=12,SNR=3.9								
SONM	**Songino Array**	**26.23**	**326**	P		**P**		**21 03 43.3**	**+0.7**
	1.0nm,0.5s,baz=139,slow=9.7,SNR=12								
MKAR	**Makanchi Array**	**40.35**	**311**	P		**P**		**

NAY	**Al-Naaiem**	**3.46**	**274**	*e*P	**Pb**	**21 32 21.6**	**-2.5**
NAY				*e*S	**Sb**	**21 33 06.4**	**+0.6**
NAY				AML	AML	21 33 08.9	
	comp=Z,9.4nm,0.5s						
BRTR	**Keskin Array B**	**17.95**	**311**	P	P	21 35 39.1	+6.5
	comp=Z,0.0nm,0.3s,baz=125,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	**29.98**	**45**	P	**P**	**21 37 30.8**	**0.0**
	comp=Z,0.2nm,0.6s,baz=239,slow=8.2,SNR=2.6						
TORD	**Torodi Ar. Bea**	**48.46**	**262**	P	**P**	**21 40 06.6**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=58,slow=7.7,SNR=5.3						

IDC 31 21:58:44.5±2.8, 21°.37S×69°.56W, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.6/17, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=73.2km s-min=58.3km az=59.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.23**	**15**	Pn	Pn	22 00 04.5	-0.2
	1.3nm,0.3s,baz=193,slow=8.6,SNR=34						
TORD	**Torodi Ar. Bea**	**77.88**	**71**	P	P	22 10 44.7	0.0
	0.7nm,1.1s,baz=254,slow=5.4,SNR=6.0						
YKA	**Yellowknife Ar**	**90.86**	**341**	P	P	22 11 49.3	-0.1
	0.2nm,0.6s,baz=135,slow=5.2,SNR=6.2						

*ISCJB **31** 22:11:59.8±0.8, 32°.96N±0°.07×139°.5E±0°.1, h204km±6km, mb3.1/3, Error ellipse: s-maj=15.6km s-min=11.5km az=176.2*

*IDC **31** 22:12:00.4±1.6, 33°.04N×139°.94E, h204km±5km, mb3.0/3, mb1 3.1/4, mb1mx2.8/25, mbtmp2.9/4, Error ellipse: s-maj=79.1km s-min=22.5km az=74.0*

*JMA **31** 22:12:01.0±0.4, 33°.02N×139°.45E, h195km±4km, M3.2*

ISC 31 22:12:01.0±1.0, 32°.97N±0°.08×139°.45E±0°.09, h199km±8km, n17, σ0°61/21, mb3.3/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**0.31**	**70**	P	**Pn**	**22 12 27.3**	**-0.1**
JHJ	**Hachijo jima 2**	**0.32**	**62**	P	**Pn**	**22 12 27.1**	**-0.3**
	63nm,0.3s,baz=74,slow=23,SNR=57						
JHJ				S	**Sn**	**22 12 48.7**	**+0.9**
	23nm,0.3s,baz=54,slow=21,SNR=6.7						
JHJ2	**Mitsune**	**0.34**	**65**	P	**Pn**	**22 12 26.9**	**-0.5**
JKO	**Kozu shima**	**1.24**	**348**	P	**Pn**	**22 12 31.9**	**-0.5**
TK02	**Tokai 2**	**1.72**	**305**	P	**Pn**	**22 12 36.1**	**-0.3**
JIZS	**Izushimoda**	**1.81**	**345**	P	**Pn**	**22 12 37.3**	**-0.2**
TK04	**Tokai 4**	**1.93**	**318**	P	**Pn**	**22 12 38.6**	**+0.1**
BSO3	**Boso 3**	**2.03**	**25**	P	**Pn**	**22 12 39.6**	**+0.2**
BSO1	**Boso 1**	**2.11**	**37**	P	**Pn**	**22 12 39.9**	**0.0**
BSO1				*e*S	**Sn**	**22 13 10.2**	**-0.2**
JOD2	**Odawara 2**	**2.31**	**353**	P	**Pn**	**22 12 42.8**	**+0.1**
JOD2				*e*S	**Sn**	**22 13 16.0**	**+0.6**
TTO1	**TONANKAI O.B.S**	**2.33**	**287**	P	**Pn**	**22 12 42.2**	**-0.4**
JRY	**Ryogami san**	**3.07**	**352**	P	**Pn**	**22 12 52.0**	**+0.5**
JRY				*e*S	**Sn**	**22 13 29.8**	**-1.3**
JAG	**Ashikaga**	**3.45**	**0**	P	**Pn**	**22 12 54.9**	**-1.0**
MJAR	**Matsushiro Arr**	**3.71**	**344**	P	**Pn**	**22 12 59.2**	**+0.1**
	0.8nm,0.3s,baz=152,slow=12,SNR=7.6						
MKAR	**Makanchi Array**	**45.03**	**305**	P	**P**	**22 19 57.8**	**+1.0**
	0.1nm,0.3s,baz=87,slow=9.5,SNR=4.2						
WRA	**Warramunga Arr**	**52.84**	**196**	P	**P**	**22 20 55.9**	**-0.4**
	0.3nm,0.3s,baz=2.6,slow=7.7,SNR=4.5						
FINES	**FINESS Array B**	**71.66**	**332**	P	**P**	**22 23 00.4**	**-0.3**
	1.5nm,0.8s,baz=69,slow=7.9,SNR=4.0						

MEX 31 22:20:43.7±0.6, 17°.98N×100°.72W, h49km±8km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.46**	**50**	*e*P	Pn	22 20 52.7	-1.8
ARIG				*i* S	Sn	22 21 00.3	-2.0
ZIIG	**Zihuatanejo**	**0.80**	**242**	*e*P	Pn	22 20 57.4	-1.3
ZIIG				*i* S	Sn	22 21 08.2	-1.4
CAIG	**El Cayaco**	**1.02**	**155**	*i* P	Pn	22 20 59.8	-2.0
CAIG				*e*S	Sn	22 21 13.0	-2.1
PLIG	**Platanillo**	**1.23**	**70**	*e*P	Pn	22 21 03.1	-1.6
PLIG				*i* S	Sn	22 21 18.6	-1.7
YAIG	**Yautepec**	**1.80**	**61**	*i* P	Pn	22 21 10.8	-1.8
YAIG				*i* S	Sn	22 21 31.8	-2.5

IDC 31 22:53:25.0±5.7, 5°.37S×151°.78E, h73km±46km, mb3.6/10, mb1 3.9/11, mb1mx3.7/22, mbtmp3.7/11, ML3.4/1, MS3.5/12, Ms1 3.5/12, ms1mx3.2/30, Error ellipse: s-maj=53.8km s-min=26.9km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.09**	**229**	P	Pn	22 54 50.9	-1.5
	5.5nm,0.3s,baz=26,slow=15,SNR=12						
PMG				S	Sn	22 56 03.2	+2.5
	0.9nm,0.3s,baz=108,slow=9.6,SNR=2.1						
DZM	**Mont Dzumac**	**21.84**	**141**	LR	LR	23 05 28.0	
	comp=Z,380nm,18.9s,baz=240,slow=33						
WRA	**Warramunga Arr**	**22.31**	**228**	P	P	22 58 16.7	0.0
	7.3nm,0.8s,baz=51,slow=9.6,SNR=21						
ASAR	**Alice Springs**	**25.05**	**222**	P	P	22 58 42.9	+0.2
	7.4nm,0.8s,baz=55,slow=8.5,SNR=66						
ASAR				LR	LR	23 08 55.8	
	comp=Z,77nm,18.3s,baz=44,slow=37						
STKA	**Stephens Creek**	**28.04**	**199**	LR	LR	23 10 01.4	
	comp=Z,158nm,20.5s,baz=21,slow=36						
FITZ	**Fitzroy Crossi**	**28.49**	**241**	P	P	22 59 12.8	-0.8
	7.5nm,0.8s,baz=67,slow=11,SNR=11						
FITZ				LR	LR	23 11 52.7	
	comp=Z,97nm,18.9s,baz=66,slow=39						
URZ	**Urewera**	**40.03**	**148**	LR	LR	23 15 39.6	
	comp=Z,117nm,18.6s,baz=178,slow=33						
MJAR	**Matsushiro Arr**	**43.58**	**344**	LR	LR	23 17 42.7	
	comp=Z,45nm,21.5s,baz=200,slow=34						
KSRS	**Korea Array**	**48.06**	**334**	LR	LR	23 19 03.8	
	comp=Z,54nm,18.9s,baz=155,slow=32						
USRK	**Ussuriysk Arra**	**52.46**	**342**	LR	LR	23 21 06.8	
	comp=Z,23nm,19.3s,baz=219,slow=32						
CMAR	**Chiang Mai Arr**	**57.20**	**296**	P	P	23 03 05.2	+0.1
	1.9nm,0.9s,baz=103,slow=4.1,SNR=5.8						
PETK	**Petropavlovsk-**	**58.47**	**4**	LR	LR	23 23 02.8	
	comp=Z,25nm,21.2s,baz=106,slow=30						
SONM	**Songino Array**	**66.27**	**328**	P	P	23 04 06.3	+0.6
	0.9nm,0.7s,baz=146,slow=5.6,SNR=7.9						
SONM				LR	LR	23 30 44.1	
	comp=Z,40nm,19.0s,baz=132,slow=34						
MKAR	**Makanchi Array**	**80.08**	**319**	P	P	23 05 26.9	-0.1
	0.1nm,0.5s,baz=102,slow=6.1,SNR=2.9						
MKAR				LR	LR	23 39 14.2	
	comp=Z,25nm,19.3s,baz=355,slow=34						
ZALV	**Zalesovo Beam**	**81.06**	**327**	P	P	23 05 31.8	-0.3
	0.4nm,0.6s,baz=131,slow=4.4,SNR=3.4						
ILAR	**Eielson Array**	**83.07**	**22**	P	P	23 05 42.9	+0.6
	0.2nm,0.5s,baz=245,slow=5.8,SNR=4.1						
KURBB	**Kurchatov Arra**	**83.62**	**322**	P	P	23 05 45.0	-0.4
	0.1nm,0.3s,baz=110,slow=3.9,SNR=4.8						
AAK	**Ala-Archa**	**84.31**	**314**	LR	LR	23 47 07.5	
	comp=Z,28nm,19.0s,baz=18,slow=38						
BVAR	**Borovoye Array**	**89.08**	**323**	P	P	23 06 11.4	-0.8
	0.6nm,0.7s,baz=116,slow=3.4,SNR=3.8						
TORD	**Torodi Ar. Bea**	**149.50**	**287**	PKPbc	PKPbc	23 13 06.8	-0.3
	0.4nm,0.6s,baz=92,slow=2.4,SNR=3.5						

IDC 31 22:53:42.8±1.1, 37°.59S×51°.63E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/23, mbtmp3.7/4, MS3.2/2, Ms1 3.2/2, ms1mx2.8/30, Error ellipse: s-maj=42.8km s-min=32.7km az=14.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**30.72**	**172**	LR	LR	23 08 42.4	
	comp=Z,82nm,22.0s,baz=54,slow=29						
KMBO	**Kilima Mbogo**	**38.63**	**337**	LR	LR	23 15 48.2	
	comp=Z,23nm,18.5s,baz=267,slow=34						
SNAA	**Sanae**	**43.75**	**202**	P	P	23 01 49.2	-0.4
	0.5nm,0.8s,baz=47,slow=4.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**68.86**	**307**	P	P	23 04 50.4	+1.1
	0.2nm,0.7s,baz=131,slow=5.9,SNR=2.9						
ASAR	**Alice Springs**	**70.10**	**105**	P	P	23 04 57.7	+0.5
	0.9nm,0.6s,baz=229,slow=6.1,SNR=11						
WRA	**Warramunga Arr**	**72.49**	**102**	P	P	23 05 11.7	+0.1
	0.3nm,0.5s,baz=232,slow=5.2,SNR=6.1						
ILAR	**Eielson Array**	**150.65**	**16**	PKPbc	PKPbc	23 13 33.9	-1.9
	1.1nm,1.1s,baz=328,slow=3.5,SNR=5.5						

IDC 31 23:16:15.8±9.9, 4°.59N×126°.97E, h154km±97km, mb3.5/8, mb1 3.6/8, mb1mx3.3/25, mbtmp3.5/8, MS3.1/1, Ms1 3.1/1, ms1mx1.7/22, Error ellipse: s-maj=126.4km s-min=16.8km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.44**	**164**	P	P	23 21 29.0	-0.4
	1.8nm,0.7s,baz=344,slow=10,SNR=7.0						
ASAR	**Alice Springs**	**28.89**	**167**	P	P	23 22 00.4	+0.1
	0.3nm,0.5s,baz=352,slow=7.8,SNR=5.9						
HNR	**Honiara**	**35.70**	**113**	LR	LR	23 37 04.3	
	comp=Z,28nm,19.8s,baz=110,slow=35						
STKA	**Stephens Creek**	**38.85**	**160**	P	P	23 23 26.1	+0.1
	1.8nm,0.5s,baz=340,slow=10,SNR=7.3						
SONM	**Songino Array**	**46.56**	**341**	P	P	23 24 28.9	+0.7
	0.2nm,0.3s,baz=152,slow=6.5,SNR=2.8						
MKAR	**Makanchi Array**	**56.99**	**325**	P	P	23 25 44.9	-0.4
	1.0nm,0.5s,baz=119,slow=7.7,SNR=24						
KURBB	**Kurchatov Arra**	**61.15**	**327**	P	P	23 26 13.9	+0.1
	1.9nm,0.6s,baz=126,slow=6.3,SNR=24						
BVAR	**Borovoye Array**	**66.73**	**327**	P	P	23 26 50.3	0.0
	0.4nm,0.4s,baz=115,slow=3.7,SNR=3.7						
ARCES	**ARCESS Array B**	**89.73**	**340**	P	P	23 28 54.8	-1.4
	3.3nm,0.9s,baz=98,slow=5.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**122.87**	**289**	PKP	PKPdf	23 34 55.6	+0.9
	0.3nm,1.0s,baz=69,slow=1.8,SNR=3.0						

ISC Computed Locations for May 2009

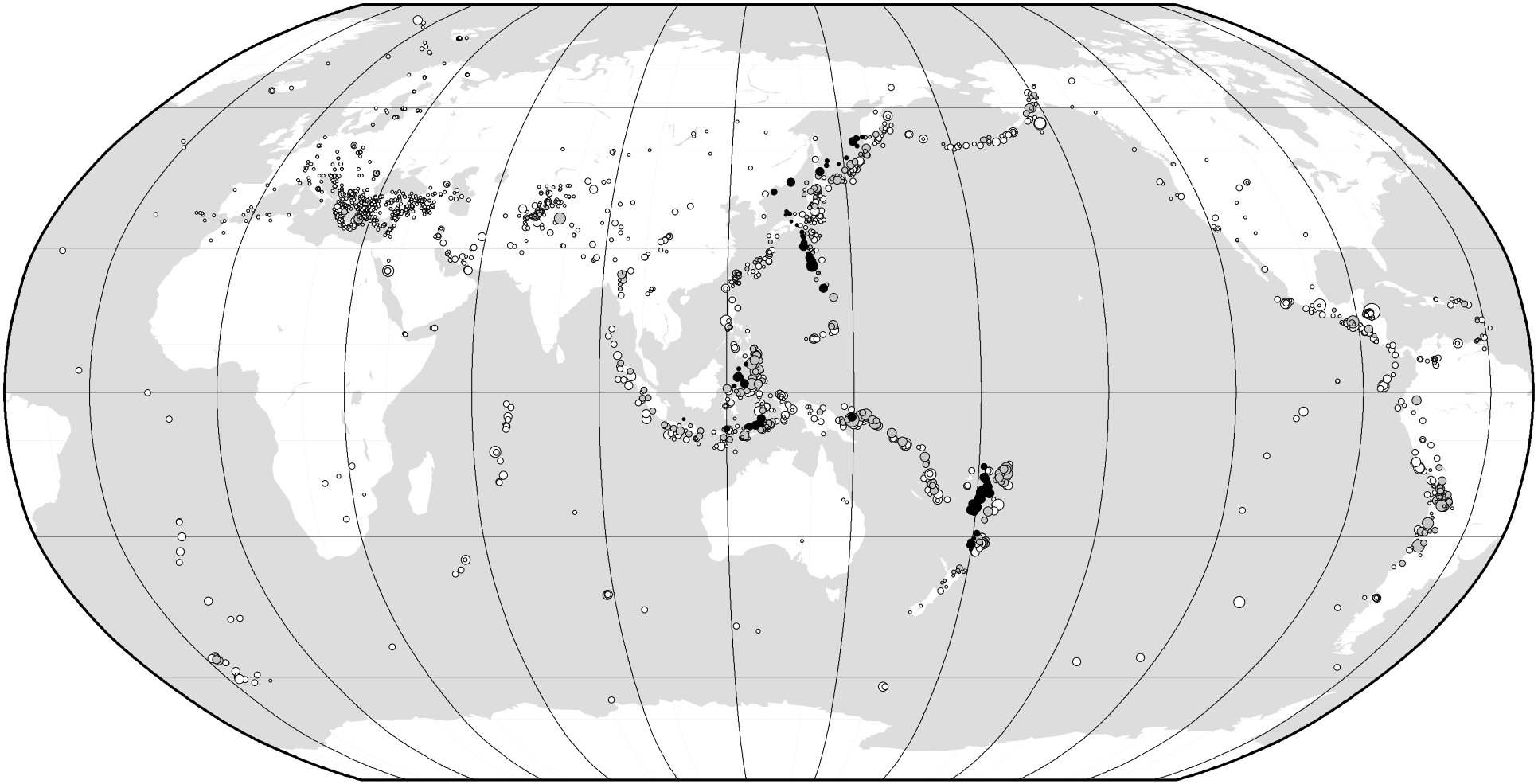

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

2551 Events